Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

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

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

Addendum III

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

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

SJA 01 00:04:54.8±1.4, 22°.36S×67°.50W, h179km±12km, ML3.0, MW3.5, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**1.71**	**289**	*i* P	Pn	00 05 30.0	+1.0
PB09				*i* S	Sn	00 05 55.7	+0.3
PB09				IAML		00 06 01.3	
	comp=Z,92nm,0.1s						
YJA	**Yavi**	**1.84**	**85**	*i* P	Pn	00 05 31.7	+1.2
YJA				*i* S	Sn	00 05 56.9	-1.3
YJA				IAML		00 05 57.4	
	comp=Z,19nm,0.5s						
PB06	**IPOC Station P**	**1.95**	**259**	*i* P	Pn	00 05 32.2	+0.8
PB06				*i* S	Sn	00 05 59.9	+0.1
PB06				IAML		00 06 03.7	
	comp=Z,125nm,0.1s						
HJA	**Humahuaca**	**2.10**	**114**	*i* P	Pn	00 05 34.9	+1.6
HJA				*i* S	Sn	00 06 02.9	-0.2
HJA				IAML		00 06 05.1	
	comp=Z,18nm,0.5s						
PB03	**IPOC Station P**	**2.12**	**278**	*i* P	Pn	00 05 33.5	+0.3
PB03				*i* S	Sn	00 06 01.8	-1.2
PB03				IAML		00 06 04.9	
	comp=Z,290nm,0.2s						
SALTA		**2.14**	**150**	*i* P	Pn	00 05 35.9	+2.0
SALTA				IAML		00 06 27.4	
	comp=Z,8.6nm,1.9s						
PB01	**IPOC Station P**	**2.27**	**305**	*i* P	Pn	00 05 35.2	+0.3
PB01				*i* S	Sn	00 06 06.0	0.0
PB01				IAML		00 06 07.8	
	comp=Z,109nm,0.1s						
PB07	**IPOC Station P**	**2.31**	**285**	*i* P	Pn	00 05 35.7	+0.3
PB07				*i* S	Sn	00 06 06.3	-0.5
PB07				IAML		00 06 07.7	
	comp=Z,236nm,0.3s						
PB02	**IPOC Station P**	**2.46**	**294**	*i* P	Pn	00 05 37.2	+0.2
PB02				IAML		00 06 12.4	
	comp=Z,348nm,0.3s						
PB05	**IPOC Station P**	**2.55**	**258**	*i* P	Pn	00 05 38.4	+0.3
PB05				IAML		00 06 15.4	
	comp=Z,39nm,0.1s						
PB08	**IPOC Station P**	**2.70**	**325**	*i* P	Pn	00 05 41.3	+1.1
PB08				IAML		00 06 20.2	
	comp=Z,45nm,0.3s						
SLA	**San Lorenzo**	**2.98**	**143**	*i* P	Pn	00 05 43.8	+0.6
SLA				IAML		00 06 57.3	
	comp=Z,2.1nm,3.3s						
PB14	**IPOC Station P**	**3.50**	**229**	*i* P	Pn	00 05 51.1	+1.3
PB14				IAML		00 06 44.9	
	comp=Z,13nm,0.9s						
AC02	**Maricunga**	**4.70**	**198**	*i* P	Pn	00 06 06.1	+0.8
AC02				IAML		00 07 04.1	
	comp=Z,6.7nm,1.6s						
AC01	**Pan de Azucar**	**4.72**	**216**	*i* P	Pn	00 06 05.3	+0.2
AC01				IAML		00 07 23.3	
	comp=Z,13nm,1.4s						

*IDC **01** 00:08:32.3±0.6, 37°.30N×141°.94E, h0km, mb4.0/24, mbtmp4.0/33, ML3.6/7, MS3.1/13, Error ellipse: s-maj=15.0km s-min=12.8km az=122.0*
*NEIC **01** 00:08:37.8±2.1, 37°.23N±0°.07×142°.02E±0°.10, h41km±4km, mb4.4/32, Error ellipse: s-maj=11.8km s-min=9.7km az=116.0*
*NIED **01** 00:08:38.1, 37°.28N×141°.80E, h50km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.42; $M_{\theta\theta}$0.57; $M_{\phi\phi}$-1.99; $M_{r\theta}$0.72; $M_{\theta\phi}$1.00; $M_{\phi r}$0.47; Fault plane solution: $M_0$2.19000×10^{15} NP1: ϕ_s130.00000°, δ52.00000°, λ42.00000°. NP2: ϕ_s11.00000°, δ58.00000°, λ134.00000°.*
*JMA **01** 00:08:38.1±0.1, 37°.3N±0°.4×141°.8E±0°.8, h50km±2km, MD4.4/40, MV4.4/40, E OFF FUKUSHIMA PREF*
JMA Felt I J1 at E OFF FUKUSHIMA PREF .
ISC 01 00:08:37.8±1.6, 37°.26N±0°.04×141°.94E±0°.07, h36km±5km, n134, σ1s.16/128, mb4.2/41, MS3.0/7, 1C-14D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.85**	**277**	⇓*i*P	**Pn**	**00 08 52.4**	**-0.9**
JFK				A	A	00 08 52.4	
	comp=N,10.0nm,0.7s,comp=E,18nm,0.7s						
JFK				⇓S	**Sn**	**00 09 02.6**	**-2.1**
ONAJ	**Iwakimizuishiy**	**0.92**	**260**	⇓*i*P	**Pn**	**00 08 53.6**	**-0.7**
ONAJ				A	A	00 08 53.6	
	comp=N,29nm,0.3s,comp=E,27nm,0.3s						
ONAJ				⇓*e*S	**Sn**	**00 09 04.2**	**-2.2**
JMST	**Minamisoumatoc**	**0.95**	**299**	⇓P	**Pn**	**00 08 53.8**	**-0.8**
JMST				A	A	00 08 53.8	
	comp=N,14nm,0.9s,comp=E,23nm,0.5s						
JMST				⇓S	**Sn**	**00 09 05.3**	**-1.7**
JMM	**Marumori**	**1.09**	**304**	⇓P	**Pn**	**00 08 55.9**	**-0.6**
JMM				⇓S	**Sn**	**00 09 08.7**	**-1.6**
JIKH	**Ishinomakikobu**	**1.11**	**340**	A	A	00 08 57.0	
	comp=N,12nm,0.5s,comp=E,17nm,0.5s						
JFFD	**Fukushimafurud**	**1.11**	**262**	⇓P	**Pn**	**00 08 56.1**	**-0.7**
JFFD				⇓S	**Sn**	**00 09 09.2**	**-1.7**
JHO	**Hitachi**	**1.27**	**240**	⇓*i*P	**Pn**	**00 08 58.2**	**-0.8**
JHO				⇓S	**Sn**	**00 09 13.0**	**-1.9**
JIO	**Ouri**	**1.28**	**339**	P	**Pn**	**00 08 59.1**	**0.0**
JIO				S	**Sn**	**00 09 14.1**	**-0.8**
JOTO	**OTAMA OYAMA**	**1.31**	**284**	P	**Pn**	**00 08 59.5**	**0.0**
JOTO				A	A	00 08 59.5	
	comp=N,21nm,2.6s,comp=E,16nm,0.8s						
JOTO				*e*S	**Sn**	**00 09 14.9**	**-0.9**
JHYU	**Hitachinakayam**	**1.42**	**230**	A	A	00 09 01.0	
	comp=N,8.0nm,2.7s,comp=E,10.0nm,1.1s						
JOU	**Okura**	**1.49**	**318**	P	**Pn**	**00 09 02.1**	**+0.1**
JOU				A	A	00 09 02.1	
	comp=N,13nm,0.6s,comp=E,10.0nm,1.8s						
JOFO	**Osakifurukawao**	**1.56**	**329**	A	A	00 09 03.1	
	comp=N,22nm,1.5s,comp=E,25nm,1.3s						
JYAR	**Yonezawaarcadi**	**1.56**	**295**	A	A	00 09 02.6	
	comp=N,25nm,1.3s,comp=E,15nm,1.1s						
JIHU	**Itakohorinouch**	**1.72**	**222**	A	A	00 09 05.5	
	comp=N,21nm,3.0s,comp=E,27nm,1.2s						
JYS	**Shirataka**	**1.77**	**303**	P	**Pn**	**00 09 06.0**	**+0.2**
JMK	**Ichinoseki**	**1.78**	**342**	P	**Pn**	**00 09 06.5**	**+0.5**
JFY	**Yanaizu**	**1.79**	**275**	⇓P	**Pn**	**00 09 06.0**	**-0.1**
JFY				⇓*e*S	**Sn**	**00 09 27.1**	**-0.4**
MJAR	**Matsushiro Arr**	**3.07**	**258**	Pn	**Pn**	**00 09 24.2**	**+0.4**
	comp=E,3.5nm,0.3s,baz=81,slow=17,SNR=91						
MJAR				Lg	Lg	00 10 06.8	
	comp=E,3.0nm,0.3s,baz=81,slow=17,SNR=5.4						
MJAR				LR	LR	00 10 56.1	
	comp=E,432nm,19.1s,baz=36,slow=47						
	comp=E,18nm,0.3s						
MJAR	**Matsushiro Arr**	**3.07**	**258**		**Pn**	**00 09 25.2**	**+1.4**
MAJO	**Matsushiro**	**3.08**	**258**	P	**Pn**	**00 09 24.7**	**+0.9**
MAJO	**Matsushiro**	**3.08**	**258**		**Pn**	**00 09 25.0**	**+1.2**
MAJO				Sn	**Sn**	**00 10 00.5**	**+1.1**
MJB9	**Matsu-Tunnel**	**3.08**	**258**		**Pn**	**00 09 24.7**	**+0.8**
JSG	**Sagara**	**3.99**	**231**	P	**Pn**	**00 09 38.7**	**+2.3**
JSG	**Sagara**	**3.99**	**231**		**Pn**	**00 09 38.1**	**+1.7**
JGF	**Kuroka**	**4.05**	**247**	P	**Pn**	**00 09 38.7**	**+1.5**
JGF	**Kuroka**	**4.05**	**247**		**Pn**	**00 09 38.8**	**+1.5**
INU	**Inuyama**	**4.41**	**246**	P	**Pn**	**00 09 44.1**	**+2.0**
INU	**Inuyama**	**4.41**	**246**		**Pn**	**00 09 44.0**	**+1.8**
JHJ2	**Mitsune**	**4.49**	**203**	P	**Pn**	**00 09 43.4**	**+0.1**
JHJ2	**Mitsune**	**4.49**	**203**	Pn	**Pn**	**00 09 43.1**	**-0.1**
JHJ	**Hachijo jima 2**	**4.50**	**204**	Pn	**Pn**	**00 09 43.2**	**-0.1**
	comp=E,198nm,0.3s,baz=98,slow=6.4,SNR=17						
JHJ				Sn	**Sn**	**00 10 31.1**	**-3.2**
	comp=E,130nm,0.3s,baz=78,slow=23,SNR=12						
JHJ				LR	LR	00 11 52.7	
	comp=E,254nm,18.2s,baz=84,slow=44						
ASAJ	**Asahikawa**	**6.86**	**4**	Pn	**Pn**	**00 10 15.2**	**-0.6**
	comp=E,2.4nm,0.3s,baz=227,slow=9.1,SNR=13						
ASAJ				Sn	**Sn**	**00 11 27.7**	**-4.9**
	comp=E,2.3nm,0.3s,baz=108,slow=30,SNR=6.8						
	comp=E,3.8nm,0.2s						
JKA	**Kamikawa-asahi**	**6.86**	**4**	Pn	**Pn**	**00 10 15.8**	**0.0**
JMN	**Monobe**	**7.46**	**244**	P	**Pn**	**00 10 26.0**	**+1.9**
JMN	**Monobe**	**7.46**	**244**		**Pn**	**00 10 25.3**	**+1.2**
JNU	**Nakatsue**	**9.95**	**249**	Pn	**Pn**	**00 10 58.4**	**+0.2**
	comp=E,0.8nm,0.3s,baz=76,slow=2.0,SNR=7.2						
JNU				LR	LR	00 14 42.1	
	comp=E,60nm,20.7s,baz=104,slow=37						
	comp=E,15nm,0.8s						
JCJ	**Chichijima**	**10.14**	**179**	Pn	**Pn**	**00 10 58.5**	**-2.3**
	comp=E,46nm,0.6s,baz=103,slow=23,SNR=5.1						
JCJ				Sn	Sn	00 12 43.9	-9.4
	comp=E,15nm,0.3s,baz=282,slow=23,SNR=6.7						
JCJ	**Chichijima**	**10.14**	**179**		**Pn**	**00 10 58.3**	**-2.5**
USRK	**Ussuriysk Ar.**	**10.24**	**316**	Pn	**Pn**	**00 11 02.0**	**-0.1**
	comp=E,0.3nm,0.3s,baz=95,slow=14,SNR=4.3						
	comp=E,1.4nm,0.5s						
KSRS	**Korea Array**	**11.16**	**275**	Pn	**Pn**	**00 11 14.5**	**-0.2**
	comp=E,0.2nm,0.3s,baz=91,slow=13,SNR=8.6						
KSRS				LR	LR	00 15 19.5	
	comp=E,67nm,18.3s,baz=75,slow=36						
	comp=E,3.3nm,0.8s						
KLR	**Kul'dur**	**14.06**	**331**	Pn	**Pn**	**00 11 53.1**	**-1.2**
	comp=E,0.2nm,0.3s,baz=140,slow=11,SNR=5.3						
KLR				LR	LR	00 17 26.5	
	comp=E,39nm,18.1s,baz=138,slow=38						
	comp=E,0.9nm,0.7s						
JOW	**Kunigami**	**15.55**	**232**	Pn	**Pn**	**00 12 14.1**	**-0.2**
	comp=E,0.4nm,0.3s,baz=57,slow=17,SNR=0.7						
	comp=E,3.0nm,0.5s						
PETK	**Petropavlovsk-**	**19.28**	**30**	LR	LR	00 20 44.8	
	comp=E,19nm,21.7s,baz=232,slow=38						
TIA	**Tai'an**	**19.90**	**274**	P	**P**	**00 13 06.8**	**+0.7**
TIA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
XLT	**XiLinHaoTe**	**20.68**	**297**	*e*P	Pn	00 13 23.6	+6.5
XLT				PP	PnPn	00 13 44.3	+11
XLT				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HNS	**HongShan**	**21.63**	**279**	⇑P	**P**	**00 13 22.4**	**-2.3**
HNS				pmax	pmax		
	comp=Z,13nm,0.7s						
MA2	**Magadan**	**23.04**	**12**	P	**P**	**00 13 39.6**	**+0.1**
	comp=Z,8.0nm,0.8s,baz=189,slow=11,SNR=12						
MA2				LR	LR	00 22 09.1	
	comp=Z,42nm,18.9s,baz=232,slow=36						
	comp=Z,8.0nm,0.8s						
MA2	**Magadan**	**23.04**	**12**		**P**	**00 13 39.2**	**-0.3**
MA2				IAmb	IAmb	00 13 41.1	
	comp=Z,9.1nm,0.8s						
HHC	**Hu-ho-hao-te**	**23.80**	**288**	*e*P	**P**	**00 13 47.5**	**+0.3**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,70nm,6.6s						
YAK	**Yakutsk**	**25.94**	**347**	LR	LR	00 24 27.7	
	comp=Z,44nm,18.5s,baz=258,slow=37						
XAN	**Xi'an**	**26.95**	**273**	P	**P**	**00 14 14.9**	**-0.9**
XAN				pP	pP	00 14 27.2	+1.2
XAN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ULN	**Ulaanbaatar**	**27.57**	**304**	P	**P**	**00 14 21.0**	**-0.4**
ENH	**Enshi**	**27.77**	**265**		**P**	**00 14 21.1**	**-2.0**
ENH				IAmb	IAmb	00 14 22.9	
	comp=Z,8.0nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**27.91**	**122**	T	T	00 43 50.9	
	baz=314,slow=75,SNR=122						
H11N1	**WAKE ISLAND Hy**	**27.92**	**122**	T	T	00 43 58.2	
	baz=314,slow=75,SNR=136						
H11N3	**WAKE ISLAND Hy**	**27.93**	**122**	T	T	00 43 53.4	
	baz=314,slow=75,SNR=152						
SONM	**Songino Array**	**28.01**	**303**	P	**P**	**00 14 25.0**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=104,slow=9.2,SNR=14						
SONM				LR	LR	00 25 45.4	
	comp=Z,42nm,19.1s,baz=210,slow=37						
	comp=Z,1.2nm,0.6s						
SONM	**Songino Array**	**28.01**	**303**	P	**P**	**00 14 24.8**	**-0.4**
H11S1	**WAKE ISLAND Hy**	**28.64**	**124**	T	T	00 44 43.8	
	baz=316,slow=76,SNR=97						
H11S3	**WAKE ISLAND Hy**	**28.64**	**124**	T	T	00 44 39.7	
	baz=316,slow=76,SNR=100						
H11S2	**WAKE ISLAND Hy**	**28.65**	**124**	T	T	00 44 38.1	
	baz=316,slow=76,SNR=85						
TLY	**Talaya**	**30.50**	**311**	LR	LR	00 27 00.8	
	comp=Z,28nm,18.1s,baz=96,slow=36						
LZDM	**Lanzhou Array**	**30.59**	**279**	P	**P**	**00 14 49.2**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=78,slow=9.0,SNR=1.8						
	comp=Z,0.7nm,0.3s						
PZH	**PanZhiHua**	**35.54**	**264**	P	**P**	**00 15 32.4**	**+0.8**
WMQ	**Urumqi**	**41.11**	**297**	*e*P	**P**	**00 16 19.0**	**+0.8**
CMAR	**Chiang Mai Arr**	**41.96**	**255**	P	**P**	**00 16 26.7**	**+1.4**
	comp=Z,0.5nm,0.3s,baz=62,slow=7.6,SNR=7.1						
CMAR				LR	LR	00 33 46.7	
	comp=Z,18nm,20.4s,baz=290,slow=36						
	comp=Z,0.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**41.96**	**255**	P	**P**	**00 16 24.5**	**-0.8**
ZAA0	**Zalesovo Array**	**42.07**	**312**	P	**P**	**00 16 24.8**	**-0.9**
ZALV	**Zalesovo Beam**	**42.07**	**312**	P	**P**	**00 16 24.9**	**-0.8**
	comp=Z,2.8nm,0.8s,baz=90,slow=8.9,SNR=12						
ZALV				PcP	**PcP**	**00 18 18.7**	**-1.3**
	comp=Z,0.4nm,0.4s,baz=90,slow=3.2,SNR=2.1						
ZALV				LR	LR	00 34 37.9	
	comp=Z,36nm,18.0s,baz=102,slow=37						
	comp=Z,2.8nm,0.8s						
ZALV	**Zalesovo Beam**	**42.07**	**312**	P	**P**	**00 16 24.4**	**-1.4**
NRIK	**Noril'sk**	**43.23**	**335**	P	**P**	**00 16 34.1**	**-0.9**
	comp=Z,1.5nm,0.7s,baz=88,slow=22,SNR=4.3						
	comp=Z,1.5nm,0.7s						
C18K	**Utukok River**	**43.89**	**26**		**P**	**00 16 40.9**	**+0.5**
C18K				IAmb	IAmb	00 16 42.6	
	comp=Z,6.9nm,0.9s						
MKAR	**Makanchi Array**	**44.35**	**302**	P	**P**	**00 16 43.6**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=84,slow=8.3,SNR=17						
	comp=Z,1.2nm,0.6s						
MKAR	**Makanchi Array**	**44.35**	**302**		**P**	**00 16 43.2**	**-1.1**
MAKZ	**Makanchi**	**44.56**	**302**	P	**P**	**00 16 44.7**	**-1.3**
C19K	**Lookout Ridge**	**44.57**	**26**	P	**P**	**00 16 46.3**	**+0.5**
C19K				IAmb	IAmb	00 16 48.7	
	comp=Z,7.0nm,1.1s						
KURK	**Kurchatov**	**46.12**	**308**		**P**	**00 16 57.2**	**-1.0**
KURK				IAmb	IAmb	00 17 11.5	
	comp=Z,5.3nm,0.8s						
KURBB	**Kurchatov Arra**	**46.19**	**308**	P	**P**	**00 16 58.0**	**-0.8**
	comp=Z,2.0nm,0.6s,baz=82,slow=7.8,SNR=28						
	comp=Z,2.0nm,0.6s						
B21K	**Ikpikpuk River**	**46.40**	**26**	P	**P**	**00 17 01.0**	**+0.8**
B21K				IAmb	IAmb	00 17 13.2	
	comp=Z,8.3nm,1.5s						
KDAK	**Kodiak Island**	**46.65**	**42**	LR	LR	00 37 43.4	
	comp=Z,30nm,20.4s,baz=226,slow=38						
EVN	**Everest**	**46.78**	**275**		**P**	**00 17 03.9**	**-0.6**
EVN				IAmb	IAmb	00 17 20.6	
	comp=Z,6.2nm,1.3s						
TRF	**Thorofare Moun**	**47.61**	**34**	P	**P**	**00 17 08.9**	**-1.0**
WUS	**Wushi**	**47.81**	**295**	P	**P**	**00 17 12.2**	**+0.3**
WRH	**Wood River Hil**	**48.57**	**33**	P	**P**	**00 17 16.1**	**-1.0**
TARG	**Taragay, Kyrgy**	**48.67**	**296**	P	**P**	**00 17 18.1**	**-0.7**
TARG				IAmb	IAmb	00 17 40.8	
	comp=Z,2.2nm,0.7s						
SCM	**Sheep Creek Mo**	**49.03**	**36**	P	**P**	**00 17 21.5**	**+0.6**
IL31		**49.08**	**32**	P	**P**	**00 17 21.1**	**+0.2**
IL31				IAmb	IAmb	00 17 22.4	
	comp=Z,3.6nm,0.8s						
ILAR	**Eielson Array**	**49.08**	**32**	P	**P**	**00 17 21.6**	**+0.6**
	comp=Z,2.0nm,0.8s,baz=264,slow=6.0,SNR=26						
	comp=Z,2.0nm,0.8s						
ILAR	**Eielson Array**	**49.08**	**32**	P	**P**	**00 17 21.4**	**+0.4**
BOOM	**Boomskoye usch**	**49.77**	**298**	P	**P**	**00 17 26.1**	**-0.8**
BOOM				IAmb	IAmb	00 17 45.0	
	comp=Z,3.7nm,1.3s						
BVAR	**Borovoye Array**	**50.73**	**312**	P	**P**	**00 17 32.7**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=83,slow=6.0,SNR=5.2						
	comp=Z,0.5nm,0.5s						
AAK	**Ala-Archa**	**50.75**	**298**	P	**P**	**00 17 35.1**	**+0.8**
BORK	**Borovoye**	**50.77**	**312**	P	**P**	**00 17 34.8**	**+0.8**
BORK				IAmb	IAmb	00 17 52.8	
	comp=Z,3.6nm,1.2s						
G30M	**tAoh Zraii Nji**	**53.21**	**29**	P	**P**	**00 17 53.0**	**+1.0**
KK31	**Karatay Array**	**53.37**	**300**	P	**P**	**00 17 53.3**	**-0.3**
KK31				IAmb	IAmb	00 18 07.2	
	comp=Z,3.3nm,1.1s						
KKAR	**Karatay Array**	**53.37**	**300**	P	**P**	**00 17 53.2**	**-0.4**
GSI	**Gunungsitoli**	**54.28**	**239**	P	**P**	**00 18 00.2**	**-0.3**
CHGR	**Chuyangaron**	**55.95**	**295**		**P**	**00 18 11.2**	**-1.1**
ARTI	**Arti**	**56.57**	**319**	P	**P**	**00 18 15.3**	**-1.1**
WB0	**Warramunga Arr**	**57.17**	**188**	P	**P**	**00 18 20.1**	**-0.9**
WRA	**Warramunga Arr**	**57.35**	**188**	P	**P**	**00 18 21.7**	**-0.6**
	comp=Z,1.0nm,0.4s,baz=5.8,slow=7.2,SNR=22						
	comp=Z,1.0nm,0.4s						
WRA	**Warramunga Arr**	**57.35**	**188**	P	**P**	**00 18 20.9**	**-1.4**
AB31	**Akbulak array**	**58.11**	**310**		**P**	**00 18 26.0**	**-1.4**
AB31				IAmb	IAmb	00 18 40.4	
	comp=Z,1.6nm,0.7s						
ABKAR	**Akbulak array**	**58.11**	**310**	P	**P**	**00 18 26.2**	**-1.2**
ASAR	**Alice Springs**	**61.07**	**188**	P	**P**	**00 18 48.0**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=14,slow=11,SNR=7.1						
	comp=Z,0.7nm,0.8s						
ASAR	**Alice Springs**	**61.07**	**188**	P	**P**	**00 18 46.9**	**-1.1**
RES	**Resolute Bay**	**62.27**	**15**	P	**P**	**00 18 55.4**	**-0.1**
RES				IAmb	IAmb	00 18 56.6	
	comp=Z,3.8nm,1.2s						
YKA	**Yellowknife Ar**	**63.40**	**30**	P	**P**	**00 19 03.5**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=305,slow=7.3,SNR=9.0						
	comp=Z,0.5nm,0.6s						
YKA	**Yellowknife Ar**	**63.40**	**30**	P	**P**	**00 19 02.9**	**-0.2**
FINES	**FINESS Array B**	**68.81**	**332**	P	**P**	**00 19 37.2**	**-0.7**
	comp=Z,2.3nm,1.0s,baz=38,slow=5.3,SNR=3.4						
	comp=Z,2.3nm,1.0s						
BLKN	**Baker Lake**	**69.02**	**23**	P	**P**	**00 19 38.4**	**-0.7**
BLKN				IAmb	IAmb	00 19 40.0	
	comp=Z,3.6nm,0.7s						
KBZ	**Khabaz**	**71.07**	**311**	P	**P**	**00 19 51.7**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=95,slow=6.4,SNR=4.3						
	comp=Z,1.6nm,0.8s						
HFS	**Hagfors**	**74.05**	**336**	P	**P**	**00 20 09.4**	**-0.1**
	comp=Z,3.9nm,0.9s,baz=71,slow=9.6,SNR=4.4						
	comp=Z,3.9nm,0.9s						
NOA	**NORSAR Array B**	**74.14**	**337**	P	**P**	**00 20 09.4**	**-0.6**
	comp=Z,1.9nm,1.0s,baz=61,slow=4.0,SNR=1.5						
	comp=Z,1.9nm,1.0s						
AKASG	**Malin Array Be**	**74.37**	**322**	P	**P**	**00 20 10.6**	**-1.0**
	comp=Z,1.4nm,0.5s,baz=48,slow=6.1,SNR=8.7						
	comp=Z,1.4nm,0.5s						
NVAR	**Mina Array Bea**	**74.52**	**53**	P	**P**	**00 20 13.2**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=278,slow=8.4,SNR=3.6						
	comp=Z,0.7nm,0.7s						
PDAR	**Pinedale Array**	**77.21**	**46**	P	**P**	**00 20 28.8**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=281,slow=1.8,SNR=6.3						
	comp=Z,0.5nm,0.6s						
PDAR	**Pinedale Array**	**77.21**	**46**	P	**P**	**00 20 28.1**	**-0.1**
BRTR	**Keskin Array B**	**79.01**	**312**	P	**P**	**00 20 38.3**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=74,slow=5.1,SNR=1.9						
	comp=Z,0.4nm,0.7s						
BRTR	**Keskin Array B**	**79.01**	**312**	P	**P**	**00 20 37.3**	**-0.8**
SRO	**Srobarova**	**81.51**	**325**	*e*P	**P**	**00 20 52.8**	**+1.5**
SRO	**Srobarova**	**81.51**	**325**	*e*P	**P**	**00 20 52.8**	**+1.5**
MODS	**Modra-Piesok**	**81.56**	**326**	*e*P	**P**	**00 20 52.5**	**+1.0**
MODS	**Modra-Piesok**	**81.56**	**326**	*e*P	**P**	**00 20 52.5**	**+1.0**
GEC2	**GERESS Array S**	**82.74**	**328**	P	**P**	**00 20 57.2**	**-0.7**
GEC2				IAmb	IAmb	00 21 13.4	
	comp=Z,3.9nm,1.2s						
GERES	**GERESS Array B**	**82.74**	**328**	P	**P**	**00 20 57.0**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=46,slow=4.6,SNR=3.6						
	comp=Z,0.8nm,0.6s						
SCHQ	**Schefferville**	**85.00**	**16**	P	**P**	**00 21 08.3**	**-0.9**
	comp=Z,1.4nm,0.9s,baz=35,slow=7.6,SNR=3.9						
	comp=Z,1.4nm,0.9s						
SCHQ	**Schefferville**	**85.00**	**16**	P	**P**	**00 21 08.4**	**-0.7**
TXAR	**Lajitas Array**	**89.65**	**53**	P	**P**	**00 21 33.1**	**+0.9**
	comp=Z,0.6nm,0.8s,baz=289,slow=3.2,SNR=6.3						
	comp=Z,0.6nm,0.8s						
TXAR	**Lajitas Array**	**89.65**	**53**	P	**P**	**00 21 31.5**	**-0.7**
LPAZ	**La Paz**	**146.22**	**60**	PKPbc	**PKPbc**	**00 28 15.6**	**+0.1**
	comp=Z,1.2nm,0.9s,baz=331,slow=3.3,SNR=4.5						
H03N2	**Juan Fernandez**	**146.63**	**96**	T	T	03 12 25.6	
	baz=291,slow=76,SNR=4.8						
H03N3	**Juan Fernandez**	**146.64**	**96**	T	T	03 12 27.8	
	baz=291,slow=76,SNR=8.7						
H03N1	**Juan Fernandez**	**146.65**	**96**	T	T	03 12 28.7	
	baz=291,slow=76,SNR=9.5						

IDC 01 00:12:55.0±6.3, 19°.26S×176°.43W, h0km, mb4.1/4, mbtmp4.1/4, Error ellipse: s-maj=262.2km s-min=39.9km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**35.10**	**262**	P	P	00 19 52.1	+1.8
	4.4nm,0.6s,baz=104,slow=8.2,SNR=1.6						
	4.4nm,0.6s						
WRA	**Warramunga Arr**	**46.24**	**261**	P	P	00 21 21.6	-0.8
	1.0nm,0.3s,baz=97,slow=7.6,SNR=39						
	1.0nm,0.3s						
ASAR	**Alice Springs**	**46.24**	**255**	P	P	00 21 21.8	-0.6
	1.2nm,0.4s,baz=87,slow=7.8,SNR=27						
	1.2nm,0.4s						
ILAR	**Eielson Array**	**86.80**	**12**	P	P	00 25 40.8	+0.1
	0.5nm,1.1s,baz=227,slow=4.6,SNR=1.6						
	0.5nm,1.1s						

*IDC **01** 00:17:26.4±1.2, 24°.35N×125°.19E, h0km, mb3.3/4, mbtmp3.3/5, ML2.7/1, Error ellipse: s-maj=32.6km s-min=23.9km az=76.0*
*NIED **01** 00:17:30.6, 24°.25N×125°.25E, h38km, MW3.6, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.14; $M_{\theta\theta}$-1.15; $M_{\phi\phi}$1.29; $M_{r\theta}$-2.12; $M_{\theta\phi}$-1.12; $M_{\phi r}$1.08; Fault plane solution: $M_0$2.90000×10^{14} NP1: ϕ_s24.00000°, δ35.00000°, λ-3.00000°. NP2: ϕ_s116.00000°, δ88.00000°, λ-125.00000°.*
*JMA **01** 00:17:30.6±0.2, 24°N±1°×125°.3E±0°.6, h38km±4km, MD3.7/10, MV3.6/10, NEAR MIYAKOJIMA ISLAND*
ISC 01 00:17:31.4±1.6, 24°.29N±0°.08×125°.25E±0°.06, h37km±2km, n22, σ1s.01/28, mb3.3/4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JMJ2	**Miyako jima3**	**0.45**	**9**	*i* P	**Pn**	**00 17 41.0**	**-0.3**
JMJ2				S	**Sn**	**00 17 48.4**	**+0.1**
JOGS	**Gusukube**	**0.48**	**17**	P	**Pn**	**00 17 41.5**	**-0.4**
JOGS				A	A	00 17 41.5	
	comp=N,11nm,0.8s,comp=E,11nm,0.4s						
JOGS				*e*S	**Sn**	**00 17 49.9**	**+0.7**
JMJ	**Miyako jima 2**	**0.52**	**4**	P	**Pn**	**00 17 40.9**	**-1.5**
JTJ	**Tarama**	**0.61**	**305**	*i* P	**Pn**	**00 17 43.0**	**-0.8**
JTJ				A	A	00 17 43.0	
	comp=N,7.0nm,0.9s,comp=E,5.0nm,1.2s						
JTJ				S	**Sn**	**00 17 52.0**	**-0.4**
JIKM	**Ikemajima**	**0.63**	**359**	P	**Pn**	**00 17 43.5**	**-0.5**
JISG	**Ishigakijimahi**	**0.91**	**289**	P	**Pn**	**00 17 47.3**	**-0.4**
JISG				*e*S	**Sn**	**00 17 59.3**	**-0.2**
JIJ	**Ishigaki jima**	**1.02**	**274**	*e*P	**Pn**	**00 17 48.9**	**-0.3**
JKRS	**Kuro-shima**	**1.14**	**267**	*e*P	**Pn**	**00 17 51.3**	**+0.5**
HATJ	**Hateruma jima**	**1.34**	**260**	*e*P	**Pn**	**00 17 53.6**	**-0.1**
HATJ				*e*S	**Sn**	**00 18 10.3**	**0.0**
IRIF	**Iriomote-Funau**	**1.39**	**272**	P	**Pn**	**00 17 54.6**	**+0.3**
YOJ	**Yonaguni jima**	**2.05**	**275**	P	**Pn**	**00 18 05.1**	**+1.7**
NACB	**Ninganchiao**	**3.34**	**269**	P	**Pn**	**00 18 20.0**	**-1.1**
YHNB	**Yeheng**	**3.55**	**277**	P	**Pn**	**00 18 25.3**	**+1.2**
JOW	**Kunigami**	**3.72**	**47**	Pn	**Pn**	**00 18 25.8**	**-0.5**
	comp=E,1.1nm,0.3s,baz=255,slow=19,SNR=11						
JOW				Sn	**Sn**	**00 19 09.5**	**+0.6**
	comp=E,2.0nm,0.3s,baz=135,slow=24,SNR=1.4						
	comp=E,3.4nm,0.3s						
YULB	**Yu-li**	**3.73**	**257**	P	**Pn**	**00 18 24.7**	**-1.8**
SSLB	**Suanglung**	**3.96**	**264**	P	**Pn**	**00 18 28.6**	**-1.1**
TWGBT	**Beinan**	**4.10**	**250**	P	**Pn**	**00 18 29.0**	**-2.6**
TPUB	**Ta-pu**	**4.35**	**258**	P	**Pn**	**00 18 35.2**	**+0.2**
MKAR	**Makanchi Array**	**40.88**	**314**	P	**P**	**00 25 09.5**	**-0.4**
	comp=E,0.2nm,0.4s,baz=104,slow=9.1,SNR=8.1						
	comp=E,0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**44.45**	**319**	P	**P**	**00 25 38.3**	**-0.4**
	comp=E,0.1nm,0.4s,baz=109,slow=9.2,SNR=1.5						
	comp=E,0.1nm,0.4s						
WRA	**Warramunga Arr**	**44.85**	**168**	P	**P**	**00 25 42.3**	**+0.1**
	comp=E,0.4nm,0.6s,baz=347,slow=8.0,SNR=2.3						
	comp=E,0.4nm,0.6s						
ASAR	**Alice Springs**	**48.41**	**169**	P	**P**	**00 26 11.3**	**+1.3**
	comp=E,0.2nm,0.6s,baz=347,slow=8.4,SNR=4.4						
	comp=E,0.2nm,0.6s						

*IDC **01** 00:51:02.2±1.0, 4°.46S×125°.45E, h473km±11km, mb3.1/7, mbtmp4.1/12, Error ellipse: s-maj=19.8km s-min=9.9km az=71.0*
*NEIC **01** 00:51:02.1±1.4, 4°.5S±0°.1×125°.4E±0°.1, h470km±14km, mb4.0/6, Error ellipse: s-maj=19.3km s-min=16.5km az=100.0*
*DJA **01** 00:51:02.9±0.3, 4°S±3°×12°5E±°, h461km±7km, M4.1/30, mB4.7/7, mb4.1/21, MLv4.2/30, Mw(mB)4.0/7*
ISC 01 00:51:01.7±0.6, 4°.51S±0°.07×125°.45E±0°.08, h470km, n46, σ0s.90/53, mb3.5/9, Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**2.08**	**53**	P	**P**	**00 52 04.8**	**+0.3**
SANI	**Sanana**	**2.50**	**13**	P	**P**	**00 52 07.4**	**+0.4**
AAI	**Ambon**	**2.86**	**74**	P	**P**	**00 52 09.0**	**-0.4**
KRAI	**Karang Ratu**	**3.17**	**68**	P	**P**	**00 52 11.6**	**0.0**
MSAI	**Masohi**	**3.66**	**72**	P	**P**	**00 52 15.7**	**+0.3**
BSSI	**Bau Bau, Buton**	**5.20**	**252**	P	**P**	**00 52 30.5**	**+1.5**
	0.2nm27nm,0.6s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
APSI	Ampana	5.21	313	P	P	00 52 29.5	+0.3
	0.2nm47nm,0.9s						
SOEI	Soe	5.35	193	P	P	00 52 30.8	+0.2
SOEI	Soe	5.35	193	P	P	00 52 31.2	+0.6
EDFI	Ende, Flores	5.63	221	P	P	00 52 34.0	+0.7
	0.1nm23nm,0.8s						
GTOI	Gorontalo	5.66	334	P	P	00 52 35.7	+2.2
	0.1nm23nm,0.7s						
KAPI	Kappang	5.70	265	P	P	00 52 34.2	+0.3
	8.5nm,0.5s,baz=20,slow=1.9,SNR=7.3						
KAPI	Kappang	5.70	265	P	P	00 52 32.9	-1.0
KAPI	Kappang	5.70	265	P	P	00 52 34.2	+0.3
BATI	Baumata	5.93	197	P	P	00 52 37.3	+1.0
	102nm,0.3s,baz=34,slow=2.8,SNR=26						
BATI				S	S	00 53 51.1	-2.3
	45nm,0.4s,baz=317,slow=22,SNR=13						
BATI	Baumata	5.93	197	P	P	00 52 37.1	+0.9
MRSI	Marisa	6.06	325	P	P	00 52 37.6	+0.1
MMSI	Mamuju	6.77	285	P	P	00 52 45.4	+0.8
	0.2nm48nm,0.7s						
SAUI	Saumlaki	6.77	121	P	P	00 52 44.5	-0.1
SIJI	Sorong	6.84	58	P	P	00 52 46.3	+0.9
	2.0nm,0.3s,baz=211,slow=17,SNR=2.1						
SIJI				S	S	00 54 10.1	-0.2
	1.7nm,0.3s,baz=206,slow=22,SNR=1.4						
WSI	Waingapu	7.24	225	P	P	00 52 50.8	+1.3
	142nm,1.3s						
TOLI2	Tolitoli	7.27	320		P	00 52 49.3	-0.5
BASI	Baing, Sumba	7.45	220	P	P	00 52 52.7	+1.0
	131nm,1.3s						
MTN	Manton Dam	10.01	146	P	P	00 53 20.2	+1.2
MTNI	Mataram	10.09	246	P	P	00 53 20.8	+0.9
KNRA	Kununurra	11.57	164	P	P	00 53 36.7	+0.8
JAGI	Jajag, Banyuwa	11.89	250	P	P	00 53 38.3	-1.0
FITZ	Fitzroy Crossi	13.51	179	P	P	00 53 57.1	+0.4
	4.0nm,0.6s,baz=352,slow=6.6,SNR=10						
WB0	Warramunga Arr	17.50	151		P	00 54 39.2	+0.5
WRA	Warramunga Arr	17.62	151	P	P	00 54 40.8	+0.8
	12nm,0.6s,baz=329,slow=10,SNR=208						
WRA				S	S	00 57 39.3	+0.3
	1.2nm,0.8s,baz=323,slow=17,SNR=4.6						
WRA				ScP	ScP	01 01 43.1	+0.4
	0.4nm,1.0s,baz=341,slow=2.3,SNR=1.3						
WRA	Warramunga Arr	17.62	151		P	00 54 39.8	-0.2
AS31	Alice Springs	20.73	158		P	00 55 10.1	+1.4
AS31				IAmb	IAmb	00 55 12.0	
	comp=Z,7.3nm,0.4s						
ASAR	Alice Springs	20.73	158	P	P	00 55 10.2	+1.6
	comp=Z,4.6nm,0.5s,baz=342,slow=16,SNR=150						
ASAR				S	S	00 58 29.4	0.0
	comp=Z,0.7nm,0.9s,baz=338,slow=18,SNR=4.4						
ASAR				PcP	PcP	00 58 58.3	+0.4
	comp=Z,0.2nm,0.3s,baz=343,slow=1.6,SNR=1.8						
ASAR				ScP	ScP	01 01 49.9	+0.1
	comp=Z,0.3nm,0.8s,baz=347,slow=3.0,SNR=4.5						
	comp=Z,4.6nm,0.5s						
ASAR	Alice Springs	20.73	158		P	00 55 10.6	+1.9
FORT	Forrest	26.25	175	P	P	00 55 58.0	0.0
FORT				IAmb	IAmb	00 56 10.2	
	comp=Z,14nm,1.1s						
USRK	Ussuriysk Ar.	48.84	6	P	P	00 59 03.6	+0.6
	comp=Z,1.3nm,0.4s,baz=177,slow=7.6,SNR=4.1						
	comp=Z,1.3nm,0.4s						
SONM	Songino Array	54.74	344	P	P	00 59 45.9	-0.1
	comp=Z,0.2nm,0.3s,baz=129,slow=3.9,SNR=2.1						
	comp=Z,0.2nm,0.3s						
MKAR	Makanchi Array	63.70	328	P	P	01 00 46.3	+0.1
	comp=Z,0.4nm,0.4s,baz=122,slow=8.0,SNR=9.0						
	comp=Z,0.4nm,0.4s						
MKAR	Makanchi Array	63.70	328	P	P	01 00 45.4	-0.8
ZAA0	Zalesovo Array	67.40	335	P	P	01 01 08.1	-1.1
ZAA0				IAmb	IAmb	01 01 09.1	
	comp=Z,1.8nm,1.1s						
ZALV	Zalesovo Beam	67.40	335	P	P	01 01 08.4	-0.8
	comp=Z,0.6nm,0.5s,baz=145,slow=7.4,SNR=4.4						
	comp=Z,0.6nm,0.5s						
ZALV	Zalesovo Beam	67.40	335	P	P	01 01 08.0	-1.2
KURBB	Kurchatov Arra	68.06	330	P	P	01 01 12.9	-0.4
	comp=Z,0.4nm,0.5s,baz=138,slow=5.8,SNR=7.2						
	comp=Z,0.4nm,0.5s						
KURK	Kurchatov	68.07	330	P	P	01 01 12.9	-0.5
KURK				IAmb	IAmb	01 01 29.9	
	comp=Z,2.3nm,1.1s						
ILAR	Eielson Array	93.04	25	P	P	01 03 23.1	-0.9
	comp=Z,0.3nm,0.6s,baz=256,slow=5.0,SNR=5.7						
	comp=Z,0.3nm,0.6s						
TORD	Torodi Ar. Bea	123.86	283	PKP	PKiKP	01 09 07.1	+0.1
	comp=Z,0.3nm,0.6s,baz=63,slow=3.8,SNR=2.1						

IDC 01 01:00:56.5±6.6**, 16°.20S**×**173°.44W, h0**km**, mb3.8**/2**, mbtmp3.8**/3**, ML3.1**/1**, Error ellipse: s-maj=293.6km s-min=29.9km az=140.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.79	35	Pn	Pn	01 01 41.9	-0.5
	2.8nm,0.3s,baz=213,slow=17,SNR=5.0						
AFI				Sn	Sn	01 02 11.8	-5.0
	11nm,0.3s,baz=137,slow=23,SNR=4.3						
	9.7nm,0.3s						
WRA	Warramunga Arr	49.62	257	P	P	01 09 49.8	-0.3
	0.7nm,0.9s,baz=94,slow=6.8,SNR=5.9						
	0.7nm,0.9s						
ASAR	Alice Springs	49.83	253	P	P	01 09 51.5	-0.2
	1.8nm,0.7s,baz=88,slow=8.5,SNR=20						
	1.8nm,0.7s						
BRTR	Keskin Array B	146.75	320	PKPbc	PKPbc	01 20 40.8	-0.2
	1.1nm,0.9s,baz=44,slow=3.8,SNR=4.9						

*IDC **01** 01:20:27.3±0.9, 8°.23N×39°.61W, h0km, mb3.8/8, mbtmp3.9/10, ML3.6/2, MS3.4/14, Error ellipse: s-maj=29.6km s-min=21.1km az=142.0*
*NEIC **01** 01:20:28.7±0.6, 8°.26N±0°.06×39°.3W±0°.1, h10km±1km, mb4.7/8, Error ellipse: s-maj=18.2km s-min=9.6km az=75.0*
ISC 01 01:20:28.9±0.6**, 8°.2N**±0°.1×**39°.51W**±0°.09**, h14**km**, n37,** σ**1s.59**/19**, mb4.0**/10**, MS3.4**/13**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MDP	Montagnes des	13.40	258	Pn	Pn	01 23 36.3	-2.6
	0.3nm,0.3s,baz=65,slow=14,SNR=10						
MDP				Sn	Sn	01 25 49.1	-19
	0.2nm,0.3s,baz=299,slow=2.3,SNR=1.7						
MDP				LR	LR	01 28 10.0	
	comp=Z,58nm,18.2s,baz=112,slow=35						
	8.8nm,0.9s						
RCBR	Riachuelo	14.38	165	Pn	Pn	01 23 51.4	-0.8
	0.3nm,0.3s,baz=353,slow=21,SNR=7.0						
RCBR				Sn	Sn	01 26 18.8	-13
	baz=328,slow=20						
	0.8nm,0.4s						
RCBR	Riachuelo	14.38	165		Pn	01 23 52.0	-0.3
SACV	Santiago Islan	16.97	65	Pn	Pn	01 24 23.3	-2.8
SACV				IAmb	IAmb	01 25 03.0	
	comp=Z,73nm,1.2s						
BOAV	Boa Vista	21.69	256	P	P	01 25 19.8	+0.1
BOAV				IAmb	IAmb	01 25 21.3	
	comp=Z,13nm,0.9s						
H05S1	Guadeloupe/Mar	21.81	288	T	T	01 47 52.9	
	SNR=3.8						
SMRT	St. Maarten	24.93	296	P	P	01 25 51.9	0.0
SMRT				IAmb	IAmb	01 26 34.3	
	comp=Z,51nm,1.4s						
BDFB	Brasilia	25.13	200	P	P	01 25 54.8	+0.9
H10N3	ASCENSION HYDR	29.57	122	T	T	01 57 32.8	
	baz=302,slow=75,SNR=16						
H10N2	ASCENSION HYDR	29.58	122	T	T	01 57 33.1	
	baz=302,slow=75,SNR=15						
H10N1	ASCENSION HYDR	29.59	122	T	T	01 57 34.3	
	baz=302,slow=75,SNR=15						
H10S3	ASCENSION HYDR	30.04	124	T	T	01 58 07.5	
	baz=297,slow=74,SNR=6.8						
H10S2	ASCENSION HYDR	30.06	124	T	T	01 58 09.2	
	baz=283,slow=74,SNR=8.5						
SDV	Santo Domingo	30.79	274	LR	LR	01 40 08.0	
	comp=Z,28nm,18.1s,baz=89,slow=38						
DBIC	Dimbokro	34.39	90	LR	LR	01 38 42.5	
	comp=Z,46nm,18.0s,baz=138,slow=32						
ROSC	El Rosal	34.74	267	LR	LR	01 41 21.5	
	comp=Z,65nm,18.8s,baz=89,slow=36						
LPAZ	La Paz	37.33	229	P	P	01 27 42.8	+0.8
	comp=Z,2.1nm,0.9s,baz=94,slow=4.5,SNR=5.6						
LPAZ				LR	LR	01 42 14.1	
	comp=Z,36nm,20.4s,baz=50,slow=35						
	comp=Z,2.1nm,0.9s						
LPAZ	La Paz	37.33	229	P	P	01 27 42.8	+0.8
CPUP	Villa Florida	38.43	206	LR	LR	01 43 50.5	
	comp=Z,85nm,18.0s,baz=18,slow=36						
MDT	Midelt	40.54	48	LR	LR	01 41 43.4	
	comp=Z,39nm,20.0s,baz=230,slow=31						
TORD	Torodi Ar. Bea	40.75	79	P	P	01 28 10.9	+1.0
	comp=Z,1.8nm,0.7s,baz=264,slow=11,SNR=11						
	comp=Z,1.8nm,0.7s						
ATAH	Atahualpa	41.65	250	LR	LR	01 46 21.9	
	comp=Z,43nm,19.2s,baz=62,slow=37						
SADO	Sadowa	50.03	324	LR	LR	01 48 26.2	
	comp=Z,36nm,18.4s,baz=102,slow=34						
SCHQ	Schefferville	51.38	340	LR	LR	01 49 02.7	
	comp=Z,43nm,18.1s,baz=134,slow=33						
PLCA	Paso Flores	56.45	208	P	P	01 30 10.9	+0.4
	comp=Z,1.6nm,0.9s,baz=37,slow=5.8,SNR=3.4						
	comp=Z,1.6nm,0.9s						
DAVOX	Davos/Dischmat	56.94	38	LR	LR	01 52 21.1	
	comp=Z,49nm,18.6s,baz=278,slow=34						
MURB	Monte Urbino	57.22	43	P	P	01 30 14.2	-1.8
NRCA	Norcia	57.46	44	P	P	01 30 16.9	-0.7
NRCA				IAmb	IAmb	01 30 35.5	
	comp=Z,15nm,1.4s						
TXAR	Lajitas Array	63.53	299	P	P	01 31 00.4	+0.9
	comp=Z,0.3nm,0.7s,baz=66,slow=5.8,SNR=2.4						
	comp=Z,0.3nm,0.7s						
TXAR	Lajitas Array	63.53	299	P	P	01 31 02.7	+3.2
AKASG	Malin Array Be	70.28	39	P	P	01 31 43.5	+1.6
	comp=Z,0.3nm,0.3s,baz=261,slow=5.5,SNR=1.7						
	comp=Z,0.3nm,0.3s						
FINES	FINESS Array B	71.30	28	P	P	01 31 49.4	+1.5
	comp=Z,5.3nm,1.1s,baz=235,slow=6.7,SNR=3.5						
	comp=Z,5.3nm,1.1s						
BOSA	Boshof	72.32	123	LR	LR	01 59 14.5	
	comp=Z,30nm,19.0s,baz=194,slow=32						
EIL	Elat	72.51	62	LR	LR	02 05 14.4	
	comp=Z,23nm,19.5s,baz=248,slow=37						
YKA	Yellowknife Ar	75.91	332	P	P	01 32 14.2	-0.8
	comp=Z,0.2nm,0.6s,baz=102,slow=5.5,SNR=4.8						
	comp=Z,0.2nm,0.6s						
FURI	Furi	77.17	83	LR	LR	02 06 05.1	
	comp=Z,24nm,18.6s,baz=218,slow=35						
ILAR	Eielson Array	89.94	336	P	P	01 33 26.5	-1.1
	comp=Z,0.5nm,0.9s,baz=47,slow=3.8,SNR=4.4						
	comp=Z,0.5nm,0.9s						

*IDC **01** 01:40:36.8±3.3, 6°.27S×149°.31E, h40km±25km, mb3.5/7, mbtmp3.9/9, ML4.4/1, MS3.4/7, Error ellipse: s-maj=44.7km s-min=16.4km az=109.0*
*NEIC **01** 01:40:39.2±1.7, 6°.50S±0°.04×149°.5E±0°.1, h35km±1km, mb4.2/8, Error ellipse: s-maj=17.9km s-min=6.1km az=105.0*
ISC 01 01:40:38.1±0.6**, 6°.48S**±0°.07×**149°.36E**±0°.10**, h49**km**, n31,** σ**2s.03**/32**, mb3.8**/9**, MS3.4**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RABL	Rabaul	3.60	51		Pn	01 41 31.9	+0.5
PMG	Port Moresby	3.64	217	P	Pn	01 41 33.9	+2.1
	210nm,0.6s,baz=51,slow=5.9,SNR=100						
PMG				S	Sn	01 42 15.8	+2.2
	200nm,0.6s,baz=13,slow=15,SNR=8.4						
MANU	Manus Island	4.84	336		Pn	01 41 51.1	+2.7
COEN	Coen	9.61	219	Pn	Pn	01 42 54.9	+1.1
CTA	Charters Tower	13.86	192	LR	LR	01 48 36.6	
	comp=Z,100nm,21.2s,baz=49,slow=34						
EIDS	Eidsvold	18.86	175		Pn	01 44 55.9	+0.8
EIDS				IAmb	IAmb	01 44 58.8	
	comp=Z,10nm,0.9s						
SIJI	Sorong	18.89	286	LR	LR	01 54 25.8	
	comp=Z,99nm,18.6s,baz=199,slow=44						
WR8	Warramunga Arr	19.69	226	P	P	01 45 04.3	+0.9
WR8				IAmb	IAmb	01 45 05.0	
	comp=Z,17nm,0.9s						
WRA	Warramunga Arr	19.80	226	P	P	01 45 05.2	+0.6
	comp=Z,1.2nm,0.3s,baz=50,slow=10,SNR=65						
WRA				S	S	01 48 40.9	-4.3
	comp=Z,0.5nm,0.8s,baz=46,slow=22,SNR=2.6						
WRA				PcP	PcP	01 49 21.3	0.0
	comp=Z,0.4nm,0.8s,baz=51,slow=2.0,SNR=2.0						
WRA				ScP	ScP	01 52 54.3	+0.7
	comp=Z,1.0nm,0.9s,baz=47,slow=2.5,SNR=5.3						
	comp=Z,13nm,0.7s						
WRA	Warramunga Arr	19.80	226	P	P	01 45 04.2	-0.4
GUMO	Guam	20.43	347	LR	LR	01 51 25.9	
	comp=Z,73nm,21.1s,baz=88,slow=32						
KNRA	Kununurra	22.16	244	P	P	01 45 29.6	-0.5
DZM	Mont Dzumac	22.64	135	LR	LR	01 53 33.2	
	comp=Z,154nm,19.1s,baz=272,slow=34						
AS31	Alice Springs	22.65	219		P	01 45 36.1	+0.9
ASAR	Alice Springs	22.65	219	P	P	01 45 36.1	+0.8
	comp=Z,1.5nm,0.4s,baz=55,slow=9.4,SNR=68						
ASAR				PcP	PcP	01 49 27.9	+1.1
	comp=Z,0.2nm,0.6s,baz=55,slow=2.1,SNR=2.0						
ASAR				S	S	01 49 35.5	-4.5
	comp=Z,0.7nm,1.0s,baz=38,slow=23,SNR=4.1						
ASAR				LR	LR	01 54 43.4	
	comp=Z,92nm,18.6s,baz=102,slow=37						
	comp=Z,1.5nm,0.4s						
ASAR	Alice Springs	22.65	219	P	P	01 45 36.0	+0.7
ARMA	Armidale	23.91	175	P	P	01 45 49.0	+1.4
ARMA				IAmb	IAmb	01 46 13.6	
	comp=Z,15nm,1.4s						
BATI	Baumata	25.69	260	LR	LR	01 59 04.3	
	comp=Z,97nm,18.3s,baz=20,slow=43						
STKA	Stephens Creek	26.29	195	P	P	01 46 09.8	+0.7
	comp=Z,2.8nm,0.7s,baz=354,slow=11,SNR=6.2						
STKA				LR	LR	01 56 33.4	
	comp=Z,142nm,18.2s,baz=23,slow=36						
	comp=Z,2.8nm,0.7s						
PSA00	Pilbara Seismi	32.24	239	P	P	01 47 00.7	-1.3
PEA0B	Petropavlovsk-	59.78	6	P	P	01 50 40.5	+2.5
PETK	Petropavlovsk-	59.78	6	P	P	01 50 37.5	-0.5
	comp=Z,1.4nm,0.4s,baz=156,slow=6.2,SNR=12						
	comp=Z,1.4nm,0.4s						
PETK	Petropavlovsk-	59.78	6	P	P	01 50 39.1	+1.1
SONM	Songino Array	65.98	330	P	P	01 51 18.4	-1.1
	comp=Z,0.1nm,0.5s,baz=124,slow=4.6,SNR=1.4						
	comp=Z,0.1nm,0.5s						
MKAR	Makanchi Array	79.37	320	P	P	01 52 36.1	-2.9
	comp=Z,0.1nm,0.3s,baz=108,slow=4.7,SNR=2.0						
	comp=Z,0.1nm,0.3s						
ZALV	Zalesovo Beam	80.67	327	P	P	01 52 42.7	-3.1
	comp=Z,0.2nm,0.3s,baz=103,slow=6.2,SNR=1.7						
	comp=Z,0.2nm,0.3s						
G18K	Tagagawik	81.42	19	P	P	01 52 52.2	+2.7
G18K				IAmb	IAmb	01 53 23.9	
	comp=Z,2.9nm,1.4s						
C19K	Lookout Ridge	83.14	16	P	P	01 53 01.6	+3.1
ILAR	Eielson Array	85.00	23	P	P	01 53 05.0	-2.9
	comp=Z,0.5nm,0.9s,baz=250,slow=5.4,SNR=4.4						
	comp=Z,0.5nm,0.9s						
TORD	Torodi Ar. Bea	147.48	284	PKPbc	PKPbc	02 00 17.6	-0.2
	comp=Z,0.5nm,0.3s,baz=66,slow=4.4,SNR=13						
BDFB	Brasilia	152.08	142	PKPbc	PKPbc	02 00 28.8	-0.5
	comp=Z,1.1nm,0.3s,baz=184,slow=2.3,SNR=5.3						

*KRNET **01** 01:48:40.3±0.1, 40°.60N×73°.00E, h17km, mb3.2*
*SOME **01** 01:48:40.5, 40°.75N×72°.95E, h0km*
*NNC **01** 01:48:42.2±0.7, 40°.71N×72°.99E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=6.4km s-min=2.8km az=172.0*
*ISU **01** 01:48:45, 40°.54N×72°.98E, h13km*
ISC 01 01:48:41.8±0.7**, 40°.57N**±0°.03×**72°.93E**±0°.02**, h10**km**, n56,** σ**1s.39**/97**, 36C-16D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OHH	Osh	0.12	248	⇑iP	Pg	01 48 43.8	-1.0
OHH				⇑iS	Sg	01 48 46.5	-0.4
TSTA	Tashata	0.35	271	P	Pg	01 48 48.9	+0.2
TSTA				S	Sb	01 48 54.8	-0.9
SFK	Sufi-Kurgan	0.71	142	⇑iP	Pg	01 48 53.7	-1.8
SFK				⇑iS	Sg	01 49 03.4	-1.4
SALK	Salom-Alik	0.74	65	⇓iP	Pg	01 48 53.5	-2.7
SALK				⇓iS	Sg	01 49 03.0	-2.9
ARSB	Arslanbob	0.75	3	⇓iP	Pg	01 48 54.4	-2.0
ARSB				⇓iS	Sg	01 49 04.5	-1.8
FRG	Fergana	0.90	258	P	Pb	01 48 59.0	-0.5
FRG				S	Sn	01 49 12.3	-1.3
KSNS	Kasansay	1.22	299	P	Pg	01 49 05.4	+0.1
KSNS				S	Sn	01 49 23.5	+1.9
DRK	Karamyk	1.39	219	⇓iP	Pn	01 49 07.3	-0.3
DRK				⇓iS	Sg	01 49 26.8	+0.1
ARK	Arkit	1.43	329	⇓iP	Pn	01 49 07.1	-0.8
ARK				⇓iS	Sn	01 49 26.4	-0.4
MINT	Mingtut	1.50	267	S	Sg	01 49 31.6	+1.7
TRKS	Terek-Say	1.66	306	⇓iP	Pn	01 49 10.6	-0.5
TRKS				⇓iS	Sn	01 49 32.5	-0.1
ARLS	Aral	1.66	39	⇑iP	Pn	01 49 10.2	-1.0
ARLS				⇑iS	Sn	01 49 31.5	-1.1
BTK	Batken	1.70	253	⇑iP	Pb	01 49 12.6	-0.5
BTK				⇑iS	Sg	01 49 36.0	-0.3
MNAS	Manas	1.94	351	⇓iP	Pn	01 49 15.7	+0.7
MNAS				⇓iS	Sb	01 49 41.3	-0.4
UCH	Uchtor	2.04	35	⇑iP	Pn	01 49 16.2	-0.4
UCH				⇑iS	Sn	01 49 42.8	+0.5
JNKS	Jany-Kuch	2.10	76	⇑iP	Pn	01 49 17.6	+0.3
JNKS				⇑iS	Sn	01 49 44.6	+1.0
EKS2	Erkin-Say	2.18	17	⇑iP	Pn	01 49 18.6	+0.3
EKS2				⇑iS	Sn	01 49 46.3	+0.8
MRKS	Merke	2.18	6	Pg	Pn	01 49 19.8	+1.6
	64nm,0.4s						
MRKS				Lg	Lg	01 49 48.8	
	133nm,0.3s						
MRKS	Merke	2.18	6	eP	Pn	01 49 19.6	+1.4
	64nm,0.4s						
MRKS				eS	Sb	01 49 47.7	-0.9
	150nm,0.3s						
AAK	Ala-Archa	2.37	29	⇓Pn	Pn	01 49 21.5	+0.5
	1.8nm,0.3s						
AAK				⇓Lg	Lg	01 49 52.7	
	4.8nm,0.4s						
AAK	Ala-Archa	2.37	29	⇑iP	Pn	01 49 21.3	+0.4
AAK				⇑iS	Sn	01 49 51.0	+0.8
CHMG	Chimgan	2.42	295	P	Pb	01 49 24.6	-0.8
CHMG				S	Sg	01 49 57.8	-1.6
NRN	Naryn	2.48	69	⇑iP	Pn	01 49 22.1	-0.4
NRN				⇑iS	Sn	01 49 52.5	-0.5
CHRV	Charvak	2.49	296	P	Pb	01 49 26.4	-0.3
CHRV				S	Sg	01 50 00.2	-1.7
FRU1	Bishkek	2.57	29	⇑iP	Pn	01 49 24.0	+0.4
FRU1				⇑iS	Sn	01 49 55.8	+0.8
KBK	Karagaybulak	2.57	35	⇑iP	Pn	01 49 23.9	+0.2
KBK				⇑iS	Sn	01 49 55.7	+0.5
TVKS	Tavaksay	2.67	293	P	Pn	01 49 24.6	-0.4
TVKS				S	Sb	01 50 00.4	-2.3
IUG	Iuzhnay	2.69	307	Pg	Pb	01 49 30.0	-0.1
	28nm,0.2s						
IUG				Lg	Lg	01 50 06.1	
	52nm,0.2s						
CHMS	Chumysh	2.78	29	⇑iP	Pn	01 49 26.6	+0.2
CHMS				⇑iS	Sn	01 50 00.5	+0.4
USP	Ospenovka	2.94	23	⇑iP	Pn	01 49 28.8	+0.2
USP				⇑iS	Sn	01 50 04.3	+0.4
BOOM	Boomskoye usch	2.96	49	⇑iP	Pn	01 49 29.2	+0.2
BOOM				⇑iS	Sn	01 50 04.9	+0.2
ULHL	Ulahol	3.00	55	⇑iP	Pn	01 49 29.7	+0.1
ULHL				⇑iS	Sn	01 50 05.7	0.0
TKM2	Tokmak 2	3.08	39	⇓iP	Pn	01 49 31.0	+0.3
TKM2				⇓iS	Sn	01 50 07.8	+0.1
KK31	Karatay Array	3.11	325	⇑Pn	Pn	01 49 30.9	0.0
	0.3nm,0.3s,baz=338,slow=44,SNR=20						
KK31				⇑Pg	Pb	01 49 37.7	+0.5
	1.0nm,0.2s,baz=131,slow=16,SNR=22						
KK31				Lg	Lg	01 50 17.9	
	7.8nm,0.3s,baz=144,slow=29,SNR=8.1						
SGDS	Sogindy	3.15	23	Pg	Pb	01 49 37.0	-0.9
SGDS				Lg	Lg	01 50 17.4	
KST	Kastek	3.35	42	Pg	Pb	01 49 40.6	-0.8
	2.8nm,0.3s						
KST				Lg	Lg	01 50 24.2	
	9.5nm,0.4s						
KST	Kastek	3.35	42	eP	Pb	01 49 40.6	-0.8
	2.8nm,0.3s						
KST				eS	Sb	01 50 24.1	+1.9
	9.5nm,0.4s						
BRLS	Boroldaу	3.38	318	Pg	Pb	01 49 41.1	-0.6
	3.3nm,0.3s						
BRLS				Lg	Lg	01 50 25.0	
	13nm,0.2s						
BRLS	Borolday	3.38	318	eP	Pb	01 49 40.6	-1.1
	1.8nm,0.2s						
BRLS				eS	Sb	01 50 23.6	+0.8
	15nm,0.2s						
DGS	Degeres	3.41	38	Pg	Pb	01 49 41.7	-0.6
	7.2nm,0.5s						
DGS				Lg	Lg	01 50 26.5	
	5.5nm,0.5s						
DGS	Degeres	3.41	38	eP	Pb	01 49 41.7	-0.6
	7.2nm,0.5s						
DGS				eS	Sb	01 50 26.5	+2.7
	5.5nm,0.5s						
CHGR	Chuyangaron	3.48	238	⇑iP	Pn	01 49 37.9	+1.8
CHGR				⇑iS	Sn	01 50 19.9	+2.4
MTBS	Maitube	3.66	44	Pg	Pb	01 49 47.1	+0.6
	3.8nm,0.3s						
MTBS				Lg	Lg	01 50 35.0	
	6.8nm,0.5s						
MTBS	Maitube	3.66	44	eP	Pb	01 49 47.1	+0.6
	3.8nm,0.3s						
MTBS				eS	Sb	01 50 35.0	+4.1
	6.8nm,0.5s						
KRBS	Karabastau	3.73	32	Pg	Pb	01 49 46.8	-1.0
	2.1nm,0.4s						
KRBS				Lg	Lg	01 50 34.6	
	8.7nm,0.6s						
KRBS	Karabastau	3.73	32	eP	Pb	01 49 47.4	-0.4
	2.0nm,0.5s						
KRBS				eS	Sb	01 50 35.2	+2.1
	8.4nm,0.6s						
TNSS	Tian-Shan	3.88	49	Pg	Pb	01 49 50.4	-0.2
	1.0nm,0.4s						
TNSS				Lg	Lg	01 50 40.5	
	2.5nm,0.5s						
TNSS	Tian-Shan	3.88	49	eP	Pb	01 49 50.4	-0.2
	1.0nm,0.4s						
TNSS				eS	Sb	01 50 40.5	+2.7
	2.5nm,0.5s						
MDOK	Medeo	4.02	49	Pg	Pb	01 49 53.8	+1.0
	6.4nm,0.7s						
MDOK				Lg	Lg	01 50 46.4	
	8.6nm,0.5s						
KOTS	Kotyrbulak	4.10	48	Pg	Pb	01 49 54.9	+0.7
	2.6nm,0.4s						
KOTS				Lg	Lg	01 50 48.5	
	17nm,0.4s						
KOTS	Kotyrbulak	4.10	48	eP	Pb	01 49 54.9	+0.7
	2.6nm,0.4s						
KOTS				eS	Sb	01 50 48.5	+4.7
	17nm,0.4s						
KTBS	Karatobe	4.20	40	Pg	Pb	01 49 55.9	+0.1
	1.5nm,0.2s						
KTBS				Lg	Lg	01 50 50.0	
	0.6nm,0.6s						
KTBS	Karatobe	4.20	40	eP	Pb	01 49 55.9	+0.1
	1.5nm,0.2s						
KTBS				eS	Sb	01 50 50.0	+3.5
	0.6nm,0.6s						
PRZ	Przheval'sk	4.53	63	⇑iP	Pn	01 49 51.1	+0.5
PRZ				⇑iS	Sn	01 50 42.5	-0.8
BTLS	Baitał	4.54	10	Pg	Pb	01 50 01.9	+0.3
	2.4nm,0.6s						
BTLS				Lg	Lg	01 51 00.2	
	3.3nm,0.3s						
BTLS	Baital	4.54	10	eP	Pb	01 50 02.5	+0.9
	2.1nm,0.3s						
BTLS				eS	Sb	01 51 01.1	+4.8
	4.2nm,0.3s						

*MOS **01** 01:53:23.8±1.3, 43°.71N×146°.22E, h124km, mb4.5/1, Error ellipse: s-maj=22.8km s-min=19.3km az=54.3*
*JMA **01** 01:53:25.8±0.2, 43°.7N±0°.7×14°6E±°, h119km±1km, MV3.5/39, NEAR KUNASHIRI ISLAND*
*SKHL **01** 01:53:26.2±0.3, 43°.70N×146°.20E, h115km±2km, mb4.7/4, msh5.6/4*
*IDC **01** 01:53:27.6±2.8, 43°.61N×145°.99E, h140km±22km, mb3.0/3, mbtmp3.4/5, MS2.7/1, Error ellipse: s-maj=36.1km s-min=27.6km az=168.0*
ISC 01 01:53:25.5±1.0**, 43°.70N**±0°.07×**146°.24E**±0°.06**, h119**km±6km**, n38,** σ**0s.67**/50**, mb3.2**/3**, 4C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	0.43	321	c iPN	Pn	01 53 42.7	-0.2
YUK				i S	Sn	01 53 55.6	-0.4

YUK				pmax	pmax		
	comp=N,61nm,0.2s						
YUK				pmax	pmax		
	comp=Z,640nm,0.2s						
YUK				pmax	pmax		
	comp=E,98nm,0.1s						
YUK				smax	smax		
	comp=N,1µm,0.3s						
YUK				smax	smax		
	comp=E,2µm,0.3s						
YUK	**Yuzh-Kuril'sk**	**0.43**	**321**	*i* P	**Pn**	**01 53 42.7**	**-0.2**
YUK				AMB	AMB	01 53 43.2	
	comp=E,550nm,0.3s						
YUK				*i* S	**Sn**	**01 53 55.3**	**-0.7**
YUK				A	A	01 53 56.4	
	comp=E,2µm,0.4s						
YUK				A	A	01 53 56.4	
	comp=E,2µm,0.4s						
SHO	**Shikotan**	**0.46**	**68**	*e*P	Pn	01 53 53.4	+10
SHO				AMB	AMB	01 53 57.4	
	comp=E,80nm,0.3s						
SHO				*e*S	Sn	01 54 06.5	+10
SHO				A	A	01 54 07.9	
	comp=E,390nm,0.3s						
SHO				A	A	01 54 07.9	
	comp=E,340nm,0.3s						
NEM2	**Nemuro 2**	**0.49**	**228**	P	**Pn**	**01 53 43.5**	**+0.3**
NEM2				S	**Sn**	**01 53 56.4**	**-0.2**
NMR	**Nemuro--Hokkai**	**0.49**	**229**	⇑*i*PN	**Pn**	**01 53 43.5**	**+0.3**
NMR				*i* S	**Sn**	**01 53 56.2**	**-0.4**
NMR	**Nemuro--Hokkai**	**0.49**	**229**	*i* P	**Pn**	**01 53 43.6**	**+0.3**
NMR				*i* S	**Sn**	**01 53 56.4**	**-0.2**
GLVR	**Golovnino**	**0.52**	**275**	⇑*i*PN	**Pn**	**01 53 43.9**	**+0.5**
GLVR				*i* S	**Sn**	**01 53 57.6**	**+0.7**
GLVR				pmax	pmax		
	comp=Z,988nm,0.2s						
GLVR				pmax	pmax		
	comp=E,68nm,0.1s						
GLVR				smax	smax		
	comp=N,5µm,0.4s						
GLVR				smax	smax		
	comp=E,4µm,0.4s						
GLVR	**Golovnino**	**0.52**	**275**	*i* P	**Pn**	**01 53 43.9**	**+0.5**
GLVR				AMB	AMB	01 53 44.4	
	comp=E,990nm,0.4s						
GLVR				*i* S	**Sn**	**01 53 57.6**	**+0.7**
GLVR				A	A	01 53 59.3	
	comp=E,5µm,0.4s						
GLVR				A	A	01 53 59.3	
	comp=E,4µm,0.4s						
RUSJ	**Misakicho**	**0.82**	**300**	⇑*i*PN	**Pn**	**01 53 45.8**	**+0.1**
RUSJ				*i* S	**Sn**	**01 54 00.5**	**-0.5**
JRA	**Rausu**	**0.84**	**287**	P	**Pn**	**01 53 46.0**	**+0.1**
JRA				*e*S	**Sn**	**01 54 01.6**	**+0.3**
JNSB	**Nemuroshibetsu**	**0.90**	**276**	P	**Pn**	**01 53 46.9**	**+0.6**
JNSB				S	**Sn**	**01 54 02.7**	**+0.5**
JKHN	**Kushirohamanak**	**1.00**	**232**	*i* P	**Pn**	**01 53 47.8**	**+0.5**
JNK	**Nakash**	**1.11**	**265**	*i* P	**Pn**	**01 53 48.6**	**+0.1**
JNK				S	**Sn**	**01 54 05.7**	**-0.2**
AKK	**Akkeshi**	**1.22**	**237**	*e*P	**Pn**	**01 53 49.8**	**+0.1**
JAK	**Akkeshi**	**1.32**	**239**	*i* P	**Pn**	**01 53 51.0**	**+0.3**
JAK				S	**Sn**	**01 54 09.9**	**0.0**
JTKR	**Abashiri--Toko**	**1.71**	**280**	P	**Pn**	**01 53 55.1**	**-0.1**
JTKR				S	**Sn**	**01 54 16.9**	**-1.1**
JAR	**Ashorobuto**	**1.84**	**258**	*i* P	**Pn**	**01 53 57.4**	**+0.6**
JAR				S	**Sn**	**01 54 20.9**	**+0.1**
JOB	**Onbets**	**1.93**	**247**	*i* P	**Pn**	**01 53 58.5**	**+0.6**
JOB				S	**Sn**	**01 54 22.6**	**0.0**
KUR	**Kuril'sk**	**1.93**	**37**	⇓*i*PN	**Pn**	**01 53 56.4**	**-1.5**
KUR				*i* S	**Sn**	**01 54 21.7**	**-1.1**
KUR				pmax	pmax		
	comp=Z,148nm,0.3s						
KUR				smax	smax		
	comp=N,509nm,0.2s						
KUR				smax	smax		
	comp=E,221nm,0.2s						
KUR	**Kuril'sk**	**1.93**	**37**	*e*P	**Pn**	**01 53 58.3**	**+0.4**
KUR				AMB	AMB	01 53 59.0	
	comp=E,130nm,0.3s						
KUR				*e*S	**Sn**	**01 54 23.1**	**+0.3**
KUR				A	A	01 54 24.9	
	comp=E,430nm,0.3s						
KUR				A	A	01 54 24.9	
	comp=E,250nm,0.3s						
JMP	**Maruseppu**	**2.11**	**279**	P	**Pn**	**01 54 00.1**	**-0.1**
JMP				S	**Sn**	**01 54 26.1**	**-0.7**
JCH	**Churui**	**2.37**	**244**	*i* P	**Pn**	**01 54 03.5**	**+0.1**
JCH				S	**Sn**	**01 54 31.5**	**-1.1**
JKK2	**Kamakawa 2**	**2.53**	**275**	P	**Pn**	**01 54 05.9**	**+0.3**
JKA	**Kamikawa-asahi**	**2.66**	**280**	*e*P	**Pn**	**01 54 08.6**	**+1.3**
ASAJ	**Asahikawa**	**2.67**	**280**	P	**Pn**	**01 54 08.6**	**+1.3**
	comp=E,17nm,0.4s,baz=103,slow=14,SNR=42						
ASAJ				S	**Sn**	**01 54 40.3**	**+0.8**
	comp=E,40nm,0.8s,baz=347,slow=26,SNR=9.1						
ASAJ	**Asahikawa**	**2.67**	**280**	P	**Pn**	**01 54 08.0**	**+0.7**
MJAR	**Matsushiro Arr**	**9.42**	**223**	P	**Pn**	**01 55 37.5**	**-0.6**
	comp=E,2.4nm,0.8s,baz=38,slow=12,SNR=6.9						
PAU	**Pauzhetka**	**10.55**	**39**	*e*P	**Pn**	**01 55 53.8**	**+0.7**
JNU	**Nakatsue**	**15.99**	**234**	LR	LR	02 03 07.4	
	comp=E,30nm,20.3s,baz=70,slow=37						
SONM	**Songino Array**	**27.88**	**293**	P	**P**	**01 59 02.9**	**-1.1**
	comp=E,0.4nm,0.7s,baz=82,slow=9.2,SNR=3.6						
	comp=E,0.4nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**29.50**	**138**	T	T	02 30 41.6	
	baz=328,slow=76,SNR=27						
H11N1	**WAKE ISLAND Hy**	**29.51**	**138**	T	T	02 30 35.8	
	baz=328,slow=76,SNR=28						
H11N3	**WAKE ISLAND Hy**	**29.52**	**138**	T	T	02 30 38.3	
	baz=328,slow=76,SNR=20						
H11S1	**WAKE ISLAND Hy**	**30.45**	**139**	T	T	02 31 38.2	
	baz=329,slow=76,SNR=39						
H11S3	**WAKE ISLAND Hy**	**30.46**	**139**	T	T	02 31 44.9	
	baz=329,slow=76,SNR=36						
H11S2	**WAKE ISLAND Hy**	**30.47**	**139**	T	T	02 31 40.1	
	baz=329,slow=76,SNR=32						
ILAR	**Eielson Array**	**41.92**	**36**	P	**P**	**02 01 05.2**	**+1.4**
	comp=E,0.4nm,0.7s,baz=279,slow=8.2,SNR=6.2						
	comp=E,0.4nm,0.7s						
MKAR	**Makanchi Array**	**44.02**	**297**	P	**P**	**02 01 20.2**	**-0.8**
	comp=E,0.2nm,0.5s,baz=78,slow=9.8,SNR=6.3						
	comp=E,0.2nm,0.5s						

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*IDC **01** 02:04:26.9±1.7, 21.°42N×120.°91E, h0km, mb3.3/6, mbtmp3.3/6, MS3.3/2, Error ellipse: s-maj=152.7km s-min=21.4km az=65.0*
*TAP **01** 02:04:28.9, 21.°84N×121.°70E, h28km, ML3.8, D*
*JMA **01** 02:04:30.7±0.2, 22°N±1°×121.°7E±0.°5, h42km, MV3.3/11, TAIWAN REGION*
ISC 01 02:04:28.9±0.9**, 21.°84N**±0.°04×**121.°74E**±0.°03**, h21**km±2km**, n106, σ1.°18**/152**, mb3.3**/6**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LYUB	**Lan-yu**	**0.22**	**319**	*i* P	**Pb**	**02 04 35.0**	**+0.3**
LYUB				*i* S	**Sb**	**02 04 39.1**	**+0.3**
LAY	**Lan-yu**	**0.27**	**319**	*i* P	**Pb**	**02 04 34.8**	**-0.4**
LAY				S	**Sb**	**02 04 38.9**	**-0.6**
TSEB	**Hengchuen, Pin**	**0.78**	**275**	*e*P	**Pn**	**02 04 44.8**	**+0.1**
TSEB				S	**Sn**	**02 04 55.2**	**-0.6**
SMST	**Manzhou Townsh**	**0.86**	**283**	*e*P	**Pb**	**02 04 44.6**	**-0.5**
SMST				*e*S	**Sn**	**02 04 56.4**	**-1.3**
TWKBT	**Hengchun**	**0.87**	**277**	*i* P	**Pb**	**02 04 44.9**	**-0.4**
TWKBT				*e*S	**Sb**	**02 04 53.5**	**-2.9**
LDUT	**Ludao**	**0.87**	**343**	P	**Pn**	**02 04 44.2**	**-1.8**
LDUT				S	**Sb**	**02 04 54.6**	**-1.8**
TWK1	**Hengchun**	**0.87**	**277**	P	**Pn**	**02 04 44.9**	**-1.1**
TWK1				*e*S	**Sb**	**02 04 54.2**	**-2.4**
TAW	**Tawu**	**0.94**	**304**	*e*P	**Pn**	**02 04 46.0**	**-0.9**
TAW				*e*S	**Sb**	**02 04 57.1**	**-1.4**
HEN	**Hengchun**	**0.94**	**280**	*e*S	**Sn**	**02 04 58.1**	**-1.8**
SLIU	**Shizi**	**0.95**	**294**	P	**Pb**	**02 04 46.6**	**0.0**
SLIU				*e*S	**Sn**	**02 04 59.6**	**-0.4**
EAST	**Anshuo**	**0.99**	**304**	*e*P	**Pb**	**02 04 46.9**	**-0.5**
EAST				*e*S	**Sb**	**02 04 59.0**	**-1.0**
ECL	**Taimali**	**1.05**	**316**	*e*P	**Pb**	**02 04 48.0**	**-0.4**
TWGBT	**Beinan**	**1.15**	**328**	P	**Pn**	**02 04 49.2**	**-0.6**
TWGBT	**Beinan**	**1.15**	**328**	P	**Pb**	**02 04 49.6**	**-0.5**
TWGBT				S	**Sn**	**02 05 03.6**	**-1.4**
TWG	**Pinlang**	**1.16**	**328**	P	**Pb**	**02 04 49.8**	**-0.4**
TWG				*e*S	**Sn**	**02 05 02.9**	**-2.3**
SCZT	**Fangliau**	**1.17**	**297**	*e*P	**Pb**	**02 04 50.2**	**-0.2**
LONT	**Longtian**	**1.21**	**332**	*e*P	**Pb**	**02 04 51.4**	**+0.4**
LONT				S	**Sb**	**02 05 07.4**	**+1.2**
SSPT	**Xinbi**	**1.26**	**301**	*e*P	**Pb**	**02 04 53.2**	**+1.3**
MASBT	**Mashibuluo**	**1.28**	**307**	*e*P	**Pb**	**02 04 51.6**	**-0.7**
CHKT	**Chengkung**	**1.30**	**345**	P	**Pn**	**02 04 51.0**	**-0.9**
CHKT				*e*S	**Sn**	**02 05 06.6**	**-2.2**
TSMG	**Majia**	**1.33**	**311**	*e*P	**Pn**	**02 04 52.0**	**-0.4**
SSD	**Sandimen**	**1.37**	**312**	*e*P	**Pn**	**02 04 52.0**	**-0.9**
CHKH	**Chenggong**	**1.39**	**347**	*i* P	**Pn**	**02 04 52.0**	**-1.0**
CHKH				S	**Sn**	**02 05 08.5**	**-2.3**
FULB	**Fuli**	**1.42**	**343**	P	**Pn**	**02 04 52.8**	**-0.8**
FULB				S	**Sn**	**02 05 10.4**	**-1.2**
SLGT	**Liugui**	**1.53**	**319**	*e*P	**Pb**	**02 04 57.2**	**+0.6**
SLGT				*e*S	**Sb**	**02 05 15.1**	**-0.5**
EYUL	**Yuli**	**1.55**	**346**	*e*P	**Pn**	**02 04 55.0**	**-0.4**
TWF1	**Yuli**	**1.56**	**345**	*e*P	**Pn**	**02 04 55.8**	**+0.3**
TWF1				*e*S	**Sn**	**02 05 14.2**	**-1.0**
TWM1	**Shoushan**	**1.56**	**309**	*e*P	**Pb**	**02 04 58.0**	**+0.8**
STYH	**Taoyuan**	**1.60**	**326**	*e*P	**Pb**	**02 04 57.1**	**-0.6**
YULB	**Yu-li**	**1.60**	**345**	P	**Pn**	**02 04 55.9**	**-0.2**
YULB	**Yu-li**	**1.60**	**345**	P	**Pn**	**02 04 55.8**	**-0.3**
YULB				*e*S	**Sn**	**02 05 15.8**	**-0.4**
SGST	**Jiashian**	**1.64**	**319**	*e*P	**Pb**	**02 04 57.2**	**-1.2**
SGST				*e*S	**Sb**	**02 05 20.2**	**+1.6**
HGSD	**Ruisui**	**1.67**	**350**	*e*P	**Pb**	**02 04 57.8**	**-1.2**
HGSD				*e*S	**Sb**	**02 05 20.6**	**+0.9**
EHYH	**Wanrong**	**1.69**	**348**	P	**Pn**	**02 04 57.6**	**+0.3**
EHYH				*e*S	**Sb**	**02 05 19.1**	**-1.0**
EHY	**Hungye**	**1.71**	**347**	P	**Pn**	**02 04 57.5**	**0.0**
EHY				*e*S	**Sn**	**02 05 17.5**	**-1.2**
WTP	**Ta-pu**	**1.75**	**324**	P	**Pb**	**02 05 00.9**	**+0.6**
WTP				*e*S	**Sb**	**02 05 23.5**	**+1.7**
CHN1	**Nanshi**	**1.75**	**320**	*e*P	**Pb**	**02 05 00.9**	**+0.6**
CHN1				S	**Sb**	**02 05 23.8**	**+2.0**
TPUB	**Ta-pu**	**1.78**	**325**	P	**Pb**	**02 05 01.6**	**+0.7**
TPUB	**Ta-pu**	**1.78**	**325**	*e*P	**Pb**	**02 05 01.1**	**+0.2**
TPUB				*e*S	**Sb**	**02 05 24.2**	**+1.4**
YUS	**Yu-Shan**	**1.80**	**336**	*e*P	**Pb**	**02 05 00.3**	**-1.1**
TWK	**Hsinying**	**1.83**	**321**	*e*P	**Pb**	**02 05 00.2**	**-1.6**
TWK				*e*S	**Sb**	**02 05 23.4**	**-1.0**
CHN4	**Tsaushan**	**1.84**	**325**	*e*P	**Pb**	**02 05 01.9**	**0.0**
CHN4				*e*S	**Sb**	**02 05 24.4**	**-0.1**
ALS	**Alishan**	**1.88**	**333**	*e*P	**Pb**	**02 05 02.0**	**-0.6**
WARBT	**Fenglin Townsh**	**1.90**	**350**	*e*P	**Pn**	**02 05 00.1**	**-0.1**
SHUL	**Shoufeng**	**1.95**	**355**	*e*P	**Pn**	**02 05 00.4**	**-0.4**
SHUL				*e*S	**Sn**	**02 05 23.8**	**-0.9**
VWDT	**VWDT**	**1.99**	**344**	*e*P	**Pb**	**02 05 02.5**	**-1.9**
ESL	**Shilin**	**1.99**	**352**	*e*P	**Pn**	**02 05 00.6**	**-0.8**
CHN5	**Tsauling**	**2.01**	**331**	*e*P	**Pb**	**02 05 04.9**	**+0.1**
CHN5				*e*S	**Sb**	**02 05 28.7**	**-0.6**
WHYT	**Xinyi Township**	**2.02**	**336**	*e*P	**Pb**	**02 05 03.9**	**-1.1**
WHYT				*e*S	**Sb**	**02 05 30.5**	**+0.7**
SSLB	**Suanglung**	**2.07**	**340**	P	**Pn**	**02 05 03.6**	**+1.0**
SSLB	**Suanglung**	**2.07**	**340**	*e*P	**Pb**	**02 05 04.2**	**-1.7**
SSLB				*e*S	**Sb**	**02 05 29.5**	**-1.6**
ETM	**Tongmen**	**2.13**	**354**	*e*P	**Pn**	**02 05 02.9**	**-0.5**
ETM				*e*S	**Sn**	**02 05 27.8**	**-1.4**
WDLH	**Douliu**	**2.15**	**329**	*e*S	**Sb**	**02 05 33.9**	**+0.5**
OWD	**Renai**	**2.17**	**346**	*e*P	**Pn**	**02 05 04.9**	**+0.9**
SMLT	**Sun Moon Lake**	**2.18**	**339**	*e*P	**Pb**	**02 05 06.7**	**-1.0**
SMLT				*e*S	**Sb**	**02 05 34.5**	**+0.2**
WJS	**Zhushan**	**2.19**	**335**	*e*P	**Pb**	**02 05 06.3**	**-1.4**
WJS				*e*S	**Sb**	**02 05 33.1**	**-1.2**
TYC	**Yuchr**	**2.21**	**339**	P	**Pb**	**02 05 07.3**	**-0.9**
WUSB	**Renai**	**2.22**	**345**	*e*P	**Pn**	**02 05 06.0**	**+1.3**
WUSB				*e*S	**Sn**	**02 05 32.0**	**+0.4**
WNT	**Mingjian**	**2.25**	**335**	*e*P	**Pb**	**02 05 09.2**	**+0.3**
NACB	**Ninganchiao**	**2.33**	**357**	P	**Pn**	**02 05 05.6**	**-0.5**
NACB	**Ninganchiao**	**2.33**	**357**	*e*P	**Pn**	**02 05 05.8**	**-0.2**
NACB				*e*S	**Sn**	**02 05 33.7**	**-0.4**
EOS4	**EOS4**	**2.34**	**13**	*e*P	**Pn**	**02 05 07.4**	**+1.6**
EOS4				*e*S	**Sn**	**02 05 32.2**	**-1.5**
WCS	**Beigang Elemen**	**2.34**	**341**	*e*S	**Sb**	**02 05 38.6**	**-0.2**
ETLH	**Xiulin Townshi**	**2.37**	**354**	*e*P	**Pn**	**02 05 07.4**	**+0.6**
ETLH				*e*S	**Sn**	**02 05 35.1**	**-0.1**
WDGT	**Dungji**	**2.39**	**307**	*e*P	**Pn**	**02 05 07.5**	**+0.7**
WDGT				*e*S	**Sn**	**02 05 35.3**	**-0.2**
EOS3	**EOS3**	**2.50**	**12**	*e*P	**Pn**	**02 05 08.7**	**+0.5**
EOS3				*e*S	**Sn**	**02 05 36.9**	**-1.0**
VCHM	**Qimei**	**2.53**	**303**	*e*P	**Pn**	**02 05 09.3**	**+0.5**
VCHM				*e*S	**Sn**	**02 05 39.9**	**+0.8**
WHP	**Taichung City**	**2.54**	**343**	*e*P	**Pb**	**02 05 12.8**	**-1.0**
WHP				*e*S	**Sb**	**02 05 44.9**	**+0.3**
EWUT	**Wuta**	**2.60**	**1**	*e*S	**Sn**	**02 05 40.9**	**+0.2**
PHUB	**P'eng-hu**	**2.60**	**310**	*e*P	**Pn**	**02 05 10.8**	**+0.9**
PHUB				*e*S	**Sn**	**02 05 42.2**	**+1.4**
TWQ1	**Liyutan**	**2.65**	**341**	*e*P	**Pb**	**02 05 13.4**	**-2.3**
TWQ1				*e*S	**Sb**	**02 05 47.6**	**-0.3**
LATG	**Datong**	**2.69**	**356**	*e*P	**Pn**	**02 05 12.7**	**+1.5**
NSY	**Sanyi**	**2.72**	**341**	*e*P	**Pb**	**02 05 13.9**	**-3.0**
NDS	**Dongshan**	**2.78**	**360**	*e*P	**Pn**	**02 05 13.9**	**+1.6**
NDS				*e*S	**Sn**	**02 05 44.5**	**-0.8**
YHNB	**Yeheng**	**2.84**	**353**	P	**Pn**	**02 05 15.3**	**+2.1**
YHNB	**Yeheng**	**2.84**	**353**	*e*S	**Sn**	**02 05 46.5**	**-0.3**
YOJ	**Yonaguni jima**	**2.86**	**24**	*e*P	**Pn**	**02 05 14.4**	**+1.0**
YOJ				*e*S	**Sn**	**02 05 48.1**	**+0.9**
LIOB	**Emei**	**2.87**	**347**	*e*P	**Pb**	**02 05 18.1**	**-1.4**
FUSB	**Fushanzhiwuyua**	**2.91**	**357**	*e*P	**Pb**	**02 05 17.2**	**-3.0**
FUSB				*e*S	**Sn**	**02 05 50.4**	**+1.8**
HATJ	**Hateruma jima**	**2.92**	**40**	*e*S	**Sn**	**02 05 47.9**	**-0.7**
NWLT	**Wulai**	**2.94**	**356**	*e*P	**Pb**	**02 05 17.4**	**-3.1**
NWLT				*e*S	**Sn**	**02 05 50.8**	**+1.7**
IRIF	**Iriomote-Funau**	**3.09**	**36**	*e*P	**Pn**	**02 05 17.5**	**+1.0**
TIPB	**Shuangxi**	**3.12**	**1**	*e*P	**Pn**	**02 05 19.0**	**+2.0**
TIPB				*e*S	**Sn**	**02 05 54.1**	**+0.4**
JKRS	**Kuro-shima**	**3.18**	**41**	*e*P	**Pn**	**02 05 18.7**	**+1.0**
JIJ	**Ishigaki jima**	**3.35**	**41**	*e*P	**Pn**	**02 05 20.8**	**+0.7**
JIJ				*e*S	**Sn**	**02 05 57.8**	**-1.5**
JISG	**Ishigakijimahi**	**3.62**	**40**	*e*P	**Pn**	**02 05 24.7**	**+1.0**
JISG				*e*S	**Sn**	**02 06 04.9**	**-1.0**
VWUC	**VWUC**	**3.78**	**327**	*e*P	**Pn**	**02 05 27.8**	**+1.8**
VWUC				*e*S	**Sn**	**02 06 09.8**	**0.0**
JTJ	**Tarama**	**3.90**	**44**	*e*S	**Sn**	**02 06 12.4**	**-0.4**
PTMZ	**Houxiangcun**	**3.99**	**323**	*e*S	**Sn**	**02 06 15.4**	**+0.3**
MATB	**Ma-tsu**	**4.60**	**339**	*e*P	**Pn**	**02 05 39.2**	**+2.0**
MATB				*e*S	**Sn**	**02 06 30.0**	**-0.1**
MHZQ	**Yeshan**	**4.91**	**330**	*e*S	**Sn**	**02 06 35.9**	**-1.9**
SXFK	**Yanhouchang**	**5.88**	**321**	*e*P	**Pn**	**02 05 56.3**	**+1.4**
SIJI	**Sorong**	**24.41**	**156**	LR	LR	02 20 31.7	
	comp=Z,46nm,20.1s,baz=34,slow=40						
SONM	**Songino Array**	**28.72**	**338**	P	**P**	**02 10 27.1**	**+2.2**
	0.5nm,0.7s,baz=154,slow=9.2,SNR=4.1						
	0.5nm,0.7s						
BATI	**Baumata**	**31.90**	**176**	LR	LR	02 27 02.6	
	comp=Z,66nm,19.0s,baz=2.0,slow=43						
MKAR	**Makanchi Array**	**40.39**	**318**	P	**P**	**02 12 04.5**	**-1.0**
	0.1nm,0.4s,baz=117,slow=7.1,SNR=4.1						
	0.1nm,0.4s						
H11N1	**WAKE ISLAND Hy**	**42.16**	**84**	T	T	02 57 30.4	
	baz=283						
H11N2	**WAKE ISLAND Hy**	**42.16**	**84**	T	T	02 57 30.5	
	baz=283						
H11N3	**WAKE ISLAND Hy**	**42.17**	**84**	T	T	02 57 26.7	
	baz=283						
H11S3	**WAKE ISLAND Hy**	**42.22**	**86**	T	T	02 57 26.9	
	baz=283						
H11S1	**WAKE ISLAND Hy**	**42.23**	**86**	T	T	02 57 32.1	
	baz=283						
H11S2	**WAKE ISLAND Hy**	**42.23**	**86**	T	T	02 57 32.9	
	baz=283						
ZALV	**Zalesovo Beam**	**42.49**	**328**	P	**P**	**02 12 23.4**	**+0.9**
	0.3nm,0.4s,baz=117,slow=8.3,SNR=3.6						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**43.31**	**163**	P	**P**	**02 12 29.1**	**-0.4**
	0.4nm,0.8s,baz=342,slow=8.2,SNR=2.3						
	0.4nm,0.8s						
KURBB	**Kurchatov Arra**	**44.24**	**321**	P	**P**	**02 12 36.8**	**+0.1**
	0.2nm,0.3s,baz=112,slow=8.1,SNR=3.3						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**46.75**	**165**	P	**P**	**02 12 56.6**	**-0.3**
	0.2nm,0.6s,baz=352,slow=12,SNR=2.0						
	0.2nm,0.6s						

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*MAN **01** 02:05:37.0, 19.°80N×121.°26E, h16km, MS4.4*
*BJI **01** 02:05:38.4, 19.°80N×121.°16E, h18km, mB4.6/17, mb4.4/51, ML4.0/2, Ms4.0/29, Ms7 4.0/31*
*NEIC **01** 02:05:39.0±1.8, 19.°74N±0.°07×121.°30E±0.°09, h35km±3km, mb4.6/105, Error ellipse: s-maj=11.6km s-min=9.7km az=92.0*
*IDC **01** 02:05:40.5±1.9, 19.°71N×121.°55E, h52km±16km, mb4.0/25, mbtmp4.3/29, ML4.4/4, MS3.7/32, Error ellipse: s-maj=16.2km s-min=10.5km az=76.0*
*DJA **01** 02:05:40.4±0.4, 20°N±3°×12°2E±°, h52km±6km, M4.9/29, mb4.8/29, mB5.6/10, MLv4.5/4, Mw(mB)5.1/10*
ISC 01 02:05:40.6±0.3**, 19.°74N**±0.°03×**121.°32E**±0.°05**, h52**km**, n208, σ1.°94**/166**, mb4.5**/89**, MS3.7**/33**, 1C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**1.55**	**205**	*i* P	**Pn**	**02 06 04.7**	**-1.1**
PIP				*i* S	**Sn**	**02 06 26.1**	**+1.3**
SIPP	**Brgy, Tapao**	**1.98**	**204**	*e*P	**Pn**	**02 06 11.3**	**-0.3**
SIPP				*e*S	**Sn**	**02 06 30.9**	**-4.5**
CVP	**Callao Caves**	**2.08**	**167**	*e*P	**Pn**	**02 06 13.6**	**+0.6**
CVP				*e*S	**Sn**	**02 06 41.7**	**+3.9**
TWG	**Pinlang**	**3.08**	**356**	Pn	**Pn**	**02 06 24.0**	**-2.7**
TPUB	**Ta-pu**	**3.60**	**350**	Pn	**Pn**	**02 06 32.1**	**-1.8**
YULB	**Yu-li**	**3.64**	**360**	Pn	**Pn**	**02 06 31.4**	**-3.0**
SSLB	**Suanglung**	**4.05**	**355**	Pn	**Pn**	**02 06 39.0**	**-1.0**
NACB	**Ninganchiao**	**4.42**	**3**	Pn	**Pn**	**02 06 43.5**	**-1.6**
YOJ	**Yonaguni jima**	**4.96**	**18**	Pn	**Pn**	**02 06 51.6**	**-0.8**
KNMB	**Chin-men Tao**	**5.43**	**331**		**Pn**	**02 06 55.3**	**-3.7**
TGY	**Tagaytay City**	**5.62**	**184**	P	**Pn**	**02 07 02.8**	**+1.2**
	16nm,0.3s,baz=143,slow=10,SNR=1.2						
	127nm,0.5s						
GQP	**Guinayangan**	**5.90**	**169**	*i* P	**Pn**	**02 07 07.5**	**+2.0**
GQP				*e*S	**Sn**	**02 08 14.0**	**+2.2**
HKPS	**Hong Kong Po S**	**7.17**	**292**		**Pn**	**02 07 20.0**	**-2.8**
PLP	**Palo**	**9.22**	**157**	*e*P	**Pn**	**02 07 54.7**	**+3.7**
JOW	**Kunigami**	**9.52**	**41**	P	**Pn**	**02 07 53.3**	**-1.8**
	21nm,0.3s,baz=188,slow=12,SNR=57						
JOW				S	**Sn**	**02 09 33.6**	**-7.1**
	10nm,0.6s,baz=112,slow=26,SNR=1.4						
	41nm,0.3s						
JOW	**Kunigami**	**9.52**	**41**		**Pn**	**02 07 52.9**	**-2.2**
QIZ	**Qiongzhong**	**10.86**	**268**	Pn	**Pn**	**02 08 10.5**	**-2.9**
QIZ	**Qiongzhong**	**10.86**	**268**	P	**Pn**	**02 08 11.5**	**-1.8**
QIZ				pP		02 08 17.2	
QIZ				S	**Sn**	**02 10 06.2**	**-7.2**
QIZ				pmax	pmax		
	comp=Z,53nm,0.9s						
QIZ				L	L		
	comp=N,160nm,12.6s						
QIZ				L	L		
	comp=E,360nm,13.2s						
QIZ				L	L		
	comp=Z,450nm,14.9s						
NJ2	**Nanjing**	**12.46**	**350**	*e*P	**Pn**	**02 08 34.4**	**-0.8**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ENH	**Enshi**	**14.99**	**317**	Pn	**Pn**	**02 09 08.5**	**-0.8**
JNU	**Nakatsue**	**15.83**	**31**	P	**Pn**	**02 09 20.6**	**+0.6**
	0.4nm,0.3s,baz=156,slow=8.3,SNR=5.5						
JNU				LR	LR	02 15 24.2	
	comp=Z,113nm,21.0s,baz=203,slow=37						
	14nm,0.9s						
LYN	**LuoYang**	**16.71**	**334**	P	**P**	**02 09 34.7**	**+1.9**
LYN				pmax	pmax		
	comp=Z,40nm,0.9s						
LYN				L	L		
	comp=N,410nm,16.8s						
LYN				L	L		
	comp=E,340nm,15.8s						
LYN				L	L		
	comp=Z,460nm,16.5s						
TIA	**Tai'an**	**16.82**	**348**	P	**Pn**	**02 09 33.1**	**+0.6**
TIA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TIA				L	L		
	comp=N,220nm,6.4s						
TIA				L	L		
	comp=E,340nm,11.9s						
TIA				L	L		
	comp=Z,300nm,13.5s						
XAN	**Xi'an**	**18.01**	**325**	P	**Pn**	**02 09 48.0**	**+0.8**
XAN				S	**Sn**	**02 13 08.8**	**+1.5**
XAN				pmax	pmax		
	comp=Z,12nm,1.0s						
XAN				L	L		
	comp=N,360nm,18.6s						
XAN				L	L		
	comp=E,350nm,16.5s						
XAN				L	L		
	comp=Z,410nm,14.4s						
TOLI2	**Tolitoli**	**18.52**	**182**		**Pn**	**02 09 53.1**	**-0.4**
HNS	**HongShan**	**18.52**	**343**	⇓P	**Pn**	**02 09 56.2**	**+2.9**
HNS				pmax	pmax		
	comp=Z,13nm,1.4s						
HNS				L	L		
	comp=N,220nm,13.7s						
HNS				L	L		
	comp=E,180nm,12.9s						
HNS				L	L		
	comp=Z,250nm,15.9s						
KSAR	**Wonju Array Be**	**18.55**	**17**	P	**P**	**02 09 51.6**	**-1.4**
KSRS	**Korea Array**	**18.57**	**17**	P	**P**	**02 09 52.6**	**-0.6**
	1.7nm,0.3s,baz=197,slow=11,SNR=28						
KSRS				LR	LR	02 17 58.7	
	comp=Z,72nm,19.9s,baz=200,slow=40						
	5.1nm,0.4s						
KS19	**Wonju Array Si**	**18.60**	**17**	P	**P**	**02 09 52.6**	**-1.0**
MRSI	**Marisa**	**19.15**	**178**	P	**Pn**	**02 10 01.4**	**+0.4**
	3µm34nm,0.7s						
PZH	**PanZhiHua**	**19.21**	**294**	P	**Pn**	**02 10 02.1**	**+0.2**
MPSI	**Mapaga**	**19.33**	**184**	P	**Pn**	**02 10 02.8**	**-0.4**
	19nm,0.7s						
SBUM	**Sibu**	**19.35**	**208**	P	**Pn**	**02 10 03.0**	**-0.4**
SBUM	**Sibu**	**19.35**	**208**	P	**Pn**	**02 10 03.7**	**+0.3**
APSI	**Ampana**	**20.52**	**179**	P	Pn	02 10 16.7	-0.6
	40nm,0.8s						
PCI	**Palu**	**20.57**	**184**	P	Pn	02 10 16.9	-0.9
BJI2	**Beijing**	**20.69**	**349**	P	**P**	**02 10 17.6**	**+1.3**
BJI2				pmax	pmax		
	comp=Z,11nm,0.7s						
BJT	**Baijiatuau**	**20.69**	**349**	P	**P**	**02 10 16.9**	**+0.5**
BJT				IAmb	IAmb	02 10 20.8	
	comp=Z,16nm,0.7s						
LUWI	**Luwuk**	**20.70**	**176**	P	**P**	**02 10 16.4**	**-0.2**
LUWI	**Luwuk**	**20.70**	**176**	P	**P**	**02 10 16.7**	**+0.1**
	comp=Z,5µmcomp=Z,91nm,0.8s						
INU	**Inuyama**	**20.83**	**38**	P	**P**	**02 10 17.1**	**-0.7**
INU				IAmb	IAmb	02 10 24.6	
	comp=Z,55nm,1.5s						
CHTO	**Chiang Mai**	**21.14**	**271**		**P**	**02 10 23.2**	**+1.9**
CHTO	**Chiang Mai**	**21.14**	**271**	P	**P**	**02 10 23.4**	**+2.0**
CHTO				pP	**pP**	**02 10 33.3**	**+0.4**
CM31	**Chiang Mai Arr**	**21.18**	**270**	P	**P**	**02 10 23.8**	**+1.9**
CMAR	**Chiang Mai Arr**	**21.18**	**270**	P	**P**	**02 10 24.1**	**+2.3**
	comp=Z,3.9nm,0.7s,baz=74,slow=9.1,SNR=28						
CMAR				PcP	**PcP**	**02 14 26.5**	**+0.5**
	comp=Z,0.9nm,0.4s,baz=105,slow=2.2,SNR=7.3						
CMAR				LR	LR	02 18 44.5	
	comp=Z,128nm,19.7s,baz=95,slow=37						
	comp=Z,3.9nm,0.7s						
CMAR	**Chiang Mai Arr**	**21.18**	**270**	P	**P**	**02 10 23.6**	**+1.8**
JHJ	**Hachijo jima 2**	**21.19**	**47**	LR	LR	02 17 16.1	
	comp=Z,114nm,20.6s,baz=178,slow=33						
JGF	**Kuroka**	**21.20**	**39**	P	**P**	**02 10 21.6**	**-0.3**
JGF				IAmb	IAmb	02 10 28.6	
	comp=Z,25nm,1.0s						
TNCH	**TengChong**	**21.72**	**288**	P	**P**	**02 10 27.2**	**-0.5**
TNCH				pP	pP	02 10 36.9	-2.2
TNCH				pmax	pmax		
	comp=Z,63nm,0.5s						
MJAR	**Matsushiro Arr**	**22.35**	**38**	P	**P**	**02 10 33.2**	**-1.0**
	comp=Z,3.1nm,0.8s,baz=226,slow=7.6,SNR=8.9						
	comp=Z,3.1nm,0.8s						
MJAR	**Matsushiro Arr**	**22.35**	**38**	P	**P**	**02 10 32.9**	**-1.3**
LZH	**Lanzhou**	**22.39**	**320**	*e*P	**P**	**02 10 35.8**	**+1.0**
LZH				pP	pP	02 10 48.0	+1.8
LZH				S	**S**	**02 14 42.2**	**+4.7**
LZH				pmax	pmax		
	comp=Z,14nm,1.5s						
LZH				L	L		
	comp=Z,370nm,13.0s						
LZH				L	L		
	comp=Z,320nm,14.0s						
LZH				L	L		
	comp=Z,380nm,15.5s						
LZDM	**Lanzhou Array**	**22.39**	**320**	P	**P**	**02 10 35.5**	**+0.5**
	comp=Z,1.4nm,0.3s,baz=139,slow=9.8,SNR=7.0						
LZDM				LR	LR	02 20 01.5	
	comp=Z,186nm,18.7s,baz=240,slow=38						
	comp=Z,1.4nm,0.3s						

MMSI Mamuju 22.41 186 P P 02 10 41.9 +6.9
HHC Hu-ho-hao-te 22.64 340 *e*P **P 02 10 42.9 +5.6**
HHC S **S 02 14 46.0 +4.3**
HHC pmax pmax
comp=Z,9.0nm,0.8s
HHC pmax pmax
comp=Z,57nm,6.6s
HHC L L
comp=Z,280nm,16.6s
HHC L L
comp=Z,63nm,10.4s
HHC L L
comp=Z,280nm,15.6s
SWI Sorong 22.68 153 P P 02 10 37.6 -0.2
comp=Z,23nm,0.6s
SIJI Sorong 22.68 153 P P 02 10 37.8 -0.1
comp=Z,2µmcomp=Z,21nm,0.8s
TTSI Tana Toraja 22.69 184 P P 02 10 39.5 +1.6
comp=Z,2µmcomp=Z,20nm,0.7s
BTO2 Baotou 23.11 337 *e*P **P 02 10 42.4 +0.2**
BTO2 pP **pP 02 10 50.7 -3.1**
BTO2 S **S 02 14 53.9 +4.2**
BTO2 pmax pmax
comp=Z,11nm,0.5s
BTO2 pmax pmax
comp=Z,92nm,3.9s
BTO2 L L
comp=Z,360nm,5.3s
BTO2 L L
comp=Z,320nm,6.1s
BTO2 L L
comp=Z,260nm,6.3s
NLAI Namlea 23.53 165 P P 02 10 47.8 +1.6
comp=Z,49nm,0.8s
SPSI Sidrap Palu 23.60 184 P P 02 10 46.5 -0.4
comp=Z,4µmcomp=Z,30nm,0.8s
BBKI Banjar Baru 23.92 196 P P 02 10 52.1 +2.3
comp=Z,70nm,0.9s
XLT XiLinHaoTe 24.49 351 *e*P **P 02 10 58.6 +3.7**
XLT pmax pmax
comp=Z,7.0nm,1.3s
KAPI Kappang 24.64 184 P P 02 10 56.9 +0.4
KAPI IAmb IAmb 02 11 04.9
comp=Z,20nm,0.9s
USRK Ussuriysk Ar. 25.97 18 P P 02 11 08.0 -0.2
comp=Z,4.8nm,0.8s,baz=202,slow=7.2,SNR=5.0
comp=Z,4.8nm,0.8s
BNX BinXian 26.42 10 ⇑P **P 02 11 13.8 +1.5**
BNX pmax pmax
comp=Z,6.0nm,1.0s
GTA2 Gaotai 27.06 321 *e*P **P 02 11 19.7 +1.4**
GTA2 pP pP 02 11 31.1 +0.4
GTA2 pmax pmax
comp=Z,3.0nm,0.6s
GTA2 L L
comp=Z,150nm,12.7s
GTA2 L L
comp=Z,130nm,12.1s
GTA2 L L
comp=Z,250nm,13.3s
SHL Shillong 27.74 288 P P 02 11 23.4 -1.3
EDFI Ende, Flores 28.31 179 P P 02 11 29.0 -0.6
ASAJ Asahikawa 30.11 31 LR LR 02 24 18.2
comp=Z,47nm,20.6s,baz=324,slow=37
JKA Kamikawa-asahi 30.11 31 P P 02 11 45.4 +0.2
SONM Songino Array 30.54 340 P P 02 11 49.9 +0.8
comp=Z,1.4nm,0.8s,baz=161,slow=11,SNR=11
SONM LR LR 02 25 03.6
comp=Z,148nm,20.2s,baz=163,slow=38
comp=Z,1.4nm,0.8s
SONM Songino Array 30.54 340 P P 02 11 48.7 -0.4
KLR Kul'dur 30.59 13 P P 02 11 49.1 -0.3
comp=Z,2.6nm,0.5s,baz=217,slow=6.8,SNR=14
KLR LR LR 02 26 06.7
comp=Z,162nm,18.5s,baz=200,slow=40
comp=Z,2.6nm,0.5s
HEH HeiHe 30.83 8 *e*P **P 02 11 54.5 +3.0**
EVN Everest 32.52 291 P P 02 12 07.6 +0.2
EVN IAmb IAmb 02 12 28.9
comp=Z,6.4nm,1.0s
TLY Talaya 34.77 341 LR LR 02 27 17.7
comp=Z,145nm,21.7s,baz=142,slow=37
KNRA Kununurra 35.95 168 P P 02 12 33.9 -2.4
WMQ Urumqi 36.93 318 *e*P **P 02 12 47.0 +2.4**
MBWA Marble Bar 40.67 182 P P 02 13 14.3 -1.7
PSA00 Pilbara Seismi 41.08 182 P P 02 13 18.3 -1.0
PSA00 IAmb IAmb 02 13 19.2
comp=Z,16nm,0.9s
WB0 Warramunga Arr 41.30 161 P P 02 13 18.9 -2.2
WB0 IAmb IAmb 02 13 20.1
comp=Z,12nm,0.7s
WRA Warramunga Arr 41.45 161 P P 02 13 20.3 -2.1
comp=Z,12nm,0.6s,baz=342,slow=8.9,SNR=123
WRA PcP **PcP 02 15 18.8 -0.8**
comp=Z,1.6nm,0.7s,baz=334,slow=3.2,SNR=4.9
WRA ScP **ScP 02 19 04.3 -1.1**
comp=Z,0.7nm,0.9s,baz=348,slow=3.8,SNR=3.3
WRA S **S 02 19 30.2 -3.9**
comp=Z,1.1nm,0.9s,baz=342,slow=15,SNR=3.4
comp=Z,12nm,0.6s
WRA Warramunga Arr 41.45 161 P P 02 13 19.7 -2.7
WR8 Warramunga Arr 41.51 161 P P 02 13 21.0 -1.9
MKAR Makanchi Array 41.70 319 P P 02 13 25.9 +1.7
comp=Z,3.8nm,0.7s,baz=113,slow=10,SNR=46
MKAR PcP **PcP 02 15 18.3 -1.8**
comp=Z,0.5nm,0.5s,baz=114,slow=5.2,SNR=1.9
MKAR LR LR 02 31 58.0
comp=Z,44nm,18.5s,baz=102,slow=38
comp=Z,3.8nm,0.7s
MKAR Makanchi Array 41.70 319 P P 02 13 26.1 +1.9
MAKZ Makanchi 41.90 319 P 02 13 27.6 +1.8
YAK Yakutsk 42.66 6 LR LR 02 33 58.1
comp=Z,75nm,18.9s,baz=234,slow=40
H11S3 WAKE ISLAND Hy 42.79 84 T T 02 59 15.1
baz=279,slow=75,SNR=16
H11N1 WAKE ISLAND Hy 42.80 82 T T 02 59 11.0
baz=278,slow=75,SNR=61
H11S1 WAKE ISLAND Hy 42.80 84 T T 02 59 15.2
baz=279,slow=75,SNR=113
H11N2 WAKE ISLAND Hy 42.80 82 T T 02 59 15.9
baz=278,slow=75,SNR=111
H11S2 WAKE ISLAND Hy 42.81 84 T T 02 59 13.8
baz=279,slow=75,SNR=89
H11N3 WAKE ISLAND Hy 42.81 82 T T 02 59 16.3
baz=278,slow=75,SNR=84
PEA0B Petropavlovsk- 43.53 31 P P 02 13 38.7 -0.3
PETK Petropavlovsk- 43.53 31 P P 02 13 38.2 -0.8
comp=Z,9.9nm,0.9s,baz=216,slow=3.0,SNR=12
comp=Z,9.9nm,0.9s
ZAA0 Zalesovo Array 44.08 330 P P 02 13 44.6 +1.3
ZALV Zalesovo Beam 44.08 330 P P 02 13 44.8 +1.4
comp=Z,2.4nm,0.8s,baz=112,slow=6.6,SNR=10
ZALV LR LR 02 33 20.1
comp=Z,76nm,19.8s,baz=128,slow=38
comp=Z,2.4nm,0.8s
NIL Nilore 44.75 298 P P 02 13 49.5 +0.4
NIL IAmb IAmb 02 13 51.7
comp=Z,7.5nm,0.8s
AS31 Alice Springs 44.85 164 P P 02 13 49.0 -0.8
ASAR Alice Springs 44.85 164 P P 02 13 49.0 -0.9
comp=Z,8.3nm,0.3s,baz=342,slow=6.7,SNR=230
ASAR PcP **PcP 02 15 31.7 +0.7**
comp=Z,1.1nm,0.8s,baz=328,slow=3.1,SNR=2.9
ASAR ScP **ScP 02 19 18.9 -0.3**
comp=Z,1.0nm,0.9s,baz=343,slow=4.0,SNR=4.8
ASAR S **S 02 20 19.7 -4.2**
comp=Z,0.7nm,0.8s,baz=356,slow=16,SNR=4.5
comp=Z,8.3nm,0.3s
ASAR Alice Springs 44.85 164 P P 02 13 48.9 -1.0
MA2 Magadan 45.05 21 LR LR 02 33 43.6
comp=Z,49nm,18.4s,baz=202,slow=37
AAK Ala-Archa 45.40 311 LR LR 02 35 55.8
comp=Z,201nm,19.1s,baz=82,slow=40
KURBB Kurchatov Arra 45.65 323 P P 02 13 57.0 +1.2
comp=Z,2.7nm,0.7s,baz=125,slow=7.4,SNR=24
KURBB PcP **PcP 02 15 32.9 -0.4**
comp=Z,0.4nm,0.5s,baz=121,slow=2.9,SNR=1.9
comp=Z,2.7nm,0.7s
CTAO Charters Tower 46.51 147 P P 02 14 02.9 -0.1
CTAO IAmb IAmb 02 14 34.0
comp=Z,11nm,1.4s
MORW Morawa 48.79 186 P P 02 14 20.1 -0.4
FORT Forrest 50.64 172 P P 02 14 33.7 -0.9
INKA Innaminka 50.81 158 P P 02 14 34.9 -0.9
BVAR Borovoye Array 51.23 323 P P 02 14 40.2 +1.3
comp=Z,0.7nm,0.6s,baz=99,slow=6.4,SNR=2.6
BVAR PcP **PcP 02 15 53.0 -0.5**
comp=Z,1.8nm,0.6s,baz=137,slow=3.0,SNR=4.0
BVAR LR LR 02 36 38.8
comp=Z,41nm,18.6s,baz=33,slow=36
comp=Z,0.7nm,0.6s
TIXI Tiksi 52.11 3 LR LR 02 40 43.6
comp=Z,82nm,18.0s,baz=202,slow=40
TIXI Tiksi 52.11 3 P P 02 14 44.5 -0.5
TIXI IAmb IAmb 02 14 49.4
comp=Z,5.8nm,0.6s
NWAO Narrogin (SRO) 52.51 184 P P 02 14 48.3 -0.2
EIDS Eidsvold 53.36 146 P P 02 14 53.8 -1.2
EIDS IAmb IAmb 02 14 57.2
comp=Z,10nm,1.1s
NRIK Noril'sk 53.72 346 P P 02 14 57.2 +0.2
comp=Z,3.7nm,0.7s,baz=134,slow=7.6,SNR=8.9
comp=Z,3.7nm,0.7s
STKA Stephens Creek 54.88 159 P P 02 15 04.9 -0.9
comp=Z,3.3nm,0.5s,baz=343,slow=8.2,SNR=11
comp=Z,3.3nm,0.5s
STKA Stephens Creek 54.88 159 P P 02 15 05.0 -0.9
AB31 Akbulak array 56.68 317 P P 02 15 20.8 +2.1
ABKAR Akbulak array 56.68 317 P P 02 15 20.9 +2.2
ARTI Arti 58.84 325 LR LR 02 43 30.6
comp=Z,111nm,19.4s,baz=43,slow=38
ARTI Arti 58.84 325 P P 02 15 34.8 +1.1
ARTI IAmb IAmb 02 15 56.6
comp=Z,4.5nm,0.6s
DZM Mont Dzumac 60.59 131 P P 02 15 45.9 -0.3
CAN Canberra 60.73 154 P P 02 15 47.1 +0.2
TOO Toolangi 61.38 158 P P 02 15 51.7 +0.4
TOO IAmb IAmb 02 15 53.4
comp=Z,5.4nm,1.1s
KIRV Kirov 63.95 326 LR LR 02 46 42.8
comp=Z,197nm,18.6s,baz=102,slow=38
ANM Nome 65.19 27 P P 02 16 16.9 +0.7
ANM IAmb IAmb 02 16 24.3
comp=Z,4.7nm,1.0s
C16K Lisburne Hills 65.66 23 P P 02 16 19.1 0.0
C16K IAmb IAmb 02 16 21.2
comp=Z,3.8nm,0.8s
C18K Utukok River 67.22 23 IAmb IAmb 02 16 33.5
comp=Z,4.2nm,0.8s
E18K Tukpahlearik C 67.37 24 IAmb IAmb 02 16 37.4
comp=Z,8.7nm,1.2s
GNI Garni 67.47 306 LR LR 02 50 27.6
comp=Z,55nm,18.9s,baz=80,slow=40
C19K Lookout Ridge 67.83 22 IAmb IAmb 02 16 38.8
comp=Z,6.5nm,1.0s
G18K Tagagawik 68.09 26 IAmb IAmb 02 16 41.9
comp=Z,3.9nm,0.8s
E19K Redstone River 68.67 24 P P 02 16 38.6 +0.4
E19K IAmb IAmb 02 16 58.5
comp=Z,6.0nm,1.1s
B20K Meade River 68.72 21 IAmb IAmb 02 16 44.8
comp=Z,5.4nm,0.8s
G19K Purcell Mounta 68.73 26 IAmb IAmb 02 16 48.5
comp=Z,9.5nm,1.5s
F20K Avaraart Lake 69.26 25 IAmb IAmb 02 17 09.9
comp=Z,6.0nm,1.4s
E21K Killik River 69.88 23 IAmb IAmb 02 16 51.6
comp=Z,4.3nm,0.8s
B22K Teshekpuk Lake 69.99 21 IAmb IAmb 02 17 20.6
comp=Z,7.7nm,1.1s
G21K Allakaket 70.17 25 IAmb IAmb 02 16 49.9
comp=Z,9.4nm,1.4s
D22K Ayikyak River 70.33 23 IAmb IAmb 02 16 57.6
comp=Z,3.7nm,0.7s
H21K Mezitna Rive 70.51 26 IAmb IAmb 02 16 51.5
comp=Z,4.4nm,0.9s
E22K Anaktuvuk Pass 70.70 23 IAmb IAmb 02 17 13.1
comp=Z,11nm,1.4s
D23K Nanushuk River 71.04 22 IAmb IAmb 02 17 00.6
comp=Z,7.0nm,0.8s
E23K Chandalar 71.53 23 IAmb IAmb 02 17 01.7
comp=Z,4.5nm,0.8s
C24K Franklin Bluff 71.66 22 IAmb IAmb 02 17 04.1
comp=Z,8.3nm,1.2s
D24K Happy Valley 71.68 22 IAmb IAmb 02 17 05.0
comp=Z,3.8nm,0.7s
L22K Petersville 71.74 29 P P 02 16 56.1 -1.0
E24K Your Creek 71.95 23 IAmb IAmb 02 17 05.9
comp=Z,4.9nm,0.9s
RND Reindeer 72.48 28 P P 02 17 00.9 -0.7
WRH Wood River Hil 72.64 27 P P 02 17 02.1 -0.3
WRH IAmb IAmb 02 17 06.5
comp=Z,8.7nm,1.4s
ILAR Eielson Array 73.10 27 P P 02 17 04.0 -1.1
comp=Z,8.8nm,0.6s,baz=264,slow=4.5,SNR=12
comp=Z,0.8nm,0.6s
ILAR Eielson Array 73.10 27 P P 02 17 02.7 -2.5
ARCES ARCESS Array B 73.70 339 P P 02 17 09.5 +0.9
comp=Z,2.6nm,0.8s,baz=100,slow=5.9,SNR=5.8
ARCES LR LR 02 52 03.5
comp=Z,62nm,18.4s,baz=108,slow=38
comp=Z,2.6nm,0.8s
ARCES ARCESS Array B 73.70 339 P P 02 17 07.5 -1.0
AFI Afiamalu 73.82 112 LR LR 02 44 29.3
comp=Z,31nm,18.9s,baz=206,slow=32
SPITS Spitsbergen Ar 73.84 348 P P 02 17 09.8 +0.5
comp=Z,8.7nm,0.7s,baz=85,slow=9.3,SNR=12
SPITS LR LR 02 55 57.9
comp=Z,72nm,18.1s,baz=54,slow=41
comp=Z,8.7nm,0.7s
PAX Paxson 74.07 28 IAmb IAmb 02 17 20.7
comp=Z,6.1nm,1.2s
I26K Coal Creek Min 74.54 26 IAmb IAmb 02 17 20.6
comp=Z,4.6nm,0.9s
I27K Kandik River 75.09 25 IAmb IAmb 02 17 22.6
comp=Z,11nm,1.3s
ASF Jabal al Asfar 75.19 299 LR LR 02 54 55.6
comp=Z,29nm,18.3s,baz=206,slow=39
M26K Nabesna, AK 75.31 29 IAmb IAmb 02 17 19.1
comp=Z,4.4nm,0.6s
FINES FINESS Array B 75.34 330 P P 02 17 18.6 +0.4
comp=Z,6.6nm,0.9s,baz=66,slow=2.3,SNR=8.5
comp=Z,3.6nm,0.9s
FINES FINESS Array B 75.34 330 P P 02 17 17.5 -0.7
BRTR Keskin Array B 75.93 307 P P 02 17 24.9 +2.6
comp=Z,0.3nm,0.6s,baz=101,slow=2.9,SNR=5.2
comp=Z,0.3nm,0.6s
BRTR Keskin Array B 75.93 307 P P 02 17 22.1 -0.1
H29M Whitestone 76.20 24 IAmb IAmb 02 17 27.4
comp=Z,9.9nm,1.4s
AKASG Mas Array Be 76.28 319 P P 02 17 23.5 -0.2
comp=Z,0.3nm,0.3s,baz=64,slow=5.7,SNR=2.6
comp=Z,0.3nm,0.3s
F30M Barrier River 76.73 23 IAmb IAmb 02 17 29.9
comp=Z,5.8nm,0.6s
G30M tAoh Zraii Nji 76.78 23 IAmb IAmb 02 17 26.5
comp=Z,5.2nm,1.0s
EPYK Eagle Plains 76.79 24 IAmb IAmb 02 17 26.8
comp=Z,4.7nm,0.5s
J29N Klondike Camp 76.80 26 IAmb IAmb 02 17 32.5
comp=Z,5.4nm,0.7s
L29M L29M 77.26 27 IAmb IAmb 02 17 35.3
comp=Z,7.1nm,1.0s
INK Inuvik 77.29 22 P P 02 17 28.6 -0.5
M29M Somme Creek 77.32 28 IAmb IAmb 02 17 38.4
comp=Z,4.4nm,0.8s
EIL Elat 77.45 297 LR LR 02 55 38.3
comp=Z,36nm,19.6s,baz=49,slow=39
G31M Satah River 77.52 23 IAmb IAmb 02 17 46.5
comp=Z,6.9nm,1.3s
M30M Minto, Yukon 78.01 28 IAmb IAmb 02 17 39.4
comp=Z,4.8nm,1.1s
A36M Sachs Harbour 78.32 17 IAmb IAmb 02 17 36.4
comp=Z,4.5nm,0.7s
M31M Drury Creek, Y 79.19 28 IAmb IAmb 02 17 49.3
comp=Z,10nm,1.4s
MLR Muntele Rosu 79.83 315 LR LR 02 59 43.2
comp=Z,79nm,19.4s,baz=78,slow=40
FURI Furi 80.17 276 LR LR 02 53 21.1
comp=Z,32nm,19.8s,baz=81,slow=36
DAG Danmarks Havn 80.76 351 *i*P **P 02 17 47.5 -0.5**
DAG IAmb IAmb 02 17 48.6
comp=Z,5.2nm,0.8s
HFS Hagfors 81.50 331 P P 02 17 52.8 +0.6
comp=Z,2.2nm,0.8s,baz=116,slow=3.4,SNR=6.1
HFS LR LR 02 58 57.3
comp=Z,148nm,19.3s,baz=276,slow=39
comp=Z,2.2nm,0.8s
NB2 NORSAR Subarra 82.20 333 P P 02 17 55.9 -0.1
comp=Z,1.7nm,0.8s,baz=58,slow=5.3
NOA NORSAR Array B 82.20 333 P P 02 17 55.4 -0.6
comp=Z,1.7nm,0.8s,baz=64,slow=4.9,SNR=4.9
NOA LR LR 02 58 09.0
comp=Z,89nm,18.3s,baz=65,slow=38
comp=Z,1.7nm,0.8s
NEEM North Greenlan 82.92 358 *i*P **P 02 18 00.3 +0.6**
NEEM IAmb IAmb 02 18 02.3
comp=Z,9.9nm,1.1s
DBG Daneborg 82.98 350 *i*P **P 02 17 59.8 +0.2**
STEB Steborice 83.48 321 *e*P **P 02 18 02.4 -0.3**
MAUC Maruska 83.67 320 *e*P **P 02 18 06.5 +2.7**
KHC Kasperske Hory 86.30 321 *e*P **P 02 18 18.7 +1.7**
SUMG Summit 86.92 354 *i*P **P 02 18 18.6 -1.3**
YKAW3 Yellowknife Wh 86.96 23 IAmb IAmb 02 18 25.8
comp=Z,4.8nm,1.1s
YKA Yellowknife Ar 87.00 23 P P 02 18 19.6 -0.5
comp=Z,1.2nm,0.5s,baz=314,slow=5.4,SNR=32
comp=Z,1.2nm,0.5s
YKA Yellowknife Ar 87.00 23 P P 02 18 20.1 0.0
YKAW1 Yellowknife Wh 87.06 23 IAmb IAmb 02 18 30.3
comp=Z,3.1nm,0.8s
RAR Rarotonga 87.23 114 LR LR 02 50 33.6
comp=Z,28nm,19.7s,baz=227,slow=31
DAVOX Davos/Dischmat 89.59 320 LR LR 03 04 49.5
comp=Z,161nm,19.6s,baz=347,slow=40
MBAR Mbarara 90.75 270 LR LR 03 00 15.1
comp=Z,21nm,18.9s,baz=66,slow=36
LSZ Lusaka 97.91 257 LR LR 03 01 41.5
comp=Z,70nm,18.1s,baz=120,slow=34
NVAR Mina Array Bea 99.58 43 P Pdif 02 19 19.1 +0.3
comp=Z,0.5nm,0.7s,baz=269,slow=5.9,SNR=3.6
comp=Z,0.5nm,0.7s
TXAR Lajitas Array 114.72 43 PKP PKPdf 02 24 16.3 +0.3
comp=Z,0.3nm,0.6s,baz=116,slow=0.7,SNR=5.9
TXAR Lajitas Array 114.72 43 PKPdf 02 24 15.8 -0.2
ROSC El Rosal 151.14 34 PKPbc PKiKP 02 25 30.0 0.0
comp=Z,7.0nm,0.5s,baz=151,slow=16,SNR=4.5
ROSC El Rosal 151.14 34 PKiKP 02 25 29.6 -0.4
COYC Coyhaique 151.95 160 PKPdf PKPdf 02 25 24.1 +0.7
PLCA Paso Flores 156.74 157 PKPab PKPab 02 25 59.1 -0.7
comp=Z,0.9nm,0.8s,baz=222,slow=5.9,SNR=7.2
PLCA Paso Flores 156.74 157 PKPab PKPab 02 26 00.7 +0.9

JMA ***01*** *02:17:51.3±0.1,24˚N±2˚×122˚4E±0˚4, h60km±2km, MV1.9/10, NW OFF ISHIGAKIJIMA IS*
TAP ***01*** *02:17:51.2, 24˚26N×122˚43E, h66km, ML2.6, C*
ISC 01 02:17:51.4±1.3, 24°23N±0°.04×122°43E±0°.03, h66km±7km, n59, σ0°80/100, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EOS3	**EOS3**	**0.12**	**301**	*e*P		**Pn**	**02 18 01.5**	**+0.5**
EOS3				*e*S		**Sn**	**02 18 09.0**	**+1.0**
EOS4	**EOS4**	**0.15**	**224**	*e*P		**Pn**	**02 18 01.0**	**+0.2**
EOS4				*e*S		**Sn**	**02 18 08.2**	**+0.6**
EOS2	**EOS2**	**0.26**	**317**	*e*P		**Pn**	**02 18 02.4**	**+0.7**
EOS2				*e*S		**Sn**	**02 18 10.5**	**+1.3**
JYNG	**Yonagunijimaku**	**0.52**	**64**	*e*P		**Pn**	**02 18 04.1**	**0.0**
JYNG				*e*S		**Sn**	**02 18 13.1**	**-0.2**
YOJ	**Yonaguni jima**	**0.58**	**66**	P		**Pn**	**02 18 04.6**	**-0.1**
YOJ				*i* S		**Sn**	**02 18 14.0**	**-0.4**
YOJ	**Yonaguni jima**	**0.58**	**66**	*e*P		**Pn**	**02 18 04.7**	**0.0**
YOJ				*e*S		**Sn**	**02 18 14.3**	**-0.1**
EWUT	**Wuta**	**0.63**	**290**	*i* P		**Pn**	**02 18 04.9**	**-0.4**
EWUT				S		**Sn**	**02 18 14.8**	**-0.6**
TWC	**Suao**	**0.65**	**306**	P		**Pn**	**02 18 05.4**	**-0.1**
TWC				*i* S		**Sn**	**02 18 15.0**	**-0.8**
ENA	**Nanau**	**0.66**	**288**	P		**Pn**	**02 18 05.8**	**+0.2**
ENA				*e*S		**Sn**	**02 18 15.6**	**-0.3**
ETL	**Fush Village**	**0.74**	**265**	*e*P		**Pn**	**02 18 06.5**	**0.0**
ETL				*e*S		**Sn**	**02 18 17.1**	**-0.6**
NACB	**Ninganchiao**	**0.76**	**266**	*i* P		**Pn**	**02 18 06.3**	**-0.5**
NACB				S		**Sn**	**02 18 17.3**	**-0.7**
EGS		**0.77**	**324**	*e*P		**Pn**	**02 18 06.2**	**-0.5**
EGS				*e*S		**Sn**	**02 18 16.6**	**-1.5**
NDS	**Dongshan**	**0.77**	**302**	*e*S		**Sn**	**02 18 17.4**	**-0.7**
TWD	**Chiawan**	**0.78**	**259**	P		**Pn**	**02 18 06.4**	**-0.5**
TWD				S		**Sn**	**02 18 17.5**	**-0.8**
TWE	**Neicheng**	**0.85**	**306**	*e*P		**Pn**	**02 18 08.2**	**+0.4**
ETLH	**Xiulin Townshi**	**0.86**	**269**	P		**Pn**	**02 18 07.7**	**-0.4**
ETLH				S		**Sn**	**02 18 19.6**	**-0.8**
TWB1	**Santiao Chiao**	**0.88**	**333**	P		**Pn**	**02 18 07.6**	**-0.5**
LATG	**Datong**	**0.88**	**291**	P		**Pn**	**02 18 08.4**	**+0.1**
LATG				S		**Sn**	**02 18 20.6**	**-0.1**
ENTT	**Nioudou**	**0.89**	**298**	P		**Pn**	**02 18 08.6**	**+0.3**
ETM	**Tongmen**	**0.89**	**253**	*e*P		**Pn**	**02 18 07.9**	**-0.5**
ETM				*e*S		**Sn**	**02 18 19.7**	**-1.2**
SHUL	**Shoufeng**	**0.90**	**241**	*e*P		**Pn**	**02 18 08.4**	**-0.1**
SHUL				*e*S		**Sn**	**02 18 21.0**	**-0.1**
FUSB	**Fushanzhiwuyua**	**0.93**	**305**	*i* P		**Pn**	**02 18 09.3**	**+0.4**
FUSB				S		**Sn**	**02 18 22.1**	**+0.2**
LXIB	**Xiulin Townshi**	**0.95**	**258**	P		**Pn**	**02 18 08.8**	**-0.4**
LXIB				S		**Sn**	**02 18 21.4**	**-1.0**
ESL	**Shilin**	**1.00**	**246**	*e*P		**Pn**	**02 18 09.2**	**-0.5**
ESL				*e*S		**Sn**	**02 18 21.8**	**-1.4**
SXI1	**Grass Mountain**	**1.00**	**330**	P		**Pn**	**02 18 09.5**	**-0.3**
SXI1				*e*S		**Sn**	**02 18 22.1**	**-1.3**
NWLT	**Wulai**	**1.01**	**303**	*i* P		**Pn**	**02 18 10.2**	**+0.4**
NWLT				S		**Sn**	**02 18 23.7**	**+0.3**
YHNB	**Yeheng**	**1.06**	**295**	*i* P		**Pn**	**02 18 10.7**	**+0.2**
YHNB				S		**Sn**	**02 18 24.9**	**+0.2**
WHF	**Hehuan Shan**	**1.07**	**266**	P		**Pn**	**02 18 10.6**	**-0.4**
WHF				*e*S		**Sn**	**02 18 24.4**	**-1.0**
NSK	**Sanguang**	**1.07**	**295**	*i* P		**Pn**	**02 18 10.9**	**+0.2**
NSK				*e*S		**Sn**	**02 18 24.6**	**-0.5**
WARBT	**Fenglin Townsh**	**1.08**	**242**	*e*P		**Pn**	**02 18 10.4**	**-0.4**
WARBT				S		**Sn**	**02 18 24.2**	**-0.9**
TWT	**Tachien**	**1.14**	**272**	*e*P		**Pn**	**02 18 12.6**	**+0.9**
TWT				*e*S		**Sn**	**02 18 27.4**	**+0.6**
TDCB	**Techi**	**1.16**	**272**	*e*P		**Pn**	**02 18 11.7**	**-0.2**
HGSD	**Ruisui**	**1.18**	**232**	*e*S		**Sn**	**02 18 26.4**	**-0.9**
OWD	**Renai**	**1.18**	**257**	*e*P		**Pn**	**02 18 12.1**	**0.0**
OWD				S		**Sn**	**02 18 26.7**	**-0.8**
IRIF	**Iriomote-Funau**	**1.19**	**85**	*e*P		**Pn**	**02 18 12.1**	**-0.1**
IRIF				*e*S		**Sn**	**02 18 27.9**	**+0.2**
YM01	**YM01**	**1.21**	**320**	*e*S		**Sn**	**02 18 26.9**	**-1.2**
WUSB	**Renai**	**1.22**	**259**	*i* P		**Pn**	**02 18 13.2**	**+0.5**
WUSB				*i* S		**Sn**	**02 18 28.5**	**-0.1**
EHYH	**Wanrong**	**1.23**	**234**	*e*S		**Sn**	**02 18 28.1**	**-0.5**
EHY	**Hungye**	**1.24**	**235**	*e*S		**Sn**	**02 18 27.6**	**-1.3**
NFF	**Wufeng Townshi**	**1.26**	**289**	*e*P		**Pn**	**02 18 13.9**	**+0.7**
NFF				*e*S		**Sn**	**02 18 28.0**	**-1.4**
VWDT	**VWDT**	**1.27**	**249**	P		**Pn**	**02 18 13.5**	**+0.3**
VWDT				S		**Sn**	**02 18 29.5**	**+0.1**
ECBN	**Changbin**	**1.27**	**225**	*e*S		**Sn**	**02 18 28.2**	**-1.4**
YULB	**Yu-li**	**1.33**	**232**	P		**Pn**	**02 18 13.6**	**-0.4**
TWF1	**Yuli**	**1.35**	**230**	P		**Pn**	**02 18 14.0**	**-0.3**
TWF1				*e*S		**Sn**	**02 18 31.4**	**-0.1**
LIOB	**Emei**	**1.35**	**288**	*e*P		**Pn**	**02 18 15.3**	**+1.0**
WHP	**Taichung City**	**1.35**	**272**	P		**Pn**	**02 18 15.6**	**+1.1**
WHP				S		**Sn**	**02 18 32.2**	**+0.6**
WCS	**Beigang Elemen**	**1.40**	**263**	*e*P		**Pn**	**02 18 15.4**	**+0.6**
SSLB	**Suanglung**	**1.42**	**252**	*e*P		**Pn**	**02 18 15.4**	**+0.2**
SSLB				*e*S		**Sn**	**02 18 33.2**	**+0.2**
SMLT	**Sun Moon Lake**	**1.44**	**257**	*e*P		**Pn**	**02 18 16.1**	**+0.6**
SMLT				*e*S		**Sn**	**02 18 34.6**	**+0.9**
JKRS	**Kuro-shima**	**1.44**	**89**	*e*P		**Pn**	**02 18 16.2**	**+0.8**
FULB	**Fuli**	**1.46**	**226**	*e*P		**Pn**	**02 18 14.2**	**-1.6**
FULB				*e*S		**Sn**	**02 18 32.9**	**-1.1**
TYC	**Yuchr**	**1.47**	**258**	*e*P		**Pn**	**02 18 16.5**	**+0.6**
WHYT	**Xinyi Township**	**1.54**	**250**	*e*P		**Pn**	**02 18 17.8**	**+1.0**
WHYT				*e*S		**Sn**	**02 18 36.6**	**+0.7**
YUS	**Yu-Shan**	**1.54**	**242**	*e*P		**Pn**	**02 18 17.7**	**+0.5**
YUS				*e*S		**Sn**	**02 18 36.0**	**-0.6**
JJ	**Ishigaki jima**	**1.57**	**85**	*e*P		**Pn**	**02 18 17.2**	**0.0**
WNT	**Mingjian**	**1.63**	**258**	*e*P		**Pn**	**02 18 20.1**	**+2.0**
CHN5	**Tsauling**	**1.72**	**249**	*e*P		**Pn**	**02 18 21.1**	**+1.8**
CHN5				*e*S		**Sn**	**02 18 42.7**	**+2.3**
JISG	**Ishigakijimahi**	**1.75**	**78**	*e*P		**Pn**	**02 18 19.5**	**-0.1**
JISG				*e*S		**Sn**	**02 18 40.6**	**-0.4**
CHN4	**Tsaushan**	**1.89**	**243**	*e*P		**Pn**	**02 18 23.7**	**+2.2**

UPP ***01*** *02:32:47.2±0.0, 67˚18N×20˚64E, h0km, ML2.4, Suspected explosion*
IDC ***01*** *02:32:47.0±1.0, 67˚13N×20˚79E, h0km, mbtmp3.0/4, ML2.0/4, Error ellipse: s-maj=16.7km s-min=8.3km az=109.0*
HEL ***01*** *02:32:47.8±0.0, 67˚17N×20˚63E, h1km, ML1.8, ML2.4(UPP), Confirmed Induced event*
ISC 01 02:32:45.9±0.7, 67°16N±0°.02×20°75E±0°.02, h0km, n35, σ0°93/60, Sweden

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

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
DUNU	**Dundret**	**0.08**	**240**	P	**Pg**	**02 32 48.7**	**+1.2**
DUNU				S	**Sg**	**02 32 49.6**	**+1.1**
DUNU	**Dundret**	**0.08**	**240**	*i* P	**Pg**	**02 32 48.7**	**+1.2**
DUNU				*i* S	**Sg**	**02 32 49.6**	**+1.1**
MASU	**Masugnsbyn**	**0.57**	**58**	P	**Pb**	**02 32 58.6**	**-0.1**
MASU				S	**Sb**	**02 33 06.7**	**-0.6**
MASU	**Masugnsbyn**	**0.57**	**58**	*i* P	**Pb**	**02 32 58.6**	**-0.1**
MASU				*i* S	**Sb**	**02 33 06.7**	**-0.6**
RATU	**Laukkuluspa**	**0.80**	**327**	P	**Pg**	**02 33 01.6**	**+0.3**
RATU	**Laukkuluspa**	**0.80**	**327**	*i* P	**Pg**	**02 33 01.6**	**+0.3**
KUA	**Kurravaara**	**0.81**	**349**	P	**Pg**	**02 33 01.9**	**+0.4**
	baz=193						
KUA				S	**Sg**	**02 33 12.7**	**+0.8**
KUA	**Kurravaara**	**0.81**	**349**	*i* P	**Pg**	**02 33 01.9**	**+0.4**
KUA				*i* S	**Sg**	**02 33 12.7**	**+0.8**
ERTU	**Ertsjaerv**	**0.83**	**136**	P	**Pb**	**02 33 03.2**	**-0.1**
ERTU				S	**Sb**	**02 33 15.0**	**0.0**
ERTU	**Ertsjaerv**	**0.83**	**136**	*e*P	**Pb**	**02 33 03.1**	**-0.1**
ERTU				*e*S	**Sb**	**02 33 14.9**	**0.0**
SALU	**Saltoluokta**	**0.90**	**285**	P	**Pg**	**02 33 03.3**	**+0.2**
SALU				S	**Sg**	**02 33 14.9**	**+0.1**
SALU	**Saltoluokta**	**0.90**	**285**	*i* P	**Pg**	**02 33 03.3**	**+0.2**
SALU				*i* S	**Sg**	**02 33 14.9**	**+0.1**
NIKU	**Nikkaluokta**	**0.97**	**318**	P	**Pg**	**02 33 04.5**	**+0.1**
NIKU	**Nikkaluokta**	**0.97**	**318**	*e*P	**Pg**	**02 33 04.5**	**+0.1**
HARU	**Harads**	**1.01**	**175**	P	**Pb**	**02 33 05.8**	**-0.3**
HARU				S	**Sb**	**02 33 20.0**	**+0.1**
HARU	**Harads**	**1.01**	**175**	*e*P	**Pb**	**02 33 05.8**	**-0.3**
HARU				*e*S	**Sb**	**02 33 20.0**	**+0.1**
LANU	**Lannavaara**	**1.01**	**28**	P	**Pb**	**02 33 06.0**	**-0.2**
LANU	**Lannavaara**	**1.01**	**28**	*e*P	**Pb**	**02 33 06.0**	**-0.2**
LANU				*e*S	**Sb**	**02 33 19.6**	**-0.4**
KOVU	**Salmi**	**1.09**	**348**	P	**Pg**	**02 33 06.9**	**+0.2**
	baz=192						
KOVU				S	**Sb**	**02 33 22.0**	**-0.4**
KOVU	**Salmi**	**1.09**	**348**	*e*P	**Pg**	**02 33 06.9**	**+0.2**
KOVU				*e*S	**Sb**	**02 33 22.0**	**-0.4**
KLF	**Kolari**	**1.25**	**85**	*e*P	**Pn**	**02 33 10.9**	**+0.2**
KLF				*e*S	**Sn**	**02 33 28.1**	**-0.1**
KLF				smax	smax	02 33 28.7	
	comp=Z,4.6nm,0.2s						
HEF	**Hetta**	**1.67**	**40**	*e*P	**Pb**	**02 33 17.3**	**-0.2**
HEF	**Hetta**	**1.67**	**40**	*e*P	**Pb**	**02 33 17.6**	**+0.2**
HEF				*e*SG	**Sg**	**02 33 40.0**	**+0.6**
HEF				smax	smax	02 33 43.3	
	comp=Z,5.9nm,0.1s						
SJUU	**Sjulsmark**	**1.70**	**168**	P	**Pb**	**02 33 18.2**	**+0.3**
SJUU	**Sjulsmark**	**1.70**	**168**	*e*P	**Pb**	**02 33 18.2**	**+0.3**
TOF	**Tornio**	**1.79**	**126**	*e*P	**Pg**	**02 33 20.2**	**0.0**
TOF				*e*SG	**Sg**	**02 33 44.5**	**+1.1**
TOF				smax	smax	02 33 46.8	
	comp=Z,5.4nm,0.1s						
KIF	**Kilpisjarvi**	**1.85**	**1**	*e*P	**Pg**	**02 33 21.3**	**-0.1**
KIF	**Kilpisjarvi**	**1.85**	**1**	*e*P	**Pb**	**02 33 20.8**	**+0.2**
KIF				*e*SG	**Sg**	**02 33 45.8**	**+0.5**
KIF				smax	smax	02 33 48.2	
	comp=Z,15nm,0.1s						
KTK1	**Kautokeino**	**2.08**	**25**	*e*PB	**Pb**	**02 33 24.7**	**+0.3**
KTK1				*e*SG	**Sg**	**02 33 52.4**	**-0.2**
RNF	**Rovaniemi**	**2.15**	**103**	*e*P	**Pb**	**02 33 25.7**	**0.0**
RNF				*e*SG	**Sg**	**02 33 55.1**	**+0.3**
SGF	**Sodankyl**	**2.26**	**80**	*e*PB	**Pb**	**02 33 27.7**	**+0.2**
SGF				*e*SG	**Sg**	**02 33 58.1**	**-0.2**
ARCES	**ARCESS Array B**	**2.96**	**34**	Pn	**Pn**	**02 33 35.9**	**+1.8**
	comp=Z,0.3nm,0.3s,baz=214,slow=13,SNR=16						
ARCES				Sn	**Sn**	**02 34 11.8**	**+1.5**
	comp=Z,0.5nm,0.3s,baz=215,slow=22,SNR=6.4						
	comp=Z,1.3nm,0.5s						
FINES	**FINESS Array B**	**6.19**	**156**	Pn	**Pn**	**02 34 20.0**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=345,slow=14,SNR=9.8						
FINES				Sn	**Sn**	**02 35 28.1**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=337,slow=24,SNR=5.0						
FINES				Lg	Lg	02 36 00.2	
	comp=Z,0.4nm,0.3s,baz=340,slow=26,SNR=6.9						
	comp=Z,2.6nm,1.0s						
NOA	**NORSAR Array B**	**7.42**	**219**	Pn	**Pn**	**02 34 33.9**	**-1.5**
	baz=30,slow=11,SNR=1.7						
	comp=Z,0.8nm,0.9s						
HFS	**Hagfors**	**7.72**	**207**	Pn	**Pn**	**02 34 39.0**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=21,slow=12,SNR=7.1						
HFS				Sn	**Sn**	**02 36 02.3**	**-5.0**
	comp=Z,0.1nm,0.3s,baz=20,slow=22,SNR=1.3						
HFS				Lg	Lg	02 36 43.7	
	comp=Z,0.1nm,0.3s,baz=34,slow=28,SNR=2.0						
	comp=Z,1.4nm,0.6s						

*OSPL **01** 02:42:34.2±0.9, 18°.22N×71°.18W, h12km±15km, ML1.5, Presumed earthquake*
*SDD **01** 02:42:35.8±2.5, 18°.15N×71°.29W, h13km±10km, MD2.5, ML1.9, MW2.5, Presumed earthquake*
ISC 01 02:42:35.2±0.9**, 18°.20N**±0°.04×**71°.25W**±0°.04**, h13**km±6km**, n10,** σ**0.s84**/20**, 11C, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PODR	**Polo**	**0.05**	**224**	⇑*e*Pg	**Pg**	**02 42 37.6**	**-0.3**
PODR				⇑*e*Sg	**Sg**	**02 42 40.2**	**+0.4**
PODR				IAML		02 42 42.8	
	comp=N,901nm,0.3s						
PODR	**Polo**	**0.05**	**224**	*i* P	**Pg**	**02 42 37.6**	**-0.3**
PODR				*e*S	**Sg**	**02 42 40.0**	**+0.2**
LODU1	**El Espartillar**	**0.26**	**305**	*i* P	**Pg**	**02 42 39.6**	**-1.2**
LODU1				*e*S	**Sg**	**02 42 44.0**	**-0.5**
LODU1				IAML		02 42 44.6	
	comp=Z,244nm,0.3s						
LONE3	**El Aguacate, B**	**0.45**	**333**	*i* P	**Pg**	**02 42 43.1**	**-1.1**
LONE3				*e*S	**Sg**	**02 42 49.5**	**-0.7**
LONE3				IAML		02 42 51.4	
	comp=Z,42nm,0.3s						
LOBH	**Bahia de las A**	**0.50**	**228**	*i* P	**Pg**	**02 42 44.4**	**-0.7**
LOBH				*e*S	**Sb**	**02 42 52.5**	**-0.6**
LOBH				IAML		02 42 57.2	
	comp=Z,30nm,0.3s						
JIDR	**Jimani**	**0.64**	**297**	⇑*i*P	**Pg**	**02 42 47.2**	**-0.6**
JIDR				⇑*e*Sg	**Sg**	**02 42 56.4**	**+0.2**
JIDR				IAML		02 42 59.2	
	comp=N,29nm,0.9s						
SDDR	**Presa de Saban**	**0.78**	**357**	*e*Pg	**Pb**	**02 42 51.1**	**+0.5**
SDDR				⇑*e*Sg	**Sn**	**02 43 02.7**	**-0.8**
SDDR				IAML		02 43 07.6	
	comp=N,16nm,5.2s						
BANI	**BANI**	**0.86**	**77**	⇑*e*Pg	**Pb**	**02 42 51.9**	**-0.2**
BANI				⇑*e*Sg	**Sn**	**02 43 05.1**	**-0.6**
BANI				IAML		02 43 08.0	
	comp=N,36nm,0.3s						
REDR	**Restauracion**	**0.97**	**352**	⇑*e*Pg	**Pn**	**02 42 56.0**	**+1.5**
REDR				⇑*e*Sg	**Sn**	**02 43 09.7**	**+1.5**
REDR				IAML		02 43 11.2	
	comp=N,26nm,0.2s						
HATOM	**Hato Mayor del**	**1.86**	**71**	⇑*e*Pg	**Pb**	**02 43 08.6**	**-0.6**
HATOM				⇑*e*Sg	**Sb**	**02 43 32.7**	**+0.3**
HATOM				IAML		02 43 33.1	
	comp=N,9.1nm,1.7s						

*ISK **01** 02:59:53.9, 41°.65N×33°.57E, h8km, ML2.9/9*
*AFAD **01** 02:59:53.9, 41°.64N×33°.52E, h7km±4km, ML2.6*
*IDC **01** 02:59:56.9±1.6, 41°.82N×33°.82E, h42km±28km, mb3.3/2, mbtmp3.3/6, ML3.1/4, Error ellipse: s-maj=24.3km s-min=11.0km az=81.0*
*CFUSG **01** 02:59:56.3, 41°.70N×33°.30E, h10km, Mb2.4/4, MD3.1/4, MSH2.8/5*
ISC 01 02:59:52.8±1.2**, 41°.66N**±0°.02×**33°.59E**±0°.02**, h3**km±9km**, n48,** σ**1.s10**/79**, 2D, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KMON	**Kastamonu**	**0.32**	**153**	Pg	**Pb**	**03 00 00.5**	**-0.7**
KMON				Sg	**Sb**	**03 00 05.3**	**-1.6**
PELI	**Kastamonı-Ara**	**0.42**	**210**	P	**Pg**	**03 00 01.8**	**+1.0**
PELI				S	**Sg**	**03 00 06.6**	**+0.4**
PELI				IAML		03 00 08.0	
	comp=N,986nm,0.6s						
BZK	**Bozkurt**	**0.43**	**46**	Pg	**Pb**	**03 00 03.1**	**0.0**
BZK				Sg	**Sb**	**03 00 09.9**	**-0.1**
CIDE	**Kastamonu/Cide**	**0.53**	**295**	P	**Pb**	**03 00 04.5**	**-0.2**
CIDE				S	**Sg**	**03 00 10.4**	**+0.6**
CIDE				IAML		03 00 13.0	
	comp=N,482nm,0.3s						
CIDE				IAML		03 00 13.0	
	comp=E,587nm,0.3s						
ILGA	**Ilgaz**	**0.61**	**171**	P	**Pb**	**03 00 06.2**	**-0.2**
ILGA				S	**Sg**	**03 00 12.7**	**+0.2**
ILGA				IAML		03 00 17.0	
	comp=N,324nm,0.7s						
ILGA				IAML		03 00 26.0	
	comp=E,312nm,0.4s						
KURC	**Kurucasile-Bar**	**0.66**	**287**	Pg	**Pb**	**03 00 06.9**	**-0.1**
KURC				Sg	**Sb**	**03 00 16.5**	**0.0**
SAFT	**Safranbolu**	**0.80**	**238**	Pg	**Pg**	**03 00 08.4**	**+0.3**
BOYA	**Sinop/Boyabat-**	**0.83**	**98**	P	**Pb**	**03 00 09.8**	**0.0**
BOYA				S	**Sb**	**03 00 20.8**	**-0.6**
BOYA				IAML		03 00 26.0	
	comp=E,162nm,0.5s						
BOYA				IAML		03 00 27.0	
	comp=N,170nm,0.8s						
KBUK	**KARABUK-Merkez**	**0.84**	**240**	P	**Pg**	**03 00 08.3**	**-0.6**
KBUK				S	**Sg**	**03 00 19.1**	**-0.6**
KBUK				IAML		03 00 23.0	
	comp=N,201nm,0.4s						
KAGI	**orum-Kargı**	**0.85**	**128**	P	**Pb**	**03 00 10.1**	**0.0**
KAGI				S	**Sb**	**03 00 21.4**	**-0.6**
KAGI				IAML		03 00 26.0	
	comp=N,194nm,0.5s						
YENC	**ankr-Yen**	**1.00**	**169**	P	**Pn**	**03 00 13.8**	**0.0**
YENC				S	**Sn**	**03 00 28.0**	**-0.4**
YENC				IAML		03 00 33.0	
	comp=N,278nm,0.5s						
YENC				IAML		03 00 33.0	
	comp=E,177nm,0.3s						
BTIN	**Bartın**	**1.00**	**269**	P	**Pb**	**03 00 12.8**	**0.0**
BTIN				S	**Sb**	**03 00 26.1**	**-0.3**
BTIN				IAML		03 00 32.0	
	comp=N,161nm,0.9s						
CANT	**Cankiri**	**1.05**	**179**	Pg	**Pn**	**03 00 14.9**	**+0.4**
DERS	**Karabk-Eskip**	**1.12**	**224**	P	**Pn**	**03 00 15.4**	**-0.2**
DERS				S	**Sg**	**03 00 29.2**	**+0.3**
DERS				IAML		03 00 34.0	
	comp=N,143nm,0.8s						
SINP	**Sinop**	**1.17**	**74**	Pn	**Pn**	**03 00 17.1**	**+1.0**
ELDT	**Eldivan**	**1.18**	**186**	P	**Pb**	**03 00 16.0**	**+0.1**
ELDT				S	**Sn**	**03 00 33.0**	**0.0**
ELDT				IAML		03 00 36.0	
	comp=E,198nm,0.6s						
ELDT				IAML		03 00 38.0	
	comp=N,216nm,0.4s						
SNOP	**Sinop**	**1.26**	**73**	Pn	**Pn**	**03 00 18.8**	**+1.5**
DEVR	**Zonguldak/Devr**	**1.32**	**247**	P	**Pg**	**03 00 17.6**	**-0.5**
DEVR				S	**Sg**	**03 00 34.9**	**-0.3**
DEVR				IAML		03 00 37.0	
	comp=E,95nm,0.3s						
KRGN	**Kargin**	**1.37**	**181**	P	**Pb**	**03 00 19.9**	**+0.8**
KRGN				S	**Sn**	**03 00 38.6**	**+1.0**
AYAZ	**Ayas K¶y, M**	**1.37**	**135**	P	**Pb**	**03 00 20.0**	**+0.8**
AYAZ				S	**Sb**	**03 00 37.0**	**-0.2**
AYAZ				IAML		03 00 43.0	
	comp=N,80nm,0.6s						
AYAZ				IAML		03 00 43.0	
	comp=E,96nm,0.4s						
KZCM	**Kizilcahamam**	**1.41**	**210**	P	**Pb**	**03 00 20.6**	**+0.7**
KZCM				S	**Sg**	**03 00 38.3**	**+0.2**
BCAM	**Yenicaga**	**1.43**	**234**	P	**Pn**	**03 00 19.6**	**-0.1**
BCAM				S	**Sg**	**03 00 38.1**	**-0.5**
BCAM				IAML		03 00 42.0	
	comp=N,76nm,0.4s						
BCAM				IAML		03 00 46.0	
	comp=E,75nm,0.8s						
CMDR	**Camlidere-ANKA**	**1.44**	**216**	P	**Pb**	**03 00 21.2**	**+0.9**
CMDR				S	**Sg**	**03 00 38.6**	**-0.4**
CMDR				IAML		03 00 43.0	
	comp=N,158nm,0.5s						
SUNG	**orum-Sungurl**	**1.55**	**161**	P	**Pg**	**03 00 22.9**	**+0.3**
SUNG				S	**Sn**	**03 00 42.4**	**+0.3**
GOKD	**Ankara-Kalecik**	**1.59**	**183**	P	**Pg**	**03 00 23.2**	**0.0**
GOKD				S	**Sg**	**03 00 44.2**	**+0.4**
RUZG	**Kolk¶y-BOLU**	**1.65**	**236**	Pn	**Pb**	**03 00 23.7**	**-0.2**
CORM	**Corum**	**1.68**	**152**	Pn	**Pb**	**03 00 24.3**	**-0.1**
DELI	**KIRIKKALE**	**1.68**	**171**	P	**Pb**	**03 00 24.3**	**-0.1**
DELI				S	**Sn**	**03 00 43.8**	**-1.5**
BOLU	**Bolu-Merkez-Mu**	**1.69**	**239**	P	**Pg**	**03 00 25.1**	**-0.1**
BOLU				S	**Sn**	**03 00 44.4**	**-1.1**
BOLU				IAML		03 00 51.0	
	comp=E,104nm,0.8s						
BOLU				IAML		03 00 53.0	
	comp=N,122nm,0.6s						
COAL	**Corum-Alaca**	**1.76**	**143**	P	**Pg**	**03 00 26.3**	**-0.2**
COAL				S	**Sg**	**03 00 49.0**	**-0.3**
COAL				IAML		03 00 53.0	
	comp=N,53nm,0.9s						
COAL				IAML		03 00 58.0	
	comp=E,51nm,1.1s						
KIBS	**BOLU**	**1.81**	**227**	P	**Pb**	**03 00 26.3**	**-0.3**
KIBS				S	**Sb**	**03 00 49.4**	**-0.2**
BRTR	**Keskin Array B**	**1.93**	**179**	P	**Pg**	**03 00 29.8**	**-0.1**
	5.6nm,0.3s,baz=0.8,slow=12,SNR=184						
BRTR				S	**Sg**	**03 00 55.1**	**+0.2**
	13nm,0.6s,baz=5.4,slow=23,SNR=11						
	25nm,0.5s						
KESK	**Krkkale-Ke**	**2.02**	**180**	P	**Pb**	**03 00 30.3**	**0.0**
YOZG	**Bozok Univ. Me**	**2.09**	**154**	P	**Pb**	**03 00 31.2**	**-0.2**
CDAG	**Cicekdag**	**2.12**	**163**	P	**Pb**	**03 00 31.6**	**-0.4**
BBAL	**Bala**	**2.15**	**190**	P	**Pg**	**03 00 34.3**	**+0.4**
CKRK	**Yozgat, Cekere**	**2.15**	**137**	P	**Pg**	**03 00 34.2**	**+0.3**
AKPI	**Kirsehir/Akpin**	**2.18**	**172**	P	**Pb**	**03 00 32.2**	**-0.7**
SEV	**Sevastopol'**	**2.88**	**1**	⇓*e*P	**Pn**	**03 00 41.1**	**+1.5**
SEV				pmax	pmax	03 00 41.6	
	comp=Z,6.0nm,0.5s						
SEV				*e*S	**Sn**	**03 01 15.3**	**+0.5**
SEV				smax	smax	03 01 17.4	
	comp=N,14nm,0.4s						
SEV				smax	smax	03 01 17.4	
	comp=E,13nm,0.6s						
ALU	**Alushta**	**3.08**	**11**	⇓*e*P	**Pb**	**03 00 45.5**	**-2.7**
ALU				pmax	pmax	03 00 47.5	
	comp=Z,12nm,0.6s						
ALU				*e*S	**Sb**	**03 01 22.9**	**-3.2**
ALU				smax	smax	03 01 25.3	
	comp=N,9.0nm,0.3s,comp=E,5.0nm,0.3s						
SIM	**Simferopol'**	**3.31**	**6**	*e*P	**Pn**	**03 00 48.1**	**+2.6**
SIM				*e*S	**Sn**	**03 01 28.1**	**+2.7**
SIM				smax	smax	03 01 29.6	
	comp=N,58nm,1.0s						
SIM				smax	smax	03 01 29.6	
	comp=E,46nm,1.1s						
DNZ2	**Donuzlav2**	**3.72**	**356**	*e*P	**Pn**	**03 00 54.1**	**+3.0**
DNZ2				pmax	pmax	03 00 54.6	
	comp=Z,4.0nm,0.1s						
DNZ2				*e*S	**Sn**	**03 01 37.3**	**+1.8**
DNZ2				smax	smax	03 01 40.0	
	comp=N,43nm,0.6s						
DNZ2				smax	smax	03 01 40.0	
	comp=E,15nm,0.3s						
TARU	**Tarkhankut**	**3.79**	**349**	*e*x	x	03 00 55.8	
TARU				pmax	pmax	03 01 05.1	
	comp=Z,5.0nm,0.5s						
TARU				*e*S	**Sn**	**03 01 39.7**	**+2.5**
TARU				smax	smax	03 01 41.4	
	comp=N,8.0nm,0.4s						
TARU				smax	smax	03 01 41.4	
	comp=E,11nm,0.5s						
MLR	**Muntele Rosu**	**6.74**	**307**	P	**Pn**	**03 01 34.9**	**+2.1**
	comp=E,0.1nm,0.3s,baz=145,slow=11,SNR=4.9						
MLR				S	**Sn**	**03 02 49.9**	**-0.2**
	comp=E,0.5nm,0.4s,baz=353,slow=22,SNR=1.5						
	comp=E,0.7nm,0.7s						
KVAR	**Kislovodsk Arr**	**7.08**	**68**	P	**Pn**	**03 01 34.4**	**-3.0**
	baz=270,slow=17						
	comp=E,0.7nm,0.3s						
AKASG	**Malin Array Be**	**9.53**	**343**	P	**Pn**	**03 02 10.3**	**-0.5**
	comp=E,0.8nm,0.3s,baz=161,slow=13,SNR=3.6						
	comp=E,0.2nm,0.3s						
FINES	**FINESS Array B**	**20.33**	**350**	P	**P**	**03 04 27.6**	**-2.2**
	comp=E,3.4nm,0.9s,baz=181,slow=10.0,SNR=2.4						
	comp=E,3.4nm,0.9s						
TORD	**Torodi Ar. Bea**	**39.70**	**234**	P	**P**	**03 07 27.0**	**+0.6**
	comp=E,0.4nm,1.0s,baz=28,slow=7.4,SNR=1.7						
	comp=E,0.4nm,1.0s						

*IDC **01** 03:01:21.0±6.7, 15°.82N×98°.81W, h0km, mb3.2/2, mbtmp3.1/4, ML3.0/1, MS2.8/2, Error ellipse: s-maj=130.7km s-min=30.7km az=9.0*
*NEIC **01** 03:01:31.2±1.0, 16°.65N±0°.02×98°.427W±0°.004, h10km±1km, mb4.2/4, Md4.3/110(MEX), Error ellipse: s-maj=3.1km s-min=2.8km az=184.0*
*MEX **01** 03:01:32.0±0.7, 16°.61N×98°.45W, h2km±4km, MD4.3*
ISC 01 03:01:27.5±1.2**, 16°.58N**±0°.02×**98°.46W**±0°.02**, h4**km±9km**, n119,** σ**1.s52**/216**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.36**	**120**		**Pn**	**03 01 39.0**	**-0.6**
PNIG					**Sb**	**03 01 44.4**	**+1.8**
PNIG	**Pinotepa**	**0.36**	**120**	*e*P	**Pn**	**03 01 39.0**	**-0.6**
PNIG				*e*S	**Sb**	**03 01 44.4**	**+1.8**
CRIG	**Cruz Grande**	**0.67**	**284**		**Pn**	**03 01 44.3**	**+0.6**
CRIG					**Sn**	**03 01 53.3**	**-1.4**
CRIG	**Cruz Grande**	**0.67**	**284**	*e*P	**Pn**	**03 01 44.3**	**+0.6**
CRIG				*e*S	**Sn**	**03 01 53.3**	**-1.4**
MGIG	**Malinaltepec**	**0.68**	**345**		**Pn**	**03 01 43.9**	**-0.1**
MGIG					**Sn**	**03 01 53.0**	**-2.1**
MGIG	**Malinaltepec**	**0.68**	**345**	*e*P	**Pn**	**03 01 43.9**	**-0.1**
MGIG				*e*S	**Sn**	**03 01 53.0**	**-2.1**
YOIG	**Yosondua**	**0.92**	**72**		**Pn**	**03 01 47.8**	**+0.3**
YOIG					**Sb**	**03 01 59.4**	**+0.7**
YOIG	**Yosondua**	**0.92**	**72**	*e*P	**Pn**	**03 01 47.8**	**+0.3**
YOIG				*e*S	**Sb**	**03 01 59.4**	**+0.7**
TXIG	**Tlaxiaco**	**0.94**	**44**		**Pn**	**03 01 48.0**	**+0.3**
TXIG					**Sb**	**03 02 00.0**	**+0.5**
TXIG	**Tlaxiaco**	**0.94**	**44**	*e*P	**Pn**	**03 01 48.0**	**+0.3**
TXIG				*e*S	**Sb**	**03 02 00.0**	**+0.5**
TLIG	**Tlapa**	**0.99**	**354**		**Pn**	**03 01 48.4**	**+0.1**
TLIG					**Sn**	**03 02 01.5**	**-1.3**
TLIG	**Tlapa**	**0.99**	**354**	*e*P	**Pn**	**03 01 48.4**	**+0.1**
TLIG				*e*S	**Sn**	**03 02 01.5**	**-1.3**
DAIG	**Los Arroyos**	**1.23**	**291**		**Pn**	**03 01 52.6**	**+1.1**
DAIG					**Sg**	**03 02 07.1**	**+0.1**
DAIG	**Los Arroyos**	**1.23**	**291**	*e*P	**Pn**	**03 01 52.6**	**+1.1**
DAIG				*e*S	**Sg**	**03 02 07.1**	**+0.1**
FTIG	**Fresnillo de T**	**1.36**	**13**		**Pg**	**03 01 54.8**	**+1.2**
FTIG					**Sn**	**03 02 11.8**	**-0.1**
FTIG	**Fresnillo de T**	**1.36**	**13**	*e*P	**Pg**	**03 01 54.8**	**+1.2**
FTIG				*e*S	**Sn**	**03 02 11.8**	**-0.1**
PEIG	**Puerto Escondi**	**1.38**	**114**		**Pg**	**03 01 54.3**	**+0.3**
PEIG					**Sb**	**03 02 11.4**	**-0.6**
PEIG	**Puerto Escondi**	**1.38**	**114**	*e*P	**Pg**	**03 01 54.3**	**+0.3**
PEIG				*e*S	**Sb**	**03 02 11.4**	**-0.6**
HLIG	**Huajuapan de L**	**1.39**	**26**		**Pg**	**03 01 55.8**	**+1.5**
HLIG					**Sn**	**03 02 13.2**	**+0.4**
HLIG	**Huajuapan de L**	**1.39**	**26**	*e*P	**Pg**	**03 01 55.8**	**+1.5**
HLIG				*e*S	**Sn**	**03 02 13.2**	**+0.4**
OXIG	**Oaxaca**	**1.72**	**73**		**Pb**	**03 01 59.9**	**+0.1**
OXIG					**Sg**	**03 02 22.7**	**-0.2**
VHO	**Vista Hermosa**	**1.72**	**73**	*e*P	**Pb**	**03 01 59.9**	**+0.1**
VHO				*e*S	**Sg**	**03 02 22.7**	**-0.2**
OXBJ	**Oaxaca**	**1.73**	**73**		**Pg**	**03 02 01.2**	**+0.5**
OXBJ					**Sg**	**03 02 22.7**	**-0.4**
OXBJ	**Oaxaca**	**1.73**	**73**	*e*P	**Pg**	**03 02 01.2**	**+0.5**
OXBJ				*e*S	**Sg**	**03 02 22.7**	**-0.4**
MEIG	**Mezcala**	**1.74**	**321**		**Pg**	**03 02 01.0**	**0.0**
MEIG					**Sb**	**03 02 22.7**	**+0.3**
MEIG	**Mezcala**	**1.74**	**321**	*e*P	**Pg**	**03 02 01.0**	**0.0**
MEIG				*e*S	**Sb**	**03 02 22.7**	**+0.3**
OXLC	**Oaxaca**	**1.75**	**74**		**Pg**	**03 02 00.7**	**-0.3**
OXLC					**Sg**	**03 02 23.7**	**-0.1**
OXLC	**Oaxaca**	**1.75**	**74**	*e*P	**Pg**	**03 02 00.7**	**-0.3**
OXLC				*e*S	**Sg**	**03 02 23.7**	**-0.1**
CAIG	**El Cayaco**	**1.80**	**285**		**Pb**	**03 02 00.6**	**-0.4**
CAIG					**Sn**	**03 02 20.7**	**-1.9**
CAIG	**El Cayaco**	**1.80**	**285**	*e*P	**Pb**	**03 02 00.6**	**-0.4**
CAIG				*e*S	**Sn**	**03 02 20.7**	**-1.9**
TOIG	**Toxpalan**	**2.01**	**41**		**Pb**	**03 02 04.0**	**-0.8**
TOIG					**Sg**	**03 02 32.9**	**+0.6**
TOIG	**Toxpalan**	**2.01**	**41**	*e*P	**Pb**	**03 02 04.0**	**-0.8**
TOIG				*e*S	**Sg**	**03 02 32.9**	**+0.6**
PLIG	**Platanillo**	**2.06**	**331**		**Pb**	**03 02 06.2**	**+0.5**
PLIG					**Sb**	**03 02 32.0**	**+0.4**
PLIG	**Platanillo**	**2.06**	**331**	*e*P	**Pb**	**03 02 06.2**	**+0.5**
PLIG				*e*S	**Sb**	**03 02 32.0**	**+0.4**
TPIG	**Tehuac#an**	**2.11**	**30**		**Pb**	**03 02 05.6**	**-0.8**
TPIG					**Sg**	**03 02 34.5**	**-0.9**
TPIG	**Tehuac#an**	**2.11**	**30**	*e*P	**Pb**	**03 02 05.6**	**-0.8**
TPIG				*e*S	**Sg**	**03 02 34.5**	**-0.9**
YAIG	**Yautepec**	**2.35**	**346**		**Pg**	**03 02 11.3**	**-1.2**
YAIG					**Sb**	**03 02 40.8**	**+0.9**
YAIG	**Yautepec**	**2.35**	**346**	*e*P	**Pg**	**03 02 11.3**	**-1.2**
YAIG				*e*S	**Sb**	**03 02 40.8**	**+0.9**
HUIG	**Huatulco**	**2.40**	**109**		**Pg**	**03 02 13.8**	**+0.3**
HUIG					**Sn**	**03 02 33.9**	**-3.4**
HUIG	**Huatulco**	**2.40**	**109**	*e*P	**Pg**	**03 02 13.8**	**+0.3**
HUIG				*e*S	**Sn**	**03 02 33.9**	**-3.4**
PBXN	**Popocatepetl**	**2.43**	**356**	*e*P	**Pb**	**03 02 11.2**	**-0.8**
PBXN				*e*P	**Pg**	**03 02 11.6**	**-2.5**
PBXN				*e*S	**Sg**	**03 02 45.1**	**-0.5**
PBXN				*e*S	**Sb**	**03 02 45.9**	**+3.4**
PBPN	**Popocatepetl**	**2.46**	**356**	*e*P	**Pb**	**03 02 13.0**	**+0.4**
PBPN				*e*S	**Sg**	**03 02 46.6**	**+0.1**
PPM	**Popocatepetl**	**2.48**	**356**	*e*P	**Pb**	**03 02 12.5**	**-0.5**
PPM				*e*S	**Sg**	**03 02 47.1**	**-0.3**
PPIG	**Popocatepetl**	**2.48**	**356**		**Pb**	**03 02 12.5**	**-0.5**
PPIG					**Sg**	**03 02 47.1**	**-0.3**
PPSX	**Xalitzintla**	**2.50**	**359**	*e*P	**Pb**	**03 02 13.9**	**+0.8**
PPSX				*e*S	**Sg**	**03 02 48.4**	**+0.6**
AMVM	**AMECAMECA**	**2.56**	**353**		**Pg**	**03 02 17.7**	**+1.0**
AMVM					**Sg**	**03 02 47.9**	**-2.0**
AMVM	**AMECAMECA**	**2.56**	**353**	*e*P	**Pg**	**03 02 17.7**	**+1.0**
AMVM				*e*S	**Sg**	**03 02 47.9**	**-2.0**
MAVM	**Malinalco, Edo**	**2.57**	**337**		**Pb**	**03 02 13.0**	**-1.2**
MAVM					**Sg**	**03 02 48.8**	**-1.2**
MAVM	**Malinalco, Edo**	**2.57**	**337**	*e*P	**Pb**	**03 02 13.0**	**-1.2**
MAVM				*e*S	**Sg**	**03 02 48.8**	**-1.2**
MPVM	**San Francisco**	**2.66**	**349**		**Pg**	**03 02 22.3**	**+3.7**
MPVM					**Sg**	**03 02 53.0**	**-0.1**
MPVM	**San Francisco**	**2.66**	**349**	*e*P	**Pg**	**03 02 22.3**	**+3.7**
MPVM				*e*S	**Sg**	**03 02 53.0**	**-0.1**
MZVM		**2.70**	**344**		**Pg**	**03 02 21.9**	**+2.5**
MZVM					**Sb**	**03 02 48.8**	**-1.1**
MZVM		**2.70**	**344**	*e*P	**Pg**	**03 02 21.9**	**+2.5**
MZVM				*e*S	**Sb**	**03 02 48.8**	**-1.1**
TLVM	**San Miguel Top**	**2.70**	**346**		**Pb**	**03 02 17.2**	**+0.6**
TLVM					**Sg**	**03 02 52.6**	**-1.9**
TLVM	**San Miguel Top**	**2.70**	**346**	*e*P	**Pb**	**03 02 17.2**	**+0.6**
TLVM				*e*S	**Sg**	**03 02 52.6**	**-1.9**
XCVM	**Xochimilco**	**2.73**	**347**		**Pg**	**03 02 23.3**	**+3.3**
XCVM					**Sg**	**03 02 53.5**	**-2.0**
XCVM	**Xochimilco**	**2.73**	**347**	*e*P	**Pg**	**03 02 23.3**	**+3.3**
XCVM				*e*S	**Sg**	**03 02 53.5**	**-2.0**
THVM	**De Xico**	**2.76**	**350**		**Pg**	**03 02 20.0**	**-0.5**
THVM					**Sg**	**03 02 54.4**	**-2.0**
THVM	**De Xico**	**2.76**	**350**	*e*P	**Pg**	**03 02 20.0**	**-0.5**
THVM				*e*S	**Sg**	**03 02 54.4**	**-2.0**
NEUV	**Arroyo Zacate**	**2.78**	**66**		**Pn**	**03 02 14.7**	**+1.9**
NEUV					**Sg**	**03 02 55.0**	**-1.9**
NEUV	**Arroyo Zacate**	**2.78**	**66**	*e*P	**Pn**	**03 02 14.7**	**+1.9**
NEUV				*e*S	**Sg**	**03 02 55.0**	**-1.9**
AOVM	**Tlapan**	**2.80**	**343**		**Pg**	**03 02 20.0**	**-1.2**
AOVM					**Sg**	**03 02 56.3**	**-1.3**
AOVM	**Tlapan**	**2.80**	**343**	*e*P	**Pg**	**03 02 20.0**	**-1.2**
AOVM				*e*S	**Sg**	**03 02 56.3**	**-1.3**
UNM	**Universidad Na**	**2.82**	**346**		**Pb**	**03 02 16.2**	**-2.5**
UNM	**Universidad Na**	**2.82**	**346**	*e*P	**Pg**	**03 02 23.5**	**+1.8**
UNM				*e*S	**Sg**	**03 02 57.6**	**-0.7**
MCRU	**Las Cruces**	**2.83**	**345**	*e*P	**Pb**	**03 02 18.1**	**-0.7**
MCRU				*e*S	**Sb**	**03 02 52.6**	**-1.5**
INVM	**La Marquesa**	**2.84**	**342**		**Pb**	**03 02 18.1**	**-0.9**
INVM					**Sb**	**03 02 52.6**	**-1.7**
INVM	**La Marquesa**	**2.84**	**342**	*e*P	**Pb**	**03 02 18.1**	**-0.9**
INVM				*e*S	**Sb**	**03 02 52.6**	**-1.7**
BJVM	**Benito Juarez**	**2.87**	**346**		**Sg**	**03 02 57.2**	**-2.4**
BJVM	**Benito Juarez**	**2.87**	**346**	*e*S	**Sg**	**03 02 57.2**	**-2.4**
MHVM	**Bosque de Chap**	**2.91**	**346**		**Pg**	**03 02 22.3**	**-0.9**
MHVM	**Bosque de Chap**	**2.91**	**346**	*e*P	**Pg**	**03 02 22.3**	**-0.9**
PBVM	**Pinon**	**2.91**	**348**		**Pn**	**03 02 16.7**	**+2.1**
PBVM					**Sb**	**03 02 55.8**	**-0.1**
PBVM	**Pinon**	**2.91**	**348**	*e*P	**Pn**	**03 02 16.7**	**+2.1**
PBVM				*e*S	**Sb**	**03 02 55.8**	**-0.1**
APVM	**Azcapotzalco**	**2.98**	**346**		**Sb**	**03 02 55.8**	**-2.5**
APVM	**Azcapotzalco**	**2.98**	**346**	*i* S	**Sb**	**03 02 55.8**	**-2.5**
APVM				*e*S	**Sb**	**03 02 55.8**	**-2.5**
ZIIG	**Zihuatanejo**	**3.06**	**290**		**Pn**	**03 02 16.3**	**-0.3**
ZIIG					**Sn**	**03 02 53.0**	**-0.6**
ZIIG	**Zihuatanejo**	**3.06**	**290**	*e*P	**Pn**	**03 02 16.3**	**-0.3**
ZIIG				*e*S	**Sn**	**03 02 53.0**	**-0.6**
PTVM	**Pico Tres Padr**	**3.06**	**348**		**Pb**	**03 02 20.0**	**-2.8**
PTVM					**Sb**	**03 02 58.6**	**-2.1**

PTVM	Pico Tres Padr	3.06	348	eP	Pb	03 02 20.0	-2.8
PTVM				eS	Sb	03 02 58.6	-2.1
AZVM	Cuida Lopez Ma	3.09	345		Pb	03 02 22.8	-0.5
AZVM					Sn	03 02 55.4	+0.4
AZVM	Cuida Lopez Ma	3.09	345	eP	Pb	03 02 22.8	-0.5
AZVM				eS	Sn	03 02 55.4	+0.4
JAUV	Jalcomulco	3.19	29		Pn	03 02 18.6	+0.1
JAUV					Sb	03 03 02.8	-1.2
JAUV	Jalcomulco	3.19	29	eP	Pn	03 02 18.6	+0.1
JAUV				eS	Sb	03 03 02.8	-1.2
VTVM	Tizayuca	3.19	355		Pg	03 02 27.9	-0.8
VTVM					Sb	03 03 06.0	+1.7
VTVM	Tizayuca	3.19	355	eP	Pg	03 02 27.9	-0.8
VTVM				eS	Sb	03 03 06.0	+1.7
ZUVM	ZUMPANGO	3.29	350		Pg	03 02 30.7	+0.2
ZUVM					Sb	03 03 06.5	-0.5
ZUVM	ZUMPANGO	3.29	350	eP	Pg	03 02 30.7	+0.2
ZUVM				eS	Sb	03 03 06.5	-0.5
ATVM	ATLACOMULCO	3.43	338		Pg	03 02 33.0	-0.3
ATVM					Sb	03 03 11.2	-0.1
ATVM	ATLACOMULCO	3.43	338	eP	Pg	03 02 33.0	-0.3
ATVM				eS	Sb	03 03 11.2	-0.1
CMIG	Matias Romero	3.46	81	Pn	Pn	03 02 22.5	+0.3
	0.9nm,0.3s,baz=248,slow=14,SNR=7.0						
CMIG				Pg	Pg	03 02 34.0	+0.2
	3.4nm,0.3s,baz=272,slow=13,SNR=17						
CMIG				Sn	Sn	03 03 01.2	-2.4
	5.5nm,0.3s,baz=38,slow=8.8,SNR=4.7						
CMIG				Lg	Lg	03 03 17.6	
	9.9nm,0.3s,baz=0.5,slow=19,SNR=13						
CMIG				LR	LR	03 03 41.0	
	comp=Z,36nm,18.1s,baz=243,slow=35						
	2.2nm,0.4s						
CMIG	Matias Romero	3.46	81		Pn	03 02 22.7	+0.5
CMIG					Sn	03 03 01.1	-2.5
CMIG	Matias Romero	3.46	81	eP	Pn	03 02 22.7	+0.5
CMIG				eS	Sn	03 03 01.1	-2.5
ACIG	Acambay	3.65	338		Pb	03 02 31.6	-1.0
ACIG	Acambay	3.65	338	eP	Pb	03 02 31.6	-1.0
CXUV	Coxquihui	3.67	13		Pb	03 02 33.5	+0.5
CXUV					Sn	03 03 12.6	+3.7
CXUV	Coxquihui	3.67	13	eP	Pb	03 02 33.5	+0.5
CXUV				eS	Sn	03 03 12.6	+3.7
LVIG	Laguna Verde	3.68	31		Pn	03 02 25.0	-0.2
LVIG					Sn	03 03 07.4	-1.7
LVIG	Laguna Verde	3.68	31	eP	Pn	03 02 25.0	-0.2
LVIG				eS	Sn	03 03 07.4	-1.7
DHIG	Demacu	3.74	352		Pb	03 02 32.5	-1.9
DHIG					Sb	03 03 18.8	-1.4
DEIG	Demacu	3.75	352	eP	Pb	03 02 32.5	-1.9
DEIG				eS	Sb	03 03 18.8	-1.4
MOIG	Morelia	4.03	320		Pb	03 02 41.8	+2.5
MOIG					Sb	03 03 28.9	+0.3
MOIG	Morelia	4.03	320	eP	Pb	03 02 41.8	+2.5
MOIG				eS	Sb	03 03 28.9	+0.3
UXUV	UXUV	4.19	79		Pn	03 02 32.7	+0.5
UXUV					Sn	03 03 23.8	+2.2
UXUV	UXUV	4.19	79	eP	Pn	03 02 32.7	+0.5
UXUV				eS	Sn	03 03 23.8	+2.2
CTUV	Llano Grande	4.87	1		Pb	03 02 48.8	-4.6
CTUV	Llano Grande	4.87	1	eP	Pb	03 02 48.8	-4.6
CEGR	Campo Tres	5.85	299	eP	Pn	03 02 57.7	+2.4
CJM	Chamela	6.91	296	eP	Pn	03 03 12.1	+2.5
TXAR	Lajitas Array	13.57	340	Pn	Pn	03 04 44.7	+3.7
	0.2nm,0.9s,baz=155,slow=12,SNR=2.1						
TXAR				LR	LR	03 10 42.6	
	comp=Z,90nm,18.0s,baz=220,slow=40						
237A	Washetta, Mont	15.54	8	Pn	Pn	03 05 06.5	-1.0
237A				IAmb	IAmb	03 05 07.0	
	comp=Z,16nm,0.8s						
PLPT	Palo Pinto	16.17	0		Pn	03 05 16.5	+0.9
PLPT				IAmb	IAmb	03 05 31.5	
	comp=Z,15nm,0.9s						
MTPU	Mount Pierson	24.56	333	P	P	03 06 50.2	+1.3
TCUT	Toone Canyon	26.89	338	P	P	03 07 12.6	+2.7
YKA	Yellowknife Ar	47.25	350	P	P	03 10 00.9	-0.5
	comp=Z,0.2nm,0.8s,baz=162,slow=6.6,SNR=4.2						
	comp=Z,0.2nm,0.8s						
H03N2	Juan Fernandez	53.11	160	T	T	04 07 41.6	
	baz=337,slow=77,SNR=17						
H03N1	Juan Fernandez	53.12	160	T	T	04 07 42.8	
	baz=337,slow=77,SNR=32						
H03N3	Juan Fernandez	53.13	160	T	T	04 07 41.6	
	baz=337,slow=77,SNR=39						
ILAR	Eielson Array	58.07	338	P	P	03 11 19.7	-1.9
	comp=Z,0.4nm,0.9s,baz=110,slow=7.7,SNR=2.7						
	comp=Z,0.4nm,0.9s						

*IDC **01** 03:13:15.4±1.8, 21.°10S×68.°39W, h111km±15km, mb4.1/11, mbtmp4.3/15, Error ellipse: s-maj=19.3km s-min=11.7km az=77.0*
*SJA **01** 03:13:15.4±0.5, 21.°12S×68.°64W, h143km±3km, ML4.5, MW4.1*
*NEIC **01** 03:13:16.9±2.0, 21.°14S±0.°03×68.°38W±0.°07, h123km±5km, mb4.5/35, Mwr4.4(GUC), Error ellipse: s-maj=10.3km s-min=2.4km az=73.0*
*GUC **01** 03:13:18.5±0.7, 21.°14S×68.°58W, h133km±4km, ML4.6*
*VAO **01** 03:13:19.2±0.5, 20.°93S×68.°23W, h134km, mb4.5, Presumed earthquake*
ISC 01 03:13:17.0±0.6, **21.°13S**±0.°03×**68.°50W**±0.°04, **h133**km±5km, **n179**, σ1.s**42**/191, **mb4.4**/21, **8C-6D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.93	275		Pn	03 13 39.6	+0.1
PB01				Sn	Sn	03 13 55.8	-0.9
PB01	IPOC Station P	0.93	275	⇑iP	Pn	03 13 39.7	+0.1
PB01				eS	Sn	03 13 56.3	-0.4
PB01				IAML		03 13 58.0	
	comp=E,14µm,0.3s						
PB01	IPOC Station P	0.93	275	eP	Pn	03 13 39.7	+0.1
PB01				eS	Sn	03 13 57.2	+0.5
PB01				IAML		03 13 58.2	
	comp=Z,7µm,0.2s						
PB09	IPOC Station P	0.96	226		Pn	03 13 40.9	+0.9
PB09				Sn	Sn	03 13 57.9	+0.4
PB09	IPOC Station P	0.96	226	⇑iP	Pn	03 13 40.9	+0.9
PB09				eS	Sn	03 13 58.2	+0.8
PB09				IAML		03 14 00.2	
	comp=E,8µm,0.5s						
PB09	IPOC Station P	0.96	226	eP	Pn	03 13 40.1	+0.2
PB09				IAML		03 14 02.6	
	comp=Z,5µm,0.4s						
PB08	IPOC Station P	1.16	328		Pn	03 13 43.0	+0.8
PB08				Sn	Sn	03 14 01.4	+0.2
PB08	IPOC Station P	1.16	328	⇓iP	Pn	03 13 43.0	+0.8
PB08				eS	Sn	03 14 01.7	+0.5
PB08	IPOC Station P	1.16	328	eP	Pn	03 13 42.3	+0.1
PB08				IAML		03 14 05.2	
	comp=Z,2µm,0.3s						
PB02	IPOC Station P	1.32	262		Pn	03 13 43.7	+0.3
PB02	IPOC Station P	1.32	262	⇑iP	Pn	03 13 43.7	+0.3
PB02				eS	Sn	03 14 03.1	-0.5
PB02	IPOC Station P	1.32	262	eP	Pn	03 13 43.0	-0.4
PB02				IAML		03 14 06.2	
	comp=Z,16µm,0.3s						
PB07	IPOC Station P	1.42	245		Pn	03 13 44.4	-0.2
PB07	IPOC Station P	1.42	245	⇑iP	Pn	03 13 44.9	+0.3
PB07				eS	Sn	03 14 05.1	-0.6
PB07				IAML		03 14 05.6	
	comp=N,12µm,0.4s						
PB07	IPOC Station P	1.42	245	eP	Pn	03 13 44.2	-0.4
PB07				eS	Sn	03 14 05.5	-0.1
PB07				IAML		03 14 06.6	
	comp=Z,6µm,0.3s						
PB03	IPOC Station P	1.48	232		Pn	03 13 45.5	+0.3
PB03	IPOC Station P	1.48	232	⇑iP	Pn	03 13 45.6	+0.3
PB03				eS	Sn	03 14 06.2	-0.6
PB03				IAML		03 14 07.1	
	comp=E,9µm,0.3s						
PB03	IPOC Station P	1.48	232	eP	Pn	03 13 44.9	-0.4
PB03				eS	Sn	03 14 06.8	0.0
PB03				IAML		03 14 08.3	
	comp=Z,6µm,0.3s						
PATCX	Punta Patache	1.58	281		Pn	03 13 46.1	-0.1
GO01	Chusmiza	1.60	336		Pn	03 13 47.5	+0.6
GO01	Chusmiza	1.60	336	⇓iP	Pn	03 13 47.5	+0.6
GO01				eS	Sn	03 14 10.4	+0.8
GO01				IAML		03 14 14.8	
	comp=E,9µm,0.1s						
GO01	Chusmiza	1.60	336	eP	Pn	03 13 46.9	0.0
PB11	IPOC Station P	1.75	321		Pn	03 13 48.2	0.0
PB11	IPOC Station P	1.75	321	⇓iP	Pn	03 13 48.2	0.0
PB11				eS	Sn	03 14 11.5	-0.6
PB11				IAML		03 14 12.7	
	comp=E,5µm,0.2s						
PB11	IPOC Station P	1.75	321	eP	Pn	03 13 47.5	-0.8
PB11				IAML		03 14 13.6	
	comp=Z,1µm,0.2s						
TA02	Huaiquique	1.75	299	eP	Pn	03 13 48.1	-0.1
TA02				eS	Sn	03 14 11.1	-0.9
TA02	Huaiquique	1.75	299	eP	Pn	03 13 47.5	-0.7
TA02				IAML		03 14 16.0	
	comp=Z,4µm,0.1s						
AF01	San Pedro de A	1.83	171		Pn	03 13 51.3	+1.8
AF01	San Pedro de A	1.83	171	eP	Pn	03 13 51.2	+1.8
AF01	San Pedro de A	1.83	171	eP	Pn	03 13 50.9	+1.5
AF01				eS	Sn	03 14 16.1	+1.8
AF01				IAML		03 14 38.3	
	comp=Z,2µm,1.1s						
PB06	IPOC Station P	1.86	212		Pn	03 13 49.8	+0.3
PB06	IPOC Station P	1.86	212	⇑iP	Pn	03 13 50.0	+0.5
PB06				eS	Sn	03 14 14.2	-0.3
PB06				IAML		03 14 16.6	
	comp=E,4µm,0.3s						
PB06	IPOC Station P	1.86	212	eP	Pn	03 13 49.3	-0.2
PB06				eS	Sn	03 14 15.4	+0.9
PB06				IAML		03 14 16.9	
	comp=Z,2µm,0.6s						
PB05	IPOC Station P	2.33	222		Pn	03 13 55.1	-0.2
PB05	IPOC Station P	2.33	222	⇑iP	Pn	03 13 55.1	-0.2
PB05				eS	Sn	03 14 22.3	-2.5
PB05				IAML		03 14 26.2	
	comp=E,2µm,0.5s						
PB05	IPOC Station P	2.33	222	eP	Pn	03 13 54.6	-0.7
PB05				IAML		03 14 27.4	
	comp=Z,972nm,0.3s						
PX02	IPOC Station P	2.69	323	eP	Pn	03 13 58.2	-1.6
PB16	IPOC Station P	2.94	341	Pn	Pn	03 14 03.7	+0.2
YJA	Yavi	2.96	111	eP	Pn	03 14 05.3	+1.7
YJA	Yavi	2.96	111	eP	Pn	03 14 06.1	+2.5
YJA				eS	Sn	03 14 38.0	-1.6
PB12	IPOC Station P	3.04	325		Pn	03 14 03.0	-1.4
PB12	IPOC Station P	3.04	325	⇓eP	Pn	03 14 03.0	-1.4
PB12	IPOC Station P	3.04	325	eP	Pn	03 14 02.4	-2.0
PB12				IAML		03 14 46.4	
	comp=Z,660nm,0.3s						
AP01	Chacalluta	3.25	327		Pn	03 14 05.8	-1.1
AP01	Chacalluta	3.25	327	eP	Pn	03 14 05.8	-1.1
AP01	Chacalluta	3.25	327	eP	Pn	03 14 06.0	-1.0
AP01				eS	Sn	03 14 45.8	+0.2
AP01				IAML		03 14 55.2	
	comp=Z,1µm,0.2s						
PB18	Visviri	3.65	345		Pn	03 14 15.1	+2.5
PB18	Visviri	3.65	345	eP	Pn	03 14 14.9	+2.3
SALTA		3.67	147	⇓eP	Pn	03 14 14.8	+1.9
SALTA		3.67	147	eP	Pn	03 14 15.6	+2.7
PB14	IPOC Station P	3.90	206		Pn	03 14 14.6	-1.1
PB14	IPOC Station P	3.90	206	eP	Pn	03 14 14.4	-1.2
PB14	IPOC Station P	3.90	206	eP	Pn	03 14 13.9	-1.8
PB14				IAML		03 15 12.2	
	comp=Z,358nm,0.5s						
GO02	Mina Guanaco	4.13	194		Pn	03 14 18.6	-0.3
GO02	Mina Guanaco	4.13	194	⇑eP	Pn	03 14 18.3	-0.6
GO02	Mina Guanaco	4.13	194	eP	Pn	03 14 17.9	-1.0
GO02				eS	Sn	03 15 05.7	-1.2
GO02				IAML		03 15 08.4	
	comp=Z,699nm,0.5s						
SLA	San Lorenzo	4.51	143	⇓eP	Pn	03 14 25.7	+2.0
SLA	San Lorenzo	4.51	143	eP	Pn	03 14 26.1	+2.3
LPAZ	La Paz	4.83	4	P	Pn	03 14 27.6	-0.8
	comp=Z,63nm,0.4s,baz=179,slow=6.6,SNR=287						
LPAZ				S	Sn	03 15 22.1	-1.9
	comp=Z,10nm,0.5s,baz=211,slow=7.2,SNR=0.9						
LPAZ	La Paz	4.83	4		Pn	03 14 29.8	+1.3
LPAZ	La Paz	4.83	4	eP	Pn	03 14 30.2	+1.8
LPAZ	La Paz	4.83	4	eP	Pn	03 14 28.7	+0.3
AC01	Pan de Azucar	5.35	201		Pn	03 14 32.8	-2.0
AC01	Pan de Azucar	5.35	201	eP	Pn	03 14 32.5	-2.3
AC01	Pan de Azucar	5.35	201	eP	Pn	03 14 32.8	-2.0
AC01				eS	Sn	03 15 31.5	-4.0
AC01				IAML		03 15 50.8	
	comp=Z,214nm,0.5s						
AC02	Maricunga	5.71	186		Pn	03 14 39.6	-0.4
AC06	Mina Casimiro	6.42	195		Pn	03 14 46.6	-2.6
GO03	Copiapo	6.62	193		Pn	03 14 49.3	-2.6
AC04	Llanos de Chal	7.42	198		Pn	03 14 58.3	-4.3
AC05	El Transito	7.84	192		Pn	03 15 05.6	-2.7
LCO	Las Campanas	8.09	194		Pn	03 15 08.1	-3.8
SIV	San Ignacio	8.70	55	P	Pn	03 15 17.3	-2.6
	baz=274,slow=12						
MURT	Porto Murtinho	10.16	95	eP	Pn	03 15 37.1	-2.3
CFA	Coronel Fontan	10.43	179	P	Pn	03 15 40.3	-2.7
	comp=Z,3.0nm,0.3s,baz=3.0,slow=14,SNR=30						
CFA				S	Sn	03 17 28.2	-10
	comp=Z,4.8nm,0.4s,baz=121,slow=22,SNR=6.6						
PTLB	Pontes e Lacer	10.53	59		Pn	03 15 42.7	-1.8
PTLB	Pontes e Lacer	10.53	59	eP	Pn	03 15 41.1	-3.4
BDQN	Bodoquena, MS	11.01	89	eP	Pn	03 15 47.6	-3.2
VILB	Vilhena	11.36	46		Pn	03 15 53.3	-2.1
VILB	Vilhena	11.36	46	eP	Pn	03 15 53.5	-1.9
CPUP	Villa Florida	11.46	119	P	Pn	03 15 53.5	-3.2
	comp=Z,1.2nm,0.6s,baz=291,slow=14,SNR=5.3						
CPUP	Villa Florida	11.46	119	Pn	Pn	03 15 54.9	-1.8
AQDB	Aquidauana	11.99	89		Pn	03 16 02.0	-1.6
AQDB	Aquidauana	11.99	89	eP	Pn	03 16 01.5	-2.1
NNA	Nana	12.11	317	S	Sn	03 18 03.2	-16
	comp=Z,2.8nm,0.3s,baz=176,slow=8.0,SNR=1.6						
AMBA	Amambai (Brazi	12.65	101	eP	Pn	03 16 12.7	+0.4
SALV	Santo Antonio	13.21	69	eP	Pn	03 16 17.4	-2.2
PP1B	Ponte de Pedra	13.32	77	eP	Pn	03 16 19.6	-1.4
BO01	Tunca	13.40	189		Pn	03 16 21.1	-0.8
PDRB	Porto dos Gac	14.73	52	eP	Pn	03 16 34.8	-4.0
TRCB	Terra Rica	14.81	99	P	P	03 16 41.4	-1.0
TRCB	Terra Rica	14.81	99	eP	Pn	03 16 39.7	-0.2
C2SB	Chapadao do Su	14.91	84	eP	P	03 16 40.9	-2.5
PTGB	Pitanga	15.55	106	eP	P	03 16 50.5	-0.1
BI02	San Fabin de	15.66	188	P	Pn	03 16 50.8	+0.4
BI02				IAmb	IAmb	03 16 52.6	
	comp=Z,30nm,0.8s						
CLDB	Colider	15.90	52	eP	P	03 16 53.8	-0.6
ITAB	Concordia	16.12	115	eP	P	03 16 57.5	+0.8
LDASE	Londrina, Braz	16.25	101	eP	P	03 16 59.4	+1.1
CPSB	Cacapava Do Su	16.39	127	eP	P	03 16 59.9	+0.2
ARAG	Araguaiana, MT	16.72	74	eP	P	03 17 02.9	-0.6
FRTB	Fartura	17.67	101	eP	Pn	03 17 14.6	-0.3
TRQA	Tornquist	17.78	163	P	P	03 17 15.5	+0.5
CNLB	Canela	17.91	121	eP	Pn	03 17 17.2	-0.5
TEFE	Tefe	17.92	13	eP	P	03 17 16.2	-0.5
GO06	Curarrehue	18.57	187	IAmb	IAmb	03 17 27.4	
	comp=Z,28nm,1.0s						
BB19B	Bebedouro	18.64	93	eP	Pn	03 17 24.5	-1.9
SNDB	Serra Nova Dou	18.82	64	eP	P	03 17 25.8	-0.8
NPGB	Novo Progresso	18.91	44	eP	P	03 17 25.8	-1.8
LR05	Currie	19.27	188	IAmb	IAmb	03 17 35.8	
	comp=Z,22nm,1.1s						
IPMB	Ipameri, GO	19.37	84	eP	P	03 17 32.3	-0.2
MACA	Manacapuru-AM	19.41	24		P	03 17 31.4	-1.6
MACA	Manacapuru-AM	19.41	24	eP	P	03 17 31.2	-1.7
RCLB	Rio Claro- Sao	19.52	98	eP	P	03 17 33.6	-0.5
PLCA	Paso Flores	19.62	185	P	P	03 17 35.9	+0.9
	comp=Z,1.3nm,0.5s,baz=2.5,slow=12,SNR=8.9						
PLCA	Paso Flores	19.62	185	eP	Pn	03 17 38.3	+0.6
BDFB	Brasilia	20.18	78	P	P	03 17 40.1	-1.3
	comp=Z,14nm,0.5s,baz=253,slow=9.8,SNR=26						
	comp=Z,14nm,0.5s						
BDFB	Brasilia	20.18	78	P	P	03 17 40.5	-0.9
BDFB				IAmb	IAmb	03 17 44.8	
	comp=Z,14nm,0.5s						
ITTB	Itaituba	20.77	38	eP	P	03 17 46.2	-1.4
PMNB	Patos De Minas	20.91	87	eP	P	03 17 48.6	-0.5
BSCB	Bom Sucesso	22.14	94	eP	P	03 18 02.4	+0.3
SLOR	San Lorenzo -	22.51	333	P	P	03 18 08.1	+1.9
DIAM	Diamantina, MG	23.53	87	eP	P	03 18 15.1	-0.4
SMTB	Santa Maria do	23.56	62	eP	P	03 18 15.5	-0.1
JANB	Januaria	23.76	79	eP	P	03 18 16.7	-0.7
SDBA	SAO DESIDERIO	24.17	73	eP	P	03 18 20.9	-0.2
BOAV	Boa Vista	24.65	19		P	03 18 25.9	+0.4
BOAV				IAmb	IAmb	03 18 26.7	
	comp=Z,8.5nm,0.6s						
BOAV	Boa Vista	24.65	19	eP	P	03 18 25.3	-0.1
SJMB	Sao Joao De Ma	25.78	89	eP	P	03 18 35.9	+0.3
GUA01	Guaratinga, BA	27.51	85	eP	P	03 18 51.0	-0.2
NBIT	Itapeh - BA	28.29	82	eP	P	03 18 58.5	+0.4
SDV	Santo Domingo	29.91	356	eP	P	03 19 12.6	+0.1
NBPS	Pedro II - PI	31.10	61	eP	P	03 19 23.2	+0.2
CELP	Cerrillos	39.01	3	P	P	03 20 31.0	+0.3
TXAR	Lajitas Array	60.55	325	P	P	03 23 14.0	+0.5
	comp=Z,0.3nm,0.8s,baz=134,slow=7.3,SNR=3.6						
TXAR	Lajitas Array	60.55	325	P	P	03 23 13.1	-0.4
FVM	French Village	62.31	341	P	P	03 23 25.6	+0.6
SNAA	Sanae	62.50	161	P	P	03 23 26.7	+0.7
	comp=Z,3.2nm,0.7s,baz=247,slow=18,SNR=1.6						
	comp=Z,3.2nm,0.7s						
SNAA	Sanae	62.50	161	P	P	03 23 26.3	+0.3
SNAA				IAmb	IAmb	03 23 27.7	
	comp=Z,7.5nm,1.0s						
S39A	Bolivar	63.00	338	IAmb	IAmb	03 23 30.9	
	comp=Z,6.9nm,0.7s						
SMWD	Samnorwood	63.53	331	IAmb	IAmb	03 23 34.7	
	comp=Z,7.1nm,0.7s						
P40A	Paris	64.24	340	P	P	03 23 37.6	-0.1
SDCO	Great Sand Dun	68.13	329	IAmb	IAmb	03 24 05.6	
	comp=Z,9.7nm,1.5s						
DBIC	Dimbokro	68.26	73	P	P	03 24 04.2	+0.2
	comp=Z,5.0nm,0.7s,baz=261,slow=6.4,SNR=6.2						
	comp=Z,5.0nm,0.7s						
DBIC	Dimbokro	68.26	73	P	P	03 24 03.4	-0.5
QSPA	South Pole Qui	69.06	180	P	P	03 24 10.4	+2.2
	comp=Z,6.8nm,0.6s,baz=150,slow=1.7,SNR=7.6						
	comp=Z,6.8nm,0.6s						
QSPA	South Pole Qui	69.06	180	P	P	03 24 10.8	+2.6
U15A	North Rim	70.64	324	IAmb	IAmb	03 24 22.2	
	comp=Z,9.3nm,1.4s						
KNB	Kanab	71.36	324	IAmb	IAmb	03 24 26.6	
	comp=Z,6.7nm,1.1s						
SRU	San Rafael Swe	71.68	327	IAmb	IAmb	03 24 27.3	
	comp=Z,4.7nm,0.7s						
P18A	Preston Nutter	71.93	327	IAmb	IAmb	03 24 28.9	
	comp=Z,4.3nm,0.8s						
EPLO	Experimental L	73.97	343	IAmb	IAmb	03 24 38.4	
	comp=Z,4.9nm,0.7s						
PDAR	Pinedale Array	73.99	330	P	P	03 24 38.5	+0.4
	comp=Z,0.6nm,0.8s,baz=126,slow=8.5,SNR=5.0						
	comp=Z,0.6nm,0.8s						
HWUT	Hardware Ranch	74.08	328	IAmb	IAmb	03 24 41.1	
	comp=Z,7.7nm,1.4s						
ULM	Lac du Bonnet	75.08	342	P	P	03 24 44.5	+0.5
	comp=Z,3.4nm,0.6s,baz=141,slow=7.0,SNR=9.0						
	comp=Z,3.4nm,0.6s						
ULM	Lac du Bonnet	75.08	342	IAmb	IAmb	03 24 44.6	
	comp=Z,3.8nm,0.6s						
NVAR	Mina Array Bea	75.44	322	P	P	03 24 47.4	+0.8
	comp=Z,0.5nm,0.5s,baz=181,slow=7.0,SNR=5.2						
	comp=Z,0.5nm,0.5s						
FLWY	Flagg Ranch	75.53	330	P	P	03 24 48.9	+1.9
FLWY				IAmb	IAmb	03 24 50.2	
	comp=Z,7.0nm,1.1s						
SCHQ	Schefferville	75.67	1	P	P	03 24 47.4	+0.2
	comp=Z,1.8nm,0.8s,baz=11,slow=6.4,SNR=4.0						
	comp=Z,1.8nm,0.8s						
SCHQ	Schefferville	75.67	1	P	P	03 24 47.7	+0.5
SCHQ				IAmb	IAmb	03 25 26.6	
	comp=Z,8.6nm,1.4s						
TORD	Torodi Ar. Bea	76.87	70	P	P	03 24 54.8	-0.1
	comp=Z,4.3nm,0.5s,baz=260,slow=4.1,SNR=108						
	comp=Z,4.3nm,0.5s						
HLID	Hailey	76.94	328	P	P	03 24 58.0	+3.2
PLID	Pearl Lake	78.83	328	P	P	03 25 07.1	+1.8
BOSA	Boshof	83.28	118	P	P	03 25 30.0	+0.7
	comp=Z,4.4nm,0.9s,baz=246,slow=3.5,SNR=6.1						
	comp=Z,4.4nm,0.9s						
BOSA	Boshof	83.28	118	P	P	03 25 29.8	+0.5
BOSA				IAmb	IAmb	03 25 54.7	
	comp=Z,17nm,1.5s						
YKA	Yellowknife Ar	90.97	340	P	P	03 26 06.5	+1.1
	comp=Z,1.7nm,0.7s,baz=135,slow=3.7,SNR=31						
	comp=Z,1.7nm,0.7s						
SEY	Seymchan	129.91	337	PKP	PKiKP	03 32 11.0	0.0
	comp=Z,0.8nm,0.5s,baz=97,slow=3.9,SNR=3.7						
ASAR	Alice Springs	130.41	207	PKP	PKiKP	03 32 13.6	+0.2
	comp=Z,1.1nm,0.5s,baz=128,slow=1.8,SNR=24						
ASAR	Alice Springs	130.41	207		PKPdf	03 32 12.6	+0.1
WRA	Warramunga Arr	133.46	210	PKP	PKiKP	03 32 19.7	+0.2
	comp=Z,1.7nm,0.6s,baz=159,slow=1.8,SNR=26						
KURBB	Kurchatov Arra	140.82	33	PKP	PKiKP	03 32 32.2	-1.3
	comp=Z,0.4nm,0.7s,baz=302,slow=2.6,SNR=3.6						
ZALV	Zalesovo Beam	141.46	25	PKP	PKiKP	03 32 33.4	-1.3
	comp=Z,1.9nm,0.5s,baz=310,slow=1.6,SNR=8.7						
KSH2	Kashi	144.40	52	PKP	PKPdf	03 32 38.5	+0.7
MKAR	Makanchi Array	145.11	36	PKPbc	PKPdf	03 32 39.9	+1.2
	comp=Z,6.5nm,0.7s,baz=322,slow=3.2,SNR=82						
MKAR	Makanchi Array	145.11	36	PKPdf	PKPdf	03 32 39.5	+0.9
KLR	Kul'dur	147.66	335	PKPbc	PKPbc	03 32 46.3	+0.6
	comp=Z,1.9nm,0.8s,baz=30,slow=5.4,SNR=5.7						
SONM	Songino Array	153.04	8	PKP	PKPdf	03 32 51.7	+0.3
	comp=Z,0.5nm,0.8s,baz=333,slow=2.5,SNR=5.0						
SONM				PKPbc	PKiKP	03 32 59.5	+0.5
	comp=Z,1.2nm,0.7s,baz=315,slow=1.3,SNR=7.7						
SONM	Songino Array	153.04	8	PKPdf	PKPdf	03 32 51.1	-0.3
SONM					PKiKP	03 32 59.6	+0.7
HHC	Hu-ho-hao-te	160.34	360	eP	PKPdf	03 32 55.7	-5.3
NJ2	Nanjing	167.30	330	eP	PKPdf	03 33 07.4	0.0
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
PZH	PanZhiHua	169.59	57	PKP	PKPdf	03 33 07.6	-1.7

*SOF **01** 04:32:26.8, 39.°51N±0.°02×24.°05E±0.°02, h2km, MD4.0/11*
*AFAD **01** 04:32:32.5, 39.°88N×24.°11E, h20km±2km, MW3.8*
*ISK **01** 04:32:33.3, 39.°83N×24.°07E, h17km, ML3.5/20*
*THE **01** 04:32:33.9, 39.°8N±0.°8×24.°0E±0.°9, h12km±1km, M3.3/33, MLh3.3/33*
*ATH **01** 04:32:33.7, 39.°82N×24.°01E, h17km±1km, ML3.4/36, Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
ISC 01 04:32:33.2±1.0, **39.°81N**±0.°02×**24.°05E**±0.°02, **h15**km±8km, **n191**, σ1.s**01**/237, **18C-15D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLN1	Chaniotis	0.41	297	P	Pg	04 32 41.3	-0.2
PLN1				S	Sg	04 32 46.9	-0.2
OUR	Ouranopolis	0.53	354	P	Pb	04 32 44.1	0.0
OUR				S	Sb	04 32 51.1	-0.5
OUR	Ouranopolis	0.53	354	Pg	Pb	04 32 43.9	-0.2
OUR				Sg	Sb	04 32 51.6	+0.1
OUR	Ouranopolis	0.53	354	P	Pb	04 32 44.1	0.0
OUR				S	Sg	04 32 50.7	+0.1
AOS	Alonnisos	0.65	192	P	Pb	04 32 46.4	+0.2
AOS				S	Sb	04 32 56.1	+0.9
AOS2	Alonissos-2	0.68	194	P	Pg	04 32 46.4	-0.1
AOS2				S	Sb	04 32 56.2	+0.2
PLG	Polygyros	0.73	321	P	Pb	04 32 46.4	-1.2
PLG				S	Sg	04 32 55.6	-1.4
PLG	Polygyros	0.73	321	P	Pb	04 32 46.4	-1.2
EFSA	Agios Efstrati	0.77	110	P	Pn	04 32 49.5	0.0
LMN1	MIRINA LIMNOU	0.78	85	P	Pn	04 32 49.5	-0.1
LMN1				S	Sn	04 33 00.3	-0.7
NEO	Neokhori	0.81	232	P	Pb	04 32 49.0	-0.1
NEO				S	Sg	04 33 00.2	+0.5
NEO	Neokhori	0.81	232	P	Pb	04 32 48.9	-0.1
NEO				S	Sg	04 33 00.1	+0.4
LIA	Limnos Island	0.88	84	P	Pn	04 32 51.1	+0.1
LIA				S	Sn	04 33 04.4	+1.0
LIA	Limnos Island	0.88	84	P	Pn	04 32 51.0	+0.1
LIA				S	Sn	04 33 03.0	-0.5
THAS	Thassos island	0.94	33	P	Pn	04 32 51.7	-0.2
THAS				S	Sn	04 33 06.3	+1.1
THAS	Thassos island	0.94	33	P	Pn	04 32 51.6	-0.2
VOL2	Volos	0.96	243	P	Pb	04 32 51.5	0.0
SKY	Skiros Island	1.01	157	P	Pg	04 32 53.0	+0.4
SKY				S	Sn	04 33 07.2	+0.5
SKY	Skiros Island	1.01	157	P	Pg	04 32 53.0	+0.4
HORT	Hortiatis	1.07	317	P	Pb	04 32 52.5	-1.0
HORT	Hortiatis	1.07	317	P	Pb	04 32 52.3	-1.2
THE	Thessaloniki	1.17	315	P	Pb	04 32 55.0	-0.1
THE				S	Sn	04 33 10.6	-0.1
THE	Thessaloniki	1.17	315	P	Pn	04 32 54.7	-0.3
KYMI	Kymi, Euboea I	1.18	178	P	Pn	04 32 55.0	-0.1
KYMI				S	Sg	04 33 11.7	+0.5
KYMI	Kymi, Euboea I	1.18	178	P	Pn	04 32 54.9	-0.1
LIT	Litokhoron	1.23	284	P	Pn	04 32 55.2	-0.7
LIT				S	Sg	04 33 12.7	-0.4
LIT	Litokhoron	1.23	284	P	Pn	04 32 55.0	-0.9
KAVA	Kavala	1.24	16	P	Pn	04 32 55.7	-0.2

KAVA				S	Sg	04 33 13.1	0.0
KAVA	**Kavala**	**1.24**	**16**	P	**Pn**	**04 32 55.5**	**-0.5**
SMTH	**Samothraki Isl**	**1.31**	**59**	P	**Pn**	**04 32 56.6**	**-0.3**
SMTH				S	**Sg**	**04 33 15.4**	**-0.1**
SMTH	**Samothraki Isl**	**1.31**	**59**	P	**Pn**	**04 32 56.7**	**-0.3**
SRS	**Serrai**	**1.35**	**345**	P	**Pn**	**04 32 57.4**	**-0.1**
SRS				S	**Sb**	**04 33 15.9**	**+0.5**
SRS	**Serrai**	**1.35**	**345**	P	**Pn**	**04 32 57.6**	**+0.1**
ATAL	**Atalanti**	**1.37**	**216**	P	**Pn**	**04 32 57.5**	**-0.4**
ATAL	**Atalanti**	**1.37**	**216**	P	**Pn**	**04 32 57.4**	**-0.4**
TYRN	**Tyrnavos**	**1.41**	**267**	P	**Pn**	**04 32 58.2**	**-0.1**
TYRN				S	**Sb**	**04 33 16.9**	**+0.1**
TYRN	**Tyrnavos**	**1.41**	**267**	P	**Pn**	**04 32 57.8**	**-0.5**
LKR	**Lokris**	**1.42**	**216**	P	**Pn**	**04 32 58.0**	**-0.5**
LKR	**Lokris**	**1.42**	**216**	P	**Pn**	**04 32 57.9**	**-0.5**
GADA	**Gvkgeada**	**1.47**	**74**	P	**Pn**	**04 32 59.5**	**+0.4**
GADA	**Gvkgeada**	**1.47**	**74**	Pn	**Pn**	**04 32 59.3**	**+0.2**
GOAD	**anakkale-G¶**	**1.47**	**76**	P	**Pn**	**04 32 59.2**	**+0.1**
GOAD				S	**Sb**	**04 33 18.3**	**-0.4**
AXAR	**Agios Charalam**	**1.50**	**226**	P	**Pn**	**04 32 59.8**	**+0.2**
AXAR	**Agios Charalam**	**1.50**	**226**	P	**Pn**	**04 32 59.6**	**0.0**
SIGR	**SIGRI**	**1.52**	**113**	P	**Pb**	**04 33 00.7**	**-0.4**
SIGR	**SIGRI**	**1.52**	**113**	Pn	**Pn**	**04 33 00.2**	**+0.4**
SIGR				Sn	**Sb**	**04 33 19.9**	**-0.2**
SIGR	**SIGRI**	**1.52**	**113**	P	**Pb**	**04 33 00.6**	**-0.4**
BOZC	**Bozcaada**	**1.54**	**88**	P	Pn	04 32 54.0	-6.1
BOZC				S	**Sn**	**04 33 14.8**	**-5.0**
NVR	**Nevrokopi**	**1.54**	**355**	P	**Pn**	**04 33 00.2**	**-0.1**
NVR	**Nevrokopi**	**1.54**	**355**	P	**Pn**	**04 33 00.1**	**-0.1**
AGG	**Agios Georgios**	**1.55**	**240**	P	**Pn**	**04 33 00.0**	**-0.3**
AGG	**Agios Georgios**	**1.55**	**240**	P	**Pn**	**04 32 59.8**	**-0.4**
THL	**Klokotos Trika**	**1.59**	**262**	P	**Pn**	**04 33 00.5**	**-0.3**
THL	**Klokotos Trika**	**1.59**	**262**	P	**Pn**	**04 33 00.3**	**-0.5**
KNT	**Kendrikon**	**1.61**	**327**	P	**Pn**	**04 33 01.6**	**+0.5**
KNT	**Kendrikon**	**1.61**	**327**	P	**Pn**	**04 33 01.6**	**+0.5**
KOCA	**Canakkale, Ayv**	**1.64**	**100**	P	**Pb**	**04 33 02.5**	**-0.6**
GPNR	**Gulpinar-Canak**	**1.65**	**102**	Pn	**Pn**	**04 33 01.9**	**+0.4**
ECEA	**Canakkale, Ece**	**1.65**	**81**	P	**Pn**	**04 33 02.2**	**+0.7**
ECEA				S	**Sb**	**04 33 24.0**	**+0.2**
STFN	**Stefani**	**1.68**	**194**	P	**Pn**	**04 33 02.4**	**+0.3**
STFN	**Stefani**	**1.68**	**194**	P	**Pn**	**04 33 02.2**	**+0.2**
MAKR	**Makrakomi, Fth**	**1.69**	**242**	P	**Pn**	**04 33 02.6**	**+0.4**
MAKR	**Makrakomi, Fth**	**1.69**	**242**	P	**Pn**	**04 33 02.5**	**+0.4**
GRG	**Griva**	**1.70**	**313**	P	**Pb**	**04 33 03.1**	**-1.1**
GRG	**Griva**	**1.70**	**313**	P	**Pb**	**04 33 03.1**	**-1.1**
VIL2	**Platees**	**1.71**	**201**	P	**Pn**	**04 33 02.8**	**+0.4**
DION	**Dionisos Attik**	**1.73**	**183**	P	**Pn**	**04 33 02.8**	**+0.1**
DION	**Dionisos Attik**	**1.73**	**183**	P	**Pn**	**04 33 02.9**	**+0.1**
VILL	**Villia**	**1.74**	**200**	P	**Pn**	**04 33 02.5**	**-0.4**
MMB	**Musomishta**	**1.75**	**353**	P	**Pn**	**04 33 03.4**	**+0.3**
MMB	**Musomishta**	**1.75**	**353**	P	**Pn**	**04 33 03.5**	**+0.5**
MMB				S	**Sg**	**04 33 31.0**	**+1.5**
RDO	**Rodhopi**	**1.75**	**40**	P	**Pn**	**04 33 03.0**	**0.0**
RDO	**Rodhopi**	**1.75**	**40**	Pn	**Pn**	**04 33 03.3**	**+0.3**
RDO	**Rodhopi**	**1.75**	**40**	P	**Pn**	**04 33 03.0**	**0.0**
EZN	**Ezine**	**1.75**	**89**	P	**Pb**	**04 33 04.0**	**-1.0**
EZN	**Ezine**	**1.75**	**89**	Pn	**Pn**	**04 33 03.4**	**+0.4**
PTL	**Penteli**	**1.77**	**185**	P	**Pn**	**04 33 03.5**	**+0.2**
PTL	**Penteli**	**1.77**	**185**	P	**Pn**	**04 33 03.4**	**+0.2**
MAGU	**Magoula**	**1.78**	**194**	P	**Pn**	**04 33 03.5**	**+0.1**
EZNE	**Ezine-Canakkal**	**1.78**	**91**	Pn	**Pn**	**04 33 03.9**	**+0.5**
ENZZ	**Sultanice-Enez**	**1.79**	**63**	Pn	**Pn**	**04 33 03.8**	**+0.3**
KARY	**Karystos**	**1.80**	**170**	P	**Pn**	**04 33 04.0**	**+0.3**
KARY	**Karystos**	**1.80**	**170**	P	**Pn**	**04 33 03.9**	**+0.3**
PRK	**Paraskevi**	**1.81**	**107**	P	**Pb**	**04 33 05.1**	**-0.8**
PRK	**Paraskevi**	**1.81**	**107**	P	**Pb**	**04 33 05.0**	**-0.9**
CNKL	**anakkale-Mer**	**1.81**	**81**	P	**Pn**	**04 33 04.3**	**+0.4**
CNKL				S	**Sb**	**04 33 29.1**	**+0.6**
KZN	**Kozani**	**1.82**	**287**	P	**Pn**	**04 33 04.3**	**+0.2**
CAVK	**Edirne/Enez-Ca**	**1.84**	**61**	⇑P	**Pb**	**04 33 06.1**	**-0.5**
CAVK				⇑S	**Sb**	**04 33 30.1**	**+0.7**
CAVK	**Edirne/Enez-Ca**	**1.84**	**61**	P	**Pn**	**04 33 04.8**	**+0.5**
CAVK				S	**Sg**	**04 33 32.5**	**+0.1**
ATHU	**Athens Univers**	**1.85**	**187**	P	**Pn**	**04 33 04.2**	**-0.3**
ENEZ	**Enez**	**1.85**	**59**	Pn	**Pn**	**04 33 04.9**	**+0.5**
ATH	**Athens Observa**	**1.85**	**188**	P	**Pn**	**04 33 04.7**	**+0.3**
ALN	**Alexandroupoli**	**1.87**	**54**	Pn	**Pn**	**04 33 05.4**	**+0.8**
ALN	**Alexandroupoli**	**1.87**	**54**	P	**Pn**	**04 33 04.7**	**0.0**
VAY	**Valandovo**	**1.88**	**324**	*e*Pn	**Pg**	**04 33 08.7**	**-0.6**
VAY				*e*Sn	**Sg**	**04 33 33.2**	**-0.6**
BAYC	**CANAKKALE_Bayr**	**1.92**	**91**	P	**Pn**	**04 33 06.5**	**+1.1**
BAYC				S	**Sn**	**04 33 28.5**	**-0.8**
GELI	**Tayfur-Gelibol**	**1.95**	**72**	Pn	**Pn**	**04 33 06.4**	**+0.7**
RZN	**Rozhen**	**1.95**	**15**	P	**Pn**	**04 33 06.5**	**+0.5**
RZN				S	**Sg**	**04 33 36.4**	**+0.4**
EVR	**Evrytania**	**1.96**	**244**	P	**Pn**	**04 33 05.9**	**0.0**
VLY	**Voula,Athens**	**1.97**	**186**	P	**Pn**	**04 33 06.0**	**0.0**
LTK	**Loutraki**	**1.98**	**206**	P	**Pn**	**04 33 05.8**	**-0.3**
ANX	**Ano Chora**	**2.05**	**234**	P	**Pn**	**04 33 07.6**	**+0.4**
KALE	**Kalithea**	**2.06**	**227**	P	**Pn**	**04 33 07.5**	**+0.2**
ERIK	**Erikli-Kesan**	**2.07**	**65**	Pn	**Pn**	**04 33 08.1**	**+0.7**
KPRO	**Kipourio**	**2.07**	**275**	P	**Pn**	**04 33 08.6**	**+1.0**
AYVA	**Ayvalik**	**2.10**	**103**	P	**Pn**	**04 33 09.3**	**+1.5**
TRIZ	**Trizonia**	**2.11**	**227**	P	**Pn**	**04 33 08.2**	**+0.3**
GOKT	**Kean, EDRN**	**2.15**	**66**	P	**Pn**	**04 33 08.9**	**+0.5**
GOKT				S	**Sb**	**04 33 40.0**	**+1.9**
KKB	**Krupnik**	**2.15**	**341**	P	**Pn**	**04 33 09.5**	**+1.0**
KKB				S	**Sg**	**04 33 41.6**	**-0.6**
MG00	**Magoula, Dorid**	**2.15**	**230**	P	**Pn**	**04 33 08.8**	**+0.3**
LPK	**Lapseki**	**2.15**	**74**	Pn	**Pn**	**04 33 09.3**	**+0.8**
KARB	**zmir-Karabur**	**2.16**	**121**	P	**Pn**	**04 33 09.6**	**+1.0**
EFP	**Efpalio**	**2.17**	**231**	P	**Pn**	**04 33 09.0**	**+0.3**
LAPS	**Lapseki, ANA**	**2.18**	**77**	P	**Pn**	**04 33 09.6**	**+0.6**
LAPS				S	**Sn**	**04 33 35.5**	**-0.2**
AGEO	**AgiosGiorgios,**	**2.19**	**226**	P	**Pn**	**04 33 09.5**	**+0.5**
TETR	**Tetrakomo, Epi**	**2.20**	**259**	P	**Pn**	**04 33 09.8**	**+0.6**
MALA	**Malamata, Dori**	**2.21**	**231**	P	**Pn**	**04 33 09.9**	**+0.6**
MET5	**Makryloggos,Me**	**2.25**	**194**	P	**Pn**	**04 33 09.4**	**-0.5**
PENT	**Pentalofos**	**2.27**	**281**	P	**Pn**	**04 33 10.8**	**+0.5**
PRMD	**Pramanda**	**2.30**	**264**	P	**Pn**	**04 33 10.9**	**+0.3**
CANM	**Can-anakkale**	**2.32**	**84**	Pn	**Pn**	**04 33 11.4**	**+0.6**
DKL	**Dikili**	**2.33**	**108**	Pn	**Pn**	**04 33 11.9**	**+1.0**
BUHA	**Balikesir, Bur**	**2.35**	**97**	P	**Pn**	**04 33 12.5**	**+1.2**
UKOP	**Uzunkopru-Edir**	**2.37**	**55**	Pn	**Pn**	**04 33 12.1**	**+0.6**
IZMD	**zmir-Dikili-**	**2.38**	**109**	P	**Pg**	**04 33 19.1**	**+0.3**
PLD	**Plovdiv**	**2.39**	**12**	Pn	**Pn**	**04 33 11.8**	**0.0**
PLD	**Plovdiv**	**2.39**	**12**	P	**Pn**	**04 33 12.8**	**+1.0**
PLD				S	**Sb**	**04 33 47.1**	**+1.8**
BIGA	**Biga-Canakkale**	**2.42**	**78**	Pn	**Pn**	**04 33 12.9**	**+0.7**
YENI	**Yenice-Canakka**	**2.46**	**86**	Pn	**Pn**	**04 33 13.4**	**+0.7**
BAGT	**Foa**	**2.46**	**117**	P	**Pn**	**04 33 14.3**	**+1.6**
BAGT				S	**Sn**	**04 33 43.4**	**+0.9**
ZEDA	**zmir-Bergama**	**2.49**	**109**	P	**Pn**	**04 33 14.6**	**+1.4**
DIM	**Dimitrovgrad**	**2.51**	**27**	P	**Pn**	**04 33 14.3**	**+0.8**
DIM				S	**Sb**	**04 33 49.7**	**+0.9**
RKY	**Sarkoy-Tekirda**	**2.55**	**69**	Pn	**Pn**	**04 33 14.6**	**+0.6**
SART	**Tekirdag**	**2.55**	**69**	P	**Pn**	**04 33 14.5**	**+0.4**
KRBG	**Karabiga-Canak**	**2.56**	**76**	Pn	**Pn**	**04 33 14.9**	**+0.8**
GAZK	**Gazikoy-TEKIRD**	**2.67**	**68**	Pn	**Pn**	**04 33 16.4**	**+0.7**
PGB	**Panagyurishte**	**2.70**	**2**	P	**Pn**	**04 33 17.3**	**+1.2**
PGB				S	**Sb**	**04 33 54.1**	**-0.1**
PLNA	**Plana**	**2.71**	**350**	P	**Pn**	**04 33 17.7**	**+1.5**
PLNA				S	**Sb**	**04 33 56.2**	**+1.8**
ATIT	**Gnen**	**2.71**	**83**	P	**Pn**	**04 33 17.6**	**+1.4**
ATIT				S	**Sn**	**04 33 49.7**	**+0.9**
CAMT	**Merkez**	**2.74**	**112**	P	**Pn**	**04 33 18.9**	**+2.3**
MADA	**Marmara adas**	**2.79**	**73**	P	**Pn**	**04 33 17.7**	**+0.4**
MADA				S	**Sb**	**04 33 55.4**	**-1.3**
OHR	**Ohrid**	**2.80**	**299**	*e*Pn	**Pn**	**04 33 19.3**	**+1.8**
DGB	**zmir**	**2.82**	**128**	P	**Pn**	**04 33 17.9**	**+0.2**
STEP	**BALIKESIR_Sava**	**2.87**	**98**	P	**Pn**	**04 33 16.5**	**-1.8**
VTS	**Vitosha**	**2.87**	**348**	P	**Pn**	**04 33 19.5**	**+0.9**
VTS				S	**Sb**	**04 34 00.2**	**+1.0**
EDRB	**Edirne**	**2.88**	**44**	Pn	**Pn**	**04 33 19.5**	**+0.9**
SKO	**Skopje**	**2.93**	**318**	*e*Pn	**Pn**	**04 33 20.2**	**+1.0**
MURA	**Muratl, TEK**	**2.94**	**62**	P	**Pn**	**04 33 19.8**	**+0.4**
BKES	**Balkesir-Mer**	**2.99**	**90**	P	**Pn**	**04 33 21.6**	**+1.6**
BLKS	**Balkesir-Sus**	**3.02**	**88**	P	**Pn**	**04 33 21.4**	**+0.9**
CMHT	**Manyas**	**3.02**	**85**	P	**Pn**	**04 33 21.1**	**+0.7**
KIRK	**Kırklareli**	**3.04**	**49**	P	**Pn**	**04 33 21.9**	**+1.2**
DUVT	**Torbali**	**3.09**	**120**	P	**Pn**	**04 33 23.1**	**+1.7**
DUVT				S	**Sn**	**04 33 53.1**	**-4.9**
BAND	**Balkesir-Ban**	**3.15**	**79**	⇑P	**Pn**	**04 33 23.3**	**+1.0**
BAND	**Balkesir-Ban**	**3.15**	**79**	P	**Pn**	**04 33 22.9**	**+0.7**
JMB	**Yambol**	**3.27**	**34**	P	**Pn**	**04 33 24.6**	**+0.8**
JMB				S	**Sb**	**04 34 09.2**	**-1.2**
ELND	**Elena**	**3.40**	**23**	⇓P	**Pn**	**04 33 26.7**	**+0.9**
PVL	**Pavlikeni**	**3.41**	**14**	P	**Pn**	**04 33 27.2**	**+1.3**
DURS	**Dursunbey**	**3.42**	**92**	P	**Pn**	**04 33 27.8**	**+1.8**
MPEP	**Malo Peshtene**	**3.55**	**356**	P	**Pn**	**04 33 29.3**	**+1.6**
MPEP				S	**Sg**	**04 34 27.8**	**+0.7**
PLVB	**Pleven**	**3.60**	**7**	⇑P	**Pn**	**04 33 29.9**	**+1.5**
ORLT	**Orhaneli**	**3.73**	**85**	P	**Pn**	**04 33 31.7**	**+1.4**
NEF	**NEVSHA**	**4.21**	**34**	P	**Pn**	**04 33 37.7**	**+0.8**
NEF				S	**Sg**	**04 34 44.9**	**-3.5**
COPA	**Copaceanca**	**4.41**	**11**	⇑P	**Pn**	**04 33 40.6**	**+1.1**
PDG	**Podgorica**	**4.47**	**307**	⇓P	**Pn**	**04 33 41.6**	**+1.2**
SRE	**Strehaia**	**4.89**	**353**	⇑P	**Pn**	**04 33 47.7**	**+1.6**
HERR	**Herculane**	**5.21**	**347**	⇓P	**Pn**	**04 33 51.6**	**+1.0**
MDVR	**Moldovita**	**5.26**	**342**	⇑P	**Pn**	**04 33 52.4**	**+1.1**
ARR	**Arges**	**5.57**	**4**	⇓P	**Pn**	**04 33 56.8**	**+1.3**
ISR	**Istrita**	**5.62**	**18**	⇑P	**Pn**	**04 33 57.5**	**+1.4**
LOT	**Lotru**	**5.64**	**358**	⇑P	**Pn**	**04 33 57.4**	**+0.8**
GZR	**Gura Zlata**	**5.66**	**351**	⇓P	**Pn**	**04 33 57.6**	**+0.8**
TIRR	**Tirgusor**	**5.66**	**33**	⇑P	**Pn**	**04 33 57.8**	**+1.1**
VOIR		**5.67**	**7**	⇓P	**Pn**	**04 33 58.6**	**+1.7**
TIP	**Timpagrande**	**5.68**	**266**	⇓P	**Pn**	**04 33 58.1**	**+1.1**
MLR	**Muntele Rosu**	**5.84**	**13**	⇑P	**Pn**	**04 34 01.0**	**+1.6**
NEHR	**Nehoiu**	**5.85**	**16**	⇓P	**Pn**	**04 34 00.8**	**+1.4**
BZS	**Buzias**	**6.07**	**344**	⇓P	**Pn**	**04 34 03.2**	**+0.8**
CFR	**Carcaliu**	**6.15**	**28**	⇓P	**Pn**	**04 34 04.6**	**+1.1**
DOPR	**Dopca**	**6.23**	**9**	⇑P	**Pn**	**04 34 05.8**	**+1.2**
COVR	**Voineasa-Covas**	**6.24**	**14**	⇑P	**Pn**	**04 34 07.1**	**+2.4**
PLOR	**Plostina**	**6.33**	**17**	⇓P	**Pn**	**04 34 07.3**	**+1.3**
MDB	**Medias**	**6.33**	**2**	⇓P	**Pn**	**04 34 08.1**	**+2.2**
VRI	**Vrincioaia**	**6.36**	**17**	⇑P	**Pn**	**04 34 08.2**	**+1.8**
TLCR		**6.42**	**32**	⇓P	**Pn**	**04 34 08.6**	**+1.5**
ONER	**Baraj Valea Uz**	**6.74**	**14**	⇑P	**Pn**	**04 34 13.7**	**+2.1**
TESR	**Tescani**	**6.96**	**15**	⇑P	**Pn**	**04 34 16.2**	**+1.6**
DRGR		**7.05**	**352**	⇓P	**Pn**	**04 34 18.1**	**+2.2**
MORH	**Mrgy, Hungar**	**7.53**	**330**	⇑P	**Pn**	**04 34 23.0**	**+0.7**
BURAR	**Bucovina Array**	**7.85**	**6**	⇓P	**Pn**	**04 34 28.8**	**+2.0**
SORM	**Soroca**	**8.88**	**19**	⇑P	**Pn**	**04 34 41.9**	**+1.1**

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*IDC **01** 04:43:31.5±4.8, 30°.91N×78°.04E, h0km, mb3.7/3, mbtmp3.7/4, ML4.1/2, MS3.7/4, Error ellipse: s-maj=87.1km s-min=48.8km az=25.0*

*NDI **01** 04:43:39.6±3.6, 31°.28N×77°.36E, h5km, ML3.2, MW3.2, Presumed earthquake*

ISC 01 04:43:36.9±1.0**, 31°.18N**±0°.03×**77°.33E**±0°.03**, h13**km±7km**, n27,** σ**2.22**/33**, mb4.0**/3**, MS3.7**/4**, Northern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMLA	**Simla**	**0.15**	**251**	*e*P	**Pb**	**04 43 42.3**	**+0.6**
SMLA				*e*S	**Sg**	**04 43 45.9**	**+2.8**
SMLA				IAML		04 43 48.7	
	comp=N,10μm,0.5s						
SMLA				IAML		04 43 48.7	
	comp=E,9μm,0.4s						
BHK	**Bhakra**	**0.84**	**285**	*e*S	Sg	04 43 53.1	-11
BHK				IAML		04 44 14.0	
	comp=N,3μm,0.3s						
BHK				IAML		04 44 14.5	
	comp=E,4μm,0.3s						
KLP	**Kalpa**	**0.86**	**66**	*e*P	**Pg**	**04 43 53.1**	**-0.5**
KLP				*e*S	**Sg**	**04 44 03.9**	**-1.0**
KLP				IAML		04 44 11.7	
	comp=N,267nm,0.3s						
KLP				IAML		04 44 14.0	
	comp=E,490nm,0.3s						
DDI	**Dehra Dun**	**1.06**	**144**	*e*P	**Pn**	**04 44 00.1**	**+2.5**
DDI				*e*S	**Sn**	**04 44 15.7**	**+3.6**
DDI				IAML		04 44 20.0	
	comp=E,527nm,0.3s						
DDI				IAML		04 44 27.2	
	comp=N,550nm,0.3s						
THN	**Thein Dam**	**1.84**	**314**	*e*P	**Pn**	**04 44 10.3**	**+2.1**
THN				*e*S	**Sb**	**04 44 34.5**	**+1.1**
THN				IAML		04 44 36.3	
	comp=E,316nm,0.4s						
THN				IAML		04 44 37.5	
	comp=N,203nm,0.3s						
TSSA	**Tissa**	**1.93**	**329**	*e*P	**Pn**	**04 44 10.6**	**+0.8**
TSSA				*e*S	**Sn**	**04 44 34.5**	**+0.5**
TSSA				IAML		04 44 37.1	
	comp=E,357nm,0.3s						
TSSA				IAML		04 44 40.4	
	comp=N,491nm,0.4s						
JOSI	**Joshimath**	**2.01**	**107**	*e*P	**Pg**	**04 44 15.0**	**-0.5**
JOSI				*e*S	**Sg**	**04 44 43.2**	**+1.6**
JOSI				IAML		04 44 46.3	
	comp=E,264nm,0.3s						
JOSI				IAML		04 44 46.3	
	comp=N,388nm,0.6s						
HNLY	**HANLEY**	**2.12**	**41**	*e*P	**Pn**	**04 44 14.6**	**+2.1**
HNLY				*e*S	**Sn**	**04 44 41.8**	**+2.8**
HNLY				IAML		04 44 45.1	
	comp=E,43nm,0.4s						
HNLY				IAML		04 44 45.5	
	comp=N,56nm,0.4s						
RTK	**Rohtak**	**2.28**	**201**	*e*S	**Sg**	**04 44 48.7**	**-1.6**
NDI	**New Delhi**	**2.49**	**182**	*e*P	**Pg**	**04 44 23.7**	**-0.9**
NDI				*e*S	**Sg**	**04 44 53.4**	**-3.5**
NDI				IAML		04 45 09.0	
	comp=N,77nm,0.5s						
NDI				IAML		04 45 09.3	
	comp=E,37nm,0.7s						
JMU	**Jammu**	**2.66**	**308**	*e*S	**Sn**	**04 44 53.8**	**+2.1**
JMU				IAML		04 45 00.4	
	comp=E,204nm,0.4s						
JMU				IAML		04 45 00.9	
	comp=N,231nm,0.7s						
AYAN	**Aya Nagar**	**2.69**	**184**	*e*S	**Sg**	**04 45 00.1**	**-3.4**
PTH	**Pithoragarh**	**2.94**	**122**	*e*P	**Pn**	**04 44 25.8**	**+2.2**
PTH				*e*S	**Sb**	**04 45 04.0**	**-1.4**
PTH				IAML		04 45 15.8	
	comp=N,60nm,0.3s						
PTH				IAML		04 45 18.2	
	comp=E,83nm,0.5s						
LGTI	**Lohaghat**	**2.97**	**126**	*e*P	**Pb**	**04 44 30.6**	**+0.8**
LGTI				*e*S	**Sb**	**04 45 05.5**	**-0.6**
ALCI	**Alchi Leh**	**3.03**	**358**	*e*P	**Pb**	**04 44 29.8**	**-1.2**
ALCI				*e*S	**Sn**	**04 45 03.9**	**+2.6**
ALCI				IAML		04 45 09.5	
	comp=E,200nm,0.4s						
ALCI				IAML		04 45 12.0	
	comp=N,109nm,0.4s						
KUDL	**Kundal**	**3.11**	**194**	*e*P	**Pb**	**04 44 31.6**	**-0.5**
KUDL				*e*S	**Sb**	**04 45 08.5**	**-1.6**
KUDL				IAML		04 45 19.6	
	comp=E,69nm,0.7s						
KUDL				IAML		04 45 25.5	
	comp=N,63nm,0.8s						
AJM	**Ajmer**	**5.30**	**207**	*e*S	**Sn**	**04 46 01.5**	**+4.7**
AJM				*e*x	x	04 46 02.0	
BHPL	**Bhopal**	**7.91**	**179**	*e*S	**Sn**	**04 47 02.0**	**+0.9**
MKAR	**Makanchi Array**	**16.05**	**12**	Pn	**Pn**	**04 47 18.9**	**-3.5**
	comp=N,0.2nm,0.3s,baz=193,slow=11,SNR=9.1						
	comp=N,0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**19.45**	**2**	P	**P**	**04 48 00.5**	**-2.6**
	comp=N,2.1nm,0.3s,baz=188,slow=11,SNR=4.8						
ZALV	**Zalesovo Beam**	**23.39**	**11**	P	**P**	**04 48 44.5**	**-0.8**
	comp=N,0.5nm,0.3s,baz=206,slow=10,SNR=3.6						
	comp=N,0.5nm,0.3s						
USRK	**Ussuriysk Ar.**	**44.39**	**57**	P	P	04 51 40.5	-6.7
	comp=N,1.5nm,0.7s,baz=284,slow=5.3,SNR=4.4						
	comp=N,1.5nm,0.7s						
ARCES	**ARCESS Array B**	**48.04**	**338**	P	**P**	**04 52 15.9**	**+0.3**
	comp=N,0.7nm,0.4s,baz=116,slow=8.4,SNR=7.1						
	comp=N,0.7nm,0.4s						
MJAR	**Matsushiro Arr**	**50.11**	**66**	LR	LR	05 14 57.4	
	comp=N,48nm,20.0s,baz=146,slow=38						
ASAJ	**Asahikawa**	**52.00**	**56**	LR	LR	05 14 10.3	
	comp=N,103nm,19.0s,baz=13,slow=36						
SIJI	**Sorong**	**60.21**	**111**	LR	LR	05 20 42.2	
	comp=N,39nm,21.5s,baz=223,slow=38						
CTA	**Charters Tower**	**83.46**	**118**	LR	LR	05 37 47.5	
	comp=N,56nm,18.3s,baz=214,slow=39						

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*MDD **01** 04:52:37.0±1.5, 36°.53N×11°.79W, h0km, Mb4.1/4, M_mb3.4/6, Error ellipse: s-maj=11.1km s-min=9.5km az=77.0*

*INMG **01** 04:52:38.0±1.2, 36°.40N×12°.05W, h33km, ML2.1, Error ellipse: s-maj=7.6km s-min=4.7km az=87.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe*

ISC 01 04:52:35.4±3.9**, 36°.6N**±0°.1×**11°.9W**±0°.2**, h10**km**, n40,** σ**1.35**/62**, 3C, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**2.49**	**76**	Pn	**Pn**	**04 53 16.5**	**+0.4**
PFVI				Sn	**Sn**	**04 53 45.5**	**-1.0**
PFVI	**Vila Bisbo**	**2.49**	**76**	*e*P	**Pn**	**04 53 17.0**	**+0.9**
PFVI				*e*S	**Sn**	**04 53 45.8**	**-0.7**
PFVI				*i* IAML		04 53 46.1	
PFVI				*i* IAML		04 53 46.2	
PFVI				*i* IAML		04 53 55.3	
MORF	**Marmelete**	**2.67**	**73**	*e*P	**Pn**	**04 53 20.0**	**+1.5**
MORF				*e*S	**Sn**	**04 53 51.1**	**+0.1**
MORF				*i* IAML		04 53 53.8	
MORF				*i* IAML		04 53 53.9	
MORF				*i* IAML		04 53 54.2	
PTEO	**Sao Teotonio**	**2.69**	**67**	*e*P	**Pn**	**04 53 20.5**	**+1.8**
PTEO				*e*S	**Sn**	**04 53 52.3**	**+0.9**
PTEO				*i* IAML		04 54 05.1	
PTEO				*i* IAML		04 54 12.5	
PTEO				*i* IAML		04 54 19.5	
PMAFR	**Mafra**	**3.15**	**39**	Sn	**Sn**	**04 54 03.1**	**+0.4**
PMAFR	**Mafra**	**3.15**	**39**	*e*S	**Sn**	**04 54 02.9**	**+0.3**
PMAFR				*i* IAML		04 54 04.0	
PMAFR				*i* IAML		04 54 04.2	
PMAFR				*i* IAML		04 54 06.8	
MESJ	**Messejana**	**3.17**	**65**	*e*P	**Pn**	**04 53 26.5**	**+1.1**
MESJ				*e*S	**Sn**	**04 54 03.9**	**+0.7**
MESJ				*i* IAML		04 54 09.5	
MESJ				*i* IAML		04 54 09.6	
MESJ				*i* IAML		04 54 10.6	
PBDV	**Barranco-do-Ve**	**3.22**	**76**	Pn	**Pn**	**04 53 27.1**	**+1.1**
PBDV	**Barranco-do-Ve**	**3.22**	**76**	*e*P	**Pn**	**04 53 27.1**	**+1.1**
PBDV				*e*S	**Sn**	**04 54 04.0**	**-0.3**
PBDV				*i* IAML		04 54 10.8	
PBDV				*i* IAML		04 54 11.6	
PBDV				*i* IAML		04 54 11.9	
PCVE	**Castro Verde**	**3.23**	**69**	Pn	**Pn**	**04 53 27.5**	**+1.3**
PCVE				Sn	**Sn**	**04 54 04.4**	**-0.3**
PCVE	**Castro Verde**	**3.23**	**69**	*e*P	**Pn**	**04 53 28.3**	**+2.1**
PCVE				*e*S	**Sn**	**04 54 05.0**	**+0.3**
PCVE				*i* IAML		04 54 07.3	
PCVE				*i* IAML		04 54 10.2	
PCVE				*i* IAML		04 54 14.0	
MOE	**Montemor**	**3.41**	**54**	*e*S	**Sn**	**04 54 09.4**	**+0.3**
MOE				*i* IAML		04 54 10.5	
MOE				*i* IAML		04 54 14.6	
MOE				*i* IAML		04 54 14.9	
PVAQ	**Vaqueiros**	**3.42**	**74**	*e*P	**Pn**	**04 53 30.3**	**+1.6**
PVAQ				*e*S	**Sn**	**04 54 09.2**	**-0.1**
PVAQ				*i* IAML		04 54 09.3	
PVAQ				*i* IAML		04 54 10.7	
PVAQ				*i* IAML		04 54 11.4	
PBEJ	**Beja**	**3.50**	**64**	*e*S	**Sn**	**04 54 10.8**	**-0.6**
EGRO	**El Granado**	**3.63**	**73**	Pn	**Pn**	**04 53 33.1**	**+1.4**
EGRO	**El Granado**	**3.63**	**73**	Pn	**Pn**	**04 53 33.2**	**+1.6**
EGRO				Sn	**Sn**	**04 54 14.2**	**-0.3**
EVO	**Evora**	**3.63**	**56**	Sn	**Sn**	**04 54 14.3**	**-0.4**
EVO	**Evora**	**3.63**	**56**	*e*S	**Sn**	**04 54 14.8**	**+0.1**
EVO				*i* IAML		04 54 15.8	
EVO				*i* IAML		04 54 16.0	
EVO				*i* IAML		04 54 16.4	
PARRA	**Arraiolos**	**3.77**	**52**	*e*P	**Pn**	**04 53 35.9**	**+2.3**
PARRA				*e*S	**Sn**	**04 54 17.4**	**-0.7**
PARRA				*i* IAML		04 54 19.7	
PARRA				*i* IAML		04 54 20.4	
PARRA				*i* IAML		04 54 20.4	
PMTG	**Montargil**	**3.82**	**48**	*e*P	**Pn**	**04 53 33.7**	**-0.6**
PMTG				*e*S	**Sn**	**04 54 18.6**	**-0.6**
PMTG				*i* IAML		04 54 21.6	
PMTG				*i* IAML		04 54 22.7	
PMTG				*i* IAML		04 54 24.2	
PSBE	**So Bento**	**3.82**	**38**	*e*S	**Sn**	**04 54 19.7**	**+0.5**
PSBE				*i* IAML		04 54 21.8	
PSBE				*i* IAML		04 54 24.9	
PSBE				*i* IAML		04 54 26.1	
PESTR	**Estremoz**	**4.09**	**54**	*e*S	**Sn**	**04 54 25.8**	**-0.3**
PBAR	**Barrancos**	**4.16**	**66**	Pn	**Pn**	**04 53 41.3**	**+2.3**
PBAR				Sn	**Sn**	**04 54 27.2**	**-0.4**
PBAR	**Barrancos**	**4.16**	**66**	*e*P	**Pn**	**04 53 40.4**	**+1.5**
PBAR				*e*S	**Sn**	**04 54 27.2**	**-0.4**
PBAR				*i* IAML		04 54 28.9	
PBAR				*i* IAML		04 54 30.7	
PBAR				*i* IAML		04 54 34.6	
PSARD	**Sardoal**	**4.21**	**43**	*e*P	**Pn**	**04 53 40.8**	**+1.2**
PSARD				*e*S	**Sn**	**04 54 28.6**	**-0.3**
PSARD				*i* IAML		04 54 30.8	
PSARD				*i* IAML		04 54 31.6	
PSARD				*i* IAML		04 54 31.8	
PCAS	**Casmilo, Conde**	**4.38**	**36**	*e*S	**Sn**	**04 54 32.4**	**-0.7**
PCAS				*i* IAML		04 54 33.0	
PMRV	**Marv??o**	**4.54**	**49**	*e*P	**Pn**	**04 53 45.5**	**+1.2**
PMRV				*e*S	**Sn**	**04 54 35.6**	**-1.5**
PMRV				*i* IAML		04 54 36.9	
PMRV				*i* IAML		04 54 36.9	
PMRV				*i* IAML		04 54 38.2	
PCBR	**Castelo Branco**	**4.76**	**45**	*e*S	**Sn**	**04 54 41.4**	**-1.0**
PCBR				*i* IAML		04 54 42.5	
ESPR	**Espera**	**4.83**	**84**	Pn	**Pn**	**04 53 47.8**	**-0.3**
ESPR				Sn	**Sn**	**04 54 41.6**	**-2.5**
ESPR	**Espera**	**4.83**	**84**	Pn	**Pn**	**04 53 48.2**	**+0.1**
ESPR				⇑*i*IVmb_VC		04 53 51.6	
	89nm,SNR=0.7						
ESPR				Sn	**Sn**	**04 54 41.8**	**-2.2**
MTE	**Manteigas**	**5.12**	**40**	*e*S	**Sn**	**04 54 50.5**	**-0.9**
MTE				*i* IAML		04 54 52.4	
MTE				*i* IAML		04 54 53.3	
MTE				*i* IAML		04 55 08.4	
PVIS	**Viseu**	**5.18**	**35**	*e*S	**Sn**	**04 54 51.6**	**-1.3**
ECAB	**El Cabril**	**5.35**	**72**	Pn	**Pn**	**04 53 56.0**	**+0.8**
ECAB				Sn	**Sn**	**04 54 54.9**	**-2.0**
ECAB	**El Cabril**	**5.35**	**72**	Pn	**Pn**	**04 53 56.1**	**+0.8**
ECAB				⇑*i*IVmb_VC		04 53 57.6	
	131nm,SNR=1.1						
ECAB				Sn	**Sn**	**04 54 54.6**	**-2.3**
POLO	**Lamas de Olo**	**5.76**	**32**	*e*S	**Sn**	**04 55 05.0**	**-2.3**
MVO	**Moncorvo**	**5.95**	**38**	*e*S	**Sn**	**04 55 09.5**	**-2.3**
MVO				*i* IAML		04 55 13.0	
MVO				*i* IAML		04 55 14.5	
MVO				*i* IAML		04 55 24.3	
EADA	**Adamuz**	**6.01**	**72**	Pn	**Pn**	**04 54 05.4**	**+1.0**
EADA				Sn	**Sn**	**04 55 11.4**	**-2.0**
EADA	**Adamuz**	**6.01**	**72**	Pn	**Pn**	**04 54 05.2**	**+0.8**
EADA				⇑*i*IVmb_VC		04 54 05.5	
	107nm,SNR=0.7						
EADA				Sn	**Sn**	**04 55 11.3**	**-2.0**
ELOB	**Lobios**	**6.07**	**28**	Sn	**Sn**	**04 55 11.8**	**-3.1**
PGAV	**Gavieira, Arco**	**6.08**	**26**	*e*S	**Sn**	**04 55 12.7**	**-2.4**

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*BJI **01** 05:04:28.2, 21°.80N×144°.04E, h151km, mB4.8/13, mb4.8/62*

*IDC **01** 05:04:31.4±0.7, 21°.97N×143°.87E, h149km±5km, mb4.2/28, mbtmp4.6/31, MS3.1/8, Error ellipse: s-maj=12.7km s-min=8.2km az=70.0*

*NEIC **01** 05:04:32.0±1.6, 21°.96N±0°.08×143°.9E±0°.1, h146km±6km, mb4.7/249, Error ellipse: s-maj=15.6km s-min=11.7km az=82.0*

*JMA **01** 05:04:34.5±0.3, 22°N±1°×14°4E±°, h143km±3km, MV4.9/29, IOTO ISLANDS REGION*

ISC 01 05:04:31.9±0.6**, 22°.00N**±0°.04×**143°.88E**±0°.06**, h152**km±4km**, n542,** σ**1.06**/475**, mb4.6**/170**, 2C, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**4.87**	**342**	*e*P	**Pn**	**05 05 43.1**	**-0.5**
JHH2				*e*S	**Sn**	**05 06 36.6**	**-2.9**
CBIJ	**Chichi jima**	**5.30**	**343**	*e*P	**Pn**	**05 05 48.8**	**-0.5**
CBIJ				*e*S	**Sn**	**05 06 46.0**	**-3.9**
JCJ	**Chichijima**	**5.30**	**343**	P	**Pn**	**05 05 48.0**	**-1.4**
	62nm,0.4s,baz=7.4,slow=20,SNR=24						
JCJ				S	**Sn**	**05 06 46.6**	**-3.3**
	212nm,0.3s,baz=286,slow=23,SNR=11						
JCJ	**Chichijima**	**5.30**	**343**	Pn	**Pn**	**05 05 48.5**	**-0.8**
GUMO	**Guam**	**8.42**	**173**	LR	LR	05 08 34.8	
	comp=Z,142nm,19.0s,baz=12,slow=29						
JHJ	**Hachijo jima 2**	**11.66**	**343**	LR	LR	05 11 41.2	
	comp=Z,42nm,21.1s,baz=144,slow=37						
BSO4	**Boso 4**	**13.31**	**347**	*e*P	**Pn**	**05 07 36.3**	**+1.5**
BSO4				*e*S	**Sn**	**05 09 56.6**	**-5.5**
INU	**Inuyama**	**14.60**	**337**	P	**Pn**	**05 07 52.2**	**+1.1**

INU **Inuyama** 14.60 337 Pn 05 07 50.8 -0.3
JRY **Ryogami san** 14.63 344 *e*P Pn 05 07 50.3 -1.3
JMN **Monobe** 14.64 325 Pn 05 07 53.5 +1.7
JAMN **Amaminishikomi** 14.69 298 *e*P P 05 07 56.6 +2.0
JGF **Kuroka** 14.70 339 Pn Pn 05 07 52.0 -0.6
JHO **Hitachi** 14.84 350 *e*P Pn 05 07 53.8 -0.4
JHO *e*S Sn 05 10 31.9 -7.2
JSU **Suzuyama** 15.27 311 P Pn 05 08 01.9 +2.3
JSU IAmb IAmb 05 08 05.5
comp=Z,35nm,1.0s
MJAR **Matsushiro Arr** 15.31 342 P Pn 05 07 59.2 -0.9
comp=Z,4.7nm,0.8s,baz=156,slow=11,SNR=12
MJAR **Matsushiro Arr** 15.31 342 Pn 05 07 58.9 -1.1
MAJO **Matsushiro** 15.31 342 P Pn 05 07 59.8 -0.2
MAJO **Matsushiro** 15.31 342 Pn 05 08 00.0 0.0
MJB9 **Matsu-Tunnel** 15.31 342 P Pn 05 08 00.7 +0.6
JSJ **Shimokoshiki** 15.88 310 *e*P Pn 05 08 09.3 +2.1
JNU **Nakatsue** 15.97 317 P Pn 05 08 09.2 +0.9
comp=Z,33nm,1.0s,baz=115,slow=7.0,SNR=10
JHS **Saijyo** 16.02 326 *e*P P 05 08 11.4 +2.1
YOJ **Yonaguni jima** 19.34 281 P P 05 08 46.1 +0.5
TJN **Taejon** 20.28 319 P P 05 08 55.4 -0.4
NACB **Ninganchiao** 20.61 280 P P 05 08 59.7 +0.3
NACB IAmb IAmb 05 09 18.6
comp=Z,37nm,1.4s
KSRS **Korea Array** 20.67 322 P P 05 09 00.7 +0.9
comp=Z,26nm,0.6s,baz=141,slow=9.6,SNR=125
KSRS LR LR 05 16 56.7
comp=Z,29nm,19.0s,baz=120,slow=36
comp=Z,26nm,0.6s
KSAR **Wonju Array Be** 20.69 322 P 05 09 01.4 +1.4
KS19 **Wonju Array Si** 20.74 322 P P 05 09 03.3 +2.7
YHNB **Yeheng** 20.83 282 P P 05 09 02.1 +0.3
YHNB **Yeheng** 20.83 282 P 05 09 01.2 -0.6
YULB **Yu-li** 20.88 278 P P 05 09 03.6 +1.4
YULB **Yu-li** 20.88 278 P P 05 09 03.1 +0.8
YULB IAmb IAmb 05 09 11.1
comp=Z,16nm,0.8s
SSLB **Suanglung** 21.20 279 P P 05 09 07.1 +1.5
SSLB **Suanglung** 21.20 279 P 05 09 06.9 +1.3
TPUB **Ta-pu** 21.50 278 P P 05 09 10.6 +1.7
TPUB **Ta-pu** 21.50 278 P P 05 09 08.9 0.0
TPUB IAmb IAmb 05 09 24.7
comp=Z,44nm,1.3s
H11N1 **WAKE ISLAND Hy** 21.62 92 T T 05 31 41.6
baz=280,slow=75,SNR=2.3
H11N2 **WAKE ISLAND Hy** 21.62 92 T T 05 31 49.2
baz=280,slow=75,SNR=3.4
H11N3 **WAKE ISLAND Hy** 21.64 92 T T 05 31 36.2
baz=280,slow=75,SNR=0.6
H11S3 **WAKE ISLAND Hy** 21.68 95 T T 05 32 10.5
baz=283,slow=75,SNR=10.0
H11S1 **WAKE ISLAND Hy** 21.68 95 T T 05 32 09.6
baz=283,slow=75,SNR=8.0
H11S2 **WAKE ISLAND Hy** 21.69 95 T T 05 32 11.8
baz=283,slow=75,SNR=8.6
JKA **Kamikawa-asahi** 22.09 358 P P 05 09 17.1 +2.4
JKA IAmb IAmb 05 09 40.7
comp=Z,41nm,1.4s
SZP **Santa** 22.48 263 P P 05 09 20.5 +1.8
KNMB **Chin-men Tao** 23.55 281 P P 05 09 29.0 +0.4
KNMB IAmb IAmb 05 09 30.7
comp=Z,24nm,0.7s
MANU **Manus Island** 24.14 171 P P 05 09 33.2 -0.7
USRK **Ussuriysk Ar.** 24.23 339 P P 05 09 34.9 +0.4
comp=Z,4.6nm,0.7s,baz=148,slow=8.3,SNR=9.4
comp=Z,4.6nm,0.7s
NJ2 **Nanjing** 24.39 300 *e*P P 05 09 35.8 -0.3
NJ2 pmax pmax
comp=Z,22nm,0.8s
DL2 **Dalian** 25.43 317 P P 05 09 46.9 +1.4
DL2 pmax pmax
comp=Z,130nm,0.8s
TIA **Tai'an** 27.22 307 P P 05 10 01.9 +0.2
TIA pmax pmax
comp=Z,10.0nm,0.9s
BNX **BinXian** 27.24 334 ⇑P P 05 10 03.1 +1.4
BNX pmax pmax
comp=Z,11nm,0.6s
WHN **Wuhan** 27.75 294 P P 05 10 09.8 +3.4
WHN pmax pmax
comp=Z,48nm,0.6s
KRAI **Karang Ratu** 29.37 213 P P 05 10 20.8 -0.1
comp=Z,26nm,0.6s
HNS **HongShan** 29.48 308 ⇑P P 05 10 23.1 +1.5
HNS PP PnPn 05 11 23.1 -0.4
HNS PcP PcP 05 13 24.9 +1.5
HNS ScP ScP 05 16 52.5 +1.4
HNS pmax pmax
comp=Z,18nm,0.7s
MYLDM **Lahad Datu** 29.71 239 P P 05 10 25.9 +2.0
MYLDM **Lahad Datu** 29.71 239 P 05 10 23.7 -0.3
MYLDM **Lahad Datu** 29.71 239 P P 05 10 26.7 +2.8
comp=Z,48nm,1.1s
LYN **LuoYang** 30.23 301 P P 05 10 28.0 -0.3
LYN pmax pmax
comp=Z,18nm,0.5s
MRSI **Marisa** 30.24 228 P P 05 10 28.7 +0.1
comp=Z,968nmcomp=Z,68nm,0.9s
TOLI2 **Tolitoli** 30.61 230 P P 05 10 32.4 +0.6
TOLI2 **Tolitoli** 30.61 230 P 05 10 31.5 -0.3
LUWI **Luwuk** 30.80 225 P P 05 10 32.0 -1.5
HEH **HeiHe** 31.03 339 *e*P P 05 10 35.9 +0.7
HEH S S 05 15 30.2 +1.3
HEH ScP ScP 05 16 54.7 -1.3
HEH pmax pmax
comp=Z,6.0nm,1.1s
KKM **Kota Kinabalu** 31.09 243 P P 05 10 37.3 +1.2
KKM IAmb IAmb 05 10 54.0
comp=Z,35nm,1.4s
APSI **Ampana** 31.45 226 P P 05 10 38.1 -1.1
XLT **XiLinHaoTe** 31.70 320 *e*P P 05 10 42.3 +1.0
XLT pmax pmax
comp=Z,8.0nm,0.7s
ENH **Enshi** 31.86 292 P P 05 10 41.9 -0.9
ENH IAmb IAmb 05 10 42.9
comp=Z,5.4nm,0.6s
QIZ **Qiongzhong** 31.98 271 P P 05 10 43.7 -0.2
QIZ IAmb IAmb 05 10 45.6
comp=Z,8.8nm,0.9s
PEA0B **Petropavlovsk-** 32.81 15 P P 05 10 51.5 +0.8
PETK **Petropavlovsk-** 32.81 15 P P 05 10 51.8 +1.1
comp=Z,4.1nm,0.8s,baz=141,slow=7.4,SNR=5.3
comp=Z,4.1nm,0.8s
PETK **Petropavlovsk-** 32.81 15 P P 05 10 52.2 +1.5
XAN **Xi'an** 32.95 299 P P 05 10 51.6 -0.7
XAN pP pwP 05 11 27.3 +0.8
XAN pmax pmax
comp=Z,10.0nm,0.9s
PET **Petropavlovsk** 32.98 16 P P 05 10 53.4 +1.3
HHC **Hu-ho-hao-te** 33.11 312 *e*P P 05 10 57.4 +3.8
HHC pmax pmax
comp=Z,6.0nm,0.6s
SPSI **Sidrap Palu** 34.96 225 P P 05 11 09.8 +0.1
comp=Z,66nm,0.8s
COEN **Coen** 35.74 181 P P 05 11 15.4 -0.9
COEN **Coen** 35.74 181 P 05 11 15.8 -0.5
KAPI **Kappang** 35.76 224 P P 05 11 16.5 -0.1
KAPI IAmb IAmb 05 11 18.8
comp=Z,16nm,0.9s
SBUM **Sibu** 36.39 242 P P 05 11 22.8 +0.9
SBUM **Sibu** 36.39 242 P 05 11 22.6 +0.8
SBUM IAmb IAmb 05 11 23.6
comp=Z,7.0nm,0.7s
SBUM **Sibu** 36.39 242 P P 05 11 23.0 +1.1
comp=Z,11nm,0.8s
MTN **Manton Dam** 36.81 201 P P 05 11 24.6 -0.8
MTN IAmb IAmb 05 12 07.6
comp=Z,12nm,1.1s
CD2 **Chengdu** 36.84 293 P P 05 11 25.3 -0.3
LZH **Lanzhou** 37.44 301 P P 05 11 31.4 +0.6
LZH pmax pmax
comp=Z,34nm,1.3s
LZDM **Lanzhou Array** 37.54 301 P P 05 11 32.1 +0.4
comp=Z,3.5nm,0.3s,baz=126,slow=7.5,SNR=21
comp=Z,3.5nm,0.3s
BATI **Baumata** 37.65 214 LR LR 05 27 29.4
comp=Z,29nm,19.0s,baz=348,slow=37
SHEM **Shemya Is, Ala** 38.43 30 LR LR 05 23 44.8
comp=Z,41nm,21.6s,baz=83,slow=30
PZH **PanZhiHua** 38.56 285 P P 05 11 41.6 +1.4
ULN **Ulaanbaatar** 39.15 320 P 05 11 45.6 +0.7
ULN **Ulaanbaatar** 39.15 320 P P 05 11 45.4 +0.5
comp=Z,47nm,1.2s
SONM **Songino Array** 39.52 320 P P 05 11 48.3 +0.3
comp=Z,2.8nm,0.5s,baz=132,slow=8.1,SNR=34
SONM ScP ScP 05 17 26.9 -0.1
comp=Z,1.0nm,0.7s,baz=150,slow=3.7,SNR=7.1
comp=Z,2.8nm,0.5s
SONM **Songino Array** 39.52 320 P P 05 11 48.3 +0.3
MTSU **Mount Surprise** 39.89 179 P P 05 11 50.6 -0.5
KNRA **Kununurra** 40.27 203 P P 05 11 53.3 -0.9
GTA2 **Gaotai** 41.28 305 P P 05 12 02.8 +0.2
GTA2 PcP PcP 05 13 58.9 +0.6
GTA2 ScP ScP 05 17 31.4 -2.7
GTA2 pmax pmax
comp=Z,18nm,1.1s
CTA **Charters Tower** 41.89 177 P P 05 12 06.8 -0.7
CTAO **Charters Tower** 41.89 177 P P 05 12 06.7 -0.7
CTAO **Charters Tower** 41.89 177 P P 05 12 07.1 -0.3
CTAO IAmb IAmb 05 12 07.6
comp=Z,17nm,1.1s
CHTO **Chiang Mai** 42.13 274 P P 05 12 10.3 +0.8
CHTO **Chiang Mai** 42.13 274 P 05 12 09.0 -0.5
CHTO **Chiang Mai** 42.13 274 P P 05 12 10.1 +0.6
CMAR **Chiang Mai Arr** 42.20 274 P P 05 12 11.1 +1.0
comp=Z,5.5nm,0.7s,baz=79,slow=6.6,SNR=33
CMAR PcP PcP 05 14 02.5 +0.9
comp=Z,0.4nm,0.3s,baz=118,slow=1.7,SNR=4.3
comp=Z,5.5nm,0.7s
CMAR **Chiang Mai Arr** 42.20 274 P P 05 12 10.1 0.0
QIS **Mount Isa** 42.50 186 P P 05 12 11.4 -1.0
WB0 **Warramunga Arr** 42.53 193 P P 05 12 11.4 -1.2
WR8 **Warramunga Arr** 42.69 193 P P 05 12 12.6 -1.3
WR8 IAmb IAmb 05 12 19.9
comp=Z,18nm,1.2s
WRAB **Tennant Creek** 42.70 193 P P 05 12 12.7 -1.3
WRAB **Tennant Creek** 42.70 193 P P 05 12 12.9 -1.1
WRAB IAmb IAmb 05 12 13.1
comp=Z,12nm,0.6s
WRA **Warramunga Arr** 42.71 193 P P 05 12 12.7 -1.4
comp=Z,7.2nm,0.6s,baz=18,slow=9.1,SNR=128
WRA PcP PcP 05 14 02.6 -0.4
comp=Z,2.9nm,0.7s,baz=359,slow=3.1,SNR=7.3
WRA ScP ScP 05 17 40.3 +0.5
comp=Z,1.8nm,0.9s,baz=4.3,slow=3.8,SNR=6.5
comp=Z,7.2nm,0.6s
WRA **Warramunga Arr** 42.71 193 P P 05 12 11.9 -2.2
TLY **Talaya** 42.90 324 P P 05 12 15.6 +0.2
UGM **Wanagama** 44.20 231 P P 05 12 26.1 0.0
GOMU **GeErMu** 44.70 300 P P 05 12 31.3 +1.0
GOMU pmax pmax
comp=Z,53nm,0.7s
KULM **Kulim** 44.97 255 P P 05 12 33.7 +1.4
KULM **Kulim** 44.97 255 P P 05 12 33.3 +1.0
KULM **Kulim** 44.97 255 P P 05 12 33.6 +1.3
comp=Z,48nm,0.9s
IPM **Ipoh** 44.99 254 P P 05 12 33.5 +0.9
IPM **Ipoh** 44.99 254 P P 05 12 32.8 +0.3
IPM **Ipoh** 44.99 254 P P 05 12 33.4 +0.9
comp=Z,42nm,0.9s
BBJI **Bungbulang** 46.03 235 P P 05 12 38.3 -2.3
BBJI IAmb IAmb 05 12 39.6
comp=Z,24nm,1.4s
AS31 **Alice Springs** 46.41 193 P P 05 12 41.9 -1.6
ASAR **Alice Springs** 46.42 193 P P 05 12 41.8 -1.7
comp=Z,3.1nm,0.5s,baz=10,slow=8.1,SNR=43
ASAR PcP PcP 05 14 15.0 -0.8
comp=Z,3.2nm,0.7s,baz=18,slow=3.5,SNR=11
ASAR ScP ScP 05 17 55.2 +0.2
comp=Z,0.7nm,1.0s,baz=22,slow=5.6,SNR=4.6
ASAR LR LR 05 30 49.4
comp=Z,50nm,18.5s,baz=121,slow=34
comp=Z,3.1nm,0.5s
SHL **Shillong** 47.47 285 P P 05 12 51.5 -0.5
PSI **Prapat** 47.62 253 P P 05 12 53.8 +0.7
PSI **Prapat** 47.62 253 P P 05 12 53.5 +0.4
comp=Z,35nm,1.0s
RPSI **Rantau Prapat** 47.67 253 P P 05 12 53.8 +0.4
LSA **Lhasa** 47.74 291 P P 05 12 51.9 -2.4
LSA pmax pmax
comp=Z,23nm,0.6s
MASI **Maura Aman, Be** 47.76 244 P P 05 12 55.0 +0.9
comp=Z,109nm,1.1s
PPI **Padang Panjang** 47.90 248 P P 05 12 57.6 +2.5
PDSI **Padang** 48.08 247 P P 05 12 55.9 -0.6
comp=Z,4µmcomp=Z,32nm,0.8s
QLP **Quilpie** 48.29 180 P P 05 12 56.1 -1.8
KCSI **Kotacane, Aceh** 48.32 254 P P 05 12 58.1 -0.3
comp=Z,17nm,0.9s
SPIA **Saint Paul Isl** 48.37 32 P P 05 12 58.4 +0.3
baz=243
MBWA **Marble Bar** 48.94 210 P P 05 13 02.5 -0.4
UNV **Unalaska Valle** 48.98 37 P P 05 13 03.4 +0.6
baz=250
DZM **Mont Dzumac** 49.02 152 P P 05 13 01.6 -2.0
DZM IAmb IAmb 05 13 05.2
comp=Z,26nm,1.4s
PSA00 **Pilbara Seismi** 49.25 210 P P 05 13 04.5 -0.7
PSA00 **Pilbara Seismi** 49.25 210 P P 05 13 04.8 -0.4
PSA00 IAmb IAmb 05 13 16.0
comp=Z,27nm,1.3s
SISI **Saibi** 49.47 248 P P 05 13 07.4 +0.3
comp=Z,78nm,1.0s
GSI **Gunungsitoli** 49.51 252 P P 05 13 07.5 +0.1
GSI **Gunungsitoli** 49.51 252 P P 05 13 07.5 +0.1
GSI **Gunungsitoli** 49.51 252 P P 05 13 07.3 -0.1
comp=Z,2µmcomp=Z,73nm,0.9s
WMQ **Urumqi** 50.89 309 *e*P P 05 13 19.3 +1.8
WMQ pmax pmax
comp=Z,18nm,1.1s
GAMB **Gambell** 51.09 24 P P 05 13 19.7 +1.2
baz=287
AULRC **Lightning Ridg** 51.28 175 P P 05 13 18.9 -1.5
M11K **Mekoryuk** 51.68 29 P P 05 13 23.8 +0.9
baz=245
MSVF **Nonsavu** 51.75 137 P P 05 13 25.0 +0.8
MSVF IAmb IAmb 05 13 25.6
comp=Z,8.2nm,0.8s
SDPT **Sand Point** 52.78 36 P P 05 13 31.5 +0.3
baz=254
M13K **Dall Lake** 52.99 30 P P 05 13 33.4 +0.8
baz=248
K13K **Kusilvak Mount** 53.02 28 P P 05 13 34.0 +1.2
baz=245
CHNA **Chernabura Isl** 53.14 37 P P 05 13 34.3 +0.5
baz=255
CMSA **Cobar Meteorol** 53.26 178 P P 05 13 33.8 -1.1
TNA **Tin City** 53.41 23 P P 05 13 36.6 +1.0
TNA **Tin City** 53.41 23 P P 05 13 36.3 +0.7
baz=240
O14K **Tigyukauivet M** 53.56 31 P P 05 13 37.4 +0.6
baz=251
N14K **Kuskokwak Cree** 53.59 31 P P 05 13 38.0 +1.0
baz=250
STKA **Stephens Creek** 53.61 182 P P 05 13 35.8 -1.7
comp=Z,5.6nm,0.5s,baz=5.4,slow=7.3,SNR=16
comp=Z,5.6nm,0.5s
STKA **Stephens Creek** 53.61 182 P P 05 13 35.9 -1.6
STKA **Stephens Creek** 53.61 182 P P 05 13 35.9 -1.6
L14K **Kuka Creek** 53.64 29 P P 05 13 38.8 +1.4
baz=248
M14K **Bethel** 53.75 30 P P 05 13 38.6 +0.5
baz=249
J14K **Nanvaranak Lak** 53.82 27 P P 05 13 39.7 +1.1
baz=246
ANM **Nome** 53.88 24 P P 05 13 40.0 +1.0
ANM **Nome** 53.88 24 P P 05 13 40.4 +1.3
baz=243
F14K **Arctic Creek** 53.95 23 P P 05 13 40.7 +1.1
baz=241
O15K **Ungalikthiuk R** 54.24 32 P P 05 13 43.0 +1.3
O15K **Ungalikthiuk R** 54.24 32 P P 05 13 42.8 +1.0
baz=252
L15K **Ungalak Mounta** 54.30 29 P P 05 13 43.1 +0.9
baz=249
M15K **Kasigluk River** 54.32 30 P P 05 13 43.2 +0.9
baz=250
ZAA0 **Zalesovo Array** 54.38 321 P P 05 13 42.6 -0.3
ZAA0 IAmb IAmb 05 13 43.3
comp=Z,12nm,0.7s
ZALV **Zalesovo Beam** 54.38 321 P P 05 13 42.5 -0.3
comp=Z,12nm,0.5s,baz=107,slow=7.8,SNR=75
ZALV PcP PcP 05 14 43.9 -0.8
comp=Z,1.6nm,0.5s,baz=121,slow=4.3,SNR=4.4
ZALV S S 05 21 08.5 -0.8
comp=Z,0.3nm,0.4s,baz=130,slow=13,SNR=3.7
comp=Z,12nm,0.5s
ZALV **Zalesovo Beam** 54.38 321 P P 05 13 42.8 0.0
N15K **Kwethluk River** 54.42 31 P P 05 13 44.0 +0.9
baz=251
K15K **Wolf Creek Mou** 54.51 28 P P 05 13 44.9 +1.2
baz=248
G15K **Niukluk** 54.58 24 P P 05 13 44.9 +0.7
baz=244
FORT **Forrest** 54.63 197 P P 05 13 44.3 -0.6
FORT IAmb IAmb 05 14 08.5
comp=Z,12nm,1.1s
F15K **North Star Dit** 54.67 23 P P 05 13 46.1 +1.2
F15K IAmb IAmb 05 13 47.8
comp=Z,9.0nm,1.1s
F15K **North Star Dit** 54.67 23 P P 05 13 45.9 +1.1
baz=243
R16K **Pilot Point** 54.92 34 P P 05 13 47.6 +0.9
baz=255
MKAR **Makanchi Array** 54.97 312 P P 05 13 47.7 +0.4
comp=Z,5.5nm,0.6s,baz=90,slow=9.2,SNR=81
MKAR pP pP 05 14 23.2 +1.4
comp=Z,3.6nm,0.7s,baz=89,slow=9.0,SNR=3.6
MKAR PcP PcP 05 14 47.0 -0.3
comp=Z,2.7nm,0.6s,baz=85,slow=2.7,SNR=6.8
MKAR ScP ScP 05 18 32.1 +0.5
comp=Z,1.4nm,0.8s,baz=85,slow=5.2,SNR=7.0
comp=Z,5.5nm,0.6s
MKAR **Makanchi Array** 54.97 312 P P 05 13 48.0 +0.6
BBOO **Buckleboo** 55.01 188 P P 05 13 45.6 -2.0
BBOO IAmb IAmb 05 13 46.7
comp=Z,7.2nm,0.6s
P16K **Nushagak River** 55.10 32 P P 05 13 49.2 +1.3
P16K **Nushagak River** 55.10 32 P P 05 13 48.7 +0.8
baz=254
H16K **Elim** 55.13 25 P P 05 13 48.6 +0.5
baz=246
N16K **Nishlik Lake** 55.14 31 P P 05 13 49.1 +0.8
baz=252
MAKZ **Makanchi** 55.19 312 P P 05 13 49.6 +0.7
MAKZ IAmb IAmb 05 13 50.3
comp=Z,9.4nm,0.8s
O16K **Kokwok River B** 55.21 32 P P 05 13 49.5 +0.8
baz=253
L16K **Owhat River** 55.21 29 P P 05 13 49.4 +0.6
baz=251
M16K **Timber Creek** 55.23 30 P P 05 13 49.0 +0.1
baz=252
J16K **Anvik River** 55.27 27 P P 05 13 49.9 +0.8
baz=249
G16K **Koyuk River** 55.40 24 P P 05 13 50.7 +0.7
baz=245
I17K **Unalakleet** 55.46 26 P P 05 13 51.7 +1.3
baz=248
CHIR **Chirikof Islan** 55.57 37 P P 05 13 52.1 +0.7
baz=258
R17L **Mt. Peulik Vol** 55.57 34 P P 05 13 52.0 +0.6
baz=256
C16K **Lisburne Hills** 55.66 20 P P 05 13 52.6 +0.8
baz=240,SNR=7.8
Q16K **King Salmon** 55.67 33 P P 05 13 52.6 +0.6
baz=255
O17K **Koliganek Bris** 55.74 32 P P 05 13 52.8 +0.2
baz=254
L17K **Donlin** 55.88 29 P P 05 13 53.9 +0.4
baz=252
N17K **Nushagak Hills** 55.91 31 P P 05 13 54.6 +0.9
baz=254
P17K **Kvichak River** 55.91 32 P P 05 13 54.1 +0.3
baz=255
Q17K **Contact Creek** 55.97 34 P P 05 13 54.3 0.0
baz=256
M17K **Holitna River** 56.04 30 P P 05 13 55.0 +0.3
baz=253
K17K **Iditarod** 56.06 28 P P 05 13 56.6 +1.8
K17K **Iditarod** 56.06 28 P P 05 13 55.2 +0.4
baz=251
G17K **Kiwalik Mounta** 56.09 24 P P 05 13 55.4 +0.5
baz=247
D17K **Noatak River** 56.14 22 P P 05 13 55.9 +0.6
baz=243
H17K **Granite Mounta** 56.16 25 P P 05 13 56.1 +0.7
baz=248
F17K **Baldwin Pennin** 56.24 23 P P 05 13 57.2 +1.2
baz=246
E17K **Hotham Inlet** 56.30 22 P P 05 13 56.9 +0.5
baz=245
RDOG **Red Dog Mine** 56.36 21 P P 05 13 57.1 +0.3
baz=243
C17K **DeLong Mountai** 56.46 21 P P 05 13 58.4 +0.8
baz=243
Q18K **Katmai Hardscr** 56.50 33 P P 05 13 58.1 0.0
baz=257
SII **Sitkinak Islan** 56.51 36 P P 05 13 59.3 +1.3
SII **Sitkinak Islan** 56.51 36 P P 05 13 58.6 +0.5
baz=259
N18K **Kilae Creek** 56.56 31 P P 05 13 58.8 +0.4
baz=255
P18K **Big Mountain,** 56.56 32 P P 05 13 59.2 +0.8
baz=256
L18K **Granite Mounta** 56.62 29 P P 05 13 59.2 +0.5
baz=253
O18K **Koktuh Hills** 56.69 32 P P 05 14 00.1 +0.8
baz=256
M18K **Stony River** 56.81 30 P P 05 14 00.3 +0.2
baz=254
H18K **Honhosa River** 56.86 25 P P 05 14 01.0 +0.6
baz=250
E18K **Tukpahlearik C** 56.88 22 IAmb IAmb 05 14 02.5
comp=Z,5.1nm,0.7s
E18K **Tukpahlearik C** 56.88 22 P P 05 14 01.1 +0.6
baz=246
J18K **Innoko River** 56.98 27 P P 05 14 01.2 -0.1
baz=252
G18K **Tagagawik** 57.01 24 IAmb IAmb 05 14 03.2
comp=Z,9.1nm,1.1s
G18K **Tagagawik** 57.01 24 P P 05 14 01.5 +0.1
baz=249
WUS **Wushi** 57.04 306 IAmb IAmb 05 14 04.3
comp=Z,12nm,1.2s
OHAK **Old Harbor** 57.11 35 P P 05 14 02.3 0.0
baz=260
C18K **Utukok River** 57.19 21 P P 05 14 03.4 +0.6
baz=245
O19K **Port Alsworth** 57.20 32 P P 05 14 02.8 0.0
baz=257
Q19K **Cape Douglas,** 57.26 33 P P 05 14 03.6 +0.3
baz=258
N19K **Bonanza Creek** 57.27 31 P P 05 14 03.4 -0.1
baz=256
GCSA **Galena City Sc** 57.31 26 P P 05 14 03.8 +0.2
baz=251
L19K **White Mountain** 57.44 29 P P 05 14 05.1 +0.5
baz=255
KDAK **Kodiak Island** 57.59 35 LR LR 05 36 47.5
comp=Z,28nm,20.6s,baz=235,slow=34
KDAK **Kodiak Island** 57.59 35 P P 05 14 05.9 +0.3
baz=260
J19K **Poorman** 57.60 27 P P 05 14 06.1 +0.5
baz=253
P19K **Oil Pt** 57.62 32 P P 05 14 05.7 -0.1
baz=258
F19K **Shaleruckik Mo** 57.67 23 P P 05 14 06.5 +0.5
baz=249
G19K **Purcell Mounta** 57.69 24 IAmb IAmb 05 14 08.0
comp=Z,5.5nm,0.7s
G19K **Purcell Mounta** 57.69 24 P P 05 14 06.7 +0.5
baz=250
KURK **Kurchatov** 57.70 317 P P 05 14 06.5 0.0
KURBB **Kurchatov Arra** 57.75 317 P P 05 14 07.0 +0.1
comp=Z,40nm,0.6s,baz=93,slow=7.7,SNR=114
comp=Z,40nm,0.6s
Q20K **Shuyak Island** 57.84 34 P P 05 14 08.2 +0.9
baz=259
SYI **Shuyak Island** 57.84 34 P P 05 14 07.3 0.0
A19K **Wainwright** 57.91 19 P P 05 14 08.7 +1.1
baz=244
C19K **Lookout Ridge** 57.91 21 IAmb IAmb 05 14 12.7
comp=Z,17nm,1.4s
C19K **Lookout Ridge** 57.91 21 P P 05 14 09.3 +1.5
baz=246
NRIK **Noril'sk** 57.94 340 P P 05 14 07.8 -0.1
comp=Z,3.8nm,0.7s,baz=115,slow=9.6,SNR=7.4
comp=Z,3.8nm,0.7s
TARG **Taragay, Kyrgy** 58.09 306 IAmb IAmb 05 14 12.2
comp=Z,12nm,0.9s
K20K **Telida** 58.09 28 P P 05 14 09.5 +0.4
baz=255
E19K **Redstone River** 58.09 23 P P 05 14 09.4 +0.4
baz=249,SNR=6.4
M20K **Styx River** 58.15 30 IAmb IAmb 05 14 13.7
comp=Z,8.1nm,0.9s
M20K **Styx River** 58.15 30 P P 05 14 09.3 -0.3

baz=257
D19K **Kuna River** 58.16 22 IAmb IAmb 05 14 17.8
comp=Z,15nm,1.4s
D19K **Kuna River** 58.16 22 P **P** **05 14 10.7 +1.2**
baz=248
H20K **Anotleneega Mo** 58.35 25 P **P** **05 14 11.7 +0.9**
baz=253,SNR=5.6
HOM **Homer** 58.41 33 P **P** **05 14 12.1 +0.8**
baz=260
N20K **Mount Spurr** 58.43 31 P **P** **05 14 11.8 +0.3**
baz=258
SPCR **Spurr Chakacha** 58.43 31 P **P** **05 14 11.8 +0.3**
baz=258
F20K **Avaraart Lake** 58.51 24 IAmb IAmb 05 14 13.6
comp=Z,4.2nm,0.6s
F20K **Avaraart Lake** 58.51 24 P **P** **05 14 12.6 +0.8**
baz=251
E20K **Nigu River** 58.74 22 P **P** **05 14 14.3 +0.7**
baz=250
D20K **Etivluk River** 58.76 22 P **P** **05 14 14.6 +1.0**
baz=249
PPLA **Purkeypile** 58.81 29 P **P** **05 14 14.8 +0.6**
baz=257
CAPN **Captain Cook N** 58.85 31 P **P** **05 14 14.6 +0.3**
baz=259
BRSE **Bradley Lake S** 58.87 33 P **P** **05 14 15.0 +0.4**
baz=260
SKT **Skwentna** 58.91 30 P **P** **05 14 15.0 +0.2**
baz=258
CHUM **Lake Minchumin** 58.98 28 P **P** **05 14 15.9 +0.7**
baz=256
B20K **Meade River** 59.05 20 P **P** **05 14 16.0 +0.5**
baz=248
SUA **Susitna One** 59.18 31 P **P** **05 14 17.5 +0.8**
baz=259
G21K **Allakaket** 59.18 24 P **P** **05 14 17.9 +1.4**
baz=254
H21K **Melozitna Rive** 59.23 26 IAmb IAmb 05 14 19.3
comp=Z,17nm,1.3s
H21K **Melozitna Rive** 59.23 26 P **P** **05 14 17.6 +0.8**
baz=255
F21K **Alatna River** 59.40 24 P **P** **05 14 19.2 +1.1**
baz=253
I21K **Tanana** 59.44 26 IAmb IAmb 05 14 20.7
comp=Z,12nm,1.1s
I21K **Tanana** 59.44 26 P **P** **05 14 19.5 +1.3**
baz=256
BOOM **Boomskoye usch** 59.44 307 **P** **05 14 20.0 +1.0**
NRN **Naryn** 59.45 306 IAmb IAmb 05 14 21.0
comp=Z,14nm,1.2s
O22K **Cooper Landing** 59.50 32 P **P** **05 14 19.5 +0.7**
baz=261
M22K **Willow** 59.52 30 P **P** **05 14 19.2 +0.3**
baz=260
C21K **Knifeblade Rid** 59.53 21 P **P** **05 14 19.3 +0.4**
baz=251
SEW **Seward** 59.57 32 P **P** **05 14 20.0 +0.7**
baz=261
CUT **Chulitna** 59.58 30 P **P** **05 14 20.2 +0.9**
baz=259
E21K **Killik River** 59.58 22 P **P** **05 14 20.0 +0.7**
baz=252
RC01 **Rabbit Creek A** 59.59 31 P **P** **05 14 20.1 +0.7**
baz=260
BPAW **Bear Paw Mtn.** 59.60 28 **P** **05 14 20.6 +1.1**
BPAW **Bear Paw Mtn.** 59.60 28 P **P** **05 14 20.0 +0.5**
baz=258
A21K **Barrow** 59.72 19 P **P** **05 14 20.9 +0.9**
baz=248,SNR=8.9
B21K **Ikpikpuk River** 59.74 21 P **P** **05 14 21.0 +0.7**
baz=251
TRF **Thorofare Moun** 59.77 28 **P** **05 14 21.1 +0.2**
TRF **Thorofare Moun** 59.77 28 P **P** **05 14 20.6 -0.3**
baz=258,SNR=5.2
H22K **Ishtalitna Cre** 59.85 25 P **P** **05 14 21.5 +0.3**
baz=256
MLY **Manley** 59.91 26 P **P** **05 14 21.5 -0.1**
baz=257
KSH2 **Kashi** 59.95 303 P **P** **05 14 23.7 +1.3**
KSH2 pmax pmax
comp=Z,26nm,0.7s
PMR **Palmer** 59.96 31 P **P** **05 14 22.3 +0.4**
baz=261
D22K **Ayikyak River** 60.16 22 IAmb IAmb 05 14 25.8
comp=Z,12nm,0.8s
D22K **Ayikyak River** 60.16 22 P **P** **05 14 24.0 +0.7**
baz=253
KNK **Knik Glacier** 60.25 31 P **P** **05 14 24.4 +0.4**
baz=261,SNR=5.1
E22K **Anaktuvuk Pass** 60.26 23 IAmb IAmb 05 14 26.4
comp=Z,7.3nm,0.8s
E22K **Anaktuvuk Pass** 60.26 23 P **P** **05 14 24.3 +0.3**
baz=254
B22K **Teshekpuk Lake** 60.36 20 IAmb IAmb 05 14 26.4
comp=Z,6.3nm,0.7s
B22K **Teshekpuk Lake** 60.36 20 P **P** **05 14 25.5 +1.0**
baz=252
SML **Sawmill** 60.37 30 P **P** **05 14 25.3 +0.5**
baz=261
MCK **McKinley** 60.42 28 IAmb IAmb 05 14 26.4
comp=Z,8.7nm,1.1s
MCK **McKinley** 60.42 28 P **P** **05 14 25.5 +0.5**
baz=260
WAT1 **Susitna Watana** 60.43 29 P **P** **05 14 25.8 +0.7**
baz=260
AAK **Ala-Archa** 60.50 307 P **P** **05 14 26.7 +0.6**
AAK IAmb IAmb 05 14 27.6
comp=Z,16nm,1.5s
I23K **Minto, Yukon-K** 60.51 26 IAmb IAmb 05 14 28.3
comp=Z,6.1nm,0.8s
I23K **Minto, Yukon-K** 60.51 26 P **P** **05 14 26.0 +0.5**
baz=259
NEA2 **Nenana** 60.52 27 IAmb IAmb 05 14 27.3
comp=Z,6.3nm,0.8s
NEA2 **Nenana** 60.52 27 P **P** **05 14 26.3 +0.6**
baz=259
P23K **Montague Islan** 60.58 33 P **P** **05 14 26.3 +0.2**
baz=263
G23K **Bananza Creek** 60.58 25 P **P** **05 14 26.5 +0.4**
baz=257,SNR=7.7
COLD **Coldfoot** 60.63 24 IAmb IAmb 05 14 28.9
comp=Z,5.9nm,1.0s
COLD **Coldfoot** 60.63 24 P **P** **05 14 26.7 +0.3**
baz=256
M23K **Glacier View** 60.66 30 P **P** **05 14 26.8 +0.1**
baz=262
WAT6 **Susitna Watana** 60.76 30 P **P** **05 14 27.3 -0.3**
baz=261
GLI **Glacier Island** 60.84 32 P **P** **05 14 27.9 0.0**
baz=263
SCM **Sheep Creek Mo** 60.85 30 P **P** **05 14 27.6 -0.5**
baz=262
D23K **Nanushuk River** 60.88 22 IAmb IAmb 05 14 30.4
comp=Z,5.0nm,0.7s
D23K **Nanushuk River** 60.88 22 P **P** **05 14 28.7 +0.6**
baz=255
DHY **Denali Highway** 61.00 29 P **P** **05 14 29.6 +0.4**
baz=261
E23K **Chandalar** 61.04 23 P **P** **05 14 30.0 +0.7**
baz=257,SNR=14
Q23K **Middleton Isla** 61.05 33 P **P** **05 14 29.2 -0.1**
baz=264
COLA **College** 61.09 27 P **P** **05 14 29.0 -0.5**
baz=260
C23K **Itkillik River** 61.14 21 P **P** **05 14 30.7 +1.0**
baz=255
TOLK **Toolik Lake Re** 61.19 23 P **P** **05 14 31.3 +1.1**
baz=256,SNR=9.1
H24K **Noodor Dome** 61.25 26 IAmb IAmb 05 14 32.7
comp=Z,5.0nm,0.8s
H24K **Noodor Dome** 61.25 26 P **P** **05 14 31.5 +0.8**
baz=260
POKR **Poker Plat Res** 61.30 27 P **P** **05 14 31.5 +0.5**
baz=260
HDA **Harding Lake** 61.39 28 IAmb IAmb 05 14 31.9
comp=Z,6.6nm,0.9s
HDA **Harding Lake** 61.39 28 P **P** **05 14 31.6 0.0**
baz=261
E24K **Your Creek** 61.46 23 IAmb IAmb 05 14 34.5
comp=Z,6.4nm,0.8s
E24K **Your Creek** 61.46 23 P **P** **05 14 33.0 +0.9**
baz=258,SNR=8.2
KLU **Klutina** 61.47 31 IAmb IAmb 05 14 33.9
comp=Z,9.2nm,0.8s
KLU **Klutina** 61.47 31 P **P** **05 14 32.9 +0.7**
baz=264
IL31 61.48 27 IAmb IAmb 05 14 32.4
comp=Z,6.6nm,0.8s
ILAR **Eielson Array** 61.48 27 P **P** **05 14 31.4 -0.7**
comp=Z,5.2nm,0.8s,baz=258,slow=5.2,SNR=49
ILAR pP **pP** **05 15 07.2 +0.5**
comp=Z,2.3nm,0.7s,baz=262,slow=5.3,SNR=4.8
ILAR LR LR 05 38 48.8
comp=Z,21nm,21.4s,baz=252,slow=33
comp=Z,5.2nm,0.8s
ILAR **Eielson Array** 61.48 27 P **P** **05 14 31.7 -0.4**
G24K **Hadweenzic Riv** 61.57 25 IAmb IAmb 05 14 35.3
comp=Z,8.1nm,1.0s
G24K **Hadweenzic Riv** 61.57 25 P **P** **05 14 33.5 +0.7**
baz=259,SNR=5.1
D24K **Happy Valley** 61.58 22 IAmb IAmb 05 14 35.2
comp=Z,7.0nm,0.8s
D24K **Happy Valley** 61.58 22 P **P** **05 14 33.2 +0.5**
baz=257
C24K **Franklin Bluff** 61.75 21 IAmb IAmb 05 14 36.0
comp=Z,5.4nm,0.8s
C24K **Franklin Bluff** 61.75 21 P **P** **05 14 34.8 +1.0**
baz=257
K24K **Donnelly Dome** 61.82 28 P **P** **05 14 35.2 +0.8**
baz=262
PAX **Paxson** 61.85 29 P **P** **05 14 35.0 +0.2**
baz=263
HARP **HAARP** 61.93 30 P **P** **05 14 35.8 +0.5**
baz=264
BMRM **Bremner River** 62.05 32 P **P** **05 14 36.5 +0.3**
baz=265
KAIM **Kayak Island** 62.06 33 P **P** **05 14 36.6 +0.5**
baz=266
J25K **Salcha River,** 62.10 27 IAmb IAmb 05 14 38.2
comp=Z,9.4nm,1.3s
J25K **Salcha River,** 62.10 27 P **P** **05 14 36.6 +0.2**
baz=262
N25K **Chitina, Valde** 62.11 31 IAmb IAmb 05 14 38.3
comp=Z,6.6nm,0.7s
N25K **Chitina, Valde** 62.11 31 P **P** **05 14 36.8 +0.2**
baz=265
PRP **Porcupine Dome** 62.16 26 P **P** **05 14 36.3 -0.6**
baz=262
RIDG **Independent Ri** 62.22 28 IAmb IAmb 05 14 38.3
comp=Z,13nm,1.0s
RIDG **Independent Ri** 62.22 28 P **P** **05 14 37.0 -0.2**
baz=263
F25K **Christian Rive** 62.43 24 IAmb IAmb 05 14 40.8
comp=Z,6.0nm,0.9s
F25K **Christian Rive** 62.43 24 P **P** **05 14 40.0 +1.5**
baz=261
D25K **Kavik River** 62.47 22 P **P** **05 14 39.8 +1.1**
baz=259
NIL **Nilore** 62.47 297 P **P** **05 14 40.2 +0.8**
E25K **Arctic Village** 62.54 23 IAmb IAmb 05 14 42.1
comp=Z,9.2nm,0.9s
E25K **Arctic Village** 62.54 23 P **P** **05 14 40.0 +0.7**
baz=260,SNR=8.0
SCRK **Sand Creek** 62.62 28 P **P** **05 14 40.4 +0.5**
SCRK IAmb IAmb 05 14 41.1
comp=Z,12nm,0.8s
SCRK **Sand Creek** 62.62 28 P **P** **05 14 40.2 +0.3**
baz=264,SNR=9.4
CRQE **Cirque** 62.78 32 P **P** **05 14 41.7 +0.7**
baz=267
BMAR **Burnt Mountain** 62.81 24 P **P** **05 14 43.1 +2.1**
L26K **Log Cabin Wild** 62.82 29 P **P** **05 14 42.3 +1.2**
baz=265
MCARA **McCarthy VSAT** 62.85 31 P **P** **05 14 42.5 +1.2**
baz=266
BVAR **Borovoye Array** 62.87 319 P **P** **05 14 41.9 +0.2**
comp=Z,14nm,0.4s,baz=88,slow=6.6,SNR=100
BVAR S **S** **05 23 00.3 +1.3**
comp=Z,2.4nm,0.9s,baz=96,slow=11,SNR=9.3
comp=Z,14nm,0.4s
BORK **Borovoye** 62.91 319 P **P** **05 14 42.4 +0.5**
M26K **Nabesna, AK** 62.93 30 P **P** **05 14 43.0 +1.0**
baz=266
F26K **Sheenjek River** 63.01 24 IAmb IAmb 05 14 45.1
comp=Z,7.7nm,0.7s
F26K **Sheenjek River** 63.01 24 P **P** **05 14 43.5 +1.2**
baz=262
G26K **Porcupine Rive** 63.05 25 IAmb IAmb 05 14 45.1
comp=Z,7.2nm,0.8s
G26K **Porcupine Rive** 63.05 25 P **P** **05 14 43.6 +1.1**
baz=263
C26K **Camden Bay** 63.08 22 P **P** **05 14 43.3 +0.6**
baz=260
I26K **Coal Creek Min** 63.12 27 P **P** **05 14 43.6 +0.6**
baz=264
KK31 **Karatay Array** 63.38 308 P **P** **05 14 45.5 +0.3**
KKAR **Karatay Array** 63.38 308 P **P** **05 14 45.9 +0.7**
GRNC **Granite Creek** 63.43 32 P **P** **05 14 46.3 +0.8**
GRNC IAmb IAmb 05 14 54.5
comp=Z,21nm,1.3s
C27K **Jago River** 63.45 22 IAmb IAmb 05 14 47.5
comp=Z,5.9nm,0.8s
C27K **Jago River** 63.45 22 P **P** **05 14 46.2 +1.1**
baz=262,SNR=6.6
M27K **Edge Creek, AK** 63.45 30 P **P** **05 14 46.2 +0.8**
baz=267
BTK **Batken** 63.50 305 IAmb IAmb 05 14 47.2
comp=Z,18nm,1.4s
L27K **Beaver Creek,** 63.51 29 IAmb IAmb 05 14 47.2
comp=Z,5.1nm,0.7s
L27K **Beaver Creek,** 63.51 29 P **P** **05 14 46.7 +0.9**
baz=266
CTG **Chitna Glacier** 63.64 32 P **P** **05 14 47.6 +0.9**
baz=268
I27K **Kandik River** 63.78 26 P **P** **05 14 48.6 +1.1**
baz=266
H27K **Steamboat Moun** 63.87 26 IAmb IAmb 05 14 50.2
comp=Z,10nm,0.8s
H27K **Steamboat Moun** 63.87 26 P **P** **05 14 48.6 +0.5**
baz=265
BVCY **Beaver Creek** 63.93 30 P **P** **05 14 49.2 +0.8**
baz=268
GAR **Garm** 64.02 304 P **P** **05 14 49.5 -0.1**
E27K **Coleen River** 64.03 24 P **P** **05 14 49.9 +0.9**
baz=264
YUK3 **Moose Creek** 64.09 31 P **P** **05 14 50.3 +0.6**
baz=268
PINM **Pinnacle** 64.16 33 P **P** **05 14 51.2 +1.1**
baz=269
O28M **Mount Upton** 64.20 32 P **P** **05 14 51.6 +1.0**
baz=269
D27M **Malcolm River** 64.36 22 IAmb IAmb 05 14 53.7
comp=Z,10nm,0.7s
D27M **Malcolm River** 64.36 22 P **P** **05 14 52.4 +1.2**
baz=264
YUK8 **Steele Glacier** 64.42 31 P **P** **05 14 52.5 +0.6**
baz=269
I28M **Miner Creek** 64.47 27 IAmb IAmb 05 14 53.6
comp=Z,6.3nm,0.9s
I28M **Miner Creek** 64.47 27 P **P** **05 14 53.3 +1.2**
baz=267
F28M **Old Crow** 64.63 24 IAmb IAmb 05 14 55.2
comp=Z,6.8nm,0.8s
F28M **Old Crow** 64.63 24 P **P** **05 14 54.1 +1.2**
baz=266,SNR=8.9
DAWY **Dawson** 64.65 28 P **P** **05 14 54.2 +1.1**
DAWY **Dawson** 64.65 28 P **P** **05 14 54.4 +1.2**
baz=268
E28M **Babbage River** 64.82 23 IAmb IAmb 05 14 56.8
comp=Z,6.8nm,0.7s
E28M **Babbage River** 64.82 23 P **P** **05 14 55.4 +1.3**
baz=266
YUK4 **Talbot Arm** 64.95 31 P **P** **05 14 56.2 +0.8**
baz=270,SNR=8.3
O29M **Mount Kennedy** 65.00 32 IAmb IAmb 05 14 58.1
comp=Z,12nm,0.9s
O29M **Mount Kennedy** 65.00 32 P **P** **05 14 56.5 +0.9**
baz=271
M29M **Somme Creek** 65.04 30 P **P** **05 14 56.5 +0.7**
baz=270
YUK6 **Outpost Mounta** 65.10 32 P **P** **05 14 57.0 +0.7**
baz=271
H29M **Whitestone** 65.15 26 IAmb IAmb 05 14 58.2
comp=Z,7.1nm,0.8s
H29M **Whitestone** 65.15 26 P **P** **05 14 57.4 +1.1**
baz=268
I29M **Ogilvie Camp,** 65.15 27 P **P** **05 14 57.4 +1.1**
baz=269
D28M **Stokes Point** 65.16 22 P **P** **05 14 57.2 +1.0**
baz=266,SNR=9.3
J29N **Klondike Camp** 65.17 28 IAmb IAmb 05 14 58.9
comp=Z,14nm,1.4s
J29N **Klondike Camp** 65.17 28 P **P** **05 14 57.6 +1.1**
baz=269
L29M **L29M** 65.20 29 IAmb IAmb 05 14 59.1
comp=Z,10nm,0.8s
L29M **L29M** 65.20 29 P **P** **05 14 57.6 +0.9**
baz=270
E29M **Blow River** 65.41 24 P **P** **05 14 58.1 +0.1**
baz=268
K29M **Barlow Dome** 65.47 29 IAmb IAmb 05 15 00.7
comp=Z,7.4nm,0.9s
K29M **Barlow Dome** 65.47 29 P **P** **05 14 58.1 -0.5**
baz=270
HYT **Haines Junctio** 65.52 32 **P** **05 15 00.3 +1.4**
HYT IAmb IAmb 05 15 01.3
comp=Z,11nm,1.0s
HYT **Haines Junctio** 65.52 32 P **P** **05 14 58.9 0.0**
baz=271,SNR=5.8
KBL **Kabul** 65.76 299 P **P** **05 15 01.2 +0.2**
P30M **Million Dollar** 65.81 33 P **P** **05 15 01.4 +0.7**
baz=272
M30M **Minto, Yukon** 65.81 30 P **P** **05 15 01.9 +1.3**
M30M **Minto, Yukon** 65.81 30 P **P** **05 15 01.5 +0.9**
baz=271
EPYK **Eagle Plains** 65.82 26 IAmb IAmb 05 15 02.4
comp=Z,11nm,0.8s
EPYK **Eagle Plains** 65.82 26 P **P** **05 15 01.2 +0.6**
baz=270,SNR=5.4
SHAA **Shahritus** 65.95 302 IAmb IAmb 05 15 03.8
comp=Z,64nm,0.7s
I30M **Mount Dempster** 65.96 27 P **P** **05 15 02.5 +0.8**
baz=270
J30M **Hart River** 65.99 28 IAmb IAmb 05 15 03.7
comp=Z,7.5nm,1.1s
J30M **Hart River** 65.99 28 P **P** **05 15 02.3 +0.4**
baz=271
G30M **tAoh Zraii Nji** 66.02 25 P **P** **05 15 02.3 +0.4**
baz=270
F30M **Barrier River** 66.19 24 P **P** **05 15 03.8 +0.9**
baz=270
MAYO **Mayo, Yukon** 66.20 29 P **P** **05 15 03.8 +0.7**
baz=272
O30N **Mendenhall** 66.21 32 P **P** **05 15 03.6 +0.3**
baz=273
S31K **Pelican** 66.30 35 P **P** **05 15 04.5 +0.8**
baz=274
N31M **Braeburn, Yuko** 66.33 31 IAmb IAmb 05 15 06.3
comp=Z,12nm,0.9s
N31M **Braeburn, Yuko** 66.33 31 P **P** **05 15 04.3 +0.4**
baz=273
G31M **Satah River** 66.79 25 P **P** **05 15 07.5 +0.8**
baz=272,SNR=18
H31M **Peel River** 66.80 26 P **P** **05 15 07.4 +0.6**
baz=272
WHY **Whitehorse** 66.81 32 P **P** **05 15 07.4 +0.2**
baz=274
M31M **Drury Creek, Y** 66.95 30 IAmb IAmb 05 15 09.7
comp=Z,8.7nm,1.1s
M31M **Drury Creek, Y** 66.95 30 P **P** **05 15 08.1 +0.3**
baz=274,SNR=5.4
F31M **Tsiigehtchic** 66.98 25 P **P** **05 15 08.6 +0.7**
baz=272
INK **Inuvik** 67.03 24 IAmb IAmb 05 15 09.5
comp=Z,7.5nm,0.7s
INK **Inuvik** 67.03 24 P **P** **05 15 08.5 +0.3**
baz=272,SNR=10
R32K **Eaglecrest** 67.18 35 P **P** **05 15 09.1 -0.2**
baz=275
S32K **Killisnoo** 67.22 35 P **P** **05 15 09.8 +0.2**
baz=275
P32M **Atlin** 67.48 33 P **P** **05 15 11.3 +0.1**
baz=275
N32M **Quiet Lake** 67.65 31 P **P** **05 15 12.8 +0.4**
baz=275
P33M **Teslin, Yukon** 67.87 32 P **P** **05 15 14.1 +0.4**
baz=276
U33K **Whale Pass** 68.17 37 P **P** **05 15 15.6 +0.1**
baz=277
T33K **Petersburg** 68.17 36 P **P** **05 15 16.5 +0.9**
baz=277
CRAG **Craig** 68.25 37 P **P** **05 15 16.8 +0.8**
baz=277
WRAK **Wrangell Islan** 68.56 36 P **P** **05 15 18.7 +0.8**
baz=278
R33M **Jennings River** 68.89 33 P **P** **05 15 21.0 +0.8**
baz=278
S34M **Telegraph Cree** 69.01 35 P **P** **05 15 21.6 +0.9**
baz=278
V35K **Ketchikan** 69.12 38 P **P** **05 15 22.1 +0.6**
baz=279
ARTI **Arti** 69.51 324 P **P** **05 15 23.6 -0.2**
DLBC **Dease Lake** 69.51 34 P **P** **05 15 24.4 +0.4**
baz=279
A36M **Sachs Harbour** 69.54 19 IAmb IAmb 05 15 25.4
comp=Z,7.9nm,0.8s
A36M **Sachs Harbour** 69.54 19 P **P** **05 15 24.2 +0.5**
baz=278,SNR=8.5
T35M **Bob Quinn** 69.62 36 P **P** **05 15 25.2 +0.6**
baz=279
AB31 **Akbulak array** 69.78 316 P **P** **05 15 25.6 -0.1**
ABKAR **Akbulak array** 69.78 316 P **P** **05 15 25.6 -0.1**
WTLY **Watson Lake, Y** 69.88 32 IAmb IAmb 05 15 28.3
comp=Z,8.0nm,0.8s
WTLY **Watson Lake, Y** 69.88 32 P **P** **05 15 27.2 +1.1**
baz=279
TGTN **Hyland Airport** 69.91 31 P **P** **05 15 27.1 +0.8**
baz=279,SNR=6.4
C36M **Paulatuk** 70.34 22 IAmb IAmb 05 15 29.4
comp=Z,6.5nm,0.6s
C36M **Paulatuk** 70.34 22 P **P** **05 15 29.5 +0.9**
baz=280,SNR=8.8
WRGLY **Wrigley** 71.79 28 P **P** **05 15 38.9 +1.4**
baz=283,SNR=16
KOTAN **Kotaneelee Air** 72.20 32 P **P** **05 15 40.9 +0.9**
baz=283
SPITS **Spitsbergen Ar** 75.65 350 P **P** **05 16 00.6 +0.8**
comp=Z,4.7nm,0.9s,baz=14,SNR=4.6
comp=Z,4.7nm,0.9s
YKA **Yellowknife Ar** 75.89 28 P **P** **05 16 01.7 +0.3**
comp=Z,4.1nm,0.8s,baz=297,slow=6.2,SNR=46
YKA pP **pP** **05 16 37.9 +0.5**
comp=Z,1.7nm,0.8s,baz=295,slow=6.4,SNR=4.3
comp=Z,4.1nm,0.8s
YKAW1 **Yellowknife Wh** 75.94 28 IAmb IAmb 05 16 02.6
comp=Z,6.0nm,0.6s
H04A **Detroit Lake** 77.55 47 IAmb IAmb 05 16 13.0
comp=Z,10.0nm,0.9s
J05D **Fort Rock, OR** 78.66 48 **P** **05 16 19.1 +1.7**
J05D IAmb IAmb 05 16 19.6
comp=Z,9.6nm,0.8s
PINE **Pine Mountain** 78.69 47 IAmb IAmb 05 16 20.0
comp=Z,15nm,0.8s
ARCES **ARCESS Array B** 78.84 342 P **P** **05 16 17.6 -0.2**
comp=Z,3.7nm,0.6s,baz=60,slow=7.4,SNR=8.4
comp=Z,3.7nm,0.6s
ARCES **ARCESS Array B** 78.84 342 P **P** **05 16 18.1 +0.4**
K05A **Summer Lake** 79.08 48 IAmb IAmb 05 16 22.1
comp=Z,19nm,1.2s
O03E **Paynes Creek** 79.25 51 IAmb IAmb 05 16 22.0
comp=Z,8.7nm,0.8s
ORV **Oroville** 79.72 52 **P** **05 16 23.6 +0.5**
CMB **Columbia Colle** 81.07 53 IAmb IAmb 05 16 31.9
comp=Z,8.9nm,0.7s
PNTR **Pine Nut** 81.27 51 IAmb IAmb 05 16 33.5
comp=Z,8.2nm,0.8s
NVAR **Mina Array Bea** 82.45 52 P **P** **05 16 38.5 +0.6**
comp=Z,5.6nm,0.6s,baz=282,slow=5.5,SNR=42
NVAR pP **pP** **05 17 16.1 +1.8**
comp=Z,2.0nm,0.7s,baz=274,slow=5.8,SNR=2.7
comp=Z,5.6nm,0.6s
KBZ **Khabaz** 82.63 314 P **P** **05 16 38.2 -0.1**
comp=Z,15nm,0.8s,baz=112,slow=2.9,SNR=33
comp=Z,15nm,0.8s
FINES **FINESS Array B** 83.19 335 P **P** **05 16 39.9 -1.0**
comp=Z,5.2nm,0.6s,baz=65,slow=4.5,SNR=43
comp=Z,5.2nm,0.6s
FINES **FINESS Array B** 83.19 335 P **P** **05 16 40.3 -0.5**
ILON **Igloolik, Nuna** 83.19 15 P **P** **05 16 40.7 0.0**
CLC **China Lake** 83.96 54 IAmb IAmb 05 16 46.8
comp=Z,6.9nm,0.8s
LRMC **Laurel Mtn Rad** 84.03 54 IAmb IAmb 05 16 45.8
comp=Z,14nm,0.9s
CCCA **Chr Cany lake** 84.25 54 IAmb IAmb 05 16 48.5
comp=Z,10nm,0.7s
QSM **Queen of Sheba** 84.45 54 IAmb IAmb 05 16 49.4
comp=Z,8.6nm,0.9s
GWY **Greenwater Val** 84.51 53 IAmb IAmb 05 16 49.7
comp=Z,9.7nm,1.0s
GSC **Goldstone, Bar** 84.76 54 IAmb IAmb 05 16 50.5
comp=Z,7.3nm,0.8s
YMR **Madison River** 84.96 44 IAmb IAmb 05 16 53.0
comp=Z,8.8nm,0.9s
YNR **Norris Junctio** 85.12 44 IAmb IAmb 05 17 05.9

	comp=Z,9.2nm,1.1s						
FFC	Flin Flon	85.23	32		P	05 16 52.1	+0.8
FFC				IAmb	IAmb	05 16 52.9	
	comp=Z,10.0nm,0.8s						
DUG	Dugway, Tooele	85.65	48	IAmb	IAmb	05 16 55.5	
	comp=Z,12nm,1.3s						
PMD	Palm Desert	85.73	56	IAmb	IAmb	05 16 55.5	
	comp=Z,9.4nm,0.9s						
BC3	Big Chuckawall	86.44	55	IAmb	IAmb	05 16 59.4	
	comp=Z,8.2nm,1.0s						
PDAR	Pinedale Array	86.72	45	P	P	05 16 58.6	-0.6
	comp=Z,0.4nm,0.5s,baz=254,slow=1.1,SNR=3.6						
	comp=Z,0.4nm,0.5s						
PDAR	Pinedale Array	86.72	45	P	P	05 16 59.6	+0.4
LAO	LASA Array	86.98	40	IAmb	IAmb	05 17 02.0	
	comp=Z,12nm,1.1s						
KNB	Kanab	87.00	51		P	05 17 01.5	+0.9
U15A	North Rim	87.63	52	IAmb	IAmb	05 17 05.6	
	comp=Z,4.9nm,0.7s						
AKASG	Malin Array Be	87.64	325	P	P	05 17 02.0	-1.1
	comp=Z,1.6nm,0.5s,baz=52,slow=4.8,SNR=10						
	comp=Z,1.6nm,0.5s						
AKASG	Malin Array Be	87.64	325	P	P	05 17 02.1	-1.0
AKBB	Malin Array Si	87.64	325	P	P	05 17 01.8	-1.3
AKBB				IAmb	IAmb	05 17 02.5	
	comp=Z,6.0nm,0.8s						
KIEV	Kiev	87.65	325	P	P	05 17 01.9	-1.2
KIEV				IAmb	IAmb	05 17 02.5	
	comp=Z,5.1nm,0.8s						
SRU	San Rafael Swe	87.72	49	P	P	05 17 04.5	+0.5
SRU				IAmb	IAmb	05 17 05.0	
	comp=Z,4.6nm,0.6s						
Y14A	Wickenburg	88.17	54	IAmb	IAmb	05 17 07.8	
	comp=Z,7.5nm,0.8s						
RAYN	Ar Rayn	88.64	295		P	05 17 07.9	-0.6
RAYN				IAmb	IAmb	05 17 08.7	
	comp=Z,5.5nm,0.6s						
HFS	Hagfors	88.70	338	P	P	05 17 06.2	-1.7
	comp=Z,2.4nm,0.8s,baz=83,slow=6.1,SNR=8.5						
	comp=Z,2.4nm,0.8s						
NOA	NORSAR Array B	88.90	339	P	P	05 17 07.6	-1.3
	comp=Z,0.8nm,0.8s,baz=50,slow=4.1,SNR=3.6						
	comp=Z,0.8nm,0.8s						
PV10	Paradox Valley	89.08	49	IAmb	IAmb	05 17 12.0	
	comp=Z,11nm,0.9s						
214A	Organ Pipe Nat	89.17	56	IAmb	IAmb	05 17 12.7	
	comp=Z,4.8nm,0.8s						
PV18	Skein Mesa, Pa	89.23	49	IAmb	IAmb	05 17 12.3	
	comp=Z,8.8nm,0.9s						
PV11	David Mesa, Pa	89.23	49	IAmb	IAmb	05 17 49.5	
	comp=Z,13nm,1.2s						
PV13	Radium Mtn., P	89.34	49	IAmb	IAmb	05 17 12.8	
	comp=Z,4.3nm,0.8s						
PV02	Paradox Valley	89.37	49	IAmb	IAmb	05 17 12.6	
	comp=Z,6.3nm,0.8s						
BR131	Keskin Array S	90.61	314	P	P	05 17 16.5	-1.0
BRTR	Keskin Array B	90.61	314	P	P	05 17 15.9	-1.5
	comp=Z,1.4nm,0.8s,baz=126,slow=3.8,SNR=7.8						
	comp=Z,1.4nm,0.8s						
BRTR	Keskin Array B	90.61	314	P	P	05 17 16.6	-0.8
LANS	Liptovska Anna	93.64	327	*e*P	P	05 17 29.4	-1.7
GERES	GERESS Array B	96.66	329	P	P	05 17 44.5	-0.5
	comp=Z,0.2nm,0.4s,baz=46,slow=7.2,SNR=1.8						
	comp=Z,0.2nm,0.4s						
TXAR	Lajitas Array	97.35	54	P	Pdif	05 17 48.9	+0.3
	comp=Z,0.3nm,0.8s,baz=250,slow=1.6,SNR=5.1						
TXAR				PKKPbc	PKKPbc	05 34 24.8	-1.2
	comp=Z,0.1nm,0.4s,baz=115,slow=3.5,SNR=6.1						
	comp=Z,0.3nm,0.8s						
BOSA	Boshof	124.63	250	PKP	PKPdf	05 23 14.0	0.0
	comp=Z,2.1nm,0.7s,baz=69,slow=2.3,SNR=6.5						
BOSA	Boshof	124.63	250		PKPdf	05 23 14.8	+0.8
TORD	Torodi Ar. Bea	129.05	310	PKP	PKPdf	05 23 22.1	-0.6
	comp=Z,1.1nm,0.5s,baz=326,slow=0.4,SNR=16						
DBIC	Dimbokro	138.16	309	PKP	PKPdf	05 23 40.5	+0.7
	comp=Z,3.1nm,0.7s,baz=312,slow=1.3,SNR=3.7						
PLCA	Paso Flores	145.46	131	PKPbc	PKPbc	05 23 52.6	+0.2
	comp=Z,6.6nm,0.6s,baz=241,slow=4.2,SNR=56						
PLCA				SKPbc	SKPbc	05 27 17.1	-0.6
	comp=Z,1.2nm,0.7s,baz=239,slow=4.5,SNR=5.1						
LPAZ	La Paz	149.27	85	PKPbc	PKiKP	05 24 05.1	-0.2
	comp=Z,4.8nm,0.5s,baz=348,slow=2.0,SNR=26						
LPAZ	La Paz	149.27	85		PKiKP	05 24 05.5	+0.1

*OTT **01** 05:18:13.4±0.2, 68°.87N×59°.41W, h18km, ML3.4/6, 242km northeast from Qikiqtarjuaq, Nu Eastern Arctic Background Seismic Zone.*
*DNK **01** 05:18:16.0±2.5, 68°.91N×59°.01W, h24km±13km, ML2.2, Presumed earthquake*
ISC 01 05:18:09.3±1.5, **68°.83N**±0°.04×**59°.32W**±0°.05, **h26**km±15km, **n27**, σ**3s.31**/46, **Davis Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GDH	Godhavn	2.12	76	*i* P	Pb	05 18 47.4	+0.4
GDH				*i* S	Sb	05 19 10.5	-2.4
GDH				IAML		05 19 11.4	
	comp=Z,84nm,0.4s						
ATTUG	Attu	2.29	110	*i* P	Pb	05 18 51.0	+1.2
NIAQ	Niaqornat	2.78	42	*i* P	Pb	05 18 57.5	-0.7
NIAQ				*i* S	Sn	05 19 26.8	+2.2
NIAQ				IAML		05 19 55.2	
	comp=Z,21nm,0.7s						
SAQQ	Saqqaq	2.86	62	*i* P	Pb	05 18 58.4	-1.1
SAQQ				*i* S	Sn	05 19 29.1	+2.5
SAQQ				IAML		05 19 31.9	
	comp=Z,26nm,0.4s						
ILULI	Ilulissat	2.98	79	PN	Pb	05 18 60.0	-1.6
ILULI				SN	Sb	05 19 34.1	-3.4
ILULI				Trac		05 19 36.4	
	comp=Z,5.3nm,0.1s						
ILULI	Ilulissat	2.98	79	*i* P	Pb	05 18 59.8	-1.8
ILULI				*i* S	Sn	05 19 32.0	+2.4
ILULI				IAML		05 19 37.3	
	comp=Z,25nm,0.7s						
SAATT	Saattut	3.33	50	*i* P	Pb	05 19 03.7	-3.7
SAATT				*i* S	Sn	05 19 39.4	+1.4
SAATT				IAML		05 20 12.2	
	comp=Z,17nm,0.6s						
NUUG	Nuugaatsiaq	3.43	35	*i* P	Pb	05 19 05.4	-3.7
NUUG				*i* S	Sn	05 19 42.7	+2.1
NUUG				IAML		05 20 13.2	
	comp=Z,11nm,0.9s						
CLRN	Clyde River	3.63	301	PN	Pn	05 19 08.1	+4.3
CLRN				SN	Sn	05 19 47.4	+1.7
CLRN				Trac		05 19 51.7	
	comp=Z,5.2nm,0.1s						
SFJD	Kangerlussuaq	3.77	115	*e*P	Pb	05 19 11.6	-3.3
SFJD				*i* S	Sn	05 19 51.9	+2.9
SFJD				IAML		05 19 53.8	
	comp=Z,21nm,0.3s						
UPNV	Upernavik	4.11	13	*i* P	Pn	05 19 14.1	+3.8
UPNV				*i* S	Sn	05 19 57.5	+0.1
UPNV				IAML		05 20 01.4	
	comp=Z,12nm,0.4s						
NUUK	Nuuk	5.57	143	*e*P	Pn	05 19 36.9	+6.6
NUUK				*i* S	Sn	05 20 34.4	+1.1
NUUK				IAML		05 20 52.9	
	comp=Z,15nm,1.0s						
KULLO	Kullorsuaq	5.82	6	PN	Pn	05 19 37.1	+3.4
KULLO				SN	Sn	05 20 39.8	+0.4
KULLO				Trac		05 20 41.3	
	comp=Z,3.2nm,0.2s						
KULLO	Kullorsuaq	5.82	6	*i* P	Pn	05 19 37.1	+3.4
KULLO				*i* S	Sn	05 20 39.4	0.0
KULLO				IAML		05 20 44.0	
	comp=Z,6.1nm,0.6s						
FRB	Frobisher Bay	6.31	220	PN	Pn	05 19 46.1	+5.6
FRB				SN	Sn	05 20 52.8	+1.2
FRB				Trac		05 21 09.2	
	comp=Z,10nm,0.1s						
POIN	Pond Inlet	7.25	311	PN	Pn	05 19 59.9	+6.5
POIN				SN	Sn	05 21 13.7	-1.0
POIN				Trac		05 21 36.8	
	comp=Z,0.2nm,0.0s						
SUMG	Summit	7.83	52	*i* P	Pn	05 20 04.4	+2.7
ILON	Igloolik, Nuna	8.05	284	PN	Pn	05 20 07.9	+3.7
ILON				SN	Sn	05 21 32.1	-2.1
ILON				Trac		05 21 41.6	
	comp=Z,1.8nm,0.1s						
TULEG	Thule	8.23	344	*i* P	Pn	05 20 11.8	+5.1
TULEG				*e*S	Sn	05 21 36.4	-2.3
TULEG				IAML		05 21 42.3	
	comp=Z,1.4nm,0.4s						
NEEM	North Greenlan	8.97	12	*i* P	Pn	05 20 20.3	+3.2
NEEM				*i* P	Pn	05 20 20.9	+3.8
NEEM				*i* S	Sn	05 21 53.8	-3.4
NEEM				IAML		05 21 57.5	
	comp=Z,3.4nm,0.6s						
ANGG	Ammassalik, Gr	8.98	101	*i* S	Sn	05 21 54.1	-3.0
KUQ	Kuujjuuaa	11.48	205	PN	Pn	05 20 55.0	+3.6
KUQ				SN	Sn	05 22 54.5	-4.1
KUQ				Trac		05 23 17.6	
	comp=Z,3.2nm,0.3s						
RES	Resolute Bay	12.39	314	SN	Sn	05 23 17.3	-3.2
SCO	Scoresbysund	12.96	65	*i* P	Pn	05 21 12.4	+1.0
SCHQ	Schefferville	14.47	198	PN	Pn	05 21 35.1	+3.0
SCHQ				SN	Sn	05 24 06.7	-4.8
SCHQ				Trac		05 24 26.8	
	comp=Z,364nm,3.6s						
LG4Q	La Grande 4	16.75	212	PN	P	05 22 04.2	+0.4
LG4Q				SN	Sn	05 24 57.9	-8.8
LG4Q				Trac		05 25 00.1	
	comp=Z,0.6nm,0.2s						
FCC	Fort Churchill	18.07	253	PN	P	05 22 22.7	+4.4
FCC				SN	Sn	05 25 31.2	-7.4
FCC				Trac		05 25 50.1	
	comp=Z,436nm,3.9s						

*IDC **01** 05:22:14.6±6.3, 22°.15S×179°.25W, h552km±66km, mb3.5/6, mbtmp4.4/7, Error ellipse: s-maj=40.7km s-min=35.5km az=84.0*
*NOU **01** 05:22:18.8, 22°.11S×179°.38W, h615km, mb3.9/13, South of Fiji Islands*
*NEIC **01** 05:22:20.4±0.9, 22°.1S±0°.1×179°.5W±0°.1, h608km±14km, mb4.2/23, Error ellipse: s-maj=21.9km s-min=14.5km az=158.0*
ISC 01 05:22:18.4±0.8, **22°.28S**±0°.09×**179°.4W**±0°.1, **h600**km, **n66**, σ**1s.18**/67, **mb4.1**/18, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	4.06	8	P	P	05 23 44.9	+0.4
MSVF	Nonsavu	5.12	332	P	P	05 23 52.6	+0.1
MSVF	Nonsavu	5.12	332	P	P	05 23 52.9	+0.4
MARNC	Mare, Loyalty	11.70	272	P	P	05 24 54.2	0.0
MARNC	Mare, Loyalty	11.70	272	P	P	05 24 54.0	-0.1
DZM	Mont Dzumac	13.12	268	P	P	05 25 09.3	+0.7
FUNA	Funafuti	13.74	354	P	P	05 25 14.2	-0.7
OUZ	Omahuta	14.27	204	P	P	05 25 21.8	+2.1
TOZ	Tahuroa Road	16.01	195	P	P	05 25 38.6	+2.9
TOZ				IAmb	IAmb	05 25 38.9	
	comp=Z,12nm,1.1s						
URZ	Urewera	16.21	190	P	P	05 25 37.1	-0.4
	comp=Z,2.9nm,0.3s,baz=259,slow=3.0,SNR=7.8						
URZ				S	S	05 28 13.7	-5.9
	comp=Z,8.2nm,0.9s,baz=151,slow=22,SNR=5.8						
URZ	Urewera	16.21	190	P	P	05 25 38.0	+0.5
QRZ	Quartz Range	19.71	198	P	P	05 26 11.3	+2.0
TATA	Tatamba Isabel	24.30	301	P	P	05 26 49.5	-1.2
ARMA	Armidale	27.14	247	P	P	05 27 16.2	+0.6
ARMA	Armidale	27.14	247	P	P	05 27 17.4	+1.8
ARMA				IAmb	IAmb	05 27 30.1	
	comp=Z,6.3nm,1.1s						
EIDS	Eidsvold	27.15	258	P	P	05 27 16.6	+1.0
EIDS				IAmb	IAmb	05 27 35.0	
	comp=Z,4.4nm,1.1s						
CTA	Charters Tower	32.06	267	P	P	05 27 57.8	-0.1
CTAO	Charters Tower	32.06	267	P	P	05 27 57.5	-0.4
CTAO	Charters Tower	32.06	267	P	P	05 27 58.6	+0.7
CTAO				IAmb	IAmb	05 27 58.9	
	comp=Z,5.1nm,0.6s						
QLP	Quilpie	33.31	255	P	P	05 28 09.1	+0.8
TOO	Toolangi	33.80	235	P	P	05 28 13.5	+1.2
STKA	Stephens Creek	35.86	246	P	P	05 28 30.3	+0.9
	comp=Z,2.3nm,0.5s,baz=96,slow=12,SNR=4.8						
	comp=Z,2.3nm,0.5s						
STKA	Stephens Creek	35.86	246	P	P	05 28 30.4	+1.0
COEN	Coen	36.44	277	P	P	05 28 34.4	0.0
BBOO	Buckleboo	40.60	245	P	P	05 29 08.1	+0.4
BBOO	Buckleboo	40.60	245	P	P	05 29 08.1	+0.4
BBOO				IAmb	IAmb	05 29 08.8	
	comp=Z,6.9nm,0.9s						
AS31	Alice Springs	42.86	259	P	P	05 29 26.0	+0.4
ASAR	Alice Springs	42.86	259	P	P	05 29 25.9	+0.3
	comp=Z,5.1nm,0.4s,baz=99,slow=8.3,SNR=107						
ASAR				PcP	PcP	05 31 03.5	+0.9
	comp=Z,1.1nm,0.5s,baz=107,slow=3.9,SNR=6.3						
ASAR				S	S	05 35 05.7	-2.5
	comp=Z,0.6nm,0.7s,baz=97,slow=14,SNR=5.3						
	comp=Z,5.1nm,0.4s						
ASAR	Alice Springs	42.86	259	P	P	05 29 25.5	-0.1
WR8	Warramunga Arr	42.94	264	P	P	05 29 26.1	-0.2
WR8				IAmb	IAmb	05 29 26.1	
	comp=Z,3.7nm,0.5s						
WB0	Warramunga Arr	43.08	264	P	P	05 29 27.1	-0.2
WRAB	Tennant Creek	43.08	264	P	P	05 29 26.9	-0.4
WRAB	Tennant Creek	43.08	264	P	P	05 29 27.0	-0.4
WRAB				IAmb	IAmb	05 29 27.2	
	comp=Z,4.6nm,0.8s						
WRA	Warramunga Arr	43.09	264	P	P	05 29 27.0	-0.4
	comp=Z,5.2nm,0.5s,baz=95,slow=8.1,SNR=150						
	comp=Z,5.2nm,0.5s						
WRA	Warramunga Arr	43.09	264	P	P	05 29 26.6	-0.8
FORT	Forrest	47.41	248	P	P	05 30 00.4	+0.3
FORT				IAmb	IAmb	05 30 05.7	
	comp=Z,9.9nm,0.9s						
MTN	Manton Dam	47.90	273	P	P	05 30 03.4	-0.6
MTN				IAmb	IAmb	05 30 04.8	
	comp=Z,12nm,1.1s						
KNRA	Kununurra	49.27	268	P	P	05 30 14.3	+0.3
PSA00	Pilbara Seismi	56.01	258	P	P	05 31 01.9	0.0
PSA00	Pilbara Seismi	56.01	258	P	P	05 31 01.2	-0.7
PSA00				IAmb	IAmb	05 31 09.2	
	comp=Z,8.2nm,1.0s						
MBWA	Marble Bar	56.21	259	P	P	05 31 03.0	-0.3
MORW	Morawa	57.96	249	P	P	05 31 15.5	+0.5
MORW				IAmb	IAmb	05 31 40.9	
	comp=Z,13nm,1.1s						
GIRL	Giralia	60.83	256	P	P	05 31 35.2	+1.0
GIRL				IAmb	IAmb	05 31 38.8	
	comp=Z,10.0nm,1.0s						
UGM	Wanagama	68.64	270	P	P	05 32 23.6	+0.1
MJAR	Matsushiro Arr	70.89	325	P	P	05 32 35.6	-0.6
	comp=Z,1.0nm,0.5s,baz=143,slow=5.5,SNR=5.2						
	comp=Z,1.0nm,0.5s						
SSLB	Suanglung	73.88	305	P	P	05 32 53.1	-0.6
PEA0B	Petropavlovsk-	77.66	346	P	P	05 33 14.5	+0.7
PEA0B				IAmb	IAmb	05 33 14.9	
	comp=Z,11nm,0.9s						
PETK	Petropavlovsk-	77.66	346	P	P	05 33 14.1	+0.2
	comp=Z,2.1nm,0.6s,baz=178,slow=6.3,SNR=2.3						
	comp=Z,2.1nm,0.6s						
CMAR	Chiang Mai Arr	89.48	290	P	P	05 34 15.7	+2.5
	comp=Z,1.2nm,0.7s,baz=139,slow=3.3,SNR=12						
	comp=Z,1.2nm,0.7s						
CMAR	Chiang Mai Arr	89.48	290	P	P	05 34 12.3	-0.9
BVAR	Borovoye Array	119.58	319	PKP	PKiKP	05 40 00.6	-0.2
	comp=Z,1.1nm,0.3s,baz=107,slow=3.1,SNR=11						
ARCES	ARCESS Array B	130.42	349	PKP	PKiKP	05 40 21.5	-0.4
	comp=Z,2.0nm,0.8s,baz=132,slow=1.3,SNR=2.0						
FINES	FINESS Array B	137.08	342	PKP	PKPdf	05 40 33.5	-0.1
	comp=Z,3.4nm,1.0s,baz=127,slow=0.7,SNR=4.6						
HFS	Hagfors	141.06	350	PKhKP	PKPpre	05 40 35.0	
	comp=Z,1.2nm,0.3s,baz=82,slow=2.9,SNR=18						
AKASG	Malin Array Be	143.89	329	PKP	PKPbc	05 40 45.2	-0.4
	comp=Z,1.5nm,0.3s,baz=44,slow=4.0,SNR=15						
EKA	Eskdalemuir Ar	146.87	4	PKPbc	PKPbc	05 40 54.1	0.0
	comp=Z,1.0nm,0.6s,baz=3.2,slow=2.5,SNR=1.2						
BRTR	Keskin Array B	147.01	309	PKPbc	PKPbc	05 40 55.5	+0.3
	comp=Z,0.7nm,0.4s,baz=120,slow=4.4,SNR=4.4						
OSTC	Ostas	149.24	340	*e*PKP	PKPbc	05 41 00.1	-0.1
STEB	Steborice	149.26	338	*e*PKP	PKiKP	05 41 01.3	+0.2
UPC	Upice	149.34	341	*e*PKP	PKPbc	05 40 59.9	-0.5
DPC	Dobruska-Polom	149.38	340	*e*PKP	PKiKP	05 41 01.5	+0.1
KRLC	Kraliky	149.47	339	*e*PKP	PKPbc	05 41 00.5	-0.3
MAUC	Maruska	149.72	337	*e*PKP	PKiKP	05 41 01.8	-0.3
KHC	Kasperske Hory	151.29	342	*e*PKP	PKPbc	05 41 02.9	-2.1
CKRC	Cesky Krumlov	151.35	341	*e*PKP	PKPbc	05 41 04.7	-0.5
GERES	GERESS Array B	151.51	342	PKPbc	PKiKP	05 41 05.9	0.0
	comp=Z,0.3nm,0.3s,baz=33,slow=3.8,SNR=2.5						

*MCSM **01** 05:38:59.2±0.8, 39°N±8°×2°8E±°, h8km±4km, mb4.6, MLv2.8*
*ISK **01** 05:38:59.1, 39°.02N×27°.86E, h8km, ML3.0/22*
*AFAD **01** 05:38:59.2, 39°.01N×27°.88E, h7km±2km, ML2.7*
ISC 01 05:38:59.4±0.8, **39°.01N**±0°.02×**27°.87E**±0°.02, **h14**km±6km, **n60**, σ**0s.38**/76, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKHS	Akhisar	0.14	198	P	Pg	05 39 02.8	-0.3
AKHS				S	Sg	05 39 05.4	-0.1
AKHS				IAML		05 39 06.0	
	comp=E,3μm,0.4s						
GORD	Gordes-Manisa	0.26	112	Pg	Pg	05 39 04.9	-0.2
GORD				Sg	Sg	05 39 09.1	+0.2
SOMA	Soma-Manisa	0.30	300	Pg	Pg	05 39 05.4	-0.3
SOMA				Sg	Sg	05 39 10.0	+0.1
GOMA	Golmarmara-Man	0.30	172	Pg	Pg	05 39 05.7	0.0
GOMA				Sg	Sb	05 39 10.9	-0.5
KTTT	Salihli	0.36	151	P	Pg	05 39 06.8	0.0
KTTT				S	Sg	05 39 11.6	-0.2
STEP	BALIKESIR_Sava	0.39	343	P	Pg	05 39 06.8	-0.5
STEP				S	Sg	05 39 12.3	-0.2
STEP				IAML		05 39 13.0	
	comp=N,1μm,0.3s						
STEP				IAML		05 39 13.0	
	comp=E,1μm,0.3s						
CAMT	Merkez	0.50	239	P	Pb	05 39 09.6	-0.4
CAMT				S	Sb	05 39 17.9	+0.7
CAMT				IAML		05 39 20.0	
	comp=N,384nm,0.3s						
CAMT				IAML		05 39 20.0	
	comp=E,527nm,0.4s						
ZEDA	zmir-Bergama	0.62	266	P	Pg	05 39 11.6	+0.1
ZEDA				S	Sg	05 39 19.9	+0.2
BALB	Balikesir	0.63	1	Pg	Pg	05 39 11.8	0.0
DEMI	Demirci	0.66	87	P	Pg	05 39 12.3	-0.1
DEMI				IAML		05 39 25.0	
	comp=N,882nm,0.2s						
DEMI				IAML		05 39 27.0	
	comp=E,497nm,0.2s						
BKES	Balkesir-Mer	0.73	4	P	Pg	05 39 13.5	-0.1
BKES				S	Sg	05 39 23.3	+0.1
IZMD	zmir-Dikili-	0.73	268	P	Pb	05 39 13.8	-0.2
IZMD				S	Sg	05 39 23.0	-0.3
MANT	Manisa	0.75	133	P	Pg	05 39 13.6	-0.4
MANT				S	Sg	05 39 23.6	-0.3
ODEM	Odemis-Izmir	0.75	167	Pg	Pb	05 39 14.4	+0.1
DKL	Dikili	0.75	275	Pg	Pg	05 39 13.8	-0.2
DURS	Dursunbey	0.76	38	P	Pg	05 39 13.3	-0.8
DURS				S	Sg	05 39 23.2	-1.0
BUHA	Balikesir, Bur	0.79	309	P	Pb	05 39 15.0	+0.1
KULA	Kula-Manisa	0.79	128	Pg	Pg	05 39 14.7	-0.1
DST	Dursunbey	0.83	44	Pg	Pg	05 39 15.6	0.0
DUVT	Torbali	0.85	203	P	Pb	05 39 16.2	+0.3
DUVT				IAML		05 39 30.0	
	comp=E,304nm,0.2s						
BAGT	Foa	0.87	246	P	Pg	05 39 15.8	-0.5
BAGT				IAML		05 39 28.0	
	comp=N,242nm,1.2s						
BAGT				IAML		05 39 32.0	
	comp=E,334nm,0.6s						
BLKS	Balkesir-Sus	0.87	5	P	Pg	05 39 15.5	-0.8
IZMR	zmir-demi	0.87	176	P	Pb	05 39 16.5	+0.2
IZMR				IAML		05 39 30.0	
	comp=E,284nm,0.5s						
SIMA	Simav-Kutahya	0.87	85	Pg	Pg	05 39 16.2	-0.2
SMAA	Simav-Kutahya	0.87	84	Pg	Pg	05 39 16.3	-0.1
BLCB	Balcova	0.90	226	Pg	Pg	05 39 16.6	-0.2
KIRA	zmir-Kiraz	0.91	152	P	Pg	05 39 16.9	-0.2
KIRA				IAML		05 39 33.0	
	comp=N,163nm,0.2s						
FOCM	Foa	0.93	252	Pg	Pg	05 39 17.3	-0.2
USAK	Uak-Merkez	0.95	108	P	Pg	05 39 17.2	-0.6
AYVA	Ayvalik	0.96	289	P	Pb	05 39 18.2	+0.4
AYVA				IAML		05 39 34.0	
	comp=N,307nm,0.5s						
AYVA				IAML		05 39 35.0	
	comp=E,350nm,0.4s						
SUSR	Susurluk-Balik	0.97	10	Pg	Pg	05 39 17.9	-0.3
CMHT	Manyas	1.01	5	P	Pg	05 39 18.1	-0.7
CMHT				IAML		05 39 38.0	
	comp=E,195nm,0.5s						
YENI	Yenice-Canakka	1.05	333	Pg	Pg	05 39 19.3	-0.3
GONE	Gonen-Balikesi	1.05	352	Pg	Pb	05 39 19.5	+0.2
SHAP	Saphane-Kutahy	1.06	89	Pg	Pb	05 39 19.8	+0.3
AYDB	Zeytinkoy-Aydi	1.06	179	Pg	Pb	05 39 19.9	+0.3
NAZL	Nazilli-Aydin	1.09	162	Pn	Pb	05 39 20.6	+0.5
ATIT	Gnen	1.10	348	P	Pb	05 39 20.6	+0.4
ATIT				IAML		05 39 36.0	
	comp=N,180nm,0.8s						
ATIT				IAML		05 39 38.0	
	comp=E,115nm,0.4s						
KRBN	Karaburun	1.11	248	Pn	Pg	05 39 20.4	-0.3
KARB	zmir-Karabur	1.19	254	P	Pb	05 39 21.7	+0.1
KARB				IAML		05 39 41.0	
	comp=N,113nm,0.6s						
KARB				IAML		05 39 41.0	
	comp=E,112nm,0.3s						
SULTU	Buldan	1.19	143	P	Pg	05 39 21.9	-0.4
EMET	Ktahya-Emet	1.19	72	P	Pn	05 39 22.4	+0.7
GEDZ	Gediz	1.20	88	Pn	Pg	05 39 22.4	-0.2
DGB	zmir	1.23	219	P	Pg	05 39 22.8	-0.3
DGB				IAML		05 39 43.0	
	comp=N,91nm,0.3s						
DGB				IAML		05 39 43.0	
	comp=E,107nm,0.3s						
KUSD	Kusadasi-Aydin	1.23	202	Pn	Pg	05 39 22.9	-0.3
BAYC	CANAKKALE_Bayr	1.26	306	P	Pn	05 39 23.0	+0.5
BAYC				IAML		05 39 42.0	
	comp=N,224nm,0.5s						
BAYC				IAML		05 39 43.0	
	comp=E,214nm,0.3s						
GDZ	Gediz	1.26	86	P	Pn	05 39 23.1	+0.4
GDZ				IAML		05 39 42.0	
	comp=N,144nm,0.6s						
GDZ				IAML		05 39 43.0	
	comp=E,163nm,0.3s						
ESEN	Aydn-Nazilli	1.27	162	P	Pn	05 39 22.5	-0.1
ORLT	Orhaneli	1.31	37	Pn	Pg	05 39 24.3	-0.3
ORLT	Orhaneli	1.31	37	P	Pn	05 39 23.6	+0.3
ORLT				S	Sb	05 39 40.2	-0.3
ZEYE	Izmir, Urla-Ze	1.31	235	P	Pn	05 39 23.5	+0.2
ZEYE				IAML		05 39 47.0	
	comp=N,127nm,0.3s						
ZEYE				IAML		05 39 50.0	
	comp=E,82nm,0.3s						
TVSB	Tavsanli	1.32	70	Pn	Pg	05 39 24.6	-0.2
AYDN	Tasoluk	1.34	180	P	Pn	05 39 23.6	-0.2
AYDN				S	Sb	05 39 41.5	0.0
KOCA	Canakkale, Ayv	1.43	291	P	Pn	05 39 25.5	+0.5
KOCA				S	Sn	05 39 42.9	-0.6
PASA	Karahalli, USA	1.43	117	P	Pb	05 39 26.0	+0.1
PASA				S	Sn	05 39 43.1	-0.5
KLYT	Kilyos	2.42	22	P	Pn	05 39 39.1	+0.6
BR105	Keskin Array S	4.51	79	P	Pn	05 40 08.1	+0.6
BR106	Keskin Array S	4.52	79	P	Pn	05 40 08.1	+0.6
AQU	L'Aquila	11.48	292	P	Pn	05 41 43.2	+0.3
	14nm,1.4s						
TUE	Stuetta	15.49	305	P	Pn	05 42 37.6	0.0
	39nm,2.2s						

IDC 01 05:48:01.2±3.1, **48°.73S**×**124°.85E**, **h0**km, **mb3.8**/4, **mbtmp3.9**/4, **MS3.4**/5, **Error ellipse: s-maj=75.7km s-min=50.7km az=150.0**, **Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W1	Cape Leeuwin H	15.94	326	T	T	06 08 37.1	
	baz=153,slow=74,SNR=21						
H01W2	Cape Leeuwin H	15.94	326	T	T	06 08 30.5	
	baz=153,slow=74,SNR=21						
H01W3	Cape Leeuwin H	15.95	326	T	T	06 08 38.4	
	baz=153,slow=74,SNR=20						
NWAO	Narrogin (SRO)	16.79	337	LR	LR	05 57 03.2	
	comp=Z,70nm,20.4s,baz=57,slow=32						
STKA	Stephens Creek	21.05	43	P	P	05 52 47.4	+0.6
	2.9nm,0.8s,baz=206,slow=12,SNR=6.7						
STKA				LR	LR	05 59 22.1	
	comp=Z,92nm,18.6s,baz=206,slow=32						
	2.9nm,0.8s						
ASAR	Alice Springs	26.02	19	P	P	05 53 35.5	-0.5
	1.8nm,0.9s,baz=197,slow=8.9,SNR=17						
ASAR				LR	LR	06 03 27.5	
	comp=Z,96nm,18.5s,baz=162,slow=36						

	1.8nm,0.9s						
WRA	**Warramunga Arr**	**29.72**	**18**	P	P	05 54 09.3	+0.2
	0.8nm,1.0s,baz=195,slow=8.6,SNR=2.7						
	0.8nm,1.0s						
CTA	**Charters Tower**	**33.36**	**39**	LR	LR	06 07 11.4	
	comp=Z,41nm,20.5s,baz=232,slow=34						
SNAA	**Sanae**	**54.35**	**198**	LR	LR	06 19 12.8	
	comp=Z,71nm,18.4s,baz=11,slow=34						
CMAR	**Chiang Mai Arr**	**70.76**	**334**	P	P	05 59 19.6	+0.4
	0.7nm,0.4s,baz=163,slow=5.7,SNR=4.1						
	0.7nm,0.4s						
YKA	**Yellowknife Ar**	**145.08**	**44**	PKPbc	PKPbc	06 07 37.5	-1.2
	0.6nm,0.7s,baz=279,slow=4.0,SNR=12						

*CATAC **01** 05:54:59.7±0.5, 14˚N±2˚×9˚2W±˚, h26km±4km, M4.4/18, mb5.2/2, mB4.7/1, MLv4.0/18, Mw(mB)3.9/1, Error ellipse: s-maj=6.6km s-min=2.8km az=42.4, confirmed*

*GCG **01** 05:55:00.6±2.1, 13˚.98N×91˚.43W, h49km±32km, MD4.0, ML4.0, Presumed earthquake*

ISC 01 05:55:00.1±1.6**, 13˚.81N**±0˚.07×**91˚.52W**±0˚.06**, h35**km**, n48,** σ**1^{s}87**/68**, 1C, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG5	**El Palmar, Qui**	**0.61**	**16**	*i* P	**Pn**	**05 55 14.5**	**+2.1**
STG5				*i* S	**Sn**	**05 55 23.3**	**+2.2**
STG2	**El Palmar, Qui**	**0.64**	**13**	*i* P	**Pn**	**05 55 15.2**	**+2.5**
STG2				*i* S	**Sn**	**05 55 24.5**	**+2.8**
STG8	**El Palmar, Qui**	**0.66**	**15**	*i* P	**Pn**	**05 55 15.5**	**+2.4**
STG8				IAML		05 55 27.5	
	comp=E,7µm,0.2s						
RTAL	**Retalhuleu**	**0.73**	**347**	P	**Pn**	**05 55 13.4**	**-0.4**
RTAL				S	**Sn**	**05 55 22.0**	**-1.8**
SOKI	**Kika Raxquin**	**1.01**	**7**	*i* P	**Pn**	**05 55 17.0**	**-1.1**
SOKI				*i* S	**Sn**	**05 55 28.8**	**-2.5**
ESSJ	**San Jos, E**	**1.02**	**104**	*i* P	**Pn**	**05 55 13.7**	**-4.3**
ESSJ				IAML		05 55 26.0	
	comp=N,6µm,0.5s						
FG8	**Yepocapa, Chim**	**1.03**	**64**	*i* P	**Pn**	**05 55 14.6**	**-3.6**
QUEO	**Labor Ovalle**	**1.05**	**1**	*i* P	**Pn**	**05 55 18.1**	**-0.5**
QUEO				*i* S	**Sn**	**05 55 30.1**	**-2.1**
FG16	**Alotenango, Sa**	**1.08**	**65**	*i* P	**Pn**	**05 55 15.6**	**-3.4**
FG16				*i* S	**Sn**	**05 55 27.2**	**-5.7**
FG16				IAML		05 55 28.0	
	comp=N,21µm,0.2s						
SMCA	**Catarina**	**1.17**	**333**	*i* P	**Pn**	**05 55 19.0**	**-1.0**
SMCA				*i* S	**Sn**	**05 55 32.8**	**-1.8**
PCG5	**San Vicente Pa**	**1.18**	**70**	*i* P	**Pn**	**05 55 17.5**	**-2.7**
PCG5				*i* S	**Sn**	**05 55 29.5**	**-5.7**
PCG5				IAML		05 55 33.8	
	comp=E,3µm,0.2s						
GCG4	**OSOP**	**1.23**	**51**	IAML		05 55 37.8	
	comp=E,3µm,0.3s						
THIG		**1.30**	**327**	*e*P	**Pn**	**05 55 21.8**	**0.0**
THIG				*e*S	**Sn**	**05 55 37.9**	**-0.1**
HUEH	**Huehuetenango**	**1.50**	**1**	S	**Sn**	**05 55 42.7**	**-0.4**
HUEH	**Huehuetenango**	**1.50**	**1**	IAML		05 55 47.7	
	comp=N,1µm,0.8s						
NUBE	**Las Nubes**	**1.70**	**87**	P	**Pn**	**05 55 27.0**	**-0.4**
NUBE	**Las Nubes**	**1.70**	**87**	*i* P	**Pn**	**05 55 26.8**	**-0.5**
NUBE				*i* S	**Sn**	**05 55 44.3**	**-3.7**
NUBE				IAML		05 55 50.4	
	comp=E,747nm,0.3s						
LOAL	**Lomas de Alarc**	**1.70**	**84**	P	**Pn**	**05 55 27.2**	**-0.2**
LOAL				S	**Sn**	**05 55 47.7**	**-0.2**
SLOZ	**Alcaldia de Sa**	**1.70**	**83**	P	**Pn**	**05 55 27.0**	**-0.4**
UNIC	**Universidad Ca**	**1.93**	**85**	P	**Pn**	**05 55 30.6**	**+0.1**
UNIC				S	**Sn**	**05 55 54.1**	**+0.7**
AVCB	**Coban**	**1.97**	**33**	IAML		05 56 14.0	
	comp=N,2µm,0.6s						
JAYA	**Jayaque - finc**	**2.02**	**94**	P	**Pn**	**05 55 31.5**	**-0.4**
JAYA	**Jayaque - finc**	**2.02**	**94**	*i* P	**Pn**	**05 55 31.1**	**-0.7**
JAYA				IAML		05 55 58.6	
	comp=E,3µm,0.2s						
CEDA	**San Andres**	**2.07**	**90**	P	**Pn**	**05 55 32.8**	**+0.5**
LALI	**Alcalda de L**	**2.17**	**98**	P	**Pn**	**05 55 33.6**	**0.0**
LALI	**Alcalda de L**	**2.17**	**98**	⇑*e*P	**Pn**	**05 55 33.6**	**0.0**
LALI				*e*S	**Sn**	**05 55 58.2**	**-1.1**
MTO3	**Montecristo**	**2.18**	**74**	P	**Pn**	**05 55 33.6**	**-0.4**
MTO3	**Montecristo**	**2.18**	**74**	*i* P	**Pn**	**05 55 33.4**	**-0.6**
UEES	**Universidad Ev**	**2.22**	**92**	P	**Pn**	**05 55 34.8**	**+0.3**
SEMO	**Seminario San**	**2.24**	**93**	P	**Pn**	**05 55 35.2**	**+0.5**
SEMO				S	**Sn**	**05 56 01.4**	**+0.2**
ZAFR2	**Estanzuela, Za**	**2.24**	**70**	*e*P	**Pn**	**05 55 36.0**	**+1.3**
ZAFR2				*e*S	**Sn**	**05 56 03.7**	**+2.5**
ESQI	**Esquipulas**	**2.24**	**70**	P	**Pn**	**05 55 34.7**	**-0.1**
ESQI				S	**Sn**	**05 56 03.4**	**+2.0**
UTEC	**Universidad Te**	**2.26**	**93**	P	**Pn**	**05 55 35.7**	**+0.7**
UTEC				S	**Sn**	**05 56 03.7**	**+2.0**
PANCS	**Alcalda de**	**2.29**	**95**	P	**Pn**	**05 55 36.0**	**+0.6**
IGN	**Direccin Gen**	**2.29**	**92**	P	**Pn**	**05 55 36.3**	**+0.9**
IGN				S	**Sn**	**05 56 04.1**	**+1.6**
PAVA	**Las Pavas**	**2.52**	**92**	P	**Pn**	**05 55 39.2**	**+0.6**
LLGN	**La Laguna**	**2.53**	**82**	P	**Pn**	**05 55 38.5**	**-0.3**
LLGN				S	**Sn**	**05 56 09.6**	**+1.2**
P5NO	**Presa 5 de nov**	**2.69**	**86**	P	**Pn**	**05 55 41.6**	**+0.7**
SCLA	**Alcaldia de Sa**	**2.72**	**92**	P	**Pn**	**05 55 41.9**	**+0.6**
SCLA				S	**Sn**	**05 56 14.7**	**+1.7**
SARH	**Santa Rosa de**	**2.84**	**70**	P	**Pn**	**05 55 43.5**	**+0.4**
PQSS	**Presa 15 de Se**	**2.89**	**93**	P	**Pn**	**05 55 44.7**	**+1.1**
PQSS				S	**Sn**	**05 56 18.8**	**+1.7**
RANC	**El Ranchito**	**3.17**	**96**	P	**Pn**	**05 55 49.7**	**+2.1**
RANC				S	**Sn**	**05 56 26.3**	**+2.0**
LCND	**La Caada**	**3.57**	**98**	P	**Pn**	**05 55 53.8**	**+0.9**
CNCH	**Conchagua**	**3.63**	**98**	P	**Pn**	**05 55 54.7**	**+0.8**
CNCH				S	**Sn**	**05 56 37.4**	**+1.8**
YUSH	**Yuscaran**	**4.55**	**88**	P	**Pn**	**05 56 07.3**	**+0.8**
POLN	**Al Sur del Vol**	**4.73**	**104**	P	**Pn**	**05 56 09.6**	**+0.6**
COPN	**Copaltepe**	**5.07**	**108**	P	**Pn**	**05 56 14.2**	**+0.5**
RCVN	**Varillal2**	**5.19**	**92**	P	**Pn**	**05 56 16.5**	**+1.2**

*MOS **01** 06:01:38.8±0.9, 36˚.58N×70˚.93E, h209km, mb4.3/5, Error ellipse: s-maj=9.1km s-min=3.9km az=79.8*

*IDC **01** 06:01:39.9±2.3, 36˚.52N×71˚.05E, h210km±20km, mb3.6/15, mbtmp4.3/21, Error ellipse: s-maj=14.5km s-min=12.3km az=171.0*

*NEIC **01** 06:01:40.1±1.3, 36˚.57N±0˚.03×71˚.0E±0˚.1, h203km±8km, mb4.2/17, Error ellipse: s-maj=12.5km s-min=4.4km az=82.0*

*NNC **01** 06:01:43.5±5.2, 36˚.94N×70˚.89E, h204km±61km, mb3.2, mpv4.0, Error ellipse: s-maj=48.6km s-min=24.6km az=7.0*

ISC 01 06:01:39.0±0.5**, 36˚.49N**±0˚.05×**70˚.96E**±0˚.05**, h200**km**, n150,** σ**1^{s}62**/173**, mb4.1**/25**, 11C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.49**	**219**		**Pn**	**06 02 24.8**	**+1.8**
KBL	**Kabul**	**2.49**	**219**	PN	**Pn**	**06 02 24.8**	**+1.8**
SHAA	**Shahritus**	**2.51**	**296**		**Pn**	**06 02 23.5**	**+0.5**
SHAA				Sn	**Sn**	**06 02 56.0**	**-1.4**
GAR	**Garm**	**2.56**	**349**		**Pn**	**06 02 24.1**	**+0.5**
CHGR	**Chuyangaron**	**2.59**	**327**		**Pn**	**06 02 24.1**	**+0.2**
CHGR	**Chuyangaron**	**2.59**	**327**	*i* PN	**Pn**	**06 02 24.2**	**+0.2**
DRK	**Karamyk**	**3.06**	**12**		**Pn**	**06 02 30.3**	**+0.8**
DRK	**Karamyk**	**3.06**	**12**	PN	**Pn**	**06 02 30.3**	**+0.8**
NIL	**Nilore**	**3.40**	**146**		**Pn**	**06 02 36.0**	**+2.5**
NIL	**Nilore**	**3.40**	**146**	PN	**Pn**	**06 02 36.0**	**+2.5**
BTK	**Batken**	**3.57**	**358**		**Pn**	**06 02 36.2**	**+0.9**
BTK	**Batken**	**3.57**	**358**	PN	**Pn**	**06 02 36.3**	**+0.9**
SRNI	**Srinagar**	**3.98**	**127**	*e*S	**Sn**	**06 03 30.9**	**+1.9**
SRNI				IAML		06 03 32.3	
	comp=N,672nm,0.3s						
SRNI				IAML		06 03 36.3	
	comp=E,909nm,0.3s						
OHH	**Osh**	**4.28**	**19**	PN	**Pn**	**06 02 42.7**	**-1.5**
KSH2	**Kashi**	**4.51**	**53**	Pn	**Pn**	**06 02 49.1**	**+1.9**
KSH2				Sn	**Sn**	**06 03 40.7**	**-0.3**
KSH2				smax	smax		
	comp=N,200nm,0.6s						
KSH2				smax	smax		
	comp=E,110nm,0.4s						
JMU	**Jammu**	**4.88**	**138**	*e*x	x	06 03 08.3	
JMU				*e*S	**Sn**	**06 03 50.3**	**+0.9**
JMU				IAML		06 03 53.7	
	comp=E,455nm,0.3s						
JMU				IAML		06 03 54.4	
	comp=N,514nm,0.5s						
TRKS	**Terek-Say**	**5.04**	**2**	PN	**Pn**	**06 02 53.1**	**-0.8**
ARSB	**Arslanbob**	**5.08**	**17**	Pn	**Pn**	**06 02 54.0**	**-0.4**
ARSB	**Arslanbob**	**5.08**	**17**	PN	**Pn**	**06 02 54.0**	**-0.4**
ARK	**Arkit**	**5.36**	**8**	PN	**Pn**	**06 02 57.7**	**-0.3**
ALCI	**Alchi Leh**	**5.57**	**112**	*e*P	**Pn**	**06 03 02.6**	**+1.6**
ALCI				*e*S	**Sn**	**06 04 05.0**	**-0.8**
ALCI				IAML		06 04 07.7	
	comp=E,165nm,0.4s						
ALCI				IAML		06 04 07.7	
	comp=N,150nm,0.5s						
TSSA	**Tissa**	**5.62**	**129**	*e*P	**Pn**	**06 03 03.8**	**+2.2**
TSSA				*e*S	**Sn**	**06 04 05.2**	**-1.5**
TSSA				IAML		06 04 08.9	
	comp=E,403nm,0.3s						
TSSA				IAML		06 04 09.0	
	comp=N,332nm,0.3s						
THN	**Thein Dam**	**5.66**	**134**	*e*P	**Pn**	**06 03 03.7**	**+1.8**
THN				*e*S	**Sn**	**06 04 07.1**	**-0.2**
THN				IAML		06 04 09.8	
	comp=E,311nm,0.3s						
THN				IAML		06 04 10.3	
	comp=N,237nm,0.3s						
IUG	**Iuzhnay**	**5.70**	**353**	*e*PN	**Pn**	**06 03 02.3**	**0.0**
IUG	**Iuzhnay**	**5.70**	**353**	*e*P	**Pn**	**06 03 02.4**	**0.0**
CHM	**Chimkent**	**5.92**	**350**	*e*PN	**Pn**	**06 03 04.9**	**-0.1**
CHM	**Chimkent**	**5.92**	**350**	*e*P	**Pn**	**06 03 05.0**	**-0.1**
ARLS	**Aral**	**5.97**	**25**	PN	**Pn**	**06 03 05.3**	**-0.6**
DHRM	**DHARAMSHALA**	**6.11**	**132**	*e*P	**Pn**	**06 03 09.8**	**+1.8**
DHRM				*e*S	**Sn**	**06 04 17.5**	**-0.8**
DHRM				IAML		06 04 20.1	
	comp=N,228nm,0.3s						
DHRM				IAML		06 04 21.3	
	comp=E,295nm,0.3s						
NRN	**Naryn**	**6.31**	**37**		**Pn**	**06 03 09.2**	**-1.3**
NRN	**Naryn**	**6.31**	**37**	PN	**Pn**	**06 03 09.2**	**-1.3**
DZA	**Taraz**	**6.40**	**2**	*e*PN	**Pn**	**06 03 11.1**	**-0.2**
DZA	**Taraz**	**6.40**	**2**	*e*P	**Pn**	**06 03 11.2**	**-0.2**
BRLS	**Borolday**	**6.59**	**353**	*e*PN	**Pn**	**06 03 10.6**	**-3.1**
BRLS	**Borolday**	**6.59**	**353**	*e*P	**Pn**	**06 03 10.7**	**-3.1**
KK31	**Karatay Array**	**6.62**	**357**		**Pn**	**06 03 13.6**	**-0.5**
KK31	**Karatay Array**	**6.62**	**357**	⇑P	**Pn**	**06 03 13.4**	**-0.7**
	comp=E,2.3nm,0.2s,baz=187,slow=13,SNR=119						
KK31				⇑S	**Sn**	**06 04 23.3**	**-6.3**
	comp=E,36nm,0.5s,baz=35,slow=74,SNR=3.8						
KK31	**Karatay Array**	**6.62**	**357**	PN	**Pn**	**06 03 13.6**	**-0.5**
KKAR	**Karatay Array**	**6.62**	**357**		**Pn**	**06 03 13.7**	**-0.4**
KKAR	**Karatay Array**	**6.62**	**357**	PN	**Pn**	**06 03 13.7**	**-0.4**
AAK	**Ala-Archa**	**6.72**	**23**	P	**Pn**	**06 03 15.7**	**+0.1**
	comp=E,34nm,0.3s,baz=211,slow=8.4,SNR=95						
AAK				S	**Sn**	**06 04 29.4**	**-2.9**
	comp=E,11nm,0.4s,baz=217,slow=15,SNR=6.3						
AAK	**Ala-Archa**	**6.72**	**23**		**Pn**	**06 03 15.5**	**-0.1**
AAK	**Ala-Archa**	**6.72**	**23**	⇑P	**Pn**	**06 03 15.7**	**+0.1**
	comp=E,9.4nm,0.5s						
AAK				⇓S	**Sn**	**06 04 29.4**	**-2.9**
	comp=E,44nm,0.8s						
AAK	**Ala-Archa**	**6.72**	**23**	⇑PN	**Pn**	**06 03 15.9**	**+0.3**
AAK				pmax	pmax		
	comp=Z,26nm,0.6s						
BHK	**Bhakra**	**6.79**	**137**	*e*x	x	06 03 47.1	
BHK				IAML		06 04 34.4	
	comp=N,148nm,0.2s						
BHK				IAML		06 04 36.3	
	comp=E,139nm,0.4s						
BOOM	**Boomskoye usch**	**7.12**	**31**		**Pn**	**06 03 20.8**	**-0.1**
BOOM	**Boomskoye usch**	**7.12**	**31**	PN	**Pn**	**06 03 20.8**	**-0.1**
HRA	**Herat**	**7.42**	**256**		**Pn**	**06 03 25.5**	**+0.7**
SMLA	**Simla**	**7.43**	**134**	*e*P	**Pn**	**06 03 26.0**	**+1.2**
SMLA				*e*S	**Sn**	**06 04 46.2**	**-2.7**
SMLA				*e*S	**Sn**	**06 04 47.1**	**-1.9**
SMLA				IAML		06 04 48.9	
	comp=N,160nm,0.3s						
SMLA				IAML		06 04 49.4	
	comp=E,206nm,0.4s						
TARG	**Taragay, Kyrgy**	**7.46**	**43**		**Pn**	**06 03 25.5**	**0.0**
TARG	**Taragay, Kyrgy**	**7.46**	**43**	PN	**Pn**	**06 03 25.5**	**0.0**
SGDS	**Sogindy**	**7.50**	**21**	*e*P	**Pn**	**06 03 25.5**	**-0.2**
HNLY	**HANLEY**	**7.57**	**117**	*e*P	**Pn**	**06 03 28.4**	**+1.2**
HNLY				*e*S	**Sn**	**06 04 49.6**	**-3.4**
HNLY				IAML		06 04 55.9	
	comp=N,115nm,0.9s						
HNLY				IAML		06 05 07.1	
	comp=E,115nm,1.1s						
KLP	**Kalpa**	**7.81**	**127**	*e*P	**Pn**	**06 03 30.4**	**+0.3**
KLP				*e*S	**Sn**	**06 04 54.9**	**-3.5**
KLP				IAML		06 04 59.1	
	comp=N,148nm,0.6s						
KLP				IAML		06 05 00.7	
	comp=E,156nm,0.7s						
WUS	**Wushi**	**7.98**	**51**		**Pn**	**06 03 31.7**	**-0.2**
TNSS	**Tian-Shan**	**8.00**	**33**	*e*PN	**Pn**	**06 03 32.0**	**-0.5**
TNSS				*e*S	**Sn**	**06 05 03.6**	**+0.8**
TNSS	**Tian-Shan**	**8.00**	**33**	*e*P	**Pn**	**06 03 32.0**	**-0.5**
TNSS				*e*S	**Sn**	**06 05 03.7**	**+0.8**
AAA	**Alma-Ata**	**8.12**	**32**	*e*PN	**Pn**	**06 03 33.6**	**-0.1**
AAA	**Alma-Ata**	**8.12**	**32**	*e*P	**Pn**	**06 03 33.7**	**-0.1**
ANVS	**Anan'yevo**	**8.14**	**37**	PN	**Pn**	**06 03 33.2**	**-0.9**
MDOK	**Medeo**	**8.15**	**33**	*e*PN	**Pn**	**06 03 33.9**	**-0.2**
MDOK				*e*S	**Sn**	**06 05 07.1**	**+1.2**
MDOK	**Medeo**	**8.15**	**33**	*e*P	**Pn**	**06 03 33.9**	**-0.2**
MDOK				*e*S	**Sn**	**06 05 07.2**	**+1.2**
PRZ	**Przheval'sk**	**8.30**	**42**		**Pn**	**06 03 37.1**	**+0.9**
PRZ	**Przheval'sk**	**8.30**	**42**	PN	**Pn**	**06 03 37.1**	**+0.9**
DDI	**Dehra Dun**	**8.54**	**134**	*e*S	**Sn**	**06 05 07.6**	**-7.8**
SATY	**Saty**	**8.71**	**39**	*e*PN	**Pn**	**06 03 41.1**	**-0.4**
SATY	**Saty**	**8.71**	**39**	*e*P	**Pn**	**06 03 41.1**	**-0.4**
UZB	**Uzynbulak**	**9.09**	**41**	*e*P	**Pn**	**06 03 46.0**	**-0.4**
UZB	**Uzynbulak**	**9.09**	**41**	*e*P	**Pn**	**06 03 46.1**	**-0.4**
JOSI	**Joshimath**	**9.30**	**127**	*e*S	**Sn**	**06 05 29.0**	**-4.6**
JOSI				IAML		06 05 31.0	
	comp=N,76nm,1.0s						
JOSI				IAML		06 05 38.0	
	comp=E,105nm,0.8s						
SHLS	**Shalkode**	**9.33**	**42**	*e*P	**Pn**	**06 03 52.2**	**+2.7**
SHLS	**Shalkode**	**9.33**	**42**	*e*P	**Pn**	**06 03 52.2**	**+2.7**
PDGK	**Podgornoye**	**9.46**	**41**	⇑P	**Pn**	**06 03 50.1**	**-1.2**
	comp=E,7.0nm,0.7s						
PDGK				⇑S	**Sn**	**06 05 33.9**	**-3.3**
	comp=E,13nm,1.1s						
PDGK	**Podgornoye**	**9.46**	**41**	P	**Pn**	**06 03 50.0**	**-1.2**
PDGK				S	**Sn**	**06 05 33.9**	**-3.3**
KUDL	**Kundal**	**9.54**	**149**	*e*P	**Pn**	**06 03 52.1**	**-0.1**
KUDL				*e*S	**Sn**	**06 05 31.6**	**-7.5**
KUDL				IAML		06 05 36.4	
	comp=N,13nm,0.3s						
KUDL				IAML		06 05 39.4	
	comp=E,18nm,0.2s						
TDK	**Taldyqorghan**	**10.21**	**31**	*e*P	**Pn**	**06 04 00.6**	**-0.1**
TDK	**Taldyqorghan**	**10.21**	**31**	*e*P	**Pn**	**06 04 00.6**	**-0.1**
MAKZ	**Makanchi**	**13.18**	**35**	Pn	**Pn**	**06 04 38.3**	**-0.3**
MAKZ	**Makanchi**	**13.18**	**35**	P	**Pn**	**06 04 38.3**	**-0.3**
MK31	**Makanchi Array**	**13.32**	**36**	Pn	**Pn**	**06 04 40.2**	**-0.1**
MK31	**Makanchi Array**	**13.32**	**36**	P	**Pn**	**06 04 40.0**	**-0.4**
	comp=E,0.4nm,0.3s,baz=214,slow=11,SNR=30						
MK31	**Makanchi Array**	**13.32**	**36**	*ce*P	**Pn**	**06 04 40.8**	**+0.5**
MKAR	**Makanchi Array**	**13.32**	**36**	P	**Pn**	**06 04 39.6**	**-0.7**
	comp=E,0.6nm,0.3s,baz=208,slow=11,SNR=15						
MKAR	**Makanchi Array**	**13.32**	**36**	*ce*P	**Pn**	**06 04 40.5**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
WMQ	**Urumqi**	**14.73**	**55**	*e*P	**Pn**	**06 04 58.3**	**+0.5**
WMQ				pmax	pmax		
	comp=Z,12nm,1.1s						
AB31	**Akbulak array**	**15.08**	**331**		**Pn**	**06 05 01.0**	**-0.9**
AB31	**Akbulak array**	**15.08**	**331**	⇓P	**Pn**	**06 04 59.9**	**-2.0**
	comp=Z,12nm,0.9s,baz=147,slow=11,SNR=94						
AB31	**Akbulak array**	**15.08**	**331**	*e*P	**Pn**	**06 05 00.3**	**-1.6**
ABKAR	**Akbulak array**	**15.08**	**331**		**Pn**	**06 05 00.6**	**-1.3**
KURBB	**Kurchatov Arra**	**15.14**	**19**	P	**Pn**	**06 05 02.8**	**+0.1**
	comp=Z,62nm,0.8s,baz=210,slow=9.8,SNR=4.3						
KURBB	**Kurchatov Arra**	**15.14**	**19**	⇑P	**P**	**06 05 04.8**	**+1.6**
	comp=Z,4.7nm,0.7s						
KURK	**Kurchatov**	**15.25**	**19**	*i* P	**Pn**	**06 05 04.0**	**0.0**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
EVN	**Everest**	**15.87**	**118**		**Pn**	**06 05 13.4**	**+1.0**
BVAR	**Borovoye Array**	**16.54**	**359**	P	**P**	**06 05 18.7**	**+0.1**
	comp=Z,5.0nm,0.4s,baz=161,slow=8.9,SNR=32						
BVAR				S	**S**	**06 08 19.5**	**-1.8**
	comp=Z,1.9nm,1.0s,baz=164,slow=22,SNR=3.7						
BORK	**Borovoye**	**16.56**	**359**		**Pn**	**06 05 19.6**	**-0.2**
BORK				IAmb	IAmb	06 05 22.1	
	comp=Z,18nm,1.4s						
BORK	**Borovoye**	**16.56**	**359**	*ce*P	**Pn**	**06 05 20.0**	**+0.2**
BORK				pmax	pmax		
	comp=Z,17nm,1.7s						
AKTO	**Aktyubinsk**	**16.77**	**330**	P	**Pn**	**06 05 21.8**	**-0.5**
	comp=Z,16nm,0.6s,baz=140,slow=8.6,SNR=58						
AKTO	**Aktyubinsk**	**16.77**	**330**	⇓P	**P**	**06 05 21.2**	**+0.1**
	comp=Z,12nm,0.7s						
DGZ	**Jazzator, Alta**	**17.81**	**37**	*i* P	**P**	**06 05 32.9**	**+0.2**
ZAA0	**Zalesovo Array**	**19.94**	**25**		**P**	**06 05 56.0**	**+0.6**
ZAA0				IAmb	IAmb	06 05 56.1	
	comp=Z,4.7nm,0.8s						
ZALV	**Zalesovo Beam**	**19.94**	**25**	P	**P**	**06 05 55.4**	**0.0**
	comp=Z,4.7nm,0.5s,baz=219,slow=11,SNR=30						
ZALV				S	**S**	**06 09 24.4**	**-4.0**
	comp=Z,1.7nm,0.9s,baz=214,slow=20,SNR=2.8						
ZALV	**Zalesovo Beam**	**19.94**	**25**		**P**	**06 05 56.0**	**+0.5**
ARTI	**Arti**	**21.64**	**341**	P	**P**	**06 06 12.8**	**-0.5**
	comp=Z,5.0nm,0.5s,baz=156,slow=6.7,SNR=7.9						
	comp=Z,5.0nm,0.5s						
ARTI	**Arti**	**21.64**	**341**		**P**	**06 06 13.9**	**+0.5**
ARTI	**Arti**	**21.64**	**341**	*d i*P	**P**	**06 06 13.8**	**+0.5**
ARTI						06 06 56.3	
ARTI				S	**S**	**06 10 01.9**	**+2.8**
ARTI				pmax	pmax		
	comp=Z,15nm,1.4s						
KBZ	**Khabaz**	**22.58**	**297**	*i* P	**P**	**06 06 20.8**	**-1.5**
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA2	**Gaotai**	**22.86**	**74**	*e*P	**P**	**06 06 27.7**	**+2.6**
GTA2				pP	pP	06 07 06.1	+3.9
GTA2				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIRV	**Kirov**	**26.24**	**334**	*ce*P	**P**	**06 06 56.5**	**+1.3**
PZH	**PanZhiHua**	**27.97**	**102**	P	**P**	**06 07 14.2**	**+3.0**
SONM	**Songino Array**	**28.37**	**55**	P	**P**	**06 07 15.8**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=276,slow=8.3,SNR=4.1						
	comp=Z,0.4nm,0.6s						
BRTR	**Keskin Array B**	**29.41**	**288**	P	**P**	**06 07 24.9**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=100,slow=7.9,SNR=6.2						
	comp=Z,0.4nm,0.6s						
OBN	**Obninsk**	**29.93**	**319**	*e*P	**P**	**06 07 27.6**	**-0.3**
OBN				*e**PP	**pP**	**06 08 09.3**	**+0.5**
OBN				*e*		06 08 34.9	
OBN				*i*		06 10 25.6	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KLMR	**Klimovskoe**	**31.48**	**331**	*e*P	**P**	**06 07 40.3**	**-1.2**
KLMR				*e**PP	**pP**	**06 08 22.1**	**-0.9**
KLMR				pmax	pmax		
	comp=Z,12nm,1.2s						
HHC	**Hu-ho-hao-te**	**31.80**	**70**	*e*P	**P**	**06 07 47.2**	**+2.5**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKASG	**Malin Array Be**	**32.93**	**309**	P	**P**	**06 07 54.4**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=83,slow=6.7,SNR=4.7						
	comp=Z,0.8nm,0.6s						
NRIK	**Noril'sk**	**34.14**	**10**	P	**P**	**06 08 05.8**	**+1.3**
	comp=Z,6.3nm,0.7s,baz=199,slow=5.9,SNR=9.9						
	comp=Z,6.3nm,0.7s						
NRIK	**Noril'sk**	**34.14**	**10**	P	**P**	**06 08 05.7**	**+1.2**
NRIK				IAmb	IAmb	06 08 06.5	
	comp=Z,7.2nm,0.8s						
NRIK	**Noril'sk**	**34.14**	**10**	P	**P**	**06 08 05.7**	**+1.2**
NRIK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MLR	**Muntele Rosu**	**34.76**	**299**	P	**P**	**06 08 10.3**	**0.0**
MLR	**Muntele Rosu**	**34.76**	**299**	P	**P**	**06 08 10.3**	**0.0**
MLR				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BURAR	**Bucovina Array**	**35.26**	**303**	P	**P**	**06 08 15.3**	**+0.7**
FIA1	**FINESS Array S**	**37.47**	**326**	P	**P**	**06 08 33.1**	**+0.3**
FINES	**FINESS Array B**	**37.48**	**326**	P	**P**	**06 08 33.2**	**+0.3**
	comp=Z,4.0nm,0.7s,baz=122,slow=9.3,SNR=12						
	comp=Z,4.0nm,0.7s						
FINES	**FINESS Array B**	**37.48**	**326**	P	**P**	**06 08 32.9**	**0.0**
FINES	**FINESS Array B**	**37.48**	**326**	P	**P**	**06 08 32.9**	**0.0**
KEV	**Kevo**	**40.80**	**338**	P	**P**	**06 09 00.8**	**+0.6**
KEV	**Kevo**	**40.80**	**338**	P	**P**	**06 09 00.9**	**+0.6**
KEV				pmax	pmax		
	comp=Z,71nm,1.5s						
ARCES	**ARCESS Array B**	**41.14**	**338**	P	**P**	**06 09 03.4**	**+0.3**
	comp=Z,5.2nm,0.6s,baz=109,slow=7.8,SNR=28						
	comp=Z,5.2nm,0.6s						
ARCES	**ARCESS Array B**	**41.14**	**338**	P	**P**	**06 09 03.8**	**+0.7**
ARCES	**ARCESS Array B**	**41.14**	**338**	P	**P**	**06 09 03.8**	**+0.7**
HFS	**Hagfors**	**43.05**	**322**	P	**P**	**06 09 18.9**	**+0.3**
	comp=Z,6.2nm,0.8s,baz=99,slow=9.3,SNR=11						
	comp=Z,6.2nm,0.8s						
NB2	**NORSAR Subarra**	**44.37**	**323**	P	**P**	**06 09 28.5**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=95,slow=7.9						
NOA	**NORSAR Array B**	**44.37**	**323**	P	**P**	**06 09 29.1**	**-0.1**
	comp=Z,2.4nm,0.8s,baz=96,slow=7.7,SNR=8.2						
	comp=Z,2.4nm,0.8s						
SPITS	**Spitsbergen Ar**	**47.50**	**347**	P	**P**	**06 09 54.4**	**+1.1**
	comp=Z,1.8nm,0.4s,baz=114,slow=10,SNR=18						
	comp=Z,1.8nm,0.4s						
TORD	**Torodi Ar. Bea**	**65.68**	**269**	P	**P**	**06 12 00.7**	**-1.6**
	comp=Z,1.2nm,0.6s,baz=49,slow=6.4,SNR=9.5						
	comp=Z,1.2nm,0.6s						
C16K	**Lisburne Hills**	**67.48**	**20**	P	**P**	**06 12 13.2**	**+0.4**
C16K				IAmb	IAmb	06 12 13.6	
	comp=Z,3.1nm,0.8s						
B21K	**Ikpikpuk River**	**69.09**	**16**	P	**P**	**06 12 23.5**	**+0.8**
B21K				IAmb	IAmb	06 12 24.8	
	comp=Z,3.8nm,1.1s						
A36M	**Sachs Harbour**	**71.22**	**5**	P	**P**	**06 12 36.1**	**+0.6**
A36M				IAmb	IAmb	06 12 37.6	
	comp=Z,5.8nm,0.8s						
ILAR	**Eielson Array**	**74.80**	**16**	P	**P**	**06 12 56.0**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=332,slow=3.6,SNR=9.7						
	comp=Z,0.7nm,0.7s						
ILAR	**Eielson Array**	**74.80**	**16**	P	**P**	**06 12 55.9**	**-0.9**
M17K	**Holitna River**	**74.84**	**22**	P	**P**	**06 12 58.2**	**+1.2**
KTH	**Kantishna Hill**	**74.89**	**18**	P	**P**	**06 12 57.5**	**+0.1**
KTH				IAmb	IAmb	06 13 24.8	
	comp=Z,8.7nm,1.2s						
YKA	**Yellowknife Ar**	**81.26**	**3**	P	**P**	**06 13 32.3**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=352,slow=5.9,SNR=41						
	comp=Z,1.0nm,0.5s						
YKA	**Yellowknife Ar**	**81.26**	**3**	P	**P**	**06 13 32.5**	**+0.2**
YKA	**Yellowknife Ar**	**81.26**	**3**	P	**P**	**06 13 32.5**	**+0.2**
YKAW1	**Yellowknife Wh**	**81.27**	**3**	P	**P**	**06 13 32.7**	**+0.4**
WRA	**Warramunga Arr**	**82.01**	**122**	P	**P**	**06 13 36.1**	**-0.7**
	comp=Z,1.0nm,0.5s,baz=322,slow=4.9,SNR=16						
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**82.01**	**122**	IAmb	IAmb	06 13 41.3	
	comp=Z,0.3nm,1.2s						
WR8	**Warramunga Arr**	**82.13**	**122**	P	**P**	**06 13 36.6**	**-0.8**
WR8				IAmb	IAmb	06 13 54.1	
	comp=Z,7.5nm,1.4s						
ASAR	**Alice Springs**	**84.28**	**125**	P	**P**	**06 13 47.7**	**-0.7**
	comp=Z,1.6nm,0.6s,baz=311,slow=5.0,SNR=28						
	comp=Z,1.6nm,0.6s						

*JMA **01** 06:30:08.1±0.1, 42˚.9N±0˚.5×145˚.5E±0˚.7, h44km±1km, MV2.7/37, OFF NEMURO PENINSULA*

*SKHL **01** 06:30:09.1±0.2, 42˚.90N×145˚.50E, h35km±3km, mb4.3/3*

ISC 01 06:30:08.4±1.9**, 42˚.89N**±0˚.10×**145˚.51E**±0˚.07**, h44**km**, n15,** σ**0^{s}43**/25**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKHN	**Kushirohamanak**	**0.32**	**307**	*i* P	**Pn**	**06 30 17.0**	**-0.2**
JKHN				S	**Sn**	**06 30 23.6**	**+0.2**
AKK	**Akkeshi**	**0.51**	**285**	*e*P	**Pn**	**06 30 18.8**	**-0.5**
AKK				*e*S	**Sn**	**06 30 27.0**	**-0.1**
NEM2	**Nemuro 2**	**0.51**	**20**	*i* P	**Pn**	**06 30 18.9**	**-0.4**
NEM2				*e*S	**Sn**	**06 30 26.9**	**-0.3**
NMR	**Nemuro--Hokkai**	**0.51**	**18**	*i* P	**Pn**	**06 30 19.0**	**-0.4**
NMR				*i* S	**Sn**	**06 30 26.6**	**-0.6**
JAK	**Akkeshi**	**0.60**	**280**	*i* P	**Pn**	**06 30 20.4**	**-0.3**
JAK				*e*S	**Sn**	**06 30 29.6**	**+0.2**
GLVR	**Golovnino**	**0.85**	**1**	*i* P	**Pn**	**06 30 23.8**	**-0.1**
GLVR				AMB	AMB	06 30 26.4	
	170nm,0.3s						
GLVR				*e*S	**Sn**	**06 30 35.3**	**+0.1**
GLVR				A	A	06 30 36.6	
	880nm,0.3s						
GLVR				A	A	06 30 36.6	
	490nm,0.3s						
JNK	**Nakash**	**0.90**	**321**	P	**Pn**	**06 30 24.6**	**-0.1**
JNK				S	**Sn**	**06 30 36.1**	**-0.5**
JNSB	**Nemuroshibetsu**	**0.96**	**338**	*i* P	**Pn**	**06 30 25.6**	**+0.2**
JNSB				*e*S	**Sn**	**06 30 38.8**	**+0.9**
JRA	**Rausu**	**1.08**	**345**	P	**Pn**	**06 30 27.3**	**+0.2**
JRA				S	**Sn**	**06 30 41.3**	**+0.3**
YUK	**Yuzh-Kuril'sk**	**1.17**	**13**	*i* P	**Pn**	**06 30 28.2**	**-0.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YUK				AMB	AMB	06 30 30.8	
	200nm,0.3s						
YUK				eS	Sn	06 30 42.4	-0.8
YUK				A	A	06 30 46.1	
	650nm,0.4s						
YUK				A	A	06 30 46.1	
	2µm,0.4s						
JOB	Onbets	1.23	271	eP	Pn	06 30 29.1	0.0
JAR	Ashorobuto	1.34	288	P	Pn	06 30 30.6	0.0
SHO	Shikotan	1.38	44	eP	Pn	06 30 38.7	+7.6
SHO				AMB	AMB	06 30 43.6	
	10.0nm,0.3s						
SHO				eS	Sn	06 30 58.0	+10
SHO				A	A	06 31 01.1	
	110nm,0.3s						
SHO				A	A	06 31 01.1	
	190nm,0.3s						
JCH	Churui	1.60	261	eP	Pn	06 30 34.5	+0.2
KUR	Kuril'sk	2.90	35	eP	Pn	06 30 52.9	+1.0
KUR				AMB	AMB	06 30 56.4	
	50nm,0.8s						
KUR				eS	Sn	06 31 25.4	-0.1
KUR				A	A	06 31 36.1	
	60nm,0.6s						
KUR				A	A	06 31 36.1	
	70nm,0.6s						

*NNC **01** 06:37:02.5±0.3, 43°.14N×78°.29E, h2km±2km, mb3.1, mpv3.2, Error ellipse: s-maj=3.1km s-min=1.9km az=0.0*
*KRNET **01** 06:37:02.6±0.1, 43°.12N×78°.27E, h18km, mb3.1*
*SOME **01** 06:37:03.6, 43°.13N×78°.25E, h20km*
ISC 01 06:37:02.9±0.8**, 43°.15N**±0°.03×**78°.24E**±0°.02**, h9**km±5km**, n38, σ1.s42**/70**, 13C-6D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SATY	Saty	0.15	127	P	Pb	06 37 05.8	-0.5
	238nm,0.1s						
SATY				S	Sb	06 37 07.7	-1.0
	2µm,0.1s						
KURS	Kuram	0.34	351	P	Pg	06 37 10.1	+0.4
	26nm,0.1s						
KURS				S	Sg	06 37 14.9	+0.7
	21nm,0.3s						
KPKS	Kokpek	0.45	46	P	Pg	06 37 11.8	+0.1
	0.4nm,0.2s						
KPKS				S	Sg	06 37 17.9	+0.2
	181nm,0.3s						
KPKS	Kokpek	0.45	46	eP	Pg	06 37 11.8	+0.1
	0.4nm,0.2s						
KPKS				eS	Sg	06 37 17.9	+0.2
	181nm,0.3s						
KOTS	Kotyrbulak	0.83	276	P	Pg	06 37 19.1	+0.2
	7.5nm,0.1s						
KOTS				S	Sg	06 37 30.6	+0.9
	60nm,0.2s						
KOTS	Kotyrbulak	0.83	276	eP	Pg	06 37 19.1	+0.2
KOTS				eS	Sg	06 37 30.6	+0.9
KOTS	Kotyrbulak	0.83	276	eP	Pg	06 37 19.1	+0.2
	7.5nm,0.1s						
KOTS				eS	Sg	06 37 30.6	+0.9
	60nm,0.2s						
MDOK	Medeo	0.87	271	Pg	Pb	06 37 19.6	-0.7
	3.7nm,0.1s						
MDOK				Lg	Lg	06 37 31.3	
	56nm,0.4s						
SHLS	Shalkode	0.89	89	P	Pn	06 37 25.0	+3.3
SHLS				S	Sn	06 37 40.5	+5.7
SHLS	Shalkode	0.89	89	eP	Pn	06 37 25.0	+3.3
	8.5nm,0.2s						
SHLS				eS	Sn	06 37 40.5	+5.7
	23nm,0.2s						
PDGK	Podgornoye	0.93	79	⇑P	Pb	06 37 19.6	-1.6
	4.8nm,0.5s						
PDGK				⇑S	Sb	06 37 31.7	-2.0
	4.6nm,0.2s						
BLB	Baldybastay	0.96	10	P	Pn	06 37 21.3	-1.4
	39nm,0.1s						
BLB				S	Sg	06 37 34.2	+0.3
	54nm,0.3s						
ARXS	Arharly	1.10	344	P	Pg	06 37 24.0	-0.1
	5.8nm,0.1s						
ARXS				S	Sn	06 37 38.7	-1.3
	11nm,0.2s						
ARXS	Arharly	1.10	344	eP	Pg	06 37 24.0	-0.1
	5.8nm,0.1s						
ARXS				eS	Sn	06 37 38.7	-1.3
	11nm,0.2s						
KTBS	Karatobe	1.27	297	P	Pg	06 37 27.1	-0.1
	6.6nm,0.2s						
KTBS				S	Sg	06 37 44.0	+0.3
	0.4nm,0.1s						
KTBS	Karatobe	1.27	297	eP	Pg	06 37 27.1	-0.1
	6.6nm,0.2s						
KTBS				eS	Sg	06 37 44.0	+0.3
	0.4nm,0.1s						
KDJ	Kajisay	1.29	218	⇑iP	Pb	06 37 26.8	-0.5
KDJ				⇑iS	Sg	06 37 43.5	-0.8
MTBS	Maitube	1.33	270	P	Pg	06 37 28.1	-0.2
	5.0nm,0.1s						
MTBS				S	Sg	06 37 45.8	+0.2
	8.1nm,0.2s						
MTBS	Maitube	1.33	270	eP	Pg	06 37 28.1	-0.2
	5.0nm,0.1s						
MTBS				eS	Sg	06 37 45.8	+0.2
	8.1nm,0.2s						
KNOS	Konyrlen	1.39	29	P	Pg	06 37 29.0	-0.4
	12nm,0.1s						
KNOS				S	Sg	06 37 47.5	0.0
	25nm,0.3s						
TARG	Taragay, Kyrgy	1.46	193	⇑iP	Pb	06 37 29.2	-1.2
TARG				⇑iS	Sb	06 37 47.8	-1.4
KTMS	Ketmen	1.57	78	P	Pb	06 37 30.7	-1.4
	4.2nm,0.1s						
KTMS				S	Sb	06 37 49.9	-2.2
	6.0nm,0.3s						
KTMS	Ketmen	1.57	78	eP	Pb	06 37 30.7	-1.4
	4.2nm,0.1s						
KTMS				eS	Sb	06 37 49.9	-2.2
	6.0nm,0.3s						
KUU	Kurty	1.57	299	P	Pg	06 37 33.0	0.0
	3.3nm,0.1s						
KUU				S	Sg	06 37 54.1	+0.8
	12nm,0.1s						
KUU	Kurty	1.57	299	eP	Pg	06 37 33.0	0.0
	3.3nm,0.1s						
KUU				eS	Sg	06 37 54.1	+0.8
	12nm,0.1s						
DJR	Jarkent	1.63	43	P	Pb	06 37 32.9	-0.2
	7.1nm,0.3s						
DJR				S	Sg	06 37 54.5	-0.8
	18nm,0.2s						
DJR	Jarkent	1.63	43	eP	Pb	06 37 32.9	-0.2
	7.1nm,0.3s						
DJR				eS	Sg	06 37 54.5	-0.8
	18nm,0.2s						
ULHL	Ulahol	1.73	239	⇓iP	Pb	06 37 34.5	-0.4
ULHL				⇓iS	Sg	06 37 57.4	-1.1
DGS	Degeres	1.81	274	P	Pb	06 37 36.6	+0.4
	4.2nm,0.3s						
DGS				S	Sg	06 38 00.3	-0.7
	13nm,0.3s						
DGS	Degeres	1.81	274	eP	Pb	06 37 36.6	+0.4
	4.2nm,0.3s						
DGS				eS	Sg	06 38 00.3	-0.7
	13nm,0.3s						
BOOM	Boomskoye usch	1.82	249	⇑iP	Pb	06 37 35.7	-0.7
BOOM				⇑iS	Sg	06 38 00.2	-1.1
KRBS	Karabastau	1.95	287	Pg	Pb	06 37 38.7	+0.1
	3.7nm,0.2s						
KRBS				Lg	Lg	06 38 04.9	
	18nm,0.3s						
KRBS	Karabastau	1.95	287	eP	Pb	06 37 38.7	+0.1
	3.7nm,0.2s						
KRBS				eS	Sg	06 38 05.0	-0.5
	18nm,0.3s						
TKM2	Tokmak 2	1.95	264	⇓iP	Pb	06 37 37.7	-1.0
TKM2				⇓iS	Sb	06 38 03.7	+0.4
KAPS	Kapalarasan	2.28	20	Pg	Pg	06 37 45.5	-1.1
	3.8nm,0.1s						
KAPS				Lg	Lg	06 38 15.5	
	62nm,0.2s						
KBK	Karagaybulak	2.47	260	⇑iP	Pb	06 37 44.9	-2.6
KBK				⇑iS	Sb	06 38 15.9	-2.2
AAK	Ala-Archa	2.80	261	⇓Pg	Pb	06 37 54.5	+1.4
	0.7nm,0.6s						
AAK				⇑Lg	Lg	06 38 31.1	
	2.1nm,0.7s						
MK31	Makanchi Array	4.64	37	⇓Pn	Pn	06 38 15.8	+2.7
	0.1nm,0.1s,baz=218,slow=11,SNR=20						
MK31				⇑Sn	Sn	06 39 08.8	+1.8
	0.7nm,0.6s						
MK31				⇑Lg	Lg	06 39 27.2	
	0.5nm,0.4s,baz=218,slow=27,SNR=9.5						

*NNC **01** 06:45:37.4±8.0, 38°.23N×71°.83E, h93km±207km, mb3.3, mpv3.8, Error ellipse: s-maj=69.8km s-min=47.8km az=14.0*
*KRNET **01** 06:45:41.4±0.1, 39°.19N×71°.57E, h18km, mb3.6*
*IDC **01** 06:45:42.3±1.4, 39°.12N×71°.63E, h0km, mb3.5/4, mbtmp3.5/9, ML3.2/5, MS3.0/1, Error ellipse: s-maj=21.9km s-min=18.0km az=106.0*
ISC 01 06:45:43.1±0.8**, 39°.21N**±0°.04×**71°.57E**±0°.03**, h10**km**, n38, σ1.s54**/65**, mb3.5**/4**, 35C-19D, Tajikistan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DRK	Karamyk	0.32	33	⇓iP	Pg	06 45 48.0	-1.6
DRK				⇓iS	Sg	06 45 53.1	-0.9
GAR	Garm	1.00	258	⇑iP	Pg	06 46 00.2	-2.1
GAR				⇑iS	Sg	06 46 13.9	-1.5
BTK	Batken	1.03	326	⇑iP	Pg	06 46 01.2	-1.6
BTK				⇑iS	Sg	06 46 15.4	-0.8
OHH	Osh	1.61	35	⇓iP	Pn	06 46 11.3	-0.3
OHH				⇓iS	Sb	06 46 33.1	-0.2
SFK	Sufi-Kurgan	1.69	61	⇑eP	Pn	06 46 12.6	-0.3
SFK				⇑iS	Sn	06 46 35.8	+1.1
CHGR	Chuyangaron	1.96	254	⇑iP	Pn	06 46 16.7	+0.2
CHGR				⇑iS	Sn	06 46 42.6	+1.4
TRKS	Terek-Say	2.34	352	⇑iP	Pn	06 46 21.6	-0.2
TRKS				⇑iS	Sn	06 46 50.9	+0.3
ARSB	Arslanbob	2.37	27	⇓iP	Pn	06 46 22.9	+0.8
ARSB				⇓iS	Sb	06 46 53.2	-2.1
SALK	Salom-Alik	2.40	45	⇑iP	Pn	06 46 23.4	+0.8
SALK				⇑iS	Sn	06 46 53.9	+1.8
ARK	Arkit	2.60	6	⇑eP	Pn	06 46 26.3	+1.0
ARK				⇑iS	Sn	06 46 58.9	+1.9
MNAS	Manas	3.35	12	⇓iP	Pn	06 46 36.5	+0.9
MNAS				⇓iS	Sn	06 47 16.7	+1.2
ARLS	Aral	3.38	37	⇑iP	Pn	06 46 36.8	+0.8
ARLS				⇑iS	Sn	06 47 17.2	+1.0
JNKS	Jany-Kuch	3.61	58	⇑iP	Pn	06 46 40.4	+1.1
JNKS				⇑iS	Sn	06 47 23.5	+1.4
UCH	Uchtor	3.75	36	⇓iP	Pn	06 46 42.2	+0.8
UCH				⇓eS	Sn	06 47 26.7	+0.9
EKS2	Erkin-Say	3.83	25	⇑iP	Pn	06 46 43.2	+1.0
EKS2				⇑eS	Sn	06 47 28.3	+1.0
KK31	Karatay Array	3.97	349	⇑Pn	Pn	06 46 47.4	+3.4
	4.5nm,0.2s,baz=166,slow=12,SNR=161						
KK31				⇓Sn	Sg	06 47 48.3	-2.2
	22nm,0.6s,baz=171,slow=23,SNR=3.9						
NRN	Naryn	4.05	55	⇓iP	Pn	06 46 45.7	+0.4
NRN				⇓iS	Sn	06 47 32.9	0.0
AAK	Ala-Archa	4.08	32	Pn	Pn	06 46 50.0	+4.4
	5.3nm,0.3s,baz=219,slow=6.1,SNR=33						
AAK				Sn	Sb	06 47 41.6	-2.8
	2.6nm,0.3s,baz=307,slow=18,SNR=3.6						
	15nm,0.4s						
AAK	Ala-Archa	4.08	32	⇑Pn	Pn	06 46 49.6	+4.0
	6.9nm,0.6s						
AAK				⇓Sn	Sb	06 47 41.8	-2.5
	11nm,0.7s						
AAK	Ala-Archa	4.08	32	⇓iP	Pn	06 46 46.5	+0.9
AAK				⇓iS	Sn	06 47 34.2	+0.8
KBK	Karagaybulak	4.29	36	⇑iP	Pn	06 46 49.5	+1.0
KBK				⇑iS	Sn	06 47 39.1	+0.4
CHMS	Chumysh	4.48	31	⇓eP	Pn	06 46 52.1	+1.1
CHMS				⇓iS	Sn	06 47 43.6	+0.4
USP	Ospenovka	4.61	28	⇑eP	Pn	06 46 54.0	+1.1
USP				⇑eS	Sn	06 47 47.0	+0.5
BOOM	Boomskoye usch	4.66	44	⇑iP	Pn	06 46 54.6	+1.0
BOOM				⇑eS	Sn	06 47 48.1	+0.3
ULHL	Ulahol	4.67	48	⇑iP	Pn	06 46 54.6	+0.9
ULHL				⇑iS	Sn	06 47 48.2	+0.2
TKM2	Tokmak 2	4.79	38	⇑eP	Pn	06 46 56.5	+1.0
TKM2				⇑iS	Sn	06 47 51.4	+0.2
TARG	Taragay, Kyrgy	5.38	60	⇑eP	Pn	06 47 04.6	+0.9
TARG				⇑iS	Sn	06 48 05.3	-0.6
MK31	Makanchi Array	10.90	42	⇓Pn	Pn	06 48 22.2	+3.1
	1.0nm,0.8s,baz=234,slow=14,SNR=5.2						
MKAR	Makanchi Array	10.90	42	Pn	Pn	06 48 22.9	+3.8
	baz=235,slow=15,SNR=6.3						
	0.4nm,0.6s						
AB31	Akbulak array	13.04	324	⇑Pn	Pn	06 48 48.8	+0.6
	1.0nm,0.5s,baz=144,slow=13,SNR=23						
BVAR	Borovoye Array	13.84	357	Pn	Pn	06 48 59.1	-0.1
	baz=167,slow=9.0,SNR=5.0						
	0.7nm,0.6s						
AKTO	Aktyubinsk	14.75	324	Pn	Pn	06 49 11.2	-0.5
	0.5nm,0.3s,baz=128,slow=12,SNR=15						
AKTO				Sn	Sn	06 51 56.6	+1.5
	0.1nm,0.3s,baz=62,slow=17,SNR=1.8						
	0.7nm,0.5s						
ZALV	Zalesovo Beam	17.28	27	P	Pn	06 49 44.0	-0.2
	0.4nm,0.3s,baz=210,slow=11,SNR=9.4						
	1.5nm,0.5s						
SONM	Songino Array	26.49	60	P	P	06 51 21.6	+1.0
	0.1nm,0.3s,baz=292,slow=7.6,SNR=1.9						
	0.1nm,0.3s						
KSRS	Korea Array	43.62	74	LR	LR	07 15 59.9	
	comp=Z,16nm,18.4s,baz=340,slow=42						
YKA	Yellowknife Ar	78.52	3	P	P	06 57 44.5	+0.5
	0.2nm,0.5s,baz=351,slow=5.8,SNR=5.6						
	0.2nm,0.5s						
WRA	Warramunga Arr	83.05	123	P	P	06 58 10.3	+1.3
	0.6nm,0.8s,baz=316,slow=5.0,SNR=3.5						
	0.6nm,0.8s						
ASAR	Alice Springs	85.44	125	P	P	06 58 21.1	+0.1
	0.4nm,0.9s,baz=331,slow=4.8,SNR=2.6						
	0.4nm,0.9s						

*SOME **01** 07:01:01.9, 50°.23N×78°.47E*
*NNC **01** 07:01:03.2±1.2, 50°.51N×79°.72E, h0km, mb3.3, mpv2.8, Error ellipse: s-maj=20.7km s-min=5.8km az=22.0, Suspected Mining explosion.*
*IDC **01** 07:01:06.5±0.9, 50°.22N×78°.95E, h0km, mbtmp2.6/3, ML2.0/3, Error ellipse: s-maj=23.7km s-min=7.9km az=55.0*
ISC 01 07:00:59.9±1.2**, 50°.09N**±0°.06×**77°.76E**±0°.08**, h0**km**, n18, σ0.s53**/27**, 19C-5D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.70	44	⇑P	Pn	07 01 16.7	-0.3
KUR07				⇑S	Sn	07 01 28.7	+0.3
KUR17	Kurchatov Arra	0.71	40	⇑P	Pn	07 01 17.7	+0.5
KUR17				⇑S	Sn	07 01 29.9	+1.1
KUR06	Kurchatov Arra	0.71	43	⇑P	Pn	07 01 17.0	-0.2
KUR06				⇓S	Sn	07 01 28.2	-0.7
KUR16	Kurchatov Arra	0.72	41	⇑P	Pn	07 01 17.6	+0.3
KUR16				⇑S	Sn	07 01 29.6	+0.6
KURBB	Kurchatov Arra	0.73	43	Pg	Pb	07 01 16.2	+0.7
	1.2nm,0.3s,baz=164,slow=19,SNR=47						
KURBB	Kurchatov Arra	0.73	43	⇑P	Pn	07 01 17.4	0.0
	15nm,0.4s						
KUR15	Kurchatov Arra	0.74	44	⇑P	Pn	07 01 17.2	-0.4
KUR15				⇑S	Sn	07 01 29.2	-0.4
KUR05	Kurchatov Arra	0.75	42	⇑P	Pn	07 01 17.7	0.0
KUR05				⇑S	Sn	07 01 29.4	-0.3
KUR14	Kurchatov Arra	0.75	45	⇑P	Pn	07 01 17.0	-0.7
KUR14				⇑S	Sn	07 01 28.6	-1.2
KUR04	Kurchatov Arra	0.77	41	⇓P	Pn	07 01 17.8	-0.1
KUR04				⇑S	Sn	07 01 29.6	-0.6
KURK	Kurchatov	0.84	41	⇓P	Pn	07 01 18.7	-0.2
	3.1nm,0.5s						
KURK				⇑S	Sb	07 01 28.6	-0.5
	22nm,0.8s						
MAKZ	Makanchi	4.32	138	⇓Pg	Pb	07 02 17.0	+0.3
	3.2nm,0.7s						
MAKZ				⇑Lg	Lg	07 03 11.2	
	9.9nm,0.7s						
MK31	Makanchi Array	4.47	136	⇑Pn	Pn	07 02 08.3	-0.6
	0.5nm,0.5s,baz=342,slow=12,SNR=11						
MK31				⇑Pg	Pb	07 02 18.9	-0.3
	2.3nm,0.5s,baz=323,slow=14,SNR=23						
MK31				⇓Lg	Lg	07 03 14.8	
	17nm,0.8s,baz=332,slow=27,SNR=15						
MKAR	Makanchi Array	4.47	136	Pn	Pn	07 02 09.3	+0.5
	0.2nm,0.3s,baz=331,slow=12,SNR=11						
MKAR				Pg	Pb	07 02 19.1	-0.1
	0.5nm,0.3s,baz=320,slow=14,SNR=14						
MKAR				Lg	Lg	07 03 12.7	
	1.6nm,0.3s,baz=332,slow=28,SNR=16						
	0.5nm,0.5s						
BVAR	Borovoye Array	5.46	305	Pn	Pb	07 02 36.1	+0.1
	baz=123,slow=16,SNR=2.1						
	0.2nm,0.5s						
I46RU	ZALESOVO INFRA	5.83	46	I	I	07 32 10.0	
	baz=222,slow=313,SNR=1.4						
ZALV	Zalesovo Beam	5.83	46	Pn	Pn	07 02 27.5	0.0
	0.3nm,0.3s,baz=233,slow=13,SNR=5.8						
ZALV				Lg	Lg	07 03 51.0	
	0.1nm,0.3s,baz=221,slow=28,SNR=1.5						
	0.9nm,0.5s						
AAK	Ala-Archa	7.79	198	Lg	Lg	07 05 16.5	
	0.3nm,0.3s,baz=64,slow=19,SNR=1.9						

*JMA **01** 07:09:50.7±0.2, 44°.9N±0°.5×144°.7E±0°.6, h21km±2km, MV2.7/29, NE OFF HOKKAIDO*
*SKHL **01** 07:09:51.3±0.1, 45°.00N×144°.80E, h40km±5km, mb4.1/4*
ISC 01 07:09:46.2±1.4**, 45°.07N**±0°.03×**144°.80E**±0°.04**, h16**km±11km**, n16, σ0.s87**/25**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JRA	Rausu	1.15	168	S	Sn	07 10 22.9	-0.1
JTKR	Abashiri--Toko	1.27	211	i P	Pb	07 10 10.2	+0.6
JTKR				S	Sb	07 10 24.3	-1.4
YUK	Yuzh-Kuril'sk	1.28	143	eP	Pg	07 10 11.4	+0.5
YUK				AMB	AMB	07 10 13.9	
	60nm,0.2s						
YUK				eS	Sn	07 10 26.4	+0.2
YUK				A	A	07 10 30.6	
	150nm,0.3s						
YUK				A	A	07 10 30.6	
	190nm,0.3s						
JNSB	Nemuroshibetsu	1.30	173	P	Pg	07 10 11.7	+0.5
JNSB				S	Sg	07 10 27.5	-0.6
JMP	Maruseppu	1.48	225	eP	Pb	07 10 13.6	+0.4
JMP				S	Sn	07 10 31.1	0.0
JNK	Nakash	1.48	182	eP	Pb	07 10 14.0	+0.7
JNK				eS	Sn	07 10 31.3	+0.1
JSE	Soyaes	1.57	267	eP	Pg	07 10 16.6	+0.2
NMR	Nemuro--Hokkai	1.82	158	eP	Pb	07 10 20.0	+0.9
NMR				eS	Sb	07 10 41.6	-0.1
NEM2	Nemuro 2	1.83	158	eP	Pb	07 10 20.0	+0.7
NEM2				eS	Sb	07 10 41.7	-0.2
ASAJ	Asahikawa	1.84	240	eP	Pb	07 10 19.8	+0.4
SHO	Shikotan	1.88	129	eP	Pg	07 10 32.7	+10
SHO				AMB	AMB	07 10 33.0	
	20nm,0.2s						
SHO				eS	Sg	07 10 56.5	+10
SHO				A	A	07 10 57.0	
	60nm,0.2s						
SHO				A	A	07 10 57.0	
	60nm,0.2s						
JAR	Ashorobuto	1.92	203	P	Pb	07 10 20.6	-0.2
AKK	Akkeshi	2.05	179	eP	Pb	07 10 22.5	-0.5
AKK				eS	Sb	07 10 46.9	-1.3
KRS4	Mayak Korsakov	2.08	319	eP	Pb	07 10 23.0	-0.6
KUR	Kuril'sk	2.18	84	eP	Pb	07 10 25.2	0.0
KUR				AMB	AMB	07 10 28.6	
	30nm,0.3s						
KUR				eS	Sb	07 10 50.5	-1.4
KUR				A	A	07 10 52.5	
	20nm,0.3s						
KUR				A	A	07 10 52.5	
	20nm,0.3s						
YSS	Yuzhno-Sakhali	2.37	324	eP	Pb	07 10 28.1	-0.3
YSS				eS	Sn	07 10 55.5	+2.5

IDC 01 07:21:05.1±3.5**, 16°.70S**×**175°.71W, h0**km**, mb4.2**/3**, mbtmp4.2**/3**, Error ellipse: s-maj=174.1km s-min=75.8km az=156.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.46	241	P	P	07 28 54.6	+0.7
	1.5nm,0.4s,baz=80,slow=12,SNR=3.8						
	1.5nm,0.4s						
WRA	Warramunga Arr	47.39	258	P	P	07 29 41.5	0.0
	0.6nm,0.5s,baz=96,slow=7.6,SNR=20						
WRA				PcP	PcP	07 31 12.2	-0.2
	0.4nm,0.9s,baz=90,slow=3.8,SNR=7.1						
	0.6nm,0.5s						
ASAR	Alice Springs	47.60	253	P	P	07 29 42.3	-0.9
	5.0nm,0.5s,baz=92,slow=8.0,SNR=4.6						
ASAR				PcP	PcP	07 31 12.6	-0.5
	0.6nm,0.4s,baz=92,slow=3.6,SNR=7.0						
	5.0nm,0.5s						

*NNC **01** 07:30:33.8±2.7, 36°.57N×70°.35E, h82km±48km, mb3.5, mpv4.0, Error ellipse: s-maj=20.4km s-min=18.2km az=39.0*
*IDC **01** 07:30:37.6±8.0, 36°.83N×70°.54E, h155km±61km, mb3.5/3, mbtmp4.0/9, MS2.9/2, Error ellipse: s-maj=66.6km s-min=40.2km az=5.0*
ISC 01 07:30:31.8±1.2**, 36°.40N**±0°.08×**70°.71E**±0°.10**, h150**km**, n23, σ2.s58**/26**, mb3.9**/3**, 3C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JMU	Jammu	4.96	135	eS	Sn	07 32 43.0	+1.6
TSSA	Tissa	5.72	127	eS	Sn	07 32 57.2	-2.8
TSSA				IAML		07 33 07.7	
	comp=N,1µm,0.3s						
TSSA				IAML		07 33 08.1	
	comp=E,718nm,0.2s						
ALCI	Alchi Leh	5.73	110	eP	Pn	07 31 54.8	-0.4
ALCI				eS	Sn	07 32 58.7	-1.6
ALCI				IAML		07 33 05.0	
	comp=N,301nm,0.3s						
ALCI				IAML		07 33 07.4	
	comp=E,288nm,0.2s						
DHRM	DHARAMSHALA	6.21	130	eS	Sn	07 33 08.2	-3.4
DHRM				IAML		07 33 11.1	
	comp=E,58nm,0.2s						
DHRM				IAML		07 33 11.5	
	comp=N,66nm,0.2s						
KK31	Karatay Array	6.70	359	⇓P	Pn	07 32 07.7	0.0
	comp=N,3.0nm,0.3s,baz=180,slow=13,SNR=96						
KK31				⇓S	Sn	07 33 21.1	-1.9
	comp=N,5.9nm,0.5s,baz=172,slow=16,SNR=3.9						
AAK	Ala-Archa	6.88	24	P	Pn	07 32 11.1	+0.8
	comp=N,21nm,0.4s,baz=202,slow=7.4,SNR=68						
AAK				S	Sn	07 33 27.3	-0.4
	comp=N,5.0nm,0.5s,baz=312,slow=18,SNR=4.7						
AAK	Ala-Archa	6.88	24	⇓P	Pn	07 32 10.8	+0.5
	comp=N,7.2nm,0.5s						
AAK				⇑S	Sn	07 33 28.1	+0.5
	comp=N,13nm,1.0s						
SMLA	Simla	7.52	132	eS	Sn	07 33 39.3	-3.4
SMLA				IAML		07 33 42.6	
	comp=E,21nm,0.2s						
SMLA				IAML		07 33 44.0	
	comp=N,20nm,0.2s						
HNLY	HANLEY	7.71	116	eS	Sn	07 33 45.4	-2.8
HNLY				IAML		07 33 52.7	
	comp=E,49nm,0.6s						
HNLY				IAML		07 33 53.4	
	comp=N,30nm,0.3s						
KLP	Kalpa	7.92	126	eS	Sn	07 33 45.0	-8.0
KLP				IAML		07 33 54.9	
	comp=E,265nm,0.3s						
KLP				IAML		07 33 56.6	
	comp=N,238nm,0.3s						
KUDL	Kundal	9.57	148	eS	Sn	07 34 23.2	-8.9
KUDL				IAML		07 34 28.4	
	comp=N,5.5nm,0.2s						
KUDL				IAML		07 34 31.1	
	comp=E,8.1nm,0.4s						
MK31	Makanchi Array	13.51	36	⇑P	P	07 33 44.0	+2.7
	comp=E,0.3nm,0.3s,baz=216,slow=11,SNR=8.9						
MKAR	Makanchi Array	13.51	36	P	Pn	07 33 38.6	+1.2
	comp=E,0.7nm,0.7s,baz=224,slow=15,SNR=9.7						
MKAR				LR	LR	07 38 49.5	
	comp=E,32nm,19.1s,baz=328,slow=37						
AB31	Akbulak array	15.06	332	P	Pn	07 33 57.2	+0.5
	comp=E,0.3nm,0.2s,baz=147,slow=12,SNR=38						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AB31				⇑S	Sn	07 36 40.7	-3.2
	comp=E,0.8nm,0.6s,baz=150,slow=23,SNR=9.1						
KURBB	Kurchatov Arra	15.30	19	P	Pn	07 34 00.9	+1.3
	comp=E,1.4nm,0.8s,baz=209,slow=10,SNR=12						
BVAR	Borovoye Array	16.63	359	P	P	07 34 15.3	-0.4
	comp=E,0.7nm,0.6s,baz=178,slow=12,SNR=4.1						
AKTO	Aktyubinsk	16.75	331	P	Pn	07 34 19.1	+1.7
	comp=E,3.6nm,0.5s,baz=141,slow=9.3,SNR=16						
AKTO				S	S	07 37 15.6	-8.0
	comp=E,0.6nm,0.5s,baz=49,slow=17,SNR=4.0						
AKTO	Aktyubinsk	16.75	331	⇓P	Pn	07 34 19.3	+1.9
	comp=E,2.6nm,0.7s						
ZALV	Zalesovo Beam	20.11	25	P	P	07 34 55.5	+1.9
	comp=E,8.0nm,0.4s,baz=216,slow=12,SNR=43						
FINES	FINESS Array B	37.44	326	P	P	07 37 32.0	+1.9
	comp=E,2.7nm,1.0s,baz=102,slow=9.8,SNR=4.5						
	comp=E,2.7nm,1.0s						
HFS	Hagfors	43.00	322	P	P	07 38 17.7	+1.8
	comp=E,3.1nm,1.0s,baz=98,slow=10,SNR=1.3						
	comp=E,3.1nm,1.0s						
YAK	Yakutsk	44.19	35	LR	LR	07 56 49.2	
	comp=E,20nm,18.6s,baz=283,slow=36						
NOA	NORSAR Array B	44.32	323	P	P	07 38 28.3	+1.8
	comp=E,1.0nm,0.9s,baz=108,slow=8.7,SNR=1.9						
	comp=E,1.0nm,0.9s						

*DJA **01** 08:09:43.3±0.4, 10°S±5°×11°9E±°, h10^{km}, M4.0/17, MLv4.0/17*
*IDC **01** 08:09:47.1±8.1, 9°75S×118°91E, h68^{km}±71^{km}, mb3.3/2, mbtmp3.5/5, ML3.4/2, Error ellipse: s-maj=94.4km s-min=19.0km az=66.0*
ISC 01 08:09:44.1±0.9**, 9°84S**±0°07×**118°86E**±0°04**, h33^{km}, n25, σ1^{s}52**/24**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.56	69	P	Pb	08 09 54.9	-0.8
WBSI				S	Sb	08 10 03.3	-0.4
WSI	Waingapu	1.43	83	P	Pn	08 10 08.0	+0.3
DBNI	Kabupaten Domp	1.44	338	P	Pn	08 10 08.9	+1.1
PLAI	Plampang	1.47	313	P	Pn	08 10 08.3	0.0
LBFI	Labuhan Bajo,	1.69	37	P	Pn	08 10 11.9	+0.5
BASI	Baing, Sumba	1.73	103	P	Pn	08 10 13.4	+1.5
TWSI	Taliwang, Sumb	2.24	299	P	Pn	08 10 19.9	+1.0
EDFI	Ende, Flores	3.00	69	P	Pn	08 10 31.8	+2.4
KHKI	Kahang-Kahang	3.53	294	P	Pn	08 10 39.1	+2.5
DNP	Denpasar	3.78	288	P	Pn	08 10 41.5	+1.4
IGBI	Denpasar	3.80	285	P	Pn	08 10 41.5	+1.1
SRBI	Singaraja	4.00	296	P	Pn	08 10 46.0	+2.9
BSSI	Bau Bau, Buton	4.01	24	P	Pn	08 10 44.6	+1.3
RTBI	Rangdo, Negare	4.10	289	P	Pn	08 10 45.6	+1.0
BKSI	Bulukumba	4.66	16	P	Pn	08 10 53.6	+1.4
JAGI	Jajag, Banyuwa	4.84	286	P	Pn	08 10 55.3	+0.6
KAPI	Kappang	4.88	11	P	Pn	08 10 57.6	+2.4
	1.5nm,0.3s,baz=110,slow=3.2,SNR=6.0						
KAPI				S	Sn	08 11 50.9	+0.4
	14nm,0.3s,baz=327,slow=23,SNR=9.8						
	4.1nm,0.4s						
KAPI	Kappang	4.88	11	P	Pn	08 10 57.2	+2.0
WRA	Warramunga Arr	18.00	126	P	Pn	08 13 51.9	-0.1
	0.4nm,0.5s,baz=300,slow=12,SNR=1.7						
ASAR	Alice Springs	19.89	136	P	P	08 14 13.9	+1.0
	0.1nm,0.3s,baz=312,slow=10,SNR=13						
	1.0nm,0.6s						
H08S2	Diego Garcia H	45.85	269	T	T	09 07 10.4	
	baz=96,slow=75,SNR=4.4						
H08S3	Diego Garcia H	45.86	269	T	T	09 07 11.7	
	baz=96,slow=75,SNR=15						
H08S1	Diego Carcia H	45.87	269	T	T	09 07 12.3	
	baz=96,slow=75,SNR=3.0						
SONM	Songino Array	58.48	350	P	P	08 19 36.4	-0.7
	0.5nm,0.6s,baz=169,slow=8.8,SNR=3.7						
	0.5nm,0.6s						
MKAR	Makanchi Array	65.14	333	P	P	08 20 19.9	-1.8
	0.4nm,0.5s,baz=142,slow=6.4,SNR=8.2						
	0.4nm,0.5s						

IDC 01 08:11:05.2±2.0**, 5°28S**×**128°31E, h0^{km}, mb3.6**/1**, mbtmp3.5**/3**, ML3.8**/2**, Error ellipse: s-maj=127.8km s-min=29.8km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.71	159	Pn	Pn	08 14 48.7	+0.7
	0.5nm,0.3s,baz=337,slow=11,SNR=12						
	0.5nm,0.3s						
ASAR	Alice Springs	19.06	164	P	P	08 15 28.9	-0.3
	0.1nm,0.3s,baz=342,slow=12,SNR=7.5						
	0.6nm,0.6s						
MKAR	Makanchi Array	65.88	327	P	P	08 21 52.8	0.0
	0.3nm,0.5s,baz=118,slow=8.5,SNR=5.8						
	0.3nm,0.5s						

*IDC **01** 08:12:12.2±13.0, 41°62N×141°28E, h0^{km}, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=354.4km s-min=36.0km az=170.0*
*JMA **01** 08:12:26.9±0.1, 42°0N±0°3×141°2E±0°6, h102^{km}±1^{km}, MV2.6/35, S OFF TOMAKOMAI*
ISC 01 08:12:26.6±0.9**, 42°01N**±0°05×**141°14E**±0°05**, h106^{km}**±7^{km}**, n24, σ0^{s}31**/29**, mb3.6**/4**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKB	Kayabe	0.14	214	*i* P	Pn	08 12 41.2	-0.1
JKB				S	Sn	08 12 52.1	-0.2
JNB	Noboribetsu	0.47	351	*i* P	Pn	08 12 42.5	-0.3
JNB				*e*S	Sn	08 12 54.7	-0.2
JYM2	Yakumo 2	0.58	281	*i* P	Pn	08 12 43.7	+0.1
JOT	Ohata	0.63	186	P	Pn	08 12 44.0	0.0
JOT				S	Sn	08 12 56.7	-0.2
JSR	Shiriuchi	0.72	229	*i* P	Pn	08 12 44.9	+0.2
JSR				S	Sn	08 12 58.3	0.0
JIAM	Iburiatsuma	0.85	43	P	Pn	08 12 46.3	+0.4
JEW	Eniwo	0.86	15	P	Pn	08 12 46.4	+0.3
JEW				S	Sn	08 13 01.1	+0.4
JOMM	Oshimamatsumae	0.97	241	P	Pn	08 12 47.6	+0.4
JOMM				S	Sn	08 13 03.1	+0.5
JHST	Hiyamasetana	1.03	294	P	Pn	08 12 47.8	+0.1
JHST				S	Sn	08 13 03.5	-0.1
JSH	Shimam	1.03	308	*i* P	Pn	08 12 48.1	+0.4
JSH				*e*S	Sn	08 13 04.0	+0.3
JBT2	Biratori 2	1.19	49	P	Pn	08 12 49.7	+0.1
JBT2				*e*S	Sn	08 13 07.1	+0.2
JTM	Tenmabayashi	1.22	183	P	Pn	08 12 50.2	+0.3
JTM				S	Sn	08 13 07.6	+0.2
JNBK	Urakawa-nobuka	1.23	77	P	Pn	08 12 50.0	0.0
JOSM	Okushiri--Mats	1.24	274	P	Pn	08 12 49.9	-0.2
JOSM				S	Sn	08 13 08.0	+0.1
H11N2	WAKE ISLAND Hy	31.12	128	T	T	08 51 13.8	
	baz=324						
H11N1	WAKE ISLAND Hy	31.13	128	T	T	08 51 06.5	
	baz=324						
H11N3	WAKE ISLAND Hy	31.14	128	T	T	08 50 55.3	
	baz=324						
H11S1	WAKE ISLAND Hy	31.96	129	T	T	08 51 56.7	
	baz=323						
H11S3	WAKE ISLAND Hy	31.97	129	T	T	08 52 05.1	
	baz=323						
H11S2	WAKE ISLAND Hy	31.98	129	T	T	08 51 47.8	
	baz=323						
ZALV	Zalesovo Beam	38.55	308	P	P	08 19 39.4	+0.8
	1.5nm,0.5s,baz=90,slow=8.6,SNR=7.9						
	1.5nm,0.5s						
MKAR	Makanchi Array	41.47	297	P	P	08 20 03.0	0.0
	0.3nm,0.5s,baz=83,slow=10.0,SNR=9.5						
	0.3nm,0.5s						
ILAR	Eielson Array	45.47	35	P	P	08 20 34.6	-0.1
	0.5nm,0.9s,baz=268,slow=8.8,SNR=5.3						
	0.5nm,0.9s						
BVAR	Borovoye Array	47.17	309	P	P	08 20 47.8	-0.4
	0.5nm,0.3s,baz=74,slow=11,SNR=5.3						
	0.5nm,0.3s						

*SJA **01** 08:27:24.6±0.7, 22°84S×68°69W, h106^{km}±3^{km}, ML3.2, MW3.5*
*GUC **01** 08:27:25.5±0.8, 22°82S×68°76W, h105^{km}±4^{km}, ML3.2*
ISC 01 08:27:26.4±1.3**, 22°84S**±0°03×**68°70W**±0°04**, h98^{km}**±9^{km}**, n31, σ1^{s}22**/52**, 4C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	San Pedro de A	0.49	103	*e*P	Pn	08 27 42.2	0.0
AF01				*i* S	Sn	08 27 54.6	+0.7
AF01				IAML		08 27 55.0	
	comp=N,3μm,0.2s						
AF01	San Pedro de A	0.49	103	*e*P	Pn	08 27 33.0	-9.2
AF01				*e*S	Sn	08 27 54.7	+0.7
AF01				IAML		08 28 12.1	
	comp=Z,1μm,0.6s						
PB06	IPOC Station P	0.82	279	⇑*i*P	Pn	08 27 44.7	-0.2
PB06				*e*S	Sn	08 27 59.1	+0.3
PB06				IAML		08 27 59.9	
	comp=E,1μm,0.2s						
PB06	IPOC Station P	0.82	279	*e*P	Pn	08 27 44.0	-0.9
PB06				*e*S	Sn	08 27 59.5	+0.7
PB06				IAML		08 27 59.8	
	comp=Z,898nm,0.2s						
PB09	IPOC Station P	1.16	334	*e*P	Pn	08 27 48.7	0.0
PB09				*i* S	Sn	08 28 05.8	+0.5
PB09				IAML		08 28 07.1	
	comp=N,379nm,0.5s						
PB09	IPOC Station P	1.16	334	*e*P	Pn	08 27 48.1	-0.5
PB09				*e*S	Sn	08 28 05.8	+0.5
PB09				IAML		08 28 06.7	
	comp=Z,320nm,0.4s						
PB03	IPOC Station P	1.26	309	⇑*i*P	Pn	08 27 49.3	-0.5
PB03				*e*S	Sn	08 28 07.0	-0.4
PB03				IAML		08 28 08.1	
	comp=N,416nm,0.3s						
PB03	IPOC Station P	1.26	309	*e*P	Pn	08 27 48.6	-1.2
PB03				*e*S	Sn	08 28 07.4	0.0
PB03				IAML		08 28 12.2	
	comp=Z,311nm,0.3s						
PB05	IPOC Station P	1.39	269	*e*P	Pn	08 27 51.0	-0.2
PB05				*e*S	Sn	08 28 09.7	-0.4
PB05				IAML		08 28 13.2	
	comp=E,202nm,0.6s						
PB05	IPOC Station P	1.39	269	*e*P	Pn	08 27 50.7	-0.6
PB05				*e*S	Sn	08 28 10.8	+0.7
PB05				IAML		08 28 14.9	
	comp=Z,129nm,0.3s						
PB07	IPOC Station P	1.57	315	⇑*i*P	Pn	08 27 53.1	-0.4
PB07				*e*S	Sn	08 28 13.8	-0.3
PB07				IAML		08 28 16.8	
	comp=N,442nm,0.3s						
PB07	IPOC Station P	1.57	315	*e*P	Pn	08 27 53.0	-0.6
PB07				*e*S	Sn	08 28 14.9	+0.8
PB07				IAML		08 28 15.9	
	comp=Z,337nm,0.3s						
PB02	IPOC Station P	1.88	324	*e*P	Pn	08 27 57.3	-0.1
PB02				*e*S	Sn	08 28 21.0	-0.1
PB02				IAML		08 28 24.2	
	comp=E,549nm,0.3s						
PB02	IPOC Station P	1.88	324	*e*P	Pn	08 27 57.2	-0.3
PB02				*e*S	Sn	08 28 19.3	-1.8
PB02				IAML		08 28 26.8	
	comp=Z,566nm,0.3s						
PB01	IPOC Station P	1.94	338	*e*P	Pn	08 27 58.0	-0.1
PB01				*i* S	Sn	08 28 22.5	+0.1
PB01	IPOC Station P	1.94	338	*e*P	Pn	08 27 57.5	-0.7
PB01				*e*S	Sn	08 28 23.1	+0.7
PB01				IAML		08 28 23.8	
	comp=Z,247nm,0.7s						
PB14	IPOC Station P	2.37	221	*e*P	Pn	08 28 04.1	+0.1
PB14				*i* S	Sn	08 28 33.2	+0.6
PB14	IPOC Station P	2.37	221	*e*P	Pn	08 28 04.0	+0.1
PB14				*e*S	Sn	08 28 30.4	-2.3
PB14				IAML		08 28 39.3	
	comp=Z,112nm,0.5s						
GO02	Mina Guanaco	2.45	199	*e*P	Pn	08 28 05.1	0.0
GO02				*e*S	Sn	08 28 37.1	+2.5
GO02				IAML		08 28 47.6	
	comp=Z,77nm,0.2s						
PB08	IPOC Station P	2.72	351	⇑*i*P	Pn	08 28 08.8	0.0
PB08	IPOC Station P	2.72	351	*e*P	Pn	08 28 08.8	0.0
PB08				*e*S	Sn	08 28 31.5	-10
TA02	Huaiquique	2.89	332	*e*P	Pn	08 28 07.8	-2.8
TA02				*e*S	Sn	08 28 31.3	-13
TA02				IAML		08 29 06.2	
	comp=Z,66nm,0.6s						
HJA	Humahuaca	3.05	97	*e*P	Pn	08 28 10.2	-2.9
HJA				*e*S	Sn	08 28 50.3	+1.3
GO01	Chusmiza	3.19	352	*e*P	Pn	08 28 14.9	-0.2
GO01				*i* S	Sn	08 28 53.4	+0.8
GO01	Chusmiza	3.19	352	*e*P	Pn	08 28 15.1	0.0
GO01				*e*S	Sn	08 28 37.9	-15
GO01				IAML		08 28 45.9	
	comp=Z,23nm,0.4s						
PB11	IPOC Station P	3.20	344	*e*P	Pn	08 28 13.5	-1.4
PB11				*e*S	Sn	08 28 36.5	-16
PB11				IAML		08 29 04.7	
	comp=Z,51nm,0.5s						
SLA	San Lorenzo	3.47	123	*e*P	Pn	08 28 17.3	-1.2
AC01	Pan de Azucar	3.72	207	*e*P	Pn	08 28 20.8	-1.0
AC01				*e*S	Sn	08 29 18.1	+13
AC01				IAML		08 29 19.4	
	comp=Z,39nm,0.3s						
AC02	Maricunga	3.99	186	*e*P	Pn	08 28 26.7	+0.8
AC02				*e*S	Sn	08 29 23.5	+12
AC02				IAML		08 29 51.0	
	comp=Z,16nm,0.5s						
PB12	IPOC Station P	4.48	340	*e*P	Pn	08 28 30.9	-1.2
PB12				*e*S	Sn	08 29 28.0	+4.9
PB12				IAML		08 29 35.8	
	comp=Z,29nm,0.5s						
PB16	IPOC Station P	4.55	350	*e*P	Pn	08 28 34.2	+0.7
PB16				*e*S	Sn	08 29 14.6	-11
PB16				IAML		08 29 56.3	
	comp=Z,12nm,1.0s						

*IDC **01** 08:33:20.9±3.9, 22°98S×111°72W, h0^{km}, mb3.6/2, mbtmp3.6/2, MS3.6/3, Error ellipse: s-maj=311.7km s-min=59.4km az=111.0*
ISC 01 08:33:21.5±4.3**, 23°2S**±0°9×**11°2W**±°**, h10^{km}, n16, σ0^{s}63**/7**, MS3.8**/3**, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03N2	Juan Fernandez	30.36	117	T	T	09 12 57.4	
	baz=285,slow=75,SNR=9.9						
H03N3	Juan Fernandez	30.37	117	T	T	09 12 58.6	
	baz=285,slow=75,SNR=13						
H03N1	Juan Fernandez	30.38	117	T	T	09 12 59.1	
	baz=285,slow=75,SNR=8.9						
PLCA	Paso Flores	38.53	127	LR	LR	08 53 30.1	
	comp=Z,32nm,18.4s,baz=217,slow=31						
PFO	Pinyon Flats O	56.65	355	LR	LR	09 02 56.7	
	comp=Z,82nm,19.0s,baz=209,slow=32						
PDAR	Pinedale Array	65.62	2	P	P	08 44 05.5	-0.3
	0.6nm,0.8s,baz=162,slow=5.8,SNR=4.0						
	0.6nm,0.8s						
BBB	Bella Bella	76.41	350	LR	LR	09 10 07.9	
	comp=Z,67nm,18.5s,baz=214,slow=29						
YKA	Yellowknife Ar	85.39	359	P	P	08 45 59.3	+0.8
	0.4nm,0.9s,baz=185,slow=4.3,SNR=6.4						
	0.4nm,0.9s						
H11S2	WAKE ISLAND Hy	89.90	290	T	T	10 24 28.4	
	baz=115,slow=74						
H11S1	WAKE ISLAND Hy	89.91	290	T	T	10 24 31.4	
	baz=115						
H11S3	WAKE ISLAND Hy	89.92	290	T	T	10 24 30.2	
	baz=115,slow=74						
ZALV	Zalesovo Beam	146.88	342	PKPbc	PKPbc	08 53 02.9	-0.9
	1.6nm,0.7s,baz=49,slow=3.5,SNR=7.1						
BVAR	Borovoye Array	150.15	358	PKPbc	PKiKP	08 53 13.2	-0.1
	1.4nm,0.6s,baz=348,slow=1.8,SNR=5.5						
CMAR	Chiang Mai Arr	151.17	266	PKPbc	PKiKP	08 53 16.6	+0.2
	0.7nm,0.3s,baz=168,slow=1.1,SNR=7.8						
KURBB	Kurchatov Arra	151.49	347	PKPbc	PKiKP	08 53 16.0	-0.1
	0.9nm,0.4s,baz=18,slow=1.7,SNR=6.2						
MKAR	Makanchi Array	153.92	338	PKPbc	PKPbc	08 53 21.0	-0.1
	1.4nm,0.6s,baz=36,slow=2.4,SNR=18						

*CATAC **01** 08:48:13.0±0.6, 12°N±4°×8°9W±°, h7^{km}±4^{km}, M3.2/6, MLv3.2/6, Error ellipse: s-maj=9.6km s-min=3.3km az=32.2, confirmed*
*SNET **01** 08:48:16.1±1.1, 12°09N×88°98W, h40^{km}, ML3.6, Presumed earthquake*
*GCG **01** 08:48:16.6±0.6, 12°20N×89°46W, h12^{km}±9^{km}, MD3.9, ML3.9, Presumed earthquake*
ISC 01 08:48:08.2±2.4**, 11°94N**±0°10×**89°25W**±0°08**, h3^{km}**±12^{km}**, n40, σ0^{s}87**/59**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	Alcalda de L	1.54	357	P	Pg	08 48 39.6	+1.8
LALI	Alcalda de L	1.54	357	*i* P	Pg	08 48 39.3	+1.5
LALI	Alcalda de L	1.54	357	*e*P	Pg	08 48 39.4	+1.6
LALI				*e*S	Sg	08 48 58.6	+0.8
LOMA	Loma Larga	1.70	2	*e*P	Pg	08 48 41.4	+0.6
LOMA				IAML		08 49 03.9	
	comp=Z,483nm,0.4s						
COEG	Centro de Oper	1.71	12	P	Pg	08 48 40.7	-0.3
COEG				S	Sb	08 49 02.7	+0.4
JAYA	Jayaque - finc	1.72	353	P	Pg	08 48 41.9	+0.8
JAYA	Jayaque - finc	1.72	353	*i* P	Pg	08 48 42.1	+0.9
JAYA				*i* S	Sn	08 49 01.2	-0.5
JAYA				IAML		08 49 04.2	
	comp=E,3μm,0.3s						
JAYA	Jayaque - finc	1.72	353	*e*P	Pg	08 48 42.2	+1.1
JAYA				*e*S	Sg	08 49 03.1	-0.4
PMON	Piamonte	1.77	358	P	Pg	08 48 42.7	+0.7
PMON				S	Sb	08 49 04.2	+0.3
PACA	Pacayal	1.77	30	P	Pb	08 48 41.2	-0.1
UEES	Universidad Ev	1.77	0	P	Pg	08 48 42.6	+0.5
UEES				S	Sb	08 49 04.1	+0.1
UEES	Universidad Ev	1.77	0	*e*S	Sb	08 49 03.6	-0.3
BOQS	Boqueron	1.79	359	*e*P	Pg	08 48 43.2	+0.7
BOQS				IAML		08 49 06.2	
	comp=Z,328nm,0.1s						
PAVA	Las Pavas	1.79	10	P	Pg	08 48 42.1	-0.4
PAVA				S	Sb	08 49 04.6	0.0
LBRS	Las Brisas	1.80	6	*e*P	Pg	08 48 43.0	+0.3
PQSS	Presa 15 de Se	1.80	22	*i* P	Pb	08 48 42.0	+0.1
LFU	La Fuente	1.81	4	*e*P	Pg	08 48 43.0	+0.2
LFU				IAML		08 49 08.1	
	comp=Z,4.8nm,0.5s						
SCLA	Alcaldia de Sa	1.82	16	P	Pg	08 48 42.6	-0.5
CNRM	Centro Naciona	1.85	34	P	Pb	08 48 42.1	-0.6
CNRM				S	Sn	08 49 04.5	-0.3
CEDA	San Andres	1.86	355	P	Pg	08 48 44.4	+0.5
CEDA				S	Sb	08 49 06.8	+0.2
CEDA	San Andres	1.86	355	*e*P	Pg	08 48 44.0	+0.1
CEDA				*e*S	Sb	08 49 05.8	-0.8
LCND	La Caada	1.90	44	P	Pn	08 48 42.1	+0.6
CSGN	Cosiguina Volc	1.94	58	P	Pn	08 48 42.4	+0.2
CSGN				S	Sn	08 49 06.2	-1.0
NUBE	Las Nubes	2.02	345	P	Pg	08 48 46.5	-0.5
NUBE	Las Nubes	2.02	345	*i* P	Pg	08 48 46.5	-0.5
NUBE				*i* S	Sb	08 49 09.9	-1.4
NUBE				IAML		08 49 11.2	
	comp=E,659nm,0.4s						
UNIC	Universidad Ca	2.05	352	P	Pg	08 48 47.3	-0.2
UNIC				S	Sb	08 49 12.9	+0.7
P5NO	Presa 5 de nov	2.09	13	P	Pb	08 48 46.5	-0.3
P5NO				S	Sb	08 49 12.3	-0.9
LOAL	Lomas de Alarc	2.11	346	S	Sg	08 49 15.1	-1.0
SLOZ	Alcaldia de Sa	2.14	346	P	Pg	08 48 48.7	-0.5
SLOZ				S	Sg	08 49 16.0	-1.0
SLOZ	Alcaldia de Sa	2.14	346	*i* P	Pg	08 48 49.1	-0.1
LLGN	La Laguna	2.23	7	P	Pb	08 48 49.2	0.0
LLGN				S	Sb	08 49 16.2	-1.2
MTO3	Montecristo	2.45	357	S	Sb	08 49 22.2	-1.5
MTO3	Montecristo	2.45	357	*i* P	Pb	08 48 52.8	-0.2
CNGN	Cerro Negro	2.55	77	S	Sn	08 49 21.6	-0.5
MACN	El Madrono	2.57	78	P	Pn	08 48 51.7	+1.0
MACN				S	Sn	08 49 22.1	-0.5
ESQI	Esquipulas	2.61	358	P	Pb	08 48 54.9	-0.7
ESQI				S	Sb	08 49 26.2	-2.0
ESQI	Esquipulas	2.61	358	*e*P	Pb	08 48 55.0	-0.7
LEVN	Ruinas Leon Vi	2.61	80	S	Sn	08 49 23.1	-0.4
TGUH	Tegucigalpa,Un	2.85	42	P	Pn	08 48 56.7	+2.0
TGUH				S	Sn	08 49 30.2	+0.5
SARH	Santa Rosa de	2.86	9	S	Sn	08 49 31.6	+1.8

IDC 01 09:03:50.1±8.4**, 3°25S**×**144°93E, h0^{km}, mb3.0**/2**, mbtmp3.0**/3**, ML3.2**/1**, Error ellipse: s-maj=285.7km s-min=35.2km az=96.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.55	211	P	P	09 08 19.8	+0.2
	0.1nm,0.3s,baz=40,slow=11,SNR=6.8						
	0.4nm,0.9s						
ASAR	Alice Springs	22.93	207	P	P	09 08 56.1	+0.1
	0.3nm,0.9s,baz=36,slow=11,SNR=4.8						
	0.3nm,0.9s						
MKAR	Makanchi Array	74.08	321	P	P	09 15 28.1	-0.1
	0.2nm,0.7s,baz=107,slow=4.8,SNR=1.7						
	0.2nm,0.7s						

*KRNET **01** 09:18:18.7±0.1, 41°28N×73°12E, h30^{km}, mb3.7*
*IDC **01** 09:18:19.8±1.4, 41°01N×73°96E, h0^{km}, mb3.6/2, mbtmp3.5/6, ML2.6/5, MS3.1/2, Error ellipse: s-maj=23.7km s-min=13.2km az=92.0*
*NNC **01** 09:18:21.6±0.7, 41°41N×73°13E, h0^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=6.5km s-min=2.8km az=175.0*
*SOME **01** 09:18:21.4, 41°42N×73°17E, h10^{km}*
*ISU **01** 09:18:22, 41°44N×73°11E, h18^{km}*
ISC 01 09:18:18.7±1.0**, 41°21N**±0°02×**73°33E**±0°02**, h9^{km}**±8^{km}**, n94, σ1^{s}66**/140**, 39C-27D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.28	293	⇑*i*P	Pg	09 18 24.3	-0.1
ARSB				⇑*e*S	Sg	09 18 27.8	-0.4
SALK	Salom-Alik	0.50	131	⇓*e*P	Pn	09 18 31.8	-0.5
SALK				⇓*i*S	Sb	09 18 41.0	+3.7
OHH	Osh	0.80	211	⇑*e*P	Pg	09 18 33.8	-0.4
OHH				⇑*i*S	Sb	09 18 44.8	-1.1
TSTA	Tashata	0.90	226	P	Pn	09 18 37.5	-0.2
TSTA				S	Sn	09 18 51.4	+0.5
ARLS	Aral	0.99	49	⇓*i*P	Pn	09 18 38.7	-0.4
ARLS				⇓*i*S	Sn	09 18 53.1	-0.2
SFK	Sufi-Kurgan	1.21	174	⇑*i*P	Pn	09 18 42.5	+0.4
SFK				⇑*i*S	Sn	09 18 59.7	+1.0
UCH	Uchtor	1.35	41	⇑*e*P	Pb	09 18 44.6	+0.1
UCH				⇑*e*S	Sn	09 19 03.1	+0.5
KSNS	Kasansay	1.36	268	P	Pg	09 18 45.6	+0.7
KSNS				S	Sb	09 19 02.5	+0.4
MNAS	Manas	1.41	335	⇑*i*P	Pn	09 18 42.5	-2.4
MNAS				⇑*i*S	Sn	09 18 59.8	-3.9
FRG	Fergana	1.44	235	P	Pb	09 18 45.8	0.0
FRG				S	Sg	09 19 06.0	+1.0
EKS2	Erkin-Say	1.49	13	⇑*i*P	Pn	09 18 45.3	-0.5
EKS2				⇑*i*S	Sn	09 19 04.5	-1.0
MRKS	Merke	1.53	357	P	Pn	09 18 47.2	+0.8
	172nm,0.3s						
MRKS				S	Sn	09 19 06.3	-0.3
	360nm,0.2s						
MRKS	Merke	1.53	357	*e*P	Pn	09 18 47.2	+0.8
	182nm,0.2s						
MRKS				*e*S	Sn	09 19 06.3	-0.3
	392nm,0.3s						
AAK	Ala-Archa	1.67	31	Pg	Pg	09 18 51.5	+0.7
	36nm,0.3s,baz=194,slow=8.2,SNR=157						
AAK				Lg	Lg	09 19 13.3	
	89nm,0.3s,baz=162,slow=20,SNR=11						
AAK	Ala-Archa	1.67	31	⇑Pn	Pg	09 18 51.7	+0.9
	6.6nm,0.3s						
AAK				⇓Sn	Sg	09 19 14.0	+1.5
	52nm,0.3s						
AAK	Ala-Archa	1.67	31	⇓*i*P	Pn	09 18 48.8	+0.4
AAK				⇓*i*S	Sn	09 19 10.5	+0.4
TRKS	Terek-Say	1.68	282	⇓*i*P	Pn	09 18 45.5	-3.0
TRKS				⇓*i*S	Sn	09 19 04.8	-5.4
JNKS	Jany-Kuch	1.75	95	⇑*i*P	Pg	09 18 52.0	-0.2
JNKS				⇑*i*S	Sg	09 19 15.9	+1.0
FRU1	Bishkek	1.87	31	⇓*e*P	Pn	09 18 51.6	+0.5
FRU1				⇓*i*S	Sn	09 19 15.3	+0.5
KBK	Karagaybulak	1.88	39	⇓*e*P	Pn	09 18 52.1	+0.8
KBK				⇓*i*S	Sn	09 19 16.2	+0.9
MINT	Mingtut	1.93	248	S	Sg	09 19 21.5	+0.6
NRN	Naryn	2.03	83	⇑*i*P	Pb	09 18 55.1	-0.9
NRN				⇑*i*S	Sg	09 19 21.4	-2.5
CHMS	Chumysh	2.08	30	⇓*e*P	Pn	09 18 54.3	+0.4
CHMS				⇓*i*S	Sn	09 19 20.0	+0.1
DRK	Karamyk	2.09	214	⇑*i*P	Pn	09 18 53.9	-0.3
DRK				⇑*i*S	Sn	09 19 19.4	-1.1
BTK	Batken	2.23	240	⇑*i*P	Pn	09 18 54.8	-1.2
BTK				⇑*i*S	Sn	09 19 21.0	-2.8
USP	Ospenovka	2.23	23	⇑*i*P	Pn	09 18 56.1	+0.1

USP				⇑iS	Sn	09 19 23.2	-0.5
DZA	Taraz	2.24	319	Pg	Pb	09 18 59.2	-0.2
	221nm,0.2s						
DZA				Lg	Lg	09 19 27.6	
	632nm,0.3s						
DZA	Taraz	2.24	319	eP	Pb	09 18 58.8	-0.7
	206nm,0.2s						
DZA				eS	Sn	09 19 25.4	+1.5
	697nm,0.3s						
BOOM	Boomskoye usch	2.33	56	⇑iP	Pb	09 18 58.9	-2.2
BOOM				⇑iS	Sb	09 19 28.0	-2.1
TKM2	Tokmak 2	2.40	44	⇓iP	Pn	09 18 59.4	+0.9
TKM2				⇓iS	Sn	09 19 29.0	+0.8
ULHL	Ulahol	2.41	64	⇑iP	Pb	09 19 00.3	-2.2
ULHL				⇑iS	Sb	09 19 30.5	-2.0
SGDS	Sogindy	2.44	23	Pg	Pg	09 19 04.3	-1.2
	6.6nm,0.3s						
SGDS				Lg	Lg	09 19 35.1	
	180nm,0.4s						
CHMG	Chimgan	2.52	279	P	Pn	09 19 01.2	+1.2
CHMG				S	Sn	09 19 32.5	+1.6
CHRV	Charvak	2.57	281	S	Sn	09 19 34.7	+2.5
IUG	Iuzhnay	2.64	292	Pg	Pb	09 19 06.9	+0.6
	121nm,0.3s						
IUG				Lg	Lg	09 19 39.5	
	542nm,0.5s						
KST	Kastek	2.68	46	Pg	Pg	09 19 08.7	-1.4
	21nm,0.5s						
KST				Lg	Lg	09 19 42.9	
	140nm,0.5s						
KST	Kastek	2.68	46	eP	Pg	09 19 08.7	-1.4
	21nm,0.5s						
KST				eS	Sg	09 19 42.9	-2.0
	140nm,0.5s						
KSH2	Kashi	2.69	140	Pn	Pg	09 19 07.2	-3.0
KSH2				Sn	Sg	09 19 46.3	+1.3
KSH2				smax	smax		
	comp=N,250nm,0.7s						
KSH2				smax	smax		
	comp=E,120nm,0.7s						
DGS	Degeres	2.72	41	Pg	Pg	09 19 10.8	-0.1
	comp=E,23nm,0.5s						
DGS				Lg	Lg	09 19 46.4	
	comp=E,164nm,0.5s						
DGS	Degeres	2.72	41	eP	Pg	09 19 10.8	-0.1
	comp=E,23nm,0.5s						
DGS				eS	Sg	09 19 46.4	+0.2
	comp=E,164nm,0.5s						
TVKS	Tavaksay	2.79	279	P	Pn	09 19 04.9	+1.3
TVKS				S	Sn	09 19 39.5	+2.0
KK31	Karatay Array	2.82	313	Pn	Pn	09 19 04.5	+0.5
	comp=E,1.2nm,0.2s,baz=131,slow=10,SNR=392						
KK31				⇑Pg	Pb	09 19 08.1	-1.2
	comp=E,19nm,0.3s,baz=137,slow=15,SNR=7.9						
KK31				⇓Lg	Lg	09 19 43.4	
	comp=E,33nm,0.2s,baz=206,slow=181,SNR=13						
CHM	Chimkent	3.00	293	eP	Pb	09 19 13.3	+1.0
	comp=E,67nm,0.3s						
CHM				eS	Sb	09 19 51.0	+1.9
	comp=E,488nm,0.5s						
MTBS	Maitube	3.00	49	Pg	Pg	09 19 15.9	-0.3
	comp=E,13nm,0.3s						
MTBS				Lg	Lg	09 19 55.0	
	comp=E,92nm,0.4s						
MTBS	Maitube	3.00	49	eP	Pg	09 19 15.9	-0.3
	comp=E,13nm,0.3s						
MTBS				eS	Sg	09 19 55.0	0.0
	comp=E,92nm,0.4s						
KRBS	Karabastau	3.03	34	Pg	Pg	09 19 15.1	-1.7
	comp=E,11nm,0.5s						
KRBS				Lg	Lg	09 19 53.9	
	comp=E,99nm,0.5s						
KRBS	Karabastau	3.03	34	eP	Pg	09 19 15.1	-1.7
	comp=E,11nm,0.5s						
KRBS				eS	Sg	09 19 53.9	-2.1
	comp=E,99nm,0.5s						
BRLS	Borolday	3.17	306	Pg	Pb	09 19 15.2	0.0
	comp=E,26nm,0.5s						
BRLS				Lg	Lg	09 19 54.4	
	comp=E,107nm,0.3s						
BRLS	Borolday	3.17	306	eP	Pb	09 19 15.2	0.0
	comp=E,26nm,0.5s						
BRLS				eS	Sb	09 19 54.4	+0.3
	comp=E,107nm,0.3s						
NZBK	Nazarbek	3.17	272	S	Sb	09 19 58.8	+4.6
GAR	Garm	3.19	227	⇓iP	Pn	09 19 08.7	-0.6
GAR				⇓iS	Sn	09 19 44.8	-2.8
TNSS	Tian-Shan	3.25	55	Pg	Pg	09 19 20.8	-0.3
	comp=E,2.6nm,0.3s						
TNSS				Lg	Lg	09 20 03.7	
	comp=E,12nm,0.5s						
TNSS	Tian-Shan	3.25	55	eP	Pg	09 19 20.8	-0.3
	comp=E,2.6nm,0.3s						
TNSS				eS	Sg	09 20 03.7	+0.5
	comp=E,12nm,0.5s						
KNDC	Almaty	3.37	52	⇑Pg	Pg	09 19 22.6	-0.6
	comp=E,20nm,0.5s						
KNDC				⇓Lg	Lg	09 20 09.1	
	comp=E,56nm,0.5s						
MDOK	Medeo	3.38	54	Pg	Pg	09 19 23.2	-0.4
	comp=E,14nm,0.3s						
MDOK				Lg	Lg	09 20 07.5	
	comp=E,47nm,0.6s						
TARG	Taragay, Kyrgy	3.41	80	⇑iP	Pn	09 19 14.6	+2.1
TARG				⇑iS	Sn	09 19 55.1	+1.9
KOTS	Kotyrbulak	3.46	53	Pg	Pg	09 19 24.8	-0.3
	comp=E,7.4nm,0.4s						
KOTS				Lg	Lg	09 20 10.5	
	comp=E,67nm,0.7s						
KOTS	Kotyrbulak	3.46	53	eP	Pg	09 19 24.8	-0.3
	comp=E,7.4nm,0.4s						
KOTS				eS	Sg	09 20 10.5	+0.6
	comp=E,67nm,0.7s						
KUU	Kurty	3.48	39	Pg	Pg	09 19 23.2	-2.3
	comp=E,3.0nm,0.1s						
KUU				Lg	Lg	09 20 07.5	
	comp=E,83nm,0.5s						
KUU	Kurty	3.48	39	eP	Pg	09 19 23.2	-2.3
	comp=E,3.0nm,0.1s						
KUU				eS	Sg	09 20 07.5	-3.0
	comp=E,83nm,0.5s						
KTBS	Karatobe	3.52	44	Pg	Pg	09 19 25.1	-1.1
	comp=E,8.0nm,0.3s						
KTBS				Lg	Lg	09 20 10.9	
	comp=E,0.4nm,0.6s						
KTBS	Karatobe	3.52	44	eP	Pg	09 19 25.1	-1.1
	comp=E,8.0nm,0.3s						
KTBS				eS	Sg	09 20 10.9	-0.9
	comp=E,0.4nm,0.6s						
ANVS	Anan'yevo	3.60	63	⇓iP	Pn	09 19 16.6	+1.7
ANVS				⇓iS	Sn	09 19 58.7	+1.1
BTLS	Baital	3.86	8	Pg	Pb	09 19 28.7	+1.7
	comp=E,2.9nm,0.4s						
BTLS				Lg	Lg	09 20 16.9	
	comp=E,48nm,0.5s						
BTLS	Baital	3.86	8	eP	Pb	09 19 28.7	+1.7
	comp=E,2.9nm,0.4s						
BTLS				eS	Sb	09 20 16.9	+3.0
	comp=E,48nm,0.5s						
PRZ	Przheval'sk	4.00	70	⇑eP	Pn	09 19 22.5	+2.1
PRZ				⇑eS	Sn	09 20 08.9	+1.4
CHGR	Chuyangaron	4.10	233	⇓iP	Pn	09 19 20.8	-0.9
CHGR				⇓iS	Sn	09 20 05.9	-3.9
SATY	Saty	4.20	62	Pg	Pg	09 19 39.9	+0.7
	comp=E,10.0nm,0.4s						
SATY				Lg	Lg	09 20 36.0	
	comp=E,38nm,0.4s						
KURS	Kuram	4.25	56	Pg	Pg	09 19 40.9	+0.8
	comp=E,6.3nm,0.6s						
KURS				Lg	Lg	09 20 37.7	
	comp=E,15nm,1.0s						
ARXS	Arharly	4.47	46	Pg	Pg	09 19 42.8	-1.5
	comp=E,8.0nm,0.6s						
ARXS				Lg	Lg	09 20 41.1	
	comp=E,48nm,0.7s						
ARXS	Arharly	4.47	46	eP	Pg	09 19 42.8	-1.5
	comp=E,8.0nm,0.6s						
ARXS				eS	Sg	09 20 41.1	-1.1
	comp=E,48nm,0.7s						
KPKS	Kokpek	4.56	59	Pg	Pg	09 19 45.6	-0.6
	comp=E,0.5nm,0.2s						
KPKS				Lg	Lg	09 20 45.7	
	comp=E,47nm,0.5s						
KPKS	Kokpek	4.56	59	eP	Pg	09 19 45.6	-0.6
	comp=E,0.5nm,0.2s						
KPKS				eS	Sg	09 20 45.7	+0.4
	comp=E,47nm,0.5s						
UZB	Uzynbulak	4.65	64	Pg	Pg	09 19 47.4	-0.4
	comp=E,6.7nm,0.6s						
UZB				Lg	Lg	09 20 48.8	
	comp=E,26nm,0.6s						
UZB	Uzynbulak	4.65	64	eP	Pg	09 19 47.4	-0.4
	comp=E,6.7nm,0.6s						
UZB				eS	Sg	09 20 48.8	+0.7
	comp=E,26nm,0.6s						
BLB	Baldybastay	4.77	51	Pg	Pg	09 19 48.1	-2.0
	comp=E,18nm,0.6s						
BLB				Lg	Lg	09 20 49.9	
	comp=E,42nm,0.5s						
SHLS	Shalkode	4.96	65	Pg	Pg	09 20 00.0	+6.4
	comp=E,8.4nm,0.3s						
SHLS				Lg	Lg	09 21 10.5	
	comp=E,47nm,0.5s						
SHLS	Shalkode	4.96	65	eP	Pg	09 20 00.1	+6.4
	comp=E,8.4nm,0.3s						
SHLS				eS	Sg	09 21 10.5	+13
	comp=E,47nm,0.5s						
PDGK	Podgornoye	5.04	63	⇑Pg	Pg	09 19 56.1	+0.9
	comp=E,4.2nm,0.6s						
PDGK				⇑Lg	Lg	09 21 04.6	
	comp=E,39nm,0.9s						
TDK	Taldyqorghan	5.31	43	Pg	Pg	09 19 58.6	-1.8
	comp=E,17nm,0.4s						
TDK				Lg	Lg	09 21 07.9	
	comp=E,66nm,0.5s						
TDK	Taldyqorghan	5.31	43	eP	Pg	09 19 58.6	-1.8
	comp=E,17nm,0.4s						
TDK				eS	Sg	09 21 07.9	-1.1
	comp=E,66nm,0.5s						
MAKZ	Makanchi	8.37	45	⇓Lg	Lg	09 22 49.3	
	comp=E,5.0nm,0.8s						
MK31	Makanchi Array	8.53	46	⇓Pn	Pn	09 20 27.6	+5.1
	comp=E,1.5nm,0.7s,baz=231,slow=14,SNR=7.7						
MK31				⇑Sn	Sn	09 22 04.8	+5.9
	comp=E,0.7nm,0.6s						
MK31				⇑Lg	Lg	09 22 52.7	
	comp=E,3.1nm,0.7s						
MKAR	Makanchi Array	8.53	46	Pn	Pn	09 20 23.8	+1.2
	comp=E,0.1nm,0.3s,baz=228,slow=13,SNR=8.2						
MKAR				Lg	Lg	09 22 41.9	
	comp=E,0.2nm,0.3s,baz=233,slow=27,SNR=2.8						
	comp=E,0.5nm,0.6s						
KURBB	Kurchatov Arra	10.08	19	Pn	Pn	09 20 44.9	+1.3
	baz=202,slow=24,SNR=1.2						
KURBB				Lg	Lg	09 23 38.0	
	comp=E,0.2nm,0.3s,baz=202,slow=25,SNR=4.2						
KURBB				LR	LR	09 25 05.1	
	comp=E,57nm,19.8s,baz=175,slow=40						
KURBB	Kurchatov Arra	10.08	19	⇑Lg	Lg	09 23 38.2	
	comp=E,15nm,0.7s						
KURK	Kurchatov	10.19	19	⇑Lg	Lg	09 23 38.8	
	comp=E,9.4nm,0.9s						
BVAR	Borovoye Array	11.98	351	Pn	Pn	09 21 13.4	+3.7
	comp=E,0.1nm,0.3s,baz=163,slow=12,SNR=6.9						
BVAR				Sn	Sn	09 23 20.0	-3.5
	baz=174,slow=30,SNR=2.5						
BVAR				Lg	Lg	09 24 32.8	
	baz=166,slow=25,SNR=5.4						
	comp=E,0.3nm,0.5s						
AKTO	Aktyubinsk	14.08	316	Pn	P	09 21 45.8	-0.4
	comp=E,0.1nm,0.3s,baz=127,slow=5.1,SNR=2.1						
	comp=E,1.2nm,0.6s						
ZALV	Zalesovo Beam	14.89	27	Pn	Pn	09 21 50.5	+1.2
	comp=E,0.1nm,0.3s,baz=215,slow=12,SNR=2.2						
ZALV				Lg	Lg	09 26 06.7	
	comp=E,0.1nm,0.3s,baz=217,slow=23,SNR=1.7						
	comp=E,0.4nm,0.4s						
GTA2	Gaotai	20.20	86	eP	Pn	09 22 57.6	+1.8
GTA2				pmax	pmax		
	comp=Z,6.0nm,0.8s						
LBTB	Lobatse	79.37	223	LR	LR	10 07 35.5	
	comp=Z,18nm,20.9s,baz=176,slow=37						
WRA	Warramunga Arr	83.03	124	P	P	09 30 43.7	-1.0
	comp=Z,0.3nm,0.8s,baz=314,slow=4.8,SNR=2.1						
	comp=Z,0.3nm,0.8s						
ASAR	Alice Springs	85.54	127	P	P	09 30 57.1	-0.2
	comp=Z,0.5nm,0.7s,baz=319,slow=6.1,SNR=7.0						
	comp=Z,0.5nm,0.7s						

*JMA **01** 09:22:32.8±0.1, 24.°2N±0.°8×122.°1E±0.°4, h46km±2km, MV2.7/10, TAIWAN REGION*
*TAP **01** 09:22:32.6, 24.°31N×122.°11E, h38km, ML3.6, C*
ISC 01 09:22:33.1±0.9, **24.°26N**±0.°02×**122.°10E**±0.°02, **h26**km±6km, **n134**, σ**0.s90**/215, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS2	EOS2	0.20	37	P	Pb	09 22 38.7	-0.1
EOS2				iS	Sb	09 22 43.6	+1.0
EOS3	EOS3	0.20	83	iP	Pb	09 22 38.9	+0.2
EOS3				eS	Sb	09 22 44.0	+1.4
EOS4	EOS4	0.24	126	P	Pb	09 22 39.0	-0.1
EOS4				S	Sb	09 22 44.5	+1.3
EAHA	Aohua	0.34	281	eP	Pb	09 22 40.0	-0.8
EAHA				eS	Sn	09 22 48.4	+0.1
EWUT	Wuta	0.35	302	eP	Pb	09 22 40.0	-0.9
EWUT				eS	Sb	09 22 45.8	-0.5
ENA	Nanau	0.37	297	P	Pb	09 22 40.8	-0.6
ENA				S	Sb	09 22 46.6	-0.3
ESAO	Su ao	0.39	323	P	Pb	09 22 40.6	-1.1
ESAO				S	Sb	09 22 46.1	-1.4
TWC	Suao	0.41	326	iP	Pb	09 22 40.9	-1.1
TWC				S	Sb	09 22 46.0	-2.1
ETL	Fush Village	0.45	257	P	Pb	09 22 42.7	+0.1
ETL				eS	Sn	09 22 50.5	-0.6
NACB	Ninganchiao	0.47	259	P	Pb	09 22 42.7	-0.2
NACB	Ninganchiao	0.47	259	S	Sn	09 22 51.8	+0.2
NACB	Ninganchiao	0.47	259	iP	Pb	09 22 43.0	0.0
NACB				S	Sn	09 22 51.4	-0.3
TWD	Chiawan	0.50	249	iP	Pb	09 22 43.5	+0.1
TWD				iS	Sn	09 22 52.4	+0.1
NDS	Dongshan	0.51	316	P	Pb	09 22 42.6	-1.0
NDS				eS	Sb	09 22 49.2	-1.4
HWA	Hwalien	0.54	238	eP	Pb	09 22 44.5	+0.5
ETLH	Xiulin Townshi	0.57	265	eP	Pb	09 22 44.5	-0.1
ETLH				iS	Sn	09 22 54.0	-0.2
LATG	Datong	0.59	297	eP	Pb	09 22 44.4	-0.6
ILA	Ilan	0.59	327	P	Pb	09 22 44.3	-0.7
ILA				eS	Sb	09 22 52.7	-0.3
EGS		0.60	345	P	Pb	09 22 44.4	-0.7
TWE	Neicheng	0.60	319	eP	Pb	09 22 44.3	-0.8
TEYL	Yanliau Villag	0.61	230	eP	Pb	09 22 45.2	0.0
TEYL				eS	Sn	09 22 56.0	+1.1
ENTT	Nioudou	0.62	308	eP	Pb	09 22 44.7	-0.7
ETM	Tongmen	0.63	242	eP	Pb	09 22 45.1	-0.5
ETM				S	Sb	09 22 55.2	+1.1
NDT	Datong Townshi	0.64	302	P	Pb	09 22 45.2	-0.5
LXIB	Xiulin Townshi	0.67	249	iP	Pb	09 22 46.2	-0.2
LXIB				eS	Sb	09 22 56.0	+0.5
FUSB	Fushanzhiwuyua	0.68	317	eP	Pb	09 22 46.0	-0.6
FUSB				eS	Sn	09 22 56.9	-0.1
SHUL	Shoufeng	0.68	226	P	Pb	09 22 46.1	-0.3
NNS	Nan Shan	0.69	285	P	Pb	09 22 46.4	-0.2
NNS				eS	Sb	09 22 56.6	+0.8
NWLT	Wulai	0.75	313	eP	Pb	09 22 47.0	-0.6
NWLT				eS	Sb	09 22 56.8	-0.7
TIPB	Shuangxi	0.75	340	iP	Pb	09 22 47.0	-0.6
TIPB				eS	Sb	09 22 56.1	-1.3
TWB1	Santiao Chiao	0.75	352	eP	Pb	09 22 47.0	-0.6
TWB1				eS	Sb	09 22 56.5	-0.9
ESL	Shilin	0.76	234	eP	Pb	09 22 46.9	-0.8
WHF	Hehuan Shan	0.77	261	iP	Pb	09 22 47.9	-0.4
WHF				iS	Sb	09 22 58.7	+0.2
YHNB	Yeheng	0.78	302	P	Pb	09 22 47.6	-0.5
YHNB	Yeheng	0.78	302	P	Pb	09 22 47.5	-0.5
YHNB				eS	Sb	09 22 58.2	-0.1
FUSS	Fushou	0.78	269	iP	Pb	09 22 48.3	0.0
FUSS				S	Sn	09 22 59.8	+0.1
JYNG	Yonagunijimaku	0.79	76	eP	Pb	09 22 48.4	+0.1
JYNG				S	Sb	09 22 58.7	0.0
NSK	Sanguang	0.79	301	iP	Pb	09 22 48.0	-0.4
NSK				iS	Sn	09 22 59.6	-0.1
TWT	Tachien	0.85	270	eP	Pb	09 22 49.5	+0.2
TWT				iS	Sn	09 23 01.4	+0.2
WARBT	Fenglin Townsh	0.85	230	P	Pb	09 22 47.9	-1.4
WARBT				eS	Sb	09 23 00.5	+0.1
YOJ	Yonaguni jima	0.85	76	P	Pb	09 22 49.3	-0.1
YOJ	Yonaguni jima	0.85	76	eP	Pb	09 22 49.0	-0.3
YOJ				S	Sb	09 23 00.4	+0.1
YOJ	Yonaguni jima	0.85	76	P	Pb	09 22 49.2	-0.1
YOJ				S	Sb	09 23 00.5	+0.1
SXI1	Grass Mountain	0.85	346	P	Pb	09 22 48.8	-0.6
SXI1				eS	Sb	09 23 00.4	-0.1
NWF	Wu-fen Shan	0.86	340	P	Pb	09 22 49.2	-0.3
NWF				eS	Sb	09 22 59.9	-0.7
TWA	Mucha	0.86	327	eP	Pb	09 22 49.3	-0.1
WFSB	Wu-fen Shan	0.86	340	P	Pb	09 22 49.2	-0.2
WFSB				eS	Sb	09 23 00.1	-0.4
TDCB	Techi	0.86	270	eP	Pb	09 22 49.3	-0.3
TDCB				S	Sn	09 23 01.8	+0.3
NHDH	Xindian Distri	0.87	323	eP	Pn	09 22 50.0	+0.3
OWD	Renai	0.90	250	iP	Pb	09 22 49.6	-0.6
OWD				eS	Sb	09 23 01.7	-0.2
TATO	Taipei	0.90	322	P	Pn	09 22 50.5	+0.4
TATO				S	Sb	09 23 02.3	+0.5
TATO	Taipei	0.90	322	S	Sb	09 23 02.3	+0.5
NHY	Taipei	0.91	328	eP	Pn	09 22 51.4	+1.1
TNOU	National Taiwa	0.93	341	eP	Pb	09 22 50.5	-0.2
TNOU				eS	Sb	09 23 02.7	0.0
WUSB	Renai	0.94	254	eP	Pb	09 22 50.6	-0.3
WUSB				S	Sb	09 23 03.1	+0.1
TAP	Taipei	0.94	325	eP	Pn	09 22 51.5	+0.8
TAP				eS	Sb	09 23 02.3	-0.7
NFF	Wufeng Townshi	0.97	292	eP	Pb	09 22 51.2	-0.2
NFF				eS	Sn	09 23 04.4	+0.4
HGSD	Ruisui	0.99	219	eP	Pb	09 22 51.0	-0.6
KSHI	Guanxi Townshi	0.99	301	iP	Pn	09 22 52.2	+1.0
YM01	YM01	1.00	331	eP	Pn	09 22 52.3	+0.7
VWDT	VWDT	1.01	240	eP	Pb	09 22 51.0	-1.0
ZUZH	Zhuzihu	1.03	331	P	Pb	09 22 52.0	-0.3
ZUZH				S	Sb	09 23 05.7	+0.3
YM08	YM08	1.03	333	eP	Pb	09 22 51.8	-0.6
YM08				eS	Sb	09 23 05.7	+0.2
EHYH	Wanrong	1.03	222	eP	Pn	09 22 50.5	-1.4
EHY	Hungye	1.04	224	P	Pn	09 22 50.4	-1.6
EHY				eS	Sb	09 23 06.0	+0.3
TWS1	Kuangyinshan	1.04	323	eP	Pb	09 22 52.8	+0.3
TWS1				eS	Sn	09 23 07.4	+1.7
WHP	Taichung City	1.05	271	iP	Pb	09 22 53.0	+0.1
WHP				S	Sn	09 23 06.8	+0.7
ANP	Anpu	1.06	330	eP	Pn	09 22 52.2	-0.1
LIOB	Emei	1.06	291	eP	Pb	09 22 53.2	+0.3
LIOB				eS	Sn	09 23 07.9	+1.6
NSTT	Nanjuang	1.07	290	eP	Pn	09 22 53.0	+0.6
NTST	Danshui	1.08	327	P	Pb	09 22 53.5	+0.4
NCUH	Zhongli	1.09	310	eP	Pn	09 22 52.6	-0.1
TWY	Chenhua	1.11	336	eP	Pb	09 22 54.0	+0.3
TWY				eS	Sn	09 23 08.0	+0.7
YULB	Yu-li	1.14	221	P	Pb	09 22 54.6	+0.4
YULB	Yu-li	1.14	221	eP	Pn	09 22 51.4	-2.0
YULB				eS	Sb	09 23 07.2	-1.4
SBCB	Hsinchu	1.15	298	eP	Pb	09 22 54.5	+0.2
SSLB	Suanglung	1.15	246	P	Pn	09 22 53.5	-0.1
SSLB				S	Sn	09 23 10.0	+1.5
SSLB	Suanglung	1.15	246	S	Sn	09 23 10.0	+1.5
SSLB	Suanglung	1.15	246	eP	Pn	09 22 53.4	-0.2
SSLB				eS	Sn	09 23 09.4	+0.9
SMLT	Sun Moon Lake	1.16	251	eP	Pn	09 22 53.9	+0.1
SMLT				eS	Sb	09 23 09.2	-0.1
HSN	Hsinchu	1.16	298	eP	Pn	09 22 54.0	+0.3
TWF1	Yuli	1.17	219	eP	Pn	09 22 52.4	-1.4
TYC	Yuchr	1.19	253	eP	Pn	09 22 54.1	0.0
TWQ1	Liyutan	1.22	274	eP	Pb	09 22 55.7	+0.2
TWQ1				eS	Sb	09 23 12.9	+2.1
NMLH	Miaoli	1.23	283	eP	Pn	09 22 55.2	+0.7
NSY	Sanyi	1.23	277	eP	Pb	09 22 57.5	+1.7
NSY				eS	Sb	09 23 14.6	+3.3
CHKH	Chenggong	1.25	211	eP	Pn	09 22 54.2	-0.7
CHKH				eS	Sn	09 23 08.2	-2.6
WHYT	Xinyi Township	1.27	244	eP	Pn	09 22 56.0	+0.7
WHYT				eS	Sb	09 23 13.5	+1.0
FULB	Fuli	1.29	215	eP	Pn	09 22 53.8	-1.7
FULB				eS	Sn	09 23 12.9	+1.0
YUS	Yu-Shan	1.30	234	eP	Pn	09 22 55.7	-0.4
TCU	Taichung	1.31	265	eP	Pn	09 22 54.7	-1.0
WJS	Zhushan	1.33	251	eP	Pb	09 22 57.9	+0.4
WJS				S	Sb	09 23 16.1	+2.0
WDJ	Dajia District	1.34	274	eP	Pb	09 22 57.5	-0.1
WNT	Mingjian	1.35	254	eP	Pb	09 22 57.7	0.0
WNT				eS	Sb	09 23 17.0	+2.3
PCYT	Pengchaiyu	1.36	359	eP	Pn	09 22 56.2	-0.2
ALS	Alishan	1.40	238	eP	Pn	09 22 57.7	+0.4
WCHH	Zhanghua	1.42	263	eP	Pb	09 22 58.5	-0.5
WCHH				eS	Sb	09 23 18.2	+1.5
ELDTW	Lidau	1.46	223	eP	Pn	09 22 57.0	-0.9
CHN5	Tsauling	1.46	243	eP	Pb	09 22 59.8	+0.1
IRIF	Iriomote-Funau	1.49	87	P	Pn	09 22 58.0	-0.1
IRIF				eS	Sn	09 23 16.7	0.0
WDLH	Douliu	1.54	249	eP	Pn	09 22 59.9	+1.0
WDLH				eS	Sb	09 23 22.2	+2.2
WCKO	Fanlu	1.60	239	eP	Pb	09 23 01.4	-0.6
WRL	Guolierlin Hig	1.62	257	eP	Pn	09 23 01.2	+1.3
WRL				iS	Sb	09 23 22.7	+0.4
STYH	Taoyuan	1.63	228	eP	Pn	09 23 01.7	+1.6
STYH				S	Sb	09 23 22.3	-0.4
RLNB	Erlin	1.64	257	eP	Pb	09 23 01.9	-0.7
CHN4	Tsaushan	1.65	237	eP	Pb	09 23 03.2	+0.3
CHN4				eS	Sb	09 23 23.8	+0.4
TPUB	Ta-pu	1.65	235	P	Pn	09 23 02.0	+1.5
TPUB	Ta-pu	1.65	235	eP	Pn	09 23 01.9	+1.5
TPUB				eS	Sb	09 23 23.5	+0.1
WTK	Tuku	1.67	250	eP	Pn	09 23 00.3	-0.3
WTP	Ta-pu	1.70	234	eP	Pn	09 23 02.3	+1.2
CHY	Chiayi	1.71	244	eP	Pb	09 23 03.8	-0.2
CHY				iS	Sb	09 23 25.7	+0.6
TWGBT	Beinan	1.72	213	eP	Pn	09 22 59.5	-1.8
TWGBT				eS	Sn	09 23 22.0	-0.5
TWG	Pinlang	1.72	214	eP	Pn	09 22 59.4	-2.0
TWG				eS	Sn	09 23 22.5	0.0
JKRS	Kuro-shima	1.74	90	P	Pn	09 23 02.4	+0.7
JKRS				eS	Sn	09 23 23.7	+0.8
TWK	Hsinying	1.78	236	eP	Pb	09 23 04.1	-1.0
TWK				eS	Sb	09 23 26.9	-0.1
CHN1	Nanshi	1.80	234	eP	Pb	09 23 04.8	-0.7
CHN1				eS	Sb	09 23 27.5	0.0
SGST	Jiashian	1.82	230	eP	Pn	09 23 03.0	+0.2
SGST				eS	Sb	09 23 28.0	-0.3
WSF	Szhu	1.83	251	eS	Sb	09 23 29.1	+0.7
SLGT	Liugui	1.84	227	eP	Pn	09 23 04.0	+1.0
SLGT				eS	Sb	09 23 27.9	-0.8
WSL	Shuilin Townsh	1.87	247	eP	Pn	09 23 04.4	+1.0
WSL				eS	Sb	09 23 29.2	-0.2
ECL	Taimali	1.96	213	eP	Pn	09 23 04.5	-0.2
SSD	Sandimen	2.02	222	eP	Pn	09 23 06.5	+1.0
SSD				eS	Sn	09 23 32.5	+2.5
MASBT	Mashibuluo	2.13	220	eP	Pn	09 23 08.6	+1.7
MASBT				iS	Sb	09 23 35.6	-1.4
EAST	Anshuo	2.20	212	eP	Pn	09 23 07.7	-0.3
SCZT	Fangliau	2.32	216	eP	Pn	09 23 10.8	+1.1
PNG	Penghu	2.43	254	eP	Pn	09 23 11.0	-0.1
PNG				eS	Sn	09 23 40.0	0.0
PHUB	P'eng-hu	2.43	253	eP	Pn	09 23 08.6	-2.6
WDGT	Dungji	2.45	246	eP	Pn	09 23 12.0	+0.6
WDGT				eS	Sn	09 23 40.9	+0.4
SMST	Manzhou Townsh	2.52	208	eP	Pn	09 23 10.9	-1.4
SMST				eS	Sn	09 23 40.2	-1.9
VWUC	VWUC	2.52	287	eP	Pn	09 23 12.0	-0.3
VWUC				S	Sn	09 23 41.0	-1.2
MATB	Ma-tsu	2.71	314	eP	Pn	09 23 14.5	-0.5
PTMZ	Houxiangcun	2.82	287	eP	Pn	09 23 16.4	-0.1
AXDP	Jialang	3.81	280	eP	Pn	09 23 29.4	-0.8
ZPLA	Ao Xicun	3.99	266	P	Pn	09 23 32.5	0.0
ZPLA				eS	Sn	09 24 17.0	-1.5

*TEH **01** 09:25:21.4, 38.°41N×44.°46E, h10km±999km, ML2.8, Presumed earthquake*
*AZER **01** 09:25:21.3, 38.°45N×44.°50E, h10km, ml2.8*
ISC 01 09:25:21.5±1.4, **38.°41N**±0.°04×**44.°53E**±0.°04, **h5**km±12km, **n16**, σ**1.s28**/26, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISHB	Shabestar	0.86	98	Pg	Pg	09 25 38.5	+0.4
MAKU	Maku	0.95	7	Pg	Pg	09 25 39.4	-0.4
IMRD	Marand	0.97	71	Pg	Pb	09 25 41.2	+0.3
HAKT	HAKKARI	1.07	218	P	Pn	09 25 42.5	-0.9
HAKT				S	Sn	09 25 59.5	+0.7
NAX	Nakhchivan	1.07	44	P	Pn	09 25 43.0	-0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NAX				S	Sn	09 25 59.0	+0.4
ORD	Ordubad	1.26	65	P	Pg	09 25 46.2	+0.6
ORD				S	Sn	09 26 04.0	+0.8
SBZ	Shahbuz	1.27	39	P	Pg	09 25 46.0	+0.1
SBZ				S	Sn	09 26 05.5	+1.9
ITBZ	Tabriz	1.28	97	Pg	Pn	09 25 45.8	-0.5
HYR	Heyderabad	1.33	11	P	Pg	09 25 47.6	+0.5
HYR				S	Sg	09 26 06.6	+2.3
IAZR	Azarshahr	1.36	122	Pg	Pg	09 25 48.1	+0.6
IGDI	IGDIR	1.50	347	P	Pg	09 25 50.6	+0.3
IGDI				S	Sg	09 26 11.9	+2.2
IHRS	Heris	1.98	92	Pn	Pb	09 25 59.1	+1.0
GDB	GEDABAY	2.50	22	P	Pb	09 26 05.9	-1.0
GDB				S	Sg	09 26 40.7	-1.0
GANJ	Ganja	2.63	31	P	Pb	09 26 07.9	-1.2
GANJ				S	Sg	09 26 43.6	-2.4
YRD	Yardimli	2.95	79	P	Pb	09 26 12.8	-1.9
YRD				S	Sb	09 26 51.4	+0.3
LRK	Lerik	3.00	84	P	Pb	09 26 13.4	-2.1
LRK				S	Sb	09 26 52.8	+0.3

IDC 01 09:51:20.8±2.1**, 3°.90N×126°.29E, h0km, mb3.3**/3**, mbtmp3.3**/3**, Error ellipse: s-maj=201.9km s-min=23.8km az=66.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.98	162	P	P	09 56 46.4	+0.1
	0.8nm,0.7s,baz=341,slow=10,SNR=8.5						
	0.8nm,0.7s						
ASAR	Alice Springs	28.39	165	P	P	09 57 16.8	-0.3
	0.2nm,0.9s,baz=340,slow=9.1,SNR=4.9						
	0.2nm,0.9s						
MKAR	Makanchi Array	57.16	325	P	P	10 01 09.3	-0.3
	0.2nm,0.5s,baz=122,slow=8.2,SNR=2.4						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	61.36	327	P	P	10 01 38.7	+0.3
	0.3nm,0.5s,baz=125,slow=6.3,SNR=2.5						

IDC 01 10:10:06.3±3.0, 2°.53N×126°.85E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=282.6km s-min=27.5km az=66.0

DJA 01 10:10:24.6±0.4, 1°N±4°×12°7E±°, h58km±12km, M3.3/13, MLv3.3/13

ISC 01 10:10:08.2±1.6**, 2°.4N**±0°.1×**126°.8E**±0°.1**, h10km, n8,** σ**1s.40**/6**, mb3.4**/3**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.75	159	P	Pg	10 10 40.6	-1.2
MNI	Manado	2.14	243	P	Pg	10 10 59.5	+10
GTOI	Gorontalo	4.14	245	P	Pg	10 11 26.5	-1.0
SANI	Sanana	4.50	190	P	Pn	10 11 18.2	+1.6
SWI	Sorong	5.56	126	P	Pn	10 11 34.2	+3.0
WRA	Warramunga Arr	23.44	162	P	P	10 15 17.2	-0.6
	0.4nm,0.4s,baz=339,slow=9.5,SNR=20						
	0.4nm,0.4s						
ASAR	Alice Springs	26.85	165	P	P	10 15 49.7	+0.5
	0.3nm,0.4s,baz=346,slow=11,SNR=12						
	0.3nm,0.4s						
MKAR	Makanchi Array	58.64	326	P	P	10 20 05.7	0.0
	0.2nm,0.7s,baz=143,slow=5.7,SNR=2.1						
	0.2nm,0.7s						

DNK 01 10:41:41.9±2.9, 62°.08N×5°.63E, h0km±28km, Presumed earthquake

NAO 01 10:41:43.4±0.4, 62°.10N×5°.69E, h4km±3km, ML2.5

HEL 01 10:41:43.5±0.1, 62°.12N×5°.61E, h18km±1km, ML2.4(UPP), ML2.6(BER), ML2.5(NAO), Confirmed Earthquake

BER 01 10:41:44.2±2.3, 62°.08N×5°.70E, h0km±4km, ML2.6, ML2.5(NAO), Confirmed Earthquake

UPP 01 10:41:44.0±2.1, 61°.99N×5°.84E, h0km, ML2.4, Presumed earthquake

IDC 01 10:41:45.0±3.0, 62°.27N×6°.17E, h0km, mbtmp3.7/2, ML2.8/3, Error ellipse: s-maj=27.7km s-min=14.8km az=58.0

ISC 01 10:41:42.6±1.0**, 62°.14N**±0°.03×**5°.60E**±0°.03**, h29km**±9km**, n176,** σ**2s.00**/289**, 4C-4D, Southern Norway**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOO	Floro	0.60	206	Pg	Pb	10 41 54.5	-0.1
FOO				Sg	Sb	10 42 02.7	-0.1
FOO	Floro	0.60	206	eP	Pb	10 41 54.5	-0.1
FOO				eS	Sb	10 42 02.6	-0.1
FOO				IAML		10 42 03.8	
	comp=Z,392nm,0.4s						
FOO	Floro	0.60	206	i P	Pb	10 41 54.5	-0.1
FOO				i S	Sb	10 42 02.6	-0.1
FOO				IAML		10 42 03.8	
	comp=Z,392nm,0.4s						
AKN	Aaknes	0.66	86	Pg	Pb	10 41 54.7	-0.9
AKN				Sg	Sb	10 42 03.1	-1.3
AKN	Aaknes	0.66	86⇓	eP	Pb	10 41 54.5	-1.1
AKN				eS	Sb	10 42 03.4	-1.0
AKN				IAML		10 42 03.6	
	comp=Z,351nm,0.2s						
AKN	Aaknes	0.66	86⇓	iP	Pb	10 41 54.5	-1.1
AKN				i S	Sb	10 42 03.4	-1.0
AKN				IAML		10 42 03.6	
	comp=Z,351nm,0.2s						
MOL	Molde	1.01	63	Pg	Pb	10 42 00.8	-0.6
MOL				Sg	Sb	10 42 13.8	-0.5
MOL	Molde	1.01	63	eP	Pb	10 42 00.7	-0.8
MOL				eS	Sb	10 42 14.2	-0.1
MOL				IAML		10 42 19.2	
	comp=Z,234nm,0.2s						
MOL	Molde	1.01	63	eP	Pb	10 42 00.7	-0.8
MOL				eS	Sb	10 42 14.2	-0.1
MOL				IAML		10 42 19.2	
	comp=Z,234nm,0.2s						
HYA	Hoyanger	1.01	164	Pg	Pb	10 42 01.5	0.0
HYA				Sg	Sn	10 42 15.2	+1.2
HYA	Hoyanger	1.01	164⇑	eP	Pb	10 42 01.4	0.0
HYA				eS	Sn	10 42 15.1	+1.2
HYA				IAML		10 42 18.7	
	comp=Z,384nm,0.2s						
HYA	Hoyanger	1.01	164⇑	eP	Pb	10 42 01.4	0.0
HYA				eS	Sn	10 42 15.1	+1.2
HYA				IAML		10 42 18.7	
	comp=Z,384nm,0.2s						
SUE	Sulen	1.15	201	Pg	Pn	10 42 04.0	+1.3
SUE				Sg	Sn	10 42 19.9	+2.4
SUE	Sulen	1.15	201⇓	eP	Pn	10 42 04.0	+1.3
SUE				eS	Sn	10 42 19.8	+2.4
SUE				IAML		10 42 23.4	
	comp=Z,165nm,0.2s						
SUE	Sulen	1.15	201⇓	eP	Pn	10 42 04.0	+1.3
SUE				eS	Sn	10 42 19.8	+2.4
SUE				IAML		10 42 23.4	
	comp=Z,165nm,0.2s						
BAS02	BAS02	1.57	192	eP	Pn	10 42 10.5	+2.2
BAS02				eS	Sb	10 42 30.8	+0.6
BAS02				IAML		10 42 32.8	
	comp=Z,130nm,0.5s						
BAS03	BAS03	1.62	189	eP	Pn	10 42 10.9	+1.8
BAS03				eS	Sn	10 42 31.0	+2.1
BAS03				IAML		10 42 35.8	
	comp=Z,234nm,0.1s						
DOMB	Dombas	1.63	92	Pb	Pb	10 42 12.2	+0.1
DOMB				Sb	Sb	10 42 32.9	+0.8
DOMB	Dombas	1.63	92	eP	Pb	10 42 12.1	+0.1
DOMB				eS	Sb	10 42 33.0	+0.8
DOMB	Dombas	1.63	92	eP	Pb	10 42 12.1	+0.1
DOMB				eS	Sb	10 42 33.0	+0.8
BAS0D	BAS04	1.65	185	eP	Pn	10 42 11.3	+1.9
BAS0D				eS	Sb	10 42 32.2	-0.3
BAS0D				IAML		10 42 36.4	
	comp=Z,100nm,0.2s						
ASK	Askoy	1.67	187	Pb	Pn	10 42 11.8	+2.0
ASK				Sb	Sb	10 42 33.0	-0.2
ASK	Askoy	1.67	187⇑	eP	Pn	10 42 11.8	+2.0
ASK				eS	Sb	10 42 32.7	-0.5
ASK				IAML		10 42 36.1	
	comp=Z,171nm,0.5s						
ASK	Askoy	1.67	187⇑	eP	Pn	10 42 11.8	+2.0
ASK				eS	Sb	10 42 32.7	-0.5
ASK				IAML		10 42 36.1	
	comp=Z,171nm,0.5s						
BER	Bergen	1.76	184	Pb	Pn	10 42 13.0	+1.9
BER				Sb	Sb	10 42 35.2	-0.6
BER	Bergen	1.76	184	eP	Pn	10 42 12.9	+1.9
BER				eS	Sb	10 42 35.0	-0.8
BER				e		10 42 37.8	
BER				IAML		10 42 38.7	
	comp=Z,284nm,0.3s						
BER	Bergen	1.76	184	eP	Pn	10 42 12.9	+1.9
BER				eS	Sb	10 42 35.0	-0.8
BER				eSB	Sn	10 42 37.8	+5.4
BER				IAML		10 42 38.7	
	comp=Z,284nm,0.3s						
BAS15	BAS15	1.91	189	eP	Pn	10 42 14.8	+1.7
BAS15				eS	Sn	10 42 38.1	+2.0
BAS15				IAML		10 42 43.2	
	comp=Z,100nm,0.6s						
BAS16	BAS16	1.92	186	eP	Pn	10 42 14.9	+1.7
BAS16				eS	Sn	10 42 38.1	+1.8
BAS16				IAML		10 42 46.2	
	comp=Z,75nm,0.5s						
SKAR	Skarslia	1.96	137	Pn	Pb	10 42 16.5	-1.0
SKAR				Sg	Sb	10 42 42.8	+1.4
SKAR	Skarslia	1.96	137	eP	Pn	10 42 16.0	+2.2
SKAR				eSg	Sb	10 42 42.6	+1.1
SKAR				IAML		10 42 44.0	
	comp=Z,313nm,0.2s						
BAS17	BAS17	1.96	183	eP	Pn	10 42 15.5	+1.7
BAS17				eS	Sn	10 42 39.2	+1.8
BAS17				IAML		10 42 45.5	
	comp=Z,71nm,0.4s						
ODD1	Odda	2.29	167	eP	Pn	10 42 20.7	+2.3
ODD1				eS	Sn	10 42 48.4	+2.9
ODD1				IAML		10 42 54.6	
	comp=Z,73nm,0.2s						
ODD1	Odda	2.29	167	eP	Pn	10 42 20.7	+2.3
ODD1				eS	Sn	10 42 48.4	+2.9
ODD1				IAML		10 42 54.6	
	comp=Z,73nm,0.2s						
NC2	NORSAR Subarra	2.64	107	Pn	Pn	10 42 25.2	+2.1
NC2	NORSAR Subarra	2.64	107	Pn	Pn	10 42 25.2	+2.1
NC2	NORSAR Subarra	2.64	107	eP	Pn	10 42 25.2	+2.1
NBO	NORSAR Subarra	2.71	112	Pn	Pn	10 42 26.6	+2.4
NBO	NORSAR Subarra	2.71	112	Pn	Pn	10 42 26.6	+2.4
NBO	NORSAR Subarra	2.71	112	eP	Pn	10 42 26.6	+2.4
BLS5	Blasjo	2.75	171	Pn	Pn	10 42 27.0	+2.2
BLS5				Sn	Sn	10 42 59.5	+2.5
BLS5	Blasjo	2.75	171	eP	Pn	10 42 27.0	+2.2
BLS5				eS	Sn	10 42 58.7	+1.7
BLS5				IAML		10 43 15.4	
	comp=Z,49nm,0.6s						
BLS5	Blasjo	2.75	171	eP	Pn	10 42 27.0	+2.2
BLS5				eS	Sn	10 42 58.7	+1.7
BLS5				IAML		10 43 15.4	
	comp=Z,49nm,0.6s						
NAO	NORSAR Subarra	2.83	115	Pn	Pn	10 42 28.3	+2.5
NAO	NORSAR Subarra	2.83	115	Pn	Pn	10 42 28.3	+2.5
NAO	NORSAR Subarra	2.83	115	eP	Pn	10 42 28.3	+2.5
NB2	NORSAR Subarra	2.90	110	Pn	Pn	10 42 28.9	+2.1
NB2				Pn	Pb	10 42 29.1	-4.5
	baz=296,slow=14						
NB2	NORSAR Subarra	2.90	110	Pn	Pn	10 42 28.9	+2.1
NB2	NORSAR Subarra	2.90	110	eP	Pn	10 42 28.9	+2.1
NOA	NORSAR Array B	2.90	110	Pn	Pn	10 42 28.5	+1.7
	comp=Z,0.6nm,0.3s,baz=302,slow=17,SNR=22						
NOA				Lg	Lg	10 43 09.4	
	comp=Z,1.5nm,0.3s,baz=298,slow=17,SNR=8.3						
NC3	NORSAR Subarra	2.91	105	Pn	Pn	10 42 28.9	+2.1
NC3	NORSAR Subarra	2.91	105	Pn	Pn	10 42 28.9	+2.1
NC3	NORSAR Subarra	2.91	105	eP	Pn	10 42 28.9	+2.1
KMY	Karmoy	2.94	184	Pn	Pn	10 42 29.2	+1.9
KMY				Sn	Sn	10 43 03.1	+1.6
KMY	Karmoy	2.94	184	eP	Pn	10 42 29.0	+1.8
KMY				eS	Sn	10 43 02.0	+0.6
KMY				IAML		10 43 17.1	
	comp=Z,28nm,0.5s						
KMY	Karmoy	2.94	184	eP	Pn	10 42 29.0	+1.8
KMY				eS	Sn	10 43 02.0	+0.6
KMY				IAML		10 43 17.1	
	comp=Z,28nm,0.5s						
NC4	NORSAR Subarra	3.11	107	Pn	Pn	10 42 31.4	+1.7
NC4	NORSAR Subarra	3.11	107	Pn	Pn	10 42 31.4	+1.7
NC4	NORSAR Subarra	3.11	107	eP	Pn	10 42 31.4	+1.7
NC6	NORSAR Subarra	3.14	114	Pn	Pn	10 42 32.2	+2.2
NC6				Sn	Sn	10 43 07.9	+1.5
NC6	NORSAR Subarra	3.14	114	Pn	Pn	10 42 32.2	+2.2
NC6				Sn	Sn	10 43 07.9	+1.5
NC6	NORSAR Subarra	3.14	114	eP	Pn	10 42 32.2	+2.2
NC6				eS	Sn	10 43 07.9	+1.5
KONO	Kongsberg	3.17	140	eP	Pn	10 42 33.6	+3.2
KONO	Kongsberg	3.17	140	eP	Pn	10 42 33.6	+3.2
NRA0	NORESS Array S	3.18	114	Pn	Pn	10 42 32.2	+1.6
	baz=298,slow=12						
NRA0				Sg	Sb	10 43 18.0	+1.4
	baz=307,slow=37						
NRA0	NORESS Array S	3.18	114	Pn	Pn	10 42 32.2	+1.6
NRA0				Sg	Sb	10 43 18.0	+1.4
NRA0	NORESS Array S	3.18	114	eP	Pn	10 42 32.2	+1.6
NRA0				eSB	Sb	10 43 18.0	+1.4
STAV	Stavanger	3.21	179	Pn	Pn	10 42 32.7	+1.7
STAV				Sn	Sn	10 43 09.3	+1.1
STAV	Stavanger	3.21	179	eP	Pn	10 42 32.7	+1.7
STAV				eS	Sn	10 43 09.3	+1.1
STAV				IAML		10 43 23.3	
	comp=Z,19nm,0.2s						
OSL	Oslo	3.33	129	eS	Sn	10 43 13.1	+2.0
OSL				IAML		10 43 29.6	
	comp=Z,51nm,0.6s						
OSL	Oslo	3.33	129	eS	Sn	10 43 13.1	+2.0
OSL				IAML		10 43 29.6	
	comp=Z,51nm,0.6s						
NSS	Namsos	3.74	47	eP	Pn	10 42 40.6	+2.4
NSS				eS	Sn	10 43 24.5	+3.2
NSS				IAML		10 43 45.6	
	comp=Z,18nm,0.4s						
NSS	Namsos	3.74	47	eP	Pn	10 42 40.7	+2.4
SNART	Snartemo	3.89	167	eP	Pn	10 42 42.4	+2.1
SNART				eS	Sn	10 43 26.2	+1.3
SNART				IAML		10 43 51.3	
	comp=Z,44nm,0.9s						
SNART	Snartemo	3.89	167	eP	Pn	10 42 42.4	+2.1
SNART				eS	Sn	10 43 26.2	+1.3
SNART				IAML		10 43 51.3	
	comp=Z,44nm,0.9s						
SNART	Snartemo	3.89	167	i P	Pn	10 42 42.5	+2.1
SNART				i S	Sn	10 43 25.9	+0.9
HOMB	Homborsund	4.14	158	i P	Pn	10 42 48.5	+4.8
HOMB				i S	Sn	10 43 31.8	+0.7
STRU	Stroemstad	4.15	136	eP	Pn	10 42 46.1	+2.2
STRU				eS	Sn	10 43 32.1	+0.7
STRU	Stroemstad	4.15	136	eP	Pn	10 42 46.1	+2.2
STRU				eS	Sn	10 43 32.1	+0.7
STRU	Stroemstad	4.15	136	eP	Pn	10 42 47.4	+3.4
STRU				i S	Sn	10 43 30.8	-0.6
FINU	Finntorp	4.34	126	P	Pn	10 42 48.3	+1.7
FINU	Finntorp	4.34	126	eP	Pn	10 42 48.3	+1.7
FINU	Finntorp	4.34	126	P	Pn	10 42 48.3	+1.7
UDD	Uddeholm	4.39	114	S	Sn	10 43 39.2	+1.9
UDD	Uddeholm	4.39	114	S	Sn	10 43 39.2	+1.9
HFS	Hagfors	4.41	113	Pn	Pn	10 42 49.2	+1.8
	baz=296,slow=14						
HFS	Hagfors	4.41	113	Pn	Pn	10 42 49.2	+1.8
HFS	Hagfors	4.41	113	eP	Pn	10 42 49.2	+1.8
VANU	Vaenersborg	4.87	136	P	Pn	10 42 55.1	+1.3
VANU				S	Sn	10 43 47.5	-1.5
VANU	Vaenersborg	4.87	136	eP	Pn	10 42 55.1	+1.3
VANU				eS	Sn	10 43 47.5	-1.5
VANU	Vaenersborg	4.87	136	P	Pn	10 42 55.1	+1.3
VANU				S	Sn	10 43 47.5	-1.5
ROTU	Roteberg	4.90	94	P	Pn	10 42 56.3	+2.1
ROTU	Roteberg	4.90	94	eP	Pn	10 42 56.3	+2.1
ROTU	Roteberg	4.90	94	P	Pn	10 42 56.3	+2.1
TJOU	Tjoern	5.10	141	eP	Pn	10 42 59.0	+2.1
TJOU				i S	Sn	10 43 55.2	+0.4
HASU	Hassela	5.17	85	P	Pn	10 43 00.4	+2.6
HASU				S	Sn	10 43 57.8	+1.4
HASU	Hassela	5.17	85	eP	Pn	10 43 00.4	+2.6
HASU				eS	Sn	10 43 57.8	+1.4
HASU	Hassela	5.17	85	P	Pn	10 43 00.4	+2.6
HASU				S	Sn	10 43 57.8	+1.4
LEIR	Leirfjorden	5.17	36	Pn	Pn	10 43 01.1	+3.3
LEIR				Sn	Sn	10 43 59.2	+2.7
LEIR	Leirfjorden	5.17	36	eP	Pn	10 43 00.6	+2.7
LEIR				eS	Sn	10 43 57.7	+1.2
LEIR				IAML		10 44 30.9	
	comp=Z,6.4nm,0.6s						
LEIR	Leirfjorden	5.17	36	eP	Pn	10 43 00.6	+2.7
LEIR				eS	Sn	10 43 57.7	+1.2
LEIR				IAML		10 44 30.9	
	comp=Z,6.4nm,0.6s						
STOK	Stokkvaagen	5.31	34	Pn	Pn	10 43 02.3	+2.6
STOK	Stokkvaagen	5.31	34	eP	Pn	10 43 02.7	+2.9
STOK				IAML		10 44 08.0	
	comp=Z,6.7nm,0.5s						
STOK	Stokkvaagen	5.31	34	eP	Pn	10 43 02.7	+2.9
STOK				IAML		10 44 08.0	
	comp=Z,6.7nm,0.5s						
ARNU	Arnoeviken	5.58	89	P	Pn	10 43 05.4	+1.9
	baz=262						
ARNU				S	Sn	10 44 07.6	+1.0
ARNU	Arnoeviken	5.58	89	eP	Pn	10 43 05.5	+1.9
ARNU	Arnoeviken	5.58	89	P	Pn	10 43 05.4	+1.9
	baz=262						
ARNU				S	Sn	10 44 07.6	+1.0
MOR8	Moi Rana	5.60	40	eP	Pn	10 43 08.5	+4.8
MOR8				eS	Sn	10 44 13.3	+6.3
MOR8				IAML		10 44 23.9	
	comp=Z,4.1nm,0.4s						
MOR8	Moi Rana	5.60	40	eP	Pn	10 43 08.5	+4.8
MOR8				eS	Sn	10 44 13.3	+6.3
MOR8				IAML		10 44 23.9	
	comp=Z,4.1nm,0.4s						
VAGH	Vaagaholmen	5.68	32	Pn	Pn	10 43 06.0	+1.1
VAGH				Sn	Sn	10 44 10.2	+1.2
VAGH	Vaagaholmen	5.68	32	eP	Pn	10 43 06.7	+1.9
VAGH				eS	Sn	10 44 09.4	+0.4
VAGH				IAML		10 44 25.3	
	comp=Z,4.5nm,1.0s						
VAGH	Vaagaholmen	5.68	32	eP	Pn	10 43 06.7	+1.9
VAGH				eS	Sn	10 44 09.4	+0.4
VAGH				IAML		10 44 25.3	
	comp=Z,4.5nm,1.0s						
ONAU	Onsala	5.72	143	i P	Pn	10 43 08.8	+3.4
ONAU				i S	Sn	10 44 10.7	+0.6
BORU	Boraas	5.78	138	i P	Pn	10 43 07.9	+1.7
BORU				i S	Sn	10 44 10.6	-0.8
HEMU	Hemsoen	5.81	79	P	Pn	10 43 08.9	+2.3
HEMU				S	Sn	10 44 13.6	+1.5
HEMU	Hemsoen	5.81	79	eP	Pn	10 43 08.9	+2.3
HEMU				eS	Sn	10 44 13.6	+1.5
HEMU	Hemsoen	5.81	79	P	Pn	10 43 08.9	+2.3
HEMU				S	Sn	10 44 13.6	+1.5
OSTU	Oestervaala	5.90	104	P	Pn	10 43 08.5	+0.7
OSTU				S	Sn	10 44 14.3	0.0
OSTU	Oestervaala	5.90	104	eP	Pn	10 43 08.5	+0.7
OSTU				eS	Sn	10 44 14.3	0.0
OSTU	Oestervaala	5.90	104	P	Pn	10 43 08.5	+0.7
OSTU				S	Sn	10 44 14.3	0.0
BIGH	Upper Bighouse	5.97	237	eP	Pn	10 43 10.2	+1.3
BIGH				eS	Sn	10 44 14.6	-1.6
BIGH	Upper Bighouse	5.97	237	eP	Pn	10 43 10.2	+1.3
BIGH				eS	Sn	10 44 14.6	-1.6
BACU	Backbrunna	6.05	107	P	Pn	10 43 11.3	+1.4
BACU				S	Sn	10 44 18.8	+0.8
BACU	Backbrunna	6.05	107	eP	Pn	10 43 11.3	+1.4
BACU				eS	Sn	10 44 18.8	+0.8
BACU	Backbrunna	6.05	107	P	Pn	10 43 11.3	+1.4
BACU				S	Sn	10 44 18.8	+0.8
FIBU	Brunna	6.14	106	P	Pn	10 43 12.1	+0.9
FIBU	Brunna	6.14	106	eP	Pn	10 43 12.1	+0.9
FIBU	Brunna	6.14	106	P	Pn	10 43 12.1	+0.9
FLYU	Flymyra	6.28	103	P	Pn	10 43 14.5	+1.4
FLYU				S	Sn	10 44 23.8	0.0
FLYU	Flymyra	6.28	103	eP	Pn	10 43 14.5	+1.4
FLYU				eS	Sn	10 44 23.8	0.0
FLYU	Flymyra	6.28	103	P	Pn	10 43 14.5	+1.4
FLYU				S	Sn	10 44 23.8	0.0
HUSU	Husum	6.38	73	P	Pn	10 43 16.3	+1.9
HUSU				S	Sn	10 44 26.6	+0.6
HUSU	Husum	6.38	73	eP	Pn	10 43 16.3	+1.9
HUSU				eS	Sn	10 44 26.6	+0.6
HUSU	Husum	6.38	73	P	Pn	10 43 16.3	+1.9
HUSU				S	Sn	10 44 26.6	+0.6
GRAU	Graesoe	6.50	100	P	Pn	10 43 17.4	+1.3
GRAU				S	Sn	10 44 28.8	-0.4
GRAU	Graesoe	6.50	100	eP	Pn	10 43 17.4	+1.3
GRAU				eS	Sn	10 44 28.8	-0.4
GRAU	Graesoe	6.50	100	P	Pn	10 43 17.4	+1.3
GRAU				S	Sn	10 44 28.8	-0.4
DRUM	Mains of Drumt	6.66	222	eS	Sn	10 44 31.7	-1.4
DRUM	Mains of Drumt	6.66	222	eS	Sn	10 44 31.7	-1.4
FAUS	Fauske	6.70	34	Pn	Pn	10 43 21.6	+2.8
FAUS				Sn	Sn	10 44 35.3	+1.4
FAUS	Fauske	6.70	34	eP	Pn	10 43 21.8	+3.0
FAUS				eS	Sn	10 44 34.8	+0.9
FAUS				IAML		10 44 41.9	
	comp=Z,4.5nm,0.4s						
FAUS	Fauske	6.70	34	eP	Pn	10 43 21.8	+3.0
FAUS				eS	Sn	10 44 34.8	+0.9
FAUS				IAML		10 44 41.9	
	comp=Z,4.5nm,0.4s						
BOGU	Bogesund	6.73	108	P	Pn	10 43 20.9	+1.6
BOGU	Bogesund	6.73	108	P	Pn	10 43 20.9	+1.6
LOF	Lofoten	6.88	26	eP	Pn	10 43 22.1	+0.8
LOF				eS	Sn	10 44 33.1	-5.4
LOF				IAML		10 44 48.9	
	comp=Z,8.2nm,0.6s						
LOF	Lofoten	6.88	26	eP	Pn	10 43 22.1	+0.8
LOF				IAML		10 44 48.9	
	comp=Z,8.2nm,0.6s						
DEL	Delary	7.08	140	i P	Pn	10 43 27.3	+3.2
DEL				i S	Sn	10 44 40.8	-2.6
STEI	Steigen	7.10	31	eP	Pn	10 43 26.3	+2.0
STEI				IAML		10 44 55.3	
	comp=Z,2.0nm,0.7s						
STEI	Steigen	7.10	31	eP	Pn	10 43 26.3	+2.0
STEI				IAML		10 44 55.3	
	comp=Z,2.0nm,0.7s						
KPL	Plockton	7.44	235	eP	Pn	10 43 30.6	+1.6
KPL				eS	Sn	10 44 49.6	-2.7
KPL	Plockton	7.44	235	eP	Pn	10 43 30.6	+1.6
KPL				eS	Sn	10 44 49.6	-2.7
SALU	Saltoluokta	7.61	41	eP	Pn	10 43 34.3	+2.9
SALU	Saltoluokta	7.61	41	eP	Pn	10 43 34.3	+2.9
KPF	Kankaanpaa	7.76	85	eP	Pn	10 43 36.3	+2.9
RAF	Rauma	7.79	91	eP	Pn	10 43 33.1	-0.7
BLEU	Blekinge	7.84	134	eP	Pn	10 43 36.1	+1.5
BLEU				i S	Sn	10 44 59.5	-2.7
EKA	Eskdalemuir Ar	8.20	218	Pn	Pn	10 43 41.7	+2.3
	baz=31,slow=14						
EKA	Eskdalemuir Ar	8.20	218	Pn	Pn	10 43 41.7	+2.3
ESK	Eskdalemuir	8.22	218	eP	Pn	10 43 40.6	+0.8
ESK				eS	Sn	10 45 07.9	-3.7
ESK	Eskdalemuir	8.22	218	eP	Pn	10 43 40.6	+0.8
ESK				eS	Sn	10 45 07.9	-3.7
KEF	Keuruu	9.02	81	eP	Pn	10 43 52.4	+1.8
KIF	Kilpisjarvi	9.31	36	eP	Pn	10 43 56.9	+2.3
KIF	Kilpisjarvi	9.31	36	eP	Pn	10 43 56.9	+2.3
JETT	Jettan, Norway	9.58	33	eP	Pn	10 44 00.3	+2.0
JETT	Jettan, Norway	9.58	33	eP	Pn	10 44 00.3	+2.0
FIA0	FINESS Array S	9.71	85	Pn	Pn	10 44 02.2	+2.0
	baz=291,slow=12						
FIA0				Sn	Sn	10 45 44.9	-3.2
	baz=278,slow=22						
FIA0	FINESS Array S	9.71	85	Pn	Pn	10 44 02.2	+2.0
FIA0				Sn	Sn	10 45 44.9	-3.2
FINES	FINESS Array B	9.71	85	Pn	Pn	10 44 01.4	+1.2
	comp=Z,0.3nm,0.3s,baz=285,slow=11,SNR=20						
FINES				Sn	Sn	10 45 44.9	-3.2
	comp=Z,0.3nm,0.3s,baz=286,slow=20,SNR=5.8						
FINES				Lg	Lg	10 46 36.7	
	comp=Z,0.8nm,0.3s,baz=286,slow=23,SNR=7.0						
	comp=Z,0.9nm,0.3s						
HEF	Hetta	9.81	42	eP	Pn	10 44 02.9	+1.5
HEF	Hetta	9.81	42	eP	Pn	10 44 02.9	+1.5
KTK1	Kautokeino	10.01	39	eP	Pn	10 44 06.2	+2.0
KTK1	Kautokeino	10.01	39	eP	Pn	10 44 06.2	+2.0
ARA0	ARCESS Array S	10.97	39	Pn	Pn	10 44 18.3	+1.0
	baz=234,slow=14						
ARA0				Sn	Sn	10 46 15.6	-3.2
	baz=229,slow=22						
ARA0	ARCESS Array S	10.97	39	Pn	Pn	10 44 18.3	+1.0
ARA0				Sn	Sn	10 46 15.6	-3.2
ARA0	ARCESS Array S	10.97	39	eP	Pn	10 44 18.3	+1.0
ARA0				eS	Sn	10 46 15.6	-3.2

ARCES	ARCESS Array B	10.97	39	Pn	Pn	10 44 17.3	-0.1
	comp=Z,0.1nm,0.3s,baz=233,slow=13,SNR=1.8						
ARCES				Sn	Sn	10 46 13.4	-5.4
	comp=Z,0.1nm,0.3s,baz=238,slow=22,SNR=1.5						
	comp=Z,3.8nm,1.0s						

IDC 01 10:42:42.3±3.1,6°.49S×147°.11E,h0km,mb3.0/1, mbtmp3.1/3,ML3.2/1,Error ellipse: s-maj=67.8km s-min=34.6km az=86.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	2.90	179	Pn	Pn	10 43 29.4	-0.4
	9.2nm,0.4s,baz=0.0,slow=8.1,SNR=16						
PMG				Sn	Sn	10 44 05.6	+0.2
	4.2nm,0.3s,baz=315,slow=20,SNR=5.8						
WRA	Warramunga Arr	18.24	222	P	P	10 46 57.4	0.0
	0.1nm,0.3s,baz=48,slow=12,SNR=6.6						
	0.5nm,1.0s						
ASAR	Alice Springs	21.28	215	P	P	10 47 31.1	+0.5
	0.2nm,0.3s,baz=39,slow=9.8,SNR=8.9						
	0.2nm,0.3s						
TORD	Torodi Ar. Bea	145.31	284	PKPbc	PKPbc	11 02 21.9	-1.1
	0.3nm,0.6s,baz=85,slow=1.7,SNR=1.9						

IDC 01 10:55:07.8±2.3,6°.67S×128°.98E,h0km,mb3.2/1, mbtmp3.1/3,ML3.0/2,Error ellipse: s-maj=129.1km s-min=33.4km az=67.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.19	159	Pn	Pn	10 58 30.4	+0.2
	0.1nm,0.3s,baz=337,slow=13,SNR=5.0						
WRA				Sn	Sn	11 00 54.8	-14
	0.1nm,0.3s,baz=343,slow=21,SNR=6.9						
	0.5nm,1.1s						
ASAR	Alice Springs	17.55	165	P	Pn	10 59 13.9	-0.3
	0.1nm,0.3s,baz=353,slow=11,SNR=6.6						
	0.4nm,0.7s						
MKAR	Makanchi Array	67.40	327	P	P	11 06 05.2	+0.1
	0.1nm,0.6s,baz=134,slow=8.3,SNR=2.4						
	0.1nm,0.6s						

*IDC **01** 11:01:31.2±0.7,5°.03N×125°.41E,h0km,mb4.1/11, mbtmp4.1/12,ML4.1/1,Error ellipse: s-maj=55.3km s-min=13.9km az=73.0*
*MAN **01** 11:01:35.0,5°.45N×126°.40E,h1km,MS3.9*
*NEIC **01** 11:01:38.4±1.0,5°.41N±0°.07×126°.5E±0°.1,h52km±8km, mb4.5/17,Error ellipse: s-maj=15.2km s-min=9.4km az=71.0*
ISC 01 11:01:36.2±0.5,5°.40N±0°.06×126°.58E±0°.07,h35km,n62, σ1s.37/55,mb4.3/20,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	General Santos	1.75	293	*i* P	Pn	11 02 02.3	-2.0
GSPH				*i* S	Sn	11 02 24.1	-1.3
DAV	Davao City (W)	1.93	329	Pn	Pn	11 02 08.0	+1.5
	74nm,0.3s,baz=190,slow=6.1,SNR=16						
DAV				Sn	Sn	11 02 33.8	+4.2
	94nm,0.3s,baz=107,slow=19,SNR=8.3						
	223nm,0.4s						
DAV	Davao City (W)	1.93	329		Pn	11 02 07.6	+1.0
DAV	Davao City (W)	1.93	329	P	Pn	11 02 05.0	-1.5
DMPH	Davao City--Mi	1.98	328	*i* P	Pn	11 02 11.0	+3.8
DMPH				*i* S	Sn	11 02 46.9	+16
KCP	Kidapawan	2.17	317	*e*P	Pn	11 02 11.6	+1.6
KCP				*e*S	Sn	11 02 38.4	+2.7
BIPH	Bislig	2.77	356	*e*P	Pn	11 02 16.9	-1.2
BIPH				*e*S	Sn	11 02 49.3	-1.0
CTBH	Cotabato--PC H	2.94	308	*e*P	Pn	11 02 22.2	+1.9
CGP	Cagayan de Oro	3.56	328	*e*P	Pn	11 02 32.5	+3.6
CGP				*e*S	Sn	11 03 19.3	+10
SCPH	Surigao	4.48	346	*e*P	Pn	11 02 44.5	+2.9
SCPH				*e*S	Sn	11 03 43.0	+10
TNTI	Ternate	4.67	170	Pn	Pn	11 02 45.2	+1.0
PLP	Palo	5.94	345	*e*P	Pn	11 03 07.8	+6.2
TOLI2	Tolitoli	7.18	234	Pn	Pn	11 03 20.0	+1.2
RCP	Roxas	7.19	328	*i* P	Pn	11 03 25.0	+6.1
SIJI	Sorong	7.80	143	Pn	Pn	11 03 28.6	+1.4
	1.0nm,0.3s,baz=313,slow=23,SNR=1.7						
MYLDM	Lahad Datu	8.04	269	Pn	Pn	11 03 33.0	+2.4
SBUM	Sibu	14.62	259	Pn	Pn	11 05 01.0	+0.4
MTN	Manton Dam	18.69	166	P	P	11 05 51.7	+0.1
KNRA	Kununurra	21.06	174	P	P	11 06 18.6	+1.3
KNRA				IAmb	IAmb	11 06 48.5	
	comp=Z,42nm,1.4s						
WB0	Warramunga Arr	26.17	163		P	11 07 08.2	+0.7
WB0				IAmb	IAmb	11 07 34.7	
	comp=Z,9.0nm,1.1s						
WRA	Warramunga Arr	26.32	163	P	P	11 07 08.9	0.0
	comp=Z,1.5nm,0.7s,baz=342,slow=9.1,SNR=18						
	comp=Z,1.5nm,0.7s						
WRA	Warramunga Arr	26.32	163	P	P	11 07 07.4	-1.5
ASAR	Alice Springs	29.77	166	P	P	11 07 39.3	-0.4
	comp=Z,0.4nm,0.6s,baz=345,slow=8.4,SNR=9.2						
ASAR				PcP	PcP	11 10 43.5	+0.5
	comp=Z,0.4nm,0.5s,baz=345,slow=2.4,SNR=5.2						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	29.77	166	P	P	11 07 39.4	-0.2
STKA	Stephens Creek	39.74	160	P	P	11 09 06.5	+0.9
	comp=Z,1.2nm,0.7s,baz=324,slow=19,SNR=4.1						
	comp=Z,1.2nm,0.7s						
H11S3	WAKE ISLAND Hy	41.23	68	T	T	11 53 07.2	
	baz=256,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	41.24	68	T	T	11 53 09.9	
	baz=256,slow=75,SNR=9.2						
H11S2	WAKE ISLAND Hy	41.24	68	T	T	11 53 09.2	
	baz=256,slow=75,SNR=14						
GTA2	Gaotai	41.68	328	*e*P	P	11 09 21.4	-0.3
GTA2				pP	pP	11 09 29.4	-1.6
GTA2				pmax	pmax		
	comp=Z,1.0nm,1.1s						
GTA2				LR	LR		
	comp=N,240nm,15.2s						
GTA2				LR	LR		
	comp=E,150nm,14.9s						
GTA2				LR	LR		
	comp=Z,250nm,16.8s						
H11N1	WAKE ISLAND Hy	41.71	66	T	T	11 53 45.1	
	baz=255,slow=75,SNR=5.6						
H11N2	WAKE ISLAND Hy	41.72	66	T	T	11 53 50.0	
	baz=255						
H11N3	WAKE ISLAND Hy	41.72	66	T	T	11 53 47.8	
	baz=255,slow=75,SNR=4.6						
EVN	Everest	43.89	305	P	P	11 09 39.3	-1.1
ULN	Ulaanbaatar	45.49	342	P	P	11 09 52.0	-0.3
SONM	Songino Array	45.67	341	P	P	11 09 53.8	+0.1
	comp=Z,0.4nm,0.4s,baz=161,slow=9.2,SNR=4.1						
	comp=Z,0.4nm,0.4s						
SONM	Songino Array	45.67	341	IAmb	IAmb	11 10 17.3	
	comp=Z,3.2nm,0.9s						
PEA0B	Petropavlovsk-	53.95	23	P	P	11 10 56.7	+0.4
PETK	Petropavlovsk-	53.95	23	P	P	11 10 56.6	+0.3
MKAR	Makanchi Array	56.10	325	P	P	11 11 10.3	-1.8
	comp=Z,0.6nm,0.5s,baz=122,slow=8.1,SNR=8.3						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	56.10	325	P	P	11 11 12.0	-0.1
NIL	Nilore	56.79	307	P	P	11 11 15.9	-1.4
ZAA0	Zalesovo Array	59.04	333	P	P	11 11 32.0	-0.6
ZALV	Zalesovo Beam	59.04	333	P	P	11 11 31.5	-1.0
	comp=Z,0.6nm,0.4s,baz=139,slow=7.5,SNR=5.1						
	comp=Z,0.6nm,0.4s						
ZALV	Zalesovo Beam	59.04	333	P	P	11 11 31.9	-0.7
KURBB	Kurchatov Arra	60.26	327	P	P	11 11 39.2	-1.8
	comp=Z,1.7nm,0.6s,baz=129,slow=5.9,SNR=11						
KURK	Kurchatov	60.26	327	P	P	11 11 39.8	-1.2
KURK				IAmb	IAmb	11 11 46.5	
	comp=Z,3.8nm,0.6s						
GAR	Garm	60.69	312	P	P	11 11 43.3	-1.0
KK31	Karatay Array	61.91	316	P	P	11 11 51.1	-1.4
KK31				IAmb	IAmb	11 12 00.5	
	comp=Z,2.9nm,1.1s						
KKAR	Karatay Array	61.91	316	P	P	11 11 51.4	-1.0
BVAR	Borovoye Array	65.84	327	P	P	11 12 16.8	-1.3
	comp=Z,2.3nm,0.8s,baz=117,slow=8.3,SNR=8.2						
	comp=Z,2.3nm,0.8s						
NRIK	Noril'sk	68.78	346	P	P	11 12 37.6	+1.3
	comp=Z,1.7nm,0.5s,baz=146,slow=7.3,SNR=3.8						
	comp=Z,1.7nm,0.5s						
NRIK	Noril'sk	68.78	346	IAmb	IAmb	11 13 19.7	
	comp=Z,6.4nm,0.8s						
AB31	Akbulak array	70.77	320	P	P	11 12 48.0	-1.0
ABKAR	Akbulak array	70.77	320	P	P	11 12 47.9	-1.0
J14K	Nanvaranak Lak	76.07	26	P	P	11 13 20.9	+1.1
J14K				IAmb	IAmb	11 13 43.2	
	comp=Z,11nm,1.3s						
IMAR	Indian Mountai	80.89	24	P	P	11 13 46.9	+0.5
B21K	Ikpikpuk River	81.07	20	P	P	11 13 47.9	+0.6
B21K				IAmb	IAmb	11 14 04.4	
	comp=Z,7.3nm,1.1s						
H21K	Melozitna Rive	81.23	24	P	P	11 13 48.5	+0.2
H21K				IAmb	IAmb	11 14 06.0	
	comp=Z,7.3nm,1.4s						
SPITS	Spitsbergen Ar	88.82	349	P	P	11 14 25.4	-0.7
	comp=Z,7.3nm,1.0s,baz=75,slow=18,SNR=4.6						
	comp=Z,7.3nm,1.0s						
ARCES	ARCESS Array B	88.83	340	P	P	11 14 25.4	-0.9
	comp=Z,3.7nm,0.9s,baz=99,slow=5.3,SNR=3.7						
	comp=Z,3.7nm,0.9s						
FINES	FINESS Array B	90.29	332	P	P	11 14 32.0	-1.3
	comp=Z,5.6nm,1.0s,baz=68,slow=5.9,SNR=4.3						
	comp=Z,5.6nm,1.0s						
TORD	Torodi Ar. Bea	122.24	289	PKP	PKPdf	11 20 27.7	-0.8
	comp=Z,0.3nm,0.8s,baz=63,slow=1.3,SNR=2.0						

*MAN **01** 11:03:53.0,19°.81N×121°.29E,h19km,MS4.4*
*NEIC **01** 11:03:53.7±1.9,19°.75N±0°.07×121°.28E±0°.09,h24km±5km, mb4.8/46,Error ellipse: s-maj=12.3km s-min=10.2km az=112.0*
*BJI **01** 11:03:53.3,19°.70N×121°.40E,h40km,mB4.7/17,mb4.5/47, ML4.0/3,Ms4.1/32,Ms7 4.0/33*
*IDC **01** 11:03:55.0±2.0,19°.74N×121°.54E,h38km±16km,mb4.2/26, mbtmp4.5/30,ML4.5/4,MS3.8/32,Error ellipse: s-maj=16.6km s-min=9.8km az=77.0*
*DJA **01** 11:03:58.4±0.6,20°N±5°×12°2E±°,h82km±12km,M4.9/29, mb5.0/29,mB5.5/13,MLv4.8/5,Mw(mB)5.0/13*
ISC 01 11:03:55.5±0.3,19°.77N±0°.03×121°.32E±0°.04,h40km,n227, σ1s.63/221,mb4.7/64,MS3.8/35,1C-1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	Pasuquin	1.58	205	*e*P	Pn	11 04 21.2	+0.1
PIP				*i* S	Sn	11 04 40.8	+0.5
SIPP	Brgy, Tapao	2.01	204	*e*P	Pn	11 04 28.0	+1.0
SIPP				*e*S	Sn	11 04 48.8	-2.1
CVP	Callao Caves	2.11	167	*e*P	Pn	11 04 29.5	+1.1
CVP				*e*S	Sn	11 04 57.8	+4.5
TWGBT	Beinan	3.04	356	P	Pn	11 04 39.9	-1.3
TWGBT	Beinan	3.04	356	P	Pn	11 04 40.2	-1.0
TWG	Pinlang	3.04	356		Pn	11 04 39.3	-1.9
TPUB	Ta-pu	3.57	350	P	Pn	11 04 47.5	-1.0
TPUB	Ta-pu	3.57	350	P	Pn	11 04 48.0	-0.5
TPUB	Ta-pu	3.57	350		Pn	11 04 46.9	-1.6
YULB	Yu-li	3.60	360	P	Pn	11 04 49.5	+0.6
YULB	Yu-li	3.60	360	P	Pn	11 04 50.2	+1.3
YULB	Yu-li	3.60	360		Pn	11 04 48.6	-0.3
SSLB	Suanglung	4.01	355	P	Pn	11 04 53.1	-1.4
SSLB	Suanglung	4.01	355	P	Pn	11 04 56.3	+1.8
SSLB	Suanglung	4.01	355		Pn	11 04 53.5	-1.0
NACB	Ninganchiao	4.39	3	P	Pn	11 05 00.9	+1.2
NACB	Ninganchiao	4.39	3		Pn	11 04 59.8	+0.1
YHNB	Yeheng	4.88	1	P	Pn	11 05 07.4	+0.9
YHNB	Yeheng	4.88	1		Pn	11 05 07.2	+0.8
YOJ	Yonaguni jima	4.92	18	P	Pn	11 05 08.6	+1.6
YOJ	Yonaguni jima	4.92	18		Pn	11 05 06.9	-0.1
TATO	Taipei	5.18	2		Pn	11 05 10.3	-0.3
KNMB	Chin-men Tao	5.40	330		Pn	11 05 11.9	-1.7
TGY	Tagaytay City	5.65	184	Pn	Pn	11 05 16.4	-0.7
	24nm,0.3s,baz=52,slow=18,SNR=1.5						
	118nm,0.3s						
QZH2	Quanzhou	5.73	334	P	Pn	11 05 16.6	-1.6
QZH2				S	Sn	11 06 19.2	-3.5
QZH2				SMN			
	76nm,0.9s						
QZH2				SME			
	130nm,0.7s						
QZH2				L	L		
	comp=N,860nm,14.8s						
QZH2				L	L		
	comp=E,420nm,11.0s						
QZH2				L	L		
	comp=Z,790nm,15.1s						
GQP	Guinayangan	5.93	169	*e*P	Pn	11 05 22.5	+1.6
GQP				*e*S	Sn	11 06 31.1	+3.4
HKPS	Hong Kong Po S	7.16	292	P	Pn	11 05 36.3	-1.4
HKPS	Hong Kong Po S	7.16	292		Pn	11 05 35.8	-1.9
GZH2	Guangzhou	8.11	300	P	Pn	11 05 48.9	-1.8
GZH2				S	Sn	11 07 21.6	+0.5
GZH2				pmax	pmax		
	comp=Z,39nm,0.5s						
GZH2				L	L		
	comp=N,550nm,17.6s						
GZH2				L	L		
	comp=E,620nm,16.7s						
GZH2				L	L		
	comp=Z,1μm,16.7s						
JOW	Kunigami	9.50	41	Pn	Pn	11 06 09.0	-0.8
	30nm,0.3s,baz=219,slow=12,SNR=133						
JOW				Sn	Sn	11 07 48.8	-6.5
	0.5nm,0.3s,baz=163,slow=19,SNR=1.1						
	63nm,0.3s						
JOW	Kunigami	9.50	41		Pn	11 06 09.5	-0.3
QIZ	Qiongzhong	10.86	268	P	Pn	11 06 28.1	-0.4
QIZ	Qiongzhong	10.86	268	P	Pn	11 06 27.5	-1.0
QIZ				pP		11 06 33.0	
QIZ				S	Sn	11 08 25.7	-3.0
QIZ				pmax	pmax		
	comp=Z,62nm,0.9s						
QIZ				L	L		
	comp=N,180nm,14.1s						
QIZ				L	L		
	comp=E,370nm,15.9s						
QIZ				L	L		
	comp=Z,520nm,17.7s						
NJ2	Nanjing	12.43	350	*e*P	Pn	11 06 51.4	+1.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
JSU	Suzuyama	14.29	33	Pn	Pn	11 07 15.7	+0.5
KKM	Kota Kinabalu	14.52	201	Pn	Pn	11 07 19.4	+0.9
ENH	Enshi	14.97	317	P	Pn	11 07 25.8	+1.4
JNU	Nakatsue	15.80	31	Pn	Pn	11 07 34.8	-0.5
	0.4nm,0.3s,baz=205,slow=17,SNR=7.8						
JNU				LR	LR	11 13 30.0	
	comp=Z,210nm,21.4s,baz=196,slow=37						
	24nm,1.3s						
SGSI	Sangihe	16.51	165	P	Pn	11 07 43.9	-0.3
LYN	LuoYang	16.68	334	P	P	11 07 50.2	+1.9
LYN				pmax	pmax		
	comp=Z,42nm,0.8s						
LYN				pmax	pmax		
	comp=Z,230nm,5.4s						
LYN				L	L		
	comp=N,370nm,15.1s						
LYN				L	L		
	comp=E,220nm,14.4s						
LYN				L	L		
	comp=Z,540nm,15.1s						
TIA	Tai'an	16.79	348	P	P	11 07 49.3	-0.2
TIA				pmax	pmax		
	comp=Z,11nm,0.8s						
TIA				L	L		
	comp=N,250nm,18.0s						
TIA				L	L		
	comp=E,400nm,18.0s						
TIA				L	L		
	comp=Z,440nm,17.8s						
TJN	Taejon	17.38	17	P	Pn	11 07 54.7	-0.2
TJN				IAmb	IAmb	11 07 57.3	
	comp=Z,47nm,0.7s						
JMN	Monobe	17.84	36	P	Pn	11 07 58.9	-1.8
XAN	Xi'an	17.98	325	P	P	11 08 04.2	+1.5
XAN				pP	pwP	11 08 14.7	-0.3
XAN				S	S	11 11 28.6	+1.6
XAN				pmax	pmax		
	comp=Z,16nm,1.3s						
XAN				L	L		
	comp=Z,410nm,18.5s						
XAN				L	L		
	comp=Z,320nm,18.5s						
XAN				L	L		
	comp=Z,440nm,17.2s						
HNS	HongShan	18.49	343	⇑P	Pn	11 08 11.3	+2.7
HNS				pmax	pmax		
	comp=Z,21nm,1.0s						
HNS				L	L		
	comp=Z,310nm,15.3s						
HNS				L	L		
	comp=Z,340nm,14.9s						
KSAR	Wonju Array Be	18.52	17	P	P	11 08 07.8	-0.7
MNI	Manado	18.54	169	P	P	11 08 08.3	-0.6
	comp=Z,260nm,0.8s						
KSRS	Korea Array	18.54	17	P	P	11 08 08.6	-0.1
	comp=Z,1.7nm,0.3s,baz=198,slow=11,SNR=25						
KSRS				LR	LR	11 16 15.3	
	comp=Z,90nm,19.6s,baz=200,slow=40						
	comp=Z,5.0nm,0.4s						
TOLI2	Tolitoli	18.55	182	P	P	11 08 08.7	-0.3
KS19	Wonju Array Si	18.57	17	P	P	11 08 08.7	-0.4
KS19				IAmb	IAmb	11 08 14.7	
	comp=Z,117nm,1.9s						
GTOI	Gorontalo	19.09	175	P	P	11 08 14.1	-0.8
	comp=Z,859nmcomp=Z,45nm,0.8s						
MRSI	Marisa	19.18	178	P	Pn	11 08 17.9	+0.8
	comp=Z,1μmcomp=Z,36nm,0.7s						
PZH	PanZhiHua	19.20	294	P	Pn	11 08 17.1	-0.3
CD2	Chengdu	19.34	308	P	Pn	11 08 19.8	+0.8
CD2				S	S	11 11 49.4	-5.0
CD2				SS	SnSn	11 12 18.0	+8.6
CD2				pmax	pmax		
	comp=Z,40nm,0.8s						
CD2				pmax	pmax		
	comp=Z,210nm,4.3s						
CD2				L	L		
	comp=Z,390nm,13.9s						
CD2				L	L		
	comp=Z,780nm,17.3s						
CD2				L	L		
	comp=Z,810nm,15.5s						
MPSI	Mapaga	19.36	184	P	P	11 08 17.4	-0.5
SBUM	Sibu	19.38	208	P	P	11 08 18.8	+0.7
SBUM	Sibu	19.38	208		Pn	11 08 19.0	-0.5
SBUM	Sibu	19.38	208	P	Pn	11 08 20.0	+0.6
TNTI	Ternate	19.79	162	P	P	11 08 20.2	-2.4
TNTI	Ternate	19.79	162		P	11 08 22.5	-0.1
TNTI				IAmb	IAmb	11 08 30.4	
	comp=Z,106nm,1.2s						
TNTI	Ternate	19.79	162	P	P	11 08 22.4	-0.1
	comp=Z,2μmcomp=Z,80nm,0.9s						
JCJ	Chichijima	20.47	65	LR	LR	11 15 17.8	
	comp=Z,132nm,20.8s,baz=136,slow=34						
JCJ	Chichijima	20.47	65	P	P	11 08 30.6	+0.6
BJI2	Beijing	20.66	349	P	Pn	11 08 33.6	-0.8
BJI2				pP	pP	11 08 39.1	-1.8
BJI2				pmax	pmax		
	comp=Z,14nm,0.7s						
BJT	Baijiatuau	20.66	349	P	P	11 08 32.2	+0.3
INU	Inuyama	20.80	39	P	Pn	11 08 35.4	-0.6
INU	Inuyama	20.80	39		P	11 08 34.1	+0.7
CHTO	Chiang Mai	21.14	271	P	P	11 08 38.1	+0.8
CHTO	Chiang Mai	21.14	271		P	11 08 36.3	-1.0
CHTO	Chiang Mai	21.14	271	P	P	11 08 39.3	+2.0
JHJ	Hachijo jima 2	21.17	47	LR	LR	11 15 33.4	
	comp=Z,102nm,21.5s,baz=258,slow=33						
JGF	Kuroka	21.17	39	P	P	11 08 38.3	+0.8
JGF	Kuroka	21.17	39		P	11 08 38.2	+0.7
JGF				IAmb	IAmb	11 08 39.6	
	comp=Z,27nm,0.9s						
CM31	Chiang Mai Arr	21.18	270	P	P	11 08 36.5	-1.3
CMAR	Chiang Mai Arr	21.18	270	P	P	11 08 39.5	+1.8
	comp=Z,5.1nm,0.8s,baz=83,slow=11,SNR=29						
CMAR				PcP	PcP	11 12 43.7	+1.3
	comp=Z,1.4nm,0.7s,baz=78,slow=2.4,SNR=9.6						
CMAR				LR	LR	11 18 05.4	
	comp=Z,168nm,18.8s,baz=85,slow=40						
	comp=Z,5.1nm,0.8s						
SANI	Sanana	22.16	168	P	P	11 08 46.1	-2.1
SANI	Sanana	22.16	168	P	P	11 08 44.7	-3.5
MAJO	Matsushiro	22.32	38	P	P	11 08 49.2	-0.6
MAJO				IAmb	IAmb	11 09 01.4	
	comp=Z,69nm,1.9s						
MJAR	Matsushiro Arr	22.32	38	P	P	11 08 47.9	-1.9
	comp=Z,4.7nm,0.9s,baz=227,slow=8.5,SNR=13						
	comp=Z,4.7nm,0.9s						
MJAR	Matsushiro Arr	22.32	38		P	11 08 50.4	+0.6
LZH	Lanzhou	22.36	320	*e*P	P	11 08 51.2	+0.8
LZH				pP	pP	11 08 57.1	-2.7
LZH				sP	pwP	11 09 02.4	-0.5
LZH				S	S	11 12 58.3	+4.5
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
LZH				L	L		
	comp=Z,280nm,13.0s						
LZH				L	L		
	comp=Z,360nm,14.6s						
LZH				L	L		
	comp=Z,450nm,13.3s						
LZDM	Lanzhou Array	22.36	320	P	P	11 08 52.4	+1.9
	comp=Z,2.1nm,0.4s,baz=151,slow=13,SNR=6.4						
LZDM				LR	LR	11 18 00.1	
	comp=Z,166nm,20.0s,baz=65,slow=38						
	comp=Z,2.1nm,0.4s						
HHC	Hu-ho-hao-te	22.61	340	*e*P	P	11 08 53.1	+0.2
HHC				S	S	11 12 52.6	-5.4
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,7.0s						
HHC				L	L		
	comp=Z,270nm,14.5s						
HHC				L	L		
	comp=Z,140nm,15.2s						
HHC				L	L		
	comp=Z,270nm,15.1s						
SWI	Sorong	22.70	153	P	P	11 08 53.9	-0.1
	comp=Z,987nmcomp=Z,31nm,0.7s						
SIJI	Sorong	22.71	153	P	P	11 08 53.0	-1.1
	comp=Z,24nm,0.7s,baz=346,slow=18,SNR=15						
	comp=Z,24nm,0.7s						
SIJI	Sorong	22.71	153	P	P	11 08 53.9	-0.2
	comp=Z,23nm,0.7s						
TTSI	Tana Toraja	22.72	184	P	P	11 08 55.9	+1.8
	comp=Z,25nm,0.8s						
BTO2	Baotou	23.08	337	*e*P	P	11 08 58.4	+0.6
BTO2				PP	PnPn	11 09 30.8	+6.8
BTO2				pmax	pmax		
	comp=Z,18nm,0.5s						
BTO2				pmax	pmax		
	comp=Z,120nm,4.3s						
BTO2				L	L		
	comp=Z,320nm,4.8s						
BTO2				L	L		
	comp=Z,340nm,6.5s						
BTO2				L	L		
	comp=Z,340nm,8.2s						
GUMO	Guam	23.37	102	LR	LR	11 16 32.3	
	comp=Z,215nm,20.6s,baz=275,slow=33						
SPSI	Sidrap Palu	23.64	184	P	P	11 09 02.4	-0.8
	comp=Z,30nm,0.7s						
BBKI	Banjar Baru	23.95	196	P	P	11 09 07.8	+1.6
	comp=Z,104nm,0.8s						
CN2	Changchun	24.21	7	P	P	11 09 09.6	+1.2
CN2				L	L		
	comp=Z,200nm,14.0s						
CN2				L	L		
	comp=Z,220nm,14.0s						
CN2				L	L		
	comp=Z,240nm,18.0s						
XLT	XiLinHaoTe	24.46	351	*e*P	P	11 09 14.9	+4.2
XLT				pmax	pmax		
	comp=Z,11nm,1.6s						
KAPI	Kappang	24.68	184	P	P	11 09 12.9	+0.1
	comp=Z,18nm,0.6s,baz=323,slow=5.1,SNR=9.8						
KAPI				LR	LR	11 18 46.0	
	comp=Z,169nm,21.8s,baz=18,slow=36						
	comp=Z,18nm,0.6s						
KAPI	Kappang	24.68	184	P	P	11 09 13.6	+0.7
KAPI				IAmb	IAmb	11 09 14.3	
	comp=Z,16nm,0.7s						
KAPI	Kappang	24.68	184	P	P	11 09 13.3	+0.5
	comp=Z,15nm,0.6s						
KULM	Kulim	24.74	237	P	P	11 09 13.2	-0.2
IPM	Ipoh	24.94	235	P	P	11 09 13.5	-1.8
MDJ	Mudanjiang	25.72	14	P	P	11 09 23.9	+1.9
MDJ	Mudanjiang	25.72	14	P	P	11 09 23.4	+1.4
MDJ				pmax	pmax		
	comp=Z,17nm,1.3s						
USRK	Ussuriysk Ar.	25.94	18	P	P	11 09 23.9	-0.2
	comp=Z,7.5nm,0.9s,baz=211,slow=8.2,SNR=7.7						
	comp=Z,7.5nm,0.9s						
BNX	BinXian	26.38	10	⇓P	P	11 09 29.5	+1.5

BNX				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BRDH	Bariadhala	27.80	281	LR	LR	11 22 30.7	
	comp=Z,262nm,18.7s,baz=162,slow=40						
EDFI	Ende, Flores	28.34	179	P	P	11 09 45.2	-0.8
SONM	Songino Array	30.50	340	PcP	PcP	11 13 03.4	+0.1
	comp=Z,0.4nm,0.7s,baz=162,slow=3.9,SNR=2.0						
SONM				LR	LR	11 23 20.3	
	comp=Z,144nm,22.0s,baz=161,slow=38						
KLR	Kul'dur	30.56	13	LR	LR	11 24 23.1	
	comp=Z,182nm,18.8s,baz=202,slow=40						
HEH	HeiHe	30.80	8	*e*P	P	11 09 57.8	-10
YSS	Yuzhno-Sakhali	32.28	28	P	P	11 10 21.7	+1.4
YSS	Yuzhno-Sakhali	32.28	28		P	11 10 20.5	+0.1
YSS				IAmb	IAmb	11 10 22.0	
	comp=Z,26nm,1.3s						
MTN	Manton Dam	33.82	163	P	P	11 10 32.0	-2.1
MTN				IAmb	IAmb	11 11 38.9	
	comp=Z,18nm,1.2s						
TLY	Talaya	34.73	341	LR	LR	11 26 19.2	
	comp=Z,123nm,20.5s,baz=144,slow=39						
KNRA	Kununurra	35.98	168	P	P	11 10 50.0	-2.7
WMQ	Urumqi	36.91	318	*e*P	P	11 11 02.4	+1.9
COEN	Coen	39.82	146	P	P	11 11 22.7	-2.5
PSAC1	Pilbara Seismi	41.08	182	P	P	11 11 34.5	-1.0
	comp=Z,33nm,1.0s						
PSAC2	Pilbara Seismi	41.10	182	P	P	11 11 34.9	-0.8
	comp=Z,39nm,0.9s						
PSA00	Pilbara Seismi	41.12	182	P	P	11 11 34.6	-1.2
	comp=Z,39nm,0.9s						
PSA00	Pilbara Seismi	41.12	182		P	11 11 34.1	-1.7
PSA00				IAmb	IAmb	11 11 35.4	
	comp=Z,36nm,1.0s						
PSA00	Pilbara Seismi	41.12	182		P	11 11 34.2	-1.6
PSA00				IAmb	IAmb	11 11 35.4	
	comp=Z,21nm,0.9s						
WB9	Warramunga Arr	41.35	161	P	P	11 11 35.1	-2.7
	comp=Z,25nm,0.7s						
WR1	Warramunga Arr	41.48	161	P	P	11 11 36.8	-2.0
	comp=Z,33nm,0.6s						
WRA	Warramunga Arr	41.48	161	P	P	11 11 36.2	-2.6
	comp=Z,15nm,0.6s,baz=341,slow=8.2,SNR=144						
WRA				PcP	PcP	11 13 36.3	+0.2
	comp=Z,2.1nm,0.6s,baz=346,slow=3.8,SNR=2.9						
WRA				ScP	ScP	11 17 22.1	-1.0
	comp=Z,0.9nm,0.9s,baz=344,slow=4.0,SNR=3.6						
	comp=Z,15nm,0.6s						
WRA	Warramunga Arr	41.48	161		P	11 11 36.5	-2.4
WB2	Warramunga Arr	41.48	161	P	P	11 11 37.1	-1.8
	comp=Z,39nm,0.6s						
WR0	Warramunga Arr	41.55	161	P	P	11 11 37.4	-2.0
	comp=Z,35nm,0.6s						
MKAR	Makanchi Array	41.67	319	P	P	11 11 42.0	+1.8
	comp=Z,2.5nm,0.6s,baz=115,slow=9.8,SNR=10						
MKAR				PcP	PcP	11 13 36.7	+0.3
	comp=Z,1.1nm,0.7s,baz=120,slow=6.1,SNR=2.3						
	comp=Z,2.5nm,0.6s						
YAK	Yakutsk	42.62	6	LR	LR	11 31 02.8	
	comp=Z,94nm,19.9s,baz=182,slow=38						
H11S3	WAKE ISLAND Hy	42.78	84	T	T	11 57 26.7	
	baz=279,slow=75,SNR=76						
H11N1	WAKE ISLAND Hy	42.79	82	T	T	11 57 29.2	
	baz=278,slow=75,SNR=173						
H11N2	WAKE ISLAND Hy	42.79	82	T	T	11 57 29.9	
	baz=278,slow=75,SNR=139						
H11S1	WAKE ISLAND Hy	42.79	84	T	T	11 57 28.4	
	baz=279,slow=75,SNR=92						
H11S2	WAKE ISLAND Hy	42.80	84	T	T	11 57 26.5	
	baz=279,slow=75,SNR=77						
H11N3	WAKE ISLAND Hy	42.81	82	T	T	11 57 30.5	
	baz=278,slow=75,SNR=111						
PEA0B	Petropavlovsk-	43.50	31	P	P	11 11 54.5	-0.4
PEA0B				IAmb	IAmb	11 11 55.5	
	comp=Z,26nm,1.1s						
PETK	Petropavlovsk-	43.50	31	P	P	11 11 54.0	-0.9
	comp=Z,15nm,0.9s,baz=222,slow=7.0,SNR=25						
PETK				PcP	PcP	11 13 42.4	+0.1
	comp=Z,0.9nm,0.8s,baz=230,slow=5.8,SNR=0.8						
PETK				LR	LR	11 30 18.9	
	comp=Z,61nm,21.1s,baz=202,slow=36						
	comp=Z,15nm,0.9s						
PETK	Petropavlovsk-	43.50	31		P	11 11 54.7	-0.2
QIS	Mount Isa	43.90	155	P	P	11 11 56.9	-1.6
	comp=Z,27nm,0.9s						
MTSU	Mount Surprise	43.91	148	P	P	11 11 57.8	-0.8
	comp=Z,3.6nm,0.6s						
ZAA0	Zalesovo Array	44.05	330		P	11 11 58.8	-0.6
ZAA0				IAmb	IAmb	11 12 13.5	
	comp=Z,7.1nm,0.6s						
ZALV	Zalesovo Beam	44.05	330	P	P	11 11 59.9	+0.6
	comp=Z,1.4nm,0.5s,baz=126,slow=7.3,SNR=5.6						
ZALV				LR	LR	11 31 45.0	
	comp=Z,112nm,18.3s,baz=128,slow=38						
	comp=Z,1.4nm,0.5s						
AS31	Alice Springs	44.88	164		P	11 12 05.0	-1.3
AS31				IAmb	IAmb	11 12 05.7	
	comp=Z,10nm,0.3s						
ASAR	Alice Springs	44.88	164	P	P	11 12 05.2	-1.2
	comp=Z,9.5nm,0.3s,baz=343,slow=8.5,SNR=248						
ASAR				PcP	PcP	11 13 47.9	+0.3
	comp=Z,1.5nm,0.8s,baz=337,slow=3.5,SNR=4.2						
ASAR				ScP	ScP	11 17 36.8	0.0
	comp=Z,1.0nm,0.9s,baz=349,slow=5.5,SNR=3.7						
	comp=Z,9.5nm,0.3s						
ASAR	Alice Springs	44.88	164	P	P	11 12 04.8	-1.5
MA2	Magadan	45.02	21	LR	LR	11 34 02.6	
	comp=Z,55nm,18.3s,baz=208,slow=40						
WRKA	Warakurna	45.05	171	P	P	11 12 06.9	-0.7
	comp=Z,6.5nm,0.7s						
AAK	Ala-Archa	45.38	311	LR	LR	11 34 02.5	
	comp=Z,288nm,18.8s,baz=83,slow=40						
KURBB	Kurchatov Arra	45.62	323	P	P	11 12 12.0	+0.2
	comp=Z,1.9nm,0.7s,baz=121,slow=7.7,SNR=2.8						
KURBB				PcP	PcP	11 13 49.3	-0.3
	comp=Z,0.7nm,0.5s,baz=118,slow=3.3,SNR=2.2						
CTAO	Charters Tower	46.54	147	P	P	11 12 18.1	-1.3
CTAO				IAmb	IAmb	11 13 55.0	
	comp=Z,12nm,0.9s						
HNR	Honiara	47.84	124	LR	LR	11 31 44.4	
	comp=Z,4.6nm,19.2s,baz=5.5,slow=35						
FORT	Forrest	50.67	172	P	P	11 12 50.7	-0.3
QLP	Quilpie	51.16	153	P	P	11 12 53.3	-1.4
BVAR	Borovoye Array	51.21	323	P	P	11 12 54.9	0.0
	comp=Z,1.0nm,0.6s,baz=108,slow=7.4,SNR=1.9						
BVAR				PcP	PcP	11 14 09.5	-0.3
	comp=Z,1.9nm,0.6s,baz=113,slow=3.7,SNR=3.4						
	comp=Z,1.0nm,0.6s						
TIXI	Tiksi	52.07	3	LR	LR	11 37 27.6	
	comp=Z,86nm,18.5s,baz=214,slow=39						
NWAO	Narrogin (SRO)	52.55	184	P	P	11 13 04.2	-0.7
NRIK	Noril'sk	53.69	346	P	P	11 13 13.4	+0.5
	comp=Z,5.9nm,0.9s,baz=140,slow=8.0,SNR=5.5						
NRIK				LR	LR	11 38 15.7	
	comp=Z,126nm,19.5s,baz=152,slow=38						
	comp=Z,5.9nm,0.9s						
NRIK	Noril'sk	53.69	346	P	P	11 13 12.7	-0.2
NRIK				IAmb	IAmb	11 13 32.6	
	comp=Z,7.7nm,0.9s						
BBOO	Buckleboo	54.15	165	P	P	11 13 13.5	-3.3
STKA	Stephens Creek	54.91	159	P	P	11 13 20.6	-1.7
	comp=Z,5.6nm,0.7s,baz=340,slow=8.3,SNR=12						
	comp=Z,5.6nm,0.7s						
BILL	Bilibino	55.79	19		P	11 13 28.2	0.0
BILL				IAmb	IAmb	11 13 41.0	
	comp=Z,11nm,1.2s						
CMSA	Cobar Meteorol	56.12	155	P	P	11 13 31.0	0.0
ABKAR	Akbulak array	56.66	316	P	P	11 13 34.9	+0.2
ADK	Adak	57.46	40	P	P	11 13 40.8	+0.5
DZM	Mont Dzumac	60.61	131	P	P	11 14 02.2	-0.4
CAN	Canberra	60.76	154	P	P	11 14 03.0	-0.4
KIRV	Kirov	63.92	326	LR	LR	11 46 08.8	
	comp=Z,122nm,18.2s,baz=78,slow=40						
TNA	Tin City	64.22	26	P	P	11 14 27.2	+1.2
TNA				IAmb	IAmb	11 15 18.8	
	comp=Z,17nm,1.8s						
M11K	Mekoryuk	64.36	32	P	P	11 14 28.4	+1.3
F15K	North Star Dit	65.59	26	P	P	11 14 35.6	+0.6
F15K				IAmb	IAmb	11 14 42.0	
	comp=Z,6.2nm,1.1s						
TAU	Tasmania Unive	66.81	159	P	P	11 14 43.5	+0.5
GNI	Garni	67.45	306	LR	LR	11 48 21.8	
	comp=Z,63nm,19.0s,baz=70,slow=39						
L16K	Owhat River	67.69	30	P	P	11 14 47.9	-0.5
D19K	Kuna River	68.32	23	P	P	11 14 52.6	+0.2
D19K				IAmb	IAmb	11 14 56.4	
	comp=Z,6.3nm,0.7s						
KBZ	Khabaz	68.37	310	LR	LR	11 50 18.0	
	comp=Z,72nm,18.3s,baz=56,slow=41						
PLK4	Peulik 4	69.44	35	P	P	11 14 59.8	+0.3
NEA2	Nenana	72.17	27	P	P	11 15 15.7	-0.2
NEA2				IAmb	IAmb	11 15 19.8	
	comp=Z,24nm,1.6s						
RND	Reindeer	72.45	28		P	11 15 16.7	-1.0
RND				IAmb	IAmb	11 15 23.4	
	comp=Z,13nm,0.9s						
ILAR	Eielson Array	73.07	27	P	P	11 15 19.6	-1.7
	comp=Z,0.8nm,0.6s,baz=278,slow=5.0,SNR=9.9						
	comp=Z,0.8nm,0.6s						
ARCES	ARCESS Array B	73.67	339	P	P	11 15 25.2	+0.5
	comp=Z,5.6nm,1.0s,baz=78,slow=4.8,SNR=5.4						
	comp=Z,5.6nm,1.0s						
SPITS	Spitsbergen Ar	73.80	348	P	P	11 15 25.8	+0.4
	comp=Z,11nm,0.8s,baz=78,slow=7.5,SNR=9.2						
SPITS				LR	LR	11 51 04.5	
	comp=Z,79nm,19.4s,baz=44,slow=38						
	comp=Z,11nm,0.8s						
G26K	Porcupine Rive	73.89	24	P	P	11 15 26.6	+0.6
G26K				IAmb	IAmb	11 15 39.1	
	comp=Z,4.3nm,0.7s						
FINES	FINESS Array B	75.31	330	P	P	11 15 35.0	+0.6
	comp=Z,3.7nm,0.8s,baz=78,slow=4.4,SNR=4.7						
FINES				LR	LR	11 51 48.4	
	comp=Z,146nm,20.3s,baz=28,slow=38						
	comp=Z,3.7nm,0.8s						
BRTR	Keskin Array B	75.91	307	P	P	11 15 39.2	+0.7
	comp=Z,0.3nm,0.6s,baz=95,slow=7.2,SNR=1.7						
AK09	Malin Array Si	76.24	319	P	P	11 15 39.9	0.0
AK03	Malin Array Si	76.25	319	P	P	11 15 40.9	+1.0
AK08	Malin Array Si	76.25	319	P	P	11 15 40.2	+0.3
AKASG	Malin Array Be	76.25	319	P	P	11 15 39.9	0.0
	comp=Z,2.1nm,0.8s,baz=65,slow=5.6,SNR=4.3						
	comp=Z,2.1nm,0.8s						
AK10	Malin Array Si	76.26	319	P	P	11 15 40.4	+0.4
AK01	Malin Array Si	76.27	319	P	P	11 15 39.9	-0.1
AK02	Malin Array Si	76.28	319	P	P	11 15 40.0	-0.1
AK04	Malin Array Si	76.29	319	P	P	11 15 40.1	0.0
AK11	Malin Array Si	76.30	319	P	P	11 15 39.9	-0.3
AK06	Malin Array Si	76.30	319	P	P	11 15 39.9	-0.3
AK22	Malin Array Si	76.33	319	P	P	11 15 40.4	0.0
AK18	Malin Array Si	76.35	319	P	P	11 15 39.8	-0.7
AK21	Malin Array Si	76.35	319	P	P	11 15 39.8	-0.7
AK17	Malin Array Si	76.36	319	P	P	11 15 39.9	-0.7
AK20	Malin Array Si	76.38	319	P	P	11 15 40.0	-0.6
AK19	Malin Array Si	76.38	319	P	P	11 15 40.0	-0.7
CTGM	Chitina Glacie	76.42	30		P	11 15 40.8	-0.2
EPYK	Eagle Plains	76.76	24	P	P	11 15 42.0	-0.6
EPYK				IAmb	IAmb	11 15 42.9	
	comp=Z,6.1nm,0.6s						
LUBAR	Lubar, Ukraine	77.37	319	P	P	11 15 45.5	-0.7
A36M	Sachs Harbour	78.28	17	P	P	11 15 50.6	-0.3
A36M				IAmb	IAmb	11 15 51.8	
	comp=Z,5.7nm,0.8s						
MLR	Muntele Rosu	79.81	315	P	P	11 16 00.4	+0.4
	comp=Z,2.2nm,0.8s,baz=100,slow=15,SNR=3.5						
	comp=Z,2.2nm,0.8s						
HFS	Hagfors	81.47	331	P	P	11 16 08.6	+0.3
	comp=Z,2.3nm,0.8s,baz=76,slow=6.1,SNR=1.4						
HFS				LR	LR	11 57 57.2	
	comp=Z,167nm,19.8s,baz=48,slow=40						
	comp=Z,2.3nm,0.8s						
NB2	NORSAR Subarra	82.17	333	P	P	11 16 11.6	-0.5
	comp=Z,1.9nm,0.8s,baz=62,slow=4.8						
NOA	NORSAR Array B	82.17	333	P	P	11 16 11.9	-0.2
	comp=Z,1.6nm,0.7s,baz=62,slow=4.8,SNR=5.6						
NOA				LR	LR	11 56 16.7	
	comp=Z,113nm,18.3s,baz=295,slow=38						
	comp=Z,1.6nm,0.7s						
DLBC	Dease Lake	82.67	30	LR	LR	11 54 22.9	
	comp=Z,30nm,19.6s,baz=294,slow=37						
LANS	Liptovska Anna	82.73	320	*e*P	P	11 16 21.9	+6.6
STEB	Steborice	83.45	321	*e*P	P	11 16 19.7	+0.8
MORC	Moravsky Berou	83.65	321	*e*P	P	11 16 21.0	+1.0
JAVC	Velka Javorina	83.93	320	*e*P	P	11 16 22.9	+1.4
KRLC	Kraliky	83.98	321	*e*P	P	11 16 22.3	+0.6
DPC	Dobruska-Polom	84.14	322	*e*P	P	11 16 23.0	+0.5
MODS	Modra-Piesok	84.36	319	*e*P	P	11 16 25.6	+1.9
VRAC	Vranov	84.40	321	LR	LR	11 54 30.0	
	comp=Z,67nm,18.0s,baz=340,slow=36						
VRAC	Vranov	84.40	321	*e*P	P	11 16 23.0	-0.8
KRUC	Moravsky	84.62	320	*e*P	P	11 16 23.8	-1.1
GERES	GERESS Array B	86.32	321	P	P	11 16 34.2	+0.7
	comp=Z,0.2nm,0.3s,baz=74,slow=6.9,SNR=2.2						
	comp=Z,0.2nm,0.3s						
YKA	Yellowknife Ar	86.97	23	P	P	11 16 35.8	-0.5
	comp=Z,1.7nm,0.6s,baz=311,slow=5.4,SNR=33						
	comp=Z,1.7nm,0.6s						
DAVOX	Davos/Dischmat	89.56	320	LR	LR	12 01 07.7	
	comp=Z,121nm,18.5s,baz=75,slow=38						
BORG	Borgarnes	91.00	345	LR	LR	12 01 59.5	
	comp=Z,88nm,18.3s,baz=85,slow=38						
EKA	Eskdalemuir Ar	91.64	332	P	P	11 16 57.2	-1.2
	comp=Z,2.2nm,0.8s,baz=37,slow=2.7,SNR=2.3						
EKA				LR	LR	12 03 11.9	
	comp=Z,445nm,19.1s,baz=350,slow=39						
	comp=Z,2.2nm,0.8s						
FRB	Frobisher Bay	96.40	4	LR	LR	12 04 48.4	
	comp=Z,42nm,18.1s,baz=54,slow=38						
NVAR	Mina Array Bea	99.55	43	P	Pdif	11 17 33.4	-1.7
	comp=Z,0.2nm,0.4s,baz=306,slow=5.2,SNR=2.2						
NVAR				LR	LR	12 05 25.0	
	comp=Z,35nm,18.1s,baz=272,slow=37						
	comp=Z,0.2nm,0.4s						
TORD	Torodi Ar. Bea	112.18	294	PKKPab	PKKPab	11 33 25.6	-2.7
	comp=Z,0.7nm,0.7s,baz=243,slow=2.1,SNR=4.5						
TXAR	Lajitas Array	114.69	43	PKP	PKiKP	11 22 32.0	-0.4
	comp=Z,0.1nm,0.4s,baz=342,slow=3.3,SNR=4.7						
PLCA	Paso Flores	156.77	157	PKP	PKPdf	11 23 45.6	-1.2
	comp=Z,1.7nm,1.1s,baz=216,slow=19,SNR=1.9						
PLCA				PKPab	PKPab	11 24 16.3	0.0
	comp=Z,2.7nm,0.7s,baz=180,slow=5.1,SNR=9.7						

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*IDC **01** 11:07:01.8±0.7, 5.19°N×126.48°E, h0km, mb4.2/18, mbtmp4.2/19, ML4.4/1, MS3.7/4, Error ellipse: s-maj=34.7km s-min=14.7km az=68.0*
*MAN **01** 11:07:05.0, 5.16°N×126.60°E, h15km, MS3.9*
*NEIC **01** 11:07:09.7±1.7, 5.34°N±0.06°×126.61°E±0.08°, h49km±7km, mb4.6/28, Error ellipse: s-maj=13.8km s-min=5.5km az=57.0*
ISC 01 11:07:07.5±0.5**, 5.29°N**±0.06°×**126.68°E**±0.08°**, h35km, n85,** σ**1s68**/87**, mb4.5**/32**, MS3.7**/4**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	General Santos	1.90	295	*i* P	Pn	11 07 35.5	-2.0
GSPH				*i* S	Sn	11 07 58.0	-2.3
DAV	Davao City (W)	2.08	328	Pn	Pn	11 07 38.8	-1.2
	142nm,0.3s,baz=143,slow=5.1,SNR=11						
DAV				Sn	Sn	11 08 03.9	-0.8
	114nm,0.3s,baz=72,slow=20,SNR=6.8						
	395nm,0.6s						
DAV	Davao City (W)	2.08	328	Pn	Pn	11 07 40.6	+0.6
DAV	Davao City (W)	2.08	328	P	Pn	11 07 40.2	+0.2
DMPH	Davao City--Mi	2.13	327	*i* P	Pn	11 07 42.7	+2.1
DMPH				*i* S	Sn	11 08 19.2	+13
KCP	Kidapawan	2.33	317	*e*P	Pn	11 07 44.4	+1.0
KCP				*e*S	Sn	11 08 12.7	+1.8
BIPH	Bislig	2.90	354	*e*P	Pn	11 07 51.3	+0.1
BIPH				*e*S	Sn	11 08 20.4	-4.4
CTBH	Cotabato--PC H	3.09	309	*e*P	Pn	11 07 55.0	+1.2
CGP	Cagayan de Oro	3.72	328	*i* P	Pn	11 08 05.0	+2.6
CGP				*i* S	Sn	11 08 55.6	+11
SCPH	Surigao	4.62	345	*e*P	Pn	11 08 17.8	+2.9
SCPH				*e*S	Sn	11 09 06.4	-1.0
TBP	Tagbilaran	5.19	328	*e*P	Pn	11 08 24.1	+1.3
LLP	Lapu-Lapu	5.68	332	*e*P	Pn	11 08 32.3	+2.9
LLP				*e*S	Sn	11 09 40.3	+7.0
PLP	Palo	6.08	344	*e*P	Pn	11 08 40.2	+5.3
TOLI2	Tolitoli	7.20	235		Pn	11 08 50.3	0.0
RCP	Roxas	7.35	328	*e*P	Pn	11 08 55.6	+3.2
LUWI	Luwuk	7.40	212	Pn	Pn	11 08 55.9	+2.8
MYLDM	Lahad Datu	8.15	270	Pn	Pn	11 09 05.5	+2.1
KKM	Kota Kinabalu	10.44	275	Pn	Pn	11 09 35.1	+0.2
BKB	Balikpapan	11.74	237	Pn	Pn	11 09 53.1	+0.5
SBUM	Sibu	14.70	260		Pn	11 10 33.6	+0.6
SOEI	Soe	15.13	189	Pn	Pn	11 10 39.9	+1.0
SOEI				IAmb	IAmb	11 11 15.0	
	comp=Z,83nm,1.4s						
PMG	Port Moresby	25.09	126	LR	LR	11 24 33.6	
	comp=Z,135nm,19.1s,baz=32,slow=42						
WRA	Warramunga Arr	26.18	163	P	P	11 12 39.0	+0.1
	comp=Z,1.3nm,0.7s,baz=344,slow=9.2,SNR=0.8						
WRA				ScP	ScP	11 19 45.3	+2.4
	comp=Z,0.8nm,0.9s,baz=341,slow=3.1,SNR=3.5						
	comp=Z,1.3nm,0.7s						
WRA	Warramunga Arr	26.18	163	P	P	11 12 38.4	-0.5
GSI	Gunungsitoli	29.32	263		P	11 13 06.9	-0.2
ASAR	Alice Springs	29.63	167	P	P	11 13 07.7	-2.0
	comp=Z,0.9nm,0.7s,baz=350,slow=8.3,SNR=0.8						
ASAR				ScP	ScP	11 19 56.0	+2.6
	comp=Z,0.8nm,0.9s,baz=337,slow=2.9,SNR=3.7						
	comp=Z,0.9nm,0.7s						
ASAR	Alice Springs	29.63	167	P	P	11 13 11.2	+1.5
CMAR	Chiang Mai Arr	30.07	298	P	P	11 13 10.8	-3.0
	comp=Z,1.2nm,0.6s,baz=110,slow=9.0,SNR=7.1						
CMAR				ScP	ScP	11 19 57.2	+2.2
	comp=Z,0.7nm,0.3s,baz=121,slow=3.2,SNR=8.3						
	comp=Z,1.2nm,0.6s						
CMAR	Chiang Mai Arr	30.07	298	P	P	11 13 13.3	-0.5
KSRS	Korea Array	32.04	2	LR	LR	11 26 53.3	
	comp=Z,46nm,19.7s,baz=190,slow=37						
BJT	Baijiatuau	35.85	346		P	11 14 03.2	-0.7
BJT				IAmb	IAmb	11 14 14.5	
	comp=Z,8.7nm,1.0s						
SHL	Shillong	38.94	305		P	11 14 29.7	-0.8
SHL				IAmb	IAmb	11 14 35.6	
	comp=Z,9.5nm,0.8s						
USRK	Ussuriysk Ar.	39.04	6	P	P	11 14 31.3	+0.4
	comp=Z,1.2nm,0.6s,baz=174,slow=7.4,SNR=2.3						
	comp=Z,1.2nm,0.6s						
STKA	Stephens Creek	39.59	160	P	P	11 14 35.8	+0.1
	comp=Z,3.7nm,0.8s,baz=334,slow=9.5,SNR=2.8						
	comp=Z,3.7nm,0.8s						
STKA	Stephens Creek	39.59	160	P	P	11 14 35.4	-0.2
H11S3	WAKE ISLAND Hy	41.17	68	T	T	11 58 43.7	
	baz=257						
H11S1	WAKE ISLAND Hy	41.19	68	T	T	11 58 46.7	
	baz=257						
H11S2	WAKE ISLAND Hy	41.19	68	T	T	11 58 45.5	
	baz=257						
H11N1	WAKE ISLAND Hy	41.66	66	T	T	11 59 22.1	
	baz=254						
H11N2	WAKE ISLAND Hy	41.67	66	T	T	11 59 24.7	
	baz=254						
H11N3	WAKE ISLAND Hy	41.68	66	T	T	11 59 24.3	
	baz=254						
EVN	Everest	44.04	305		P	11 15 11.4	-1.5
EVN				IAmb	IAmb	11 15 15.1	
	comp=Z,6.5nm,0.7s						
ULN	Ulaanbaatar	45.64	342	P	P	11 15 24.3	-0.4
ULN				IAmb	IAmb	11 15 34.1	
	comp=Z,11nm,1.5s						
SONM	Songino Array	45.82	341	P	P	11 15 25.8	-0.3
	comp=Z,1.3nm,0.9s,baz=158,slow=10.0,SNR=6.1						
SONM				PcP	PcP	11 17 04.2	+1.1
	comp=Z,0.7nm,0.7s,baz=149,slow=4.6,SNR=3.0						
SONM				ScP	ScP	11 20 56.7	+3.0
	comp=Z,0.4nm,0.8s,baz=151,slow=3.3,SNR=3.0						
	comp=Z,1.3nm,0.9s						
SONM	Songino Array	45.82	341	P	P	11 15 24.9	-1.2
PETK	Petropavlovsk-	54.02	23	P	P	11 16 28.9	+0.7
	comp=Z,2.1nm,0.7s,baz=211,slow=7.6,SNR=4.0						
	comp=Z,2.1nm,0.7s						
PETK	Petropavlovsk-	54.02	23	P	P	11 16 28.3	+0.2
MKAR	Makanchi Array	56.26	325	P	P	11 16 44.4	-0.2
	comp=Z,3.0nm,0.7s,baz=122,slow=8.3,SNR=18						
MKAR				PcP	PcP	11 17 41.9	+0.2
	comp=Z,3.1nm,0.8s,baz=127,slow=4.8,SNR=6.3						
MKAR				ScP	ScP	11 21 42.3	+3.7
	comp=Z,0.4nm,0.7s,baz=107,slow=4.1,SNR=3.7						
MKAR				LR	LR	11 42 02.1	
	comp=Z,89nm,19.6s,baz=106,slow=37						
	comp=Z,3.0nm,0.7s						
MKAR	Makanchi Array	56.26	325		P	11 16 43.6	-0.9
NIL	Nilore	56.95	307		P	11 16 49.1	-0.6
KDJ	Kajisay	57.17	318		P	11 16 50.5	-0.7
KDJ				IAmb	IAmb	11 17 01.5	
	comp=Z,7.8nm,1.2s						
NRN	Naryn	57.67	316	P	P	11 16 54.2	-0.8
ZAA0	Zalesovo Array	59.19	333	P	P	11 17 05.5	+0.6
ZAA0				IAmb	IAmb	11 17 07.0	
	comp=Z,5.4nm,1.1s						
ZALV	Zalesovo Beam	59.19	333	P	P	11 17 04.3	-0.6
	comp=Z,1.7nm,0.5s,baz=126,slow=7.4,SNR=7.5						
	comp=Z,1.7nm,0.5s						
ZALV	Zalesovo Beam	59.19	333		P	11 17 04.7	-0.2
ARSB	Arslanbob	59.72	315	P	P	11 17 08.3	-0.7
ARSB				IAmb	IAmb	11 17 40.0	
	comp=Z,2.9nm,0.6s						
DRK	Karamyk	59.91	313	P	P	11 17 09.9	-0.6
KURK	Kurchatov	60.41	327		P	11 17 12.3	-1.1
KURBB	Kurchatov Arra	60.41	327	P	P	11 17 12.9	-0.5
	comp=Z,6.4nm,0.6s,baz=128,slow=6.6,SNR=7.1						
	comp=Z,6.4nm,0.6s						
GAR	Garm	60.85	312	P	P	11 17 16.3	-0.4
KK31	Karatay Array	62.07	316	P	P	11 17 23.6	-1.2
KK31				IAmb	IAmb	11 17 39.6	
	comp=Z,3.3nm,0.9s						
KKAR	Karatay Array	62.07	316		P	11 17 24.5	-0.3
BVAR	Borovoye Array	66.00	327	P	P	11 17 50.9	+0.5
	comp=Z,5.2nm,0.6s,baz=134,slow=10,SNR=16						
	comp=Z,5.2nm,0.6s						
NRIK	Noril'sk	68.92	346	P	P	11 18 09.0	+0.5
	comp=Z,2.3nm,0.7s,baz=123,slow=6.4,SNR=8.7						
	comp=Z,2.3nm,0.7s						
AB31	Akbulak array	70.92	320		P	11 18 20.2	-1.0
AKTO	Aktyubinsk	72.42	321	LR	LR	11 51 42.8	
	comp=Z,116nm,20.1s,baz=290,slow=37						
B21K	Ikpikpuk River	81.14	20	P	P	11 19 20.1	+1.1
H22K	Ishtalitna Cre	81.91	24	P	P	11 19 24.9	+1.7
E22K	Anaktuvuk Pass	81.96	22	P	P	11 19 25.1	+1.7
E22K				IAmb	IAmb	11 19 28.8	
	comp=Z,12nm,1.4s						
TRF	Thorofare Moun	82.18	27	P	P	11 19 24.6	-0.3
D23K	Nanushuk River	82.45	21	P	P	11 19 27.6	+1.7
D23K				IAmb	IAmb	11 19 33.1	
	comp=Z,6.0nm,1.2s						
COLD	Coldfoot	82.49	23	P	P	11 19 26.0	-0.2
COLD				IAmb	IAmb	11 19 34.8	
	comp=Z,6.2nm,1.1s						
C23K	Itkillik River	82.55	20	P	P	11 19 27.9	+1.5
MCK	McKinley	82.80	27	P	P	11 19 28.6	+0.7
MCK				IAmb	IAmb	11 19 40.8	
	comp=Z,15nm,1.4s						
RND	Reindeer	82.82	27	P	P	11 19 27.9	-0.2
RND				IAmb	IAmb	11 19 46.6	
	comp=Z,16nm,1.4s						
ILAR	Eielson Array	83.73	25	P	P	11 19 31.9	-0.8
	comp=Z,1.0nm,0.9s,baz=256,slow=5.0,SNR=6.3						
	comp=Z,1.0nm,0.9s						
ARCES	ARCESS Array B	88.98	340	P	P	11 19 58.3	-0.1
	comp=Z,3.6nm,0.7s,baz=76,slow=4.9,SNR=6.4						
	comp=Z,3.6nm,0.7s						
BRTR	Keskin Array B	89.00	310	P	P	11 19 57.5	-1.7
	comp=Z,0.4nm,0.6s,baz=111,slow=3.2,SNR=2.9						
	comp=Z,0.4nm,0.6s						
FINES	FINESS Array B	90.45	332	P	P	11 20 04.3	-1.0
	comp=Z,2.1nm,0.6s,baz=65,slow=4.7,SNR=9.2						
	comp=Z,2.1nm,0.6s						
AKASG	Malin Array Be	90.66	321	P	P	11 20 05.2	-1.4
	comp=Z,0.3nm,0.4s,baz=69,slow=5.1,SNR=1.9						
	comp=Z,0.3nm,0.4s						
HFS	Hagfors	96.63	332	P	P	11 20 33.8	0.0
	comp=Z,6.3nm,1.0s,baz=81,slow=8.9,SNR=3.2						
NOA	NORSAR Array B	97.38	334	P	P	11 20 35.8	-1.4
	comp=Z,1.0nm,0.8s,baz=61,slow=4.5,SNR=1.8						
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	98.11	24	PP	PP	11 24 37.0	-2.4
	comp=Z,0.1nm,0.5s,baz=290,slow=6.5,SNR=4.1						
TXAR	Lajitas Array	120.68	51	PKKPab	PKKPab	11 36 02.2	-1.1
	comp=Z,0.1nm,0.5s,baz=124,slow=3.8,SNR=3.6						
TORD	Torodi Ar. Bea	122.38	289	PKP	PKiKP	11 26 00.5	+0.3
	comp=Z,0.7nm,0.7s,baz=79,slow=1.1,SNR=4.2						

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*MAN **01** 11:08:14.0, 16.10°N×119.04°E, h75km, MS3.2*
IDC 01 11:08:06.4±3.6**, 17.03°N×120.68°E, h0km, mb3.6**/3**, mbtmp3.6**/3**, Error ellipse: s-maj=336.1km s-min=30.0km az=61.0, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	2.93	175	*e*P	Pg	11 09 03.0	+0.5
WRA	Warramunga Arr	39.12	159	P	P	11 15 35.4	-0.5
	0.6nm,0.4s,baz=339,slow=8.2,SNR=2.7						
	0.6nm,0.4s						
ASAR	Alice Springs	42.47	162	P	P	11 16 03.5	+0.1
	1.1nm,0.6s,baz=338,slow=7.1,SNR=5.2						
	1.1nm,0.6s						

MKAR	**Makanchi Array**	**43.38**	**322**	P	P	11 16 10.7	-0.1
	0.3nm,0.6s,baz=116,slow=6.6,SNR=1.2						
	0.3nm,0.6s						

RSNC 01 11:12:08.1±0.0**,3˚N**±1˚×**7˚4W**±˚**,h0**km±2km**,M3.3,mB4.7, mb3.9,ML3.0,Mw(mB)3.9,Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URMC	**La Uribe, Meta**	**0.27**	**228**	P	Pg	11 12 12.8	-0.5
URMC				S	Sg	11 12 16.3	-0.5
PRAC	**Prado**	**0.76**	**292**	P	Pg	11 12 21.2	-1.5
PRAC				S	Sg	11 12 31.1	-1.4
VILC	**Villavicencio,**	**0.83**	**36**	P	Pg	11 12 23.4	-0.7
VILC				S	Sb	11 12 36.3	-1.1
CVER	**Cruz Verde, Cu**	**1.09**	**6**	P	Pg	11 12 27.7	-1.3
CVER				S	Sg	11 12 43.1	-0.1
CHIC	**Chingaza**	**1.27**	**21**	P	Pg	11 12 30.9	-1.6
CHIC				S	Sg	11 12 46.7	-2.4
MACC	**Macarena, Meta**	**1.32**	**165**	P	Pg	11 12 31.6	-1.8
MACC				S	Sg	11 12 49.5	-1.0
ROSC	**El Rosal**	**1.41**	**354**	P	Pg	11 12 33.9	-1.2
ROSC				S	Sb	11 12 53.9	-0.3
ANIL	**Santa Ana**	**1.61**	**311**	P	Pn	11 12 35.8	-2.3
ANIL				S	Sn	11 12 57.4	-2.4
GARC	**Garzon, Huila**	**1.80**	**227**	P	Pn	11 12 39.5	-1.2
GARC				S	Sn	11 13 02.5	-1.9
RECRC	**Villamaria, Ca**	**1.92**	**322**	P	Pn	11 12 41.8	-0.7
RECRC				S	Sn	11 13 05.8	-1.9
NIZA	**Niza - Manizal**	**2.07**	**322**	P	Pn	11 12 43.5	-0.9
NIZA				S	Sn	11 13 10.5	-0.5
GUY2C	**Guyana, Caldas**	**2.14**	**326**	P	Pn	11 12 45.0	-0.5
GUY2C				S	Sn	11 13 12.0	-1.0
SPBC	**San Pablo de B**	**2.21**	**3**	P	Pb	11 12 47.8	-1.2
SPBC				S	Sb	11 13 16.5	-0.5
YOTC	**Yotoco, Valle**	**2.23**	**284**	P	Pn	11 12 45.2	-1.3
YOTC				S	Sn	11 13 14.7	-0.1
FLOC	**Florencia**	**2.35**	**219**	P	Pn	11 12 48.3	+0.2
FLOC				S	Sn	11 13 18.6	+0.9
JAMC	**Jamundi, Valle**	**2.50**	**265**	P	Pn	11 12 50.6	+0.4
JAMC				S	Sb	11 13 24.7	-0.7
PLMC	**San Jos del P**	**2.56**	**305**	P	Pn	11 12 51.0	+0.1
PLMC				S	Sn	11 13 24.0	+1.2
POPC	**Popayan, Colom**	**2.65**	**251**	P	Pn	11 12 52.6	+0.3
POPC				S	Sb	11 13 28.9	-0.8
RUSC	**La Rusia**	**2.68**	**24**	P	Pn	11 12 54.1	+1.1
RUSC				S	Sn	11 13 28.6	+2.2
CBOC	**Ciudad Bolivar**	**3.03**	**323**	P	Pn	11 12 58.7	+1.2
CBOC				S	Sb	11 13 38.4	-2.3
PTBC	**PUERTO BERRIO,**	**3.10**	**355**	P	Pn	11 12 58.2	-0.2
PTBC				S	Sn	11 13 38.3	+2.1
BARC	**Barichara**	**3.29**	**18**	P	Pn	11 13 01.5	+0.3
PTLC	**Puerto Leguiza**	**3.29**	**191**	P	Pb	11 13 07.2	-0.3
CRUC	**La Cruz**	**3.33**	**236**	P	Pn	11 13 03.2	+1.4
CRUC				S	Sb	11 13 50.0	+0.5
BBAC	**Balboa, Cauca**	**3.37**	**246**	P	Pn	11 13 02.7	+0.5
GCUF	**Volcan Galeras**	**3.85**	**235**	P	Pb	11 13 15.9	-1.3
PAMC	**Pamplona, Colo**	**4.15**	**21**	P	Pn	11 13 14.8	+1.5
BONI	**La Bonita**	**4.47**	**229**	P	Pb	11 13 26.8	-0.8
CASC	**Dorado de Casc**	**4.55**	**224**	P	Pb	11 13 28.4	-0.5
OCAC	**Ocana**	**4.85**	**10**	P	Pn	11 13 24.1	+1.5
SDV	**Santo Domingo**	**6.47**	**33**	P	Pn	11 13 45.1	+0.3
	7.7nm,1.1s						
SGC2	**Sao Gabriel da**	**8.03**	**116**	P	Pn	11 14 04.0	-2.1

IDC 01 11:15:44.5±2.3**,49˚55S**×**120˚39E,h0**km**,mb4.0**/3**, mbtmp4.0**/3**,Error ellipse: s-maj=66.0km s-min=55.9km az=103.0,Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.34**	**340**	T	T	11 35 30.0	
	baz=165,slow=74,SNR=563						
H01W1	**Cape Leeuwin H**	**15.35**	**340**	T	T	11 35 30.0	
	baz=165,slow=74,SNR=540						
H01W3	**Cape Leeuwin H**	**15.36**	**340**	T	T	11 35 30.0	
	baz=165,slow=74,SNR=571						
ASAR	**Alice Springs**	**27.93**	**27**	P	P	11 21 37.0	+0.5
	2.2nm,1.0s,baz=196,slow=9.3,SNR=8.8						
	2.2nm,1.0s						
WRA	**Warramunga Arr**	**31.57**	**26**	P	P	11 22 08.1	-0.7
	0.7nm,1.0s,baz=195,slow=8.5,SNR=2.0						
	0.7nm,1.0s						
CMAR	**Chiang Mai Arr**	**70.33**	**338**	P	P	11 26 59.8	0.0
	1.0nm,0.3s,baz=166,slow=8.0,SNR=5.0						
	1.0nm,0.3s						
PDAR	**Pinedale Array**	**145.29**	**82**	PKPbc	PKPbc	11 35 22.7	-0.9
	0.2nm,0.7s,baz=236,slow=5.0,SNR=1.9						
YKA	**Yellowknife Ar**	**147.73**	**45**	PKPbc	PKPbc	11 35 29.0	-0.8
	0.3nm,0.8s,baz=278,slow=3.3,SNR=7.1						

*BER **01** 11:17:29.5±4.3,80˚09N×0˚65E,h10km,Mw3.9, ML3.1(NAO),Confirmed Earthquake*
*DNK **01** 11:17:31.3±2.9,79˚92N×1˚15E,h36km±23km,ML2.5, Presumed earthquake*
*FCIAR **01** 11:17:32.0,79˚76N×1˚65E,h10km,station ZFI2 has station magnitude of 3.70 station OMEGA has station magnitude of 3.60*
*KOLA **01** 11:17:36.8,80˚04N×5˚06E,h0km,ML2.4,Error ellipse: s-maj=75.6km s-min=18.2km az=60.0,Greenland sea,Knipovich ridge, north*
ISC 01 11:17:20.9±0.8**,78˚94N**±0˚07×**0˚70W**±0˚03**,h10**km**,n35,** σ**2˚04**/55**,1C,Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**2.44**	**84**	Pn	**Pb**	**11 18 06.2**	**+1.4**
KBS				Sn	**Sn**	**11 18 31.2**	**+0.7**
KBS	**Kingsbay**	**2.44**	**84**	*e*P	**Pb**	**11 18 06.0**	**+1.2**
KBS				*e*S	**Sn**	**11 18 31.5**	**+1.1**
KBS				IAML		11 18 38.9	
	comp=Z,28nm,0.4s						
KBS	**Kingsbay**	**2.44**	**84**	*i* P	**Pb**	**11 18 04.7**	**0.0**
KBS				*i* S	**Sn**	**11 18 29.3**	**-1.1**
KBS	**Kingsbay**	**2.44**	**84**	P	**Pb**	**11 18 05.9**	**+1.2**
KBS				S	**Sn**	**11 18 27.7**	**-2.8**
BRBB	**Barentsburg B**	**3.10**	**98**	Pn	**Pg**	**11 18 20.0**	**-0.1**
BRBB				Sn	**Sb**	**11 18 54.6**	**+1.0**
BRBB	**Barentsburg B**	**3.10**	**98**	*e*P	**Pg**	**11 18 19.8**	**-0.4**
BRBB				*e*S	**Sb**	**11 18 54.2**	**+0.5**
BRBB	**Barentsburg B**	**3.10**	**98**	P	**Pg**	**11 18 19.7**	**-0.4**
BRBB				S	**Sb**	**11 18 53.7**	**0.0**
BRBA	**Barentsburg A**	**3.11**	**99**	Pn	**Pg**	**11 18 20.3**	**-0.1**
BRBA				Sn	**Sb**	**11 18 54.7**	**+0.6**
BRBA	**Barentsburg A**	**3.11**	**99**	*e*P	**Pg**	**11 18 20.7**	**+0.3**
BRBA				*e*S	**Sb**	**11 18 56.6**	**+2.4**
BRBA				IAML		11 18 57.6	
	comp=Z,18nm,0.4s						
SPA0	**Spitsbergen Ar**	**3.48**	**94**	Pn	**Pb**	**11 18 22.7**	**+0.2**
	baz=322,slow=7.4						
SPA0				Sn	**Sn**	**11 18 59.5**	**+3.4**
	baz=315,slow=12						
SPA0	**Spitsbergen Ar**	**3.48**	**94**	Pn	**Pb**	**11 18 22.7**	**+0.2**
SPA0				Sn	**Sn**	**11 18 59.5**	**+3.4**
SPA0	**Spitsbergen Ar**	**3.48**	**94**⇑	*i*P	**Pb**	**11 18 22.9**	**+0.4**
SPA0				*i* S	**Sn**	**11 18 59.6**	**+3.4**
SPITS	**Spitsbergen Ar**	**3.48**	**94**	P	**Pb**	**11 18 22.6**	**+0.1**
SPITS				S	**Sn**	**11 18 53.5**	**-2.7**
NOR	**Nord**	**3.79**	**322**	Pn	**Pn**	**11 18 19.5**	**+0.2**
NOR	**Nord**	**3.79**	**322**	*e*P	**Pn**	**11 18 19.7**	**+0.4**
NOR				*i* S	Sn	11 18 53.6	-10
NOR				IAML		11 19 02.0	
	comp=Z,7.4nm,0.6s						
NOR	**Nord**	**3.79**	**322**	*e*P	**Pn**	**11 18 19.7**	**+0.4**
NOR				*i* S	Sn	11 18 53.6	-10
NOR				IAML		11 19 02.0	
	comp=Z,7.4nm,0.6s						
HSPB	**Hornsund (broa**	**3.90**	**112**	Pn	**Pg**	**11 18 33.2**	**-2.3**
HSPB				Sn	**Sb**	**11 19 18.7**	**+1.9**
HSPB	**Hornsund (broa**	**3.90**	**112**	*e*P	**Pg**	**11 18 33.3**	**-2.3**
HSPB				*e*S	**Sb**	**11 19 17.7**	**+0.8**
HSPB				IAML		11 19 23.2	
	comp=Z,8.3nm,0.3s						
HSPB	**Hornsund (broa**	**3.90**	**112**	*e*P	**Pg**	**11 18 33.3**	**-2.2**
HSPB				*e*S	**Sb**	**11 19 17.7**	**+0.8**
HSPB	**Hornsund (broa**	**3.90**	**112**	P	**Pg**	**11 18 33.4**	**-2.2**
HSPB				S	**Sb**	**11 19 16.0**	**-0.9**
DAG	**Danmarks Havn**	**4.36**	**249**	*i* P	**Pg**	**11 18 43.0**	**-1.3**
DAG				*i* S	**Sb**	**11 19 34.9**	**+4.9**
DAG				IAML		11 19 37.8	
	comp=Z,44nm,0.3s						
DAG	**Danmarks Havn**	**4.36**	**249**	*i* P	**Pg**	**11 18 43.0**	**-1.3**
DAG				*i* S	**Sb**	**11 19 34.9**	**+4.9**
DAG				IAML		11 19 37.8	
	comp=Z,44nm,0.3s						
HOPEN	**Hopen**	**5.96**	**101**	Pn	Pb	11 18 57.0	-7.6
HOPEN				Sn	**Sn**	**11 20 00.4**	**+3.4**
HOPEN	**Hopen**	**5.96**	**101**	*e*P	Pb	11 18 57.2	-7.4
HOPEN				*e*S	**Sn**	**11 19 59.9**	**+2.8**
HOPEN				IAML		11 20 03.2	
	comp=Z,9.4nm,0.2s						
BJO1	**Bjornoya**	**6.32**	**125**	*e*P	**Pb**	**11 19 10.3**	**-0.4**
BEAR	**Bear Island, N**	**6.32**	**125**	Pn	**Pb**	**11 19 08.9**	**-2.0**
	baz=338,slow=18						
BEAR				Sn	**Sb**	**11 20 22.7**	**-3.7**
	baz=338,slow=37						
DBG	**Daneborg**	**6.45**	**234**	Pn	**Pb**	**11 19 14.7**	**+1.7**
DBG	**Daneborg**	**6.45**	**234**	*i* P	**Pb**	**11 19 14.5**	**+1.5**
DBG				*i* S	**Sb**	**11 20 28.7**	**-1.2**
DBG				IAML		11 20 35.9	
	comp=Z,37nm,0.6s						
DBG	**Daneborg**	**6.45**	**234**	*i* P	**Pb**	**11 19 14.5**	**+1.5**
DBG				*i* S	**Sb**	**11 20 28.7**	**-1.2**
DBG				IAML		11 20 35.9	
	comp=Z,37nm,0.6s						
JNW	**Jan Mayen West**	**8.19**	**198**	*e*P	**Pb**	**11 19 42.8**	**+0.2**
JNW				*e*S	Sb	11 21 18.2	-1.7
JNW				IAML		11 21 26.4	
	comp=Z,23nm,0.7s						
JMIC	**Jan Mayen**	**8.23**	**198**	*e*P	**Pb**	**11 19 43.1**	**-0.2**
ZFI2	**Zemlya Franca-**	**8.49**	**54**	*e*P	Pn	11 19 19.0	-4.6
ZFI2				*e*S	Sn	11 20 39.0	-20
	comp=Z,20nm,1.0s						
OMEGA	**Omega**	**8.51**	**55**	*e*P	Pn	11 19 19.1	-4.8
OMEGA				*e*S	Sn	11 20 39.0	-21
	comp=Z,18nm,3.2s						
NEEM	**North Greenlan**	**10.15**	**287**	*i* P	Pn	11 19 52.1	+5.5
NEEM				*i* S	**Sn**	**11 21 36.9**	**-3.5**
NEEM				IAML		11 21 41.1	
	comp=Z,11nm,0.5s						
NEEM	**North Greenlan**	**10.15**	**287**	*i* P	Pn	11 19 52.1	+5.5
NEEM				*i* S	**Sn**	**11 21 36.9**	**-3.5**
NEEM				IAML		11 21 41.1	
	comp=Z,11nm,0.5s						

*IDC **01** 11:23:04.4±1.6,6˚74N×125˚05E,h0km,mb3.3/3, mbtmp3.3/3,Error ellipse: s-maj=31.2km s-min=11.2km az=142.0*
*MAN **01** 11:23:06.0,6˚86N×125˚13E,h8km,MS3.2*
MAN INTENSITY III - KIDAPAWAN CITY; BANSALAN AND MAGSAYSAY DAVAO DEL SUR; MAKILALA COTABATO; . INTENSITY II - COLUMBIO SULTAN KUDARAT.
ISC 01 11:23:06.3±0.9**,6˚96N**±0˚04×**125˚09E**±0˚03**,h17**km±5km**, n13,**σ**1˚42**/22**,mb3.3**/3**,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**0.05**	**2**	*i* P	**Pg**	**11 23 09.6**	**+0.1**
KCP				*i* S	**Sg**	**11 23 12.3**	**+0.7**
DMPH	**Davao City--Mi**	**0.44**	**73**	*i* P	**Pg**	**11 23 14.8**	**-0.3**
DMPH				*i* S	**Sb**	**11 23 22.0**	**+0.1**
DAV	**Davao City (W)**	**0.50**	**77**	Pg	**Pb**	**11 23 16.4**	**-0.3**
	821nm,0.3s,baz=243,slow=2.3,SNR=66						
DAV				Lg	Lg	11 23 25.1	
	360nm,0.3s,baz=288,slow=20,SNR=9.3						
DAV				LR	LR	11 23 45.4	
	comp=Z,449nm,18.1s,baz=14,slow=66						
GSPH	**General Santos**	**0.87**	**189**	*i* P	**Pb**	**11 23 22.2**	**-0.9**
GSPH				*i* S	**Sn**	**11 23 36.6**	**+0.1**
CTBH	**Cotabato--PC H**	**0.88**	**288**	*i* P	**Pg**	**11 23 23.1**	**-0.3**
CTBH				*i* S	**Sn**	**11 23 36.0**	**-0.3**
CGP	**Cagayan de Oro**	**1.54**	**345**	*i* P	**Pn**	**11 23 33.2**	**+0.2**
CGP				*i* S	**Sb**	**11 23 54.1**	**+0.5**
BIPH	**Bislig**	**1.75**	**46**	*e*P	**Pn**	**11 23 36.5**	**+0.5**
BIPH				*e*S	**Sb**	**11 23 59.6**	**-0.3**
SCPH	**Surigao**	**2.84**	**8**	*e*P	**Pg**	**11 24 01.3**	**+0.6**
SCPH				*e*S	**Sb**	**11 24 28.4**	**-2.6**
ZCP	**Zamboanga City**	**2.99**	**270**	*e*P	**Pb**	**11 23 57.7**	**-1.5**
ZCP				*e*S	**Sn**	**11 24 31.7**	**+3.1**
LLP	**Lapu-Lapu**	**3.52**	**342**	*e*P	**Pb**	**11 24 05.9**	**-2.3**
LLP				*i* S	**Sb**	**11 24 52.1**	**+1.4**
WRA	**Warramunga Arr**	**28.24**	**161**	P	**P**	**11 28 56.5**	**-2.2**
	0.2nm,0.4s,baz=338,slow=10.0,SNR=2.7						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**31.63**	**164**	P	**P**	**11 29 28.9**	**+0.1**
	0.3nm,0.6s,baz=343,slow=8.9,SNR=1.2						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**53.99**	**325**	P	**P**	**11 32 31.3**	**+1.8**
	0.2nm,0.7s,baz=118,slow=7.4,SNR=2.1						
	0.2nm,0.7s						

*IDC **01** 11:24:25.1±2.1,49˚97S×120˚17E,h0km,mb4.1/4, mbtmp4.1/4,MS3.7/12,Error ellipse: s-maj=55.2km s-min=48.0km az=149.0*
*NEIC **01** 11:24:26.9±1.7,49˚99S±0˚10×120˚0E±0˚1,h10km±1km, mb4.5/17,Error ellipse: s-maj=21.9km s-min=5.5km az=137.0*
ISC 01 11:24:26.8±0.7**,50˚0S**±0˚1×**120˚0E**±0˚1**,h10**km**,n36,** σ**0˚76**/24**,mb4.5**/12**,MS3.7**/12**,Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.65**	**342**	T	T	11 44 10.2	
	baz=165,slow=74,SNR=41						
H01W1	**Cape Leeuwin H**	**15.65**	**342**	T	T	11 44 09.7	
	baz=165,slow=74,SNR=28						
H01W3	**Cape Leeuwin H**	**15.66**	**342**	T	T	11 44 10.6	
	baz=165,slow=74,SNR=36						
NWAO	**Narrogin (SRO)**	**17.14**	**352**	Pn	**Pn**	**11 28 25.8**	**-0.5**
NWAO				IAmb	IAmb	11 29 09.8	
	comp=Z,58nm,1.3s						
TOO	**Toolangi**	**22.06**	**66**	P	**P**	**11 29 22.2**	**+0.6**
STKA	**Stephens Creek**	**24.20**	**50**	P	**P**	**11 29 41.7**	**-1.7**
	comp=Z,2.9nm,0.7s,baz=213,slow=14,SNR=3.8						
STKA				LR	LR	11 37 27.2	
	comp=Z,116nm,21.4s,baz=211,slow=32						
	comp=Z,2.9nm,0.7s						
PSA00	**Pilbara Seismi**	**28.33**	**360**	P	**P**	**11 30 21.2**	**+0.5**
ASAR	**Alice Springs**	**28.41**	**28**	P	**P**	**11 30 21.5**	**0.0**
	comp=Z,2.4nm,0.8s,baz=198,slow=8.8,SNR=14						
ASAR				LR	LR	11 40 17.5	
	comp=Z,175nm,21.7s,baz=271,slow=34						
	comp=Z,2.4nm,0.8s						
ASAR	**Alice Springs**	**28.41**	**28**	P	**P**	**11 30 20.9**	**-0.5**
AS31	**Alice Springs**	**28.41**	**28**	P	**P**	**11 30 20.8**	**-0.6**
VNDA	**Vanda**	**31.81**	**164**	LR	LR	11 42 06.4	
	comp=Z,135nm,20.3s,baz=318,slow=33						
VNDA	**Vanda**	**31.81**	**164**	P	**P**	**11 30 51.3**	**+0.4**
VNDA				IAmb	IAmb	11 31 11.9	
	comp=Z,8.8nm,1.2s						
WRA	**Warramunga Arr**	**32.05**	**26**	P	**P**	**11 30 53.5**	**-0.1**
	comp=Z,1.1nm,0.9s,baz=193,slow=11,SNR=2.2						
	comp=Z,1.1nm,0.9s						
MAW	**Mawson**	**32.91**	**216**	LR	LR	11 43 06.7	
	comp=Z,128nm,18.1s,baz=70,slow=34						
CTA	**Charters Tower**	**36.38**	**45**	LR	LR	11 46 32.2	
	comp=Z,83nm,19.4s,baz=216,slow=36						
CTAO	**Charters Tower**	**36.38**	**45**	P	**P**	**11 31 32.0**	**+0.8**
CTAO				IAmb	IAmb	11 31 36.8	
	comp=Z,14nm,1.4s						
THZ	**Tophouse**	**37.06**	**98**	P	**P**	**11 31 36.9**	**+0.1**
THZ				IAmb	IAmb	11 32 18.1	
	comp=Z,17nm,1.3s						
MRZ	**Mangatainoka R**	**39.35**	**98**	P	**P**	**11 31 55.7**	**-0.4**
MRZ				IAmb	IAmb	11 32 07.4	
	comp=Z,20nm,1.3s						
BATI	**Baumata**	**39.74**	**6**	LR	LR	11 48 45.8	
	comp=Z,105nm,18.4s,baz=220,slow=37						
QSPA	**South Pole Qui**	**40.17**	**180**	LR	LR	11 47 18.4	
	comp=Z,119nm,19.1s,baz=350,slow=34						
COEN	**Coen**	**40.59**	**36**	P	**P**	**11 32 07.0**	**+0.5**
COEN				IAmb	IAmb	11 32 48.3	
	comp=Z,8.8nm,1.4s						
DZM	**Mont Dzumac**	**45.73**	**70**	LR	LR	11 48 55.3	
	comp=Z,84nm,18.2s,baz=202,slow=32						
SNAA	**Sanae**	**52.16**	**200**	LR	LR	11 54 29.8	
	comp=Z,166nm,19.8s,baz=185,slow=35						
CMAR	**Chiang Mai Arr**	**70.62**	**339**	P	**P**	**11 35 42.3**	**+0.1**
	comp=Z,1.5nm,0.3s,baz=167,slow=7.7,SNR=7.5						
CMAR				LR	LR	12 07 10.5	
	comp=Z,13nm,18.1s,baz=320,slow=36						
	comp=Z,1.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**70.62**	**339**	P	**P**	**11 35 41.6**	**-0.6**
CHTO	**Chiang Mai**	**70.96**	**339**	P	**P**	**11 35 46.4**	**+2.2**
BOSA	**Boshof**	**71.53**	**247**	LR	LR	12 01 29.3	
	comp=Z,47nm,19.2s,baz=124,slow=31						
BOSA	**Boshof**	**71.53**	**247**	P	**P**	**11 35 47.6**	**-0.4**
KNMB	**Chin-men Tao**	**74.10**	**358**	P	**P**	**11 36 03.0**	**+0.2**
KHWEE	**KHWEE**	**76.34**	**252**	P	**P**	**11 36 16.5**	**+0.2**
SHL	**Shillong**	**79.23**	**334**	P	**P**	**11 36 31.7**	**-0.4**
SHL				IAmb	IAmb	11 36 34.1	
	comp=Z,3.2nm,0.8s						
KSANE	**Kasane**	**79.63**	**255**	P	**P**	**11 36 33.9**	**-0.6**
KSANE				IAmb	IAmb	11 37 17.9	
	comp=Z,7.9nm,1.1s						
EVN	**Everest**	**82.98**	**331**	P	**P**	**11 36 52.8**	**+0.2**
EVN				IAmb	IAmb	11 36 54.1	
	comp=Z,4.3nm,1.2s						
RPN	**Rapa Nui**	**91.66**	**137**	LR	LR	12 10 51.6	
	comp=Z,29nm,19.0s,baz=262,slow=30						
PDAR	**Pinedale Array**	**145.59**	**83**	PKPbc	**PKPdf**	**11 44 04.2**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=219,slow=3.8,SNR=4.2						
YKA	**Yellowknife Ar**	**148.19**	**46**	PKPbc	**PKPbc**	**11 44 10.8**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=284,slow=3.0,SNR=10.0						

*IDC **01** 11:25:55.5±1.1,2˚81S×128˚64E,h0km,mb3.6/4, mbtmp3.7/6,ML3.7/2,Error ellipse: s-maj=41.1km s-min=22.2km az=71.0*
*DJA **01** 11:26:04.4±0.5,3˚S±3˚×12˚9E±˚,h12km±4km,M4.0/17, mb4.5/3,MLv3.8/17*
ISC 01 11:25:57.4±0.8**,2˚53S**±0˚06×**129˚38E**±0˚05**,h10**km**,n16,** σ**1˚65**/15**,mb3.9**/5**,Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.93**	**209**	P	**Pn**	**11 26 18.4**	**+1.9**
KRAI	**Karang Ratu**	**1.26**	**231**	P	Pg	11 26 26.6	+5.0
AAI	**Ambon**	**1.65**	**226**	P	**Pg**	**11 26 31.3**	**+2.2**
BNDI	**Bandanaira**	**2.05**	**165**	P	**Pb**	**11 26 34.8**	**0.0**
NLAI	**Namlea**	**2.38**	**253**	P	**Pg**	**11 26 44.0**	**+0.9**
SIJI	**Sorong**	**2.50**	**49**	Pn	**Pg**	**11 26 47.1**	**+1.6**
	10nm,0.3s,baz=216,slow=8.7,SNR=32						
SIJI				Sn	**Sg**	**11 27 18.5**	**+0.6**
	13nm,0.3s,baz=233,slow=20,SNR=10						
	24nm,0.3s						
SIJI	**Sorong**	**2.50**	**49**	P	**Pg**	**11 26 47.0**	**+1.6**
SWI	**Sorong**	**2.50**	**49**	P	**Pg**	**11 26 47.3**	**+1.9**
SANI	**Sanana**	**3.42**	**278**	P	**Pb**	**11 26 58.5**	**+0.4**
GTOI	**Gorontalo**	**7.10**	**296**	P	Pb	11 27 53.2	-7.6
WRA	**Warramunga Arr**	**17.98**	**165**	P	**Pn**	**11 30 05.0**	**-2.6**
	0.2nm,0.3s,baz=340,slow=12,SNR=9.0						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**21.47**	**169**	P	**P**	**11 30 45.2**	**-1.0**
	3.5nm,0.5s,baz=345,slow=11,SNR=21						
	3.5nm,0.5s						
SONM	**Songino Array**	**54.03**	**341**	P	**P**	**11 35 20.7**	**-1.4**
	0.2nm,0.6s,baz=134,slow=6.2,SNR=2.1						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**64.18**	**326**	P	**P**	**11 36 30.3**	**-2.0**
	0.3nm,0.4s,baz=125,slow=7.4,SNR=6.8						
	0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**67.33**	**333**	P	**P**	**11 36 52.8**	**+0.3**
	0.5nm,0.6s,baz=123,slow=5.3,SNR=1.8						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**68.41**	**328**	P	**P**	**11 36 58.7**	**-0.6**
	1.2nm,0.6s,baz=128,slow=6.6,SNR=6.0						

IDC 01 11:26:07.7±2.2**,49˚96S**×**119˚99E,h0**km**,mb4.0**/3**, mbtmp4.0**/3**,Error ellipse: s-maj=59.9km s-min=52.0km az=174.0,Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.65**	**342**	T	T	11 45 59.1	
	baz=164,slow=74,SNR=12						
H01W1	**Cape Leeuwin H**	**15.65**	**342**	T	T	11 45 58.4	
	baz=164,slow=74,SNR=7.6						
H01W3	**Cape Leeuwin H**	**15.66**	**342**	T	T	11 45 58.4	
	baz=164,slow=74,SNR=9.9						
STKA	**Stephens Creek**	**24.20**	**50**	P	P	11 31 25.6	-0.2
	2.3nm,0.7s,baz=219,slow=6.5,SNR=3.1						
	2.3nm,0.7s						
ASAR	**Alice Springs**	**28.41**	**28**	P	P	11 32 04.2	+0.3
	1.9nm,0.9s,baz=202,slow=9.8,SNR=6.6						
	1.9nm,0.9s						
CMAR	**Chiang Mai Arr**	**70.61**	**339**	P	P	11 37 24.6	0.0
	0.5nm,0.3s,baz=167,slow=5.9,SNR=6.5						
	0.5nm,0.3s						
PDAR	**Pinedale Array**	**145.60**	**83**	PKPbc	PKPdf	11 45 47.0	-0.5
	0.6nm,0.8s,baz=229,slow=4.8,SNR=4.2						
YKA	**Yellowknife Ar**	**148.20**	**46**	PKPbc	PKPbc	11 45 53.4	-0.8
	0.7nm,0.8s,baz=280,slow=3.0,SNR=8.0						

*IDC **01** 11:34:34.0±2.1,5˚86S×152˚17E,h0km,mb3.6/5, mbtmp3.7/6,ML1.7/1,Error ellipse: s-maj=93.5km s-min=21.0km az=125.0*
ISC 01 11:34:38.9±1.9**,6˚0S**±0˚4×**152˚2E**±0˚4**,h36**km**,n7,**σ**1˚17**/8**, mb3.7**/5**,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.07**	**235**	Pn	**Pn**	**11 36 04.4**	**-1.7**
	1.2nm,0.3s,baz=60,slow=15,SNR=8.1						
PMG				Sn	**Sn**	**11 37 15.3**	**+0.9**
	2.7nm,0.3s,baz=49,slow=19,SNR=5.6						
	11nm,0.8s						
WRA	**Warramunga Arr**	**22.25**	**230**	P	**P**	**11 39 33.7**	**+0.8**
	0.9nm,0.7s,baz=53,slow=9.7,SNR=5.8						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**24.91**	**223**	P	**P**	**11 39 59.4**	**+0.6**
	1.7nm,0.8s,baz=51,slow=9.2,SNR=17						
	1.7nm,0.8s						
PETK	**Petropavlovsk-**	**59.03**	**4**	P	**P**	**11 44 34.1**	**-1.0**
	2.4nm,0.9s,baz=176,slow=8.9,SNR=2.1						
	2.4nm,0.9s						
MKAR	**Makanchi Array**	**80.82**	**319**	P	**P**	**11 46 50.1**	**+1.0**
	0.1nm,0.4s,baz=90,slow=4.3,SNR=1.9						
	0.1nm,0.4s						
ILAR	**Eielson Array**	**83.45**	**22**	P	**P**	**11 47 02.8**	**+0.3**
	0.4nm,0.6s,baz=232,slow=4.2,SNR=4.3						
	0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**150.10**	**286**	PKPbc	**PKPbc**	**11 54 27.1**	**+0.2**
	0.3nm,0.7s,baz=97,slow=2.3,SNR=1.9						

*SKO **01** 11:42:51.7,41˚45N×20˚51E,h16km,ML2.9*
*TIR **01** 11:42:52.2,41˚41N×20˚48E,h3km±1km,Md2.6/6,Ml3.1/7*
*PDG **01** 11:42:52.1±0.7,41˚46N×20˚54E,h2km±1km,MD3.2/2, ML3.1/13,Error ellipse: s-maj=0.8km s-min=1.3km az=0.0*
*THE **01** 11:42:52.8,41˚N±4˚×2˚1E±˚,h0km±5km,M2.8/18, MLh2.8/18*
*BEO **01** 11:42:53.7±0.6,41˚49N×20˚64E,h3km±4km,ML2.9/18*
ISC 01 11:42:52.7±1.0**,41˚45N**±0˚02×**20˚52E**±0˚02**,h5**km±9km**, n93,**σ**1˚20**/126**,6C-5D,Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.24**	**346**	Pg	**Pg**	**11 42 58.2**	**+0.7**
PHP				Sg	**Sg**	**11 43 01.9**	**+1.1**
PHP				AML	AML	11 43 04.0	
	17nm,0.1s						
PHP				AMd		11 43 34.5	
PHP	**Peshkopia**	**0.24**	**346**	P	**Pg**	**11 42 58.4**	**+0.9**
PHP				S	**Sg**	**11 43 02.3**	**+1.6**
OHR	**Ohrid**	**0.40**	**148**	*i* Pg	**Pg**	**11 43 00.1**	**-0.3**
OHR				*i* Sg	**Sg**	**11 43 06.8**	**+1.2**
OHR				*e*Lg	Lg	11 43 06.9	
	comp=N,543nm,0.2s						
OHR				*e*Lg	Lg	11 43 08.3	
	comp=E,907nm,0.3s						
TIR	**Tirane**	**0.50**	**259**	Pg	**Pg**	**11 43 01.9**	**-0.5**
TIR				Sg	**Sg**	**11 43 08.9**	**+0.1**
TIR				AML	AML	11 43 11.3	
	comp=E,3.5nm,0.2s						
TIR				AML	AML	11 43 13.9	
	comp=E,4.9nm,0.3s						
KBN	**Korca**	**0.85**	**166**	Pn	**Pg**	**11 43 07.8**	**-1.1**
KBN				Sn	**Sg**	**11 43 19.7**	**-0.3**
KBN				AML	AML	11 43 26.0	
	comp=E,2.5nm,0.3s						
KBN				AMd		11 43 52.7	
KBN	**Korca**	**0.85**	**166**	P	**Pg**	**11 43 08.5**	**-0.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBN				S	Sg	11 43 19.9	0.0
SKO	**Skopje**	**0.87**	**52**	*i* Pg	**Pg**	**11 43 08.6**	**-0.8**
SKO				*i* Sg	**Sb**	**11 43 21.4**	**-0.9**
SDA	**Shkodra**	**0.97**	**309**	Pg	**Pg**	**11 43 10.7**	**-0.7**
SDA				Sg	**Sn**	**11 43 26.0**	**-1.2**
SDA				AML	AML	11 43 28.7	
	comp=E,4.1nm,0.3s						
SDA				AMd		11 43 56.6	
ULC	**Ulcinj**	**1.08**	**299**⇓	*i*Pg	**Pg**	**11 43 11.9**	**-1.6**
ULC				*i* Sg	**Sn**	**11 43 29.1**	**-1.0**
NEST	**Nestorio**	**1.11**	**158**	Pg	**Pg**	**11 43 12.8**	**-1.1**
NEST				Sg	**Sb**	**11 43 29.4**	**+0.2**
NEST				AML	AML	11 43 34.5	
	comp=E,1.7nm,0.3s						
NEST				AMd		11 44 07.9	
NEST	**Nestorio**	**1.11**	**158**	P	**Pg**	**11 43 12.9**	**-1.0**
NEST				S	**Sn**	**11 43 30.2**	**-0.5**
PVY	**Plav**	**1.22**	**340**	*e*Pg	**Pg**	**11 43 14.5**	**-1.6**
PVY				*i* Sg	**Sn**	**11 43 33.5**	**-0.1**
DRME	**Dracevica, Mon**	**1.24**	**307**⇑	*i*Pg	**Pg**	**11 43 14.9**	**-1.6**
DRME				*i* Sg	**Sn**	**11 43 34.6**	**+0.7**
PENT	**Pentalofos**	**1.33**	**159**	P	**Pg**	**11 43 17.3**	**-1.0**
PENT				S	**Sn**	**11 43 37.0**	**+0.7**
PDG	**Podgorica**	**1.36**	**317**	Pg	**Pn**	**11 43 16.3**	**-2.1**
PDG				Sg	**Sn**	**11 43 39.0**	**+2.2**
PDG				AMd		11 44 11.0	
PDG	**Podgorica**	**1.36**	**317**	*e*Pg	**Pn**	**11 43 17.5**	**-0.9**
PDG				*e*Sg	**Sn**	**11 43 40.2**	**+3.4**
PDG	**Podgorica**	**1.36**	**317**⇑	*i*Pg	**Pn**	**11 43 17.1**	**-1.3**
PDG				*i* Sg	**Sn**	**11 43 38.7**	**+1.9**
PDG	**Podgorica**	**1.36**	**317**	*e*Pn	**Pn**	**11 43 16.9**	**-1.5**
BUM	**Brajici-Budva**	**1.48**	**306**⇑	*i*Pg	**Pn**	**11 43 19.4**	**-0.7**
BUM				*i* Sg	**Sn**	**11 43 42.9**	**+2.9**
KZN	**Kozani**	**1.48**	**140**	P	**Pn**	**11 43 19.3**	**-0.9**
IVA	**Berane**	**1.50**	**342**⇑	*i*Pg	**Pn**	**11 43 20.0**	**-0.4**
IVA				*i* Sg	**Sg**	**11 43 43.0**	**+2.1**
GRG	**Griva**	**1.50**	**108**	P	**Pn**	**11 43 19.5**	**-0.8**
VAY	**Valandovo**	**1.55**	**94**	*i* Pn	**Pn**	**11 43 20.4**	**-0.6**
VAY				*i* Sn	**Sg**	**11 43 42.1**	**-0.4**
VAY				*e*Lg	Lg	11 43 42.3	
	comp=N,161nm,0.6s						
VAY				*e*Lg	Lg	11 43 43.8	
	comp=E,143nm,0.5s						
KOME	**Kolasin**	**1.59**	**332**	*e*Pn	**Pn**	**11 43 21.6**	**0.0**
KOME				*i* Sn	**Sg**	**11 43 46.1**	**+2.3**
SRN	**Sarande**	**1.61**	**194**	Pn	**Pg**	**11 43 23.0**	**-0.7**
SRN				Sn	**Sg**	**11 43 46.1**	**+1.6**
SRN				AML	AML	11 43 53.3	
	comp=E,0.9nm,0.7s						
SRN				AMd		11 44 25.0	
SRN	**Sarande**	**1.61**	**194**	P	**Pg**	**11 43 23.0**	**-0.7**
CEME	**Cevo**	**1.62**	**313**⇑	*i*Pn	**Pn**	**11 43 21.8**	**-0.3**
CEME				*i* Sn	**Sg**	**11 43 47.7**	**+2.9**
KPRO	**Kipourio**	**1.62**	**156**	P	**Pb**	**11 43 22.4**	**-0.8**
BARS	**Barje**	**1.68**	**35**	*e*Pn	**Pb**	**11 43 23.1**	**-1.0**
NKME	**Niksic**	**1.76**	**319**⇓	*i*Pn	**Pb**	**11 43 24.5**	**-1.0**
NKME				*i* Sn	**Sg**	**11 43 51.2**	**+1.9**
BOSS	**Bosilegrad**	**1.80**	**54**	*e*Pn	**Pn**	**11 43 24.5**	**0.0**
HCY	**Herceg Novi**	**1.81**	**304**⇓	*i*Pn	**Pb**	**11 43 25.7**	**-0.6**
HCY				*i* Sn	**Sg**	**11 43 52.4**	**+1.5**
HCY	**Herceg Novi**	**1.81**	**304**	*e*Pn	**Pb**	**11 43 25.8**	**-0.6**
KEK	**Kerkira**	**1.82**	**198**	P	**Pb**	**11 43 25.4**	**-1.0**
KEK				S	**Sb**	**11 43 49.1**	**-0.4**
KNT	**Kendrikon**	**1.82**	**98**	P	**Pn**	**11 43 24.4**	**-0.3**
SELS	**Selova**	**1.83**	**14**	*e*Pn	**Pb**	**11 43 25.6**	**-1.1**
SJES	**Sjenica**	**1.86**	**348**	*e*Pg	**Pb**	**11 43 26.4**	**-0.8**
SJES				*e*Sg	**Sg**	**11 43 52.7**	**+0.3**
SJES	**Sjenica**	**1.86**	**348**	*e*Pn	**Pn**	**11 43 24.6**	**-0.8**
IGT	**Igoumenitsa**	**1.92**	**184**	P	**Pb**	**11 43 27.7**	**-0.5**
IGT	**Igoumenitsa**	**1.92**	**184**	*e*Pn	**Pb**	**11 43 27.9**	**-0.3**
PRMD	**Pramanda**	**1.96**	**167**	P	**Pb**	**11 43 29.2**	**+0.2**
KKB	**Krupnik**	**2.00**	**78**	P	**Pn**	**11 43 27.5**	**+0.3**
LIT	**Litokhoron**	**2.01**	**131**	P	**Pn**	**11 43 27.8**	**+0.4**
TREB	**Trebinje**	**2.05**	**309**	*e*Pg	**Pb**	**11 43 29.4**	**-1.0**
TREB	**Trebinje**	**2.05**	**309**	*e*Pn	**Pb**	**11 43 29.5**	**-1.0**
PLE	**Pljevlja**	**2.06**	**336**⇓	*i*Pn	**Pb**	**11 43 29.5**	**-1.2**
PLE				*i* Sn	**Sg**	**11 43 58.1**	**-0.8**
BRY	**Bratogost**	**2.07**	**315**⇓	*i*Pn	**Pb**	**11 43 29.9**	**-0.9**
BRY				*i* Sn	**Sg**	**11 43 58.1**	**-1.1**
BRY	**Bratogost**	**2.07**	**315**	*e*Pn	**Pb**	**11 43 29.9**	**-0.9**
UPM	**Unac-Piva**	**2.12**	**326**⇑	*i*Pn	**Pn**	**11 43 29.7**	**+0.6**
UPM				*i* Sn	**Sg**	**11 44 00.1**	**-0.9**
UPM	**Unac-Piva**	**2.12**	**326**	*e*Pn	**Pg**	**11 43 32.3**	**-1.1**
HORT	**Hortiatis**	**2.13**	**113**	P	**Pn**	**11 43 28.8**	**-0.3**
GOCS	**Kraljevo Serbi**	**2.13**	**7**	*e*Pn	**Pn**	**11 43 28.9**	**-0.2**
IVAS	**Ivanjica**	**2.15**	**353**	*e*Pn	**Pn**	**11 43 28.9**	**-0.4**
TYRN	**Tyrnavos**	**2.17**	**142**	P	**Pn**	**11 43 29.8**	**+0.3**
TETR	**Tetrakomo, Epi**	**2.18**	**164**	P	**Pb**	**11 43 33.0**	**+0.4**
THL	**Klokotos Trika**	**2.20**	**148**	P	**Pn**	**11 43 30.2**	**+0.3**
KLINJ	**Klinje**	**2.24**	**321**	*e*Pn	**Pb**	**11 43 32.5**	**-1.2**
RUDO	**Rudo**	**2.33**	**339**	*e*Pn	**Pb**	**11 43 34.5**	**-0.7**
VTS	**Vitosha**	**2.34**	**59**	P	**Pn**	**11 43 32.2**	**+0.2**
VTS	**Vitosha**	**2.34**	**59**	*e*Pn	**Pn**	**11 43 32.2**	**+0.2**
SRS	**Serrai**	**2.34**	**97**	*e*Pn	**Pn**	**11 43 32.1**	**+0.2**
ZAPS	**Zavoj**	**2.41**	**40**	*e*Pn	**Pn**	**11 43 34.0**	**+1.2**
MMB	**Musomishta**	**2.43**	**87**	P	**Pn**	**11 43 33.2**	**+0.1**
GRUS	**Gruza**	**2.44**	**3**	*e*Pn	**Pn**	**11 43 34.2**	**+0.9**
PLG	**Polygyros**	**2.46**	**115**	P	**Pn**	**11 43 34.1**	**+0.5**
STON	**Ston**	**2.53**	**305**	*e*Pn	**Pb**	**11 43 37.8**	**-0.9**
BBLS	**Lazi&#263i**	**2.55**	**342**	*e*Pn	**Pb**	**11 43 36.9**	**-2.2**
BBLS	**Lazi&#263i**	**2.55**	**342**	*e*Pn	**Pn**	**11 43 34.8**	**-0.1**
DIVS	**Divibare**	**2.68**	**352**	*e*Pn	**Pn**	**11 43 36.4**	**-0.2**
ZAGS	**Zajecar**	**2.68**	**28**	*e*Pn	**Pn**	**11 43 38.2**	**+1.6**
KUBS	**Kucevo**	**3.08**	**16**	*e*Pn	**Pn**	**11 43 40.6**	**-1.5**
TEKS	**Tekeris**	**3.19**	**347**	*e*Pn	**Pn**	**11 43 43.8**	**+0.3**
AVAS	**Avala Beograd**	**3.25**	**360**	*e*Pn	**Pn**	**11 43 43.7**	**-0.7**
MDVR	**Moldovita**	**3.45**	**14**	*e*Pn	**Pn**	**11 43 46.6**	**-0.5**
FRGS	**Fruska Gora**	**3.75**	**352**	*e*Pn	**Pn**	**11 43 51.1**	**-0.1**
FRGS	**Fruska Gora**	**3.75**	**352**	*e*Pn	**Pn**	**11 43 49.0**	**-2.2**
BLY	**Banja Luka**	**4.11**	**325**	*e*Pn	**Pb**	**11 44 01.9**	**-3.6**
BZS	**Buzias**	**4.25**	**10**	*e*Pn	**Pn**	**11 43 57.3**	**-0.7**
GZR	**Gura Zlata**	**4.28**	**22**	*e*Pn	**Pn**	**11 43 58.7**	**+0.2**
MORH	**Mrgy, Hungar**	**4.96**	**345**	*e*Pn	**Pn**	**11 44 07.5**	**-0.3**
BOJS	**Bojanci**	**5.58**	**318**	*e*Pn	**Pn**	**11 44 18.1**	**+1.8**
CEY	**Cerknica**	**6.16**	**316**	*e*Pn	**Pn**	**11 44 26.0**	**+1.6**
SOKA	**Soboth**	**6.55**	**325**	*e*Pn	**Pn**	**11 44 30.5**	**+0.7**
	comp=E,1.1nm,0.3s						
OBKA	**Obir**	**6.64**	**322**	*i* Pn	**Pn**	**11 44 33.4**	**+2.3**
	comp=E,0.8nm,0.3s						
ARSA	**Arzberg**	**6.82**	**330**	*e*Pn	**Pn**	**11 44 35.8**	**+2.4**
	comp=E,2.7nm,0.4s						
ARSA				*e*Sn	**Sn**	**11 45 51.6**	**+0.2**
	comp=E,1.3nm,0.7s						
KECS	**Kecovo**	**7.04**	**360**	*e*PN	**Pn**	**11 44 37.7**	**+1.3**
MODS	**Modra-Piesok**	**7.30**	**343**	*e*PN	**Pn**	**11 44 39.8**	**-0.2**
KBA	**Koelnbreinsper**	**7.63**	**320**	*e*Pn	**Pn**	**11 44 44.8**	**+0.2**
	comp=E,1.0nm,0.5s						
MOA	**Molln**	**7.80**	**327**	*e*Pn	**Pn**	**11 44 48.1**	**+1.3**
	comp=E,1.5nm,0.4s						
LESA	**Schwarzleotal**	**8.19**	**319**	*e*Pn	**Pn**	**11 44 52.8**	**+0.5**
	comp=E,0.6nm,0.2s						
WTTA	**Wattenberg**	**8.62**	**315**	*e*Pn	**Pn**	**11 44 59.5**	**+1.3**
	comp=E,0.2nm,0.1s						
WTTA				*e*Sn	**Sn**	**11 46 36.7**	**+0.9**
	comp=E,3.1nm,0.4s						
WATA	**Walderalm**	**8.69**	**316**	*e*Pn	**Pn**	**11 45 01.2**	**+1.9**
	comp=E,1.4nm,0.2s						
WATA				*e*Sn	**Sn**	**11 46 38.6**	**+0.9**
	comp=E,2.4nm,0.5s						
SQTA	**Sankt Quirin**	**8.82**	**314**	*e*Pn	**Pn**	**11 45 02.7**	**+1.8**
	comp=E,0.9nm,0.2s						

*MEX **01** 11:43:09.9±0.8, 14.71°N×93.47°W, h18km±32km, MD4.0*
*GCG **01** 11:43:10.7±1.9, 14.83°N×93.23°W, h70km±37km, MD4.0, ML3.9, Presumed earthquake*
ISC 01 11:43:07.5±2.5**, 14.72°N**±0.06°×**93.46°W**±0.03°**, h29**km±21km**, n30, σ1.62**/54**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCIG		**1.00**	**14**	*e*P	**Pn**	**11 43 25.7**	**0.0**
PCIG				*e*S	**Sb**	**11 43 38.4**	**-0.9**
THIG		**1.17**	**81**	*e*P	**Pn**	**11 43 28.5**	**+0.4**
THIG				*e*S	**Sn**	**11 43 41.8**	**-1.3**
THIG		**1.17**	**81**	*i* P	**Pn**	**11 43 28.4**	**+0.4**
THIG				*i* S	**Sn**	**11 43 42.2**	**-0.9**
PATR	**El Naranjo**	**1.25**	**72**	*e*P	**Pn**	**11 43 28.8**	**-0.5**
PATR				*e*S	**Sn**	**11 43 44.1**	**-1.2**
PATR				*e*P	**Sn**	**11 43 44.4**	**-0.9**
PAVE	**Pavencul**	**1.33**	**69**	*e*P	**Pn**	**11 43 30.3**	**-0.1**
PAVE				*e*S	**Sn**	**11 43 46.2**	**-1.1**
SMCA	**Catarina**	**1.35**	**84**	*i* P	**Pn**	**11 43 30.5**	**0.0**
SMCA				*i* S	**Sn**	**11 43 46.4**	**-1.1**
CHUJ	**Union Juarez**	**1.36**	**74**	*e*P	**Pn**	**11 43 30.5**	**-0.4**
CHUJ				*e*S	**Sn**	**11 43 46.9**	**-1.2**
CARR	**Arriaga**	**1.58**	**344**	*e*P	**Pn**	**11 43 34.4**	**+0.8**
CARR				*e*S	**Sn**	**11 43 53.4**	**+0.3**
RTAL	**Retalhuleu**	**1.72**	**96**	*e*P	**Pn**	**11 43 35.9**	**+0.3**
RTAL				*e*S	**Sn**	**11 43 56.6**	**-0.1**
QUEO	**Labor Ovalle**	**1.89**	**85**	*i* P	**Pn**	**11 43 39.3**	**+1.1**
QUEO				*i* S	**Sn**	**11 44 01.7**	**+0.5**
QUEO				IAML		11 44 02.5	
	comp=N,2μm,0.5s						
HUEH	**Huehuetenango**	**1.98**	**72**	*e*P	**Pn**	**11 43 41.1**	**+1.7**
HUEH				*e*S	**Sn**	**11 44 06.0**	**+2.6**
HUEH	**Huehuetenango**	**1.98**	**72**	*i* P	**Pn**	**11 43 40.7**	**+1.3**
HUEH				*i* S	**Sn**	**11 44 06.0**	**+2.6**
HUEH				IAML		11 44 07.3	
	comp=N,736nm,0.5s						
CCIG	**Comitan**	**2.01**	**39**	*e*P	**Pn**	**11 43 41.2**	**+1.5**
CCIG				*e*S	**Sn**	**11 44 01.7**	**-2.3**
CCIG	**Comitan**	**2.01**	**39**	*i* P	**Pn**	**11 43 41.7**	**+2.0**
STG2	**El Palmar, Qui**	**2.04**	**98**	*i* P	Pn	11 43 36.4	-3.7
STG2				*i* S	Sn	11 43 56.6	-8.2
STG2				IAML		11 44 01.1	
	comp=E,2μm,0.4s						
STG8	**El Palmar, Qui**	**2.06**	**97**	*i* P	Pn	11 43 37.2	-3.3
STG8				*i* S	Sn	11 43 57.5	-7.9
STG8				IAML		11 43 58.9	
	comp=N,819nm,0.2s						
TGIG		**2.07**	**9**	*e*P	**Pn**	**11 43 41.6**	**+1.1**
TGIG				*e*S	**Sn**	**11 44 04.5**	**-0.8**
TGIG		**2.07**	**9**	*i* P	**Pn**	**11 43 41.6**	**+1.1**
TGIG				*i* S	**Sn**	**11 44 05.0**	**-0.4**
STG5	**El Palmar, Qui**	**2.07**	**99**	*i* P	Pn	11 43 37.1	-3.4
STG5				*i* S	Sn	11 43 58.0	-7.4
UXUV	**UXUV**	**2.66**	**346**	*e*P	**Pn**	**11 43 51.0**	**+2.4**
UXUV				*e*S	**Sn**	**11 44 20.7**	**+0.8**
CMIG	**Matias Romero**	**2.72**	**330**	*e*P	**Pn**	**11 43 50.6**	**+1.2**
CMIG				*e*S	**Sn**	**11 44 21.2**	**-0.2**
HUIG	**Huatulco**	**2.76**	**293**	*e*P	**Pn**	**11 43 50.2**	**+0.4**
HUIG				*e*S	**Sn**	**11 44 19.7**	**-2.5**
NEUV	**Arroyo Zacate**	**3.73**	**323**	*e*P	**Pn**	**11 44 03.7**	**+0.5**
NEUV				*e*S	**Sn**	**11 44 44.4**	**-1.8**
PEIG	**Puerto Escondi**	**3.77**	**290**	*e*P	**Pn**	**11 44 04.2**	**+0.4**
PEIG				*e*S	**Sn**	**11 44 43.2**	**-4.2**
VHO	**Vista Hermosa**	**3.92**	**307**	*e*P	**Pn**	**11 44 07.4**	**+1.4**
VHO				*e*S	**Sn**	**11 44 51.7**	**+0.5**
YOIG	**Yosondua**	**4.47**	**299**	*e*P	**Pn**	**11 44 16.3**	**+2.7**
YOIG				*e*S	**Sn**	**11 45 05.7**	**+0.9**
SCIG	**Sabancuy**	**4.75**	**27**	*e*P	**Pn**	**11 44 17.7**	**+0.4**
SCIG				*e*S	**Sn**	**11 45 09.0**	**-2.4**
TOIG	**Toxpalan**	**4.82**	**315**	*e*P	**Pn**	**11 44 21.5**	**+3.2**
TOIG				*e*S	**Sn**	**11 45 14.2**	**+1.0**
TXIG	**Tlaxiaco**	**4.84**	**302**	*e*P	**Pn**	**11 44 20.1**	**+1.2**
TXIG				*e*S	**Sn**	**11 45 14.4**	**+0.2**
JAUV	**Jalcomulco**	**5.62**	**326**	*e*P	**Pn**	**11 44 29.3**	**+0.1**
JAUV				*e*S	**Sn**	**11 45 28.2**	**-4.6**

IDC 01 11:48:57.5±5.5**, 4.16°S**×**127.36°E, h194**km±63km**, mb2.5**/2**, mbtmp3.3**/4**, Error ellipse: s-maj=66.8km s-min=20.2km az=76.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.09**	**50**	P	Pn	11 50 13.4	+0.5
	8.4nm,0.2s,baz=232,slow=19,SNR=19						
SIJI				S	Sn	11 51 12.5	+0.1
	5.1nm,0.2s,baz=211,slow=19,SNR=7.3						
WRA	**Warramunga Arr**	**17.10**	**157**	P	P	11 52 44.1	0.0
	0.4nm,0.6s,baz=331,slow=12,SNR=12						
WRA				S	S	11 55 53.3	+0.9
	0.2nm,0.6s,baz=332,slow=17,SNR=1.5						
ASAR	**Alice Springs**	**20.40**	**163**	P	P	11 53 19.7	0.0
	0.4nm,0.8s,baz=337,slow=9.5,SNR=4.3						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**64.42**	**327**	P	P	11 59 13.0	-0.1
	0.1nm,0.4s,baz=116,slow=6.6,SNR=2.7						
	0.1nm,0.4s						

NOU 01 12:30:44.0, 18.49°S×**167.38°E, h0**km**, MLv3.6**/6**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.08**	**45**	P	Pn	12 31 06.0	-0.4
RTV	**Rentapao**	**1.21**	**55**	P	Pg	12 31 05.7	-1.6
MARNC	**Mare, Loyalty**	**3.04**	**168**	P	Pn	12 31 33.8	+0.5
DZM	**Mont Dzumac**	**3.67**	**194**	P	Pn	12 31 41.8	-0.3
OUENC	**Ouen Island, N**	**3.94**	**187**	P	Pn	12 31 45.4	-0.4

*KOLA **01** 12:47:60.0, 78.19°N×18.97°E, h0km, ML3.1, Error ellipse: s-maj=17.1km s-min=11.1km az=170.0, Spitsbergen, Barentz Sea*
*NAO **01** 12:48:00.6±0.5, 77.72°N×18.50°E, h15km±4km, ML3.1*
*FCIAR **01** 12:48:01.0, 77.76°N×18.67°E, h10km, station ZFI2 has station magnitude of 3.40 station OMEGA has station magnitude of 3.40*
*BER **01** 12:48:02.2±4.0, 77.77°N×18.42°E, h15km±12km, ML2.6, ML3.1(NAO), Confirmed Earthquake*
ISC 01 12:47:59.3±1.2**, 77.70N**±0.03°×**18.63E**±0.04°**, h19**km±4km**, n34, σ1.87**/53**, 1C, Svalbard region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SPA0	**Spitsbergen Ar**	**0.68**	**317**	Pb	**Pg**	**12 48 11.8**	**-0.9**
	baz=138,slow=22						
SPA0				Sg	**Sg**	**12 48 20.2**	**-1.6**
	baz=137,slow=37						
SPA0	**Spitsbergen Ar**	**0.68**	**317**	Pb	**Pg**	**12 48 11.8**	**-0.9**
SPA0				Sg	**Sg**	**12 48 20.2**	**-1.6**
SPA0	**Spitsbergen Ar**	**0.68**	**317**⇑	*i*P	**Pg**	**12 48 11.8**	**-0.9**
SPA0				*i* S	**Sg**	**12 48 20.2**	**-1.6**
SPITS	**Spitsbergen Ar**	**0.68**	**317**	P	**Pg**	**12 48 11.3**	**-1.4**
SPITS				S	**Sg**	**12 48 20.0**	**-1.8**
HSPB	**Hornsund (broa**	**0.98**	**226**	Pg	**Pg**	**12 48 18.4**	**+0.2**
HSPB				Sg	**Sg**	**12 48 31.7**	**+0.6**
HSPB	**Hornsund (broa**	**0.98**	**226**	*e*P	**Pg**	**12 48 18.4**	**+0.2**
HSPB				*e*S	**Sg**	**12 48 31.6**	**+0.6**
HSPB				IAML		12 48 38.6	
	comp=Z,221nm,0.4s						
HSPB	**Hornsund (broa**	**0.98**	**226**	*e*P	**Pg**	**12 48 18.1**	**-0.1**
HSPB				*e*S	**Sg**	**12 48 31.5**	**+0.4**
BRBA	**Barentsburg A**	**1.00**	**294**	Pg	**Pg**	**12 48 18.5**	**-0.2**
BRBA				Sg	**Sg**	**12 48 31.1**	**-0.8**
BRBA	**Barentsburg A**	**1.00**	**294**	*e*P	**Pg**	**12 48 18.5**	**-0.2**
BRBA				*e*S	**Sg**	**12 48 30.8**	**-1.1**
BRBA				IAML		12 48 35.5	
	comp=Z,296nm,0.2s						
BRBB	**Barentsburg B**	**1.01**	**295**	Pg	**Pg**	**12 48 18.4**	**-0.6**
BRBB				Sg	**Sg**	**12 48 32.0**	**-0.3**
BRBB	**Barentsburg B**	**1.01**	**295**	*e*P	**Pg**	**12 48 18.4**	**-0.6**
BRBB				*e*S	**Sg**	**12 48 30.9**	**-1.4**
BRBB	**Barentsburg B**	**1.01**	**295**	P	**Pg**	**12 48 18.2**	**-0.7**
BRBB				S	**Sg**	**12 48 31.3**	**-1.0**
KBS	**Kingsbay**	**1.84**	**315**	Pn	Pn	12 48 30.2	+0.4
KBS				Sn	**Sn**	**12 48 54.6**	**+2.1**
KBS	**Kingsbay**	**1.84**	**315**	*e*P	Pn	12 48 30.0	+0.2
KBS				*e*Pg	Pg	12 48 32.8	-1.9
KBS				*e*Sg	**Sn**	**12 48 55.8**	**+3.3**
KBS				IAML		12 48 58.6	
	comp=Z,170nm,0.6s						
KBS	**Kingsbay**	**1.84**	**315**	P	Pn	12 48 30.0	+0.2
KBS				S	Sn	12 48 49.9	-2.6
HOPEN	**Hopen**	**1.86**	**127**	Pn	**Pn**	**12 48 32.5**	**+2.4**
HOPEN				Pg	Pg	12 48 35.0	0.0
HOPEN				Sg	**Sg**	**12 48 59.5**	**+0.2**
HOPEN	**Hopen**	**1.86**	**127**	*e*P	**Pn**	**12 48 32.5**	**+2.4**
HOPEN				*e*Pg	Pg	12 48 35.1	0.0
HOPEN				*e*Sg	**Sg**	**12 48 59.4**	**+0.2**
HOPEN				IAML		12 49 01.8	
	comp=Z,237nm,0.3s						
BJO1	**Bjornoya**	**3.21**	**178**	Pn	**Pn**	**12 48 49.8**	**+1.1**
BJO1				Sg	**Sg**	**12 49 40.3**	**-2.1**
BJO1	**Bjornoya**	**3.21**	**178**	*e*P	**Pn**	**12 48 49.9**	**+1.3**
BJO1				*e*Pg	Pg	12 49 00.1	-0.7
BJO1				*e*Sg	**Sg**	**12 49 42.4**	**0.0**
BJO1				IAML		12 49 44.4	
	comp=Z,41nm,0.5s						
BEAR	**Bear Island, N**	**3.22**	**178**	Pn	**Pn**	**12 48 49.9**	**+1.2**
	baz=356,slow=18						
BEAR				Pg	Pg	12 48 59.7	-1.2
	baz=356,slow=18						
BEAR				Sg	**Sg**	**12 49 40.2**	**-2.4**
	baz=356,slow=37						
ZFI2	**Zemlya Franca-**	**6.19**	**46**	*e*P	Pn	12 49 29.1	-0.3
ZFI2				*e*S	Sn	12 50 34.8	-4.6
	comp=Z,14nm,2.6s						
OMEGA	**Omega**	**6.19**	**47**	*e*P	Pn	12 49 29.2	-0.3
OMEGA				*e*S	Sn	12 50 35.0	-4.6
	comp=Z,16nm,3.0s						
HAMF	**Hammerfest**	**7.22**	**166**	*e*P	**Pn**	**12 49 43.9**	**+0.2**
HAMF				IAML		12 51 18.0	
	comp=Z,4.9nm,0.5s						
VADS	**Vadso**	**8.15**	**153**	Pn	**Pn**	**12 49 57.4**	**+1.0**
VADS				Sn	Sn	12 51 22.6	-5.2
VADS	**Vadso**	**8.15**	**153**	*e*P	**Pn**	**12 49 57.5**	**+1.1**
VADS				*e*S	**Sn**	**12 51 24.3**	**-3.5**
VADS				IAML		12 52 00.3	
	comp=Z,4.8nm,1.1s						
VADS	**Vadso**	**8.15**	**153**	P	**Pn**	**12 49 58.2**	**+1.8**
VADS				S	**Sn**	**12 51 22.9**	**-4.9**
DAG	**Danmarks Havn**	**8.20**	**282**	*e*P	**Pn**	**12 50 00.2**	**+3.2**
DAG				*e*S	**Sn**	**12 51 27.1**	**-1.9**
JETT	**Jettan, Norway**	**8.20**	**176**	*e*P	**Pn**	**12 49 58.1**	**+1.0**
JETT				*e*S	**Sn**	**12 51 25.6**	**-3.5**
JETT				IAML		12 52 08.4	
	comp=Z,2.9nm,1.0s						
KEV	**Kevo**	**8.31**	**159**	*e*P	**Pn**	**12 49 60.0**	**+1.5**
KEV				*e*S	**Sn**	**12 51 27.1**	**-4.5**
ARA0	**ARCESS Array S**	**8.42**	**163**	Pn	**Pn**	**12 50 01.3**	**+1.2**
	baz=353,slow=8.6						
ARA0				Sn	Sn	12 51 28.1	-6.3
	baz=341,slow=22						
ARA0	**ARCESS Array S**	**8.42**	**163**	Pn	**Pn**	**12 50 01.3**	**+1.2**
ARA0				Sn	Sn	12 51 28.1	-6.3
ARCES	**ARCESS Array B**	**8.42**	**163**	P	**Pn**	**12 50 01.9**	**+1.7**
ARCES				S	Sn	12 51 27.6	-6.9
KIF	**Kilpisjarvi**	**8.76**	**175**	*e*P	**Pn**	**12 50 05.4**	**+0.7**
KIF				*e*S	Sn	12 51 37.6	-5.2
KTK1	**Kautokeino**	**8.83**	**169**	*e*S	**Sn**	**12 51 41.2**	**-3.2**
KTK1				IAML		12 51 46.4	
	comp=Z,2.2nm,0.8s						

WEL 01 12:56:59.5±1.3**, 35°S**±16°×**17°9E**±1°4**, h215**km±21km**, M3.5**/12**, ML3.4**/13**, MLv3.5**/12**, Error ellipse: s-maj=24.0km s-min=13.9km az=37.8, confirmed, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.13**	**186**	P	Pn	12 57 40.5	+0.2
MXZ				S	S	12 58 12.6	+0.4
WMGZ	**Waiomatatini S**	**2.38**	**183**	P	Pn	12 57 43.5	+0.5
WMGZ				S	S	12 58 18.5	+1.7
HAZ	**Te Kaha**	**2.40**	**195**	P	Pn	12 57 43.0	-0.2
HAZ				S	S	12 58 17.5	+0.3
PKGZ	**Pakihiroa**	**2.46**	**189**	P	Pn	12 57 44.0	+0.2
RUGZ	**Raukumara Rang**	**2.63**	**196**	P	Pn	12 57 45.2	-0.6
RUGZ				S	S	12 58 21.6	-0.2
PUZ	**Puketiti**	**2.64**	**186**	P	Pn	12 57 45.6	-0.2
PUZ				S	S	12 58 22.1	+0.2
TWGZ	**Tauwhareparae**	**2.78**	**190**	P	Pn	12 57 47.8	+0.5
TWGZ				S	S	12 58 26.4	+1.8
OPRZ	**Ohinepanea**	**2.91**	**214**	P	Pn	12 57 49.1	+0.4
MARZ	**Manawahe**	**2.97**	**211**	P	Pn	12 57 50.7	+1.2
MWZ	**Matawai**	**3.01**	**196**	P	Pn	12 57 50.2	+0.1
MWZ				S	S	12 58 29.9	+0.5
TKGZ	**Te Karaka**	**3.05**	**191**	P	Pn	12 57 50.1	-0.3
TKGZ				S	S	12 58 30.8	+0.6
URZ	**Urewera**	**3.06**	**202**	P	Pn	12 57 50.0	-0.5
RAGZ	**Rawiri**	**3.19**	**197**	P	Pn	12 57 52.3	+0.1
MKAZ	**Moumakai**	**3.23**	**238**	P	Pn	12 57 53.3	+0.8
ETAZ	**East Tamaki Re**	**3.33**	**242**	P	Pn	12 57 54.4	+0.8
RIGZ	**Rimuhau**	**3.33**	**191**	P	Pn	12 57 53.0	-0.7
MUGZ	**Murupara**	**3.37**	**205**	P	Pn	12 57 54.5	+0.4
RTZ	**Ruatahuna**	**3.42**	**202**	P	Pn	12 57 54.2	-0.6
SNGZ	**Shannon Statio**	**3.48**	**196**	P	Pn	12 57 55.4	-0.1
PRGZ	**Paritu Road**	**3.52**	**189**	P	Pn	12 57 56.6	+0.6
PRRZ	**Plateau Road**	**3.53**	**209**	P	Pn	12 57 55.5	-0.5
ALRZ	**Allen Road**	**3.60**	**209**	P	Pn	12 57 57.6	+0.7
KNZ	**Kokohu**	**3.65**	**191**	P	Pn	12 57 56.4	-1.1
RAHZ	**Arahi**	**3.67**	**199**	P	Pn	12 57 57.8	0.0
MTHZ	**Maungataniwha**	**3.68**	**202**	P	Pn	12 57 57.9	-0.1
MHGZ	**Mahia Peninsul**	**3.75**	**188**	P	Pn	12 57 59.5	+0.8
KUTZ	**Kaahu Road**	**3.77**	**215**	P	Pn	12 58 00.3	+1.4
TLZ	**Tolley Road**	**3.78**	**219**	P	Pn	12 58 00.4	+1.2
WHHZ	**Waihua**	**3.79**	**196**	P	Pn	12 57 58.7	-0.5
MRHZ	**Matea Rd**	**3.81**	**206**	P	Pn	12 57 59.3	-0.1
NMHZ	**Naumai**	**3.92**	**201**	P	Pn	12 58 00.5	-0.3
ARHZ	**Aropaoanui**	**4.02**	**198**	P	Pn	12 58 01.7	-0.3
BKZ	**Black Stump Fm**	**4.08**	**204**	P	Pn	12 58 02.1	-0.6
OUZ	**Omahuta**	**4.09**	**272**	P	Pn	12 58 01.9	-0.9
RITZ	**Rihia Road**	**4.15**	**211**	P	Pn	12 58 03.8	+0.2
MCHZ	**McNeill Hill**	**4.27**	**200**	P	Pn	12 58 04.1	-1.0
HIZ	**Hauiti**	**4.29**	**223**	P	Pn	12 58 07.2	+2.0
NTVZ	**North Tongarir**	**4.33**	**212**	P	Pn	12 58 05.3	-0.6
TMVZ	**Te Maari**	**4.33**	**211**	P	Pn	12 58 05.2	-0.8
KWHZ	**Kaweka Forest**	**4.34**	**203**	P	Pn	12 58 04.7	-1.3
ETVZ	**East Tongariro**	**4.35**	**211**	P	Pn	12 58 05.8	-0.4
CKHZ	**Cape Kidnapper**	**4.38**	**195**	P	Pn	12 58 06.2	-0.2
OTVZ	**Oturere**	**4.39**	**211**	P	Pn	12 58 05.9	-0.8
SNVZ	**South Ngauruho**	**4.42**	**211**	P	Pn	12 58 06.4	-0.7
NGZ	**Ngauruhoe**	**4.43**	**212**	P	Pn	12 58 06.6	-0.5
KRHZ	**Kereru**	**4.55**	**202**	P	Pn	12 58 06.8	-1.8
KAHZ	**Kahuranaki**	**4.56**	**197**	P	Pn	12 58 07.3	-1.3
MOVZ	**Moawhango**	**4.56**	**209**	P	Pn	12 58 07.2	-1.5
MTVZ	**Mangateitei**	**4.66**	**211**	P	Pn	12 58 09.4	-0.5
PXZ	**Pawanui**	**4.79**	**196**	P	Pn	12 58 09.3	-2.1

IDC 01 13:00:16.6±4.4**, 0.73°N**×**127.32°E, h0**km**, mb3.2**/3**, mbtmp3.3**/3**, Error ellipse: s-maj=186.3km s-min=27.8km az=55.0, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.67**	**162**	P	P	13 05 10.0	+1.0
	0.3nm,0.3s,baz=340,slow=10,SNR=9.8						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**25.08**	**166**	P	P	13 05 42.2	-0.9
	0.3nm,0.8s,baz=345,slow=8.2,SNR=5.3						
	0.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**32.96**	**304**	P	P	13 06 53.4	+0.1
	0.4nm,0.3s,baz=110,slow=9.6,SNR=4.4						
	0.4nm,0.3s						

*IDC **01** 13:29:28.6±2.9, 37.90°N×38.71°E, h0km, mb3.2/1, mbtmp3.1/3, ML2.7/2, MS2.6/2, Error ellipse: s-maj=48.5km s-min=17.2km az=177.0*
*AFAD **01** 13:29:29.6, 38.26°N×38.82°E, h7km±2km, MW3.5*
*ISK **01** 13:29:29.0, 38.26°N×38.83°E, h3km, ML3.6/16*
ISC 01 13:29:30.1±1.2**, 38.28°N**±0.02°×**38.83°E**±0.02°**, h0**km±11km**, n56, σ0.73**/62**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MDYL	**Doganyol-Malat**	**0.17**	**79**	Pg	**Pg**	**13 29 33.3**	**0.0**
MDYL				Sg	**Sg**	**13 29 36.2**	**+0.7**
ESGZ	**Sivrice-Elazig**	**0.23**	**51**	Pg	**Pg**	**13 29 34.6**	**0.0**
ESGZ				Sg	**Sg**	**13 29 39.0**	**+1.3**
ELZG	**Elazig**	**0.25**	**29**	P	**Pg**	**13 29 35.3**	**+0.4**
ELZG				S	**Sg**	**13 29 38.9**	**+0.8**
ELZG				IAML		13 29 41.0	
	comp=N,7μm,0.2s						
ELZG				IAML		13 29 41.0	
	comp=E,7μm,0.3s						
MAYA	**Malatya/Merkez**	**0.32**	**278**	P	**Pg**	**13 29 36.3**	**0.0**
MAYA				S	**Sg**	**13 29 40.2**	**-0.3**
MAYA				IAML		13 29 41.0	
	comp=E,3μm,0.3s						
MAYA				IAML		13 29 43.0	
	comp=N,3μm,0.3s						
CNGT	**ngs**	**0.37**	**100**	P	**Pg**	**13 29 36.8**	**-0.5**
SVRC	**Sivrice-ELAZID**	**0.39**	**75**	Pg	**Pg**	**13 29 37.3**	**-0.2**
NARI	**Adyaman-Kaht**	**0.40**	**188**	P	**Pg**	**13 29 37.5**	**-0.2**
NARI				S	**Sg**	**13 29 42.8**	**-0.2**
NARI				IAML		13 29 43.0	
	comp=E,2μm,0.4s						

NARI				IAML		13 29 48.0	
	comp=N,2µm,0.5s						
ESIJ	Sivrice-Elazig	0.41	66	Pg	Pg	13 29 38.2	+0.2
ESIJ				Sg	Sg	13 29 44.8	+1.4
ELZ	Elazig	0.50	36	P	Pg	13 29 39.9	+0.1
KAHTU	Kahta	0.51	200	P	Pg	13 29 39.7	-0.2
AZEY	Adyaman-Merk	0.66	225	P	Pg	13 29 42.9	+0.2
MDNT	Maden	0.68	80	P	Pg	13 29 43.3	+0.2
AKCD	Akcadag	0.72	271	P	Pg	13 29 43.5	-0.4
AKCD				S	Sg	13 29 53.6	+0.4
AKCD				IAML		13 29 57.0	
	comp=N,3µm,0.4s						
AKCD				IAML		13 30 00.0	
	comp=E,2µm,0.4s						
MCKZ	Bingol	0.84	8	P	Pg	13 29 45.9	-0.4
KOVA	Elazig, Kovanc	0.88	61	P	Pg	13 29 46.9	0.0
ARPR	Arapgir-MALATY	0.90	335	Pg	Pg	13 29 47.4	0.0
ARPR				Sg	Sb	13 30 01.0	-0.3
HEKM	Malatya_Hekimh	0.91	311	P	Pg	13 29 47.4	-0.2
ATAB	Bozova	0.92	208	P	Pg	13 29 48.3	+0.7
TNCL	Tunceli-Merkez	1.00	34	P	Pg	13 29 48.6	-0.8
AKCA	Adyaman/G¶l	1.03	242	P	Pg	13 29 49.8	0.0
DIYA	Diyarbakir	1.08	109	P	Pn	13 29 53.7	+1.2
DIYA				S	Sn	13 30 07.8	-0.4
DYBB	Diyarbakir	1.08	107	Pg	Pg	13 29 50.6	-0.3
SANL	SANLIURFA_Merk	1.11	174	P	Pb	13 29 51.6	-0.7
ILIC	ilic-Erzincan	1.19	350	Pn	Pb	13 29 52.3	-1.3
MDIV		1.21	330	P	Pg	13 29 53.9	+0.6
MIMR	Divri	1.21	330	P	Pg	13 30 01.6	+8.3
MAYK		1.28	69	P	Pn	13 29 54.1	-1.2
ELBS	KAHRAMANMARAS	1.34	272	P	Pn	13 29 55.5	-0.6
GZT	Gaziantep	1.36	228	P	Pg	13 29 57.1	+0.8
SURC	SANLIURFA_SURC	1.41	187	P	Pb	13 29 56.8	-0.6
ERZN	Erzincan	1.48	28	Pn	Pn	13 29 57.4	-0.7
NZIP	Nizip/Gaziante	1.54	217	P	Pn	13 29 58.1	-0.8
EUZM	Uzumlu	1.58	25	P	Pn	13 29 59.2	-0.2
KHMN	Narli-Kahraman	1.60	237	P	Pb	13 30 00.3	-0.2
KAHM	Kahramanmaras,	1.65	243	P	Pn	13 29 59.8	-0.5
GAZ	Gaziantep	1.70	230	Pn	Pn	13 30 00.3	-0.7
KMRS	Kahramanmaras	1.71	244	Pn	Pn	13 30 00.6	-0.6
YEDI	Yedisu-Bingol	1.77	49	Pn	Pn	13 30 01.9	-0.2
MBOZ		1.78	356	P	Pb	13 30 03.3	-0.4
KHMR	Kahramanmara	1.79	239	P	Pn	13 30 01.5	-0.7
SARI	SarD1z-Kayseri	1.90	275	Pn	Pn	13 30 03.3	-0.7
CUAYA	Sivas-Altinyay	1.90	302	P	Pb	13 30 04.6	-1.2
KARO	Karliova-Bingo	2.01	59	Pn	Pn	13 30 05.1	-0.4
KAMA	Osmaniye	2.04	238	P	Pn	13 30 04.6	-1.1
SCER	sogukcermik	2.06	320	P	Pb	13 30 08.0	-0.5
ANDN	Andirin	2.09	251	P	Pn	13 30 05.8	-0.7
SVSK	Karacayir	2.17	319	Pn	Pn	13 30 07.3	-0.1
SAIM	ADANA	2.19	263	P	Pn	13 30 08.8	+1.0
VRTB	Varto-Mus	2.23	66	Pn	Pn	13 30 08.4	-0.1
BAYT	Aydıntepe-Bayb	2.34	25	Pn	Pn	13 30 10.0	0.0
GURO	Guroymak-BITLI	2.53	83	Pn	Pn	13 30 12.5	0.0
ERZM	Erzurum	2.55	50	P	Pb	13 30 14.7	-2.2
BRTR	Keskin Array B	4.29	291	Pn	Pn	13 30 38.2	+1.4
	0.9nm,0.3s,baz=112,slow=12,SNR=29						
BRTR				Lg	Lg	13 31 47.5	
	baz=117,slow=32						
BRTR				LR	LR	13 32 35.1	
	comp=Z,90nm,19.5s,baz=100,slow=43						
	4.4nm,0.6s						
MMAI	Mount Meron Ar	5.95	209	LR	LR	13 33 22.1	
	comp=Z,53nm,19.5s,baz=10.0,slow=42						
KBZ	Khabaz	6.25	28	Pn	Pn	13 31 09.5	+6.0
	0.1nm,0.3s,baz=216,slow=17,SNR=1.5						
	0.6nm,0.5s						
MKAR	Makanchi Array	32.78	61	P	P	13 36 06.2	+1.4
	0.2nm,0.6s,baz=271,slow=7.0,SNR=5.0						
	0.2nm,0.6s						

WEL 01 13:40:08.3±1.3, 34°S±22°×17°7W±2°8, h173km±41km, M4.6/7, MLv4.6/7, Error ellipse: s-maj=43.9km s-min=15.0km az=126.0, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	5.08	226	P	Pn	13 41 22.7	-0.4
MXZ				S	Sn	13 42 21.1	-0.7
WMGZ	Waiomatatini S	5.19	223	P	Pn	13 41 24.7	+0.2
WMGZ				S	Sn	13 42 24.8	+0.3
PKGZ	Pakihiroa	5.42	225	P	Pn	13 41 27.5	0.0
PKGZ				S	Sn	13 42 31.1	+1.4
PUZ	Puketiti	5.46	222	P	Pn	13 41 28.1	+0.1
PUZ				S	Sn	13 42 32.0	+1.3
HAZ	Te Kaha	5.52	227	P	Pn	13 41 29.1	+0.2
HAZ				S	Sn	13 42 32.0	-0.1
TWGZ	Tauwhareparae	5.69	223	P	Pn	13 41 31.1	0.0
TWGZ				S	Sn	13 42 38.4	+2.3
RUGZ	Raukumara Rang	5.72	226	P	Pn	13 41 31.8	+0.2
RUGZ				S	Sn	13 42 37.0	0.0
CNGZ	Carnagh Statio	5.79	219	P	Pn	13 41 33.2	+0.9
CNGZ				S	Sn	13 42 34.0	-4.4
TKGZ	Te Karaka	5.95	222	S	Sn	13 42 43.5	+1.3
MWZ	Matawai	6.05	224	P	Pn	13 41 35.7	-0.2
MWZ				S	Sn	13 42 45.6	+0.7
RIGZ	Rimuhau	6.18	220	P	Pn	13 41 37.6	0.0
RIGZ				S	Sn	13 42 50.6	+2.7
RAGZ	Rawiri	6.23	224	P	Pn	13 41 37.1	-1.1
RAGZ				S	Sn	13 42 48.4	-0.6
URZ	Urewera	6.25	227	P	Pn	13 41 38.1	-0.3
KNZ	Kokohu	6.46	219	P	Pn	13 41 41.5	+0.3
SNGZ	Shannon Statio	6.47	222	P	Pn	13 41 42.2	+0.8
NMHZ	Naumai	6.99	223	P	Pn	13 41 48.4	+0.2
ARHZ	Aropaoanui	7.00	221	P	Pn	13 41 48.3	0.0
ARHZ				S	Sn	13 43 09.2	+2.0
BKZ	Black Stump Fm	7.21	224	P	Pn	13 41 50.8	-0.4
BKZ				S	Sn	13 43 11.6	-0.8
KWHZ	Kaweka Forest	7.43	222	P	Pn	13 41 54.7	+0.7
KAHZ	Kahuranaki	7.45	218	P	Pn	13 41 53.9	-0.4
PXZ	Pawanui	7.63	217	P	Pn	13 41 55.9	-0.7
PNHZ	Pukenui	7.89	221	P	Pn	13 41 59.3	-0.8

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*SOME **01** 13:46:00.4, 42°.20N×80°.62E, h15km*
*NNC **01** 13:46:01.6±1.0, 42°.29N×80°.59E, h0km, mb3.5, mpv3.4, Error ellipse: s-maj=6.5km s-min=5.2km az=142.0*
*KRNET **01** 13:46:01.4±0.1, 42°.56N×80°.71E, mb3.1*
ISC 01 13:46:01.4±2.2, 42°.27N±0°.06×80°.51E±0°.07, h1km±13km, n37, σ1§82/60, 11C-5D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	1.17	319	P	Pn	13 46 21.4	-3.8
	20nm,0.1s						
SHLS				S	Sb	13 46 36.1	-4.3
	419nm,0.2s						
SHLS	Shalkode	1.17	319	eP	Pn	13 46 21.4	-3.8
	20nm,0.1s						
SHLS				eS	Sb	13 46 36.1	-4.3
	419nm,0.2s						
KTMS	Ketmen	1.18	354	P	Pn	13 46 23.2	-2.0
	5.5nm,0.2s						
KTMS				S	Sb	13 46 39.6	-0.9
	19nm,0.1s						
KTMS	Ketmen	1.18	354	eP	Pn	13 46 23.2	-2.0
	5.5nm,0.2s						
KTMS				eS	Sb	13 46 39.6	-0.9
	19nm,0.1s						
PDGK	Podgornoye	1.29	325	⇑P	Pb	13 46 26.1	-0.6
	3.6nm,0.3s						
PDGK				⇓S	Sb	13 46 44.3	+0.4
	48nm,0.4s						
UZB	Uzynbulak	1.40	309	P	Pb	13 46 28.2	-0.2
	4.8nm,0.1s						
UZB				S	Sg	13 46 48.3	+1.9
	24nm,0.2s						
UZB	Uzynbulak	1.40	309	eP	Pb	13 46 28.2	-0.2
	4.8nm,0.1s						
UZB				eS	Sg	13 46 48.3	+1.9
	24nm,0.2s						
PRZ	Przheval'sk	1.58	278	⇑eP	Pg	13 46 32.5	+0.9
PRZ				⇑eS	Sg	13 46 55.1	+3.1
SATY	Saty	1.74	298	Pg	Pg	13 46 35.6	+0.9
	14nm,0.3s						
SATY				Lg	Lg	13 47 01.4	
	63nm,0.2s						
KPKS	Kokpek	1.79	312	P	Pb	13 46 35.4	+0.2
	0.4nm,0.2s						
KPKS				S	Sg	13 47 00.5	+1.4
	34nm,0.2s						
KPKS	Kokpek	1.79	312	eP	Pb	13 46 35.4	+0.2
	0.4nm,0.2s						
KPKS				eS	Sg	13 47 00.5	+1.4
	34nm,0.2s						
TARG	Taragay, Kyrgy	2.09	256	⇓eP	Pg	13 46 40.9	-0.5
TARG				⇓eS	Sg	13 47 09.9	+1.4
KURS	Kuram	2.10	306	Pg	Pb	13 46 41.1	+0.7
	14nm,0.4s						
KURS				Lg	Lg	13 47 10.4	
	17nm,0.4s						
DJR	Jarkent	2.12	346	Pg	Pb	13 46 40.2	-0.5
	4.7nm,0.2s						
DJR				Lg	Lg	13 47 09.2	
	20nm,0.2s						
DJR	Jarkent	2.12	346	eP	Pb	13 46 40.2	-0.5
	4.7nm,0.2s						
DJR				eS	Sb	13 47 09.2	+1.5
	20nm,0.2s						
BLB	Baldybastay	2.35	322	Pg	Pb	13 46 45.0	+0.4
	22nm,0.1s						
BLB				Lg	Lg	13 47 17.3	
	196nm,0.3s						
KDJ	Kajisay	2.48	268	⇑iP	Pb	13 46 45.5	-1.3
KDJ				⇑iS	Sb	13 47 17.6	-0.3
KOTS	Kotyrbulak	2.68	292	Pg	Pb	13 46 51.1	+0.8
	12nm,0.2s						
KOTS				Lg	Lg	13 47 27.4	
	79nm,0.2s						
KOTS	Kotyrbulak	2.68	292	eP	Pb	13 46 51.1	+0.8
	12nm,0.2s						
KOTS				eS	Sg	13 47 27.4	-0.1
	79nm,0.2s						
MDOK	Medeo	2.70	290	Pg	Pb	13 46 51.5	+0.8
	19nm,0.4s						
MDOK				Lg	Lg	13 47 28.6	
	60nm,0.5s						
TNSS	Tian-Shan	2.74	287	Pg	Pb	13 46 52.2	+0.8
	3.4nm,0.3s						
TNSS				Lg	Lg	13 47 29.8	
	7.4nm,0.3s						
TNSS	Tian-Shan	2.74	287	eP	Pb	13 46 52.2	+0.8
	3.4nm,0.3s						
TNSS				eS	Sg	13 47 29.8	+0.5
	7.4nm,0.3s						
ARXS	Arharly	2.76	316	Pg	Pb	13 46 52.1	+0.6
	6.4nm,0.2s						
ARXS				Lg	Lg	13 47 29.5	
	48nm,0.4s						
ARXS	Arharly	2.76	316	eP	Pb	13 46 52.1	+0.6
	6.4nm,0.2s						
ARXS				eS	Sg	13 47 29.5	-0.5
	48nm,0.4s						
KAPS	Kapalarasan	3.12	345	Pg	Pb	13 46 58.3	+0.5
KAPS				Lg	Lg	13 47 39.7	
MTBS	Maitube	3.13	287	Pg	Pb	13 46 58.8	+0.9
	4.8nm,0.2s						
MTBS				Lg	Lg	13 47 40.9	
	30nm,0.4s						
MTBS	Maitube	3.13	287	eP	Pb	13 46 58.8	+0.9
	4.8nm,0.2s						
MTBS				eS	Sg	13 47 40.9	-1.0
	30nm,0.4s						
ULHL	Ulahol	3.17	271	⇑iP	Pb	13 46 55.1	-3.5
ULHL				⇑iS	Sb	13 47 34.2	-3.6
BOOM	Boomskoye usch	3.39	275	⇓eP	Pn	13 46 57.8	+2.1
BOOM				⇓iS	Sn	13 47 39.0	+2.3
KST	Kastek	3.44	284	Pg	Pb	13 47 03.8	+0.6
	4.0nm,0.3s						
KST				Lg	Lg	13 47 49.3	
	9.1nm,0.4s						
KST	Kastek	3.44	284	eP	Pb	13 47 03.8	+0.6
	4.0nm,0.3s						
KST				eS	Sb	13 47 49.3	+3.7
	9.1nm,0.4s						
DGS	Degeres	3.62	287	Pg	Pb	13 47 07.9	+1.6
	3.8nm,0.5s						
DGS				Lg	Lg	13 47 56.9	
	22nm,0.5s						
DGS	Degeres	3.62	287	eP	Pb	13 47 07.9	+1.6
	3.8nm,0.5s						
DGS				eS	Sg	13 47 56.9	-0.8
	22nm,0.5s						
KRBS	Karabastau	3.82	293	Pg	Pb	13 47 11.0	+1.3
	1.5nm,0.2s						
KRBS				Lg	Lg	13 48 02.2	
	12nm,0.3s						
KRBS	Karabastau	3.82	293	eP	Pb	13 47 11.0	+1.3
	1.5nm,0.2s						
KRBS				eS	Sg	13 48 02.2	-1.9
	12nm,0.3s						
AAK	Ala-Archa	4.46	277	⇑Pg	Pg	13 47 25.1	-1.9
	0.9nm,0.5s						
AAK				⇑Lg	Lg	13 48 21.5	
	1.6nm,0.5s						
MK31	Makanchi Array	4.70	15	Pn	Pn	13 47 14.6	+1.1
	0.4nm,0.2s,baz=200,slow=14,SNR=36						
MK31				⇑Sn	Sn	13 48 10.6	+2.0
	1.0nm,0.3s,baz=189,slow=22,SNR=8.4						
MK31				⇑Lg	Lg	13 48 31.3	
	2.8nm,0.5s						

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*IDC **01** 13:51:56.3±1.3, 13°.76N×87°.79W, h0km, mb3.2/3, mbtmp3.3/5, ML3.3/2, Error ellipse: s-maj=45.4km s-min=13.1km az=42.0*
*SNET **01** 13:52:01.0±0.8, 12°.92N×88°.70W, h58km±15km, ML3.8, Presumed earthquake*
*CATAC **01** 13:52:02.3±0.2, 13°N±2°×8°9W±°, h39km±4km, M4.1/43, MLv4.1/43, Error ellipse: s-maj=4.4km s-min=1.5km az=30.6, confirmed*
*GCG **01** 13:52:03.8±1.2, 13°.04N×88°.78W, h48km±34km, MD4.3, ML4.2, Presumed earthquake*
ISC 01 13:52:01.9±1.0, 12°.95N±0°.05×88°.69W±0°.03, h63km±8km, n99, σ0§75/145, mb3.3/3, 1C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TECA	Tecapa	0.57	19	eP	Pn	13 52 15.0	-0.1
LCY	Lacayo	0.60	39	eP	Pn	13 52 15.5	+0.1
RANC	El Ranchito	0.62	39	P	Pn	13 52 15.7	+0.1
RANC				S	Sn	13 52 26.2	+0.6
RANC	El Ranchito	0.62	39	eP	Pn	13 52 15.7	+0.1
PACA	Pacayal	0.62	35	P	Pn	13 52 15.8	+0.1
PACA				S	Sn	13 52 25.6	-0.1
PACA	Pacayal	0.62	35	eP	Pn	13 52 15.8	+0.1
PACA				eS	Sn	13 52 26.6	+0.9
PQSS	Presa 15 de Se	0.68	11	P	Pn	13 52 16.2	0.0
PQSS				S	Sn	13 52 27.6	+1.1
PQSS	Presa 15 de Se	0.68	11	eP	Pn	13 52 16.3	+0.2
COEG	Centro de Oper	0.69	344	P	Pn	13 52 16.1	-0.3
COEG	Centro de Oper	0.69	344	eP	Pn	13 52 16.1	-0.3
COEG				i S	Sn	13 52 26.9	0.0
COEG				IAML		13 52 31.0	
	comp=Z,4µm,0.3s						
CNRM	Centro Naciona	0.72	44	P	Pn	13 52 17.0	+0.4
CNRM				S	Sn	13 52 29.1	+1.6
SCLA	Alcaldia de Sa	0.74	357	P	Pn	13 52 17.4	+0.4
SCLA	Alcaldia de Sa	0.74	357	eP	Pn	13 52 17.3	+0.4
SCLA				eS	Sn	13 52 28.9	+0.9
LFRS	El Faro	0.76	332	eP	Pn	13 52 17.0	-0.2
PAVA	Las Pavas	0.79	342	P	Pn	13 52 17.7	0.0
PAVA				S	Sn	13 52 29.8	+0.6
PAVA	Las Pavas	0.79	342	eP	Pn	13 52 17.8	+0.1
PANCS	Alcalda de	0.81	324	P	Pn	13 52 17.5	-0.2
PANCS				S	Sn	13 52 28.5	-0.9
LALI	Alcalda de L	0.81	311	P	Pn	13 52 17.4	-0.3
LALI				S	Sn	13 52 28.3	-1.1
LALI	Alcalda de L	0.81	311	i P	Pn	13 52 17.4	-0.3
LALI	Alcalda de L	0.81	311	eP	Pn	13 52 17.5	-0.3
LOMA	Loma Larga	0.83	326	eP	Pn	13 52 17.9	-0.2
LOMA				i S	Sn	13 52 29.9	-0.2
LBRS	Las Brisas	0.85	336	eP	Pn	13 52 19.1	+0.7
LCND	La Caada	0.85	65	P	Pn	13 52 18.4	+0.1
LCND	La Caada	0.85	65	⇑eP	Pn	13 52 18.6	+0.3
UDBS	Universidad Do	0.88	329	P	Pn	13 52 19.0	+0.2
UDBS				S	Sn	13 52 31.2	+0.2
UDBS	Universidad Do	0.88	329	eP	Pn	13 52 18.9	+0.2
IGN	Direccin Gen	0.89	328	P	Pn	13 52 18.7	0.0
IGN				S	Sn	13 52 31.9	+0.7
IGN	Direccin Gen	0.89	328	eP	Pn	13 52 18.9	+0.1
LFU	La Fuente	0.89	332	eP	Pn	13 52 19.1	+0.3
CNCH	Conchagua	0.89	69	P	Pn	13 52 18.9	0.0
CNCH				S	Sn	13 52 32.0	+0.6
CNCH	Conchagua	0.89	69	eP	Pn	13 52 18.9	0.0
CNCH				eS	Sn	13 52 31.6	+0.3
UTEC	Universidad Te	0.90	326	P	Pn	13 52 19.0	+0.2
UTEC				S	Sn	13 52 31.8	+0.5
SEMO	Seminario San	0.91	325	P	Pn	13 52 19.1	+0.1
SEMO				S	Sn	13 52 31.9	+0.3
UEES	Universidad Ev	0.93	325	P	Pn	13 52 19.4	0.0
UEES				S	Sn	13 52 32.2	+0.1
UEES	Universidad Ev	0.93	325	eP	Pn	13 52 19.3	0.0
UEES				IAML		13 52 36.5	
	comp=Z,2µm,0.3s						
PIC2	El Picacho	0.96	325	eP	Pn	13 52 20.2	+0.4
BOQS	Boqueron	0.97	324	eP	Pn	13 52 20.0	+0.1
PMON	Piamonte	0.97	321	P	Pn	13 52 19.9	+0.1
PMON				S	Sn	13 52 33.8	+0.7
PMON	Piamonte	0.97	321	eP	Pn	13 52 19.8	0.0
JAYA	Jayaque - finc	1.02	313	P	Pn	13 52 20.2	-0.2
JAYA				S	Sn	13 52 34.3	+0.1
JAYA	Jayaque - finc	1.02	313	i P	Pn	13 52 20.1	-0.4
JAYA				IAML		13 52 38.8	
	comp=N,8µm,0.2s						
JAYA	Jayaque - finc	1.02	313	eP	Pn	13 52 20.3	-0.1
P5NO	Presa 5 de nov	1.03	356	P	Pn	13 52 20.6	+0.1
P5NO				S	Sn	13 52 34.6	+0.4
P5NO	Presa 5 de nov	1.03	356	eP	Pn	13 52 20.7	+0.1
P5NO				i S	Sn	13 52 34.0	-0.3
CEDA	San Andres	1.09	321	P	Pn	13 52 21.4	+0.1
CEDA				S	Sn	13 52 36.3	+0.6
CSGN	Cosiguina Volc	1.10	89	P	Pn	13 52 21.8	+0.3
CSGN				S	Sn	13 52 37.7	+1.6
LLGN	La Laguna	1.23	348	P	Pn	13 52 23.5	+0.3
SBLS	San Blas	1.27	314	eP	Pn	13 52 24.4	+0.6
SNJE	San Jose	1.27	316	eP	Pn	13 52 24.2	+0.3
UNIC	Universidad Ca	1.32	321	P	Pn	13 52 24.7	+0.4
UNIC				S	Sn	13 52 42.4	+1.3
RTR	El Retiro	1.32	315	eP	Pn	13 52 25.1	+0.6
NUBE	Las Nubes	1.42	312	P	Pn	13 52 26.1	+0.3
NUBE				S	Sn	13 52 44.0	+0.3
NUBE	Las Nubes	1.42	312	i P	Pn	13 52 25.9	+0.1
NUBE				i S	Sn	13 52 43.3	-0.3
NUBE	Las Nubes	1.42	312	eP	Pn	13 52 26.1	+0.3
LOAL	Lomas de Alarc	1.48	315	P	Pn	13 52 27.5	+1.0
LOAL				S	Sn	13 52 46.9	+1.8
SLOZ	Alcaldia de Sa	1.51	315	P	Pn	13 52 27.3	+0.4
SLOZ	Alcaldia de Sa	1.51	315	eP	Pn	13 52 27.3	+0.4
MTO3	Montecristo	1.58	336	P	Pn	13 52 28.0	0.0
MTO3	Montecristo	1.58	336	i P	Pn	13 52 28.2	+0.2
MTO3	Montecristo	1.58	336	eP	Pn	13 52 28.1	+0.2
CRIN	San Cristobal	1.62	99	P	Pn	13 52 29.6	+1.3
CRIN				S	Sn	13 52 49.1	+0.8
PKGN	Cerro Pekin	1.69	99	P	Pn	13 52 29.9	+0.6
PKGN				S	Sn	13 52 49.5	-0.6
ESQI	Esquipulas	1.72	338	P	Pn	13 52 30.4	+0.7
ESQI				S	Sn	13 52 51.4	+0.6
TGUH	Tegucigalpa,Un	1.76	51	P	Pn	13 52 30.7	+0.3
TGUH				S	Sn	13 52 52.7	+0.8
SARH	Santa Rosa de	1.81	358	P	Pn	13 52 32.1	+1.1
SARH	Santa Rosa de	1.81	358	i P	Pn	13 52 32.1	+1.1
HERN	Volcan Telica	1.84	100	P	Pn	13 52 31.3	-0.2
HERN				S	Sn	13 52 53.0	-0.9
POLN	Al Sur del Vol	1.86	99	P	Pn	13 52 31.5	0.0
POLN				S	Sn	13 52 53.5	-0.5
ILCN	San Idelfonso	1.98	101	P	Pn	13 52 32.1	-1.0
ILCN				S	Sn	13 52 56.0	-0.9
CNGN	Cerro Negro	1.99	103	P	Pn	13 52 33.6	+0.2
CNGN				S	Sn	13 52 56.9	-0.4
MACN	El Madrono	2.02	104	P	Pn	13 52 33.8	0.0
MACN				S	Sn	13 52 57.9	-0.2
YUSH	Yuscaran	2.05	61	P	Pn	13 52 34.6	+0.3
YUSH				S	Sn	13 52 58.8	-0.1
LEVN	Ruinas Leon Vi	2.10	105	P	Pn	13 52 35.5	+0.8
LEVN				S	Sn	13 53 00.9	+1.1
COPN	Copaltepe	2.19	110	P	Pn	13 52 35.8	-0.2
FG16	Alotenango, Sa	2.20	307	i P	Pn	13 52 41.2	+4.8
FG16				i S	Sn	13 53 13.1	+10
OCON	Estacion meteo	2.26	72	P	Pn	13 52 36.9	-0.1
OCON				S	Sn	13 53 04.0	+0.2
LIMN	Finca el Limon	2.27	87	P	Pn	13 52 37.3	+0.1
LIMN				S	Sn	13 53 04.0	-0.1
AMTN	Mateare	2.32	108	P	Pn	13 52 38.7	+1.0
SAPS	Ciudad Sandino	2.36	109	P	Pn	13 52 39.1	+0.7
SAPS				S	Sn	13 53 05.8	-0.5
APYN	Apoyeque	2.39	107	P	Pn	13 52 39.7	+0.8
APQ2	Apoyeque	2.43	108	P	Pn	13 52 40.8	+1.5
UNAN	Cigeo UNAN	2.51	109	P	Pn	13 52 42.1	+1.8
UNAN				S	Sn	13 53 08.8	-1.0
RCVN	Varillal2	2.51	75	P	Pn	13 52 40.6	+0.1
MGAN	Managua	2.52	108	S	Sn	13 53 10.0	0.0
RCON	San Juan de Ri	2.52	78	P	Pn	13 52 41.0	+0.3
RCPN	Sur Rio San Ju	2.59	77	P	Pn	13 52 42.2	+0.6
MAS3	Al N del Volca	2.62	110	P	Pn	13 52 43.6	+1.7
MAS3				S	Sn	13 53 11.9	-0.8
APG	El Apazote	2.67	320	Pn	Pn	13 52 44.0	+1.3
	comp=N,0.1nm,0.3s,baz=135,slow=11,SNR=8.4						
APG				Lg	Lg	13 53 27.4	
	comp=N,0.3nm,0.3s,baz=62,slow=24,SNR=4.6						
MATN	Matagalpa	2.69	90	P	Pn	13 52 41.8	-1.2
MATN				S	Sn	13 53 13.0	-1.5
NANN	Nandasmo	2.70	112	P	Pn	13 52 45.5	+2.4
NANN				S	Sn	13 53 15.3	+0.6
STG5	El Palmar, Qui	2.96	299	i P	Pn	13 52 52.7	+6.1
STG8	El Palmar, Qui	2.98	300	i P	Pn	13 52 53.4	+6.3
ELI1	Hacienda Flor	3.83	126	P	Pn	13 53 01.1	+2.6
ELI1				S	Sn	13 53 42.7	+0.3
JTS	Las Juntas de	4.52	125	Pn	Pn	13 53 06.8	-1.1
	comp=N,1.8nm,0.3s,baz=106,slow=22,SNR=6.3						
JTS				Pg		13 53 16.1	
	comp=N,16nm,0.3s,baz=298,slow=6.6,SNR=28						
JTS				Sn	Sn	13 53 58.7	-0.5
	comp=N,0.4nm,0.3s,baz=276,slow=22,SNR=0.9						
JTS				Lg	Lg	13 54 15.9	
	comp=N,5.3nm,0.3s,baz=115,slow=22,SNR=7.8						
	comp=N,3.5nm,0.3s						
LCR2	La Lucha 2	5.59	124	S	Sn	13 54 26.2	+0.3
CMIG	Matias Romero	7.26	305	Pn	Pn	13 53 47.3	+1.9
	comp=N,0.4nm,0.3s,baz=114,slow=10,SNR=7.6						
CMIG				Sn	Sn	13 55 08.0	+1.6
	comp=N,0.8nm,0.3s,baz=246,slow=13,SNR=4.3						
	comp=N,1.3nm,0.4s						
TXAR	Lajitas Array	21.43	322	P	P	13 56 45.6	+0.7
	comp=N,0.4nm,0.6s,baz=136,slow=10,SNR=8.4						
	comp=N,0.4nm,0.6s						
PDAR	Pinedale Array	34.77	333	P	P	13 58 46.2	-0.3
	comp=N,0.2nm,0.5s,baz=128,slow=11,SNR=2.2						
	comp=N,0.2nm,0.5s						
YKA	Yellowknife Ar	52.81	345	P	P	14 01 08.8	-1.8
	comp=N,0.2nm,0.3s,baz=143,slow=7.0,SNR=6.4						
	comp=N,0.2nm,0.3s						

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*IDC **01** 14:11:11.2±0.7, 55°.04N×163°.33W, h94km±4km, mb3.8/26, mbtmp4.1/30, MS3.1/6, Error ellipse: s-maj=17.4km s-min=8.8km az=3.0*
*NEIC **01** 14:11:11.5±1.9, 54°.88N±0°.08×163°.07W±0°.07, h98km±4km, mb4.5/76, ML4.1/22, ML3.9(AEIC), Error ellipse: s-maj=13.1km s-min=1.5km az=156.0*
*AEIC **01** 14:11:13.3±4.7, 54°.73N±0°.08×162°.92W±0°.07, h80km±4km, Error ellipse: s-maj=12.4km s-min=4.6km az=159.0*
ISC 01 14:11:11.4±0.5, 54°.95N±0°.07×163°.09W±0°.04, h98km±3km, n186, σ1§36/165, mb4.3/56, 1D, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FALS	False Pass	0.21	244		Pn	14 11 25.2	-0.1
FALS					Sn	14 11 35.7	0.0
ISNN	Isanotski Nort	0.42	254		Pn	14 11 26.9	+0.5
DT1	Dutton Round H	0.49	71		Pn	14 11 26.7	-0.2
DT1					Sn	14 11 37.9	-0.6
DTNA	Dutton South F	0.52	67		Pn	14 11 27.0	-0.1
DTNA					Sn	14 11 39.0	+0.1
SSBA	Shishaldin	0.62	254		Pn	14 11 28.1	+0.1
SSBA					Sn	14 11 40.8	+0.4
DOL	Dolgoi Island	0.73	74		Pn	14 11 29.2	+0.3
DOL					Sn	14 11 42.4	+0.4
HAG	Hague Volcano	0.77	61		Pn	14 11 30.1	+0.8
PN7A	Pavlof North-7	0.79	52		Pn	14 11 30.3	+0.8
PN7A					Sn	14 11 44.7	+1.6
PS4A	Pavlof South-4	0.81	60		Pn	14 11 30.4	+0.7
PS1A	Pavlof South-1	0.91	58		Sn	14 11 46.8	+1.7
SDPT	Sand Point	1.55	74		Pn	14 11 38.1	+0.1
SDPT					Sn	14 11 58.1	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AKSA	**Akutan Strait**	**1.73**	**243**		**Pn**	**14 11 40.9**	**+0.6**
AKUT	**Akutan**	**1.76**	**244**		**Pn**	**14 11 40.6**	**-0.2**
AKUT				IAML		14 12 07.3	
	comp=E,877nm,0.6s						
AHB	**Akutan Harbor**	**1.80**	**243**		**Pn**	**14 11 41.6**	**+0.4**
AKBBA	**Akutan Broad B**	**1.86**	**244**		**Pn**	**14 11 42.6**	**+0.5**
AKBBA					**Sn**	**14 12 05.6**	**+0.1**
AKV	**Akutan Volcano**	**1.87**	**245**		**Pn**	**14 11 42.6**	**+0.4**
LVA	**Lava Point**	**1.89**	**246**	Pn	**Pn**	**14 11 42.2**	**-0.2**
LVA				IAML		14 12 15.5	
	comp=N,2μm,0.7s						
ZRO	**Akutan Zero**	**1.89**	**244**		**Pn**	**14 11 42.9**	**+0.5**
AKMO	**Akutan Morgan**	**1.91**	**244**		**Pn**	**14 11 43.1**	**+0.5**
UNV	**Unalaska Valle**	**2.28**	**242**		**Pn**	**14 11 47.4**	**-0.1**
UNV				IAML		14 12 17.9	
	comp=N,564nm,0.6s						
MNAT	**Makushin Natee**	**2.36**	**245**		**Pn**	**14 11 48.7**	**+0.3**
VNKR	**Veniaminof 5**	**2.38**	**61**		**Pn**	**14 11 50.0**	**+1.3**
VNFG	**Fog Glacier, M**	**2.41**	**55**		**Pn**	**14 11 51.0**	**+1.8**
VNSS	**Veniaminof 8**	**2.43**	**57**		**Pn**	**14 11 50.9**	**+1.3**
VNSG	**Veniaminof 6**	**2.56**	**61**		**Pn**	**14 11 52.2**	**+1.0**
ANPB	**Aniakchak Plen**	**3.28**	**54**		**Pn**	**14 12 02.1**	**+1.3**
OKTU	**Okmok Mt. Tuli**	**3.31**	**244**		**Pn**	**14 12 02.0**	**+0.9**
CHIR	**Chirikof Islan**	**4.35**	**75**	Pn	**Pn**	**14 12 14.1**	**-1.0**
CHIR				IAML		14 13 08.8	
	comp=N,172nm,1.1s						
CHIR				IAML		14 13 23.7	
	comp=E,288nm,0.9s						
O14K	**Tigyukauivet M**	**4.43**	**12**		**Pn**	**14 12 17.9**	**+1.7**
O14K	**Tigyukauivet M**	**4.43**	**12**	IAML		14 13 45.1	
	comp=N,109nm,1.1s						
O15K	**Ungalikthiuk R**	**4.60**	**21**	Pn	**Pn**	**14 12 19.7**	**+1.3**
O15K				IAML		14 13 56.4	
	comp=E,84nm,0.8s						
PLK1	**Peulik 1**	**4.60**	**49**		**Pn**	**14 12 20.6**	**+2.2**
PLK4	**Peulik 4**	**4.61**	**52**		**Pn**	**14 12 19.0**	**+0.3**
PLK4				IAML		14 13 39.3	
	comp=E,165nm,0.8s						
PLK4				IAML		14 13 40.1	
	comp=N,170nm,0.8s						
P16K	**Nushagak River**	**4.95**	**32**		**Pn**	**14 12 25.2**	**+2.0**
P16K	**Nushagak River**	**4.95**	**32**	IAML		14 14 11.2	
	comp=E,184nm,0.9s						
N14K	**Kuskokwak Cree**	**5.04**	**8**	Pn	**Pn**	**14 12 25.6**	**+1.1**
N14K				IAML		14 14 13.2	
	comp=N,121nm,1.1s						
N14K				IAML		14 14 24.2	
	comp=E,122nm,1.1s						
CNTC	**Contact Creek**	**5.18**	**47**		**Pn**	**14 12 28.2**	**+1.7**
ANCK	**Angle Creek**	**5.31**	**49**		**Pn**	**14 12 29.6**	**+1.4**
O16K	**Kokwok River B**	**5.39**	**28**		**Pn**	**14 12 31.1**	**+1.9**
ACHA	**Angle Creek He**	**5.39**	**50**		**Pn**	**14 12 30.5**	**+1.1**
N15K	**Kwethluk River**	**5.48**	**16**		**Pn**	**14 12 32.6**	**+2.2**
M13K	**Dall Lake**	**5.48**	**359**		**Pn**	**14 12 33.1**	**+2.7**
KAKN	**Katmai Knife C**	**5.56**	**50**		**Pn**	**14 12 33.3**	**+1.7**
M11K	**Mekoryuk**	**5.70**	**344**		**Pn**	**14 12 34.9**	**+1.5**
KAWH	**Katmai**	**5.72**	**50**		**Pn**	**14 12 35.0**	**+1.2**
O17K	**Koliganek Bris**	**5.82**	**31**		**Pn**	**14 12 36.3**	**+1.2**
KARR	**Katmai Rainbow**	**5.83**	**49**		**Pn**	**14 12 36.4**	**+1.3**
M14K	**Bethel**	**5.85**	**5**		**Pn**	**14 12 36.6**	**+1.2**
M15K	**Kasigluk River**	**5.90**	**12**		**Pn**	**14 12 37.8**	**+1.6**
OHAK	**Old Harbor**	**5.94**	**63**		**Pn**	**14 12 35.6**	**-1.1**
N16K	**Nishlik Lake**	**6.00**	**21**		**Pn**	**14 12 40.0**	**+2.5**
P18K	**Big Mountain,**	**6.17**	**41**		**Pn**	**14 12 42.2**	**+2.4**
L14K	**Kuka Creek**	**6.41**	**2**		**Pn**	**14 12 44.6**	**+1.6**
M16K	**Timber Creek**	**6.47**	**18**	Pn	**Pn**	**14 12 45.4**	**+1.5**
KDAK	**Kodiak Island**	**6.49**	**60**	P	**Pn**	**14 12 43.3**	**-0.9**
	comp=E,10nm,0.5s,baz=225,slow=5.9,SNR=34						
KDAK				S	**Sn**	**14 13 50.3**	**-6.3**
	comp=E,14nm,0.5s,baz=324,slow=19,SNR=11						
KDAK	**Kodiak Island**	**6.49**	**60**	Pn	**Pn**	**14 12 43.4**	**-0.7**
O18K	**Koktuh Hills**	**6.50**	**38**		**Pn**	**14 12 45.8**	**+1.4**
Q19K	**Cape Douglas,**	**6.53**	**48**		**Pn**	**14 12 46.0**	**+1.4**
L15K	**Ungalak Mounta**	**6.80**	**6**		**Pn**	**14 12 49.9**	**+1.6**
L16K	**Owhat River**	**7.04**	**14**		**Pn**	**14 12 53.0**	**+1.4**
K13K	**Kusilvak Mount**	**7.05**	**354**		**Pn**	**14 12 54.0**	**+2.3**
KOFP	**Korovin Flat P**	**7.08**	**252**		**Pn**	**14 12 53.1**	**+0.9**
M17K	**Holitna River**	**7.12**	**22**		**Pn**	**14 12 54.4**	**+1.7**
ILSW	**Iliamna Southw**	**7.36**	**43**		**Pn**	**14 12 56.9**	**+0.8**
K15K	**Wolf Creek Mou**	**7.41**	**6**		**Pn**	**14 12 58.0**	**+1.4**
L17K	**Donlin**	**7.63**	**17**		**Pn**	**14 13 01.0**	**+1.4**
J14K	**Nanvaranak Lak**	**7.83**	**358**		**Pn**	**14 13 04.5**	**+2.3**
CNPM	**China Poot**	**7.89**	**50**		**Pn**	**14 13 03.6**	**+0.3**
L18K	**Granite Mounta**	**8.02**	**22**		**Pn**	**14 13 06.8**	**+1.9**
RDT	**Redoubt**	**8.02**	**41**		**Pn**	**14 13 06.9**	**+1.9**
BRSE	**Bradley Lake S**	**8.22**	**49**		**Pn**	**14 13 07.5**	**-0.2**
GSMY	**Great Sitkin M**	**8.26**	**255**		**Pn**	**14 13 08.7**	**+0.4**
GSTD	**Great Sitkin T**	**8.31**	**255**		**Pn**	**14 13 09.9**	**+1.0**
GSCK	**Great Sitkin C**	**8.33**	**255**		**Pn**	**14 13 09.9**	**+0.7**
J16K	**Anvik River**	**8.46**	**8**		**Pn**	**14 13 12.6**	**+1.8**
ETKA	**Kagalaska Isla**	**8.54**	**254**		**Pn**	**14 13 12.4**	**+0.4**
SPU	**Mount Spurr**	**8.55**	**39**	Pn	**Pn**	**14 13 13.0**	**+0.8**
SLKM	**Skilak Lake**	**8.85**	**46**	Pn	**Pn**	**14 13 16.8**	**+0.5**
SEW	**Seward**	**8.96**	**49**		**Pn**	**14 13 17.4**	**-0.3**
O22K	**Cooper Landing**	**9.04**	**47**		**Pn**	**14 13 18.9**	**+0.1**
I17K	**Unalakleet**	**9.05**	**7**		**Pn**	**14 13 20.4**	**+1.5**
H17K	**Granite Mounta**	**10.14**	**8**		**Pn**	**14 13 36.5**	**+2.8**
F15K	**North Star Dit**	**10.82**	**357**		**Pn**	**14 13 46.0**	**+3.1**
N25K	**Chitina, Valde**	**11.77**	**48**	Pn	**Pn**	**14 13 54.7**	**-1.1**
IMAR	**Indian Mountai**	**11.97**	**19**	Pn	**Pn**	**14 14 01.3**	**+3.0**
ILAR	**Eielson Array**	**12.73**	**33**	P	**Pn**	**14 14 07.6**	**-0.8**
	comp=E,0.7nm,0.9s,baz=225,slow=13,SNR=4.7						
ILAR				S	Sn	14 16 20.1	-8.0
	comp=E,0.5nm,0.8s,baz=242,slow=17,SNR=0.9						
G23K	**Bananza Creek**	**13.36**	**23**	Pn	**Pn**	**14 14 18.1**	**+1.3**
SHEM	**Shemya Is, Ala**	**13.64**	**270**	P	**Pn**	**14 14 17.3**	**-3.1**
	comp=E,28nm,0.3s,baz=94,slow=23,SNR=1.1						
J29N	**Klondike Camp**	**15.64**	**43**		**Pn**	**14 14 47.3**	**+1.4**
J29N				IAmb	IAmb	14 15 12.1	
	comp=Z,14nm,0.6s						
N31M	**Braeburn, Yuko**	**15.72**	**54**		**Pn**	**14 14 48.6**	**+1.7**
N31M				IAmb	IAmb	14 14 53.5	
	comp=Z,30nm,1.1s						
S34M	**Telegraph Cree**	**17.83**	**67**	P	**Pn**	**14 15 14.0**	**+1.2**
S34M				IAmb	IAmb	14 15 42.9	
	comp=Z,27nm,1.3s						
DLBC	**Dease Lake**	**18.38**	**66**	P	**Pn**	**14 15 20.1**	**+0.7**
	comp=Z,3.2nm,0.8s,baz=266,slow=16,SNR=4.7						
T35M	**Bob Quinn**	**18.40**	**70**	IAmb	IAmb	14 15 23.2	
	comp=Z,22nm,1.1s						
INK	**Inuvik**	**19.12**	**34**	P	**P**	**14 15 27.7**	**+1.6**
	comp=Z,1.5nm,0.8s,baz=232,slow=9.9,SNR=9.9						
BBB	**Bella Bella**	**20.82**	**83**	P	Pn	14 15 48.1	+0.1
	comp=Z,8.6nm,0.9s,baz=297,slow=16,SNR=1.8						
	comp=Z,8.6nm,0.9s						
BBB	**Bella Bella**	**20.82**	**83**	IAmb	IAmb	14 16 12.7	
	comp=Z,39nm,1.2s						
PETK	**Petropavlovsk-**	**22.90**	**282**	P	**P**	**14 16 05.5**	**-1.1**
	comp=Z,8.3nm,0.7s,baz=80,slow=14,SNR=32						
	comp=Z,8.3nm,0.7s						
A36M	**Sachs Harbour**	**23.36**	**29**	P	**P**	**14 16 10.8**	**+0.1**
MA2	**Magadan**	**24.97**	**300**	LR	LR	14 28 24.4	
	comp=Z,22nm,18.3s,baz=96,slow=42						
YKAW3	**Yellowknife Wh**	**25.70**	**53**	P	**P**	**14 16 33.2**	**+1.3**
YKA	**Yellowknife Ar**	**25.71**	**53**	P	**P**	**14 16 33.2**	**+1.2**
	comp=Z,1.1nm,0.8s,baz=278,slow=10,SNR=18						
YKA				pP	**pP**	**14 16 53.6**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=279,slow=9.4,SNR=6.7						
YKA				ScP	**ScP**	**14 23 29.9**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=281,slow=3.6,SNR=4.2						
	comp=Z,1.1nm,0.8s						
NEW	**Newport**	**28.88**	**84**	P	**P**	**14 17 01.7**	**+1.2**
YBH	**Yreka Blue Hor**	**29.47**	**100**	LR	LR	14 26 11.9	
	comp=Z,5.7nm,18.9s,baz=286,slow=30						
TIXI	**Tiksi**	**32.53**	**327**	LR	LR	14 31 03.5	
	comp=Z,60nm,18.2s,baz=34,slow=37						
TIXI	**Tiksi**	**32.53**	**327**		**P**	**14 17 32.1**	**-0.2**
TIXI				IAmb	IAmb	14 17 34.1	
	comp=Z,3.2nm,0.5s						
PAHR	**Pah Rah Range**	**32.70**	**99**		**P**	**14 17 36.0**	**+1.6**
PAHR				IAmb	IAmb	14 17 58.9	
	comp=Z,9.6nm,1.2s						
PNTR	**Pine Nut**	**33.00**	**100**	P	**P**	**14 17 38.4**	**+1.4**
PNTR				IAmb	IAmb	14 18 02.6	
	comp=Z,7.1nm,0.8s						
YHL	**Hebgen Lake**	**34.18**	**85**	IAmb	IAmb	14 17 50.0	
	comp=Z,7.2nm,0.9s						
NVAR	**Mina Array Bea**	**34.19**	**100**	P	**P**	**14 17 49.4**	**+2.0**
	comp=Z,0.8nm,0.5s,baz=309,slow=8.3,SNR=6.5						
NVAR				pP	**pP**	**14 18 10.4**	**+0.8**
	comp=Z,3.1nm,0.9s,baz=302,slow=8.3,SNR=9.6						
	comp=Z,0.8nm,0.5s						
YHB	**Horse Butte**	**34.23**	**85**	IAmb	IAmb	14 17 50.3	
	comp=Z,8.1nm,1.0s						
YAK	**Yakutsk**	**34.35**	**310**	LR	LR	14 30 53.9	
	comp=Z,36nm,19.9s,baz=70,slow=35						
YAK	**Yakutsk**	**34.35**	**310**		**P**	**14 17 47.3**	**-0.9**
YNR	**Norris Junctio**	**34.55**	**85**	IAmb	IAmb	14 17 54.2	
	comp=Z,8.4nm,0.9s						
YNE	**Yellowstone No**	**34.76**	**84**	IAmb	IAmb	14 17 54.8	
	comp=Z,5.1nm,0.9s						
H17A	**Grant Village**	**34.80**	**85**	IAmb	IAmb	14 17 56.6	
	comp=Z,4.6nm,0.9s						
RLMT	**Red Lodge**	**35.12**	**83**	IAmb	IAmb	14 17 58.4	
	comp=Z,7.8nm,0.9s						
PDAR	**Pinedale Array**	**36.38**	**87**	P	**P**	**14 18 07.5**	**+1.3**
	comp=Z,1.3nm,0.6s,baz=293,slow=5.2,SNR=20						
	comp=Z,1.3nm,0.6s						
BSUT	**Blindstream Ca**	**37.11**	**91**	IAmb	IAmb	14 18 14.7	
	comp=Z,3.6nm,0.9s						
SRU	**San Rafael Swe**	**38.19**	**92**	IAmb	IAmb	14 18 45.5	
	comp=Z,4.1nm,0.9s						
RSSD	**Black Hills**	**38.71**	**81**	P	**P**	**14 18 26.3**	**+0.6**
HAYD	**Hayden**	**39.14**	**88**	IAmb	IAmb	14 18 31.7	
	comp=Z,7.3nm,0.7s						
PV10	**Paradox Valley**	**39.54**	**92**	IAmb	IAmb	14 18 35.7	
	comp=Z,8.7nm,0.9s						
ULM	**Lac du Bonnet**	**39.67**	**68**	P	**P**	**14 18 34.5**	**+1.1**
	comp=Z,1.2nm,0.6s,baz=246,slow=7.9,SNR=3.1						
ULM				pP	**pP**	**14 18 55.9**	**-0.3**
	comp=Z,7.3nm,0.8s,baz=306,slow=7.0,SNR=10						
	comp=Z,1.2nm,0.6s						
ULM	**Lac du Bonnet**	**39.67**	**68**	IAmb	IAmb	14 18 57.3	
	comp=Z,6.4nm,0.7s						
PV03	**Paradox Valley**	**39.73**	**92**	IAmb	IAmb	14 18 36.3	
	comp=Z,4.1nm,0.8s						
PV01	**Paradox Valley**	**39.97**	**92**	IAmb	IAmb	14 18 38.3	
	comp=Z,5.0nm,0.7s						
ISCO	**Idaho Springs**	**40.56**	**87**	P	**P**	**14 18 42.4**	**+1.2**
H11N2	**WAKE ISLAND Hy**	**41.87**	**225**	T	T	15 03 22.4	
	baz=27,slow=76,SNR=3.2						
H11N3	**WAKE ISLAND Hy**	**41.88**	**225**	T	T	15 03 21.9	
	baz=27,slow=76,SNR=2.9						
H11N1	**WAKE ISLAND Hy**	**41.89**	**225**	T	T	15 03 33.2	
	baz=27,slow=76,SNR=3.1						
SDCO	**Great Sand Dun**	**42.01**	**90**	IAmb	IAmb	14 18 55.6	
	comp=Z,3.9nm,0.8s						
H11S1	**WAKE ISLAND Hy**	**43.05**	**224**	T	T	15 04 31.5	
	baz=26,slow=76,SNR=4.4						
H11S2	**WAKE ISLAND Hy**	**43.06**	**224**	T	T	15 04 47.7	
	baz=26,slow=76,SNR=2.7						
H11S3	**WAKE ISLAND Hy**	**43.06**	**224**	T	T	15 04 32.3	
	baz=26,slow=76,SNR=2.8						
MJAR	**Matsushiro Arr**	**43.48**	**270**	P	**P**	**14 19 02.8**	**-1.9**
	comp=Z,0.5nm,0.4s,baz=70,slow=7.1,SNR=4.2						
	comp=Z,0.5nm,0.4s						
NRIK	**Noril'sk**	**45.91**	**332**	P	**P**	**14 19 22.4**	**-1.1**
	comp=Z,1.3nm,0.4s,baz=106,slow=2.8,SNR=2.8						
	comp=Z,1.3nm,0.4s						
NRIK	**Noril'sk**	**45.91**	**332**	IAmb	IAmb	14 19 24.2	
	comp=Z,7.0nm,1.2s						
MNTX	**Cornudas Mount**	**46.38**	**96**	IAmb	IAmb	14 19 30.3	
	comp=Z,3.5nm,0.8s						
SPITS	**Spitsbergen Ar**	**47.13**	**0**	P	**P**	**14 19 32.3**	**-0.7**
	comp=Z,6.6nm,1.0s,baz=36,slow=7.5,SNR=2.0						
SPITS				PcP	**PcP**	**14 21 02.6**	**-0.4**
	comp=Z,6.6nm,1.1s,baz=289,slow=2.6,SNR=4.5						
	comp=Z,6.6nm,1.0s						
VHRN	**Van Horn**	**47.29**	**96**	IAmb	IAmb	14 19 37.6	
	comp=Z,9.1nm,1.1s						
128A	**Castleberry Fa**	**47.38**	**92**	IAmb	IAmb	14 19 37.3	
	comp=Z,14nm,0.9s						
DKNS	**Dickens**	**47.52**	**90**	IAmb	IAmb	14 19 38.1	
	comp=Z,7.7nm,0.8s						
129A	**Stewart Farms,**	**47.73**	**92**	IAmb	IAmb	14 19 39.7	
	comp=Z,5.5nm,0.7s						
SN07	**Snyder 07**	**47.95**	**90**	IAmb	IAmb	14 19 42.5	
	comp=Z,5.9nm,0.7s						
ALPN	**Alpine**	**48.37**	**95**	IAmb	IAmb	14 19 44.9	
	comp=Z,3.3nm,0.8s						
KSRS	**Korea Array**	**48.76**	**279**	P	**P**	**14 19 45.5**	**-0.4**
	comp=Z,2.1nm,0.6s,baz=47,slow=6.9,SNR=10						
	comp=Z,2.1nm,0.6s						
TX31	**Lajitas Ar. Si**	**49.13**	**96**	IAmb	IAmb	14 19 51.2	
	comp=Z,8.7nm,1.0s						
TXAR	**Lajitas Array**	**49.13**	**96**	P	**P**	**14 19 50.2**	**+1.3**
	comp=Z,3.8nm,0.5s,baz=304,slow=5.8,SNR=58						
TXAR				pP	**pP**	**14 20 12.4**	**0.0**
	comp=Z,1.7nm,0.9s,baz=299,slow=5.2,SNR=4.2						
	comp=Z,3.8nm,0.5s						
TXAR	**Lajitas Array**	**49.13**	**96**	P	**P**	**14 19 50.0**	**+1.0**
OZNA	**Ozona**	**49.41**	**93**	P	**P**	**14 19 51.6**	**+0.5**
SAND	**Sanderson**	**49.55**	**94**	IAmb	IAmb	14 19 53.8	
	comp=Z,3.6nm,0.9s						
SCHQ	**Schefferville**	**50.96**	**48**	P	**P**	**14 20 01.8**	**-0.6**
	comp=Z,1.5nm,0.8s,baz=36,slow=13,SNR=1.8						
SCHQ				pP	**pP**	**14 20 25.2**	**-0.8**
	comp=Z,2.0nm,0.9s,baz=317,slow=2.6,SNR=2.1						
	comp=Z,1.5nm,0.8s						
SCHQ	**Schefferville**	**50.96**	**48**	IAmb	IAmb	14 20 35.8	
	comp=Z,8.3nm,1.2s						
TLY	**Talaya**	**51.78**	**308**	LR	LR	14 43 34.0	
	comp=Z,26nm,20.9s,baz=18,slow=38						
SADO	**Sadowa**	**51.93**	**64**	LR	LR	14 40 59.8	
	comp=Z,41nm,18.5s,baz=102,slow=34						
SONM	**Songino Array**	**53.12**	**303**	P	**P**	**14 20 18.3**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=52,slow=5.3,SNR=4.7						
SONM				pP	**pP**	**14 20 41.4**	**-1.0**
	comp=Z,0.7nm,0.6s,baz=53,slow=6.3,SNR=4.0						
SONM				PcP	**PcP**	**14 21 25.8**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=76,slow=2.4,SNR=8.1						
	comp=Z,0.7nm,0.6s						
HHC	**Hu-ho-hao-te**	**55.41**	**293**	*e*P	**P**	**14 20 36.8**	**+1.5**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ARCES	**ARCESS Array B**	**55.66**	**356**	PcP	**PcP**	**14 21 34.7**	**-0.1**
	comp=Z,3.3nm,1.0s,baz=13,slow=4.7,SNR=4.0						
HNS	**HongShan**	**56.20**	**288**	⇓P	**P**	**14 20 40.4**	**-0.4**
HNS				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NJ2	**Nanjing**	**57.81**	**281**	*e*P	**P**	**14 20 53.2**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
ZALV	**Zalesovo Beam**	**57.95**	**320**	P	**P**	**14 20 52.5**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=30,slow=7.0,SNR=3.9						
ZALV				PcP	**PcP**	**14 21 43.9**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=66,slow=5.0,SNR=4.6						
	comp=Z,0.6nm,0.5s						
GTA2	**Gaotai**	**62.50**	**300**	P	**P**	**14 21 23.4**	**-1.0**
GTA2				pP	pP	14 21 51.5	+2.8
GTA2				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KURK	**Kurchatov**	**62.83**	**321**	P	**P**	**14 21 26.2**	**+0.1**
KURBB	**Kurchatov Arra**	**62.93**	**321**	P	**P**	**14 21 26.2**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=33,slow=6.9,SNR=4.4						
LZDM	**Lanzhou Array**	**63.18**	**295**	P	**P**	**14 21 28.3**	**-0.9**
	comp=Z,1.7nm,0.4s,baz=358,slow=4.5,SNR=5.3						
	comp=Z,1.7nm,0.4s						
BVAR	**Borovoye Array**	**63.67**	**327**	P	**P**	**14 21 31.9**	**+0.2**
	comp=Z,3.2nm,0.7s,baz=38,slow=5.9,SNR=14						
BVAR				pP	**pP**	**14 21 56.0**	**-0.1**
	comp=Z,2.8nm,0.7s,baz=56,slow=5.6,SNR=5.9						
	comp=Z,3.2nm,0.7s						
FINES	**FINESS Array B**	**63.72**	**355**	P	**P**	**14 21 30.5**	**-1.3**
	comp=Z,4.6nm,1.0s,baz=353,slow=14,SNR=5.0						
FINES				pP	**pP**	**14 21 54.6**	**-1.7**
	comp=Z,4.5nm,1.0s,baz=322,slow=5.8,SNR=2.0						
FINES				PcP	**sP**	**14 22 06.8**	**-0.2**
	comp=Z,3.7nm,0.9s,baz=56,slow=5.5,SNR=3.5						
	comp=Z,4.6nm,1.0s						
MKAR	**Makanchi Array**	**64.64**	**316**	P	**P**	**14 21 36.5**	**-1.6**
	comp=Z,0.4nm,0.5s,baz=44,slow=6.1,SNR=7.4						
MKAR				pP	**pP**	**14 21 60.0**	**-2.6**
	comp=Z,0.4nm,0.7s,baz=52,slow=6.1,SNR=3.0						
	comp=Z,0.4nm,0.5s						
WMQ	**Urumqi**	**64.78**	**311**	*e*P	**P**	**14 21 43.4**	**+4.2**
HFS	**Hagfors**	**65.24**	**2**	P	**P**	**14 21 41.1**	**-0.7**
	comp=Z,2.6nm,0.7s,baz=54,slow=7.5,SNR=6.7						
	comp=Z,2.6nm,0.7s						
AB31	**Akbulak array**	**70.08**	**332**		**P**	**14 22 12.2**	**-0.2**
AAK	**Ala-Archa**	**71.15**	**319**		**P**	**14 22 19.8**	**+0.6**
PZH	**PanZhiHua**	**71.58**	**290**	P	**P**	**14 22 24.2**	**+2.2**
KSH2	**Kashi**	**73.73**	**316**	P	**P**	**14 22 35.1**	**+0.5**
KSH2				pmax	pmax		
	comp=Z,3.0nm,1.0s						
AKASG	**Malin Array Be**	**74.22**	**352**	P	**P**	**14 22 35.7**	**-1.3**
	comp=Z,1.2nm,0.5s,baz=12,slow=6.1,SNR=6.2						
	comp=Z,1.2nm,0.5s						
AKASG	**Malin Array Be**	**74.22**	**352**	IAmb	IAmb	14 22 37.9	
	comp=Z,2.5nm,1.0s						
GERES	**GERESS Array B**	**76.54**	**2**	P	**P**	**14 22 51.0**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=61,slow=8.2,SNR=2.2						
	comp=Z,0.5nm,0.7s						
EVN	**Everest**	**78.14**	**302**		**P**	**14 22 59.9**	**-0.5**
EVN				IAmb	IAmb	14 23 01.2	
	comp=Z,5.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**79.56**	**287**	P	**P**	**14 23 07.5**	**0.0**
	comp=Z,5.3nm,0.8s,baz=19,slow=5.6,SNR=41						
	comp=Z,5.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**79.56**	**287**		**P**	**14 23 07.4**	**-0.2**
ESDC	**Sonseca Array**	**84.06**	**16**	P	**P**	**14 23 31.2**	**+0.3**
	comp=Z,1.9nm,0.8s,baz=334,slow=5.6,SNR=7.6						
	comp=Z,1.9nm,0.8s						
ESDC	**Sonseca Array**	**84.06**	**16**	IAmb	IAmb	14 23 34.4	
	comp=Z,2.6nm,1.4s						
BRTR	**Keskin Array B**	**84.61**	**347**	P	**P**	**14 23 33.1**	**-0.7**
	comp=Z,1.0nm,0.8s,baz=23,slow=2.2,SNR=6.3						
	comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	**91.55**	**237**	P	**P**	**14 24 05.7**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=38,slow=5.9,SNR=5.5						
	comp=Z,0.5nm,0.7s						
ASAR	**Alice Springs**	**94.93**	**235**	P	**P**	**14 24 22.0**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=30,slow=5.0,SNR=6.8						
	comp=Z,0.3nm,0.7s						
BOSA	**Boshof**	**153.00**	**344**	PKPbc	**PKPbc**	**14 30 56.8**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=342,slow=3.2,SNR=1.6						

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*AFAD **01** 14:34:49.1, 37°.26N×37°.97E, h10km±3km, MW3.5*
*ISK **01** 14:34:49.3, 37°.16N×37°.96E, h7km, ML3.5/10*
ISC 01 14:34:49.2±1.1**, 37°.22N**±0°.03×**37°.96E**±0°.02**, h8**km±10km**,**
n50, σ**0s.78**/60**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NZIP	**Nizip/Gaziante**	**0.29**	**232**	P	**Pg**	**14 34 55.4**	**+0.5**
GZT	**Gaziantep**	**0.34**	**293**	P	**Pg**	**14 34 55.9**	**0.0**
ATAB	**Bozova**	**0.36**	**47**	P	**Pg**	**14 34 55.8**	**-0.5**
ATAB				S	**Sg**	**14 35 02.4**	**+1.3**
ATAB				IAML		14 35 10.0	
	comp=N,8μm,0.5s						
ATAB				IAML		14 35 11.0	
	comp=E,1μm,0.6s						
GAZ	**Gaziantep**	**0.60**	**265**	Pg	**Pg**	**14 35 00.9**	**+0.2**
GAZ				Sg	**Sb**	**14 35 10.3**	**-0.4**
AKCA	**Adyaman/G¶l**	**0.61**	**339**	P	**Pg**	**14 35 00.5**	**-0.5**
AKCA				S	**Sg**	**14 35 07.9**	**-1.1**
AKCA				IAML		14 35 12.0	
	comp=E,1μm,0.4s						
AKCA				IAML		14 35 18.0	
	comp=N,1μm,0.6s						
SURC	**SANLIURFA_SURC**	**0.62**	**123**	P	**Pb**	**14 35 01.7**	**-0.7**
AZEY	**Adyaman-Merk**	**0.63**	**21**	P	**Pg**	**14 35 00.6**	**-0.7**
KHMN	**Narli-Kahraman**	**0.66**	**285**	P	**Pg**	**14 35 02.0**	**+0.1**
KAHTU	**Kahta**	**0.78**	**41**	P	**Pg**	**14 35 04.5**	**+0.3**
KAHTU				S	**Sg**	**14 35 13.9**	**-0.4**
KAHTU				IAML		14 35 20.0	
	comp=N,2μm,0.3s						
KAHTU				IAML		14 35 25.0	
	comp=E,2μm,0.6s						
SANL	**SANLIURFA_Merk**	**0.82**	**93**	P	**Pg**	**14 35 04.3**	**-0.7**
KAHM	**Kahramanmaras,**	**0.83**	**291**	P	**Pb**	**14 35 05.8**	**0.0**
KUZU	**Kuzuini**	**0.84**	**238**	P	**Pb**	**14 35 06.4**	**+0.4**
KHMR	**Kahramanmara**	**0.85**	**278**	P	**Pg**	**14 35 05.3**	**-0.2**
KMRS	**Kahramanmaras**	**0.89**	**289**	Pg	**Pb**	**14 35 07.5**	**+0.6**
KMRS				Sg	**Sn**	**14 35 20.6**	**-0.6**
NARI	**Adyaman-Kaht**	**0.92**	**44**	P	**Pg**	**14 35 06.3**	**-0.5**
NARI				S	**Sg**	**14 35 18.7**	**-0.1**
NARI				IAML		14 35 23.0	
	comp=N,1μm,0.5s						
NARI				IAML		14 35 23.0	
	comp=E,2μm,0.5s						
KAMA	**Osmaniye**	**1.03**	**268**	P	**Pn**	**14 35 09.9**	**-0.1**
AKCD	**Akcadag**	**1.07**	**358**	P	**Pg**	**14 35 08.9**	**-0.8**
MAYA	**Malatya/Merkez**	**1.16**	**18**	P	**Pg**	**14 35 11.7**	**+0.3**
HASA	**Hatay-Hassa-Ha**	**1.27**	**249**	P	**Pg**	**14 35 13.8**	**+0.2**
ELBS	**KAHRAMANMARAS**	**1.28**	**329**	P	**Pg**	**14 35 14.2**	**+0.5**
ANDN	**Andirin**	**1.33**	**286**	P	**Pg**	**14 35 14.8**	**0.0**
MDYL	**Doganyol-Malat**	**1.38**	**38**	Pn	**Pb**	**14 35 15.6**	**+0.2**
CNGT	**ngs**	**1.45**	**47**	P	**Pg**	**14 35 17.1**	**0.0**
RHAN	**Hatay/Reyhanl**	**1.45**	**229**	P	**Pg**	**14 35 17.4**	**+0.4**
ESGZ	**Sivrice-Elazig**	**1.49**	**36**	Pn	**Pg**	**14 35 17.7**	**0.0**
ELZG	**Elazig**	**1.51**	**32**	P	**Pn**	**14 35 16.4**	**-0.3**
SVRC	**Sivrice-ELAZID**	**1.57**	**42**	Pn	**Pb**	**14 35 18.6**	**0.0**
SVRC				Sn	**Sg**	**14 35 40.3**	**+0.6**
ESIJ	**Sivrice-Elazig**	**1.62**	**41**	Pn	**Pb**	**14 35 19.9**	**+0.4**
ESIJ				Sn	**Sg**	**14 35 41.8**	**+0.4**
HEKM	**Malatya_Hekimh**	**1.65**	**360**	P	**Pb**	**14 35 20.3**	**+0.2**
TAHT	**Tahtakopru-Hat**	**1.66**	**240**	Pn	**Pb**	**14 35 19.3**	**-0.7**
SAIM	**ADANA**	**1.67**	**297**	P	**Pg**	**14 35 21.0**	**-0.1**
SARI	**SarD1z-Kayseri**	**1.70**	**315**	Pn	**Pb**	**14 35 21.4**	**+0.6**
SARI				Sn	**Sg**	**14 35 43.7**	**-0.1**
KOZT	**Kozan**	**1.72**	**279**	Pn	**Pb**	**14 35 20.9**	**-0.1**
KOZT				Sn	**Sb**	**14 35 43.3**	**+0.5**
ELZ	**Elazig**	**1.77**	**34**	P	**Pg**	**14 35 22.6**	**-0.4**
MDNT	**Maden**	**1.80**	**49**	P	**Pg**	**14 35 24.3**	**+0.7**
DIYA	**Diyarbakir**	**1.85**	**67**	P	**Pg**	**14 35 27.2**	**+2.5**
DYBB	**Diyarbakir**	**1.88**	**67**	Pn	**Pb**	**14 35 23.2**	**-0.6**
ARPR	**Arapgir-MALATY**	**1.89**	**9**	Pn	**Pb**	**14 35 23.6**	**-0.4**
MCKZ	**Bingol**	**2.06**	**23**	P	**Pn**	**14 35 23.8**	**-0.4**
KOVA	**Elazig, Kovanc**	**2.08**	**44**	P	**Pb**	**14 35 26.5**	**-0.8**
MDIV		**2.10**	**2**	P	**Pn**	**14 35 26.1**	**+1.4**
MARD	**Mardin**	**2.25**	**87**	P	**Pb**	**14 35 30.1**	**0.0**
CUAYA	**Sivas-Altinyay**	**2.25**	**335**	P	**Pn**	**14 35 27.9**	**+1.0**
TNCL	**Tunceli-Merkez**	**2.26**	**33**	P	**Pn**	**14 35 27.1**	**+0.1**
MAYK		**2.42**	**51**	P	**Pn**	**14 35 28.9**	**-0.4**
ERZN	**Erzincan**	**2.74**	**30**	Pn	**Pb**	**14 35 36.2**	**-2.2**
BNGB	**Bingl**	**2.78**	**50**	Pn	**Pn**	**14 35 36.5**	**+2.4**
BEIL	**Beino**	**3.04**	**209**	*e*P	**Pn**	**14 35 37.9**	**+0.2**
FKH	**Fakeheh**	**3.23**	**203**	*e*P	**Pn**	**14 35 39.9**	**-0.4**
HWQ	**Hawqa**	**3.36**	**210**	*e*P	**Pn**	**14 35 40.8**	**-1.3**

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*CNRM **01** 14:35:45.6, 35°.63N×3°.63W, h8km, ML2.0*
*MDD **01** 14:35:46.4±1.0, 35°.50N×3°.87W, h2km±7km, mb_Lg2.3/5,*
Error ellipse: s-maj=6.5km s-min=3.8km az=86.0
*SFS **01** 14:35:46.9, 35°.50N×3°.83W, h0km, ML2.6/5, ML2.6/5,*
MLv2.6/5
ISC 01 14:35:47.2±1.3**, 35°.52N**±0°.03×**3°.78W**±0°.04**, h14**km±10km**,**
n18, σ**0s.79**/34**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.33**	**203**	P	**Pb**	**14 35 54.7**	**-0.1**
PALE				S	**Sb**	**14 36 00.4**	**+0.5**
WMELI	**Melilla**	**0.71**	**106**	Pg	**Pb**	**14 36 00.9**	**-0.3**
WMELI				Sg	**Sg**	**14 36 10.3**	**0.0**
EMEL	**Melilla**	**0.71**	**108**	Pg	**Pg**	**14 36 00.6**	**-0.4**
EMEL				Pg	**Pb**	**14 36 00.8**	**-0.5**
EMEL				Sg	**Sb**	**14 36 10.8**	**0.0**
EMEL				Sg	**Sg**	**14 36 11.1**	**+0.7**
EMLI	**Melilla**	**0.71**	**108**	Pg	**Pg**	**14 36 00.7**	**-0.4**
EMLI				Sg	**Sg**	**14 36 10.2**	**-0.3**
EALB	**Alboran**	**0.74**	**55**	Pg	**Pg**	**14 36 01.4**	**-0.2**
EALB				Sg	**Sb**	**14 36 12.6**	**+0.8**
EALB	**Alboran**	**0.74**	**55**	Pg	**Pg**	**14 36 01.4**	**-0.2**
EALB				Pg	**Pb**	**14 36 01.5**	**-0.2**
EALB				Sg	**Sb**	**14 36 12.5**	**+0.8**
EALB				Sg	**Sg**	**14 36 13.1**	**+1.7**
AKLM	**AKL**	**1.01**	**184**	P	**Pn**	**14 36 07.8**	**+0.9**
AKLM				S	**Sn**	**14 36 21.9**	**+1.0**
EMIJ	**Mijas**	**1.32**	**323**	Sn	**Sb**	**14 36 27.6**	**-0.8**
EMIJ				*i* IVmb_Lg		14 36 34.0	
TAF	**Taforalt**	**1.32**	**122**	P	**Pn**	**14 36 09.8**	**-1.4**
TAF				S	**Sb**	**14 36 28.4**	**-0.2**
ELGU	**Los Guajares,**	**1.35**	**5**	Pn	**Pn**	**14 36 10.9**	**-0.8**
ELGU				Sn	**Sb**	**14 36 29.3**	**-0.1**
ELGU	**Los Guajares,**	**1.35**	**5**	Pn	**Pn**	**14 36 11.0**	**-0.6**
ELGU				Sn	**Sb**	**14 36 29.7**	**+0.2**
ELGU				*i* IVmb_Lg		14 36 35.2	
JBK	**JBK**	**1.55**	**139**	P	**Pn**	**14 36 13.7**	**-0.8**
EGOR	**Sierra Gorda,**	**1.61**	**351**	Sn	**Sb**	**14 36 37.4**	**+0.5**
IFR	**Ifrane**	**2.29**	**209**	Pn	**Pn**	**14 36 24.0**	**-0.5**
IFR				Sn	**Sn**	**14 36 51.9**	**-0.7**
EQES	**Quesada**	**2.35**	**14**	Pn	**Pn**	**14 36 25.7**	**+0.2**
EQES				Sn	**Sn**	**14 36 54.3**	**+0.2**
EQES				*i* IVmb_Lg		14 36 54.9	
TLOR	**Lorca, Murcia**	**2.72**	**38**	Sn	**Sn**	**14 37 04.9**	**+1.9**
EADA	**Adamuz**	**2.72**	**347**	Sn	**Sn**	**14 37 02.1**	**-1.0**
EADA				*i* IVmb_Lg		14 37 07.9	
MD31	**MD31**	**2.77**	**197**	P	**Pn**	**14 36 32.0**	**+0.9**

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*IDC **01** 14:43:17.5±1.4, 19°.55N×121°.43E, h0km, mb3.3/3,*

mbtmp3.5/4, ML3.4/1, Error ellipse: s-maj=53.3km s-min=26.3km az=75.0

*MAN **01** 14:43:22.0, 19°.74N×121°.32E, h14km, MS3.0*

ISC 01 14:43:23.0±1.1**, 19°.83N**±0°.08×**121°.3E**±0°.1**, h35**km**, n6, σ2.63**/8**, mb3.3**/3**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIP	Pasuquin	1.61	202	eP	Pn	14 43 49.3	+0.3
PIP				eS	Sn	14 44 08.4	-0.2
CVP	Callao Caves	2.18	166	eP	Pn	14 43 57.8	+1.0
CVP				eS	Sn	14 44 25.7	+3.2
JOW	Kunigami	9.49	41	Pn	Pn	14 45 37.0	-0.2
	0.9nm,0.3s,baz=247,slow=13,SNR=6.3						
	11nm,0.8s						
WRA	Warramunga Arr	41.55	161	P	P	14 51 03.9	-3.5
	0.5nm,0.8s,baz=341,slow=8.2,SNR=12						
	0.5nm,0.8s						
MKAR	Makanchi Array	41.59	319	P	P	14 51 09.7	+2.1
	0.2nm,0.7s,baz=111,slow=7.9,SNR=1.8						
	0.2nm,0.7s						
ASAR	Alice Springs	44.95	164	P	P	14 51 32.3	-2.5
	0.3nm,0.3s,baz=342,slow=8.1,SNR=23						
	0.3nm,0.3s						

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*IDC **01** 14:54:31.4±2.9, 31°.48S×178°.76W, h0km, mb4.0/2, mbtmp4.0/3, ML3.3/1, Error ellipse: s-maj=65.0km s-min=36.2km az=109.0*

*WEL **01** 14:54:37.3±2.4, 32°S±16°×17°7W±2°2, h213km±67km, ML4.4/2, Error ellipse: s-maj=29.3km s-min=20.5km az=83.4, confirmed*

ISC 01 14:54:32.1±2.6**, 31°.5S**±0°.1×**178°.7W**±0°.4**, h10**km**, n19, σ1.37**/20**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	Te Kaha	6.90	204	P	Pn	14 56 15.8	+2.5
HAZ				S	Sn	14 57 34.8	+2.9
PUZ	Puketiti	7.04	200	P	Pn	14 56 16.0	+0.8
PUZ				S	Sn	14 57 33.8	-1.6
WCZ	Waipu Caves	7.32	231	P	Pb	14 56 31.9	-7.3
OUZ	Omahuta	7.46	238	P	Pb	14 56 32.7	-9.0
MWZ	Matawai	7.51	203	P	Pn	14 56 20.8	-0.9
MWZ				S	Sn	14 57 46.6	-0.4
URZ	Urewera	7.59	206	Pn	Pn	14 56 23.5	+0.7
	0.4nm,0.3s,baz=328,slow=19,SNR=3.0						
URZ				Sn	Sn	14 57 47.7	-1.2
	2.0nm,0.3s,baz=16,slow=13,SNR=14						
	13nm,1.0s						
URZ	Urewera	7.59	206	P	Pn	14 56 23.3	+0.4
URZ				S	Sn	14 57 47.6	-1.4
NMHZ	Naumai	8.44	205	P	Pn	14 56 35.3	+0.7
NMHZ				S	Sn	14 58 09.8	-0.3
ARHZ	Aropaoanui	8.53	203	P	Pn	14 56 35.3	-0.3
ARHZ				S	Sn	14 58 11.5	-0.5
BKZ	Black Stump Fm	8.62	206	P	Pn	14 56 36.3	-0.7
MCHZ	McNeill Hill	8.79	204	P	Pn	14 56 41.6	+2.3
PNHZ	Pukenui	9.38	205	P	Pn	14 56 45.9	-1.6
RAR	Rarotonga	19.76	63	P	P	14 58 43.1	-19
ASAR	Alice Springs	42.48	268	P	P	15 02 27.9	+0.2
	0.4nm,0.3s,baz=107,slow=7.3,SNR=36						
	0.4nm,0.3s						
WRA	Warramunga Arr	43.57	274	P	P	15 02 36.7	+0.1
	2.0nm,0.5s,baz=113,slow=7.9,SNR=64						
	2.0nm,0.5s						
H03N3	Juan Fernandez	80.55	123	T	T	16 35 39.8	
	baz=240						
H03N2	Juan Fernandez	80.55	123	T	T	16 35 39.1	
	baz=240						
H03N1	Juan Fernandez	80.56	123	T	T	16 35 29.1	
	baz=240						
FINES	FINESS Array B	145.95	339	PKPbc	PKPab	15 14 11.1	-0.6
	6.6nm,1.2s,baz=24,slow=4.9,SNR=7.9						

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*ASRS **01** 15:22:28.5±0.2, 52°.0N±0°.8×89°.0E±1°.0, h10km, MLh3.9/20, Error ellipse: s-maj=2.2km s-min=1.7km az=110.5, confirmed*

*NNC **01** 15:22:34.6±1.8, 52°.04N×88°.64E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=15.4km s-min=8.7km az=92.0, Suspected Mining explosion.*

ISC 01 15:22:30.7±0.7**, 51°.97N**±0°.02×**89°.06E**±0°.02**, h0**km**, n30, σ1.21**/58**, 13C-4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YALR	Yailyu, Altay	0.92	258	⇑Pg	Pg	15 22 47.0	-1.3
YALR				Sg	Sg	15 22 58.6	-1.6
ARTR	Artybash	1.12	262	⇑Pg	Pg	15 22 50.4	-1.7
ARTR				Sg	Sg	15 23 06.4	-0.2
TEL	Teeli	1.18	143	Pg	Pg	15 22 50.5	-2.8
TEL				Sg	Sg	15 23 06.2	-2.5
VEH	Verkhnyaya Baz	1.50	30	Pg	Pn	15 22 58.9	0.0
VEH				Sg	Sg	15 23 18.5	-0.3
ULGR	Ulagan, Altay	1.51	208	⇓Pg	Pn	15 22 57.8	-1.3
ULGR				Sg	Sn	15 23 21.5	+2.0
DJO	Djoy, Khakassi	1.55	57	Pg	Pn	15 22 60.0	+0.4
DJO				Sg	Sg	15 23 21.0	+0.5
CERR	Cheremushki	1.69	57	Pg	Pb	15 23 02.8	+0.1
CERR				Sg	Sg	15 23 26.2	+1.2
LUZB	Luzhba, Kemero	1.70	357	Pg	Pn	15 23 01.7	+0.1
LUZB				Sg	Sg	15 23 25.2	0.0
KALT1	Kaltan 1	1.76	326	Pg	Pb	15 23 03.6	-0.2
KALT1				Sg	Sg	15 23 27.4	+0.2
KIYZ	Kiyzas, Kuzbas	1.78	334	Pg	Pg	15 23 04.6	-0.2
KIYZ				Sg	Sg	15 23 28.8	+1.0
KALT2	Kaltan 2	1.79	324	Pg	Pg	15 23 05.9	+1.1
KALT2				Sg	Sg	15 23 28.5	+0.6
KALT3	Kaltan 3	1.84	328	Pg	Pg	15 23 05.5	-0.3
KALT3				Sg	Sb	15 23 28.5	-0.1
AKAR	Aktash	1.88	209	Pg	Pn	15 23 04.7	+0.5
AKAR				Sg	Sb	15 23 30.4	+0.4
CHBI	Chibit, Altay	1.93	211	Pg	Pn	15 23 05.7	+0.9
CHBI				Sg	Sn	15 23 30.9	+1.2
GALT	Gorno-Altaysk,	1.93	271	Pg	Pn	15 23 05.1	+0.4
GALT				Sg	Sn	15 23 29.9	+0.3
ELT	Eltsovka	2.16	308	Pg	Pb	15 23 09.2	-1.3
ELT				Sg	Sb	15 23 36.9	-0.9
ERU	Erunakovo, Kuz	2.40	336	Pg	Pb	15 23 14.5	-0.2
ERU				Sg	Sb	15 23 45.7	+0.8
DGZ	Jazzator, Alta	2.49	205	Pg	Pb	15 23 16.8	+0.4
DGZ				Sg	Sb	15 23 48.8	+1.1
TUNR	Tungur	2.50	225	Pg	Pb	15 23 17.2	+0.8
TUNR				Sg	Sb	15 23 47.7	-0.1
ARDR	Aradan	2.75	75	Pg	Pb	15 23 22.5	+1.7
ARDR				Sg	Sg	15 23 58.4	-0.6
BJR3	Bachatsky-3 (S	2.86	323	Pg	Pb	15 23 22.3	-0.2
BJR3				Sg	Sb	15 23 57.3	-0.8
UKR	Ust'-Kan	2.88	251	Pg	Pb	15 23 22.6	-0.3
UKR				Sg	Sb	15 23 59.6	+1.0
BJR1	Bachatsky 1, K	2.92	322	Pg	Pb	15 23 23.3	-0.2
BJR1				Sg	Sb	15 23 58.5	-1.1
ZAA0	Zalesovo Array	3.25	309	⇑Pn	Pn	15 23 23.4	+0.6
	5.5nm,0.5s						
ZAA0				⇑Lg	Lg	15 24 08.5	
	73nm,0.8s						
BRCR	Berchikul'	3.71	353	Pg	Pb	15 23 36.5	-0.5
BRCR				Sg	Sg	15 24 26.9	-2.8
KURK	Kurchatov	6.66	263	⇑Pn	Pn	15 24 10.2	+0.5
	1.3nm,0.4s						
KURK				⇑Sn	Sn	15 25 26.1	-0.1
	2.9nm,0.6s						
KURK				⇑Lg	Lg	15 25 59.3	
	9.9nm,0.7s						
KURBB	Kurchatov Arra	6.74	263	⇓Pn	Pn	15 24 11.6	+0.8
	5.9nm,0.3s						
KURBB				⇑Sn	Sn	15 25 28.7	+0.5
	10nm,0.6s						
KURBB				⇓Lg	Lg	15 25 58.2	
	37nm,0.7s						
MK31	Makanchi Array	6.81	223	⇓Pn	Pn	15 24 15.0	+3.3
	5.8nm,0.6s,baz=43,slow=11,SNR=233						
MK31				⇑Sn	Sn	15 25 30.9	+1.0
	6.6nm,0.5s,baz=52,slow=24,SNR=7.8						
MK31				⇑Lg	Lg	15 26 05.7	
	30nm,1.1s,baz=45,slow=29,SNR=4.8						
MAKZ	Makanchi	6.93	225	⇑Pn	Pn	15 24 16.5	+3.1
	3.8nm,0.5s						
MAKZ				⇑Sn	Sn	15 25 33.7	+0.8
	24nm,0.8s						
BVA0	Borovoye Array	11.44	283	⇑Pn	Pn	15 25 13.4	-1.7
	2.2nm,0.8s						

IDC 01 15:35:35.0±2.4**, 1°.07N**×**126°.64E, h0**km**, mb3.1**/3**, mbtmp3.2**/3**, Error ellipse: s-maj=209.6km s-min=28.4km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.21	161	P	P	15 40 32.2	-1.1
	0.4nm,0.6s,baz=339,slow=11,SNR=5.8						
	0.4nm,0.6s						
ASAR	Alice Springs	25.59	164	P	P	15 41 06.9	+0.8
	0.4nm,0.8s,baz=347,slow=9.9,SNR=8.3						
	0.4nm,0.8s						
MKAR	Makanchi Array	59.68	326	P	P	15 45 41.2	-0.1
	0.1nm,0.5s,baz=111,slow=7.9,SNR=2.5						
	0.1nm,0.5s						

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*MAN **01** 15:38:31.0, 4°.84N×126°.79E, h36km, MS3.2*

IDC 01 15:38:32.6±2.2**, 5°.52N**×**126°.16E, h0**km**, mb3.3**/3**, mbtmp3.3**/3**, Error ellipse: s-maj=210.0km s-min=24.8km az=66.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.65	339	LR	LR	15 39 40.2	
	comp=Z,43nm,18.7s,baz=180,slow=41						
DMPH	Davao City--Mi	1.69	337	eP	Pg	15 39 06.1	+1.2
DMPH				i S	Sg	15 39 52.2	+25
CTBH	Cotabato--PC H	2.55	312	i P	Pg	15 39 25.3	+3.8
CGP	Cagayan de Oro	3.26	334	eP	Pg	15 39 37.0	+1.8
CGP				eS	Sg	15 40 24.9	+7.4
WRA	Warramunga Arr	26.55	163	P	P	15 44 12.1	-0.3
	0.8nm,0.9s,baz=342,slow=9.1,SNR=5.1						
	0.8nm,0.9s						
ASAR	Alice Springs	29.97	166	P	P	15 44 43.2	+0.2
	0.2nm,0.8s,baz=348,slow=8.7,SNR=1.5						
	0.2nm,0.8s						
MKAR	Makanchi Array	55.78	325	P	P	15 48 11.7	+0.2
	0.3nm,0.9s,baz=123,slow=5.8,SNR=1.7						
	0.3nm,0.9s						
KURBB	Kurchatov Arra	59.94	327	P	P	15 48 40.3	-0.2
	0.3nm,0.6s,baz=125,slow=7.1,SNR=3.0						

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*IDC **01** 15:50:12.6±0.5, 6°.14S×114°.52E, h502km±5km, mb3.6/15, mbtmp4.6/20, Error ellipse: s-maj=13.4km s-min=6.6km az=46.0*

*DJA **01** 15:50:12.2±0.1, 6°S±2°×11°4E±°, h504km±1km, M4.4/115, mb4.7/115, mB5.0/70, MLv5.0/71, Mw(mB)4.4/70*

*NEIC **01** 15:50:13.1±1.8, 6°.21S±0°.09×114°.46E±0°.09, h502km±7km, mb4.6/54, Error ellipse: s-maj=14.0km s-min=12.0km az=214.0*

ISC 01 15:50:12.4±0.3**, 6°.26S**±0°.05×**114°.46E**±0°.04**, h500**km**, n232, σ1.03**/247**, mb4.4**/43**, Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMMI	Kalianget	0.93	212	P	P	15 51 14.4	+0.8
KMMI				S	S	15 52 04.0	+0.9
ABJI	Asem Bagus	1.54	188	P	P	15 51 16.3	+0.8
ABJI				S	S	15 52 07.6	+0.9
BLJI	Banyuglugur	1.71	210	P	P	15 51 16.5	+0.3
BLJI				S	S	15 52 08.1	+0.2
JAGI	Jajag, Banyuwa	2.22	188	P	P	15 51 17.9	-0.8
JAGI				S	S	15 52 10.7	-1.8
JAGI	Jajag, Banyuwa	2.22	188	S	S	15 52 10.7	-1.8
JAGI	Jajag, Banyuwa	2.22	188		P	15 51 18.0	-0.8
JAGI	Jajag, Banyuwa	2.22	188	P	P	15 51 17.3	-1.4
RTBI	Rangdo, Negare	2.24	168	P	P	15 51 18.2	-0.7
KHKI	Kahang-Kahang	2.39	151	P	P	15 51 20.4	+0.8
DNP	Denpasar	2.52	163	P	P	15 51 19.9	-0.5
IGBI	Denpasar	2.64	165	P	P	15 51 20.4	-0.7
BBKI	Banjar Baru	2.80	8	P	P	15 51 21.4	-0.8
SJI	Sawahan	3.05	241	P	P	15 51 24.1	+0.2
SNJI	Sawahan-Nganju	3.08	240	P	P	15 51 24.7	+0.5
NGJI	Ngawi	3.17	249	P	P	15 51 25.6	+1.0
TWSI	Taliwang, Sumb	3.44	136	P	P	15 51 24.9	-1.7
PCJI	Pacitan	3.78	239	P	P	15 51 29.1	0.0
SMRI	Semarang	4.07	259	P	P	15 51 32.7	+1.3
SMRI				S	S	15 52 34.5	-1.2
SMRI	Semarang	4.07	259	S	S	15 52 34.5	-1.2
SMRI	Semarang	4.07	259		P	15 51 32.5	+1.0
SMRI	Semarang	4.07	259	P	P	15 51 32.0	+0.6
PLAI	Plampang	4.17	128	P	P	15 51 30.8	-1.4
PLAI	Plampang	4.17	128	P	P	15 51 30.8	-1.4
UGM	Wanagama	4.24	247	P	P	15 51 33.4	+0.5
UGM				S	S	15 52 38.1	-0.2
UGM	Wanagama	4.24	247	S	S	15 52 38.1	-0.2
UGM	Wanagama	4.24	247		P	15 51 33.4	+0.5
UGM	Wanagama	4.24	247	P	P	15 51 33.1	+0.2
YOGI	Yogyakarta	4.41	249	P	P	15 51 34.7	+0.4
DBNI	Kabupaten Domp	4.43	120	P	P	15 51 33.8	-0.6
MKS	Makassar	5.09	79	P	P	15 51 39.8	-0.5
	1.1nm3μm272nm,0.9s						
PMSI	Majene	5.22	59	P	P	15 51 42.2	+0.7
CTJI	Waduk Cacaban	5.29	262	P	P	15 51 42.8	+0.7
	1.0nm218nm,0.6s						
KAPI	Kappang	5.41	77	P	P	15 51 43.5	+0.2
	156nm,0.3s,baz=219,slow=3.9,SNR=72						
KAPI				S	S	15 52 57.0	-0.3
	30nm,1.1s,baz=229,slow=20,SNR=0.6						
KAPI	Kappang	5.41	77	P	P	15 51 43.6	+0.4
KAPI	Kappang	5.41	77	P	P	15 51 43.0	-0.2
	0.5nm2μm127nm,0.9s						
BKB	Balikpapan	5.53	26	P	P	15 51 47.7	+3.4
BKB	Balikpapan	5.53	26		P	15 51 46.6	+2.3
BKB	Balikpapan	5.53	26	P	P	15 51 46.8	+2.5
	1.1nm3μm367nm,0.8s						
KPJI	Karang Pucung	5.59	259	P	P	15 51 46.1	+1.2
	1.9nm2μm117nm,0.4s						
MMSI	Mamuju	5.68	52	P	P	15 51 46.1	+0.3
	1.5nm4μm511nm,0.9s						
SPSI	Sidrap Palu	5.76	67	P	P	15 51 46.1	-0.4
	1.6nm4μm426nm,0.8s						
LBFI	Labuhan Bajo,	5.82	113	P	P	15 51 48.2	+1.1
WBSI	Waikabubak, Su	5.93	125	P	P	15 51 46.8	-1.4
	4.1nm107nm,0.9s						
BSSI	Bau Bau, Buton	6.00	89	P	P	15 51 48.9	+0.1
TTSI	Tana Toraja	6.22	59	P	P	15 51 51.8	+0.8
	0.6nm2μm153nm,0.7s						
WSI	Waingapu	6.71	121	P	P	15 51 53.8	-1.9
	87nm,0.4s						
LEM	Lembang	6.82	265	P	P	15 51 58.5	+1.5
	101nm,0.6s,baz=36,slow=12,SNR=21						
LEM				S	S	15 53 21.5	-1.1
	207nm,0.8s,baz=73,slow=19,SNR=8.1						
LEM	Lembang	6.82	265	P	P	15 51 58.8	+1.7
	0.9nm1μm121nm,0.7s						
BBJI	Bungbulang	6.86	260	P	P	15 51 57.1	-0.3
BBJI	Bungbulang	6.86	260		P	15 51 57.2	-0.1
BBJI	Bungbulang	6.86	260	P	P	15 51 56.8	-0.6
	2.2nm3μm186nm,0.9s						
BASI	Baing, Sumba	7.22	123	P	P	15 51 59.9	-1.0
	147nm,1.3s						
KKSI	Kolaka, Sulawe	7.46	74	P	P	15 52 03.0	-0.4
	0.4nm1μm81nm,0.5s						
PCI	Palu	7.55	45	P	P	15 52 04.8	+0.4
	1.4nm5μm396nm,0.9s						
EDFI	Ende, Flores	7.59	110	P	P	15 52 03.4	-1.4
	0.3nm45nm,0.6s						
TPI	Tanjungpandan	7.62	297	P	P	15 52 04.7	-0.3
	0.4nm1μm131nm,0.8s						
DBJI	Dramaga	7.67	267	P	P	15 52 06.4	+0.9
	1.0nm6μm81nm,0.6s						
MMRI	Maumere	8.07	108	P	P	15 52 08.4	-1.2
	66nm,1.1s						
MPSI	Mapaga	8.51	40	P	P	15 52 14.5	+0.3
	2μm214nm,0.8s						
APSI	Ampana	8.93	54	P	P	15 52 18.8	+0.2
	2μm153nm,1.0s						
SBUM	Sibu	8.93	345	P	P	15 52 19.5	+0.9
SBUM	Sibu	8.93	345		P	15 52 19.6	+0.9
SBUM	Sibu	8.93	345	P	P	15 52 19.3	+0.7
	81nm,0.8s						
PPBI	Pangkal Pinang	9.24	296	P	P	15 52 21.7	-0.2
XMI	Christmas Isla	9.62	244	P	P	15 52 25.7	-0.2
XMI				S	S	15 54 15.7	+0.1
XMI	Christmas Isla	9.62	244	S	S	15 54 15.7	+0.1
TOLI2	Tolitoli	9.67	41	P	P	15 52 26.3	-0.1
TOLI2	Tolitoli	9.67	41		P	15 52 26.7	+0.3
LUWI	Luwuk	9.78	58	P	P	15 52 28.8	+1.2
LUWI	Luwuk	9.78	58		P	15 52 27.9	+0.3
LUWI	Luwuk	9.78	58	P	P	15 52 27.8	+0.3
	2μm305nm,1.2s						
BATI	Baumata	9.92	114	P	P	15 52 28.6	-0.4
	26nm,0.2s,baz=288,slow=20,SNR=30						
BATI				S	S	15 54 16.4	-5.0
	103nm,0.7s,baz=295,slow=17,SNR=6.6						
BATI	Baumata	9.92	114	P	P	15 52 28.1	-1.0
	60nm,1.2s						
KASI	Kota Agung	9.93	274	P	P	15 52 27.8	-1.4
	3μm157nm,0.6s						
MRSI	Marisa	10.03	48	P	P	15 52 28.8	-1.4
	2μm215nm,0.8s						
SOEI	Soe	10.32	110	P	P	15 52 34.9	+1.5
SOEI	Soe	10.32	110		P	15 52 32.7	-0.7
SOEI	Soe	10.32	110	P	P	15 52 32.9	-0.5
	50nm,0.8s						
MDSI	Maura Dua	10.38	279	P	P	15 52 32.4	-1.5
LWLI	Liwa	10.42	276	P	P	15 52 33.6	-0.9
GTOI	Gorontalo	10.94	52	P	P	15 52 39.1	-0.8
	3μm211nm,0.7s						
MNAI	Manna	11.61	279	P	P	15 52 46.9	0.0
MYLDM	Lahad Datu	12.06	20	P	P	15 52 54.2	+2.5
MYLDM	Lahad Datu	12.06	20		P	15 52 52.4	+0.7
MYLDM	Lahad Datu	12.06	20	P	P	15 52 53.2	+1.5
KSI	Kapahiang	12.10	282	P	P	15 52 51.2	-1.0
	58nm,0.6s						
TPRI	Tanjung Pinang	12.21	305	P	P	15 52 53.7	+0.4
	30nm,0.5s						
SANI	Sanana	12.23	71	P	P	15 52 53.7	+0.1
SANI	Sanana	12.23	71	P	P	15 52 53.2	-0.4
	50nm,0.9s						
KKM	Kota Kinabalu	12.34	8	P	P	15 52 55.8	+0.9
MASI	Maura Aman, Be	12.56	284	P	P	15 52 56.3	-0.8
	2μm119nm,0.6s						
MNI	Manado	12.88	54	P	P	15 52 58.2	-2.3
	172nm,1.2s						
KRJI	Kerinci	13.60	287	P	P	15 53 07.8	-0.4
AAI	Ambon	13.92	80	P	P	15 53 10.9	-0.6
	62nm,1.0s						
KRAI	Karang Ratu	14.19	79	P	P	15 53 13.4	-0.9
	742nm28nm,0.5s						
TNTI	Ternate	14.66	62	P	P	15 53 21.9	+2.7
TNTI	Ternate	14.66	62	P	P	15 53 18.9	-0.3
PPSI	Pulau Pagai	14.81	283	P	P	15 53 18.5	-2.3
PDSI	Padang	14.94	290	P	P	15 53 19.6	-2.6
	24nm,0.6s						
PPI	Padang Panjang	15.17	292	P	P	15 53 23.2	-1.3
	24nm,0.5s						
FITZ	Fitzroy Crossi	16.05	138	P	P	15 53 33.4	-0.2
	38nm,0.4s,baz=335,slow=6.9,SNR=25						
FITZ				S	S	15 56 18.6	-1.0
	2.7nm,0.5s,baz=321,slow=14,SNR=1.5						
PSA00	Pilbara Seismi	16.09	162	P	P	15 53 34.1	0.0
PSA00	Pilbara Seismi	16.09	162		P	15 53 34.1	0.0
PSA00	Pilbara Seismi	16.09	162	P	P	15 53 34.1	0.0
PSA00				IAmb	IAmb	15 53 36.6	
	comp=Z,153nm,0.5s						
MNSI	Mandailing Nat	16.42	295	P	P	15 53 36.4	-1.2
	comp=Z,2μmcomp=Z,41nm,0.4s						
KNRA	Kununurra	16.87	125		P	15 53 41.0	-1.2
IPM	Ipoh	17.13	308	P	P	15 53 45.9	+1.0
IPM	Ipoh	17.13	308		P	15 53 45.2	+0.3
IPM				IAmb	IAmb	15 53 46.5	
	comp=Z,16nm,0.8s						
IPM	Ipoh	17.13	308	P	P	15 53 45.2	+0.3
	comp=Z,22nm,0.7s						
DRS	Darwin Rock St	17.34	112	P	P	15 53 46.2	-0.6
SIJI	Sorong	17.60	73	P	P	15 53 48.6	-0.7
	comp=Z,9.1nm,0.6s,baz=267,slow=17,SNR=6.8						
SIJI				S	S	15 56 46.0	-0.6
	comp=Z,4.4nm,0.8s,baz=294,slow=20,SNR=1.0						
MTN	Manton Dam	17.69	113		P	15 53 48.7	-1.4
PSI	Prapat	17.93	300	P	P	15 53 53.7	+1.2
PSI	Prapat	17.93	300	P	P	15 53 52.0	-0.5
	comp=Z,767nmcomp=Z,80nm,1.1s						
KULM	Kulim	17.93	309	P	P	15 53 52.8	+0.5
KULM	Kulim	17.93	309	P	P	15 53 52.1	-0.2
KULM				IAmb	IAmb	15 53 53.5	
	comp=Z,27nm,1.4s						
KULM	Kulim	17.93	309	P	P	15 53 52.3	0.0
COCO	West Island	18.36	250	P	P	15 53 57.1	+0.9
COCO	West Island	18.36	250	P	P	15 53 56.3	+0.1
	comp=Z,49nm,0.8s						
GSI	Gunungsitoli	18.45	293		P	15 53 56.0	-1.1
GSI				IAmb	IAmb	15 54 07.5	
	comp=Z,23nm,0.8s						
GSI	Gunungsitoli	18.45	293	P	P	15 53 56.2	-0.9
KCSI	Kotacane, Aceh	19.29	300	P	P	15 54 04.1	-0.6
MEEK	Meekatharra	20.65	169	P	P	15 54 17.8	+0.7
MLSI	Meulaboh, Aceh	20.84	300	P	P	15 54 18.4	-0.4
	comp=Z,81nm,0.6s						
MORW	Morawa	22.74	176	P	P	15 54 36.6	+0.8
MORW	Morawa	22.74	176	P	P	15 54 36.8	+1.0
WB0	Warramunga Arr	23.57	127	IAmb	IAmb	15 54 44.3	
	comp=Z,40nm,0.9s						
WRA	Warramunga Arr	23.62	127	P	P	15 54 43.8	-0.1
	comp=Z,23nm,0.4s,baz=298,slow=8.6,SNR=372						
WRA				PcP	PcP	15 58 11.3	-0.2
	comp=Z,1.1nm,0.6s,baz=318,slow=1.1,SNR=2.4						
WRA				S	S	15 58 22.2	-0.6
	comp=Z,0.7nm,0.5s,baz=299,slow=16,SNR=2.1						
WRA				ScP	ScP	16 01 01.6	-0.8
	comp=Z,3.3nm,0.7s,baz=305,slow=2.3,SNR=7.4						
WRA	Warramunga Arr	23.62	127	P	P	15 54 43.7	-0.2
WRAB	Tennant Creek	23.63	127	P	P	15 54 44.2	+0.3
WRAB	Tennant Creek	23.63	127	P	P	15 54 44.0	+0.1
BLDU	Ballidu	24.32	175	P	P	15 54 50.6	+0.7
KLBR	Kellerberrin	25.39	173	P	P	15 55 00.3	+0.9
ASAR	Alice Springs	25.48	135	P	P	15 55 00.9	+0.5
	comp=Z,56nm,0.4s,baz=308,slow=8.2,SNR=1786						
ASAR				PcP	PcP	15 58 15.4	-0.3
	comp=Z,0.8nm,0.7s,baz=333,slow=2.2,SNR=5.0						
ASAR				S	S	15 58 50.9	-1.1
	comp=Z,4.5nm,0.9s,baz=308,slow=16,SNR=14						
ASAR				ScP	ScP	16 01 07.7	0.0
	comp=Z,2.8nm,0.7s,baz=325,slow=2.6,SNR=12						
ASAR	Alice Springs	25.48	135	P	P	15 55 01.0	+0.6
ASAR	Alice Springs	25.48	135		ScP	16 01 07.3	-0.3
MUN	Mundaring	25.64	177	P	P	15 55 02.2	+0.6
NWAO	Narrogin (SRO)	26.66	175	P	P	15 55 10.8	+0.2
FORT	Forrest	27.54	154	P	P	15 55 19.4	+1.1
QIS	Mount Isa	28.23	123	P	P	15 55 24.8	+0.2
CMAR	Chiang Mai Arr	28.93	328	P	P	15 55 31.4	+0.7
	comp=Z,2.2nm,0.8s,baz=153,slow=7.1,SNR=18						
CMAR				ScP	ScP	16 01 18.3	+0.1
	comp=Z,0.5nm,0.6s,baz=156,slow=1.9,SNR=4.7						
	comp=Z,2.2nm,0.8s						
CMAR	Chiang Mai Arr	28.93	328	P	P	15 55 30.8	+0.1
COEN	Coen	29.27	107	P	P	15 55 33.5	-0.2
COEN	Coen	29.27	107	P	P	15 55 33.3	-0.4
COEN				IAmb	IAmb	15 55 34.1	
	comp=Z,11nm,0.8s						
MTSU	Mount Surprise	31.42	115	P	P	15 55 53.0	+0.7
PMG	Port Moresby	32.54	98	P	P	15 56 01.9	+0.1
	comp=Z,10nm,0.9s,baz=251,slow=7.0,SNR=7.0						
	comp=Z,10nm,0.9s						
PMG	Port Moresby	32.54	98	P	P	15 56 02.3	+0.4
PMG				IAmb	IAmb	15 56 03.5	
	comp=Z,12nm,0.9s						
PMG	Port Moresby	32.54	98	P	P	15 56 01.8	-0.1
	comp=Z,16nm,1.1s						
INKA	Innaminka	32.85	134	IAmb	IAmb	15 56 06.3	
	comp=Z,20nm,0.7s						
BBOO	Buckleboo	33.20	146	P	P	15 56 07.8	+0.6
BBOO	Buckleboo	33.20	146	P	P	15 56 07.7	+0.4
CTA	Charters Tower	33.79	117	P	P	15 56 12.8	+0.5
	comp=Z,14nm,0.9s,baz=285,slow=8.1,SNR=11						
	comp=Z,14nm,0.9s						
CTA	Charters Tower	33.79	117	P	P	15 56 12.9	+0.5
CTAO	Charters Tower	33.79	117	P	P	15 56 13.0	+0.6
CTAO	Charters Tower	33.79	117	P	P	15 56 12.1	-0.3
CTAO				IAmb	IAmb	15 56 14.1	
	comp=Z,20nm,1.0s						
PTPS	Port Pirie	34.58	144	P	P	15 56 19.0	+0.2
PZH	PanZhiHua	34.82	340	P	P	15 56 23.6	+2.5
QLP	Quilpie	34.83	129	P	P	15 56 21.5	+0.5
HTT	Hallett	35.31	143	P	P	15 56 25.5	+0.5
STKA	Stephens Creek	35.95	139	P	P	15 56 31.4	+1.1
	comp=Z,84nm,0.5s,baz=314,slow=8.6,SNR=146						
STKA	Stephens Creek	35.95	139	P	P	15 56 31.4	+1.1
NJ2	Nanjing	38.32	6	eP	P	15 56 52.1	+2.4
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
SHL	Shillong	38.50	326	P	P	15 56 51.2	-0.3
SHL				IAmb	IAmb	15 56 52.2	
	comp=Z,12nm,0.8s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CMSA	Cobar Meteorol	38.54	135	P	P	15 56 53.1	+1.5
EIDS	Eidsvold	39.83	123	P	P	15 57 03.0	+0.8
EIDS	Eidsvold	39.83	123	IAmb	IAmb	15 57 03.5	
	comp=Z,34nm,1.4s						
TOO	Toolangi	42.05	142	P	P	15 57 21.1	+1.3
TOO				IAmb	IAmb	15 57 22.6	
	comp=Z,28nm,1.4s						
ARMA	Armidale	42.37	129	P	P	15 57 24.5	+2.1
ARMA	Armidale	42.37	129	P	P	15 57 23.6	+1.1
ARMA				IAmb	IAmb	15 57 25.3	
	comp=Z,15nm,0.7s						
CAN	Canberra	42.95	137	P	P	15 57 27.9	+1.0
CAN	Canberra	42.95	137	P	P	15 57 28.0	+1.2
CAN				IAmb	IAmb	15 57 29.1	
	comp=Z,35nm,1.1s						
LZDM	Lanzhou Array	43.19	347	P	P	15 57 28.9	-0.1
	comp=Z,1.1nm,0.4s,baz=181,slow=9.7,SNR=2.2						
	comp=Z,1.1nm,0.4s						
EVN	Everest	43.23	323	P	P	15 57 30.0	+0.1
EVN				IAmb	IAmb	15 57 30.9	
	comp=Z,16nm,1.3s						
MGCD	Mangrove Creek	43.31	133	P	P	15 57 31.1	+1.5
RIV	Riverview	43.66	134	P	P	15 57 33.5	+1.2
HNR	Honiara	45.15	97	P	P	15 57 44.8	+0.6
HHC	Hu-ho-hao-te	46.95	357	*e*P	P	15 58 00.7	+3.1
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MJAR	Matsushiro Arr	48.04	26	P	P	15 58 03.8	-2.0
	comp=Z,1.5nm,0.8s,baz=197,slow=9.3,SNR=5.8						
	comp=Z,1.5nm,0.8s						
MJAR	Matsushiro Arr	48.04	26	IAmb	IAmb	15 58 10.6	
	comp=Z,4.0nm,1.4s						
DZM	Mont Dzumac	52.53	113	P	P	15 58 40.3	+1.2
DZM	Mont Dzumac	52.53	113	P	P	15 58 39.7	+0.6
DZM				IAmb	IAmb	15 59 13.1	
	comp=Z,23nm,1.3s						
OUENC	Ouen Island, N	52.95	113	P	P	15 58 43.0	+1.0
SONM	Songino Array	54.33	353	P	P	15 58 50.4	-1.0
	comp=Z,1.0nm,0.7s,baz=171,slow=10,SNR=5.1						
SONM				pP	pP	16 00 28.8	-0.7
	comp=Z,1.6nm,0.9s,baz=174,slow=9.2,SNR=5.3						
	comp=Z,1.0nm,0.7s						
SONM	Songino Array	54.33	353	IAmb	IAmb	15 58 52.1	
	comp=Z,2.4nm,1.2s						
WMQ	Urumqi	55.40	337	*e*P	P	15 58 59.5	+0.6
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
KSH2	Kashi	57.75	325	P	P	15 59 14.6	-0.7
KSH2				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KDJ	Kajisay	58.93	328	P	P	15 59 23.4	0.0
KBL	Kabul	59.00	317	P	P	15 59 23.0	-1.0
KBL				IAmb	IAmb	15 59 23.1	
	comp=Z,6.0nm,0.6s						
BOOM	Boomskoye usch	59.84	328	IAmb	IAmb	15 59 29.8	
	comp=Z,6.7nm,0.6s						
MKAR	Makanchi Array	60.03	335	P	P	15 59 29.9	-0.5
	comp=Z,4.1nm,0.4s,baz=149,slow=6.7,SNR=148						
MKAR				pP	pP	16 01 11.6	+0.5
	comp=Z,1.7nm,0.7s,baz=142,slow=8.0,SNR=8.5						
	comp=Z,4.1nm,0.4s						
MKAR	Makanchi Array	60.03	335	P	P	15 59 30.1	-0.3
JCZ	Jackson Bay	60.47	138	P	P	15 59 34.3	+0.8
WHZ	Wether Hill Ro	60.62	140	P	P	15 59 34.8	+0.4
WHZ				IAmb	IAmb	16 00 18.4	
	comp=Z,15nm,1.2s						
ARSB	Arslanbob	60.67	325	IAmb	IAmb	15 59 35.4	
	comp=Z,6.9nm,0.8s						
AAK	Ala-Archa	60.71	327	P	P	15 59 35.0	-0.2
GAR	Garm	60.79	322	P	P	15 59 34.9	-0.8
GAR				IAmb	IAmb	15 59 35.8	
	comp=Z,14nm,0.9s						
WKZ	Wanaka	60.91	138	P	P	15 59 36.9	+0.6
WKZ				IAmb	IAmb	15 59 49.3	
	comp=Z,51nm,1.3s						
RPZ	Rata Peaks	61.88	137	P	P	15 59 43.4	+0.7
RPZ	Rata Peaks	61.88	137	P	P	15 59 43.0	+0.4
QRZ	Quartz Range	62.00	133	P	P	15 59 44.7	+1.2
THZ	Tophouse	62.55	134	IAmb	IAmb	15 59 48.4	
	comp=Z,21nm,0.6s						
MSVF	Nonsavu	62.99	107	P	P	15 59 51.5	+1.1
SNZO	South Karori	63.72	133	P	P	15 59 54.7	+0.2
BKZ	Black Stump Fm	64.50	130	P	P	16 00 00.5	+0.8
DGTI	Dogotuki	64.57	105	P	P	16 00 01.8	+1.3
KURBB	Kurchatov Arra	64.58	336	P	P	15 59 59.0	-0.8
	comp=Z,1.6nm,0.6s,baz=150,slow=5.7,SNR=12						
KURBB				pP	pP	16 01 42.4	-0.1
	comp=Z,1.3nm,1.0s,baz=159,slow=4.5,SNR=5.8						
KURK	Kurchatov	64.61	336		pP	16 01 42.4	-0.3
KURK	Kurchatov	64.61	336	P	P	15 59 59.0	-1.0
KURK	Kurchatov	64.61	336	IAmb	IAmb	16 00 00.0	
	comp=Z,2.1nm,0.6s						
RTZ	Ruatahuna	64.75	130	IAmb	IAmb	16 00 02.5	
	comp=Z,34nm,1.0s						
ZAA0	Zalesovo Array	64.95	341	P	P	16 00 00.8	-1.3
ZALV	Zalesovo Beam	64.95	341	P	P	16 00 00.7	-1.4
	comp=Z,2.4nm,0.4s,baz=146,slow=4.8,SNR=15						
ZALV				pP	pP	16 01 43.8	-1.2
	comp=Z,2.6nm,0.7s,baz=145,slow=4.9,SNR=9.3						
	comp=Z,2.4nm,0.4s						
ZALV	Zalesovo Beam	64.95	341	P	P	16 00 00.9	-1.2
VOI	Vohitsoka	66.98	249	P	P	16 00 15.7	+0.1
VOI				IAmb	IAmb	16 00 42.0	
	comp=Z,40nm,1.4s						
BVAR	Borovoye Array	69.81	333	P	P	16 00 30.8	-1.2
	comp=Z,1.8nm,0.7s,baz=134,slow=8.5,SNR=11						
BVAR				pP	pP	16 02 16.2	-0.6
	comp=Z,0.9nm,0.8s,baz=140,slow=9.4,SNR=5.0						
	comp=Z,1.8nm,0.7s						
AB31	Akbulak array	72.76	326	P	P	16 00 48.7	-0.7
ABKAR	Akbulak array	72.76	326	P	P	16 00 48.5	-0.9
RAYN	Ar Rayn	73.46	297	P	P	16 00 53.0	-1.0
VNDA	Vanda	75.40	170	P	P	16 01 04.8	+0.9
	comp=Z,2.4nm,0.5s,baz=302,slow=9.5,SNR=1.5						
	comp=Z,2.4nm,0.5s						
VNDA	Vanda	75.40	170	P	P	16 01 04.6	+0.7
VNDA				IAmb	IAmb	16 01 11.6	
	comp=Z,17nm,1.3s						
QSPA	South Pole Qui	83.72	180	P	P	16 01 48.0	-0.1
	comp=Z,5.8nm,0.8s,baz=330,slow=2.6,SNR=4.9						
	comp=Z,5.8nm,0.8s						
MMAI	Mount Meron Ar	84.27	304	P	P	16 01 51.4	-0.1
	comp=Z,6.3nm,0.9s,baz=48,slow=2.1,SNR=1.6						
	comp=Z,6.3nm,0.9s						
LSZ	Lusaka	84.79	255	P	P	16 01 54.5	0.0
LSZ				IAmb	IAmb	16 01 55.1	
	comp=Z,8.1nm,0.7s						
BOSA	Boshof	86.34	242	P	P	16 02 01.4	-0.3
	comp=Z,2.5nm,0.4s,baz=111,slow=3.2,SNR=14						
	comp=Z,2.5nm,0.4s						
BOSA	Boshof	86.34	242	P	P	16 02 02.0	+0.3
BOSA				IAmb	IAmb	16 02 10.7	
	comp=Z,12nm,1.4s						
LBTB	Lobatse	86.36	245	P	P	16 02 01.9	0.0
	comp=Z,2.6nm,0.7s,baz=94,slow=5.5,SNR=6.6						
	comp=Z,2.6nm,0.7s						
LBTB	Lobatse	86.36	245	P	P	16 02 02.3	+0.4
LBTB				IAmb	IAmb	16 02 02.7	
	comp=Z,5.1nm,1.1s						
BRTR	Keskin Array B	86.94	310	P	P	16 02 03.0	-1.3
	comp=Z,1.2nm,0.9s,baz=141,slow=5.0,SNR=6.7						
BRTR				pP	pP	16 03 55.5	+0.4
	comp=Z,1.0nm,1.1s,baz=102,slow=5.2,SNR=2.4						
	comp=Z,1.2nm,0.9s						
SCHQ	Schefferville	131.55	1	SKPab	SKPbc	16 11 06.6	+0.1
	comp=Z,2.5nm,1.0s,baz=264,slow=3.1,SNR=4.0						
TXAR	Lajitas Array	137.36	53	PKP	PKPdf	16 08 40.2	+0.7
	comp=Z,0.2nm,0.7s,baz=314,slow=1.7,SNR=1.9						
TXAR				SKPbc	SKPbc	16 11 25.9	+0.1
	comp=Z,0.3nm,0.9s,baz=320,slow=1.8,SNR=4.3						
CPUP	Villa Florida	146.64	193	PKPbc	PKPbc	16 08 58.9	+0.4
	comp=Z,2.2nm,0.6s,baz=170,slow=4.1,SNR=8.4						
LPAZ	La Paz	157.46	174	PKPab	PKPab	16 09 48.0	+0.8
	comp=Z,2.3nm,0.6s,baz=180,slow=4.5,SNR=10						

IDC ***01*** *16:08:42.7±1.7, 0.°72N×126.°33E, h0km, mb3.4/3, mbtmp3.5/3, MS2.2/1, Error ellipse: s-maj=175.2km s-min=21.5km az=66.0*

DJA ***01*** *16:08:47.1±0.2, 1°N±3°×12°6E±°, h10km, M3.5/12, mb3.8/2, MLv3.4/12*

ISC 01 16:08:49.5±1.0**, 0.°69N**±0.°09×**126.°25E**±0.°06**, h47**km**, n10,** σ**1.ˢ66**/11**, mb3.6**/4**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.12	86	P	Pn	16 09 08.2	-0.5
TNTI				S	Sn	16 09 24.4	+1.4
MNI	Manado	1.59	298	P	Pn	16 09 14.0	-1.3
MNI				S	Sn	16 09 34.2	-0.5
SANI	Sanana	2.74	185	P	Pn	16 09 29.0	-1.9
GTOI	Gorontalo	3.24	269	P	Pn	16 09 40.8	+3.0
KRAI	Karang Ratu	4.53	152	P	Pn	16 09 57.4	+1.9
SIJI	Sorong	5.25	107	LR	LR	16 11 40.2	
	comp=Z,22nm,19.5s,baz=154,slow=34						
WRA	Warramunga Arr	21.99	159	P	P	16 13 38.5	-1.2
	0.8nm,0.5s,baz=338,slow=11,SNR=12						
	0.8nm,0.5s						
ASAR	Alice Springs	25.33	163	P	P	16 14 11.5	-0.6
	0.5nm,0.6s,baz=345,slow=11,SNR=19						
	0.5nm,0.6s						
MKAR	Makanchi Array	59.78	327	P	P	16 18 49.9	+0.1
	0.3nm,0.5s,baz=119,slow=7.4,SNR=7.3						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	64.04	328	P	P	16 19 18.3	0.0
	0.4nm,0.5s,baz=127,slow=6.4,SNR=3.5						

BUC ***01*** *16:09:08.8±0.1, 46.°68N×22.°08E, h1km, ml3.0/28, Error ellipse: s-maj=1.2km s-min=0.9km az=104.0*

BEO ***01*** *16:09:08.6±0.5, 46.°70N×21.°99E, h9km±4km, ML2.7/11*

PRU ***01*** *16:09:14.1, 47.°08N×21.°81E, h1km*

ISC 01 16:09:08.5±1.1**, 46.°67N**±0.°02×**22.°01E**±0.°02**, h3**km±10km**,** **n62,** σ**0.ˢ90**/89**, 34C-18D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORR	Bors	0.44	340	⇑P	Pg	16 09 16.8	-0.2
BORR				⇑S	Sb	16 09 24.3	-1.7
DRGR		0.50	76	⇑P	Pg	16 09 18.1	+0.1
DRGR				⇓S	Sg	16 09 23.9	-0.7
DRGR		0.50	76	*e*Pg	Pg	16 09 18.1	+0.1
DRGR				*e*Sg	Sg	16 09 25.0	+0.5
LTVH	Ltavrtes, Hu	0.72	354	⇑P	Pg	16 09 22.3	+0.1
LTVH				⇓S	Sg	16 09 32.0	+0.6
MARR	Marisel-Cluj	0.77	89	⇓P	Pg	16 09 23.1	-0.1
MARR				⇑S	Sg	16 09 31.8	-1.3
MESR	Meseseni	0.80	53	⇑P	Pg	16 09 23.7	-0.2
MESR				⇑S	Sg	16 09 34.6	+0.3
DEV	Deva	1.01	141	⇑P	Pg	16 09 27.9	+0.1
DEV				⇑S	Sg	16 09 41.0	+0.2
CEI	Carei	1.06	17	⇑P	Pg	16 09 28.6	-0.1
CEI				⇓S	Sb	16 09 44.0	+0.3
TIM	Timisoara	1.08	210	⇑S	Sn	16 09 45.8	-0.2
BZS	Buzias	1.09	194	⇓P	Pb	16 09 30.1	+0.1
BZS				⇑S	Sb	16 09 44.5	-0.1
BZS	Buzias	1.09	194	*e*Pg	Pg	16 09 28.4	-0.9
BZS				*e*Sg	Sb	16 09 44.5	-0.1
CJR	Cluj-Napoca	1.10	87	⇑P	Pg	16 09 29.1	-0.3
CJR				⇓S	Sg	16 09 42.8	-0.9
GZR	Gura Zlata	1.39	157	⇑P	Pn	16 09 35.2	+0.3
GZR	Gura Zlata	1.39	157	*e*Pg	Pn	16 09 35.1	+0.3
GZR				*e*Sg	Sb	16 09 53.8	+0.6
BANR	Banloc	1.43	205	⇓S	Sn	16 09 56.7	+2.2
BMR	Baia Mare	1.43	45	⇓P	Pn	16 09 35.4	+0.1
BMR				⇑S	Sg	16 09 54.1	-0.2
VRSS	Vrsac	1.62	197	*e*Pn	Pn	16 09 37.6	-0.4
MDB	Medias	1.73	107	⇑P	Pn	16 09 39.7	+0.3
MDB				⇑S	Sn	16 10 02.1	+0.1
LOT	Lotru	1.73	134	⇓P	Pn	16 09 39.8	+0.2
LOT				⇓S	Sn	16 10 02.9	+0.6
TGMR	Targu Mures	1.74	94	⇓P	Pn	16 09 40.1	+0.5
TGMR				⇑S	Sn	16 10 03.2	+0.9
HERR	Herculane	1.81	171	⇑P	Pn	16 09 41.1	+0.5
HERR				⇓S	Sb	16 10 06.2	+0.7
TNR	Turnu Rosu	1.88	122	⇑S	Sn	16 10 06.5	+0.8
MDVR	Moldovita	1.90	186	⇑P	Pn	16 09 42.2	+0.3
MDVR				⇑S	Sg	16 10 08.7	-0.8
MDVR	Moldovita	1.90	186	*e*Pg	Pb	16 09 43.5	-0.3
MDVR				*e*Sg	Sg	16 10 09.5	-0.1
RMGR	Halanga-Turnu	2.07	166	⇑S	Sb	16 10 12.1	-0.6
KECS	Kecovo	2.08	331	*e*PN	Pn	16 09 44.7	+0.4
KECS				*e*PG	Pg	16 09 49.7	+1.3
KECS				*e*SN	Sn	16 10 08.8	-2.0
FRGS	Fruska Gora	2.15	226	*e*Pn	Pn	16 09 45.7	+0.4
SRE	Strehaia	2.18	157	⇑P	Pn	16 09 46.5	+0.8
SRE				⇑S	Sb	16 10 15.2	-0.7
ARR	Arges	2.25	125	⇑P	Pn	16 09 45.9	-0.8
ARR				⇑S	Sn	16 10 16.0	+1.1
KUBS	Kucevo	2.27	186	*e*Pn	Pn	16 09 45.2	-1.7
BURAR	Bucovina Array	2.39	66	⇑P	Pn	16 09 48.5	-0.1
JOSR	Joseni	2.42	88	⇑S	Sn	16 10 18.9	-0.1
VOIR		2.45	119	⇑P	Pn	16 09 49.5	0.0
VOIR				⇑S	Sn	16 10 19.9	-0.1
PUNG	Punghina	2.48	164	⇓P	Pn	16 09 50.0	+0.2
BORS2	Bor- Borsko je	2.58	180	*e*Pn	Pn	16 09 49.5	-1.7
BOSR	Bodos	2.60	102	⇑S	Sn	16 10 23.6	0.0
OZUR		2.68	101	⇓P	Pn	16 09 52.2	-0.4
TRUS	Trudelj	2.70	205	*e*Pn	Pn	16 09 53.1	+0.4
TEKS	Tekeris	2.75	220	*e*Pn	Pn	16 09 53.4	0.0
SRO	Srobarova	2.76	296	*e*SN	Sn	16 10 26.5	-1.0
STHS	Stebnicka Huta	2.79	350	*e*PN	Pn	16 09 53.4	-0.7
STHS				*e*PG	Pg	16 10 02.1	+0.1
ZAGS	Zajecar	2.87	177	*e*Pn	Pn	16 09 54.7	-0.3
GRUS	Gruza	2.93	199	*e*Pn	Pn	16 09 55.4	-0.5
DIVS	Divibare	2.94	210	*e*Pn	Pn	16 09 56.1	-0.1
MLR	Muntele Rosu	2.99	112	⇓P	Pn	16 09 56.7	-0.2
MLR	Muntele Rosu	2.99	112	*e*Pn	Pn	16 09 58.0	+1.2
LANS	Liptovska Anna	3.01	326	*e*PN	Pn	16 09 57.2	+0.1
LANS				*e*PG	Pg	16 10 06.5	+0.4
LANS				*e*SG	Sg	16 10 47.8	+2.7
ONER	Baraj Valea Uz	3.05	95	⇑P	Pn	16 09 57.5	-0.1
BLKB	Belogradchik	3.09	171	⇓S	Sn	16 10 38.0	+2.4
BLKB	Belogradchik	3.09	171	*e*Pn	Pn	16 09 57.4	-0.7
TESR	Tescani	3.21	91	⇓P	Pn	16 09 59.8	+0.1
GOCS	Kraljevo Serbi	3.21	195	*e*Pn	Pn	16 09 59.8	-0.1
PLOR	Plostina	3.33	103	⇑S	Sn	16 10 42.1	+0.6
VRI	Vrincioaia	3.37	102	⇓P	Pn	16 10 01.5	-0.5
ZAPS	Zavoj	3.43	172	*e*Pn	Pn	16 10 02.1	-0.7
SELS	Selova	3.51	191	*e*Pn	Pn	16 10 04.8	+0.9
MODS	Modra-Piesok	3.63	300	*e*SN	Sn	16 10 45.6	-3.3
SJES	Sjenica	3.70	204	*e*Pn	Pn	16 10 06.1	-0.6
BARS	Barje	3.86	182	*e*Pn	Pn	16 10 07.9	-0.8
MAUC	Maruska	3.89	315	*e*PN	Pn	16 10 09.8	+0.7
BOSS	Bosilegrad	4.19	175	*e*Pn	Pn	16 10 12.8	-0.5
KHC	Kasperske Hory	6.18	297	*e*PN	Pn	16 10 42.6	+2.0

JMA ***01*** *16:09:21.3±0.2, 25°N±3°×123.°0E±0.°7, h104km±1km, MV2.1/12, NW OFF ISHIGAKIJIMA IS*

TAP ***01*** *16:09:22.8, 24.°46N×122.°78E, h108km±1km, ML3.0, C*

ISC 01 16:09:20.6±1.8**, 24.°50N**±0.°07×**122.°95E**±0.°03**,** **h112**km±11km**, n61,** σ**1.ˢ13**/92**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.05	185	*e*P	Pn	16 09 35.9	-0.1
YOJ	Yonaguni jima	0.07	125	*e*P	Pn	16 09 37.7	+1.8
YOJ	Yonaguni jima	0.07	125	*e*P	Pn	16 09 35.6	-0.3
YOJ				*e*S	Sn	16 09 46.2	-1.3
EOS3	EOS3	0.61	250	P	Pn	16 09 40.4	+2.1
EOS3				S	Sn	16 09 51.6	0.0
EOS2	EOS2	0.66	263	P	Pn	16 09 39.4	+0.8
EOS2				S	Sn	16 09 52.8	+0.5
EOS4	EOS4	0.69	237	P	Pn	16 09 40.5	+1.9
EOS4				*i* S	Sn	16 09 52.5	+0.3
IRIF	Iriomote-Funau	0.73	103	*e*P	Pn	16 09 39.4	0.0
IRIF				S	Sn	16 09 52.8	-0.7
HATJ	Hateruma jima	0.90	119	*e*S	Sn	16 09 57.0	+0.8
JKRS	Kuro-shima	1.00	105	*e*P	Pn	16 09 42.6	+0.7
JKRS				*e*S	Sn	16 09 58.4	+0.3
TWC	Suao	1.01	276	*i* S	Sn	16 09 56.2	-2.0
JIJ	Ishigaki jima	1.10	97	P	Pn	16 09 43.0	+0.1
JIJ				*e*S	Sn	16 09 58.9	-0.9
ENA	Nanau	1.10	266	P	Pn	16 09 43.9	+0.9
ENA				S	Sn	16 10 00.3	+0.4
TIPB	Shuangxi	1.12	295	*e*P	Pn	16 09 43.7	+0.5
TIPB				*e*S	Sn	16 10 00.0	-0.4
NDS	Dongshan	1.13	277	*e*S	Sn	16 09 59.1	-1.4
TWE	Neicheng	1.19	281	*i* P	Pn	16 09 44.5	+0.6
TWE				S	Sn	16 09 59.4	-2.2
JISG	Ishigakijimahi	1.24	86	P	Pn	16 09 44.6	+0.1
JISG				S	Sn	16 10 01.7	-0.9
ETL	Fush Village	1.26	255	*e*S	Sn	16 10 02.2	-0.8
FUSB	Fushanzhiwuyua	1.27	282	P	Pn	16 09 45.7	+0.9
FUSB				S	Sn	16 10 02.5	-0.8
ENTT	Nioudou	1.27	277	P	Pn	16 09 45.8	+1.0
ENTT				S	Sn	16 10 02.0	-1.2
NACB	Ninganchiao	1.28	256	P	Pn	16 09 44.9	0.0
NACB				S	Sn	16 10 01.8	-1.6
LATG	Datong	1.30	272	P	Pn	16 09 45.7	+0.5
LATG				S	Sn	16 10 01.4	-2.6
TWD	Chiawan	1.30	252	*i* P	Pn	16 09 45.4	+0.2
TWD				*i* S	Sn	16 10 02.4	-1.5
NDT	Datong Townshi	1.31	275	*e*S	Sn	16 10 04.3	+0.2
NWLT	Wulai	1.34	282	*e*P	Pn	16 09 46.2	+0.5
NWLT				*e*S	Sn	16 10 03.7	-1.1
ETLH	Xiulin Townshi	1.37	258	*e*P	Pn	16 09 46.6	+0.5
ETLH				*e*S	Sn	16 10 03.8	-1.6
YM01	YM01	1.41	297	*e*S	Sn	16 10 05.9	-0.2
ETM	Tongmen	1.43	248	P	Pn	16 09 46.4	-0.3
ETM				S	Sn	16 10 05.2	-1.3
NNS	Nan Shan	1.44	268	P	Pn	16 09 47.8	+1.0
NNS				S	Sn	16 10 06.1	-0.8
YHNB	Yeheng	1.44	277	P	Pn	16 09 48.1	+1.2
YHNB				S	Sn	16 10 07.0	+0.1
SHUL	Shoufeng	1.45	241	*e*P	Pn	16 09 46.5	-0.4
SHUL				*e*S	Sn	16 10 06.7	-0.2
NSK	Sanguang	1.46	277	P	Pn	16 09 48.5	+1.4
NSK				S	Sn	16 10 06.6	-0.6
LXIB	Xiulin Townshi	1.48	252	*e*P	Pn	16 09 47.1	-0.3
LXIB				*e*S	Sn	16 10 05.7	-2.1
ESL	Shilin	1.54	244	P	Pn	16 09 48.5	+0.4
ESL				S	Sn	16 10 07.5	-1.4
FUSS	Fushou	1.58	261	*e*P	Pn	16 09 49.2	+0.6
FUSS				*e*S	Sn	16 10 10.0	0.0
WHF	Hehuan Shan	1.58	257	P	Pn	16 09 49.6	+0.7
WHF				S	Sn	16 10 08.9	-1.4
WARBT	Fenglin Townsh	1.63	242	P	Pn	16 09 49.4	+0.4
WARBT				S	Sn	16 10 09.1	-1.6
TWT	Tachien	1.64	262	*e*S	Sn	16 10 11.3	+0.2
KSHI	Guanxi Townshi	1.64	280	*e*P	Pn	16 09 49.4	+0.3
TDCB	Techi	1.65	262	*e*P	Pn	16 09 50.3	+0.8
NFF	Wufeng Townshi	1.67	275	*e*P	Pn	16 09 50.0	+0.4
OWD	Renai	1.71	252	*e*P	Pn	16 09 50.9	+0.7
OWD				*e*S	Sn	16 10 10.6	-2.1
HGSD	Ruisui	1.72	235	*e*P	Pn	16 09 50.6	+0.5
HGSD				*e*S	Sn	16 10 12.3	-0.3
WUSB	Renai	1.75	254	*e*P	Pn	16 09 51.2	+0.6
WUSB				*e*S	Sn	16 10 12.3	-1.2
LIOB	Emei	1.77	275	*e*P	Pn	16 09 51.4	+0.7
EHYH	Wanrong	1.78	236	*e*P	Pn	16 09 52.0	+1.1
NSTT	Nanjuang	1.78	275	*e*P	Pn	16 09 51.8	+0.9
EHY	Hungye	1.79	237	*e*P	Pn	16 09 51.7	+0.7
VWDT	VWDT	1.81	246	*e*P	Pn	16 09 51.9	+0.6
WHP	Taichung City	1.84	263	*e*P	Pn	16 09 53.5	+1.7
YULB	Yu-li	1.87	234	*e*P	Pn	16 09 51.4	-0.6
TWF1	Yuli	1.90	233	*e*P	Pn	16 09 52.1	-0.2
WCS	Beigang Elemen	1.91	257	*e*P	Pn	16 09 54.2	+1.7
SSLB	Suanglung	1.96	249	*e*P	Pn	16 09 54.2	+1.0
SMLT	Sun Moon Lake	1.97	252	*e*P	Pn	16 09 54.5	+1.1
TYC	Yuchr	2.00	253	*e*P	Pn	16 09 56.0	+2.4
WHYT	Xinyi Township	2.08	248	*e*P	Pn	16 09 56.4	+1.8
WJS	Zhushan	2.14	252	*e*P	Pn	16 09 57.5	+2.1
WNT	Mingjian	2.16	254	*e*P	Pn	16 09 57.6	+1.9
ALS	Alishan	2.19	244	*e*P	Pn	16 09 58.6	+2.2
ELDTW	Lidau	2.20	234	*e*P	Pn	16 09 56.5	+0.2
CHN5	Tsauling	2.26	247	*e*P	Pn	16 09 58.0	+0.9

IDC 01 16:23:29.5±7.5**, 31.°90N**×**140.°95E, h0**km**, mb3.4**/4**, mbtmp3.4**/4**, Error ellipse: s-maj=302.6km s-min=27.8km az=69.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	46.68	306	P	P	16 31 59.5	-0.4
	0.1nm,0.4s,baz=97,slow=7.4,SNR=1.3						
	0.1nm,0.4s						
WRA	Warramunga Arr	51.94	188	P	P	16 32 39.3	-1.0
	0.1nm,0.3s,baz=11,slow=7.9,SNR=6.7						
	0.1nm,0.3s						
BVAR	Borovoye Array	53.84	315	P	P	16 32 54.1	+0.1
	0.4nm,0.5s,baz=93,slow=5.9,SNR=3.5						
	0.4nm,0.5s						
ASAR	Alice Springs	55.67	188	P	P	16 33 08.4	+0.9
	0.9nm,1.1s,baz=15,slow=6.8,SNR=6.1						
	0.9nm,1.1s						

IDC 01 16:37:42.8±6.6**, 3.°62S**×**149.°92E, h0**km**, mb3.1**/3**, mbtmp3.1**/3**, MS3.5**/1**, Error ellipse: s-maj=207.2km s-min=38.4km az=101.0, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.22	222	P	P	16 42 41.8	+0.5
	0.3nm,0.8s,baz=47,slow=11,SNR=1.3						
	0.3nm,0.8s						
ASAR	Alice Springs	25.23	216	P	P	16 43 10.3	-0.4
	0.4nm,0.9s,baz=46,slow=8.4,SNR=8.6						
	0.4nm,0.9s						
H11S3	WAKE ISLAND Hy	27.50	36	T	T	17 10 47.8	
	baz=217						
H11S2	WAKE ISLAND Hy	27.50	36	T	T	17 10 50.3	
	baz=217						
H11S1	WAKE ISLAND Hy	27.52	36	T	T	17 10 46.0	
	baz=217						
H11N1	WAKE ISLAND Hy	28.57	35	T	T	17 12 03.7	
	baz=217						
H11N3	WAKE ISLAND Hy	28.59	35	T	T	17 12 03.7	
	baz=217						
H11N2	WAKE ISLAND Hy	28.59	35	T	T	17 12 02.3	
	baz=217						
LZDM	Lanzhou Array	58.43	317	LR	LR	17 12 41.2	
	comp=Z,41nm,19.6s,baz=30,slow=36						
MKAR	Makanchi Array	77.56	319	P	P	16 49 41.0	+0.1
	0.2nm,0.7s,baz=104,slow=4.6,SNR=2.4						
	0.2nm,0.7s						

IDC ***01*** *17:11:00.5±1.0, 0.°34S×129.°40E, h0km, mb3.9/6, mbtmp4.0/7, ML3.6/1, MS3.1/2, Error ellipse: s-maj=31.7km s-min=17.6km az=53.0*

DJA ***01*** *17:11:03.3±1.0, 0°S±2°×12°9E±°, h11km±8km, M4.0/20, mb4.3/6, MLv3.8/20*

ISC 01 17:11:05.8±0.9**, 0.°31S**±0.°07×**129.°46E**±0.°06**, h35**km**, n21,** σ**1.ˢ33**/23**, mb4.0**/5**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SWI	Sorong	1.88	107	P	Pn	17 11 33.9	-1.6
SWI				S	Sn	17 12 00.4	+2.4
SIJI	Sorong	1.89	107	Pn	Pn	17 11 34.7	-0.9
	39nm,0.3s,baz=306,slow=11,SNR=145						
SIJI				Sn	Sn	17 11 59.6	+1.4
	8.7nm,0.3s,baz=353,slow=11,SNR=4.8						
SIJI	Sorong	1.89	107	P	Pn	17 11 33.9	-1.7
TNTI	Ternate	2.35	297	P	Pn	17 11 42.1	+0.1
MSAI	Masohi	3.06	190	P	Pn	17 11 52.5	+0.8
KRAI	Karang Ratu	3.17	200	P	Pn	17 11 54.7	+1.5
AAI	Ambon	3.58	201	P	Pn	17 11 59.7	+0.8
NLAI	Namlea	3.74	219	P	Pn	17 12 01.3	+0.2
SANI	Sanana	3.87	244	P	Pn	17 12 02.4	-0.5
BNDI	Bandanaira	4.21	174	P	Pn	17 12 05.9	-1.6
MWPI	Manokwari, Pap	4.62	98	P	Pn	17 12 13.6	+0.4
BAKI	Biak	6.71	98	P	Pn	17 12 43.6	+1.7
DAV	Davao City (W)	8.29	332	LR	LR	17 16 34.8	
	comp=Z,85nm,21.2s,baz=344,slow=40						
SPSI	Sidrap Palu	10.34	249	P	Pn	17 13 33.8	+2.1
FITZ	Fitzroy Crossi	18.07	192	P	Pn	17 15 12.1	-2.1
	0.1nm,0.3s,baz=358,slow=6.8,SNR=2.5						
	6.2nm,1.0s						
WRA	Warramunga Arr	20.09	167	P	P	17 15 34.8	-1.7
	1.9nm,0.9s,baz=346,slow=12,SNR=11						
WRA				S	S	17 19 09.6	-11
	0.3nm,0.9s,baz=329,slow=26,SNR=1.7						
	1.9nm,0.9s						
ASAR	Alice Springs	23.61	170	P	P	17 16 13.4	-0.3
	4.0nm,0.7s,baz=348,slow=11,SNR=31						
ASAR				PcP	PcP	17 19 58.1	-0.1
	0.2nm,0.6s,baz=341,slow=1.7,SNR=4.3						
	4.0nm,0.7s						
CTA	Charters Tower	25.62	141	P	P	17 16 32.8	+0.5
	3.9nm,0.9s,baz=348,slow=9.3,SNR=2.4						
	3.9nm,0.9s						
STKA	Stephens Creek	33.43	161	P	P	17 17 41.1	-0.3
	2.3nm,0.8s,baz=1.7,slow=6.8,SNR=3.7						
STKA				LR	LR	17 34 13.9	
	comp=Z,51nm,20.3s,baz=221,slow=42						

	2.3nm,0.8s						
MKAR	**Makanchi Array**	**62.41**	**325**	P	**P**	**17 21 25.2**	**-0.1**
	0.4nm,0.8s,baz=108,slow=7.4,SNR=4.8						
	0.4nm,0.8s						
KURBB	**Kurchatov Arra**	**66.59**	**327**	P	**P**	**17 21 52.5**	**0.0**
	0.5nm,0.2s,baz=124,slow=5.5,SNR=6.1						
	0.5nm,0.2s						

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*IDC **01** 17:44:37.1±2.8, 5°.96S×130°.94E, h90km±31km, mb3.5/4, mbtmp3.9/8, Error ellipse: s-maj=51.8km s-min=17.1km az=75.0*

*DJA **01** 17:44:39.3±0.3, 6°S±2°×13°1E±°, h135km±6km, M4.4/25, mB5.0/4, mb4.3/14, MLv4.4/25, Mw(mB)4.3/4*

ISC 01 17:44:37.9±0.7**, 5°.89S**±0°.05×**131°.05E**±0°.06**, h100**km**, n32,** σ**2ˢ43**/35**, mb3.8**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.77**	**320**	P	**Pn**	**17 45 10.4**	**+2.8**
BNDI	**Bandanaira**	**1.77**	**320**	P	**Pn**	**17 45 10.3**	**+2.7**
BNDI				S	**Sn**	**17 45 33.2**	**+3.1**
SAUI	**Saumlaki**	**2.10**	**173**	P	**Pn**	**17 45 15.2**	**+3.4**
SAUI	**Saumlaki**	**2.10**	**173**	P	**Pn**	**17 45 15.1**	**+3.3**
MSAI	**Masohi**	**3.29**	**320**	P	**Pn**	**17 45 29.3**	**+1.7**
MSAI				S	**Sn**	**17 46 05.4**	**-0.6**
KMPI	**Kaimana, Papua**	**3.45**	**50**	P	**Pn**	**17 45 32.0**	**+2.3**
AAI	**Ambon**	**3.58**	**307**	P	**Pn**	**17 45 34.3**	**+2.7**
KRAI	**Karang Ratu**	**3.67**	**314**	P	**Pn**	**17 45 36.3**	**+3.5**
NLAI	**Namlea**	**4.73**	**304**	P	**Pn**	**17 45 49.2**	**+2.1**
SIJI	**Sorong**	**4.99**	**3**	P	**Pn**	**17 45 51.0**	**+0.5**
	17nm,0.3s,baz=198,slow=20,SNR=71						
SIJI				S	**Sn**	**17 46 42.8**	**-4.2**
	54nm,0.3s,baz=90,slow=20,SNR=7.5						
SIJI	**Sorong**	**4.99**	**3**	P	**Pn**	**17 45 50.6**	**0.0**
SWI	**Sorong**	**4.99**	**2**	P	**Pn**	**17 45 50.6**	**0.0**
RKPI	**Ransiki, Papua**	**5.35**	**36**	P	**Pn**	**17 45 57.5**	**+2.0**
	0.6nm2µm74nm,1.2s						
MWPI	**Manokwari, Pap**	**5.76**	**31**	P	**Pn**	**17 46 04.3**	**+3.3**
	0.3nm41nm,0.8s						
SANI	**Sanana**	**6.32**	**307**	P	**Pn**	**17 46 09.4**	**+0.7**
SANI	**Sanana**	**6.32**	**307**	P	**Pn**	**17 46 09.0**	**+0.3**
	0.2nm1µm45nm,0.6s						
DRS	**Darwin Rock St**	**6.51**	**181**	P	**Pn**	**17 46 12.4**	**+1.2**
BAKI	**Biak**	**6.87**	**47**	P	**Pn**	**17 46 19.1**	**+2.9**
	0.2nm41nm,1.2s						
SOEI	**Soe**	**7.74**	**240**	P	**Pn**	**17 46 32.7**	**+4.6**
SOEI	**Soe**	**7.74**	**240**	P	**Pn**	**17 46 29.1**	**+1.0**
BATI	**Baumata**	**8.48**	**239**	S	**Sn**	**17 48 09.5**	**-2.6**
	31nm,0.7s,baz=343,slow=21,SNR=1.9						
TOLI2	**Tolitoli**	**12.38**	**304**	P	**Pn**	**17 47 34.3**	**+3.5**
FITZ	**Fitzroy Crossi**	**13.24**	**203**	P	**Pn**	**17 47 38.5**	**-3.5**
	1.2nm,0.2s,baz=29,slow=13,SNR=12						
FITZ				S	Sn	17 49 54.3	-13
	7.4nm,0.5s,baz=15,slow=20,SNR=11						
PLAI	**Plampang**	**13.48**	**257**	P	**P**	**17 47 50.5**	**-0.4**
WRA	**Warramunga Arr**	**14.34**	**167**	P	**Pn**	**17 47 53.5**	**-2.8**
	1.0nm,0.5s,baz=352,slow=13,SNR=6.9						
WRA				S	Sn	17 50 22.2	-12
	2.4nm,0.5s,baz=337,slow=22,SNR=7.2						
COEN	**Coen**	**14.38**	**125**	P	**Pn**	**17 47 56.7**	**-0.2**
QIS	**Mount Isa**	**16.79**	**151**	P	**P**	**17 48 28.4**	**+0.8**
ASAR	**Alice Springs**	**17.89**	**171**	P	**P**	**17 48 40.4**	**+0.6**
	1.0nm,0.4s,baz=348,slow=10,SNR=24						
ASAR				S	Sn	17 51 47.8	-12
	0.6nm,0.6s,baz=9.2,slow=27,SNR=5.3						
STKA	**Stephens Creek**	**27.68**	**160**	P	**P**	**17 50 16.7**	**+0.1**
	1.1nm,0.3s,baz=328,slow=6.8,SNR=5.1						
	1.1nm,0.3s						
CMAR	**Chiang Mai Arr**	**39.84**	**308**	P	**P**	**17 52 02.3**	**+0.3**
	0.8nm,0.6s,baz=130,slow=7.1,SNR=9.3						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**67.88**	**326**	P	**P**	**17 55 26.1**	**+0.4**
	0.7nm,0.6s,baz=112,slow=8.2,SNR=14						
	0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**72.12**	**328**	P	**P**	**17 55 50.1**	**-1.4**
	0.3nm,0.6s,baz=131,slow=4.5,SNR=2.9						
	0.3nm,0.6s						

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*BJI **01** 18:13:00.3, 20°.36S×177°.89W, h536km, mB5.1/14, mb4.9/56*

*NEIC **01** 18:13:01.8±1.4, 20°.69S±0°.05×178°.2W±0°.1, h537km±8km, mb4.9/268, Error ellipse: s-maj=13.9km s-min=6.7km az=100.0*

*NOU **01** 18:13:01.0, 20°.72S×178°.16W, h537km, ML5.0/93, Fiji Islands Region*

*IDC **01** 18:13:01.5±0.4, 20°.67S×178°.33W, h533km±4km, mb4.5/28, mbtmp5.3/31, Error ellipse: s-maj=8.7km s-min=7.4km az=158.0*

*MOS **01** 18:13:01.1±0.8, 20°.65S×178°.35W, h540km, mb4.8/15, Error ellipse: s-maj=12.8km s-min=8.8km az=122.1*

*GCMT **01** 18:13:02.8±0.3, 20°.61S±0°.03×178°.32W±0°.03, h545km±2km, MW5.2/93, Moment Tensor Solution. s93,c111; Duration: 0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.78±.03; $M_{\theta\theta}$0.64±.05; $M_{\phi\phi}$0.13±.05; $M_{r\theta}$0.33±.06; $M_{\theta\phi}$-0.07±.04; $M_{\phi r}$-0.17±.06; Best double couple: $M_0$0.80400×10^{17} NP1:ϕ_s93.00000°, δ32.00000°, λ-101.00000°. NP2:ϕ_s286.00000°, δ58.00000°, λ-83.00000°. Principal axes: T 0.7350, Plg13.0000°, Azm11.0000°; N 0.1400, Plg6.0000°, Azm102.0000°; P -0.8740, Plg76.0000°, Azm217.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

*BGR **01** 18:13:02.9, 21°.02S×178°.79W, h552km±16km*

ISC 01 18:13:01.7±0.3**, 20°.70S**±0°.04×**178°.26W**±0°.04**, h544**km±2km**, h545**km**:pP-P, n1175,** σ**0ˢ99**/1205**, mb5.0**/259**, 98C-78D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.57**	**310**	P	**P**	**18 14 27.8**	**0.0**
MSVF	**Nonsavu**	**4.57**	**310**		**P**	**18 14 27.1**	**-0.7**
MSVF	**Nonsavu**	**4.57**	**310***c*	*i*P	**P**	**18 14 27.9**	**+0.1**
DGTI	**Dogotuki**	**4.78**	**336**	P	**P**	**18 14 28.8**	**-0.6**
NIUE	**Niue**	**8.01**	**80**	P	**P**	**18 14 58.1**	**-1.2**
	comp=Z,508nm,0.5s						
NIUE	**Niue**	**8.01**	**80**	P	**P**	**18 14 58.2**	**-1.2**
NIUE	**Niue**	**8.01**	**80**		**P**	**18 14 57.7**	**-1.6**
NIUE	**Niue**	**8.01**	**80**	P	**P**	**18 14 57.4**	**-2.0**
NIUE				S	**S**	**18 16 37.5**	**+1.6**
RAO	**Raoul Island**	**8.52**	**178**	P	**P**	**18 15 02.7**	**-1.6**
	comp=Z,2µm,0.3s,baz=339,slow=1.6,SNR=21						
RAO				S	**S**	**18 16 46.1**	**+1.1**
	comp=Z,797nm,0.4s,baz=76,slow=23,SNR=5.0						
RAO	**Raoul Island**	**8.52**	**178**	P	**P**	**18 15 02.9**	**-1.4**
RAO	**Raoul Island**	**8.52**	**178**		**P**	**18 15 02.6**	**-1.7**
GLKZ	**Green Lake**	**8.53**	**178**	P	**P**	**18 15 03.9**	**-0.5**
GLKZ				S	**S**	**18 16 46.0**	**+0.9**
AFI	**Afiamalu**	**9.16**	**44**	P	**P**	**18 15 07.0**	**-4.2**
	comp=Z,303nm,0.5s,baz=187,slow=8.1,SNR=43						
AFI				S	S	18 16 44.9	-13
	comp=Z,189nm,0.4s,baz=263,slow=17,SNR=9.3						
FUNA	**Funafuti**	**12.35**	**348**	P	**P**	**18 15 42.1**	**-2.0**
FUNA	**Funafuti**	**12.35**	**348**		**P**	**18 15 42.1**	**-2.0**
MARNC	**Mare, Loyalty**	**12.82**	**264**	P	**P**	**18 15 48.7**	**-0.1**
MARNC	**Mare, Loyalty**	**12.82**	**264**		**P**	**18 15 48.1**	**-0.6**
RTV	**Rentapao**	**12.90**	**281**	P	**P**	**18 15 50.4**	**+0.7**
DVP	**Devils Point**	**13.14**	**281**	P	**P**	**18 15 52.8**	**+0.7**
OUENC	**Ouen Island, N**	**13.97**	**260**	P	**P**	**18 16 00.7**	**+0.1**
DZM	**Mont Dzumac**	**14.31**	**262**	P	**P**	**18 16 03.4**	**-0.9**
	comp=Z,81nm,0.7s,baz=132,slow=21,SNR=97						
DZM				S	**S**	**18 18 34.9**	**+0.1**
	comp=Z,30nm,1.1s,baz=152,slow=16,SNR=4.0						
DZM	**Mont Dzumac**	**14.31**	**262**	P	**P**	**18 16 04.3**	**0.0**
DZM	**Mont Dzumac**	**14.31**	**262**		**P**	**18 16 04.1**	**-0.3**
ONTNC	**Ouen Toro**	**14.32**	**261**	P	**P**	**18 16 04.5**	**+0.2**
ONTNC	**Ouen Toro**	**14.32**	**261**		**P**	**18 16 04.1**	**-0.1**
SANVU	**Saraoutou**	**14.77**	**288**	P	**P**	**18 16 09.1**	**0.0**
SANVU	**Saraoutou**	**14.77**	**288**		**P**	**18 16 08.8**	**-0.3**
OUZ	**Omahuta**	**16.14**	**205**	P	**P**	**18 16 23.6**	**+1.0**
OUZ	**Omahuta**	**16.14**	**205**	P	**P**	**18 16 23.3**	**+0.7**
KOUNC	**Koumac, New Ca**	**16.34**	**267**	P	**P**	**18 16 25.3**	**+0.6**
WCZ	**Waipu Caves**	**16.50**	**202**	P	**P**	**18 16 27.0**	**+0.9**
WIAZ	**Waiheke Island**	**17.04**	**198**	P	**P**	**18 16 31.8**	**+0.9**
MXZ	**Matakaoa Point**	**17.06**	**189**	P	**P**	**18 16 31.3**	**+0.2**
MXZ	**Matakaoa Point**	**17.06**	**189**	P	**P**	**18 16 31.3**	**+0.2**
MBAZ	**Motutapu North**	**17.08**	**199**	P	**P**	**18 16 32.4**	**+1.1**
ETAZ	**East Tamaki Re**	**17.25**	**199**	P	**P**	**18 16 34.3**	**+1.5**
RAR	**Rarotonga**	**17.28**	**95**	P	**P**	**18 16 33.5**	**+0.2**
	comp=Z,24nm,0.6s,baz=217,slow=1.5,SNR=4.7						
RAR	**Rarotonga**	**17.28**	**95**	P	**P**	**18 16 33.9**	**+0.6**
RAR	**Rarotonga**	**17.28**	**95**	P	**P**	**18 16 33.3**	**0.0**
WMGZ	**Waiomatatini S**	**17.30**	**189**	P	**P**	**18 16 32.6**	**-0.6**
WMGZ				S	**S**	**18 19 22.2**	**-3.6**
MKAZ	**Moumakai**	**17.32**	**198**	P	**P**	**18 16 34.4**	**+1.0**
WTAZ	**Waiatarua**	**17.34**	**200**	P	**P**	**18 16 34.5**	**+0.9**
HAZ	**Te Kaha**	**17.34**	**191**	P	**P**	**18 16 34.0**	**+0.4**
HAZ				S	**S**	**18 19 20.2**	**-6.1**
KBAZ	**Karaka Road Bo**	**17.39**	**199**	P	**P**	**18 16 36.0**	**+1.9**
PKGZ	**Pakihiroa**	**17.39**	**190**	P	**P**	**18 16 33.3**	**-0.9**
PKGZ				S	**S**	**18 19 25.7**	**-1.7**
AWAZ	**Awhitu Peninsu**	**17.43**	**199**	P	**P**	**18 16 35.0**	**+0.5**
RUGZ	**Raukumara Rang**	**17.56**	**191**	P	**P**	**18 16 35.2**	**-0.6**
PUZ	**Puketiti**	**17.57**	**189**	P	**P**	**18 16 36.4**	**+0.6**
TWGZ	**Tauwhareparae**	**17.71**	**190**	P	**P**	**18 16 37.9**	**+0.7**
TWGZ				S	**S**	**18 19 28.9**	**-3.8**
TOZ	**Tahuroa Road**	**17.81**	**196**		**P**	**18 16 39.0**	**+1.1**
TOZ	**Tahuroa Road**	**17.81**	**196**	P	**P**	**18 16 39.6**	**+1.6**
MWZ	**Matawai**	**17.94**	**191**	P	**P**	**18 16 38.3**	**-0.9**
MWZ				S	**S**	**18 19 31.4**	**-4.9**
URZ	**Urewera**	**17.95**	**192**	P	**P**	**18 16 38.0**	**-1.2**
	comp=Z,39nm,0.3s,baz=32,slow=6.8,SNR=52						
URZ				S	**S**	**18 19 30.0**	**-6.3**
	comp=Z,21nm,0.5s,baz=74,slow=16,SNR=9.4						
URZ	**Urewera**	**17.95**	**192**	P	**P**	**18 16 37.2**	**-2.0**
URZ	**Urewera**	**17.95**	**192**	P	**P**	**18 16 37.3**	**-2.0**
URZ				S	**S**	**18 19 30.1**	**-6.2**
MKRZ	**Makatiti**	**17.96**	**194**	P	**P**	**18 16 41.1**	**+1.6**
CNGZ	**Carnagh Statio**	**17.98**	**189**	P	**P**	**18 16 40.3**	**+0.8**
RTZ	**Ruatahuna**	**18.32**	**192**	P	**P**	**18 16 41.9**	**-0.8**
RTZ				S	**S**	**18 19 40.5**	**-2.0**
TLZ	**Tolley Road**	**18.36**	**196**	P	**P**	**18 16 45.4**	**+2.3**
KNZ	**Kokohu**	**18.59**	**190**	P	**P**	**18 16 44.1**	**-1.0**
HIZ	**Hauiti**	**18.72**	**197**	P	**P**	**18 16 46.3**	**0.0**
HIZ	**Hauiti**	**18.72**	**197**	P	**P**	**18 16 48.6**	**+2.4**
BKZ	**Black Stump Fm**	**18.95**	**193**	P	**P**	**18 16 47.0**	**-1.4**
BKZ	**Black Stump Fm**	**18.95**	**193**		**P**	**18 16 46.1**	**-2.3**
BKZ	**Black Stump Fm**	**18.95**	**193**	P	**P**	**18 16 46.9**	**-1.5**
NGZ	**Ngauruhoe**	**19.15**	**195**	P	**P**	**18 16 49.8**	**-0.6**
VRZ	**Vera Road**	**19.32**	**197**	P	**P**	**18 16 53.1**	**+1.4**
KHEZ	**Kahui Hut**	**19.68**	**198**	P	**P**	**18 16 54.9**	**-0.2**
PXZ	**Pawanui**	**19.71**	**191**	P	**P**	**18 16 55.0**	**-0.2**
WAZ	**Wanganui**	**19.85**	**195**	P	**P**	**18 16 57.5**	**+0.9**
TSZ	**Takapari Road**	**19.91**	**193**	P	**P**	**18 16 56.4**	**-0.7**
BFZ	**Birch Farm**	**20.46**	**192**	P	**P**	**18 17 00.8**	**-1.2**
BFZ	**Birch Farm**	**20.46**	**192**	P	**P**	**18 17 00.2**	**-1.9**
BFZ	**Birch Farm**	**20.46**	**192**	P	**P**	**18 17 00.4**	**-1.6**
MRZ	**Mangatainoka R**	**20.57**	**193**	P	**P**	**18 17 01.8**	**-1.3**
SNZO	**South Karori**	**21.39**	**195**	P	**P**	**18 17 09.6**	**-0.8**
QRZ	**Quartz Range**	**21.54**	**199**	P	**P**	**18 17 11.9**	**+0.1**
QRZ	**Quartz Range**	**21.54**	**199**	P	**P**	**18 17 12.1**	**+0.3**
QRZ	**Quartz Range**	**21.54**	**199**	P	**P**	**18 17 11.9**	**+0.1**
TKNZ	**Takaka Hill**	**21.60**	**198**	P	**P**	**18 17 12.1**	**-0.3**
NNZ	**Nelson**	**21.65**	**197**	P	**P**	**18 17 12.2**	**-0.6**
TUWZ	**Tuamarina**	**21.69**	**196**	P	**P**	**18 17 13.0**	**-0.1**
BSWZ	**Blackbirch Sta**	**21.98**	**196**	P	**P**	**18 17 17.6**	**+1.9**
MRNZ	**Matariki Terra**	**21.99**	**198**	P	**P**	**18 17 15.2**	**-0.7**
THZ	**Tophouse**	**22.29**	**198**	P	**P**	**18 17 18.4**	**-0.2**
THZ	**Tophouse**	**22.29**	**198**	P	**P**	**18 17 18.2**	**-0.4**
DSZ	**Denniston Nort**	**22.60**	**200**	P	**P**	**18 17 20.6**	**-0.7**
DSZ	**Denniston Nort**	**22.60**	**200**	P	**P**	**18 17 21.1**	**-0.3**
NGOA	**Tingoa Renbel**	**22.70**	**290**	P	**P**	**18 17 22.6**	**+0.1**
KHZ	**Kahutara**	**22.72**	**196**	P	**P**	**18 17 21.3**	**-1.0**
KHZ	**Kahutara**	**22.72**	**196**	P	**P**	**18 17 21.4**	**-1.0**
LHI	**Lord Howe Isla**	**22.99**	**237**	P	**P**	**18 17 26.8**	**+1.8**
	comp=Z,83nm,1.0s						
LTZ	**Lake Taylor**	**23.41**	**198**	P	**P**	**18 17 26.7**	**-1.8**
INZ	**Inchbonnie**	**23.60**	**199**	P	**P**	**18 17 29.1**	**-1.1**
INZ	**Inchbonnie**	**23.60**	**199**	P	**P**	**18 17 28.9**	**-1.3**
HNR	**Honiara**	**23.81**	**295**	P	**P**	**18 17 31.9**	**-0.5**
OXZ	**Oxford**	**23.97**	**198**	P	**P**	**18 17 32.1**	**-1.4**
SAVO	**Savo Central**	**24.06**	**295**	P	**P**	**18 17 35.4**	**+0.7**
WVZ	**Waitaha Valley**	**24.14**	**200**	P	**P**	**18 17 33.9**	**-1.0**
TATA	**Tatamba Isabel**	**24.47**	**297**	P	**P**	**18 17 37.4**	**-0.9**
RPZ	**Rata Peaks**	**24.62**	**199**	P	**P**	**18 17 38.4**	**-0.8**
FOZ	**Fox Glacier**	**24.85**	**201**	P	**P**	**18 17 40.5**	**-0.7**
LBZ	**Lake Benmore**	**25.49**	**199**	P	**P**	**18 17 45.3**	**-1.7**
JCZ	**Jackson Bay**	**25.68**	**202**	P	**P**	**18 17 48.3**	**-0.4**
JCZ	**Jackson Bay**	**25.68**	**202**	P	**P**	**18 17 48.3**	**-0.4**
ODZ	**Otahua Downs**	**25.95**	**198**	P	**P**	**18 17 50.0**	**-0.9**
ODZ	**Otahua Downs**	**25.95**	**198**	P	**P**	**18 17 50.0**	**-0.9**
WKZ	**Wanaka**	**26.26**	**201**	P	**P**	**18 17 52.4**	**-1.3**
MSZ	**Milford Sound**	**26.50**	**202**	P	**P**	**18 17 58.1**	**+2.3**
MLZ	**Mavora Lakes**	**27.04**	**201**	P	**P**	**18 18 00.2**	**-0.4**
MLZ	**Mavora Lakes**	**27.04**	**201**	P	**P**	**18 18 00.8**	**+0.3**
DCZ	**Deep Cove**	**27.46**	**203**	P	**P**	**18 18 04.4**	**+0.2**
DCZ	**Deep Cove**	**27.46**	**203**	P	**P**	**18 18 04.9**	**+0.8**
WHZ	**Wether Hill Ro**	**27.56**	**201**	P	**P**	**18 18 06.6**	**+1.6**
TW1H	**Toowoomba 1 Ha**	**27.96**	**250**	P	**P**	**18 18 10.4**	**+1.4**
EIDS	**Eidsvold**	**28.56**	**255**	P	**P**	**18 18 14.2**	**+0.1**
	comp=Z,140nm,0.7s						
EIDS	**Eidsvold**	**28.56**	**255**	P	**P**	**18 18 14.3**	**+0.2**
EIDS	**Eidsvold**	**28.56**	**255**	P	**P**	**18 18 14.3**	**+0.2**
ARMA	**Armidale**	**28.76**	**244**	P	**P**	**18 18 17.0**	**+1.1**
	comp=Z,93nm,0.7s						
ARMA	**Armidale**	**28.76**	**244**	P	**P**	**18 18 16.8**	**+0.9**
ARMA	**Armidale**	**28.76**	**244**	P	**P**	**18 18 16.9**	**+0.9**
MGCD	**Mangrove Creek**	**29.89**	**239**	P	**P**	**18 18 26.9**	**+1.3**
	comp=Z,178nm,1.1s						
MGCD	**Mangrove Creek**	**29.89**	**239**	P	**P**	**18 18 25.6**	**0.0**
SYDH	**Sydney Hard Ro**	**30.35**	**238**	P	**P**	**18 18 30.7**	**+1.2**
XMAS	**Kiritimati**	**30.45**	**44**	P	**P**	**18 18 30.5**	**0.0**
CAN	**Canberra**	**32.19**	**236**	P	**P**	**18 18 46.5**	**+1.1**
	comp=Z,85nm,1.0s						
CAN	**Canberra**	**32.19**	**236**	P	**P**	**18 18 46.1**	**+0.8**
CAN	**Canberra**	**32.19**	**236**	P	**P**	**18 18 46.1**	**+0.8**
YNG	**Young**	**32.37**	**238**	P	**P**	**18 18 47.7**	**+0.9**
	comp=Z,20nm,1.9s						
RABL	**Rabaul**	**33.12**	**296**	P	**P**	**18 18 52.0**	**-1.4**
RABL				IAmb	IAmb	18 18 55.8	
	comp=Z,32nm,0.7s						
CTA	**Charters Tower**	**33.23**	**265**	PcP	**PcP**	**18 21 21.7**	**+1.0**
	comp=Z,25nm,0.9s,baz=92,slow=1.5,SNR=7.2						
CTA	**Charters Tower**	**33.23**	**265**	P	**P**	**18 18 54.7**	**+0.5**
CTAO	**Charters Tower**	**33.23**	**265**	P	**P**	**18 18 54.8**	**+0.5**
CTAO	**Charters Tower**	**33.23**	**265**	P	**P**	**18 18 54.5**	**+0.3**
CTAO	**Charters Tower**	**33.23**	**265**	P	**P**	**18 18 54.8**	**+0.5**
CTAO				pP	**pP**	**18 20 25.7**	**+0.6**
CTAO				PcP	**PcP**	**18 21 21.4**	**+0.7**
CMSA	**Cobar Meteorol**	**33.98**	**244**	P	**P**	**18 19 00.7**	**+0.3**
	comp=Z,147nm,0.7s						
CMSA	**Cobar Meteorol**	**33.98**	**244**	P	**P**	**18 19 00.9**	**+0.5**
QLP	**Quilpie**	**34.77**	**253**	P	**P**	**18 19 07.5**	**+0.4**
	comp=Z,369nm,0.8s						
QLP	**Quilpie**	**34.77**	**253**	P	**P**	**18 19 07.4**	**+0.4**
PMG	**Port Moresby**	**35.15**	**283**	P	**P**	**18 19 10.6**	**+0.2**
PMG	**Port Moresby**	**35.15**	**283**	P	**P**	**18 19 10.4**	**0.0**
PMG	**Port Moresby**	**35.15**	**283***d*	*i*P	**P**	**18 19 10.4**	**0.0**
PMG				pmax	pmax		
	comp=Z,158nm,0.7s						
PMG	**Port Moresby**	**35.15**	**283**	P	**P**	**18 19 09.8**	**-0.6**
	comp=Z,2µmcomp=Z,220nm,0.8s						
PMG	**Port Moresby**	**35.15**	**283**	P	**P**	**18 19 10.6**	**+0.2**
PMG				PcP	**PcP**	**18 21 27.5**	**+1.0**
PMG				sP	**sP**	**18 21 44.2**	**+0.2**
MTSU	**Mount Surprise**	**35.34**	**268**	P	**P**	**18 19 12.5**	**+0.5**
	comp=Z,117nm,0.8s						
MTSU	**Mount Surprise**	**35.34**	**268**	P	**P**	**18 19 12.2**	**+0.3**
TOO	**Toolangi**	**35.58**	**234**	P	**P**	**18 19 14.7**	**+1.0**
	comp=Z,43nm,1.2s						
TOO	**Toolangi**	**35.58**	**234**	P	**P**	**18 19 14.4**	**+0.7**
TOO				IAmb	IAmb	18 19 15.4	
	comp=Z,30nm,0.8s						
TAU	**Tasmania Unive**	**36.31**	**225**	P	**P**	**18 19 20.5**	**+0.9**
COEN	**Coen**	**37.35**	**274**	P	**P**	**18 19 29.0**	**+0.5**
COEN	**Coen**	**37.35**	**274**	P	**P**	**18 19 28.8**	**+0.3**
STKA	**Stephens Creek**	**37.48**	**244**	P	**P**	**18 19 30.2**	**+0.8**
	comp=Z,53nm,0.5s,baz=94,slow=11,SNR=144						
STKA				PcP	**PcP**	**18 21 34.6**	**+1.3**
	comp=Z,20nm,0.8s,baz=35,slow=3.2,SNR=4.4						
	comp=Z,53nm,0.5s						
STKA	**Stephens Creek**	**37.48**	**244**	P	**P**	**18 19 29.9**	**+0.6**
STKA	**Stephens Creek**	**37.48**	**244**	P	**P**	**18 19 30.0**	**+0.6**
INKA	**Innaminka**	**37.90**	**251**	P	**P**	**18 19 33.8**	**+1.0**
INKA				IAmb	IAmb	18 19 35.2	
	comp=Z,32nm,0.7s						
ARPS	**Mount Arapiles**	**38.17**	**236**	P	**P**	**18 19 35.5**	**+0.6**
	comp=Z,39nm,0.8s						
MANU	**Manus Island**	**38.31**	**294**	P	**P**	**18 19 36.8**	**+0.4**
TAOE	**Nuku Hiva Isla**	**38.58**	**78**	P	**P**	**18 19 38.3**	**-0.3**
QIS	**Mount Isa**	**39.35**	**263**	P	**P**	**18 19 44.3**	**-0.4**
MGBR	**Mount Gambier**	**39.38**	**235**	P	**P**	**18 19 45.3**	**+0.6**
HTT	**Hallett**	**39.91**	**242**	P	**P**	**18 19 49.3**	**+0.2**
PTPS	**Port Pirie**	**40.66**	**243**	P	**P**	**18 19 55.8**	**+0.9**
BBOO	**Buckleboo**	**42.24**	**244**	P	**P**	**18 20 07.3**	**-0.2**
BBOO	**Buckleboo**	**42.24**	**244**	P	**P**	**18 20 07.7**	**+0.2**
JAY	**Jayapura**	**43.88**	**289**	P	**P**	**18 20 20.4**	**-0.2**
	comp=Z,3µmcomp=Z,240nm,0.7s						
ASAR	**Alice Springs**	**44.23**	**257**	P	**P**	**18 20 23.4**	**+0.2**
	comp=Z,194nm,0.5s,baz=89,slow=8.4,SNR=5034						
ASAR				PcP	**PcP**	**18 21 56.6**	**+0.7**
	comp=Z,39nm,0.7s,baz=97,slow=3.7,SNR=16						
ASAR				ScP	**ScP**	**18 24 58.8**	**+2.6**
	comp=Z,2.1nm,0.7s,baz=98,slow=4.1,SNR=3.4						
ASAR				S	**S**	**18 26 16.4**	**-1.1**
	comp=Z,13nm,0.9s,baz=93,slow=15,SNR=20						
ASAR				PKiKP	**PKiKP**	**18 28 53.2**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=99,slow=1.5,SNR=6.6						
	comp=Z,194nm,0.5s						
GENI	**Genyem**	**44.32**	**288**	P	**P**	**18 20 24.2**	**+0.3**
GENI	**Genyem**	**44.32**	**288**	P	**P**	**18 20 24.4**	**+0.5**
	comp=Z,3µmcomp=Z,233nm,1.3s						
WRAB	**Tennant Creek**	**44.32**	**262**	P	**P**	**18 20 23.4**	**-0.5**
WRAB	**Tennant Creek**	**44.32**	**262**	P	**P**	**18 20 23.3**	**-0.6**
WRAB	**Tennant Creek**	**44.32**	**262***d*	*i*P	**P**	**18 20 23.4**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,235nm,1.3s						
WRAB	**Tennant Creek**	**44.32**	**262**	P	**P**	**18 20 23.5**	**-0.4**
WRA	**Warramunga Arr**	**44.33**	**262**	P	**P**	**18 20 23.8**	**-0.1**
	comp=Z,70nm,0.3s,baz=98,slow=7.4,SNR=1377						
WRA				PcP	**PcP**	**18 21 57.0**	**+0.7**
	comp=Z,15nm,0.6s,baz=97,slow=3.4,SNR=10						
WRA				S	**S**	**18 26 16.6**	**-2.4**
	comp=Z,11nm,1.0s,baz=97,slow=13,SNR=9.9						
WRA				PKiKP	**PKiKP**	**18 28 53.5**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=88,slow=1.1,SNR=5.1						
	comp=Z,70nm,0.3s						
WRA	**Warramunga Arr**	**44.33**	**262**	P	**P**	**18 20 23.4**	**-0.6**
WRA				IAmb	IAmb	18 20 24.5	
	comp=Z,15nm,0.7s						
OVEH	**Oceanview Est**	**45.33**	**31**	P	**P**	**18 20 32.1**	**+0.4**
OVEH				IAmb	IAmb	18 21 42.4	
	comp=Z,399nm,1.6s						
MLOA	**Mauna Loa Obse**	**45.75**	**31**	P	**P**	**18 20 35.2**	**0.0**
STCH	**Steam Cracks**	**45.83**	**31**	P	**P**	**18 20 35.7**	**+0.2**
POHA	**Pohakuloa**	**45.96**	**30**	P	**P**	**18 20 36.8**	**+0.2**
HIL	**Hilo**	**46.14**	**31**	P	**P**	**18 20 37.8**	**+0.2**
HIL				IAmb	IAmb	18 20 38.6	
	comp=Z,108nm,0.7s						
DHH	**Diamond Head**	**46.26**	**27**	P	**P**	**18 20 39.0**	**+0.5**
SRPI	**Serui, Papua**	**48.15**	**287**	P	**P**	**18 20 52.7**	**-0.2**
	comp=Z,96nm,0.8s						
BAKI	**Biak**	**48.57**	**288**	P	**P**	**18 20 56.9**	**+0.8**
	comp=Z,2µmcomp=Z,249nm,0.9s						
MTN	**Manton Dam**	**48.92**	**271**	P	**P**	**18 20 58.0**	**-0.6**
FORT	**Forrest**	**48.99**	**247**	P	**P**	**18 20 58.6**	**-0.4**
DRS	**Darwin Rock St**	**49.26**	**271**	P	**P**	**18 21 01.0**	**-0.1**
SAUI	**Saumlaki**	**50.28**	**277**	P	**P**	**18 21 08.9**	**+0.2**
SAUI	**Saumlaki**	**50.28**	**277**	P	**P**	**18 21 08.5**	**-0.1**
SAUI	**Saumlaki**	**50.28**	**277**	P	**P**	**18 21 08.6**	**-0.1**
	comp=Z,4µmcomp=Z,389nm,1.0s						
KNRA	**Kununurra**	**50.40**	**266**	P	**P**	**18 21 09.7**	**+0.1**
MWPI	**Manokwari, Pap**	**50.53**	**287**	P	**P**	**18 21 11.0**	**+0.5**
	comp=Z,181nm,1.0s						
FITZ	**Fitzroy Crossi**	**52.76**	**263**	P	**P**	**18 21 26.8**	**+0.3**
	comp=Z,45nm,0.5s,baz=101,slow=4.3,SNR=112						
	comp=Z,45nm,0.5s						
BNDI	**Bandanaira**	**52.83**	**280**	P	**P**	**18 21 27.2**	**+0.1**
BNDI	**Bandanaira**	**52.83**	**280**	P	**P**	**18 21 26.5**	**-0.6**
SIJI	**Sorong**	**53.05**	**285**	P	**P**	**18 21 29.1**	**+0.3**
	comp=Z,384nm,0.7s,baz=90,slow=4.7,SNR=256						
	comp=Z,384nm,0.7s						
SIJI	**Sorong**	**53.05**	**285**	P	**P**	**18 21 28.4**	**-0.3**
SWI	**Sorong**	**53.06**	**285**	P	**P**	**18 21 28.6**	**-0.2**
DRV	**Dumont d'Urvil**	**53.08**	**199**	P	**P**	**18 21 29.1**	**+1.1**
DRV				PcP	**PcP**	**18 22 27.5**	**+0.1**
DRV				pP	**pP**	**18 23 10.7**	**-0.3**
MSAI	**Masohi**	**54.18**	**281**	P	**P**	**18 21 36.2**	**-0.5**
KRAI	**Karang Ratu**	**54.68**	**281**	P	**P**	**18 21 39.4**	**-0.8**
	comp=Z,2µmcomp=Z,152nm,0.7s						
AAI	**Ambon**	**54.72**	**280**	P	**P**	**18 21 40.1**	**-0.4**
	comp=Z,3µmcomp=Z,215nm,0.6s						
NLAI	**Namlea**	**55.90**	**280**	P	**P**	**18 21 48.2**	**-0.5**
	comp=Z,2µmcomp=Z,178nm,0.7s						
SOEI	**Soe**	**56.26**	**272**	P	**P**	**18 21 52.5**	**+1.1**
SOEI	**Soe**	**56.26**	**272**	P	**P**	**18 21 52.8**	**+1.5**
SOEI	**Soe**	**56.26**	**272**	P	**P**	**18 21 52.4**	**+1.1**
BATI	**Baumata**	**56.69**	**271**	P	**P**	**18 21 55.0**	**+0.8**
	comp=Z,174nm,0.7s,baz=155,slow=3.5,SNR=10.0						
	comp=Z,174nm,0.7s						
BATI	**Baumata**	**56.69**	**271**	P	**P**	**18 21 54.9**	**+0.8**
	comp=Z,202nm,0.8s						
TNTI	**Ternate**	**57.28**	**285**	P	**P**	**18 21 58.1**	**0.0**
TNTI	**Ternate**	**57.28**	**285**	P	**P**	**18 21 57.8**	**-0.3**
	comp=Z,1µmcomp=Z,187nm,0.9s						
SANI	**Sanana**	**57.38**	**281**	P	**P**	**18 21 58.5**	**-0.4**
SANI	**Sanana**	**57.38**	**281**	P	**P**	**18 21 57.9**	**-1.0**
	comp=Z,1µmcomp=Z,179nm,0.9s						
PSA00	**Pilbara Seismi**	**57.38**	**257**	P	**P**	**18 21 58.7**	**-0.1**
PSA00	**Pilbara Seismi**	**57.38**	**257**	P	**P**	**18 21 58.4**	**-0.4**
PSA00	**Pilbara Seismi**	**57.38**	**257**	P	**P**	**18 21 58.4**	**-0.4**
PSA00				IAmb	IAmb	18 21 59.6	
	comp=Z,95nm,0.9s						
MBWA	**Marble Bar**	**57.57**	**258**	P	**P**	**18 21 59.9**	**-0.2**
MBWA	**Marble Bar**	**57.57**	**258**	P	**P**	**18 21 59.9**	**-0.2**
MBWA				PcP	**PcP**	**18 22 46.3**	**+0.4**
MBWA				pP	**pP**	**18 23 45.4**	**+0.4**
MBWA				sP	**sP**	**18 24 42.8**	**-0.2**
MEEK	**Meekatharra**	**57.62**	**251**	P	**P**	**18 21 59.8**	**-0.6**
VNDA	**Vanda**	**57.69**	**185**	P	**P**	**18 22 01.8**	**+1.9**
	comp=Z,13nm,0.6s,baz=354,slow=7.7,SNR=18						
	comp=Z,13nm,0.6s						
KLBR	**Kellerberrin**	**57.75**	**245**	P	**P**	**18 22 01.0**	**-0.1**
NWAO	**Narrogin (SRO)**	**58.06**	**243**	P	**P**	**18 22 03.5**	**+0.3**
MMRI	**Maumere**	**58.52**	**272**	P	**P**	**18 22 06.4**	**-0.2**
BLDU	**Ballidu**	**58.75**	**246**	P	**P**	**18 22 07.7**	**-0.2**
EDFI	**Ende, Flores**	**58.99**	**272**	P	**P**	**18 22 08.5**	**-1.4**
	comp=Z,1µmcomp=Z,160nm,1.1s						
MUN	**Mundaring**	**59.02**	**244**	P	**P**	**18 22 10.2**	**+0.5**
MORW	**Morawa**	**59.52**	**248**	P	**P**	**18 22 13.0**	**-0.1**
MORW	**Morawa**	**59.52**	**248**	IAmb	IAmb	18 22 14.2	
	comp=Z,70nm,1.1s						
MNI	**Manado**	**59.85**	**284**	P	**P**	**18 22 14.0**	**-1.5**
	comp=Z,3µmcomp=Z,178nm,0.8s						
WSI	**Waingapu**	**60.01**	**271**	P	**P**	**18 22 16.5**	**0.0**
KKSI	**Kolaka, Sulawe**	**60.59**	**277**	P	**P**	**18 22 20.1**	**-0.3**
	comp=Z,908nmcomp=Z,70nm,0.8s						
LUWI	**Luwuk**	**60.73**	**281**	P	**P**	**18 22 22.2**	**+0.9**
LUWI	**Luwuk**	**60.73**	**281**	P	**P**	**18 22 21.4**	**+0.2**
LUWI	**Luwuk**	**60.73**	**281**	P	**P**	**18 22 21.5**	**+0.2**
	comp=Z,2µmcomp=Z,264nm,1.1s						
LBFI	**Labuhan Bajo,**	**60.76**	**272**	P	**P**	**18 22 20.6**	**-0.9**
WBSI	**Waikabubak, Su**	**60.86**	**270**	P	**P**	**18 22 21.7**	**-0.5**
	comp=Z,80nm,0.7s						
GTOI	**Gorontalo**	**61.18**	**283**	P	**P**	**18 22 25.6**	**+1.4**
	comp=Z,2µmcomp=Z,227nm,0.7s						
DAV	**Davao City (W)**	**61.68**	**291**	P	**P**	**18 22 27.3**	**-0.2**
	comp=Z,133nm,0.4s,baz=88,slow=4.0,SNR=5.5						
	comp=Z,133nm,0.4s						
APSI	**Ampana**	**61.82**	**280**	P	**P**	**18 22 29.1**	**+0.7**
	comp=Z,1µmcomp=Z,153nm,0.8s						
KAPI	**Kappang**	**62.06**	**275**	P	**P**	**18 22 30.2**	**+0.3**
	comp=Z,14nm,0.5s,baz=118,slow=6.4,SNR=8.2						
	comp=Z,14nm,0.5s						
KAPI	**Kappang**	**62.06**	**275**	P	**P**	**18 22 30.3**	**+0.3**
KAPI				IAmb	IAmb	18 22 31.0	
	comp=Z,101nm,1.8s						
KAPI	**Kappang**	**62.06**	**275***d*	*i*P	**P**	**18 22 30.1**	**+0.1**
KAPI				pmax	pmax		
	comp=Z,61nm,1.8s						
MRSI	**Marisa**	**62.09**	**282**	P	**P**	**18 22 29.6**	**-0.6**
	comp=Z,72nm,0.8s						
CCD	**Concordia, Ant**	**62.21**	**194**	P	**P**	**18 22 31.8**	**+1.4**
CCD				PcP	**PcP**	**18 23 04.6**	**+0.4**
CCD				x	x	18 24 23.9	
DBNI	**Kabupaten Domp**	**62.23**	**271**	P	**P**	**18 22 30.2**	**-0.9**
	comp=Z,2µmcomp=Z,213nm,0.7s						
GIRL	**Giralia**	**62.26**	**255**	P	**P**	**18 22 32.3**	**+1.1**
SPSI	**Sidrap Palu**	**62.42**	**277**	P	**P**	**18 22 31.3**	**-1.0**
	comp=Z,72nm,0.9s						
PLAI	**Plampang**	**62.63**	**271**	P	**P**	**18 22 33.5**	**-0.2**
PLAI	**Plampang**	**62.63**	**271**	P	**P**	**18 22 32.8**	**-0.9**
	comp=Z,2µmcomp=Z,278nm,0.9s						
TTSI	**Tana Toraja**	**62.70**	**277**	P	**P**	**18 22 33.9**	**-0.3**
PMSI	**Majene**	**63.38**	**277**	P	**P**	**18 22 38.7**	**+0.2**
	comp=Z,2µmcomp=Z,216nm,1.1s						
TOLI2	**Tolitoli**	**63.41**	**282**	P	**P**	**18 22 38.7**	**0.0**
PCI	**Palu**	**63.49**	**280**	P	**P**	**18 22 40.3**	**+1.1**

comp=Z,3µmcomp=Z,314nm,0.9s
CASY Casey 63.67 205 P **P** 18 22 40.5 +1.0
MPSI Mapaga 63.91 281 P **P** 18 22 41.0 -0.9
comp=Z,1µmcomp=Z,145nm,0.8s
IGBI Denpasar 65.10 270 P **P** 18 22 49.3 -0.1
comp=Z,348nm,1.1s
RTBI Rangdo, Negare 65.40 270 P **P** 18 22 50.5 -0.9
comp=Z,115nm,0.9s
JAGI Jajag, Banyuwa 66.14 270 P **P** 18 22 55.1 -0.8
JAGI Jajag, Banyuwa 66.14 270 P **P** 18 22 54.9 -1.0
JAGI Jajag, Banyuwa 66.14 270 P **P** 18 22 54.2 -1.7
comp=Z,1µmcomp=Z,130nm,0.9s
ABJI Asem Bagus 66.28 270 P **P** 18 22 56.4 -0.4
comp=Z,105nm,1.1s
JHJ2 Mitsune 66.83 322 P **P** 18 23 00.1 +0.4
BLJI Banyuglugur 66.89 270 P **P** 18 22 59.8 -0.8
comp=Z,131nm,0.9s
MYLDM Lahad Datu 67.15 285 P **P** 18 23 03.8 +1.6
MYLDM Lahad Datu 67.15 285 P **P** 18 23 03.7 +1.6
comp=Z,82nm,0.9s
BBKI Banjar Baru 67.19 275 P **P** 18 23 02.8 +0.4
comp=Z,84nm,0.7s
SNJI Sawahan-Nganju 68.60 270 P **P** 18 23 11.4 +0.2
comp=Z,111nm,1.1s
SJI Sawahan 68.61 270 P **P** 18 23 10.5 -0.7
comp=Z,56nm,0.9s
PCJI Pacitan 69.01 269 P **P** 18 23 13.2 -0.3
TGY Tagaytay City 69.02 295 P **P** 18 23 14.7 +1.1
comp=Z,245nm,0.4s,baz=45,slow=23,SNR=5.0
QSPA South Pole Qui 69.36 180 P **P** 18 23 16.5 +1.7
comp=Z,75nm,0.7s,baz=40,slow=1.1,SNR=91
comp=Z,75nm,0.7s
QSPA South Pole Qui 69.36 180 P **P** 18 23 16.5 +1.7
QSPA PcP **PcP** 18 23 34.8 +0.8
QSPA pP **pP** 18 25 06.7 +0.7
QSPA x x 18 25 10.6
KKM Kota Kinabalu 69.58 285 P **P** 18 23 17.5 +0.5
KKM Kota Kinabalu 69.58 285 P **P** 18 23 16.8 -0.2
comp=Z,1µmcomp=Z,109nm,1.0s
UGM Wanagama 69.72 269 P **P** 18 23 17.8 +0.1
UGM Wanagama 69.72 269 P **P** 18 23 17.8 +0.1
UGM IAmb IAmb 18 23 23.4
comp=Z,56nm,0.9s
JOW Kunigami 70.11 310 P **P** 18 23 20.6 +0.9
JOW Kunigami 70.11 310 P **P** 18 23 21.0 +1.2
MJAR Matsushiro Arr 70.23 324 P **P** 18 23 20.0 -0.2
comp=Z,9.9nm,0.8s,baz=157,slow=5.9,SNR=31
comp=Z,9.9nm,0.8s
MAJO Matsushiro 70.23 324 P **P** 18 23 20.4 +0.1
MAJO Matsushiro 70.23 324 *d i* P **P** 18 23 20.2 -0.1
MAJO pmax pmax
comp=Z,17nm,0.9s
CTJI Waduk Cacaban 71.27 269 P **P** 18 23 26.7 -0.2
KPJI Karang Pucung 71.39 269 P **P** 18 23 27.2 -0.4
comp=Z,67nm,1.0s
JSU Suzuyama 71.50 315 P **P** 18 23 28.4 +0.6
JSU IAmb IAmb 18 23 28.9
comp=Z,41nm,1.0s
SBUM Sibu 71.80 280 P **P** 18 23 29.9 -0.1
KIWB Kanaga Island 72.25 1 P **P** 18 23 31.9 +0.2
ADK Adak 72.29 1 P **P** 18 23 31.6 -0.3
ADK Adak 72.29 1 P **P** 18 23 31.8 -0.1
BBJI Bungbulang 72.55 268 P **P** 18 23 34.2 -0.2
BBJI Bungbulang 72.55 268 P **P** 18 23 33.7 -0.7
BBJI IAmb IAmb 18 23 34.7
comp=Z,41nm,0.9s
BBJI Bungbulang 72.55 268 P **P** 18 23 32.9 -1.5
comp=Z,48nm,0.9s
LEM Lembang 72.79 269 P **P** 18 23 36.6 +0.7
comp=Z,139nm,0.9s,baz=62,slow=5.5,SNR=30
comp=Z,139nm,0.9s
TWGBT Beinan 73.28 303 P **P** 18 23 37.2 -1.1
TWG Pinlang 73.28 303 IAmb IAmb 18 23 37.6
comp=Z,37nm,0.7s
YULB Yu-li 73.41 303 P **P** 18 23 38.4 -0.6
YULB Yu-li 73.41 303 P **P** 18 23 38.3 -0.8
DBJI Dramaga 73.69 269 P **P** 18 23 40.4 -0.5
comp=Z,133nm,1.2s
JKA Kamikawa-asahi 73.79 332 IAmb IAmb 18 23 43.6
comp=Z,60nm,1.0s
TPUB Ta-pu 73.88 303 P **P** 18 23 40.9 -0.8
SSLB Suanglung 73.88 304 P **P** 18 23 41.0 -0.7
SSLB Suanglung 73.88 304 IAmb IAmb 18 23 41.8
comp=Z,48nm,1.0s
SBJI Serang 74.42 269 P **P** 18 23 44.9 -0.1
comp=Z,3µmcomp=Z,185nm,1.3s
SKR Severo-Kuril's 74.58 343 ⇓ *eP* **P** 18 23 43.3 -1.7
UNV Unalaska Valle 74.93 7 P **P** 18 23 46.7 -0.1
UNV Unalaska Valle 74.93 7 P **P** 18 23 46.9 +0.1
baz=191
YSS Yuzhno-Sakhali 75.97 334 P **P** 18 23 53.6 +0.8
YSS IAmb IAmb 18 23 55.1
comp=Z,44nm,0.9s
YSS Yuzhno-Sakhali 75.97 334 *eP* **P** 18 23 54.1 +1.3
YSS *eS* **S** 18 32 52.4 +0.8
YSS pmax pmax
comp=Z,30nm,1.1s
YSS pmax pmax
comp=Z,200nm,3.9s
YSS pmax pmax
comp=N,100nm,4.2s
YSS pmax pmax
comp=E,100nm,4.9s
YSS Yuzhno-Sakhali 75.97 334 P **P** 18 23 54.0 +1.3
YSS PcP **PcP** 18 24 02.7 +0.4
PET Petropavlovsk 76.11 346 *eP* **P** 18 23 52.5 -0.9
PET pmax pmax
comp=Z,34nm,0.9s
KASI Kota Agung 76.15 269 P **P** 18 23 53.2 -1.4
comp=Z,905nmcomp=Z,114nm,1.1s
FALS False Pass 76.32 9 P **P** 18 23 55.3 +0.7
baz=194
PEA0B Petropavlovsk- 76.41 345 IAmb IAmb 18 23 56.5
comp=Z,47nm,0.8s
PEA0B Petropavlovsk- 76.41 345 *d i* P **P** 18 23 55.1 0.0
PETK Petropavlovsk- 76.41 345 P **P** 18 23 55.3 +0.2
comp=Z,33nm,0.7s,baz=122,slow=6.5,SNR=83
PETK PKiKP **PKiKP** 18 29 33.1 -0.4
comp=Z,1.8nm,0.7s,baz=96,slow=2.0,SNR=7.7
comp=Z,33nm,0.7s
LWLI Liwa 76.73 270 P **P** 18 23 57.0 -1.0
comp=Z,152nm,0.8s
MDSI Maura Dua 76.80 270 P **P** 18 23 56.4 -1.8
comp=Z,1µmcomp=Z,84nm,0.9s
KSRS Korea Array 76.88 319 P **P** 18 23 59.1 +1.1
comp=Z,9.5nm,1.0s,baz=146,slow=6.1,SNR=14
comp=Z,9.5nm,1.0s
KSAR Wonju Array Be 76.89 319 P **P** 18 23 59.1 +1.0
CHNA Chernabura Isl 76.91 11 P **P** 18 23 58.6 +0.8
baz=198
SDPT Sand Point 77.25 10 P **P** 18 24 00.3 +0.7
baz=197
DSRI Dabo 77.82 274 P **P** 18 24 04.3 +0.6
comp=Z,59nm,1.2s
SPIA Saint Paul Isl 77.87 4 P **P** 18 24 03.9 +1.0
baz=188
UGL Uglegorsk 77.94 335 *eP* **P** 18 24 04.6 +1.1
UGL pmax pmax
comp=Z,100nm,0.8s
MNAI Manna 77.99 270 P **P** 18 24 05.1 +0.5
MNAI Manna 77.99 270 P **P** 18 24 04.1 -0.5
comp=Z,2µmcomp=Z,224nm,1.0s
JMBI JAMBI 78.29 273 P **P** 18 24 07.9 +1.7
VLA Vladivostok 78.31 325 ⇓ *eP* **P** 18 24 06.8 +1.2
VLA pmax pmax
comp=Z,33nm,1.4s
TPRI Tanjung Pinang 78.37 275 P **P** 18 24 07.1 +0.4
comp=Z,57nm,1.2s
KSI Kapahiang 78.57 270 P **P** 18 24 07.3 -0.5
HKPS Hong Kong Po S 78.58 299 IAmb IAmb 18 24 10.3
comp=Z,72nm,1.1s
PSTR Posyet 78.58 324 *c i* P **P** 18 24 08.8 +1.7
PSTR pmax pmax
comp=Z,7.0nm,1.0s
CHIR Chirikof Islan 78.61 13 P **P** 18 24 07.4 +0.5
baz=202
UBSI University, Be 78.83 270 P **P** 18 24 08.7 -0.4
comp=Z,191nm,1.4s
USRK Ussuriysk Ar. 79.00 326 P **P** 18 24 10.5 +1.2
comp=Z,19nm,0.8s,baz=152,slow=3.4,SNR=15
comp=Z,19nm,0.8s
KMRM Mail Ridge 79.07 39 IAmb IAmb 18 24 13.0
comp=Z,52nm,0.9s
MASI Maura Aman, Be 79.08 271 P **P** 18 24 09.7 -0.8
comp=Z,2µmcomp=Z,218nm,1.1s
TYV Tymovskoe 79.13 336 *eP* **P** 18 24 10.7 +0.9
TYV *eS* **S** 18 33 17.6 -7.1
TYV pmax pmax
comp=Z,45nm,1.1s
TYV pmax pmax
comp=Z,200nm,3.2s
TYV smax smax
comp=N,200nm,5.4s
TYV smax smax
comp=E,300nm,5.4s
MYKOM Kota Tinggi 79.31 276 IAmb IAmb 18 24 13.8
comp=Z,65nm,1.0s
MYKOM Kota Tinggi 79.31 276 P **P** 18 24 11.4 -0.3
comp=Z,744nmcomp=Z,74nm,1.1s
BELA Belgrano 2 79.39 173 P **P** 18 24 11.7 +0.7
BELA IAmb IAmb 18 24 12.6
comp=Z,53nm,0.9s
SII Sitkinak Islan 79.60 13 P **P** 18 24 13.2 +1.0
baz=203
NJ2 Nanjing 79.82 310 ⇓ P **P** 18 24 14.9 +1.0
NJ2 pmax pmax
comp=Z,25nm,1.1s
R16K Pilot Point 79.87 11 P **P** 18 24 14.3 +0.8
baz=200
R17L Mt. Peulik Vol 80.16 12 P **P** 18 24 15.4 +0.3
baz=201
KRJI Kerinci 80.17 271 P **P** 18 24 15.1 -1.2
comp=Z,1µmcomp=Z,108nm,1.1s
OHAK Old Harbor 80.40 13 P **P** 18 24 16.8 +0.5
baz=204
MDJ Mudanjiang 80.55 325 P **P** 18 24 18.4 +1.0
MDJ PcP **PcP** 18 24 24.6 +2.2
MDJ sP **sP** 18 27 07.6 -0.9
M03C McCloud 80.66 39 IAmb IAmb 18 24 20.9
comp=Z,27nm,0.9s
HATC Hat Creek Radi 80.78 40 IAmb IAmb 18 24 21.6
comp=Z,34nm,1.1s
Q17K Contact Creek 80.84 12 P **P** 18 24 19.2 +0.4
baz=201,SNR=5.8
O14K Tigyukauivet M 80.88 9 P **P** 18 24 19.4 +0.6
baz=196
PNTR Pine Nut 80.90 42 IAmb IAmb 18 24 22.3
comp=Z,25nm,0.8s
O15K Ungalikthiuk R 81.02 9 P **P** 18 24 20.3 +0.8
baz=197
KDAK Kodiak Island 81.07 14 P **P** 18 24 21.3 +1.5
comp=Z,12nm,0.8s,baz=290,slow=6.0,SNR=6.0
comp=Z,12nm,0.8s
KDAK Kodiak Island 81.07 14 ⇓ *eP* **P** 18 24 19.3 -0.5
KDAK pmax pmax
comp=Z,123nm,2.2s
KDAK Kodiak Island 81.07 14 P **P** 18 24 20.8 +1.0
baz=204
Q16K King Salmon 81.08 11 P **P** 18 24 20.9 +1.1
baz=200
IRM Iron Mountain 81.11 48 P **P** 18 24 21.4 +0.8
LHV Little Huntoon 81.11 44 IAmb IAmb 18 26 56.3
comp=Z,20nm,0.8s
L04D Klamath Falls 81.14 39 IAmb IAmb 18 24 23.3
comp=Z,32nm,1.0s
GWY Greenwater Val 81.16 46 P **P** 18 24 21.2 +0.2
P16K Nushagak River 81.18 10 P **P** 18 24 20.8 +0.5
baz=199,SNR=5.4
MAW Mawson 81.29 200 P **P** 18 24 21.8 +0.9
comp=Z,16nm,0.7s,baz=119,slow=6.4,SNR=6.6
comp=Z,16nm,0.7s
BBOR Butler Butte 81.34 38 IAmb IAmb 18 25 45.1
comp=Z,48nm,1.9s
NVAR Mina Array Bea 81.34 43 P **P** 18 24 23.4 +1.4
comp=Z,9.2nm,0.9s,baz=225,slow=9.2,SNR=30
NVAR pP **pP** 18 26 18.3 +0.3
comp=Z,4.4nm,1.0s,baz=227,slow=7.5,SNR=6.1
NVAR PKKPbc **PKKPbc** 18 42 51.8 -1.5
comp=Z,1.0nm,0.7s,baz=47,slow=4.9,SNR=4.8
comp=Z,9.2nm,0.9s
Q18K Katmai Hardscr 81.37 12 P **P** 18 24 21.6 +0.1
baz=202,SNR=5.7
M11K Mekoryuk 81.39 6 P **P** 18 24 22.0 +0.7
baz=191
N14K Kuskokwak Cree 81.47 8 P **P** 18 24 22.2 +0.4
baz=196
PDSI Padang 81.52 272 P **P** 18 24 21.3 -1.9
GRNR Gornyy 81.58 333 ⇓ *i* P **P** 18 24 23.8 +1.2
GRNR pmax pmax
comp=E,5.0nm,1.1s
GRNR pmax pmax
comp=N,7.0nm,1.0s
GRNR pmax pmax
comp=Z,30nm,1.0s
P17K Kvichak River 81.61 11 P **P** 18 24 22.4 -0.1
baz=201
O16K Kokwok River B 81.70 10 P **P** 18 24 23.2 +0.3
baz=199
DL2 Dalian 81.71 317 P **P** 18 24 23.4 -0.1
DL2 pmax pmax
comp=Z,38nm,1.2s
M13K Dall Lake 81.73 7 P **P** 18 24 23.5 +0.4
baz=194
Q20K Shuyak Island 81.87 13 P **P** 18 24 23.9 +0.1
baz=204
J04A Umpqua Nationa 81.89 38 IAmb IAmb 18 24 27.4
comp=Z,43nm,0.8s
Q19K Cape Douglas, 81.90 13 P **P** 18 24 24.4 +0.4
baz=203
N15K Kwethluk River 81.93 9 P **P** 18 24 24.9 +0.7
baz=197
P18K Big Mountain, 82.02 12 IAmb IAmb 18 24 25.4
comp=Z,64nm,1.2s
P18K Big Mountain, 82.02 12 P **P** 18 24 24.9 +0.3
baz=202,SNR=6.4
O17K Koliganek Bris 82.04 11 P **P** 18 24 25.1 +0.5
baz=200
M14K Bethel 82.23 8 P **P** 18 24 26.3 +0.6
baz=195
K05A Summer Lake 82.28 39 IAmb IAmb 18 24 29.5
comp=Z,36nm,1.0s
CN2 Changchun 82.31 323 P **P** 18 24 27.0 +0.5
CN2 pP pwP 18 26 24.2 -1.4
CN2 pmax pmax
comp=Z,40nm,1.2s
CNSH ChangSha 82.32 304 P **P** 18 24 27.2 +0.3
CNSH pmax pmax
comp=Z,18nm,1.4s
M15K Kasigluk River 82.35 9 P **P** 18 24 26.8 +0.6
baz=196
WHN Wuhan 82.37 307 P **P** 18 24 28.1 +1.0
WHN pmax pmax
comp=Z,120nm,1.4s
J05D Fort Rock, OR 82.42 38 IAmb IAmb 18 24 30.0
comp=Z,40nm,0.8s
N16K Nishlik Lake 82.42 10 P **P** 18 24 27.8 +1.1
baz=198
BNX BinXian 82.45 325 ⇓ P **P** 18 24 27.4 +0.3
BNX pmax pmax
comp=Z,35nm,0.8s
O18K Koktuh Hills 82.45 12 IAmb IAmb 18 24 28.6
comp=Z,72nm,1.1s
O18K Koktuh Hills 82.45 12 P **P** 18 24 27.2 +0.4
baz=202,SNR=8.8
WIFE Three Sisters- 82.56 37 IAmb IAmb 18 24 30.6
comp=Z,19nm,0.9s
KLR Kul'dur 82.58 330 *d i* P **P** 18 24 28.7 +1.0
KLR pmax pmax
comp=Z,17nm,1.0s
P19K Oil Pt 82.65 13 P **P** 18 24 27.7 -0.1
baz=204
L14K Kuka Creek 82.72 7 P **P** 18 24 27.5 -0.5
baz=195
N17K Nushagak Hills 82.73 10 P **P** 18 24 27.6 -0.6
baz=200
H04A Detroit Lake 82.74 37 IAmb IAmb 18 24 30.7
comp=Z,36nm,1.3s
PINE Pine Mountain 82.89 38 IAmb IAmb 18 24 32.5
comp=Z,38nm,1.0s
PRN Pahroc Range 82.91 46 IAmb IAmb 18 24 32.6
comp=Z,19nm,1.0s
IPM Ipoh 82.92 277 P **P** 18 24 31.3 +1.0
IPM Ipoh 82.92 277 P **P** 18 24 30.2 -0.1
comp=Z,894nmcomp=Z,76nm,1.1s
M16K Timber Creek 82.92 9 P **P** 18 24 29.3 +0.2
baz=198
O19K Port Alsworth 82.94 12 P **P** 18 24 28.9 -0.2
baz=202
MNSI Mandailing Nat 82.94 274 P **P** 18 24 29.4 -1.0
comp=Z,70nm,0.9s
HOM Homer 82.99 13 P **P** 18 24 29.2 -0.3
baz=205
I05D Terrebonne, OR 83.00 37 IAmb IAmb 18 24 32.5
comp=Z,20nm,0.9s
K13K Kusilvak Mount 83.07 6 P **P** 18 24 30.1 +0.3
baz=193
N18K Kilae Creek 83.10 11 P **P** 18 24 30.0 -0.1
baz=201
L15K Ungalak Mounta 83.19 8 P **P** 18 24 30.7 +0.2
baz=196
TIA Tai'an 83.23 313 P **P** 18 24 32.1 +0.8
TIA pmax pmax
comp=Z,19nm,1.3s
BRSE Bradley Lake S 83.26 14 P **P** 18 24 30.9 0.0
baz=206
TUC Tucson 83.30 52 P **P** 18 24 33.1 +1.3
RED Redoubt Volcan 83.45 12 IAmb IAmb 18 24 32.5
comp=Z,28nm,1.0s
N19K Bonanza Creek 83.48 11 P **P** 18 24 32.6 +0.6
baz=202
L16K Owhat River 83.50 9 IAmb IAmb 18 24 34.2
comp=Z,47nm,1.3s
L16K Owhat River 83.50 9 P **P** 18 24 32.4 +0.4
baz=198
M17K Holitna River 83.52 10 P **P** 18 24 32.2 +0.1
baz=200
KULM Kulim 83.56 278 P **P** 18 24 34.5 +1.1
KULM Kulim 83.56 278 IAmb IAmb 18 24 35.2
comp=Z,26nm,0.8s
KULM Kulim 83.56 278 P **P** 18 24 33.7 +0.3
comp=Z,525nmcomp=Z,39nm,1.2s
K15K Wolf Creek Mou 83.78 8 P **P** 18 24 34.0 +0.7
baz=196
M18K Stony River 83.87 11 P **P** 18 24 34.0 +0.2
baz=201
SEW Seward 83.87 14 P **P** 18 24 34.1 +0.3
baz=207
MA2 Magadan 83.92 345 P **P** 18 24 33.6 -0.4
MA2 IAmb IAmb 18 24 35.0
comp=Z,27nm,0.9s
MA2 Magadan 83.92 345 *d i* P **P** 18 24 33.7 -0.4
MA2 pmax pmax
comp=Z,25nm,0.8s
MA2 Magadan 83.92 345 P **P** 18 24 33.4 -0.7
comp=Z,42nm,1.0s
MA2 Magadan 83.92 345 P **P** 18 24 33.9 -0.3
319A Douglas 83.97 53 IAmb IAmb 18 24 38.5
comp=Z,32nm,1.1s
J14K Nanvaranak Lak 83.98 7 P **P** 18 24 35.0 +0.7
baz=194
Q23K Middleton Isla 84.02 16 P **P** 18 24 34.6 0.0
baz=210
L17K Donlin 84.08 9 P **P** 18 24 35.4 +0.5
baz=199
CAPN Captain Cook N 84.10 13 P **P** 18 24 35.3 +0.4
baz=205
O22K Cooper Landing 84.15 14 P **P** 18 24 35.4 +0.1
baz=207
RPSI Rantau Prapat 84.23 275 IAmb IAmb 18 24 37.9
comp=Z,44nm,1.0s
P23K Montague Islan 84.26 15 P **P** 18 24 36.1 +0.3
baz=209
PSI Prapat 84.27 275 P **P** 18 24 36.0 -1.1
comp=Z,49nm,1.2s
SPCR Spurr Chakacha 84.27 12 P **P** 18 24 36.4 +0.4
baz=204,SNR=6.5
U15A North Rim 84.28 48 IAmb IAmb 18 24 39.6
comp=Z,20nm,1.0s
SPU Mount Spurr 84.29 12 IAmb IAmb 18 24 36.4
comp=Z,23nm,1.1s
GAMB Gambell 84.36 3 IAmb IAmb 18 24 38.2
comp=Z,27nm,0.9s
GAMB Gambell 84.36 3 P **P** 18 24 36.3 +0.2
baz=186,SNR=14
D05A Enumclaw 84.40 35 IAmb IAmb 18 24 41.3
comp=Z,32nm,1.2s
L18K Granite Mounta 84.41 10 P **P** 18 24 36.5 +0.1
baz=200
M19K Big River Lodg 84.51 11 P **P** 18 24 37.6 +0.6
baz=202
STLK Strandline Lak 84.62 12 IAmb IAmb 18 24 37.8
comp=Z,32nm,1.3s
GO08 Villa O'Higgin 84.63 140 P **P** 18 24 38.7 +0.7
GO08 IAmb IAmb 18 24 41.1
comp=Z,22nm,1.0s
K17K Iditarod 84.63 9 P **P** 18 24 38.2 +0.6
baz=199
DUN6 Lazy B Ranch 84.67 52 IAmb IAmb 18 24 41.8
comp=Z,35nm,0.8s
L19K White Mountain 84.68 11 P **P** 18 24 37.9 0.0
baz=202,SNR=7.2
RC01 Rabbit Creek A 84.69 13 IAmb IAmb 18 24 39.3
comp=Z,37nm,1.2s
RC01 Rabbit Creek A 84.69 13 P **P** 18 24 38.2 +0.3
baz=207
M20K Styx River 84.72 12 P **P** 18 24 38.6 +0.5
baz=204
PKCU Pink Cliffs 84.78 47 IAmb IAmb 18 24 42.8
comp=Z,23nm,1.2s
SUA Susitna One 84.81 13 IAmb IAmb 18 24 39.5
comp=Z,33nm,1.1s
SUA Susitna One 84.81 13 P **P** 18 24 38.4 -0.3
baz=206,SNR=6.2
J16K Anvik River 84.86 8 P **P** 18 24 39.0 +0.4
baz=196
G08A Pilot Rock 84.93 38 IAmb IAmb 18 24 42.0
comp=Z,16nm,0.9s
KAIM Kayak Island 84.95 16 P **P** 18 24 39.1 -0.1
baz=212
GSI Gunungsitoli 85.00 273 P **P** 18 24 41.9 +1.4
GSI Gunungsitoli 85.00 273 P **P** 18 24 41.3 +0.8
comp=Z,2µmcomp=Z,155nm,1.2s
CRAG Craig 85.00 24 P **P** 18 24 38.8 -0.7
baz=222
GLI Glacier Island 85.11 15 P **P** 18 24 39.9 -0.1
baz=209
SKT Skwentna 85.12 12 P **P** 18 24 40.3 +0.3
baz=205
EYAK Cordova Ski Ar 85.15 15 P **P** 18 24 40.4 +0.3
baz=210
LTY Liberty 85.16 35 IAmb IAmb 18 25 28.7
comp=Z,33nm,1.7s
E07A Sunnyside 85.18 36 IAmb IAmb 18 24 43.3
comp=Z,16nm,1.0s
M22K Willow 85.20 13 P **P** 18 24 40.5 +0.1
baz=206
HAWA Hanford 85.26 36 IAmb IAmb 18 24 43.6
comp=Z,20nm,1.0s
KNK Knik Glacier 85.26 14 IAmb IAmb 18 24 42.0
comp=Z,41nm,1.2s
KNK Knik Glacier 85.26 14 P **P** 18 24 40.7 0.0
baz=208
PMR Palmer 85.27 14 P **P** 18 24 40.9 +0.2
PMR Palmer 85.27 14 IAmb IAmb 18 24 42.5
comp=Z,52nm,1.4s
PMR Palmer 85.27 14 P **P** 18 24 40.5 -0.1
baz=207
HEH HeiHe 85.36 328 *eP* **P** 18 24 41.9 +0.6
HEH pmax pmax
comp=Z,31nm,1.2s
SIT Sitka 85.40 22 P **P** 18 24 41.1 -0.3
baz=220
BGLC Bering Glacier 85.42 17 P **P** 18 24 41.1 -0.3
baz=212
I17K Unalakleet 85.42 8 P **P** 18 24 41.6 +0.3
baz=196
WAH2 Wahluke Slope 85.45 36 IAmb IAmb 18 24 44.4
comp=Z,25nm,1.6s
V35K Ketchikan 85.48 25 P **P** 18 24 41.5 -0.2
baz=223
GHO Glory Hole Cre 85.48 14 IAmb IAmb 18 24 43.0
comp=Z,44nm,1.0s
U33K Whale Pass 85.48 23 P **P** 18 24 42.0 +0.2
baz=222
HNS HongShan 85.50 313 ⇓ P **P** 18 24 43.6 +1.2
HNS pmax pmax
comp=Z,29nm,1.0s
ANM Nome 85.58 6 P **P** 18 24 42.3 +0.2
baz=192
E08A Dider Farm, El 85.58 37 IAmb IAmb 18 24 45.0
comp=Z,14nm,0.9s
J18K Innoko River 85.58 10 P **P** 18 24 42.5 +0.3
baz=200
KCSI Kotacane, Aceh 85.60 275 P **P** 18 24 43.0 -0.4
SML Sawmill 85.64 14 P **P** 18 24 41.8 -0.7
baz=208
LYN LuoYang 85.69 309 P **P** 18 24 44.5 +1.1
LYN pmax pmax
comp=Z,70nm,0.9s
CUT Chulitna 85.76 13 P **P** 18 24 42.3 -0.7
baz=206
M23K Glacier View 85.76 14 P **P** 18 24 42.5 -0.6

	baz=208						
S31K	Pelican	85.80	21	P	P	18 24 43.8	+0.5
	baz=219						
BMRM	Bremner River	85.80	16	P	P	18 24 43.6	+0.3
	baz=211						
EPH	Ephrata	85.80	36	IAmb	IAmb	18 24 45.7	
	comp=Z,15nm,1.0s						
PPLA	Purkeypile	85.83	12	P	P	18 24 44.0	+0.5
	baz=204						
MESA	MESA	85.83	17	P	P	18 24 43.7	+0.1
	baz=214						
SCM	Sheep Creek Mo	85.89	14	P	P	18 24 43.8	0.0
	baz=209						
K20K	Telida	85.91	11	P	P	18 24 43.9	+0.2
	baz=203						
KLU	Klutina	85.92	15	P	P	18 24 43.6	-0.3
	baz=210						
ENH	Enshi	85.95	304	P	P	18 24 45.8	+1.0
ENH	Enshi	85.95	304	P	P	18 24 45.8	+1.0
ENH				x	x	18 26 47.1	
H16K	Elim	85.97	7	P	P	18 24 44.4	+0.5
	baz=195,SNR=12						
D08A	Wollman Farm,	85.99	36	IAmb	IAmb	18 24 47.0	
	comp=Z,17nm,0.9s						
WRAK	Wrangell Islan	86.00	24	P	P	18 24 44.4	+0.1
	baz=222						
CRQE	Cirque	86.00	16	P	P	18 24 44.6	+0.2
	baz=213						
T33K	Petersburg	86.07	23	P	P	18 24 44.6	0.0
	baz=222						
E09A	Wood Farm, Sta	86.10	37	IAmb	IAmb	18 24 47.2	
	comp=Z,26nm,1.2s						
G15K	Niukluk	86.12	6	P	P	18 24 44.8	+0.2
	baz=193						
PINM	Pinnacle	86.25	18	P	P	18 24 45.7	+0.2
	baz=215						
J19K	Poorman	86.25	10	P	P	18 24 45.4	+0.1
	baz=201						
N25K	Chitina, Valde	86.34	15	P	P	18 24 45.7	-0.2
	baz=211						
TNA	Tin City	86.36	4	P	P	18 24 46.4	+0.6
	baz=190,SNR=7.8						
F14K	Arctic Creek	86.39	5	P	P	18 24 46.3	+0.4
	baz=191						
M24K	Tolsona, Glenn	86.40	14	P	P	18 24 46.4	+0.3
	baz=210						
ELIB	Princess Elisa	86.41	187	*d*P	P	18 24 46.8	+0.4
	comp=Z,82nm,0.7s						
WAT6	Susitna Watana	86.46	14	P	P	18 24 46.8	+0.3
	baz=208,SNR=6.6						
TMUT	Trail Mountain	86.47	46	IAmb	IAmb	18 24 50.2	
	comp=Z,16nm,1.2s						
WAT1	Susitna Watana	86.50	13	P	P	18 24 47.1	+0.5
	baz=208						
SEY	Seymchan	86.52	347	⇓*i*P	P	18 24 47.0	+0.4
SEY				pmax	pmax		
	comp=Z,50nm,0.8s						
PLID	Pearl Lake	86.53	39	IAmb	IAmb	18 24 49.4	
	comp=Z,50nm,1.6s						
U35K	Hyder	86.53	25	P	P	18 24 47.1	+0.4
	baz=224						
H17K	Granite Mounta	86.53	8	P	P	18 24 47.3	+0.7
	baz=197						
B08A	Colville Reser	86.54	35	IAmb	IAmb	18 24 48.8	
	comp=Z,16nm,0.9s						
GYA	Guiyang	86.54	300	⇓P	P	18 24 48.7	+1.0
GYA				pmax	pmax		
	comp=Z,17nm,1.2s						
MCARA	McCarthy VSAT	86.56	16	P	P	18 24 46.8	0.0
	baz=213						
R32K	Eaglecrest	86.62	21	P	P	18 24 47.5	+0.3
	baz=220						
CTG	Chitna Glacier	86.66	17	P	P	18 24 47.5	0.0
	baz=214						
KTH	Kantishna Hill	86.67	12	IAmb	IAmb	18 24 47.6	
	comp=Z,25nm,1.0s						
G16K	Koyuk River	86.69	7	P	P	18 24 47.5	+0.2
	baz=195						
TRF	Thorofare Moun	86.70	12	IAmb	IAmb	18 24 48.3	
	comp=Z,32nm,0.9s						
TRF	Thorofare Moun	86.70	12	P	P	18 24 47.4	-0.3
	baz=206,SNR=11						
CHUM	Lake Minchumin	86.71	11	P	P	18 24 48.2	+0.8
	baz=204						
GCSA	Galena City Sc	86.76	9	P	P	18 24 48.3	+0.6
	baz=200						
F15K	North Star Dit	86.77	6	P	P	18 24 47.9	+0.2
	baz=193						
O28M	Mount Upton	86.82	18	P	P	18 24 48.6	+0.1
	baz=215						
HARP	HAARP	86.89	15	P	P	18 24 49.1	+0.7
	baz=211						
O29M	Mount Kennedy	86.91	19	P	P	18 24 48.4	-0.2
	baz=217						
H18K	Honhosa River	86.94	8	P	P	18 24 48.4	-0.2
	baz=199						
VHRN	Van Horn	86.97	56	IAmb	IAmb	18 24 52.5	
	comp=Z,16nm,0.9s						
DHY	Denali Highway	86.97	14	IAmb	IAmb	18 24 50.8	
	comp=Z,39nm,1.6s						
DHY	Denali Highway	86.97	14	P	P	18 24 49.2	+0.3
	baz=209						
G17K	Kiwalik Mounta	86.98	7	P	P	18 24 48.8	+0.1
	baz=196						
MNTX	Cornudas Mount	87.07	55	IAmb	IAmb	18 24 52.6	
	comp=Z,16nm,1.0s						
BPAW	Bear Paw Mtn.	87.15	12	P	P	18 24 49.0	-0.6
	baz=205						
T35M	Bob Quinn	87.20	24	P	P	18 24 49.3	-0.7
	baz=224						
MCK	McKinley	87.22	13	IAmb	IAmb	18 24 51.4	
	comp=Z,26nm,0.8s						
MCK	McKinley	87.22	13	P	P	18 24 49.8	-0.1
	baz=207,SNR=11						
P30M	Million Dollar	87.25	19	P	P	18 24 50.1	-0.1
	baz=218						
SKAG	Skagway	87.26	20	P	P	18 24 49.7	-0.4
	baz=220						
PAX	Paxson	87.31	14	P	P	18 24 50.0	-0.5
	baz=210						
LL02	Futaleuf	87.35	135	P	P	18 24 52.2	+1.0
LL02				IAmb	IAmb	18 24 54.3	
	comp=Z,47nm,1.4s						
YUK8	Steele Glacier	87.36	18	P	P	18 24 50.2	-0.7
	baz=216						
TX31	Lajitas Ar. Si	87.37	57	IAmb	IAmb	18 24 54.5	
	comp=Z,16nm,1.1s						
TXAR	Lajitas Array	87.37	57	P	P	18 24 52.8	+1.2
	comp=Z,8.9nm,0.9s,baz=217,slow=6.5,SNR=54						
TXAR				pP	pP	18 26 49.2	-0.4
	comp=Z,1.6nm,0.9s,baz=243,slow=5.7,SNR=4.9						
TXAR				PKKPbc	PKKPbc	18 42 39.7	+1.2
	comp=Z,1.6nm,0.8s,baz=120,slow=2.8,SNR=10						
	comp=Z,8.9nm,0.9s						
HWUT	Hardware Ranch	87.41	44	IAmb	IAmb	18 26 53.9	
	comp=Z,23nm,1.9s						
M26K	Nabesna, AK	87.42	16	P	P	18 24 51.2	+0.2
	baz=213						
YUK6	Outpost Mounta	87.48	18	P	P	18 24 51.0	-0.5
	baz=217						
PV10	Paradox Valley	87.49	47	IAmb	IAmb	18 24 53.3	
	comp=Z,10nm,0.8s						
PV20	West Nyswonger	87.53	47	IAmb	IAmb	18 24 54.1	
	comp=Z,13nm,1.0s						
TROLL	Troll, Antarti	87.53	180	⇓P	P	18 24 51.9	+0.3
PV23	Carpenter Ridg	87.55	47	IAmb	IAmb	18 24 54.4	
	comp=Z,15nm,0.8s						
S34M	Telegraph Cree	87.55	23	P	P	18 24 51.5	-0.1
	baz=223						
YUK3	Moose Creek	87.57	17	P	P	18 24 51.4	-0.5
	baz=215,SNR=12						
G18K	Tagagawik	87.61	8	P	P	18 24 51.2	-0.5
	baz=198						
PV02	Paradox Valley	87.62	48	IAmb	IAmb	18 25 49.0	
	comp=Z,11nm,0.7s						
HYT	Haines Junctio	87.64	19	P	P	18 24 52.3	+0.2
	baz=218						
M27K	Edge Creek, AK	87.67	16	P	P	18 24 52.3	+0.1
	baz=214						
ZEA	Zeya	87.69	331	*e*P	P	18 24 53.2	+0.9
ZEA				pmax	pmax		
	comp=N,10.0nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MENT	Mentasta	87.70	15	IAmb	IAmb	18 27 43.4	
	comp=Z,49nm,1.8s						
ANMO	Albuquerque	87.72	51	P	P	18 24 53.2	0.0
ANMO	Albuquerque	87.72	51	*de*P	P	18 24 54.2	+1.0
ANMO				pmax	pmax		
	comp=Z,11nm,1.2s						
ANMO	Albuquerque	87.72	51	P	P	18 24 54.4	+1.2
ANMO				pP	pP	18 26 51.4	-0.1
ANMO				x	x	18 27 47.8	
YUK4	Talbot Arm	87.72	18	P	P	18 24 53.3	+0.7
	baz=217						
H20K	Anotleneega Mo	87.76	10	P	P	18 24 53.0	+0.6
	baz=202						
SNAA	Sanae	87.81	179	⇓P	P	18 24 52.9	0.0
	comp=Z,203nm,0.6s						
SNAA	Sanae	87.81	179	P	P	18 24 52.5	-0.3
	comp=Z,6.6nm,0.6s,baz=209,slow=10.0,SNR=9.3						
	comp=Z,6.6nm,0.6s						
SNAA	Sanae	87.81	179	⇓*i*P	P	18 24 52.7	-0.1
SNAA				pmax	pmax		
	comp=Z,91nm,4.0s						
F17K	Baldwin Pennin	87.82	7	P	P	18 24 52.8	+0.1
	baz=196						
ALPN	Alpine	87.84	56	IAmb	IAmb	18 24 56.3	
	comp=Z,16nm,0.9s						
L26K	Log Cabin Wild	87.86	15	IAmb	IAmb	18 24 54.1	
	comp=Z,26nm,1.3s						
L26K	Log Cabin Wild	87.86	15	P	P	18 24 53.2	+0.3
	baz=212						
P32M	Atlin	87.89	21	P	P	18 24 53.2	0.0
	baz=221						
Q32M	Nakina River	87.91	22	P	P	18 24 52.7	-0.8
	baz=222						
XLT	XiLinHaoTe	87.93	319	*e*P	P	18 24 54.1	+0.3
XLT				pmax	pmax		
	comp=Z,23nm,0.8s						
I21K	Tanana	87.95	11	P	P	18 24 53.5	+0.2
	baz=204						
VNA3	Neumayer Olymp	87.95	176	⇓P	P	18 24 53.8	+0.4
	comp=Z,183nm,0.7s						
K24K	Donnelly Dome	87.96	14	P	P	18 24 53.8	+0.4
	baz=210,SNR=5.0						
NEA2	Nenana	87.97	12	IAmb	IAmb	18 24 54.9	
	comp=Z,11nm,0.8s						
NEA2	Nenana	87.97	12	P	P	18 24 53.6	+0.2
	baz=207,SNR=7.2						
TPB01	Permian Basin	87.97	56	IAmb	IAmb	18 24 56.7	
	comp=Z,18nm,0.8s						
BVCY	Beaver Creek	87.98	16	P	P	18 24 53.6	0.0
	baz=215						
O30N	Mendenhall	88.03	19	P	P	18 24 53.9	0.0
	baz=219						
MLY	Manley	88.04	11	IAmb	IAmb	18 24 54.0	
	comp=Z,31nm,1.3s						
MLY	Manley	88.04	11	P	P	18 24 53.7	0.0
	baz=206,SNR=9.9						
G19K	Purcell Mounta	88.05	8	P	P	18 24 54.0	+0.3
	baz=200						
XAN	Xi'an	88.06	307	P	P	18 24 55.8	+1.2
XAN				pmax	pmax		
	comp=Z,52nm,1.1s						
PECS	Pecos	88.09	56	IAmb	IAmb	18 24 57.2	
	comp=Z,16nm,1.3s						
RIDG	Independent Ri	88.12	14	IAmb	IAmb	18 24 56.2	
	comp=Z,22nm,1.2s						
RIDG	Independent Ri	88.12	14	P	P	18 24 54.4	+0.2
	baz=211						
F18K	Selawik	88.16	7	P	P	18 24 54.2	0.0
	baz=197						
DOT	Dot Lake	88.22	15	IAmb	IAmb	18 24 56.1	
	comp=Z,29nm,1.3s						
HDA	Harding Lake	88.24	13	IAmb	IAmb	18 24 55.4	
	comp=Z,17nm,0.6s						
HDA	Harding Lake	88.24	13	P	P	18 24 54.4	-0.2
	baz=209,SNR=13						
H21K	Melozitna Rive	88.25	10	P	P	18 24 54.9	+0.2
	baz=204						
L27K	Beaver Creek,	88.27	16	P	P	18 24 55.1	+0.2
	baz=214						
N30M	Aishikik Lake	88.27	18	P	P	18 24 55.0	0.0
	baz=218						
AHID	Auburn Hatcher	88.29	43	IAmb	IAmb	18 24 58.0	
	comp=Z,9.8nm,0.9s						
WHY	Whitehorse	88.33	20	P	P	18 24 55.1	-0.2
	baz=220						
DLBC	Dease Lake	88.33	23	P	P	18 24 55.0	-0.3
	baz=224						
E17K	Hotham Inlet	88.38	6	P	P	18 24 54.8	-0.5
	baz=195,SNR=14						
VNA2	Neumayer--Watz	88.39	177	⇓P	P	18 24 56.1	+0.6
	comp=Z,80nm,0.6s,baz=191,slow=4.5						
IMAR	Indian Mountai	88.40	10	P	P	18 24 55.6	+0.3
I23K	Minto, Yukon-K	88.41	12	IAmb	IAmb	18 24 56.0	
	comp=Z,10.0nm,0.7s						
I23K	Minto, Yukon-K	88.41	12	P	P	18 24 55.2	-0.1
	baz=207,SNR=7.3						
COLA	College	88.46	12	P	P	18 24 55.3	-0.3
COLA	College	88.46	12	P	P	18 24 55.3	-0.3
COLA	College	88.46	12	*de*P	P	18 24 55.2	-0.3
COLA				pmax	pmax		
	comp=Z,56nm,1.2s						
COLA	College	88.46	12	P	P	18 24 56.0	+0.4
	baz=208						
COLA	College	88.46	12	P	P	18 24 55.4	-0.2
COLA				pP	pP	18 26 53.6	-0.5
COLA				sP	sP	18 27 48.8	+0.3
NVL	N'lazarevskaya	88.50	183	*e*P	P	18 25 01.7	+5.8
NVL				*e*		18 28 38.9	
NVL				*e*PPP	PPP	18 30 39.5	
NVL				*e*SS	SS	18 41 11.5	+10
NVL				*e*SSS	SSS	18 44 52.9	
NVL				pmax	pmax		
	comp=Z,151nm,2.8s						
SCRK	Sand Creek	88.52	14	IAmb	IAmb	18 24 57.6	
	comp=Z,23nm,1.3s						
SCRK	Sand Creek	88.52	14	P	P	18 24 55.9	-0.2
	baz=212,SNR=5.8						
LR05	Currie	88.54	133	IAmb	IAmb	18 24 59.5	
	comp=Z,37nm,1.2s						
IL31		88.57	13	IAmb	IAmb	18 24 57.5	
	comp=Z,20nm,0.9s						
ILAR	Eielson Array	88.57	13	P	P	18 24 55.8	-0.4
	comp=Z,17nm,1.0s,baz=216,slow=5.5,SNR=108						
ILAR				pP	pP	18 26 53.7	-1.0
	comp=Z,2.6nm,1.0s,baz=241,slow=5.3,SNR=4.7						
ILAR				PKiKP	PKiKP	18 29 51.9	-0.7
	comp=Z,0.4nm,0.4s,baz=250,slow=2.9,SNR=6.7						
ILAR				PKKP	PKKPdf	18 42 34.0	+2.1
	comp=Z,0.3nm,0.5s,baz=346,slow=2.1,SNR=6.8						
	comp=Z,17nm,1.0s						
ILAR	Eielson Array	88.57	13	P	P	18 24 56.0	-0.2
F19K	Shaleruckik Mo	88.61	8	IAmb	IAmb	18 24 57.5	
	comp=Z,17nm,0.9s						
F19K	Shaleruckik Mo	88.61	8	P	P	18 24 56.6	+0.3
	baz=199,SNR=16						
VNA1	Neumayer--Stat	88.62	177	⇓P	P	18 24 57.2	+0.7
	comp=Z,91nm,0.9s						
P33M	Teslin, Yukon	88.66	21	P	P	18 24 57.1	+0.3
	baz=222						
M29M	Somme Creek	88.66	17	P	P	18 24 57.3	+0.5
	baz=217,SNR=7.5						
MSO	Missoula	88.68	38	IAmb	IAmb	18 26 56.2	
	comp=Z,24nm,2.0s						
N31M	Braeburn, Yuko	88.69	19	P	P	18 24 57.2	+0.4
	baz=219						
R33M	Jennings River	88.69	22	P	P	18 24 57.1	+0.1
	baz=223						
DLMT	Dillon	88.70	40	IAmb	IAmb	18 24 59.9	
	comp=Z,16nm,1.0s						
H22K	Ishtalitna Cre	88.71	11	P	P	18 24 57.3	+0.4
	baz=205,SNR=21						
J25K	Salcha River,	88.75	14	P	P	18 24 56.8	-0.3
	baz=210,SNR=8.0						
POKR	Poker Plat Res	88.76	13	P	P	18 24 56.7	-0.4
	baz=209,SNR=5.3						
E18K	Tukpahlearik C	88.84	7	P	P	18 24 57.7	+0.3
	baz=196,SNR=8.3						
SAND	Sanderson	88.85	57	IAmb	IAmb	18 25 00.4	
	comp=Z,8.9nm,1.0s						
D17K	Noatak River	88.86	6	P	P	18 24 57.3	-0.1
	baz=194,SNR=14						
SNOW	Snow King Moun	88.86	42	IAmb	IAmb	18 25 00.8	
	comp=Z,28nm,1.1s						
O20A	White River Ci	88.88	46	IAmb	IAmb	18 25 00.6	
	comp=Z,18nm,1.3s						
G21K	Allakaket	88.93	10	P	P	18 24 57.6	-0.2
	baz=203						
MOOW	Moose Ponds	89.01	42	IAmb	IAmb	18 25 01.3	
	comp=Z,25nm,1.9s						
F20K	Avaraart Lake	89.09	9	P	P	18 24 59.1	+0.5
	baz=201						
GO06	Curarrehue	89.19	132	P	P	18 25 00.2	+0.2
GO06				IAmb	IAmb	18 25 02.6	
	comp=Z,19nm,1.1s						
FLWY	Flagg Ranch	89.21	42	IAmb	IAmb	18 25 02.7	
	comp=Z,24nm,0.9s						
BILL	Bilibino	89.21	354	P	P	18 24 59.9	+0.8
BILL				IAmb	IAmb	18 25 01.8	
	comp=Z,9.4nm,0.7s						
BILL	Bilibino	89.21	354	*d i*P	P	18 24 59.2	+0.1
BILL				pmax	pmax		
	comp=Z,16nm,1.1s						
BILL	Bilibino	89.21	354	P	P	18 24 59.4	+0.3
BILL				pP	pP	18 26 57.7	-0.9
RDOG	Red Dog Mine	89.22	6	P	P	18 24 59.7	+0.5
	baz=194						
C16K	Lisburne Hills	89.22	5	P	P	18 24 59.5	+0.4
	baz=192						
KMI2	Kunming	89.23	297	⇓P	P	18 25 02.2	+1.7
KMI2				pmax	pmax		
	comp=Z,37nm,1.0s						
KMI2				pmax	pmax		
	comp=Z,140nm,5.5s						
YHB	Horse Butte	89.24	41	IAmb	IAmb	18 25 03.0	
	comp=Z,17nm,1.0s						
M30M	Minto, Yukon	89.24	18	IAmb	IAmb	18 25 01.1	
	comp=Z,19nm,0.9s						
M30M	Minto, Yukon	89.24	18	P	P	18 24 59.9	+0.5
	baz=218,SNR=11						
N32M	Quiet Lake	89.27	20	P	P	18 24 59.9	+0.3
	baz=222						
E19K	Redstone River	89.28	8	P	P	18 24 59.8	+0.4
	baz=200,SNR=36						
BW06	Boulder Array	89.28	43	IAmb	IAmb	18 25 01.9	
	comp=Z,10nm,0.8s						
PD31	Pinedale Array	89.28	43	IAmb	IAmb	18 25 01.9	
	comp=Z,10.0nm,0.8s						
PDAR	Pinedale Array	89.28	43	P	P	18 25 00.9	+0.6
	comp=Z,9.7nm,0.8s,baz=209,slow=3.1,SNR=78						
PDAR				pP	pP	18 26 58.1	-0.9
	comp=Z,0.4nm,0.6s,baz=220,slow=3.9,SNR=2.0						
PDAR				PKKPbc	PKKPbc	18 42 33.1	-1.6
	comp=Z,1.0nm,0.7s,baz=74,slow=4.1,SNR=8.3						
	comp=Z,9.7nm,0.8s						
L29M	L29M	89.29	17	P	P	18 25 00.0	+0.4
	baz=217						
H24K	Noodor Dome	89.31	12	P	P	18 24 59.6	-0.1
	baz=208						
PLCA	Paso Flores	89.31	134	P	P	18 25 02.1	+1.7
	comp=Z,5.4nm,0.8s,baz=226,slow=5.0,SNR=14						
PLCA				PKKPbc	PKKPbc	18 42 33.8	-0.2
	comp=Z,1.6nm,0.9s,baz=274,slow=4.5,SNR=2.9						
	comp=Z,5.4nm,0.8s						
HHC	Hu-ho-hao-te	89.32	314	*e*P	P	18 25 01.4	+1.0
HHC				pmax	pmax		
	comp=Z,17nm,1.2s						
HHC				pmax	pmax		
	comp=Z,50nm,7.6s						
BOZ	Bozeman (W)	89.40	40	IAmb	IAmb	18 25 03.1	
	comp=Z,13nm,0.9s						
ODSA	Odessa	89.42	55	IAmb	IAmb	18 25 03.0	
	comp=Z,18nm,1.0s						
PRP	Porcupine Dome	89.50	13	IAmb	IAmb	18 25 03.0	
	comp=Z,28nm,1.3s						
PRP	Porcupine Dome	89.50	13	P	P	18 25 00.9	+0.3
	baz=210,SNR=9.0						
F21K	Alatna River	89.58	9	P	P	18 25 00.8	-0.1
	baz=203						
C17K	DeLong Mountai	89.60	6	P	P	18 25 01.4	+0.5
	baz=194						
M31M	Drury Creek, Y	89.66	19	P	P	18 25 01.5	+0.2
	baz=220						
G23K	Bananza Creek	89.69	11	P	P	18 25 01.8	+0.4
	baz=206,SNR=6.0						
HAYD	Hayden	89.72	46	IAmb	IAmb	18 25 05.3	
	comp=Z,41nm,2.0s						
DAWY	Dawson	89.72	16	IAmb	IAmb	18 25 03.3	
	comp=Z,22nm,1.0s						
DAWY	Dawson	89.72	16	P	P	18 25 02.0	+0.4
	baz=216,SNR=11						
DRIO	Del Rio	89.83	58	IAmb	IAmb	18 25 04.9	
	comp=Z,16nm,0.8s						
I26K	Coal Creek Min	89.84	14	P	P	18 25 02.8	+0.8
	baz=212						
CM31	Chiang Mai Arr	89.95	290	P	P	18 25 00.2	-3.5
	SNR=18						
CMAR	Chiang Mai Arr	89.95	290	P	P	18 25 05.1	+1.4
	comp=Z,24nm,1.0s,baz=121,slow=3.0,SNR=123						
CMAR				PP	PP	18 28 46.9	+0.2
	comp=Z,1.6nm,0.9s,baz=129,slow=6.1,SNR=5.0						
CMAR				PKKPbc	PKKPbc	18 42 33.0	+1.3
	comp=Z,2.2nm,0.6s,baz=283,slow=4.2,SNR=10						
	comp=Z,24nm,1.0s						
CMAR	Chiang Mai Arr	89.95	290	P	P	18 25 03.9	+0.2
C18K	Utukok River	89.96	6	P	P	18 25 03.4	+0.8
	baz=196						
WTLY	Watson Lake, Y	89.97	22	P	P	18 25 02.8	0.0
	baz=225						
MSTX	Muleshoe	90.03	54	IAmb	IAmb	18 25 05.5	
	comp=Z,13nm,0.9s						
OZNA	Ozona	90.03	57	IAmb	IAmb	18 25 05.2	
	comp=Z,5.7nm,0.7s						
K29M	Barlow Dome	90.04	17	P	P	18 25 03.5	+0.3
	baz=218,SNR=9.3						
CHTO	Chiang Mai	90.08	290	P	P	18 25 05.8	+1.5
CHTO	Chiang Mai	90.08	290	P	P	18 25 04.3	0.0
CHTO	Chiang Mai	90.08	290	P	P	18 25 05.7	+1.5
CHTO	Chiang Mai	90.08	290	P	P	18 25 04.6	+0.3
	comp=Z,497nmcomp=Z,49nm,1.1s						
YNE	Yellowstone No	90.09	41	IAmb	IAmb	18 25 06.8	
	comp=Z,9.7nm,0.9s						
COLD	Coldfoot	90.12	11	IAmb	IAmb	18 25 05.2	
	comp=Z,21nm,1.1s						
COLD	Coldfoot	90.12	11	P	P	18 25 03.8	+0.5
	baz=206,SNR=12						
G24K	Hadweenzic Riv	90.14	12	P	P	18 25 03.7	+0.2
	baz=209						
D19K	Kuna River	90.15	7	P	P	18 25 03.5	0.0
	baz=199,SNR=19						
129A	Stewart Farms,	90.16	55	IAmb	IAmb	18 25 06.3	
	comp=Z,9.8nm,1.0s						
E20K	Nigu River	90.17	8	P	P	18 25 03.9	+0.3
	baz=201						
MAYO	Mayo, Yukon	90.29	18	P	P	18 25 04.5	+0.3
	baz=219						
J29N	Klondike Camp	90.34	16	P	P	18 25 05.2	+0.7
	baz=217,SNR=6.6						
833A	Chaparral WMA,	90.37	60	IAmb	IAmb	18 25 07.1	
	comp=Z,9.7nm,0.8s						
BTO2	Baotou	90.41	314	*e*P	P	18 25 06.7	+1.3
BTO2				sP	sP	18 27 59.6	+1.0
BTO2				PP	PP	18 28 54.8	+4.8
BTO2				S	S	18 35 07.0	-7.2
BTO2				pmax	pmax		
	comp=Z,30nm,1.3s						
BTO2				pmax	pmax		
	comp=Z,240nm,7.8s						
I27K	Kandik River	90.44	14	P	P	18 25 05.0	+0.1
	baz=214						
D20K	Etivluk River	90.54	8	P	P	18 25 05.8	+0.6
	baz=200,SNR=20						
C19K	Lookout Ridge	90.57	7	P	P	18 25 06.1	+0.7
	baz=197,SNR=18						
PZH	PanZhiHua	90.59	298	P	P	18 25 07.6	+1.0
POST	Post	90.62	55	IAmb	IAmb	18 25 07.9	
	comp=Z,11nm,0.8s						
E21K	Killik River	90.64	9	P	P	18 25 06.1	+0.3
	baz=203						
E22K	Anaktuvuk Pass	90.68	10	IAmb	IAmb	18 25 07.5	
	comp=Z,20nm,1.1s						
E22K	Anaktuvuk Pass	90.68	10	P	P	18 25 05.9	-0.1
	baz=205,SNR=18						
I28M	Miner Creek	90.71	15	P	P	18 25 05.9	-0.3
	baz=215						
HNDO	Hondo	90.94	59	IAmb	IAmb	18 25 10.4	
	comp=Z,16nm,0.8s						
J30M	Hart River	90.94	17	P	P	18 25 06.9	-0.4
	baz=219						
E23K	Chandalar	90.97	10	P	P	18 25 07.6	+0.2
	baz=207						
H27K	Steamboat Moun	90.98	14	P	P	18 25 08.4	+1.0
	baz=214,SNR=7.9						
EFI	East Falkland	91.04	147	⇑*i*P	P	18 25 09.4	+1.3
EFI				pmax	pmax		
	comp=Z,39nm,0.9s						
I29M	Ogilvie Camp,	91.05	16	IAmb	IAmb	18 25 09.6	
	comp=Z,23nm,1.3s						
I29M	Ogilvie Camp,	91.05	16	P	P	18 25 08.1	+0.4
	baz=217,SNR=7.0						

G26K	Porcupine Rive	91.10	13	P	P	18 25 08.5	+0.7
	baz=212,SNR=8.1						
TGTN	Hyland Airport	91.15	22	P	P	18 25 08.6	+0.4
	baz=226						
E24K	Your Creek	91.18	11	P	P	18 25 08.8	+0.6
	baz=208						
K22A	Casper	91.19	44	IAmb	IAmb	18 25 10.8	
	comp=Z,9.3nm,0.9s						
C21K	Knifeblade Rid	91.19	8	P	P	18 25 08.3	0.0
	baz=202						
D22K	Ayikyak River	91.23	9	P	P	18 25 08.9	+0.4
	baz=204						
F25K	Christian Rive	91.28	12	P	P	18 25 09.1	+0.3
	baz=210						
I30M	Mount Dempster	91.43	16	P	P	18 25 09.9	+0.3
	baz=219,SNR=7.5						
A19K	Wainwright	91.47	6	P	P	18 25 10.0	+0.5
	baz=196						
TOLK	Toolik Lake Re	91.50	10	P	P	18 25 10.0	+0.2
	baz=207						
D23K	Nanushuk River	91.61	10	P	P	18 25 10.0	-0.1
	baz=206						
B21K	Ikpikpuk River	91.65	8	P	P	18 25 10.8	+0.5
	baz=202						
F26K	Sheenjek River	91.66	12	P	P	18 25 10.8	+0.3
	baz=212						
H29M	Whitestone	91.72	15	P	P	18 25 10.9	+0.2
	baz=217						
KOTAN	Kotaneelee Air	91.73	24	P	P	18 25 10.9	0.0
	baz=229						
E25K	Arctic Village	91.75	12	IAmb	IAmb	18 28 03.7	
	comp=Z,8.3nm,0.6s						
E25K	Arctic Village	91.75	12	P	P	18 25 11.1	+0.2
	baz=210						
ABTX	Abilene, Hawle	91.87	56	IAmb	IAmb	18 25 13.4	
	comp=Z,6.8nm,0.6s						
MT01	Popeta	91.89	127	IAmb	IAmb	18 25 14.3	
	comp=Z,20nm,0.9s						
D24K	Happy Valley	92.08	10	P	P	18 25 12.2	-0.1
	baz=207						
YAK	Yakutsk	92.21	338	P	P	18 25 12.7	-0.3
YAK	Yakutsk	92.21	338	*e*P	P	18 25 12.2	-0.8
YAK				*e*PPP	PPP	18 31 05.4	
YAK				*e*S	SKSac	18 34 52.0	-1.6
YAK				*e*		18 35 28.4	
YAK				*e*SS	SS	18 41 58.9	+2.7
YAK				*e*SSS	SSS	18 45 38.4	
YAK				pmax	pmax		
	comp=Z,54nm,1.0s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.5s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,174nm,5.7s						
YAK				pmax	pmax		
	comp=N,81nm,6.1s						
YAK				pmax	pmax		
	comp=E,92nm,8.4s						
YAK				smax	smax		
	comp=N,174nm,5.7s						
YAK				smax	smax		
	comp=E,132nm,7.6s						
EPYK	Eagle Plains	92.25	16	P	P	18 25 12.9	-0.3
	baz=218						
KSCO	Kaye Shedlock'	92.26	49	IAmb	IAmb	18 25 16.0	
	comp=Z,13nm,0.8s						
C23K	Itkillik River	92.41	9	P	P	18 25 14.2	+0.4
	baz=206						
H31M	Peel River	92.42	17	P	P	18 25 14.3	+0.2
	baz=220						
B22K	Teshekpuk Lake	92.47	8	IAmb	IAmb	18 25 15.7	
	comp=Z,12nm,1.1s						
B22K	Teshekpuk Lake	92.47	8	P	P	18 25 14.5	+0.5
	baz=203						
F28M	Old Crow	92.50	14	P	P	18 25 14.3	0.0
	baz=216						
E27K	Coleen River	92.60	13	P	P	18 25 14.2	-0.6
	baz=214						
C24K	Franklin Bluff	92.61	10	P	P	18 25 14.4	-0.3
	baz=208						
D25K	Kavik River	92.65	11	P	P	18 25 14.6	-0.4
	baz=210						
LZH	Lanzhou	92.70	308	*e*P	P	18 25 17.6	+1.4
LZH				pmax	pmax		
	comp=Z,29nm,1.1s						
LZDM	Lanzhou Array	92.76	307	P	P	18 25 17.3	+0.7
	comp=Z,2.2nm,0.5s,baz=115,slow=5.2,SNR=10						
	comp=Z,2.2nm,0.5s						
G30M	tAoh Zraii Nji	92.85	15	P	P	18 25 16.1	+0.1
	baz=219						
A21K	Barrow	93.00	7	P	P	18 25 16.1	-0.3
	baz=200						
CO02	Combarbal	93.26	125	IAmb	IAmb	18 25 21.5	
	comp=Z,12nm,0.9s						
G31M	Satah River	93.30	16	P	P	18 25 17.3	-0.6
	baz=221						
E28M	Babbage River	93.38	13	P	P	18 25 18.6	+0.3
	baz=216						
C27K	Jago River	93.39	11	P	P	18 25 17.5	-0.8
	baz=212						
C26K	Camden Bay	93.42	11	P	P	18 25 18.2	-0.2
	baz=211						
F30M	Barrier River	93.45	15	P	P	18 25 18.2	-0.4
	baz=219						
E29M	Blow River	93.57	14	P	P	18 25 18.5	-0.6
	baz=217						
D27M	Malcolm River	93.61	12	P	P	18 25 19.7	+0.3
	baz=215						
F31M	Tsiigehtchic	93.82	16	P	P	18 25 20.2	0.0
	baz=221						
WRGLY	Wrigley	93.96	22	P	P	18 25 21.0	0.0
	baz=230						
D28M	Stokes Point	94.14	13	P	P	18 25 21.7	0.0
	baz=217						
INK	Inuvik	94.53	15	P	P	18 25 23.3	-0.2
	baz=221						
CFA	Coronel Fontan	95.18	126	P	P	18 25 28.6	+1.1
	comp=Z,3.0nm,0.7s,baz=268,slow=4.0,SNR=10						
	comp=Z,3.0nm,0.7s						
ULN	Ulaanbaatar	95.36	319	P	P	18 25 28.0	0.0
ULN				IAmb	IAmb	18 25 29.9	
	comp=Z,5.2nm,0.9s						
ULN	Ulaanbaatar	95.36	319	*de*P	P	18 25 27.4	-0.5
ULN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ULN	Ulaanbaatar	95.36	319	P	P	18 25 28.1	+0.2
ULN	Ulaanbaatar	95.36	319	P	P	18 25 27.5	-0.5
SONM	Songino Array	95.75	319	P	P	18 25 29.1	-0.6
	comp=Z,1.6nm,0.7s,baz=141,slow=5.4,SNR=6.8						
SONM				PKiKP	PKiKP	18 30 04.9	-0.6
	comp=Z,0.4nm,0.3s,baz=143,slow=1.8,SNR=2.2						
SONM				PKKP	PKKPbc	18 42 17.8	-0.3
	comp=Z,1.4nm,0.8s,baz=292,slow=3.4,SNR=5.1						
	comp=Z,1.6nm,0.7s						
YKA	Yellowknife Ar	96.80	25	P	P	18 25 34.2	+0.3
	comp=Z,0.7nm,0.8s,baz=253,slow=4.6,SNR=11						
YKA				pP	pP	18 27 32.4	-1.1
	comp=Z,0.5nm,1.0s,baz=244,slow=5.4,SNR=2.8						
YKA				PKiKP	PKiKP	18 30 06.3	-0.4
	comp=Z,0.3nm,0.6s,baz=277,slow=1.8,SNR=3.8						
YKA				PKKP	PKKPbc	18 42 13.1	-2.6
	comp=Z,0.4nm,0.5s,baz=31,slow=2.5,SNR=7.1						
	comp=Z,0.7nm,0.8s						
GTA2	Gaotai	96.98	309	P	P	18 25 35.9	+0.5
GTA2				pmax	pmax		
	comp=Z,6.0nm,1.0s						
C36M	Paulatuk	97.72	17	P	Pdif	18 25 37.8	0.0
	baz=230						
TIXI	Tiksi	98.88	345	⇑*i*P	Pdif	18 25 42.5	-0.4
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.2s						
A36M	Sachs Harbour	99.14	15	P	Pdif	18 25 43.7	-0.4
	baz=229						
LPAZ	La Paz	102.21	113	P	Pdif	18 26 02.2	+2.4
	comp=Z,1.3nm,0.9s,baz=291,slow=8.6,SNR=8.6						
LPAZ				PKKPbc	PKKPbc	18 41 59.5	-0.4
	comp=Z,1.1nm,0.5s,baz=25,slow=9.0,SNR=4.6						
SDV	Santo Domingo	109.52	88	PKiKP	PKiKP	18 30 30.8	-0.9
	comp=Z,0.6nm,0.3s,baz=285,slow=5.9,SNR=3.7						
ZALV	Zalesovo Beam	110.50	321	PKiKP	PKiKP	18 30 31.2	-0.9
	comp=Z,7.6nm,0.6s,baz=151,slow=1.1,SNR=47						
ZALV				PKKPbc	PKKPbc	18 41 33.4	-1.3
	comp=Z,0.6nm,0.5s,baz=235,slow=5.2,SNR=3.6						
NRIK	Noril'sk	110.66	338	PKiKP	PKiKP	18 30 31.8	-0.2
	comp=Z,2.3nm,0.5s,baz=89,slow=4.8,SNR=6.3						
MK31	Makanchi Array	111.16	313	*d i*PKIKP	PKiKP	18 30 32.9	-0.8
MKAR	Makanchi Array	111.16	313	Pdiff	Pdif	18 26 39.2	+1.0
	comp=Z,0.9nm,0.8s,baz=91,slow=6.4,SNR=8.2						
MKAR				PKiKP	PKiKP	18 30 32.9	-0.7
	comp=Z,7.2nm,0.6s,baz=192,slow=0.9,SNR=89						
MKAR				PKKPbc	PKKPbc	18 41 32.3	-0.2
	comp=Z,0.8nm,0.6s,baz=132,slow=13,SNR=4.7						
MKAR				PKKP	PKKPdf	18 41 50.3	+0.7
	comp=Z,0.2nm,0.3s,baz=148,slow=28,SNR=4.7						
KURK	Kurchatov	113.98	317	*d i*PKIKP	PKiKP	18 30 38.1	-0.7
KURK	Kurchatov	113.98	317	P	PKiKP	18 30 38.5	-0.4
KURBB	Kurchatov Arra	114.03	317	PKiKP	PKPdf	18 30 38.2	-0.8
	comp=Z,11nm,0.7s,baz=97,slow=1.8,SNR=120						
KURBB				PP	PP	18 31 39.0	-4.8
	comp=Z,2.0nm,0.9s,baz=95,slow=6.4,SNR=7.0						
KURBB				PKKPbc	PKKPbc	18 41 22.9	-0.2
	comp=Z,1.6nm,1.0s,baz=271,slow=4.0,SNR=8.8						
KURBB				PKKPab	PKKPab	18 41 30.9	+1.3
	comp=Z,1.5nm,0.9s,baz=272,slow=4.6,SNR=6.6						
TULEG	Thule	114.50	14	*i* P	PKPdf	18 30 38.8	-0.3
KSH2	Kashi	115.07	304	PKP	PKiKP	18 30 41.8	+0.2
PCRV	Puerto La Cruz	115.53	88	PP	PP	18 31 54.1	-1.0
	baz=344,slow=8.9,SNR=3.2						
AAK	Ala-Archa	116.23	308	*i* PKPdf	PKPdf	18 30 43.1	-0.6
	SNR=8.6						
AAK	Ala-Archa	116.23	308	*d i*PKIKP	PKPdf	18 30 43.3	-0.4
AAK	Ala-Archa	116.23	308	P	PKPdf	18 30 43.4	-0.4
M65A	Busby, Falmout	116.42	53	P	PKPdf	18 30 42.8	-1.0
	baz=265						
NEEM	North Greenlan	117.83	11	*i* P	PKPdf	18 30 45.6	-0.4
NOR	Nord	118.57	3	*i* P	PKPdf	18 30 46.5	-0.4
UPNV	Upernavik	118.93	17	*i* P	PKPdf	18 30 47.0	-0.8
SCHQ	Schefferville	118.98	38	PKP	PKPdf	18 30 47.7	-0.7
	comp=Z,3.5nm,0.7s,baz=286,slow=1.9,SNR=7.3						
SCHQ				PKKPbc	PKKPbc	18 41 04.9	-1.1
	comp=Z,1.6nm,0.8s,baz=46,slow=5.2,SNR=3.9						
BVAR	Borovoye Array	119.08	320	PKP	PKPdf	18 30 48.5	-0.2
	comp=Z,22nm,0.4s,baz=113,slow=2.1,SNR=285						
BVAR				PKKPbc	PKKPbc	18 41 05.5	-0.2
	comp=Z,1.1nm,0.6s,baz=267,slow=3.0,SNR=8.4						
BORK	Borovoye	119.12	320	*d i*PKIKP	PKPdf	18 30 48.3	-0.4
BDFB	Brasilia	119.25	123	PKP	PKPdf	18 30 49.9	-0.3
	comp=Z,2.9nm,0.4s,baz=191,slow=2.0,SNR=6.5						
BDFB				PKKPbc	PKKPbc	18 41 04.7	-0.1
	comp=Z,3.7nm,0.6s,baz=61,slow=9.3,SNR=5.8						
KBL	Kabul	119.77	299	P	PKiKP	18 30 51.4	+0.5
	SNR=11						
KBL				P	PKiKP	18 30 51.4	+0.5
CHGR	Chuyangaron	120.01	303	*d i*PKIKP	PKPdf	18 30 50.9	-0.1
NUUG	Nuugaatsiaq	120.30	18	*i* P	PKPdf	18 30 49.9	-0.5
KBS	Kingsbay	121.53	358	*e*PKPdf	PKiKP	18 30 53.1	+0.3
KBS	Kingsbay	121.53	358	*i* P	PKiKP	18 30 52.9	+0.1
ILULI	Ilulissat	122.02	20	*i* P	PKPdf	18 30 53.4	-0.3
SPA0	Spitsbergen Ar	122.05	356	*e*PKPdf	PKPdf	18 30 53.8	+0.1
SPITS	Spitsbergen Ar	122.05	356	PKP	PKPdf	18 30 53.6	-0.1
	comp=Z,15nm,0.7s,baz=64,slow=5.7,SNR=31						
SPITS				PKKPab	PKKPab	18 40 53.8	+0.1
	comp=Z,3.8nm,0.7s,baz=172,slow=6.7,SNR=5.9						
HOPEN	Hopen	122.93	354	*e*PKPdf	PKPdf	18 30 54.8	-0.6
DAG	Danmarks Havn	122.96	5	*i* P	PKPdf	18 30 54.4	-1.1
SUMG	Summit	123.41	13	*i* P	PKPdf	18 30 57.0	+0.1
NUUK	Nuuk	124.06	25	*i* P	PKPdf	18 30 57.9	+0.1
SUR	Sutherland	124.15	200	P	PKPdf	18 30 58.0	-1.4
MDP	Montagnes des	125.04	99	PKP	PKiKP	18 31 01.6	-0.1
	comp=Z,14nm,1.0s,baz=278,slow=4.4,SNR=5.1						
DBG	Daneborg	125.07	7	*i* P	PKPdf	18 30 59.2	-0.3
ARTI	Arti	125.34	325	*i* PKIKP	PKiKP	18 31 00.8	-0.1
ARTI						18 33 00.5	
ARTI						18 37 19.8	
BJO1	Bjornoya	125.37	354	*e*PKPdf	PKiKP	18 31 01.2	+0.6
NGCH	Negor - Chabah	125.52	287	P	PKPdf	18 31 01.1	-0.7
BOSA	Boshof	125.97	206	PKP	PKiKP	18 31 03.6	+0.3
	comp=Z,6.1nm,0.6s,baz=142,slow=1.8,SNR=19						
JLN	Jalan Bani Buh	126.58	283	P	PKPdf	18 31 03.0	-0.9
	SNR=7.8						
WSAR	Wadi Sarin	127.47	284	P	PKPdf	18 31 04.7	-0.9
MHTO	MHTO	127.69	281	P	PKPdf	18 31 05.3	-0.7
	SNR=6.9						
JMDO	Jabal Madar	127.81	283	P	PKPdf	18 31 04.6	-1.7
SMDO	Samad	127.97	284	P	PKPdf	18 31 06.6	-0.1
HAMF	Hammerfest	128.38	351	*e*PKPdf	PKPdf	18 31 05.9	0.0
JASK	Jask - Hormozg	128.51	287	P	PKPdf	18 31 06.9	-0.6
BSY	Bisya	128.69	283	P	PKPdf	18 31 07.7	-0.3
HOQ	Hoqain	128.72	284	P	PKPdf	18 31 07.1	-0.8
KIRV	Kirov	129.02	330	*de*PKIKP	PKPdf	18 31 07.1	-0.3
APA	Apatity	129.08	345	⇓*i*PKIKP	PKPdf	18 31 07.0	-0.3
ARA0	ARCESS Array S	129.08	349	*e*PKPdf	PKPdf	18 31 07.3	0.0
ARCES	ARCESS Array B	129.08	349	PKP	PKPdf	18 31 07.2	-0.2
	comp=Z,6.7nm,0.4s,baz=40,slow=1.0,SNR=50						
SHAO	Shalim	129.28	277	P	PKPdf	18 31 07.2	-2.0
SOHO	SOHO	129.50	285	*i* PKPdf	PKPdf	18 31 09.1	-0.3
	SNR=18						
SOHO	SOHO	129.50	285	P	PKPdf	18 31 09.1	-0.3
DMTO	DMTO	129.85	276	P	PKPdf	18 31 08.6	-1.7
MDH	Madha	129.85	286	P	PKPdf	18 31 09.0	-1.0
UOSS	Minazif	129.89	286	PKPdf	PKPdf	18 31 09.8	-0.3
UOSS	Minazif	129.89	286	P	PKPdf	18 31 09.3	-0.9
BANOM	Banah	129.92	287	PKPdf	PKPdf	18 31 09.9	-0.3
BANOM	Banah	129.92	287	P	PKPdf	18 31 08.9	-1.3
KTK1	Kautokeino	129.92	350	*e*PKPdf	PKPdf	18 31 08.6	-0.3
HATD	Hatta, Dubai	129.94	286	*i* PKiKP	PKPdf	18 31 10.3	0.0
	SNR=15						
HATD	Hatta, Dubai	129.94	286	P	PKPdf	18 31 10.3	0.0
	SNR=7.6						
TRO	Tromso	129.97	352	*e*PKPdf	PKPdf	18 31 09.1	+0.2
MSFE	Esma-Masafi	129.98	286	*i* PKiKP	PKPdf	18 31 10.6	+0.2
	SNR=10						
MASF	Masafi	129.98	286	P	PKPdf	18 31 10.7	+0.3
	SNR=5.6						
ASHO	Ashiyiah	129.99	285	*i* PKiKP	PKPdf	18 31 10.5	+0.1
	SNR=8.9						
ASHO	Ashiyiah	129.99	285	P	PKPdf	18 31 09.8	-0.6
	SNR=5.9						
SHME	Shamm	130.07	287	P	PKPdf	18 31 10.2	-0.3
ALNE	Al Ain	130.19	284	*i* PKPdf	PKPdf	18 31 10.7	-0.1
	SNR=8.3						
ALNE	Al Ain	130.19	284	P	PKPdf	18 31 10.4	-0.4
	SNR=7.1						
NAZ	Nazwa, Dubai	130.39	286	*i* PKPdf	PKPdf	18 31 11.1	0.0
	SNR=7.4						
NAZ	Nazwa, Dubai	130.39	286	P	PKPdf	18 31 11.0	-0.1
FAQ	Al Faqa, Dubai	130.42	285	PKiKP	PKiKP	18 31 11.7	-0.4
RBK	Rabkut	130.49	276	P	PKPdf	18 31 11.8	+0.3
	SNR=6.0						
ASUD	Al Ashush, Dub	130.65	285	PKiKP	PKiKP	18 31 12.5	0.0
ASUD	Al Ashush, Dub	130.65	285	P	PKPdf	18 31 10.5	-1.0
DOK	Doka	130.80	277	P	PKPdf	18 31 11.0	-1.0
	SNR=6.1						
WHFO	Wadi Hawf	130.99	276	P	PKPdf	18 31 12.1	-0.3
KLMR	Klimovskoe	131.97	336	*e*PKIKP	PKPdf	18 31 11.6	-1.4
KLMR				*e*		18 33 42.7	
KLMR				pmax	pmax		
	comp=Z,28nm,1.5s						
LOF	Lofoten	132.00	354	*e*PKPdf	PKiKP	18 31 13.7	-0.3
STEI	Steigen	132.02	353	*e*PKPdf	PKiKP	18 31 13.4	-0.6
MZR	Muzera	132.12	283	*i* PKiKP	PKiKP	18 31 15.6	0.0
	SNR=10.0						
MZR	Muzera	132.12	283	P	PKPdf	18 31 13.3	-1.1
	SNR=6.2						
FAUS	Fauske	132.54	353	*e*PKPdf	PKPdf	18 31 14.3	+0.5
BELG	Belogornoye	132.62	323	*c i*PKIKP	PKPdf	18 31 14.4	0.0
GHWR	Ruwais	132.79	284	P	PKPdf	18 31 14.9	-0.7
JRN	Qarnain Island	132.92	285	P	PKPdf	18 31 15.7	-0.2
STOK	Stokkvaagen	133.80	354	*e*PKPdf	PKPdf	18 31 16.2	0.0
LEIR	Leirfjorden	134.01	354	*e*PKPdf	PKiKP	18 31 17.4	-0.7
NSS	Namsos	135.67	354	*e*PKPdf	PKiKP	18 31 20.7	-0.8
LSZ	Lusaka	135.80	218	P	PKPdf	18 31 18.5	-3.2
FINES	FINESS Array B	135.90	343	PKP	PKPdf	18 31 19.8	-0.5
	comp=Z,7.8nm,0.5s,baz=75,slow=2.6,SNR=9.4						
FINES				SKPbc	SKPbc	18 34 03.7	+2.6
	comp=Z,9.4nm,0.8s,baz=35,slow=3.4,SNR=8.8						
FINES				SKPab	SKPab	18 34 09.3	+2.1
	comp=Z,6.7nm,0.8s,baz=28,slow=3.6,SNR=4.3						
MOS	Moscow	135.96	332	*i* PKIKP	PKPdf	18 31 19.7	-0.9
MOS				*e*		18 34 03.1	
AKT	Akhty	136.11	309	*e*PKIKP	PKPdf	18 31 22.2	+0.7
AKT				pmax	pmax		
	comp=Z,13nm,0.6s						
VRH	Novokhopyorsk	136.43	324	*e*PKIKP	PKPdf	18 31 20.7	-0.9
VRH				pmax	pmax		
	comp=Z,29nm,0.9s						
OBN	Obninsk	136.82	331	*e*PKIKP	PKPdf	18 31 21.7	-0.5
OBN				*e*PPP	PPP	18 37 18.0	
OBN				pmax	pmax		
	comp=Z,18nm,0.9s						
LPSR	Galich'ya Gora	137.17	327	*e*PKIKP	PKPdf	18 31 21.5	-1.4
LPSR				pmax	pmax		
	comp=Z,28nm,1.0s						
VORR	Voronezh	137.54	326	*e*PKIKP	PKPdf	18 31 22.5	-1.1
VORR				pmax	pmax		
	comp=Z,33nm,1.0s						
VSR	Storozhevoye	137.80	325	*e*PKHKP	PKPpre	18 31 14.5	
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VORD	Divnogorie	137.87	325	*e*PKHKP	PKPpre	18 31 15.1	
VORD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
DOMB	Dombas	138.38	355	*e*PKPdf	PKPpre	18 31 17.7	
GNI	Garni	138.64	308	*ce*PKIKP	PKPdf	18 31 25.9	-0.4
GNI	Garni	138.64	308	P	PKPdf	18 31 25.9	-0.4
KBZ	Khabaz	138.86	314	PKhKP	PKPpre	18 31 18.6	
	comp=Z,3.1nm,0.9s,baz=100,slow=3.6,SNR=6.1						
KBZ				PKP	PKPdf	18 31 26.8	+0.5
	comp=Z,3.1nm,0.9s,baz=298,slow=1.9,SNR=4.6						
KBZ	Khabaz	138.86	314	*de*PKIKP	PKPdf	18 31 25.1	-1.2
KIV	Kislovodsk	138.92	314	*e*PKIKP	PKPdf	18 31 26.4	-0.2
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SHA1	Shidzhatmaz	139.02	314	*d i*PKIKP	PKPdf	18 31 27.0	+0.1
NB2	NORSAR Subarra	139.15	353	PKP	PKPpre	18 31 17.7	
	comp=Z,1.9nm,0.6s,baz=16,slow=3.2						
NB2				SKP	SKPbc	18 34 13.3	+2.8
	comp=Z,2.3nm,0.8s,baz=13,slow=2.9						
NB2	NORSAR Subarra	139.15	353	PKP	PKPpre	18 31 17.7	
NOA	NORSAR Array B	139.15	353	PKhKP	PKPpre	18 31 17.6	
	comp=Z,5.8nm,0.8s,baz=17,slow=2.8,SNR=16						
NOA				PKP	PKPdf	18 31 26.9	+0.5
	comp=Z,2.5nm,0.5s,baz=13,slow=4.1,SNR=3.3						
NOA				SKP	SKPbc	18 34 11.7	+1.1
	comp=Z,5.0nm,0.9s,baz=12,slow=2.5,SNR=6.3						
NEUR	Neytrino	139.15	313	⇓*e*PKIKP	PKPdf	18 31 23.6	-3.5
NC602	NORSAR Array S	139.41	353	*e*PKPdf	PKPpre	18 31 19.8	
HFS	Hagfors	139.70	351	PKhKP	PKPpre	18 31 19.4	
	comp=Z,16nm,0.4s,baz=72,slow=4.8,SNR=79						
HFS				PKP	PKPdf	18 31 27.5	+0.2
	comp=Z,8.1nm,0.6s,baz=82,slow=1.2,SNR=7.7						
HFS				SKP	SKPbc	18 34 13.0	+1.0
	comp=Z,8.2nm,0.8s,baz=113,slow=3.9,SNR=5.8						
MNK	Minsk	140.87	336	*i* PKP	PKPdf	18 31 28.9	-0.7
MNK				*i* PKP	PKPdf	18 31 28.9	-0.7
MNK				*i* PKP	PKPdf	18 31 28.9	-0.7
	comp=Z,32nm,0.9s,baz=41						
MNK				*i* PKiKP	PKiKP	18 31 32.4	0.0
MNK				*i* pPKP	pPKPdf	18 33 36.8	+0.1
MNK				*i* PP	PP	18 34 37.8	+0.7
MNK				*i* SKS	SKSdf	18 37 47.4	-0.7
MNK				*i* PPP	PPP	18 37 50.1	
MNK				*i* SKKS	SKKSdf	18 47 10.2	-4.0
MNK				*i* SS	SS	18 52 22.9	+2.5
MNK				*i* SSS	SSS	18 57 48.4	
MNK				*i* LRM	MLR	19 34 47.4	
	comp=N,228nm,19.6s						
MNK				*i* LRM	MLR	19 34 56.3	
	comp=Z,66nm,6.2s						
MNK	Minsk	140.87	336	*i* PKIKP	PKPdf	18 31 28.9	-0.7
MNK				*i*		18 34 37.8	
MNK				*i*		18 37 47.3	
MNK				*i* PPP	PPP	18 37 50.0	
MNK				*i*		18 47 10.1	
MNK				*i* SS	SS	18 52 22.9	+2.5
MNK				*i* SSS	SSS	18 57 48.3	
MNK				pmax	pmax		
	comp=Z,32nm,0.9s						
MNK				MLR	MLR		
	comp=N,228nm,20.0s						
MNK				MLR	MLR		
	comp=Z,66nm,6.0s						
VSLR	Vesyoloye	140.89	314	*ce*PKIKP	PKPdf	18 31 29.6	-0.4
BLS5	Blasjo	141.18	356	*e*PKPdf	PKPdf	18 31 25.2	-4.9
HOMB	Homborsund	142.16	354	*e*PKPdf	PKPdf	18 31 28.4	-3.4
BORU	Boraas	142.24	350	*i* P	PKPdf	18 31 27.8	-4.2
ONAU	Onsala	142.60	351	*i* P	PKPdf	18 31 29.2	-3.4
FABU	Falkenberg	142.85	350	*i* P	PKPdf	18 31 29.9	-3.1
BLEU	Blekinge	142.94	347	*i* P	PKPdf	18 31 29.9	-3.2
SUW	Suwalki	142.94	339	*e*PKP	PKPdf	18 31 31.4	-1.8
MCD	Coleburn Disti	142.99	4	*e*P	PKPdf	18 31 30.2	-3.1
KPL	Plockton	143.01	7	*e*P	PKPab	18 31 30.7	-0.1
LODK	Lodwar	143.04	247	P	PKPdf	18 31 33.9	-0.9
	SNR=29						
AKASG	Malin Array Be	143.07	331	PKP	PKPbc	18 31 31.5	-0.2
	comp=Z,131nm,0.6s,baz=44,slow=4.3,SNR=521						
AKBB	Malin Array Si	143.07	331	*d i*PKHKP	PKPpre	18 31 30.6	
KIEV	Kiev	143.09	331	⇓P	PKPab	18 31 31.1	-0.2
KIEV	Kiev	143.09	331	*i* PKPdf	PKPab	18 31 31.1	-0.2
	SNR=17						
DEL	Delary	143.16	349	*i* P	PKPab	18 31 31.5	+0.1
DRUM	Mains of Drumt	143.71	4	*e*P	PKPab	18 31 32.6	-0.9
MUD	Monsted U'grnd	143.87	353	*i* P	PKPab	18 31 34.2	+0.1
SIM	Simferopol'	143.99	320	*e*PKIKP	PKPdf	18 31 35.6	+0.2
SIM				pmax	pmax		
	comp=Z,316nm,0.9s						
SIM				pmax	pmax		
	comp=Z,85nm,0.7s						
LUNU	Lund	144.03	349	*i* P	PKPbc	18 31 34.3	-0.2
INVG	Invergeldie, C	144.07	5	*e*P	PKPbc	18 31 34.2	-0.5
HAMD	Hammershus, De	144.12	347	*i* P	PKPbc	18 31 34.5	-0.3
HAMD				*i* P	PKPab	18 31 34.9	-0.2
RNPP5	Staryi Chortor	144.14	334	PKP	PKPbc	18 31 34.8	-0.2
COP	Copenhagen	144.16	350	*i* P	PKPbc	18 31 34.9	-0.1
BSD	Bornholm Skovb	144.23	347	*i* P	PKPbc	18 31 35.2	0.0
BSD				*i* P	PKPab	18 31 35.5	0.0
LUBAR	Lubar, Ukraine	144.29	331	PKP	PKPbc	18 31 35.2	-0.4
MBAR	Mbarara	144.60	237	P	PKPab	18 31 38.7	+0.3
PGBU	Glenifferbraes	144.63	6	*e*P	PKPdf	18 31 35.9	-0.2
BAL3X	Bal3x, Balta	144.76	327	PKP	PKPdf	18 31 36.2	-0.4
NE56	Odesa	144.87	324	PKP	PKPdf	18 31 36.4	-0.4
IDGL	Inch Island, C	144.98	9	PKPdf	PKPbc	18 31 37.2	-0.3
R9F13	Warsaw-Wawer	145.12	339	*e*PKP	PKPab	18 31 38.6	-0.4
EKA	Eskdalemuir Ar	145.23	5	PKPbc	PKPbc	18 31 38.0	-0.3
	comp=Z,20nm,0.8s,baz=0.1,slow=3.7,SNR=20						
EKA	Eskdalemuir Ar	145.23	5	PKIKP	PKPbc	18 31 38.0	-0.3
ESK	Eskdalemuir	145.24	5	*e*P	PKPdf	18 31 37.7	+0.5
SORM	Soroca	145.25	328	⇑P	PKPbc	18 31 38.3	-0.2
GKP	Gorka Klasztor	145.37	344	*e*PKP	PKPbc	18 31 38.4	-0.3
PURM	Purcari	145.51	325	⇑P	PKPbc	18 31 38.9	-0.4
BZK	Bozkurt	145.54	315	⇑P	PKPab	18 31 40.5	-0.5
BEL	Belsk	145.56	339	*e*PKP	PKPdf	18 31 38.5	+0.6
KIS	Kishinev	145.77	326	⇑P	PKPbc	18 31 40.1	0.0
EDMD	Edmundbyers	145.81	4	*e*P	PKPbc	18 31 39.8	-0.2
KESW	Keswick, Cumbr	145.97	5	*e*P	PKPbc	18 31 39.5	-0.8
IOMK	Kirk Michael	146.16	7	*e*P	PKPbc	18 31 40.5	-0.4
BSEG	Bad Segeberg	146.18	351	*e*PKPbc	PKPbc	18 31 41.7	+0.7
	baz=17,slow=2.4						
IGLA	Glengowla, Co	146.24	12	PKPdf	PKPdf	18 31 39.3	+0.3
HLG	Helgoland	146.25	353	*e*PKPbc	PKPbc	18 31 42.2	+1.0
	baz=17,slow=2.4						
CIDE	Kastamonu/Cide	146.27	316	⇑P	PKPbc	18 31 42.2	+0.5
GDLE	Glaisdale, N Y	146.28	3	*e*P	PKPbc	18 31 41.1	-0.2
IASR	Iasi	146.29	328	⇑P	PKPab	18 31 43.6	-0.2
VASR	Vaslui	146.54	327	⇑P	PKPbc	18 31 42.9	+0.7
KWP	Kalwaria Pacla	146.66	335	*e*PKP	PKPbc	18 31 42.7	+0.2
BEIL	Beino	146.69	302	*e*P	PKPbc	18 31 44.0	+0.9
BR131	Keskin Array S	146.79	312	P	PKPdf	18 31 41.1	+0.6
	SNR=29						
BRTR	Keskin Array B	146.79	312	PKPbc	PKPbc	18 31 43.5	+0.1
	comp=Z,43nm,0.8s,baz=150,slow=3.5,SNR=117						
BRTR				pPKPbc	pPKPdf	18 33 47.3	-0.5
	comp=Z,5.6nm,1.1s,baz=108,slow=2.7,SNR=4.0						
BRTR				SKP	SKPdf	18 34 24.4	+1.2
	comp=Z,1.8nm,0.8s,baz=50,slow=2.3,SNR=2.4						
PRAR	RASCA	146.82	329	⇑P	PKPbc	18 31 43.1	+0.1
KIRS	Kirsehir-Merke	146.85	311	⇑P	PKPbc	18 31 43.6	+0.2
BIR	Birlad	146.87	326	⇑P	PKPbc	18 31 43.6	+0.4
VLDR	Vladesti	146.91	325	⇑P	PKPbc	18 31 44.1	+0.9
DSB	Dublin	146.92	9	PKPdf	PKPdf	18 31 40.4	+0.3
TLCR		146.93	324	⇑P	PKPbc	18 31 43.5	+0.2
GORT1	Trebel	146.94	349	*e*PKPbc	PKPbc	18 31 43.7	+0.7
	baz=17,slow=2.4						
RUE	Ruedersdorf	146.94	346	*e*PKPbc	PKPbc	18 31 43.7	+0.6
	baz=17,slow=2.4						
HWQ	Hawqa	146.95	301	*e*P	PKPbc	18 31 44.3	+0.4
GIRR	Girov	146.97	328	⇑P	PKPbc	18 31 43.6	+0.2
VARL	Varlezi	147.00	326	⇑P	PKPbc	18 31 42.9	-0.5
SCTR	Scanteiesti	147.07	325	⇓P	PKPbc	18 31 44.4	+0.7
GIUM	Giurgiulesti	147.07	325	⇑P	PKPbc	18 31 44.4	+0.7
TATR	Tatarca	147.09	325	⇓P	PKPbc	18 31 43.6	-0.1
ZAHL	Zahle	147.10	301	*e*P	PKPbc	18 31 45.1	+0.8
BURAR	Bucovina Array	147.12	330	⇑P	PKiKP	18 31 45.0	-0.7
GHRR		147.12	326	⇓P	PKiKP	18 31 45.1	-0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WLF1	Llynfaes	147.13	7	eP	PKPbc	18 31 43.0	-0.6
JURR	Jurilovca	147.16	323	⇑P	PKPbc	18 31 44.3	+0.4
TESR	Tescani	147.21	328	⇑P	PKPbc	18 31 44.3	+0.3
NEGRR	Negrea	147.22	325	⇑P	PKPbc	18 31 44.8	+0.7
RCY	Rachaya	147.24	300	eP	PKPbc	18 31 45.3	+0.6
LBWR	Ladybower, Pea	147.25	4	eP	PKPbc	18 31 43.6	-0.3
LMK	Market Rasen	147.27	2	eP	PKPbc	18 31 43.6	-0.3
IZVR	Izvoarele	147.27	325	⇑P	PKPbc	18 31 45.0	+0.8
BHL	Bhannes	147.28	301	eP	PKPbc	18 31 45.4	+0.7
SCHLR	Schela	147.28	325	⇓P	PKPbc	18 31 44.4	+0.2
TUDR		147.29	325	⇑P	PKPbc	18 31 44.8	+0.6
CFR	Carcaliu	147.31	324	⇑P	PKPbc	18 31 44.2	-0.1
COSR	Cosmesti PH	147.31	326	⇑P	PKPbc	18 31 44.9	+0.6
QRWL	Qaraoun	147.35	300	eP	PKiKP	18 31 45.9	-0.7
TPGR	Topolog	147.36	324	⇓P	PKPbc	18 31 45.2	+0.7
PANC	Panciu	147.38	326	⇑P	PKPbc	18 31 45.3	+0.8
DQRL	Deir Qamar	147.40	301	eP	PKiKP	18 31 46.0	-0.7
STHS	Stebnicka Huta	147.40	336	ePKP	PKPbc	18 31 44.5	0.0
STHS				e		18 31 49.0	
ONER	Baraj Valea Uz	147.45	328	⇓P	PKiKP	18 31 45.8	-0.5
RETH	Rethem/Aller,	147.49	351	ePKPdf	PKPdf	18 31 41.4	+0.4
	baz=12,slow=1.4						
RETH				ePKPbc	PKiKP	18 31 45.2	-0.8
	baz=17,slow=2.4						
RETH				epPKPbc	pPKPab	18 33 52.0	+1.2
ODBI	Odobesti	147.50	326	⇑P	PKiKP	18 31 46.0	-0.3
FLTG	Flechtingen	147.58	349	ePKPdf	PKPdf	18 31 41.4	+0.1
	baz=12,slow=1.4						
FLTG				ePKPbc	PKPbc	18 31 45.1	+0.3
	baz=17,slow=2.4						
FLTG				ePKPab	PKPab	18 31 48.9	+0.1
	baz=14,slow=4.3						
FLTG				epPKPbc	pPKPab	18 33 51.9	+0.8
VRI	Vrincioaia	147.60	327	⇑P	PKPbc	18 31 45.0	-0.1
TIRR	Tirgusor	147.61	323	⇓P	PKPbc	18 31 45.4	+0.3
PLOR	Plostina	147.65	327	⇑P	PKPbc	18 31 45.0	-0.3
MMAI	Mount Meron Ar	147.70	299	PKPbc	PKiKP	18 31 46.9	-0.5
	comp=Z,79nm,0.6s,baz=55,slow=7.3,SNR=141						
MMAI				pPKPbc	pPKPdf	18 33 49.6	+0.2
	comp=Z,17nm,1.0s,baz=132,slow=2.1,SNR=1.7						
IWEX	Carrickbyrne,	147.70	10	PKPdf	PKPdf	18 31 42.9	+1.5
EFOR	EFORIE	147.72	322	⇑P	PKPbc	18 31 45.3	-0.1
NIE	Niedzica	147.75	337	ePKP	PKiKP	18 31 46.2	-0.6
MFTR	Murfatlar	147.78	323	⇑P	PKiKP	18 31 46.3	-0.7
GRER		147.80	326	⇑P	PKPab	18 31 52.5	+2.5
KSP	Ksiaz	147.81	343	ePKP	PKPbc	18 31 46.1	+0.7
BISRR	Bisoca	147.83	326	⇑P	PKPab	18 31 55.2	+5.0
BMR	Baia Mare	147.85	332	⇑P	PKiKP	18 31 46.6	-0.4
ASSE	Asse, Remlinge	147.87	350	ePKPbc	PKiKP	18 31 46.1	-0.7
	baz=17,slow=2.4						
COVR	Voineasa-Covas	147.89	327	⇑P	PKPbc	18 31 45.8	0.0
MANR	Mangalia	147.90	322	⇑P	PKiKP	18 31 46.7	-0.5
OZUR		147.93	328	⇓P	PKPbc	18 31 46.5	+0.6
BOSR	Bodos	148.00	328	⇑P	PKiKP	18 31 46.8	-0.6
WACR	West Acre	148.03	1	eP	PKPbc	18 31 45.6	-0.3
HLM1	Long Mynd	148.04	5	eP	PKPbc	18 31 44.6	-1.4
SHAB	Shabla	148.06	322	⇑P	PKPdf	18 31 35.2	-7.1
OSTC	Ostas	148.09	342	ePKP2	PKiKP	18 31 47.1	-0.4
OSTC	Ostas	148.09	342	⇑ePKP	PKiKP	18 31 47.1	-0.4
CHVC	Chvalec	148.11	343	ePKP2	PKiKP	18 31 47.3	-0.2
CHVC	Chvalec	148.11	343	⇑ePKP	PKiKP	18 31 47.3	-0.2
AMRR	Amara	148.11	324	⇑P	PKiKP	18 31 47.2	-0.4
IBBN	Ibbenburen	148.11	353	ePKPdf	PKPdf	18 31 42.2	+0.1
	baz=12,slow=1.4						
IBBN				ePKPbc	PKiKP	18 31 46.8	-0.6
	baz=17,slow=2.4						
IBBN				ePKPab	PKPab	18 31 51.1	+0.1
	baz=14,slow=4.3						
NEHR	Nehoiu	148.12	326	⇑P	PKPbc	18 31 46.4	0.0
ICOR	Ion Corvin	148.16	323	⇑P	PKiKP	18 31 47.2	-0.6
STEB	Steborice	148.18	340	⇑ePKP	PKPbc	18 31 46.8	+0.4
STEB				ePKPAB	PKPab	18 31 52.5	+1.1
UPC	Upice	148.19	343	ePKP2	PKiKP	18 31 47.5	-0.2
UPC	Upice	148.19	343	⇑ePKP	PKiKP	18 31 47.5	-0.2
CLZ	Clausthal	148.20	350	ePKPdf	PKPdf	18 31 42.6	+0.3
	baz=12,slow=1.4						
CLZ				ePKPbc	PKiKP	18 31 47.4	-0.3
	baz=17,slow=2.4						
ISR	Istrita	148.20	326	⇑P	PKPbc	18 31 47.2	+0.5
CLL	Collm	148.21	347	⇓ePKHKP	PKPpre	18 31 43.0	
CLL				i		18 31 51.2	
CLL				pmax	pmax		
	comp=Z,15nm,1.2s						
CLL				pmax	pmax		
	comp=Z,147nm,0.9s						
CLL				pmax	pmax		
	comp=Z,58nm,0.8s						
CLL				MLR	MLR		
	comp=Z,800nm,20.4s						
CLL	Collm	148.21	347	ePKPdf	PKPdf	18 31 43.0	+0.7
	comp=Z,15nm,1.2s						
CLL				⇓iPKPbc	PKPbc	18 31 47.0	+0.6
	comp=Z,147nm,0.9s						
CLL				i PKPab	PKPab	18 31 51.2	-0.2
	comp=Z,58nm,0.8s						
CLL				i x	x	18 32 01.6	
CLL				epPKPab	pPKPbc	18 33 52.0	-0.2
CLL				ex	x	18 34 13.0	
CLL				ePP	PP	18 35 19.0	-1.0
CLL	Collm	148.21	347	ePKPdf	PKPdf	18 31 42.9	+0.6
	baz=12,slow=1.4						
CLL				ePKPbc	PKPbc	18 31 47.0	+0.6
	baz=17,slow=2.4						
CLL				epPKPbc	pPKPab	18 33 53.3	-0.2
DOPR	Dopca	148.21	328	⇑P	PKiKP	18 31 47.6	-0.3
TGMR	Targu Mures	148.23	329	⇑P	PKPab	18 31 52.7	+1.0
DPC	Dobruska-Polom	148.25	342	ePKP2	PKiKP	18 31 47.6	-0.2
DPC	Dobruska-Polom	148.25	342	⇑ePKP	PKiKP	18 31 47.6	-0.2
DPC				ePKPAB	PKPab	18 31 52.7	+1.0
MLR	Muntele Rosu	148.26	327	⇑P	PKPbc	18 31 46.8	-0.1
LANS	Liptovska Anna	148.28	338	ePKHKP	PKPpre	18 31 42.8	
LANS				e		18 31 53.5	
LANS	Liptovska Anna	148.28	338	ePKP	PKPdf	18 31 42.8	+0.2
LANS				e		18 31 48.5	
LANS				e		18 31 53.5	
MORC	Moravsky Berou	148.39	340	⇑P	PKPbc	18 31 47.5	+0.5
MORC	Moravsky Berou	148.39	340	ePKP	PKPdf	18 31 43.3	+0.6
MORC				e		18 31 47.5	
BRG	Berggiesshubel	148.40	345	ePKPdf	PKPdf	18 31 43.0	+0.4
	baz=12,slow=1.4						
BRG				ePKPbc	PKiKP	18 31 47.6	-0.5
	baz=17,slow=2.4						
BRG				ePKPab	PKPab	18 31 52.6	+0.4
	baz=14,slow=4.3						
KECS	Kecovo	148.46	336	ePKP2	PKiKP	18 31 48.4	+0.1
KECS	Kecovo	148.46	336	ePKP	PKiKP	18 31 48.4	+0.1
KECS				e		18 31 53.7	
LEHL	Lehliu	148.48	325	⇑P	PKiKP	18 31 48.1	-0.3
MESR	Meseseni	148.49	332	⇑P	PKiKP	18 31 49.1	+0.7
CJR	Cluj-Napoca	148.53	331	⇑P	PKiKP	18 31 48.2	-0.4
MCH1	Michaelchurch	148.55	6	eP	PKPbc	18 31 46.6	-0.6
GTTG	Gottingen	148.55	350	ePKPdf	PKPdf	18 31 43.2	+0.3
	baz=12,slow=1.4						
GTTG				ePKPbc	PKiKP	18 31 48.0	-0.4
	baz=17,slow=2.4						
GTTG				ePKPab	PKPab	18 31 52.7	-0.2
	baz=14,slow=4.3						
NEUB	Neuenburg	148.55	348	ePKPdf	PKPdf	18 31 43.4	+0.6
	baz=12,slow=1.4						
NEUB				ePKPbc	PKiKP	18 31 48.1	-0.3
	baz=17,slow=2.4						
NEUB				ePKPab	PKPab	18 31 53.2	+0.3
	baz=14,slow=4.3						
PVCC	Panska Ves	148.56	344	ePKP2	PKiKP	18 31 47.9	-0.5
PVCC	Panska Ves	148.56	344	⇑ePKP	PKiKP	18 31 47.9	-0.5
MDB	Medias	148.58	329	⇑P	PKiKP	18 31 48.3	-0.3
SULR		148.65	325	⇑P	PKPbc	18 31 48.1	+0.4
MAUC	Maruska	148.65	340	⇑ePKP	PKiKP	18 31 48.7	0.0
MONM	Monmouth	148.72	5	eP	PKPbc	18 31 47.4	-0.2
VOIR		148.75	328	⇑P	PKiKP	18 31 48.6	-0.5
LTVH	Ltavrtes, Hu	148.76	333	⇑P	PKiKP	18 31 48.9	0.0
MARR	Marisel-Cluj	148.78	331	⇑P	PKiKP	18 31 48.9	-0.2
SILT	Sile	148.78	317	⇑P	PKPbc	18 31 48.5	+0.3
DRGR		148.87	332	⇑P	PKPbc	18 31 48.4	+0.1
MTUR	Matau	148.89	327	⇑P	PKPbc	18 31 47.9	-0.5
ARR	Arges	149.01	328	⇑P	PKiKP	18 31 50.2	+0.6
BUG	Bochum--Univer	149.02	353	ePKPdf	PKPdf	18 31 43.6	0.0
	baz=12,slow=1.4						
BUG				ePKPbc	PKiKP	18 31 48.9	-0.4
	baz=17,slow=2.4						
BUG				ePKPab	PKPab	18 31 54.2	-0.6
	baz=14,slow=4.3						
PRU	Pruhonice	149.06	344	ePKHKP	PKPpre	18 31 49.0	
PRU	Pruhonice	149.06	344	⇑ePKP	PKiKP	18 31 49.0	-0.5
VRAC	Vranov	149.09	341	⇑P	PKiKP	18 31 49.3	-0.2
VRAC	Vranov	149.09	341	ePKP	PKPdf	18 31 44.3	+0.5
VRAC				e		18 31 49.3	
VRAC				e		18 31 55.8	
KASTN	Kahler Asten	149.11	352	ePKPdf	PKPdf	18 31 44.0	+0.2
	baz=12,slow=1.4						
KASTN				ePKPbc	PKiKP	18 31 49.3	-0.3
	baz=17,slow=2.4						
KASTN				ePKPab	PKPab	18 31 54.8	-0.4
	baz=14,slow=4.3						
MOX	Moxa	149.12	348	ePKPdf	PKPdf	18 31 44.0	+0.2
	baz=12,slow=1.4						
MOX				ePKPbc	PKiKP	18 31 49.2	-0.3
	baz=17,slow=2.4						
MOX				ePKPab	PKPab	18 31 55.2	-0.1
	baz=14,slow=4.3						
JAVC	Velka Javorina	149.14	339	ePKP	PKPdf	18 31 45.3	+1.3
JAVC				e		18 31 50.5	
PSZ	Piszkesteto	149.15	336	⇑P	PKiKP	18 31 49.7	-0.1
PLN	Plauen	149.16	347	ePKPbc	PKiKP	18 31 49.4	-0.2
	baz=17,slow=2.4						
PLN				ePKPab	PKPab	18 31 56.3	+0.8
	baz=14,slow=4.3						
TANN	Tannenbergstha	149.16	347	ePKPdf	PKPdf	18 31 44.2	+0.3
	baz=12,slow=1.4						
TANN				ePKPbc	PKiKP	18 31 49.5	-0.3
	baz=17,slow=2.4						
RAZG	Razgrad	149.24	323	⇓P	PKPbc	18 31 49.0	-0.2
UBBA	Unterbreizbach	149.25	350	ePKPbc	PKiKP	18 31 49.3	-0.3
	baz=17,slow=2.4						
LOZB	Loznitsa	149.31	323	⇓P	PKPbc	18 31 49.7	+0.3
NKC	Novy Kostel	149.34	346	ePKHKP	PKPpre	18 31 49.9	
NKC	Novy Kostel	149.34	346	⇑ePKP	PKiKP	18 31 49.9	-0.2
WOL	Wolverton	149.36	4	eP	PKPbc	18 31 48.7	-0.5
KRUC	Moravsky	149.37	341	ePKP	PKPdf	18 31 44.4	+0.1
KRUC				e		18 31 49.8	
KRUC				e		18 31 56.9	
LOT	Lotru	149.38	329	⇑P	PKPbc	18 31 49.1	-0.5
HUMR	Humele	149.42	326	⇑P	PKPbc	18 31 49.4	-0.2
DEV	Deva	149.47	330	⇑P	PKPbc	18 31 49.8	+0.1
BSZH	Besenyszg	149.50	335	⇑P	PKPbc	18 31 49.0	-0.6
SMOL	Smolenice	149.52	339	ePKP2	PKiKP	18 31 51.1	+0.6
COPA	Copaceanca	149.56	326	⇑P	PKPbc	18 31 49.6	-0.3
MANZ	Manzenberg	149.64	347	ePKPbc	PKiKP	18 31 50.7	0.0
	baz=17,slow=2.4						
MANZ				epPKPbc	pPKPab	18 33 59.2	-0.1
ZVC	Zvikov	149.66	344	⇑ePKP	PKiKP	18 31 50.6	-0.1
ZVC				ePKPAB	PKPab	18 31 58.3	+0.8
MODS	Modra-Piesok	149.69	339	ePKP2	PKiKP	18 31 51.5	+0.6
MODS	Modra-Piesok	149.69	339	ePKP	PKiKP	18 31 51.5	+0.6
SBD	Saint Breward	149.77	8	eP	PKPbc	18 31 49.9	-0.3
ZIMR		149.81	325	⇑P	PKPbc	18 31 50.6	+0.1
BEBN	Eben Emael	149.81	355	dPKPdf	PKPdf	18 31 45.2	+0.4
BEBN				dPKP	PKPbc	18 31 50.5	+0.2
BEBN				dPKPab	PKPab	18 31 58.3	+0.3
SRO	Srobarova	149.82	338	ePKHKP	PKPpre	18 31 51.4	
SRO				e		18 31 59.3	
SRO	Srobarova	149.82	338	ePKP	PKiKP	18 31 51.3	+0.2
SRO				e		18 31 59.3	
ROTZ	Rotzenmuhle	149.83	346	ePKPdf	PKPdf	18 31 44.8	-0.2
	baz=12,slow=1.4						
ROTZ				ePKPbc	PKiKP	18 31 51.1	0.0
	baz=17,slow=2.4						
ROTZ				ePKPab	PKPab	18 31 58.8	+0.6
	baz=14,slow=4.3						
GZR	Gura Zlata	149.89	330	⇓P	PKPbc	18 31 50.8	0.0
UCC	Uccle	149.90	357	dPKP	PKiKP	18 31 50.9	-0.2
MEM	Membach	149.97	355	dPKPdf	PKPdf	18 31 45.1	0.0
MEM				dPKP	PKPbc	18 31 50.9	+0.2
MEM				dPKPab	PKPab	18 31 57.2	-1.6
BTNL	Ternell	149.98	354	dPKPdf	PKPdf	18 31 45.5	+0.4
BTNL				dPKP	PKiKP	18 31 51.1	-0.3
ELND	Elena	150.00	323	⇓P	PKiKP	18 31 51.4	-0.2
BSTI	Sart Tilman	150.03	355	dPKP	PKiKP	18 31 51.4	0.0
TNS	Taunus Mts	150.07	351	ePKPdf	PKPdf	18 31 44.8	-0.6
	baz=12,slow=1.4						
TNS				ePKPbc	PKiKP	18 31 51.6	0.0
	baz=17,slow=2.4						
TNS				ePKPab	PKPab	18 31 59.5	+0.2
	baz=14,slow=4.3						
VLAD	Vladila	150.09	326	⇑P	PKiKP	18 31 52.2	+0.5
KHC	Kasperske Hory	150.10	344	ePKIKP	PKPdf	18 31 44.5	-0.9
KHC				e		18 32 00.1	
KHC	Kasperske Hory	150.10	344	ePKPDF	PKPdf	18 31 44.5	-0.9
KHC				⇑ePKP	PKiKP	18 31 51.7	0.0
KHC				ePKPAB	PKPab	18 32 00.1	+0.7
GRF	Grafenberg Arr	150.11	348	ePKPbc	PKiKP	18 31 51.7	0.0
	baz=17,slow=2.4						
GRF				ePKPab	PKPab	18 32 00.1	+0.7
	baz=14,slow=4.3						
CKRC	Cesky Krumlov	150.19	343	ePKIKP	PKiKP	18 31 52.1	+0.2
CKRC	Cesky Krumlov	150.19	343	⇑ePKP	PKiKP	18 31 52.1	+0.2
BAND	Balkesir-Ban	150.20	317	⇑P	PKPbc	18 31 51.5	0.0
BCLA	Clavier	150.21	355	dPKP	PKiKP	18 31 51.6	-0.2
BHOU	Houvegnez	150.22	354	dPKP	PKiKP	18 31 52.0	+0.2
BHOU				dPKPab	PKPab	18 32 00.3	+0.4
SRE	Strehaia	150.22	328	⇑P	PKiKP	18 31 52.2	+0.2
WET	Wettzell	150.26	345	ePKPbc	PKiKP	18 31 51.8	-0.2
	baz=17,slow=2.4						
WET				ePKPab	PKPab	18 32 00.6	+0.6
	baz=14,slow=4.3						
BZS	Buzias	150.26	331	⇓P	PKPbc	18 31 51.7	+0.2
BGES	Gesves	150.26	356	dPKP	PKPbc	18 31 51.6	+0.2
BGES				dPKPab	PKPab	18 31 59.8	-0.2
WINA	Alland / Wiene	150.32	340	i PKiKP	PKiKP	18 31 52.4	+0.3
	comp=Z,29nm,0.6s,SNR=11						
GEC2	GERESS Array S	150.33	344	ePKPbc	PKiKP	18 31 52.1	-0.2
	baz=17,slow=2.4						
GERES	GERESS Array B	150.33	344	PKP	PKPdf	18 31 46.1	+0.2
	comp=Z,2.7nm,0.9s,baz=17,slow=1.4,SNR=8.8						
GERES				PKPbc	PKiKP	18 31 52.3	+0.1
	comp=Z,2.6nm,0.9s,baz=42,slow=2.2,SNR=13						
GERES				PKPab	PKPab	18 32 00.3	-0.1
	comp=Z,4.9nm,0.7s,baz=36,slow=2.5,SNR=7.6						
GERES				pPKPbc	pPKPdf	18 33 55.7	+2.1
	comp=Z,2.8nm,0.9s,baz=291,slow=1.1,SNR=3.7						
TIM	Timisoara	150.34	332	⇑P	PKiKP	18 31 52.4	+0.2
BMRD	Maredsous	150.37	356	dPKP	PKPbc	18 31 51.6	0.0
BMRD				dPKPab	PKPab	18 32 00.5	+0.1
PLVB	Pleven	150.39	325	⇑P	PKiKP	18 31 52.2	-0.2
HERR	Herculane	150.44	329	⇑P	PKiKP	18 31 52.2	-0.2
RMGR	Halanga-Turnu	150.47	329	⇑P	PKiKP	18 31 52.5	0.0
RCHB	Rochefort	150.48	355	dPKPdf	PKPdf	18 31 46.5	+0.6
RCHB				dPKP	PKPbc	18 31 51.9	0.0
RCHB				dPKPab	PKPab	18 32 00.6	-0.2
CONA	Conrad Observa	150.54	341	i PKP	PKPdf	18 31 46.7	+0.5
	comp=Z,5.8nm,1.0s						
CONA				i PKP	PKiKP	18 31 52.8	+0.1
	comp=Z,12nm,0.4s,SNR=17						
DOU	Dourbes	150.58	356	dPKP	PKPbc	18 31 52.1	0.0
RONA	Rosalia, Austr	150.60	340	i PKP	PKPdf	18 31 46.8	+0.5
	comp=Z,8.3nm,0.9s						
RONA				ePKP	PKiKP	18 31 52.9	+0.1
	comp=Z,23nm,0.5s,SNR=19						
PUNG	Punghina	150.64	328	⇑P	PKPbc	18 31 52.2	-0.2
BANR	Banloc	150.66	331	⇑P	PKiKP	18 31 53.4	+0.5
MDVR	Moldovita	150.85	330	⇑P	PKPbc	18 31 53.1	0.0
WLF	Walferdange	150.89	354	dPKP	PKiKP	18 31 53.7	+0.4
WLF				dPKPab	PKPab	18 32 02.9	+0.3
WLF	Walferdange	150.89	354	ePKPbc	PKiKP	18 31 54.0	+0.7
	baz=17,slow=2.4						
MORH	Mrgy, Hungar	151.03	335	⇓P	PKPbc	18 31 53.2	0.0
MOA	Molln	151.09	342	i PKP	PKPdf	18 31 46.7	-0.3
	comp=Z,4.6nm,0.8s						
MOA				ePKP	PKPbc	18 31 53.5	+0.1
	comp=Z,6.9nm,0.4s,SNR=6.0						
MOA				i PKP	PKPab	18 32 04.4	+0.9
	comp=Z,28nm,1.3s						
CAVK	Edirne/Enez-Ca	151.21	319	⇑P	PKPbc	18 31 53.2	-0.7
BIOA	Bad Ischl, Aus	151.41	343	i PKP	PKPdf	18 31 48.3	+0.8
	comp=Z,1.4nm,0.5s						
BIOA				ePKP	PKPbc	18 31 53.9	-0.2
	comp=Z,7.8nm,0.4s,SNR=8.1						
BIOA				i PKP	PKPab	18 32 06.0	+1.0
	comp=Z,44nm,0.9s						
FUR	Furstenfeldbru	151.54	347	ePKPbc	PKiKP	18 31 54.7	0.0
	baz=17,slow=2.4						
KOGS	Kog	151.71	339	i PKPbc	PKPbc	18 31 54.5	-0.3
KOGS				i PKPab	PKPab	18 32 06.4	+0.2
LESA	Schwarzleotal	151.91	344	i PKP	PKPdf	18 31 48.0	-0.3
	comp=Z,4.7nm,0.9s						
LESA				i PKP	PKPbc	18 31 55.2	-0.2
	comp=Z,20nm,0.5s						
SOKA	Soboth	151.91	340	ePKP	PKPbc	18 31 55.0	-0.3
	comp=Z,9.6nm,0.5s,SNR=6.3						
BFO	Black Forest	151.93	351	ePKPbc	PKiKP	18 31 55.5	0.0
	baz=17,slow=2.4						
BFO				epPKPbc	pPKPab	18 34 06.7	-1.9
KBA	Koelnbreinsper	152.05	343	ePKP	PKPbc	18 31 55.1	-0.7
	comp=Z,20nm,0.6s,SNR=6.2						
OBKA	Obir	152.21	341	i PKP	PKPbc	18 31 55.6	-0.5
	comp=Z,15nm,0.8s						
OBKA				ePKP	PKPab	18 32 09.3	+0.8
	comp=Z,18nm,0.9s						
UBR	Ueberruh	152.25	348	ePKPbc	PKiKP	18 31 56.4	+0.1
	baz=17,slow=2.4						
WATA	Walderalm	152.26	346	i PKP	PKPbc	18 31 56.1	-0.1
	comp=Z,15nm,0.5s,SNR=7.1						
RETA	Reutte	152.30	347	i PKP	PKiKP	18 31 56.3	-0.1
	comp=Z,8.2nm,0.6s						
RETA				i PKP	PKPab	18 32 09.1	+0.3
	comp=Z,11nm,0.7s						
WTTA	Wattenberg	152.31	345	i PKP	PKPdf	18 31 48.8	-0.2
	comp=Z,11nm,0.8s						
WTTA				ePKP	PKiKP	18 31 56.5	-0.1
	comp=Z,23nm,0.4s,SNR=7.8						
WTTA				ePKP	PKPab	18 32 09.6	+0.6
	comp=Z,31nm,0.7s						
MOTA	Moosalm	152.36	346	ePKP	PKPdf	18 31 48.9	-0.1
	comp=Z,12nm,0.9s,SNR=4.8						
MOTA				i PKP	PKPbc	18 31 56.4	-0.1
	comp=Z,28nm,0.9s						
MOTA				ePKP	PKPab	18 32 09.5	+0.3
	comp=Z,29nm,0.8s						
MOTA	Moosalm	152.36	346	eP	PKPdf	18 31 48.9	-0.1
	comp=Z,12nm,0.9s,SNR=4.8						
MYKA	Terra Mystica	152.37	342	ePKP	PKPdf	18 31 48.4	-0.6
	comp=Z,7.2nm,1.1s						
MYKA				ePKP	PKPbc	18 31 55.6	-0.8
	comp=Z,14nm,0.5s,SNR=5.4						
MYKA				i PKP	PKPab	18 32 09.0	-0.1
	comp=Z,17nm,0.8s						
SQTA	Sankt Quirin	152.45	346	i PKP	PKPdf	18 31 49.1	-0.1
	comp=Z,9.5nm,1.0s,SNR=5.2						
SQTA				i PKP	PKPbc	18 31 56.5	-0.1
	comp=Z,15nm,0.5s,SNR=5.5						
SQTA	Sankt Quirin	152.45	346	eP	PKPdf	18 31 49.1	-0.1
	comp=Z,9.5nm,1.0s,SNR=5.2						
ABTA	Abfaltersbach	152.57	344	i PKP	PKPdf	18 31 48.8	-0.5
	comp=Z,13nm,0.9s						
ABTA				i PKP	PKPbc	18 31 56.3	-0.5
	comp=Z,46nm,0.6s,SNR=7.5						
ABTA				i PKP	PKPab	18 32 09.7	-0.3
	comp=Z,21nm,1.0s						
LJU	Ljubljana	152.64	340	i PKPbc	PKPbc	18 31 56.9	0.0
DAVA	Damuels	152.67	348	i PKP	PKPbc	18 31 57.1	0.0
	comp=Z,6.3nm,0.6s						
FETA	Feichten	152.75	346	i PKP	PKPdf	18 31 49.8	+0.2
	comp=Z,15nm,0.8s						
FETA				i PKP	PKiKP	18 31 57.5	+0.1
	comp=Z,13nm,0.6s						
FETA				i PKP	PKPab	18 32 11.2	+0.4
	comp=Z,27nm,1.3s						
BLY	Banja Luka	152.82	335	⇑P	PKiKP	18 31 58.0	+0.6
BOJS	Bojanci	152.88	339	i PKPbc	PKiKP	18 31 57.9	+0.4
VAY	Valandovo	152.91	324	i P	PKPbc	18 31 57.0	-0.6
OHR	Ohrid	154.01	326	i P	PKPbc	18 31 59.8	-0.2
TIP	Timpagrande	157.51	328	⇑P	PKPdf	18 31 55.8	-0.4
PBRG	Braganca	157.77	17	ePKPab	PKPab	18 32 32.9	+0.4
PCAS	Casmilo, Conde	158.82	22	ePKPab	PKPab	18 32 36.6	-0.3
PSARD	Sardoal	159.34	22	ePKPab	PKPab	18 32 39.6	+0.3
PCBR	Castelo Branco	159.36	20	ePKPdf	PKPdf	18 31 58.8	+0.6
PMTG	Montargil	159.79	23	ePKPab	PKPab	18 32 41.4	+0.1
PARRA	Arraiolos	160.08	23	ePKPab	PKPab	18 32 42.6	+0.1
PESTR	Estremoz	160.19	22	ePKPab	PKPab	18 32 43.2	+0.2
EVO	Evora	160.34	23	ePKPdf	PKPdf	18 32 00.4	+1.1
ESDC	Sonseca Array	160.47	13	PKP	PKPdf	18 31 59.7	+0.2
	comp=Z,1.9nm,0.9s,baz=332,slow=3.5,SNR=7.5						
ESDC				PKPab	PKPab	18 32 44.6	+0.3
	comp=Z,7.4nm,1.0s,baz=342,slow=3.8,SNR=14						
PBEJ	Beja	160.84	24	ePKPdf	PKPdf	18 32 01.2	+1.3
PBAR	Barrancos	161.00	22	ePKPdf	PKPdf	18 32 00.9	+0.8
PCVE	Castro Verde	161.12	25	ePKPdf	PKPdf	18 32 01.4	+1.2
PCVE				ePKPab	PKPab	18 32 47.6	+0.5
MORF	Marmelete	161.15	26	ePKPdf	PKPdf	18 32 01.7	+1.4
PVAQ	Vaqueiros	161.44	24	ePKPab	PKPab	18 32 49.2	+0.7
PBDV	Barranco-do-Ve	161.50	25	ePKPdf	PKPdf	18 32 02.4	+1.8
KEST	Kesra	163.61	338	PKP	PKPdf	18 32 03.1	+0.4
	comp=Z,6.3nm,1.0s,baz=341,slow=3.3,SNR=4.1						
KEST				PKPab	PKPab	18 32 58.8	+0.6
	comp=Z,7.0nm,0.6s,baz=23,slow=3.5,SNR=10.0						
KEST	Kesra	163.61	338	P	PKPdf	18 32 03.2	+0.4
DBIC	Dimbokro	164.65	154	PKP	PKPdf	18 32 04.0	-0.2
	comp=Z,18nm,0.9s,baz=142,slow=1.5,SNR=16						
DBIC				PKPab	PKPab	18 33 04.0	+0.8
	comp=Z,17nm,0.7s,baz=221,slow=4.8,SNR=14						
TOA0	Torodi Ar. Sit	172.49	180	P	PKPdf	18 32 09.2	0.0
	SNR=14						
TORD	Torodi Ar. Bea	172.49	180	PKP	PKPdf	18 32 08.4	-0.8
	comp=Z,9.6nm,0.8s,baz=241,slow=3.3,SNR=50						
TORD				PKPab	PKPab	18 33 38.2	+0.5
	comp=Z,10nm,0.8s,baz=198,slow=6.2,SNR=25						
TORD				PP	PP	18 37 28.5	+0.1
	comp=Z,3.1nm,0.9s,baz=210,slow=8.1,SNR=9.1						

TAP 01 18:38:20.4, 24°.39N × 121°.41E, h7km, ML1.9, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNSH	Datong	0.05	326	i P	Pg	18 38 22.3	+0.2
NNSH				i S	Sg	18 38 23.3	-0.1
NNS	Nan Shan	0.06	325	i P	Pg	18 38 22.6	+0.3
NNS				i S	Sg	18 38 23.8	+0.2
LATG	Datong	0.18	36	P	Pg	18 38 24.5	+0.4
LATG				eS	Sg	18 38 27.4	+0.8
ETLH	Xiulin Townshi	0.19	161	P	Pg	18 38 25.3	+1.0
ETLH				S	Sg	18 38 28.2	+1.2
FUSS	Fushou	0.21	228	P	Pg	18 38 25.2	+0.6
FUSS				eS	Sg	18 38 28.6	+1.0
NDT	Datong Townshi	0.23	23	eS	Sg	18 38 29.0	+0.9
NACB	Ninganchiao	0.27	142	eP	Pb	18 38 26.7	-0.9
NACB				eS	Sg	18 38 30.0	+0.7
WHF	Hehuan Shan	0.28	209	eP	Pg	18 38 26.6	+0.6
WHF				eS	Sg	18 38 30.6	+0.8
YHNB	Yeheng	0.28	353	eP	Pg	18 38 26.8	+0.8
YHNB				eS	Sg	18 38 30.3	+0.6
ENTT	Nioudou	0.29	29	P	Pg	18 38 26.6	+0.6
ENTT				eS	Sg	18 38 30.7	+0.8
NSK	Sanguang	0.29	350	eP	Pg	18 38 27.0	+0.9
NSK				eS	Sg	18 38 30.5	+0.5
ENA	Nanau	0.30	83	P	Pb	18 38 27.2	-0.9
ENA				S	Sg	18 38 31.3	+1.0
EWUT	Wuta	0.34	80	eS	Sg	18 38 31.9	+0.4
TWD	Chiawan	0.35	151	eS	Sg	18 38 33.0	+1.2
NFF	Wufeng Townshi	0.36	312	eS	Sg	18 38 33.5	+1.2
LXIB	Xiulin Townshi	0.37	180	P	Pg	18 38 28.3	+0.7
LXIB				eS	Sg	18 38 33.5	+1.1
NDS	Dongshan	0.37	49	eP	Pg	18 38 28.4	+0.8
NDS				eS	Sg	18 38 33.7	+1.2
NWLT	Wulai	0.40	12	eP	Pb	18 38 29.2	-0.5
NWLT				S	Sg	18 38 33.6	+0.3
FUSB	Fushanzhiwuyua	0.40	23	eP	Pg	18 38 28.8	+0.6
FUSB				eS	Sg	18 38 34.1	+0.6
TWE	Neicheng	0.40	35	eP	Pb	18 38 29.2	-0.6
TWE				eS	Sb	18 38 35.0	-1.2
ETM	Tongmen	0.43	170	eP	Pb	18 38 29.7	-0.6
ETM				eS	Sg	18 38 35.0	+0.7
WHP	Taichung City	0.44	255	P	Pb	18 38 30.0	-0.5
WHP				S	Sg	18 38 35.6	+0.9
LIOB	Emei	0.44	305	eS	Sb	18 38 36.2	-1.2
WUSB	Renai	0.48	214	eP	Pg	18 38 30.1	+0.4
WUSB				eS	Sg	18 38 36.5	+0.6
OWD	Renai	0.48	207	eP	Pb	18 38 30.9	-0.3
ESL	Shilin	0.57	178	eP	Pb	18 38 32.6	-0.1
ESL				eS	Sg	18 38 40.0	+1.1

IDC ***01*** *18:38:58.5±1.3, 23°.13N×125°.01E, h0km, mb3.5/4, mbtmp3.5/5, ML2.4/1, MS3.1/3, Error ellipse: s-maj=54.4km s-min=22.7km az=68.0*

JMA ***01*** *18:38:60.0±0.3, 24°N±1°×125°.9E±1°.0, h114km, MV3.1/17, NEAR MIYAKOJIMA ISLAND*

ISC 01 18:38:58.8±2.1**, 23°.68N**±0°.07×**126°.06E**±0°.05**, h25**km±15km**, n31, σ1§18**/37**, mb3.5**/4**, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	Gusukube	1.24	331	eP	Pb	18 39 21.4	-0.1
JOGS				eS	Sb	18 39 37.6	+0.6
JMJ2	Miyako jima3	1.26	328	eP	Pb	18 39 21.6	-0.3
JMJ2				eS	Sb	18 39 38.0	+0.3
JMJ	Miyako jima 2	1.33	328	S	Sn	18 39 38.2	-0.6
JMJ	Miyako jima 2	1.33	328	S	Sn	18 39 38.2	-0.6
JMJ	Miyako jima 2	1.33	328	P	Pn	18 39 21.8	-0.1
JIKM	Ikemajima	1.45	329	eP	Pn	18 39 24.1	+0.6
JTJ	Tarama	1.57	308	eP	Pn	18 39 25.1	0.0
JTJ				eS	Sn	18 39 43.6	-1.1
JISG	Ishigakijimahi	1.84	300	eP	Pn	18 39 29.1	+0.3
JISG				eS	Sn	18 39 50.8	-0.5
JIJ	Ishigaki jima	1.89	292	eP	Pn	18 39 29.4	-0.1
JIJ				eS	Sn	18 39 51.3	-1.2
JKRS	Kuro-shima	1.96	287	eP	Pn	18 39 30.8	+0.3
JKRS				eS	Sn	18 39 53.1	-1.2
IRIF	Iriomote-Funau	2.23	288	eP	Pn	18 39 34.4	+0.1
IRIF				eS	Sn	18 39 59.8	-1.3
JKE	Kume jima 2	2.72	14	eP	Pn	18 39 40.5	-0.4
JJT3	Tamagusuku3	2.91	32	eP	Pn	18 39 43.3	-0.2
JNTH	Nagotoyohara	3.34	32	eP	Pn	18 39 49.0	-0.5
JOW	Kunigami	3.73	32	S	Sn	18 40 36.1	-1.8
JOW	Kunigami	3.73	32	S	Sn	18 40 36.1	-1.8
JOW	Kunigami	3.73	32	eP	Pn	18 39 54.3	-0.5
JOW	Kunigami	3.73	32	P	Pn	18 39 54.6	-0.2
JIH	Iheya	3.76	27	eP	Pn	18 39 55.0	-0.3
YULB	Yu-li	4.38	267	P	Pn	18 40 02.1	-1.8
YHNB	Yeheng	4.39	284	P	Pn	18 40 04.7	+0.6
YHNB				S	Sn	18 40 51.3	-3.2
YHNB	Yeheng	4.39	284	S	Sn	18 40 51.3	-3.2
TPUB	Ta-pu	5.00	267	P	Pn	18 40 12.3	-0.1
TPUB				S	Sn	18 41 08.5	-0.9
TPUB	Ta-pu	5.00	267	S	Sn	18 41 08.5	-0.9
KSRS	Korea Array	13.83	6	LR	LR	18 47 59.8	
	comp=Z,16nm,18.6s,baz=120,slow=37						
MJAR	Matsushiro Arr	16.56	36	P	P	18 43 05.1	+13
	baz=226,slow=18,SNR=1.7						
MJAR				LR	LR	18 49 12.6	
	comp=Z,42nm,20.4s,baz=178,slow=35						
	1.3nm,0.8s						
MKAR	Makanchi Array	41.84	315	P	P	18 46 47.5	+0.8
	0.2nm,0.4s,baz=105,slow=8.6,SNR=5.4						
	0.2nm,0.4s						
WRA	Warramunga Arr	44.10	169	P	P	18 47 05.2	+0.1
	1.4nm,0.7s,baz=348,slow=8.2,SNR=11						
	1.4nm,0.7s						
KURBB	Kurchatov Arra	45.40	319	P	P	18 47 17.0	+1.7
	0.4nm,0.7s,baz=108,slow=8.5,SNR=2.6						
	0.4nm,0.7s						
ASAR	Alice Springs	47.67	170	P	P	18 47 34.5	+1.2
	0.3nm,0.5s,baz=349,slow=8.7,SNR=5.6						
	0.3nm,0.5s						
URZ	Urewera	78.02	141	LR	LR	19 25 22.7	
	comp=Z,68nm,18.5s,baz=250,slow=36						

*NEIC **01** 18:44:49.6±1.5, 14°.59S±0°.03×167°.6E±0°.1, h131km±10km, mb4.6/16, Error ellipse: s-maj=19.7km s-min=1.7km az=103.0*

*IDC **01** 18:44:52.1±2.5, 14°.84S×167°.44E, h134km±19km, mb3.8/11, mbtmp4.2/12, Error ellipse: s-maj=23.9km s-min=15.8km az=84.0*

*NOU **01** 18:44:52.7, 14°.85S×167°.45E, h127km, mb4.5/36, Vanuatu Islands*

ISC 01 18:44:51.6±0.7, **14°.80S**±0°.06×**167°.46E**±0°.09, **h129**km, **n93**, σ**1s.66**/99, **mb4.3**/15, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.69	201	P	Pn	18 45 12.1	+0.3
SANVU	Saraoutou	0.69	201		Pn	18 45 11.7	-0.1
DVP	Devils Point	2.99	167	P	Pn	18 45 39.2	+1.2
RTV	Rentapao	3.11	163	P	Pn	18 45 40.3	+0.7
KOUNC	Koumac, New Ca	6.47	207	P	Pn	18 46 25.1	+0.7
MARNC	Mare, Loyalty	6.66	175	P	Pn	18 46 25.8	-1.2
MARNC	Mare, Loyalty	6.66	175	Pn	Pn	18 46 26.1	-1.0
DZM	Mont Dzumac	7.29	187	P	Pn	18 46 36.5	+0.9
	24nm,0.3s,baz=63,slow=5.9,SNR=120						
DZM				S	Sn	18 47 57.0	0.0
	33nm,0.4s,baz=292,slow=22,SNR=7.0						
DZM	Mont Dzumac	7.29	187	P	Pn	18 46 36.4	+0.8
DZM				S	Sn	18 47 57.6	+0.6
DZM	Mont Dzumac	7.29	187		Pn	18 46 36.3	+0.7
ONTNC	Ouen Toro	7.53	187	P	Pn	18 46 40.0	+1.4
ONTNC				S	Sn	18 48 02.8	+0.3
ONTNC	Ouen Toro	7.53	187	S	Sn	18 48 02.8	+0.3
ONTNC	Ouen Toro	7.53	187		Pn	18 46 39.8	+1.2
OUENC	Ouen Island, N	7.60	184	P	Pn	18 46 40.9	+1.3
OUENC				S	Sn	18 48 04.5	+0.3
OUENC	Ouen Island, N	7.60	184	S	Sn	18 48 04.5	+0.3
OUENC	Ouen Island, N	7.60	184	Pn	Pn	18 46 41.3	+1.7
NGOA	Tingoa Renbel	7.89	293	P	Pn	18 46 43.5	-0.2
HNR	Honiara	9.08	305	P	Pn	18 47 01.8	+2.1
	2.6nm,0.4s,baz=90,slow=13,SNR=11						
HNR				S	Sn	18 48 40.2	-0.1
	4.5nm,0.5s,baz=267,slow=22,SNR=9.8						
HNR	Honiara	9.08	305	P	Pn	18 47 02.0	+2.4
HNR				S	Sn	18 48 41.9	+1.7
HNR	Honiara	9.08	305	S	Sn	18 48 41.9	+1.7
HNR	Honiara	9.08	305		Pn	18 46 57.2	-2.4
SAVO	Savo Central	9.36	306	P	Pn	18 47 06.5	+3.1
TATA	Tatamba Isabel	9.84	310	P	Pn	18 47 12.3	+2.4
TATA				S	Sn	18 49 00.0	+1.3
TATA	Tatamba Isabel	9.84	310	S	Sn	18 49 00.0	+1.3
EIDS	Eidsvold	18.61	233	P	Pn	18 49 01.0	+0.1
EIDS	Eidsvold	18.61	233		Pn	18 49 00.8	-0.1
EIDS				IAmb	IAmb	18 49 01.5	
	comp=Z,30nm,0.6s						
PMG	Port Moresby	20.55	283	P	P	18 49 21.0	+0.8
	comp=Z,4.9nm,0.7s,baz=108,slow=8.0,SNR=3.6						
	comp=Z,4.9nm,0.7s						
CTA	Charters Tower	20.89	252	P	P	18 49 24.5	+0.6
	comp=Z,10nm,0.8s,baz=75,slow=11,SNR=11						
	comp=Z,10nm,0.8s						
CTA	Charters Tower	20.89	252	P	P	18 49 24.4	+0.6
CTAO	Charters Tower	20.89	252	P	P	18 49 24.3	+0.5
CTAO	Charters Tower	20.89	252	P	P	18 49 24.4	+0.6
CTAO				IAmb	IAmb	18 49 25.2	
	comp=Z,9.4nm,0.8s						
RMQ	Roma	20.98	233	P	Pn	18 49 27.4	-1.3
OUZ	Omahuta	21.07	166	P	P	18 49 28.4	+3.0
ARMA	Armidale	21.29	220	P	P	18 49 29.1	+1.0
ARMA	Armidale	21.29	220	P	P	18 49 28.9	+0.8
COEN	Coen	23.54	269	P	P	18 49 51.4	+1.0
COEN	Coen	23.54	269	P	P	18 49 48.5	-2.0
TOZ	Tahuroa Road	23.93	164	P	P	18 49 58.1	+4.4
HAZ	Te Kaha	24.63	160	P	P	18 50 02.4	+2.4
QLP	Quilpie	24.64	238	P	P	18 50 00.7	+0.4
RUGZ	Raukumara Rang	24.78	160	P	P	18 50 02.5	+1.0
URZ	Urewera	24.88	162	P	P	18 50 03.0	+0.8
URZ	Urewera	24.88	162	P	P	18 50 03.8	+1.6
MWZ	Matawai	25.07	161	P	P	18 50 05.4	+1.3
RTZ	Ruatahuna	25.16	162	P	P	18 50 04.8	-0.2
RTZ				IAmb	IAmb	18 50 06.5	
	comp=Z,28nm,1.4s						
RTZ	Ruatahuna	25.16	162	P	P	18 50 06.5	+1.5
ETVZ	East Tongariro	25.30	165	P	P	18 50 11.1	+4.8
NGZ	Ngauruhoe	25.31	165	P	P	18 50 10.9	+4.5
OTVZ	Oturere	25.32	165	P	P	18 50 10.8	+4.3
MTHZ	Maungataniwha	25.34	163	P	P	18 50 07.7	+1.1
SNGZ	Shannon Statio	25.43	162	P	P	18 50 08.4	+1.1
BKZ	Black Stump Fm	25.54	164	P	P	18 50 08.7	+0.4
BKZ	Black Stump Fm	25.54	164	P	P	18 50 07.0	-1.3
BKZ				IAmb	IAmb	18 50 10.8	
	comp=Z,12nm,0.5s						
BKZ	Black Stump Fm	25.54	164	P	P	18 50 09.1	+0.8
NMHZ	Naumai	25.56	163	P	P	18 50 10.9	+2.4
KNZ	Kokohu	25.75	161	P	P	18 50 11.2	+1.1
KRHZ	Kereru	25.95	164	P	P	18 50 13.4	+1.3
CMSA	Cobar Meteorol	25.95	226	P	P	18 50 12.6	+0.5
KAHZ	Kahuranaki	26.23	163	P	P	18 50 15.1	+0.5
MRZ	Mangatainoka R	26.72	166	P	P	18 50 19.6	+0.8
BFZ	Birch Farm	26.90	165	P	P	18 50 21.1	+0.6
BFZ	Birch Farm	26.90	165	P	P	18 50 20.5	0.0
QIS	Mount Isa	27.13	254	P	P	18 50 23.0	+0.2
MSWZ	Moikau Station	27.36	167	P	P	18 50 23.0	-1.6
INKA	Innaminka	27.95	238	P	P	18 50 27.4	-2.6
STKA	Stephens Creek	29.09	230	P	P	18 50 40.8	+0.7
	comp=Z,7.1nm,0.4s,baz=56,slow=9.6,SNR=37						
	comp=Z,7.1nm,0.4s						
STKA	Stephens Creek	29.09	230	P	P	18 50 40.8	+0.7
STKA	Stephens Creek	29.09	230	P	P	18 50 38.0	-2.1
JCZ	Jackson Bay	29.19	178	P	P	18 50 42.7	+1.7
LBZ	Lake Benmore	29.58	176	P	P	18 50 44.1	-0.2
MSZ	Milford Sound	29.77	179	P	P	18 50 51.3	+5.4
EAZ	Earnscleugh	30.37	177	P	P	18 50 51.4	+0.2
HTT	Hallett	31.81	229	P	P	18 51 04.7	+0.6
WR8	Warramunga Arr	31.84	256	P	P	18 51 02.8	-1.7
WR8				IAmb	IAmb	18 51 21.7	
	comp=Z,11nm,1.5s						
WB0	Warramunga Arr	31.93	256	P	P	18 51 02.8	-2.4
WB0				IAmb	IAmb	18 51 04.1	
	comp=Z,8.8nm,1.3s						
WRA	Warramunga Arr	31.99	256	P	P	18 51 04.0	-1.8
	comp=Z,1.9nm,0.8s,baz=86,slow=9.5,SNR=29						
	comp=Z,1.9nm,0.8s						
WRA	Warramunga Arr	31.99	256	P	P	18 51 02.0	-3.7
AS31	Alice Springs	32.82	249	P	P	18 51 10.8	-2.3
AS31				IAmb	IAmb	18 51 12.4	
	comp=Z,2.0nm,0.3s						
ASAR	Alice Springs	32.82	249	P	P	18 51 11.4	-1.6
	comp=Z,2.5nm,0.3s,baz=78,slow=9.5,SNR=150						
ASAR				ScP	ScP	18 57 27.5	+0.1
	comp=Z,0.6nm,1.0s,baz=76,slow=2.9,SNR=3.0						
	comp=Z,2.5nm,0.3s						
ASAR	Alice Springs	32.82	249	P	P	18 51 10.9	-2.2
BBOO	Buckleboo	33.68	232	P	P	18 51 20.9	+0.5
BBOO	Buckleboo	33.68	232	P	P	18 51 19.3	-1.1
KNRA	Kununurra	37.31	263	P	P	18 51 49.4	-2.2
FORT	Forrest	39.42	239	P	P	18 52 07.0	-2.1
FORT				IAmb	IAmb	18 52 19.3	
	comp=Z,35nm,1.3s						
MBWA	Marble Bar	45.70	255	P	P	18 52 57.7	-2.3
MJAR	Matsushiro Arr	58.06	332	P	P	18 54 32.1	+0.8
	comp=Z,1.5nm,0.9s,baz=168,slow=11,SNR=4.1						
	comp=Z,1.5nm,0.9s						
CMAR	Chiang Mai Arr	75.15	294	P	P	18 56 21.9	+1.7
	comp=Z,0.5nm,0.3s,baz=118,slow=5.7,SNR=6.4						
	comp=Z,0.5nm,0.3s						
SONM	Songino Array	82.67	324	P	P	18 56 59.5	-1.3
	comp=Z,0.6nm,0.7s,baz=136,slow=6.4,SNR=2.8						
	comp=Z,0.6nm,0.7s						
ILAR	Eielson Array	86.54	18	P	P	18 57 18.7	-1.0
	comp=Z,0.5nm,0.8s,baz=229,slow=5.4,SNR=5.6						
	comp=Z,0.5nm,0.8s						
MKAR	Makanchi Array	97.39	316	P	P	18 58 10.8	+0.3
	comp=Z,0.7nm,0.7s,baz=95,slow=5.5,SNR=8.5						
	comp=Z,0.7nm,0.7s						
ZALV	Zalesovo Beam	97.56	324	P	P	18 58 10.1	-0.9
	comp=Z,0.4nm,0.6s,baz=155,slow=8.2,SNR=3.7						
	comp=Z,0.4nm,0.6s						
ARCES	ARCESS Array B	120.37	345	PKP	PKPdf	19 03 26.6	-0.4
	comp=Z,2.0nm,0.8s,baz=46,slow=2.3,SNR=5.1						
FINES	FINESS Array B	125.86	338	PKP	PKPdf	19 03 38.0	+0.2
	comp=Z,7.2nm,1.2s,baz=101,slow=3.9,SNR=1.8						

*UCR **01** 18:52:10.3±0.9, 10°.39N×85°.52W, h47km±3km, MW3.6, Fault plane solution: NP1:φs315.00000°, δ65.00000°, λ-90.00000°., Presumed earthquake*

*CATAC **01** 18:52:11.1±0.3, 10°N±3°×8°5W±°, h30km±3km, M3.5/10, MLv3.5/10, Error ellipse: s-maj=6.8km s-min=4.0km az=43.2, confirmed*

ISC 01 18:52:12.0±1.3, **10°.37N**±0°.03×**85°.45W**±0°.04, **h41**km±8km, **n65**, σ**0s.71**/76, **11C-27D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLVR	Palo Verde	0.10	103	⇓eP	Pn	18 52 18.3	-0.7
PLVR				eS	Sn	18 52 23.6	-0.1
DELF	Filadelfia	0.12	308	⇓eP	Pn	18 52 18.4	-0.5
DELF				eS	Sn	18 52 24.1	+0.6
ELVJ	El Viejo (Barb	0.15	58	⇓eP	Pn	18 52 17.9	-1.0
SACU	Santa Cruz	0.17	230	⇑eP	Pn	18 52 18.5	-0.6
SACU				eS	Sn	18 52 24.5	+0.5
JUD3	Juan Diaz 3	0.22	202	⇑eP	Pn	18 52 19.0	-0.7
JUD3				eS	Sn	18 52 25.8	+0.8
BAGA	Bagaces	0.24	51	⇓eP	Pn	18 52 19.4	-0.4
ERIA	Liberia	0.26	3	eP	Pn	18 52 19.5	-0.4
ELI1	Hacienda Flor	0.29	340	P	Pn	18 52 19.9	-0.3
ELI1				S	Sn	18 52 26.6	+0.7
ELI1	Hacienda Flor	0.29	340	⇓eP	Pn	18 52 19.9	-0.3
CMARA	Lajas Hojancha	0.35	175	P	Pn	18 52 20.2	-0.8
CMARA				S	Sn	18 52 27.7	+0.5
CMARA	Lajas Hojancha	0.35	175	⇑eP	Pn	18 52 20.2	-0.8
CMARA				eS	Sn	18 52 27.8	+0.6
CNAS	Canas	0.36	81	⇓eP	Pn	18 52 20.7	-0.3
COLC	Colonia	0.38	40	⇓eP	Pn	18 52 20.4	-0.9
GPS3	Bodega del ICE	0.39	13	eP	Pn	18 52 21.1	-0.3
GPS2	Hotel Rincn d	0.39	15	⇓eP	Pn	18 52 20.7	-0.8
GPS2				eS	Sn	18 52 28.4	+0.3
LAPC	Finca la Perla	0.39	3	⇓eP	Pn	18 52 20.6	-0.9
INVE	Universidad In	0.40	75	⇓eP	Pn	18 52 21.1	-0.4
CUI	Cuipilapa	0.40	45	⇓eP	Pn	18 52 20.9	-0.7
CUI				eS	Sn	18 52 29.1	+0.8
GPS1	Guardaparques	0.41	14	⇓eP	Pn	18 52 20.9	-0.8
NYURE	Nandayure	0.42	152	⇓eP	Pn	18 52 20.8	-0.9
NYURE				eS	Sn	18 52 28.5	-0.1
VRLE	La Escondida,	0.42	12	⇓eP	Pn	18 52 21.0	-0.9
HORNC	Hornillas	0.43	39	eP	Pn	18 52 21.2	-0.8
MESS	Mesas	0.45	35	⇓eP	Pn	18 52 21.3	-0.9
VORI	VORI	0.46	13	⇓eP	Pn	18 52 21.5	-0.9
TIMP	Tierras Morena	0.48	64	⇓eP	Pn	18 52 21.8	-0.8
TILA	Tilaran	0.49	78	⇓eP	Pn	18 52 22.1	-0.5
CLARA	Aguas Claras	0.49	34	⇓eP	Pn	18 52 22.0	-0.7
JUNT	Juntas	0.49	100	⇓eP	Pn	18 52 21.9	-0.8
JTS	Las Juntas de	0.50	99	P	Pn	18 52 21.9	-0.9
JTS				S	Sn	18 52 30.5	+0.1
JTS	Las Juntas de	0.50	99	⇓eP	Pn	18 52 21.9	-0.9
BUAI	Buenos Aires	0.52	13	⇓eP	Pn	18 52 22.4	-0.6
PEJA	Penjamo Buenos	0.54	15	⇓eP	Pn	18 52 22.9	-0.4
VMAR	Armenia, Volca	0.55	37	⇑eP	Pn	18 52 22.9	-0.6
VMAR				eS	Sn	18 52 33.1	+1.5
QUEB	Quebradon, Cot	0.60	65	⇑eP	Pn	18 52 23.8	-0.4
JCR1	Jicaral	0.62	147	⇓eP	Pn	18 52 23.7	-0.8
MTEVE	Monteverde	0.62	95	⇓eP	Pn	18 52 24.0	-0.5
TABAC	Tabacon	0.69	79	⇑eP	Pn	18 52 25.3	0.0
LCRUZ	La Cruz	0.72	346	⇓eP	Pn	18 52 25.0	-0.8
VARE2	V. Arenal	0.73	83	⇑eP	Pn	18 52 26.1	+0.2
ARE1	Arenal 1	0.73	83	⇑eP	Pn	18 52 26.0	+0.1
CEDE	Laguna Cedeo	0.75	81	⇑eP	Pn	18 52 26.2	0.0
CEDE				eS	Sn	18 52 38.5	+2.1
PAQE	Paquera	0.75	137	eP	Pn	18 52 25.4	-0.8
REZ	Monterrey de S	0.76	78	eP	Pn	18 52 26.3	0.0
VACR	Volcan Arenal	0.77	82	⇑eP	Pn	18 52 26.5	+0.1
FORC	Fortuna	0.78	83	eP	Pn	18 52 26.6	+0.1
CARN	Rivas	0.81	355	P	Pn	18 52 26.5	-0.5
CARN				S	Sn	18 52 38.8	+0.9
CARN	Rivas	0.81	355	eP	Pn	18 52 26.1	-0.9
ARZA	Esparza	0.86	116	eP	Pn	18 52 26.7	-1.0
LCHIL	Los Chiles	0.98	48	⇑eP	Pn	18 52 28.4	-0.9
QUEU	Ciudad Quesada	1.00	93	eP	Pn	18 52 29.7	0.0
RAMO	San Ramon	1.01	106	eP	Pn	18 52 29.6	-0.2
COVE	Coope Vega, Sa	1.09	71	P	Pn	18 52 30.1	-0.7
MORN	Al O del Volca	1.18	351	P	Pn	18 52 31.6	-0.5
MORN				S	Sn	18 52 47.0	-0.1
BELE	Belen	1.31	107	eP	Pn	18 52 33.8	-0.1
ACON	Acoyapa	1.61	10	P	Pn	18 52 37.1	-0.9
ACON				S	Sn	18 52 56.7	-0.8
PIEC	Cerro El Cedra	1.65	117	eP	Pn	18 52 38.3	-0.4
NANN	Nandasmo	1.69	337	P	Pn	18 52 39.8	+0.7
NANN				S	Sn	18 52 59.9	+0.4
TRT2	Tortugero	1.70	84	S	Sn	18 52 58.4	-1.3
ABRB	Las Abras (San	1.75	102	eP	Pn	18 52 39.9	-0.1
BOAB	BOACO BROADBAN	2.08	354	P	Pn	18 52 43.5	-0.8
BOAB				S	Sn	18 53 09.2	+0.2
COPN	Copaltepe	2.12	328	P	Pn	18 52 44.9	0.0
COPN	Copaltepe	2.12	328	eP	Pn	18 52 44.9	0.0
PKGN	Cerro Pekin	2.73	327	P	Pn	18 52 45.7	-7.6
CRIN	San Cristobal	2.79	326	P	Pn	18 52 45.0	-9.3
PIRO	Carate, Puerto	2.86	133	⇓eP	Pn	18 52 55.9	+0.7

IDC 01 19:01:19.4±1.4, **12°.08S**×**179°.46W**, **h0**km, **mb3.6**/3, **mbtmp3.8**/4, **ML4.3**/1, **Error ellipse: s-maj=54.0km s-min=25.5km az=173.0, North of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.71	104	Pn	Pn	19 03 14.7	+1.7
	3.9nm,0.3s,baz=267,slow=19,SNR=6.5						
AFI				Sn	Sn	19 04 40.2	-0.9
	1.9nm,0.3s,baz=222,slow=12,SNR=1.8						
	30nm,0.6s						
WRA	Warramunga Arr	44.98	254	P	P	19 09 37.6	+0.7
	0.1nm,0.3s,baz=91,slow=7.6,SNR=5.4						
	0.1nm,0.3s						
ASAR	Alice Springs	45.67	249	P	P	19 09 41.7	-0.7
	0.8nm,0.4s,baz=85,slow=8.2,SNR=38						
	0.8nm,0.4s						
ILAR	Eielson Array	80.48	14	P	P	19 13 32.4	-0.5
	0.3nm,0.5s,baz=207,slow=5.1,SNR=2.1						
	0.3nm,0.5s						

IDC 01 19:12:10.4±2.0, **1°.71N**×**126°.00E**, **h0**km, **mb3.5**/3, **mbtmp3.7**/4, **ML3.8**/1, **Error ellipse: s-maj=125.9km s-min=26.6km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.69	181	P	P	19 16 40.9	-0.4
	0.2nm,0.3s,baz=336,slow=10.0,SNR=3.0						
	10nm,1.1s						
WRA	Warramunga Arr	23.02	160	P	P	19 17 17.1	-0.2
	1.0nm,0.4s,baz=338,slow=10,SNR=23						
	1.0nm,0.4s						
ASAR	Alice Springs	26.37	164	P	P	19 17 48.8	+0.2
	0.5nm,0.4s,baz=345,slow=8.8,SNR=22						
	0.5nm,0.4s						
MKAR	Makanchi Array	58.80	326	P	P	19 22 10.8	+0.2
	0.2nm,0.5s,baz=122,slow=5.2,SNR=1.8						
	0.2nm,0.5s						

*NEIC **01** 19:41:26.2±1.7, 32°.29S±0°.09×179°.5E±0°.2, h406km±10km, mb4.1/15, Error ellipse: s-maj=26.1km s-min=8.5km az=112.0*

*IDC **01** 19:41:26.9±1.3, 32°.25S×179°.68E, h436km±12km, mb3.5/4, mbtmp4.6/8, Error ellipse: s-maj=26.0km s-min=14.8km az=139.0*

*WEL **01** 19:41:30.7±0.8, 32°S±5°×18°0E±1°0, h277km±13km, M5.2/23, mB5.6/19, ML5.0/7, MLv5.5/23, Mw(mB)5.1/19, Error ellipse: s-maj=13.3km s-min=5.0km az=112.1, confirmed*

*NOU **01** 19:41:39.4, 33°.54S×179°.08E, h405km, MLv5.2/9, South of Kermadec Islands*

ISC 01 19:41:26.4±0.7, **32°.49S**±0°.07×**179°.9E**±0°.1, **h450**km, **n200**, σ**1s.70**/208, **mb4.1**/12, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.71	30	P	P	19 42 29.3	-10
GLKZ				P	S	19 43 19.5	-19
RAO	Raoul Island	3.72	30	P	P	19 42 38.7	-0.5
	291nm,0.4s,baz=197,slow=23,SNR=2.0						
RAO				S	S	19 43 24.8	-14
	372nm,0.3s,baz=70,slow=20,SNR=3.6						
RAO	Raoul Island	3.72	30		P	19 42 36.9	-2.3
RAO	Raoul Island	3.72	30	S	S	19 43 20.2	-18
MXZ	Matakaoa Point	5.24	194	P	P	19 42 52.2	-0.7
MXZ	Matakaoa Point	5.24	194	Pn	P	19 42 52.5	-0.4
MXZ				Sn	S	19 43 54.5	-9.1
MXZ	Matakaoa Point	5.24	194	P	P	19 42 52.3	-0.7
MXZ				S	S	19 44 02.5	-1.1
GRZ	Great Barrier	5.27	223	P	P	19 42 54.4	+1.1
WMGZ	Waiomatatini S	5.46	193	P	P	19 42 54.7	-0.4
WIZ	White Island	5.51	203	P	P	19 42 57.6	+2.0
HAZ	Te Kaha	5.54	198	P	P	19 42 55.1	-0.8
HAZ				S	S	19 44 08.7	-0.5
PKGZ	Pakihiroa	5.58	195	P	P	19 42 56.3	0.0
MYRZ	Mayor Island	5.66	211	P	P	19 43 00.5	+3.3
PUZ	Puketiti	5.74	193	P	P	19 42 57.9	0.0
WCZ	Waipu Caves	5.77	232	P	P	19 42 59.1	+0.9
RUGZ	Raukumara Rang	5.77	198	P	P	19 42 57.3	-1.0
WIAZ	Waiheke Island	5.84	221	P	P	19 43 00.9	+2.0
ABAZ	Army Bay	5.88	224	P	P	19 43 01.3	+2.0
WHRZ	Whale Island	5.88	203	P	P	19 43 02.1	+2.8
TWGZ	Tauwhareparae	5.90	195	P	P	19 43 00.2	+0.6
OUZ	Omahuta	5.93	241	P	P	19 42 59.8	-0.1
OUZ	Omahuta	5.93	241	P	P	19 42 59.9	-0.1
MBAZ	Motutapu North	5.95	223	P	P	19 43 02.1	+2.0
OPRZ	Ohinepanea	6.02	206	P	P	19 43 02.4	+1.7
TGRZ	Tauranga	6.03	209	P	P	19 43 04.3	+3.4
MKAZ	Moumakai	6.05	219	P	P	19 43 03.4	+2.4
MARZ	Manawahe	6.10	205	P	P	19 43 04.3	+2.7
CNGZ	Carnagh Statio	6.15	193	P	P	19 43 02.4	+0.3
MWZ	Matawai	6.16	198	P	P	19 43 01.5	-0.7
MWZ				S	S	19 44 20.4	-0.2
TKGZ	Te Karaka	6.18	195	P	P	19 43 02.6	+0.2
TKGZ				S	S	19 44 20.9	0.0
EDRZ	Edgecumbe	6.18	204	P	P	19 43 04.5	+2.0
URZ	Urewera	6.20	201	P	P	19 43 04.7	+2.0
	731nm,0.4s,baz=312,slow=2.1,SNR=166						
URZ				S	S	19 44 19.7	-1.7
	146nm,0.4s,baz=238,slow=22,SNR=12						
URZ	Urewera	6.20	201	P	P	19 43 02.1	-0.5
URZ	Urewera	6.20	201	P	P	19 43 01.9	-0.7
KMRZ	Kaimai	6.27	210	P	P	19 43 06.1	+2.8
KARZ	Kaharoa	6.29	208	P	P	19 43 06.5	+2.9
MKRZ	Makatiti	6.31	206	P	P	19 43 07.4	+3.6
OMRZ	Omania	6.32	206	P	P	19 43 06.6	+2.7
RAGZ	Rawiri	6.34	198	P	P	19 43 03.5	-0.6
TOZ	Tahuroa Road	6.37	213	P	P	19 43 07.1	+2.8
TARZ	Mount Tarawera	6.38	205	P	P	19 43 07.3	+2.7
NGRZ	Ngongotaha	6.38	208	P	P	19 43 08.3	+3.7
UTU	Utuhina	6.45	207	P	P	19 43 09.0	+3.8
HLRZ	Highlands Stat	6.45	206	P	P	19 43 08.4	+3.2
RIGZ	Rimuhau	6.45	195	P	P	19 43 05.3	+0.1
RIGZ				S	S	19 44 26.5	+0.3
RRRZ	Republican Roa	6.47	205	P	P	19 43 07.6	+2.1
MUGZ	Murupara	6.51	202	P	P	19 43 07.4	+1.6
HSRZ	Hossack Road	6.54	206	P	P	19 43 09.0	+2.8
RTZ	Ruatahuna	6.57	201	Pn	P	19 43 07.0	+0.5
RTZ				Sn	S	19 44 23.8	-4.7
RTZ	Ruatahuna	6.57	201	P	P	19 43 07.2	+0.6
HRRZ	Handcock Road	6.60	206	P	P	19 43 08.6	+1.8
SNGZ	Shannon Statio	6.63	198	P	P	19 43 07.8	+0.7
PRRZ	Plateau Road	6.66	205	P	P	19 43 09.0	+1.7
ALRZ	Allen Road	6.73	205	P	P	19 43 09.1	+0.9
WPRZ	Whakapapatarin	6.76	206	P	P	19 43 10.4	+2.0
KNZ	Kokohu	6.78	195	P	P	19 43 08.6	0.0
RAHZ	Arahi	6.82	199	P	P	19 43 08.9	-0.2
MTHZ	Maungataniwha	6.83	201	P	P	19 43 09.2	-0.1
TLZ	Tolley Road	6.84	210	P	P	19 43 10.6	+1.2
MHGZ	Mahia Peninsul	6.85	193	P	P	19 43 11.2	+1.8
WHHZ	Waihua	6.93	198	P	P	19 43 12.6	+2.3
MRHZ	Matea Rd	6.95	203	P	P	19 43 10.1	-0.4
WHTZ	Whakaora	6.96	207	P	P	19 43 13.8	+3.1
NMHZ	Naumai	7.07	200	P	P	19 43 12.4	+0.6
WATZ	Wairara	7.09	208	P	P	19 43 13.2	+1.3
HATZ	Hinemaiaia	7.11	205	P	P	19 43 13.3	+1.1
ARHZ	Aropaoanui	7.17	199	P	P	19 43 13.0	+0.2
RATZ	Rangitukua	7.21	207	P	P	19 43 14.1	+0.9
BKZ	Black Stump Fm	7.23	202	P	P	19 43 11.6	-1.8
BKZ	Black Stump Fm	7.23	202		P	19 43 12.2	-1.2
BKZ				Sn	S	19 44 31.9	-9.3
BKZ	Black Stump Fm	7.23	202	P	P	19 43 12.5	-1.0
RITZ	Rihia Road	7.27	206	P	P	19 43 14.6	+0.7
HIZ	Hauiti	7.30	213	P	P	19 43 11.5	-2.6
HIZ	Hauiti	7.30	213		P	19 43 15.7	+1.6
HIZ	Hauiti	7.30	213	P	P	19 43 15.7	+1.6
KATZ	Kakaramea	7.33	207	P	P	19 43 15.9	+1.2
MCHZ	McNeill Hill	7.42	200	P	P	19 43 15.6	+0.1
NTVZ	North Tongarir	7.45	206	P	P	19 43 15.0	-0.9
TMVZ	Te Maari	7.45	206	P	P	19 43 14.9	-1.0
KRVZ	Karewarewa	7.46	207	P	P	19 43 16.9	+0.9
ETVZ	East Tongariro	7.47	206	P	P	19 43 15.0	-1.1
KWHZ	Kaweka Forest	7.49	201	P	P	19 43 15.4	-0.8
WTVZ	West Tongariro	7.50	207	P	P	19 43 16.6	+0.3
OTVZ	Oturere	7.51	206	P	P	19 43 15.2	-1.3
TWVZ	Taurewa	7.52	208	P	P	19 43 17.3	+0.7
CKHZ	Cape Kidnapper	7.52	197	P	P	19 43 16.9	+0.4
SNVZ	South Ngauruho	7.54	206	P	P	19 43 15.6	-1.3
NGZ	Ngauruhoe	7.54	207	P	P	19 43 16.1	-0.8
COVZ	Chateau Observ	7.59	207	P	P	19 43 18.6	+1.3
TUVZ	Tukino	7.61	206	P	P	19 43 17.5	0.0
FWVZ	Far West T-bar	7.63	206	P	P	19 43 19.0	+1.1
WHVZ	Whangaehu Hut	7.64	206	P	P	19 43 19.7	+1.6
TRVZ	Turoa	7.67	206	P	P	19 43 20.3	+1.9
WNVZ	Wahianoa	7.68	206	P	P	19 43 18.3	-0.1
MOVZ	Moawhango	7.69	205	P	P	19 43 18.1	-0.3
KAHZ	Kahuranaki	7.70	198	P	P	19 43 18.2	-0.2

KRHZ	Kereru	7.70	201	P	P	19 43 16.7	-1.8
PKVZ	Pokaka	7.74	207	P	P	19 43 18.9	0.0
MTVZ	Mangateitei	7.78	206	P	P	19 43 19.7	+0.3
VRZ	Vera Road	7.84	211	P	P	19 43 21.1	+1.1
PXZ	Pawanui	7.93	197	P	P	19 43 21.0	+0.1
PNHZ	Pukenui	8.00	201	P	P	19 43 19.4	-2.3
WPHZ	Waipukurau	8.07	199	P	P	19 43 22.7	+0.3
PRHZ	Porangahau	8.21	198	P	P	19 43 24.2	+0.3
TSZ	Takapari Road	8.21	202	P	P	19 43 23.0	-0.9
LREZ	Lake Rotokare	8.28	211	P	P	19 43 27.1	+2.5
WAZ	Wanganui	8.28	207	P	P	19 43 25.6	+0.9
PREZ	Palmer Road	8.29	213	P	P	19 43 29.4	+4.6
KHEZ	Kahui Hut	8.32	214	P	P	19 43 28.1	+2.9
DVHZ	Dannevirke	8.37	200	P	P	19 43 25.1	-0.5
ANWZ	Angora Road	8.43	198	P	P	19 43 27.4	+1.1
OHWZ	Ohakea	8.55	204	P	P	19 43 28.4	+0.8
POWZ	Post Office Ro	8.57	202	P	P	19 43 28.9	+1.1
PRWZ	Pori Road	8.66	200	P	P	19 43 30.0	+1.2
BFZ	Birch Farm	8.70	199	P	P	19 43 27.4	-1.8
BFZ	Birch Farm	8.70	199		P	19 43 28.8	-0.4
BFZ	Birch Farm	8.70	199	P	P	19 43 27.4	-1.8
MRZ	Mangatainoka R	8.88	202	P	P	19 43 28.9	-2.2
TIWZ	Tintock	8.89	200	P	P	19 43 31.5	+0.2
CPWZ	Castlepoint	8.92	199	P	P	19 43 34.1	+2.5
HOWZ	Holdsworth Sta	9.11	202	P	P	19 43 31.7	-2.0
OGWZ	Otaki Gorge	9.15	203	P	P	19 43 32.3	-1.8
TMWZ	Te Maipa	9.19	199	P	P	19 43 35.5	+0.9
KIW	Kapiti Island	9.28	204	P	P	19 43 33.8	-1.7
MTW	Mount Morrison	9.35	201	P	P	19 43 36.7	+0.4
CAW	Cannon Point	9.45	203	P	P	19 43 36.3	-1.0
TRWZ	Traveller	9.52	200	P	P	19 43 38.6	+0.5
PAWZ	Paruwai Farm	9.58	201	P	P	19 43 39.0	+0.2
DUWZ	D'Urville Isla	9.60	208	P	P	19 43 36.9	-2.1
MSWZ	Moikau Station	9.67	201	P	P	19 43 41.0	+1.3
MSWZ	Moikau Station	9.67	201	P	P	19 43 38.2	-1.5
WEL	Wellington	9.70	204	P	P	19 43 40.5	+0.4
SNZO	South Karori	9.75	204	P	P	19 43 41.0	+0.4
BHW	Baring Head	9.78	203	P	P	19 43 39.1	-1.9
PLWZ	Palliser	9.80	201	P	P	19 43 42.0	+0.7
PLWZ	Palliser	9.80	201	P	P	19 43 41.1	-0.2
TCW	Tory Channel	9.81	206	P	P	19 43 39.6	-1.6
TUWZ	Tuamarina	10.13	206	P	P	19 43 43.6	-1.1
NNZ	Nelson	10.17	209	P	P	19 43 44.4	-0.8
TKNZ	Takaka Hill	10.20	211	P	P	19 43 45.0	-0.5
QRZ	Quartz Range	10.22	213	P	P	19 43 45.7	-0.1
QRZ	Quartz Range	10.22	213	P	P	19 43 45.7	-0.1
CMWZ	Cape Campbell	10.31	205	P	P	19 43 48.4	+1.7
BSWZ	Blackbirch Sta	10.40	206		P	19 43 47.2	-0.4
BSWZ	Blackbirch Sta	10.40	206	P	P	19 43 48.6	+0.9
MRNZ	Matariki Terra	10.58	211	P	P	19 43 49.2	-0.5
THZ	Tophouse	10.82	209	P	P	19 43 51.6	-0.8
KHZ	Kahutara	11.13	205	P	P	19 43 54.8	-0.8
KHZ	Kahutara	11.13	205	P	P	19 43 55.0	-0.6
DSZ	Denniston Nort	11.29	213	P	P	19 43 57.4	0.0
GVZ	Greta Valley S	11.80	206	P	P	19 44 04.7	+1.8
LTZ	Lake Taylor	11.93	208	P	P	19 44 05.4	+1.1
AMCZ	Amberley	12.12	206	P	P	19 44 08.0	+1.7
OXZ	Oxford	12.48	208	P	P	19 44 11.6	+1.4
MQZ	McQueen's Vall	12.58	205		P	19 44 11.0	-0.3
MQZ	McQueen's Vall	12.58	205	P	P	19 44 12.1	+0.8
AKCZ	Akaroa Harbour	12.63	204	P	P	19 44 15.1	+3.2
RACZ	Rakaia	12.78	206	P	P	19 44 15.9	+2.4
WVZ	Waitaha Valley	12.82	212	P	P	19 44 14.7	+0.8
MHCZ	Mount Hutt	12.84	208	P	P	19 44 16.2	+2.0
WACZ	Wakanui South	13.08	207	P	P	19 44 19.4	+2.7
RPZ	Rata Peaks	13.20	209	P	P	19 44 20.1	+2.1
	9.2nm,0.3s,baz=295,slow=0.6,SNR=11						
RPZ				S	S	19 46 39.2	-0.7
	11nm,0.6s,baz=3.5,slow=19,SNR=3.9						
RPZ	Rata Peaks	13.20	209	P	P	19 44 21.2	+3.1
ARCZ	Arundel	13.34	208	P	P	19 44 21.8	+2.2
FOZ	Fox Glacier	13.60	213	P	P	19 44 24.4	+2.2
TMZ	Timaru	13.77	208	P	P	19 44 27.9	+3.7
LBZ	Lake Benmore	14.11	210	P	P	19 44 31.7	+3.9
ODZ	Otahua Downs	14.47	207	P	P	19 44 35.6	+4.0
JCZ	Jackson Bay	14.49	214	P	P	19 44 34.9	+2.9
ONTNC	Ouen Toro	15.67	307		P	19 44 41.1	-3.6
DZM	Mont Dzumac	15.84	308	P	P	19 44 43.1	-3.5
	18nm,0.8s,baz=123,slow=9.3,SNR=15						
DZM	Mont Dzumac	15.84	308	P	P	19 44 42.5	-4.1
AFI	Afiamalu	19.98	24	P	P	19 45 28.4	+0.5
	28nm,0.6s,baz=38,slow=19,SNR=8.0						
ARMA	Armidale	24.20	267	P	P	19 46 06.7	+0.8
ARMA				IAmb	IAmb	19 46 09.1	
	comp=Z,4.7nm,0.8s						
EIDS	Eidsvold	26.17	278	P	P	19 46 23.1	-0.2
EIDS				IAmb	IAmb	19 46 24.4	
	comp=Z,12nm,1.1s						
STKA	Stephens Creek	32.34	261	P	P	19 47 17.6	+0.6
	comp=Z,2.6nm,1.0s,baz=98,slow=12,SNR=5.0						
	comp=Z,2.6nm,1.0s						
STKA	Stephens Creek	32.34	261	P	P	19 47 17.1	+0.1
CTAO	Charters Tower	32.48	284	P	P	19 47 18.1	-0.3
CTAO				IAmb	IAmb	19 47 18.6	
	comp=Z,7.9nm,0.6s						
COEN	Coen	38.23	290	P	P	19 48 05.6	-0.9
AS31	Alice Springs	41.29	270	P	P	19 48 29.9	-1.3
ASAR	Alice Springs	41.29	270	P	P	19 48 31.1	-0.2
	comp=Z,1.6nm,0.6s,baz=103,slow=7.3,SNR=23						
ASAR				ScP	ScP	19 53 28.5	+2.4
	comp=Z,0.3nm,0.7s,baz=105,slow=4.0,SNR=4.1						
	comp=Z,1.6nm,0.6s						
ASAR	Alice Springs	41.29	270	P	P	19 48 30.1	-1.1
WR8	Warramunga Arr	42.33	276	P	P	19 48 37.7	-1.9
WR8				IAmb	IAmb	19 48 39.7	
	comp=Z,9.3nm,1.1s						
WB2	Warramunga Arr	42.46	276	P	P	19 48 39.8	-0.8
WRAB	Tennant Creek	42.47	276	P	P	19 48 39.4	-1.2
WRAB				IAmb	IAmb	19 49 17.4	
	comp=Z,13nm,1.4s						
WRA	Warramunga Arr	42.47	276	P	P	19 48 39.9	-0.7
	comp=Z,4.6nm,0.5s,baz=113,slow=7.9,SNR=71						
WRA				ScP	ScP	19 53 34.2	+3.2
	comp=Z,0.3nm,0.5s,baz=119,slow=3.0,SNR=5.8						
	comp=Z,4.6nm,0.5s						
WRA	Warramunga Arr	42.47	276	P	P	19 48 39.7	-0.9
WB0	Warramunga Arr	42.50	276	P	P	19 48 39.9	-1.0
WB0				IAmb	IAmb	19 48 40.6	
	comp=Z,14nm,1.3s						
MTN	Manton Dam	48.62	282	P	P	19 49 27.1	-0.9
MTN				IAmb	IAmb	19 49 43.4	
	comp=Z,10nm,1.2s						
BELA	Belgrano 2	67.96	173	P	P	19 51 44.2	+5.7
BELA				IAmb	IAmb	19 52 01.1	
	comp=Z,7.8nm,1.4s						
PETK	Petropavlovsk-	87.41	347	P	P	19 53 24.8	+0.5
	comp=Z,2.4nm,0.6s,baz=119,slow=7.5,SNR=13						
	comp=Z,2.4nm,0.6s						
PETK	Petropavlovsk-	87.41	347	P	P	19 53 25.0	+0.8
GEVA	Gevas	144.61	292		PKPdf	20 00 12.3	+1.3
FIA1	FINESS Array S	146.44	337		PKPbc	20 00 16.0	+0.7
FINES	FINESS Array B	146.44	337	PKPbc	PKPbc	20 00 16.1	+0.8
	comp=Z,4.4nm,0.4s,baz=45,slow=4.3,SNR=68						
NB2	NORSAR Subarra	150.50	349	PKP	PKiKP	20 00 26.7	+0.6
	comp=Z,0.6nm,0.5s,baz=13,slow=2.6						
NOA	NORSAR Array B	150.50	349	PKPbc	PKPbc	20 00 26.1	+0.5
	comp=Z,0.8nm,0.5s,baz=14,slow=4.0,SNR=4.3						
HFS	Hagfors	150.88	346	PKPbc	PKiKP	20 00 27.3	+0.5
	comp=Z,1.2nm,0.4s,baz=114,slow=3.6,SNR=9.7						
HFS				PKPab	PKPab	20 00 35.1	-0.6
	comp=Z,1.9nm,0.6s,baz=67,slow=5.0,SNR=6.0						
AKASG	Malin Array Be	151.79	319	PKPbc	PKiKP	20 00 30.0	+0.9
	comp=Z,0.4nm,0.3s,baz=52,slow=3.0,SNR=2.6						
TORD	Torodi Ar. Bea	160.68	185	PKPab	PKPab	20 01 20.1	+1.1
	comp=Z,0.6nm,0.8s,baz=171,slow=1.4,SNR=2.8						

*NNC **01** 19:53:31.8±0.4, 45°.92N×81°.43E, h0km, mb3.6, mpv3.4, Error ellipse: s-maj=9.4km s-min=2.0km az=126.0*

*SOME **01** 19:53:33.4, 45°.90N×81°.43E, h25km*

ISC 01 19:53:31.1±1.4**, 45°.95N**±0°.04×**81°.61E**±0°.05**, h2**km±13km**, n38,** σ1s.58/51**, 7C-2D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAKZ	Makanchi	0.90	16	⇑P	Pn	19 53 50.4	-0.3
	4.7nm,0.5s						
MAKZ				⇑S	Sn	19 54 03.8	-0.5
	7.3nm,0.3s						
MK31	Makanchi Array	0.97	29	⇓P	Pg	19 53 51.9	+2.2
	2.0nm,0.2s,baz=203,slow=17,SNR=206						
MK31				⇑S	Sn	19 54 06.2	+0.1
	3.4nm,0.2s,baz=209,slow=30,SNR=21						
KAPS	Kapalarasan	1.71	248	P	Pb	19 54 02.2	-1.0
	14nm,0.1s						
KAPS				S	Sn	19 54 23.3	-1.1
	69nm,0.2s						
DJR	Jarkent	2.06	219	Pg	Pb	19 54 08.7	-0.5
	38nm,0.4s						
DJR				Lg	Lg	19 54 34.6	
	24nm,0.3s						
DJR	Jarkent	2.06	219	eP	Pb	19 54 08.7	-0.5
	38nm,0.4s						
DJR				eS	Sb	19 54 34.6	-0.7
	24nm,0.3s						
KNOS	Konyrlen	2.34	228	Pg	Pb	19 54 13.2	-0.8
	9.2nm,0.1s						
KNOS				Lg	Lg	19 54 41.9	
	32nm,0.3s						
TDK	Taldyqorghan	2.44	248	Pg	Pb	19 54 14.8	-0.9
	7.8nm,0.1s						
TDK				Lg	Lg	19 54 44.5	
	102nm,0.3s						
TDK	Taldyqorghan	2.44	248	eP	Pb	19 54 14.8	-0.9
	7.8nm,0.1s						
TDK				eS	Sb	19 54 44.5	-1.7
	102nm,0.3s						
KTMS	Ketmen	2.66	200	Pg	Pb	19 54 18.9	-0.5
	5.9nm,0.1s						
KTMS				Lg	Lg	19 54 51.5	
	12nm,0.1s						
KTMS	Ketmen	2.66	200	eP	Pb	19 54 18.9	-0.5
	5.9nm,0.1s						
KTMS				eS	Sb	19 54 51.5	-0.9
	12nm,0.1s						
ZSN	Zaisan	2.70	55	Pg	Pg	19 54 23.1	+0.3
ZSN				Lg	Lg	19 54 58.7	
ZSN	Zaisan	2.70	55	eP	Pg	19 54 23.2	+0.4
	1.6nm,0.1s						
ZSN				eS	Sg	19 54 58.8	+1.0
	19nm,0.4s						
BLB	Baldybastay	2.89	231	Pg	Pb	19 54 23.1	-0.2
	18nm,0.3s						
BLB				Lg	Lg	19 54 59.1	
	83nm,0.5s						
PDGK	Podgornoye	3.02	211	⇑Pn	Pn	19 54 21.2	+1.2
	9.4nm,0.7s						
PDGK				⇑Lg	Lg	19 55 05.5	
	34nm,0.5s						
SHLS	Shalkode	3.18	210	Pg	Pb	19 54 25.5	-2.9
	29nm,0.5s						
SHLS				Lg	Lg	19 55 03.6	
	78nm,0.4s						
SHLS	Shalkode	3.18	210	eP	Pb	19 54 25.5	-2.9
	29nm,0.5s						
SHLS				eS	Sb	19 55 03.6	-4.0
	78nm,0.4s						
ARXS	Arharly	3.19	238	Pg	Pb	19 54 28.3	-0.1
	3.3nm,0.1s						
ARXS				Lg	Lg	19 55 07.7	
	24nm,0.5s						
ARXS	Arharly	3.19	238	eP	Pb	19 54 28.3	-0.1
	3.3nm,0.1s						
ARXS				eS	Sb	19 55 07.7	0.0
	24nm,0.5s						
KPKS	Kokpek	3.24	221	Pg	Pb	19 54 29.1	-0.2
	0.3nm,0.1s						
KPKS				Lg	Lg	19 55 09.2	
	61nm,0.2s						
KPKS	Kokpek	3.24	221	eP	Pb	19 54 29.1	-0.2
	0.3nm,0.1s						
KPKS				eS	Sb	19 55 09.2	0.0
	61nm,0.2s						
UZB	Uzynbulak	3.35	214	Pg	Pb	19 54 31.1	-0.2
	6.9nm,0.2s						
UZB				Lg	Lg	19 55 12.4	
	24nm,0.2s						
UZB	Uzynbulak	3.35	214	eP	Pb	19 54 31.1	-0.2
	6.9nm,0.2s						
UZB				eS	Sb	19 55 12.4	-0.1
	24nm,0.2s						
KURS	Kuram	3.47	226	Pg	Pb	19 54 33.0	-0.2
	2.3nm,0.3s						
KURS				Lg	Lg	19 55 15.5	
	13nm,0.3s						
SATY	Saty	3.68	220	Pg	Pb	19 54 36.7	-0.2
	1.9nm,0.1s						
SATY				Lg	Lg	19 55 22.7	
	17nm,0.2s						
KOTS	Kotyrbulak	4.20	231	Pg	Pb	19 54 46.3	+0.6
	1.3nm,0.3s						
KOTS				Lg	Lg	19 55 38.6	
	16nm,0.4s						
KOTS	Kotyrbulak	4.20	231	eP	Pb	19 54 46.3	+0.6
	1.3nm,0.3s						
KOTS				eS	Sb	19 55 38.6	+1.6
	16nm,0.4s						
MDOK	Medeo	4.29	231	Pg	Pb	19 54 47.6	+0.5
	1.4nm,0.3s						
MDOK				Lg	Lg	19 55 41.0	
	15nm,0.5s						
SEM	Semipalatinsk	4.56	349	Pg	Pg	19 54 56.3	-2.0
	1.8nm,0.1s						
SEM				Lg	Lg	19 55 55.5	
	6.8nm,0.2s						
SEM	Semipalatinsk	4.56	349	eP	Pg	19 54 56.3	-2.0
	1.8nm,0.1s						
SEM				eS	Sg	19 55 55.5	-1.9
	6.8nm,0.2s						
MTBS	Maitube	4.65	235	Pg	Pb	19 54 54.1	+0.7
	0.8nm,0.1s						
MTBS				Lg	Lg	19 55 51.8	
	9.2nm,0.3s						
MTBS	Maitube	4.65	235	eP	Pb	19 54 54.1	+0.7
	0.8nm,0.1s						
MTBS				eS	Sb	19 55 51.8	+2.0
	9.2nm,0.3s						
KRBS	Karabastau	4.78	244	Pg	Pb	19 54 57.6	+2.0
	1.3nm,0.4s						
KRBS				Lg	Lg	19 55 57.7	
	5.3nm,0.3s						
KRBS	Karabastau	4.78	244	eP	Pb	19 54 57.5	+2.0
	1.3nm,0.4s						
KRBS				eS	Sb	19 55 57.7	+4.1
	5.3nm,0.3s						
DGS	Degeres	4.97	239	Pg	Pb	19 55 00.4	+1.7
	1.2nm,0.4s						
DGS				Lg	Lg	19 56 02.9	
DGS	Degeres	4.97	239	eP	Pb	19 55 00.4	+1.7
	1.2nm,0.4s						
DGS				eS	Sb	19 56 02.9	+4.0
KURBB	Kurchatov Arra	5.11	337	⇑Lg	Lg	19 56 16.2	
	23nm,0.6s						
KURK	Kurchatov	5.17	338	⇑Lg	Lg	19 56 16.7	
	7.2nm,0.6s						
AAK	Ala-Archa	6.08	240	⇓Lg	Lg	19 56 42.5	
	1.5nm,0.6s						

*IDC **01** 20:01:27.7±1.3, 60°.42N×153°.63W, h134km±13km, mb3.2/5, mbtmp3.8/10, Error ellipse: s-maj=20.0km s-min=11.0km az=102.0*

*NEIC **01** 20:01:28.4±0.9, 60°.30N±0°.06×153°.46W±0°.09, h173km±3km, mb4.4/4, ML4.0/184, ML3.7(AEIC), Error ellipse: s-maj=8.6km s-min=6.0km az=152.0*

*AEIC **01** 20:01:30.2±0.7, 60°.33N±0°.05×153°.43W±0°.10, h165km±5km, Error ellipse: s-maj=8.1km s-min=6.2km az=132.0*

ISC 01 20:01:29.6±0.7**, 60°.36N**±0°.04×**153°.42W**±0°.04**, h165**km±5km**, n215,** σ**0s.87**/193**, mb3.4**/6**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDWB	Redoubt West	0.32	66		Pn	20 01 52.1	-0.1
RDWB					Sn	20 02 09.0	-0.4
NCT	North Crescent	0.32	50		Pn	20 01 52.1	+0.1
RED	Redoubt Volcan	0.33	79		Sn	20 02 09.0	-0.3
RED	Redoubt Volcan	0.33	79		Pn	20 01 51.9	-0.2
RED				IAML		20 02 13.5	
	comp=N,392nm,1.1s						
ILW	Iliamna West	0.33	154		Pn	20 01 51.9	-0.4
RDSO	Redoubt South	0.35	74		Pn	20 01 52.0	-0.3
RDJH	Redoubt Jeurge	0.39	53		Pn	20 01 52.4	+0.1
RDJH					Sn	20 02 09.9	+0.1
ILSW	Iliamna Southw	0.40	159		Pn	20 01 51.9	-0.6
ILSW				IAML		20 02 10.7	
	comp=N,416nm,1.2s						
ILSW				IAML		20 02 11.3	
	comp=E,447nm,1.0s						
ILSW	Iliamna Southw	0.40	159		Sn	20 02 09.2	-0.6
DFR	Drift River	0.43	57		Pn	20 01 52.4	-0.1
ILS	Iliamna Low So	0.44	156		Pn	20 01 52.1	-0.4
O19K	Port Alsworth	0.48	250		Pn	20 01 52.0	-0.5
O19K				IAML		20 02 09.6	
	comp=N,2μm,0.5s						
O19K				IAML		20 02 09.6	
	comp=E,2μm,0.5s						
O19K	Port Alsworth	0.48	250		Sn	20 02 09.0	-1.0
RDT	Redoubt	0.55	66		Pn	20 01 52.8	-0.1
N19K	Bonanza Creek	0.69	311		Sn	20 02 11.6	-0.8
N19K	Bonanza Creek	0.69	311		Pn	20 01 53.5	-0.3
N19K	Bonanza Creek	0.69	311	IAML		20 02 12.4	
	comp=E,1μm,1.0s						
N19K				IAML		20 02 13.2	
	comp=N,612nm,1.2s						
P19K	Oil Pt	0.72	172		Pn	20 01 53.7	-0.1
P19K				IAML		20 02 13.1	
	comp=N,1μm,1.0s						
P19K				IAML		20 02 13.5	
	comp=E,2μm,0.8s						
P19K	Oil Pt	0.72	172		Sn	20 02 12.4	0.0
AUF	Augustine Flow	0.97	181		Pn	20 01 55.4	-0.2
AUF					Sn	20 02 15.2	-0.3
AUL	Augustine Lava	0.98	180		Pn	20 01 55.6	-0.1
AU22	Augustine Moun	0.99	178		Pn	20 01 55.5	-0.2
AUW	Augustine West	0.99	181		Pn	20 01 55.9	+0.1
AUI	Augustine Isla	1.03	180		Sn	20 02 15.9	-0.4
O18K	Koktuh Hills	1.03	241		Sn	20 02 15.7	-0.7
O18K	Koktuh Hills	1.03	241		Pn	20 01 55.5	-0.5
SPU	Mount Spurr	1.06	39		Pn	20 01 56.5	+0.1
HOM	Homer	1.14	127		Pn	20 01 56.5	-0.3
HOM				IAML		20 02 19.5	
	comp=E,4μm,0.8s						
HOM				IAML		20 02 19.8	
	comp=N,4μm,0.6s						
HOM	Homer	1.14	127		Sn	20 02 18.0	+0.2
CAPN	Captain Cook N	1.19	69		Pn	20 01 58.6	+1.3
CAPN	Captain Cook N	1.19	69	IAML		20 02 28.1	
	comp=E,4μm,0.5s						
N18K	Kilae Creek	1.26	286		Sn	20 02 18.6	-1.4
N18K	Kilae Creek	1.26	286		Pn	20 01 57.6	-0.4
N18K				IAML		20 02 19.3	
	comp=N,562nm,0.9s						
P18K	Big Mountain,	1.33	224		Pn	20 01 57.8	-0.9
CNPM	China Poot	1.38	126		Pn	20 01 58.7	-0.4
CNPM				IAML		20 02 22.3	
	comp=N,3μm,0.7s						
CNPM	China Poot	1.38	126		Sn	20 02 20.9	-1.0
STLK	Strandline Lak	1.38	33		Pn	20 01 59.4	+0.2
STLK				IAML		20 02 24.6	
	comp=N,309nm,0.7s						
STLK				IAML		20 02 24.9	
	comp=E,241nm,0.8s						
BRLK	Bradley Lake	1.41	114		Pn	20 01 59.0	-0.4
BRLK				IAML		20 02 22.6	
	comp=E,3μm,0.6s						
BRLK				IAML		20 02 23.0	
	comp=N,1μm,0.4s						
Q19K	Cape Douglas,	1.44	185		Pn	20 01 59.1	-0.6
Q19K				IAML		20 02 25.0	
	comp=E,782nm,1.1s						
Q19K				IAML		20 02 27.1	
	comp=N,601nm,0.9s						
BRSE	Bradley Lake S	1.48	114		Sn	20 02 22.0	-1.6
M20K	Styx River	1.54	5		Pn	20 02 01.3	+0.6
SLKM	Skilak Lake	1.59	83		Pn	20 02 00.7	-0.6
SLKM				IAML		20 02 24.5	
	comp=N,3μm,0.3s						
SLKM				IAML		20 02 25.3	
	comp=E,2μm,0.3s						
M19K	Big River Lodg	1.62	344		Pn	20 02 01.4	-0.1
M19K	Big River Lodg	1.62	344	IAML		20 02 26.7	
	comp=E,231nm,0.9s						
M18K	Stony River	1.63	315		Pn	20 02 01.1	-0.4
M18K					Sn	20 02 25.2	-1.1
SUA	Susitna One	1.71	49		Pn	20 02 02.4	-0.2
SUA				IAML		20 02 29.8	
	comp=E,2μm,0.6s						
SUA				IAML		20 02 31.9	
	comp=N,2μm,0.8s						
SYI	Shuyak Island	1.83	163		Sn	20 02 28.2	-1.9
SYI	Shuyak Island	1.83	163		Pn	20 02 03.0	-0.8
SYI				IAML		20 02 29.0	
	comp=N,834nm,0.7s						
SYI				IAML		20 02 29.4	
	comp=E,506nm,0.8s						
O22K	Cooper Landing	1.84	85		Pn	20 02 03.0	-0.7
N17K	Nushagak Hills	1.87	277		Pn	20 02 04.0	-0.2
KAHC	Katmai Hardscr	1.90	206		Pn	20 02 03.6	-1.0
KAHC					Sn	20 02 29.7	-1.9
P17K	Kvichak River	1.92	234		Pn	20 02 04.4	-0.3
P17K				IAML		20 02 44.6	
	comp=E,301nm,1.1s						
P17K				IAML		20 02 44.8	
	comp=N,313nm,1.1s						
RC01	Rabbit Creek A	1.95	66		Pn	20 02 04.2	-0.8
RC01				IAML		20 02 33.2	
	comp=N,2μm,0.2s						
L19K	White Mountain	1.96	340		Pn	20 02 04.7	-0.3
L19K				IAML		20 02 33.5	
	comp=N,239nm,1.1s						
KARR	Katmai Rainbow	1.98	200		Pn	20 02 04.8	-0.6
SEW	Seward	2.00	96		Pn	20 02 04.8	-0.6
SEW				IAML		20 02 32.3	
	comp=N,607nm,0.4s						
SEW				IAML		20 02 37.8	
	comp=E,690nm,0.5s						
KAWH	Katmai	2.10	200		Pn	20 02 06.0	-0.9
M17K	Holitna River	2.22	300		Pn	20 02 07.8	-0.3
KAKN	Katmai Knife C	2.23	203		Sn	20 02 36.0	-2.3
KABU	Katmai Buttres	2.30	205		Pn	20 02 08.0	-1.2
ACHA	Angle Creek He	2.37	205		Pn	20 02 09.1	-0.8
ANCK	Angle Creek	2.41	207		Pn	20 02 09.7	-0.7
PMR	Palmer	2.43	58		Pn	20 02 09.2	-1.3
PMR				IAML		20 02 41.6	
	comp=E,873nm,0.2s						
PMR				IAML		20 02 41.8	
	comp=N,1μm,0.2s						
L18K	Granite Mounta	2.44	321		Pn	20 02 10.3	-0.4
L18K				IAML		20 02 43.0	
	comp=N,237nm,0.8s						
L18K				IAML		20 02 43.1	
	comp=E,174nm,1.0s						
CNTC	Contact Creek	2.45	212		Pn	20 02 10.1	-0.8
O16K	Kokwok River B	2.47	254		Pn	20 02 10.6	-0.4
CUT	Chulitna	2.55	35		Pn	20 02 11.2	-0.8
GHO	Glory Hole Cre	2.61	55		Pn	20 02 11.4	-1.3
KDAK	Kodiak Island	2.62	170	P	Pn	20 02 10.7	-2.1
	comp=E,47nm,0.2s,baz=357,slow=9.8,SNR=267						
KDAK				S	Sn	20 02 43.7	-2.6
	comp=E,90nm,0.4s,baz=323,slow=20,SNR=23						
KDAK	Kodiak Island	2.62	170		Pn	20 02 10.4	-2.4
KDAK				IAML		20 02 46.8	
	comp=E,202nm,0.7s						
KDAK				IAML		20 02 49.0	
	comp=E,165nm,0.7s						
N16K	Nishlik Lake	2.65	275		Pn	20 02 13.2	-0.1
P16K	Nushagak River	2.67	242		Pn	20 02 13.2	-0.2
P16K				IAML		20 02 48.5	
	comp=E,104nm,1.2s						
P16K				IAML		20 02 49.4	
	comp=N,264nm,1.1s						
M16K	Timber Creek	2.80	286		Pn	20 02 15.0	0.0
SML	Sawmill	2.87	57		Pn	20 02 14.8	-1.1
SML				IAML		20 02 51.5	
	comp=N,846nm,0.3s						
SML				IAML		20 02 52.4	
	comp=E,760nm,0.6s						
L17K	Donlin	2.95	309		Pn	20 02 16.5	-0.3
K20K	Telida	3.02	354		Pn	20 02 18.1	+0.3
P23K	Montague Islan	3.03	94		Pn	20 02 17.5	-0.3
PLK1	Peulik 1	3.05	214		Pn	20 02 17.8	-0.2
PLK4	Peulik 4	3.13	210		Pn	20 02 18.4	-0.8
PLK4	Peulik 4	3.13	210	IAML		20 02 57.3	
	comp=E,133nm,1.2s						
PLK4				IAML		20 02 58.7	
	comp=N,117nm,1.2s						
OHAK	Old Harbor	3.15	179		Pn	20 02 16.6	-2.7
OHAK	Old Harbor	3.15	179	IAML		20 02 56.7	
	comp=N,96nm,0.4s						
OHAK				IAML		20 02 56.8	
	comp=E,119nm,0.4s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GLI	Glacier Island	3.16	78		Pn	20 02 18.9	-0.6
GLI				IAML		20 02 59.4	
	comp=N,895nm,0.3s						
L16K	Owhat River	3.24	297		Pn	20 02 20.1	-0.3
SCM	Sheep Creek Mo	3.31	61		Pn	20 02 20.4	-1.0
WAT7	Susitna Watana	3.31	39		Pn	20 02 20.8	-0.6
K17K	Iditarod	3.32	317		Pn	20 02 21.3	-0.2
K17K	Iditarod	3.32	317	IAML		20 03 03.1	
	comp=E,131nm,1.0s						
K17K				IAML		20 03 03.1	
	comp=N,101nm,1.1s						
N15K	Kwethluk River	3.33	270		Pn	20 02 21.7	+0.1
KTH	Kantishna Hill	3.42	19		Pn	20 02 22.4	-0.3
KTH	Kantishna Hill	3.42	19	IAML		20 03 04.3	
	comp=E,129nm,0.5s						
KTH				IAML		20 03 05.7	
	comp=N,202nm,0.8s						
TRF	Thorofare Moun	3.44	24		Pn	20 02 22.8	-0.3
TRF				IAML		20 03 07.1	
	comp=E,244nm,0.4s						
TRF				IAML		20 03 07.3	
	comp=N,414nm,0.5s						
J18K	Innoko River	3.48	335		Pn	20 02 23.4	-0.1
J18K	Innoko River	3.48	335	IAML		20 03 05.4	
	comp=N,71nm,0.9s						
CHUM	Lake Minchumin	3.58	8		Pn	20 02 25.0	+0.4
RND	Reindeer	3.75	33	IAML		20 03 12.0	
	comp=E,231nm,0.3s						
RND				IAML		20 03 15.2	
	comp=N,187nm,0.4s						
EYAK	Cordova Ski Ar	3.81	84		Pn	20 02 27.3	-0.3
EYAK	Cordova Ski Ar	3.81	84	IAML		20 03 14.4	
	comp=E,217nm,0.8s						
EYAK				IAML		20 03 16.6	
	comp=N,316nm,0.6s						
KLU	Klutina	3.83	70	IAML		20 03 14.8	
	comp=E,566nm,0.3s						
DIV	Divide	3.83	75		Pn	20 02 26.9	-1.2
BPAW	Bear Paw Mtn.	3.92	16	IAML		20 03 15.0	
	comp=N,250nm,0.8s						
BPAW				IAML		20 03 15.3	
	comp=E,99nm,0.6s						
DHY	Denali Highway	3.96	44	IAML		20 03 19.2	
	comp=E,459nm,0.5s						
MCK	McKinley	3.99	30	IAML		20 03 18.9	
	comp=N,203nm,0.4s						
MCK				IAML		20 03 19.3	
	comp=E,193nm,0.3s						
O14K	Tigyukauivet M	4.11	258		Pn	20 02 31.6	0.0
L15K	Ungalak Mounta	4.14	292		Pn	20 02 31.9	0.0
N14K	Kuskokwak Cree	4.15	268		Pn	20 02 32.4	+0.3
M14K	Bethel	4.23	279		Pn	20 02 33.2	+0.1
GOAT	Goat Mountain	4.31	83		Pn	20 02 33.3	-0.9
RAGM	Ragged Mountai	4.34	86		Pn	20 02 34.2	-0.4
BMRM	Bremner River	4.38	78		Pn	20 02 34.4	-0.7
BMRM	Bremner River	4.38	78	IAML		20 03 28.2	
	comp=N,356nm,0.4s						
J16K	Anvik River	4.49	314		Pn	20 02 35.6	-0.9
KAIM	Kayak Island	4.52	92		Pn	20 02 36.9	0.0
KAIM	Kayak Island	4.52	92	IAML		20 03 34.1	
	comp=N,292nm,0.8s						
KAIM				IAML		20 03 38.6	
	comp=E,141nm,0.4s						
L14K	Kuka Creek	4.63	286		Pn	20 02 38.6	+0.3
WACK	Wrangell Chich	4.70	66		Pn	20 02 39.0	-0.3
NEA2	Nenana	4.70	24	IAML		20 03 33.4	
	comp=E,79nm,0.6s						
NEA2				IAML		20 03 34.6	
	comp=N,88nm,1.0s						
WASW	Wrangell South	4.75	67		Pn	20 02 39.8	-0.2
WAZA	Wrangell Mount	4.80	65		Pn	20 02 41.6	+0.9
WRH	Wood River Hil	4.81	29	IAML		20 03 35.7	
	comp=N,89nm,0.3s						
WRH				IAML		20 03 36.0	
	comp=E,88nm,0.5s						
GLB	Gilahina Butte	4.82	73		Pn	20 02 40.3	-0.5
GLB	Gilahina Butte	4.82	73	IAML		20 03 36.8	
	comp=E,270nm,0.4s						
GLB				IAML		20 03 37.4	
	comp=N,285nm,0.7s						
BERG	Berg Lake	4.83	85		Pn	20 02 40.5	-0.3
MLY	Manley	4.85	14	IAML		20 03 35.2	
	comp=E,30nm,0.8s						
MLY				IAML		20 03 35.6	
	comp=N,25nm,0.8s						
I21K	Tanana	4.88	7		Pn	20 02 41.2	-0.3
I21K	Tanana	4.88	7	IAML		20 03 36.8	
	comp=E,56nm,1.0s						
I21K				IAML		20 03 37.6	
	comp=N,34nm,0.7s						
M13K	Dall Lake	4.93	275		Pn	20 02 41.6	-0.5
VRDI	Verde Repeater	4.96	76	IAML		20 03 39.8	
	comp=N,190nm,0.5s						
VRDI				IAML		20 03 43.7	
	comp=E,100nm,0.7s						
K24K	Donnelly Dome	4.98	43		Pn	20 02 44.1	+1.2
CCB	Clear Creek Bu	5.03	29	IAML		20 03 40.5	
	comp=E,125nm,0.4s						
CCB				IAML		20 03 42.9	
	comp=N,73nm,0.3s						
I23K	Minto, Yukon-K	5.16	19	IAML		20 03 43.2	
	comp=E,29nm,0.5s						
I23K				IAML		20 03 44.0	
	comp=N,54nm,0.7s						
MCARA	McCarthy VSAT	5.18	74		Pn	20 02 45.9	+0.3
H20K	Anotleneega Mo	5.20	353		Pn	20 02 45.7	0.0
COLA	College	5.21	27	IAML		20 03 50.9	
	comp=N,229nm,0.5s						
TGL	Tana Glacier	5.24	81	IAML		20 03 48.1	
	comp=N,168nm,0.6s						
TGL				IAML		20 03 49.9	
	comp=E,138nm,0.4s						
RIDG	Independent Ri	5.27	46		Pn	20 02 46.8	+0.1
SNH	Sunshine Point	5.27	87		Pn	20 02 46.7	-0.1
SNH	Sunshine Point	5.27	87	IAML		20 03 49.5	
	comp=E,118nm,0.8s						
SNH				IAML		20 06 16.3	
	comp=N,106nm,1.2s						
MENT	Mentasta	5.30	57		Pn	20 02 47.3	+0.2
MENT	Mentasta	5.30	57	IAML		20 04 05.4	
	comp=N,181nm,0.7s						
MENT				IAML		20 04 08.0	
	comp=E,209nm,0.6s						
H18K	Honhosa River	5.32	337		Pn	20 02 47.2	-0.1
H21K	Melozitna Rive	5.33	3	IAML		20 03 48.1	
	comp=E,16nm,1.0s						
ILAR	Eielson Array	5.36	31	P	Pn	20 02 47.1	-0.7
	comp=E,13nm,0.3s,baz=220,slow=12,SNR=239						
ILAR				S	Sn	20 03 45.6	-3.5
	comp=E,7.5nm,0.5s,baz=219,slow=22,SNR=6.6						
J14K	Nanvaranak Lak	5.40	301		Pn	20 02 48.3	0.0
M26K	Nabesna, AK	5.42	63		Pn	20 02 49.0	+0.4
BARK	Barkley Ridge	5.42	85		Pn	20 02 49.2	+0.4
PTPK	Patty Peak	5.43	76		Pn	20 02 49.6	+0.6
CYK	Cape Yakataga	5.46	88		Pn	20 02 49.8	+0.7
KIAG	Kiagna River	5.47	79		Pn	20 02 49.7	+0.1
H17K	Granite Mounta	5.48	330		Pn	20 02 49.1	-0.3
BALM	Baldy	5.49	78		Pn	20 02 49.9	+0.3
H22K	Ishtalitna Cre	5.63	9		Pn	20 02 51.0	-0.4
J25K	Salcha River,	5.67	38		Pn	20 02 51.8	-0.2
MESA	MESA	5.71	87		Pn	20 02 53.1	+0.4
GRNC	Granite Creek	5.77	81		Pn	20 02 53.9	+0.4
BARN	Barnard Glacie	5.82	78		Pn	20 02 54.3	+0.3
M27K	Edge Creek, AK	5.90	65		Pn	20 02 55.8	+0.7
CTGM	Chitina Glacie	5.98	79		Pn	20 02 56.5	+0.4
G18K	Tagagawik	6.04	339		Pn	20 02 56.9	+0.1
H24K	Noodor Dome	6.04	22		Pn	20 02 56.4	-0.5
G17K	Kiwalik Mounta	6.12	331		Pn	20 02 57.4	-0.5
LOGN	Logan Glacier	6.14	80		Pn	20 02 58.2	0.0
BC01	Beaver Creek A	6.14	59		Pn	20 02 58.6	+0.4
L27K	Beaver Creek,	6.14	59		Pn	20 02 58.6	+0.4
G21K	Allakaket	6.18	360		Pn	20 02 58.8	+0.2
YUK2	White River	6.27	71		Pn	20 03 00.2	+0.3
BVCY	Beaver Creek	6.38	66		Pn	20 03 02.0	+0.7
G16K	Koyuk River	6.49	325		Pn	20 03 02.3	-0.4
O28M	Mount Upton	6.54	81		Pn	20 03 04.0	+0.4
G23K	Bananza Creek	6.55	12		Pn	20 03 03.0	-0.5
PCA	Pinnacle	6.56	87		Pn	20 03 03.8	0.0
G15K	Niukluk	6.74	318		Pn	20 03 06.1	+0.1
F19K	Shaleruckik Mo	6.78	345		Pn	20 03 06.9	+0.4
F20K	Avaraart Lake	6.79	352		Pn	20 03 07.0	+0.3
G24K	Hadweenzic Riv	6.89	20		Pn	20 03 07.0	-1.0
ANM	Nome	6.96	312		Pn	20 03 08.9	0.0
F17K	Baldwin Pennin	7.04	333		Pn	20 03 10.0	+0.1
COLD	Coldfoot	7.04	10		Pn	20 03 09.7	-0.3
E19K	Redstone River	7.32	348		Pn	20 03 14.4	+0.7
O29M	Mount Kennedy	7.37	84		Pn	20 03 14.3	-0.2
F15K	North Star Dit	7.40	321		Pn	20 03 14.9	+0.2
M29M	Somme Creek	7.48	67		Pn	20 03 16.0	+0.1
I27K	Kandik River	7.51	41		Pn	20 03 16.4	0.0
DAWY	Dawson	7.53	54		Pn	20 03 17.1	+0.6
YUK5	Granite Creek	7.67	77		Pn	20 03 18.7	+0.2
L29M	L29M	7.76	63		Pn	20 03 20.3	+0.6
G26K	Porcupine Rive	7.87	29		Pn	20 03 19.2	-1.8
H27K	Steamboat Moun	7.95	37		Pn	20 03 21.7	-0.4
I28M	Miner Creek	7.99	45		Pn	20 03 22.1	-0.5
F25K	Christian Rive	8.02	22		Pn	20 03 21.9	-1.1
E24K	Your Creek	8.04	13		Pn	20 03 22.0	-1.2
N30M	Aishikik Lake	8.04	75		Pn	20 03 22.1	-1.1
K29M	Barlow Dome	8.23	58		Pn	20 03 26.8	+0.9
M30M	Minto, Yukon	8.26	67		Pn	20 03 27.0	+0.8
G27K	Doyon Strip	8.32	34		Pn	20 03 25.3	-1.7
F26K	Sheenjek River	8.40	25		Pn	20 03 26.1	-1.9
D20K	Etivluk River	8.50	352		Pn	20 03 29.4	+0.1
H29M	Whitestone	8.95	43		Pn	20 03 35.9	+0.6
C18K	Utukok River	8.96	341		Pn	20 03 35.8	+0.3
J30M	Hart River	8.96	55		Pn	20 03 37.2	+1.7
F28M	Old Crow	9.38	33		Pn	20 03 39.5	-1.4
INK	Inuvik	11.68	39	P	Pn	20 04 10.7	-0.3
	comp=E,3.0nm,0.5s,baz=249,slow=13,SNR=21						
DLBC	Dease Lake	12.06	89	P	Pn	20 04 16.9	+1.0
	comp=E,2.3nm,0.6s,baz=300,slow=14,SNR=8.1						
C36M	Paulatuk	15.21	42		Pn	20 04 54.1	-1.3
A36M	Sachs Harbour	16.06	32		Pn	20 05 04.5	-1.3
A36M				IAmb	IAmb	20 05 08.0	
	comp=Z,16nm,0.8s						
YKAW3	Yellowknife Wh	18.48	66		Pn	20 05 33.5	-1.3
YKAW3				IAmb	IAmb	20 05 36.9	
	comp=Z,10.0nm,0.8s						
YKA	Yellowknife Ar	18.50	67	P	Pn	20 05 33.8	-1.1
	comp=Z,4.8nm,0.8s,baz=284,slow=11,SNR=34						
YKA	Yellowknife Ar	18.50	67		Pn	20 05 33.6	-1.3
YKAW1	Yellowknife Wh	18.56	67		Pn	20 05 34.2	-1.4
PDAR	Pinedale Array	31.68	104	P	P	20 07 39.5	+2.1
	comp=Z,0.4nm,0.6s,baz=317,slow=9.5,SNR=4.2						
	comp=Z,0.4nm,0.6s						
ULM	Lac du Bonnet	33.23	81	P	P	20 07 52.0	+1.6
	comp=Z,2.7nm,0.4s,baz=315,slow=8.6,SNR=4.5						
	comp=Z,2.7nm,0.4s						
TXAR	Lajitas Array	45.31	110	P	P	20 09 32.7	+1.9
	comp=Z,0.4nm,0.8s,baz=303,slow=7.0,SNR=3.9						
	comp=Z,0.4nm,0.8s						
SONM	Songino Array	54.41	305	P	P	20 10 40.3	+1.1
	comp=Z,0.7nm,0.9s,baz=21,slow=4.8,SNR=3.4						
	comp=Z,0.7nm,0.9s						
HHC	Hu-ho-hao-te	57.83	297	eP	P	20 11 01.7	-1.8
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MKAR	Makanchi Array	64.02	321	P	P	20 11 44.7	-0.3
	comp=Z,0.2nm,0.5s,baz=19,slow=7.7,SNR=2.5						
	comp=Z,0.2nm,0.5s						

IDC ***01*** *20:07:49.5±1.5, 31°.22N×139°.92E, h95km±19km, mb3.5/8, mbtmp3.9/9, Error ellipse: s-maj=62.5km s-min=9.7km az=74.0*

ISC 01 20:07:49.8±0.8, **31°.3N**±0°.1×**140°.1E**±0°.3, **h100**km, **n14**, σ0s.**66**/13, **mb3.7**/8, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	1.86	353	P	Pn	20 08 20.1	-0.5
	162nm,0.3s,baz=233,slow=20,SNR=32						
JHJ				S	Sn	20 08 44.4	+0.2
	180nm,0.3s,baz=212,slow=23,SNR=6.1						
JCJ	Chichijima	4.55	155	P	Pn	20 08 56.0	-0.5
	18nm,0.4s,baz=342,slow=20,SNR=5.2						
JCJ				S	Sn	20 09 48.4	+0.2
	30nm,0.4s,baz=311,slow=19,SNR=1.7						
MJAR	Matsushiro Arr	5.48	344	P	Pn	20 09 09.1	+0.1
	2.4nm,0.5s,baz=156,slow=13,SNR=13						
H11S3	WAKE ISLAND Hy	27.23	112	T	T	20 42 02.0	
	baz=304,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	27.23	112	T	T	20 42 06.1	
	baz=304,slow=75,SNR=12						
H11S2	WAKE ISLAND Hy	27.24	112	T	T	20 42 03.2	
	baz=304,slow=75,SNR=10.0						
MKAR	Makanchi Array	46.44	307	P	P	20 16 06.4	-0.1
	0.3nm,0.8s,baz=82,slow=8.7,SNR=2.6						
	0.3nm,0.8s						
KURBB	Kurchatov Arra	48.84	312	P	P	20 16 23.7	-1.2
	0.4nm,0.4s,baz=89,slow=7.5,SNR=5.0						
	0.4nm,0.4s						
WRA	Warramunga Arr	51.21	187	P	P	20 16 43.2	+0.2
	0.4nm,0.7s,baz=2.9,slow=7.7,SNR=5.2						
	0.4nm,0.7s						
FINES	FINESS Array B	73.40	333	P	P	20 19 10.7	+0.1
	3.3nm,1.0s,baz=46,slow=8.2,SNR=8.4						
	3.3nm,1.0s						
HFS	Hagfors	78.87	336	P	P	20 19 41.9	+0.3
	2.5nm,0.8s,baz=46,slow=6.2,SNR=4.1						
	2.5nm,0.8s						
NOA	NORSAR Array B	79.06	337	P	P	20 19 43.4	+0.6
	1.2nm,1.0s,baz=54,slow=6.1,SNR=1.4						
	1.2nm,1.0s						
GERES	GERESS Array B	87.00	328	P	P	20 20 25.1	+1.2
	0.1nm,0.3s,baz=39,slow=4.6,SNR=1.7						
	0.1nm,0.3s						
EKA	Eskdalemuir Ar	88.17	340	P	P	20 20 28.6	-0.6
	0.9nm,0.7s,baz=51,slow=6.8,SNR=1.4						
	0.9nm,0.7s						

IDC ***01*** *20:08:19.9±2.6, 17°.23S×174°.46W, h46km±23km, mb3.8/8, mbtmp4.1/10, ML3.8/2, Error ellipse: s-maj=40.8km s-min=15.7km az=141.0*
NEIC ***01*** *20:08:25.3±1.2, 17°.4S±0°.2×174°.17W±0°.08, h120km±12km, mb4.5/12, Error ellipse: s-maj=23.8km s-min=5.0km az=203.0*

ISC 01 20:08:23.9±0.5, **17°.41S**±0°.09×**174°.29W**±0°.07, **h100**km, **n29**, σ1s.**93**/31, **mb4.2**/14, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	4.24	35	P	Pn	20 09 21.9	-4.5
	13nm,0.3s,baz=201,slow=14,SNR=3.8						
AFI				S	Sn	20 10 09.4	-5.6
	276nm,0.4s,baz=252,slow=20,SNR=14						
	18nm,0.3s						
NIUE	Niue	4.46	112		Pn	20 09 29.6	+0.2
NIUE				Sn	Sn	20 10 16.6	-3.7
MSVF	Nonsavu	7.31	266	Pn	Pn	20 10 17.0	+8.9
RAR	Rarotonga	14.21	108	P	Pn	20 11 42.3	+1.7
	2.2nm,0.3s,baz=250,slow=7.4,SNR=8.3						
	15nm,0.6s						
RAR	Rarotonga	14.21	108	P	P	20 11 43.4	-1.6
RTZ	Ruatahuna	22.46	198	P	P	20 13 14.4	-0.5
RTZ				IAmb	IAmb	20 13 14.9	
	comp=Z,28nm,1.4s						
BKZ	Black Stump Fm	23.12	198	P	P	20 13 19.3	-2.0
QRZ	Quartz Range	25.96	203	P	P	20 13 46.4	-0.7
QRZ				IAmb	IAmb	20 14 08.0	
	comp=Z,52nm,1.5s						
EIDS	Eidsvold	33.13	250	P	P	20 14 48.8	-2.0
EIDS				IAmb	IAmb	20 14 53.2	
	comp=Z,13nm,1.4s						
PATS	Pohnpei	36.24	309	P	P	20 15 15.4	-2.2
STKA	Stephens Creek	42.31	242	P	P	20 16 09.2	+1.2
	comp=Z,2.6nm,0.8s,baz=86,slow=14,SNR=2.0						
	comp=Z,2.6nm,0.8s						
INKA	Innaminka	42.57	248	P	P	20 16 10.6	+0.4
INKA				IAmb	IAmb	20 16 14.8	
	comp=Z,4.0nm,0.6s						
BBOO	Buckleboo	47.08	241	P	P	20 16 44.1	-1.8
WR8	Warramunga Arr	48.43	259	P	P	20 16 55.5	-1.0
WR8				IAmb	IAmb	20 17 36.9	
	comp=Z,9.6nm,1.4s						
WB0	Warramunga Arr	48.55	259	P	P	20 16 57.3	-0.1
WB0				IAmb	IAmb	20 17 01.2	
	comp=Z,4.9nm,1.0s						
WRA	Warramunga Arr	48.58	259	P	P	20 16 58.0	+0.3
	comp=Z,1.0nm,0.4s,baz=96,slow=7.2,SNR=26						
WRA				PcP	PcP	20 18 23.1	+1.1
	comp=Z,0.6nm,1.0s,baz=91,slow=4.0,SNR=1.9						
	comp=Z,1.0nm,0.4s						
WRA	Warramunga Arr	48.58	259	P	P	20 16 56.2	-1.5
AS31	Alice Springs	48.70	254		P	20 16 57.7	-0.8
ASAR	Alice Springs	48.70	254	P	P	20 16 59.2	+0.7
	comp=Z,12nm,0.8s,baz=92,slow=7.9,SNR=111						
ASAR				PcP	PcP	20 18 23.2	+0.8
	comp=Z,0.4nm,0.7s,baz=100,slow=5.1,SNR=1.3						
	comp=Z,12nm,0.8s						
ASAR	Alice Springs	48.70	254	P	P	20 16 57.5	-1.1
FORT	Forrest	53.76	244	P	P	20 17 34.9	-1.3
PETK	Petropavlovsk-	74.28	343	P	P	20 19 52.0	+2.0
	comp=Z,1.4nm,0.7s,baz=154,slow=5.6,SNR=2.4						
	comp=Z,1.4nm,0.7s						
PETK	Petropavlovsk-	74.28	343	P	P	20 19 49.5	-0.5
NVAR	Mina Array Bea	76.39	42	P	P	20 20 05.3	+2.6
	comp=Z,0.4nm,0.6s,baz=258,slow=4.7,SNR=2.5						
	comp=Z,0.4nm,0.6s						
TXAR	Lajitas Array	82.44	56	P	P	20 20 38.1	+2.5
	comp=Z,0.6nm,1.0s,baz=221,slow=6.6,SNR=2.7						
	comp=Z,0.6nm,1.0s						
PDAR	Pinedale Array	84.32	42	P	P	20 20 47.0	+1.8
	comp=Z,1.7nm,0.6s,baz=209,slow=3.2,SNR=18						
	comp=Z,1.7nm,0.6s						
ILAR	Eielson Array	84.57	11	P	P	20 20 46.9	+1.3
	comp=Z,0.3nm,0.5s,baz=227,slow=5.9,SNR=16						
	comp=Z,0.3nm,0.5s						
BRTR	Keskin Array B	147.13	318	PKPbc	PKPbc	20 27 57.1	+1.3
	comp=Z,0.6nm,0.7s,baz=74,slow=4.9,SNR=4.3						
GERES	GERESS Array B	147.98	350	PKPbc	PKPbc	20 27 59.4	+1.6
	comp=Z,0.5nm,0.5s,baz=19,slow=3.5,SNR=3.0						

ISK ***01*** *20:10:43.8, 43°.01N×23°.26E, h11km, ML3.4/12*
BEO ***01*** *20:10:45.5±0.3, 42°.96N×23°.35E, h3km±2km, ML3.3/10*
SOF ***01*** *20:10:45.4, 42°.95N±0°.01×23°.32E±0°.01, h15km±1km, MD3.3/9*
MCSM ***01*** *20:10:45.7±2.1, 43°N±5°×2°3E±°, h10km±19km, MLv3.6*
AFAD ***01*** *20:10:46.6, 42°.85N×23°.63E, h7km±1km, ML3.0*
THE ***01*** *20:10:47.6, 43°N±3°×2°3E±°, h1km±2km, M3.0/25, MLh3.0/25*

ISC 01 20:10:45.0±1.1, **42°.96N**±0°.01×**23°.32E**±0°.01, **h4**km±9km, **n165**, σ0s.**97**/252, **53C-34D**, **Bulgaria**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SOF	Sofia	0.29	173	*i* P	Pb	20 10 51.9	-0.9
VTS	Vitosha	0.35	191	P	Pb	20 10 52.8	-1.1
VTS				S	Sg	20 10 56.1	-0.3
VTS	Vitosha	0.35	191	*i* P	Pb	20 10 52.8	-1.1
VTS				*i* S	Sg	20 10 57.6	+1.2
VTS	Vitosha	0.35	191	*e*Pg	Pb	20 10 52.8	-1.1
VTS				*e*Sg	Sg	20 10 57.6	+1.2
PLNA	Plana	0.49	171	*i* P	Pb	20 10 55.2	-1.1
PLNA				*i* S	Sb	20 11 02.2	-1.7
MPEP	Malo Peshtene	0.50	37	*i* P	Pb	20 10 56.0	-0.4
MPEP				*i* S	Sb	20 11 03.0	-1.1
TRAN	Tran	0.51	256	*i* P	Pg	20 10 55.5	+0.7
TRAN				*i* S	Sb	20 11 03.4	-1.0
ZAPS	Zavoj	0.59	302	*e*Pg	Pg	20 10 56.8	+0.4
ZAPS				*e*Sg	Sg	20 11 05.8	+1.6
VALD	Valchedram	0.73	6	*i* Pg	Pb	20 11 00.4	0.0
PGB	Panagyurishte	0.77	125	*i* P	Pb	20 11 00.1	-0.9
PGB				*i* S	Sb	20 11 10.9	-0.9
BOSS	Bosilegrad	0.78	234	*e*Pg	Pb	20 11 00.7	-0.4
BOSS				*e*Sg	Sg	20 11 10.8	+0.8
BLKB	Belogradchik	0.81	325	⇑S	Sg	20 11 10.5	-0.7
BLKB	Belogradchik	0.81	325	*e*Pg	Pg	20 11 00.9	+0.3
BLKB				*e*Sg	Sg	20 11 11.6	+0.4
PLVB	Pleven	1.04	65	⇓P	Pn	20 11 06.2	-0.2
PLVB				⇓S	Sn	20 11 21.6	+0.2
BARS	Barje	1.12	263	*e*Pg	Pg	20 11 06.5	+0.1
BARS				*e*Sg	Sg	20 11 21.9	+1.0
KKB	Krupnik	1.13	187	P	Pg	20 11 06.5	-0.1
KKB				S	Sb	20 11 21.8	-0.3
KKB	Krupnik	1.13	187	*i* P	Pg	20 11 06.5	-0.1
ZAGS	Zajecar	1.17	317	*e*Pg	Pg	20 11 07.2	-0.2
ZAGS				*e*Sg	Sn	20 11 24.7	+0.2
VLAD	Vladila	1.30	37	⇑P	Pg	20 11 09.7	-0.2
VLAD				⇑S	Sn	20 11 30.2	+2.3
PLD	Plovdiv	1.33	127	P	Pg	20 11 09.9	-0.6
PLD				S	Sb	20 11 27.2	-0.7
PLD	Plovdiv	1.33	127	Pn	Pg	20 11 09.9	-0.6
PLD	Plovdiv	1.33	127	*i* P	Pb	20 11 10.2	-0.3
PLD				*i* S	Sb	20 11 27.5	-0.5
PLD	Plovdiv	1.33	127	*e*Pg	Pg	20 11 10.0	-0.6
PLD				*e*Sg	Sb	20 11 27.4	-0.5
PUNG	Punghina	1.35	348	⇑P	Pg	20 11 09.9	-1.0
PUNG				⇑S	Sb	20 11 28.8	+0.3
PVL	Pavlikeni	1.36	83	*i* P	Pb	20 11 11.4	+0.2
PVL				*i* S	Sn	20 11 30.8	+1.3
MMB	Musomishta	1.45	167	P	Pg	20 11 12.3	-0.5
MMB				S	Sn	20 11 32.2	+0.7
MMB	Musomishta	1.45	167	*i* P	Pb	20 11 12.7	+0.1
MMB				*i* S	Sn	20 11 32.4	+0.8
BORS2	Bor- Borsko je	1.48	320	*e*Pg	Pn	20 11 11.2	-1.3
BORS2				*e*Sg	Sg	20 11 30.7	-1.7
SELS	Selova	1.64	280	*e*Pn	Pn	20 11 15.0	+0.3
RZN	Rozhen	1.64	140	P	Pn	20 11 15.2	+0.3
RZN				S	Sg	20 11 37.5	-0.3
RZN	Rozhen	1.64	140	*i* P	Pg	20 11 16.0	-0.5
RZN				*i* S	Sg	20 11 38.7	+0.9
ZIMR		1.64	64	⇓P	Pn	20 11 14.8	0.0
ZIMR				⇑S	Sg	20 11 39.1	+1.2
NVR	Nevrokopi	1.66	166	P	Pb	20 11 15.6	-0.6
NVR				S	Sb	20 11 37.4	-0.1
SRE	Strehaia	1.70	357	⇑P	Pn	20 11 15.1	-0.5
SKO	Skopje	1.71	235	*i* Pn	Pg	20 11 18.0	+0.2
SKO				*i* Sn	Sb	20 11 39.6	+0.7
VAY	Valandovo	1.73	199	*i* Pn	Pn	20 11 16.3	+0.4
VAY				*i* Sn	Sn	20 11 38.7	+0.2
RMGR	Halanga-Turnu	1.76	345	⇑P	Pn	20 11 15.9	-0.4
RMGR				⇓S	Sn	20 11 39.5	+0.3
DJES	Djerdap	1.80	341	⇑P	Pn	20 11 15.7	-1.2
DJES				⇓S	Sn	20 11 40.4	+0.2
DJES	Djerdap	1.80	341	*e*Pn	Pb	20 11 18.9	+0.3
COPA	Copaceanca	1.81	49	⇑P	Pn	20 11 16.9	0.0
COPA				⇓S	Sg	20 11 42.4	-0.7
KNT	Kendrikon	1.83	190	P	Pn	20 11 17.5	+0.2
KNT				S	Sn	20 11 40.8	-0.1
SRS	Serrai	1.85	174	P	Pn	20 11 18.1	+0.4
SRS				S	Sn	20 11 41.8	+0.2
SRS	Serrai	1.85	174	*e*Pn	Pn	20 11 18.0	+0.4
SRS				*e*Sn	Sn	20 11 41.9	+0.4
ELND	Elena	1.87	90	⇓P	Pn	20 11 18.3	+0.4
ELND				⇓S	Sg	20 11 45.3	+0.1
KUBS	Kucevo	1.88	321	*e*Pn	Pn	20 11 16.7	-1.3
GOCS	Kraljevo Serbi	1.89	289	*e*Pn	Pn	20 11 18.4	+0.2
DIM	Dimitrovgrad	1.90	118	P	Pb	20 11 19.3	-1.0
DIM				S	Sb	20 11 43.7	-0.7
DIM	Dimitrovgrad	1.90	118	*i* P	Pb	20 11 19.7	-0.6
DIM				*i* S	Sg	20 11 46.6	+0.5
SZH	Strazhitsa	1.97	80	P	Pn	20 11 19.6	+0.4
SZH				S	Sg	20 11 47.5	-0.7
SZH	Strazhitsa	1.97	80	*i* P	Pb	20 11 20.5	-0.9
SZH				*i* S	Sg	20 11 48.5	+0.3
HUMR	Humele	1.97	37	⇑P	Pn	20 11 19.2	-0.1
HUMR				⇑S	Sn	20 11 45.5	+1.0
KDZ	Kurdzhali	2.00	131	P	Pn	20 11 18.0	-1.6
KDZ				S	Sn	20 11 45.6	+0.5
KDZ	Kurdzhali	2.00	131	Pn	Pn	20 11 18.3	-1.4
KDZ				Sn	Sn	20 11 45.4	+0.2
SVIS	Svilajnac	2.01	311	*e*Pn	Pb	20 11 22.7	+0.5
HERR	Herculane	2.03	341	⇓P	Pn	20 11 19.2	-0.8
GRUS	Gruza	2.12	297	*e*Pn	Pn	20 11 21.5	+0.3
GRUS				*e*Sn	Sb	20 11 50.8	+0.2
GRG	Griva	2.12	199	P	Pn	20 11 21.6	+0.3
GRG				S	Sn	20 11 48.9	+0.8
SOH	Sokhos	2.14	179	P	Pn	20 11 22.3	+0.7
SOH				S	Sn	20 11 49.0	+0.4
KAVA	Kavala	2.15	155	P	Pn	20 11 22.6	+0.9
KAVA				S	Sn	20 11 50.1	+1.2
MDVR	Moldovita	2.16	328	⇓P	Pn	20 11 21.8	-0.1
MDVR				⇑S	Sn	20 11 48.8	-0.4
SGRR	Singureni	2.30	56	⇑P	Pn	20 11 23.8	+0.1
SGRR				⇑S	Sb	20 11 54.8	-1.1
THE	Thessaloniki	2.34	187	P	Pn	20 11 24.7	+0.4
THE				S	Sn	20 11 53.5	0.0
HORT	Hortiatis	2.37	184	P	Pn	20 11 24.9	+0.2
IVAS	Ivanjica	2.40	286	*e*Pn	Pn	20 11 24.8	-0.4
BUC1	Bucharest	2.40	54	⇑S	Sb	20 11 57.2	-1.6
RAZG	Razgrad	2.40	74	⇑P	Pn	20 11 26.7	+1.5
RAZG				⇑S	Sn	20 11 55.9	+0.8
JMB	Yambol	2.41	100	P	Pn	20 11 26.0	+0.8
JMB				S	Sn	20 11 56.6	+1.4
GZR	Gura Zlata	2.46	351	⇑P	Pn	20 11 25.2	-0.9
TRUS	Trudelj	2.47	302	*e*Pn	Pn	20 11 26.0	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
TRUS				*e*Sn	Sn	20 11 58.6	+1.9
SJES	Sjenica	2.47	278	*e*Pn	Pn	20 11 26.7	+0.5
SJES	Sjenica	2.47	278	*e*Pn	Pn	20 11 25.9	-0.3
PHP	Peshkopia	2.49	240	P	Pn	20 11 28.3	+1.9
LOT	Lotru	2.51	7	⇑P	Pn	20 11 26.2	-0.5
THAS	Thassos island	2.57	156	P	Pn	20 11 27.6	+0.1
ARR	Arges	2.58	21	⇓P	Pn	20 11 27.4	-0.3
PLG	Polygyros	2.59	178	P	Pn	20 11 28.3	+0.6
PLG				S	Sn	20 11 59.9	+0.3
MTUR	Matau	2.59	28	⇑P	Pn	20 11 28.1	+0.3
VRSS	Vrsac	2.60	327	*e*Pn	Pn	20 11 27.5	-0.4
VRSS				*e*Sn	Sn	20 12 00.7	+0.8
OHR	Ohrid	2.64	226	*i* Pn	Pg	20 11 35.6	+0.1
OHR				*i* Sn	Sg	20 12 09.2	-0.5
OUR	Ouranopolis	2.67	169	P	Pn	20 11 29.1	+0.3
OUR				S	Sn	20 12 01.5	-0.2
OUR	Ouranopolis	2.67	169	Pn	Pn	20 11 28.9	+0.1
DIVS	Divibare	2.68	296	*e*Pn	Pn	20 11 28.9	-0.1
SULR		2.73	50	⇑P	Pn	20 11 29.7	0.0
SULR				⇓S	Sn	20 12 05.5	+2.5
PLAR	PLOIESTI	2.76	44	⇑P	Pn	20 11 30.6	+0.5
EDRB	Edirne	2.77	113	Pn	Pn	20 11 30.3	+0.1
EDRB				Sn	Sn	20 12 04.3	+0.3
VOIR		2.77	26	⇑P	Pn	20 11 30.2	-0.1
VOIR				⇓S	Sn	20 12 06.3	+2.0
VOIR		2.77	26	P	Pn	20 11 30.3	0.0
VOIR				S	Sn	20 12 05.1	+0.9
BANR	Banloc	2.89	328	⇑P	Pn	20 11 31.3	-0.5
BANR				⇓S	Sn	20 12 07.0	0.0
ALN	Alexandroupoli	2.89	135	P	Pn	20 11 32.8	+0.8
ALN				S	Sn	20 12 08.2	+1.1
ALN	Alexandroupoli	2.89	135	Pn	Pn	20 11 32.2	+0.3
KZN	Kozani	2.90	204	P	Pn	20 11 32.5	+0.5
BZS	Buzias	2.92	336	⇑P	Pn	20 11 31.4	-0.9
BZS				⇓S	Sn	20 12 07.8	-0.1
LIT	Litokhoron	2.93	193	P	Pn	20 11 32.1	-0.3
DEV	Deva	2.94	354	⇓P	Pn	20 11 33.0	+0.5
DEV				⇑S	Sn	20 12 09.3	+1.0
RUDO	Rudo	2.96	284	*e*Pn	Pn	20 11 32.2	-0.7
SMTH	Samothraki Isl	2.99	146	P	Pn	20 11 33.6	+0.4
BBLS	Lazi&#263i	3.00	289	*e*Pn	Pn	20 11 33.4	0.0
BBLS	Lazi&#263i	3.00	289	*e*Pn	Pn	20 11 32.8	-0.6
PRD	Provadia	3.00	85	*i* P	Pn	20 11 34.3	+0.9
KIRK	Kırklareli	3.03	112	P	Pn	20 11 34.0	+0.2
KIRK				S	Sn	20 12 11.3	+0.7
PDG	Podgorica	3.05	261	*e*Pn	Pb	20 11 40.7	+0.9
NEST	Nestorio	3.06	215	P	Pn	20 11 35.2	+0.9
ENEZ	Enez	3.07	136	Pn	Pn	20 11 34.6	+0.3
UKOP	Uzunkopru-Edir	3.07	126	Pn	Pn	20 11 34.6	+0.3
UKOP				Sn	Sn	20 12 11.7	+0.2
CAVK	Edirne/Enez-Ca	3.11	136	⇓P	Pn	20 11 34.9	0.0
CAVK	Edirne/Enez-Ca	3.11	136	P	Pn	20 11 35.9	+1.1
CAVK				S	Sg	20 12 25.1	+0.3
CAVK				IAML		20 12 30.0	
	comp=N,110nm,0.9s						
CAVK				IAML		20 12 30.0	
	comp=E,117nm,0.9s						
MLR	Muntele Rosu	3.15	36	⇓P	Pn	20 11 36.4	+0.8
MLR				⇓S	Sn	20 12 15.9	+2.1
ISR	Istrita	3.17	46	⇑P	Pn	20 11 37.0	+1.2
ARMN	Kirklareli, Me	3.23	108	P	Pn	20 11 37.2	+0.6
ARMN				S	Sn	20 12 15.1	-0.5
NEHR	Nehoiu	3.26	40	⇑P	Pn	20 11 38.0	+1.0
NEHR				⇑S	Sn	20 12 18.0	+1.7
MDB	Medias	3.27	13	⇓P	Pn	20 11 38.1	+1.0
ERIK	Erikli-Kesan	3.30	133	Pn	Pn	20 11 37.9	+0.4
AMRR	Amara	3.34	59	⇑S	Sn	20 12 20.1	+2.0
DOPR	Dopca	3.35	25	⇑P	Pn	20 11 38.8	+0.6
FRGS	Fruska Gora	3.35	312	*e*Pn	Pn	20 11 37.7	-0.5
LIA	Limnos Island	3.36	155	P	Pn	20 11 38.6	+0.2
GOKT	Kean, EDRN	3.37	132	P	Pn	20 11 39.6	+1.1
GOKT				S	Sn	20 12 19.1	+0.2
GOKT				IAML		20 12 36.0	
	comp=E,54nm,1.0s						
GOKT				IAML		20 12 44.0	
	comp=N,57nm,0.9s						
GADA	Gvkgeada	3.38	144	P	Pn	20 11 39.1	+0.6
GADA	Gvkgeada	3.38	144	Pn	Pn	20 11 39.1	+0.6
ICOR	Ion Corvin	3.45	69	⇑P	Pn	20 11 40.6	+1.0
ICOR				⇓S	Sn	20 12 23.0	+2.0
KLINJ	Klinje	3.48	275	*e*Pn	Pn	20 11 40.2	+0.1
GELI	Tayfur-Gelibol	3.48	136	Pn	Pn	20 11 40.6	+0.6
BRY	Bratogost	3.52	271	*e*Pn	Pn	20 11 40.3	-0.3
COVR	Voineasa-Covas	3.55	35	⇓P	Pn	20 11 41.9	+0.9
COVR				⇑S	Sn	20 12 24.8	+1.5
MURA	Muratl, TEK	3.59	119	P	Pn	20 11 43.0	+1.6
MURA				IAML		20 12 53.0	
	comp=E,37nm,1.7s						
MURA				IAML		20 12 54.0	
	comp=N,43nm,1.2s						
OZUR		3.59	28	⇑P	Pn	20 11 42.2	+0.6
VIZE	Kirklareli, Vi	3.62	111	P	Pn	20 11 43.0	+1.1
VIZE				S	Sn	20 12 24.7	-0.5
VIZE				IAML		20 12 27.0	
	comp=E,23nm,0.4s						
VIZE				IAML		20 12 44.0	
	comp=N,35nm,0.6s						
LPK	Lapseki	3.65	134	Pn	Pn	20 11 42.9	+0.6
TREB	Trebinje	3.67	268	*e*Pn	Pn	20 11 43.7	+1.2
MARR	Marisel-Cluj	3.72	358	⇓P	Pn	20 11 42.8	-0.5
BOZC	Bozcaada	3.73	146	Pn	Pn	20 11 44.0	+0.6
PLOR	Plostina	3.75	38	⇓P	Pn	20 11 45.1	+1.4
PLOR				⇓S	Sn	20 12 30.0	+1.8
LAPS	Lapseki, ANA	3.78	135	P	Pn	20 11 45.0	+0.9
LAPS				S	Sn	20 12 28.4	-0.7
LAPS				IAML		20 12 49.0	
	comp=N,31nm,0.8s						
LAPS				IAML		20 12 50.0	
	comp=E,26nm,0.6s						
VRI	Vrincioaia	3.79	39	⇓P	Pn	20 11 45.4	+1.1
VRI				⇑S	Sn	20 12 30.9	+1.6
VRI	Vrincioaia	3.79	39	P	Pn	20 11 45.3	+1.0
DRGR		3.85	354	⇓P	Pn	20 11 44.3	-0.9
EZN	Ezine	3.86	143	P	Pn	20 11 45.3	+0.1
ODBI	Odobesti	3.87	42	⇑P	Pn	20 11 45.9	+0.5
KRBG	Karabiga-Canak	3.93	129	Pn	Pn	20 11 46.9	+0.8
CTYL	Yalikoy Yolu	3.98	110	P	Pn	20 11 48.1	+1.3
TIRR	Tirgusor	3.98	66	⇓P	Pn	20 11 47.2	+0.4
TIRR				⇑S	Sn	20 12 35.7	+1.7
PANC	Panciu	4.00	42	⇑P	Pn	20 11 47.1	+0.1
ONER	Baraj Valea Uz	4.02	32	⇓P	Pn	20 11 48.1	+0.7
CATL	atalca, ST	4.08	112	P	Pn	20 11 48.7	+0.5
CATL				S	Sn	20 12 36.2	-0.1
CATL				IAML		20 13 01.0	
	comp=E,24nm,0.5s						
CATL				IAML		20 13 02.0	
	comp=N,41nm,0.9s						
TUDR		4.08	48	⇑S	Sn	20 12 38.1	+1.7
SCHLR	Schela	4.10	51	⇑S	Sn	20 12 39.4	+2.6
CFR	Carcaliu	4.12	56	⇓P	Pn	20 11 49.1	+0.4
CFR				⇑S	Sn	20 12 39.4	+2.1
TPGR	Topolog	4.14	61	⇓P	Pn	20 11 49.7	+0.7
TPGR				⇓S	Sn	20 12 40.3	+2.4
TESR	Tescani	4.27	33	⇑P	Pn	20 11 51.2	+0.4
TATR	Tatarca	4.30	51	⇑S	Sn	20 12 43.3	+1.6
VLDR	Vladesti	4.46	48	⇓P	Pn	20 11 53.6	+0.2
VLDR				⇑S	Sn	20 12 47.7	+1.8
LTVH	Ltavrtes, Hu	4.54	348	⇑P	Pn	20 11 54.1	-0.3
LTVH				⇓S	Sn	20 12 47.4	-0.2
TLCR		4.54	59	⇑P	Pn	20 11 55.5	+1.0
GIRR	Girov	4.59	28	⇑P	Pn	20 11 56.0	+0.8
MORH	Mrgy, Hungar	4.66	316	⇑P	Pn	20 11 56.0	-0.3
MORH	Mrgy, Hungar	4.66	316	P	Pn	20 11 55.9	-0.3
MORH	Mrgy, Hungar	4.66	316	*e*Pn	Pn	20 11 55.7	-0.5
BLY	Banja Luka	4.79	294	*e*Pn	Pn	20 11 57.6	-0.3
BURAR	Bucovina Array	4.84	15	⇑P	Pn	20 11 59.4	+0.6
PRAR	RASCA	4.86	24	⇑P	Pn	20 11 58.7	-0.2
PRAR				⇑S	Sn	20 12 56.6	+1.0
HOLU	Holmets	5.61	354	P	Pn	20 12 07.9	-1.2
KECS	Kecovo	5.87	341	*e*PG	Pn	20 12 12.1	-0.7
KECS				*e*SN	Sn	20 13 17.4	-3.1
SORM	Soroca	6.26	33	⇑P	Pn	20 12 18.0	-0.2
MODS	Modra-Piesok	6.87	324	*e*SN	Sn	20 13 41.4	-3.8
SEV	Sevastopol'	7.66	75	*e*P	Pn	20 12 36.8	-0.5
SEV				pmax	pmax	20 12 38.2	
	comp=Z,3.0nm,0.4s						
SEV				*e*S	Sn	20 13 59.6	-4.8

IDC 01 20:21:53.7±45.0**,16°.16S**×**174°.11W,h0**km**,mb4.1**/3**, mbtmp4.1**/3**,Error ellipse: s-maj=853.4km s-min=186.4km az=79.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	43.07	240	P	P	20 29 56.2	+0.6
	1.8nm,0.7s,baz=60,slow=8.1,SNR=1.4						
	1.8nm,0.7s						
WRA	Warramunga Arr	49.01	257	P	P	20 30 42.2	-0.5
	0.5nm,0.6s,baz=96,slow=7.3,SNR=12						
	0.5nm,0.6s						
ASAR	Alice Springs	49.23	253	P	P	20 30 44.1	-0.2
	5.4nm,0.6s,baz=88,slow=8.2,SNR=114						
	5.4nm,0.6s						

NNC 01 20:26:35.2±7.3**,36°.91N**×**70°.24E,h0**km**,mb3.6,mpv3.4, 4C-1D,Error ellipse: s-maj=64.3km s-min=50.6km az=153.0,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.19	2	⇑P	Pn	20 28 09.2	+1.4
	0.9nm,0.4s,baz=170,slow=12						
KK31				⇑S	Sn	20 29 20.9	+1.6
	2.1nm,0.4s,baz=183,slow=22						
AAK	Ala-Archa	6.59	29	⇑P	Pn	20 28 13.3	-0.2
	5.8nm,1.5s						
AAK				⇑S	Sn	20 29 29.6	+0.2
	3.7nm,1.1s						
AB31	Akbulak array	14.43	332	⇓P	Pn	20 29 58.1	-2.5
	0.6nm,0.7s						

IDC ***01*** *20:28:57.0±8.0, 18°.00S×178°.54W, h582km±78km, mb3.2/5, mbtmp4.1/6, Error ellipse: s-maj=75.1km s-min=34.3km az=116.0*

ISC 01 20:28:56.1±1.8**,18°.1S**±0°.4×**178°.4W**±0°.3**,h579**km**,n7,** σ**0s.60**/9**,mb3.6**/5**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.79	252	P	P	20 32 03.8	+0.7
	3.5nm,0.7s,baz=83,slow=17,SNR=3.3						
STKA	Stephens Creek	38.57	241	P	P	20 35 30.1	-0.3
	2.2nm,0.5s,baz=90,slow=8.1,SNR=8.4						
	2.2nm,0.5s						
WRA	Warramunga Arr	44.62	260	P	P	20 36 17.2	-1.0
	1.0nm,0.5s,baz=98,slow=7.2,SNR=41						
WRA				PcP	PcP	20 37 48.6	+0.3
	0.3nm,0.8s,baz=108,slow=2.9,SNR=2.2						
	1.0nm,0.5s						
ASAR	Alice Springs	44.77	254	P	P	20 36 19.1	-0.2
	8.6nm,0.6s,baz=88,slow=8.3,SNR=154						
ASAR				PcP	PcP	20 37 49.4	+0.5
	0.2nm,0.5s,baz=100,slow=4.0,SNR=1.5						
	8.6nm,0.6s						
MJAR	Matsushiro Arr	68.03	323	P	P	20 38 58.6	0.0
	1.3nm,0.8s,baz=140,slow=9.6,SNR=4.4						
	1.3nm,0.8s						
ILAR	Eielson Array	86.03	13	P	P	20 40 35.6	+0.1
	0.6nm,1.1s,baz=209,slow=4.4,SNR=1.9						
	0.6nm,1.1s						
TORD	Torodi Ar. Bea	175.12	181	PKP	PKPdf	20 48 00.7	-0.3
	0.3nm,0.5s,baz=154,slow=2.2,SNR=1.7						

MOS ***01*** *20:29:40.5±0.9, 53°.25N×170°.45W, h159km, mb4.4/22, Error ellipse: s-maj=9.9km s-min=6.6km az=80.8*

NEIC ***01*** *20:29:41.3±1.0, 53°.2N±0°.1×170°.39W±0°.10, h153km±6km, mb4.7/201, ML4.7/20, ML4.5(AEIC), Error ellipse: s-maj=16.8km s-min=7.1km az=161.0*

AEIC ***01*** *20:29:42.6±1.6, 52°.9N±0°.1×170°.3W±0°.1, h157km±4km, Error ellipse: s-maj=18.2km s-min=7.0km az=160.0*

ANF ***01*** *20:29:43.0±1.1, 53°.08N×170°.03W, h158km±4km, Mb4.8/16, Error ellipse: s-maj=12.1km s-min=4.1km az=40.0*

IDC ***01*** *20:29:43.2±0.5, 53°.30N×170°.55W, h165km±2km, mb3.8/35, mbtmp4.3/36, MS3.5/6, Error ellipse: s-maj=12.9km s-min=6.9km az=6.0*

BGR ***01*** *20:30:15.3, 53°.81N×169°.67W, h33km, mb5.0*

ISC 01 20:29:42.1±0.4**,53°.19N**±0°.06×**170°.40W**±0°.03**, h160**km±2km**,h160**km**:pP-P,n654,**σ**1s.17**/630**,mb4.6**/188**, 7C-13D,Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLES	Cleveland East	0.48	140		Sn	20 30 19.5	-2.1
CLES	Cleveland East	0.48	140		Pn	20 30 02.7	-1.8
CLCO	Concord Point,	0.58	135		Pn	20 30 03.6	-1.3
CLCO					Sn	20 30 20.1	-2.3
NIKH	Nikolski High	0.96	103	P	Pn	20 30 05.9	-1.5
NIKH				S	Sn	20 30 24.0	-2.8
NIKH	Nikolski High	0.96	103		Sn	20 30 24.1	-2.8
NIKH	Nikolski High	0.96	103		Pn	20 30 05.7	-1.7
NIKH				IAML		20 30 26.0	
	comp=N,6μm,0.9s						
NIKH	Nikolski High	0.96	103	P	Pn	20 30 06.0	-1.5
	baz=281,SNR=39						
NIKH				S	Sn	20 30 24.2	-2.7
	baz=281						
OKSP	Okmok Steeple	1.27	87		Pn	20 30 09.3	-0.9
OKFG	Magazine Ridge	1.51	81		Pn	20 30 11.9	-0.6
MGOD	Makushin Gods	2.19	73		Pn	20 30 19.6	-0.5
MGOD					Sn	20 30 48.0	-1.3
MNAT	Makushin Natee	2.32	71		Pn	20 30 21.3	-0.3
KOSE	Korovin Southe	2.38	250		Pn	20 30 21.6	-0.6
KOSE					Sn	20 30 52.8	-0.4
UNV	Unalaska Valle	2.42	73		Sn	20 30 53.2	-0.7
UNV	Unalaska Valle	2.42	73		Pn	20 30 22.3	-0.3
UNV				IAML		20 30 54.5	
	comp=E,2μm,0.2s						
UNV				IAML		20 30 55.0	
	comp=N,3μm,0.3s						
UNV	Unalaska Valle	2.42	73	P	Pn	20 30 22.3	-0.3
	baz=255,SNR=84						
UNV				S	Sn	20 30 52.8	-1.1
	baz=255						
KOFP	Korovin Flat P	2.43	249		Pn	20 30 22.4	-0.5
KOFP					Sn	20 30 53.3	-1.1
KOKV	Korovin Volcan	2.43	251		Pn	20 30 22.4	-0.6
KOKL	Mount Kliuchef	2.47	251		Pn	20 30 22.8	-0.5
AKRB	Akutan Reef Bi	2.74	68		Pn	20 30 26.9	+0.3
LVA	Lava Point	2.77	68		Sn	20 31 02.4	+0.6
LVA	Lava Point	2.77	68		Pn	20 30 27.1	+0.2
LVA				IAML		20 31 07.4	
	comp=N,3μm,0.8s						
LVA				IAML		20 31 08.5	
	comp=E,2μm,1.1s						
ZRO	Akutan Zero	2.78	69		Sn	20 31 01.7	-0.3
AKUT	Akutan	2.91	69		Pn	20 30 28.8	+0.1
GSIG	Igitkin Island	3.58	252		Pn	20 30 36.3	-0.9
GSTR	Great Sitkin T	3.62	255		Pn	20 30 36.8	-0.9
GSTR				IAML		20 31 28.1	
	comp=E,1μm,0.5s						
GSCK	Great Sitkin C	3.71	254		Pn	20 30 37.7	-1.1
SPIA	Saint Paul Isl	3.99	1		Pn	20 30 44.9	+2.5
SPIA	Saint Paul Isl	3.99	1	P	Pn	20 30 43.8	+1.4
	baz=182,SNR=6.8						
ADK	Adak	4.05	254	P	Pn	20 30 42.5	-0.8
ADK				S	Sn	20 31 28.8	-2.1
ADK	Adak	4.05	254	S	Sn	20 31 28.8	-2.1
ADK	Adak	4.05	254		Pn	20 30 42.0	-1.3
ADK				IAML		20 31 29.5	
	comp=E,841nm,0.3s						
ADK				IAML		20 31 36.2	
	comp=E,861nm,0.3s						
ADK	Adak	4.05	254	P	Pn	20 30 42.0	-1.3
ISNN	Isanotski Nort	4.24	65		Pn	20 30 46.1	+0.5
KIWB	Kanaga Island	4.34	255		Pn	20 30 46.1	-0.9
KIWB				IAML		20 31 43.8	
	comp=N,672nm,0.5s						
KIWB				IAML		20 31 44.5	
	comp=E,1μm,0.6s						
KIKV	Kanaga Island	4.34	255		Pn	20 30 46.2	-0.7
FALS	False Pass	4.44	65	S	Sn	20 31 40.5	+0.7
FALS	False Pass	4.44	65		Pn	20 30 48.2	0.0
FALS	False Pass	4.44	65	P	Pn	20 30 48.3	0.0
	baz=250,SNR=18						
FALS				S	Sn	20 31 39.5	-0.3
	baz=250						
DOL	Dolgoi Island	5.38	65		Pn	20 31 00.3	-0.3
HAG	Hague Volcano	5.42	63		Pn	20 31 01.2	+0.1
HAG	Hague Volcano	5.42	63	P	Pn	20 31 01.2	+0.1
PS1A	Pavlof South-1	5.54	63		Pn	20 31 02.6	-0.1
SDPT	Sand Point	6.20	66	P	Pn	20 31 10.0	-1.4
SDPT	Sand Point	6.20	66		Pn	20 31 10.2	-1.2
SDPT	Sand Point	6.20	66	P	Pn	20 31 10.2	-1.2
	baz=253,SNR=11						
SDPT				S	Sn	20 32 17.3	-4.1
	baz=253						
CESW	Semis' Southwe	6.26	262		Pn	20 31 11.3	-1.0
AMKA	Amchitka	6.58	258		Pn	20 31 14.8	-1.7
CNBA	Chernabura Isl	6.58	71		Pn	20 31 14.6	-1.8
CHNA	Chernabura Isl	6.58	71	P	Pn	20 31 14.7	-1.7
CHNA	Chernabura Isl	6.58	71	P	Pn	20 31 14.5	-2.0
	baz=260,SNR=8.1						
VNKR	Veniaminof 5	7.01	62		Pn	20 31 21.3	-0.9
VNSS	Veniaminof 8	7.03	60		Pn	20 31 22.0	-0.6
VNSG	Veniaminof 6	7.19	61		Pn	20 31 23.7	-0.9
M11K	Mekoryuk	7.57	16		Pn	20 31 31.2	+1.7
M11K	Mekoryuk	7.57	16	P	Pn	20 31 31.0	+1.5
	baz=200,SNR=10						
O14K	Tigyukauivet M	7.92	36		Pn	20 31 35.2	+1.0
O14K	Tigyukauivet M	7.92	36	P	Pn	20 31 35.6	+1.4
	baz=224,SNR=16						
M13K	Dall Lake	8.20	25		Pn	20 31 39.5	+1.6
M13K	Dall Lake	8.20	25	P	Pn	20 31 39.8	+1.9
	baz=211,SNR=25						
N14K	Kuskokwak Cree	8.28	32	P	Pn	20 31 40.4	+1.4
	baz=219,SNR=37						
O15K	Ungalikthiuk R	8.40	40		Pn	20 31 42.0	+1.4
O15K	Ungalikthiuk R	8.40	40	P	Pn	20 31 42.1	+1.4
	baz=229,SNR=24						
M14K	Bethel	8.86	28	P	Pn	20 31 48.0	+1.4
	baz=215,SNR=18						
PLBL	Peulik Blue Cr	8.94	54		Pn	20 31 47.7	0.0
CHIR	Chirikof Islan	8.99	67	P	Pn	20 31 45.8	-2.6
CHIR	Chirikof Islan	8.99	67		Pn	20 31 45.8	-2.6
CHIR	Chirikof Islan	8.99	67	P	Pn	20 31 45.7	-2.8
	baz=259						
N15K	Kwethluk River	8.99	35		Pn	20 31 50.3	+1.9
N15K	Kwethluk River	8.99	35	P	Pn	20 31 50.4	+1.9
	baz=223,SNR=41						
P16K	Nushagak River	9.06	45		Pn	20 31 50.2	+0.9
P16K	Nushagak River	9.06	45	P	Pn	20 31 50.7	+1.4
	baz=235,SNR=29						
PLK1	Peulik 1	9.08	54		Pn	20 31 49.4	-0.2
R17L	Mt. Peulik Vol	9.13	55	P	Pn	20 31 49.7	-0.6
	baz=247						
PLK4	Peulik 4	9.13	55		Pn	20 31 50.0	-0.4
L14K	Kuka Creek	9.17	24		Pn	20 31 52.2	+1.5
L14K	Kuka Creek	9.17	24	P	Pn	20 31 51.8	+1.1
	baz=210,SNR=16						
M15K	Kasigluk River	9.19	31		Pn	20 31 52.1	+1.1
M15K	Kasigluk River	9.19	31	P	Pn	20 31 52.3	+1.2
	baz=219,SNR=40						
K13K	Kusilvak Mount	9.29	17		Pn	20 31 52.7	+0.5
K13K	Kusilvak Mount	9.29	17	P	Pn	20 31 54.0	+1.7
	baz=202,SNR=17						
O16K	Kokwok River B	9.35	42		Pn	20 31 54.2	+1.0
O16K	Kokwok River B	9.35	42	P	Pn	20 31 54.4	+1.2
	baz=232,SNR=17						
SMY	Shemya	9.37	273	P	Pn	20 31 49.7	-3.8
Q16K	King Salmon	9.46	49	P	Pn	20 31 55.2	+0.6
	baz=240						
Q17K	Contact Creek	9.63	52	P	Pn	20 31 56.6	-0.3
	baz=244,SNR=9.3						
N16K	Nishlik Lake	9.68	36		Pn	20 31 58.8	+1.3
N16K	Nishlik Lake	9.68	36	P	Pn	20 31 59.0	+1.5
	baz=226,SNR=11						
L15K	Ungalak Mounta	9.76	26		Pn	20 31 59.8	+1.3
L15K	Ungalak Mounta	9.76	26	P	Pn	20 31 59.2	+0.7
	baz=213,SNR=15						
ANCK	Angle Creek	9.79	53		Pn	20 31 58.7	-0.3
P17K	Kvichak River	9.82	47		Pn	20 31 59.6	+0.3
P17K	Kvichak River	9.82	47	P	Pn	20 31 59.3	0.0
	baz=238,SNR=8.4						
O17K	Koliganek Bris	9.87	43		Pn	20 32 00.9	+1.0
O17K	Koliganek Bris	9.87	43	P	Pn	20 32 00.3	+0.3
	baz=234,SNR=15						
ACHA	Angle Creek He	9.87	53		Pn	20 31 59.8	-0.3
KABU	Katmai Buttres	9.92	53		Pn	20 32 00.5	-0.3
SII	Sitkinak Islan	9.93	64	P	Pn	20 31 58.4	-2.5
SII	Sitkinak Islan	9.93	64	P	Pn	20 31 58.1	-2.8
	baz=257						
M16K	Timber Creek	10.00	34	P	Pn	20 32 01.8	0.0
	baz=223,SNR=13						
Q18K	Katmai Hardscr	10.21	52	P	Pn	20 32 03.3	-1.3
	baz=244,SNR=16						
J14K	Nanvaranak Lak	10.24	18	P	Pn	20 32 05.0	+0.2
	baz=204,SNR=10						
K15K	Wolf Creek Mou	10.27	24	P	Pn	20 32 06.3	+1.1
	baz=211,SNR=31						
N17K	Nushagak Hills	10.29	39	P	Pn	20 32 05.6	0.0
	baz=230,SNR=30						
L16K	Owhat River	10.35	30	P	Pn	20 32 06.6	+0.2
	baz=219,SNR=13						
P18K	Big Mountain,	10.46	48	P	Pn	20 32 07.8	+0.1
	baz=240,SNR=26						
OHAK	Old Harbor	10.57	61	P	Pn	20 32 05.2	-4.0
OHAK	Old Harbor	10.57	61	P	Pn	20 32 06.0	-3.2
	baz=255						
GAMB	Gambell	10.63	357	P	Pn	20 32 10.1	+0.1
	baz=176,SNR=12						
O18K	Koktuh Hills	10.70	45		Pn	20 32 11.4	+0.5
O18K	Koktuh Hills	10.70	45	P	Pn	20 32 11.7	+0.7
	baz=238,SNR=17						
M17K	Holitna River	10.79	35	P	Pn	20 32 13.1	+1.0
	baz=226,SNR=16						
N18K	Kilae Creek	10.89	41	P	Pn	20 32 14.5	+1.1
	baz=233,SNR=9.8						
Q19K	Cape Douglas,	10.97	52	P	Pn	20 32 12.6	-1.9
	baz=246,SNR=6.5						
L17K	Donlin	11.04	31	P	Pn	20 32 16.4	+1.1
	baz=221						
KDAK	Kodiak Island	11.09	58	P	Pn	20 32 13.9	-2.1
	comp=E,5.9nm,0.3s,baz=256,slow=6.6,SNR=7.0						
KDAK				S	Sn	20 34 10.1	-8.6
	comp=E,7.2nm,0.3s,baz=289,slow=15,SNR=2.0						
KDAK	Kodiak Island	11.09	58	*d i*P	Pn	20 32 12.9	-3.1
KDAK	Kodiak Island	11.09	58	P	Pn	20 32 14.0	-2.0
	baz=253						
O19K	Port Alsworth	11.26	45	P	Pn	20 32 18.4	+0.1
	baz=238						
J16K	Anvik River	11.34	23	P	Pn	20 32 20.0	+0.7
	baz=211,SNR=9.9						
M18K	Stony River	11.43	38	P	Pn	20 32 20.9	+0.5
	baz=230,SNR=21						
Q20K	Shuyak Island	11.45	55	P	Pn	20 32 18.3	-2.5
	baz=249,SNR=6.9						
P19K	Oil Pt	11.48	49		Pn	20 32 20.7	-0.4
P19K	Oil Pt	11.48	49	P	Pn	20 32 20.3	-0.8
	baz=243						
K17K	Iditarod	11.48	29	P	Pn	20 32 22.0	+0.9
	baz=219,SNR=11						
N19K	Bonanza Creek	11.53	42	P	Pn	20 32 23.0	+1.1
	baz=236,SNR=56						
L18K	Granite Mounta	11.62	33	P	Pn	20 32 23.6	+0.8
	baz=225,SNR=22						
ANM	Nome	11.69	11	P	Pn	20 32 24.7	+0.8
	baz=195						
I17K	Unalakleet	11.84	21	P	Pn	20 32 26.4	+0.7
	baz=210,SNR=8.3						
HOM	Homer	12.21	51	P	Pn	20 32 29.5	-1.1
	baz=246						
H16K	Elim	12.21	17	P	Pn	20 32 31.1	+0.6
	baz=204,SNR=6.0						
M19K	Big River Lodg	12.22	38	P	Pn	20 32 30.5	-0.2
	baz=232						
L19K	White Mountain	12.22	36	P	Pn	20 32 31.7	+0.9
	baz=230,SNR=32						
G15K	Niukluk	12.27	13	P	Pn	20 32 31.7	+0.4
	baz=198,SNR=15						
TNA	Tin City	12.47	5	P	Pn	20 32 34.3	+0.5
	baz=187,SNR=13						
F14K	Arctic Creek	12.49	8	P	Pn	20 32 34.6	+0.5
	baz=192,SNR=15						
J18K	Innoko River	12.52	29	P	Pn	20 32 34.9	+0.3
	baz=221,SNR=41						
BRSE	Bradley Lake S	12.66	51	P	Pn	20 32 35.4	-1.0
	baz=247,SNR=6.6						
SPCR	Spurr Chakacha	12.67	44	P	Pn	20 32 37.1	+0.5
	baz=239,SNR=20						
M20K	Styx River	12.68	40	P	Pn	20 32 37.4	+0.8
	baz=234,SNR=17						
F15K	North Star Dit	12.88	11	P	Pn	20 32 41.1	+2.0
	baz=196,SNR=52						
G16K	Koyuk River	12.89	15	P	Pn	20 32 40.8	+1.5
	baz=202,SNR=16						
CAPN	Captain Cook N	12.91	46	P	Pn	20 32 40.8	+1.3

	baz=242						
H17K	Granite Mounta	12.93	20	P	Pn	20 32 41.5	+1.8
	baz=209,SNR=54						
J19K	Poorman	13.24	29	P	Pn	20 32 44.9	+1.1
	baz=222,SNR=20						
K20K	Telida	13.28	34	P	Pn	20 32 45.9	+1.7
	baz=227,SNR=58						
G17K	Kiwalik Mounta	13.28	18	P	Pn	20 32 45.7	+1.5
	baz=206,SNR=20						
SKT	Skwentna	13.36	41	P	Pn	20 32 46.5	+1.2
	baz=237,SNR=22						
SEW	Seward	13.40	51	P	Pn	20 32 43.3	-2.4
	baz=248,SNR=15						
SUA	Susitna One	13.41	44	P	Pn	20 32 45.7	-0.4
	baz=241,SNR=6.4						
O22K	Cooper Landing	13.42	49	P	Pn	20 32 44.7	-1.3
	baz=246,SNR=13						
H18K	Honhosa River	13.45	22	P	P	20 32 48.5	-1.6
	baz=213						
GCSA	Galena City Sc	13.48	25	P	Pn	20 32 48.3	+1.6
	baz=217,SNR=23						
PPLA	Purkeypile	13.64	37	P	Pn	20 32 50.5	+1.6
	baz=233,SNR=23						
RC01	Rabbit Creek A	13.67	47	P	Pn	20 32 48.7	-0.6
	baz=244,SNR=12						
M22K	Willow	13.82	44	Pn	Pn	20 32 51.6	+0.6
M22K	Willow	13.82	44	P	Pn	20 32 51.7	+0.7
	baz=241						
G18K	Tagagawik	14.02	20	P	P	20 32 55.5	-1.0
	baz=210,SNR=58						
F17K	Baldwin Pennin	14.04	15	P	P	20 32 55.7	-0.9
	baz=203,SNR=14						
PMR	Palmer	14.16	45	P	Pn	20 32 53.5	-1.8
PMR	Palmer	14.16	45	P	Pn	20 32 55.1	-0.1
	baz=243						
CHUM	Lake Minchumin	14.21	34	P	Pn	20 32 56.4	+0.5
	baz=229						
P23K	Montague Islan	14.33	52	P	Pn	20 32 55.3	-2.1
	baz=252						
KNK	Knik Glacier	14.37	46	P	Pn	20 32 56.2	-1.8
	baz=245,SNR=21						
F18K	Selawik	14.45	17	P	P	20 33 01.0	-0.1
	baz=207,SNR=52						
E17K	Hotham Inlet	14.55	13	P	P	20 33 01.7	-0.6
	baz=201,SNR=44						
G19K	Purcell Mounta	14.57	22	P	P	20 33 02.1	-0.4
	baz=213,SNR=28						
H20K	Anotleneega Mo	14.59	26	P	Pn	20 33 01.4	+0.8
	baz=220,SNR=27						
SML	Sawmill	14.60	45	P	Pn	20 33 00.4	-0.5
	baz=244,SNR=16						
TRF	Thorofare Moun	14.66	38		Pn	20 33 02.7	+1.0
TRF	Thorofare Moun	14.66	38	P	Pn	20 33 02.2	+0.5
	baz=235,SNR=17						
Q23K	Middleton Isla	14.68	55	P	Pn	20 32 60.0	-1.8
	baz=255						
GLI	Glacier Island	14.77	49	P	Pn	20 33 00.9	-2.0
	baz=249						
BPAW	Bear Paw Mtn.	14.80	35	P	P	20 33 04.6	-0.5
	baz=231,SNR=101						
M23K	Glacier View	14.85	46	P	Pn	20 33 02.5	-1.4
	baz=245,SNR=43						
D17K	Noatak River	14.97	11	P	Pn	20 33 05.8	+0.4
	baz=197,SNR=10						
WAT1	Susitna Watana	14.99	41	P	Pn	20 33 05.9	+0.2
	baz=240						
F19K	Shaleruckik Mo	15.02	20	Pn	Pn	20 33 05.8	0.0
F19K	Shaleruckik Mo	15.02	20	P	Pn	20 33 06.3	+0.4
	baz=210,SNR=19						
SCM	Sheep Creek Mo	15.04	46	P	Pn	20 33 05.3	-1.1
	baz=245,SNR=25						
E18K	Tukpahlearik C	15.04	15	Pn	Pn	20 33 05.7	-0.5
E18K	Tukpahlearik C	15.04	15	P	Pn	20 33 06.9	+0.7
	baz=203,SNR=18						
RND	Reindeer	15.17	39		Pn	20 33 07.5	-0.5
RND	Reindeer	15.17	39	P	Pn	20 33 07.5	-0.5
I21K	Tanana	15.19	31	P	P	20 33 09.5	+0.1
I21K	Tanana	15.19	31	P	Pn	20 33 08.6	+0.5
	baz=226,SNR=53						
WAT6	Susitna Watana	15.20	43	P	Pn	20 33 08.1	-0.3
	baz=242,SNR=13						
IMAR	Indian Mountai	15.27	26	Pn	Pn	20 33 08.8	-0.2
EYAK	Cordova Ski Ar	15.28	51	P	Pn	20 33 07.2	-2.0
	baz=252						
H21K	Melozitna Rive	15.29	28	P	P	20 33 10.5	+0.1
H21K	Melozitna Rive	15.29	28	P	Pn	20 33 08.7	-0.6
	baz=224,SNR=51						
MCK	McKinley	15.32	38		Pn	20 33 09.5	-0.2
MCK	McKinley	15.32	38	P	Pn	20 33 09.5	-0.2
MCK	McKinley	15.32	38	P	Pn	20 33 09.2	-0.5
	baz=236,SNR=27						
C16K	Lisburne Hills	15.32	7	P	Pn	20 33 09.7	+0.1
	baz=192,SNR=20						
MLY	Manley	15.48	32	P	Pn	20 33 11.0	-0.8
	baz=229,SNR=32						
KLU	Klutina	15.52	48	P	Pn	20 33 10.1	-2.2
	baz=249,SNR=18						
DHY	Denali Highway	15.58	42		Pn	20 33 12.4	-0.6
DHY	Denali Highway	15.58	42	P	Pn	20 33 12.8	-0.2
	baz=241,SNR=12						
F20K	Avaraart Lake	15.63	22	P	P	20 33 14.0	-0.2
	baz=214						
M24K	Tolsona, Glenn	15.65	46	P	Pn	20 33 13.0	-0.8
	baz=246,SNR=20						
E19K	Redstone River	15.66	19	P	P	20 33 14.9	+0.3
	baz=210						
C17K	DeLong Mountai	15.71	10	P	P	20 33 16.1	+1.0
	baz=196,SNR=36						
G21K	Allakaket	15.74	25	P	P	20 33 16.7	+1.2
	baz=220						
RAGM	Ragged Mountai	15.75	53	Pn	Pn	20 33 13.7	-1.3
KAIM	Kayak Island	15.75	54	P	Pn	20 33 14.5	-0.5
	baz=256						
NEA2	Nenana	15.77	35		Pn	20 33 14.9	-0.3
NEA2	Nenana	15.77	35	P	Pn	20 33 14.9	-0.3
	baz=234,SNR=19						
H22K	Ishtalitna Cre	15.87	29	P	Pn	20 33 16.4	-0.1
	baz=226,SNR=35						
BMRM	Bremner River	15.95	51	Pn	Pn	20 33 15.6	-1.8
BMRM	Bremner River	15.95	51	P	Pn	20 33 16.0	-1.4
	baz=252,SNR=9.4						
I23K	Minto, Yukon-K	16.01	33	P	P	20 33 18.9	+0.6
I23K	Minto, Yukon-K	16.01	33	P	P	20 33 19.0	+0.6
	baz=232,SNR=36						
WRH	Wood River Hil	16.04	37	P	Pn	20 33 17.3	-1.2
C18K	Utukok River	16.11	12	P	P	20 33 21.9	+2.4
	baz=200,SNR=48						
N25K	Chitina, Valde	16.16	48	P	Pn	20 33 18.7	-1.3
	baz=250,SNR=14						
HARP	HAARP	16.20	45	P	Pn	20 33 19.8	-0.6
	baz=247,SNR=23						
F21K	Alatna River	16.29	24	P	Pn	20 33 18.7	-2.9
	baz=219,SNR=15						
PAX	Paxson	16.30	43	P	P	20 33 21.1	-0.7
	baz=244,SNR=8.6						
COLA	College	16.36	36	P	P	20 33 20.6	-1.6
COLA	College	16.36	36	*c i*P	P	20 33 21.3	-0.9
COLA				pmax	pmax		
	comp=Z,38nm,1.2s						
COLA	College	16.36	36	P	P	20 33 21.2	-1.0
	baz=235						
D19K	Kuna River	16.42	16	P	Pn	20 33 24.5	+1.4
	baz=207						
HDA	Harding Lake	16.42	38	P	P	20 33 22.2	-0.8
	baz=238,SNR=31						
GLB	Gilahina Butte	16.46	49	P	P	20 33 22.3	-1.2
E20K	Nigu River	16.56	19	P	Pn	20 33 25.6	+0.8
	baz=211						
K24K	Donnelly Dome	16.56	40	P	Pn	20 33 24.8	0.0
	baz=242,SNR=17						
CRQM	Cirque	16.58	52	P	P	20 33 24.1	-0.9
CRQE	Cirque	16.60	52	P	P	20 33 23.6	-1.5
	baz=255,SNR=11						
ILAR	Eielson Array	16.64	37	P	P	20 33 22.9	-2.5
	comp=Z,12nm,0.3s,baz=233,slow=10,SNR=149						
ILAR				S	S	20 36 25.1	-4.8
	comp=Z,0.8nm,0.7s,baz=237,slow=18,SNR=2.6						
ILAR				PcP	PcP	20 38 05.5	+0.5
	comp=Z,0.8nm,0.7s,baz=258,slow=2.7,SNR=2.9						
ILAR				ScP	ScP	20 41 24.6	+0.3
	comp=Z,2.9nm,0.8s,baz=289,slow=3.3,SNR=21						
ILAR	Eielson Array	16.64	37	P	P	20 33 23.4	-2.0
ILAR	Eielson Array	16.64	37	P	P	20 33 23.4	-2.0
POKR	Poker Plat Res	16.64	35	P	P	20 33 24.3	-1.1
	baz=235,SNR=9.3						
C19K	Lookout Ridge	16.75	14	P	Pn	20 33 28.9	+1.8
	baz=203						

MCARA	McCarthy VSAT	16.80	50	P	P	20 33 26.8	-0.5
	baz=253,SNR=9.4						
G23K	Bananza Creek	16.83	29	P	Pn	20 33 29.2	+1.1
	baz=226,SNR=61						
D20K	Etivluk River	16.87	17	P	Pn	20 33 29.6	+1.0
	baz=210						
RIDG	Independent Ri	16.90	41	P	P	20 33 28.0	-0.3
	baz=243,SNR=20						
H24K	Noodor Dome	16.92	33	P	P	20 33 28.7	+0.2
	baz=232,SNR=61						
MESA	MESA	17.02	54	P	P	20 33 29.6	-0.2
	baz=258						
MENT	Mentasta	17.02	45	P	P	20 33 30.0	+0.4
J25K	Salcha River,	17.11	38	P	P	20 33 29.2	-1.4
	baz=240,SNR=185						
M26K	Nabesna, AK	17.14	47	P	P	20 33 30.6	-0.4
	baz=250,SNR=26						
COLD	Coldfoot	17.15	27	P	Pn	20 33 32.5	+0.7
	baz=225,SNR=46						
E21K	Killik River	17.16	21	P	Pn	20 33 32.4	+0.4
	baz=215						
L26K	Log Cabin Wild	17.21	44	P	P	20 33 31.5	-0.2
	baz=248,SNR=58						
SCRK	Sand Creek	17.34	41	P	P	20 33 32.6	-0.7
SCRK	Sand Creek	17.34	41	P	P	20 33 32.0	-1.2
	baz=244,SNR=56						
E22K	Anaktuvuk Pass	17.41	24	P	Pn	20 33 35.3	+0.4
	baz=220						
CTG	Chitna Glacier	17.48	52	P	P	20 33 34.5	-0.3
	baz=256,SNR=10						
PRP	Porcupine Dome	17.53	36	P	P	20 33 34.8	-0.5
	baz=237,SNR=28						
G24K	Hadweenzic Riv	17.59	31	P	Pn	20 33 36.6	-0.4
	baz=231,SNR=47						
A19K	Wainwright	17.59	11	P	Pn	20 33 37.3	+0.2
	baz=199,SNR=18						
C21K	Knifeblade Rid	17.59	19	P	Pn	20 33 37.2	+0.1
	baz=212,SNR=49						
M27K	Edge Creek, AK	17.62	47	P	P	20 33 35.8	-0.5
	baz=252,SNR=26						
D22K	Ayikyak River	17.80	21	P	Pn	20 33 39.9	+0.3
	baz=217,SNR=51						
PINM	Pinnacle	17.84	55	P	P	20 33 38.9	+0.3
	baz=260,SNR=5.7						
L27K	Beaver Creek,	17.87	45	P	P	20 33 38.9	-0.1
	baz=250,SNR=15						
BCAR	Beaver Creek A	17.89	45	P	P	20 33 38.8	-0.4
E23K	Chandalar	17.90	26	P	Pn	20 33 41.1	+0.2
	baz=224,SNR=105						
B20K	Meade River	17.93	15	P	Pn	20 33 40.3	-0.7
	baz=207						
O28M	Mount Upton	17.99	53	P	P	20 33 40.7	+0.1
	baz=258,SNR=10.0						
B21K	Ikpikpuk River	18.02	18	P	Pn	20 33 41.7	-0.4
	baz=212,SNR=45						
BVCY	Beaver Creek	18.09	48	P	P	20 33 41.8	+0.5
	baz=253,SNR=14						
YUK3	Moose Creek	18.09	50	P	P	20 33 40.6	-0.9
	baz=255,SNR=12						
E24K	Your Creek	18.21	27	P	Pn	20 33 44.2	-0.3
	baz=226						
I26K	Coal Creek Min	18.28	38	P	P	20 33 42.5	-0.8
	baz=241,SNR=69						
YUK8	Steele Glacier	18.30	52	P	P	20 33 43.7	-0.1
	baz=258						
D23K	Nanushuk River	18.31	23	P	Pn	20 33 45.3	-0.3
	baz=220,SNR=45						
TOLK	Toolik Lake Re	18.34	24	P	Pn	20 33 45.9	0.0
	baz=223,SNR=98						
BILL	Bilibino	18.58	332	⇓*e*P	P	20 33 45.4	-1.1
O29M	Mount Kennedy	18.70	55	P	P	20 33 48.7	+0.7
	baz=262,SNR=26						
F25K	Christian Rive	18.71	30	P	P	20 33 48.7	+0.7
	baz=232,SNR=52						
YUK4	Talbot Arm	18.84	52	P	P	20 33 50.2	+0.5
	baz=258						
B22K	Teshekpuk Lake	18.85	18	P	P	20 33 50.1	+0.6
	baz=213,SNR=35						
D24K	Happy Valley	18.90	24	P	Pn	20 33 51.4	-1.0
	baz=223						
YUK6	Outpost Mounta	18.90	53	P	P	20 33 50.5	+0.2
	baz=260,SNR=6.9						
G26K	Porcupine Rive	18.91	33	P	P	20 33 49.3	-0.8
	baz=236,SNR=14						
BMAR	Burnt Mountain	18.93	31	P	P	20 33 50.9	+0.4
I27K	Kandik River	18.98	38	P	P	20 33 50.7	-0.4
	baz=243,SNR=48						
C23K	Itkillik River	19.00	21	P	Pn	20 33 52.5	-1.2
	baz=219,SNR=115						
PEA0B	Petropavlovsk-	19.05	283	⇓*e*P	P	20 33 52.2	+0.3
PETK	Petropavlovsk-	19.05	283	P	P	20 33 52.3	+0.4
	comp=Z,4.4nm,0.6s,baz=83,slow=15,SNR=14						
PETK				ScP	ScP	20 41 30.4	+0.8
	comp=Z,4.0nm,0.9s,baz=63,slow=1.0,SNR=5.0						
E25K	Arctic Village	19.06	29	P	P	20 33 52.4	+0.6
	baz=231,SNR=28						
M29M	Somme Creek	19.17	49	P	P	20 33 52.7	-0.4
	baz=256						
A21K	Barrow	19.19	14	P	P	20 33 53.2	+0.1
	baz=206,SNR=16						
F26K	Sheenjek River	19.23	31	P	P	20 33 54.0	+0.4
	baz=234,SNR=26						
DAWY	Dawson	19.24	43	P	P	20 33 53.5	-0.4
	baz=250,SNR=18						
HYT	Haines Junctio	19.30	54	P	P	20 33 54.4	-0.1
	baz=261,SNR=22						
H27K	Steamboat Moun	19.31	36	P	P	20 33 54.3	-0.3
	baz=241,SNR=26						
C24K	Franklin Bluff	19.35	23	P	P	20 33 55.2	+0.4
	baz=222						
P30M	Million Dollar	19.47	56	P	P	20 33 56.7	+0.3
	baz=264						
L29M	L29M	19.49	47	P	P	20 33 55.8	-0.7
	baz=254						
I28M	Miner Creek	19.55	39	P	P	20 33 56.6	-0.6
	baz=246,SNR=47						
G27K	Doyon Strip	19.55	35	P	P	20 33 55.2	-2.0
	baz=240,SNR=10						
N30M	Aishikik Lake	19.60	52	P	P	20 33 57.1	-0.6
	baz=260						
D25K	Kavik River	19.64	25	P	P	20 33 58.0	0.0
	baz=227,SNR=31						
S31K	Pelican	19.75	62	P	P	20 33 58.4	-0.9
	baz=271,SNR=14						
J29N	Klondike Camp	19.86	43	P	P	20 33 59.5	-1.0
	baz=251						
M30M	Minto, Yukon	19.95	49	P	P	20 34 01.4	0.0
M30M	Minto, Yukon	19.95	49	P	P	20 34 00.2	-1.3
	baz=257						
K29M	Barlow Dome	19.96	45	P	P	20 34 00.7	-0.9
	baz=253,SNR=32						
O30N	Mendenhall	19.98	54	P	P	20 34 00.3	-1.5
	baz=263,SNR=18						
I29M	Ogilvie Camp,	20.14	40	P	P	20 34 02.4	-1.1
I29M	Ogilvie Camp,	20.14	40	P	P	20 34 02.5	-0.9
	baz=248,SNR=38						
N31M	Braeburn, Yuko	20.22	52	P	P	20 34 03.2	-1.2
	baz=261,SNR=5.5						
SKAG	Skagway	20.25	58	P	P	20 34 04.0	-0.6
	baz=267						
SIT	Sitka	20.28	65	P	P	20 34 03.9	-1.0
	baz=274						
E27K	Coleen River	20.30	31	P	P	20 34 05.3	+0.2
	baz=237,SNR=23						
C26K	Camden Bay	20.42	25	P	P	20 34 06.9	+0.6
	baz=228,SNR=24						
H29M	Whitestone	20.45	38	P	P	20 34 06.6	-0.1
	baz=246						
C27K	Jago River	20.54	27	P	P	20 34 07.9	+0.2
	baz=230,SNR=14						
F28M	Old Crow	20.55	34	P	P	20 34 07.4	-0.5
F28M	Old Crow	20.55	34	P	P	20 34 07.8	-0.1
	baz=240,SNR=28						
WHY	Whitehorse	20.55	55	P	P	20 34 07.5	-0.5
WHY	Whitehorse	20.55	55	P	P	20 34 07.6	-0.4
	baz=264,SNR=29						
R32K	Eaglecrest	20.66	61	P	P	20 34 08.5	-0.5
	baz=271,SNR=5.7						
S32K	Killisnoo	20.66	64	P	P	20 34 07.5	-1.4
	baz=273						
J30M	Hart River	20.67	43	P	P	20 34 08.2	-1.0
	baz=253,SNR=16						
I30M	Mount Dempster	20.85	41	P	P	20 34 09.5	-1.7
	baz=251,SNR=46						
M31M	Drury Creek, Y	20.98	50	P	P	20 34 11.5	-0.9
	baz=261,SNR=6.4						
P32M	Atlin	21.07	58	P	P	20 34 12.6	-0.9
	baz=268						

D27M	Malcolm River	21.08	29	P	P	20 34 13.0	-0.5
	baz=235,SNR=9.5						
EPYK	Eagle Plains	21.13	38	P	P	20 34 12.7	-1.3
	baz=248,SNR=35						
E28M	Babbage River	21.17	31	P	P	20 34 13.7	-0.7
	baz=239,SNR=18						
N32M	Quiet Lake	21.47	53	P	P	20 34 16.8	-0.9
	baz=265						
G30M	tAoh Zraii Nji	21.55	37	P	P	20 34 16.7	-1.7
	baz=247,SNR=24						
P33M	Teslin, Yukon	21.55	56	P	P	20 34 17.3	-1.2
	baz=268,SNR=12						
E29M	Blow River	21.58	33	IAmb	IAmb	20 34 20.9	
	comp=Z,17nm,0.8s						
E29M	Blow River	21.58	33	P	P	20 34 18.9	+0.1
	baz=242,SNR=27						
U33K	Whale Pass	21.59	67	P	P	20 34 17.7	-1.2
	baz=278						
SEY	Seymchan	21.65	311	P	P	20 34 19.8	+0.3
	comp=Z,4.7nm,0.7s,baz=115,slow=9.3,SNR=16						
SEY				pP	pP	20 34 48.3	+1.6
	comp=Z,7.3nm,1.1s,baz=98,slow=13,SNR=3.7						
SEY				PcP	PcP	20 38 14.3	+0.5
	comp=Z,4.9nm,1.1s,baz=98,slow=5.0,SNR=7.7						
SEY				ScP	ScP	20 41 35.6	0.0
	comp=Z,8.2nm,0.6s,baz=135,slow=4.1,SNR=35						
	comp=Z,4.7nm,0.7s						
CRAG	Craig	21.69	69	P	P	20 34 18.9	-1.0
	baz=279						
D28M	Stokes Point	21.79	30	P	P	20 34 20.4	-0.5
	baz=238,SNR=9.7						
H31M	Peel River	21.84	41	IAmb	IAmb	20 34 26.7	
	comp=Z,16nm,0.8s						
H31M	Peel River	21.84	41	P	P	20 34 19.6	-2.0
	baz=252,SNR=8.7						
F30M	Barrier River	21.95	36	IAmb	IAmb	20 34 24.6	
	comp=Z,34nm,0.7s						
F30M	Barrier River	21.95	36	P	P	20 34 21.8	-0.8
	baz=246,SNR=28						
WRAK	Wrangell Islan	21.98	66	P	P	20 34 21.1	-1.8
	baz=278						
MA2	Magadan	22.17	302	P	P	20 34 25.3	+0.6
	comp=Z,1.2nm,0.3s,baz=103,slow=11,SNR=3.8						
MA2				pP	pP	20 34 53.9	+1.6
	comp=Z,6.9nm,0.8s,baz=102,slow=12,SNR=3.0						
	comp=Z,1.2nm,0.3s						
G31M	Satah River	22.24	38	P	P	20 34 23.1	-2.3
	baz=250						
S34M	Telegraph Cree	22.47	62	P	P	20 34 27.3	-0.4
	baz=275,SNR=35						
R33M	Jennings River	22.48	58	P	P	20 34 27.7	-0.2
	baz=271,SNR=18						
MMPY	Sheldon Lake,	22.48	50	IAmb	IAmb	20 34 29.8	
	comp=Z,24nm,1.0s						
MMPY	Sheldon Lake,	22.48	50	P	P	20 34 27.5	-0.3
	baz=263,SNR=9.4						
V35K	Ketchikan	22.56	69	P	P	20 34 28.5	0.0
	baz=281						
F31M	Tsiigehtchic	22.61	37	IAmb	IAmb	20 34 29.6	
	comp=Z,26nm,0.9s						
F31M	Tsiigehtchic	22.61	37	P	P	20 34 27.8	-1.1
	baz=249,SNR=20						
INK	Inuvik	23.01	35	P	P	20 34 32.4	-0.2
	comp=Z,27nm,0.5s,baz=235,slow=7.6,SNR=81						
INK				pP	pwP	20 35 04.6	+0.5
	comp=Z,37nm,1.0s,baz=238,slow=10.0,SNR=8.3						
INK				PcP	PcP	20 38 17.5	+1.0
	comp=Z,3.6nm,0.6s,baz=270,slow=2.0,SNR=5.4						
INK				ScP	ScP	20 41 39.4	+0.4
	comp=Z,4.8nm,0.8s,baz=257,slow=2.7,SNR=8.8						
	comp=Z,27nm,0.5s						
INK	Inuvik	23.01	35	P	P	20 34 32.3	-0.2
INK				IAmb	IAmb	20 35 07.0	
	comp=Z,49nm,1.1s						
INK	Inuvik	23.01	35	P	P	20 34 32.3	-0.3
INK				pmax	pmax		
	comp=Z,49nm,1.1s						
INK	Inuvik	23.01	35	P	P	20 34 32.2	-0.3
	baz=247,SNR=40						
DLBC	Dease Lake	23.01	61	P	P	20 34 35.3	+2.5
	comp=Z,64nm,0.6s,baz=251,slow=8.6,SNR=141						
DLBC	Dease Lake	23.01	61	P	P	20 34 35.1	+2.3
	baz=274,SNR=46						
T35M	Bob Quinn	23.05	64	P	P	20 34 34.0	+0.9
	baz=278,SNR=12						
WTLY	Watson Lake, Y	23.56	56	IAmb	IAmb	20 34 39.9	
	comp=Z,23nm,0.9s						
WTLY	Watson Lake, Y	23.56	56	P	P	20 34 38.5	+0.9
	baz=271,SNR=5.1						
TGTN	Hyland Airport	23.81	53	P	P	20 34 40.6	+0.6
	baz=269,SNR=17						
KOTAN	Kotaneelee Air	25.93	56	P	P	20 35 00.0	+0.9
	baz=275,SNR=8.6						
WRGLY	Wrigley	26.08	49	IAmb	IAmb	20 35 02.0	
	comp=Z,23nm,0.8s						
WRGLY	Wrigley	26.08	49	P	P	20 35 00.9	+0.5
	baz=269,SNR=7.9						
C36M	Paulatuk	26.60	35	P	P	20 35 04.8	-0.1
C36M	Paulatuk	26.60	35	P	P	20 35 05.0	+0.1
	baz=256,SNR=9.3						
A36M	Sachs Harbour	26.99	29	P	P	20 35 09.0	+0.7
A36M				IAmb	IAmb	20 35 10.2	
	comp=Z,26nm,0.9s						
A36M	Sachs Harbour	26.99	29	P	P	20 35 09.1	+0.7
	baz=250,SNR=19						
YKAW3	Yellowknife Wh	30.17	50	P	P	20 35 36.5	-0.1
YKA	Yellowknife Ar	30.18	50	P	P	20 35 36.8	0.0
	comp=Z,2.8nm,0.6s,baz=281,slow=8.6,SNR=36						
YKA				sP	sP	20 36 30.5	+2.8
	comp=Z,1.3nm,0.9s,baz=295,slow=15,SNR=2.3						
YKA				PcP	PcP	20 38 34.6	+1.1
	comp=Z,0.3nm,0.6s,baz=288,slow=3.2,SNR=3.6						
YKA				ScP	ScP	20 42 01.9	+1.4
	comp=Z,0.8nm,0.7s,baz=287,slow=3.5,SNR=8.8						
YKA				LR	LR	20 49 14.9	
	comp=Z,72nm,19.1s,baz=301,slow=39						
	comp=Z,2.8nm,0.6s						
YKA	Yellowknife Ar	30.18	50	P	P	20 35 36.5	-0.2
YKAW1	Yellowknife Wh	30.23	50	IAmb	IAmb	20 35 38.5	
	comp=Z,8.7nm,0.9s						
LON	Longmire	31.39	82	IAmb	IAmb	20 35 51.0	
	comp=Z,8.4nm,0.7s						
LTY	Liberty	31.82	80	IAmb	IAmb	20 35 53.4	
	comp=Z,6.2nm,0.7s						
YAK	Yakutsk	32.16	310	LR	LR	20 48 51.5	
	comp=Z,31nm,20.7s,baz=90,slow=36						
YAK	Yakutsk	32.16	310	⇓*e*P	P	20 35 54.2	+0.1
YAK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
H04A	Detroit Lake	32.25	85	IAmb	IAmb	20 35 58.0	
	comp=Z,13nm,0.7s						
EPH	Ephrata	32.41	79	IAmb	IAmb	20 35 58.6	
	comp=Z,13nm,0.7s						
I04A	Tendick Farm,	32.60	87	IAmb	IAmb	20 36 00.7	
	comp=Z,11nm,0.9s						
E07A	Sunnyside	32.65	81	IAmb	IAmb	20 36 01.2	
	comp=Z,8.0nm,0.6s						
F07A	Phinny Hill Vi	32.95	82	IAmb	IAmb	20 36 04.4	
	comp=Z,14nm,0.7s						
D08A	Wollman Farm,	32.96	80	IAmb	IAmb	20 36 03.5	
	comp=Z,14nm,0.9s						
E08A	Dider Farm, El	33.16	81	IAmb	IAmb	20 36 05.3	
	comp=Z,7.5nm,0.7s						
EDM	Edmonton	33.38	66	P	P	20 36 06.1	+1.1
EDM	Edmonton	33.38	66	P	P	20 36 06.1	+1.1
EDM				pmax	pmax		
	comp=Z,52nm,0.6s						
NEW	Newport	33.42	77	P	P	20 36 06.7	+1.3
	comp=Z,12nm,0.4s,baz=298,slow=8.2,SNR=49						
	comp=Z,12nm,0.4s						
NEW	Newport	33.42	77	P	P	20 36 06.2	+0.9
NEW				IAmb	IAmb	20 36 07.1	
	comp=Z,15nm,0.6s						
NEW	Newport	33.42	77	P	P	20 36 06.2	+0.9
NEW				pmax	pmax		
	comp=Z,15nm,0.6s						
YPT	Yellepit	33.45	81	P	P	20 36 05.2	-0.3
YPT				IAmb	IAmb	20 36 07.5	
	comp=Z,14nm,0.6s						
E09A	Wood Farm, Sta	33.69	80	IAmb	IAmb	20 36 10.8	
	comp=Z,11nm,0.7s						
K05A	Summer Lake	34.12	87	IAmb	IAmb	20 36 14.7	
	comp=Z,11nm,0.7s						
BMO	Blue Mountains	35.07	82	P	P	20 36 18.6	-1.1
BMO	Blue Mountains	35.07	82	P	P	20 36 18.6	-1.1
BMO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
J08A	Circle Bar Ran	35.21	85	IAmb	IAmb	20 36 23.4	

comp=Z,11nm,0.7s
KLR Kul'dur 35.60 288⇑ *e*P P 20 36 23.2 -0.8
KLR pmax pmax
comp=Z,11nm,2.5s
WVOR Wild Horse Val 35.64 86 IAmb IAmb 20 36 28.1
comp=Z,12nm,0.8s
RES Resolute Bay 35.90 26 LR LR 20 55 41.3
comp=Z,72nm,18.9s,baz=14,slow=44
RES Resolute Bay 35.90 26 P P 20 36 26.2 0.0
RES IAmb IAmb 20 36 27.1
comp=Z,17nm,1.2s
RES Resolute Bay 35.90 26 P P 20 36 26.2 0.0
RES pmax pmax
comp=Z,17nm,1.3s
MSO Missoula 36.01 77 IAmb IAmb 20 36 34.7
comp=Z,20nm,1.4s
PAHR Pah Rah Range 36.85 90 IAmb IAmb 20 36 37.4
comp=Z,7.2nm,0.7s
HEH HeiHe 37.57 291 *e*P P 20 36 42.0 +1.4
HEH PcP PcP 20 38 54.0 -0.9
HEH ScP ScP 20 42 26.2 -0.6
H11N2 WAKE ISLAND Hy 37.73 216 T T 21 18 27.0
baz=24
MCMT McKenzie Canyo 37.73 79 P P 20 36 43.3 +1.0
H11N3 WAKE ISLAND Hy 37.73 216 T T 21 18 39.1
baz=24,slow=74
H11N1 WAKE ISLAND Hy 37.75 216 T T 21 18 04.6
baz=24,slow=74
EGMT Eagleton 37.81 73 IAmb IAmb 20 36 44.7
comp=Z,16nm,0.9s
BLKN Baker Lake 37.87 43 P P 20 36 42.9 0.0
BOZ Bozeman (W) 38.02 77 IAmb IAmb 20 36 46.4
comp=Z,19nm,1.3s
NVAR Mina Array Bea 38.30 91 P P 20 36 49.0 +1.8
comp=Z,3.1nm,0.7s,baz=303,slow=7.9,SNR=17
NVAR pP pP 20 37 23.8 +2.0
comp=Z,0.7nm,0.7s,baz=275,slow=4.7,SNR=1.3
NVAR PcP PcP 20 38 58.9 +1.2
comp=Z,1.3nm,0.6s,baz=276,slow=1.8,SNR=6.1
NVAR ScP ScP 20 42 31.4 +1.2
comp=Z,1.2nm,0.8s,baz=278,slow=1.9,SNR=6.5
comp=Z,3.1nm,0.7s
ELK Elko 38.70 86 P P 20 36 51.9 +1.5
comp=Z,6.5nm,0.8s,baz=295,slow=9.6,SNR=27
ELK PcP PcP 20 38 59.7 +0.8
comp=Z,0.7nm,0.6s,baz=299,slow=1.7,SNR=3.8
comp=Z,6.5nm,0.8s
YHL Hebgen Lake 38.70 78 IAmb IAmb 20 36 52.5
comp=Z,34nm,1.5s
YHB Horse Butte 38.75 78 IAmb IAmb 20 36 52.7
comp=Z,11nm,0.8s
FFC Flin Flon 38.83 59 P P 20 36 51.5 +0.4
FFC IAmb IAmb 20 36 52.5
comp=Z,21nm,0.8s
FFC Flin Flon 38.83 59 *e*P P 20 36 51.5 +0.4
H11S1 WAKE ISLAND Hy 38.92 216 T T 21 18 32.3
baz=23,slow=76,SNR=12
YMR Madison River 38.93 78 IAmb IAmb 20 36 54.3
comp=Z,12nm,0.7s
H11S2 WAKE ISLAND Hy 38.94 216 T T 21 18 37.7
baz=23,slow=76,SNR=6.3
H11S3 WAKE ISLAND Hy 38.94 216 T T 21 18 31.3
baz=23,slow=76,SNR=13
YNR Norris Junctio 39.07 78 IAmb IAmb 20 36 56.1
comp=Z,12nm,0.9s
MJAR Matsushiro Arr 39.12 266 P P 20 36 53.9 +0.2
comp=Z,0.3nm,0.4s,baz=48,slow=8.9,SNR=1.4
MJAR ScP ScP 20 42 33.3 +0.3
comp=Z,3.4nm,0.8s,baz=54,slow=4.1,SNR=9.5
comp=Z,0.3nm,0.4s
H17A Grant Village 39.31 78 IAmb IAmb 20 36 58.9
comp=Z,28nm,1.5s
FLWY Flagg Ranch 39.42 78 IAmb IAmb 20 36 59.0
comp=Z,16nm,1.1s
HVU Hansel Valley 39.54 83 P P 20 36 56.9 -0.5
HVU IAmb IAmb 20 36 59.5
comp=Z,8.7nm,0.7s
HVU Hansel Valley 39.54 83 P P 20 36 56.9 -0.5
HVU pmax pmax
comp=Z,9.0nm,0.7s
RLMT Red Lodge 39.67 76 IAmb IAmb 20 37 01.3
comp=Z,16nm,1.1s
DUG Dugway, Tooele 40.49 85 IAmb IAmb 20 37 07.4
comp=Z,19nm,1.2s
BW06 Boulder Array 40.86 79 P P 20 37 09.2 +0.8
BW06 IAmb IAmb 20 37 10.1
comp=Z,13nm,0.8s
PD31 Pinedale Array 40.86 79 P P 20 37 09.1 +0.7
PD31 IAmb IAmb 20 37 10.0
comp=Z,13nm,0.8s
PDAR Pinedale Array 40.86 79 P P 20 37 09.2 +0.8
comp=Z,9.7nm,0.6s,baz=302,slow=4.4,SNR=67
PDAR sP sP 20 38 04.1 +3.1
comp=Z,4.2nm,0.9s,baz=305,slow=5.2,SNR=3.5
PDAR PcP PcP 20 39 06.3 +0.5
comp=Z,0.5nm,0.5s,baz=201,slow=1.2,SNR=1.7
PDAR ScP ScP 20 42 40.5 +0.5
comp=Z,0.8nm,1.0s,baz=40,slow=2.5,SNR=3.7
comp=Z,9.7nm,0.6s
PDAR Pinedale Array 40.86 79 P P 20 37 09.0 +0.7
FCC Fort Churchill 40.90 51 P P 20 37 08.3 +0.3
FCC Fort Churchill 40.90 51 P P 20 37 08.3 +0.3
FCC pmax pmax
comp=Z,42nm,0.7s
POIN Pond Inlet 41.02 27 P P 20 37 08.8 -0.1
ILON Igloolik, Nuna 41.22 33 P P 20 37 10.7 +0.1
TULEG Thule 41.56 20 P P 20 37 14.2 +0.9
TULEG Thule 41.56 20 *i* P P 20 37 13.9 +0.6
TULEG IAmb IAmb 20 37 15.1
comp=Z,19nm,0.7s
TMUT Trail Mountain 42.02 85 IAmb IAmb 20 37 20.1
comp=Z,14nm,0.7s
RDMU Red Mountain 42.20 82 IAmb IAmb 20 37 21.2
comp=Z,15nm,0.6s
CN2 Changchun 42.20 284 P P 20 37 17.7 -1.1
PFO Pinyon Flats O 42.64 95 LR LR 20 52 30.4
comp=Z,61nm,19.7s,baz=214,slow=32
K22A Casper 42.72 78 IAmb IAmb 20 37 24.4
comp=Z,7.1nm,0.5s
HMU Henry Mountain 43.17 86 P P 20 37 25.6 -1.5
HMU IAmb IAmb 20 37 29.2
comp=Z,22nm,0.7s
U15A North Rim 43.23 89 IAmb IAmb 20 37 29.7
comp=Z,7.9nm,0.5s
RSSD Black Hills 43.29 74 P P 20 37 26.7 -1.2
RSSD IAmb IAmb 20 37 29.2
comp=Z,23nm,1.6s
RSSD Black Hills 43.29 74 P P 20 37 26.7 -1.2
RSSD pmax pmax
comp=Z,23nm,1.7s
PV23 Carpenter Ridg 43.87 84 IAmb IAmb 20 37 39.9
comp=Z,11nm,0.7s
PV20 West Nyswonger 43.97 84 IAmb IAmb 20 37 34.8
comp=Z,12nm,0.7s
PV16 Nyswonger Mesa 44.02 84 IAmb IAmb 20 37 35.3
comp=Z,9.1nm,0.6s
PV11 David Mesa, Pa 44.05 84 IAmb IAmb 20 37 35.5
comp=Z,20nm,0.6s
ESJX Sierra Juarez 44.07 96 P P 20 37 32.0 -2.2
ESJX IAmb IAmb 20 37 59.0
comp=Z,26nm,1.3s
PV03 Paradox Valley 44.10 84 IAmb IAmb 20 37 35.9
comp=Z,11nm,0.7s
PV02 Paradox Valley 44.20 84 P P 20 37 33.4 -1.8
PV15 Paradox Valley 44.26 84 IAmb IAmb 20 37 37.7
comp=Z,11nm,0.7s
ULM Lac du Bonnet 44.32 62 P P 20 37 35.8 0.0
comp=Z,6.8nm,0.5s,baz=301,slow=7.7,SNR=14
comp=Z,6.8nm,0.5s
ULM Lac du Bonnet 44.32 62 P P 20 37 35.7 0.0
ULM IAmb IAmb 20 37 36.4
comp=Z,9.1nm,0.7s
ULM Lac du Bonnet 44.32 62 *de*P P 20 37 36.1 +0.4
NEEM North Greenlan 44.37 16 *i* P P 20 37 36.5 +0.4
NEEM IAmb IAmb 20 37 37.5
comp=Z,32nm,0.6s
KSRS Korea Array 44.70 275 P P 20 37 38.5 -0.4
comp=Z,0.8nm,0.4s,baz=54,slow=6.9,SNR=4.5
comp=Z,0.8nm,0.4s
NOR Nord 44.71 5 *i* P P 20 37 39.3 +0.8
NOR IAmb IAmb 20 37 40.2
comp=Z,2.9nm,0.8s
KULLO Kullorsuaq 45.07 20 *i* P P 20 37 42.0 +0.7
KULLO IAmb IAmb 20 37 43.3
comp=Z,10nm,0.8s
NRIK Noril'sk 45.40 331 pP pP 20 38 19.2 +0.7
comp=Z,1.4nm,0.2s,baz=71,slow=6.4,SNR=3.8

AGMN Agassiz Nation 45.44 65 IAmb IAmb 20 37 45.5
comp=Z,15nm,0.9s
EPLO Experimental L 45.79 62 P P 20 37 47.1 -0.3
EPLO IAmb IAmb 20 37 48.3
comp=Z,28nm,0.9s
UPNV Upernavik 46.46 22 *i* P P 20 37 52.9 +0.6
UPNV IAmb IAmb 20 37 54.1
comp=Z,24nm,0.6s
F33A 5 Mile Ranch, 46.66 68 P P 20 37 53.9 -0.3
K30B Basset 46.73 73 P P 20 37 54.1 -0.7
K30B IAmb IAmb 20 37 60.0
comp=Z,23nm,0.8s
T25A Trinidad 47.48 82 IAmb IAmb 20 38 03.1
comp=Z,13nm,0.9s
ANMO Albuquerque 47.73 86 P P 20 38 03.8 +0.9
comp=Z,1.1nm,0.7s,baz=262,slow=7.4,SNR=4.0
ANMO PcP PcP 20 39 30.9 +1.5
comp=Z,1.8nm,0.6s,baz=329,slow=5.0,SNR=8.2
comp=Z,1.1nm,0.7s
ECSD EROS Data Cent 47.78 70 P P 20 38 02.1 -0.8
NUUG Nuugaatsiaq 47.97 22 *i* P P 20 38 03.4 -0.5
NUUG IAmb IAmb 20 38 05.3
comp=Z,9.8nm,0.6s
EYMN Ely 48.00 63 P P 20 38 04.2 -0.3
EYMN IAmb IAmb 20 38 05.4
comp=Z,17nm,1.1s
KBS Kingsbay 48.13 359 *e*P P 20 38 05.7 +0.6
KBS Kingsbay 48.13 359 *i* P P 20 38 06.7 +1.6
NIAQ Niaqornat 48.39 23 *i* P P 20 38 08.0 +0.9
NIAQ IAmb IAmb 20 38 09.7
comp=Z,8.8nm,0.9s
TBO Thunder Bay 48.68 61 P P 20 38 09.7 0.0
TBO IAmb IAmb 20 38 10.2
comp=Z,16nm,0.9s
E38A The Farm, Brul 48.79 64 P P 20 38 10.3 -0.2
SPA0 Spitsbergen Ar 48.83 358 *e*P P 20 38 11.1 +0.6
SPA0 IAmb IAmb 20 38 12.7
comp=Z,31nm,1.2s
SPITS Spitsbergen Ar 48.83 358 P P 20 38 10.6 +0.1
comp=Z,0.8nm,0.3s,baz=59,slow=8.1,SNR=14
SPITS pP pwP 20 38 47.1 -1.1
comp=Z,8.6nm,0.9s,baz=26,slow=7.0,SNR=3.3
SPITS PcP PcP 20 39 32.5 0.0
comp=Z,8.9nm,1.1s,baz=25,slow=4.1,SNR=1.4
comp=Z,0.8nm,0.3s
SAATT Saattut 48.85 23 *i* P P 20 38 10.7 +0.1
SAATT IAmb IAmb 20 38 15.8
comp=Z,5.9nm,0.7s
SPMN Marine on St. 48.97 66 P P 20 38 11.8 -0.2
SPMN IAmb IAmb 20 38 14.6
comp=Z,16nm,1.2s
DAG Danmarks Havn 49.06 8 *i* P P 20 38 12.0 -0.2
DAG IAmb IAmb 20 38 13.4
comp=Z,11nm,0.8s
SAQQ Saqqaq 49.35 23 *i* P P 20 38 13.8 -0.7
SAQQ IAmb IAmb 20 38 16.7
comp=Z,9.4nm,0.8s
TLY Talaya 49.35 305⇓ *e*P P 20 38 15.2 +0.4
TLY pmax pmax
comp=Z,10.0nm,4.1s
I37A Lemond, Waseca 49.40 68 P P 20 38 15.0 -0.3
I37A IAmb IAmb 20 38 15.8
comp=Z,18nm,0.8s
GDH Godhavn 49.51 25 *i* P P 20 38 15.8 +0.1
GDH IAmb IAmb 20 38 16.9
comp=Z,6.0nm,0.7s
ULN Ulaanbaatar 49.98 299⇓ *e*P P 20 38 17.6 -2.2
ULN pmax pmax
comp=Z,10.0nm,3.1s
ILULI Ilulissat 50.13 24 *i* P P 20 38 20.6 +0.2
ILULI IAmb IAmb 20 38 21.6
comp=Z,9.9nm,1.1s
SUMG Summit 50.17 17 P P 20 38 21.8 +0.6
SUMG Summit 50.17 17 P P 20 38 21.8 +0.6
SUMG pmax pmax
comp=Z,33nm,1.1s
SUMG Summit 50.17 17 *i* P P 20 38 21.3 +0.2
SUMG IAmb IAmb 20 38 24.4
comp=Z,12nm,0.7s
SONM Songino Array 50.34 300 P P 20 38 22.1 -0.3
comp=Z,0.6nm,0.5s,baz=53,slow=6.0,SNR=3.6
SONM pP pP 20 38 58.0 +0.3
comp=Z,1.6nm,0.7s,baz=49,slow=7.1,SNR=3.4
SONM PcP PcP 20 39 38.9 +0.2
comp=Z,2.7nm,0.6s,baz=40,slow=2.2,SNR=8.9
SONM ScP ScP 20 43 19.0 -0.1
comp=Z,3.2nm,0.6s,baz=46,slow=4.4,SNR=14
comp=Z,0.6nm,0.5s
G40A Rib Lake 50.37 65 IAmb IAmb 20 38 23.6
comp=Z,38nm,1.6s
I40A Norwalk 51.02 66 IAmb IAmb 20 38 29.1
comp=Z,14nm,0.6s
DBG Daneborg 51.21 10 *i* P P 20 38 27.9 -0.5
DBG IAmb IAmb 20 38 28.9
comp=Z,11nm,0.6s
SMWD Samnorwood 51.34 81 IAmb IAmb 20 38 31.4
comp=Z,12nm,0.6s
N38A Joes South For 51.59 71 P P 20 38 31.0 -0.7
JFWS Jewell Farm 51.87 67 P P 20 38 33.4 -0.3
JFWS IAmb IAmb 20 38 35.1
comp=Z,11nm,0.7s
JFWS Jewell Farm 51.87 67 P P 20 38 33.4 -0.3
JFWS pmax pmax
comp=Z,11nm,0.7s
SFJD Kangerlussuaq 51.90 26 P P 20 38 34.2 +0.6
SFJD IAmb IAmb 20 38 34.9
comp=Z,20nm,0.8s
SFJD Kangerlussuaq 51.90 26 P P 20 38 34.2 +0.6
SFJD pmax pmax
comp=Z,20nm,0.8s
SFJD Kangerlussuaq 51.90 26 *i* P P 20 38 33.9 +0.3
SFJD IAmb IAmb 20 38 35.2
comp=Z,14nm,0.8s
DKNS Dickens 51.93 83 IAmb IAmb 20 38 38.5
comp=Z,7.7nm,0.7s
HHC Hu-ho-hao-te 52.05 290 *e*P P 20 38 35.5 +0.3
HHC pmax pmax
comp=Z,5.0nm,0.7s
P38A Dawn 52.20 72 P P 20 38 35.6 -0.6
E46A Sault Ste Mari 52.80 60 P P 20 38 40.6 0.0
E46A IAmb IAmb 20 38 41.4
comp=Z,15nm,0.8s
KNGR Kungurtug, Tuv 53.01 307⇑ *e*P P 20 38 40.9 -1.3
KNGR pmax pmax
comp=Z,3.0nm,1.4s
BTO2 Baotou 53.07 291 *e*P P 20 38 41.6 -1.1
BTO2 pP pwP 20 39 21.6 +0.3
BTO2 sP sP 20 39 35.1 -0.9
BTO2 S S 20 45 58.7 -1.6
BTO2 pmax pmax
comp=Z,5.0nm,0.6s
BTO2 pmax pmax
comp=Z,130nm,4.3s
BTO2 LR LR
comp=N,260nm,3.7s
BTO2 LR LR
comp=E,170nm,4.9s
BTO2 LR LR
comp=Z,240nm,5.5s
P40A Paris 53.11 71 P P 20 38 42.2 -0.7
TXAR Lajitas Array 53.36 89 P P 20 38 45.9 +0.9
comp=Z,3.0nm,0.4s,baz=303,slow=6.4,SNR=56
TXAR PcP PcP 20 39 51.5 +1.2
comp=Z,2.8nm,1.0s,baz=323,slow=3.8,SNR=5.3
TXAR ScP ScP 20 43 33.5 +1.1
comp=Z,0.4nm,0.8s,baz=325,slow=2.0,SNR=2.6
TXAR LR LR 20 59 51.4
comp=Z,83nm,19.7s,baz=14,slow=34
comp=Z,3.0nm,0.4s
TXAR Lajitas Array 53.36 89 P P 20 38 45.3 +0.4
NJ2 Nanjing 53.82 277 *e*P P 20 38 38.4 -10
NJ2 pmax pmax
comp=Z,6.0nm,0.6s
R40A Maddies Statio 53.82 73 P P 20 38 46.8 -1.3
R40A IAmb IAmb 20 38 47.0
comp=Z,6.6nm,0.5s
HDIL Hopedale 53.97 69 P P 20 38 48.9 -0.2
HDIL IAmb IAmb 20 38 52.0
comp=Z,14nm,0.7s
SCO Scoresbysund 54.55 12 P P 20 38 53.4 +0.5
SCO Scoresbysund 54.55 12 P P 20 38 53.4 +0.5
SCO pmax pmax
comp=Z,202nm,1.9s
FVM French Village 55.09 72 P P 20 38 56.4 -0.9
FVM IAmb IAmb 20 38 57.2
comp=Z,7.4nm,0.6s

FVM French Village 55.09 72 P P 20 38 56.4 -0.9
FVM pmax pmax
comp=Z,7.0nm,0.6s
SCHQ Schefferville 55.26 43 P P 20 38 58.3 0.0
comp=Z,7.7nm,0.6s,baz=327,slow=6.4,SNR=25
comp=Z,7.7nm,0.6s
SCHQ Schefferville 55.26 43 IAmb IAmb 20 38 58.5
comp=Z,9.9nm,0.8s
SFIN Lafayette 55.32 67 IAmb IAmb 20 39 00.7
comp=Z,12nm,0.7s
BUKO Buck Lake 55.95 58 P P 20 39 03.4 0.0
S44A Carbondale 55.96 71 P P 20 39 03.1 -0.4
S44A IAmb IAmb 20 39 08.3
comp=Z,13nm,1.4s
ZALV Zalesovo Beam 56.39 317 P P 20 39 05.4 -0.8
comp=Z,0.2nm,0.4s,baz=57,slow=5.3,SNR=1.9
ZALV pP pP 20 39 42.4 +0.2
comp=Z,1.0nm,0.7s,baz=54,slow=6.3,SNR=1.7
comp=Z,0.2nm,0.4s
O48B Farmland 56.47 66 IAmb IAmb 20 39 06.6
comp=Z,13nm,0.8s
N49A Columbus Grove 56.55 65 IAmb IAmb 20 39 08.8
comp=Z,8.4nm,0.7s
SADO Sadowa 56.55 59 P P 20 39 06.9 -0.7
comp=Z,8.3nm,0.5s,baz=332,slow=8.3,SNR=7.1
comp=Z,8.3nm,0.5s
P48A Milroy 56.88 67 P P 20 39 09.2 -0.8
P48A IAmb IAmb 20 39 09.8
comp=Z,20nm,1.2s
ARA0 ARCESS Array S 57.03 353 IAmb IAmb 20 39 10.7
comp=Z,957nm,3.0s
ARA0 *e*P P 20 39 10.7 +0.1
ARCES ARCESS Array B 57.03 353 P P 20 39 09.3 -1.2
comp=Z,9.1nm,1.0s,baz=1.9,slow=7.3,SNR=7.2
ARCES pP pP 20 39 47.6 +0.7
comp=Z,5.8nm,0.9s,baz=359,slow=12,SNR=2.6
comp=Z,9.1nm,1.0s
ARCES ARCESS Array B 57.03 353 P P 20 39 10.3 -0.3
ARCES ARCESS Array B 57.03 353 P P 20 39 10.3 -0.3
ARCES pmax pmax
comp=Z,114nm,1.9s
IVI Ivigtut 57.08 29 P P 20 39 11.5 +0.6
TRO Tromso 57.30 356 *e*P P 20 39 12.7 +0.3
TRO IAmb IAmb 20 39 14.0
comp=Z,216nm,2.1s
JETT Jettan, Norway 57.31 356 *e*P P 20 39 13.2 +0.7
JETT IAmb IAmb 20 39 13.5
comp=Z,34nm,1.1s
DELO Deloro Mine 57.51 58 IAmb IAmb 20 39 15.4
comp=Z,15nm,0.8s
N51A Ashland 57.53 64 P P 20 39 14.1 -0.4
T47A Sharon Grove 57.67 70 IAmb IAmb 20 39 16.1
comp=Z,11nm,1.0s
KTK1 Kautokeino 57.70 354 *e*P P 20 39 15.5 +0.3
KTK1 IAmb IAmb 20 39 21.0
comp=Z,725nm,2.8s
TRQ Mont Tremblant 57.84 55 IAmb IAmb 20 39 16.8
comp=Z,15nm,1.0s
LDAQ Lac Daran 58.19 51 P P 20 39 18.9 -0.1
LDAQ IAmb IAmb 20 39 19.5
comp=Z,6.7nm,0.6s
R50A Paris 58.32 67 IAmb IAmb 20 39 23.8
comp=Z,8.0nm,0.9s
WBO Williamsburg 58.35 56 IAmb IAmb 20 39 22.2
comp=Z,15nm,1.0s
ICQ Pointe Anglais 58.88 48 P P 20 39 23.6 -0.1
ICQ IAmb IAmb 20 39 24.0
comp=Z,12nm,0.7s
P53A Whipple 59.07 64 IAmb IAmb 20 39 25.7
comp=Z,10nm,0.7s
STEI Steigen 59.12 358 *e*P P 20 39 24.9 -0.1
STEI IAmb IAmb 20 39 33.9
comp=Z,157nm,2.0s
GTA2 Gaotai 59.52 296 *e*P P 20 39 32.7 +4.2
GTA2 pP pP 20 40 04.0 -0.9
GTA2 sP sP 20 40 24.7 +2.6
GTA2 pmax pmax
comp=Z,2.0nm,1.4s
NCB Newcomb 59.61 56 P P 20 39 28.9 0.0
FAUS Fauske 59.67 357 *e*P P 20 39 29.1 +0.2
FAUS IAmb IAmb 20 39 29.4
comp=Z,58nm,1.5s
Q54A Coxs Mills 59.73 64 P P 20 39 29.4 -0.3
Q54A IAmb IAmb 20 39 31.9
comp=Z,10nm,0.6s
D62A Allapoint, All 59.85 51 P P 20 39 30.4 0.0
SSPA Standing Stone 60.13 61 P P 20 39 32.4 0.0
SSPA IAmb IAmb 20 39 34.0
comp=Z,15nm,1.1s
S54A Dingess, Beckl 60.33 66 P P 20 39 33.4 -0.5
TKL Tuckaleechee C 60.50 69 P P 20 39 36.2 +1.2
comp=Z,3.3nm,0.6s,baz=0.5,slow=2.5,SNR=2.4
comp=Z,3.3nm,0.6s
KONS Konsvik 60.60 358 *e*P P 20 39 35.5 +0.4
MOR8 Moi Rana 60.91 358 *e*P P 20 39 36.5 -0.7
U54A Nelsons Funny 60.97 67 IAmb IAmb 20 39 39.4
comp=Z,11nm,0.9s
LEIR Leirfjorden 60.99 358 *e*P P 20 39 38.2 +0.4
KURK Kurchatov 61.34 317⇑ *e*P P 20 39 40.8 +0.4
KURK pmax pmax
comp=Z,30nm,6.3s
I63A Otisfield 61.35 54 P P 20 39 40.3 -0.2
KURBB Kurchatov Arra 61.45 317 P P 20 39 40.9 -0.2
comp=Z,0.3nm,0.4s,baz=46,slow=7.4,SNR=6.1
KURBB pP pwP 20 40 19.8 -1.5
comp=Z,7.2nm,0.8s,baz=45,slow=7.3,SNR=18
comp=Z,0.3nm,0.4s
KMSC Kings Mountain 62.24 68 IAmb IAmb 20 39 48.9
comp=Z,7.1nm,0.8s
EMMW East Machias 62.36 52 P P 20 39 47.4 +0.1
HODGE Hodges 62.39 69 IAmb IAmb 20 39 48.1
comp=Z,8.0nm,0.9s
WMQ Urumqi 62.53 307 *e*P P 20 39 50.0 +1.4
BVAR Borovoye Array 62.67 324 P P 20 39 48.8 -0.5
comp=Z,1.9nm,0.6s,baz=47,slow=6.3,SNR=8.6
BVAR pP pwP 20 40 28.9 -0.4
comp=Z,7.1nm,0.7s,baz=60,slow=7.0,SNR=14
comp=Z,1.9nm,0.6s
MK31 Makanchi Array 62.78 312⇑ *e*P P 20 39 50.9 +0.8
MKAR Makanchi Array 62.78 312 P P 20 39 49.4 -0.8
comp=Z,0.3nm,0.5s,baz=53,slow=6.0,SNR=7.1
MKAR pP PcP 20 40 27.9 +0.8
comp=Z,4.8nm,0.8s,baz=49,slow=5.5,SNR=20
comp=Z,0.3nm,0.5s
MKAR Makanchi Array 62.78 312 P P 20 39 49.2 -1.0
MKAR Makanchi Array 62.78 312 *i* P P 20 39 49.7 -0.4
DRLN Deer Lake 63.25 43 P P 20 39 53.0 -0.2
ARTI Arti 63.68 332 P P 20 39 55.9 0.0
ARTI Arti 63.68 332 *d* *i* P P 20 39 55.8 0.0
ARTI *PP pwP 20 40 36.1 +0.4
ARTI S S 20 48 17.7 +0.8
ARTI SS SS 20 52 20.9 -5.5
ARTI pmax pmax
comp=Z,8.0nm,1.8s
KLMR Klimovskoe 63.82 344 *e*P P 20 39 56.3 -0.3
KLMR *e*PP PcP 20 40 29.7 -1.3
KLMR pmax pmax
comp=Z,18nm,1.6s
KIRV Kirov 64.00 338⇓ *e*P P 20 39 56.8 -1.0
MOL Molde 64.57 1 *e*P P 20 40 01.6 +0.2
AKN Aaknes 64.95 1 *e*P P 20 40 04.6 +0.6
AKN IAmb IAmb 20 40 05.0
comp=Z,2μm,3.2s
FIA1 FINESS Array S 64.96 351 P P 20 40 03.7 -0.4
FINES FINESS Array B 64.96 351 P P 20 40 03.7 -0.3
comp=Z,1.6nm,0.4s,baz=3.3,slow=7.8,SNR=29
comp=Z,1.6nm,0.4s
FINES FINESS Array B 64.96 351 P P 20 40 03.5 -0.5
NB2 NORSAR Subarra 66.11 359 P P 20 40 11.5 0.0
comp=Z,1.4nm,0.7s,baz=0.4,slow=6.2
NB2 NORSAR Subarra 66.11 359 P P 20 40 11.5 0.0
NOA NORSAR Array B 66.11 359 P P 20 40 11.6 0.0
comp=Z,1.3nm,0.6s,baz=0.2,slow=6.3,SNR=7.2
NOA pP pP 20 40 49.4 +0.5
comp=Z,3.8nm,1.0s,baz=1.7,slow=6.3,SNR=5.6
comp=Z,1.3nm,0.6s
SKAR Skarslia 66.47 1 *e*P P 20 40 14.3 +0.5
SKAR IAmb IAmb 20 40 17.3
comp=Z,6μm,4.3s
HFS Hagfors 66.98 358 P P 20 40 16.7 -0.2
comp=Z,4.5nm,0.3s,baz=2.2,slow=2.8,SNR=55
HFS pP pwP 20 40 56.6 -0.3
comp=Z,8.2nm,1.0s,baz=25,slow=3.8,SNR=3.4
comp=Z,4.5nm,0.3s
PZH PanZhiHua 68.00 285 P P 20 40 24.2 +0.2
AB31 Akbulak array 69.40 327 P P 20 40 32.0 -0.2

AB31				IAmb	IAmb	20 41 14.4	
	comp=Z,11nm,1.0s						
ABKAR	Akbulak array	69.40	327	P	P	20 40 31.9	-0.3
AAK	Ala-Archa	69.47	314⇓	eP	P	20 40 32.8	-0.2
AAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
OBN	Obninsk	69.78	344	eP	P	20 40 34.9	+0.5
OBN				e		20 40 55.0	
OBN				e		20 43 08.7	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BELG	Belogornoye	70.08	336⇑	eP	P	20 40 35.5	-0.8
BELG				pmax	pmax		
	comp=Z,17nm,5.0s						
EKA	Eskdalemuir Ar	71.33	8	P	P	20 40 43.8	0.0
	comp=Z,1.2nm,0.5s,baz=4.0,slow=5.2,SNR=4.6						
EKA				LR	LR	21 11 59.3	
	comp=Z,33nm,18.6s,baz=350,slow=36						
	comp=Z,1.2nm,0.5s						
MNK	Minsk	71.60	349	i P	P	20 40 45.2	-0.2
	comp=E,10.0nm,1.0s						
MNK				i P	P	20 40 45.2	-0.2
	comp=N,6.0nm,0.9s						
MNK				i P	P	20 40 45.2	-0.2
	comp=Z,7.0nm,1.0s,baz=12						
MNK				i pP	pP	20 41 22.1	-1.3
MNK				i PP	PP	20 43 28.2	+2.5
MNK				i PPP	PPP	20 45 09.6	
MNK				i S	S	20 49 52.9	+1.7
MNK				i SS	SS	20 54 30.4	+2.0
MNK				i SSS	SSS	20 57 53.6	
MNK				i LRM	MLR	21 15 36.1	
	comp=N,46nm,6.4s						
MNK				i LRM	MLR	21 15 40.7	
	comp=Z,69nm,6.5s						
MNK				i LRM	MLR	21 15 46.8	
	comp=E,224nm,20.6s						
MNK	Minsk	71.60	349	i P	P	20 40 45.2	-0.2
MNK				i *PP	pP	20 41 22.0	-1.3
MNK				i		20 43 28.1	
MNK				i PPP	PPP	20 45 09.6	
MNK				i S	S	20 49 52.9	+1.7
MNK				i SS	SS	20 54 30.4	+2.0
MNK				pmax	pmax		
	comp=N,6.0nm,0.9s						
MNK				pmax	pmax		
	comp=E,10.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MNK				MLR	MLR		
	comp=N,46nm,6.0s						
MNK				MLR	MLR		
	comp=Z,69nm,6.0s						
MNK				MLR	MLR		
	comp=E,224nm,21.0s						
KSH2	Kashi	71.84	312	P	P	20 40 47.1	-0.3
KSH2				pmax	pmax		
	comp=Z,2.0nm,0.6s						
PMG	Port Moresby	72.03	224	P	P	20 40 48.0	-0.5
PMG				IAmb	IAmb	20 40 49.0	
	comp=Z,17nm,1.1s						
PMG	Port Moresby	72.03	224	P	P	20 40 48.0	-0.5
PMG				pmax	pmax		
	comp=Z,17nm,1.2s						
CHGR	Chuyangaron	75.04	316⇑	eP	P	20 41 05.8	-0.2
CHGR				pmax	pmax		
	comp=Z,17nm,2.5s						
AK04	Malin Array Si	75.15	347	P	P	20 41 04.7	-1.6
AK18	Malin Array Si	75.17	347	P	P	20 41 04.6	-1.7
AKASG	Malin Array Be	75.17	347	P	P	20 41 05.5	-0.8
	comp=Z,1.0nm,0.4s,baz=18,slow=6.0,SNR=5.6						
AKASG				pP	pwP	20 41 46.2	-1.0
	comp=Z,2.2nm,0.6s,baz=16,slow=6.0,SNR=4.6						
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	75.17	347	i P	P	20 41 04.9	-1.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	Malin Array Si	75.17	347⇓	eP	P	20 41 05.5	-0.8
AKBB				pmax	pmax		
	comp=Z,4.0nm,1.1s						
AK19	Malin Array Si	75.17	347	P	P	20 41 04.7	-1.7
AK01	Malin Array Si	75.18	347	P	P	20 41 04.7	-1.7
AK11	Malin Array Si	75.19	347	P	P	20 41 04.8	-1.7
AK17	Malin Array Si	75.20	347	P	P	20 41 04.9	-1.6
AK02	Malin Array Si	75.21	347	P	P	20 41 04.9	-1.7
AK16	Malin Array Si	75.21	347	P	P	20 41 04.9	-1.7
CMAR	Chiang Mai Arr	75.83	282	P	P	20 41 10.2	-0.4
	comp=Z,1.2nm,0.9s,baz=26,slow=6.6,SNR=7.7						
	comp=Z,1.2nm,0.9s						
CMAR	Chiang Mai Arr	75.83	282	i P	P	20 41 11.1	+0.5
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
OSTC	Ostas	76.47	356	epP	pP	20 41 55.2	+3.1
DPC	Dobruska-Polom	76.67	356	epP	pP	20 41 55.0	+1.7
MORC	Moravsky Berou	77.18	355	eP	P	20 41 17.9	+0.1
MORC				e		20 42 00.6	
GRF	Grafenberg Arr	77.48	359	eP	pP	20 42 02.4	+4.5
	comp=Z,14nm,1.1s,baz=1.5,slow=5.0						
ZVC	Zvikov	77.67	357	epP	pP	20 42 02.9	+4.0
VRAC	Vranov	77.70	355	eP	P	20 41 21.2	+0.5
VRAC				e		20 42 03.6	
KRUC	Moravsky	77.96	355	eP	P	20 41 21.2	-0.9
KRUC				e		20 42 04.6	
KHC	Kasperske Hory	78.00	357⇓	eP	P	20 41 21.0	-1.3
KHC				pmax	pmax		
	comp=Z,18nm,1.4s						
KHC	Kasperske Hory	78.00	357	epP	pP	20 42 02.8	+2.0
JAVC	Velka Javorina	78.09	355	eP	P	20 41 24.1	+1.2
JAVC				e		20 42 07.1	
GERES	GERESS Array B	78.28	357	P	P	20 41 24.5	+0.5
	comp=Z,0.5nm,0.6s,baz=17,slow=1.8,SNR=4.0						
GERES				pP	pwP	20 42 05.3	+0.1
	comp=Z,3.0nm,0.9s,baz=1.9,slow=4.0,SNR=9.7						
	comp=Z,0.5nm,0.6s						
CKRC	Cesky Krumlov	78.28	357	epP	pP	20 42 06.1	+3.7
WINA	Alland / Wiene	78.92	356	epP	pP	20 42 10.2	+4.3
	comp=Z,13nm,1.1s						
CONA	Conrad Observa	79.11	356	epP	pP	20 42 11.6	+4.5
	comp=Z,11nm,0.9s						
KIV	Kislovodsk	79.14	336	eP	P	20 41 28.4	-0.4
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MOA	Molln	79.25	357	epP	pP	20 42 12.0	+4.2
	comp=Z,7.0nm,1.0s						
KBZ	Khabaz	79.30	336	P	P	20 41 30.1	+0.7
	comp=Z,0.9nm,0.7s,baz=22,slow=5.4,SNR=1.9						
KBZ				pP	pwP	20 42 10.2	-0.6
	comp=Z,5.1nm,0.9s,baz=0.0,slow=2.0,SNR=7.5						
	comp=Z,0.9nm,0.7s						
KBZ	Khabaz	79.30	336⇓	eP	P	20 41 30.2	+0.7
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
RONA	Rosalia, Austr	79.32	355	epP	pP	20 42 12.5	+4.3
	comp=Z,7.2nm,0.8s						
BIOA	Bad Ischl, Aus	79.43	357	epP	pP	20 42 13.0	+4.2
	comp=Z,7.1nm,1.0s						
MOTA	Moosalm	79.83	359	i pP	pP	20 42 15.4	+4.3
	comp=Z,13nm,1.2s						
WATA	Walderalm	79.83	359	epP	pP	20 42 15.3	+4.2
	comp=Z,11nm,1.1s,SNR=4.7						
WTTA	Wattenberg	79.90	359	epP	pP	20 42 16.0	+4.4
	comp=Z,8.9nm,0.8s,SNR=4.6						
SQTA	Sankt Quirin	79.95	359	epP	pP	20 42 16.1	+4.4
	comp=Z,13nm,0.9s,SNR=6.1						
KBA	Koelnbreinsper	80.05	357	i pP	pP	20 42 17.2	+4.8
	comp=Z,17nm,0.8s,SNR=9.3						
FETA	Feichten	80.16	359	epP	pP	20 42 17.4	+4.5
	comp=Z,16nm,1.0s,SNR=6.8						
SOKA	Soboth	80.40	356	i pP	pP	20 42 18.8	+4.6
	comp=Z,20nm,1.0s,SNR=8.2						
ABTA	Abfaltersbach	80.40	358	epP	pP	20 42 18.4	+4.2
	comp=Z,10nm,0.9s						
OBKA	Obir	80.58	357	i pP	pP	20 42 19.3	+4.1
	comp=Z,25nm,1.4s,SNR=7.1						
CTAO	Charters Tower	82.04	221	P	P	20 41 43.6	-0.6
CTAO				IAmb	IAmb	20 41 44.8	
	comp=Z,13nm,0.9s						
CTAO	Charters Tower	82.04	221	P	P	20 41 43.6	-0.6
CTAO				pmax	pmax		
	comp=Z,13nm,0.9s						
MTN	Manton Dam	82.50	237	IAmb	IAmb	20 41 46.8	
	comp=Z,10nm,0.8s						
BRTR	Keskin Array B	85.14	342	P	P	20 41 60.0	-0.2
	comp=Z,0.4nm,0.6s,baz=29,slow=3.3,SNR=2.3						
BRTR				pP	pwP	20 42 41.0	-0.9
	comp=Z,2.9nm,0.8s,baz=350,slow=4.4,SNR=13						
	comp=Z,0.4nm,0.6s						
BORA	Eskisehir	85.56	344	P	P	20 42 02.6	+0.5
BORA				IAmb	IAmb	20 42 46.2	
	comp=Z,8.1nm,0.8s						
ESDC	Sonseca Array	86.76	10	P	P	20 42 07.7	-0.3
	comp=Z,0.7nm,0.6s,baz=349,slow=5.2,SNR=7.9						
ESDC				pP	pwP	20 42 49.4	-0.8
	comp=Z,0.8nm,0.6s,baz=350,slow=5.0,SNR=3.4						
	comp=Z,0.7nm,0.6s						
WR8	Warramunga Arr	86.97	231	IAmb	IAmb	20 42 09.0	
	comp=Z,8.0nm,0.8s						
WRA	Warramunga Arr	87.03	231	P	P	20 42 08.3	-1.0
	comp=Z,4.6nm,0.6s,baz=32,slow=5.7,SNR=54						
	comp=Z,4.6nm,0.6s						
WRA	Warramunga Arr	87.03	231	P	P	20 42 08.0	-1.3
WRA	Warramunga Arr	87.03	231	i P	P	20 42 08.5	-0.8
WRA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
PSI	Prapat	88.19	272	P	P	20 42 14.7	-0.5
PSI				pmax	pmax		
	comp=Z,11nm,0.7s						
RPSI	Rantau Prapat	88.27	272	P	P	20 42 14.7	-0.7
ASAR	Alice Springs	90.45	229	P	P	20 42 25.1	-0.2
	comp=Z,9.2nm,0.8s,baz=25,slow=4.5,SNR=95						
ASAR				pP	pP	20 43 06.8	+1.4
	comp=Z,0.5nm,0.6s,baz=30,slow=4.4,SNR=1.2						
	comp=Z,9.2nm,0.8s						
ASAR	Alice Springs	90.45	229	P	P	20 42 24.7	-0.6
ASAR	Alice Springs	90.45	229	P	P	20 42 24.7	-0.6
TORD	Torodi Ar. Bea	113.58	8	PKKPbc	PKKPbc	20 58 42.4	-0.6
	comp=Z,1.0nm,0.6s,baz=197,slow=3.4,SNR=11						
PLCA	Paso Flores	126.68	111	PKP	PKPdf	20 48 25.9	+0.1
	comp=Z,2.1nm,0.8s,baz=322,slow=2.0,SNR=6.7						
BOSA	Boshof	152.86	329	PKPbc	PKiKP	20 49 20.1	0.0
	comp=Z,4.3nm,0.6s,baz=43,slow=2.4,SNR=19						

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*SDD **01** 20:53:25.8±0.7, 18°.27N×70°.52W, h36km±4km, MD3.3, ML1.9, MW3.8, Presumed earthquake*

*OSPL **01** 20:53:26.4±1.0, 18°.54N×70°.39W, h55km±15km, ML1.6, Presumed earthquake*

ISC 01 20:53:25.9±1.0**, 18°.52N**±0°.06×**70°.45W**±0°.03**, h32**km±9km**, n9,** σ0.s**57**/17**, 5C, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BANI	BANI	0.15	148⇑	ePg	Pn	20 53 32.0	-0.2
BANI				eSg	Sb	20 53 37.0	+0.7
BANI				eSg		20 54 01.8	
BANI				IAML		20 54 08.1	
	comp=N,30nm,1.0s						
SDD	Santo Domingo	0.51	97	i P	Pn	20 53 36.6	-0.3
SDD				eS	Sn	20 53 44.6	+0.1
SDDR	Presa de Saban	0.92	300⇑	ePg	Pn	20 53 42.6	0.0
SDDR				⇑eSg	Sb	20 53 55.3	0.0
SDDR				IAML		20 54 18.9	
	comp=N,22nm,3.0s						
SDDR	Presa de Saban	0.92	300	i P	Pb	20 53 43.0	-0.4
SDDR				eS	Sb	20 53 55.4	0.0
SDDR				IAML		20 53 56.3	
	comp=Z,9.8nm,1.1s						
LONE3	El Aguacate, B	0.96	275	i P	Pn	20 53 43.0	-0.3
LONE3				eS	Sn	20 53 56.6	+0.7
LONE3				IAML		20 53 58.8	
	comp=Z,8.3nm,0.5s						
LODU1	El Espartillar	0.99	260	i P	Pb	20 53 44.1	-0.5
LODU1				eS	Sn	20 53 57.2	+0.8
LODU1				IAML		20 53 59.4	
	comp=Z,19nm,1.0s						
HATOM	Hato Mayor del	1.04	75⇑	ePg	Pb	20 53 44.9	-0.5
HATOM				⇑eSg	Sn	20 53 59.1	+1.3
LOVI	El Cajuil, Ovi	1.14	231	i P	Pb	20 53 46.7	-0.2
LOVI				eS	Sn	20 54 00.0	0.0
LOVI				IAML		20 54 01.1	
	comp=Z,78nm,1.0s						
HIDR	Higuey Centro	1.64	87	eSg	Sn	20 54 12.9	+0.4
HIDR				IAML		20 54 16.1	
	comp=N,62nm,0.1s						

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*IDC **01** 20:58:44.6±3.7, 7°.01S×155°.57E, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=101.9km s-min=32.1km az=111.0*

ISC 01 20:58:52.6±1.2**, 7°.0S**±0°.2×**155°.4E**±0°.2**, h50**km**, n9,** σ1.s**67**/6**, mb3.9**/5**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.11	119	Sn	Sn	21 01 04.6	+0.3
	0.4nm,0.3s,baz=270,slow=10,SNR=0.9						
WRA	Warramunga Arr	24.15	236	P	P	21 04 04.8	+0.6
	3.5nm,0.8s,baz=61,slow=9.8,SNR=19						
	3.5nm,0.8s						
ASAR	Alice Springs	26.47	229	P	P	21 04 23.9	-1.5
	0.3nm,0.6s,baz=65,slow=8.9,SNR=5.4						
	0.3nm,0.6s						
H11S3	WAKE ISLAND Hy	27.67	24	T	T	21 32 58.7	
	baz=202,slow=75,SNR=22						
H11S2	WAKE ISLAND Hy	27.68	24	T	T	21 32 58.4	
	baz=202,slow=75,SNR=15						
H11S1	WAKE ISLAND Hy	27.69	24	T	T	21 32 59.5	
	baz=202,slow=75,SNR=12						
CMAR	Chiang Mai Arr	61.15	295	P	P	21 09 04.2	+1.7
	0.4nm,0.6s,baz=112,slow=6.9,SNR=4.4						
	0.4nm,0.6s						
MKAR	Makanchi Array	83.68	319	P	P	21 11 15.5	-0.6
	0.8nm,0.6s,baz=102,slow=6.0,SNR=11						
	0.8nm,0.6s						
ZALV	Zalesovo Beam	84.41	326	P	P	21 11 18.1	-1.5
	0.5nm,0.5s,baz=129,slow=6.5,SNR=2.7						
	0.5nm,0.5s						

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*IDC **01** 21:19:18.1±0.4, 11°.28N×124°.61E, h0km, mb4.8/36, mbtmp4.8/40, ML4.6/4, MS4.7/62, Error ellipse: s-maj=15.3km s-min=9.4km az=82.0*

*MOS **01** 21:19:20.1±1.0, 11°.31N×124°.61E, h25km, mb5.3/66, MS4.7/9, Error ellipse: s-maj=8.5km s-min=4.3km az=113.3*

*NEIC **01** 21:19:20.6±1.9, 11°.36N±0°.06×124°.68E±0°.08, h10km±1km, mb5.2/179, Mww5.4/23, Error ellipse: s-maj=13.2km s-min=10.4km az=78.0*

*NEIC **01** 21:19:20.6, 11°.34N×124°.84E, h12km, Moment Tensor Solution. Duration: 2.s5 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.23; $M_{\theta\theta}$1.41; $M_{\phi\phi}$-1.17; $M_{r\theta}$-0.22; $M_{\theta\phi}$-0.45; $M_{\phi r}$-0.32; Fault plane solution: $M_0$1.43000×10^{17} NP1: ϕ_s323.55000°, δ73.54000°, λ-8.73000°. NP2:ϕ_s56.05000°, δ81.63000°, λ-163.36000°. Principal axes: T 1.4985, Plg6.0000°, Azm189.0000°; N -0.1368, Plg71.0000°, Azm82.0000°; P -1.3617, Plg18.0000°, Azm281.0000°;*

*NEIC **01** 21:19:20.6, 11°.34N×124°.63E, h12km*

*MAN **01** 21:19:20.0, 11°.32N×124°.55E, h10km, MS5.4*

MAN INTENSITY VI - BILIRAN BILIRAN . INTENSITY V - LEYTE KANANGA CAPOOCAN AND PASTRANA LEYTE; TACLOBAN CITY AND ORMOC CITY; . INTENSITY IV - PALO DULAG BABATNGON ALANG-ALANG VILLABA BARUGO DAGAMI JARO SAN ISIDRO TABANGO JAVIER TANAUAN BATO HILONGOS AND PALOMPON LEYTE; NAVAL BILIRAN; MANDAUE CITY AND CEBU CITY; . INTENSITY III - ABUYOG LEYTE; LAWAAN BORONGAN MAYDOLONG AND GENERAL MACARTHUR EASTERN SAMAR; LAPU-LAPU CITY; . INTENSITY II - BONTOC SOUTHERN LEYTE; . INTENSITY I - ROXAS CITY.

*BJI **01** 21:19:22.2, 11°.32N×124°.67E, h41km, mB5.3/49, mb5.0/86, Ms5.2/88, Ms7 4.9/86*

*GCMT **01** 21:19:22.6±0.1, 11°.37N±0°.01×124°.55E±0°.01, h17km, MW5.4/144, Moment Tensor Solution. s113,c185; s144,c271; Duration: 1.s3 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.14±.02; $M_{\theta\theta}$1.69±.02; $M_{\phi\phi}$-1.56±.02; $M_{r\theta}$0.02±.04; $M_{\theta\phi}$-0.59±.02; $M_{\phi r}$0.29±.05; Best double couple: $M_0$1.75400×10^{17} NP1:ϕ_s235.00000°, δ82.00000°, λ-173.00000°. NP2:ϕ_s144.00000°, δ83.00000°, λ-8.00000°. Principal axes: T 1.7930, Plg1.0000°, Azm190.0000°; N -0.0840, Plg80.0000°, Azm285.0000°; P -1.7140, Plg10.0000°, Azm100.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **01** 21:19:23.7±0.4, 11°N±2°×12°5E±°, h51km±3km, M5.2/168, mb5.3/168, mB5.7/143, MLv6.0/4, Mw(mB)5.2/143, MwMwp5.1/60, Mwp5.4/60*

*GFZ **01** 21:19:24.3, 11°.30N×124°.70E, h45km, MW5.5, Moment Tensor Solution. s61 Moment tensor: M_{rr}-0.32; $M_{\theta\theta}$1.68; $M_{\phi\phi}$-1.36; $M_{r\theta}$-0.92; $M_{\theta\phi}$-0.76; $M_{\phi r}$-0.02; Fault plane solution: NP1:ϕ_s330.00000°, δ66.00000°, λ5.00000°. NP2:ϕ_s238.00000°, δ85.00000°, λ156.00000°. Principal axes: T 2.1800, Plg19.0000°, Azm192.0000°; N -0.5800, Plg66.0000°, Azm47.0000°; P -1.6000, Plg12.0000°, Azm286.0000°;*

ISC 01 21:19:23.3±0.4**, 11°.32N**±0°.02×**124°.71E**±0°.03**, h33**km±1km**, h34**km**:pP-P, n961,** σ1.s**64**/959**, mb5.1**/267**, MS4.8**/94**, 45C-23D, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	Palo	0.30	121	i P	Pb	21 19 29.9	-1.3
PLP				i S	Sb	21 19 36.1	-0.4
LLP	Lapu-Lapu	1.24	216	i P	Pn	21 19 41.0	-3.3
LLP				i S	Sn	21 19 57.1	-2.8
MMPH	Masbate	1.48	314	i P	Pn	21 19 44.8	-2.8
MMPH				i S	Sn	21 20 04.5	-1.4
SCPH	Surigao	1.71	153	i P	Pn	21 19 51.9	+1.1
SCPH				i S	Sn	21 20 10.8	-0.7
TBP	Tagbilaran	1.82	207	i P	Pn	21 19 50.2	-2.3
TBP				i S	Sn	21 20 16.1	+1.8
RCP	Roxas	1.94	277	eP	Pn	21 19 51.4	-2.6
RCP				i S	Sn	21 20 15.5	-1.8
JAP	San Jose, Anti	2.78	258	eP	Pn	21 20 04.4	-1.1
CGP	Cagayan de Oro	2.85	180	i P	Pn	21 20 05.5	-1.0
CGP				i S	Sb	21 20 51.0	+2.9
DCPH	Dipolog City	3.04	206	eP	Pn	21 20 06.1	-2.9
DCPH				i S	Sb	21 20 55.0	+1.6
GQP	Guinayangan	3.39	319	eP	Pn	21 20 12.4	-1.6
GQP				eS	Sn	21 20 56.2	+3.2
BIPH	Bislig	3.52	152	eP	Pn	21 20 18.0	+2.3
BIPH				eS	Sb	21 21 02.0	-5.2
CTBH	Cotabato--PC H	4.10	186	eP	Pn	21 20 25.0	+1.2
DMPH	Davao City--Mi	4.29	169	i P	Pn	21 20 29.0	+2.7
DMPH				eS	Sb	21 21 46.9	+18
KCP	Kidapawan	4.30	175	eP	Pn	21 20 26.8	+0.2
DAV	Davao City (W)	4.31	168	Pn	Pn	21 20 28.2	+1.6
	60nm,0.3s,baz=336,slow=10.0,SNR=13						
DAV				Sn	Sn	21 21 19.9	+4.1
	38nm,0.3s,baz=138,slow=17,SNR=3.6						
DAV				LR	LR	21 22 36.8	
	comp=Z,26μm,18.4s,baz=354,slow=46						
DAV	Davao City (W)	4.31	168	P	Pn	21 20 29.3	+2.6
DAV	Davao City (W)	4.31	168		Pn	21 20 26.0	-0.6
DAV	Davao City (W)	4.31	168	P	Pn	21 20 29.2	+2.6
TGY	Tagaytay City	4.61	307	Pn	Pn	21 20 32.7	+2.0
	baz=114,slow=7.3						
TGY				Sn	Sn	21 21 22.3	-0.8
	58nm,0.3s,baz=86,slow=11,SNR=1.0						
TGY				LR	LR	21 22 45.5	
	comp=Z,10μm,18.8s,baz=136,slow=46						
TGY	Tagaytay City	4.61	307	eP	Pn	21 20 36.4	+5.7
ZCP	Zamboanga City	5.08	211	eP	Pn	21 20 37.2	0.0
GSPH	General Santos	5.21	177	i P	Pn	21 20 44.7	+5.7
GSPH				i S	Sn	21 21 26.2	-12
CVP	Callao Caves	6.93	337	eP	Pn	21 21 03.6	+0.9
SGSI	Sangihe	7.63	174	P	Pn	21 21 12.9	+0.6
PIP	Pasuquin	8.01	331	eP	Pn	21 21 17.4	0.0
MYLDM	Lahad Datu	8.66	226	P	Pn	21 21 27.1	+0.7
MYLDM	Lahad Datu	8.66	226		Pn	21 21 26.3	-0.1
MYLDM	Lahad Datu	8.66	226	P	Pn	21 21 26.7	+0.3
MNI	Manado	9.82	179	P	Pn	21 21 42.9	+0.6
KKM	Kota Kinabalu	9.90	239	P	Pn	21 21 49.7	+6.2
KKM	Kota Kinabalu	9.90	239		Pn	21 21 42.1	-1.4
KKM	Kota Kinabalu	9.90	239	P	Pn	21 21 45.9	+2.4
	94nm,1.0s						
I39PW	PALAU INFRASON	10.40	110	I	I	22 21 55.0	
	baz=297,slow=243,SNR=1.4						
GTOI	Gorontalo	10.75	189	P	Pn	21 21 54.7	-0.4
	8μm2μm131nm,0.9s						
TNTI	Ternate	10.81	166	P	Pn	21 21 58.6	+2.8
TNTI	Ternate	10.81	166		Pn	21 21 55.8	-0.1
TNTI	Ternate	10.81	166	P	Pn	21 21 56.8	+1.0
	3μm218nm,1.1s						
TOLI2	Tolitoli	10.87	201	P	Pn	21 21 57.6	+0.9
TOLI2	Tolitoli	10.87	201	Pn	Pn	21 21 56.5	-0.2
MRSI	Marisa	11.12	195	P	Pn	21 22 04.4	+4.3
	94nm,1.2s						
MPSI	Mapaga	11.92	204	P	Pn	21 22 15.4	+4.4
TWG	Pinlang	11.95	344		Pn	21 22 10.7	-0.7
LUWI	Luwuk	12.44	189	P	Pn	21 22 22.2	+4.1
	6μm263nm,0.9s						
YULB	Yu-li	12.44	345	P	Pn	21 22 19.9	+1.8
YULB	Yu-li	12.44	345		Pn	21 22 17.0	-1.1
APSI	Ampana	12.53	194	P	Pn	21 22 23.6	+4.2
	5μm174nm,1.2s						
TPUB	Ta-pu	12.53	342	P	Pn	21 22 23.9	+4.5
SSLB	Suanglung	12.90	344	P	Pn	21 22 29.0	+4.5
SSLB	Suanglung	12.90	344		Pn	21 22 23.0	-1.5
PCI	Palu	13.08	202	P	Pn	21 22 30.5	+3.6
	2μm121nm,1.1s						
NACB	Ninganchiao	13.12	347	Pn	Pn	21 22 27.4	0.0
SANI	Sanana	13.35	174	P	Pn	21 22 31.2	+0.7
SANI	Sanana	13.35	174	P	Pn	21 22 28.0	-2.5
	5μm2μm191nm,1.2s						
YHNB	Yeheng	13.65	347	P	Pn	21 22 36.3	+1.6
YHNB	Yeheng	13.65	347	Pn	Pn	21 22 36.2	+1.6
SWI	Sorong	13.74	151	P	Pn	21 22 35.8	-0.2
SIJI	Sorong	13.75	151	Pn	Pn	21 22 35.7	-0.4
	0.9nm,0.3s,baz=325,slow=2.5,SNR=3.9						
SIJI				LR	LR	21 29 14.4	
	comp=Z,2μm,19.1s,baz=314,slow=43						
	11nm,0.7s						
SIJI	Sorong	13.75	151	P	Pn	21 22 33.6	-2.5
NLAI	Namlea	14.66	171	P	Pn	21 22 45.6	-2.9
	3μm2μm173nm,0.9s						
BKB	Balikpapan	14.72	212	P	Pn	21 22 50.9	+1.6
BKB	Balikpapan	14.72	212	P	Pn	21 22 51.1	+1.8
	5μm3μm211nm,1.0s						
QZH2	Quanzhou	14.74	338	P	Pn	21 22 47.6	-1.9
QZH2				S	Sn	21 25 29.0	-2.7
QZH2				L	L		
	comp=N,3μm,19.2s						
QZH2				L	L		
	comp=E,6μm,19.6s						
QZH2				L	L		
	comp=Z,7μm,18.2s						
HKPS	Hong Kong Po S	14.86	318	P	P	21 22 55.3	-1.2
KRAI	Karang Ratu	15.00	166	P	Pn	21 22 51.6	-1.4
	120nm,1.0s						
MMSI	Mamuju	15.07	203	P	Pn	21 22 54.7	+0.7
	2μm124nm,1.5s						
TTSI	Tana Toraja	15.08	199	P	P	21 22 57.0	-2.0
	5μm3μm232nm,1.0s						
MSAI	Masohi	15.16	164	P	P	21 23 00.5	+0.6
SBUM	Sibu	15.21	235	P	P	21 23 01.5	+1.1
SBUM	Sibu	15.21	235	Pn	Pn	21 22 54.7	-1.1
SBUM	Sibu	15.21	235	P	P	21 22 58.2	-2.2
	110nm,1.0s						
MWPI	Manokwari, Pap	15.30	142	P	Pn	21 22 55.5	-1.5
	6μm237nm,1.3s						
AAI	Ambon	15.31	167	P	Pn	21 22 56.5	-0.6
	2μm150nm,1.1s						
KKSI	Kolaka, Sulawe	15.69	191	P	Pn	21 23 02.1	0.0
JOW	Kunigami	15.79	12	Pn	Pn	21 23 02.1	-1.2
	5.5nm,0.3s,baz=139,slow=24,SNR=8.7						
JOW				LR	LR	21 30 37.5	
	comp=Z,939nm,18.2s,baz=241,slow=43						
	19nm,0.4s						
JOW	Kunigami	15.79	12	P	P	21 23 06.1	-0.7
JOW	Kunigami	15.79	12	Pn	Pn	21 23 01.8	-1.4
JOW				IAmb	IAmb	21 23 07.4	
	comp=Z,339nm,1.7s						
PMSI	Majene	15.82	202	P	Pn	21 23 05.0	+1.3
	comp=Z,6μmcomp=Z,3μmcomp=Z,104nm,1.0s						
RKPI	Ransiki, Papua	15.85	143	P	P	21 23 06.7	-0.8
	comp=Z,3μmcomp=Z,165nm,1.8s						
SPSI	Sidrap Palu	15.96	198	P	P	21 23 07.4	-1.4
	comp=Z,5μmcomp=Z,3μmcomp=Z,138nm,0.9s						
GZH2	Guangzhou	16.16	321	P	Pn	21 23 08.8	+0.8
GZH2				S	Sn	21 26 10.5	+4.2
GZH2				pmax	pmax		
	comp=Z,62nm,1.3s						
GZH2				L	L		
	comp=Z,8μm,17.5s						
GZH2				L	L		
	comp=Z,8μm,17.1s						

GZH2 L L
comp=Z,6μm,14.3s
QIZ Qiongzhong 16.26 300 P **P** **21 23 11.3 -0.8**
QIZ Qiongzhong 16.26 300 Pn **Pn** **21 23 08.2 -1.2**
QIZ Qiongzhong 16.26 300 P **Pn** **21 23 08.6 -0.8**
QIZ S **Sn** **21 26 11.6 +2.8**
QIZ pmax pmax
comp=Z,36nm,1.3s
QIZ pmax pmax
comp=Z,760nm,6.5s
QIZ L L
comp=Z,3μm,14.5s
QIZ L L
comp=Z,2μm,16.4s
QIZ L L
comp=Z,4μm,17.2s
BNDI Bandanaira 16.57 162 P **P** **21 23 15.9 +0.4**
KAPI Kappang 16.96 197 Pn **Pn** **21 23 16.5 -1.8**
comp=Z,1.0nm,0.3s,baz=11,slow=8.0,SNR=24
KAPI LR LR 21 30 18.1
comp=Z,3μm,21.3s,baz=52,slow=39
comp=Z,8.2nm,0.4s
KAPI Kappang 16.96 197 P **P** **21 23 20.4 +0.5**
KAPI Kappang 16.96 197 Pn **Pn** **21 23 17.3 -1.0**
KAPI Kappang 16.96 197*c i*P **Pn** **21 23 18.1 -0.2**
KAPI Kappang 16.96 197 P **Pn** **21 23 19.0 +0.7**
comp=Z,2μmcomp=Z,2μmcomp=Z,98nm,1.2s
MKS Makassar 17.24 198 P **P** **21 23 22.8 -0.2**
comp=Z,6μmcomp=Z,268nm,2.7s
SRPI Seruí, Papua 17.41 138 P **Pn** **21 23 21.6 -2.3**
comp=Z,101nm,1.1s
BBKI Banjar Baru 17.67 214 P **Pn** **21 23 26.4 -0.7**
BSSI Bau Bau, Buton 17.85 194 P **P** **21 23 29.5 -0.2**
comp=Z,5μmcomp=Z,5μmcomp=Z,172nm,1.4s
GUMO Guam 19.81 81 P **Pn** **21 23 52.4 -0.5**
comp=Z,6.0nm,0.3s,baz=316,slow=7.6,SNR=4.2
GUMO LR LR 21 29 59.8
comp=Z,1μm,19.6s,baz=255,slow=32
comp=Z,90nm,0.9s
GUMO Guam 19.81 81 P **P** **21 23 48.6 -2.6**
SSE Sheshan 19.95 351 P **Pn** **21 23 53.5 -0.9**
SSE S **Sn** **21 27 37.1 -0.7**
SSE pmax pmax
comp=Z,59nm,1.0s
SSE pmax pmax
comp=Z,390nm,4.1s
SSE L L
comp=Z,1μm,14.3s
SSE L L
comp=Z,960nm,14.3s
MMRI Maumere 19.98 187 P **Pn** **21 23 58.0 +3.1**
MMRI Maumere 19.98 187 P **P** **21 23 52.9 -0.2**
MMRI Maumere 19.98 187 P **P** **21 23 52.1 -1.0**
comp=Z,5μmcomp=Z,5μmcomp=Z,271nm,1.9s
CNSH ChangSha 20.08 328 P **P** **21 23 53.9 -0.2**
CNSH S **S** **21 27 34.4 -3.6**
CNSH pmax pmax
comp=Z,26nm,1.3s
CNSH L L
comp=Z,7μm,21.4s
CNSH L L
comp=Z,9μm,20.8s
CNSH L L
comp=Z,2μm,18.6s
EDFI Ende, Flores 20.17 189 P **P** **21 23 54.8 -0.4**
comp=Z,4μmcomp=Z,2μmcomp=Z,89nm,1.1s
LBFI Labuhan Bajo, 20.25 194 P **P** **21 23 55.9 -0.1**
SAUI Saumlaki 20.27 161 P Pn 21 23 59.8 +1.5
SAUI Saumlaki 20.27 161 P **P** **21 23 57.2 +1.0**
SAUI Saumlaki 20.27 161 P **P** **21 23 55.8 -0.4**
comp=Z,5μmcomp=Z,331nm,1.3s
GENI Genyem 20.67 131 P Pn 21 24 04.6 +1.5
GENI Genyem 20.67 131 P Pn 21 24 02.2 -0.9
DBNI Kabupaten Domp 20.70 198 P **P** **21 24 02.0 +1.1**
JSU Suzuyama 20.77 14 P Pn 21 24 04.0 -0.2
JSU Suzuyama 20.77 14 P Pn 21 24 03.3 -0.8
JSU IAmb IAmb 21 24 15.5
comp=Z,136nm,1.2s
SOEI Soe 20.95 181 P Pn 21 24 06.2 -0.1
SOEI Soe 20.95 181 P **P** **21 24 04.2 +0.5**
SOEI IAmb IAmb 21 24 20.5
comp=Z,158nm,1.1s
SOEI Soe 20.95 181 P **P** **21 24 02.9 -0.8**
comp=Z,4μmcomp=Z,4μmcomp=Z,197nm,0.9s
JAY Jayapura 21.02 130 P **P** **21 24 04.0 -0.5**
comp=Z,3μmcomp=Z,106nm,0.9s
PLAI Plampang 21.17 199 P **P** **21 24 10.7 +4.7**
PLAI Plampang 21.17 199 P **P** **21 24 08.3 +2.3**
comp=Z,3μmcomp=Z,3μmcomp=Z,257nm,0.9s
NJ2 Nanjing 21.33 346*e*P **P** **21 24 07.6 +0.1**
NJ2 PP **PnPn** **21 24 31.4 +3.4**
NJ2 pmax pmax
comp=Z,43nm,1.3s
NJ2 L L
comp=Z,4μm,17.1s
NJ2 L L
comp=Z,4μm,16.6s
NJ2 L L
comp=Z,5μm,18.1s
WHN Wuhan 21.41 335 P **P** **21 24 10.4 +2.0**
WHN pmax pmax
comp=Z,88nm,1.1s
WHN L L
comp=Z,9μm,13.9s
WHN L L
comp=Z,8μm,16.6s
WHN L L
comp=Z,11μm,15.7s
BATI Baumata 21.41 183 P **P** **21 24 07.3 -1.3**
comp=Z,62nm,0.4s,baz=312,slow=2.3,SNR=7.7
BATI LR LR 21 33 28.2
comp=Z,3μm,21.4s,baz=3.5,slow=40
comp=Z,62nm,0.4s
BATI Baumata 21.41 183 P **P** **21 24 07.6 -1.0**
WBSI Waikabubak, Su 21.49 194 P **P** **21 24 10.4 +1.0**
KHKI Kahang-Kahang 21.55 205 P **P** **21 24 12.8 +2.7**
ABJI Asem Bagus 21.67 209 P **P** **21 24 15.3 +4.0**
comp=Z,3μmcomp=Z,3μmcomp=Z,162nm,1.7s
RTBI Rangdo, Negare 21.93 207 P **P** **21 24 17.3 +3.2**
comp=Z,2μmcomp=Z,2μmcomp=Z,215nm,1.3s
BLJI Banyuglugur 21.94 211 P **P** **21 24 13.9 -0.3**
comp=Z,2μmcomp=Z,104nm,1.0s
TPI Tanjungpandan 21.99 231 P **P** **21 24 14.0 -0.8**
comp=Z,2μmcomp=Z,143nm,1.0s
DNP Denpasar 22.00 206 P **P** **21 24 17.2 +2.3**
comp=Z,257nm,0.9s
IGBI Denpasar 22.16 206 P **P** **21 24 18.1 +1.6**
comp=Z,2μmcomp=Z,3μmcomp=Z,160nm,1.6s
JAGI Jajag, Banyuwa 22.29 209 P **P** **21 24 22.4 +4.3**
JAGI Jajag, Banyuwa 22.29 209 P **P** **21 24 18.3 +0.2**
JAGI Jajag, Banyuwa 22.29 209 P **P** **21 24 18.7 +0.6**
comp=Z,3μmcomp=Z,5μmcomp=Z,312nm,1.7s
UWJI Ujung Watu 22.32 219 P **P** **21 24 23.3 +4.9**
JNU Nakatsue 22.42 14 P **P** **21 24 19.4 0.0**
comp=Z,44nm,1.1s,baz=169,slow=4.1,SNR=9.5
JNU LR LR 21 34 40.8
comp=Z,678nm,18.1s,baz=190,slow=41
comp=Z,44nm,1.1s
TPRI Tanjung Pinang 22.55 244 P **P** **21 24 19.0 -1.9**
GYA Guiyang 22.72 314 P **P** **21 24 22.4 -0.3**
GYA sP sP 21 24 33.4 -2.5
GYA S **S** **21 28 28.4 -0.9**
GYA pmax pmax
comp=Z,32nm,1.0s
GYA pmax pmax
comp=Z,620nm,8.8s
GYA L L
comp=Z,6μm,15.2s
GYA L L
comp=Z,3μm,18.3s
GYA L L
comp=Z,5μm,18.9s
JCJ Chichijima 22.72 44 P **P** **21 24 22.3 -0.2**
comp=Z,104nm,0.7s,baz=293,slow=7.9,SNR=7.1
comp=Z,104nm,0.7s
JCJ Chichijima 22.72 44 P **P** **21 24 22.9 +0.4**
JCJ Chichijima 22.72 44 P **P** **21 24 24.9 +2.3**
MYKOM Kota Tinggi 22.77 247 P **P** **21 24 24.6 +1.5**
NGJI Ngawi 22.77 216 P **P** **21 24 26.3 +3.2**
comp=Z,4μmcomp=Z,179nm,1.1s
SJI Sawahan 22.90 215 P **P** **21 24 25.2 +0.6**
comp=Z,2μmcomp=Z,115nm,1.8s
SNJI Sawahan-Nganju 22.94 215 P **P** **21 24 26.6 +1.5**
comp=Z,2μmcomp=Z,143nm,1.1s
SMRI Semarang 23.13 219 P **P** **21 24 30.1 +3.3**
SMRI Semarang 23.13 219 P **P** **21 24 26.3 -0.5**
comp=Z,159nm,1.5s
DSRI Dabo 23.19 241 P **P** **21 24 27.3 -0.2**
comp=Z,1μmcomp=Z,64nm,1.1s
ENH Enshi 23.57 325 P **P** **21 24 31.3 +0.2**
ENH Enshi 23.57 325 P **P** **21 24 30.3 -0.8**
ENH IAmb IAmb 21 24 38.7
comp=Z,73nm,1.0s
PCJI Pacitan 23.61 215 P **P** **21 24 30.5 -1.0**
comp=Z,136nm,1.1s
UGM Wanagama 23.76 217 P **P** **21 24 36.2 +3.2**
UGM Wanagama 23.76 217 P **P** **21 24 32.4 -0.6**
UGM Wanagama 23.76 217 P **P** **21 24 31.6 -1.4**
comp=Z,168nm,1.7s
YOGI Yogyakarta 23.82 218 P **P** **21 24 31.7 -1.8**
comp=Z,422nm,1.8s
JMN Monobe 23.83 19 P **P** **21 24 34.5 +1.0**
JMN Monobe 23.83 19 P **P** **21 24 31.3 -2.2**
CTJI Waduk Cacaban 23.88 221 P **P** **21 24 33.8 -0.3**
comp=Z,128nm,1.0s
KPJI Karang Pucung 24.29 221 P **P** **21 24 38.0 +0.1**
comp=Z,2μmcomp=Z,2μmcomp=Z,119nm,1.8s
AUDHS Darwin High Sc 24.38 165 P **P** **21 24 38.9 +0.3**
DRS Darwin Rock St 24.39 165 P **P** **21 24 40.6 +1.9**
IPM Ipoh 24.41 256 P **P** **21 24 43.9 +4.8**
IPM Ipoh 24.41 256 P **P** **21 24 37.4 -1.7**
IPM Ipoh 24.41 256 P **P** **21 24 34.9 -4.2**
comp=Z,3μmcomp=Z,251nm,1.6s
KULM Kulim 24.54 258 P **P** **21 24 44.4 +4.2**
KULM Kulim 24.54 258 P **P** **21 24 39.0 -1.3**
KULM Kulim 24.54 258 P **P** **21 24 37.3 -2.9**
comp=Z,2μmcomp=Z,172nm,1.7s
JMBI JAMBI 24.59 240 P **P** **21 24 43.5 +2.9**
LEM Lembang 24.79 224 P **P** **21 24 44.0 +1.4**
comp=Z,2μmcomp=Z,2μmcomp=Z,109nm,0.9s
MTN Manton Dam 24.84 165 P **P** **21 24 42.4 -0.5**
comp=Z,66nm,1.1s,comp=Z,0.0nm
MTN Manton Dam 24.84 165 IAmb IAmb 21 25 03.4
comp=Z,51nm,0.9s
KMI2 Kunming 24.93 306 ⇓P **P** **21 24 43.1 -0.8**
KMI2 S **S** **21 29 07.1 +1.5**
KMI2 pmax pmax
comp=Z,35nm,0.9s
KMI2 pmax pmax
comp=Z,490nm,4.3s
KMI2 L L
comp=Z,2μm,16.2s
KMI2 L L
comp=Z,3μm,22.7s
KMI2 L L
comp=Z,4μm,23.2s
TJN Taejon 25.06 5 P **P** **21 24 44.3 -0.3**
KDU Kakadu 25.07 162 P **P** **21 24 43.7 -1.2**
comp=Z,60nm,1.1s
MMPI Merauke 25.09 141 P **P** **21 24 45.7 +0.6**
DBJI Dramaga 25.20 226 P **P** **21 24 47.7 +1.6**
comp=Z,97nm,1.3s
BBJI Bungbulang 25.23 223 P **P** **21 24 50.7 +4.2**
BBJI Bungbulang 25.23 223 P **P** **21 24 46.6 +0.1**
BBJI Bungbulang 25.23 223 P **P** **21 24 46.3 -0.2**
comp=Z,1μmcomp=Z,70nm,1.6s
SBJI Serang 25.34 228 P **P** **21 24 45.4 -2.0**
LYN LuoYang 25.68 336 P **P** **21 24 50.6 +0.3**
LYN sP sP 21 25 07.6 +3.7
LYN S **S** **21 29 16.8 +0.1**
LYN pmax pmax
comp=Z,55nm,1.1s
LYN pmax pmax
comp=Z,680nm,4.1s
LYN L L
comp=Z,5μm,21.3s
LYN L L
comp=Z,7μm,19.2s
LYN L L
comp=Z,3μm,16.5s
TIA Tai'an 25.71 346 P **P** **21 24 49.8 -0.8**
TIA PP **PnPn** **21 25 26.9 -1.0**
TIA S **S** **21 29 17.8 +0.5**
TIA SS **SnSn** **21 30 18.7 +4.9**
TIA pmax pmax
comp=Z,42nm,1.1s
TIA pmax pmax
comp=Z,220nm,3.6s
TIA L L
comp=Z,3μm,18.1s
TIA L L
comp=Z,2μm,18.1s
TIA L L
comp=Z,4μm,19.0s
JHJ Hachijo jima 2 25.73 30 LR LR 21 35 53.4
comp=Z,1μm,18.5s,baz=240,slow=38
MDSI Maura Dua 25.77 234 P **P** **21 24 51.4 +0.1**
comp=Z,1μmcomp=Z,57nm,1.3s
CM31 Chiang Mai Arr 25.87 289 IAmb IAmb 21 25 00.9
comp=Z,52nm,1.3s
CM31 Chiang Mai Arr 25.87 289 P **P** **21 24 52.4 +0.1**
SNR=26
CMAR Chiang Mai Arr 25.87 289 P **P** **21 24 51.9 -0.4**
comp=Z,3.8nm,0.9s,baz=101,slow=7.5,SNR=31
CMAR PcP **PcP** **21 28 20.4 -0.7**
comp=Z,0.4nm,0.3s,baz=96,slow=3.4,SNR=1.2
comp=Z,3.8nm,0.9s
CMAR Chiang Mai Arr 25.87 289 P **P** **21 24 50.2 -2.1**
CMAR **PcP** **21 28 18.7 -2.3**
BKNI Bangkinang 25.93 247 P **P** **21 24 56.7 +3.9**
CHTO Chiang Mai 25.95 290 P **P** **21 24 58.2 +5.2**
CHTO Chiang Mai 25.95 290 P **P** **21 24 51.8 -1.2**
CHTO Chiang Mai 25.95 290 P **P** **21 24 51.8 -1.2**
CHTO pmax pmax
comp=Z,13nm,1.1s
CHTO Chiang Mai 25.95 290 P **P** **21 24 55.2 +2.2**
CHTO S **S** **21 29 16.4 -5.0**
CHTO Chiang Mai 25.95 290 P **P** **21 24 50.7 -2.3**
INCN Inchon 26.11 3 P **P** **21 24 49.3 -4.9**
MANU Manus Island 26.15 119 P **P** **21 24 55.5 +0.7**
MANU IAmb IAmb 21 25 01.9
comp=Z,71nm,1.4s
KSAR Wonju Array Be 26.16 6 P **P** **21 24 55.3 +0.7**
KSAR Wonju Array Be 26.16 6 P **P** **21 24 55.3 +0.7**
KASI Kota Agung 26.17 231 P **P** **21 24 56.7 +1.8**
KSRS Korea Array 26.18 6 P **P** **21 24 55.2 +0.4**
comp=Z,12nm,0.8s,baz=181,slow=10,SNR=24
comp=Z,12nm,0.8s
LWLI Liwa 26.19 233 P **P** **21 24 56.3 +1.0**
comp=Z,2μmcomp=Z,112nm,0.8s
KS19 Wonju Array Si 26.22 6 IAmb IAmb 21 24 56.1
comp=Z,117nm,1.4s
PZH PanZhiHua 26.39 308 P **P** **21 24 56.4 -0.6**
PZH S **S** **21 29 27.0 -1.5**
PZH pmax pmax
comp=Z,360nm,1.3s
PZH pmax pmax
comp=Z,240nm,5.6s
PZH L L
comp=Z,2μm,18.2s
PZH L L
comp=Z,2μm,20.4s
PZH L L
comp=Z,3μm,19.0s
INU Inuyama 26.40 23 P **P** **21 24 58.4 +1.6**
INU Inuyama 26.40 23 P **P** **21 24 57.2 +0.3**
INU IAmb IAmb 21 25 08.6
comp=Z,92nm,1.3s
KSI Kapahiang 26.56 237 P **P** **21 24 57.8 -0.8**
comp=Z,103nm,1.0s
MASI Maura Aman, Be 26.58 239 P **P** **21 24 57.3 -1.4**
MNAI Manna 26.67 235 P **P** **21 24 59.0 -0.5**
comp=Z,2μmcomp=Z,93nm,1.7s
KRJI Kerinci 26.69 241 P **P** **21 25 03.0 +3.2**
JGF Kuroka 26.75 23 P **P** **21 25 00.8 +0.7**
XAN Xi'an 26.82 330 ⇑P **P** **21 25 00.0 -0.8**
XAN S **S** **21 29 36.0 +1.0**
XAN pmax pmax
comp=Z,96nm,1.0s
XAN L L
comp=Z,6μm,20.9s
XAN L L
comp=Z,6μm,20.5s
XAN L L
comp=Z,4μm,15.3s
PPI Padang Panjang 26.85 246 P **P** **21 25 00.0 -1.1**
PSI Prapat 26.93 254 P **P** **21 25 06.0 +4.0**
PSI Prapat 26.93 254 P **P** **21 24 58.9 -3.1**
comp=Z,821nmcomp=Z,84nm,1.3s
PDSI Padang 27.00 245 P **P** **21 25 00.9 -1.6**
comp=Z,33nm,0.9s
TSI Tuntungan 27.05 255 P **P** **21 25 03.4 +0.5**
MNSI Mandailing Nat 27.06 249 P **P** **21 25 01.8 -1.2**
comp=Z,801nmcomp=Z,76nm,1.1s
KNRA Kununurra 27.12 171 P **P** **21 25 04.7 +1.2**
comp=Z,65nm,1.5s
KNRA Kununurra 27.12 171 P **P** **21 25 03.5 0.0**
KNRA IAmb IAmb 21 25 31.2
comp=Z,55nm,0.9s
HNS HongShan 27.48 343 ⇑P **P** **21 25 06.1 -0.4**
HNS S **S** **21 29 42.9 -2.2**
HNS pmax pmax
comp=Z,52nm,1.2s
HNS L L
comp=Z,3μm,17.3s
HNS L L
comp=Z,2μm,15.3s
HNS L L
comp=Z,3μm,16.7s
CD2 Chengdu 27.51 318 P **P** **21 25 06.3 -0.7**
CD2 pmax pmax
comp=Z,60nm,0.8s
CD2 pmax pmax
comp=Z,370nm,5.3s
CD2 L L
comp=Z,6μm,19.4s
CD2 L L
comp=Z,7μm,18.0s
CD2 L L
comp=Z,4μm,14.3s
DL2 Dalian 27.61 355 P **P** **21 25 07.7 +0.1**
DL2 S **S** **21 29 46.7 -0.4**
DL2 pmax pmax
comp=Z,44nm,1.2s
DL2 pmax pmax
comp=Z,220nm,4.1s
DL2 L L
comp=Z,1μm,17.9s
DL2 L L
comp=Z,2μm,17.6s
DL2 L L
comp=Z,2μm,17.2s
KCSI Kotacane, Aceh 27.80 256 P **P** **21 25 06.6 -3.1**
MAJO Matsushiro 27.91 24 P **P** **21 25 11.1 +0.7**
MAJO Matsushiro 27.91 24⇓*i*P **P** **21 25 09.4 -1.0**
MAJO pmax pmax
comp=Z,15nm,1.1s
MJAR Matsushiro Arr 27.91 24 P **P** **21 25 09.8 -0.7**
comp=Z,4.8nm,1.0s,baz=188,slow=9.2,SNR=9.2
MJAR PcP **PcP** **21 28 25.5 -0.1**
comp=Z,1.8nm,0.8s,baz=165,slow=3.3,SNR=2.8
MJAR LR LR 21 34 23.7
comp=Z,910nm,20.7s,baz=214,slow=32
comp=Z,4.8nm,1.0s
MJAR Matsushiro Arr 27.91 24 P **P** **21 25 09.7 -0.7**
MJAR **PcP** **21 28 25.6 0.0**
LHMI Lhok Sumawe 28.12 260 P **P** **21 25 15.8 +3.3**
LHMI Lhok Sumawe 28.12 260 P **P** **21 25 15.0 +2.5**
comp=Z,2μmcomp=Z,124nm,1.1s
TNCH TengChong 28.30 302 P **P** **21 25 13.2 -1.1**
TNCH S **S** **21 29 56.3 -2.5**
TNCH pmax pmax
comp=Z,34nm,1.3s
TNCH pmax pmax
comp=Z,150nm,3.7s
TNCH L L
comp=Z,1μm,12.8s
TNCH L L
comp=Z,870nm,14.8s
TNCH L L
comp=Z,1μm,21.7s
TIY Taiyuan 28.50 339 P **P** **21 25 17.9 +2.2**
TIY S **S** **21 30 05.4 +4.1**
TIY pmax pmax
comp=Z,310nm,5.2s
TIY L L
comp=Z,2μm,18.5s
TIY L L
comp=Z,2μm,16.8s
TIY L L
comp=Z,2μm,17.4s
GSI Gunungsitoli 28.72 252 P P 21 25 23.1 +5.2
GSI Gunungsitoli 28.72 252 P **P** **21 25 17.2 -0.7**
GSI Gunungsitoli 28.72 252 P **P** **21 25 18.7 +0.8**
comp=Z,939nmcomp=Z,84nm,0.8s
BJI2 Beijing 29.57 347 P **P** **21 25 24.7 -0.4**
BJI2 S **S** **21 30 16.4 -1.5**
BJI2 pmax pmax
comp=Z,14nm,1.3s
BJI2 L L
comp=Z,560nm,13.1s
BJI2 L L
comp=Z,940nm,16.7s
BJI2 L L
comp=Z,1μm,17.6s
BJT Baijiatuan 29.57 347 P **P** **21 25 24.8 -0.3**
BJT Baijiatuan 29.57 347 P **P** **21 25 24.6 -0.5**
BJT IAmb IAmb 21 25 33.2
comp=Z,28nm,1.0s
BJT Baijiatuan 29.57 347 P **P** **21 25 24.6 -0.5**
BJT pmax pmax
comp=Z,28nm,1.0s
PMG Port Moresby 30.37 132 P **P** **21 25 32.0 -0.4**
PMG Port Moresby 30.37 132 P **P** **21 25 31.7 -0.8**
PMG Port Moresby 30.37 132 P **P** **21 25 31.6 -0.8**
PMG IAmb IAmb 21 25 32.7
comp=Z,46nm,1.0s
PMG Port Moresby 30.37 132*d i*P **P** **21 25 31.4 -1.0**
PMG pmax pmax
comp=Z,80nm,1.7s
PMG Port Moresby 30.37 132 P **P** **21 25 29.7 -2.7**
comp=Z,697nmcomp=Z,51nm,1.1s
SNY Shenyang 30.40 358 ⇓P **P** **21 25 32.6 +0.2**
SNY pmax pmax
comp=Z,29nm,1.5s
SNY pmax pmax
comp=Z,180nm,3.8s
SNY L L
comp=Z,1μm,18.3s
SNY L L
comp=Z,3μm,14.6s
SNY L L
comp=Z,2μm,19.1s
LZDM Lanzhou Array 31.04 326 P **P** **21 25 37.2 -1.3**
comp=Z,0.8nm,0.3s,baz=161,slow=10,SNR=10
LZDM LR LR 21 39 55.2
comp=Z,1μm,18.2s,baz=100,slow=40
comp=Z,0.8nm,0.3s
LZH Lanzhou 31.05 326*e*P **P** **21 25 39.5 +1.0**
LZH S **S** **21 30 43.1 +1.5**
LZH pmax pmax
comp=Z,26nm,1.7s
LZH pmax pmax
comp=Z,320nm,4.2s
LZH L L
comp=Z,9μm,18.4s
LZH L L
comp=Z,7μm,18.1s
LZH L L
comp=Z,3μm,17.1s
COEN Coen 31.08 143 P **P** **21 25 38.4 -0.4**
comp=Z,65nm,1.0s
COEN Coen 31.08 143 P **P** **21 25 38.7 0.0**
COEN Coen 31.08 143 P **P** **21 25 37.6 -1.1**
COEN IAmb IAmb 21 25 47.8
comp=Z,44nm,0.8s
HHC Hu-ho-hao-te 31.61 341⇓*i*P **P** **21 25 43.9 +0.6**
HHC S **S** **21 30 52.0 +1.8**
HHC pmax pmax
comp=Z,28nm,0.9s
HHC pmax pmax
comp=Z,260nm,7.6s
HHC L L
comp=Z,2μm,20.2s
HHC L L
comp=Z,1μm,19.9s
HHC L L
comp=Z,2μm,18.5s
PSTR Posyet 31.66 9⇓*e*P **P** **21 25 41.2 -2.3**
BTO2 Baotou 32.09 339*e*P **P** **21 25 48.4 +0.9**
BTO2 sP **sP** **21 26 06.4 +5.1**
BTO2 PP **PnPn** **21 26 56.0 +2.3**
BTO2 S **S** **21 30 59.0 +1.3**
BTO2 pmax pmax
comp=Z,24nm,0.6s
BTO2 pmax pmax
comp=Z,490nm,4.8s
BTO2 L L

BTO2 L L
comp=Z,7μm,17.0s
BTO2 L L
comp=Z,2μm,18.0s
VLA Vladivostok 32.29 10⇑ *e*P **P 21 25 47.1 -1.9**
VLA pmax pmax
comp=Z,41nm,0.9s
WB0 Warramunga Arr 32.33 163 P P 21 25 48.5 -1.2
WB0 IAmb IAmb 21 26 10.7
comp=Z,18nm,0.8s
CN2 Changchun 32.37 1 P **P 21 25 50.4 +0.7**
CN2 S **S 21 31 00.5 -1.1**
CN2 sS sS 21 31 20.8 +3.2
CN2 SS **SnSn 21 32 57.8 +2.1**
CN2 L L
comp=Z,1μm,16.0s
CN2 L L
comp=Z,1μm,16.0s
CN2 L L
comp=Z,2μm,17.0s
WRAB Tennant Creek 32.48 163 P **P 21 25 50.7 -0.2**
WRAB Tennant Creek 32.48 163 P **P 21 25 49.9 -1.0**
WRAB IAmb IAmb 21 26 20.4
comp=Z,57nm,1.6s
WRAB Tennant Creek 32.48 163 *de*P **P 21 25 49.5 -1.4**
WRAB pmax pmax
comp=Z,57nm,1.9s
WRA Warramunga Arr 32.48 163 P **P 21 25 49.6 -1.4**
comp=Z,3.4nm,0.4s,baz=341,slow=9.0,SNR=58
WRA PcP **PcP 21 28 36.4 -1.3**
comp=Z,8.6nm,1.0s,baz=344,slow=3.5,SNR=5.6
comp=Z,3.4nm,0.4s
WRA Warramunga Arr 32.48 163 P **P 21 25 49.2 -1.8**
WRA **PcP 21 28 36.2 -1.4**
WRA Warramunga Arr 32.48 163 P **P 21 25 49.2 -1.8**
WRA 21 28 36.3
WRA pmax pmax
comp=Z,3.0nm,1.6s
WR8 Warramunga Arr 32.54 163 P **P 21 25 50.1 -1.4**
WR8 IAmb IAmb 21 25 51.6
comp=Z,36nm,1.3s
PSA00 Pilbara Seismi 33.04 188 P **P 21 25 54.7 -1.1**
XLT XiLinHaoTe 33.31 349 *e*P **P 21 25 57.7 -0.4**
XLT S **S 21 31 15.0 -1.5**
XLT pmax pmax
comp=Z,22nm,1.2s
XLT L L
comp=Z,1μm,18.3s
XLT L L
comp=Z,2μm,18.2s
USRK Ussuriysk Ar. 33.35 10 P **P 21 25 58.6 +0.3**
comp=Z,29nm,0.7s,baz=192,slow=7.1,SNR=41
comp=Z,29nm,0.7s
MDJ Mudanjiang 33.44 6 P **P 21 26 00.8 +1.7**
MDJ Mudanjiang 33.44 6 P **P 21 25 59.2 +0.2**
MDJ IAmb IAmb 21 26 01.5
comp=Z,43nm,1.1s
BRDH Bariadhala 33.50 294 LR LR 21 40 33.4
comp=Z,773nm,18.2s,baz=111,slow=38
SHL Shillong 34.10 299 P P 21 26 03.6 -1.7
SHL IAmb IAmb 21 26 11.1
comp=Z,38nm,0.8s
SHL Shillong 34.10 299 P **P 21 26 03.6 -1.7**
SHL pmax pmax
comp=Z,38nm,0.8s
SHL Shillong 34.10 299 P **P 21 26 03.9 -1.4**
SNR=16
BNX BinXian 34.38 3 ⇓P **P 21 26 07.1 -0.1**
BNX sP **sP 21 26 24.2 +3.2**
BNX S **S 21 31 36.4 +3.6**
BNX pmax pmax
comp=Z,33nm,1.0s
BNX pmax pmax
comp=Z,130nm,3.6s
BNX L L
comp=Z,1μm,13.5s
BNX L L
comp=Z,1μm,13.1s
BNX L L
comp=Z,770nm,17.7s
QIS Mount Isa 34.90 155 P **P 21 26 11.1 -1.0**
comp=Z,54nm,1.0s
QIS Mount Isa 34.90 155 P **P 21 26 11.2 -0.9**
MTSU Mount Surprise 35.09 146 P **P 21 26 13.7 0.0**
comp=Z,15nm,0.8s
MTSU Mount Surprise 35.09 146 P **P 21 26 14.7 +1.0**
GIRL Giralia 35.28 197 P **P 21 26 13.4 -1.9**
comp=Z,56nm,1.5s
GTA2 Gaotai 35.74 326 P **P 21 26 19.4 +0.2**
GTA2 S **S 21 31 56.6 +2.4**
GTA2 pmax pmax
comp=Z,25nm,1.4s
GTA2 pmax pmax
comp=Z,240nm,6.0s
GTA2 L L
comp=Z,6μm,21.9s
GTA2 L L
comp=Z,5μm,20.3s
GTA2 L L
comp=Z,3μm,19.0s
AS31 Alice Springs 35.92 166 P 21 26 21.0 +0.2
ASAR Alice Springs 35.92 166 P **P 21 26 20.5 -0.3**
comp=Z,15nm,0.5s,baz=348,slow=7.8,SNR=266
ASAR PcP **PcP 21 28 46.5 -1.0**
comp=Z,4.2nm,0.7s,baz=346,slow=4.4,SNR=4.2
comp=Z,15nm,0.5s
ASAR Alice Springs 35.92 166 P **P 21 26 20.8 +0.1**
ASAR **PcP 21 28 46.6 -0.8**
ASAJ Asahikawa 36.14 22 P **P 21 26 24.1 +1.7**
comp=Z,5.7nm,0.6s,baz=192,slow=5.6,SNR=4.9
ASAJ LR LR 21 38 38.8
comp=Z,787nm,21.4s,baz=218,slow=32
comp=Z,5.7nm,0.6s
JKA Kamikawa-asahi 36.14 22 IAmb IAmb 21 26 51.1
comp=Z,29nm,1.1s
LSA Lhasa 36.17 305 P **P 21 26 23.3 -0.2**
LSA P **P 21 26 23.3 -0.2**
LSA Lhasa 36.17 305 P **P 21 26 20.2 -3.3**
LSA S **S 21 31 52.9 -8.9**
LSA pmax pmax
comp=Z,18nm,1.1s
LSA L L
comp=Z,570nm,20.1s
LSA L L
comp=Z,450nm,18.3s
LSA L L
comp=Z,790nm,16.5s
WRKA Warakurna 36.31 175 P **P 21 26 24.1 0.0**
comp=Z,31nm,1.1s
GOMU GeErMu 36.64 317 P **P 21 26 27.8 +0.6**
GOMU S **S 21 32 12.1 +3.6**
GOMU pmax pmax
comp=Z,49nm,1.1s
GOMU L L
comp=Z,1μm,15.0s
GOMU L L
comp=Z,2μm,14.4s
GOMU L L
comp=Z,3μm,14.8s
CTAO Charters Tower 37.73 146 P **P 21 26 38.3 +2.0**
CTAO Charters Tower 37.73 146 P **P 21 26 36.1 -0.2**
CTAO Charters Tower 37.73 146 P **P 21 26 36.1 -0.2**
CTAO pmax pmax
comp=Z,28nm,1.4s
MEEK Meekatharra 38.20 189 P **P 21 26 43.3 +3.2**
KLR Kul'dur 38.24 7 P **P 21 26 40.2 0.0**
comp=Z,18nm,1.1s,baz=221,slow=5.6,SNR=29
KLR PcP **PcP 21 28 54.3 +0.3**
comp=Z,5.1nm,0.8s,baz=214,slow=3.6,SNR=3.9
comp=Z,18nm,1.1s
KLR Kul'dur 38.24 7*c i*P **P 21 26 40.1 0.0**
KLR pmax pmax
comp=Z,33nm,1.3s
YSS Yuzhno-Sakhali 38.65 20 P **P 21 26 44.4 +0.8**
YSS Yuzhno-Sakhali 38.65 20 *e*P **P 21 26 44.8 +1.2**
YSS *e*S **S 21 32 36.4 -1.6**
YSS pmax pmax
comp=Z,20nm,0.8s
YSS MLR MLR
comp=E,500nm,16.0s
YSS MLR MLR
comp=Z,700nm,16.0s
HEH HeiHe 38.88 3 *e*P **P 21 26 45.5 0.0**
HEH PcP **PcP 21 28 59.5 +3.5**
HEH S **S 21 32 43.0 +1.7**
HEH pmax pmax
comp=Z,290nm,4.4s
HEH L L
comp=Z,340nm,16.2s
HEH L L
comp=Z,2μm,16.3s
HEH L L
comp=Z,1μm,18.0s
EVN Everest 39.14 301 P 21 26 48.3 -0.5
EVN IAmb IAmb 21 27 02.2
comp=Z,52nm,0.9s
ULN Ulaanbaatar 39.33 341 P **P 21 26 49.4 -0.1**
ULN Ulaanbaatar 39.33 341*c i*P **P 21 26 49.6 +0.1**
ULN pmax pmax
comp=Z,37nm,1.1s
ULN Ulaanbaatar 39.33 341 P **P 21 26 46.7 -2.8**
ULN P **P 21 26 46.7 -2.8**
ULN S S 21 32 36.0 -13
ULN S S 21 32 36.0 -13
SONM Songino Array 39.51 341 P **P 21 26 51.0 0.0**
comp=Z,14nm,1.0s,baz=162,slow=8.9,SNR=42
SONM PcP **PcP 21 28 58.8 +0.6**
comp=Z,1.6nm,0.7s,baz=161,slow=6.1,SNR=1.6
comp=Z,14nm,1.0s
SONM Songino Array 39.51 341 P **P 21 26 50.7 -0.4**
SONM **PcP 21 28 59.2 +1.0**
TATA Tatamba Isabel 40.02 118 P **P 21 26 56.4 +0.9**
GRNR Gornyy 40.49 11⇑ *i*P **P 21 26 59.7 +0.8**
GRNR pmax pmax
comp=Z,10.0nm,1.0s
GRNR MLR MLR
comp=E,260nm,16.0s
GRNR MLR MLR
comp=N,490nm,19.0s
GRNR MLR MLR
comp=Z,700nm,15.0s
HNR Honiara 40.65 119 LR LR 21 45 10.4
comp=Z,15nm,18.1s,baz=12,slow=38
MORW Morawa 41.02 192 P **P 21 27 06.4 +2.9**
MORW Morawa 41.02 192 P **P 21 27 02.4 -1.1**
MORW IAmb IAmb 21 27 21.8
comp=Z,45nm,1.1s
CIT Chita 41.59 350 *e*P **P 21 27 08.2 +0.2**
CIT *e* 21 27 14.6
CIT *e* 21 28 46.6
CIT *e* 21 29 06.0
CIT *e* 21 29 23.2
CIT pmax pmax
comp=Z,73nm,2.8s
INKA Innaminka 41.83 158 P 21 27 10.0 -0.1
FORT Forrest 41.98 176 P **P 21 27 12.4 +1.0**
comp=Z,60nm,0.7s
FORT Forrest 41.98 176 P **P 21 27 11.0 -0.4**
FORT IAmb IAmb 21 27 18.0
comp=Z,36nm,0.7s
TYV Tymovskoe 42.08 17 *e*P **P 21 27 13.4 +1.5**
TYV *e*S **S 21 33 29.9 +0.8**
TYV pmax pmax
comp=Z,14nm,1.3s
TYV pmax pmax
comp=Z,300nm,3.3s
TYV smax smax
comp=N,100nm,4.9s
TYV smax smax
comp=E,100nm,4.9s
QLP Quilpie 42.19 154 P **P 21 27 12.3 -0.8**
comp=Z,39nm,0.8s
QLP Quilpie 42.19 154 P **P 21 27 12.9 -0.2**
ZEA Zeya 42.35 2 *e*P **P 21 27 13.9 -0.3**
ZEA *e*S **S 21 33 32.8 -0.2**
ZEA pmax pmax
comp=N,10.0nm,0.9s
ZEA pmax pmax
comp=Z,20nm,1.0s
ZEA pmax pmax
comp=N,100nm,3.8s
ZEA pmax pmax
comp=Z,100nm,4.4s
ZEA smax smax
comp=N,200nm,12.8s
ZEA MLR MLR
comp=E,700nm,15.0s
ZEA MLR MLR
comp=N,500nm,17.0s
ZEA MLR MLR
comp=Z,700nm,14.0s
KMBL Kambalda 42.53 184 P **P 21 27 15.0 -0.9**
comp=Z,22nm,1.0s
ZAK Zakamensk 42.75 340 *e*P **P 21 27 16.5 -1.1**
ZAK pmax pmax
comp=Z,18nm,1.7s
KLBR Kellerberrin 43.19 189 P **P 21 27 20.1 -1.1**
comp=Z,44nm,0.9s
PALK Palkekele 43.59 269 LR LR 21 48 00.6
comp=Z,917nm,18.0s,baz=84,slow=40
TLY Talaya 43.74 341 LR LR 21 47 55.5
comp=Z,887nm,18.6s,baz=144,slow=39
TLY Talaya 43.74 341 P **P 21 27 25.4 -0.1**
TLY Talaya 43.74 341 *de*P **P 21 27 25.2 -0.3**
TLY pmax pmax
comp=Z,31nm,1.0s
TLY Talaya 43.74 341 P **P 21 27 23.5 -1.9**
TLY P **P 21 27 23.5 -1.9**
IRK Irkutsk 44.03 342 *e*P **P 21 27 26.8 -1.0**
IRK pmax pmax
comp=Z,69nm,2.3s
NWAO Narrogin (SRO) 44.58 189 LR LR 21 47 22.1
comp=Z,635nm,21.5s,baz=8.0,slow=38
EIDS Eidsvold 44.61 145 P **P 21 27 32.3 -0.4**
comp=Z,12nm,0.7s
EIDS Eidsvold 44.61 145 P **P 21 27 34.4 +1.7**
EIDS Eidsvold 44.61 145 IAmb IAmb 21 29 17.4
comp=Z,15nm,0.4s
MOY Mondy 44.61 339 *e*P **P 21 27 32.4 -0.2**
MOY pmax pmax
comp=Z,94nm,2.4s
HYB Hyderabad 45.04 283 *e*P **P 21 27 36.0 -0.4**
HYB *ep*P **pP 21 27 39.1 -7.2**
HYB IVmB_BB 21 27 41.5
comp=Z,497nm,2.6s
HYB *e*PcP **PcP 21 29 17.4 +0.4**
HYB *e*PP **PP 21 29 22.0 -0.1**
HYB *e*S **S 21 34 15.5 +2.1**
HYB IVMs_BB IVMs_BB 21 42 23.2
comp=Z,213nm,19.9s
KNGR Kungurtug, Tuv 45.07 336⇓ *i*P **P 21 27 37.0 +0.8**
KNGR pmax pmax
comp=Z,24nm,1.2s
BBOO Buckleboo 45.20 166 P **P 21 27 37.2 -0.2**
comp=Z,88nm,0.6s
BBOO Buckleboo 45.20 166 P **P 21 27 38.2 +0.9**
BBOO Buckleboo 45.20 166 P **P 21 27 37.3 0.0**
WMQ Urumqi 45.46 322 *e*P **P 21 27 40.3 +0.9**
WMQ sP sP 21 27 56.2 +2.9
WMQ pmax pmax
comp=Z,23nm,0.9s
WMQ pmax pmax
comp=Z,310nm,4.5s
WMQ L L
comp=Z,8μm,20.3s
WMQ L L
comp=Z,3μm,17.5s
WMQ L L
comp=Z,3μm,18.1s
STKA Stephens Creek 45.90 160 P **P 21 27 43.4 +0.6**
comp=Z,281nm,1.0s
STKA Stephens Creek 45.90 160 P **P 21 27 42.6 -0.2**
comp=Z,15nm,0.6s,baz=333,slow=8.1,SNR=31
STKA LR LR 21 49 47.3
comp=Z,973nm,20.2s,baz=331,slow=40
comp=Z,15nm,0.6s
STKA Stephens Creek 45.90 160 P **P 21 27 44.2 +1.4**
STKA Stephens Creek 45.90 160 P **P 21 27 42.6 -0.2**
STKA Stephens Creek 45.90 160⇓ *e*P **P 21 27 43.1 +0.3**
AULRC Lightning Ridg 46.32 152 P **P 21 27 48.9 +2.7**
HTT Hallett 46.52 164 P **P 21 27 48.4 +0.7**
comp=Z,18nm,2.5s
HTT Hallett 46.52 164 P **P 21 27 49.1 +1.4**
TW1H Toowoomba 1 Ha 46.81 146 P **P 21 27 51.4 +1.2**
AUBSH Beerwah State 46.82 145 P **P 21 27 51.1 +0.9**
CMSA Cobar Meteorol 47.12 155 P **P 21 27 53.2 +0.7**
comp=Z,56nm,1.7s
CMSA Cobar Meteorol 47.12 155 P **P 21 27 53.2 +0.7**
AUMAR Marden Senior 47.82 165 P **P 21 27 59.0 +1.2**
ARMA Armidale 48.91 149 P **P 21 28 06.8 +0.4**
comp=Z,24nm,1.6s
ARMA Armidale 48.91 149 P **P 21 28 07.8 +1.3**
ARMA Armidale 48.91 149 P **P 21 28 07.2 +0.7**
ARMA IAmb IAmb 21 28 13.7
comp=Z,59nm,1.6s
AUDCS Dubbo College 48.98 153 P **P 21 28 09.1 +2.3**
DGZ Jazzator, Alta 49.08 329⇑ *i*P **P 21 28 07.8 +0.3**
DGZ pmax pmax
comp=Z,27nm,1.0s
AUPHS Peel High Scho 49.10 150 P **P 21 28 09.0 +1.2**
ZSN Zaisan 49.13 325 *e*P **P 21 28 07.9 +0.1**
ZSN Zaisan 49.13 325 *e*P **P 21 28 07.9 +0.1**
PEA0B Petropavlovsk- 49.34 26 P **P 21 28 10.6 +1.3**
PEA0B Petropavlovsk- 49.34 26⇓ *e*P **P 21 28 10.0 +0.7**
PETK Petropavlovsk- 49.34 26 P **P 21 28 09.6 +0.3**
comp=Z,8.0nm,0.7s,baz=186,slow=3.6,SNR=16
PETK LR LR 21 46 34.7
comp=Z,604nm,21.4s,baz=218,slow=33
comp=Z,8.0nm,0.7s
PETK Petropavlovsk- 49.34 26 P **P 21 28 10.6 +1.3**
PET Petropavlovsk 49.69 26 *e*P **P 21 28 13.4 +1.5**
PET *e*S **S 21 35 15.9 -2.5**
PET pmax pmax
comp=Z,39nm,1.7s
PET MLR MLR
comp=Z,300nm,16.0s
PET MLR MLR
comp=Z,400nm,15.0s
MK31 Makanchi Array 50.27 323⇓ *i*P **P 21 28 17.1 +0.6**
MKAR Makanchi Array 50.27 323 P **P 21 28 16.6 0.0**
comp=Z,6.8nm,0.6s,baz=121,slow=9.0,SNR=61
MKAR PcP **PcP 21 29 35.5 +0.4**
comp=Z,11nm,1.0s,baz=129,slow=3.9,SNR=1.7
comp=Z,6.8nm,0.6s
MKAR Makanchi Array 50.27 323 P **P 21 28 16.7 +0.1**
MKAR **PcP 21 29 34.9 -0.3**
MKAR Makanchi Array 50.27 323 P **P 21 28 16.7 +0.1**
MKAR 21 29 34.9
SHLS Shalkode 50.34 318 *e*P **P 21 28 15.0 -2.3**
SHLS pmax pmax
comp=Z,19nm,1.1s
SHLS Shalkode 50.34 318 *e*P **P 21 28 15.0 -2.3**
comp=Z,19nm,1.1s
ARPS Mount Arapiles 50.48 162 P **P 21 28 15.5 -2.6**
UZB Uzynbulak 50.63 317 *e*P **P 21 28 18.8 -0.7**
UZB pmax pmax
comp=Z,23nm,1.3s
UZB Uzynbulak 50.63 317 *e*P **P 21 28 18.8 -0.7**
comp=Z,23nm,1.3s
YNG Young 50.64 155 P **P 21 28 21.0 +1.5**
comp=Z,26nm,2.2s
YAK Yakutsk 50.75 3 P **P 21 28 19.9 +0.1**
comp=Z,27nm,0.4s,baz=173,slow=2.5,SNR=51
YAK LR LR 21 52 46.5
comp=Z,644nm,18.2s,baz=179,slow=40
comp=Z,27nm,0.4s
YAK Yakutsk 50.75 3 P **P 21 28 19.1 -0.7**
YAK Yakutsk 50.75 3*c i*P **P 21 28 19.9 +0.1**
YAK *e**PP **sP 21 28 34.1 +0.2**
YAK *e* 21 29 35.8
YAK *e* 21 30 16.4
YAK *e*PPP PPP 21 31 12.7
YAK *e*S **S 21 35 31.8 -1.1**
YAK *e* 21 38 02.1
YAK *e*SS **SS 21 39 09.0 +1.4**
YAK *e*SSS SSS 21 40 42.9
YAK pmax pmax
comp=Z,168nm,1.8s
YAK pmax pmax
comp=N,81nm,1.8s
YAK pmax pmax
comp=E,27nm,2.0s
YAK pmax pmax
comp=Z,188nm,5.9s
YAK pmax pmax
comp=N,225nm,6.4s
YAK pmax pmax
comp=E,121nm,6.2s
YAK smax smax
comp=N,301nm,6.8s
YAK smax smax
comp=E,124nm,4.3s
YAK MLR MLR
comp=Z,1μm,31.0s
YAK MLR MLR
comp=N,584nm,16.0s
YAK MLR MLR
comp=E,292nm,15.0s
PRZ Przheval'sk 50.77 316 IAmb IAmb 21 28 30.1
comp=Z,38nm,0.9s
KPKS Kokpek 50.99 318 *e*P **P 21 28 21.8 -0.3**
KPKS Kokpek 50.99 318 *e*P **P 21 28 21.8 -0.3**
SATY Saty 51.00 317 *e*P **P 21 28 21.6 -0.7**
SATY pmax pmax
comp=Z,17nm,1.1s
SATY Saty 51.00 317 *e*P **P 21 28 21.6 -0.7**
comp=Z,17nm,1.1s
HMDM Hanimaadhoo 51.04 270 P P 21 28 30.5 +7.7
KDJ Kajisay 51.47 315 IAmb IAmb 21 28 34.5
comp=Z,18nm,0.8s
KSH2 Kashi 51.57 311 P **P 21 28 27.0 +0.4**
KSH2 pmax pmax
comp=Z,23nm,1.3s
KSH2 L L
comp=Z,2μm,19.4s
KSH2 L L
comp=Z,2μm,21.2s
KSH2 L L
comp=Z,2μm,20.8s
AUDAR Daramalan Coll 51.77 154 P **P 21 28 29.5 +1.6**
AUMTS Mt Stromlo 51.77 155 P **P 21 28 29.1 +1.2**
CAN Canberra 51.77 155 P **P 21 28 29.3 +1.4**
CAN Canberra 51.77 155 IAmb IAmb 21 28 41.7
comp=Z,67nm,1.3s
TDK Taldyqorghan 51.82 319 *e*P **P 21 28 28.0 -0.2**
TDK pmax pmax
comp=Z,19nm,0.8s
TDK Taldyqorghan 51.82 319 *e*P **P 21 28 28.1 -0.2**
comp=Z,19nm,0.8s
BRAT Ballarat 51.85 161 P **P 21 28 29.9 +1.5**
NIL Nilore 51.88 304 P **P 21 28 27.9 -1.0**
NIL Nilore 51.88 304 P **P 21 28 27.9 -1.0**
NIL pmax pmax
comp=Z,72nm,1.1s
NIL Nilore 51.88 304 P **P 21 28 28.6 -0.3**
NIL P **P 21 28 28.6 -0.3**
MA2 Magadan 51.95 16 P **P 21 28 29.1 +0.2**
comp=Z,14nm,0.7s,baz=194,slow=6.1,SNR=18
comp=Z,14nm,0.7s
MA2 Magadan 51.95 16 P **P 21 28 30.0 +1.1**
MA2 Magadan 51.95 16 P **P 21 28 29.1 +0.2**
MA2 IAmb IAmb 21 28 30.7
comp=Z,23nm,1.0s
MA2 Magadan 51.95 16*ce*P **P 21 28 29.4 +0.6**
MA2 pmax pmax
comp=Z,29nm,1.1s
MA2 Magadan 51.95 16 P **P 21 28 29.5 +0.6**
comp=Z,29nm,1.0s
MDOK Medeo 51.96 317 *e*P **P 21 28 28.9 -0.5**
MDOK Medeo 51.96 317 *e*P **P 21 28 29.0 -0.5**
TNSS Tian-Shan 51.98 316 *e*P **P 21 28 29.1 -0.8**
TNSS Tian-Shan 51.98 316 *e*P **P 21 28 29.1 -0.8**
NRN Naryn 52.03 314 IAmb IAmb 21 28 37.9
comp=Z,41nm,1.4s
AAA Alma-Ata 52.06 317 *e*P **P 21 28 29.6 -0.5**
AAA pmax pmax
comp=Z,20nm,0.7s
AAA Alma-Ata 52.06 317 *e*P **P 21 28 29.7 -0.5**
comp=Z,20nm,0.7s
TOO Toolangi 52.40 159 P **P 21 28 33.0 +0.5**
comp=Z,20nm,2.2s
TOO Toolangi 52.40 159 P **P 21 28 33.6 +1.1**
TOO Toolangi 52.40 159 P **P 21 28 33.6 +1.1**
TOO pmax pmax
comp=Z,14nm,1.0s
DZM Mont Dzumac 52.69 129 *e*P **P 21 28 35.3 +0.2**
comp=Z,74nm,1.1s
DZM *e*PP **PP 21 30 27.1 -7.5**
comp=Z,98nm,24.2s
DZM *e*S **S 21 36 08.3 +7.3**
comp=Z,318nm,28.4s
DZM *e*SS **SS 21 39 42.3 +2.2**
comp=Z,467nm,29.0s
DZM *e*LQ LQ 21 41 28.7
comp=Z,1μm,37.5s
DZM *e*LR LR 21 43 43.5
comp=Z,1μm,26.8s

DZM **Mont Dzumac** 52.69 129 P **P** 21 28 35.7 +0.6
DZM **Mont Dzumac** 52.69 129 IAmb IAmb 21 28 36.5
comp=Z,27nm,0.7s
ZAA0 **Zalesovo Array** 52.98 332 IAmb IAmb 21 28 45.7
comp=Z,19nm,0.9s
ZALV **Zalesovo Beam** 52.98 332 P **P** 21 28 36.0 -0.6
comp=Z,9.1nm,0.7s,baz=116,slow=6.8,SNR=25
ZALV PcP **PcP** 21 29 44.9 -0.1
comp=Z,2.4nm,0.6s,baz=132,slow=5.5,SNR=1.1
ZALV LR LR 21 51 32.8
comp=Z,1µm,21.1s,baz=128,slow=36
comp=Z,9.1nm,0.7s
ZALV **Zalesovo Beam** 52.98 332 P **P** 21 28 36.0 -0.6
ZALV **PcP** 21 29 45.1 0.0
ZALV **Zalesovo Beam** 52.98 332 *i* P **P** 21 28 36.2 -0.4
ZALV pmax pmax
comp=Z,9.0nm,0.7s
OUENC **Quen Island, N** 53.19 129 P **P** 21 28 39.7 +1.1
SEM **Semipalatinsk** 53.29 326 *e*P **P** 21 28 38.7 -0.5
SEM pmax pmax
comp=Z,17nm,1.5s
SEM **Semipalatinsk** 53.29 326 *e*P **P** 21 28 38.8 -0.5
comp=Z,17nm,1.5s
AAK **Ala-Archa** 53.51 315⇑ *e*P **P** 21 28 41.5 +0.6
AAK pmax pmax
comp=Z,33nm,2.3s
SGDS **Sogindy** 53.70 316 *e*P **P** 21 28 41.8 -0.5
ARSB **Arslanbob** 54.14 313 IAmb IAmb 21 28 54.9
comp=Z,21nm,0.8s
KURK **Kurchatov** 54.34 326 P **P** 21 28 46.7 +0.1
KURK **Kurchatov** 54.34 326 *d* P **P** 21 28 46.9 +0.3
KURK pmax pmax
comp=Z,57nm,1.7s
KURK **Kurchatov** 54.34 326 P **P** 21 28 47.3 +0.7
KURBB **Kurchatov Arra** 54.34 326 P **P** 21 28 46.5 -0.1
comp=Z,12nm,0.9s,baz=124,slow=7.0,SNR=81
KURBB LR LR 21 50 55.0
comp=Z,1µm,21.6s,baz=160,slow=35
comp=Z,12nm,0.9s
SEY **Seymchan** 55.19 15 P **P** 21 28 53.8 +1.2
comp=Z,6.8nm,0.7s,baz=228,slow=5.8,SNR=55
SEY LR LR 21 53 36.9
comp=Z,403nm,19.8s,baz=230,slow=37
comp=Z,6.8nm,0.7s
SEY **Seymchan** 55.19 15⇑ *i* P **P** 21 28 53.9 +1.3
SEY pmax pmax
comp=Z,15nm,0.9s
BTK **Batken** 55.34 311 IAmb IAmb 21 29 11.2
comp=Z,32nm,1.0s
KBL **Kabul** 55.48 304 P **P** 21 28 54.5 -1.0
KBL IAmb IAmb 21 29 09.6
comp=Z,41nm,1.0s
KBL **Kabul** 55.48 304 P **P** 21 28 54.5 -1.0
KBL pmax pmax
comp=Z,41nm,1.0s
KBL **Kabul** 55.48 304 P **P** 21 28 55.1 -0.3
SNR=19
KBL P **P** 21 28 55.1 -0.3
SNR=19
DZA **Taraz** 55.79 314 *e*P **P** 21 28 57.2 -0.1
DZA pmax pmax
comp=Z,21nm,0.9s
DZA **Taraz** 55.79 314 *e*P **P** 21 28 57.2 -0.1
comp=Z,21nm,0.9s
CHGR **Chuyangaron** 56.24 309⇑ *i* P **P** 21 29 00.3 -0.4
CHGR pmax pmax
comp=Z,70nm,0.9s
KKAR **Karatay Array** 56.43 315 P **P** 21 29 01.0 -0.9
KKAR **Karatay Array** 56.43 315 P **P** 21 29 01.0 -0.9
IUG **Iuzhnay** 56.49 313 *c i* P **P** 21 29 02.1 -0.3
IUG pmax pmax
comp=Z,20nm,0.7s
IUG **Iuzhnay** 56.49 313⇑ *i* P **P** 21 29 02.1 -0.3
comp=Z,20nm,0.7s
CHM **Chimkent** 56.84 313 *e*P **P** 21 29 04.5 -0.3
CHM pmax pmax
comp=Z,12nm,0.8s
CHM **Chimkent** 56.84 313 *e*P **P** 21 29 04.6 -0.3
comp=Z,12nm,0.8s
BRLS **Boroldaу** 56.88 314 *c i* P **P** 21 29 05.0 -0.1
BRLS pmax pmax
comp=Z,17nm,0.9s
BRLS **Boroldaу** 56.88 314⇑ *i* P **P** 21 29 05.0 -0.1
comp=Z,17nm,0.9s
SHEM **Shemya Is, Ala** 57.10 33 LR LR 21 49 57.3
comp=Z,180nm,21.1s,baz=271,slow=32
BRZS **Berezniki** 57.42 323 *e*P **P** 21 29 08.5 -0.2
BRZS **Berezniki** 57.42 323 *e*P **P** 21 29 08.6 -0.2
BVAR **Borovoye Array** 59.94 325 P **P** 21 29 26.4 +0.2
comp=Z,6.7nm,1.0s,baz=110,slow=8.1,SNR=11
BVAR LR LR 21 54 27.6
comp=Z,1µm,19.7s,baz=111,slow=35
comp=Z,6.7nm,1.0s
BORK **Borovoye** 59.98 325 P **P** 21 29 25.6 -0.8
BORK IAmb IAmb 21 29 38.4
comp=Z,20nm,0.8s
BORK **Borovoye** 59.98 325⇑ *e*P **P** 21 29 26.1 -0.4
BORK pmax pmax
comp=Z,29nm,0.9s
MSVF **Nonsavu** 60.06 118 P **P** 21 29 28.5 +0.8
TIXI **Tiksi** 60.34 2 LR LR 21 58 29.0
comp=Z,1µm,19.3s,baz=198,slow=39
TIXI **Tiksi** 60.34 2 P **P** 21 29 27.9 -0.7
TIXI **Tiksi** 60.34 2⇑ *e*P **P** 21 29 28.0 -0.6
TIXI pmax pmax
comp=Z,53nm,1.1s
DGTI **Dogotuki** 60.95 116 P **P** 21 29 34.5 +0.8
HRA **Herat** 61.02 303 P **P** 21 29 32.6 -1.6
NRIK **Noril'sk** 62.63 346 P **P** 21 29 43.8 -0.3
comp=Z,25nm,1.0s,baz=133,slow=6.2,SNR=41
NRIK LR LR 21 59 19.3
comp=Z,2µm,18.0s,baz=154,slow=38
comp=Z,25nm,1.0s
NRIK **Noril'sk** 62.63 346 P **P** 21 29 43.3 -0.8
NRIK **Noril'sk** 62.63 346 *c i* P **P** 21 29 43.6 -0.5
NRIK pmax pmax
comp=Z,43nm,1.0s
BILL **Bilibino** 62.82 16 P **P** 21 29 45.2 -0.2
BILL IAmb IAmb 21 29 46.9
comp=Z,30nm,1.2s
BILL **Bilibino** 62.82 16 *ce*P **P** 21 29 45.5 +0.1
BILL pmax pmax
comp=Z,39nm,1.5s
JLN **Jalan Bani Buh** 63.06 289 P **P** 21 29 50.7 +2.9
WBK **Wadi Bani Khal** 63.45 290 P **P** 21 29 53.6 +3.1
WBK P **P** 21 29 53.6 +3.1
WSAR **Wadi Sarin** 63.75 290 P **P** 21 29 55.9 +3.5
SMDO **Samad** 64.29 290 P **P** 21 29 59.8 +3.8
SMDO P **P** 21 29 59.8 +3.8
MHTO **MHTO** 64.45 288 P **P** 21 30 00.4 +3.4
SNR=6.5
MHTO P **P** 21 30 00.4 +3.4
SNR=6.5
HOQ **Hoqain** 64.95 291 P **P** 21 30 03.3 +3.0
AB31 **Akbulak array** 65.08 319 P **P** 21 29 59.9 -0.8
AB31 IAmb IAmb 21 30 08.3
comp=Z,26nm,0.9s
ABKAR **Akbulak array** 65.08 319 P **P** 21 29 59.5 -1.1
BSY **Bisya** 65.08 290 P **P** 21 30 04.9 +3.7
BANOM **Banah** 65.81 293 P **P** 21 30 09.3 +3.4
ALNE **Al Ain** 66.36 291 P **P** 21 30 12.8 +3.4
SNR=6.6
ALNE P **P** 21 30 12.8 +3.4
SNR=6.6
SVE **Sverdlovsk** 66.50 327 *e*P P 21 30 16.9 +7.3
AKTO **Aktyubinsk** 66.54 320 LR LR 21 58 53.3
comp=Z,2µm,20.3s,baz=89,slow=36
ASUD **Al Ashush, Dub** 66.73 292 P **P** 21 30 15.4 +3.8
SHAO **Shalim** 66.85 285 P P 21 30 17.3 +4.7
SHAO P P 21 30 17.3 +4.7
UMZA **Um Al Zommool** 66.97 290 P **P** 21 30 17.7 +4.5
UMZA P **P** 21 30 17.7 +4.5
AJN **Ajban** 67.04 292 P **P** 21 30 17.6 +4.0
SPIA **Saint Paul Isl** 67.11 32 P **P** 21 30 13.9 +0.5
baz=255
DMTO **DMTO** 67.52 285 P P 21 30 21.6 +4.8
DMTO P P 21 30 21.6 +4.8
ARTI **Arti** 67.60 327 LR LR 21 59 21.4
comp=Z,1µm,21.8s,baz=103,slow=36
ARTI **Arti** 67.60 327 P **P** 21 30 16.4 -0.2
ARTI IAmb IAmb 21 30 24.9
comp=Z,18nm,0.7s
ARTI **Arti** 67.60 327 *c i* P **P** 21 30 17.3 +0.7
ARTI 21 30 46.5
ARTI 21 32 40.0

ARTI S **S** 21 39 10.2 -0.9
ARTI pmax pmax
comp=Z,7.0nm,0.8s
QRZ **Quartz Range** 68.11 143 P **P** 21 30 21.7 +1.7
DOK **Doka** 68.22 286 P **P** 21 30 25.6 +4.4
SNR=8.3
DOK P **P** 21 30 25.6 +4.4
SNR=8.3
RBK **Rabkut** 68.25 284 P P 21 30 26.2 +4.7
SNR=6.7
RBK P P 21 30 26.2 +4.7
SNR=6.7
GAMB **Gambell** 68.37 25 P **P** 21 30 22.3 +1.1
baz=251
UNV **Unalaska Valle** 68.44 36 P **P** 21 30 22.8 +0.9
baz=260
RAO **Raoul Island** 68.45 128 LR LR 21 54 59.7
comp=Z,202nm,21.1s,baz=123,slow=31
MZR **Muzera** 68.50 290 P **P** 21 30 27.2 +4.3
SNR=5.7
MZR P **P** 21 30 27.2 +4.3
SNR=5.7
WHFO **Wadi Hawf** 68.62 285 P **P** 21 30 28.3 +4.5
SNR=5.8
WHFO P **P** 21 30 28.3 +4.5
SNR=5.8
RPZ **Rata Peaks** 69.11 146 LR LR 22 03 16.2
comp=Z,272nm,18.3s,baz=360,slow=38
URZ **Urewera** 69.46 138 LR LR 21 57 55.2
comp=Z,469nm,21.8s,baz=302,slow=33
BKZ **Black Stump Fm** 69.57 139 P **P** 21 30 30.2 +1.0
BKZ **Black Stump Fm** 69.57 139 P **P** 21 30 29.4 +0.2
RTZ **Ruatahuna** 69.58 139 P **P** 21 30 29.5 +0.2
M11K **Mekoryuk** 69.93 30 P **P** 21 30 31.4 +0.4
baz=257
TRNA **Turayna** 70.46 292 P **P** 21 30 38.3 +3.4
TNA **Tin City** 70.46 24 P **P** 21 30 34.3 +0.1
baz=254
SMRA **Abu-Samra** 70.81 292 P **P** 21 30 40.6 +3.5
K13K **Kusilvak Mount** 70.99 28 P **P** 21 30 38.4 +0.9
baz=258
F14K **Arctic Creek** 71.08 24 P **P** 21 30 38.4 +0.4
baz=256
ANM **Nome** 71.25 25 IAmb IAmb 21 31 10.2
comp=Z,33nm,1.9s
ANM **Nome** 71.25 25 P **P** 21 30 39.7 +0.7
baz=257
M13K **Dall Lake** 71.32 30 P **P** 21 30 39.8 +0.4
baz=260
J14K **Nanvaranak Lak** 71.66 27 P **P** 21 30 41.2 -0.3
baz=259
L14K **Kuka Creek** 71.80 29 P **P** 21 30 42.7 +0.3
baz=260
F15K **North Star Dit** 71.81 24 IAmb IAmb 21 30 51.7
comp=Z,50nm,1.9s
F15K **North Star Dit** 71.81 24 P **P** 21 30 43.0 +0.6
baz=257
G15K **Niukluk** 71.91 25 P **P** 21 30 43.9 +0.9
baz=258
M14K **Bethel** 72.05 30 P **P** 21 30 45.1 +1.2
baz=261
N14K **Kuskokwak Cree** 72.06 31 P **P** 21 30 44.5 +0.6
baz=262
SDPT **Sand Point** 72.13 35 P **P** 21 30 44.7 +0.3
baz=264
C16K **Lisburne Hills** 72.17 22 P **P** 21 30 44.8 +0.4
baz=256
O14K **Tigyukauivet M** 72.18 31 P **P** 21 30 45.1 +0.4
baz=262
L15K **Ungalak Mounta** 72.42 29 P **P** 21 30 47.0 +0.9
baz=261
K15K **Wolf Creek Mou** 72.50 28 P **P** 21 30 46.8 +0.2
baz=261
CHNA **Chernabura Isl** 72.58 36 P **P** 21 30 47.3 +0.2
baz=265
H16K **Elim** 72.59 26 P **P** 21 30 47.4 +0.4
baz=260
M15K **Kasigluk River** 72.66 30 P **P** 21 30 47.1 -0.5
baz=262
G16K **Koyuk River** 72.68 25 P **P** 21 30 47.7 +0.2
baz=259
KIRV **Kirov** 72.75 328 LR LR 22 02 46.9
comp=Z,1µm,21.2s,baz=97,slow=36
KIRV **Kirov** 72.75 328⇓ *e*P **P** 21 30 46.4 -1.7
D17K **Noatak River** 72.86 22 P **P** 21 30 49.6 +1.0
baz=258,SNR=7.3
AKT **Akhty** 72.86 310 *e*P **P** 21 30 48.2 -1.1
AKT *e* 21 31 05.0
AKT pmax pmax
comp=Z,38nm,1.4s
N15K **Kwethluk River** 72.89 30 P **P** 21 30 49.3 +0.4
baz=263
C17K **DeLong Mountai** 72.99 22 P **P** 21 30 50.0 +0.6
baz=258
RDOG **Red Dog Mine** 73.00 22 IAmb IAmb 21 31 27.5
comp=Z,21nm,1.4s
RDOG **Red Dog Mine** 73.00 22 P **P** 21 30 50.1 +0.7
baz=258
J16K **Anvik River** 73.08 27 P **P** 21 30 50.4 +0.4
baz=262
I17K **Unalakleet** 73.13 26 P **P** 21 30 50.8 +0.6
baz=261
E17K **Hotham Inlet** 73.21 23 P **P** 21 30 51.4 +0.7
baz=259,SNR=5.3
BELG **Belogornoye** 73.23 321 LR LR 22 05 36.5
comp=Z,630nm,19.1s,baz=88,slow=38
BELG **Belogornoye** 73.23 321⇑ *e*P **P** 21 30 53.1 +2.0
BELG pmax pmax
comp=Z,12nm,0.9s
KBD **Kabd** 73.31 297 P **P** 21 30 54.5 +2.5
F17K **Baldwin Pennin** 73.32 24 IAmb IAmb 21 31 36.5
comp=Z,17nm,1.1s
L16K **Owhat River** 73.38 29 P **P** 21 30 52.6 +0.8
baz=263
G17K **Kiwalik Mounta** 73.40 25 P **P** 21 30 52.2 +0.3
baz=261
M16K **Timber Creek** 73.54 30 P **P** 21 30 53.0 +0.2
baz=264
N16K **Nishlik Lake** 73.58 30 P **P** 21 30 52.9 -0.1
baz=264
H17K **Granite Mounta** 73.62 25 P **P** 21 30 53.7 +0.5
baz=262
C18K **Utukok River** 73.74 22 P **P** 21 30 54.4 +0.5
baz=259
E18K **Tukpahlearik C** 73.74 23 P **P** 21 30 54.6 +0.8
baz=260
O16K **Kokwok River B** 73.83 31 P **P** 21 30 54.8 +0.4
baz=265
P16K **Nushagak River** 73.83 32 P **P** 21 30 55.0 +0.5
baz=265
R16K **Pilot Point** 73.93 33 P **P** 21 30 55.9 +0.8
baz=266
F18K **Selawik** 73.98 24 P **P** 21 30 56.5 +1.4
baz=261,SNR=8.8
L17K **Donlin** 73.98 28 P **P** 21 30 57.0 +1.7
baz=264
K17K **Iditarod** 74.04 28 P **P** 21 30 56.8 +1.1
baz=264
A19K **Wainwright** 74.08 20 P **P** 21 30 57.0 +1.3
baz=259
G18K **Tagagawik** 74.28 25 P **P** 21 30 58.2 +1.2
baz=262
H18K **Honhosa River** 74.30 25 P **P** 21 30 58.5 +1.4
baz=263
M17K **Holitna River** 74.31 29 P **P** 21 30 58.3 +1.1
baz=265
O17K **Koliganek Bris** 74.35 31 P **P** 21 30 58.9 +1.4
baz=266
N17K **Nushagak Hills** 74.36 30 P **P** 21 30 58.6 +1.1
baz=265
C19K **Lookout Ridge** 74.39 21 IAmb IAmb 21 31 11.8
comp=Z,35nm,1.4s
C19K **Lookout Ridge** 74.39 21 P **P** 21 30 58.5 +0.9
baz=261
Q16K **King Salmon** 74.49 32 P **P** 21 30 59.4 +1.1
baz=266
R17L **Mt. Peulik Vol** 74.59 33 P **P** 21 30 59.8 +0.9
baz=267
P17K **Kvichak River** 74.64 32 P **P** 21 31 00.4 +1.2
baz=266
L18K **Granite Mounta** 74.74 28 P **P** 21 31 00.5 +0.8
baz=265
F19K **Shaleruckik Mo** 74.75 24 P **P** 21 31 00.5 +0.9
baz=263
D19K **Kuna River** 74.83 22 P **P** 21 31 01.0 +0.8
baz=262
J18K **Innoko River** 74.84 27 P **P** 21 31 00.8 +0.5
baz=265

Q17K **Contact Creek** 74.87 33 P **P** 21 31 00.7 0.0
baz=267
GCSA **Galena City Sc** 74.89 26 P **P** 21 31 00.6 +0.1
baz=264
CHIR **Chirikof Islan** 74.91 35 P **P** 21 31 01.5 +0.7
baz=268
N18K **Kilae Creek** 75.01 30 P **P** 21 31 02.4 +1.0
baz=266
E19K **Redstone River** 75.03 23 P **P** 21 31 02.0 +0.7
baz=263
M18K **Stony River** 75.09 29 P **P** 21 31 02.7 +1.0
baz=266
GNI **Garni** 75.16 309 LR LR 22 08 30.3
comp=Z,328nm,18.0s,baz=79,slow=39
P18K **Big Mountain,** 75.27 31 P **P** 21 31 03.2 +0.3
baz=267
O18K **Koktuh Hills** 75.30 31 IAmb IAmb 21 31 21.8
comp=Z,22nm,0.9s
O18K **Koktuh Hills** 75.30 31 P **P** 21 31 03.1 +0.1
baz=267
Q18K **Katmai Hardscr** 75.35 32 P **P** 21 31 03.4 0.0
baz=268
J19K **Poorman** 75.36 27 P **P** 21 31 04.0 +0.7
baz=266
B20K **Meade River** 75.37 20 IAmb IAmb 21 31 10.0
comp=Z,19nm,1.1s
B20K **Meade River** 75.37 20 P **P** 21 31 03.9 +0.7
baz=263
D20K **Etivluk River** 75.41 22 P **P** 21 31 04.2 +0.7
baz=264
E20K **Nigu River** 75.51 22 P **P** 21 31 05.4 +1.3
baz=264
F20K **Avaraart Lake** 75.57 23 P **P** 21 31 05.2 +0.8
baz=265
L19K **White Mountain** 75.60 29 P **P** 21 31 05.7 +1.0
baz=267
N19K **Bonanza Creek** 75.71 30 IAmb IAmb 21 31 24.8
comp=Z,24nm,1.2s
N19K **Bonanza Creek** 75.71 30 P **P** 21 31 06.1 +0.7
baz=268
A21K **Barrow** 75.71 19 P **P** 21 31 06.5 +1.4
baz=263
RAYN **Ar Rayn** 75.76 292 P **P** 21 31 05.1 -1.3
RAYN **Ar Rayn** 75.76 292 P **P** 21 31 05.1 -1.3
RAYN pmax pmax
comp=Z,71nm,1.6s
O19K **Port Alsworth** 75.76 31 P **P** 21 31 06.1 +0.5
baz=268
H20K **Anotleneega Mo** 75.79 25 P **P** 21 31 07.4 +1.7
baz=266
M19K **Big River Lodg** 75.80 29 P **P** 21 31 06.9 +1.0
baz=268
NCK **Nalchik** 75.88 312⇓ *e*P **P** 21 31 05.2 -1.5
NCK pmax pmax
comp=Z,35nm,1.9s
K20K **Telida** 76.02 27 P **P** 21 31 07.4 +0.3
baz=267
Q19K **Cape Douglas,** 76.07 32 P **P** 21 31 07.8 +0.3
baz=269
C21K **Knifeblade Rid** 76.11 21 P **P** 21 31 08.3 +0.9
baz=265
B21K **Ikpikpuk River** 76.21 21 IAmb IAmb 21 31 21.6
comp=Z,19nm,0.8s
B21K **Ikpikpuk River** 76.21 21 P **P** 21 31 09.1 +1.2
baz=265
A22K **Sinclair Lake** 76.21 19 P **P** 21 31 08.9 +0.9
baz=265
OHAK **Old Harbor** 76.23 34 P **P** 21 31 08.5 +0.1
baz=270
IMAR **Indian Mountai** 76.29 25 P **P** 21 31 09.0 +0.5
P19K **Oil Pt** 76.30 31 P **P** 21 31 09.4 +0.7
baz=269
E21K **Killik River** 76.35 22 P **P** 21 31 09.4 +0.5
baz=266
KBZ **Khabaz** 76.37 312 P **P** 21 31 08.4 -1.0
comp=Z,4.0nm,1.0s,baz=109,slow=3.6,SNR=5.9
KBZ LR LR 22 10 25.9
comp=Z,636nm,18.1s,baz=80,slow=40
comp=Z,4.0nm,1.0s
KBZ **Khabaz** 76.37 312⇑ *e*P **P** 21 31 07.5 -1.9
KBZ pmax pmax
comp=Z,23nm,1.3s
M20K **Styx River** 76.40 29 P **P** 21 31 10.2 +0.9
baz=269
G21K **Allakaket** 76.41 24 P **P** 21 31 10.3 +1.1
baz=267
F21K **Alatna River** 76.46 23 P **P** 21 31 10.6 +1.0
baz=267
KIV **Kislovodsk** 76.52 313 ⇓P **P** 21 31 07.7 -2.6
KIV **Kislovodsk** 76.52 313 P **P** 21 31 09.6 -0.8
KIV **Kislovodsk** 76.52 313 *e*P **P** 21 31 09.5 -0.8
KIV pmax pmax
comp=Z,25nm,1.0s
KIV MLR MLR
comp=Z,610nm,18.0s
KIV **Kislovodsk** 76.52 313 P **P** 21 31 10.8 +0.4
KIV P **P** 21 31 10.8 +0.4
KIV **Kislovodsk** 76.52 313 P **P** 21 31 11.0 +0.6
comp=Z,29nm,0.8s
SHA1 **Shidzhatmaz** 76.55 312⇓ *e*P **P** 21 31 09.7 -1.1
KDAK **Kodiak Island** 76.62 33 P **P** 21 31 11.5 +1.0
baz=270
H21K **Melozitna Rive** 76.66 25 IAmb IAmb 21 31 30.1
comp=Z,17nm,1.1s
H21K **Melozitna Rive** 76.66 25 P **P** 21 31 11.5 +0.8
baz=268
B22K **Teshekpuk Lake** 76.67 20 IAmb IAmb 21 31 19.2
comp=Z,13nm,0.8s
B22K **Teshekpuk Lake** 76.67 20 P **P** 21 31 11.6 +1.0
baz=266
Q20K **Shuyak Island** 76.72 32 P **P** 21 31 12.1 +1.0
baz=270
CHUM **Lake Minchumin** 76.82 27 P **P** 21 31 12.6 +1.1
baz=269
SPCR **Spurr Chakacha** 76.83 30 P **P** 21 31 11.9 +0.1
baz=270
D22K **Ayikyak River** 76.85 22 IAmb IAmb 21 31 26.7
comp=Z,19nm,1.4s
D22K **Ayikyak River** 76.85 22 P **P** 21 31 12.4 +0.7
baz=267
PPLA **Purkeypile** 76.86 28 P **P** 21 31 12.2 +0.2
baz=269
VRH **Novokhopyorsk** 76.88 320 *e*P **P** 21 31 10.0 -2.2
VRH pmax pmax
comp=Z,10.0nm,0.8s
I21K **Tanana** 76.99 25 P **P** 21 31 13.0 +0.5
baz=269
HOM **Homer** 77.10 31 P **P** 21 31 13.3 +0.1
baz=270
E22K **Anaktuvuk Pass** 77.14 22 IAmb IAmb 21 31 36.6
comp=Z,37nm,1.8s
E22K **Anaktuvuk Pass** 77.14 22 P **P** 21 31 13.8 +0.4
baz=268
SKT **Skwentna** 77.15 29 P **P** 21 31 14.4 +0.9
baz=270
H22K **Ishtalitna Cre** 77.25 25 P **P** 21 31 14.0 0.0
baz=269
CAPN **Captain Cook N** 77.34 30 P **P** 21 31 14.8 +0.3
baz=271
GURO **Guroymak-BITLI** 77.35 307 IAmb IAmb 21 31 23.6
comp=Z,22nm,0.9s
BPAW **Bear Paw Mtn.** 77.41 27 IAmb IAmb 21 31 27.2
comp=Z,26nm,1.0s
BPAW **Bear Paw Mtn.** 77.41 27 P **P** 21 31 15.6 +0.7
baz=270
MLY **Manley** 77.52 26 IAmb IAmb 21 31 24.1
comp=Z,15nm,1.1s
MLY **Manley** 77.52 26 P **P** 21 31 16.1 +0.6
baz=270
SUA **Susitna One** 77.53 29 IAmb IAmb 21 31 34.0
comp=Z,17nm,0.8s
SUA **Susitna One** 77.53 29 P **P** 21 31 15.9 +0.2
baz=271
BRSE **Bradley Lake S** 77.56 31 P **P** 21 31 16.1 +0.3
baz=271
D23K **Nanushuk River** 77.57 22 P **P** 21 31 16.6 +0.8
baz=269
C23K **Itkillik River** 77.61 21 IAmb IAmb 21 31 41.9
comp=Z,14nm,0.8s
C23K **Itkillik River** 77.61 21 P **P** 21 31 16.8 +0.9
baz=269
TRF **Thorofare Moun** 77.72 27 P **P** 21 31 17.3 +0.5
baz=271
COLD **Coldfoot** 77.74 23 IAmb IAmb 21 31 28.0
comp=Z,15nm,0.9s
COLD **Coldfoot** 77.74 23 P **P** 21 31 17.6 +0.9
baz=270,SNR=10
CUT **Chulitna** 77.74 28 P **P** 21 31 17.5 +0.7

baz=271
G23K **Bananza Creek** 77.81 24 IAmb IAmb 21 31 35.3
comp=Z,20nm,1.3s
G23K **Bananza Creek** 77.81 24 P **P** **21 31 17.5 +0.4**
baz=270
M22K **Willow** 77.83 29 P **P** **21 31 17.5 +0.3**
baz=271
KLMR **Klimovskoe** 77.86 330 *e*P **P** **21 31 16.2 -1.2**
KLMR pmax pmax
comp=Z,87nm,1.5s
LABN **Labinsk** 77.88 313 *e*P **P** **21 31 17.0 -0.9**
LABN *e**PP **sP** **21 31 31.5 -0.8**
LABN *e*S **S** **21 41 07.0 -1.8**
LABN pmax pmax
comp=Z,31nm,0.6s
E23K **Chandalar** 77.96 23 IAmb IAmb 21 31 45.9
comp=Z,26nm,1.2s
E23K **Chandalar** 77.96 23 P **P** **21 31 18.5 +0.5**
baz=270,SNR=9.0
TOLK **Toolik Lake Re** 77.97 22 P **P** **21 31 19.0 +0.9**
baz=270,SNR=7.4
ERBR **Yeremizino-Bor** 77.98 315 *e*P P 21 31 24.1 +5.7
ERBR *e**PP sP 21 31 38.4 +5.6
ERBR *e*S S 21 41 20.2 +10
ERBR pmax pmax
comp=Z,27nm,1.0s
RC01 **Rabbit Creek A** 78.03 30 P **P** **21 31 19.3 +0.9**
baz=272
O22K **Cooper Landing** 78.05 30 P **P** **21 31 18.1 -0.3**
baz=272
I23K **Minto, Yukon-K** 78.10 26 IAmb IAmb 21 31 30.4
comp=Z,59nm,1.8s
I23K **Minto, Yukon-K** 78.10 26 P **P** **21 31 18.5 -0.1**
baz=271
SEW **Seward** 78.20 31 P **P** **21 31 19.1 -0.2**
baz=272
NEA2 **Nenana** 78.23 26 IAmb IAmb 21 31 27.8
comp=Z,13nm,0.9s
NEA2 **Nenana** 78.23 26 P **P** **21 31 18.4 -1.1**
baz=272
D24K **Happy Valley** 78.24 21 P **P** **21 31 18.7 -0.7**
baz=271
C24K **Franklin Bluff** 78.28 21 P **P** **21 31 19.0 -0.6**
baz=271
PMR **Palmer** 78.30 29 P **P** **21 31 19.7 -0.2**
baz=272
MCK **McKinley** 78.32 27 IAmb IAmb 21 31 38.5
comp=Z,21nm,1.0s
MCK **McKinley** 78.32 27 P **P** **21 31 19.7 -0.2**
baz=272
RND **Reindeer** 78.37 27 IAmb IAmb 21 31 38.8
comp=Z,46nm,1.4s
E24K **Your Creek** 78.38 23 P **P** **21 31 19.5 -0.8**
baz=271
VORD **Divnogorie** 78.42 320 *e*P **P** **21 31 18.9 -1.9**
VORD pmax pmax
comp=Z,10.0nm,0.9s
VORR **Voronezh** 78.43 321 *e*P **P** **21 31 18.5 -2.3**
VORR pmax pmax
comp=Z,10.0nm,0.9s
VSR **Storozhevoye** 78.49 320 *e*P **P** **21 31 19.2 -1.9**
VSR pmax pmax
comp=Z,9.0nm,0.8s
WAT1 **Susitna Watana** 78.53 28 P **P** **21 31 20.3 -0.9**
baz=272
LPSR **Galich'ya Gora** 78.55 322 *e*P **P** **21 31 20.0 -1.4**
LPSR pmax pmax
comp=Z,46nm,0.8s
KNK **Knik Glacier** 78.63 29 P **P** **21 31 20.9 -0.9**
baz=273
SML **Sawmill** 78.67 29 P **P** **21 31 20.8 -1.2**
baz=273
H24K **Noodor Dome** 78.69 25 P **P** **21 31 21.5 -0.6**
baz=272
COLA **College** 78.75 26⇑ *i*P **P** **21 31 21.1 -1.1**
COLA pmax pmax
comp=Z,27nm,2.9s
COLA **College** 78.75 26 P **P** **21 31 22.4 +0.1**
baz=273
G24K **Hadweenzic Riv** 78.82 24 P **P** **21 31 23.0 +0.3**
baz=273
WAT6 **Susitna Watana** 78.91 28 P **P** **21 31 24.2 +0.7**
baz=273
POKR **Poker Plat Res** 78.91 26 P **P** **21 31 23.5 +0.3**
baz=273
M23K **Glacier View** 78.96 29 P **P** **21 31 24.5 +0.9**
baz=273
DHY **Denali Highway** 79.05 28 IAmb IAmb 21 33 49.9
comp=Z,55nm,2.0s
DHY **Denali Highway** 79.05 28 P **P** **21 31 24.6 +0.4**
baz=273
MOS **Moscow** 79.10 325 *e*P **P** **21 31 23.5 -0.9**
MOS *e* 21 34 20.4
MOS pmax pmax
comp=Z,31nm,0.6s
D25K **Kavik River** 79.11 21 P **P** **21 31 24.5 +0.3**
baz=273
SCM **Sheep Creek Mo** 79.15 29 P **P** **21 31 24.8 +0.2**
baz=274
HDA **Harding Lake** 79.16 26 P **P** **21 31 24.6 +0.1**
baz=274
ILAR **Eielson Array** 79.17 26 P **P** **21 31 23.9 -0.7**
comp=Z,1.4nm,0.8s,baz=254,slow=4.5,SNR=12
ILAR LR LR 22 06 22.4
comp=Z,135nm,21.2s,baz=280,slow=36
comp=Z,1.4nm,0.8s
ILAR **Eielson Array** 79.17 26 P **P** **21 31 24.4 -0.2**
ILAR **Eielson Array** 79.17 26 P **P** **21 31 24.4 -0.2**
P23K **Montague Islan** 79.23 31 P **P** **21 31 25.0 -0.1**
baz=274
GLI **Glacier Island** 79.32 30 P **P** **21 31 26.4 +0.8**
baz=274
E25K **Arctic Village** 79.47 22 IAmb IAmb 21 31 47.7
comp=Z,53nm,1.9s
E25K **Arctic Village** 79.47 22 P **P** **21 31 26.8 +0.6**
baz=274,SNR=6.6
F25K **Christian Rive** 79.48 23 P **P** **21 31 27.2 +0.9**
baz=274
C26K **Camden Bay** 79.58 21 P **P** **21 31 27.4 +0.7**
baz=274
M24K **Tolsona, Glenn** 79.67 29 P **P** **21 31 28.6 +1.1**
baz=275
PRP **Porcupine Dome** 79.69 25 P **P** **21 31 28.4 +0.8**
baz=275
K24K **Donnelly Dome** 79.72 27 IAmb IAmb 21 31 57.7
comp=Z,16nm,0.9s
K24K **Donnelly Dome** 79.72 27 P **P** **21 31 28.2 +0.6**
baz=275
OBN **Obninsk** 79.75 324 LR LR 22 06 47.8
comp=Z,422nm,19.4s,baz=64,slow=36
OBN **Obninsk** 79.75 324⇓ *e*P **P** **21 31 26.2 -1.7**
OBN *e* 21 31 32.7
OBN *e**PP **sP** **21 31 41.1 -1.2**
OBN *e* 21 34 27.4
OBN *e*PPP PPP 21 36 18.5
OBN *e*S **S** **21 41 25.7 -2.6**
OBN *e*SS **SS** **21 46 41.1 +4.0**
OBN pmax pmax
comp=Z,248nm,6.1s
OBN MLR MLR
comp=Z,482nm,19.0s
Q23K **Middleton Isla** 79.81 31 P **P** **21 31 28.8 +0.7**
baz=275
J25K **Salcha River,** 79.83 26 P **P** **21 31 28.7 +0.4**
baz=275
KLU **Klutina** 79.84 29 P **P** **21 31 28.6 +0.2**
baz=275
BMAR **Burnt Mountain** 79.90 23 P **P** **21 31 29.3 +0.6**
PAX **Paxson** 79.92 28 IAmb IAmb 21 33 28.5
comp=Z,33nm,1.6s
PAX **Paxson** 79.92 28 P **P** **21 31 29.4 +0.5**
baz=275
ATD **Arta Tunnel** 79.94 280 LR LR 22 06 09.5
comp=Z,5.3nm,18.4s,baz=47,slow=35
EYAK **Cordova Ski Ar** 80.01 30 P **P** **21 31 30.1 +0.9**
baz=275
C27K **Jago River** 80.02 21 P **P** **21 31 30.1 +1.0**
baz=276
F26K **Sheenjek River** 80.05 23 P **P** **21 31 30.3 +0.9**
baz=276
HARP **HAARP** 80.12 28 P **P** **21 31 30.7 +0.8**
baz=276
APA **Apatity** 80.12 337⇓ *e*P **P** **21 31 30.6 +0.9**
APA pmax pmax
comp=Z,17nm,1.1s
APA MLR MLR
comp=Z,2µm,6.0s

RIDG **Independent Ri** 80.13 27 IAmb IAmb 21 31 41.9
comp=Z,17nm,0.9s
RIDG **Independent Ri** 80.13 27 P **P** **21 31 30.5 +0.5**
baz=276
ANN **Anapa** 80.20 314 *e*P **P** **21 31 34.3 +3.7**
ANN *e**PP **sP** **21 31 48.8 +3.8**
ANN *e*S **S** **21 41 40.3 +6.8**
ANN pmax pmax
comp=Z,31nm,0.9s
G26K **Porcupine Rive** 80.26 24 P **P** **21 31 30.2 -0.2**
baz=276
N25K **Chitina, Valde** 80.46 29 P **P** **21 31 31.6 -0.2**
baz=276
SCRK **Sand Creek** 80.49 27 P **P** **21 31 31.8 -0.2**
baz=276
BMRM **Bremner River** 80.53 30 P **P** **21 31 32.2 +0.1**
baz=276
I26K **Coal Creek Min** 80.69 25 P **P** **21 31 32.6 -0.3**
baz=277
KAIM **Kayak Island** 80.73 31 P **P** **21 31 33.1 0.0**
baz=277
RAR **Rarotonga** 80.87 114 LR LR 22 00 53.6
comp=Z,394nm,21.2s,baz=286,slow=31
L26K **Log Cabin Wild** 80.88 27 P **P** **21 31 34.5 +0.6**
baz=277
E27K **Coleen River** 80.95 22 P **P** **21 31 34.9 +0.7**
baz=278
D27M **Malcolm River** 81.03 21 IAmb IAmb 21 31 45.9
comp=Z,19nm,0.9s
D27M **Malcolm River** 81.03 21 P **P** **21 31 35.2 +0.6**
baz=278
M26K **Nabesna, AK** 81.12 28 P **P** **21 31 35.9 +0.6**
baz=277
MCARA **McCarthy VSAT** 81.24 29 P **P** **21 31 36.7 +0.8**
baz=278
H27K **Steamboat Moun** 81.24 24 P **P** **21 31 36.6 +0.8**
baz=278
BGLC **Bering Glacier** 81.27 30 P **P** **21 31 36.9 +0.9**
baz=278
CRQE **Cirque** 81.29 30 P **P** **21 31 36.0 -0.3**
baz=278
I27K **Kandik River** 81.29 25 IAmb IAmb 21 32 01.1
comp=Z,19nm,0.8s
I27K **Kandik River** 81.29 25 P **P** **21 31 36.1 0.0**
baz=278
L27K **Beaver Creek,** 81.56 27 P **P** **21 31 36.9 -0.7**
baz=278
E28M **Babbage River** 81.64 22 P **P** **21 31 37.8 -0.1**
baz=280
M27K **Edge Creek, AK** 81.64 28 P **P** **21 31 37.5 -0.6**
baz=278
F28M **Old Crow** 81.68 23 IAmb IAmb 21 31 49.2
comp=Z,16nm,0.8s
F28M **Old Crow** 81.68 23 P **P** **21 31 38.5 +0.5**
baz=279,SNR=8.4
D28M **Stokes Point** 81.80 21 P **P** **21 31 38.8 +0.2**
baz=280
MESA **MESA** 81.93 30 P **P** **21 31 39.6 -0.2**
baz=279
I28M **Miner Creek** 82.01 25 IAmb IAmb 21 31 47.3
comp=Z,14nm,1.0s
I28M **Miner Creek** 82.01 25 P **P** **21 31 39.7 -0.2**
baz=280
BVCY **Beaver Creek** 82.10 28 P **P** **21 31 40.2 -0.2**
baz=279
CTG **Chitna Glacier** 82.11 29 P **P** **21 31 40.5 -0.1**
baz=279
CTGM **Chitina Glacie** 82.11 29 IAmb IAmb 21 31 51.7
comp=Z,31nm,1.0s
ASF **Jabal al Asfar** 82.24 301 LR LR 22 14 35.3
comp=Z,239nm,18.4s,baz=26,slow=40
E29M **Blow River** 82.27 22 P **P** **21 31 41.6 +0.5**
baz=281
YUK3 **Moose Creek** 82.39 29 P **P** **21 31 41.2 -1.0**
baz=280
DAWY **Dawson** 82.48 26 P **P** **21 31 41.9 -0.4**
baz=280
H29M **Whitestone** 82.51 24 P **P** **21 31 42.4 -0.1**
baz=281
SIM **Simferopol'** 82.53 314 *e*P **P** **21 31 46.3 +3.4**
SIM *e*S **S** **21 41 58.7 +1.1**
SIM pmax pmax
comp=Z,27nm,0.8s
SIM smax smax
comp=N,56nm,15.8s
SIM MLR MLR
comp=Z,602nm,24.4s
ARA0 **ARCESS Array S** 82.68 340 *e*P **P** **21 31 43.0 -0.2**
ARA0 IAmb IAmb 21 31 44.5
comp=Z,85nm,1.6s
ARCES **ARCESS Array B** 82.68 340 P **P** **21 31 43.1 -0.2**
comp=Z,4.3nm,0.6s,baz=82,slow=6.1,SNR=14
ARCES LR LR 22 12 22.5
comp=Z,427nm,19.9s,baz=83,slow=38
comp=Z,4.3nm,0.6s
ARCES **ARCESS Array B** 82.68 340 **P** **21 31 43.3 +0.1**
ARCES **ARCESS Array B** 82.68 340 P **P** **21 31 43.3 +0.1**
ARCES pmax pmax
comp=Z,119nm,1.6s
SPA0 **Spitsbergen Ar** 82.69 349 *e*P **P** **21 31 43.3 +0.1**
SPA0 IAmb IAmb 21 31 50.5
comp=Z,122nm,1.4s
SPITS **Spitsbergen Ar** 82.69 349 P **P** **21 31 42.8 -0.4**
comp=Z,18nm,0.8s,baz=84,slow=8.0,SNR=18
SPITS LR LR 22 14 11.2
comp=Z,742nm,18.2s,baz=70,slow=40
comp=Z,18nm,0.8s
O28M **Mount Upton** 82.69 30 P **P** **21 31 43.4 -0.4**
baz=280
I29M **Ogilvie Camp,** 82.70 25 P **P** **21 31 43.6 +0.2**
baz=281
PINM **Pinnacle** 82.78 30 P **P** **21 31 44.2 +0.2**
baz=280
YUK8 **Steele Glacier** 82.81 29 P **P** **21 31 43.4 -1.0**
baz=280
J29N **Klondike Camp** 82.91 26 P **P** **21 31 44.2 -0.5**
baz=281
EPYK **Eagle Plains** 83.13 24 P **P** **21 31 45.0 -0.7**
baz=282
G30M **tAoh Zraii Nji** 83.19 23 P **P** **21 31 45.0 -1.0**
baz=283
M29M **Somme Creek** 83.19 28 P **P** **21 31 45.1 -1.1**
baz=281
F30M **Barrier River** 83.21 22 IAmb IAmb 21 32 04.3
comp=Z,15nm,0.9s
F30M **Barrier River** 83.21 22 P **P** **21 31 45.7 -0.4**
baz=283
L29M **L29M** 83.21 27 P **P** **21 31 44.9 -1.4**
baz=282
KBS **Kingsbay** 83.22 350 *e*P **P** **21 31 45.7 -0.2**
KBS IAmb IAmb 21 31 46.5
comp=Z,17nm,0.9s
KBS **Kingsbay** 83.22 350 *i* P **P** **21 31 45.7 -0.2**
YUK4 **Talbot Arm** 83.32 29 P **P** **21 31 46.2 -0.8**
baz=281
K29M **Barlow Dome** 83.33 26 P **P** **21 31 45.4 -1.4**
baz=282
MMAI **Mount Meron Ar** 83.36 302 P **P** **21 31 46.6 -0.9**
comp=Z,2.5nm,0.8s,baz=115,slow=8.6,SNR=3.9
MMAI LR LR 22 15 20.4
comp=Z,200nm,18.6s,baz=64,slow=40
comp=Z,2.5nm,0.8s
I30M **Mount Dempster** 83.52 25 IAmb IAmb 21 32 58.6
comp=Z,35nm,1.8s
I30M **Mount Dempster** 83.52 25 P **P** **21 31 47.3 -0.6**
baz=283
YUK6 **Outpost Mounta** 83.54 29 P **P** **21 31 47.2 -0.9**
baz=282
O29M **Mount Kennedy** 83.56 30 P **P** **21 31 47.2 -0.9**
baz=282
KIRS **Kirsehir-Merke** 83.57 308 ⇑P **P** **21 31 48.3 -0.3**
KTK1 **Kautokeino** 83.59 339 *e*P **P** **21 31 47.4 -0.6**
KTK1 IAmb IAmb 21 31 52.5
comp=Z,211nm,2.0s
J30M **Hart River** 83.68 25 P **P** **21 31 48.4 -0.3**
baz=283
BR131 **Keskin Array S** 83.69 309⇓ *e*P **P** **21 31 50.1 +0.9**
BR131 **Keskin Array S** 83.69 309 P **P** **21 31 52.1 +2.9**
BR131 P **P** **21 31 52.1 +2.9**
BRTR **Keskin Array B** 83.69 309 P **P** **21 31 49.5 +0.3**
comp=Z,4.0nm,0.8s,baz=100,slow=4.3,SNR=21
BRTR LR LR 22 10 56.7
comp=Z,357nm,21.8s,baz=72,slow=37
comp=Z,4.0nm,0.8s
BRTR **Keskin Array B** 83.69 309 **P** **21 31 49.6 +0.4**
INK **Inuvik** 83.87 21 IAmb IAmb 21 32 00.5
comp=Z,20nm,1.4s
INK **Inuvik** 83.87 21 P **P** **21 31 49.2 -0.2**

baz=285,SNR=6.3
G31M **Satah River** 83.95 23 P **P** **21 31 49.4 -0.3**
baz=285
HYT **Haines Junctio** 83.97 29 IAmb IAmb 21 31 59.5
comp=Z,12nm,0.9s
HYT **Haines Junctio** 83.97 29 P **P** **21 31 49.6 -0.6**
baz=282
F31M **Tsiigehtchic** 84.02 22 IAmb IAmb 21 31 59.3
comp=Z,22nm,1.1s
F31M **Tsiigehtchic** 84.02 22 P **P** **21 31 49.8 -0.3**
baz=285
N30M **Aishikik Lake** 84.03 29 P **P** **21 31 50.1 -0.4**
baz=283
MAYO **Mayo, Yukon** 84.09 26 P **P** **21 31 50.5 -0.1**
baz=284
H31M **Peel River** 84.20 24 IAmb IAmb 21 32 00.8
comp=Z,28nm,1.4s
H31M **Peel River** 84.20 24 P **P** **21 31 51.1 -0.1**
baz=285
FINES **FINESS Array B** 84.24 331 P **P** **21 31 50.8 -0.6**
comp=Z,6.8nm,0.6s,baz=69,slow=4.3,SNR=31
FINES LR LR 22 10 52.3
comp=Z,675nm,20.1s,baz=86,slow=37
comp=Z,6.8nm,0.6s
FINES **FINESS Array B** 84.24 331 P **P** **21 31 51.4 0.0**
EIL **Eiat** 84.28 299 LR LR 22 13 34.7
comp=Z,305nm,19.6s,baz=64,slow=39
P30M **Million Dollar** 84.39 30 P **P** **21 31 52.5 +0.2**
baz=283
JETT **Jettan, Norway** 84.41 340 *e*P **P** **21 31 52.8 +0.7**
JETT IAmb IAmb 21 31 54.3
comp=Z,26nm,0.9s
FURI **Furi** 84.43 278 LR LR 22 08 16.8
comp=Z,480nm,19.4s,baz=67,slow=35
VSU **Vasula** 84.58 328⇓ *e*P **P** **21 31 52.0 -1.2**
VSU pmax pmax
comp=Z,95nm,1.3s
N31M **Braeburn, Yuko** 84.64 28 P **P** **21 31 53.4 -0.1**
baz=284
O30N **Mendenhall** 84.66 29 P **P** **21 31 53.5 -0.2**
baz=284
AKASG **Malin Array Be** 84.78 321 P **P** **21 31 53.6 -0.7**
comp=Z,10nm,0.8s,baz=69,slow=4.4,SNR=19
AKASG LR LR 22 10 03.2
comp=Z,579nm,20.7s,baz=71,slow=36
comp=Z,10nm,0.8s
AKASG **Malin Array Be** 84.78 321 P **P** **21 31 53.7 -0.7**
AKBB **Malin Array Si** 84.78 321⇑ *e*P **P** **21 31 53.7 -0.7**
AKBB pmax pmax
comp=Z,30nm,0.9s
KIEV **Kiev** 84.80 321 ⇑P **P** **21 31 52.9 -1.6**
KIEV **Kiev** 84.80 321 P **P** **21 31 53.4 -1.0**
KIEV **Kiev** 84.80 321 P **P** **21 31 53.4 -1.0**
KIEV pmax pmax
comp=Z,24nm,0.9s
MNK **Minsk** 84.81 324 *i* P **P** **21 31 53.4 -1.1**
comp=E,13nm,1.1s
MNK *i* P **P** **21 31 53.4 -1.1**
comp=N,21nm,1.0s
MNK *i* P **P** **21 31 53.4 -1.1**
comp=Z,48nm,0.9s,baz=78
MNK *i* pP **sP** **21 32 08.8 -0.1**
MNK *i* PP **PP** **21 35 09.8 -0.9**
MNK *i* PPP PPP 21 36 57.3
MNK *i* S **SKSac** **21 42 12.6 -3.7**
MNK *i* SS **SS** **21 47 53.5 +1.2**
MNK *i* SSS SSS 21 51 26.6
MNK *i* LQ LQ 22 03 03.6
MNK *i* LR LR 22 07 28.1
MNK *i* LRM MLR 22 09 33.7
comp=Z,711nm,21.5s
MNK *i* LRM MLR 22 10 07.2
comp=N,517nm,18.7s
MNK *i* LRM MLR 22 10 39.6
comp=E,533nm,17.8s
MNK **Minsk** 84.81 324 *i* P **P** **21 31 53.3 -1.1**
MNK *i* 21 35 09.7
MNK *i* S **SKSac** **21 42 12.6 -3.7**
MNK *i* SS **SS** **21 47 53.4 +1.2**
MNK *i* SSS SSS 21 51 26.6
MNK pmax pmax
comp=E,13nm,1.1s
MNK pmax pmax
comp=N,21nm,1.0s
MNK pmax pmax
comp=Z,48nm,0.9s
MNK MLR MLR
comp=Z,711nm,22.0s
MNK MLR MLR
comp=N,517nm,19.0s
MNK MLR MLR
comp=E,533nm,18.0s
TRO **Tromso** 84.88 340 *e*P **P** **21 31 53.8 -0.6**
M31M **Drury Creek, Y** 85.10 28 IAmb IAmb 21 32 04.3
comp=Z,18nm,1.2s
M31M **Drury Creek, Y** 85.10 28 P **P** **21 31 54.9 -0.9**
baz=285
S31K **Pelican** 85.25 32 P **P** **21 31 56.5 -0.1**
baz=284
WHY **Whitehorse** 85.27 29 P **P** **21 31 55.8 -0.9**
baz=285
SKAG **Skagway** 85.35 30 P **P** **21 31 56.5 -0.5**
baz=284
A36M **Sachs Harbour** 85.36 17 IAmb IAmb 21 32 06.2
comp=Z,21nm,0.9s
A36M **Sachs Harbour** 85.36 17 P **P** **21 31 56.2 -0.7**
baz=292
NOR **Nord** 85.40 355 *i* P **P** **21 31 56.6 -0.3**
NOR IAmb IAmb 21 31 58.1
comp=Z,23nm,1.3s
SORM **Soroca** 85.87 318 ⇑P **P** **21 31 58.6 -1.2**
SIT **Sitka** 85.95 33 P **P** **21 31 59.5 -0.5**
baz=285
N32M **Quiet Lake** 85.98 28 P **P** **21 31 59.9 -0.3**
baz=286
R32K **Eaglecrest** 86.06 31 P **P** **21 31 59.6 -0.9**
baz=285
BORA **Eskisehir** 86.07 310 IAmb IAmb 21 32 10.5
comp=Z,16nm,1.0s
P32M **Atlin** 86.11 30 P **P** **21 31 59.9 -1.0**
baz=286
TLCR 86.18 315 ⇑P **P** **21 32 00.7 -0.7**
S32K **Killisnoo** 86.23 32 P **P** **21 32 00.1 -1.4**
baz=285
P33M **Teslin, Yukon** 86.37 29 P **P** **21 32 00.9 -1.3**
baz=286
MMPY **Sheldon Lake,** 86.38 27 IAmb IAmb 21 32 11.0
comp=Z,22nm,1.3s
MMPY **Sheldon Lake,** 86.38 27 P **P** **21 32 01.3 -0.9**
baz=288
ISP **Isparta** 86.42 308 IAmb IAmb 21 32 11.9
comp=Z,28nm,1.3s
VLDR **Vladesti** 86.54 316 ⇑P **P** **21 32 03.2 0.0**
CFR **Carcaliu** 86.65 315 ⇑P **P** **21 32 03.4 -0.3**
STEI **Steigen** 86.73 339 *e*P **P** **21 32 02.7 -0.9**
C36M **Paulatuk** 86.76 19 IAmb IAmb 21 32 40.0
comp=Z,19nm,1.0s
C36M **Paulatuk** 86.76 19 P **P** **21 32 03.1 -0.7**
baz=294,SNR=14
KIBK **Kibwezi** 87.19 267 P P 21 32 14.3 +7.2
SNR=5.4
T33K **Petersburg** 87.27 33 P **P** **21 32 05.6 -0.8**
baz=286
GIRR **Girov** 87.36 317 ⇑P **P** **21 32 07.7 +0.5**
TESR **Tescani** 87.36 317 ⇑P **P** **21 32 05.8 -1.4**
U33K **Whale Pass** 87.37 33 P **P** **21 32 06.2 -0.8**
baz=286
VRI **Vrincioaia** 87.46 316 ⇑P **P** **21 32 06.1 -1.6**
R33M **Jennings River** 87.51 30 P **P** **21 32 06.5 -1.3**
baz=288
CRAG **Craig** 87.55 34 P **P** **21 32 07.4 -0.5**
baz=286
WRAK **Wrangell Islan** 87.70 33 P **P** **21 32 08.0 -0.6**
baz=287
NEHR **Nehoiu** 87.86 316 ⇑P **P** **21 32 09.5 -0.1**
S34M **Telegraph Cree** 87.88 31 P **P** **21 32 09.3 -0.2**
baz=288
BURAR **Bucovina Array** 88.04 318 ⇓P **P** **21 32 09.7 -0.9**
BURAR **Bucovina Array** 88.04 318 P **P** **21 32 09.8 -0.7**
BURAR IAmb IAmb 21 32 15.7
comp=Z,12nm,0.8s
BUR08 **Bucovina Ar. S** 88.05 318 IAmb IAmb 21 32 20.1
comp=Z,20nm,1.2s
TGTN **Hyland Airport** 88.07 27 P **P** **21 32 10.0 -0.4**
baz=290
MLR **Muntele Rosu** 88.08 316 ⇑P **P** **21 32 09.6 -1.2**
MLR **Muntele Rosu** 88.08 316 IAmb IAmb 21 32 36.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,15nm,1.1s						
DLBC	Dease Lake	88.27	31	LR	LR	22 09 19.7	
	comp=Z,83nm,20.8s,baz=277,slow=34						
DLBC	Dease Lake	88.27	31	P	P	21 32 10.4	-1.0
	baz=289						
WTLY	Watson Lake, Y	88.31	29	P	P	21 32 10.9	-0.6
	baz=290						
V35K	Ketchikan	88.42	34	P	P	21 32 11.3	-0.8
	baz=288						
T35M	Bob Quinn	88.63	32	P	P	21 32 12.4	-0.6
	baz=289						
ELND	Elena	88.76	313	⇑P	P	21 32 13.4	-0.6
U35K	Hyder	89.09	33	P	P	21 32 14.6	-0.5
	baz=289						
PPT	Papeete	89.34	108	LR	LR	22 06 52.9	
	comp=Z,84nm,19.6s,baz=74,slow=32						
PPT2	Papeete2	89.35	108	*e*S	S	21 43 04.8	-0.6
	comp=Z,366nm,27.5s						
PPT2				*e*LR	LR	22 00 38.2	
	comp=Z,782nm,30.5s						
PPT2				*e*LR	LR	22 00 40.4	
	comp=Z,556nm,34.0s						
WRGLY	Wrigley	89.50	25	P	P	21 32 15.4	-1.5
	baz=295						
DAG	Danmarks Havn	89.51	352	*i* P	P	21 32 15.0	-1.8
DAG				IAmb	IAmb	21 32 22.2	
	comp=Z,7.2nm,0.7s						
PLVB	Pleven	89.53	314	⇑P	P	21 32 18.0	+0.5
MARR	Marisel-Cluj	89.67	318	⇑P	P	21 32 18.4	+0.1
DRGR		89.91	318	⇑P	P	21 32 20.0	+0.7
MAW	Mawson	90.16	200	LR	LR	22 09 39.7	
	comp=Z,190nm,21.7s,baz=58,slow=34						
HFS	Hagfors	90.41	332	P	P	21 32 21.0	-0.3
	comp=Z,3.6nm,0.7s,baz=94,slow=5.9,SNR=8.6						
HFS				LR	LR	22 16 14.6	
	comp=Z,604nm,19.2s,baz=68,slow=38						
	comp=Z,3.6nm,0.7s						
KOTAN	Kotaneelee Air	90.51	28	P	P	21 32 20.8	-1.0
	baz=294						
TBI	Tubuai	90.64	114	*e*S	S	21 43 16.6	-0.5
	comp=Z,1µm,28.0s						
TBI				*e*SS	SS	21 49 18.7	-0.8
	comp=Z,718nm,31.8s						
TBI				*e*LR	LR	22 01 23.4	
	comp=Z,4µm,28.8s						
RES	Resolute Bay	90.73	10	IAmb	IAmb	21 32 24.0	
	comp=Z,22nm,1.9s						
KECS	Kecovo	90.84	320	*e*P	P	21 32 28.0	+4.4
KECS	Kecovo	90.84	320	*e*P	P	21 32 28.0	+4.4
BZS	Buzias	90.97	317	⇓P	P	21 32 25.0	+0.8
NB2	NORSAR Subarra	91.14	333	P	P	21 32 23.7	-1.0
	comp=Z,21nm,1.2s,baz=64,slow=4.6						
NB2	NORSAR Subarra	91.14	333	P	P	21 32 23.7	-1.0
NOA	NORSAR Array B	91.14	333	P	P	21 32 24.4	-0.3
	comp=Z,2.2nm,0.8s,baz=63,slow=4.6,SNR=7.5						
NOA				LR	LR	22 15 54.5	
	comp=Z,490nm,20.5s,baz=65,slow=37						
	comp=Z,2.2nm,0.8s						
VNDA	Vanda	91.17	172	P	P	21 32 24.1	-0.3
	comp=Z,12nm,0.9s,baz=300,slow=6.8,SNR=6.3						
VNDA				LR	LR	22 16 51.9	
	comp=Z,250nm,18.0s,baz=344,slow=38						
	comp=Z,12nm,0.9s						
VNDA	Vanda	91.17	172	P	P	21 32 25.1	+0.8
VNDA	Vanda	91.17	172	P	P	21 32 25.1	+0.8
VNDA				pmax	pmax		
	comp=Z,118nm,1.8s						
LANS	Liptovska Anna	91.27	321	*e*P	P	21 32 30.2	+4.6
NEEM	North Greenlan	91.35	359	*i* P	P	21 32 25.5	-0.3
NEEM				IAmb	IAmb	21 32 33.3	
	comp=Z,15nm,0.8s						
PSZ	Piszkesteto	91.40	319	⇑P	P	21 32 25.3	-0.9
BBB	Bella Bella	91.41	36	LR	LR	22 09 54.6	
	comp=Z,58nm,19.9s,baz=298,slow=33						
IDI	Anoyia	91.42	306	LR	LR	22 20 13.2	
	comp=Z,140nm,19.8s,baz=96,slow=40						
TULEG	Thule	91.94	3	*i* P	P	21 32 28.1	+0.1
TULEG				IAmb	IAmb	21 32 31.5	
	comp=Z,9.7nm,1.1s						
JMIC	Jan Mayen	92.05	346	LR	LR	22 19 26.5	
	comp=Z,322nm,18.6s,baz=91,slow=39						
MORC	Moravsky Berou	92.25	322	*e*P	P	21 32 30.7	+0.6
SRO	Srobarova	92.44	320	*e*P	P	21 32 35.3	+4.4
JAVC	Velka Javorina	92.48	321	*e*P	P	21 32 31.0	-0.2
MORH	Mrgy, Hungar	92.76	318	⇑P	P	21 32 32.2	-0.3
MODS	Modra-Piesok	92.90	320	*e*P	P	21 32 37.3	+4.2
MODS	Modra-Piesok	92.90	320	*e*P	P	21 32 37.3	+4.2
VRAC	Vranov	92.99	321	LR	LR	22 15 05.7	
	comp=Z,691nm,18.8s,baz=84,slow=36						
VRAC	Vranov	92.99	321	⇑P	P	21 32 34.0	+0.5
VRAC	Vranov	92.99	321	*e*P	P	21 32 34.0	+0.5
KRUC	Moravsky	93.20	321	*e*P	P	21 32 34.7	+0.2
YKA	Yellowknife Ar	93.42	24	P	P	21 32 35.4	+0.3
	comp=Z,2.7nm,0.8s,baz=302,slow=5.5,SNR=20						
	comp=Z,2.7nm,0.8s						
YKA	Yellowknife Ar	93.42	24	P	P	21 32 35.7	+0.6
YKA	Yellowknife Ar	93.42	24	P	P	21 32 35.7	+0.6
MBAR	Mbarara	94.02	270	LR	LR	22 10 44.9	
	comp=Z,232nm,21.9s,baz=64,slow=33						
ARSA	Arzberg	94.41	320	*e*PcP	P	21 32 39.6	-0.4
	comp=Z,3.0nm,0.9s						
GEC2	GERESS Array S	94.93	322		P	21 32 40.2	-2.3
GERES	GERESS Array B	94.93	322	P	P	21 32 42.7	+0.2
	comp=Z,2.5nm,0.9s,baz=73,slow=4.6,SNR=11						
GERES				LR	LR	22 17 07.0	
	comp=Z,804nm,20.8s,baz=74,slow=37						
	comp=Z,2.5nm,0.9s						
SOKA	Soboth	94.93	319	*e*PcP	P	21 32 42.2	-0.3
	comp=Z,7.9nm,1.3s						
MOA	Molln	94.97	321	*e*PcP	P	21 32 42.2	-0.4
	comp=Z,8.6nm,1.2s						
BIOA	Bad Ischl, Aus	95.42	321	*e*PcP	P	21 32 44.4	-0.3
	comp=Z,6.4nm,1.3s						
SUMG	Summit	95.56	355	*i* P	P	21 32 43.2	-2.1
KBA	Koelnbreinsper	95.84	320	*e*PcP	P	21 32 46.5	-0.4
	comp=Z,7.6nm,1.4s						
GRF	Grafenberg Arr	96.06	323	*e*P	P	21 32 48.2	+0.6
	comp=Z,6.6nm,0.9s,baz=65,slow=4.1						
UPNV	Upernavik	96.08	0	*i* P	P	21 32 46.0	-1.1
UPNV				IAmb	IAmb	21 32 47.0	
	comp=Z,4.7nm,0.8s						
LESA	Schwarzleotal	96.12	321	*e*PcP	P	21 32 47.2	-0.8
	comp=Z,5.1nm,1.1s						
ABTA	Abfaltersbach	96.50	320	*e*P	P	21 32 48.4	-1.4
	comp=Z,4.3nm,1.1s						
WTTA	Wattenberg	96.83	321	*e*PcP	P	21 32 50.4	-0.9
	comp=Z,9.0nm,1.1s						
WATA	Walderalm	96.84	321	*e*PcP	P	21 32 50.9	-0.4
	comp=Z,3.5nm,0.6s						
SQTA	Sankt Quirin	97.12	321	*e*PcP	P	21 32 51.7	-0.8
	comp=Z,8.2nm,1.5s						
MOTA	Moosalm	97.13	321	*e*PcP	P	21 32 51.5	-1.2
	comp=Z,10nm,1.8s						
FETA	Feichten	97.50	321	*e*P	P	21 32 53.1	-1.3
	comp=Z,5.3nm,1.4s						
FUORN	Ofenpass-Fuorn	97.96	321		P	21 32 54.4	-2.1
DAVOX	Davos/Dischmat	98.13	321	LR	LR	22 19 49.8	
	comp=Z,679nm,21.7s,baz=77,slow=37						
YBH	Yreka Blue Hor	98.77	44	LR	LR	22 12 26.9	
	comp=Z,7.0nm,19.3s,baz=284,slow=32						
LSZ	Lusaka	99.13	256	LR	LR	22 13 04.6	
	comp=Z,323nm,20.6s,baz=90,slow=33						
BORG	Borgarnes	99.95	346	LR	LR	22 20 42.6	
	comp=Z,292nm,21.9s,baz=32,slow=37						
PDAR	Pinedale Array	106.84	39	PKKPab	PKKPab	21 49 19.9	-1.4
	comp=Z,0.3nm,0.7s,baz=110,slow=2.5,SNR=3.6						
TX31	Lajitas Ar. Si	118.28	48		PKiKP	21 38 08.3	+0.2
TXAR	Lajitas Array	118.28	48	PKP	PKPdf	21 38 08.0	0.0
	comp=Z,1.0nm,0.6s,baz=340,slow=2.6,SNR=12						
TXAR	Lajitas Array	118.28	48		PKPdf	21 38 08.1	0.0
TXAR	Lajitas Array	118.28	48	PKIKP	PKiKP	21 38 08.1	0.0
TORD	Torodi Ar. Bea	118.46	292	PKP	PKPdf	21 38 07.6	-1.0
	comp=Z,0.7nm,1.1s,baz=76,slow=1.2,SNR=2.2						
TORD				PKKPbc	PKKPbc	21 48 26.0	+0.4
	comp=Z,0.4nm,0.7s,baz=211,slow=5.0,SNR=5.0						
TORD	Torodi Ar. Bea	118.46	292	PKPdf	PKPdf	21 38 08.2	-0.4
S39A	Bolivar	119.61	34		PKPdf	21 38 09.5	-0.7
JCT	Junction City	120.35	45		PKiKP	21 38 12.2	+0.2
JCT	Junction City	120.35	45	PKIKP	PKiKP	21 38 12.2	+0.2
T42A	Van Buren	121.30	33		PKPdf	21 38 12.8	-0.7
WVT	Waverly	123.70	32		PKiKP	21 38 18.6	+0.2
WVT	Waverly	123.70	32	PKIKP	PKiKP	21 38 18.6	+0.2
S51A	Beattyville	124.53	27		PKPdf	21 38 19.1	-0.6
M65A	Busby, Falmout	125.51	14	P	PKPdf	21 38 20.0	-1.5
	baz=342						
LL02	Futaleuf	145.15	159		PKPbc	21 38 56.6	-0.6
PLCA	Paso Flores	147.76	158	PKPbc	PKPbc	21 39 04.8	-0.3
	comp=Z,3.8nm,0.8s,baz=213,slow=3.0,SNR=15						
PLCA	Paso Flores	147.76	158		PKPbc	21 39 05.4	+0.3
PLCA	Paso Flores	147.76	158	PKP2	PKPbc	21 39 05.4	+0.3
OBIP	Obispado Ponce	148.75	21	PKPdf	PKPdf	21 39 04.0	-0.5
BI02	San Fabin de	150.94	153		PKPbc	21 39 13.1	-0.1
TRQA	Tornquist	152.71	168	PKPdf	PKPdf	21 39 10.8	+0.7
TRQA	Tornquist	152.71	168	PKIKP	PKPdf	21 39 10.8	+0.7
OTAV	Otavalo	154.28	65		PKPab	21 39 34.0	-1.7
SDV	Santo Domingo	154.78	38		PKPdf	21 39 13.4	-0.5
ROSC	El Rosal	155.17	51	PKP	PKPdf	21 39 14.0	-0.7
	comp=Z,3.4nm,0.4s,baz=28,slow=17,SNR=1.3						
ROSC	El Rosal	155.17	51		PKPdf	21 39 13.0	-1.7
CFA	Coronel Fontan	156.53	151	PKP	PKPdf	21 39 15.2	-0.4
	comp=Z,0.7nm,0.5s,baz=271,slow=2.7,SNR=3.0						
PLTB	Pedras Altas	159.60	184		PKPab	21 39 57.1	-0.3
CPUP	Villa Florida	164.95	173	PKP	PKPdf	21 39 24.0	-0.7
	comp=Z,0.9nm,0.6s,baz=163,slow=2.2,SNR=2.6						
CPUP				PKPab	PKPab	21 40 20.1	-0.7
	comp=Z,3.5nm,0.9s,baz=213,slow=6.2,SNR=4.8						
CPUP	Villa Florida	164.95	173		PKPdf	21 39 22.9	-1.8
CPUP					PKPab	21 40 20.5	-0.3
LPAZ	La Paz	166.59	113	PKP	PKPdf	21 39 26.9	-0.2
	comp=Z,0.8nm,0.7s,baz=219,slow=3.5,SNR=3.6						
LPAZ				PKPab	PKPab	21 40 31.6	+2.2
	comp=Z,3.2nm,0.8s,baz=255,slow=3.9,SNR=5.5						
LPAZ	La Paz	166.59	113		PKPdf	21 39 25.9	-1.2
LPAZ					PKPab	21 40 29.3	-0.2
BDFB	Brasilia	171.73	238	PKPab	PKPab	21 40 52.8	+1.2
	comp=Z,4.2nm,0.9s,baz=23,slow=3.3,SNR=3.3						
BDFB	Brasilia	171.73	238		PKPab	21 40 51.7	+0.2
BDFB	Brasilia	171.73	238	PKP2	PKPab	21 40 51.7	+0.2
SIV	San Ignacio	172.71	130	PKP	PKPdf	21 39 29.7	-0.3
	baz=274,slow=0.7						

NOU 01 21:20:46.3,21°.24S×169°.79E,h29km,MLv4.0/11, Southeast of Loyalty Islands,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.66	261	P	Pn	21 21 12.7	-0.7
MARNC				S	Sn	21 21 34.4	+0.6
MARNC	Mare, Loyalty	1.66	261	S	Sn	21 21 34.4	+0.6
OUENC	Ouen Island, N	2.98	246	P	Pn	21 21 31.7	+0.1
OUENC				S	Sn	21 22 07.3	+0.9
OUENC	Ouen Island, N	2.98	246	S	Sn	21 22 07.3	+0.9
DZM	Mont Dzumac	3.22	255	P	Pn	21 21 35.1	+0.1
DZM				S	Sn	21 22 13.0	+0.5
DZM	Mont Dzumac	3.22	255	S	Sn	21 22 13.0	+0.5
ONTNC	Ouen Toro	3.28	250	P	Pn	21 21 35.7	0.0
RTV	Rentapao	3.66	339	P	Pn	21 21 41.2	+0.2
DVP	Devils Point	3.81	336	P	Pn	21 21 42.9	-0.1
KOUNC	Koumac, New Ca	5.19	277	P	Pn	21 22 02.6	+0.5

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*RSNC **01** 21:40:45.0±0.0,7°N±1°×7°3W±°,h148km±1km,M2.1,ML2.0*
*FUNV **01** 21:40:48.3,7°.04N×73°.39W,h5km,MW2.7,Presumed earthquake*
ISC 01 21:40:43.9±1.7,**6°.85N**±0°.04×**73°.14W**±0°.06,**h151**km±10km, **n23**,σ**1s.08**/45,**Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.26	190	P	Pn	21 41 05.1	+0.3
BARC				S	Sn	21 41 20.5	-0.2
BRJC	Barrancabermej	0.61	281	P	Pn	21 41 06.4	+0.4
BRJC				S	Sn	21 41 23.2	+0.4
PAMC	Pamplona, Colo	0.65	42	P	Pn	21 41 07.8	+1.0
PAMC				S	Sn	21 41 25.2	+1.0
RUSC	La Rusia	0.96	177	P	Pn	21 41 08.5	-0.5
RUSC				S	Sn	21 41 27.7	-0.5
RUSC	La Rusia	0.96	177	*e*P	Pn	21 41 09.1	+0.1
RUSC				*e*S	Sn	21 41 26.4	-1.7
CAPV	Capacho	1.29	39	*e*P	Pn	21 41 13.2	+1.5
CAPV				*e*S	Sn	21 41 31.8	-1.3
PTBC	PUERTO BERRIO,	1.35	257	P	Pn	21 41 11.3	-0.7
PTBC				S	Sn	21 41 32.6	-0.9
OCAC	Ocana	1.39	353	P	Pn	21 41 12.5	-0.1
OCAC				S	Sn	21 41 35.2	+0.6
SPBC	San Pablo de B	1.51	218	P	Pn	21 41 14.0	+0.2
SPBC				S	Sn	21 41 36.1	-0.6
NORC	Norcasia	2.15	233	P	Pn	21 41 21.1	+0.2
NORC				S	Sn	21 41 48.1	-1.3
CHIC	Chingaza	2.29	195	P	Pn	21 41 23.0	0.0
CHIC				S	Sn	21 41 52.7	-0.3
ROSC	El Rosal	2.32	211	P	Pn	21 41 24.8	+1.5
ROSC				S	Sn	21 41 53.9	+0.3
HELC	Santa Helena	2.47	255	P	Pn	21 41 27.1	+2.1
HELC				S	Sn	21 41 57.2	+0.5
HELC	Santa Helena	2.47	255	*e*P	Pn	21 41 25.8	+0.8
HELC				*e*S	Sn	21 41 54.8	-1.9
GUY2C	Guyana, Caldas	2.74	234	P	Pn	21 41 30.4	+1.8
GUY2C				S	Sn	21 42 04.5	+1.5
VILC	Villavicencio,	2.78	192	P	Pn	21 41 28.5	-0.2
VILC				S	Sn	21 42 03.0	-0.3
CBOC	Ciudad Bolivar	3.02	251	P	Pn	21 41 32.7	+0.9
CBOC				S	Sn	21 42 08.8	0.0
DBBC	Dabeiba	3.06	273	P	Pn	21 41 33.0	+0.9
DBBC				S	Sn	21 42 08.3	-1.1
PRAC	Prado	3.57	209	P	Pn	21 41 39.0	+0.3
PRAC				S	Sn	21 42 20.8	-0.5
ORTC	Ortega, Tolima	3.60	216	P	Pn	21 41 39.0	-0.1
ORTC				S	Sn	21 42 22.0	+0.1
SJCC	San Jacinto, C	3.64	326	P	Pn	21 41 40.1	+0.5
SJCC				S	Sn	21 42 22.2	-0.6
SJCC	San Jacinto, C	3.64	326	*e*S	Sn	21 42 19.0	-3.7
URMC	La Uribe, Meta	3.79	199	P	Pn	21 41 41.7	+0.1
URMC				S	Sn	21 42 25.7	-0.7

RSNC 01 21:49:35.6±0.0,**7°N**±1°×**7°6W**±°,**h0**km±2km,**M1.3,ML1.3, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBBC	Dabeiba	0.18	3	S	Sg	21 49 42.6	+1.3
DBBC	Dabeiba	0.18	3	P	Pg	21 49 38.8	-0.2
DBBC				S	Sg	21 49 41.9	+0.6
DBBC	Dabeiba	0.18	3	P	Pg	21 49 39.0	0.0
DBBC	Dabeiba	0.18	3	P	Pg	21 49 39.1	+0.1
DBBC	Dabeiba	0.18	3	S	Sg	21 49 39.1	-2.2
HELC	Santa Helena	0.94	133	P	Pg	21 49 53.2	-0.5
HELC	Santa Helena	0.94	133	P	Pg	21 49 52.2	-1.5
HELC				S	Sg	21 50 05.3	-0.6
CBOC	Ciudad Bolivar	0.99	168	P	Pg	21 49 53.6	-1.0
CBOC	Ciudad Bolivar	0.99	168	P	Pg	21 49 52.7	-1.9
CBOC				S	Sg	21 50 07.3	-0.2
CBOC	Ciudad Bolivar	0.99	168	P	Pg	21 49 53.3	-1.3
APAC	Apartado, Choc	1.11	341	P	Pg	21 49 55.8	-1.2
UREC	San Jos de Ur	1.13	37	P	Pg	21 49 56.4	-1.0
UREC				S	Sg	21 50 12.7	+0.6
PTBC	PUERTO BERRIO,	1.78	100	P	Pn	21 50 06.8	-0.8
PTBC	PUERTO BERRIO,	1.78	100	P	Pn	21 50 06.6	-1.0
PTBC				S	Sn	21 50 31.0	0.0
NORC	Norcasia	1.85	133	P	Pn	21 50 08.2	-0.4
NORC				S	Sn	21 50 31.9	-0.8

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*JSN **01** 22:03:00.3±1.1,18°.78N×81°.32W,h15km±999km,MD4.8, Presumed earthquake*
*SSNC **01** 22:03:02.2±1.8,18°.76N×81°.25W,h20km±26km,MD3.4, ML3.5,MW3.2,Presumed earthquake*
ISC 01 22:02:58.2±2.1,**18°.79N**±0°.08×**81°.30W**±0°.09,**h10**km,**n27**, σ**2s.08**/38,**1C,North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCCY	Blossom Villag	1.44	53	*e*P	Pn	22 03 24.3	-0.1
LCCY				*e*S	Sn	22 03 42.8	-0.6
LCCY				IAML		22 03 53.3	
	comp=N,515nm,0.5s						
LCCY				IAML		22 03 58.9	
	comp=E,562nm,1.2s						
LCCY	Blossom Villag	1.44	53	*e*P	Pn	22 03 24.3	-0.1
LCCY				*e*S	Sn	22 03 42.8	-0.6
LCCY				IAML		22 03 53.3	
	comp=N,515nm,0.5s						
LCCY				IAML		22 03 58.9	
	comp=E,562nm,1.2s						
CBCY	The Bluff, Cay	1.73	57	*e*P	Pn	22 03 27.9	-0.5
CBCY				*e*S	Sn	22 03 48.6	-1.9
CBCY				IAML		22 03 57.4	
	comp=E,292nm,0.7s						
CBCY				IAML		22 04 09.2	
	comp=N,307nm,0.9s						
CBCY	The Bluff, Cay	1.73	57	*e*P	Pn	22 03 27.9	-0.5
CBCY				*e*S	Sn	22 03 48.6	-1.9
CBCY				IAML		22 03 57.4	
	comp=E,292nm,0.7s						
CBCY				IAML		22 04 09.2	
	comp=N,307nm,0.9s						
MGV	Manicaragua	3.52	20	*e*P	Pn	22 03 52.3	-0.8
MGV				*i* P	Pb	22 03 52.4	-8.3
MGV				*e*S	Sn	22 04 32.5	-2.4
MGV				*e*Sg	Sb	22 04 34.5	-9.1
MGV				IAML		22 04 35.9	
	comp=N,92nm,0.3s						
MGV	Manicaragua	3.52	20	*e*P	Pn	22 03 52.3	-0.8
MGV				*i* P	Pb	22 03 52.4	-8.3
MGV				*e*S	Sn	22 04 32.5	-2.4
MGV				*e*Sg	Sb	22 04 34.5	-9.1
MGV				IAML		22 04 35.9	
	comp=N,92nm,0.3s						
MTDJ	Mount Denham	3.61	98	*e*P	Pn	22 03 54.7	+0.2
MTDJ				*e*S	Sn	22 04 34.2	-3.0
MTDJ				IAML		22 04 43.8	
	comp=N,91nm,0.3s						
MTDJ				IAML		22 04 52.8	
	comp=N,106nm,1.3s						
MTDJ	Mount Denham	3.61	98	*i* P	Pn	22 03 55.4	+0.9
MTDJ				*i* S	Sn	22 04 36.1	-1.1
MTDJ	Mount Denham	3.61	98	*e*P	Pn	22 03 54.7	+0.2
MTDJ				*e*S	Sn	22 04 34.2	-3.0
MTDJ				IAML		22 04 43.8	
	comp=N,91nm,0.3s						
MTDJ				IAML		22 04 52.8	
	comp=N,106nm,1.3s						
CAIB	Caibarien	4.06	25	*e*P	Pn	22 04 02.2	+1.8
CAIB				*e*S	Sn	22 04 48.0	0.0
CAIB	Caibarien	4.06	25	*e*P	Pn	22 04 02.2	+1.8
CAIB				*e*S	Sn	22 04 48.0	0.0
SOR	Soroa	4.29	338	*i* S	Sn	22 04 52.9	-0.9
SOR	Soroa	4.29	338	*i* S	Sn	22 04 52.9	-0.9
STH	Stony Hill	4.32	99	⇑*i*P	Pn	22 04 05.3	+1.2
HOJ	Hope	4.39	100	*i* P	Pn	22 04 04.5	-0.4
YAR	Yar	4.91	71	*e*P	Pn	22 04 14.2	+2.0
YAR	Yar	4.91	71	*e*P	Pn	22 04 14.2	+2.0
MARVS	Santiago de Cu	5.23	76	*e*P	Pn	22 04 19.8	+3.2
MARVS	Santiago de Cu	5.23	76	*e*P	Pn	22 04 19.8	+3.2
HLGC	Holguin	5.35	66	*e*P	Pn	22 04 20.8	+2.5
HLGC	Holguin	5.35	66	*e*P	Pn	22 04 20.8	+2.5
RCC	Rio Carpintero	5.42	76	*e*P	Pn	22 04 19.8	+0.6
RCC	Rio Carpintero	5.42	76	*e*P	Pn	22 04 19.8	+0.6
GTBY	Guantanamo Bay	5.95	78	*e*P	Pn	22 04 29.3	+2.9
GTBY	Guantanamo Bay	5.95	78	*e*P	Pn	22 04 29.3	+2.9
QMBU	Quimbuelo	6.28	76	*e*P	Pn	22 04 35.4	+4.5
QMBU	Quimbuelo	6.28	76	*e*P	Pn	22 04 35.4	+4.5

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*IDC **01** 22:10:50.6±1.3,16°.00S×176°.19W,h360km±13km, mb3.8/11,mbtmp4.5/13,Error ellipse: s-maj=23.4km s-min=10.5km az=146.0*
*NEIC **01** 22:10:51.0±1.6,16°.1S±0°.1×176°.10W±0°.09,h361km±5km, mb4.5/120,Error ellipse: s-maj=16.7km s-min=11.1km az=146.0*
*NOU **01** 22:10:52.5,16°.14S×175°.99W,h392km,mb4.3/22,Tonga Islands*
ISC 01 22:10:54.2±0.4,**16°.11S**±0°.08×**176°.19W**±0°.08,**h400**km, **n258**,σ**0s.73**/257,**mb4.4**/75,**13C-19D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	3.28	230	P	Pn	22 11 58.7	-1.0
TAVE	Taveuni	3.61	260	P	Pn	22 12 02.4	-0.3
DGTI	Dogotuki	3.92	267	P	Pn	22 12 04.6	-0.9
AFI	Afiamalu	4.79	63	P	Pn	22 12 09.1	-5.1
	243nm,0.5s,baz=248,slow=11,SNR=42						
AFI				S	S	22 13 10.1	-9.2
	25nm,0.3s,baz=240,slow=20,SNR=1.1						
MSVF	Nonsavu	5.74	253	P	Pn	22 12 24.4	+0.3
MSVF	Nonsavu	5.74	253		Pn	22 12 23.8	-0.4
NIUE	Niue	6.66	117	P	Pn	22 12 30.2	-3.9
NIUE	Niue	6.66	117		Pn	22 12 28.9	-5.3
FUNA	Funafuti	8.78	329		Pn	22 12 55.6	-2.7
MARNC	Mare, Loyalty	15.86	248	P	P	22 14 16.3	+0.3
MARNC	Mare, Loyalty	15.86	248	P	P	22 14 14.0	-2.0
DZM	Mont Dzumac	17.44	247	P	P	22 14 32.2	-0.8
	4.9nm,0.7s,baz=70,slow=15,SNR=6.2						
DZM	Mont Dzumac	17.44	247	P	P	22 14 33.5	+0.5
DZM	Mont Dzumac	17.44	247	P	P	22 14 32.0	-1.0
HURO	Huro Makira	22.04	282	P	P	22 15 17.6	+0.2
URZ	Urewera	22.84	194	P	P	22 15 22.5	-1.8
RTZ	Ruatahuna	23.21	194	P	P	22 15 25.4	-2.4
TATA	Tatamba Isabel	24.66	285	P	P	22 15 42.2	+1.2
MRZ	Mangatainoka R	25.48	195	P	P	22 15 45.4	-2.6
MRZ				IAmb	IAmb	22 16 07.2	
	comp=Z,34nm,1.5s						
TCW	Tory Channel	26.34	196	P	P	22 15 55.0	-0.6
BHW	Baring Head	26.36	195	P	P	22 15 54.1	-1.7
QRZ	Quartz Range	26.50	199	P	P	22 15 56.3	-0.7
QRZ	Quartz Range	26.50	199	P	P	22 15 56.1	-0.9
QRZ				IAmb	IAmb	22 16 20.0	
	comp=Z,34nm,1.4s						
THZ	Tophouse	27.24	198	P	P	22 16 02.6	-1.0
DSZ	Denniston Nort	27.56	200	P	P	22 16 05.3	-1.2
DSZ				IAmb	IAmb	22 16 20.5	
	comp=Z,42nm,1.4s						
LTZ	Lake Taylor	28.36	198	P	P	22 16 12.7	-0.8
LTZ				IAmb	IAmb	22 16 41.6	
	comp=Z,38nm,1.5s						
INZ	Inchbonnie	28.56	199	P	P	22 16 13.5	-1.6
FOZ	Fox Glacier	29.82	201	P	P	22 16 26.4	+0.3
JCZ	Jackson Bay	30.65	201	P	P	22 16 33.0	-0.6
MLZ	Mavora Lakes	32.01	201	P	P	22 16 44.6	-0.7
MLZ				IAmb	IAmb	22 16 46.6	
	comp=Z,22nm,0.9s						
DCZ	Deep Cove	32.44	202	P	P	22 16 47.3	-1.5
WHZ	Wether Hill Ro	32.53	201	P	P	22 16 49.4	-0.2
ARMA	Armidale	32.68	238	P	P	22 16 50.8	-0.6
CMSA	Cobar Meteorol	37.88	239	P	P	22 17 35.4	+0.4
QLP	Quilpie	38.16	247	P	P	22 17 38.2	+0.8
COEN	Coen	39.26	268	P	P	22 17 47.2	+0.7
COEN	Coen	39.26	268		P	22 17 47.2	+0.7
COEN				IAmb	IAmb	22 17 48.1	
	comp=Z,17nm,0.8s						
GLAD	Gladstone	39.61	224	P	P	22 17 48.6	-0.4
TOO	Toolangi	39.94	230	P	P	22 17 52.1	+0.3
STKA	Stephens Creek	41.36	240	P	P	22 18 03.2	-0.1
	comp=Z,2.7nm,0.4s,baz=82,slow=11,SNR=11						
	comp=Z,2.7nm,0.4s						
STKA	Stephens Creek	41.36	240	P	P	22 18 02.9	-0.3
STKA	Stephens Creek	41.36	240	P	P	22 18 03.1	-0.1
INKA	Innaminka	41.40	246	P	P	22 18 03.6	0.0
QIS	Mount Isa	42.10	257	P	P	22 18 09.5	+0.1
HTT	Hallett	43.88	238	P	P	22 18 23.4	+0.1
BBOO	Buckleboo	46.13	240	P	P	22 18 40.7	-0.1
BBOO	Buckleboo	46.13	240	P	P	22 18 40.5	-0.3
BBOO				IAmb	IAmb	22 18 58.5	
	comp=Z,34nm,1.2s						
WR8	Warramunga Arr	46.91	258	P	P	22 18 46.2	-0.7
WR8				IAmb	IAmb	22 18 47.5	
	comp=Z,16nm,0.5s						
WB0	Warramunga Arr	47.03	258		P	22 18 47.2	-0.6
WB0				IAmb	IAmb	22 18 47.8	
	comp=Z,24nm,0.8s						
WRAB	Tennant Creek	47.06	258	P	P	22 18 47.8	-0.2
WRAB	Tennant Creek	47.06	258	P	P	22 18 47.1	-0.9
WRAB				IAmb	IAmb	22 18 48.1	
	comp=Z,17nm,0.8s						
WB1	Warramunga Ar.	47.06	258	P	P	22 18 47.4	-0.6
WRA	Warramunga Arr	47.06	258	P	P	22 18 47.5	-0.5
	comp=Z,12nm,0.6s,baz=90,slow=7.0,SNR=280						
WRA				PcP	PcP	22 20 13.1	+0.3
	comp=Z,3.6nm,0.8s,baz=90,slow=3.6,SNR=6.9						
WRA				S	S	22 25 08.7	-0.8
	comp=Z,0.4nm,0.9s,baz=97,slow=30,SNR=1.5						
	comp=Z,12nm,0.6s						
WRA	Warramunga Arr	47.06	258		P	22 18 46.3	-1.8
WRA					PcP	22 20 13.1	+0.3
AS31	Alice Springs	47.33	253		P	22 18 49.8	-0.4
AS31				IAmb	IAmb	22 18 50.6	
	comp=Z,20nm,0.7s						

ASAR	Alice Springs	47.33	253	P	P	22 18 49.9	-0.3
	comp=Z,64nm,0.4s,baz=89,slow=7.7,SNR=1150						
ASAR				PcP	PcP	22 20 13.8	+0.1
	comp=Z,2.1nm,0.5s,baz=94,slow=4.2,SNR=5.4						
ASAR				S	S	22 25 11.7	-1.5
	comp=Z,0.6nm,1.0s,baz=90,slow=14,SNR=4.3						
ASAR	Alice Springs	47.33	253		P	22 18 49.8	-0.3
ASAR					PcP	22 20 14.1	+0.4
ASAR					S	22 25 15.1	+1.9
MTN	Manton Dam	51.00	266	P	P	22 19 17.0	-0.6
MTN				IAmb	IAmb	22 19 18.7	
	comp=Z,23nm,1.4s						
FORT	Forrest	52.70	243	P	P	22 19 29.1	-0.6
FORT				IAmb	IAmb	22 19 29.7	
	comp=Z,21nm,0.7s						
KNRA	Kununurra	52.80	262	P	P	22 19 30.7	0.0
KNRA				IAmb	IAmb	22 19 53.5	
	comp=Z,42nm,1.4s						
PSA00	Pilbara Seismi	60.42	254	P	P	22 20 23.4	-0.2
MBWA	Marble Bar	60.58	255	P	P	22 20 24.5	-0.2
MORW	Morawa	63.15	245	P	P	22 20 41.3	-0.1
TOLI2	Tolitoli	64.49	279	P	P	22 20 51.9	+1.6
TOLI2				IAmb	IAmb	22 20 54.4	
	comp=Z,5.8nm,0.8s						
GIRL	Giralia	65.45	252	P	P	22 20 57.1	+0.8
PETK	Petropavlovsk-	72.52	344	P	P	22 21 37.9	-0.7
	comp=Z,2.5nm,0.7s,baz=153,slow=5.3,SNR=5.1						
	comp=Z,2.5nm,0.7s						
PETK	Petropavlovsk-	72.52	344	P	P	22 21 37.7	-0.9
QSPA	South Pole Qui	73.94	180	P	P	22 21 47.9	+1.1
	comp=Z,11nm,0.7s,baz=19,slow=1.6,SNR=14						
	comp=Z,11nm,0.7s						
QSPA	South Pole Qui	73.94	180	P	P	22 21 47.9	+1.1
CMB	Columbia Colle	75.09	43		P	22 21 53.8	+0.2
CMB				IAmb	IAmb	22 21 54.8	
	comp=Z,7.7nm,1.0s						
AFDM	Forest Hills D	75.23	41		P	22 21 54.2	-0.2
YBH	Yreka Blue Hor	75.80	38	P	P	22 21 58.3	+0.6
YBH				IAmb	IAmb	22 21 59.0	
	comp=Z,6.9nm,0.7s						
NVAR	Mina Array Bea	76.67	43	P	P	22 22 03.2	+0.5
	comp=Z,3.8nm,0.8s,baz=227,slow=9.6,SNR=16						
	comp=Z,3.8nm,0.8s						
PAHR	Pah Rah Range	76.68	42	P	P	22 22 02.8	+0.1
PAHR				IAmb	IAmb	22 22 03.9	
	comp=Z,7.5nm,1.1s						
J04A	Umpqua Nationa	77.07	37	P	P	22 22 05.2	+0.4
TPNV	Topopah Spring	77.25	45	P	P	22 22 06.2	+0.3
TPNV				IAmb	IAmb	22 22 07.2	
	comp=Z,4.9nm,0.8s						
J05D	Fort Rock, OR	77.61	38		P	22 22 08.5	+0.8
W13A	Hualapai Mount	77.97	48		P	22 22 10.6	+0.6
PINE	Pine Mountain	78.08	37		P	22 22 11.1	+0.8
PINE				IAmb	IAmb	22 22 12.0	
	comp=Z,11nm,0.9s						
TUC	Tucson	78.93	52		P	22 22 15.2	+0.2
I07A	Izee	79.09	38		P	22 22 16.5	+0.9
I07A				IAmb	IAmb	22 22 49.0	
	comp=Z,7.6nm,1.4s						
J08A	Circle Bar Ran	79.29	39		P	22 22 16.4	-0.3
J08A				IAmb	IAmb	22 22 18.0	
	comp=Z,8.6nm,1.1s						
CCUT	Cedar City	79.54	46		P	22 22 19.4	+1.0
PSUT	Pine Spring	79.69	45	P	P	22 22 19.4	+0.3
U15A	North Rim	79.75	47		P	22 22 20.6	+1.1
ELK	Elko	79.90	42		P	22 22 20.1	-0.2
ELK				IAmb	IAmb	22 22 21.8	
	comp=Z,6.0nm,1.1s						
G08A	Pilot Rock	80.10	37	P	P	22 22 21.0	0.0
G08A				IAmb	IAmb	22 22 22.3	
	comp=Z,7.4nm,0.9s						
DUN6	Lazy B Ranch	80.32	52	P	P	22 22 23.4	+0.9
E07A	Sunnyside	80.33	36	P	P	22 22 22.4	+0.3
E07A				IAmb	IAmb	22 22 23.5	
	comp=Z,7.0nm,0.8s						
HAWA	Hanford	80.41	36		P	22 22 22.8	+0.3
HAWA				IAmb	IAmb	22 22 23.8	
	comp=Z,7.8nm,0.9s						
J18K	Innoko River	80.76	9	P	P	22 22 24.3	+0.4
J18K				IAmb	IAmb	22 22 24.7	
	comp=Z,4.0nm,0.7s						
BMO	Blue Mountains	80.83	38		P	22 22 25.0	+0.2
MFID	Camas Ranch	80.94	40		P	22 22 25.4	0.0
MFID				IAmb	IAmb	22 22 26.7	
	comp=Z,6.1nm,1.0s						
121A	Cookes Peak, D	81.30	53		P	22 22 27.1	-0.6
121A				IAmb	IAmb	22 22 29.4	
	comp=Z,6.1nm,0.8s						
F10A	Beach Ranch, E	81.49	37		P	22 22 27.8	-0.5
F10A				IAmb	IAmb	22 22 29.0	
	comp=Z,5.1nm,0.8s						
TNA	Tin City	81.66	3		P	22 22 28.6	+0.1
TNA				IAmb	IAmb	22 22 29.9	
	comp=Z,7.9nm,1.0s						
Q16A	Castle Valley	81.71	46	P	P	22 22 29.5	-0.2
PLID	Pearl Lake	81.73	38		P	22 22 29.4	-0.3
TMUT	Trail Mountain	81.87	45	P	P	22 22 31.7	+1.1
HLID	Hailey	81.89	40		P	22 22 31.2	+0.7
HLID				IAmb	IAmb	22 22 32.2	
	comp=Z,5.5nm,0.9s						
SRU	San Rafael Swe	82.25	46		P	22 22 32.7	+0.3
SRU				IAmb	IAmb	22 22 33.8	
	comp=Z,7.9nm,0.8s						
P17A	Butcher Ranch,	82.27	45	P	P	22 22 32.1	-0.4
M26K	Nabesna, AK	82.50	15	P	P	22 22 33.0	0.0
TCUT	Toone Canyon	82.60	44	P	P	22 22 34.4	+0.1
P18A	Preston Nutter	82.68	45	P	P	22 22 35.0	+0.3
BSUT	Blindstream Ca	82.76	44		P	22 22 35.6	+0.3
BSUT				IAmb	IAmb	22 22 36.6	
	comp=Z,6.0nm,0.7s						
VHRN	Van Horn	82.76	55		P	22 22 35.2	+0.1
VHRN				IAmb	IAmb	22 22 37.2	
	comp=Z,5.4nm,0.8s						
PV05	Paradox Valley	82.77	47	P	P	22 22 35.3	+0.1
PV05				IAmb	IAmb	22 22 37.0	
	comp=Z,7.2nm,0.9s						
MNTX	Cornudas Mount	82.81	54		P	22 22 35.2	0.0
MNTX				IAmb	IAmb	22 22 36.7	
	comp=Z,4.5nm,0.7s						
PV10	Paradox Valley	82.94	47	P	P	22 22 35.7	-0.3
PV20	West Nyswonger	82.98	47	P	P	22 22 36.1	0.0
PV23	Carpenter Ridg	83.00	47	P	P	22 22 36.1	-0.3
PV13	Radium Mtn., P	83.00	47	P	P	22 22 37.3	+1.0
PV03	Paradox Valley	83.02	47	P	P	22 22 36.0	-0.5
PV03				IAmb	IAmb	22 22 37.6	
	comp=Z,9.2nm,1.2s						
PV21	Cone Mtn., Par	83.07	47	P	P	22 22 36.9	+0.2
PV21				IAmb	IAmb	22 22 38.1	
	comp=Z,7.7nm,0.8s						
PV01	Paradox Valley	83.17	47	P	P	22 22 37.3	+0.2
PV01				IAmb	IAmb	22 22 38.3	
	comp=Z,6.3nm,0.9s						
WRH	Wood River Hil	83.17	12		P	22 22 35.5	-0.7
WRH				IAmb	IAmb	22 22 36.6	
	comp=Z,11nm,1.0s						
MLY	Manley	83.18	11	P	P	22 22 35.8	-0.6
MLY				IAmb	IAmb	22 22 36.2	
	comp=Z,5.5nm,1.0s						
TX31	Lajitas Ar. Si	83.24	57		P	22 22 37.8	+0.2
TX31				IAmb	IAmb	22 22 40.0	
	comp=Z,8.2nm,1.2s						
TXAR	Lajitas Array	83.25	57	P	P	22 22 37.7	+0.1
	comp=Z,1.9nm,0.9s,baz=220,slow=5.8,SNR=14						
	comp=Z,1.9nm,0.9s						
TXAR	Lajitas Array	83.25	57	P	P	22 22 38.5	+0.9
G19K	Purcell Mounta	83.25	8		P	22 22 37.1	+0.5
G19K				IAmb	IAmb	22 22 37.6	
	comp=Z,5.2nm,0.8s						
ANMO	Albuquerque	83.32	51	P	P	22 22 38.2	+0.3
ANMO	Albuquerque	83.32	51		P	22 22 38.1	+0.1
ANMO				IAmb	IAmb	22 22 39.5	
	comp=Z,4.0nm,1.0s						
HDA	Harding Lake	83.35	12	P	P	22 22 36.8	-0.4
HDA				IAmb	IAmb	22 22 37.8	
	comp=Z,8.2nm,0.8s						
CCB	Clear Creek Bu	83.39	12		P	22 22 36.6	-0.7
MCMT	McKenzie Canyo	83.50	40	P	P	22 22 39.1	+0.4
AHID	Auburn Hatcher	83.59	42	P	P	22 22 39.3	+0.1
AHID				IAmb	IAmb	22 22 39.9	
	comp=Z,8.6nm,1.4s						
BELA	Belgrano 2	83.66	172	P	P	22 22 39.0	+0.3
ALPN	Alpine	83.67	56		P	22 22 40.5	+0.8
IL31		83.68	12	P	P	22 22 38.0	-0.7
ILAR	Eielson Array	83.68	12	P	P	22 22 38.0	-0.8
	comp=Z,4.3nm,0.6s,baz=215,slow=5.2,SNR=90						
	comp=Z,4.3nm,0.6s						
ILAR	Eielson Array	83.68	12		P	22 22 38.5	-0.3
GDL2	Guadalupe Moun	83.81	54	P	P	22 22 40.2	-0.2
J25K	Salcha River,	83.86	13	P	P	22 22 39.7	-0.1
H22K	Ishtalitna Cre	83.86	10	P	P	22 22 39.6	-0.1
H22K				IAmb	IAmb	22 22 40.4	
	comp=Z,9.0nm,0.9s						
DLMT	Dillon	83.93	39		P	22 22 41.3	+0.6
DLMT				IAmb	IAmb	22 22 42.3	
	comp=Z,8.0nm,1.0s						
F20K	Avaraart Lake	84.29	8	P	P	22 22 42.1	+0.4
MOOW	Moose Ponds	84.29	41		P	22 22 43.2	+0.6
FLWY	Flagg Ranch	84.48	41	P	P	22 22 43.5	0.0
YHB	Horse Butte	84.49	40	P	P	22 22 44.5	+0.9
YHB				IAmb	IAmb	22 22 45.7	
	comp=Z,5.8nm,1.0s						
YHL	Hebgen Lake	84.55	40		P	22 22 43.8	-0.2
YHL				IAmb	IAmb	22 22 46.1	
	comp=Z,7.7nm,0.8s						
YMR	Madison River	84.60	41	P	P	22 22 44.8	+0.7
YMR				IAmb	IAmb	22 22 47.2	
	comp=Z,10nm,1.3s						
PD31	Pinedale Array	84.60	43	P	P	22 22 43.7	-0.5
PDAR	Pinedale Array	84.60	43	P	P	22 22 44.0	-0.2
	comp=Z,1.2nm,0.6s,baz=216,slow=4.0,SNR=16						
	comp=Z,1.2nm,0.6s						
PDAR	Pinedale Array	84.60	43	P	P	22 22 44.2	0.0
PRP	Porcupine Dome	84.61	12		P	22 22 43.4	-0.2
PRP				IAmb	IAmb	22 22 44.6	
	comp=Z,6.4nm,0.9s						
BOZ	Bozeman (W)	84.64	40	P	P	22 22 45.1	+0.9
BOZ				IAmb	IAmb	22 22 45.8	
	comp=Z,7.2nm,1.1s						
DAWY	Dawson	84.79	15	P	P	22 22 44.3	-0.1
DAWY				IAmb	IAmb	22 22 45.3	
	comp=Z,6.1nm,0.8s						
BILL	Bilibino	84.88	353		P	22 22 44.9	+0.2
BILL				IAmb	IAmb	22 22 45.3	
	comp=Z,7.4nm,0.8s						
YNE	Yellowstone No	85.36	41	P	P	22 22 47.0	-0.9
YNE				IAmb	IAmb	22 22 49.6	
	comp=Z,8.0nm,1.2s						
J29N	Klondike Camp	85.41	16		P	22 22 48.0	+0.6
J29N				IAmb	IAmb	22 22 48.8	
	comp=Z,7.2nm,0.7s						
DRIO	Del Rio	85.75	58		P	22 22 50.6	+0.7
BMAR	Burnt Mountain	86.47	12		P	22 22 53.0	+0.5
HNDO	Hondo	86.88	58	P	P	22 22 56.4	+1.1
XAN	Xi'an	86.88	307	*e*P	P	22 22 56.3	+1.1
XAN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC	Hu-ho-hao-te	87.55	314	*e*P	P	22 23 02.2	+3.9
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
F31M	Tsiigehtchic	88.90	15	P	P	22 23 03.5	-0.3
F31M				IAmb	IAmb	22 23 05.4	
	comp=Z,7.2nm,1.0s						
PZH	PanZhiHua	90.20	297	P	P	22 23 13.2	+2.2
CMAR	Chiang Mai Arr	90.29	289	P	P	22 23 12.8	+1.3
	comp=Z,1.3nm,0.8s,baz=98,slow=2.6,SNR=12						
	comp=Z,1.3nm,0.8s						
CMAR	Chiang Mai Arr	90.29	289	P	P	22 23 12.2	+0.8
ELIB	Princess Elisa	91.17	186	*d*P	P	22 23 14.9	+0.2
	comp=Z,7.5nm,0.8s						
YKA	Yellowknife Ar	91.83	24	P	P	22 23 17.1	-0.3
	comp=Z,0.8nm,1.0s,baz=251,slow=4.7,SNR=5.8						
	comp=Z,0.8nm,1.0s						
YKA	Yellowknife Ar	91.83	24	P	P	22 23 17.3	-0.2
TROLL	Troll, Antarti	92.09	180	⇓P	P	22 23 19.5	+0.6
VNA3	Neumayer Olymp	92.38	176	⇓P	P	22 23 21.1	+1.0
	comp=Z,8.5nm,0.8s						
VNA2	Neumayer--Watz	92.84	176	⇓P	P	22 23 23.5	+1.3
	comp=Z,9.8nm,0.6s,baz=182,slow=5.1						
SONM	Songino Array	93.59	319	P	P	22 23 26.5	+0.3
	comp=Z,0.7nm,0.6s,baz=134,slow=6.2,SNR=2.1						
	comp=Z,0.7nm,0.6s						
SONM	Songino Array	93.59	319	P	P	22 23 26.0	-0.2
A36M	Sachs Harbour	94.22	14		P	22 23 28.2	-0.1
MGMO	Mountain Grove	94.85	53	P	P	22 23 32.2	+0.2
SIUN	Universidad Ur	95.06	77	P	P	22 23 32.4	-1.0
BVAR	Borovoye Array	116.78	322	PKP	PKPdf	22 28 51.2	-0.4
	comp=Z,1.6nm,0.5s,baz=117,slow=1.7,SNR=9.1						
SPITS	Spitsbergen Ar	117.60	357	PKP	PKPdf	22 28 52.0	-0.6
	comp=Z,7.0nm,1.0s,baz=50,slow=2.3,SNR=7.3						
ARCES	ARCESS Array B	124.91	351	PKP	PKPdf	22 29 06.5	-0.3
	comp=Z,2.0nm,0.4s,baz=16,slow=1.6,SNR=29						
ARCES	ARCESS Array B	124.91	351		PKPdf	22 29 06.8	0.0
BOSA	Boshof	130.94	205	PKP	PKiKP	22 29 20.9	+0.2
	comp=Z,1.9nm,0.8s,baz=91,slow=7.9,SNR=1.8						
BOSA	Boshof	130.94	205		PKiKP	22 29 20.3	-0.4
FINES	FINESS Array B	132.01	346	PKP	PKiKP	22 29 21.2	-0.4
	comp=Z,1.2nm,0.4s,baz=62,slow=3.3,SNR=20						
NOA	NORSAR Array B	134.81	355	PKP	PKiKP	22 29 27.2	-0.2
	comp=Z,1.6nm,0.9s,baz=16,slow=3.3,SNR=3.6						
HFS	Hagfors	135.45	353	PKP	PKiKP	22 29 28.0	-0.7
	comp=Z,4.6nm,1.0s,baz=40,slow=4.7,SNR=1.4						
GAZ	Gaziantep	143.79	312		PKPab	22 29 40.6	-0.8
BUR08	Bucovina Ar. S	143.94	335		PKPdf	22 29 42.2	-0.7
BNN	Bunyan	143.95	315		PKPdf	22 29 42.6	-0.6
BURAR	Bucovina Array	143.95	335	⇑P	PKPbc	22 29 42.0	+0.3
CLL	Collm	144.12	350	*i* PKPbc	PKPbc	22 29 41.8	-0.2
	comp=Z,12nm,0.9s						
TLCR		144.19	329	⇑P	PKPbc	22 29 41.3	-1.0
OSTC	Ostas	144.21	346	*e*PKP	PKPdf	22 29 42.8	-0.4
GHRR		144.22	332	⇓P	PKPdf	22 29 43.9	+0.6
UPC	Upice	144.30	347	*e*PKP	PKPbc	22 29 42.4	-0.2
DPC	Dobruska-Polom	144.38	346	*e*PKP	PKPdf	22 29 43.5	0.0
STEB	Steborice	144.41	344	*e*PKP	PKPab	22 29 43.2	+0.1
PANC	Panciu	144.48	332	⇑P	PKPdf	22 29 43.6	-0.1
KRLC	Kraliky	144.53	346	*e*PKP	PKPdf	22 29 43.9	+0.1
CFR	Carcaliu	144.53	330	⇓P	PKPdf	22 29 43.6	-0.2
BMR	Baia Mare	144.58	337	⇓P	PKPdf	22 29 43.8	0.0
PVCC	Panska Ves	144.59	348	*e*PKP	PKPab	22 29 43.6	-0.1
ODBI	Odobesti	144.60	332	⇓P	PKPdf	22 29 45.1	+1.1
MORC	Moravsky Berou	144.62	345	⇑P	PKPdf	22 29 44.1	+0.2
MORC	Moravsky Berou	144.62	345		PKPdf	22 29 44.1	+0.2
MORC	Moravsky Berou	144.62	345	*e*PKP	PKPab	22 29 43.8	-0.2
TPGR	Topolog	144.63	329	⇓P	PKPdf	22 29 44.5	+0.5
LANS	Liptovska Anna	144.66	342	*e*PKP	PKPab	22 29 45.0	+0.9
VRI	Vrincioaia	144.68	332	⇑P	PKPab	22 29 44.2	-0.1
PLOR	Plostina	144.72	332	⇓P	PKPab	22 29 44.2	-0.3
OZUR		144.92	333	⇑P	PKPab	22 29 45.0	-0.2
COVR	Voineasa-Covas	144.93	332	⇑P	PKPdf	22 29 44.1	-0.5
BR131	Keskin Array S	144.95	318		PKPab	22 29 45.2	-0.5
BRTR	Keskin Array B	144.95	318	PKP	PKPab	22 29 45.4	-0.3
	comp=Z,7.9nm,0.8s,baz=116,slow=2.3,SNR=44						
BRTR	Keskin Array B	144.95	318		PKPab	22 29 45.1	-0.5
KIRS	Kirsehir-Merke	145.09	317	⇓P	PKPab	22 29 45.9	-0.2
PRU	Pruhonice	145.11	348	*e*PKP	PKPbc	22 29 45.0	-0.1
DOPR	Dopca	145.19	333	⇑P	PKPab	22 29 46.7	+0.5
VRAC	Vranov	145.29	345	⇓P	PKPbc	22 29 45.5	-0.3
VRAC	Vranov	145.29	345	*e*PKP	PKPab	22 29 46.1	-0.4
MLR	Muntele Rosu	145.32	332	⇑P	PKPbc	22 29 46.2	+0.1
MLR	Muntele Rosu	145.32	332		PKPbc	22 29 45.9	-0.3
ISR	Istrita	145.33	331	⇓P	PKPab	22 29 46.6	-0.2
CJR	Cluj-Napoca	145.33	336	⇑P	PKPab	22 29 46.6	-0.2
JAVC	Velka Javorina	145.43	344	*e*PKP	PKPab	22 29 47.4	+0.3
MARR	Marisel-Cluj	145.55	336	⇓P	PKPbc	22 29 47.0	+0.2
KRUC	Moravsky	145.56	345	*e*PKP	PKPbc	22 29 46.8	+0.2
DRGR		145.61	337	⇓P	PKPbc	22 29 46.9	0.0
VOIR		145.75	333	⇓P	PKPab	22 29 48.1	-0.3
SULR		145.80	331	⇓P	PKPbc	22 29 47.5	+0.1
MODS	Modra-Piesok	145.98	344	*e*PKP	PKPab	22 29 48.8	-0.4
ARR	Arges	145.99	333	⇓P	PKPbc	22 29 47.8	-0.2
MDUB	Mudurnu	146.04	321		PKPbc	22 29 48.6	+0.2
KHC	Kasperske Hory	146.12	348		PKPbc	22 29 48.6	+0.4
KHC	Kasperske Hory	146.12	348	*e*PKP	PKPbc	22 29 48.2	0.0
SRO	Srobarova	146.20	342	*e*PKP	PKiKP	22 29 50.9	-0.1
CKRC	Cesky Krumlov	146.26	347	*e*PKP	PKPbc	22 29 47.7	-0.9
GERES	GERESS Array B	146.36	348	PKPbc	PKPbc	22 29 49.0	0.0
	comp=Z,1.7nm,0.5s,baz=20,slow=4.3,SNR=12						
LODK	Lodwar	146.51	251		PKPbc	22 29 50.8	+0.4
GZR	Gura Zlata	146.74	335	⇑P	PKPbc	22 29 50.1	0.0
CONA	Conrad Observa	146.75	345	*e*PKP	PKPbc	22 29 50.7	+0.6
	comp=Z,7.7nm,0.7s						
BORA	Eskisehir	146.85	321		PKPbc	22 29 50.7	+0.1
RONA	Rosalia, Austr	146.85	345	*e*PKP	PKPbc	22 29 50.9	+0.6
	comp=Z,10nm,1.0s,SNR=5.4						
MMAI	Mount Meron Ar	146.87	306	PKPbc	PKiKP	22 29 51.8	-1.3
	comp=Z,5.4nm,0.6s,baz=50,slow=6.9,SNR=16						
BZS	Buzias	147.01	337	⇑P	PKPbc	22 29 50.0	-0.7
MOA	Molln	147.19	347	*e*PKP	PKPbc	22 29 51.4	+0.2
	comp=Z,7.9nm,1.1s,SNR=4.2						
MOA	Molln	147.19	347	P	PKPbc	22 29 51.4	+0.2
	comp=Z,7.9nm,1.1s,SNR=4.2						
HERR	Herculane	147.31	335	⇑P	PKPbc	22 29 51.7	+0.2
BIOA	Bad Ischl, Aus	147.48	348	*i* PKP	PKPbc	22 29 52.2	+0.2
	comp=Z,6.2nm,1.1s						
PLVB	Pleven	147.54	331	⇓P	PKPdf	22 29 48.1	-0.9
LESA	Schwarzleotal	147.92	349	*i* PKiKP	PKPbc	22 29 53.4	+0.2
	comp=Z,2.9nm,0.7s						
KBA	Koelnbreinsper	148.12	348	*i* PKP	PKPbc	22 29 53.5	-0.4
	comp=Z,5.6nm,0.5s						
WATA	Walderalm	148.21	350	*i* PKiKP	PKPbc	22 29 54.0	0.0
	comp=Z,2.8nm,0.4s,SNR=6.6						
WTTA	Wattenberg	148.26	350	*i* PKiKP	PKPbc	22 29 54.3	+0.1
	comp=Z,7.5nm,0.4s,SNR=9.7						
SQTA	Sankt Quirin	148.38	350	*i* PKiKP	PKPbc	22 29 54.5	0.0
	comp=Z,2.4nm,0.4s						
MYKA	Terra Mystica	148.49	347	*i* PKP	PKPbc	22 29 54.0	-0.6
	comp=Z,5.0nm,0.5s,SNR=4.2						
DAVA	Damuels	148.51	352	*e*PKiKP	PKPbc	22 29 55.1	+0.3
	comp=Z,12nm,0.9s,SNR=4.4						
DAVA	Damuels	148.51	352	P	PKPbc	22 29 55.1	+0.3
	comp=Z,12nm,0.9s,SNR=4.4						
ABTA	Abfaltersbach	148.60	348	*i* PKP	PKPbc	22 29 54.5	-0.5
	comp=Z,4.6nm,0.6s,SNR=6.5						
FUORN	Ofenpass-Fuorn	149.11	351		PKPbc	22 29 56.8	+0.4
TUE	Stuetta	149.38	352		PKPbc	22 29 57.3	+0.3
TORD	Torodi Ar. Bea	176.41	145	PKP	PKPdf	22 30 17.0	-1.1
	comp=Z,1.2nm,0.8s,baz=252,slow=3.0,SNR=6.9						
TORD	Torodi Ar. Bea	176.41	145		PKPdf	22 30 17.4	-0.7

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*IDC **01** 22:22:19.1±1.6, 11°.42S×165°.21E, h0km, mb3.7/4, mbtmp4.0/6, ML3.4/2, MS3.4/2, Error ellipse: s-maj=44.1km s-min=29.2km az=129.0*

ISC 01 22:22:23.8±1.3**, 11°.5S**±0°.1×**165°.2E**±0°.2**, h34km, n8, σ1s37**/6**, mb3.7**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.55	174	Pn	Pn	22 24 52.5	-0.3
	0.2nm,0.3s,baz=310,slow=17,SNR=1.6						
	4.7nm,1.0s						
PMG	Port Moresby	17.89	275	P	P	22 26 30.8	+0.2
	4.7nm,0.3s,baz=130,slow=7.9,SNR=6.0						
	13nm,0.3s						
WRA	Warramunga Arr	30.84	250	P	P	22 28 38.1	+1.0
	1.3nm,0.8s,baz=81,slow=9.1,SNR=9.1						
	1.3nm,0.8s						
ASAR	Alice Springs	32.12	244	P	P	22 28 48.4	+0.1
	0.5nm,0.9s,baz=69,slow=10,SNR=4.5						
	0.5nm,0.9s						
JCJ	Chichijima	44.43	330	LR	LR	22 46 36.8	
	comp=Z,13nm,20.0s,baz=130,slow=33						
SONM	Songino Array	78.75	324	P	P	22 34 21.4	-1.8
	0.9nm,0.7s,baz=106,slow=4.7,SNR=2.4						
	0.9nm,0.7s						
ILAR	Eielson Array	84.13	19	P	P	22 34 52.3	+1.2
	0.3nm,0.5s,baz=240,slow=5.2,SNR=7.2						
	0.3nm,0.5s						
LPIG	La Paz	89.67	65	LR	LR	23 08 39.1	
	comp=Z,57nm,19.6s,baz=34,slow=31						

IDC 01 22:37:26.8±3.4**, 17°.68S**×**174°.17W, h0km, mb3.9**/4**, mbtmp3.9**/4**, Error ellipse: s-maj=175.5km s-min=28.7km az=147.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	48.65	259	P	P	22 46 12.5	-0.4
	0.5nm,0.7s,baz=98,slow=7.2,SNR=8.4						
	0.5nm,0.7s						
ASAR	Alice Springs	48.74	254	P	P	22 46 13.8	+0.2
	3.7nm,0.6s,baz=90,slow=8.4,SNR=40						
	3.7nm,0.6s						
PDAR	Pinedale Array	84.44	42	P	P	22 50 02.0	+0.4
	0.4nm,0.6s,baz=244,slow=4.6,SNR=3.9						
	0.4nm,0.6s						
ILAR	Eielson Array	84.81	11	P	P	22 50 02.3	-0.4
	0.7nm,0.8s,baz=229,slow=6.1,SNR=11						
	0.7nm,0.8s						

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*SDD **01** 22:44:36.0±1.2, 19°.95N×70°.82W, h23km±6km, MD2.8, ML2.0, MW2.7, Presumed earthquake*

*OSPL **01** 22:44:37.9±1.9, 19°.77N×70°.61W, h10km±9km, ML2.0, Presumed earthquake*

ISC 01 22:44:36.8±1.1**, 19°.82N**±0°.05×**70°.80W**±0°.04**, h12km**±7km**, n12, σ1s85**/21**, 11C, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUDR	Luperon	0.16	296	⇑*e*Pg	Pg	22 44 40.5	0.0
LUDR				⇑*e*Sg	Sg	22 44 43.7	+0.6
SODR	Sosua Marina B	0.22	108	*e*Sg	Sb	22 44 47.1	+2.4
SODR				IAML		22 44 53.3	
	comp=N,272nm,0.7s						
LOPP1	Punta Rusia, P	0.38	275	*i* P	Pn	22 44 47.9	-0.1
LOPP1				*e*S	Sn	22 44 55.9	+6.5
LOPP1				IAML		22 44 56.0	
	comp=Z,115nm,1.4s						
SC01	Santiago de lo	0.40	170	⇑*e*Pg	Pg	22 44 45.1	+0.3
SC01				⇑*e*Sg	Sb	22 44 53.2	+1.3
SC01				IAML		22 44 54.0	
	comp=N,110nm,0.6s						
SC01	Santiago de lo	0.40	170	*i* P	Pg	22 44 44.7	0.0
SC01				*e*S	Sg	22 44 49.9	-0.2
REDR	Restauracion	0.86	221	⇑*e*Pg	Pn	22 44 54.6	-0.1
REDR				⇑*e*Sg	Sn	22 45 08.5	+1.3
REDR				IAML		22 45 11.2	
	comp=N,77nm,0.1s						
SDDR	Presa de Saban	0.95	209	⇑*e*Pg	Pb	22 44 53.2	-2.1
SDDR				⇑*e*Sg	Sb	22 45 08.0	+0.1
SDDR				IAML		22 45 10.7	
	comp=N,14nm,0.8s						
SDDR	Presa de Saban	0.95	209	*i* P	Pb	22 44 54.4	-0.9
SDDR				IAML		22 45 07.5	
	comp=Z,13nm,0.8s						
LONE3	El Aguacate, B	1.36	207	*i* P	Pn	22 45 01.5	-0.2
LONE3				*e*S	Sb	22 45 19.6	-0.1
LONE3				IAML		22 45 19.8	
	comp=Z,23nm,3.2s						
BANI	BANI	1.48	164	⇑*e*Pg	Pn	22 45 03.4	0.0
BANI				⇑*e*Sg	Sb	22 45 23.5	+0.3
BANI				IAML		22 45 29.2	
	comp=N,18nm,0.5s						
LODU1	El Espartillar	1.59	204	*i* P	Pb	22 45 06.2	0.0
LODU1				IAML		22 45 33.8	
	comp=Z,54nm,2.3s						
HATOM	Hato Mayor del	1.69	127	⇑*e*Pg	Pn	22 45 06.5	+0.3
HATOM				*e*Sg	Sb	22 45 28.1	-1.0
HATOM				IAML		22 45 39.9	
	comp=N,18nm,4.2s						

NOU 01 22:46:04.1, 19°.77S×**173°.01E, h177km, mb4.5**/9**, Vanuatu Islands Region, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INH	Isangel	3.53	273	P	Pn	22 46 58.6	-0.6
RTV	Rentapao	4.77	294	P	Pn	22 47 16.4	+1.4
MARNC	Mare, Loyalty	4.96	249	P	Pn	22 47 17.4	-0.1
DVP	Devils Point	5.00	293	P	Pn	22 47 17.9	-0.1
OUENC	Ouen Island, N	6.33	244	P	Pn	22 47 37.0	+1.6
DZM	Mont Dzumac	6.55	248	P	Pn	22 47 36.7	-1.7
ONTNC	Ouen Toro	6.62	246	P	Pn	22 47 39.8	+0.5

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*NEIC **01** 23:00:49.7±1.1, 19°.05N±0°.04×67°.56W±0°.04, h14km±5km, ML2.9/35, Md3.6/5(RSPR), Error ellipse: s-maj=7.1km s-min=4.4km az=46.0*

*SDD **01** 23:00:50.8±1.4, 19°.10N×67°.58W, h20km±144km, MD3.2, ML2.9, MW3.3, Presumed earthquake*

*OSPL **01** 23:00:52.0±2.4, 19°.17N×67°.32W, h0km±19km, ML2.6, Presumed earthquake*

ISC 01 23:00:47.9±1.3**, 19°.13N**±0°.06×**67°.57W**±0°.03**, h18km**±8km**, n34, σ1s04**/51**, 12C-1D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.74	173		Pg	23 01 02.6	0.0
IDE					Sb	23 01 11.8	-0.4
AGPR	Aguadilla, PR	0.79	147		Pn	23 01 04.2	0.0
AGPR					Sb	23 01 13.3	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AGPR				IAML		23 01 15.9	
	463nm,0.2s						
AGPR				IAML		23 01 16.1	
	604nm,0.2s						
PRSN	**Puerto Rico Se**	**0.99**	**156**		**Pg**	**23 01 07.3**	**+0.1**
PRSN				Sn	**Sg**	**23 01 21.4**	**+1.1**
PRSN				IAML		23 01 29.4	
	610nm,0.2s						
LSP	**Las Mesas**	**1.05**	**154**		**Pg**	**23 01 09.0**	**+0.6**
LSP					**Sg**	**23 01 23.9**	**+1.7**
AOPR	**Arecibo Observ**	**1.10**	**135**	Pn	**Pg**	**23 01 09.1**	**-0.1**
AOPR				IAML		23 01 31.2	
	259nm,0.3s						
AOPR				IAML		23 01 31.3	
	484nm,0.4s						
EMPR	**Esperanza - Ma**	**1.18**	**123**		**Pg**	**23 01 11.9**	**+1.2**
EMPR					**Sg**	**23 01 28.0**	**+1.8**
UUPR	**Utuado, UPR, P**	**1.19**	**137**		**Pg**	**23 01 10.8**	**-0.2**
UUPR					**Sg**	**23 01 25.9**	**-0.5**
CRPR	**Cabo Rojo, PR**	**1.20**	**159**	Pn	**Pg**	**23 01 10.7**	**-0.4**
CRPR				Sn	**Sg**	**23 01 26.6**	**-0.2**
CRPR				IAML		23 01 32.4	
	271nm,0.5s						
CRPR	**Cabo Rojo, PR**	**1.20**	**159**	⇑*e*Pg	**Pg**	**23 01 11.3**	**+0.2**
CRPR				⇑*e*Sg	**Sg**	**23 01 26.7**	**-0.2**
CRPR				IAML		23 01 32.3	
	comp=N,309nm,0.6s						
CRPR	**Cabo Rojo, PR**	**1.20**	**159**	*i* P	**Pg**	**23 01 11.3**	**+0.2**
CRPR				*e*S	**Sg**	**23 01 28.8**	**+2.0**
CRPR				IAML		23 01 29.9	
	comp=Z,220nm,0.6s						
HIDR	**Higuey Centro**	**1.21**	**244**	⇑*e*Pg	**Pb**	**23 01 10.4**	**+0.1**
HIDR				IAML		23 01 26.0	
	comp=N,283nm,0.2s						
MLPR	**Magueyes Islan**	**1.26**	**157**	Pn	**Pb**	**23 01 10.9**	**-0.2**
MLPR				Sn	**Sg**	**23 01 28.5**	**-0.2**
MLPR				IAML		23 01 31.8	
	comp=N,226nm,0.6s						
GBPR	**Guanica, Bosqu**	**1.32**	**150**		**Pg**	**23 01 13.3**	**-0.2**
GBPR					**Sg**	**23 01 29.9**	**-0.8**
ECPR	**Experimental S**	**1.40**	**125**		**Pg**	**23 01 14.3**	**-0.6**
CELP	**Cerrillos**	**1.41**	**138**		**Pg**	**23 01 14.5**	**-0.6**
CELP				IAML		23 01 40.6	
	comp=N,286nm,0.2s						
CELP				IAML		23 01 40.7	
	comp=N,164nm,0.2s						
OBIP	**Obispado Ponce**	**1.42**	**140**		**Pg**	**23 01 14.2**	**-1.1**
OBIP	**Obispado Ponce**	**1.42**	**140**		**Sg**	**23 01 33.9**	**+0.2**
OBIP	**Obispado Ponce**	**1.42**	**140**	*i* P	**Pg**	**23 01 14.3**	**-0.9**
OBIP				*e*S	**Sg**	**23 01 33.8**	**+0.1**
OBIP				IAML		23 01 39.6	
	comp=Z,106nm,0.2s						
SMDR	**Samana, DR**	**1.54**	**276**		**Pg**	**23 01 16.7**	**-0.9**
SMDR					**Sg**	**23 01 38.2**	**+0.6**
SMDR	**Samana, DR**	**1.54**	**276**	⇑*e*Pg	**Pb**	**23 01 16.1**	**+0.1**
SMDR				⇑*e*Sg	**Sg**	**23 01 37.2**	**-0.4**
SMDR				IAML		23 01 52.3	
	comp=N,132nm,0.7s						
SJG	**San Juan**	**1.68**	**127**		**Pb**	**23 01 18.3**	**-0.1**
SJG				IAML		23 01 44.9	
	comp=N,152nm,0.3s						
SJG	**San Juan**	**1.68**	**127**	⇑*e*Pg	**Pg**	**23 01 20.0**	**-0.4**
SJG				⇑*e*Sg	**Sg**	**23 01 41.8**	**-0.5**
SJG	**San Juan**	**1.68**	**127**	*i* P	**Pg**	**23 01 19.3**	**-1.1**
SJG				IAML		23 01 45.2	
	comp=Z,56nm,0.2s						
DR12	**Loma Pena Alta**	**1.75**	**259**		**Pb**	**23 01 19.9**	**+0.3**
HATOM	**Hato Mayor del**	**1.75**	**259**	*e*Pg	**Pg**	**23 01 21.3**	**-0.3**
HATOM				⇑*e*Sg	**Sg**	**23 01 43.5**	**-0.9**
HATOM				IAML		23 01 46.0	
	comp=N,81nm,0.2s						
HUMP	**Col San Antoni**	**1.90**	**121**		**Pb**	**23 01 21.9**	**-0.3**
NADR	**Nagua**	**2.17**	**276**	⇑*e*Sg	**Sb**	**23 01 55.5**	**+2.1**
NADR				IAML		23 02 00.4	
	comp=N,368nm,0.3s						
CUPR	**Culebra, Puert**	**2.32**	**110**	Pn	**Pb**	**23 01 28.9**	**-0.3**
SDD	**Santo Domingo**	**2.32**	**254**	⇑*e*Sg	**Sb**	**23 01 59.6**	**+2.0**
SDD				IAML		23 02 02.9	
	comp=N,32nm,1.3s						
BANI	**BANI**	**2.74**	**255**		**Pb**	**23 01 34.0**	**-2.6**
BANI	**BANI**	**2.74**	**255**	⇓*e*Pg	**Pb**	**23 01 37.6**	**+1.1**
BANI				⇑*e*Sg	**Sb**	**23 02 11.7**	**+1.8**
BANI				IAML		23 02 22.8	
	comp=N,60nm,0.9s						
SDDR	**Presa de Saban**	**3.52**	**268**	⇑*e*Pg	**Pb**	**23 01 50.6**	**+0.8**
SDDR				IAML		23 02 42.1	
	comp=N,22nm,1.2s						
SDDR	**Presa de Saban**	**3.52**	**268**	*i* P	**Pb**	**23 01 49.8**	**0.0**
SDDR				IAML		23 02 40.9	
	comp=Z,28nm,2.0s						
LOBH	**Bahia de las A**	**4.06**	**253**	*e*S	**Sb**	**23 02 44.8**	**-3.0**
LOBH				IAML		23 02 50.4	
	comp=Z,35nm,2.2s						

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*SJA **01** 23:17:03.0±1.2, 21°.90S×68°.77W, h130km, ML3.5, MW3.5*
*GUC **01** 23:17:04.7±0.8, 21°.86S×68°.67W, h115km±4km, ML3.6*
ISC 01 23:17:01.9±1.3**, 21°.88S**±0°.03×**68°.64W**±0°.05**, h134**km±8km**,**
n35, σ**1s.77**/63**, 5C-6D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.57**	**278**	⇓*i*P	**Pn**	**23 17 22.4**	**+0.3**
PB09				*i* S	**Sn**	**23 17 35.5**	**-1.8**
PB09	**IPOC Station P**	**0.57**	**278**	*e*P	**Pn**	**23 17 22.6**	**+0.6**
PB09				*e*S	**Sn**	**23 17 36.8**	**-0.5**
PB09				IAML		23 17 38.5	
	comp=Z,1µm,0.2s						
PB03	**IPOC Station P**	**1.05**	**260**	⇑*i*P	**Pn**	**23 17 26.2**	**+0.4**
PB03				*i* S	**Sn**	**23 17 42.9**	**-1.1**
PB03				IAML		23 17 44.3	
	comp=E,2µm,0.1s						
PB03	**IPOC Station P**	**1.05**	**260**	*e*P	**Pn**	**23 17 26.1**	**+0.3**
PB03				*e*S	**Sn**	**23 17 43.4**	**-0.6**
PB03				IAML		23 17 44.2	
	comp=Z,2µm,0.4s						
PB01	**IPOC Station P**	**1.15**	**316**	⇓*i*P	**Pn**	**23 17 27.1**	**+0.4**
PB01				*i* S	**Sn**	**23 17 44.7**	**-0.8**
PB01				IAML		23 17 46.6	
	comp=N,1µm,0.3s						
PB01	**IPOC Station P**	**1.15**	**316**	*e*P	**Pn**	**23 17 26.5**	**-0.2**
PB01				*e*S	**Sn**	**23 17 46.9**	**+1.4**
PB01				IAML		23 17 47.9	
	comp=Z,788nm,0.2s						
AF01	**San Pedro de A**	**1.15**	**158**	*e*P	**Pn**	**23 17 27.9**	**+0.9**
AF01				*e*S	**Sn**	**23 17 46.6**	**+0.5**
AF01	**San Pedro de A**	**1.15**	**158**	*e*P	**Pn**	**23 17 29.9**	**+3.0**
AF01				*e*S	**Sn**	**23 17 39.8**	**-6.3**
AF01				IAML		23 18 10.6	
	comp=Z,683nm,0.8s						
PB07	**IPOC Station P**	**1.17**	**277**	⇑*i*P	**Pn**	**23 17 27.5**	**+0.5**
PB07				*i* S	**Sn**	**23 17 45.1**	**-0.9**
PB07				IAML		23 17 47.1	
	comp=N,2µm,0.2s						
PB07	**IPOC Station P**	**1.17**	**277**	*e*P	**Pn**	**23 17 27.6**	**+0.5**
PB07				*e*S	**Sn**	**23 17 46.0**	**-0.1**
PB07				IAML		23 17 48.4	
	comp=Z,1µm,0.1s						
PB06	**IPOC Station P**	**1.20**	**226**	⇑*i*P	**Pn**	**23 17 28.0**	**+0.7**
PB06				*i* S	**Sn**	**23 17 46.2**	**-0.3**
PB06				IAML		23 17 47.3	
	comp=E,2µm,0.5s						
PB06	**IPOC Station P**	**1.20**	**226**	*e*P	**Pn**	**23 17 27.7**	**+0.4**
PB06				*e*S	**Sn**	**23 17 47.0**	**+0.4**
PB06				IAML		23 17 49.7	
	comp=Z,619nm,0.2s						
PB02	**IPOC Station P**	**1.29**	**295**	⇑*i*P	**Pn**	**23 17 28.8**	**+0.6**
PB02				*i* S	**Sn**	**23 17 46.8**	**-1.4**
PB02				IAML		23 17 50.7	
	comp=E,1µm,0.3s						
PB02	**IPOC Station P**	**1.29**	**295**	*e*P	**Pn**	**23 17 28.8**	**+0.6**
PB02				*e*S	**Sn**	**23 17 47.8**	**-0.4**
PB02				IAML		23 17 49.0	
	comp=Z,2µm,0.3s						
PB05	**IPOC Station P**	**1.75**	**236**	⇑*i*P	**Pn**	**23 17 33.8**	**+0.5**
PB05				*i* S	**Sn**	**23 17 56.2**	**-0.9**
PB05	**IPOC Station P**	**1.75**	**236**	*e*P	**Pn**	**23 17 33.8**	**+0.5**
PB05				*e*S	**Sn**	**23 17 57.5**	**+0.4**
PB05				IAML		23 17 57.9	
	comp=Z,184nm,0.4s						
PB08	**IPOC Station P**	**1.79**	**344**	⇓*i*P	**Pn**	**23 17 35.8**	**+1.7**
PB08				*i* S	**Sn**	**23 17 58.9**	**+0.3**
PB08	**IPOC Station P**	**1.79**	**344**	*e*P	**Pn**	**23 17 35.9**	**+1.8**
PB08				*e*S	**Sn**	**23 18 00.5**	**+1.9**
PB08				IAML		23 18 04.6	
	comp=Z,119nm,0.5s						
HMBC	**Humberstone**	**1.97**	**323**	⇓*i*P	**Pn**	**23 17 36.1**	**+0.2**
HMBC				*i* S	**Sn**	**23 18 01.3**	**-0.6**
HMBC				IAML		23 18 03.0	
	comp=E,481nm,0.3s						
TA02	**Huaiquique**	**2.12**	**319**	*e*P	**Pn**	**23 17 38.2**	**+0.6**
TA02	**Huaiquique**	**2.12**	**319**	*e*P	**Pn**	**23 17 39.7**	**+2.1**
TA02				*e*S	**Sn**	**23 18 04.5**	**-0.4**
TA02				IAML		23 18 10.6	
	comp=Z,256nm,0.1s						
GO01	**Chusmiza**	**2.26**	**347**	⇓*i*P	**Pn**	**23 17 41.1**	**+1.4**
GO01				*e*S	**Sn**	**23 18 08.5**	**-0.2**
GO01	**Chusmiza**	**2.26**	**347**	*e*P	**Pn**	**23 17 41.5**	**+1.7**
GO01				*e*S	**Sn**	**23 18 11.4**	**+2.7**
GO01				IAML		23 18 12.6	
	comp=Z,110nm,0.6s						
PB11	**IPOC Station P**	**2.31**	**335**	⇓*i*P	**Pn**	**23 17 40.7**	**+0.6**
PB11				*i* S	**Sn**	**23 18 08.8**	**-0.6**
PB11				IAML		23 18 10.9	
	comp=E,344nm,0.2s						
PB11	**IPOC Station P**	**2.31**	**335**	*e*P	**Pn**	**23 17 40.7**	**+0.6**
PB11				*e*S	**Sn**	**23 18 09.1**	**-0.3**
PB11				IAML		23 18 13.5	
	comp=Z,100nm,0.4s						
YJA	**Yavi**	**2.91**	**96**	*e*P	Pn	23 17 54.5	+6.5
YJA				*e*S	**Sn**	**23 18 22.1**	**-1.3**
PB14	**IPOC Station P**	**3.18**	**210**	*e*P	**Pn**	**23 17 51.5**	**+0.2**
PB14	**IPOC Station P**	**3.18**	**210**	*e*P	**Pn**	**23 17 51.6**	**+0.2**
PB14				*e*S	Sn	23 18 17.9	-12
PB14				IAML		23 18 40.9	
	comp=Z,78nm,0.4s						
HJA	**Humahuaca**	**3.27**	**115**	*e*P	**Pn**	**23 17 51.4**	**-1.1**
GO02	**Mina Guanaco**	**3.39**	**195**	*e*P	**Pn**	**23 17 54.8**	**+0.8**
GO02				*e*S	**Sn**	**23 18 35.6**	**+1.3**
GO02				IAML		23 18 36.4	
	comp=Z,137nm,0.1s						
PB12	**IPOC Station P**	**3.61**	**334**	*e*P	**Pn**	**23 17 56.3**	**-0.5**
PB12	**IPOC Station P**	**3.61**	**334**	*e*P	**Pn**	**23 17 56.8**	**0.0**
PB12				*e*S	**Sn**	**23 18 31.6**	**-7.7**
PB12				IAML		23 18 53.8	
	comp=Z,29nm,0.3s						
PB16	**IPOC Station P**	**3.62**	**347**	*e*P	**Pn**	**23 17 59.0**	**+1.7**
AC01	**Pan de Azucar**	**4.62**	**202**	*e*P	**Pn**	**23 18 09.2**	**-0.8**
AC01				*e*S	**Sn**	**23 19 00.5**	**-2.5**
AC01				IAML		23 19 01.5	
	comp=Z,33nm,0.3s						
AC02	**Maricunga**	**4.96**	**185**	*e*P	**Pn**	**23 18 16.3**	**+1.3**
AC02				*e*S	**Sn**	**23 19 15.8**	**+4.0**
AC02				IAML		23 19 55.4	
	comp=Z,15nm,0.6s						

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*KRNET **01** 23:21:25.9±0.1, 41°.22N×70°.59E, h16km, mb2.9*
*NNC **01** 23:21:27.0±2.5, 41°.25N×70°.53E, h0km, mb3.7, mpv3.3,*
Error ellipse: s-maj=19.8km s-min=8.4km az=29.0
*SOME **01** 23:21:26.4, 41°.23N×70°.57E, h15km*
*ISU **01** 23:21:30, 41°.21N×70°.50E, h15km*
ISC 01 23:21:24.9±1.0**, 41°.25N**±0°.02×**70°.57E**±0°.02**, h16**km±8km**,**
n43, σ**1s.62**/80**, 25C-12D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRKS	**Terek-Say**	**0.51**	**57**	⇑*i*P	**Pb**	**23 21 35.5**	**-0.1**
TRKS				⇑*i*S	**Sg**	**23 21 42.5**	**+0.6**
CHMG	**Chimgan**	**0.52**	**305**	P	**Pg**	**23 21 34.3**	**-0.9**
CHMG				S	**Sg**	**23 21 41.9**	**-0.3**
CHRV	**Charvak**	**0.61**	**310**	P	**Pg**	**23 21 36.3**	**-0.6**
CHRV				S	**Sg**	**23 21 44.8**	**-0.2**
KSNS	**Kasansay**	**0.72**	**97**	P	**Pn**	**23 21 40.9**	**+0.4**
KSNS				S	**Sn**	**23 21 51.6**	**+0.3**
TVKS	**Tavaksay**	**0.76**	**295**	P	**Pg**	**23 21 39.4**	**-0.4**
TVKS				S	**Sg**	**23 21 50.2**	**+0.3**
MINT	**Mingtut**	**0.84**	**159**	P	**Pn**	**23 21 42.1**	**-0.1**
MINT				S	**Sn**	**23 21 53.6**	**-0.6**
IUG	**Iuzhnay**	**0.98**	**336**	P	**Pg**	**23 21 44.2**	**+0.4**
	19nm,0.2s						
IUG				S	**Sg**	**23 21 57.7**	**+0.9**
	67nm,0.2s						
IUG	**Iuzhnay**	**0.98**	**336**	*e*P	**Pg**	**23 21 44.2**	**+0.4**
	19nm,0.2s						
IUG				*e*S	**Sg**	**23 21 57.7**	**+0.9**
	67nm,0.2s						
NZBK	**Nazarbek**	**1.10**	**269**	P	**Pg**	**23 21 47.8**	**+1.7**
NZBK				S	**Sn**	**23 22 02.6**	**+2.0**
ARK	**Arkit**	**1.18**	**62**	⇓*i*P	**Pg**	**23 21 48.3**	**+0.7**
ARK				⇓*i*S	**Sg**	**23 22 04.6**	**+1.6**
BTK	**Batken**	**1.21**	**171**	⇑*i*P	**Pg**	**23 21 47.9**	**-0.3**
BTK				⇑*i*S	**Sg**	**23 22 03.9**	**0.0**
FRG	**Fergana**	**1.27**	**133**	P	**Pg**	**23 21 51.3**	**+2.0**
FRG				S	**Sg**	**23 22 09.1**	**+3.2**
CHM	**Chimkent**	**1.29**	**326**	*e*P	**Pg**	**23 21 50.2**	**+0.5**
	36nm,0.2s						
CHM				*e*S	**Sg**	**23 22 07.8**	**+1.3**
	58nm,0.1s						
TSTA	**Tashata**	**1.59**	**114**	P	**Pg**	**23 21 57.3**	**+1.8**
TSTA				S	**Sg**	**23 22 19.1**	**+2.9**
DZA	**Taraz**	**1.73**	**19**	P	**Pg**	**23 21 58.4**	**+0.3**
	7.8nm,0.1s						
DZA				S	**Sg**	**23 22 21.6**	**+1.0**
	33nm,0.2s						
DZA	**Taraz**	**1.73**	**19**	*e*P	**Pg**	**23 21 58.4**	**+0.3**
	7.8nm,0.1s						
DZA				*e*S	**Sg**	**23 22 21.6**	**+1.0**
	33nm,0.2s						
ARSB	**Arslanbob**	**1.82**	**87**	⇓*i*P	**Pg**	**23 21 59.3**	**-0.5**
ARSB				⇓*i*S	**Sg**	**23 22 23.3**	**-0.1**
OHH	**Osh**	**1.83**	**113**	⇓*i*P	**Pg**	**23 21 58.9**	**-1.1**
OHH				⇓*i*S	**Sg**	**23 22 23.2**	**-0.5**
KK31	**Karatay Array**	**1.85**	**359**	Pn	**Pg**	**23 22 00.3**	**-0.1**
	2.3nm,0.2s,baz=188,slow=17,SNR=83						
KK31				⇑Sn	**Sg**	**23 22 26.7**	**+2.2**
	7.8nm,0.2s,baz=180,slow=26,SNR=12						
BRLS	**Borolday**	**1.86**	**343**	P	**Pn**	**23 21 57.3**	**+1.2**
	4.7nm,0.2s						
BRLS				S	**Sn**	**23 22 20.2**	**+0.9**
	12nm,0.1s						
BRLS	**Borolday**	**1.86**	**343**	*e*P	**Pn**	**23 21 57.3**	**+1.2**
	4.7nm,0.2s						
BRLS				*e*S	**Sn**	**23 22 20.2**	**+0.9**
	12nm,0.1s						
MNAS	**Manas**	**1.90**	**49**	⇑*i*P	**Pg**	**23 22 01.0**	**-0.3**
MNAS				⇑*i*S	**Sg**	**23 22 26.6**	**+0.7**
DRK	**Karamyk**	**2.00**	**152**	⇑*i*P	**Pg**	**23 22 02.0**	**-1.3**
DRK				⇑*i*S	**Sg**	**23 22 28.2**	**-1.2**
GAR	**Garm**	**2.26**	**185**	⇑*i*P	**Pb**	**23 22 05.5**	**+0.1**
GAR				⇑*i*S	**Sb**	**23 22 34.1**	**+0.9**
MRKS	**Merke**	**2.48**	**52**	Pg	**Pg**	**23 22 11.5**	**-0.9**
	8.1nm,0.3s						
MRKS				Lg	Lg	23 22 44.9	
	5.4nm,0.2s						
MRKS	**Merke**	**2.48**	**52**	*e*P	**Pg**	**23 22 11.5**	**-0.9**
	8.1nm,0.3s						
MRKS				*e*S	**Sg**	**23 22 44.9**	**+0.4**
	5.4nm,0.2s						
SALK	**Salom-Alik**	**2.48**	**97**	⇑*i*P	**Pb**	**23 22 08.8**	**-0.4**
SALK				⇑*i*S	**Sb**	**23 22 39.8**	**+0.2**
SFK	**Sufi-Kurgan**	**2.55**	**118**	⇑*i*P	**Pb**	**23 22 09.7**	**-0.7**
SFK				⇑*i*S	**Sb**	**23 22 41.4**	**-0.2**
EKS2	**Erkin-Say**	**2.77**	**58**	⇑*i*P	**Pb**	**23 22 13.2**	**-0.9**
EKS2				⇑*i*S	**Sb**	**23 22 47.6**	**-0.4**
CHGR	**Chuyangaron**	**2.81**	**203**	⇑*i*P	**Pb**	**23 22 12.9**	**-1.9**
CHGR				⇑*i*S	**Sb**	**23 22 47.3**	**-1.7**
ARLS	**Aral**	**2.88**	**77**	⇓*i*P	**Pb**	**23 22 14.5**	**-1.5**
ARLS				⇓*i*S	**Sb**	**23 22 49.8**	**-1.2**
UCH	**Uchtor**	**3.10**	**70**	⇓*e*P	**Pb**	**23 22 17.8**	**-2.2**
UCH				⇓*i*S	**Sb**	**23 22 55.8**	**-2.0**
AAK	**Ala-Archa**	**3.23**	**63**	⇑Pn	**Pb**	**23 22 21.3**	**-0.7**
	2.8nm,0.7s						
AAK				⇑Lg	Lg	23 23 10.2	
	1.8nm,0.5s						
AAK	**Ala-Archa**	**3.23**	**63**	⇓*i*P	**Pb**	**23 22 19.5**	**-2.5**
AAK				⇓*i*S	**Sb**	**23 22 58.6**	**-2.7**
AGL	**Agalyk**	**3.31**	**240**	S	**Sg**	**23 23 08.3**	**-2.9**
USP	**Ospenovka**	**3.54**	**54**	⇑*i*P	**Pb**	**23 22 23.8**	**-3.4**
USP				⇑*i*S	**Sb**	**23 23 06.0**	**-4.0**
BOOM	**Boomskoye usch**	**4.19**	**71**	⇑*e*P	**Pn**	**23 22 32.9**	**+4.5**
BOOM				⇑*i*S	**Sn**	**23 23 21.6**	**+4.5**
DGS	**Degeres**	**4.34**	**61**	Pg	**Pg**	**23 22 45.6**	**-2.3**
	1.1nm,0.3s						
DGS				Lg	Lg	23 23 42.7	
	7.9nm,0.4s						
DGS	**Degeres**	**4.34**	**61**	*e*P	**Pg**	**23 22 45.6**	**-2.3**
	1.1nm,0.3s						
DGS				*e*S	**Sg**	**23 23 42.7**	**-1.5**
	7.9nm,0.4s						
KST	**Kastek**	**4.39**	**64**	Pg	**Pg**	**23 22 47.1**	**-1.8**
	0.5nm,0.1s						
KST				Lg	Lg	23 23 45.3	
	11nm,0.6s						
KST	**Kastek**	**4.39**	**64**	*e*P	**Pg**	**23 22 47.1**	**-1.8**
	0.5nm,0.1s						
KST				*e*S	**Sg**	**23 23 45.3**	**-0.4**
	11nm,0.6s						
KRBS	**Karabastau**	**4.49**	**55**	Pg	**Pg**	**23 22 49.2**	**-1.7**
	1.2nm,0.3s						
KRBS				Lg	Lg	23 23 48.8	
	3.3nm,0.4s						
KRBS	**Karabastau**	**4.49**	**55**	*e*P	**Pg**	**23 22 49.2**	**-1.7**
	1.2nm,0.3s						
KRBS				*e*S	**Sg**	**23 23 48.8**	**-0.3**
	3.3nm,0.4s						

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*IDC **01** 23:21:50.6±1.0, 15°.83N×119°.21E, h0km, mb3.9/7,*
mbtmp3.9/7, Error ellipse: s-maj=128.3km s-min=18.7km
az=66.0
*MAN **01** 23:21:53.0, 15°.89N×119°.01E, h29km, MS3.1*
ISC 01 23:21:55.7±1.0**, 15°.9N**±0°.1×**119°.4E**±0°.2**, h35**km**, n8,**
σ**0s.51**/9**, mb3.7**/7**, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**2.25**	**26**	*e*P	**Pn**	**23 22 29.9**	**-0.5**
SIPP				*e*S	**Sn**	**23 22 57.4**	**+0.5**
SONM	**Songino Array**	**33.61**	**344**	P	**P**	**23 28 32.8**	**-0.1**
	0.7nm,0.4s,baz=172,slow=11,SNR=2.6						
	0.7nm,0.4s						
WRA	**Warramunga Arr**	**38.52**	**157**	P	**P**	**23 29 14.7**	**-0.3**
	0.6nm,0.8s,baz=336,slow=8.7,SNR=8.3						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**41.80**	**160**	P	**P**	**23 29 42.5**	**+0.3**
	0.5nm,0.3s,baz=341,slow=8.3,SNR=9.2						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**43.53**	**323**	P	**P**	**23 29 56.0**	**-0.1**
	0.3nm,0.7s,baz=142,slow=7.3,SNR=2.4						
	0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**47.68**	**326**	P	**P**	**23 30 28.3**	**-0.4**
	0.4nm,0.8s,baz=120,slow=8.0,SNR=5.4						
	0.4nm,0.8s						
SPITS	**Spitsbergen Ar**	**77.19**	**348**	P	**P**	**23 33 46.4**	**+0.8**
	8.2nm,1.1s,baz=132,slow=2.1,SNR=4.5						
	8.2nm,1.1s						
FINES	**FINESS Array B**	**77.77**	**331**	P	**P**	**23 33 48.8**	**-0.2**
	4.9nm,1.1s,baz=67,slow=5.3,SNR=6.3						
	4.9nm,1.1s						

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*IDC **01** 23:23:57.9±0.8, 15°.80N×119°.18E, h0km, mb3.9/11,*
mbtmp3.8/12, MS2.9/1, Error ellipse: s-maj=34.5km
s-min=16.3km az=70.0
*MAN **01** 23:24:01.0, 15°.88N×119°.06E, h24km, MS3.1*
ISC 01 23:24:04.4±0.8**, 15°.8N**±0°.1×**119°.2E**±0°.2**, h47**km**, n12,**
σ**0s.73**/14**, mb3.8**/11**, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**19.50**	**281**	P	**P**	**23 28 27.6**	**-0.1**
	0.6nm,0.3s,baz=95,slow=11,SNR=1.4						
CMAR				LR	LR	23 36 01.2	
	comp=Z,34nm,19.0s,baz=95,slow=37						
KSRS	**Korea Array**	**22.91**	**18**	P	**P**	**23 29 03.8**	**-0.5**
	1.6nm,0.6s,baz=198,slow=11,SNR=3.3						
	1.6nm,0.6s						
SONM	**Songino Array**	**33.63**	**344**	P	**P**	**23 30 39.8**	**-0.7**
	0.5nm,0.5s,baz=164,slow=7.5,SNR=1.8						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**38.54**	**157**	P	**P**	**23 31 21.6**	**-1.0**
	1.2nm,0.8s,baz=336,slow=9.3,SNR=9.6						
WRA				PcP	**PcP**	**23 33 36.0**	**+1.2**
	0.4nm,0.8s,baz=341,slow=2.7,SNR=2.6						
	1.2nm,0.8s						
ASAR	**Alice Springs**	**41.80**	**160**	P	**P**	**23 31 49.4**	**-0.2**
	1.2nm,0.6s,baz=336,slow=7.4,SNR=11						
ASAR				PcP	**PcP**	**23 33 45.3**	**+0.1**
	0.3nm,0.3s,baz=313,slow=3.0,SNR=2.1						
	1.2nm,0.6s						
MKAR	**Makanchi Array**	**43.46**	**323**	P	**P**	**23 32 03.4**	**+0.5**
	0.4nm,0.8s,baz=129,slow=9.6,SNR=4.4						
	0.4nm,0.8s						
KURBB	**Kurchatov Arra**	**47.62**	**326**	P	**P**	**23 32 35.8**	**+0.1**
	0.6nm,0.7s,baz=123,slow=8.0,SNR=4.2						
	0.6nm,0.7s						
PETK	**Petropavlovsk-**	**47.94**	**30**	P	**P**	**23 32 38.4**	**+0.3**
	2.1nm,0.9s,baz=255,slow=3.9,SNR=2.5						
	2.1nm,0.9s						
NRIK	**Noril'sk**	**57.04**	**347**	P	**P**	**23 33 44.1**	**-1.1**
	1.6nm,0.6s,baz=165,slow=7.1,SNR=4.8						
	1.6nm,0.6s						
SPITS	**Spitsbergen Ar**	**77.23**	**348**	P	**P**	**23 35 53.9**	**+0.8**
	2.4nm,0.8s,baz=64,slow=6.6,SNR=5.0						
	2.4nm,0.8s						
FINES	**FINESS Array B**	**77.72**	**331**	P	**P**	**23 35 56.2**	**+0.2**
	4.6nm,1.0s,baz=46,slow=4.0,SNR=6.4						
	4.6nm,1.0s						
YKA	**Yellowknife Ar**	**91.40**	**22**	P	**P**	**23 37 05.8**	**+0.7**
	0.1nm,0.7s,baz=309,slow=5.8,SNR=1.9						
	0.1nm,0.7s						

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*TEH **02** 00:07:19.4, 26°.99N×55°.86E, h10km±60km, ML2.5,*
Presumed earthquake
*DSN **02** 00:07:19.7±1.0, 27°.12N×56°.18E, h2km±3km, ML2.4/7,*
Error ellipse: s-maj=32.4km s-min=5.7km az=87.0
ISC 02 00:07:21.2±1.1**, 27°.02N**±0°.03×**55°.89E**±0°.08**, h14**km**, n13,**
σ**0s.87**/17**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.45**	**34**	Pg	**Pg**	**00 07 29.0**	**-1.2**
GENO	**Geno**	**0.45**	**34**	Pg	**Pg**	**00 07 29.0**	**-1.3**
IBND	**Bandar-abas**	**0.72**	**54**	Pg	**Pb**	**00 07 35.2**	**-0.4**
IBND				Sg	**Sb**	**00 07 45.5**	**+0.2**
SHME	**Shamm**	**1.00**	**167**	P	**Pn**	**00 07 40.5**	**-0.3**
SHME				S	**Sn**	**00 07 55.2**	**+0.5**
BANOM	**Banah**	**1.16**	**161**	P	**Pg**	**00 07 43.2**	**-0.3**
BANOM				S	**Sg**	**00 07 59.4**	**+0.8**
MSFE	**Esma-Masafi**	**1.68**	**171**	P	**Pb**	**00 07 50.9**	**-0.9**
MSFE				S	**Sg**	**00 08 15.9**	**+0.8**
MDH	**Madha**	**1.76**	**168**	P	**Pb**	**00 07 52.5**	**-0.7**
KHNJ	**Kahnooj**	**1.86**	**60**	Pn	**Pb**	**00 07 54.7**	**-0.3**
HATD	**Hatta, Dubai**	**2.20**	**174**	P	**Pn**	**00 07 58.0**	**+0.7**
ASHO	**Ashiyiah**	**2.33**	**176**	P	**Pn**	**00 07 59.8**	**+0.6**
LMD1	**Lamerd**	**2.44**	**278**	Pn	**Pn**	**00 08 01.2**	**+0.5**
CHMN	**Cheshme madani**	**3.18**	**27**	Pn	**Pn**	**00 08 12.2**	**+1.1**
KHGB	**Koh Gabri**	**3.38**	**9**	Pn	**Pn**	**00 08 15.1**	**+1.3**

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*IDC **02** 00:17:11.6±1.7, 36°.50N×141°.79E, h0km, mb3.7/5,*
mbtmp3.7/8, ML3.4/3, Error ellipse: s-maj=34.7km
s-min=21.6km az=85.0
*JMA **02** 00:17:15.2±0.2, 36°.5N±0°.5×14°2E±°, h52km±4km,*
MV3.3/28, E OFF IBARAKI PREF
ISC 02 00:17:16.3±1.1**, 36°.53N**±0°.06×**141°.51E**±0°.08**, h26**km**, n21,**
σ**1s.24**/20**, mb3.7**/5**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.77**	**277**	*i* P	**Pb**	**00 17 30.6**	**-0.3**
JHO				*e*S	**Sn**	**00 17 42.2**	**+0.1**
JHYU	**Hitachinakayam**	**0.77**	**256**	*i* P	**Pb**	**00 17 31.0**	**0.0**
JHYU				S	**Sn**	**00 17 42.4**	**+0.2**
ONAJ	**Iwakimizuishiy**	**0.81**	**315**	*i* P	**Pb**	**00 17 31.1**	**-0.7**
JFK	**Kawauchi**	**0.98**	**329**	P	**Pb**	**00 17 33.4**	**-1.2**
JMM	**Marumori**	**1.45**	**337**	P	**Pn**	**00 17 40.5**	**-0.4**
JAG	**Ashikaga**	**1.66**	**267**	P	**Pn**	**00 17 43.7**	**0.0**
JFY	**Yanaizu**	**1.69**	**302**	P	**Pn**	**00 17 45.1**	**+0.9**
MJAR	**Matsushiro Arr**	**2.66**	**271**	Pn	**Pn**	**00 17 58.6**	**+1.1**
	1.3nm,0.3s,baz=90,slow=9.1,SNR=27						
MJAR				Sn	**Sb**	**00 18 33.9**	**-1.5**
	0.5nm,0.3s,baz=122,slow=9.3,SNR=4.5						
	5.6nm,0.3s						
JHJ	**Hachijo jima 2**	**3.69**	**203**	Pn	**Pn**	**00 18 10.9**	**-0.6**
	13nm,0.3s,baz=2.7,slow=20,SNR=5.1						
JHJ				Sn	**Sn**	**00 18 52.3**	**-1.8**
	27nm,0.3s,baz=268,slow=23,SNR=2.3						
	38nm,0.2s						
ASAJ	**Asahikawa**	**7.62**	**6**	Pn	**Pn**	**00 19 03.1**	**-2.5**

0.9nm,0.3s,baz=252,slow=32,SNR=1.9
ASAJ Sn **Sn** **00 20 33.4 +2.2**
0.4nm,0.3s,baz=121,slow=22,SNR=1.2
2.1nm,0.3s
H11N2 WAKE ISLAND Hy 27.82 120 T T 00 51 58.3
baz=313,slow=75,SNR=27
H11N1 WAKE ISLAND Hy 27.83 120 T T 00 52 13.6
baz=313,slow=75,SNR=18
H11N3 WAKE ISLAND Hy 27.84 120 T T 00 52 18.1
baz=313,slow=75,SNR=17
SONM Songino Array 28.14 305 P **P** **00 23 07.7 +1.4**
1.3nm,0.8s,baz=99,slow=9.2,SNR=3.6
1.3nm,0.8s
H11S1 WAKE ISLAND Hy 28.52 122 T T 00 52 52.6
baz=315,slow=76,SNR=14
H11S3 WAKE ISLAND Hy 28.52 122 T T 00 53 10.4
baz=315,slow=76,SNR=13
H11S2 WAKE ISLAND Hy 28.54 122 T T 00 53 08.1
baz=315,slow=76,SNR=12
ZALV Zalesovo Beam 42.31 313 P **P** **00 25 08.4 +0.7**
1.0nm,0.6s,baz=104,slow=7.0,SNR=4.7
1.0nm,0.6s
MKAR Makanchi Array 44.46 303 P **P** **00 25 26.1 +1.0**
0.5nm,0.8s,baz=91,slow=9.6,SNR=5.8
0.5nm,0.8s
KURBB Kurchatov Arra 46.38 308 P **P** **00 25 40.8 +0.6**
0.8nm,0.5s,baz=82,slow=7.7,SNR=12
0.8nm,0.5s
WRA Warramunga Arr 56.57 188 P **P** **00 26 55.9 -0.8**
0.5nm,0.9s,baz=3.3,slow=7.4,SNR=5.9
0.5nm,0.9s

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*NNC **02** 00:20:17.7±0.5, 42°.92N×78°.30E, h0km±3km, mb2.6, mpv3.0, Error ellipse: s-maj=4.8km s-min=2.0km az=175.0*
*SOME **02** 00:20:18.9, 42°.93N×78°.25E, h20km*
*KRNET **02** 00:20:19.2±0.1, 42°.94N×78°.20E, h30km, mb2.6*
ISC 02 00:20:18.6±1.1**, 42°.93N**±0°.02×**78°.24E**±0°.02**, h3**km±9km**,**
n48, σ**1**§**19**/90**, 21C-11D, Lake Issyk-Kul region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
SATY Saty 0.17 44 P **Pg** **00 20 22.0 0.0**
42nm,0.1s
SATY S **Sg** **00 20 24.0 -0.3**
624nm,0.1s
ANVS Anan'yevo 0.45 250⇑*e*P **Pg** **00 20 28.2 +1.0**
ANVS ⇑*e*S **Sg** **00 20 34.8 +1.8**
PRZ Przheval'sk 0.47 165⇓*e*P **Pg** **00 20 28.8 +1.3**
PRZ ⇓*e*S **Sb** **00 20 35.8 -1.1**
KURS Kuram 0.56 355 P **Pg** **00 20 29.4 +0.2**
9.0nm,0.1s
KURS S **Sg** **00 20 37.2 +0.7**
28nm,0.3s
UZB Uzynbulak 0.61 69 P **Pg** **00 20 28.9 -1.4**
17nm,0.1s
UZB S **Sg** **00 20 36.2 -2.1**
87nm,0.2s
UZB Uzynbulak 0.61 69 *e*P **Pg** **00 20 28.9 -1.4**
17nm,0.1s
UZB *e*S **Sg** **00 20 36.2 -2.1**
87nm,0.2s
KPKS Kokpek 0.62 31 P **Pg** **00 20 30.2 -0.4**
0.3nm,0.2s
KPKS S **Sg** **00 20 38.4 -0.3**
36nm,0.3s
KPKS Kokpek 0.62 31 *e*P **Pg** **00 20 30.2 -0.4**
0.3nm,0.2s
KPKS *e*S **Sg** **00 20 38.4 -0.3**
36nm,0.3s
KOTS Kotyrbulak 0.88 290 P **Pg** **00 20 36.4 +1.0**
5.7nm,0.1s
KOTS S **Sb** **00 20 49.0 +0.2**
25nm,0.2s
KOTS Kotyrbulak 0.88 290 *e*P **Pg** **00 20 36.4 +1.0**
5.7nm,0.1s
KOTS *e*S **Sb** **00 20 49.0 +0.2**
25nm,0.2s
MDOK Medeo 0.90 285 Pg **Pg** **00 20 36.0 +0.1**
3.8nm,0.2s
MDOK Lg Lg 00 20 48.0
14nm,0.2s
SHLS Shalkode 0.92 76 P **Pn** **00 20 41.1 +2.5**
6.3nm,0.2s
SHLS S **Sn** **00 20 57.1 +4.7**
15nm,0.2s
SHLS Shalkode 0.92 76 *e*P **Pn** **00 20 41.1 +2.5**
6.3nm,0.2s
SHLS *e*S **Sn** **00 20 57.1 +4.7**
15nm,0.2s
TNSS Tian-Shan 0.95 277 P **Pg** **00 20 36.7 -0.2**
0.6nm,0.2s
TNSS S **Sg** **00 20 49.7 +0.4**
4.9nm,0.1s
TNSS Tian-Shan 0.95 277 *e*P **Pg** **00 20 36.7 -0.2**
0.6nm,0.2s
TNSS *e*S **Sg** **00 20 49.7 +0.4**
4.9nm,0.1s
PDGK Podgornoye 1.00 66 ⇑P **Pg** **00 20 36.3 -1.4**
8.1nm,0.7s
PDGK ⇓S **Sg** **00 20 48.8 -1.8**
7.0nm,0.5s
KDJ Kajisay 1.12 225⇑*e*P **Pg** **00 20 39.6 -0.5**
KDJ ⇑*e*S **Sg** **00 20 54.2 -0.4**
BLB Baldybastay 1.18 8 P **Pg** **00 20 40.6 -0.5**
12nm,0.1s
BLB S **Sg** **00 20 56.1 -0.3**
39nm,0.2s
TARG Taragay, Kyrgy 1.25 195⇑*e*P **Pg** **00 20 42.1 -0.3**
TARG ⇑*e*S **Sg** **00 20 58.7 +0.1**
ARXS Arharly 1.31 347 P **Pn** **00 20 43.2 -0.7**
5.1nm,0.2s
ARXS S **Sg** **00 21 00.7 -0.1**
13nm,0.2s
ARXS Arharly 1.31 347 *e*P **Pn** **00 20 43.2 -0.7**
5.1nm,0.2s
ARXS *e*S **Sg** **00 21 00.7 -0.1**
13nm,0.2s
MTBS Maitube 1.34 279 P **Pn** **00 20 44.6 +0.4**
1.0nm,0.3s
MTBS S **Sn** **00 21 03.1 +0.5**
9.9nm,0.2s
MTBS Maitube 1.34 279 *e*P **Pn** **00 20 44.6 +0.4**
1.0nm,0.3s
MTBS *e*S **Sn** **00 21 03.1 +0.5**
9.9nm,0.2s
KTBS Karatobe 1.38 305 P **Pn** **00 20 44.6 -0.1**
10nm,0.1s
KTBS S **Sb** **00 21 03.1 +0.1**
0.3nm,0.2s
KTBS Karatobe 1.38 305 *e*P **Pn** **00 20 44.6 -0.1**
10nm,0.1s
KTBS *e*S **Sb** **00 21 03.1 +0.1**
0.3nm,0.2s
KNOS Konyrlen 1.58 25 P **Pn** **00 20 47.6 -0.1**
4.0nm,0.1s
KNOS S **Sb** **00 21 09.8 +0.8**
40nm,0.3s
ULHL Ulahol 1.63 246⇓*e*P **Pn** **00 20 47.9 -0.4**
ULHL ⇓*e*S **Sn** **00 21 08.7 -1.2**
KTMS Ketmen 1.63 71 P **Pn** **00 20 47.8 -0.4**
1.6nm,0.1s
KTMS S **Sn** **00 21 08.8 -1.1**
11nm,0.2s
KTMS Ketmen 1.63 71 *e*P **Pn** **00 20 47.8 -0.4**
1.6nm,0.1s
KTMS *e*S **Sn** **00 21 08.8 -1.1**
11nm,0.2s
KST Kastek 1.67 275 P **Pn** **00 20 49.7 +0.8**
1.4nm,0.2s
KST S **Sb** **00 21 12.1 +0.5**
10nm,0.5s
KST Kastek 1.67 275 *e*P **Pn** **00 20 49.7 +0.8**
1.4nm,0.2s
KST *e*S **Sb** **00 21 12.1 +0.5**
10nm,0.5s
KUU Kurty 1.68 305 P **Pn** **00 20 49.0 0.0**
3.4nm,0.1s
KUU S **Sn** **00 21 10.4 -0.6**
5.5nm,0.1s
KUU Kurty 1.68 305 *e*P **Pb** **00 20 50.4 +0.2**
5.5nm,0.1s
KUU *e*S **Sb** **00 21 12.9 +1.1**
15nm,0.1s
BOOM Boomskoye usch 1.75 256⇑*e*P **Pn** **00 20 49.5 -0.5**
BOOM ⇑*e*S **Sn** **00 21 11.6 -1.3**
DJR Jarkent 1.79 38 P **Pn** **00 20 51.0 +0.5**
6.4nm,0.1s
DJR S **Sn** **00 21 13.9 +0.1**
21nm,0.2s
DJR Jarkent 1.79 38 *e*P **Pn** **00 20 51.0 +0.5**
6.4nm,0.1s
DJR *e*S **Sn** **00 21 13.9 +0.1**
21nm,0.2s
TKM2 Tokmak 2 1.94 271⇑*e*P **Pn** **00 20 52.2 -0.4**
TKM2 ⇑*e*S **Sn** **00 21 16.3 -1.3**
TDK Taldyqorghan 2.07 3 Pg **Pb** **00 20 56.7 -0.1**
16nm,0.4s
TDK Lg Lg 00 21 23.7
55nm,0.4s
TDK Taldyqorghan 2.07 3 *e*P **Pb** **00 20 56.7 -0.1**
16nm,0.4s
TDK *e*S **Sb** **00 21 23.7 +0.8**
55nm,0.4s
NRN Naryn 2.24 229⇓*e*P **Pn** **00 20 56.8 0.0**
NRN ⇓*e*S **Sn** **00 21 24.1 -1.0**
CHMS Chumysh 2.56 273⇑*e*P **Pn** **00 21 00.7 -0.3**
CHMS ⇑*e*S **Sn** **00 21 30.8 -1.9**
SGDS Sogindy 2.69 282 Pg **Pb** **00 21 07.2 -0.1**
4.0nm,0.1s
SGDS Lg Lg 00 21 41.7
12nm,0.1s
USP Ospenovka 2.76 278⇓*e*P **Pn** **00 21 03.5 -0.2**
USP ⇓*e*S **Sn** **00 21 35.6 -2.0**
AAK Ala-Archa 2.77 265 ⇓Pg **Pb** **00 21 09.4 +0.5**
0.9nm,0.8s
AAK ⇓Lg Lg 00 21 47.2
1.0nm,0.4s
AAK Ala-Archa 2.77 265⇑*e*P **Pn** **00 21 03.8 -0.2**
AAK ⇑*e*S **Sn** **00 21 36.1 -2.0**
UCH Uchtor 2.84 257⇑*e*P **Pn** **00 21 04.9 -0.3**
UCH ⇑*e*S **Sn** **00 21 38.1 -2.1**
MAKZ Makanchi 4.70 33 ⇑Pn **Pn** **00 21 31.7 +1.4**
0.3nm,0.5s
MAKZ ⇑Lg Lg 00 22 45.6
3.4nm,1.2s
MK31 Makanchi Array 4.81 35 ⇑Pn **Pn** **00 21 33.1 +1.1**
0.2nm,0.2s,baz=210,slow=15,SNR=7.0
MK31 ⇑Lg Lg 00 22 47.8
0.6nm,0.6s,baz=219,slow=27,SNR=13

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*IDC **02** 00:26:16.1±0.9, 51°.28N×16°.47E, h0km, mbtmp3.3/6, ML2.7/5, Error ellipse: s-maj=14.3km s-min=7.6km az=113.0*
*PRU **02** 00:26:17.9, 51°.38N×16°.24E, h0km*
*VIE **02** 00:26:17.4±1.1, 51°.33N×16°.52E, h0km, mb2.7/2, ml2.8/5, Error ellipse: s-maj=10.3km s-min=5.6km az=46.0 43 km NW of Wroclaw Suspected Mining induced.*
ISC 02 00:26:14.4±0.7**, 51°.50N**±0°.03×**16°.29E**±0°.03**, h0**km**, n39,**
σ**1**§**21**/74**, Poland**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
KSP Ksiaz 0.66 180 *e*Pg **Pg** **00 26 27.6 +0.6**
KSP *e*Sg **Sg** **00 26 35.2 -0.4**
CHVC Chvalec 0.93 189 *e*PG **Pg** **00 26 32.7 +0.5**
CHVC *e*SG **Sg** **00 26 44.3 +0.1**
comp=Z,42nm,0.6s
OSTC Ostas 0.95 183 *e*PG **Pg** **00 26 33.2 +0.6**
OSTC *e*SG **Sg** **00 26 44.9 0.0**
comp=Z,29nm,0.4s
UPC Upice 1.01 190 *e*PG **Pg** **00 26 34.1 +0.3**
UPC *e*SG **Sg** **00 26 47.4 +0.5**
comp=Z,122nm,0.4s
DPC Dobruska-Polom 1.16 179 *e*PG **Pg** **00 26 36.7 +0.2**
DPC *e*SG **Sg** **00 26 50.7 -0.8**
comp=Z,35nm,0.5s
PVCC Panska Ves 1.46 229 *e*PG **Pn** **00 26 42.6 +0.6**
PVCC *e*SG **Sg** **00 27 01.3 0.0**
comp=Z,109nm,0.2s
KRLC Kraliky 1.46 167 *e*PG **Pn** **00 26 42.3 +0.2**
KRLC *e*SG **Sg** **00 27 00.2 -1.2**
comp=Z,23nm,0.3s
PRA Prague 1.86 220 *e*PG **Pb** **00 26 49.7 +0.5**
PRA *e*SG **Sb** **00 27 12.7 -0.2**
34nm,0.7s
PRU Pruhonice 1.88 217 *e*PG **Pb** **00 26 49.6 0.0**
PRU *e*SG **Sb** **00 27 13.3 -0.3**
comp=Z,33nm,1.1s
MORC Moravsky Berou 1.91 155 *e*PN **Pn** **00 26 48.2 +0.1**
MORC *e*SG **Sn** **00 27 13.3 +0.5**
HSKC Hora Svate Kat 2.01 245 *e*PG **Pb** **00 26 52.3 +0.4**
HSKC *e*SG **Sb** **00 27 17.9 +0.4**
comp=Z,27nm,0.3s
OKC Ostrava-Krasne 2.04 144 *e*PG **Pg** **00 26 53.3 -0.2**
OKC *e*SG **Sg** **00 27 18.9 -1.1**
comp=Z,24nm,0.6s
CLL Collm 2.07 266 *e*Pg **Pb** **00 26 54.0 +1.2**
CLL *e*Sg **Sg** **00 27 22.0 +1.2**
comp=Z,17nm,0.7s
VRAC Vranov 2.21 175 Pg **Pn** **00 26 53.4 +1.1**
comp=Z,1.9nm,0.3s,baz=354,slow=16,SNR=12
VRAC Lg Lg 00 27 18.3
comp=Z,2.7nm,0.3s,baz=100,slow=17,SNR=10
VRAC Rg Rg 00 27 27.5
comp=Z,5.7nm,0.4s,baz=202,slow=20,SNR=5.9
VRAC Vranov 2.21 175 *e*PN **Pn** **00 26 52.7 +0.4**
VRAC *e*SG **Sb** **00 27 23.2 +0.2**
KRUC Moravsky 2.45 178 *e*PN **Pn** **00 26 55.9 +0.4**
KRUC *e*SG **Sb** **00 27 30.3 +0.4**
NKC Novy Kostel 2.75 244 *e*PG **Pg** **00 27 07.2 +0.2**
NKC *e*SG **Sg** **00 27 41.6 -0.9**
comp=Z,20nm,0.4s
JAVC Velka Javorina 2.79 161 *e*PN **Pn** **00 26 59.4 -1.0**
KHC Kasperske Hory 2.94 217 *e*PN **Pn** **00 27 03.0 +0.6**
KHC *e*PG **Pb** **00 27 09.0 +1.3**
KHC *e*SN **Sn** **00 27 36.0 -2.5**
KHC *e*SG **Sg** **00 27 46.9 -2.0**
comp=Z,9.4nm,0.5s
CKRC Cesky Krumlov 2.97 206 *e*PN **Pn** **00 27 04.0 +1.2**
CKRC *e*PG **Pb** **00 27 09.8 +1.6**
CKRC *e*SG **Sb** **00 27 46.1 +1.0**
comp=Z,18nm,0.7s
LANS Liptovska Anna 3.12 138 *e*PN **Pn** **00 27 05.5 +0.7**
LANS *e*PG **Pg** **00 27 16.0 +2.0**
LANS *e*SG **Sg** **00 27 54.0 -0.4**
GERES GERESS Array B 3.14 213 Pn **Pn** **00 27 06.1 +0.9**
comp=Z,0.4nm,0.4s,baz=37,slow=15,SNR=4.4
GERES Pg **Pb** **00 27 11.3 +0.2**
comp=Z,0.4nm,0.3s,baz=40,slow=17,SNR=30
GERES Sn **Sn** **00 27 42.5 -0.8**
comp=Z,0.2nm,0.3s,baz=36,slow=29,SNR=5.6
GERES Lg Lg 00 27 51.9
comp=Z,0.5nm,0.3s,baz=34,slow=29,SNR=12
MODS Modra-Piesok 3.20 168 *e*PN **Pn** **00 27 05.3 -0.6**
MODS *e*PG **Pg** **00 27 16.1 +0.5**
MODS *e*SG **Sg** **00 27 54.9 -2.2**
WINA Alland / Wiene 3.40 182 *i* Pn **Pn** **00 27 10.4 +1.7**
CONA Conrad Observa 3.59 185 *e*Pn **Pn** **00 27 10.8 -0.6**
comp=Z,0.7nm,0.3s
CONA *e*Sg **Sg** **00 28 06.8 -2.9**
comp=Z,8.6nm,0.4s
BSD Bornholm Skovb 3.71 348 *i* P **Pn** **00 27 14.3 +1.4**
BSD *i* 00 27 20.3
BSD *e*S **Sn** **00 27 55.1 -2.1**
BSD IAML 00 28 00.2
comp=Z,12nm,0.8s
STHS Stebnicka Huta 3.79 122 *e*SG **Sg** **00 28 18.8 +2.6**
HAMD Hammershus, De 3.88 347 *i* P **Pn** **00 27 16.4 +1.2**
HAMD *e*S **Sn** **00 28 00.5 -1.0**
HAMD IAML 00 28 13.2
comp=Z,19nm,1.1s
BIOA Bad Ischl, Aus 4.19 205 *i* Pn **Pn** **00 27 21.2 +1.7**
comp=Z,0.3nm,0.2s
BIOA *e*Pg **Pg** **00 27 35.5 +0.9**
comp=Z,2.6nm,0.3s
BIOA Sg **Sg** **00 28 28.2 -0.6**
comp=Z,14nm,0.6s
LUNU Lund 4.47 339 *i* P **Pn** **00 27 23.7 +0.4**
LUNU *e*S **Sn** **00 28 13.1 -2.8**
LESA Schwarzleotal 4.71 211 *e*Sg **Sg** **00 28 44.8 -0.9**
comp=Z,3.1nm,0.3s
BLEU Blekinge 4.82 357 *i* P **Pn** **00 27 29.5 +1.4**
BLEU *i* S **Sn** **00 28 22.9 -1.6**
KBA Koelnbreinsper 4.83 205 *e*Sg **Sg** **00 28 49.0 -0.5**
comp=Z,2.3nm,0.4s
DEL Delary 5.18 345 *i* P **Pn** **00 27 33.9 +0.9**
DEL *i* S **Sn** **00 28 32.6 -0.7**
DAVOX Davos/Dischmat 6.33 224 Pn **Pn** **00 27 50.2 +1.2**
comp=Z,0.1nm,0.3s,baz=10,slow=13,SNR=1.8
DAVOX Lg Lg 00 29 34.9
comp=Z,0.1nm,0.3s,baz=201,slow=15,SNR=2.5
comp=Z,1.5nm,0.8s
AKASG Malin Array Be 8.18 91 Pn **Pn** **00 28 11.0 -3.3**
comp=Z,0.2nm,0.3s,baz=286,slow=12,SNR=1.9
comp=Z,0.2nm,0.4s
HFS Hagfors 8.77 351 Pn **Pn** **00 28 23.0 +0.7**
comp=Z,0.1nm,0.3s,baz=163,slow=15,SNR=1.4
comp=Z,2.7nm,0.9s
FINES FINESS Array B 11.32 25 Pn **Pn** **00 28 57.7 +0.5**
comp=Z,0.1nm,0.3s,baz=214,slow=9.6,SNR=5.6
comp=Z,2.3nm,0.8s
ARCES ARCESS Array B 18.61 10 Pn **P** **00 30 31.3 -1.7**
comp=Z,0.1nm,0.3s,baz=186,slow=9.0,SNR=1.6
comp=Z,2.0nm,0.8s

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*NNC **02** 00:27:53.1±0.5, 42°.92N×78°.20E, h1km±2km, mb2.6, mpv2.8, Error ellipse: s-maj=4.3km s-min=1.8km az=174.0*
*SOME **02** 00:27:53.7, 42°.98N×78°.18E, h10km*
*KRNET **02** 00:27:54.2±0.1, 42°.95N×78°.09E, h26km, mb2.8*
ISC 02 00:27:53.7±1.1**, 42°.95N**±0°.02×**78°.16E**±0°.02**, h5**km±9km**,**
n41, σ**1**§**19**/76**, 18C-4D, Lake Issyk-Kul region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
SATY Saty 0.22 58 P **Pg** **00 27 58.2 +0.2**
37nm,0.1s
SATY S **Sg** **00 28 02.1 +1.3**
239nm,0.1s
ANVS Anan'yevo 0.39 246⇑*e*P **Pg** **00 28 02.0 +0.6**
ANVS ⇑*e*S **Sg** **00 28 07.5 +0.9**
PRZ Przheval'sk 0.49 159⇑*e*P **Pb** **00 28 04.4 -0.6**
PRZ ⇑*e*S **Sb** **00 28 11.9 -0.7**
KURS Kuram 0.54 1 P **Pg** **00 28 04.0 -0.2**
14nm,0.1s
KURS S **Sg** **00 28 11.9 +0.6**
19nm,0.3s
KPKS Kokpek 0.65 36 P **Pg** **00 28 06.0 -0.2**
0.1nm,0.1s
KPKS S **Sg** **00 28 14.9 +0.3**
51nm,0.3s
KPKS Kokpek 0.65 36 *e*P **Pg** **00 28 05.2 -1.0**
0.4nm,0.2s
KPKS *e*S **Sg** **00 28 13.5 -1.1**
56nm,0.2s
UZB Uzynbulak 0.67 72 P **Pg** **00 28 06.1 -0.5**
13nm,0.2s
UZB S **Sg** **00 28 14.9 -0.3**
38nm,0.2s
UZB Uzynbulak 0.67 72 *e*P **Pg** **00 28 06.0 -0.5**
13nm,0.2s
UZB *e*S **Sg** **00 28 14.9 -0.3**
38nm,0.2s
KOTS Kotyrbulak 0.82 291 P **Pg** **00 28 09.5 +0.1**
2.0nm,0.2s
KOTS S **Sg** **00 28 21.1 +1.1**
44nm,0.2s
KOTS Kotyrbulak 0.82 291 *e*P **Pg** **00 28 09.5 +0.1**
2.0nm,0.2s
KOTS *e*S **Sg** **00 28 21.1 +1.1**
44nm,0.2s
MDOK Medeo 0.84 285 Pg **Pg** **00 28 10.1 +0.2**
3.0nm,0.2s
MDOK Lg Lg 00 28 21.6
20nm,0.5s
TNSS Tian-Shan 0.89 276 P **Pg** **00 28 10.8 0.0**
0.5nm,0.2s
TNSS S **Sg** **00 28 23.3 +0.9**
4.9nm,0.2s
TNSS Tian-Shan 0.89 276 *e*P **Pg** **00 28 10.8 0.0**
0.5nm,0.2s
TNSS *e*S **Sg** **00 28 23.3 +0.9**
4.9nm,0.2s
SHLS Shalkode 0.98 77 P **Pn** **00 28 16.7 +2.4**
4.7nm,0.1s
SHLS S **Sn** **00 28 33.2 +4.6**
13nm,0.3s
SHLS Shalkode 0.98 77 *e*P **Pn** **00 28 16.7 +2.4**
4.7nm,0.1s
SHLS *e*S **Sn** **00 28 33.2 +4.6**
13nm,0.3s
PDGK Podgornoye 1.05 68 ⇑P **Pg** **00 28 12.7 -1.1**
4.1nm,0.7s
PDGK ⇑S **Sg** **00 28 26.3 -1.2**
5.4nm,0.5s
KDJ Kajisay 1.09 222⇑*e*P **Pg** **00 28 13.9 -0.7**
KDJ ⇑*e*S **Sg** **00 28 28.1 -0.6**
BLB Baldybastay 1.18 11 P **Pb** **00 28 15.8 -0.8**
9.7nm,0.1s
BLB S **Sg** **00 28 31.3 -0.2**
43nm,0.2s
TARG Taragay, Kyrgy 1.24 192⇓*e*P **Pn** **00 28 17.1 -1.0**
TARG ⇓*e*S **Sb** **00 28 33.7 -0.7**
MTBS Maitube 1.28 279 P **Pn** **00 28 17.6 -0.7**
1.3nm,0.2s
MTBS S **Sb** **00 28 35.2 +0.1**
10.0nm,0.2s
MTBS Maitube 1.28 279 *e*P **Pn** **00 28 17.6 -0.7**
1.3nm,0.2s
MTBS *e*S **Sb** **00 28 35.2 +0.1**
10.0nm,0.2s
ARXS Arharly 1.29 349 P **Pb** **00 28 18.0 -0.5**
3.5nm,0.2s
ARXS S **Sn** **00 28 35.2 -1.0**
9.7nm,0.1s
ARXS Arharly 1.29 349 *e*P **Pn** **00 28 17.4 -1.1**
2.7nm,0.2s
ARXS *e*S **Sb** **00 28 34.4 -1.0**
33nm,0.2s
KTBS Karatobe 1.32 306 P **Pb** **00 28 18.7 -0.3**
5.7nm,0.3s
KTBS S **Sg** **00 28 37.1 +0.9**
0.2nm,0.1s
KTBS Karatobe 1.32 306 *e*P **Pb** **00 28 18.7 -0.3**
5.7nm,0.3s
KTBS *e*S **Sg** **00 28 37.1 +0.9**
0.2nm,0.1s
ULHL Ulahol 1.58 244⇑*e*P **Pn** **00 28 22.1 -0.5**
ULHL ⇑*e*S **Sn** **00 28 42.2 -1.3**
KNOS Konyrlen 1.60 27 P **Pg** **00 28 23.7 -0.7**
4.6nm,0.2s
KNOS S **Sg** **00 28 45.2 +0.2**
14nm,0.3s
KST Kastek 1.61 274 P **Pb** **00 28 24.1 +0.1**
0.7nm,0.2s
KST S **Sg** **00 28 46.4 +0.9**
12nm,0.5s
KST Kastek 1.61 274 *e*P **Pb** **00 28 24.1 +0.1**
0.7nm,0.2s
KST *e*S **Sg** **00 28 46.4 +0.9**
12nm,0.5s
KTMS Ketmen 1.68 72 P **Pb** **00 28 24.0 -1.2**
1.6nm,0.1s
KTMS S **Sb** **00 28 45.9 -0.9**
8.2nm,0.1s
KTMS Ketmen 1.68 72 *e*P **Pb** **00 28 24.0 -1.2**
1.6nm,0.1s
KTMS *e*S **Sb** **00 28 45.9 -0.9**
8.2nm,0.1s
BOOM Boomskoye usch 1.69 255⇓*e*P **Pn** **00 28 23.7 -0.4**
BOOM ⇓*e*S **Sn** **00 28 45.3 -1.0**
DJR Jarkent 1.82 40 P **Pb** **00 28 26.8 -0.9**
6.7nm,0.1s
DJR S **Sg** **00 28 51.1 -1.2**
11nm,0.5s
DJR Jarkent 1.82 40 *e*P **Pb** **00 28 26.8 -0.9**
6.7nm,0.1s
DJR *e*S **Sg** **00 28 51.1 -1.2**
11nm,0.5s
TKM2 Tokmak 2 1.88 270⇑*e*P **Pn** **00 28 26.3 -0.4**
TKM2 ⇑*e*S **Sn** **00 28 49.7 -1.2**
TDK Taldyqorghan 2.06 5 Pg **Pb** **00 28 31.5 -0.2**
7.3nm,0.2s
TDK Lg Lg 00 28 58.6
51nm,0.5s
TDK Taldyqorghan 2.06 5 *e*P **Pb** **00 28 31.5 -0.2**
7.3nm,0.2s
TDK *e*S **Sg** **00 28 58.6 -1.4**
51nm,0.5s
KAPS Kapalarasan 2.49 20 Pg **Pb** **00 28 39.3 +0.3**
1.3nm,0.4s
KAPS Lg Lg 00 29 12.2
32nm,0.2s
AAK Ala-Archa 2.71 265 ⇑Pg **Pb** **00 28 43.9 +1.1**
0.3nm,0.4s
AAK ⇑Lg Lg 00 29 19.4
2.2nm,0.8s

MAKZ	Makanchi	4.72	34	⇑Pn	Pn	00 29 07.2	+1.6
	0.2nm,0.6s						
MAKZ				⇑Lg	Lg	00 30 19.9	
	1.6nm,0.8s						
MK31	Makanchi Array	4.84	36	⇑Pn	Pn	00 29 08.8	+1.6
	0.1nm,0.2s,baz=211,slow=13,SNR=4.6						
MK31				⇑Lg	Lg	00 30 25.2	
	0.5nm,0.6s,baz=218,slow=29,SNR=6.2						

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*GFZ **02** 00:31:13.9, 51°.19N×179°.83W, h28km, MW5.7, Moment Tensor Solution. s67 Moment tensor: M_{rr}3.75; $M_{\theta\theta}$-3.61; $M_{\phi\phi}$-0.14; $M_{r\theta}$2.00; $M_{\theta\phi}$-1.10; $M_{\phi r}$0.14; Fault plane solution: NP1:ϕ_s79.00000°, δ58.00000°, λ96.00000°. NP2:ϕ_s247.00000°, δ31.00000°, λ79.00000°. Principal axes: T 4.2600, Plg75.0000°, Azm7.0000°; N 0.1400, Plg5.0000°, Azm256.0000°; P -4.4000, Plg13.0000°, Azm165.0000°;*

*ISC-PP **02** 00:31:15, 51°.11N×179°.85W, h15km, Mwppsm6.2, Moment Tensor Solution. s61 Moment tensor: Scale 10^{18}Nm; M_{rr}0.57±.17; $M_{\theta\theta}$-0.01±.18; $M_{\phi\phi}$-0.58±.17; $M_{r\theta}$0.18±.14; $M_{\theta\phi}$0.21±.25; $M_{\phi r}$-0.30±.14; Fault plane solution: $M_0$2.24000×10^{18} NP1:ϕ_s31.10000°, δ56.70000°, λ99.70000°. NP2:ϕ_s193.80000°, δ34.50000°, λ75.70000°.*

*IPGP **02** 00:31:15.0, 51°.11N×179°.87W, h25km, Mw5.7, Fault plane solution: NP1:ϕ_s260.00000°, δ32.00000°, λ95.00000°. NP2:ϕ_s74.00000°, δ58.00000°, λ87.00000°.*

*NEIC **02** 00:31:15.4±2.0, 51°.11N±0°.04×179°.85W±0°.05, h20km±1km, mb5.8/1040, ML5.7/11, Ms_20 5.3/536, Mwb5.6/152, Mww5.7/67, ML5.5(AEIC), Error ellipse: s-maj=6.4km s-min=3.8km az=164.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.41; $M_{\theta\theta}$-2.92; $M_{\phi\phi}$0.51; $M_{r\theta}$1.02; $M_{\theta\phi}$-0.66; $M_{\phi r}$0.39; Fault plane solution: $M_0$2.99000×10^{17} NP1:ϕ_s74.35000°, δ55.99000°, λ83.68000°. NP2:ϕ_s265.55000°, δ34.53000°, λ99.26000°. Principal axes: T 2.6354, Plg78.0000°, Azm322.0000°; N 0.6148, Plg5.0000°, Azm78.0000°; P -3.2502, Plg11.0000°, Azm169.0000°;*

*NEIC **02** 00:31:15.6, 51°.13N×179°.87W, h30km*

*BJI **02** 00:31:15.9, 51°.16N×179°.81W, h49km, mB5.6/69, mb5.6/92, Ms5.6/94, Ms7 5.4/94*

*AEIC **02** 00:31:15.8±2.2, 51°.10N±0°.04×179°.84W±0°.06, h13km±2km, Error ellipse: s-maj=6.5km s-min=4.9km az=153.0*

*NEIC **02** 00:31:15.6, 50°.93N×179°.98E, h30km, Moment Tensor Solution. Duration: 3s6 Moment tensor: Scale 10^{17}Nm; M_{rr}4.03; $M_{\theta\theta}$-4.06; $M_{\phi\phi}$0.03; $M_{r\theta}$1.71; $M_{\theta\phi}$-1.56; $M_{\phi r}$0.70; Fault plane solution: $M_0$4.71000×10^{17} NP1: ϕ_s253.09000°, δ33.44000°, λ92.83000°. NP2:ϕ_s69.70000°, δ56.60000°, λ88.13000°. Principal axes: T 4.4095, Plg78.0000°, Azm333.0000°; N 0.5560, Plg2.0000°, Azm71.0000°; P -4.9655, Plg12.0000°, Azm161.0000°;*

*NEIC **02** 00:31:15.9, 51°.13N×179°.86W, h24km*

*BGR **02** 00:31:16.2, 51°.00N×177°.85E, h33km, mb5.7, Ms5.0*

*MOS **02** 00:31:16.6±0.9, 51°.26N×179°.85W, h42km, mb5.9/118, MS5.5/32, Error ellipse: s-maj=6.6km s-min=4.2km az=112.4*

*IDC **02** 00:31:18.2±1.1, 51°.22N×179°.76W, h43km±8km, mb5.2/38, mbtmp5.4/43, ML5.3/4, MS5.2/96, Error ellipse: s-maj=11.4km s-min=8.3km az=170.0*

*GCMT **02** 00:31:18.9±0.1, 51°.13N±0°.01×179°.79W±0°.01, h24km, MW5.7/161, Moment Tensor Solution. s153,c296; s161,c344; Duration: 1s8 Moment tensor: Scale 10^{17} Nm; M_{rr}4.16±.05; $M_{\theta\theta}$-4.09±.04; $M_{\phi\phi}$-0.07±.04; $M_{r\theta}$1.66±.06; $M_{\theta\phi}$-1.49±.03; $M_{\phi r}$0.99±.06; Best double couple: $M_0$4.78300×10^{17} NP1:ϕ_s258.00000°, δ34.00000°, λ100.00000°. NP2:ϕ_s66.00000°, δ57.00000°, λ84.00000°. Principal axes: T 4.5910, Plg77.0000°, Azm316.0000°; N 0.3770, Plg5.0000°, Azm70.0000°; P -4.9740, Plg12.0000°, Azm161.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 00:31:16.5±0.3, **51°.15N**±0°.03×**179°.79W**±0°.02, **h32**km±1km, **h32**km**:pP-P, n2166, σ1s33**/1782, **mb5.8**/746, **MS5.3**/414, **131C-51D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	Amchitka	0.62	292		Pb	00 31 26.9	-2.0
AMKA					Sb	00 31 36.0	-1.4
GAKI	Gareloi-Kavalg	0.73	56		Pn	00 31 30.5	-0.1
GAKI					Sn	00 31 40.7	0.0
GAKI					Sb	00 31 41.8	+1.2
CESW	Semis' Southwe	0.85	332		Pn	00 31 32.8	+0.6
GASW	Gareloi Southw	0.86	43		Pn	00 31 33.2	+0.9
GASW					Sn	00 31 46.1	+2.4
CERB	Semis' Cerberu	0.86	335		Pn	00 31 33.2	+0.8
GALAA	Gareloi Lava P	0.88	46		Pb	00 31 33.7	+0.3
GALAA					Sn	00 31 47.2	+2.8
GALAA					Sb	00 31 47.8	+2.9
GAEA	Gareloi East	0.91	45		Pb	00 31 34.1	+0.3
GAEA					Sn	00 31 47.8	+2.8
GANO	Gareloi North	0.91	42		Pb	00 31 33.4	-0.5
GANE	Gareloi Northe	0.92	43		Pb	00 31 33.8	-0.2
GANE					Sn	00 31 48.6	+3.3
CETU	Semis' Tuman	0.93	331		Pb	00 31 34.0	-0.2
LSSE	Little Sitkin	1.29	308		Pb	00 31 39.2	-1.1
TASE	Tanaga Southea	1.29	57		Pb	00 31 39.4	-0.8
TASE					Sb	00 31 57.9	+1.4
TANO	Tanaga North	1.29	53		Pb	00 31 39.9	-0.4
TANO					Sb	00 31 58.4	+1.9
LSPA	Little Sitkin	1.30	309		Pb	00 31 39.2	-1.3
LSNW	Little Sitkin	1.34	308		Pn	00 31 39.3	+0.4
TAPA	Tanaga Point A	1.40	61		Sb	00 32 00.1	+0.5
KIMD	Kanaga Island	1.71	68		Sb	00 32 09.0	+0.6
KICM	Kanaga Island	1.79	64		Pb	00 31 47.1	-1.5
KIWB	Kanaga Island	1.79	66		Pb	00 31 46.9	-1.8
KIWB					Sb	00 32 11.2	+0.5
KIWB				IAML		00 32 14.8	
	comp=N,66µm,1.4s						
KIWB				IAML		00 32 18.5	
	comp=E,78µm,1.0s						
ADK	Adak	2.07	68	P	Pb	00 31 51.7	-1.7
ADK	Adak	2.07	68		Sb	00 32 17.2	-1.6
ADK					Sn	00 32 18.4	+4.7
ADK	Adak	2.07	68		Pn	00 31 50.2	+1.2
ADK				IAML		00 32 25.0	
	comp=E,82µm,1.3s						
ADK				IAML		00 32 26.4	
	comp=E,89µm,1.2s						
ADAG	Mount Adagdak	2.15	66		Pb	00 31 52.5	-2.3
ETKA	Kagalaska Isla	2.23	70		Sb	00 32 20.8	-2.5
GSSP	Great Sitkin S	2.44	66		Pn	00 31 56.4	+2.3
GSMY	Great Sitkin M	2.49	68		Sb	00 32 28.8	-2.1
GSTR	Great Sitkin T	2.51	66		Pn	00 31 56.2	+1.2
KOWE	Korovin West	3.65	68		Pn	00 32 13.1	+2.4
KOFP	Korovin Flat P	3.71	70		Pn	00 32 14.2	+2.6
KOSE	Korovin Southe	3.76	69		Pn	00 32 15.1	+2.8
SHEM	Shemya Is, Ala	4.10	295	P	Pn	00 32 18.8	+2.0
	comp=E,194nm,0.3s,baz=108,slow=2.4,SNR=41						
SHEM				S	Sn	00 33 08.4	+4.8
	comp=E,1µm,0.7s,baz=141,slow=21,SNR=4.6						
SHEM				LR	LR	00 33 57.9	
	comp=E,66µm,18.5s,baz=132,slow=39						
	comp=E,2µm,0.7s						
SHEM	Shemya Is, Ala	4.10	295	IAML		00 33 19.5	
	comp=N,4µm,0.9s						
SMY	Shemya	4.10	295	P	Pn	00 32 20.3	+3.5
SMY				S	Sn	00 33 09.6	+6.0
SMY	Shemya	4.10	295	S	Sn	00 33 09.6	+6.0
SMY	Shemya	4.10	295		Pn	00 32 15.3	-1.5
SMY				IAML		00 33 19.6	
	comp=N,10µm,0.9s						
SMY				IAML		00 33 30.8	
	comp=E,11µm,1.3s						
SMY	Shemya	4.10	295	P	Pn	00 32 15.3	-1.5
CLES	Cleveland East	6.34	71		Pn	00 32 48.6	+1.1
CLCO	Concord Point,	6.43	71		Pn	00 32 52.7	+3.8
NIKH	Nikolski High	6.98	71	P	Pn	00 33 00.1	+3.7
NIKH				S	Sn	00 34 19.8	+5.1
NIKH	Nikolski High	6.98	71	S	Sn	00 34 19.8	+5.1
NIKH	Nikolski High	6.98	71		Pn	00 32 58.2	+1.8
NIKH	Nikolski High	6.98	71	P	Pn	00 32 58.3	+1.8
	baz=259,SNR=14						
OKCE	Okmok Cone E	7.49	68		Pn	00 33 07.6	+4.2
SPIA	Saint Paul Isl	8.23	39	P	Pn	00 33 16.9	+3.5
SPIA				S	Sn	00 34 47.3	+2.1
SPIA	Saint Paul Isl	8.23	39	S	Sn	00 34 47.3	+2.1
SPIA	Saint Paul Isl	8.23	39		Pn	00 33 16.9	+3.5
SPIA	Saint Paul Isl	8.23	39	P	Pn	00 33 17.5	+4.0
	baz=227,SNR=39						
MNAT	Makushin Natee	8.45	66		Pn	00 33 20.0	+3.5
UNV	Unalaska Valle	8.54	66	P	Pn	00 33 21.0	+3.2
UNV	Unalaska Valle	8.54	66		Pn	00 33 19.7	+2.0
UNV	Unalaska Valle	8.54	66	P	Pn	00 33 20.2	+2.4
	baz=257,SNR=21						
AKRB	Akutan Reef Bi	8.86	65		Pn	00 33 25.6	+3.4
AKV	Akutan Volcano	8.92	65		Pn	00 33 26.6	+3.5
AKUT	Akutan	9.03	65	P	Pn	00 33 28.3	+3.8
AKUT	Akutan	9.03	65		Pn	00 33 26.9	+2.4
FALS	False Pass	10.54	63	P	Pn	00 33 47.9	+2.8
FALS	False Pass	10.54	63		Pn	00 33 46.8	+1.7
FALS	False Pass	10.54	63	P	Pn	00 33 46.9	+1.8
	baz=256,SNR=7.5						
M11K	Mekoryuk	11.98	34		Pn	00 34 07.5	+2.8
M11K	Mekoryuk	11.98	34	P	Pn	00 34 08.7	+3.9
	baz=226,SNR=27						
SDPT	Sand Point	12.29	63	P	Pn	00 34 10.8	+1.7
SDPT				S	Sn	00 36 28.8	+4.0
SDPT	Sand Point	12.29	63	S	Sn	00 36 28.8	+4.0
SDPT	Sand Point	12.29	63		Pn	00 34 09.9	+0.8
SDPT	Sand Point	12.29	63	P	Pn	00 34 08.9	-0.2
	baz=258,SNR=7.4						
CNBA	Chernabura Isl	12.70	65		Pn	00 34 14.6	-0.1
CHNA	Chernabura Isl	12.70	65	P	Pn	00 34 16.3	+1.6
CHNA	Chernabura Isl	12.70	65	P	Pn	00 34 14.8	+0.1
	baz=261,SNR=6.7						
M13K	Dall Lake	13.06	38	P	Pn	00 34 24.2	+4.7
	baz=232,SNR=32						
O14K	Tigyukauivet M	13.29	45	P	Pn	00 34 25.8	+3.1
	baz=240						
GAMB	Gambell	13.37	16		Pn	00 34 25.9	+2.2
GAMB	Gambell	13.37	16	P	Pn	00 34 26.5	+2.8
	baz=203,SNR=169						
PET	Petropavlovsk	13.38	286	P	Pn	00 34 27.3	+3.3
PET	Petropavlovsk	13.38	286		Pn	00 34 24.7	+0.8
PET	Petropavlovsk	13.38	286	eP	Pn	00 34 25.5	+1.5
PET				eS	Sn	00 36 46.8	-4.6
PET				pmax	pmax		
	comp=Z,1µm,10.1s						
PET				pmax	pmax		
	comp=Z,1µm,12.3s						
PET				pmax	pmax		
	comp=Z,125nm,1.1s						
PET				MLR	MLR		
	comp=Z,6µm,16.0s						
PET				MLR	MLR		
	comp=Z,6µm,15.0s						
N14K	Kuskokwak Cree	13.46	42	P	Pn	00 34 29.0	+4.1
	baz=237,SNR=91						
K13K	Kusilvak Mount	13.61	32	P	Pn	00 34 30.3	+3.3
	baz=224,SNR=34						
M14K	Bethel	13.81	39		Pn	00 34 33.1	+3.3
M14K	Bethel	13.81	39	P	Pn	00 34 33.4	+3.6
	baz=234,SNR=81						
L14K	Kuka Creek	13.90	36	P	P	00 34 35.3	-3.5
	baz=230						
O15K	Ungalikthiuk R	13.91	47		Pn	00 34 32.9	+1.8
O15K	Ungalikthiuk R	13.91	47	P	Pn	00 34 34.0	+2.9
	baz=243,SNR=65						
PEA0B	Petropavlovsk-	13.96	287		Pn	00 34 33.2	+1.4
PEA0B	Petropavlovsk-	13.96	287	c iP	Pn	00 34 32.1	+0.3
PETK	Petropavlovsk-	13.96	287	P	Pn	00 34 34.1	+2.2
	comp=Z,81nm,0.8s,baz=75,slow=12,SNR=54						
PETK				S	Sn	00 37 06.9	+1.4
	comp=Z,8.3nm,0.8s,baz=88,slow=39,SNR=2.3						
PETK				LR	LR	00 39 44.9	
	comp=Z,13µm,21.8s,baz=97,slow=36						
PETK				PcP	PcP	00 39 52.6	+1.1
	comp=Z,22nm,0.8s,baz=102,slow=5.8,SNR=10						
PETK				ScP	ScP	00 43 21.3	-1.2
	comp=Z,3.4nm,0.9s,baz=96,slow=1.4,SNR=2.7						
PETK				PKiKP	PKiKP	00 47 46.5	-0.7
	comp=Z,5.0nm,0.8s,baz=101,slow=5.5,SNR=6.7						
PETK	Petropavlovsk-	13.96	287		Pn	00 34 33.3	+1.4
N15K	Kwethluk River	14.27	43	Pn	Pn	00 34 38.3	+2.3
N15K	Kwethluk River	14.27	43	P	Pn	00 34 38.7	+2.7
	baz=240,SNR=234						
M15K	Kasigluk River	14.29	41	P	Pn	00 34 38.7	+2.3
	baz=237,SNR=74						
R16K	Pilot Point	14.41	55	P	Pn	00 34 40.8	+2.8
	baz=253						
J14K	Nanvaranak Lak	14.55	31	P	P	00 34 43.7	-2.3
	baz=224,SNR=35						
L15K	Ungalak Mounta	14.56	37	P	P	00 34 43.7	-2.3
	baz=232,SNR=161						
P16K	Nushagak River	14.71	49	P	Pn	00 34 44.2	+2.2
P16K	Nushagak River	14.71	49	P	Pn	00 34 44.0	+2.1
	baz=247,SNR=57						
O16K	Kokwok River B	14.89	47	P	Pn	00 34 46.0	+1.6
O16K	Kokwok River B	14.89	47	P	Pn	00 34 46.6	+2.2
	baz=245,SNR=82						
K15K	Wolf Creek Mou	14.93	35	P	P	00 34 48.5	-1.7
	baz=230,SNR=177						
N16K	Nishlik Lake	14.99	43	P	Pn	00 34 48.3	+2.5
	baz=241,SNR=124						
R17L	Mt. Peulik Vol	15.06	55	P	Pn	00 34 46.5	-0.3
	baz=254						
CHIR	Chirikof Islan	15.09	63	P	Pn	00 34 48.5	+1.4
CHIR	Chirikof Islan	15.09	63	Pn	Pn	00 34 47.9	+0.8
CHIR				IAmb	IAmb	00 34 50.0	
	comp=Z,556nm,1.4s						
CHIR	Chirikof Islan	15.09	63	P	Pn	00 34 47.4	+0.3
	baz=262						
M16K	Timber Creek	15.19	41	IAmb	IAmb	00 34 56.8	
	comp=Z,404nm,1.0s						
M16K	Timber Creek	15.19	41	P	Pn	00 34 50.2	+1.9
	baz=239,SNR=48						
SKR	Severo-Kuril's	15.19	278	eP	Pn	00 34 47.2	-1.2
SKR				pmax	pmax		
	comp=Z,2µm,6.4s						
SKR				pmax	pmax		
	comp=Z,312nm,0.8s						
SKR				MLR	MLR		
	comp=Z,6µm,18.0s						
SKR				MLR	MLR		
	comp=N,5µm,17.0s						
SKR				MLR	MLR		
	comp=E,6µm,18.0s						
Q16K	King Salmon	15.23	51	P	Pn	00 34 51.2	+2.3
	baz=250,SNR=18						
L16K	Owhat River	15.35	39		Pn	00 34 52.2	+1.7
L16K	Owhat River	15.35	39	P	Pn	00 34 52.7	+2.2
	baz=236,SNR=98						
ANM	Nome	15.42	24		Pn	00 34 53.3	+1.9
ANM	Nome	15.42	24	P	Pn	00 34 53.3	+1.9
ANM				pmax	pmax		
	comp=Z,61nm,0.8s						
ANM	Nome	15.42	24	P	P	00 34 54.5	-1.1
	baz=216,SNR=46						
O17K	Koliganek Bris	15.43	47	P	Pn	00 34 53.1	+1.6
	baz=246,SNR=40						
Q17K	Contact Creek	15.48	53	P	Pn	00 34 53.0	+0.7
	baz=253,SNR=27						
P17K	Kvichak River	15.51	50	IAmb	IAmb	00 35 00.2	
	comp=Z,516nm,0.7s						
P17K	Kvichak River	15.51	50	P	P	00 34 55.2	-1.4
	baz=249,SNR=23						
TNA	Tin City	15.69	18	P	P	00 34 58.7	+0.2
	baz=209,SNR=127						
N17K	Nushagak Hills	15.71	45	IAmb	IAmb	00 35 02.0	
	comp=Z,501nm,0.9s						
N17K	Nushagak Hills	15.71	45	P	P	00 34 57.4	-1.4
	baz=243,SNR=121						
J16K	Anvik River	15.90	33	P	P	00 35 00.5	-0.4
	baz=229,SNR=94						
F14K	Arctic Creek	15.95	21	P	P	00 35 01.8	+0.3
	baz=212,SNR=122						
SII	Sitkinak Islan	15.99	60	P	P	00 35 01.1	-0.9
SII	Sitkinak Islan	15.99	60		Pn	00 34 57.6	-1.2
SII				IAmb	IAmb	00 35 06.8	
	comp=Z,1µm,0.9s						
SII	Sitkinak Islan	15.99	60	P	Pn	00 35 00.4	+1.5
	baz=261,SNR=7.4						
M17K	Holitna River	16.01	42	P	P	00 35 01.6	-0.6
	baz=240,SNR=91						
Q18K	Katmai Hardscr	16.04	52	P	Pn	00 34 59.6	+0.1
	baz=253,SNR=24						
L17K	Donlin	16.05	39	P	P	00 35 01.9	-0.8
	baz=237,SNR=64						
G15K	Niukluk	16.11	25	P	P	00 35 03.3	0.0
	baz=218,SNR=149						
P18K	Big Mountain,	16.16	50	Pn	Pn	00 35 01.9	+0.9
P18K	Big Mountain,	16.16	50	P	P	00 35 02.8	-1.1
	baz=250,SNR=45						
I17K	Unalakleet	16.27	31		P	00 35 04.9	-0.2
I17K	Unalakleet	16.27	31	P	P	00 35 04.8	-0.2
	baz=227,SNR=148						
H16K	Elim	16.33	28	P	P	00 35 06.1	+0.4
	baz=222,SNR=97						
O18K	Koktuh Hills	16.34	48	Pn	Pn	00 35 03.7	+0.5
O18K	Koktuh Hills	16.34	48	P	P	00 35 05.0	-0.8
	baz=249,SNR=32						
N18K	Kilae Creek	16.35	45	Pn	Pn	00 35 04.1	+0.7
N18K	Kilae Creek	16.35	45	P	P	00 35 05.4	-0.5
	baz=245,SNR=91						
K17K	Iditarod	16.38	37	P	P	00 35 05.8	-0.4
	baz=235,SNR=97						
F15K	North Star Dit	16.53	22	P	Pn	00 35 05.8	+0.2
F15K	North Star Dit	16.53	22	P	P	00 35 09.0	+1.1
	baz=215,SNR=206						
OHAK	Old Harbor	16.59	58	P	Pn	00 35 07.3	+0.9
OHAK	Old Harbor	16.59	58	P	Pn	00 35 03.9	-2.5
	baz=260,SNR=13						
L18K	Granite Mounta	16.74	40	P	P	00 35 09.8	-0.3
	baz=239,SNR=102						
M18K	Stony River	16.74	43	P	P	00 35 10.1	-0.1
	baz=243,SNR=88						
Q19K	Cape Douglas,	16.80	52		Pn	00 35 08.1	-1.0
Q19K	Cape Douglas,	16.80	52	P	Pn	00 35 07.7	-1.3
	baz=254,SNR=8.7						
G16K	Koyuk River	16.87	26	Pn	Pn	00 35 09.2	-0.6
G16K	Koyuk River	16.87	26	P	P	00 35 12.1	+0.5
	baz=221						
O19K	Port Alsworth	16.88	48	Pn	Pn	00 35 10.5	+0.5
O19K	Port Alsworth	16.88	48	P	P	00 35 12.4	+0.7
	baz=249,SNR=20						
N19K	Bonanza Creek	17.04	46		P	00 35 13.7	0.0
N19K				IAmb	IAmb	00 35 21.8	
	comp=Z,1µm,1.0s						
N19K	Bonanza Creek	17.04	46	P	P	00 35 14.7	+1.1
	baz=247,SNR=154						
KDAK	Kodiak Island	17.07	57	P	Pn	00 35 11.0	-1.3
	comp=Z,20nm,0.3s,baz=224,slow=1.2,SNR=83						
KDAK				S	Sn	00 38 20.3	-0.6
	comp=Z,12nm,0.6s,baz=108,slow=21,SNR=1.6						
	comp=Z,197nm,0.6s						
KDAK	Kodiak Island	17.07	57		Pn	00 35 10.2	-2.1
KDAK	Kodiak Island	17.07	57	P	Pn	00 35 10.2	-2.1
KDAK				pmax	pmax		
	comp=Z,279nm,0.9s						
KDAK	Kodiak Island	17.07	57	P	Pn	00 35 10.0	-2.4
	baz=259						
P19K	Oil Pt	17.21	50		Pn	00 35 14.4	+0.2
P19K	Oil Pt	17.21	50	P	P	00 35 15.8	+0.2
	baz=252,SNR=16						
H17K	Granite Mounta	17.25	29	P	P	00 35 18.5	+2.7
	baz=226						
Q20K	Shuyak Island	17.34	54	P	Pn	00 35 15.3	-0.5
	baz=256,SNR=11						
SYI	Shuyak Island	17.34	54	P	Pn	00 35 14.9	-0.9
ILSW	Iliamna Southw	17.36	49	P	P	00 35 17.6	+0.4
J18K	Innoko River	17.40	36	P	P	00 35 19.4	+1.8
	baz=236						
G17K	Kiwalik Mounta	17.43	27	P	P	00 35 19.8	+2.0
	baz=224,SNR=129						
L19K	White Mountain	17.47	41	P	P	00 35 20.1	+1.8
	baz=242,SNR=121						
RED	Redoubt Volcan	17.68	48	P	P	00 35 21.0	+0.3
RED				IAmb	IAmb	00 35 27.8	
	comp=Z,899nm,1.1s						
H18K	Honhosa River	17.88	30	P	P	00 35 25.4	+2.6
	baz=229						
F17K	Baldwin Pennin	17.96	24	P	P	00 35 26.7	+3.0
	baz=221						
HOM	Homer	17.98	51	P	Pn	00 35 24.0	+0.3
HOM				IAmb	IAmb	00 35 32.7	
	comp=Z,640nm,1.1s						
HOM	Homer	17.98	51	P	P	00 35 24.7	+0.7
	baz=254						
GCSA	Galena City Sc	18.10	33	P	P	00 35 27.0	+1.8
	baz=232,SNR=78						
J19K	Poorman	18.10	36	P	P	00 35 26.3	+1.0
J19K	Poorman	18.10	36	P	P	00 35 27.0	+1.7
	baz=236,SNR=222						
CNPM	China Poot	18.15	51		P	00 35 26.1	+0.2
BILL	Bilibino	18.26	343		Pn	00 35 27.7	+0.6
BILL				IAmb	IAmb	00 35 35.2	
	comp=Z,924nm,1.3s						
BILL	Bilibino	18.26	343	⇓iP	Pn	00 35 28.0	+0.9
BILL				pmax	pmax		
	comp=Z,847nm,1.3s						
SPU	Mount Spurr	18.27	46	P	Pn	00 35 27.9	+0.6
SPU				IAmb	IAmb	00 35 35.1	
	comp=Z,776nm,1.1s						
G18K	Tagagawik	18.29	28	P	Pn	00 35 29.5	+2.1
	baz=226,SNR=133						
E17K	Hotham Inlet	18.32	23	P	Pn	00 35 30.5	+2.8
	baz=218,SNR=337						
K20K	Telida	18.35	38	P	Pn	00 35 29.5	+1.4
	baz=240						
BRLK	Bradley Lake	18.38	51	P	P	00 35 27.8	-0.6
BRSE	Bradley Lake S	18.45	51	P	Pn	00 35 30.4	+1.0
	baz=255,SNR=8.0						
F18K	Selawik	18.51	26	P	Pn	00 35 32.2	+2.2
	baz=223,SNR=279						
D17K	Noatak River	18.53	20	P	Pn	00 35 32.9	+2.6
	baz=215,SNR=664						
CAPN	Captain Cook N	18.55	48	P	Pn	00 35 33.3	+2.7
	baz=252,SNR=9.7						
C16K	Lisburne Hills	18.56	17	P	Pn	00 35 33.2	+2.5
	baz=210						
MA2	Magadan	18.60	308	P	P	00 35 30.8	+0.1
	comp=Z,1.4nm,0.3s,baz=97,slow=11,SNR=11						
MA2				PcP	PcP	00 39 57.7	-0.8
	comp=Z,8.3nm,0.7s,baz=163,slow=18,SNR=2.6						
MA2				LR	LR	00 42 12.9	
	comp=Z,10µm,19.3s,baz=108,slow=35						
MA2				ScP	ScP	00 43 30.8	-0.6
	comp=Z,2.7nm,0.3s,baz=123,slow=19,SNR=1.4						
	comp=Z,8.1nm,0.5s						
MA2	Magadan	18.60	308	P	Pn	00 35 32.6	+1.4
MA2	Magadan	18.60	308		P	00 35 30.3	-0.5
MA2	Magadan	18.60	308	ceP	Pn	00 35 31.6	+0.4
MA2				pmax	pmax		
	comp=Z,30nm,0.8s						
SKT	Skwentna	18.80	44		P	00 35 33.4	+0.4
SKT				IAmb	IAmb	00 35 36.4	
	comp=Z,957nm,1.1s						
SKT	Skwentna	18.80	44	P	Pn	00 35 34.9	+1.3
	baz=248,SNR=218						
RDOG	Red Dog Mine	18.86	20		Pn	00 35 35.0	+0.8
RDOG				IAmb	IAmb	00 35 42.9	
	comp=Z,462nm,1.1s						
RDOG	Red Dog Mine	18.86	20	P	Pn	00 35 36.2	+1.9
	baz=214,SNR=48						
E18K	Tukpahlearik C	18.88	23	P	Pn	00 35 36.9	+2.4
	baz=220						
PPLA	Purkeypile	18.89	41	IAmb	IAmb	00 35 47.1	
	comp=Z,1µm,1.2s						
PPLA	Purkeypile	18.89	41	P	Pn	00 35 36.4	+1.5
	baz=244,SNR=74						
SLKM	Skilak Lake	18.91	49		P	00 35 34.4	+0.2
G19K	Purcell Mounta	18.93	29	P	Pn	00 35 35.4	+0.2
G19K				IAmb	IAmb	00 35 42.9	
	comp=Z,974nm,1.3s						
G19K	Purcell Mounta	18.93	29	P	Pn	00 35 36.2	+1.1
	baz=229,SNR=399						
SUA	Susitna One	18.96	46	IAmb	IAmb	00 35 47.3	
	comp=Z,386nm,0.8s						
SUA	Susitna One	18.96	46	P	Pn	00 35 35.6	-0.1
	baz=250,SNR=75						
SEY	Seymchan	19.00	319	P	P	00 35 35.6	+0.5
	comp=Z,1.1nm,0.3s,baz=116,slow=11,SNR=34						
SEY				LR	LR	00 42 55.4	
	comp=Z,9µm,18.3s,baz=112,slow=37						
SEY				ScP	ScP	00 43 31.6	-0.6
	comp=Z,3.8nm,0.6s,baz=127,slow=4.3,SNR=3.5						
SEY				PKiKP	PKiKP	00 47 47.9	-0.9
	comp=Z,1.0nm,0.3s,baz=351,slow=2.0,SNR=3.7						
	comp=Z,11nm,0.7s						
SEY	Seymchan	19.00	319	⇑iP	Pn	00 35 35.8	-0.2
SEY				pmax	pmax		
	comp=Z,114nm,1.5s						
O22K	Cooper Landing	19.14	49	IAmb	IAmb	00 35 49.4	
	comp=Z,614nm,0.6s						
O22K	Cooper Landing	19.14	49	P	Pn	00 35 37.5	-0.1
	baz=254,SNR=25						
C17K	DeLong Mountai	19.15	19	P	Pn	00 35 39.3	+1.5

baz=213,SNR=483
SEW Seward 19.17 50 P **P** **00 35 36.4 -0.5**
SEW Seward 19.17 50 P **P** **00 35 36.9 -0.1**
baz=256,SNR=20
F19K Shaleruckik Mo 19.20 27 IAmb IAmb 00 35 45.6
comp=Z,354nm,0.9s
F19K Shaleruckik Mo 19.20 27 P **Pn** **00 35 39.0 +0.7**
baz=226
H20K Anotleneega Mo 19.23 32 P **Pn** **00 35 39.2 +0.5**
baz=234,SNR=251
CHUM Lake Minchumin 19.29 38 P **Pn** **00 35 40.5 +1.0**
baz=242
RC01 Rabbit Creek A 19.30 47 P **Pn** **00 35 39.8 +0.1**
baz=253,SNR=42
M22K Willow 19.34 45 P **Pn** **00 35 39.7 -0.4**
baz=250,SNR=21
CUT Chulitna 19.51 43 P **P** **00 35 41.2 +0.5**
baz=248,SNR=40
C18K Utukok River 19.71 20 IAmb IAmb 00 35 50.4
comp=Z,412nm,0.9s
C18K Utukok River 19.71 20 P **Pn** **00 35 45.3 +0.7**
baz=217,SNR=496
PMR Palmer 19.73 46 P **Pn** **00 35 44.5 -0.3**
PMR S **S** **00 39 22.8 -0.8**
PMR Palmer 19.73 46 S **S** **00 39 22.8 -0.8**
PMR Palmer 19.73 46 P **Pn** **00 35 44.9 +0.1**
baz=252,SNR=20
E19K Redstone River 19.79 26 P **Pn** **00 35 45.8 +0.4**
baz=226
IMAR Indian Mountai 19.89 32 **Pn** **00 35 46.2 -0.4**
TRF Thorofare Moun 19.91 41 P **P** **00 35 46.0 +0.7**
baz=246,SNR=116
BPAW Bear Paw Mtn. 19.91 38 IAmb IAmb 00 35 51.6
comp=Z,515nm,1.0s
BPAW Bear Paw Mtn. 19.91 38 P **Pn** **00 35 46.6 -0.3**
baz=243,SNR=246
F20K Avaraart Lake 19.94 28 P **Pn** **00 35 47.4 +0.3**
baz=229,SNR=362
KNK Knik Glacier 19.99 47 IAmb IAmb 00 35 54.7
comp=Z,437nm,1.1s
KNK Knik Glacier 19.99 47 P **P** **00 35 45.1 -0.9**
baz=253,SNR=28
H21K Melozitna Rive 20.03 33 IAMs_20 IAMs_20 00 44 20.5
comp=Z,11µm,18.0s
H21K Melozitna River 20.03 33 P Pn 00 35 48.4 +0.1
baz=237,SNR=203
I21K Tanana 20.07 35 IAmb IAmb 00 35 56.1
comp=Z,807nm,1.1s
I21K Tanana 20.07 35 P Pn 00 35 48.5 -0.2
baz=239,SNR=195
P23K Montague Islan 20.15 51 P **P** **00 35 47.9 +0.3**
P23K IAMs_20 IAMs_20 00 43 59.2
comp=Z,11µm,20.0s
P23K Montague Islan 20.15 51 P **P** **00 35 47.9 +0.3**
baz=258,SNR=8.2
SML Sawmill 20.16 46 IAmb IAmb 00 36 02.4
comp=Z,288nm,0.9s
SML Sawmill 20.16 46 P **P** **00 35 47.2 -0.7**
baz=252,SNR=53
G21K Allakaket 20.29 31 IAMs_20 IAMs_20 00 44 13.3
comp=Z,11µm,18.0s
G21K Allakaket 20.29 31 P Pn 00 35 51.0 -0.3
baz=234
D19K Kuna River 20.31 23 IAMs_20 IAMs_20 00 43 49.7
comp=Z,12µm,19.0s
D19K Kuna River 20.31 23 P Pn 00 35 51.3 -0.2
baz=222
WAT1 Susitna Watana 20.40 43 P **P** **00 35 50.1 -0.3**
baz=250
C19K Lookout Ridge 20.43 21 P Pn 00 35 52.2 -0.8
C19K IAmb IAmb 00 35 57.8
comp=Z,488nm,1.1s
C19K IAMs_20 IAMs_20 00 43 55.5
comp=Z,10µm,19.0s
C19K Lookout Ridge 20.43 21 P Pn 00 35 53.1 +0.1
baz=219,SNR=328
M23K Glacier View 20.43 46 P **P** **00 35 49.7 -1.1**
baz=253,SNR=54
MLY Manley 20.45 36 IAmb IAmb 00 35 57.3
comp=Z,759nm,1.5s
MLY Manley 20.45 36 P Pn 00 35 52.7 -0.5
baz=241,SNR=212
RND Reindeer 20.48 41 IAMs_20 IAMs_20 00 44 07.8
comp=Z,15µm,19.0s
GLI Glacier Island 20.49 49 IAMs_20 IAMs_20 00 45 07.2
comp=Z,12µm,20.0s
GLI Glacier Island 20.49 49 P **P** **00 35 49.2 -2.1**
baz=256,SNR=16
Q23K Middleton Isla 20.57 53 P **P** **00 35 51.3 -0.9**
baz=261
MCK McKinley 20.58 40 IAmb IAmb 00 36 07.6
comp=Z,444nm,1.1s
MCK IAMs_20 IAMs_20 00 44 10.3
comp=Z,12µm,19.0s
MCK McKinley 20.58 40 P **P** **00 35 52.1 -0.2**
baz=247,SNR=92
SCM Sheep Creek Mo 20.63 46 IAmb IAmb 00 35 57.8
comp=Z,543nm,0.8s
SCM Sheep Creek Mo 20.63 46 P **P** **00 35 52.0 -0.9**
baz=254,SNR=114
E20K Nigu River 20.63 25 P Pn 00 35 54.7 -0.7
baz=226
H22K Ishtalitna Cre 20.65 34 P **P** **00 35 54.4 +1.2**
H22K IAmb IAmb 00 36 04.6
comp=Z,512nm,1.1s
H22K Ishtalitna Cre 20.65 34 P Pn 00 35 55.2 -0.4
baz=238,SNR=132
HIN Hinchinbrook I 20.67 51 P Pn 00 35 55.0 -0.8
WAT6 Susitna Watana 20.67 44 P **P** **00 35 53.0 -0.4**
baz=251,SNR=255
F21K Alatna River 20.73 29 IAMs_20 IAMs_20 00 44 27.6
comp=Z,12µm,18.0s
F21K Alatna River 20.73 29 P Pn 00 35 55.9 -0.5
baz=232,SNR=104
D20K Etivluk River 20.85 24 IAMs_20 IAMs_20 00 44 25.9
comp=Z,12µm,19.0s
D20K Etivluk River 20.85 24 P Pn 00 35 57.0 -0.8
baz=224
NEA2 Nenana 20.88 38 IAmb IAmb 00 36 03.0
comp=Z,736nm,1.0s
NEA2 IAMs_20 IAMs_20 00 44 34.3
comp=Z,10µm,18.0s
NEA2 Nenana 20.88 38 P **P** **00 35 56.1 +0.6**
baz=244,SNR=296
DHY Denali Highway 20.99 43 IAMs_20 IAMs_20 00 44 24.0
comp=Z,12µm,19.0s
DHY Denali Highway 20.99 43 P **P** **00 35 56.8 -0.1**
baz=250,SNR=317
A19K Wainwright 21.01 18 P **P** **00 35 59.0 +2.1**
baz=214
I23K Minto, Yukon-K 21.02 37 IAmb IAmb 00 36 07.4
comp=Z,844nm,1.4s
I23K IAMs_20 IAMs_20 00 44 30.3
comp=Z,9µm,19.0s
I23K Minto, Yukon-K 21.02 37 P **P** **00 35 57.9 +0.9**
baz=243,SNR=77
EYAK Cordova Ski Ar 21.06 50 P **P** **00 35 58.9 +1.4**
EYAK Cordova Ski Ar 21.06 50 IAMs_20 IAMs_20 00 45 32.1
comp=Z,14µm,20.0s
EYAK Cordova Ski Ar 21.06 50 P **P** **00 35 59.1 +1.5**
baz=259,SNR=8.9
DIV Divide 21.17 49 IAmb IAmb 00 36 07.7
comp=Z,438nm,0.8s
DIV IAMs_20 IAMs_20 00 45 29.9
comp=Z,16µm,20.0s
KLU Klutina 21.19 48 IAmb IAmb 00 36 08.5
comp=Z,499nm,1.0s
KLU IAMs_20 IAMs_20 00 44 13.2
comp=Z,10µm,20.0s
KLU Klutina 21.19 48 P **P** **00 35 59.0 +0.1**
baz=256,SNR=53
WRH Wood River Hil 21.21 39 IAmb IAmb 00 36 10.6
comp=Z,257nm,1.0s
M24K Tolsona, Glenn 21.23 46 **P** **00 35 58.9 -0.5**
M24K Tolsona, Glenn 21.23 46 P **P** **00 35 59.5 +0.1**
baz=254,SNR=62
E21K Killik River 21.36 26 P **P** **00 36 01.6 +0.9**
E21K IAmb IAmb 00 36 09.6
comp=Z,237nm,0.9s
E21K Killik River 21.36 26 P **P** **00 36 01.4 +0.6**
baz=229,SNR=140
COLA College 21.47 38 P **P** **00 36 02.7 +0.8**
COLA College 21.47 38 P **P** **00 36 01.6 -0.3**
COLA IAmb IAmb 00 36 13.7
comp=Z,514nm,0.9s
COLA IAMs_20 IAMs_20 00 44 51.8
comp=Z,9µm,18.0s
COLA College 21.47 38 *i* P **P** **00 36 02.4 +0.5**
COLA pmax pmax
comp=Z,141nm,0.9s
COLA College 21.47 38 P **P** **00 36 02.4 +0.5**
baz=246
G23K Bananza Creek 21.55 33 P **P** **00 36 03.8 +1.0**
G23K IAmb IAmb 00 36 09.7
comp=Z,414nm,1.1s
G23K Bananza Creek 21.55 33 P **P** **00 36 04.4 +1.6**
baz=238,SNR=261
RAGM Ragged Mountai 21.56 51 P **P** **00 36 03.8 +0.9**
RAGM IAmb IAmb 00 36 12.0
comp=Z,317nm,0.9s
RAGM IAMs_20 IAMs_20 00 44 53.1
comp=Z,16µm,21.0s
KAIM Kayak Island 21.61 52 P **P** **00 36 02.5 -1.0**
KAIM IAmb IAmb 00 36 19.3
comp=Z,884nm,1.7s
KAIM IAMs_20 IAMs_20 00 45 09.7
comp=Z,13µm,18.0s
KAIM Kayak Island 21.61 52 P **P** **00 36 03.8 +0.4**
baz=262
C21K Knifeblade Rid 21.63 24 P **P** **00 36 05.0 +1.4**
baz=226,SNR=200
HDA Harding Lake 21.65 40 P **P** **00 36 02.3 -1.5**
HDA IAMs_20 IAMs_20 00 45 17.3
comp=Z,11µm,18.0s
HDA Harding Lake 21.65 40 P **P** **00 36 03.4 -0.4**
baz=248,SNR=52
B20K Meade River 21.68 21 IAmb IAmb 00 36 06.7
comp=Z,305nm,0.9s
B20K Meade River 21.68 21 P **P** **00 36 05.4 +1.4**
baz=221,SNR=243
BMRM Bremner River 21.70 49 P **P** **00 36 04.2 -0.2**
BMRM IAMs_20 IAMs_20 00 45 55.4
comp=Z,11µm,20.0s
BMRM Bremner River 21.70 49 P **P** **00 36 03.8 -0.6**
baz=259,SNR=52
POKR Poker Flat Res 21.74 38 P **P** **00 36 05.0 +0.3**
baz=246,SNR=139
HARP HAARP 21.76 46 P **P** **00 36 05.2 +0.1**
baz=255,SNR=51
COLD Coldfoot 21.77 31 **P** **00 36 05.5 +0.4**
COLD IAMs_20 IAMs_20 00 45 17.8
comp=Z,12µm,18.0s
COLD Coldfoot 21.77 31 P **P** **00 36 06.2 +1.1**
baz=237,SNR=151
PAX Paxson 21.78 44 IAmb IAmb 00 36 15.5
comp=Z,438nm,1.2s
PAX IAMs_20 IAMs_20 00 44 57.6
comp=Z,10µm,20.0s
PAX Paxson 21.78 44 P **P** **00 36 05.0 -0.4**
baz=253,SNR=114
E22K Anaktuvuk Pass 21.79 28 P **P** **00 36 05.7 +0.4**
E22K IAmb IAmb 00 36 12.6
comp=Z,291nm,1.0s
E22K IAMs_20 IAMs_20 00 45 23.0
comp=Z,12µm,18.0s
E22K Anaktuvuk Pass 21.79 28 P **P** **00 36 06.5 +1.1**
baz=233,SNR=228
IL31 21.81 39 IAmb IAmb 00 36 27.2
comp=Z,313nm,1.1s
ILAR Eielson Array 21.81 39 P **P** **00 36 03.8 -1.7**
comp=Z,27nm,0.7s,baz=241,slow=8.5,SNR=143
ILAR PcP **PcP** **00 40 04.0 -0.3**
comp=Z,5.1nm,0.8s,baz=260,slow=3.1,SNR=5.3
ILAR ScP **ScP** **00 43 36.7 -2.1**
comp=Z,3.2nm,0.7s,baz=285,slow=3.6,SNR=10.0
ILAR LR LR 00 45 32.4
comp=Z,7µm,18.8s,baz=231,slow=39
ILAR P3KPbc 01 09 45.4
comp=Z,2.0nm,0.9s,baz=48,slow=4.2,SNR=14
comp=Z,27nm,0.7s
ILAR Eielson Array 21.81 39 **P** **00 36 03.2 -2.3**
N25K Chitina, Valde 21.83 48 IAmb IAmb 00 36 13.3
comp=Z,252nm,0.8s
N25K IAMs_20 IAMs_20 00 44 23.6
comp=Z,9µm,20.0s
N25K Chitina, Valde 21.83 48 P **P** **00 36 07.4 +1.5**
baz=257,SNR=64
H24K Noodor Dome 21.88 36 P **P** **00 36 06.4 0.0**
H24K Noodor Dome 21.88 36 P **P** **00 36 07.2 +0.9**
baz=243,SNR=193
K24K Donnelly Dome 21.91 42 IAmb IAmb 00 36 09.7
comp=Z,262nm,0.9s
K24K Donnelly Dome 21.91 42 P **P** **00 36 06.2 -0.4**
baz=251,SNR=56
SUCK Suckling Hills 21.95 52 IAMs_20 IAMs_20 00 45 43.3
comp=Z,13µm,18.0s
B21K Ikpikpuk River 22.00 23 IAmb IAmb 00 36 25.0
comp=Z,606nm,1.2s
B21K IAMs_20 IAMs_20 00 45 04.5
comp=Z,12µm,20.0s
B21K Ikpikpuk River 22.00 23 P **P** **00 36 08.6 +1.1**
baz=226,SNR=315
D22K Ayikyak River 22.01 26 IAMs_20 IAMs_20 00 45 12.9
comp=Z,10µm,19.0s
D22K Ayikyak River 22.01 26 P **P** **00 36 09.1 +1.4**
baz=230,SNR=354
GLB Gilahina Butte 22.16 48 IAmb IAmb 00 36 12.4
comp=Z,371nm,0.8s
GLB IAMs_20 IAMs_20 00 45 58.8
comp=Z,11µm,22.0s
BGLC Bering Glacier 22.20 52 P **P** **00 36 08.1 -1.7**
KUR Kuril'sk 22.24 267 *c* *i* P **P** **00 36 08.5 -1.8**
KUR *e* PPP PPP 00 36 39.1
KUR *e* S **S** **00 40 12.9 -0.1**
KUR *e* SS **SnSn** **00 40 44.6 +3.6**
KUR pmax pmax
comp=Z,2µm,1.1s
KUR pmax pmax
comp=E,454nm,1.2s
KUR pmax pmax
comp=Z,3µm,4.9s
KUR MLR MLR
comp=Z,3µm,17.0s
RIDG Independent Ri 22.28 42 P **P** **00 36 09.9 -0.8**
baz=252,SNR=63
VRDI Verde Repeater 22.29 49 IAmb IAmb 00 36 19.3
comp=Z,301nm,1.0s
VRDI IAMs_20 IAMs_20 00 46 11.7
comp=Z,10µm,22.0s
J25K Salcha River, 22.36 40 P **P** **00 36 09.9 -1.6**
J25K IAMs_20 IAMs_20 00 45 47.9
comp=Z,10µm,18.0s
J25K Salcha River, 22.36 40 P **P** **00 36 09.1 -2.4**
baz=249,SNR=51
CRQM Cirque 22.37 50 IAmb IAmb 00 36 29.1
comp=Z,297nm,0.9s
CRQM IAMs_20 IAMs_20 00 46 06.2
comp=Z,9µm,19.0s
CRQE Cirque 22.39 50 P **P** **00 36 12.1 +0.1**
baz=261,SNR=26
E23K Chandalar 22.42 30 IAmb IAmb 00 36 24.7
comp=Z,302nm,1.1s
E23K IAMs_20 IAMs_20 00 45 41.8
comp=Z,11µm,18.0s
E23K Chandalar 22.42 30 P **P** **00 36 12.7 +0.6**
baz=236
G24K Hadweenzic Riv 22.43 34 P **P** **00 36 13.6 +1.5**
G24K IAmb IAmb 00 36 18.0
comp=Z,400nm,1.0s
G24K Hadweenzic Riv 22.43 34 P **P** **00 36 13.5 +1.3**
baz=242,SNR=363
TGL Tana Glacier 22.52 50 P **P** **00 36 13.9 +0.7**
TGL IAmb IAmb 00 36 26.9
comp=Z,254nm,1.1s
TGL IAMs_20 IAMs_20 00 46 09.1
comp=Z,9µm,20.0s
MCARA McCarthy VSAT 22.52 49 IAmb IAmb 00 36 33.2
comp=Z,288nm,0.8s
MCARA IAMs_20 IAMs_20 00 46 20.4
comp=Z,10µm,22.0s
MCARA McCarthy VSAT 22.52 49 P **P** **00 36 13.2 -0.1**
baz=260,SNR=32
MENT Mentasta 22.54 45 P **P** **00 36 13.7 +0.2**
MENT S **S** **00 40 17.0 -1.4**
MENT Mentasta 22.54 45 S **S** **00 40 17.0 -1.4**
MENT Mentasta 22.54 45 IAmb IAmb 00 36 26.8
comp=Z,251nm,1.0s
DOT Dot Lake 22.59 43 IAmb IAmb 00 36 15.9
comp=Z,388nm,1.0s
DOT IAMs_20 IAMs_20 00 45 25.3
comp=Z,16µm,20.0s
D23K Nanushuk River 22.63 27 IAmb IAmb 00 36 20.8
comp=Z,376nm,0.8s
D23K IAMs_20 IAMs_20 00 45 52.2
comp=Z,12µm,18.0s
D23K Nanushuk River 22.63 27 P **P** **00 36 15.1 +0.8**
baz=233,SNR=317
PRP Porcupine Dome 22.63 38 IAMs_20 IAMs_20 00 45 38.0
comp=Z,9µm,19.0s
PRP Porcupine Dome 22.63 38 P **P** **00 36 13.0 -1.5**
baz=247,SNR=103
SCRK Sand Creek 22.72 42 **P** **00 36 14.0 -1.4**
SCRK Sand Creek 22.72 42 P **P** **00 36 14.1 -1.3**
baz=253,SNR=65
L26K Log Cabin Wild 22.73 45 IAmb IAmb 00 36 28.5
comp=Z,474nm,1.1s
L26K IAMs_20 IAMs_20 00 45 35.7
comp=Z,8µm,19.0s
L26K Log Cabin Wild 22.73 45 P **P** **00 36 15.4 -0.1**
baz=256,SNR=45
M26K Nabesna, AK 22.74 46 P **P** **00 36 14.5 -1.1**
M26K IAMs_20 IAMs_20 00 45 39.2
comp=Z,9µm,19.0s
M26K Nabesna, AK 22.74 46 P **P** **00 36 14.8 -0.8**
baz=257,SNR=54
TOLK Toolik Lake Re 22.76 28 P **P** **00 36 16.5 +0.8**
baz=235,SNR=150
E24K Your Creek 22.78 30 P **P** **00 36 16.5 +0.6**
E24K IAMs_20 IAMs_20 00 46 01.9
comp=Z,11µm,18.0s
E24K Your Creek 22.78 30 P **P** **00 36 16.6 +0.6**
baz=238
B22K Teshekpuk Lake 22.80 23 IAmb IAmb 00 36 22.6
comp=Z,411nm,1.1s
B22K IAMs_20 IAMs_20 00 45 42.1
comp=Z,10µm,20.0s
B22K Teshekpuk Lake 22.80 23 P **P** **00 36 16.2 +0.3**
baz=226,SNR=213
A21K Barrow 22.80 19 P **P** **00 36 16.5 +0.5**
baz=220,SNR=283
MESA MESA 22.87 52 P **P** **00 36 17.5 +0.4**
MESA MESA 22.87 52 P **P** **00 36 17.3 +0.2**
baz=264
A22K Sinclair Lake 22.91 21 P **P** **00 36 17.8 +0.7**
baz=223,SNR=232
MIDW Midway 22.98 175 P **P** **00 36 17.5 -0.7**
MIDW IAmb IAmb 00 36 24.9
comp=Z,266nm,1.1s
GRNC Granite Creek 23.04 51 IAmb IAmb 00 36 20.7
comp=Z,214nm,0.9s
BARN Barnard Glacie 23.12 50 P **P** **00 36 18.9 -0.8**
BARN IAMs_20 IAMs_20 00 46 18.2
comp=Z,9µm,21.0s
FYU Fort Yukon 23.17 35 IAmb IAmb 00 36 27.2
comp=Z,428nm,1.1s
C23K Itkillik River 23.19 25 P **P** **00 36 20.2 +0.2**
C23K IAMs_20 IAMs_20 00 45 44.5
comp=Z,10µm,20.0s
C23K Itkillik River 23.19 25 P **P** **00 36 20.6 +0.7**
baz=231,SNR=279
M27K Edge Creek, AK 23.24 47 P **P** **00 36 20.9 +0.1**
M27K IAmb IAmb 00 36 23.5
comp=Z,273nm,0.8s
M27K IAMs_20 IAMs_20 00 46 05.1
comp=Z,13µm,22.0s
M27K Edge Creek, AK 23.24 47 P **P** **00 36 21.2 +0.4**
baz=259,SNR=83
CTG Chitna Glacier 23.27 50 P **P** **00 36 21.0 -0.1**
baz=262,SNR=27
CTGM Chitina Glacie 23.27 50 IAmb IAmb 00 36 37.7
comp=Z,204nm,0.9s
CTGM IAMs_20 IAMs_20 00 46 31.7
comp=Z,10µm,20.0s
D24K Happy Valley 23.28 28 IAMs_20 IAMs_20 00 46 23.2
comp=Z,13µm,18.0s
D24K Happy Valley 23.28 28 P **P** **00 36 21.5 +0.5**
baz=235
L27K Beaver Creek, 23.41 45 P **P** **00 36 22.4 0.0**
baz=257,SNR=101
LOGN Logan Glacier 23.41 51 IAmb IAmb 00 36 29.4
comp=Z,289nm,1.0s
LOGN IAMs_20 IAMs_20 00 46 46.5
comp=Z,8µm,19.0s
BCAR Beaver Creek A 23.43 45 **P** **00 36 22.4 -0.1**
TYV Tymovskoe 23.47 284 *e* P **P** **00 36 24.5 +1.6**
TYV *e* S **S** **00 40 37.8 +3.7**
TYV pmax pmax
comp=Z,148nm,0.8s
TYV pmax pmax
comp=Z,2µm,2.9s
TYV smax smax
comp=N,15nm,1.8s
TYV smax smax
comp=E,11nm,1.8s
TYV smax smax
comp=N,1µm,5.6s
TYV smax smax
comp=E,2µm,5.6s
F25K Christian Rive 23.48 33 P **P** **00 36 23.5 +0.6**
baz=243,SNR=162
I26K Coal Creek Min 23.48 39 P **P** **00 36 21.0 -2.0**
baz=251
C24K Franklin Bluff 23.64 27 IAMs_20 IAMs_20 00 46 35.9
comp=Z,9µm,19.0s
C24K Franklin Bluff 23.64 27 P **P** **00 36 24.9 +0.4**
baz=234
PCA Pinnacle 23.71 52 IAmb IAmb 00 36 28.0
comp=Z,270nm,0.9s
PINM Pinnacle 23.71 52 P **P** **00 36 24.6 -0.7**
baz=266,SNR=17
BVCY Beaver Creek 23.72 47 P **P** **00 36 25.0 -0.3**
baz=260,SNR=186
E25K Arctic Village 23.75 32 IAmb IAmb 00 36 28.1
comp=Z,316nm,1.0s
E25K Arctic Village 23.75 32 P **P** **00 36 26.2 +0.7**
baz=242,SNR=272
BMAR Burnt Mountain 23.77 34 **P** **00 36 26.1 +0.4**
YUK3 Moose Creek 23.80 48 P **P** **00 36 26.1 -0.2**
baz=262,SNR=134
O28M Mount Upton 23.80 51 P **P** **00 36 25.5 -0.9**
O28M Mount Upton 23.80 51 P **P** **00 36 25.3 -1.1**
baz=264,SNR=31
G26K Porcupine Rive 23.85 35 P **P** **00 36 27.1 +0.7**
baz=246,SNR=269
BCPM Bancas Point 24.01 53 P **P** **00 36 27.4 -0.6**
BCPM IAMs_20 IAMs_20 00 46 34.3
comp=Z,10µm,20.0s
F26K Sheenjek River 24.03 33 P **P** **00 36 28.9 +0.7**
baz=244,SNR=155
YUK8 Steele Glacier 24.07 50 P **P** **00 36 28.2 -0.6**
baz=263
YUK Yuzh-Kuril'sk 24.07 266 *d* *i* P **P** **00 36 28.6 0.0**
YUK *i* PPP PPP 00 37 06.2
YUK *i* S **S** **00 40 46.2 +2.4**
YUK *i* SS **SnSn** **00 41 26.7 +0.9**
YUK *e* SSS SSS 00 41 48.9
YUK pmax pmax
comp=Z,849nm,0.9s
YUK pmax pmax
comp=Z,718nm,2.1s
YUK MLR MLR
comp=Z,3µm,18.0s
YUK MLR MLR
comp=E,2µm,12.0s
D25K Kavik River 24.10 29 P **P** **00 36 29.2 +0.4**
baz=238,SNR=193
NKL Nikolayevsk 24.13 290 *e* P **P** **00 36 29.4 +0.3**
NKL *e* S **S** **00 40 47.6 +3.0**
NKL pmax pmax
comp=E,483nm,1.0s
NKL pmax pmax
comp=N,1µm,1.1s
NKL pmax pmax
comp=Z,3µm,1.1s
NKL smax smax
comp=E,960nm,3.9s
NKL smax smax
comp=N,927nm,6.7s
NKL MLR MLR
comp=E,4µm,15.0s
NKL MLR MLR
comp=N,18µm,20.0s
NKL MLR MLR
comp=Z,25µm,20.0s
I27K Kandik River 24.18 39 P **P** **00 36 28.6 -1.0**
I27K Kandik River 24.18 39 P **P** **00 36 28.0 -1.7**
baz=252,SNR=45
UGL Uglegorsk 24.37 280 ⇑ *i* P **P** **00 36 33.2 +1.8**
UGL *e* S **S** **00 40 54.0 +5.5**
UGL pmax pmax
comp=Z,3µm,5.8s

UGL pmax pmax
comp=Z,500nm,0.8s
UGL smax smax
comp=E,4μm,12.0s
UGL smax smax
comp=N,2μm,6.0s
UGL MLR MLR
comp=E,3μm,16.0s
UGL MLR MLR
comp=N,4μm,17.0s
UGL MLR MLR
comp=Z,4μm,17.0s
H27K Steamboat Moun 24.42 37 IAMs_20 IAMs_20 00 46 54.5
comp=Z,9μm,18.0s
H27K Steamboat Moun 24.42 37 P P **00 36 29.9 -1.9**
baz=251,SNR=25
O29M Mount Kennedy 24.56 52 P P **00 36 32.3 -0.9**
baz=267,SNR=12
YUK4 Talbot Arm 24.61 50 P P **00 36 33.4 -0.3**
baz=264
DAWY Dawson 24.70 43 P **00 36 34.1 -0.2**
DAWY IAmb IAmb 00 36 42.5
comp=Z,193nm,1.0s
DAWY Dawson 24.70 43 P P **00 36 34.3 0.0**
baz=258,SNR=119
YUK6 Outpost Mounta 24.71 51 P P **00 36 32.7 -1.9**
baz=266
YSS Yuzhno-Sakhali 24.72 275 P P **00 36 36.0 +1.4**
YSS Yuzhno-Sakhali 24.72 275 P **00 36 34.2 -0.3**
YSS IAmb IAmb 00 36 38.2
comp=Z,240nm,0.8s
YSS Yuzhno-Sakhali 24.72 275 *αe* P **00 36 36.2 +1.6**
YSS *e**SP **pwP** **00 36 53.0 +5.3**
YSS *e* 00 40 11.8
YSS *e*S **S** **00 40 53.0 -1.2**
YSS *e**SS sS 00 41 15.2 +6.8
YSS pmax pmax
comp=Z,2μm,6.7s
YSS pmax pmax
comp=N,700nm,5.9s
YSS pmax pmax
comp=E,1μm,7.8s
YSS pmax pmax
comp=Z,280nm,0.8s
YSS MLR MLR
comp=Z,5μm,20.0s
YSS MLR MLR
comp=N,3μm,18.0s
YSS MLR MLR
comp=E,3μm,19.0s
I28M Miner Creek 24.81 40 P P **00 36 34.8 -0.6**
I28M IAmb IAmb 00 36 40.0
comp=Z,279nm,1.1s
I28M IAMs_20 IAMs_20 00 47 33.9
comp=Z,7μm,18.0s
I28M Miner Creek 24.81 40 P P **00 36 34.8 -0.6**
baz=254,SNR=179
M29M Somme Creek 24.82 47 IAMs_20 IAMs_20 00 47 11.4
comp=Z,10μm,21.0s
M29M Somme Creek 24.82 47 P P **00 36 35.2 -0.3**
baz=262,SNR=126
C26K Camden Bay 24.85 28 P P **00 36 36.6 +1.1**
baz=239,SNR=340
C27K Jago River 25.07 29 IAMs_20 IAMs_20 00 47 37.6
comp=Z,11μm,18.0s
C27K Jago River 25.07 29 P P **00 36 38.0 +0.5**
baz=241,SNR=180
L29M L29M 25.07 45 IAMs_20 IAMs_20 00 47 59.8
comp=Z,8μm,22.0s
L29M L29M 25.07 45 P P **00 36 37.6 -0.1**
baz=261,SNR=58
E27K Coleen River 25.11 33 P P **00 36 38.7 +0.7**
baz=247,SNR=112
HYT Haines Junctio 25.12 51 P **00 36 37.5 -0.7**
HYT Haines Junctio 25.12 51 P P **00 36 38.1 -0.1**
baz=266,SNR=26
J29N Klondike Camp 25.28 42 P P **00 36 39.5 -0.1**
baz=258,SNR=20
P30M Million Dollar 25.36 53 P P **00 36 40.1 -0.2**
baz=268
N30M Aishikik Lake 25.36 49 IAMs_20 IAMs_20 00 47 37.6
comp=Z,9μm,20.0s
N30M Aishikik Lake 25.36 49 P P **00 36 39.9 -0.5**
baz=266
I29M Ogilvie Camp, 25.45 40 IAmb IAmb 00 36 49.6
comp=Z,225nm,1.1s
I29M Ogilvie Camp, 25.45 40 P P **00 36 40.4 -0.6**
baz=256,SNR=39
K29M Barlow Dome 25.46 44 IAMs_20 IAMs_20 00 48 08.2
comp=Z,12μm,20.0s
K29M Barlow Dome 25.46 44 P P **00 36 41.2 -0.2**
baz=260,SNR=144
F28M Old Crow 25.51 35 IAmb IAmb 00 36 45.5
comp=Z,193nm,0.8s
F28M Old Crow 25.51 35 P P **00 36 42.2 +0.6**
baz=250,SNR=217
M30M Minto, Yukon 25.61 47 IAMs_20 IAMs_20 00 47 45.1
comp=Z,9μm,21.0s
M30M Minto, Yukon 25.61 47 P P **00 36 42.5 0.0**
baz=264,SNR=42
H29M Whitestone 25.64 38 P P **00 36 42.1 -0.7**
baz=254
D27M Malcolm River 25.76 31 P P **00 36 43.9 0.0**
D27M IAmb IAmb 00 36 51.2
comp=Z,190nm,1.1s
D27M IAMs_20 IAMs_20 00 47 51.2
comp=Z,9μm,18.0s
D27M Malcolm River 25.76 31 P P **00 36 44.9 +1.0**
baz=245,SNR=94
O30N Mendenhall 25.81 51 P P **00 36 43.5 -0.9**
O30N IAMs_20 IAMs_20 00 48 48.5
comp=Z,9μm,18.0s
O30N Mendenhall 25.81 51 P P **00 36 43.8 -0.6**
baz=268,SNR=7.7
E28M Babbage River 25.98 33 P P **00 36 46.0 +0.2**
baz=248
N31M Braeburn, Yuko 25.99 50 P P **00 36 46.0 -0.1**
N31M IAMs_20 IAMs_20 00 47 56.2
comp=Z,8μm,19.0s
N31M Braeburn, Yuko 25.99 50 P P **00 36 45.9 -0.1**
baz=267
JKA Kamikawa-asahi 26.08 269 P **00 36 47.5 +0.6**
JKA IAmb IAmb 00 36 49.5
comp=Z,240nm,1.0s
ASAJ Asahikawa 26.08 269 LR LR 00 46 48.2
comp=Z,4μm,20.8s,baz=72,slow=36
ASAJ Asahikawa 26.08 269 P P **00 36 47.5 +0.5**
ASAJ pmax pmax
comp=Z,240nm,1.0s
J30M Hart River 26.10 42 P P **00 36 46.4 -0.8**
baz=260,SNR=35
MAYO Mayo, Yukon 26.14 45 IAmb IAmb 00 36 55.9
comp=Z,246nm,0.9s
MAYO Mayo, Yukon 26.14 45 P P **00 36 46.5 -0.9**
baz=262,SNR=15
SKAG Skagway 26.18 54 P P **00 36 47.2 -0.5**
SKAG Skagway 26.18 54 P P **00 36 46.3 -1.4**
baz=271
I30M Mount Dempster 26.21 41 IAMs_20 IAMs_20 00 47 35.9
comp=Z,8μm,20.0s
I30M Mount Dempster 26.21 41 P P **00 36 47.3 -0.7**
baz=259,SNR=85
EPYK Eagle Plains 26.32 38 P P **00 36 48.2 -0.8**
baz=256,SNR=34
SIT Sitka 26.34 60 P P **00 36 49.2 0.0**
baz=276
WHY Whitehorse 26.40 51 P **00 36 48.8 -1.0**
WHY Whitehorse 26.40 51 P P **00 36 49.8 0.0**
baz=269,SNR=9.1
BESE Bessie Mountai 26.46 56 P P **00 36 50.4 +0.1**
BESE IAMs_20 IAMs_20 00 47 30.8
comp=Z,8μm,21.0s
E29M Blow River 26.47 34 P **00 36 50.4 +0.1**
E29M Blow River 26.47 34 P P **00 36 50.8 +0.6**
baz=251,SNR=98
D28M Stokes Point 26.52 31 P P **00 36 51.5 +0.9**
baz=248,SNR=26
R32K Eaglecrest 26.66 57 P P **00 36 51.2 -0.9**
R32K Eaglecrest 26.66 57 P P **00 36 52.3 +0.2**
baz=274
G30M tAoh Zraii Nji 26.67 37 P P **00 36 51.6 -0.5**
G30M IAMs_20 IAMs_20 00 48 24.0
comp=Z,8μm,18.0s
G30M tAoh Zraii Nji 26.67 37 P P **00 36 51.4 -0.7**
baz=255,SNR=15
M31M Drury Creek, Y 26.69 48 P P **00 36 52.2 -0.2**
M31M Drury Creek, Y 26.69 48 P P **00 36 52.2 -0.2**
baz=267,SNR=16
S32K Killisnoo 26.70 59 P P **00 36 52.6 +0.2**
S32K Killisnoo 26.70 59 P P **00 36 53.0 +0.6**
baz=276
JIS Juneau Island 26.73 57 P P **00 36 53.7 +1.0**
JEM Erimo 26.81 265 P P **00 36 54.4 +0.9**
F30M Barrier River 27.00 36 P **00 36 54.8 -0.2**
F30M IAmb IAmb 00 37 16.1
comp=Z,324nm,1.7s
F30M IAMs_20 IAMs_20 00 48 26.0
comp=Z,9μm,18.0s
F30M Barrier River 27.00 36 P P **00 36 55.0 +0.1**
baz=255,SNR=28
P32M Atlin 27.00 54 P **00 36 55.2 +0.1**
P32M IAMs_20 IAMs_20 00 47 57.8
comp=Z,11μm,20.0s
P32M Atlin 27.00 54 P P **00 36 55.4 +0.3**
baz=272,SNR=11
H31M Peel River 27.15 40 IAMs_20 IAMs_20 00 48 26.2
comp=Z,6μm,18.0s
H31M Peel River 27.15 40 P P **00 36 55.9 -0.5**
baz=260,SNR=33
GRNR Gornyy 27.28 287 ⇑*i* P P **00 36 58.6 +0.9**
GRNR pmax pmax
comp=E,60nm,0.9s
GRNR pmax pmax
comp=N,20nm,1.0s
GRNR pmax pmax
comp=Z,130nm,1.0s
GRNR MLR MLR
comp=E,3μm,17.0s
GRNR MLR MLR
comp=N,2μm,15.0s
GRNR MLR MLR
comp=Z,3μm,16.0s
N32M Quiet Lake 27.29 50 IAMs_20 IAMs_20 00 48 33.5
comp=Z,10μm,21.0s
N32M Quiet Lake 27.29 50 P P **00 36 57.5 -0.2**
baz=270
G31M Satah River 27.40 38 IAMs_20 IAMs_20 00 48 47.4
comp=Z,6μm,19.0s
G31M Satah River 27.40 38 P P **00 36 58.1 -0.5**
baz=258
P33M Teslin, Yukon 27.43 52 P P **00 36 59.2 +0.2**
P33M IAMs_20 IAMs_20 00 48 28.2
comp=Z,12μm,21.0s
P33M Teslin, Yukon 27.43 52 P P **00 36 59.5 +0.4**
baz=272,SNR=30
F31M Tsiigehtchic 27.72 37 IAMs_20 IAMs_20 00 49 13.7
comp=Z,10μm,18.0s
F31M Tsiigehtchic 27.72 37 P P **00 37 01.1 -0.2**
baz=257,SNR=36
INK Inuvik 28.00 35 LR LR 00 49 19.0
comp=Z,5μm,18.3s,baz=250,slow=39
INK Inuvik 28.00 35 P P **00 37 04.0 +0.1**
baz=256,SNR=41
WRAK Wrangell Islan 28.06 60 IAMs_20 IAMs_20 00 47 29.7
comp=Z,7μm,21.0s
R33M Jennings River 28.41 54 P P **00 37 07.3 -0.6**
R33M IAMs_20 IAMs_20 00 48 49.2
comp=Z,7μm,20.0s
R33M Jennings River 28.41 54 P P **00 37 08.3 +0.5**
baz=275,SNR=6.6
S34M Telegraph Cree 28.49 57 P P **00 37 08.9 +0.5**
S34M Telegraph Cree 28.49 57 P P **00 37 08.6 +0.2**
baz=278
V35K Ketchikan 28.66 63 IAMs_20 IAMs_20 00 49 10.8
comp=Z,6μm,19.0s
H02S2 DAWSON INLET T 28.67 67 P P **00 37 10.4 +0.3**
SNR=2.7
MOBC Moresby Island 28.98 67 P P **00 37 13.0 +0.1**
MOBC IAmb IAmb 00 37 20.6
comp=Z,207nm,1.4s
DLBC Dease Lake 29.00 56 LR LR 00 48 47.2
comp=Z,4μm,21.1s,baz=267,slow=36
DLBC Dease Lake 29.00 56 P P **00 37 13.3 +0.3**
baz=277
T35M Bob Quinn 29.10 59 IAMs_20 IAMs_20 00 48 16.4
comp=Z,8μm,21.0s
T35M Bob Quinn 29.10 59 P P **00 37 13.9 0.0**
baz=280
YAK Yakutsk 29.10 312 PcP PcP **00 40 20.1 -0.7**
comp=Z,28nm,0.6s,baz=171,slow=4.6,SNR=2.9
YAK LR LR 00 50 35.1
comp=Z,7μm,18.1s,baz=94,slow=40
YAK Yakutsk 29.10 312 P **00 37 12.8 -1.0**
YAK IAmb IAmb 00 37 14.4
comp=Z,132nm,1.1s
YAK Yakutsk 29.10 312 IAMs_20 IAMs_20 00 48 25.8
comp=Z,6μm,19.0s
YAK Yakutsk 29.10 312 *c i* P P **00 37 13.0 -0.8**
YAK *e**PP **sP** **00 37 22.4 -3.2**
YAK *e*PPP PPP 00 38 12.0
YAK *e* 00 40 20.4
YAK *e*S **S** **00 42 00.7 -2.4**
YAK *e**SS **sS** **00 42 17.0 -0.5**
YAK *e*SSS SSS 00 43 39.4
YAK *e* 00 47 53.5
YAK pmax pmax
comp=Z,29nm,0.9s
YAK pmax pmax
comp=N,5.0nm,1.0s
YAK pmax pmax
comp=E,22nm,0.7s
YAK pmax pmax
comp=Z,111nm,2.1s
YAK pmax pmax
comp=N,57nm,1.6s
YAK pmax pmax
comp=E,76nm,1.6s
YAK smax smax
comp=N,116nm,1.3s
YAK smax smax
comp=E,191nm,1.9s
YAK MLR MLR
comp=Z,6μm,18.0s
YAK MLR MLR
comp=N,1μm,13.0s
YAK MLR MLR
comp=E,5μm,19.0s
TEY Ternei 29.42 275 ⇑*e* P **P** **00 37 17.2 +0.5**
TEY pmax pmax
comp=N,20nm,0.9s
TEY pmax pmax
comp=E,30nm,0.9s
TEY pmax pmax
comp=Z,110nm,0.9s
WTLY Watson Lake, Y 29.44 52 P P **00 37 17.0 +0.1**
WTLY Watson Lake, Y 29.44 52 P P **00 37 17.0 +0.1**
baz=275
TGTN Hyland Airport 29.59 49 P P **00 37 18.4 +0.2**
baz=273,SNR=9.3
RUBB Prince Rupert 29.66 64 P P **00 37 18.7 -0.1**
HG4B Hotspring 29.68 68 P P **00 37 18.7 -0.3**
HG4B IAmb IAmb 00 37 21.5
comp=Z,136nm,1.2s
TIXI Tiksi 30.53 331 ScP **ScP** **00 44 02.4 -1.7**
comp=Z,7.8nm,0.7s,baz=316,slow=19,SNR=6.0
TIXI LR LR 00 50 51.8
comp=Z,9μm,18.1s,baz=125,slow=38
TIXI Tiksi 30.53 331 P **00 37 25.9 -0.5**
TIXI Tiksi 30.53 331 IAMs_20 IAMs_20 00 50 45.8
comp=Z,7μm,18.0s
TIXI Tiksi 30.53 331 ‖*e* P **P** **00 37 25.8 -0.5**
TIXI pmax pmax
comp=Z,14nm,1.1s
KLR Kul'dur 30.64 286 PcP **PcP** **00 40 25.2 +0.2**
comp=Z,12nm,1.0s,baz=359,slow=7.8,SNR=3.0
KLR LR LR 00 51 29.3
comp=Z,5μm,18.1s,baz=70,slow=40
KLR Kul'dur 30.64 286 *c i* P **P** **00 37 28.0 +0.4**
KLR pmax pmax
comp=Z,307nm,0.8s
BBB Bella Bella 31.51 68 LR LR 00 50 14.8
comp=Z,3μm,18.4s,baz=290,slow=36
BBB Bella Bella 31.51 68 P P **00 37 34.3 -0.8**
BBB IAmb IAmb 00 38 02.7
comp=Z,176nm,1.5s
C36M Paulatuk 31.56 34 P P **00 37 35.5 +0.1**
baz=264,SNR=68
A36M Sachs Harbour 31.59 29 P **00 37 36.0 +0.4**
A36M IAmb IAmb 00 37 41.5
comp=Z,170nm,0.8s
A36M Sachs Harbour 31.59 29 P P **00 37 36.8 +1.2**
baz=258,SNR=136
WRGLY Wrigley 31.72 46 IAmb IAmb 00 37 38.6
comp=Z,141nm,0.9s
baz=274,SNR=69
WRGLY Wrigley 31.72 46 P P **00 37 37.5 +0.7**
ZEA Zeya 31.77 296 *e* P P **00 37 37.3 -0.1**
ZEA *e* 00 38 48.3
ZEA *e* 00 40 29.3
ZEA *e*S **S** **00 42 38.6 -6.5**
ZEA pmax pmax
comp=E,200nm,5.7s
ZEA pmax pmax
comp=Z,400nm,4.6s
ZEA pmax pmax
comp=E,70nm,0.9s
ZEA pmax pmax
comp=N,30nm,0.7s
ZEA pmax pmax
comp=Z,170nm,1.0s
ZEA pmax pmax
comp=Z,200nm,11.6s
ZEA smax smax
comp=N,500nm,5.3s
ZEA smax smax
comp=E,500nm,6.6s
ZEA MLR MLR
comp=E,2μm,20.0s
ZEA MLR MLR
comp=N,2μm,18.0s
ZEA MLR MLR
comp=Z,3μm,23.0s
KOTAN Kotaneelee Air 31.80 52 P P **00 37 38.2 +0.6**
baz=279,SNR=15
USRK Ussuriysk Ar. 32.71 277 P P **00 37 46.3 +0.6**
comp=Z,27nm,0.7s,baz=58,slow=8.1,SNR=26
USRK PcP **PcP** **00 40 30.7 0.0**
comp=Z,16nm,0.8s,baz=23,slow=1.5,SNR=7.1
comp=Z,27nm,0.7s
HEH HeiHe 32.86 290 *e* P P **00 37 45.3 -1.7**
HEH PcP **PcP** **00 40 31.7 +0.7**
HEH S S **00 42 54.4 -7.7**
HEH ScP **ScP** **00 44 12.7 +0.3**
HEH pmax pmax
comp=Z,100nm,1.3s
HEH L L
comp=Z,4μm,16.1s
HEH L L
comp=Z,5μm,16.3s
HEH L L
comp=Z,5μm,15.7s
H11N2 WAKE ISLAND Hy 33.07 203 T T 01 13 20.1
baz=16,slow=76,SNR=587
H11N3 WAKE ISLAND Hy 33.08 203 T T 01 13 16.2
baz=16,slow=76,SNR=504
H11N1 WAKE ISLAND Hy 33.09 203 T T 01 13 14.5
baz=16,slow=76,SNR=364
MJAR Matsushiro Arr 33.13 260 P P **00 37 50.6 +1.0**
comp=Z,22nm,0.7s,baz=52,slow=7.7,SNR=58
MJAR PcP **PcP** **00 40 32.5 +0.4**
comp=Z,10nm,0.8s,baz=79,slow=2.8,SNR=9.6
MJAR ScP **ScP** **00 44 11.2 -2.4**
comp=Z,1.1nm,0.4s,baz=259,slow=1.3,SNR=4.6
MJAR LR LR 00 49 15.8
comp=Z,5μm,21.7s,baz=56,slow=32
comp=Z,22nm,0.7s
MJAR Matsushiro Arr 33.13 260 P **00 37 49.7 +0.1**
MJAR PcP **00 40 33.0 +1.0**
MAJO Matsushiro 33.14 260 P P **00 37 50.7 +1.1**
MAJO Matsushiro 33.14 260 P **00 37 50.1 +0.6**
MAJO IAmb IAmb 00 37 51.9
comp=Z,85nm,0.9s
MAJO Matsushiro 33.14 260 ⇑*i* P P **00 37 50.0 +0.4**
MAJO pmax pmax
comp=Z,104nm,1.1s
MJB9 Matsu-Tunnel 33.14 260 P P **00 37 50.6 +1.0**
MJB9 IAmb IAmb 00 37 52.9
comp=Z,83nm,0.9s
VLA Vladivostok 33.32 275 ‖*e* P P **00 37 50.8 -0.3**
VLA pmax pmax
comp=Z,112nm,0.9s
CBB Campbell River 33.91 70 P P **00 37 57.3 +1.2**
CBB IAmb IAmb 00 37 59.8
comp=Z,153nm,1.4s
MDJ Mudanjiang 34.00 279 P P **00 37 56.9 -0.1**
MDJ Mudanjiang 34.00 279 IAMs_20 IAMs_20 00 50 35.8
comp=Z,6μm,22.0s
MDJ Mudanjiang 34.00 279 P P **00 37 56.9 -0.1**
MDJ PcP **PcP** **00 40 29.8 -4.5**
MDJ S S **00 43 22.0 +2.1**
MDJ pmax pmax
comp=Z,88nm,0.9s
MDJ L L
comp=Z,3μm,17.8s
MDJ L L
comp=Z,3μm,22.2s
MDJ L L
comp=Z,8μm,21.7s
PSTR Posyet 34.24 275 ‖*e* P P **00 37 59.7 +0.6**
JGF Kuroka 34.27 260 P P **00 38 00.5 +1.0**
JGF Kuroka 34.27 260 IAmb IAmb 00 38 02.0
comp=Z,99nm,0.9s
H11S1 WAKE ISLAND Hy 34.29 203 T T 01 14 45.4
baz=17
H11S2 WAKE ISLAND Hy 34.31 203 T T 01 14 54.3
baz=17,slow=74
H11S3 WAKE ISLAND Hy 34.31 203 T T 01 14 54.5
baz=17,slow=74
JSG Sagara 34.36 258 P P **00 38 00.6 +0.3**
JSG IAmb IAmb 00 38 47.6
comp=Z,151nm,0.9s
JHJ2 Mitsune 34.42 254 P P **00 38 02.4 +1.6**
JHJ2 Mitsune 34.42 254 P P **00 38 01.8 +1.1**
JHJ Hachijo jima 2 34.44 254 LR LR 00 49 51.7
comp=Z,2μm,21.2s,baz=64,slow=32
INU Inuyama 34.64 260 P P **00 38 03.9 +1.3**
INU Inuyama 34.64 260 P P **00 38 02.0 -0.6**
BNX BinXian 34.81 282 ⇑P P **00 38 03.5 -0.5**
BNX sP **pwP** **00 38 21.4 +5.5**
BNX pmax pmax
comp=Z,210nm,0.8s
BNX pmax pmax
comp=Z,740nm,9.4s
BNX L L
comp=Z,2μm,16.2s
BNX L L
comp=Z,3μm,17.7s
BNX L L
comp=Z,4μm,20.1s
CLRS Cowichan Lake 35.14 71 P P **00 38 08.4 +1.6**
CLRS IAmb IAmb 00 38 10.3
comp=Z,167nm,1.0s
C03A Quillayute Air 35.26 73 P P **00 38 08.6 +0.8**
JOHN Johnston Islan 35.30 163 P P **00 38 08.0 -0.5**
PGC Sidney 35.62 71 P P **00 38 12.1 +1.2**
YKAW3 Yellowknife Wh 35.82 46 IAmb IAmb 00 38 13.8
comp=Z,130nm,0.8s
YKA Yellowknife Ar 35.84 46 P P **00 38 12.8 +0.2**
comp=Z,73nm,0.8s,baz=287,slow=9.1,SNR=437
YKA PcP **PcP** **00 40 39.5 +0.2**
comp=Z,20nm,1.0s,baz=291,slow=3.5,SNR=12
YKA ScP **ScP** **00 44 21.2 -1.5**
comp=Z,5.4nm,0.8s,baz=299,slow=4.1,SNR=6.3
YKA LR LR 00 54 30.6
comp=Z,14μm,18.5s,baz=278,slow=39
YKA P3KPbc 01 08 52.5
comp=Z,0.4nm,0.8s,baz=92,slow=4.6,SNR=7.9
comp=Z,73nm,0.8s
YKA Yellowknife Ar 35.84 46 P **00 38 12.3 -0.3**
B04A Port Angeles 35.85 72 P P **00 38 14.3 +1.3**
B04A IAmb IAmb 00 38 16.6
comp=Z,147nm,1.1s
YKAW1 Yellowknife Wh 35.90 46 IAmb IAmb 00 38 14.4
comp=Z,107nm,0.8s
NLWA Neilton Lookou 35.93 74 IAmb IAmb 00 38 17.6
comp=Z,185nm,1.1s
A04D Lummi Island 36.03 71 P P **00 38 16.4 +1.9**
WISH Wishkah 36.12 74 P P **00 38 17.0 +1.8**
WISH IAmb IAmb 00 38 26.5
comp=Z,284nm,1.3s
RADR Rader Ridge 36.43 75 IAmb IAmb 00 38 58.6
comp=Z,160nm,1.1s
GNW Green Mountain 36.48 73 IAmb IAmb 00 38 22.0
comp=Z,172nm,0.9s
POHA Pohakuloa 36.69 140 IAMs_20 IAMs_20 00 50 59.0
comp=Z,6μm,19.0s
F03A Seaside 36.81 76 P P **00 38 22.4 +1.2**
F03A IAmb IAmb 00 38 24.9
comp=Z,224nm,0.9s
CN2 Changchun 36.98 281 ⇑P P **00 38 22.5 -0.1**

CN2 *epP* pwP 00 38 35.5 +0.9
CN2 *eS* **S** **00 44 02.9 -2.7**
CN2 pmax pmax
comp=Z,40nm,1.1s
CN2 pmax pmax
comp=Z,500nm,6.0s
CN2 L L
comp=Z,1µm,15.0s
CN2 L L
comp=Z,1µm,15.0s
CN2 L L
comp=Z,2µm,17.0s
RSD Rainshed 37.06 139 P **P** **00 38 24.6 +1.0**
F04D Rainier, OR 37.07 75 P **P** **00 38 24.8 +1.5**
D05A Enumclaw 37.16 73 P **P** **00 38 26.4 +2.3**
G03D McMinnville, O 37.34 76 P **P** **00 38 26.7 +1.0**
G03D IAmb IAmb 00 38 34.0
comp=Z,140nm,0.9s
JCJ Chichijima 37.42 245 LR LR 00 51 11.2
comp=Z,3µm,21.9s,baz=65,slow=32
JCJ Chichijima 37.42 245 P **P** **00 38 28.1 +1.6**
JCJ Chichijima 37.42 245 **P** **00 38 26.1 -0.4**
LON Longmire 37.48 73 P **P** **00 38 27.8 +0.9**
LON Longmire 37.48 73 P **P** **00 38 27.8 +0.9**
LON pmax pmax
comp=Z,70nm,0.8s
I02E Swisshome, OR 37.55 78 P **P** **00 38 28.7 +1.3**
I02E IAmb IAmb 00 38 31.1
comp=Z,128nm,1.0s
COR Corvallis 37.64 77 P **P** **00 38 30.3 +2.2**
COR IAmb IAmb 00 38 32.1
comp=Z,272nm,1.0s
COR Corvallis 37.64 77 P **P** **00 38 30.3 +2.2**
COR pmax pmax
comp=Z,273nm,1.0s
JMN Monobe 37.66 261 P **P** **00 38 29.6 +1.1**
JMN Monobe 37.66 261 **P** **00 38 27.7 -0.8**
HIA Hailar 37.79 292 P **P** **00 38 29.3 -0.2**
HIA Hailar 37.79 292 IAMs_20 IAMs_20 00 55 47.0
comp=Z,5µm,18.0s
HIA Hailar 37.79 292 IAmb IAmb 00 38 30.6
comp=Z,248nm,1.5s
G04A Mulino 37.83 76 P **P** **00 38 31.4 +1.6**
LTY Liberty 37.92 72 P **P** **00 38 31.5 +0.9**
LTY IAmb IAmb 00 38 33.4
comp=Z,131nm,1.2s
J01E Myrtle Point 37.99 80 P **P** **00 38 32.0 +0.8**
J01E IAmb IAmb 00 38 45.5
comp=Z,198nm,1.2s
H04D Lebanon 38.02 77 P **P** **00 38 32.9 +1.5**
H04D IAmb IAmb 00 38 35.0
comp=Z,155nm,0.9s
BUCK Buck Mountain 38.03 78 P **P** **00 38 32.2 +0.5**
BUCK IAmb IAmb 00 38 35.7
comp=Z,155nm,1.1s
I03D Drain, OR 38.07 79 P **P** **00 38 32.2 +0.4**
I03D IAmb IAmb 00 38 35.7
comp=Z,127nm,1.1s
B08A Colville Reser 38.20 70 **P** **00 38 33.0 +0.1**
B08A IAmb IAmb 00 38 35.6
comp=Z,183nm,1.0s
H04A Detroit Lake 38.27 77 P **P** **00 38 35.0 +1.5**
HOOD Mount Hood Mea 38.27 75 P **P** **00 38 34.2 +0.4**
HOOD IAmb IAmb 00 38 44.0
comp=Z,405nm,1.4s
KBO Bosley Butte 38.32 81 P **P** **00 38 36.1 +2.0**
KBO IAmb IAmb 00 38 38.0
comp=Z,320nm,1.3s
KBO IAMs_20 IAMs_20 00 51 49.8
comp=Z,4µm,19.0s
K02D Willamette Mer 38.41 80 P **P** **00 38 35.8 +1.0**
MXC Moxie City 38.47 73 P **P** **00 38 35.6 +0.4**
MXC IAmb IAmb 00 38 38.4
comp=Z,180nm,1.4s
EPH Ephrata 38.52 71 P **P** **00 38 36.4 +0.8**
EPH IAmb IAmb 00 38 38.0
comp=Z,255nm,1.1s
G05A Wamic 38.52 75 P **P** **00 38 37.6 +2.0**
G05A IAmb IAmb 00 38 56.4
comp=Z,234nm,1.1s
I04A Tendick Farm, 38.60 78 P **P** **00 38 38.1 +1.7**
I04A IAmb IAmb 00 38 50.3
comp=Z,236nm,0.9s
E07A Sunnyside 38.75 73 P **P** **00 38 39.1 +1.6**
L02F Cave Junction 38.78 81 P **P** **00 38 39.1 +1.3**
L02F IAmb IAmb 00 38 48.3
comp=Z,146nm,1.1s
WIFE Three Sisters- 38.82 77 P **P** **00 38 39.5 +1.1**
WIFE IAmb IAmb 00 38 47.7
comp=Z,222nm,1.0s
WAH2 Wahluke Slope 38.82 72 IAmb IAmb 00 38 40.9
comp=Z,388nm,1.4s
BBOR Butler Butte 38.91 79 P **P** **00 38 41.0 +1.8**
G06A Carlson Farm, 38.94 75 P **P** **00 38 40.4 +1.2**
I05D Terrebonne, OR 38.97 76 P **P** **00 38 41.1 +1.7**
I05D IAmb IAmb 00 38 48.5
comp=Z,194nm,1.0s
KSRS Korea Array 39.02 270 P **P** **00 38 41.5 +1.6**
comp=Z,55nm,0.8s,baz=59,slow=8.2,SNR=81
KSRS PcP **PcP** **00 40 49.9 +0.4**
comp=Z,9.0nm,0.9s,baz=40,slow=2.3,SNR=8.2
KSRS LR LR 00 53 44.7
comp=Z,1µm,21.6s,baz=60,slow=34
comp=Z,55nm,0.8s
HAWA Hanford 39.02 73 IAmb IAmb 00 38 42.8
comp=Z,227nm,1.1s
KS19 Wonju Array Si 39.02 270 P **P** **00 38 40.0 0.0**
KRPM Rodgers 39.03 82 P **P** **00 38 40.9 +0.9**
KRPM IAmb IAmb 00 38 55.1
comp=Z,390nm,1.6s
KRPM IAMs_20 IAMs_20 00 52 19.7
comp=Z,4µm,19.0s
F07A Phinny Hill Vi 39.03 74 P **P** **00 38 41.4 +1.5**
F07A IAmb IAmb 00 38 43.0
comp=Z,133nm,0.8s
KSAR Wonju Array Be 39.05 270 **P** **00 38 40.7 +0.6**
KSAR Wonju Array Be 39.05 270 P **P** **00 38 40.7 +0.6**
D08A Wollman Farm, 39.06 71 **P** **00 38 40.9 +0.7**
D08A IAmb IAmb 00 38 42.6
comp=Z,169nm,1.0s
J04A Umpqua Nationa 39.08 78 P **P** **00 38 42.5 +1.9**
J04A IAmb IAmb 00 39 08.0
comp=Z,210nm,0.7s
SNY Shenyang 39.20 279 ⇑P **P** **00 38 42.4 +1.1**
SNY PP **PnPn** **00 40 19.2 +5.1**
SNY S **S** **00 44 39.6 +0.4**
SNY pmax pmax
comp=Z,150nm,1.1s
SNY L L
comp=Z,3µm,19.4s
SNY L L
comp=Z,2µm,21.8s
SNY L L
comp=Z,5µm,22.5s
E08A Dider Farm, El 39.26 72 P **P** **00 38 42.4 +0.6**
E08A IAmb IAmb 00 38 44.5
comp=Z,165nm,1.1s
KHMM Horse Mountain 39.37 83 P **P** **00 38 43.6 +0.7**
KHMM IAMs_20 IAMs_20 00 54 07.7
comp=Z,4µm,18.0s
KMPM Mount Pierce 39.39 83 P **P** **00 38 43.8 +0.8**
EDM Edmonton 39.46 60 IAmb IAmb 00 38 50.4
comp=Z,110nm,0.7s
PINE Pine Mountain 39.50 77 **P** **00 38 45.6 +1.5**
PINE IAmb IAmb 00 38 47.8
comp=Z,180nm,1.2s
L04D Klamath Falls 39.51 80 **P** **00 38 45.8 +1.7**
L04D IAmb IAmb 00 38 54.1
comp=Z,221nm,1.0s
YBH Yreka Blue Hor 39.53 81 LR LR 00 54 41.5
comp=Z,200nm,18.3s,baz=286,slow=36
YBH Yreka Blue Hor 39.53 81 **P** **00 38 45.7 +1.5**
YBH IAmb IAmb 00 38 54.3
comp=Z,133nm,1.0s
YBH Yreka Blue Hor 39.53 81 P **P** **00 38 45.7 +1.5**
YBH pmax pmax
comp=Z,133nm,1.0s
YPT Yellepit 39.54 73 P **P** **00 38 45.3 +1.2**
YPT IAmb IAmb 00 38 46.9
comp=Z,145nm,1.0s
NEW Newport 39.54 69 LR LR 00 55 07.8
comp=Z,2µm,19.1s,baz=305,slow=36
NEW Newport 39.54 69 IAmb IAmb 00 38 46.4
comp=Z,215nm,1.1s
J05D Fort Rock, OR 39.59 78 IAmb IAmb 00 38 48.6
comp=Z,178nm,1.1s
K04D Chiloquin, OR 39.63 79 IAmb IAmb 00 39 28.6
comp=Z,188nm,0.9s
M02C Callahan 39.63 81 IAMs_20 IAMs_20 00 51 02.5
comp=Z,4µm,22.0s
KMRM Mail Ridge 39.76 83 **P** **00 38 45.8 -0.3**
KMRM IAMs_20 IAMs_20 00 52 24.3
comp=Z,4µm,20.0s
E09A Wood Farm, Sta 39.79 72 P **P** **00 38 46.7 +0.5**
E09A IAmb IAmb 00 38 48.8
comp=Z,234nm,1.1s
INCN Inchon 39.81 271 P **P** **00 38 47.6 +1.1**
INCN Inchon 39.81 271 **P** **00 38 46.8 +0.3**
INCN IAmb IAmb 00 38 48.9
comp=Z,207nm,0.9s
INCN Inchon 39.81 271 P **P** **00 38 46.8 +0.3**
INCN pmax pmax
comp=Z,207nm,0.9s
INCN MLR MLR
comp=Z,2µm,18.0s
INCN Inchon 39.81 271 P **P** **00 38 48.0 +1.4**
KHBM Hayfork Bally 39.81 83 **P** **00 38 47.3 +0.6**
JNU Nakatsue 39.93 263 LR LR 00 54 04.1
comp=Z,4µm,21.6s,baz=56,slow=34
N02D Trinity Center 39.96 82 **P** **00 38 48.7 +0.9**
TJN Taejon 40.04 269 P **P** **00 38 49.6 +1.3**
TJN Taejon 40.04 269 **P** **00 38 49.0 +0.7**
TJN Taejon 40.04 269 P **P** **00 38 49.0 +0.7**
TJN pmax pmax
comp=Z,573nm,0.8s
CIT Chita 40.10 298 *e*P **P** **00 38 49.4 +0.6**
CIT *e* 00 39 00.8
CIT *e* 00 39 06.8
CIT *e* 00 40 53.0
CIT *e* 00 44 43.4
CIT pmax pmax
comp=Z,522nm,1.1s
K05A Summer Lake 40.10 78 **P** **00 38 50.9 +1.8**
K05A IAmb IAmb 00 38 53.0
comp=Z,186nm,1.1s
KCPM Cahto Peak 40.15 84 P **P** **00 38 50.0 +0.6**
KCPM IAMs_20 IAMs_20 00 51 18.3
comp=Z,4µm,21.0s
M03C McCloud 40.15 81 IAmb IAmb 00 39 10.3
comp=Z,148nm,1.0s
RES Resolute Bay 40.21 24 LR LR 00 57 25.0
comp=Z,3µm,20.8s,baz=276,slow=39
I07A Izee 40.23 76 **P** **00 38 51.3 +1.3**
I07A IAmb IAmb 00 38 53.1
comp=Z,124nm,0.9s
O02D Mt. Diablo Mer 40.36 83 IAMs_20 IAMs_20 00 51 43.9
comp=Z,4µm,21.0s
F10A Beach Ranch, E 40.62 72 **P** **00 38 53.6 +0.4**
HATC Hat Creek Radi 40.82 81 P **P** **00 38 57.0 +2.1**
HATC IAmb IAmb 00 39 04.7
comp=Z,212nm,0.9s
HOPS Hopland Field 40.88 85 P **P** **00 38 56.6 +1.3**
HOPS IAMs_20 IAMs_20 00 52 49.6
comp=Z,5µm,20.0s
O03E Paynes Creek 40.91 82 P **P** **00 38 56.4 +0.8**
O03E IAmb IAmb 00 39 14.7
comp=Z,238nm,1.1s
BMO Blue Mountains 41.15 73 **P** **00 38 58.4 +0.8**
BMO Blue Mountains 41.15 73 P **P** **00 38 58.4 +0.8**
BMO pmax pmax
comp=Z,63nm,0.9s
BMO MLR MLR
comp=Z,2µm,19.0s
GDXM Geysers 41.16 85 P **P** **00 38 58.9 +1.2**
JSU Suzuyama 41.28 261 P **P** **00 39 00.3 +1.6**
JSU Suzuyama 41.28 261 **P** **00 38 58.9 +0.1**
JSU IAmb IAmb 00 39 01.2
comp=Z,139nm,1.1s
MNRC McLaughlin Min 41.34 84 P **P** **00 39 00.7 +1.5**
MNRC IAmb IAmb 00 39 13.7
comp=Z,208nm,1.6s
MNRC IAMs_20 IAMs_20 00 53 06.8
comp=Z,5µm,20.0s
MCCM Marconi Confer 41.51 85 IAMs_20 IAMs_20 00 55 14.2
comp=Z,4µm,18.0s
ORV Oroville 41.53 83 **P** **00 39 02.1 +1.4**
ORV Oroville 41.53 83 P **P** **00 39 02.1 +1.4**
ORV pmax pmax
comp=Z,36nm,1.0s
CVS Carmenet Viney 41.65 85 P **P** **00 39 02.5 +0.8**
CVS IAMs_20 IAMs_20 00 55 29.0
comp=Z,4µm,18.0s
WVOR Wild Horse Val 41.66 77 P **P** **00 39 03.2 +1.4**
WVOR IAmb IAmb 00 39 04.8
comp=Z,136nm,1.1s
WVOR Wild Horse Val 41.66 77 P **P** **00 39 03.2 +1.4**
WVOR pmax pmax
comp=Z,137nm,1.1s
FARB Farallon Islan 41.70 86 P **P** **00 39 01.3 -0.7**
FARB IAMs_20 IAMs_20 00 55 35.4
comp=Z,4µm,19.0s
PLID Pearl Lake 41.81 72 IAMs_20 IAMs_20 00 57 35.1
comp=Z,3µm,18.0s
BEKR Beckworth 42.06 82 P **P** **00 39 06.2 +1.1**
DL2 Dalian 42.10 277 P **P** **00 39 04.9 -0.4**
DL2 pP **pwP** **00 39 17.1 -0.1**
DL2 sP **sP** **00 39 20.5 +3.5**
DL2 PcP **PcP** **00 40 58.8 -0.6**
DL2 S **S** **00 45 19.6 -2.9**
DL2 pmax pmax
comp=Z,140nm,1.0s
DL2 pmax pmax
comp=Z,420nm,9.1s
DL2 L L
comp=Z,2µm,15.3s
DL2 L L
comp=Z,2µm,19.4s
DL2 L L
comp=Z,3µm,17.7s
MSO Missoula 42.13 69 IAmb IAmb 00 39 07.6
comp=Z,240nm,1.0s
AFDM Forest Hills D 42.22 83 **P** **00 39 07.4 +1.1**
JRSC Jasper Ridge 42.36 86 IAMs_20 IAMs_20 00 55 19.8
comp=Z,4µm,20.0s
MPK Martis Peak 42.60 82 P **P** **00 39 10.9 +1.2**
MPK IAmb IAmb 00 39 16.0
comp=Z,166nm,1.2s
XLT XiLinHaoTe 42.66 286 *e*P **P** **00 39 11.0 +1.1**
XLT pP pwP 00 39 25.9 +3.9
XLT sP sP 00 39 28.8 +6.9
XLT S **S** **00 45 26.7 -4.2**
XLT sS sS 00 45 47.1 +1.9
XLT SS SS 00 48 29.1 -12
XLT ScS **ScS** **00 49 05.6 -2.8**
XLT pmax pmax
comp=Z,230nm,1.0s
XLT pmax pmax
comp=Z,810nm,10.2s
XLT L L
comp=Z,240nm,19.1s
XLT L L
comp=Z,2µm,19.6s
XLT L L
comp=Z,3µm,20.8s
WELL Weller Preserv 42.68 84 IAMs_20 IAMs_20 00 54 12.3
comp=Z,3µm,20.0s
PAHR Pah Rah Range 42.76 81 **P** **00 39 11.6 +0.8**
PAHR IAmb IAmb 00 39 20.7
comp=Z,196nm,1.2s
MHC Mount Hamilton 42.77 85 P **P** **00 39 11.9 +1.0**
MHC IAMs_20 IAMs_20 00 56 17.7
comp=Z,5µm,19.0s
MHC Mount Hamilton 42.77 85 P **P** **00 39 11.9 +1.0**
MHC pmax pmax
comp=Z,136nm,1.5s
MHC MLR MLR
comp=Z,4µm,19.0s
PNTR Pine Nut 42.99 82 **P** **00 39 13.1 +0.3**
PNTR IAmb IAmb 00 39 31.8
comp=Z,169nm,0.8s
FORD Fort Ord Natur 43.09 86 IAMs_20 IAMs_20 00 55 58.2
comp=Z,3µm,19.0s
CMB Columbia Colle 43.13 84 **P** **00 39 13.8 0.0**
CMB IAMs_20 IAMs_20 00 53 52.3
comp=Z,3µm,20.0s
CMB Columbia Colle 43.13 84 P **P** **00 39 13.8 0.0**
CMB pmax pmax
comp=Z,60nm,1.2s
BLKN Baker Lake 43.21 39 **P** **00 39 13.3 -0.7**
SAO San Andreas Ge 43.25 86 P **P** **00 39 15.0 +0.3**
SAO IAMs_20 IAMs_20 00 56 46.5
comp=Z,3µm,18.0s
SAO San Andreas Ge 43.25 86 P **P** **00 39 15.0 +0.3**
SAO pmax pmax
comp=Z,50nm,1.1s
SAO MLR MLR
comp=Z,3µm,18.0s
HRY Holter Researc 43.43 68 P **P** **00 39 14.4 -1.7**
HLID Hailey 43.60 73 **P** **00 39 17.8 +0.2**
HLID IAmb IAmb 00 39 20.3
comp=Z,101nm,0.9s
BBGB Big Mountain B 43.62 86 **P** **00 39 18.4 +0.6**
BBGB IAmb IAmb 00 39 36.0
comp=Z,177nm,1.2s
DLMT Dillon 43.70 70 IAmb IAmb 00 39 20.4
comp=Z,134nm,1.1s
HULI Fort Hunter Li 43.85 87 P **P** **00 39 20.6 +1.1**
HULI IAmb IAmb 00 39 22.6
comp=Z,149nm,1.1s
HULI IAMs_20 IAMs_20 00 59 47.3
comp=Z,3µm,18.0s
EGMT Eagleton 43.94 65 IAmb IAmb 00 39 22.9
comp=Z,178nm,0.8s
PMPB Monarch Peak 44.00 86 P **P** **00 39 21.5 +0.8**
LHV Little Huntoon 44.18 82 P **P** **00 39 23.9 +1.8**
LHV IAmb IAmb 00 39 32.8
comp=Z,154nm,1.3s
NVAR Mina Array Bea 44.20 82 P **P** **00 39 24.1 +1.6**
comp=Z,38nm,0.8s,baz=291,slow=7.8,SNR=92
NVAR ScP **ScP** **00 44 54.0 -2.0**
comp=Z,0.9nm,0.8s,baz=329,slow=5.2,SNR=2.1
NVAR LR LR 00 55 55.6
comp=Z,2µm,20.0s,baz=290,slow=33
comp=Z,38nm,0.8s
MDPB Devils Postpil 44.20 83 IAmb IAmb 00 39 31.4
comp=Z,118nm,1.0s
NRIK Noril'sk 44.29 329 P **P** **00 39 22.8 +0.2**
comp=Z,6.0nm,0.9s,baz=80,slow=7.6,SNR=15
NRIK PcP **PcP** **00 41 06.7 +0.4**
comp=Z,31nm,0.9s,baz=72,slow=3.7,SNR=7.9
NRIK Noril'sk 44.29 329 *c iP* **P** **00 39 22.2 -0.4**
NRIK pmax pmax
comp=Z,64nm,1.4s
PKD Bear Valley Ra 44.33 86 **P** **00 39 24.1 +0.7**
Q09A Carvers 44.65 81 P **P** **00 39 27.5 +1.4**
ELK Elko 44.71 77 LR LR 00 58 04.9
comp=Z,2µm,18.5s,baz=312,slow=36
ELK Elko 44.71 77 IAMs_20 IAMs_20 00 59 28.9
comp=Z,3µm,18.0s
FFC Flin Flon 44.78 54 **P** **00 39 25.8 -0.9**
FFC Flin Flon 44.78 54 IAMs_20 IAMs_20 00 59 31.7
comp=Z,5µm,19.0s
FFC Flin Flon 44.78 54 P **P** **00 39 25.8 -0.9**
FFC pmax pmax
comp=Z,63nm,1.0s
FFC MLR MLR
comp=Z,5µm,19.0s
BJI2 Beijing 44.83 282 P **P** **00 39 27.6 +0.3**
BJI2 pP **pwP** **00 39 38.1 -1.2**
BJI2 PcP **PcP** **00 41 09.3 +0.7**
BJI2 PP **PP** **00 41 13.0 +0.9**
BJI2 S **S** **00 46 02.0 -0.4**
BJI2 sS sS 00 46 18.5 +1.7
BJI2 pmax pmax
comp=Z,54nm,0.9s
BJI2 pmax pmax
comp=Z,330nm,7.3s
BJI2 L L
comp=Z,2µm,18.9s
BJI2 L L
comp=Z,720nm,20.0s
BJI2 L L
comp=Z,2µm,21.0s
BJT Baijiatuau 44.83 282 P **P** **00 39 28.1 +0.8**
BJT Baijiatuau 44.83 282 IAMs_20 IAMs_20 00 57 51.5
comp=Z,4µm,21.0s
BJT Baijiatuau 44.83 282 IAmb IAmb 00 39 29.3
comp=Z,90nm,0.9s
IRK Irkutsk 45.04 303 *e*P **P** **00 39 27.9 -0.9**
IRK *e* 00 46 01.6
IRK pmax pmax
comp=N,150nm,1.6s
DSP Deep Springs 45.05 83 **P** **00 39 30.6 +1.5**
DSP IAmb IAmb 00 39 39.8
comp=Z,100nm,1.1s
TIN Tinemaha, Big 45.09 83 P **P** **00 39 31.0 +1.5**
TIN IAMs_20 IAMs_20 00 57 16.1
comp=Z,3µm,19.0s
TIN Tinemaha, Big 45.09 83 P **P** **00 39 31.0 +1.5**
TIN pmax pmax
comp=Z,216nm,1.0s
YNM Yellowstone No 45.17 70 P **P** **00 39 31.1 +0.9**
YFT Old Faithful 45.24 70 P **P** **00 39 32.3 +1.5**
YPP Pitchstone Pla 45.36 70 P **P** **00 39 32.7 +0.8**
YPP IAmb IAmb 00 39 45.1
comp=Z,133nm,1.1s
POIN Pond Inlet 45.37 24 **P** **00 39 31.3 +0.2**
TULEG Thule 45.39 18 IAmb IAmb 00 39 49.1
comp=Z,123nm,1.4s
TULEG Thule 45.39 18 *i* **P** **00 39 31.5 +0.3**
TULEG IAmb IAmb 00 39 31.7
comp=Z,39nm,0.9s
YNE Yellowstone No 45.42 69 P **P** **00 39 32.9 +0.6**
H17A Grant Village 45.43 70 P **P** **00 39 34.4 +2.1**
YMP Mirror Lake Pl 45.48 70 IAmb IAmb 00 39 35.3
comp=Z,205nm,1.0s
HVU Hansel Valley 45.61 74 IAmb IAmb 00 39 37.7
comp=Z,90nm,0.8s
TLY Talaya 45.66 302 LR LR 01 00 08.7
comp=Z,6µm,19.1s,baz=46,slow=38
TLY Talaya 45.66 302 P **P** **00 39 34.4 +0.7**
TLY IAmb IAmb 00 39 35.8
comp=Z,67nm,0.7s
TLY Talaya 45.66 302 ⇓ *iP* **P** **00 39 33.0 -0.8**
TLY pmax pmax
comp=Z,90nm,0.9s
TLY Talaya 45.66 302 P **P** **00 39 35.0 +1.2**
RLMT Red Lodge 45.79 69 IAMs_20 IAMs_20 01 00 30.2
comp=Z,3µm,18.0s
ULN Ulaanbaatar 45.80 296 **P** **00 39 35.5 +0.4**
ULN IAmb IAmb 00 39 37.2
comp=Z,73nm,0.8s
ULN Ulaanbaatar 45.80 296 *c iP* **P** **00 39 35.4 +0.3**
ULN pmax pmax
comp=Z,160nm,1.6s
ULN Ulaanbaatar 45.80 296 P **P** **00 39 36.5 +1.4**
ULN S **S** **00 46 18.4 +1.8**
ULN Ulaanbaatar 45.80 296 P **P** **00 39 35.8 +0.7**
ISA Isabella, Lake 45.81 85 IAMs_20 IAMs_20 00 58 20.3
comp=Z,3µm,18.0s
SNOW Snow King Moun 45.85 71 P **P** **00 39 36.6 +0.9**
LOHW Long Hollow 45.86 71 IAmb IAmb 00 39 38.3
comp=Z,101nm,1.2s
JOW Kunigami 45.92 258 LR LR 00 59 24.6
comp=Z,928nm,18.9s,baz=78,slow=37
JOW Kunigami 45.92 258 P **P** **00 39 36.5 +0.4**
JOW IAmb IAmb 00 39 37.9
comp=Z,84nm,1.0s
ILON Igloolik, Nuna 45.94 29 **P** **00 39 35.8 +0.1**
ILON IAmb IAmb 00 39 37.0
comp=Z,117nm,1.0s
BGU Big Grassy Mou 45.96 76 IAmb IAmb 00 39 46.5
comp=Z,170nm,1.3s
AHID Auburn Hatcher 46.05 72 IAmb IAmb 00 39 42.3
comp=Z,129nm,1.0s
AHID IAMs_20 IAMs_20 01 00 13.1
comp=Z,3µm,18.0s
SPUT South Promonto 46.08 75 P **P** **00 39 38.9 +1.4**
SPUT IAmb IAmb 00 39 43.7
comp=Z,88nm,1.0s
SONM Songino Array 46.19 296 P **P** **00 39 39.3 +1.1**
comp=Z,40nm,0.7s,baz=58,slow=9.5,SNR=142
SONM PcP **PcP** **00 41 14.2 +0.8**
comp=Z,23nm,0.8s,baz=75,slow=3.2,SNR=5.6
SONM ScP **ScP** **00 45 02.5 -1.6**
comp=Z,4.4nm,0.8s,baz=49,slow=3.7,SNR=5.6
SONM LR LR 01 00 26.3
comp=Z,11µm,18.6s,baz=60,slow=38
comp=Z,40nm,0.7s
SONM Songino Array 46.19 296 P **P** **00 39 38.5 +0.4**
SONM IAmb IAmb 00 39 40.5
comp=Z,317nm,1.7s
SONM Songino Array 46.19 296 P **P** **00 39 38.5 +0.4**
SONM 00 41 14.2
SONM pmax pmax
comp=Z,317nm,1.7s

S11A Rachel 46.27 81 P **P** **00 39 39.9 +1.0**
FURC Furnace Creek, 46.31 83 P **P** **00 39 40.5 +1.5**
OSI Osito Audit: C 46.33 86 P **P** **00 39 40.2 +1.0**
OSI IAmb IAmb 00 39 41.8
comp=Z,73nm,0.9s
TPNV Topopah Spring 46.39 82 IAMs_20 IAMs_20 00 56 17.4
comp=Z,4µm,20.0s
LRMC Laurel Mtn Rad 46.42 85 P **P** **00 39 41.1 +1.0**
LRMC IAMs_20 IAMs_20 00 58 41.3
comp=Z,3µm,18.0s
HWUT Hardware Ranch 46.44 74 IAmb IAmb 00 40 00.3
comp=Z,79nm,1.1s
TPO Tropico Hills 46.47 86 **P** **00 39 42.0 +1.6**
TPO IAmb IAmb 00 39 50.0
comp=Z,98nm,1.3s
ZAK Zakamensk 46.54 301 *e*P **P** **00 39 40.7 -0.1**
ZAK pmax pmax
comp=Z,158nm,1.7s
ZAK pmax pmax
comp=Z,8.0nm,1.7s
FCC Fort Churchill 46.56 46 IAmb IAmb 00 39 41.4
comp=Z,67nm,0.9s
TIA Tai'an 46.58 277 P **P** **00 39 41.7 +0.6**
TIA S **S** **00 46 26.7 -0.9**
TIA pmax pmax
comp=Z,170nm,0.9s
TIA pmax pmax
comp=Z,800nm,9.6s
TIA L L
comp=Z,1µm,17.5s
TIA L L
comp=Z,2µm,17.9s
TIA L L
comp=Z,3µm,17.2s
CCCA Chr Cany lake 46.59 84 P **P** **00 39 42.5 +1.1**
GWY Greenwater Val 46.61 83 IAmb IAmb 00 39 51.9
comp=Z,101nm,1.1s
LAO LASA Array 46.68 65 IAmb IAmb 00 39 44.0
comp=Z,120nm,0.7s
LAO IAMs_20 IAMs_20 00 58 58.6
comp=Z,3µm,19.0s
TCUT Toone Canyon 46.83 74 P **P** **00 39 44.0 +0.6**
TCUT IAmb IAmb 00 40 08.9
comp=Z,92nm,0.9s
CTU Camp Tracy 46.88 75 IAmb IAmb 00 39 46.1
comp=Z,90nm,1.1s
PSUT Pine Spring 46.90 79 IAmb IAmb 00 39 52.2
comp=Z,134nm,1.0s
PDAR Pinedale Array 46.97 71 P **P** **00 39 45.0 +0.6**
comp=Z,206nm,1.0s,baz=307,slow=3.9,SNR=845
PDAR ScP **ScP** **00 45 06.6 -0.9**
comp=Z,1.5nm,0.9s,baz=351,slow=3.3,SNR=2.7
PDAR LR LR 00 59 17.5
comp=Z,1µm,19.4s,baz=304,slow=36
comp=Z,206nm,1.0s
PDAR Pinedale Array 46.97 71 P **P** **00 39 44.0 -0.4**
MWC Mount Wilson 47.00 86 IAmb IAmb 00 39 47.0
comp=Z,198nm,1.4s
SHOC Shoshone, Teco 47.04 83 IAmb IAmb 00 39 52.9
comp=Z,162nm,1.0s
SHOC IAMs_20 IAMs_20 00 58 53.5
comp=Z,3µm,18.0s
MOY Mondy 47.07 303 *e*P **P** **00 39 45.4 +0.5**
MOY pmax pmax
comp=Z,157nm,1.5s
GUMO Guam 47.09 230 LR LR 00 57 48.2
comp=Z,2µm,20.4s,baz=36,slow=34
HHC Hu-ho-hao-te 47.15 285⇑ *i*P **P** **00 39 46.6 +0.9**
HHC PP **PP** **00 41 37.6 +1.0**
HHC S **S** **00 46 32.9 -3.1**
HHC SS **SS** **00 49 53.7 -9.2**
HHC pmax pmax
comp=Z,92nm,1.2s
HHC pmax pmax
comp=Z,540nm,6.7s
HHC L L
comp=Z,3µm,17.1s
HHC L L
comp=Z,3µm,17.1s
HHC L L
comp=Z,3µm,18.9s
NOR Nord 47.18 3 *i*P **P** **00 39 45.7 +0.4**
NOR IAmb IAmb 00 39 47.4
comp=Z,26nm,0.9s
HNS HongShan 47.33 280⇑ P **P** **00 39 48.1 +1.1**
HNS PcP **PcP** **00 41 17.9 +0.5**
HNS S **S** **00 46 41.2 +2.8**
HNS pmax pmax
comp=Z,140nm,1.0s
HNS pmax pmax
comp=Z,940nm,7.5s
HNS L L
comp=Z,2µm,19.2s
HNS L L
comp=Z,2µm,18.6s
HNS L L
comp=Z,4µm,22.4s
MPU Maple Canyon 47.35 76 IAmb IAmb 00 40 07.1
comp=Z,54nm,0.8s
SSE Sheshan 47.37 269 P **P** **00 39 48.3 +1.0**
SSE pP **pP** **00 39 55.0 -0.9**
SSE sP **pwP** **00 40 00.7 +0.1**
SSE S **S** **00 46 42.0 +3.0**
SSE sS sS 00 47 01.2 +8.2
SSE pmax pmax
comp=Z,58nm,1.0s
SSE pmax pmax
comp=Z,450nm,5.1s
BSUT Blindstream Ca 47.57 75 IAmb IAmb 00 40 11.4
comp=Z,131nm,1.1s
TCRU Three Creeks R 47.72 78 P **P** **00 39 51.4 +1.1**
TCRU IAmb IAmb 00 40 02.2
comp=Z,127nm,1.1s
MTPC Mountain Pass 47.75 83 IAmb IAmb 00 40 00.4
comp=Z,61nm,0.9s
PATS Pohnpei 47.77 210 IAMs_20 IAMs_20 00 58 14.4
comp=Z,4µm,20.0s
ELS Elsinore Mount 47.77 86 IAmb IAmb 00 39 52.9
comp=Z,126nm,1.5s
NEEM North Greenlan 47.80 13 *i*P **P** **00 39 50.8 +0.3**
NEEM IAmb IAmb 00 39 51.6
comp=Z,213nm,0.8s
CCUT Cedar City 47.81 79 IAmb IAmb 00 40 07.8
comp=Z,314nm,1.9s
SZCU Shurtz Canyon 47.95 79 P **P** **00 39 52.5 +0.4**
V12A Nelson 48.04 82 IAmb IAmb 00 40 02.5
comp=Z,160nm,1.5s
NJ2 Nanjing 48.20 271⇑ *i*P **P** **00 39 53.9 +0.2**
NJ2 S **S** **00 46 54.2 +3.5**
NJ2 pmax pmax
comp=Z,60nm,1.0s
NJ2 pmax pmax
comp=Z,760nm,6.3s
NJ2 L L
comp=Z,2µm,18.9s
NJ2 L L
comp=Z,2µm,20.8s
NJ2 L L
comp=Z,3µm,23.5s
LCMT Little Creek M 48.22 80 IAmb IAmb 00 40 03.8
comp=Z,118nm,1.1s
MTPU Mount Pierson 48.23 78 IAmb IAmb 00 39 57.4
comp=Z,91nm,1.0s
P17A Butcher Ranch, 48.23 76 P **P** **00 39 54.4 +0.3**
P17A IAmb IAmb 00 40 13.9
comp=Z,86nm,0.9s
BTO2 Baotou 48.24 286 *e*P **P** **00 39 55.0 +0.9**
BTO2 pP pwP 00 40 10.8 +3.9
BTO2 PP **PP** **00 41 47.4 +1.0**
BTO2 S **S** **00 46 53.3 +1.9**
BTO2 pmax pmax
comp=Z,330nm,1.0s
BTO2 pmax pmax
comp=Z,2µm,4.5s
BTO2 L L
comp=Z,4µm,17.1s
BTO2 L L
comp=Z,6µm,19.0s
BTO2 L L
comp=Z,7µm,21.3s
RDMU Red Mountain 48.27 74 P **P** **00 39 55.2 +0.7**
Q16A Castle Valley 48.31 77 **P** **00 39 55.5 +0.7**
Q16A IAmb IAmb 00 40 14.8
comp=Z,90nm,0.9s
DNR Dunn Ranch,Anz 48.32 86 P **P** **00 39 55.6 +0.7**
PFO Pinyon Flats O 48.40 86 LR LR 00 56 54.7
comp=Z,2µm,21.3s,baz=294,slow=32
PFO Pinyon Flats O 48.40 86 IAMs_20 IAMs_20 00 57 23.8
comp=Z,3µm,18.0s
PFO Pinyon Flats O 48.40 86 *c*P **P** **00 39 56.0 +0.5**
PFO pmax pmax
comp=Z,100nm,1.2s
DANC Danby, Needles 48.41 84 P **P** **00 39 55.9 +0.5**
DANC IAmb IAmb 00 40 09.0
comp=Z,89nm,0.8s
DANC IAMs_20 IAMs_20 01 00 05.8
comp=Z,3µm,18.0s
P18A Preston Nutter 48.44 75 P **P** **00 39 56.6 +0.7**
P18A IAmb IAmb 00 40 13.1
comp=Z,161nm,1.1s
CPE Camp Elliot 48.47 87 P **P** **00 39 56.6 +0.7**
CPE IAmb IAmb 00 39 58.2
comp=Z,86nm,0.9s
KNB Kanab 48.48 80 P **P** **00 39 56.7 +0.6**
KNB IAmb IAmb 00 40 14.0
comp=Z,149nm,1.0s
KNB Kanab 48.48 80 P **P** **00 39 56.7 +0.6**
KNB pmax pmax
comp=Z,149nm,1.0s
DPP Dos Picos Cty 48.50 87 P **P** **00 39 56.7 +0.5**
PKCU Pink Cliffs 48.53 79 P **P** **00 39 57.4 +0.7**
PKCU IAmb IAmb 00 40 04.3
comp=Z,79nm,0.8s
TIY Taiyuan 48.54 282 P **P** **00 39 58.2 +1.7**
TIY pP **pP** **00 40 04.3 -0.9**
TIY S **S** **00 46 59.0 +3.3**
TIY pmax pmax
comp=Z,130nm,0.8s
TIY pmax pmax
comp=Z,780nm,8.8s
TIY L L
comp=Z,2µm,17.9s
TIY L L
comp=Z,2µm,19.2s
TIY L L
comp=Z,2µm,20.6s
SRU San Rafael Swe 48.59 76 P **P** **00 39 58.2 +1.3**
SRU IAmb IAmb 00 40 03.9
comp=Z,106nm,0.8s
SRU San Rafael Swe 48.59 76 P **P** **00 39 58.2 +1.3**
SRU pmax pmax
comp=Z,106nm,0.8s
BORC Borrego Spring 48.66 86 P **P** **00 39 57.9 +0.6**
BORC IAmb IAmb 00 39 59.7
comp=Z,127nm,1.0s
NEE2 Needles Airpor 48.80 83 IAmb IAmb 00 40 00.3
comp=Z,55nm,0.7s
NEE2 IAMs_20 IAMs_20 01 00 39.2
comp=Z,2µm,19.0s
IRM Iron Mountain 48.87 84 P **P** **00 39 59.0 +0.1**
IRM IAmb IAmb 00 40 01.2
comp=Z,86nm,1.2s
KULLO Kullorsuaq 48.87 17 *i*P **P** **00 39 57.9 -0.5**
KULLO IAmb IAmb 00 39 59.4
comp=Z,63nm,0.9s
BAR Barrett 48.88 87 **P** **00 39 59.3 +0.2**
BAR IAmb IAmb 00 40 01.3
comp=Z,88nm,0.9s
BC3 Big Chuckawall 49.01 85 **P** **00 40 00.1 0.0**
BC3 IAMs_20 IAMs_20 01 00 20.7
comp=Z,3µm,18.0s
W13A Hualapai Mount 49.05 82 P **P** **00 40 00.8 +0.2**
W13A IAmb IAmb 00 40 10.0
comp=Z,70nm,1.1s
U15A North Rim 49.18 80 P **P** **00 40 02.8 +1.2**
O20A White River Ci 49.34 73 IAmb IAmb 00 40 04.7
comp=Z,136nm,0.9s
RSSD Black Hills 49.42 67 **P** **00 40 03.4 +0.1**
RSSD IAmb IAmb 00 40 04.7
comp=Z,91nm,1.1s
RSSD Black Hills 49.42 67 P **P** **00 40 03.4 +0.1**
RSSD pmax pmax
comp=Z,91nm,1.1s
CCX Cicese 49.43 88 IAmb IAmb 00 40 05.4
comp=Z,54nm,0.8s
KNGR Kungurtug, Tuv 49.48 304⇑ *i*P **P** **00 40 03.9 +0.3**
KNGR pmax pmax
comp=Z,78nm,0.9s
BLYC Blythe 49.52 84 IAmb IAmb 00 40 12.5
comp=Z,108nm,1.2s
HAYD Hayden 49.70 72 IAmb IAmb 00 40 21.9
comp=Z,161nm,1.5s
MDND Maddock 49.73 60 IAMs_20 IAMs_20 01 00 35.1
comp=Z,3µm,21.0s
ESJX Sierra Juarez 49.79 87 IAmb IAmb 00 40 08.5
comp=Z,89nm,1.1s
GLA Glamis 49.80 85 IAmb IAmb 00 40 08.2
comp=Z,102nm,0.8s
GLA IAMs_20 IAMs_20 01 00 24.6
comp=Z,3µm,18.0s
E28A Huff 49.87 62 IAmb IAmb 00 40 07.8
comp=Z,58nm,0.8s
E28A IAMs_20 IAMs_20 01 01 52.9
comp=Z,4µm,19.0s
PV21 Cone Mtn., Par 49.87 76 IAmb IAmb 00 40 26.5
comp=Z,103nm,0.8s
PV14 Lion Creek, Pa 49.96 76 IAmb IAmb 00 40 19.6
comp=Z,88nm,0.8s
KBS Kingsbay 49.99 357 IAMs_20 IAMs_20 01 03 36.2
comp=Z,3µm,18.0s
KBS Kingsbay 49.99 357⇑ *i*P **P** **00 40 07.4 +0.5**
KBS *e* 00 47 46.6
KBS IAMs_20 IAMs_20 01 03 28.0
comp=Z,3µm,20.0s
KBS Kingsbay 49.99 357 *i*P **P** **00 40 07.6 +0.7**
TARA Tarawa 50.00 190 IAMs_20 IAMs_20 00 57 05.1
comp=Z,4µm,20.0s
PV04 Paradox Valley 50.02 76 IAmb IAmb 00 40 16.4
comp=Z,143nm,0.8s
PV16 Nyswonger Mesa 50.07 76 IAmb IAmb 00 40 15.7
comp=Z,174nm,1.1s
PV05 Paradox Valley 50.10 76 IAmb IAmb 00 40 28.7
comp=Z,143nm,0.9s
PV07 Paradox Valley 50.15 75 IAmb IAmb 00 40 28.6
comp=Z,112nm,1.0s
ULM Lac du Bonnet 50.33 56 P **P** **00 40 09.6 -0.2**
comp=Z,20nm,0.7s,baz=298,slow=7.8,SNR=32
ULM PcP **PcP** **00 41 27.8 -0.3**
comp=Z,19nm,1.0s,baz=297,slow=4.8,SNR=4.5
ULM LR LR 01 01 27.7
comp=Z,4µm,21.8s,baz=310,slow=36
comp=Z,20nm,0.7s
ULM Lac du Bonnet 50.33 56 *c*P **P** **00 40 09.2 -0.6**
WUAZ Wupatki 50.34 80 IAmb IAmb 00 40 19.2
comp=Z,129nm,1.0s
WUAZ IAMs_20 IAMs_20 01 01 19.8
comp=Z,4µm,19.0s
PV01 Paradox Valley 50.39 76 IAmb IAmb 00 40 19.2
comp=Z,168nm,0.9s
UPNV Upernavik 50.39 19 *i*P **P** **00 40 09.8 -0.1**
UPNV IAmb IAmb 00 40 10.8
comp=Z,74nm,1.0s
LYN LuoYang 50.55 278⇑ P **P** **00 40 12.4 +0.7**
LYN pP pwP 00 40 25.0 +0.6
LYN S **S** **00 47 25.1 +1.4**
LYN sS sS 00 47 42.3 +4.0
LYN pmax pmax
comp=Z,160nm,0.9s
LYN pmax pmax
comp=Z,930nm,6.9s
LYN L L
comp=Z,3µm,18.9s
LYN L L
comp=Z,2µm,20.2s
LYN L L
comp=Z,3µm,23.0s
SPA0 Spitsbergen Ar 50.56 356⇑ *i*P **P** **00 40 11.2 0.0**
SPA0 IAmb IAmb 00 40 12.0
comp=Z,194nm,1.2s
SPA0 *e* 00 47 51.1
SPA0 IAMs_20 IAMs_20 00 59 23.9
comp=Z,3µm,25.6s
SPITS Spitsbergen Ar 50.56 356 P **P** **00 40 11.5 +0.3**
comp=Z,66nm,0.7s,baz=46,slow=7.1,SNR=183
SPITS LR LR 01 01 26.1
comp=Z,2µm,21.7s,baz=10,slow=36
comp=Z,66nm,0.7s
SPITS Spitsbergen Ar 50.56 356 P **P** **00 40 11.6 +0.4**
SPITS pmax pmax
comp=Z,174nm,1.2s
SPB2 Spitsbergen Ar 50.56 356 P **P** **00 40 11.6 +0.4**
SPB2 IAmb IAmb 00 40 12.3
comp=Z,152nm,1.1s
X16A Lo Mia Camp, P 51.01 81 IAmb IAmb 00 40 25.4
comp=Z,104nm,1.1s
MVCO Mesa Verde 51.02 77 IAmb IAmb 00 40 37.0
comp=Z,92nm,1.0s
ISCO Idaho Springs 51.13 72 IAMs_20 IAMs_20 01 04 15.6
comp=Z,3µm,20.0s
AGMN Agassiz Nation 51.49 58 IAMs_20 IAMs_20 01 01 18.5
comp=Z,4µm,22.0s
W18A Petrified Fore 51.61 79 IAmb IAmb 00 40 28.7
comp=Z,141nm,1.0s
HOPEN Hopen 51.62 353 *e*P **P** **00 40 20.0 +0.9**
HOPEN *e* 00 48 15.5
HOPEN IAMs_20 IAMs_20 01 04 31.7
comp=Z,3µm,17.3s
HSPB Hornsund (broa 51.75 356 *e*P **P** **00 40 19.6 -0.5**
HSPB Hornsund (broa 51.75 356 *e*P **P** **00 40 20.0 -0.1**
YHNB Yeheng 51.76 262 IAMs_20 IAMs_20 01 00 57.0
comp=Z,3µm,21.0s
DAG Danmarks Havn 51.78 5 *i*P **P** **00 40 20.2 -0.1**
DAG IAmb IAmb 00 40 21.0
comp=Z,29nm,0.9s
EPLO Experimental L 51.79 56 IAmb IAmb 00 40 21.3
comp=Z,76nm,0.8s
X18A Snowflake 51.87 80 IAmb IAmb 00 40 39.7
comp=Z,369nm,1.9s
NUUG Nuugaatsiaq 51.93 19 *i*P **P** **00 40 21.1 -0.3**
NUUG IAmb IAmb 00 40 22.1
comp=Z,26nm,0.9s
Q24A Divide 51.94 73 IAMs_20 IAMs_20 01 04 33.0
comp=Z,2µm,18.0s
NACB Ninganchiao 51.99 262 P **P** **00 40 23.1 +0.5**
WHN Wuhan 52.05 273 P **P** **00 40 22.8 -0.2**
WHN PcP **PcP** **00 41 35.3 +0.5**
WHN S **S** **00 47 46.8 +2.4**
WHN pmax pmax
comp=Z,220nm,1.0s
WHN pmax pmax
comp=Z,2µm,4.6s
WHN L L
comp=Z,8µm,21.1s
WHN L L
comp=Z,12µm,24.8s
WHN L L
comp=Z,5µm,21.7s
SUSD Miller 52.13 64 IAmb IAmb 00 40 25.5
comp=Z,201nm,0.9s
SUSD IAMs_20 IAMs_20 01 02 51.7
comp=Z,3µm,20.0s
NIAQ Niaqornat 52.41 20 *i*P **P** **00 40 25.6 +0.5**
NIAQ IAmb IAmb 00 40 26.1
comp=Z,67nm,0.9s
SSLB Suanglung 52.67 262 P **P** **00 40 28.4 +0.7**
SSLB Suanglung 52.67 262 IAmb IAmb 00 40 29.1
comp=Z,166nm,1.0s
SSLB IAMs_20 IAMs_20 01 01 27.3
comp=Z,3µm,20.0s
YULB Yu-li 52.74 261 P **P** **00 40 28.7 +0.5**
YULB Yu-li 52.74 261 IAmb IAmb 00 40 49.0
comp=Z,272nm,1.7s
F33A 5 Mile Ranch, 52.75 61 IAMs_20 IAMs_20 01 03 45.1
comp=Z,3µm,19.0s
SAATT Saattut 52.81 19 *i*P **P** **00 40 27.8 -0.3**
SAATT IAmb IAmb 00 40 28.2
comp=Z,31nm,1.1s
TUC Tucson 52.82 83 P **P** **00 40 29.8 +1.0**
TUC Tucson 52.82 83 IAMs_20 IAMs_20 01 05 05.7
comp=Z,2µm,18.0s
TUC Tucson 52.82 83 P **P** **00 40 29.8 +1.0**
TUC pmax pmax
comp=Z,90nm,1.2s
TUC MLR MLR
comp=Z,2µm,18.0s
K30B Basset 52.85 66 IAMs_20 IAMs_20 01 06 39.0
comp=Z,3µm,18.0s
XAN Xi'an 53.09 280 P **P** **00 40 30.8 +0.1**
XAN PP **PP** **00 42 34.5 +4.0**
XAN S **S** **00 48 00.8 +2.1**
XAN pmax pmax
comp=Z,78nm,1.0s
XAN L L
comp=Z,2µm,19.9s
XAN L L
comp=Z,3µm,20.6s
XAN L L
comp=Z,4µm,22.0s
TPUB Ta-pu 53.23 262 P **P** **00 40 32.4 +0.6**
TPUB Ta-pu 53.23 262 IAmb IAmb 00 40 50.5
comp=Z,150nm,1.2s
TPUB IAMs_20 IAMs_20 01 01 46.1
comp=Z,3µm,21.0s
QZH2 Quanzhou 53.30 265 P **P** **00 40 33.5 +1.2**
QZH2 S **S** **00 48 05.3 +3.7**
QZH2 pmax pmax
comp=Z,230nm,1.0s
QZH2 L L
comp=Z,2µm,23.2s
QZH2 L L
comp=Z,1µm,18.2s
QZH2 L L
comp=Z,2µm,23.3s
SAQQ Saqqaq 53.38 20 *i*P **P** **00 40 32.4 +0.2**
SAQQ IAmb IAmb 00 40 33.2
comp=Z,41nm,1.0s
FRB Frobisher Bay 53.54 31 LR LR 01 06 45.0
comp=Z,7µm,18.2s,baz=310,slow=40
GDH Godhavn 53.63 21 *i*P **P** **00 40 33.8 -0.3**
GDH IAmb IAmb 00 40 35.1
comp=Z,32nm,1.0s
SUMG Summit 53.67 14 P **P** **00 40 33.1 -1.7**
SUMG Summit 53.67 14 IAmb IAmb 00 40 53.8
comp=Z,122nm,1.1s
SUMG Summit 53.67 14 *i*P **P** **00 40 35.1 +0.3**
SUMG IAmb IAmb 00 40 35.6
comp=Z,68nm,0.9s
ZALV Zalesovo Beam 53.73 313 P **P** **00 40 35.0 -0.1**
comp=Z,26nm,0.9s,baz=57,slow=6.9,SNR=80
ZALV PcP **PcP** **00 41 42.0 +1.2**
comp=Z,32nm,0.8s,baz=39,slow=3.7,SNR=9.2
ZALV LR LR 01 04 51.8
comp=Z,2µm,19.9s,baz=52,slow=38
comp=Z,26nm,0.9s
ZALV Zalesovo Beam 53.73 313 P **P** **00 40 34.2 -0.9**
ZALV Zalesovo Beam 53.73 313 *i*P **P** **00 40 35.0 -0.1**
ZALV pmax pmax
comp=Z,27nm,0.9s
ANMO Albuquerque 53.75 77 LR LR 01 03 46.9
comp=Z,2µm,18.7s,baz=316,slow=36
ANMO Albuquerque 53.75 77 P **P** **00 40 36.3 +0.6**
ANMO Albuquerque 53.75 77 IAmb IAmb 00 40 38.0
comp=Z,47nm,1.1s
ANMO IAMs_20 IAMs_20 01 00 23.2
comp=Z,2µm,21.0s
ANMO Albuquerque 53.75 77 *c*P **P** **00 40 36.6 +0.9**
ANMO pmax pmax
comp=Z,75nm,1.7s
KNMB Chin-men Tao 53.78 265 P **P** **00 40 36.9 +1.1**
KNMB IAmb IAmb 00 40 37.6
comp=Z,85nm,1.0s
ECSD EROS Data Cent 53.89 63 IAMs_20 IAMs_20 01 03 47.3
comp=Z,3µm,20.0s
BJO1 Bjornoya 54.00 354 *e*P **P** **00 40 37.3 +0.6**
EYMN Ely 54.01 56 IAMs_20 IAMs_20 01 05 23.3
comp=Z,3µm,18.0s
EYMN Ely 54.01 56 IAmb IAmb 00 40 37.9
comp=Z,95nm,0.9s
DBG Daneborg 54.07 7 *i*P **P** **00 40 36.6 -0.6**
DBG IAmb IAmb 00 40 37.5
comp=Z,28nm,0.8s
Y22A Socorro 54.11 79 IAmb IAmb 00 40 56.0
comp=Z,108nm,1.1s
ILULI Ilulissat 54.20 20 IAmb IAmb 00 40 38.3
comp=Z,28nm,0.8s
ILULI Ilulissat 54.20 20 *i*P **P** **00 40 37.5 -0.7**
ILULI IAmb IAmb 00 40 38.5
comp=Z,32nm,0.8s
319A Douglas 54.40 83 IAmb IAmb 00 40 50.8
comp=Z,99nm,1.1s
BGNE Belgrade 54.50 66 IAMs_20 IAMs_20 01 07 39.6
comp=Z,3µm,18.0s
121A Cookes Peak, D 54.54 81 IAmb IAmb 00 40 51.1
comp=Z,68nm,1.1s
CNSH ChangSha 54.57 272 P **P** **00 40 41.6 +0.1**
CNSH S **S** **00 48 22.6 +3.8**
CNSH pmax pmax

comp=Z,34nm,1.5s
CNSH L L
comp=Z,1µm,17.5s
CNSH L L
comp=Z,1µm,17.3s
CNSH L L
comp=Z,2µm,20.4s
TBO Thunder Bay 54.65 54 IAmb IAmb 00 40 42.7
comp=Z,63nm,0.9s
E38A The Farm, Brul 54.83 57 IAmb IAmb 00 40 43.6
comp=Z,137nm,0.8s
LZH Lanzhou 54.85 286 P **P** **00 40 44.8 +1.1**
LZH S **S** **00 48 23.9 +1.2**
LZH sS sS 00 48 39.8 +2.4
LZH pmax pmax
comp=Z,120nm,1.8s
LZH pmax pmax
comp=Z,1µm,4.8s
LZH L L
comp=Z,3µm,16.8s
LZH L L
comp=Z,5µm,16.2s
LZH L L
comp=Z,6µm,17.1s
LZDM Lanzhou Array 55.03 286 P **P** **00 40 46.3 +1.1**
comp=Z,30nm,0.8s,baz=51,slow=0.9,SNR=42
LZDM PcP **PcP** **00 41 46.2 -0.2**
comp=Z,11nm,0.7s,baz=93,slow=3.0,SNR=3.6
LZDM LR LR 01 07 25.6
comp=Z,3µm,18.5s,baz=35,slow=39
comp=Z,30nm,0.8s
GTA2 Gaotai 55.05 291 P **P** **00 40 45.9 +0.8**
GTA2 S **S** **00 48 25.8 +0.5**
GTA2 SS **SS** **00 52 10.3 +1.6**
GTA2 pmax pmax
comp=Z,280nm,1.1s
GTA2 pmax pmax
comp=Z,1µm,8.7s
GTA2 L L
comp=Z,3µm,16.5s
GTA2 L L
comp=Z,3µm,16.8s
GTA2 L L
comp=Z,6µm,16.2s
L34A Svendsen Farm, 55.15 65 IAMs_20 IAMs_20 01 06 26.9
comp=Z,2µm,18.0s
DGZ Jazzator, Alta 55.19 308*c iP* **P** **00 40 46.6 +0.7**
DGZ pmax pmax
comp=Z,222nm,1.1s
ENH Enshi 55.29 277 P **P** **00 40 47.4 +0.7**
ENH Enshi 55.29 277 IAmb IAmb 00 40 47.8
comp=Z,80nm,1.1s
I37A Lemond, Waseca 55.50 61 IAmb IAmb 00 40 49.7
comp=Z,102nm,0.8s
I37A IAMs_20 IAMs_20 01 05 19.8
comp=Z,4µm,19.0s
EPT El Paso 55.85 80 P **P** **00 40 51.6 +0.7**
SFJD Kangerlussuaq 56.09 22 LR LR 01 08 55.1
comp=Z,840nm,18.3s,baz=323,slow=40
SFJD Kangerlussuaq 56.09 22 P **P** **00 40 51.9 0.0**
SFJD IAmb IAmb 00 40 52.7
comp=Z,212nm,1.9s
SFJD Kangerlussuaq 56.09 22 P **P** **00 40 51.9 0.0**
SFJD pmax pmax
comp=Z,212nm,2.0s
SFJD Kangerlussuaq 56.09 22 *i* P **P** **00 40 51.5 -0.4**
SFJD IAmb IAmb 00 40 52.4
comp=Z,30nm,1.0s
PH02 Texas Public H 56.20 74 IAmb IAmb 00 41 01.8
comp=Z,242nm,1.0s
G40A Rib Lake 56.41 58 IAMs_20 IAMs_20 01 06 22.1
comp=Z,3µm,19.0s
MNTX Cornudas Mount 56.60 80 P **P** **00 40 56.6 +0.5**
MNTX IAmb IAmb 00 41 04.8
comp=Z,140nm,1.1s
MSTX Muleshoe 56.66 76 IAmb IAmb 00 40 58.5
comp=Z,203nm,1.4s
AMTX Amarillo 56.71 74 IAmb IAmb 00 41 05.5
comp=Z,95nm,1.1s
KSU1 Kansas State U 56.90 67 P **P** **00 40 57.7 -0.4**
KSU1 IAMs_20 IAMs_20 01 09 12.2
comp=Z,2µm,18.0s
SCIA State Center 56.98 63 IAmb IAmb 00 41 01.0
comp=Z,70nm,0.8s
SCIA IAMs_20 IAMs_20 01 08 11.1
comp=Z,3µm,18.0s
I40A Norwalk 57.10 59 IAmb IAmb 00 41 01.2
comp=Z,79nm,1.0s
F42A Maple Grove Fa 57.19 56 IAmb IAmb 00 41 01.2
comp=Z,92nm,0.8s
F42A IAMs_20 IAMs_20 01 05 16.4
comp=Z,3µm,21.0s
VADS Vadso 57.20 349⇑ *i* P **P** **00 40 59.2 -0.5**
ELIS Ellis County 57.27 72 IAmb IAmb 00 41 18.6
comp=Z,85nm,0.9s
HAMF Hammerfest 57.34 351 *e* P **P** **00 41 00.4 -0.3**
HAMF IAmb IAmb 00 41 02.8
comp=Z,33nm,0.9s
HAMF *e*S S 00 49 06.9 +13
HAMF IAMs_20 IAMs_20 01 11 43.6
comp=Z,5µm,15.7s
GZH2 Guangzhou 57.34 268 P **P** **00 41 02.3 +0.9**
GZH2 sP **pwP** **00 41 15.7 +0.7**
GZH2 S **S** **00 48 58.7 +3.0**
GZH2 pmax pmax
comp=Z,120nm,0.9s
GZH2 L L
comp=Z,1µm,16.5s
GZH2 L L
comp=Z,1µm,16.8s
GZH2 L L
comp=Z,1µm,21.0s
KAN08 Anthony NE Sta 57.35 70 IAmb IAmb 00 41 02.5
comp=Z,86nm,0.9s
OK038 West end E0370 57.40 71 IAmb IAmb 00 41 19.0
comp=Z,101nm,0.9s
OK038 IAMs_20 IAMs_20 01 07 11.5
comp=Z,2µm,18.0s
SMWD Samnorwood 57.43 73 IAmb IAmb 00 41 20.1
comp=Z,73nm,0.8s
VHRN Van Horn 57.47 80 IAmb IAmb 00 41 11.8
comp=Z,92nm,1.0s
KUQ Kuujjuuaa 57.56 36 IAmb IAmb 00 41 03.1
comp=Z,145nm,0.9s
SCO Scoresbysund 57.62 9 *i* P **P** **00 41 03.0 +0.3**
SCO IAmb IAmb 00 41 04.3
comp=Z,40nm,0.9s
SZP Santa 57.63 257 P **P** **00 41 04.7 +1.3**
N38A Joes South For 57.71 64 IAMs_20 IAMs_20 01 06 25.4
comp=Z,2µm,20.0s
128A Castleberry Fa 57.75 77 IAmb IAmb 00 41 06.0
comp=Z,87nm,1.0s
KEV Kevo 57.83 349 P **P** **00 41 03.5 -0.6**
KEV IAmb IAmb 00 41 29.2
comp=Z,112nm,1.6s
KEV Kevo 57.83 349 P **P** **00 41 03.5 -0.6**
KEV pmax pmax
comp=Z,112nm,1.6s
CROK Carrier 57.83 70 IAmb IAmb 00 41 09.3
comp=Z,89nm,0.8s
JFWS Jewell Farm 57.95 60 IAmb IAmb 00 41 06.8
comp=Z,100nm,0.8s
ZSN Zaisan 57.95 307*c iP* **P** **00 41 05.7 +0.3**
ZSN *e*S **S** **00 49 04.0 +0.9**
ZSN pmax pmax
comp=Z,71nm,1.0s
ZSN Zaisan 57.95 307⇑ *iP* **P** **00 41 05.8 +0.3**
comp=Z,71nm,1.0s
ZSN *e*S **S** **00 49 04.1 +0.9**
TPB06 Permian Basin 57.97 78 IAmb IAmb 00 41 14.6
comp=Z,51nm,0.9s
L40A Anamosa 57.98 61 IAmb IAmb 00 41 07.5
comp=Z,84nm,1.0s
L40A IAMs_20 IAMs_20 01 06 45.6
comp=Z,3µm,19.0s
DKNS Dickens 57.99 75 IAmb IAmb 00 41 14.6
comp=Z,102nm,0.9s
JMIC Jan Mayen 58.01 3 LR LR 01 08 17.9
comp=Z,681nm,18.2s,baz=332,slow=38
I42A Draeger Farm, 58.02 58 IAmb IAmb 00 41 06.9
comp=Z,76nm,0.8s
I42A IAMs_20 IAMs_20 01 07 22.5
comp=Z,3µm,19.0s
HKPS Hong Kong Po S 58.04 266 IAmb IAmb 00 41 08.6
comp=Z,88nm,1.0s
POST Post 58.05 76 IAmb IAmb 00 41 13.8
comp=Z,135nm,0.9s

ODSA Odessa 58.06 77 IAmb IAmb 00 41 08.0
comp=Z,81nm,1.0s
TPB01 Permian Basin 58.11 79 IAmb IAmb 00 41 27.4
comp=Z,56nm,0.8s
129A Stewart Farms, 58.13 76 IAmb IAmb 00 41 15.3
comp=Z,56nm,1.0s
SEM Semipalatinsk 58.18 312 *e*P **P** **00 41 06.8 -0.4**
SEM Semipalatinsk 58.18 312 *e*P **P** **00 41 06.8 -0.4**
ARA0 ARCESS Array S 58.21 350 *e*P **P** **00 41 06.3 -0.6**
ARA0 *e* 00 49 38.4
ARA0 IAMs_20 IAMs_20 01 08 47.1
comp=Z,4µm,15.3s
ARCES ARCESS Array B 58.21 350 P **P** **00 41 06.3 -0.5**
comp=Z,45nm,0.8s,baz=28,slow=7.6,SNR=47
ARCES LR LR 01 08 53.3
comp=Z,3µm,19.1s,baz=17,slow=39
comp=Z,45nm,0.8s
ARCES ARCESS Array B 58.21 350 P **P** **00 41 06.7 -0.2**
ARCES IAmb IAmb 00 41 07.5
comp=Z,67nm,0.9s
ARCES ARCESS Array B 58.21 350 P **P** **00 41 06.7 -0.2**
ARCES pmax pmax
comp=Z,67nm,1.0s
GULI GuiLin 58.23 272 P **P** **00 41 08.0 +0.3**
GULI S **S** **00 49 11.3 +4.0**
GULI pmax pmax
comp=Z,49nm,0.9s
GULI L L
comp=Z,920nm,16.8s
GULI L L
comp=Z,720nm,15.2s
GULI L L
comp=Z,1µm,24.8s
H43A Windswept, Lux 58.24 57 P **P** **00 41 07.3 -0.1**
H43A IAmb IAmb 00 41 08.4
comp=Z,103nm,0.8s
H43A IAMs_20 IAMs_20 01 07 54.3
comp=Z,3µm,18.0s
SN07 Snyder 07 58.41 75 IAmb IAmb 00 41 17.3
comp=Z,54nm,0.8s
TPB05 Hovey Rd 58.41 79 IAmb IAmb 00 41 16.9
comp=Z,49nm,0.9s
CD2 Chengdu 58.41 281⇑ P **P** **00 41 09.1 +0.2**
CD2 PP **PP** **00 43 20.5 +2.4**
CD2 S **S** **00 49 13.3 +3.7**
CD2 pmax pmax
comp=Z,90nm,1.1s
CD2 pmax pmax
comp=Z,860nm,8.8s
CD2 L L
comp=Z,2µm,19.7s
CD2 L L
comp=Z,4µm,16.5s
CD2 L L
comp=Z,3µm,22.2s
T35A Sooner Cattle 58.42 69 IAmb IAmb 00 41 10.1
comp=Z,142nm,1.0s
MNHN Monahans 58.47 78 IAmb IAmb 00 41 29.6
comp=Z,79nm,0.7s
LVZ Lovozero 58.51 345 P **P** **00 41 08.5 -0.5**
LVZ Lovozero 58.51 345*c iP* **P** **00 41 08.1 -0.9**
LVZ pmax pmax
comp=Z,169nm,0.7s
OK051 E0350 and S346 58.51 70 IAmb IAmb 00 41 10.9
comp=Z,137nm,1.1s
WMOK Wichita Mounta 58.55 72 IAmb IAmb 00 41 12.0
comp=Z,121nm,1.4s
WMOK IAMs_20 IAMs_20 01 07 47.2
comp=Z,2µm,18.0s
229A Bryant Ranch, 58.62 77 IAmb IAmb 00 41 19.9
comp=Z,32nm,1.0s
TMB01 Midkiff 58.66 77 IAmb IAmb 00 41 12.3
comp=Z,36nm,0.9s
JETT Jettan, Norway 58.70 352 *e*P **P** **00 41 10.2 -0.1**
KURK Kurchatov 58.73 313 **PcP** **00 42 01.3 +1.1**
KURK Kurchatov 58.73 313 P **P** **00 41 10.2 -0.5**
KURK Kurchatov 58.73 313*c iP* **P** **00 41 10.5 -0.2**
KURK pmax pmax
comp=Z,205nm,0.9s
KURK Kurchatov 58.73 313 P **P** **00 41 11.9 +1.2**
TRO Tromso 58.75 352 *e*P **P** **00 41 10.6 0.0**
TRO *e* 00 49 47.1
QUOK Quay 58.81 70 IAmb IAmb 00 41 13.1
comp=Z,138nm,1.2s
KURBB Kurchatov Arra 58.83 313 P **P** **00 41 12.1 +0.6**
comp=Z,104nm,0.6s,baz=42,slow=6.6,SNR=929
KURBB PcP **PcP** **00 42 01.3 +0.7**
comp=Z,20nm,0.7s,baz=40,slow=5.8,SNR=6.4
KURBB LR LR 01 08 11.7
comp=Z,4µm,18.0s,baz=26,slow=38
KURBB PKPPKP **P'P'df** **01 10 47.1 -5.1**
comp=Z,3.4nm,1.1s,baz=251,slow=3.2,SNR=7.0
comp=Z,104nm,0.6s
KURBB Kurchatov Arra 58.83 313 P **P** **00 41 11.1 -0.4**
LPIG La Paz 58.86 90 LR LR 01 04 01.7
comp=Z,698nm,18.0s,baz=308,slow=33
L42A Oliver, Polo 58.88 61 IAmb IAmb 00 41 14.1
comp=Z,90nm,0.8s
WMQ Urumqi 58.94 302⇑ P **P** **00 41 13.5 +1.1**
WMQ S **S** **00 49 09.6 -6.7**
WMQ pmax pmax
comp=Z,61nm,0.9s
WMQ pmax pmax
comp=Z,310nm,3.7s
WMQ L L
comp=Z,4µm,18.3s
WMQ L L
comp=Z,3µm,19.7s
WMQ L L
comp=Z,6µm,22.7s
KTK1 Kautokeino 58.95 351 *e*P **P** **00 41 11.9 -0.1**
KTK1 IAmb IAmb 00 41 12.4
comp=Z,87nm,1.0s
KTK1 *e* 00 49 40.4
APA Apatity 59.00 346 *e*P **P** **00 41 10.5 -1.9**
APA *e* 00 41 58.7
APA *e* 00 43 21.6
APA *e*S S 00 49 07.3 -8.9
APA *e* 00 50 58.0
APA *e*SS **SS** **00 53 04.5 -4.8**
APA pmax pmax
comp=Z,30nm,1.0s
APA MLR MLR
comp=Z,5µm,21.9s
N41A Harden Midland 59.10 62 IAMs_20 IAMs_20 01 07 10.2
comp=Z,3µm,19.0s
K43A Burlington 59.13 59 IAMs_20 IAMs_20 01 05 55.0
comp=Z,4µm,21.0s
P40A Paris 59.23 64 IAMs_20 IAMs_20 01 07 21.7
comp=Z,2µm,20.0s
TX31 Lajitas Ar. Si 59.30 80 IAmb IAmb 00 41 24.2
comp=Z,91nm,1.0s
TXAR Lajitas Array 59.30 80 P **P** **00 41 15.6 +0.4**
comp=Z,26nm,0.9s,baz=295,slow=4.9,SNR=176
TXAR LR LR 01 06 50.8
comp=Z,2µm,18.3s,baz=320,slow=36
TXAR PKPPKP **P'P'df** **01 10 45.4 -3.6**
comp=Z,0.6nm,0.9s,baz=125,slow=3.5,SNR=4.1
TXAR PKP2ab **P'P'ab** **01 11 09.8 -2.3**
comp=Z,1.6nm,1.0s,baz=180,slow=3.8,SNR=5.1
comp=Z,26nm,0.9s
I45A Fountain 59.34 57 IAMs_20 IAMs_20 01 08 27.5
comp=Z,3µm,19.0s
SLBS Sierra La Lagu 59.39 90 P **P** **00 41 16.7 +1.0**
SLBS IAmb IAmb 00 41 17.4
comp=Z,48nm,0.9s
SLBS Sierra La Lagu 59.39 90 IAMs_20 IAMs_20 01 07 43.6
comp=Z,2µm,18.0s
FUNA Funafuti 59.44 181 P **P** **00 41 16.4 +0.5**
FUNA IAmb IAmb 00 41 31.5
comp=Z,46nm,0.8s
ABTX Abilene, Hawle 59.49 75 IAMs_20 IAMs_20 01 07 57.9
comp=Z,2µm,18.0s
TUL3 Leonard 59.53 70 IAMs_20 IAMs_20 01 11 10.9
comp=Z,2µm,19.0s
GLMI Grayling 59.65 55 IAMs_20 IAMs_20 01 08 19.5
comp=Z,3µm,20.0s
MK31 Makanchi Array 59.69 308*c iP* **P** **00 41 17.2 -0.3**
MKAR Makanchi Array 59.69 308 P **P** **00 41 17.9 +0.4**
comp=Z,143nm,0.9s,baz=52,slow=6.9,SNR=924
MKAR S **S** **00 49 24.5 -1.2**
comp=Z,2.6nm,1.1s,baz=55,slow=12,SNR=5.0
MKAR LR LR 01 08 21.6
comp=Z,3µm,19.3s,baz=30,slow=37
MKAR PKPPKP **P'P'df** **01 10 46.1 -4.6**
comp=Z,1.3nm,1.0s,baz=242,slow=2.6,SNR=4.4
comp=Z,143nm,0.9s

MKAR Makanchi Array 59.69 308 P **P** **00 41 16.8 -0.7**
MKAR Makanchi Array 59.69 308 *i* P **P** **00 41 17.0 -0.5**
MKAR pmax pmax
comp=Z,144nm,0.9s
GYA Guiyang 59.73 275⇑ P **P** **00 41 18.1 -0.1**
GYA pP sP 00 41 27.1 -3.1
GYA PcP **PcP** **00 42 05.1 +0.3**
GYA PP **PP** **00 43 30.5 +0.6**
GYA S **S** **00 49 23.8 -3.1**
GYA pmax pmax
comp=Z,58nm,1.4s
GYA pmax pmax
comp=Z,740nm,7.6s
GYA L L
comp=Z,1µm,20.2s
GYA L L
comp=Z,1µm,23.4s
GYA L L
comp=Z,2µm,21.4s
HPIG 59.75 84 IAmb IAmb 00 41 26.7
comp=Z,58nm,1.1s
S39A Bolivar 59.75 66 IAmb IAmb 00 41 18.0
comp=Z,72nm,0.9s
OZNA Ozona 59.76 77 IAmb IAmb 00 41 19.7
comp=Z,76nm,1.0s
SAND Sanderson 59.82 79 IAmb IAmb 00 41 26.4
comp=Z,78nm,1.4s
MAKZ Makanchi 59.83 308 P **P** **00 41 18.0 -0.5**
MAKZ IAMs_20 IAMs_20 01 08 06.5
comp=Z,3µm,19.0s
MAKZ Makanchi 59.83 308 P **P** **00 41 18.0 -0.5**
MAKZ pmax pmax
comp=Z,159nm,0.9s
MAKZ MLR MLR
comp=Z,3µm,19.0s
MANU Manus Island 59.91 219 P **P** **00 41 19.4 +0.1**
MANU IAmb IAmb 00 41 20.6
comp=Z,53nm,0.9s
TGY Tagaytay City 59.98 254 LR LR 01 06 55.5
comp=Z,735nm,19.6s,baz=54,slow=36
ANGG Ammassalik, Gr 59.99 17 *i* P **P** **00 41 18.1 -1.1**
ANGG IAmb IAmb 00 41 18.7
comp=Z,33nm,0.7s
U38A Gravette 59.99 68 IAmb IAmb 00 41 20.7
comp=Z,84nm,1.0s
HDIL Hopedale 60.07 62 IAMs_20 IAMs_20 01 07 50.9
comp=Z,3µm,19.0s
GOMU GeErMu 60.16 292 P **P** **00 41 19.4 -1.9**
GOMU S **S** **00 49 31.9 -0.9**
GOMU pmax pmax
comp=Z,40nm,0.9s
GOMU L L
comp=Z,2µm,17.3s
GOMU L L
comp=Z,2µm,17.7s
GOMU L L
comp=Z,4µm,18.1s
PLPT Palo Pinto 60.16 74 P **P** **00 41 21.7 +0.8**
M44A Midewin, Midew 60.19 60 P **P** **00 41 21.1 +0.1**
M44A IAMs_20 IAMs_20 01 09 40.9
comp=Z,3µm,18.0s
HHAR Hobbs 60.36 68 IAmb IAmb 00 41 23.1
comp=Z,62nm,0.9s
Z35A Perchaven, San 60.44 73 P **P** **00 41 22.6 -0.2**
Z35A IAmb IAmb 00 41 38.2
comp=Z,74nm,1.0s
Z35A IAMs_20 IAMs_20 01 07 52.1
comp=Z,2µm,20.0s
FW06 Azle 60.51 73 IAmb IAmb 00 41 24.7
comp=Z,73nm,1.0s
SCHQ Schefferville 60.56 38 P **P** **00 41 22.9 -0.5**
comp=Z,88nm,1.0s,baz=322,slow=6.4,SNR=70
SCHQ LR LR 01 09 13.8
comp=Z,5µm,19.7s,baz=320,slow=38
comp=Z,88nm,1.0s
SCHQ Schefferville 60.56 38 P **P** **00 41 23.1 -0.3**
SCHQ IAmb IAmb 00 41 24.2
comp=Z,128nm,1.0s
P43A Skaggs, Pawnee 60.57 62 IAMs_20 IAMs_20 01 08 05.3
comp=Z,3µm,20.0s
J47A Sumner 60.64 57 IAMs_20 IAMs_20 01 09 24.7
comp=Z,3µm,18.0s
BVA0 Borovoye Array 60.66 319 P **P** **00 41 23.9 -0.1**
BVAR Borovoye Array 60.66 319 P **P** **00 41 24.1 +0.1**
comp=Z,74nm,0.8s,baz=49,slow=6.7,SNR=229
BVAR PcP **PcP** **00 42 08.0 0.0**
comp=Z,29nm,0.8s,baz=60,slow=3.6,SNR=6.0
BVAR LR LR 01 09 01.2
comp=Z,5µm,21.8s,baz=45,slow=37
comp=Z,74nm,0.8s
BORK Borovoye 60.67 319 P **P** **00 41 24.1 -0.1**
BORK IAmb IAmb 00 41 26.2
comp=Z,86nm,0.8s
BORK Borovoye 60.67 319*c iP* **P** **00 41 24.0 -0.1**
BORK pmax pmax
comp=Z,124nm,1.0s
CCM Cathedral Cave 60.70 65 P **P** **00 41 23.7 -0.8**
CCM Cathedral Cave 60.70 65 P **P** **00 41 23.7 -0.8**
CCM pmax pmax
comp=Z,387nm,1.8s
CCM MLR MLR
comp=Z,2µm,18.0s
STEI Steigen 60.71 354 *e*P **P** **00 41 24.1 +0.1**
BRDY Brady 60.81 75 IAmb IAmb 00 41 32.9
comp=Z,85nm,1.3s
SLM Saint Louis 60.87 64 P **P** **00 41 24.7 -0.9**
SLM Saint Louis 60.87 64 P **P** **00 41 24.7 -0.9**
SLM pmax pmax
comp=Z,152nm,1.1s
JCT Junction City 60.88 77 IAmb IAmb 00 41 37.4
comp=Z,58nm,0.8s
JCT IAMs_20 IAMs_20 01 04 39.0
comp=Z,3µm,22.0s
VLDQ Val d'Or 60.90 49 IAmb IAmb 00 41 24.6
comp=Z,64nm,0.9s
FW13 Cleburne 61.02 74 IAmb IAmb 00 41 28.8
comp=Z,78nm,0.8s
DRIO Del Rio 61.13 78 IAmb IAmb 00 41 28.4
comp=Z,67nm,1.1s
FVM French Village 61.21 64 IAmb IAmb 00 41 29.1
comp=Z,147nm,1.1s
FAUS Fauske 61.24 353 *e*P **P** **00 41 27.2 -0.5**
FAUS *e* 00 50 03.3
WHTX Lake Whitney, 61.25 74 IAmb IAmb 00 41 30.5
comp=Z,87nm,0.9s
WHTX IAMs_20 IAMs_20 01 08 31.6
comp=Z,2µm,19.0s
SFIN Lafayette 61.40 60 IAMs_20 IAMs_20 01 09 11.1
comp=Z,3µm,19.0s
SVE Sverdlovsk 61.45 327 *e*P **P** **00 41 30.0 +0.7**
ADZR Andozero 61.46 342 *e*P **P** **00 41 26.8 -2.4**
ADZR pmax pmax
comp=Z,153nm,0.7s
ADZR MLR MLR
comp=Z,4µm,16.0s
T42A Van Buren 61.49 66 IAmb IAmb 00 41 30.1
comp=Z,115nm,1.2s
IVI Ivigtut 61.50 24 *i* P **P** **00 41 29.4 -0.2**
IVI IAmb IAmb 00 41 30.1
comp=Z,60nm,0.9s
N47A Urbana 61.81 59 IAmb IAmb 00 41 34.4
comp=Z,110nm,1.0s
Z38A Mt. Pleasant 61.85 71 IAmb IAmb 00 41 47.6
comp=Z,117nm,1.0s
Z38A IAMs_20 IAMs_20 01 12 31.3
comp=Z,2µm,19.0s
BUKO Buck Lake 61.86 52 IAmb IAmb 00 41 35.4
comp=Z,89nm,0.9s
TATA Tatamba Isabel 61.87 203 P **P** **00 41 33.8 +1.3**
P46A Rosedale 61.87 61 IAMs_20 IAMs_20 01 09 06.6
comp=Z,3µm,20.0s
AAM Ann Arbor 61.90 57 IAmb IAmb 00 41 34.4
comp=Z,65nm,0.9s
AAM IAMs_20 IAMs_20 01 08 12.3
comp=Z,2µm,20.0s
435B Jarrell 62.02 75 IAmb IAmb 00 41 41.4
comp=Z,141nm,1.1s
S44A Carbondale 62.08 64 IAMs_20 IAMs_20 01 09 10.1
comp=Z,2µm,19.0s
K50A Casco 62.11 56 IAmb IAmb 00 41 35.2
comp=Z,47nm,0.8s
K50A IAMs_20 IAMs_20 01 08 27.7
comp=Z,2µm,20.0s
CGM3 Cape Girardeau 62.12 64 IAmb IAmb 00 41 34.3
comp=Z,54nm,1.1s
LCAR Lake Charles 62.13 66 IAmb IAmb 00 41 34.8
comp=Z,104nm,0.9s

NRS Narsarsuaq 62.24 23 *i* P **P** **00 41 33.8 -0.7**
NRS IAmb IAmb 00 41 34.5
comp=Z,15nm,0.6s
237A Washetta, Mont 62.24 73 IAmb IAmb 00 41 37.1
comp=Z,173nm,1.4s
X40A Basin Creek Fa 62.26 69 IAmb IAmb 00 41 36.8
comp=Z,118nm,1.1s
KONS Konsvik 62.27 354 *e*P **P** **00 41 35.0 +0.4**
H06N1 SOCORRO T-PHAS 62.27 94 T T 01 49 10.0
SNR=5.4
STOK Stokkvaagen 62.44 354 *e*P **P** **00 41 36.0 +0.2**
SADO Sadowa 62.47 52 LR LR 01 10 31.4
comp=Z,3µm,18.1s,baz=341,slow=38
SADO Sadowa 62.47 52 IAmb IAmb 00 42 17.1
comp=Z,60nm,1.0s
MOR8 Moi Rana 62.50 354 *e*P **P** **00 41 34.9 -1.3**
ARTI Arti 62.56 328 LR LR 01 11 02.9
comp=Z,2µm,20.6s,baz=40,slow=38
ARTI Arti 62.56 328 P **P** **00 41 35.9 -0.8**
ARTI IAmb IAmb 00 42 17.0
comp=Z,58nm,0.6s
ARTI Arti 62.56 328 *c i* P **P** **00 41 36.6 -0.2**
ARTI 00 42 15.2
ARTI S **S** **00 50 01.6 -0.3**
ARTI SS **SS** **00 54 01.7 -3.7**
ARTI pmax pmax
comp=Z,49nm,1.3s
ARTI MLR MLR
comp=Z,3µm,18.0s
BLO Bloomington 62.56 61 IAmb IAmb 00 41 41.6
comp=Z,83nm,0.8s
N49A Columbus Grove 62.60 58 IAmb IAmb 00 41 40.5
comp=Z,91nm,0.9s
SAVO Savo Central 62.60 203 P **P** **00 41 38.6 +1.2**
LEIR Leirfjorden 62.65 354 *e*P **P** **00 41 37.4 +0.2**
833A Chaparral WMA, 62.66 78 IAmb IAmb 00 41 54.1
comp=Z,144nm,1.3s
PZH PanZhiHua 62.77 279 P **P** **00 41 39.0 +0.2**
PZH S **S** **00 50 05.4 -0.2**
PZH pmax pmax
comp=Z,70nm,1.4s
PZH pmax pmax
comp=Z,650nm,6.7s
PZH L L
comp=Z,880nm,19.6s
PZH L L
comp=Z,1µm,19.7s
PZH L L
comp=Z,1µm,20.8s
DAV Davao City (W) 62.82 245 LR LR 01 04 39.3
comp=Z,3µm,21.9s,baz=62,slow=32
DAV Davao City (W) 62.82 245 IAMs_20 IAMs_20 01 04 27.8
comp=Z,3µm,22.0s
HNR Honiara 62.84 203 LR LR 01 06 52.8
comp=Z,100nm,18.7s,baz=90,slow=34
HNR Honiara 62.84 203 IAMs_20 IAMs_20 01 06 13.1
comp=Z,2µm,20.0s
M50A Fremont 62.86 57 IAmb IAmb 00 41 40.8
comp=Z,52nm,0.9s
M50A IAMs_20 IAMs_20 01 10 36.7
comp=Z,3µm,19.0s
EF02 Christine 62.87 77 IAmb IAmb 00 41 50.0
comp=Z,126nm,1.1s
TDK Taldyqorghan 62.87 309 *c i* P **P** **00 41 39.5 +0.5**
TDK pmax pmax
comp=Z,79nm,1.2s
TDK Taldyqorghan 62.87 309⇑ *i* P **P** **00 41 39.6 +0.5**
comp=Z,79nm,1.2s
P48A Milroy 62.96 60 IAmb IAmb 00 41 55.4
comp=Z,107nm,0.9s
P48A IAMs_20 IAMs_20 01 08 02.4
comp=Z,3µm,22.0s
O49A Covington 63.04 59 IAmb IAmb 00 41 42.5
comp=Z,82nm,1.0s
NATX Nacogdoches 63.10 72 IAmb IAmb 00 41 45.3
comp=Z,49nm,0.8s
NATX IAMs_20 IAMs_20 01 06 56.5
comp=Z,2µm,21.0s
KMI2 Kunming 63.12 277 ⇑P **P** **00 41 41.6 +0.4**
KMI2 PP **PP** **00 44 02.0 +2.0**
KMI2 S **S** **00 50 13.1 +2.9**
KMI2 pmax pmax
comp=Z,59nm,1.3s
KMI2 pmax pmax
comp=Z,560nm,5.6s
KMI2 L L
comp=Z,1µm,20.2s
KMI2 L L
comp=Z,920nm,15.3s
KMI2 L L
comp=Z,1µm,26.3s
QIZ Qiongzhong 63.13 267 P **P** **00 41 42.0 +0.9**
QIZ Qiongzhong 63.13 267⇑ *i* P **P** **00 41 42.3 +1.2**
QIZ PP **PP** **00 44 01.6 +1.6**
QIZ S **S** **00 50 12.3 +2.3**
QIZ pmax pmax
comp=Z,49nm,1.7s
QIZ pmax pmax
comp=Z,650nm,4.4s
QIZ L L
comp=Z,490nm,16.3s
QIZ L L
comp=Z,1µm,17.5s
QIZ L L
comp=Z,1µm,19.3s
Z41A Richland Creek 63.15 70 IAmb IAmb 00 41 43.1
comp=Z,145nm,1.2s
JAY Jayapura 63.15 225 P **P** **00 41 41.1 -0.1**
BORG Borgarnes 63.23 10 LR LR 01 12 05.3
comp=Z,1µm,18.3s,baz=340,slow=39
735A Kenedy 63.26 77 IAMs_20 IAMs_20 01 06 24.7
comp=Z,3µm,21.0s
WCI Wyandotte Cave 63.36 62 P **P** **00 41 41.6 -0.7**
WCI IAmb IAmb 00 41 44.0
comp=Z,133nm,1.1s
WCI Wyandotte Cave 63.36 62 P **P** **00 41 41.6 -0.7**
WCI pmax pmax
comp=Z,133nm,1.1s
WCI MLR MLR
comp=Z,4µm,20.0s
GENI Genyem 63.46 226 P **P** **00 41 44.5 +1.3**
GENI Genyem 63.46 226 P **P** **00 41 43.5 +0.3**
comp=Z,115nm,1.4s
KIRV Kirov 63.51 334 P **P** **00 41 43.2 +0.3**
comp=Z,18nm,0.6s,baz=12,slow=4.4,SNR=8.9
KIRV LR LR 01 11 46.4
comp=Z,2µm,20.4s,baz=29,slow=38
comp=Z,18nm,0.6s
PDGK Podgornoye 63.54 307 P **P** **00 41 43.3 -0.3**
N51A Ashland 63.56 57 IAMs_20 IAMs_20 01 10 59.2
comp=Z,3µm,19.0s
TRQ Mont Tremblant 63.63 48 IAmb IAmb 00 41 44.0
comp=Z,61nm,1.0s
M52A Chesterland 63.65 56 IAmb IAmb 00 41 45.4
comp=Z,79nm,1.0s
M52A IAMs_20 IAMs_20 01 13 27.5
comp=Z,3µm,18.0s
SHLS Shalkode 63.68 307 *c i* P **P** **00 41 43.5 -1.0**
SHLS pmax pmax
comp=Z,49nm,1.0s
SHLS Shalkode 63.68 307⇑ *i* P **P** **00 41 43.6 -1.0**
comp=Z,49nm,1.0s
HKT Hockley 63.68 74 P **P** **00 41 45.6 +1.1**
HKT IAmb IAmb 00 41 47.2
comp=Z,222nm,1.7s
HKT Hockley 63.68 74 IAMs_20 IAMs_20 01 14 03.5
comp=Z,2µm,18.0s
HKT Hockley 63.68 74 *c i* P **P** **00 41 45.4 +0.9**
HKT pmax pmax
comp=Z,120nm,1.5s
T47A Sharon Grove 63.79 63 IAMs_20 IAMs_20 01 12 20.3
comp=Z,3µm,19.0s
KPKS Kokpek 63.84 307 *e*P **P** **00 41 46.1 +0.5**
KPKS Kokpek 63.84 307 *e*P **P** **00 41 46.1 +0.5**
LDAQ Lac Daran 63.86 45 IAmb IAmb 00 41 48.2
comp=Z,40nm,0.8s
UZB Uzynbulak 63.91 307 *c i* P **P** **00 41 46.5 +0.4**
UZB pmax pmax
comp=Z,50nm,0.9s
UZB Uzynbulak 63.91 307⇑ *i* P **P** **00 41 46.5 +0.4**
comp=Z,50nm,0.9s
R49A Shelbyville 63.93 61 IAmb IAmb 00 41 47.9
comp=Z,129nm,1.5s
R49A IAMs_20 IAMs_20 01 07 57.1
comp=Z,3µm,22.0s
ERPA Erie 63.94 55 IAmb IAmb 00 41 48.1
comp=Z,93nm,0.8s

MEDO Medina 63.97 53 IAmb IAmb 00 41 48.2
comp=Z,106nm,0.9s
KLMR Klimovskoe 63.98 340 *e*P **P** **00 41 44.1 -1.9**
KLMR pmax pmax
comp=Z,169nm,1.3s
KLMR MLR MLR
comp=Z,6µm,18.0s
WVT Waverly 63.99 64 P **P** **00 41 46.9 +0.4**
WVT Waverly 63.99 64 IAMs_20 IAMs_20 01 08 58.7
comp=Z,2µm,22.0s
WVT Waverly 63.99 64 P **P** **00 41 46.9 +0.4**
WVT pmax pmax
comp=Z,140nm,1.0s
PECO Prince Edward 64.13 52 IAmb IAmb 00 41 48.3
comp=Z,71nm,1.0s
J55A Hilton 64.21 53 IAmb IAmb 00 41 49.1
comp=Z,92nm,1.1s
P51A Williamsport 64.23 59 IAmb IAmb 00 41 49.6
comp=Z,47nm,0.7s
SATY Saty 64.28 307 *c i* P **P** **00 41 49.0 +0.5**
SATY *e*S **S** **00 50 24.8 +0.8**
SATY pmax pmax
comp=Z,67nm,1.0s
SATY Saty 64.28 307⇑ *i* P **P** **00 41 49.0 +0.5**
comp=Z,67nm,1.0s
SATY *e*S **S** **00 50 24.8 +0.8**
143A Socs Landing, 64.36 69 IAMs_20 IAMs_20 01 12 50.9
comp=Z,2µm,20.0s
Q51A Peebles 64.40 59 IAmb IAmb 00 41 51.4
comp=Z,100nm,0.8s
R50A Paris 64.40 60 IAMs_20 IAMs_20 01 08 33.5
comp=Z,3µm,22.0s
ICQ Pointe Anglais 64.41 42 IAmb IAmb 00 41 49.5
comp=Z,102nm,1.2s
N53A Lisbon 64.45 56 IAmb IAmb 00 41 50.6
comp=Z,65nm,1.0s
MMNY Mt. Morris Dam 64.56 53 IAmb IAmb 00 41 51.3
comp=Z,150nm,1.2s
LMQ La Vallbaie 64.58 45 IAmb IAmb 00 41 50.6
comp=Z,99nm,1.2s
O53A New Philadelph 64.66 57 IAmb IAmb 00 41 52.7
comp=Z,90nm,0.8s
ZAIG Zacatecas 64.69 85 P **P** **00 41 52.0 +0.3**
PAMR Moraine State 64.74 56 IAmb IAmb 00 42 26.5
comp=Z,93nm,1.2s
V48A Smith Brothers 64.84 64 IAMs_20 IAMs_20 01 12 36.2
comp=Z,2µm,19.0s
U49A Red Boiling Sp 64.87 63 IAMs_20 IAMs_20 01 10 39.0
comp=Z,3µm,20.0s
MDOK Medeo 64.88 308 *e*P **P** **00 41 52.9 +0.4**
MDOK Medeo 64.88 308 *e*P **P** **00 41 52.9 +0.4**
AAA Alma-Ata 64.91 308 *e*P **P** **00 41 53.0 +0.5**
AAA pmax pmax
comp=Z,52nm,0.8s
AAA Alma-Ata 64.91 308 *e*P **P** **00 41 53.1 +0.5**
comp=Z,52nm,0.8s
J57A Williamstown 65.01 51 IAmb IAmb 00 42 06.0
comp=Z,55nm,1.0s
TNSS Tian-Shan 65.02 308 *e*P **P** **00 41 53.8 +0.1**
TNSS Tian-Shan 65.02 308 *e*P **P** **00 41 53.9 +0.1**
Q52A Bidwell 65.03 58 IAmb IAmb 00 41 55.1
comp=Z,67nm,0.8s
P53A Whipple 65.12 58 IAmb IAmb 00 41 55.7
comp=Z,47nm,0.7s
O54A Avella 65.15 56 IAmb IAmb 00 42 28.2
comp=Z,48nm,0.7s
AFI Afiamalu 65.16 171 LR LR 01 06 58.6
comp=Z,2µm,19.0s,baz=354,slow=33
L56A Keenewood 65.17 53 IAMs_20 IAMs_20 01 09 56.5
comp=Z,3µm,21.0s
WUS Wushi 65.23 305 IAMs_20 IAMs_20 01 11 50.1
comp=Z,3µm,20.0s
VBMS Vicksburg 65.23 69 IAMs_20 IAMs_20 01 13 57.9
comp=Z,2µm,20.0s
K57A Scipio Center 65.25 52 IAmb IAmb 00 41 55.7
comp=Z,157nm,1.2s
S51A Beattyville 65.27 60 IAMs_20 IAMs_20 01 09 23.4
comp=Z,3µm,22.0s
D62A Allapoint, All 65.50 45 IAmb IAmb 00 41 56.9
comp=Z,100nm,1.2s
TARG Taragay, Kyrgy 65.56 307 IAmb IAmb 00 42 18.7
comp=Z,56nm,0.9s
E62A Clayton Lake 65.64 45 IAmb IAmb 00 41 57.5
comp=Z,83nm,1.3s
J59A Piesco 65.70 50 IAmb IAmb 00 42 05.0
comp=Z,143nm,1.8s
Q54A Coxs Mills 65.78 58 IAmb IAmb 00 42 00.9
comp=Z,49nm,0.9s
146A Union 65.79 68 IAMs_20 IAMs_20 01 13 30.5
comp=Z,2µm,19.0s
MCWV Mont Chateau 65.81 56 IAmb IAmb 00 42 31.3
comp=Z,69nm,0.8s
TNCH TengChong 65.83 280 P **P** **00 42 00.0 +1.1**
TNCH PP **PP** **00 44 24.7 +1.0**
TNCH S **S** **00 50 42.8 -0.9**
TNCH pmax pmax
comp=Z,140nm,0.8s
TNCH pmax pmax
comp=Z,680nm,2.7s
TNCH L L
comp=Z,870nm,18.0s
TNCH L L
comp=Z,1µm,17.5s
TNCH L L
comp=Z,2µm,22.6s
SGDS Sogindy 65.85 310 *e*P **P** **00 41 59.2 +0.6**
comp=Z,33nm,0.9s
FIA1 FINESS Array S 65.86 347 P **P** **00 41 58.0 -0.3**
FINES FINESS Array B 65.87 347 P **P** **00 41 57.8 -0.5**
comp=Z,74nm,0.8s,baz=23,slow=9.3,SNR=147
FINES PKPPKP P'P'df 01 10 33.4 -8.4
comp=Z,4.5nm,0.9s,baz=108,slow=3.1,SNR=4.4
FINES LR LR 01 16 23.1
comp=Z,2µm,18.4s,baz=20,slow=41
comp=Z,74nm,0.8s
FINES FINESS Array B 65.87 347 P **P** **00 41 57.3 -1.0**
FINES FINESS Array B 65.87 347 *i* P **P** **00 41 57.2 -1.1**
FINES pmax pmax
comp=Z,74nm,0.8s
VT1 Waterbury 65.89 49 IAmb IAmb 00 42 14.6
comp=Z,105nm,1.7s
BINY Binghamton 65.91 52 IAmb IAmb 00 42 00.3
comp=Z,138nm,1.2s
M57A Sunshine Farm, 65.97 54 IAmb IAmb 00 42 00.8
comp=Z,112nm,1.2s
M57A IAMs_20 IAMs_20 01 10 11.9
comp=Z,3µm,21.0s
TZTN Tazewell 66.08 61 IAmb IAmb 00 42 02.2
comp=Z,96nm,1.0s
SSPA Standing Stone 66.11 55 P **P** **00 42 00.5 +0.3**
SSPA IAmb IAmb 00 42 01.4
comp=Z,55nm,0.9s
G62A West of Eustis 66.25 47 IAmb IAmb 00 42 01.7
comp=Z,84nm,1.3s
SWI Sorong 66.30 235 P **P** **00 42 01.1 -0.6**
comp=Z,3µmcomp=Z,203nm,1.0s
SIJI Sorong 66.30 235 P **P** **00 42 01.9 +0.2**
comp=Z,110nm,0.8s,baz=38,slow=6.1,SNR=43
SIJI LR LR 01 06 09.0
comp=Z,2µm,21.9s,baz=28,slow=32
comp=Z,110nm,0.8s
SIJI Sorong 66.30 235 P **P** **00 42 01.3 -0.5**
comp=Z,2µmcomp=Z,160nm,1.2s
CPCT Cooper Cave 66.34 63 IAmb IAmb 00 42 03.3
comp=Z,125nm,1.2s
LBNH Lisbon 66.35 48 IAmb IAmb 00 42 47.9
comp=Z,187nm,2.0s
L59A Walton 66.38 52 IAmb IAmb 00 42 03.1
comp=Z,101nm,1.2s
S54A Dingess, Beckl 66.39 59 IAmb IAmb 00 42 05.9
comp=Z,63nm,0.9s
Y49A Blount Mountai 66.43 65 IAMs_20 IAMs_20 01 12 47.4
comp=Z,1µm,18.0s
H62A Milan 66.45 48 IAmb IAmb 00 42 02.9
comp=Z,130nm,1.3s
MOL Molde 66.48 356 *e*P **P** **00 42 02.3 +0.1**
KSPA Keystone Colle 66.50 53 IAmb IAmb 00 42 03.9
comp=Z,106nm,1.3s
AAK Ala-Archa 66.53 309 LR LR 01 12 30.4
comp=Z,2µm,19.9s,baz=48,slow=37
AAK Ala-Archa 66.53 309 P **P** **00 42 03.6 +0.5**
AAK Ala-Archa 66.53 309 IAMs_20 IAMs_20 01 14 47.6
comp=Z,3µm,21.0s
AAK Ala-Archa 66.53 309 *i* P **P** **00 42 04.2 +1.1**
SNR=10.0
AAK Ala-Archa 66.53 309⇑ *e*P **P** **00 42 01.9 -1.2**
AAK pmax pmax
comp=Z,198nm,0.9s
AAK Ala-Archa 66.53 309 P **P** **00 42 04.7 +1.6**
N58A Sunbury 66.55 54 IAmb IAmb 00 42 04.3
comp=Z,77nm,1.1s
N58A IAMs_20 IAMs_20 01 10 51.2
comp=Z,3µm,21.0s
TKL Tuckaleechee C 66.61 62 LR LR 01 12 05.4
comp=Z,3µm,20.2s,baz=324,slow=37
TKL Tuckaleechee C 66.61 62 IAmb IAmb 00 42 05.1
comp=Z,127nm,1.0s
Q56A Snyder Ridge, 66.61 57 IAmb IAmb 00 42 34.2
comp=Z,45nm,0.9s
Q56A IAMs_20 IAMs_20 01 15 00.8
comp=Z,2µm,19.0s
TRY Troy 66.65 50 IAmb IAmb 00 44 20.2
comp=Z,73nm,1.5s
R55A Marlinton 66.67 58 IAmb IAmb 00 42 07.7
comp=Z,65nm,0.9s
NRN Naryn 66.69 307 IAmb IAmb 00 42 07.0
comp=Z,117nm,1.0s
LRAL Lakeview Retre 66.69 66 IAmb IAmb 00 42 05.1
comp=Z,92nm,0.8s
J61A Chester 66.73 49 IAmb IAmb 00 42 04.8
comp=Z,69nm,1.2s
F64A Sherman 66.75 45 IAmb IAmb 00 42 08.2
comp=Z,36nm,0.7s
PMG Port Moresby 66.75 216 LR LR 01 09 30.0
comp=Z,2µm,19.4s,baz=50,slow=34
PMG Port Moresby 66.75 216 P **P** **00 42 05.2 +0.7**
PMG Port Moresby 66.75 216 P **P** **00 42 05.0 +0.5**
PMG IAmb IAmb 00 42 06.1
comp=Z,104nm,1.6s
PMG Port Moresby 66.75 216 IAMs_20 IAMs_20 01 10 35.3
comp=Z,2µm,19.0s
PMG Port Moresby 66.75 216 P **P** **00 42 05.0 +0.5**
PMG pmax pmax
comp=Z,104nm,1.7s
PMG Port Moresby 66.75 216 P **P** **00 42 04.4 -0.1**
PUL Pulkovo 66.78 344⇑ *e*P **P** **00 42 03.3 -0.8**
PUL pmax pmax
comp=Z,699nm,6.2s
AKN Aaknes 66.89 357 *e*P **P** **00 42 05.9 +1.0**
LSA Lhasa 66.93 289 IAMs_20 IAMs_20 01 14 14.7
comp=Z,2µm,18.0s
LSA Lhasa 66.93 289 P **P** **00 42 07.5 +1.3**
LSA Lhasa 66.93 289 P **P** **00 42 04.6 -1.6**
LSA S S 00 50 46.2 -11
LSA pmax pmax
comp=Z,80nm,0.8s
LSA L L
comp=Z,960nm,18.3s
LSA L L
comp=Z,2µm,17.2s
LSA L L
comp=Z,2µm,17.6s
W52A Murphy 66.93 62 IAmb IAmb 00 42 07.3
comp=Z,126nm,1.1s
DOMB Dombas 66.93 355 *e*P **P** **00 42 05.2 0.0**
TNTI Ternate 67.00 240 P **P** **00 42 05.6 -0.6**
PAGS Pennsylvania G 67.00 54 IAmb IAmb 00 42 35.4
comp=Z,91nm,1.2s
U54A Nelsons Funny 67.05 60 IAmb IAmb 00 42 08.6
comp=Z,56nm,0.8s
I63A Otisfield 67.12 48 IAmb IAmb 00 42 07.5
comp=Z,98nm,1.3s
V53A Saluda 67.13 61 IAmb IAmb 00 42 08.9
comp=Z,60nm,0.8s
V53A IAMs_20 IAMs_20 01 10 09.8
comp=Z,3µm,22.0s
BLA Blacksburg 67.30 59 IAmb IAmb 00 42 11.1
comp=Z,90nm,1.1s
AKTO Aktyubinsk 67.51 324 LR LR 01 14 36.5
comp=Z,6µm,18.3s,baz=37,slow=38
AKTO Aktyubinsk 67.51 324 P **P** **00 42 07.5 -1.5**
G65A Princeton 67.61 45 IAmb IAmb 00 42 10.2
comp=Z,108nm,1.4s
AB31 Akbulak array 67.74 322 IAmb IAmb 00 42 13.1
comp=Z,66nm,1.1s
AB31 Akbulak array 67.74 322 P **P** **00 42 09.8 -0.7**
ABKAR Akbulak array 67.74 322 P **P** **00 42 10.2 -0.3**
Y52A Lilburn 67.76 63 IAmb IAmb 00 42 12.3
comp=Z,120nm,0.9s
NB2 NORSAR Subarra 67.81 354 P **P** **00 42 10.8 0.0**
comp=Z,179nm,1.1s,baz=8.0,slow=6.5
NB2 NORSAR Subarra 67.81 354 P **P** **00 42 10.8 0.0**
NOA NORSAR Array B 67.81 354 P **P** **00 42 10.6 -0.2**
comp=Z,85nm,0.9s,baz=7.2,slow=6.3,SNR=146
NOA PKPPKP **P'P'df** **01 10 33.3 -5.3**
comp=Z,2.1nm,0.9s,baz=172,slow=3.0,SNR=4.2
NOA LR LR 01 14 53.4
comp=Z,731nm,18.1s,baz=0.0,slow=39
comp=Z,85nm,0.9s
MOIG Morelia 67.83 86 IAmb IAmb 00 42 14.1
comp=Z,75nm,1.0s
PAL Palisades 67.83 52 IAmb IAmb 00 42 12.1
comp=Z,115nm,1.4s
NBO00 NORSAR Array S 67.85 354 IAmb IAmb 00 42 12.2
comp=Z,169nm,1.4s
DZA Taraz 67.85 311 *e*P **P** **00 42 11.9 +0.6**
DZA pmax pmax
comp=Z,43nm,1.1s
DZA Taraz 67.85 311 *e*P **P** **00 42 12.0 +0.6**
comp=Z,43nm,1.1s
V55A Taylorsville 67.87 60 IAmb IAmb 00 42 14.1
comp=Z,89nm,1.2s
HYA Hoyanger 67.93 357 *e*P **P** **00 42 11.6 +0.1**
U56A King 67.96 59 IAmb IAmb 00 42 14.6
comp=Z,44nm,0.8s
CPNY Central Park 67.97 52 IAmb IAmb 00 42 16.7
comp=Z,49nm,0.7s
GGN Saint George 68.00 45 IAmb IAmb 00 42 22.1
comp=Z,89nm,1.2s
NAO01 NORSAR Array S 68.03 354 IAmb IAmb 00 42 13.1
comp=Z,80nm,1.1s
EMMW East Machias 68.04 45 IAmb IAmb 00 42 24.9
comp=Z,53nm,1.0s
WES Weston 68.04 49 IAmb IAmb 00 42 22.1
comp=Z,46nm,0.8s
UCCT U. Connecticut 68.06 50 IAmb IAmb 00 42 13.4
comp=Z,93nm,1.3s
KK31 Karatay Array 68.08 312 P **P** **00 42 12.6 -0.1**
KKAR Karatay Array 68.08 312 P **P** **00 42 12.8 +0.1**
KKAR Karatay Array 68.08 312 P **P** **00 42 12.8 +0.1**
R58B Mineral 68.09 56 IAMs_20 IAMs_20 01 13 34.8
comp=Z,3µm,19.0s
NC602 NORSAR Array S 68.09 354 *e*P **P** **00 42 12.0 -0.5**
CBN Corbin Frederi 68.18 56 IAMs_20 IAMs_20 01 13 43.0
comp=Z,3µm,20.0s
152A Waverly Hall 68.26 65 IAMs_20 IAMs_20 01 14 45.9
comp=Z,2µm,18.0s
PAULI Pauline 68.31 61 IAmb IAmb 00 42 16.0
comp=Z,89nm,1.0s
LMN Caledonia Moun 68.31 43 IAmb IAmb 00 42 14.7
comp=Z,105nm,1.3s
SKAR Skarslia 68.33 356 *e*P **P** **00 42 14.6 +0.5**
SKAR IAmb IAmb 00 42 15.1
comp=Z,132nm,1.0s
KMSC Kings Mountain 68.33 61 IAMs_20 IAMs_20 01 11 09.5
comp=Z,3µm,22.0s
GOGA Godfrey 68.43 63 IAMs_20 IAMs_20 01 15 02.1
comp=Z,3µm,19.0s
GOGA Godfrey 68.43 63 IAmb IAmb 00 42 16.3
comp=Z,119nm,1.1s
M63A Gales Ferry 68.44 50 IAmb IAmb 00 42 15.6
comp=Z,116nm,1.2s
BRLS Boroldav 68.45 312 *c i* P **P** **00 42 17.1 +2.0**
BRLS pmax pmax
comp=Z,44nm,1.4s
BRLS Boroldav 68.45 312⇑ *i* P **P** **00 42 17.1 +2.0**
comp=Z,44nm,1.4s
MYLDM Lahad Datu 68.47 251 P **P** **00 42 16.9 +1.4**
MYLDM Lahad Datu 68.47 251 P **P** **00 42 16.2 +0.7**
comp=Z,3µmcomp=Z,3µmcomp=Z,164nm,1.3s
DRLN Deer Lake 68.51 37 P **P** **00 42 15.2 0.0**
DRLN IAmb IAmb 00 42 16.0
comp=Z,66nm,1.0s
HFS Hagfors 68.54 353 P **P** **00 42 14.8 -0.5**
comp=Z,87nm,0.8s,baz=34,slow=6.3,SNR=73
comp=Z,87nm,0.8s
MSVF Nonsavu 68.61 182 P **P** **00 42 17.8 +1.6**
MSVF Nonsavu 68.61 182 P **P** **00 42 19.0 +2.8**
MSVF Nonsavu 68.61 182 P **P** **00 42 19.0 +2.8**
MSVF pmax pmax
comp=Z,72nm,0.4s
VSU Vasula 68.62 345 *c e* P **P** **00 42 14.4 -1.4**
VSU pmax pmax
comp=Z,109nm,0.9s

KSH2 **Kashi** 68.62 306 P **P** 00 42 17.6 +1.2
KSH2 sP pwP 00 42 33.1 +3.6
KSH2 S **S** 00 51 16.8 0.0
KSH2 pmax pmax
comp=Z,290nm,1.4s
KSH2 L L
comp=Z,3µm,19.2s
KSH2 L L
comp=Z,2µm,16.3s
KSH2 L L
comp=Z,4µm,21.2s
BER Bergen 68.74 357 *eP* **P** 00 42 17.5 +1.0
OSL Oslo 68.94 354 *eP* **P** 00 42 18.6 +0.8
T59A Double "B" Far 69.01 57 IAmb IAmb 00 42 21.2
comp=Z,68nm,0.9s
JSC Jenkinsville 69.01 61 IAmb IAmb 00 42 20.6
comp=Z,77nm,0.8s
MORE Moreh 69.02 283 IAmb IAmb 00 43 22.6
comp=Z,32nm,0.9s
MORE IAMs_20 IAMs_20 01 15 18.1
comp=Z,2µm,20.0s
352A Blakely 69.02 66 IAMs_20 IAMs_20 01 16 30.2
comp=Z,2µm,18.0s
IUG luzhnay 69.04 312*c* *i*P **P** 00 42 19.2 +0.4
IUG pmax pmax
comp=Z,65nm,1.0s
IUG luzhnay 69.04 312⇑ *i*P **P** 00 42 19.3 +0.4
comp=Z,65nm,1.0s
MOS Moscow 69.04 338 *e*P **P** 00 42 17.3 -1.2
MOS *e* 00 42 42.7
MOS *e*S **S** 00 51 18.2 -2.7
MOS *e*SS **SS** 00 55 39.5 -6.3
MOS pmax pmax
comp=Z,191nm,1.2s
MOS MLR MLR
comp=Z,3µm,19.0s
V58A Windy Hill, Pi 69.06 59 IAmb IAmb 00 42 35.3
comp=Z,47nm,1.0s
CHM Chimkent 69.11 312 *e*P **P** 00 42 19.6 +0.5
CHM pmax pmax
comp=Z,48nm,0.9s
CHM Chimkent 69.11 312 *e*P **P** 00 42 19.6 +0.5
comp=Z,48nm,0.9s
KKM Kota Kinabalu 69.16 253 P **P** 00 42 20.7 +0.8
KKM Kota Kinabalu 69.16 253 IAmb IAmb 00 42 21.8
comp=Z,87nm,1.1s
KKM Kota Kinabalu 69.16 253 P **P** 00 42 19.4 -0.5
comp=Z,1µmcomp=Z,90nm,1.5s
ODD1 Odda 69.17 357 *e*P **P** 00 42 19.9 +0.6
BIRD Birdtown, Kers 69.18 61 IAmb IAmb 00 42 22.0
comp=Z,54nm,1.0s
154A Montrose 69.22 64 IAMs_20 IAMs_20 01 15 28.1
comp=Z,2µm,18.0s
KONO Kongsberg 69.29 355 P **P** 00 42 20.8 +0.8
KONO Kongsberg 69.29 355 *e*P **P** 00 42 20.3 +0.4
KONO Kongsberg 69.29 355 P **P** 00 42 20.8 +0.8
KONO pmax pmax
comp=Z,182nm,0.9s
BELG Belogornoye 69.35 331 P **P** 00 42 20.2 -0.2
comp=Z,72nm,0.9s,baz=310,slow=1.0,SNR=20
BELG LR LR 01 15 29.2
comp=Z,2µm,19.8s,baz=35,slow=38
comp=Z,72nm,0.9s
BELG Belogornoye 69.35 331*c* *i*P **P** 00 42 20.0 -0.4
BELG pmax pmax
comp=Z,17nm,0.9s
UNM Universidad Na 69.35 85 IAMs_20 IAMs_20 01 11 22.0
comp=Z,2µm,19.0s
SHL Shillong 69.52 285 P **P** 00 42 22.4 +0.3
SNR=78
MSAI Masohi 69.62 236 P **P** 00 42 22.0 -0.6
comp=Z,3µmcomp=Z,74nm,0.8s
BLS5 Blasjo 69.67 357 *e*P **P** 00 42 22.9 +0.6
Y57A Sumter 69.69 61 IAmb IAmb 00 42 24.7
comp=Z,77nm,0.7s
TIGA Tifton 69.82 65 IAMs_20 IAMs_20 01 15 53.0
comp=Z,2µm,18.0s
OBN Obninsk 69.86 339 LR LR 01 17 07.2
comp=Z,4µm,18.7s,baz=20,slow=39
OBN Obninsk 69.86 339 ⇑P **P** 00 42 22.9 -0.7
OBN Obninsk 69.86 339 P **P** 00 42 23.1 -0.4
OBN IAmb IAmb 00 42 24.2
comp=Z,135nm,1.0s
OBN Obninsk 69.86 339*c* *i*P **P** 00 42 22.8 -0.7
OBN *i* 00 42 40.7
OBN *i* 00 44 55.5
OBN *i*S **S** 00 51 35.2 +4.7
OBN pmax pmax
comp=Z,151nm,1.0s
OBN MLR MLR
comp=Z,4µm,18.0s
OBN Obninsk 69.86 339 P **P** 00 42 22.5 -1.0
comp=Z,140nm,1.1s
X58A Rowland 69.86 60 IAmb IAmb 00 42 25.9
comp=Z,232nm,1.8s
KRAI Karang Ratu 69.88 237 P **P** 00 42 23.8 -0.4
W59A Clinton 69.89 59 IAmb IAmb 00 42 41.0
comp=Z,70nm,0.9s
KMY Karmoy 69.92 357 *e*P **P** 00 42 24.7 +0.9
SANI Sanana 70.10 240 P **P** 00 42 24.3 -1.3
SANI Sanana 70.10 240 P **P** 00 42 26.1 +0.6
SANI Sanana 70.10 240 P **P** 00 42 24.5 -1.0
comp=Z,1µmcomp=Z,58nm,1.2s
BNDI Bandanaira 70.11 235 P **P** 00 42 25.1 -0.5
comp=Z,114nm,1.0s
CHTO Chiang Mai 70.15 276 P **P** 00 42 26.6 +0.7
CHTO Chiang Mai 70.15 276 P **P** 00 42 25.9 0.0
CHTO IAmb IAmb 00 42 27.2
comp=Z,61nm,1.1s
CHTO Chiang Mai 70.15 276 P **P** 00 42 25.9 0.0
CHTO pmax pmax
comp=Z,61nm,1.1s
CHTO MLR MLR
comp=Z,900nm,21.0s
CHTO Chiang Mai 70.15 276 P **P** 00 42 26.3 +0.4
CHTO Chiang Mai 70.15 276 P **P** 00 42 25.7 -0.2
comp=Z,966nmcomp=Z,60nm,1.0s
553A Crawfordville 70.26 66 IAMs_20 IAMs_20 01 17 15.9
comp=Z,2µm,19.0s
MRSI Marisa 70.27 245 P **P** 00 42 26.2 -0.4
comp=Z,2µmcomp=Z,161nm,1.1s
AAI Ambon 70.29 237 P **P** 00 42 27.3 +0.6
comp=Z,2µmcomp=Z,126nm,1.3s
TOLI2 Tolitoli 70.41 246 P **P** 00 42 27.2 -0.3
TOLI2 Tolitoli 70.41 246 IAmb IAmb 00 42 28.1
comp=Z,82nm,1.0s
CM31 Chiang Mai Arr 70.42 275 IAmb IAmb 00 42 29.1
comp=Z,49nm,0.8s
CM31 Chiang Mai Arr 70.42 275 P **P** 00 42 28.2 +0.7
SNR=22
CMAR Chiang Mai Arr 70.42 275 P **P** 00 42 27.9 +0.4
comp=Z,36nm,0.8s,baz=26,slow=6.9,SNR=178
CMAR PKPPKP **P'P'df** 01 10 27.7 -2.2
comp=Z,2.4nm,0.7s,baz=240,slow=5.0,SNR=8.3
CMAR LR LR 01 13 41.9
comp=Z,857nm,21.6s,baz=75,slow=36
comp=Z,36nm,0.8s
CMAR Chiang Mai Arr 70.42 275 P **P** 00 42 26.9 -0.6
CMAR Chiang Mai Arr 70.42 275 *i*P **P** 00 42 27.8 +0.3
CMAR pmax pmax
comp=Z,37nm,0.8s
NLAI Namlea 70.50 238 P **P** 00 42 27.0 -0.9
comp=Z,2µmcomp=Z,37nm,1.0s
RGRS Roger Stewart 70.63 62 IAmb IAmb 00 42 31.1
comp=Z,222nm,1.0s
SNART Snartemo 70.72 356 *e*P **P** 00 42 29.6 +0.9
SNART Snartemo 70.72 356 *i*P **P** 00 42 29.1 +0.4
HOMB Homborsund 70.73 355 *i*P **P** 00 42 29.0 +0.3
TJOU Tjoern 70.78 354 *i*P **P** 00 42 29.4 +0.3
EVN Everest 70.78 291 IAmb IAmb 00 42 32.7
comp=Z,116nm,1.2s
257A Skidaway Islan 70.86 63 IAmb IAmb 00 42 32.3
comp=Z,151nm,1.1s
257A IAMs_20 IAMs_20 01 14 23.6
comp=Z,3µm,20.0s
LUWI Luwuk 71.04 243 P **P** 00 42 29.5 -1.8
LUWI Luwuk 71.04 243 P **P** 00 42 31.4 +0.1
LUWI Luwuk 71.04 243 IAMs_20 IAMs_20 01 08 00.5
comp=Z,2µm,22.0s
LUWI Luwuk 71.04 243 P **P** 00 42 29.7 -1.6
comp=Z,3µmcomp=Z,161nm,1.1s
BORU Boraas 71.09 353 *i*P **P** 00 42 31.1 +0.1
456A Hilliard 71.24 64 IAMs_20 IAMs_20 01 17 29.7
comp=Z,2µm,18.0s
ONAU Onsala 71.39 353 *i*P **P** 00 42 32.6 -0.2
MPSI Mapaga 71.55 246 P **P** 00 42 34.0 -0.4
comp=Z,5µmcomp=Z,118nm,0.9s
APSI Ampana 71.57 244 P **P** 00 42 33.9 -0.6
comp=Z,4µmcomp=Z,95nm,1.3s
OVD Ostervraa, Den 71.58 354 *i*P **P** 00 42 34.9 +0.9
OVD IAmb IAmb 00 42 35.2
comp=Z,254nm,1.0s
LPSR Galich'ya Gora 71.59 336 *e*P **P** 00 42 31.2 -2.9
LPSR pmax pmax
comp=Z,40nm,1.0s
FABU Falkenberg 71.72 353 *i*P **P** 00 42 35.0 +0.2
BRDH Bariadhala 71.80 284 LR LR 01 17 48.6
comp=Z,948nm,19.5s,baz=32,slow=39
PABE Paberze 71.89 346 IAmb IAmb 00 42 36.6
comp=Z,104nm,0.8s
GOET G??ttrup 71.92 355 *i*P **P** 00 42 37.4 +1.4
GOET IAmb IAmb 00 42 38.3
comp=Z,186nm,1.0s
656A Willston 71.97 66 IAMs_20 IAMs_20 01 17 46.0
comp=Z,2µm,22.0s
VRH Novokhopyorsk 72.12 334 *e*P **P** 00 42 33.7 -3.6
VRH pmax pmax
comp=Z,40nm,1.0s
BLEU Blekinge 72.13 351 *i*P **P** 00 42 36.7 -0.6
DEL Delary 72.15 352 *i*P **P** 00 42 37.2 -0.1
CHGR Chuyangaron 72.18 310*c* *i*P **P** 00 42 38.7 +0.7
CHGR pmax pmax
comp=Z,888nm,0.9s
MNK Minsk 72.21 343 *i*P **P** 00 42 38.0 +0.2
comp=E,71nm,1.1s
MNK *i*P **P** 00 42 38.0 +0.2
comp=N,17nm,0.8s
MNK *i*P **P** 00 42 38.0 +0.2
comp=Z,127nm,0.9s,baz=15
MNK *i*PcP **PcP** 00 42 55.8 -0.1
MNK *i*PP **PP** 00 45 18.5 +0.8
MNK *i*PPP PPP 00 47 02.8
MNK *i*S **S** 00 51 59.0 +1.3
MNK *i*ScS **ScS** 00 52 41.6 +0.3
MNK *i*SS **SS** 00 56 38.0 +3.7
MNK *i*SSS SSS 00 59 58.5
MNK *i*LQ LQ 01 09 31.1
MNK *i*LR LR 01 13 24.8
MNK *i*LRM MLR 01 15 03.6
comp=E,2µm,21.5s
MNK *i*LRM MLR 01 15 08.9
comp=Z,3µm,21.1s
MNK *i*LRM MLR 01 15 30.2
comp=N,1µm,18.9s
MNK Minsk 72.21 343 *i*P **P** 00 42 37.9 +0.2
MNK *i**PP **sP** 00 42 48.2 -1.8
MNK *i* 00 42 55.7
MNK *i* 00 45 18.4
MNK *i*PPP PPP 00 47 02.7
MNK *i*S **S** 00 51 59.0 +1.3
MNK *i* 00 52 41.5
MNK *i*SS **SS** 00 56 38.0 +3.7
MNK pmax pmax
comp=Z,127nm,0.9s
MNK pmax pmax
comp=E,71nm,1.1s
MNK pmax pmax
comp=N,17nm,0.8s
MNK MLR MLR
comp=E,2µm,21.0s
MNK MLR MLR
comp=Z,3µm,21.0s
MNK MLR MLR
comp=N,1µm,19.0s
DRUM Mains of Drumt 72.28 2 *e*P **P** 00 42 38.2 0.0
DRUM IAmb IAmb 00 42 39.6
comp=Z,85nm,0.9s
VORR Voronezh 72.37 336 *e*P **P** 00 42 38.1 -0.7
VORR pmax pmax
comp=Z,88nm,1.3s
SAUI Saumlaki 72.37 232 P **P** 00 42 40.3 +1.1
SAUI Saumlaki 72.37 232 P **P** 00 42 40.8 +1.6
COEN Coen 72.43 218 P **P** 00 42 39.7 +0.2
comp=Z,42nm,1.1s
COEN Coen 72.43 218 P **P** 00 42 40.5 +1.0
MUD Monsted U'grnd 72.50 355 *i*P **P** 00 42 40.4 +0.9
MUD IAmb IAmb 00 42 41.6
comp=Z,129nm,1.0s
PCI Palu 72.60 246 P **P** 00 42 39.6 -1.0
comp=Z,127nm,1.2s
VSR Storozhevoye 72.79 336 *e*P **P** 00 42 38.8 -2.5
VSR pmax pmax
comp=Z,50nm,1.0s
VORD Divnogorie 72.99 335 *e*P **P** 00 42 40.7 -1.8
VORD pmax pmax
comp=Z,50nm,1.0s
LUNU Lund 73.02 352 *i*P **P** 00 42 43.0 +0.4
COP Copenhagen 73.05 353 *i*P **P** 00 42 43.0 +0.2
COP IAmb IAmb 00 42 44.0
comp=Z,277nm,0.8s
HAMD Hammershus, De 73.26 351 *i*P **P** 00 42 43.9 0.0
HAMD IAmb IAmb 00 42 44.4
comp=Z,68nm,0.9s
PPT Papeete 73.37 150 LR LR 01 08 22.0
comp=Z,932nm,20.9s,baz=351,slow=30
BSD Bornholm Skovb 73.40 351 *i*P **P** 00 42 44.8 0.0
BSD IAmb IAmb 00 42 45.4
comp=Z,43nm,1.0s
SSRD Sdr. Stenderup 73.45 354 *i*P **P** 00 42 46.5 +1.4
SSRD IAmb IAmb 00 42 46.8
comp=Z,190nm,0.9s
SUW Suwalki 73.45 346 *e*P **P** 00 42 44.3 -0.9
SHAA Shahritus 73.54 310 IAmb IAmb 00 42 48.8
comp=Z,1µm,1.3s
DWPF Disney Wildern 73.55 66 P **P** 00 42 47.8 +1.7
DWPF Disney Wildern 73.55 66 IAMs_20 IAMs_20 01 18 50.9
comp=Z,1µm,18.0s
CMIG Matias Romero 73.72 83 LR LR 01 10 39.5
comp=Z,1µm,21.9s,baz=302,slow=32
EKA Eskdalemuir Ar 73.85 2 P **P** 00 42 47.6 +0.1
comp=Z,71nm,0.8s,baz=355,slow=5.0,SNR=79
EKA LR LR 01 13 14.8
comp=Z,928nm,21.6s,baz=338,slow=34
comp=Z,71nm,0.8s
ESK Eskdalemuir 73.86 2 *e*P **P** 00 42 47.9 +0.3
ESK IAmb IAmb 00 42 49.4
comp=Z,61nm,0.8s
ESK Eskdalemuir 73.86 2 P **P** 00 42 48.5 +0.9
ESK IAmb IAmb 00 42 49.2
comp=Z,96nm,0.8s
ESK Eskdalemuir 73.86 2 P **P** 00 42 48.5 +0.9
ESK pmax pmax
comp=Z,96nm,0.9s
DZM Mont Dzumac 73.90 193 P **P** 00 42 49.4 +1.2
DZM Mont Dzumac 73.90 193 IAmb IAmb 00 44 40.8
comp=Z,48nm,0.7s
IDGL Inch Island, C 73.95 5 P **P** 00 42 48.7 +0.7
IDGL Inch Island, C 73.95 5 *e*P **P** 00 42 48.4 +0.4
IDGL IAmb IAmb 00 42 50.7
comp=Z,92nm,0.9s
CLGH Cloghs, Cushen 74.00 4 *e*P **P** 00 42 48.7 +0.3
CLGH IAmb IAmb 00 42 50.3
comp=Z,89nm,1.0s
NIL Nilore 74.03 304 P **P** 00 42 50.4 +1.4
NIL Nilore 74.03 304 P **P** 00 42 50.4 +1.4
NIL pmax pmax
comp=Z,260nm,1.0s
NIL MLR MLR
comp=Z,5µm,21.0s
NIL Nilore 74.03 304 P **P** 00 42 50.6 +1.6
NEWG New Galloway 74.04 3 *e*P **P** 00 42 48.9 +0.3
NEWG IAmb IAmb 00 42 50.2
comp=Z,45nm,0.9s
RGN Rugen 74.10 352 *e*P **P** 00 42 49.6 +0.7
comp=Z,244nm,0.7s,baz=8.7,slow=5.6
RAR Rarotonga 74.17 161 LR LR 01 09 19.4
comp=Z,3µm,19.7s,baz=320,slow=31
OUENC Ouen Island, N 74.19 193 P **P** 00 42 51.1 +1.4
KKSI Kolaka, Sulawe 74.25 242 P **P** 00 42 50.4 +0.1
comp=Z,43nm,0.4s
TTSI Tana Toraja 74.35 244 P **P** 00 42 51.0 +0.1
comp=Z,2µmcomp=Z,105nm,1.1s
EDMD Edmundbyers 74.37 1 *e*P **P** 00 42 50.4 -0.1
EDMD IAmb IAmb 00 42 51.8
comp=Z,48nm,0.7s
SBUM Sibu 74.41 254 P **P** 00 42 52.4 +1.1
SBUM Sibu 74.41 254 P **P** 00 42 51.9 +0.6
comp=Z,35nm,0.7s
MMSI Mamuju 74.58 245 P **P** 00 42 52.3 0.0
comp=Z,1µmcomp=Z,120nm,0.8s
HLG Helgoland 74.84 355 *e*P **P** 00 42 54.2 +1.0
comp=Z,138nm,0.6s,baz=8.7,slow=5.6
BSEG Bad Segeberg 74.94 354 *e*P **P** 00 42 54.6 +0.7
comp=Z,64nm,0.7s,baz=8.7,slow=5.6
GKP Gorka Klasztor 74.97 350 *e*P **P** 00 42 53.9 -0.1
060A Indiantown 74.98 66 IAMs_20 IAMs_20 01 15 17.8
comp=Z,2µm,22.0s
ILTH Belurgan, Co L 75.05 4 P **P** 00 42 55.8 +1.4
SPSI Sidrap Palu 75.13 244 P **P** 00 42 55.6 +0.2
comp=Z,1µmcomp=Z,1µmcomp=Z,41nm,0.9s
TEIG Tepich 75.44 76 IAMs_20 IAMs_20 01 17 17.9
comp=Z,1µm,18.0s
KBL Kabul 75.48 307 P **P** 00 42 57.6 0.0
KBL Kabul 75.48 307 P **P** 00 42 57.6 0.0
KBL pmax pmax
comp=Z,324nm,0.9s
KBL Kabul 75.48 307 P **P** 00 42 57.7 +0.1
SNR=144
IGLA Glengowla, Co 75.49 6 P **P** 00 42 57.3 +0.3
R9F13 Warsaw-Wawer 75.50 347 *e*P **P** 00 42 57.3 +0.3
R9F13 eS SKiKP 00 51 50.1 -26
RNPP9 Sopachiv 75.52 344 P **P** 00 42 55.6 -1.6
AK23 Malin Array Si 75.53 342 P **P** 00 42 56.1 -1.2
AK21 Malin Array Si 75.53 342 P **P** 00 42 56.2 -1.1
AK22 Malin Array Si 75.54 342 P **P** 00 42 56.2 -1.1
AK03 Malin Array Si 75.55 341 P **P** 00 42 56.2 -1.2
061Z Ochoppi 75.56 67 IAMs_20 IAMs_20 01 18 34.2
comp=Z,2µm,19.0s
061Z Ochoppi 75.56 67 *i*P **P** 00 42 59.7 +1.9
061Z Ochoppi 75.56 67 *i*P **P** 00 42 59.7 +1.9
AK04 Malin Array Si 75.56 341 P **P** 00 42 56.3 -1.1
AKASG Malin Array Be 75.57 341 P **P** 00 42 57.0 -0.5
comp=Z,61nm,0.8s,baz=22,slow=5.8,SNR=130
AKASG LR LR 01 20 58.5
comp=Z,2µm,18.5s,baz=25,slow=40
comp=Z,61nm,0.8s
AKASG Malin Array Be 75.57 341 P **P** 00 42 56.9 -0.6
AKASG IAmb IAmb 00 42 58.2
comp=Z,156nm,1.1s
AKASG Malin Array Be 75.57 341 *i*P **P** 00 42 57.0 -0.5
AKASG pmax pmax
comp=Z,62nm,0.8s
AKBB Malin Array Si 75.57 341 IAmb IAmb 00 42 58.2
comp=Z,183nm,1.2s
AKBB Malin Array Si 75.57 341*c* *i*P **P** 00 42 57.0 -0.5
AKBB pmax pmax
comp=Z,171nm,1.2s
AKBB Malin Array Si 75.57 341 P **P** 00 42 56.4 -1.1
AK20 Malin Array Si 75.57 342 P **P** 00 42 56.9 -0.6
KIEV Kiev 75.58 341 ⇑P **P** 00 42 57.1 -0.4
KIEV Kiev 75.58 341 P **P** 00 42 56.4 -1.1
KIEV IAmb IAmb 00 42 58.2
comp=Z,165nm,1.2s
KIEV Kiev 75.58 341 *i*P **P** 00 42 57.1 -0.4
SNR=40
KIEV Kiev 75.58 341 P **P** 00 42 56.4 -1.1
KIEV pmax pmax
comp=Z,165nm,1.2s
KIEV MLR MLR
comp=Z,3µm,18.0s
KIEV Kiev 75.58 341 P **P** 00 42 56.4 -1.1
comp=Z,461nm,1.1s
AK01 Malin Array Si 75.58 341 P **P** 00 42 56.4 -1.2
AK18 Malin Array Si 75.58 342 P **P** 00 42 56.9 -0.7
AK19 Malin Array Si 75.59 342 P **P** 00 42 56.5 -1.1
AK15 Malin Array Si 75.59 341 P **P** 00 42 56.5 -1.1
RNPP8 Varash 75.60 344 P **P** 00 42 56.6 -1.1
AK02 Malin Array Si 75.61 341 P **P** 00 42 57.0 -0.8
AK17 Malin Array Si 75.62 342 P **P** 00 42 57.0 -0.8
AK16 Malin Array Si 75.62 341 P **P** 00 42 56.7 -1.1
AK08 Malin Array Si 75.63 341 P **P** 00 42 56.7 -1.1
AK12 Malin Array Si 75.64 341 P **P** 00 42 56.8 -1.1
AK09 Malin Array Si 75.64 341 P **P** 00 42 56.9 -1.0
AK05 Malin Array Si 75.65 341 P **P** 00 42 56.9 -1.1
MI28 Mi28,Pidlybu 75.65 342 P **P** 00 42 56.2 -1.8
AK14 Malin Array Si 75.66 341 P **P** 00 42 56.6 -1.4
AK10 Malin Array Si 75.66 341 P **P** 00 42 56.6 -1.4
AK06 Malin Array Si 75.68 341 P **P** 00 42 57.0 -1.2
AK13 Malin Array Si 75.69 342 P **P** 00 42 57.0 -1.2
RNPP5 Staryi Chortor 75.69 344 P **P** 00 42 57.1 -1.1
AK07 Malin Array Si 75.72 341 P **P** 00 42 57.2 -1.1
GORT1 Trebel 75.81 353 *e*P **P** 00 42 59.6 +0.8
comp=Z,187nm,1.1s,baz=8.7,slow=5.6
MTSU Mount Surprise 75.83 215 P **P** 00 42 59.9 +0.6
comp=Z,37nm,0.9s
MTSU Mount Surprise 75.83 215 P **P** 00 43 00.3 +1.0
DSB Dublin 75.83 4 P **P** 00 42 58.6 -0.3
DSB Dublin 75.83 4 P **P** 00 42 59.4 +0.5
DSB Dublin 75.83 4 IAmb IAmb 00 43 00.6
comp=Z,109nm,0.8s
KDU Kakadu 75.89 228 P **P** 00 42 59.6 -0.1
comp=Z,47nm,1.3s
BEL Belsk 75.92 347 *e*P **P** 00 43 00.1 +0.6
KAPI Kappang 76.00 243 LR LR 01 12 07.1
comp=Z,516nm,21.7s,baz=49,slow=32
KAPI Kappang 76.00 243 P **P** 00 43 01.4 +1.0
KAPI Kappang 76.00 243 P **P** 00 43 01.4 +1.0
KAPI Kappang 76.00 243 P **P** 00 43 01.4 +1.0
KAPI pmax pmax
comp=Z,43nm,1.1s
KAPI Kappang 76.00 243 P **P** 00 43 01.2 +0.7
KAPI Kappang 76.00 243 P **P** 00 42 59.8 -0.6
CCIG Comitan 76.04 81 IAmb IAmb 00 43 04.0
comp=Z,83nm,1.2s
RUE Ruedersdorf 76.11 352 *e*P **P** 00 43 00.7 +0.2
comp=Z,70nm,0.8s,baz=8.7,slow=5.6
RETH Rethem/Aller, 76.20 354 *e*P **P** 00 43 01.6 +0.6
comp=Z,113nm,1.1s,baz=8.7,slow=5.6
DRS Darwin Rock St 76.41 230 P **P** 00 43 03.5 +0.8
FLTG Flechtingen 76.47 353 *e*P **P** 00 43 02.4 -0.2
comp=Z,71nm,0.8s,baz=8.7,slow=5.6
CWF Charnwood Fore 76.48 1 *e*P **P** 00 43 02.7 +0.1
WACR West Acre 76.50 360 *e*P **P** 00 43 02.8 +0.1
LUBAR Lubar, Ukraine 76.60 342 P **P** 00 43 02.5 -0.9
MTN Manton Dam 76.66 229 P **P** 00 43 04.3 +0.3
comp=Z,133nm,1.1s
MTN Manton Dam 76.66 229 IAmb IAmb 00 43 05.2
comp=Z,116nm,1.0s
SOR Soroa 76.67 70 IAmb IAmb 00 43 06.6
comp=Z,113nm,1.1s
SOR Soroa 76.67 70 *i*P **P** 00 43 05.7 +1.5
SOR Soroa 76.67 70 *i*P **P** 00 43 05.7 +1.5
IWEX Carrickbyrne, 76.68 4 P **P** 00 43 03.3 -0.5
ASSE Asse, Remlinge 76.71 353 *e*P **P** 00 43 03.6 -0.3
comp=Z,61nm,1.0s,baz=8.7,slow=5.6
IBBN Ibbenburen 76.72 355 *e*P **P** 00 43 04.8 +0.8
comp=Z,236nm,0.8s,baz=8.7,slow=5.6
VAL Valentia 76.90 7 P **P** 00 43 03.3 -1.7
VAL Valentia 76.90 7 P **P** 00 43 03.0 -2.0
CTA Charters Tower 76.95 213 LR LR 01 11 31.9
comp=Z,929nm,21.7s,baz=13,slow=31
CTA Charters Tower 76.95 213 P **P** 00 43 05.9 +0.3
CTAO Charters Tower 76.95 213 P **P** 00 43 06.0 +0.3
CTAO Charters Tower 76.95 213 P **P** 00 43 05.8 +0.3
CTAO Charters Tower 76.95 213 P **P** 00 43 05.9 +0.3
CTAO pmax pmax
comp=Z,57nm,1.1s
CLZ Clausthal 77.02 354 *e*P **P** 00 43 06.5 +0.6
comp=Z,93nm,0.8s,baz=8.7,slow=5.6
GOF Gofitskoye 77.26 330*c* *i*P **P** 00 43 07.5 +0.3
CLL Collm 77.34 352⇑ *i*P **P** 00 43 07.2 -0.3
CLL *e**PP **pwP** 00 43 21.0 -0.4
CLL pmax pmax
comp=Z,55nm,1.0s
CLL MLR MLR
comp=Z,1µm,20.0s
CLL Collm 77.34 352⇑ *i*P **P** 00 43 07.2 -0.3
comp=Z,55nm,1.0s
CLL *e*P **pwP** 00 43 21.0 -0.4
CLL *e*sP PcP 00 43 26.0 +8.0
CLL *e*PP **PP** 00 45 59.0 -2.1
CLL *e*PPP PPP 00 47 48.0
CLL *e*PS **PnS** 00 53 42.0 +5.3
CLL *e*SS SS 00 58 12.0 +20
CLL *e*SSS SSS 01 01 30.0
CLL AMS AMS 01 22 00.0
comp=Z,1µm,20.0s
CLL AMS AMS 01 23 00.0
comp=N,1µm,18.1s
CLL AMS AMS 01 23 00.0
comp=E,1µm,20.2s
CLL Collm 77.34 352 *e*P **P** 00 43 07.0 -0.6
comp=E,29nm,0.7s,baz=8.7,slow=5.6
CLL Collm 77.34 352 P **P** 00 43 06.6 -0.9
comp=E,67nm,1.6s

GTTG Gottingen 77.35 354 eP P 00 43 08.2 +0.6
comp=E,116nm,1.1s,baz=8.7,slow=5.6
CAMR Camarioca 77.43 69 i P P 00 43 06.8 -1.7
CAMR Camarioca 77.43 69 i P P 00 43 06.8 -1.7
ERBR Yeremizino-Bor 77.44 332 eP P 00 43 07.8 -0.4
ERBR eS S 00 52 55.0 -1.3
ERBR pmax pmax
comp=Z,144nm,1.2s
ERBR MLR MLR
comp=Z,5µm,17.0s
KSP Ksiaz 77.47 350 eP P 00 43 08.2 -0.1
KSP Ksiaz 77.47 350 P P 00 43 07.7 -0.6
comp=Z,41nm,1.6s
SOEI Soe 77.47 237 P P 00 43 07.7 -1.1
SOEI Soe 77.47 237 P P 00 43 09.8 +1.0
SOEI Soe 77.47 237 IAmb IAmb 00 43 49.9
comp=Z,110nm,1.1s
SOEI Soe 77.47 237 P P 00 43 08.4 -0.4
comp=Z,2µmcomp=Z,81nm,0.9s
NEUB Neuenburg 77.55 353 eP P 00 43 08.9 +0.2
comp=Z,131nm,1.0s,baz=8.7,slow=5.6
BBKI Banjar Baru 77.56 248 P P 00 43 09.5 +0.2
comp=Z,99nm,1.1s
BUG Bochum--Univer 77.61 355 eP P 00 43 09.3 +0.3
comp=Z,56nm,0.7s,baz=8.7,slow=5.6
RTAL Retalhuleu 77.65 82 P P 00 43 10.6 +0.8
MAK Makhachkala 77.65 326 d i P P 00 43 08.2 -1.2
MAK e 00 46 02.7
MAK eS S 00 52 58.2 -0.5
MAK eSS SS 00 58 04.7 +7.3
MAK pmax pmax
comp=Z,45nm,0.6s
MAK pmax pmax
comp=Z,6µm,20.0s
BRG Berggiesshubel 77.68 351 eP P 00 43 09.1 -0.3
comp=Z,28nm,0.7s,baz=8.7,slow=5.6
CHVC Chvalec 77.75 350 eP P 00 43 10.2 +0.3
CHVC Chvalec 77.75 350 eP P 00 43 10.2 +0.3
OSTC Ostas 77.76 350 eP P 00 43 10.3 +0.4
OSTC MLR MLR
comp=Z,3µm,23.8s
OSTC Ostas 77.76 350 eP P 00 43 10.3 +0.4
OSTC AMS AMS 01 20 40.0
comp=Z,3µm,23.8s
KWP Kalwaria Pacla 77.78 345 eP P 00 43 10.5 +0.5
KWP Kalwaria Pacla 77.78 345 P P 00 43 10.3 +0.3
comp=Z,339nm,1.1s
KASTN Kahler Asten 77.78 355 eP P 00 43 10.6 +0.5
comp=Z,34nm,0.8s,baz=8.7,slow=5.6
UPC Upice 77.83 350 eP P 00 43 10.6 +0.3
UPC MLR MLR
comp=Z,2µm,20.2s
UPC Upice 77.83 350 eP P 00 43 10.6 +0.3
UPC AMS AMS 01 20 30.0
comp=Z,2µm,20.2s
DPC Dobruska-Polom 77.95 350 eP P 00 43 11.7 +0.7
DPC MLR MLR
comp=Z,2µm,20.9s
DPC Dobruska-Polom 77.95 350 eP P 00 43 11.7 +0.7
DPC AMS AMS 01 21 20.0
comp=Z,2µm,20.9s
DPC Dobruska-Polom 77.95 350 P P 00 43 10.3 -0.7
comp=Z,76nm,1.1s
PVCC Panska Ves 77.96 351 eP P 00 43 11.6 +0.6
PVCC MLR MLR
comp=Z,2µm,17.5s
PVCC Panska Ves 77.96 351 eP P 00 43 11.6 +0.6
PVCC AMS AMS 01 21 30.0
comp=Z,2µm,17.5s
HSKC Hora Svate Kat 78.00 351 eP P 00 43 11.3 0.0
HSKC AMS AMS 01 22 10.0
EDFI Ende, Flores 78.01 240 P P 00 43 10.7 -1.1
comp=Z,1µmcomp=Z,74nm,1.6s
APG El Apazote 78.05 81 LR LR 01 17 34.9
comp=Z,62nm,18.4s,baz=246,slow=36
MORS Morshin 78.06 344 P P 00 43 11.3 -0.3
SHIU Shidnytsya 78.06 345 P P 00 43 11.5 -0.2
UBBA Unterbreizbach 78.07 354 eP P 00 43 11.6 +0.2
comp=Z,66nm,1.3s,baz=8.7,slow=5.6
MOX Moxa 78.12 353 eP P 00 43 12.0 +0.1
comp=Z,31nm,0.7s,baz=8.7,slow=5.6
MOX eL L 01 23 59.0
comp=Z,831nm,20.9s
KMPD K-Podol'skiy 78.15 343 P P 00 43 11.4 -0.7
KMPD P P 00 43 11.4 -0.7
KRLC Kraliky 78.17 349 eP P 00 43 12.7 +0.5
KRLC MLR MLR
comp=Z,2µm,21.4s
KRLC Kraliky 78.17 349 eP P 00 43 12.7 +0.5
KRLC AMS AMS 01 24 40.0
comp=Z,2µm,21.4s
BATI Baumata 78.17 237 LR LR 01 13 34.0
comp=Z,414nm,21.8s,baz=48,slow=32
BATI Baumata 78.17 237 P P 00 43 12.6 0.0
comp=Z,121nm,0.9s
SORM Soroca 78.19 341 ⇑P P 00 43 12.2 -0.1
SORM Soroca 78.19 341 P P 00 43 11.6 -0.7
comp=Z,142nm,1.1s
STHS Stebnicka Huta 78.21 346 eP P 00 43 12.2 -0.3
STHS pmax pmax
comp=Z,106nm,1.4s
STHS Stebnicka Huta 78.21 346 eP P 00 43 12.2 -0.3
PLN Plauen 78.23 352 eP P 00 43 12.6 0.0
comp=Z,12nm,0.8s,baz=8.7,slow=5.6
OKC Ostrava-Krasne 78.23 348 eP P 00 43 13.2 +0.7
OKC MLR MLR
comp=Z,3µm,15.5s
OKC Ostrava-Krasne 78.23 348 eP P 00 43 13.2 +0.7
OKC AMS AMS 01 23 50.0
comp=Z,3µm,15.5s
TANN Tannenbergstha 78.28 352 eP P 00 43 12.7 -0.1
comp=Z,15nm,0.6s,baz=8.7,slow=5.6
BEBN Eben Emael 78.32 356 dP P 00 43 13.1 +0.1
comp=Z,117nm,0.9s
LABN Labinsk 78.34 332 eP P 00 43 12.3 -0.9
LABN e*PP sP 00 43 23.3 -2.3
LABN eS S 00 53 07.1 +1.0
LABN pmax pmax
comp=Z,71nm,1.3s
LABN MLR MLR
comp=Z,4µm,18.0s
NIE Niedzica 78.35 347 eP P 00 43 13.9 +0.7
NIE Niedzica 78.35 347 P P 00 43 12.6 -0.6
comp=Z,30nm,1.7s
KVAR Kislovodsk Arr 78.36 330 LR LR 01 21 51.2
comp=Z,2µm,20.8s,baz=266,slow=39
KIV Kislovodsk 78.36 330 ⇑P P 00 43 13.9 +0.4
KIV Kislovodsk 78.36 330 P P 00 43 13.6 +0.1
KIV IAMs_20 IAMs_20 01 24 07.2
comp=Z,2µm,20.0s
KIV Kislovodsk 78.36 330 i P P 00 43 13.8 +0.3
SNR=21
KIV Kislovodsk 78.36 330 eP P 00 43 12.7 -0.7
KIV pmax pmax
comp=Z,46nm,1.1s
KIV Kislovodsk 78.36 330 P P 00 43 14.0 +0.4
KIV Kislovodsk 78.36 330 P P 00 43 12.8 -0.7
STNU Starunia 78.36 344 P P 00 43 12.8 -0.5
UCC Uccle 78.37 357 P P 00 43 12.8 -0.4
UCC IAmb IAmb 00 43 14.4
comp=Z,56nm,0.8s
UCC Uccle 78.37 357 P P 00 43 12.8 -0.4
UCC pmax pmax
comp=Z,56nm,0.8s
UCC Uccle 78.37 357 dP P 00 43 12.6 -0.6
comp=Z,52nm,0.9s
MORC Moravsky Berou 78.37 349 ⇑P P 00 43 13.3 0.0
MORC Moravsky Berou 78.37 349 eP P 00 43 12.9 -0.5
NKC Novy Kostel 78.46 352 eP P 00 43 14.4 +0.6
NKC Novy Kostel 78.46 352 eP P 00 43 14.4 +0.6
NCK Nalchik 78.48 329 ⇓eP P 00 43 15.0 +0.9
NCK pmax pmax
comp=Z,129nm,1.2s
MEM Membach 78.50 356 dP P 00 43 14.3 +0.4
comp=Z,134nm,0.9s
KBZ Khabaz 78.50 330 P P 00 43 14.6 +0.5
comp=Z,23nm,1.0s,baz=59,slow=3.1,SNR=37
KBZ LR LR 01 22 00.6
comp=Z,3µm,20.9s,baz=17,slow=39
comp=Z,23nm,1.0s
KBZ Khabaz 78.50 330 c i P P 00 43 14.4 +0.3
KBZ pmax pmax
comp=Z,39nm,1.1s
PRU Pruhonice 78.50 351 eP P 00 43 14.3 +0.3
PRU MLR MLR
comp=Z,3µm,22.0s
PRU Pruhonice 78.50 351 eP P 00 43 14.3 +0.3
PRU AMS AMS 01 21 50.0
comp=Z,3µm,22.0s
BTNL Ternell 78.52 356 dP P 00 43 14.4 +0.3
comp=Z,105nm,0.9s
BSTI Sart Tilman 78.54 357 dP P 00 43 14.6 +0.4
comp=Z,27nm,0.8s
SHA1 Shidzhatmaz 78.56 330 c i P P 00 43 14.9 +0.1
AUNRC North Rockhamp 78.65 208 P P 00 43 16.1 +1.1
BCLA Clavier 78.71 357 dP P 00 43 15.6 +0.5
comp=Z,79nm,0.9s
LANS Liptovska Anna 78.73 347 eP P 00 43 16.3 +1.0
LANS pmax pmax
comp=Z,84nm,1.1s
LANS Liptovska Anna 78.73 347 eP P 00 43 16.3 +1.0
MANZ Manzenberg 78.73 352 eP P 00 43 15.4 +0.1
comp=Z,6.0nm,0.8s,baz=8.7,slow=5.6
BHOU Houvegnez 78.75 356 dP P 00 43 15.8 +0.4
comp=Z,30nm,1.0s
BGES Gesves 78.76 357 dP P 00 43 15.5 +0.1
comp=Z,68nm,1.0s
TNS Taunus Mts 78.76 355 eP P 00 43 15.8 +0.3
comp=Z,59nm,0.7s,baz=8.7,slow=5.6
LBFI Labuhan Bajo, 78.77 241 P P 00 43 14.3 -1.6
BMRD Maredsous 78.85 357 dP P 00 43 16.1 +0.2
comp=Z,121nm,0.9s
AKT Akhty 78.88 326 eP P 00 43 16.3 -0.1
AKT e 00 43 24.0
AKT e 00 46 12.8
AKT eS S 00 53 13.6 +1.4
AKT eSS SS 00 58 20.3 +4.1
AKT pmax pmax
comp=Z,66nm,1.0s
AKT MLR MLR
comp=Z,5µm,19.0s
HRA Herat 78.91 312 P P 00 43 16.8 0.0
HRA IAmb IAmb 00 43 19.2
comp=Z,100nm,0.9s
CCA1 Carnmenellis 78.93 4 eP P 00 43 16.8 +0.4
CCA1 IAmb IAmb 00 43 18.1
comp=Z,71nm,0.8s
ROTZ Rotzenmuhle 78.94 352 eP P 00 43 16.5 +0.1
comp=Z,6.6nm,0.9s,baz=8.7,slow=5.6
VRAC Vranov 78.94 349 LR LR 01 19 18.6
comp=Z,941nm,22.0s,baz=20,slow=36
VRAC Vranov 78.94 349 ⇑P P 00 43 16.7 +0.3
VRAC Vranov 78.94 349 eP P 00 43 16.4 -0.1
MGV Manicaragua 78.98 69 i P P 00 43 18.4 +1.4
MGV Manicaragua 78.98 69 i P P 00 43 18.4 +1.4
NEUR Neytrino 78.98 330 ⇑eP P 00 43 16.8 -0.2
NEUR pmax pmax
comp=Z,30nm,1.2s
RCHB Rochefort 78.98 357 dP P 00 43 16.4 -0.3
comp=Z,69nm,0.9s
DOU Dourbes 79.06 357 dP P 00 43 17.1 0.0
comp=Z,63nm,1.0s
ZVC Zvikov 79.08 351 eP P 00 43 17.7 +0.5
ZVC AMS AMS 01 22 00.0
comp=Z,3µm,19.5s
TREC Trest 79.08 350 eP P 00 43 17.6 +0.3
TREC MLR MLR
comp=Z,3µm,20.2s
TREC Trest 79.08 350 eP P 00 43 17.6 +0.3
TREC AMS AMS 01 24 30.0
comp=Z,3µm,20.2s
ESQI Esquipulas 79.09 80 P P 00 43 18.2 +0.4
ESQI IAmb IAmb 00 43 37.9
comp=Z,190nm,1.4s
GRA1 Grafenberg Arr 79.10 353 IAmb IAmb 00 43 19.1
comp=Z,107nm,0.8s
GRF Grafenberg Arr 79.10 353 eP P 00 43 17.7 +0.4
comp=Z,79nm,0.7s,baz=8.7,slow=5.6
GRF eL L 01 22 52.9
comp=Z,854nm,21.5s
GRFO Grafenberg 79.10 353 P P 00 43 18.4 +1.1
GRFO Grafenberg 79.10 353 P P 00 43 18.4 +1.1
ANN Anapa 79.14 334 eP P 00 43 17.1 -0.5
ANN e*PP PcP 00 43 26.5 +0.6
ANN eS S 00 53 15.2 +0.6
ANN eSS SS 00 58 19.9 +0.3
ANN pmax pmax
comp=Z,47nm,1.0s
BBSR BB Station 79.17 51 IAMs_20 IAMs_20 01 18 03.8
comp=Z,2µm,21.0s
KIS Kishinev 79.18 341 ⇑P P 00 43 17.6 -0.1
MTO3 Montecristo 79.20 81 P P 00 43 18.7 +0.1
KRUC Moravsky 79.21 349 eP P 00 43 17.7 -0.2
KECS Kecovo 79.23 346 eP P 00 43 18.8 +0.7
KECS pmax pmax
comp=Z,81nm,1.0s
KECS Kecovo 79.23 346 eP P 00 43 18.8 +0.7
JAVC Velka Javorina 79.25 348 eP P 00 43 19.2 +1.0
IASR Iasi 79.26 341 ⇓P P 00 43 18.2 0.0
BUR08 Bucovina Ar. S 79.27 343 IAmb IAmb 00 43 20.1
comp=Z,112nm,0.9s
BURAR Bucovina Array 79.29 343 ⇑P P 00 43 18.7 +0.2
BURAR Bucovina Array 79.29 343 P P 00 43 19.0 +0.5
BURAR IAmb IAmb 00 43 20.6
comp=Z,157nm,1.0s
PRAR RASCA 79.35 342 ⇑P P 00 43 18.8 +0.1
KULM Kulm 79.35 265 P P 00 43 19.5 +0.3
KULM Kulm 79.35 265 P P 00 43 19.1 -0.1
comp=Z,981nmcomp=Z,63nm,1.2s
PURM Purcari 79.39 340 ⇓P P 00 43 19.1 +0.2
WLF Walferdange 79.43 356 P P 00 43 19.1 -0.1
WLF Walferdange 79.43 356 P P 00 43 19.7 +0.6
WLF IAmb IAmb 00 43 21.1
comp=Z,106nm,1.0s
WLF Walferdange 79.43 356 P P 00 43 19.7 +0.6
WLF pmax pmax
comp=Z,106nm,1.0s
WLF Walferdange 79.43 356 dP P 00 43 19.6 +0.4
comp=Z,61nm,1.0s
WLF Walferdange 79.43 356 eP P 00 43 19.9 +0.7
comp=Z,92nm,1.0s,baz=8.7,slow=5.6
KHC Kasperske Hory 79.44 351 IAmb IAmb 00 43 20.9
comp=Z,66nm,1.0s
KHC Kasperske Hory 79.44 351 c i P P 00 43 19.4 +0.1
KHC pmax pmax
comp=Z,78nm,1.1s
KHC Kasperske Hory 79.44 351 eP P 00 43 20.0 +0.7
KHC AMS AMS 01 22 10.0
comp=Z,3µm,19.3s
PBA Port Blair 79.45 275 P P 00 43 18.3 -1.4
PBA IAmb IAmb 00 43 34.9
comp=Z,86nm,1.0s
WET Wettzell 79.50 352 eP P 00 43 19.9 +0.4
comp=Z,20nm,0.8s,baz=8.7,slow=5.6
BMR Baia Mare 79.54 344 ⇓P P 00 43 20.3 +0.6
SOC Sochi 79.60 332 eP P 00 43 18.9 -1.2
SOC ePPP PPP 00 48 13.8
SOC pmax pmax
comp=Z,37nm,1.0s
VSLR Vesyoloye 79.62 332 c i P P 00 43 20.0 -0.3
VSLR pmax pmax
comp=Z,88nm,1.1s
SMOL Smolenice 79.62 348 eP P 00 43 21.2 +1.0
SMOL pmax pmax
comp=Z,50nm,1.2s
CKRC Cesky Krumlov 79.68 351 eP P 00 43 20.7 +0.2
CKRC MLR MLR
comp=Z,3µm,18.3s
CKRC Cesky Krumlov 79.68 351 eP P 00 43 20.7 +0.2
CKRC AMS AMS 01 22 40.0
comp=Z,3µm,18.3s
GIRR Girov 79.69 342 ⇓P P 00 43 21.0 +0.4
CEI Carei 79.70 345 ⇑P P 00 43 20.8 +0.2
GEC2 GERESS Array S 79.72 351 P P 00 43 20.2 -0.6
GEC2 GERESS Array S 79.72 351 eP P 00 43 20.4 -0.4
comp=Z,23nm,0.7s,baz=8.7,slow=5.6
GERES GERESS Array B 79.72 351 P P 00 43 20.9 0.0
comp=Z,14nm,0.6s,baz=24,slow=4.7,SNR=59
GERES LR LR 01 23 00.4
comp=Z,969nm,18.8s,baz=22,slow=39
comp=Z,14nm,0.6s
IPM Ipoh 79.74 264 P P 00 43 21.0 -0.3
IPM Ipoh 79.74 264 P P 00 43 20.7 -0.6
comp=Z,890nmcomp=Z,66nm,1.1s
MODS Modra-Piesok 79.78 349 eP P 00 43 22.0 +0.9
MODS pmax pmax
comp=Z,212nm,1.2s
MODS Modra-Piesok 79.78 349 eP P 00 43 22.0 +0.9
QIS Mount Isa 79.81 218 P P 00 43 21.0 -0.5
comp=Z,34nm,2.2s
QIS Mount Isa 79.81 218 P P 00 43 20.9 -0.5
PSZ Piszkesteto 79.87 347 ⇑P P 00 43 22.2 +0.6
PSZ Piszkesteto 79.87 347 P P 00 43 21.9 +0.3
PSZ IAmb IAmb 00 43 24.4
comp=Z,127nm,1.2s
PSZ Piszkesteto 79.87 347 P P 00 43 21.9 +0.3
PSZ pmax pmax
comp=Z,127nm,1.2s
SIM Simferopol' 79.88 336 eP P 00 43 20.4 -1.2
SIM e 00 43 29.0
SIM eS S 00 53 17.0 -5.5
SIM pmax pmax
comp=Z,84nm,1.5s
SIM pmax pmax
comp=Z,2µm,20.6s
JSA Saint Aubin 80.02 2 eP P 00 43 22.3 0.0
JSA IAmb IAmb 00 43 24.0
comp=Z,137nm,0.8s
MYKOM Kota Tinggi 80.06 260 P P 00 43 24.0 +1.0
MYKOM Kota Tinggi 80.06 260 P P 00 43 23.5 +0.5
comp=Z,1µmcomp=Z,72nm,1.1s
RAO Raoul Island 80.07 178 LR LR 01 14 05.4
comp=Z,2µm,19.0s,baz=43,slow=32
TESR Tescani 80.08 342 ⇑P P 00 43 22.6 -0.1
LTVH Ltavrtes, Hu 80.09 345 ⇑P P 00 43 23.9 +1.2
BIR Birlad 80.12 341 ⇑P P 00 43 23.0 +0.1
MESR Meseseni 80.14 344 ⇑P P 00 43 24.0 +1.0
STU Stuttgart 80.16 354 IAmb IAmb 00 43 24.3
comp=Z,79nm,1.0s
STU Stuttgart 80.16 354 eP P 00 43 23.5 +0.4
comp=Z,162nm,0.9s,baz=8.7,slow=5.6
WINA Alland / Wiene 80.19 349 i P P 00 43 23.6 +0.3
comp=Z,63nm,1.2s,SNR=13
SRO Srobarova 80.20 348 eP P 00 43 24.7 +1.4
SRO pmax pmax
comp=Z,64nm,1.0s
SRO Srobarova 80.20 348 eP P 00 43 24.7 +1.4
PLAI Plampang 80.23 243 P P 00 43 22.9 -1.0
PLAI Plampang 80.23 243 P P 00 43 22.3 -1.6
comp=Z,1µmcomp=Z,96nm,1.4s
ONER Baraj Valea Uz 80.30 342 ⇓P P 00 43 25.0 +1.1
TPRI Tanjung Pinang 80.33 259 P P 00 43 25.5 +1.1
comp=Z,101nm,1.2s
GHRR 80.36 341 ⇑P P 00 43 24.4 +0.2
CONA Conrad Observa 80.39 349 eP P 00 43 25.1 +0.6
comp=Z,61nm,0.8s,SNR=16
EIDS Eidsvold 80.40 207 P P 00 43 25.5 +1.0
comp=Z,37nm,1.8s
EIDS Eidsvold 80.40 207 P P 00 43 25.7 +1.2
EIDS Eidsvold 80.40 207 P P 00 43 24.4 0.0
BSZH Besenyszg 80.42 346 ⇓P P 00 43 25.1 +0.6
VLDR Vladesti 80.43 341 ⇓P P 00 43 25.3 +0.8
CJR Cluj-Napoca 80.45 344 ⇓P P 00 43 25.4 +0.6
TGMR Targu Mures 80.47 343 ⇑P P 00 43 25.9 +1.1
DRGR 80.53 345 ⇑P P 00 43 25.9 +0.7
RONA Rosalia, Austr 80.56 349 i P P 00 43 26.2 +0.9
comp=Z,35nm,0.8s,SNR=13
MARR Marisel-Cluj 80.57 344 ⇑P P 00 43 26.0 +0.5
PANC Panciu 80.59 341 ⇑P P 00 43 26.6 +1.1
FUR Furstenfeldbru 80.61 353 eP P 00 43 26.0 +0.4
comp=Z,50nm,0.7s,baz=8.7,slow=5.6
MOA Molln 80.64 350 i P P 00 43 25.8 +0.1
comp=Z,22nm,0.9s
OZUR 80.65 342 ⇑P P 00 43 26.1 +0.3
BFO Black Forest 80.65 355 P P 00 43 25.8 0.0
BFO Black Forest 80.65 355 P P 00 43 25.8 0.0
BFO pmax pmax
comp=Z,62nm,1.1s
BFO Black Forest 80.65 355 eP P 00 43 26.0 +0.2
comp=Z,25nm,0.8s,baz=8.7,slow=5.6
TATR Tatarca 80.67 341 ⇑P P 00 43 27.0 +1.1
VRI Vrincioaia 80.69 342 ⇓P P 00 43 25.7 -0.3
BOSR Bodos 80.69 342 ⇑P P 00 43 26.5 +0.5
PLOR Plostina 80.72 342 ⇓P P 00 43 26.2 +0.1
ODBI Odobesti 80.72 341 ⇑P P 00 43 27.4 +1.3
GIUM Giurgiulesti 80.75 340 ⇑P P 00 43 26.6 +0.4
TGUH Tegucigalpa,Un 80.75 79 P P 00 43 27.9 +1.0
TUDR 80.75 341 ⇑P P 00 43 27.5 +1.2
IZVR Izvoarele 80.78 341 ⇓P P 00 43 27.4 +0.9
COVR Voineasa-Covas 80.81 342 ⇑P P 00 43 27.4 +0.8
SCHL Schela 80.81 341 ⇑P P 00 43 27.2 +0.6
SCHLR Schela 80.84 341 ⇑P P 00 43 27.0 +0.2
DOPR Dopca 80.85 343 ⇓P P 00 43 27.9 +1.1
BIOA Bad Ischl, Aus 80.86 351 eP P 00 43 27.2 +0.3
comp=Z,70nm,1.0s,SNR=18
MDB Medias 80.87 343 ⇓P P 00 43 27.6 +0.6
RJOB Jochberg 80.90 351 eP P 00 43 27.4 +0.2
comp=Z,44nm,0.8s,baz=8.7,slow=5.6
TLCR 80.90 340 ⇑P P 00 43 27.8 +0.7
CCCC Cccc 80.98 68 i P P 00 43 30.2 +2.3
CCCC Cccc 80.98 68 i P P 00 43 30.2 +2.3
CFR Carcaliu 81.05 340 ⇑P P 00 43 27.9 0.0
KHKI Kahang-Kahang 81.08 245 P P 00 43 27.8 -0.6
comp=Z,977nmcomp=Z,80nm,1.1s
ARSA Arzberg 81.10 350 eP P 00 43 29.0 +0.9
comp=Z,45nm,0.8s,SNR=15
GNI Garni 81.10 327 LR LR 01 24 23.2
comp=Z,4µm,19.8s,baz=32,slow=39
GNI Garni 81.10 327 P P 00 43 29.6 +1.1
GNI Garni 81.10 327 ⇓eP P 00 43 29.1 +0.6
GNI pmax pmax
comp=Z,61nm,1.1s
GNI Garni 81.10 327 P P 00 43 30.8 +2.3
GRER 81.10 341 ⇓P P 00 43 29.0 +0.8
UBR Ueberruh 81.18 353 eP P 00 43 29.0 +0.3
comp=Z,25nm,0.8s,baz=8.7,slow=5.6
NEHR Nehoiu 81.19 342 ⇓P P 00 43 29.3 +0.6
MLR Muntele Rosu 81.20 342 LR LR 01 22 26.3
comp=Z,2µm,20.6s,baz=22,slow=38
MLR Muntele Rosu 81.20 342 ⇑P P 00 43 29.2 +0.3
MLR Muntele Rosu 81.20 342 IAMs_20 IAMs_20 01 22 13.2
comp=Z,2µm,21.0s
LESA Schwarzleotal 81.22 351 eP P 00 43 29.4 +0.5
comp=Z,46nm,1.3s,SNR=7.6
KARS Kars 81.23 328 P P 00 43 29.4 +0.3
KARS Kars 81.23 328 P P 00 43 29.4 +0.3
KARS pmax pmax
comp=Z,38nm,1.1s
WB0 Warramunga Arr 81.24 223 IAmb IAmb 00 43 29.9
comp=Z,188nm,1.8s
TPI Tanjungpandan 81.29 255 P P 00 43 29.6 0.0
comp=Z,2µmcomp=Z,132nm,1.1s
TPGR Topolog 81.30 340 ⇑P P 00 43 29.4 +0.1
RETA Reutte 81.32 353 eP P 00 43 29.5 +0.1
comp=Z,33nm,0.9s,SNR=7.3
WR0 Warramunga Arr 81.35 223 P P 00 43 28.7 -1.0
WR8 Warramunga Arr 81.36 223 IAmb IAmb 00 43 30.4
comp=Z,249nm,2.0s
DEV Deva 81.38 344 ⇑P P 00 43 30.1 +0.5
DSRI Dabo 81.39 258 P P 00 43 30.7 +0.6
comp=Z,158nm,1.0s
WATA Walderalm 81.41 352 eP P 00 43 30.2 +0.2
comp=Z,154nm,1.1s,SNR=34
WRAB Tennant Creek 81.41 223 P P 00 43 29.8 -0.2
WRAB Tennant Creek 81.41 223 P P 00 43 29.6 -0.4
WRAB Tennant Creek 81.41 223 IAMs_20 IAMs_20 01 18 48.0
comp=Z,2µm,20.0s
WRAB Tennant Creek 81.41 223 c i P P 00 43 29.4 -0.6
WRAB pmax pmax
comp=Z,91nm,1.8s
WB2 Warramunga Arr 81.42 223 P P 00 43 29.6 -0.4
WRA Warramunga Arr 81.42 223 P P 00 43 29.6 -0.5
comp=Z,21nm,0.9s,baz=32,slow=6.2,SNR=73
WRA PKiKP PKiKP 00 48 54.8 0.0
comp=Z,0.8nm,0.8s,baz=25,slow=3.4,SNR=2.8
comp=Z,21nm,0.9s
WRA Warramunga Arr 81.42 223 P P 00 43 28.8 -1.2
VOIR 81.42 343 ⇑P P 00 43 30.9 +0.9
MOTA Moosalm 81.44 353 i P P 00 43 30.4 +0.2
comp=Z,120nm,1.2s,SNR=26
ISR Istrita 81.44 341 ⇑P P 00 43 30.0 -0.1
WTTA Wattenberg 81.47 352 eP P 00 43 31.0 +0.6
comp=Z,127nm,0.8s,SNR=30
KBA Koelnbreinsper 81.50 351 eP P 00 43 31.4 +0.9
comp=Z,206nm,0.7s,SNR=70
RTBI Rangdo, Negare 81.54 245 P P 00 43 29.1 -1.8
comp=Z,76nm,1.0s
SQTA Sankt Quirin 81.55 352 i P P 00 43 31.1 +0.4
comp=Z,94nm,1.0s,SNR=22
ARR Arges 81.57 343 ⇓P P 00 43 31.2 +0.4
DAVA Damuels 81.59 353 eP P 00 43 31.1 +0.1
comp=Z,54nm,1.3s,SNR=6.2
MTUR Matau 81.62 343 ⇑P P 00 43 30.8 -0.3
LOT Lotru 81.65 343 ⇑P P 00 43 31.0 -0.2

TIRR Tirgusor 81.68 340 ⇓P P 00 43 31.2 0.0
TIRR Tirgusor 81.68 340 P P 00 43 31.6 +0.3
TIRR Tirgusor 81.68 340 P P 00 43 31.6 +0.3
TIRR pmax pmax
comp=Z,45nm,1.1s
BEHE Becsehely 81.71 349 P P 00 43 31.3 -0.1
BEHE Becsehely 81.71 349⇑ iP P 00 43 31.7 +0.3
MORH Mrgy, Hungar 81.72 347 ⇑P P 00 43 31.4 0.0
MORH Mrgy, Hungar 81.72 347⇑ iP P 00 43 31.0 -0.4
SOKA Soboth 81.72 350 eP P 00 43 32.1 +0.6
comp=Z,167nm,1.1s,SNR=38
LHMI Lhok Sumawe 81.73 268 P P 00 43 33.1 +1.1
LHMI Lhok Sumawe 81.73 268 P P 00 43 32.0 +0.1
LHMI Lhok Sumawe 81.73 268 P P 00 43 33.0 +1.1
PPBI Pangkal Pinang 81.75 256 P P 00 43 31.7 -0.3
PERS Pernice 81.75 350 iP P 00 43 32.2 +0.5
FETA Feichten 81.79 353 iP P 00 43 32.5 +0.5
comp=Z,101nm,1.0s,SNR=22
TIM Timisoara 81.80 345 ⇓P P 00 43 32.5 +0.7
BZS Buzias 81.85 345 ⇑P P 00 43 32.3 +0.1
GZR Gura Zlata 81.87 344 ⇑P P 00 43 32.8 +0.4
GROS Grobnik 81.88 349 iP P 00 43 32.5 +0.1
ABTA Abfaltersbach 81.91 351 eP P 00 43 32.7 +0.2
comp=Z,127nm,1.1s,SNR=20
MYKA Terra Mystica 81.91 351 eP P 00 43 32.8 +0.2
comp=Z,41nm,1.0s,SNR=8.5
SULR 81.92 342 ⇑P P 00 43 32.8 +0.4
OBKA Obir 81.94 350 iP P 00 43 33.1 +0.4
comp=Z,87nm,0.7s,SNR=14
LEHL Lehliu 82.00 341 ⇑P P 00 43 32.8 -0.2
DAVOX Davos/Dischmat 82.09 353 LR LR 01 23 27.6
comp=Z,426nm,18.4s,baz=8.5,slow=38
PRED Cave del Predi 82.11 351 IAmb IAmb 00 43 34.4
comp=Z,65nm,0.9s
ICOR Ion Corvin 82.14 340 ⇑P P 00 43 35.0 +1.3
BANR Banloc 82.16 345 ⇓P P 00 43 34.6 +0.9
HLGC Holguin 82.21 66 iP P 00 43 35.2 +0.8
HLGC Holguin 82.21 66 iP P 00 43 35.2 +0.8
TW1H Toowoomba 1 Ha 82.22 205 P P 00 43 35.6 +1.5
FUORN Ofenpass-Fuorn 82.22 353 IAmb IAmb 00 43 36.2
comp=Z,66nm,0.9s
CNGN Cerro Negro 82.31 80 P P 00 43 34.5 -0.5
LMGC Las Mercedes 82.31 68 iP P 00 43 35.6 +0.7
LMGC Las Mercedes 82.31 68 iP P 00 43 35.6 +0.7
HUMR Humele 82.31 342 ⇑P P 00 43 34.3 -0.3
PSI Prapat 82.36 265 P P 00 43 36.4 +1.0
PSI Prapat 82.36 265 P P 00 43 35.0 -0.4
comp=Z,1µmcomp=Z,134nm,0.9s
SGRR Singureni 82.41 342 ⇑P P 00 43 34.6 -0.5
HERR Herculane 82.43 344 ⇑P P 00 43 35.2 0.0
TUE Stuetta 82.44 354 P P 00 43 35.6 +0.1
TUE IAmb IAmb 00 43 37.2
comp=Z,70nm,0.9s
RPSI Rantau Prapat 82.44 265 IAmb IAmb 00 43 36.4
comp=Z,113nm,0.9s
YAR Yar 82.44 67 iP P 00 43 36.5 +0.9
YAR Yar 82.44 67 iP P 00 43 36.5 +0.9
GCIS Gornji Cirnik 82.45 349 iP P 00 43 35.6 +0.3
KCSI Kotacane, Aceh 82.53 266 P P 00 43 32.9 -3.2
SIUN Universidad Ur 82.56 78 P P 00 43 36.9 +0.6
SABO M.te Sabotino 82.56 351 P P 00 43 35.7 -0.2
SABO IAmb IAmb 00 43 40.1
comp=Z,63nm,1.0s
FRGS Fruska Gora 82.58 346⇑ iP P 00 43 36.1 +0.1
KOPT Kop Dagi 82.62 330 P P 00 43 37.1 +0.5
MDVR Moldovita 82.65 345 ⇓P P 00 43 36.9 +0.5
SENIN Lac Senin/Sane 82.67 355 P P 00 43 36.5 -0.2
NGJI Ngawi 82.68 249 P P 00 43 36.0 -0.8
comp=Z,64nm,0.8s
CHIV Chivirico 82.72 67 P P 00 43 37.7 +0.6
CHIV Chivirico 82.72 67 iP P 00 43 38.0 +1.0
CHIV Chivirico 82.72 67 iP P 00 43 38.0 +1.0
SJI Sawahan 82.79 248 P P 00 43 35.2 -2.3
comp=Z,66nm,1.4s
TRI Trieste 82.81 350 P P 00 43 36.6 -0.5
TRI IAmb IAmb 00 44 22.2
comp=Z,103nm,1.3s
TRI Trieste 82.81 350 P P 00 43 36.6 -0.5
TRI pmax pmax
comp=Z,103nm,1.3s
SNJI Sawahan-Nganju 82.83 248 P P 00 43 37.8 0.0
comp=Z,2µmcomp=Z,62nm,1.5s
PUNG Punghina 82.93 344 ⇓P P 00 43 38.0 +0.3
VLAD Vladila 82.93 343 ⇑P P 00 43 37.9 +0.1
RAZG Razgrad 82.94 341 ⇑P P 00 43 38.0 +0.2
BKNI Bangkinang 82.95 262 P P 00 43 38.1 -0.2
BKNI Bangkinang 82.95 262 P P 00 43 39.0 +0.7
BKNI Bangkinang 82.95 262 P P 00 43 38.5 +0.2
BKNI Bangkinang 82.95 262 P P 00 43 37.2 -1.1
comp=Z,202nm,1.0s
BOAB BOACO BROADBAN 82.98 79 IAmb IAmb 00 43 55.9
comp=Z,171nm,1.4s
BOAB IAMs_20 IAMs_20 01 24 57.9
comp=Z,2µm,20.0s
MARVS Santiago de Cu 83.00 67 iP P 00 43 39.0 +0.5
MARVS Santiago de Cu 83.00 67 iP P 00 43 39.0 +0.5
MOAC Moa 83.02 66 iP P 00 43 32.8 -5.8
MOAC Moa 83.02 66 iP P 00 43 32.8 -5.8
SMRI Semarang 83.02 250 P P 00 43 37.9 -0.7
NMDO Nuevo Mundo 83.09 66 P P 00 43 39.3 +0.3
NMDO IAmb IAmb 00 43 40.9
comp=Z,86nm,0.9s
NMDO Nuevo Mundo 83.09 66 iP P 00 43 39.8 +0.8
NMDO Nuevo Mundo 83.09 66 iP P 00 43 39.8 +0.8
LOZB Loznitsa 83.11 341 ⇑P P 00 43 38.5 -0.2
RCC Rio Carpintero 83.12 67 iP P 00 43 39.3 +0.2
RCC Rio Carpintero 83.12 67 iP P 00 43 39.3 +0.2
BLY Banja Luka 83.35 348 ⇓P P 00 43 40.3 +0.3
BLY Banja Luka 83.35 348⇑ iP P 00 43 39.7 -0.3
MTDJ Mount Denham 83.43 69 P P 00 43 41.1 +0.2
MTDJ Mount Denham 83.43 69 iP P 00 43 41.9 +1.0
MTDJ Mount Denham 83.43 69 iP P 00 43 41.9 +1.0
GURO Guroymak-BITLI 83.45 328 P P 00 43 40.9 +0.1
QMBU Quimbuelo 83.47 66 iP P 00 43 42.1 +1.1
QMBU Quimbuelo 83.47 66 iP P 00 43 42.1 +1.1
PLVB Pleven 83.48 342 ⇓P P 00 43 40.5 -0.1
MNSI Mandailing Nat 83.50 263 P P 00 43 38.6 -2.5
comp=Z,55nm,0.7s
GTBY Guantanamo Bay 83.51 66 IAMs_20 IAMs_20 01 25 11.9
comp=Z,2µm,19.0s
GTBY Guantanamo Bay 83.51 66 iP P 00 43 43.2 +2.1
GTBY Guantanamo Bay 83.51 66 iP P 00 43 43.2 +2.1
TOKA Tokat 83.55 333 P P 00 43 41.5 +0.4
ILGA Ilgaz 83.63 335 P P 00 43 41.2 -0.5
ILGA IAmb IAmb 00 43 44.0
comp=Z,61nm,1.4s
QLP Quilpie 83.64 212 P P 00 43 42.7 +1.2
UGM Wanagama 83.67 249 P P 00 43 41.1 -0.9
UGM Wanagama 83.67 249 IAmb IAmb 00 43 49.0
comp=Z,118nm,1.1s
UGM Wanagama 83.67 249 P P 00 43 41.7 -0.3
ELND Elena 83.67 341 ⇓P P 00 43 41.7 +0.1
HYB Hyderabad 83.71 290 eP P 00 43 42.6 +0.3
HYB ePcP PcP 00 43 47.0 +0.6
HYB esP sP 00 43 52.0 -2.8
HYB ePP PP 00 46 56.2 +1.2
CTJI Waduk Cacaban 83.74 251 P P 00 43 40.7 -1.6
comp=Z,6µmcomp=Z,139nm,1.0s
MASC Masc 83.82 66 iP P 00 43 43.8 +1.1
MASC Masc 83.82 66 iP P 00 43 43.8 +1.1
FITZ Fitzroy Crossi 83.83 231 LR LR 01 21 25.5
comp=Z,896nm,19.5s,baz=50,slow=36
SSB Saint Sauveur 83.88 357 IAmb IAmb 00 43 44.4
comp=Z,45nm,1.0s
BBLS Lazi&#263i 83.91 346⇑ iP P 00 43 43.6 +0.7
PPI Padang Panjang 83.96 262 P P 00 43 41.7 -1.8
comp=Z,1µmcomp=Z,23nm,0.7s
BNI Bardonecchia 84.01 355 P P 00 43 44.3 +0.8
BNI IAmb IAmb 00 43 46.1
comp=Z,86nm,0.9s
BNI Bardonecchia 84.01 355 P P 00 43 44.3 +0.8
BNI pmax pmax
comp=Z,86nm,1.0s
PRMA PARMA 84.06 353 P P 00 43 43.7 +0.1
ARPR Arapgir-MALATY 84.13 331 P P 00 43 44.4 +0.1
ARPR IAmb IAmb 00 43 46.9
comp=Z,82nm,1.0s
KPJI Karang Pucung 84.15 251 P P 00 43 43.0 -1.4
comp=Z,117nm,1.1s
RUDO Rudo 84.15 346 eP P 00 43 44.3 +0.2
PDSI Padang 84.27 261 P P 00 43 43.7 -1.4
comp=Z,45nm,1.3s
GSI Gunungsitoli 84.36 265 P P 00 43 45.9 +0.4
GSI Gunungsitoli 84.36 265 IAmb IAmb 00 43 46.2
comp=Z,68nm,0.9s
GSI Gunungsitoli 84.36 265 P P 00 43 46.1 +0.6
comp=Z,3µmcomp=Z,120nm,0.9s
SJES Sjenica 84.41 346⇑ iP P 00 43 45.7 +0.1
ZCCA Zocca 84.42 352 P P 00 43 45.9 +0.4
LEM Lembang 84.53 252 P P 00 43 45.4 -1.1
comp=Z,28nm,0.6s,baz=85,slow=8.2,SNR=6.8
LEM LR LR 01 19 33.4
comp=Z,480nm,20.7s,baz=19,slow=34
comp=Z,28nm,0.6s
SAHE Sakarya_HENDEK 84.55 337 ⇓P P 00 43 46.4 +0.3
SILT Sile 84.55 338 ⇓P P 00 43 46.7 +0.6
KRJI Kerinci 84.57 260 P P 00 43 44.9 -1.8
KLI Kotabumi 84.65 256 P P 00 43 46.3 -0.6
VLC Villacollemand 84.66 353 P P 00 43 47.2 +0.5
KLINJ Klinje 84.71 347 eP P 00 43 47.0 -0.1
MDSI Maura Dua 84.77 256 P P 00 43 45.6 -1.9
comp=Z,1µmcomp=Z,108nm,1.1s
BLSI Bandar Lampung 84.81 255 P P 00 43 45.8 -2.0
MDUB Mudurnu 84.82 337 P P 00 43 47.7 +0.1
MDUB IAmb IAmb 00 43 50.1
comp=Z,76nm,1.0s
DBJI Dramaga 84.83 253 P P 00 43 46.8 -1.1
comp=Z,58nm,0.5s
BR131 Keskin Array S 84.89 335 IAmb IAmb 00 43 50.1
comp=Z,39nm,0.9s
BR131 Keskin Array S 84.89 335c iP P 00 43 47.8 -0.3
BR131 Keskin Array S 84.89 335 P P 00 43 48.3 +0.2
SNR=30
BRTR Keskin Array B 84.89 335 P P 00 43 48.0 -0.1
comp=Z,29nm,0.9s,baz=47,slow=2.6,SNR=139
BRTR PKKP PKKPdf 01 01 45.6 +1.3
comp=Z,0.7nm,0.8s,baz=171,slow=7.5,SNR=4.2
BRTR PKPPKP P'P'df 01 10 02.0 -5.4
comp=Z,0.8nm,0.8s,baz=176,slow=3.7,SNR=4.5
BRTR LR LR 01 28 14.4
comp=Z,753nm,18.3s,baz=9.0,slow=40
comp=Z,29nm,0.9s
BRTR Keskin Array B 84.89 335 P P 00 43 47.6 -0.5
BRTR Keskin Array B 84.89 335 P P 00 43 47.6 -0.5
ASAR Alice Springs 84.90 222 P P 00 43 48.1 +0.1
comp=Z,26nm,0.8s,baz=29,slow=5.0,SNR=146
ASAR PKiKP PKiKP 00 49 00.2 0.0
comp=Z,0.7nm,0.7s,baz=1.9,slow=2.8,SNR=2.3
ASAR LR LR 01 18 38.8
comp=Z,1µm,20.5s,baz=25,slow=33
comp=Z,26nm,0.8s
ASAR Alice Springs 84.90 222 P P 00 43 47.5 -0.5
MASI Maura Aman, Be 84.91 259 P P 00 43 47.6 -0.7
BRY Bratogost 84.98 347⇑ iP P 00 43 48.7 +0.2
BBJI Bungbulang 85.01 252 P P 00 43 48.0 -0.8
ARMA Armidale 85.04 205 P P 00 43 49.7 +1.1
ARMA Armidale 85.04 205 P P 00 43 49.1 +0.5
ARMA IAmb IAmb 00 43 51.0
comp=Z,53nm,0.9s
JTS Las Juntas de 85.09 80 LR LR 01 23 52.6
comp=Z,328nm,18.1s,baz=315,slow=37
JTS Las Juntas de 85.09 80 P P 00 43 50.0 +0.7
JTS Las Juntas de 85.09 80 P P 00 43 50.0 +0.7
JTS pmax pmax
comp=Z,16nm,1.0s
JTS MLR MLR
comp=Z,700nm,22.0s
KSI Kapahiang 85.09 258 P P 00 43 47.4 -1.8
BNN Bunyan 85.09 333 IAmb IAmb 00 43 51.5
comp=Z,59nm,0.9s
AULRC Lightning Ridg 85.12 208 P P 00 43 49.8 +0.9
TREB Trebinje 85.19 347 eP P 00 43 48.3 -1.0
LWLI Liwa 85.26 256 P P 00 43 48.4 -1.7
PDG Podgorica 85.33 346 ⇑P P 00 43 50.8 +0.7
PDG Podgorica 85.33 346 P P 00 43 49.8 -0.3
PDG IAmb IAmb 00 43 51.1
comp=Z,67nm,0.7s
PDG Podgorica 85.33 346 eP P 00 43 49.6 -0.4
KIRS Kirsehir-Merke 85.37 334 ⇑P P 00 43 50.5 0.0
UBSI University, Be 85.37 258 P P 00 43 49.7 -0.9
comp=Z,179nm,1.1s
KASI Kota Agung 85.39 255 P P 00 43 49.2 -1.4
comp=Z,917nmcomp=Z,71nm,0.9s
SKO Skopje 85.43 344 iP P 00 43 51.3 +0.8
BORA Eskisehir 85.56 337 IAmb IAmb 00 43 52.5
comp=Z,67nm,0.9s
ALN Alexandroupoli 85.59 341 P P 00 43 51.7 +0.3
ALN Alexandroupoli 85.59 341 P P 00 43 51.7 +0.3
ALN pmax pmax
comp=Z,24nm,1.0s
VAY Valandovo 85.86 343 iP P 00 43 53.1 +0.4
AUPHS Peel High Scho 85.88 205 P P 00 43 53.6 +0.9
CASP Castiglione de 85.98 352 P P 00 43 53.4 +0.2
CAMP Campotosto 85.99 350 P P 00 43 53.3 -0.2
CESX Cesi 86.00 351 IAmb IAmb 00 44 11.1
comp=Z,116nm,1.2s
AQU L'Aquila 86.17 350 P P 00 43 55.4 +1.1
AQU L'Aquila 86.17 350 eP P 00 43 54.8 +0.5
GAZ Gaziantep 86.24 331 P P 00 43 54.8 0.0
GAZ IAmb IAmb 00 43 56.6
comp=Z,44nm,0.9s
OHR Ohrid 86.37 345 iP P 00 43 58.5 +3.2
BALB Balikesir 86.40 339 IAmb IAmb 00 44 23.4
comp=Z,82nm,1.8s
SC01 Santiago de lo 86.41 63 P P 00 43 56.6 +0.9
SDDR Presa de Saban 86.44 64 P P 00 43 56.5 +0.5
SDDR IAmb IAmb 00 43 57.9
comp=Z,69nm,0.9s
SDDR IAMs_20 IAMs_20 01 28 19.4
comp=Z,1µm,18.0s
SDDR Presa de Saban 86.44 64 iP P 00 43 56.7 +0.7
SDDR Presa de Saban 86.44 64 iP P 00 43 56.7 +0.7
INTR Introdacqua 86.45 350 IAmb IAmb 00 44 17.2
comp=Z,74nm,0.9s
CEST Esterri de Car 86.63 359 P P 00 43 56.9 +0.3
CEST IAmb IAmb 00 43 59.2
comp=Z,54nm,1.1s
EJON La Jonquera 86.75 358 P P 00 43 57.9 +0.8
NGCH Negor - Chabah 86.91 308 P P 00 43 59.7 +1.6
SNR=8.2
PGAV Gavieira, Arco 86.97 6 eLR LR 01 13 47.9
PGAV IAMs_20 IAMs_20 01 28 43.0
comp=Z,881nm,18.0s
LIT Litokhoron 87.06 343 P P 00 43 58.0 -0.7
LIT Litokhoron 87.06 343 P P 00 43 58.0 -0.7
LIT pmax pmax
comp=Z,31nm,1.3s
PBRG Braganca 87.22 5 eP P 00 43 59.6 +0.1
PBRG IAmb IAmb 00 44 46.3
comp=Z,84nm,1.7s
ACER Acerenza 87.41 348 P P 00 43 59.7 -0.7
BANI BANI 87.44 64 P P 00 44 02.0 +1.1
PIRO Carate, Puerto 87.55 80 P P 00 44 02.5 +1.2
AUDCS Dubbo College 87.57 206 P P 00 44 01.9 +1.1
POLO Lamas de Olo 87.59 6 eP P 00 44 01.4 +0.1
SDD Santo Domingo 87.64 63 P P 00 44 01.8 +0.1
PVRL Vila Real 87.69 6 eP P 00 44 02.0 +0.3
PVRL IAmb IAmb 00 44 02.6
comp=Z,112nm,1.4s
CMSA Cobar Meteorol 87.78 209 P P 00 44 02.8 +0.9
MVO Moncorvo 87.85 5 eP P 00 44 02.5 0.0
MVO eLR LR 01 15 09.3
MVO IAMs_20 IAMs_20 01 29 21.1
comp=Z,1µm,20.0s
JASK Jask - Hormozg 88.08 310 P P 00 44 04.5 +0.7
SNR=11
PVIS Viseu 88.24 6 eP P 00 44 04.1 -0.2
RIV Riverview 88.40 204 P P 00 44 05.4 +0.7
XMI Christmas Isla 88.55 251 P P 00 44 06.6 +0.6
MTE Manteigas 88.58 6 IAmb IAmb 00 44 06.6
comp=Z,48nm,0.9s
MTE Manteigas 88.58 6 eP P 00 44 06.0 +0.1
MTE eLR LR 01 14 45.3
MTE IAMs_20 IAMs_20 01 33 19.9
comp=Z,701nm,18.0s
TOZ Tahuroa Road 88.61 184 IAmb IAmb 00 44 22.8
comp=Z,127nm,1.6s
ELL Elmali 88.67 337 P P 00 44 05.9 -0.6
ELL Elmali 88.67 337 P P 00 44 05.9 -0.6
ELL pmax pmax
comp=Z,17nm,1.2s
SHME Shamm 88.75 312 iP P 00 44 06.5 -0.4
SNR=14
SHME Shamm 88.75 312 P P 00 44 06.2 -0.7
SNR=15
BANOM Banah 88.78 312 iP P 00 44 06.8 -0.3
SNR=27
BANOM Banah 88.78 312 P P 00 44 07.2 +0.1
PCAS Casmilo, Conde 88.85 7 eP P 00 44 06.9 -0.2
UCM Universidad Co 88.87 3 P P 00 44 07.3 0.0
TIP Timpagrande 88.89 347 IAMs_20 IAMs_20 01 26 27.6
comp=Z,1µm,21.0s
WOLH Wollongong Har 89.02 204 P P 00 44 09.2 +1.6
URZ Urewera 89.08 182 LR LR 01 18 08.4
comp=Z,2µm,20.7s,baz=26,slow=32
PCBR Castelo Branco 89.14 6 eP P 00 44 08.0 -0.5
AKAS Kas 89.23 337 IAmb IAmb 00 44 09.7
comp=Z,39nm,0.9s
MDH Madha 89.31 311 iP P 00 44 08.2 -1.4
SNR=7.7
MDH Madha 89.31 311 P P 00 44 08.0 -1.5
SNR=6.8
MASF Masafi 89.32 311 P P 00 44 09.3 -0.3
SNR=8.1
MSFE Esma-Masafi 89.33 311 iP P 00 44 09.0 -0.7
SNR=9.5
PSARD Sardoal 89.33 6 eP P 00 44 09.0 -0.4
PSBE So Bento 89.37 7 eP P 00 44 09.3 -0.4
MBWA Marble Bar 89.38 234 P P 00 44 09.6 -0.1
MBWA Marble Bar 89.38 234 P P 00 44 09.6 -0.1
MBWA IAmb IAmb 00 44 10.3
comp=Z,48nm,0.8s
MBWA Marble Bar 89.38 234 IAMs_20 IAMs_20 01 24 24.0
comp=Z,1µm,20.0s
PRSN Puerto Rico Se 89.38 61 IAmb IAmb 00 44 11.9
comp=Z,99nm,1.2s
STKA Stephens Creek 89.40 212 P P 00 44 09.8 +0.3
comp=Z,49nm,0.9s,baz=350,slow=6.9,SNR=38
STKA LR LR 01 22 16.9
comp=Z,2µm,19.6s,baz=21,slow=34
comp=Z,49nm,0.9s
STKA Stephens Creek 89.40 212 P P 00 44 10.2 +0.7
CSS Mathiatis 89.44 333 IAmb IAmb 00 44 12.4
comp=Z,45nm,1.1s
RTZ Ruatahuna 89.44 183 IAmb IAmb 00 44 10.3
comp=Z,55nm,1.4s
ESDC Sonseca Array 89.48 3 P P 00 44 09.0 -1.2
comp=Z,12nm,1.1s,baz=351,slow=4.2,SNR=28
ESDC LR LR 01 24 43.5
comp=Z,576nm,20.3s,baz=6.5,slow=36
comp=Z,12nm,1.1s
ESDC Sonseca Array 89.48 3 P P 00 44 09.9 -0.2
MALK Mahakanadarawa 89.54 283 P P 00 44 10.6 -0.2
PMRV Marv??o 89.55 6 eP P 00 44 11.0 +0.5
PMRV IAmb IAmb 00 45 03.0
comp=Z,64nm,1.6s
PMRV eLR LR 01 15 28.0
PMRV IAMs_20 IAMs_20 01 26 13.8
comp=Z,644nm,20.0s
CRPR Cabo Rojo, PR 89.57 61 P P 00 44 11.1 +0.3
CRPR IAmb IAmb 00 44 13.5
comp=Z,66nm,1.0s
UUPR Utuado, UPR, P 89.58 61 P P 00 44 10.4 -0.5
UUPR IAmb IAmb 00 44 13.5
comp=Z,80nm,1.0s
PAB San Pablo 89.59 4 P P 00 44 10.2 -0.5
PAB San Pablo 89.59 4 P P 00 44 10.2 -0.5
PAB pmax pmax
comp=Z,38nm,1.4s
ARG Arkhangelos 89.61 338 P P 00 44 10.5 -0.2
ARG IAmb IAmb 00 44 11.1
comp=Z,65nm,1.1s
ARG Arkhangelos 89.61 338 P P 00 44 10.5 -0.2
ARG pmax pmax
comp=Z,65nm,1.1s
ECHE Chera 89.63 1 P P 00 44 11.0 +0.1
MLPR Magueyes Islan 89.63 61 P P 00 44 11.0 -0.1
MLPR IAmb IAmb 00 44 14.1
comp=Z,41nm,0.9s
UOSS Minazif 89.66 311 P P 00 44 10.6 -0.6
UOSS Minazif 89.66 311 IAMs_20 IAMs_20 01 29 08.0
comp=Z,1µm,22.0s
UOSS Minazif 89.66 311 iP P 00 44 10.7 -0.6
SNR=7.3
UOSS Minazif 89.66 311 P P 00 44 10.6 -0.6
PSA00 Pilbara Seismi 89.66 234 P P 00 44 11.3 +0.3
PSA00 Pilbara Seismi 89.66 234 P P 00 44 09.9 -1.1
PSA00 Pilbara Seismi 89.66 234 P P 00 44 10.6 -0.4
PSA00 IAmb IAmb 00 44 11.6
comp=Z,26nm,0.8s
HATD Hatta, Dubai 89.79 311 iP P 00 44 11.2 -0.6
SNR=17
HATD Hatta, Dubai 89.79 311 P P 00 44 12.0 +0.2
SNR=12
CELP Cerrillos 89.80 61 P P 00 44 12.5 +0.6
OBIP Obispado Ponce 89.81 61 P P 00 44 12.4 +0.4
OBIP IAmb IAmb 00 44 14.1
comp=Z,68nm,1.1s
PMTG Montargil 89.85 7 eP P 00 44 11.2 -0.7
NAZ Nazwa, Dubai 89.88 312 iP P 00 44 11.7 -0.5
SNR=7.9
NAZ Nazwa, Dubai 89.88 312 P P 00 44 12.0 -0.2
SNR=15
WSAR Wadi Sarin 89.92 308 P P 00 44 13.6 +1.1
SNR=5.4
BIDO Bidbid 89.93 309 P P 00 44 12.9 +0.4
ASHO Ashiyiah 89.95 311 iP P 00 44 12.0 -0.6
SNR=16
ASHO Ashiyiah 89.95 311 P P 00 44 12.1 -0.4
SNR=8.8
BKZ Black Stump Fm 90.00 183 P P 00 44 12.8 +0.6
SJG San Juan 90.01 61 P P 00 44 12.8 -0.1
SJG San Juan 90.01 61 P P 00 44 12.8 -0.1
SJG pmax pmax
comp=Z,116nm,1.0s
PESTR Estremoz 90.10 6 P P 00 44 12.7 -0.3
PESTR Estremoz 90.10 6 eP P 00 44 12.5 -0.5
PESTR IAmb IAmb 00 44 22.5
comp=Z,55nm,1.4s
FAQ Al Faqa, Dubai 90.11 312 iP P 00 44 12.5 -0.8
SNR=7.3
FAQ Al Faqa, Dubai 90.11 312 P P 00 44 13.0 -0.3
SNR=8.3
PARRA Arraiolos 90.12 6 eP P 00 44 12.8 -0.3
PARRA IAmb IAmb 00 44 13.4
comp=Z,51nm,1.4s
HUMP Col San Antoni 90.15 60 IAmb IAmb 00 44 16.8
comp=Z,81nm,1.0s
PDPR Patillas Dam, 90.16 61 IAmb IAmb 00 44 15.5
comp=Z,102nm,1.1s
SOHO SOHO 90.19 311 iP P 00 44 12.6 -1.0
SNR=9.6
SOHO SOHO 90.19 311 P P 00 44 12.8 -0.8
HOQ Hoqain 90.28 310 P P 00 44 14.0 -0.1
SNR=9.8
WBK Wadi Bani Khal 90.28 308 P P 00 44 14.9 +0.7
PALK Pallekele 90.32 282 LR LR 01 27 29.0
comp=Z,769nm,20.6s,baz=31,slow=37
PALK Pallekele 90.32 282 P P 00 44 14.3 -0.1
CUPR Culebra, Puert 90.32 60 IAmb IAmb 00 44 16.0
comp=Z,92nm,1.0s
ASUD Al Ashush, Dub 90.34 312 iP P 00 44 14.0 -0.4
SNR=22
ASUD Al Ashush, Dub 90.34 312 P P 00 44 15.0 +0.6
SNR=11
SMDO Samad 90.36 309 P P 00 44 15.0 +0.4
SNR=7.8
CAN Canberra 90.38 205 P P 00 44 14.9 +0.8
MOE Montemor 90.39 7 eP P 00 44 14.2 -0.2
EVO Evora 90.40 6 P P 00 44 13.8 -0.6
EVO Evora 90.40 6 eP P 00 44 14.2 -0.3
JLN Jalan Bani Buh 90.45 307 P P 00 44 16.0 +1.1
SNR=9.6
KARP Karpathos 90.47 338 IAMs_20 IAMs_20 01 32 57.7
comp=Z,1µm,18.0s
AJN Ajban 90.56 312 iP P 00 44 14.8 -0.5
SNR=6.0
AJN Ajban 90.56 312 P P 00 44 14.6 -0.8
SNR=8.0
ETOB Tobarra 90.57 1 P P 00 44 14.7 -0.6
ALNE Al Ain 90.63 311 iP P 00 44 15.3 -0.4
SNR=14
ALNE Al Ain 90.63 311 P P 00 44 15.5 -0.2
SNR=19
MMAI Mount Meron Ar 90.64 331 P P 00 44 14.9 -0.8
comp=Z,6.3nm,0.8s,baz=6.0,slow=8.7,SNR=7.1
MMAI LR LR 01 32 49.1
comp=Z,790nm,18.0s,baz=16,slow=41
comp=Z,6.3nm,0.8s
PBAR Barrancos 90.82 6 eP P 00 44 16.0 -0.4
PBAR IAmb IAmb 00 44 34.5
comp=Z,74nm,2.0s
VAE Valguarnera 90.87 349 LR LR 01 30 51.4
comp=Z,918nm,18.2s,baz=10,slow=39

JMDO Jabal Madar 90.91 308 P **P** 00 44 17.1 +0.1
SNR=11
PBEJ Beja 90.91 6 *e*P **P** 00 44 16.9 +0.1
ASF Jabal al Asfar 90.96 330 LR LR 01 31 07.1
comp=Z,2µm,18.9s,baz=26,slow=40
BSY Bisya 91.04 309 P **P** 00 44 18.0 +0.3
SNR=16
JRN Qarnain Island 91.22 314 P **P** 00 44 18.3 -0.1
SNR=5.3
IDI Anoyia 91.23 340 LR LR 01 30 07.2
comp=Z,1µm,19.8s,baz=15,slow=39
SHMA Al-Shehemyia 91.27 316 P **P** 00 44 18.3 -0.3
SAKB Bahrain 91.35 316 P **P** 00 44 18.9 -0.1
MRZ Mangatainoka R 91.52 184 IAmb IAmb 00 44 19.2
comp=Z,32nm,1.0s
PVAQ Vaqueiros 91.54 6 *e*P **P** 00 44 19.6 -0.2
PVAQ *e*LR LR 01 15 47.3
PVAQ *i* IAMs_20 IAMs_20 01 28 35.6
comp=Z,945nm,20.0s
SMRT St. Maarten 91.73 58 P **P** 00 44 20.7 -0.2
SMRT IAMs_20 IAMs_20 01 25 45.9
comp=Z,2µm,20.0s
HTT Hallett 91.73 214 P **P** 00 44 21.1 +0.7
MZWR Madinat Zayed 91.76 312 P **P** 00 44 20.9 0.0
QRZ Quartz Range 91.84 186 P **P** 00 44 20.4 -0.3
TKNZ Takaka Hill 92.03 185 P **P** 00 44 19.8 -1.7
GHWR Ruwais 92.05 313 P **P** 00 44 22.0 -0.3
TRNA Turayna 92.13 315 P **P** 00 44 22.3 -0.4
MHTO MHTO 92.15 308 P **P** 00 44 23.0 +0.2
SNR=20
GHAJ Ghor Haditha 92.18 330 IAMs_20 IAMs_20 01 31 41.2
comp=Z,1µm,20.0s
SNZO South Karori 92.21 184 IAMs_20 IAMs_20 01 23 03.6
comp=Z,2µm,19.0s
SEUS St. Eustatius 92.23 58 IAMs_20 IAMs_20 01 29 09.4
comp=Z,2µm,20.0s
SMRA Abu-Samra 92.30 315 P **P** 00 44 22.9 -0.5
WDD Wied Dalam 92.47 348 IAMs_20 IAMs_20 01 32 36.5
comp=Z,1µm,20.0s
MZR Muzera 92.60 312 *i* P **P** 00 44 24.6 -0.2
SNR=33
MZR Muzera 92.60 312 P **P** 00 44 24.9 0.0
SNR=14
ANWB Willy Bob 92.73 57 IAMs_20 IAMs_20 01 28 39.4
comp=Z,2µm,20.0s
KEST Kesra 93.11 353 P **P** 00 44 26.9 -0.3
comp=Z,12nm,1.0s,baz=332,slow=4.1,SNR=8.0
KEST LR LR 01 29 25.7
comp=Z,418nm,19.5s,baz=20,slow=38
comp=Z,12nm,1.0s
KEST Kesra 93.11 353 P **P** 00 44 27.2 +0.1
FORT Forrest 93.61 223 IAmb IAmb 00 44 30.6
comp=Z,28nm,0.9s
ABD La Joyeuse, An 93.87 58 IAMs_20 IAMs_20 01 29 13.8
comp=Z,1µm,20.0s
GDHS Morne Mazeau, 93.89 58 IAMs_20 IAMs_20 01 29 21.0
comp=Z,1µm,19.0s
EIL Elat 93.89 330 LR LR 01 33 28.9
comp=Z,2µm,18.8s,baz=38,slow=40
CBE Ff, Capester 94.14 58 IAMs_20 IAMs_20 01 29 49.0
comp=Z,2µm,19.0s
GDSD La Dsirade Is 94.23 58 IAmb IAmb 00 44 33.6
comp=Z,61nm,1.2s
GDSD IAMs_20 IAMs_20 01 29 43.3
comp=Z,1µm,21.0s
MAGL Barre de l'ile 94.42 58 IAMs_20 IAMs_20 01 32 16.2
comp=Z,1µm,19.0s
MEEK Meekatharra 94.49 232 P **P** 00 44 33.7 +0.4
RPZ Rata Peaks 94.82 187 LR LR 01 21 42.5
comp=Z,3µm,20.0s,baz=358,slow=32
SDV Santo Domingo 94.88 70 LR LR 01 30 19.2
comp=Z,569nm,19.2s,baz=346,slow=37
SDV Santo Domingo 94.88 70 P **P** 00 44 35.3 -0.3
SDV IAMs_20 IAMs_20 01 29 59.4
comp=Z,962nm,20.0s
SDV Santo Domingo 94.88 70 *e*P **P** 00 44 36.1 +0.4
COCO West Island 95.28 257 P **P** 00 44 37.3 +0.2
COCO West Island 95.28 257 P **P** 00 44 37.3 +0.2
COCO pmax pmax
comp=Z,83nm,1.2s
SVN Savane Anatole 95.39 59 IAMs_20 IAMs_20 01 30 26.2
comp=Z,1µm,19.0s
AVE Averroes 95.65 6 IAmb IAmb 00 44 39.3
comp=Z,44nm,1.0s
AVE IAMs_20 IAMs_20 01 32 22.9
comp=Z,1µm,19.0s
RAYN Ar Rayn 95.65 319 P **P** 00 44 39.0 +0.1
RAYN Ar Rayn 95.65 319 *i* P **P** 00 44 38.7 -0.2
SNR=17
RAYN Ar Rayn 95.65 319 P **P** 00 44 39.0 +0.1
RAYN pmax pmax
comp=Z,12nm,0.9s
RAYN Ar Rayn 95.65 319 P **P** 00 44 39.0 +0.1
BIM Bigot 95.72 59 IAMs_20 IAMs_20 01 33 26.7
comp=Z,2µm,19.0s
SHAO Shalim 95.82 308 P **P** 00 44 39.1 -0.5
ROSC El Rosal 95.87 75 P **P** 00 44 40.7 +0.2
comp=Z,3.7nm,0.4s,baz=152,slow=20,SNR=2.1
comp=Z,3.7nm,0.4s
MPOM Morne Pois Mar 95.89 58 IAMs_20 IAMs_20 01 30 49.2
comp=Z,1µm,20.0s
DOK Doka 96.04 310 P **P** 00 44 40.1 -0.6
SNR=9.9
MD01 Midelt array s 96.23 4 P **P** 00 44 40.8 -0.8
MD31 MD31 96.23 4 P **P** 00 44 40.3 -1.2
MDT Midelt 96.29 4 LR LR 01 27 27.7
comp=Z,512nm,21.4s,baz=11,slow=35
DMTO DMTO 96.41 308 P **P** 00 44 42.1 -0.3
WHFO Wadi Hawf 96.81 310 P **P** 00 44 44.0 -0.3
SNR=10
OTAV Otavalo 96.93 81 *e*P **P** 00 44 45.8 +0.5
RPN Rapa Nui 99.47 122 LR LR 01 20 58.6
comp=Z,406nm,19.9s,baz=318,slow=30
NWAO Narrogin (SRO) 100.34 230 P **Pdif** 00 44 59.0 -0.5
comp=Z,16nm,0.9s,baz=14,slow=5.9,SNR=4.3
TAM Tamanrasset 106.23 355 IAMs_20 IAMs_20 01 39 11.2
comp=Z,879nm,21.0s
ATD Arta Tunnel 107.45 316 IAMs_20 IAMs_20 01 38 59.1
comp=Z,976nm,22.0s
TORD Torodi Ar. Bea 115.96 358 PKP **PKiKP** 00 49 55.4 -0.8
comp=Z,2.4nm,0.7s,baz=249,slow=3.2,SNR=22
TORD PP **PP** 00 50 56.9 -2.4
comp=Z,3.6nm,1.0s,baz=334,slow=5.8,SNR=4.6
TORD PKKPbc **PKKPbc** 01 00 26.3 +1.3
comp=Z,5.4nm,0.9s,baz=199,slow=4.5,SNR=22
TORD SKKP **SKKPdf** 01 04 27.0 +6.0
comp=Z,1.7nm,0.9s,baz=199,slow=6.1,SNR=4.2
LPAZ La Paz 116.09 84 PKP **PKPdf** 00 49 57.0 0.0
comp=Z,2.9nm,0.8s,baz=22,slow=3.7,SNR=8.9
LPAZ PKKPab **PKKPab** 01 00 31.1 -0.4
comp=Z,2.2nm,0.8s,baz=120,slow=3.5,SNR=8.7
LPAZ La Paz 116.09 84 PKIKP **PKPdf** 00 49 57.0 0.0
LODK Lodwar 117.91 319 IAMs_20 IAMs_20 01 46 00.6
comp=Z,660nm,20.0s
PB08 IPOC Station P 118.32 87 PKP **PKPdf** 00 49 58.1 -2.8
PTLB Pontes e Lacer 121.01 75 *e*P **PKPdf** 00 50 05.9 +0.2
H03N2 Juan Fernandez 121.68 105 T T 03 03 21.1
baz=317,slow=77,SNR=60
H03N1 Juan Fernandez 121.70 105 T T 03 03 26.0
baz=317,slow=77,SNR=124
H03N3 Juan Fernandez 121.70 105 T T 03 03 20.6
baz=317,slow=77,SNR=81
KIBK Kibwezi 121.91 314 IAMs_20 IAMs_20 01 50 44.3
comp=Z,707nm,19.0s
DBIC Dimbokro 122.25 6 PKP **PKPdf** 00 50 08.3 +0.1
comp=Z,24nm,1.0s,baz=23,slow=2.4,SNR=11
MBAR Mbarara 123.41 323 IAMs_20 IAMs_20 01 49 54.3
comp=Z,726nm,21.0s
GO04 Tololo Observa 124.47 97 IAMs_20 IAMs_20 01 39 35.5
comp=Z,689nm,21.0s
EDA Edea 124.62 348 IAMs_20 IAMs_20 01 50 46.8
comp=Z,732nm,21.0s
RCBR Riachuelo 125.77 46 IAMs_20 IAMs_20 01 39 42.2
comp=Z,1µm,22.0s
MT01 Popeta 126.69 100 IAMs_20 IAMs_20 01 40 51.4
comp=Z,842nm,19.0s
MT03 Universidad Ad 126.90 99 IAMs_20 IAMs_20 01 42 03.0
comp=Z,806nm,18.0s
AQDB Aquidauana 126.95 76 *e*P **PKPdf** 00 50 17.3 +0.4
CFA Coronel Fontan 127.05 96 PKP **PKPdf** 00 50 17.2 +0.3
comp=Z,16nm,0.7s,baz=299,slow=2.6,SNR=59
BO01 Tunca 127.14 101 IAMs_20 IAMs_20 01 33 11.4
comp=Z,1µm,21.0s
MT13 San Alfonso 127.20 100 IAMs_20 IAMs_20 01 42 05.1
comp=Z,851nm,18.0s
BO02 Sierra Bellavi 127.59 101 IAMs_20 IAMs_20 01 33 26.3
comp=Z,966nm,20.0s

BDFB Brasilia 127.76 65 PKP **PKPdf** 00 50 19.3 +0.5
comp=Z,14nm,1.1s,baz=174,slow=1.9,SNR=8.8
BI02 San Fabin de 128.51 103 IAMs_20 IAMs_20 01 41 00.6
comp=Z,740nm,19.0s
AMBA Amambai (Brazi 129.21 78 *e*P **PKiKP** 00 50 21.9 -0.1
JANB Januaria 129.37 61 *e*P **PKPdf** 00 50 22.2 +0.5
GO06 Curarrehue 130.24 106 IAMs_20 IAMs_20 01 39 21.3
comp=Z,878nm,20.0s
CPUP Villa Florida 130.24 83 PKP **PKPdf** 00 50 22.8 -0.3
comp=Z,15nm,0.9s,baz=339,slow=3.5,SNR=28
CPUP SKPbc **SKPab** 00 53 41.7 -1.7
comp=Z,2.2nm,1.0s,baz=233,slow=1.1,SNR=2.3
CPUP Villa Florida 130.24 83 **PKPdf** 00 50 23.2 +0.1
CPUP Villa Florida 130.24 83 *e*P **PKPdf** 00 50 23.6 +0.5
PLCA Paso Flores 131.50 107 PKhKP PKPpre 00 50 14.9
comp=Z,3.1nm,0.9s,baz=280,slow=3.6,SNR=4.7
PLCA PKP **PKiKP** 00 50 25.9 -0.1
comp=Z,31nm,1.0s,baz=295,slow=3.5,SNR=25
PLCA SKPbc **SKPbc** 00 53 46.4 -1.3
comp=Z,7.4nm,1.1s,baz=334,slow=8.0,SNR=3.6
PLCA Paso Flores 131.50 107 PKIKP **PKiKP** 00 50 26.0 -0.1
PLCA Paso Flores 131.50 107 *e*P **PKiKP** 00 50 26.3 +0.2
NBIT Itapeh - BA 131.89 56 *e*P **PKPdf** 00 50 27.0 +0.5
PTGB Pitanga 132.33 77 *e*P **PKPdf** 00 50 28.0 +0.8
FRTB Fartura 132.83 73 *e*P **PKPdf** 00 50 28.9 +0.7
PSAL Palomas, Salto 133.38 88 *e*P **PKiKP** 00 50 30.0 0.0
TRQA Tornquist 135.13 98 IAMs_20 IAMs_20 01 46 07.9
comp=Z,721nm,20.0s
CPSB Cacapava Do Su 135.53 83 *e*P **PKPdf** 00 50 33.9 +1.0
PLTB Pedras Altas 136.35 85 *e*P **PKPdf** 00 50 35.3 +0.8
USHA Ushuaia 140.02 123 PKP **PKPdf** 00 50 41.2 +0.9
comp=Z,59nm,0.4s,baz=157,slow=0.4,SNR=6.5
USHA SKP **SKPdf** 00 54 10.9 -1.5
comp=Z,21nm,0.5s,baz=21,slow=0.3,SNR=1.8
QSPA South Pole Qui 140.90 180 PKhKP PKPpre 00 50 36.0
comp=Z,14nm,0.8s,baz=14,slow=1.0,SNR=18
BROLN Tlhalogang 143.27 315 *i* P PKPbc 00 50 45.2 +0.7
BROLN Tlhalogang 143.27 315 P PKPbc 00 50 45.1 +0.7
SOOWA Sowa 143.29 317 *i* P PKPbc 00 50 45.7 +1.2
SOOWA Sowa 143.29 317 P PKPbc 00 50 45.6 +1.1
MREMI Moremi 144.49 313 P PKPbc 00 50 48.8 +0.7
KHWEE KHWEE 144.84 317 *i* P **PKPab** 00 50 49.2 0.0
KHWEE KHWEE 144.84 317 P **PKPdf** 00 50 50.3 +0.2
TSUM Tsumeb 145.29 330 IAMs_20 IAMs_20 02 07 47.9
comp=Z,712nm,20.0s
TSUM Tsumeb 145.29 330 P **PKPdf** 00 50 51.6 +0.5
LPHEP Lephephe 145.90 315 *i* P **PKPdf** 00 50 51.0 -0.9
MAW Mawson 145.92 217 PKPbc **PKPbc** 00 50 51.1 -0.1
comp=Z,70nm,1.0s,baz=80,slow=7.1,SNR=7.2
GRTLG Ghanzi 146.03 323 *i* P **PKPdf** 00 50 52.7 +0.5
KDWAN Kaudwane 146.44 317 *i* P **PKPdf** 00 50 52.8 -0.1
KDWAN Kaudwane 146.44 317 P **PKPab** 00 50 55.3 +0.1
KGCAE Kacgae 147.00 321 *i* P **PKPdf** 00 50 54.4 +0.6
LBTB Lobatse 147.45 314 P **PKPdf** 00 50 54.9 +0.4
KOOLE Kule 147.90 324 *i* P **PKPdf** 00 50 57.0 +1.7
KOOLE Kule 147.90 324 P **PKPbc** 00 50 59.5 +1.1
BOSA Boshof 150.66 311 PKPbc **PKPbc** 00 51 05.6 +0.5
comp=Z,58nm,0.8s,baz=34,slow=2.0,SNR=121
BOSA Boshof 150.66 311 P **PKiKP** 00 51 06.0 +0.2
SYO Syowa Base 154.16 212⥣*i*P **PKPbc** 00 51 11.0 -0.4
ELIB Princess Elisa 156.72 198 *d*PKP PKPdf 00 51 16.2 +9.3
TROLL Troll, Antarti 159.04 182 PKPab **PKPab** 00 51 46.0 -0.6
VNA3 Neumayer Olymp 159.34 171 ⥥PKPab **PKPab** 00 51 46.6 -1.1
comp=Z,23nm,0.7s
SNAA Sanae 159.36 177 ⥥PKPab **PKPab** 00 51 48.0 +0.1
comp=Z,313nm,1.3s
SNAA Sanae 159.36 177 PKPab **PKPab** 00 51 46.3 -1.6
comp=Z,15nm,1.1s,baz=66,slow=4.7,SNR=4.8
SNAA Sanae 159.36 177 **PKPab** 00 51 47.8 -0.1
VNA2 Neumayer--Watz 159.85 173 ⥥PKPab **PKPab** 00 51 50.1 +0.2
comp=Z,28nm,0.6s,baz=202,slow=1.7
VNA1 Neumayer--Stat 160.04 172 PKPab **PKPab** 00 51 51.2 +0.4
comp=Z,30nm,1.0s

NEIC ***02*** *00:47:34.7±1.9, 39.°35N±0.°08×144.°7E±0.°1, h10km±1km, mb4.8/35, Error ellipse: s-maj=20.4km s-min=8.8km az=127.0*
BJI ***02*** *00:47:36.5, 39.°64N×143.°84E, h10km, mB5.1/8, mb4.7/59, Ms5.3/11, Ms7 5.2/11*
MOS ***02*** *00:47:39.7±0.9, 39.°64N×143.°51E, h12km, mb4.8/32, Error ellipse: s-maj=8.1km s-min=4.9km az=112.1*
JMA ***02*** *00:47:41.2±0.3, 39.°6N±0.°8×14°4E±°, h31km, MD4.8/32, MV4.8/32, FAR E OFF SANRIKU*
JMA Felt I J1 at FAR E OFF SANRIKU .
IDC ***02*** *00:47:45.8±2.4, 39.°60N×143.°38E, h38km±20km, mb4.0/27, mbtmp4.3/34, ML3.8/7, Error ellipse: s-maj=15.4km s-min=12.2km az=120.0*
ISC 02 00:47:41.1±0.5**, 39.°61N**±0.°05**×143.°62E**±0.°06**, h11**km**, n223,** σ**1§66**/214**, mb4.7**/78**, 10C-15D, Off east coast of Honshu**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MIYJ Miyakonagasawa 1.39 269 *i* P **Pn** 00 48 04.8 -1.7
JTH Tanohata 1.39 284 *i* P **Pn** 00 48 04.6 -1.9
JKEN Kujiedanarisaw 1.59 293 P **Pn** 00 48 07.2 -1.9
OFUJ Ofunato 1.60 251 *i* P **Pn** 00 48 07.8 -1.5
JANG Nango 1.79 296 *i* P **Pn** 00 48 09.9 -2.0
JOM Ohasama 1.81 267 *i* P **Pn** 00 48 11.2 -0.9
JOM A A 00 48 11.2
comp=N,12nm,0.4s,comp=E,12nm,0.4s
JOM *e*S **Sn** 00 48 32.8 -2.3
JMK Ichinoseki 1.98 251 *i* P **Pn** 00 48 13.3 -1.1
JSZI Iwateshizukuis 2.06 275 A A 00 48 14.4
comp=N,20nm,0.8s,comp=E,23nm,1.4s
JIO Ouri 2.11 238 P **Pn** 00 48 14.8 -1.6
JTM Tenmabayashi 2.28 302 P **Pn** 00 48 18.1 -0.6
JRG Rokugo 2.32 266 P **Pn** 00 48 18.5 -0.7
JRG A A 00 48 18.5
comp=N,9.0nm,2.1s,comp=E,10.0nm,1.1s
JOFO Osakifurukawao 2.33 245 A A 00 48 18.5
comp=N,24nm,4.2s,comp=E,35nm,3.6s
JAHD Aomorihigashid 2.40 314 A A 00 48 19.3
comp=N,10.0nm,1.0s,comp=E,13nm,0.9s
JOU Okura 2.62 243 A A 00 48 22.6
comp=N,6.0nm,0.9s,comp=E,6.0nm,0.7s
JYK Kaneyama 2.62 256 *i* P **Pn** 00 48 22.8 -0.6
JYW Yuwa 2.64 270 A A 00 48 22.8
comp=N,22nm,1.5s,comp=E,18nm,2.7s
JOT Ohata 2.64 313 P **Pn** 00 48 22.9 -0.7
JHHS Hirosakihyakuz 2.71 294 A A 00 48 23.6
comp=N,9.0nm,5.6s,comp=E,8.0nm,0.9s
JNTW Noshirotokiwa 2.74 285 A A 00 48 24.1
comp=N,22nm,2.9s,comp=E,17nm,1.9s
JNBK Urakawa-nobuka 2.75 346 *i* P **Pn** 00 48 25.6 +0.4
JYYZ Yamagatayuza 2.92 260 A A 00 48 26.8
comp=N,13nm,3.9s,comp=E,13nm,2.0s
JOG3 Oga3 3.51 277 A A 00 48 27.2
comp=N,7.0nm,3.7s,comp=E,8.0nm,2.2s
NMR Nemuro--Hokkai 4.08 22⥥*i*P **Pn** 00 48 43.3 -0.1
NMR *i* S **Sn** 00 49 28.0 -3.1
JKA Kamikawa-asahi 4.57 351 **Pn** 00 48 49.7 -0.4
ASAJ Asahikawa 4.57 351 Pn **Pn** 00 48 51.4 +1.2
comp=E,5.2nm,0.3s,baz=219,slow=16,SNR=18
ASAJ Sn **Sn** 00 49 42.0 -1.2
comp=E,9.3nm,0.3s,baz=269,slow=30,SNR=6.9
comp=E,26nm,0.6s
RUSJ Misakicho 4.66 15 *e*P **Pn** 00 48 51.5 +0.2
RUSJ *i* S **Sn** 00 49 43.2 -2.1
YUK Yuzh-Kuril'sk 4.73 20 *e*P **Pn** 00 48 53.5 +1.2
YUK *e*S **Sn** 00 49 43.7 -3.4
YUK pmax pmax
comp=N,111nm,0.2s
YUK pmax pmax
comp=E,47nm,0.2s
YUK pmax pmax
comp=Z,219nm,0.2s
YUK smax smax
comp=E,1µm,0.6s
YUK smax smax
comp=N,738nm,0.4s
MJAR Matsushiro Arr 5.25 236 Pn **Pn** 00 49 00.1 +0.5
comp=N,1.3nm,0.3s,baz=39,slow=12,SNR=110
comp=N,46nm,0.8s
MJAR Matsushiro Arr 5.25 236 **Pn** 00 48 59.7 +0.1
MAJO Matsushiro 5.25 236 **Pn** 00 48 59.6 +0.1
MAJO Matsushiro 5.25 236*c i*P **Pn** 00 49 00.0 +0.4
MJB9 Matsu-Tunnel 5.25 236 **Pn** 00 49 00.5 +0.9
JGF Kuroka 6.38 233 **Pn** 00 49 15.5 +0.4
KUR Kuril'sk 6.44 28 P **Pn** 00 49 12.3 -3.5
KUR *e*S **Sn** 00 50 24.3 -5.0
KUR pmax pmax
comp=Z,92nm,0.5s

KUR smax smax
comp=N,206nm,0.4s
KUR smax smax
comp=E,96nm,0.4s
INU Inuyama 6.75 233 **Pn** 00 49 20.4 +0.3
JHJ Hachijo jima 2 7.17 207 Pn **Pn** 00 49 26.5 +0.6
comp=E,23nm,0.3s,baz=286,slow=9.3,SNR=5.2
JHJ Sn Sn 00 50 38.0 -9.4
comp=E,28nm,0.3s,baz=249,slow=23,SNR=7.9
comp=E,40nm,0.3s
YSS Yuzhno-Sakhali 7.37 355 Pn **Pn** 00 49 26.5 -2.1
YSS Yuzhno-Sakhali 7.37 355 *e*P **Pn** 00 49 29.2 +0.6
YSS *e*S **Sn** 00 50 54.8 +2.6
YSS pmax pmax
comp=Z,30nm,0.6s
YSS smax smax
comp=N,40nm,0.8s
YSS smax smax
comp=E,30nm,0.9s
TEY Ternei 7.51 319 *e*P **Pn** 00 49 29.9 -0.6
USRK Ussuriysk Ar. 9.81 302 Pn **Pn** 00 50 02.9 +0.9
comp=E,1.1nm,0.3s,baz=99,slow=12,SNR=15
comp=E,17nm,0.7s
TYV Tymovskoe 11.28 357 *e*P **Pn** 00 50 23.1 +1.0
TYV pmax pmax
comp=Z,6.0nm,0.8s
TYV pmax pmax
comp=Z,300nm,3.2s
MDJ Mudanjiang 11.56 300 P Pn 00 50 33.0 +7.1
MDJ pmax pmax
comp=Z,16nm,1.2s
KSRS Korea Array 12.48 265 Pn **Pn** 00 50 40.3 +1.7
comp=Z,0.5nm,0.3s,baz=87,slow=13,SNR=7.1
comp=Z,3.2nm,0.8s
KSAR Wonju Array Be 12.51 265 Pn **Pn** 00 50 42.5 +3.5
KSAR Wonju Array Be 12.51 265 P **Pn** 00 50 42.5 +3.5
KLR Kul'dur 12.81 323 Pn **Pn** 00 50 44.0 +1.0
comp=Z,0.2nm,0.3s,baz=139,slow=10,SNR=7.9
comp=Z,2.9nm,0.7s
BNX BinXian 13.40 302 ⥣P **Pn** 00 50 51.3 +0.1
BNX pmax pmax
comp=Z,20nm,0.8s
CN2 Changchun 14.21 293 *e*P **P** 00 51 06.7 -2.9
CN2 pmax pmax
comp=Z,10.0nm,0.6s
HEH HeiHe 15.62 318 *e*P **Pn** 00 51 19.1 -1.9
PETK Petropavlovsk- 16.59 31 Pn **P** 00 51 37.5 +1.4
comp=Z,0.9nm,0.3s,baz=226,slow=9.7,SNR=5.5
comp=Z,1.4nm,0.5s
DL2 Dalian 17.05 275 P **P** 00 51 42.8 +1.7
DL2 pmax pmax
comp=Z,25nm,1.0s
ZEA Zeya 17.99 327 *e*P **Pn** 00 51 48.0 -3.0
ZEA pmax pmax
comp=E,10.0nm,0.7s
ZEA pmax pmax
comp=N,10.0nm,1.2s
ZEA pmax pmax
comp=Z,20nm,0.7s
MA2 Magadan 20.50 10 P Pn 00 52 20.2 -0.8
comp=Z,16nm,0.6s,baz=198,slow=8.4,SNR=17
comp=Z,16nm,0.6s
MA2 Magadan 20.50 10 P **P** 00 52 15.8 -3.1
MA2 Magadan 20.50 10⥥*e*P Pn 00 52 19.0 -2.0
MA2 pmax pmax
comp=Z,15nm,0.7s
XLT XiLinHaoTe 20.95 291 *e*P **P** 00 52 20.9 -3.1
XLT pP pP 00 52 25.9 -0.5
XLT sP pwP 00 52 30.9 +1.1
XLT PP **PnPn** 00 52 45.8 +3.3
XLT pmax pmax
comp=Z,23nm,1.0s
TIA Tai'an 21.15 269 P **P** 00 52 24.4 -1.8
TIA pmax pmax
comp=Z,35nm,0.9s
NJ2 Nanjing 21.41 257 *e*P **P** 00 52 30.0 +1.1
NJ2 pmax pmax
comp=Z,8.0nm,0.7s
HNS HongShan 22.70 274 ⥥P **P** 00 52 38.2 -4.4
HNS pmax pmax
comp=Z,11nm,0.8s
SEY Seymchan 23.95 10⥥*e*P **P** 00 52 55.0 0.0
SEY pmax pmax
comp=Z,15nm,1.0s
YAK Yakutsk 24.01 344 P **P** 00 52 54.4 -1.1
comp=Z,21nm,0.5s,baz=139,slow=0.1,SNR=5.7
comp=Z,21nm,0.5s
YAK Yakutsk 24.01 344 P **P** 00 52 53.8 -1.8
YAK IAmb IAmb 00 53 11.7
comp=Z,27nm,0.8s
YAK Yakutsk 24.01 344 *e*P **P** 00 52 54.5 -1.1
YAK *e**PP **pP** 00 52 57.3 -0.8
YAK *e* 00 53 25.0
YAK *e* 00 56 33.0
YAK *e*S **S** 00 57 15.5 +3.3
YAK *e*SS **SnSn** 00 58 00.5 +8.1
YAK *e*SSS SSS 00 58 14.0
YAK *e* 01 03 58.6
YAK pmax pmax
comp=Z,10.0nm,0.6s
YAK pmax pmax
comp=N,4.0nm,0.7s
YAK pmax pmax
comp=E,3.0nm,1.0s
YAK pmax pmax
comp=Z,2µm,10.1s
YAK pmax pmax
comp=N,738nm,12.7s
YAK pmax pmax
comp=E,1µm,10.6s
YAK smax smax
comp=N,333nm,7.3s
YAK smax smax
comp=E,261nm,5.1s
CIT Chita 24.16 311 *e*P **P** 00 52 51.0 -6.2
CIT *e* 00 53 23.8
CIT *e* 00 53 37.2
CIT *e* 00 57 14.4
HHC Hu-ho-hao-te 24.44 283 *e*P **P** 00 53 01.0 +1.1
HHC pmax pmax
comp=E,5.0nm,0.6s
HHC pmax pmax
comp=E,170nm,6.4s
LYN LuoYang 25.29 268 P **P** 00 53 07.4 -0.1
LYN pmax pmax
comp=E,54nm,0.9s
WHN Wuhan 25.51 258 P **P** 00 53 08.8 -0.8
WHN pmax pmax
comp=E,110nm,0.7s
BTO2 Baotou 25.72 283 *e*P **P** 00 53 10.2 -1.3
BTO2 sP **pwP** 00 53 19.8 +2.4
BTO2 S **S** 00 57 43.0 +2.7
BTO2 pmax pmax
comp=E,21nm,0.5s
BTO2 pmax pmax
comp=E,670nm,4.7s
BTO2 L L
comp=E,6µm,15.8s
BTO2 L L
comp=E,7µm,14.9s
BTO2 L L
comp=E,7µm,14.9s
ULN Ulaanbaatar 27.47 300 **P** 00 53 26.8 -0.5
ULN IAmb IAmb 00 53 28.2
comp=Z,16nm,1.1s
ULN Ulaanbaatar 27.47 300*ce*P **P** 00 53 27.1 -0.2
ULN pmax pmax
comp=Z,15nm,1.1s
SONM Songino Array 27.91 299 P **P** 00 53 31.2 0.0
comp=Z,6.7nm,0.8s,baz=96,slow=8.6,SNR=17
comp=Z,6.7nm,0.8s
SONM Songino Array 27.91 299 **P** 00 53 31.0 -0.2
SONM IAmb IAmb 00 53 32.3
comp=Z,42nm,2.0s
SONM Songino Array 27.91 299 P **P** 00 53 31.0 -0.2
SONM pmax pmax
comp=Z,42nm,2.0s
H11N2 WAKE ISLAND Hy 28.16 128 T T 01 24 31.9
baz=318,slow=75,SNR=8.4
H11N1 WAKE ISLAND Hy 28.17 128 T T 01 24 35.0
baz=318,slow=75,SNR=5.6
H11N3 WAKE ISLAND Hy 28.18 128 T T 01 24 28.7
baz=318,slow=75,SNR=8.1
XAN Xi'an 28.21 270 P **P** 00 53 32.8 -1.1
XAN pmax pmax
comp=Z,13nm,0.9s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
H11S1	WAKE ISLAND Hy	28.98	130	T	T	01 25 26.4	
	baz=318						
H11S3	WAKE ISLAND Hy	28.99	130	T	T	01 24 52.0	
	baz=318						
H11S2	WAKE ISLAND Hy	29.00	130	T	T	01 25 03.9	
	baz=318						
TLY	Talaya	30.06	307	P	P	00 53 49.3	-0.9
TLY	Talaya	30.06	307	⇓iP	P	00 53 50.2	0.0
TLY				pmax	pmax		
	comp=Z,7.0nm,1.5s						
BILL	Bilibino	31.07	16	⇑eP	P	00 53 58.4	-0.4
BILL				pmax	pmax		
	comp=Z,10.0nm,2.2s						
LZH	Lanzhou	31.43	276	eP	P	00 54 02.0	-0.5
LZH				pP	sP	00 54 06.1	-0.1
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
LZDM	Lanzhou Array	31.59	276	P	P	00 54 03.1	-0.9
	comp=Z,4.9nm,0.6s,baz=90,slow=5.9,SNR=9.8						
	comp=Z,4.9nm,0.6s						
TIXI	Tiksi	32.98	351	⇑eP	P	00 54 14.1	-1.4
TIXI				pmax	pmax		
	comp=Z,65nm,12.6s						
GYA	Guiyang	33.41	258	P	P	00 54 19.0	-0.9
GYA				pmax	pmax		
	comp=Z,21nm,0.9s						
CD2	Chengdu	33.46	268	P	P	00 54 19.4	-0.9
CD2				pmax	pmax		
	comp=Z,20nm,1.0s						
GTA2	Gaotai	33.57	284	P	P	00 54 21.2	0.0
GTA2				sP	pwP	00 54 29.8	+2.6
GTA2				pmax	pmax		
	comp=Z,14nm,1.5s						
KNGR	Kungurtug, Tuv	33.83	304	⇑iP	P	00 54 24.0	+0.6
KNGR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PZH	PanZhiHua	37.13	262	P	P	00 54 52.6	+0.6
GOMU	GeErMu	38.29	281	P	P	00 55 00.2	-1.8
GOMU				pP	pP	00 55 03.4	-1.2
GOMU				sP	pwP	00 55 07.5	-0.4
GOMU				pmax	pmax		
	comp=Z,13nm,0.8s						
DGZ	Jazzator, Alta	40.36	304	d iP	P	00 55 19.7	+0.9
DGZ				pmax	pmax		
	comp=Z,24nm,0.8s						
WMQ	Urumqi	41.29	295	eP	P	00 55 27.0	+0.5
WMQ				pmax	pmax		
	comp=Z,26nm,0.9s						
WMQ				L	L		
	comp=Z,5µm,18.3s						
WMQ				L	L		
	comp=Z,4µm,24.9s						
WMQ				L	L		
	comp=Z,5µm,19.9s						
ZAA0	Zalesovo Array	41.52	310		P	00 55 27.6	-0.5
ZALV	Zalesovo Beam	41.52	310	P	P	00 55 28.1	-0.1
	comp=Z,5.4nm,0.5s,baz=85,slow=7.9,SNR=28						
ZALV				PcP	PcP	00 57 25.9	+0.5
	comp=Z,2.8nm,0.8s,baz=85,slow=3.1,SNR=4.5						
	comp=Z,5.4nm,0.5s						
ZALV	Zalesovo Beam	41.52	310		P	00 55 27.6	-0.5
NRIK	Noril'sk	41.70	334	P	P	00 55 28.9	-0.5
	comp=Z,1.1nm,0.5s,baz=110,slow=8.9,SNR=3.6						
	comp=Z,1.1nm,0.5s						
NRIK	Noril'sk	41.70	334	P	P	00 55 28.1	-1.3
NRIK	Noril'sk	41.70	334	⇓iP	P	00 55 29.5	+0.1
NRIK				pmax	pmax		
	comp=Z,17nm,3.6s						
ZSN	Zaisan	42.41	301	eP	P	00 55 35.4	-0.2
ZSN	Zaisan	42.41	301	eP	P	00 55 35.5	-0.2
CHTO	Chiang Mai	43.62	255	P	P	00 55 44.5	-1.1
CHTO	Chiang Mai	43.62	255	P	P	00 55 44.6	-1.1
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
E21K	Killik River	43.76	28	P	P	00 55 41.0	-5.3
E21K				IAmb	IAmb	00 55 48.6	
	comp=Z,27nm,1.9s						
CMAR	Chiang Mai Arr	43.84	254	P	P	00 55 46.0	-1.4
	comp=Z,1.3nm,0.3s,baz=43,slow=6.9,SNR=8.4						
	comp=Z,1.3nm,0.3s						
CMAR	Chiang Mai Arr	43.84	254	i P	P	00 55 47.5	+0.1
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MK31	Makanchi Array	44.27	300	c iP	P	00 55 50.2	-0.4
MKAR	Makanchi Array	44.27	300	P	P	00 55 50.2	-0.4
	comp=Z,6.7nm,0.8s,baz=83,slow=9.4,SNR=67						
	comp=Z,6.7nm,0.8s						
MKAR	Makanchi Array	44.27	300		P	00 55 49.7	-0.9
MAKZ	Makanchi	44.48	300		P	00 55 51.1	-1.2
MAKZ				IAmb	IAmb	00 55 53.0	
	comp=Z,10nm,1.0s						
MAKZ	Makanchi	44.48	300	P	P	00 55 51.1	-1.2
MAKZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SEM	Semipalatinsk	44.80	306	eP	P	00 55 54.1	-0.9
SEM	Semipalatinsk	44.80	306	eP	P	00 55 54.2	-0.9
KURK	Kurchatov	45.76	306		P	00 56 00.8	-1.5
KURK				IAmb	IAmb	00 56 19.0	
	comp=Z,13nm,0.8s						
KURK	Kurchatov	45.76	306	c iP	P	00 56 01.8	-0.5
KURK				pmax	pmax		
	comp=Z,17nm,0.8s						
KURBB	Kurchatov Arra	45.83	306	P	P	00 56 02.4	-0.5
	comp=Z,13nm,0.8s,baz=81,slow=8.1,SNR=109						
	comp=Z,13nm,0.8s						
ILAR	Eielson Array	46.40	34	P	P	00 56 08.9	+1.7
	comp=Z,0.8nm,0.8s,baz=260,slow=6.1,SNR=10						
	comp=Z,0.8nm,0.8s						
SHLS	Shalkode	47.22	296	eP	P	00 56 11.0	-3.1
SHLS				pmax	pmax		
	comp=Z,9.0nm,1.2s						
SHLS	Shalkode	47.22	296	eP	P	00 56 11.1	-3.1
	comp=Z,8.9nm,1.2s						
TDK	Taldyqorghan	47.37	299	eP	P	00 56 14.5	-0.6
TDK				pmax	pmax		
	comp=Z,12nm,0.9s						
TDK	Taldyqorghan	47.37	299	eP	P	00 56 14.5	-0.6
	comp=Z,12nm,0.9s						
UZB	Uzynbulak	47.53	296	eP	P	00 56 15.8	-0.7
UZB	Uzynbulak	47.53	296	eP	P	00 56 15.9	-0.7
EVN	Everest	47.91	274	P	P	00 56 20.4	+0.2
SATY	Saty	47.98	296	eP	P	00 56 19.4	-0.6
SATY	Saty	47.98	296	eP	P	00 56 19.4	-0.6
MDOK	Medeo	48.89	297	eP	P	00 56 26.3	-0.7
MDOK	Medeo	48.89	297	eP	P	00 56 26.3	-0.7
AAA	Alma-Ata	48.96	297	eP	P	00 56 26.7	-0.7
AAA				pmax	pmax		
	comp=Z,13nm,0.6s						
AAA	Alma-Ata	48.96	297	eP	P	00 56 26.8	-0.7
	comp=Z,13nm,0.6s						
TNSS	Tian-Shan	49.00	297	eP	P	00 56 27.2	-0.9
TNSS	Tian-Shan	49.00	297	eP	P	00 56 27.2	-0.9
KDJ	Kajisay	49.15	296	P	P	00 56 28.2	-0.9
KDJ	Kajisay	49.15	296	P	P	00 56 28.2	-0.9
KDJ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BOOM	Boomskoye usch	49.88	297	IAmb	IAmb	00 56 35.7	
	comp=Z,11nm,0.8s						
BVAR	Borovoye Array	50.16	311	P	P	00 56 36.4	0.0
	comp=Z,6.4nm,0.6s,baz=69,slow=8.1,SNR=31						
	comp=Z,6.4nm,0.6s						
BORK	Borovoye	50.19	311		P	00 56 36.1	-0.5
BORK				IAmb	IAmb	00 56 37.5	
	comp=Z,6.0nm,0.7s						
BORK	Borovoye	50.19	311	⇓eP	P	00 56 36.4	-0.2
BORK				pmax	pmax		
	comp=Z,67nm,5.5s						
SGDS	Sogindy	50.44	298	eP	P	00 56 38.2	-0.6
AAK	Ala-Archa	50.83	297		P	00 56 40.4	-1.4
AAK				IAmb	IAmb	00 56 53.8	
	comp=Z,18nm,1.9s						
AAK	Ala-Archa	50.83	297	⇓eP	P	00 56 41.0	-0.8
AAK				pmax	pmax		
	comp=Z,29nm,5.2s						
KSH2	Kashi	51.41	293	P	P	00 56 46.3	+0.1
KSH2				pP	sP	00 56 50.5	+0.7
KSH2				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ARSB	Arslanbob	52.37	296	IAmb	IAmb	00 56 54.6	
	comp=Z,12nm,0.8s						
DZA	Taraz	52.89	299	eP	P	00 56 56.3	-0.7
DZA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DZA	Taraz	52.89	299	eP	P	00 56 56.4	-0.7
	comp=Z,5.4nm,0.8s						
KK31	Karatay Array	53.36	299	IAmb	IAmb	00 57 00.9	
	comp=Z,4.9nm,0.9s						
KKAR	Karatay Array	53.36	299	P	P	00 56 59.2	-1.3
KKAR	Karatay Array	53.36	299	P	P	00 56 59.2	-1.3
BRLS	Borolday	53.85	299	eP	P	00 57 04.7	+0.7
BRLS	Borolday	53.85	299	eP	P	00 57 04.8	+0.7
IUG	Iuzhnay	54.07	298	eP	P	00 57 05.0	-0.7
IUG				pmax	pmax		
	comp=Z,8.0nm,1.1s						
IUG	Iuzhnay	54.07	298	eP	P	00 57 05.0	-0.7
	comp=Z,8.2nm,1.1s						
CHM	Chimkent	54.29	299	eP	P	00 57 06.7	-0.6
CHM				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CHM	Chimkent	54.29	299	eP	P	00 57 06.7	-0.6
	comp=Z,4.0nm,0.7s						
GAR	Garm	55.19	295	P	P	00 57 13.2	-0.8
NIL	Nilore	55.48	288	P	P	00 57 15.9	-0.1
NIL				IAmb	IAmb	00 57 17.5	
	comp=Z,8.4nm,0.8s						
NIL	Nilore	55.48	288	P	P	00 57 15.9	-0.1
NIL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ARTI	Arti	55.71	318	P	P	00 57 16.8	-0.5
ARTI	Arti	55.71	318	d iP	P	00 57 17.5	+0.2
ARTI				S	S	01 05 08.7	+5.3
ARTI				pmax	pmax		
	comp=Z,24nm,0.9s						
CHGR	Chuyangaron	56.15	295	⇑iP	P	00 57 20.2	-0.6
CHGR				pmax	pmax		
	comp=Z,16nm,0.8s						
SHAA	Shahritus	57.37	294	P	P	00 57 29.2	-0.3
SHAA				IAmb	IAmb	00 57 45.2	
	comp=Z,16nm,0.8s						
AB31	Akbulak array	57.63	310	P	P	00 57 30.5	-0.5
AB31				IAmb	IAmb	00 57 31.7	
	comp=Z,7.7nm,0.7s						
ABKAR	Akbulak array	57.63	310	P	P	00 57 30.3	-0.7
KBL	Kabul	58.13	290	P	P	00 57 33.9	-1.2
KBL				IAmb	IAmb	00 57 35.0	
	comp=Z,5.7nm,0.8s						
KBL	Kabul	58.13	290	P	P	00 57 33.9	-1.2
KBL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KIRV	Kirov	59.25	323	⇑eP	P	00 57 42.1	-0.1
RES	Resolute Bay	59.67	15	P	P	00 57 45.1	+0.2
	comp=Z,1.5nm,0.8s,baz=332,slow=8.0,SNR=6.4						
	comp=Z,1.5nm,0.8s						
WRAB	Tennant Creek	59.86	190	⇓iP	P	00 57 39.8	-6.9
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WRA	Warramunga Arr	59.87	190	P	P	00 57 46.9	0.0
	comp=Z,1.2nm,0.5s,baz=7.9,slow=6.9,SNR=20						
	comp=Z,1.2nm,0.5s						
YKA	Yellowknife Ar	60.71	31	P	P	00 57 53.3	+1.1
	comp=Z,0.3nm,0.7s,baz=304,slow=7.2,SNR=4.1						
	comp=Z,0.3nm,0.7s						
KLMR	Klimovskoe	62.51	328	eP	P	00 58 02.1	-2.2
KLMR				e		01 00 20.5	
KLMR				pmax	pmax		
	comp=Z,27nm,1.7s						
BELG	Belogornoye	63.11	317	⇓eP	P	00 58 07.7	-0.7
BELG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ASAR	Alice Springs	63.59	190	P	P	00 58 11.8	-0.1
	comp=Z,0.6nm,0.6s,baz=10,slow=5.3,SNR=6.6						
	comp=Z,0.6nm,0.6s						
FINES	FINESS Array B	67.34	333	P	P	00 58 36.0	+0.3
	comp=Z,5.6nm,0.7s,baz=49,slow=7.3,SNR=19						
	comp=Z,5.6nm,0.7s						
FINES	FINESS Array B	67.34	333	P	P	00 58 36.0	+0.3
AKT	Akhty	68.94	307	eP	P	00 58 45.4	-0.9
NCK	Nalchik	70.27	310	⇓eP	P	00 58 54.8	+0.5
NCK				pmax	pmax		
	comp=Z,47nm,3.8s						
KIV	Kislovodsk	70.53	311	P	P	00 58 56.6	+0.6
KIV	Kislovodsk	70.53	311	eP	P	00 58 56.2	+0.2
KIV				pmax	pmax		
	comp=Z,20nm,1.1s						
KIV	Kislovodsk	70.53	311	P	P	00 58 55.4	-0.6
	comp=Z,19nm,1.1s						
KBZ	Khabaz	70.54	311	P	P	00 58 57.0	+1.1
	comp=Z,6.5nm,0.8s,baz=55,slow=4.9,SNR=14						
	comp=Z,6.5nm,0.8s						
KBZ	Khabaz	70.54	311	i P	P	00 58 56.8	+0.9
KBZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SHA1	Shidzhatmaz	70.67	311	⇓eP	P	00 58 57.0	-0.1
ERBR	Yeremizino-Bor	70.73	314	eP	P	00 58 53.4	-3.7
ERBR				pmax	pmax		
	comp=Z,11nm,0.7s						
MDPB	Devils Postpil	72.05	56	P	P	00 58 56.1	-9.5
NVAR	Mina Array Bea	72.07	55	P	P	00 59 07.8	+2.2
	comp=Z,0.3nm,0.3s,baz=282,slow=7.1,SNR=3.9						
	comp=Z,0.3nm,0.3s						
HFS	Hagfors	72.45	336	P	P	00 59 07.7	+0.6
	comp=Z,5.5nm,0.6s,baz=39,slow=7.6,SNR=24						
	comp=Z,5.5nm,0.6s						
NB2	NORSAR Subarra	72.47	338	P	P	00 59 07.1	-0.3
	comp=Z,2.7nm,0.8s,baz=38,slow=6.2						
NOA	NORSAR Array B	72.47	338	P	P	00 59 07.6	+0.3
	comp=Z,4.0nm,0.8s,baz=38,slow=6.0,SNR=11						
	comp=Z,4.0nm,0.8s						
AKASG	Malin Array Be	73.31	323	P	P	00 59 11.7	-0.8
	comp=Z,2.2nm,0.5s,baz=44,slow=6.0,SNR=11						
	comp=Z,2.2nm,0.5s						
AKASG	Malin Array Be	73.31	323	i P	P	00 59 12.3	-0.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKBB	Malin Array Si	73.31	323	⇓eP	P	00 59 12.4	0.0
AKBB				pmax	pmax		
	comp=Z,85nm,4.8s						
AK04	Malin Array Si	73.33	323	P	P	00 59 10.7	-1.8
AK02	Malin Array Si	73.35	323	P	P	00 59 10.9	-1.8
AK11	Malin Array Si	73.36	323	P	P	00 59 11.0	-1.7
AK05	Malin Array Si	73.38	323	P	P	00 59 10.8	-2.0
AK12	Malin Array Si	73.39	323	P	P	00 59 10.9	-2.0
AK20	Malin Array Si	73.39	323	P	P	00 59 10.9	-2.0
AK16	Malin Array Si	73.39	323	P	P	00 59 11.1	-1.8
AK19	Malin Array Si	73.40	323	P	P	00 59 11.2	-1.7
AK17	Malin Array Si	73.40	323	P	P	00 59 11.4	-1.6
AK13	Malin Array Si	73.45	323	P	P	00 59 11.9	-1.4
FRB	Frobisher Bay	73.87	14	P	P	00 59 16.0	+0.6
	comp=Z,2.6nm,0.7s,baz=350,slow=6.5,SNR=7.6						
	comp=Z,2.6nm,0.7s						
GURO	Guroymak-BITLI	74.19	307	P	P	00 59 19.4	+1.4
GURO				IAmb	IAmb	00 59 19.9	
	comp=Z,8.2nm,0.9s						
LUBAR	Lubar, Ukraine	74.53	323	P	P	00 59 17.5	-2.1
PDAR	Pinedale Array	74.64	47	P	P	00 59 22.6	+1.9
	comp=Z,0.4nm,0.6s,baz=294,slow=1.7,SNR=5.6						
	comp=Z,0.4nm,0.6s						
ARPR	Arapgir-MALATY	76.10	309	P	P	00 59 27.3	-1.8
ULM	Lac du Bonnet	76.40	35	P	P	00 59 32.2	+1.9
	comp=Z,0.8nm,0.5s,baz=96,slow=4.8,SNR=1.9						
	comp=Z,0.8nm,0.5s						
BUR08	Bucovina Ar. S	77.34	322	P	P	00 59 34.5	-1.3
BUR08				IAmb	IAmb	01 01 51.8	
	comp=Z,26nm,2.0s						
BURAR	Bucovina Array	77.35	322	P	P	00 59 34.2	-1.6
BRTR	Keskin Array B	78.43	312	P	P	00 59 41.4	-0.7
	comp=Z,0.7nm,0.6s,baz=100,slow=3.0,SNR=5.0						
	comp=Z,0.7nm,0.6s						
BRTR	Keskin Array B	78.43	312	i P	P	00 59 42.4	+0.3
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
LANS	Liptovska Anna	78.80	326	eP	P	00 59 45.4	+1.6
LANS	Liptovska Anna	78.80	326	eP	P	00 59 45.4	+1.6
CLL	Collm	79.71	331	eP	P	00 59 46.0	-2.7
CLL	Collm	79.71	331	eP	P	00 59 46.0	-2.7
CLL				i x	x	00 59 49.4	
CLL				ePP	PP	01 02 49.0	+0.1
RAYN	Ar Rayn	81.27	293	P	P	00 59 56.4	-1.2
RAYN	Ar Rayn	81.27	293	P	P	00 59 56.4	-1.2
RAYN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
EKA	Eskdalemuir Ar	81.27	342	P	P	00 59 57.7	+0.7
	comp=Z,1.9nm,0.8s,baz=46,slow=4.3,SNR=2.4						
	comp=Z,1.9nm,0.8s						
FUORN	Ofenpass-Fuorn	84.58	330	P	P	01 00 11.2	-3.4
FUORN				IAmb	IAmb	01 00 16.3	
	comp=Z,7.7nm,0.8s						
K43A	Burlington	85.52	36	P	P	01 00 11.0	-8.1
TXAR	Lajitas Array	87.19	54	P	P	01 00 30.2	+2.5
	comp=Z,0.2nm,0.5s,baz=277,slow=3.3,SNR=4.1						
	comp=Z,0.2nm,0.5s						

KRNET 02 01:09:41.5±0.1, 40.13N×77.28E, h12km, mb3.0
NNC 02 01:09:41.5±3.2, 40.14N×77.27E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=21.7km s-min=16.9km az=172.0
SOME 02 01:09:43.7, 40.20N×77.27E, h10km
ISC 02 01:09:39.6±2.1, 40.09N±0.08×77.30E±0.05, h17km±16km, n24, σ0.94/39, 18C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JNKS	Jany-Kuch	1.60	307	⇑eP	Pg	01 10 10.5	+0.2
JNKS				⇑eS	Sg	01 10 31.8	+0.7
NRN	Naryn	1.67	324	⇑eP	Pg	01 10 12.0	+0.4
NRN				⇑eS	Sg	01 10 34.4	+1.1
TARG	Taragay, Kyrgy	1.68	13	⇑eP	Pg	01 10 12.4	+0.5
TARG				⇑eS	Sg	01 10 35.1	+1.3
KDJ	Kajisay	2.04	357	⇑eP	Pg	01 10 18.5	-0.2
KDJ				⇑eS	Sg	01 10 45.5	+0.3
ULHL	Ulahol	2.29	340	⇓eP	Pb	01 10 22.1	+1.5
ULHL				⇓eS	Sg	01 10 51.7	-1.7
BOOM	Boomskoye usch	2.61	337	⇓eP	Pb	01 10 26.4	+0.5
BOOM				⇓eS	Sb	01 10 59.2	+1.5
SALK	Salom-Alik	2.77	288	⇑eP	Pb	01 10 28.8	+0.1
SALK				⇑eS	Sb	01 11 03.4	+1.0
SFK	Sufi-Kurgan	2.92	270	⇑eP	Pb	01 10 31.0	-0.3
SFK				⇑eS	Sb	01 11 07.3	+0.6
TNSS	Tian-Shan	2.95	355	Pg	Pg	01 10 36.2	0.0
	3.9nm,0.3s						
TNSS				Lg	Lg	01 11 14.8	
	4.0nm,1.0s						
TNSS	Tian-Shan	2.95	355	eP	Pg	01 10 36.6	+0.4
	3.9nm,0.3s						
TNSS				eS	Sg	01 11 14.8	+0.3
	4.0nm,1.0s						
MDOK	Medeo	3.07	357	Pg	Pg	01 10 36.9	-1.6
	6.4nm,0.3s						
MDOK				Lg	Lg	01 11 14.9	
	22nm,0.8s						
SATY	Saty	3.08	15	Pg	Pg	01 10 37.8	-0.7
	3.5nm,0.3s						
SATY				Lg	Lg	01 11 17.4	
	7.6nm,0.4s						
MTBS	Maitube	3.10	348	Pg	Pg	01 10 38.6	-0.5
	4.1nm,0.2s						
MTBS				Lg	Lg	01 11 18.5	
	4.5nm,0.2s						
MTBS	Maitube	3.10	348	eP	Pg	01 10 38.8	-0.2
	4.1nm,0.2s						
MTBS				eS	Sg	01 11 18.5	-0.8
	4.5nm,0.2s						
KST	Kastek	3.11	342	Pg	Pg	01 10 38.9	-0.4
	1.8nm,0.2s						
KST				Lg	Lg	01 11 18.9	
	9.6nm,0.5s						
KST	Kastek	3.11	342	eP	Pg	01 10 39.0	-0.2
	1.8nm,0.2s						
KST				eS	Sg	01 11 18.9	-0.8
	9.6nm,0.5s						
KOTS	Kotyrbulak	3.14	357	Pg	Pg	01 10 39.5	-0.3
	6.3nm,0.4s						
KOTS				Lg	Lg	01 11 21.4	
	37nm,0.8s						
KOTS	Kotyrbulak	3.14	357	eP	Pg	01 10 40.5	+0.7
	6.3nm,0.4s						
KOTS				eS	Sg	01 11 21.4	+0.9
	37nm,0.8s						
AAK	Ala-Archa	3.31	321	⇑Pg	Pb	01 10 38.1	+0.3
	1.3nm,0.5s						
AAK				⇑Lg	Lg	01 11 25.0	
	5.8nm,0.9s						
AAK	Ala-Archa	3.31	321	⇑eP	Pb	01 10 36.0	-1.8
AAK				⇑eS	Sb	01 11 15.9	-1.9
UZB	Uzynbulak	3.31	22	Pg	Pg	01 10 42.2	-0.8
	3.0nm,0.2s						
UZB				Lg	Lg	01 11 25.1	
	6.0nm,0.5s						
UZB	Uzynbulak	3.31	22	eP	Pg	01 10 42.6	-0.4
	3.0nm,0.2s						
UZB				eS	Sg	01 11 25.1	-0.9
	6.0nm,0.5s						
KPKS	Kokpek	3.52	17	eP	Pg	01 10 46.5	-0.6
	0.5nm,0.2s						
KPKS				eS	Sg	01 11 31.6	-1.1
	5.9nm,0.5s						
PDGK	Podgornoye	3.62	26	⇑Pg	Pb	01 10 44.3	+1.1
	3.3nm,0.8s						
PDGK				⇑Lg	Lg	01 11 34.6	
	7.4nm,0.8s						

VIE 02 01:09:51.3±0.2, 47.30N×11.79E, h12km±1km, ml1.7/12, Error ellipse: s-maj=1.7km s-min=1.0km az=176.0 6 km W of Ried im Zillertal, Austria

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WTTA	Wattenberg	0.11	253	i Pg	Pg	01 09 54.8	+0.4
	69nm,0.1s						
WTTA				i Sg	Sg	01 09 57.0	+0.3
	150nm,0.1s						
WATA	Walderalm	0.15	285	i Pg	Pg	01 09 55.1	+0.1
	29nm,0.1s						
WATA				i Sg	Sg	01 09 57.6	0.0
	54nm,0.1s						
SQTA	Sankt Quirin	0.40	259	ePg	Pg	01 09 59.5	+0.2
	3.2nm,0.1s						
MOTA	Moosalm	0.47	276	ePg	Pg	01 10 00.5	-0.1
	1.3nm,0.1s						
MOTA				eSg	Sg	01 10 07.5	+0.6
	5.7nm,0.1s						
LESA	Schwarzleotal	0.62	78	ePg	Pg	01 10 03.4	0.0
	0.4nm,0.1s						
LESA				eSg	Sb	01 10 12.4	-0.4
	2.0nm,0.1s						
RETA	Reutte	0.72	286	ePg	Pg	01 10 05.5	+0.1
	0.1nm,0.1s						
RETA				eSg	Sb	01 10 15.9	0.0
	3.6nm,0.3s						
ABTA	Abfaltersbach	0.74	138	i Pg	Pg	01 10 05.6	0.0
	0.3nm,0.1s						
ABTA				eSg	Sg	01 10 15.4	+0.1
	9.5nm,0.2s						
FETA	Feichten	0.77	250	ePg	Pg	01 10 06.4	+0.1
	0.4nm,0.1s						
FETA				eSg	Sg	01 10 16.3	-0.2
	0.9nm,0.1s						
KBA	Koelnbreinsper	1.08	101	i Pg	Pg	01 10 12.2	0.0
	0.2nm,0.1s						
KBA				eSg	Sb	01 10 25.6	-0.7
	1.2nm,0.2s						
DAVA	Damuels	1.30	270	i Pg	Pg	01 10 17.0	+0.7
	0.5nm,0.1s						
BIOA	Bad Ischl, Aus	1.31	72	ePg	Pg	01 10 16.6	0.0
	0.2nm,0.1s						

VIE 02 01:09:57.1±0.3, 47.30N×11.80E, h11km±2km, mb1.2/4, ml1.7/8, Error ellipse: s-maj=2.3km s-min=1.3km az=7.0 5 km W of Ried im Zillertal, Austria

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WTTA	Wattenberg	0.12	252	i Pg	Pg	01 10 00.6	+0.4
	38nm,0.1s						
WTTA				i Sg	Sg	01 10 02.8	+0.4
	151nm,0.1s						
WATA	Walderalm	0.15	283	ePg	Pg	01 10 00.9	+0.2
	24nm,0.1s						
WATA				i Sg	Sg	01 10 03.4	+0.1
	52nm,0.1s						
SQTA	Sankt Quirin	0.41	259	ePg	Pg	01 10 05.5	+0.2
	4.8nm,0.1s						
SQTA				eSg	Sb	01 10 11.9	-0.9
	7.2nm,0.1s						
MOTA	Moosalm	0.47	276	eSg	Sb	01 10 13.9	-0.8
	5.2nm,0.1s						
LESA	Schwarzleotal	0.61	78	i Pg	Pg	01 10 09.1	+0.1
	0.7nm,0.1s						
ABTA	Abfaltersbach	0.74	138	i Pg	Pg	01 10 11.5	+0.1
	0.4nm,0.1s						
ABTA				eSg	Sg	01 10 21.3	+0.2
	7.3nm,0.2s						
FETA	Feichten	0.78	249	ePg	Pg	01 10 12.2	-0.1
	0.3nm,0.1s						
FETA				eSg	Sg	01 10 22.5	0.0
	0.9nm,0.1s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BIOA	**Bad Ischl, Aus**	**1.31**	**72**	*i* Pg	Pg	01 10 23.1	+0.8
	0.3nm,0.1s						

LDG 02 01:10:07.0±0.1, 48°.47N×0°.43W, h12km, Md0.2/3, Ml2.1/2, Error ellipse: s-maj=1.5km s-min=0.9km az=167.0, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LDF	**La Druitiere**	**0.24**	**58**	*e*Pg	Pg	01 10 12.0	-0.1
LDF				*e*Sg	Sg	01 10 15.5	0.0
	1.1nm,0.1s						
FLN	**La Foliniere**	**0.30**	**353**	*e*Pg	Pg	01 10 13.2	+0.1
FLN				*e*Sg	Sg	01 10 17.2	0.0
	6.6nm,0.2s						
GRR	**Gorron**	**0.30**	**255**	*e*Pg	Pg	01 10 13.2	+0.1
GRR				*e*Sg	Sg	01 10 17.1	0.0
	1.5nm,0.1s						
SGMF	**Saint Gilles**	**1.44**	**262**	*e*Pg	Pb	01 10 33.4	-0.3
SGMF				*e*Sg	Sb	01 10 51.9	0.0
	2.0nm,0.2s						
ROSF	**Rostrenen**	**1.90**	**267**	*e*Sg	Sg	01 11 06.7	-1.3
	1.8nm,0.2s						

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*ANF **02** 01:26:44.2±0.1, 65°.22N×139°.38W, h6km±1km, ML2.9/39, Error ellipse: s-maj=0.8km s-min=0.8km az=83.0*
*IDC **02** 01:26:45.7±1.4, 64°.89N×139°.49W, h0km, mb2.9/1, mbtmp2.8/3, ML2.7/2, Error ellipse: s-maj=45.7km s-min=12.9km az=5.0*
*PGC **02** 01:26:45.2±0.1, 65°.24N×139°.39W, h9km, ML2.9/33, 130km northeast of Dawson, Yt Northern Yukon Territory, Canada*
ISC 02 01:26:43.9±1.1, 65°.22N±0°.01×139°.35W±0°.02, h1km±9km, n106, σ0s.95/163, Northern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I28M	**Miner Creek**	**0.33**	**313**	P	**Pg**	**01 26 50.3**	**0.0**
I28M				S	**Sg**	**01 26 55.4**	**+0.8**
I28M	**Miner Creek**	**0.33**	**313**	P	**Pg**	**01 26 50.2**	**0.0**
	baz=137,SNR=1000						
I28M				S	**Sg**	**01 26 55.1**	**+0.5**
	baz=137						
I29M	**Ogilvie Camp,**	**0.46**	**72**	P	**Pg**	**01 26 53.6**	**+0.9**
I29M				S	**Sb**	**01 27 00.7**	**-1.3**
I29M	**Ogilvie Camp,**	**0.46**	**72**	P	**Pg**	**01 26 53.5**	**+0.8**
	baz=253,SNR=126						
I29M				S	**Sg**	**01 26 59.4**	**+0.8**
	baz=253						
J29N	**Klondike Camp**	**0.91**	**147**	P	**Pb**	**01 27 02.0**	**-0.5**
J29N				S	**Sb**	**01 27 15.3**	**+0.2**
J29N	**Klondike Camp**	**0.91**	**147**	P	**Pb**	**01 27 02.0**	**-0.5**
	baz=327,SNR=70						
J29N				S	**Sb**	**01 27 14.2**	**-0.9**
	baz=327						
I27K	**Kandik River**	**1.02**	**293**	P	**Pg**	**01 27 03.4**	**0.0**
	baz=112						
I27K				S	**Sb**	**01 27 17.3**	**-1.0**
	baz=112						
H29M	**Whitestone**	**1.08**	**22**	P	**Pb**	**01 27 05.2**	**-0.1**
H29M				S	**Sb**	**01 27 20.1**	**+0.2**
H29M	**Whitestone**	**1.08**	**22**	P	**Pn**	**01 27 05.5**	**-0.6**
	baz=204						
H29M				Sn	**Sn**	**01 27 22.4**	**+0.7**
	baz=204						
DAWY	**Dawson**	**1.16**	**181**	P	**Pg**	**01 27 05.9**	**-0.2**
DAWY				S	**Sb**	**01 27 21.9**	**-0.4**
DAWY	**Dawson**	**1.16**	**181**	P	**Pg**	**01 27 05.9**	**-0.2**
	baz=360,SNR=760						
DAWY				S	**Sb**	**01 27 22.0**	**-0.3**
	baz=360						
I30M	**Mount Dempster**	**1.25**	**89**	P	**Pn**	**01 27 07.8**	**-0.7**
I30M	**Mount Dempster**	**1.25**	**89**	P	**Pn**	**01 27 07.8**	**-0.7**
	baz=271						
I30M				S	**Sn**	**01 27 25.9**	**-0.2**
	baz=271						
H27K	**Steamboat Moun**	**1.35**	**319**	P	**Pb**	**01 27 09.6**	**-0.3**
H27K				S	**Sn**	**01 27 28.1**	**-0.4**
H27K	**Steamboat Moun**	**1.35**	**319**	P	**Pb**	**01 27 09.8**	**-0.2**
	baz=138,SNR=518						
H27K				S	**Sn**	**01 27 28.5**	**0.0**
	baz=138						
J30M	**Hart River**	**1.44**	**115**	P	**Pb**	**01 27 11.2**	**-0.3**
J30M				S	**Sg**	**01 27 31.3**	**+1.2**
J30M	**Hart River**	**1.44**	**115**	P	**Pb**	**01 27 11.2**	**-0.3**
	baz=297,SNR=361						
J30M				S	**Sg**	**01 27 31.4**	**+1.2**
	baz=297						
EPYK	**Eagle Plains**	**1.58**	**42**	Pn	**Pn**	**01 27 12.9**	**0.0**
EPYK	**Eagle Plains**	**1.58**	**42**	P	**Pn**	**01 27 12.7**	**-0.3**
	baz=225,SNR=5.5						
EPYK				S	**Sg**	**01 27 34.5**	**-0.1**
	baz=225						
K29M	**Barlow Dome**	**1.60**	**149**	Pn	**Pb**	**01 27 14.0**	**-0.2**
K29M	**Barlow Dome**	**1.60**	**149**	Pb	**Pb**	**01 27 13.9**	**-0.2**
	baz=330						
K29M				Sb	**Sg**	**01 27 35.9**	**+0.8**
	baz=330						
I26K	**Coal Creek Min**	**1.60**	**275**	P	**Pn**	**01 27 12.6**	**-0.7**
	baz=92,SNR=179						
I26K				S	**Sb**	**01 27 34.4**	**-0.4**
	baz=92						
H31M	**Peel River**	**2.17**	**72**	Pn	**Pn**	**01 27 20.7**	**-0.3**
H31M	**Peel River**	**2.17**	**72**	P	**Pn**	**01 27 20.8**	**-0.2**
	baz=256						
H31M				S	**Sn**	**01 27 48.8**	**+0.3**
	baz=256						
G30M	**tAoh Zraii Nji**	**2.18**	**34**	Pn	**Pn**	**01 27 20.9**	**-0.3**
G30M	**tAoh Zraii Nji**	**2.18**	**34**	P	**Pn**	**01 27 20.8**	**-0.4**
	baz=218,SNR=16						
G30M				Sb	**Sg**	**01 27 53.4**	**-0.2**
	baz=218						
L29M	**L29M**	**2.19**	**165**	Pn	**Pn**	**01 27 21.6**	**+0.2**
L29M	**L29M**	**2.19**	**165**	P	**Pn**	**01 27 21.4**	**0.0**
	baz=346						
L29M				S	**Sn**	**01 27 49.5**	**+0.4**
	baz=346						
MAYO	**Mayo, Yukon**	**2.22**	**136**	Sb	**Sg**	**01 27 54.2**	**-0.9**
	baz=318						
SCRK	**Sand Creek**	**2.36**	**240**	P	**Pn**	**01 27 23.1**	**-0.7**
	baz=56,SNR=27						
SCRK				Sb	**Sb**	**01 27 57.1**	**+0.3**
	baz=56						
F28M	**Old Crow**	**2.41**	**355**	Pn	**Pn**	**01 27 24.8**	**+0.4**
F28M	**Old Crow**	**2.41**	**355**	P	**Pn**	**01 27 24.2**	**-0.1**
	baz=175,SNR=60						
F28M				Sb	**Sb**	**01 27 59.5**	**+1.4**
	baz=175						
L27K	**Beaver Creek,**	**2.43**	**208**	Pn	**Pn**	**01 27 24.9**	**+0.2**
L27K	**Beaver Creek,**	**2.43**	**208**	P	**Pn**	**01 27 24.6**	**0.0**
	baz=25						
L27K				S	**Sn**	**01 27 54.6**	**-0.4**
	baz=25						
G26K	**Porcupine Rive**	**2.50**	**316**	Pn	**Pn**	**01 27 25.7**	**+0.1**
G26K				Sg	**Sg**	**01 28 02.5**	**-1.7**
G26K	**Porcupine Rive**	**2.50**	**316**	P	**Pn**	**01 27 25.3**	**-0.3**
	baz=132,SNR=7.8						
G26K				Sb	**Sg**	**01 28 02.5**	**-1.7**
	baz=132						
DOT	**Dot Lake**	**2.58**	**234**	Pn	**Pn**	**01 27 26.1**	**-0.6**
PRP	**Porcupine Dome**	**2.60**	**279**	P	**Pn**	**01 27 26.5**	**-0.7**
	baz=94						
PRP				S	**Sn**	**01 27 58.2**	**-1.1**
	baz=94						
J25K	**Salcha River,**	**2.64**	**259**	P	**Pn**	**01 27 26.6**	**-0.9**
	baz=74						
J25K				Sb	**Sb**	**01 28 04.8**	**+0.1**
	baz=74						
G31M	**Satah River**	**2.68**	**48**	Pn	**Pn**	**01 27 27.4**	**-0.7**
G31M				Sn	**Sn**	**01 28 00.8**	**-0.2**
G31M	**Satah River**	**2.68**	**48**	P	**Pn**	**01 27 27.6**	**-0.4**
	baz=233						
G31M				Sb	**Sb**	**01 28 07.4**	**+1.6**
	baz=233						
F30M	**Barrier River**	**2.79**	**29**	Pn	**Pn**	**01 27 29.3**	**-0.3**
F30M				Sn	**Sn**	**01 28 03.7**	**-0.2**
F30M	**Barrier River**	**2.79**	**29**	P	**Pn**	**01 27 29.3**	**-0.3**
	baz=213						
F30M				Sb	**Sg**	**01 28 11.6**	**-1.8**
	baz=213						
RIDG	**Independent Ri**	**2.81**	**240**	P	**Pn**	**01 27 29.0**	**-0.9**
	baz=55						
RIDG				Sb	**Sb**	**01 28 10.9**	**+1.3**
	baz=55						
L26K	**Log Cabin Wild**	**2.82**	**220**	P	**Pn**	**01 27 29.4**	**-0.6**
	baz=36						
L26K				Sb	**Sb**	**01 28 10.8**	**+0.9**
	baz=36						
M29M	**Somme Creek**	**2.82**	**172**	Pn	**Pn**	**01 27 30.2**	**+0.2**
M29M	**Somme Creek**	**2.82**	**172**	P	**Pn**	**01 27 29.8**	**-0.3**
	baz=352,SNR=47						
M29M				S	**Sn**	**01 28 04.4**	**-0.3**
	baz=352						
M30M	**Minto, Yukon**	**2.89**	**156**	Pn	**Pn**	**01 27 30.9**	**0.0**
M30M	**Minto, Yukon**	**2.89**	**156**	P	**Pn**	**01 27 30.6**	**-0.4**
	baz=338,SNR=31						
M30M				S	**Sn**	**01 28 06.2**	**-0.1**
	baz=338						
BVCY	**Beaver Creek**	**2.90**	**194**	Pn	**Pn**	**01 27 30.9**	**-0.2**
BVCY				Sn	**Sn**	**01 28 06.4**	**-0.2**
BVCY	**Beaver Creek**	**2.90**	**194**	P	**Pn**	**01 27 30.7**	**-0.4**
	baz=12,SNR=6.6						
BVCY				S	**Sn**	**01 28 06.4**	**-0.2**
	baz=12						
M27K	**Edge Creek, AK**	**3.09**	**202**	P	**Pn**	**01 27 33.6**	**-0.2**
	baz=20,SNR=30						
E27K	**Coleen River**	**3.11**	**344**	Pn	**Pn**	**01 27 33.9**	**-0.1**
E27K	**Coleen River**	**3.11**	**344**	P	**Pn**	**01 27 33.7**	**-0.2**
	baz=163						
K24K	**Donnelly Dome**	**3.12**	**246**	P	**Pn**	**01 27 33.8**	**-0.4**
	baz=60						
F26K	**Sheenjek River**	**3.14**	**324**	P	**Pn**	**01 27 34.1**	**-0.3**
	baz=140						
F26K				Sb	**Sb**	**01 28 20.9**	**+1.8**
	baz=140						
F31M	**Tsiigehtchic**	**3.17**	**43**	Pn	**Pn**	**01 27 33.9**	**-0.8**
F31M				Sn	**Sn**	**01 28 11.4**	**-1.7**
F31M	**Tsiigehtchic**	**3.17**	**43**	P	**Pn**	**01 27 34.1**	**-0.7**
	baz=228						
E29M	**Blow River**	**3.23**	**10**	Pn	**Pn**	**01 27 35.3**	**-0.3**
E29M				Sn	**Sn**	**01 28 13.7**	**-0.9**
E29M	**Blow River**	**3.23**	**10**	P	**Pn**	**01 27 35.5**	**-0.1**
	baz=191						
E29M				S	**Sn**	**01 28 15.7**	**+1.1**
	baz=191						
ILAR	**Eielson Array**	**3.23**	**265**	Pn	**Pn**	**01 27 36.4**	**+0.7**
	0.9nm,0.3s,baz=85,slow=10,SNR=53						
ILAR				Lg	Lg	01 28 23.4	
	3.6nm,0.3s,baz=84,slow=27,SNR=22						
	1.2nm,0.5s						
M26K	**Nabesna, AK**	**3.26**	**211**	P	**Pn**	**01 27 35.9**	**-0.2**
	baz=28						
M26K				S	**Sn**	**01 28 14.8**	**-0.7**
	baz=28						
HDA	**Harding Lake**	**3.35**	**259**	Sb	**Sb**	**01 28 26.9**	**+1.7**
	baz=73						
E28M	**Babbage River**	**3.40**	**359**	Pn	**Pn**	**01 27 38.0**	**+0.1**
E28M	**Babbage River**	**3.40**	**359**	P	**Pn**	**01 27 37.5**	**-0.4**
	baz=179						
E28M				S	**Sn**	**01 28 18.9**	**+0.2**
	baz=179						
POKR	**Poker Plat Res**	**3.41**	**272**	P	**Pn**	**01 27 37.1**	**-1.0**
	baz=85						
POKR				Sb	**Sb**	**01 28 28.6**	**+1.7**
	baz=85						
F25K	**Christian Rive**	**3.47**	**316**	Sb	**Sb**	**01 28 31.3**	**+2.6**
	baz=131						
YUK3	**Moose Creek**	**3.50**	**189**	Pn	**Pn**	**01 27 39.8**	**+0.3**
YUK3				Sn	**Sn**	**01 28 21.6**	**+0.1**
YUK3	**Moose Creek**	**3.50**	**189**	P	**Pn**	**01 27 39.6**	**+0.1**
	baz=7.3,SNR=99						
YUK3				S	**Sn**	**01 28 21.2**	**-0.3**
	baz=7.3						
PAX	**Paxson**	**3.51**	**233**	Pn	**Pn**	**01 27 39.8**	**+0.2**
PAX				Sn	**Sn**	**01 28 21.4**	**-0.3**
PAX	**Paxson**	**3.51**	**233**	P	**Pn**	**01 27 39.7**	**+0.2**
	baz=47						
PAX				S	**Sn**	**01 28 21.5**	**-0.2**
	baz=47						
YUK2	**White River**	**3.52**	**192**	Pn	**Pn**	**01 27 39.6**	**0.0**
H24K	**Noodor Dome**	**3.60**	**284**	P	**Pn**	**01 27 39.9**	**-0.8**
	baz=96						
COLA	**College**	**3.62**	**268**	Sb	**Sb**	**01 28 35.4**	**+2.5**
	baz=81						
G24K	**Hadweenzic Riv**	**3.64**	**298**	Sb	**Sb**	**01 28 36.6**	**+3.1**
	baz=111						
M31M	**Drury Creek, Y**	**3.75**	**142**	Sb	**Sb**	**01 28 39.6**	**+2.9**
	baz=326						
E25K	**Arctic Village**	**3.82**	**322**	Pn	**Pn**	**01 27 44.1**	**+0.4**
E25K	**Arctic Village**	**3.82**	**322**	P	**Pn**	**01 27 44.0**	**+0.4**
	baz=137,SNR=13						
HARP	**HAARP**	**3.83**	**225**	P	**Pn**	**01 27 44.3**	**+0.5**
	baz=40						
INK	**Inuvik**	**3.86**	**34**	Pn	**Pn**	**01 27 44.5**	**+0.2**
INK				Sn	**Sn**	**01 28 28.4**	**-1.6**
INK	**Inuvik**	**3.86**	**34**	S	**Sn**	**01 28 29.0**	**-1.0**
	baz=220						
BRWY	**Burwash Landin**	**3.87**	**178**	Sn	**Sn**	**01 28 30.4**	**-0.2**
YUK4	**Talbot Arm**	**3.91**	**175**	Pn	**Pn**	**01 27 44.2**	**-0.9**
YUK4	**Talbot Arm**	**3.91**	**175**	P	**Pn**	**01 27 44.2**	**-0.9**
	baz=354,SNR=96						
N30M	**Aishikik Lake**	**3.92**	**164**	Sn	**Sn**	**01 28 31.6**	**0.0**
N30M	**Aishikik Lake**	**3.92**	**164**	P	**Pn**	**01 27 45.4**	**+0.3**
	baz=346						
N30M				S	**Sn**	**01 28 31.9**	**+0.3**
	baz=346						
YUK8	**Steele Glacier**	**3.96**	**183**	Pn	**Pn**	**01 27 45.9**	**0.0**
YUK8				Sn	**Sn**	**01 28 33.0**	**+0.1**
YUK8	**Steele Glacier**	**3.96**	**183**	P	**Pn**	**01 27 46.1**	**+0.2**
	baz=2.2,SNR=58						
YUK8				S	**Sn**	**01 28 32.8**	**-0.2**
	baz=2.2						
D27M	**Malcolm River**	**4.09**	**352**	S	**Sn**	**01 28 34.9**	**-0.9**
	baz=171						
DHY	**Denali Highway**	**4.12**	**242**	P	**Pn**	**01 27 48.2**	**+0.2**
	baz=55						
DHY				S	**Sn**	**01 28 36.3**	**-0.6**
	baz=55						
YUK5	**Granite Creek**	**4.16**	**170**	Sn	**Sn**	**01 28 37.9**	**0.0**
NEA2	**Nenana**	**4.19**	**266**	Sb	**Sb**	**01 28 52.8**	**+3.5**
	baz=77						
YUK6	**Outpost Mounta**	**4.32**	**174**	Sg	**Sg**	**01 28 59.0**	**-3.5**
CTGM	**Chitina Glacie**	**4.37**	**193**	Sn	**Sn**	**01 28 43.7**	**+0.8**
LOGN	**Logan Glacier**	**4.48**	**190**	Pn	**Pn**	**01 27 54.1**	**+1.2**
O28M	**Mount Upton**	**4.49**	**185**	Pn	**Pn**	**01 27 54.8**	**+1.7**
O28M				Sn	**Sn**	**01 28 45.7**	**-0.3**
HYT	**Haines Junctio**	**4.50**	**168**	Pn	**Pn**	**01 27 54.2**	**+1.1**
KIAG	**Kiagna River**	**4.53**	**199**	Pn	**Pn**	**01 27 55.7**	**+2.1**
GRNC	**Granite Creek**	**4.64**	**195**	Pn	**Pn**	**01 27 56.9**	**+1.7**
GRNC				Sn	**Sn**	**01 28 50.6**	**+0.9**
O30N	**Mendenhall**	**4.71**	**160**	Sn	**Sn**	**01 28 52.4**	**+1.2**
C27K	**Jago River**	**4.73**	**341**	Pn	**Pn**	**01 27 57.5**	**+1.4**
COLD	**Coldfoot**	**4.83**	**299**	Sn	**Sn**	**01 28 53.9**	**-0.1**
O29M	**Mount Kennedy**	**4.95**	**176**	Sn	**Sn**	**01 28 58.9**	**+1.7**
PCA	**Pinnacle**	**5.16**	**185**	Sn	**Sn**	**01 29 03.5**	**+1.1**
YKA	**Yellowknife Ar**	**11.22**	**93**	Pn	**Pn**	**01 29 24.1**	**-0.9**
	0.1nm,0.3s,baz=293,slow=14,SNR=2.6						
	0.2nm,0.5s						
PDAR	**Pinedale Array**	**28.01**	**129**	P	**P**	**01 32 36.4**	**+0.1**
	0.1nm,0.5s,baz=321,slow=9.8,SNR=1.5						
	0.1nm,0.5s						

RSNC 02 01:27:45.3±0.8, 3°N±5°×7°9W±°, h0km, M2.7, mb3.8, ML2.4, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBAC	**Balboa, Cauca**	**2.31**	**105**	P	Pn	01 28 22.3	-2.6
GCUF	**Volcan Galeras**	**2.55**	**123**	P	Pn	01 28 26.7	-1.7
CRUC	**La Cruz**	**2.74**	**113**	P	Pn	01 28 30.9	0.0
POPC	**Popayan, Colom**	**2.80**	**92**	P	Pn	01 28 29.2	-2.4
JAMC	**Jamundi, Valle**	**2.86**	**78**	P	Pn	01 28 29.8	-2.7
YOTC	**Yotoco, Valle**	**3.41**	**67**	P	Pn	01 28 36.6	-3.3
YOTC				S	Sn	01 29 16.9	-4.2
FLOC	**Florencia**	**3.96**	**105**	P	Pn	01 28 47.2	-0.2
FLOC				S	Sn	01 29 36.2	+1.5
GARC	**Garzon, Huila**	**4.01**	**96**	P	Pn	01 28 48.6	+0.4
GARC				S	Sn	01 29 36.7	+0.6
ORTC	**Ortega, Tolima**	**4.41**	**73**	P	Pn	01 28 53.7	0.0
ORTC				S	Sn	01 29 45.3	-0.5
ANIL	**Santa Ana**	**4.47**	**65**	P	Pn	01 28 54.5	-0.1
PRAC	**Prado**	**4.71**	**77**	P	Pn	01 28 58.0	+0.3
PRAC				S	Sn	01 29 53.0	-0.2
URMC	**La Uribe, Meta**	**5.13**	**83**	P	Pn	01 29 04.0	+0.4
	4.1nm,2.6s						
NORC	**Norcasia**	**5.44**	**57**	P	Pn	01 29 07.9	+0.1
	3.4nm,2.7s						
MACC	**Macarena, Meta**	**5.65**	**95**	P	Pn	01 29 10.4	-0.2
	28nm,0.6s						
MACC				S	Sn	01 30 11.2	-5.1
	28nm,0.6s						
VILC	**Villavicencio,**	**5.96**	**76**	P	Pn	01 29 16.1	+1.1
	15nm,0.6s						
CHIC	**Chingaza**	**6.07**	**71**	P	Pn	01 29 16.9	+0.1

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*OSPL **02** 01:31:15.6±1.0, 18°.81N×71°.78W, h18km±53km, ML1.5, Presumed earthquake*
SDD 02 01:31:16.0±0.8, 18°.66N×71°.79W, h26km±12km, MD2.5, ML1.8, MW2.2, 7C, Presumed earthquake, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIDR	**Jimani**	**0.18**	**198**	⇑*e*Pg	Pb	01 31 20.6	-0.9
JIDR				⇑*e*Sg	Sb	01 31 24.7	-0.4
JIDR				IAML		01 31 25.9	
	comp=N,143nm,0.1s						
LONE3	**El Aguacate, B**	**0.32**	**100**	*i* P	Pb	01 31 22.6	-0.9
LONE3				*e*S	Sb	01 31 28.6	0.0
LONE3				IAML		01 31 30.8	
	comp=Z,17nm,0.3s						
NEDR	**Neiba UASD**	**0.40**	**116**	⇑*e*Sg	Sb	01 31 28.9	-1.5
NEDR				IAML		01 32 09.8	
	comp=N,546nm,3.1s						
LODU1	**El Espartillar**	**0.43**	**135**	*i* P	Pb	01 31 25.1	0.0
LODU1				*e*S	Sb	01 31 32.4	+1.1
LODU1				IAML		01 31 33.7	
	comp=Z,69nm,3.1s						
SDDR	**Presa de Saban**	**0.57**	**56**	⇑*e*Pg	Pb	01 31 26.8	-0.8
SDDR				⇑*e*Sg	Sb	01 31 33.8	-1.6
SDDR				IAML		01 31 38.8	
	comp=N,12nm,1.3s						
SDDR	**Presa de Saban**	**0.57**	**56**	*i* P	Pb	01 31 24.6	-2.9
SDDR				IAML		01 31 39.7	
	comp=Z,9.9nm,1.3s						
REDR	**Restauracion**	**0.63**	**37**	⇑*e*Pg	Pb	01 31 27.2	-1.2
REDR				⇑*e*Sg	Sb	01 31 35.9	-0.9
REDR				IAML		01 31 36.6	
	comp=N,34nm,0.2s						
LOBH	**Bahia de las A**	**0.81**	**170**	*i* P	Pn	01 31 33.0	+1.2
LOBH				*e*S	Sn	01 31 44.8	+1.9
LOBH				IAML		01 31 46.8	
	comp=Z,49nm,1.8s						

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*KOLA **02** 01:49:16.2, 82°.96N×47°.06E, h0km, ML1.7, Arctic Ocean*
FCIAR 02 01:49:11.0, 85°.77N×29°.54E, h10km, station OMEGA has station magnitude of 3.00, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZFI2	**Zemlya Franca-**	**5.37**	**148**	*e*P	Pn	01 50 30.5	-0.4
ZFI2				*e*S	Sn	01 51 28.7	-4.0
OMEGA	**Omega**	**5.40**	**148**	*e*P	Pn	01 50 30.6	-0.7
OMEGA				*e*S	Sn	01 51 28.8	-4.5
	8.6nm,3.2s						
KBS	**Kingsbay**	**7.20**	**208**	P	Pn	01 50 47.5	-8.6
KBS				S	Sn	01 52 00.7	-17
SPA0	**Spitsbergen Ar**	**7.81**	**200**	*e*P	Pn	01 50 56.8	-7.7
SPA0				*e*S	Sn	01 52 18.2	-15
SPITS	**Spitsbergen Ar**	**7.81**	**200**	P	Pn	01 50 57.0	-7.4
SPITS				S	Sn	01 52 18.9	-14
BRBB	**Barentsburg B**	**7.96**	**203**	P	Pn	01 50 59.7	-6.7
HSPB	**Hornsund (broa**	**9.01**	**200**	*e*P	Pn	01 51 15.4	-5.4
HSPB				S	Sn	01 52 47.3	-15
HSPB	**Hornsund (broa**	**9.01**	**200**	P	Pn	01 51 15.0	-5.9

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*JMA **02** 02:16:23.0±0.1, 24°N±2°×122°.9E±0°.5, h67km, MV3.2/14, NW OFF ISHIGAKIJIMA IS*
*TAP **02** 02:16:23.2, 24°.52N×122°.87E, h63km, ML3.6, C*
ISC 02 02:16:23.2±1.3, 24°.40N±0°.04×122°.91E±0°.03, h67km±7km, n92, σ1s.08/160, 2C-3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.06**	**30**	P	**Pn**	**02 16 32.8**	**-0.1**
JYNG				*e*S	**Sn**	**02 16 40.0**	**-0.1**
YOJ	**Yonaguni jima**	**0.11**	**55**	P	**Pn**	**02 16 32.9**	**-0.2**
YOJ				S	**Sn**	**02 16 40.4**	**+0.1**
YOJ	**Yonaguni jima**	**0.11**	**55**	⇑*i*P	**Pn**	**02 16 32.9**	**-0.2**
YOJ				*i* S	**Sn**	**02 16 39.9**	**-0.3**
YOJ	**Yonaguni jima**	**0.11**	**55**	P	**Pn**	**02 16 32.9**	**-0.2**
YOJ				*e*S	**Sn**	**02 16 40.0**	**-0.3**
EOS3	**EOS3**	**0.55**	**259**	⇓*i*P	**Pn**	**02 16 36.7**	**+0.7**
EOS3				S	**Sn**	**02 16 46.9**	**+1.3**
EOS4	**EOS4**	**0.61**	**243**	P	**Pn**	**02 16 37.3**	**+0.9**
EOS2	**EOS2**	**0.62**	**272**	⇑*i*P	**Pn**	**02 16 37.0**	**+0.2**
EOS2				S	**Sn**	**02 16 47.7**	**+0.8**
IRIF	**Iriomote-Funau**	**0.75**	**95**	P	**Pn**	**02 16 38.5**	**0.0**
IRIF				*e*S	**Sn**	**02 16 49.9**	**+0.2**
HATJ	**Hateruma jima**	**0.88**	**112**	*e*P	**Pn**	**02 16 41.0**	**+0.9**
HATJ				*e*S	**Sn**	**02 16 53.8**	**+1.2**
TWC	**Suao**	**0.99**	**283**	P	**Pn**	**02 16 40.8**	**-0.6**
TWC				*e*S	**Sn**	**02 16 53.1**	**-1.8**
JKRS	**Kuro-shima**	**1.01**	**99**	*e*P	**Pn**	**02 16 42.2**	**+0.6**
JKRS				*e*S	**Sn**	**02 16 56.3**	**+0.9**
EWUT	**Wuta**	**1.03**	**273**	*e*P	**Pn**	**02 16 41.8**	**-0.1**
EWUT				*e*S	**Sn**	**02 16 54.9**	**-0.9**
EAHA	**Aohua**	**1.07**	**267**	*e*S	**Sn**	**02 16 57.3**	**+0.6**
NDS	**Dongshan**	**1.11**	**282**	*e*P	**Pn**	**02 16 42.9**	**0.0**
NDS				*e*S	**Sn**	**02 16 55.7**	**-2.0**
JIJ	**Ishigaki jima**	**1.12**	**91**	*e*P	**Pn**	**02 16 42.9**	**-0.2**
JIJ				*e*S	**Sn**	**02 16 57.4**	**-0.5**
TIPB	**Shuangxi**	**1.14**	**300**	*e*P	**Pn**	**02 16 43.0**	**-0.3**
TIPB				*e*S	**Sn**	**02 16 57.1**	**-1.3**
SXI1	**Grass Mountain**	**1.17**	**307**	*e*P	**Pn**	**02 16 44.1**	**+0.3**
TWE	**Neicheng**	**1.18**	**286**	*e*P	**Pn**	**02 16 43.6**	**-0.2**
TWE				*e*S	**Sn**	**02 16 58.4**	**-0.8**
ETL	**Fush Village**	**1.20**	**259**	*e*P	**Pn**	**02 16 44.1**	**0.0**
NACB	**Ninganchiao**	**1.22**	**260**	P	**Pn**	**02 16 44.1**	**-0.3**
NACB	**Ninganchiao**	**1.22**	**260**	⇓P	**Pn**	**02 16 44.1**	**-0.3**
NACB				*e*S	**Sn**	**02 16 59.4**	**-0.9**
WFSB	**Wu-fen Shan**	**1.23**	**303**	*e*P	**Pn**	**02 16 45.1**	**+0.6**
TWD	**Chiawan**	**1.24**	**256**	*e*P	**Pn**	**02 16 44.4**	**-0.2**
TWD				*e*S	**Sn**	**02 17 00.6**	**0.0**
ENTT	**Nioudou**	**1.25**	**281**	*e*P	**Pn**	**02 16 45.1**	**+0.4**
ENTT				*e*S	**Sn**	**02 17 01.3**	**+0.4**
FUSB	**Fushanzhiwuyua**	**1.26**	**287**	⇓P	**Pn**	**02 16 44.7**	**-0.2**
FUSB				*i* S	**Sn**	**02 17 00.0**	**-1.2**
LATG	**Datong**	**1.27**	**276**	P	**Pn**	**02 16 45.5**	**+0.4**
LATG				S	**Sn**	**02 17 01.7**	**+0.2**
JISG	**Ishigakijimahi**	**1.29**	**81**	P	**Pn**	**02 16 45.0**	**-0.2**
JISG				*e*S	**Sn**	**02 17 01.3**	**-0.4**
NDT	**Datong Townshi**	**1.29**	**279**	*e*P	**Pn**	**02 16 45.8**	**+0.6**
NDT				*e*S	**Sn**	**02 17 02.0**	**+0.2**
TEYL	**Yanliau Villag**	**1.31**	**247**	*e*S	**Sn**	**02 17 02.4**	**+0.1**
ETLH	**Xiulin Townshi**	**1.32**	**262**	*e*P	**Pn**	**02 16 45.6**	**-0.2**
ETLH				*e*S	**Sn**	**02 17 02.4**	**-0.2**
NWLT	**Wulai**	**1.34**	**287**	*e*P	**Pn**	**02 16 46.0**	**+0.1**
NWLT				*e*S	**Sn**	**02 17 02.1**	**-0.9**
ETM	**Tongmen**	**1.36**	**252**	*e*P	**Pn**	**02 16 45.9**	**-0.4**
SHUL	**Shoufeng**	**1.37**	**244**	*e*P	**Pn**	**02 16 46.2**	**-0.2**
SHUL				*e*S	**Sn**	**02 17 03.5**	**-0.3**
NNS	**Nan Shan**	**1.40**	**272**	*e*P	**Pn**	**02 16 47.0**	**+0.1**
NNS				*e*S	**Sn**	**02 17 04.5**	**-0.1**
LXIB	**Xiulin Townshi**	**1.42**	**255**	*e*P	**Pn**	**02 16 46.8**	**-0.3**
LXIB				*e*S	**Sn**	**02 17 03.6**	**-1.4**
YHNB	**Yeheng**	**1.42**	**281**	P	**Pn**	**02 16 47.9**	**+0.8**
YHNB				S	**Sn**	**02 17 05.2**	**+0.1**
YHNB	**Yeheng**	**1.42**	**281**	S	**Sn**	**02 17 05.2**	**+0.1**
YHNB	**Yeheng**	**1.42**	**281**	*e*P	**Pn**	**02 16 47.7**	**+0.6**
YHNB				*e*S	**Sn**	**02 17 04.9**	**-0.2**
YM01	**YM01**	**1.43**	**302**	*e*P	**Pn**	**02 16 47.2**	**0.0**
YM01				*e*S	**Sn**	**02 17 04.3**	**-0.8**
YM08	**YM08**	**1.44**	**304**	*e*P	**Pn**	**02 16 47.0**	**-0.2**
NSK	**Sanguang**	**1.44**	**281**	*e*P	**Pn**	**02 16 47.9**	**+0.5**
NSK				*e*S	**Sn**	**02 17 05.2**	**-0.3**
ZUZH	**Zhuzihu**	**1.46**	**302**	*e*P	**Pn**	**02 16 47.9**	**+0.4**
ESL	**Shilin**	**1.47**	**247**	*e*P	**Pn**	**02 16 47.2**	**-0.5**
ESL				*e*S	**Sn**	**02 17 05.7**	**-0.4**
WHF	**Hehuan Shan**	**1.52**	**261**	*e*P	**Pn**	**02 16 48.6**	**-0.1**
WHF				*e*S	**Sn**	**02 17 07.6**	**-0.4**
FUSS	**Fushou**	**1.53**	**265**	*e*P	**Pn**	**02 16 49.1**	**+0.5**
WARBT	**Fenglin Townsh**	**1.55**	**244**	*e*P	**Pn**	**02 16 48.2**	**-0.5**
WARBT				*e*S	**Sn**	**02 17 06.3**	**-1.7**
TWT	**Tachien**	**1.59**	**265**	*e*P	**Pn**	**02 16 50.3**	**+0.9**
TWT				*e*S	**Sn**	**02 17 09.8**	**+0.6**

TDCB	**Techi**	**1.60**	**265**	eP	**Pn**	**02 16 50.0**	**+0.4**
TDCB				eS	**Sn**	**02 17 09.1**	**-0.4**
KSHI	**Guanxi Townshi**	**1.62**	**284**	eP	**Pn**	**02 16 50.5**	**+0.8**
HGSD	**Ruisui**	**1.63**	**237**	eP	**Pn**	**02 16 49.5**	**-0.3**
HGSD				eS	**Sn**	**02 17 09.6**	**-0.3**
OWD	**Renai**	**1.65**	**255**	eP	**Pn**	**02 16 50.1**	**-0.1**
OWD				eS	**Sn**	**02 17 09.2**	**-1.3**
JTJ	**Tarama**	**1.65**	**81**	eP	**Pn**	**02 16 50.2**	**+0.2**
NFF	**Wufeng Townshi**	**1.65**	**278**	eP	**Pn**	**02 16 50.9**	**+0.7**
NFF				eS	**Sn**	**02 17 12.2**	**+1.7**
WUSB	**Renai**	**1.69**	**257**	P	**Pn**	**02 16 50.9**	**+0.3**
WUSB				eS	**Sn**	**02 17 11.0**	**-0.5**
EHYH	**Wanrong**	**1.69**	**238**	eP	**Pn**	**02 16 50.6**	**-0.1**
EHYH				eS	**Sn**	**02 17 11.1**	**-0.3**
VWDT	**VWDT**	**1.74**	**249**	eP	**Pn**	**02 16 51.7**	**+0.4**
VWDT				eS	**Sn**	**02 17 11.8**	**-0.7**
LIOB	**Emei**	**1.74**	**279**	eP	**Pn**	**02 16 52.1**	**+0.8**
NSTT	**Nanjuang**	**1.75**	**278**	eP	**Pn**	**02 16 52.2**	**+0.7**
YULB	**Yu-li**	**1.78**	**236**	P	**Pn**	**02 16 51.9**	**0.0**
YULB	**Yu-li**	**1.78**	**236**	eP	**Pn**	**02 16 51.7**	**-0.2**
YULB				eS	**Sn**	**02 17 12.5**	**-1.2**
WHP	**Taichung City**	**1.80**	**267**	eP	**Pn**	**02 16 53.6**	**+1.5**
WHP				eS	**Sn**	**02 17 14.3**	**+0.3**
TWF1	**Yuli**	**1.81**	**235**	eP	**Pn**	**02 16 52.2**	**0.0**
TWF1				eS	**Sn**	**02 17 13.5**	**-0.7**
CHKH	**Chenggong**	**1.83**	**229**	eP	**Pn**	**02 16 52.0**	**-0.5**
CHKH				eS	**Sn**	**02 17 12.7**	**-2.1**
SSLB	**Suanglung**	**1.89**	**252**	P	**Pn**	**02 16 53.8**	**+0.5**
SSLB	**Suanglung**	**1.89**	**252**	eP	**Pn**	**02 16 53.6**	**+0.3**
SSLB				eS	**Sn**	**02 17 15.8**	**-0.4**
FULB	**Fuli**	**1.90**	**231**	eP	**Pn**	**02 16 53.4**	**-0.1**
FULB				eS	**Sn**	**02 17 15.5**	**-1.0**
SMLT	**Sun Moon Lake**	**1.91**	**255**	eP	**Pn**	**02 16 54.3**	**+0.7**
SMLT				eS	**Sn**	**02 17 16.0**	**-0.7**
CHKT	**Chengkung**	**1.92**	**228**	eP	**Pn**	**02 16 52.9**	**-0.8**
CHKT				eS	**Sn**	**02 17 15.1**	**-1.7**
TYC	**Yuchr**	**1.94**	**256**	eP	**Pn**	**02 16 54.8**	**+0.9**
TYC				eS	**Sn**	**02 17 17.4**	**+0.1**
WHYT	**Xinyi Township**	**2.01**	**250**	eP	**Pn**	**02 16 56.0**	**+1.1**
WJS	**Zhushan**	**2.08**	**254**	eP	**Pn**	**02 16 57.7**	**+1.9**
WJS				eS	**Sn**	**02 17 23.4**	**+2.8**
WNT	**Mingjian**	**2.10**	**256**	eP	**Pn**	**02 16 58.1**	**+2.0**
WNT				eS	**Sn**	**02 17 23.1**	**+1.9**
ELDTW	**Lidau**	**2.11**	**236**	eP	**Pn**	**02 16 56.1**	**-0.2**
ELDTW				eS	**Sn**	**02 17 18.1**	**-3.6**
ALS	**Alishan**	**2.12**	**246**	eP	**Pn**	**02 16 57.7**	**+1.0**
CHN5	**Tsauling**	**2.19**	**249**	eP	**Pn**	**02 16 59.0**	**+1.5**
LONT	**Longtian**	**2.21**	**228**	eP	**Pn**	**02 16 57.8**	**+0.2**
LONT				eS	**Sn**	**02 17 23.1**	**-0.7**
WDLH	**Douliu**	**2.28**	**252**	eP	**Pn**	**02 17 00.3**	**+1.8**
WDLH				eS	**Sn**	**02 17 28.0**	**+2.4**
TWGBT	**Beinan**	**2.30**	**227**	eP	**Pn**	**02 16 58.8**	**-0.1**
TWGBT				eS	**Sn**	**02 17 25.2**	**-1.0**
TWG	**Pinlang**	**2.30**	**227**	eP	**Pn**	**02 16 59.0**	**+0.1**
TWG				eS	**Sn**	**02 17 25.2**	**-1.0**
STYH	**Taoyuan**	**2.31**	**238**	eP	**Pn**	**02 16 60.0**	**+1.1**
STYH				eS	**Sn**	**02 17 27.0**	**+0.8**
WCKO	**Fanlu**	**2.32**	**246**	eP	**Pn**	**02 17 01.1**	**+2.0**
WCKO				eS	**Sn**	**02 17 29.3**	**+2.8**
TPUB	**Ta-pu**	**2.36**	**243**	P	**Pn**	**02 17 01.3**	**+1.7**
TPUB				S	**Sn**	**02 17 28.7**	**+1.2**
TPUB	**Ta-pu**	**2.36**	**243**	S	**Sn**	**02 17 28.7**	**+1.2**
TPUB	**Ta-pu**	**2.36**	**243**	eP	**Pn**	**02 17 01.1**	**+1.4**
TPUB				eS	**Sn**	**02 17 29.9**	**+2.4**
WTP	**Ta-pu**	**2.40**	**242**	eP	**Pn**	**02 17 02.1**	**+2.0**
TWK	**Hsinying**	**2.49**	**244**	eP	**Pn**	**02 17 03.3**	**+1.9**
TWK				eS	**Sn**	**02 17 32.8**	**+2.0**
CHN1	**Nanshi**	**2.49**	**242**	eP	**Pn**	**02 17 03.6**	**+2.1**
CHN1				eS	**Sn**	**02 17 33.4**	**+2.5**
LYUB	**Lan-yu**	**2.68**	**207**	eP	**Pn**	**02 17 02.6**	**-1.3**
LYUB				eS	**Sn**	**02 17 32.3**	**-3.0**
MASBT	**Mashibuluo**	**2.74**	**230**	eP	**Pn**	**02 17 06.0**	**+1.1**
MASBT				eS	**Sn**	**02 17 36.4**	**-0.5**
SMST	**Manzhou Townsh**	**3.04**	**219**	eP	**Pn**	**02 17 10.2**	**+1.3**
SMST				eS	**Sn**	**02 17 43.4**	**-0.7**
VWUC	**VWUC**	**3.20**	**281**	eP	**Pn**	**02 17 10.5**	**-0.6**
AXDP	**Jialang**	**4.52**	**277**	eP	**Pn**	**02 17 28.9**	**-0.2**
AXDP				eS	**Sn**	**02 18 17.1**	**-3.4**

*FUNV **02** 02:27:52.7, 8°.12N×72°.25W, h5km, MW3.2, Presumed earthquake*
*RSNC **02** 02:27:53.6±0.0, 8°N±1°×7°2W±°, h4km±2km, M2.3, ML2.0*
ISC 02 02:27:51.1±1.3**, 8°.17N**±0°.03×**72°.24W**±0°.03**, h1**km±11km**,**
n20, σ1**°.16**/38**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**0.32**	**194**	eP	**Pg**	**02 27 57.4**	**+0.2**
CAPV				eS	**Sg**	**02 28 02.0**	**+0.7**
PAMC	**Pamplona, Colo**	**0.95**	**209**	P	**Pg**	**02 28 08.7**	**-0.6**
PAMC				S	**Sg**	**02 28 21.4**	**-0.2**
OCAC	**Ocana**	**1.07**	**274**	P	**Pg**	**02 28 10.6**	**-1.1**
OCAC				S	**Sg**	**02 28 25.3**	**-0.3**
SOCV	**Socops**	**1.37**	**85**	eP	**Pn**	**02 28 17.8**	**+0.3**
SOCV				eS	**Sg**	**02 28 37.1**	**+1.9**
SDV	**Santo Domingo**	**1.74**	**66**	P	**Pb**	**02 28 23.9**	**0.0**
SDV				S	**Sb**	**02 28 46.3**	**-0.1**
SDV	**Santo Domingo**	**1.74**	**66**	eP	**Pb**	**02 28 24.0**	**0.0**
SDV				eS	**Sb**	**02 28 46.5**	**+0.1**
BARC	**Barichara**	**1.83**	**211**	P	**Pb**	**02 28 25.4**	**-0.2**
BARC				S	**Sb**	**02 28 48.5**	**-0.6**
MCQV	**Machiques**	**1.89**	**351**	eP	**Pn**	**02 28 25.0**	**+0.4**
MCQV				eS	**Sb**	**02 28 50.6**	**+0.1**
BRJC	**Barrancabermej**	**1.91**	**232**	P	**Pb**	**02 28 25.9**	**-0.9**
BRJC				S	**Sb**	**02 28 51.4**	**+0.2**
RUSC	**La Rusia**	**2.42**	**200**	P	**Pn**	**02 28 33.7**	**+1.4**
RUSC				S	**Sb**	**02 29 05.6**	**-0.6**
RUSC	**La Rusia**	**2.42**	**200**	eP	**Pn**	**02 28 31.6**	**-0.7**
RUSC				eS	**Sn**	**02 28 60.0**	**-2.8**
ARGC	**Ariguani, Magd**	**2.60**	**310**	P	**Pn**	**02 28 34.8**	**+0.5**
ARGC				S	**Sn**	**02 29 07.5**	**+0.9**
PTBC	**PUERTO BERRIO,**	**2.73**	**234**	P	**Pn**	**02 28 36.0**	**-0.2**
PTBC				S	**Sn**	**02 29 11.1**	**+1.1**
CRJC	**Cerrejon, Guaj**	**2.90**	**347**	P	**Pn**	**02 28 39.9**	**+1.3**
CRJC				S	**Sn**	**02 29 13.6**	**-0.6**
SPBC	**San Pablo de B**	**3.10**	**216**	P	**Pn**	**02 28 42.6**	**+1.3**
SPBC				S	**Sn**	**02 29 21.0**	**+2.0**
SJCC	**San Jacinto, C**	**3.37**	**301**	P	**Pn**	**02 28 46.2**	**+1.1**
SJCC				S	**Sn**	**02 29 26.2**	**+0.3**
CHIC	**Chingaza**	**3.82**	**203**	P	**Pn**	**02 28 52.9**	**+1.4**
CHIC				S	**Sn**	**02 29 38.2**	**+0.8**
GUY2C	**Guyana, Caldas**	**4.27**	**227**	P	**Pn**	**02 28 58.5**	**+0.7**
GUY2C				S	**Sn**	**02 29 49.2**	**+0.7**
BENV	**Beln**	**4.91**	**68**	eP	**Pn**	**02 29 07.1**	**+0.8**
BENV				eS	**Sn**	**02 30 00.4**	**-3.5**
CACV	**CAICARA DEL OR**	**5.68**	**96**	eP	Pn	02 29 22.8	+6.1

*IDC **02** 03:03:01.2±1.4, 2°.85S×136°.07E, h0km, mb3.9/3, mbtmp3.9/5, ML4.0/2, Error ellipse: s-maj=53.0km s-min=26.3km az=87.0*
*DJA **02** 03:03:06.1±0.5, 3°S±2°×13°6E±°, h23km±4km, M4.1/12, MLv4.1/12*
ISC 02 03:03:03.9±0.8**, 3°.03S**±0°.06×**136°.09E**±0°.08**, h33**km**, n11,**
σ2**°.38**/15**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**1.16**	**7**	P	**Pn**	**03 03 21.7**	**-2.2**
SRPI				S	**Sn**	**03 03 36.9**	**-1.7**
BAKI	**Biak**	**1.83**	**1**	P	**Pn**	**03 03 33.2**	**+0.2**
BAKI				S	**Sn**	**03 03 55.1**	**+0.1**
RKPI	**Ransiki, Papua**	**2.43**	**308**	P	**Pb**	**03 03 45.5**	**-1.5**
RKPI				S	**Sb**	**03 04 16.5**	**-0.2**
SMPI	**Sarmi**	**2.81**	**69**	P	**Pn**	**03 03 44.7**	**-1.9**
GENI	**Genyem**	**4.10**	**84**	P	**Pn**	**03 04 03.2**	**-1.1**
WRA	**Warramunga Arr**	**16.90**	**186**	P	**Pn**	**03 06 58.2**	**+0.2**
	4.8nm,0.5s,baz=7.1,slow=12,SNR=20						
WRA				S	**Sn**	**03 09 59.7**	**-5.2**
	2.8nm,0.9s,baz=7.0,slow=22,SNR=4.8						
FITZ	**Fitzroy Crossi**	**18.14**	**214**	P	**P**	**03 07 16.3**	**+2.8**
	0.5nm,0.3s,baz=27,slow=9.9,SNR=5.4						
FITZ				S	**Sn**	**03 10 32.4**	**-2.7**
	8.7nm,1.0s,baz=205,slow=13,SNR=5.1						
	2.4nm,0.5s						
CTA	**Charters Tower**	**19.64**	**150**	P	**Pn**	**03 07 33.8**	**+2.2**
	0.2nm,0.3s,baz=326,slow=13,SNR=5.5						
	2.3nm,0.7s						
ASAR	**Alice Springs**	**20.62**	**186**	P	Pn	03 07 44.0	+0.9

	14nm,0.3s,baz=18,slow=11,SNR=77						
	14nm,0.3s						
MKAR	**Makanchi Array**	**68.46**	**323**	P	**P**	**03 14 04.4**	**+1.6**
	0.1nm,0.4s,baz=118,slow=6.2,SNR=2.4						
	0.1nm,0.4s						
ILAR	**Eielson Array**	**87.21**	**25**	P	**P**	**03 15 48.4**	**+1.7**
	0.2nm,0.4s,baz=275,slow=5.3,SNR=4.5						
	0.2nm,0.4s						

*TEH **02** 03:05:08.7, 38°.03N×57°.70E, h9km±31km, ML3.2, Presumed earthquake*
ISC 02 03:05:08.8±1.0**, 38°.13N**±0°.06×**57°.74E**±0°.05**, h18**km**, n11,**
σ1**°.12**/13**, 2C-2D, Iran-Turkmenistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJND	**Bojnord**	**0.90**	**198**	Pg	**Pb**	**03 05 24.2**	**-1.9**
IEMG	**Emamgholi**	**1.02**	**134**	Pg	**Pb**	**03 05 27.6**	**-0.4**
ISFR	**Sfrayin**	**1.09**	**169**	Pg	**Pb**	**03 05 28.6**	**-0.7**
MRVT	**Maraveh tapeh**	**1.39**	**251**	Pg	**Pb**	**03 05 34.0**	**-0.1**
IAKL	**Akhelmad**	**1.73**	**152**	Pg	**Pb**	**03 05 39.9**	**-0.2**
IPAY	**Payeh**	**1.95**	**149**	Pn	**Pb**	**03 05 42.6**	**-1.3**
IKRD	**Kardeh**	**1.96**	**133**	Pn	**Pb**	**03 05 43.8**	**-0.2**
IMND	**Minoodasht**	**2.04**	**246**	Pn	**Pb**	**03 05 44.9**	**-0.4**
TAPT	**Tabas- Tapeh t**	**3.27**	**188**	Pn	**Pn**	**03 06 00.6**	**+1.4**
AB31	**Akbulak array**	**11.24**	**7**	⇑Pn	**Pn**	**03 07 49.0**	**+0.7**
	0.3nm,0.6s,baz=193,slow=12,SNR=7.6						
AB31				⇑Sn	**Sn**	**03 09 51.7**	**-1.7**
	0.6nm,0.6s,baz=199,slow=23,SNR=6.1						
AKTO	**Aktyubinsk**	**12.30**	**1**	⇓Pn	**Pn**	**03 08 03.5**	**+0.5**
	0.7nm,0.8s						
AKTO				⇓Sn	**Sn**	**03 10 18.6**	**-0.9**
	2.3nm,0.9s						

*IDC **02** 03:05:20.9±2.9, 55°.76N×149°.61W, h0km, mb3.9/2, mbtmp3.8/7, ML3.6/5, Error ellipse: s-maj=48.2km s-min=25.7km az=34.0*
*NEIC **02** 03:05:23.6±1.2, 56°.07N±0°.07×149°.84W±0°.08, h10km±1km, mb3.8/5, ML3.8/40, ML3.7(AEIC), Error ellipse: s-maj=12.2km s-min=7.8km az=4.0*
*AEIC **02** 03:05:27.0±6.3, 55°.99N±0°.08×149°.6W±0°.1, h10km±6km, Error ellipse: s-maj=13.3km s-min=9.6km az=145.0*
ISC 02 03:05:22.7±0.8**, 56°.10N**±0°.06×**149°.77W**±0°.04**, h10**km**,**
n151, σ1**°.74**/161**, mb4.0**/3**, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.25**	**302**	P	**Pn**	**03 06 00.9**	**+1.0**
OHAK				S	**Sn**	**03 06 27.3**	**-0.3**
OHAK	**Old Harbor**	**2.25**	**302**	S	**Sn**	**03 06 27.3**	**-0.3**
OHAK	**Old Harbor**	**2.25**	**302**		**Pn**	**03 06 00.4**	**+0.6**
OHAK					**Sn**	**03 06 26.5**	**-1.1**
KDAK	**Kodiak Island**	**2.29**	**319**	Pn	**Pn**	**03 06 01.6**	**+1.2**
	15nm,0.3s,baz=136,slow=5.1,SNR=786						
KDAK				Sn	**Sn**	**03 06 28.1**	**-0.6**
	27nm,0.3s,baz=0.2,slow=19,SNR=22						
	41nm,0.3s						
KDAK	**Kodiak Island**	**2.29**	**319**	Pn	**Pn**	**03 06 01.5**	**+1.0**
KDAK				Sn	**Sn**	**03 06 26.9**	**-1.8**
SII	**Sitkinak Islan**	**2.50**	**282**	P	**Pn**	**03 06 04.0**	**+0.5**
SII				S	**Sn**	**03 06 32.7**	**-1.3**
SII	**Sitkinak Islan**	**2.50**	**282**	S	**Sn**	**03 06 32.7**	**-1.3**
SII	**Sitkinak Islan**	**2.50**	**282**	Pn	**Pn**	**03 06 03.7**	**+0.2**
SII				Sn	**Sn**	**03 06 32.3**	**-1.7**
SII				IAML		03 06 34.6	
	comp=E,582nm,0.6s						
SII				IAML		03 06 36.5	
	comp=N,306nm,0.7s						
SYI	**Shuyak Island**	**2.89**	**332**	Pn	**Pn**	**03 06 09.8**	**+1.1**
SYI				Sn	**Sn**	**03 06 43.5**	**0.0**
CHIR	**Chirikof Islan**	**3.30**	**268**	P	**Pn**	**03 06 15.1**	**+0.7**
CHIR				S	**Sn**	**03 06 51.2**	**-2.5**
CHIR	**Chirikof Islan**	**3.30**	**268**	S	**Sn**	**03 06 51.2**	**-2.5**
CHIR	**Chirikof Islan**	**3.30**	**268**	Pn	**Pn**	**03 06 14.6**	**+0.1**
CHIR				Sn	**Sn**	**03 06 51.4**	**-2.4**
CHIR				IAML		03 06 52.4	
	comp=N,365nm,0.4s						
CHIR				IAML		03 06 52.6	
	comp=E,369nm,0.8s						
CNPM	**China Poot**	**3.52**	**348**	Pn	**Pn**	**03 06 18.4**	**+0.9**
CNPM				Sn	**Sn**	**03 06 59.4**	**+0.2**
CNPM				IAML		03 07 01.1	
	comp=E,213nm,0.3s						
CNPM				IAML		03 07 01.1	
	comp=N,152nm,0.3s						
Q19K	**Cape Douglas,**	**3.52**	**325**	Pn	**Pn**	**03 06 19.5**	**+2.0**
Q19K				IAML		03 07 05.5	
	comp=N,293nm,0.8s						
KAHG	**Katmai Hook Gl**	**3.53**	**315**		**Pn**	**03 06 20.3**	**+2.7**
KAWH	**Katmai**	**3.56**	**312**		**Pn**	**03 06 20.8**	**+2.7**
KAKN	**Katmai Knife C**	**3.62**	**310**		**Sn**	**03 07 02.9**	**+1.1**
KAKN					**Sb**	**03 07 05.2**	**-5.7**
ACHA	**Angle Creek He**	**3.69**	**307**	Pn	**Pn**	**03 06 22.3**	**+2.4**
HOM	**Homer**	**3.71**	**345**	Pn	**Pn**	**03 06 20.8**	**+0.8**
KABU	**Katmai Buttres**	**3.71**	**308**		**Pn**	**03 06 22.7**	**+2.7**
BRLK	**Bradley Lake**	**3.72**	**351**	Pn	**Pn**	**03 06 20.9**	**+0.7**
BRLK				IAML		03 07 08.0	
	comp=N,89nm,0.5s						
BRLK				IAML		03 07 08.2	
	comp=E,117nm,0.5s						
ANCK	**Angle Creek**	**3.76**	**306**		**Pn**	**03 06 23.2**	**+2.4**
AUJK	**Augustine Jueg**	**3.80**	**331**		**Pn**	**03 06 23.6**	**+2.4**
MID	**Middleton Isla**	**3.81**	**27**	Pn	**Pn**	**03 06 21.2**	**-0.1**
AUCH	**Augustine Cone**	**3.82**	**330**		**Pn**	**03 06 24.1**	**+2.5**
AUL	**Augustine Lava**	**3.83**	**331**		**Pn**	**03 06 24.6**	**+2.8**
AUW	**Augustine West**	**3.83**	**330**		**Pn**	**03 06 24.0**	**+2.3**
PLK4	**Peulik 4**	**3.93**	**296**	Pn	**Pn**	**03 06 24.5**	**+1.3**
PLK4				IAML		03 07 10.5	
	comp=E,112nm,0.5s						
PLK4				IAML		03 07 12.7	
	comp=N,94nm,0.6s						
P19K	**Oil Pt**	**4.01**	**334**	Pn	**Pn**	**03 06 25.6**	**+1.4**
P19K				IAML		03 07 18.1	
	comp=N,165nm,0.5s						
SEW	**Seward**	**4.02**	**2**	Pn	**Pn**	**03 06 24.2**	**0.0**
P23K	**Montague Islan**	**4.11**	**17**	Pn	**Pn**	**03 06 25.9**	**+0.5**
ILS	**Iliamna Low So**	**4.25**	**337**		**Pn**	**03 06 28.6**	**+1.1**
ILSW	**Iliamna Southw**	**4.29**	**337**	Pn	**Pn**	**03 06 28.7**	**+0.6**
ILSW				IAML		03 07 20.9	
	comp=N,99nm,0.3s						
ILSW				IAML		03 07 21.5	
	comp=E,75nm,0.5s						
RED	**Redoubt Volcan**	**4.61**	**341**	Pn	**Pn**	**03 06 32.5**	**0.0**
RED				IAML		03 07 28.6	
	comp=E,74nm,0.4s						
RED				IAML		03 07 30.4	
	comp=N,104nm,0.5s						
RDT	**Redoubt**	**4.70**	**344**		**Pn**	**03 06 33.9**	**+0.2**
NCT	**North Crescent**	**4.77**	**341**		**Pn**	**03 06 34.9**	**+0.2**
KAIM	**Kayak Island**	**4.78**	**34**	Pn	**Pn**	**03 06 35.0**	**+0.4**
KAIM				IAML		03 07 31.3	
	comp=N,130nm,1.4s						
EYAK	**Cordova Ski Ar**	**4.94**	**24**	P	**Pn**	**03 06 37.6**	**+0.7**
EYAK				S	**Sn**	**03 07 31.6**	**-2.3**
EYAK	**Cordova Ski Ar**	**4.94**	**24**	S	**Sn**	**03 07 31.6**	**-2.3**
RAGM	**Ragged Mountai**	**5.07**	**30**	Pn	**Pn**	**03 06 39.5**	**+0.7**
RAGM				IAML		03 07 39.4	
	comp=E,101nm,0.7s						
SUCK	**Suckling Hills**	**5.09**	**36**	Pn	**Pn**	**03 06 39.6**	**+0.5**
SUCK				IAML		03 07 33.9	
	comp=E,80nm,1.3s						
SUCK				IAML		03 07 42.1	
	comp=N,100nm,1.5s						
GOAT	**Goat Mountain**	**5.22**	**28**		**Pn**	**03 06 41.4**	**+0.6**
CKL	**Chakachamna La**	**5.28**	**346**		**Pn**	**03 06 42.3**	**+0.6**
O17K	**Koliganek Bris**	**5.37**	**316**		**Pn**	**03 06 44.5**	**+1.7**
KNK	**Knik Glacier**	**5.37**	**7**	Pn	**Pn**	**03 06 43.7**	**+0.8**
SUA	**Susitna One**	**5.40**	**355**	Pn	**Pn**	**03 06 43.5**	**+0.1**
SPNN	**North Nagishla**	**5.50**	**345**		**Pn**	**03 06 45.6**	**+0.9**
PMR	**Palmer**	**5.52**	**3**	P	**Pn**	**03 06 46.5**	**+1.7**
PMR				S	**Sn**	**03 07 46.4**	**-1.8**
PMR	**Palmer**	**5.52**	**3**	S	**Sn**	**03 07 46.4**	**-1.8**
PMR	**Palmer**	**5.52**	**3**	Pn	**Pn**	**03 06 45.6**	**+0.8**
BMRM	**Bremner River**	**5.58**	**27**	Pn	**Pn**	**03 06 46.2**	**+0.5**
N18K	**Kilae Creek**	**5.61**	**328**	Pn	**Pn**	**03 06 46.4**	**+0.3**
O16K	**Kokwok River B**	**5.66**	**312**		**Pn**	**03 06 48.9**	**+2.1**
GHO	**Glory Hole Cre**	**5.71**	**4**	Pn	**Pn**	**03 06 49.4**	**+1.9**
KLU	**Klutina**	**5.76**	**19**	Pn	**Pn**	**03 06 49.0**	**+0.7**
SML	**Sawmill**	**5.77**	**7**	Pn	**Pn**	**03 06 49.8**	**+1.4**
BARK	**Barkley Ridge**	**5.78**	**39**		**Pn**	**03 06 48.9**	**+0.4**
M23K	**Glacier View**	**5.81**	**10**		**Pn**	**03 06 50.1**	**+1.3**
MESA	**MESA**	**5.82**	**42**	Pn	**Pn**	**03 06 49.2**	**+0.1**
CRQM	**Cirque**	**5.82**	**34**	Pn	**Pn**	**03 06 49.6**	**+0.4**
N17K	**Nushagak Hills**	**5.91**	**322**		**Pn**	**03 06 51.6**	**+1.3**
SKT	**Skwentna**	**5.97**	**352**	Pn	**Pn**	**03 06 52.0**	**+0.9**
SDPT	**Sand Point**	**6.10**	**267**	P	**Pn**	**03 06 53.8**	**+1.0**
SDPT				S	**Sn**	**03 07 58.3**	**-4.3**
SDPT	**Sand Point**	**6.10**	**267**	S	**Sn**	**03 07 58.3**	**-4.3**
SDPT	**Sand Point**	**6.10**	**267**		**Pn**	**03 06 53.7**	**+1.0**
GLB	**Gilahina Butte**	**6.19**	**28**	Pn	**Pn**	**03 06 54.6**	**+0.6**
KIAG	**Kiagna River**	**6.20**	**36**		**Pn**	**03 06 54.6**	**+0.3**
O15K	**Ungalikthiuk R**	**6.22**	**304**		**Pn**	**03 06 56.4**	**+2.0**
GRNC	**Granite Creek**	**6.26**	**39**	Pn	**Pn**	**03 06 55.8**	**+0.5**
MCARA	**McCarthy VSAT**	**6.35**	**31**	Pn	**Pn**	**03 06 57.5**	**+1.2**
N16K	**Nishlik Lake**	**6.46**	**316**		**Pn**	**03 06 59.9**	**+2.1**
WACK	**Wrangell Chich**	**6.53**	**23**		**Pn**	**03 06 59.9**	**+0.9**
L19K	**White Mountain**	**6.63**	**339**		**Pn**	**03 07 00.5**	**+0.3**
M17K	**Holitna River**	**6.64**	**326**		**Pn**	**03 07 02.2**	**+1.9**
HARP	**HAARP**	**6.74**	**19**		**Pn**	**03 07 03.1**	**+1.4**
WAT7	**Susitna Watana**	**6.77**	**4**		**Pn**	**03 07 03.8**	**+1.7**
N15K	**Kwethluk River**	**6.82**	**311**		**Pn**	**03 07 05.2**	**+2.6**
O28M	**Mount Upton**	**6.87**	**43**	Pn	**Pn**	**03 07 03.8**	**+0.1**
PS4A	**Pavlof South-4**	**6.87**	**269**		**Pn**	**03 07 04.2**	**+0.8**
M16K	**Timber Creek**	**6.89**	**320**		**Pn**	**03 07 05.6**	**+2.0**
DOL	**Dolgoi Island**	**6.92**	**267**		**Pn**	**03 07 04.6**	**+0.5**
O14K	**Tigyukauivet M**	**6.93**	**302**	Pn	**Pn**	**03 07 05.5**	**+1.4**
PPLA	**Purkeypile**	**6.93**	**351**	Pn	**Pn**	**03 07 07.9**	**+3.6**
L18K	**Granite Mounta**	**7.09**	**333**	Pn	**Pn**	**03 07 06.3**	**-0.1**
DHY	**Denali Highway**	**7.10**	**9**	Pn	**Pn**	**03 07 08.2**	**+1.5**
DTNA	**Dutton South F**	**7.13**	**268**		**Pn**	**03 07 07.7**	**+0.7**
DT1	**Dutton Round H**	**7.16**	**267**		**Pn**	**03 07 07.8**	**+0.4**
O29M	**Mount Kennedy**	**7.26**	**50**		**Pn**	**03 07 09.4**	**+0.6**
YUK2	**White River**	**7.33**	**35**		**Pn**	**03 07 11.1**	**+1.3**
M15K	**Kasigluk River**	**7.35**	**313**		**Pn**	**03 07 12.5**	**+2.5**
TRF	**Thorofare Moun**	**7.38**	**358**	Pn	**Pn**	**03 07 11.5**	**+1.0**
N14K	**Kuskokwak Cree**	**7.40**	**306**		**Pn**	**03 07 12.9**	**+2.4**
YUK3	**Moose Creek**	**7.45**	**36**		**Pn**	**03 07 13.0**	**+1.5**
M27K	**Edge Creek, AK**	**7.46**	**30**		**Pn**	**03 07 12.8**	**+1.1**
L17K	**Donlin**	**7.47**	**328**		**Pn**	**03 07 13.4**	**+1.8**
KTH	**Kantishna Hill**	**7.50**	**356**		**Pn**	**03 07 13.4**	**+1.3**
MCK	**McKinley**	**7.67**	**3**	Pn	**Pn**	**03 07 16.3**	**+1.9**
M14K	**Bethel**	**7.91**	**311**	Pn	**Pn**	**03 07 20.3**	**+2.7**
K17K	**Iditarod**	**7.93**	**330**	Pn	**Pn**	**03 07 18.7**	**+0.8**
HYT	**Haines Junctio**	**7.98**	**49**	Pn	**Pn**	**03 07 19.6**	**+0.8**
K24K	**Donnelly Dome**	**7.98**	**13**	Pn	**Pn**	**03 07 21.5**	**+2.9**
RIDG	**Independent Ri**	**8.05**	**16**	Pn	**Pn**	**03 07 21.9**	**+2.3**
L27K	**Beaver Creek,**	**8.05**	**27**	Pn	**Pn**	**03 07 20.9**	**+1.2**
BCAR	**Beaver Creek A**	**8.07**	**27**	Pn	**Pn**	**03 07 20.8**	**+0.9**
DOT	**Dot Lake**	**8.09**	**18**	Pn	**Pn**	**03 07 22.4**	**+2.2**
M13K	**Dall Lake**	**8.36**	**307**	Pn	**Pn**	**03 07 25.8**	**+2.0**
SCRK	**Sand Creek**	**8.41**	**18**	Pn	**Pn**	**03 07 25.9**	**+1.3**
BESE	**Bessie Mountai**	**8.44**	**67**	Pn	**Pn**	**03 07 24.0**	**-1.0**
WRH	**Wood River Hil**	**8.44**	**5**	Pn	**Pn**	**03 07 26.9**	**+2.0**
HDA	**Harding Lake**	**8.45**	**8**	Pn	**Pn**	**03 07 27.1**	**+2.0**
S32K	**Killisnoo**	**8.45**	**74**	Pn	**Pn**	**03 07 23.1**	**-2.0**
NEA2	**Nenana**	**8.53**	**2**	Pn	**Pn**	**03 07 27.6**	**+1.5**
O30N	**Mendenhall**	**8.56**	**51**	Pn	**Pn**	**03 07 26.7**	**+0.1**
R32K	**Eaglecrest**	**8.56**	**69**	Pn	**Pn**	**03 07 25.4**	**-1.2**
M29M	**Somme Creek**	**8.59**	**38**	Pn	**Pn**	**03 07 28.0**	**+0.9**
CCB	**Clear Creek Bu**	**8.63**	**6**	Pn	**Pn**	**03 07 29.1**	**+1.6**
IL31		**8.81**	**8**	Pn	**Pn**	**03 07 31.5**	**+1.5**
ILAR	**Eielson Array**	**8.81**	**8**	Pn	**Pn**	**03 07 31.6**	**+1.5**
	comp=N,0.7nm,0.3s,baz=189,slow=13,SNR=40						
ILAR				Sn	**Sn**	**03 09 05.2**	**-4.1**
	comp=N,1.0nm,0.3s,baz=278,slow=19,SNR=11						
	comp=N,1.8nm,0.4s						
ILAR	**Eielson Array**	**8.81**	**8**	Pn	**Pn**	**03 07 31.3**	**+1.2**
COLA	**College**	**8.85**	**5**	Pn	**Pn**	**03 07 32.3**	**+1.8**
MLY	**Manley**	**8.97**	**357**	Pn	**Pn**	**03 07 33.5**	**+1.3**
N31M	**Braeburn, Yuko**	**9.04**	**48**	Pn	**Pn**	**03 07 34.0**	**+0.8**
WHY	**Whitehorse**	**9.05**	**54**	Pn	**Pn**	**03 07 33.8**	**+0.5**
I23K	**Minto, Yukon-K**	**9.08**	**1**	Pn	**Pn**	**03 07 34.8**	**+1.1**
P32M	**Atlin**	**9.24**	**61**	Pn	**Pn**	**03 07 36.0**	**+0.1**
M30M	**Minto, Yukon**	**9.26**	**40**	Pn	**Pn**	**03 07 36.9**	**+0.7**
U33K	**Whale Pass**	**9.30**	**83**	Pn	**Pn**	**03 07 34.2**	**-2.5**
DAWY	**Dawson**	**9.51**	**29**	Pn	**Pn**	**03 07 40.7**	**+1.1**
K29M	**Barlow Dome**	**9.88**	**33**	Pn	**Pn**	**03 07 46.1**	**+1.4**
IMAR	**Indian Mountai**	**10.10**	**351**	Pn	**Pn**	**03 07 49.1**	**+1.5**
J30M	**Hart River**	**10.77**	**32**	Pn	**Pn**	**03 07 58.9**	**+2.0**
H27K	**Steamboat Moun**	**10.90**	**18**	Pn	**Pn**	**03 07 59.5**	**+0.8**
DLBC	**Dease Lake**	**10.94**	**69**	Pn	**Pn**	**03 07 59.0**	**-0.1**
	comp=N,0.3nm,0.3s,baz=206,slow=7.4,SNR=9.3						
DLBC				Sn	**Sn**	**03 09 54.8**	**-6.7**
	comp=N,0.1nm,0.3s,baz=54,slow=22,SNR=1.9						
	comp=N,1.4nm,0.4s						
ANM	**Nome**	**11.45**	**324**	Pn	**Pn**	**03 08 08.6**	**+2.6**
INK	**Inuvik**	**14.32**	**25**	Pn	**Pn**	**03 08 47.8**	**+2.5**
	comp=N,0.1nm,0.3s,baz=215,slow=16,SNR=7.0						
	comp=N,2.7nm,1.0s						
INK	**Inuvik**	**14.32**	**25**	Pn	**Pn**	**03 08 47.3**	**+2.0**
C36M	**Paulatuk**	**17.54**	**31**		**P**	**03 09 28.9**	**+0.9**
C36M				IAmb	IAmb	03 09 31.1	
	comp=Z,4.3nm,0.9s						
YKA	**Yellowknife Ar**	**18.87**	**56**	P	**P**	**03 09 44.3**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=269,slow=9.9,SNR=13						
	comp=Z,0.6nm,0.8s						
YKAW3	**Yellowknife Wh**	**18.87**	**56**		**P**	**03 09 44.2**	**+1.5**
A36M	**Sachs Harbour**	**18.95**	**23**	P	**Pn**	**03 09 45.7**	**+1.5**
A36M				IAmb	IAmb	03 10 04.2	
	comp=Z,5.8nm,0.8s						
PDAR	**Pinedale Array**	**28.90**	**100**	P	**P**	**03 11 20.2**	**-1.6**
	comp=Z,0.3nm,0.5s,baz=319,slow=6.1,SNR=3.6						
	comp=Z,0.3nm,0.5s						
PDAR	**Pinedale Array**	**28.90**	**100**	P	**P**	**03 11 22.2**	**+0.4**
FCC	**Fort Churchill**	**29.36**	**61**	P	**P**	**03 11 26.9**	**+1.5**
FCC				IAmb	IAmb	03 11 45.6	
	comp=Z,3.2nm,1.3s						
ILON	**Igloolik, Nuna**	**31.89**	**38**	P	**P**	**03 11 48.8**	**+1.2**
H11N2	**WAKE ISLAND Hy**	**48.56**	**240**	T	T	04 06 25.9	
	baz=31,slow=76,SNR=10						
H11N3	**WAKE ISLAND Hy**	**48.56**	**240**	T	T	04 06 29.8	
	baz=31,slow=76,SNR=26						
H11N1	**WAKE ISLAND Hy**	**48.57**	**240**	T	T	04 06 26.6	
	baz=31,slow=76,SNR=14						
H11S1	**WAKE ISLAND Hy**	**49.70**	**239**	T	T	04 07 50.3	
	baz=30,slow=76,SNR=20						
H11S2	**WAKE ISLAND Hy**	**49.71**	**239**	T	T	04 07 50.1	
	baz=30,slow=76,SNR=21						
H11S3	**WAKE ISLAND Hy**	**49.72**	**239**	T	T	04 07 50.4	
	baz=30,slow=76,SNR=25						
FINES	**FINESS Array B**	**62.75**	**2**	P	**P**	**03 15 49.4**	**+2.0**
	comp=Z,3.6nm,1.0s,baz=353,slow=9.9,SNR=5.0						
	comp=Z,3.6nm,1.0s						

*IDC **02** 03:08:47.8±2.6, 23°.64S×179°.62W, h473km±33km, mb3.5/6, mbtmp4.4/9, Error ellipse: s-maj=34.7km s-min=15.8km az=155.0*
ISC 02 03:08:49.5±0.7**, 23°.57S**±0°.07×**179°.58W**±0°.10**, h500**km**,**
n44, σ1**°.68**/46**, mb3.8**/6**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**5.86**	**166**	P	**P**	**03 10 26.9**	**+2.6**
GLKZ				S	**S**	**03 11 41.8**	**-0.1**
AFI	**Afiamalu**	**12.12**	**39**	P	**P**	**03 11 29.5**	**0.0**
	29nm,0.8s,baz=41,slow=17,SNR=6.9						
AFI				S	**S**	**03 13 37.8**	**-3.5**
	11nm,0.4s,baz=51,slow=12,SNR=3.7						
DZM	**Mont Dzumac**	**12.98**	**274**	P	**P**	**03 11 38.2**	**-0.4**
	4.9nm,0.9s,baz=163,slow=20,SNR=6.7						
OUZ	**Omahuta**	**13.04**	**206**	P	**P**	**03 11 40.6**	**+1.7**
WCZ	**Waipu Caves**	**13.40**	**202**	P	**P**	**03 11 44.7**	**+1.9**
HAZ	**Te Kaha**	**14.32**	**188**	P	**P**	**03 11 52.3**	**-0.1**
HAZ				S	**S**	**03 14 20.0**	**-3.2**
PKGZ	**Pakihiroa**	**14.39**	**187**	P	P	03 11 55.7	+2.5
RUGZ	**Raukumara Rang**	**14.54**	**189**	P	**P**	**03 11 54.7**	**-0.2**
PUZ	**Puketiti**	**14.57**	**187**	P	**P**	**03 11 56.7**	**+1.6**
URZ	**Urewera**	**14.91**	**190**	P	**P**	**03 11 56.2**	**-2.4**
	7.6nm,0.3s,baz=246,slow=4.3,SNR=16						
URZ				S	**S**	**03 14 32.2**	**-2.4**
	8.5nm,0.7s,baz=86,slow=18,SNR=6.7						
URZ	**Urewera**	**14.91**	**190**	P	**P**	**03 11 57.6**	**-1.0**
MWZ	**Matawai**	**14.92**	**189**	P	**P**	**03 11 59.7**	**+0.9**
CNGZ	**Carnagh Statio**	**14.98**	**187**	P	**P**	**03 12 01.2**	**+1.8**
RTZ	**Ruatahuna**	**15.28**	**190**	P	**P**	**03 12 01.7**	**-0.8**
HIZ	**Hauiti**	**15.63**	**196**	P	**P**	**03 12 10.3**	**+4.1**
NMHZ	**Naumai**	**15.78**	**190**	P	**P**	**03 12 08.2**	**+0.4**
BKZ	**Black Stump Fm**	**15.90**	**191**	P	**P**	**03 12 07.5**	**-1.5**
TMVZ	**Te Maari**	**16.01**	**193**	P	**P**	**03 12 10.3**	**+0.1**
ETVZ	**East Tongariro**	**16.02**	**193**	P	**P**	**03 12 09.7**	**-0.7**
WTVZ	**West Tongariro**	**16.03**	**194**	P	**P**	**03 12 10.7**	**+0.2**
OTVZ	**Oturere**	**16.06**	**193**	P	**P**	**03 12 09.4**	**-1.4**

SNVZ	South Ngauruho	16.09	194	P	P	03 12 09.6	-1.5
KWHZ	Kaweka Forest	16.16	191	P	P	03 12 10.4	-1.4
VRZ	Vera Road	16.23	196	P	P	03 12 11.7	-0.8
KRHZ	Kereru	16.39	191	P	P	03 12 11.8	-2.3
PNHZ	Pukenui	16.68	191	P	P	03 12 14.9	-2.3
TSZ	Takapari Road	16.86	192	P	P	03 12 17.8	-1.2
BFZ	Birch Farm	17.42	191	P	P	03 12 22.5	-1.9
MRZ	Mangatainoka R	17.52	192	P	P	03 12 22.5	-2.8
QRZ	Quartz Range	18.44	199	P	P	03 12 33.4	-0.3
NNZ	Nelson	18.56	197	P	P	03 12 34.2	-0.6
THZ	Tophouse	19.20	197	P	P	03 12 40.1	-0.6
DSZ	Denniston Nort	19.50	200	P	P	03 12 43.3	-0.2
KHZ	Kahutara	19.64	195	P	P	03 12 43.2	-1.5
GVZ	Greta Valley S	20.29	196	P	P	03 12 49.1	-1.5
LTZ	Lake Taylor	20.32	198	P	P	03 12 49.0	-1.9
INZ	Inchbonnie	20.50	199	P	P	03 12 51.4	-1.1
CTA	Charters Tower	31.87	270	P	P	03 14 33.5	+0.4
	5.1nm,0.5s,baz=97,slow=11,SNR=10						
	5.1nm,0.5s						
ASAR	Alice Springs	42.47	260	P	P	03 15 59.7	-0.6
	13nm,0.4s,baz=95,slow=8.1,SNR=11						
	13nm,0.4s						
WRA	Warramunga Arr	42.82	266	P	P	03 16 02.1	-1.0
	2.3nm,0.6s,baz=102,slow=7.9,SNR=40						
	2.3nm,0.6s						
NVAR	Mina Array Bea	84.25	44	P	P	03 20 29.5	+1.2
	0.2nm,0.3s,baz=254,slow=7.5,SNR=4.0						
	0.2nm,0.3s						
TXAR	Lajitas Array	89.93	58	P	P	03 20 57.0	+1.7
	0.8nm,0.7s,baz=214,slow=6.8,SNR=12						
	0.8nm,0.7s						
PDAR	Pinedale Array	92.19	44	P	P	03 21 06.3	+0.8
	0.5nm,0.7s,baz=222,slow=2.0,SNR=4.8						
	0.5nm,0.7s						
HFS	Hagfors	142.30	349	PKhKP	PKPpre	03 27 20.3	
	2.7nm,0.9s,baz=90,slow=1.4,SNR=4.4						

*IDC **02** 03:12:28.8±6.0, 21°.26S×179°.04W, h664km±83km, mb3.3/5, mbtmp4.3/7, Error ellipse: s-maj=56.9km s-min=29.8km az=13.0*

ISC 02 03:12:26.0±1.2**, 21°.1S**±0°.2×**178°.9W**±0°.2**, h619**km**, n9, σ0s.98**/7**, mb4.2**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	13.63	263	P	P	03 15 21.7	+0.8
	2.1nm,0.6s,baz=154,slow=18,SNR=1.1						
URZ	Urewera	17.40	190	P	P	03 15 54.6	-0.4
	1.5nm,0.4s,baz=333,slow=15,SNR=1.1						
CTA	Charters Tower	32.56	266	P	P	03 18 08.6	-0.1
	5.2nm,0.4s,baz=90,slow=10,SNR=13						
	5.2nm,0.4s						
ASAR	Alice Springs	43.53	258	P	P	03 19 37.0	0.0
	9.5nm,0.3s,baz=94,slow=7.9,SNR=4.0						
	9.5nm,0.3s						
WRA	Warramunga Arr	43.65	263	P	P	03 19 37.4	-0.7
	2.6nm,0.3s,baz=97,slow=7.3,SNR=70						
	2.6nm,0.3s						
TXAR	Lajitas Array	88.14	58	P	P	03 24 13.8	+1.1
	0.4nm,0.8s,baz=212,slow=4.4,SNR=4.3						
	0.4nm,0.8s						
ILAR	Eielson Array	89.13	13	P	P	03 24 15.2	-1.1
	0.2nm,0.5s,baz=215,slow=5.1,SNR=6.0						
	0.2nm,0.5s						
HFS	Hagfors	140.03	350	PKhKP	PKPpre	03 30 35.4	
	3.5nm,0.9s,baz=46,slow=4.2,SNR=2.0						
AKASG	Malin Array Be	143.14	330	PKP	PKPab	03 30 47.4	-1.4
	1.7nm,0.4s,baz=44,slow=4.1,SNR=11						

*NEIC **02** 03:27:58.2±1.3, 17°.75N±0°.03×66°.85W±0°.01, h10km±1km, ML3.5/37, Md2.9/5(RSPR), Error ellipse: s-maj=5.7km s-min=2.7km az=12.0*

*OSPL **02** 03:28:00.0±0.4, 17°.80N×66°.87W, h9km±4km, ML2.8, Presumed earthquake*

*SDD **02** 03:28:00.8±1.8, 17°.92N×66°.88W, h17km±15km, MD3.8, ML3.3, MW3.8, Presumed earthquake*

ISC 02 03:27:59.2±1.4**, 17°.80N**±0°.06×**66°.84W**±0°.02**, h6**km±10km**, n31, σ0s.75**/52**, 6C-1D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.18	347		Pg	03 28 02.9	+0.1
MLPR	Magueyes Islan	0.26	310	Pg	Pg	03 28 04.3	+0.1
MLPR				Sg	Sg	03 28 07.4	-0.3
MLPR				IAML		03 28 08.0	
	8µm,0.7s						
MLPR				IAML		03 28 08.9	
	5µm,0.7s						
OBIP	Obispado Ponce	0.33	42	Pg	Pg	03 28 06.0	+0.5
OBIP				Sg	Sg	03 28 10.6	+0.7
OBIP	Obispado Ponce	0.33	42	iP	Pg	03 28 06.3	+0.7
OBIP				eS	Sb	03 28 11.2	-1.7
OBIP				IAML		03 28 12.4	
	comp=Z,1µm,0.8s						
CRPR	Cabo Rojo, PR	0.33	308	Pg	Pg	03 28 05.5	-0.1
CRPR				Sg	Sg	03 28 09.8	-0.2
CRPR				IAML		03 28 12.1	
	comp=Z,5µm,0.5s						
CRPR				IAML		03 28 12.9	
	comp=Z,4µm,0.5s						
CRPR	Cabo Rojo, PR	0.33	308	⇓ePg	Pg	03 28 05.7	+0.1
CRPR				⇑eSg	Sg	03 28 09.1	-0.9
CRPR				IAML		03 28 12.2	
	comp=N,5µm,0.5s						
CRPR	Cabo Rojo, PR	0.33	308	iP	Pg	03 28 05.8	+0.1
CRPR				eS	Sg	03 28 09.9	-0.1
CRPR				IAML		03 28 12.8	
	comp=Z,4µm,0.5s						
CELP	Cerrillos	0.37	42	Pg	Pg	03 28 06.9	+0.6
CELP				Sg	Sg	03 28 12.4	+1.2
LSP	Las Mesas	0.44	328		Pg	03 28 07.8	0.0
LSP					Sg	03 28 14.8	+1.2
UUPR	Utuado, UPR, P	0.46	14	Pg	Pg	03 28 08.1	-0.1
UUPR				Sg	Sg	03 28 14.6	+0.4
PRSN	Puerto Rico Se	0.51	325	Pg	Pg	03 28 08.6	-0.4
PRSN				Sg	Sg	03 28 16.3	+0.7
AOPR	Arecibo Observ	0.55	8	Pg	Pg	03 28 09.4	-0.4
AOPR				Sg	Sg	03 28 17.0	0.0
AOPR				IAML		03 28 19.4	
	comp=Z,3µm,0.6s						
AOPR				IAML		03 28 24.6	
	comp=Z,2µm,0.7s						
ECPR	Experimental S	0.69	41	Pg	Pg	03 28 12.3	-0.1
ECPR				Sg	Sb	03 28 22.2	-1.0
ECPR				IAML		03 28 23.5	
	comp=Z,2µm,0.2s						
ECPR				IAML		03 28 23.6	
	comp=Z,2µm,0.3s						
AGPR	Aguadilla, PR	0.71	339	Pg	Pg	03 28 12.3	-0.6
AGPR				Sg	Sg	03 28 22.3	+0.1
AGPR				IAML		03 28 28.0	
	comp=Z,2µm,1.0s						
AGPR				IAML		03 28 29.0	
	comp=Z,2µm,0.9s						
SJG	San Juan	0.72	65	Pg	Pg	03 28 13.1	+0.1
SJG				Sg	Sg	03 28 23.1	+0.6
SJG	San Juan	0.72	65	⇑ePg	Pg	03 28 13.2	+0.1
SJG				⇑eSg	Sb	03 28 23.4	-0.9
SJG	San Juan	0.72	65	iP	Pb	03 28 13.7	-0.5
SJG				eS	Sb	03 28 23.5	-0.9
SJG				IAML		03 28 27.7	
	comp=Z,234nm,0.3s						
EMPR	Esperanza - Ma	0.73	23		Pg	03 28 13.5	+0.2
EMPR					Sb	03 28 23.8	-0.8
PDPR	Patillas Dam,	0.81	74	Pg	Pg	03 28 14.6	0.0
IDE	Isla Desecheo	0.84	314		Pg	03 28 14.7	-0.6
IDE					Sg	03 28 26.1	-0.2
HUMP	Col San Antoni	1.00	70		Pg	03 28 18.1	-0.2
HUMP					Sb	03 28 32.4	+0.1
HUMP	Col San Antoni	1.00	70	Pg	Pg	03 28 18.0	-0.3
HUMP				Sg	Sg	03 28 30.7	-0.6
HUMP				IAML		03 28 36.5	
	comp=Z,339nm,0.6s						
HUMP				IAML		03 28 36.9	
	comp=Z,534nm,0.8s						
CUPR	Culebra, Puert	1.56	71		Pn	03 28 27.9	+0.4
HIDR	Higuey Centro	1.95	294	⇑ePg	Pb	03 28 34.5	-0.7
HIDR				IAML		03 29 09.6	
	comp=N,194nm,0.8s						
DR12	Loma Pena Alta	2.61	293	Pn	Pn	03 28 41.1	-0.9
HATOM	Hato Mayor del	2.61	293	⇑ePg	Pn	03 28 43.3	+1.4
HATOM				⇑eSg	Sn	03 29 16.1	+2.1
HATOM				IAML		03 29 24.7	
	comp=N,141nm,0.8s						
BANI	BANI	3.40	281	Pn	Pn	03 28 53.3	+0.4
SABA	Saba	3.43	92	Pn	Pn	03 28 53.7	+0.5
SABA				IAML		03 29 15.1	
	comp=N,96nm,0.6s						
SMRT	St. Maarten	3.59	85	Pn	Pn	03 28 54.3	-1.1
SC01	Santiago de lo	4.03	294	Pn	Pn	03 29 02.8	+1.3
SDDR	Presa de Saban	4.39	286	Pn	Pn	03 29 07.4	+1.0

*FUNV **02** 03:30:42.9, 6°.75N×73°.16W, h171km, MW3.7, Presumed earthquake*

*RSNC **02** 03:30:45.1±0.0, 7°N±1°×7°3W±°, h147km±1km, M2.0, ML1.9*

ISC 02 03:30:43.6±1.6**, 6°.84N**±0°.04×**73°.14W**±0°.06**, h154**km±10km**, n18, σ1s.00**/34**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.25	189	P	Pn	03 31 04.8	0.0
BARC				S	Sn	03 31 20.8	-0.2
BRJC	Barrancabermej	0.61	282	P	Pn	03 31 06.6	+0.6
BRJC				S	Sn	03 31 23.1	0.0
PAMC	Pamplona, Colo	0.66	42	P	Pn	03 31 07.6	+0.7
PAMC				S	Sn	03 31 24.8	+0.2
RUSC	La Rusia	0.94	176	P	Pn	03 31 08.6	-0.3
RUSC				S	Sn	03 31 27.6	-0.6
RUSC	La Rusia	0.94	176	eP	Pn	03 31 08.4	-0.5
RUSC				eS	Sn	03 31 26.8	-1.5
CAPV	Capacho	1.31	39	eP	Pn	03 31 12.9	+1.1
CAPV				eS	Sn	03 31 34.7	+1.3
PTBC	PUERTO BERRIO,	1.34	257	P	Pn	03 31 11.6	-0.3
PTBC				S	Sn	03 31 33.0	-0.5
OCAC	Ocana	1.40	353	P	Pn	03 31 13.5	+0.9
OCAC				S	Sn	03 31 35.3	+0.4
SPBC	San Pablo de B	1.50	218	P	Pn	03 31 13.6	0.0
SPBC				S	Sn	03 31 36.0	-0.6
CHIC	Chingaza	2.27	195	P	Pn	03 31 22.8	+0.1
CHIC				S	Sn	03 31 51.9	-0.8
ROSC	El Rosal	2.31	211	P	Pn	03 31 24.4	+1.4
ROSC				S	Sn	03 31 52.6	-0.8
SOCV	Socops	2.68	58	eS	Sn	03 31 59.3	-1.5
GUY2C	Guyana, Caldas	2.73	234	P	Pn	03 31 29.5	+1.2
GUY2C				S	Sn	03 32 01.9	-0.8
CBOC	Ciudad Bolivar	3.01	251	P	Pn	03 31 32.9	+1.4
CBOC				S	Sn	03 32 08.8	+0.3
ORTC	Ortega, Tolima	3.59	216	P	Pn	03 31 39.2	+0.5
ORTC				S	Sn	03 32 22.8	+1.3
SJCC	San Jacinto, C	3.64	327	P	Pn	03 31 39.2	-0.2
SJCC				S	Sn	03 32 21.5	-1.3
SJCC	San Jacinto, C	3.64	327	eS	Sn	03 32 20.0	-2.8
URMC	La Uribe, Meta	3.78	199	P	Pn	03 31 41.2	0.0
URMC				S	Sn	03 32 26.0	0.0

*IDC **02** 03:40:20.2±2.1, 31°.11S×177°.77W, h0km, mb4.4/3, mbtmp4.3/4, ML2.9/1, Error ellipse: s-maj=55.1km s-min=27.9km az=122.0*

ISC 02 03:40:25.6±1.6**, 31°.06S**±0°.09×**177°.9W**±0°.3**, h46**km**, n23, σ2s.03**/25**, mb4.2**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.79	0	P	Pn	03 40 54.6	+0.6
GLKZ				S	Sn	03 41 11.3	-4.2
RAO	Raoul Island	1.80	0	Pn	Pn	03 40 53.9	-0.2
	69nm,0.3s,baz=93,slow=23,SNR=1.8						
RAO				Sn	Sn	03 41 14.1	-1.6
	466nm,0.3s,baz=178,slow=23,SNR=8.8						
MXZ	Matakaoa Point	7.20	205	S	Sn	03 43 28.0	-0.6
HAZ	Te Kaha	7.56	207	P	Pn	03 42 13.2	0.0
HAZ				S	Sn	03 43 33.4	-4.2
PUZ	Puketiti	7.67	203	P	Pn	03 42 14.4	-0.3
PUZ				S	Sn	03 43 39.6	-0.7
MWZ	Matawai	8.17	206	P	Pn	03 42 21.2	-0.4
MWZ				S	Sn	03 43 52.4	0.0
OUZ	Omahuta	8.23	237	P	Pn	03 42 29.6	+7.3
URZ	Urewera	8.27	208	Pn	Pn	03 42 21.6	-1.2
	0.2nm,0.3s,baz=202,slow=15,SNR=2.5						
URZ				Sn	Sn	03 43 52.7	-2.1
	2.4nm,0.3s,baz=202,slow=23,SNR=21						
	5.6nm,0.9s						
URZ	Urewera	8.27	208	P	Pn	03 42 21.9	-0.9
URZ				S	Sn	03 43 52.2	-2.6
RTZ	Ruatahuna	8.62	208	P	Pn	03 42 26.6	-1.3
RTZ				S	Sn	03 44 00.9	-2.9
BKZ	Black Stump Fm	9.29	208	P	Pn	03 42 35.4	-1.5
BKZ				S	Sn	03 44 16.8	-3.2
STKA	Stephens Creek	34.40	258	P	P	03 47 11.4	+3.0
	3.0nm,0.9s,baz=104,slow=11,SNR=4.7						
	3.0nm,0.9s						
ASAR	Alice Springs	43.14	268	P	P	03 48 23.1	+1.3
	18nm,0.5s,baz=110,slow=8.1,SNR=6.3						
	18nm,0.5s						
WRA	Warramunga Arr	44.19	273	P	P	03 48 31.6	+1.4
	0.7nm,0.3s,baz=112,slow=8.1,SNR=15						
	0.7nm,0.3s						
H03S2	Juan Fernandez	80.05	123	T	T	05 21 31.8	
	baz=230						
H03S1	Juan Fernandez	80.06	123	T	T	05 21 42.8	
	baz=230						
H03S3	Juan Fernandez	80.07	123	T	T	05 21 26.8	
	baz=230						
H03N3	Juan Fernandez	80.25	123	T	T	05 22 00.3	
	baz=233						
H03N2	Juan Fernandez	80.25	123	T	T	05 22 06.2	
	baz=233						
H03N1	Juan Fernandez	80.26	123	T	T	05 22 01.5	
	baz=233						
FINES	FINESS Array B	145.78	340	PKPbc	PKPab	03 59 59.8	+0.5
	2.9nm,0.8s,baz=16,slow=4.9,SNR=4.4						
HFS	Hagfors	149.90	348	PKPbc	PKiKP	04 00 11.7	+0.7
	5.3nm,1.0s,baz=11,slow=1.5,SNR=2.4						
BRTR	Keskin Array B	152.96	297	PKPbc	PKiKP	04 00 19.6	+1.4
	0.2nm,0.7s,baz=137,slow=1.1,SNR=1.6						

IDC 02 03:59:27.3±16.0**, 24°.32S**×**178°.54E, h603**km±154km**, mb3.5**/4**, mbtmp4.5**/4**, Error ellipse: s-maj=146.0km s-min=61.3km az=115.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	33.33	249	P	P	04 05 17.0	-0.1
	0.9nm,0.3s,baz=96,slow=9.2,SNR=4.8						
	0.9nm,0.3s						
ASAR	Alice Springs	40.65	261	P	P	04 06 17.0	0.0
	10.0nm,0.3s,baz=102,slow=8.3,SNR=10.0						
	10.0nm,0.3s						
WRA	Warramunga Arr	41.05	267	P	P	04 06 19.9	-0.2
	4.2nm,0.6s,baz=104,slow=7.9,SNR=24						
	4.2nm,0.6s						
PETK	Petropavlovsk-	79.20	347	P	P	04 10 30.7	+0.1
	1.7nm,0.6s,baz=159,slow=5.5,SNR=3.4						
	1.7nm,0.6s						
FINES	FINESS Array B	138.40	340	PKP	PKPdf	04 17 44.4	-0.2
	0.8nm,0.7s,baz=343,slow=1.5,SNR=3.4						
AKASG	Malin Array Be	144.58	326	PKP	PKPdf	04 17 55.1	-0.8
	1.1nm,0.5s,baz=43,slow=3.8,SNR=6.3						
BRTR	Keskin Array B	146.75	306	PKPbc	PKPbc	04 18 02.5	-0.6
	0.9nm,0.6s,baz=132,slow=2.1,SNR=6.6						

*KOLA **02** 04:08:01.8, 67°.68N×33°.72E, h0km, ML1.4, Error ellipse: s-maj=1.8km s-min=1.0km az=140.0, Khibiny, mines Kirovsk, Yukspor*

HEL 02 04:08:01.4±0.7**, 67°.64N**×**33°.89E, h0**km**, ML1.4, Suspected explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA	Apatity	0.20	250	P	Pg	04 08 04.6	-0.6
APA				S	Sg	04 08 07.0	-0.8
APA0	Apatity Array	0.35	265	P	Pg	04 08 06.9	-1.1
APA0				S	Sg	04 08 10.9	-1.6
LVZ	Lovozero	0.39	47	P	Pg	04 08 09.3	+0.4
LVZ				S	Sg	04 08 15.2	+1.3
KVDA	Kovda	1.03	203	P	Pg	04 08 20.9	-0.2
KVDA				S	Sg	04 08 34.1	-0.3
VRF	Varrio	1.64	276	PG	Pn	04 08 30.9	-0.6
VRF				SB	Sn	04 08 49.9	-3.3
VRF				smax	smax	04 08 50.4	
	comp=Z,3.8nm,0.2s						
OLKF	Oulanka, Finla	2.21	235	PG	Pb	04 08 40.7	-1.4
OLKF				smax	smax	04 09 06.7	
	comp=Z,1.1nm,0.2s						
OLKF				SG	Sb	04 09 09.2	-0.7
RAJF	Raja-Jooseppi	2.26	294	PB	Pn	04 08 40.4	+0.5
RAJF				SN	Sn	04 09 06.6	-1.9
KU6	Riekki	2.26	226	PG	Pb	04 08 41.5	-1.5
KU6				smax	smax	04 09 08.3	
	comp=Z,0.9nm,0.2s						
KU6				SG	Sb	04 09 11.0	-0.5
MSF	Maaselka	2.59	230	PG	Pb	04 08 47.7	-0.9
MSF				SG	Sb	04 09 22.4	+1.5
VADS	Vadso	2.99	329	P	Pn	04 08 49.6	-0.3
VADS				S	Sn	04 09 23.5	-2.9
RNF	Rovaniemi	3.25	255	PN	Pn	04 08 53.8	+0.3
RNF				SN	Sn	04 09 33.3	+0.5
RANF	Ranua	3.25	243	SB	Sb	04 09 39.1	-0.7
KEV	Kevo	3.29	313	PN	Pn	04 08 54.2	+0.1
KEV				SN	Sn	04 09 32.0	-1.9
ARCES	ARCESS Array B	3.62	306	P	Pn	04 08 57.9	-0.8
ARCES				S	Sn	04 09 38.4	-3.6

*UPP **02** 04:22:20.4±0.1, 67°.86N×20°.19E, h0km, ML2.9, Confirmed Induced event*

*HEL **02** 04:22:21.6±0.3, 67°.86N×20°.27E, h0km, ML0.9, Suspected explosion*

*DNK **02** 04:22:21.0±0.7, 67°.86N×20°.21E, h0km, ML2.9(UPP), Suspected explosion*

ISC 02 04:22:20.9±0.8**, 67°.84N**±0°.03×**20°.21E**±0°.02**, h0**km**, n19, σ0s.93**/33**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.12	24	P	Pg	04 22 22.7	-0.5
KUA				S	Sg	04 22 24.3	-0.4
KUA	Kurravaara	0.12	24	P	Pg	04 22 22.7	-0.5
KUA				S	Sg	04 22 24.3	-0.4
RATU	Laukkuluspa	0.23	266	P	Pg	04 22 25.0	-0.4
RATU				S	Sg	04 22 28.3	0.0
RATU	Laukkuluspa	0.23	266	P	Pg	04 22 25.0	-0.4
RATU				S	Sg	04 22 28.3	0.0
KOVU	Salmi	0.38	357	P	Pg	04 22 27.5	-0.7
	baz=175						
KOVU				S	Sg	04 22 32.8	-0.3
KOVU	Salmi	0.38	357	P	Pg	04 22 27.5	-0.7
	baz=175						
KOVU				S	Sg	04 22 32.8	-0.3
NIKU	Nikkaluokta	0.45	274	P	Pg	04 22 28.9	-0.5
NIKU				S	Sg	04 22 35.2	+0.1
NIKU	Nikkaluokta	0.45	274	P	Pg	04 22 28.9	-0.5
NIKU				S	Sg	04 22 35.2	+0.1
LANU	Lannavaara	0.71	72	P	Pg	04 22 33.9	-0.5
LANU				S	Sg	04 22 42.9	-0.6
LANU	Lannavaara	0.71	72	PG	Pg	04 22 34.1	-0.2
LANU				SG	Sg	04 22 43.0	-0.6
LANU	Lannavaara	0.71	72	P	Pg	04 22 33.9	-0.5
LANU				S	Sg	04 22 42.9	-0.6
KIF	Kilpisjarvi	1.19	10	PG	Pg	04 22 43.6	0.0
KIF				smax	smax	04 22 58.2	
	comp=Z,0.7nm,0.2s						
KIF				SG	Sg	04 22 58.9	0.0
HEF	Hetta	1.41	65	PG	Pn	04 22 46.3	-1.5
	baz=246						
HEF				smax	smax	04 23 03.3	
	comp=Z,0.5nm,0.2s						
HEF				SN	Sn	04 23 08.9	+1.7
ERTU	Ertsjaerv	1.51	148	PG	Pn	04 22 48.9	-0.2
ERTU				SN	Sn	04 23 09.4	0.0
HARU	Harads	1.71	169	P	Pb	04 22 52.6	-0.6
HARU	Harads	1.71	169	P	Pb	04 22 52.6	-0.6
RNF	Rovaniemi	2.58	116	SG	Sb	04 23 39.8	-0.3
VRF	Varrio	3.57	87	PB	Pn	04 23 20.2	+2.8
VRF	Varrio	3.57	87	SG	Pn	04 23 20.2	+2.8

*KOLA **02** 04:22:30.2, 67°.64N×33°.86E, h0km, ML1.4, Error ellipse: s-maj=2.9km s-min=1.8km az=140.0, Khibiny, mines Rasvumchorr, Central*

HEL 02 04:22:29.5±0.5**, 67°.81N**×**33°.96E, h0**km**, ML1.2, Explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVZ	Lovozero	0.28	72	P	Pb	04 22 37.5	+0.1
LVZ				S	Sb	04 22 42.8	+0.2
APA	Apatity	0.32	221	P	Pg	04 22 33.2	-2.5
APA0	Apatity Array	0.42	241	P	Pg	04 22 36.0	-1.6
APA0				S	Sg	04 22 40.8	-2.2
KVDA	Kovda	1.20	201	P	Pg	04 22 49.1	-3.4
KVDA				S	Sg	04 23 01.8	-6.2
VRF	Varrio	1.66	270	PG	Pn	04 22 59.5	-0.2
VRF				smax	smax	04 23 19.0	
	comp=Z,1.6nm,0.2s						
RAJF	Raja-Jooseppi	2.22	290	PN	Pb	04 23 09.2	-1.2
RAJF	Raja-Jooseppi	2.22	290	PG	Pb	04 23 09.2	-1.2
RAJF				SG	Sb	04 23 38.0	-0.3
OLKF	Oulanka, Finla	2.33	232	PB	Pn	04 23 09.6	+0.6
OLKF				SN	Sn	04 23 38.0	-0.3
OLKF				smax	smax	04 23 38.4	
	comp=Z,1.0nm,0.2s						
KU6	Riekki	2.41	224	PN	Pn	04 23 09.9	-0.2
KU6				SN	Sn	04 23 38.9	-1.3
KU6				smax	smax	04 23 40.5	
	comp=Z,0.8nm,0.2s						
MSF	Maaselka	2.72	228	PB	Pn	04 23 16.5	+2.0
MSF				SB	Sb	04 23 51.0	-2.0
VADS	Vadso	2.85	327	P	Pn	04 23 17.7	+1.5
VADS				S	Sb	04 23 54.0	-2.5
KEV	Kevo	3.19	311	PB	Pn	04 23 23.2	+2.4
KEV				SB	Sn	04 24 02.2	+2.6
RNF	Rovaniemi	3.32	252	PN	Pn	04 23 23.0	+0.4
RANF	Ranua	3.35	241	PB	Pb	04 23 26.5	-3.3
	baz=53						
ARA0	ARCESS Array S	3.54	303	PN	Pn	04 23 26.9	+1.3
ARCES	ARCESS Array B	3.54	303	P	Pn	04 23 26.8	+1.1
ARCES				S	Sn	04 24 08.6	+0.5
TOF	Tornio	4.17	250	SG	Pn	04 23 35.0	+0.7
TOF	Tornio	4.17	250	PN	Pn	04 23 35.0	+0.7
TOF	Tornio	4.17	250	smax	smax	04 23 32.3	
	comp=Z,0.7nm,0.2s						

*IDC **02** 04:27:18.7±6.9, 0°.74S×13°.37W, h0km, mb4.0/6, mbtmp4.1/7, ML4.3/1, MS3.6/41, Error ellipse: s-maj=162.4km s-min=59.2km az=171.0*

ISC 02 04:27:23.1±3.4**, 0°.3S**±0°.6×**13°.4W**±0°.3**, h10**km**, n49, σ0s.81**/9**, mb4.0**/5**, MS3.6**/40**, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	7.55	188	T	T	04 35 31.7	
	baz=5.4,slow=74,SNR=84						
H10N3	ASCENSION HYDR	7.57	189	T	T	04 35 44.7	
	baz=5.4,slow=74,SNR=140						
H10N1	ASCENSION HYDR	7.57	188	T	T	04 35 42.9	
	baz=5.4,slow=74,SNR=175						
H10S3	ASCENSION HYDR	8.68	189	T	T	04 37 12.9	
	baz=8.3,slow=74,SNR=48						
H10S2	ASCENSION HYDR	8.69	188	T	T	04 37 07.5	
	baz=212,slow=74,SNR=31						
DBIC	Dimbokro	10.96	51	Pn	Pn	04 30 00.9	+0.7
	1.9nm,0.3s,baz=264,slow=13,SNR=23						
DBIC				Sn	Sn	04 32 03.4	+0.4
	1.4nm,0.3s,baz=338,slow=24,SNR=1.9						
DBIC				LR	LR	04 33 51.1	
	comp=Z,352nm,19.4s,baz=225,slow=35						
	8.6nm,0.5s						
TORD	Torodi Ar. Bea	20.04	48	P	P	04 31 56.5	-0.1
	10nm,0.7s,baz=233,slow=11,SNR=31						
TORD				S	S	04 35 40.5	-1.6
	1.9nm,0.7s,baz=228,slow=22,SNR=5.6						
	10nm,0.7s						
MDT	Midelt	33.97	13	LR	LR	04 47 52.7	
	comp=Z,78nm,18.9s,baz=220,slow=36						
TSUM	Tsumeb	35.69	124	LR	LR	04 45 30.6	
	comp=Z,87nm,21.5s,baz=331,slow=31						
BDFB	Brasilia	37.44	244	LR	LR	04 46 19.8	
	comp=Z,48nm,21.2s,baz=145,slow=31						
MDP	Montagnes des	39.59	278	LR	LR	04 47 13.4	
	comp=Z,51nm,19.9s,baz=50,slow=30						
ESDC	Sonseca Array	40.71	11	LR	LR	04 51 11.8	
	comp=Z,87nm,19.2s,baz=216,slow=35						

KEST	Kesra	41.63	28	P	P	04 35 12.0	+0.2
	3.8nm,0.9s,baz=290,slow=4.5,SNR=3.8						
KEST				LR	LR	04 54 06.4	
	comp=Z,116nm,18.2s,baz=297,slow=38						
	3.8nm,0.9s						
LSZ	Lusaka	43.65	112	LR	LR	04 49 58.1	
	comp=Z,48nm,19.3s,baz=186,slow=31						
MBAR	Mbarara	44.10	91	LR	LR	04 52 33.5	
	comp=Z,73nm,18.6s,baz=260,slow=34						
LBTB	Lobatse	44.95	126	LR	LR	04 50 28.8	
	comp=Z,52nm,20.2s,baz=284,slow=31						
SUR	Sutherland	45.34	138	LR	LR	04 52 01.4	
	comp=Z,47nm,18.4s,baz=306,slow=33						
BOSA	Boshof	46.41	131	LR	LR	04 51 12.9	
	comp=Z,30nm,19.4s,baz=220,slow=31						
CPUP	Villa Florida	49.59	235	LR	LR	04 53 50.7	
	comp=Z,32nm,20.5s,baz=70,slow=32						
DAVOX	Davos/Dischmat	51.13	20	LR	LR	04 58 22.0	
	comp=Z,95nm,18.5s,baz=244,slow=36						
FURI	Furi	52.63	79	LR	LR	04 56 48.3	
	comp=Z,33nm,21.1s,baz=250,slow=34						
GERES	GERESS Array B	54.25	22	P	P	04 36 49.8	+0.5
	0.7nm,0.7s,baz=237,slow=6.9,SNR=2.8						
GERES				LR	LR	05 01 05.1	
	comp=Z,80nm,18.3s,baz=262,slow=37						
	0.7nm,0.7s						
EIL	Elat	54.82	53	LR	LR	05 02 01.2	
	comp=Z,101nm,18.1s,baz=249,slow=38						
VRAC	Vranov	55.74	23	LR	LR	05 01 11.2	
	comp=Z,44nm,18.9s,baz=257,slow=36						
EKA	Eskdalemuir Ar	56.09	7	P	P	04 37 02.6	+0.2
	1.2nm,0.7s,baz=246,slow=12,SNR=3.8						
	1.2nm,0.7s						
LPAZ	La Paz	56.25	251	LR	LR	04 59 00.1	
	comp=Z,48nm,20.0s,baz=76,slow=34						
MMAI	Mount Meron Ar	56.58	49	LR	LR	05 05 15.6	
	comp=Z,18nm,18.3s,baz=268,slow=40						
MLR	Muntele Rosu	57.29	32	LR	LR	05 03 55.2	
	comp=Z,72nm,18.2s,baz=252,slow=38						
SDV	Santo Domingo	57.76	281	LR	LR	04 58 59.9	
	comp=Z,24nm,18.9s,baz=98,slow=33						
BRTR	Keskin Array B	58.50	41	P	P	04 37 19.6	-0.4
	1.0nm,0.8s,baz=233,slow=6.0,SNR=8.0						
BRTR				LR	LR	05 05 37.2	
	comp=Z,26nm,18.1s,baz=247,slow=39						
	1.0nm,0.8s						
ROSC	El Rosal	61.09	276	LR	LR	05 01 38.4	
	comp=Z,50nm,18.6s,baz=102,slow=34						
AKASG	Malin Array Be	62.35	29	LR	LR	05 06 13.8	
	comp=Z,36nm,19.0s,baz=244,slow=37						
HFS	Hagfors	63.83	15	LR	LR	05 07 10.0	
	comp=Z,36nm,19.3s,baz=216,slow=37						
NOA	NORSAR Array B	64.03	13	LR	LR	05 06 08.5	
	comp=Z,25nm,18.9s,baz=300,slow=36						
ATAH	Atahualpa	65.19	262	LR	LR	05 05 27.9	
	comp=Z,48nm,18.6s,baz=84,slow=35						
PLCA	Paso Flores	65.46	225	LR	LR	05 01 40.3	
	comp=Z,46nm,21.2s,baz=90,slow=32						
FINES	FINESS Array B	68.51	19	P	P	04 38 24.8	-0.7
	1.1nm,0.7s,baz=248,slow=10,SNR=5.4						
	1.1nm,0.7s						
SNAA	Sanae	71.57	177	LR	LR	05 01 52.0	
	comp=Z,35nm,19.5s,baz=115,slow=29						
SADO	Sadowa	73.23	317	LR	LR	05 08 53.7	
	comp=Z,43nm,18.4s,baz=132,slow=34						
PMSA	Palmer Station	73.96	200	LR	LR	05 06 35.6	
	comp=Z,50nm,18.1s,baz=185,slow=32						
TKL	Tuckaleechee C	74.34	307	LR	LR	05 07 36.1	
	comp=Z,40nm,18.1s,baz=139,slow=32						
KIRV	Kirov	76.41	29	LR	LR	05 15 59.7	
	comp=Z,35nm,18.2s,baz=269,slow=38						
BVAR	Borovoye Array	86.48	37	LR	LR	05 22 19.7	
	comp=Z,20nm,18.5s,baz=282,slow=38						
AAK	Ala-Archa	88.63	48	LR	LR	05 26 56.9	
	comp=Z,19nm,18.1s,baz=260,slow=40						
MKAR	Makanchi Array	94.11	43	LR	LR	05 28 33.6	
	comp=Z,19nm,19.1s,baz=304,slow=39						
NRIK	Noril'sk	94.14	20	LR	LR	05 27 32.1	
	comp=Z,26nm,18.3s,baz=302,slow=38						
PDAR	Pinedale Array	94.76	313	LR	LR	05 20 37.6	
	comp=Z,29nm,19.9s,baz=54,slow=34						
ZALV	Zalesovo Beam	95.08	36	LR	LR	05 27 26.5	
	comp=Z,28nm,19.0s,baz=250,slow=38						
NEW	Newport	99.37	319	LR	LR	05 18 07.5	
	comp=Z,36nm,21.0s,baz=44,slow=31						

IDC 02 05:02:00.3±2.1, 6°.82S×128°.47E, h0km, mb3.4/1, mbtmp3.9/3, ML3.5/2, Error ellipse: s-maj=117.1km s-min=32.3km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.23	157	Pn	Pn	05 05 24.1	+0.8
	0.2nm,0.3s,baz=336,slow=13,SNR=13						
WRA				Sn	Sn	05 07 48.4	-14
	0.4nm,0.3s,baz=340,slow=22,SNR=9.8						
	0.3nm,0.3s						
ASAR	Alice Springs	17.54	163	P	Pn	05 06 05.9	-0.5
	0.2nm,0.3s,baz=343,slow=8.9,SNR=7.0						
	24nm,0.6s						
MKAR	Makanchi Array	67.25	327	P	P	05 12 56.7	0.0
	0.1nm,0.3s,baz=134,slow=8.3,SNR=4.3						
	0.1nm,0.3s						

JMA 02 05:37:04.3±0.2, 25°N±2°×123°.5E±0°.5, h52km±3km, MV0.8/6, NW OFF ISHIGAKIJIMA IS, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.38	142	P	Pn	05 37 14.2	-0.2
YOJ	Yonaguni jima	0.46	248	P	Pn	05 37 15.2	0.0
JKRS	Kuro-shima	0.63	129	P	Pn	05 37 17.2	0.0
JKRS				S	Sn	05 37 27.1	+0.5
JIJ	Ishigaki jima	0.67	114	S	Sn	05 37 27.6	+0.2

TAP 02 05:37:38.2, 24°.41N×121°.42E, h6km, ML1.7, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNSH	Datong	0.04	302	*i* P	Pg	05 37 39.8	+0.2
NNSH				*i* S	Sg	05 37 40.6	0.0
NNS	Nan Shan	0.05	308	*i* P	Pg	05 37 40.0	+0.3
NNS				*i* S	Sg	05 37 41.0	+0.2
LATG	Datong	0.16	38	*i* P	Pg	05 37 41.9	+0.4
LATG				*i* S	Sg	05 37 44.8	+1.1
ETLH	Xiulin Townshi	0.21	164	*e*P	Pg	05 37 43.6	+1.2
ETLH				*e*S	Sg	05 37 46.6	+1.5
NDT	Datong Townshi	0.21	24	*e*P	Pg	05 37 43.0	+0.6
FUSS	Fushou	0.23	225	*e*P	Pg	05 37 43.2	+0.5
FUSS				*e*S	Sg	05 37 46.8	+1.1
YHNB	Yeheng	0.26	352	*e*P	Pg	05 37 44.1	+0.7
YHNB				*e*S	Sg	05 37 47.5	+0.5
ENTT	Nioudou	0.27	30	*i* P	Pg	05 37 44.1	+0.6
ENTT				S	Sg	05 37 48.0	+0.9
NACB	Ninganchiao	0.28	145	*e*P	Pg	05 37 44.4	+0.6
NACB				*e*S	Sg	05 37 48.6	+1.0
ENA	Nanau	0.29	86	*e*P	Pb	05 37 45.0	-1.0
ENA				*e*S	Sg	05 37 49.2	+1.3
WHF	Hehuan Shan	0.30	208	*e*P	Pg	05 37 44.2	+0.1
WHF				*e*S	Sg	05 37 49.0	+0.8
EWUT	Wuta	0.33	83	P	Pg	05 37 45.3	+0.6
EWUT				*e*S	Sg	05 37 49.8	+0.7
NDS	Dongshan	0.35	50	*e*P	Pg	05 37 45.5	+0.4
NWLT	Wulai	0.38	12	*e*P	Pg	05 37 46.0	+0.5
NWLT				*e*S	Sg	05 37 50.8	+0.3
FUSB	Fushanzhiwuyua	0.38	24	*e*P	Pg	05 37 46.2	+0.5
FUSB				*e*S	Sg	05 37 51.5	+0.7
LXIB	Xiulin Townshi	0.39	181	*e*P	Pb	05 37 46.9	-0.7
LXIB				*e*S	Sb	05 37 52.5	-1.4

IDC 02 06:02:16.6±2.1, 27°.85S×63°.58E, h0km, mb4.2/6, mbtmp4.2/6, MS3.0/1, Error ellipse: s-maj=73.2km s-min=30.1km az=40.0

ISC 02 06:02:19.3±2.0, 27°.9S±0°.4×63°.6E±0°.3, h17km, n11, σ1s.19/7, mb4.1/6, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H04N2	CROZET ISLANDS	20.47	204	T	T	06 27 38.1	
	baz=31,slow=73,SNR=166						
H04N1	CROZET ISLANDS	20.47	204	T	T	06 27 40.9	
	baz=31,slow=73,SNR=180						
H04N3	CROZET ISLANDS	20.48	204	T	T	06 27 35.7	
	baz=31,slow=73,SNR=160						
LBTB	Lobatse	34.04	266	LR	LR	06 21 11.0	
	comp=Z,26nm,19.9s,baz=168,slow=33						
CMAR	Chiang Mai Arr	57.41	41	P	P	06 12 08.1	+0.9
	0.8nm,0.3s,baz=212,slow=6.3,SNR=1.7						
	0.8nm,0.3s						
ASAR	Alice Springs	62.67	104	P	P	06 12 43.5	0.0
	4.9nm,0.3s,baz=253,slow=6.7,SNR=8.4						
	4.9nm,0.3s						
WRA	Warramunga Arr	64.39	100	P	P	06 12 55.0	+0.2
	1.2nm,0.8s,baz=247,slow=6.0,SNR=7.6						
	1.2nm,0.8s						
MKAR	Makanchi Array	76.25	13	P	P	06 14 05.9	-0.8
	0.5nm,0.7s,baz=172,slow=4.7,SNR=5.6						
	0.5nm,0.7s						
KEST	Kesra	81.36	318	P	P	06 14 36.2	+1.1
	2.2nm,0.7s,baz=135,slow=4.3,SNR=1.9						
	2.2nm,0.7s						
ZALV	Zalesovo Beam	83.56	12	P	P	06 14 45.3	-0.8
	0.8nm,0.6s,baz=197,slow=4.6,SNR=5.3						
	0.8nm,0.6s						
YKA	Yellowknife Ar	145.39	359	PKPbc	PKPbc	06 21 53.9	-1.6
	0.2nm,0.4s,baz=2.2,slow=3.5,SNR=9.1						

NEIC 02 06:17:23.3±1.4, 6°.6S±0°.1×129°.90E±0°.08, h122km±7km, mb4.2/14, Error ellipse: s-maj=18.7km s-min=11.6km az=191.0

IDC 02 06:17:25.6±2.2, 6°.76S×129°.75E, h145km±21km, mb3.8/6, mbtmp4.4/11, Error ellipse: s-maj=32.2km s-min=15.7km az=78.0

DJA 02 06:17:27.9±0.4, 7°S±3°×13°0E±°, h185km±8km, M4.4/18, mB4.8/4, mb4.3/7, MLv4.6/18, Mw(mB)4.0/4, MwMwp4.3/1, Mwp4.7/1

ISC 02 06:17:25.3±0.6, 6°.87S±0°.05×129°.85E±0°.07, h150km, n48, σ2s.11/51, mb4.0/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.81	128		Pn	06 17 56.4	-1.8
SAUI	Saumlaki	1.81	128	P	Pn	06 18 04.7	+6.5
BNDI	Bandanaira	2.33	1	P	Pn	06 18 07.8	+3.4
MSAI	Masohi	3.62	345	P	Pn	06 18 24.5	+3.9
KRAI	Karang Ratu	3.82	338	P	Pn	06 18 27.0	+3.8
NLAI	Namlea	4.53	323	P	Pn	06 18 35.2	+2.7
KMPI	Kaimana, Papua	4.99	50	P	Pn	06 18 40.6	+2.0
MTN	Manton Dam	6.07	168		Pn	06 18 55.7	+2.8
SIJI	Sorong	6.13	13	P	Pn	06 18 53.4	-0.4
	18nm,0.3s,baz=192,slow=20,SNR=5.2						
SIJI				S	Sn	06 19 56.7	-6.3
	110nm,0.2s,baz=253,slow=23,SNR=13						
SWI	Sorong	6.13	13	P	Pn	06 18 55.1	+1.3
	0.7nm2μm27nm,0.4s						
SOEI	Soe	6.22	242	Pn	Pn	06 18 55.7	+0.6
SOEI	Soe	6.22	242	P	Pn	06 18 57.8	+2.7
	0.6nm40nm,1.0s						
RKPI	Ransiki, Papua	6.85	39	P	Pn	06 19 05.9	+2.5
BATI	Baumata	6.96	241	P	Pn	06 19 05.8	+1.0
	40nm,0.4s,baz=303,slow=4.1,SNR=9.3						
BATI				S	Sn	06 20 20.9	-2.1
	70nm,0.4s,baz=161,slow=19,SNR=11						
BATI	Baumata	6.96	241	P	Pn	06 19 06.8	+2.0
KNRA	Kununurra	8.82	187		Pn	06 19 31.6	+2.1
FITZ	Fitzroy Crossi	11.89	200	P	Pn	06 20 10.5	+0.4
	6.0nm,0.3s,baz=24,slow=11,SNR=19						
FITZ				S	Sn	06 22 15.3	-6.3
	6.6nm,0.3s,baz=125,slow=9.8,SNR=6.7						
WB0	Warramunga Arr	13.56	161		Pn	06 20 32.0	+0.4
WRAB	Tennant Creek	13.70	162		Pn	06 20 33.7	+0.3
WRA	Warramunga Arr	13.70	162	P	Pn	06 20 33.9	+0.3
	2.7nm,0.6s,baz=331,slow=13,SNR=36						
WRA				S	Sn	06 23 03.1	-2.3
	3.4nm,0.5s,baz=334,slow=22,SNR=6.4						
WRA	Warramunga Arr	13.70	162		Pn	06 20 33.6	+0.1
WR8	Warramunga Arr	13.77	161		Pn	06 20 34.5	+0.2
JAGI	Jajag, Banyuwa	15.64	263		Pn	06 20 58.0	+0.2
JAGI				IAmb	IAmb	06 21 05.7	
	comp=Z,34nm,1.5s						
AS31	Alice Springs	17.15	167		Pn	06 21 17.4	+1.4
ASAR	Alice Springs	17.15	167	P	Pn	06 21 17.2	+1.2
	comp=Z,14nm,0.3s,baz=342,slow=8.8,SNR=49						
ASAR	Alice Springs	17.15	167	P	Pn	06 21 17.7	+1.7
MBWA	Marble Bar	17.25	214		Pn	06 21 19.0	+1.7
MBWA				IAmb	IAmb	06 21 27.1	
	comp=Z,19nm,1.2s						
PSA00	Pilbara Seismi	17.52	212		Pn	06 21 21.9	+1.4
PSA00				IAmb	IAmb	06 21 23.9	
	comp=Z,30nm,1.5s						
PSA00	Pilbara Seismi	17.52	212		Pn	06 21 22.0	+1.4
PSA00				IAmb	IAmb	06 21 22.7	
	comp=Z,13nm,1.4s						
STKA	Stephens Creek	27.19	158	P	P	06 22 57.7	+2.8
	comp=Z,1.5nm,0.6s,baz=339,slow=12,SNR=3.5						
	comp=Z,1.5nm,0.6s						
STKA	Stephens Creek	27.19	158	P	P	06 22 56.9	+2.0
SONM	Songino Array	58.27	342	P	P	06 27 03.6	-0.6
	comp=Z,0.7nm,0.6s,baz=157,slow=8.0,SNR=3.6						
	comp=Z,0.7nm,0.6s						
SONM	Songino Array	58.27	342	P	P	06 27 02.6	-1.6
MK31	Makanchi Array	68.04	327	P	P	06 28 09.0	+0.5
MK31				IAmb	IAmb	06 28 09.9	
	comp=Z,2.1nm,0.9s						
MKAR	Makanchi Array	68.04	327	P	P	06 28 08.9	+0.4
	comp=Z,2.1nm,0.4s,baz=122,slow=7.6,SNR=18						
	comp=Z,2.1nm,0.4s						
MKAR	Makanchi Array	68.04	327	P	P	06 28 09.0	+0.5
ARSB	Arslanbob	70.70	318	P	P	06 28 23.2	-1.9
ZAA0	Zalesovo Array	71.40	334	P	P	06 28 28.1	-0.8
ZAA0				IAmb	IAmb	06 28 28.8	
	comp=Z,2.0nm,0.8s						
ZALV	Zalesovo Beam	71.40	334	P	P	06 28 28.1	-0.8
	comp=Z,1.5nm,0.6s,baz=126,slow=3.8,SNR=7.5						
	comp=Z,1.5nm,0.6s						
ZALV	Zalesovo Beam	71.40	334	P	P	06 28 28.2	-0.6
KURBB	Kurchatov Arra	72.32	329	P	P	06 28 34.5	+0.1
	comp=Z,1.7nm,0.3s,baz=128,slow=4.9,SNR=5.1						
	comp=Z,1.7nm,0.3s						
KURK	Kurchatov	72.33	329	P	P	06 28 34.8	+0.3
KURK				IAmb	IAmb	06 28 35.1	
	comp=Z,2.6nm,0.8s						
BVAR	Borovoye Array	77.88	328	P	P	06 29 06.2	0.0
	comp=Z,0.7nm,0.5s,baz=134,slow=6.4,SNR=4.4						
	comp=Z,0.7nm,0.5s						
AB31	Akbulak array	82.32	322	P	P	06 29 30.0	-0.1
ABKAR	Akbulak array	82.32	322	P	P	06 29 29.9	-0.2
C19K	Lookout Ridge	89.56	20	P	P	06 30 05.9	+0.6
C19K				IAmb	IAmb	06 30 44.2	
	comp=Z,3.4nm,1.4s						
D19K	Kuna River	89.86	21	P	P	06 30 06.6	-0.2
LPAZ	La Paz	150.91	142	PKPbc	PKiKP	06 37 03.8	+1.3
	comp=Z,0.5nm,0.4s,baz=27,slow=2.3,SNR=3.1						

BGSI 02 06:38:05.9±1.4, 27°.07S×25°.73E, h0km±124km, ML2.2

PRE 02 06:37:56.4±1.0, 27°.04S×26°.81E, h2km, ML2.1, Presumed earthquake, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRYS	Parys	0.51	77	*e*P	Pg	06 38 06.9	+0.8
PRYS				*e*S	Sg	06 38 12.9	+0.3
PRYS				IAML		06 38 17.9	
	comp=Z,71nm,0.4s						
HRAO	HartRAO	1.39	35	*e*P	Pb	06 38 23.2	0.0
HRAO				*e*S	Sn	06 38 42.4	+0.4
HRAO				IAML		06 38 42.9	
	comp=Z,63nm,0.4s						
SNKL	Senekal, Frees	1.50	145	*e*P	Pg	06 38 25.4	+0.3
SNKL				*e*S	Sn	06 38 46.2	+1.5
SNKL				IAML		06 38 49.4	
	comp=Z,40nm,0.7s						
BOSA	Boshof	2.09	221	*e*P	Pb	06 38 34.1	-0.9
BOSA				*e*S	Sn	06 39 00.3	+1.1
BOSA				IAML		06 39 13.7	
	comp=Z,10nm,0.2s						
LEPH	Lephalale, Lim	3.29	16	*e*P	Pn	06 38 50.1	+1.0
LEPH				*e*S	Sn	06 39 28.5	-0.4
LEPH				IAML		06 39 43.8	
	comp=Z,7.6nm,0.4s						
LPHEP	Lephephe	3.76	347	*i* P	Pb	06 39 02.5	-1.1
LPHEP				*i* S	Sn	06 39 44.8	+4.4
LPHEP				IAML		06 39 55.0	
	comp=N,4.9nm,0.5s						
PILG	Pilgrimsrest,	4.09	60	*e*P	Pn	06 39 01.5	+1.3
PILG				*e*S	Sn	06 39 47.5	-1.3
PILG				IAML		06 40 08.3	
	comp=Z,10nm,0.6s						
KDWAN	Kaudwane	4.13	331	*i* P	Pn	06 39 03.1	+2.5
KDWAN				*i* S	Sn	06 39 46.6	-3.0
KDWAN				IAML		06 40 08.0	
	comp=N,29nm,0.4s						
ALKP	Alkanpan, Nort	4.95	233	*e*P	Pn	06 39 12.8	+0.9
ALKP				*e*S	Sn	06 40 07.8	-2.0
ALKP				IAML		06 40 32.9	
	comp=Z,6.6nm,0.4s						
BFON	Badsfontein, M	5.47	209	*e*P	Pn	06 39 20.8	+1.7
BFON				*e*S	Sn	06 40 20.6	-2.1
BFON				IAML		06 40 49.1	
	comp=Z,4.2nm,0.5s						
GRAF	Camdeboo Natio	5.60	201	*e*P	Pn	06 39 21.8	+1.1
GRAF				*e*S	Sn	06 40 23.3	-2.5
GRAF				IAML		06 40 57.4	
	comp=Z,3.3nm,0.4s						
BRAK	Brakfontein	5.83	215	*e*P	Pn	06 39 25.5	+1.6
BRAK				*e*S	Sn	06 40 29.3	-2.1
BRAK				IAML		06 41 09.3	
	comp=Z,3.2nm,0.8s						
KGCAE	Kacgae	5.90	314	*i* P	Pn	06 39 24.6	-0.4
ROOI	Rooidraai Farm	6.13	207	*e*P	Pn	06 39 29.4	+1.3
ROOI				*e*S	Sn	06 40 36.0	-2.8
ROOI				IAML		06 41 13.1	
	comp=Z,2.8nm,0.4s						
GRAN	Grantham	6.62	216	*e*P	Pn	06 39 36.0	+1.2
GRAN				*e*S	Sn	06 40 48.5	-2.4
GRAN				IAML		06 41 36.2	
	comp=Z,3.2nm,0.5s						
FRAZ	Fraserburg	6.77	223	*e*P	Pn	06 39 38.9	+1.9
FRAZ				*e*S	Sn	06 40 51.9	-2.9
FRAZ				IAML		06 41 33.5	
	comp=Z,1.8nm,0.5s						
MERW	Merweville	7.25	218	*e*P	Pn	06 39 44.7	+1.2
MERW				*e*S	Sn	06 41 03.2	-3.3
MERW				IAML		06 41 49.2	
	comp=Z,2.1nm,0.5s						

SNET 02 06:51:21.3±1.1, 13°.89N×89°.68W, h7km±3km, ML2.3, Presumed earthquake

GCG 02 06:51:21.6±1.5, 13°.87N×89°.71W, h6km±29km, MD3.7, Presumed earthquake

CATAC 02 06:51:22.2±0.3, 14°N±2°×9°0W±°, h4km±1km, M2.3/13, MLv2.3/13, Error ellipse: s-maj=3.9km s-min=2.1km az=35.6, confirmed

ISC 02 06:51:21.9±0.9, 13°.87N±0°.03×89°.69W±0°.03, h8km±5km, n40, σ1s.03/57, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTR	El Retiro	0.05	56	*e*P	Pg	06 51 23.8	-0.1
SBLS	San Blas	0.07	112	*e*P	Pg	06 51 24.1	0.0
SBLS				*e*S	Sg	06 51 25.8	0.0
SNJE	San Jose	0.08	89	*e*P	Pg	06 51 24.5	+0.3
SNJE				*e*P		06 51 24.6	
SNJE				*e*S	Sg	06 51 26.7	+0.7
NUBE	Las Nubes	0.09	292	P	Pg	06 51 24.1	-0.3
NUBE	Las Nubes	0.09	292	*i* P	Pg	06 51 24.0	-0.3
NUBE	Las Nubes	0.09	292	*e*P	Pg	06 51 24.1	-0.3
NUBE				*e*S	Sg	06 51 25.8	-0.3
NUBE				IAML		06 51 26.2	
	comp=Z,1μm,0.1s						
LOAL	Lomas de Alarc	0.16	326	P	Pg	06 51 25.5	+0.2
LOAL				S	Sg	06 51 28.4	+0.8
LOAL	Lomas de Alarc	0.16	326	*e*P	Pg	06 51 25.1	-0.2
UNIC	Universidad Ca	0.18	51	P	Pg	06 51 25.7	0.0
UNIC	Universidad Ca	0.18	51	*e*P	Pg	06 51 25.8	0.0
UNIC				*e*S	Sg	06 51 28.7	+0.5
SLOZ	Alcaldia de Sa	0.18	330	P	Pg	06 51 25.9	+0.1
SLOZ				S	Sg	06 51 28.7	+0.4
SLOZ	Alcaldia de Sa	0.18	330	*e*P	Pg	06 51 25.9	+0.1
RBDL	Robledal	0.24	1	*e*P	Pg	06 51 27.2	+0.3
RBDL				*e*S	Sg	06 51 31.3	+1.0
RBDL				IAML		06 51 32.3	
	comp=Z,434nm,0.4s						
CEDA	San Andres	0.29	102	P	Pg	06 51 21.6	-6.2
CEDA				S	Sg	06 51 33.1	+1.3
JAYA	Jayaque - finc	0.32	132	P	Pg	06 51 28.5	+0.2
JAYA	Jayaque - finc	0.32	132	*i* P	Pg	06 51 28.5	+0.2
JAYA				*i* S	Sg	06 51 32.9	+0.4
JAYA	Jayaque - finc	0.32	132	*e*P	Pg	06 51 28.5	+0.2
JAYA				*e*S	Sg	06 51 33.8	+1.3
PMON	Piamonte	0.40	113	P	Pg	06 51 30.4	+0.6
PMON				S	Sb	06 51 36.6	-1.0
PMON	Piamonte	0.40	113	*e*P	Pg	06 51 29.9	+0.1
UEES	Universidad Ev	0.46	109	P	Pg	06 51 31.0	0.0
UEES				S	Sg	06 51 38.1	+1.0
SEMO	Seminario San	0.48	110	S	Sg	06 51 38.1	+0.4
LALI	Alcalda de L	0.52	136	S	Sg	06 51 40.1	+1.2
LALI	Alcalda de L	0.52	136	*i* P	Pg	06 51 32.3	+0.3
IGN	Direccin Gen	0.53	107	S	Sg	06 51 33.1	-6.1
UDBS	Universidad Do	0.54	106	S	Sb	06 51 41.1	-0.6
MTO3	Montecristo	0.62	31	P	Pg	06 51 33.7	-0.3
MTO3	Montecristo	0.62	31	*i* P	Pg	06 51 33.7	-0.3
MTO3	Montecristo	0.62	31	*e*P	Pg	06 51 33.7	-0.3
MTO3				*e*S	Sg	06 51 42.7	+0.6
PAVA	Las Pavas	0.75	102	P	Pg	06 51 36.7	+0.3
PAVA				S	Sb	06 51 47.5	-0.2
ESQI	Esquipulas	0.77	26	P	Pg	06 51 36.6	-0.2
ESQI				S	Sb	06 51 47.4	-0.9
LLGN	La Laguna	0.78	68	P	Pg	06 51 36.6	-0.4
LLGN				S	Sb	06 51 47.9	-0.7
COEG	Centro de Oper	0.82	107	P	Pb	06 51 38.9	+0.3
P5NO	Presa 5 de nov	0.91	82	S	Sg	06 51 51.2	-0.2
TECO	Alcaldia de Te	0.94	110	P	Pn	06 51 41.5	0.0
SCLA	Alcaldia de Sa	0.95	100	P	Pb	06 51 40.9	+0.2
SCLA				S	Sn	06 51 55.0	-0.4
SARH	Santa Rosa de	1.28	45	P	Pn	06 51 46.0	-0.2
SARH				S	Sn	06 52 05.2	+1.7
SARH	Santa Rosa de	1.28	45	*i* P	Pn	06 51 46.0	-0.2
PACA	Pacayal	1.39	106	P	Pn	06 51 47.6	-0.1
LCND	La Caada	1.84	107	P	Pb	06 51 54.9	-0.9
TGUH	Tegucigalpa,Un	2.35	85	Pn	Sb	06 52 35.2	+1.2

IDC 02 07:01:38.7±1.6, 10°.92S×73°.88W, h129km±20km, mb3.1/4, mbtmp3.8/9, Error ellipse: s-maj=22.3km s-min=15.0km az=29.0

NEIC 02 07:01:39.7±0.6, 10°.9S±0°.1×73°.88W±0°.07, h123km±10km, mb4.1/13, Error ellipse: s-maj=17.9km s-min=8.4km az=158.0

ISC 02 07:01:37.5±0.6, 10°.79S±0°.07×73°.81W±0°.07, h105km, n34, σ1s.52/38, mb4.0/8, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	3.21	248	P	Pn	07 02 26.9	+0.8
	171nm,0.3s,baz=80,slow=9.0,SNR=181						
NNA				S	Sn	07 03 03.8	+0.1
	314nm,0.4s,baz=332,slow=22,SNR=17						
NNA	Nana	3.21	248		Pn	07 02 26.8	+0.6
NNA				Sn	Sn	07 03 02.7	-1.0
ATAH	Atahualpa	5.81	308	P	Pn	07 03 02.5	+0.9
	12nm,0.4s,baz=120,slow=9.0,SNR=18						
ATAH				S	Sn	07 04 10.3	+3.1
	28nm,0.5s,baz=7.6,slow=18,SNR=3.6						
LPAZ	La Paz	7.77	135	P	Pn	07 03 29.8	+1.4
	3.3nm,0.5s,baz=323,slow=4.9,SNR=22						
LPAZ	La Paz	7.77	135		Pn	07 03 30.6	+2.2
PB18	Visviri	7.95	149	Pn	Pn	07 03 31.9	+1.1
PB16	IPOC Station P	8.58	151	Pn	Pn	07 03 41.1	+1.8
SLOR	San Lorenzo -	11.03	335	Pn	Pn	07 04 15.2	+2.6
OTAV	Otavalo	11.89	337	Pn	P	07 04 28.4	-4.3
SIV	San Ignacio	13.42	114	P	Pn	07 04 44.1	+0.3
	1.4nm,0.6s,baz=308,slow=11,SNR=9.4						
VILB	Vilhena	13.49	101	Pn	Pn	07 04 45.5	+0.8
PTLB	Pontes e Lacer	15.02	110		Pn	07 05 05.3	+1.1
MACA	Manacapuru-AM	15.06	61	Pn	Pn	07 05 03.5	-1.4
MACA				IAmb	IAmb	07 05 34.4	
	comp=Z,9.8nm,0.6s						
PTBC	PUERTO BERRIO,	17.23	358	P	Pn	07 05 33.7	+2.0
BARC	Barichara	17.28	2	P	Pn	07 05 36.3	+3.7
PAMC	Pamplona, Colo	18.05	4	P	Pn	07 05 42.7	+0.7
BOAV	Boa Vista	18.61	46	P	Pn	07 05 48.3	-0.1
BOAV				IAmb	IAmb	07 05 49.1	
	comp=Z,14nm,1.5s						
SDV	Santo Domingo	19.80	9	P	P	07 06 01.0	+1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,2.2nm,0.4s,baz=200,slow=3.8,SNR=7.8						
SDV	Santo Domingo	19.80	9	P	Pn	07 06 01.6	-0.8
MTO3	Montecristo	29.40	328	P	P	07 07 29.5	-1.9
TXAR	Lajitas Array	49.20	325	P	P	07 10 14.7	-0.7
	comp=Z,0.5nm,0.5s,baz=153,slow=8.8,SNR=7.3						
	comp=Z,0.5nm,0.5s						
TXAR	Lajitas Array	49.20	325	P	P	07 10 15.4	0.0
TX31	Lajitas Ar. Si	49.20	325	P	P	07 10 15.5	+0.1
SDCO	Great Sand Dun	56.68	330	P	P	07 11 10.8	+0.4
SDCO				IAmb	IAmb	07 11 52.5	
	comp=Z,1.3nm,1.1s						
PV01	Paradox Valley	58.52	328	P	P	07 11 23.9	+0.6
PV01				IAmb	IAmb	07 11 24.0	
	comp=Z,3.3nm,1.2s						
RDMU	Red Mountain	60.87	329	P	P	07 11 39.5	+0.2
BSUT	Blindstream Ca	61.45	329	P	P	07 11 43.5	+0.2
BSUT				IAmb	IAmb	07 11 46.6	
	comp=Z,2.9nm,1.1s						
PDAR	Pinedale Array	62.53	331	P	P	07 11 49.4	-1.0
	comp=Z,0.2nm,0.4s,baz=144,slow=7.2,SNR=4.5						
	comp=Z,0.2nm,0.4s						
PDAR	Pinedale Array	62.53	331	P	P	07 11 50.2	-0.2
HWUT	Hardware Ranch	62.65	329	P	P	07 11 50.8	-0.4
HWUT				IAmb	IAmb	07 11 51.5	
	comp=Z,1.9nm,0.7s						
NVAR	Mina Array Bea	64.20	322	P	P	07 12 01.0	-0.5
	comp=Z,0.3nm,0.5s,baz=140,slow=3.8,SNR=2.4						
	comp=Z,0.3nm,0.5s						
TORD	Torodi Ar. Bea	78.61	74	P	P	07 13 27.1	-1.3
	comp=Z,0.4nm,0.7s,baz=232,slow=4.5,SNR=2.4						
TORD				pP	pP	07 13 56.2	+0.9
	comp=Z,0.7nm,0.7s,baz=259,slow=8.1,SNR=4.3						
	comp=Z,0.4nm,0.7s						
L29M	L29M	88.40	336	P	P	07 14 18.0	+0.5
G31M	Satah River	88.86	340	P	P	07 14 19.6	+0.2
G31M				IAmb	IAmb	07 14 34.1	
	comp=Z,2.9nm,1.4s						

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*ISK **02** 07:30:10.0, 38°.25N×38°.83E, h6km, ML3.5/24*
*AFAD **02** 07:30:10.6, 38°.27N×38°.83E, h7km±1km, MW3.6*
ISC 02 07:30:10.6±1.0**, 38°.27N**±0°.02×**38°.82E**±0°.02**, h5**km±9km**, n43,** σ0.**81**/60**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MDYL	Doganyol-Malat	0.18	75	Pg	Pg	07 30 14.1	-0.1
MDYL				Sg	Sg	07 30 16.9	+0.3
ESGZ	Sivrice-Elazig	0.25	50	Pg	Pg	07 30 15.4	-0.2
ESGZ				Sg	Sg	07 30 19.6	+0.7
MAYA	Malatya/Merkez	0.32	281	P	Pg	07 30 17.2	+0.4
MAYA				S	Sb	07 30 22.5	-1.8
CNGT	ngs	0.38	98	P	Pg	07 30 17.5	-0.6
CNGT				S	Sg	07 30 23.7	+0.6
NARI	Adyaman-Kaht	0.39	187	P	Pg	07 30 18.5	+0.4
NARI				S	Sb	07 30 24.4	-1.8
SVRC	Sivrice-ELAZID	0.40	74	Pg	Pg	07 30 17.9	-0.5
SVRC				Sg	Sg	07 30 24.6	+0.9
ESIJ	Sivrice-Elazig	0.43	65	Pg	Pg	07 30 18.9	0.0
ESIJ				Sg	Sb	07 30 25.9	-1.6
KAHTU	Kahta	0.49	200	P	Pb	07 30 20.6	-1.2
KAHTU				S	Sb	07 30 28.0	-1.2
ELZ	Elazig	0.52	36	S	Sg	07 30 28.2	+0.8
AZEY	Adyaman-Merk	0.64	225	P	Pb	07 30 23.5	-0.8
AZEY				S	Sb	07 30 33.5	-0.1
MDNT	Maden	0.69	79	P	Pg	07 30 23.7	-0.2
MDNT				S	Sg	07 30 33.5	+0.6
AKCD	Akcadag	0.71	273	P	Pg	07 30 24.4	+0.2
AKCD				S	Sb	07 30 35.0	-0.5
MCKZ	Bingol	0.86	8	P	Pg	07 30 26.4	-0.8
MCKZ				S	Sg	07 30 38.2	-0.1
KOVA	Elazig, Kovanc	0.89	60	P	Pg	07 30 27.4	-0.4
KOVA				S	Sn	07 30 43.2	-0.1
ARPR	Arapgir-MALATY	0.91	335	Pg	Pg	07 30 28.2	+0.1
ARPR				Sg	Sb	07 30 41.9	+0.6
HEKM	Malatya_Hekimh	0.91	312	P	Pg	07 30 27.9	-0.2
HEKM				S	Sb	07 30 41.3	-0.2
DIYA	Diyarbakir	1.08	108	P	Pn	07 30 34.1	+1.6
DIYA				S	Sn	07 30 50.1	+2.3
DYBB	Diyarbakir	1.09	106	Pg	Pg	07 30 31.2	-0.3
ILIC	ilic-Erzincan	1.20	351	Pn	Pg	07 30 32.9	-0.7
MDIV		1.21	330	P	Pn	07 30 34.1	-0.2
MDIV				S	Sb	07 30 50.4	+0.3
ERZN	Erzincan	1.49	28	Pn	Pn	07 30 37.3	-0.9
KHMN	Narli-Kahraman	1.58	237	Pn	Pn	07 30 38.9	-0.4
BNGB	Bingl	1.63	63	Pn	Pn	07 30 39.8	-0.2
GAZ	Gaziantep	1.68	230	Pn	Pn	07 30 40.6	-0.1
KMRS	Kahramanmaras	1.70	244	Pn	Pn	07 30 41.1	+0.2
YEDI	Yedisu-Bingol	1.78	49	Pn	Pn	07 30 42.3	+0.1
SVAN	Silvan-Diyarba	1.88	93	Pn	Pn	07 30 43.3	-0.1
SARI	SarD1z-Kayseri	1.89	275	Pn	Pn	07 30 43.9	+0.2
SVSK	Karacayir	2.17	320	Pn	Pn	07 30 47.9	+0.5
VRTB	Varto-Mus	2.25	66	Pn	Pn	07 30 49.3	+0.7
BAYT	Aydıntepe-Bayb	2.36	25	Pn	Pn	07 30 50.7	+0.6
BNN	Bunyan	2.40	285	Pn	Pn	07 30 50.9	+0.2
KOZT	Kozan	2.50	253	Pn	Pn	07 30 52.3	+0.5
GURO	Guroymak-BITLI	2.54	83	Pn	Pn	07 30 52.8	+0.2
TOKT	Tokat	2.71	320	Pn	Pn	07 30 55.9	+1.1
CHOM	Cayeli-Rize	3.20	27	Pn	Pn	07 31 02.9	+1.4
AKDM	Akdamar-Van	3.27	88	Pn	Pn	07 31 03.5	+0.8
AGRB	Hanur-Agry	3.51	67	Pn	Pn	07 31 06.7	+0.8
BEIL	Beino	4.28	211	eP	Pn	07 31 17.6	+1.2
FKH	Fakeheh	4.46	207	eP	Pn	07 31 19.9	+1.0
HWQ	Hawqa	4.61	211	eP	Pn	07 31 21.9	+0.9
RCY	Rachaya	5.34	208	eP	Pn	07 31 31.9	+0.8
QRWL	Qaraoun	5.35	209	eP	Pn	07 31 30.6	-0.6

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*IDC **02** 07:49:14.4±1.1, 27°.30N×66°.85E, h0km, mb3.8/9, mbtmp3.8/10, ML3.5/1, MS3.2/9, Error ellipse: s-maj=26.8km s-min=23.1km az=48.0*
ISC 02 07:49:18.8±1.0**, 27°.3N**±0°.2×**66°.6E**±0°.1**, h35**km**, n23,** σ1.**76**/19**, mb3.5**/9**, MS3.2**/8**, Pakistan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BANOM	Banah	9.35	264	P	Pn	07 51 31.8	+0.7
SHME	Shamm	9.47	265	P	Pn	07 51 34.4	+1.7
MDH	Madha	9.48	260	P	Pn	07 51 33.3	+0.4
MSFE	Esma-Masafi	9.59	261	P	Pn	07 51 35.9	+1.5
SOHO	SOHO	9.63	253	P	Pn	07 51 33.6	-1.3
HATD	Hatta, Dubai	9.76	258	P	Pn	07 51 36.8	+0.2
ASHO	Ashiyiah	9.86	257	P	Pn	07 51 39.2	+1.1
ASHO				S	Sn	07 53 23.4	-4.2
AAK	Ala-Archa	16.63	21	Pn	Pn	07 53 06.5	-2.8
	0.2nm,0.3s,baz=167,slow=14,SNR=4.5						
AAK				LR	LR	08 00 24.8	
	comp=Z,58nm,20.3s,baz=62,slow=41						
	1.0nm,0.4s						
MKAR	Makanchi Array	23.08	28	P	P	07 54 19.4	-2.0
	1.1nm,0.7s,baz=210,slow=9.5,SNR=8.0						
	1.1nm,0.7s						
AKTO	Aktyubinsk	24.07	346	LR	LR	08 05 08.1	
	comp=Z,93nm,18.4s,baz=14,slow=40						
KURBB	Kurchatov Arra	25.04	18	P	P	07 54 39.1	-0.4
	0.8nm,0.7s,baz=212,slow=8.7,SNR=2.0						
KURBB				LR	LR	08 06 26.9	
	comp=Z,86nm,19.4s,baz=160,slow=41						
KBZ	Khabaz	25.25	317	P	P	07 54 43.5	+2.1
	0.9nm,0.6s,baz=120,slow=4.1,SNR=4.5						
	0.9nm,0.6s						
BVAR	Borovoye Array	25.89	5	P	P	07 54 48.5	+1.2
	2.1nm,0.6s,baz=171,slow=10,SNR=10						
BVAR				LR	LR	08 05 07.0	
	comp=Z,38nm,20.4s,baz=232,slow=37						
	2.1nm,0.6s						
ASF	Jabal al Asfar	26.25	288	LR	LR	08 07 18.3	
	comp=Z,36nm,18.1s,baz=27,slow=41						
EIL	Elat	27.92	282	LR	LR	08 08 02.2	
	comp=Z,59nm,22.0s,baz=68,slow=40						
CMAR	Chiang Mai Arr	30.95	100	LR	LR	08 10 07.2	
	comp=Z,14nm,21.1s,baz=350,slow=41						
SONM	Songino Array	37.09	46	P	P	07 56 24.8	-1.0
	0.6nm,0.4s,baz=263,slow=2.3,SNR=2.2						
	0.6nm,0.4s						
FINES	FINESS Array B	43.58	333	P	P	07 57 19.6	+0.5
	2.7nm,1.0s,baz=94,slow=8.4,SNR=1.5						
FINES				LR	LR	08 17 33.7	
	comp=Z,40nm,19.8s,baz=94,slow=39						
	2.7nm,1.0s						
HFS	Hagfors	48.48	328	P	P	07 57 59.1	+1.3
	1.8nm,0.7s,baz=108,slow=8.0,SNR=4.2						
	1.8nm,0.7s						
ARCES	ARCESS Array B	48.53	342	LR	LR	08 19 37.7	
	comp=Z,61nm,18.8s,baz=296,slow=38						
TORD	Torodi Ar. Bea	61.95	271	P	P	07 59 36.9	+1.3
	0.3nm,0.4s,baz=72,slow=4.6,SNR=3.2						
	0.3nm,0.4s						
WRA	Warramunga Arr	80.60	118	P	P	08 01 28.3	+0.2
	0.3nm,0.7s,baz=314,slow=4.6,SNR=5.4						
	0.3nm,0.7s						
ASAR	Alice Springs	82.32	121	P	P	08 01 38.2	+1.0
	0.2nm,0.5s,baz=309,slow=5.3,SNR=5.1						
	0.2nm,0.5s						

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*ASRS **02** 07:50:14.0±1.3, 53°.85N×88°.23E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 02 07:50:11.8±5.2**, 53°.84N**×**88°.48E, h0**km**, mbtmp2.6**/2**, ML2.3**/3**, Error ellipse: s-maj=57.6km s-min=26.5km az=69.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	2.17	274	I	I	08 07 30.0	
	baz=92,slow=333,SNR=6.0						
ZALV	Zalesovo Beam	2.17	274	Pn	Pn	07 50 49.4	+0.2
	1.5nm,0.3s,baz=91,slow=14,SNR=27						
ZALV				Sn	Sn	07 51 16.7	0.0
	2.5nm,0.3s,baz=92,slow=23,SNR=26						
	5.1nm,0.5s						
KURBB	Kurchatov Arra	6.91	246	Pn	Pn	07 51 54.1	-0.1
	0.1nm,0.3s,baz=60,slow=18,SNR=1.2						
MKAR	Makanchi Array	8.09	212	Pn	Pn	07 52 11.8	+1.4
	0.1nm,0.3s,baz=30,slow=13,SNR=5.9						
	0.2nm,0.5s						

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*ASRS **02** 08:04:33.0±1.0, 54°.59N×83°.31E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 02 08:04:33.2±3.8**, 54°.67N**×**83°.37E, h0**km**, mbtmp2.3**/1**, Error ellipse: s-maj=27.5km s-min=14.2km az=149.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.11	130	I	I	08 10 55.0	
	0.1nm,0.7s,baz=312,slow=325,SNR=5.2						
ZALV	Zalesovo Beam	1.11	130	Pg	Pg	08 04 54.5	0.0
	1.0nm,0.3s,baz=312,slow=16,SNR=10						
ZALV				Lg	Lg	08 05 10.2	
	1.0nm,0.3s,baz=313,slow=27,SNR=13						
MKAR	Makanchi Array	7.92	185	Pn	Pn	08 06 30.2	+0.7
	0.1nm,0.5s,baz=10,slow=13,SNR=1.4						
MKAR				Sn	Sn	08 07 57.0	-2.7
	0.1nm,0.3s,baz=345,slow=27,SNR=5.1						

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*TRN **02** 08:13:23.9, 10°.88N×62°.26W, h94km, MD3.3, North of the Paria peninsula.*
*FUNV **02** 08:13:26.0, 10°.91N×62°.28W, h24km, MW3.5, Presumed earthquake*
ISC 02 08:13:22.0±1.9**, 10°.84N**±0°.06×**62°.20W**±0°.08**, h116**km±17km**, n19,** σ1.**35**/33**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DMDM	Guralp CMG5TDE	0.66	102	eP	Pn	08 13 41.5	+0.9
DMDM				eS	Sn	08 13 53.2	-1.4
PSMG	Mucurapo Girls	0.68	104	eS	Sn	08 13 53.7	-1.2
TRN	Trinidad (W)	0.81	104	eP	Pn	08 13 42.8	+0.9
TRN				eS	Sn	08 13 55.4	-1.5
TRN	Trinidad (W)	0.81	104	eP	Pn	08 13 43.3	+1.5
TRN				eS	Sn	08 13 56.3	-0.5
TPP	Pointe-a-Pierr	0.90	125	x	Sn	08 13 59.3	+0.9
GRFF	Grenada Fort F	1.28	21	eP	Pn	08 13 46.6	-0.1
GRFF				eS	Sn	08 14 03.5	-2.0
GRGR	Grenville	1.39	23	eP	Pn	08 13 48.8	+0.8
GRGR				eS	Sn	08 14 07.0	-0.6
GRGR	Grenville	1.39	23	eP	Pn	08 13 48.7	+0.7
GRGR				eS	Sn	08 14 06.8	-0.9
GRW	Mount Saint Ca	1.42	22	eP	Pn	08 13 48.6	+0.3
GRW				eS	Sn	08 14 07.7	-0.6
GRSS	Sisters	1.56	22	eP	Pn	08 13 51.0	+1.1
GRSS				eS	Sn	08 14 10.2	-0.9
GCMP	Grenada, Carri	1.80	25	eP	Pn	08 13 53.8	+1.0
GCMP				eS	Sn	08 14 15.2	-1.1
PCRV	Puerto La Cruz	2.48	255	eP	Pn	08 14 03.6	+2.1
PCRV				eS	Sn	08 14 31.2	-0.5
PCRV	Puerto La Cruz	2.48	255	eS	Sn	08 14 30.5	-1.2
SVB	Belmont	2.59	21	eP	Pn	08 14 04.5	+1.6
SVB				eS	Sn	08 14 34.4	+0.1
SLBI	Saint Lucia, B	3.38	21	eP	Pn	08 14 14.7	+1.4
SLBI				eS	Sn	08 14 51.1	-1.8
BIM	Bigot	3.82	17	eP	Pn	08 14 19.4	+0.3
BIM				eS	Sn	08 15 02.3	-1.0
TACV	Tcata	4.80	262	eP	Pn	08 14 34.1	+1.9
CACV	CAICARA DEL OR	5.38	233	eP	Pn	08 14 37.9	-2.1
CACV				eS	Sn	08 15 30.6	-10
BENV	Beln	5.38	261	eP	Pn	08 14 42.3	+2.1
BENV				eS	Sn	08 15 39.1	-1.9

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*IDC **02** 08:19:39.3±0.9, 18°.88S×169°.60E, h0km, mb4.4/9, mbtmp4.5/11, ML3.8/2, MS4.2/43, Error ellipse: s-maj=27.3km s-min=19.2km az=148.0*
*NEIC **02** 08:19:41.7±1.4, 18°.80S±0°.06×169°.41E±0°.09, h10km±1km, mb4.8/21, Error ellipse: s-maj=14.4km s-min=10.7km az=93.0*
*NOU **02** 08:19:43.1, 18°.76S×169°.35E, h20km, MLv4.9/16, Vanuatu Islands*
*GCMT **02** 08:19:43.7±0.2, 18°.64S±0°.01×169°.54E±0°.01, h12km, MW5.1/132, Moment Tensor Solution. s65,c90; s132,c209; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.58±.11; $M_{\theta\theta}$-0.83±.11; $M_{\phi\phi}$2.41±.11; $M_{r\theta}$2.02±.32; $M_{\theta\phi}$-5.19±.11; $M_{\phi r}$-0.16±.25; Best double couple: $M_0$5.87800×10^{16} NP1:ϕ_s187.00000°,δ67.00000°, λ-10.00000°. NP2:ϕ_s281.00000°,δ81.00000°, λ-156.00000°. Principal axes: T 6.4520, Plg10.0000°, Azm52.0000°; N -1.1470, Plg65.0000°, Azm301.0000°; P -5.3040, Plg23.0000°, Azm146.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 02 08:19:42.2±0.4**, 18°.76S**±0°.03×**169°.42E**±0°.06**, h10**km**, n121,** σ1.**77**/82**, mb4.8**/26**, MS4.3**/43**, 1C-3D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
INH	Isangel	0.80	190	P	Pg	08 19 59.2	+1.6
INH				S	Sg	08 20 09.5	+1.5
INH	Isangel	0.80	190	S	Sg	08 20 09.5	+1.5
RTV	Rentapao	1.35	315	P	Pn	08 20 04.6	-2.4
RTV				S	Sb	08 20 24.1	-0.7
RTV	Rentapao	1.35	315	S	Sb	08 20 24.1	-0.7
DVP	Devils Point	1.56	311	P	Pn	08 20 07.8	-2.1
DVP				S	Sn	08 20 29.6	-0.6
DVP	Devils Point	1.56	311	S	Sn	08 20 29.6	-0.6
MARNC	Mare, Loyalty	3.01	205	P	Pn	08 20 28.5	-1.4
MARNC				S	Sn	08 21 04.9	-1.1
MARNC	Mare, Loyalty	3.01	205	S	Sn	08 21 04.9	-1.1
MARNC	Mare, Loyalty	3.01	205		Pn	08 20 28.2	-1.7
SANVU	Saraoutou	3.91	327	P	Pn	08 20 42.2	-0.2
SANVU	Saraoutou	3.91	327		Pn	08 20 42.6	+0.2
DZM	Mont Dzumac	4.32	220	Pn	Pn	08 20 47.5	-0.5
	7.6nm,0.3s,baz=91,slow=7.9,SNR=202						
DZM				Sn	Sn	08 21 38.9	+0.4
	19nm,0.3s,baz=291,slow=22,SNR=7.6						
DZM				LR	LR	08 22 18.3	
	comp=Z,8μm,19.4s,baz=56,slow=37						
	33nm,0.4s						
DZM	Mont Dzumac	4.32	220	P	Pn	08 20 47.7	-0.3
OUENC	Ouen Island, N	4.37	213	P	Pn	08 20 48.5	-0.1
OUENC	Ouen Island, N	4.37	213	Pn	Pn	08 20 48.5	-0.1
ONTNC	Ouen Toro	4.50	218	P	Pn	08 20 50.4	0.0
ONTNC	Ouen Toro	4.50	218		Pn	08 20 50.2	-0.1
KOUNC	Koumac, New Ca	5.16	249	P	Pn	08 20 58.7	-0.8
MSVF	Nonsavu	8.26	84		Pn	08 21 42.8	+0.5
HNR	Honiara	13.04	314	LR	LR	08 27 13.6	
	comp=Z,60nm,21.9s,baz=234,slow=34						
RAO	Raoul Island	15.57	134	LR	LR	08 27 55.7	
	comp=Z,1μm,18.5s,baz=236,slow=32						
EIDS	Eidsvold	18.22	246		Pn	08 23 52.9	-2.3
AFI	Afiamalu	18.67	78	P	P	08 23 57.0	-3.6
	0.2nm,0.3s,baz=286,slow=19,SNR=5.7						
AFI				LR	LR	08 29 39.6	
	comp=Z,1μm,21.3s,baz=247,slow=32						
	66nm,1.1s						
ARMA	Armidale	19.88	231	P	P	08 24 12.7	-1.1
URZ	Urewera	20.56	163	P	P	08 24 17.7	-3.3
	4.3nm,0.8s,baz=349,slow=4.6,SNR=8.6						
URZ				LR	LR	08 30 40.8	
	comp=Z,1μm,21.3s,baz=338,slow=32						
	4.3nm,0.8s						
CTA	Charters Tower	21.89	263	LR	LR	08 31 58.8	
	comp=Z,526nm,20.4s,baz=72,slow=34						
CTAO	Charters Tower	21.89	263	P	P	08 24 35.4	-0.2
PMG	Port Moresby	23.48	290		P	08 24 51.1	-1.1
PMG				IAmb	IAmb	08 25 01.9	
	comp=Z,26nm,1.1s						
COEN	Coen	25.62	277	P	P	08 25 11.1	-1.0
COEN				IAmb	IAmb	08 25 19.9	
	comp=Z,19nm,1.1s						
STKA	Stephens Creek	28.25	237	P	P	08 25 35.9	+0.3
	comp=Z,3.9nm,0.6s,baz=67,slow=12,SNR=8.3						
STKA				LR	LR	08 36 12.9	
	comp=Z,949nm,20.8s,baz=64,slow=35						
	comp=Z,3.9nm,0.6s						
STKA	Stephens Creek	28.25	237	P	P	08 25 34.0	-1.6
WR8	Warramunga Arr	32.93	262	P	P	08 26 15.3	-1.8
BBOO	Buckleboo	32.98	238	P	P	08 26 16.6	-0.8
WB0	Warramunga Arr	33.05	262	P	P	08 26 16.4	-1.8
WB0				IAmb	IAmb	08 26 26.1	
	comp=Z,20nm,1.4s						
WRA	Warramunga Arr	33.09	262	P	P	08 26 16.6	-1.9
	comp=Z,3.6nm,1.0s,baz=88,slow=8.5,SNR=12						
	comp=Z,3.6nm,1.0s						
WRA	Warramunga Arr	33.09	262	P	P	08 26 17.6	-0.9
ASAR	Alice Springs	33.41	255	P	P	08 26 20.1	-1.3
	comp=Z,12nm,0.8s,baz=84,slow=8.6,SNR=90						
	comp=Z,12nm,0.8s						
MTN	Manton Dam	37.25	273	P	P	08 26 52.9	-1.5
MTN				IAmb	IAmb	08 26 56.3	
	comp=Z,20nm,1.1s						
KNRA	Kununurra	38.90	268	P	P	08 27 07.8	-0.4
KNRA				IAmb	IAmb	08 27 17.4	
	comp=Z,29nm,1.1s						
GUMO	Guam	40.23	321	LR	LR	08 41 35.9	
	comp=Z,700nm,21.5s,baz=140,slow=33						
SIJI	Sorong	41.42	291	P	P	08 27 29.9	+0.6
	comp=Z,5.9nm,0.5s,baz=114,slow=7.2,SNR=5.9						
SIJI				LR	LR	08 45 44.3	
	comp=Z,385nm,19.8s,baz=39,slow=38						
	comp=Z,5.9nm,0.5s						
FITZ	Fitzroy Crossi	41.46	264	P	P	08 27 29.5	-0.1
	comp=Z,21nm,0.9s,baz=132,slow=8.0,SNR=10						
FITZ				LR	LR	08 43 56.4	
	comp=Z,652nm,19.5s,baz=96,slow=35						
	comp=Z,21nm,0.9s						
BATI	Baumata	45.00	274	LR	LR	08 47 16.0	
	comp=Z,371nm,18.2s,baz=141,slow=37						
PSA00	Pilbara Seismi	46.47	258	P	P	08 28 07.6	-2.1
PSA00	Pilbara Seismi	46.47	258	P	P	08 28 07.6	-2.1
PSA00				IAmb	IAmb	08 28 16.2	
	comp=Z,8.6nm,0.9s						
DAV	Davao City (W)	50.27	297	LR	LR	08 50 23.1	
	comp=Z,103nm,18.5s,baz=130,slow=36						
JHJ	Hachijo jima 2	58.84	331	LR	LR	08 52 28.0	
	comp=Z,86nm,21.5s,baz=234,slow=33						
VNDA	Vanda	58.92	182	LR	LR	08 52 36.0	
	comp=Z,221nm,18.0s,baz=14,slow=34						
LEM	Lembang	61.16	272	LR	LR	08 56 09.3	
	comp=Z,198nm,21.6s,baz=160,slow=36						
MJAR	Matsushiro Arr	62.41	332	LR	LR	08 54 55.1	
	comp=Z,100nm,21.7s,baz=152,slow=34						
JNU	Nakatsue	63.38	324	LR	LR	08 53 38.4	
	comp=Z,61nm,21.4s,baz=116,slow=32						
JKA	Kamikawa-asahi	67.21	339	P	P	08 30 34.7	-1.8
KSRS	Korea Array	68.21	325	LR	LR	08 59 54.8	
	comp=Z,60nm,18.6s,baz=145,slow=35						
QIZ	Qiongzhong	69.49	299	P	P	08 30 51.8	+0.5
QIZ				S	S	08 40 02.6	+3.3
QIZ				LR	LR		
	comp=N,120nm,15.6s						
QIZ				LR	LR		
	comp=E,99nm,15.6s						
QIZ				LR	LR		
	comp=Z,130nm,17.2s						
NJ2	Nanjing	69.98	316	eP	P	08 30 55.8	+1.7
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
QSPA	South Pole Qui	71.29	180	LR	LR	08 58 52.7	
	comp=Z,184nm,19.8s,baz=32,slow=33						
QSPA	South Pole Qui	71.29	180	P	P	08 31 00.2	-1.6
QSPA				IAmb	IAmb	08 31 03.3	
	comp=Z,16nm,1.2s						
SHEM	Shemya Is, Ala	71.30	3	LR	LR	08 56 01.3	
	comp=Z,194nm,21.1s,baz=88,slow=31						
PETK	Petropavlovsk-	72.28	353	LR	LR	08 57 26.2	
	comp=Z,179nm,20.1s,baz=163,slow=31						
RPN	Rapa Nui	74.13	114	LR	LR	08 57 46.8	
	comp=Z,65nm,19.4s,baz=232,slow=31						
BNX	BinXian	74.64	331	⇑P	P	08 31 26.4	+4.8
BNX				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KLR	Kul'dur	75.50	336	LR	LR	09 01 35.2	
	comp=Z,80nm,21.5s,baz=154,slow=33						
XAN	Xi'an	77.91	312	eP	P	08 31 45.6	+5.0
XAN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
CMAR	Chiang Mai Arr	78.46	294	P	P	08 31 44.9	+1.0
	comp=Z,0.9nm,0.3s,baz=126,slow=4.0,SNR=6.7						
	comp=Z,0.9nm,0.3s						
MAW	Mawson	78.94	202	LR	LR	09 02 01.7	
	comp=Z,420nm,21.3s,baz=95,slow=32						
PZH	PanZhiHua	79.59	303	P	P	08 31 51.7	+1.6
HHC	Hu-ho-hao-te	79.97	319	eP	P	08 31 53.8	+2.0
HHC				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,120nm,5.5s						
HHC				LR	LR		
	comp=N,290nm,21.8s						
HHC				LR	LR		
	comp=E,170nm,20.8s						
HHC				LR	LR		
	comp=Z,120nm,22.7s						
KDAK	Kodiak Island	82.52	19	LR	LR	09 05 13.8	
	comp=Z,241nm,18.6s,baz=205,slow=33						
BELA	Belgrano 2	82.56	175	P	P	08 32 04.0	-0.9
BELA				IAmb	IAmb	08 32 30.6	
	comp=Z,5.6nm,1.1s						
J16K	Anvik River	85.07	13	P	P	08 32 17.3	-0.4
J16K				IAmb	IAmb	08 32 25.6	
	comp=Z,6.2nm,0.9s						
K17K	Iditarod	85.09	14	P	P	08 32 17.4	-0.4
K17K				IAmb	IAmb	08 32 25.0	
	comp=Z,13nm,1.3s						
YAK	Yakutsk	86.47	342	LR	LR	09 10 18.4	
	comp=Z,88nm,18.2s,baz=111,slow=35						
G16K	Koyuk River	86.60	11	P	P	08 32 24.6	-0.6
G16K				IAmb	IAmb	08 32 32.9	
	comp=Z,5.2nm,1.2s						
YBH	Yreka Blue Hor	86.83	44	LR	LR	09 03 16.2	
	comp=Z,25nm,20.3s,baz=257,slow=30						
SONM	Songino Array	86.94	323	P	P	08 32 27.8	+0.2
	comp=Z,0.6nm,0.6s,baz=134,slow=4.2,SNR=4.6						
SONM				LR	LR	09 08 46.7	
	comp=Z,60nm,21.7s,baz=35,slow=34						
	comp=Z,0.6nm,0.6s						
GTA2	Gaotai	86.99	313	eP	P	08 32 28.3	+0.3
GTA2				pP	sP	08 32 33.1	+0.8
GTA2				pmax	pmax		
	comp=Z,2.0nm,1.0s						
PMSA	Palmer Station	87.30	160	LR	LR	09 08 11.2	
	comp=Z,102nm,18.9s,baz=241,slow=33						
PFO	Pinyon Flats O	87.69	53	LR	LR	09 02 45.6	
	comp=Z,238nm,21.6s,baz=254,slow=30						
NVAR	Mina Array Bea	88.35	48	LR	LR	09 03 47.6	
	comp=Z,402nm,20.9s,baz=272,slow=30						
BBB	Bella Bella	88.98	33	LR	LR	09 09 46.5	
	comp=Z,147nm,18.1s,baz=202,slow=34						
TROLL	Troll, Antarti	89.03	184	P	P	08 32 27.3	-10
LPIG	La Paz	89.05	64	LR	LR	09 02 54.3	
	comp=Z,411nm,21.8s,baz=215,slow=29						
SNAA	Sanae	89.65	182	⇓P	P	08 32 35.8	-4.3
	comp=Z,105nm,0.9s						
SNAA	Sanae	89.65	182	LR	LR	09 11 16.1	
	comp=Z,141nm,18.6s,baz=186,slow=35						
ILAR	Eielson Array	89.72	17	P	P	08 32 38.9	-1.3
	comp=Z,0.8nm,1.0s,baz=249,slow=5.0,SNR=6.5						
ILAR				LR	LR	09 06 09.0	
	comp=Z,242nm,20.4s,baz=228,slow=31						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,0.8nm,1.0s						
VNA3	Neumayer Olymp	90.23	180	⇓P	P	08 32 41.4	-1.3
	comp=Z,8.6nm,0.7s						
TLY	Talaya	90.46	325	LR	LR	09 13 53.1	
	comp=Z,54nm,19.1s,baz=115,slow=36						
VNA2	Neumayer--Watz	90.53	181	⇓P	P	08 32 52.0	+7.9
	comp=Z,11nm,0.3s,baz=188,slow=2.1						
PALK	Pallekele	91.10	277	LR	LR	09 15 50.5	
	comp=Z,161nm,19.6s,baz=111,slow=37						
DLBC	Dease Lake	91.54	27	LR	LR	09 05 10.6	
	comp=Z,203nm,21.6s,baz=260,slow=30						
NEW	Newport	93.30	40	LR	LR	09 11 22.1	
	comp=Z,116nm,18.1s,baz=249,slow=33						
ANMO	Albuquerque	95.89	55	LR	LR	09 09 21.5	
	comp=Z,155nm,20.0s,baz=250,slow=31						
INK	Inuvik	96.03	18	LR	LR	09 13 32.1	
	comp=Z,136nm,18.4s,baz=12,slow=34						
PDAR	Pinedale Array	96.16	47	LR	LR	09 11 16.7	
	comp=Z,88nm,19.1s,baz=248,slow=32						
TXAR	Lajitas Array	96.39	61	LR	LR	09 09 14.8	
	comp=Z,298nm,19.3s,baz=261,slow=31						
WMQ	Urumqi	97.00	314	eP	P	08 33 15.2	+0.9
WMQ				LR	LR		
	comp=Z,140nm,23.8s						
RLMT	Red Lodge	97.15	45	P	P	08 33 13.8	-1.4
PLCA	Paso Flores	98.78	138	LR	LR	09 11 58.6	
	comp=Z,56nm,18.1s,baz=226,slow=32						
YKA	Yellowknife Ar	100.16	27	P	Pdif	08 33 26.4	-1.5
	comp=Z,0.1nm,0.6s,baz=261,slow=4.8,SNR=4.6						
MKAR	Makanchi Array	101.52	316	P	Pdif	08 33 33.7	-0.6
	comp=Z,0.1nm,0.4s,baz=116,slow=3.4,SNR=1.4						
MODS	Modra-Piesok	142.82	329	ePKP	PKiKP	08 39 19.5	+0.4
RONA	Rosalia, Austr	143.76	329	ePKiKP	PKPdf	08 39 20.7	+3.0
	comp=Z,9.2nm,1.3s						
CONA	Conrad Observa	143.82	330	i PKiKP	PKPdf	08 39 20.8	+3.1
	comp=Z,12nm,1.2s						
GERES	GERESS Array B	144.15	332	PKP	PKPab	08 39 17.4	+1.4
	comp=Z,2.3nm,1.0s,baz=51,slow=0.9,SNR=7.3						
ARSA	Arzberg	144.45	329	i pPKP	PKPdf	08 39 21.6	+2.7
	comp=Z,11nm,1.4s						
GRF	Grafenberg Arr	144.53	335	ePKP	PKPdf	08 39 21.7	+2.8
	comp=Z,16nm,1.1s,baz=38,slow=3.1						
MOA	Molln	144.63	331	i PKiKP	PKPdf	08 39 22.2	+3.1
	comp=Z,13nm,1.1s						
BIOA	Bad Ischl, Aus	145.03	331	i PKiKP	PKiKP	08 39 23.2	-0.5
	comp=Z,10nm,1.1s						
SOKA	Soboth	145.09	329	i PKiKP	PKPdf	08 39 23.4	+3.4
	comp=Z,26nm,1.3s						
OBKA	Obir	145.45	329	i PKiKP	PKPab	08 39 23.7	+2.9
	comp=Z,21nm,1.4s						
KBA	Koelnbreinsper	145.62	331	ePKiKP	PKPab	08 39 24.5	+3.0
	comp=Z,10nm,1.3s						
LESA	Schwarzleotal	145.67	332	i PKiKP	PKPab	08 39 24.4	+2.8
	comp=Z,15nm,1.2s						
MYKA	Terra Mystica	145.80	330	i PKiKP	PKPab	08 39 24.8	+2.7
	comp=Z,24nm,1.7s						
WATA	Walderalm	146.22	333	i pPKP	pPKPdf	08 39 26.5	+1.5
	comp=Z,11nm,1.1s						
ABTA	Abfaltersbach	146.25	331	i pPKP	PKPdf	08 39 24.0	+1.9
	comp=Z,11nm,1.3s						
WTTA	Wattenberg	146.25	332	i pPKP	PKPbc	08 39 24.8	+1.5
	comp=Z,13nm,1.3s						
MOTA	Moosalm	146.42	333	i pPKP	pPKPdf	08 39 27.2	+1.8
	comp=Z,14nm,1.1s						
RETA	Reutte	146.45	333	i pPKP	pPKPdf	08 39 27.4	+2.0
	comp=Z,8.2nm,1.1s						
SQTA	Sankt Quirin	146.47	333	i PKP	PKPdf	08 39 23.6	+1.2
	comp=Z,14nm,1.4s						
FETA	Feichten	146.83	333	i PKP	PKPdf	08 39 24.8	+1.7
	comp=Z,12nm,1.2s						
TORD	Torodi Ar. Bea	166.95	246	PKP	PKPdf	08 39 47.1	-2.0
	comp=Z,2.3nm,1.1s,baz=220,slow=2.0,SNR=7.3						

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*IDC **02** 08:23:45.4±15.0, 17°.26S×178°.88W, h483km±159km, mb3.6/6, mbtmp4.5/6, Error ellipse: s-maj=79.5km s-min=59.5km az=108.0*

*NEIC **02** 08:23:54.1±1.7, 17°.3S±0°.2×179°.3W±0°.1, h557km±8km, mb4.2/21, Error ellipse: s-maj=22.0km s-min=18.2km az=165.0*

ISC 02 08:23:52.0±0.8**, 17°.3S**±0°.2×**179°.2W**±0°.1**, h539km, n39, σ0.98**/36**, mb4.2**/17**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.65	259	P	P	08 25 07.2	+3.0
MARNC	Mare, Loyalty	12.74	249	P	P	08 26 37.4	-0.8
EIDS	Eidsvold	28.77	249	P	P	08 29 06.8	+0.2
EIDS				IAmb	IAmb	08 29 06.9	
	comp=Z,5.0nm,0.8s						
ARMA	Armidale	29.60	238	P	P	08 29 14.4	+0.5
ARMA				IAmb	IAmb	08 29 14.8	
	comp=Z,4.0nm,0.7s						
PATS	Pohnpei	32.66	315	P	P	08 29 40.4	+0.3
COEN	Coen	36.33	270	P	P	08 30 11.8	+1.0
COEN				IAmb	IAmb	08 30 12.4	
	comp=Z,7.0nm,0.8s						
TOO	Toolangi	36.98	230	P	P	08 30 16.0	+0.1
TOO				IAmb	IAmb	08 30 32.6	
	comp=Z,8.3nm,1.3s						
STKA	Stephens Creek	38.27	240	P	P	08 30 26.1	-0.4
	comp=Z,2.9nm,0.5s,baz=88,slow=11,SNR=8.4						
	comp=Z,2.9nm,0.5s						
STKA	Stephens Creek	38.27	240	P	P	08 30 26.7	+0.2
BBOO	Buckleboo	43.05	240	P	P	08 31 04.0	-0.5
WR8	Warramunga Arr	43.84	259	P	P	08 31 09.8	-1.1
WR8				IAmb	IAmb	08 31 16.3	
	comp=Z,9.9nm,1.4s						
WB0	Warramunga Arr	43.95	259	P	P	08 31 10.8	-0.9
WRAB	Tennant Creek	43.98	259	P	P	08 31 11.0	-1.0
WRAB				IAmb	IAmb	08 31 16.2	
	comp=Z,7.8nm,1.3s						
WRA	Warramunga Arr	43.99	259	P	P	08 31 10.9	-1.2
	comp=Z,1.5nm,0.6s,baz=94,slow=7.7,SNR=32						
	comp=Z,1.5nm,0.6s						
WRA	Warramunga Arr	43.99	259	P	P	08 31 10.9	-1.2
ASAR	Alice Springs	44.22	254	P	P	08 31 13.3	-0.5
	comp=Z,15nm,0.5s,baz=88,slow=8.1,SNR=127						
	comp=Z,15nm,0.5s						
ASAR	Alice Springs	44.22	254	P	P	08 31 13.0	-0.9
PTCN	Pitcairn Islan	46.26	108	P	P	08 31 30.3	+0.9
KNRA	Kununurra	49.78	264	P	P	08 31 56.1	+0.3
SIJI	Sorong	51.34	283	P	P	08 32 07.4	+0.3
	comp=Z,20nm,0.8s,baz=112,slow=6.6,SNR=5.1						
	comp=Z,20nm,0.8s						
FITZ	Fitzroy Crossi	52.37	260	P	P	08 32 14.4	-0.1
	comp=Z,3.7nm,0.6s,baz=131,slow=11,SNR=2.1						
	comp=Z,3.7nm,0.6s						
SOEI	Soe	55.30	270	P	P	08 32 35.4	0.0
SOEI				IAmb	IAmb	08 32 48.7	
	comp=Z,27nm,1.0s						
PSA00	Pilbara Seismi	57.32	255	P	P	08 32 48.9	-0.3
PSA00				IAmb	IAmb	08 33 15.3	
	comp=Z,17nm,1.4s						
MBWA	Marble Bar	57.48	256	P	P	08 32 49.6	-0.6
MBWA				IAmb	IAmb	08 33 06.3	
	comp=Z,16nm,1.2s						
MORW	Morawa	60.03	246	P	P	08 33 06.4	-0.9
MORW				IAmb	IAmb	08 33 46.8	
	comp=Z,13nm,1.1s						
PETK	Petropavlovsk-	72.87	346	P	P	08 34 26.1	+0.1
J16K	Anvik River	81.60	8	P	P	08 35 14.2	+1.0
J16K				IAmb	IAmb	08 35 14.8	
	comp=Z,8.0nm,1.5s						
J18K	Innoko River	82.36	10	P	P	08 35 16.8	-0.3
IMAR	Indian Mountai	85.19	10	P	P	08 35 30.4	-0.7
ILAR	Eielson Array	85.44	13	P	P	08 35 30.1	-2.2
	comp=Z,0.5nm,1.0s,baz=213,slow=6.5,SNR=2.0						
	comp=Z,0.5nm,1.0s						
ILAR	Eielson Array	85.44	13	P	P	08 35 31.9	-0.5
G21K	Allakaket	85.71	10	P	P	08 35 32.5	-1.1
D22K	Ayikyak River	88.00	9	P	P	08 35 43.3	-1.0
LODK	Lodwar	143.40	252		PKPab	08 42 24.3	-0.3
BURAR	Bucovina Array	143.69	332	PKPbc	PKPdf	08 42 25.5	-0.4
BRTR	Keskin Array B	143.78	315	PKP	PKPbc	08 42 25.0	-0.4
	comp=Z,1.3nm,1.0s,baz=29,slow=3.3,SNR=4.8						
BRTR	Keskin Array B	143.78	315		PKPbc	08 42 24.8	-0.6
SHEL	Horse Pasture	146.37	169	PKPbc	PKPdf	08 42 30.8	-0.5
GERES	GERESS Array B	146.79	344	PKPbc	PKPbc	08 42 32.5	-1.4
	comp=Z,0.5nm,0.5s,baz=19,slow=3.4,SNR=2.9						

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*IDC **02** 08:27:40.0±0.9, 0°.81N×125°.90E, h0km, mb4.0/6, mbtmp4.0/6, Error ellipse: s-maj=61.5km s-min=17.0km az=68.0*

*DJA **02** 08:27:43.6±0.2, 1°N±2°×12°6E±°, h10km, M4.2/18, mB5.2/1, mb4.5/6, MLv4.1/18, Mw(mB)4.6/1*

*NEIC **02** 08:27:43.3±0.5, 0°.8N±0°.1×126°.13E±0°.06, h25km±6km, mb4.2/10, Error ellipse: s-maj=15.4km s-min=8.0km az=183.0*

ISC 02 08:27:45.7±0.7**, 0°.94N**±0°.07×**126°.19E**±0°.04**, h44km, n32, σ1.95**/36**, mb4.1**/13**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.19	98		Pn	08 28 04.8	-1.1
TNTI				Sn	Sn	08 28 20.5	-0.4
TNTI	Ternate	1.19	98	P	Pn	08 28 06.3	+0.4
TNTI				S	Sn	08 28 24.4	+3.5
MNI	Manado	1.44	290	P	Pn	08 28 08.1	-1.3
SANI	Sanana	2.98	184	P	Pn	08 28 28.7	-1.8
GTOI	Gorontalo	3.19	265	P	Pn	08 28 34.7	+1.2
GTOI				S	Sn	08 29 14.5	+4.2
LUWI	Luwuk	3.94	240	Pn	Pn	08 28 40.4	-3.4
LUWI	Luwuk	3.94	240	P	Pn	08 28 45.4	+1.6
LUWI				S	Sn	08 29 31.7	+2.9
MRSI	Marisa	4.28	264	P	Pn	08 28 47.4	-0.9
KRAI	Karang Ratu	4.77	152	P	Pn	08 28 57.4	+2.3
APSI	Ampana	4.90	248	P	Pn	08 28 57.7	+0.8
TOLI2	Tolitoli	5.41	272		Pn	08 29 01.4	-2.5
SPSI	Sidrap Palu	8.06	233	P	Pn	08 29 39.0	-1.3
WB0	Warramunga Arr	22.10	159	P	P	08 32 34.3	-3.1
WB0				IAmb	IAmb	08 32 41.8	
	comp=Z,13nm,0.9s						
WRAB	Tennant Creek	22.23	159	P	P	08 32 35.8	-3.1
WRAB				IAmb	IAmb	08 32 43.0	
	comp=Z,6.9nm,0.7s						
WRA	Warramunga Arr	22.24	159	P	P	08 32 37.9	-1.1
	comp=Z,6.9nm,0.7s,baz=339,slow=12,SNR=22						
	comp=Z,6.9nm,0.7s						
WRA	Warramunga Arr	22.24	159	P	P	08 32 35.5	-3.4
WR8	Warramunga Arr	22.31	159	P	P	08 32 37.2	-2.5
WR8				IAmb	IAmb	08 32 44.3	
	comp=Z,12nm,0.9s						
COEN	Coen	22.41	132	P	P	08 32 39.7	-1.1
COEN				IAmb	IAmb	08 32 49.6	
	comp=Z,8.4nm,1.4s						
ASAR	Alice Springs	25.58	163	P	P	08 33 10.8	-0.1
	comp=Z,2.2nm,0.7s,baz=341,slow=9.5,SNR=15						
	comp=Z,2.2nm,0.7s						
STKA	Stephens Creek	35.76	157	P	P	08 34 40.9	+0.3
	comp=Z,3.4nm,0.8s,baz=345,slow=12,SNR=4.6						
	comp=Z,3.4nm,0.8s						
PEA0B	Petropavlovsk-	58.20	22	P	P	08 37 36.0	+0.7
PETK	Petropavlovsk-	58.20	22	P	P	08 37 37.8	+2.5
	comp=Z,1.6nm,0.9s,baz=190,slow=6.0,SNR=3.8						
	comp=Z,1.6nm,0.9s						
PETK	Petropavlovsk-	58.20	22	P	P	08 37 36.0	+0.7
MK31	Makanchi Array	59.55	326	P	P	08 37 44.7	-0.1
MK31				IAmb	IAmb	08 37 46.8	
	comp=Z,0.8nm,0.8s						
MKAR	Makanchi Array	59.55	326	P	P	08 37 44.5	-0.3
	comp=Z,1.0nm,0.6s,baz=126,slow=8.7,SNR=12						
	comp=Z,1.0nm,0.6s						
KURBB	Kurchatov Arra	63.80	328	P	P	08 38 13.1	-0.2
	comp=Z,1.4nm,0.7s,baz=130,slow=6.2,SNR=10						
KURK	Kurchatov	63.80	328	P	P	08 38 13.2	-0.1
KK31	Karatay Array	64.91	318	P	P	08 38 20.4	-0.4
KK31				IAmb	IAmb	08 38 54.2	
	comp=Z,5.4nm,1.4s						
KKAR	Karatay Array	64.91	318	P	P	08 38 20.2	-0.6
BVAR	Borovoye Array	69.36	328	P	P	08 38 50.6	+1.8
	comp=Z,0.4nm,0.5s,baz=131,slow=8.1,SNR=4.0						
	comp=Z,0.4nm,0.5s						
AB31	Akbulak array	73.97	321	P	P	08 39 16.7	+0.1
ABKAR	Akbulak array	73.97	321	P	P	08 39 16.3	-0.2

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*ISN **02** 08:27:51.5±0.8, 34°.65N×45°.72E, h18km±43km, ML2.6, Presumed earthquake*

*TEH **02** 08:27:57.0, 34°.63N×45°.74E, h10km, ML2.6, Presumed earthquake*

ISC 02 08:27:54.4±1.2**, 34°.65N**±0°.06×**45°.62E**±0°.06**, h18km, n7, σ0.88**/10**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GLG1	Gilan-e-Gharb	0.58	156	Pg	Pn	08 28 07.6	-0.3
IDHR	Dehrash	0.63	85	Pg	Pn	08 28 08.1	-0.6
KCHF	Cheshme Sefid,	1.23	107	Pg	Pg	08 28 18.8	+0.6
IKRK	Kirkuk	1.29	306	ePg	Pn	08 28 17.0	-0.6
IKRK				eSg	Sn	08 28 34.6	+0.1
IKRK				AML	AML	08 28 39.0	
	comp=N,126nm,0.7s						
IKRK				AML	AML	08 28 44.1	
	comp=E,97nm,0.8s						
IBDR	Badra	1.56	170	ePn	Pn	08 28 19.5	-1.6
IBDR				eSn	Sn	08 28 41.0	+0.2
IBDR				AML	AML	08 29 01.1	
	comp=E,91nm,0.8s						
IBDR				AML	AML	08 29 04.3	
	comp=N,73nm,0.5s						
SNQR	Sonqor, Kerman	1.66	82	Pg	Pg	08 28 26.8	+0.3
BHD	Baghdad	1.72	217	ePn	Pn	08 28 23.0	-0.4
BHD				eSn	Sn	08 28 46.0	+1.1

TAP 02 08:38:12.0, 24°.37N×121°.42E, h8km, ML1.6, B, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NNSH	Datong	0.06	331	i P	Pg	08 38 14.3	+0.3
NNSH				i S	Sg	08 38 15.4	-0.1
NNS	Nan Shan	0.08	329	i P	Pg	08 38 14.5	+0.3
NNS				S	Sg	08 38 16.0	+0.2
ETLH	Xiulin Townshi	0.18	160	i P	Pg	08 38 16.6	+0.9
ETLH				i S	Sg	08 38 19.3	+1.1
LATG	Datong	0.19	32	i P	Pg	08 38 16.1	+0.1
LATG				S	Sg	08 38 19.7	+1.0
FUSS	Fushou	0.20	231	i P	Pg	08 38 17.0	+0.8
FUSS				i S	Sg	08 38 20.1	+1.0
NACB	Ninganchiao	0.26	141	i P	Pg	08 38 18.0	+0.8
NACB				S	Sg	08 38 21.8	+1.2
WHF	Hehuan Shan	0.27	211	P	Pg	08 38 18.0	+0.5
WHF				i S	Sg	08 38 22.1	+1.0
YHNB	Yeheng	0.30	353	i P	Pg	08 38 18.7	+0.8
YHNB				i S	Sg	08 38 22.3	+0.3
ENTT	Nioudou	0.30	27	i P	Pg	08 38 18.2	+0.3
ENTT				eS	Sg	08 38 21.6	-0.3
ENA	Nanau	0.30	80	P	Pb	08 38 19.9	+0.3
ENA				i S	Sg	08 38 22.9	+0.9
LXIB	Xiulin Townshi	0.35	180	P	Pg	08 38 19.6	+0.6
LXIB				i S	Sg	08 38 24.6	+1.0
NDS	Dongshan	0.38	47	i P	Pg	08 38 19.1	-0.2
NDS				S	Sg	08 38 25.4	+1.0
NWLT	Wulai	0.41	11	i P	Pg	08 38 20.6	+0.6
NWLT				S	Sg	08 38 25.5	0.0
FUSB	Fushanzhiwuyua	0.41	22	i P	Pg	08 38 20.6	+0.5
FUSB				eS	Sg	08 38 26.6	+1.0
WHP	Taichung City	0.44	257	i P	Pb	08 38 21.8	-0.2
WHP				S	Sb	08 38 28.2	-0.6
WUSB	Renai	0.47	216	i P	Pg	08 38 21.6	+0.5
WUSB				eS	Sg	08 38 28.1	+0.9

IDC 02 08:38:21.8±2.3**, 6°.77S×129°.17E, h0km, mb3.1**/1**, mbtmp3.3**/4**, ML3.2**/3**, Error ellipse: s-maj=84.1km s-min=30.4km az=75.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.78	197	Pn	Pn	08 41 11.0	-0.2
	0.1nm,0.3s,baz=20,slow=13,SNR=1.4						
FITZ				Sn	Sn	08 43 09.8	-14
	0.2nm,0.3s,baz=304,slow=7.2,SNR=2.8						
	1.9nm,0.6s						
WRA	Warramunga Arr	14.02	160	Pn	Pn	08 41 41.6	-0.3
	0.1nm,0.3s,baz=338,slow=14,SNR=5.2						
WRA				Sn	Sn	08 44 05.2	-13
	0.2nm,0.3s,baz=343,slow=20,SNR=4.8						
	0.3nm,0.7s						
ASAR	Alice Springs	17.41	165	P	Pn	08 42 26.7	+0.4
	0.1nm,0.3s,baz=336,slow=9.2,SNR=6.7						
	0.3nm,0.5s						
MKAR	Makanchi Array	67.59	327	P	P	08 49 20.4	0.0
	0.1nm,0.4s,baz=111,slow=8.2,SNR=1.7						
	0.1nm,0.4s						

JMA 02 08:38:50.9±0.2**, 24°.3N**±0°.8×**123°.6E**±0°.7**, h18km**±2km**, MV1.2**/7**, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.13	82	i P	Pb	08 38 54.7	-0.1
IRIF				S	Sg	08 38 57.6	+0.1
HATJ	Hateruma jima	0.33	142	P	Pg	08 38 57.5	-0.3
HATJ				eS	Sg	08 39 02.4	-0.1
JKRS	Kuro-shima	0.39	101	P	Pg	08 38 59.0	+0.1
JKRS				eS	Sb	08 39 05.1	+0.1
JIJ	Ishigaki jima	0.51	85	P	Pg	08 39 00.5	-0.6
JIJ				eS	Sg	08 39 07.7	-0.2
JISG	Ishigakijimahi	0.71	68	S	Sn	08 39 15.6	-1.0

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*ASRS **02** 08:39:26.0±0.7, 53°.74N×88°.07E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 02 08:39:25.0±5.2**, 53°.76N×88°.65E, h0km, mbtmp2.7**/2**, ML2.3**/3**, Error ellipse: s-maj=57.6km s-min=26.9km az=72.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	2.28	276	I	I	08 56 30.0	
	baz=92,slow=324,SNR=1.7						
ZALV	Zalesovo Beam	2.28	276	Pn	Pn	08 40 03.9	0.0
	1.5nm,0.3s,baz=95,slow=11,SNR=25						
ZALV				Sn	Sn	08 40 32.1	-0.5
	3.2nm,0.3s,baz=96,slow=26,SNR=20						
	4.1nm,0.4s						
KURBB	Kurchatov Arra	6.97	247	Pn	Pn	08 41 08.6	+0.4
	0.1nm,0.3s,baz=61,slow=14,SNR=3.7						
MKAR	Makanchi Array	8.07	213	Pn	Pn	08 41 24.6	+1.1
	0.1nm,0.3s,baz=26,slow=13,SNR=4.3						
	0.2nm,0.4s						

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*IDC **02** 08:54:06.4±2.1, 7°.51S×128°.90E, h123km±23km, mb3.7/2, mbtmp4.2/7, Error ellipse: s-maj=24.7km s-min=19.5km az=123.0*

*DJA **02** 08:54:09.1±0.4, 8°S±3°×12°9E±°, h138km±13km, M4.5/15, mB5.3/3, mb4.5/6, MLv4.5/15, Mw(mB)4.7/3*

ISC 02 08:54:07.2±0.8**, 7°.64S**±0°.06×**128°.86E**±0°.06**, h131km, n15, σ2.46**/20**, mb3.9**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.44	98	P	Pn	08 54 48.5	+1.8
SAUI				S	Sn	08 55 20.3	+3.2
BNDI	Bandanaira	3.27	19	P	Pn	08 54 56.8	-0.6
KRAI	Karang Ratu	4.32	354	P	Pn	08 55 12.1	+0.8
SOEI	Soe	5.00	245	P	Pn	08 55 23.4	+2.9
	1.4nm52nm,0.9s						
BATI	Baumata	5.73	243	P	Pn	08 55 31.9	+1.7
	52nm,0.4s,baz=92,slow=4.1,SNR=6.9						
BATI				S	Sn	08 56 36.0	+1.0
	188nm,0.5s,baz=296,slow=23,SNR=19						
BATI	Baumata	5.73	243	P	Pn	08 55 32.5	+2.3
	0.8nm65nm,1.0s						
KMPI	Kaimana, Papua	6.23	51	P	Pn	08 55 37.2	+0.3
	0.8nm187nm,0.7s						
SIJI	Sorong	7.14	20	P	Pn	08 55 46.5	-2.6
	23nm,0.4s,baz=304,slow=5.4,SNR=13						
EDFI	Ende, Flores	7.18	261	P	Pn	08 55 52.1	+2.3
	0.1nm11nm,0.7s						
FITZ	Fitzroy Crossi	10.86	196	P	Pn	08 56 39.4	+0.3
	2.8nm,0.3s,baz=8.9,slow=6.9,SNR=13						
FITZ				S	Sn	08 58 36.3	-2.5
	14nm,0.3s,baz=90,slow=16,SNR=9.1						
WRA	Warramunga Arr	13.33	157	P	Pn	08 57 11.4	0.0
	3.2nm,0.4s,baz=342,slow=12,SNR=35						
WRA				S	Sn	08 59 34.4	-4.3
	9.3nm,0.4s,baz=335,slow=22,SNR=9.5						
ASAR	Alice Springs	16.66	164	P	P	08 57 55.4	+2.2
	0.9nm,0.5s,baz=337,slow=10,SNR=21						
ASAR				S	Sn	09 00 53.5	-5.1
	1.2nm,0.4s,baz=82,slow=18,SNR=5.9						
MKAR	Makanchi Array	68.15	327	P	P	09 04 53.0	-0.2
	1.2nm,0.4s,baz=132,slow=8.2,SNR=29						
	1.2nm,0.4s						
ZALV	Zalesovo Beam	71.66	334	P	P	09 05 13.4	-1.1
	0.9nm,0.7s,baz=136,slow=7.4,SNR=2.6						
	0.9nm,0.7s						
KURBB	Kurchatov Arra	72.47	329	P	P	09 05 19.0	-0.4
	1.0nm,0.5s,baz=125,slow=5.0,SNR=5.0						

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*SNET **02** 09:10:48.5±1.3, 13°.14N×89°.63W, h46km, ML3.5, Presumed earthquake*

*CATAC **02** 09:10:49.0±0.4, 13°N±2°×9°0W±°, h28km±2km, M3.6/24, MLv3.6/24, Error ellipse: s-maj=5.6km s-min=3.6km az=44.0, confirmed*

*GCG **02** 09:10:51.2±1.1, 13°.34N×89°.65W, h42km±10km, MD4.0, ML3.9, Presumed earthquake*

ISC 02 09:10:51.0±1.6**, 13°.21N**±0°.06×**89°.54W**±0°.05**, h41km**±11km**, n64, σ1.04**/94**, El Salvador**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.34	38	P	Pn	09 10 59.2	-0.7
LALI	Alcalda de L	0.34	38	i P	Pn	09 10 59.4	-0.4
LALI				i S	Sn	09 11 06.4	+0.3
LALI	Alcalda de L	0.34	38	eP	Pn	09 10 59.5	-0.4
LALI				eS	Sn	09 11 07.4	+1.4
JAYA	Jayaque - finc	0.45	11	P	Pn	09 11 00.4	-0.8
JAYA				S	Sn	09 11 09.1	+0.7
JAYA	Jayaque - finc	0.45	11	i P	Pn	09 11 00.5	-0.8
JAYA				i S	Sn	09 11 08.1	-0.3
JAYA				IAML		09 11 11.2	
	comp=N,8μm,0.2s						
JAYA	Jayaque - finc	0.45	11	eP	Pn	09 11 00.5	-0.8
PANCS	Alcalda de	0.53	41	P	Pn	09 11 01.5	-0.7
PANCS				S	Sn	09 11 10.5	+0.4
PMON	Piamonte	0.54	24	P	Pn	09 11 01.8	-0.7
PMON				S	Sn	09 11 11.5	+0.9
PMON	Piamonte	0.54	24	eP	Pn	09 11 01.8	-0.7
LOMA	Loma Larga	0.56	40	eP	Pn	09 11 02.1	-0.6
LOMA				eS	Sn	09 11 12.1	+1.1
SEMO	Seminario San	0.57	32	P	Pn	09 11 02.1	-0.8
SEMO				S	Sn	09 11 12.0	+0.7
SEMO	Seminario San	0.57	32	eP	Pn	09 11 01.9	-1.0
BOQS	Boqueron	0.58	26	eP	Pn	09 11 02.5	-0.6
UEES	Universidad Ev	0.58	30	P	Pn	09 11 02.2	-0.8
UEES	Universidad Ev	0.58	30	eP	Pn	09 11 02.3	-0.6
UEES				eS	Sn	09 11 12.5	+1.1
UTEC	Universidad Te	0.58	34	P	Pn	09 11 02.4	-0.6
UTEC				S	Sn	09 11 12.6	+1.0
PIC2	El Picacho	0.59	27	eP	Pn	09 11 02.8	-0.6
CEDA	San Andres	0.60	13	P	Pn	09 11 02.4	-0.8
CEDA				S	Sn	09 11 12.6	+0.7
IGN	Direccin Gen	0.61	36	P	Pn	09 11 02.7	-0.7
IGN				S	Sn	09 11 13.3	+1.1
IGN	Direccin Gen	0.61	36	eP	Pn	09 11 02.7	-0.7
UDBS	Universidad Do	0.62	37	P	Pn	09 11 02.9	-0.6
UDBS				S	Sn	09 11 13.4	+0.9
SBLS	San Blas	0.63	352	eP	Pn	09 11 02.9	-0.8
SNJE	San Jose	0.65	354	eP	Pn	09 11 03.3	-0.8
QUEZ	Alcaldia de Qu	0.67	23	eP	Pn	09 11 03.6	-0.6
QUEZ				eS	Sn	09 11 15.0	+1.5
LBRS	Las Brisas	0.71	43	eP	Pn	09 11 04.3	-0.4
NUBE	Las Nubes	0.72	341	P	Pn	09 11 03.7	-1.3
NUBE				S	Sn	09 11 14.4	-0.6
NUBE	Las Nubes	0.72	341	i P	Pn	09 11 03.6	-1.3
NUBE				i S	Sn	09 11 13.5	-1.5
NUBE	Las Nubes	0.72	341	eP	Pn	09 11 03.8	-1.2
COEG	Centro de Oper	0.76	58	P	Pn	09 11 04.6	-0.7
COEG				S	Sn	09 11 16.6	+0.9
COEG	Centro de Oper	0.76	58	eP	Pn	09 11 04.6	-0.7
UNIC	Universidad Ca	0.76	359	P	Pn	09 11 04.8	-0.6
UNIC				S	Sn	09 11 16.4	+0.5
PAVA	Las Pavas	0.77	50	P	Pn	09 11 05.4	-0.2
PAVA	Las Pavas	0.77	50	eP	Pn	09 11 05.3	-0.2
PAVA				eS	Sn	09 11 17.4	+1.4
TECO	Alcaldia de Te	0.80	66	P	Pn	09 11 04.9	-1.0
TECO				S	Sn	09 11 17.1	+0.3
LOAL	Lomas de Alarc	0.81	343	P	Pn	09 11 04.9	-1.2
SLOZ	Alcaldia de Sa	0.84	344	P	Pn	09 11 05.9	-0.6
SLOZ				S	Sn	09 11 18.4	+0.7
RBDL	Robledal	0.91	351	eP	Pn	09 11 06.6	-0.9
SCLA	Alcaldia de Sa	0.93	58	P	Pn	09 11 07.1	-0.5
SCLA				S	Sn	09 11 21.5	+1.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SCLA	**Alcaldia de Sa**	**0.93**	**58**	*e*P	**Pn**	**09 11 07.3**	**-0.4**
TECA	**Tecapa**	**1.05**	**74**	*e*P	**Pn**	**09 11 08.5**	**-0.9**
P5NO	**Presa 5 de nov**	**1.08**	**45**	P	**Pn**	**09 11 08.8**	**-0.9**
P5NO				S	**Sn**	**09 11 24.0**	**+0.5**
P5NO	**Presa 5 de nov**	**1.08**	**45**	*e*P	**Pn**	**09 11 08.9**	**-0.8**
P5NO				*e*S	**Sn**	**09 11 24.1**	**+0.6**
LLGN	**La Laguna**	**1.11**	**31**	P	**Pn**	**09 11 09.5**	**-0.6**
LLGN				S	**Sn**	**09 11 24.8**	**+0.6**
MTO3	**Montecristo**	**1.19**	**8**	P	**Pn**	**09 11 10.5**	**-1.0**
MTO3	**Montecristo**	**1.19**	**8**	*e*P	**Pn**	**09 11 10.4**	**-1.0**
MTO3	**Montecristo**	**1.19**	**8**	*e*P	**Pn**	**09 11 10.5**	**-1.0**
MTO3				*e*S	**Sn**	**09 11 26.2**	**-0.3**
PACA	**Pacayal**	**1.21**	**78**	P	**Pn**	**09 11 11.2**	**-0.3**
PACA				S	**Sn**	**09 11 28.9**	**+2.1**
PACA	**Pacayal**	**1.21**	**78**	*e*P	**Pn**	**09 11 11.3**	**-0.3**
RANC	**El Ranchito**	**1.24**	**80**	P	**Pn**	**09 11 11.5**	**-0.4**
RANC				S	**Sn**	**09 11 28.3**	**+0.8**
ESQI	**Esquipulas**	**1.35**	**8**	P	**Pn**	**09 11 12.9**	**-0.6**
ESQI				S	**Sn**	**09 11 30.9**	**+0.6**
ZAFR2	**Estanzuela, Za**	**1.37**	**8**	*i* P	Pn	09 11 18.1	+4.4
FG16	**Alotenango, Sa**	**1.42**	**318**	*i* P	Pn	09 11 18.0	+3.5
FG16				*i* S	**Sn**	**09 11 37.9**	**+5.8**
FG16				IAML		09 11 50.9	
	comp=N,2μm,0.3s						
FG8	**Yepocapa, Chim**	**1.44**	**316**	*i* P	Pn	09 11 18.6	+3.8
LCND	**La Caada**	**1.61**	**86**	P	**Pn**	**09 11 16.5**	**-0.4**
CNCH	**Conchagua**	**1.66**	**88**	P	**Pn**	**09 11 17.1**	**-0.6**
CNCH	**Conchagua**	**1.66**	**88**	*e*P	**Pn**	**09 11 17.1**	**-0.6**
SARH	**Santa Rosa de**	**1.73**	**26**	P	**Pn**	**09 11 18.6**	**-0.1**
SARH				S	**Sn**	**09 11 40.5**	**+1.0**
SARH	**Santa Rosa de**	**1.73**	**26**	*i* P	**Pn**	**09 11 18.6**	**-0.1**
SARH				*i* S	**Sn**	**09 11 38.6**	**-0.9**
CSGN	**Cosiguina Volc**	**1.94**	**97**	S	**Sn**	**09 11 45.3**	**+0.5**
STG8	**El Palmar, Qui**	**2.15**	**305**	*i* P	Pn	09 11 28.0	+3.4
HERN	**Volcan Telica**	**2.71**	**103**	P	**Pn**	**09 11 31.5**	**-0.6**
HERN				S	**Sn**	**09 12 02.9**	**-0.8**
POLN	**Al Sur del Vol**	**2.71**	**102**	P	**Pn**	**09 11 30.9**	**-1.3**
POLN				S	**Sn**	**09 12 04.1**	**+0.3**
YUSH	**Yuscaran**	**2.72**	**74**	P	**Pn**	**09 11 31.6**	**-0.8**
CNGN	**Cerro Negro**	**2.86**	**104**	P	**Pn**	**09 11 33.8**	**-0.4**

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*PDG **02** 09:23:37.2±0.3, 41.°46N×19.°59E, h12km±1km, MD3.2/2, ML3.1/12, Error ellipse: s-maj=0.6km s-min=1.9km az=0.0*
*TIR **02** 09:23:37.1, 41.°47N×19.°53E, h29km, Md2.7/6, Ml3.1/7*
*BEO **02** 09:23:37.6±0.5, 41.°48N×19.°58E, h11km±3km, ML2.8/16*
ISC 02 09:23:37.1±1.0**, 41.°45N**±0.°02×**19.°56E**±0.°02**, h12**km±8km**, n55, σ0.s86**/95**, 8C-11D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.25**	**115**	Pg	**Pg**	**09 23 42.3**	**0.0**
TIR				Sg	**Sg**	**09 23 44.8**	**-1.1**
TIR				AML	AML	09 23 46.3	
	27nm,0.2s						
ULC	**Ulcinj**	**0.56**	**335**	⇓*i*Pg	**Pg**	**09 23 48.1**	**-0.1**
ULC				*i* Sg	**Sb**	**09 23 57.2**	**+0.2**
SDA	**Shkodra**	**0.60**	**355**	Pg	**Pg**	**09 23 48.7**	**-0.1**
SDA				Sg	**Sb**	**09 23 57.7**	**-0.3**
SDA				AML	AML	09 24 02.0	
	0.9nm,0.3s						
SDA				AMd		09 24 43.8	
PHP	**Peshkopia**	**0.70**	**70**	Pg	**Pb**	**09 23 51.0**	**-0.3**
PHP				Sg	**Sb**	**09 24 01.2**	**+0.4**
PHP				AML	AML	09 24 05.5	
	1.0nm,0.4s						
PHP				AMd		09 24 33.5	
DRME	**Dracevica, Mon**	**0.79**	**339**	⇓*i*Pg	**Pg**	**09 23 51.9**	**-0.5**
DRME				*i* Sg	**Sn**	**09 24 04.3**	**-1.4**
BUM	**Brajici-Budva**	**0.98**	**330**	⇓*i*Pg	**Pn**	**09 23 56.5**	**-0.3**
BUM				*i* Sg	**Sn**	**09 24 11.3**	**+0.6**
VLO	**Vlora**	**0.99**	**183**	Sn	**Sg**	**09 24 09.6**	**+0.7**
VLO				AML	AML	09 24 18.3	
	2.5nm,0.3s						
OHR	**Ohrid**	**0.99**	**110**	*i* Pg	**Pg**	**09 23 55.6**	**-0.7**
OHR				*i* Sg	**Sn**	**09 24 11.5**	**+0.6**
PDG	**Podgorica**	**1.00**	**347**	⇑P	**Pn**	**09 23 57.0**	**0.0**
PDG				⇓S	**Sn**	**09 24 11.4**	**+0.3**
PDG	**Podgorica**	**1.00**	**347**	*e*Pg	**Pg**	**09 23 55.8**	**-0.7**
PDG				*i* Sg	**Sn**	**09 24 11.7**	**+0.6**
PVY	**Plav**	**1.18**	**14**	⇑*i*Pg	**Pn**	**09 23 59.3**	**-0.3**
PVY				*i* Sg	**Sn**	**09 24 16.9**	**+1.3**
KBN	**Korca**	**1.24**	**131**	Pn	**Pn**	**09 24 00.3**	**-0.1**
KBN				Sn	**Sg**	**09 24 18.0**	**+0.8**
KBN				AMd		09 24 49.7	
HCY	**Herceg Novi**	**1.27**	**322**	⇓*i*Pg	**Pg**	**09 24 01.5**	**-0.1**
HCY				*i* Sg	**Sg**	**09 24 20.3**	**+2.1**
NKME	**Niksic**	**1.39**	**341**	⇓*i*Pg	**Pb**	**09 24 03.0**	**-0.1**
NKME				*i* Sg	**Sg**	**09 24 23.0**	**+1.1**
KOME	**Kolasin**	**1.40**	**359**	⇑*i*Pg	**Pb**	**09 24 03.0**	**-0.2**
KOME				*i* Sg	**Sg**	**09 24 24.2**	**+2.1**
IVA	**Berane**	**1.44**	**10**	⇓*i*Pg	**Pn**	**09 24 03.2**	**+0.1**
IVA				*i* Sg	**Sg**	**09 24 25.3**	**+1.8**
SKO	**Skopje**	**1.50**	**69**	*i* Pn	**Pg**	**09 24 05.7**	**-0.2**
SKO				*i* Sn	**Sg**	**09 24 25.8**	**+0.5**
NEST	**Nestorio**	**1.53**	**132**	Pn	**Pb**	**09 24 05.9**	**+0.4**
NEST				Sn	**Sg**	**09 24 27.0**	**+0.6**
NEST				AML	AML	09 24 29.7	
	1.0nm,0.4s						
NEST				AMd		09 25 05.9	
TREB	**Trebinje**	**1.55**	**325**	*e*Pg	**Pn**	**09 24 04.6**	**0.0**
TREB				*e*Sg	**Sg**	**09 24 26.2**	**-0.9**
SRN	**Sarande**	**1.61**	**168**	Pg	**Pb**	**09 24 07.0**	**+0.3**
SRN				Sg	**Sg**	**09 24 29.4**	**+0.6**
SRN				AMd		09 25 13.4	
BRY	**Bratogost**	**1.64**	**333**	⇓*i*Pn	**Pb**	**09 24 07.4**	**+0.1**
BRY				*i* Sn	**Sg**	**09 24 30.7**	**+0.9**
UPM	**Unac-Piva**	**1.81**	**345**	*e*Pn	**Pb**	**09 24 10.4**	**0.0**
UPM				*i* Sn	**Sg**	**09 24 35.1**	**-0.5**
SJES	**Sjenica**	**1.83**	**9**	*e*Pg	**Pb**	**09 24 10.6**	**-0.1**
SJES				*e*Sg	**Sg**	**09 24 35.8**	**-0.3**
PLE	**Pljevlja**	**1.88**	**356**	⇑*i*Pn	**Pb**	**09 24 10.7**	**-0.8**
PLE				*i* Sn	**Sg**	**09 24 36.7**	**-0.9**
STON	**Ston**	**1.98**	**316**	*e*Pn	**Pn**	**09 24 09.8**	**-0.7**
STON				*e*Sn	**Sn**	**09 24 35.2**	**0.0**
NOCI	**Noci**	**2.00**	**251**	Pn	**Pn**	**09 24 09.4**	**-1.4**
NOCI				Sn	**Sb**	**09 24 38.1**	**-0.3**
NOCI				AML	AML	09 24 44.6	
	0.4nm,0.5s						
NOCI				AMd		09 25 32.5	
IGT	**Igoumenitsa**	**2.01**	**163**	Sn	**Sb**	**09 24 39.6**	**+1.1**
IGT	**Igoumenitsa**	**2.01**	**163**	*e*Pn	**Pn**	**09 24 11.5**	**+0.7**
IGT				*e*Sn	**Sb**	**09 24 38.1**	**-0.4**
SELS	**Selova**	**2.11**	**33**	*e*Pn	**Pn**	**09 24 12.8**	**+0.5**
SELS				*e*Sn	**Sn**	**09 24 38.4**	**0.0**
BARS	**Barje**	**2.16**	**50**	*e*Pn	**Pn**	**09 24 13.6**	**+0.7**
BARS				*e*Sn	**Sn**	**09 24 40.5**	**+0.9**
IVAS	**Ivanjica**	**2.17**	**11**	*e*Pn	**Pn**	**09 24 13.6**	**+0.5**
IVAS				*e*Sn	**Sn**	**09 24 40.3**	**+0.4**
RUDO	**Rudo**	**2.17**	**356**	*e*Pn	**Pn**	**09 24 14.1**	**+1.0**
RUDO				*e*Sn	**Sn**	**09 24 41.0**	**+1.1**
VAY	**Valandovo**	**2.27**	**92**	*i* Pn	**Pg**	**09 24 20.2**	**-0.4**
VAY				*i* Sn	**Sb**	**09 24 43.9**	**-2.1**
GOCS	**Kraljevo Serbi**	**2.32**	**24**	*e*Pn	**Pn**	**09 24 15.4**	**+0.2**
GOCS				*e*Sn	**Sn**	**09 24 42.7**	**-1.0**
BOSS	**Bosilegrad**	**2.41**	**63**	*e*Pn	**Pn**	**09 24 16.4**	**0.0**
BBLS	**Lazi&#263i**	**2.41**	**357**	*e*Pn	**Pn**	**09 24 17.1**	**+0.6**
BBLS				*e*Sn	**Sn**	**09 24 46.6**	**+0.6**
GRUS	**Gruza**	**2.58**	**19**	*e*Pn	**Pn**	**09 24 18.8**	**+0.1**
GRUS				*e*Sn	**Sn**	**09 24 50.5**	**+0.6**
DIVS	**Divibare**	**2.66**	**7**	*e*Pn	**Pn**	**09 24 20.0**	**+0.1**
DIVS				*e*Sn	**Sn**	**09 24 51.9**	**-0.2**
TRUS	**Trudelj**	**2.84**	**12**	*e*Pn	**Pn**	**09 24 22.5**	**+0.2**
ZAPS	**Zavoj**	**2.91**	**50**	*e*Pn	**Pn**	**09 24 24.2**	**+0.9**
ZAPS				*e*Sn	**Sn**	**09 24 56.7**	**-1.6**
VTS	**Vitosha**	**2.97**	**66**	*e*Sn	**Sn**	**09 24 59.1**	**-0.8**
ZAGS	**Zajecar**	**3.07**	**39**	*e*Pn	**Pn**	**09 24 25.1**	**-0.4**
ZAGS				*e*Sn	**Sn**	**09 25 00.3**	**-1.8**
TEKS	**Tekeris**	**3.09**	**360**	*e*Pn	**Pn**	**09 24 26.8**	**+1.0**
BORS2	**Bor- Borsko je**	**3.19**	**34**	*e*Pn	**Pn**	**09 24 26.1**	**-1.1**
BORS2				*e*Sn	**Sn**	**09 25 03.8**	**-1.4**
KUBS	**Kucevo**	**3.34**	**27**	*e*Pn	**Pn**	**09 24 27.7**	**-1.5**
KUBS				*e*Sn	**Sn**	**09 25 08.1**	**-0.6**
MDVR	**Moldovita**	**3.68**	**25**	⇓P	**Pn**	**09 24 34.4**	**+0.5**
MDVR	**Moldovita**	**3.68**	**25**	*e*Pn	**Pn**	**09 24 34.2**	**+0.3**
HERR	**Herculane**	**4.01**	**30**	⇓P	**Pn**	**09 24 38.9**	**+0.6**
BZS	**Buzias**	**4.42**	**19**	⇑P	**Pn**	**09 24 44.7**	**+0.7**
BZS	**Buzias**	**4.42**	**19**	*e*Pn	**Pn**	**09 24 43.9**	**-0.1**
BZS				*e*Sn	**Sn**	**09 25 33.6**	**-1.8**
GZR	**Gura Zlata**	**4.58**	**30**	⇑P	**Pn**	**09 24 47.9**	**+1.6**
BOJS	**Bojanci**	**5.12**	**324**	*e*Pn	**Pn**	**09 24 53.3**	**-0.3**
ARR	**Arges**	**5.38**	**42**	⇓P	**Pn**	**09 24 58.7**	**+1.4**
VOIR		**5.64**	**43**	⇑P	**Pn**	**09 25 01.7**	**+0.9**
MLR	**Muntele Rosu**	**6.15**	**47**	⇑P	**Pn**	**09 25 09.1**	**+1.2**

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*NEIC **02** 09:26:57.9±1.6, 51.°7N±0.°1×177.°29W±0.°06, h75km±4km, mb4.0/75, ML4.4/9, ML4.1(AEIC), Error ellipse: s-maj=16.2km s-min=5.2km az=170.0*
*AEIC **02** 09:26:57.4±1.6, 51.°6N±0.°1×177.°26W±0.°06, h72km±4km, Error ellipse: s-maj=16.2km s-min=5.1km az=172.0*
*IDC **02** 09:26:57.4±0.9, 51.°91N×177.°45W, h73km±7km, mb3.6/10, mbtmp4.0/14, MS3.2/4, Error ellipse: s-maj=23.7km s-min=13.6km az=175.0*
ISC 02 09:26:57.3±0.7**, 51.°63N**±0.°10×**177.°26W**±0.°03**, h77**km±4km**, n130, σ0.s89**/106**, mb4.0**/26**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIMD	**Kanaga Island**	**0.13**	**8**		**Pn**	**09 27 08.3**	**-0.1**
KIMD					**Sn**	**09 27 16.0**	**-0.6**
KIWB	**Kanaga Island**	**0.23**	**18**		**Pn**	**09 27 08.9**	**+0.1**
KIWB				Sn	**Sn**	**09 27 17.4**	**+0.1**
KIKV	**Kanaga Island**	**0.25**	**13**		**Pn**	**09 27 09.0**	**0.0**
KIKV					**Sn**	**09 27 17.6**	**0.0**
KIRH	**Kanaga Island**	**0.29**	**22**		**Pn**	**09 27 09.3**	**+0.2**
KIRH					**Sn**	**09 27 18.1**	**+0.2**
TAPA	**Tanaga Point A**	**0.39**	**298**		**Pn**	**09 27 10.0**	**+0.2**
TAPA					**Sn**	**09 27 19.3**	**+0.2**
TAFL	**Tanaga Flats**	**0.41**	**288**		**Pn**	**09 27 10.2**	**+0.2**
ADK	**Adak**	**0.44**	**55**		**Pn**	**09 27 10.1**	**-0.1**
ADK				Sn	**Sn**	**09 27 19.3**	**-0.4**
ADK				IAML		09 27 20.0	
	26μm,0.2s						
TAFP	**Tanaga Falls P**	**0.52**	**301**		**Pn**	**09 27 10.9**	**0.0**
TASE	**Tanaga Southea**	**0.52**	**293**		**Pn**	**09 27 11.2**	**+0.2**
ADAG	**Mount Adagdak**	**0.54**	**50**		**Pn**	**09 27 11.2**	**+0.2**
ADAG					**Sn**	**09 27 21.6**	**+0.3**
ETKA	**Kagalaska Isla**	**0.58**	**66**		**Pn**	**09 27 11.3**	**-0.1**
ETKA					**Sn**	**09 27 21.4**	**-0.5**
TANO	**Tanaga North**	**0.60**	**298**		**Pn**	**09 27 11.9**	**+0.2**
TANO					**Sn**	**09 27 23.0**	**+0.7**
GSCK	**Great Sitkin C**	**0.78**	**61**		**Pn**	**09 27 13.7**	**+0.1**
GSTD	**Great Sitkin T**	**0.81**	**58**		**Sn**	**09 27 26.8**	**+0.3**
GSSP	**Great Sitkin S**	**0.82**	**55**		**Sn**	**09 27 26.9**	**+0.5**
GSMY	**Great Sitkin M**	**0.85**	**61**		**Sn**	**09 27 27.8**	**+0.7**
GSTR	**Great Sitkin T**	**0.88**	**58**		**Pn**	**09 27 15.2**	**+0.5**
GSTR				Sn	**Sn**	**09 27 28.6**	**+0.9**
GSTR				IAML		09 27 32.0	
	comp=N,13μm,0.7s						
GSTR				IAML		09 27 32.7	
	comp=E,8μm,0.6s						
GALAA	**Gareloi Lava P**	**0.95**	**278**		**Pn**	**09 27 16.0**	**+0.6**
GANE	**Gareloi Northe**	**0.96**	**282**		**Sn**	**09 27 30.0**	**+0.7**
GAKI	**Gareloi-Kavalg**	**0.97**	**266**		**Pn**	**09 27 16.0**	**+0.3**
GAKI					**Sn**	**09 27 29.7**	**+0.2**
CESW	**Semis' Southwe**	**1.99**	**279**		**Pn**	**09 27 29.3**	**+0.4**
CEAP	**Semis' Anvil P**	**2.00**	**282**		**Pn**	**09 27 29.7**	**+0.7**
KOWE	**Korovin West**	**2.00**	**67**		**Pn**	**09 27 29.7**	**+0.6**
KOKL	**Mount Kliuchef**	**2.02**	**69**		**Pn**	**09 27 30.1**	**+0.7**
KOFP	**Korovin Flat P**	**2.06**	**71**		**Pn**	**09 27 30.9**	**+1.0**
KOSE	**Korovin Southe**	**2.11**	**69**		**Pn**	**09 27 31.6**	**+1.0**
AMKA	**Amchitka**	**2.16**	**265**		**Pn**	**09 27 31.9**	**+0.7**
LSSE	**Little Sitkin**	**2.61**	**278**		**Pn**	**09 27 38.2**	**+1.0**
LSNW	**Little Sitkin**	**2.64**	**279**		**Pn**	**09 27 38.4**	**+0.8**
NIKH	**Nikolski High**	**5.33**	**72**	Pn	**Pn**	**09 28 15.4**	**+1.1**
NIKH				IAML		09 29 38.4	
	comp=E,67nm,0.6s						
NIKH				IAML		09 29 38.6	
	comp=N,114nm,0.7s						
SHEM	**Shemya Is, Ala**	**5.43**	**285**	P	**Pn**	**09 28 14.8**	**-0.7**
	comp=N,32nm,0.3s,baz=94,slow=4.4,SNR=4.5						
SMY	**Shemya**	**5.43**	**285**	Pn	**Pn**	**09 28 16.5**	**+1.0**
SPIA	**Saint Paul Isl**	**6.90**	**34**	Pn	**Pn**	**09 28 36.6**	**+1.1**
UNV	**Unalaska Valle**	**6.90**	**67**	Pn	**Pn**	**09 28 34.4**	**-1.2**
AKUT	**Akutan**	**7.39**	**66**	Pn	**Pn**	**09 28 40.5**	**-1.8**
SDPT	**Sand Point**	**10.67**	**63**	Pn	**Pn**	**09 29 25.9**	**-1.1**
M11K	**Mekoryuk**	**10.72**	**31**		**Pn**	**09 29 27.9**	**+0.3**
GAMB	**Gambell**	**12.53**	**11**		**Pn**	**09 29 53.5**	**+1.4**
P16K	**Nushagak River**	**13.20**	**48**	Pn	**Pn**	**09 30 00.9**	**-0.4**
O16K	**Kokwok River B**	**13.41**	**46**	Pn	**Pn**	**09 30 04.2**	**+0.2**
P17K	**Kvichak River**	**14.00**	**49**	Pn	**Pn**	**09 30 11.3**	**-0.4**
L16K	**Owhat River**	**14.00**	**37**	Pn	**Pn**	**09 30 12.3**	**+0.6**
ACHA	**Angle Creek He**	**14.19**	**54**	Pn	**Pn**	**09 30 13.2**	**-1.1**
ANM	**Nome**	**14.37**	**21**		**Pn**	**09 30 17.5**	**+1.0**
TNA	**Tin City**	**14.76**	**15**	Pn	**Pn**	**09 30 23.1**	**+1.5**
O18K	**Koktuh Hills**	**14.84**	**48**	Pn	**Pn**	**09 30 22.5**	**-0.2**
OHAK	**Old Harbor**	**14.99**	**59**	Pn	**Pn**	**09 30 24.5**	**-0.1**
Q19K	**Cape Douglas,**	**15.25**	**52**	Pn	**Pn**	**09 30 29.7**	**+1.8**
PETK	**Petropavlovsk-**	**15.34**	**285**	P	**Pn**	**09 30 29.0**	**-0.1**
	comp=N,1.2nm,0.9s,baz=90,slow=17,SNR=6.2						
KDAK	**Kodiak Island**	**15.48**	**57**	P	**Pn**	**09 30 31.4**	**+0.5**
	comp=N,7.6nm,0.5s,baz=168,slow=1.5,SNR=32						
KDAK				LR	LR	09 36 04.3	
	comp=N,87nm,18.9s,baz=262,slow=35						
KDAK	**Kodiak Island**	**15.48**	**57**	Pn	**Pn**	**09 30 31.8**	**+0.9**
G16K	**Koyuk River**	**15.77**	**23**	IAmb	IAmb	09 30 41.3	
	comp=Z,14nm,1.4s						
H18K	**Honhosa River**	**16.68**	**28**	P	**P**	**09 30 49.2**	**+2.3**
SPU	**Mount Spurr**	**16.80**	**46**		**Pn**	**09 30 48.1**	**+0.8**
SPU				IAmb	IAmb	09 31 31.6	
	comp=Z,12nm,1.3s						
BRLK	**Bradley Lake**	**16.85**	**51**	Pn	**Pn**	**09 30 46.8**	**-1.2**
STLK	**Strandline Lak**	**17.03**	**45**	IAmb	IAmb	09 30 56.6	
	comp=Z,18nm,1.3s						
SKT	**Skwentna**	**17.36**	**43**		**Pn**	**09 30 54.5**	**+0.3**
SLKM	**Skilak Lake**	**17.40**	**49**		**P**	**09 30 56.2**	**+1.2**
SUA	**Susitna One**	**17.49**	**46**		**P**	**09 30 56.5**	**+0.5**
O22K	**Cooper Landing**	**17.62**	**49**	P	**P**	**09 30 58.7**	**+1.3**
SEW	**Seward**	**17.64**	**50**	P	**Pn**	**09 30 57.6**	**0.0**
F19K	**Shaleruckik Mo**	**18.07**	**25**	IAmb	IAmb	09 31 06.5	
	comp=Z,9.5nm,1.1s						
BILL	**Bilibino**	**18.30**	**340**	P	**Pn**	**09 31 07.1**	**+1.5**
KTH	**Kantishna Hill**	**18.32**	**39**		**P**	**09 31 05.1**	**+0.1**
KTH				IAmb	IAmb	09 31 07.7	
	comp=Z,12nm,1.0s						
TRF	**Thorofare Moun**	**18.52**	**40**	IAmb	IAmb	09 31 12.6	
	comp=Z,9.1nm,0.8s						
IMAR	**Indian Mountai**	**18.66**	**31**	P	**Pn**	**09 31 09.9**	**+0.1**
E19K	**Redstone River**	**18.68**	**24**	P	**Pn**	**09 31 10.3**	**+0.2**
E19K				IAmb	IAmb	09 31 15.2	
	comp=Z,5.1nm,0.7s						
C18K	**Utukok River**	**18.73**	**18**	IAmb	IAmb	09 31 12.3	
	comp=Z,4.8nm,0.7s						
H21K	**Melozitna Rive**	**18.77**	**32**	IAmb	IAmb	09 31 15.2	
	comp=Z,9.3nm,1.1s						
I21K	**Tanana**	**18.77**	**34**	IAmb	IAmb	09 31 13.9	
	comp=Z,10nm,1.0s						
G21K	**Allakaket**	**19.08**	**30**	IAmb	IAmb	09 31 15.7	
	comp=Z,7.6nm,0.7s						
MLY	**Manley**	**19.13**	**35**	IAmb	IAmb	09 31 16.0	
	comp=Z,6.0nm,0.6s						
D19K	**Kuna River**	**19.26**	**22**	IAmb	IAmb	09 31 17.6	
	comp=Z,12nm,1.2s						
C19K	**Lookout Ridge**	**19.44**	**19**	IAmb	IAmb	09 31 22.9	
	comp=Z,9.3nm,1.2s						
NEA2	**Nenana**	**19.53**	**38**	IAmb	IAmb	09 31 23.9	
	comp=Z,7.8nm,1.2s						
F21K	**Alatna River**	**19.55**	**28**	IAmb	IAmb	09 31 21.9	
	comp=Z,5.8nm,0.8s						
DHY	**Denali Highway**	**19.56**	**43**	IAmb	IAmb	09 31 37.4	
	comp=Z,6.5nm,0.8s						
MA2	**Magadan**	**19.57**	**306**	LR	LR	09 38 46.0	
	comp=Z,35nm,18.5s,baz=46,slow=37						
I23K	**Minto, Yukon-K**	**19.69**	**36**	IAmb	IAmb	09 31 41.3	
	comp=Z,16nm,1.4s						
SEY	**Seymchan**	**19.71**	**317**	P	**P**	**09 31 18.1**	**-2.0**
	comp=Z,4.7nm,1.0s,baz=112,slow=11,SNR=22						
CCB	**Clear Creek Bu**	**20.04**	**38**	P	**P**	**09 31 24.3**	**+0.6**
E21K	**Killik River**	**20.25**	**25**	IAmb	IAmb	09 31 29.3	
	comp=Z,7.7nm,1.2s						
G23K	**Bananza Creek**	**20.30**	**32**	IAmb	IAmb	09 31 30.1	
	comp=Z,6.4nm,0.9s						
N25K	**Chitina, Valde**	**20.33**	**48**	P	**P**	**09 31 27.7**	**+0.7**
ILAR	**Eielson Array**	**20.45**	**38**	P	**P**	**09 31 27.6**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=244,slow=8.0,SNR=10						
ILAR				PcP	**PcP**	**09 35 36.6**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=274,slow=2.9,SNR=6.9						
ILAR				ScP	**ScP**	**09 39 05.0**	**-1.3**
	comp=Z,0.9nm,0.7s,baz=281,slow=3.5,SNR=8.8						
	comp=Z,0.6nm,0.6s						
COLD	**Coldfoot**	**20.55**	**30**		**P**	**09 31 29.9**	**+0.7**
COLD				IAmb	IAmb	09 31 34.7	
	comp=Z,5.7nm,1.1s						
E22K	**Anaktuvuk Pass**	**20.63**	**27**		**P**	**09 31 30.9**	**+0.8**
D22K	**Ayikyak River**	**20.89**	**25**	IAmb	IAmb	09 31 36.7	
	comp=Z,6.8nm,0.8s						
B21K	**Ikpikpuk River**	**20.94**	**22**	IAmb	IAmb	09 31 34.7	
	comp=Z,8.4nm,0.8s						
G24K	**Hadweenzic Riv**	**21.15**	**33**	IAmb	IAmb	09 31 41.0	
	comp=Z,8.5nm,0.9s						
E23K	**Chandalar**	**21.22**	**29**	IAmb	IAmb	09 31 43.6	
	comp=Z,8.5nm,1.5s						
D23K	**Nanushuk River**	**21.49**	**26**	IAmb	IAmb	09 31 43.8	
	comp=Z,4.3nm,0.8s						
E24K	**Your Creek**	**21.57**	**29**	IAmb	IAmb	09 31 45.0	
	comp=Z,4.3nm,0.6s						
D24K	**Happy Valley**	**22.12**	**27**	IAmb	IAmb	09 31 50.0	
	comp=Z,7.8nm,1.0s						
F25K	**Christian Rive**	**22.22**	**32**	IAmb	IAmb	09 31 50.1	
	comp=Z,4.4nm,0.9s						
E25K	**Arctic Village**	**22.52**	**31**	P	**P**	**09 31 50.6**	**+0.3**
E25K				IAmb	IAmb	09 31 51.4	
	comp=Z,4.0nm,0.8s						
I28M	**Miner Creek**	**23.43**	**40**	IAmb	IAmb	09 31 59.5	
	comp=Z,5.1nm,1.1s						
E27K	**Coleen River**	**23.85**	**33**	IAmb	IAmb	09 32 04.8	
	comp=Z,3.5nm,0.8s						
K29M	**Barlow Dome**	**24.02**	**44**	IAmb	IAmb	09 32 06.5	
	comp=Z,11nm,1.2s						
I29M	**Ogilvie Camp,**	**24.05**	**40**		**P**	**09 32 04.3**	**-0.6**
I29M				IAmb	IAmb	09 32 06.2	
	comp=Z,7.4nm,1.1s						
F28M	**Old Crow**	**24.21**	**35**		**P**	**09 32 07.0**	**+0.7**
F28M				IAmb	IAmb	09 32 37.9	
	comp=Z,7.4nm,1.4s						
E28M	**Babbage River**	**24.72**	**32**	IAmb	IAmb	09 32 14.9	
	comp=Z,4.2nm,0.8s						
I30M	**Mount Dempster**	**24.80**	**41**	P	**P**	**09 32 10.6**	**-1.3**
I30M				IAmb	IAmb	09 32 13.9	
	comp=Z,5.4nm,1.1s						
A36M	**Sachs Harbour**	**30.40**	**29**	P	**P**	**09 33 01.1**	**-0.4**
H11N2	**WAKE ISLAND Hy**	**34.18**	**207**	T	T	10 10 11.8	
	baz=18,slow=76,SNR=1467						
H11N3	**WAKE ISLAND Hy**	**34.19**	**207**	T	T	10 10 12.6	
	baz=18,slow=76,SNR=1466						
H11N1	**WAKE ISLAND Hy**	**34.20**	**207**	T	T	10 10 09.7	
	baz=18,slow=76,SNR=1588						
YKA	**Yellowknife Ar**	**34.36**	**47**	P	**P**	**09 33 34.9**	**-1.4**
	comp=Z,0.6nm,0.7s,baz=292,slow=9.3,SNR=13						
YKA				PcP	**PcP**	**09 36 10.8**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=294,slow=3.6,SNR=6.5						
	comp=Z,0.6nm,0.7s						
H11S1	**WAKE ISLAND Hy**	**35.40**	**207**	T	T	10 11 27.8	
	baz=17,slow=76,SNR=1343						
H11S2	**WAKE ISLAND Hy**	**35.41**	**207**	T	T	10 11 40.9	
	baz=17,slow=76,SNR=550						
H11S3	**WAKE ISLAND Hy**	**35.41**	**207**	T	T	10 11 41.2	
	baz=17,slow=76,SNR=640						
HLID	**Hailey**	**41.95**	**75**	P	**P**	**09 34 41.6**	**+1.2**
HLID				IAmb	IAmb	09 34 44.0	
	comp=Z,4.5nm,1.4s						
MCMT	**McKenzie Canyo**	**42.19**	**73**	P	**P**	**09 34 42.7**	**+0.2**
NVAR	**Mina Array Bea**	**42.57**	**84**	P	**P**	**09 34 47.5**	**+1.9**
	comp=Z,0.3nm,0.5s,baz=314,slow=6.6,SNR=3.9						
NVAR				pP	**pP**	**09 35 03.7**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=316,slow=7.0,SNR=2.3						
	comp=Z,0.3nm,0.5s						
YHL	**Hebgen Lake**	**43.16**	**72**	P	**P**	**09 34 51.2**	**+0.8**
YHL				IAmb	IAmb	09 34 52.1	
	comp=Z,3.4nm,1.0s						
PDAR	**Pinedale Array**	**45.32**	**73**	P	**P**	**09 35 08.4**	**+0.9**
	comp=Z,3.9nm,0.7s,baz=332,slow=2.7,SNR=63						
PDAR				pP	**pP**	**09 35 25.8**	**-0.6**
	comp=Z,1.6nm,0.8s,baz=306,slow=3.5,SNR=3.9						
	comp=Z,3.9nm,0.7s						
PDAR	**Pinedale Array**	**45.32**	**73**		**P**	**09 35 08.3**	**+0.7**
PFO	**Pinyon Flats O**	**46.80**	**88**	LR	LR	09 51 36.9	
	comp=Z,33nm,20.3s,baz=3.5,slow=32						
HHC	**Hu-ho-hao-te**	**48.54**	**287**	*e*P	**P**	**09 35 33.2**	**+0.7**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,190nm,4.5s						
SPITS	**Spitsbergen Ar**	**50.19**	**356**	P	**P**	**09 35 42.9**	**-1.6**
	comp=Z,3.4nm,0.9s,baz=33,slow=11,SNR=4.8						
	comp=Z,3.4nm,0.9s						
TXAR	**Lajitas Array**	**57.67**	**82**	P	**P**	**09 36 41.0**	**+1.3**
	comp=Z,0.5nm,0.4s,baz=312,slow=6.0,SNR=16						
TXAR				pP	**pP**	**09 36 59.4**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=303,slow=5.3,SNR=5.4						
	comp=Z,0.5nm,0.4s						
BVAR	**Borovoye Array**	**61.31**	**320**	P	**P**	**09 37 01.5**	**-2.8**
	comp=Z,0.9nm,0.3s,baz=17,slow=5.3,SNR=5.6						
	comp=Z,0.9nm,0.3s						
CMAR	**Chiang Mai Arr**	**71.94**	**277**	P	**P**	**09 38 11.9**	**-0.5**
	comp=Z,1.2nm,0.3s,baz=40,slow=6.1,SNR=8.2						
	comp=Z,1.2nm,0.3s						
MLR	**Muntele Rosu**	**81.20**	**344**	LR	LR	10 23 02.0	
	comp=Z,26nm,18.4s,baz=259,slow=42						
WRA	**Warramunga Arr**	**82.87**	**225**	P	**P**	**09 39 13.7**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=34,slow=6.9,SNR=4.8						
	comp=Z,0.4nm,0.6s						
ASAR	**Alice Springs**	**86.33**	**224**	P	**P**	**09 39 31.9**	**+1.3**
	comp=Z,1.1nm,0.8s,baz=28,slow=4.8,SNR=11						
	comp=Z,1.1nm,0.8s						
H03N2	**Juan Fernandez**	**120.29**	**107**	T	T	11 57 29.2	
	baz=317,slow=77,SNR=33						
H03N1	**Juan Fernandez**	**120.31**	**107**	T	T	11 57 19.9	
	baz=317,slow=77,SNR=49						
H03N3	**Juan Fernandez**	**120.31**	**107**	T	T	11 57 29.4	
	baz=317,slow=77,SNR=47						
BOSA	**Boshof**	**151.49**	**315**	PKPbc	**PKPbc**	**09 46 42.2**	**0.0**
	comp=Z,1.8nm,0.6s,baz=18,slow=3.5,SNR=9.1						

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*CATAC **02** 09:48:42.7±0.2, 12°N±2°×8°7W±°, h46km±3km, M3.5/36, MLv3.5/36, Error ellipse: s-maj=4.5km s-min=1.9km az=42.1, confirmed*
*SNET **02** 09:48:43.1±1.0, 12.°05N×86.°96W, h37km, ML3.0, Presumed earthquake*
ISC 02 09:48:42.6±1.3**, 12.°03N**±0.°04×**86.°94W**±0.°04**, h68**km±9km**, n46, σ0.s60**/75**, 4C-8D, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.37**	**66**	⇓P	**Pn**	**09 48 53.6**	**-0.5**
LEVN	**Ruinas Leon Vi**	**0.49**	**40**	⇓P	**Pn**	**09 48 55.0**	**-0.2**
LEVN				S	**Sn**	**09 49 04.9**	**+0.6**
MACN	**El Madrono**	**0.51**	**31**	⇓P	**Pn**	**09 48 55.2**	**-0.2**
CNGN	**Cerro Negro**	**0.53**	**26**	⇑P	**Pn**	**09 48 55.5**	**-0.1**
CNGN				S	**Sn**	**09 49 05.9**	**+0.8**
AMTN	**Mateare**	**0.54**	**67**	P	**Pn**	**09 48 55.6**	**0.0**
AMTN				S	**Sn**	**09 49 05.6**	**+0.4**
SAPS	**Ciudad Sandino**	**0.54**	**75**	⇓P	**Pn**	**09 48 55.4**	**-0.2**
SAPS				S	**Sn**	**09 49 05.7**	**+0.5**
ILCN	**San Idelfonso**	**0.60**	**23**	P	**Pn**	**09 48 54.3**	**-1.9**
ILCN				S	**Sn**	**09 49 05.0**	**-1.2**
APYN	**Apoyeque**	**0.61**	**70**	P	**Pn**	**09 48 56.5**	**0.0**
APYN				S	**Sn**	**09 49 07.2**	**+0.6**
APQ2	**Apoyeque**	**0.62**	**74**	P	**Pn**	**09 48 56.5**	**0.0**
APQ2				S	**Sn**	**09 49 07.3**	**+0.5**
POLN	**Al Sur del Vol**	**0.63**	**11**	P	**Pn**	**09 48 56.8**	**+0.1**
POLN				S	**Sn**	**09 49 07.5**	**+0.5**
UNAN	**Cigeo UNAN**	**0.66**	**82**	⇓P	**Pn**	**09 48 56.9**	**-0.1**
UNAN				S	**Sn**	**09 49 07.8**	**+0.4**
ALLN	**Telcor Managua**	**0.66**	**79**	S	**Sn**	**09 49 08.2**	**+0.7**
TISN	**Laguna Tiscapa**	**0.67**	**80**	⇓P	**Pn**	**09 48 54.9**	**-2.1**
MGAN	**Managua**	**0.69**	**80**	P	**Pn**	**09 48 57.1**	**-0.1**
MGAN				S	**Sn**	**09 49 08.5**	**+0.5**
MAS3	**Al N del Volca**	**0.75**	**90**	⇓P	**Pn**	**09 48 57.7**	**-0.2**
MAS3				S	**Sn**	**09 49 09.4**	**+0.1**
AERN	**Aeropuerto Man**	**0.76**	**81**	P	**Pn**	**09 48 58.3**	**+0.2**
AERN				S	**Sn**	**09 49 09.8**	**+0.2**
MASN	**Masaya**	**0.77**	**93**	P	**Pn**	**09 48 58.2**	**0.0**
MASN				S	**Sn**	**09 49 10.0**	**+0.2**
NANN	**Nandasmo**	**0.81**	**96**	⇓P	**Pn**	**09 48 59.5**	**+0.8**
NANN				S	**Sn**	**09 49 11.2**	**+0.7**
CSGN	**Cosiguina Volc**	**1.12**	**327**	⇑P	**Pn**	**09 49 02.9**	**+0.3**
CSGN				S	**Sn**	**09 49 16.6**	**-1.0**
LIMN	**Finca el Limon**	**1.17**	**28**	⇑P	**Pn**	**09 49 03.2**	**-0.1**
LIMN				S	**Sn**	**09 49 18.3**	**-0.4**
MATN	**Matagalpa**	**1.34**	**48**	P	**Pn**	**09 49 04.4**	**-1.0**
MATN				S	**Sn**	**09 49 21.7**	**-0.9**
CNCH	**Conchagua**	**1.52**	**325**	P	**Pn**	**09 49 07.6**	**-0.3**
CNCH	**Conchagua**	**1.52**	**325**	*e*P	**Pn**	**09 49 07.8**	**-0.1**
CNCH				*e*S	**Sn**	**09 49 26.9**	**0.0**
LCND	**La Caada**	**1.58**	**324**	*e*S	**Sn**	**09 49 27.5**	**-0.7**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CARN	Rivas	1.62	121	P	Pn	09 49 09.3	+0.2
CARN				S	Sn	09 49 28.7	-0.5
RCON	San Juan de Ri	1.64	28	P	Pn	09 49 10.0	+0.5
RCPN	Sur Rio San Ju	1.71	29	P	Pn	09 49 11.0	+0.6
RCVN	Varillal2	1.71	25	⇑P	Pn	09 49 10.9	+0.4
RCVN				S	Sn	09 49 31.6	+0.1
ACON	Acoyapa	1.73	92	P	Pn	09 49 10.3	-0.3
ELI1	Hacienda Flor	1.93	135	P	Pn	09 49 13.4	+0.1
ELI1				S	Sn	09 49 36.6	0.0
PACA	Pacayal	1.97	317	P	Pn	09 49 14.6	+0.6
PACA				S	Sn	09 49 37.4	-0.4
PACA	Pacayal	1.97	317	*i* P	Pn	09 49 14.5	+0.6
TGUH	Tegucigalpa,Un	2.05	351	P	Pn	09 49 15.6	+0.6
TGUH				S	Sn	09 49 39.4	-0.2
TECA	Tecapa	2.11	314	*i* P	Pn	09 49 16.8	+0.9
TECO	Alcaldia de Te	2.34	310	S	Sn	09 49 46.2	-0.4
SCLA	Alcaldia de Sa	2.41	314	P	Pn	09 49 20.2	+0.3
SCLA				S	Sn	09 49 48.7	+0.4
COEG	Centro de Oper	2.47	310	P	Pn	09 49 20.6	-0.1
COEG	Centro de Oper	2.47	310	*e*P	Pn	09 49 20.5	-0.1
COEG				*e*S	Sn	09 49 49.6	-0.2
CMARA	Lajas Hojancha	2.49	143	P	Pn	09 49 20.8	-0.1
CMARA				S	Sn	09 49 49.1	-1.1
PAVA	Las Pavas	2.57	311	S	Sn	09 49 52.1	-0.3
JTS	Las Juntas de	2.60	131	P	Pn	09 49 22.4	0.0
P5NO	Presa 5 de nov	2.63	318	S	Sn	09 49 54.4	+0.7
SIUN	Universidad Ur	2.70	51	P	Pn	09 49 23.8	+0.1
JAYA	Jayaque - finc	2.94	304	P	Pn	09 49 27.7	+0.6
JAYA				S	Sn	09 50 00.4	-0.9
JAYA	Jayaque - finc	2.94	304	*e*P	Pn	09 49 27.9	+0.8
JAYA				*e*S	Sn	09 50 01.4	+0.1
NUBE	Las Nubes	3.34	304	P	Pn	09 49 32.4	-0.2
NUBE				S	Sn	09 50 10.9	-0.3

RSNC 02 09:54:35.8±0.7**,3°S**±7°×**7°7W**±°**,h77**km±54km**,M3.1,mb4.0, ML2.7,MLv3.6,Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COHC	Cochancay	2.73	271	P	Pn	09 55 18.3	+0.8
COHC				S	Sn	09 55 50.0	+0.5
CASC	Dorado de Casc	2.74	343	P	Pn	09 55 17.4	-0.4
PTLC	Puerto Leguiza	3.16	33	P	Pn	09 55 22.9	-0.5
MCRA	Macar, Loja	3.90	241	P	Pn	09 55 33.4	0.0
MCRA				S	Sn	09 56 18.5	+0.4
FLOC	Florencia	4.15	12	P	Pn	09 55 36.8	0.0
PPLP	Puerto Lpez	4.36	282	P	Pn	09 55 36.7	-2.9
BBAC	Balboa, Cauca	4.55	351	P	Pn	09 55 39.4	-3.1
GARC	Garzon, Huila	4.77	12	P	Pn	09 55 45.2	-0.3
POPC	Popayan, Colom	5.01	358	P	Pn	09 55 48.8	+0.1
	0.0nm18nm,0.9s						
MACC	Macarena, Meta	5.33	30	P	Pn	09 55 52.6	-0.4
	0.1nm18nm,0.6s						
JAMC	Jamundi, Valle	5.68	358	P	Pn	09 55 55.4	-2.5
	5.3nm,0.8s						
URMC	La Uribe, Meta	6.10	21	P	Pn	09 56 03.4	-0.1
PRAC	Prado	6.38	15	P	Pn	09 56 07.3	-0.1

NOU 02 10:21:26.1,18°.47S×**170°.42E,h0**km**,MLv3.9**/8**,Vanuatu Islands,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INH	Isangel	1.52	225	P	Pn	10 21 53.4	-1.2
RTV	Rentapao	2.01	289	P	Pn	10 22 01.5	+0.2
DVP	Devils Point	2.25	289	P	Pn	10 22 05.0	+0.4
MARNC	Mare, Loyalty	3.75	216	P	Pn	10 22 24.5	-0.7
OUENC	Ouen Island, N	5.17	220	P	Pn	10 22 45.5	+0.8
DZM	Mont Dzumac	5.17	226	P	Pn	10 22 44.3	-0.6
ONTNC	Ouen Toro	5.33	224	P	Pn	10 22 47.4	+0.4

IDC 02 10:34:50.1±8.8**,48°.54S**×**122°.87E,h0**km**,mb3.4**/1**, mbtmp3.4**/1**,MS3.1**/3**,Error ellipse: s-maj=718.8km s-min=74.9km az=103.0,Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	Cape Leeuwin H	15.09	331	T	T	10 55 18.9	
	baz=159,slow=79,SNR=6.9						
H01W2	Cape Leeuwin H	15.09	331	T	T	10 55 18.1	
	baz=159,slow=79,SNR=7.5						
H01W3	Cape Leeuwin H	15.11	331	T	T	10 55 19.8	
	baz=159,slow=79,SNR=7.3						
STKA	Stephens Creek	21.85	47	LR	LR	10 46 50.8	
	comp=Z,46nm,18.1s,baz=207,slow=33						
ASAR	Alice Springs	26.32	23	P	P	10 40 27.9	+0.3
	0.6nm,0.8s,baz=202,slow=9.3,SNR=4.6						
ASAR				LR	LR	10 49 49.2	
	comp=Z,39nm,20.5s,baz=126,slow=34						
	0.6nm,0.8s						
CTA	Charters Tower	34.06	42	LR	LR	10 54 46.2	
	comp=Z,37nm,19.7s,baz=238,slow=35						
TXAR	Lajitas Array	139.77	101	PKP	PKPdf	10 54 19.5	-0.3
	0.6nm,1.1s,baz=195,slow=5.5,SNR=3.8						
YKA	Yellowknife Ar	145.87	44	PKPbc	PKPdf	10 54 28.9	-0.5
	0.3nm,0.7s,baz=279,slow=4.4,SNR=6.8						

*IDC **02** 10:56:03.4±1.6,37°.64N×20°.61E,h0km,mb3.6/4, mbtmp3.6/4,Error ellipse: s-maj=69.1km s-min=28.6km az=129.0*
*ATH **02** 10:56:05.8,37°.65N×20°.32E,h14km±3km,ML3.3/24, Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*
*THE **02** 10:56:06.0,38°N±1°×2°0E±°,h0km±1km,M3.2/26, MLh3.2/26*
ISC 02 10:56:05.9±1.4**,37°.64N**±0°.04×**20°.35E**±0°.05**,h15**km±8km**, n70,**σ**0s92**/104**,mb3.7**/3**,Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORTH	Orthonies,Zaky	0.35	53	P	Pb	10 56 13.7	-0.1
ORTH				S	Sg	10 56 18.0	+0.1
ORTH	Orthonies,Zaky	0.35	53	P	Pb	10 56 13.7	-0.1
ORTH				S	Sg	10 56 18.5	+0.6
LTHK	Lithakia	0.40	80	P	Pg	10 56 13.3	-0.5
LTHK				S	Sg	10 56 18.4	-0.9
LTHK	Lithakia	0.40	80	P	Pg	10 56 13.4	-0.5
LTHK				S	Sg	10 56 19.1	-0.2
KYPS	Kipseli, Zakin	0.42	65	P	Pg	10 56 14.2	-0.1
KYPS				S	Sg	10 56 20.6	+0.6
ZAK2	Zakynthos	0.46	71	P	Pg	10 56 15.2	+0.1
ZAK2				S	Sb	10 56 22.4	0.0
KFL1	Kefalonia,Entr	0.54	13	P	Pg	10 56 16.2	-0.3
KFL1				S	Sg	10 56 24.0	+0.3
ARG2	Argostoli	0.55	12	P	Pg	10 56 15.7	-1.0
ARG2				S	Sg	10 56 23.5	-0.5
ARG2	Argostoli	0.55	12	P	Pg	10 56 15.8	-0.9
ARG2				S	Sg	10 56 24.4	+0.4
RTZL	Ratzakli, Kefa	0.55	38	P	Pg	10 56 16.3	-0.4
RTZL				S	Sg	10 56 23.9	-0.2
RTZL	Ratzakli, Kefa	0.55	38	P	Pg	10 56 16.4	-0.3
RTZL				S	Sg	10 56 24.6	+0.5
VLS	Valsamata	0.57	20	P	Pg	10 56 16.6	-0.5
VLS				S	Sg	10 56 24.1	-0.6
VLS	Valsamata	0.57	20	P	Pg	10 56 16.3	-0.8
VLS				S	Sg	10 56 24.7	0.0
DMLN	Damoulianata-K	0.60	2	P	Pg	10 56 17.3	-0.3
DMLN				S	Sg	10 56 25.9	+0.3
DMLN	Damoulianata-K	0.60	2	P	Pg	10 56 17.4	-0.2
DMLN				S	Sg	10 56 26.1	+0.5
CLEM	Kyllini,Ilia,G	0.67	68	P	Pg	10 56 19.2	+0.2
CLEM				S	Sb	10 56 28.5	0.0
LCHA	Lechaina	0.79	68	P	Pb	10 56 21.4	+0.2
LCHA				S	Sb	10 56 32.1	+0.4
VSK1	VASILIKIADES	0.79	13	P	Pg	10 56 20.2	-0.9
VSK1				S	Sg	10 56 31.2	-0.3
FSK	Fiskardo	0.83	12	P	Pg	10 56 21.2	-0.9
FSK				S	Sg	10 56 32.1	-0.9
FSK	Fiskardo	0.83	12	P	Pg	10 56 21.2	-0.9
FSK				S	Sg	10 56 32.5	-0.6
RLS	Riolos of Patr	0.98	65	P	Pg	10 56 23.8	-1.0
RLS				S	Sg	10 56 37.7	0.0
RLS	Riolos of Patr	0.98	65	P	Pg	10 56 24.0	-0.8
RLS				S	Sg	10 56 37.6	0.0
AXS	Araxos	0.99	55	P	Pg	10 56 23.9	-1.1
AXS	Araxos	0.99	55	P	Pg	10 56 24.0	-0.9
AXS				S	Sg	10 56 37.4	-0.4
EVGI	Lefkada island	1.01	14	P	Pg	10 56 24.3	-1.1
EVGI	Lefkada island	1.01	14	P	Pg	10 56 24.4	-0.9
EVGI				S	Sg	10 56 38.0	-0.5
ZARO	Zacharo	1.05	98	P	Pb	10 56 26.1	+0.4
ZARO				S	Sb	10 56 39.8	+0.6
DRAG	Dragano-Lefkad	1.06	10	P	Pg	10 56 25.3	-1.0
DRAG	Dragano-Lefkad	1.06	10	P	Pg	10 56 25.2	-1.1
DRAG				S	Sg	10 56 39.6	-0.5
AMT	Artemida-Makis	1.09	95	P	Pg	10 56 25.7	-1.2
AMT				S	Sb	10 56 42.8	+2.3
AMT	Artemida-Makis	1.09	95	P	Pg	10 56 26.0	-0.9
AMT				S	Sg	10 56 40.9	-0.2
NYDR	Nydri-Lefkada	1.11	14	P	Pg	10 56 25.9	-1.3
NYDR	Nydri-Lefkada	1.11	14	P	Pg	10 56 26.4	-0.9
NYDR				S	Sg	10 56 40.9	-0.7
DRO	Drossia	1.12	74	P	Pg	10 56 26.7	-0.8
DRO	Drossia	1.12	74	P	Pg	10 56 26.8	-0.8
DRO				S	Sb	10 56 42.3	+0.7
LKD2	Lefkada island	1.17	12	P	Pg	10 56 27.1	-1.4
LKD2	Lefkada island	1.17	12	P	Pg	10 56 27.4	-1.1
LKD2				S	Sg	10 56 43.4	-0.4
TSLK	Tsoukalades, L	1.21	12	P	Pg	10 56 28.3	-0.8
TSLK	Tsoukalades, L	1.21	12	P	Pg	10 56 28.4	-0.8
TSLK				S	Sg	10 56 42.7	-2.2
PATC	Patra C	1.28	60	P	Pg	10 56 30.1	-0.5
PYL1	Pylos	1.30	124	P	Pg	10 56 30.5	-0.3
PYL1				S	Sg	10 56 47.0	-0.7
UPR	University Cam	1.31	60	P	Pn	10 56 32.1	+2.4
UPR	University Cam	1.31	60	P	Pb	10 56 31.0	+0.8
UPR				S	Sg	10 56 46.6	-1.5
RIOA	Rio	1.32	60	P	Pg	10 56 30.5	-0.7
AGRP	Agrapidokambos	1.32	55	P	Pg	10 56 30.3	-1.0
PYL	PYLOS	1.34	123	P	Pg	10 56 30.4	-1.2
ITM	Ithomi	1.34	110	P	Pg	10 56 30.8	-0.9
ITM	Ithomi	1.34	110	P	Pg	10 56 30.6	-1.1
PVO	Paravola	1.35	43	P	Pg	10 56 30.8	-1.0
PVO	Paravola	1.35	43	P	Pg	10 56 30.9	-0.9
MALA	Malamata, Dori	1.42	58	P	Pn	10 56 31.6	+0.4
ZIRI	Ziria, Aigiali	1.43	62	P	Pn	10 56 31.7	+0.4
AMPL	Ampelaki	1.45	28	P	Pn	10 56 33.2	+1.6
AMPL	Ampelaki	1.45	28	P	Pn	10 56 32.5	+0.9
EFP	Efpalio	1.46	57	P	Pn	10 56 32.0	+0.3
EFP	Efpalio	1.46	57	P	Pn	10 56 32.4	+0.6
MG00	Magoula, Dorid	1.48	58	P	Pn	10 56 33.0	+0.9
KLV	Kalavryta, Ach	1.48	74	P	Pn	10 56 33.0	+0.8
KLV	Kalavryta, Ach	1.48	74	P	Pn	10 56 32.8	+0.7
AGEO	AgiosGiorgios,	1.50	65	P	Pn	10 56 32.6	+0.4
SERG	Sergoula	1.56	60	P	Pn	10 56 34.2	+1.1
ANX	Ano Chora	1.56	52	P	Pn	10 56 34.0	+0.7
GUR	Goura	1.61	79	P	Pb	10 56 36.0	+0.7
AGG	Agios Georgios	2.08	48	P	Pn	10 56 42.2	+1.9
THL	Klokotos Trika	2.32	34	P	Pn	10 56 46.2	+2.6
OHR	Ohrid	3.48	6	*i* Pn	Pg	10 57 13.0	+0.4
FINES	FINESS Array B	24.10	7	P	P	11 01 19.9	-0.7
	1.7nm,0.7s,baz=181,slow=10.0,SNR=4.5						
	1.7nm,0.7s						
TORD	Torodi Ar. Bea	29.53	219	P	P	11 02 10.8	+0.9
	0.5nm,0.9s,baz=21,slow=7.3,SNR=1.9						
	0.5nm,0.9s						
MKAR	Makanchi Array	45.70	58	P	P	11 04 23.9	-2.3
	0.3nm,0.6s,baz=282,slow=7.0,SNR=4.7						
	0.3nm,0.6s						
ZALV	Zalesovo Beam	46.15	48	P	P	11 04 28.7	-0.9
	0.9nm,0.5s,baz=274,slow=8.4,SNR=4.6						
	0.9nm,0.5s						

*IDC **02** 11:46:00.4±1.1,5°.14S×126°.31E,h459km±14km,mb3.5/11, mbtmp4.5/17,Error ellipse: s-maj=17.7km s-min=10.1km az=58.0*
*NEIC **02** 11:46:00.3±1.9,5°.11S±0°.09×126°.35E±0°.10,h449km±7km, mb4.4/54,Error ellipse: s-maj=14.5km s-min=12.2km az=58.0*
*DJA **02** 11:46:01.4±0.4,5°S±3°×12°6E±°,h410km±5km,M4.6/24, mB5.1/8,mb4.8/10,MLv4.7/24,Mw(mB)4.5/8*
ISC 02 11:45:59.8±0.4**,5°.12S**±0°.05×**126°.35E**±0°.05**,h450**km**,n125,** σ**1s08**/132**,mb4.3**/36**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	Namlea	2.01	22	P	P	11 46 59.0	-1.4
NLAI				S	S	11 47 45.5	-4.0
AAI	Ambon	2.32	52	P	P	11 47 01.8	-0.5
KRAI	Karang Ratu	2.71	49	P	P	11 47 03.6	-1.2
KRAI				S	S	11 47 52.5	-5.0
SANI	Sanana	3.07	353	P	P	11 47 07.0	-0.4
SANI				S	S	11 48 01.9	-0.4
SANI	Sanana	3.07	353	S	S	11 48 01.9	-0.4
SANI	Sanana	3.07	353	P	P	11 47 06.1	-1.3
BNDI	Bandanaira	3.59	81	P	P	11 47 11.0	-0.5
BNDI				S	S	11 48 09.6	-0.1
BNDI	Bandanaira	3.59	81	S	S	11 48 09.6	-0.1
BNDI	Bandanaira	3.59	81	P	P	11 47 10.0	-1.5
KDI	Kendari	3.90	287	P	P	11 47 12.3	-1.8
KKSI	Kolaka, Sulawe	4.78	281	P	P	11 47 20.3	-1.8
SOEI	Soe	5.05	204	P	P	11 47 25.8	+0.9
MMRI	Maumere	5.38	229	P	P	11 47 27.1	-0.8
LUWI	Luwuk	5.40	318	P	P	11 47 28.8	+0.6
SAUI	Saumlaki	5.68	120	P	P	11 47 32.2	+1.3
SAUI				S	S	11 48 44.9	-0.3
SAUI	Saumlaki	5.68	120	S	S	11 48 44.9	-0.3
SAUI	Saumlaki	5.68	120		P	11 47 32.0	+1.1
SAUI	Saumlaki	5.68	120	P	P	11 47 31.8	+0.9
	635nm,0.7s						
BATI	Baumata	5.71	208	P	P	11 47 32.6	+1.4
	16nm,0.3s,baz=152,slow=2.5,SNR=7.4						
BATI				S	S	11 48 44.1	-1.8
	67nm,0.5s,baz=171,slow=23,SNR=11						
TNTI	Ternate	5.94	10	P	P	11 47 33.8	+0.2
TNTI	Ternate	5.94	10		P	11 47 33.8	+0.2
TNTI	Ternate	5.94	10	P	P	11 47 34.2	+0.6
	0.2nm84nm,1.0s						
SIJI	Sorong	6.47	49	P	P	11 47 40.0	+0.9
	46nm,0.3s,baz=261,slow=23,SNR=63						
SIJI				S	S	11 49 00.1	0.0
	44nm,0.5s,baz=83,slow=23,SNR=10						
SIJI	Sorong	6.47	49	P	P	11 47 39.3	+0.2
	0.5nm5μm58nm,0.6s						
SWI	Sorong	6.47	49	P	P	11 47 39.8	+0.8
	0.6nm2μm104nm,0.6s						
KAPI	Kappang	6.58	271	P	P	11 47 41.2	+1.1
	14nm,0.6s,baz=95,slow=4.2,SNR=9.0						
KAPI	Kappang	6.58	271		P	11 47 41.5	+1.4
GTOI	Gorontalo	6.62	330	P	P	11 47 42.2	+1.6
TOLI2	Tolitoli	8.32	318	P	P	11 47 59.6	+0.9
AUDHS	Darwin High Sc	8.51	149	P	P	11 48 01.3	+0.5
DRS	Darwin Rock St	8.54	149	P	P	11 48 01.7	+0.6
MTN	Manton Dam	9.01	149	P	P	11 48 06.5	+0.3
KNRA	Kununurra	10.76	167		P	11 48 26.1	+0.9
JAGI	Jajag, Banyuwa	12.56	254	P	P	11 48 43.5	-1.4
FITZ	Fitzroy Crossi	12.92	183	P	P	11 48 48.2	-0.4
	3.7nm,0.3s,baz=8.7,slow=10,SNR=18						
KKM	Kota Kinabalu	15.02	317	P	P	11 49 13.8	+2.5
SBUM	Sibu	16.00	298	P	P	11 49 21.2	-0.5
SBUM	Sibu	16.00	298		P	11 49 25.7	+4.0
SBUM				IAmb	IAmb	11 49 26.1	
	comp=Z,6.6nm,0.8s						
WB0	Warramunga Arr	16.53	152		P	11 49 26.1	-1.1
WRAB	Tennant Creek	16.66	153	P	P	11 49 27.8	-0.7
WRAB	Tennant Creek	16.66	153	P	P	11 49 27.9	-0.7
WRA	Warramunga Arr	16.66	153	P	P	11 49 27.5	-1.0
	comp=Z,24nm,0.5s,baz=331,slow=10,SNR=161						
WRA				S	S	11 52 19.2	-1.9
	comp=Z,5.5nm,0.8s,baz=324,slow=20,SNR=9.5						
WRA	Warramunga Arr	16.66	153		P	11 49 26.2	-2.4
WR8	Warramunga Arr	16.74	152	P	P	11 49 28.5	-1.0
PSA00	Pilbara Seismi	17.53	201	P	P	11 49 37.8	0.0
PSA00				IAmb	IAmb	11 49 55.3	
	comp=Z,13nm,1.1s						
BBJI	Bungbulang	18.73	262	P	P	11 49 49.7	-0.1
BBJI				IAmb	IAmb	11 49 51.1	
	comp=Z,11nm,0.6s						
COEN	Coen	18.75	119		P	11 49 49.3	-0.6
COEN				IAmb	IAmb	11 49 50.3	
	comp=Z,12nm,0.8s						
AS31	Alice Springs	19.82	159		P	11 49 59.8	+0.1
AS31				IAmb	IAmb	11 50 00.9	
	comp=Z,13nm,0.7s						
ASAR	Alice Springs	19.82	159	P	P	11 49 59.5	-0.1
	comp=Z,17nm,0.3s,baz=337,slow=8.4,SNR=451						
ASAR				S	S	11 53 14.5	-0.7
	comp=Z,2.9nm,0.8s,baz=350,slow=24,SNR=7.5						
ASAR				ScP	ScP	11 56 48.8	-0.8
	comp=Z,1.5nm,0.6s,baz=347,slow=2.2,SNR=7.4						
ASAR	Alice Springs	19.82	159		P	11 49 59.8	+0.1
QIS	Mount Isa	20.03	141	P	P	11 50 01.8	+0.2
PMG	Port Moresby	21.07	103	P	P	11 50 11.7	+0.5
	comp=Z,14nm,0.7s,baz=259,slow=16,SNR=16						
	comp=Z,14nm,0.7s						
PMG	Port Moresby	21.07	103	P	P	11 50 12.2	+1.1
PMG	Port Moresby	21.07	103	P	P	11 50 12.3	+1.1
PMG	Port Moresby	21.07	103		P	11 50 11.6	+0.5
MYKOM	Kota Tinggi	23.50	286	P	P	11 50 34.0	+0.9
MYKOM				IAmb	IAmb	11 50 34.7	
	comp=Z,11nm,0.6s						
CTAO	Charters Tower	24.42	129	P	P	11 50 41.8	+0.6
CTAO				IAmb	IAmb	11 51 04.5	
	comp=Z,15nm,1.5s						
FORT	Forrest	25.57	177	P	P	11 50 51.2	-0.1
FORT				IAmb	IAmb	11 50 52.0	
	comp=Z,11nm,0.8s						
MORW	Morawa	25.74	201	P	P	11 50 52.3	-0.6
MORW				IAmb	IAmb	11 50 54.5	
	comp=Z,22nm,1.3s						
INKA	Innaminka	26.34	150		P	11 50 58.8	+0.7
IPM	Ipoh	27.04	290	P	P	11 51 03.9	-0.7
IPM				IAmb	IAmb	11 51 05.7	
	comp=Z,11nm,1.1s						
KULM	Kulim	27.67	292	P	P	11 51 10.3	+0.2
KULM				IAmb	IAmb	11 51 10.7	
	comp=Z,14nm,0.7s						
TPUB	Ta-pu	28.80	349	P	P	11 51 19.0	-0.8
NWAO	Narrogin (SRO)	28.95	196	P	P	11 51 20.8	-0.2
BBOO	Buckleboo	29.00	163	P	P	11 51 21.3	-0.2
BBOO				IAmb	IAmb	11 51 43.4	
	comp=Z,31nm,1.4s						
HKPS	Hong Kong Po S	29.74	337	P	P	11 51 28.4	+0.4
STKA	Stephens Creek	30.21	154	P	P	11 51 32.3	+0.2
	comp=Z,12nm,0.3s,baz=333,slow=8.3,SNR=35						
	comp=Z,12nm,0.3s						
STKA	Stephens Creek	30.21	154	P	P	11 51 32.4	+0.4
STKA	Stephens Creek	30.21	154		P	11 51 32.5	+0.4
CMSA	Cobar Meteorol	31.93	148	P	P	11 51 47.3	+0.3
HNR	Honiara	33.59	99	P	P	11 51 59.3	-2.0
ARMA	Armidale	34.64	140	P	P	11 52 10.6	+0.4
ARMA				IAmb	IAmb	11 52 14.8	
	comp=Z,17nm,1.3s						
CM31	Chiang Mai Arr	35.77	312	P	P	11 52 20.3	+0.7
CMAR	Chiang Mai Arr	35.77	312	P	P	11 52 20.0	+0.4
	comp=Z,3.7nm,0.3s,baz=137,slow=7.1,SNR=29						
	comp=Z,3.7nm,0.3s						
CMAR	Chiang Mai Arr	35.77	312	P	P	11 52 19.8	+0.1
CHTO	Chiang Mai	35.99	312	P	P	11 52 22.0	+0.6
CHTO	Chiang Mai	35.99	312		P	11 52 22.1	+0.7
CHTO				IAmb	IAmb	11 52 22.6	
	comp=Z,7.8nm,0.7s						
ENH	Enshi	38.72	336	P	P	11 52 44.4	+0.6
SANVU	Saraoutou	41.41	108	P	P	11 53 07.0	+1.2
SANVU				IAmb	IAmb	11 53 24.0	
	comp=Z,20nm,1.1s						
DZM	Mont Dzumac	42.27	117	P	P	11 53 13.3	+0.6
KSRS	Korea Array	42.38	2	P	P	11 53 13.4	+0.3
	comp=Z,1.5nm,0.7s,baz=190,slow=8.9,SNR=3.3						
	comp=Z,1.5nm,0.7s						
OUENC	Ouen Island, N	42.73	118	P	P	11 53 17.2	+1.1
OUENC				IAmb	IAmb	11 53 25.6	
	comp=Z,15nm,1.2s						
LSA	Lhasa	48.36	318	P	P	11 53 57.4	-2.5
LSA				pmax	pmax		
	comp=Z,12nm,0.6s						
USRK	Ussuriysk Ar.	49.36	5	P	P	11 54 06.8	+0.4
	comp=Z,1.4nm,0.5s,baz=193,slow=6.7,SNR=4.9						
	comp=Z,1.4nm,0.5s						
EVN	Everest	50.34	313	P	P	11 54 15.3	+0.4
EVN				IAmb	IAmb	11 54 15.6	
	comp=Z,12nm,0.6s						
ULN	Ulaanbaatar	55.43	344	P	P	11 54 51.4	+0.9
SONM	Songino Array	55.58	344	P	P	11 54 50.9	-0.6
	comp=Z,1.4nm,0.5s,baz=169,slow=7.3,SNR=8.1						
	comp=Z,1.4nm,0.5s						
SONM	Songino Array	55.58	344	P	P	11 54 51.7	+0.2
TUWZ	Tuamarina	55.70	138	P	P	11 54 52.9	+0.6
BKZ	Black Stump Fm	56.49	134	P	P	11 54 58.2	+0.2
PEA0B	Petropavlovsk-	63.76	20	P	P	11 55 45.4	-0.8
PEA0B				IAmb	IAmb	11 55 46.4	
	comp=Z,8.9nm,1.2s						
PETK	Petropavlovsk-	63.76	20	P	P	11 55 47.4	+1.2
	comp=Z,0.3nm,0.4s,baz=212,slow=6.5,SNR=1.6						
	comp=Z,0.3nm,0.4s						
PETK	Petropavlovsk-	63.76	20	P	P	11 55 45.8	-0.3
KSH2	Kashi	64.28	318	P	P	11 55 49.5	-0.5
KSH2				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MKAR	Makanchi Array	64.70	328	P	P	11 55 52.1	-0.2
	comp=Z,3.8nm,0.5s,baz=120,slow=7.9,SNR=89						
	comp=Z,3.8nm,0.5s						
MKAR	Makanchi Array	64.70	328		P	11 55 52.2	-0.1
KDJ	Kajisay	64.84	322	P	P	11 55 53.8	+0.3
MAKZ	Makanchi	64.88	328		P	11 55 53.5	+0.1
MAKZ				IAmb	IAmb	11 55 54.3	
	comp=Z,8.2nm,1.4s						
ARSB	Arslanbob	67.09	319	P	P	11 56 08.3	+0.7
ARSB				IAmb	IAmb	11 56 08.5	
	comp=Z,4.6nm,0.7s						
GAR	Garm	67.79	316		P	11 56 11.8	-0.1
GAR				IAmb	IAmb	11 56 13.1	
	comp=Z,7.6nm,0.8s						
ZAA0	Zalesovo Array	68.33	335		P	11 56 14.1	-0.6
ZALV	Zalesovo Beam	68.33	335	P	P	11 56 14.0	-0.7
	comp=Z,2.1nm,0.5s,baz=116,slow=4.4,SNR=13						
	comp=Z,2.1nm,0.5s						
ZALV	Zalesovo Beam	68.33	335		P	11 56 13.6	-1.1
KURBB	Kurchatov Arra	69.04	330	P	P	11 56 18.6	-0.5
	comp=Z,2.6nm,0.8s,baz=133,slow=5.2,SNR=18						
	comp=Z,2.6nm,0.8s						
KURK	Kurchatov	69.06	330	P	P	11 56 18.8	-0.4
BVAR	Borovoye Array	74.57	329	P	P	11 56 51.0	-0.5
	comp=Z,1.8nm,0.6s,baz=130,slow=8.7,SNR=11						
	comp=Z,1.8nm,0.6s						
BORK	Borovoye	74.61	329	P	P	11 56 51.8	+0.1
VNDA	Vanda	74.76	172	P	P	11 56 52.2	+0.1
VNDA				IAmb	IAmb	11 57 20.6	
	comp=Z,18nm,1.4s						
VOI	Vohitsoka	78.43	249	P	P	11 57 13.0	-0.6
AB31	Akbulak array	78.80	322	P	P	11 57 15.0	+0.1
ABKAR	Akbulak array	78.80	322	P	P	11 57 14.9	0.0
L16K	Owhat River	87.05	27	P	P	11 57 56.6	+0.5
L16K				IAmb	IAmb	11 58 18.5	
	comp=Z,7.1nm,1.4s						
P18K	Big Mountain,	88.50	30	P	P	11 58 02.8	-0.3
P18K				IAmb	IAmb	11 58 04.1	
	comp=Z,8.7nm,1.1s						
G18K	Tagagawik	88.56	23	P	P	11 58 03.2	0.0
G18K				IAmb	IAmb	11 58 10.0	
	comp=Z,6.6nm,1.4s						
I23K	Minto, Yukon-K	92.20	25	P	P	11 58 20.6	+0.6
I23K				IAmb	IAmb	11 58 35.5	
	comp=Z,2.8nm,1.4s						
RIDG	Independent Ri	94.02	26	P	P	11 58 28.1	-0.4
RIDG				IAmb	IAmb	11 58 45.5	
	comp=Z,6.5nm,1.3s						
BCAR	Beaver Creek A	95.37	27	P	P	11 58 34.8	+0.1
I28M	Miner Creek	96.17	25	P	P	11 58 39.0	+0.8
ELL	Elmali	98.20	306	Pdif	Pdif	11 58 47.6	-0.4
G31M	Satah River	98.36	23	Pdif	Pdif	11 58 47.9	0.0
F31M	Tsiigehtchic	98.50	23	Pdif	Pdif	11 58 48.4	0.0
F31M				IAmb	IAmb	11 58 49.7	
	comp=Z,3.6nm,1.2s						
P17A	Butcher Ranch,	118.36	48		PKPdf	12 03 55.6	-0.2
AC01	Pan de Azucar	144.84	153	PKPdf	PKPdf	12 04 45.9	+0.5
GO02	Mina Guanaco	146.14	153		PKPbc	12 04 50.5	+0.6
PB14	IPOC Station P	146.23	152	PKPbc	PKPbc	12 04 50.6	+0.5

*NEIC **02** 12:26:37.6±1.6,56°.01S±0°.08×28°.4W±0°.2,h83km±7km, mb4.6/17,Error ellipse: s-maj=15.9km s-min=11.3km az=92.0*
*IDC **02** 12:26:44.7±7.1,56°.07S×28°.34W,h156km±69km,mb3.5/3, mbtmp4.1/4,MS3.1/1,Error ellipse: s-maj=57.8km s-min=21.9km az=45.0*
ISC 02 12:26:38.7±0.6**,56°.0S**±0°.1×**28°.55W**±0°.10**,h100**km**,n43,** σ**1s57**/38**,mb4.5**/9**,1D,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	4.87	288	Pn	Pn	12 27 48.9	-0.6
HOPE				Sn	Sn	12 28 39.5	-5.1

EFI	East Falkland	17.87	272	P	Pn	12 30 41.6	+1.1
EFI				IAmb	IAmb	12 30 57.3	
	comp=Z,50nm,1.4s						
SNAA	Sanae	19.09	155	⇓P	Pn	12 30 54.7	-0.2
	comp=Z,294nm,0.5s						
SNAA	Sanae	19.09	155	P	Pn	12 30 53.9	-1.0
	comp=Z,10nm,0.5s,baz=300,slow=11,SNR=22						
SNAA	Sanae	19.09	155	P	Pn	12 30 53.9	-1.0
TROLL	Troll, Antarti	20.62	153	P	Pn	12 31 10.6	-2.2
MG02	Cerro Sombrero	23.65	261	P	P	12 31 41.1	+0.5
MG03	Isla Dawson	23.91	258	P	P	12 31 45.8	+2.9
MG03				IAmb	IAmb	12 32 04.5	
	comp=Z,66nm,1.5s						
TRQA	Tornquist	28.61	295	P	P	12 32 25.6	+0.3
PLTB	Pedras Altas	29.91	314	P	P	12 32 38.4	+1.5
PLTB				IAmb	IAmb	12 32 59.8	
	comp=Z,15nm,1.3s						
PLCA	Paso Flores	31.24	281	P	P	12 32 50.0	+1.3
LR04	Corral	33.42	280	P	P	12 33 07.9	+0.4
CPUP	Villa Florida	36.22	313	P	P	12 33 32.9	+1.2
	comp=Z,3.2nm,0.6s,baz=149,slow=12,SNR=9.6						
	comp=Z,3.2nm,0.6s						
CPUP	Villa Florida	36.22	313	P	P	12 33 33.4	+1.7
CPUP				IAmb	IAmb	12 33 33.9	
	comp=Z,3.9nm,0.7s						
CO02	Combarbal	38.59	292	P	P	12 33 51.6	-0.2
CO02				IAmb	IAmb	12 34 25.3	
	comp=Z,11nm,1.1s						
CO06	Fray Jorge	39.34	292	P	P	12 33 59.5	+1.5
CO06				IAmb	IAmb	12 34 37.8	
	comp=Z,19nm,1.4s						
GO02	Mina Guanaco	42.80	299	P	P	12 34 29.2	+2.5
GO02				IAmb	IAmb	12 34 30.2	
	comp=Z,4.7nm,0.6s						
VNDA	Vanda	46.57	183	P	P	12 34 56.1	+0.4
VNDA				IAmb	IAmb	12 34 57.5	
	comp=Z,12nm,1.2s						
H10S2	ASCENSION HYDR	48.20	19	T	T	13 27 05.8	
	baz=190,slow=74,SNR=5.5						
H10S3	ASCENSION HYDR	48.20	19	T	T	13 27 12.6	
	baz=30,slow=74,SNR=6.8						
PB16	IPOC Station P	48.58	304	P	P	12 35 11.6	-1.0
PB16				IAmb	IAmb	12 35 39.6	
	comp=Z,9.5nm,1.4s						
H10N1	ASCENSION HYDR	49.32	19	T	T	13 28 35.5	
	baz=188						
H10N3	ASCENSION HYDR	49.32	18	T	T	13 28 37.1	
	baz=188,SNR=5.4						
H10N2	ASCENSION HYDR	49.33	19	T	T	13 28 38.6	
	baz=188						
LPAZ	La Paz	49.74	307	P	P	12 35 23.1	+1.7
	comp=Z,0.9nm,0.4s,baz=160,slow=3.0,SNR=3.6						
LPAZ				LR	LR	12 59 13.6	
	comp=Z,18nm,18.4s,baz=266,slow=39						
	comp=Z,0.9nm,0.4s						
LPAZ	La Paz	49.74	307	P	P	12 35 21.9	+0.4
TORD	Torodi Ar. Bea	73.41	31	P	P	12 37 59.6	-0.1
	comp=Z,0.2nm,0.4s,baz=195,slow=5.0,SNR=1.7						
	comp=Z,0.2nm,0.4s						
BILN	Bilwi Airport	83.43	307	P	P	12 38 55.8	+1.0
BILN				IAmb	IAmb	12 39 09.8	
	comp=Z,100nm,0.9s						
DGAR	Diego Garcia	90.01	103	P	P	12 39 26.1	-0.9
ZAIG	Zacatecas	100.12	296	Pdif	Pdif	12 40 12.3	-0.8
W52A	Murphy	102.24	316	Pdif	Pdif	12 40 22.0	+0.2
H31M	Peel River	144.77	317	PKPbc	PKPdf	12 46 02.3	+0.2
F31M	Tsiigehtchic	145.10	319		PKPab	12 46 03.4	+0.9
G31M	Satah River	145.13	318	PKPbc	PKiKP	12 46 03.7	-2.8
L29M	L29M	145.34	311		PKPab	12 46 03.7	+0.1
K29M	Barlow Dome	145.35	313	PKPdf	PKiKP	12 46 04.9	-2.3
I30M	Mount Dempster	145.37	315		PKPab	12 46 04.3	+0.6
F30M	Barrier River	145.90	319	PKPbc	PKiKP	12 46 06.3	-1.9
DAWY	Dawson	146.20	312	PKPbc	PKPab	12 46 06.3	-0.5
BCAR	Beaver Creek A	146.88	310	PKPbc	PKPab	12 46 08.3	-1.2
F28M	Old Crow	147.41	319	PKPbc	PKiKP	12 46 10.4	-0.8
ILAR	Eielson Array	149.52	312	PKPbc	PKPbc	12 46 13.7	-1.0
	comp=Z,0.8nm,0.7s,baz=107,slow=2.3,SNR=8.6						
SONM	Songino Array	151.49	87	PKPbc	PKPbc	12 46 18.5	-1.5
	comp=Z,0.7nm,0.6s,baz=244,slow=3.2,SNR=4.5						

IDC 02 12:31:06.9±1.1**,23°.34N×92°.92E,h0**^{km}**,mb3.4**/4, **mbtmp3.3**/5**,Error ellipse: s-maj=21.4km s-min=15.5km az=157.0,India-Bangladesh border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRDH	Bariadhala	1.35	241	Pg	Pg	12 31 30.4	-2.4
	59nm,0.3s,baz=54,slow=19,SNR=7.6						
BRDH				Lg	Lg	12 31 51.2	
	90nm,0.3s,baz=49,slow=19,SNR=6.4						
CMAR	Chiang Mai Arr	7.43	130	Pn	Pn	12 32 56.8	+0.1
	0.3nm,0.3s,baz=312,slow=12,SNR=4.9						
MKAR	Makanchi Array	24.92	342	P	P	12 36 32.4	+0.7
	0.5nm,0.5s,baz=164,slow=7.2,SNR=9.1						
	0.5nm,0.5s						
KURBB	Kurchatov Arra	29.45	341	P	P	12 37 11.9	-0.3
	0.2nm,0.6s,baz=144,slow=8.0,SNR=1.9						
	0.2nm,0.6s						
WRA	Warramunga Arr	59.01	133	P	P	12 41 09.0	+0.2
	0.5nm,1.0s,baz=314,slow=7.2,SNR=2.4						
	0.5nm,1.0s						
ASAR	Alice Springs	61.38	137	P	P	12 41 25.1	0.0
	0.6nm,1.0s,baz=319,slow=7.0,SNR=7.5						
	0.6nm,1.0s						

RSNC ***02*** *12:39:29.0±0.0,7°N±1°×7°3W±°,h145*^{km}*±1*^{km}*,M3.0,mb3.4, mB4.6,ML2.7,MLv3.4,Mw(mB)3.8*
FUNV ***02*** *12:39:29.8,6°.88N×73°.11W,h128*^{km}*,MW3.3,Presumed earthquake*
ISC 02 12:39:26.7±1.3**,6°.85N**±0°.03×**73°.10W**±0°.04**,h155**^{km}±8^{km}**, n38,σ1**^{s}**47**/72**,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.27	199	P	Pn	12 39 48.8	+0.7
BARC				S	Sn	12 40 03.5	-0.8
PAMC	Pamplona, Colo	0.63	39	P	Pn	12 39 51.6	+1.7
PAMC				S	Sn	12 40 08.2	+0.7
BRJC	Barrancabermej	0.66	281	P	Pn	12 39 50.5	+1.1
BRJC				S	Sn	12 40 07.1	+0.4
RUSC	La Rusia	0.95	179	P	Pn	12 39 52.6	+0.5
RUSC				S	Sn	12 40 11.0	-0.5
RUSC	La Rusia	0.95	179	eP	Pn	12 39 52.6	+0.5
RUSC				eS	Sn	12 40 07.9	-3.5
PTBC	PUERTO BERRIO,	1.38	257	P	Pn	12 39 55.3	-0.2
PTBC				S	Sn	12 40 15.7	-1.8
OCAC	Ocana	1.40	351	P	Pn	12 39 57.1	+1.3
OCAC				S	Sn	12 40 18.4	+0.2
SPBC	San Pablo de B	1.53	219	P	Pn	12 39 57.6	+0.5
SPBC				S	Sn	12 40 19.8	-0.6
CHIC	Chingaza	2.29	196	P	Pn	12 40 06.7	+0.7
CHIC				S	Sn	12 40 37.2	+1.0
ROSC	El Rosal	2.33	211	P	Pn	12 40 08.4	+1.9
ROSC				S	Sn	12 40 39.7	+2.6
HELC	Santa Helena	2.50	255	P	Pn	12 40 09.3	+0.8
HELC				S	Sn	12 40 40.4	-0.2
HELC	Santa Helena	2.50	255	eP	Pn	12 40 09.9	+1.4
HELC				eS	Sn	12 40 37.9	-2.7
CVER	Cruz Verde, Cu	2.50	203	P	Pn	12 40 10.3	+1.7
CVER				S	Sn	12 40 40.7	-0.2
UREC	San Jos de Ur	2.58	291	P	Pn	12 40 09.2	+0.2
UREC				S	Sn	12 40 39.9	-1.8
SOCV	Socops	2.64	57	eP	Pn	12 40 11.8	+1.9
GUY2C	Guyana, Caldas	2.77	235	P	Pn	12 40 13.5	+1.6
GUY2C				S	Sn	12 40 44.6	-2.1
VILC	Villavicencio,	2.78	192	P	Pn	12 40 12.3	+0.6
VILC				S	Sn	12 40 46.9	+0.4
PTGC	Puerto Gaitan,	2.80	160	P	Pn	12 40 10.6	-1.2
PTGC				S	Sn	12 40 44.7	-2.0
RECRC	Villamaria, Ca	2.92	230	P	Pn	12 40 15.7	+1.9
RECRC				S	Sn	12 40 49.5	-0.7
CBOC	Ciudad Bolivar	3.06	252	P	Pn	12 40 16.6	+1.4
CBOC				S	Sn	12 40 52.1	-0.5
SDV	Santo Domingo	3.17	50	P	Pn	12 40 17.7	+1.0
SDV				S	Sn	12 40 55.2	-0.1
ARGC	Ariguani, Magd	3.20	339	P	Pn	12 40 18.9	+2.1
ARGC				S	Sn	12 40 57.0	+1.2
ANIL	Santa Ana	3.28	225	P	Pn	12 40 19.8	+1.7
ANIL				S	Sn	12 40 58.0	+0.1
PRAC	Prado	3.58	210	P	Pn	12 40 22.3	+0.5
PRAC				S	Sn	12 41 04.6	0.0
APAC	Apartado, Choc	3.61	287	P	Pn	12 40 22.7	+0.6
APAC				S	Sn	12 41 05.1	+0.1
ORTC	Ortega, Tolima	3.62	216	P	Pn	12 40 23.2	+1.0
ORTC				S	Sn	12 41 04.6	-0.7
SJCC	San Jacinto, C	3.67	326	P	Pn	12 40 23.2	+0.4
SJCC				S	Sn	12 41 04.6	-1.9
SJCC	San Jacinto, C	3.67	326	eP	Pn	12 40 23.4	+0.6
SJCC				eS	Sn	12 41 03.6	-2.9
PLMC	San Jos del P	3.71	239	P	Pn	12 40 24.8	+1.4
PLMC				S	Sn	12 41 06.8	-0.7
URMC	La Uribe, Meta	3.80	200	P	Pn	12 40 25.4	+0.8
URMC				S	Sn	12 41 08.1	-1.4
CRJC	Cerrejon, Guaj	4.15	3	P	Pn	12 40 29.1	-0.1
CRJC				S	Sn	12 41 15.2	-2.7
YOTC	Yotoco, Valle	4.31	229	P	Pn	12 40 30.7	-0.5
YOTC				S	Sn	12 41 20.2	-1.3
URIC	Uribia, Colomb	4.95	13	P	Pn	12 40 39.5	0.0
URIC	Uribia, Colomb	4.95	13	eP	Pn	12 40 39.6	+0.1
JAMC	Jamundi, Valle	5.07	225	P	Pn	12 40 41.5	+0.1
	0.0nm3.5nm,0.8s						
JAMC				S	Sn	12 41 39.6	0.0
	0.0nm3.5nm,0.8s						
MAPV	Macapo	5.46	57	eP	Pn	12 40 46.9	+0.5
MAPV				eS	Sn	12 41 43.4	-5.4
FLOC	Florencia	5.82	206	P	Pn	12 40 50.8	-0.3
	9.8nm,1.7s						
BBAC	Balboa, Cauca	6.33	221	P	Pn	12 40 59.8	+1.7
BBAC				S	Sn	12 42 09.1	-0.6

SOME ***02*** *12:46:10.7,40°.15N×70°.47E,h0*^{km}
KRNET ***02*** *12:46:10.7±0.1,40°.12N×70°.47E,h20*^{km}*,mb2.8*
NNC ***02*** *12:46:11.5±3.3,40°.12N×70°.51E,h0*^{km}*,mb3.5,mpv3.1, Error ellipse: s-maj=23.8km s-min=14.0km az=25.0*
ISU ***02*** *12:46:15,40°.02N×70°.51E,h6*^{km}
ISC 02 12:46:11.8±1.1**,40°.09N**±0°.03×**70°.49E**±0°.03**,h9**^{km}±9^{km}**, n22,σ1**^{s}**37**/37**,14C-7D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	Batken	0.25	98	⇓eP	Pg	12 46 16.7	-0.2
BTK				⇓eS	Sg	12 46 21.0	+0.6
MINT	Mingtut	0.52	45	P	Pg	12 46 21.1	-0.9
MINT				S	Sb	12 46 29.7	-1.3
FRG	Fergana	1.03	74	P	Pn	12 46 33.0	+0.5
FRG				S	Sn	12 46 47.9	+0.9
GAR	Garm	1.10	187	⇑eP	Pg	12 46 31.7	-1.3
GAR				⇑eS	Sg	12 46 46.8	-0.5
DRK	Karamyk	1.18	121	⇑eP	Pg	12 46 33.3	-1.2
DRK				⇑eS	Sg	12 46 49.6	-0.2
CHMG	Chimgan	1.50	346	P	Pg	12 46 40.1	-0.5
CHMG				S	Sg	12 47 02.5	+2.4
TRKS	Terek-Say	1.52	19	⇑eP	Pn	12 46 37.4	-1.9
TRKS				⇑eS	Sn	12 46 56.6	-2.7
TSTA	Tashata	1.59	72	S	Sg	12 47 05.6	+2.6
TVKS	Tavaksay	1.61	337	S	Sg	12 47 06.1	+2.5
CHGR	Chuyangaron	1.77	216	⇓eP	Pn	12 46 42.8	+0.1
CHGR				⇓eS	Sn	12 47 06.1	+0.7
ARK	Arkit	2.04	33	⇑eP	Pn	12 46 46.3	-0.1
ARK				⇑eS	Sn	12 47 12.2	+0.2
IUG	Iuzhnay	2.08	351	Pg	Pg	12 46 50.1	-1.6
	48nm,0.2s						
IUG				Lg	Lg	12 47 19.0	
	102nm,0.4s						
IUG	Iuzhnay	2.08	351	eP	Pb	12 46 49.7	-0.1
	48nm,0.2s						
IUG				eS	Sg	12 47 18.6	-0.1
	109nm,0.5s						
ARSB	Arslanbob	2.26	56	⇑eP	Pn	12 46 49.6	+0.1
ARSB				⇑eS	Sn	12 47 17.8	+0.3
SFK	Sufi-Kurgan	2.31	91	⇑eP	Pn	12 46 50.7	+0.4
SFK				⇑eS	Sn	12 47 19.7	+0.7
MNAS	Manas	2.83	32	⇓eP	Pn	12 46 57.4	0.0
MNAS				⇓eS	Sn	12 47 31.3	-0.4
BRLS	Borolday	2.98	351	Pg	Pn	12 46 59.5	+0.3
	1.4nm,0.2s						
BRLS				Lg	Lg	12 47 36.9	
	7.4nm,0.2s						
BRLS	Borolday	2.98	351	eP	Pn	12 47 00.8	+1.5
	0.8nm,0.1s						
BRLS				eS	Sn	12 47 37.1	+2.0
	7.4nm,0.2s						
KK31	Karatay Array	3.01	0	⇑Pg	Pb	12 47 05.8	+0.3
	1.8nm,0.5s,baz=183,slow=18,SNR=9.1						
KK31				Lg	Lg	12 47 45.5	
	5.0nm,0.6s,baz=180,slow=29,SNR=16						
MRKS	Merke	3.35	37	Pg	Pb	12 47 12.1	+0.6
	2.5nm,0.4s						
MRKS				Lg	Lg	12 47 56.5	
	4.2nm,0.4s						
MRKS	Merke	3.35	37	eP	Pb	12 47 12.1	+0.6
	2.5nm,0.4s						
MRKS				eS	Sg	12 47 56.5	-3.0
	4.2nm,0.4s						
AAK	Ala-Archa	3.94	49	⇑Pg	Pb	12 47 23.7	+2.1
	0.8nm,0.7s						
AAK				⇓Lg	Lg	12 48 15.1	
	0.9nm,0.6s						

IDC ***02*** *12:51:34.5±1.5,51°.62N×176°.70W,h0*^{km}*,mb3.4/4, mbtmp3.6/5,ML4.4/1,Error ellipse: s-maj=49.0km s-min=27.8km az=156.0*
AEIC ***02*** *12:51:41.8±2.3,51°.52N±0°.04×176°.38W±0°.05,h31*^{km}*±5*^{km}*, Error ellipse: s-maj=6.2km s-min=3.3km az=150.0*
NEIC ***02*** *12:51:42.5±1.6,51°.62N±0°.09×176°.42W±0°.06,h48*^{km}*±7*^{km}*, mb4.0/23,ML4.1/6,ML3.5(AEIC),Error ellipse: s-maj=13.3km s-min=3.9km az=164.0*
ISC 02 12:51:41.6±1.3**,51°.6N**±0°.1×**176°.38W**±0°.04**,h46**^{km}±10^{km}**, n70,σ1**^{s}**03**/70**,mb3.8**/6**,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETKA	Kagalaska Isla	0.29	357		Pn	12 51 50.4	0.0
ETKA					Sn	12 51 56.7	+0.2
ADK	Adak	0.36	329		Pn	12 51 51.2	+0.1
ADK					Sn	12 51 58.3	+0.5
ADK	Adak	0.36	329	IAML		12 51 58.5	
	21μm,0.3s						
ADK				IAML		12 51 59.2	
	18μm,0.3s						
ADAG	Mount Adagdak	0.43	342		Pn	12 51 52.5	+0.7
ADAG					Sn	12 52 00.6	+1.5
GSCK	Great Sitkin C	0.46	17		Pn	12 51 52.7	+0.5
GSCK					Sn	12 52 00.9	+1.1
GSIG	Igitkin Island	0.50	34		Pn	12 51 52.8	+0.1
GSIG					Sn	12 52 01.3	+0.7
GSTD	Great Sitkin T	0.51	17		Pn	12 51 53.4	+0.5
GSTD					Sn	12 52 01.9	+1.1
GSMY	Great Sitkin M	0.51	23		Pn	12 51 53.3	+0.4
GSSP	Great Sitkin S	0.54	14		Pn	12 51 53.8	+0.6
KIRH	Kanaga Island	0.55	307		Pn	12 51 53.7	+0.4
KIWB	Kanaga Island	0.56	301		Pn	12 51 53.6	+0.3
KIWB					Sn	12 52 02.5	+0.8
KIWB				IAML		12 52 02.8	
	comp=N,12μm,0.3s						
KIWB				IAML		12 52 03.1	
	comp=E,9μm,0.5s						
GSTR	Great Sitkin T	0.56	21		Pn	12 51 54.2	+0.8
GSTR				IAML		12 52 07.5	
	comp=N,5μm,0.8s						
KIMD	Kanaga Island	0.56	290		Pn	12 51 53.6	+0.1
KIKV	Kanaga Island	0.58	302		Pn	12 51 54.0	+0.3
KIKV					Sn	12 52 03.3	+1.0
TAPA	Tanaga Point A	0.92	286		Pn	12 51 58.7	+0.4
TAFL	Tanaga Flats	0.96	282		Pn	12 51 59.1	+0.4
TAFL					Sn	12 52 12.3	+1.0
TAFP	Tanaga Falls P	1.05	289		Pn	12 52 00.5	+0.5
TASE	Tanaga Southea	1.06	285		Pn	12 52 00.9	+0.7
GALAA	Gareloi Lava P	1.50	278		Pn	12 52 07.0	+0.9
GANE	Gareloi Northe	1.51	280		Pn	12 52 07.3	+1.0
GANE					Sn	12 52 27.4	+2.7
GAKI	Gareloi-Kavalg	1.52	270		Pn	12 52 07.2	+0.9
GANO	Gareloi North	1.53	280		Pn	12 52 07.4	+1.0
GANO					Sn	12 52 27.5	+2.3
KOWE	Korovin West	1.54	58		Pn	12 52 07.8	+1.2
KOKL	Mount Kliuchef	1.55	60		Pn	12 52 08.2	+1.4
KOFP	Korovin Flat P	1.58	63		Pn	12 52 08.2	+1.0
KOSE	Korovin Southe	1.64	61		Pn	12 52 09.3	+1.4
AMKA	Amchitka	2.71	268	Pn	Pn	12 52 20.8	-1.7
UNV	Unalaska Valle	6.42	65	Pn	Pn	12 53 13.9	+0.5
KDAK	Kodiak Island	15.05	56	Pn	Pn	12 55 09.6	-1.5
	comp=N,1.6nm,0.3s,baz=256,slow=3.9,SNR=37						
	comp=N,3.0nm,0.3s						
KDAK	Kodiak Island	15.05	56		Pn	12 55 11.0	0.0
N19K	Bonanza Creek	15.23	44	Pn	Pn	12 55 13.2	-0.2
N19K				IAmb	IAmb	12 55 25.9	
	comp=Z,13nm,1.3s						
L19K	White Mountain	15.76	39	Pn	Pn	12 55 20.3	+0.1
L19K				IAmb	IAmb	12 55 47.4	
	comp=Z,14nm,1.5s						
J18K	Innoko River	15.83	34	Pn	Pn	12 55 19.3	-1.8
H17K	Granite Mounta	15.88	26	Pn	Pn	12 55 21.3	-0.3
SLKM	Skilak Lake	17.03	48	Pn	Pn	12 55 34.5	-1.6
SLKM				IAmb	IAmb	12 55 53.2	
	comp=Z,25nm,1.3s						
SEW	Seward	17.26	50	Pn	Pn	12 55 38.4	-0.5
SEW				IAmb	IAmb	12 55 41.0	
	comp=Z,48nm,1.4s						
KTH	Kantishna Hill	18.02	38	P	Pn	12 55 46.3	-2.0
KTH				IAmb	IAmb	12 56 01.7	
	comp=Z,7.4nm,1.2s						
IMAR	Indian Mountai	18.44	30	P	P	12 55 52.1	-0.7
SCM	Sheep Creek Mo	18.80	46	P	P	12 55 56.1	-0.9
SCM				IAmb	IAmb	12 56 15.1	
	comp=Z,27nm,1.3s						
M24K	Tolsona, Glenn	19.40	45	P	P	12 56 03.6	0.0
D20K	Etivluk River	19.63	22	P	P	12 56 05.4	-0.6
D20K				IAmb	IAmb	12 56 21.6	
	comp=Z,4.3nm,1.3s						
CCB	Clear Creek Bu	19.75	38	P	P	12 56 06.8	-0.4
ILAR	Eielson Array	20.16	38	P	P	12 56 12.2	+0.6
	comp=Z,0.4nm,0.6s,baz=241,slow=11,SNR=9.0						
	comp=Z,0.4nm,0.6s						
ILAR	Eielson Array	20.16	38	P	P	12 56 12.0	+0.4
K24K	Donnelly Dome	20.18	41	P	P	12 56 11.6	-0.4
K24K				IAmb	IAmb	12 56 23.6	
	comp=Z,14nm,1.4s						
RIDG	Independent Ri	20.54	42	P	P	12 56 15.3	-0.6
RIDG				IAmb	IAmb	12 56 48.4	
	comp=Z,9.4nm,1.3s						
J25K	Salcha River,	20.67	39	P	P	12 56 18.1	+0.7
SCRK	Sand Creek	20.98	41	P	P	12 56 20.1	-0.6
SCRK				IAmb	IAmb	12 57 01.0	
	comp=Z,5.8nm,1.4s						
BARN	Barnard Glacie	21.22	50	P	P	12 56 22.6	-0.8
BARN				IAmb	IAmb	12 56 57.5	
	comp=Z,29nm,1.4s						
CTGM	Chitina Glacie	21.36	50	P	P	12 56 24.5	-0.3
K29M	Barlow Dome	23.68	44	P	P	12 56 49.2	+0.4
K29M				IAmb	IAmb	12 57 17.2	
	comp=Z,5.2nm,1.2s						
I30M	Mount Dempster	24.49	41	P	P	12 56 55.9	-0.3
H11N2	WAKE ISLAND Hy	34.38	209	T	T	13 34 57.9	
	baz=18,slow=76,SNR=263						
H11N3	WAKE ISLAND Hy	34.39	209	T	T	13 35 02.2	
	baz=18,slow=76,SNR=394						
H11N1	WAKE ISLAND Hy	34.40	209	T	T	13 35 02.9	
	baz=18,slow=76,SNR=284						
H11S1	WAKE ISLAND Hy	35.60	208	T	T	13 36 29.9	
	baz=18,slow=76,SNR=106						
H11S2	WAKE ISLAND Hy	35.61	208	T	T	13 36 31.6	
	baz=18,slow=76,SNR=81						
H11S3	WAKE ISLAND Hy	35.62	208	T	T	13 36 31.7	
	baz=18,slow=76,SNR=69						
I07A	Izee	38.05	78	P	P	12 58 54.5	-0.9
I07A	Izee	38.05	78			12 57 36.5	
ILON	Igloolik, Nuna	44.52	30	P	P	12 59 47.4	-0.6
ILON				IAmb	IAmb	13 00 31.2	
	comp=Z,2.7nm,1.4s						
TXAR	Lajitas Array	57.13	83	P	P	13 01 23.7	+0.2
	comp=Z,0.4nm,0.7s,baz=324,slow=7.4,SNR=4.7						
	comp=Z,0.4nm,0.7s						
TXAR	Lajitas Array	57.13	83	P	P	13 01 24.2	+0.8
KURBB	Kurchatov Arra	60.08	315	P	P	13 01 41.0	-2.5
	comp=Z,0.2nm,0.6s,baz=46,slow=6.7,SNR=2.1						
	comp=Z,0.2nm,0.6s						
ASAR	Alice Springs	86.67	224	P	P	13 04 20.0	-0.2
	comp=Z,0.5nm,0.9s,baz=35,slow=4.8,SNR=3.6						
	comp=Z,0.5nm,0.9s						
ASAR	Alice Springs	86.67	224	P	P	13 04 21.2	+1.0
SCTE	Santa Cesarea	87.82	349	P	P	13 04 27.9	+2.3
H03N2	Juan Fernandez	119.75	107	T	T	15 21 38.9	
	baz=317,slow=77,SNR=48						
H03N1	Juan Fernandez	119.76	107	T	T	15 21 40.2	
	baz=317,slow=77,SNR=28						
H03N3	Juan Fernandez	119.77	107	T	T	15 21 39.5	
	baz=317,slow=77,SNR=30						

JMA ***02*** *12:53:10.6±0.2,43°.2N±0°.6×145°.6E±0°.8,h57*^{km}*±1*^{km}*, MV2.9/36,OFF NEMURO PENINSULA*
SKHL ***02*** *12:53:11.1±0.2,43°.20N×145°.70E,h52*^{km}*±3*^{km}*,mb4.0/4*
ISC 02 12:53:10.5±1.9**,43°.20N**±0°.08×**145°.65E**±0°.06**,h57**^{km}±10^{km}**, n14,σ0**^{s}**38**/21**,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.18	22	P	Pn	12 53 19.6	+0.1
NEM2				S	Sn	12 53 26.0	0.0
NMR	Nemuro--Hokkai	0.18	19	eP	Pn	12 53 19.6	+0.1
NMR				iS	Sn	12 53 25.6	-0.4
JKHN	Kushirohamanak	0.38	252	P	Pn	12 53 21.2	+0.3
JKHN				S	Sn	12 53 28.6	+0.2
GLVR	Golovnino	0.55	350	eP	Pn	12 53 23.1	+0.3
GLVR				AMB	AMB	12 53 23.7	
	90nm,0.3s						
GLVR				iS	Sn	12 53 32.1	+0.4
GLVR				A	A	12 53 33.0	
	1μm,0.3s						
GLVR				A	A	12 53 33.0	
	660nm,0.3s						
AKK	Akkeshi	0.62	253	eP	Pn	12 53 23.2	-0.3
JNSB	Nemuroshibetsu	0.74	321	iP	Pn	12 53 25.0	-0.1
JNK	Nakash	0.78	300	iP	Pn	12 53 25.2	-0.4
JNK				S	Sn	12 53 35.9	-0.7
JRA	Rausu	0.83	333	iP	Pn	12 53 26.4	+0.2
JRA				S	Sn	12 53 38.0	+0.2
YUK	Yuzh-Kuril'sk	0.85	10	eP	Pn	12 53 26.2	-0.3
YUK				AMB	AMB	12 53 27.5	
	100nm,0.3s						
YUK				iS	Sn	12 53 37.8	-0.4
YUK				A	A	12 53 40.9	
	460nm,0.4s						
YUK				A	A	12 53 40.9	
	590nm,0.4s						
SHO	Shikotan	1.09	52	eP	Pn	12 53 39.9	+10
SHO				AMB	AMB	12 53 40.7	
	80nm,0.4s						
SHO				eS	Sn	12 53 52.9	+9.1
SHO				A	A	12 53 55.1	
	140nm,0.3s						
SHO				A	A	12 53 55.1	
	160nm,0.3s						
JOB	Onbets	1.36	258	P	Pn	12 53 33.3	+0.1
JAR	Ashorobuto	1.38	275	iP	Pn	12 53 33.6	+0.2
JTKR	Abashiri--Toko	1.48	302	iP	Pn	12 53 35.4	+0.6
KUR	Kuril'sk	2.59	37	eP	Pn	12 53 50.2	+0.4
KUR				AMB	AMB	12 53 52.4	
	10.0nm,0.3s						
KUR				iS	Sn	12 54 19.6	-0.5
KUR				A	A	12 54 29.0	
	40nm,0.3s						
KUR				A	A	12 54 29.0	
	50nm,0.3s						

REN ***02*** *12:56:26.8±1.6,40°.58N±0°.04×116°.28W±0°.03,h9*^{km}*±8*^{km}*, Error ellipse: s-maj=6.3km s-min=3.1km az=156.0*
NEIC 02 12:56:25.9±0.9**,40°.56N**±0°.02×**116°.25W**±0°.02**,h5**^{km}±1^{km}**, ML3.3**/76**,ML3.5**/7(REN)**,Error ellipse: s-maj=4.1km s-min=2.8km az=180.0,Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELK	Elko	0.79	76	Pg	Pg	12 56 41.2	+0.1
ELK				Sg	Sg	12 56 50.1	-1.3
ELK				IAML		12 56 55.2	
	996nm,0.2s						
ELK				IAML		12 56 56.2	
	812nm,0.2s						
Q09A	Carvers	1.87	203		Pb	12 57 00.5	-0.2
Q09A					Sb	12 57 23.7	-0.7
R11B	Troy Canyon, C	2.27	167		Pn	12 57 05.1	+0.9
BGU	Big Grassy Mou	2.47	81		Pn	12 57 07.8	+0.8
BGU					Sn	12 57 36.6	-1.1
BGU				IAML		12 57 43.5	
	comp=N,140nm,0.7s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PAHR	**Pah Rah Range**	**2.55**	**251**		Pn	12 57 09.4	+1.3
PAHR				IAML		12 57 54.2	
	comp=E,103nm,0.6s						
WVOR	**Wild Horse Val**	**2.59**	**317**		Pb	12 57 12.8	-0.1
WVOR	**Wild Horse Val**	**2.59**	**317**	IAML		12 57 52.7	
	comp=E,92nm,1.5s						
WVOR				IAML		12 57 55.2	
	comp=E,87nm,1.3s						
DUG	**Dugway, Tooele**	**2.65**	**97**		Pn	12 57 10.5	+1.0
DUG					Sn	12 57 39.5	-2.6
DUG				IAML		12 57 49.3	
	comp=E,198nm,0.8s						
DUG				IAML		12 57 51.3	
	comp=E,167nm,0.8s						
MFID	**Camas Ranch**	**2.87**	**6**		Pb	12 57 15.7	-1.9
HVU	**Hansel Valley**	**2.89**	**64**		Pn	12 57 13.3	+0.6
HVU				IAML		12 58 00.9	
	comp=E,169nm,0.5s						
HVU				IAML		12 58 01.4	
	comp=N,166nm,0.6s						
LHV	**Little Huntoon**	**2.89**	**218**		Pn	12 57 14.5	+1.9
LHV				IAML		12 58 03.9	
	comp=N,145nm,0.5s						
LHV				IAML		12 58 08.2	
	comp=E,126nm,0.5s						
S11A	**Rachel**	**2.94**	**172**		Pn	12 57 15.6	+2.1
PNTR	**Pine Nut**	**2.97**	**241**		Pn	12 57 15.3	+1.4
PNTR				IAML		12 58 05.5	
	comp=E,155nm,0.8s						
PNTR				IAML		12 58 11.6	
	comp=N,158nm,0.7s						
J08A	**Circle Bar Ran**	**3.25**	**330**		Pb	12 57 22.1	-1.9
J08A				IAML		12 58 18.7	
	comp=N,110nm,0.7s						
HLID	**Hailey**	**3.29**	**24**	IAML		12 58 07.9	
	comp=N,102nm,0.8s						
HLID				IAML		12 58 18.3	
	comp=N,85nm,0.7s						
DSP	**Deep Springs**	**3.46**	**203**		Pn	12 57 22.8	+2.5
DSP				IAML		12 58 26.7	
	comp=N,37nm,0.9s						
LCH	**Last Change Ra**	**3.50**	**199**		Pn	12 57 24.4	+3.3
HWUT	**Hardware Ranch**	**3.69**	**72**		Pn	12 57 26.2	+2.4
WCT	**Wildcat Mounta**	**3.78**	**185**		Pn	12 57 26.7	+1.9
WCT				IAML		12 58 30.0	
	comp=E,57nm,0.6s						
WCT				IAML		12 58 42.7	
	comp=N,59nm,0.9s						
SZCU	**Shurtz Canyon**	**3.85**	**139**		Pn	12 57 27.2	+1.2
SZCU				IAML		12 58 33.3	
	comp=N,76nm,0.4s						
SZCU				IAML		12 58 38.8	
	comp=E,74nm,0.4s						
MCY	**Mercury**	**3.90**	**177**		Pn	12 57 28.5	+1.9
MTPU	**Mount Pierson**	**4.04**	**127**		Pn	12 57 31.0	+2.3
CMB	**Columbia Colle**	**4.08**	**233**		Pn	12 57 30.7	+1.7
CMB				IAML		12 58 40.4	
	comp=N,22nm,1.3s						
SHPR	**Sheep Range**	**4.14**	**168**		Pn	12 57 32.5	+2.6
BSUT	**Blindstream Ca**	**4.18**	**89**		Pn	12 57 34.1	+3.4
BMO	**Blue Mountains**	**4.36**	**350**		Pb	12 57 38.1	-4.9
BMO				IAML		12 58 48.8	
	comp=N,22nm,1.6s						
BMO				IAML		12 58 56.5	
	comp=N,21nm,1.8s						
PKCU	**Pink Cliffs**	**4.37**	**134**		Pn	12 57 35.5	+2.3
GWY	**Greenwater Val**	**4.38**	**184**		Pn	12 57 35.3	+2.1
KNB	**Kanab**	**4.44**	**142**		Pn	12 57 34.6	+0.6
KNB				IAML		12 58 49.0	
	comp=E,38nm,0.7s						
KNB				IAML		12 58 49.1	
	comp=N,32nm,0.7s						
PLID	**Pearl Lake**	**4.53**	**2**		Pb	12 57 40.8	-5.1
PLID				IAML		12 59 06.2	
	comp=N,17nm,1.2s						
SRU	**San Rafael Swe**	**4.64**	**106**		Pn	12 57 39.9	+3.1
SRU				IAML		12 58 55.0	
	comp=E,37nm,0.6s						
SRU				IAML		12 58 55.4	
	comp=N,30nm,0.7s						
P18A	**Preston Nutter**	**4.70**	**100**		Pn	12 57 42.0	+4.2
MCMT	**McKenzie Canyo**	**4.94**	**29**		Pn	12 57 44.6	+3.6
FXWY	**Fox Creek**	**4.95**	**50**		Pn	12 57 44.5	+3.3
V12A	**Nelson**	**4.95**	**167**		Pn	12 57 43.2	+2.2
V12A				IAML		12 59 11.6	
	comp=N,20nm,1.0s						
V12A				IAML		12 59 21.4	
	comp=E,13nm,0.9s						
PD31	**Pinedale Array**	**5.47**	**64**		Pn	12 57 51.3	+3.0
W13A	**Hualapai Mount**	**5.77**	**160**	Pn	Pn	12 57 55.6	+3.3

*NEIC **02** 12:57:59.8±1.0, 24°.0S±0°.1×179°.3W±0°.1, h527km±7km, mb4.2/9, Error ellipse: s-maj=22.4km s-min=13.4km az=150.0*
*IDC **02** 12:57:59.6±3.0, 23°.99S×179°.38W, h527km±39km, mb3.1/6, mbtmp4.1/8, Error ellipse: s-maj=39.8km s-min=20.7km az=147.0*
ISC 02 12:57:58.8±0.7**, 23°.95S**±0°.08×**179°.3W**±0°.1**, h512**km**, n22,** σ**1s.04**/24**, mb3.8**/10**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.43**	**167**	P	**P**	**12 59 31.0**	**+0.8**
MSVF	**Nonsavu**	**6.65**	**338**	P	**P**	**12 59 43.9**	**+1.8**
AFI	**Afiamalu**	**12.27**	**37**	P	**P**	**13 00 41.1**	**+0.7**
	3.9nm,0.3s,baz=190,slow=23,SNR=1.3						
AFI				S	**S**	**13 02 52.7**	**-0.8**
	3.7nm,0.3s,baz=233,slow=20,SNR=1.3						
OUENC	**Ouen Island, N**	**12.81**	**274**	P	**P**	**13 00 47.2**	**+1.3**
DZM	**Mont Dzumac**	**13.23**	**275**	P	**P**	**13 00 50.2**	**-0.3**
URZ	**Urewera**	**14.59**	**191**	P	**P**	**13 01 05.7**	**+1.3**
	2.7nm,0.4s,baz=20,slow=12,SNR=8.7						
URZ				S	**S**	**13 03 37.4**	**0.0**
	2.2nm,0.5s,baz=24,slow=20,SNR=8.2						
BKZ	**Black Stump Fm**	**15.58**	**192**	P	**P**	**13 01 14.5**	**-0.2**
BKZ				IAmb	IAmb	13 01 28.7	
	comp=Z,17nm,1.3s						
ARMA	**Armidale**	**26.58**	**250**	P	**P**	**13 02 55.7**	**0.0**
ARMA				IAmb	IAmb	13 03 37.2	
	comp=Z,12nm,1.4s						
EIDS	**Eidsvold**	**26.90**	**261**	P	**P**	**13 02 57.8**	**-0.7**
EIDS				IAmb	IAmb	13 03 08.0	
	comp=Z,6.9nm,1.1s						
CTAO	**Charters Tower**	**32.09**	**270**	P	**P**	**13 03 43.5**	**0.0**
CTAO				IAmb	IAmb	13 03 51.3	
	comp=Z,8.0nm,1.2s						
STKA	**Stephens Creek**	**35.27**	**248**	P	**P**	**13 04 09.7**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=79,slow=18,SNR=1.6						
	comp=Z,1.1nm,0.5s						
BBOO	**Buckleboo**	**39.99**	**247**	P	**P**	**13 04 48.5**	**-0.4**
AS31	**Alice Springs**	**42.63**	**261**	P	**P**	**13 05 09.6**	**-0.4**
ASAR	**Alice Springs**	**42.63**	**261**	P	**P**	**13 05 09.2**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=102,slow=7.5,SNR=43						
	comp=Z,1.0nm,0.5s						
WR8	**Warramunga Arr**	**42.86**	**266**	P	**P**	**13 05 10.9**	**-1.0**
WR8				IAmb	IAmb	13 05 23.4	
	comp=Z,11nm,1.4s						
WB0	**Warramunga Arr**	**43.01**	**266**	P	**P**	**13 05 11.9**	**-1.1**
WRA	**Warramunga Arr**	**43.01**	**266**	P	**P**	**13 05 11.5**	**-1.5**
	comp=Z,0.8nm,0.3s,baz=103,slow=8.0,SNR=114						
	comp=Z,0.8nm,0.3s						
FORT	**Forrest**	**46.87**	**250**	P	**P**	**13 05 41.8**	**-0.7**
PETK	**Petropavlovsk-**	**79.29**	**346**	P	**P**	**13 09 11.3**	**+0.8**
	comp=Z,1.3nm,0.6s,baz=153,slow=5.5,SNR=4.1						
	comp=Z,1.3nm,0.6s						
TXAR	**Lajitas Array**	**89.94**	**58**	P	**P**	**13 10 02.3**	**-1.2**
	comp=Z,0.6nm,1.1s,baz=244,slow=5.0,SNR=1.8						
	comp=Z,0.6nm,1.1s						
CMAR	**Chiang Mai Arr**	**90.12**	**290**	P	**P**	**13 10 04.2**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=103,slow=7.7,SNR=1.5						
	comp=Z,0.6nm,0.3s						
HFS	**Hagfors**	**142.71**	**349**	PKP	**PKPdf**	**13 16 30.7**	**-2.3**
	comp=Z,0.8nm,0.6s,baz=11,slow=8.8,SNR=1.3						

*LVSN **02** 13:01:36.5±3.9, 59°.34N×25°.98E, h0km±365km, Presumed earthquake*
HEL 02 13:01:53.0±0.5**, 60°.30N×25°.51E, h0**km**, ML1.2, Explosion, Finland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PVF	**Pernaja**	**0.30**	**35**	PG	Pg	13 01 58.3	-0.6
	baz=222						
PVF				SG	Sg	13 02 02.7	-0.1
HEL5	**Espoo, Suvisaa**	**0.42**	**245**	PG	Pg	13 02 01.1	0.0
HEL5				SG	Sg	13 02 06.1	-0.5
MEF	**Metsahovi**	**0.56**	**262**	eS	Sg	13 02 10.2	-0.7
MEF	**Metsahovi**	**0.56**	**262**	PG	Pg	13 02 02.9	-0.8
MEF				SG	Sg	13 02 10.3	-0.7
MEF				smax	smax	13 02 10.9	
	comp=Z,2.4nm,0.2s						
FIA0	**FINESS Array S**	**1.19**	**13**	PG	Pg	13 02 14.5	-1.2
FIA0				smax	smax	13 02 29.0	
	comp=Z,1.3nm,0.2s						
FIA0				SN	Sn	13 02 35.4	+1.8
VSU	**Vasula**	**1.94**	**161**	eS	Sn	13 02 05.2	-47
RAF	**Rauma**	**1.98**	**293**	eP	Pn	13 02 22.6	-5.2
RAF				eS	Sn	13 02 52.7	-0.6
RAF	**Rauma**	**1.98**	**293**	smax	smax	13 02 51.8	
	comp=Z,1.9nm,0.2s						
RAF				SG	Sn	13 02 53.6	+0.3

*IDC **02** 13:05:17.8±1.4, 15°.39S×172°.93W, h0km, mb3.5/8, mbtmp3.5/8, MS3.3/6, Error ellipse: s-maj=72.7km s-min=18.6km az=144.0*
ISC 02 13:05:22.6±1.3**, 15°.2S**±0°.3×**172°.9W**±0°.3**, h29**km**, n26,** σ**1s.72**/12**, mb3.5**/8**, MS3.3**/5**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.66**	**41**	Pn	**Pn**	**13 05 49.3**	**-0.6**
	43nm,0.3s,baz=214,slow=11,SNR=50						
AFI				Sn	**Sn**	**13 06 07.5**	**-2.8**
	199nm,0.3s,baz=234,slow=18,SNR=17						
AFI				LR	LR	13 06 22.3	
	comp=Z,183nm,18.2s,baz=206,slow=35						
RAR	**Rarotonga**	**13.85**	**118**	LR	LR	13 12 26.4	
	comp=Z,70nm,21.4s,baz=281,slow=31						
DZM	**Mont Dzumac**	**20.72**	**248**	eLR	LR	13 15 43.7	
	108nm,24.4s						
DZM	**Mont Dzumac**	**20.72**	**248**	LR	LR	13 16 08.9	
	comp=Z,55nm,18.2s,baz=68,slow=32						
PPT	**Papeete**	**22.51**	**99**	LR	LR	13 16 20.6	
	comp=Z,80nm,21.3s,baz=246,slow=30						
PPT2	**Papeete2**	**22.51**	**99**	eLR	LR	13 15 41.7	
	153nm,25.5s						
PPT2				eLR	LR	13 15 43.7	
	127nm,26.8s						
TBI	**Tubuai**	**23.56**	**114**	eLR	LR	13 16 16.6	
	430nm,25.2s						
TAOE	**Nuku Hiva Isla**	**32.62**	**83**	eLR	LR	13 20 24.6	
	72nm,25.2s						
H11S2	**WAKE ISLAND Hy**	**39.01**	**328**	T	T	13 54 33.2	
	baz=147,slow=76						
H11S3	**WAKE ISLAND Hy**	**39.02**	**328**	T	T	13 54 24.0	
	baz=147,slow=76						
H11S1	**WAKE ISLAND Hy**	**39.03**	**328**	T	T	13 54 15.7	
	baz=147,slow=76,SNR=9.4						
CTA	**Charters Tower**	**39.16**	**257**	LR	LR	13 26 16.1	
	comp=Z,44nm,18.4s,baz=46,slow=32						
H11N3	**WAKE ISLAND Hy**	**39.95**	**330**	T	T	13 55 15.4	
	baz=149,slow=74						
H11N1	**WAKE ISLAND Hy**	**39.95**	**330**	T	T	13 55 25.1	
	baz=149,slow=74,SNR=3.1						
H11N2	**WAKE ISLAND Hy**	**39.97**	**330**	T	T	13 55 23.1	
	baz=149						
STKA	**Stephens Creek**	**44.56**	**240**	P	**P**	**13 13 30.9**	**-1.3**
	1.0nm,0.7s,baz=90,slow=7.1,SNR=1.4						
	1.0nm,0.7s						
WRA	**Warramunga Arr**	**50.36**	**257**	P	**P**	**13 14 15.6**	**-1.8**
	0.4nm,0.7s,baz=92,slow=7.0,SNR=7.8						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**50.63**	**252**	P	**P**	**13 14 17.9**	**-1.6**
	1.5nm,0.7s,baz=90,slow=7.5,SNR=46						
ASAR				LR	LR	13 34 08.4	
	comp=Z,57nm,18.8s,baz=116,slow=34						
	1.5nm,0.7s						
JCJ	**Chichijima**	**60.53**	**314**	LR	LR	13 39 09.2	
	comp=Z,25nm,18.6s,baz=148,slow=34						
PETK	**Petropavlovsk-**	**72.56**	**342**	P	**P**	**13 16 48.0**	**+1.3**
	0.7nm,0.8s,baz=166,slow=4.8,SNR=1.3						
	0.7nm,0.8s						
NVAR	**Mina Array Bea**	**73.84**	**42**	P	**P**	**13 16 54.3**	**-0.7**
	0.1nm,0.3s,baz=268,slow=4.4,SNR=1.2						
	0.1nm,0.3s						
TXAR	**Lajitas Array**	**80.09**	**56**	P	**P**	**13 17 31.1**	**+0.8**
	0.1nm,0.7s,baz=244,slow=4.6,SNR=2.6						
	0.1nm,0.7s						
PDAR	**Pinedale Array**	**81.78**	**42**	P	**P**	**13 17 40.8**	**+1.7**
	0.2nm,0.7s,baz=260,slow=6.0,SNR=1.4						
	0.2nm,0.7s						
ILAR	**Eielson Array**	**82.13**	**11**	P	**P**	**13 17 42.3**	**+2.2**
	0.2nm,0.6s,baz=211,slow=6.3,SNR=2.0						
	0.2nm,0.6s						
GERES	**GERESS Array B**	**145.98**	**352**	PKPbc	**PKPab**	**13 25 00.7**	**+0.6**
	0.3nm,0.4s,baz=353,slow=4.0,SNR=1.6						
BRTR	**Keskin Array B**	**146.27**	**322**	PKPbc	**PKPdf**	**13 25 00.4**	**+0.6**
	1.2nm,0.8s,baz=72,slow=4.7,SNR=4.6						

*IDC **02** 13:19:43.4±4.7, 4°.07S×102°.75E, h0km, mb3.3/5, mbtmp3.3/5, Error ellipse: s-maj=251.1km s-min=22.7km az=52.0*
*DJA **02** 13:19:46.7±0.6, 5°S±3°×10°2E±°, h13km±4km, M3.7/19, MLv3.7/19*
ISC 02 13:19:43.9±1.1**, 4°.62S**±0°.07×**102°.05E**±0°.10**, h10**km**, n21,** σ**1s.71**/14**, mb3.3**/5**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EGSI	**Enggano, Bengk**	**0.76**	**163**	P	**Pn**	**13 20 03.1**	**+2.4**
UBSI	**University, Be**	**0.89**	**15**	P	**Pb**	**13 20 03.7**	**+2.3**
MNAI	**Manna**	**0.94**	**74**	P	**Pb**	**13 20 03.5**	**+1.1**
KSI	**Kapahiang**	**1.11**	**29**	P	**Pb**	**13 20 06.6**	**+1.4**
MASI	**Maura Aman, Be**	**1.48**	**7**	P	**Pn**	**13 20 11.8**	**+1.0**
LWLI	**Liwa**	**2.04**	**101**	P	**Pn**	**13 20 19.6**	**+1.1**
MDSI	**Maura Dua**	**2.13**	**86**	P	**Pn**	**13 20 20.3**	**+0.8**
KASI	**Kota Agung**	**2.60**	**110**	P	**Pn**	**13 20 27.0**	**+1.0**
KLSI		**2.67**	**92**	P	**Pn**	**13 20 28.7**	**+1.6**
H08S2	**Diego Garcia H**	**29.53**	**263**	T	T	13 56 15.8	
	baz=86						
H08S3	**Diego Garcia H**	**29.54**	**263**	T	T	13 56 16.8	
	baz=86,SNR=7.7						
H08S1	**Diego Carcia H**	**29.55**	**263**	T	T	13 56 16.3	
	baz=86						
WRA	**Warramunga Arr**	**34.93**	**119**	P	**P**	**13 26 34.0**	**-2.2**
	0.6nm,1.0s,baz=294,slow=8.6,SNR=5.5						
	0.6nm,1.0s						
ASAR	**Alice Springs**	**36.08**	**125**	P	**P**	**13 26 45.2**	**-0.9**
	0.2nm,0.6s,baz=300,slow=8.2,SNR=7.7						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**54.10**	**343**	P	**P**	**13 29 07.2**	**-1.8**
	0.2nm,0.6s,baz=148,slow=9.2,SNR=3.9						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**58.64**	**343**	P	**P**	**13 29 41.1**	**-0.1**
	0.1nm,0.4s,baz=163,slow=6.8,SNR=1.5						
	0.1nm,0.4s						
H04N2	**CROZET ISLANDS**	**59.96**	**218**	T	T	14 34 22.3	
	baz=64,slow=75,SNR=20						
H04N1	**CROZET ISLANDS**	**59.97**	**218**	T	T	14 34 23.8	
	baz=64,slow=75,SNR=22						
H04N3	**CROZET ISLANDS**	**59.98**	**218**	T	T	14 34 22.7	
	baz=64,slow=75,SNR=26						
ZALV	**Zalesovo Beam**	**60.12**	**348**	P	P	13 29 49.4	-2.1
	0.4nm,0.3s,baz=163,slow=5.9,SNR=2.3						
	0.4nm,0.3s						
TXAR	**Lajitas Array**	**145.41**	**42**	PKP	**PKPbc**	**13 39 21.4**	**-1.6**
	0.2nm,0.5s,baz=291,slow=3.4,SNR=4.2						

*SOME **02** 13:35:29.5, 42°.22N×81°.53E, h15km*
*NNC **02** 13:35:33.1±1.6, 42°.24N×81°.32E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=11.3km s-min=7.7km az=159.0*
ISC 02 13:35:27.1±1.9**, 42°.22N**±0°.08×**81°.66E**±0°.05**, h16**km**, n34,** σ**2s.54**/51**, 5C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.56**	**322**	P	**Pg**	**13 35 58.4**	**+1.3**
	28nm,0.2s						
KTMS				S	**Sg**	**13 36 17.5**	**+0.2**
	103nm,0.1s						
KTMS	**Ketmen**	**1.56**	**322**	eP	**Pb**	**13 35 57.6**	**+2.0**
	30nm,0.2s						
KTMS				eS	**Sg**	**13 36 17.8**	**+0.4**
	107nm,0.2s						
SHLS	**Shalkode**	**1.87**	**301**	P	**Pn**	**13 35 58.5**	**-0.1**
	124nm,0.3s						
SHLS				S	**Sn**	**13 36 20.1**	**-1.8**
	157nm,0.2s						
SHLS	**Shalkode**	**1.87**	**301**	eP	**Pn**	**13 35 58.5**	**-0.1**
	124nm,0.3s						
SHLS				eS	**Sn**	**13 36 19.3**	**-2.6**
	231nm,0.4s						
PDGK	**Podgornoye**	**1.94**	**306**	⇑Pn	**Pg**	**13 36 05.4**	**+1.0**
	19nm,0.5s						
PDGK				⇑Sn	**Sg**	**13 36 30.1**	**+0.4**
	243nm,0.7s						
UZB	**Uzynbulak**	**2.15**	**296**	Pg	**Pg**	**13 36 08.5**	**+0.1**
	51nm,0.3s						
UZB				Lg	Lg	13 36 36.0	
	84nm,0.2s						
UZB	**Uzynbulak**	**2.15**	**296**	eP	**Pb**	**13 36 07.9**	**+2.1**
	52nm,0.4s						
UZB				eS	**Sg**	**13 36 35.3**	**-1.0**
	84nm,0.2s						
DJR	**Jarkent**	**2.52**	**328**	Pg	**Pb**	**13 36 14.4**	**+2.5**
	11nm,0.3s						
DJR				Lg	Lg	13 36 47.0	
	47nm,0.4s						
DJR	**Jarkent**	**2.52**	**328**	eP	**Pb**	**13 36 14.4**	**+2.5**
	11nm,0.3s						
DJR				eS	**Sg**	**13 36 47.0**	**-0.9**
	47nm,0.4s						
KPKS	**Kokpek**	**2.52**	**301**	Pg	**Pb**	**13 36 14.1**	**+2.2**
	0.3nm,0.4s						
KPKS				Lg	Lg	13 36 46.2	
	92nm,0.4s						
KPKS	**Kokpek**	**2.52**	**301**	eP	**Pb**	**13 36 14.1**	**+2.2**
	0.3nm,0.4s						
KPKS				eS	**Sg**	**13 36 46.2**	**-1.7**
	92nm,0.4s						
SATY	**Saty**	**2.54**	**290**	Pg	**Pg**	**13 36 15.2**	**-0.6**
	26nm,0.4s						
SATY				Lg	Lg	13 36 48.7	
	96nm,0.1s						
KNOS	**Konyrlen**	**2.80**	**321**	Pg	**Pb**	**13 36 19.1**	**+2.2**
	7.8nm,0.2s						
KNOS				Lg	Lg	13 36 55.8	
	93nm,0.3s						
KURS	**Kuram**	**2.86**	**298**	Pg	**Pg**	**13 36 21.7**	**-0.2**
	7.6nm,0.3s						
KURS				Lg	Lg	13 36 59.1	
	30nm,0.3s						
BLB	**Baldybastay**	**2.99**	**310**	Pg	**Pb**	**13 36 22.0**	**+1.9**
	9.6nm,0.3s						
BLB				Lg	Lg	13 36 59.4	
	64nm,0.2s						
ARXS	**Arharly**	**3.44**	**307**	Pg	**Pb**	**13 36 29.8**	**+2.2**
	2.6nm,0.3s						
ARXS				Lg	Lg	13 37 13.3	
	16nm,0.3s						
ARXS	**Arharly**	**3.44**	**307**	eP	**Pb**	**13 36 29.8**	**+2.2**
	2.6nm,0.3s						
ARXS				eS	**Sb**	**13 37 13.3**	**+4.1**
	16nm,0.3s						
KAPS	**Kapalarasan**	**3.49**	**332**	Pg	**Pb**	**13 36 31.5**	**+3.0**
	2.4nm,0.1s						
KAPS				Lg	Lg	13 37 16.8	
	82nm,0.2s						
KOTS	**Kotyrbulak**	**3.50**	**288**	Pg	**Pb**	**13 36 30.5**	**+1.8**
	7.9nm,0.4s						
KOTS				Lg	Lg	13 37 15.2	
	26nm,0.3s						
KOTS	**Kotyrbulak**	**3.50**	**288**	eP	**Pb**	**13 36 30.5**	**+1.8**
	7.9nm,0.4s						
KOTS				eS	**Sg**	**13 37 15.2**	**-4.2**
	26nm,0.3s						
MDOK	**Medeo**	**3.53**	**287**	Pg	**Pb**	**13 36 31.8**	**+2.6**
	13nm,0.4s						
MDOK				Lg	Lg	13 37 16.4	
	27nm,0.5s						
TDK	**Taldyqorghan**	**3.65**	**321**	Pg	**Pb**	**13 36 34.5**	**+3.3**
	19nm,0.2s						
TDK				Lg	Lg	13 37 21.6	
	104nm,0.2s						
TDK	**Taldyqorghan**	**3.65**	**321**	eP	**Pb**	**13 36 34.5**	**+3.3**
	19nm,0.2s						
TDK				eS	**Sg**	**13 37 21.6**	**-2.6**
	104nm,0.2s						
KTBS	**Karatobe**	**3.94**	**294**	Pg	**Pb**	**13 36 40.4**	**+4.1**
	9.5nm,0.4s						
KTBS				Lg	Lg	13 37 31.8	
	0.5nm,0.6s						
KTBS	**Karatobe**	**3.94**	**294**	eP	**Pb**	**13 36 40.4**	**+4.1**
	9.5nm,0.4s						
KTBS				eS	**Sg**	**13 37 31.8**	**-1.9**
	0.5nm,0.6s						
MTBS	**Maitube**	**3.96**	**285**	Pg	**Pb**	**13 36 40.5**	**+3.9**
	7.2nm,0.5s						
MTBS				Lg	Lg	13 37 31.1	
	15nm,0.2s						
MTBS	**Maitube**	**3.96**	**285**	eP	**Pb**	**13 36 40.5**	**+3.9**
	7.2nm,0.5s						
MTBS				eS	**Sg**	**13 37 31.1**	**-3.2**
	15nm,0.2s						
KST	**Kastek**	**4.28**	**283**	Pg	**Pb**	**13 36 46.2**	**+4.2**
	4.9nm,0.6s						
KST				Lg	Lg	13 37 41.1	
	20nm,0.6s						
KST	**Kastek**	**4.28**	**283**	eP	**Pb**	**13 36 46.2**	**+4.2**
	4.9nm,0.6s						
KST				eS	**Sg**	**13 37 41.1**	**-3.4**
	20nm,0.6s						
MAKZ	**Makanchi**	**4.60**	**3**	⇓Pn	**Pb**	**13 36 45.5**	**-1.8**
	0.7nm,0.3s						
MAKZ				⇓Sn	**Sb**	**13 37 40.9**	**-1.5**
	2.2nm,0.7s						
MAKZ				⇑Lg	Lg	13 38 00.7	
	4.1nm,0.8s						
MK31	**Makanchi Array**	**4.60**	**5**	Pn	**Pb**	**13 36 46.6**	**-0.8**
	0.3nm,0.4s,baz=194,slow=14,SNR=24						
MK31				⇓Sn	**Sb**	**13 37 39.1**	**-3.4**
	2.0nm,0.6s,baz=181,slow=19,SNR=3.6						
MK31				⇑Lg	Lg	13 38 00.0	
	3.7nm,0.6s,baz=187,slow=28,SNR=5.7						
AAK	**Ala-Archa**	**5.32**	**277**	⇑Pg	**Pg**	**13 37 06.4**	**-2.5**
	1.2nm,0.5s						
AAK				⇓Lg	Lg	13 38 13.9	
	7.3nm,1.1s						
ZSN	**Zaisan**	**5.71**	**22**	Pg	**Pg**	**13 37 17.9**	**+1.6**
	1.7nm,0.2s						
ZSN				Lg	Lg	13 38 35.4	
	7.6nm,0.3s						
ZSN	**Zaisan**	**5.71**	**22**	eP	**Pg**	**13 37 16.2**	**-0.1**
	2.2nm,0.2s						
ZSN				eS	**Sg**	**13 38 32.5**	**+2.3**
	7.6nm,0.3s						

*NEIC **02** 13:43:21, 50°.45N×130°.25W, h7km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; Mrr0.28; Mθθ-4.01; Mφφ5.65; Mrθ1.31; Mθφ0.70; Mφr-0.12; Fault plane solution: M0 5.10000×10^{15} NP1:φs228.00000°, δ79.00000°, λ-11.00000°. NP2:φs320.00000°, δ79.00000°, λ-169.00000°. Principal axes: T 5.0582, Plg0.0000°, Azm94.0000°; N 0.0102, Plg74.0000°, Azm3.0000°; P -5.0684, Plg16.0000°, Azm184.0000°;*
*PGC **02** 13:43:21.0±0.2, 50°.45N×130°.25W, h10km, MLSn3.8/36, Mw4.4, 196km west of Port Hardy, Bc Vancouver Island, Canada Region*
*NEIC **02** 13:43:23.0±1.1, 50°.66N±0°.08×130°.0W±0°.1, h10km±1km, mb4.2/162, Mwr4.4(OTT), Error ellipse: s-maj=16.3km s-min=8.1km az=218.0*
*IDC **02** 13:43:22.3±0.8, 50°.53N×129°.93W, h0km, mb3.9/10, mbtmp3.9/18, ML3.7/6, MS3.6/44, Error ellipse: s-maj=14.3km s-min=8.3km az=57.0*
ISC 02 13:43:22.3±0.5**, 50°.55N**±0°.05×**130°.09W**±0°.04**, h10**km**, n368,** σ**1s.26**/284**, mb4.2**/30**, MS3.6**/36**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.25**	**85**	Pn	**Pb**	**13 43 44.1**	**-2.0**
BPEB	**Brooks Peninsu**	**1.54**	**104**	Pn	**Pn**	**13 43 47.0**	**-2.8**
PACB	**Port Alice, BC**	**1.67**	**93**	Pn	**Pn**	**13 43 49.4**	**-2.1**
PHC	**Port Hardy**	**1.70**	**84**	Pn	**Pn**	**13 43 50.7**	**-1.3**
PHC				Sn	**Sn**	**13 44 11.2**	**-2.6**
HG4B	**Hotspring**	**1.88**	**339**		**Pn**	**13 43 51.6**	**-2.8**
JEDB	**Jedway, Haida**	**1.88**	**339**	Pn	**Pn**	**13 43 51.6**	**-2.8**
JEDB				Sn	**Sn**	**13 44 14.4**	**-3.9**
FHBB	**Fair Harbour**	**1.97**	**103**	Pn	**Pn**	**13 43 53.3**	**-2.4**
BBB	**Bella Bella**	**2.06**	**36**	Pn	**Pn**	**13 43 56.0**	**-0.8**
	32nm,0.3s,baz=221,slow=9.9,SNR=468						

BBB Lg Lg 13 44 18.7
112nm,0.3s,baz=212,slow=13,SNR=9.3
117nm,0.4s
BBB Bella Bella 2.06 36 Pn Pn 13 43 56.0 -0.8
BBB Bella Bella 2.06 36 Pn Pn 13 43 56.1 -0.8
BBB Sn Sn 13 44 19.7 -2.8
BAIB Barry Inlet 2.28 334 Pn Pn 13 43 57.7 -2.3
BAIB Sn Sn 13 44 25.0 -3.2
WOSB Woss 2.29 98 Pn Pn 13 43 58.7 -1.5
TAHB Tahsis 2.29 105 Pn Pn 13 43 58.0 -2.2
NTKA Nootka 2.44 112 Pn Pn 13 43 59.4 -2.7
ETB Estevan Point 2.58 116 Pn Pn 13 44 01.5 -2.5
NCSB Newcastle Ridg 2.58 92 Pn Pn 13 44 02.8 -1.5
HG1B Mitchell Dam 2.71 333 Pn Pn 13 44 04.7 -1.1
GDR Gold River 2.72 105 Pn Pn 13 44 04.1 -2.0
NC89 ODP889 2.83 130 Pn Pn 13 44 05.3 -2.0
MOBC Moresby Island 2.85 337 Pn Pn 13 44 05.6 -2.2
GRIB Gribbell Islan 2.86 12 Pn Pn 13 44 06.9 -1.1
BNAB Bonilla 2.97 354 Pn Pn 13 44 07.8 -1.6
DIB Dawson Inlet, 3.04 332 Pn 13 44 08.2 -2.1
DIB Dawson Inlet, 3.04 332 Pn Pn 13 44 08.3 -2.1
H02S2 DAWSON INLET T 3.04 332 Pn Pn 13 44 08.4 -2.0
H02S2 Sn Sn 13 44 43.6 -3.3
CBB Campbell River 3.08 98 Pn 13 44 09.9 -1.1
CBB Campbell River 3.08 98 Pn Pn 13 44 09.8 -1.1
GRNB Grenville Isla 3.31 1 Pn Pn 13 44 13.2 -0.9
PCLB Port Clements 3.51 336 Pn Pn 13 44 14.8 -2.1
BFSB Bamfield 3.65 116 Pn Pn 13 44 17.4 -1.4
KITB Kitimat 3.65 14 Pn Pn 13 44 18.2 -0.5
B928 Bamfield 3.65 116 Pn Pn 13 44 16.9 -1.8
B927 Port Alberni 3.67 109 Pn Pn 13 44 17.6 -1.4
PABB Port Alberni 3.67 109 Pn Pn 13 44 17.6 -1.4
TXDB Texada 3.74 101 Pn Pn 13 44 18.9 -1.1
RUBB Prince Rupert 3.79 359 Pn 13 44 19.9 -0.8
RUBB Prince Rupert 3.79 359 Pn Pn 13 44 20.0 -0.7
RUBB Sn Sn 13 45 02.8 -2.4
MGRB Mount Grey 3.83 112 Pn Pn 13 44 19.5 -1.8
SHB Sechelt 4.12 101 Pn Pn 13 44 24.3 -1.0
NLLB Nanaimo Lost L 4.16 106 Pn Pn 13 44 24.2 -1.6
PTRF Port Renfrew 4.21 116 Pn Pn 13 44 25.0 -1.5
CLRS Cowichan Lake 4.24 112 Pn 13 44 26.0 -0.9
CLRS Cowichan Lake 4.24 112 Pn Pn 13 44 25.9 -1.0
SYMB Survey Mountai 4.55 113 Pn Pn 13 44 30.2 -1.1
WSLR Whistler 4.61 92 Pn Pn 13 44 31.8 -0.3
B010 North Saanich 4.72 111 Pn Pn 13 44 32.5 -1.0
PGC Sidney 4.72 111 Pn 13 44 32.5 -1.0
PGC Sidney 4.72 111 Pn Pn 13 44 32.5 -1.0
B009 North Saanich 4.72 111 Pn Pn 13 44 32.4 -1.0
B011 North Saanich 4.72 111 Pn Pn 13 44 32.4 -1.1
V35K Ketchikan 4.88 350 Pn 13 44 34.8 -0.8
V35K Ketchikan 4.88 350 P Pn 13 44 34.7 -0.9
baz=168
VGZ Gonzales 4.90 113 Pn Pn 13 44 35.4 -0.6
A04D Lummi Island 5.14 108 Pn 13 44 39.4 +0.2
NLWA Neilton Lookou 5.17 125 Pn 13 44 39.5 -0.3
LLLB Lillooet 5.23 86 Pn 13 44 40.6 0.0
LLLB Lillooet 5.23 86 Pn Pn 13 44 40.7 +0.1
CRAG Craig 5.26 341 P Pn 13 44 39.9 -1.0
baz=157
FSJB Fort St James 5.28 40 Pn Pn 13 44 42.3 +1.1
FSJB Sn Sn 13 45 40.9 -1.3
U35K Hyder 5.38 0 P Pn 13 44 41.1 -1.4
baz=180
GNW Green Mountain 5.63 119 Pn 13 44 46.1 0.0
HOPB Hope 5.72 98 Pn Pn 13 44 47.3 +0.1
WRAK Wrangell Islan 6.03 348 P Pn 13 44 49.8 -1.7
baz=166
D05A Enumclaw 6.32 119 Pn 13 44 56.1 +0.7
T35M Bob Quinn 6.45 359 P Pn 13 44 55.8 -1.4
baz=179,SNR=9.3
PNT Penticton 6.88 96 Pn Pn 13 45 03.2 +0.1
LTY Liberty 7.03 114 Pn 13 45 06.0 +0.7
B08A Colville Reser 7.35 103 Pn 13 45 09.5 -0.1
S34M Telegraph Cree 7.41 356 P Pn 13 45 09.5 -0.8
baz=174
NBC8 Simpson Ranch 7.57 34 Pn Pn 13 45 14.2 +1.5
NBC8 Sn Sn 13 46 40.6 +2.1
EPH Ephrata 7.61 111 Pn 13 45 13.0 -0.3
MXC Moxie City 7.62 118 Pn 13 45 13.7 +0.3
E07A Sunnyside 7.88 117 Pn 13 45 17.1 +0.2
DLBC Dease Lake 7.91 0 Pn Pn 13 45 19.4 +2.1
2.4nm,0.3s,baz=179,slow=14,SNR=107
DLBC Sn Sn 13 46 47.1 +0.4
0.3nm,0.3s,baz=150,slow=20,SNR=1.2
DLBC Lg Lg 13 47 30.0
0.2nm,0.3s,baz=237,slow=17,SNR=3.7
DLBC LR LR 13 47 59.7
comp=Z,448nm,22.0s,baz=172,slow=35
14nm,0.6s
DLBC Dease Lake 7.91 0 P Pn 13 45 17.2 -0.1
baz=180,SNR=6.6
H04A Detroit Lake 7.93 135 Pn 13 45 18.7 +1.0
WAH2 Wahluke Slope 7.94 115 Pn 13 45 17.2 -0.4
D08A Wollman Farm, 8.16 111 Pn 13 45 20.1 -0.7
C09A Chrisman Ranch 8.22 105 Pn Pn 13 45 21.5 -0.1
NBC5 NorthernBC 5 8.23 29 Pn Pn 13 45 23.3 +1.5
NBC5 Sn Sn 13 46 53.9 -1.0
NEW Newport 8.76 100 Pn Pn 13 45 28.0 -1.0
10nm,0.4s,baz=288,slow=15,SNR=32
NEW Lg Lg 13 47 53.6
0.2nm,0.3s,baz=297,slow=16,SNR=1.2
NEW LR LR 13 48 50.0
comp=Z,627nm,19.1s,baz=278,slow=38
NEW Newport 8.76 100 Pn 13 45 28.3 -0.7
R33M Jennings River 8.88 357 P Pn 13 45 30.1 -0.6
baz=176
WTLY Watson Lake, Y 9.62 4 P Pn 13 45 39.4 -1.3
baz=185
P33M Teslin, Yukon 9.81 352 P Pn 13 45 42.5 -0.8
baz=169
YBH Yreka Blue Hor 10.19 147 Pn Pn 13 45 50.7 +2.0
baz=349,slow=12,SNR=6.8
YBH LR LR 13 49 00.9
comp=Z,15nm,20.0s,baz=313,slow=34
KOTAN Kotaneelee Air 10.20 17 P Pn 13 45 47.6 -0.9
baz=202
BMO Blue Mountains 10.33 119 Pn 13 45 51.1 +0.6
JTMT Jette 10.73 99 Pn 13 45 56.2 +0.1
PLID Pearl Lake 10.93 115 Pn 13 45 58.8 -0.1
ORV Oroville 12.55 148 Pn 13 46 22.6 +1.8
HLID Hailey 12.76 117 Pn 13 46 24.4 +0.5
YMR Madison River 14.16 107 Pn 13 46 43.1 0.0
ELK Elko 14.26 128 Pn Pn 13 46 45.9 +1.5
0.1nm,0.3s,baz=325,slow=13,SNR=3.8
ELK Lg Lg 13 50 52.5
0.1nm,0.3s,baz=26,slow=14,SNR=1.4
ELK LR LR 13 52 14.3
comp=Z,179nm,18.4s,baz=326,slow=38
1.0nm,0.7s
L26K Log Cabin Wild 14.42 335 P Pn 13 46 45.2 -1.0
baz=144
DAWY Dawson 14.43 343 P Pn 13 46 44.9 -1.5
baz=155
YKA Yellowknife Ar 14.65 29 Pn Pn 13 46 47.9 -1.5
0.2nm,0.3s,baz=225,slow=12,SNR=29
YKA Sn Sn 13 49 21.5 -10
0.2nm,0.3s,baz=226,slow=23,SNR=5.9
YKA Lg Lg 13 50 58.5
0.1nm,0.3s,baz=216,slow=26,SNR=1.7
YKA LR LR 13 51 57.8
comp=Z,139nm,18.0s,baz=287,slow=35
1.6nm,0.7s
YKA Yellowknife Ar 14.65 29 Pn 13 46 48.1 -1.3
YKAW1 Yellowknife Wh 14.68 30 Pn 13 46 48.8 -1.1
YKAW3 Yellowknife Wh 14.70 29 Pn 13 46 49.0 -1.0
NVAR Mina Array Bea 14.73 141 Pn Pn 13 46 53.2 +2.4
0.6nm,0.7s,baz=325,slow=14,SNR=4.9
NVAR LR LR 13 52 05.6
comp=Z,139nm,19.8s,baz=352,slow=36
O22K Cooper Landing 14.86 320 P Pn 13 46 52.0 -0.2
baz=123
M23K Glacier View 14.88 326 P Pn 13 46 51.7 -0.8
baz=131
KNK Knik Glacier 14.90 324 P Pn 13 46 51.6 -1.2
baz=128
KDAK Kodiak Island 14.98 308 LR LR 13 50 20.7
comp=Z,154nm,20.5s,baz=126,slow=28
DOT Dot Lake 15.11 336 Pn Pn 13 46 56.2 +0.6
DOT IAmb IAmb 13 47 10.7
comp=Z,8.8nm,1.0s
BGU Big Grassy Mou 15.28 122 IAmb IAmb 13 47 06.2
comp=Z,8.8nm,1.0s
SCRK Sand Creek 15.36 336 P 13 47 03.9 +0.1
SCRK IAmb IAmb 13 47 13.4
comp=Z,18nm,1.1s
SCRK Sand Creek 15.36 336 P Pn 13 46 57.4 -1.6
baz=144
RIDG Independent Ri 15.40 335 P Pn 13 46 57.9 -1.5
baz=142
H31M Peel River 15.46 353 P Pn 13 46 58.8 -1.4
baz=170
HWUT Hardware Ranch 15.62 118 Pn Pn 13 47 03.1 +0.5
HWUT IAmb IAmb 13 47 06.7
comp=Z,16nm,1.1s
K24K Donnelly Dome 15.71 334 IAmb IAmb 13 47 18.0
comp=Z,23nm,1.0s
K24K Donnelly Dome 15.71 334 P Pn 13 47 03.4 0.0
baz=140
I28M Miner Creek 15.79 345 P Pn 13 47 03.7 -0.9
baz=156
SUA Susitna One 15.82 322 P Pn 13 47 04.3 -0.6
baz=124
WAT1 Susitna Watana 15.86 328 P Pn 13 47 04.1 -1.4
baz=132
BW06 Boulder Array 16.07 111 IAmb IAmb 13 47 12.4
comp=Z,35nm,1.1s
PD31 Pinedale Array 16.07 111 IAmb IAmb 13 47 12.4
comp=Z,35nm,1.1s
PDAR Pinedale Array 16.07 111 Pn P 13 47 10.9 -0.9
comp=Z,0.5nm,0.3s,baz=311,slow=15,SNR=90
PDAR Pinedale Array 16.07 111 P 13 47 11.3 -0.6
EPYK Eagle Plains 16.23 350 P Pn 13 47 09.2 -0.9
baz=164
I27K Kandik River 16.23 343 P Pn 13 47 08.6 -1.6
baz=153
J25K Salcha River, 16.23 336 P Pn 13 47 09.8 -0.4
baz=143,SNR=9.5
SPCR Spurr Chakacha 16.27 319 P Pn 13 47 10.5 -0.2
baz=121
I26K Coal Creek Min 16.28 340 P Pn 13 47 09.8 -1.0
baz=149
RND Reindeer 16.36 329 Pn Pn 13 47 12.7 +0.9
S11A Rachel 16.47 136 IAmb IAmb 13 47 19.9
comp=Z,24nm,1.2s
HDA Harding Lake 16.50 334 P Pn 13 47 13.0 -0.6
baz=139
G31M Satah River 16.56 354 P Pn 13 47 14.6 +0.3
baz=170
MCK McKinley 16.61 330 P Pn 13 47 14.7 -0.3
baz=134,SNR=7.4
O19K Port Alsworth 16.72 315 P Pn 13 47 16.4 0.0
baz=114
IL31 16.76 335 IAmb IAmb 13 47 29.0
comp=Z,13nm,0.9s
ILAR Eielson Array 16.76 335 Pn P 13 47 20.7 +1.5
comp=Z,0.1nm,0.3s,baz=146,slow=9.5,SNR=25
ILAR LR LR 13 53 30.7
comp=Z,108nm,18.5s,baz=163,slow=36
comp=Z,6.4nm,0.9s
G30M tAoh Zraii Nji 16.77 352 P Pn 13 47 17.0 -0.1
baz=166
H27K Steamboat Moun 16.78 344 P Pn 13 47 16.1 -1.1
baz=154
TPNV Topopah Spring 16.84 139 IAmb IAmb 13 47 25.0
comp=Z,31nm,1.4s
TRF Thorofare Moun 16.86 328 P Pn 13 47 18.0 -0.4
baz=130
O18K Kotsina Hills 16.99 313 P Pn 13 47 19.6 -0.2
baz=112
PRP Porcupine Dome 17.00 338 IAmb IAmb 13 47 34.2
comp=Z,15nm,1.1s
PRP Porcupine Dome 17.00 338 P Pn 13 47 19.7 -0.4
baz=144,SNR=9.8
F31M Tsiigehtchic 17.04 355 IAmb IAmb 13 47 23.4
comp=Z,16nm,1.1s
F31M Tsiigehtchic 17.04 355 P Pn 13 47 18.4 -2.0
baz=172,SNR=9.9
N19K Bonanza Creek 17.06 316 P Pn 13 47 19.5 -1.2
baz=116
ISA Isabella, Lake 17.09 146 IAmb IAmb 13 47 27.7
comp=Z,16nm,1.2s
KTH Kantishna Hill 17.15 327 IAmb IAmb 13 47 28.5
comp=Z,40nm,1.5s
POKR Poker Plat Res 17.18 335 P Pn 13 47 19.8 -2.3
baz=140
NEA2 Nenana 17.26 332 P Pn 13 47 23.6 +0.5
baz=135
F30M Barrier River 17.35 353 P Pn 13 47 24.4 +0.2
baz=168
FFC Flin Flon 17.51 65 Pn 13 47 25.2 -1.1
FFC IAmb IAmb 13 47 34.6
comp=Z,22nm,1.1s
BPAW Bear Paw Mtn. 17.53 329 P Pn 13 47 26.4 0.0
baz=131
N18K Kilae Creek 17.63 315 P Pn 13 47 28.0 +0.3
baz=113
I23K Minto, Yukon-K 17.75 333 P Pn 13 47 29.3 +0.2
baz=136
F28M Old Crow 17.80 348 P Pn 13 47 30.3 +0.5
baz=159,SNR=5.5
FYU Fort Yukon 17.81 340 IAmb IAmb 13 47 41.5
comp=Z,42nm,1.2s
CHUM Lake Minchumin 17.84 327 P Pn 13 47 30.9 +0.6
baz=128
G26K Porcupine Rive 17.84 342 IAmb IAmb 13 47 41.9
comp=Z,17nm,1.1s
G26K Porcupine Rive 17.84 342 P Pn 13 47 31.4 +1.1
baz=150,SNR=6.7
H24K Noodor Dome 17.85 336 IAmb IAmb 13 47 39.0
comp=Z,22nm,1.1s
H24K Noodor Dome 17.85 336 P Pn 13 47 31.2 +0.6
baz=140,SNR=10
L19K White Mountain 17.86 320 Pn 13 47 30.6 +0.1
L19K White Mountain 17.86 320 P Pn 13 47 31.8 +1.2
baz=119
INK Inuvik 17.89 356 P P 13 47 32.4 +0.9
baz=175,slow=9.9,SNR=11
INK LR LR 13 54 36.6
comp=Z,303nm,19.6s,baz=231,slow=38
comp=Z,6.0nm,1.1s
INK Inuvik 17.89 356 P Pn 13 47 31.4 +0.4
baz=173,SNR=6.4
K22A Casper 17.96 107 IAmb IAmb 13 47 36.0
comp=Z,22nm,0.9s
P16K Nushagak River 18.07 309 P Pn 13 47 33.9 +0.7
baz=105
MLY Manley 18.07 331 IAmb IAmb 13 47 43.0
comp=Z,21nm,1.4s
MLY Manley 18.07 331 P Pn 13 47 34.5 +1.3
baz=133
N17K Nushagak Hills 18.16 314 P Pn 13 47 35.1 +0.8
baz=111
K20K Telida 18.16 324 P P 13 47 36.0 +1.4
baz=123
PKCU Pink Cliffs 18.25 129 IAmb IAmb 13 47 46.6
comp=Z,22nm,1.3s
O16K Kokwok River B 18.28 310 P Pn 13 47 36.7 +0.9
baz=107
E29M Blow River 18.30 351 P Pn 13 47 37.0 +1.0
baz=164
BMAR Burnt Mountain 18.41 342 P 13 47 37.3 0.0
G24K Haweenzic Riv 18.43 338 P P 13 47 38.0 +0.4
baz=143
O20A White River Ci 18.49 116 IAmb IAmb 13 47 42.4
comp=Z,26nm,1.2s
F26K Sheenjek River 18.56 343 IAmb IAmb 13 47 46.8
comp=Z,24nm,1.2s
F26K Sheenjek River 18.56 343 P P 13 47 40.0 +1.0
baz=151,SNR=15
I21K Tanana 18.56 330 P P 13 47 40.2 +1.2
baz=131
E27K Coleen River 18.57 346 P P 13 47 39.3 +0.2
baz=156
M17K Holitna River 18.61 316 P P 13 47 40.7 +1.2
baz=113
L18K Granite Mounta 18.63 319 P P 13 47 40.8 +1.1
L18K IAmb IAmb 13 47 48.2
comp=Z,20nm,1.2s
L18K Granite Mounta 18.63 319 P Pn 13 47 41.4 +1.4
baz=116
HMU Henry Mountain 18.67 125 IAmb IAmb 13 47 44.1
comp=Z,21nm,1.0s
E28M Babbage River 18.69 349 P P 13 47 41.0 +0.7
baz=161
RSSD Black Hills 18.74 100 P 13 47 41.1 -0.2
RSSD IAmb IAmb 13 47 50.5
comp=Z,12nm,0.9s
F25K Christian Rive 18.76 341 IAmb IAmb 13 47 49.4
comp=Z,22nm,1.1s
F25K Christian Rive 18.76 341 P P 13 47 41.4 +0.2
baz=148,SNR=11
H22K Ishtalitna Cre 18.87 333 P P 13 47 42.7 +0.3
baz=134,SNR=9.0
O15K Ungalikthiuk R 19.02 308 P P 13 47 45.4 +1.3
baz=104
U15A North Rim 19.06 131 Pn 13 47 46.4 +0.7
C36M Paulatuk 19.08 7 IAmb IAmb 13 47 46.8
comp=Z,15nm,1.1s
C36M Paulatuk 19.08 7 P P 13 47 45.4 +0.8
baz=192,SNR=8.8
G23K Bananza Creek 19.08 336 IAmb IAmb 13 48 04.5
comp=Z,13nm,1.2s
G23K Bananza Creek 19.08 336 P P 13 47 45.0 +0.3
baz=138
J19K Poorman 19.09 324 IAmb IAmb 13 47 52.5
comp=Z,21nm,1.4s
J19K Poorman 19.09 324 P P 13 47 44.2 -0.6
baz=122
H21K Melozitna Rive 19.14 331 IAmb IAmb 13 47 52.6
comp=Z,19nm,1.4s
H21K Melozitna Rive 19.14 331 P P 13 47 45.7 +0.4
baz=131
E25K Arctic Village 19.20 342 IAmb IAmb 13 47 57.7
comp=Z,16nm,1.1s
E25K Arctic Village 19.20 342 P P 13 47 47.3 +1.3
baz=149,SNR=12
J18K Innoko River 19.23 322 IAmb IAmb 13 47 55.8
comp=Z,14nm,1.2s
J18K Innoko River 19.23 322 P P 13 47 47.7 +1.3
baz=120
PV10 Paradox Valley 19.26 121 IAmb IAmb 13 47 50.6
comp=Z,22nm,0.9s
PV14 Lion Creek, Pa 19.27 121 IAmb IAmb 13 47 54.0
comp=Z,24nm,0.9s
L17K Donlin 19.28 318 P P 13 47 48.0 +1.2
baz=114
PV22 Blue Mesa, Par 19.28 120 IAmb IAmb 13 47 53.2
comp=Z,12nm,0.9s
D28M Stokes Point 19.29 351 P P 13 47 47.1 +0.2
baz=163
PV04 Paradox Valley 19.32 121 IAmb IAmb 13 47 54.6
comp=Z,12nm,0.9s
PV20 West Nyswonger 19.32 121 IAmb IAmb 13 47 50.5
comp=Z,23nm,0.9s
PV19 Morning Glory 19.34 121 IAmb IAmb 13 47 50.2
comp=Z,20nm,0.8s
PV17 East Wray Mesa 19.37 121 IAmb IAmb 13 47 55.1
comp=Z,23nm,1.1s
PV16 Nyswonger Mesa 19.37 121 IAmb IAmb 13 47 55.1
comp=Z,11nm,0.8s
PV11 David Mesa, Pa 19.40 121 IAmb IAmb 13 47 59.3
comp=Z,22nm,0.9s
PV12 Saucer Basin, 19.43 121 IAmb IAmb 13 47 52.9
comp=Z,16nm,0.9s
PV03 Paradox Valley 19.45 121 IAmb IAmb 13 47 55.8
comp=Z,12nm,0.9s
D27M Malcolm River 19.47 348 P P 13 47 50.1 +1.2
baz=159
COLD Coldfoot 19.52 336 IAmb IAmb 13 48 00.7
comp=Z,17nm,1.1s
COLD Coldfoot 19.52 336 P P 13 47 48.1 -1.3
baz=139,SNR=12
K17K Iditarod 19.52 319 P P 13 47 49.3 -0.2
baz=115
PV13 Radium Mtn., P 19.53 121 IAmb IAmb 13 47 54.9
comp=Z,21nm,1.2s
PV02 Paradox Valley 19.54 121 IAmb IAmb 13 47 52.4
comp=Z,12nm,0.8s
PV15 Paradox Valley 19.59 120 IAmb IAmb 13 48 02.0
comp=Z,13nm,0.9s
L16K Owhat River 19.63 316 P P 13 47 49.9 -0.7
baz=111
IMAR Indian Mountai 19.65 331 P P 13 47 51.8 +1.0
PV01 Paradox Valley 19.69 121 P P 13 47 52.6 +0.9
PV01 IAmb IAmb 13 47 54.3
comp=Z,11nm,0.9s
H20K Anotleneega Mo 19.70 329 P P 13 47 50.5 -1.0
baz=127
E24K Your Creek 19.77 339 P P 13 47 51.6 -0.6
baz=143
M15K Kasigluk River 19.85 312 P P 13 47 52.7 -0.4
baz=107
G21K Allakaket 19.93 332 P P 13 47 53.4 -0.5
baz=132
GCSA Galena City Sc 19.96 326 P P 13 47 54.7 +0.5
baz=122
E23K Chandalar 20.02 338 IAmb IAmb 13 48 02.5
comp=Z,22nm,1.1s
E23K Chandalar 20.02 338 P P 13 47 54.1 -0.9
baz=141,SNR=9.2
N14K Kuskokwak Cree 20.12 310 P P 13 47 56.3 +0.2
baz=103
C27K Jago River 20.21 346 P P 13 47 57.1 +0.2
baz=154
WUAZ Wupatki 20.23 131 IAmb IAmb 13 48 06.2
comp=Z,12nm,1.1s
D25K Kavik River 20.39 343 P P 13 47 57.2 -1.8
baz=149
MVCO Mesa Verde 20.40 123 IAmb IAmb 13 48 04.8
comp=Z,16nm,1.1s
F21K Alatna River 20.40 334 P P 13 47 58.8 -0.2
baz=133
M14K Bethel 20.46 312 P 13 48 02.2 +2.5
M14K IAmb IAmb 13 48 03.4
comp=Z,20nm,1.2s
M14K Bethel 20.46 312 P P 13 47 59.4 -0.3
baz=105
TOLK Toolik Lake Re 20.47 340 P P 13 48 00.0 +0.2
baz=142,SNR=15
L15K Ungalak Mounta 20.52 315 P P 13 48 01.0 +0.6
baz=108
E22K Anaktuvuk Pass 20.61 337 P P 13 48 01.8 +0.5
baz=138
C26K Camden Bay 20.66 345 P P 13 48 02.5 +0.7
baz=152
H18K Honhosa River 20.71 326 P P 13 48 03.4 +1.0
baz=121,SNR=7.8
J16K Anvik River 20.72 320 P 13 48 05.0 +2.5
J16K Anvik River 20.72 320 P P 13 48 02.7 +0.3
baz=113
D24K Happy Valley 20.72 341 P P 13 48 03.5 +1.0
baz=144
K15K Wolf Creek Mou 20.74 317 P P 13 48 03.1 +0.3
K15K IAmb IAmb 13 48 16.8
comp=Z,14nm,1.1s
K15K Wolf Creek Mou 20.74 317 P P 13 48 02.3 -0.5
baz=110
G19K Purcell Mounta 20.82 329 P P 13 48 02.6 -1.0
baz=125
F20K Avaraart Lake 20.94 332 P P 13 48 04.7 -0.2
baz=129
L14K Kuka Creek 20.96 313 IAmb IAmb 13 48 16.3
comp=Z,14nm,1.1s
L14K Kuka Creek 20.96 313 P P 13 48 05.3 +0.1
baz=106
D23K Nanushuk River 20.98 339 P P 13 48 05.5 +0.2
baz=141
I17K Unalakleet 21.00 321 P 13 48 08.1 +2.6
I17K IAmb IAmb 13 48 18.9
comp=Z,9.8nm,0.9s
I17K Unalakleet 21.00 321 P P 13 48 04.7 -0.8
baz=115
M13K Dall Lake 21.05 311 P P 13 48 06.5 +0.5
baz=103
X16A Lo Mia Camp, P 21.10 133 IAmb IAmb 13 48 13.0
comp=Z,9.3nm,0.9s
C24K Franklin Bluff 21.16 342 P P 13 48 06.4 -0.8
baz=145
H17K Granite Mounta 21.18 324 P P 13 48 05.5 -2.0
baz=118
G18K Tagagawik 21.21 327 P P 13 48 06.6 -1.2
baz=122
W18A Petrified Fore 21.36 128 IAmb IAmb 13 48 15.7
comp=Z,14nm,0.9s
D22K Ayikyak River 21.38 338 P P 13 48 08.8 -0.8
baz=138
E21K Killik River 21.39 336 P P 13 48 08.0 -1.7
baz=135
F19K Shaleruckik Mo 21.45 330 P P 13 48 10.3 0.0
baz=126,SNR=5.9
A36M Sachs Harbour 21.62 4 P P 13 48 10.9 -1.2
baz=188,SNR=20
C23K Itkillik River 21.65 341 P P 13 48 11.2 -1.2
baz=142,SNR=5.3
E19K Redstone River 21.66 332 P P 13 48 12.2 -0.3
baz=128
SDCO Great Sand Dun 21.68 117 IAmb IAmb 13 48 15.7
comp=Z,6.7nm,0.8s
ULM Lac du Bonnet 21.71 77 P P 13 48 12.9 -0.4
comp=Z,21nm,0.9s,baz=284,slow=13,SNR=10

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ULM				LR	LR	13 57 09.4	
	comp=Z,141nm,21.7s,baz=279,slow=38						
	comp=Z,21nm,0.9s						
ULM	**Lac du Bonnet**	**21.71**	**77**	P	**P**	**13 48 12.8**	**-0.4**
G17K	**Kiwalik Mounta**	**21.72**	**325**	P	**P**	**13 48 12.9**	**-0.4**
	baz=118						
X18A	**Snowflake**	**21.72**	**130**	IAmb	IAmb	13 48 18.6	
	comp=Z,16nm,1.0s						
J14K	**Nanvaranak Lak**	**21.78**	**317**	P	**P**	**13 48 13.7**	**-0.2**
	baz=108						
E20K	**Nigu River**	**21.86**	**334**	P	**P**	**13 48 14.1**	**-0.7**
	baz=131						
H16K	**Elim**	**21.93**	**322**	P	**P**	**13 48 16.0**	**+0.5**
	baz=114						
F18K	**Selawik**	**21.93**	**328**	P	**P**	**13 48 15.1**	**-0.4**
	baz=122						
K13K	**Kusilvak Mount**	**22.03**	**314**	P	**P**	**13 48 16.9**	**+0.3**
	baz=105						
C21K	**Knifeblade Rid**	**22.10**	**337**	P	**P**	**13 48 16.9**	**-0.4**
	baz=135						
FCC	**Fort Churchill**	**22.15**	**54**		**P**	**13 48 18.6**	**+0.7**
FCC				IAmb	IAmb	13 48 20.1	
	comp=Z,13nm,0.9s						
D20K	**Etivluk River**	**22.28**	**335**	P	**P**	**13 48 17.6**	**-1.7**
	baz=131						
G16K	**Koyuk River**	**22.30**	**324**	P	**P**	**13 48 18.3**	**-1.2**
	baz=116						
B21K	**Ikpikpuk River**	**22.39**	**338**	P	**P**	**13 48 20.1**	**-0.3**
	baz=136						
F17K	**Baldwin Pennin**	**22.40**	**327**	P	**P**	**13 48 19.6**	**-0.9**
	baz=120						
UNV	**Unalaska Valle**	**22.40**	**293**	P	**P**	**13 48 19.8**	**-0.8**
	baz=83						
M11K	**Mekoryuk**	**22.43**	**310**	P	**P**	**13 48 20.5**	**-0.4**
	baz=100						
D19K	**Kuna River**	**22.56**	**333**	P	**P**	**13 48 20.9**	**-1.4**
	baz=128						
B22K	**Teshekpuk Lake**	**22.65**	**340**	P	**P**	**13 48 21.7**	**-1.4**
	baz=139						
E18K	**Tukpahlearik C**	**22.69**	**329**	P	**P**	**13 48 21.5**	**-2.1**
	baz=123						
T25A	**Trinidad**	**22.72**	**116**	IAmb	IAmb	13 48 33.3	
	comp=Z,9.0nm,1.1s						
G15K	**Niukluk**	**22.78**	**322**	P	**P**	**13 48 23.1**	**-1.5**
	baz=113						
E17K	**Hotham Inlet**	**22.92**	**328**	P	**P**	**13 48 24.8**	**-1.3**
	baz=120						
ANM	**Nome**	**23.15**	**321**	P	**P**	**13 48 27.9**	**-0.6**
	baz=110						
ANMO	**Albuquerque**	**23.19**	**123**	P	**P**	**13 48 30.2**	**+0.9**
	comp=Z,5.1nm,1.0s,baz=318,slow=11,SNR=8.8						
ANMO				LR	LR	13 57 25.3	
	comp=Z,137nm,21.1s,baz=312,slow=36						
	comp=Z,5.1nm,1.0s						
ANMO	**Albuquerque**	**23.19**	**123**		**P**	**13 48 29.7**	**+0.4**
ANMO				IAmb	IAmb	13 48 31.5	
	comp=Z,5.7nm,0.9s						
ANMO	**Albuquerque**	**23.19**	**123**	IAmb	IAmb	13 48 31.6	
	comp=Z,10.0nm,1.1s						
EPLO	**Experimental L**	**23.20**	**78**		**P**	**13 48 28.3**	**-0.7**
F15K	**North Star Dit**	**23.30**	**324**	P	**P**	**13 48 29.6**	**-0.3**
F15K				IAmb	IAmb	13 48 38.7	
	comp=Z,7.4nm,1.1s						
F15K	**North Star Dit**	**23.30**	**324**	P	**P**	**13 48 28.8**	**-1.1**
	baz=114						
C19K	**Lookout Ridge**	**23.36**	**334**	P	**P**	**13 48 29.0**	**-1.6**
	baz=127						
C18K	**Utukok River**	**23.56**	**332**	P	**P**	**13 48 32.4**	**-0.2**
	baz=124						
Y22A	**Socorro**	**23.70**	**126**	IAmb	IAmb	13 48 36.4	
	comp=Z,6.6nm,0.8s						
NIKH	**Nikolski High**	**23.92**	**291**	P	**P**	**13 48 36.7**	**+0.6**
	baz=80						
C17K	**DeLong Mountai**	**24.08**	**330**	P	**P**	**13 48 36.9**	**-0.6**
	baz=121						
121A	**Cookes Peak, D**	**24.39**	**129**	IAmb	IAmb	13 48 53.7	
	comp=Z,14nm,1.3s						
A19K	**Wainwright**	**24.45**	**335**	P	**P**	**13 48 39.7**	**-1.1**
	baz=127						
TNA	**Tin City**	**24.51**	**322**	P	**P**	**13 48 40.4**	**-1.0**
	baz=109						
C16K	**Lisburne Hills**	**24.68**	**329**	P	**P**	**13 48 41.8**	**-1.1**
	baz=118						
EYMN	**Ely**	**25.14**	**81**	P	**P**	**13 48 47.0**	**-0.3**
GAMB	**Gambell**	**25.60**	**317**	P	**P**	**13 48 49.9**	**-1.4**
	baz=101						
128A	**Castleberry Fa**	**27.10**	**121**	IAmb	IAmb	13 49 06.7	
	comp=Z,5.8nm,0.9s						
VHRN	**Van Horn**	**27.21**	**127**		**P**	**13 49 06.8**	**+0.5**
VHRN				IAmb	IAmb	13 49 08.8	
	comp=Z,6.7nm,0.8s						
TPB05	**Hovey Rd**	**27.96**	**124**	IAmb	IAmb	13 49 15.0	
	comp=Z,5.8nm,0.8s						
RES	**Resolute Bay**	**28.25**	**19**	LR	LR	14 00 26.3	
	comp=Z,138nm,21.1s,baz=336,slow=36						
TX31	**Lajitas Ar. Si**	**29.05**	**127**	IAmb	IAmb	13 49 25.2	
	comp=Z,7.8nm,1.1s						
TXAR	**Lajitas Array**	**29.05**	**127**	P	**P**	**13 49 23.7**	**+1.0**
	comp=Z,3.8nm,1.0s,baz=327,slow=9.0,SNR=24						
TXAR				LR	LR	14 01 02.9	
	comp=Z,91nm,19.7s,baz=323,slow=37						
	comp=Z,3.8nm,1.0s						
SAND	**Sanderson**	**29.36**	**124**	IAmb	IAmb	13 49 27.4	
	comp=Z,3.6nm,0.9s						
DRIO	**Del Rio**	**30.58**	**122**	IAmb	IAmb	13 49 38.9	
	comp=Z,4.5nm,0.9s						
FCAR	**Ozark Folk Cen**	**30.93**	**104**	P	**P**	**13 49 38.9**	**-0.2**
CGM3	**Cape Girardeau**	**31.58**	**99**	P	**P**	**13 49 44.7**	**-0.2**
SHEM	**Shemya Is, Ala**	**33.97**	**296**	LR	LR	14 02 27.9	
	comp=Z,48nm,21.2s,baz=112,slow=34						
SADO	**Sadowa**	**34.23**	**80**	LR	LR	14 04 15.9	
	comp=Z,208nm,18.6s,baz=328,slow=37						
FRB	**Frobisher Bay**	**34.42**	**44**	LR	LR	14 04 33.8	
	comp=Z,142nm,18.1s,baz=262,slow=37						
TKL	**Tuckaleechee C**	**36.32**	**96**	LR	LR	14 05 46.5	
	comp=Z,220nm,18.2s,baz=316,slow=37						
SCHQ	**Schefferville**	**37.42**	**58**	LR	LR	14 05 37.8	
	comp=Z,196nm,19.6s,baz=290,slow=36						
ILULI	**Ilulissat**	**40.29**	**33**	P	**P**	**13 50 58.4**	**-0.6**
SEY	**Seymchan**	**41.60**	**318**	LR	LR	14 08 32.1	
	comp=Z,86nm,18.9s,baz=162,slow=36						
PETK	**Petropavlovsk-**	**42.95**	**303**	P	**P**	**13 51 22.1**	**+1.0**
	comp=Z,1.7nm,0.8s,baz=62,slow=12,SNR=3.9						
PETK				LR	LR	14 07 14.4	
	comp=Z,36nm,19.7s,baz=108,slow=33						
	comp=Z,1.7nm,0.8s						
MA2	**Magadan**	**43.61**	**314**	LR	LR	14 08 35.5	
	comp=Z,46nm,19.6s,baz=86,slow=35						
CMIG	**Matias Romero**	**43.66**	**127**	LR	LR	14 12 25.1	
	comp=Z,52nm,19.0s,baz=355,slow=40						
TIXI	**Tiksi**	**46.23**	**335**	LR	LR	14 12 40.4	
	comp=Z,66nm,18.5s,baz=60,slow=38						
SPITS	**Spitsbergen Ar**	**49.92**	**9**	LR	LR	14 14 28.6	
	comp=Z,106nm,18.8s,baz=354,slow=37						
JTS	**Las Juntas de**	**54.58**	**121**	LR	LR	14 20 48.0	
	comp=Z,27nm,18.9s,baz=325,slow=41						
ASAJ	**Asahikawa**	**56.24**	**300**	LR	LR	14 16 55.0	
	comp=Z,19nm,19.3s,baz=334,slow=36						
NRIK	**Noril'sk**	**57.27**	**345**	P	**P**	**13 53 12.6**	**+3.2**
	comp=Z,3.8nm,0.8s,baz=34,slow=7.3,SNR=6.2						
	comp=Z,3.8nm,0.8s						
NRIK	**Noril'sk**	**57.27**	**345**	P	**P**	**13 53 10.0**	**+0.6**
H11N2	**WAKE ISLAND Hy**	**57.91**	**262**	T	T	14 55 53.7	
	baz=42,slow=76,SNR=535						
H11N3	**WAKE ISLAND Hy**	**57.92**	**262**	T	T	14 55 53.7	
	baz=42,slow=76,SNR=440						
H11N1	**WAKE ISLAND Hy**	**57.93**	**262**	T	T	14 56 01.8	
	baz=42,slow=76,SNR=313						
ARCES	**ARCESS Array B**	**58.90**	**10**	LR	LR	14 20 03.9	
	comp=Z,51nm,18.3s,baz=358,slow=37						
H11S1	**WAKE ISLAND Hy**	**58.94**	**261**	T	T	14 57 19.0	
	baz=42,slow=75						
H11S2	**WAKE ISLAND Hy**	**58.95**	**261**	T	T	14 57 18.6	
	baz=42,slow=75						
H11S3	**WAKE ISLAND Hy**	**58.96**	**261**	T	T	14 57 19.4	
	baz=42,slow=75						
HEH	**HeiHe**	**59.88**	**314**	*e*P	**P**	**13 53 27.3**	**-0.5**
HEH				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MJAR	**Matsushiro Arr**	**63.81**	**296**	LR	LR	14 19 51.9	
	comp=Z,16nm,20.5s,baz=42,slow=34						
HFS	**Hagfors**	**65.86**	**19**	LR	LR	14 23 26.8	
	comp=Z,84nm,18.0s,baz=314,slow=36						
FINES	**FINESS Array B**	**66.74**	**12**	LR	LR	14 23 06.0	
	comp=Z,67nm,18.6s,baz=322,slow=36						
JCJ	**Chichijima**	**68.19**	**286**	LR	LR	14 17 06.6	
	comp=Z,35nm,21.8s,baz=133,slow=30						
SONM	**Songino Array**	**70.63**	**323**	P	**P**	**13 54 40.3**	**+2.5**
	comp=Z,0.2nm,0.4s,baz=39,slow=5.5,SNR=3.8						
	comp=Z,0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**71.83**	**339**	P	**P**	**13 54 45.1**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=18,slow=9.7,SNR=4.0						
ZALV				LR	LR	14 29 12.5	
	comp=Z,26nm,18.1s,baz=1.0,slow=38						
	comp=Z,0.5nm,0.6s						
ARTI	**Arti**	**73.20**	**355**	LR	LR	14 29 25.5	
	comp=Z,23nm,18.6s,baz=156,slow=38						
HHC	**Hu-ho-hao-te**	**74.22**	**316**	*e*P	**P**	**13 54 57.7**	**-1.6**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,71nm,4.9s						
BVAR	**Borovoye Array**	**75.36**	**347**	P	**P**	**13 55 08.7**	**+3.2**
	comp=Z,0.3nm,0.6s,baz=37,slow=7.4,SNR=1.8						
BVAR				LR	LR	14 30 53.1	
	comp=Z,31nm,19.7s,baz=8.7,slow=38						
	comp=Z,0.3nm,0.6s						
KURK	**Kurchatov**	**76.19**	**342**	P	**P**	**13 55 10.8**	**+0.5**
KURK				IAmb	IAmb	13 55 27.8	
	comp=Z,2.5nm,1.1s						
GERES	**GERESS Array B**	**76.23**	**24**	LR	LR	14 29 27.0	
	comp=Z,33nm,19.1s,baz=359,slow=36						
KURBB	**Kurchatov Arra**	**76.30**	**342**	P	**P**	**13 55 12.5**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=19,slow=5.5,SNR=1.6						
VRAC	**Vranov**	**76.51**	**22**	LR	LR	14 30 17.2	
	comp=Z,46nm,21.1s,baz=338,slow=37						
DAVOX	**Davos/Dischmat**	**77.08**	**27**	LR	LR	14 33 13.5	
	comp=Z,66nm,20.3s,baz=71,slow=39						
AKASG	**Malin Array Be**	**77.60**	**13**	P	**P**	**13 55 21.3**	**+3.1**
	comp=Z,0.2nm,0.2s,baz=350,slow=4.7,SNR=1.6						
AKASG				LR	LR	14 30 58.0	
	comp=Z,38nm,18.5s,baz=18,slow=37						
	comp=Z,0.2nm,0.2s						
MDP	**Montagnes des**	**78.11**	**96**	LR	LR	14 29 38.0	
	comp=Z,24nm,21.7s,baz=302,slow=36						
MKAR	**Makanchi Array**	**79.08**	**338**	P	**P**	**13 55 27.2**	**+0.6**
	comp=Z,0.3nm,0.8s,baz=36,slow=4.6,SNR=6.4						
MKAR				LR	LR	14 33 52.9	
	comp=Z,62nm,19.2s,baz=30,slow=38						
	comp=Z,0.3nm,0.8s						
AKTO	**Aktyubinsk**	**79.16**	**355**	LR	LR	14 33 25.6	
	comp=Z,15nm,18.4s,baz=100,slow=38						
MLR	**Muntele Rosu**	**82.11**	**17**	LR	LR	14 33 04.9	
	comp=Z,73nm,18.9s,baz=252,slow=36						
LPAZ	**La Paz**	**85.79**	**122**	LR	LR	14 37 09.7	
	comp=Z,16nm,19.7s,baz=28,slow=38						
KEST	**Kesra**	**86.94**	**32**	LR	LR	14 36 00.0	
	comp=Z,34nm,18.4s,baz=319,slow=36						
BDFB	**Brasilia**	**96.99**	**106**	LR	LR	14 43 58.8	
	comp=Z,19nm,20.6s,baz=164,slow=38						

IDC ***02*** *13:44:52.3±22.0, 21°.52S×173°.92W, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=559.4km s-min=46.0km az=40.0*

NEIC ***02*** *13:44:54.4±0.7, 21°.5S±0°.2×173°.8W±0°.2, h10km±2km, mb4.4/7, Error ellipse: s-maj=34.0km s-min=14.9km az=312.0*

ISC 02 13:44:53.9±1.0**, 21°.5S**±0°.2×**173°.9W**±0°.1**, h10**km**, n14, σ0s41**/14**, mb4.4**/8**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.45**	**58**	Pn	**Pn**	**13 46 01.7**	**+0.2**
RAO	**Raoul Island**	**8.54**	**204**	Pn	**Pn**	**13 46 58.1**	**+0.4**
EIDS	**Eidsvold**	**32.28**	**256**	P	**P**	**13 51 23.5**	**+0.4**
EIDS				IAmb	IAmb	13 51 45.1	
	comp=Z,8.0nm,1.2s						
CTA	**Charters Tower**	**37.19**	**265**	P	**P**	**13 52 05.5**	**-0.1**
	comp=Z,2.6nm,0.6s,baz=87,slow=11,SNR=6.6						
	comp=Z,2.6nm,0.6s						
CTAO	**Charters Tower**	**37.19**	**265**	P	**P**	**13 52 05.9**	**+0.3**
CTAO				IAmb	IAmb	13 52 33.2	
	comp=Z,7.4nm,1.2s						
AS31	**Alice Springs**	**48.00**	**257**	P	**P**	**13 53 33.7**	**+0.2**
AS31				IAmb	IAmb	13 53 34.1	
	comp=Z,1.0nm,1.0s						
ASAR	**Alice Springs**	**48.00**	**257**	P	**P**	**13 53 33.7**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=102,slow=7.8,SNR=17						
	comp=Z,0.7nm,0.5s						
ASAR	**Alice Springs**	**48.00**	**257**	P	**P**	**13 53 33.1**	**-0.5**
WR8	**Warramunga Arr**	**48.08**	**262**	P	**P**	**13 53 33.9**	**-0.3**
WR8				IAmb	IAmb	13 54 13.6	
	comp=Z,7.5nm,1.4s						
WB0	**Warramunga Arr**	**48.22**	**262**	P	**P**	**13 53 35.0**	**-0.1**
WB0				IAmb	IAmb	13 54 14.9	
	comp=Z,9.0nm,1.4s						
WRA	**Warramunga Arr**	**48.23**	**262**	P	**P**	**13 53 34.5**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=97,slow=8.0,SNR=12						
	comp=Z,0.5nm,0.6s						
WRA	**Warramunga Arr**	**48.23**	**262**	P	**P**	**13 53 35.3**	**0.0**
VNDA	**Vanda**	**57.32**	**186**	P	**P**	**13 54 41.1**	**-0.5**
	comp=Z,5.3nm,1.0s,baz=31,slow=5.9,SNR=2.5						
	comp=Z,5.3nm,1.0s						
VNDA	**Vanda**	**57.32**	**186**	P	**P**	**13 54 41.1**	**-0.5**

IDC ***02*** *14:07:05.9±0.7, 20°.72N×122°.42E, h0km, mb3.6/15, mbtmp3.7/17, ML4.2/2, MS3.2/6, Error ellipse: s-maj=22.1km s-min=14.5km az=70.0*

NEIC ***02*** *14:07:09.9±1.0, 20°.85N±0°.09×122°.36E±0°.08, h19km±4km, mb4.3/13, Error ellipse: s-maj=12.8km s-min=10.5km az=160.0*

NIED ***02*** *14:07:09.4, 21°.12N×122°.28E, h2km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.29; $M_{\theta\theta}$0.68; $M_{\phi\phi}$-1.97; $M_{r\theta}$1.87; $M_{\theta\phi}$-1.32; $M_{\phi r}$0.82; Fault plane solution: $M_0$2.98000×10^{15} NP1: ϕ_s167.00000°, δ39.00000°, λ26.00000°. NP2: ϕ_s56.00000°, δ74.00000°, λ126.00000°.*

JMA ***02*** *14:07:09.4±0.5, 21°N±2°×12°2E±°, h2km, MV4.6/20, TAIWAN REGION*

TAP ***02*** *14:07:10.4, 21°.08N×122°.29E, h17km±2km, ML4.2, D*

MAN ***02*** *14:07:11.0, 20°.44N×122°.32E, h1km, MS3.5*

ISC 02 14:07:07.4±1.7**, 20°.89N**±0°.03×**122°.32E**±0°.04**, h6**km±10km**, n189, σ1s77**/232**, mb3.8**/21**, MS3.3**/5**, 1C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LYUB	**Lan-yu**	**1.30**	**328**	P	**Pg**	**14 07 32.5**	**+0.1**
LYUB				S	**Sg**	**14 07 48.0**	**-1.2**
LAY	**Lan-yu**	**1.35**	**328**	*i* P	**Pn**	**14 07 32.2**	**-0.7**
LAY				*i* S	**Sg**	**14 07 48.1**	**-2.6**
TSEB	**Hengchuen, Pin**	**1.66**	**307**	*i* P	**Pn**	**14 07 38.9**	**+1.8**
TSEB				*i* S	**Sn**	**14 07 58.2**	**-0.6**
TWKBT	**Hengchun**	**1.75**	**307**	⇑P	**Pn**	**14 07 38.6**	**+0.2**
TWKBT				S	**Sn**	**14 07 59.9**	**-1.1**
TWK1	**Hengchun**	**1.76**	**307**	*i* P	**Pn**	**14 07 39.1**	**+0.6**
TWK1				*i* S	**Sn**	**14 08 00.0**	**-1.2**
SMST	**Manzhou Townsh**	**1.78**	**309**	*e*P	**Pn**	**14 07 39.3**	**+0.5**
SMST				S	**Sn**	**14 08 00.9**	**-0.9**
HEN	**Hengchun**	**1.84**	**307**	P	**Pn**	**14 07 38.7**	**-0.9**
HEN				*e*S	**Sn**	**14 08 02.3**	**-1.0**
SLIU	**Shizi**	**1.93**	**313**	*e*P	**Pn**	**14 07 41.3**	**+0.3**
SLIU				*e*S	**Sn**	**14 08 04.5**	**-1.0**
LDUT	**Ludao**	**1.94**	**336**	*e*P	**Pn**	**14 07 39.9**	**-1.1**
LDUT				S	**Sn**	**14 08 02.5**	**-3.2**
TAW	**Tawu**	**1.97**	**318**	*i* P	**Pn**	**14 07 41.6**	**+0.2**
TAW				*i* S	**Sn**	**14 08 04.7**	**-1.8**
EAST	**Anshuo**	**2.02**	**317**	*i* P	**Pn**	**14 07 42.2**	**+0.1**
EAST				*i* S	**Sn**	**14 08 05.5**	**-2.2**
ECL	**Taimali**	**2.12**	**323**	*e*P	**Pn**	**14 07 43.4**	**-0.1**
TTN	**Taitung**	**2.15**	**330**	*i* P	**Pn**	**14 07 44.2**	**+0.4**
TTN				*i* S	**Sn**	**14 08 11.3**	**+0.5**
SCZT	**Fangliau**	**2.16**	**313**	*i* P	**Pn**	**14 07 45.0**	**+1.0**
SCZT				*e*S	**Sn**	**14 08 10.8**	**-0.3**
TWGBT	**Beinan**	**2.23**	**329**	P	**Pn**	**14 07 45.1**	**0.0**
TWGBT	**Beinan**	**2.23**	**329**	*i* P	**Pn**	**14 07 45.7**	**+0.6**
TWGBT				S	**Sn**	**14 08 11.3**	**-1.7**
TWG	**Pinlang**	**2.24**	**329**		**Pn**	**14 07 44.8**	**-0.4**
TWG	**Pinlang**	**2.24**	**329**	*i* P	**Pn**	**14 07 45.2**	**+0.1**
TWG				S	**Sn**	**14 08 11.7**	**-1.5**
SSPT	**Xinbi**	**2.27**	**314**	*e*P	**Pn**	**14 07 45.7**	**+0.2**
LONT	**Longtian**	**2.29**	**331**	P	**Pn**	**14 07 46.3**	**+0.5**
MASBT	**Mashibuluo**	**2.32**	**318**	*e*P	**Pn**	**14 07 47.2**	**+1.0**
CHKT	**Chengkung**	**2.37**	**338**	*i* P	**Pn**	**14 07 45.9**	**-1.0**
CHKT				S	**Sn**	**14 08 11.6**	**-4.7**
TSMG	**Majia**	**2.38**	**319**	*e*P	**Pn**	**14 07 48.3**	**+1.2**
ECS	**Chishang**	**2.42**	**335**	*e*P	**Pn**	**14 07 48.4**	**+0.8**
ECS				S	**Sn**	**14 08 17.0**	**-0.5**
SSD	**Sandimen**	**2.42**	**320**	P	**Pn**	**14 07 46.8**	**-0.9**
CHKH	**Chenggong**	**2.44**	**340**	*e*P	**Pn**	**14 07 46.9**	**-1.0**
CHKH				*i* S	**Sn**	**14 08 14.2**	**-4.0**
EHD	**Haiduan**	**2.47**	**335**	*e*P	**Pn**	**14 07 50.2**	**+1.9**
FULB	**Fuli**	**2.48**	**338**	P	**Pn**	**14 07 48.0**	**-0.6**
FULB				S	**Sn**	**14 08 16.1**	**-3.1**
ECBN	**Changbin**	**2.54**	**342**	*e*P	**Pn**	**14 07 49.6**	**+0.3**
ECBN				S	**Sn**	**14 08 17.1**	**-3.5**
ELDTW	**Lidau**	**2.58**	**332**	*e*P	**Pn**	**14 07 50.0**	**+0.1**
SLGT	**Liugui**	**2.60**	**324**	*e*P	**Pn**	**14 07 50.6**	**+0.5**
TWM1	**Shoushan**	**2.61**	**318**	P	**Pn**	**14 07 53.9**	**+3.7**
EYUL	**Yuli**	**2.61**	**339**	*e*P	**Pn**	**14 07 50.9**	**+0.7**
TWF1	**Yuli**	**2.62**	**339**	*e*P	**Pn**	**14 07 50.0**	**-0.4**
TWF1				S	**Sn**	**14 08 20.9**	**-1.7**
YULB	**Yu-li**	**2.66**	**339**	P	**Pn**	**14 07 51.0**	**+0.1**
YULB	**Yu-li**	**2.66**	**339**		**Pn**	**14 07 50.5**	**-0.5**
YULB	**Yu-li**	**2.66**	**339**	*i* P	**Pn**	**14 07 50.7**	**-0.2**
YULB				*i* S	**Sn**	**14 08 21.9**	**-1.7**
STYH	**Taoyuan**	**2.68**	**328**	*e*P	**Pn**	**14 07 51.2**	**0.0**
SGST	**Jiashian**	**2.71**	**324**	*e*P	**Pn**	**14 07 53.7**	**+2.1**
HGSD	**Ruisui**	**2.72**	**342**	*e*P	**Pn**	**14 07 50.6**	**-1.1**
HGSD				S	**Sn**	**14 08 21.0**	**-3.9**
EHYH	**Wanrong**	**2.74**	**341**	P	**Pn**	**14 07 51.6**	**-0.4**
EHYH				S	**Sn**	**14 08 24.8**	**-0.8**
EHY	**Hungye**	**2.76**	**341**	*i* P	**Pn**	**14 07 51.7**	**-0.6**
EHY				*i* S	**Sn**	**14 08 24.3**	**-1.7**
CHN1	**Nanshi**	**2.82**	**324**	*e*P	**Pn**	**14 07 56.7**	**+3.5**
WTP	**Ta-pu**	**2.83**	**326**	*e*P	**Pn**	**14 07 55.8**	**+2.5**
TPUB	**Ta-pu**	**2.86**	**327**	P	**Pn**	**14 07 56.1**	**+2.4**
TPUB	**Ta-pu**	**2.86**	**327**		**Pn**	**14 07 55.7**	**+2.0**
TPUB	**Ta-pu**	**2.86**	**327**	P	**Pn**	**14 07 56.3**	**+2.6**
TWK	**Hsinying**	**2.91**	**325**	P	**Pn**	**14 07 56.9**	**+2.5**
WARBT	**Fenglin Townsh**	**2.94**	**343**	*i* P	**Pn**	**14 07 54.3**	**-0.5**
WARBT				*i* S	**Sn**	**14 08 27.7**	**-2.8**
ALS	**Alishan**	**2.96**	**332**	P	**Pn**	**14 07 56.7**	**+1.5**
SHUL	**Shoufeng**	**2.96**	**346**	P	**Pn**	**14 07 54.6**	**-0.5**
SHUL				*e*S	**Sn**	**14 08 27.1**	**-3.9**
WCKO	**Fanlu**	**2.99**	**328**	*e*P	**Pn**	**14 07 59.0**	**+3.5**
PIP	**Pasuquin**	**3.02**	**212**	*e*P	**Pn**	**14 07 56.5**	**+0.6**
PIP				*e*S	**Sn**	**14 08 28.5**	**-3.8**
ESL	**Shilin**	**3.02**	**344**	*i* P	**Pn**	**14 07 55.6**	**-0.2**
ESL				S	**Sn**	**14 08 28.8**	**-3.6**
TEYL	**Yanliau Villag**	**3.03**	**347**	*e*P	**Pn**	**14 07 57.1**	**+1.1**
TEYL				*e*S	**Sn**	**14 08 31.7**	**-1.0**
VWDT	**VWDT**	**3.05**	**339**	*e*P	**Pn**	**14 07 57.2**	**+0.9**
TSCK	**Chigu Township**	**3.06**	**318**	*e*P	**Pn**	**14 07 58.2**	**+1.9**
TSCK				S	**Sn**	**14 08 34.1**	**+0.9**
CHN5	**Tsauling**	**3.09**	**331**	P	**Pn**	**14 07 59.4**	**+2.5**
WHYT	**Xinyi Township**	**3.10**	**334**	P	**Pn**	**14 07 59.2**	**+2.1**
WHYT				*e*S	**Sn**	**14 08 36.3**	**+1.8**
CHY	**Chiayi**	**3.13**	**326**	*e*P	**Pn**	**14 07 59.0**	**+1.6**
CHY				*e*S	**Sn**	**14 08 36.6**	**+1.4**
HWA	**Hwalien**	**3.14**	**348**	*e*P	**Pn**	**14 07 58.1**	**+0.6**
SSLB	**Suanglung**	**3.15**	**337**	P	**Pn**	**14 07 59.1**	**+1.5**
SSLB	**Suanglung**	**3.15**	**337**		**Pn**	**14 07 58.8**	**+1.2**
SSLB	**Suanglung**	**3.15**	**337**	*e*P	**Pn**	**14 07 59.2**	**+1.5**
ETM	**Tongmen**	**3.15**	**346**	*e*P	**Pn**	**14 07 57.5**	**-0.1**
CVP	**Callao Caves**	**3.21**	**189**	*e*P	**Pn**	**14 07 57.6**	**-0.8**
CVP				*e*S	**Sn**	**14 08 36.0**	**-1.1**
EOS4	**EOS4**	**3.21**	**360**	P	**Pn**	**14 07 58.9**	**+0.7**
EOS4				*i* S	**Sn**	**14 08 34.5**	**-2.1**
WGK	**Gukeng**	**3.22**	**330**	*e*P	**Pn**	**14 08 00.2**	**+1.5**
LXIB	**Xiulin Townshi**	**3.22**	**345**	P	**Pn**	**14 07 58.4**	**-0.4**
LXIB				*i* S	**Sn**	**14 08 34.7**	**-3.0**
OWD	**Renai**	**3.23**	**341**	*i* P	**Pn**	**14 07 58.7**	**-0.1**
OWD				S	**Sn**	**14 08 35.6**	**-2.0**
WDLH	**Douliu**	**3.23**	**330**	*e*P	**Pn**	**14 08 02.0**	**+3.2**
TWD	**Chiawan**	**3.24**	**348**	P	**Pn**	**14 07 59.5**	**+0.7**
TWD				*i* S	**Sn**	**14 08 35.0**	**-2.9**
SMLT	**Sun Moon Lake**	**3.25**	**336**	P	**Pn**	**14 08 01.5**	**+2.3**
WDL	**Douliou City**	**3.26**	**330**	*e*P	**Pn**	**14 07 59.6**	**+0.5**
WSL	**Shuilin Townsh**	**3.26**	**324**	*e*P	**Pn**	**14 07 59.4**	**+0.3**
WSL				*e*S	**Sn**	**14 08 38.8**	**+0.6**
WJS	**Zhushan**	**3.27**	**333**	*e*P	**Pn**	**14 08 02.9**	**+3.6**
WUSB	**Renai**	**3.28**	**340**	P	**Pn**	**14 08 00.3**	**+0.7**
WUSB				*e*S	**Sn**	**14 08 37.0**	**-1.9**
TYC	**Yuchr**	**3.29**	**336**	*e*P	**Pn**	**14 08 02.2**	**+2.7**
ETL	**Fush Village**	**3.31**	**349**	*e*P	**Pn**	**14 08 00.9**	**+1.0**
NACB	**Ninganchiao**	**3.33**	**348**	P	**Pn**	**14 07 59.4**	**-0.8**
NACB	**Ninganchiao**	**3.33**	**348**		**Pn**	**14 07 59.3**	**-0.9**
NACB	**Ninganchiao**	**3.33**	**348**	P	**Pn**	**14 07 59.7**	**-0.4**
WNT	**Mingjian**	**3.33**	**333**	*e*P	**Pn**	**14 08 03.4**	**+3.2**
EOS3	**EOS3**	**3.38**	**360**	*e*P	**Pn**	**14 08 01.9**	**+1.3**
EOS3				S	**Sn**	**14 08 39.3**	**-1.7**
WHF	**Hehuan Shan**	**3.38**	**343**	*e*P	**Pn**	**14 08 01.2**	**+0.1**
ETLH	**Xiulin Townshi**	**3.39**	**347**	*e*P	**Pn**	**14 08 01.3**	**+0.3**
ETLH				S	**Sn**	**14 08 38.3**	**-3.3**
WCS	**Beigang Elemen**	**3.41**	**338**	*e*P	**Pn**	**14 08 03.2**	**+2.1**
HATJ	**Hateruma jima**	**3.43**	**23**	P	**Pn**	**14 08 02.8**	**+1.3**
HATJ				S	**Sn**	**14 08 40.7**	**-1.9**
SIPP	**Brgy, Tapao**	**3.44**	**211**	*e*P	**Pn**	**14 08 03.2**	**+1.6**
SIPP				*e*S	**Sn**	**14 08 41.2**	**-1.5**
EAHA	**Aohua**	**3.46**	**351**	P	**Pn**	**14 08 02.8**	**+0.9**
FUSS	**Fushou**	**3.48**	**344**	*e*P	**Pn**	**14 08 03.8**	**+1.4**
FUSS				S	**Sn**	**14 08 41.6**	**-2.6**
TWT	**Tachien**	**3.51**	**343**	*e*P	**Pn**	**14 08 04.7**	**+2.0**
EOS2	**EOS2**	**3.51**	**359**	*e*P	**Pn**	**14 08 03.0**	**+0.6**
TDCB	**Techi**	**3.51**	**342**	*e*P	**Pn**	**14 08 04.7**	**+1.9**
TCU	**Taichung**	**3.58**	**335**	*e*P	**Pn**	**14 08 05.8**	**+2.3**
JYNG	**Yonagunijimaku**	**3.59**	**9**	*e*P	**Pn**	**14 08 05.8**	**+2.2**
JYNG				S	**Sn**	**14 08 46.5**	**+0.2**
WHP	**Taichung City**	**3.60**	**340**	*e*P	**Pn**	**14 08 07.5**	**+3.6**
YOJ	**Yonaguni jima**	**3.61**	**10**	P	**Pn**	**14 08 06.3**	**+2.4**
YOJ	**Yonaguni jima**	**3.61**	**10**	Pn	**Pn**	**14 08 05.8**	**+1.9**
YOJ	**Yonaguni jima**	**3.61**	**10**	*e*P	**Pn**	**14 08 06.1**	**+2.2**
YOJ	**Yonaguni jima**	**3.61**	**10**	P	**Pn**	**14 08 05.6**	**+1.7**
YOJ				S	**Sn**	**14 08 46.2**	**-0.6**
NNS	**Nan Shan**	**3.64**	**346**	P	**Pn**	**14 08 06.0**	**+1.5**
PHUB	**P'eng-hu**	**3.65**	**316**	*e*P	**Pn**	**14 08 05.1**	**+0.7**
IRIF	**Iriomote-Funau**	**3.66**	**21**	P	**Pn**	**14 08 05.7**	**+1.0**
IRIF				S	**Sn**	**14 08 47.3**	**-0.9**
JKRS	**Kuro-shima**	**3.67**	**25**	P	**Pn**	**14 08 06.4**	**+1.6**
JKRS				S	**Sn**	**14 08 46.9**	**-1.6**
LATG	**Datong**	**3.70**	**349**	*e*P	**Pn**	**14 08 06.2**	**+1.0**
TWC	**Suao**	**3.72**	**353**	P	**Pn**	**14 08 07.0**	**+1.5**
TWQ1	**Liyutan**	**3.72**	**338**	P	**Pn**	**14 08 09.1**	**+3.6**
NDS	**Dongshan**	**3.76**	**352**	*e*P	**Pn**	**14 08 07.1**	**+1.0**
NDT	**Datong Townshi**	**3.77**	**349**	*e*P	**Pn**	**14 08 07.2**	**+1.1**
ENTT	**Nioudou**	**3.79**	**350**	P	**Pn**	**14 08 07.6**	**+1.1**
JIJ	**Ishigaki jima**	**3.84**	**26**	P	**Pn**	**14 08 08.1**	**+1.0**
JIJ				S	**Sn**	**14 08 49.8**	**-2.8**
TWE	**Neicheng**	**3.86**	**351**	P	**Pn**	**14 08 08.8**	**+1.5**
YHNB	**Yeheng**	**3.86**	**347**	P	**Pn**	**14 08 08.7**	**+1.2**
YHNB	**Yeheng**	**3.86**	**347**		**Pn**	**14 08 08.7**	**+1.2**
YHNB	**Yeheng**	**3.86**	**347**	*e*P	**Pn**	**14 08 09.0**	**+1.6**
NSK	**Sanguang**	**3.87**	**347**	P	**Pn**	**14 08 08.7**	**+1.1**
NFF	**Wufeng Townshi**	**3.88**	**344**	*e*P	**Pn**	**14 08 10.5**	**+2.7**
NMLH	**Miaoli**	**3.89**	**339**	*e*P	**Pn**	**14 08 10.7**	**+2.8**
FUSB	**Fushanzhiwuyua**	**3.91**	**350**	*e*P	**Pn**	**14 08 10.1**	**+2.0**
NSTT	**Nanjuang**	**3.91**	**342**	P	**Pn**	**14 08 11.6**	**+3.4**
LIOB	**Emei**	**3.92**	**342**	*e*P	**Pn**	**14 08 10.8**	**+2.5**
NWLT	**Wulai**	**3.94**	**349**	*e*P	**Pn**	**14 08 10.0**	**+1.5**
KSHI	**Guanxi Townshi**	**4.01**	**345**	*e*P	**Pn**	**14 08 12.7**	**+3.3**
TIPB	**Shuangxi**	**4.08**	**354**	*e*P	**Pn**	**14 08 13.1**	**+2.5**
TWB1	**Santiao Chiao**	**4.11**	**356**	*e*P	**Pn**	**14 08 12.2**	**+1.4**
JISG	**Ishigakijimahi**	**4.11**	**26**	P	**Pn**	**14 08 11.7**	**+0.9**
JISG				*e*S	**Sn**	**14 08 56.9**	**-2.3**
NWF	**Wu-fen Shan**	**4.19**	**353**	*e*P	**Pn**	**14 08 14.9**	**+2.9**
WFSB	**Wu-fen Shan**	**4.19**	**353**	*e*P	**Pn**	**14 08 14.5**	**+2.6**
SXI1	**Grass Mountain**	**4.20**	**354**	*e*P	**Pn**	**14 08 13.9**	**+1.8**
YM01	**YM01**	**4.29**	**351**	*e*P	**Pn**	**14 08 14.1**	**+0.8**
ZUZH	**Zhuzihu**	**4.31**	**351**	*e*P	**Pn**	**14 08 15.5**	**+1.9**
JTJ	**Tarama**	**4.33**	**30**	P	**Pn**	**14 08 15.4**	**+1.6**
JTJ				S	**Sn**	**14 09 02.4**	**-2.3**
YM08	**YM08**	**4.33**	**351**	*e*P	**Pn**	**14 08 15.9**	**+2.1**
ANP	**Anpu**	**4.34**	**350**	*e*P	**Pn**	**14 08 16.3**	**+2.3**
JMJ2	**Miyako jima3**	**4.73**	**35**	P	**Pn**	**14 08 21.4**	**+2.1**
JMJ2				*e*S	**Sn**	**14 09 14.7**	**+0.2**
JOGS	**Gusukube**	**4.79**	**36**	P	**Pn**	**14 08 22.3**	**+2.1**
JOGS				*e*S	**Sn**	**14 09 15.9**	**0.0**
JIKM	**Ikemajima**	**4.83**	**33**	P	**Pn**	**14 08 23.0**	**+2.2**
VWUC	**VWUC**	**4.86**	**328**	P	**Pn**	**14 08 22.9**	**+1.7**
PTMZ	**Houxiangcun**	**5.07**	**325**	*e*P	**Pn**	**14 08 25.8**	**+1.8**
KNMB	**Chin-men Tao**	**5.08**	**315**	*e*P	**Pn**	**14 08 25.0**	**+0.8**
AXDP	**Jialang**	**5.66**	**316**	*e*P	**Pn**	**14 08 31.9**	**-0.2**
MATB	**Ma-tsu**	**5.67**	**338**	*e*P	**Pn**	**14 08 31.9**	**-0.4**
MHZQ	**Yeshan**	**6.00**	**330**	*e*P	**Pn**	**14 08 36.2**	**-0.6**
RTBP	**Dona Remedios**	**6.01**	**192**	*e*P	**Pn**	**14 08 38.7**	**+1.7**
RTBP				*e*S	**Sn**	**14 09 43.7**	**-2.5**

PCPS Palayan City 6.32 191 eP Pn 14 08 30.6 -11
PCPS eS Sn 14 09 35.5 -18
GQP Guinayangan 6.95 179 eP Pn 14 08 50.6 +0.7
GQP eS Sn 14 10 04.0 -5.4
JIH Iheya 8.00 39 P Pn 14 09 04.7 +0.4
JOW Kunigami 8.04 42 Pn Pn 14 09 05.3 +0.5
8.6nm,0.3s,baz=234,slow=14,SNR=1.8
36nm,0.4s
JOW Kunigami 8.04 42 Pn 14 09 05.2 +0.3
JNU Nakatsue 14.36 30 LR LR 14 15 53.9
comp=Z,62nm,20.1s,baz=196,slow=36
KSRS Korea Array 17.20 15 P Pn 14 11 09.7 +1.2
0.4nm,0.3s,baz=197,slow=12,SNR=8.0
2.7nm,0.8s
JHJ2 Mitsune 19.74 48 P P 14 11 37.6 -0.4
SBUM Sibu 20.81 210 P P 14 11 49.4 -0.4
MJAR Matsushiro Arr 20.86 38 P P 14 11 51.6 +1.3
0.7nm,0.6s,baz=222,slow=10,SNR=2.5
0.7nm,0.6s
CMAR Chiang Mai Arr 22.14 268 P P 14 12 05.3 +1.1
0.3nm,0.4s,baz=87,slow=10,SNR=4.2
CMAR LR LR 14 20 42.7
comp=Z,27nm,18.7s,baz=65,slow=37
0.3nm,0.4s
LZDM Lanzhou Array 22.16 317 P P 14 12 07.5 +3.0
0.5nm,0.3s,baz=153,slow=13,SNR=1.3
0.5nm,0.3s
SONM Songino Array 29.80 338 P P 14 13 14.4 -0.8
0.3nm,0.4s,baz=164,slow=12,SNR=3.8
0.3nm,0.4s
SONM Songino Array 29.80 338 P P 14 13 15.3 +0.1
MKAR Makanchi Array 41.45 318 P P 14 14 56.3 +1.3
1.1nm,0.6s,baz=111,slow=9.9,SNR=12
1.1nm,0.6s
MKAR Makanchi Array 41.45 318 P 14 14 55.9 +0.8
MAKZ Makanchi 41.65 318 P P 14 14 56.9 +0.2
MAKZ IAmb IAmb 14 15 08.5
comp=Z,3.5nm,1.1s
H11S3 WAKE ISLAND Hy 41.74 85 T T 14 59 59.3
baz=281,slow=75,SNR=7.2
H11S1 WAKE ISLAND Hy 41.75 85 T T 15 00 00.8
baz=281,slow=75,SNR=8.2
H11S2 WAKE ISLAND Hy 41.76 85 T T 15 00 01.5
baz=281,slow=75,SNR=7.4
PEA0B Petropavlovsk- 42.05 31 P P 14 14 59.9 0.0
PEA0B IAmb IAmb 14 15 07.2
comp=Z,20nm,1.4s
PETK Petropavlovsk- 42.05 31 P P 14 15 01.8 +1.9
comp=Z,1.5nm,0.9s,baz=242,slow=8.0,SNR=2.9
comp=Z,1.5nm,0.9s
PETK Petropavlovsk- 42.05 31 P P 14 14 60.0 +0.1
WB0 Warramunga Arr 42.10 163 P P 14 14 58.4 -2.2
WB0 IAmb IAmb 14 15 40.1
comp=Z,8.7nm,1.4s
WRA Warramunga Arr 42.26 163 P P 14 14 58.9 -3.0
comp=Z,0.8nm,0.7s,baz=343,slow=8.8,SNR=6.2
comp=Z,0.8nm,0.7s
WR8 Warramunga Arr 42.31 163 P P 14 14 59.8 -2.5
WR8 IAmb IAmb 14 15 29.6
comp=Z,9.5nm,1.4s
ZALV Zalesovo Beam 43.58 329 P P 14 15 12.7 +0.5
comp=Z,0.7nm,0.5s,baz=102,slow=7.9,SNR=5.8
comp=Z,0.7nm,0.5s
NIL Nilore 45.05 297 P P 14 15 24.1 -0.2
KURK Kurchatov 45.30 322 P P 14 15 26.6 +0.6
KURK IAmb IAmb 14 15 40.2
comp=Z,5.5nm,1.4s
KURBB Kurchatov Arra 45.31 322 P P 14 15 27.0 +0.9
comp=Z,0.9nm,0.7s,baz=115,slow=7.8,SNR=6.5
AS31 Alice Springs 45.70 165 P P 14 15 28.5 -1.1
ASAR Alice Springs 45.71 165 P P 14 15 27.4 -2.2
comp=Z,0.3nm,0.5s,baz=345,slow=7.2,SNR=7.8
comp=Z,0.3nm,0.5s
ASAR Alice Springs 45.71 165 P P 14 15 28.6 -0.9
CTA Charters Tower 46.98 149 P P 14 15 39.0 -0.6
comp=Z,1.1nm,0.5s,baz=308,slow=12,SNR=1.7
CTA LR LR 14 34 48.5
comp=Z,28nm,20.4s,baz=68,slow=36
comp=Z,1.1nm,0.5s
CTAO Charters Tower 46.98 149 P P 14 15 39.0 -0.6
CTAO IAmb IAmb 14 16 05.7
comp=Z,12nm,1.4s
BVAR Borovoye Array 50.89 322 P P 14 16 10.7 +1.5
comp=Z,0.3nm,0.5s,baz=101,slow=7.5,SNR=2.2
comp=Z,0.3nm,0.5s
TIXI Tiksi 50.91 3 LR LR 14 38 45.3
comp=Z,40nm,18.3s,baz=237,slow=37
INKA Innaminka 51.53 159 P P 14 16 12.8 -1.4
INKA IAmb IAmb 14 16 24.0
comp=Z,2.4nm,1.1s
STKA Stephens Creek 55.63 160 P P 14 16 41.3 -3.0
comp=Z,2.2nm,0.9s,baz=349,slow=10,SNR=1.8
STKA LR LR 14 44 12.4
comp=Z,22nm,19.5s,baz=24,slow=40
comp=Z,2.2nm,0.9s
MGBR Mount Gambier 60.79 163 P P 14 17 19.8 -0.5
ILAR Eielson Array 71.65 27 P P 14 18 30.0 +0.3
comp=Z,0.4nm,0.6s,baz=279,slow=6.2,SNR=2.7
comp=Z,0.4nm,0.6s
RES Resolute Bay 81.72 9 P P 14 19 24.9 -1.6
comp=Z,0.4nm,0.3s,baz=346,slow=8.3,SNR=11
comp=Z,0.4nm,0.3s
YKA Yellowknife Ar 85.58 23 P P 14 19 46.6 +0.1
comp=Z,0.2nm,0.6s,baz=311,slow=5.3,SNR=6.4
comp=Z,0.2nm,0.6s
LSZ Lusaka 99.08 257 LR LR 15 05 34.2
comp=Z,27nm,18.8s,baz=178,slow=35

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*NEIC **02** 14:12:46.3±1.4, 62°.26N±0°.02×153°.415W±0°.010, h10km±1km, ML3.4/190, ML3.2(AEIC), Error ellipse: s-maj=3.6km s-min=2.9km az=175.0*
*AEIC **02** 14:12:46.3±1.5, 62°.26N±0°.02×153°.46W±0°.05, h12km±4km, Error ellipse: s-maj=4.1km s-min=3.0km az=50.0*
*IDC **02** 14:12:51.0±1.7, 62°.01N×151°.93W, h0km, mb3.2/3, mbtmp3.2/7, ML2.8/4, Error ellipse: s-maj=30.4km s-min=14.0km az=105.0*
ISC 02 14:12:45.9±1.0**, 62°.26N**±0°.02×**153°.42W**±0°.02**, h10**km±8km**, n171, σ0ˢ.91**/141**, mb3.1**/3**, Central Alaska**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
M20K Styx River 0.40 160 Pg 14 12 54.0 +0.3
M20K Sg 14 12 59.3 +0.2
M20K Styx River 0.40 160 IAML 14 12 59.6
comp=N,2μm,0.2s
M20K IAML 14 12 59.8
comp=E,3μm,0.4s
L19K White Mountain 0.67 264 Pg 14 12 58.9 0.0
L19K White Mountain 0.67 264 Sg 14 13 08.3 +0.6
PPLA Purkeypile 0.86 41 Sg 14 13 13.6 -0.1
PPLA Purkeypile 0.86 41 Pg 14 13 02.2 -0.3
PPLA IAML 14 13 19.3
comp=E,862nm,0.5s
SKT Skwentna 0.93 107 Sb 14 13 16.6 +0.2
SKT Skwentna 0.93 107 Pg 14 13 04.0 +0.2
SPNN North Nagishla 0.96 159 Pg 14 13 04.0 -0.3
SPWE Spurr West 1.07 157 Pg 14 13 05.8 -0.6
STLK Strandline Lak 1.07 135 Pg 14 13 06.1 -0.3
STLK Sg 14 13 20.1 -0.2
STLK Strandline Lak 1.07 135 IAML 14 13 20.6
comp=N,718nm,0.3s
STLK IAML 14 13 21.5
comp=E,614nm,0.3s
SPBG Spurr Blockage 1.12 153 Pb 14 13 06.8 -0.5
SPBG Sg 14 13 21.6 -0.3
K20K Telida 1.14 345 Pb 14 13 07.1 -0.5
K20K Telida 1.14 345 Sg 14 13 23.4 +0.7
SPCG Spurr Capps Gl 1.18 145 Pb 14 13 07.6 -0.6
SPCG Sb 14 13 23.3 -0.3
SPCN Chakachatna No 1.19 150 Pb 14 13 08.4 0.0
SPU Mount Spurr 1.26 148 Pn 14 13 09.4 -0.1
M18K Stony River 1.37 237 Pn 14 13 10.8 -0.2
M18K Sn 14 13 30.0 +0.8
CUT Chulitna 1.48 83 Pb 14 13 13.4 0.0
SUA Susitna One 1.50 121 Pn 14 13 13.5 +0.7
SUA IAML 14 13 37.5
comp=N,644nm,0.5s
L18K Granite Mounta 1.53 270 Pn 14 13 13.2 +0.1
L18K IAML 14 13 37.0
comp=E,375nm,0.4s
L18K IAML 14 13 41.4
comp=N,651nm,0.7s
N19K Bonanza Creek 1.54 200 Pn 14 13 13.8 +0.5
N19K IAML 14 13 36.7
comp=E,722nm,0.3s
M22K Willow 1.64 107 Pn 14 13 15.3 +0.7
M22K Willow 1.64 107 Sg 14 13 38.1 -0.4
CHUM Lake Minchumin 1.71 17 Pn 14 13 15.9 +0.3
NCT North Crescent 1.72 172 Pn 14 13 16.4 +0.5
NCT Sb 14 13 39.6 +0.5
KTH Kantishna Hill 1.73 40 Pn 14 13 15.8 -0.2
KTH IAML 14 13 44.5
comp=N,448nm,0.7s
RDT Redoubt 1.76 163 Pn 14 13 17.2 +0.8
RDT Sb 14 13 40.7 +0.4
RDWB Redoubt West 1.80 171 Pn 14 13 17.4 +0.4
RDSO Redoubt South 1.84 169 Pn 14 13 18.2 +0.7
RED Redoubt Volcan 1.87 170 Pn 14 13 19.0 +1.1
RED IAML 14 13 44.7
comp=N,222nm,0.4s
RED IAML 14 13 48.9
comp=E,230nm,0.7s
TRF Thorofare Moun 1.87 49 Pn 14 13 18.9 +0.8
TRF Thorofare Moun 1.87 49 IAML 14 13 51.9
comp=E,397nm,0.9s
TRF IAML 14 13 53.7
comp=N,438nm,0.9s
J18K Innoko River 1.94 310 Pn 14 13 18.8 0.0
J18K Innoko River 1.94 310 IAML 14 13 48.7
comp=E,192nm,0.5s
N18K Kilae Creek 1.98 218 Pn 14 13 19.7 +0.4
N18K IAML 14 13 49.1
comp=E,444nm,0.5s
N18K IAML 14 13 50.4
comp=N,426nm,0.6s
J19K Poorman 2.01 331 Pn 14 13 19.9 +0.1
M17K Holitna River 2.09 248 Pn 14 13 21.2 +0.3
RC01 Rabbit Creek A 2.11 122 Pn 14 13 22.1 +0.9
RC01 IAML 14 13 53.3
comp=E,178nm,0.3s
RC01 IAML 14 13 55.7
comp=N,275nm,0.3s
O19K Port Alsworth 2.11 192 Pn 14 13 22.5 +1.3
PMR Palmer 2.14 106 Pn 14 13 22.3 +0.8
PMR IAML 14 13 55.9
comp=N,332nm,0.5s
PMR IAML 14 13 57.0
comp=E,271nm,0.8s
BPAW Bear Paw Mtn. 2.15 30 Pn 14 13 21.2 -0.6
BPAW IAML 14 13 54.9
comp=N,189nm,0.8s
BPAW IAML 14 13 56.0
comp=E,214nm,0.5s
GHO Glory Hole Cre 2.18 101 Pn 14 13 22.9 +0.8
GHO IAML 14 13 57.8
comp=N,370nm,0.6s
ILSW Iliamna Southw 2.29 176 Pn 14 13 24.5 +0.9
K17K Iditarod 2.31 284 Pn 14 13 24.1 +0.2
SLKM Skilak Lake 2.34 137 Pn 14 13 25.4 +1.2
SLKM IAML 14 14 01.2
comp=E,165nm,0.5s
RND Reindeer 2.39 59 Pn 14 13 25.6 +0.5
RND IAML 14 14 06.2
comp=N,147nm,1.0s
RND IAML 14 14 07.5
comp=E,150nm,0.6s
SML Sawmill 2.44 98 Pn 14 13 26.9 +1.1
SML IAML 14 14 09.9
comp=N,309nm,0.8s
KNK Knik Glacier 2.50 108 IAML 14 14 05.5
comp=N,216nm,0.5s
KNK IAML 14 14 05.7
comp=E,278nm,0.4s
N17K Nushagak Hills 2.51 228 Pn 14 13 26.8 +0.2
N17K Nushagak Hills 2.51 228 IAML 14 14 07.8
comp=N,212nm,0.8s
N17K IAML 14 14 10.3
comp=E,220nm,0.9s
O22K Cooper Landing 2.52 133 Pn 14 13 28.3 +1.6
MCK McKinley 2.53 52 Pn 14 13 27.3 +0.4
MCK IAML 14 14 10.3
comp=N,213nm,1.0s
MCK IAML 14 14 10.8
comp=E,136nm,0.8s
O18K Koktuh Hills 2.56 201 Pn 14 13 29.3 +1.9
O18K IAML 14 14 09.7
comp=N,230nm,0.5s
O18K IAML 14 14 10.4
comp=E,233nm,0.6s
WAT6 Susitna Watana 2.67 80 Pn 14 13 29.1 +0.2
SEW Seward 2.89 137 Pn 14 13 33.3 +1.5
SEW IAML 14 14 19.7
comp=E,89nm,0.8s
SCM Sheep Creek Mo 2.90 96 Pn 14 13 33.4 +1.3
L16K Owhat River 2.91 262 Pn 14 13 32.2 +0.2
L16K IAML 14 14 20.8
comp=E,184nm,0.4s
L16K IAML 14 14 29.1
comp=N,108nm,0.8s
DHY Denali Highway 2.91 71 Pn 14 13 32.3 +0.1
DHY IAML 14 14 25.7
comp=E,185nm,0.9s
M16K Timber Creek 2.92 247 Pn 14 13 32.1 -0.2
M16K Timber Creek 2.92 247 IAML 14 14 20.7
comp=N,152nm,0.7s
M16K IAML 14 14 23.8
comp=E,171nm,0.7s
GCSA Galena City Sc 2.94 330 Pn 14 13 33.7 +1.2
I21K Tanana 3.00 12 Pn 14 13 33.5 +0.1
I21K Tanana 3.00 12 IAML 14 14 29.1
comp=E,74nm,1.0s
P18K Big Mountain, 3.01 198 Pn Pn 14 13 34.2 +0.7
P18K IAML 14 14 21.0
comp=N,95nm,0.6s
P18K IAML 14 14 23.6
comp=E,161nm,0.5s
MLY Manley 3.03 22 Pn 14 13 33.5 -0.3
N16K Nishlik Lake 3.13 238 Pn 14 13 35.1 -0.1
GLI Glacier Island 3.33 112 IAML 14 14 32.2
comp=N,105nm,0.6s
GLI IAML 14 14 36.3
comp=E,136nm,0.7s
M24K Tolsona, Glenn 3.40 89 Pn 14 13 41.1 +2.2
P17K Kvichak River 3.41 207 Pn 14 13 40.0 +1.1
I23K Minto, Yukon-K 3.42 30 IAML 14 14 35.2
comp=E,72nm,0.6s
I23K IAML 14 14 38.8
comp=N,69nm,1.1s
H21K Melozitna Rive 3.42 4 Pn 14 13 39.7 +0.5
J16K Anvik River 3.46 291 Pn 14 13 39.7 +0.1
J16K IAML 14 14 37.3
comp=N,73nm,1.1s
J16K IAML 14 14 40.5
comp=E,69nm,0.7s
CCB Clear Creek Bu 3.48 44 IAML 14 14 36.2
comp=E,59nm,0.5s
CCB IAML 14 14 36.2
comp=N,49nm,0.7s
O16K Kokwok River B 3.51 223 Pn 14 13 40.1 -0.2
O16K Kokwok River B 3.51 223 IAML 14 14 39.3
comp=N,91nm,0.5s
MDM Murphy Dome 3.57 38 Pn 14 13 40.4 -0.8
HDA Harding Lake 3.63 51 IAML 14 14 44.9
comp=E,61nm,0.5s
KLU Klutina 3.63 99 IAML 14 14 42.5
comp=N,74nm,0.8s
KLU IAML 14 14 49.0
comp=E,60nm,0.7s
H18K Honhosa River 3.64 325 Pn 14 13 43.3 +1.1
H18K Honhosa River 3.64 325 IAML 14 14 51.8
comp=N,51nm,0.8s
I17K Unalakleet 3.69 300 Pn 14 13 43.5 +0.7
I17K IAML 14 14 56.9
comp=N,39nm,1.1s
P23K Montague Islan 3.70 125 Pn 14 13 43.3 +0.4
P23K Montague Islan 3.70 125 IAML 14 14 50.4
comp=N,57nm,1.2s
P23K IAML 14 15 00.9
comp=E,64nm,1.0s
IMAR Indian Mountai 3.75 358 Pn 14 13 44.1 +0.5
PAX Paxson 3.75 75 Pn 14 13 44.3 +0.6
PAX Paxson 3.75 75 IAML 14 14 44.3
comp=E,72nm,0.6s
H22K Ishtalitna Cre 3.76 13 Pn 14 13 44.1 +0.3
K15K Wolf Creek Mou 3.79 274 Pn 14 13 44.3 +0.1
K15K Wolf Creek Mou 3.79 274 IAML 14 14 48.3
comp=E,38nm,0.7s
K15K IAML 14 14 49.0
comp=N,46nm,0.8s
K24K Donnelly Dome 3.81 63 Pn 14 13 46.0 +1.4
DIV Divide 3.82 104 IAML 14 14 50.1
comp=E,48nm,0.7s
DIV IAML 14 14 51.0
comp=N,96nm,1.0s
M15K Kasigluk River 3.82 249 Pn 14 13 44.5 -0.1
HARP HAARP 3.86 84 Pn 14 13 47.3 +2.1
IL31 3.87 46 Pn 14 13 45.1 -0.1
ILAR Eielson Array 3.87 46 Pn Pn 14 13 45.0 -0.2
comp=N,0.7nm,0.3s,baz=222,slow=14,SNR=24
ILAR Lg Lg 14 14 47.6
comp=N,2.0nm,0.3s,baz=223,slow=28,SNR=4.9
comp=N,1.5nm,0.4s
ILAR Eielson Array 3.87 46 Pn 14 13 45.9 +0.6
P16K Nushagak River 3.94 217 Pn 14 13 46.6 +0.4
H17K Granite Mounta 3.95 316 Pn 14 13 47.8 +1.3
H17K Granite Mounta 3.95 316 IAML 14 14 57.8
comp=E,38nm,1.1s
ACHA Angle Creek He 4.17 194 IAML 14 14 59.6
comp=N,35nm,0.8s
ACHA IAML 14 15 00.3
comp=E,38nm,1.1s
CNTC Contact Creek 4.19 198 Pn 14 13 51.0 +1.2
G19K Purcell Mounta 4.22 339 Pn 14 13 51.0 +1.0
G19K Purcell Mounta 4.22 339 IAML 14 15 04.2
comp=E,34nm,1.2s
N25K Chitina, Valde 4.22 95 IAML 14 15 00.8
comp=E,53nm,0.9s
N25K IAML 14 15 01.1
comp=N,66nm,1.0s
G21K Allakaket 4.28 360 Pn 14 13 52.0 +1.1
G18K Tagagawik 4.31 330 Pn 14 13 52.7 +1.3
J25K Salcha River, 4.32 53 Pn 14 13 52.3 +0.8
J25K Salcha River, 4.32 53 IAML 14 15 03.4
comp=E,32nm,0.6s
J25K IAML 14 15 06.9
comp=N,34nm,0.6s
H24K Noodor Dome 4.34 32 Pn 14 13 51.5 -0.3
H24K Noodor Dome 4.34 32 IAML 14 15 05.1
comp=E,25nm,1.1s
M14K Bethel 4.36 254 Pn 14 13 52.5 +0.6
M14K IAML 14 15 10.7
comp=N,54nm,0.8s
M14K IAML 14 15 12.8
comp=E,43nm,1.1s
O15K Ungalikthiuk R 4.41 228 Pn 14 13 53.3 +0.6
O15K Ungalikthiuk R 4.41 228 IAML 14 15 15.7
comp=E,61nm,1.1s
O15K IAML 14 15 18.9
comp=N,49nm,1.2s
L14K Kuka Creek 4.49 262 Pn 14 13 54.2 +0.5
L14K Kuka Creek 4.49 262 IAML 14 15 13.3
comp=N,59nm,0.7s
DOT Dot Lake 4.50 68 IAML 14 15 15.2
comp=N,60nm,0.9s
DOT IAML 14 15 16.2
comp=E,54nm,1.1s
KDAK Kodiak Island 4.51 174 Pn Pn 14 13 55.9 +1.8
comp=E,0.8nm,0.3s,baz=32,slow=7.9,SNR=9.6
KDAK Lg Lg 14 15 11.8
comp=E,0.7nm,0.3s,baz=88,slow=22,SNR=1.1
comp=E,19nm,1.1s
KDAK Kodiak Island 4.51 174 IAML 14 15 16.7
comp=E,23nm,1.2s
SCRK Sand Creek 4.62 64 IAML 14 15 16.9
comp=E,38nm,0.9s
SCRK IAML 14 15 17.1
comp=N,43nm,0.8s
GLB Gilahina Butte 4.63 96 Pn 14 13 56.6 +0.9
GLB Gilahina Butte 4.63 96 IAML 14 15 12.2
comp=N,40nm,0.9s
GLB IAML 14 15 12.9
comp=E,29nm,1.0s
N14K Kuskokwak Cree 4.64 243 Pn 14 13 56.3 +0.5
G23K Bananza Creek 4.71 17 Pn 14 13 57.1 +0.3
J14K Nanvaranak Lak 4.72 280 Pn 14 13 57.1 +0.2
J14K Nanvaranak Lak 4.72 280 IAML 14 15 20.1
comp=N,27nm,1.1s
J14K IAML 14 15 23.6
comp=E,34nm,1.2s
PRP Porcupine Dome 4.78 43 IAML 14 15 18.6
comp=N,26nm,0.6s
PRP IAML 14 15 30.3
comp=E,23nm,0.7s
O14K Tigyukauivet M 4.88 235 Pn 14 13 59.0 -0.2
O14K Tigyukauivet M 4.88 235 IAML 14 15 31.9
comp=E,44nm,0.9s
F20K Avaraart Lake 4.91 349 Pn 14 14 00.8 +1.2
F19K Shaleruckik Mo 4.96 340 Pn 14 14 01.2 +1.0
F21K Alatna River 4.99 360 Pn Pn 14 14 02.2 +1.6
MCARA McCarthy VSAT 5.01 95 Pn 14 14 02.1 +1.2
G16K Koyuk River 5.05 312 Pn 14 14 02.3 +0.8
G16K Koyuk River 5.05 312 IAML 14 15 41.3
comp=E,16nm,1.0s
G16K IAML 14 15 42.9
comp=N,16nm,0.9s
M13K Dall Lake 5.12 253 Pn 14 14 03.4 +0.9
M13K Dall Lake 5.12 253 IAML 14 15 38.3
comp=N,35nm,0.8s
F18K Selawik 5.13 331 Pn 14 14 03.9 +1.4
G24K Hadweenzic Riv 5.15 27 Pn 14 14 02.9 +0.1
K13K Kusilvak Mount 5.29 271 Pn 14 14 05.2 +0.5
K13K Kusilvak Mount 5.29 271 IAML 14 15 36.9
comp=E,14nm,1.0s
K13K IAML 14 15 39.6
comp=N,21nm,0.8s
L27K Beaver Creek, 5.41 76 Pn 14 14 07.8 +1.3
KIAG Kiagna River 5.45 99 Pn 14 14 07.7 +0.6
E19K Redstone River 5.47 344 Pn 14 14 07.2 -0.1
I26K Coal Creek Min 5.48 52 Pn 14 14 08.6 +1.2
GRNC Granite Creek 5.79 100 Pn 14 14 13.3 +1.4
ANM Nome 5.84 299 Pn 14 14 13.0 +0.7
E22K Anaktuvuk Pass 5.94 6 Pn 14 14 14.9 +1.1
E18K Tukpahlearik C 6.02 333 Pn 14 14 16.4 +1.6
F15K North Star Dit 6.03 310 Pn 14 14 16.2 +1.3
E23K Chandalar 6.04 14 Pn 14 14 15.8 +0.6
YUK3 Moose Creek 6.12 89 Pn 14 14 17.5 +1.0
E24K Your Creek 6.20 17 Pn 14 14 18.2 +0.9
F25K Christian Rive 6.29 28 Pn 14 14 18.7 +0.1
M11K Mekoryuk 6.43 259 Pn 14 14 21.4 +1.1
D22K Ayikyak River 6.66 2 Pn 14 14 25.4 +1.8
I28M Miner Creek 6.76 56 Pn 14 14 26.6 +1.5
D23K Nanushuk River 6.83 8 Pn 14 14 27.8 +1.9
L29M L29M 7.09 76 Pn Pn 14 14 30.8 +1.3
C18K Utukok River 7.18 337 Pn 14 14 32.4 +1.6
K29M Barlow Dome 7.40 71 Pn 14 14 34.9 +1.1
B21K Ikpikpuk River 7.41 357 Pn 14 14 35.2 +1.4
B22K Teshekpuk Lake 8.12 0 Pn 14 14 44.6 +1.1
INK Inuvik 10.27 45 Pn Pn 14 15 13.9 +1.0
comp=N,0.1nm,0.3s,baz=236,slow=17,SNR=4.6
comp=N,2.0nm,1.0s
YKA Yellowknife Ar 17.82 72 P Pn 14 16 51.4 -2.1
baz=290,slow=12,SNR=3.6
comp=N,0.3nm,0.8s
YKA Yellowknife Ar 17.82 72 Pn Pn 14 16 52.7 -0.8
NVAR Mina Array Bea 32.04 122 P P 14 19 12.3 -0.2
comp=N,0.5nm,0.7s,baz=327,slow=12,SNR=3.9
comp=N,0.5nm,0.7s
PDAR Pinedale Array 32.18 107 P P 14 19 12.0 -1.8
comp=N,0.1nm,0.5s,baz=316,slow=7.8,SNR=1.4
comp=N,0.1nm,0.5s
PDAR Pinedale Array 32.18 107 P P 14 19 13.1 -0.7
TXAR Lajitas Array 45.99 112 P P 14 21 09.7 +0.6
comp=N,0.1nm,0.4s,baz=349,slow=7.1,SNR=2.2
comp=N,0.1nm,0.4s

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*IDC **02** 14:13:05.1±4.8, 14°.64S×167°.33E, h133km±45km, mb3.6/9, mbtmp4.1/10, MS3.4/1, Error ellipse: s-maj=34.3km s-min=21.6km az=0.0*
*NEIC **02** 14:13:05.1±1.3, 14°.7S±0°.1×167°.55E±0°.10, h135km±7km, mb4.4/20, Error ellipse: s-maj=16.2km s-min=13.3km az=156.0*
*NOU **02** 14:13:08.3, 14°.86S×167°.49E, h119km, MLv4.6/18, Vanuatu Islands*
ISC 02 14:13:04.9±0.7**, 14°.73S**±0°.07×**167°.55E**±0°.08**, h135**km**, n52, σ1ˢ.34**/53**, mb4.3**/14**, Vanuatu Islands**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
SANVU Saraoutou 0.79 205 P Pn 14 13 27.7 +1.2
SANVU Saraoutou 0.79 205 Pn 14 13 26.7 +0.1
DVP Devils Point 3.04 169 P Pn 14 13 53.7 +1.4
RTV Rentapao 3.16 165 P Pn 14 13 55.8 +2.0

MARNC	Mare, Loyalty	6.73	176	P	Pn	14 14 41.2	-0.1
MARNC	Mare, Loyalty	6.73	176	Pn	Pn	14 14 40.7	-0.6
DZM	Mont Dzumac	7.38	188	P	Pn	14 14 50.6	+0.5
	11nm,0.3s,baz=98,slow=9.5,SNR=63						
DZM				S	Sn	14 16 09.2	-3.4
	7.5nm,0.4s,baz=142,slow=23,SNR=3.8						
DZM	Mont Dzumac	7.38	188	P	Pn	14 14 51.2	+1.1
DZM				S	Sn	14 16 12.8	+0.3
DZM	Mont Dzumac	7.38	188	S	Sn	14 16 12.8	+0.3
DZM	Mont Dzumac	7.38	188		Pn	14 14 51.0	+0.8
DZM					Sn	14 16 13.4	+0.9
ONTNC	Ouen Toro	7.61	188	P	Pn	14 14 55.7	+2.6
ONTNC				S	Sn	14 16 18.8	+0.8
ONTNC	Ouen Toro	7.61	188	S	Sn	14 16 18.8	+0.8
ONTNC	Ouen Toro	7.61	188		Pn	14 14 54.6	+1.5
OUENC	Ouen Island, N	7.68	185	P	Pn	14 14 56.7	+2.6
OUENC				S	Sn	14 16 20.1	+0.5
OUENC	Ouen Island, N	7.68	185	S	Sn	14 16 20.1	+0.5
NGOA	Tingoa Renbel	7.95	292	P	Pn	14 14 59.6	+1.9
SAVO	Savo Central	9.38	305	P	Pn	14 15 22.4	+5.4
TATA	Tatamba Isabel	9.86	309	P	Pn	14 15 27.6	+4.2
EIDS	Eidsvold	18.73	233	P	P	14 17 13.2	-0.1
EIDS				IAmb	IAmb	14 17 15.3	
	comp=Z,8.3nm,0.8s						
RAO	Raoul Island	19.73	139	P	Pn	14 17 27.4	+0.5
	comp=Z,342nm,0.3s,baz=280,slow=22,SNR=3.0						
RAO	Raoul Island	19.73	139	P	P	14 17 23.1	-1.0
PMG	Port Moresby	20.62	283	P	P	14 17 32.4	-1.5
	comp=Z,8.2nm,0.9s,baz=78,slow=6.0,SNR=4.9						
	comp=Z,8.2nm,0.9s						
PMG	Port Moresby	20.62	283	P	P	14 17 32.5	-1.3
PMG				IAmb	IAmb	14 17 37.2	
	comp=Z,10nm,0.9s						
CTA	Charters Tower	21.00	252	P	P	14 17 37.4	-0.5
	comp=Z,3.7nm,0.7s,baz=69,slow=7.8,SNR=5.1						
	comp=Z,3.7nm,0.7s						
CTAO	Charters Tower	21.00	252	P	P	14 17 37.8	0.0
CTAO				IAmb	IAmb	14 17 39.0	
	comp=Z,7.5nm,0.9s						
ARMA	Armidale	21.41	220	P	P	14 17 42.8	+0.6
NIUE	Niue	21.97	104	P	P	14 17 47.9	-0.3
COEN	Coen	23.63	269	P	P	14 18 04.0	0.0
COEN				IAmb	IAmb	14 18 40.7	
	comp=Z,10nm,1.4s						
RTZ	Ruatahuna	25.21	162	P	P	14 18 18.7	+0.5
RTZ				IAmb	IAmb	14 18 29.9	
	comp=Z,28nm,1.4s						
BKZ	Black Stump Fm	25.59	164	P	P	14 18 21.8	+0.2
BKZ				IAmb	IAmb	14 18 53.7	
	comp=Z,26nm,1.4s						
INKA	Innaminka	28.07	238	P	P	14 18 43.9	+0.1
STKA	Stephens Creek	29.20	230	P	P	14 18 53.7	-0.2
	comp=Z,3.4nm,0.4s,baz=55,slow=9.4,SNR=17						
	comp=Z,3.4nm,0.4s						
STKA	Stephens Creek	29.20	230	P	P	14 18 54.1	+0.3
WR8	Warramunga Arr	31.94	256	P	P	14 19 16.6	-1.6
WR8				IAmb	IAmb	14 19 52.0	
	comp=Z,6.7nm,1.4s						
WB0	Warramunga Arr	32.03	256	P	P	14 19 17.3	-1.6
WB0				IAmb	IAmb	14 19 57.5	
	comp=Z,5.5nm,1.1s						
WRA	Warramunga Arr	32.09	256	P	P	14 19 17.1	-2.4
	comp=Z,1.6nm,0.9s,baz=84,slow=8.7,SNR=11						
	comp=Z,1.6nm,0.9s						
WRA	Warramunga Arr	32.09	256	P	P	14 19 18.1	-1.4
AS31	Alice Springs	32.93	249	P	P	14 19 25.1	-1.6
ASAR	Alice Springs	32.93	249	P	P	14 19 25.1	-1.7
	comp=Z,2.5nm,0.4s,baz=79,slow=9.3,SNR=144						
	comp=Z,2.5nm,0.4s						
BBOO	Buckleboo	33.80	232	P	P	14 19 33.8	-0.3
KNRA	Kununurra	37.41	263	P	P	14 20 04.0	-1.2
KNRA				IAmb	IAmb	14 20 07.0	
	comp=Z,23nm,1.1s						
BATI	Baumata	43.04	271	LR	LR	14 37 46.2	
	comp=Z,51nm,20.2s,baz=272,slow=35						
MBWA	Marble Bar	45.81	255	P	P	14 21 12.9	-0.7
CMAR	Chiang Mai Arr	75.20	294	P	P	14 24 32.9	-0.3
	comp=Z,0.3nm,0.5s,baz=109,slow=6.7,SNR=2.1						
	comp=Z,0.3nm,0.5s						
CMAR	Chiang Mai Arr	75.20	294	P	P	14 24 32.0	-1.2
O14K	Tigyukauivet M	77.96	16	P	P	14 24 47.5	-0.3
O14K				IAmb	IAmb	14 25 30.3	
	comp=Z,13nm,1.2s						
SONM	Songino Array	82.66	323	P	P	14 25 13.2	-0.2
	comp=Z,0.4nm,0.6s,baz=151,slow=6.3,SNR=2.8						
	comp=Z,0.4nm,0.6s						
SONM	Songino Array	82.66	323	IAmb	IAmb	14 25 13.8	
	comp=Z,1.9nm,1.5s						
ILAR	Eielson Array	86.44	18	P	P	14 25 31.2	-0.6
	comp=Z,0.6nm,0.8s,baz=235,slow=4.8,SNR=6.2						
	comp=Z,0.6nm,0.8s						
ILAR	Eielson Array	86.44	18	P	P	14 25 31.9	0.0
MKAR	Makanchi Array	97.39	316	P	Pdif	14 26 23.6	+0.5
	comp=Z,0.3nm,0.6s,baz=88,slow=5.5,SNR=4.4						
	comp=Z,0.3nm,0.6s						
ARCES	ARCESS Array B	120.32	345	PKP	PKPdf	14 31 39.5	-0.1
	comp=Z,6.4nm,1.1s,baz=64,slow=2.1,SNR=5.2						

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*AFAD **02** 14:22:34.9, 38°.63N×40°.80E, h14km±5km, ML3.5*
*ISK **02** 14:22:35.0, 38°.62N×40°.83E, h6km, ML3.7/14*
*IDC **02** 14:22:35.7±1.2, 38°.68N×40°.78E, h0km, mb3.7/3, mbtmp3.5/8, ML2.9/5, MS3.1/5, Error ellipse: s-maj=25.0km s-min=11.8km az=164.0*
ISC 02 14:22:35.5±1.1**, 38°.63N**±0°.02×**40°.85E**±0°.02**, h7**km±9km**, n56,** σ1§**86**/72**, mb3.6**/4**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLHN	Bingol, Solhan	0.36	22	P	Pg	14 22 42.1	-0.4
SLHN				S	Sb	14 22 49.4	-0.8
SLHN				IAML		14 22 53.0	
	comp=E,3μm,0.4s						
SLHN				IAML		14 22 54.0	
	comp=N,4μm,0.8s						
BNGB	Bingl	0.39	340	Pg	Pb	14 22 43.1	-1.7
BNGB				Sg	Sb	14 22 49.1	-2.0
MAYK		0.40	286	P	Pg	14 22 41.7	-1.6
MAYK				IAML		14 22 54.0	
	comp=N,5μm,0.7s						
MUSM	Mu-Merkez	0.53	79	P	Pg	14 22 44.9	-0.8
MUSM				S	Sg	14 22 53.0	+0.5
SVAN	Silvan-Diyarba	0.55	150	Pg	Pg	14 22 46.0	-0.1
SVAN				Sg	Sb	14 22 54.7	-0.9
SVAN	Silvan-Diyarba	0.55	150	P	Pg	14 22 46.2	+0.1
SVAN				S	Sb	14 22 55.3	-0.2
SVAN				IAML		14 22 56.0	
	comp=E,6μm,0.4s						
SVAN				IAML		14 22 58.0	
	comp=N,3μm,0.6s						
KARO	Karliova-Bingo	0.70	13	Pg	Pg	14 22 48.5	-0.5
VRTB	Varto-Mus	0.71	41	Pg	Pg	14 22 49.2	0.0
VRTB				Sg	Sb	14 23 00.7	+0.3
VRTB	Varto-Mus	0.71	41	P	Pb	14 22 49.4	-0.9
VRTB				IAML		14 23 14.0	
	comp=N,2μm,1.0s						
BTMN	Batman	0.81	156	P	Pb	14 22 51.2	-0.7
BTMN				IAML		14 23 08.0	
	comp=E,3μm,1.0s						
BTMN				IAML		14 23 09.0	
	comp=N,3μm,0.8s						
KOVA	Elazig, Kovanc	0.82	276	P	Pg	14 22 49.0	-2.3
YEDI	Yedisu-Bingol	0.84	344	Pg	Pg	14 22 50.9	-0.9
YEDI				Sg	Sn	14 23 04.4	-2.4
DYBB	Diyarbakir	0.88	220	Pg	Pb	14 22 51.9	-1.2
DYBB				Sg	Sn	14 23 05.1	-2.3
GURO	Guroymak-BITLI	0.93	94	Pg	Pb	14 22 53.4	-0.6
GURO				Sg	Sg	14 23 06.9	+1.5
MDNT	Maden	0.95	256	P	Pn	14 22 54.0	-1.4
MDNT				S	Sn	14 23 09.9	+0.7
MDNT				IAML		14 23 14.0	
	comp=N,855nm,0.5s						
ECAT	Cat-ERZURUM	0.98	5	P	Pb	14 22 53.5	-1.5
ECAT				IAML		14 23 13.0	
	comp=E,1μm,0.6s						
BLIS	Bitlis-Merkez	1.01	102	P	Pb	14 22 52.6	-2.9
BLIS				IAML		14 23 13.0	
	comp=E,2μm,0.6s						
BLIS				IAML		14 23 15.0	
	comp=N,1μm,0.5s						
TNCL	Tunceli-Merkez	1.13	296	P	Pg	14 22 56.2	-1.1
TNCL				IAML		14 23 16.0	
	comp=E,1μm,0.6s						
TNCL				IAML		14 23 18.0	
	comp=N,814nm,0.5s						
ESIJ	Sivrice-Elazig	1.22	262	Pn	Pg	14 22 58.2	-0.8
SVRC	Sivrice-ELAZID	1.24	259	Pn	Pg	14 22 58.8	-0.5
EJDE	Erzurum, Palan	1.25	16	P	Pg	14 22 59.0	-0.7
EJDE				IAML		14 23 24.0	
	comp=N,752nm,0.5s						
EJDE				IAML		14 23 35.0	
	comp=E,1μm,1.2s						
CNGT	ngs	1.29	252	P	Pg	14 22 59.4	-0.8
CNGT				S	Sg	14 23 18.1	+1.1
CNGT				IAML		14 23 20.0	
	comp=N,888nm,0.6s						
CNGT				IAML		14 23 20.0	
	comp=E,993nm,0.9s						
ELZ	Elazig	1.29	273	P	Pg	14 22 59.0	-1.3
ELZ				S	Sg	14 23 19.9	+2.8
ELZ				IAML		14 23 31.0	
	comp=N,557nm,0.9s						
ELZ				IAML		14 23 35.0	
	comp=E,637nm,0.7s						
ERZN	Erzincan	1.30	318	Pn	Pg	14 23 00.1	-0.4
ERZM	Erzurum	1.34	17	P	Pg	14 23 00.8	-0.4
KOPT	Kop Dagi	1.42	349	P	Pg	14 23 02.6	-0.1
KOPT				S	Sg	14 23 27.6	+6.5
ESGZ	Sivrice-Elazig	1.42	263	Pn	Pg	14 23 01.5	-1.2
MLAZ	Malazgirt-MUS	1.42	68	Pn	Pn	14 22 58.9	-3.0
MDYL	Doganyol-Malat	1.46	258	Pn	Pg	14 23 02.1	-1.4
ELZG	Elazig	1.47	266	P	Pg	14 23 03.1	-0.7
ELZG				S	Sg	14 23 24.0	+1.1
ELZG				IAML		14 23 28.0	
	comp=E,1μm,0.7s						
ELZG				IAML		14 23 30.0	
	comp=N,645nm,0.6s						
MCKZ	Bingol	1.54	289	P	Pg	14 23 05.8	+0.6
AKDM	Akdamar-Van	1.70	99	Pn	Pb	14 23 06.4	-0.8
NARI	Adyaman-Kaht	1.81	246	P	Pb	14 23 07.6	-1.4
NARI				S	Sg	14 23 35.8	+2.2
NARI				IAML		14 23 38.0	
	comp=E,417nm,0.8s						
NARI				IAML		14 23 46.0	
	comp=N,483nm,0.6s						
BAYT	Aydıntepe-Bayb	1.85	343	Pn	Pb	14 23 08.2	-1.6
HANM	anlurfa/Hi	1.88	237	P	Pb	14 23 08.1	-2.1
HANM				IAML		14 23 35.0	
	comp=N,834nm,0.5s						
HANM				IAML		14 23 35.0	
	comp=E,488nm,0.5s						
AGRB	Hanur-Agry	1.92	60	Pn	Pb	14 23 09.3	-1.6
MAYA	Malatya/Merkez	1.93	262	P	Pb	14 23 09.9	-1.2
MAYA				S	Sg	14 23 39.0	+1.4
MAYA				IAML		14 23 43.0	
	comp=N,253nm,1.1s						
KAHTU	Kahta	1.95	246	P	Pb	14 23 09.9	-1.5
KAHTU				S	Sg	14 23 38.1	-0.1
KAHTU				IAML		14 23 45.0	
	comp=E,1μm,0.6s						
KAHTU				IAML		14 23 49.0	
	comp=N,903nm,0.5s						
ILIC	ilic-Erzincan	1.96	296	Pn	Pb	14 23 09.5	-2.1
VANB	Van	1.99	90	Pn	Pb	14 23 10.6	-1.5
ARPR	Arapgir-MALATY	2.02	284	Pn	Pb	14 23 10.3	-2.4
AZEY	Adyaman-Merk	2.21	249	P	Pb	14 23 13.1	-2.7
AZEY				IAML		14 23 53.0	
	comp=N,266nm,0.5s						
SENK	Senkaya-Erzuru	2.25	30	Pn	Pb	14 23 14.1	-2.6
AKCD	Akcadag	2.32	263	P	Pb	14 23 15.8	-2.1
AKCD				IAML		14 24 05.0	
	comp=E,220nm,0.6s						
AKCD				IAML		14 24 06.0	
	comp=N,367nm,0.9s						
CHOM	Cayeli-Rize	2.47	358	Pn	Pb	14 23 17.1	-3.1
GNI	Garni	3.38	62	Pn	Pb	14 23 31.4	-4.3
	1.1nm,0.3s,baz=267,slow=18,SNR=5.9						
GNI				Pg	Pg	14 23 38.6	-1.6
	2.6nm,0.3s,baz=221,slow=6.7,SNR=10						
	10nm,0.7s						
KBZ	Khabaz	5.33	16	Pn	Pn	14 23 58.6	+3.2
	0.1nm,0.3s,baz=169,slow=10,SNR=1.8						
	2.1nm,1.2s						
BRTR	Keskin Array B	5.71	283	Pn	Pn	14 24 01.6	+0.8
	0.2nm,0.3s,baz=102,slow=13,SNR=4.4						
BRTR				LR	LR	14 26 34.2	
	comp=Z,87nm,19.0s,baz=78,slow=42						
	0.7nm,0.5s						
MMAI	Mount Meron Ar	7.14	220	Pn	Pn	14 24 22.3	+1.9
	1.6nm,0.3s,baz=59,slow=15,SNR=5.5						
MMAI				LR	LR	14 27 29.3	
	comp=Z,76nm,19.5s,baz=13,slow=41						
	1.5nm,0.4s						
ASF	Jabal al Asfar	7.20	208	Pn	Pn	14 24 24.1	+2.8
	0.3nm,0.3s,baz=45,slow=16,SNR=4.1						
ASF				Lg	Lg	14 26 24.7	
	0.7nm,0.3s,baz=3.1,slow=20,SNR=5.9						
ASF				LR	LR	14 27 38.2	
	comp=Z,49nm,20.8s,baz=26,slow=42						
	2.8nm,0.6s						
FINES	FINESS Array B	24.61	343	P	P	14 27 58.5	+2.3
	1.1nm,0.8s,baz=148,slow=9.1,SNR=4.4						
	1.1nm,0.8s						
KURBB	Kurchatov Arra	29.06	53	P	P	14 28 37.8	+1.6
	0.4nm,0.6s,baz=266,slow=8.4,SNR=3.9						
MKAR	Makanchi Array	31.22	61	P	P	14 28 56.5	+1.0
	0.6nm,0.8s,baz=273,slow=10.0,SNR=7.1						
	0.6nm,0.8s						
ARCES	ARCESS Array B	32.05	350	P	P	14 29 03.4	+0.9
	2.1nm,0.9s,baz=139,slow=7.5,SNR=1.3						
	2.1nm,0.9s						
BOSA	Boshof	68.46	195	LR	LR	15 04 10.5	
	comp=Z,34nm,18.9s,baz=273,slow=36						
GUMO	Guam	92.25	71	LR	LR	15 20 50.2	
	comp=Z,23nm,18.0s,baz=96,slow=38						

IDC 02 14:27:04.1±1.7**, 4°.15S**×**143°.02E, h0**km**, mb3.5**/3**, mbtmp3.5**/5**, ML3.5**/1**, Error ellipse: s-maj=43.8km s-min=27.0km az=84.0, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.65	142	Pn	Pn	14 28 43.6	+0.5
	1.7nm,0.4s,baz=315,slow=11,SNR=1.6						
PMG				Sn	Sn	14 29 50.6	-9.1
	0.3nm,0.3s,baz=162,slow=7.8,SNR=1.8						
WRA	Warramunga Arr	17.83	208	P	Pn	14 31 13.6	-0.3
	0.2nm,0.3s,baz=29,slow=12,SNR=8.4						
	0.7nm,0.5s						
BATI	Baumata	20.11	252	P	P	14 31 40.2	+0.4
	35nm,0.7s,baz=124,slow=3.6,SNR=8.8						
ASAR	Alice Springs	21.30	204	P	P	14 31 52.5	-0.2
	0.6nm,0.6s,baz=34,slow=10.0,SNR=12						
	0.6nm,0.6s						
MKAR	Makanchi Array	73.57	321	P	P	14 38 39.5	+0.3
	0.2nm,0.5s,baz=106,slow=6.4,SNR=4.3						
	0.2nm,0.5s						
BVAR	Borovoye Array	82.96	324	P	P	14 39 30.7	-0.4
	0.5nm,0.5s,baz=92,slow=4.7,SNR=4.0						
	0.5nm,0.5s						

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*IDC **02** 14:31:05.6±2.1, 29°.54N×51°.57E, h0km, mb3.6/8, mbtmp3.6/10, ML3.2/2, Error ellipse: s-maj=46.2km s-min=25.1km az=157.0*
*TEH **02** 14:31:06.1, 29°.59N×51°.82E, h6km±38km, ML3.5, Presumed earthquake*
*OMAN **02** 14:31:10.7±0.6, 29°.30N×51°.90E, h7km, mb3.2/14, ml3.7/3, Error ellipse: s-maj=5.3km s-min=3.5km az=165.0*
*DSN **02** 14:31:13.6±1.2, 29°.10N×52°.00E, h15km, ML3.1/8, Error ellipse: s-maj=13.2km s-min=9.9km az=8.0*
ISC 02 14:31:06.8±0.6**, 29°.59N**±0°.04×**51°.82E**±0°.03**, h10**km**, n61,** σ1§**66**/72**, mb3.7**/7**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAZ2	Kazeron-Fars-I	0.14	281	Pg	Pg	14 31 10.4	+0.5
SHI	Shiraz	0.61	85	Pg	Pb	14 31 19.1	-0.5
SHI				Sg	Sb	14 31 28.0	-0.3
DSBU	Dashti - Bushe	1.31	202	Pg	Pg	14 31 31.9	-0.1
KLNJ	Kolanjah	1.43	352	Pg	Pg	14 31 34.5	+0.2
QIR1	Qir	1.54	136	Pg	Pg	14 31 36.8	+0.4
JHRM	Jahrom	1.88	125	Pn	Pg	14 31 42.1	-0.8
IBRJ	Brojen	2.36	348	Pn	Pb	14 31 48.6	-1.0
JHBN	Jahan bin	2.81	340	Pn	Pb	14 31 54.5	-2.8
TAFT	Taft - Yazd	2.94	43	Pn	Pb	14 31 56.7	-2.8
AMIS	Naft Sefid	3.01	314	Pn	Pb	14 31 57.1	-3.3
IZEF	Zefreh	3.33	7	Pn	Pb	14 32 02.2	-3.9
ICHK	Chekchek	3.46	39	Pn	Pb	14 32 03.9	-4.4
SAKB	Bahrain	3.77	198	P	Pn	14 32 05.7	+0.7
IBAF	Bafgh	3.80	57	Pn	Pn	14 32 08.7	+3.1
KHGB	Koh Gabri	4.12	78	Pn	Pn	14 32 12.8	+2.8
TRNA	Turayna	4.86	186	P	Pn	14 32 21.6	+1.6
TRNA				S	Sn	14 33 15.7	-0.6
SMRA	Abu-Samra	4.90	191	P	Pn	14 32 22.2	+1.7
	SNR=10.0						
SMRA				S	Sn	14 33 18.1	+0.8
BDRS	Dareh Seyedi	5.02	331	Pn	Pn	14 32 25.5	+3.0
SHME	Shamm	5.21	132	P	Pn	14 32 26.1	+1.4
SHME	Shamm	5.21	132	P	Pn	14 32 26.7	+2.0
SHME				S	Sn	14 33 24.5	-0.4
BANOM	Banah	5.39	132	P	Pn	14 32 27.6	+0.2
BANOM	Banah	5.39	132	P	Pn	14 32 28.4	+1.1
BANOM				S	Sn	14 33 28.6	-1.0
SLWR	Sila	5.50	181	P	Pn	14 32 29.5	+0.8
SLWR				S	Sn	14 33 30.7	-1.3
GHWR	Ruwais	5.68	170	P	Pn	14 32 32.0	+0.8
MASF	Masafi	5.70	136	P	Pn	14 32 32.9	+1.3
MASF				S	Sn	14 33 36.6	-0.6
MSFE	Esma-Masafi	5.71	136	P	Pn	14 32 31.9	+0.2
KBAM	BAM	5.81	93	Pn	Pn	14 32 35.9	+2.7
MDH	Madha	5.84	136	P	Pn	14 32 32.8	-0.7
MDH	Madha	5.84	136	P	Pn	14 32 34.6	+1.2
UOSS	Minazif	6.05	139	P	Pn	14 32 37.7	+1.4
UOSS				S	Sn	14 33 44.8	-0.9
HATD	Hatta, Dubai	6.10	140	P	Pn	14 32 36.2	-0.9
HATD	Hatta, Dubai	6.10	140	P	Pn	14 32 38.8	+1.7
ASHO	Ashiyiah	6.18	141	P	Pn	14 32 37.5	-0.6
ASHO				S	Sn	14 33 44.3	-4.5
ASHO	Ashiyiah	6.18	141	P	Pn	14 32 39.4	+1.4
ASHO				S	Sn	14 33 47.9	-0.9
JASK	Jask - Hormozg	6.52	123	P	Pn	14 32 44.0	+1.3
MZR	Muzera	6.73	167	P	Pn	14 32 45.1	-0.5
MZR	Muzera	6.73	167	P	Pn	14 32 46.4	+0.8
MZR				S	Sn	14 34 01.2	-1.2
SOHO	SOHO	6.87	141	P	Pn	14 32 47.8	+0.2
HOQ	Hoqain	7.74	139	P	Pn	14 33 01.0	+1.4
RAYN	Ar Rayn	8.27	225	P	Pn	14 33 08.5	+1.6
BSY	Bisya	8.36	143	P	Pn	14 33 07.5	-0.5
SMDO	Samad	8.57	138	P	Pn	14 33 11.2	+0.1
WSAR	Wadi Sarin	8.79	134	P	Pn	14 33 14.5	+0.5
JMDO	Jabal Madar	9.14	140	P	Pn	14 33 20.4	+1.6
WBK	Wadi Bani Khal	9.46	136	P	Pn	14 33 23.8	+0.6
JLN	Jalan Bani Buh	10.08	136	P	Pn	14 33 33.3	+1.7
MHTO	MHTO	10.21	146	P	Pn	14 33 35.4	+2.0
DOK	Doka	11.12	169	P	Pn	14 33 46.0	+0.1
WHFO	Wadi Hawf	11.75	171	P	Pn	14 33 54.7	+0.1
	SNR=7.1						
DMTO	DMTO	12.16	166	P	Pn	14 34 00.8	+0.7
RBK	Rabkut	12.23	169	P	Pn	14 34 01.1	+0.1
KBZ	Khabaz	15.81	336	Pn	P	14 34 52.2	-1.0
	baz=132,slow=14,SNR=1.8						
	1.3nm,0.8s						
BRTR	Keskin Array B	18.02	309	P	Pn	14 35 15.5	-2.0
	0.2nm,0.3s,baz=139,slow=14,SNR=5.3						
	0.6nm,0.5s						
AKTO	Aktyubinsk	21.34	11	P	P	14 35 55.5	+1.6
	0.6nm,0.5s,baz=208,slow=12,SNR=5.0						
	0.6nm,0.5s						
BVAR	Borovoye Array	27.10	25	P	P	14 36 50.8	+1.2
	0.8nm,0.4s,baz=224,slow=7.8,SNR=7.3						
	0.8nm,0.4s						
MKAR	Makanchi Array	29.23	46	P	P	14 37 11.3	+2.7
	0.2nm,0.5s,baz=239,slow=11,SNR=4.1						
	0.2nm,0.5s						
ZALV	Zalesovo Beam	34.10	35	P	P	14 37 53.4	+2.0
	0.6nm,0.6s,baz=253,slow=10,SNR=4.1						
	0.6nm,0.6s						
FINES	FINESS Array B	36.12	339	P	P	14 38 09.0	+0.4
	2.0nm,1.0s,baz=131,slow=7.4,SNR=3.5						
	2.0nm,1.0s						
HFS	Hagfors	39.80	331	P	P	14 38 39.2	-0.6
	1.4nm,0.6s,baz=128,slow=9.3,SNR=2.2						
	1.4nm,0.6s						
TORD	Torodi Ar. Bea	49.08	262	P	P	14 39 53.5	-1.0
	0.4nm,0.5s,baz=72,slow=5.0,SNR=5.4						
	0.4nm,0.5s						
ILAR	Eielson Array	84.82	8	P	P	14 43 41.0	-0.2
	0.3nm,0.7s,baz=328,slow=3.2,SNR=2.8						
	0.3nm,0.7s						

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*TIF **02** 14:52:49.7, 38°.23N×38°.86E, h12km±1km*
*AFAD **02** 14:52:50.7, 38°.28N×38°.84E, h7km±2km, MW3.9*
*ISK **02** 14:52:50.1, 38°.26N×38°.85E, h2km, ML3.9/15*
*IDC **02** 14:52:51.1±0.8, 38°.25N×38°.83E, h0km, mb3.8/11, mbtmp3.8/18, ML3.4/6, MS3.2/5, Error ellipse: s-maj=18.8km s-min=9.1km az=171.0*
*NEIC **02** 14:52:52.6±1.6, 38°.20N±0°.04×38°.85E±0°.02, h5km±1km, mb4.1/7, Error ellipse: s-maj=6.9km s-min=3.0km az=181.0*
*GII **02** 14:52:53.7±0.0, 38°.22N×38°.83E, h0km, Mws4.0, confirmed*
ISC 02 14:52:52.4±0.5**, 38°.30N**±0°.02×**38°.83E**±0°.02**, h10**km**, n94,** σ1§**62**/111**, mb4.0**/13**, MS3.0**/5**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDYL	Doganyol-Malat	0.17	85	Pg	Pg	14 52 54.3	-1.8
MDYL				Sg	Sg	14 52 56.8	-1.8
ESGZ	Sivrice-Elazig	0.23	55	Pg	Pg	14 52 55.6	-1.5
ESGZ				Sg	Sg	14 52 59.2	-1.2
ELZG	Elazig	0.23	32	P	Pg	14 52 56.1	-1.2
ELZG				S	Sg	14 52 59.8	-0.8
MAYA	Malatya/Merkez	0.32	275	P	Pg	14 52 57.8	-1.0
MAYA				S	Sg	14 53 02.7	-0.4
CNGT	ngs	0.38	103	P	Pg	14 52 57.8	-2.2
CNGT				S	Sg	14 53 03.3	-1.7
SVRC	Sivrice-ELAZID	0.38	78	Pg	Pg	14 52 58.1	-1.9
ESIJ	Sivrice-Elazig	0.41	68	Pg	Pg	14 52 59.0	-1.5
ESIJ				Sg	Sb	14 53 05.5	-2.6
NARI	Adyaman-Kaht	0.42	187	P	Pg	14 52 59.1	-1.6
NARI				S	Sg	14 53 04.8	-1.4
ELZ	Elazig	0.49	37	P	Pg	14 53 00.6	-1.4
ELZ				S	Sg	14 53 07.5	-1.0
KAHTU	Kahta	0.52	199	P	Pb	14 53 01.5	-2.2
KAHTU				S	Sg	14 53 07.6	-1.9
MDNT	Maden	0.68	82	P	Pg	14 53 03.9	-1.7
MDNT				S	Sg	14 53 12.8	-1.6
AKCD	Akcadag	0.71	270	P	Pg	14 53 05.1	-1.1
AKCD				S	Sb	14 53 15.2	-1.8
MCKZ	Bingol	0.83	8	P	Pg	14 53 06.8	-1.5
MCKZ				S	Sb	14 53 18.8	-1.4
KOVA	Elazig, Kovanc	0.87	62	P	Pg	14 53 07.1	-2.1
ARPR	Arapgir-MALATY	0.88	334	Pg	Pb	14 53 08.4	-1.5
ARPR	Arapgir-MALATY	0.88	334	Pg	Pb	14 53 08.4	-1.5
TNCL	Tunceli-Merkez	0.99	34	P	Pg	14 53 09.2	-2.2
TNCL				S	Sg	14 53 22.8	-1.4
DYBB	Diyarbakir	1.09	108	Pg	Pg	14 53 11.3	-2.1
DYBB				Sg	Sn	14 53 26.8	-2.2
ILIC	ilic-Erzincan	1.17	350	Pn	Pn	14 53 13.5	-1.5
ERZN	Erzincan	1.46	28	Pn	Pg	14 53 18.9	-1.6
BNGB	Bingl	1.60	64	Pn	Pb	14 53 20.7	-1.5
GAZ	Gaziantep	1.71	229		Pn	14 53 21.3	-1.1
GAZ	Gaziantep	1.71	229	Pn	Pn	14 53 21.2	-1.1
KMRS	Kahramanmaras	1.72	243	Pn	Pn	14 53 21.4	-1.0
YEDI	Yedisu-Bingol	1.76	49	Pn	Pb	14 53 23.4	-1.4
MARD	Mardin	1.83	122		Pb	14 53 23.3	-2.8
SVAN	Silvan-Diyarba	1.87	94	Pn	Pn	14 53 23.6	-0.9
SARI	SarD1z-Kayseri	1.90	274	Pn	Pb	14 53 24.7	-2.6
KARO	Karliova-Bingo	2.01	59	Pn	Pb	14 53 26.7	-2.4
KOPT	Kop Dagi	2.15	37		Pb	14 53 29.7	-2.0
SVSK	Karacayir	2.15	319	Pn	Pb	14 53 29.0	-2.5
VRTB	Varto-Mus	2.23	66	Pn	Pn	14 53 29.4	-0.1
BAYT	Aydıntepe-Bayb	2.33	26	Pn	Pb	14 53 31.5	-3.0
BNN	Bunyan	2.40	284		Pb	14 53 33.1	-2.7
GURO	Guroymak-BITLI	2.53	83		Pn	14 53 32.9	-0.8
GURO	Guroymak-BITLI	2.53	83	Pn	Pn	14 53 33.1	-0.5
TOKA	Tokat	2.72	319		Pb	14 53 37.4	-3.8
GEVA	Gevas	3.33	88		Pn	14 53 44.8	+0.1
KARS	Kars	4.03	53	Pn	Pn	14 53 55.2	+0.9
BR131	Keskin Array S	4.29	291		Pn	14 53 59.2	+1.4
BRTR	Keskin Array B	4.29	291	Pn	Pn	14 53 59.2	+1.4
	3.1nm,0.3s,baz=122,slow=13,SNR=78						
BRTR				Pg	Pg	14 54 10.1	-4.5
	2.6nm,0.3s,baz=121,slow=16,SNR=13						
BRTR				Lg	Lg	14 55 10.2	
	0.6nm,0.3s,baz=124,slow=31,SNR=7.2						
	19nm,0.7s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BEIL	Beino	4.31	210	eP	Pn	14 53 57.7	-0.4
FKH	Fakeheh	4.49	207	eP	Pn	14 54 00.0	-0.6
HWQ	Hawqa	4.64	211	eP	Pn	14 54 02.4	-0.3
ILGA	Ilgaz	4.81	306		Pn	14 54 06.7	+1.7
GNI	Garni	4.95	66	Pn	Pn	14 54 08.6	+1.7
	0.8nm,0.3s,baz=220,slow=4.4,SNR=3.3						
GNI				Pg	Pb	14 54 20.7	+1.5
	1.8nm,0.3s,baz=229,slow=9.3,SNR=7.1						
GNI				LR	LR	14 55 37.1	
	comp=Z,15nm,20.0s,baz=253,slow=33						
	4.7nm,0.4s						
GNI	Garni	4.95	66		Pn	14 54 08.4	+1.5
ZAHL	Zahle	5.03	209	eP	Pn	14 54 08.4	+0.3
BHL	Bhannes	5.08	211	eP	Pn	14 54 09.0	+0.3
DQRL	Deir Qamar	5.29	211	eP	Pn	14 54 12.6	+1.0
ALIG	Mtskhetisjvari	5.30	43	P	Pn	14 54 12.7	+1.0
RCY	Rachaya	5.37	208	eP	Pn	14 54 12.9	+0.1
QRWL	Qaraoun	5.38	209	eP	Pn	14 54 13.6	+0.7
CSS	Mathiatis	5.54	235		Pn	14 54 14.4	-0.5
CSS	Mathiatis	5.54	235	P	Pn	14 54 15.7	+0.8
CSS				S	Sn	14 55 20.7	+2.1
NATI	Neve Ativ	5.62	207	P	Pn	14 54 17.3	+1.3
NATI				S	Sn	14 55 22.1	+1.5
GEM	Giv'at Ha'Em	5.69	208	P	Pn	14 54 18.1	+1.0
GEM				S	Sn	14 55 23.7	+1.3
KSHT	Keshet	5.85	206	P	Pn	14 54 19.9	+0.7
KSHT				S	Sn	14 55 27.7	+1.4
DGRG	David-gareji	5.94	56	P	Pn	14 54 22.2	+1.8
MMC7	Mount Meron ar	5.96	209	P	Pn	14 54 21.6	+0.8
MMA0B	Mount Meron ar	5.96	209	P	Pn	14 54 22.2	+1.4
MMA0B				S	Sn	14 55 30.6	+1.3
MMAI	Mount Meron Ar	5.96	209	Pn	Pn	14 54 21.1	+0.3
	6.0nm,0.3s,baz=32,slow=15,SNR=16						
MMAI				Lg	Lg	14 55 59.8	
	6.3nm,0.3s,baz=30,slow=35,SNR=3.8						
	7.6nm,0.5s						
CHRG	Chargali	6.16	47	P	Pn	14 54 19.6	-3.9
KBZ	Khabaz	6.24	28	Pn	Pn	14 54 27.9	+3.5
	0.2nm,0.3s,baz=222,slow=20,SNR=4.2						
	0.6nm,0.4s						
ASF	Jabal al Asfar	6.31	195	Pn	Pn	14 54 25.6	-0.1
	0.8nm,0.3s,baz=89,slow=4.5,SNR=3.6						
ASF				Lg	Lg	14 56 08.2	
	3.5nm,0.3s,baz=322,slow=23,SNR=4.3						
	1.9nm,0.3s						
MMLI	Mount Malkishu	6.48	206	P	Pn	14 54 29.2	+1.4
MMLI				S	Sn	14 55 43.1	+1.3
SHTL	Shatili	6.49	46	P	Pn	14 54 29.3	+1.1
HMDT	Nahal Hemdat	6.61	205	P	Pn	14 54 30.9	+1.3
HMDT				S	Sn	14 55 46.3	+1.3
IDI	Anoyia	11.57	259	Pn	Pn	14 55 38.4	+0.7
	5.7nm,0.6s,baz=94,slow=12,SNR=6.1						
IDI	Anoyia	11.57	259	Pn	Pn	14 55 38.2	+0.4
TIP	Timpagrande	17.24	280	P	P	14 56 56.1	+1.3
TIP				IAmb	IAmb	14 56 59.1	
	comp=Z,11nm,0.9s						
AKTO	Aktyubinsk	18.25	42	P	P	14 57 06.5	+0.7
	comp=Z,0.1nm,0.3s,baz=238,slow=12,SNR=8.1						
	comp=Z,2.1nm,0.8s						
GERES	GERESS Array B	20.94	308	P	Pn	14 57 36.6	-1.3
	comp=Z,1.5nm,0.7s,baz=115,slow=9.4,SNR=6.5						
	comp=Z,1.5nm,0.7s						
KIRV	Kirov	21.43	15	LR	LR	15 06 17.2	
	comp=Z,73nm,20.7s,baz=175,slow=38						
ARTI	Arti	22.29	29	LR	LR	15 06 18.4	
	comp=Z,38nm,20.8s,baz=116,slow=36						
VSL	Villasalto	22.91	282	P	P	14 57 57.4	+1.0
FINES	FINESS Array B	24.49	345	P	P	14 58 12.5	+1.1
	comp=Z,1.6nm,0.6s,baz=144,slow=9.9,SNR=9.6						
	comp=Z,1.6nm,0.6s						
FINES	FINESS Array B	24.49	345	P	P	14 58 14.3	+2.9
BVAR	Borovoye Array	26.25	46	P	P	14 58 28.5	+1.0
	comp=Z,0.5nm,0.5s,baz=261,slow=8.5,SNR=5.3						
BVAR				LR	LR	15 10 38.2	
	comp=Z,35nm,20.4s,baz=262,slow=41						
	comp=Z,0.5nm,0.5s						
KURBB	Kurchatov Arra	30.53	53	P	P	14 59 07.2	+1.6
	comp=Z,2.3nm,0.2s,baz=265,slow=8.8,SNR=5.1						
	comp=Z,2.3nm,0.2s						
KURK	Kurchatov	30.60	53	P	P	14 59 07.2	+1.0
KURK	Kurchatov	30.60	53	IAmb	IAmb	14 59 10.7	
	comp=Z,3.0nm,1.1s						
MAKZ	Makanchi	32.56	61	P	P	14 59 25.3	+1.6
MAKZ				IAmb	IAmb	14 59 27.1	
	comp=Z,1.7nm,0.7s						
MKAR	Makanchi Array	32.77	61	P	P	14 59 26.8	+1.3
	comp=Z,1.0nm,0.6s,baz=271,slow=7.7,SNR=17						
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	32.77	61	P	P	14 59 27.3	+1.8
ESDC	Sonseca Array	33.06	286	P	P	14 59 27.0	-1.2
	comp=Z,0.5nm,0.5s,baz=63,slow=10.0,SNR=2.0						
	comp=Z,0.5nm,0.5s						
ZALV	Zalesovo Beam	34.82	48	P	P	14 59 42.2	-0.9
	comp=Z,0.3nm,0.3s,baz=248,slow=6.1,SNR=3.5						
ZALV				LR	LR	15 16 09.6	
	comp=Z,24nm,19.2s,baz=344,slow=40						
	comp=Z,0.3nm,0.3s						
EVN	Everest	41.09	90	P	P	15 00 37.8	+0.6
EVN				IAmb	IAmb	15 00 40.8	
	comp=Z,7.1nm,1.5s						
TORD	Torodi Ar. Bea	41.37	243	P	P	15 00 38.2	-0.6
	comp=Z,0.6nm,0.8s,baz=41,slow=6.2,SNR=3.5						
	comp=Z,0.6nm,0.8s						
SONM	Songino Array	48.82	56	LR	LR	15 24 48.6	
	comp=Z,68nm,18.9s,baz=38,slow=39						
CMAR	Chiang Mai Arr	55.50	93	P	P	15 02 27.2	-0.6
	comp=Z,0.4nm,0.7s,baz=261,slow=5.2,SNR=2.1						
	comp=Z,0.4nm,0.7s						
SEY	Seymchan	66.11	27	P	P	15 03 41.4	+2.1
	comp=Z,0.7nm,0.6s,baz=328,slow=19,SNR=2.8						
	comp=Z,0.7nm,0.6s						
KSRS	Korea Array	67.44	60	P	P	15 03 49.4	+1.2
	comp=Z,1.4nm,0.8s,baz=302,slow=8.1,SNR=3.4						
	comp=Z,1.4nm,0.8s						
D62A	Allapoint, All	73.41	317	P	P	15 04 26.3	+1.7
D62A				IAmb	IAmb	15 04 55.6	
	comp=Z,6.0nm,1.3s						

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*IDC **02** 15:00:33.8±0.8, 7°.96S×129°.92E, h0km, mb4.0/7, mbtmp4.0/14, ML4.0/6, MS3.1/6, Error ellipse: s-maj=26.2km s-min=16.3km az=71.0*

*NEIC **02** 15:00:35.8±0.6, 7°.95S±0°.06×129°.89E±0°.07, h10km±1km, mb4.4/9, Error ellipse: s-maj=11.6km s-min=9.7km az=269.0*

*DJA **02** 15:00:44.0±0.3, 8°S±3°×13°0E±°, h10km, M4.3/17, mB5.0/3, mb4.4/8, MLv4.2/17, Mw(mB)4.3/3*

ISC 02 15:00:36.7±0.5, 8°.18S±0°.04×130°.01E±0°.05, h22km, n55, σ2s.28/58, mb4.0/11, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.29	81	P	Pb	15 01 05.2	+4.8
SAUI	Saumlaki	1.29	81		Pb	15 01 01.2	+0.9
SAUI	Saumlaki	1.29	81	P	Pb	15 01 04.6	+4.2
BNDI	Bandanaira	3.64	358	P	Pn	15 01 33.0	+1.3
DRS	Darwin Rock St	4.31	168	P	Pb	15 01 48.3	-3.6
MTN	Manton Dam	4.76	167		Pn	15 01 51.5	+4.2
AAI	Ambon	4.82	338	P	Pn	15 01 48.7	+0.7
KRAI	Karang Ratu	5.09	342	P	Pn	15 01 51.8	0.0
NLAI	Namlea	5.70	329	P	Pn	15 02 02.2	+2.1
	0.2nm611nm43nm,0.7s						
SOEI	Soe	5.88	254	Pn	Pn	15 02 02.5	-0.3
SOEI	Soe	5.88	254	P	Pb	15 02 20.2	+1.5
	48nm,1.1s						
BATI	Baumata	6.58	252	Pn	Pn	15 02 12.8	+0.6
	1.7nm,0.3s,baz=62,slow=23,SNR=1.7						
BATI				Sn	Sn	15 03 31.9	+5.3
	1.3nm,0.3s,baz=172,slow=24,SNR=1.7						
	6.5nm,0.4s						
SANI	Sanana	7.29	326	P	Pn	15 02 24.3	+2.3
	0.1nm22nm,1.0s						
SIJI	Sorong	7.37	10	Pn	Pn	15 02 21.2	-1.9
	5.3nm,0.3s,baz=190,slow=13,SNR=18						
SIJI				Sn	Sn	15 03 38.8	-7.4
	3.7nm,0.3s,baz=217,slow=20,SNR=6.0						
SIJI				LR	LR	15 05 49.0	
	comp=Z,107nm,18.8s,baz=106,slow=44						
	12nm,0.3s						
SIJI	Sorong	7.37	10	P	Pn	15 02 21.7	-1.4
SWI	Sorong	7.38	10	P	Pn	15 02 22.6	-0.6
	0.2nm23nm,0.6s						
KNRA	Kununurra	7.55	189		Pn	15 02 28.3	+2.8
KAPI	Kappang	10.66	287	LR	LR	15 07 09.7	
	comp=Z,68nm,21.0s,baz=110,slow=38						
FITZ	Fitzroy Crossi	10.73	203	Pn	Pn	15 03 11.3	+2.1
	1.4nm,0.3s,baz=23,slow=11,SNR=16						
FITZ				Sn	Sn	15 05 03.8	-5.0
	2.4nm,0.3s,baz=110,slow=17,SNR=7.6						
	4.2nm,0.5s						
WB0	Warramunga Arr	12.28	160		Pn	15 03 30.6	+0.2
WRAB	Tennant Creek	12.42	161	P	Pn	15 03 33.1	+0.8
WRA	Warramunga Arr	12.42	161	Pn	Pn	15 03 33.1	+0.8
	1.0nm,0.3s,baz=339,slow=13,SNR=26						
WRA				Sn	Sn	15 05 46.9	-3.3
	2.1nm,0.3s,baz=331,slow=23,SNR=8.5						
WRA				LR	LR	15 08 05.2	
	comp=Z,4µm,18.6s,baz=307,slow=36						
	1.9nm,0.4s						
WRA	Warramunga Arr	12.42	161		Pn	15 03 32.5	+0.2
WRA					Sn	15 05 46.8	-3.3
WR8	Warramunga Arr	12.49	160		Pn	15 03 33.5	+0.2
COEN	Coen	14.14	115	P	Pn	15 03 56.2	+0.4
COEN	Coen	14.14	115	Pn	Pn	15 03 55.4	-0.4
QIS	Mount Isa	15.41	144	P	Pn	15 04 13.3	+0.3
AS31	Alice Springs	15.84	167		Pn	15 04 19.1	+0.5
ASAR	Alice Springs	15.84	167	Pn	Pn	15 04 19.5	+0.9
	0.5nm,0.3s,baz=345,slow=8.8,SNR=41						
ASAR				Sn	Sn	15 07 14.4	+0.7
	0.8nm,0.3s,baz=351,slow=26,SNR=7.3						
ASAR				LR	LR	15 11 08.5	
	comp=Z,126nm,18.7s,baz=322,slow=40						
	1.5nm,0.7s						
ASAR	Alice Springs	15.84	167		Pn	15 04 19.3	+0.7
ASAR					Sn	15 07 10.8	-2.9
MBWA	Marble Bar	16.27	216	Pn	Pn	15 04 24.2	+0.2
MBWA				IAmb	IAmb	15 04 25.3	
	comp=Z,39nm,1.2s						
PMG	Port Moresby	16.99	95	P	Pn	15 04 33.7	+0.5
	comp=Z,4.1nm,0.7s,baz=315,slow=14,SNR=4.2						
MTSU	Mount Surprise	17.07	127	P	Pn	15 04 31.9	-2.3
CTA	Charters Tower	19.68	129	P	Pn	15 05 07.0	+1.0
	comp=Z,0.2nm,0.3s,baz=294,slow=11,SNR=5.8						
CTA				LR	LR	15 13 56.3	
	comp=Z,86nm,18.3s,baz=332,slow=40						
	comp=Z,3.7nm,1.1s						
CTAO	Charters Tower	19.68	129	P	Pn	15 05 07.5	+1.5
INKA	Innaminka	21.95	154	P	P	15 05 32.1	+3.2
INKA				IAmb	IAmb	15 05 49.9	
	comp=Z,4.9nm,0.8s						
RABL	Rabaul	22.38	81	P	P	15 05 34.4	+0.6
RABL				IAmb	IAmb	15 05 44.2	
	comp=Z,12nm,0.6s						
BBOO	Buckleboo	25.14	168	P	P	15 06 02.8	+2.4
BBOO				IAmb	IAmb	15 06 39.4	
	comp=Z,35nm,1.4s						
STKA	Stephens Creek	25.93	157	P	P	15 06 10.7	+3.2
	comp=Z,1.6nm,0.7s,baz=337,slow=5.8,SNR=3.6						
	comp=Z,1.6nm,0.7s						
STKA	Stephens Creek	25.93	157	P	P	15 06 09.7	+2.2
JOW	Kunigami	34.85	357	LR	LR	15 23 44.7	
	comp=Z,16nm,18.3s,baz=320,slow=40						
CMAR	Chiang Mai Arr	40.50	311	P	P	15 08 12.2	-2.1
	comp=Z,0.2nm,0.4s,baz=136,slow=8.6,SNR=1.8						
CMAR				LR	LR	15 26 02.5	
	comp=Z,20nm,20.9s,baz=110,slow=38						
	comp=Z,0.2nm,0.4s						
QRZ	Quartz Range	49.78	138	P	P	15 09 29.9	+2.1
PETK	Petropavlovsk-	65.44	18	P	P	15 11 17.3	-0.4
	comp=Z,1.3nm,0.7s,baz=169,slow=3.9,SNR=5.4						
	comp=Z,1.3nm,0.7s						
PETK	Petropavlovsk-	65.44	18	P	P	15 11 16.9	-0.8
MKAR	Makanchi Array	69.21	327	P	P	15 11 41.6	-0.3
	comp=Z,0.5nm,0.4s,baz=120,slow=7.9,SNR=20						
	comp=Z,0.5nm,0.4s						
MKAR	Makanchi Array	69.21	327	P	P	15 11 41.0	-0.8
ZALV	Zalesovo Beam	72.64	334	P	P	15 12 00.9	-1.6
	comp=Z,0.9nm,0.6s,baz=126,slow=7.3,SNR=5.1						
	comp=Z,0.9nm,0.6s						
ZALV	Zalesovo Beam	72.64	334	P	P	15 12 01.3	-1.2
SEY	Seymchan	72.96	10	P	P	15 12 03.6	-0.6
	comp=Z,0.8nm,0.8s,baz=152,slow=8.4,SNR=5.3						
	comp=Z,0.8nm,0.8s						
KURBB	Kurchatov Arra	73.52	329	P	P	15 12 06.3	-1.4
	comp=Z,5.9nm,1.0s,baz=128,slow=5.1,SNR=1.1						
	comp=Z,5.9nm,1.0s						
KURK	Kurchatov	73.53	329	P	P	15 12 06.3	-1.4
KURK	Kurchatov	73.53	329	IAmb	IAmb	15 12 23.9	
	comp=Z,1.3nm,0.9s						
ABKAR	Akbulak array	83.43	322	P	P	15 13 01.6	-0.9
CPUP	Villa Florida	144.96	168	PKPbc	PKPdf	15 20 14.4	+1.3
	comp=Z,0.9nm,0.3s,baz=202,slow=2.3,SNR=4.6						

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*VAO **02** 15:03:07.4±1.7, 22°.82S×73°.61W, h70km, mb4.5, Presumed earthquake*

*IDC **02** 15:03:59.6±0.9, 20°.55S×69°.25W, h92km±7km, mb3.3/5, mbtmp3.8/9, MS3.0/2, Error ellipse: s-maj=24.3km s-min=18.8km az=71.0*

*SJA **02** 15:03:59.6±1.1, 20°.38S×69°.31W, h94km±5km, ML4.1, MW3.8*

*NEIC **02** 15:04:00.5±1.4, 20°.42S±0°.04×69°.30W±0°.10, h90km±3km, ML4.2/30, ML4.1(GUC), Error ellipse: s-maj=13.4km s-min=6.1km az=89.0*

*GUC **02** 15:04:01.7±0.7, 20°.38S×69°.33W, h87km±3km, ML4.1*

ISC 02 15:03:59.8±0.6, 20°.39S±0°.03×69°.24W±0°.06, h91km±5km, n75, σ1s.45/87, mb3.5/3, 3C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.26	18	Pn	Pn	15 04 14.3	+0.7
PX03	IPOC Station P	0.37	268	eP	Pn	15 04 13.4	-0.4
PX03				eS	Sn	15 04 24.5	+0.2
PX03				IAML		15 04 24.8	
	comp=N,29µm,0.3s						
HMBC	Humberstone	0.62	280		Pn	15 04 15.8	0.0
HMBC				IAML		15 04 28.2	
	comp=N,10µm,0.3s						
HMBC				IAML		15 04 28.3	
	comp=E,6µm,0.2s						
HMBC	Humberstone	0.62	280⇑	iP	Pn	15 04 16.0	+0.3
HMBC				eS	Sn	15 04 27.6	-0.1
HMBC				IAML		15 04 28.3	
	comp=N,10µm,0.2s						
HMBC	Humberstone	0.62	280	i P	Pn	15 04 15.8	0.0
HMBC				eS	Sn	15 04 27.8	+0.1
HMBC				IAML		15 04 32.6	
	comp=Z,5µm,0.1s						
PB01	IPOC Station P	0.69	200	Pn	Pn	15 04 16.9	+0.5
PB01				IAML		15 04 32.1	
	comp=N,9µm,0.2s						
PB01				IAML		15 04 33.4	
	comp=E,7µm,0.2s						
PB01	IPOC Station P	0.69	200	eP	Pn	15 04 17.0	+0.5
PB01				eS	Sn	15 04 29.4	+0.6
PB01				IAML		15 04 32.1	
	comp=N,9µm,0.2s						
PB01	IPOC Station P	0.69	200	i P	Pn	15 04 17.1	+0.7
PB01				eS	Sn	15 04 29.9	+1.1
PB01				IAML		15 04 32.1	
	comp=Z,10µm,0.1s						
GO01	Chusmiza	0.72	3		Pn	15 04 18.1	+1.0
GO01	Chusmiza	0.72	3	eP	Pn	15 04 18.2	+1.0
GO01				eS	Sn	15 04 31.3	+1.4
GO01	Chusmiza	0.72	3	i P	Pn	15 04 18.1	+1.0
GO01				eS	Sn	15 04 31.4	+1.4
GO01				IAML		15 04 32.4	
	comp=Z,11µm,0.2s						
PB11	IPOC Station P	0.74	328		Pn	15 04 17.6	+0.7
PB11	IPOC Station P	0.74	328⇑	iP	Pn	15 04 17.6	+0.7
PB11				eS	Sn	15 04 30.8	+1.1
PB11				IAML		15 04 31.3	
	comp=E,15µm,0.2s						
PB11	IPOC Station P	0.74	328	i P	Pn	15 04 17.2	+0.3
PB11				eS	Sn	15 04 31.1	+1.4
PB11				IAML		15 04 32.0	
	comp=Z,4µm,0.2s						
TA02	Huaiquique	0.84	278⇑	eP	Pn	15 04 18.1	+0.3
TA02				IAML		15 04 33.4	
	comp=N,14µm,0.1s						
TA02	Huaiquique	0.84	278	i P	Pn	15 04 18.1	+0.3
TA02				eS	Sn	15 04 32.0	+0.7
TA02				IAML		15 04 36.5	
	comp=Z,6µm,0.1s						
PB02	IPOC Station P	1.11	213	eP	Pn	15 04 21.6	+0.6
PB02				eS	Sn	15 04 37.0	+0.2
PB02				IAML		15 04 43.2	
	comp=E,4µm,0.3s						
PB02	IPOC Station P	1.11	213	i P	Pn	15 04 21.7	+0.7
PB02				IAML		15 04 49.3	
	comp=Z,3µm,0.2s						
PB09	IPOC Station P	1.40	180		Pn	15 04 25.5	+1.0
PB09				IAML		15 04 46.9	
	comp=N,4µm,0.6s						
PB09				IAML		15 04 47.0	
	comp=E,3µm,0.6s						
PB09	IPOC Station P	1.40	180	eP	Pn	15 04 25.5	+1.0
PB09				IAML		15 04 46.6	
	comp=N,3µm,0.2s						
PB09	IPOC Station P	1.40	180	i P	Pn	15 04 26.1	+1.6
PB09				eS	Sn	15 04 45.0	+1.9
PB09				IAML		15 04 46.2	
	comp=Z,4µm,0.6s						
PB07	IPOC Station P	1.46	204		Pn	15 04 25.6	+0.3
PB07				IAML		15 04 47.9	
	comp=E,3µm,0.3s						
PB07				IAML		15 04 47.9	
	comp=N,2µm,0.3s						
PB07	IPOC Station P	1.46	204	eP	Pn	15 04 25.9	+0.5
PB07				i S	Sn	15 04 45.4	+0.8
PB07				IAML		15 04 47.8	
	comp=N,3µm,0.3s						
PB07	IPOC Station P	1.46	204	i P	Pn	15 04 26.6	+1.3
PB07				eS	Sn	15 04 46.2	+1.7
PB07				IAML		15 04 47.6	
	comp=Z,2µm,0.3s						
PB03	IPOC Station P	1.72	196		Pn	15 04 28.9	+0.4
PB03	IPOC Station P	1.72	196	eP	Pn	15 04 28.7	+0.2
PB03				IAML		15 04 56.8	
	comp=E,3µm,0.1s						
PB03	IPOC Station P	1.72	196	i P	Pn	15 04 30.1	+1.5
PB03				IAML		15 05 00.3	
	comp=Z,662nm,0.2s						
PB12	IPOC Station P	2.04	330		Pn	15 04 32.7	0.0
PB12				IAML		15 05 04.7	
	comp=E,1µm,0.3s						
PB12	IPOC Station P	2.04	330	eP	Pn	15 04 32.8	+0.1
PB12				IAML		15 05 03.0	
	comp=N,992nm,0.3s						
PB12	IPOC Station P	2.04	330	i P	Pn	15 04 32.8	+0.1
PB12				IAML		15 05 09.7	
	comp=Z,448nm,0.7s						
PB16	IPOC Station P	2.06	353		Pn	15 04 35.6	+2.2
PB16	IPOC Station P	2.06	353	eP	Pn	15 04 35.3	+1.9
PB16				eS	Sn	15 05 01.5	+2.6
PB16	IPOC Station P	2.06	353	i P	Pn	15 04 35.1	+1.8
PB16				eS	Sn	15 05 00.5	+1.6
PB16				IAML		15 05 06.4	
	comp=Z,573nm,0.5s						
AP01	Chacalluta	2.26	332		Pn	15 04 36.1	+0.7
AP01				IAML		15 05 11.4	
	comp=N,2µm,0.5s						
AP01				IAML		15 05 15.1	
	comp=E,2µm,0.5s						
AP01	Chacalluta	2.26	332	eP	Pn	15 04 36.2	+0.7
AP01				IAML		15 05 09.1	
	comp=E,1µm,0.3s						
AP01	Chacalluta	2.26	332	i P	Pn	15 04 36.0	+0.5
AP01				IAML		15 05 13.1	
	comp=Z,941nm,0.9s						
PB06	IPOC Station P	2.33	188		Pn	15 04 36.5	-0.1
PB06				IAML		15 05 08.7	
	comp=E,1µm,0.3s						
PB06				IAML		15 05 09.6	
	comp=N,838nm,0.4s						
PB06	IPOC Station P	2.33	188	i P	Pn	15 04 37.1	+0.6
PB06				IAML		15 05 16.2	
	comp=Z,711nm,0.3s						
PB05	IPOC Station P	2.61	200		Pn	15 04 39.7	-0.6
PB05	IPOC Station P	2.61	200	eP	Pn	15 04 40.0	-0.3
PB05				IAML		15 05 21.9	
	comp=E,559nm,0.6s						
PB05	IPOC Station P	2.61	200	i P	Pn	15 04 40.5	+0.3
PB05				IAML		15 05 34.5	
	comp=Z,287nm,0.4s						
AF01	San Pedro de A	2.73	159	i P	Pn	15 04 43.9	+1.8
AF01				IAML		15 05 47.8	
	comp=Z,785nm,0.8s						
LPAZ	La Paz	4.21	15	P	Pn	15 05 05.4	+3.0
	comp=Z,19nm,0.6s,baz=181,slow=7.9,SNR=84						
LPAZ				S	Sn	15 05 44.4	-6.3
	comp=Z,17nm,0.7s,baz=193,slow=8.5,SNR=4.4						
LPAZ	La Paz	4.21	15		Pn	15 05 05.5	+3.2
LPAZ	La Paz	4.21	15	eP	Pn	15 05 06.0	+3.7
PB14	IPOC Station P	4.35	194		Pn	15 05 03.5	-0.5
PB14				IAML		15 06 19.3	
	comp=E,226nm,0.8s						
PB14				IAML		15 06 25.8	
	comp=N,185nm,0.6s						
GO02	Mina Guanaco	4.76	184		Pn	15 05 08.4	-1.1
GO02				IAML		15 06 30.8	
	comp=N,298nm,0.6s						
AC02	Maricunga	6.42	179		Pn	15 05 31.2	-1.0
SIV	San Ignacio	8.91	62	P	Pn	15 06 04.8	-1.0
	comp=N,4.8nm,0.4s,baz=250,slow=9.0,SNR=31						
MURT	Porto Murtinho	10.94	99	eP	Pn	15 06 31.2	-2.1
ZON	Zonda	11.12	178	Pn	Pn	15 06 37.1	+1.2
CFA	Coronel Fontan	11.21	176	P	Pn	15 06 32.7	-4.3
	comp=N,0.8nm,0.3s,baz=11,slow=15,SNR=5.7						
CPUP	Villa Florida	12.43	121	P	Pn	15 06 52.0	-1.5
	comp=N,3.7nm,0.7s,baz=292,slow=16,SNR=9.5						
CPUP	Villa Florida	12.43	121		Pn	15 06 53.6	+0.2
PP1B	Ponte de Pedra	13.86	81	eP	P	15 07 18.0	+0.4
PDRB	Porto dos Gac	14.85	56	eP	P	15 07 28.6	-0.1
SNDB	Serra Nova Dou	19.14	67	eP	P	15 08 15.2	-0.9
PLCA	Paso Flores	20.31	183	P	P	15 08 28.1	-0.5
	comp=N,1.3nm,0.7s,baz=4.3,slow=14,SNR=4.7						
PLCA				LR	LR	15 17 27.6	
	comp=N,35nm,18.2s,baz=188,slow=40						
	comp=N,1.3nm,0.7s						
CAM01	Campos-RJ	25.76	98	eP	P	15 09 06.4	-16
SDV	Santo Domingo	29.12	357	LR	LR	15 23 25.0	
	comp=N,31nm,20.2s,baz=192,slow=40						
TXAR	Lajitas Array	59.55	325	P	P	15 13 53.7	-0.3
	comp=N,0.3nm,0.7s,baz=92,slow=4.1,SNR=2.5						
TXAR				pP	pP	15 14 17.1	+0.1
	comp=N,0.1nm,0.5s,baz=120,slow=4.7,SNR=1.8						
	comp=N,0.3nm,0.7s						
NVAR	Mina Array Bea	74.43	322	P	P	15 15 29.4	+1.0
	comp=N,0.3nm,0.5s,baz=166,slow=5.0,SNR=1.9						
	comp=N,0.3nm,0.5s						
TORD	Torodi Ar. Bea	77.28	71	P	P	15 15 45.3	+0.6
	comp=N,0.4nm,0.3s,baz=258,slow=3.7,SNR=7.7						
TORD				pP	pP	15 16 08.9	-0.8
	comp=N,1.8nm,0.8s,baz=248,slow=7.0,SNR=6.1						
	comp=N,0.4nm,0.3s						
YKA	Yellowknife Ar	90.04	341	P	P	15 16 48.8	0.0
	comp=N,0.6nm,0.8s,baz=136,slow=3.7,SNR=9.7						
YKA				pP	pP	15 17 14.0	+0.4
	comp=N,0.4nm,0.7s,baz=139,slow=4.1,SNR=3.3						
	comp=N,0.6nm,0.8s						
H11S2	WAKE ISLAND Hy	127.42	278	T	T	17 42 37.0	
	baz=102,slow=74,SNR=22						
H11S1	WAKE ISLAND Hy	127.43	278	T	T	17 42 43.8	
	baz=102,slow=74,SNR=22						
H11S3	WAKE ISLAND Hy	127.44	278	T	T	17 42 43.4	
	baz=102,slow=74,SNR=22						
H11N3	WAKE ISLAND Hy	127.48	280	T	T	17 42 45.5	
	baz=102,slow=75,SNR=9.6						
H11N2	WAKE ISLAND Hy	127.49	280	T	T	17 42 49.2	
	baz=102,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	127.49	280	T	T	17 42 49.6	
	baz=102,slow=75,SNR=7.7						
ASAR	Alice Springs	130.74	208	PKP	PKPdf	15 23 00.3	-0.9
	comp=N,0.2nm,0.6s,baz=128,slow=1.6,SNR=4.8						
WRA	Warramunga Arr	133.74	211	PKP	PKPdf	15 23 05.0	-1.8
	comp=N,0.4nm,0.8s,baz=148,slow=2.0,SNR=2.4						
MKAR	Makanchi Array	144.91	35	PKPbc	PKPab	15 23 25.6	-0.1
	comp=N,0.2nm,0.4s,baz=324,slow=3.9,SNR=5.2						
HHC	Hu-ho-hao-te	159.59	358	eP	PKPdf	15 23 50.7	+2.5
PZH	PanZhiHua	169.73	52	PKP	PKPdf	15 23 57.4	-0.1

IDC 02 15:34:53.5±2.4, 33°.67S×57°.08E, h0km, mb3.6/3, mbtmp3.6/3, MS3.2/4, Error ellipse: s-maj=96.3km s-min=44.8km az=38.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H04N2	CROZET ISLANDS	13.11	196	T	T	15 51 17.7	
	baz=19,slow=74,SNR=45						
H04N1	CROZET ISLANDS	13.11	196	T	T	15 51 19.4	
	baz=19,slow=74,SNR=58						
H04N3	CROZET ISLANDS	13.13	196	T	T	15 51 20.0	
	baz=19,slow=74,SNR=60						

TSUM	**Tsumeb**	**37.95**	**282**	LR	LR	15 55 12.4	
	comp=Z,37nm,19.9s,baz=329,slow=32						
MBAR	**Mbarara**	**41.15**	**318**	LR	LR	15 59 09.3	
	comp=Z,52nm,18.1s,baz=117,slow=35						
PALK	**Pallekele**	**46.48**	**33**	LR	LR	15 58 57.7	
	comp=Z,27nm,21.6s,baz=108,slow=31						
CMAR	**Chiang Mai Arr**	**65.43**	**44**	P	P	15 45 38.3	0.0
	0.2nm,0.4s,baz=246,slow=4.7,SNR=2.4						
CMAR				LR	LR	16 09 57.5	
	comp=Z,9.7nm,19.8s,baz=210,slow=32						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**66.76**	**104**	P	P	15 45 47.7	+0.7
	0.5nm,0.9s,baz=237,slow=5.7,SNR=4.7						
	0.5nm,0.9s						
WRA	**Warramunga Arr**	**68.89**	**100**	P	P	15 45 59.8	-0.6
	1.2nm,1.0s,baz=238,slow=6.6,SNR=5.0						
	1.2nm,1.0s						
ILAR	**Eielson Array**	**145.61**	**18**	PKPbc	PKPdf	15 54 32.4	-0.5
	0.8nm,0.9s,baz=307,slow=3.5,SNR=8.4						
YKA	**Yellowknife Ar**	**150.68**	**352**	PKPbc	PKPbc	15 54 46.2	-0.5
	1.1nm,0.9s,baz=349,slow=2.8,SNR=12						

AZER ***02*** *15:46:23.7, 38°.33N×44°.60E, h10km, ml2.6*
AFAD ***02*** *15:46:23.1, 38°.33N×44°.51E, h7km±5km, ML2.2*
ISK ***02*** *15:46:24.8, 38°.37N×44°.41E, h5km, ML2.5/6*
ISC 02 15:46:25.0±1.1**, 38°.37N**±0°.03×**44°.49E**±0°.03**, h13**km±10km**,**
n21, σ1**°.60**/34**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.49**	**307**	P	**Pg**	**15 46 34.0**	**-0.7**
OZAP				S	**Sg**	**15 46 40.7**	**-0.5**
OZAP				IAML		15 46 43.0	
	comp=N,191nm,0.8s						
TVAN	**Van**	**0.86**	**281**	P	**Pb**	**15 46 41.1**	**-0.9**
TVAN				S	**Sb**	**15 46 53.7**	**+0.2**
TVAN				IAML		15 46 58.0	
	comp=E,82nm,0.4s						
TVAN				IAML		15 47 04.0	
	comp=N,76nm,0.5s						
VANB	**Van**	**0.89**	**285**	Pg	**Pb**	**15 46 40.6**	**-1.8**
VANB				Sg	**Sb**	**15 46 53.7**	**-0.5**
VMUR	**Van-Muradiye**	**0.95**	**311**	P	**Pb**	**15 46 41.1**	**-2.3**
VMUR				S	**Sg**	**15 46 57.0**	**+1.2**
VMUR				IAML		15 46 59.0	
	comp=N,84nm,0.4s						
VMUR				IAML		15 47 03.0	
	comp=E,116nm,0.7s						
HAKT	**HAKKARI**	**1.02**	**218**	P	**Pb**	**15 46 43.6**	**-1.0**
HAKT				S	**Sn**	**15 47 00.7**	**+1.3**
GEVA	**Gevas**	**1.13**	**268**	P	**Pn**	**15 46 44.3**	**-2.3**
GEVA				S	**Sb**	**15 47 01.2**	**+0.2**
GEVA				IAML		15 47 08.0	
	comp=E,60nm,0.3s						
GEVA				IAML		15 47 12.0	
	comp=N,55nm,0.4s						
NAX	**Nakhchivan**	**1.13**	**44**	S	**Sg**	**15 47 02.0**	**+0.6**
ORD	**Ordubad**	**1.30**	**64**	S	**Sg**	**15 47 07.2**	**+0.1**
CUKT	**Cukurca**	**1.32**	**212**	Pn	**Pg**	**15 46 50.7**	**+0.4**
CUKT				Sn	**Sg**	**15 47 09.4**	**+1.9**
SBZ	**Shahbuz**	**1.32**	**39**	S	**Sg**	**15 47 08.1**	**+0.5**
HYR	**Heyderabad**	**1.38**	**12**	S	**Sg**	**15 47 12.2**	**+2.8**
ADCV	**BITLIS_Adilcev**	**1.45**	**288**	P	**Pn**	**15 46 51.2**	**+0.2**
ADCV				S	**Sb**	**15 47 11.4**	**+1.1**
ADCV				IAML		15 47 15.0	
	comp=N,31nm,1.2s						
IGDI	**IGDIR**	**1.53**	**348**	P	**Pg**	**15 46 54.1**	**-0.3**
IGDI				S	**Sg**	**15 47 17.8**	**+3.4**
PERV	**Siirt/Pervari-**	**1.59**	**255**	P	**Pg**	**15 46 55.8**	**+0.2**
PERV				S	**Sg**	**15 47 16.2**	**0.0**
PERV				IAML		15 47 24.0	
	comp=E,67nm,0.4s						
PERV				IAML		15 47 27.0	
	comp=N,45nm,0.4s						
AGRB	**Hanur-Agry**	**1.68**	**316**	Pn	**Pb**	**15 46 55.9**	**+0.1**
MLAZ	**Malazgirt-MUS**	**1.70**	**298**	Pn	**Pb**	**15 46 56.1**	**-0.1**
GNI	**Garni**	**1.79**	**6**	Pn	**Pb**	**15 46 58.1**	**+0.4**
GURO	**Guroymak-BITLI**	**1.94**	**276**	Pn	**Pb**	**15 46 59.3**	**-0.9**
GDB	**GEDABAY**	**2.55**	**22**	P	**Pb**	**15 47 08.4**	**-2.2**
GDB				S	**Sg**	**15 47 44.4**	**-2.4**
GANJ	**Ganja**	**2.68**	**31**	P	**Pb**	**15 47 11.2**	**-1.6**
GANJ				S	**Sb**	**15 47 47.8**	**+2.2**
YRD	**Yardimli**	**2.99**	**78**	P	**Pn**	**15 47 14.2**	**+2.0**
YRD				S	**Sb**	**15 47 51.6**	**-3.0**

IDC 02 15:50:45.9±3.3**, 5°.24S**×**129°.02E, h0**km**, mb3.5**/1**,**
mbtmp3.2/3**, ML2.9**/2**, MS3.1**/1**, Error ellipse:**
s-maj=323.1km s-min=29.8km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.50**	**161**	Pn	Pn	15 54 27.6	+1.5
	baz=340,slow=14,SNR=2.3						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**18.91**	**166**	P	P	15 55 07.8	-0.7
	0.1nm,0.3s,baz=348,slow=11,SNR=7.4						
	0.1nm,0.5s						
GUMO	**Guam**	**24.44**	**40**	LR	LR	16 06 03.3	
	comp=Z,38nm,18.9s,baz=102,slow=38						
MKAR	**Makanchi Array**	**66.23**	**327**	P	P	16 01 35.8	0.0
	0.2nm,0.4s,baz=114,slow=7.4,SNR=8.1						
	0.2nm,0.4s						

NOU ***02*** *15:57:19.0, 44°.99S×167°.88E, h17km, MLv3.6/11, South Island, New Zealand*
WEL ***02*** *15:57:20.4±0.7, 45°S±4°×16°8E±°, h33km, M3.3/7, ML3.1/6, MLv3.3/7, Error ellipse: s-maj=7.6km s-min=5.0km az=120.8, confirmed*
ISC 02 15:57:19.5±2.0**, 44°.97S**±0°.04×**167°.80E**±0°.05**, h15**km±15km**,**
n25, σ1**°.29**/33**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.31**	**17**	P	**Pn**	**15 57 30.3**	**+0.8**
MSZ				S	**Sn**	**15 57 38.4**	**+2.6**
GLNY	**Glenorchy**	**0.45**	**76**	P	**Pn**	**15 57 32.1**	**+0.7**
TAFS	**Te Anau Fire S**	**0.45**	**187**	P	**Pn**	**15 57 32.0**	**+0.6**
MLZ	**Mavora Lakes**	**0.46**	**150**	P	**Pn**	**15 57 32.1**	**+0.6**
MLZ				S	**Sn**	**15 57 41.8**	**+2.4**
QTPS	**Queenstown Pol**	**0.62**	**96**	P	**Pn**	**15 57 34.2**	**+0.5**
QTPS				S	**Sn**	**15 57 44.8**	**+1.5**
DCZ	**Deep Cove**	**0.67**	**222**	P	**Pb**	**15 57 32.6**	**-0.3**
MOSS	**Mossburn Schoo**	**0.76**	**156**	P	**Pn**	**15 57 35.9**	**+0.2**
WKZ	**Wanaka**	**0.88**	**81**	P	**Pn**	**15 57 37.7**	**+0.3**
WKZ				S	**Sn**	**15 57 50.8**	**+1.0**
WHZ	**Wether Hill Ro**	**0.93**	**173**	P	**Pb**	**15 57 37.0**	**-0.2**
WHZ				S	**Sg**	**15 57 50.3**	**+0.8**
EAZ	**Earnscleugh**	**1.10**	**104**	P	**Pb**	**15 57 40.7**	**+0.5**
EAZ				S	**Sn**	**15 57 55.4**	**+0.1**
JCZ	**Jackson Bay**	**1.14**	**39**	P	**Pn**	**15 57 39.5**	**-1.5**
JCZ				S	**Sb**	**15 57 56.1**	**+0.4**
JCZ	**Jackson Bay**	**1.14**	**39**	S	**Sb**	**15 57 56.1**	**+0.4**
JCZ	**Jackson Bay**	**1.14**	**39**	P	**Pn**	**15 57 39.8**	**-1.2**
PYZ	**Puysegur Point**	**1.43**	**213**	P	**Pn**	**15 57 44.1**	**-0.8**
PYZ	**Puysegur Point**	**1.43**	**213**	P	**Pn**	**15 57 44.0**	**-0.9**
LBZ	**Lake Benmore**	**1.80**	**72**	P	**Pn**	**15 57 48.4**	**-1.6**
SYZ	**Scrubby Hill**	**1.82**	**149**	P	**Pn**	**15 57 49.5**	**-0.8**
SYZ				S	**Sn**	**15 58 11.9**	**-1.2**
SYZ	**Scrubby Hill**	**1.82**	**149**	S	**Sn**	**15 58 11.9**	**-1.2**
APZ	**The Paps**	**1.86**	**176**	P	**Pn**	**15 57 49.4**	**-1.5**
ODZ	**Otahua Downs**	**2.02**	**93**	P	**Pn**	**15 57 51.4**	**-1.6**
RPZ	**Rata Peaks**	**2.65**	**63**	P	**Pn**	**15 57 59.1**	**-2.6**
QRZ	**Quartz Range**	**5.41**	**42**	P	**Pn**	**15 58 37.5**	**-2.0**
KHEZ	**Kahui Hut**	**7.32**	**41**	P	**Pn**	**15 59 05.2**	**-0.6**
HIZ	**Hauiti**	**8.33**	**42**	P	**Pn**	**15 59 18.5**	**-1.2**
OUZ	**Omahuta**	**10.70**	**26**	P	**Pn**	**15 59 51.9**	**-0.2**

IDC ***02*** *16:14:17.8±1.9, 8°.28S×116°.26E, h0km, mb3.5/4, mbtmp3.7/6, ML3.7/2, Error ellipse: s-maj=53.7km s-min=22.3km az=51.0*
DJA ***02*** *16:14:20.3±0.4, 8°S±5°×11°6E±°, h13km±4km, M4.1/24, mB4.7/2, mb4.3/7, MLv4.0/24, Mw(mB)4.0/2*
ISC 02 16:14:22.1±1.0**, 8°.34S**±0°.09×**116°.22E**±0°.04**, h35**km**, n26,**
σ1**°.50**/24**, mb3.6**/3**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHKI	**Kahang-Kahang**	**0.61**	**268**	P	**Pn**	**16 14 32.5**	**-1.7**
TWSI	**Taliwang, Sumb**	**0.76**	**121**	P	**Pn**	**16 14 34.8**	**-1.6**
DNP	**Denpasar**	**1.05**	**252**	P	**Pn**	**16 14 40.0**	**-0.3**
IGBI	**Denpasar**	**1.16**	**246**	P	**Pn**	**16 14 41.3**	**-0.5**
RTBI	**Rangdo, Negare**	**1.27**	**265**	P	**Pn**	**16 14 43.2**	**-0.1**
PLAI	**Plampang**	**1.61**	**107**	P	**Pn**	**16 14 49.1**	**+1.0**
ABJI	**Asem Bagus**	**2.04**	**285**	P	Pn	16 14 59.6	+5.7
JAGI	**Jajag, Banyuwa**	**2.05**	**266**	P	**Pn**	**16 14 53.5**	**-0.6**
DBNI	**Kabupaten Domp**	**2.08**	**95**	P	**Pn**	**16 14 55.0**	**+0.6**
KMMI	**Kalianget**	**2.58**	**300**	P	**Pn**	**16 15 04.6**	**+3.3**
BLJI	**Banyuglugur**	**2.67**	**283**	P	Pn	16 15 17.7	+15
WBSI	**Waikabubak, Su**	**3.39**	**113**	P	**Pn**	**16 15 13.3**	**+0.8**
LBFI	**Labuhan Bajo,**	**3.63**	**92**	P	**Pn**	**16 15 14.1**	**-1.8**
WSI	**Waingapu**	**4.24**	**108**	P	**Pn**	**16 15 24.0**	**-0.2**
SJI	**Sawahan**	**4.45**	**277**	P	**Pn**	**16 15 27.0**	**-0.2**
SNJI	**Sawahan-Nganju**	**4.45**	**277**	P	**Pn**	**16 15 28.4**	**+1.1**
BSSI	**Bau Bau, Buton**	**4.77**	**63**	P	**Pn**	**16 15 30.2**	**-1.3**
KAPI	**Kappang**	**4.82**	**47**	Pn	**Pn**	**16 15 29.5**	**-2.7**
	2.6nm,0.3s,baz=218,slow=18,SNR=1.8						
KAPI				Sn	**Sn**	**16 16 24.2**	**-2.7**
	3.6nm,0.3s,baz=203,slow=20,SNR=2.1						
	7.2nm,0.3s						
PCJI	**Pacitan**	**4.99**	**271**	P	**Pn**	**16 15 34.2**	**-0.4**
EDFI	**Ende, Flores**	**5.43**	**95**	P	**Pn**	**16 15 39.9**	**-0.7**
	0.1nm19nm,0.8s						
UGM	**Wanagama**	**5.66**	**274**	P	**Pn**	**16 15 41.5**	**-2.2**
BATI	**Baumata**	**7.58**	**105**	Pn	**Pn**	**16 16 09.8**	**-0.3**
	1.4nm,0.3s,baz=315,slow=8.6,SNR=1.4						
	6.3nm,0.4s						
WRA	**Warramunga Arr**	**20.99**	**125**	P	Pn	16 19 02.7	-2.6
	2.8nm,0.6s,baz=301,slow=12,SNR=48						
	2.8nm,0.6s						
ASAR	**Alice Springs**	**22.78**	**134**	P	**P**	**16 19 22.2**	**+0.4**
	1.6nm,0.8s,baz=307,slow=9.1,SNR=21						
	1.6nm,0.8s						
SONM	**Songino Array**	**56.60**	**352**	P	**P**	**16 24 02.1**	**+0.6**
	0.3nm,0.5s,baz=174,slow=6.8,SNR=2.2						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**62.65**	**334**	P	**P**	**16 24 44.4**	**+1.2**
	0.1nm,0.4s,baz=148,slow=5.8,SNR=2.1						
	0.1nm,0.4s						

SOME 02 16:32:22.9, 44°.58N×**78°.47E, h15**km**, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOTS	**Kotyrbulak**	**1.67**	**216**	*e*P	Pb	16 32 53.4	0.0
	0.8nm,0.2s						
MTBS	**Maitube**	**2.07**	**226**	*e*P	Pb	16 33 00.8	+0.6
	0.5nm,0.1s						
MTBS				*e*S	Sg	16 33 28.0	-1.5
	4.4nm,0.2s						

SOME ***02*** *16:32:53.4, 43°.52N×78°.00E, h20km*
NNC 02 16:32:51.0±0.6**, 43°.60N**×**77°.98E, h6**km±5km**, mb2.6,**
mpv2.5, Error ellipse: s-maj=4.6km s-min=3.3km
az=161.0, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURS	**Kuram**	**0.18**	**128**	P	Pg	16 32 56.1	+1.6
	2.3nm,0.0s						
KURS				S	Sg	16 32 59.3	+2.4
	20nm,0.2s						
KURS				S		16 32 59.4	
	22nm,0.1s						
KPKS	**Kokpek**	**0.53**	**104**	P	Pb	16 33 02.1	-0.7
	0.2nm,0.1s						
KPKS				S	Sg	16 33 09.4	+1.3
	18nm,0.2s						
KPKS	**Kokpek**	**0.53**	**104**	*e*P	Pb	16 33 02.1	-0.7
	0.2nm,0.1s						
KPKS				*e*S	Sg	16 33 09.4	+1.3
	18nm,0.2s						
BLB	**Baldybastay**	**0.62**	**36**	P	Pg	16 33 03.4	+0.5
	5.5nm,0.1s						
BLB				S	Sg	16 33 11.7	+0.7
	7.8nm,0.2s						
SATY	**Saty**	**0.62**	**150**	P	Pg	16 33 03.6	+0.7
	2.5nm,0.1s						
SATY				S	Sg	16 33 12.0	+0.9
	12nm,0.1s						
SATY				S	Sb	16 33 12.2	-1.2
	25nm,0.1s						
KOTS	**Kotyrbulak**	**0.73**	**240**	P	Pg	16 33 05.5	+0.4
	0.7nm,0.1s						
KOTS				S	Sg	16 33 15.2	+0.7
	7.5nm,0.1s						
KOTS				S	Sb	16 33 15.2	-1.4
	7.4nm,0.1s						
KOTS	**Kotyrbulak**	**0.73**	**240**	*e*P	Pg	16 33 05.5	+0.4
	0.7nm,0.1s						
KOTS				*e*S	Sg	16 33 15.2	+0.7
	7.4nm,0.1s						
KOTS	**Kotyrbulak**	**0.73**	**240**	*e*S	Sg	16 33 15.2	+0.7
	7.5nm,0.1s						
MDOK	**Medeo**	**0.81**	**238**	Pg	Pg	16 33 06.8	+0.3
	1.5nm,0.1s						
MDOK				Lg	Lg	16 33 18.1	
	2.4nm,0.4s						
UZB	**Uzynbulak**	**0.88**	**120**	P	Pg	16 33 08.3	+0.3
	2.2nm,0.1s						
UZB				S	Sg	16 33 19.8	+0.4
	3.9nm,0.1s						
UZB	**Uzynbulak**	**0.88**	**120**	*e*P	Pg	16 33 08.3	+0.3
	2.2nm,0.1s						
UZB				*e*S	Sg	16 33 19.8	+0.4
	3.9nm,0.1s						
KST	**Kastek**	**1.57**	**250**	P	Pg	16 33 21.1	-0.1
	1.3nm,0.5s						
KST				S	Sg	16 33 41.3	-0.3
	2.4nm,0.3s						
KST	**Kastek**	**1.57**	**250**	*e*P	Pg	16 33 21.1	-0.1
	0.5nm,0.1s						
KST				*e*S	Sg	16 33 41.7	+0.1
	2.1nm,0.1s						

IDC ***02*** *16:39:28.5±1.5, 28°.28S×176°.33W, h0km, mb4.1/7, mbtmp4.1/8, ML3.6/1, MS3.8/8, Error ellipse: s-maj=52.8km s-min=19.8km az=134.0*
NEIC ***02*** *16:39:30.0±1.6, 28°.3S±0°.1×176°.11W±0°.09, h10km±1km, mb4.4/15, Error ellipse: s-maj=22.5km s-min=8.1km az=146.0*
ISC 02 16:39:33.5±0.8**, 28°.3S**±0°.1×**176°.2W**±0°.1**, h36**km**, n43,**
σ1**°.10**/38**, mb4.3**/10**, MS3.8**/8**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.76**	**238**	Pn	**Pn**	**16 40 01.2**	**-0.2**
	122nm,0.3s,baz=121,slow=19,SNR=4.2						
RAO				Sn	**Sn**	**16 40 24.2**	**+1.7**
	550nm,0.3s,baz=279,slow=23,SNR=8.5						
RAO	**Raoul Island**	**1.76**	**238**		**Pn**	**16 40 01.2**	**-0.2**
RAO					**Sn**	**16 40 24.7**	**+2.1**
MXZ	**Matakaoa Point**	**10.29**	**205**	Pn	**Pn**	**16 41 58.2**	**-0.3**
NIUE	**Niue**	**10.86**	**33**	Pn	Pn	16 42 01.6	-4.8
URZ	**Urewera**	**11.36**	**208**	Pn	**Pn**	**16 42 12.6**	**-0.6**
	0.4nm,0.3s,baz=356,slow=13,SNR=1.8						
URZ				Sn	Sn	16 44 08.9	-10
	1.3nm,0.3s,baz=53,slow=22,SNR=8.7						
	2.4nm,0.5s						
DZM	**Mont Dzumac**	**16.89**	**288**	Pn	**P**	**16 43 29.4**	**+0.4**
	0.4nm,0.3s,baz=109,slow=20,SNR=6.9						
DZM	**Mont Dzumac**	**16.89**	**288**	Pn	**Pn**	**16 43 26.5**	**-0.7**
DZM				IAmb	IAmb	16 43 32.3	
	comp=Z,23nm,1.3s						
GVZ	**Greta Valley S**	**16.99**	**208**	Pn	**Pn**	**16 43 27.4**	**-0.9**
PPT	**Papeete**	**26.70**	**72**	LR	LR	16 54 34.0	
	comp=Z,38nm,18.8s,baz=192,slow=34						
CAN	**Canberra**	**30.27**	**248**	P	**P**	**16 45 41.7**	**+0.6**
CTA	**Charters Tower**	**35.10**	**275**	LR	LR	16 59 40.9	
	comp=Z,240nm,18.2s,baz=69,slow=35						
CTAO	**Charters Tower**	**35.10**	**275**	P	**P**	**16 46 23.0**	**-0.5**
CTAO				IAmb	IAmb	16 46 27.1	
	comp=Z,7.2nm,1.1s						
STKA	**Stephens Creek**	**36.52**	**254**	P	**P**	**16 46 35.2**	**-0.3**
	comp=Z,2.5nm,0.8s,baz=112,slow=12,SNR=3.6						
STKA				LR	LR	17 00 46.1	
	comp=Z,120nm,18.2s,baz=39,slow=35						
	comp=Z,2.5nm,0.8s						
STKA	**Stephens Creek**	**36.52**	**254**	P	**P**	**16 46 35.6**	**+0.1**
COEN	**Coen**	**40.30**	**282**	P	**P**	**16 47 07.4**	**-0.1**
COEN				IAmb	IAmb	16 47 32.7	
	comp=Z,11nm,1.4s						
BBOO	**Buckleboo**	**41.07**	**252**	P	**P**	**16 47 14.0**	**+0.3**
AS31	**Alice Springs**	**44.84**	**264**	P	**P**	**16 47 42.4**	**-2.0**
ASAR	**Alice Springs**	**44.84**	**264**	P	**P**	**16 47 42.9**	**-1.5**
	comp=Z,1.4nm,0.8s,baz=94,slow=7.1,SNR=24						
ASAR				PcP	**PcP**	**16 49 25.8**	**0.0**
	comp=Z,0.7nm,1.0s,baz=100,slow=4.1,SNR=2.6						
ASAR				LR	LR	17 05 19.8	
	comp=Z,105nm,18.4s,baz=108,slow=35						
	comp=Z,1.4nm,0.8s						
ASAR	**Alice Springs**	**44.84**	**264**	P	**P**	**16 47 42.3**	**-2.0**
WR8	**Warramunga Arr**	**45.50**	**269**	P	**P**	**16 47 48.0**	**-1.6**
WR8				IAmb	IAmb	16 47 57.6	
	comp=Z,12nm,1.5s						
WRA	**Warramunga Arr**	**45.64**	**269**	P	**P**	**16 47 48.5**	**-2.3**
	comp=Z,2.4nm,0.9s,baz=109,slow=6.1,SNR=14						
	comp=Z,2.4nm,0.9s						
WRA	**Warramunga Arr**	**45.64**	**269**	P	**P**	**16 47 48.6**	**-2.1**
FITZ	**Fitzroy Crossi**	**53.98**	**268**	LR	LR	17 11 36.1	
	comp=Z,138nm,18.4s,baz=135,slow=36						
MBWA	**Marble Bar**	**58.04**	**262**	P	**P**	**16 49 23.3**	**+0.1**
RPN	**Rapa Nui**	**58.48**	**106**	LR	LR	17 10 14.0	
	comp=Z,35nm,18.1s,baz=209,slow=32						
BATI	**Baumata**	**58.99**	**275**	LR	LR	17 15 19.3	
	comp=Z,183nm,18.1s,baz=132,slow=36						
GIRL	**Giralia**	**62.28**	**258**	P	**P**	**16 49 52.3**	**+0.1**
MJAR	**Matsushiro Arr**	**77.48**	**324**	P	**P**	**16 51 24.8**	**-0.4**
	comp=Z,2.3nm,0.7s,baz=154,slow=5.4,SNR=5.5						
	comp=Z,2.3nm,0.7s						
MJAR	**Matsushiro Arr**	**77.48**	**324**	P	**P**	**16 51 25.7**	**+0.5**
MJAR				IAmb	IAmb	16 51 26.5	
	comp=Z,2.5nm,0.8s						
LPIG	**La Paz**	**82.11**	**57**	LR	LR	17 26 36.5	
	comp=Z,31nm,18.0s,baz=186,slow=34						
KSRS	**Korea Array**	**83.82**	**318**	P	**P**	**16 52 00.8**	**+1.8**
	comp=Z,2.6nm,0.9s,baz=134,slow=6.2,SNR=5.6						
	comp=Z,2.6nm,0.9s						
PETK	**Petropavlovsk-**	**84.23**	**345**	P	**P**	**16 52 01.9**	**+1.1**
	comp=Z,0.8nm,0.7s,baz=189,slow=7.1,SNR=2.2						
	comp=Z,0.8nm,0.7s						
O02D	**Mt. Diablo Mer**	**84.31**	**38**	P	**P**	**16 52 01.9**	**+0.2**
AIS	**Amsterdam Isla**	**84.66**	**230**	P	**P**	**16 52 04.2**	**+0.6**
USRK	**Ussuriysk Ar.**	**86.33**	**325**	P	**P**	**16 52 12.9**	**+1.4**
	comp=Z,1.4nm,0.7s,baz=99,slow=6.1,SNR=4.5						
	comp=Z,1.4nm,0.7s						
MKAR	**Makanchi Array**	**117.64**	**311**	PKP	**PKPdf**	**16 58 15.4**	**0.0**
	comp=Z,0.2nm,0.6s,baz=81,slow=1.2,SNR=1.9						
BVAR	**Borovoye Array**	**126.01**	**317**	PKP	**PKiKP**	**16 58 32.2**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=108,slow=3.2,SNR=2.3						
FINES	**FINESS Array B**	**143.71**	**342**	PKP	PKPbc	16 59 01.7	+0.2
	comp=Z,7.3nm,1.2s,baz=45,slow=2.8,SNR=6.0						
NB2	**NORSAR Subarra**	**146.92**	**353**	PKP	**PKPbc**	**16 59 12.4**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=9.7,slow=3.0						
NOA	**NORSAR Array B**	**146.92**	**353**	PKPbc	**PKPbc**	**16 59 11.8**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=13,slow=4.5,SNR=5.3						
HFS	**Hagfors**	**147.50**	**351**	PKPbc	**PKPbc**	**16 59 13.3**	**+0.2**
	comp=Z,2.1nm,0.6s,baz=76,slow=6.1,SNR=9.0						
AKASG	**Malin Array Be**	**150.54**	**326**	PKPbc	**PKPbc**	**16 59 19.9**	**-1.1**
	comp=Z,1.5nm,0.6s,baz=47,slow=2.1,SNR=6.2						
BRTR	**Keskin Array B**	**152.91**	**303**	PKPbc	**PKPbc**	**16 59 26.5**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=134,slow=1.0,SNR=2.8						

IDC ***02*** *17:06:07.2±4.4, 18°.25S×178°.12W, h485km±51km, mb3.6/15, mbtmp4.4/15, Error ellipse: s-maj=23.0km s-min=17.6km az=166.0*
NEIC ***02*** *17:06:13.5±1.4, 17°.8S±0°.1×178°.4W±0°.1, h533km±10km, mb4.5/85, Error ellipse: s-maj=22.4km s-min=17.0km az=146.0*
ISC 02 17:06:13.0±0.4**, 18°.11S**±0°.09×**178°.12W**±0°.08**, h550**km**,**
n327, σ1**°.09**/313**, mb4.5**/63**, 11C-3D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.67**	**275**		**P**	**17 07 31.2**	**-1.3**
AFI	**Afiamalu**	**7.39**	**57**	S	**S**	**17 09 28.4**	**-8.1**
	28nm,0.5s,baz=62,slow=14,SNR=7.4						
NIUE	**Niue**	**7.83**	**98**	P	**P**	**17 08 08.6**	**-0.4**
FUNA	**Funafuti**	**9.88**	**344**	P	P	17 08 22.9	-6.8
URZ	**Urewera**	**20.50**	**191**	P	P	17 10 08.7	-4.7
	2.4nm,0.3s,baz=263,slow=2.8,SNR=10						
	2.4nm,0.3s						
EIDS	**Eidsvold**	**29.46**	**250**	P	**P**	**17 11 32.5**	**-0.4**
EIDS				IAmb	IAmb	17 11 51.0	
	comp=Z,12nm,1.5s						
ARMA	**Armidale**	**30.08**	**240**	P	**P**	**17 11 38.4**	**+0.2**
ARMA				IAmb	IAmb	17 11 58.2	
	comp=Z,13nm,1.3s						
CTAO	**Charters Tower**	**33.69**	**261**	P	**P**	**17 12 08.1**	**-0.9**
CTAO				IAmb	IAmb	17 12 29.8	
	comp=Z,14nm,1.4s						
PMG	**Port Moresby**	**34.76**	**280**		**P**	**17 12 17.5**	**-0.5**
PMG				IAmb	IAmb	17 12 18.8	
	comp=Z,9.9nm,0.8s						
COEN	**Coen**	**37.38**	**271**		**P**	**17 12 39.2**	**-0.5**
COEN				IAmb	IAmb	17 12 40.4	
	comp=Z,12nm,1.1s						
STKA	**Stephens Creek**	**38.78**	**241**	P	**P**	**17 12 50.2**	**-0.6**
	comp=Z,0.9nm,0.4s,baz=94,slow=4.9,SNR=5.3						
	comp=Z,0.9nm,0.4s						
INKA	**Innaminka**	**38.93**	**248**	P	**P**	**17 12 52.2**	**+0.2**
WR8	**Warramunga Arr**	**44.72**	**260**	P	**P**	**17 13 36.2**	**-1.6**
WB0	**Warramunga Arr**	**44.84**	**260**	P	**P**	**17 13 37.2**	**-1.5**
WRA	**Warramunga Arr**	**44.87**	**260**	P	**P**	**17 13 37.2**	**-1.7**
	comp=Z,2.3nm,0.7s,baz=94,slow=7.3,SNR=21						
WRA				PcP	**PcP**	**17 15 08.6**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=82,slow=3.4,SNR=2.6						
	comp=Z,2.3nm,0.7s						
WRA	**Warramunga Arr**	**44.87**	**260**		**P**	**17 13 37.2**	**-1.7**
AS31	**Alice Springs**	**45.00**	**254**		**P**	**17 13 39.0**	**-1.0**
ASAR	**Alice Springs**	**45.00**	**254**	P	**P**	**17 13 38.9**	**-1.1**
	comp=Z,17nm,0.7s,baz=88,slow=8.3,SNR=213						
ASAR				PcP	**PcP**	**17 15 08.6**	**-0.7**
	comp=Z,1.2nm,0.9s,baz=96,slow=7.6,SNR=2.0						
	comp=Z,17nm,0.7s						
MTN	**Manton Dam**	**49.07**	**269**	P	**P**	**17 14 09.8**	**-0.9**
SIJI	**Sorong**	**52.55**	**283**	P	**P**	**17 14 35.4**	**-0.6**
	comp=Z,22nm,0.9s,baz=75,slow=5.8,SNR=6.7						
	comp=Z,22nm,0.9s						
PSA00	**Pilbara Seismi**	**58.13**	**255**	P	**P**	**17 15 13.8**	**-0.8**
PSA00				IAmb	IAmb	17 15 20.4	
	comp=Z,42nm,1.4s						
MJAR	**Matsushiro Arr**	**68.23**	**323**	P	**P**	**17 16 18.6**	**-0.5**
	comp=Z,2.7nm,0.8s,baz=168,slow=6.3,SNR=5.0						
	comp=Z,2.7nm,0.8s						
KIWB	**Kanaga Island**	**69.67**	**1**	P	**P**	**17 16 27.7**	**+0.4**
ADK	**Adak**	**69.70**	**1**	P	**P**	**17 16 27.8**	**+0.3**
NIKH	**Nikolski High**	**71.24**	**6**	P	**P**	**17 16 37.0**	**+0.4**
	baz=190						
ASAJ	**Asahikawa**	**71.58**	**331**	P	**P**	**17 16 39.6**	**+0.9**
	comp=Z,5.6nm,1.0s,baz=306,slow=10,SNR=2.1						
	comp=Z,5.6nm,1.0s						
UNV	**Unalaska Valle**	**72.35**	**7**	P	**P**	**17 16 42.5**	**-0.5**
UNV	**Unalaska Valle**	**72.35**	**7**	P	**P**	**17 16 43.4**	**+0.4**
	baz=192						
SSLB	**Suanglung**	**72.58**	**303**	P	**P**	**17 16 43.8**	**-1.3**
SSLB				IAmb	IAmb	17 16 56.9	
	comp=Z,20nm,1.2s						
PEA0B	**Petropavlovsk-**	**73.94**	**345**	P	**P**	**17 16 52.3**	**+0.2**
PEA0B				IAmb	IAmb	17 16 53.5	
	comp=Z,18nm,1.2s						
PETK	**Petropavlovsk-**	**73.94**	**345**	P	**P**	**17 16 52.5**	**+0.4**
	comp=Z,8.3nm,0.8s,baz=121,slow=8.1,SNR=11						
	comp=Z,8.3nm,0.8s						
SPIA	**Saint Paul Isl**	**75.29**	**4**	P	**P**	**17 16 59.6**	**+0.1**
	baz=188						
SII	**Sitkinak Islan**	**77.06**	**13**	P	**P**	**17 17 09.4**	**0.0**
	baz=204						
R16K	**Pilot Point**	**77.31**	**11**	P	**P**	**17 17 11.3**	**+0.6**
	baz=200						
KHBM	**Hayfork Bally**	**77.55**	**40**	P	**P**	**17 17 14.4**	**+1.7**
OHAK	**Old Harbor**	**77.86**	**14**	P	**P**	**17 17 14.6**	**+0.9**
OHAK	**Old Harbor**	**77.86**	**14**	P	**P**	**17 17 13.9**	**+0.3**
	baz=204						
NJ2	**Nanjing**	**78.28**	**309**	*e*P	**P**	**17 17 17.6**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
Q17K	**Contact Creek**	**78.28**	**12**	P	**P**	**17 17 15.8**	**-0.2**
	baz=202						
O14K	**Tigyukauivet M**	**78.31**	**9**	P	**P**	**17 17 15.9**	**-0.1**
	baz=197						
O15K	**Ungalikthiuk R**	**78.45**	**9**	P	**P**	**17 17 17.0**	**+0.2**
O15K				IAmb	IAmb	17 17 43.9	
	comp=Z,20nm,1.4s						
O15K	**Ungalikthiuk R**	**78.45**	**9**	P	**P**	**17 17 16.9**	**+0.2**
	baz=198						
KDAK	**Kodiak Island**	**78.53**	**14**	P	**P**	**17 17 18.5**	**+1.2**

KDAK **Kodiak Island** 78.53 14 P P 17 17 17.2 0.0
baz=205
P16K **Nushagak River** 78.62 10 P P 17 17 18.2 +0.5
P16K IAmb IAmb 17 17 18.9
comp=Z,31nm,1.1s
P16K **Nushagak River** 78.62 10 P P 17 17 17.8 +0.2
baz=200
GSC **Goldstone, Bar** 78.72 47 P P 17 17 20.4 +1.5
M11K **Mekoryuk** 78.81 6 P P 17 17 19.0 +0.3
baz=192
Q18K **Katmai Hardscr** 78.81 12 P P 17 17 19.6 +0.7
baz=203
N14K **Kuskokwak Cree** 78.90 8 P P 17 17 19.8 +0.7
baz=196
P17K **Kvichak River** 79.05 11 P 17 17 20.4 +0.4
P17K **Kvichak River** 79.05 11 P P 17 17 20.6 +0.6
baz=201
O16K **Kokwok River B** 79.13 10 IAmb IAmb 17 17 20.9
comp=Z,8.3nm,0.7s
O16K **Kokwok River B** 79.13 10 P P 17 17 20.6 +0.3
baz=200
M13K **Dall Lake** 79.15 7 P P 17 17 20.9 +0.5
baz=194
Q20K **Shuyak Island** 79.33 13 P P 17 17 21.9 +0.5
baz=205
Q19K **Cape Douglas,** 79.35 13 P P 17 17 22.3 +0.7
baz=204
N15K **Kwethluk River** 79.36 9 P P 17 17 22.4 +0.8
baz=198
NVAR **Mina Array Bea** 79.38 44 P P 17 17 24.5 +2.0
comp=Z,2.0nm,0.7s,baz=219,slow=9.2,SNR=9.2
comp=Z,2.0nm,0.7s
P18K **Big Mountain,** 79.46 12 P 17 17 22.5 +0.3
P18K IAmb IAmb 17 17 23.3
comp=Z,21nm,0.8s
P18K **Big Mountain,** 79.46 12 P P 17 17 22.7 +0.5
baz=202
O17K **Koliganek Bris** 79.47 11 P P 17 17 22.6 +0.4
baz=201
M14K **Bethel** 79.66 8 P 17 17 24.3 +1.2
M14K IAmb IAmb 17 17 25.2
comp=Z,18nm,1.1s
M14K **Bethel** 79.66 8 P P 17 17 23.6 +0.5
baz=196
J04A **Umpqua Nationa** 79.77 38 P 17 17 26.1 +1.7
J04A IAmb IAmb 17 17 27.2
comp=Z,20nm,0.7s
M15K **Kasigluk River** 79.78 9 P P 17 17 24.1 +0.4
baz=197
N16K **Nishlik Lake** 79.86 10 P P 17 17 24.9 +0.6
baz=199
O18K **Koktuh Hills** 79.89 12 P 17 17 25.0 +0.6
O18K **Koktuh Hills** 79.89 12 P P 17 17 24.9 +0.5
baz=202
P19K **Oil Pt** 80.10 13 P P 17 17 26.2 +0.7
baz=204
L14K **Kuka Creek** 80.14 7 P P 17 17 26.5 +0.9
baz=195
N17K **Nushagak Hills** 80.17 10 P P 17 17 26.6 +0.8
baz=200
K05A **Summer Lake** 80.18 39 P P 17 17 28.3 +1.7
J05D **Fort Rock, OR** 80.31 38 P 17 17 29.1 +2.0
J05D IAmb IAmb 17 17 30.2
comp=Z,12nm,0.7s
M16K **Timber Creek** 80.35 9 IAmb IAmb 17 17 29.5
comp=Z,26nm,1.0s
M16K **Timber Creek** 80.35 9 P P 17 17 27.6 +0.8
baz=199
O19K **Port Alsworth** 80.38 12 P P 17 17 27.9 +1.0
baz=203
BNX **BinXian** 80.42 325 ⇑P P 17 17 28.2 +0.7
BNX pmax pmax
comp=Z,9.0nm,1.0s
ILSW **Iliamna Southw** 80.42 12 P P 17 17 28.0 +0.7
HOM **Homer** 80.44 13 P P 17 17 28.2 +1.0
baz=206
K13K **Kusilvak Mount** 80.49 6 P P 17 17 28.9 +1.5
baz=193
L15K **Ungalak Mounta** 80.62 8 P P 17 17 29.5 +1.4
baz=196,SNR=5.5
BRSE **Bradley Lake S** 80.72 14 P P 17 17 30.0 +1.3
baz=207
N19K **Bonanza Creek** 80.92 11 P P 17 17 29.9 0.0
baz=203
L16K **Owhat River** 80.93 9 P 17 17 31.0 +1.3
L16K IAmb IAmb 17 17 32.2
comp=Z,14nm,1.1s
L16K **Owhat River** 80.93 9 P P 17 17 30.9 +1.2
baz=198,SNR=7.1
M17K **Holitna River** 80.95 10 P P 17 17 31.6 +1.8
M17K **Holitna River** 80.95 10 P P 17 17 31.5 +1.6
baz=200,SNR=6.1
K15K **Wolf Creek Mou** 81.20 8 P P 17 17 32.4 +1.2
baz=196
M18K **Stony River** 81.31 11 P P 17 17 32.3 +0.6
baz=202
SEW **Seward** 81.33 14 P P 17 17 31.9 +0.1
baz=208
WVOR **Wild Horse Val** 81.38 40 P P 17 17 34.3 +1.6
J14K **Nanvaranak Lak** 81.40 7 P P 17 17 33.2 +1.1
J14K **Nanvaranak Lak** 81.40 7 P P 17 17 32.4 +0.2
baz=194
Q23K **Middleton Isla** 81.50 16 P P 17 17 33.3 +0.6
baz=211
L17K **Donlin** 81.51 9 P P 17 17 33.5 +0.8
baz=199
CAPN **Captain Cook N** 81.55 13 P P 17 17 33.4 +0.4
baz=206
O22K **Cooper Landing** 81.61 14 P P 17 17 33.9 +0.7
baz=208
SPCR **Spurr Chakacha** 81.72 12 P P 17 17 34.2 +0.3
baz=205
P23K **Montague Islan** 81.73 15 P P 17 17 34.1 +0.2
baz=210
GAMB **Gambell** 81.77 3 P 17 17 35.0 +1.0
GAMB **Gambell** 81.77 3 P P 17 17 34.5 +0.5
baz=186,SNR=7.9
I07A **Izee** 81.79 38 P P 17 17 36.7 +1.9
I07A IAmb IAmb 17 17 37.7
comp=Z,7.2nm,0.8s
L18K **Granite Mounta** 81.84 10 IAmb IAmb 17 17 36.9
comp=Z,32nm,1.4s
L18K **Granite Mounta** 81.84 10 P P 17 17 35.1 +0.7
baz=201
LON **Longmire** 82.04 35 P P 17 17 37.0 +1.1
K17K **Iditarod** 82.06 9 P P 17 17 36.2 +0.7
baz=195
L19K **White Mountain** 82.12 11 P P 17 17 36.7 +0.8
baz=202
RC01 **Rabbit Creek A** 82.15 13 P P 17 17 37.1 +1.1
baz=207
M20K **Styx River** 82.16 12 P P 17 17 36.2 0.0
baz=204
SUA **Susitna One** 82.27 13 P P 17 17 37.2 +0.5
SUA IAmb IAmb 17 17 38.2
comp=Z,16nm,0.9s
SUA **Susitna One** 82.27 13 P P 17 17 35.9 -0.8
baz=206
J16K **Anvik River** 82.28 8 P P 17 17 36.5 -0.1
baz=197
KAIM **Kayak Island** 82.44 16 P P 17 17 37.9 +0.4
baz=212
SKT **Skwentna** 82.57 12 P P 17 17 38.8 +0.7
baz=206
GLI **Glacier Island** 82.58 15 P P 17 17 38.3 +0.2
baz=210
CRAG **Craig** 82.59 24 P P 17 17 39.0 +0.7
baz=223
EYAK **Cordova Ski Ar** 82.62 15 P P 17 17 38.7 +0.3
baz=211
M22K **Willow** 82.66 13 P P 17 17 39.3 +0.8
baz=207
KNK **Knik Glacier** 82.72 14 P P 17 17 38.9 0.0
baz=209
PMR **Palmer** 82.73 14 P P 17 17 39.2 +0.3
baz=208
BGLC **Bering Glacier** 82.91 17 P P 17 17 40.5 +0.7
baz=214
GHO **Glory Hole Cre** 82.94 14 P P 17 17 40.4 +0.4
SIT **Sitka** 82.96 22 P P 17 17 40.8 +0.7
baz=221
ANM **Nome** 83.00 6 P P 17 17 40.9 +0.7
baz=192
J18K **Innoko River** 83.01 10 P P 17 17 41.0 +0.7
baz=201
U33K **Whale Pass** 83.06 24 P P 17 17 41.6 +1.0
baz=223
SML **Sawmill** 83.10 14 P P 17 17 41.6 +0.8
baz=209
CUT **Chulitna** 83.21 13 P P 17 17 41.8 +0.5
baz=207
M23K **Glacier View** 83.23 14 P P 17 17 41.9 +0.5
baz=209
PPLA **Purkeypile** 83.27 12 P P 17 17 41.5 -0.3
baz=205
BMRM **Bremner River** 83.27 16 P P 17 17 41.9 +0.2
baz=212
MESA **MESA** 83.33 17 P P 17 17 42.8 +0.6
baz=215
S31K **Pelican** 83.34 21 P P 17 17 43.2 +1.2
baz=220
K20K **Telida** 83.35 11 P P 17 17 42.6 +0.6
baz=203
SCM **Sheep Creek Mo** 83.35 14 P P 17 17 42.9 +0.7
baz=210
H16K **Elim** 83.39 7 P P 17 17 42.9 +0.8
baz=195
KLU **Klutina** 83.39 15 P P 17 17 42.9 +0.5
baz=211
CRQE **Cirque** 83.49 16 P P 17 17 43.6 +0.7
baz=214
G15K **Niukluk** 83.54 6 P P 17 17 43.4 +0.5
baz=194
WRAK **Wrangell Islan** 83.58 24 P P 17 17 44.3 +1.1
baz=224
J19K **Poorman** 83.68 10 P P 17 17 44.9 +1.2
J19K **Poorman** 83.68 10 P P 17 17 44.5 +0.9
baz=202
PINM **Pinnacle** 83.75 18 P P 17 17 44.6 +0.4
baz=216
TNA **Tin City** 83.77 4 P 17 17 44.8 +0.8
TNA IAmb IAmb 17 17 46.0
comp=Z,7.7nm,0.9s
TNA **Tin City** 83.77 4 P P 17 17 44.6 +0.7
baz=190,SNR=9.1
F14K **Arctic Creek** 83.81 5 P P 17 17 44.8 +0.6
baz=192,SNR=9.5
N25K **Chitina, Valde** 83.82 15 P P 17 17 45.0 +0.5
baz=212
R31K **City Hall, Gus** 83.85 21 P P 17 17 45.0 +0.5
baz=220
M24K **Tolsona, Glenn** 83.86 14 P P 17 17 45.6 +1.0
baz=211
WAT6 **Susitna Watana** 83.92 14 P P 17 17 45.3 +0.3
baz=209,SNR=7.0
H17K **Granite Mounta** 83.95 8 P P 17 17 45.4 +0.4
baz=198
WAT1 **Susitna Watana** 83.96 13 P P 17 17 45.6 +0.5
baz=208
SEY **Seymchan** 84.03 347 P P 17 17 45.6 +0.3
comp=Z,6.7nm,0.7s,baz=143,slow=6.0,SNR=48
comp=Z,6.7nm,0.7s
MCARA **McCarthy VSAT** 84.04 16 P P 17 17 45.7 +0.3
baz=214
G16K **Koyuk River** 84.11 7 P P 17 17 46.0 +0.3
baz=195
KTH **Kantishna Hill** 84.11 12 IAmb IAmb 17 17 46.6
comp=Z,9.4nm,0.8s
U35K **Hyder** 84.13 25 P P 17 17 46.9 +1.0
baz=226
TRF **Thofare Moun** 84.15 12 P P 17 17 46.5 +0.4
baz=207
CHUM **Lake Minchumin** 84.15 11 P P 17 17 45.9 0.0
baz=205
CTG **Chitna Glacier** 84.15 17 P P 17 17 46.7 +0.6
baz=215
R32K **Eaglecrest** 84.17 21 P P 17 17 46.8 +0.7
baz=222
F15K **North Star Dit** 84.18 6 P P 17 17 46.6 +0.5
baz=193
F10A **Beach Ranch, E** 84.19 38 IAmb IAmb 17 17 49.0
comp=Z,6.4nm,0.9s
GCSA **Galena City Sc** 84.19 9 P P 17 17 46.3 +0.3
baz=200
O28M **Mount Upton** 84.32 18 P P 17 17 47.8 +0.6
baz=216
HARP **HAARP** 84.36 15 P P 17 17 48.1 +1.0
baz=212
H18K **Honhosa River** 84.36 8 P P 17 17 47.9 +0.9
baz=199
RND **Reindeer** 84.40 13 P 17 17 48.2 +1.0
G17K **Kiwalik Mounta** 84.41 7 P P 17 17 47.1 0.0
baz=197
O29M **Mount Kennedy** 84.42 19 P P 17 17 47.7 +0.2
baz=218
DHY **Denali Highway** 84.43 14 P P 17 17 47.7 +0.2
baz=210
BPAW **Bear Paw Mtn.** 84.59 12 P P 17 17 47.9 -0.2
baz=206
MCK **McKinley** 84.67 13 IAmb IAmb 17 17 49.7
comp=Z,13nm,1.0s
MCK **McKinley** 84.67 13 P P 17 17 49.1 +0.6
baz=208
P30M **Million Dollar** 84.77 19 P P 17 17 49.5 +0.3
baz=219
PAX **Paxson** 84.78 14 P P 17 17 49.6 +0.5
baz=211
YUK8 **Steele Glacier** 84.86 18 P P 17 17 50.2 +0.4
baz=217
M26K **Nabesna, AK** 84.90 16 IAmb IAmb 17 17 52.1
comp=Z,12nm,1.0s
M26K **Nabesna, AK** 84.90 16 P P 17 17 50.4 +0.7
baz=214
YUK6 **Outpost Mounta** 84.99 18 P P 17 17 51.4 +1.0
baz=218
G18K **Tagagawik** 85.03 8 P P 17 17 51.3 +1.1
baz=199
YUK3 **Moose Creek** 85.06 17 P P 17 17 50.8 +0.1
baz=216
S34M **Telegraph Cree** 85.12 23 IAmb IAmb 17 17 53.9
comp=Z,12nm,0.9s
S34M **Telegraph Cree** 85.12 23 P P 17 17 51.9 +1.1
baz=225
M27K **Edge Creek, AK** 85.15 16 P P 17 17 51.4 +0.3
baz=215
HYT **Haines Junctio** 85.16 19 P P 17 17 51.3 +0.2
baz=219
H20K **Anotleneega Mo** 85.20 10 P P 17 17 51.5 +0.4
baz=202
YUK4 **Talbot Arm** 85.23 18 P P 17 17 52.8 +1.3
baz=218
F17K **Baldwin Pennin** 85.24 7 P P 17 17 51.8 +0.7
baz=196
L26K **Log Cabin Wild** 85.34 15 P P 17 17 52.8 +1.0
baz=213
I21K **Tanana** 85.39 11 P P 17 17 52.4 +0.5
baz=205
K24K **Donnelly Dome** 85.42 14 P P 17 17 53.2 +1.0
K24K **Donnelly Dome** 85.42 14 P P 17 17 52.8 +0.7
baz=211,SNR=5.4
P32M **Atlin** 85.43 21 P P 17 17 53.0 +0.7
baz=222
Q32M **Nakina River** 85.47 22 P P 17 17 53.6 +0.8
baz=224
BVCY **Beaver Creek** 85.47 16 P P 17 17 53.8 +1.4
baz=216
G19K **Purcell Mounta** 85.48 8 P P 17 17 52.7 +0.3
baz=200
MLY **Manley** 85.48 11 P P 17 17 53.1 +0.6
baz=206
WRH **Wood River Hil** 85.50 13 IAmb IAmb 17 17 53.5
comp=Z,24nm,1.4s
O30N **Mendenhall** 85.55 19 P P 17 17 53.8 +0.9
baz=220
F18K **Selawik** 85.58 7 P P 17 17 53.8 +1.0
baz=198
RIDG **Independent Ri** 85.58 14 IAmb IAmb 17 17 54.5
comp=Z,12nm,1.0s
RIDG **Independent Ri** 85.58 14 P P 17 17 53.4 +0.4
baz=212
H21K **Melozitna Rive** 85.69 10 P P 17 17 53.9 +0.5
baz=204
HDA **Harding Lake** 85.69 13 IAmb IAmb 17 17 54.5
comp=Z,6.5nm,0.8s
HDA **Harding Lake** 85.69 13 P P 17 17 54.2 +0.8
baz=210,SNR=5.1
CCB **Clear Creek Bu** 85.72 13 IAmb IAmb 17 17 54.4
comp=Z,15nm,1.2s
L27K **Beaver Creek,** 85.75 16 P P 17 17 54.4 +0.7
baz=215
N30M **Aishikik Lake** 85.78 18 P P 17 17 54.5 +0.5
baz=219
E17K **Hotham Inlet** 85.80 6 P P 17 17 54.7 +0.9
baz=196
I23K **Minto, Yukon-K** 85.85 12 P P 17 17 54.8 +0.7
baz=208
WHY **Whitehorse** 85.85 20 P P 17 17 55.1 +0.7
baz=221
TXAR **Lajitas Array** 85.87 58 P P 17 17 57.0 +1.8
comp=Z,0.6nm,0.7s,baz=222,slow=6.4,SNR=6.1
comp=Z,0.6nm,0.7s
DLBC **Dease Lake** 85.91 23 P P 17 17 55.7 +1.0
baz=226
COLA **College** 85.91 12 P P 17 17 55.1 +0.7
baz=209
SCRK **Sand Creek** 85.98 14 P P 17 17 55.6 +0.7
baz=213
IL31 86.02 13 P P 17 17 54.7 -0.2
IL31 IAmb IAmb 17 17 55.9
comp=Z,4.4nm,0.7s
ILAR **Eielson Array** 86.02 13 P P 17 17 55.0 0.0
comp=Z,2.9nm,0.7s,baz=224,slow=4.9,SNR=40
comp=Z,2.9nm,0.7s
ILAR **Eielson Array** 86.02 13 P P 17 17 54.8 -0.2
F19K **Shaleruckik Mo** 86.04 8 P P 17 17 55.7 +0.7
baz=200
H22K **Ishtalitna Cre** 86.15 11 P P 17 17 56.3 +0.8
baz=206
M29M **Somme Creek** 86.16 17 P P 17 17 56.4 +0.6
baz=218
P33M **Teslin, Yukon** 86.19 21 P P 17 17 57.2 +1.2
baz=223
POKR **Poker Plat Res** 86.21 12 P P 17 17 56.9 +1.0
baz=209
J25K **Salcha River,** 86.21 14 IAmb IAmb 17 17 57.2
comp=Z,14nm,1.4s
J25K **Salcha River,** 86.21 14 P P 17 17 56.9 +0.9
baz=211,SNR=5.5
R33M **Jennings River** 86.24 22 P P 17 17 58.1 +1.8
baz=225
E18K **Tukpahlearik C** 86.26 7 P P 17 17 57.1 +1.1
baz=197
D17K **Noatak River** 86.27 6 P P 17 17 57.5 +1.4
baz=195
G21K **Allakaket** 86.36 10 IAmb IAmb 17 17 58.0
comp=Z,5.7nm,0.8s
G21K **Allakaket** 86.36 10 P P 17 17 57.9 +1.3
baz=204
F20K **Avaraart Lake** 86.52 9 P P 17 17 58.6 +1.4
baz=202
XAN **Xi'an** 86.60 307 P P 17 18 00.0 +1.5
XAN pP pP 17 19 52.8 -5.4
XAN pmax pmax
comp=Z,11nm,1.1s
RDOG **Red Dog Mine** 86.64 6 P P 17 17 59.0 +1.2
baz=195
C16K **Lisburne Hills** 86.64 5 P P 17 17 59.1 +1.3
baz=192
E19K **Redstone River** 86.70 8 P P 17 17 59.2 +1.1
baz=200
M30M **Minto, Yukon** 86.74 18 P P 17 17 59.5 +1.0
M30M IAmb IAmb 17 18 00.4
comp=Z,7.0nm,0.8s
M30M **Minto, Yukon** 86.74 18 P P 17 17 59.9 +1.5
baz=219
L29M **L29M** 86.78 17 P P 17 17 59.4 +0.8
baz=218
N32M **Quiet Lake** 86.80 20 P P 17 17 59.9 +1.1
baz=223
PRP **Porcupine Dome** 86.96 13 IAmb IAmb 17 18 02.9
comp=Z,11nm,1.4s
PRP **Porcupine Dome** 86.96 13 P P 17 18 00.4 +0.8
baz=211
F21K **Alatna River** 87.02 9 P P 17 18 00.3 +0.6
baz=204
C17K **DeLong Mountai** 87.02 5 P P 17 18 00.9 +1.3
baz=194
G23K **Bananza Creek** 87.13 11 P P 17 18 01.1 +0.9
baz=207
M31M **Drury Creek, Y** 87.17 19 P P 17 18 01.1 +0.6
baz=221
DAWY **Dawson** 87.20 16 P P 17 18 01.5 +0.9
baz=217
I26K **Coal Creek Min** 87.30 14 P P 17 18 01.8 +0.8
baz=213
PDAR **Pinedale Array** 87.31 43 P P 17 18 02.8 +0.9
comp=Z,1.4nm,0.7s,baz=225,slow=3.4,SNR=15
comp=Z,1.4nm,0.7s
PDAR **Pinedale Array** 87.31 43 P P 17 18 03.4 +1.5
C18K **Utukok River** 87.38 6 P P 17 18 02.5 +1.1
baz=196
K29M **Barlow Dome** 87.53 17 P P 17 18 02.7 +0.4
baz=219
COLD **Coldfoot** 87.56 11 P P 17 18 02.7 +0.5
baz=207,SNR=10
D19K **Kuna River** 87.57 7 P P 17 18 03.0 +0.8
baz=199
G24K **Hadweenzic Riv** 87.59 12 P P 17 18 02.4 +0.1
baz=209
E20K **Nigu River** 87.59 8 P P 17 18 02.7 +0.3
baz=201
HHC **Hu-ho-hao-te** 87.61 314 eP P 17 18 02.5 -0.7
HHC pmax pmax
comp=Z,1.0nm,0.5s
HHC pmax pmax
comp=Z,110nm,5.3s
MAYO **Mayo, Yukon** 87.79 18 P P 17 18 04.0 +0.7
baz=220
J29N **Klondike Camp** 87.82 16 IAmb IAmb 17 18 07.2
comp=Z,7.0nm,0.8s
J29N **Klondike Camp** 87.82 16 P P 17 18 04.5 +0.9
baz=218
I27K **Kandik River** 87.91 14 P P 17 18 04.4 +0.5
baz=215
D20K **Etivluk River** 87.97 8 P P 17 18 04.8 +0.7
D20K IAmb IAmb 17 18 05.6
comp=Z,5.0nm,0.9s
D20K **Etivluk River** 87.97 8 P P 17 18 04.3 +0.2
baz=201
C19K **Lookout Ridge** 87.99 7 P P 17 18 04.6 +0.4
baz=198
E21K **Killik River** 88.07 9 P P 17 18 05.0 +0.5
baz=203
E22K **Anaktuvuk Pass** 88.11 10 IAmb IAmb 17 18 06.4
comp=Z,8.3nm,1.1s
E22K **Anaktuvuk Pass** 88.11 10 P P 17 18 05.3 +0.5
baz=205,SNR=8.0
I28M **Miner Creek** 88.18 15 P P 17 18 05.6 +0.3
baz=216
E23K **Chandalar** 88.41 10 P P 17 18 06.5 +0.3
baz=207
J30M **Hart River** 88.43 17 P P 17 18 06.7 +0.3
baz=220
H27K **Steamboat Moun** 88.45 14 P P 17 18 07.0 +0.6
baz=215
I29M **Ogilvie Camp,** 88.52 16 P P 17 18 07.8 +1.1
baz=218
G26K **Porcupine Rive** 88.55 13 IAmb IAmb 17 18 08.8
comp=Z,13nm,1.2s
G26K **Porcupine Rive** 88.55 13 P P 17 18 07.4 +0.6
baz=213
E24K **Your Creek** 88.62 11 P P 17 18 07.4 +0.2
baz=208
C21K **Kniefelade Rid** 88.62 8 P P 17 18 07.9 +0.8
baz=202,SNR=5.6
D22K **Ayikyak River** 88.66 9 P P 17 18 08.1 +0.8
baz=204,SNR=8.0
F25K **Christian Rive** 88.72 12 P P 17 18 08.5 +0.8
baz=211
BMAR **Burnt Mountain** 88.80 12 P P 17 18 09.2 +1.2
A19K **Wainwright** 88.89 6 P P 17 18 09.6 +1.3
baz=196
I30M **Mount Dempster** 88.92 16 IAmb IAmb 17 18 10.4
comp=Z,8.5nm,1.1s
I30M **Mount Dempster** 88.92 16 P P 17 18 09.7 +1.0
baz=220
TOLK **Toolik Lake Re** 88.93 10 P P 17 18 09.3 +0.7
baz=207
D23K **Nanushuk River** 89.05 10 P P 17 18 10.7 +1.7
baz=206
B21K **Ikpikpuk River** 89.08 8 P P 17 18 10.6 +1.5
baz=203
F26K **Sheenjek River** 89.11 12 P P 17 18 10.9 +1.5
baz=212
E25K **Arctic Village** 89.19 12 P P 17 18 10.5 +0.7
baz=211
CMAR **Chiang Mai Arr** 89.21 290 P P 17 18 12.3 +1.4
comp=Z,1.5nm,0.9s,baz=105,slow=2.9,SNR=12
comp=Z,1.5nm,0.9s
KOTAN **Kotaneelee Air** 89.32 24 P P 17 18 12.1 +1.6
baz=231
PZH **PanZhiHua** 89.49 298 P P 17 18 13.1 +0.8
D24K **Happy Valley** 89.52 10 P P 17 18 12.4 +1.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=208						
EPYK	**Eagle Plains**	**89.72**	**15**	P	**P**	**17 18 13.6**	**+1.3**
	baz=219						
C23K	**Itkillik River**	**89.84**	**9**	IAmb	IAmb	17 18 14.7	
	comp=Z,7.4nm,0.9s						
C23K	**Itkillik River**	**89.84**	**9**	P	**P**	**17 18 13.8**	**+1.1**
	baz=206						
B22K	**Teshekpuk Lake**	**89.90**	**8**	IAmb	IAmb	17 18 14.8	
	comp=Z,7.7nm,1.1s						
B22K	**Teshekpuk Lake**	**89.90**	**8**	P	**P**	**17 18 14.1**	**+1.1**
	baz=204						
H31M	**Peel River**	**89.91**	**17**	P	**P**	**17 18 14.3**	**+1.1**
	baz=221						
F28M	**Old Crow**	**89.96**	**14**	P	**P**	**17 18 13.9**	**+0.5**
	baz=216						
C24K	**Franklin Bluff**	**90.04**	**10**	P	**P**	**17 18 14.8**	**+1.2**
	baz=208						
E27K	**Coleen River**	**90.05**	**13**	P	**P**	**17 18 14.8**	**+1.1**
	baz=215						
D25K	**Kavik River**	**90.09**	**11**	P	**P**	**17 18 14.5**	**+0.6**
	baz=210						
TROLL	**Troll, Antarti**	**90.11**	**180**	⇓P	**P**	**17 18 13.5**	**-0.8**
TROLL				⇑PcP	**PcP**	**17 18 17.2**	**+2.1**
TROLL				⇑pP	**pP**	**17 20 10.3**	**-4.1**
TROLL				⇑PKiKP	**PKiKP**	**17 23 08.7**	**+2.7**
G30M	**tAoh Zraii Nji**	**90.32**	**15**	P	**P**	**17 18 15.6**	**+0.5**
	baz=220,SNR=5.6						
SNAA	**Sanae**	**90.39**	**179**	PKiKP	**PKiKP**	**17 23 06.6**	**+0.3**
A21K	**Barrow**	**90.42**	**7**	P	**P**	**17 18 16.4**	**+1.1**
	baz=201						
VNA3	**Neumayer Olymp**	**90.52**	**176**	⇓P	**P**	**17 18 16.7**	**+0.7**
	comp=Z,7.8nm,0.7s						
VNA3				⇑PcP	**PcP**	**17 18 19.9**	**+3.2**
VNA3				⇑pP	**pP**	**17 20 12.6**	**-3.4**
VNA3				⇑PP	**PP**	**17 22 01.4**	**+1.4**
VNA3				⇑PKiKP	**PKiKP**	**17 23 04.6**	**-2.0**
G31M	**Satah River**	**90.78**	**16**	P	**P**	**17 18 18.1**	**+1.0**
	baz=222,SNR=7.3						
C27K	**Jago River**	**90.83**	**11**	P	**P**	**17 18 18.4**	**+1.1**
	baz=213						
E28M	**Babbage River**	**90.84**	**13**	P	**P**	**17 18 18.2**	**+0.8**
	baz=217						
C26K	**Camden Bay**	**90.86**	**11**	P	**P**	**17 18 17.8**	**+0.4**
	baz=212						
F30M	**Barrier River**	**90.92**	**15**	P	**P**	**17 18 18.3**	**+0.5**
	baz=220						
VNA2	**Neumayer--Watz**	**90.96**	**177**	⇓P	**P**	**17 18 17.5**	**-0.6**
	comp=Z,6.9nm,0.3s,baz=255,slow=4.9						
VNA2				⇑pP	pP	17 20 12.6	-5.4
	baz=240,slow=27						
E29M	**Blow River**	**91.03**	**14**	P	**P**	**17 18 19.0**	**+0.8**
	baz=218						
D27M	**Malcolm River**	**91.06**	**12**	P	**P**	**17 18 19.5**	**+1.1**
	baz=215						
VNA1	**Neumayer--Stat**	**91.19**	**177**	⇑pP	**pP**	**17 20 15.1**	**-4.0**
VNA1				⇑PP	**PP**	**17 22 08.2**	**+3.0**
F31M	**Tsiigehtchic**	**91.30**	**16**	P	**P**	**17 18 20.3**	**+0.9**
	baz=222,SNR=8.9						
INK	**Inuvik**	**92.00**	**15**	IAmb	IAmb	17 18 23.9	
	comp=Z,7.2nm,0.9s						
INK	**Inuvik**	**92.00**	**15**	P	**P**	**17 18 23.4**	**+0.7**
	baz=222,SNR=6.2						
YKA	**Yellowknife Ar**	**94.40**	**25**	P	**P**	**17 18 34.3**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=252,slow=5.0,SNR=14						
	comp=Z,0.9nm,0.8s						
A36M	**Sachs Harbour**	**96.60**	**14**	P	**P**	**17 18 44.4**	**+0.9**
	baz=230						
BRTR	**Keskin Array B**	**145.12**	**315**	PKPbc	**PKPab**	**17 24 49.6**	**-0.8**
	comp=Z,1.5nm,0.8s,baz=94,slow=2.6,SNR=7.7						
CLL	**Collm**	**145.72**	**348**	*i* PKPbc	**PKPab**	**17 24 50.9**	**-1.2**
	comp=Z,13nm,1.0s						
MMAI	**Mount Meron Ar**	**146.48**	**303**	PKPbc	**PKPbc**	**17 24 53.5**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=89,slow=6.1,SNR=4.2						
MODS	**Modra-Piesok**	**147.31**	**341**	*e*PKP	**PKPab**	**17 24 57.6**	**-1.0**
GERES	**GERESS Array B**	**147.88**	**345**	PKPbc	**PKPbc**	**17 24 56.8**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=33,slow=3.2,SNR=6.5						
ESDC	**Sonseca Array**	**157.92**	**12**	PKPab	**PKPab**	**17 25 43.6**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=339,slow=5.8,SNR=2.7						

IDC 02 17:13:03.4±2.4**, 11°.32S**×**113°.02E, h0**km**, mb3.3**/3**, mbtmp3.7**/5**, ML3.9**/2**, Error ellipse: s-maj=76.5km s-min=26.8km az=41.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**10.52**	**85**	Pn	Pn	17 15 35.6	0.0
	2.3nm,0.3s,baz=262,slow=15,SNR=4.5						
	8.5nm,0.5s						
FITZ	**Fitzroy Crossi**	**13.94**	**120**	Pn	Pn	17 16 20.7	-1.7
	0.3nm,0.3s,baz=304,slow=11,SNR=1.6						
	2.5nm,0.7s						
WRA	**Warramunga Arr**	**22.23**	**115**	P	P	17 18 01.9	+0.1
	0.8nm,0.6s,baz=287,slow=11,SNR=6.9						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**23.36**	**124**	P	P	17 18 13.7	0.0
	0.6nm,0.6s,baz=301,slow=9.3,SNR=10						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**64.06**	**337**	P	P	17 23 39.4	+0.3
	0.2nm,0.6s,baz=150,slow=6.2,SNR=2.2						
	0.2nm,0.6s						

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*IDC **02** 17:15:30.0±2.2, 6°.04S×130°.54E, h118km±22km, mb3.6/4, mbtmp4.2/9, Error ellipse: s-maj=35.9km s-min=16.4km az=81.0*

*NEIC **02** 17:15:30.5±1.8, 6°.04S±0°.02×130°.6E±0°.1, h120km±10km, mb4.2/10, Error ellipse: s-maj=15.5km s-min=2.5km az=98.0*

*DJA **02** 17:15:32.1±0.3, 6°S±3°×13°1E±°, h169km±7km, M4.4/22, mB5.3/7, mb4.2/8, MLv4.3/22, Mw(mB)4.7/7*

ISC 02 17:15:29.9±0.6**, 6°.10S**±0°.05×**130°.51E**±0°.06**, h124**km**, n44, σ2s30**/49**, mb4.0**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.68**	**339**	P	**Pn**	**17 16 03.1**	**+3.4**
SAUI	**Saumlaki**	**2.03**	**157**	Pn	**Pn**	**17 16 05.7**	**+1.7**
SAUI					**Sn**	**17 16 30.1**	**-0.1**
SAUI	**Saumlaki**	**2.03**	**157**	P	Pn	17 16 10.0	+6.0
MSAI	**Masohi**	**3.15**	**330**	P	**Pn**	**17 16 21.5**	**+3.1**
AAI	**Ambon**	**3.32**	**316**	P	**Pn**	**17 16 24.3**	**+3.7**
KRAI	**Karang Ratu**	**3.47**	**323**	P	**Pn**	**17 16 26.3**	**+3.7**
KMPI	**Kaimana, Papua**	**4.00**	**53**	P	**Pn**	**17 16 32.0**	**+2.4**
NLAI	**Namlea**	**4.43**	**310**	P	**Pn**	**17 16 39.3**	**+4.0**
SIJI	**Sorong**	**5.25**	**8**	P	**Pn**	**17 16 45.7**	**-0.6**
	45nm,0.3s,baz=200,slow=15,SNR=292						
SIJI				S	**Sn**	**17 17 40.7**	**-5.1**
	44nm,0.2s,baz=259,slow=23,SNR=11						
SIJI	**Sorong**	**5.25**	**8**	P	**Pn**	**17 16 46.2**	**-0.1**
SWI	**Sorong**	**5.25**	**8**	P	**Pn**	**17 16 46.3**	**-0.1**
RKPI	**Ransiki, Papua**	**5.84**	**39**	P	**Pn**	**17 16 55.2**	**+0.8**
SANI	**Sanana**	**6.04**	**312**	P	**Pn**	**17 17 00.2**	**+3.2**
	0.1nm11nm,1.1s						
MWPI	**Manokwari, Pap**	**6.23**	**35**	P	**Pn**	**17 17 01.2**	**+1.7**
	0.5nm66nm,0.6s						
MTN	**Manton Dam**	**6.73**	**175**		**Pn**	**17 17 08.3**	**+2.0**
MTN				Sn	**Sn**	**17 18 21.8**	**+0.1**
SRPI	**Serui, Papua**	**7.09**	**54**	P	**Pn**	**17 17 13.6**	**+2.4**
	0.2nm14nm,0.6s						
SOEI	**Soe**	**7.17**	**239**	Pn	**Pn**	**17 17 14.2**	**+1.8**
SOEI				Sn	**Sn**	**17 18 31.3**	**-1.1**
BAKI	**Biak**	**7.41**	**49**	P	**Pn**	**17 17 18.6**	**+3.1**
	0.2nm81nm,1.1s						
TNTI	**Ternate**	**7.51**	**335**	Pn	**Pn**	**17 17 17.8**	**+1.0**
BATI	**Baumata**	**7.91**	**238**	P	**Pn**	**17 17 24.0**	**+1.7**
	13nm,0.7s,baz=274,slow=3.5,SNR=9.9						
BATI				S	**Sn**	**17 18 48.9**	**-1.4**
	22nm,0.4s,baz=41,slow=22,SNR=9.2						
KNRA	**Kununurra**	**9.67**	**190**		**Pn**	**17 17 46.9**	**+0.9**
KNRA				Sn	**Sn**	**17 19 27.8**	**-5.1**
FITZ	**Fitzroy Crossi**	**12.84**	**201**	P	**Pn**	**17 18 27.2**	**-0.8**
	5.2nm,0.3s,baz=25,slow=14,SNR=37						
FITZ				S	Sn	17 20 41.4	-8.2
	8.2nm,0.4s,baz=89,slow=12,SNR=7.9						
WB0	**Warramunga Arr**	**14.10**	**165**		**Pn**	**17 18 44.6**	**+0.2**
WRA	**Warramunga Arr**	**14.26**	**165**	P	**Pn**	**17 18 45.5**	**-0.8**
	1.3nm,0.4s,baz=351,slow=13,SNR=23						
WRA				S	Sn	17 21 15.6	-8.3
	2.3nm,0.4s,baz=346,slow=23,SNR=7.6						
WR8	**Warramunga Arr**	**14.31**	**165**		**Pn**	**17 18 46.8**	**-0.2**
COEN	**Coen**	**14.71**	**123**	Pn	**Pn**	**17 18 51.1**	**-1.0**
TARAI	**Tarakan**	**15.95**	**306**	P	**Pn**	**17 19 05.8**	**-1.8**
AS31	**Alice Springs**	**17.77**	**170**		**P**	**17 19 30.4**	**+1.7**
AS31				IAmb	IAmb	17 19 32.4	
	comp=Z,3.6nm,0.5s						
ASAR	**Alice Springs**	**17.77**	**170**	P	**P**	**17 19 30.9**	**+2.2**
	comp=Z,5.9nm,0.6s,baz=349,slow=11,SNR=100						
ASAR				S	**S**	**17 22 40.1**	**-7.0**
	comp=Z,1.7nm,0.7s,baz=350,slow=25,SNR=6.8						
ASAR	**Alice Springs**	**17.77**	**170**		**P**	**17 19 31.3**	**+2.6**
PSA00	**Pilbara Seismi**	**18.52**	**213**	P	**P**	**17 19 37.3**	**+0.4**
KKM	**Kota Kinabalu**	**18.68**	**310**	P	**P**	**17 19 39.2**	**+0.4**
KKM				IAmb	IAmb	17 20 17.0	
	comp=Z,24nm,1.1s						
INKA	**Innaminka**	**23.62**	**157**	P	**P**	**17 20 29.6**	**-0.3**
BBOO	**Buckleboo**	**27.08**	**170**	P	**P**	**17 21 00.8**	**-0.2**
STKA	**Stephens Creek**	**27.66**	**159**	P	**P**	**17 21 07.6**	**+1.3**
	comp=Z,1.2nm,0.3s,baz=344,slow=8.6,SNR=4.5						
	comp=Z,1.2nm,0.3s						
EVN	**Everest**	**54.06**	**311**	P	**P**	**17 24 43.4**	**+0.7**
EVN				IAmb	IAmb	17 24 43.9	
	comp=Z,1.8nm,0.6s						
SONM	**Songino Array**	**57.75**	**341**	P	**P**	**17 25 08.7**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=161,slow=6.2,SNR=2.0						
	comp=Z,0.2nm,0.5s						
SONM	**Songino Array**	**57.75**	**341**	IAmb	IAmb	17 25 27.4	
	comp=Z,2.1nm,1.5s						
MKAR	**Makanchi Array**	**67.75**	**326**	P	**P**	**17 26 14.9**	**+0.7**
	comp=Z,1.7nm,0.4s,baz=126,slow=7.7,SNR=36						
	comp=Z,1.7nm,0.4s						
MKAR	**Makanchi Array**	**67.75**	**326**	P	**P**	**17 26 14.7**	**+0.4**
MAKZ	**Makanchi**	**67.94**	**326**	P	**P**	**17 26 15.9**	**+0.4**
MAKZ				IAmb	IAmb	17 26 16.4	
	comp=Z,2.4nm,0.5s						
KURBB	**Kurchatov Arra**	**72.01**	**328**	P	**P**	**17 26 40.7**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=128,slow=5.1,SNR=7.1						
KURK	**Kurchatov**	**72.02**	**328**	P	**P**	**17 26 40.7**	**+0.5**
BVAR	**Borovoye Array**	**77.57**	**328**	P	**P**	**17 27 12.2**	**0.0**
	comp=Z,0.3nm,0.4s,baz=118,slow=5.5,SNR=5.0						
	comp=Z,0.3nm,0.4s						

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*IDC **02** 17:16:00.7±4.4, 36°.20N×72°.37E, h0km, mb3.6/2, mbtmp3.5/6, ML3.1/4, Error ellipse: s-maj=81.1km s-min=41.4km az=146.0*

*NNC **02** 17:16:30.0±6.1, 38°.09N×71°.82E, h144km±92km, mb2.8, mpv3.7, Error ellipse: s-maj=55.1km s-min=32.8km az=13.0*

ISC 02 17:16:30.2±1.9**, 38°.1N**±0°.1×**72°.0E**±0°.1**, h150**km**, n10, σ1s55**/14**, 3C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**4.89**	**22**	⇓P	**Pn**	**17 17 42.3**	**0.0**
	2.8nm,0.4s						
AAK				⇓S	**Sn**	**17 18 39.8**	**+1.2**
	5.7nm,0.6s						
KK31	**Karatay Array**	**5.08**	**348**	⇓P	**Pn**	**17 17 45.7**	**+1.0**
	5.6nm,0.3s,baz=163,slow=12,SNR=134						
KK31				⇑S	**Sn**	**17 18 44.6**	**+1.8**
	9.4nm,0.3s,baz=173,slow=24,SNR=22						
MKAR	**Makanchi Array**	**11.53**	**38**	Pn	**Pn**	**17 19 08.2**	**-2.0**
	0.1nm,0.3s,baz=224,slow=15,SNR=4.9						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**13.33**	**18**	Pn	**Pn**	**17 19 33.5**	**+0.1**
	0.1nm,0.3s,baz=206,slow=11,SNR=14						
	0.2nm,0.5s						
AB31	**Akbulak array**	**14.09**	**326**	⇓P	**Pn**	**17 19 43.2**	**+0.2**
	0.4nm,0.5s,baz=141,slow=13,SNR=14						
AB31				⇓S	**Sn**	**17 22 16.6**	**-2.4**
	1.4nm,0.6s,baz=138,slow=22,SNR=10						
BVAR	**Borovoye Array**	**14.93**	**356**	Pn	**Pn**	**17 19 53.7**	**+0.1**
	0.1nm,0.3s,baz=173,slow=13,SNR=22						
	1.4nm,0.4s						
AKTO	**Aktyubinsk**	**15.80**	**326**	⇑P	**P**	**17 20 06.1**	**+1.0**
	0.9nm,0.8s						
AKTO				⇑S	**Sn**	**17 22 57.6**	**-2.6**
	2.0nm,0.9s						
ZALV	**Zalesovo Beam**	**18.11**	**25**	P	**P**	**17 20 30.7**	**+0.3**
	0.3nm,0.3s,baz=209,slow=11,SNR=6.5						
	1.0nm,0.4s						
HFS	**Hagfors**	**42.27**	**321**	P	**P**	**17 24 09.8**	**+1.4**
	0.9nm,0.5s,baz=94,slow=8.7,SNR=4.4						
	0.9nm,0.5s						
YKA	**Yellowknife Ar**	**79.58**	**3**	P	**P**	**17 28 19.1**	**-1.0**
	0.1nm,0.4s,baz=350,slow=6.5,SNR=2.9						
	0.1nm,0.4s						

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*SOME **02** 17:34:57.2, 41°.72N×73°.32E, h0km*

*KRNET **02** 17:34:57.6±0.1, 41°.78N×73°.34E, h18km, mb2.5*

ISC 02 17:34:57.6±1.1**, 41°.76N**±0°.03×**73°.34E**±0°.03**, h10**km±11km**, n14, σ1s26**/27**, 10C-7D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**0.74**	**82**	⇓*i*P	**Pg**	**17 35 11.8**	**-0.1**
ARLS				⇓*i*S	**Sg**	**17 35 22.0**	**+0.3**
SALK	**Salom-Alik**	**0.95**	**157**	⇑*i*P	**Pg**	**17 35 15.5**	**-0.3**
SALK				⇑*i*S	**Sb**	**17 35 28.5**	**-0.4**
MNAS	**Manas**	**0.95**	**320**	⇑*i*P	**Pg**	**17 35 15.4**	**-0.6**
MNAS				⇑*i*S	**Sg**	**17 35 28.2**	**-0.2**
EKS2	**Erkin-Say**	**0.96**	**20**	⇓*i*P	**Pg**	**17 35 15.2**	**-0.8**
EKS2				⇓*i*S	**Sg**	**17 35 28.0**	**-0.5**
UCH	**Uchtor**	**0.99**	**62**	⇑*i*P	**Pg**	**17 35 15.9**	**-0.8**
UCH				⇑*i*S	**Sg**	**17 35 29.3**	**-0.4**
AAK	**Ala-Archa**	**1.23**	**44**	⇑P	**Pn**	**17 35 20.4**	**-0.5**
	0.9nm,0.6s						
AAK				⇑S	**Sn**	**17 35 38.6**	**+0.8**
	2.8nm,0.9s						
AAK	**Ala-Archa**	**1.23**	**44**	⇓*i*P	**Pn**	**17 35 19.9**	**-1.1**
AAK				⇓*i*S	**Sb**	**17 35 36.2**	**-0.8**
SFK	**Sufi-Kurgan**	**1.75**	**176**	⇑*e*P	**Pb**	**17 35 29.9**	**0.0**
SFK				⇑*i*S	**Sg**	**17 35 53.3**	**-0.5**
KST	**Kastek**	**2.33**	**56**	*e*P	**Pg**	**17 35 41.7**	**-0.5**
	4.9nm,0.2s						
KST				*e*S	**Sg**	**17 36 14.3**	**+1.9**
	7.8nm,0.5s						
KK31	**Karatay Array**	**2.49**	**304**	Pg	**Pg**	**17 35 44.8**	**-0.4**
	1.5nm,0.3s,baz=121,slow=16,SNR=63						
KK31				⇓Lg	Lg	17 36 20.5	
	1.3nm,0.4s,baz=123,slow=29,SNR=5.8						
IUG	**Iuzhnay**	**2.50**	**280**	*e*P	**Pg**	**17 35 45.6**	**+0.3**
	8.4nm,0.5s						
IUG				*e*S	**Sg**	**17 36 20.4**	**+2.7**
	11nm,0.6s						
MTBS	**Maitube**	**2.67**	**58**	*e*P	**Pg**	**17 35 47.8**	**-0.8**
	2.2nm,0.2s						
MTBS				*e*S	**Sg**	**17 36 25.1**	**+1.9**
	1.3nm,0.1s						
TNSS	**Tian-Shan**	**2.96**	**63**	*e*P	**Pg**	**17 35 54.6**	**+0.3**
	1.3nm,0.5s						
TNSS				*e*S	**Sg**	**17 36 36.1**	**+3.4**
	1.0nm,0.3s						
KOTS	**Kotyrbulak**	**3.16**	**61**	*e*P	**Pg**	**17 35 57.6**	**-0.4**
	3.1nm,0.3s						
KOTS				*e*S	**Sg**	**17 36 40.9**	**+2.0**
	4.8nm,0.6s						

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*IDC **02** 17:43:29.2±1.5, 23°.76S×64°.80W, h0km, mb3.5/2, mbtmp3.5/6, ML3.4/3, MS3.1/1, Error ellipse: s-maj=33.8km s-min=23.5km az=41.0*

ISC 02 17:43:33.6±1.0**, 23°.69S**±0°.08×**64°.8W**±0°.1**, h35**km**, n7, σ1s80**/8**, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPUP	**Villa Florida**	**7.29**	**113**	Pn	**Pn**	**17 45 17.6**	**0.0**
	0.6nm,0.3s,baz=294,slow=15,SNR=16						
CPUP				Lg	Lg	17 47 17.9	
	1.5nm,0.3s,baz=3.6,slow=19,SNR=1.9						
	4.9nm,0.7s						
LPAZ	**La Paz**	**7.99**	**336**	Pn	**Pn**	**17 45 27.8**	**0.0**
	0.1nm,0.3s,baz=158,slow=8.5,SNR=2.0						
LPAZ				Sn	**Sn**	**17 46 56.6**	**-0.8**
	0.1nm,0.3s,baz=330,slow=5.5,SNR=1.3						
	0.4nm,0.4s						
SIV	**San Ignacio**	**8.43**	**25**	Pn	**Pn**	**17 45 34.1**	**+0.8**
	2.5nm,0.4s,baz=274,slow=3.7						
SIV				Sn	**Sn**	**17 47 04.3**	**-3.0**
	baz=274,slow=17						
CFA	**Coronel Fontan**	**8.45**	**200**	Pn	**Pn**	**17 45 32.0**	**-1.5**
	0.2nm,0.3s,baz=19,slow=15,SNR=1.6						
CFA				Lg	Lg	17 47 49.9	
	0.4nm,0.3s,baz=340,slow=9.7,SNR=2.3						
	0.7nm,0.4s						
PLCA	**Paso Flores**	**17.67**	**194**	LR	LR	17 54 45.8	
	comp=Z,60nm,20.0s,baz=237,slow=38						
TORD	**Torodi Ar. Bea**	**74.60**	**68**	P	**P**	**17 55 10.5**	**+0.9**
	0.2nm,0.5s,baz=256,slow=6.1,SNR=7.3						
	0.2nm,0.5s						
PDAR	**Pinedale Array**	**77.92**	**328**	P	**P**	**17 55 29.8**	**+1.6**
	0.4nm,0.7s,baz=142,slow=6.9,SNR=3.7						
	0.4nm,0.7s						

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*IDC **02** 17:57:46.0±1.9, 0°.46N×24°.88W, h0km, mb3.9/3, mbtmp4.0/3, MS3.4/13, Error ellipse: s-maj=73.0km s-min=42.6km az=136.0*

*NEIC **02** 17:57:48.9±0.9, 0°.6N±0°.2×24°.89W±0°.05, h10km±2km, mb4.8/8, Error ellipse: s-maj=35.0km s-min=7.8km az=188.0*

ISC 02 17:57:48.0±0.8**, 0°.7N**±0°.2×**24°.9W**±0°.1**, h10**km**, n32, σ0s72**/15**, MS3.4**/12**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**12.73**	**239**	LR	LR	18 04 26.9	
	comp=Z,60nm,21.2s,baz=71,slow=32						
RCBR	**Riachuelo**	**12.73**	**239**	Pn	**Pn**	**18 00 49.5**	**+0.2**
H10N3	**ASCENSION HYDR**	**13.37**	**129**	T	T	18 15 02.5	
	baz=307,slow=74,SNR=42						
H10N2	**ASCENSION HYDR**	**13.37**	**129**	T	T	18 14 59.4	
	baz=307,slow=74,SNR=35						
H10N1	**ASCENSION HYDR**	**13.38**	**129**	T	T	18 14 56.3	
	baz=307,slow=74,SNR=44						
H10S3	**ASCENSION HYDR**	**13.96**	**133**	T	T	18 15 39.0	
	baz=270,slow=74,SNR=14						
H10S2	**ASCENSION HYDR**	**13.98**	**133**	T	T	18 15 38.5	
	baz=310,slow=74,SNR=15						
DBIC	**Dimbokro**	**20.87**	**73**	P	**P**	**18 02 30.6**	**+0.1**
	5.1nm,0.9s,baz=255,slow=12,SNR=4.5						
DBIC				LR	LR	18 08 51.1	
	comp=Z,88nm,20.7s,baz=316,slow=32						
	5.1nm,0.9s						
DBIC	**Dimbokro**	**20.87**	**73**	P	**P**	**18 02 30.8**	**+0.4**
DBIC				IAmb	IAmb	18 02 35.4	
	comp=Z,52nm,1.9s						
SHEL	**Horse Pasture**	**25.10**	**132**	P	**P**	**18 03 13.8**	**+0.6**
BDFB	**Brasilia**	**27.99**	**234**	LR	LR	18 13 36.8	
	comp=Z,95nm,19.9s,baz=32,slow=34						
MDP	**Montagnes des**	**28.05**	**280**	LR	LR	18 12 14.0	
	comp=Z,48nm,20.0s,baz=128,slow=31						
TORD	**Torodi Ar. Bea**	**29.13**	**64**	P	**P**	**18 03 49.3**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=244,slow=10,SNR=5.2						
	comp=Z,0.9nm,0.8s						
MDT	**Midelt**	**37.27**	**29**	LR	LR	18 17 53.4	
	comp=Z,56nm,20.7s,baz=52,slow=32						
CPUP	**Villa Florida**	**41.20**	**227**	LR	LR	18 21 10.4	
	comp=Z,22nm,19.2s,baz=58,slow=34						
MLPR	**Magueyes Islan**	**44.83**	**295**	P	**P**	**18 06 02.6**	**-0.1**
CRPR	**Cabo Rojo, PR**	**44.91**	**295**	P	**P**	**18 06 04.0**	**+0.7**
LPAZ	**La Paz**	**45.85**	**246**	LR	LR	18 24 54.2	
	comp=Z,117nm,18.1s,baz=76,slow=36						
TSUM	**Tsumeb**	**46.12**	**118**	LR	LR	18 21 18.7	
	comp=Z,42nm,20.8s,baz=172,slow=31						
SDV	**Santo Domingo**	**46.26**	**282**	LR	LR	18 22 52.4	
	comp=Z,24nm,20.3s,baz=7.5,slow=32						
ROSC	**El Rosal**	**49.52**	**276**	LR	LR	18 26 05.9	
	comp=Z,56nm,18.6s,baz=323,slow=34						
NMDO	**Nuevo Mundo**	**52.76**	**295**	P	**P**	**18 07 03.8**	**+0.2**
LSZ	**Lusaka**	**54.78**	**109**	LR	LR	18 27 37.8	
	comp=Z,34nm,20.5s,baz=162,slow=33						
MBAR	**Mbarara**	**55.65**	**91**	LR	LR	18 29 17.0	
	comp=Z,46nm,18.3s,baz=225,slow=34						
L59A	**Walton**	**61.07**	**319**	P	**P**	**18 08 03.0**	**+0.7**
J57A	**Williamstown**	**62.27**	**320**	P	**P**	**18 08 09.1**	**-1.2**
MLR	**Muntele Rosu**	**63.12**	**38**	LR	LR	18 36 05.8	
	comp=Z,33nm,18.6s,baz=262,slow=36						
BNN	**Bunyan**	**67.13**	**48**	P	**P**	**18 08 42.3**	**-0.1**
BNN				IAmb	IAmb	18 09 01.7	
	comp=Z,20nm,2.0s						
FINES	**FINESS Array B**	**71.80**	**23**	P	**P**	**18 09 11.3**	**+0.8**
	comp=Z,1.3nm,0.7s,baz=239,slow=7.5,SNR=3.4						
	comp=Z,1.3nm,0.7s						
FINES	**FINESS Array B**	**71.80**	**23**	P	**P**	**18 09 10.5**	**0.0**
ASAR	**Alice Springs**	**149.24**	**140**	PKPbc	**PKPbc**	**18 17 37.3**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=233,slow=1.5,SNR=6.2						
WRA	**Warramunga Arr**	**152.06**	**135**	PKPbc	**PKPbc**	**18 17 43.2**	**-1.5**
	comp=Z,0.6nm,0.8s,baz=242,slow=2.5,SNR=3.6						

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*IDC **02** 18:00:29.1±2.1, 20°.92S×70°.51W, h0km, mb4.1/1, mbtmp3.9/3, ML3.5/1, MS2.5/1, Error ellipse: s-maj=78.8km s-min=49.2km az=141.0*

*SJA **02** 18:00:31.0±1.2, 20°.05S×70°.93W, h22km±3km, ML3.9, MW3.8*

*NEIC **02** 18:00:32.9±1.2, 20°.04S±0°.04×70°.90W±0°.05, h17km±7km, mb4.1/2, ML3.8(GUC), Error ellipse: s-maj=8.0km s-min=4.2km az=48.0*

*GUC **02** 18:00:34.0±0.8, 20°.03S×70°.91W, h20km±6km, ML3.8*

ISC 02 18:00:31.2±1.6**, 20°.05S**±0°.03×**70°.98W**±0°.05**, h12**km±9km**, n70, σ0s94**/83**, 4C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.82**	**105**	*e*P	**Pg**	**18 00 47.5**	**+0.3**
TA02	**Huaiquique**	**0.82**	**105**	*e*P	**Pg**	**18 00 47.0**	**-0.2**
TA02				*e*S	**Sg**	**18 00 57.5**	**-0.4**
TA02				IAML		18 00 59.0	
	comp=Z,3µm,0.9s						
TA01	**Diego Aracena**	**0.90**	**125**		**Pb**	**18 00 49.3**	**+0.5**
TA01					**Sg**	**18 01 00.6**	**+0.1**
HMBC	**Humberstone**	**1.05**	**103**		**Pb**	**18 00 50.9**	**-0.5**
HMBC				Sg	**Sb**	**18 01 03.6**	**-1.4**
HMBC	**Humberstone**	**1.05**	**103**	⇓*i*P	**Pb**	**18 00 51.0**	**-0.3**
HMBC				*i* S	**Sb**	**18 01 03.9**	**-1.2**
HMBC				IAML		18 01 06.7	
	comp=N,4µm,0.5s						
HMBC	**Humberstone**	**1.05**	**103**	*e*P	**Pb**	**18 00 50.8**	**-0.5**
HMBC				*e*S	**Sb**	**18 01 05.6**	**+0.5**
HMBC				IAML		18 01 10.9	
	comp=Z,3µm,0.3s						
PB11	**IPOC Station P**	**1.27**	**77**		**Pn**	**18 00 54.5**	**-0.4**
PB11	**IPOC Station P**	**1.27**	**77**	⇓*i*P	**Pn**	**18 00 54.6**	**-0.4**
PB11				*i* S	**Sb**	**18 01 10.3**	**-1.3**
PB11				IAML		18 01 12.4	
	comp=N,5µm,0.5s						
PB11	**IPOC Station P**	**1.27**	**77**	*e*P	**Pn**	**18 00 54.6**	**-0.4**
PB11				*e*S	**Sb**	**18 01 11.5**	**-0.2**
PB11				IAML		18 01 12.0	
	comp=Z,3µm,0.2s						
PX02	**IPOC Station P**	**1.31**	**34**	*e*P	**Pn**	**18 00 54.3**	**-1.1**
PX03	**IPOC Station P**	**1.31**	**106**	*e*P	**Pn**	**18 00 54.9**	**-0.6**
PX03				*e*S	**Sb**	**18 01 11.4**	**-1.2**
PB12	**IPOC Station P**	**1.56**	**23**		**Pn**	**18 00 59.3**	**+0.5**
PB12	**IPOC Station P**	**1.56**	**23**	*i* P	**Pn**	**18 00 59.2**	**+0.5**
PB12				*e*S	**Sn**	**18 01 17.8**	**-1.2**
PB12				IAML		18 01 30.3	
	comp=E,2µm,0.5s						
PB12	**IPOC Station P**	**1.56**	**23**	*e*P	**Pn**	**18 00 59.4**	**+0.5**
PB12				*e*S	**Sb**	**18 01 20.3**	**+0.6**
PB12				IAML		18 01 27.8	
	comp=Z,874nm,0.7s						
PB02	**IPOC Station P**	**1.62**	**142**		**Pn**	**18 01 00.1**	**+0.4**
PB02	**IPOC Station P**	**1.62**	**142**	⇑*i*P	**Pn**	**18 01 00.3**	**+0.7**
PB02				*i* S	**Sn**	**18 01 20.1**	**-0.5**
PB02				IAML		18 01 25.9	
	comp=E,4µm,0.5s						
PB02	**IPOC Station P**	**1.62**	**142**	*e*P	**Pn**	**18 01 00.3**	**+0.7**
PB02				*e*S	**Sb**	**18 01 22.1**	**+0.6**
PB02				IAML		18 01 31.1	
	comp=Z,3µm,0.4s						
PB01	**IPOC Station P**	**1.71**	**126**		**Pn**	**18 01 01.4**	**+0.5**
PB01	**IPOC Station P**	**1.71**	**126**	*i* P	**Pn**	**18 01 01.5**	**+0.5**
PB01				*i* S	**Sn**	**18 01 22.5**	**-0.2**
PB01				IAML		18 01 28.6	
	comp=N,2µm,0.4s						
PB01	**IPOC Station P**	**1.71**	**126**	*e*P	**Pn**	**18 01 01.7**	**+0.7**
PB01				*e*S	**Sn**	**18 01 23.5**	**+0.8**
PB01				IAML		18 01 28.3	
	comp=Z,2µm,0.4s						
PB08	**IPOC Station P**	**1.71**	**93**		**Pn**	**18 01 01.5**	**+0.3**
GO01	**Chusmiza**	**1.72**	**77**		**Pn**	**18 01 01.6**	**+0.2**
GO01	**Chusmiza**	**1.72**	**77**	⇑*i*P	**Pn**	**18 01 01.8**	**+0.5**
GO01				*i* S	**Sn**	**18 01 23.6**	**0.0**
GO01	**Chusmiza**	**1.72**	**77**	*e*P	**Pn**	**18 01 01.9**	**+0.5**
GO01				*e*S	**Sn**	**18 01 24.2**	**+0.7**
GO01				IAML		18 01 24.6	
	comp=Z,3µm,0.7s						
AP01	**Chacalluta**	**1.78**	**20**		**Pn**	**18 01 02.7**	**+1.0**
AP01	**Chacalluta**	**1.78**	**20**	*e*P	**Pn**	**18 01 02.2**	**+0.5**
AP01				IAML		18 01 34.5	
	comp=N,3µm,0.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AP01	Chacalluta	1.78	20	eP	Pn	18 01 02.3	+0.5
AP01				eS	Sb	18 01 25.6	-0.4
AP01				IAML		18 01 39.6	
	comp=Z,1µm,0.2s						
PB07	IPOC Station P	1.95	149		Pn	18 01 04.7	+0.3
PB07	IPOC Station P	1.95	149	⇑iP	Pn	18 01 04.8	+0.5
PB07				iS	Sb	18 01 31.2	-0.1
PB07				IAML		18 01 38.5	
	comp=E,1µm,0.5s						
PB07	IPOC Station P	1.95	149	eP	Pn	18 01 04.7	+0.3
PB07				eS	Sb	18 01 31.1	-0.2
PB07				IAML		18 01 38.8	
	comp=Z,861nm,0.4s						
PB16	IPOC Station P	2.20	39		Pn	18 01 08.8	+0.7
PB16	IPOC Station P	2.20	39	iP	Pn	18 01 09.0	+0.9
PB16				iS	Sn	18 01 37.1	+1.6
PB16				IAML		18 01 45.8	
	comp=N,729nm,0.3s						
PB16	IPOC Station P	2.20	39	eP	Pn	18 01 09.0	+0.9
PB16				eS	Sn	18 01 37.2	+1.6
PB16				IAML		18 01 48.3	
	comp=Z,573nm,0.6s						
PB03	IPOC Station P	2.29	150		Pn	18 01 09.6	+0.6
PB03	IPOC Station P	2.29	150	iP	Pn	18 01 09.4	+0.4
PB03				IAML		18 01 48.3	
	comp=E,456nm,0.6s						
PB09	IPOC Station P	2.37	137	Pn	Pn	18 01 11.9	+1.8
PB09	IPOC Station P	2.37	137	⇑iP	Pn	18 01 11.9	+1.8
PB09				iS	Sn	18 01 41.2	+1.9
PB09				IAML		18 01 52.5	
	comp=E,1µm,0.6s						
PB09	IPOC Station P	2.37	137	eP	Pn	18 01 10.3	+0.1
PB09				IAML		18 01 54.4	
	comp=Z,1µm,0.5s						
PB18	Visviri	2.83	30	eS	Sb	18 01 54.8	-2.1
PB18				IAML		18 02 12.3	
	comp=E,686nm,0.5s						
PB05	IPOC Station P	2.88	166		Pn	18 01 16.9	-0.1
PB05	IPOC Station P	2.88	166	eP	Pn	18 01 17.0	-0.1
PB05				eS	Sb	18 01 56.6	-1.3
PB05				IAML		18 02 15.9	
	comp=E,210nm,0.6s						
PB06	IPOC Station P	2.95	154		Pn	18 01 18.1	+0.1
PB06	IPOC Station P	2.95	154	eP	Pn	18 01 18.0	0.0
PB06	IPOC Station P	2.95	154	eP	Pn	18 01 18.2	+0.1
PB06				IAML		18 02 11.0	
	comp=Z,272nm,0.6s						
PB14	IPOC Station P	4.58	173		Pn	18 01 40.0	-0.6
LPAZ	La Paz	4.62	36	Pn	Pb	18 01 47.5	-5.1
	comp=Z,0.9nm,0.3s,baz=212,slow=5.0,SNR=18						
LPAZ				Lg	Lg	18 02 58.3	
	comp=Z,0.5nm,0.3s,baz=0.0,slow=20,SNR=1.3						
LPAZ				LR	LR	18 04 15.7	
	comp=Z,59nm,21.3s,baz=266,slow=44						
	comp=Z,2.1nm,0.3s						
GO02	Mina Guanaco	5.25	166	Pn	Pn	18 01 50.3	+0.6
AC01	Pan de Azucar	6.08	177	Pn	Pn	18 01 59.6	-1.4
AC02	Maricunga	6.96	166	Pn	Pn	18 02 12.7	-0.8
LCO	Las Campanas	8.92	178	Pn	Pn	18 02 42.1	+1.9
SIV	San Ignacio	10.25	68	Pn	Pn	18 02 57.7	-0.5
	comp=Z,2.3nm,0.4s,baz=274,slow=10						
PTLB	Pontes e Lacer	12.17	70	Pn	Pn	18 03 25.3	+0.8
VILB	Vilhena	12.51	57	Pn	Pn	18 03 30.5	+1.3
H03N1	Juan Fernandez	15.09	206	T	T	18 19 40.9	
	baz=32,slow=72,SNR=35						
H03N2	Juan Fernandez	15.10	206	T	T	18 19 39.7	
	baz=32,slow=72,SNR=25						
H03N3	Juan Fernandez	15.11	206	T	T	18 19 42.5	
	baz=32,slow=72,SNR=25						
BOAV	Boa Vista	24.55	26	P	P	18 05 51.5	+0.4
BOAV				IAmb	IAmb	18 05 58.2	
	comp=Z,3.3nm,0.8s						
RCBR	Riachuelo	36.88	72	P	P	18 07 39.8	-0.2
RCBR				IAmb	IAmb	18 07 49.4	
	comp=Z,3.2nm,0.9s						
TORD	Torodi Ar. Bea	78.71	71	P	P	18 12 32.8	-1.2
	comp=Z,1.8nm,1.0s,baz=234,slow=7.5,SNR=6.1						
	comp=Z,1.8nm,1.0s						
H11S2	WAKE ISLAND Hy	125.76	279	T	T	20 38 55.9	
	baz=101,slow=74,SNR=24						
H11S1	WAKE ISLAND Hy	125.77	279	T	T	20 38 54.7	
	baz=101,slow=74,SNR=14						
H11S3	WAKE ISLAND Hy	125.78	279	T	T	20 38 57.0	
	baz=101,slow=74,SNR=18						
H11N3	WAKE ISLAND Hy	125.81	280	T	T	20 39 01.1	
	baz=101						
H11N2	WAKE ISLAND Hy	125.83	280	T	T	20 38 58.8	
	baz=101						
H11N1	WAKE ISLAND Hy	125.83	280	T	T	20 38 59.4	
	baz=101						
KSH2	Kashi	145.51	49	PKPbc	PKPab	18 20 11.7	+1.6
MKAR	Makanchi Array	145.54	33	PKPbc	PKPab	18 20 10.6	+0.8
	comp=Z,1.2nm,0.7s,baz=318,slow=3.5,SNR=12						
SONM	Songino Array	152.20	4	PKPbc	PKiKP	18 20 28.5	+1.2
	comp=Z,0.2nm,0.7s,baz=328,slow=3.7,SNR=3.6						
HHC	Hu-ho-hao-te	159.16	355	eP	PKPdf	18 20 26.3	-3.4
PZH	PanZhiHua	170.73	45	PKP	PKPdf	18 20 39.8	-0.3

*IDC **02** 18:05:10.1±4.8, 27°.62S×176°.94W, h0km, mb3.8/3, mbtmp3.8/3, MS3.5/5, Error ellipse: s-maj=236.9km s-min=36.9km az=152.0*

ISC 02 18:05:12.7±2.9**, 28°.2S**±0°.5×**176°.5W**±0°.5**, h35**km**, n13,** σ**0.93**/7**, mb3.9**/3**, MS3.4**/4**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.61	229	Sn	Sn	18 05 57.7	-0.5
	180nm,0.3s,baz=85,slow=22,SNR=2.6						
URZ	Urewera	11.35	206	LR	LR	18 11 59.1	
	comp=Z,168nm,18.0s,baz=351,slow=35						
DZM	Mont Dzumac	16.58	288	LR	LR	18 14 19.7	
	comp=Z,129nm,18.6s,baz=12,slow=34						
PPT	Papeete	26.93	73	LR	LR	18 21 49.2	
	comp=Z,68nm,18.0s,baz=186,slow=37						
HNR	Honiara	28.96	306	LR	LR	18 21 10.0	
	comp=Z,4.2nm,18.7s,baz=290,slow=34						
CTA	Charters Tower	34.80	275	LR	LR	18 25 11.5	
	comp=Z,153nm,18.2s,baz=61,slow=35						
STKA	Stephens Creek	36.28	254	P	P	18 12 14.2	+1.2
	2.8nm,1.1s,baz=104,slow=12,SNR=1.7						
	2.8nm,1.1s						
ASAR	Alice Springs	44.57	264	P	P	18 13 21.3	-0.3
	0.7nm,0.7s,baz=106,slow=7.7,SNR=12						
	0.7nm,0.7s						
WRA	Warramunga Arr	45.36	269	P	P	18 13 27.3	-0.6
	0.5nm,0.3s,baz=111,slow=7.7,SNR=7.9						
	0.5nm,0.3s						
RPN	Rapa Nui	58.79	106	LR	LR	18 37 03.0	
	comp=Z,29nm,18.1s,baz=187,slow=32						
NOA	NORSAR Array B	146.75	353	PKPbc	PKPab	18 24 50.9	-0.8
	0.6nm,0.9s,baz=29,slow=3.1,SNR=1.4						
HFS	Hagfors	147.32	351	PKPbc	PKPbc	18 24 52.6	+0.6
	1.5nm,0.6s,baz=27,slow=4.8,SNR=5.2						
AKASG	Malin Array Be	150.27	326	PKPbc	PKiKP	18 25 00.2	-0.4
	0.4nm,0.4s,baz=49,slow=2.7,SNR=1.9						

*NEIC **02** 18:21:37.0±1.0, 38°.52S±0°.07×71°.0W±0°.1, h185km±6km, ML4.1/36, ML4.2(GUC), Error ellipse: s-maj=12.9km s-min=10.0km az=88.0*

*SJA **02** 18:21:37.3±0.7, 38°.50S×70°.92W, h176km±6km, ML3.9, MW3.7*

*GUC **02** 18:21:38.5±0.6, 38°.54S×71°.15W, h174km±5km, ML4.2*

ISC 02 18:21:37.9±1.0**, 38°.48S**±0°.03×**71°.01W**±0°.06**, h172**km±8km**, n60,** σ**1.82**/81**, 4C, Southern Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CANA	Caviahue	0.59	356	eP	Pn	18 22 02.9	+0.3
LC01	Cunco	0.79	238	⇑iP	Pn	18 22 03.0	-0.4
LC01				eS	Sn	18 22 22.0	-1.1
GO06	Curarrehue	1.16	198		Pn	18 22 06.0	-0.2
GO06				Sn	Sn	18 22 27.5	-0.8
GO06	Curarrehue	1.16	198	⇑eP	Pn	18 22 06.1	-0.2
GO06				eS	Sn	18 22 27.2	-1.1
GO06	Curarrehue	1.16	198	eP	Pn	18 22 06.0	-0.2
GO06				eS	Sn	18 22 27.9	-0.3
BI02	San Fabin de	1.83	353		Pn	18 22 13.7	+1.0
BI02	San Fabin de	1.83	353	⇑eP	Pn	18 22 13.8	+1.0
BI02				eS	Sn	18 22 40.6	+1.0
BI02	San Fabin de	1.83	353	eP	Pn	18 22 13.1	+0.4
LR05	Currie	1.91	203		Pn	18 22 13.1	-0.3
LR05	Currie	1.91	203	eP	Pn	18 22 13.4	-0.1
LR05				IAML		18 22 50.8	
	comp=E,223nm,0.3s						
LR05	Currie	1.91	203	eP	Pn	18 22 14.0	+0.6
LR05				eS	Sn	18 22 48.3	+7.2
LR02	Universidad Au	2.19	232	eP	Pn	18 22 15.9	-0.6
LR02				eS	Sn	18 22 44.0	-2.5
LR02				IAML		18 22 48.4	
	comp=E,3µm,0.2s						
BI04	Isla Mocha	2.26	271	eP	Pn	18 22 16.9	-0.4
BI04				eS	Sn	18 22 45.5	-2.3
PLCA	Paso Flores	2.28	171		Pn	18 22 17.4	-0.2
PLCA	Paso Flores	2.28	171	eP	Pn	18 22 17.8	+0.1
PLCA				eS	Sn	18 22 42.8	-5.8
LR04	Corral	2.34	233		Pn	18 22 17.1	-1.1
LR04				Sn	Sn	18 22 46.5	-3.1
LR04	Corral	2.34	233	eP	Pn	18 22 17.1	-1.1
LR04				eS	Sn	18 22 47.0	-2.6
LR04				IAML		18 22 48.9	
	comp=N,2µm,0.2s						
LR04	Corral	2.34	233	eP	Pn	18 22 16.6	-1.6
LR04				IAML		18 22 48.8	
	comp=Z,1µm,0.2s						
BI05	Punta Hualpn	2.45	314		Pn	18 22 19.9	+0.4
BI05				IAML		18 22 52.4	
	comp=E,821nm,0.3s						
BI05	Punta Hualpn	2.45	314	eP	Pn	18 22 20.1	+0.5
BI05				eS	Sn	18 22 50.0	-1.8
BI05				IAML		18 22 53.4	
	comp=N,2µm,0.1s						
BI05	Punta Hualpn	2.45	314	eP	Pn	18 22 19.7	+0.2
BI05				IAML		18 22 53.2	
	comp=Z,308nm,0.3s						
LL04	Puerto Octay	2.65	203	eP	Pn	18 22 22.5	+0.6
LL04				eS	Sn	18 22 57.3	+1.0
ML02	Panimavida	2.73	353		Pn	18 22 23.8	+0.7
ML02				IAML		18 23 01.0	
	comp=N,247nm,0.4s						
ML02				IAML		18 23 02.4	
	comp=E,317nm,0.5s						
ML02	Panimavida	2.73	353	eP	Pn	18 22 24.0	+1.0
ML02	Panimavida	2.73	353	eS	Sn	18 22 58.3	+0.2
ML02				IAML		18 23 04.4	
	comp=Z,141nm,0.3s						
EDS3	Malargue	3.00	26	eP	Pn	18 22 23.7	-2.7
GO05	Hualane	3.54	348		Pn	18 22 33.4	+0.4
GO05				IAML		18 23 18.1	
	comp=N,266nm,0.5s						
GO05				IAML		18 23 18.2	
	comp=E,413nm,0.6s						
GO05	Hualane	3.54	348	eP	Pn	18 22 33.5	+0.4
GO05	Hualane	3.54	348	eP	Pn	18 22 33.4	+0.4
GO05				eS	Sn	18 23 15.6	-0.4
GO05				IAML		18 23 16.9	
	comp=Z,193nm,0.2s						
BO02	Sierra Bellavi	3.69	3		Pn	18 22 35.4	+0.4
BO02				IAML		18 23 21.7	
	comp=N,230nm,0.7s						
BO02				IAML		18 23 26.6	
	comp=E,240nm,0.4s						
BO02	Sierra Bellavi	3.69	3	eP	Pn	18 22 35.6	+0.6
BO02	Sierra Bellavi	3.69	3	eP	Pn	18 22 35.7	+0.7
BO02				eS	Sn	18 23 22.4	+3.1
BO02				IAML		18 23 29.2	
	comp=Z,123nm,0.2s						
BO01	Tunca	4.08	359		Pn	18 22 39.6	-0.3
BO01				IAML		18 23 28.7	
	comp=E,106nm,0.3s						
BO01	Tunca	4.08	359	eP	Pn	18 22 39.5	-0.3
BO01				eS	Sn	18 23 26.7	-1.6
BO01				IAML		18 23 32.7	
	comp=Z,66nm,0.3s						
RFA	San Rafael	4.23	30	eP	Pn	18 22 38.3	-3.6
RFA				eS	Sn	18 23 34.8	+3.0
BO04	La Punta	4.50	4		Pn	18 22 45.0	-0.3
BO04				IAML		18 23 40.1	
	comp=N,96nm,0.8s						
BO04				IAML		18 23 40.6	
	comp=E,84nm,0.4s						
MT01	Popeta	4.61	358		Pn	18 22 45.4	-1.4
MT01				IAML		18 23 42.9	
	comp=N,145nm,0.4s						
MT01	Popeta	4.61	358	eP	Pn	18 22 45.6	-1.1
MT01				eS	Sn	18 23 37.9	-2.7
MT01				IAML		18 23 41.6	
	comp=Z,135nm,0.2s						
MT09	Talagante	4.70	0		Pn	18 22 46.8	-1.2
MT09				Sn	Sn	18 23 38.9	-3.9
MT13	San Alfonso	4.76	7		Pn	18 22 48.3	-0.5
MT13				IAML		18 23 46.4	
	comp=N,168nm,0.7s						
MT13				IAML		18 23 47.1	
	comp=E,150nm,0.3s						
MT13	San Alfonso	4.76	7	eP	Pn	18 22 44.4	-4.4
MT13				eS	Sn	18 23 45.0	+0.7
MT13				IAML		18 23 49.1	
	comp=Z,59nm,0.5s						
MT03	Universidad Ad	4.99	5	Pn	Pn	18 22 51.1	-0.7
MT03				IAML		18 23 54.4	
	comp=N,128nm,0.3s						
MT05	Renca	5.08	3	Pn	Pn	18 22 52.5	-0.4
MT05	Renca	5.08	3	eP	Pn	18 22 52.9	0.0
MT05				eS	Sn	18 23 49.1	-2.6
MT05				IAML		18 23 51.3	
	comp=Z,106nm,0.3s						
MT08	Bocatoma Ro	5.09	9		Pn	18 22 53.3	+0.1
MT04	Ro Olivares	5.12	8	eP	Pn	18 22 53.9	+0.4
MT04				eS	Sn	18 23 53.3	+0.6
MT04				IAML		18 23 55.0	
	comp=Z,28nm,0.2s						
MT02	Curacav	5.21	359	IAML		18 23 53.7	
	comp=N,73nm,0.7s						
MT02				IAML		18 23 55.9	
	comp=E,65nm,0.7s						
PEL	Peldehue	5.33	3		Pn	18 22 55.4	-0.8
PEL				IAML		18 23 58.6	
	comp=E,95nm,0.5s						
PEL				IAML		18 23 59.9	
	comp=N,82nm,0.3s						
VA01	Torpederas	5.47	354		Pn	18 22 56.6	-1.3
VA03	San Esteban	5.72	4		Pn	18 23 00.2	-1.1
VA06	Catapilco	5.91	358		Pn	18 23 02.1	-1.6
CO04	Los Peladeros	6.42	0		Pn	18 23 09.3	-1.5
TRQA	Tornquist	7.12	89		Pn	18 23 18.9	-0.7
ZON	Zonda	7.18	16	Pn	Pn	18 23 19.7	-0.8
CO02	Combarbal	7.26	0		Pn	18 23 19.9	-1.8
CO03	El Pedregal	7.63	2		Pn	18 23 25.2	-1.3
CO06	Fray Jorge	7.81	356		Pn	18 23 26.9	-1.9
CO01	Juntas del Tor	8.52	5	Pn	Pn	18 23 37.5	-0.8
SNAA	Sanae	47.14	156	⇑P	P	18 29 54.3	+1.9
	comp=Z,252nm,0.9s						
TROLL	Troll, Antarti	48.84	157	P	P	18 30 07.3	+1.8

*IDC **02** 18:28:59.1±1.4, 41°.80S×84°.45E, h0km, mb4.0/6, mbtmp4.0/6, MS3.6/18, Error ellipse: s-maj=40.2km s-min=31.6km az=92.0*

ISC 02 18:29:00.7±1.2**, 41°.8S**±0°.2×**84°.5E**±0°.3**, h10**km**, n32,** σ**0.72**/7**, mb4.1**/6**, MS3.6**/18**, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H04S1	CROZET ISLANDS	23.73	247	T	T	18 59 13.9	
	baz=89,slow=76,SNR=7.4						
H04S2	CROZET ISLANDS	23.75	247	T	T	18 59 09.6	
	baz=89,slow=76,SNR=22						
H04S3	CROZET ISLANDS	23.75	247	T	T	18 59 08.2	
	baz=89,slow=76,SNR=15						
H04N2	CROZET ISLANDS	23.81	248	T	T	18 59 21.5	
	baz=90,slow=75,SNR=298						
H04N3	CROZET ISLANDS	23.83	248	T	T	18 59 22.2	
	baz=90,slow=75,SNR=217						
H04N1	CROZET ISLANDS	23.83	248	T	T	18 59 21.3	
	baz=90,slow=75,SNR=342						
H01W2	Cape Leeuwin H	24.18	83	T	T	18 58 55.3	
	baz=244						
H01W3	Cape Leeuwin H	24.19	83	T	T	18 58 56.5	
	baz=244						
H01W1	Cape Leeuwin H	24.20	83	T	T	18 58 57.4	
	baz=244						
MAW	Mawson	28.40	197	LR	LR	18 43 25.3	
	comp=Z,120nm,20.7s,baz=61,slow=30						
H08S2	Diego Garcia H	35.63	339	T	T	19 13 38.7	
	baz=164,slow=76,SNR=158						
H08S1	Diego Garcia H	35.63	339	T	T	19 13 35.4	
	baz=164,slow=76,SNR=106						
H08S3	Diego Garcia H	35.65	339	T	T	19 13 36.4	
	baz=164,slow=76,SNR=533						
ASAR	Alice Springs	44.69	82	P	P	18 37 13.8	-0.1
	2.2nm,0.8s,baz=218,slow=6.9,SNR=17						
ASAR				PcP	PcP	18 38 56.4	+0.1
	0.4nm,0.8s,baz=242,slow=2.0,SNR=2.7						
	2.2nm,0.8s						
STKA	Stephens Creek	46.03	97	LR	LR	18 54 22.4	
	comp=Z,67nm,18.5s,baz=203,slow=33						
BATI	Baumata	46.58	59	LR	LR	18 53 44.6	
	comp=Z,44nm,20.4s,baz=258,slow=32						
VNDA	Vanda	46.88	163	LR	LR	18 53 58.3	
	comp=Z,97nm,19.0s,baz=300,slow=32						
WRA	Warramunga Arr	47.27	78	P	P	18 37 34.5	+0.2
	3.7nm,1.0s,baz=230,slow=7.3,SNR=13						
	3.7nm,1.0s						
QSPA	South Pole Qui	48.36	180	P	P	18 37 42.4	+0.1
	4.5nm,0.8s,baz=312,slow=5.1,SNR=4.6						
QSPA				LR	LR	18 55 50.8	
	comp=Z,132nm,19.4s,baz=1.0,slow=33						
	4.5nm,0.8s						
PALK	Pallekele	48.95	355	LR	LR	18 53 28.7	
	comp=Z,97nm,21.6s,baz=174,slow=30						
BOSA	Boshof	49.25	266	LR	LR	18 54 11.8	
	comp=Z,71nm,20.9s,baz=180,slow=31						
SUR	Sutherland	50.61	259	LR	LR	18 54 24.7	
	comp=Z,46nm,20.4s,baz=150,slow=30						
LSZ	Lusaka	54.94	281	LR	LR	18 58 26.9	
	comp=Z,57nm,19.3s,baz=128,slow=32						
TSUM	Tsumeb	60.37	270	LR	LR	19 00 39.9	
	comp=Z,67nm,21.2s,baz=154,slow=32						
CMAR	Chiang Mai Arr	61.42	16	P	P	18 39 17.5	+0.4
	0.5nm,0.4s,baz=208,slow=6.8,SNR=5.1						
CMAR				LR	LR	19 04 27.3	
	comp=Z,15nm,18.0s,baz=205,slow=35						
	0.5nm,0.4s						
BRDH	Bariadhala	64.48	7	LR	LR	19 03 01.8	
	comp=Z,48nm,19.7s,baz=212,slow=32						
AAK	Ala-Archa	84.53	353	LR	LR	19 14 45.4	
	comp=Z,21nm,21.2s,baz=218,slow=32						
MKAR	Makanchi Array	88.22	358	P	P	18 41 52.1	+0.6
	0.2nm,0.5s,baz=180,slow=5.3,SNR=4.6						
MKAR				LR	LR	19 20 12.8	
	comp=Z,21nm,19.1s,baz=160,slow=35						
	0.2nm,0.5s						
SONM	Songino Array	91.33	15	P	P	18 42 05.0	-1.2
	0.4nm,0.8s,baz=204,slow=3.2,SNR=1.4						
SONM				LR	LR	19 20 27.6	
	comp=Z,18nm,20.6s,baz=200,slow=34						
	0.4nm,0.8s						
DBIC	Dimbokro	93.89	275	LR	LR	19 18 29.8	
	comp=Z,42nm,20.2s,baz=173,slow=32						
AKTO	Aktyubinsk	94.72	343	LR	LR	19 24 21.8	
	comp=Z,26nm,18.9s,baz=124,slow=35						
BVAR	Borovoye Array	95.22	352	LR	LR	19 21 46.0	
	comp=Z,32nm,19.4s,baz=247,slow=33						

*NDI **02** 18:33:28.7±3.2, 28°.80N×91°.97E, h10km, ML3.4, MW3.2, Presumed earthquake*

ISC 02 18:33:26.6±1.2**, 28°.79N**±0°.06×**91°.90E**±0°.05**, h10**km**, n15,** σ**2.02**/23**, Xizang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LSA	Lhasa	1.12	324	Pg	Pg	18 33 43.9	-4.3
LSA				Sg	Sg	18 34 00.1	-2.7
LSA				smax	smax		
	comp=N,170nm,0.6s						
LSA				smax	smax		
	comp=E,150nm,0.5s						
TAWA	Tawang	1.19	181	IAML		18 34 00.7	
	comp=N,319nm,0.2s						
TAWA				IAML		18 34 01.8	
	comp=E,500nm,0.2s						
ZIRO	ZIRO	2.13	126	eP	Pn	18 34 04.5	+2.0
ZIRO				eS	Sn	18 34 30.4	+1.3
ZIRO				IAML		18 34 35.1	
	comp=N,709nm,0.7s						
ZIRO				IAML		18 34 37.0	
	comp=E,255nm,0.6s						
ITAN	ITANAGAR	2.30	135	eP	Pn	18 34 06.7	+2.1
ITAN				eS	Sb	18 34 35.9	-0.8
ITAN				IAML		18 34 37.6	
	comp=E,466nm,0.4s						
ITAN				IAML		18 34 39.3	
	comp=N,229nm,0.4s						
TEZP	TEZPUR	2.31	160	eP	Pn	18 34 05.2	+0.5
TEZP				eS	Sb	18 34 36.0	-0.9
TEZP				IAML		18 34 37.1	
	comp=N,328nm,0.2s						
TEZP				IAML		18 34 37.3	
	comp=E,266nm,0.2s						
GUWA	GUWAHATI	2.59	184	eP	Pn	18 34 10.7	+2.1
GUWA				eS	Sn	18 34 41.5	+1.4
GUWA				IAML		18 34 44.6	
	comp=N,98nm,0.4s						
GUWA				IAML		18 34 45.0	
	comp=E,87nm,0.4s						
JORH	JORHAT	2.92	134	ex	x	18 34 55.5	
JORH				IAML		18 34 59.0	
	comp=N,371nm,0.3s						
PASG	PASIGHAT	3.10	103	eP	Pn	18 34 18.4	+2.7
SHL	Shillong	3.21	180	eP	Pn	18 34 19.9	+2.6
SHL				eS	Sn	18 34 56.0	+0.3
SHL				IAML		18 35 02.7	
	comp=N,917nm,0.3s						
SHL				IAML		18 35 03.2	
	comp=E,828nm,0.4s						
DHUB	DHUBRI	3.24	212	eP	Pn	18 34 19.1	+1.7
DHUB				eS	Sn	18 34 59.4	+3.4
DHUB				IAML		18 35 01.3	
	comp=N,118nm,0.3s						
DHUB				IAML		18 35 01.5	
	comp=E,98nm,0.2s						
GTK	Tadong	3.26	244	eP	Pb	18 34 23.1	-1.6
GTK				eS	Sn	18 35 00.2	+3.3
GTK				IAML		18 35 10.6	
	comp=N,478nm,0.3s						
GTK				IAML		18 35 10.7	
	comp=Z,226nm,0.3s						
MOKO	MOKOCHONG	3.38	136	eP	Pn	18 34 20.5	+0.9
MOKO				eS	Sn	18 35 02.2	+2.2
MOKO				IAML		18 35 10.9	
	comp=E,138nm,0.4s						
MOKO				IAML		18 35 11.4	
	comp=N,126nm,0.4s						
KOHI	KOHIMA	3.63	147	eP	Pn	18 34 22.8	-0.3
KOHI				eS	Sn	18 35 06.0	-0.2
KOHI				IAML		18 35 19.2	
	comp=N,77nm,0.4s						
KOHI				IAML		18 35 24.0	
	comp=E,92nm,1.0s						
IMP	Imphal	4.35	155	eP	Pn	18 34 33.0	+0.2
SAIH	SAIHA	6.35	171	eP	Pn	18 34 59.3	-1.1
SAIH				eS	Sn	18 36 10.3	-2.7
SAIH				IAML		18 36 15.5	
	comp=E,111nm,1.0s						
SAIH				IAML		18 36 21.0	
	comp=N,126nm,0.5s						

*VIE **02** 19:13:26.6±1.2, 49°.85N×18°.57E, h0km, mb2.6/4, ml2.5/4, Error ellipse: s-maj=9.9km s-min=5.4km az=44.0 23 km E of Ostrava Suspected Mining induced.*

*IPEC **02** 19:13:27.0±0.3, 49°.82N×18°.56E, h1km, ML2.3/6, Error ellipse: s-maj=1.8km s-min=1.4km az=71.0*

*PRU **02** 19:13:30.1, 49°.83N×18°.35E, h0km, Mining Induced Event Csm, E=6.1e+05*

ISC 02 19:13:26.0±0.8**, 49°.83N**±0°.04×**18°.52E**±0°.02**, h0**km**, n30,** σ**0.96**/53**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.24	272	ePG	Pb	19 13 32.9	+2.3
OKC				eSG	Sg	19 13 34.4	+0.7
	comp=Z,117nm,0.4s						
STEB	Steborice	0.49	282	ePG	Pb	19 13 37.2	-0.4
STEB				eSG	Sb	19 13 44.3	-1.1
MORC	Moravsky Berou	0.64	266	ePg	Pb	19 13 39.8	-0.2
	baz=86						
MORC				eSg	Sg	19 13 47.8	+1.4
	60nm,0.5s,baz=86						
LOSC	Losov	0.77	255	ePg	Pb	19 13 42.2	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=75						
LOSC				eSg	Sg	19 13 51.9	+1.1
	53nm,0.3s,baz=75						
ANAC	**Anensky vrch**	**0.78**	**289**	ePg	**Pb**	**19 13 42.4**	**0.0**
	baz=108						
ANAC				eSg	**Sb**	**19 13 52.6**	**-1.0**
	65nm,0.4s,baz=108						
LANS	**Liptovska Anna**	**0.92**	**137**	ePG	**Pb**	**19 13 44.7**	**-0.1**
LANS				eSG	**Sb**	**19 13 57.7**	**+0.1**
LANS				eLG	Lg	19 14 01.2	
JAVC	**Velka Javorina**	**1.12**	**210**	ePg	**Pn**	**19 13 48.6**	**-0.4**
	baz=31						
JAVC	**Velka Javorina**	**1.12**	**210**	ePG	**Pn**	**19 13 48.7**	**-0.3**
KRLC	**Kraliky**	**1.15**	**283**	ePG	**Pb**	**19 13 48.4**	**-0.4**
KRLC				eSG	**Sg**	**19 14 03.6**	**+0.7**
	comp=Z,52nm,0.3s						
NIE	**Niedzica**	**1.23**	**109**	ePg	**Pn**	**19 13 50.2**	**-0.2**
NIE				eSg	**Sn**	**19 14 09.1**	**+1.3**
VRAC	**Vranov**	**1.36**	**248**	ePg	**Pb**	**19 13 52.8**	**+0.5**
	baz=68						
VRAC				eSg	**Sb**	**19 14 10.2**	**0.0**
	46nm,0.4s,baz=68						
DPC	**Dobruska-Polom**	**1.51**	**291**	ePG	**Pg**	**19 13 55.1**	**+0.2**
DPC				eSG	**Sn**	**19 14 14.8**	**+0.1**
	comp=Z,27nm,0.5s						
KRUC	**Moravsky**	**1.59**	**242**	ePg	**Pb**	**19 13 56.1**	**-0.1**
	baz=61						
KRUC				eSg	**Sg**	**19 14 17.2**	**+0.3**
	21nm,0.4s,baz=61						
OSTC	**Ostas**	**1.65**	**297**	ePG	**Pg**	**19 13 57.7**	**+0.1**
OSTC				eSG	**Sg**	**19 14 19.8**	**+0.8**
	comp=Z,62nm,0.8s						
MODS	**Modra-Piesok**	**1.67**	**210**	ePG	**Pb**	**19 13 57.3**	**-0.3**
MODS				eSG	**Sg**	**19 14 20.2**	**+0.5**
UPC	**Upice**	**1.75**	**294**	ePG	**Pg**	**19 13 59.3**	**-0.2**
UPC				eSG	**Sg**	**19 14 22.4**	**+0.2**
	comp=Z,30nm,0.8s						
KSP	**Ksiaz**	**1.75**	**306**	ePg	**Pb**	**19 13 59.0**	**0.0**
KSP				eSg	**Sb**	**19 14 21.7**	**+0.2**
CHVC	**Chvalec**	**1.76**	**297**	ePG	**Pg**	**19 13 59.6**	**0.0**
CHVC				eSG	**Sg**	**19 14 22.5**	**+0.1**
	comp=Z,16nm,0.6s						
STHS	**Stebnicka Huta**	**1.82**	**102**	ePG	**Pg**	**19 14 00.2**	**-0.6**
STHS				eSG	**Sg**	**19 14 26.7**	**+2.3**
STHS				eLG	Lg	19 14 29.9	
KECS	**Kecovo**	**1.87**	**136**	ePG	**Pb**	**19 14 00.3**	**-0.7**
KECS				eSN	**Sn**	**19 14 22.6**	**-0.9**
KECS				eLG	Lg	19 14 26.5	
TREC	**Trest**	**2.05**	**256**	ePG	**Pb**	**19 14 03.9**	**-0.1**
TREC				eSG	**Sg**	**19 14 31.0**	**-0.7**
	comp=Z,13nm,0.4s						
WINA	**Alland / Wiene**	**2.36**	**224**	ePn	**Pn**	**19 14 06.1**	**+0.1**
PRU	**Pruhonice**	**2.58**	**275**	ePG	**Pg**	**19 14 14.8**	**-0.6**
PRU				eSG	**Sg**	**19 14 47.1**	**-1.6**
	comp=Z,11nm,0.5s						
CONA	**Conrad Observa**	**2.59**	**224**	ePn	**Pn**	**19 14 09.4**	**+0.2**
	0.8nm,0.2s						
PVCC	**Panska Ves**	**2.63**	**287**	eSG	**Sg**	**19 14 50.7**	**+0.1**
	comp=Z,30nm,0.9s						
ZVC	**Zvikov**	**2.84**	**264**	ePG	**Pb**	**19 14 18.9**	**+1.3**
ZVC				eSG	**Sg**	**19 14 56.0**	**-1.2**
CKRC	**Cesky Krumlov**	**2.93**	**251**	ePG	**Pg**	**19 14 22.1**	**-0.1**
CKRC				eSG	**Sg**	**19 14 59.0**	**-1.2**
	comp=Z,14nm,0.9s						
KHC	**Kasperske Hory**	**3.30**	**260**	ePG	**Pg**	**19 14 28.2**	**-1.0**
KHC				eSG	**Sg**	**19 15 11.1**	**-0.8**
	comp=Z,7.0nm,0.6s						
MOA	**Molln**	**3.44**	**236**	i Sn	**Sn**	**19 15 05.1**	**+2.8**
	0.3nm,0.2s						
CLL	**Collm**	**3.82**	**295**	eSg	**Sg**	**19 15 26.0**	**-2.5**

*IDC **02** 19:15:13.0±0.8, 27.°97N×139.°67E, h488km±13km, mb2.7/7, mbtmp3.6/8, Error ellipse: s-maj=31.3km s-min=15.7km az=81.0*

ISC 02 19:15:13.6±0.8**, 27.°9N**±0.°2×**139.°8E**±0.°2**, h500**km**, n8, σ0s87**/9**, mb3.1**/7**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.31**	**111**	P	**P**	**19 16 20.7**	**+0.3**
	45nm,0.7s,baz=25,slow=22,SNR=1.7						
JCJ				S	**S**	**19 17 13.1**	**-1.5**
	98nm,0.5s,baz=116,slow=23,SNR=12						
CMAR	**Chiang Mai Arr**	**38.53**	**265**	P	**P**	**19 21 52.7**	**-0.1**
	0.2nm,0.3s,baz=52,slow=7.1,SNR=1.2						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**47.88**	**187**	P	**P**	**19 23 06.2**	**+0.4**
	0.5nm,0.4s,baz=3.8,slow=7.8,SNR=9.2						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**50.91**	**314**	P	**P**	**19 23 26.7**	**-1.1**
	0.3nm,0.5s,baz=92,slow=8.1,SNR=4.9						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**51.61**	**187**	P	**P**	**19 23 33.5**	**+0.2**
	0.3nm,0.5s,baz=4.7,slow=6.2,SNR=10						
	0.3nm,0.5s						
BVAR	**Borovoye Array**	**55.96**	**317**	P	**P**	**19 24 04.0**	**+0.3**
	0.5nm,0.4s,baz=100,slow=5.3,SNR=4.4						
	0.5nm,0.4s						
YKA	**Yellowknife Ar**	**72.42**	**28**	P	**P**	**19 25 49.1**	**+0.8**
	0.1nm,0.5s,baz=306,slow=7.5,SNR=2.3						
	0.1nm,0.5s						
FINES	**FINESS Array B**	**76.23**	**333**	P	**P**	**19 26 09.8**	**0.0**
	0.7nm,0.4s,baz=49,slow=4.1,SNR=7.8						
	0.7nm,0.4s						

*IDC **02** 20:08:19.1±10.0, 36.°82N×69.°97E, h0km, mb3.7/1, mbtmp3.3/3, ML2.7/2, Error ellipse: s-maj=390.4km s-min=28.0km az=142.0*

*NNC **02** 20:08:33.0±9.0, 36.°66N×70.°61E, h80km±180km, mb3.5, mpv3.8, Error ellipse: s-maj=65.5km s-min=58.7km az=3.0*

ISC 02 20:08:27.3±0.9**, 36.°29N**±0.°07×**71.°26E**±0.°09**, h150**km**, n18, σ3s27**/30**, 6C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JMU	**Jammu**	**4.57**	**139**	eS	**Sn**	**20 10 25.9**	**-2.0**
JMU				IAML		20 10 31.4	
	comp=E,137nm,0.4s						
JMU				IAML		20 10 32.6	
	comp=N,214nm,0.5s						
ALCI	**Alchi Leh**	**5.27**	**111**	eP	**Pn**	**20 09 46.2**	**+1.5**
ALCI				eS	**Sn**	**20 10 45.7**	**+0.7**
ALCI				IAML		20 10 46.9	
	comp=N,35nm,0.4s						
ALCI				IAML		20 10 47.4	
	comp=E,47nm,0.2s						
TSSA	**Tissa**	**5.30**	**129**	eP	**Pn**	**20 09 46.4**	**+1.5**
TSSA				eS	**Sn**	**20 10 43.8**	**-1.8**
TSSA				IAML		20 10 47.0	
	comp=N,285nm,0.5s						
TSSA				IAML		20 10 48.0	
	comp=E,354nm,0.4s						
THN	**Thein Dam**	**5.34**	**135**	eP	**Pn**	**20 09 47.6**	**+2.2**
THN				eS	**Sn**	**20 10 46.4**	**+0.2**
THN				IAML		20 10 49.7	
	comp=Z,64nm,0.4s						
THN				IAML		20 10 50.5	
	comp=N,115nm,0.5s						
DHRM	**DHARAMSHALA**	**5.80**	**133**	eP	**Pn**	**20 09 53.7**	**+2.1**
DHRM				eS	**Sn**	**20 10 56.0**	**-1.4**
DHRM				IAML		20 10 59.5	
	comp=E,326nm,0.3s						
DHRM				IAML		20 11 00.2	
	comp=N,256nm,0.4s						
TLWR	**Talawar**	**5.81**	**137**	eS	**Sn**	**20 10 57.2**	**-0.3**
AAK	**Ala-Archa**	**6.82**	**21**	⇑P	**Pn**	**20 10 07.8**	**+2.7**
	comp=N,1.1nm,0.4s						
AAK				⇑S	**Sn**	**20 11 21.9**	**+0.3**
	comp=N,4.3nm,0.6s						
KK31	**Karatay Array**	**6.83**	**355**	⇑P	**Pn**	**20 10 06.3**	**+1.2**
	comp=N,6.7nm,0.3s,baz=177,slow=12,SNR=242						
KK31				⇑S	**Sn**	**20 11 19.6**	**-2.1**
	comp=N,4.3nm,0.5s,baz=185,slow=24,SNR=6.5						
SMLA	**Simla**	**7.12**	**135**	eP	**Pn**	**20 10 10.4**	**+1.5**
SMLA				eS	**Sn**	**20 11 25.7**	**-3.0**
SMLA				IAML		20 11 30.0	
	comp=N,60nm,0.3s						
SMLA				IAML		20 11 31.1	
	comp=E,80nm,0.4s						
KLP	**Kalpa**	**7.50**	**127**	eP	**Pn**	**20 10 15.9**	**+1.6**
KLP				eS	**Sn**	**20 11 34.0**	**-4.3**
KLP				IAML		20 11 38.4	
	comp=E,90nm,0.2s						
KLP				IAML		20 11 43.0	
	comp=N,66nm,0.4s						
JOSI	**Joshimath**	**8.98**	**127**	eP	**Pn**	**20 10 37.9**	**+3.8**
JOSI				eS	**Sn**	**20 12 11.0**	**-3.0**
JOSI				IAML		20 12 13.9	
	comp=E,36nm,0.5s						
JOSI				IAML		20 12 15.1	
	comp=N,41nm,0.5s						
KUDL	**Kundal**	**9.24**	**150**	eS	**Sn**	**20 12 11.8**	**-8.1**
PTH	**Pithoragarh**	**10.05**	**129**	eP	**Pn**	**20 10 48.5**	**+0.3**
PTH				eS	**Sn**	**20 12 33.6**	**-6.0**
PTH				IAML		20 12 38.6	
	comp=N,108nm,0.4s						
PTH				IAML		20 12 38.7	
	comp=E,109nm,0.3s						
MKAR	**Makanchi Array**	**13.35**	**35**	Pn	**P**	**20 11 33.3**	**-1.8**
	baz=223,slow=13,SNR=2.3						
	comp=E,0.1nm,0.7s						
AB31	**Akbulak array**	**15.37**	**331**	⇑P	**P**	**20 11 57.9**	**+0.4**
	comp=E,0.9nm,0.3s,baz=138,slow=13,SNR=66						
AB31				S	**Sn**	**20 14 40.8**	**-6.2**
	comp=E,1.7nm,0.6s,baz=156,slow=20,SNR=6.4						
AKTO	**Aktyubinsk**	**17.07**	**330**	⇑P	**Pn**	**20 12 20.3**	**+3.4**
	comp=E,1.1nm,0.6s						
AKTO				⇓S	**S**	**20 15 21.0**	**-5.4**
	comp=E,1.8nm,0.9s						
ZALV	**Zalesovo Beam**	**20.02**	**24**	P	**Pn**	**20 12 52.8**	**+1.2**
	comp=E,0.1nm,0.3s,baz=224,slow=10,SNR=3.6						
	comp=E,0.4nm,0.3s						
TORD	**Torodi Ar. Bea**	**65.92**	**269**	P	**P**	**20 19 00.6**	**+3.1**
	comp=E,0.4nm,0.5s,baz=50,slow=6.3,SNR=6.2						
	comp=E,0.4nm,0.5s						

*IDC **02** 20:11:11.5±0.9, 13.°69N×121.°10E, h134km±7km, mb2.8/4, mbtmp3.2/4, Error ellipse: s-maj=57.7km s-min=18.4km az=56.0*

*MAN **02** 20:11:13.0, 13.°60N×120.°66E, h119km, MS3.0*

ISC 02 20:11:10.3±1.2**, 13.°2N**±0.°1×**121.°33E**±0.°09**, h100**km**, n8, σ3s68**/7**, mb3.2**/5**, Mindoro**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.95**	**336**	P	**Pn**	**20 11 31.7**	**+1.4**
	226nm,0.3s,baz=166,slow=4.2,SNR=6.9						
TGY				S	**Sn**	**20 11 46.8**	**+1.5**
	299nm,0.3s,baz=210,slow=23,SNR=13						
TGY	**Tagaytay City**	**0.95**	**336**	eP	Pn	20 11 33.4	+3.1
GQP	**Guinayangan**	**1.28**	**58**	eP	**Pn**	**20 11 31.1**	**-2.8**
GQP				eS	**Sn**	**20 11 54.7**	**+3.0**
CMAR	**Chiang Mai Arr**	**22.14**	**286**	P	**P**	**20 15 53.0**	**-5.1**
	0.6nm,0.7s,baz=96,slow=7.9,SNR=6.7						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**35.36**	**159**	P	**P**	**20 17 58.2**	**+1.7**
	0.3nm,0.6s,baz=331,slow=9.9,SNR=1.8						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**38.68**	**161**	P	**P**	**20 18 26.7**	**+2.2**
	0.3nm,0.9s,baz=342,slow=9.0,SNR=4.9						
	0.3nm,0.9s						
MKAR	**Makanchi Array**	**46.77**	**324**	P	P	20 19 24.1	-5.7
	0.1nm,0.3s,baz=126,slow=9.0,SNR=5.8						
	0.1nm,0.3s						
KURBB	**Kurchatov Arra**	**50.92**	**326**	P	P	20 19 54.1	-7.2
	0.4nm,0.5s,baz=128,slow=8.5,SNR=4.6						

*IDC **02** 20:20:48.8±4.2, 2.°41S×140.°33E, h0km, mb3.4/3, mbtmp3.5/4, ML3.7/1, Error ellipse: s-maj=166.3km s-min=26.5km az=89.0*

*DJA **02** 20:20:51.4±0.5, 2°S±4°×14°0E±°, h10km, M4.1/8, mB4.7/1, mb4.3/1, MLv4.0/8, Mw(mB)3.9/1*

ISC 02 20:20:52.4±1.2**, 2.°34S**±0.°09×**140.°24E**±0.°07**, h25**km**, n9, σ0s86**/11**, mb3.5**/3**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.26**	**196**	P	**Pb**	**20 20 58.7**	**-0.2**
GENI				S	**Sb**	**20 21 04.0**	**+0.7**
JAY	**Jayapura**	**0.50**	**111**	P	**Pn**	**20 21 03.6**	**-0.4**
WAMI	**Wamena**	**2.16**	**225**	P	**Pn**	**20 21 26.9**	**0.0**
SRPI	**Serui, Papua**	**4.02**	**277**	P	**Pn**	**20 21 52.4**	**-0.1**
SRPI				S	**Sn**	**20 22 39.0**	**+0.1**
BAKI	**Biak**	**4.28**	**285**	P	**Pn**	**20 21 54.9**	**-1.2**
WRA	**Warramunga Arr**	**18.42**	**198**	P	**P**	**20 25 04.8**	**-1.3**
	0.2nm,0.3s,baz=17,slow=12,SNR=7.8						
	1.5nm,0.7s						
ASAR	**Alice Springs**	**22.07**	**196**	P	**P**	**20 25 45.4**	**-0.3**
	1.0nm,0.8s,baz=28,slow=12,SNR=10.0						
	1.0nm,0.8s						
MKAR	**Makanchi Array**	**70.44**	**322**	P	**P**	**20 32 05.7**	**+1.0**
	0.4nm,0.6s,baz=118,slow=6.9,SNR=6.1						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**74.31**	**324**	P	**P**	**20 32 28.7**	**+1.0**
	0.4nm,0.8s,baz=117,slow=5.3,SNR=3.3						
	0.4nm,0.8s						

*IDC **02** 20:33:29.0±4.2, 6.°80S×149.°13E, h100km±38km, mb3.3/4, mbtmp3.6/6, Error ellipse: s-maj=77.3km s-min=32.0km az=128.0*

ISC 02 20:33:28.2±2.1**, 7.°0S**±0.°4×**149.°4E**±0.°5**, h100**km**, n6, σ1s03**/7**, mb3.3**/4**, New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.28**	**222**	P	**Pn**	**20 34 17.8**	**0.0**
	26nm,0.3s,baz=19,slow=8.0,SNR=24						
PMG				S	**Sn**	**20 34 56.7**	**+0.6**
	16nm,0.3s,baz=153,slow=23,SNR=7.1						
WRA	**Warramunga Arr**	**19.49**	**227**	P	**P**	**20 37 47.3**	**-0.2**
	0.4nm,0.3s,baz=52,slow=11,SNR=5.1						
ASAR	**Alice Springs**	**22.30**	**220**	P	**P**	**20 38 18.2**	**+0.6**
	0.8nm,0.6s,baz=52,slow=9.2,SNR=25						
	0.8nm,0.6s						
FITZ	**Fitzroy Crossi**	**25.66**	**242**	P	**P**	**20 38 47.3**	**-1.6**
	1.4nm,0.4s,baz=70,slow=10,SNR=1.8						
	1.4nm,0.4s						
KURBB	**Kurchatov Arra**	**83.44**	**323**	P	**P**	**20 45 45.5**	**+0.9**
	0.3nm,1.0s,baz=117,slow=3.2,SNR=1.0						
	0.3nm,1.0s						
ILAR	**Eielson Array**	**85.44**	**23**	P	**P**	**20 45 54.2**	**-0.3**
	0.3nm,0.6s,baz=262,slow=5.1,SNR=4.6						
	0.3nm,0.6s						

*IDC **02** 20:37:34.4±1.2, 0.°43N×125.°46E, h0km, mb3.3/5, mbtmp3.3/5, Error ellipse: s-maj=141.1km s-min=20.1km az=67.0*

*DJA **02** 20:37:38.1±0.2, 1°N±3°×12°6E±°, h10km, M3.6/13, mb3.9/5, MLv3.5/13*

ISC 02 20:37:39.1±1.0**, 0.°8N**±0.°1×**126.°5E**±0.°1**, h39**km**, n18, σ1s86**/13**, mb3.4**/5**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**1.78**	**291**	P	**Pn**	**20 38 07.5**	**+0.1**
SANI	**Sanana**	**2.89**	**190**	P	**Pn**	**20 38 20.5**	**-2.2**
GTOI	**Gorontalo**	**3.50**	**267**	P	**Pn**	**20 38 33.6**	**+2.5**
KRAI	**Karang Ratu**	**4.51**	**155**	P	Pn	20 38 50.0	+5.0
KRAI	**Karang Ratu**	**4.51**	**155**	P	**Pn**	**20 38 48.6**	**+3.6**
MRSI	**Marisa**	**4.58**	**266**	P	**Pn**	**20 38 44.7**	**-1.2**
AAI	**Ambon**	**4.78**	**159**	P	Pn	20 38 55.3	+6.7
AAI	**Ambon**	**4.78**	**159**	P	**Pn**	**20 38 48.8**	**+0.2**
MSAI	**Masohi**	**4.79**	**150**	P	Pn	20 38 43.3	-5.5
SWI	**Sorong**	**5.03**	**109**	P	Pn	20 38 58.3	+6.1
SIJI	**Sorong**	**5.04**	**109**	P	Pn	20 38 59.1	+6.8
MPSI	**Mapaga**	**6.63**	**266**	P	**Pn**	**20 39 13.0**	**-1.1**
	7.4nm,1.2s						
MWPI	**Manokwari, Pap**	**7.73**	**103**	P	**Pn**	**20 39 27.9**	**-1.3**
WRA	**Warramunga Arr**	**22.01**	**160**	P	**P**	**20 42 30.5**	**+0.3**
	1.1nm,0.5s,baz=337,slow=10,SNR=10						
	1.1nm,0.5s						
ASAR	**Alice Springs**	**25.37**	**164**	P	**P**	**20 43 03.2**	**+0.4**
	0.8nm,0.7s,baz=344,slow=10,SNR=12						
	0.8nm,0.7s						
SONM	**Songino Array**	**49.98**	**342**	P	**P**	**20 46 31.7**	**+2.1**
	0.3nm,0.8s,baz=168,slow=7.4,SNR=2.7						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	**59.83**	**326**	P	**P**	**20 47 39.3**	**-1.4**
	0.1nm,0.3s,baz=126,slow=6.2,SNR=8.0						
	0.1nm,0.3s						
KURBB	**Kurchatov Arra**	**64.08**	**328**	P	**P**	**20 48 08.6**	**-0.5**
	0.1nm,0.4s,baz=128,slow=6.0,SNR=3.5						
	0.1nm,0.4s						

*GII **02** 20:38:17.4±0.0, 34.°868N±0.°001×33.°702E±0.°001, h0km, Mws2.4, confirmed*

*ISK **02** 20:38:18.1, 34.°87N×33.°59E, h45km±1km, ML2.5/14*

*NIC **02** 20:38:19.2, 34.°89N×33.°66E, h33km±1km, Ml1.8/11*

*AFAD **02** 20:38:22.0, 35.°22N×33.°58E, h18km±2km, ML1.7*

ISC 02 20:38:18.9±1.0**, 34.°83N**±0.°02×**33.°69E**±0.°02**, h34**km±2km**, n49, σ0s90**/88**, 3C-1D, Cyprus region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LAR1C	**Larnaka City C**	**0.11**	**326**	P	**Pb**	**20 38 25.0**	**+0.1**
LAR1C				S	**Sb**	**20 38 30.4**	**+1.4**
MVOU	**Mavrovouni**	**0.19**	**345**	⇑iP	**Pb**	**20 38 25.0**	**-0.5**
MVOU				S	**Sb**	**20 38 30.1**	**0.0**
MVOU				AML	AML	20 38 30.5	
	0.5nm,0.2s						
MVOU				AML	AML	20 38 31.9	
	0.5nm,0.3s						
PAR1C	**Paralimni Civi**	**0.31**	**49**	P	**Pb**	**20 38 26.9**	**0.0**
PAR1C				S	**Sb**	**20 38 33.8**	**+1.5**
CSS	**Mathiatis**	**0.33**	**294**	Pg	**Pb**	**20 38 26.6**	**-0.6**
CSS				Sg	**Sb**	**20 38 32.7**	**0.0**
CSS	**Mathiatis**	**0.33**	**294**	⇑iP	**Pb**	**20 38 26.6**	**-0.6**
CSS				S	**Sb**	**20 38 32.5**	**-0.2**
CSS				AML	AML	20 38 33.5	
	1.2nm,0.5s						
CSS				AML	AML	20 38 33.6	
	0.3nm,0.3s						
CSS	**Mathiatis**	**0.33**	**294**	P	**Pb**	**20 38 26.4**	**-0.8**
CSS				S	**Sn**	**20 38 31.1**	**-1.1**
PARAL	**Paralimni**	**0.33**	**60**	⇓iP	**Pb**	**20 38 27.3**	**+0.1**
PARAL				S	**Sn**	**20 38 34.2**	**+1.9**
PARAL				AML	AML	20 38 35.0	
	0.5nm,0.6s						
PARAL				AML	AML	20 38 38.7	
	0.5nm,0.8s						
ASGA	**Asgata**	**0.37**	**263**	P	**Pb**	**20 38 27.9**	**+0.2**
ASGA				S	**Sn**	**20 38 34.6**	**+1.0**
ASGA				AML	AML	20 38 37.2	
	0.3nm,0.4s						
ASGA				AML	AML	20 38 38.6	
	0.4nm,0.3s						
ATHAL	**Athalassa**	**0.39**	**322**	⇑iP	**Pb**	**20 38 27.3**	**-0.7**
ATHAL				S	**Sn**	**20 38 34.1**	**-0.2**
ATHAL				AML	AML	20 38 35.2	
	0.8nm,0.5s						
ATHAL				AML	AML	20 38 42.6	
	0.6nm,0.4s						
LFK	**Lefkose**	**0.47**	**344**	Pg	**Pb**	**20 38 28.4**	**-0.7**
LFK				Sg	**Sn**	**20 38 36.3**	**0.0**
XYLS	**Xyliatos**	**0.56**	**289**	P	**Pb**	**20 38 29.7**	**-0.8**
XYLS				S	**Sn**	**20 38 38.8**	**+0.2**
XYLS				AML	AML	20 38 40.6	
	0.5nm,0.4s						
XYLS				AML	AML	20 38 41.6	
	0.4nm,0.3s						
TROD	**Troodos**	**0.69**	**280**	P	**Pn**	**20 38 32.4**	**0.0**
TROD				S	**Sn**	**20 38 45.8**	**+3.8**
TROD				AML	AML	20 38 46.6	
	0.4nm,0.6s						
TROD				AML	AML	20 38 46.9	
	0.4nm,0.5s						
APOL	**The Sanctuary**	**0.70**	**257**	P	**Pb**	**20 38 32.8**	**0.0**
APOL				S	**Sb**	**20 38 44.0**	**+1.7**
APOL				AML	AML	20 38 46.0	
	0.1nm,0.3s						
APOL				AML	AML	20 38 47.4	
	0.2nm,0.4s						
EREN	**Erenkoy**	**0.80**	**29**	P	**Pn**	**20 38 33.6**	**-0.2**
EREN				IAML		20 38 47.0	
	comp=N,34nm,0.6s						
EREN				IAML		20 38 54.0	
	comp=E,43nm,0.6s						
NATA	**Nata**	**0.93**	**267**	P	**Pb**	**20 38 36.6**	**0.0**
NATA				S	**Sb**	**20 38 51.3**	**+2.7**
NATA				AML	AML	20 38 53.2	
	0.3nm,0.4s						
NATA				AML	AML	20 38 55.4	
	0.3nm,0.5s						
ALFC	**Alefka**	**0.95**	**290**	P	**Pn**	**20 38 35.9**	**0.0**
ALFC				S	**Sb**	**20 38 48.3**	**-1.2**
ALFC				AML	AML	20 38 50.6	
	0.1nm,0.3s						
ALFC				AML	AML	20 38 55.3	
	0.2nm,0.3s						
AKMS	**Akamas**	**1.13**	**280**	P	**Pb**	**20 38 39.6**	**-0.4**
AKMS				S	**Sb**	**20 38 53.3**	**-1.2**
AKMS				AML	AML	20 38 58.9	
	0.1nm,0.3s						
AKMS				AML	AML	20 39 02.3	
	0.1nm,0.4s						
AKK1	**Akkuyu-Mersin**	**1.31**	**355**	Pn	**Pn**	**20 38 40.1**	**-0.7**
AKK1				Sn	**Sn**	**20 38 56.4**	**-0.8**
BECE	**Buyukeceli-Mer**	**1.33**	**355**	Pn	**Pn**	**20 38 40.5**	**-0.5**
BECE				Sn	**Sn**	**20 38 56.5**	**-1.0**
TISA	**Tisan-Mersin**	**1.33**	**359**	Pn	**Pn**	**20 38 40.7**	**-0.3**
YORU	**Yoruktepe-Mers**	**1.34**	**350**	Pn	**Pn**	**20 38 41.0**	**-0.2**
YORU				Sn	**Sn**	**20 38 57.0**	**-0.9**
GULN	**MERSIN_Gulnar**	**1.35**	**355**	P	**Pn**	**20 38 41.0**	**-0.4**
GULN				S	**Sn**	**20 38 57.1**	**-1.1**
GULN				IAML		20 38 58.0	
	comp=E,25nm,0.6s						
YESI	**Yesilovacik-Me**	**1.36**	**358**	Pn	**Pn**	**20 38 41.8**	**+0.3**
KARG	**Kargicak-Mersi**	**1.37**	**1**	Pn	**Pn**	**20 38 41.0**	**-0.6**
TEKE	**Tekeli-Mersin**	**1.39**	**340**	Pn	**Pn**	**20 38 41.1**	**-0.8**
TEKE				Sn	**Sn**	**20 38 57.9**	**-1.2**
IKL	**Isikli**	**1.40**	**360**	Pn	**Pn**	**20 38 41.7**	**-0.4**
KEBE	**Keben-Mersin**	**1.61**	**1**	Pn	**Pn**	**20 38 44.7**	**-0.3**
TEVE	**Tevekalti-Mers**	**1.61**	**353**	Pn	**Pn**	**20 38 45.0**	**0.0**
KIZK	**Mersin**	**1.69**	**12**	P	**Pn**	**20 38 46.1**	**+0.2**
KIZK				S	**Sn**	**20 39 05.7**	**-0.7**
KIZK				IAML		20 39 11.0	
	comp=N,9.9nm,0.4s						
HNTI	**Hanita**	**2.13**	**144**	P	**Pn**	**20 38 51.4**	**-0.7**
HNTI				S	**Sn**	**20 39 17.1**	**-0.3**
MMC7	**Mount Meron ar**	**2.29**	**141**	P	**Pn**	**20 38 53.7**	**-0.6**
GEM	**Giv'at Ha'Em**	**2.30**	**134**	P	**Pn**	**20 38 53.6**	**-0.8**
GEM				S	**Sn**	**20 39 20.6**	**-0.9**
MMA0B	**Mount Meron ar**	**2.30**	**141**	P	**Pn**	**20 38 53.7**	**-0.8**
MMA0B				S	**Sn**	**20 39 21.7**	**+0.1**
NATI	**Neve Ativ**	**2.31**	**132**	P	**Pn**	**20 38 53.7**	**-0.7**
NATI				S	**Sn**	**20 39 21.3**	**-0.4**
HDMB	**Hadim**	**2.34**	**336**	Pn	**Pn**	**20 38 54.8**	**-0.4**
KRMN	**Karaman**	**2.36**	**352**	Pn	**Pn**	**20 38 54.6**	**-0.8**
OFRI	**`Ofer**	**2.45**	**154**	P	**Pn**	**20 38 55.9**	**-0.7**
OFRI				S	**Sn**	**20 39 25.4**	**+0.1**
KKBE	**Karaman, Kazim**	**2.46**	**346**	P	**Pn**	**20 38 59.0**	**+2.3**
KKBE				S	**Sn**	**20 39 26.1**	**+0.5**
KKBE				IAML		20 39 30.0	
	comp=N,5.3nm,0.7s						
KKBE				IAML		20 40 16.0	
	comp=E,13nm,3.1s						
KSHT	**Keshet**	**2.55**	**136**	P	**Pn**	**20 38 57.1**	**-0.8**
KSHT				S	**Sn**	**20 39 27.5**	**-0.3**
KERG	**Konya-Eregli**	**2.60**	**8**	P	**Pn**	**20 39 00.1**	**+1.4**
KERG				IAML		20 39 28.0	
	comp=E,12nm,2.1s						
KERG				S	**Sn**	**20 39 30.6**	**+1.4**
MMLI	**Mount Malkishu**	**2.79**	**148**	P	**Pn**	**20 39 00.3**	**-0.8**
MMLI				S	**Sn**	**20 39 33.4**	**-0.2**
HMDT	**Nahal Hemdat**	**2.99**	**149**	P	**Pn**	**20 39 03.2**	**-0.7**
HMDT				S	**Sn**	**20 39 38.8**	**+0.2**
SALP	**Salfit**	**3.03**	**155**	P	**Pn**	**20 39 03.9**	**-0.5**
SALP				S	**Sn**	**20 39 39.8**	**+0.3**
DSI	**Dead Sea**	**3.55**	**156**	P	**Pn**	**20 39 10.8**	**-0.8**
DSI				S	**Sn**	**20 39 52.0**	**-0.3**
YTIR	**Yattir**	**3.66**	**161**	P	**Pn**	**20 39 12.7**	**-0.4**
YTIR				S	**Sn**	**20 39 55.5**	**+0.3**
KZIT	**Kziot**	**3.96**	**171**	P	**Pn**	**20 39 16.5**	**-0.7**
KZIT				S	**Sn**	**20 40 02.6**	**+0.2**
RMNI	**Mount Ramon**	**4.32**	**168**	P	**Pn**	**20 39 21.6**	**-0.7**
RMNI				S	**Sn**	**20 40 11.6**	**+0.1**
PRNI	**Paran**	**4.60**	**166**	P	**Pn**	**20 39 25.7**	**-0.4**
PRNI				S	**Sn**	**20 40 18.8**	**+0.5**
HRFI	**Mount Harif**	**4.91**	**166**	P	**Pn**	**20 39 29.8**	**-0.5**
HRFI				S	**Sn**	**20 40 26.0**	**-0.1**

*IDC **02** 20:43:26.7±9.3, 32.°26S×179.°59W, h0km, mb3.7/2, mbtmp3.7/2, Error ellipse: s-maj=423.1km s-min=59.2km az=160.0*

WEL 02 20:44:04.7±1.1, 33°S±20°×17°9E±5°0, h214km±38km, M4.2/10, mB4.7/7, ML4.1/10, MLv4.5/10, Mw(mB)3.9/7, Error ellipse: s-maj=70.4km s-min=4.9km az=111.6, confirmed

NOU 02 20:44:22.3, 34°75S×179°37E, h346km, mb3.9/8, South of Kermadec Islands

ISC 02 20:44:01.8±1.0, 32°63S±0°08×179°1E±0°1, h250km, n24, σ1s87/29, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.22	38	P	Pn	20 45 09.9	+1.7
GLKZ				S	S	20 46 01.2	+0.2
MXZ	Matakaoa Point	4.96	187	P	Pn	20 45 20.9	+3.8
MXZ	Matakaoa Point	4.96	187	P	Pn	20 45 18.0	+0.9
MXZ				S	S	20 46 17.8	+0.7
WMGZ	Waiomatatini S	5.21	186	P	Pn	20 45 21.3	+1.3
WMGZ				S	S	20 46 22.4	-0.2
HAZ	Te Kaha	5.23	192	P	Pn	20 45 22.0	+1.7
HAZ				S	S	20 46 22.9	0.0
PKGZ	Pakihiroa	5.29	189	P	Pn	20 45 22.7	+1.6
RUGZ	Raukumara Rang	5.45	192	P	Pn	20 45 24.5	+1.3
PUZ	Puketiti	5.47	187	P	Pn	20 45 25.5	+2.2
PUZ				S	S	20 46 26.6	-1.9
TWGZ	Tauwhareparae	5.61	189	P	Pn	20 45 27.9	+2.9
MWZ	Matawai	5.83	192	P	Pn	20 45 28.3	+0.5
URZ	Urewera	5.85	196	P	Pn	20 45 30.5	+2.5
URZ	Urewera	5.85	196	P	Pn	20 45 29.8	+1.9
URZ				S	S	20 46 36.8	-0.1
CNGZ	Carnagh Statio	5.89	187	P	Pn	20 45 29.3	+0.8
TKGZ	Te Karaka	5.89	190	P	Pn	20 45 29.8	+1.4
SNGZ	Shannon Statio	6.30	193	P	Pn	20 45 33.5	-0.2
HIZ	Hauiti	6.81	209	P	Pn	20 45 43.8	+3.7
BKZ	Black Stump Fm	6.86	197	P	Pn	20 45 42.0	+1.3
BFZ	Birch Farm	8.36	195	P	Pn	20 45 57.2	-2.3
QRZ	Quartz Range	9.73	211	P	Pn	20 46 18.1	+1.2
KHZ	Kahutara	10.72	203	P	Pn	20 46 27.4	-1.9
CTZ	Chatham Island	11.58	164	P	Pn	20 46 34.1	-6.0
ASAR	Alice Springs	40.59	271	P	P	20 51 17.4	-0.3
	0.3nm,0.3s,baz=108,slow=7.7,SNR=8.7						
	0.3nm,0.3s						
WRA	Warramunga Arr	41.80	276	P	P	20 51 26.8	-0.6
	0.5nm,0.3s,baz=116,slow=8.2,SNR=7.2						
	0.5nm,0.3s						
FINES	FINESS Array B	146.30	337	PKPbc	PKPdf	21 03 07.9	-2.7
	1.0nm,0.8s,baz=40,slow=2.4,SNR=5.4						

TAP 02 20:51:28.6, 24°16N×122°35E, h15km, ML2.6, C

JMA 02 20:51:29.1±0.1, 24°1N±0°9×122°4E±0°3, h18km±2km, MV2.1/10, TAIWAN REGION

ISC 02 20:51:28.8±0.8, 24°13N±0°02×122°35E±0°02, h16km±5km, n58, σ0s62/95, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS4	EOS4	0.03	260	eP	Pg	20 51 31.1	-0.1
EOS4				eS	Sg	20 51 33.0	+0.2
EOS3	EOS3	0.16	350	eP	Pb	20 51 33.2	-0.1
EOS3				eS	Sb	20 51 36.8	+0.4
EOS2	EOS2	0.31	340	eP	Pb	20 51 36.2	+0.4
EOS2				eS	Sb	20 51 41.6	+1.0
EWUT	Wuta	0.61	302	i P	Pg	20 51 40.2	-0.6
EWUT				eS	Sg	20 51 48.7	-0.3
ESAO	Su ao	0.64	314	P	Pg	20 51 40.8	-0.6
ESAO				eS	Sg	20 51 49.5	-0.5
TWC	Suao	0.66	317	i P	Pg	20 51 41.0	-0.8
TWC				S	Sg	20 51 49.5	-1.1
NACB	Ninganchiao	0.69	274	i P	Pg	20 51 42.4	+0.1
NACB				eS	Sb	20 51 52.8	+1.2
YOJ	Yonaguni jima	0.69	61	i P	Pg	20 51 42.2	-0.1
YOJ				i S	Sg	20 51 51.4	-0.1
YOJ	Yonaguni jima	0.69	61	eP	Pg	20 51 42.3	-0.1
NDS	Dongshan	0.77	311	i P	Pb	20 51 42.9	-0.9
NDS				eS	Sb	20 51 53.4	-0.5
SHUL	Shoufeng	0.79	245	S	Sg	20 51 55.9	+1.1
ETLH	Xiulin Townshi	0.80	276	P	Pb	20 51 44.3	+0.1
ETLH				S	Sn	20 51 56.7	-0.3
ETM	Tongmen	0.80	259	eP	Pn	20 51 46.1	+0.7
ETM				eS	Sb	20 51 55.0	+0.2
LATG	Datong	0.85	299	i P	Pb	20 51 44.8	-0.5
TWE	Neicheng	0.86	314	i P	Pb	20 51 44.9	-0.4
TWE				S	Sb	20 51 56.2	-0.3
LXIB	Xiulin Townshi	0.86	263	eP	Pb	20 51 45.5	+0.1
LXIB				eS	Sg	20 51 57.6	+0.7
ENTT	Nioudou	0.88	306	eP	Pb	20 51 45.2	-0.4
ENTT				eS	Sb	20 51 56.8	-0.3
ESL	Shilin	0.89	250	eP	Pn	20 51 47.4	+0.8
ESL				eS	Sb	20 51 57.7	+0.2
NDT	Datong Townshi	0.90	302	P	Pb	20 51 46.0	0.0
NDT				i S	Sb	20 51 57.7	0.0
FUSB	Fushanzhiwuyua	0.94	312	i P	Pb	20 51 46.6	0.0
FUSB				eS	Sg	20 51 59.2	-0.1
TIPB	Shuangxi	0.97	331	i P	Pg	20 51 47.5	0.0
TIPB				i S	Sb	20 51 59.9	+0.1
WARBT	Fenglin Townsh	0.97	245	eS	Sb	20 51 59.7	0.0
WHF	Hehuan Shan	0.99	271	eS	Sg	20 52 01.7	+0.6
NWLT	Wulai	1.01	310	i P	Pb	20 51 47.8	0.0
NWLT				eS	Sb	20 52 00.5	-0.3
FUSS	Fushou	1.02	277	P	Pg	20 51 48.6	+0.1
YHNB	Yeheng	1.04	302	P	Pb	20 51 48.5	+0.1
YHNB				S	Sb	20 52 01.4	-0.4
NSK	Sanguang	1.06	301	i P	Pb	20 51 48.8	+0.1
SXI1	Grass Mountain	1.06	336	i P	Pn	20 51 49.1	+0.1
SXI1				S	Sn	20 52 03.4	0.0
OWD	Renai	1.08	261	S	Sb	20 52 03.1	-0.1
EHY	Hungye	1.12	237	eS	Sb	20 52 02.6	-1.6
WUSB	Renai	1.13	263	eP	Pn	20 51 50.0	0.0
WUSB				eS	Sb	20 52 05.0	+0.5
VWDT	VWDT	1.16	252	eP	Pb	20 51 51.0	+0.5
VWDT				eS	Sb	20 52 04.8	-0.5
YULB	Yu-li	1.21	233	eP	Pn	20 51 50.0	-0.9
YULB				eS	Sb	20 52 05.7	-0.9
NFF	Wufeng Townshi	1.23	294	eP	Pg	20 51 52.3	-0.2
YM01	YM01	1.24	325	P	Pg	20 51 52.9	+0.2
YM01				eS	Sn	20 52 08.3	+0.5
YM08	YM08	1.26	327	eP	Pg	20 51 52.8	-0.4
ZUZH	Zhuzihu	1.26	325	eP	Pn	20 51 52.0	+0.2
IRIF	Iriomote-Funau	1.28	80	P	Pb	20 51 52.3	-0.1
IRIF				eS	Sb	20 52 08.4	-0.3
WHP	Taichung City	1.29	277	eP	Pg	20 51 53.8	+0.1
WHP				eS	Sg	20 52 12.5	+2.0
WCS	Beigang Elemen	1.31	267	eP	Pn	20 51 52.8	+0.4
WCS				eS	Sb	20 52 10.4	+0.8
SSLB	Suanglung	1.32	255	eP	Pg	20 51 54.4	+0.2
LIOB	Emei	1.32	293	eP	Pg	20 51 54.1	-0.1
FULB	Fuli	1.34	227	P	Pn	20 51 51.4	-1.3
FULB				eS	Sn	20 52 08.2	-2.0
EHD	Haiduan	1.43	227	P	Pb	20 51 55.3	+0.3
EHD				S	Sb	20 52 13.4	+0.4
WHYT	Xinyi Township	1.43	253	eP	Pn	20 51 54.4	+0.3
WHYT				eS	Sb	20 52 13.9	+0.8
JKRS	Kuro-shima	1.52	85	eP	Pb	20 51 56.4	-0.2
JKRS				eS	Sb	20 52 15.9	+0.3
ELDTW	Lidau	1.54	233	eP	Pn	20 51 55.0	-0.6
ALS	Alishan	1.54	247	S	Sn	20 52 15.7	0.0
JIJ	Ishigaki jima	1.66	81	P	Pn	20 51 57.5	+0.4
JIJ				eS	Sn	20 52 18.2	+0.2
WDLH	Douliu	1.71	256	eS	Sg	20 52 23.2	-0.7
WCKO	Fanlu	1.74	247	eS	Sg	20 52 23.6	-1.1
TPUB	Ta-pu	1.78	243	eP	Pb	20 52 00.9	0.0
TPUB				eS	Sb	20 52 23.1	+0.1
WTP	Ta-pu	1.81	241	eP	Pn	20 52 00.4	+1.1
WTP				eS	Sb	20 52 24.6	+0.5
RLNB	Erlin	1.83	263	eP	Pn	20 51 59.5	0.0
JISG	Ishigakijimahi	1.85	75	eP	Pn	20 52 00.1	+0.3
JISG				eS	Sn	20 52 23.0	+0.2
CHN1	Nanshi	1.91	241	eS	Sb	20 52 27.1	+0.2
SGST	Jiashian	1.92	238	eS	Sb	20 52 27.0	-0.3
MASBT	Mashibuluo	2.18	227	eP	Pn	20 52 05.7	+1.3
MASBT				eS	Sb	20 52 34.1	-0.5

NEIC 02 21:13:07.8±2.2, 19°4S±0°1×173°0W±0°1, h10km±1km, mb4.6/18, Error ellipse: s-maj=21.0km s-min=16.7km az=200.0

IDC 02 21:13:08.1±0.7, 19°31S×173°39W, h0km, mb4.3/12, mbtmp4.3/14, ML4.2/2, MS3.8/17, Error ellipse: s-maj=29.5km s-min=16.4km az=135.0

ISC 02 21:13:08.1±0.4, 19°36S±0°07×172°95W±0°06, h10km, n78, σ1s97/65, mb4.5/20, MS3.7/17, 1D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	2.87	85	Pn	Pn	21 13 52.7	-1.2
AFI	Afiamalu	5.53	12	Pn	Pn	21 14 31.0	+0.4
	10.0nm,0.3s,baz=281,slow=23,SNR=6.0						
AFI				Sn	Sn	21 15 28.2	-6.2
	16nm,0.3s,baz=120,slow=21,SNR=4.3						
	18nm,0.4s						
MSVF	Nonsavu	8.69	279	Pn	Pn	21 15 17.3	+3.2
RAO	Raoul Island	10.84	204	Pn	Pn	21 15 37.5	-5.9
	85nm,0.3s,baz=41,slow=23,SNR=2.2						
RAR	Rarotonga	12.50	101	Pn	Pn	21 16 06.7	+0.6
	3.7nm,0.3s,baz=338,slow=3.4,SNR=4.3						
RAR				LR	LR	21 20 37.5	
	comp=Z,380nm,18.6s,baz=288,slow=35						
RAR	Rarotonga	12.50	101	Pn	Pn	21 16 06.6	+0.5
DZM	Mont Dzumac	19.47	258	eP	P	21 17 34.6	-0.7
	71nm,0.9s						
DZM				eLR	LR	21 22 08.5	
	262nm,20.7s						
DZM	Mont Dzumac	19.47	258	P	P	21 17 33.3	-2.0
	0.4nm,0.3s,baz=76,slow=18,SNR=19						
	27nm,0.8s						
DZM	Mont Dzumac	19.47	258		P	21 17 34.4	-0.8
DZM				IAmb	IAmb	21 17 36.3	
	comp=Z,33nm,0.9s						
URZ	Urewera	20.73	203	P	P	21 17 48.6	-0.2
	comp=Z,17nm,0.9s,baz=358,slow=3.8,SNR=9.6						
	comp=Z,17nm,0.9s						
RTZ	Ruatahuna	21.09	202	P	P	21 17 55.0	+2.2
BKZ	Black Stump Fm	21.75	203	P	P	21 17 59.4	-0.5
TBI	Tubuai	22.22	104	eS	S	21 22 04.4	-5.4
	comp=Z,2μm,25.8s						
PPT2	Papeete2	22.23	89	eS	S	21 22 08.5	-1.7
	comp=Z,387nm,25.5s						
PPT2				eLR	LR	21 23 13.4	
	comp=Z,186nm,31.8s						
PPT2				eLR	LR	21 23 21.8	
	comp=Z,156nm,21.0s						
PPT	Papeete	22.24	89	LR	LR	21 25 16.2	
	comp=Z,252nm,18.3s,baz=241,slow=32						
BFZ	Birch Farm	23.18	201	P	P	21 18 15.5	+0.5
BFZ				IAmb	IAmb	21 18 17.3	
	comp=Z,32nm,1.2s						
MRZ	Mangatainoka R	23.40	202	P	P	21 18 14.9	-2.2
MRZ				IAmb	IAmb	21 18 19.0	
	comp=Z,13nm,0.9s						
TCW	Tory Channel	24.36	204	P	P	21 18 25.6	-0.7
HNR	Honiara	28.01	287	LR	LR	21 28 53.4	
	comp=Z,7.4nm,18.0s,baz=215,slow=34						
TAOE	Nuku Hiva Isla	33.42	76	eLR	LR	21 28 34.9	
	comp=Z,274nm,28.4s						
CAN	Canberra	37.10	237	P	P	21 20 16.4	-2.5
CAN				IAmb	IAmb	21 20 18.2	
	comp=Z,6.2nm,0.7s						
CTA	Charters Tower	38.35	262	LR	LR	21 35 52.5	
	comp=Z,174nm,19.5s,baz=63,slow=36						
CTAO	Charters Tower	38.35	262	P	P	21 20 26.6	-2.9
TOO	Toolangi	40.41	234	P	P	21 20 45.3	-1.4
COEN	Coen	42.29	270	P	P	21 21 00.2	-2.1
COEN				IAmb	IAmb	21 21 01.8	
	comp=Z,8.5nm,0.9s						
STKA	Stephens Creek	42.56	244	P	P	21 21 02.1	-2.2
	comp=Z,4.5nm,0.9s,baz=86,slow=9.4,SNR=5.4						
	comp=Z,4.5nm,0.9s						
STKA	Stephens Creek	42.56	244	P	P	21 21 03.1	-1.2
STKA				IAmb	IAmb	21 21 23.3	
	comp=Z,19nm,1.1s						
WR8	Warramunga Arr	49.32	260	P	P	21 21 54.7	-3.2
WR8				IAmb	IAmb	21 22 17.6	
	comp=Z,6.3nm,1.0s						
AS31	Alice Springs	49.41	255	P	P	21 21 56.6	-1.9
AS31				IAmb	IAmb	21 21 57.4	
	comp=Z,5.8nm,0.9s						
ASAR	Alice Springs	49.41	255	P	P	21 21 56.4	-2.2
	comp=Z,20nm,0.9s,baz=86,slow=8.5,SNR=140						
ASAR				PcP	PcP	21 23 21.4	+0.5
	comp=Z,1.6nm,0.9s,baz=97,slow=4.1,SNR=1.7						
ASAR				LR	LR	21 42 52.4	
	comp=Z,140nm,18.2s,baz=109,slow=36						
	comp=Z,20nm,0.9s						
ASAR	Alice Springs	49.41	255	P	P	21 21 56.1	-2.4
WB0	Warramunga Arr	49.45	260	P	P	21 21 55.5	-3.4
WB0				IAmb	IAmb	21 21 58.5	
	comp=Z,6.5nm,0.7s						
WRA	Warramunga Arr	49.47	260	P	P	21 21 56.0	-3.0
	comp=Z,2.1nm,0.4s,baz=98,slow=6.9,SNR=24						
WRA				PcP	PcP	21 23 20.8	-0.4
	comp=Z,1.0nm,0.8s,baz=97,slow=3.3,SNR=4.7						
	comp=Z,2.1nm,0.4s						
WRA	Warramunga Arr	49.47	260	P	P	21 21 55.5	-3.5
KNRA	Kununurra	55.49	264	P	P	21 22 41.4	-2.3
SOEI	Soe	61.24	269	P	P	21 23 23.6	-0.5
NWAO	Narrogin (SRO)	63.12	242	LR	LR	21 50 46.5	
	comp=Z,89nm,18.1s,baz=352,slow=36						
QSPA	South Pole Qui	70.71	180	P	P	21 24 26.2	+2.0
	comp=Z,4.9nm,0.9s,baz=38,slow=1.9,SNR=3.7						
	comp=Z,4.9nm,0.9s						
MJAR	Matsushiro Arr	72.24	320	P	P	21 24 32.8	-0.8
	comp=Z,3.5nm,0.9s,baz=151,slow=6.4,SNR=7.2						
MJAR				LR	LR	21 51 00.4	
	comp=Z,43nm,19.1s,baz=145,slow=32						
	comp=Z,3.5nm,0.9s						
JOW	Kunigami	73.18	307	LR	LR	21 51 21.0	
	comp=Z,27nm,19.5s,baz=123,slow=32						
JNU	Nakatsue	74.82	314	LR	LR	21 52 31.6	
	comp=Z,30nm,19.8s,baz=114,slow=32						
ASAJ	Asahikawa	75.12	329	LR	LR	21 51 50.3	
	comp=Z,34nm,20.8s,baz=136,slow=31						
PETK	Petropavlovsk-	76.51	342	P	P	21 24 58.4	+0.3
	comp=Z,2.2nm,0.8s,baz=133,slow=6.5,SNR=4.3						
	comp=Z,2.2nm,0.8s						
NVAR	Mina Array Bea	76.99	41	P	P	21 25 04.4	+3.0
	comp=Z,1.2nm,0.8s,baz=215,slow=7.3,SNR=5.9						
NVAR				LR	LR	21 54 30.8	
	comp=Z,98nm,20.1s,baz=268,slow=32						
	comp=Z,1.2nm,0.8s						
KDAK	Kodiak Island	78.70	11	LR	LR	21 55 36.8	
	comp=Z,97nm,19.4s,baz=121,slow=32						
KSRS	Korea Array	79.28	316	LR	LR	21 54 28.6	
	comp=Z,24nm,21.4s,baz=120,slow=31						
P18K	Big Mountain,	79.80	9	P	P	21 25 16.5	+0.3
PMSA	Palmer Station	80.41	156	LR	LR	21 59 06.1	
	comp=Z,78nm,18.4s,baz=229,slow=34						
L14K	Kuka Creek	80.84	5	P	P	21 25 24.9	+3.2
L14K				IAmb	IAmb	21 25 31.6	
	comp=Z,6.8nm,1.1s						
TXAR	Lajitas Array	82.47	55	P	P	21 25 33.8	+2.6
	comp=Z,1.3nm,1.0s,baz=217,slow=6.1,SNR=6.3						
	comp=Z,1.3nm,1.0s						
KLR	Kul'dur	84.06	327	LR	LR	21 57 38.9	
	comp=Z,34nm,20.8s,baz=122,slow=32						
PDAR	Pinedale Array	84.92	41	P	P	21 25 45.9	+2.2
	comp=Z,0.5nm,0.9s,baz=324,slow=0.7,SNR=3.7						
	comp=Z,0.5nm,0.9s						
ILAR	Eielson Array	86.22	11	P	P	21 25 51.5	+2.2
	comp=Z,1.3nm,0.7s,baz=227,slow=5.8,SNR=22						
	comp=Z,1.3nm,0.7s						
PLCA	Paso Flores	86.55	132	LR	LR	21 59 14.2	
	comp=Z,57nm,18.1s,baz=191,slow=32						
ELIB	Princess Elisa	88.25	185	dP	P	21 26 00.6	+1.1
	comp=Z,5.2nm,1.5s						
SNAA	Sanae	88.95	177	LR	LR	22 03 43.5	
	comp=Z,60nm,18.5s,baz=190,slow=34						
YAK	Yakutsk	92.90	337	LR	LR	22 05 35.1	
	comp=Z,26nm,20.4s,baz=112,slow=34						
CMAR	Chiang Mai Arr	94.25	288	P	P	21 26 29.4	+1.2
	comp=Z,1.5nm,0.9s,baz=115,slow=3.0,SNR=11						
	comp=Z,1.5nm,0.9s						
MKAR	Makanchi Array	113.87	313	PKiKP	PKiKP	21 31 47.4	+0.2
	comp=Z,0.3nm,0.7s,baz=74,slow=1.8,SNR=3.6						
BVAR	Borovoye Array	121.23	321	PKP	PKiKP	21 32 01.8	+0.4
	comp=Z,0.6nm,0.6s,baz=108,slow=4.7,SNR=2.7						
GNI	Garni	141.66	311	PKP	PKPdf	21 32 40.3	+0.1
AKBB	Malin Array Si	144.12	336	PKP	PKPdf	21 32 45.3	+1.3
AK11	Malin Array Si	144.16	336	PKP	PKPdf	21 32 43.2	-0.9
AK02	Malin Array Si	144.16	336	PKP	PKPdf	21 32 44.4	+0.3
AK08	Malin Array Si	144.16	336	PKP	PKPdf	21 32 44.5	+0.4
GURO	Guroymak-BITLI	144.20	310	PKPdf	PKPdf	21 32 44.9	+0.1
MI28	Mi28,Pidlybu	144.52	337	PKP	PKPdf	21 32 43.7	-1.0
RNPP9	Sopachiv	144.74	339	PKP	PKPdf	21 32 45.3	+0.2
RNPP5	Staryi Chortor	144.89	339	PKP	PKPdf	21 32 45.9	+0.6
LUBAR	Lubar, Ukraine	145.31	336	PKP	PKPdf	21 32 46.9	+0.8
MARD	Mardin	145.58	308	PKPdf	PKPab	21 32 48.4	+0.8
BAL3X	Bal3x, Balta	146.12	332	PKP	PKPbc	21 32 48.3	-0.2
KMPD	K-Podol'skiy	146.91	336	PKP	PKPdf	21 32 48.3	-0.6
CLL	Collm	147.77	353	i P	PKPab	21 32 55.6	+0.2
	comp=Z,21nm,1.3s						
CLL				i x	x	21 33 06.9	
BRTR	Keskin Array B	149.42	317	PKPbc	PKiKP	21 32 59.8	+0.7
	comp=Z,3.3nm,0.8s,baz=130,slow=2.9,SNR=17						
BRTR	Keskin Array B	149.42	317		PKiKP	21 32 59.1	+0.1
GERES	GERESS Array B	150.10	351	PKPbc	PKiKP	21 33 00.8	+0.7
	comp=Z,1.7nm,0.8s,baz=45,slow=4.0,SNR=6.8						
MMAI	Mount Meron Ar	151.26	304	PKPbc	PKiKP	21 33 04.1	+1.2
	comp=Z,4.9nm,0.8s,baz=338,slow=3.1,SNR=6.4						

IDC 02 21:23:04.3±0.4, 59°64S×26°26W, h0km, mb4.9/15, mbtmp4.9/16, ML5.4/1, MS4.1/28, Error ellipse: s-maj=18.9km s-min=13.9km az=68.0

GCMT 02 21:23:10.3±0.4, 59°87S±0°03×26°17W±0°04, h43km±2km, MW5.0/53, Moment Tensor Solution. s32,c41; s53,c61; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.63±.24; $M_{\theta\theta}$3.96±.25; $M_{\phi\phi}$-4.58±.17; $M_{r\theta}$-0.09±.20; $M_{\theta\phi}$0.61±.19; $M_{\phi r}$1.32±.19; Best double couple: $M_0$4.47000×10^{16} NP1:ϕ_s130.00000°, δ80.00000°, λ-9.00000°. NP2: ϕ_s222.00000°, δ81.00000°, λ-170.00000°. Principal axes: T 4.0030, Plg0.0000°, Azm356.0000°; N 0.9400, Plg77.0000°, Azm265.0000°; P -4.9380, Plg13.0000°, Azm86.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

MOS 02 21:23:12.5±1.3, 59°65S×26°40W, h70km, mb5.1/8 Error ellipse: s-maj=24.9km s-min=12.5km az=112.8

NEIC 02 21:23:15.3±1.6, 59°61S±0°10×26°4W±0°2, h80km±4km, mb5.1/81, Error ellipse: s-maj=14.6km s-min=14.0km az=52.0

ISC 02 21:23:12.6±0.6, 59°68S±0°06×26°25W±0°06, h61km±4km, h61km:pP-P, n314, σ1s34/275, mb5.1/54, 14C-3D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	7.77	310		Pn	21 25 06.0	+3.2
HOPE	Hope Point	7.77	310	P	Pn	21 25 06.0	+3.2
VNA1	Neumayer--Stat	13.27	153	⇑P	Pn	21 26 14.0	-3.8
	comp=Z,260nm,0.3s						
VNA1				⇑S	Sn	21 28 29.8	-14
VNA3	Neumayer Olymp	13.42	157	⇑P	Pn	21 26 15.4	-4.4
	comp=Z,376nm,0.6s						
VNA3				⇓S	Sn	21 28 29.3	-18
VNA2	Neumayer--Watz	13.67	153	⇑P	Pn	21 26 18.6	-4.6
	comp=Z,99nm,0.5s,baz=313,slow=15						
VNA2				⇓S	Sn	21 28 39.7	-13
	baz=310,slow=19						
ESPZ	Base Esperanza	15.04	243	Pn	Pn	21 26 43.2	+2.2
SNAA	Sanae	15.26	151	⇑P	Pn	21 26 40.7	-3.2
	comp=Z,2μm,0.6s						
SNAA				⇓S	Sn	21 29 21.5	-10
SNAA	Sanae	15.26	151	Pn	Pn	21 26 40.6	-3.4
	comp=Z,16nm,0.3s,baz=313,slow=13,SNR=86						
SNAA				Sn	Sn	21 29 14.8	-17
	comp=Z,4.0nm,0.3s,baz=228,slow=21,SNR=6.7						
SNAA				LR	LR	21 31 24.8	
	comp=Z,629nm,20.1s,baz=1.0,slow=33						
	comp=Z,47nm,0.4s						
SNAA	Sanae	15.26	151		Pn	21 26 40.0	-4.0
SNAA	Sanae	15.26	151	ceP	Pn	21 26 40.3	-3.6
SNAA				pmax	pmax		
	comp=Z,94nm,1.0s						
TROLL	Troll, Antarti	16.82	149	P	Pn	21 27 00.6	-3.0
TROLL				S	Sn	21 29 53.8	-16
PMSA	Palmer Station	18.12	238	P	Pn	21 27 21.6	+2.1
	comp=Z,27nm,0.8s,baz=74,slow=8.7,SNR=4.1						
PMSA				LR	LR	21 33 43.7	
	comp=Z,815nm,19.0s,baz=80,slow=35						
PMSA	Palmer Station	18.12	238	P	Pn	21 27 21.4	+1.8
BELA	Belgrano 2	18.50	186	P	P	21 27 23.7	+0.4
NVL	N'lazarevskaya	19.03	141	eP	P	21 27 23.1	-6.0
NVL				eS	S	21 30 50.1	-11
NVL				pmax	pmax		
	comp=Z,88nm,2.0s						
NVL				MLR	MLR		
	comp=Z,556nm,19.0s						
EFI	East Falkland	19.48	280	P	Pn	21 27 36.1	+0.3
EFI	East Falkland	19.48	280	ceP	P	21 27 34.1	0.0
EFI				pmax	pmax		
	comp=Z,80nm,1.0s						
MG02	Cerro Sombrero	24.49	267	P	P	21 28 24.9	-0.6
MG03	Isla Dawson	24.54	264	P	P	21 28 24.9	-1.1
MG04	Isla Riesco	25.64	265	P	P	21 28 36.1	+0.2
MG04				IAmb	IAmb	21 29 13.5	
	comp=Z,50nm,1.0s						
MG05	Puerto Natales	26.78	267	P	P	21 28 45.3	-1.0
MG05				IAmb	IAmb	21 28 46.2	
	comp=Z,28nm,0.6s						
GO09	Cerro Castillo	26.93	268	P	P	21 28 46.6	-1.1
GO08	Villa O'Higgin	28.79	272	P	P	21 29 04.3	+0.1
QSPA	South Pole Qui	30.57	180	P	P	21 29 20.4	+0.4
	comp=Z,21nm,0.6s,baz=202,slow=2.0,SNR=38						
QSPA				PcP	PcP	21 32 17.2	+0.2
	comp=Z,10nm,0.6s,baz=203,slow=1.5,SNR=4.9						
QSPA				LR	LR	21 41 21.8	
	comp=Z,533nm,19.4s,baz=178,slow=36						
	comp=Z,21nm,0.6s						
QSPA	South Pole Qui	30.57	180	P	P	21 29 21.4	+1.4
QSPA				IAmb	IAmb	21 29 22.2	
	comp=Z,23nm,0.7s						
QSPA				PcP	PcP	21 32 18.0	+1.0
QSPA	South Pole Qui	30.57	180	P	P	21 29 21.6	+1.6
QSPA				pP	pP	21 29 32.4	-1.8
TRQA	Tornquist	31.33	298	P	P	21 29 27.8	+0.9
TRQA				IAmb	IAmb	21 29 30.5	
	comp=Z,21nm,0.7s						
TRQA	Tornquist	31.33	298	P	P	21 29 27.8	+0.9
TRQA				pmax	pmax		
	comp=Z,21nm,0.7s						
LL02	Futaleuf	32.08	280	P	P	21 29 34.6	+1.3
PLCA	Paso Flores	33.27	285	P	P	21 29 43.8	-0.1
	comp=Z,8.3nm,0.7s,baz=152,slow=7.4,SNR=25						
PLCA				LR	LR	21 43 30.5	
	comp=Z,230nm,18.1s,baz=148,slow=37						
	comp=Z,8.3nm,0.7s						
PLCA	Paso Flores	33.27	285	P	P	21 29 44.0	+0.1
PLCA				IAmb	IAmb	21 29 44.8	
	comp=Z,9.0nm,0.7s						
PLCA	Paso Flores	33.27	285	eP	P	21 29 41.7	-2.2
PLCA	Paso Flores	33.27	285	eP	P	21 29 43.6	-0.3
PLCA	Paso Flores	33.27	285	P	P	21 29 43.7	-0.1
PLCA				pP	pP	21 29 54.5	-4.2
PLTB	Pedras Altas	33.35	315	P	P	21 29 44.8	+0.2
PLTB	Pedras Altas	33.35	315	eP	P	21 29 45.2	+0.6
LR05	Currie	34.37	284	P	P	21 29 52.9	-0.4
LR05				IAmb	IAmb	21 29 56.5	
	comp=Z,18nm,0.8s						
CPSB	Cacapava Do Su	34.52	316	eP	P	21 29 55.7	+1.0
GO06	Curarrehue	34.60	285	P	P	21 29 55.0	-0.5
LR04	Corral	35.34	283	P	P	21 30 02.1	+0.5
PSAL	Palomas, Salto	35.47	310	eP	P	21 30 02.3	-0.5
BI02	San Fabin de	36.80	288	P	P	21 30 13.9	-0.4
MAW	Mawson	36.98	140	LR	LR	21 43 59.6	
	comp=Z,398nm,19.8s,baz=241,slow=34						
ML02	Panimavida	37.59	289	P	P	21 30 20.3	-0.6
ML02				IAmb	IAmb	21 30 24.4	
	comp=Z,28nm,0.8s						
BI05	Punta Hualpn	37.66	286	P	P	21 30 22.0	+0.5
BO02	Sierra Bellavi	38.08	291	P	P	21 30 24.1	-0.9
BO02				IAmb	IAmb	21 30 27.1	
	comp=Z,15nm,0.8s						
GO05	Hualane	38.45	289	P	P	21 30 28.1	-0.1
GO05				IAmb	IAmb	21 30 31.1	
	comp=Z,33nm,0.7s						
BO01	Tunca	38.55	291	P	P	21 30 28.6	-0.4
BO01				IAmb	IAmb	21 30 33.8	
	comp=Z,25nm,0.8s						
BO04	La Punta	38.65	292	P	P	21 30 29.6	-0.3
MT13	San Alfonso	38.70	292	IAmb	IAmb	21 30 46.3	
	comp=Z,15nm,0.8s						
MT08	Bocatoma Ro	38.82	293	IAmb	IAmb	21 30 35.3	
	comp=Z,35nm,0.8s						
MT01	Popeta	39.06	291	IAmb	IAmb	21 30 49.8	
	comp=Z,29nm,0.7s						
PEL	Peldehue	39.38	292	P	P	21 30 36.7	+0.7
PEL				pP	pP	21 30 47.9	-3.1
MT02	Curacav	39.50	292	IAmb	IAmb	21 30 52.6	
	comp=Z,34nm,0.8s						

CFA Coronel Fontan 39.54 296 LR LR 21 46 20.2
comp=Z,132nm,21.8s,baz=194,slow=35
CPUP Villa Florida 39.63 313 P **P** **21 30 37.5 -0.6**
comp=Z,6.1nm,0.7s,baz=158,slow=9.8,SNR=16
CPUP LR LR 21 46 39.9
comp=Z,142nm,19.7s,baz=160,slow=36
comp=Z,6.1nm,0.7s
CPUP Villa Florida 39.63 313 P **P** **21 30 38.9 +0.8**
CPUP Villa Florida 39.63 313 *e*P **P** **21 30 39.2 +1.2**
VA03 San Esteban 39.64 293 P **P** **21 30 37.7 -0.5**
VA03 IAmb IAmb 21 30 40.3
comp=Z,42nm,0.9s
ZON Zonda 39.79 296 P **P** **21 30 38.9 -0.5**
ZON Zonda 39.79 296 P **P** **21 30 38.9 -0.5**
ZON pmax pmax
comp=Z,15nm,1.0s
CO04 Los Peladeros 40.43 293 P **P** **21 30 45.2 +0.2**
CO04 IAmb IAmb 21 30 50.2
comp=Z,27nm,0.8s
CO02 Combarbal 41.15 294 IAmb IAmb 21 30 59.1
comp=Z,28nm,1.0s
SUR Sutherland 41.26 70 LR LR 21 44 15.1
comp=Z,289nm,19.2s,baz=206,slow=31
CO03 El Pedregal 41.31 294 PcP **PcP** **21 32 49.4 0.0**
CO01 Juntas del Tor 41.76 296 IAmb IAmb 21 30 59.7
comp=Z,22nm,0.8s
CO06 Fray Jorge 41.89 293 IAmb IAmb 21 30 58.4
comp=Z,16nm,0.8s
SJMB Sao Joao De Ma 42.32 339 *e*P **P** **21 31 00.4 +0.2**
CO05 La Serena 42.34 294 IAmb IAmb 21 31 02.7
comp=Z,45nm,0.9s
VNDA Vanda 42.97 183 P **P** **21 31 04.8 +0.1**
comp=Z,15nm,0.7s,baz=189,slow=5.6,SNR=12
VNDA PcP **PcP** **21 32 53.9 -0.1**
comp=Z,8.8nm,0.9s,baz=146,slow=3.6,SNR=2.9
VNDA LR LR 21 47 34.5
comp=Z,220nm,20.4s,baz=170,slow=34
comp=Z,15nm,0.7s
VNDA Vanda 42.97 183 P **P** **21 31 06.8 +2.0**
VNDA PcP **PcP** **21 32 56.2 +2.2**
DIAM Diamantina, MG 43.21 335 *e*P **P** **21 31 07.9 +0.4**
PMNB Patos De Minas 43.60 332 *e*P **P** **21 31 10.8 +0.2**
MURT Porto Murtinho 44.01 316 *e*P **P** **21 31 12.6 -1.1**
CCD Concordia, Ant 44.01 169 P **P** **21 31 13.9 +0.2**
CCD pP pP 21 31 24.9 -3.8
CCD sP **pwP** **21 31 29.8 -1.2**
AC02 Maricunga 44.01 299 P **P** **21 31 14.6 +0.2**
AC02 IAmb IAmb 21 31 17.9
comp=Z,21nm,1.1s
GUA01 Guaratinga, BA 44.16 341 *e*P **P** **21 31 15.3 +0.4**
AQDB Aquidauana 44.44 319 *e*P **P** **21 31 18.6 +1.4**
CMC01 Camacan, BA 45.31 342 *e*P **P** **21 31 24.5 +0.3**
GO02 Mina Guanaco 45.67 300 IAmb IAmb 21 31 29.1
comp=Z,33nm,0.8s
H04S2 CROZET ISLANDS 45.71 110 T T 22 20 54.2
baz=224,slow=75,SNR=24
NBIT Itapeh - BA 45.72 342 *e*P **P** **21 31 28.0 +0.6**
H04S3 CROZET ISLANDS 45.72 110 T T 22 20 53.9
baz=224,slow=75,SNR=20
H04S1 CROZET ISLANDS 45.73 110 T T 22 20 56.9
baz=224,slow=75,SNR=17
JANB Januaria 46.48 336 *e*P **P** **21 31 33.4 -0.1**
PB14 IPOC Station P 46.49 299 P **P** **21 31 32.9 -0.9**
PB14 IAmb IAmb 21 31 35.0
comp=Z,17nm,0.8s
BOSA Boshof 46.51 72 P **P** **21 31 33.9 +0.2**
comp=Z,2.3nm,0.7s,baz=204,slow=6.0,SNR=12
BOSA PcP **PcP** **21 33 07.2 0.0**
comp=Z,4.8nm,0.8s,baz=197,slow=3.9,SNR=5.1
BOSA LR LR 21 47 28.7
comp=Z,212nm,19.1s,baz=210,slow=32
comp=Z,2.3nm,0.7s
BOSA Boshof 46.51 72 P **P** **21 31 33.9 +0.2**
BOSA PcP **PcP** **21 33 08.1 +0.9**
BDFB Brasilia 46.77 331 P **P** **21 31 35.3 -0.5**
comp=Z,5.5nm,0.7s,baz=172,slow=7.0,SNR=6.9
BDFB LR LR 21 48 22.2
comp=Z,195nm,21.8s,baz=157,slow=32
comp=Z,5.5nm,0.7s
BDFB Brasilia 46.77 331 P **P** **21 31 34.9 -0.9**
BDFB Brasilia 46.77 331 P **P** **21 31 34.9 -0.9**
BDFB pmax pmax
comp=Z,8.0nm,1.0s
PP1B Ponte de Pedra 46.86 321 *e*P **P** **21 31 35.9 -0.5**
ARAG Araguaiana, MT 47.72 326 *e*P **P** **21 31 43.1 0.0**
PB06 IPOC Station P 47.81 301 P **P** **21 31 42.5 -1.4**
PB06 IAmb IAmb 21 31 47.5
comp=Z,24nm,0.7s
PB05 IPOC Station P 47.95 300 IAmb IAmb 21 31 47.3
comp=Z,33nm,0.9s
PB03 IPOC Station P 48.47 301 IAmb IAmb 21 31 50.2
comp=Z,22nm,0.6s
PB09 IPOC Station P 48.47 302 P **P** **21 31 49.9 +0.9**
SALV Santo Antonio 48.71 321 *e*P **P** **21 31 50.1 -0.6**
KOOLE Kule 48.94 62 *i* P **P** **21 31 52.2 -0.4**
KOOLE Kule 48.94 62 IAmb IAmb 21 31 54.2
comp=Z,14nm,0.8s
SDBA SAO DESIDERIO 49.18 336 *e*P **P** **21 31 54.1 -0.2**
PB08 IPOC Station P 49.89 303 IAmb IAmb 21 32 17.6
comp=Z,23nm,1.1s
KGCAE Kacgae 49.97 64 *i* P **P** **21 32 00.2 -0.2**
HMBC Humberstone 50.09 302 IAmb IAmb 21 32 24.8
comp=Z,36nm,1.2s
PTLB Pontes e Lacer 50.28 317 IAmb IAmb 21 32 03.6
comp=Z,17nm,0.8s
PTLB Pontes e Lacer 50.28 317 *e*P **P** **21 32 01.9 -0.7**
GO01 Chusmiza 50.33 303 IAmb IAmb 21 32 05.1
comp=Z,18nm,0.7s
PB11 IPOC Station P 50.45 303 IAmb IAmb 21 32 51.8
comp=Z,29nm,1.1s
KDWAN Kaudwane 50.65 67 *i* P **P** **21 32 04.8 -0.7**
GRTLG Ghanzi 50.82 62 *i* P **P** **21 32 06.9 +0.1**
TSUM Tsumeb 51.12 57 LR LR 21 48 56.5
comp=Z,301nm,21.5s,baz=204,slow=30
TSUM Tsumeb 51.12 57 P **P** **21 32 09.0 -0.2**
TSUM Tsumeb 51.12 57 P **P** **21 32 10.2 +1.0**
TSUM x x 21 32 23.4
SNDB Serra Nova Dou 51.13 328 *e*P **P** **21 32 09.0 -0.1**
LPHEP Lephephe 51.23 68 *i* P **P** **21 32 09.6 -0.3**
H10S2 ASCENSION HYDR 51.36 15 T T 22 27 51.6
baz=187,slow=74,SNR=10
H10S3 ASCENSION HYDR 51.37 15 T T 22 27 51.9
baz=33,slow=74,SNR=24
KHWEE KHWEE 52.25 67 *i* P **P** **21 32 16.9 -0.6**
H10N1 ASCENSION HYDR 52.48 15 T T 22 29 15.5
baz=187,slow=75,SNR=7.4
H10N3 ASCENSION HYDR 52.48 15 T T 22 29 20.5
baz=187,slow=75,SNR=21
H10N2 ASCENSION HYDR 52.50 15 T T 22 29 17.0
baz=187,slow=75,SNR=18
LPAZ La Paz 52.91 307 P **P** **21 32 22.8 -0.2**
comp=Z,9.9nm,0.7s,baz=138,slow=7.0,SNR=35
comp=Z,9.9nm,0.7s
LPAZ La Paz 52.91 307 IAmb IAmb 21 32 40.1
comp=Z,20nm,1.1s
LPAZ La Paz 52.91 307 *e*P **P** **21 32 23.7 +0.7**
VILB Vilhena 52.97 317 *e*P **P** **21 32 22.0 -0.7**
PDRB Porto dos Gac 53.07 322 *e*P **P** **21 32 22.4 -1.1**
SMTB Santa Maria do 53.20 333 *e*P **P** **21 32 24.6 +0.2**
CLDB Colider 53.48 323 *e*P **P** **21 32 25.3 -1.1**
NBPV Pedro Velho 53.58 349 *e*P **P** **21 32 27.1 0.0**
SOOWA Sowa 53.80 67 *i* P **P** **21 32 28.6 -0.3**
BROLN Tlhalogang 53.87 68 *i* P **P** **21 32 29.0 -0.4**
RCBR Riachuelo 54.22 348 LR LR 21 51 05.7
comp=Z,27nm,21.3s,baz=214,slow=31
NBPA Parau_RN 54.44 347 *e*P **P** **21 32 33.5 +0.1**
KSANE Kasane 55.71 64 *i* P **P** **21 32 42.2 -0.5**
KSANE Kasane 55.71 64 IAmb IAmb 21 32 44.3
comp=Z,17nm,0.7s
NPGB Novo Progresso 56.97 325 *e*P **P** **21 32 50.5 -1.1**
LSZ Lusaka 59.31 66 LR LR 21 54 44.1
comp=Z,376nm,21.8s,baz=196,slow=32
LSZ Lusaka 59.31 66 P **P** **21 33 08.6 +0.6**
LSZ IAmb IAmb 21 33 09.7
comp=Z,16nm,0.8s
LSZ Lusaka 59.31 66 P **P** **21 33 08.6 +0.6**
LSZ pmax pmax
comp=Z,16nm,0.8s
LSZ Lusaka 59.31 66 P **P** **21 33 08.7 +0.6**
LSZ sP **pP** **21 33 24.8 +1.4**
ITTB Itaituba 59.63 325 *e*P **P** **21 33 08.8 -1.3**
NNA Nana 60.46 300 *i* P **P** **21 33 14.1 -1.8**
NNA pmax pmax
comp=Z,18nm,0.9s
TEFE Tefe 63.29 316 *e*P **P** **21 33 33.6 -1.1**

OPO Ambohidratompo 65.80 85 LR LR 21 56 40.1
comp=Z,149nm,21.1s,baz=344,slow=31
BOAV Boa Vista 67.47 322 **P** **21 33 60.0 -1.8**
BOAV Boa Vista 67.47 322 *e*P **P** **21 33 59.9 -1.8**
MDP Montagnes des 67.87 331 LR LR 22 00 44.4
comp=Z,145nm,21.9s,baz=174,slow=33
DBIC Dimbokro 68.29 23 P **P** **21 34 07.1 +0.2**
comp=Z,6.9nm,0.9s,baz=196,slow=6.0,SNR=7.0
DBIC LR LR 21 56 33.2
comp=Z,106nm,21.3s,baz=180,slow=29
comp=Z,6.9nm,0.9s
DBIC Dimbokro 68.29 23 P **P** **21 34 07.3 +0.5**
DBIC Dimbokro 68.29 23 P **P** **21 34 07.4 +0.5**
DBIC pmax pmax
comp=Z,9.0nm,1.0s
DBIC Dimbokro 68.29 23 P **P** **21 34 07.1 +0.2**
DBIC pP pP 21 34 19.1 -3.5
EDA Edea 69.44 39 P **P** **21 34 14.8 +0.7**
EDA Edea 69.44 39 P **P** **21 34 14.8 +0.7**
EDA pP **pP** **21 34 27.5 -2.4**
OTAV Otavalo 72.09 304 P **P** **21 34 30.9 +0.2**
OTAV Otavalo 72.09 304 P **P** **21 34 30.9 +0.2**
OTAV pmax pmax
comp=Z,9.0nm,0.9s
OTAV Otavalo 72.09 304 *e*P **P** **21 34 30.9 +0.2**
OTAV Otavalo 72.09 304 P **P** **21 34 31.9 +1.2**
MBAR Mbarara 73.42 61 LR LR 22 03 37.7
comp=Z,226nm,20.1s,baz=208,slow=33
MBAR Mbarara 73.42 61 P **P** **21 34 40.3 +2.1**
MBAR IAmb IAmb 21 34 57.2
comp=Z,31nm,1.6s
MBAR Mbarara 73.42 61 *i* P **P** **21 34 38.5 +0.3**
MBAR pmax pmax
comp=Z,14nm,1.6s
MBAR Mbarara 73.42 61 P **P** **21 34 41.5 +3.3**
MBAR pP **PcP** **21 34 53.4 -0.8**
ROSC El Rosal 74.59 310 P **P** **21 34 46.0 +0.7**
comp=Z,16nm,0.6s,baz=170,slow=15,SNR=5.2
ROSC LR LR 22 08 27.7
comp=Z,97nm,21.9s,baz=213,slow=36
comp=Z,16nm,0.6s
ROSC El Rosal 74.59 310 P **P** **21 34 44.9 -0.4**
ROSC IAmb IAmb 21 34 46.8
comp=Z,18nm,0.9s
ROSC El Rosal 74.59 310 P **P** **21 34 44.9 -0.4**
ROSC pmax pmax
comp=Z,18nm,0.9s
TORD Torodi Ar. Bea 76.00 28 P **P** **21 34 53.8 +1.0**
comp=Z,14nm,0.7s,baz=210,slow=10,SNR=76
comp=Z,14nm,0.7s
SDV Santo Domingo 76.93 315 LR LR 22 08 45.3
comp=Z,230nm,22.0s,baz=127,slow=36
SDV Santo Domingo 76.93 315 P **P** **21 34 57.7 -0.7**
SDV IAmb IAmb 21 34 58.6
comp=Z,14nm,0.7s
SDV Santo Domingo 76.93 315 *e*P **P** **21 34 57.9 -0.5**
TAU Tasmania Unive 77.64 175 P **P** **21 35 02.3 +0.5**
TAU Tasmania Unive 77.64 175 P **P** **21 35 02.3 +0.5**
TAU pmax pmax
comp=Z,139nm,1.6s
MRZ Mangatainoka R 78.41 197 IAmb IAmb 21 35 08.5
comp=Z,20nm,0.8s
RTZ Ruatahuna 80.20 198 P **P** **21 35 17.7 +1.7**
RTZ IAmb IAmb 21 37 34.4
comp=Z,24nm,0.7s
URZ Urewera 80.52 198 P **P** **21 35 18.7 +1.0**
comp=Z,9.5nm,0.8s,baz=151,slow=0.3,SNR=6.3
comp=Z,9.5nm,0.8s
PDPR Patillas Dam, 83.90 322 P **P** **21 35 33.6 -1.7**
SJG San Juan 84.03 322 LR LR 22 12 05.2
comp=Z,47nm,21.7s,baz=100,slow=35
TBI Tubuai 85.17 231 *e*S **S** **21 46 05.3 -1.6**
comp=Z,431nm,30.8s
TBI *e*LR LR 22 02 31.9
comp=Z,420nm,23.2s
BBOO Buckleboo 86.70 165 P **P** **21 35 49.0 -0.4**
FORT Forrest 87.41 158 P **P** **21 35 54.0 +1.1**
FORT IAmb IAmb 21 35 54.6
comp=Z,14nm,0.7s
STKA Stephens Creek 88.23 170 P **P** **21 35 57.5 +0.7**
comp=Z,8.4nm,0.7s,baz=178,slow=6.3,SNR=12
STKA LR LR 22 13 45.6
comp=Z,77nm,18.5s,baz=200,slow=34
comp=Z,8.4nm,0.7s
STKA Stephens Creek 88.23 170 P **P** **21 35 57.5 +0.7**
STKA Stephens Creek 88.23 170 *i* P P 21 35 52.6 -4.2
PPT2 Papeete2 90.41 233 *e*LR LR 22 04 58.9
comp=Z,178nm,23.8s
PPT2 *e*LR LR 22 05 03.2
comp=Z,194nm,27.5s
PPT Papeete 90.42 233 LR LR 22 09 03.6
comp=Z,127nm,19.5s,baz=173,slow=30
RAR Rarotonga 90.92 223 LR LR 22 10 55.0
comp=Z,29nm,19.5s,baz=134,slow=32
MDT Midelt 93.88 18 LR LR 22 12 26.6
comp=Z,112nm,21.3s,baz=218,slow=32
TAOE Nuku Hiva Isla 94.09 245 *e*LR LR 22 06 42.7
comp=Z,375nm,26.2s
CMIG Matias Romero 94.29 297 P **P** **21 36 24.3 -0.6**
comp=Z,2.7nm,0.9s,baz=81,slow=3.4,SNR=3.7
comp=Z,2.7nm,0.9s
PSA00 Pibara Seismi 94.42 149 P **P** **21 36 25.1 -0.6**
ASAR Alice Springs 95.38 162 P **P** **21 36 30.2 +0.2**
comp=Z,6.5nm,0.6s,baz=184,slow=4.1,SNR=81
ASAR PKiKP **PKiKP** **21 41 07.6 -2.6**
comp=Z,0.5nm,0.7s,baz=182,slow=1.6,SNR=5.9
ASAR PKKP **PKKPbc** **21 53 21.6 +2.6**
comp=Z,0.4nm,0.8s,baz=242,slow=0.4,SNR=4.2
ASAR LR LR 22 15 50.0
comp=Z,249nm,21.8s,baz=187,slow=33
comp=Z,6.5nm,0.6s
ASAR Alice Springs 95.38 162 P **P** **21 36 29.8 -0.2**
ASAR Alice Springs 95.38 162 P **P** **21 36 29.8 -0.2**
AS31 Alice Springs 95.38 162 P **P** **21 36 29.8 -0.2**
WRA Warramunga Arr 99.09 162 P **Pdif** **21 36 46.2 -0.7**
comp=Z,1.7nm,0.3s,baz=192,slow=4.6,SNR=9.6
comp=Z,1.7nm,0.3s
WR8 Warramunga Arr 99.11 162 P **Pdif** **21 36 46.3 -0.6**
FITZ Fitzroy Crossi 99.19 153 LR LR 22 19 37.6
comp=Z,73nm,18.9s,baz=207,slow=34
WB0 Warramunga Arr 99.28 162 P **Pdif** **21 36 47.0 -0.7**
WB0 IAmb IAmb 21 37 59.4
comp=Z,13nm,1.4s
KEST Kesra 99.51 29 LR LR 22 17 38.5
comp=Z,74nm,19.4s,baz=17,slow=33
MSVF Nonsavu 100.36 203 *i* P **Pdif** **21 36 47.2 -5.4**
MSVF pmax pmax
comp=Z,14nm,1.3s
BRTR Keskin Array B 110.62 45 PP **PP** **21 42 14.8 -0.6**
comp=Z,1.0nm,0.9s,baz=190,slow=7.3,SNR=4.6
BFO Black Forest 111.28 24 *i* PKiKP **PKiKP** **21 41 34.4 -3.8**
NRDN NARMADA NAGAR 116.08 89 *e*P **PKPdf** **21 41 46.1 -2.1**
NRDN IAmb IAmb 21 41 47.6
comp=Z,7.1nm,0.8s
BHPL Bhopal 116.64 89 *e*P **PKPdf** **21 41 49.1 -0.2**
KBZ Khabaz 117.56 50 PKP **PKPdf** **21 41 50.5 +0.2**
comp=Z,1.2nm,0.8s,baz=294,slow=2.8,SNR=3.8
AKT Akhty 117.61 55 *e*PKiKP **PKiKP** **21 41 51.7 +1.0**
KIV Kislovodsk 117.67 50 *i* PKiKP **PKPdf** **21 41 48.2 -2.5**
KIV pmax pmax
comp=Z,4.0nm,1.0s
HRA Herat 118.26 70 **PKiKP** **21 41 53.0 +0.7**
SCHQ Schefferville 118.68 335 PKP **PKPdf** **21 41 52.0 -0.1**
comp=Z,3.8nm,0.8s,baz=198,slow=3.6,SNR=5.8
AKASG Malin Array Be 118.83 37 PKP **PKPdf** **21 41 52.5 -0.1**
comp=Z,2.4nm,0.7s,baz=241,slow=1.4,SNR=6.0
GAYA Gaya 121.90 95 *e*P **PKPdf** **21 41 59.3 0.0**
GAYA IAmb IAmb 21 42 00.2
comp=Z,11nm,0.5s
VORD Divnogorie 122.33 43 *e*PKiKP **PKPdf** **21 41 56.0 -3.2**
VORD pmax pmax
comp=Z,6.0nm,0.7s
VSR Storozhevoye 122.49 43 *e*PKiKP **PKPdf** **21 41 55.9 -3.7**
VSR pmax pmax
comp=Z,3.0nm,0.8s
PDAR Pinedale Array 122.64 300 PKP **PKPdf** **21 41 60.0 -0.5**
comp=Z,0.5nm,0.5s,baz=131,slow=5.5,SNR=8.0
PDAR Pinedale Array 122.64 300 PKPdf **PKPdf** **21 41 59.4 -1.1**
VORR Voronezh 122.89 42 *e*PKiKP **PKPdf** **21 41 58.3 -2.0**
VORR pmax pmax
comp=Z,6.0nm,0.9s
SMLA Simla 122.97 84 *e*P **PKPdf** **21 42 01.1 0.0**
LGTI Lohaghat 123.05 88 *e*P **PKPdf** **21 42 01.6 -0.1**
ULM Lac du Bonnet 123.18 314 PKP **PKPdf** **21 42 00.3 -0.6**
comp=Z,1.8nm,0.5s,baz=64,slow=2.7,SNR=4.8
PTH Pithoragarh 123.26 87 *e*P **PKPdf** **21 42 02.5 +0.5**

PTH IAmb IAmb 21 42 03.5
comp=Z,4.9nm,0.7s
CMAR Chiang Mai Arr 123.28 112 PKP **PKiKP** **21 42 03.0 +0.7**
comp=Z,7.5nm,0.7s,baz=228,slow=3.7,SNR=71
CMAR Chiang Mai Arr 123.28 112 PKPdf **PKPdf** **21 42 02.0 -0.2**
CMAR Chiang Mai Arr 123.28 112 PKiKP **PKPdf** **21 42 02.0 -0.2**
THN Thein Dam 123.32 82 *e*P **PKPdf** **21 42 02.0 +0.1**
VRH Novokhopyorsk 123.37 44 *e*PKiKP **PKPdf** **21 41 59.7 -1.5**
VRH pmax pmax
comp=Z,6.0nm,0.8s
DHRM DHARAMSHALA 123.44 82 *e*P **PKiKP** **21 42 03.4 +0.8**
DHRM IAmb IAmb 21 42 04.5
comp=Z,535nm,0.1s
HFS Hagfors 123.46 23 PKP **PKPdf** **21 42 00.4 -0.7**
comp=Z,1.3nm,0.5s,baz=274,slow=7.1,SNR=8.3
LPSR Galich'ya Gora 123.57 42 *e*PKiKP **PKPdf** **21 42 00.4 -1.2**
LPSR pmax pmax
comp=Z,7.0nm,0.9s
CHTO Chiang Mai 123.59 112 PKPdf **PKPdf** **21 42 03.0 +0.3**
CHTO Chiang Mai 123.59 112 PKiKP **PKPdf** **21 42 03.1 +0.3**
ELK Elko 123.60 294 PKP **PKiKP** **21 42 02.9 +0.2**
comp=Z,0.6nm,0.6s,baz=194,slow=4.2,SNR=2.1
JOSI Joshimath 123.72 86 *e*P **PKiKP** **21 42 03.8 +0.6**
JOSI IAmb IAmb 21 42 05.1
comp=Z,8.9nm,0.8s
NB2 NORSAR Subarra 123.83 21 PKPdf **PKPdf** **21 42 02.1 +0.2**
comp=Z,1.7nm,0.9s,baz=202,slow=1.9
NOA NORSAR Array B 123.83 21 PKP **PKPdf** **21 42 01.5 -0.4**
comp=Z,2.2nm,0.8s,baz=200,slow=1.8,SNR=7.1
TSSA Tissa 123.83 82 *e*P **PKPdf** **21 42 03.5 +0.4**
TSSA IAmb IAmb 21 42 05.6
comp=Z,7.5nm,0.9s
SAIH SAIHA 123.84 104 *e*P **PKiKP** **21 42 04.5 +1.0**
SAIH IAmb IAmb 21 42 05.6
comp=Z,86nm,0.1s
KLP Kalpa 123.85 84 *e*P **PKiKP** **21 42 04.1 +0.5**
KLP IAmb IAmb 21 42 08.4
comp=Z,6.1nm,0.6s
MOOW Moose Ponds 123.95 300 PKPdf **PKPdf** **21 42 03.3 +0.4**
OBN Obninsk 124.90 39 *i* PKiKP **PKPdf** **21 42 03.3 -0.7**
OBN pmax pmax
comp=Z,6.0nm,0.7s
CHGR Chuyangaron 125.00 72 *i* PKiKP **PKPdf** **21 42 02.6 -2.3**
EVN Everest 125.29 94 PKPdf **PKPdf** **21 42 06.6 0.0**
DHUB DHUBRI 125.30 99 *e*P **PKPdf** **21 42 05.8 0.0**
ALCI Alchi Leh 125.45 82 *e*P **PKiKP** **21 42 07.5 +0.8**
ALCI IAmb IAmb 21 42 08.8
comp=Z,5.8nm,0.6s
GTK Tadong 125.67 96 *e*P **PKPdf** **21 42 07.4 +0.7**
SHL Shillong 125.87 101 *e*P **PKPdf** **21 42 07.4 +0.2**
SHL IAmb IAmb 21 42 08.8
comp=Z,7.6nm,0.6s
KOHI KOHIMA 127.10 103 *e*P **PKPdf** **21 42 10.0 +0.5**
TEZP TEZPUR 127.20 101 *e*P **PKPdf** **21 42 09.7 +0.3**
TEZP IAmb IAmb 21 42 10.9
comp=Z,9.8nm,0.9s
FINES FINESS Array B 127.35 29 PKP **PKPdf** **21 42 08.8 +0.3**
comp=Z,5.5nm,0.6s,baz=171,slow=1.3,SNR=32
TAWA Tawang 127.54 99 *e*P **PKiKP** **21 42 11.5 +0.5**
TAWA IAmb IAmb 21 42 13.5
comp=Z,16nm,0.6s
MOKO MOKOCHONG 127.81 103 *e*P **PKiKP** **21 42 12.6 +1.2**
MOKO IAmb IAmb 21 42 13.9
comp=Z,34nm,0.8s
ZIRO ZIRO 128.47 101 *e*P **PKiKP** **21 42 13.4 +0.7**
KSH2 Kashi 128.50 77 PKP **PKPdf** **21 42 12.2 +0.5**
TNCH TengChong 128.69 107 *e*PKP **PKiKP** **21 42 14.5 +1.3**
LSA Lhasa 128.90 97 PKPdf **PKiKP** **21 42 14.4 +0.5**
LSA Lhasa 128.90 97 PKiKP **PKiKP** **21 42 14.4 +0.5**
AB31 Akbulak array 128.97 57 PKPdf **PKPdf** **21 42 12.2 +0.2**
KKAR Karatay Array 129.08 70 PKPdf **PKPdf** **21 42 12.3 -0.2**
KKAR Karatay Array 129.08 70 PKiKP **PKPdf** **21 42 12.3 -0.2**
KLMR Klimovskoe 130.50 36 *e*PKiKP **PKPdf** **21 42 13.7 -0.8**
KLMR PS **PS** **21 54 39.7 -2.6**
KLMR pmax pmax
comp=Z,16nm,1.4s
AAK Ala-Archa 130.64 73 *c i* PKiKP **PKPdf** **21 42 14.9 -0.8**
AAK pmax pmax
comp=Z,7.0nm,0.7s
PZH PanZhiHua 131.48 110 PKP **PKPdf** **21 42 15.4 -2.3**
KIRV Kirov 131.93 43 *c i* PKiKP **PKPdf** **21 42 17.6 +0.3**
ARTI Arti 133.61 50 *i* PKiKP **PKPdf** **21 42 19.1 -1.5**
ARCES ARCESS Array B 134.12 23 PKP **PKPdf** **21 42 21.2 0.0**
comp=Z,2.5nm,0.5s,baz=200,slow=1.5,SNR=16
ARCES ARCESS Array B 134.12 23 PKPdf **PKPdf** **21 42 21.1 -0.1**
BLKN Baker Lake 134.35 325 PKPdf **PKPdf** **21 42 22.0 +0.3**
LVZ Lovozero 134.77 28 *i* PKiKP **PKPdf** **21 42 20.9 -1.6**
BORK Borovoye 136.22 60 *c i* PKiKP **PKiKP** **21 42 27.1 -0.2**
BORK pmax pmax
comp=Z,4.0nm,0.6s
BVAR Borovoye Array 136.23 60 PKhKP PKPpre 21 42 14.5
comp=Z,1.7nm,0.7s,baz=219,slow=3.8,SNR=4.9
BVAR PKP **PKPdf** **21 42 26.2 +0.6**
comp=Z,5.6nm,0.6s,baz=246,slow=2.6,SNR=16
MK31 Makanchi Array 137.47 75 *c* PKiKP **PKPdf** **21 42 26.6 -1.6**
MKAR Makanchi Array 137.47 75 PKhKP PKPpre 21 42 17.4
comp=Z,0.9nm,0.6s,baz=212,slow=2.3,SNR=14
WMQ Urumqi 138.04 82 *e*PKP **PKPdf** **21 42 27.8 -1.6**
KURBB Kurchatov Arra 138.31 68 PKhKP PKPpre 21 42 21.3
comp=Z,1.3nm,0.6s,baz=234,slow=3.4,SNR=18
KURBB PKP **PKPdf** **21 42 29.8 +0.3**
comp=Z,3.8nm,0.7s,baz=236,slow=2.6,SNR=9.0
KURK Kurchatov 138.41 68 *c i* PKiKP **PKPdf** **21 42 31.1 +1.4**
KURK pmax pmax
comp=Z,3.0nm,0.7s
TULEG Thule 138.60 346 PKPdf **PKPdf** **21 42 29.6 +0.3**
YKA Yellowknife Ar 139.15 315 PKhKP PKPpre 21 42 22.7
comp=Z,0.1nm,0.4s,baz=125,slow=2.8,SNR=4.8
YKA PKP **PKPdf** **21 42 30.8 +0.2**
comp=Z,1.4nm,0.6s,baz=123,slow=1.4,SNR=20
YKA PP **PP** **21 45 22.1 -3.3**
comp=Z,0.7nm,1.1s,baz=137,slow=5.4,SNR=3.8
YKA SKP **SKPbc** **21 46 02.1 +2.0**
comp=Z,0.3nm,0.7s,baz=131,slow=2.7,SNR=5.0
SPITS Spitsbergen Ar 140.01 13 PKhKP PKPpre 21 42 24.8
comp=Z,2.5nm,0.7s,baz=142,slow=4.2,SNR=7.0
LZDM Lanzhou Array 140.18 104 PKP **PKPdf** **21 42 33.2 -0.7**
comp=Z,0.9nm,0.3s,baz=247,slow=3.1,SNR=4.1
LZH Lanzhou 140.36 104 pPKP pPKPdf 21 42 48.8 -2.5
LZH Lanzhou 140.36 104 PKP **PKiKP** **21 42 37.6 +1.1**
GTA2 Gaotai 140.95 96 pPKP PKiKP 21 42 38.6 +1.0
GTA2 Gaotai 140.95 96 *e*PKP **PKPdf** **21 42 31.2 -3.7**
XAN Xi'an 141.17 111 pPKP pPKPdf 21 42 53.4 +0.7
XAN Xi'an 141.17 111 PKP **PKPdf** **21 42 34.0 -1.4**
QSZ Jazzator, Alta 141.97 75 *i* PKiKP **PKPdf** **21 42 34.0 -2.4**
LYN LuoYang 143.25 114 PKP PKPbc 21 42 37.3 +1.1
ZALV Zalesovo Beam 143.41 68 PKhKP PKPpre 21 42 35.6
comp=Z,5.1nm,0.6s,baz=244,slow=3.3,SNR=31
NJ2 Nanjing 143.95 124 *e*P **PKPab** **21 42 38.5 +0.8**
NJ2 pmax pmax
comp=Z,4.0nm,0.9s
MMPY Sheldon Lake, 145.57 308 PKPdf **PKPdf** **21 42 42.3 +0.2**
HNS HongShan 146.62 114 ⇑PKPbc **PKPbc** **21 42 47.4 +1.1**
TIA Tai'an 146.74 118 PKPbc **PKPbc** **21 42 47.5 +0.7**
BTO2 Baotou 146.95 105 *e*PKPbc **PKPbc** **21 42 48.2 +0.8**
BTO2 PKPab **PKiKP** **21 42 54.0 +4.1**
BTO2 pPKP **pPKPab** **21 43 12.7 +7.0**
BTO2 PP **PP** **21 46 15.1 +2.3**
KNGR Kungurtug, Tuv 147.55 81 *i* PKHKP PKPpre 21 42 43.4
HHC Hu-ho-hao-te 147.85 107 ⇑*i*PKPbc **PKPbc** **21 42 50.6 +0.8**
MOY Mondy 149.93 82 *e*PKiKP **PKPbc** **21 42 55.3 +0.6**
MOY pmax pmax
comp=Z,23nm,2.3s
SONM Songino Array 150.27 92 PKPbc **PKPbc** **21 42 56.5 +0.8**
comp=Z,27nm,0.7s,baz=214,slow=1.2,SNR=26
SONM Songino Array 150.27 92 PKPbc **PKPbc** **21 42 55.9 +0.2**
ZAK Zakamensk 150.31 86 *e*PKiKP **PKPbc** **21 42 55.1 -0.6**
ZAK pmax pmax
comp=Z,25nm,1.0s
DL2 Dalian 150.96 121 LR LR
comp=Z,360nm,23.3s
DL2 Dalian 150.96 121 LR LR
comp=E,310nm,22.9s
DL2 Dalian 150.96 121 LR LR
comp=N,330nm,22.4s
DL2 Dalian 150.96 121 AMB AMB
comp=Z,430nm,4.3s
DL2 Dalian 150.96 121 *e*PKPbc PKPdf 21 42 39.2 -12
DL2 Dalian 150.96 121 PKPab **PKPbc** **21 42 58.1 +0.7**
DL2 Dalian 150.96 121 pPKP **PKPab** **21 43 06.1 +1.0**
NRIK Noril'sk 151.44 43 PKPbc **PKPbc** **21 42 58.0 +0.4**
comp=Z,5.3nm,0.8s,baz=321,slow=0.6,SNR=11
SCM Sheep Creek Mo 151.98 300 PKPbc **PKPbc** **21 42 58.9 -0.2**
SCM Sheep Creek Mo 151.98 300 PKiKP **PKPbc** **21 42 58.9 -0.2**

KSRS	Korea Array	152.29	132	PKP	PKPdf	21 42 53.1	-0.6
	comp=Z,0.7nm,0.4s,baz=217,slow=1.3,SNR=3.1						
KSRS				PKPbc	PKPbc	21 43 01.1	+0.7
	comp=Z,5.3nm,0.7s,baz=199,slow=2.1,SNR=15						
XLT	XiLinHaoTe	152.35	108	*e*PKPbc	PKPdf	21 42 54.0	+0.3
XLT				PKPab	PKPab	21 43 11.6	+0.7
XLT				pPKP	pPKPbc	21 43 22.1	+4.3
ILAR	Eielson Array	152.79	306	PKPbc	PKPbc	21 43 00.6	-0.2
	comp=Z,4.2nm,0.7s,baz=150,slow=1.2,SNR=46						
COLA	College	153.22	306		PKPab	21 43 13.9	0.0
MJAR	Matsushiro Arr	154.76	150	PKPbc	PKPbc	21 43 06.5	+0.6
	comp=Z,2.8nm,0.8s,baz=134,slow=2.7,SNR=4.9						
MJAR				PKPab	PKPab	21 43 21.6	+0.4
	comp=Z,3.8nm,0.7s,baz=183,slow=4.6,SNR=7.2						
ZEA	Zeya	164.35	101	*e*PKP2	PKPab	21 44 02.7	+0.2
PETK	Petropavlovsk-	173.06	200	PKP	PKPdf	21 43 14.3	+1.0
	comp=Z,1.4nm,0.9s,baz=98,slow=10,SNR=2.8						
PETK				PKPab	PKPab	21 44 41.5	+0.5
	comp=Z,5.6nm,0.7s,baz=127,slow=6.6,SNR=14						
PETK	Petropavlovsk-	173.06	200	PKPdf	PKPdf	21 43 15.3	+2.0
PETK				PKPab	PKPab	21 44 41.8	+0.8

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*IDC **02** 21:25:49.7±36.0, 11°.25N×122°.36E, h0km, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=631.3km s-min=183.7km az=152.0*
*MAN **02** 21:26:39.0, 6°.68N×125°.21E, h10km, MS3.7*
ISC 02 21:26:36.0±0.8**, 6°.64N**±0°.04×**125°.29E**±0°.06**, h10km, n12, σ1s12**/18**, mb3.7**/4**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCP	Kidapawan	0.42	332	*i* P	Pb	21 26 46.8	+1.3
KCP				*i* S	Sb	21 26 52.8	+0.7
DMPH	Davao City--Mi	0.49	26	*i* P	Pn	21 26 49.2	0.0
DMPH				*i* S	Sb	21 26 55.4	+1.2
GSPH	General Santos	0.64	212	*i* P	Pn	21 26 51.3	+0.1
GSPH				*i* S	Sn	21 27 01.9	+0.3
DDMP	Don Marcelino,	0.67	141	*i* P	Pn	21 26 53.0	+1.4
DDMP				*e*S	Sn	21 27 02.7	+0.5
CTBH	Cotabato--PC H	1.19	299	*i* P	Pg	21 26 59.0	+0.2
CTBH				*i* S	Sn	21 27 14.8	-0.1
CGP	Cagayan de Oro	1.90	342	*i* P	Pb	21 27 10.7	-0.1
CGP				*i* S	Sb	21 27 36.0	+1.3
DCPH	Dipolog City	2.73	315	*e*P	Pb	21 27 24.0	-0.9
SCPH	Surigao	3.13	4	*e*P	Pb	21 27 30.2	-1.6
FITZ	Fitzroy Crossi	24.58	179	P	P	21 31 56.4	0.0
	1.3nm,0.5s,baz=22,slow=11,SNR=1.7						
	1.3nm,0.5s						
WRA	Warramunga Arr	27.87	162	P	P	21 32 26.3	+0.2
	0.5nm,0.6s,baz=330,slow=10.0,SNR=2.0						
	0.5nm,0.6s						
ASAR	Alice Springs	31.27	165	P	P	21 32 57.2	+0.9
	0.5nm,0.6s,baz=348,slow=8.5,SNR=4.8						
	0.5nm,0.6s						
STKA	Stephens Creek	41.34	159	P	P	21 34 19.5	-2.6
	2.0nm,0.8s,baz=337,slow=7.7,SNR=1.9						
	2.0nm,0.8s						

WEL 02 21:27:32.5±1.5**, 33°S**±33°×**18°0W**±4°6**, h328km**±43km**, M3.5**/8**, mB4.2**/8**, ML3.9**/11**, MLv3.8**/5**, Mw(mB)3.2**/8**, Error ellipse: s-maj=70.9km s-min=22.9km az=123.5, confirmed, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.88	197	P	Pn	21 28 48.8	-0.9
WMGZ	Waiomatatini S	5.11	195	P	Pn	21 28 53.3	+1.1
WMGZ				S	S	21 29 57.5	+1.0
HAZ	Te Kaha	5.21	200	P	Pn	21 28 53.8	+0.5
HAZ				S	S	21 29 59.1	+0.5
PKGZ	Pakihiroa	5.23	197	P	Pn	21 28 53.7	+0.1
PUZ	Puketiti	5.38	195	S	S	21 30 02.9	+0.6
RUGZ	Raukumara Rang	5.43	200	P	Pn	21 28 54.7	-1.4
MWZ	Matawai	5.82	200	P	Pn	21 29 01.5	+1.1
MWZ				S	S	21 30 11.0	-0.5
URZ	Urewera	5.88	203	P	Pn	21 29 01.0	0.0
URZ				S	S	21 30 12.3	-0.3
MUGZ	Murupara	6.19	205	P	Pn	21 29 05.2	+0.5
RTZ	Ruatahuna	6.24	203	P	Pn	21 29 04.9	-0.5
KNZ	Kokohu	6.42	197	P	Pn	21 29 07.3	-0.1
MTHZ	Maungataniwha	6.50	203	P	Pn	21 29 10.2	+1.8
MTHZ				S	S	21 30 28.1	+2.0
BKZ	Black Stump Fm	6.90	204	P	Pn	21 29 13.6	+0.4
TMVZ	Te Maari	7.15	208	P	Pn	21 29 15.6	-0.6
OTVZ	Oturere	7.21	208	P	Pn	21 29 17.4	+0.5
KRHZ	Kereru	7.37	203	P	Pn	21 29 18.2	-0.5
PNHZ	Pukenui	7.67	203	P	Pn	21 29 21.6	-0.7
PRHZ	Porangahau	7.87	199	P	Pn	21 29 24.0	-0.6

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*SDD **02** 21:51:58.3±2.3, 17°.53N×66°.95W, h15km±23km, MD3.8, ML3.8, MW3.7, Presumed earthquake*
*NEIC **02** 21:52:00.9±1.0, 17°.91N±0°.02×66°.91W±0°.01, h10km±1km, ML3.9/39, ML3.5/5(RSPR), Error ellipse: s-maj=4.2km s-min=2.6km az=6.0*
*OSPL **02** 21:52:01.4±0.3, 17°.89N×66°.93W, h10km±3km, ML3.3, Presumed earthquake*
*IDC **02** 21:52:01.2±2.2, 18°.34N×66°.88W, h0km, mb3.4/3, mbtmp3.4/3, MS3.1/1, Error ellipse: s-maj=95.7km s-min=9.4km az=24.0*
ISC 02 21:52:01.0±0.8**, 17°.94N**±0°.05×**66°.91W**±0°.02**, h12km**±5km**, n45, σ1s10**/63**, mb3.5**/3**, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.05	40		Pg	21 52 03.6	+0.1
GBPR					Sg	21 52 05.0	-0.1
MLPR	Magueyes Islan	0.13	285	Pg	Pg	21 52 03.9	-0.4
MLPR				Sg	Sg	21 52 06.3	-0.4
MLPR				IAML		21 52 06.7	
	45μm,0.6s						
MLPR				IAML		21 52 07.3	
	19μm,0.3s						
CRPR	Cabo Rojo, PR	0.20	291	Pg	Pg	21 52 05.2	-0.3
CRPR				Sg	Sg	21 52 08.1	-0.4
CRPR				IAML		21 52 08.6	
	31μm,0.4s						
CRPR				IAML		21 52 09.6	
	14μm,0.3s						
CRPR	Cabo Rojo, PR	0.20	291	*e*Pg	Pg	21 52 05.7	+0.3
CRPR				IAML		21 52 11.5	
	comp=N,10μm,0.3s						
CRPR	Cabo Rojo, PR	0.20	291	*i* P	Pg	21 52 05.5	+0.1
CRPR				*e*S	Sg	21 52 08.4	0.0
CRPR				IAML		21 52 09.1	
	comp=Z,13μm,0.5s						
LSP	Las Mesas	0.29	326		Pg	21 52 07.2	+0.1
LSP					Sg	21 52 10.9	-0.1
OBIP	Obispado Ponce	0.31	70	Pg	Pg	21 52 07.6	+0.2
OBIP				Sg	Sg	21 52 13.0	+1.3
OBIP	Obispado Ponce	0.31	70	*i* P	Pg	21 52 07.9	+0.4
OBIP				*e*S	Sg	21 52 12.6	+0.9
OBIP				IAML		21 52 13.4	
	comp=Z,4μm,0.2s						
CELP	Cerrillos	0.35	66	Pg	Pg	21 52 08.1	0.0
CELP				Sg	Sg	21 52 13.8	+1.1
CELP				IAML		21 52 14.7	
	comp=Z,7μm,0.3s						
PRSN	Puerto Rico Se	0.36	322	Pg	Pg	21 52 08.1	-0.1
PRSN				Sg	Sg	21 52 13.7	+0.7
PRSN				IAML		21 52 16.5	
	comp=Z,17μm,0.4s						
PRSN				IAML		21 52 16.8	
	comp=Z,17μm,0.5s						
UUPR	Utuado, UPR, P	0.36	30	Pg	Pg	21 52 08.4	0.0
UUPR				Sg	Sg	21 52 13.6	+0.3
AOPR	Arecibo Observ	0.44	20	Pg	Pg	21 52 09.7	-0.1
AOPR				Sg	Sg	21 52 15.2	-0.4
AOPR				IAML		21 52 17.7	
	comp=Z,15μm,0.3s						
AGPR	Aguadilla, PR	0.56	341	Pg	Pg	21 52 11.9	-0.1
AGPR				Sg	Sg	21 52 19.1	-0.4
AGPR				IAML		21 52 20.1	
	comp=Z,6μm,0.4s						
AGPR				IAML		21 52 21.0	
	comp=Z,5μm,0.3s						
ECPR	Experimental S	0.65	54	Pg	Pg	21 52 13.3	-0.3
ECPR				Sg	Sg	21 52 22.8	+0.5
EMPR	Esperanza - Ma	0.65	34		Pg	21 52 14.2	+0.4
EMPR					Sg	21 52 22.2	-0.1
IDE	Isla Desecheo	0.70	310		Pg	21 52 14.1	-0.5
IDE					Sg	21 52 23.2	-0.6
SJG	San Juan	0.75	76	Pg	Pg	21 52 15.2	-0.3
	comp=Z,317nm,0.3s,baz=266,slow=13,SNR=282						
SJG				Lg	Lg	21 52 25.6	
	comp=Z,343nm,0.3s,baz=356,slow=20,SNR=16						
SJG				LR	LR	21 52 50.4	
	comp=Z,105nm,19.3s,baz=126,slow=68						
SJG	San Juan	0.75	76	Pg	Pg	21 52 15.1	-0.5
SJG				Sg	Sg	21 52 25.5	+0.1
SJG				IAML		21 52 27.1	
	comp=Z,2μm,0.3s						
SJG	San Juan	0.75	76	*e*Pg	Pg	21 52 15.4	-0.2
SJG	San Juan	0.75	76	*i* P	Pg	21 52 15.2	-0.3
SJG				*e*S	Sg	21 52 25.7	+0.3
SJG				IAML		21 52 25.8	
	comp=Z,1μm,0.7s						
PDPR	Patillas Dam,	0.85	84	Pg	Pg	21 52 17.1	-0.5
PDPR				Sg	Sg	21 52 28.9	+0.2
HUMP	Col San Antoni	1.03	78	Pg	Pg	21 52 19.7	-1.3
HUMP				Sg	Sg	21 52 34.0	-0.5
CUPR	Culebra, Puert	1.59	76		Pn	21 52 29.3	+0.3
HIDR	Higuey Centro	1.83	291	*e*Pg	Pn	21 52 32.5	+0.1
HIDR				IAML		21 53 09.0	
	comp=N,348nm,0.2s						
DR12	Loma Pena Alta	2.49	290	Pn	Pn	21 52 42.3	+0.9
HATOM	Hato Mayor del	2.49	290	*e*Pg	Pn	21 52 43.4	+2.0
HATOM				IAML		21 53 22.5	
	comp=N,136nm,0.7s						
SMDR	Samana, DR	2.54	302	*e*Pg	Pb	21 52 45.8	-0.8
SMDR				IAML		21 53 32.5	
	comp=N,221nm,0.6s						
DR08	Loma La Naviza	3.12	290	*e*Pg	Pn	21 52 53.8	+3.6
DR08				IAML		21 53 51.2	
	comp=N,1μm,0.3s						
NADR	Nagua	3.13	297	*e*Pg	Pb	21 52 55.4	-1.2
NADR				IAML		21 53 50.8	
	comp=N,474nm,0.8s						
BANI	BANI	3.31	278	*e*Pg	Pn	21 52 56.1	+3.4
BANI				IAML		21 53 52.3	
	comp=N,84nm,0.7s						
SABA	Saba	3.51	95	Pn	Pn	21 52 55.9	+0.5
SMRT	St. Maarten	3.66	88	Pn	Pn	21 52 57.4	0.0
SC01	Santiago de lo	3.91	293	*e*Pg	Pb	21 53 08.8	-1.1
SC01				IAML		21 54 21.4	
	comp=N,113nm,0.7s						
PODR	Polo	4.16	274	*e*Pg	Pn	21 53 08.0	+3.4
PODR				IAML		21 54 36.9	
	comp=N,83nm,2.9s						
SDDR	Presa de Saban	4.28	285	*e*Pg	Pb	21 53 12.6	-3.6
SDDR				IAML		21 54 23.6	
	comp=N,58nm,0.8s						
REDR	Restauracion	4.42	287	*e*Pg	Pb	21 53 19.6	+0.9
REDR				IAML		21 54 36.5	
	comp=N,46nm,1.8s						
GDHS	Morne Mazeau,	5.19	108	Pn	Pn	21 53 17.8	-0.8
GDHS				IAML		21 54 21.7	
	comp=N,95nm,0.6s						
GRTK	Grand Turk	5.33	313	*e*Pn	Pn	21 53 20.6	+0.2
GRTK				IAML		21 54 58.0	
	comp=N,141nm,2.8s						
ABD	La Joyeuse, An	5.38	105	Pn	Pn	21 53 20.5	-0.7
TDBA	Terre de Bas,	5.46	112	Pn	Pn	21 53 21.9	-0.3
BIM	Bigot	6.56	120	Pn	Pn	21 53 37.1	-0.3
TXAR	Lajitas Array	35.39	296	P	P	21 58 57.9	+1.0
	comp=N,0.4nm,0.6s,baz=107,slow=8.8,SNR=5.3						
	comp=N,0.4nm,0.6s						
YKA	Yellowknife Ar	55.35	335	P	P	22 01 34.5	0.0
	comp=N,0.3nm,0.6s,baz=112,slow=6.5,SNR=7.0						
	comp=N,0.3nm,0.6s						
NOA	NORSAR Array B	68.73	31	LR	LR	22 29 04.6	
	comp=N,14nm,21.7s,baz=220,slow=32						
ILAR	Eielson Array	69.66	333	P	P	22 03 09.6	-0.5
	comp=N,0.2nm,0.6s,baz=85,slow=6.3,SNR=2.6						
	comp=N,0.2nm,0.6s						

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*SOME **02** 21:53:18.9, 39°.18N×72°.93E, h15km*
ISC 02 21:53:20.8±3.7**, 39°.3N**±0°.2×**72°.94E**±0°.06**, h10km, n6, σ2s87**/12**, 3C-1D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRKS	Merke	3.46	3	*e*P	Pg	21 54 24.7	-2.4
	2.8nm,0.3s						
MRKS				*e*S	Sg	21 55 12.1	+0.1
	47nm,0.4s						
AAK	Ala-Archa	3.55	19	⇑Pn	Pb	21 54 24.0	+0.3
	0.3nm,0.3s						
AAK				⇑Sn	Sb	21 55 10.6	+3.6
	3.1nm,0.6s						
IUG	Iuzhnay	3.61	323	*e*P	Pb	21 54 25.6	+0.8
	1.5nm,0.3s						
IUG				*e*S	Sg	21 55 13.5	-3.4
	208nm,0.5s						
KK31	Karatay Array	4.23	335	⇑Pn	Pb	21 54 37.5	+2.2
	3.0nm,0.3s,baz=158,slow=15,SNR=66						
KK31				⇓Sn	Sg	21 55 34.7	-1.9
	4.3nm,0.3s,baz=148,slow=23,SNR=15						
KST	Kastek	4.39	30	*e*P	Pb	21 54 40.0	+1.9
	1.3nm,0.2s						
KST				*e*S	Sg	21 55 38.1	-3.7
	5.6nm,0.5s						
BRLS	Borolday	4.42	329	*e*P	Pb	21 54 38.4	0.0
	7.3nm,0.1s						
BRLS				*e*S	Sb	21 55 36.0	+4.2
	0.5nm,0.3s						

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*SJA **02** 22:15:09.8±0.6, 21°.25S×67°.26W, h227km±5km, ML3.8, MW3.7*
*IDC **02** 22:15:11.3±1.9, 21°.35S×66°.96W, h180km±30km, mb3.1/1, mbtmp3.7/6, Error ellipse: s-maj=42.4km s-min=19.0km az=112.0*
*GUC **02** 22:15:12.4±0.7, 21°.28S×67°.61W, h235km±8km, ML3.9*
*SCB **02** 22:15:12.4±1.1, 21°.30S×67°.25W, h184km±9km, MB3.7, ML3.9/3, Error ellipse: s-maj=4.1km s-min=2.5km az=0.0*
ISC 02 22:15:11.3±0.9**, 21°.30S**±0°.04×**67°.22W**±0°.04**, h201km**±8km**, n64, σ1s70**/100**, 1C-5D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCB	Mochara	1.48	89	P	Pn	22 15 45.8	+0.4
MOCB				S	S	22 16 10.9	-0.4
MOCB				IAML		22 16 13.7	
	398nm,0.4s						
YJA	Yavi	1.81	119	*e*P	Pn	22 15 50.2	+1.7
YJA				*e*S	S	22 16 17.6	+0.9
YJA	Yavi	1.81	119	P	Pn	22 15 49.6	+1.1
AF01	San Pedro de A	1.87	208	*e*S	S	22 16 34.0	+16
PB09	IPOC Station P	1.95	255	*i* P	Pn	22 15 50.2	+0.7
PB09				*i* S	S	22 16 18.9	+0.2
PB09	IPOC Station P	1.95	255	*e*P	Pn	22 15 50.5	+1.0
PB09				*e*S	S	22 16 20.0	+1.3
PB09				IAML		22 16 21.0	
	comp=Z,151nm,0.4s						
PB09	IPOC Station P	1.95	255	P	Pn	22 15 50.3	+0.7
PB01	IPOC Station P	2.13	276	*i* P	Pn	22 15 51.3	-0.1
PB01				*i* S	S	22 16 20.9	-0.9
PB01				IAML		22 16 24.1	
	comp=N,286nm,0.2s						
PB01	IPOC Station P	2.13	276	*e*P	Pn	22 15 51.7	+0.3
PB01				*e*S	S	22 16 22.5	+0.6
PB01				IAML		22 16 23.3	
	comp=Z,243nm,0.2s						
PB01	IPOC Station P	2.13	276	P	Pn	22 15 51.5	+0.1
PB08	IPOC Station P	2.14	302	⇓*i*P	Pn	22 15 52.5	+0.7
PB08				*i* S	S	22 16 23.3	+0.6
PB08				IAML		22 16 26.3	
	comp=E,159nm,0.2s						
PB08	IPOC Station P	2.14	302	*e*P	Pn	22 15 52.6	+0.8
PB08				*e*S	S	22 16 23.7	+1.1
PB08				IAML		22 16 25.2	
	comp=Z,98nm,0.2s						
PB08	IPOC Station P	2.14	302	P	Pn	22 15 52.6	+0.8
AOVT	TarijaAcel	2.35	96	P	Pn	22 15 54.6	+0.7
GO01	Chusmiza	2.46	311	*i* P	Pn	22 15 55.4	0.0
GO01	Chusmiza	2.46	311	*e*P	Pn	22 15 56.5	+1.1
GO01				*e*S	S	22 16 33.1	+4.2
GO01				IAML		22 16 38.4	
	comp=Z,142nm,0.1s						
GO01	Chusmiza	2.46	311	P	Pn	22 15 55.6	+0.3
PB03	IPOC Station P	2.47	252	*i* P	Pn	22 15 55.1	0.0
PB03				*i* S	S	22 16 27.0	-1.5
PB03				IAML		22 16 28.2	
	comp=N,416nm,0.2s						
PB03	IPOC Station P	2.47	252	*e*P	Pn	22 15 55.4	+0.3
PB03				*e*S	S	22 16 27.4	-1.2
PB03				IAML		22 16 28.2	
	comp=Z,418nm,0.2s						
PB02	IPOC Station P	2.50	269	⇓*i*P	Pn	22 15 55.4	+0.1
PB02				*i* S	S	22 16 26.8	-2.1
PB02				IAML		22 16 29.7	
	comp=E,410nm,0.1s						
PB02	IPOC Station P	2.50	269	*e*P	Pn	22 15 55.6	+0.3
PB02				*e*S	S	22 16 27.9	-1.0
PB02				IAML		22 16 29.6	
	comp=Z,424nm,0.2s						
PB02	IPOC Station P	2.50	269	P	Pn	22 15 55.5	+0.1
PB02				S	S	22 16 27.6	-1.3
PB02				IAML		22 16 31.4	
	comp=Z,393nm,0.4s						
PB07	IPOC Station P	2.52	260	*i* P	Pn	22 15 55.5	-0.2
PB07				*i* S	S	22 16 27.9	-1.7
PB07				IAML		22 16 28.9	
	comp=N,597nm,0.5s						
PB07	IPOC Station P	2.52	260	*e*P	Pn	22 15 55.9	+0.2
PB07				*e*S	S	22 16 28.5	-1.0
PB07				IAML		22 16 30.2	
	comp=Z,310nm,0.1s						
HJA	Humahuaca	2.54	139	*e*P	Pn	22 15 58.1	+2.0
HJA				*e*S	S	22 16 20.8	-10
HJA				IAML		22 16 32.4	
	comp=Z,159nm,0.6s						
PB06	IPOC Station P	2.59	237	*i* P	Pn	22 15 56.9	+0.4
PB06				*i* S	S	22 16 30.1	-1.0
PB06				IAML		22 16 32.4	
	comp=E,425nm,0.4s						
PB06	IPOC Station P	2.59	237	*e*P	Pn	22 15 57.0	+0.6
PB06				*e*S	S	22 16 31.8	+0.7
PB06				IAML		22 16 36.4	
	comp=Z,186nm,0.2s						
PB06	IPOC Station P	2.59	237	P	Pn	22 15 56.8	+0.4
HMBC	Humberstone	2.69	292	⇓*i*P	Pn	22 15 57.0	-0.6
HMBC				*i* S	S	22 16 30.1	-2.8
HMBC				IAML		22 16 35.5	
	comp=N,587nm,0.3s						
HMBC	Humberstone	2.69	292	*e*P	Pn	22 15 57.2	-0.4
HMBC				*e*S	S	22 16 32.0	-1.0
HMBC				IAML		22 16 34.1	
	comp=Z,481nm,0.2s						
PB11	IPOC Station P	2.75	303	⇓*i*P	Pn	22 15 58.1	-0.1
PB11				*i* S	S	22 16 32.6	-1.6
PB11	IPOC Station P	2.75	303	*e*P	Pn	22 15 58.1	-0.1
PB11				*e*S	S	22 16 34.0	-0.1
PB11				IAML		22 16 35.4	
	comp=Z,453nm,0.1s						
PB11	IPOC Station P	2.75	303	P	Pn	22 15 58.2	-0.1
PB11				S	S	22 16 33.4	-0.7
PB11				IAML		22 16 34.8	
	comp=Z,392nm,0.4s						
SOEO	Opoqueri	2.79	347	P	Pn	22 16 00.2	+1.1
TA01	Diego Aracena	2.86	284	⇓*i*P	Pn	22 15 58.5	-0.9
TA01				*i* S	S	22 16 33.4	-2.8
TA01				IAML		22 16 35.4	
	comp=E,220nm,0.2s						
TA01	Diego Aracena	2.86	284	*e*P	Pn	22 15 58.8	-0.6
TA01				*e*S	S	22 16 34.8	-1.4
TA01				IAML		22 16 37.2	
	comp=Z,90nm,0.4s						
TA02	Huaiquique	2.91	290	*i* P	Pn	22 15 59.1	-0.8
TA02				*i* S	S	22 16 34.1	-3.1
TA02	Huaiquique	2.91	290	*e*P	Pn	22 15 59.6	-0.4
TA02				*e*S	S	22 16 35.4	-1.8
SALTA		3.02	165	*e*P	Pn	22 16 03.0	+1.2
PB05	IPOC Station P	3.17	240	*i* P	Pn	22 16 03.4	+0.2
PB05				*i* S	S	22 16 40.2	-2.7
PB05				IAML		22 16 42.0	
	comp=N,182nm,0.4s						
PB05	IPOC Station P	3.17	240	*e*P	Pn	22 16 03.5	+0.4
PB05				*e*S	S	22 16 41.5	-1.5
PB05				IAML		22 16 44.6	
	comp=Z,94nm,0.4s						
SOET	ToroToro	3.43	23	P	Pn	22 16 07.1	+0.5
AOEA	Aiquile	3.62	31	P	Pn	22 16 09.2	+0.4
PB16	IPOC Station P	3.65	323	*e*P	Pn	22 16 10.8	+1.4
PB16				*e*S	S	22 16 56.4	+2.2
PB16				IAML		22 16 59.6	
	comp=Z,72nm,0.5s						
PB16	IPOC Station P	3.65	323	P	Pn	22 16 10.1	+0.7
PB12	IPOC Station P	3.96	312	*e*P	Pn	22 16 11.4	-1.3
PB12				*e*S	S	22 16 57.1	-3.2
PB12				IAML		22 17 02.1	
	comp=Z,108nm,0.2s						
BBOJ	La Paz, Jacaqu	4.39	348	P	Pn	22 16 20.1	+1.4
SOEJ	Jacaque	4.39	348	P	Pn	22 16 20.4	+1.7
GO02	Mina Guanaco	4.42	209	⇑*i*P	Pn	22 16 19.1	+0.4
GO02				*i* S	S	22 17 09.4	-1.8
GO02	Mina Guanaco	4.42	209	*e*P	Pn	22 16 19.1	+0.4
GO02				*e*S	S	22 17 10.4	-0.8
GO02				IAML		22 17 15.6	
	comp=Z,164nm,0.5s						
PB14	IPOC Station P	4.43	221	*i* P	Pn	22 16 18.9	+0.1
PB14				*i* S	S	22 17 07.2	-4.0
PB14	IPOC Station P	4.43	221	*e*P	Pn	22 16 18.9	+0.1
PB14				IAML		22 17 15.6	
	comp=Z,59nm,0.2s						
PB14	IPOC Station P	4.43	221	P	Pn	22 16 19.5	+0.7
BBOE	La Paz, Chanca	4.52	351	P	Pn	22 16 21.5	+1.3
BBOD	La Paz, Gloria	4.81	344	P	Pn	22 16 25.1	+1.1
FSA	Cafayete	4.93	167	*e*P	Pn	22 16 22.0	-2.9
LPAZ	La Paz	5.06	350	P	Pn	22 16 28.2	+1.1
	comp=Z,6.7nm,0.4s,baz=184,slow=11,SNR=31						
LPAZ				S	S	22 17 25.4	-0.9
	comp=Z,1.4nm,0.3s,baz=242,slow=17,SNR=3.8						
BBOB	La Paz, Bander	5.20	350	P	Pn	22 16 29.7	+0.8
AC01	Pan de Azucar	5.74	212	*i* P	Pn	22 16 34.0	-1.2
AC01				*i* S	S	22 17 35.3	-5.8
SIV	San Ignacio	7.86	49	P	Pn	22 17 00.5	-2.3
	comp=Z,2.6nm,0.3s,baz=274,slow=2.3						
SIV				S	S	22 18 23.4	-8.3
	baz=275,slow=19						
CFA	Coronel Fontan	10.31	185	P	Pn	22 17 33.8	-0.7
	comp=Z,0.9nm,0.3s,baz=15,slow=16,SNR=16						
CFA				S	S	22 19 21.4	-8.7
	comp=Z,0.4nm,0.3s,baz=299,slow=19,SNR=1.3						
BDFB	Brasilia	19.06	76	P	P	22 19 18.6	-0.2
	comp=Z,2.6nm,0.6s,baz=244,slow=9.6,SNR=3.8						
PLCA	Paso Flores	19.58	188	P	P	22 19 26.1	+1.9
	comp=Z,0.9nm,0.7s,baz=1.1,slow=7.9,SNR=3.8						
TORD	Torodi Ar. Bea	75.81	70	P	P	22 26 36.5	+0.7
	comp=Z,0.5nm,0.9s,baz=251,slow=4.4,SNR=2.0						
	comp=Z,0.5nm,0.9s						

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*IDC **02** 22:35:06.0±1.2, 25°.75N×144°.58E, h0km, mb3.5/7, mbtmp3.5/9, ML3.1/2, Error ellipse: s-maj=38.4km s-min=21.1km az=78.0*
ISC 02 22:35:11.5±1.1**, 25°.8N**±0°.1×**144°.4E**±0°.2**, h35km, n15, σ0s83**/10**, mb3.6**/7**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	2.41	303	Pn	Pn	22 35 47.8	-0.7
	13nm,0.3s,baz=135,slow=10.0,SNR=10						
JCJ				Sn	Sn	22 36 16.6	-0.2
	28nm,0.3s,baz=8.4,slow=16,SNR=7.3						
	31nm,0.3s						
MJAR	Matsushiro Arr	11.98	335	Pn	Pn	22 37 59.2	-0.6
	baz=160,slow=14,SNR=1.5						
	0.9nm,0.6s						
H11N2	WAKE ISLAND Hy	21.55	102	T	T	23 02 07.7	
	baz=291,slow=75,SNR=3.8						
H11N1	WAKE ISLAND Hy	21.55	102	T	T	23 02 11.0	
	baz=291,slow=75,SNR=3.2						
H11N3	WAKE ISLAND Hy	21.57	102	T	T	23 02 11.6	
	baz=291,slow=75,SNR=4.4						
H11S3	WAKE ISLAND Hy	21.82	105	T	T	23 02 33.9	
	baz=294						
H11S1	WAKE ISLAND Hy	21.83	105	T	T	23 02 51.9	
	baz=294						
H11S2	WAKE ISLAND Hy	21.84	105	T	T	23 02 36.1	
	baz=294						
SONM	Songino Array	37.06	316	P	P	22 42 19.0	+0.7
	0.2nm,0.6s,baz=101,slow=7.5,SNR=2.3						
	0.2nm,0.6s						
WRA	Warramunga Arr	46.50	193	P	P	22 43 35.0	-0.5
	0.7nm,0.6s,baz=18,slow=8.8,SNR=7.3						
	0.7nm,0.6s						

ASAR	**Alice Springs**	**50.20**	**193**	P	**P**	**22 44 03.7**	**-0.4**
	0.3nm,0.8s,baz=4.0,slow=8.2,SNR=4.1						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	**52.87**	**310**	P	**P**	**22 44 25.2**	**+1.4**
	0.4nm,0.9s,baz=85,slow=8.0,SNR=2.6						
	0.4nm,0.9s						
ILAR	**Eielson Array**	**57.90**	**28**	P	**P**	**22 44 59.0**	**-0.7**
	0.5nm,0.8s,baz=241,slow=7.6,SNR=4.9						
	0.5nm,0.8s						
BVAR	**Borovoye Array**	**60.37**	**318**	P	**P**	**22 45 16.8**	**-0.2**
	0.4nm,0.5s,baz=92,slow=6.6,SNR=2.5						
	0.4nm,0.5s						
FINES	**FINESS Array B**	**80.01**	**335**	P	**P**	**22 47 17.8**	**+0.8**
	1.6nm,0.9s,baz=60,slow=5.3,SNR=5.4						
	1.6nm,0.9s						

*NIED **02** 22:43:19.7, 43°.30N×143°.94E, h0^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.11; $M_{\theta\theta}$1.05; $M_{\phi\phi}$-5.16; $M_{r\theta}$-3.08; $M_{\theta\phi}$-0.21; $M_{\phi r}$6.21; Fault plane solution: $M_0$8.39000×10^{14} NP1: ϕ_s206.00000°, δ22.00000°, λ135.00000°. NP2: ϕ_s339.00000°, δ75.00000°, λ74.00000°.*
*JMA **02** 22:43:19.7±0.1, 43°.3N±0°.3×143°.9E±0°.3, h0^{km}, MV3.9/20, KUSHIRO REGION*
JMA Felt II J1 at KUSHIRO REGION .
*MOS **02** 22:43:20.9±0.9, 43°.15N×143°.92E, h37^{km}, mb4.4/23, Error ellipse: s-maj=8.3km s-min=6.8km az=91.0*
*SKHL **02** 22:43:20.3±0.5, 43°.10N×143°.90E, h43^{km}±2^{km}, mb5.0/4*
*NEIC **02** 22:43:23.2±1.8, 43°.24N±0°.06×143°.83E±0°.10, h32^{km}±6^{km}, mb4.5/30, Error ellipse: s-maj=11.1km s-min=7.7km az=126.0*
*IDC **02** 22:43:24.4±1.8, 43°.17N×143°.79E, h49^{km}±15^{km}, mb3.7/20, mbtmp4.0/26, ML2.8/5, MS3.1/4, Error ellipse: s-maj=14.8km s-min=13.2km az=134.0*
ISC 02 22:43:19.8±0.9**, 43°.26N**±0°.03×**143°.94E**±0°.02**, h10^{km}**±5^{km}**, n162, σ1ˢ.40**/175**, mb4.3**/49**, 9C-4D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAR	**Ashorobuto**	**0.13**	**287**	iP	**Pg**	**22 43 22.6**	**-0.2**
JAR				S	**Sg**	**22 43 25.4**	**+0.5**
JOB	**Onbets**	**0.36**	**193**	iP	**Pb**	**22 43 28.1**	**-0.3**
JOB				S	**Sb**	**22 43 35.2**	**+1.1**
JAK	**Akkeshi**	**0.61**	**115**	⇓iP	**Pg**	**22 43 31.7**	**+0.1**
JAK				⇓eS	**Sb**	**22 43 41.1**	**0.0**
JNK	**Nakash**	**0.65**	**60**	⇓iP	**Pg**	**22 43 31.8**	**-0.6**
AKK	**Akkeshi**	**0.70**	**110**	eP	**Pg**	**22 43 32.6**	**-0.7**
AKK				eS	**Sg**	**22 43 41.7**	**-0.7**
JTKR	**Abashiri--Toko**	**0.71**	**358**	P	**Pg**	**22 43 32.6**	**-1.0**
JTKR				S	**Sg**	**22 43 42.3**	**-0.6**
JCH	**Churui**	**0.77**	**214**	iP	**Pb**	**22 43 35.0**	**-0.2**
JMP	**Maruseppu**	**0.86**	**331**	iP	**Pg**	**22 43 35.5**	**-0.9**
JMP				S	**Sg**	**22 43 46.9**	**-0.7**
JKHN	**Kushirohamanak**	**0.91**	**101**	⇓iP	**Pg**	**22 43 36.5**	**-0.7**
GLVR	**Golovnino**	**1.24**	**67**	ePN	**Pn**	**22 43 41.9**	**-1.3**
GLVR				iS	**Sb**	**22 43 59.3**	**-0.1**
GLVR				pmax	pmax		
	comp=N,109nm,0.2s						
GLVR				pmax	pmax		
	comp=E,96nm,0.2s						
GLVR				pmax	pmax		
	comp=Z,398nm,0.2s						
GLVR				smax	smax		
	comp=N,5µm,0.3s						
GLVR				smax	smax		
	comp=E,3µm,0.3s						
GLVR	**Golovnino**	**1.24**	**67**	eP	**Pn**	**22 43 41.9**	**-1.3**
GLVR				AMB	AMB	22 43 43.3	
	comp=E,400nm,0.2s						
GLVR				iS	**Sb**	**22 43 59.0**	**-0.4**
GLVR				A	A	22 44 01.3	
	comp=E,5µm,0.5s						
GLVR				A	A	22 44 01.3	
	comp=E,3µm,0.5s						
RUSJ	**Misakicho**	**1.27**	**48**	ePN	**Pn**	**22 43 42.3**	**-1.3**
RUSJ				S	**Sb**	**22 43 59.0**	**-1.2**
JKA	**Kamikawa-asahi**	**1.30**	**312**		**Pn**	**22 43 43.8**	**-0.2**
JKA				Sn	**Sb**	**22 44 00.0**	**-1.0**
ASAJ	**Asahikawa**	**1.30**	**312**	P	**Pg**	**22 43 44.7**	**-0.1**
	comp=E,2µm,0.6s,baz=143,slow=11,SNR=1051						
ASAJ				S	**Sg**	**22 44 02.4**	**+0.7**
	comp=E,3µm,0.8s,baz=240,slow=30,SNR=24						
ASAJ	**Asahikawa**	**1.30**	**312**	PN	**Pn**	**22 43 43.8**	**-0.2**
ASAJ						22 44 00.0	
NMR	**Nemuro--Hokkai**	**1.31**	**84**	ePN	**Pn**	**22 43 42.1**	**-2.0**
NMR				iS	**Sb**	**22 44 00.0**	**-1.2**
NMR	**Nemuro--Hokkai**	**1.31**	**84**	eP	**Pn**	**22 43 42.3**	**-1.8**
NMR				iS	**Sb**	**22 43 58.4**	**-2.8**
YUK	**Yuzh-Kuril'sk**	**1.59**	**60**	ePN	**Pn**	**22 43 48.3**	**+0.3**
YUK				iS	**Sn**	**22 44 09.5**	**+0.8**
YUK				pmax	pmax		
	comp=Z,448nm,0.3s						
YUK				pmax	pmax		
	comp=N,99nm,0.2s						
YUK				pmax	pmax		
	comp=E,32nm,0.3s						
YUK				smax	smax		
	comp=N,1µm,0.5s						
YUK				smax	smax		
	comp=E,2µm,0.6s						
YUK	**Yuzh-Kuril'sk**	**1.59**	**60**	eP	**Pn**	**22 43 47.6**	**-0.4**
YUK				AMB	AMB	22 43 49.2	
	comp=E,450nm,0.3s						
YUK				eS	**Sn**	**22 44 06.8**	**-1.9**
YUK				A	A	22 44 15.1	
	comp=E,1µm,0.5s						
YUK				A	A	22 44 15.1	
	comp=E,2µm,0.5s						
SHO	**Shikotan**	**2.19**	**73**	eP	**Pg**	**22 44 03.0**	**+1.4**
SHO				AMB	AMB	22 44 07.3	
	comp=E,90nm,0.2s						
SHO				eS	**Sg**	**22 44 33.9**	**+3.9**
SHO				A	A	22 44 43.6	
	comp=E,540nm,0.3s						
SHO				A	A	22 44 43.6	
	comp=E,510nm,0.3s						
KUR	**Kuril'sk**	**3.44**	**54**	ePN	**Pb**	**22 44 18.9**	**-1.9**
KUR				eS	**Sb**	**22 45 01.1**	**-1.6**
KUR				pmax	pmax		
	comp=Z,115nm,1.1s						
KUR				smax	smax		
	comp=N,114nm,0.7s						
KUR				smax	smax		
	comp=E,86nm,0.6s						
KUR	**Kuril'sk**	**3.44**	**54**	eP	**Pn**	**22 44 13.5**	**+0.1**
KUR				AMB	AMB	22 44 18.0	
	comp=E,120nm,0.3s						
KUR				eS	**Sn**	**22 44 52.9**	**-1.4**
KUR				A	A	22 44 58.7	
	comp=E,170nm,0.2s						
KUR				A	A	22 44 58.7	
	comp=E,140nm,0.2s						
YSS	**Yuzhno-Sakhali**	**3.79**	**348**	Pn	**Pn**	**22 44 18.1**	**-0.1**
YSS	**Yuzhno-Sakhali**	**3.79**	**348**	ePN	**Pn**	**22 44 18.7**	**+0.5**
YSS				pmax	pmax		
	comp=Z,30nm,0.6s						
YSS	**Yuzhno-Sakhali**	**3.79**	**348**	eP	**Pn**	**22 44 18.9**	**+0.7**
YSS				eS	**Sn**	**22 45 03.3**	**+0.4**
MJAR	**Matsushiro Arr**	**8.02**	**215**	P	**Pn**	**22 45 15.9**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=23,slow=15,SNR=5.2						
MJAR				LR	LR	22 48 31.4	
	comp=Z,66nm,21.2s,baz=330,slow=39						
	comp=Z,2.0nm,0.7s						
USRK	**Ussuriysk Ar.**	**8.71**	**280**	P	**Pn**	**22 45 27.3**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=100,slow=16,SNR=7.2						
	comp=Z,5.2nm,0.9s						
NKL	**Nikolayevsk**	**10.13**	**349**	eP	**Pn**	**22 45 48.0**	**+2.8**
KLR	**Kul'dur**	**10.34**	**310**	P	**Pn**	**22 45 50.2**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=113,slow=16,SNR=9.4						
	comp=Z,5.2nm,1.1s						
KLR	**Kul'dur**	**10.34**	**310**	cePN	**Pn**	**22 45 51.3**	**+3.2**
KLR				pmax	pmax		
	comp=Z,11nm,1.1s						
KLR	**Kul'dur**	**10.34**	**310**	eP	**Pn**	**22 45 51.3**	**+3.2**
MDJ	**Mudanjiang**	**10.44**	**282**	Pn	**Pn**	**22 45 54.0**	**+4.4**
MDJ	**Mudanjiang**	**10.44**	**282**	P	**Pn**	**22 45 46.5**	**-3.0**
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.8s						
BNX	**BinXian**	**12.07**	**288**	⇑P	**Pn**	**22 46 10.4**	**-1.4**
BNX				pmax	pmax		
	comp=Z,5.0nm,1.8s						
HEH	**HeiHe**	**13.30**	**307**	eP	**Pn**	**22 46 30.9**	**+2.3**
HEH				pmax	pmax		
	comp=Z,12nm,1.0s						
PETK	**Petropavlovsk-**	**13.44**	**38**	P	**Pn**	**22 46 32.5**	**+2.0**
	comp=Z,0.6nm,0.3s,baz=228,slow=8.9,SNR=3.5						
	comp=Z,2.0nm,0.4s						
PETK	**Petropavlovsk-**	**13.44**	**38**	Pn	**Pn**	**22 46 32.7**	**+2.2**
KSRS	**Korea Array**	**13.52**	**250**	P	**Pn**	**22 46 30.2**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=66,slow=12,SNR=4.4						
KSRS				LR	LR	22 51 03.0	
	comp=Z,58nm,18.9s,baz=65,slow=34						
	comp=Z,1.6nm,0.6s						
ZEA	**Zeya**	**15.20**	**319**	eP	**P**	**22 46 58.6**	**-0.9**
MA2	**Magadan**	**16.87**	**12**	P	**P**	**22 47 18.5**	**+0.6**
	comp=Z,2.2nm,0.3s,baz=194,slow=11,SNR=4.5						
MA2	**Magadan**	**16.87**	**12**		**Pn**	**22 47 16.9**	**+1.1**
MA2	**Magadan**	**16.87**	**12**	P	**Pn**	**22 47 16.9**	**+1.1**
MA2				pmax	pmax		
	comp=Z,6.0nm,1.0s						
XLT	**XiLinHaoTe**	**20.16**	**281**	eP	**P**	**22 47 53.8**	**-0.5**
XLT				pP	sP	22 47 58.7	+0.2
XLT				pmax	pmax		
	comp=Z,5.0nm,1.0s						
XLT				pmax	pmax		
	comp=Z,230nm,5.5s						
SEY	**Seymchan**	**20.32**	**11**	P	Pn	22 47 57.3	-0.4
	comp=Z,3.0nm,0.7s,baz=184,slow=8.9,SNR=11						
	comp=Z,3.0nm,0.7s						
SEY	**Seymchan**	**20.32**	**11**	ceP	Pn	22 47 57.5	-0.2
SEY				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SEY	**Seymchan**	**20.32**	**11**	eP	Pn	22 47 57.5	-0.2
YAK	**Yakutsk**	**20.61**	**341**		**P**	**22 47 58.1**	**-0.8**
YAK				IAmb	IAmb	22 48 16.7	
	comp=Z,16nm,0.5s						
YAK	**Yakutsk**	**20.61**	**341**	iP	**P**	**22 47 59.8**	**+0.9**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YAK	**Yakutsk**	**20.61**	**341**	eP	**P**	**22 47 59.8**	**+0.9**
BJT	**Baijiatuau**	**20.97**	**271**	P	**P**	**22 48 01.8**	**-1.2**
BJT	**Baijiatuau**	**20.97**	**271**	P	**P**	**22 48 01.8**	**-1.2**
BJT				pmax	pmax		
	comp=Z,8.0nm,1.1s						
TIA	**Tai'an**	**21.73**	**260**	P	**P**	**22 48 12.3**	**+1.1**
TIA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NJ2	**Nanjing**	**22.71**	**249**	eP	**P**	**22 48 21.7**	**0.0**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**24.09**	**275**	eP	**P**	**22 48 33.3**	**-2.2**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,4.7s						
ULN	**Ulaanbaatar**	**26.07**	**293**	P	**P**	**22 48 53.3**	**-0.2**
ULN	**Ulaanbaatar**	**26.07**	**293**	ceP	**P**	**22 48 52.8**	**-0.7**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ULN	**Ulaanbaatar**	**26.07**	**293**	eP	**P**	**22 48 52.9**	**-0.6**
SONM	**Songino Array**	**26.51**	**293**	P	**P**	**22 48 57.8**	**+0.3**
	comp=Z,4.1nm,0.9s,baz=81,slow=7.1,SNR=19						
	comp=Z,4.1nm,0.9s						
SONM	**Songino Array**	**26.51**	**293**	P	**P**	**22 48 56.5**	**-1.0**
SONM	**Songino Array**	**26.51**	**293**	P	**P**	**22 48 56.5**	**-1.0**
SONM				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BILL	**Bilibino**	**27.52**	**18**	iP	**P**	**22 49 10.6**	**+4.5**
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BILL	**Bilibino**	**27.52**	**18**	eP	**P**	**22 49 10.7**	**+4.6**
ZAK	**Zakamensk**	**28.44**	**299**	eP	**P**	**22 49 13.8**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.5s						
H11N2	**WAKE ISLAND Hy**	**30.36**	**133**	T	T	23 20 50.3	
	baz=327,slow=75,SNR=97						
H11N1	**WAKE ISLAND Hy**	**30.37**	**133**	T	T	23 20 53.0	
	baz=327,slow=75,SNR=87						
H11N3	**WAKE ISLAND Hy**	**30.38**	**133**	T	T	23 20 47.1	
	baz=327,slow=75,SNR=75						
H11S1	**WAKE ISLAND Hy**	**31.27**	**135**	T	T	23 21 42.4	
	baz=328,slow=76,SNR=53						
H11S3	**WAKE ISLAND Hy**	**31.27**	**135**	T	T	23 21 59.5	
	baz=328,slow=76,SNR=42						
H11S2	**WAKE ISLAND Hy**	**31.29**	**135**	T	T	23 21 48.9	
	baz=328,slow=76,SNR=56						
LZDM	**Lanzhou Array**	**31.62**	**270**	P	**P**	**22 49 40.6**	**-2.6**
	comp=Z,0.9nm,0.4s,baz=38,slow=5.4,SNR=1.2						
	comp=Z,0.9nm,0.4s						
KNGR	**Kungurtug, Tuv**	**32.10**	**300**	iP	**P**	**22 49 48.0**	**+0.9**
KNGR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA2	**Gaotai**	**33.08**	**279**	eP	**P**	**22 49 55.6**	**-0.2**
GTA2				sP	sP	22 50 01.8	+1.6
GTA2				pmax	pmax		
	comp=Z,1.0nm,1.1s						
PZH	**PanZhiHua**	**38.00**	**258**	P	**P**	**22 50 38.4**	**+0.3**
DGZ	**Jazzator, Alta**	**38.64**	**300**	iP	**P**	**22 50 44.5**	**+1.1**
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ZAA0	**Zalesovo Array**	**39.43**	**307**	P	**P**	**22 50 49.4**	**-0.3**
ZALV	**Zalesovo Beam**	**39.43**	**307**	P	**P**	**22 50 47.1**	**-2.6**
	comp=Z,1.7nm,0.8s,baz=88,slow=11,SNR=8.4						
ZALV				PcP	**PcP**	**22 52 55.2**	**-2.3**
	comp=Z,1.3nm,0.8s,baz=64,slow=3.4,SNR=5.6						
	comp=Z,1.7nm,0.8s						
ZALV	**Zalesovo Beam**	**39.43**	**307**	P	**P**	**22 50 49.5**	**-0.2**
ZALV					**PcP**	**22 52 55.5**	**-2.1**
ZALV	**Zalesovo Beam**	**39.43**	**307**	iP	**P**	**22 50 49.7**	**0.0**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WMQ	**Urumqi**	**40.10**	**291**	eP	**P**	**22 50 55.7**	**+0.2**
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SPU	**Mount Spurr**	**41.19**	**41**	P	**P**	**22 51 06.0**	**+1.8**
KTH	**Kantishna Hill**	**41.57**	**38**	P	**P**	**22 51 08.2**	**+0.9**
MCK	**McKinley**	**42.45**	**37**	P	**P**	**22 51 14.3**	**-0.2**
MCK				IAmb	IAmb	22 51 16.5	
	comp=Z,17nm,1.2s						
MCK	**McKinley**	**42.45**	**37**	P	**P**	**22 51 14.3**	**-0.2**
MCK				pmax	pmax		
	comp=Z,17nm,1.2s						
MK31	**Makanchi Array**	**42.74**	**297**	ceP	**P**	**22 51 17.6**	**+0.5**
MKAR	**Makanchi Array**	**42.74**	**297**	P	**P**	**22 51 15.0**	**-2.0**
	comp=Z,5.1nm,1.0s,baz=97,slow=10,SNR=3.7						
MKAR				PcP	**PcP**	**22 53 07.3**	**-1.2**
	comp=Z,0.5nm,0.8s,baz=72,slow=4.7,SNR=1.8						
	comp=Z,5.1nm,1.0s						
MKAR	**Makanchi Array**	**42.74**	**297**	P	**P**	**22 51 16.3**	**-0.8**
MKAR	**Makanchi Array**	**42.74**	**297**	iP	**P**	**22 51 21.0**	**+3.9**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MAKZ	**Makanchi**	**42.94**	**297**	P	**P**	**22 51 17.7**	**-1.0**
MAKZ				IAmb	IAmb	22 51 20.6	
	comp=Z,5.9nm,0.9s						
MAKZ	**Makanchi**	**42.94**	**297**	P	**P**	**22 51 17.7**	**-1.0**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ILAR	**Eielson Array**	**43.26**	**36**	P	**P**	**22 51 22.0**	**+1.0**
	comp=Z,7.9nm,1.0s,baz=268,slow=7.2,SNR=18						
	comp=Z,7.9nm,1.0s						
ILAR	**Eielson Array**	**43.26**	**36**	P	**P**	**22 51 21.1**	**+0.1**
ILAR	**Eielson Array**	**43.26**	**36**	P	**P**	**22 51 21.1**	**+0.1**
K24K	**Donnelly Dome**	**43.84**	**37**	P	**P**	**22 51 26.7**	**+1.0**
KURK	**Kurchatov**	**43.86**	**304**	P	**P**	**22 51 24.6**	**-1.4**
KURK				IAmb	IAmb	22 51 31.7	
	comp=Z,3.5nm,0.7s						
KURK	**Kurchatov**	**43.86**	**304**	ceP	**P**	**22 51 26.3**	**+0.3**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KURK	**Kurchatov**	**43.86**	**304**	eP	**P**	**22 51 26.3**	**+0.3**
KURBB	**Kurchatov Arra**	**43.95**	**303**	P	**P**	**22 51 26.5**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=75,slow=8.8,SNR=3.0						
	comp=Z,1.0nm,0.3s						
L26K	**Log Cabin Wild**	**45.03**	**38**	P	**P**	**22 51 36.6**	**+1.4**
L26K				IAmb	IAmb	22 51 39.2	
	comp=Z,10nm,1.0s						
CMAR	**Chiang Mai Arr**	**45.15**	**251**	P	**P**	**22 51 36.4**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=57,slow=7.6,SNR=1.9						
CMAR				LR	LR	23 12 16.2	
	comp=Z,19nm,18.1s,baz=90,slow=38						
	comp=Z,0.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**45.15**	**251**	P	**P**	**22 51 35.0**	**-1.7**
CMAR	**Chiang Mai Arr**	**45.15**	**251**	P	**P**	**22 51 35.0**	**-1.7**
M26K	**Nabesna, AK**	**45.30**	**39**	P	**P**	**22 51 38.5**	**+1.1**
L27K	**Beaver Creek,**	**45.71**	**38**	P	**P**	**22 51 41.4**	**+0.8**
L27K				IAmb	IAmb	22 51 43.7	
	comp=Z,9.0nm,1.1s						
BCAR	**Beaver Creek A**	**45.72**	**38**	P	**P**	**22 51 41.8**	**+1.0**
I28M	**Miner Creek**	**46.08**	**34**	P	**P**	**22 51 44.8**	**+1.2**
I28M				IAmb	IAmb	22 51 47.4	
	comp=Z,7.7nm,1.1s						
I29M	**Ogilvie Camp,**	**46.77**	**34**	P	**P**	**22 51 50.0**	**+1.1**
I30M	**Mount Dempster**	**47.59**	**34**	P	**P**	**22 51 56.6**	**+1.1**
BVAR	**Borovoye Array**	**48.00**	**309**	P	**P**	**22 51 58.2**	**-0.4**
	comp=Z,1.9nm,0.9s,baz=91,slow=7.4,SNR=5.3						
	comp=Z,1.9nm,0.9s						
BORK	**Borovoye**	**48.03**	**309**	ceP	**P**	**22 51 59.3**	**+0.4**
BORK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
HYT	**Haines Junctio**	**48.22**	**40**	P	**P**	**22 52 02.2**	**+1.8**
ARSB	**Arslanbob**	**51.05**	**294**	P	**P**	**22 52 21.6**	**-0.7**
ARSB				IAmb	IAmb	22 52 32.6	
	comp=Z,6.8nm,1.0s						
ARSB	**Arslanbob**	**51.05**	**294**	P	**P**	**22 52 21.6**	**-0.7**
ARSB				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KK31	**Karatay Array**	**51.87**	**297**	P	**P**	**22 52 27.0**	**-1.2**
KK31				IAmb	IAmb	22 52 29.4	
	comp=Z,4.4nm,1.4s						
KK31	**Karatay Array**	**51.87**	**297**	P	**P**	**22 52 27.0**	**-1.2**
KK31				pmax	pmax		
	comp=Z,4.0nm,1.4s						
KKAR	**Karatay Array**	**51.87**	**297**	P	**P**	**22 52 27.8**	**-0.4**
KKAR	**Karatay Array**	**51.87**	**297**	P	**P**	**22 52 27.8**	**-0.4**
ARTI	**Arti**	**53.20**	**316**	c iP	**P**	**22 52 37.9**	**0.0**
ARTI						22 53 46.1	
ARTI						22 54 33.6	
ARTI				S	**S**	**23 00 12.1**	**+3.5**
ARTI				SS	**SKiKP**	**23 03 52.1**	**-3.1**
ARTI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CHGR	**Chuyangaron**	**54.91**	**293**	iP	**P**	**22 52 50.1**	**-0.6**
CHGR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
AB31	**Akbulak array**	**55.54**	**308**	P	**P**	**22 52 55.0**	**0.0**
AB31				IAmb	IAmb	22 52 55.9	
	comp=Z,3.0nm,0.9s						
ABKAR	**Akbulak array**	**55.54**	**308**	P	**P**	**22 52 54.3**	**-0.7**
YKAW3	**Yellowknife Wh**	**57.45**	**33**	P	**P**	**22 53 08.8**	**+0.4**
YKAW3				IAmb	IAmb	22 53 11.1	
	comp=Z,6.1nm,1.1s						
YKA	**Yellowknife Ar**	**57.49**	**33**	P	**P**	**22 53 09.2**	**+0.5**
	comp=Z,2.7nm,1.0s,baz=304,slow=8.1,SNR=25						
	comp=Z,2.7nm,1.0s						
YKA	**Yellowknife Ar**	**57.49**	**33**	P	**P**	**22 53 08.3**	**-0.3**
YKA	**Yellowknife Ar**	**57.49**	**33**	iP	**P**	**22 53 09.3**	**+0.7**
YKA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
YKAW1	**Yellowknife Wh**	**57.55**	**33**	P	**P**	**22 53 10.1**	**+1.0**
YKAW1				IAmb	IAmb	22 53 11.8	
	comp=Z,8.4nm,1.2s						
WRA	**Warramunga Arr**	**63.50**	**190**	P	**P**	**22 53 48.8**	**-1.3**
	comp=Z,0.5nm,0.8s,baz=12,slow=7.3,SNR=2.1						
	comp=Z,0.5nm,0.8s						
WRA	**Warramunga Arr**	**63.50**	**190**	P	**P**	**22 53 49.6**	**-0.5**
FINES	**FINESS Array B**	**64.23**	**332**	P	**P**	**22 53 53.7**	**-0.8**
	comp=Z,1.5nm,0.8s,baz=49,slow=5.8,SNR=4.3						
	comp=Z,1.5nm,0.8s						
FINES	**FINESS Array B**	**64.23**	**332**	P	**P**	**22 53 55.0**	**+0.5**
FINES	**FINESS Array B**	**64.23**	**332**	iP	**P**	**22 53 57.2**	**+2.7**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
OBN	**Obninsk**	**64.31**	**323**	iP	**P**	**22 53 53.7**	**-1.4**
OBN				iPPP	PPP	22 57 47.2	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
OBN	**Obninsk**	**64.31**	**323**	eP	**P**	**22 53 54.9**	**-0.2**
ASAR	**Alice Springs**	**67.23**	**190**	P	**P**	**22 54 14.1**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=9.5,slow=7.0,SNR=1.9						
	comp=Z,0.2nm,0.6s						
FFC	**Flin Flon**	**67.46**	**35**	P	**P**	**22 54 16.5**	**+1.1**
FFC				IAmb	IAmb	22 54 18.0	
	comp=Z,3.6nm,1.0s						
FFC	**Flin Flon**	**67.46**	**35**	P	**P**	**22 54 16.5**	**+1.1**
FFC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
FCC	**Fort Churchill**	**67.59**	**29**	P	**P**	**22 54 16.5**	**+0.3**
FCC				IAmb	IAmb	22 54 25.9	
	comp=Z,4.5nm,1.4s						
FCC	**Fort Churchill**	**67.59**	**29**	P	**P**	**22 54 16.5**	**+0.3**
FCC				pmax	pmax		
	comp=Z,4.0nm,1.4s						
KIV	**Kislovodsk**	**68.33**	**310**	P	**P**	**22 54 19.0**	**-2.3**
KIV	**Kislovodsk**	**68.33**	**310**	eP	**P**	**22 54 20.9**	**-0.3**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV	**Kislovodsk**	**68.33**	**310**	eP	**P**	**22 54 20.9**	**-0.3**
KBZ	**Khabaz**	**68.35**	**310**	P	**P**	**22 54 19.9**	**-1.4**
	comp=Z,2.0nm,0.8s,baz=29,slow=3.7,SNR=5.4						
	comp=Z,2.0nm,0.8s						
KBZ	**Khabaz**	**68.35**	**310**	ceP	**P**	**22 54 20.8**	**-0.4**
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KBZ	**Khabaz**	**68.35**	**310**	eP	**P**	**22 54 20.9**	**-0.3**
BOZ	**Bozeman (W)**	**69.00**	**47**	P	**P**	**22 54 25.3**	**-0.1**
BOZ				IAmb	IAmb	22 54 28.0	
	comp=Z,3.5nm,1.1s						
BOZ	**Bozeman (W)**	**69.00**	**47**	P	**P**	**22 54 25.3**	**-0.1**
BOZ				pmax	pmax		
	comp=Z,4.0nm,1.2s						
NOA	**NORSAR Array B**	**69.19**	**338**	P	**P**	**22 54 25.6**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=36,slow=6.2,SNR=4.1						
	comp=Z,1.3nm,0.8s						
HFS	**Hagfors**	**69.21**	**336**	P	**P**	**22 54 26.0**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=37,slow=13,SNR=1.9						
	comp=Z,1.6nm,0.7s						
HFS	**Hagfors**	**69.21**	**336**	P	**P**	**22 54 26.0**	**-0.3**
NVAR	**Mina Array Bea**	**69.80**	**56**	P	**P**	**22 54 29.8**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=317,slow=6.8,SNR=2.1						
	comp=Z,0.2nm,0.4s						
PD31	**Pinedale Array**	**71.99**	**48**	P	**P**	**22 54 43.6**	**-0.2**
PDAR	**Pinedale Array**	**71.99**	**48**	P	**P**	**22 54 44.5**	**+0.6**
	comp=Z,1.3nm,1.0s,baz=284,slow=0.6,SNR=7.3						
	comp=Z,1.3nm,1.0s						
PDAR	**Pinedale Array**	**71.99**	**48**	P	**P**	**22 54 44.0**	**+0.1**
GURO	**Guroymak-BITLI**	**72.21**	**306**	P	**P**	**22 54 45.6**	**+0.4**
GURO				IAmb	IAmb	22 54 46.8	
	comp=Z,2.7nm,0.7s						
ULM	**Lac du Bonnet**	**73.28**	**35**	P	**P**	**22 54 51.5**	**+0.4**
	comp=Z,2.1nm,0.9s,baz=228,slow=5.9,SNR=3.0						
	comp=Z,2.1nm,0.9s						
PFO	**Pinyon Flats O**	**74.06**	**59**	iP	**P**	**22 54 56.7**	**+0.5**
CLL	**Collm**	**76.64**	**331**	eP	**P**	**22 55 11.0**	**+0.5**
CLL	**Collm**	**76.64**	**331**	eP	**P**	**22 55 11.0**	**+0.5**
GERES	**GERESS Array B**	**78.41**	**329**	LR	LR	23 36 16.7	
	comp=Z,49nm,19.4s,baz=283,slow=40						
TXAR	**Lajitas Array**	**84.85**	**54**	P	**P**	**22 55 55.0**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=307,slow=3.7,SNR=6.7						
	comp=Z,0.5nm,0.8s						
TXAR	**Lajitas Array**	**84.85**	**54**	P	**P**	**22 55 55.5**	**+0.5**
TXAR	**Lajitas Array**	**84.85**	**54**	P	**P**	**22 55 55.0**	**+0.1**
NVL	**N'lazarevskaya**	**143.76**	**205**	ePKHKP	PKPpre	23 02 40.3	
NVL				pmax	pmax		
	comp=Z,95nm,2.7s						

*JMA **02** 22:48:00.8±0.2, 30°N±1°×14°0E±°, h429^{km}, MV3.7/32, NEAR TORISHIMA IS*
*IDC **02** 22:48:01.9±0.8, 30°.04N×139°.26E, h385^{km}±12^{km}, mb3.2/16, mbtmp3.9/20, Error ellipse: s-maj=30.7km s-min=9.6km az=72.0*
ISC 02 22:48:02.0±0.6**, 30°.04N**±0°.06×**139°.3E**±0°.1**, h388^{km}, n34, σ1ˢ.63**/42**, mb3.5**/16**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.09**	**8**	eP	**Pn**	**22 49 07.5**	**+2.5**
JHJ	**Hachijo jima 2**	**3.10**	**8**	P	**Pn**	**22 49 06.5**	**+1.5**
	214nm,0.7s,baz=270,slow=20,SNR=8.0						
JHJ				S	**S**	**22 49 50.4**	**-5.5**
	127nm,0.8s,baz=270,slow=20,SNR=1.8						
JMKN	**Mikurajimanish**	**3.85**	**4**	eP	**Pn**	**22 49 13.9**	**+2.2**
CBIJ	**Chichi jima**	**3.88**	**138**	P	**Pn**	**22 49 12.8**	**+0.6**
CBIJ				S	**S**	**22 50 07.7**	**-1.4**
JCJ	**Chichijima**	**3.88**	**138**	P	**Pn**	**22 49 12.1**	**-0.2**
	89nm,0.4s,baz=345,slow=22,SNR=18						
JCJ				S	**S**	**22 50 07.8**	**-1.3**
	145nm,0.3s,baz=264,slow=23,SNR=16						
TTO1	**TONANKAI O.B.S**	**4.16**	**330**	P	**Pn**	**22 49 17.8**	**+3.3**
BSO1	**Boso 1**	**4.81**	**17**	eP	**Pn**	**22 49 22.4**	**+1.7**
BSO1				eS	**S**	**22 50 25.6**	**+0.7**
JIE	**Ise**	**4.86**	**334**	P	**Pn**	**22 49 24.7**	**+2.9**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JKN2	Miekihoku	4.91	329	eP	Pn	22 49 24.9	+2.5
BSO4	Boso 4	5.01	10	eP	Pn	22 49 24.9	+1.6
BSO4				eS	S	22 50 30.8	+1.4
JOD2	Odawara 2	5.21	358	eP	Pn	22 49 26.5	+1.0
JAO	Obara	5.49	342	eP	Pn	22 49 30.9	+2.4
JRY	Ryogami san	5.97	357	eP	Pn	22 49 34.8	+1.1
JAG	Ashikaga	6.37	1	P	Pn	22 49 37.7	-0.4
MJAR	Matsushiro Arr	6.55	352	P	Pn	22 49 40.6	+0.5
	2.6nm,0.4s,baz=168,slow=11,SNR=5.8						
JHO	Hitachi	6.64	9	P	Pn	22 49 41.7	+0.6
JHO				eS	S	22 50 59.6	-2.4
KSRS	Korea Array	12.01	311	P	Pn	22 50 42.6	-0.7
	1.0nm,0.5s,baz=126,slow=10,SNR=3.1						
KLR	Kul'dur	20.01	345	P	P	22 52 08.3	+1.2
	1.6nm,0.6s,baz=174,slow=8.4,SNR=5.8						
	1.6nm,0.6s						
LZDM	Lanzhou Array	30.32	291	P	P	22 53 38.9	-0.8
	0.7nm,0.3s,baz=140,slow=3.4,SNR=1.9						
	0.7nm,0.3s						
SONM	Songino Array	30.84	314	P	P	22 53 42.7	-1.2
	0.3nm,0.4s,baz=130,slow=9.2,SNR=6.7						
	0.3nm,0.4s						
ZALV	Zalesovo Beam	45.61	318	P	P	22 55 44.7	-0.3
	0.4nm,0.3s,baz=103,slow=7.2,SNR=3.6						
ZALV				PcP	PcP	22 57 15.9	0.0
	0.6nm,0.3s,baz=142,slow=3.1,SNR=3.7						
	0.4nm,0.3s						
MKAR	Makanchi Array	46.66	308	P	P	22 55 53.1	-0.3
	0.3nm,0.4s,baz=85,slow=10,SNR=7.5						
MKAR				PcP	PcP	22 57 19.3	-0.5
	0.2nm,0.3s,baz=78,slow=10,SNR=6.3						
	0.3nm,0.4s						
NRIK	Noril'sk	48.99	338	P	P	22 56 10.5	0.0
	1.1nm,0.5s,baz=110,slow=9.8,SNR=3.6						
	1.1nm,0.5s						
KURBB	Kurchatov Arra	49.18	313	P	P	22 56 12.1	-0.2
	1.5nm,0.4s,baz=90,slow=7.7,SNR=2.6						
WRA	Warramunga Arr	49.92	186	P	P	22 56 18.7	+0.6
	0.7nm,0.6s,baz=4.4,slow=8.1,SNR=9.9						
	0.7nm,0.6s						
ASAR	Alice Springs	53.65	186	P	P	22 56 45.8	+0.5
	0.2nm,0.3s,baz=23,slow=10,SNR=7.9						
	0.2nm,0.3s						
BVAR	Borovoye Array	54.17	316	P	P	22 56 48.7	0.0
	1.2nm,0.5s,baz=94,slow=6.7,SNR=6.5						
	1.2nm,0.5s						
STKA	Stephens Creek	61.62	178	P	P	22 57 40.7	+0.8
	1.1nm,0.4s,baz=319,slow=9.3,SNR=2.9						
	1.1nm,0.4s						
ARCES	ARCESS Array B	69.92	340	P	P	22 58 32.6	+0.7
	4.8nm,1.0s,baz=65,slow=6.2,SNR=6.5						
	4.8nm,1.0s						
FINES	FINESS Array B	74.18	333	P	P	22 58 57.1	+0.1
	0.9nm,0.3s,baz=75,slow=4.1,SNR=20						
	0.9nm,0.3s						
AKASG	Malin Array Be	78.75	322	P	P	22 59 21.9	-0.6
	0.4nm,0.3s,baz=53,slow=5.2,SNR=2.9						
	0.4nm,0.3s						
HFS	Hagfors	79.71	336	P	P	22 59 26.8	-0.7
	1.3nm,0.4s,baz=93,slow=5.9,SNR=16						
	1.3nm,0.4s						
NOA	NORSAR Array B	79.93	337	P	P	22 59 28.4	-0.3
	0.5nm,0.5s,baz=55,slow=6.6,SNR=5.1						
	0.5nm,0.5s						
BRTR	Keskin Array B	82.15	311	P	P	22 59 41.0	+0.2
	0.8nm,0.7s,baz=86,slow=4.6,SNR=5.9						
	0.8nm,0.7s						

*IDC **02** 22:49:06.5±25.0, 17°.38S×177°.48W, h358km±219km, mb3.5/3, mbtmp4.3/3, Error ellipse: s-maj=147.4km s-min=84.7km az=110.0*

ISC 02 22:49:06.3±2.6**, 17°.1S**±0°.9×**177°.7W**±0°.7**, h350**km**, n7,** σ1s**47**/9**, mb3.6**/3**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.64	241	P	P	22 56 06.3	+0.8
	3.7nm,0.9s,baz=53,slow=10,SNR=4.0						
	3.7nm,0.9s						
WRA	Warramunga Arr	45.49	259	P	P	22 56 52.2	-0.1
	0.9nm,0.7s,baz=93,slow=7.0,SNR=14						
WRA				PcP	PcP	22 58 22.5	-2.1
	0.2nm,0.6s,baz=100,slow=3.4,SNR=1.6						
	0.9nm,0.7s						
ASAR	Alice Springs	45.70	253	P	P	22 56 54.0	+0.1
	6.9nm,0.6s,baz=88,slow=8.3,SNR=98						
ASAR				PcP	PcP	22 58 23.1	-2.2
	0.4nm,0.6s,baz=97,slow=3.9,SNR=3.1						
	6.9nm,0.6s						
HFS	Hagfors	136.26	352	PKP	PKPdf	23 07 47.2	+1.1
	1.4nm,0.8s,baz=90,slow=2.9,SNR=1.6						
BRTR	Keskin Array B	144.72	316	PKPbc	PKPdf	23 08 01.9	-0.3
	0.5nm,0.8s,baz=45,slow=6.3,SNR=2.9						
MMAI	Mount Meron Ar	146.30	304	PKPbc	PKPdf	23 08 06.3	+1.3
	0.5nm,0.5s,baz=53,slow=8.1,SNR=1.7						
GERES	GERESS Array B	147.03	346	PKPbc	PKPbc	23 08 08.4	+0.1
	0.3nm,0.5s,baz=32,slow=5.2,SNR=1.9						

*NEIC **02** 23:07:50.2±1.2, 18°.11S±0°.04×70°.54W±0°.06, h58km±4km, mb5.2/552, Mww4.9/15, Mwr4.8(GUC), Error ellipse: s-maj=8.4km s-min=5.8km az=99.0*

*NEIC **02** 23:07:51.5, 17°.92S×70°.90W, h50km, Moment Tensor Solution. Duration: 1s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.30; $M_{\theta\theta}$2.17; $M_{\phi\phi}$0.13; $M_{r\theta}$-0.10; $M_{\theta\phi}$-0.78; $M_{\phi r}$-0.74; Fault plane solution: $M_0$2.48000×10^{16} NP1:ϕ_s92.45000°, δ45.70000°, λ-114.04000°. NP2:ϕ_s305.02000°, δ49.18000°, λ-67.34000°. Principal axes: T 2.4409, Plg2.0000°, Azm19.0000°; N 0.0847, Plg17.0000°, Azm110.0000°; P -2.5257, Plg73.0000°, Azm283.0000°;*

*IDC **02** 23:07:51.8±0.4, 17°.96S×70°.37W, h61km±3km, mb4.6/23, mbtmp4.8/27, MS3.7/44 Error ellipse: s-maj=14.8km s-min=9.3km az=52.0*

*NEIC **02** 23:07:51.5, 18°.12S×70°.58W, h50km*

*GUC **02** 23:07:53.9±0.8, 18°.20S×70°.41W, h57km±3km, ML4.8*

*GCMT **02** 23:07:54.4±0.4, 18°.24S±0°.03×70°.51W±0°.03, h61km±1km, MW4.9/67, Moment Tensor Solution. s35,c37; s67,c78; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.43±.17; $M_{\theta\theta}$3.02±.12; $M_{\phi\phi}$-0.59±.15; $M_{r\theta}$0.15±.08; $M_{\theta\phi}$0.21±.16; $M_{\phi r}$-0.24±.10; Best double couple: $M_0$2.75100×10^{16} NP1:ϕ_s79.00000°, δ44.00000°, λ-101.00000°. NP2: ϕ_s274.00000°, δ47.00000°, λ-79.00000°. Principal axes: T 3.0350, Plg1.0000°, Azm357.0000°; N -0.5750, Plg8.0000°, Azm87.0000°; P -2.4670, Plg82.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*VAO **02** 23:07:55.7±0.6, 17°.95S×70°.31W, h108km±5km, mb4.8, Presumed earthquake*

ISC 02 23:07:50.8±0.3**, 18°.05S**±0°.03×**70°.47W**±0°.04**, h62**km±2km**, h63**km**:pP-P, n777,** σ1s**21**/797**, mb5.2**/269**, 8C-9D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AP01	Chacalluta	0.34	159		Pn	23 08 00.8	-0.6
AP01				Sn	Sn	23 08 07.9	-1.3
AP01	Chacalluta	0.34	159	⇓iP	Pn	23 08 03.0	+1.6
AP01				iS	Sn	23 08 10.4	+1.3
PB12	IPOC Station P	0.57	167		Pn	23 08 02.0	-1.9
PB12				Sn	Sn	23 08 13.1	-0.3
PB12	IPOC Station P	0.57	167	⇓iP	Pn	23 08 05.2	+1.3
PB12				iS	Sn	23 08 13.3	0.0
PB12				IAML		23 08 16.3	
	comp=N,121μm,0.2s						
PX02	IPOC Station P	0.94	164	iP	Pn	23 08 08.9	+0.6
PX02				iS	Sn	23 08 21.4	+0.2
PB16	IPOC Station P	0.95	107		Pn	23 08 09.7	+0.8
PB16				Sn	Sn	23 08 23.6	+1.4
PB16	IPOC Station P	0.95	107	⇓iP	Pn	23 08 11.4	+2.5
PB16				iS	Sn	23 08 25.1	+2.8
PB18	Visviri	1.05	64		Pn	23 08 12.6	+2.6
PB18				Sn	Sn	23 08 26.1	+1.9
PB18	Visviri	1.05	64	iP	Pn	23 08 14.6	+4.6
PB11	IPOC Station P	1.87	156		Pn	23 08 21.4	+0.8
PB11	IPOC Station P	1.87	156	⇑iP	Pn	23 08 22.2	+1.6
PB11				iS	Sn	23 08 44.2	+1.0
PB11				IAML		23 08 53.4	
	comp=N,13μm,0.3s						
GO01	Chusmiza	2.01	143		Pn	23 08 24.8	+1.9
GO01	Chusmiza	2.01	143	iP	Pn	23 08 25.9	+3.0
GO01				iS	Sn	23 08 49.3	+2.1
TA02	Huaiquique	2.23	172	⇑iP	Pn	23 08 26.8	+1.4
TA02				IAML		23 08 54.9	
	comp=N,15μm,0.7s						
HMBC	Humberstone	2.28	166		Pn	23 08 27.2	+0.9
HMBC	Humberstone	2.28	166	⇑iP	Pn	23 08 27.6	+1.4
PB08	IPOC Station P	2.42	149		Pn	23 08 30.8	+2.4
PB08	IPOC Station P	2.42	149	⇑iP	Pn	23 08 31.1	+2.7
PB08				iS	Sn	23 08 58.5	+1.4
PB08				IAML		23 09 10.9	
	comp=N,5μm,0.2s						
PX03	IPOC Station P	2.47	161	eP	Pn	23 08 30.2	+1.4
TA01	Diego Aracena	2.52	174		Pn	23 08 30.7	+1.4
TA01	Diego Aracena	2.52	174	⇑iP	Pn	23 08 30.6	+1.4
TA01				IAML		23 09 11.6	
	comp=E,4μm,0.6s						
LPAZ	La Paz	2.84	52	P	Pn	23 08 39.8	+5.5
	comp=E,531nm,0.6s,baz=231,slow=8.0,SNR=782						
LPAZ				S	Sn	23 08 56.0	-12
	comp=E,484nm,0.8s,baz=229,slow=11,SNR=8.3						
LPAZ				LR	LR	23 10 08.8	
	comp=E,2μm,20.4s,baz=248,slow=50						
LPAZ	La Paz	2.84	52		Pn	23 08 38.5	+4.2
LPAZ	La Paz	2.84	52	P	Pn	23 08 40.2	+5.9
LPAZ	La Paz	2.84	52	eP	Pn	23 08 40.2	+5.9
PB01	IPOC Station P	3.12	163		Pn	23 08 38.4	+0.8
PB01	IPOC Station P	3.12	163	⇑iP	Pn	23 08 38.9	+1.3
PB01				iS	Sn	23 09 13.7	+0.1
PB02	IPOC Station P	3.29	171		Pn	23 08 40.6	+0.5
PB02	IPOC Station P	3.29	171	⇓iP	Pn	23 08 40.8	+0.7
PB02				iS	Sn	23 09 17.7	-0.4
PB07	IPOC Station P	3.70	172		Pn	23 08 46.2	+0.6
PB09	IPOC Station P	3.90	163		Pn	23 08 49.5	+1.1
PB09	IPOC Station P	3.90	163	⇑iP	Pn	23 08 50.4	+2.0
PB09				iS	Sn	23 09 34.1	+1.1
PB03	IPOC Station P	4.03	171		Pn	23 08 51.2	+1.0
PB03	IPOC Station P	4.03	171	⇑iP	Pn	23 08 51.4	+1.2
PB03				IAML		23 09 57.6	
	comp=E,2μm,0.8s						
PB06	IPOC Station P	4.71	170		Pn	23 08 59.6	+0.2
PB05	IPOC Station P	4.78	177		Pn	23 09 00.0	-0.4
AF01	San Pedro de A	5.33	157		Pn	23 09 07.7	-0.3
YJA	Yavi	6.20	132	eP	Pn	23 09 25.4	+5.2
PB14	IPOC Station P	6.54	179		Pn	23 09 21.6	-3.1
GO02	Mina Guanaco	7.12	174		Pn	23 09 31.3	-1.3
AC01	Pan de Azucar	8.06	181		Pn	23 09 42.8	-2.4
NNA	Nana	8.62	314	P	Pn	23 09 55.1	+2.2
	comp=E,119nm,0.7s,baz=181,slow=7.4,SNR=25						
NNA				S	Sn	23 11 28.6	-0.1
	comp=E,142nm,0.6s,baz=79,slow=9.5,SNR=3.7						
NNA	Nana	8.62	314		Pn	23 09 53.5	+0.6
NNA	Nana	8.62	314	P	Pn	23 09 55.1	+2.2
	comp=E,3μmcomp=E,363nm,0.6s						
AC02	Maricunga	8.83	172		Pn	23 09 55.2	-1.0
SIV	San Ignacio	9.22	79	P	Pn	23 10 02.4	+1.3
	comp=E,121nm,0.8s,baz=274,slow=15						
SIV				LR	LR	23 13 57.1	
	comp=E,430nm,20.8s,baz=282,slow=40						
AC06	Mina Casimiro	9.26	179		Pn	23 09 59.2	-2.5
GO03	Copiapo	9.50	179		Pn	23 10 01.8	-3.1
AC04	Llanos de Chal	10.12	183		Pn	23 10 09.6	-3.7
AC05	El Transito	10.74	179		Pn	23 10 18.9	-3.0
LCO	Las Campanas	10.91	181		Pn	23 10 21.2	-3.2
VILB	Vilhena	11.12	64		Pn	23 10 27.9	+0.9
VILB	Vilhena	11.12	64	eP	Pn	23 10 28.0	+0.9
PTLB	Pontes e Lacer	11.16	78		Pn	23 10 27.7	+0.1
PTLB	Pontes e Lacer	11.16	78	eP	Pn	23 10 29.0	+1.4
CO05	La Serena	11.84	183	Pn	Pn	23 10 34.0	-2.7
CO01	Juntas del Tor	11.88	178		Pn	23 10 34.4	-3.2
GO04	Tololo Observa	12.07	181		Pn	23 10 36.4	-3.8
CO06	Fray Jorge	12.61	185		Pn	23 10 43.8	-3.6
CO03	El Pedregal	12.73	181		Pn	23 10 45.7	-3.4
CO02	Combarbal	13.10	182		Pn	23 10 50.3	-3.9
ATAH	Atahualpa	13.32	324	P	Pn	23 10 58.0	+0.5
	comp=E,9.9nm,0.7s,baz=144,slow=8.5,SNR=7.4						
ATAH				S	Sn	23 13 27.2	+3.1
	comp=E,16nm,0.9s,baz=240,slow=17,SNR=2.2						
ZON	Zonda	13.53	173		Pn	23 10 57.0	-2.9
CFA	Coronel Fontan	13.64	172	P	Pn	23 10 58.1	-3.3
	comp=E,5.5nm,0.5s,baz=13,slow=16,SNR=22						
CFA				S	Sn	23 13 35.2	+3.8
	comp=E,3.4nm,0.7s,baz=312,slow=16,SNR=1.8						
CFA				LR	LR	23 16 53.9	
	comp=E,214nm,21.7s,baz=326,slow=40						
CO04	Los Peladeros	13.94	182		Pn	23 11 03.1	-2.5
AQDB	Aquidauana	14.15	102	Pn	Pn	23 11 08.5	+0.3
SALV	Santo Antonio	14.29	84	eP	P	23 11 12.0	-3.5
VA06	Catapilco	14.47	183		Pn	23 11 10.0	-2.2
VA03	San Esteban	14.65	180		Pn	23 11 11.6	-3.1
CPUP	Villa Florida	14.69	126	P	P	23 11 16.6	-3.1
	comp=E,4.9nm,0.6s,baz=302,slow=13,SNR=10.0						
CPUP				LR	LR	23 17 57.7	
	comp=E,274nm,20.2s,baz=296,slow=41						
CPUP	Villa Florida	14.69	126		Pn	23 11 15.3	+0.2
PDRB	Porto dos Gac	14.74	66	eP	Pn	23 11 14.2	-1.7
PP1B	Ponte de Pedra	14.85	91	eP	Pn	23 11 18.0	+0.7
VA01	Torpederas	14.95	184		Pn	23 11 16.1	-2.3
PEL	Peldehue	15.03	181		Pn	23 11 17.6	-2.0
MT02	Curacav	15.16	182	Pn	Pn	23 11 17.8	-3.4
MT05	Renca	15.28	181		Pn	23 11 21.0	-1.8
MT05				IAmb	IAmb	23 11 45.3	
	comp=Z,169nm,1.4s						
AMBA	Amambai (Brazi	15.29	111	eP	P	23 11 24.1	-2.5
MT16	CCHEN	15.31	180		Pn	23 11 22.0	-1.2
MT16				IAmb	IAmb	23 11 44.0	
	comp=Z,75nm,0.8s						
MT08	Bocatoma Ro	15.34	179		Pn	23 11 21.5	-2.2
MT08				IAmb	IAmb	23 11 27.8	
	comp=Z,83nm,0.8s						
MT03	Universidad Ad	15.38	180		Pn	23 11 23.2	-0.9
MT03				IAmb	IAmb	23 11 52.6	
	comp=Z,88nm,0.9s						
TEFE	Tefe	15.54	22	eP	P	23 11 27.2	-2.2
MT13	San Alfonso	15.63	179		Pn	23 11 25.8	-1.5
MT09	Talagante	15.67	182		Pn	23 11 27.1	-0.8
MT01	Popeta	15.76	182	Pn	Pn	23 11 26.5	-2.4
BO04	La Punta	15.87	180		Pn	23 11 27.3	-3.1
CLDB	Colider	15.89	65	eP	P	23 11 31.8	-1.5
BO01	Tunca	16.28	182		Pn	23 11 32.4	-3.0
MCRA	Macar, Loja	16.46	325	P	P	23 11 39.1	-0.6
	comp=Z,45nm,0.8s						
BO02	Sierra Bellavi	16.68	181		Pn	23 11 38.4	-2.0
GO05	Hualane	16.94	184		Pn	23 11 41.1	-2.6
H03N1	Juan Fernandez	17.10	205	P	P	23 11 47.3	+1.1
	baz=110,slow=14,SNR=22						
H03N1				T	T	23 29 11.7	
	baz=28,slow=73,SNR=5743						
H03N2	Juan Fernandez	17.10	205	P	P	23 11 48.5	+2.3
	baz=110,slow=14,SNR=14						
H03N2				T	T	23 29 13.4	
	baz=28,slow=73,SNR=5823						
H03N3	Juan Fernandez	17.11	205	P	P	23 11 47.5	+1.1
	baz=110,slow=14,SNR=27						
H03N3				T	T	23 29 13.0	
	baz=28,slow=73,SNR=5908						
VA04	Juan Fernndez	17.24	204	Pn	Pn	23 11 43.4	-3.9
VA04				IAmb	IAmb	23 12 10.7	
	comp=Z,111nm,1.1s						
TRCB	Terra Rica	17.36	109	P	P	23 11 48.6	-0.9
TRCB				IAmb	IAmb	23 12 11.2	
	comp=Z,63nm,0.7s						
TRCB	Terra Rica	17.36	109	eP	P	23 11 50.5	+0.9
H03S3	Juan Fernandez	17.43	204	P	P	23 11 50.7	+0.9
	baz=37,slow=72,SNR=4.6						
PSAL	Palomas, Salto	17.45	140	eP	P	23 11 52.9	+2.6
H03S1	Juan Fernandez	17.45	204	P	P	23 11 50.6	+0.6
	baz=37,slow=72,SNR=3.7						
H03S2	Juan Fernandez	17.45	204	P	P	23 11 50.8	+0.8
	baz=37,slow=72,SNR=4.1						
MACA	Manacapuru-AM	17.63	34	P	Pn	23 11 49.7	-2.6
MACA				IAmb	IAmb	23 11 54.0	
	comp=Z,87nm,0.8s						
MACA	Manacapuru-AM	17.63	34	eP	P	23 11 52.4	-0.1
ML02	Panimavida	17.66	183	P	Pn	23 11 49.7	-2.8
ML02				IAmb	IAmb	23 12 16.1	
	comp=Z,124nm,1.1s						
COHC	Cochancay	17.73	330		P	23 11 52.0	-1.6
ARAG	Araguaiana, MT	18.00	85	eP	Pn	23 11 56.5	-0.4
SGC2	Sao Gabriel da	18.12	11	P	P	23 11 57.1	-0.7
	comp=Z,2μmcomp=Z,105nm,1.0s						
NPGB	Novo Progresso	18.34	55	eP	Pn	23 12 00.4	-0.6
PTGB	Pitanga	18.37	114	eP	Pn	23 12 01.9	+0.7
BI02	San Fabin de	18.55	182	P	P	23 12 00.8	-1.8
BI02				IAmb	IAmb	23 12 27.0	
	comp=Z,133nm,1.2s						
PTLC	Puerto Leguiza	18.60	346	P	P	23 11 59.6	-3.6
	comp=Z,69nm,1.1s						
BI05	Punta Hualpn	18.78	187	P	P	23 12 03.1	-1.8
LDASE	Londrina, Braz	18.86	110	eP	Pn	23 12 07.0	-0.1
SLOR	San Lorenzo -	18.94	335		Pn	23 12 09.3	+0.8
SLOR				IAmb	IAmb	23 12 23.3	
	comp=Z,144nm,1.0s						
ITRB	Iturama	19.10	98	eP	Pn	23 12 09.4	-0.6
ITAB	Concordia	19.21	122	P	P	23 12 09.2	-0.6
ITAB	Concordia	19.21	122	eP	Pn	23 12 10.3	-1.0
CASC	Dorado de Casc	19.30	339	P	Pn	23 12 13.8	+1.3
	comp=Z,2μmcomp=Z,260nm,0.9s						
SNDB	Serra Nova Dou	19.47	75	eP	Pn	23 12 12.6	-1.9
BONI	La Bonita	19.66	339	P	Pn	23 12 18.7	+1.8
	comp=Z,1μmcomp=Z,127nm,0.8s						
CPSB	Cacapava Do Su	19.78	132	eP	Pn	23 12 16.6	-1.4
OTAV	Otavalo	19.80	336	P	P	23 12 15.8	-0.9
OTAV	Otavalo	19.80	336	P	Pn	23 12 21.2	+2.5
	comp=Z,598nmcomp=Z,49nm,1.0s						
OTAV	Otavalo	19.80	336	eP	Pn	23 12 18.1	-0.6
ITTB	Itaituba	19.82	48	eP	P	23 12 16.1	-0.4
CUSE	Cuicocha Este	19.84	336	P	Pn	23 12 23.8	+4.6
	comp=Z,4μmcomp=Z,148nm,0.9s						
PAC1	Pacto, Paraso	19.96	335	P	Pn	23 12 21.0	+0.7
	comp=Z,1μmcomp=Z,78nm,0.6s						
TULM	Tulcn-Chalpat	19.99	338	P	Pn	23 12 21.9	+0.8
	comp=Z,2μmcomp=Z,292nm,1.0s						
FLOC	Florencia	20.17	345	P	Pn	23 12 22.0	-0.7
	comp=Z,634nmcomp=Z,68nm,0.8s						
CMBC	Cumbal	20.21	338	P	Pn	23 12 28.2	+4.6
GCUF	Volcan Galeras	20.32	340	P	Pn	23 12 27.6	+2.7
	comp=Z,2μmcomp=Z,172nm,0.8s						
MACC	Macarena, Meta	20.34	350	P	Pn	23 12 24.3	-0.4
	comp=Z,75nm,1.0s						
PLTB	Pedras Altas	20.46	135	P	P	23 12 22.9	-0.5
PLTB	Pedras Altas	20.46	135	eP	Pn	23 12 24.1	-1.9
CRUC	La Cruz	20.52	341	P	Pn	23 12 28.8	+1.7
GARC	Garzon, Huila	20.71	346	P	P	23 12 27.0	+0.6
	comp=Z,1μmcomp=Z,98nm,0.6s						
BB19B	Bebedouro	20.89	102	eP	Pn	23 12 28.3	-2.8
BBAC	Balboa, Cauca	21.04	341	P	P	23 12 31.8	+2.0
	comp=Z,2μmcomp=Z,273nm,1.0s						
IPMB	Ipameri, GO	21.16	93	eP	P	23 12 31.0	-0.1
TRQA	Tornquist	21.27	161	P	P	23 12 31.4	-0.5
TRQA				IAmb	IAmb	23 12 58.3	
	comp=Z,72nm,1.1s						
POPC	Popayan, Colom	21.36	343	P	P	23 12 35.0	+1.7
	comp=Z,1μmcomp=Z,119nm,0.8s						
GO06	Curarrehue	21.47	182	P	P	23 12 33.0	-1.3
URMC	La Uribe, Meta	21.51	349	P	P	23 12 37.3	+2.5
	comp=Z,28nm,1.2s						
BDFB	Brasilia	21.62	87	P	P	23 12 35.4	-0.7
	comp=Z,16nm,0.6s,baz=257,slow=11,SNR=12						
BDFB				LR	LR	23 21 52.2	
	comp=Z,204nm,18.3s,baz=257,slow=39						
	comp=Z,16nm,0.6s						
BDFB	Brasilia	21.62	87		P	23 12 35.8	-0.2
LR04	Corral	21.90	186	P	P	23 12 37.2	-1.4
LR04				IAmb	IAmb	23 12 55.4	
	comp=Z,44nm,0.7s						
JAMC	Jamundi, Valle	22.00	343	P	P	23 12 40.9	+0.7
	comp=Z,1μmcomp=Z,125nm,0.9s						
PRAC	Prado	22.06	348	P	P	23 12 40.6	-0.1
	comp=Z,31nm,0.9s						
LR05	Currie	22.14	183	P	P	23 12 40.4	-0.9
LR05				IAmb	IAmb	23 13 08.4	
	comp=Z,58nm,1.0s						
GR1C	Gorgona, Isla	22.25	339	P	P	23 12 44.9	+2.2
ORTC	Ortega, Tolima	22.32	347	P	P	23 12 42.2	-1.3
	comp=Z,70nm,1.0s						
BOAV	Boa Vista	22.56	27	P	P	23 12 45.8	-0.1
BOAV	Boa Vista	22.56	27	eP	P	23 12 45.2	-0.7
PLCA	Paso Flores	22.60	180	P	P	23 12 47.2	+0.8
	comp=Z,9.1nm,1.0s,baz=358,slow=12,SNR=17						
PLCA				PcP	PcP	23 16 39.0	+1.6
	comp=Z,2.5nm,0.7s,baz=36,slow=6.4,SNR=2.9						
	comp=Z,9.1nm,1.0s						
PLCA	Paso Flores	22.60	180	P	P	23 12 44.7	-1.6
PLCA	Paso Flores	22.60	180	eP	P	23 12 47.1	+0.8
YOTC	Yotoco, Valle	22.65	345	P	P	23 12 47.1	0.0
	comp=Z,51nm,0.7s						
ROSC	El Rosal	23.06	350	P	P	23 12 51.9	+0.3
	comp=Z,9.5nm,0.3s,baz=217,slow=20,SNR=2.2						
ROSC				LR	LR	23 23 03.1	
	comp=Z,343nm,19.7s,baz=176,slow=40						
	comp=Z,9.5nm,0.3s						
ROSC	El Rosal	23.06	350	P	P	23 12 51.4	-0.1
LL05	Los Muermos	23.42	186	P	P	23 12 53.5	-0.8
PLMC	San Jos del P	23.52	345	P	P	23 12 55.6	0.0
	comp=Z,34nm,0.6s						
GUY2C	Guyana, Caldas	23.63	348	P	P	23 12 57.1	+0.1
	comp=Z,563nmcomp=Z,59nm,0.8s						
RUSC	La Rusia	23.93	354	P	P	23 12 59.1	-0.7
	comp=Z,43nm,0.7s						
SMTB	Santa Maria do	24.03	71	eP	P	23 13 00.1	-0.1
BSCB	Bom Sucesso	24.39	101	eP	P	23 13 03.7	+0.2
HELC	Santa Helena	24.60	348	P	P	23 13 05.6	-0.1
	comp=Z,18nm,0.5s						
BARC	Barichara	24.63	354	P	P	23 13 04.6	-1.3
	comp=Z,714nmcomp=Z,36nm,0.7s						
PTBC	PUERTO BERRIO,	24.75	350	P	P	23 13 05.0	-1.7
	comp=Z,16nm,0.6s						
LL02	Futaleuf	25.09	182	P	P	23 13 07.9	-1.6
JANB	Januaria	25.24	87	eP	P	23 13 10.0	-1.3
SDBA	SAO DESIDERIO	25.28	81	eP	P	23 13 10.0	-1.6
PAMC	Pamplona, Colo	25.33	355	P	P	23 13 11.9	-0.5
	comp=Z,416nmcomp=Z,11nm,0.9s						
DIAM	Diamantina, MG	25.45	95	eP	P	23 13 13.4	+0.1
DBBC	Dabeiba	25.55	347	P	P	23 13 14.5	+0.5
AY01	Puyuhuapi	26.35	184	P	P	23 13 19.5	-1.4
SDV	Santo Domingo	26.77	360	LR	LR	23 25 21.9	
	comp=Z,387nm,18.4s,baz=176,slow=39						
SDV	Santo Domingo	26.77	360	P	P	23 13 23.9	-1.2
SDV	Santo Domingo	26.77	360	P	P	23 13 24.4	-0.7
SDV	Santo Domingo	26.77	360	eP	P	23 13 23.7	-1.4
COYC	Coyhaique	27.47	182	P	P	23 13 29.4	-1.6
RIB01	Linhares ES	28.50	97	eP	P	23 13 38.6	-1.8
MDP	Montagnes des	28.96	39	LR	LR	23 26 00.1	
	comp=Z,282nm,21.7s,baz=209,slow=38						
GUA01	Guaratinga, BA	29.29	92	eP	P	23 13 43.9	-3.6
CMC01	Camacan, BA	29.75	89	eP	P	23 13 50.5	-1.0
RAFA	San Farael, Vo	30.79	334	P	P	23 14 00.0	-1.1
NBPS	Pedro II - PI	31.47	68	eP	P	23 14 05.1	-1.7
JTS	Las Juntas de	31.59	332	LR	LR	23 27 15.1	
	comp=Z,104nm,21.5s,baz=185,slow=37						
MPOM	Morne Pois Mar	33.65	17	P	P	23 14 24.4	-1.3
BIM	Bigot	33.66	17	P	P	23 14 24.1	-1.8
BIM				IAmb	IAmb	23 14 36.6	
	comp=Z,40nm,0.8s						
EFI	East Falkland	34.96	166	P	P	23 14 34.9	-1.8
EFI				IAmb	IAmb	23 14 42.3	
	comp=Z,26nm,1.1s						
MG03	Isla Dawson	35.73	180	P	P	23 14 42.3	-1.0
MG03				IAmb	IAmb	23 15 00.8	
	comp=Z,45nm,1.2s						
RCBR	Riachuelo	35.85	75	LR	LR	23 30 30.8	
	comp=Z,68nm,19.0s,baz=236,slow=38						
RCBR	Riachuelo	35.85	75	P	P	23 14 44.6	-0.3
MLPR	Magueyes Islan	35.95	6	P	P	23 14 44.4	-1.2
MLPR				IAmb	IAmb	23 15 10.6	
	comp=Z,63nm,1.3s						
CRPR	Cabo Rojo, PR	35.98	5	P	P	23 14 44.5	-1.3
CRPR				IAmb	IAmb	23 15 03.1	
	comp=Z,35nm,0.9s						
OBIP	Obispado Ponce	36.07	6	P	P	23 14 46.1	-0.4
OBIP				IAmb	IAmb	23 14 48.9	
	comp=Z,44nm,1.4s						
CELP	Cerrillos	36.10	6	P	P	23 14 46.7	-0.2
CELP				IAmb	IAmb	23 14 47.7	
	comp=Z,25nm,0.6s						
PDPR	Patillas Dam,	36.11	7	P	P	23 14 45.7	-1.2
PDPR				IAmb	IAmb	23 14 46.3	
	comp=Z,22nm,0.5s						
SJG	San Juan	36.19	7	LR	LR	23 30 20.9	
	comp=Z,87nm,20.5s,baz=242,slow=37						
HUMP	Col San Antoni	36.25	7	P	P	23 14 47.0	-1.1
HUMP				IAmb	IAmb	23 14 52.6	
	comp=Z,63nm,1.5s						
UUPR	Utuado, UPR, P	36.27	6	P	P	23 14 47.7	-0.5
SDD	Santo Domingo	36.29	1	P	P	23 14 47.8	-0.6
AOPR	Arecibo Observ	36.35	6	P	P	23 14 47.9	-1.1
ECPR	Experimental S	36.37	7	P	P	23 14 47.6	-1.5
CUPR	Culebra, Puert	36.49	8	P	P	23 14 48.4	-1.7

CUPR IAmb IAmb 23 15 04.9
comp=Z,52nm,1.2s
DR12 Loma Pena Alta 36.62 2 P P 23 14 50.2 -1.2
MTDJ Mount Denham 36.71 349 P P 23 14 52.2 +0.1
MTDJ IAmb IAmb 23 15 17.3
comp=Z,53nm,1.1s
RPN Rapa Nui 36.88 249 LR LR 23 26 30.0
comp=Z,107nm,18.3s,baz=86,slow=30
MTO3 Montecristo 37.24 329 P P 23 14 57.8 +1.0
MTO3 IAmb IAmb 23 14 59.5
comp=Z,28nm,1.2s
TEIG Tepich 41.86 335 P P 23 15 35.2 +0.3
TEIG IAmb IAmb 23 15 36.5
comp=Z,22nm,0.8s
CAMR Camarioca 42.23 345 P P 23 15 39.7 +1.9
CMIG Matias Romero 42.39 324 LR LR 23 32 08.5
comp=Z,56nm,20.0s,baz=178,slow=34
SOR Soroa 42.41 343 P P 23 15 40.9 +1.5
SOR IAmb IAmb 23 15 57.7
comp=Z,31nm,1.1s
061Z Ochoppi 44.82 347 P P 23 15 59.6 +1.0
ESPZ Base Esperanza 46.25 172 P P 23 16 10.7 +1.2
PMSA Palmer Station 46.89 176 LR LR 23 35 01.2
comp=Z,98nm,18.3s,baz=344,slow=35
DWPF Disney Wildern 47.10 347 P P 23 16 17.6 +1.0
656A Willston 48.56 346 P P 23 16 29.0 +1.1
553A Crawfordville 49.81 344 P P 23 16 38.4 +0.9
451A Vernon 50.57 343 P P 23 16 43.9 +0.7
352A Blakely 51.17 344 P P 23 16 47.9 +0.3
RGRS Roger Stewart 51.52 350 P P 23 16 50.3 +0.1
RGRS IAmb IAmb 23 16 52.0
comp=Z,111nm,1.1s
CSU Charleston Sou 51.57 350 P P 23 16 50.2 -0.4
NHSC New Hope 51.71 350 P P 23 16 51.2 -0.5
154A Montrose 51.81 346 P P 23 16 52.6 +0.2
250A Grady 52.00 343 P P 23 16 53.1 -0.8
152A Waverly Hall 52.24 345 P P 23 16 55.4 -0.3
152A IAmb IAmb 23 17 13.2
comp=Z,27nm,1.0s
Y58A Scranton 52.41 350 P P 23 16 56.9 +0.1
HBVL Hebbronville 52.54 328 P P 23 16 58.4 +0.5
HBVL IAmb IAmb 23 17 00.1
comp=Z,23nm,0.9s
Y57A Sumter 52.63 350 P P 23 16 58.3 -0.2
GOGA Godfrey 52.66 346 P P 23 16 57.6 -1.1
GOGA IAmb IAmb 23 17 15.6
comp=Z,19nm,1.0s
GOGA Godfrey 52.66 346 P P 23 16 58.8 +0.1
GOGA IAmb IAmb 23 17 15.6
comp=Z,18nm,1.0s
X58A Rowland 52.99 351 P P 23 17 00.1 -1.0
X58A IAmb IAmb 23 17 02.4
comp=Z,40nm,1.1s
JSC Jenkinsville 53.05 349 P P 23 17 01.5 -0.1
JSC IAmb IAmb 23 17 03.0
comp=Z,44nm,1.1s
HODGE Hodges 53.19 348 P P 23 17 02.1 -0.5
HODGE IAmb IAmb 23 17 04.1
comp=Z,20nm,0.8s
LRAL Lakeview Retre 53.20 343 P P 23 17 01.8 -0.9
LRAL IAmb IAmb 23 17 20.5
comp=Z,12nm,1.0s
Y52A Lilburn 53.23 346 P P 23 17 02.6 -0.3
Y52A IAmb IAmb 23 17 20.1
comp=Z,20nm,1.0s
BIRD Birdtown, Kers 53.26 350 P P 23 17 03.2 +0.1
146A Union 53.45 340 P P 23 17 03.7 -0.8
146A IAmb IAmb 23 17 22.6
comp=Z,27nm,0.7s
Z47A Carrollton 53.67 342 P P 23 17 05.3 -0.8
Z47A IAmb IAmb 23 17 31.4
comp=Z,15nm,0.7s
PAULI Pauline 53.67 348 P P 23 17 05.6 -0.5
PAULI IAmb IAmb 23 17 07.8
comp=Z,34nm,0.8s
W57A Gilead 53.68 350 P 23 17 05.5 -0.6
W57A IAmb IAmb 23 17 07.5
comp=Z,30nm,0.9s
Y49A Blount Mountai 53.81 344 P P 23 17 06.8 -0.4
Y49A IAmb IAmb 23 17 24.6
comp=Z,12nm,1.0s
EF04 Eagle Ford 04 53.89 330 P P 23 17 06.6 -1.2
EF04 IAmb IAmb 23 17 09.5
comp=Z,50nm,1.3s
KMSC Kings Mountain 53.90 349 P P 23 17 08.1 +0.3
833A Chaparral WMA, 53.93 328 P P 23 17 07.9 -0.2
833A IAmb IAmb 23 17 10.0
comp=Z,25nm,1.0s
BG3 Lake Jocassee 54.06 347 P P 23 17 08.2 -0.9
BG3 IAmb IAmb 23 17 26.3
comp=Z,20nm,1.0s
X51A Calhoun 54.09 345 P P 23 17 09.2 0.0
X51A IAmb IAmb 23 17 26.1
comp=Z,19nm,1.0s
HNVL Huntsville, TX 54.16 333 P P 23 17 09.9 +0.2
HNVL IAmb IAmb 23 17 12.4
comp=Z,29nm,0.9s
V58A Windy Hill, Pi 54.17 351 P P 23 17 09.3 -0.5
V58A IAmb IAmb 23 17 11.0
comp=Z,27nm,1.1s
FPAL Fort Paine 54.25 345 P P 23 17 09.1 -1.3
W52A Murphy 54.38 346 P P 23 17 11.1 -0.2
W52A IAmb IAmb 23 17 28.9
comp=Z,35nm,1.2s
X48A Hartselle 54.54 343 P 23 17 11.5 -1.0
X48A IAmb IAmb 23 17 30.2
comp=Z,22nm,0.9s
V55A Taylorsville 54.57 349 P P 23 17 12.5 -0.1
V53A Saluda 54.69 348 P 23 17 13.9 +0.2
V53A IAmb IAmb 23 17 31.1
comp=Z,19nm,0.9s
NATX Nacogdoches 54.70 335 P P 23 17 13.5 -0.2
NATX IAmb IAmb 23 17 35.0
comp=Z,17nm,0.8s
Y45A Yeager Farm, C 54.74 341 P P 23 17 13.6 -0.3
Y45A IAmb IAmb 23 17 32.8
comp=Z,25nm,0.8s
W50A Signal Mountai 54.80 345 P P 23 17 13.9 -0.5
W50A IAmb IAmb 23 17 15.2
comp=Z,16nm,0.8s
CPCT Cooper Cave 54.85 346 P P 23 17 14.3 -0.5
CPCT pP pP **23 17 30.2 -1.1**
CPCT IAmb IAmb 23 17 31.7
comp=Z,15nm,1.0s
HNDO Hondo 54.87 329 P 23 17 14.9 0.0
TKL Tuckaleechee C 54.88 347 LR LR 23 42 56.5
comp=Z,75nm,18.8s,baz=158,slow=38
TKL Tuckaleechee C 54.88 347 P P 23 17 14.3 -0.6
TKL pP pP **23 17 31.5 0.0**
TKL IAmb IAmb 23 17 31.6
comp=Z,35nm,1.1s
U56A King 54.91 350 P P 23 17 15.6 +0.5
SWET Sewanee 54.97 345 P P 23 17 14.4 -1.3
SWET IAmb IAmb 23 17 16.1
comp=Z,19nm,0.8s
SWET pP pP **23 17 31.6 -0.5**
435B Jarrell 55.12 331 P P 23 17 15.5 -1.3
435B IAmb IAmb 23 17 17.9
comp=Z,14nm,0.7s
T59A Double "B" Far 55.13 353 P 23 17 16.7 0.0
T59A IAmb IAmb 23 17 19.7
comp=Z,11nm,0.8s
OXF Oxford 55.29 341 P P 23 17 17.3 -0.6
OXF IAmb IAmb 23 17 18.5
comp=Z,18nm,0.9s
Z41A Richland Creek 55.30 337 P P 23 17 17.8 -0.2
Z41A IAmb IAmb 23 17 20.2
comp=Z,25nm,0.8s
U54A Nelsons Funny 55.33 349 P P 23 17 17.6 -0.6
237A Washetta, Mont 55.38 334 P P 23 17 18.2 -0.4
237A IAmb IAmb 23 17 21.0
comp=Z,31nm,0.8s
ASCN Ascension 55.41 87 P P 23 17 18.8 -0.4
DRIO Del Rio 55.45 328 P 23 17 18.8 -0.3
DRIO IAmb IAmb 23 17 20.5
comp=Z,15nm,0.9s
CCAR Cane Creek 55.53 339 P P 23 17 19.1 -0.5
CCAR IAmb IAmb 23 17 21.2
comp=Z,19nm,0.8s
TZTN Tazewell 55.69 347 P P 23 17 20.1 -0.6
TZTN IAmb IAmb 23 17 23.9
comp=Z,10nm,0.7s
V48A Smith Brothers 55.70 344 P P 23 17 20.1 -0.7
V48A IAmb IAmb 23 17 21.4
comp=Z,34nm,1.2s
BLA Blacksburg 55.76 350 P P 23 17 21.3 0.0
BLA IAmb IAmb 23 17 24.0
comp=Z,35nm,0.9s
WLAR White Oak Lake 55.80 337 P P 23 17 21.9 +0.4
CLTN Cedars of Leba 55.90 344 P P 23 17 21.9 -0.3
JCT Junction City 55.91 329 P P 23 17 21.4 -1.1
JCT IAmb IAmb 23 17 23.9
comp=Z,26nm,1.3s
WHTX Lake Whitney, 56.08 332 P P 23 17 23.4 -0.2
WHTX IAmb IAmb 23 17 25.3
comp=Z,26nm,0.7s
S57A Dark Hollow, R 56.09 352 P P 23 17 23.6 +0.1
S57A IAmb IAmb 23 17 25.1
comp=Z,26nm,1.1s
Z38A Mt. Pleasant 56.14 335 P 23 17 23.8 -0.3
R58B Mineral 56.15 353 P P 23 17 23.7 -0.3
R58B IAmb IAmb 23 17 25.4
comp=Z,15nm,1.0s
U49A Red Boiling Sp 56.17 345 P P 23 17 23.1 -1.1
U49A IAmb IAmb 23 17 24.1
comp=Z,17nm,0.6s
BRDY Brady 56.19 331 P 23 17 23.4 -1.0
HPIG 56.27 322 P P 23 17 24.0 -1.4
CBN Corbin Frederi 56.33 353 P 23 17 25.7 +0.4
CBN IAmb IAmb 23 17 31.4
comp=Z,17nm,0.9s
WVT Waverly 56.34 343 P P 23 17 24.5 -0.9
WVT IAmb IAmb 23 17 25.3
comp=Z,20nm,0.9s
WVT Waverly 56.34 343 P P 23 17 24.4 -0.9
WVT pP pP **23 17 39.8 -2.1**
FW13 Cleburne 56.38 333 P P 23 17 25.5 -0.2
T50A Nancy 56.43 346 P P 23 17 24.9 -1.1
T50A IAmb IAmb 23 17 26.1
comp=Z,16nm,0.7s
S54A Dingess, Beckl 56.48 350 P 23 17 26.4 -0.1
UALR University of 56.50 338 P 23 17 26.3 -0.2
UALR IAmb IAmb 23 17 27.4
comp=Z,18nm,0.9s
SAND Sanderson 56.65 327 P P 23 17 27.6 -0.2
HBAR Harrisburg 56.65 340 P P 23 17 26.5 -1.0
S51A Beattyville 56.76 348 P 23 17 27.7 -0.6
S51A IAmb IAmb 23 17 45.5
comp=Z,19nm,1.0s
R55A Marlinton 56.76 351 P P 23 17 28.1 -0.4
R55A IAmb IAmb 23 17 30.5
comp=Z,24nm,0.7s
GNAR Gosnell 56.82 341 P P 23 17 27.8 -1.0
UTMT University of 56.83 342 P P 23 17 28.3 -0.5
GLAT Glass 56.88 342 P P 23 17 28.2 -1.0
PEBM Pemiscott Bayo 56.91 341 P P 23 17 28.6 -0.9
OZNA Ozona 56.92 328 P 23 17 28.5 -1.2
OZNA IAmb IAmb 23 17 31.7
comp=Z,8.7nm,0.8s
WHAR Wooly Hollow 56.95 339 P 23 17 29.2 -0.5
WHAR IAmb IAmb 23 17 30.6
comp=Z,12nm,0.9s
T47A Sharon Grove 56.95 344 P 23 17 29.0 -0.7
FW06 Azle 56.96 333 P P 23 17 29.4 -0.5
FW06 IAmb IAmb 23 17 53.9
comp=Z,20nm,0.7s
TX31 Lajitas Ar. Si 56.98 325 P P 23 17 29.9 -0.3
TXAR Lajitas Array 56.98 325 P P 23 17 30.7 +0.6
comp=Z,3.7nm,0.7s,baz=138,slow=7.5,SNR=29
TXAR pP pP **23 17 46.5 -0.3**
comp=Z,3.7nm,0.9s,baz=146,slow=7.7,SNR=7.2
comp=Z,3.7nm,0.7s
TXAR Lajitas Array 56.98 325 P 23 17 29.2 -1.0
HICK Hickman 57.12 342 P P 23 17 30.8 -0.1
Z35A Perchaven, San 57.14 333 P P 23 17 30.8 -0.4
LPIG La Paz 57.15 316 LR LR 23 37 24.0
comp=Z,57nm,19.2s,baz=204,slow=31
PLPT Palo Pinto 57.16 332 P P 23 17 31.2 -0.1
PLPT IAmb IAmb 23 17 33.7
comp=Z,11nm,0.9s
LCAR Lake Charles 57.28 340 P P 23 17 31.6 -0.5
LCAR IAmb IAmb 23 17 32.5
comp=Z,16nm,1.0s
Q56A Snyder Ridge, 57.38 352 P 23 17 33.4 +0.7
PARMO Parma 57.39 342 P P 23 17 32.6 -0.1
T45A Paducah 57.40 343 P P 23 17 32.5 -0.3
FCAR Ozark Folk Cen 57.44 339 P P 23 17 32.2 -0.9
FCAR IAmb IAmb 23 17 33.6
comp=Z,12nm,1.0s
R50A Paris 57.53 347 P P 23 17 32.5 -1.2
R50A pP pP **23 17 50.0 -0.4**
R50A IAmb IAmb 23 17 51.0
comp=Z,28nm,1.0s
Q54A Coxs Mills 57.56 350 P P 23 17 33.5 -0.4
Q54A pP pP **23 17 50.8 +0.2**
ABTX Abilene, Hawle 57.61 331 P P 23 17 34.3 -0.2
ABTX IAmb IAmb 23 17 36.0
comp=Z,36nm,1.0s
P57A Homestead Farm 57.67 353 P P 23 17 34.3 -0.4
P57A IAmb IAmb 23 17 36.7
comp=Z,14nm,0.8s
LOOK Love County 57.68 334 P P 23 17 34.7 -0.2
R49A Shelbyville 57.72 346 P 23 17 34.5 -0.6
R49A IAmb IAmb 23 17 35.5
comp=Z,14nm,0.7s
SGCY Sterling City 57.73 329 P 23 17 34.2 -1.1
SGCY IAmb IAmb 23 17 37.3
comp=Z,21nm,1.1s
Q52A Bidwell 57.78 349 P P 23 17 34.7 -0.8
Q52A IAmb IAmb 23 17 52.9
comp=Z,27nm,0.8s
WUPA West Chester U 57.88 355 P P 23 17 36.2 +0.1
WCI Wyandotte Cave 57.92 345 P P 23 17 35.4 -1.1
WCI Wyandotte Cave 57.92 345 P P 23 17 35.9 -0.6
WCI pP pP **23 17 51.0 -2.2**
CGM3 Cape Girardeau 57.95 342 P P 23 17 36.3 -0.4
CGM3 IAmb IAmb 23 17 37.4
comp=Z,31nm,1.0s
MVL Millersville 58.01 355 P P 23 17 36.7 -0.4
MVL IAmb IAmb 23 17 37.7
comp=Z,19nm,1.3s
USIN University of 58.02 344 P P 23 17 35.5 -1.7
WTFS Witchita Falls 58.04 333 P P 23 17 36.9 -0.5
Q51A Peebles 58.04 348 P 23 17 36.4 -1.0
Q51A IAmb IAmb 23 17 54.5
comp=Z,26nm,0.8s
MCWV Mont Chateau 58.07 351 P P 23 17 38.0 +0.4
MNHN Monahans 58.08 327 P P 23 17 37.8 -0.1
MNHN IAmb IAmb 23 17 39.6
comp=Z,25nm,1.1s
T42A Van Buren 58.14 341 P 23 17 37.2 -0.8
T42A IAmb IAmb 23 17 37.8
comp=Z,7.8nm,0.8s
P53A Whipple 58.14 350 P P 23 17 38.0 0.0
P53A pP pP **23 17 55.1 +0.4**
S44A Carbondale 58.20 343 P P 23 17 37.8 -0.7
S44A pP pP **23 17 54.5 -0.7**
SIUC Southern Illin 58.21 343 P P 23 17 38.1 -0.4
SIUC pP pP **23 17 55.1 -0.1**
APMT Aspermont 58.41 331 P 23 17 39.8 -0.3
APMT IAmb IAmb 23 17 41.6
comp=Z,26nm,0.9s
HHAR Hobbs 58.42 338 P P 23 17 39.4 -0.7
HHAR IAmb IAmb 23 17 41.0
comp=Z,24nm,1.2s
P51A Williamsport 58.43 349 P P 23 17 39.5 -0.5
P51A IAmb IAmb 23 17 56.5
comp=Z,23nm,0.8s
X34A Smith Ranch, M 58.48 334 P P 23 17 39.7 -0.8
W35A Tecumseh 58.55 335 P P 23 17 39.8 -1.2
W35A IAmb IAmb 23 17 41.7
comp=Z,30nm,1.2s
SN07 Snyder 07 58.58 330 P P 23 17 40.9 -0.3
SN07 IAmb IAmb 23 17 42.0
comp=Z,16nm,0.7s
ODSA Odessa 58.60 328 P P 23 17 40.6 -0.9
ODSA IAmb IAmb 23 17 42.7
comp=Z,28nm,1.2s
MGMO Mountain Grove 58.63 340 P 23 17 41.2 -0.4
MGMO IAmb IAmb 23 17 42.3
comp=Z,22nm,1.1s
O54A Avella 58.66 351 P P 23 17 41.6 -0.1
PECS Pecos 58.68 327 P P 23 17 41.7 -0.3
PECS IAmb IAmb 23 17 43.8
comp=Z,15nm,1.3s
RLO Rose Lookout 58.72 337 P P 23 17 42.0 -0.1
U38A Gravette 58.73 338 P P 23 17 41.6 -0.5
U38A IAmb IAmb 23 17 42.6
comp=Z,9.8nm,1.0s
TUL3 Leonard 58.78 336 P P 23 17 42.6 0.0
TUL3 IAmb IAmb 23 17 43.9
comp=Z,38nm,1.1s
SSPA Standing Stone 58.79 353 P P 23 17 41.5 -1.1
SSPA IAmb IAmb 23 17 43.9
comp=Z,26nm,1.2s
SSPA Standing Stone 58.79 353 P 23 17 42.0 -0.5
SSPA IAmb IAmb 23 17 43.6
comp=Z,11nm,0.8s
FVM French Village 58.81 342 P 23 17 42.0 -0.7
VHRN Van Horn 58.82 325 P P 23 17 42.5 -0.6
VHRN IAmb IAmb 23 17 44.7
comp=Z,22nm,1.2s
O52A Adamsville 58.83 350 P P 23 17 42.7 -0.1
POST Post 58.85 330 P P 23 17 42.9 -0.3
POST IAmb IAmb 23 17 45.3
comp=Z,16nm,0.9s
OLIL Olney 58.85 344 P P 23 17 42.5 -0.5
OLIL IAmb IAmb 23 18 00.1
comp=Z,16nm,1.1s
O53A New Philadelph 58.86 350 P P 23 17 42.9 -0.1
O53A IAmb IAmb 23 18 00.1
comp=Z,27nm,0.8s
BLO Bloomington 58.87 345 P P 23 17 42.0 -1.1
BLO IAmb IAmb 23 17 43.3
comp=Z,42nm,1.2s
N58A Sunbury 58.88 354 P P 23 17 42.5 -0.6
N58A IAmb IAmb 23 17 44.5
comp=Z,16nm,0.8s
P48A Milroy 58.90 347 P P 23 17 41.8 -1.5
P48A IAmb IAmb 23 17 59.8
comp=Z,20nm,0.9s
WMOK Wichita Mounta 59.00 333 P P 23 17 43.6 -0.5
DEOK Depew 59.00 335 P P 23 17 44.3 +0.2
DKNS Dickens 59.07 330 P P 23 17 44.5 -0.2
DKNS IAmb IAmb 23 17 46.0
comp=Z,11nm,0.9s
CCM Cathedral Cave 59.13 341 P 23 17 44.2 -0.7
CCM IAmb IAmb 23 18 03.8
comp=Z,17nm,1.1s
CCM Cathedral Cave 59.13 341 P P 23 17 44.3 -0.6
CCM x x 23 18 02.3
CCM PcP **PcP 23 18 33.9 +0.9**
OK052 Battle Ridge R 59.25 335 P P 23 17 45.4 -0.4
Q44A Meyer Farm, Va 59.26 343 P P 23 17 45.0 -0.8
N53A Lisbon 59.34 351 P P 23 17 46.2 -0.1
N53A pP **pP 23 18 03.2 +0.2**
OK029 Liberty Lake 59.35 335 P P 23 17 46.3 -0.2
O49A Covington 59.36 348 P P 23 17 45.5 -1.0
O49A pP **pP 23 18 02.0 -1.2**
PAMR Moraine State 59.37 352 P P 23 17 46.4 -0.1
QUOK Quay 59.37 335 P 23 17 46.6 0.0
M57A Sunshine Farm, 59.41 354 P P 23 17 46.9 +0.1
M57A IAmb IAmb 23 17 48.7
comp=Z,26nm,1.1s
P46A Rosedale 59.46 345 P P 23 17 45.8 -1.4
P46A IAmb IAmb 23 18 09.5
comp=Z,16nm,0.8s
S39A Bolivar 59.47 339 P P 23 17 46.5 -0.8
S39A IAmb IAmb 23 17 48.1
comp=Z,18nm,0.9s
S39A pP **pP 23 18 04.2 +0.2**
KSPA Keystone Colle 59.51 355 P P 23 17 47.5 0.0
KSPA IAmb IAmb 23 18 03.5
comp=Z,26nm,1.3s
GDL2 Guadalupe Moun 59.59 327 P P 23 17 49.0 +0.6
O48B Farmland 59.60 347 P P 23 17 46.9 -1.2
O48B pP **pP 23 18 04.1 -0.8**
R40A Maddies Statio 59.67 340 P 23 17 48.2 -0.4
R40A IAmb IAmb 23 17 48.6
comp=Z,11nm,0.8s
OK048 Pawnee Station 59.68 335 P 23 17 48.6 -0.1
N51A Ashland 59.70 350 P P 23 17 48.1 -0.7
N51A IAmb IAmb 23 18 05.8
comp=Z,28nm,0.9s
MNTX Cornudas Mount 59.74 326 P 23 17 48.9 -0.4
PAOC Oil Creek Stat 59.88 352 P P 23 17 50.1 +0.1
T35A Sooner Cattle 59.94 336 P P 23 17 49.7 -0.9
T35A IAmb IAmb 23 17 52.6
comp=Z,18nm,0.9s
SMWD Samnorwood 59.95 332 P 23 17 50.3 -0.4
N49A Columbus Grove 60.04 348 P 23 17 49.4 -1.7
N49A pP **pP 23 18 07.0 -0.9**
BLOK Blackwell 60.08 335 P P 23 17 51.2 -0.3
L59A Walton 60.09 356 P P 23 17 51.1 -0.4
L59A IAmb IAmb 23 17 53.0
comp=Z,30nm,0.9s
P43A Skaggs, Pawnee 60.09 343 P P 23 17 50.8 -0.7
M52A Chesterland 60.14 351 P P 23 17 51.4 -0.4
SFIN Lafayette 60.16 345 P 23 17 50.9 -1.0
SFIN IAmb IAmb 23 17 51.6
comp=Z,20nm,0.8s
BINY Binghamton 60.16 355 P P 23 17 51.6 -0.3
CROK Carrier 60.17 335 P P 23 17 51.8 -0.3
MSTX Muleshoe 60.20 329 P 23 17 52.2 -0.3
MSTX IAmb IAmb 23 17 54.2
comp=Z,30nm,1.0s
L56A Greenwood 60.24 354 P 23 17 52.5 -0.1
HRV Adam Dziewonsk 60.26 359 P P 23 17 52.1 -0.5
HRV IAmb IAmb 23 17 53.8
comp=Z,27nm,0.8s
M50A Fremont 60.29 349 P P 23 17 52.1 -0.7
N47A Urbana 60.31 347 P P 23 17 51.5 -1.5
N47A IAmb IAmb 23 17 54.8
comp=Z,23nm,0.9s
ELIS Ellis County 60.40 333 P P 23 17 53.5 -0.2
ELIS IAmb IAmb 23 17 55.7
comp=Z,14nm,0.5s
EPT El Paso 60.41 325 P P 23 17 53.0 -1.0
EPT IAmb IAmb 23 18 21.2
comp=Z,8.7nm,0.7s
AMTX Amarillo 60.42 331 P P 23 17 53.5 -0.5
AMTX IAmb IAmb 23 18 03.7
comp=Z,14nm,0.5s
OK038 West end E0370 60.46 334 P P 23 17 54.0 -0.2
OK038 IAmb IAmb 23 17 55.3
comp=Z,23nm,0.8s
ERPA Erie 60.51 352 P P 23 17 54.1 -0.2
KAN01 Argonia South 60.64 335 P P 23 17 54.1 -1.3
P40A Paris 60.73 341 P P 23 17 54.6 -1.3
P40A IAmb IAmb 23 17 56.4
comp=Z,25nm,1.4s
K57A Scipio Center 60.73 355 P P 23 17 55.5 -0.3
KAN08 Anthony NE Sta 60.79 335 P P 23 17 55.6 -0.7
MMNY Mt. Morris Dam 60.87 354 P P 23 17 56.4 -0.3
HDIL Hopedale 60.88 344 P P 23 17 55.6 -1.2
HDIL IAmb IAmb 23 18 14.0
comp=Z,20nm,0.8s
J59A Piesco 61.32 357 P 23 17 60.0 +0.1
J59A IAmb IAmb 23 18 01.4
comp=Z,32nm,1.0s
MEDO Medina 61.35 353 P P 23 17 59.3 -0.7
J57A Williamstown 61.37 355 P P 23 17 59.7 -0.4
J57A IAmb IAmb 23 18 01.1
comp=Z,22nm,0.8s
J55A Hilton 61.39 354 P P 23 17 59.6 -0.6
N41A Harden Midland 61.46 342 P P 23 17 59.4 -1.4
N41A IAmb IAmb 23 18 18.9
comp=Z,27nm,1.0s
L46A Eue Claire 61.53 347 P P 23 17 59.9 -1.3
K50A Casco 61.55 350 P P 23 18 01.1 -0.2
319A Douglas 61.67 322 P 23 18 01.7 -0.9
319A IAmb IAmb 23 18 05.0
comp=Z,18nm,0.9s
121A Cookes Peak, D 61.69 324 P P 23 18 00.3 -2.4
121A IAmb IAmb 23 18 05.3
comp=Z,26nm,1.4s
NCB Newcomb 61.81 357 P P 23 18 03.3 +0.2
NCB IAmb IAmb 23 18 19.1
comp=Z,19nm,1.4s
KSU1 Kansas State U 61.90 337 P 23 18 02.8 -0.9
KSU1 IAmb IAmb 23 18 04.7
comp=Z,24nm,0.9s
PECO Prince Edward 61.97 355 P P 23 18 03.4 -0.7
PECO IAmb IAmb 23 18 05.3
comp=Z,22nm,0.8s
R32A Long Quarter, 62.12 335 P 23 18 04.8 -0.5
R32A IAmb IAmb 23 18 06.7
comp=Z,22nm,0.8s
CRNM Carthage 62.20 326 P P 23 18 06.4 +0.3
N38A Joes South For 62.25 341 P P 23 18 05.1 -1.0
N38A IAmb IAmb 23 18 06.6
comp=Z,13nm,0.6s

Y22A Socorro 62.31 326 P P 23 18 06.3 -0.6
L42A Oliver, Polo 62.33 344 P P 23 18 05.8 -0.8
L42A IAmb IAmb 23 18 06.8
comp=Z,21nm,1.1s
BELA Belgrano 2 62.35 172 P P 23 18 06.0 -0.3
BELA IAmb IAmb 23 18 09.9
comp=Z,23nm,1.4s
J47A Sunmer 62.40 348 P 23 18 06.3 -0.7
DUN6 Lazy B Ranch 62.43 324 P P 23 18 06.8 -0.9
DUN6 IAmb IAmb 23 18 09.7
comp=Z,20nm,0.9s
SBM South Baldy 62.45 326 P P 23 18 08.0 -0.1
LONY Lake Ozonia 62.48 357 P P 23 18 07.0 -0.6
LONY IAmb IAmb 23 18 09.0
comp=Z,24nm,1.0s
LENM Lemitar 62.49 326 P P 23 18 06.8 -1.3
DELO Deloro Mine 62.61 354 P 23 18 08.2 -0.1
DELO IAmb IAmb 23 18 09.1
comp=Z,20nm,0.7s
FRNY Flat Rock 62.65 358 P P 23 18 08.4 -0.2
FRNY IAmb IAmb 23 18 10.3
comp=Z,30nm,1.3s
K43A Burlington 62.66 345 P P 23 18 07.2 -1.6
I49A Point Hope 62.72 350 P P 23 18 08.5 -0.6
L40A Anamosa 62.81 343 P 23 18 09.0 -0.8
L40A IAmb IAmb 23 18 10.8
comp=Z,26nm,1.0s
ABQ Albuquerque 62.82 327 P P 23 18 09.8 -0.5
ANMO Albuquerque 62.82 327 P P 23 18 11.2 +0.9
comp=Z,3.4nm,0.8s,baz=172,slow=7.8,SNR=8.5
ANMO LR LR 23 44 50.3
comp=Z,37nm,20.3s,baz=132,slow=35
comp=Z,3.4nm,0.8s
ANMO Albuquerque 62.82 327 P P 23 18 09.7 -0.6
ANMO Albuquerque 62.82 327 P 23 18 09.8 -0.4
ANMO IAmb IAmb 23 18 37.3
comp=Z,4.0nm,0.8s
ANMO Albuquerque 62.82 327 P P 23 18 09.4 -0.9
ANMO IAmb IAmb 23 18 37.4
comp=Z,4.1nm,0.9s
ANMO Albuquerque 62.82 327 P P 23 18 10.5 +0.2
ANMO pP **pP 23 18 25.6 -1.6**
ANMO x x 23 18 28.7
ANMO sP **sP 23 18 33.2 -1.1**
ANMO PcP **PcP 23 18 47.4 -0.8**
TASM ASL Pad, Albuq 62.82 327 P P 23 18 09.9 -0.4
TASM ASL Pad, Albuq 62.82 327 P P 23 18 09.6 -0.7
TASM IAmb IAmb 23 18 13.6
comp=Z,4.4nm,0.9s
TASM ASL Pad, Albuq 62.82 327 P P 23 18 09.6 -0.7
TASM IAmb IAmb 23 18 13.6
comp=Z,4.6nm,0.9s
TASM ASL Pad, Albuq 62.82 327 P P 23 18 09.7 -0.7
TASM IAmb IAmb 23 18 13.6
comp=Z,5.0nm,0.9s
CBKS Cedar Bluff 62.87 335 P P 23 18 10.3 0.0
WBO Williamsburg 62.90 356 P P 23 18 10.5 +0.2
WBO IAmb IAmb 23 18 11.6
comp=Z,20nm,0.7s
G62A West of Eustis 62.97 360 P 23 18 11.1 +0.3
SADO Sadowa 63.02 353 LR LR 23 47 03.2
comp=Z,89nm,21.0s,baz=148,slow=37
PKME Peaks-Kenny Pk 63.02 1 P P 23 18 12.1 +1.0
N35A Tabor 63.11 339 P P 23 18 11.3 -0.5
TUC Tucson 63.23 322 P P 23 18 12.1 -0.8
SCIA State Center 63.26 341 P P 23 18 12.7 -0.1
SCIA IAmb IAmb 23 18 13.0
comp=Z,17nm,0.7s
MNTQ Montreal, Queb 63.31 358 P P 23 18 13.2 +0.2
JFWS Jewell Farm 63.34 344 P 23 18 12.5 -0.8
JFWS IAmb IAmb 23 18 32.8
comp=Z,18nm,0.7s
T25A Trinidad 63.54 330 P P 23 18 14.0 -1.1
BUKO Buck Lake 63.71 353 P P 23 18 15.5 -0.2
VNA3 Neumayer Olymp 63.79 162 ⇓P P 23 18 18.1 +2.0
comp=Z,17nm,0.8s
LMN Caledonia Moun 63.81 4 P P 23 18 15.7 -0.6
GLMI Grayling 63.89 349 P P 23 18 16.0 -0.9
I42A Draeger Farm, 63.91 345 P 23 18 16.8 -0.3
I42A IAmb IAmb 23 18 18.0
comp=Z,29nm,1.0s
VNA1 Neumayer--Stat 64.01 161 ⇓P P 23 18 19.6 +2.3
comp=Z,35nm,1.2s
TRQ Mont Tremblant 64.08 357 P 23 18 17.9 -0.2
TRQ IAmb IAmb 23 18 19.5
comp=Z,34nm,0.8s
214A Organ Pipe Nat 64.18 321 P P 23 18 18.9 -0.2
H43A Windswept, Lux 64.19 346 P P 23 18 18.2 -0.7
KSCO Kaye Shedlock' 64.25 333 P P 23 18 20.3 +0.7
KSCO IAmb IAmb 23 18 21.4
comp=Z,23nm,0.7s
L34A Svendsen Farm, 64.34 339 P P 23 18 19.8 -0.2
I40A Norwalk 64.35 344 P P 23 18 19.6 -0.3
I40A IAmb IAmb 23 18 20.6
comp=Z,31nm,1.4s
E62A Clayton Lake 64.37 1 P 23 18 20.4 +0.4
E62A IAmb IAmb 23 18 21.8
comp=Z,30nm,0.7s
VNA2 Neumayer--Watz 64.37 161 ⇓P P 23 18 22.0 +2.2
comp=Z,18nm,0.7s,baz=286,slow=9.8
X18A Snowflake 64.38 324 P P 23 18 20.5 0.0
BGNE Belgrade 64.48 337 P 23 18 21.0 +0.1
SDCO Great Sand Dun 64.55 330 P P 23 18 21.7 0.0
SDCO IAmb IAmb 23 18 23.9
comp=Z,12nm,0.8s
W18A Petrified Fore 64.70 325 P P 23 18 21.4 -1.2
W18A IAmb IAmb 23 18 39.4
comp=Z,21nm,1.0s
D62A Allapoint, All 64.84 1 P P 23 18 22.9 -0.2
X16A Lo Mia Camp, P 65.13 323 P P 23 18 25.0 -0.5
BATG Bathurst New B 65.14 3 P P 23 18 24.4 -0.6
BATG IAmb IAmb 23 18 26.4
comp=Z,24nm,0.7s
I37A Lemond, Waseca 65.23 342 P P 23 18 25.3 -0.4
I37A IAmb IAmb 23 18 26.6
comp=Z,29nm,0.8s
LMQ La Malbaie 65.30 0 P P 23 18 25.9 -0.1
LMQ IAmb IAmb 23 18 26.9
comp=Z,11nm,0.7s
E46A Sault Ste Mari 65.33 349 P 23 18 26.0 -0.2
E46A IAmb IAmb 23 18 43.4
comp=Z,38nm,0.9s
113A Mohawk Valley, 65.33 321 P P 23 18 26.1 -0.4
Q24A Divide 65.35 331 P P 23 18 26.8 -0.2
Q24A IAmb IAmb 23 18 29.1
comp=Z,14nm,1.0s
MVCO Mesa Verde 65.62 327 P 23 18 28.1 -0.5
Y14A Wickenburg 65.69 322 P P 23 18 27.7 -1.2
LDAQ Lac Daran 65.72 359 P 23 18 28.6 -0.1
LDAQ IAmb IAmb 23 18 30.3
comp=Z,32nm,0.8s
WUAZ Wupatki 65.89 324 P 23 18 29.5 -0.9
WUAZ IAmb IAmb 23 18 33.3
comp=Z,15nm,1.0s
ECSD EROS Data Cent 65.99 340 P 23 18 30.3 -0.3
ECSD IAmb IAmb 23 18 31.9
comp=Z,47nm,1.4s
SNAA Sanae 66.00 161 ⇓P P 23 18 32.5 +2.1
comp=Z,509nm,0.7s
SNAA Sanae 66.00 161 P P 23 18 32.5 +2.1
comp=Z,19nm,0.7s,baz=265,slow=7.5,SNR=15
SNAA LR LR 23 45 43.6
comp=Z,13nm,18.8s,baz=346,slow=34
comp=Z,19nm,0.7s
SNAA Sanae 66.00 161 P 23 18 30.4 0.0
SNAA IAmb IAmb 23 18 33.4
comp=Z,24nm,0.8s
K30B Basset 66.12 337 P P 23 18 31.1 -0.4
VLDQ Val d'Or 66.16 355 P 23 18 31.9 +0.4
SPMN Marine on St. 66.17 343 P 23 18 31.1 -0.6
SPMN IAmb IAmb 23 18 33.1
comp=Z,17nm,0.7s
ISCO Idaho Springs 66.24 331 P 23 18 32.5 -0.1
PV01 Paradox Valley 66.36 328 P P 23 18 33.1 -0.3
PV01 IAmb IAmb 23 18 35.9
comp=Z,13nm,0.9s
BLYC Blythe 66.46 321 P P 23 18 32.2 -1.6
PV15 Paradox Valley 66.48 328 P P 23 18 33.4 -0.7
PV15 IAmb IAmb 23 18 36.8
comp=Z,28nm,0.9s
PV02 Paradox Valley 66.50 328 P P 23 18 33.7 -0.6
PV02 IAmb IAmb 23 18 36.2
comp=Z,18nm,1.1s
PV13 Radium Mtn., P 66.51 328 P P 23 18 34.2 -0.1
PV13 IAmb IAmb 23 18 36.6
comp=Z,12nm,0.9s
PV05 Paradox Valley 66.59 328 P P 23 18 33.9 -0.9
PV03 Paradox Valley 66.59 328 P P 23 18 34.0 -0.8
PV12 Saucer Basin, 66.62 328 P P 23 18 34.5 -0.5
PV12 IAmb IAmb 23 19 01.8
comp=Z,16nm,1.2s
PV18 Skein Mesa, Pa 66.62 328 P P 23 18 34.0 -1.0
PV18 IAmb IAmb 23 18 37.1
comp=Z,21nm,1.5s
PV07 Paradox Valley 66.63 328 P P 23 18 34.0 -1.1
PV11 David Mesa, Pa 66.64 328 P P 23 18 34.6 -0.5
PV19 Morning Glory 66.70 328 P P 23 18 34.4 -1.1
PV19 IAmb IAmb 23 18 37.9
comp=Z,22nm,1.4s
PV20 West Nyswonger 66.72 328 P P 23 18 34.5 -1.1
PV14 Lion Creek, Pa 66.77 328 P P 23 18 34.4 -1.6
PV22 Blue Mesa, Par 66.78 328 P P 23 18 34.8 -1.2
PV10 Paradox Valley 66.78 328 P P 23 18 35.1 -1.0
PV10 IAmb IAmb 23 18 37.2
comp=Z,24nm,1.3s
BC3 Big Chuckawall 66.96 320 P P 23 18 36.4 -0.7
W13A Hualapai Mount 67.02 322 P P 23 18 37.6 -0.1
U15A North Rim 67.06 324 P P 23 18 37.2 -0.7
E38A The Farm, Brul 67.11 344 P P 23 18 37.2 -0.4
E38A IAmb IAmb 23 18 38.5
comp=Z,25nm,1.3s
IRM Iron Mountain 67.12 321 P P 23 18 36.5 -1.5
ICQ Pointe Anglais 67.33 2 P P 23 18 38.8 -0.1
HMU Henry Mountain 67.33 326 P P 23 18 39.4 -0.2
HMU IAmb IAmb 23 18 42.6
comp=Z,17nm,1.2s
PFO Pinyon Flats O 67.55 320 P P 23 18 42.4 +1.6
comp=Z,4.9nm,0.7s,baz=133,slow=6.0,SNR=6.4
PFO LR LR 23 45 44.9
comp=Z,66nm,18.7s,baz=66,slow=34
comp=Z,4.9nm,0.7s
PFO Pinyon Flats O 67.55 320 P P 23 18 40.8 -0.1
HAYD Hayden 67.58 330 P P 23 18 41.2 +0.2
DANC Danby, Needles 67.59 321 P P 23 18 40.6 -0.3
DANC IAmb IAmb 23 18 44.1
comp=Z,25nm,1.0s
TROLL Troll, Antarti 67.72 161 P P 23 18 43.9 +2.5
O20A White River Ci 67.74 330 P 23 18 41.4 -0.6
O20A IAmb IAmb 23 18 44.5
comp=Z,14nm,1.0s
F33A 5 Mile Ranch, 67.76 341 P 23 18 41.4 -0.3
F33A IAmb IAmb 23 18 42.6
comp=Z,12nm,0.7s
KNB Kanab 67.78 324 P P 23 18 42.7 +0.3
KNB IAmb IAmb 23 18 45.8
comp=Z,37nm,1.2s
PKCU Pink Cliffs 67.81 325 P P 23 18 42.1 -0.6
DRLN Deer Lake 67.99 9 P P 23 18 43.0 -0.1
DRLN IAmb IAmb 23 18 43.8
comp=Z,24nm,0.8s
LCMT Little Creek M 68.02 324 P P 23 18 42.8 -1.0
V12A Nelson 68.03 322 P P 23 18 42.9 -0.9
V12A IAmb IAmb 23 18 46.7
comp=Z,23nm,1.3s
SRU San Rafael Swe 68.10 327 P P 23 18 43.4 -0.9
MTPU Mount Pierson 68.18 326 P P 23 18 44.9 -0.2
MTPC Mountain Pass 68.27 322 P P 23 18 45.0 -0.5
MTPC IAmb IAmb 23 18 48.0
comp=Z,18nm,1.3s
Q16A Castle Valley 68.29 327 P P 23 18 44.5 -1.0
EYMN Ely 68.34 345 P P 23 18 44.0 -1.4
P18A Preston Nutter 68.34 328 P P 23 18 44.8 -1.2
SZCU Shurtz Canyon 68.35 325 P P 23 18 45.2 -0.7
CCUT Cedar City 68.47 324 P P 23 18 45.8 -0.9
CCUT IAmb IAmb 23 18 50.3
comp=Z,15nm,0.9s
P17A Butcher Ranch, 68.48 327 P P 23 18 45.5 -1.2
P17A IAmb IAmb 23 18 49.0
comp=Z,13nm,0.9s
TBO Thunder Bay 68.52 347 P P 23 18 45.3 -1.1
TBO IAmb IAmb 23 19 04.9
comp=Z,24nm,1.1s
TMUT Trail Mountain 68.59 327 P P 23 18 46.6 -0.9
RDMU Red Mountain 68.72 329 P P 23 18 47.7 -0.5
TCRU Three Creeks R 68.73 326 P P 23 18 49.1 +0.7
SHPR Sheep Range 68.75 323 P 23 18 48.4 0.0
GSC Goldstone, Bar 68.90 321 P P 23 18 47.8 -1.4
K22A Casper 68.93 332 P P 23 18 48.6 -0.8
K22A IAmb IAmb 23 18 51.3
comp=Z,12nm,0.7s
RSSD Black Hills 69.07 335 P 23 18 50.1 -0.2
RSSD IAmb IAmb 23 18 52.2
comp=Z,9.3nm,0.6s
RSSD Black Hills 69.07 335 P P 23 18 51.3 +1.0
RSSD pP **pP 23 19 07.0 -0.5**
RSSD PcP **sP 23 19 14.7 +0.3**
DBIC Dimbokro 69.23 75 P P 23 18 51.8 +0.2
comp=Z,24nm,0.7s,baz=266,slow=5.8,SNR=23
DBIC LR LR 23 47 47.6
comp=Z,48nm,18.5s,baz=300,slow=35
comp=Z,24nm,0.7s
DBIC Dimbokro 69.23 75 P 23 18 50.8 -0.8
DBIC IAmb IAmb 23 18 54.1
comp=Z,24nm,0.7s
DBIC Dimbokro 69.23 75 P P 23 18 51.6 0.0
DBIC pP **pP 23 19 07.4 -1.4**
BSUT Blindstream Ca 69.29 328 P 23 18 51.2 -0.7
PRN Pahroc Range 69.31 323 P P 23 18 51.0 -0.8
MPU Maple Canyon 69.34 327 P P 23 18 52.4 +0.4
GWY Greenwater Val 69.41 321 P 23 18 50.9 -1.6
GWY IAmb IAmb 23 18 55.2
comp=Z,13nm,0.8s
PSUT Pine Spring 69.44 325 P P 23 18 52.7 0.0
TPO Tropico Hills 69.48 319 P P 23 18 52.6 -0.2
TPO IAmb IAmb 23 19 03.8
comp=Z,22nm,1.4s
TPNV Topopah Spring 69.69 322 P P 23 18 54.0 -0.1
TPNV IAmb IAmb 23 18 57.6
comp=Z,22nm,1.1s
FURC Furnace Creek, 69.72 322 P P 23 18 54.1 0.0
FURC IAmb IAmb 23 18 57.5
comp=Z,29nm,0.9s
CLC China Lake 69.72 321 P P 23 18 53.5 -0.8
CMLA Cha da Macela 69.77 37 P P 23 18 54.6 +0.2
WCT Wildcat Mounta 69.80 322 P P 23 18 54.0 -0.8
WCT IAmb IAmb 23 18 58.3
comp=Z,18nm,1.0s
MPMC Manual Prospec 69.81 321 P P 23 18 54.1 -0.9
AGMN Agassiz Nation 69.84 342 P P 23 18 54.2 -0.4
E28A Huff 69.87 338 P 23 18 54.6 -0.3
E28A IAmb IAmb 23 18 56.4
comp=Z,29nm,0.7s
S11A Rachel 69.88 323 P P 23 18 54.0 -1.3
TCUT Toone Canyon 70.05 328 P 23 18 55.7 -0.7
DUG Dugway, Tooele 70.09 327 P 23 18 56.6 +0.1
ISA Isabella, Lake 70.15 320 P P 23 18 55.4 -1.6
BW06 Boulder Array 70.40 330 P P 23 18 58.5 0.0
PD31 Pinedale Array 70.40 330 P 23 18 58.2 -0.3
PDAR Pinedale Array 70.40 330 P P 23 18 59.2 +0.7
comp=Z,2.3nm,0.7s,baz=148,slow=7.0,SNR=13
PDAR LR LR 23 54 47.0
comp=Z,22nm,18.3s,baz=116,slow=40
comp=Z,2.3nm,0.7s
PDAR Pinedale Array 70.40 330 P 23 18 58.0 -0.5
HWUT Hardware Ranch 70.49 328 P 23 18 58.5 -0.5
EPLO Experimental L 70.51 344 P 23 18 57.0 -1.7
EPLO IAmb IAmb 23 18 59.5
comp=Z,15nm,0.9s
MDND Maddock 70.60 340 P P 23 18 59.4 0.0
SPUT South Promonto 70.72 328 P P 23 19 01.0 +0.6
BGU Big Grassy Mou 70.73 327 P P 23 18 59.4 -1.1
DSP Deep Springs 70.98 322 P P 23 19 02.2 +0.4
AHID Auburn Hatcher 71.14 330 P P 23 19 02.2 -0.7
HVU Hansel Valley 71.23 328 P P 23 19 02.8 -0.7
LOHW Long Hollow 71.54 330 P P 23 19 05.2 -0.2
ULM Lac du Bonnet 71.61 343 P P 23 19 05.0 -0.3
comp=Z,9.2nm,0.6s,baz=140,slow=6.7,SNR=23
ULM LR LR 23 53 36.0
comp=Z,98nm,18.1s,baz=189,slow=38
comp=Z,9.2nm,0.6s
ULM Lac du Bonnet 71.61 343 P 23 19 04.6 -0.7
ULM IAmb IAmb 23 19 05.6
comp=Z,11nm,0.7s
MOOW Moose Ponds 71.71 330 P 23 19 06.5 +0.1
FXWY Fox Creek 71.76 330 P P 23 19 06.0 -0.8
ELK Elko 71.77 326 P P 23 19 07.9 +1.1
comp=Z,4.8nm,1.0s,baz=132,slow=3.6,SNR=15
comp=Z,4.8nm,1.0s
ELK Elko 71.77 326 P 23 19 06.8 0.0
NVAR Mina Array Bea 71.89 322 P P 23 19 09.1 +1.5
comp=Z,5.1nm,0.8s,baz=146,slow=7.4,SNR=20
NVAR pP **PcP 23 19 26.1 +0.1**
comp=Z,3.1nm,0.8s,baz=156,slow=6.4,SNR=5.9
comp=Z,5.1nm,0.8s
FLWY Flagg Ranch 71.95 331 P 23 19 07.6 -0.2
FLWY IAmb IAmb 23 19 10.6
comp=Z,20nm,1.0s
RLMT Red Lodge 72.10 332 P P 23 19 08.6 -0.1
QSPA South Pole Qui 72.12 180 P P 23 19 10.0 +1.5
comp=Z,9.6nm,0.6s,baz=158,slow=2.2,SNR=17
QSPA pP **pP 23 19 26.4 +0.9**
comp=Z,6.6nm,0.7s,baz=198,slow=2.2,SNR=3.9
comp=Z,9.6nm,0.6s
QSPA South Pole Qui 72.12 180 P P 23 19 06.6 -1.9
QSPA IAmb IAmb 23 19 11.8
comp=Z,32nm,1.2s
H17A Grant Village 72.13 331 P P 23 19 09.1 +0.1
YPP Pitchstone Pla 72.14 331 P P 23 19 09.4 +0.4
YNE Yellowstone No 72.34 332 P P 23 19 08.5 -1.6
YNE IAmb IAmb 23 19 12.6
comp=Z,38nm,0.8s
YNR Norris Junctio 72.42 331 P P 23 19 09.9 -0.7
YHH Holmes Hill 72.56 331 P P 23 19 12.5 +1.0
SCHQ Schefferville 72.66 2 P P 23 19 11.3 -0.2
comp=Z,20nm,0.9s,baz=190,slow=5.1,SNR=32
SCHQ pP **PcP 23 19 28.2 -0.4**
comp=Z,9.9nm,0.8s,baz=162,slow=4.1,SNR=6.0
SCHQ LR LR 23 53 37.7
comp=Z,56nm,18.4s,baz=194,slow=38
comp=Z,20nm,0.9s
SCHQ Schefferville 72.66 2 P 23 19 11.3 -0.2
SCHQ IAmb IAmb 23 19 12.8
comp=Z,20nm,0.9s
YHB Horse Butte 72.69 331 P P 23 19 11.3 -0.9
YHB IAmb IAmb 23 19 15.2
comp=Z,13nm,0.8s
YHL Hebgen Lake 72.76 331 P P 23 19 11.9 -0.8
YHL IAmb IAmb 23 19 18.2
comp=Z,20nm,0.5s
HLID Hailey 73.36 328 P 23 19 16.3 +0.2
PAHR Pah Rah Range 73.36 323 P 23 19 15.8 -0.5
PAHR IAmb IAmb 23 19 19.6
comp=Z,22nm,0.9s
MCMT McKenzie Canyo 73.52 330 P P 23 19 17.8 +0.6
BOZ Bozeman (W) 73.53 331 P P 23 19 17.2 +0.1
AFDM Forest Hills D 73.80 321 P P 23 19 19.6 +0.9
DLMT Dillon 73.80 330 P P 23 19 18.5 -0.2
MFID Camas Ranch 73.97 327 P P 23 19 20.6 +0.9
MFID IAmb IAmb 23 19 22.8
comp=Z,22nm,1.0s
LRM Limekiln Ridge 74.08 331 P P 23 19 21.7 +1.3
CVS Carmenet Viney 74.31 320 P P 23 19 22.7 +1.1
CVS IAmb IAmb 23 19 25.0
comp=Z,41nm,1.1s
ORV Oroville 74.50 321 P P 23 19 23.9 +1.2
ORV IAmb IAmb 23 19 26.1
comp=Z,25nm,1.1s
EGMT Eagleton 74.57 334 P P 23 19 23.4 +0.4
EGMT IAmb IAmb 23 19 24.5
comp=Z,12nm,0.8s
O03E Paynes Creek 75.15 322 P P 23 19 27.2 +0.6
PLID Pearl Lake 75.24 328 P P 23 19 27.9 +0.8
PLID IAmb IAmb 23 19 29.6
comp=Z,17nm,1.1s
MSO Missoula 75.52 331 P 23 19 28.0 -0.5
O02D Mt. Diablo Mer 75.66 321 P P 23 19 29.0 -0.5
BMO Blue Mountains 75.73 328 P 23 19 29.1 -0.7
KUQ Kuujjuuaa 75.89 1 P 23 19 30.0 -0.2
M03C McCloud 75.97 322 P P 23 19 30.6 -0.6
M03C IAmb IAmb 23 19 33.3
comp=Z,17nm,0.9s
KHBM Hayfork Bally 76.22 321 P 23 19 32.1 -0.7
KHBM IAmb IAmb 23 19 35.8
comp=Z,25nm,0.9s
I07A Izee 76.35 326 P P 23 19 32.0 -1.4
F10A Beach Ranch, E 76.48 328 P P 23 19 34.1 +0.1
YBH Yreka Blue Hor 76.60 323 P P 23 19 35.3 +0.5
comp=Z,0.4nm,0.8s,baz=135,slow=2.8,SNR=8.8
YBH LR LR 23 51 43.0
comp=Z,6.2nm,20.4s,baz=64,slow=34
YBH Yreka Blue Hor 76.60 323 P 23 19 33.9 -0.9
J05D Fort Rock, OR 76.76 324 P 23 19 35.5 -0.2
J05D IAmb IAmb 23 19 38.7
comp=Z,16nm,1.1s
G08A Pilot Rock 76.89 327 P P 23 19 35.4 -0.9
PINE Pine Mountain 76.93 325 P P 23 19 36.0 -0.8
PINE IAmb IAmb 23 19 40.2
comp=Z,18nm,1.0s
J04A Umpqua Nationa 77.22 324 P P 23 19 38.0 -0.3
J04A IAmb IAmb 23 19 41.1
comp=Z,17nm,0.8s
FFC Flin Flon 77.31 342 P P 23 19 38.3 0.0
FFC PcP **PcP 23 19 48.5 -0.1**
FFC pP **pP 23 19 54.8 -0.8**
WIFE Three Sisters- 77.59 325 P P 23 19 39.4 -1.1
WIFE IAmb IAmb 23 19 43.1
comp=Z,9.9nm,0.8s
TORD Torodi Ar. Bea 77.63 72 P P 23 19 41.0 0.0
comp=Z,32nm,0.8s,baz=244,slow=9.7,SNR=161
TORD pP **pP 23 19 57.1 -1.3**
comp=Z,16nm,0.8s,baz=246,slow=5.3,SNR=8.6
TORD S **S 23 29 24.7 -3.6**
comp=Z,1.0nm,1.0s,baz=252,slow=11,SNR=3.8
comp=Z,32nm,0.8s
HAWA Hanford 77.93 328 P P 23 19 42.3 +0.3
HAWA IAmb IAmb 23 19 45.1
comp=Z,18nm,1.0s
NEW Newport 78.04 330 P P 23 19 43.1 +0.4
comp=Z,1.8nm,0.6s,baz=162,slow=4.5,SNR=4.0
NEW LR LR 23 56 42.8
comp=Z,95nm,18.2s,baz=262,slow=38
comp=Z,1.8nm,0.6s
NEW Newport 78.04 330 P P 23 19 41.8 -0.9
D08A Wollman Farm, 78.07 328 P P 23 19 42.4 -0.4
E07A Sunnyside 78.20 328 P P 23 19 42.8 -0.8
E07A IAmb IAmb 23 19 46.9
comp=Z,16nm,1.2s
HOOD Mount Hood Mea 78.32 326 P P 23 19 43.0 -1.4
HOOD IAmb IAmb 23 19 50.0
comp=Z,18nm,0.8s
EPH Ephrata 78.61 328 P P 23 19 44.4 -1.4
EPH IAmb IAmb 23 19 49.2
comp=Z,6.9nm,0.9s
FCC Fort Churchill 78.97 348 P 23 19 47.0 -0.3
LTY Liberty 79.09 328 P P 23 19 48.2 -0.3
LTY IAmb IAmb 23 19 51.3
comp=Z,16nm,1.1s
B08A Colville Reser 79.17 329 P P 23 19 48.4 -0.4
D05A Enumclaw 79.72 327 P P 23 19 51.5 -0.3
D05A IAmb IAmb 23 19 54.5
comp=Z,31nm,0.9s
VNDA Vanda 79.97 190 P P 23 19 54.0 +1.2
comp=Z,7.2nm,0.8s,baz=88,slow=2.7,SNR=3.9
comp=Z,7.2nm,0.8s
VNDA Vanda 79.97 190 P P 23 19 54.2 +1.5
EDM Edmonton 80.03 335 P 23 19 52.7 -0.7
MORF Marmelete 80.07 46 P P 23 19 56.1 +2.2
MORF IAmb IAmb 23 20 18.4
comp=Z,59nm,1.4s
MORF Marmelete 80.07 46 eP P 23 19 56.4 +2.4
RADR Rader Ridge 80.18 326 P P 23 19 55.2 +0.9
GNW Green Mountain 80.39 327 P P 23 19 55.4 0.0
GNW IAmb IAmb 23 19 57.3
comp=Z,13nm,0.9s
MD01 Midelt array s 80.62 51 P 23 19 57.5 +0.3
MD31 MD31 80.62 51 P P 23 19 57.4 +0.3
MD31 IAmb IAmb 23 20 00.1
comp=Z,19nm,1.1s
MESJ Messejana 80.64 45 eP P 23 19 58.7 +1.7
PCVE Castro Verde 80.66 45 eP P 23 19 59.4 +2.3
MDT Midelt 80.70 51 LR LR 23 55 15.1
comp=Z,31nm,20.0s,baz=234,slow=35
MOE Montemor 80.91 45 eP P 23 20 00.4 +2.0
PBEJ Beja 80.98 45 eP P 23 20 00.7 +1.9
WIN Windhoek 81.09 111 P P 23 19 59.2 -0.9
EVO Evora 81.14 45 eP P 23 20 01.4 +1.8
PARRA Arraiolos 81.27 44 eP P 23 20 01.8 +1.5
PARRA epP **pP 23 20 19.1 +1.1**
PMTG Montargil 81.28 44 eP P 23 20 02.0 +1.6
SFS San Fernando 81.33 47 P P 23 20 00.2 -0.4
FRB Frobisher Bay 81.55 1 LR LR 00 00 49.6
comp=Z,23nm,18.1s,baz=206,slow=39
SUR Sutherland 81.59 121 LR LR 23 52 31.5

	comp=Z,29nm,21.6s,baz=234,slow=33						
PESTR	**Estremoz**	**81.60**	**45**	*e*P	**P**	**23 20 03.9**	**+1.8**
PSARD	**Sardoal**	**81.60**	**44**	*e*P	**P**	**23 20 03.5**	**+1.4**
PSARD				*e*pP	**pP**	**23 20 20.4**	**+0.6**
PBAR	**Barrancos**	**81.61**	**45**	*e*P	**P**	**23 20 04.2**	**+2.0**
PBAR				*e*pP	**pP**	**23 20 20.7**	**+0.9**
PCAS	**Casmilo, Conde**	**81.62**	**43**	*e*P	**P**	**23 20 04.8**	**+2.6**
LLLB	**Lillooet**	**81.91**	**330**	P	**P**	**23 20 04.0**	**+0.5**
LLLB				IAmb	IAmb	23 20 05.7	
	comp=Z,30nm,1.1s						
PCBR	**Castelo Branco**	**82.18**	**44**	*e*P	**P**	**23 20 06.4**	**+1.4**
MTE	**Manteigas**	**82.42**	**43**	*e*P	**P**	**23 20 07.8**	**+1.4**
MTE				*e*pP	**pP**	**23 20 24.7**	**+0.5**
TSUM	**Tsumeb**	**82.46**	**108**	LR	LR	23 55 06.4	
	comp=Z,45nm,19.8s,baz=164,slow=34						
TSUM	**Tsumeb**	**82.46**	**108**		**P**	**23 20 07.0**	**-0.2**
TSUM				IAmb	IAmb	23 20 10.0	
	comp=Z,29nm,1.1s						
TSUM	**Tsumeb**	**82.46**	**108**	P	**P**	**23 20 08.8**	**+1.6**
TSUM				pP	**pP**	**23 20 25.1**	**+0.5**
RAR	**Rarotonga**	**83.02**	**250**	LR	LR	23 48 19.9	
	comp=Z,65nm,19.8s,baz=191,slow=29						
MVO	**Moncorvo**	**83.15**	**43**	*e*P	**P**	**23 20 11.7**	**+1.6**
MVO				*e*pP	**pP**	**23 20 28.9**	**+1.0**
PBRG	**Braganca**	**83.67**	**42**	*e*pP	pP	23 20 31.8	+1.3
KOOLE	**Kule**	**83.71**	**112**	*i* P	**P**	**23 20 14.5**	**+0.8**
KOOLE	**Kule**	**83.71**	**112**	P	**P**	**23 20 12.6**	**-1.1**
KOOLE				IAmb	IAmb	23 20 16.3	
	comp=Z,24nm,0.8s						
PAB	**San Pablo**	**84.12**	**45**	P	**P**	**23 20 15.7**	**+0.5**
PAB				IAmb	IAmb	23 20 17.7	
	comp=Z,30nm,0.8s						
ESDC	**Sonseca Array**	**84.44**	**45**	P	**P**	**23 20 18.4**	**+1.6**
	comp=Z,17nm,0.9s,baz=252,slow=5.2,SNR=45						
ESDC				pP	**pP**	**23 20 35.1**	**+0.7**
	comp=Z,11nm,1.0s,baz=248,slow=5.8,SNR=8.5						
ESDC				LR	LR	23 53 37.9	
	comp=Z,36nm,21.2s,baz=248,slow=33						
	comp=Z,17nm,0.9s						
ESDC	**Sonseca Array**	**84.44**	**45**	P	**P**	**23 20 16.9**	**+0.1**
ESDC				IAmb	IAmb	23 20 19.5	
	comp=Z,29nm,1.1s						
ESBB	**Sonseca Array**	**84.44**	**45**	P	**P**	**23 20 16.0**	**-0.7**
ESBB				IAmb	IAmb	23 20 19.5	
	comp=Z,26nm,1.0s						
BLKN	**Baker Lake**	**84.44**	**349**		**P**	**23 20 16.1**	**+0.1**
BLKN				IAmb	IAmb	23 20 34.1	
	comp=Z,17nm,1.3s						
TAM	**Tamanrasset**	**84.61**	**64**		**P**	**23 20 17.5**	**-0.6**
TAM				IAmb	IAmb	23 20 20.6	
	comp=Z,46nm,1.3s						
TAM	**Tamanrasset**	**84.61**	**64**	P	**P**	**23 20 19.9**	**+1.7**
TAM				pP	**pP**	**23 20 36.1**	**+0.3**
GRTLG	**Ghanzi**	**85.10**	**111**	*i* P	**P**	**23 20 21.1**	**+0.4**
KGCAE	**Kacgae**	**85.53**	**112**	*i* P	**P**	**23 20 23.1**	**+0.3**
SFJD	**Kangerlussuaq**	**86.07**	**8**	LR	LR	00 00 23.4	
	comp=Z,43nm,19.1s,baz=178,slow=37						
SFJD	**Kangerlussuaq**	**86.07**	**8**	*i* P	**P**	**23 20 24.6**	**+0.4**
SFJD				IAmb	IAmb	23 20 25.6	
	comp=Z,24nm,1.2s						
BOSA	**Boshof**	**86.37**	**119**	P	**P**	**23 20 27.7**	**+0.8**
	comp=Z,8.7nm,1.0s,baz=260,slow=4.6,SNR=10						
BOSA				LR	LR	23 56 52.1	
	comp=Z,49nm,18.3s,baz=208,slow=34						
	comp=Z,8.7nm,1.0s						
BOSA	**Boshof**	**86.37**	**119**		**P**	**23 20 25.8**	**-1.1**
BOSA				IAmb	IAmb	23 20 29.6	
	comp=Z,7.5nm,0.8s						
CCD	**Concordia, Ant**	**86.64**	**184**	P	**P**	**23 20 29.8**	**+2.2**
ANGG	**Ammassalik, Gr**	**87.04**	**13**	P	**P**	**23 20 29.0**	**+0.1**
ANGG				IAmb	IAmb	23 20 48.1	
	comp=Z,23nm,0.9s						
ANGG	**Ammassalik, Gr**	**87.04**	**13**	*i* P	**P**	**23 20 29.8**	**+0.9**
ANGG				IAmb	IAmb	23 20 30.4	
	comp=Z,27nm,0.6s						
YKAW1	**Yellowknife Wh**	**87.42**	**341**	P	**P**	**23 20 31.2**	**+0.3**
YKA	**Yellowknife Ar**	**87.47**	**341**	P	**P**	**23 20 31.9**	**+0.8**
	comp=Z,18nm,0.8s,baz=139,slow=4.0,SNR=292						
YKA				pP	**pP**	**23 20 49.2**	**+0.5**
	comp=Z,12nm,0.8s,baz=138,slow=4.0,SNR=14						
YKA				LR	LR	00 02 36.1	
	comp=Z,89nm,19.2s,baz=323,slow=38						
	comp=Z,18nm,0.8s						
YKA	**Yellowknife Ar**	**87.47**	**341**	P	**P**	**23 20 31.2**	**+0.2**
KDWAN	**Kaudwane**	**87.51**	**114**	*i* P	**P**	**23 20 32.5**	**+0.1**
YKAW3	**Yellowknife Wh**	**87.52**	**341**	P	**P**	**23 20 30.9**	**-0.4**
ILON	**Igloolik, Nuna**	**87.56**	**356**	P	**P**	**23 20 31.6**	**+0.2**
ILON				IAmb	IAmb	23 20 32.4	
	comp=Z,7.4nm,0.6s						
MAW	**Mawson**	**88.03**	**164**	LR	LR	23 59 52.7	
	comp=Z,48nm,21.3s,baz=187,slow=35						
LPHEP	**Lephephe**	**88.56**	**114**	*i* P	**P**	**23 20 38.2**	**+0.7**
KHWEE	**KHWEE**	**88.66**	**113**	*i* P	**P**	**23 20 38.0**	**+0.1**
KSANE	**Kasane**	**89.73**	**109**	*i* P	**P**	**23 20 43.0**	**0.0**
DLBC	**Dease Lake**	**90.48**	**333**	P	**P**	**23 20 46.6**	**+1.2**
	comp=Z,12nm,0.8s,baz=110,slow=9.8,SNR=18						
DLBC				LR	LR	00 05 13.8	
	comp=Z,127nm,18.1s,baz=80,slow=38						
	comp=Z,12nm,0.8s						
BROLN	**Tlhalogang**	**90.59**	**112**	*i* P	**P**	**23 20 48.4**	**+1.4**
BORG	**Borgarnes**	**90.64**	**19**	LR	LR	23 58 28.2	
	comp=Z,26nm,20.4s,baz=245,slow=34						
POIN	**Pond Inlet**	**90.67**	**358**	P	**P**	**23 20 46.6**	**+0.7**
POIN				IAmb	IAmb	23 21 05.3	
	comp=Z,15nm,1.2s						
KEST	**Kesra**	**92.42**	**53**	P	**P**	**23 20 56.2**	**+1.2**
	comp=Z,7.6nm,0.9s,baz=333,slow=6.8,SNR=4.8						
	comp=Z,7.6nm,0.9s						
EKA	**Eskdalemuir Ar**	**92.47**	**32**	LR	LR	23 58 20.2	
	comp=Z,54nm,19.0s,baz=213,slow=33						
SUMG	**Summit**	**92.90**	**9**	*i* P	**P**	**23 20 58.5**	**+1.7**
SUMG				IAmb	IAmb	23 20 59.1	
	comp=Z,4.0nm,0.6s						
LSZ	**Lusaka**	**93.30**	**107**	LR	LR	00 02 40.5	
	comp=Z,40nm,18.0s,baz=309,slow=35						
RES	**Resolute Bay**	**93.83**	**354**	LR	LR	00 04 36.5	
	comp=Z,56nm,21.9s,baz=74,slow=36						
NEEM	**North Greenlan**	**95.98**	**4**	*i* P	**P**	**23 21 11.6**	**+0.8**
NEEM				IAmb	IAmb	23 21 12.4	
	comp=Z,11nm,0.9s						
L29M	**L29M**	**96.31**	**335**	P	**P**	**23 21 11.4**	**-0.7**
L29M				IAmb	IAmb	23 21 13.7	
	comp=Z,10nm,0.8s						
DAVOX	**Davos/Dischmat**	**96.55**	**43**	LR	LR	00 03 14.3	
	comp=Z,36nm,20.1s,baz=258,slow=34						
VAE	**Valguarnera**	**96.84**	**53**	LR	LR	00 06 44.1	
	comp=Z,40nm,18.5s,baz=312,slow=36						
FETA	**Feichten**	**97.18**	**43**	*i* PcP	Pdif	23 21 18.0	+1.3
	comp=Z,0.7nm,0.4s						
INK	**Inuvik**	**97.22**	**340**		Pdif	23 21 16.3	+0.2
INK				IAmb	IAmb	23 21 17.4	
	comp=Z,5.1nm,1.0s						
RETA	**Reutte**	**97.35**	**43**	*i* PcP	Pdif	23 21 18.8	+1.4
	comp=Z,8.0nm,1.2s						
MOTA	**Moosalm**	**97.53**	**43**	*i* P	Pdif	23 21 18.7	+0.4
	comp=Z,1.6nm,0.5s						
MOTA				*i* pP	pP	23 21 35.9	-0.1
	comp=Z,9.2nm,1.3s						
SQTA	**Sankt Quirin**	**97.56**	**43**	*i* P	Pdif	23 21 19.1	+0.8
	comp=Z,2.5nm,0.6s						
SQTA				*i* pP	pP	23 21 36.2	+0.2
	comp=Z,10.0nm,1.4s						
WTTA	**Wattenberg**	**97.85**	**43**	*i* P	Pdif	23 21 20.5	+0.8
	comp=Z,12nm,1.3s						
WTTA				*e*pP	pP	23 21 36.8	-0.7
	comp=Z,14nm,1.3s						
E29M	**Blow River**	**98.67**	**340**		**P**	**23 21 21.5**	**-1.1**
E29M				IAmb	IAmb	23 21 24.3	
	comp=Z,4.4nm,0.9s						
GERES	**GERESS Array B**	**99.64**	**42**	P	**Pdif**	**23 21 27.3**	**-0.2**
	comp=Z,1.7nm,1.0s,baz=217,slow=3.3,SNR=4.6						
GERES				pP	**pP**	**23 21 45.1**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=327,slow=3.7,SNR=3.7						
GERES				LR	LR	00 03 04.0	
	comp=Z,25nm,19.7s,baz=270,slow=33						
	comp=Z,1.7nm,1.0s						
ILAR	**Eielson Array**	**100.52**	**335**	P	**Pdif**	**23 21 30.9**	**0.0**
	comp=Z,0.7nm,0.9s,baz=161,slow=2.1,SNR=5.3						
ILAR				PP	**PP**	**23 25 41.1**	**+2.6**
	comp=Z,1.7nm,1.0s,baz=106,slow=7.7,SNR=9.0						
ARCES	**ARCESS Array B**	**108.85**	**22**	PKKPbc	PKKPbc	23 37 20.9	-2.4
	comp=Z,1.9nm,0.8s,baz=76,slow=3.8,SNR=3.6						
BRTR	**Keskin Array B**	**112.02**	**54**	PKiKP	**PKiKP**	**23 26 19.7**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=180,slow=0.7,SNR=4.7						
MMAI	**Mount Meron Ar**	**112.68**	**61**	PKiKP	**PKiKP**	**23 26 20.4**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=324,slow=9.3,SNR=4.1						
KBZ	**Khabaz**	**119.06**	**50**	PKP	**PKiKP**	**23 26 34.0**	**+1.4**
	comp=Z,5.9nm,0.8s,baz=196,slow=4.7,SNR=17						
GNI	**Garni**	**120.56**	**54**	PKP	**PKiKP**	**23 26 37.1**	**+1.2**
STKA	**Stephens Creek**	**121.61**	**212**	PKP	**PKiKP**	**23 26 38.8**	**+0.7**
	comp=Z,1.6nm,0.5s,baz=156,slow=3.5,SNR=4.0						
H11N3	**WAKE ISLAND Hy**	**125.91**	**282**	T	T	01 44 50.7	
	baz=99,slow=75						
H11S2	**WAKE ISLAND Hy**	**125.91**	**280**	T	T	01 44 48.8	
	baz=100						
H11S1	**WAKE ISLAND Hy**	**125.92**	**280**	T	T	01 44 51.0	
	baz=100,slow=74						
H11N2	**WAKE ISLAND Hy**	**125.92**	**282**	T	T	01 44 51.5	
	baz=99,slow=75						
H11N1	**WAKE ISLAND Hy**	**125.92**	**282**	T	T	01 44 50.6	
	baz=99,slow=75						
H11S3	**WAKE ISLAND Hy**	**125.93**	**280**	T	T	01 44 50.9	
	baz=100,slow=74						
NRIK	**Noril'sk**	**126.95**	**10**	PKP	**PKiKP**	**23 26 47.6**	**+0.2**
	comp=Z,2.4nm,0.7s,baz=346,slow=0.8,SNR=5.5						
PETK	**Petropavlovsk-**	**128.92**	**325**	PKP	**PKiKP**	**23 26 52.6**	**+0.7**
	comp=Z,7.8nm,0.9s,baz=83,slow=6.7,SNR=7.4						
ASAR	**Alice Springs**	**132.19**	**211**	PKP	**PKiKP**	**23 26 59.3**	**-0.2**
	comp=Z,2.2nm,0.6s,baz=131,slow=1.6,SNR=14						
ASAR				pPKP	**pPKPdf**	**23 27 16.9**	**+0.2**
	comp=Z,1.4nm,0.9s,baz=73,slow=1.7,SNR=3.3						
ASAR	**Alice Springs**	**132.19**	**211**		**PKiKP**	**23 26 59.1**	**-0.5**
BVAR	**Borovoye Array**	**133.72**	**32**	PKP	**PKiKP**	**23 27 02.6**	**+1.0**
	comp=Z,3.0nm,0.6s,baz=270,slow=3.0,SNR=23						
BVAR				pPKP	**pPKPdf**	**23 27 20.0**	**+1.3**
	comp=Z,2.1nm,0.7s,baz=22,slow=1.6,SNR=5.2						
WRA	**Warramunga Arr**	**135.07**	**214**	PKP	**PKiKP**	**23 27 05.1**	**-0.3**
	comp=Z,3.9nm,0.6s,baz=202,slow=0.9,SNR=6.0						
WRA				pPKP	**pPKPdf**	**23 27 23.9**	**+1.7**
	comp=Z,2.5nm,0.8s,baz=153,slow=1.6,SNR=3.8						
WRA	**Warramunga Arr**	**135.07**	**214**		**PKPdf**	**23 27 01.2**	**-2.7**
KURK	**Kurchatov**	**139.17**	**30**		**PKiKP**	**23 27 12.5**	**-0.3**
KURBB	**Kurchatov Arra**	**139.19**	**30**	PKhKP	PKPpre	23 27 06.3	
	comp=Z,4.9nm,0.8s,baz=293,slow=3.1,SNR=4.1						
KURBB				PKP	**PKiKP**	**23 27 12.4**	**-0.3**
	comp=Z,6.0nm,0.9s,baz=310,slow=2.6,SNR=22						
KURBB				pPKP	pPKPdf	23 27 29.7	+0.8
	comp=Z,2.3nm,0.7s,baz=308,slow=2.6,SNR=3.8						
ZALV	**Zalesovo Beam**	**139.40**	**22**	PKhKP	PKPpre	23 27 06.2	
	comp=Z,1.7nm,0.5s,baz=331,slow=2.4,SNR=7.4						
ZALV				PKP	**PKiKP**	**23 27 12.3**	**-0.8**
	comp=Z,22nm,0.7s,baz=300,slow=2.4,SNR=74						
ZALV				pPKP	pPKPdf	23 27 29.8	+0.7
	comp=Z,14nm,0.7s,baz=292,slow=2.5,SNR=9.0						
MKAR	**Makanchi Array**	**143.61**	**32**	PKP	**PKPdf**	**23 27 17.4**	**-1.2**
	comp=Z,3.4nm,0.6s,baz=330,slow=3.0,SNR=67						
MKAR	**Makanchi Array**	**143.61**	**32**		**PKPdf**	**23 27 16.8**	**-1.8**
KSH2	**Kashi**	**143.83**	**47**	PKP	**PKPdf**	**23 27 18.8**	**-0.6**
KLR	**Kul'dur**	**144.09**	**335**	PKP	**PKPdf**	**23 27 18.0**	**-1.3**
	comp=Z,6.7nm,1.0s,baz=70,slow=4.0,SNR=12						
HEH	**HeiHe**	**144.82**	**340**	*e*P	**PKPdf**	**23 27 20.4**	**-0.2**
HEH				pmax	pmax		
	comp=Z,45nm,0.8s						
USRK	**Ussuriysk Ar.**	**147.82**	**329**	PKPbc	**PKPab**	**23 27 30.4**	**-0.9**
	comp=Z,27nm,0.8s,baz=28,slow=1.2,SNR=23						
USRK				pPKPbc	**pPKPbc**	**23 27 48.3**	**+1.3**
	comp=Z,6.9nm,0.8s,baz=0.0,slow=2.5,SNR=3.0						
WMQ	**Urumqi**	**148.40**	**31**	*e*PKPbc	**PKPdf**	**23 27 27.5**	**+0.6**
WMQ				PKPab	**PKPab**	**23 27 32.4**	**-1.4**
WMQ				sPKP	sPKPdf	23 27 51.2	-0.7
WMQ				LR	LR		
	comp=Z,140nm,24.2s						
BNX	**BinXian**	**148.65**	**336**	⇓P	**PKiKP**	**23 27 31.6**	**-0.8**
BNX				pmax	pmax		
	comp=Z,27nm,0.9s						
MJAR	**Matsushiro Arr**	**148.74**	**312**	PKPbc	**PKiKP**	**23 27 33.0**	**+0.1**
	comp=Z,31nm,0.9s,baz=96,slow=1.6,SNR=48						
MJAR				pPKPbc	**pPKPbc**	**23 27 49.3**	**-0.5**
	comp=Z,20nm,0.9s,baz=106,slow=0.6,SNR=7.5						
SONM	**Songino Array**	**150.19**	**4**	PKP	**PKPdf**	**23 27 31.0**	**+1.3**
	comp=Z,5.8nm,1.0s,baz=291,slow=1.9,SNR=15						
SONM				PKPbc	**PKiKP**	**23 27 36.4**	**+0.8**
	comp=Z,27nm,0.7s,baz=325,slow=1.7,SNR=151						
SONM	**Songino Array**	**150.19**	**4**		**PKPbc**	**23 27 31.8**	**-3.0**
CN2	**Changchun**	**151.03**	**336**	*e*P	**PKPab**	**23 27 42.4**	**-2.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
XLT	**XiLinHaoTe**	**153.65**	**349**	*e*PKPbc	**PKPdf**	**23 27 36.1**	**+1.1**
XLT				PKPab	**PKPab**	**23 27 56.8**	**+1.3**
XLT				pPKP	pPKPbc	23 28 02.0	+0.9
XLT				sPKP	sPKPab	23 28 13.6	-6.6
KSRS	**Korea Array**	**154.82**	**324**	PKP	**PKPdf**	**23 27 38.3**	**+1.6**
	comp=Z,2.2nm,0.8s,baz=37,slow=1.7,SNR=6.3						
KSRS				PKPbc	**PKiKP**	**23 27 47.2**	**+1.9**
	comp=Z,3.4nm,0.7s,baz=20,slow=2.1,SNR=8.2						
GTA2	**Gaotai**	**157.02**	**20**	*e*PKP	**PKPdf**	**23 27 41.4**	**+1.7**
GTA2				pPKP	pPKPdf	23 27 51.5	-6.6
GTA2				PKPab	**PKPab**	**23 28 11.1**	**+1.0**
HHC	**Hu-ho-hao-te**	**157.21**	**356**	*e*P	**PKPdf**	**23 27 35.0**	**-4.9**
TIA	**Tai'an**	**160.71**	**341**	PKP	**PKPdf**	**23 27 46.1**	**+2.1**
LZH	**Lanzhou**	**161.34**	**15**	*e*P	**PKPdf**	**23 27 47.8**	**+2.9**
LZH				pmax	pmax		
	comp=Z,13nm,1.2s						
LZDM	**Lanzhou Array**	**161.43**	**15**	PKPab	**PKPab**	**23 28 30.3**	**+0.8**
	comp=Z,0.7nm,0.3s,baz=79,slow=3.1,SNR=1.4						
NJ2	**Nanjing**	**163.72**	**331**	*e*P	**PKPdf**	**23 27 47.2**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
XAN	**Xi'an**	**164.07**	**2**	PKP	**PKPdf**	**23 27 49.7**	**+2.2**
XAN				pPKP	pPKPdf	23 28 08.0	+2.1
PZH	**PanZhiHua**	**168.93**	**39**	PKP	**PKPdf**	**23 27 49.7**	**-1.9**
CMAR	**Chiang Mai Arr**	**169.93**	**86**	PKP	**PKPdf**	**23 27 53.2**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=283,slow=1.8,SNR=12						
CMAR				pPKP	**pPKPdf**	**23 28 11.9**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=185,slow=1.1,SNR=1.8						
CMAR				PKPab	**PKPab**	**23 29 08.1**	**+0.7**
	comp=Z,4.8nm,1.0s,baz=275,slow=6.2,SNR=20						
CMAR	**Chiang Mai Arr**	**169.93**	**86**		**PKPdf**	**23 27 53.4**	**+1.2**
CMAR					**PKPab**	**23 29 08.2**	**+0.8**

IDC 02 23:11:22.4±2.1**, 6°.69S**×**129°.30E, h0**km**, mb3.5**/1**, mbtmp3.5**/3**, ML3.4**/2**, Error ellipse: s-maj=133.6km s-min=31.5km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.06**	**160**	Pn	Pn	23 14 43.5	+0.6
	0.2nm,0.3s,baz=339,slow=13,SNR=2.8						
WRA				Sn	Sn	23 17 04.9	-15
	0.6nm,0.3s,baz=333,slow=22,SNR=10						
	1.2nm,1.1s						
ASAR	**Alice Springs**	**17.45**	**166**	P	Pn	23 15 27.1	-0.4
	0.2nm,0.3s,baz=338,slow=12,SNR=16						
ASAR				S	Sn	23 18 26.3	-16
	0.2nm,0.3s,baz=316,slow=17,SNR=5.0						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**67.58**	**327**	P	P	23 22 20.9	0.0
	0.3nm,0.5s,baz=115,slow=8.0,SNR=7.6						
	0.3nm,0.5s						

NIED ***02*** *23:16:19.8, 33°.61N×130°.38E, h17km, MW3.3, Moment Tensor Solution. s3 Moment tensor: Scale 10*^{14}*Nm;* M_{rr}*0.79;* $M_{\theta\theta}$*0.16;* $M_{\phi\phi}$*-0.95;* $M_{r\theta}$*-0.29;* $M_{\theta\phi}$*-0.68;* $M_{\phi r}$*0.19; Fault plane solution:* M_0*1.15000×10*^{14} *NP1:* ϕ_s*234.00000°, δ52.00000°, λ133.00000°. NP2:* ϕ_s*357.00000°, δ55.00000°, λ49.00000°.*

JMA 02 23:16:19.8±0.0**, 33°.61N**±0°.08×**130°.38E**±0°.07**, h17**km**, MV3.5**/39**, 2D, CENTRAL FUKUOKA PREF, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFI	**Itaya**	**0.19**	**178**	*i* P	Pg	23 16 24.4	-0.1
JFI				S	Sg	23 16 27.5	-0.1
JFA	**Akaike**	**0.36**	**74**	*i* P	Pg	23 16 27.1	-0.1
JFA				S	Sg	23 16 32.0	-0.3
JII	**Iki**	**0.57**	**289**	⇓*i*P	Pg	23 16 31.1	0.0
JII				⇓S	Sg	23 16 38.9	+0.1
JTA	**Tamana**	**0.66**	**169**	*i* P	Pg	23 16 32.4	-0.4
JTA				*e*S	Sg	23 16 41.0	-0.6

NSSP ***02*** *23:32:24.6, 38°.30N×44°.65E, h10km, Ms3.3*
AFAD ***02*** *23:32:25.0, 38°.43N×44°.61E, h7km±2km, ML3.2*
TIF ***02*** *23:32:26.1, 38°.42N×44°.51E, h5km±2km*
ISK ***02*** *23:32:27.5, 38°.35N×44°.36E, h5km, ML3.3/11*
IDC ***02*** *23:32:27.6±2.0, 38°.45N×44°.38E, h0km, mb3.4/5, mbtmp3.5/6, ML3.3/1, Error ellipse: s-maj=65.9km s-min=21.8km az=158.0*

TEH ***02*** *23:32:33.1, 38°.34N×45°.00E, h6km, ML2.8, Presumed earthquake*

ISC 02 23:32:27.3±1.2**, 38°.31N**±0°.03×**44°.41E**±0°.02**, h3**km±9km**, n54, σ1**s**.53**/81**, mb3.5**/5**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.48**	**317**	P	**Pg**	**23 32 35.8**	**-0.7**
OZAP				S	**Sb**	**23 32 44.0**	**-2.1**
OZAP				IAML		23 32 51.0	
	comp=N,2μm,1.0s						
TVAN	**Van**	**0.82**	**286**	P	**Pb**	**23 32 43.0**	**-1.3**
TVAN				S	**Sn**	**23 32 57.1**	**-1.6**
TVAN				IAML		23 33 04.0	
	comp=N,1μm,0.5s						
TVAN				IAML		23 33 13.0	
	comp=E,897nm,0.6s						
VANB	**Van**	**0.85**	**290**	Pg	**Pb**	**23 32 43.3**	**-1.4**
VANB				Sg	**Sb**	**23 32 54.9**	**-1.7**
HAKT	**HAKKARI**	**0.93**	**217**	P	**Pn**	**23 32 46.5**	**-0.9**
HAKT				S	**Sn**	**23 33 03.2**	**+1.8**
HAKT				IAML		23 33 06.0	
	comp=N,678nm,0.4s						
HAKT				IAML		23 33 06.0	
	comp=E,644nm,0.5s						
VMUR	**Van-Muradiye**	**0.94**	**316**	P	**Pg**	**23 32 44.4**	**-1.0**
VMUR				S	**Sb**	**23 32 57.9**	**-1.5**
VMUR				IAML		23 33 04.0	
	comp=E,616nm,0.4s						
VMUR				IAML		23 33 05.0	
	comp=N,563nm,0.5s						
ISHB	**Shabestar**	**0.95**	**91**	Pg	**Pg**	**23 32 42.8**	**-2.7**
GEVA	**Gevas**	**1.06**	**271**	P	**Pn**	**23 32 47.6**	**-1.6**
GEVA				S	**Sn**	**23 33 04.1**	**-0.5**
GEVA				IAML		23 33 06.0	
	comp=N,653nm,0.7s						
GEVA				IAML		23 33 08.0	
	comp=E,470nm,0.7s						
IMRD	**Marand**	**1.09**	**68**	Pg	**Pg**	**23 32 45.8**	**-2.4**
ERCV	**ERCIS-VAN**	**1.10**	**311**	Pg	**Pn**	**23 32 48.9**	**-0.8**
ERCV				Sg	**Sn**	**23 33 04.4**	**-1.1**
AKDM	**Akdamar-Van**	**1.12**	**271**	Pn	**Pn**	**23 32 48.9**	**-1.2**
CUKT	**Cukurca**	**1.23**	**211**	Pn	**Pn**	**23 32 52.5**	**+1.0**
CUKT				Sn	**Sn**	**23 33 11.3**	**+2.5**
DYDN	**Diyadin**	**1.36**	**336**	P	**Pn**	**23 32 52.0**	**-1.3**
DYDN				S	**Sb**	**23 33 08.7**	**-2.6**
DYDN				IAML		23 33 18.0	
	comp=N,421nm,0.7s						
DYDN				IAML		23 33 18.0	
	comp=E,441nm,0.9s						
ITBZ	**Tabriz**	**1.37**	**93**	Pg	**Pn**	**23 32 50.1**	**-3.3**
IAZR	**Azarshahr**	**1.39**	**116**	Pg	**Pn**	**23 32 53.0**	**-0.8**
ADCV	**BITLIS_Adilcev**	**1.41**	**291**	P	**Pg**	**23 32 54.5**	**+0.2**
ADCV				S	**Sg**	**23 33 16.6**	**+3.9**
ADCV				IAML		23 33 20.0	
	comp=E,244nm,0.8s						
ADCV				IAML		23 33 26.0	
	comp=N,213nm,0.6s						
IGDI	**IGDIR**	**1.58**	**351**	P	**Pn**	**23 32 55.3**	**-0.9**
IGDI				S	**Sb**	**23 33 18.0**	**+0.5**
IGDI				IAML		23 33 21.0	
	comp=N,234nm,0.5s						
IGDI				IAML		23 33 21.0	
	comp=E,284nm,1.1s						
VAYK	**Vayk**	**1.60**	**29**	*i* P	**Pn**	**23 32 54.5**	**-2.0**
VAYK				*i* S	**Sn**	**23 33 16.0**	**-1.6**
DORK	**Agr/Tutak/Do**	**1.67**	**311**	P	**Pn**	**23 32 57.1**	**-0.5**
DORK				IAML		23 33 28.0	
	comp=N,194nm,0.6s						
DORK				IAML		23 33 28.0	
	comp=E,179nm,0.8s						
MLAZ	**Malazgirt-MUS**	**1.68**	**300**	Pn	**Pg**	**23 32 58.5**	**-0.9**
AGRB	**Hanur-Agry**	**1.68**	**319**	Pn	**Pb**	**23 32 57.8**	**-1.1**
AGRB				Sn	**Sg**	**23 33 21.3**	**0.0**
VNNZ	**Vanand**	**1.85**	**346**	*e*P	**Pb**	**23 33 01.7**	**-0.1**
VNNZ				*e*S	**Sg**	**23 33 29.2**	**+2.5**
MAHB	**Mahabad**	**1.85**	**146**	Pg	**Pg**	**23 33 03.9**	**+1.1**
GNI	**Garni**	**1.86**	**8**	Pn	**Pn**	**23 33 00.7**	**+0.6**
GNI				Sn	**Sb**	**23 33 26.5**	**+0.9**
GNI	**Garni**	**1.86**	**8**	*e*P	**Pn**	**23 33 00.5**	**+0.4**
GNI				*e*S	**Sb**	**23 33 26.1**	**+0.5**
GURO	**Guroymak-BITLI**	**1.88**	**278**	Pn	**Pb**	**23 33 01.6**	**-0.7**
EGVZ	**Egvard**	**1.90**	**61**	*e*P	**Pn**	**23 32 59.1**	**-1.6**
EGVZ				*e*S	**Sn**	**23 33 24.4**	**-0.9**
ARUZ	**Aruch**	**1.99**	**353**	*e*P	**Pb**	**23 33 03.2**	**-0.9**
ARUZ				*e*S	**Sg**	**23 33 31.6**	**+0.4**
KAPZ	**Kaputan**	**2.02**	**6**	*e*P	**Pn**	**23 33 02.5**	**+0.1**
KAPZ				*e*S	**Sb**	**23 33 30.0**	**-0.4**
AMBZ	**Amberd**	**2.08**	**357**	*e*P	**Pn**	**23 33 04.2**	**+0.9**
AMBZ				*e*S	**Sb**	**23 33 33.8**	**+1.6**
AYRK	**Ayrk**	**2.10**	**30**	*e*P	**Pn**	**23 33 03.2**	**-0.3**
AYRK				*e*S	**Sn**	**23 33 30.9**	**+0.6**
VRTB	**Varto-Mus**	**2.46**	**291**	Pn	**Pb**	**23 33 09.8**	**-2.4**
SVAN	**Silvan-Diyarba**	**2.53**	**267**	Pn	**Pb**	**23 33 11.1**	**-2.3**
KARS	**Kars**	**2.54**	**336**	Pn	**Pn**	**23 33 10.9**	**+1.5**
ISRB	**Sarab**	**2.62**	**100**	Pn	**Pn**	**23 33 11.8**	**+1.1**
LSVT	**Lusahovit**	**2.67**	**13**	*e*P	**Pn**	**23 33 11.2**	**-0.1**
LSVT				*e*S	**Sn**	**23 33 45.8**	**+1.5**
SRTK	**Saratovka**	**2.76**	**359**	*e*P	**Pb**	**23 33 16.0**	**-1.3**
SRTK				*e*S	**Sb**	**23 33 54.2**	**+2.7**
SENK	**Senkaya-Erzuru**	**2.76**	**325**	Pn	**Pn**	**23 33 14.2**	**+1.6**
BGD	**Bogdanovka**	**3.02**	**348**	P	**Pb**	**23 33 22.6**	**+0.9**
BGD				S	**Sg**	**23 34 05.1**	**+0.9**
AKH	**Akhalkalaki**	**3.18**	**347**	P	**Pb**	**23 33 26.1**	**+1.6**
YEDI	**Yedisu-Bingol**	**3.22**	**292**	Pn	**Pn**	**23 33 20.6**	**+1.7**
DGRG	**David-gareji**	**3.23**	**13**	P	**Pb**	**23 33 26.3**	**+1.1**
DGRG				S	**Sg**	**23 34 11.4**	**+0.5**
TRLG	**Trialeti**	**3.24**	**356**	P	**Pb**	**23 33 24.6**	**-0.8**
TRLG				S	**Sg**	**23 34 11.4**	**+0.2**
DDFL	**Dedoflistskaro**	**3.40**	**22**	P	**Pb**	**23 33 30.5**	**+2.3**
LGD	**Lagodekhi**	**3.79**	**21**	P	**Pb**	**23 33 37.4**	**+2.5**
ALIG	**Mtskhetisjvari**	**3.84**	**352**	P	**Pb**	**23 33 37.6**	**+2.0**
CHRG	**Chargali**	**4.04**	**5**	P	**Pb**	**23 33 40.3**	**+1.3**
CHRG				S	**Sg**	**23 34 35.9**	**-1.0**
SHTL	**Shatili**	**4.38**	**7**	P	**Pb**	**23 33 46.2**	**+1.2**
MMAI	**Mount Meron Ar**	**9.03**	**237**	Pn	**Pn**	**23 34 41.8**	**+3.3**
	0.3nm,0.3s,baz=53,slow=15,SNR=2.0						
	1.0nm,0.7s						
ARTI	**Arti**	**20.34**	**23**	P	**P**	**23 37 04.4**	**-0.1**
	1.6nm,0.7s,baz=217,slow=11,SNR=3.1						
	1.6nm,0.7s						
BVAR	**Borovoye Array**	**23.20**	**42**	P	**P**	**23 37 35.9**	**+0.9**
	0.3nm,0.4s,baz=235,slow=12,SNR=2.6						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**27.04**	**52**	P	**P**	**23 38 10.8**	**+0.3**
	0.5nm,0.5s,baz=262,slow=9.1,SNR=5.8						
MKAR	**Makanchi Array**	**28.93**	**61**	P	**P**	**23 38 27.4**	**-0.2**
	0.4nm,0.7s,baz=260,slow=9.1,SNR=6.6						
	0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**31.57**	**47**	P	**P**	**23 38 50.4**	**-0.4**
	0.4nm,0.4s,baz=267,slow=7.9,SNR=2.0						
	0.4nm,0.4s						
ESDC	**Sonseca Array**	**37.26**	**288**	P	**P**	**23 39 39.8**	**-0.4**
	0.7nm,0.7s,baz=80,slow=8.8,SNR=5.7						
	0.7nm,0.7s						

AEIC ***03*** *00:08:33.4±1.4, 51°.07N±0°.05×179°.75W±0°.04, h14km±6km, Error ellipse: s-maj=7.6km s-min=3.8km az=186.0*

NEIC 03 00:08:31.8±0.5**, 51°.00N**±0°.04×**179°.78W**±0°.03**, h10**km±1km**, ML3.5**/10**, ML3.0**(AEIC)**, Error ellipse: s-maj=8.0km s-min=3.5km az=161.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.70**	**304**		Pg	00 08 45.5	+0.3
GAKI	**Gareloi-Kavalg**	**0.82**	**47**		Pg	00 08 47.8	+0.1
GAKI					Sg	00 08 58.5	+0.1
GASW	**Gareloi Southw**	**0.97**	**36**		Pg	00 08 50.4	-0.1
GASW					Sg	00 09 03.3	+0.1
GALAA	**Gareloi Lava P**	**0.99**	**39**		Pb	00 08 51.0	-0.1
GALAA					Sg	00 09 03.9	+0.1
CESW	**Semis' Southwe**	**1.00**	**336**		Pg	00 08 51.0	0.0
GAEA	**Gareloi East**	**1.02**	**39**		Pg	00 08 51.3	0.0
GAEA					Sg	00 09 04.7	+0.1
GANO	**Gareloi North**	**1.03**	**36**		Pg	00 08 51.0	-0.5
GANE	**Gareloi Northe**	**1.03**	**37**		Pg	00 08 51.4	-0.3
CETU	**Semis' Tuman**	**1.07**	**335**		Pg	00 08 52.3	-0.1
CEAP	**Semis' Anvil P**	**1.09**	**338**		Pg	00 08 52.5	-0.1
TASE	**Tanaga Southea**	**1.38**	**52**		Pn	00 08 56.7	-0.4
TASE					Sb	00 09 14.7	-0.5
LSSE	**Little Sitkin**	**1.40**	**313**		Pn	00 08 57.3	-0.1
TAFL	**Tanaga Flats**	**1.40**	**56**		Pn	00 08 57.0	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TAFL					Sn	00 09 14.4	-1.5
LSPA	Little Sitkin	1.41	314		Pn	00 08 57.5	0.0
TAFP	Tanaga Falls P	1.44	50		Pn	00 08 57.4	-0.6
TAPA	Tanaga Point A	1.48	56		Pn	00 08 58.3	-0.2
TAPA					Sn	00 09 16.8	-1.1
KIMD	Kanaga Island	1.77	63		Pn	00 09 02.3	-0.1
KIMD					Sn	00 09 24.1	-0.8
KIWB	Kanaga Island	1.85	61		Sn	00 09 27.2	+0.1
KIKV	Kanaga Island	1.85	61		Pn	00 09 03.6	-0.1
KIKV					Sn	00 09 27.2	0.0
ADK	Adak	2.13	64		Pn	00 09 07.4	0.0
ADK	Adak	2.13	64		Sn	00 09 33.4	-0.4
ADK				IAML		00 09 40.7	
	375nm,0.7s						
ADK				IAML		00 09 40.9	
	446nm,0.6s						
GSMY	Great Sitkin M	2.55	64		Pn	00 09 13.7	+0.5
GSTR	Great Sitkin T	2.57	63	Pn	Pn	00 09 13.9	+0.5
GSTR				IAML		00 09 55.4	
	comp=E,291nm,0.8s						
SHEM	Shemya Is, Ala	4.17	297	Pn	Pn	00 09 34.7	-0.8
SHEM				IAML		00 10 10.9	
	comp=N,34nm,1.0s						
SHEM				IAML		00 10 39.3	
	comp=E,48nm,1.1s						
SMY	Shemya	4.17	297	Pn	Pn	00 09 34.8	-0.6
SMY				IAML		00 11 18.5	
	comp=N,71nm,1.0s						
CLES	Cleveland East	6.38	70	Pn	Pn	00 10 04.1	-1.7

*AZER **03** 00:13:42.8, 38.°45N×44.°40E, h2km, ml2.9*
*AFAD **03** 00:13:43.7, 38.°45N×44.°53E, h7km±2km, ML2.7*
*TEH **03** 00:13:45.3, 38.°44N×44.°44E, h6km±193km, ML2.8, Presumed earthquake*
*ISK **03** 00:13:45.5, 38.°40N×44.°35E, h5km, ML2.8/11*
ISC 03 00:13:45.4±1.1, **38.°43N**±0.°03×**44.°44E**±0.°02, **h11**km±9km, **n40**, σ**1.s37**/57, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.42	304	P	Pg	00 13 53.1	-0.6
OZAP				S	Sb	00 14 00.1	-1.2
TVAN	Van	0.81	278	P	Pg	00 14 00.3	-0.8
TVAN				S	Sn	00 14 15.7	+0.6
TVAN				IAML		00 14 27.0	
	comp=E,322nm,0.7s						
TVAN				IAML		00 14 31.0	
	comp=N,264nm,0.8s						
VANB	Van	0.84	282	Pg	Pg	00 14 00.3	-1.3
VANB				Sg	Sb	00 14 12.8	-0.5
VMUR	Van-Muradiye	0.88	310	P	Pg	00 14 01.9	-0.4
VMUR				S	Sn	00 14 16.2	-0.5
VMUR				IAML		00 14 19.0	
	comp=N,185nm,0.7s						
ISHB	Shabestar	0.94	98	Pg	Pg	00 14 02.5	-1.0
MAKU	Maku	0.95	12	Pg	Pg	00 14 02.8	-0.9
IMRD	Marand	1.03	74	Pg	Pn	00 14 05.3	-0.6
HAKT	HAKKARI	1.04	214	P	Pg	00 14 05.0	-0.4
HAKT				S	Sn	00 14 21.1	+0.4
HAKT				IAML		00 14 25.0	
	comp=N,162nm,0.5s						
HAKT	HAKKARI	1.04	214	P	Pb	00 14 05.2	-0.3
HAKT				S	Sn	00 14 21.7	+1.0
ERCV	ERCIS-VAN	1.04	305	Pg	Pn	00 14 06.0	-0.1
ERCV				Sg	Sn	00 14 21.0	+0.3
GEVA	Gevas	1.09	264	P	Pg	00 14 05.5	-0.8
GEVA				S	Sn	00 14 23.0	+1.2
GEVA				IAML		00 14 27.0	
	comp=N,149nm,0.5s						
NAX	Nakhchivan	1.11	48	S	Sn	00 14 23.9	+1.5
AKDM	Akdamar-Van	1.15	266	Pn	Pn	00 14 07.4	-0.1
AKDM				Sn	Sn	00 14 23.5	+0.2
DYDN	Diyadin	1.26	333	P	Pn	00 14 08.7	-0.4
DYDN				S	Sb	00 14 25.4	-0.1
DYDN				IAML		00 14 33.0	
	comp=N,135nm,0.7s						
DYDN				IAML		00 14 39.0	
	comp=E,105nm,0.8s						
SBZ	Shahbuz	1.30	42	S	Sg	00 14 30.2	+2.8
ORD	Ordubad	1.32	67	S	Sg	00 14 29.4	+1.6
HYR	Heyderabad	1.33	14	S	Sg	00 14 32.7	+4.5
CUKT	Cukurca	1.35	209	Pn	Pg	00 14 10.9	-0.3
ITBZ	Tabriz	1.36	98	Pg	Pn	00 14 10.2	-0.3
ADCV	BITLIS_Adilcev	1.39	286	P	Pb	00 14 11.4	-0.1
ADCV				S	Sg	00 14 33.3	+3.1
IAZR	Azarshahr	1.43	121	Pg	Pg	00 14 12.6	-0.2
IGDI	IGDIR	1.47	349	P	Pg	00 14 13.0	-0.5
IGDI				S	Sg	00 14 34.2	+1.6
IGDI				IAML		00 14 38.0	
	comp=E,113nm,1.1s						
IGDI	IGDIR	1.47	349	P	Pg	00 14 12.8	-0.7
IGDI				S	Sg	00 14 34.5	+1.9
AGRB	Hanur-Agry	1.61	316	Pn	Pg	00 14 15.7	-0.5
DORK	Agr/Tutak/Do	1.61	307	P	Pg	00 14 15.6	-0.6
DORK				S	Sg	00 14 38.2	+1.1
DORK				IAML		00 14 49.0	
	comp=E,68nm,0.8s						
MLAZ	Malazgirt-MUS	1.64	296	Pn	Pb	00 14 15.9	+0.3
GNI	Garni	1.74	8	Pn	Pg	00 14 18.3	-0.4
GURO	Guroymak-BITLI	1.89	275	Pn	Pb	00 14 19.4	-0.5
IHRS	Heris	2.05	92	Pn	Pg	00 14 23.3	-1.5
KARS	Kars	2.44	335	Pn	Pb	00 14 27.9	-1.4
QRD	Qoradiz	2.48	64	P	Pb	00 14 28.9	-1.0
QRD				S	Sg	00 15 03.8	-1.1
GDB	GEDABAY	2.51	24	S	Sg	00 15 05.6	-0.4
SVAN	Silvan-Diyarba	2.56	265	Pn	Pb	00 14 28.9	-2.4
GANJ	Ganja	2.65	33	S	Sg	00 15 09.4	-1.2
AGDM	Agdam	2.67	50	S	Sb	00 15 07.0	+1.0
SENK	Senkaya-Erzuru	2.67	324	Pn	Pb	00 14 31.3	-2.0
QZX	Qazax, Azerbai	2.73	15	P	Pb	00 14 32.9	-1.3
QZX				S	Sb	00 15 09.1	+1.6
BLQ	Beylaqan	2.75	61	P	Pb	00 14 34.7	+0.1
BLQ				S	Sg	00 15 11.4	-2.4
YRD	Yardimli	3.02	79	S	Sb	00 15 17.9	+1.7
LRK	Lerik	3.07	85	S	Sb	00 15 19.7	+2.1

*AZER **03** 00:14:48.7, 38.°41N×44.°48E, h6km, ml2.5*
*ISK **03** 00:14:54.3, 38.°36N×44.°08E, h11km, ML2.0/7*
ISC 03 00:14:52.6±1.2, **38.°43N**±0.°03×**44.°33E**±0.°03, **h24**km±15km, **n17**, σ**1.s62**/31, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VANB	Van	0.76	283	Pg	Pb	00 15 06.0	-1.1
VANB				Sg	Sb	00 15 13.5	-3.6
ERCV	ERCIS-VAN	0.97	308	Pg	Pb	00 15 11.5	+0.6
ERCV				Sg	Sb	00 15 24.2	+0.8
HAKT	HAKKARI	1.00	210	P	Pb	00 15 11.1	-0.2
HAKT				S	Sn	00 15 27.0	+2.4
AKDM	Akdamar-Van	1.06	265	Pg	Pn	00 15 11.2	-0.9
AKDM				Sg	Sn	00 15 23.8	-2.4
NAX	Nakhchivan	1.18	50	P	Pn	00 15 12.1	-1.5
NAX				S	Sn	00 15 28.6	-0.3
CUKT	Cukurca	1.31	206	Pn	Pb	00 15 17.0	+0.5
CUKT				Sn	Sb	00 15 33.8	+0.9
HYR	Heyderabad	1.35	17	P	Pn	00 15 15.9	-0.1
HYR				S	Sb	00 15 35.8	+1.6
SBZ	Shahbuz	1.36	44	P	Pn	00 15 15.3	-0.9
SBZ				S	Sb	00 15 35.1	+0.7
ORD	Ordubad	1.40	68	P	Pn	00 15 15.4	-1.2
ORD				S	Sn	00 15 34.0	-0.3
IGDI	IGDIR	1.45	352	P	Pb	00 15 18.9	-0.1
IGDI				S	Sb	00 15 41.4	+4.4
AGRB	Hanur-Agry	1.55	318	Pn	Pb	00 15 21.3	+0.6
AGRB				Sn	Sb	00 15 41.2	+1.3
MLAZ	Malazgirt-MUS	1.56	298	Pn	Pb	00 15 20.7	-0.2
MLAZ				Sn	Sb	00 15 40.1	-0.2
GURO	Guroymak-BITLI	1.81	275	Pn	Pn	00 15 23.3	+1.0
GDB	GEDABAY	2.54	25	P	Pb	00 15 35.4	-2.2
GDB				S	Sb	00 16 09.2	+0.8
GANJ	Ganja	2.70	34	P	Pn	00 15 36.6	+2.1
GANJ				S	Sb	00 16 12.0	-0.8
AGDM	Agdam	2.73	51	S	Sb	00 16 13.8	0.0
LRK	Lerik	3.15	85	S	Sb	00 16 27.5	+1.4

*SKHL **03** 00:18:16.0±0.4, 47.°00N×144.°50E, h405km±3km, mb4.6/2, msh5.0/5*
*MOS **03** 00:18:16.1±1.1, 47.°07N×144.°41E, h418km, mb3.8/7, Error ellipse: s-maj=14.6km s-min=9.9km az=108.5*
*IDC **03** 00:18:17.0±1.1, 47.°12N×144.°38E, h410km±11km, mb3.1/10, mbtmp3.9/16, Error ellipse: s-maj=17.0km s-min=13.4km az=78.0*
*JMA **03** 00:18:17.2±0.4, 47°N±3°×14°4E±°, h433km, MV3.7/22, SOUTHERN SEA OF OKHOTSK*
ISC 03 00:18:16.2±0.6, **46.°98N**±0.°05×**144.°38E**±0.°08, **h400**km, **n64**, σ**2.s25**/85, **mb3.5**/16, **3C-1D, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YSS	Yuzhno-Sakhali	1.11	269α	iPN	Pn	00 19 10.4	+2.8
YSS				eS	S	00 19 52.4	+3.2
YSS				pmax	pmax		
	comp=Z,100nm,2.9s						
YSS				pmax	pmax		
	comp=Z,120nm,0.8s						
YSS				smax	smax		
	comp=N,120nm,0.9s						
YSS				smax	smax		
	comp=E,110nm,0.9s						
YSS	Yuzhno-Sakhali	1.11	269	eP	Pn	00 19 10.3	+2.7
YSS				AMB	AMB	00 19 11.3	
	comp=E,120nm,0.6s						
YSS				eS	S	00 19 52.4	+3.2
YSS				A	A	00 19 53.9	
	comp=E,90nm,0.7s						
YSS				A	A	00 19 53.9	
	comp=E,100nm,0.7s						
JSE	Soyaes	2.38	212	P	Pn	00 19 17.1	+2.5
JSE				S	S	00 20 04.6	+2.7
JWK2	Keihoku	2.40	227	P	Pn	00 19 17.9	+3.1
JWK2				eS	S	00 20 06.2	+4.1
UGL	Uglegorsk	2.61	324	ePN	Pn	00 19 17.8	+1.6
UGL				pmax	pmax		
	comp=Z,200nm,0.9s						
UGL	Uglegorsk	2.61	324	eP	Pn	00 19 18.4	+2.2
JTKR	Abashiri--Toko	3.03	186	P	Pn	00 19 21.8	+2.1
JTKR				S	S	00 20 13.5	+2.5
JRA	Rausu	3.09	170	P	Pn	00 19 22.3	+2.1
YUK	Yuzh-Kuril'sk	3.12	160	PN	Pn	00 19 24.7	+4.3
YUK				iS	S	00 20 18.5	+6.1
YUK				pmax	pmax		
	comp=Z,72nm,0.2s						
YUK				pmax	pmax		
	comp=N,38nm,0.3s						
YUK				pmax	pmax		
	comp=E,20nm,0.2s						
YUK				smax	smax		
	comp=E,139nm,0.5s						
YUK				smax	smax		
	comp=N,89nm,0.2s						
YUK	Yuzh-Kuril'sk	3.12	160	eP	Pn	00 19 22.4	+2.0
YUK				AMB	AMB	00 19 24.5	
	comp=N,110nm,0.6s						
YUK				AMB	AMB	00 19 24.5	
	comp=N,300nm,1.5s						
YUK				eS	S	00 20 14.8	+2.4
YUK				A	A	00 20 21.0	
	comp=N,1μm,2.0s						
YUK				A	A	00 20 21.0	
	comp=N,1μm,2.0s						
YUK				A	A	00 20 22.7	
	comp=N,210nm,0.8s						
YUK				A	A	00 20 22.7	
	comp=N,140nm,0.8s						
ASAJ	Asahikawa	3.12	204	P	Pn	00 19 22.9	+2.4
	comp=N,5.7nm,0.5s,baz=31,slow=9.2,SNR=5.5						
ASAJ				S	S	00 20 16.6	+4.1
	comp=N,2.6nm,0.3s,baz=68,slow=33,SNR=1.6						
JSS	Shosan	3.13	215	eP	Pn	00 19 23.2	+2.7
GLVR	Golovnino	3.34	166	PN	Pn	00 19 25.2	+2.9
GLVR				iS	S	00 20 19.8	+4.0
GLVR				pmax	pmax		
	comp=Z,41nm,0.2s						
GLVR				smax	smax		
	comp=N,269nm,0.5s						
GLVR				smax	smax		
	comp=E,274nm,0.6s						
GLVR	Golovnino	3.34	166	eP	Pn	00 19 25.2	+2.9
GLVR				AMB	AMB	00 19 28.8	
	comp=E,40nm,0.2s						
GLVR				iS	S	00 20 19.8	+4.0
GLVR				A	A	00 20 23.8	
	comp=E,270nm,0.5s						
GLVR				A	A	00 20 23.8	
	comp=E,270nm,0.5s						
JNK	Nakash	3.40	176	eP	Pn	00 19 25.4	+2.6
JAR	Ashorobuto	3.71	187	P	Pn	00 19 27.1	+1.5
JAR				S	S	00 20 24.5	+2.7
NMR	Nemuro--Hokkai	3.73	165	ePN	Pn	00 19 25.6	-0.2
NMR				iS	S	00 20 19.8	-2.4
NMR	Nemuro--Hokkai	3.73	165	eP	Pn	00 19 25.7	-0.1
NEM2	Nemuro 2	3.74	165	eP	Pn	00 19 25.6	-0.2
NEM2				S	S	00 20 20.3	-2.0
AKK	Akkeshi	3.98	175	eP	Pn	00 19 29.0	+0.9
JAK	Akkeshi	3.99	177	eP	Pn	00 19 28.7	+0.5
JAK				S	S	00 20 25.0	-1.6
TYV	Tymovskoe	4.05	344	ePN	Pn	00 19 29.8	+1.3
TYV				eS	S	00 20 23.9	-3.5
TYV				pmax	pmax		
	comp=Z,100nm,2.1s						
TYV				smax	smax		
	comp=N,7.0nm,1.0s						
TYV				smax	smax		
	comp=E,5.0nm,1.0s						
TYV				smax	smax		
	comp=N,100nm,6.0s						
TYV				smax	smax		
	comp=E,300nm,6.0s						
TYV	Tymovskoe	4.05	344	eP	Pn	00 19 29.8	+1.3
TYV				AMB	AMB	00 19 30.1	
	comp=E,100nm,2.1s						
TYV				eS	S	00 20 29.9	+2.5
TYV				A	A	00 20 43.0	
	comp=E,470nm,5.0s						
TYV				A	A	00 20 43.0	
	comp=E,330nm,5.0s						
JCH	Churui	4.42	190	P	Pn	00 19 32.4	0.0
JCH				S	S	00 20 31.9	-2.3
JBT2	Biratori 2	4.44	200	P	Pn	00 19 34.0	+1.4
JBT2				eS	S	00 20 34.5	0.0
JNBK	Urakawa-nobuka	4.84	194	eP	Pn	00 19 36.9	+0.3
JOT	Ohata	6.09	204	eP	Pn	00 19 50.1	+0.4
JOT				eS	S	00 21 00.9	-5.1
JSI2	Shiura 2	6.57	207	eP	P	00 19 56.2	+0.4
JANG	Nango	6.92	198	S	S	00 21 17.2	-5.8
KLR	Kul'dur	8.75	290	P	Pn	00 20 20.0	+0.4
	comp=E,4.8nm,0.9s,baz=100,slow=12,SNR=9.4						
KLR	Kul'dur	8.75	290d	iPN	Pn	00 20 20.1	+0.5
KLR	Kul'dur	8.75	290	eP	P	00 20 20.2	+0.5
USRK	Ussuriysk Ar.	9.12	257	P	Pn	00 20 24.6	+0.6
	comp=E,5.0nm,0.6s,baz=56,slow=9.6,SNR=4.6						
MJAR	Matsushiro Arr	11.40	206	P	Pn	00 20 51.9	+1.4
	comp=E,1.4nm,0.4s,baz=8.7,slow=13,SNR=2.4						
KSRS	Korea Array	15.44	238	P	P	00 21 35.8	+2.4
	comp=E,2.8nm,0.6s,baz=42,slow=10.0,SNR=8.1						
HIA	Hailar	16.59	287	iP	P	00 21 47.2	+1.6
HIA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SEY	Seymchan	16.61	13	P	P	00 21 45.4	-0.2
	comp=Z,2.9nm,0.8s,baz=204,slow=8.1,SNR=13						
SEY	Seymchan	16.61	13	iP	P	00 21 45.5	-0.1
SEY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SEY	Seymchan	16.61	13	eP	P	00 21 45.5	-0.1
ULN	Ulaanbaatar	25.12	286	iP	P	00 23 07.0	+0.2
ULN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ULN	Ulaanbaatar	25.12	286	eP	P	00 23 07.1	+0.2
SONM	Songino Array	25.55	286	P	P	00 23 12.0	+1.3
	comp=Z,3.6nm,0.9s,baz=96,slow=8.9,SNR=17						
	comp=Z,3.6nm,0.9s						
SONM	Songino Array	25.55	286	eP	P	00 23 13.2	+2.5
SONM				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LZDM	Lanzhou Array	32.08	265	P	P	00 24 08.2	0.0
	comp=Z,0.7nm,0.3s,baz=18,slow=6.1,SNR=1.4						
	comp=Z,0.7nm,0.3s						
DGZ	Jazzator, Alta	37.18	296	iP	P	00 24 50.3	-0.6
DGZ				pmax	pmax		
	comp=Z,2.0nm,2.0s						
ZALV	Zalesovo Beam	37.54	303	P	P	00 24 53.1	-0.5
	comp=Z,0.4nm,0.3s,baz=64,slow=13,SNR=2.1						
	comp=Z,0.4nm,0.3s						
ILAR	Eielson Array	40.10	38	P	P	00 25 13.7	-0.8
	comp=Z,0.8nm,0.9s,baz=266,slow=6.3,SNR=8.1						
	comp=Z,0.8nm,0.9s						
MK31	Makanchi Array	41.43	293	iP	P	00 25 24.4	-1.1
MKAR	Makanchi Array	41.43	293	P	P	00 25 24.6	-0.8
	comp=Z,1.6nm,0.7s,baz=72,slow=7.9,SNR=23						
	comp=Z,1.6nm,0.7s						
KURK	Kurchatov	42.16	300	P	P	00 25 30.1	-1.0
KURK	Kurchatov	42.16	300	eP	P	00 25 30.1	-1.0
KURBB	Kurchatov Arra	42.24	300	P	P	00 25 30.1	-1.8
	comp=Z,0.6nm,0.2s,baz=72,slow=9.2,SNR=3.5						
	comp=Z,0.6nm,0.2s						
BVAR	Borovoye Array	45.98	306	P	P	00 26 00.4	-0.7
	comp=Z,0.4nm,0.7s,baz=26,slow=10,SNR=2.4						
	comp=Z,0.4nm,0.7s						
ARTI	Arti	50.78	314c	iP	P	00 26 36.2	-0.9
ARTI						00 28 35.0	
ARTI				S	S	00 33 19.3	-1.9
ARTI				SS	SS	00 36 57.7	-3.4
ARTI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CHGR	Chuyangaron	53.83	290	iP	P	00 26 58.6	-1.0
CHGR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
FINES	FINESS Array B	61.11	331	P	P	00 27 47.6	-1.6
	comp=Z,1.8nm,1.0s,baz=38,slow=7.1,SNR=3.5						
	comp=Z,1.8nm,1.0s						
FINES	FINESS Array B	61.11	331	iP	P	00 27 47.0	-2.1
FINES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KIV	Kislovodsk	66.18	309	eP	P	00 28 22.5	+0.2
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIV	Kislovodsk	66.18	309	eP	P	00 28 22.5	+0.2
KBZ	Khabaz	66.22	309	P	P	00 28 21.5	-0.9
	comp=Z,1.4nm,0.8s,baz=96,slow=9.7,SNR=3.7						
	comp=Z,1.4nm,0.8s						
KBZ	Khabaz	66.22	309	iP	P	00 28 21.9	-0.5
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KBZ	Khabaz	66.22	309	eP	P	00 28 21.9	-0.5
WRA	Warramunga Arr	67.22	190	P	P	00 28 28.4	-0.5
	comp=Z,1.6nm,0.9s,baz=0.4,slow=6.2,SNR=5.3						
	comp=Z,1.6nm,0.9s						
ASAR	Alice Springs	70.95	190	P	P	00 28 52.9	+1.4
	comp=Z,2.7nm,0.7s,baz=3.2,slow=5.8,SNR=16						

*UPA **03** 00:19:54.9±1.1, 8.°41N×83.°12W, h17km±3km, ML3.2, MW4.1, Presumed earthquake*
*UCR **03** 00:19:54.8±0.8, 8.°37N×83.°11W, h22km±3km, MW4.1, Presumed earthquake*
ISC 03 00:19:55.0±0.9, **8.°40N**±0.°02×**83.°11W**±0.°02, **h18**km±3km, **n64**, σ**0.s98**/93, **6C-18D, Costa Rica**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PIRO	Carate, Puerto	0.22	270	eP	Pg	00 20 00.2	-0.1
PIRO				eS	Sg	00 20 05.8	+1.9
PIRO	Carate, Puerto	0.22	270	⇑eP	Pb	00 20 00.0	-0.4
PIRO				eS	Sg	00 20 04.5	+0.6
FITO	Golfito	0.22	349	⇓eP	Pb	00 20 00.1	-0.3
FITO				⇑eS	Sg	00 20 04.5	+0.6
PTJ1	Puerto Jimnez	0.23	305	eP	Pg	00 20 00.8	+0.4
PTJ1	Puerto Jimnez	0.23	305	eP	Pg	00 20 00.9	+0.5
NELY	Ciudad Neily	0.29	34	iP	Pg	00 20 01.6	+0.2
NELY	Ciudad Neily	0.29	34	⇓eP	Pg	00 20 01.6	+0.1
LPPC	Paso Canoas	0.30	64	eP	Pg	00 20 01.4	-0.2
LPPC				eS	Sb	00 20 06.9	+0.5
PTPM	Petroterminale	0.30	131	eP	Pg	00 20 01.5	-0.1
PTPM				eS	Sb	00 20 07.6	+1.0
PTPA	Petro Terminal	0.31	130	eP	Pg	00 20 01.3	-0.5
PTPA				eS	Sb	00 20 07.5	+0.7
LESP3	La Esperanza,	0.32	89	eP	Pg	00 20 01.5	-0.3
LESP3				eS	Sn	00 20 14.7	+3.7
LIMO3	Limones	0.39	141	eP	Pg	00 20 02.6	-0.4
LIMO3				eS	Sb	00 20 10.2	+1.2
LMNES	Limones	0.39	140	⇓eP	Pg	00 20 02.5	-0.6
VITO	San Vito	0.44	19	eP	Pb	00 20 04.4	+0.1
MLIR3	Monte Lirio, C	0.48	36	eP	Pb	00 20 05.2	+0.2
MLIR3				eS	Sn	00 20 15.5	+0.3
RSRNO	Rio Sereno	0.48	31	eP	Pb	00 20 05.1	+0.1
SCLRA	Santa Clara, W	0.54	37	iP	Pg	00 20 06.1	+0.3
SCLRA	Santa Clara, W	0.54	37	⇓eP	Pg	00 20 06.1	+0.2
BRU2	Volcan	0.57	47	iP	Pb	00 20 06.4	-0.1
BRU2				⇓iP	Pb	00 20 06.5	-0.1
BRU2				eS	Sg	00 20 15.4	+1.3
BRU2				eS	Sb	00 20 15.6	+1.3
BRU2	Volcan	0.57	47	⇓eP	Pb	00 20 06.4	-0.1
CLLRA	Cordillera,	0.60	55	iP	Pg	00 20 07.0	0.0
CLLRA	Cordillera,	0.60	55	eP	Pg	00 20 06.9	0.0
ALCO	Alturas Coton,	0.61	27	⇓eP	Pb	00 20 06.8	-0.4
EDP2	Potrero Grande	0.61	354	eP	Pg	00 20 07.2	0.0
JEFFS	S de V. Baru	0.63	65	iP	Pb	00 20 07.3	-0.2
JEFFS	S de V. Baru	0.63	65	⇑eP	Pb	00 20 07.2	-0.3
FIMO	Fila Mora	0.63	338	⇓eP	Pb	00 20 07.5	-0.1
PANP	Palmar Norte	0.65	328	⇓eP	Pb	00 20 07.2	-0.6
DVD	David	0.65	87	eP	Pb	00 20 07.2	-0.7
DVD				eS	Sg	00 20 17.1	+0.4
PTAR3	Potrerillos Ar	0.67	65	eP	Pb	00 20 08.0	-0.3
PTAR3				eS	Sg	00 20 18.4	+1.0
PEDE3	Pedregal, Chir	0.68	92	eP	Pb	00 20 07.4	-0.9
PEDE3				eS	Sg	00 20 17.8	+0.3
LOCO3	Loma Colorada,	0.69	89	eP	Pb	00 20 07.6	-0.8
LOCO3				eS	Sg	00 20 17.8	+0.1
LOMA3	Las Lomas, Chi	0.71	88	eP	Pb	00 20 08.1	-0.8
LOMA3				eS	Sb	00 20 18.3	0.0
BQTLY	Boquete Panama	0.73	61	eP	Pb	00 20 08.8	-0.6
BQSF3	Alto Boquete,	0.75	63	eP	Pb	00 20 08.8	-0.8
BQSF3				eS	Sg	00 20 20.3	+0.5
LNBQ3	Los Naranjos,	0.77	60	eP	Pb	00 20 09.1	-0.8
LNBQ3				eS	Sg	00 20 20.4	+0.1
CHIR3	Chiriqui UPA,	0.77	91	eP	Pb	00 20 08.9	-1.0
CHIR3				eS	Sg	00 20 20.5	0.0
BURE	Buenos Aires	0.80	344	⇓eP	Pb	00 20 10.3	-0.1
PSOM3	Paja de Sombre	0.83	70	eP	Pb	00 20 09.9	-1.0
PSOM3				eS	Sb	00 20 22.0	+0.2
DRK0	Durika	0.86	351	iP	Pb	00 20 09.1	-2.5
DRK0				eP	Pb	00 20 09.1	-2.5
DRK0				eS	Sb	00 20 22.4	-0.5
DRK0	Durika	0.86	351	⇓eP	Pb	00 20 09.1	-2.5
EDPE	Pejibaye, P	0.88	329	⇓eP	Pb	00 20 11.1	-0.7
SAJE	San Jernim	1.02	337	⇓eP	Pb	00 20 13.4	-0.8
PBNVO	Pueblo Nuevo,	1.03	62	iP	Pb	00 20 12.8	-1.4
PBNVO				eS	Sb	00 20 27.2	-0.3
PBNVO	Pueblo Nuevo,	1.03	62	⇑eP	Pb	00 20 12.9	-1.4
RBALA	Bur	1.06	63	iP	Pb	00 20 13.7	-1.1
RBALA				eS	Sb	00 20 27.8	-0.6
RBALA				IAML		00 20 28.7	
	comp=Z,577nm,0.5s						
RBALA	Bur	1.06	63	⇑eP	Pb	00 20 13.5	-1.3
CHGR2	Aguacate	1.09	61	eP	Pn	00 20 14.3	-1.1
CHGR2				eS	Sb	00 20 29.1	-0.3
CNI2	El Empalme, Bo	1.20	32	eP	Pn	00 20 16.5	-0.4
CNI2				eS	Sn	00 20 33.1	+0.5
REME3	Remedios, Chir	1.28	98	eP	Pn	00 20 16.8	-1.1
RGM0	Gandoca	1.28	23	eP	Pg	00 20 19.4	-0.4
LAES	El Progreso Va	1.35	3	⇓eP	Pb	00 20 19.6	-0.2
KKNTU	Kakintº	1.36	71	⇑eP	Pn	00 20 18.0	-1.2
NANC3	Nancito, Chiri	1.37	97	eP	Pn	00 20 18.4	-0.9
NANC3				eS	Sb	00 20 37.2	-0.3
VERH	Veragua Rainfo	1.52	357	⇓eP	Pn	00 20 21.7	+0.4
RESJ	San Isidro (Tu	1.70	342	⇓eP	Pb	00 20 24.7	-1.1
ABRB	Las Abras (San	1.70	339	eP	Pn	00 20 24.8	+0.7
LCOCO	El Coco	1.73	345	⇓eP	Pb	00 20 25.2	-1.0
MESA3	La Mesa, Verag	1.92	97	eP	Pn	00 20 25.7	-1.1
GMAL	Guarumal, Vera	1.96	109	eP	Pn	00 20 27.0	-0.4
TRT2	Tortugero	2.23	344	eP	Pn	00 20 32.6	+1.5
MARI3	Mariato, Verag	2.23	109	eP	Pn	00 20 31.4	+0.3
CACAO	El Cacao, Vera	2.46	115	eP	Pn	00 20 34.2	-0.1
JTS	Las Juntas de	2.61	316	eP	Pg	00 20 43.4	-1.7
JTS				eS	Sg	00 21 16.4	-2.7

*AFAD **03** 00:21:44.9, 38.°35N×44.°56E, h7km±1km, ML2.2*
*AZER **03** 00:21:46.5, 38.°42N×44.°41E, h7km, ml2.5*
*ISK **03** 00:21:48.1, 38.°42N×44.°34E, h2km, ML2.4/6*
ISC 03 00:21:48.3±1.1, **38.°41N**±0.°03×**44.°40E**±0.°02, **h13**km±9km, **n22**, σ**1.s42**/38, **Turkey-Iran border region**

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

OZAP	Van, Ozalp-Mer	0.41	308	P	Pg	00 21 55.8	-0.7
OZAP				S	Sg	00 22 02.5	+0.4
TVAN	Van	0.79	279	P	Pg	00 22 02.5	-1.2
TVAN				S	Sn	00 22 16.1	-1.1
TVAN				IAML		00 22 29.0	
	comp=E,120nm,1.0s						
TVAN				IAML		00 22 37.0	
	comp=N,135nm,1.1s						
VANB	Van	0.82	284	Pg	Pg	00 22 03.3	-0.8
VANB				Sg	Sb	00 22 14.3	-1.1
VMUR	Van-Muradiye	0.87	312	P	Pb	00 22 04.3	-1.0
VMUR				S	Sn	00 22 18.4	-0.7
VMUR				IAML		00 22 22.0	
	comp=N,68nm,0.7s						
VMUR				IAML		00 22 25.0	
	comp=E,49nm,0.5s						
HAKT	HAKKARI	1.01	213	P	Pn	00 22 07.9	-0.5
HAKT				S	Sn	00 22 23.6	+1.1
GEVA	Gevas	1.06	265	P	Pb	00 22 07.5	-1.1
GEVA				S	Sn	00 22 24.5	+0.8
GEVA				IAML		00 22 29.0	
	comp=N,58nm,0.5s						
GEVA				IAML		00 22 29.0	
	comp=E,38nm,0.4s						
AKDM	Akdamar-Van	1.12	266	Pg	Pb	00 22 08.6	-1.0
AKDM				Sg	Sn	00 22 25.2	0.0
NAX	Nakhchivan	1.15	48	S	Sg	00 22 26.3	+1.0
CUKT	Cukurca	1.32	209	Pn	Pg	00 22 13.9	+0.3
CUKT				Sn	Sg	00 22 32.9	+2.1
SBZ	Shahbuz	1.33	42	S	Sg	00 22 32.6	+1.3
ORD	Ordubad	1.35	67	S	Sg	00 22 31.8	0.0
HYR	Heyderabad	1.35	15	S	Sg	00 22 34.9	+3.0
ADCV	BITLIS_Adilcev	1.37	287	P	Pg	00 22 14.3	-0.4
ADCV				S	Sg	00 22 35.0	+2.4
ADCV				IAML		00 22 39.0	
	comp=N,25nm,0.4s						
IGDI	IGDIR	1.48	350	P	Pg	00 22 16.1	-0.6
IGDI				S	Sg	00 22 38.4	+2.5
AGRB	Hanur-Agry	1.60	317	Pn	Pb	00 22 17.7	-0.1
AGRB				Sn	Sg	00 22 39.4	-0.5
GNI	Garni	1.76	9	Pn	Pb	00 22 20.6	+0.1
GURO	Guroymak-BITLI	1.86	275	Pn	Pb	00 22 21.4	-0.9
QRD	Qoradiz	2.51	64	P	Pb	00 22 33.0	-0.2
QRD				S	Sg	00 23 06.5	-2.3
GDB	GEDABAY	2.54	24	P	Pb	00 22 32.3	-1.4
GDB				S	Sg	00 23 08.0	-1.8
GANJ	Ganja	2.68	33	P	Pb	00 22 35.3	-0.8
GANJ				S	Sb	00 23 11.2	+2.2
YRD	Yardimli	3.05	79	P	Pb	00 22 39.8	-2.7
YRD				S	Sb	00 23 19.8	+0.2
LRK	Lerik	3.10	84	P	Pn	00 22 39.0	+2.0
LRK				S	Sb	00 23 21.5	+0.4

*HEL **03** 00:22:59.3±0.4, 67°.89N×20°.01E, h0km, ML1.5, Explosion*
*UPP **03** 00:23:00.0±0.0, 67°.84N×20°.21E, h0km, ML2.5, Suspected explosion*
ISC 03 00:22:59.1±0.8**, 67°.86N**±0°.02×**20°.36E**±0°.03**, h0km, n19, σ0s99**/33**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	Kurravaara	0.10	354	P	Pg	00 23 02.6	+1.6
KUA				S	Sg	00 23 04.4	+2.1
RATU	Laukkuluspa	0.29	264	P	Pg	00 23 04.7	-0.1
RATU				S	Sg	00 23 07.9	-0.6
NIKU	Nikkaluokta	0.50	272	P	Pg	00 23 08.6	-0.2
NIKU				S	Sg	00 23 14.9	-0.4
LANU	Lannavaara	0.65	72	P	Pb	00 23 13.3	0.0
LANU				S	Sb	00 23 22.6	-0.2
LANU	Lannavaara	0.65	72	PG	Pb	00 23 13.3	0.0
LANU				SG	Sb	00 23 22.6	-0.2
DUNU	Dundret	0.74	174	P	Pg	00 23 13.8	+0.5
DUNU				S	Sg	00 23 24.0	+1.1
SALU	Saltoluokta	0.86	237	P	Pg	00 23 15.1	-0.5
SALU				S	Sg	00 23 25.9	-0.7
KIF	Kilpisjarvi	1.17	8	eP	Pn	00 23 22.5	-0.1
KIF	Kilpisjarvi	1.17	8	PN	Pn	00 23 22.8	+0.2
KIF				smax	smax	00 23 35.6	
	comp=Z,6.1nm,0.2s						
KIF				SN	Sn	00 23 38.5	-0.7
HEF	Hetta	1.35	64	eP	Pg	00 23 24.0	-1.1
HEF	Hetta	1.35	64	PG	Pb	00 23 26.2	+0.9
HEF				smax	smax	00 23 43.1	
	comp=Z,2.8nm,0.2s						
HEF				SG	Sn	00 23 44.4	+0.5
ERTU	Ertsjaerv	1.49	151	P	Pg	00 23 27.5	-0.1
ERTU	Ertsjaerv	1.49	151	PG	Pg	00 23 27.8	+0.2
ERTU				SN	Sn	00 23 49.0	+1.7
KLF	Kolari	1.52	113	PG	Pg	00 23 28.7	+0.6
KLF				smax	smax	00 23 48.8	
	comp=Z,2.1nm,0.2s						
KLF				SG	Sn	00 23 50.0	+2.1
HARU	Harads	1.72	172	P	Pb	00 23 31.2	-0.3
TOF	Tornio	2.37	137	PB	Pb	00 23 42.0	-0.5
TOF				smax	smax	00 24 12.9	
	comp=Z,1.4nm,0.2s						
TOF				SG	Sg	00 24 14.2	-0.9
ARA0	ARCESS Array S	2.52	46	PB	Pb	00 23 44.3	-1.0
ARA0				SG	Sg	00 24 18.7	-1.4
RNF	Rovaniemi	2.53	117	PB	Pb	00 23 45.2	-0.2
RNF				SB	Sg	00 24 19.5	-0.8
KEV	Kevo	3.08	49	SG	Sg	00 24 35.7	-2.1

*FUNV **03** 00:23:06.2, 6°.46N×73°.10W, h124km, MW3.6, Presumed earthquake*
*RSNC **03** 00:23:09.3±0.0, 7°N±1°×7°3W±°, h148km±2km, M3.0, ML2.8, MLv3.4*
ISC 03 00:23:08.2±1.3**, 6°.87N**±0°.03×**73°.11W**±0°.04**, h151**km±8km**, n35, σ1s26**/60**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.29	194	P	Pn	00 23 29.3	+0.1
BARC				S	Sn	00 23 44.3	-0.8
PAMC	Pamplona, Colo	0.62	41	P	Pn	00 23 32.1	+1.1
PAMC				S	Sn	00 23 49.1	+0.9
BRJC	Barrancabermej	0.63	279	P	Pn	00 23 31.0	+0.6
BRJC				S	Sn	00 23 48.3	+1.0
RUSC	La Rusia	0.97	178	P	Pn	00 23 33.2	-0.3
RUSC				S	Sn	00 23 51.6	-1.1
CAPV	Capacho	1.27	39	eS	Sn	00 23 55.6	-1.2
OCAC	Ocana	1.37	351	P	Pn	00 23 37.6	+0.8
OCAC				S	Sn	00 23 59.4	+0.8
PTBC	PUERTO BERRIO,	1.37	256	P	Pn	00 23 36.1	-0.5
PTBC				S	Sn	00 23 57.1	-1.2
SPBC	San Pablo de B	1.54	218	P	Pn	00 23 38.3	-0.2
SPBC				S	Sn	00 24 00.0	-1.6
NORC	Norcasia	2.18	233	P	Pn	00 23 45.8	+0.2
NORC				S	Sn	00 24 13.0	-1.3
CHIC	Chingaza	2.31	195	P	Pn	00 23 47.3	-0.3
CHIC				S	Sn	00 24 16.6	-1.2
ROSC	El Rosal	2.35	211	P	Pn	00 23 48.5	+0.5
ROSC				S	Sn	00 24 17.4	-1.2
HELC	Santa Helena	2.49	254	P	Pn	00 23 50.2	+0.5
HELC				S	Sn	00 24 21.1	-0.5
CVER	Cruz Verde, Cu	2.52	202	P	Pn	00 23 51.0	+0.8
CVER				S	Sn	00 24 26.8	+4.3
UREC	San Jos de Ur	2.55	290	P	Pn	00 23 49.6	-0.5
UREC				S	Sn	00 24 21.2	-1.2
SOCV	Socops	2.64	58	eS	Sn	00 24 22.5	-1.8
GUY2C	Guyana, Caldas	2.77	234	P	Pn	00 23 53.7	+0.4
GUY2C				S	Sn	00 24 28.0	0.0
VILC	Villavicencio,	2.80	192	P	Pn	00 23 53.1	-0.2
VILC				S	Sn	00 24 27.8	-0.4
RECRC	Villamaria, Ca	2.93	230	P	Pn	00 23 56.1	+0.8
RECRC				S	Sn	00 24 33.9	+2.4
CBOC	Ciudad Bolivar	3.05	251	P	Pn	00 23 57.6	+1.1
CBOC				S	Sn	00 24 33.5	-0.2
DBBC	Dabeiba	3.08	273	P	Pn	00 23 57.1	+0.4
DBBC				S	Sn	00 24 34.1	-0.1
SDV	Santo Domingo	3.17	51	P	Pn	00 23 58.9	+0.9
SDV				S	Sn	00 24 36.1	-0.4
ARGC	Ariguani, Magd	3.17	339	P	Pn	00 24 00.0	+2.1
MCQV	Machiques	3.21	10	eP	Pn	00 23 59.6	+1.3
ANIL	Santa Ana	3.28	224	P	Pn	00 24 00.1	+0.5
ANIL				S	Sn	00 24 40.2	+0.9
APAC	Apartado, Choc	3.59	287	P	Pn	00 24 03.8	+0.6
APAC				S	Sn	00 24 45.5	-0.3
PRAC	Prado	3.60	209	P	Pn	00 24 02.8	-0.6
PRAC				S	Sn	00 24 45.0	-1.2
ORTC	Ortega, Tolima	3.63	216	P	Pn	00 24 03.7	-0.1
ORTC				S	Sn	00 24 49.2	+2.3
SJCC	San Jacinto, C	3.63	326	P	Pn	00 24 03.2	-0.7
SJCC				S	Sn	00 24 44.8	-2.2
PLMC	San Jos del P	3.71	238	P	Pn	00 24 05.2	+0.3
PLMC				S	Sn	00 24 47.8	-1.0
URMC	La Uribe, Meta	3.82	199	P	Pn	00 24 06.0	-0.3
YOTC	Yotoco, Valle	4.31	228	P	Pn	00 24 12.3	-0.5
TEPV	Terepaima	4.95	51	eP	Pn	00 24 20.0	-1.0
MAPV	Macapo	5.46	57	eP	Pn	00 24 26.5	-1.4
BENV	Beln	6.26	60	eP	Pn	00 24 36.5	-2.1
CACV	CAICARA DEL OR	6.56	84	eP	Pn	00 24 45.5	+3.0

*CATAC **03** 00:51:38.1±0.8, 14°N±4°×9°3W±°, h2km±3km, M3.9/16, MLv3.9/16, Error ellipse: s-maj=9.1km s-min=3.6km az=36.4, confirmed*
*MEX **03** 00:51:39.2±0.5, 14°.33N×93°.18W, h10km, MD4.1*
*GCG **03** 00:51:41.4±1.5, 14°.36N×92°.89W, h32km±44km, MD4.1, ML3.6, Presumed earthquake*
ISC 03 00:51:36.8±1.7**, 14°.49N**±0°.05×**93°.13W**±0°.03**, h7**km±11km**, n43, σ1s64**/66**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.93	63	eP	Pb	00 51 55.9	+0.6
THIG				eS	Sn	00 52 08.7	-1.2
THIG		0.93	63	i P	Pb	00 51 56.0	+0.8
THIG				i S	Sb	00 52 08.2	+0.3
THIG				IAML		00 52 13.2	
	comp=E,1µm,0.4s						
PATR	El Naranjo	1.07	54	eP	Pb	00 51 58.0	+0.3
PATR				eS	Sn	00 52 12.0	-1.5
SMCA	Catarina	1.08	70	i P	Pg	00 51 58.0	+0.4
CHUJ	Union Juarez	1.16	58	eP	Pg	00 51 59.3	+0.3
CHUJ				eS	Sb	00 52 14.2	-0.3
PAVE	Pavencul	1.16	53	eP	Pb	00 51 59.4	+0.1
PAVE				eS	Sn	00 52 14.7	-1.0
PCIG		1.21	356	eP	Pn	00 52 01.4	+1.3
PCIG				eS	Sn	00 52 16.1	-0.7
RTAL	Retalhuleu	1.39	88	eP	Pn	00 52 01.8	-0.8
RTAL				eS	Sb	00 52 18.4	-2.5
RTAL	Retalhuleu	1.39	88	P	Pn	00 52 02.0	-0.6
RTAL				S	Sb	00 52 21.1	+0.1
QUEO	Labor Ovalle	1.61	76	i P	Pn	00 52 05.9	0.0
QUEO				i S	Sn	00 52 25.2	-1.8
STG2	El Palmar, Qui	1.70	91	i P	Pn	00 52 03.0	-4.0
STG2				IAML		00 52 30.3	
	comp=E,4µm,0.3s						
SOKI	Kika Raxquin	1.70	79	i P	Pn	00 52 08.0	+0.8
SOKI				eS	Sn	00 52 27.6	-1.8
SOKI				IAML		00 52 43.3	
	comp=N,480nm,0.7s						
STG8	El Palmar, Qui	1.72	91	i P	Pn	00 52 03.5	-3.9
STG8				IAML		00 52 24.7	
	comp=E,1µm,0.2s						
STG5	El Palmar, Qui	1.73	93	i P	Pn	00 52 03.3	-4.0
STG5				i S	Sn	00 52 20.7	-8.9
CARR	Arriaga	1.91	337	eP	Pb	00 52 12.2	+0.3
CARR				eS	Sb	00 52 36.2	+0.3
CCIG	Comitan	2.02	28	eP	Pg	00 52 15.5	-0.2
CCIG				eS	Sg	00 52 42.4	+0.5
CCIG	Comitan	2.02	28	P	Pg	00 52 15.4	-0.2
CCIG	Comitan	2.02	28	i P	Pg	00 52 15.5	-0.2
TGBT	Tuxtla Gutierr	2.28	1	eP	Pb	00 52 17.9	-0.3
TGBT				eS	Sb	00 52 46.8	+0.2
TGIG		2.28	0	eP	Pb	00 52 18.4	+0.2
TGIG				eS	Sg	00 52 47.2	-2.8
TGIG		2.28	0	i P	Pb	00 52 18.4	+0.2
FG16	Alotenango, Sa	2.54	94	i P	Pn	00 52 13.4	-5.3
APG	El Apazote	2.63	78	i P	Pn	00 52 20.9	+1.1
UXUV	UXUV	2.98	341	eP	Pb	00 52 28.7	-1.5
UXUV				eS	Sb	00 53 05.2	-1.6
CMIG	Matias Romero	3.09	327	eP	Pn	00 52 27.6	+1.5
CMIG				eS	Sn	00 53 04.2	+0.9
HUIG	Huatulco	3.15	294	eP	Pn	00 52 28.0	+1.3
HUIG				eS	Sn	00 53 05.1	+0.5
SLOZ	Alcaldia de Sa	3.27	98	P	Pn	00 52 29.7	+1.2
LOAL	Lomas de Alarc	3.28	98	P	Pn	00 52 29.7	+1.0
NUBE	Las Nubes	3.30	100	P	Pn	00 52 28.9	0.0
NUBE				S	Sn	00 53 09.8	+1.2
NUBE	Las Nubes	3.30	100	i P	Pn	00 52 28.8	-0.2
CEVE	Cerro Verde	3.46	100	P	Pn	00 52 31.9	+0.6
CEVE				S	Sn	00 53 13.3	+0.6
MTO3	Montecristo	3.65	91	P	Pn	00 52 34.7	+0.8
MTO3				S	Sn	00 53 17.9	+0.6
JAYA	Jayaque - finc	3.67	103	P	Pn	00 52 35.1	+1.1
PMON	Piamonte	3.78	101	P	Pn	00 52 36.6	+1.0
PMON				S	Sn	00 53 20.9	+0.5
PETF	Flores	3.96	52	eP	Pn	00 52 40.5	+2.6
PETF	Flores	3.96	52	P	Pn	00 52 40.7	+2.8
NEUV	Arroyo Zacate	4.11	322	eP	Pn	00 52 41.3	+1.3
NEUV				eS	Sn	00 53 29.1	+0.7
PEIG	Puerto Escondi	4.16	292	eP	Pn	00 52 43.7	+3.0
PEIG				eS	Sn	00 53 27.0	-2.6
SCIG	Sabancuy	4.83	22	P	Pn	00 52 53.5	+3.6
YOIG	Yosondua	4.86	300	eP	Pn	00 52 51.9	+1.2
YOIG				eS	Sn	00 53 49.4	+2.0
PNIG	Pinotepa	5.18	292	eP	Pn	00 52 57.2	+2.4
PNIG				eS	Sn	00 53 52.0	-2.8
TOIG	Toxpalan	5.21	314	eP	Pn	00 52 56.8	+1.5
TOIG				eS	Sn	00 53 50.7	-5.0
TXIG	Tlaxiaco	5.24	302	eP	Pn	00 52 59.2	+3.3
TXIG				eS	Sn	00 53 53.1	-3.6

*IDC **03** 01:06:36.6±0.6, 54°.69S×144°.22E, h0km, mb4.4/11, mbtmp4.4/11, MS4.2/34, Error ellipse: s-maj=32.2km s-min=14.9km az=83.0*
*NEIC **03** 01:06:38.3±2.8, 54°.62S±0°.02×144°.2E±0°.2, h10km±1km, mb5.0/48, Error ellipse: s-maj=21.1km s-min=3.4km az=88.0*
*GCMT **03** 01:06:40.3±0.2, 54°.67S±0°.01×144°.05E±0°.02, h12km, MW5.0/100, Moment Tensor Solution. s30,c39; s100,c156; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.51±.09; $M_{\theta\theta}$1.28±.08; $M_{\phi\phi}$0.23±.09; $M_{r\theta}$-1.07±.26; $M_{\theta\phi}$-3.41±.06; $M_{\phi r}$-0.23±.24; Best double couple: $M_0$3.72500×10^{16} NP1:ϕ_s353.00000°, δ65.00000°, λ-16.00000°. NP2:ϕ_s90.00000°, δ75.00000°, λ-154.00000°. Principal axes: T 4.2850, Plg7.0000°, Azm220.0000°; N -1.1130, Plg61.0000°, Azm118.0000°; P -3.1660, Plg29.0000°, Azm313.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 03 01:06:38.3±0.3**, 54°.66S**±0°.07×**144°.3E**±0°.1**, h10km, n188, σ1s07**/159**, mb5.0**/36**, MS4.1**/35**, 2D, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOO	Toolangi	17.11	3		P	01 10 39.7	+0.5
LBZ	Lake Benmore	19.60	69	P	P	01 11 06.5	+0.1
CAN	Canberra	19.62	12		Pn	01 11 07.9	-0.1
RPZ	Rata Peaks	20.51	69	P	P	01 11 15.4	-1.0
	10nm,1.1s,baz=13,slow=8.4,SNR=3.1						
RPZ				LR	LR	01 17 48.5	
	comp=Z,3µm,19.0s,baz=214,slow=33						
	10nm,1.1s						
RPZ	Rata Peaks	20.51	69	P	P	01 11 16.2	-0.2
DSZ	Denniston Nort	22.27	66	P	P	01 11 35.5	+0.2
DSZ				IAmb	IAmb	01 11 40.8	
	comp=Z,62nm,1.1s						
BBOO	Buckleboo	22.60	342		P	01 11 38.6	-0.3
THZ	Tophouse	22.84	67		P	01 11 43.5	+2.0
THZ				IAmb	IAmb	01 11 54.8	
	comp=Z,48nm,1.1s						
STKA	Stephens Creek	22.85	354	P	P	01 11 41.8	+0.2
	comp=Z,11nm,1.0s,baz=171,slow=11,SNR=9.5						
STKA				LR	LR	01 19 22.1	
	comp=Z,518nm,19.3s,baz=176,slow=34						
	comp=Z,11nm,1.0s						
STKA	Stephens Creek	22.85	354		P	01 11 41.4	-0.2
QRZ	Quartz Range	23.30	65	P	P	01 11 46.6	+0.5
TKNZ	Takaka Hill	23.38	66	P	P	01 11 48.8	+1.9
TUWZ	Tuamarina	23.63	68	P	P	01 11 52.0	+2.6
VNDA	Vanda	23.81	171	P	P	01 11 50.9	+0.1
	comp=Z,12nm,1.2s,baz=139,slow=6.3,SNR=2.6						
VNDA				LR	LR	01 18 52.2	
	comp=Z,200nm,18.9s,baz=348,slow=31						
	comp=Z,12nm,1.2s						
VNDA	Vanda	23.81	171	P	P	01 11 50.8	0.0
SNZO	South Karori	24.13	69	P	P	01 11 53.5	-0.5
SNZO				IAmb	IAmb	01 11 55.7	
	comp=Z,65nm,1.1s						
ARMA	Armidale	24.80	15	P	P	01 12 00.6	+0.2
MRZ	Mangatainoka R	25.05	69		P	01 12 03.9	+1.4
MRZ				IAmb	IAmb	01 12 14.8	
	comp=Z,60nm,1.2s						
BKZ	Black Stump Fm	26.61	68	P	P	01 12 18.4	+1.7
BKZ				IAmb	IAmb	01 12 28.7	
	comp=Z,41nm,1.4s						
INKA	Innaminka	27.02	353	P	P	01 12 20.9	+0.6
RTZ	Ruatahuna	27.27	67		P	01 12 23.8	+1.1
RTZ				IAmb	IAmb	01 12 33.9	
	comp=Z,36nm,1.3s						
URZ	Urewera	27.60	67	LR	LR	01 22 19.2	
	comp=Z,2µm,20.8s,baz=219,slow=34						
H01W1	Cape Leeuwin H	28.77	301	T	T	01 42 35.6	
	baz=142,slow=75,SNR=39						
H01W2	Cape Leeuwin H	28.77	301	T	T	01 42 37.4	
	baz=142,slow=75,SNR=40						
H01W3	Cape Leeuwin H	28.78	301	T	T	01 42 36.7	
	baz=142,slow=75,SNR=38						
NWAO	Narrogin (SRO)	28.89	308	LR	LR	01 21 24.8	
	comp=Z,956nm,21.2s,baz=122,slow=31						
NWAO	Narrogin (SRO)	28.89	308	P	P	01 12 34.9	-2.2
NWAO				IAmb	IAmb	01 12 37.3	
	comp=Z,46nm,1.2s						
EIDS	Eidsvold	29.69	13	P	P	01 12 45.0	+0.8
EIDS				IAmb	IAmb	01 12 59.4	
	comp=Z,50nm,1.8s						
ASAR	Alice Springs	31.91	342	P	P	01 13 03.9	+0.1
	comp=Z,3.5nm,1.0s,baz=166,slow=9.0,SNR=15						
ASAR				PcP	PcP	01 15 53.5	-0.6
	comp=Z,1.2nm,0.9s,baz=157,slow=2.6,SNR=4.6						
ASAR				LR	LR	01 24 15.3	
	comp=Z,252nm,20.2s,baz=164,slow=33						
	comp=Z,3.5nm,1.0s						
ASAR	Alice Springs	31.91	342	P	P	01 13 03.3	-0.5
ASAR					PcP	01 15 52.7	-1.4
CTA	Charters Tower	34.55	3	LR	LR	01 26 29.8	
	comp=Z,431nm,18.4s,baz=207,slow=34						
CTAO	Charters Tower	34.55	3	P	P	01 13 25.5	-1.3
WR8	Warramunga Arr	35.44	344		P	01 13 34.1	-0.4
WR8				IAmb	IAmb	01 13 35.4	
	comp=Z,27nm,1.2s						
QSPA	South Pole Qui	35.45	180	P	P	01 13 34.9	+0.5
	comp=Z,16nm,1.0s,baz=350,slow=4.3,SNR=12						
QSPA				LR	LR	01 28 03.7	
	comp=Z,815nm,18.0s,baz=10.0,slow=36						
	comp=Z,16nm,1.0s						
QSPA	South Pole Qui	35.45	180		P	01 13 36.7	+2.3
QSPA				IAmb	IAmb	01 13 41.3	
	comp=Z,28nm,1.1s						
WB2	Warramunga Arr	35.47	344	P	P	01 13 33.8	-1.0
WRA	Warramunga Arr	35.48	344	P	P	01 13 33.9	-0.9
	comp=Z,12nm,1.0s,baz=169,slow=7.7,SNR=42						
WRA				PcP	PcP	01 16 03.5	-0.7
	comp=Z,1.5nm,1.1s,baz=186,slow=2.7,SNR=3.5						
	comp=Z,12nm,1.0s						
WRA	Warramunga Arr	35.48	344	P	P	01 13 34.5	-0.4
WRA					PcP	01 16 03.3	-0.9
WRAB	Tennant Creek	35.48	344	P	P	01 13 33.8	-1.1
WRAB				IAmb	IAmb	01 13 35.7	
	comp=Z,35nm,1.1s						
WB0	Warramunga Arr	35.64	344		P	01 13 36.5	+0.3
WB0				IAmb	IAmb	01 13 46.1	
	comp=Z,24nm,1.0s						
RAO	Raoul Island	37.17	62	LR	LR	01 26 13.6	
	comp=Z,619nm,22.0s,baz=136,slow=32						
MAW	Mawson	38.27	218	LR	LR	01 28 39.5	
	comp=Z,212nm,19.8s,baz=88,slow=35						
FITZ	Fitzroy Crossi	39.20	331	LR	LR	01 29 44.1	
	comp=Z,216nm,20.2s,baz=164,slow=35						
COEN	Coen	40.62	358	P	P	01 14 19.5	+1.3
PMG	Port Moresby	45.19	4	P	P	01 14 55.4	+0.2
PMG				IAmb	IAmb	01 15 09.7	
	comp=Z,17nm,1.0s						
PMG	Port Moresby	45.19	4	P	P	01 14 57.0	+1.7
	comp=Z,17nm,1.3s						
HNR	Honiara	46.81	21	LR	LR	01 32 04.3	
	comp=Z,9.6nm,18.4s,baz=294,slow=33						
ELIB	Princess Elisa	47.14	201	dP	P	01 15 14.2	+4.1
	comp=Z,5.8nm,1.1s						
BATI	Baumata	47.26	332	LR	LR	01 33 56.1	
	comp=Z,272nm,20.0s,baz=207,slow=35						
BELA	Belgrano 2	47.73	180	P	P	01 15 14.6	+0.1
BELA				IAmb	IAmb	01 15 21.5	
	comp=Z,18nm,1.0s						
SNAA	Sanae	51.85	193	P	P	01 15 43.5	-2.5
	comp=Z,3.6nm,0.7s,baz=153,slow=4.8,SNR=4.5						
SNAA				LR	LR	01 37 28.5	
	comp=Z,1µm,19.2s,baz=178,slow=36						
	comp=Z,3.6nm,0.7s						
SNAA	Sanae	51.85	193	P	P	01 15 45.9	-0.1
SNAA				IAmb	IAmb	01 15 53.2	
	comp=Z,38nm,1.3s						
KAPI	Kappang	53.33	329	LR	LR	01 37 31.2	
	comp=Z,147nm,20.7s,baz=159,slow=35						
RAR	Rarotonga	53.40	74	LR	LR	01 35 26.5	
	comp=Z,179nm,19.9s,baz=234,slow=32						
VNA1	Neumayer--Stat	53.45	191	⇓P	P	01 15 59.4	+1.7
	comp=Z,30nm,1.0s						
SNJI	Sawahan-Nganju	53.49	318	P	P	01 16 06.6	+7.7
SIJI	Sorong	54.67	344	LR	LR	01 39 35.2	
	comp=Z,176nm,21.2s,baz=56,slow=36						
H04S1	CROZET ISLANDS	54.87	237	T	T	02 16 02.7	
	baz=134,slow=74,SNR=20						
H04S2	CROZET ISLANDS	54.87	237	T	T	02 16 02.0	
	baz=134,slow=74,SNR=23						
H04S3	CROZET ISLANDS	54.89	237	T	T	02 15 59.2	
	baz=134,slow=74,SNR=17						
LEM	Lembang	56.02	314	LR	LR	01 36 15.3	
	comp=Z,183nm,21.9s,baz=286,slow=32						
PPT	Papeete	62.08	81	LR	LR	01 37 48.2	
	comp=Z,144nm,21.3s,baz=198,slow=30						
GUMO	Guam	67.98	1	LR	LR	01 49 39.0	
	comp=Z,46nm,18.4s,baz=106,slow=38						
RPSI	Rantau Prapat	68.29	310	P	P	01 17 40.0	+0.6
RPSI				IAmb	IAmb	01 17 40.0	
	comp=Z,11nm,1.0s						
PSI	Prapat	68.39	310	P	P	01 17 40.0	-0.1
TGY	Tagaytay City	71.30	336	LR	LR	01 47 55.9	
	comp=Z,158nm,21.7s,baz=98,slow=35						
COYC	Coyhaique	75.48	155	P	P	01 18 21.5	-0.8
COYC				IAmb	IAmb	01 18 23.9	
	comp=Z,17nm,1.2s						
RPN	Rapa Nui	77.11	119	LR	LR	01 45 13.9	
	comp=Z,125nm,18.8s,baz=222,slow=30						
LL02	Futaleuf	77.77	154		P	01 18 34.9	-0.4
LL02				IAmb	IAmb	01 18 41.6	
	comp=Z,15nm,1.1s						
ABPO	Ambohimpanom	78.69	253	P	P	01 18 41.6	+0.8
PLCA	Paso Flores	80.41	154	P	P	01 18 49.0	-0.8
	comp=Z,2.9nm,1.1s,baz=206,slow=5.3,SNR=4.8						
PLCA				LR	LR	01 46 16.0	
	comp=Z,80nm,21.2s,baz=194,slow=30						
	comp=Z,2.9nm,1.1s						
PLCA	Paso Flores	80.41	154		P	01 18 49.5	-0.3
PLCA				IAmb	IAmb	01 18 51.1	
	comp=Z,24nm,1.6s						
LR05	Currie	80.50	153		P	01 18 50.3	+0.1
SUR	Sutherland	80.64	226	LR	LR	01 49 59.9	
	comp=Z,360nm,18.1s,baz=152,slow=32						
PALK	Pallekele	81.13	296	LR	LR	01 49 35.0	
	comp=Z,120nm,19.5s,baz=148,slow=32						
GO06	Curarrehue	81.25	153		P	01 18 54.4	0.0
JCJ	Chichijima	81.44	358	P	P	01 18 56.2	+1.2
	comp=Z,172nm,1.1s,baz=286,slow=7.5,SNR=3.7						
JCJ				LR	LR	01 56 01.3	
	comp=Z,41nm,18.0s,baz=250,slow=36						
JCJ	Chichijima	81.44	358	P	P	01 18 54.5	-0.6
BOSA	Boshof	81.95	231	P	P	01 18 58.5	+0.2
	comp=Z,2.9nm,0.8s,baz=137,slow=6.0,SNR=4.3						
BOSA				LR	LR	01 49 42.8	
	comp=Z,211nm,18.7s,baz=172,slow=32						
	comp=Z,2.9nm,0.8s						
BOSA	Boshof	81.95	231	P	P	01 18 58.0	-0.2
CM31	Chiang Mai Arr	82.44	317	P	P	01 19 01.1	+0.6
CMAR	Chiang Mai Arr	82.44	317	P	P	01 19 00.6	0.0
	comp=Z,1.0nm,0.3s,baz=186,slow=4.9,SNR=11						
	comp=Z,1.0nm,0.3s						
CMAR	Chiang Mai Arr	82.44	317		P	01 18 59.3	-1.2
CHTO	Chiang Mai	82.76	317	P	P	01 19 00.4	-1.8
CHTO	Chiang Mai	82.76	317	P	P	01 19 04.1	+1.9

BI02	San Fabin de	84.04	152		P	01 19 08.2	-0.8
H03S1	Juan Fernandez	84.34	145	T	T	02 53 06.7	
	baz=202						
H03S2	Juan Fernandez	84.34	145	T	T	02 53 02.4	
	baz=202						
H03S3	Juan Fernandez	84.36	145	T	T	02 53 02.8	
	baz=202						
BO02	Sierra Bellavi	85.94	152	P	P	01 19 17.4	-1.1
BO02				IAmb	IAmb	01 19 27.7	
	comp=Z,12nm,1.0s						
BO01	Tunca	86.23	151		P	01 19 18.6	-1.2
BO01				IAmb	IAmb	01 19 20.0	
	comp=Z,16nm,1.3s						
MT01	Popeta	86.68	151	P	P	01 19 21.0	-1.0
MT01				IAmb	IAmb	01 19 21.7	
	comp=Z,14nm,1.2s						
BO04	La Punta	86.74	152	P	P	01 19 21.1	-1.3
MT09	Talagante	86.83	151	P	P	01 19 22.5	-0.5
MT09				IAmb	IAmb	01 19 28.6	
	comp=Z,15nm,1.2s						
MT13	San Alfonso	87.06	152	P	P	01 19 23.1	-0.9
JHJ	Hachijo jima 2	87.51	356	LR	LR	01 56 17.0	
	comp=Z,52nm,19.6s,baz=110,slow=34						
JNU	Nakatsue	88.18	349	LR	LR	01 58 19.6	
	comp=Z,22nm,19.6s,baz=182,slow=35						
PZH	PanZhiHua	88.72	323	P	P	01 19 34.2	+2.5
NJ2	Nanjing	89.10	339	*e*P	P	01 19 34.6	+1.4
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
BRDH	Bariadhala	89.21	313	LR	LR	01 59 39.8	
	comp=Z,83nm,20.4s,baz=249,slow=36						
MJAR	Matsushiro Arr	90.99	355	P	P	01 19 41.6	-0.4
	comp=Z,1.4nm,0.4s,baz=190,slow=6.3,SNR=5.2						
MJAR				LR	LR	01 58 43.1	
	comp=Z,55nm,21.2s,baz=168,slow=34						
	comp=Z,1.4nm,0.4s						
MJAR	Matsushiro Arr	90.99	355	P	P	01 19 42.2	+0.3
MJAR				IAmb	IAmb	01 19 44.9	
	comp=Z,16nm,1.5s						
LSZ	Lusaka	91.92	240	LR	LR	01 55 28.5	
	comp=Z,371nm,18.8s,baz=152,slow=32						
LSZ	Lusaka	91.92	240		P	01 19 45.8	-1.3
KSRS	Korea Array	92.82	347	LR	LR	02 00 50.0	
	comp=Z,35nm,20.4s,baz=150,slow=35						
TSUM	Tsumeb	93.55	229	LR	LR	01 58 03.4	
	comp=Z,77nm,18.7s,baz=153,slow=33						
ASAJ	Asahikawa	98.41	359	LR	LR	02 10 49.1	
	comp=Z,23nm,18.6s,baz=248,slow=39						
HHC	Hu-ho-hao-te	99.17	335	*e*P	Pdif	01 20 22.1	+2.7
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,5.1s						
BTO2	Baotou	99.49	334	*e*P	Pdif	01 20 22.5	+1.7
BTO2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
BTO2				pmax	pmax		
	comp=Z,150nm,4.0s						
WMQ	Urumqi	109.27	320	Pdif	Pdif	01 21 05.5	+1.4
KURBB	Kurchatov Arra	118.38	319	PKP	PKiKP	01 25 25.8	+1.0
	comp=Z,0.1nm,0.3s,baz=159,slow=2.1,SNR=4.1						
KURK	Kurchatov	118.42	319		PKiKP	01 25 25.3	+0.4
BVAR	Borovoye Array	123.45	316	PKP	PKiKP	01 25 36.1	+1.4
	comp=Z,0.7nm,0.6s,baz=158,slow=16,SNR=2.3						
TXAR	Lajitas Array	125.96	89	PKP	PKPdf	01 25 40.4	+0.2
	comp=Z,0.9nm,0.9s,baz=26,slow=3.3,SNR=5.0						
MNTX	Cornudas Mount	126.71	86		PKPdf	01 25 41.4	-0.1
MVCO	Mesa Verde	128.87	78		PKPdf	01 25 46.0	+0.3
TORD	Torodi Ar. Bea	129.31	230	PKP	PKPdf	01 25 46.8	0.0
	comp=Z,0.7nm,1.0s,baz=216,slow=4.6,SNR=3.7						
TORD	Torodi Ar. Bea	129.31	230		PKPdf	01 25 46.0	-0.9
PV13	Radium Mtn., P	129.34	77		PKiKP	01 25 47.3	0.0
PV18	Skein Mesa, Pa	129.35	77		PKiKP	01 25 47.4	+0.1
PV19	Morning Glory	129.36	77		PKiKP	01 25 47.6	+0.3
PV10	Paradox Valley	129.37	77		PKPdf	01 25 46.6	0.0
PV03	Paradox Valley	129.39	77		PKiKP	01 25 47.2	-0.2
PV16	Nyswonger Mesa	129.40	77		PKPdf	01 25 46.8	+0.1
PV11	David Mesa, Pa	129.41	77		PKiKP	01 25 47.7	+0.3
PV02	Paradox Valley	129.42	77		PKiKP	01 25 47.7	+0.3
PV12	Saucer Basin,	129.46	77		PKiKP	01 25 47.3	-0.2
BRDY	Brady	130.11	91		PKPdf	01 25 47.2	-0.7
ILAR	Eielson Array	130.20	32	PKP	PKiKP	01 25 48.3	+0.5
	comp=Z,0.2nm,0.5s,baz=306,slow=3.2,SNR=2.6						
ILAR	Eielson Array	130.20	32		PKiKP	01 25 48.1	+0.2
ABTX	Abilene, Hawle	130.71	89		PKPdf	01 25 48.4	-0.7
APMT	Aspermont	130.94	88		PKPdf	01 25 49.1	-0.4
YKA	Yellowknife Ar	140.61	46	PKP	PKPdf	01 26 04.5	-1.9
	comp=Z,0.2nm,0.4s,baz=251,slow=2.9,SNR=5.6						
YKA	Yellowknife Ar	140.61	46		PKPdf	01 26 04.9	-1.5
KEST	Kesra	143.81	257	PKP	PKPdf	01 26 14.2	+1.0
	comp=Z,6.9nm,0.9s,baz=0.8,slow=3.1,SNR=4.1						
KEST	Kesra	143.81	257		PKPdf	01 26 13.8	+0.6
ULM	Lac du Bonnet	144.07	72	PKP	PKPdf	01 26 12.6	-0.4
	comp=Z,3.2nm,0.8s,baz=228,slow=1.9,SNR=4.5						
ULM	Lac du Bonnet	144.07	72		PKPab	01 26 10.6	+0.1
U56A	King	144.48	102		PKPab	01 26 12.5	-0.1
I42A	Draeger Farm,	144.49	85		PKPab	01 26 10.9	-1.4
G40A	Rib Lake	144.56	82		PKPab	01 26 11.7	-0.8
Q51A	Peebles	144.63	96		PKPab	01 26 12.1	-1.0
KWP	Kalwaria Pacla	144.70	287	*e*PKP	PKPab	01 26 13.0	0.0
EPLO	Experimental L	144.96	74		PKPab	01 26 12.5	-1.4
BLA	Blacksburg	145.07	101		PKPbc	01 26 14.0	-0.7
P51A	Williamsport	145.10	96		PKPbc	01 26 11.2	-3.5
Q52A	Bidwell	145.21	97		PKPbc	01 26 13.3	-1.7
N49A	Columbus Grove	145.39	93		PKPbc	01 26 14.1	-1.5
STHS	Stebnicka Huta	145.41	285	*e*PKP	PKPab	01 26 16.4	+0.8
NIE	Niedzica	145.94	285	*e*PKP	PKPbc	01 26 16.9	-0.1
O52A	Adamsville	146.23	96	PKPdf	PKPdf	01 26 15.8	-1.2
LANS	Liptovska Anna	146.27	284	*e*PKP	PKPdf	01 26 17.1	+0.2
SUW	Suwalki	146.52	294	*e*PKP	PKPdf	01 26 17.7	+0.7
SUW	Suwalki	146.52	294	PKPdf	PKPdf	01 26 17.7	+0.7
MODS	Modra-Piesok	147.11	281	*e*PKP	PKPbc	01 26 20.7	+0.2
JAVC	Velka Javorina	147.13	282	*e*PKP	PKPab	01 26 21.8	-0.5
RONA	Rosalia, Austr	147.31	280	*i* PKP	PKPbc	01 26 21.0	-0.1
	comp=Z,13nm,1.8s						
SOKA	Soboth	147.49	277	*e*PKP	PKPbc	01 26 21.3	-0.3
	comp=Z,17nm,1.3s						
ARSA	Arzberg	147.52	278	*i* PKP	PKPbc	01 26 21.7	+0.1
	comp=Z,12nm,2.0s						
STEB	Steborice	147.62	284	*e*PKP	PKPab	01 26 24.1	0.0
MORC	Moravsky Berou	147.67	284		PKPdf	01 26 19.8	+0.6
MORC	Moravsky Berou	147.67	284	*e*PKP	PKPbc	01 26 21.3	-0.7
FINES	FINESS Array B	147.75	307	PKPbc	PKPbc	01 26 21.3	-0.5
	comp=Z,4.2nm,0.8s,baz=90,slow=5.7,SNR=11						
FINES	FINESS Array B	147.75	307		PKPdf	01 26 19.6	+0.7
KRUC	Moravsky	147.96	282	*e*PKP	PKPbc	01 26 22.3	-0.5
VRAC	Vranov	147.97	282	*e*PKP	PKPdf	01 26 20.9	+1.2
MYKA	Terra Mystica	148.27	276	*i* pPKP	PKPbc	01 26 24.6	+0.8
	comp=Z,10nm,1.1s						
FCC	Fort Churchill	148.59	58		PKPdf	01 26 21.9	+1.5
DPC	Dobruska-Polom	148.63	284	*e*PKP	PKiKP	01 26 25.7	-0.3
BIOA	Bad Ischl, Aus	148.84	278	*e*PKP	PKiKP	01 26 25.9	-0.6
	comp=Z,14nm,1.9s						
ABTA	Abfaltersbach	148.98	275	*e*PKP	PKPdf	01 26 21.0	-0.5
	comp=Z,11nm,1.2s						
LESA	Schwarzleotal	149.25	277	*i* pPKP	pPKPdf	01 26 24.8	+0.4
	comp=Z,9.5nm,1.3s						
ARCES	ARCESS Array B	149.34	323	PKPbc	PKPbc	01 26 25.1	-0.5
	comp=Z,5.0nm,0.8s,baz=79,slow=9.0,SNR=4.2						
ARCES	ARCESS Array B	149.34	323		PKPdf	01 26 23.2	+1.9
GEC2	GERESS Array S	149.39	280		PKPdf	01 26 23.1	+0.9
GERES	GERESS Array B	149.39	280	PKPbc	PKPdf	01 26 24.2	+2.1
	comp=Z,1.1nm,0.9s,baz=356,slow=1.3,SNR=6.9						
WTTA	Wattenberg	149.77	276	*e*PKP	PKPbc	01 26 27.4	-0.2
	comp=Z,12nm,1.1s						
WATA	Walderalm	149.84	276	*i* PKP	PKiKP	01 26 28.8	+0.1
	comp=Z,22nm,1.6s						
SQTA	Sankt Quirin	149.99	275	*e*PKP	PKPbc	01 26 28.3	+0.2
	comp=Z,16nm,1.0s						
MOTA	Moosalm	150.12	275	*e*pPKP	PKPbc	01 26 27.7	-0.8
	comp=Z,17nm,1.2s						
FETA	Feichten	150.16	275	*i* pPKP	PKPbc	01 26 27.7	-0.9
	comp=Z,13nm,1.2s						
RETA	Reutte	150.39	275	*e*PKP	PKPbc	01 26 29.2	+0.2
	comp=Z,12nm,1.2s						
SPITS	Spitsbergen Ar	150.46	341	PKPab	PKPab	01 26 35.0	0.0
	comp=Z,10nm,0.9s,baz=64,slow=3.4,SNR=3.7						
DAVA	Damuels	150.79	274	*e*PKP	PKPbc	01 26 30.3	+0.2
	comp=Z,17nm,1.4s						
CLL	Collm	150.94	284	*e*PKPbc	PKPbc	01 26 29.0	-1.0
	comp=Z,13nm,1.5s						
CLL				*i* PKPab	PKPab	01 26 36.8	-0.8
	comp=Z,77nm,2.5s						
CLL				*e*PP	PP	01 30 09.0	+0.5
HFS	Hagfors	153.35	302	PKPbc	PKPbc	01 26 33.6	-1.6
	comp=Z,2.7nm,1.0s,baz=64,slow=3.4,SNR=2.1						
HFS				PKPab	PKPab	01 26 46.8	-0.6
	comp=Z,4.0nm,1.0s,baz=93,slow=2.9,SNR=3.5						
ESDC	Sonseca Array	154.00	248	PKPbc	PKiKP	01 26 37.6	+0.1
	comp=Z,1.3nm,1.1s,baz=92,slow=2.4,SNR=3.1						
ESDC	Sonseca Array	154.00	248		PKPbc	01 26 36.5	-0.9

CATAC 03 01:13:32.3±0.4**,12°N**±3°×**8°8W**±°**,h27**km**,M3.5**/12**,**
MLv3.5/12**,Error ellipse: s-maj=6.4km s-min=3.0km**
az=29.5,confirmed,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALEN	Leon	0.98	62	S	Sn	01 14 04.6	+1.2
CRIN	San Cristobal	0.98	45	S	Sn	01 14 04.9	+1.3
CSGN	Cosiguina Volc	0.99	11	P	Pn	01 13 50.8	+0.2
CSGN				S	Sn	01 14 04.9	+1.1
PKGN	Cerro Pekin	1.02	49	P	Pn	01 13 50.3	-0.5
PKGN				S	Sb	01 14 05.0	+0.8
CNGN	Cerro Negro	1.15	64	P	Pn	01 13 51.5	-1.3
CNGN				S	Sb	01 14 08.2	0.0
COPN	Copaltepe	1.16	81	P	Pn	01 13 53.0	+0.2
MACN	El Madrono	1.16	66	P	Pn	01 13 51.9	-0.9
MACN				S	Sn	01 14 07.6	-0.2
ILCN	San Idelfonso	1.19	61	S	Sn	01 14 07.9	-0.5
CNCH	Conchagua	1.28	357	S	Sn	01 14 10.6	-0.2
APQ2	Apoyeque	1.42	82	P	Pn	01 13 56.0	-0.3
UNAN	Cigeo UNAN	1.46	85	P	Pn	01 13 56.8	-0.1
UNAN				S	Sn	01 14 15.1	-0.1
MGAN	Managua	1.48	84	S	Sn	01 14 15.4	-0.4
RANC	El Ranchito	1.52	340	P	Pn	01 13 57.7	-0.2
RANC				S	Sn	01 14 17.6	+0.6
PACA	Pacayal	1.57	339	P	Pn	01 13 58.0	-0.5
PACA				S	Sn	01 14 18.3	+0.3
NANN	Nandasmo	1.60	92	P	Pn	01 13 59.0	+0.1
NANN				S	Sn	01 14 18.5	-0.3
COEG	Centro de Oper	1.95	326	P	Pn	01 14 03.2	-0.6
COEG				S	Sn	01 14 27.6	+0.2
OCON	Estacion meteo	2.05	37	P	Pn	01 14 04.5	-0.6
JAYA	Jayaque - finc	2.33	315	P	Pn	01 14 09.6	+0.5
JAYA				S	Sn	01 14 37.5	+0.5

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*IDC **03** 01:47:40.9±1.0,9°.93S×126°.97E,h0km,mb3.7/6,*
mbtmp3.8/10,ML3.9/4,MS2.5/1,Error ellipse:
s-maj=27.8km s-min=16.9km az=71.0
ISC 03 01:47:45.6±0.8**,10°.05S**±0°.08×**127°.00E**±0°.09**,h35**km**,n11,**
σ1s36/14**,mb3.6**/6**,Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	3.29	267	Pn	Pn	01 48 34.0	-0.7
	9.5nm,0.3s,baz=17,slow=22,SNR=2.4						
BATI				Sn	Sn	01 49 13.0	+0.3
	15nm,0.3s,baz=55,slow=20,SNR=2.2						
	26nm,0.4s						
FITZ	Fitzroy Crossi	8.11	189	Pn	Pn	01 49 42.5	+1.6
	0.9nm,0.3s,baz=12,slow=10,SNR=14						
FITZ				Sn	Sn	01 51 11.7	+0.2
	2.1nm,0.3s,baz=7.8,slow=23,SNR=8.2						
FITZ				Lg	Lg	01 52 02.7	
	1.6nm,0.3s,baz=282,slow=10,SNR=1.2						
	4.7nm,0.5s						
KAPI	Kappang	8.75	304	LR	LR	01 54 21.6	
	comp=Z,32nm,19.1s,baz=33,slow=46						
WRA	Warramunga Arr	12.12	145	Pn	Pn	01 50 35.9	-0.1
	0.8nm,0.3s,baz=319,slow=13,SNR=32						
WRA				Sn	Sn	01 52 47.5	-2.5
	1.8nm,0.3s,baz=326,slow=21,SNR=9.9						
	3.8nm,0.6s						
ASAR	Alice Springs	15.06	155	Pn	Pn	01 51 16.6	+0.6
	0.8nm,0.3s,baz=319,slow=10,SNR=38						
ASAR				Sn	Sn	01 53 59.2	-2.6
	0.7nm,0.3s,baz=326,slow=22,SNR=7.4						
	1.5nm,0.5s						
STKA	Stephens Creek	25.59	150	P	P	01 53 12.8	+1.3
	0.8nm,0.5s,baz=295,slow=4.8,SNR=5.4						
	0.8nm,0.5s						
CMAR	Chiang Mai Arr	39.61	316	P	P	01 55 13.4	-0.7
	1.0nm,0.3s,baz=142,slow=7.2,SNR=4.9						
	1.0nm,0.3s						
SONM	Songino Array	60.46	344	P	P	01 57 53.0	+1.1
	0.2nm,0.4s,baz=183,slow=5.5,SNR=4.4						
	0.2nm,0.4s						
PETK	Petropavlovsk-	68.14	19	P	P	01 58 42.3	+0.3
	0.8nm,0.5s,baz=227,slow=7.1,SNR=2.5						
	0.8nm,0.5s						
MKAR	Makanchi Array	69.21	329	P	P	01 58 48.4	-0.4
	0.2nm,0.5s,baz=125,slow=7.3,SNR=5.3						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	73.60	330	P	P	01 59 14.5	-0.6
	0.1nm,0.2s,baz=127,slow=4.1,SNR=4.2						
	0.1nm,0.2s						

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*IDC **03** 01:59:09.1±1.6,9°.88S×127°.04E,h0km,mb3.3/2,*
mbtmp3.6/6,ML3.4/4,Error ellipse: s-maj=35.7km
s-min=25.9km az=58.0
ISC 03 01:59:13.5±1.3**,10°.07S**±0°.10×**127°.1E**±0°.1**,h35**km**,n6,**
σ2s10/10**,Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	3.35	267	Pn	Pn	02 00 03.3	-0.1
	9.8nm,0.3s,baz=260,slow=14,SNR=6.0						
BATI				Sn	Sn	02 00 42.0	-0.1
	8.9nm,0.3s,baz=77,slow=19,SNR=2.3						
	35nm,0.4s						
FITZ	Fitzroy Crossi	8.10	190	Pn	Pn	02 01 11.4	+2.7
	0.1nm,0.3s,baz=223,slow=18,SNR=1.1						
FITZ				Sn	Sn	02 02 38.0	-1.0
	1.0nm,0.3s,baz=177,slow=22,SNR=6.8						
	2.7nm,0.5s						
WRA	Warramunga Arr	12.07	145	Pn	Pn	02 02 04.7	+1.5
	0.3nm,0.3s,baz=320,slow=13,SNR=13						
WRA				Sn	Sn	02 04 15.9	-0.7
	1.1nm,0.3s,baz=319,slow=25,SNR=9.4						
	2.7nm,0.7s						
ASAR	Alice Springs	15.02	155	Pn	Pn	02 02 44.0	+0.7
	0.3nm,0.3s,baz=326,slow=11,SNR=8.6						
ASAR				Sn	Sn	02 05 24.2	-4.4
	0.4nm,0.3s,baz=314,slow=20,SNR=7.3						
	1.3nm,0.7s						
MKAR	Makanchi Array	69.26	329	P	P	02 10 17.3	+0.2
	0.1nm,0.5s,baz=133,slow=5.0,SNR=1.6						
	0.1nm,0.5s						
KURBB	Kurchatov Arra	73.65	330	P	P	02 10 43.2	-0.2
	0.3nm,0.7s,baz=128,slow=5.6,SNR=4.2						
	0.3nm,0.7s						

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*IDC **03** 02:09:04.8±0.9,9°.93S×126°.91E,h0km,mb3.8/8,*
mbtmp3.9/12,ML4.0/4,MS3.1/2,Error ellipse:
s-maj=27.5km s-min=18.3km az=66.0
ISC 03 02:09:09.3±0.7**,10°.07S**±0°.07×**127°.02E**±0°.09**,h35**km**,n13,**
σ1s60/16**,mb3.8**/8**,Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	3.30	267	Pn	Pn	02 09 57.2	-1.4
	14nm,0.3s,baz=275,slow=2.0,SNR=4.4						
BATI				Sn	Sn	02 10 37.7	+1.0
	20nm,0.3s,baz=177,slow=18,SNR=6.1						
	38nm,0.5s						
FITZ	Fitzroy Crossi	8.09	189	Pn	Pn	02 11 04.9	+0.5
	2.0nm,0.3s,baz=16,slow=9.4,SNR=13						
FITZ				Sn	Sn	02 12 34.2	-0.5
	3.5nm,0.3s,baz=266,slow=15,SNR=8.4						
	3.9nm,0.5s						
WRA	Warramunga Arr	12.09	145	Pn	Pn	02 11 59.8	+0.6
	0.9nm,0.3s,baz=320,slow=13,SNR=47						
WRA				Sn	Sn	02 14 09.5	-3.5
	3.2nm,0.3s,baz=326,slow=21,SNR=13						
	7.1nm,0.6s						
ASAR	Alice Springs	15.03	155	Pn	Pn	02 12 40.2	+0.9
	0.9nm,0.3s,baz=320,slow=10,SNR=65						
ASAR				Sn	Sn	02 15 22.8	-2.0
	1.2nm,0.3s,baz=326,slow=24,SNR=8.9						
ASAR				LR	LR	02 19 43.1	
	comp=Z,49nm,19.0s,baz=136,slow=42						
	2.7nm,0.6s						
CTA	Charters Tower	21.05	120	LR	LR	02 22 19.9	
	comp=Z,61nm,18.0s,baz=58,slow=38						
STKA	Stephens Creek	25.56	150	P	P	02 14 38.0	+3.0
	1.8nm,0.9s,baz=316,slow=14,SNR=3.8						
	1.8nm,0.9s						
CMAR	Chiang Mai Arr	39.64	316	P	P	02 16 37.6	-0.4
	0.9nm,0.4s,baz=146,slow=6.2,SNR=6.6						
	0.9nm,0.4s						
USRK	Ussuriysk Ar.	54.20	4	P	P	02 18 31.6	+0.3
	1.4nm,0.6s,baz=205,slow=8.4,SNR=4.2						
	1.4nm,0.6s						
SONM	Songino Array	60.49	344	P	P	02 19 16.1	+0.3
	0.2nm,0.5s,baz=174,slow=6.8,SNR=1.8						
	0.2nm,0.5s						
PETK	Petropavlovsk-	68.16	19	P	P	02 20 06.7	+0.9
	1.3nm,0.6s,baz=194,slow=3.9,SNR=4.0						
	1.3nm,0.6s						
MKAR	Makanchi Array	69.24	329	P	P	02 20 12.5	-0.2
	0.3nm,0.5s,baz=130,slow=7.0,SNR=5.6						
	0.3nm,0.5s						
ZALV	Zalesovo Beam	73.08	335	P	P	02 20 34.5	-1.2
	0.5nm,0.4s,baz=145,slow=5.3,SNR=2.1						
	0.5nm,0.4s						
KURBB	Kurchatov Arra	73.63	330	P	P	02 20 38.0	-1.1
	0.5nm,0.7s,baz=139,slow=5.1,SNR=5.9						
	0.5nm,0.7s						

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*IDC **03** 02:22:45.8±1.0,9°.81S×126°.97E,h0km,mb3.7/6,*
mbtmp3.9/10,ML4.2/4,MS2.9/5,Error ellipse:
s-maj=30.6km s-min=19.6km az=53.0
*NEIC **03** 02:22:47.8±1.1,10°.0S±0°.1×126°.95E±0°.02,h10km±1km,*
mb4.4/11,Error ellipse: s-maj=17.4km s-min=3.0km
az=175.0
ISC 03 02:22:50.9±0.6**,10°.03S**±0°.07×**126°.92E**±0°.06**,h35**km**,n37,**
σ1s44/38**,mb3.9**/11**,MS3.1**/4**,Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	Soe	2.63	276		Pn	02 23 30.9	-0.1
BATI	Baumata	3.21	267	Pn	Pn	02 23 40.3	+1.3
	21nm,0.3s,baz=300,slow=5.3,SNR=5.4						
BATI				Sn	Sn	02 24 16.9	+0.9
	15nm,0.3s,baz=30,slow=1.2,SNR=5.0						
	54nm,0.4s						
MTN	Manton Dam	4.99	125		Pn	02 24 06.3	+2.9
MTN				Sn	Sn	02 25 01.9	+1.9
KNRA	Kununurra	5.90	162		Pn	02 24 18.5	+2.7
FITZ	Fitzroy Crossi	8.12	189	Pn	Pn	02 24 48.5	+2.1
	1.9nm,0.3s,baz=18,slow=13,SNR=11						
FITZ				Sn	Sn	02 26 16.6	-0.4
	2.8nm,0.3s,baz=72,slow=18,SNR=9.3						
	9.5nm,0.4s						
KAPI	Kappang	8.68	305	LR	LR	02 28 10.2	
	comp=Z,53nm,20.0s,baz=113,slow=38						
WB0	Warramunga Arr	12.08	144		Pn	02 25 39.7	-1.0
WRA	Warramunga Arr	12.18	145	Pn	Pn	02 25 41.1	-1.0
	1.3nm,0.3s,baz=320,slow=13,SNR=61						
WRA				Sn	Sn	02 27 52.6	-4.2
	3.0nm,0.3s,baz=326,slow=21,SNR=10.0						
	10nm,0.6s						
WRA	Warramunga Arr	12.18	145		Pn	02 25 41.5	-0.6
WR8	Warramunga Arr	12.29	144		Pn	02 25 42.6	-0.9
MBWA	Marble Bar	13.05	211	Pn	Pn	02 25 54.0	+0.1
PSA00	Pilbara Seismi	13.34	210	Pn	Pn	02 25 57.5	-0.5
PSA00	Pilbara Seismi	13.34	210	Pn	Pn	02 25 57.7	-0.2
AS31	Alice Springs	15.11	155	Pn	Pn	02 26 21.6	-0.4
AS31				IAmb	IAmb	02 26 32.2	
	comp=Z,3.1nm,0.7s						
ASAR	Alice Springs	15.12	155	Pn	Pn	02 26 21.8	-0.3
	comp=Z,1.3nm,0.3s,baz=326,slow=11,SNR=83						
ASAR				Sn	Sn	02 29 07.0	-1.3
	comp=Z,0.9nm,0.3s,baz=335,slow=23,SNR=7.5						
ASAR				LR	LR	02 32 16.3	
	comp=Z,54nm,18.3s,baz=299,slow=37						
	comp=Z,4.0nm,0.6s						
ASAR	Alice Springs	15.12	155		Pn	02 26 21.4	-0.6
COEN	Coen	16.37	105	Pn	Pn	02 26 37.2	-1.1
BBJI	Bungbulang	19.21	276	P	P	02 27 11.6	-0.6
CTA	Charters Tower	21.16	120	P	P	02 27 34.9	+1.6
	comp=Z,0.4nm,0.5s,baz=286,slow=15,SNR=0.8						
	comp=Z,0.4nm,0.5s						
BBOO	Buckleboo	24.19	161	P	P	02 28 04.7	+0.5
BBOO				IAmb	IAmb	02 28 26.8	
	comp=Z,22nm,1.1s						
STKA	Stephens Creek	25.64	150	LR	LR	02 40 24.3	
	comp=Z,72nm,18.2s,baz=25,slow=41						
STKA	Stephens Creek	25.64	150	P	P	02 28 16.5	-0.9
STKA				IAmb	IAmb	02 28 57.9	
	comp=Z,40nm,1.2s						
CM31	Chiang Mai Arr	39.54	316	P	P	02 30 18.1	-0.7
CM31				IAmb	IAmb	02 30 19.5	
	comp=Z,3.5nm,0.7s						
CMAR	Chiang Mai Arr	39.54	316	P	P	02 30 17.6	-1.3
	comp=Z,1.6nm,0.4s,baz=145,slow=6.8,SNR=12						
CMAR				LR	LR	02 49 40.6	
	comp=Z,4.6nm,20.8s,baz=75,slow=41						
	comp=Z,1.6nm,0.4s						
CMAR	Chiang Mai Arr	39.54	316	P	P	02 30 18.1	-0.7
JNU	Nakatsue	43.07	5	LR	LR	02 50 55.6	
	comp=Z,20nm,19.1s,baz=32,slow=39						
SONM	Songino Array	60.42	344	P	P	02 32 56.6	-0.4
	comp=Z,0.2nm,0.4s,baz=151,slow=6.4,SNR=3.1						
	comp=Z,0.2nm,0.4s						
SONM	Songino Array	60.42	344	P	P	02 32 56.3	-0.7
SONM				IAmb	IAmb	02 32 58.2	
	comp=Z,1.8nm,1.4s						
ROCAM	Rodrigues Isla	61.88	253	P	P	02 33 07.3	-0.1
MK31	Makanchi Array	69.15	329		P	02 33 53.9	+0.1
MK31				IAmb	IAmb	02 34 14.6	
	comp=Z,1.6nm,1.2s						
MKAR	Makanchi Array	69.15	329	P	P	02 33 53.7	-0.1
	comp=Z,0.4nm,0.5s,baz=128,slow=7.4,SNR=6.6						
	comp=Z,0.4nm,0.5s						
SBA	Scott Base	70.78	172	P	P	02 34 05.7	+2.4
ZALV	Zalesovo Beam	73.00	336	P	P	02 34 14.6	-2.3
	comp=Z,0.5nm,0.4s,baz=153,slow=4.4,SNR=2.0						
	comp=Z,0.5nm,0.4s						
ZALV	Zalesovo Beam	73.00	336	P	P	02 34 15.8	-1.0
KURBB	Kurchatov Arra	73.54	330	P	P	02 34 19.4	-0.8
	comp=Z,0.4nm,0.6s,baz=137,slow=5.1,SNR=5.4						
	comp=Z,0.4nm,0.6s						
SHEM	Shemya Is, Ala	74.35	28	P	P	02 34 25.7	+0.9
SHEM				IAmb	IAmb	02 34 40.7	
	comp=Z,82nm,1.1s						
KDAK	Kodiak Island	93.38	32	LR	LR	03 17 23.7	
	comp=Z,87nm,19.0s,baz=76,slow=35						

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*IDC **03** 02:31:21.9±1.7,8°.76S×126°.37E,h0km,mb3.4/2,*
mbtmp3.5/5,ML3.8/3,Error ellipse: s-maj=46.4km
s-min=31.2km az=68.0
ISC 03 02:31:27.8±1.5**,9°.2S**±0°.1×**126°.34E**±0°.10**,h35**km**,n6,**
σ2s26/8**,Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	2.81	250	Pn	Pn	02 32 10.8	+0.4
	18nm,0.3s,baz=90,slow=13,SNR=4.2						
BATI				Sn	Sn	02 32 43.5	+0.4
	22nm,0.3s,baz=114,slow=22,SNR=7.1						
	46nm,0.4s						
FITZ	Fitzroy Crossi	8.85	184	Sn	Sn	02 35 09.2	-2.5
	3.0nm,0.3s,baz=181,slow=22,SNR=8.7						
WRA	Warramunga Arr	13.16	145	Pn	Pn	02 34 35.3	+2.9
	0.4nm,0.3s,baz=324,slow=13,SNR=4.7						
WRA				Sn	Sn	02 36 55.0	-2.6
	1.0nm,0.3s,baz=324,slow=22,SNR=8.5						
	0.4nm,0.3s						
ASAR	Alice Springs	16.08	154	Pn	P	02 35 14.8	+0.4
	0.4nm,0.3s,baz=331,slow=12,SNR=8.9						
ASAR				Sn	Sn	02 38 08.3	-0.4
	0.3nm,0.3s,baz=322,slow=24,SNR=5.8						
	0.6nm,0.5s						
MKAR	Makanchi Array	68.17	329	P	P	02 42 20.9	-3.7
	0.2nm,0.7s,baz=137,slow=7.1,SNR=3.1						
	0.2nm,0.7s						
KURBB	Kurchatov Arra	72.57	330	P	P	02 42 49.5	-1.8
	0.2nm,0.6s,baz=128,slow=6.0,SNR=2.0						
	0.2nm,0.6s						

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*AZER **03** 02:50:01.5,38°.44N×44°.42E,h3km,ml2.6*
*AFAD **03** 02:50:01.6,38°.44N×44°.44E,h6km±4km,ML2.4*
*ISK **03** 02:50:02.4,38°.46N×44°.31E,h5km,ML2.8/7*
ISC 03 02:50:02.7±1.1**,38°.42N**±0°.03×**44°.39E**±0°.02**,h10**km±10km**,**
n23,σ**1s92**/37**,Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.40	308	P	Pg	02 50 10.4	-0.2
OZAP				S	Sg	02 50 15.8	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TVAN	**Van**	**0.78**	**278**	P	**Pg**	**02 50 17.3**	**-0.5**
TVAN				S	**Sn**	**02 50 30.2**	**-1.6**
TVAN				IAML		02 50 33.0	
	comp=E,201nm,0.4s						
TVAN				IAML		02 50 38.0	
	comp=N,230nm,0.5s						
VANB	**Van**	**0.81**	**283**	Pg	**Pg**	**02 50 17.5**	**-0.8**
VANB				Sg	**Sg**	**02 50 28.4**	**-0.4**
VMUR	**Van-Muradiye**	**0.86**	**312**	P	**Pb**	**02 50 19.2**	**-0.6**
VMUR				S	**Sb**	**02 50 32.0**	**+0.6**
VMUR				IAML		02 50 34.0	
	comp=N,100nm,0.8s						
VMUR				IAML		02 50 36.0	
	comp=E,174nm,0.5s						
HAKT	**HAKKARI**	**1.02**	**212**	P	**Pn**	**02 50 23.5**	**+0.3**
HAKT				S	**Sn**	**02 50 40.9**	**+3.2**
GEVA	**Gevas**	**1.05**	**265**	P	**Pg**	**02 50 22.1**	**-0.9**
GEVA				S	**Sn**	**02 50 38.2**	**-0.2**
GEVA				IAML		02 50 43.0	
	comp=N,84nm,0.4s						
GEVA				IAML		02 50 43.0	
	comp=E,99nm,0.5s						
AKDM	**Akdamar-Van**	**1.11**	**266**	Pg	**Pg**	**02 50 23.1**	**-1.0**
AKDM				Sg	**Sn**	**02 50 39.4**	**-0.6**
NAX	**Nakhchivan**	**1.14**	**48**	S	**Sn**	**02 50 43.5**	**+2.9**
DYDN	**Diyadin**	**1.25**	**334**	P	**Pg**	**02 50 26.9**	**+0.1**
DYDN				S	**Sb**	**02 50 41.6**	**-1.1**
DYDN				IAML		02 50 50.0	
	comp=E,56nm,0.7s						
DYDN				IAML		02 50 56.0	
	comp=N,65nm,0.5s						
CUKT	**Cukurca**	**1.32**	**208**	Pn	**Pg**	**02 50 29.1**	**+1.0**
CUKT				Sn	**Sg**	**02 50 48.4**	**+3.0**
SBZ	**Shahbuz**	**1.33**	**42**	S	**Sg**	**02 50 47.7**	**+2.2**
HYR	**Heyderabad**	**1.35**	**15**	S	**Sg**	**02 50 51.0**	**+5.0**
ORD	**Ordubad**	**1.35**	**67**	S	**Sg**	**02 50 49.4**	**+3.2**
ADCV	**BITLIS_Adilcev**	**1.36**	**287**	P	**Pb**	**02 50 27.6**	**-0.8**
ADCV				S	**Sg**	**02 50 46.8**	**+0.2**
ADCV				IAML		02 50 51.0	
	comp=E,45nm,1.4s						
ADCV				IAML		02 50 53.0	
	comp=N,47nm,0.6s						
IGDI	**IGDIR**	**1.47**	**350**	P	**Pg**	**02 50 30.9**	**0.0**
IGDI				S	**Sg**	**02 50 53.0**	**+3.0**
AGRB	**Hanur-Agry**	**1.59**	**317**	Pn	**Pb**	**02 50 31.5**	**-0.7**
MLAZ	**Malazgirt-MUS**	**1.61**	**297**	Pn	**Pb**	**02 50 32.1**	**-0.5**
GNI	**Garni**	**1.75**	**9**	Pn	**Pb**	**02 50 34.7**	**-0.2**
GURO	**Guroymak-BITLI**	**1.86**	**275**	Pn	**Pb**	**02 50 35.9**	**-0.9**
GDB	**GEDABAY**	**2.53**	**24**	S	**Sg**	**02 51 23.2**	**-0.7**
GANJ	**Ganja**	**2.68**	**33**	P	**Pb**	**02 50 49.9**	**-0.8**
GANJ				S	**Sg**	**02 51 25.9**	**-2.8**
YRD	**Yardimli**	**3.05**	**79**	P	**Pb**	**02 50 55.5**	**-1.7**
YRD				S	**Sb**	**02 51 34.3**	**-0.3**
LRK	**Lerik**	**3.10**	**85**	P	**Pb**	**02 50 55.6**	**-2.5**
LRK				S	**Sg**	**02 51 38.3**	**-4.1**

*ECX **03** 02:54:16.6±0.6, 32°.12N×115°.17W, h9km±2km, MD3.1, ML3.3*
*NEIC **03** 02:54:17.9±2.3, 32°.117N±0°.004×115°.11W±0°.02, h10km±2km, ML3.0/50, ML3.3/24(PAS), Error ellipse: s-maj=3.0km s-min=2.4km az=95.0*
*PAS **03** 02:54:18.6±2.2, 32°.15N±0°.01×115°.11W±0°.02, h16km±5km, Error ellipse: s-maj=2.3km s-min=1.8km az=79.0*
*MEX **03** 02:54:18.9±0.7, 32°.11N×115°.17W, h9km±8km, MD3.8*
ISC 03 02:54:17.1±0.9, **32°.13N**±0°.02×**115°.10W**±0°.02, **h15**km±6km, **n67**, σ**0s.89**/96, **5C-7D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RITX	**Riito Sonora**	**0.12**	**74**		**Pb**	**02 54 22.1**	**+0.9**
RITX					**Sb**	**02 54 25.6**	**+1.7**
AGSX	**Ej. Aguas Cali**	**0.14**	**340**	⇓iP	**Pb**	**02 54 21.4**	**-0.1**
AGSX				e		02 54 25.0	
AGSX				IAML		02 54 25.0	
	comp=E,13μm,0.3s						
AGSX				⇓e		02 54 28.4	
AGSX				IAML		02 54 28.4	
	comp=N,12μm,0.4s						
RHX	**Rio Hardy**	**0.15**	**271**	⇑iP	**Pg**	**02 54 20.9**	**-0.1**
RHX				eS	**Sg**	**02 54 23.0**	**-0.7**
GUVIX	**Guadalupe Vict**	**0.17**	**8**		**Pb**	**02 54 22.8**	**+0.7**
GUVIX					**Sb**	**02 54 27.0**	**+1.7**
MBIG	**Mexicali**	**0.29**	**344**	eP	**Pb**	**02 54 25.0**	**+1.0**
MBIG				eS	**Sn**	**02 54 31.1**	**-1.7**
PESCX	**Ej. Pescaderos**	**0.32**	**21**		**Pb**	**02 54 25.4**	**+0.8**
PESCX					**Sn**	**02 54 31.5**	**-2.2**
PESCX	**Ej. Pescaderos**	**0.32**	**21**	⇓eP	**Pb**	**02 54 25.4**	**+0.8**
PESCX				eS	**Sn**	**02 54 31.5**	**-2.2**
CPBX	**Cerro Prieto**	**0.33**	**329**		**Pb**	**02 54 25.0**	**+0.3**
CPBX				Sg	**Sn**	**02 54 31.7**	**-2.3**
CPBX	**Cerro Prieto**	**0.33**	**329**	⇓eP	**Pb**	**02 54 25.1**	**+0.3**
CPBX				eS	**Sb**	**02 54 31.3**	**+1.3**
CPBX				⇑e		02 54 33.4	
CPBX				IAML		02 54 33.4	
	comp=E,11μm,0.3s						
CPBX				⇑e		02 54 35.1	
CPBX				IAML		02 54 35.1	
	comp=N,7μm,0.3s						
CTLX	**Tlaxcala, TLX**	**0.34**	**354**	eP	**Pb**	**02 54 25.2**	**+0.3**
CTLX				eS	**Sb**	**02 54 31.5**	**+1.3**
CTLX				IAML		02 54 32.1	
	comp=N,4μm,0.3s						
CTLX				⇓e		02 54 32.1	
CTLX				e		02 54 32.4	
CTLX				IAML		02 54 32.4	
	comp=E,5μm,0.4s						
EDOMX	**El Doctor, EDO**	**0.35**	**119**		**Pn**	**02 54 26.3**	**-1.4**
EDOMX					**Sn**	**02 54 32.7**	**-1.6**
ALAMX	**Rancho Alamar**	**0.53**	**257**	⇑iP	**Pg**	**02 54 28.0**	**+0.5**
ALAMX				eS	**Sg**	**02 54 35.1**	**+0.5**
UABX	**UABC, Campus M**	**0.57**	**330**		**Pn**	**02 54 29.8**	**-0.9**
UABX					**Sn**	**02 54 39.4**	**-0.6**
UABX	**UABC, Campus M**	**0.57**	**330**	⇓eP	**Pn**	**02 54 29.8**	**-0.9**
UABX				eS	**Sn**	**02 54 39.3**	**-0.6**
5054	**Holtville Bond**	**0.59**	**341**		**Pn**	**02 54 30.1**	**-1.0**
5054					**Sn**	**02 54 40.0**	**-0.4**
EMSC	**East Mesa**	**0.61**	**9**		**Pn**	**02 54 30.3**	**-0.9**
EMSC					**Sn**	**02 54 40.0**	**-0.9**
ECBX	**El Chinero**	**0.66**	**176**	⇓eP	**Pb**	**02 54 30.6**	**+0.3**
ESJX	**Sierra Juarez**	**0.73**	**260**		**Pg**	**02 54 31.2**	**-0.1**
ESJX				Sg	**Sg**	**02 54 41.3**	**+0.3**
ESJX				IAML		02 54 42.6	
	comp=N,623nm,0.2s						
ESJX				IAML		02 54 44.2	
	comp=E,636nm,0.3s						
COA	**Coachella**	**0.73**	**359**		**Pb**	**02 54 31.8**	**+0.3**
DREC	**Desert Rsrch C**	**0.73**	**337**		**Pn**	**02 54 32.2**	**-0.7**
SGL	**Mount Signal**	**0.74**	**315**		**Pb**	**02 54 31.7**	**0.0**
SGL					**Sb**	**02 54 42.4**	**+0.9**
SNR	**Schaffner Ranc**	**0.78**	**339**		**Pn**	**02 54 33.3**	**-0.3**
SNR					**Sn**	**02 54 45.0**	**-0.1**
SJX	**San Joaquin**	**0.81**	**243**	⇑eP	**Pb**	**02 54 31.6**	**-1.3**
WESC	**Westside Schoo**	**0.82**	**320**		**Pn**	**02 54 33.5**	**-0.6**
WESC					**Sn**	**02 54 45.8**	**-0.2**
RUN	**Ruthven**	**0.84**	**7**		**Pg**	**02 54 33.2**	**-0.3**
RUN					**Sg**	**02 54 44.9**	**+0.2**
IMPE	**Imperial**	**0.86**	**333**		**Pn**	**02 54 34.5**	**-0.1**
IMPE					**Sn**	**02 54 47.9**	**+0.9**
YUH2	**Yuha Desert**	**0.86**	**307**	eP	**Pb**	**02 54 33.5**	**-0.3**
YUH2				eS	**Sg**	**02 54 45.3**	**+0.1**
YUH	**Yuha Desert**	**0.86**	**307**		**Pb**	**02 54 33.5**	**-0.3**
YUH					Pn	02 54 45.0	+10
YUH				IAML		02 54 45.7	
	comp=E,352nm,0.8s						
COK2	**Cook Ranch 2**	**0.89**	**324**		**Pb**	**02 54 32.8**	**-1.4**
VTX	**Valle De La Tr**	**0.94**	**218**		**Sg**	**02 54 48.4**	**+0.8**
VTX	**Valle De La Tr**	**0.94**	**218**	Pg	**Pb**	**02 54 35.4**	**+0.3**
VTX				IAML		02 54 57.4	
	comp=E,273nm,0.5s						
GLA	**Glamis**	**0.95**	**14**		**Sn**	**02 54 48.3**	**-0.9**
GLA	**Glamis**	**0.95**	**14**		**Pb**	**02 54 35.0**	**-0.2**
RMX	**La Rumorosa**	**0.95**	**300**		**Pb**	**02 54 34.5**	**-0.8**
IKP	**In-Ko-Pah, Jac**	**1.00**	**302**		**Pg**	**02 54 36.3**	**-0.1**
IKP					**Sn**	**02 54 50.1**	**-0.4**
IKP	**In-Ko-Pah, Jac**	**1.00**	**302**	eS	**Sg**	**02 54 49.4**	**-0.1**
SWSC	**Sam W. Stewart**	**1.00**	**324**	eP	**Pb**	**02 54 35.3**	**-0.9**
CRR	**Carrizo Plain**	**1.05**	**316**		**Pg**	**02 54 37.4**	**0.0**
SFX	**San Felipe**	**1.11**	**169**		**Pn**	**02 54 38.1**	**0.0**
SFX				Sg	**Sb**	**02 54 52.0**	**-0.3**
SFX				IAML		02 54 54.6	
	comp=E,528nm,0.5s						
SFX				IAML		02 54 55.3	
	comp=N,472nm,0.4s						
SFX	**San Felipe**	**1.11**	**169**	eP	**Pb**	**02 54 38.3**	**+0.3**
SFX				eS	**Sn**	**02 54 53.0**	**-0.1**
SPIG	**San Pedro Mart**	**1.12**	**196**	eP	**Pn**	**02 54 38.9**	**+0.3**
SPIG				eS	**Sb**	**02 54 53.5**	**+0.4**
113A	**Mohawk Valley,**	**1.30**	**60**		**Pn**	**02 54 40.6**	**-0.1**
113A				IAML		02 54 58.1	
	comp=E,217nm,0.3s						
113A				IAML		02 55 06.1	
	comp=N,225nm,0.5s						
CBX	**Cerro Bola**	**1.33**	**278**		**Pn**	**02 54 41.5**	**+0.1**
CBX					**Sb**	**02 54 59.5**	**+0.6**
CBX	**Cerro Bola**	**1.33**	**278**	eP	**Pn**	**02 54 41.2**	**-0.1**
CBX				eS	**Sb**	**02 54 59.0**	**+0.1**
CCX	**Cicese**	**1.35**	**259**		**Pb**	**02 54 42.3**	**+0.2**
CCX				IAML		02 55 07.0	
	comp=N,468nm,0.6s						
TJIG	**Tijuana**	**1.36**	**283**	eP	**Pn**	**02 54 41.7**	**0.0**
TJIG				eS	**Sn**	**02 54 59.1**	**-0.3**
BAR	**Barrett**	**1.44**	**293**		**Pn**	**02 54 43.0**	**+0.4**
BAR				IAML		02 55 03.9	
	comp=E,246nm,0.2s						
BAR				IAML		02 55 04.2	
	comp=N,396nm,0.8s						
DUZA	**Dulzura**	**1.49**	**289**		**Pb**	**02 54 45.0**	**+0.4**
PIX	**Pinacate**	**1.51**	**112**		**Pn**	**02 54 42.9**	**-0.7**
PIX				IAML		02 55 18.4	
	comp=N,151nm,0.8s						
BC3	**Big Chuckawall**	**1.55**	**349**		**Pn**	**02 54 43.7**	**-0.6**
BC3				IAML		02 55 21.8	
	comp=N,96nm,0.6s						
BORC	**Borrego Spring**	**1.58**	**316**		**Pn**	**02 54 44.2**	**-0.5**
SDRC	**San Diego Road**	**1.67**	**292**		**Sb**	**02 55 09.1**	**+0.8**
MATG	**Mataguay Scout**	**1.68**	**310**		**Pg**	**02 54 48.6**	**-0.8**
BLYC	**Blythe**	**1.69**	**17**	Pn	**Pn**	**02 54 46.0**	**-0.1**
BLYC				IAML		02 55 19.7	
	comp=N,95nm,0.8s						
BLYC				IAML		02 55 23.3	
	comp=E,116nm,0.7s						
TJX	**Tijuana**	**1.69**	**283**	Pn	**Pn**	**02 54 47.0**	**+0.9**
DPP	**Dos Picos Cty**	**1.78**	**300**		**Pn**	**02 54 47.4**	**+0.1**
DPP				IAML		02 55 13.3	
	comp=N,99nm,0.9s						
DPP				IAML		02 55 14.6	
	comp=E,151nm,0.5s						
CPE	**Camp Elliot**	**1.85**	**295**		**Pn**	**02 54 48.8**	**+0.4**
CPE				IAML		02 55 17.0	
	comp=E,218nm,0.5s						
PMD	**Palm Desert**	**1.85**	**325**		**Pn**	**02 54 49.2**	**+0.8**
PFO	**Pinyon Flats O**	**1.87**	**323**		**Pn**	**02 54 47.9**	**-0.8**
DNR	**Dunn Ranch,Anz**	**1.92**	**318**		**Pn**	**02 54 49.1**	**-0.4**
DNR				IAML		02 55 23.9	
	comp=E,180nm,1.2s						
DNR				IAML		02 55 26.4	
	comp=N,160nm,0.8s						
214A	**Organ Pipe Nat**	**1.95**	**95**		**Pn**	**02 54 49.4**	**-0.4**
214A				IAML		02 55 27.5	
	comp=E,108nm,0.5s						
214A				IAML		02 55 30.4	
	comp=N,95nm,0.6s						
IRM	**Iron Mountain**	**2.02**	**359**	Pn	**Pn**	**02 54 50.7**	**0.0**
IRM				IAML		02 55 29.8	
	comp=E,77nm,0.9s						
ELS	**Elsinore Mount**	**2.47**	**308**		**Pn**	**02 54 57.1**	**+0.2**
ELS				IAML		02 55 40.6	
	comp=N,52nm,0.5s						
ELS				IAML		02 55 42.9	
	comp=E,60nm,0.6s						
Y14A	**Wickenburg**	**2.52**	**44**		**Pb**	**02 54 60.0**	**-2.1**
W13A	**Hualapai Mount**	**3.13**	**19**	Pn	**Pn**	**02 55 07.7**	**+1.6**
V12A	**Nelson**	**3.59**	**3**	Pn	**Pn**	**02 55 14.1**	**+1.7**
X16A	**Lo Mia Camp, P**	**3.82**	**52**		**Pn**	**02 55 17.6**	**+2.0**

*IDC **03** 02:59:35.2±0.6, 37°.03N×141°.04E, h0km, mb3.9/19, mbtmp3.9/23, ML3.3/4, MS2.9/2, Error ellipse: s-maj=16.7km s-min=14.1km az=97.0*
*NIED **03** 02:59:38.2, 37°.03N×141°.07E, h18km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^14 Nm; Mrr-4.06; Mθθ2.18; Mφφ1.88; Mrθ-0.67; Mθφ2.68; Mφr1.23; Fault plane solution: M0 4.64000×10^14 NP1:φs65.00000°, δ46.00000°, λ-63.00000°. NP2:φs208.00000°, δ50.00000°, λ-115.00000°.*
*JMA **03** 02:59:38.2±0.1, 37°.0N±0°.1×141°.1E±0°.3, h18km, MD4.2/40, MV3.9/40, E OFF FUKUSHIMA PREF*
JMA Felt II J1 at E OFF FUKUSHIMA PREF .
*NEIC **03** 02:59:43.9±2.0, 37°.17N±0°.07×140°.9E±0°.1, h55km±6km, mb4.3/25, Error ellipse: s-maj=12.5km s-min=9.9km az=122.0*
ISC 03 02:59:38.2±1.0, **37°.04N**±0°.03×**141°.02E**±0°.05, **h18**km±4km, **n97**, σ**1s.42**/95, **mb4.1**/32, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.19**	**290**	P	**Pb**	**02 59 43.5**	**+0.9**
ONAJ				A	A	02 59 43.5	
	comp=N,38nm,0.3s,comp=E,32nm,0.3s						
ONAJ				S	**Sb**	**02 59 47.2**	**+1.8**
JFK	**Kawauchi**	**0.35**	**340**	P	**Pb**	**02 59 45.9**	**-0.1**
JFK				S	**Sb**	**02 59 51.2**	**0.0**
JFFD	**Fukushimafurud**	**0.37**	**279**	i P	**Pb**	**02 59 46.5**	**+0.2**
JFFD				eS	**Sb**	**02 59 52.3**	**+0.5**
JHO	**Hitachi**	**0.56**	**221**	P	**Pb**	**02 59 49.3**	**0.0**
JHO				eS	**Sb**	**02 59 57.4**	**+0.5**
JMST	**Minamisoumatoc**	**0.70**	**351**	A	A	02 59 51.7	
	comp=N,10.0nm,0.3s,comp=E,13nm,0.3s						
JOTO	**OTAMA OYAMA**	**0.76**	**314**	i P	**Pb**	**02 59 53.5**	**+0.7**
JOTO				A	A	02 59 53.5	
	comp=N,22nm,0.5s,comp=E,14nm,1.2s						
JOTO				eS	**Sn**	**03 00 04.3**	**-0.7**
JMM	**Marumori**	**0.85**	**348**	i P	**Pb**	**02 59 54.1**	**-0.3**
JMM				A	A	02 59 54.1	
	comp=N,16nm,0.3s,comp=E,10.0nm,0.4s						
JMM				S	**Sb**	**03 00 05.7**	**+0.3**
JSB	**Shiboa**	**0.89**	**266**	i P	**Pn**	**02 59 56.2**	**+0.5**
JSB				A	A	02 59 56.2	
	comp=N,8.0nm,0.5s,comp=E,8.0nm,0.8s						
JSB				S	**Sn**	**03 00 08.7**	**+0.7**
JYT	**Yasato**	**1.05**	**220**	P	**Pb**	**02 59 57.0**	**-0.7**
JYT				S	**Sb**	**03 00 10.8**	**-0.2**
JFY	**Yanaizu**	**1.11**	**290**	i P	**Pb**	**02 59 59.6**	**+0.7**
JFY				S	**Sn**	**03 00 15.0**	**+1.2**
JYAR	**Yonezawaarcadi**	**1.12**	**322**	A	A	02 59 59.2	
	comp=N,21nm,0.4s,comp=E,19nm,0.3s						
JOU	**Okura**	**1.36**	**348**	A	A	03 00 02.8	
	comp=N,17nm,0.3s,comp=E,22nm,0.6s						
JYS	**Shirataka**	**1.41**	**328**	A	A	03 00 03.7	
	comp=N,15nm,0.7s,comp=E,13nm,1.1s						
JNS	**Sasagawa**	**1.57**	**300**	A	A	03 00 06.3	
	comp=N,3.0nm,0.8s,comp=E,5.0nm,0.7s						
JYA	**Atsumi**	**1.87**	**327**	A	A	03 00 10.6	
	comp=N,7.0nm,0.5s,comp=E,7.0nm,0.5s						
MJAR	**Matsushiro Arr**	**2.31**	**259**	Pn	**Pn**	**03 00 15.5**	**+0.2**
	comp=E,3.4nm,0.3s,baz=84,slow=16,SNR=42						
MJAR				Sn	**Sb**	**03 00 48.4**	**+0.9**
	comp=E,1.4nm,0.3s,baz=73,slow=13,SNR=6.2						
	comp=E,7.0nm,0.3s						
MJAR	**Matsushiro Arr**	**2.31**	**259**		**Pb**	**03 00 17.6**	**-1.7**
MJAR					**Sb**	**03 00 46.3**	**-1.3**
MAJO	**Matsushiro**	**2.31**	**259**		**Pb**	**03 00 17.6**	**-1.7**
MJB9	**Matsu-Tunnel**	**2.31**	**259**		**Pn**	**03 00 17.4**	**+2.0**
JGF	**Kuroka**	**3.29**	**245**		**Pn**	**03 00 30.7**	**+2.0**
INU	**Inuyama**	**3.65**	**244**	Pn	**Pn**	**03 00 36.8**	**+3.1**
JHJ	**Hachijo jima 2**	**4.04**	**195**	Pn	**Pn**	**03 00 38.4**	**-0.6**
	comp=E,11nm,0.3s,baz=49,slow=20,SNR=5.3						
JHJ				Sn	**Sn**	**03 01 25.6**	**-0.2**
	comp=E,13nm,0.3s,baz=70,slow=22,SNR=1.6						
	comp=E,89nm,0.9s						
JHJ2	**Mitsune**	**4.04**	**195**	Pn	**Pn**	**03 00 43.3**	**+4.3**
JMN	**Monobe**	**6.70**	**243**	Pn	**Pn**	**03 01 18.9**	**+3.2**
ASAJ	**Asahikawa**	**7.17**	**9**	Pn	**Pn**	**03 01 22.1**	**0.0**
	comp=E,0.8nm,0.3s,baz=227,slow=12,SNR=4.2						
ASAJ				Sn	**Sn**	**03 02 42.9**	**-0.1**
	comp=E,0.2nm,0.3s,baz=238,slow=19,SNR=1.0						
	comp=E,3.2nm,0.4s						
JKA	**Kamikawa-asahi**	**7.17**	**9**		**Pn**	**03 01 22.3**	**+0.2**
USRK	**Ussuriysk Ar.**	**9.91**	**319**	Pn	**Pn**	**03 02 00.0**	**+0.4**
	comp=E,0.1nm,0.3s,baz=138,slow=12,SNR=4.5						
USRK				Sn	**Sn**	**03 03 42.5**	**-7.9**
	comp=E,0.1nm,0.3s,baz=137,slow=15,SNR=1.7						
	comp=E,0.7nm,0.5s						
KSRS	**Korea Array**	**10.45**	**276**	LR	LR	03 05 27.9	
	comp=E,15nm,19.2s,baz=105,slow=34						
SONM	**Songino Array**	**27.52**	**304**	P	**P**	**03 05 23.7**	**0.0**
	comp=E,1.0nm,0.6s,baz=109,slow=9.0,SNR=9.8						
	comp=E,1.0nm,0.6s						
SONM	**Songino Array**	**27.52**	**304**	P	**P**	**03 05 23.2**	**-0.5**
H11N2	**WAKE ISLAND Hy**	**28.42**	**120**	T	T	03 35 15.2	
	baz=313,slow=75,SNR=654						
H11N1	**WAKE ISLAND Hy**	**28.43**	**120**	T	T	03 35 16.6	
	baz=313,slow=75,SNR=485						
H11N3	**WAKE ISLAND Hy**	**28.44**	**120**	T	T	03 35 17.3	
	baz=313,slow=75,SNR=395						
H11S1	**WAKE ISLAND Hy**	**29.12**	**122**	T	T	03 36 08.1	
	baz=314,slow=76,SNR=308						
H11S3	**WAKE ISLAND Hy**	**29.12**	**122**	T	T	03 36 08.2	
	baz=314,slow=76,SNR=249						
H11S2	**WAKE ISLAND Hy**	**29.14**	**122**	T	T	03 36 06.8	
	baz=314,slow=76,SNR=167						
DAV	**Davao City (W)**	**32.98**	**209**	LR	LR	03 18 29.5	
	comp=E,91nm,21.8s,baz=2.0,slow=34						
CMAR	**Chiang Mai Arr**	**41.19**	**255**	P	**P**	**03 07 21.8**	**0.0**
	comp=E,1.1nm,0.3s,baz=146,slow=9.9,SNR=2.2						
	comp=E,1.1nm,0.3s						
CMAR	**Chiang Mai Arr**	**41.19**	**255**	P	**P**	**03 07 21.2**	**-0.6**
ZALV	**Zalesovo Beam**	**41.68**	**312**	P	**P**	**03 07 25.9**	**+0.5**
	comp=E,0.8nm,0.4s,baz=95,slow=7.4,SNR=4.5						
	comp=E,0.8nm,0.4s						
ZALV	**Zalesovo Beam**	**41.68**	**312**	P	**P**	**03 07 25.1**	**-0.3**
C16K	**Lisburne Hills**	**42.84**	**26**	P	**P**	**03 07 35.3**	**+0.7**
C16K				IAmb	IAmb	03 07 36.0	
	comp=Z,4.4nm,1.1s						
MK31	**Makanchi Array**	**43.85**	**302**	P	**P**	**03 07 43.2**	**0.0**
MKAR	**Makanchi Array**	**43.85**	**302**	P	**P**	**03 07 43.2**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=88,slow=10,SNR=17						
	comp=Z,0.9nm,0.6s						
MKAR	**Makanchi Array**	**43.85**	**302**	P	**P**	**03 07 43.1**	**-0.1**
F17K	**Baldwin Pennin**	**43.87**	**29**	P	**P**	**03 07 44.9**	**+2.0**
L16K	**Owhat River**	**43.88**	**36**	P	**P**	**03 07 44.4**	**+1.2**
L16K				IAmb	IAmb	03 07 46.5	
	comp=Z,4.9nm,1.2s						
E18K	**Tukpahlearik C**	**44.34**	**28**	P	**P**	**03 07 47.2**	**+0.5**
C18K	**Utukok River**	**44.41**	**26**	P	**P**	**03 07 48.3**	**+0.9**
C18K				IAmb	IAmb	03 07 49.6	
	comp=Z,4.8nm,0.8s						
K17K	**Iditarod**	**44.53**	**35**	P	**P**	**03 07 49.2**	**+0.8**
H18K	**Honhosa River**	**44.81**	**31**	P	**P**	**03 07 51.8**	**+1.3**
C19K	**Lookout Ridge**	**45.09**	**26**		**P**	**03 07 54.3**	**+1.6**
C19K				IAmb	IAmb	03 07 56.0	
	comp=Z,7.8nm,1.1s						
D19K	**Kuna River**	**45.48**	**27**	P	**P**	**03 07 57.1**	**+1.2**
D19K				IAmb	IAmb	03 07 58.4	
	comp=Z,5.6nm,0.9s						
E19K	**Redstone River**	**45.62**	**28**	P	**P**	**03 07 57.5**	**+0.5**
E19K				IAmb	IAmb	03 07 59.5	
	comp=Z,4.0nm,0.9s						
KURK	**Kurchatov**	**45.68**	**308**	P	**P**	**03 07 57.6**	**0.0**
KURK				IAmb	IAmb	03 08 03.4	
	comp=Z,4.9nm,0.8s						
KURBB	**Kurchatov Arra**	**45.75**	**308**	P	**P**	**03 07 57.9**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=83,slow=8.4,SNR=11						
	comp=Z,0.7nm,0.3s						
J19K	**Poorman**	**45.85**	**33**	P	**P**	**03 08 00.2**	**+1.4**
J19K				IAmb	IAmb	03 08 21.0	
	comp=Z,3.8nm,1.2s						
B20K	**Meade River**	**46.12**	**25**	P	**P**	**03 08 01.9**	**+1.1**
K20K	**Telida**	**46.50**	**34**	P	**P**	**03 08 06.0**	**+2.1**
K20K				IAmb	IAmb	03 08 06.6	
	comp=Z,2.0nm,0.7s						
B21K	**Ikpikpuk River**	**46.92**	**26**		**P**	**03 08 08.5**	**+1.4**
B21K				IAmb	IAmb	03 08 11.4	
	comp=Z,3.6nm,0.8s						
E22K	**Anaktuvuk Pass**	**47.75**	**28**	P	**P**	**03 08 14.6**	**+1.0**
E22K				IAmb	IAmb	03 08 15.8	
	comp=Z,2.6nm,0.9s						
ILAR	**Eielson Array**	**49.66**	**32**	P	**P**	**03 08 29.1**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=270,slow=6.4,SNR=14						
	comp=Z,1.1nm,0.7s						
ILAR	**Eielson Array**	**49.66**	**32**	P	**P**	**03 08 29.3**	**+1.0**
BVAR	**Borovoye Array**	**50.34**	**312**	P	**P**	**03 08 38.0**	**+4.3**
	comp=Z,0.6nm,0.5s,baz=66,slow=7.0,SNR=4.9						
BVAR				PcP	**PcP**	**03 09 52.5**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=64,slow=3.4,SNR=3.7						
I30M	**Mount Dempster**	**54.03**	**31**		**P**	**03 09 02.8**	**+1.7**
P32M	**Atlin**	**56.64**	**37**	P	**P**	**03 09 20.0**	**+0.2**
WB0	**Warramunga Arr**	**56.84**	**187**	P	**P**	**03 09 21.6**	**0.0**
WB0				IAmb	IAmb	03 09 29.6	
	comp=Z,3.5nm,1.0s						
WR8	**Warramunga Arr**	**57.02**	**187**	P	**P**	**03 09 22.9**	**+0.1**
WRA	**Warramunga Arr**	**57.02**	**187**	P	**P**	**03 09 22.6**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=4.0,slow=7.2,SNR=13						
	comp=Z,1.4nm,0.6s						
SPITS	**Spitsbergen Ar**	**60.46**	**349**	P	**P**	**03 09 46.6**	**+0.4**
	comp=Z,6.0nm,1.0s,baz=191,slow=4.0,SNR=2.0						
	comp=Z,6.0nm,1.0s						
ASAR	**Alice Springs**	**60.75**	**187**	P	**P**	**03 09 48.9**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=1.6,slow=5.2,SNR=7.1						
	comp=Z,0.8nm,0.8s						
ASAR	**Alice Springs**	**60.75**	**187**	P	**P**	**03 09 48.5**	**-0.2**
ARCES	**ARCESS Array B**	**63.88**	**339**	P	**P**	**03 10 09.0**	**-0.2**
	comp=Z,8.0nm,1.0s,baz=46,slow=8.7,SNR=4.6						
	comp=Z,8.0nm,1.0s						
ARCES	**ARCESS Array B**	**63.88**	**339**	P	**P**	**03 10 08.6**	**-0.6**
YKA	**Yellowknife Ar**	**63.96**	**30**	P	**P**	**03 10 09.7**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=306,slow=7.1,SNR=5.2						
	comp=Z,0.3nm,0.7s						
YKA	**Yellowknife Ar**	**63.96**	**30**	P	**P**	**03 10 09.9**	**+0.1**
FORT	**Forrest**	**68.55**	**192**	P	**P**	**03 10 40.4**	**+1.0**
FINES	**FINESS Array B**	**68.67**	**332**	P	**P**	**03 10 39.5**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=40,slow=6.9,SNR=12						
	comp=Z,1.2nm,0.6s						
FINES	**FINESS Array B**	**68.67**	**332**	P	**P**	**03 10 39.9**	**-0.1**
KBZ	**Khabaz**	**70.66**	**310**	P	**P**	**03 10 53.2**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=98,slow=4.5,SNR=3.1						
	comp=Z,1.2nm,0.7s						
HFS	**Hagfors**	**73.96**	**336**	P	**P**	**03 11 11.9**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=55,slow=7.8,SNR=5.5						
	comp=Z,1.1nm,0.7s						
NOA	**NORSAR Array B**	**74.06**	**337**	P	**P**	**03 11 12.2**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=40,slow=4.9,SNR=2.2						
	comp=Z,0.6nm,0.6s						
AKASG	**Malin Array Be**	**74.10**	**322**	P	**P**	**03 11 12.8**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=48,slow=6.1,SNR=6.3						
	comp=Z,0.7nm,0.3s						
AKASG	**Malin Array Be**	**74.10**	**322**	P	**P**	**03 11 13.2**	**+0.2**
AKASG				IAmb	IAmb	03 11 47.5	
	comp=Z,4.4nm,1.3s						
NVAR	**Mina Array Bea**	**75.24**	**53**	P	**P**	**03 11 19.9**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=78,slow=11,SNR=2.0						
	comp=Z,0.1nm,0.3s						
PDAR	**Pinedale Array**	**77.89**	**45**	P	**P**	**03 11 36.0**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=312,slow=0.7,SNR=4.5						
	comp=Z,0.3nm,0.6s						
PDAR	**Pinedale Array**	**77.89**	**45**	P	**P**	**03 11 35.3**	**+0.2**
BRTR	**Keskin Array B**	**78.61**	**311**	P	**P**	**03 11 38.5**	**-0.5**
	comp=Z,0.4nm,0.9s,baz=52,slow=2.4,SNR=2.4						
	comp=Z,0.4nm,0.9s						
BRTR	**Keskin Array B**	**78.61**	**311**	P	**P**	**03 11 38.2**	**-0.8**
LPAZ	**La Paz**	**146.96**	**59**	PKPbc	**PKPbc**	**03 19 20.4**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=29,slow=6.0,SNR=6.4						
LPAZ	**La Paz**	**146.96**	**59**		**PKPbc**	**03 19 20.2**	**-0.5**
H03N2	**Juan Fernandez**	**147.34**	**96**	T	T	06 03 59.1	
	baz=291,slow=76,SNR=87						
H03N3	**Juan Fernandez**	**147.35**	**96**	T	T	06 04 00.2	
	baz=291,slow=76,SNR=162						
H03N1	**Juan Fernandez**	**147.35**	**96**	T	T	06 04 01.0	
	baz=291,slow=76,SNR=26						
SIV	**San Ignacio**	**151.32**	**49**	PKPbc	**PKPbc**	**03 19 31.5**	**+0.4**
	baz=274,slow=2.8						
ESPZ	**Base Esperanza**	**151.41**	**163**	PKPdf	**PKPdf**	**03 19 24.7**	**+1.0**
PLCA	**Paso Flores**	**155.22**	**108**	PKPab	**PKPab**	**03 19 53.6**	**-1.6**
	comp=Z,0.9nm,0.8s,baz=339,slow=11,SNR=3.0						

*SJA **03** 03:03:17.1±0.8, 22°.98S×68°.63W, h129km±3km, ML3.7, MW3.7*
*GUC **03** 03:03:18.7±0.7, 22°.96S×68°.68W, h132km±4km, ML3.8*
ISC 03 03:03:16.6±1.3, **22°.98S**±0°.03×**68°.65W**±0°.05, **h141**km±9km, **n35**, σ**1s.33**/64, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**0.43**	**87**	eP	**Pn**	**03 03 36.7**	**-0.3**
AF01				eS	**Sn**	**03 03 50.6**	**-1.8**
AF01				IAML		03 04 02.2	

comp=Z,1μm,0.5s
PB06 IPOC Station P 0.89 287 eP Pn 03 03 40.4 +0.5
PB06 i S Sn 03 03 56.7 -0.8
PB06 IAML 03 03 57.2
comp=N,6μm,0.2s
PB06 IPOC Station P 0.89 287 eP Pn 03 03 40.2 +0.3
PB06 eS Sn 03 03 56.9 -0.6
PB06 IAML 03 03 60.0
comp=Z,2μm,0.2s
PB09 IPOC Station P 1.29 335 eP Pn 03 03 44.6 +1.0
PB09 i S Sn 03 04 04.5 +0.3
PB09 IPOC Station P 1.29 335 eP Pn 03 03 44.4 +0.7
PB09 eS Sn 03 04 04.6 +0.5
PB09 IAML 03 04 05.4
comp=Z,988nm,0.5s
PB03 IPOC Station P 1.37 312 eP Pn 03 03 45.0 +0.6
PB03 i S Sn 03 04 05.0 -0.6
PB03 IAML 03 04 06.1
comp=E,2μm,0.2s
PB03 IPOC Station P 1.37 312 eP Pn 03 03 45.0 +0.6
PB03 eS Sn 03 04 05.7 +0.2
PB03 IAML 03 04 07.7
comp=Z,933nm,0.2s
PB05 IPOC Station P 1.44 275 eP Pn 03 03 45.7 +0.7
PB05 i S Sn 03 04 05.9 -0.7
PB05 IAML 03 04 07.9
comp=N,967nm,0.4s
PB05 IPOC Station P 1.44 275 eP Pn 03 03 45.5 +0.5
PB05 eS Sn 03 03 52.9 -14
PB05 IAML 03 04 07.2
comp=Z,691nm,0.4s
PB07 IPOC Station P 1.69 317 eP Pn 03 03 48.6 +0.7
PB07 i S Sn 03 04 11.2 -0.4
PB07 IAML 03 04 12.6
comp=N,1μm,0.5s
PB07 IPOC Station P 1.69 317 eP Pn 03 03 48.6 +0.7
PB07 eS Sn 03 04 12.3 +0.6
PB07 IAML 03 04 12.5
comp=Z,766nm,0.1s
PB02 IPOC Station P 2.01 325 eP Pn 03 03 52.1 +0.5
PB02 i S Sn 03 04 16.9 -1.3
PB02 IAML 03 04 19.6
comp=N,664nm,0.1s
PB02 IPOC Station P 2.01 325 eP Pn 03 03 52.1 +0.5
PB02 eS Sn 03 04 19.1 +0.9
PB02 IAML 03 04 20.6
comp=Z,893nm,0.3s
PB01 IPOC Station P 2.07 338 eP Pn 03 03 52.5 +0.3
PB01 i S Sn 03 04 19.1 -0.4
PB01 IAML 03 04 22.2
comp=E,801nm,0.5s
PB01 IPOC Station P 2.07 338 eP Pn 03 03 52.7 +0.4
PB01 eS Sn 03 04 19.4 -0.2
PB01 IAML 03 04 22.4
comp=Z,526nm,0.1s
PB14 IPOC Station P 2.30 224 eP Pn 03 03 56.0 +0.8
PB14 i S Sn 03 04 24.6 -0.2
PB14 IPOC Station P 2.30 224 eP Pn 03 03 56.1 +1.0
PB14 eS Sn 03 04 24.9 +0.2
PB14 IAML 03 04 25.7
comp=Z,264nm,0.2s
GO02 Mina Guanaco 2.34 201 eP Pn 03 03 56.7 +1.1
GO02 i S Sn 03 04 26.6 +0.9
GO02 Mina Guanaco 2.34 201 eP Pn 03 03 56.8 +1.1
GO02 eS Sn 03 04 27.6 +1.9
GO02 IAML 03 04 30.4
comp=Z,343nm,0.3s
SALTA 2.46 121 eP Pn 03 03 53.8 -3.5
SALTA eP 03 03 59.1
TA01 Diego Aracena 2.79 329 eP Pn 03 04 00.7 -0.3
TA01 eS Sn 03 04 34.8 -0.3
TA01 IAML 03 04 41.1
comp=Z,100nm,0.5s
PB08 IPOC Station P 2.86 350 eP Pn 03 04 03.3 +0.9
PB08 i S Sn 03 04 34.9 -2.5
PB08 IPOC Station P 2.86 350 eP Pn 03 04 03.2 +0.9
PB08 eS Sn 03 04 38.5 +1.0
PB08 IAML 03 04 40.1
comp=Z,102nm,0.2s
HJA Humahuaca 2.99 95 eP Pn 03 04 06.1 +2.1
TA02 Huaiquique 3.02 333 eP Pn 03 04 04.2 +0.2
TA02 eS Sn 03 04 40.6 0.0
TA02 IAML 03 04 43.8
comp=Z,213nm,0.1s
GO01 Chusmiza 3.33 351 eP Pn 03 04 09.2 +0.7
GO01 i S Sn 03 04 48.0 -0.3
GO01 Chusmiza 3.33 351 eP Pn 03 04 09.2 +0.7
GO01 IAML 03 04 51.3
comp=Z,113nm,0.1s
PB11 IPOC Station P 3.33 343 eP Pn 03 04 07.7 -0.5
PB11 eS Sn 03 04 48.5 +0.5
PB11 IAML 03 04 50.9
comp=Z,135nm,0.2s
SLA San Lorenzo 3.36 122 eP Pn 03 04 11.8 +3.3
AC01 Pan de Azucar 3.62 209 eP Pn 03 04 11.6 -0.1
AC01 eS Sn 03 04 50.3 -4.2
AC01 IAML 03 04 53.9
comp=Z,43nm,0.3s
AC02 Maricunga 3.87 186 eP Pn 03 04 16.9 +1.5
AC02 eS Sn 03 04 58.9 -2.1
PB12 IPOC Station P 4.61 340 eP Pn 03 04 23.8 -1.2
PB12 eS Sn 03 05 14.0 -4.0
PB12 IAML 03 05 19.9
comp=Z,47nm,0.2s
PB16 IPOC Station P 4.69 350 eP Pn 03 04 27.2 +0.9
PB16 eS Sn 03 05 20.8 +0.4
PB16 IAML 03 05 22.6
comp=Z,41nm,0.6s
GO03 Copiapo 4.82 197 eP Pn 03 04 27.1 -0.4
GO03 eS Sn 03 05 22.4 -0.4
GO03 IAML 03 05 27.4
comp=Z,53nm,0.2s
TINO Tinogasta 5.16 169 eP Pn 03 04 33.5 +1.4

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*IDC **03** 03:10:15.5±1.3, 18.°35N×68.°75W, h162km±13km, mb3.4/7, mbtmp4.0/11, Error ellipse: s-maj=15.9km s-min=14.2km az=101.0*
*SDD **03** 03:10:16.7±1.0, 18.°33N×68.°91W, h184km±9km, MD3.8, ML4.3, MW4.1, Presumed earthquake*
*PTWC **03** 03:10:16, 18.°30N×68.°90W, h176km, Ml4.2/24*
*NEIC **03** 03:10:17.3±1.5, 18.°38N±0.°09×68.°86W±0.°03, h161km±6km, mb4.2/12, ML4.3/43, ML4.0/8(RSPR), Error ellipse: s-maj=12.8km s-min=2.9km az=193.0*
*OSPL **03** 03:10:18.5±1.8, 18.°38N×68.°87W, h173km±14km, ML3.8, Presumed earthquake*
ISC 03 03:10:16.3±0.6**, 18.°40N**±0.°05×**68.°78W**±0.°04**, h172**km±5km**, n109, σ1.s61**/130**, mb3.8**/9**, 6C-4D, Mona Passage**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
HIDR Higuey Centro 0.20 18⇑ePg Pn 03 10 39.8 +0.6
HIDR ⇑eSg Sn 03 10 57.7 +0.8
HIDR IAML 03 10 58.5
comp=N,6μm,0.3s
HGY1 Higuey 0.20 18 P Pn 03 10 39.8 +0.6
DR12 Loma Pena Alta 0.69 304 Pn 03 10 40.3 -0.8
DR12 Sn Sn 03 10 57.5 -2.7
HATOM Hato Mayor del 0.69 304⇑ePg Pn 03 10 40.9 -0.2
HATOM ⇓eSg Sn 03 10 58.8 -1.4
HATOM IAML 03 11 01.7
comp=N,2μm,0.6s
SMDR Samana, DR 0.97 337 P Pn 03 10 43.0 +0.1
SMDR Samana, DR 0.97 337⇑ePg Pn 03 10 43.0 +0.1
SMDR ⇓eSg Sn 03 11 03.3 -0.2
SMDR IAML 03 11 09.4
comp=N,3μm,0.7s
SDD Santo Domingo 1.07 273 Pn 03 10 43.2 -0.5
SDD Sn Sn 03 11 01.0 -3.8
SDD IAML 03 11 04.2
comp=N,3μm,0.3s
SDD Santo Domingo 1.07 273 P Pn 03 10 43.7 0.0
SDD Santo Domingo 1.07 273 i P Pn 03 10 43.4 -0.3
SDD eS Sn 03 11 02.5 -2.3
IDE Isla Desecheo 1.24 90 P Pn 03 10 46.8 +1.6
DR08 Loma La Naviza 1.30 296 P Pn 03 10 45.7 0.0
DR08 Loma La Naviza 1.30 296⇑ePg Pn 03 10 46.0 +0.2
DR08 ⇑eSg Sn 03 11 06.6 -1.9
DR08 IAML 03 11 09.3
comp=N,7μm,0.1s
NADR Nagua 1.39 313 P Pn 03 10 46.8 +0.3
BANI BANI 1.50 270 Pn 03 10 47.2 -0.4
BANI Sn Sn 03 11 10.2 -1.6
PRSN Puerto Rico Se 1.57 96 Pn 03 10 49.4 +1.2
PRSN Sn Sn 03 11 12.6 -0.2
AGPR Aguadilla, PR 1.59 87 Pn 03 10 49.8 +1.4
AGPR Sn Sn 03 11 14.2 +1.0
AGPR IAML 03 11 19.5
comp=N,2μm,0.6s
AGPR IAML 03 11 22.6
comp=N,2μm,0.4s
AGPR Aguadilla, PR 1.59 87 P Pn 03 10 50.1 +1.7
LSP Las Mesas 1.63 98 P Pn 03 10 50.2 +1.3
CRPR Cabo Rojo, PR 1.64 103 Pn 03 10 50.3 +1.3
CRPR Cabo Rojo, PR 1.64 103 P Pn 03 10 50.3 +1.3
CRPR Cabo Rojo, PR 1.64 103⇓ePg Pn 03 10 50.0 +1.1
CRPR ⇓eSg Sn 03 11 14.8 +0.7
CRPR IAML 03 11 24.6
comp=N,755nm,0.6s
CRPR Cabo Rojo, PR 1.64 103 i P Pn 03 10 50.2 +1.3
CRPR IAML 03 11 20.1
comp=Z,623nm,0.4s
SFDR San Fco. de Ma 1.64 303 P Pn 03 10 49.3 +0.4
SFM1 San Francisco 1.64 303 P Pn 03 10 49.7 +0.7
MLPR Magueyes Islan 1.71 104 Pn 03 10 50.5 +0.9
MLPR IAML 03 11 21.3
comp=Z,1μm,0.6s
MLPR Magueyes Islan 1.71 104 P Pn 03 10 51.0 +1.4
GBPR Guanica, Bosqu 1.86 103 P Pn 03 10 52.7 +1.5
AOPR Arecibo Observ 1.93 91 Pn 03 10 52.6 +0.6
AOPR Arecibo Observ 1.93 91 P Pn 03 10 52.9 +0.9
UUPR Utuado, UPR, P 1.96 94 Pn 03 10 53.6 +1.2
OBIP Obispado Ponce 2.10 99 Pn 03 10 54.8 +0.9
OBIP Obispado Ponce 2.10 99 P Pn 03 10 55.1 +1.2
OBIP Obispado Ponce 2.10 99 i P Pn 03 10 55.2 +1.2
OBIP eS Sn 03 11 24.1 +1.1
OBIP IAML 03 11 30.7
comp=Z,310nm,0.4s
SC01 Santiago de lo 2.11 299 Pn 03 10 53.6 -0.3
SC01 IAML 03 11 24.3
comp=N,1μm,0.7s
SC01 IAML 03 11 25.1
comp=E,1μm,0.8s
SC01 Santiago de lo 2.11 299 P Pn 03 10 54.4 +0.5
SC01 Santiago de lo 2.11 299 i P Pn 03 10 54.4 +0.5
CELP Cerrillos 2.12 98 Pn 03 10 55.2 +1.1
CELP IAML 03 11 28.4
comp=E,1μm,0.8s
CELP IAML 03 11 28.9
comp=E,1μm,0.6s
ECPR Experimental S 2.30 92 Pn 03 10 56.4 +0.2
PODR Polo 2.38 265 i P Pn 03 10 57.1 -0.3
SDDR Presa de Saban 2.44 284 Pn 03 10 57.0 -0.9
SDDR Presa de Saban 2.44 284 eP Pn 03 10 58.2 +0.3
SDDR eS Sn 03 11 30.2 0.0
SDDR Presa de Saban 2.44 284 i P Pn 03 10 58.1 +0.3
SDDR IAML 03 11 33.6
comp=Z,131nm,0.6s
SJG San Juan 2.52 96 P Pn 03 10 57.6 -1.2
comp=Z,49nm,0.3s,baz=12,slow=21,SNR=37
SJG S Sn 03 11 29.5 -2.1
comp=Z,330nm,0.4s,baz=14,slow=24,SNR=19
SJG San Juan 2.52 96 Pn Pn 03 10 59.0 +0.2
SJG IAML 03 11 36.6
comp=Z,750nm,0.4s
SJG IAML 03 11 38.5
comp=Z,914nm,0.3s
SJG San Juan 2.52 96 i P Pn 03 10 59.5 +0.8
SJG eS Sn 03 11 31.7 0.0
SJG IAML 03 11 34.5
comp=Z,371nm,0.3s
LOVI El Cajuil, Ovi 2.53 257 i P Pn 03 10 57.9 -0.9
LOVI eS Sn 03 11 28.0 -3.9
LOVI IAML 03 11 33.7
comp=Z,329nm,1.0s
LONE3 El Aguacate, B 2.55 275 i P Pn 03 10 59.4 +0.2
LONE3 IAML 03 11 33.9
comp=Z,75nm,0.8s
LODU1 El Espartillar 2.56 269 i P Pn 03 10 59.6 +0.4
LODU1 IAML 03 11 39.0
comp=Z,361nm,0.4s
PDPR Patillas Dam, 2.65 98 Pn 03 11 00.6 +0.3
PDPR IAML 03 11 37.0
comp=Z,803nm,0.7s
PDPR IAML 03 11 40.1
comp=Z,627nm,0.6s
LOPP1 Punta Rusia, P 2.70 303 i P Pn 03 11 00.7 -0.2
LOPP1 IAML 03 11 37.6
comp=Z,249nm,2.6s
LOBH Bahia de las A 2.77 259 i P Pn 03 11 01.5 -0.2
LOBH eS Sn 03 11 34.1 -2.8
LOBH IAML 03 11 39.0
comp=Z,106nm,0.4s
HUMP Col San Antoni 2.80 95 Pn 03 11 02.7 +0.6
HUMP IAML 03 11 43.4
comp=Z,999nm,0.3s
HUMP IAML 03 11 43.5
comp=Z,680nm,0.5s
CUPR Culebra, Puert 3.33 91 Pn Pn 03 11 08.6 0.0
GRTK Grand Turk 3.81 325 i P Pn 03 11 13.6 -1.1
GRTK eS Sn 03 11 56.6 -3.6
GRTK IAML 03 12 03.1
comp=Z,126nm,0.9s
SABA Saba 5.33 97 eP Pn 03 11 35.9 +1.5
SABA eS Sn 03 12 36.9 +1.2
SMRT St. Maarten 5.44 93 Pn Pn 03 11 35.8 0.0
SMRT St. Maarten 5.44 93 eP Pn 03 11 34.8 -1.0
SMRT eS Sn 03 12 34.2 -4.0
SKI Saint Kitts 5.85 99 eP Pn 03 11 42.1 +0.8
SKI eS Sn 03 12 44.0 -4.1
MBFL Flemmings, Mon 6.48 104 eP Pn 03 11 50.5 +0.9
MBFL eS Sn 03 12 56.6 -6.4
MBWH Windy Hill 6.50 104 eP Pn 03 11 49.1 -0.7
MLYT Lee's Yard 6.51 104 eP Pn 03 11 51.4 +1.4
MLYT eS Sn 03 13 01.9 -1.7
ANWB Willy Bob 6.70 95 eP Pn 03 11 51.2 -1.2
ANWB eS Sn 03 13 02.5 -5.6
DHSZ Broadband at M 7.03 106 eS Sn 03 13 17.2 +1.2
GDHS Morne Mazeau, 7.03 106 Pn Pn 03 11 57.4 +0.5
MMLZ Guadeloupe Bro 7.19 108 eP Pn 03 12 05.8 +6.8
MMLZ eS Sn 03 13 19.9 0.0
URIC Uribia, Colomb 7.34 205 P Pn 03 12 02.3 +1.3
comp=Z,19nm,0.5s
DSLB Salisbury 7.64 112 eP Pn 03 12 05.5 +0.6
DSLB eS Sn 03 13 29.8 -0.8
DSDZ La Diserade, G 7.66 105 eP Pn 03 12 03.9 -1.2
DSDZ eS Sn 03 13 28.5 -2.5
CRJC Cerrejon, Guaj 8.34 209 P Pn 03 12 16.9 +2.7
comp=Z,23nm,1.5s
BIM Bigot 8.35 116 eP Pn 03 12 16.5 +2.2
BIM eS Sn 03 13 46.4 -1.2
SLBI Saint Lucia, B 8.67 119 eS Sn 03 13 54.0 -1.3
SDV Santo Domingo 9.62 191 P Pn 03 12 30.6 -0.7
comp=Z,7.8nm,0.7s,baz=332,slow=10,SNR=12
SDV Santo Domingo 9.62 191 Pn 03 12 33.1 +1.7
SDV Santo Domingo 9.62 191 P Pn 03 12 36.4 +5.1
comp=Z,15nm,0.8s
OCAC Ocana 11.02 204 P P 03 12 52.8 -4.3
comp=Z,877nmcomp=Z,41nm,0.6s
PAMC Pamplona, Colo 11.63 200 P P 03 13 01.2 -3.1
comp=Z,472nmcomp=Z,37nm,0.6s
BRJC Barrancabermej 12.34 204 P P 03 13 10.5 -1.1
comp=Z,86nm,0.6s
UREC San Jos de Ur 12.45 213 P P 03 13 14.2 +1.3
comp=Z,15nm,0.6s
BARC Barichara 12.49 201 P P 03 13 14.4 +0.9
comp=Z,633nmcomp=Z,48nm,0.6s
PTBC PUERTO BERRIO, 13.02 206 P P 03 13 20.2 +1.0
comp=Z,573nmcomp=Z,57nm,0.6s
RUSC La Rusia 13.12 199 P P 03 13 21.4 +0.6
comp=Z,38nm,0.9s
SPBC San Pablo de B 13.68 203 P P 03 13 28.5 +1.9
comp=Z,10.0nm,0.7s
CBOC Ciudad Bolivar 14.32 210 P P 03 13 39.6 +5.9
comp=Z,7.6nm,0.6s
CHIC Chingaza 14.51 200 P P 03 13 38.5 +2.3
comp=Z,15nm,0.6s
ROSC El Rosal 14.52 203 P Pn 03 13 33.0 -1.3
comp=Z,6.0nm,0.4s,baz=51,slow=11,SNR=7.9
ROSC El Rosal 14.52 203 P P 03 13 36.9 +0.7
GUY2C Guyana, Caldas 14.59 207 P P 03 13 41.2 +4.1
comp=Z,27nm,0.7s
PRAC Prado 15.77 203 P P 03 13 51.6 +1.9
656A Willston 16.64 314 P Pn 03 13 59.6 -0.1
JTS Las Juntas de 17.61 245 P P 03 14 09.8 -0.1
comp=Z,3.0nm,0.5s,baz=18,slow=20,SNR=3.9
JTS Las Juntas de 17.61 245 Pn Pn 03 14 11.9 +0.5
JTS IAmb IAmb 03 14 15.0
comp=Z,7.4nm,0.9s
BOAV Boa Vista 17.85 152 P P 03 14 12.9 +0.4
S61A Accomac 20.14 344 P Pn 03 14 39.0 -2.0
OTAV Otavalo 20.39 209 P Pn 03 14 42.7 -2.1
OTAV IAmb IAmb 03 14 48.6
comp=Z,4.6nm,0.7s
APG El Apazote 21.04 264 P P 03 14 48.0 +0.8
comp=Z,0.1nm,0.3s,baz=121,slow=5.0,SNR=3.7
CCIG Comitan 22.39 268 P P 03 15 01.6 +0.7
CCIG IAmb IAmb 03 15 04.4
comp=Z,29nm,1.5s
I40A Norwalk 31.35 329 P P 03 16 22.2 +1.5
I40A IAmb IAmb 03 16 28.2
comp=Z,10nm,1.1s
TXAR Lajitas Array 33.59 295 P P 03 16 41.5 +1.0
comp=Z,0.7nm,0.8s,baz=110,slow=10,SNR=5.7
TXAR PcP PcP 03 19 17.2 +0.3
comp=Z,0.3nm,0.7s,baz=121,slow=2.9,SNR=2.8
comp=Z,0.7nm,0.8s
TX31 Lajitas Ar. Si 33.59 295 P P 03 16 41.1 +0.6
LPAZ La Paz 34.47 179 P P 03 16 48.6 0.0
comp=Z,1.7nm,0.9s,baz=163,slow=4.2,SNR=4.3
comp=Z,1.7nm,0.9s
LPAZ La Paz 34.47 179 IAmb IAmb 03 16 53.1
comp=Z,2.5nm,0.9s
SIV San Ignacio 35.01 167 P P 03 16 52.0 -0.6
comp=Z,0.8nm,0.4s,baz=274,slow=7.0
comp=Z,0.8nm,0.4s
SCHQ Schefferville 36.40 2 P P 03 17 04.0 -0.1
comp=Z,3.2nm,0.5s,baz=179,slow=7.1,SNR=15
comp=Z,3.2nm,0.5s
SCHQ Schefferville 36.40 2 IAmb IAmb 03 17 28.5
comp=Z,7.9nm,1.3s
CPUP Villa Florida 45.83 166 P P 03 18 20.2 -1.0
comp=Z,1.1nm,0.5s,baz=354,slow=9.7,SNR=3.8
comp=Z,1.1nm,0.5s
CFA Coronel Fontan 49.72 179 P P 03 18 50.5 -0.5
comp=Z,1.0nm,0.7s,baz=354,slow=9.0,SNR=5.3
comp=Z,1.0nm,0.7s
TORD Torodi Ar. Bea 67.67 83 P P 03 20 56.7 +1.3
comp=Z,0.2nm,0.5s,baz=275,slow=7.8,SNR=4.5
comp=Z,0.2nm,0.5s
WRA Warramunga Arr 158.11 262 PKPab PKPab 03 30 27.5 -0.6
comp=Z,0.3nm,0.4s,baz=93,slow=3.8,SNR=2.7
ASAR Alice Springs 158.19 252 PKPab PKPab 03 30 27.4 -1.0
comp=Z,0.4nm,0.6s,baz=88,slow=4.0,SNR=4.6

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*IGQ **03** 03:20:18.1±0.3, 1.°N±2.°×7.°9W±.°, h18km±3km, M3.6/26, Mjma3.5/26, ML3.8/26, MLv3.4/26, Ms(BB)3.7/5*
ISC 03 03:20:16.8±1.3**, 0.°82N**±0.°03×**79.°23W**±0.°03**, h26**km±14km**, n71, σ1.s17**/86**, Near coast of Ecuador**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
AV21 Acelerografo, 0.35 244 P Pn 03 20 27.6 +1.3
AMA1 Acelerografo, 0.51 283 P Pn 03 20 30.0 +1.6
AMA1 S Sn 03 20 39.6 +3.3
AV18 Acelerografo, 0.56 206 P Pn 03 20 30.0 +0.9
SNLR San Lorenzo-Es 0.61 39 P Pn 03 20 31.9 +2.1
BV15 Puerto Quito-O 0.66 180 P Pb 03 20 29.9 +0.2
BV15 S Sn 03 20 40.1 +0.2
PAC1 Pacto, Paraso 0.70 141 P Pb 03 20 30.7 +0.2
PAC1 Pacto, Paraso 0.70 141 P Pb 03 20 30.7 +0.2
PAC1 S Sn 03 20 41.7 +0.4
APR2 Miler 0.78 161 P Pb 03 20 31.5 -0.3
ALIT Ecuador-Imbabu 0.87 92 P Pb 03 20 33.1 -0.3
LITE1 Lita 0.87 92 P Pb 03 20 33.1 -0.2
OTAV Otavalo 0.97 127 P Pb 03 20 34.5 -0.7
OTAV S Sb 03 20 47.9 +0.1
CUSE Cuicocha Este 0.97 122 P Pb 03 20 35.0 -0.3
CUSE Cuicocha Este 0.97 122 P Pb 03 20 35.0 -0.3
CUSE S Sn 03 20 48.7 +0.3
CUIC Cuicocha-Domo 1.01 121 P Pb 03 20 35.3 -0.6
COTA Cotacachi 1.01 118 P Pb 03 20 35.8 -0.2
URCU Urcuqui 1.04 111 P Pb 03 20 36.2 -0.3
APR1 Acelerografo, 1.06 144 P Pb 03 20 36.5 -0.2
PULU Pululahua 1.07 137 P Pb 03 20 36.7 -0.3
ASDO Santo Domingo 1.08 174 P Pb 03 20 34.9 -2.0
YANA Yana 1.14 145 P Pn 03 20 37.3 -0.2
IMBA Imbabura, San 1.16 118 P Pb 03 20 38.7 +0.2
CHMA Chilma 1.17 88 P Pn 03 20 37.4 -0.3
TERV Terraza Guagua 1.17 148 P Pn 03 20 37.7 -0.3
GGPC Guagua Pichinc 1.18 147 P Pn 03 20 37.6 -0.5
JUA2 San Juan 2 1.20 149 P Pn 03 20 38.1 -0.3
GGPT Toaza - Volcan 1.20 150 P Pn 03 20 38.0 -0.3
LNGL El Angel-Carch 1.23 94 P Pn 03 20 39.2 +0.4
YAHU Yahuarcocha 1.24 111 P Pb 03 20 40.3 +0.5
ECEN Cerro Negro 1.26 90 P Pn 03 20 39.5 +0.2
CHL1 Volc¡n Chiles 1.28 91 P Pn 03 20 39.9 +0.3
PUEM Granja Avicola 1.28 138 P Pb 03 20 40.3 -0.1
CHL2 Volc¡n Chiles 1.31 91 P Pn 03 20 40.3 +0.4
TING Casa Alexandra 1.34 145 P Pn 03 20 41.0 +0.8
CMBC Cumbal 1.41 85 P Pn 03 20 42.0 +0.8
CMBC S Sn 03 21 00.2 +1.0
TULM Tulcn-Chalpat 1.45 94 P Pb 03 20 43.2 -0.2
TULM Tulcn-Chalpat 1.45 94 P Pb 03 20 43.7 +0.3
TULM S Sb 03 21 02.8 +1.3
CAYR Refugio Cayamb 1.46 123 P Pb 03 20 43.3 -0.4
TOMA Boca Toma-Volc 1.53 149 P Pn 03 20 43.9 +1.0
PITA Cotopaxi Volc 1.58 150 P Pn 03 20 44.4 +0.7
ILLI Illinizas Sur 1.60 162 P Pn 03 20 43.8 -0.2
SUCR Mariscal Sucre 1.62 153 P Pn 03 20 45.1 +0.9
ANTG Antisana-Guama 1.64 143 P Pn 03 20 45.1 +0.7
ANTI Antisana 1.65 140 P Pn 03 20 45.6 +0.9
VC1 Cotopaxi 1 1.67 150 P Pn 03 20 45.8 +0.9
BREF Cotopaxi Volca 1.68 152 P Pn 03 20 46.3 +1.2
BVC2 Cotopaxi Volca 1.68 151 P Pn 03 20 46.1 +1.0
ANTS Antisana-Sarah 1.68 141 P Pn 03 20 46.0 +0.9
SRAM San Ramn-Vol 1.69 157 P Pn 03 20 45.9 +0.8
BTAM Cotopaxi Volca 1.70 151 P Pn 03 20 46.3 +1.0
SLOR San Lorenzo - 1.70 155 P Pn 03 20 46.5 +1.2
BMOR Cotopaxi Volca 1.72 153 P Pn 03 20 46.3 +0.7
TAMB Tambo 1.73 150 P Pn 03 20 46.6 +0.9
BRRN Barrancas-Volc 1.76 155 P Pn 03 20 46.8 +0.7
REVS Reventador Sur 1.85 120 P Pb 03 20 49.2 -1.0
GCUF Volcan Galeras 1.93 78 P Pn 03 20 50.1 +1.7
GCUF S Sb 03 21 14.8 -0.6
CASC Dorado de Casc 2.01 110 P Pn 03 20 51.0 +1.8
CASC Dorado de Casc 2.01 110 P Pn 03 20 50.6 +1.4
CASC S Sb 03 21 18.3 +0.9
PIS1 Pisayambo 2.05 156 P Pn 03 20 52.0 +1.9
BBAC Balboa, Cauca 2.31 59 P Pn 03 20 54.0 +0.5
BBAC S Sn 03 21 22.0 +0.8
CHSH Refugio Sur-Vo 2.33 171 P Pn 03 20 54.7 +0.7
JUI6 Juive 2.35 161 P Pn 03 20 56.2 +2.1
BULB Ulba Tungurahu 2.39 160 P Pn 03 20 51.1 -3.5
TAMH Tambohuasha Ch 2.39 169 P Pn 03 20 56.1 +1.4
CRUC La Cruz 2.40 72 P Pn 03 20 56.5 +1.8
CRUC S Sb 03 21 28.5 -0.3
JIPI JIPIJAPA 2.54 212 P Pn 03 20 54.5 -2.0
PPLP Puerto Lpez 2.81 213 P Pn 03 20 58.4 -1.8
POPC Popayan, Colom 3.07 56 P Pn 03 21 05.1 +1.2
POPC S Sn 03 21 40.5 +0.5
JAMC Jamundi, Valle 3.49 47 P Pn 03 21 09.4 -0.3
JAMC S Sn 03 21 49.6 -0.7
FLOC Florencia 3.66 78 P Pn 03 21 13.0 +1.2
YOTC Yotoco, Valle 4.26 42 P Pn 03 21 18.1 -2.1
YOTC S Sn 03 22 07.4 -1.9
PLMC San Jos del P 5.01 36 P Pn 03 21 28.5 -2.0
PLMC S Sn 03 22 24.8 -2.9

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*JMA **03** 03:20:22.7±0.2, 42.°0N±0.°8×142.°6E±0.°8, h65km±1km, MV3.8/40, S OFF URAKAWA*
JMA Felt I J1 at S OFF URAKAWA .
*NIED **03** 03:20:22.7, 42.°03N×142.°58E, h65km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.07; $M_{\theta\theta}$-0.79; $M_{\phi\phi}$-3.28; $M_{r\theta}$2.31; $M_{\theta\phi}$-1.05; $M_{\phi r}$4.14; Fault plane solution: $M_0$6.12000×10^{14} NP1: ϕ_s195.00000°, δ20.00000°, λ79.00000°. NP2:ϕ_s27.00000°, δ70.00000°, λ94.00000°.*
*NEIC **03** 03:20:24.4±1.1, 42.°10N±0.°06×142.°7E±0.°1, h78km±5km, mb4.2/38 Error ellipse: s-maj=15.8km s-min=8.1km az=99.0*
*IDC **03** 03:20:24.9±1.9, 42.°10N×142.°60E, h84km±13km, mb3.5/14, mbtmp3.8/19, MS2.8/3, Error ellipse: s-maj=21.6km s-min=13.2km az=120.0*

ISC 03 03:20:23.0±0.7**, 42°.04N**±0°.04×**142°.60E**±0°.04**, h67**km±6km**,**
n96, σ**0s.96**/107**, mb4.1**/33**, 17D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.27**	**26**	*i* P	**Pn**	**03 20 33.0**	**-0.7**
JNBK				S	**Sn**	**03 20 40.9**	**-0.6**
JSHD	**Hidakashinhida**	**0.39**	**346**	*i* P	**Pn**	**03 20 34.3**	**-0.3**
JSHD				*e*S	**Sn**	**03 20 42.9**	**-0.1**
JEM	**Erimo**	**0.42**	**93**	*i* P	**Pn**	**03 20 34.8**	**-0.1**
JEM				*e*S	**Sn**	**03 20 43.1**	**-0.4**
JTHR	**Tokachihiroo**	**0.58**	**64**	*i* P	**Pn**	**03 20 36.4**	**0.0**
JTHR				S	**Sn**	**03 20 46.2**	**0.0**
JBT2	**Biratori 2**	**0.76**	**347**	⇓*i*P	**Pn**	**03 20 38.0**	**-0.5**
JBT2				⇓S	**Sn**	**03 20 49.3**	**-0.5**
JIAM	**Iburiatsuma**	**0.77**	**320**	⇓*i*P	**Pn**	**03 20 38.8**	**+0.3**
JCH	**Churui**	**0.81**	**44**	*i* P	**Pn**	**03 20 39.0**	**-0.1**
JCH				S	**Sn**	**03 20 50.9**	**+0.1**
JFR	**Furan**	**1.13**	**360**	⇓*i*P	**Pn**	**03 20 42.7**	**-0.4**
JFR				⇓*e*S	**Sn**	**03 20 57.7**	**-0.2**
JEW	**Eniwo**	**1.17**	**314**	⇓*i*P	**Pn**	**03 20 43.3**	**-0.3**
JEW				⇓*e*S	**Sn**	**03 20 58.5**	**-0.4**
JKB	**Kayabe**	**1.18**	**263**	⇓*i*P	**Pn**	**03 20 43.0**	**-0.6**
JKB				⇓S	**Sn**	**03 20 57.7**	**-1.2**
JNB	**Noboribetsu**	**1.23**	**291**	⇓*i*P	**Pn**	**03 20 43.2**	**-1.1**
JNB				⇓S	**Sn**	**03 20 59.4**	**-0.9**
JOB	**Onbets**	**1.26**	**46**	*i* P	**Pn**	**03 20 45.8**	**+1.1**
JOT	**Ohata**	**1.33**	**241**	⇓*i*P	**Pn**	**03 20 45.1**	**-0.5**
JOT				⇓*e*S	**Sn**	**03 21 01.7**	**-0.9**
JAB	**Ashibetsu**	**1.49**	**350**	*i* P	**Pn**	**03 20 48.0**	**+0.2**
JAB				S	**Sn**	**03 21 08.2**	**+1.7**
JISS	**Ishikarishitsu**	**1.51**	**325**	⇓*i*P	**Pn**	**03 20 48.1**	**+0.1**
JISS				⇓S	**Sn**	**03 21 07.3**	**+0.4**
JAR	**Ashorobuto**	**1.53**	**34**	P	**Pn**	**03 20 48.5**	**+0.3**
JAR				S	**Sn**	**03 21 07.7**	**+0.4**
JYM2	**Yakumo 2**	**1.66**	**274**	⇓*i*P	**Pn**	**03 20 49.4**	**-0.6**
JYM2				⇓*e*S	**Sn**	**03 21 09.6**	**-0.8**
JKA	**Kamikawa-asahi**	**2.08**	**0**		**Pn**	**03 20 56.1**	**+0.4**
JKA					**Sn**	**03 21 20.2**	**-0.3**
ASAJ	**Asahikawa**	**2.08**	**0**	P	**Pn**	**03 20 57.0**	**+1.3**
	97nm,0.3s,baz=204,slow=14,SNR=142						
ASAJ				S	**Sn**	**03 21 22.2**	**+1.6**
	46nm,0.3s,baz=278,slow=12,SNR=6.5						
MAJO	**Matsushiro**	**6.46**	**213**	Pn	**Pn**	**03 21 58.3**	**+2.9**
MJAR	**Matsushiro Arr**	**6.46**	**213**	P	**Pn**	**03 21 58.0**	**+2.6**
	1.4nm,0.3s,baz=32,slow=11,SNR=4.7						
MJAR	**Matsushiro Arr**	**6.46**	**213**		**Pn**	**03 21 57.0**	**+1.5**
JGF	**Kuroka**	**7.62**	**214**	Pn	**Pn**	**03 22 13.9**	**+2.6**
USRK	**Ussuriysk Ar.**	**8.05**	**289**	P	**Pn**	**03 22 18.0**	**+0.7**
	4.2nm,0.8s,baz=87,slow=15,SNR=6.6						
KLR	**Kul'dur**	**10.45**	**317**	P	**Pn**	**03 22 51.8**	**+1.8**
	0.6nm,0.5s,baz=123,slow=17,SNR=2.1						
KLR				LR	LR	03 27 07.6	
	comp=Z,54nm,18.8s,baz=99,slow=39						
KSRS	**Korea Array**	**12.18**	**253**	P	**Pn**	**03 23 17.6**	**+3.9**
	2.1nm,0.7s,baz=66,slow=14,SNR=5.9						
KSRS				LR	LR	03 27 27.0	
	comp=Z,20nm,19.8s,baz=15,slow=34						
JMZ	**Minamidaito 2**	**18.70**	**214**	P	**Pn**	**03 24 37.6**	**+0.6**
SEY	**Seymchan**	**21.71**	**12**	P	**P**	**03 25 07.2**	**-1.0**
	0.9nm,0.4s,baz=159,slow=6.6,SNR=6.0						
	0.9nm,0.4s						
SONM	**Songino Array**	**26.10**	**295**	P	**P**	**03 25 50.5**	**-0.1**
	0.7nm,0.6s,baz=77,slow=8.7,SNR=6.5						
SONM				LR	LR	03 36 56.1	
	comp=Z,40nm,18.1s,baz=7.0,slow=38						
	0.7nm,0.6s						
SONM	**Songino Array**	**26.10**	**295**	P	**P**	**03 25 50.9**	**+0.4**
H11N2	**WAKE ISLAND Hy**	**30.29**	**130**	T	T	03 58 06.5	
	baz=323,slow=75,SNR=45						
H11N1	**WAKE ISLAND Hy**	**30.30**	**130**	T	T	03 58 04.8	
	baz=323,slow=75,SNR=54						
H11N3	**WAKE ISLAND Hy**	**30.31**	**130**	T	T	03 58 02.4	
	baz=323,slow=75,SNR=50						
H11S1	**WAKE ISLAND Hy**	**31.16**	**131**	T	T	03 59 10.6	
	baz=325,slow=76,SNR=52						
H11S3	**WAKE ISLAND Hy**	**31.16**	**132**	T	T	03 59 11.2	
	baz=325,slow=76,SNR=36						
H11S2	**WAKE ISLAND Hy**	**31.18**	**132**	T	T	03 59 12.3	
	baz=325,slow=76,SNR=42						
LVA	**Lava Point**	**35.60**	**52**	P	**P**	**03 27 11.4**	**-2.5**
TNA	**Tin City**	**36.10**	**32**	P	**P**	**03 27 17.0**	**-0.9**
C16K	**Lisburne Hills**	**37.84**	**29**	P	**P**	**03 27 32.2**	**-0.5**
C16K				IAmb	IAmb	03 27 58.4	
	comp=Z,4.8nm,1.5s						
RDOG	**Red Dog Mine**	**38.66**	**29**	P	**P**	**03 27 38.1**	**-1.5**
RDOG				IAmb	IAmb	03 27 51.2	
	comp=Z,3.9nm,0.9s						
ZAA0	**Zalesovo Array**	**39.38**	**308**	P	**P**	**03 27 46.4**	**+0.6**
ZAA0				IAmb	IAmb	03 27 47.2	
	comp=Z,3.8nm,0.9s						
ZALV	**Zalesovo Beam**	**39.38**	**308**	P	**P**	**03 27 45.5**	**-0.4**
	comp=Z,2.1nm,0.6s,baz=90,slow=7.4,SNR=13						
	comp=Z,2.1nm,0.6s						
ZALV	**Zalesovo Beam**	**39.38**	**308**	P	**P**	**03 27 46.0**	**+0.2**
C18K	**Utukok River**	**39.42**	**29**	P	**P**	**03 27 45.2**	**-0.8**
C18K				IAmb	IAmb	03 27 56.9	
	comp=Z,3.3nm,1.4s						
G18K	**Tagagawik**	**39.92**	**33**	P	**P**	**03 27 49.0**	**-1.1**
G18K				IAmb	IAmb	03 27 50.3	
	comp=Z,4.4nm,1.4s						
D19K	**Kuna River**	**40.50**	**29**	P	**P**	**03 27 53.5**	**-1.4**
E19K	**Redstone River**	**40.68**	**31**	P	**P**	**03 27 55.8**	**-0.6**
E19K				IAmb	IAmb	03 28 04.8	
	comp=Z,3.1nm,1.3s						
D20K	**Etivluk River**	**41.08**	**29**	P	**P**	**03 27 59.0**	**-0.6**
D20K				IAmb	IAmb	03 28 03.7	
	comp=Z,3.2nm,1.1s						
B20K	**Meade River**	**41.10**	**27**	P	**P**	**03 27 59.4**	**-0.4**
B20K				IAmb	IAmb	03 28 08.9	
	comp=Z,3.2nm,1.2s						
IMAR	**Indian Mountai**	**41.93**	**33**	P	**P**	**03 28 06.9**	**+0.3**
MKAR	**Makanchi Array**	**42.41**	**298**	P	**P**	**03 28 10.7**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=80,slow=9.1,SNR=12						
	comp=Z,1.4nm,0.8s						
MKAR	**Makanchi Array**	**42.41**	**298**	P	**P**	**03 28 11.3**	**+0.4**
MYLDM	**Lahad Datu**	**42.51**	**217**	P	**P**	**03 28 11.9**	**0.0**
D22K	**Ayikyak River**	**42.52**	**29**	P	**P**	**03 28 11.5**	**+0.1**
D22K				IAmb	IAmb	03 28 15.6	
	comp=Z,3.7nm,1.4s						
MAKZ	**Makanchi**	**42.62**	**298**		**P**	**03 28 12.9**	**+0.4**
MAKZ				IAmb	IAmb	03 28 14.5	
	comp=Z,2.3nm,0.9s						
E22K	**Anaktuvuk Pass**	**42.79**	**30**	P	**P**	**03 28 12.6**	**-1.1**
E22K				IAmb	IAmb	03 28 21.7	
	comp=Z,4.7nm,1.4s						
KURK	**Kurchatov**	**43.72**	**304**	P	**P**	**03 28 21.4**	**+0.2**
KURK				IAmb	IAmb	03 28 22.0	
	comp=Z,2.8nm,0.8s						
KURBB	**Kurchatov Arra**	**43.80**	**304**	P	**P**	**03 28 21.5**	**-0.4**
	comp=Z,2.0nm,0.4s,baz=77,slow=8.9,SNR=17						
	comp=Z,2.0nm,0.4s						
SML	**Sawmill**	**44.48**	**39**	P	**P**	**03 28 26.3**	**-1.1**
ILAR	**Eielson Array**	**44.83**	**35**	P	**P**	**03 28 30.6**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=261,slow=5.3,SNR=5.5						
	comp=Z,0.2nm,0.6s						
ILAR	**Eielson Array**	**44.83**	**35**	P	**P**	**03 28 28.8**	**-1.2**
PRP	**Porcupine Dome**	**45.33**	**34**	P	**P**	**03 28 34.3**	**+0.2**
BMAR	**Burnt Mountain**	**45.55**	**31**	P	**P**	**03 28 35.6**	**-0.1**
C27K	**Jago River**	**45.72**	**28**	P	**P**	**03 28 36.8**	**-0.2**
SCRK	**Sand Creek**	**46.17**	**36**	P	**P**	**03 28 40.0**	**-0.7**
EVN	**Everest**	**47.02**	**271**	P	**P**	**03 28 49.2**	**+0.8**
EVN				IAmb	IAmb	03 28 51.0	
	comp=Z,3.2nm,0.8s						
BCAR	**Beaver Creek A**	**47.30**	**37**	P	**P**	**03 28 48.8**	**-0.7**
M27K	**Edge Creek, AK**	**47.39**	**38**	P	**P**	**03 28 52.0**	**+1.7**
BVAR	**Borovoye Array**	**48.00**	**309**	P	**P**	**03 28 55.1**	**+0.1**
	comp=Z,1.5nm,0.3s,baz=73,slow=9.0,SNR=13						
	comp=Z,1.5nm,0.3s						
BOOM	**Boomskoye usch**	**48.14**	**294**	P	**P**	**03 28 57.3**	**+0.9**
BOOM				IAmb	IAmb	03 28 57.9	
	comp=Z,3.3nm,0.7s						
F30M	**Barrier River**	**48.87**	**30**	P	**P**	**03 29 02.9**	**+1.5**
F30M				IAmb	IAmb	03 29 25.6	
	comp=Z,6.4nm,1.4s						
I30M	**Mount Dempster**	**49.16**	**33**	P	**P**	**03 29 04.3**	**+0.5**
I30M				IAmb	IAmb	03 29 11.9	
	comp=Z,2.3nm,1.0s						
INK	**Inuvik**	**49.55**	**29**	P	**P**	**03 29 07.2**	**+0.7**
INK				IAmb	IAmb	03 29 20.4	
	comp=Z,4.0nm,1.4s						
H31M	**Peel River**	**49.84**	**32**	P	**P**	**03 29 08.7**	**-0.2**
ARSB	**Arslanbob**	**50.63**	**294**	P	**P**	**03 29 15.8**	**+0.4**
KK31	**Karatay Array**	**51.53**	**297**	P	**P**	**03 29 22.6**	**+0.7**
KKAR	**Karatay Array**	**51.53**	**297**	P	**P**	**03 29 22.1**	**+0.2**
ARTI	**Arti**	**53.40**	**316**	P	**P**	**03 29 35.9**	**+0.4**
AB31	**Akbulak array**	**55.50**	**308**	P	**P**	**03 29 51.4**	**+0.6**
AB31				IAmb	IAmb	03 29 52.5	
	comp=Z,1.3nm,0.6s						
ABKAR	**Akbulak array**	**55.50**	**308**	P	**P**	**03 29 51.4**	**+0.6**
RES	**Resolute Bay**	**57.54**	**15**	P	**P**	**03 30 04.8**	**-0.1**
RES				IAmb	IAmb	03 30 10.5	
	comp=Z,3.6nm,1.4s						
WRA	**Warramunga Arr**	**62.14**	**189**	P	**P**	**03 30 36.8**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=6.8,slow=6.6,SNR=2.4						
	comp=Z,0.4nm,0.5s						
WRA	**Warramunga Arr**	**62.14**	**189**	P	**P**	**03 30 36.7**	**-0.3**
WRA				IAmb	IAmb	03 31 12.5	
	comp=Z,0.2nm,0.9s						
ILON	**Igloolik, Nuna**	**64.20**	**16**	P	**P**	**03 30 49.2**	**-0.9**
FIA1	**FINESS Array S**	**64.83**	**332**	P	**P**	**03 30 54.1**	**-0.3**
FINES	**FINESS Array B**	**64.83**	**332**	P	**P**	**03 30 53.5**	**-0.9**
	comp=Z,1.4nm,0.6s,baz=53,slow=6.2,SNR=14						
	comp=Z,1.4nm,0.6s						
FINES	**FINESS Array B**	**64.83**	**332**	P	**P**	**03 30 54.3**	**-0.1**
HFS	**Hagfors**	**69.92**	**335**	P	**P**	**03 31 26.4**	**-0.1**
	comp=Z,1.5nm,0.5s,baz=43,slow=6.7,SNR=15						
	comp=Z,1.5nm,0.5s						
NB2	**NORSAR Subarra**	**69.93**	**337**	P	**P**	**03 31 26.3**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=37,slow=6.2						
NOA	**NORSAR Array B**	**69.93**	**337**	P	**P**	**03 31 26.4**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=37,slow=6.1,SNR=4.9						
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**70.92**	**322**	P	**P**	**03 31 32.5**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=45,slow=6.7,SNR=5.2						
	comp=Z,0.7nm,0.4s						
AKASG	**Malin Array Be**	**70.92**	**322**	P	**P**	**03 31 32.9**	**+0.1**
AKASG				IAmb	IAmb	03 31 47.5	
	comp=Z,4.5nm,1.4s						
PDAR	**Pinedale Array**	**73.55**	**47**	P	**P**	**03 31 48.7**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=287,slow=6.2,SNR=2.7						
	comp=Z,0.2nm,0.6s						
PDAR	**Pinedale Array**	**73.55**	**47**	P	**P**	**03 31 47.7**	**-1.3**
BRTR	**Keskin Array B**	**76.23**	**311**	P	**P**	**03 32 04.1**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=45,slow=4.3,SNR=2.2						
	comp=Z,0.3nm,0.7s						
BRTR	**Keskin Array B**	**76.23**	**311**	P	**P**	**03 32 03.8**	**-0.6**

*NOU **03** 03:40:06.5, 34°.95S×177°.52W, h128km, mb4.8/8, South of Kermadec Islands*
*IDC **03** 03:40:29.1±1.7, 35°.49S×179°.89E, h0km, mb4.0/2, mbtmp4.1/3, ML4.6/1, Error ellipse: s-maj=45.3km s-min=41.7km az=140.0*
*WEL **03** 03:40:35.8±0.6, 36°S±4°×18°0E±°, h12km, M4.5/25, ML4.4/23, MLv4.5/25, Error ellipse: s-maj=8.2km s-min=4.7km az=106.0, confirmed*
ISC 03 03:40:36.1±1.8**, 35°.85S**±0°.08×**179°.9E**±0°.1**, h60**km±17km**,**
n115, σ**1s.54**/127**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.12**	**216**	P	**Pn**	**03 41 09.0**	**-0.2**
MXZ	**Matakaoa Point**	**2.12**	**216**	P	**Pn**	**03 41 09.0**	**-0.2**
MXZ				S	**Sn**	**03 41 37.2**	**+2.8**
WMGZ	**Waiomatatini S**	**2.29**	**210**	P	**Pn**	**03 41 13.5**	**+2.1**
WMGZ				S	**Sn**	**03 41 41.9**	**+3.5**
PKGZ	**Pakihiroa**	**2.47**	**215**	P	**Pn**	**03 41 15.1**	**+1.1**
PKGZ				S	**Sn**	**03 41 44.7**	**+1.6**
HAZ	**Te Kaha**	**2.54**	**221**	P	**Pn**	**03 41 14.7**	**-0.2**
PUZ	**Puketiti**	**2.57**	**210**	P	**Pn**	**03 41 16.7**	**+1.4**
PUZ				S	**Sn**	**03 41 46.5**	**+1.2**
WIZ	**White Island**	**2.73**	**231**	P	**Pn**	**03 41 18.0**	**+0.5**
WIZ				S	**Sn**	**03 41 45.9**	**-3.4**
RUGZ	**Raukumara Rang**	**2.75**	**219**	P	**Pn**	**03 41 19.0**	**+1.1**
RUGZ				S	**Sn**	**03 41 51.7**	**+1.8**
TWGZ	**Tauwhareparae**	**2.77**	**213**	P	**Pn**	**03 41 19.5**	**+1.4**
TWGZ				S	**Sn**	**03 41 51.5**	**+1.1**
CNGZ	**Carnagh Statio**	**2.94**	**206**	P	**Pn**	**03 41 22.1**	**+1.7**
CNGZ				S	**Sn**	**03 41 56.8**	**+2.2**
TKGZ	**Te Karaka**	**3.05**	**212**	P	**Pn**	**03 41 22.6**	**+0.8**
TKGZ				S	**Sn**	**03 41 55.9**	**-1.2**
WHRZ	**Whale Island**	**3.07**	**228**	P	**Pn**	**03 41 24.1**	**+2.0**
MWZ	**Matawai**	**3.11**	**216**	P	**Pn**	**03 41 23.4**	**+0.7**
MWZ				S	**Sn**	**03 41 59.5**	**+0.8**
MYRZ	**Mayor Island**	**3.25**	**243**	P	**Pn**	**03 41 24.5**	**-0.2**
MYRZ				S	**Sn**	**03 42 01.1**	**-1.1**
URZ	**Urewera**	**3.27**	**222**	Pn	**Pn**	**03 41 25.0**	**+0.2**
	50nm,0.3s,baz=0.0,slow=8.1,SNR=331						
URZ				Sn	**Sn**	**03 41 58.5**	**-3.9**
	34nm,0.3s,baz=260,slow=19,SNR=7.7						
	113nm,0.3s						
URZ	**Urewera**	**3.27**	**222**	P	**Pn**	**03 41 25.3**	**+0.5**
URZ	**Urewera**	**3.27**	**222**	P	**Pn**	**03 41 25.0**	**+0.2**
URZ				S	**Sn**	**03 42 00.6**	**-1.8**
RAGZ	**Rawiri**	**3.29**	**216**	P	**Pn**	**03 41 25.9**	**+0.7**
RAGZ				S	**Sn**	**03 42 02.9**	**-0.2**
RIGZ	**Rimuhau**	**3.31**	**210**	P	**Pn**	**03 41 26.1**	**+0.6**
OPRZ	**Ohinepanea**	**3.32**	**232**	P	**Pn**	**03 41 26.3**	**+0.7**
MARZ	**Manawahe**	**3.33**	**229**	P	**Pn**	**03 41 26.6**	**+0.8**
PRGZ	**Paritu Road**	**3.45**	**207**	P	**Pn**	**03 41 27.8**	**+0.4**
TGRZ	**Tauranga**	**3.45**	**236**	P	**Pn**	**03 41 27.8**	**+0.4**
SNGZ	**Shannon Statio**	**3.55**	**214**	P	**Pn**	**03 41 29.8**	**+1.0**
SNGZ				S	**Sn**	**03 42 07.6**	**-1.9**
MKRZ	**Makatiti**	**3.56**	**229**	P	**Pn**	**03 41 31.8**	**+2.9**
TARZ	**Mount Tarawera**	**3.59**	**228**	P	**Pn**	**03 41 30.5**	**+1.1**
OMRZ	**Omania**	**3.60**	**230**	P	**Pn**	**03 41 30.3**	**+1.0**
RTZ	**Ruatahuna**	**3.60**	**219**	P	**Pn**	**03 41 29.3**	**-0.1**
GRZ	**Great Barrier**	**3.60**	**262**	P	**Pn**	**03 41 29.2**	**-0.2**
MUGZ	**Murupara**	**3.61**	**223**	P	**Pn**	**03 41 29.3**	**-0.1**
MUGZ				S	**Sn**	**03 42 06.7**	**-4.1**
KNZ	**Kokohu**	**3.62**	**208**	P	**Pn**	**03 41 29.1**	**-0.5**
KARZ	**Kaharoa**	**3.63**	**232**	P	**Pn**	**03 41 30.7**	**+1.0**
MHGZ	**Mahia Peninsul**	**3.65**	**205**	P	**Pn**	**03 41 30.3**	**+0.3**
RRRZ	**Republican Roa**	**3.66**	**226**	P	**Pn**	**03 41 30.9**	**+0.7**
HLRZ	**Highlands Stat**	**3.70**	**229**	P	**Pn**	**03 41 32.7**	**+1.9**
NGRZ	**Ngongotaha**	**3.71**	**232**	P	**Pn**	**03 41 32.6**	**+1.7**
KMRZ	**Kaimai**	**3.73**	**237**	P	**Pn**	**03 41 31.7**	**+0.5**
RAHZ	**Arahi**	**3.78**	**215**	P	**Pn**	**03 41 32.4**	**+0.6**
HSRZ	**Hossack Road**	**3.80**	**229**	P	**Pn**	**03 41 34.4**	**+2.3**
PRRZ	**Plateau Road**	**3.84**	**225**	P	**Pn**	**03 41 33.3**	**+0.7**
WHHZ	**Waihua**	**3.84**	**212**	P	**Pn**	**03 41 33.5**	**+0.8**
MTHZ	**Maungataniwha**	**3.85**	**218**	P	**Pn**	**03 41 33.0**	**+0.1**
ALRZ	**Allen Road**	**3.91**	**225**	P	**Pn**	**03 41 34.1**	**+0.5**
WIAZ	**Waiheke Island**	**3.94**	**255**	P	**Pn**	**03 41 34.5**	**+0.4**
TOZ	**Tahuroa Road**	**3.98**	**241**	P	**Pn**	**03 41 35.1**	**+0.6**
MKAZ	**Moumakai**	**4.00**	**250**	P	**Pn**	**03 41 35.5**	**+0.6**
NMHZ	**Naumai**	**4.05**	**216**	P	**Pn**	**03 41 35.7**	**0.0**
MRHZ	**Matea Rd**	**4.06**	**222**	P	**Pn**	**03 41 35.7**	**0.0**
ARHZ	**Aropaoanui**	**4.10**	**213**	P	**Pn**	**03 41 35.9**	**-0.3**
MBAZ	**Motutapu North**	**4.12**	**256**	P	**Pn**	**03 41 37.1**	**+0.6**
ETAZ	**East Tamaki Re**	**4.14**	**253**	P	**Pn**	**03 41 37.8**	**+1.0**
TLZ	**Tolley Road**	**4.26**	**233**	P	**Pn**	**03 41 39.4**	**+1.0**
BKZ	**Black Stump Fm**	**4.26**	**218**	P	**Pn**	**03 41 38.3**	**-0.2**
BKZ	**Black Stump Fm**	**4.26**	**218**	P	**Pn**	**03 41 37.7**	**-0.8**
WATZ	**Wairara**	**4.36**	**228**	P	**Pn**	**03 41 40.6**	**+0.7**
MCHZ	**McNeill Hill**	**4.38**	**214**	P	**Pn**	**03 41 40.0**	**-0.1**
AWAZ	**Awhitu Peninsu**	**4.39**	**252**	P	**Pn**	**03 41 41.4**	**+1.3**
CKHZ	**Cape Kidnapper**	**4.40**	**209**	P	**Pn**	**03 41 39.2**	**-1.1**
WTAZ	**Waiatarua**	**4.41**	**254**	P	**Pn**	**03 41 41.9**	**+1.4**
RATZ	**Rangitukua**	**4.44**	**226**	P	**Pn**	**03 41 41.6**	**+0.6**
RITZ	**Rihia Road**	**4.47**	**225**	P	**Pn**	**03 41 41.4**	**+0.1**
WCZ	**Waipu Caves**	**4.49**	**267**	P	**Pn**	**03 41 42.1**	**+0.5**
KWHZ	**Kaweka Forest**	**4.50**	**217**	P	**Pn**	**03 41 40.8**	**-0.9**
KATZ	**Kakaramea**	**4.56**	**226**	P	**Pn**	**03 41 43.5**	**+0.9**
KAHZ	**Kahuranaki**	**4.59**	**210**	P	**Pn**	**03 41 41.8**	**-1.2**
TMVZ	**Te Maari**	**4.65**	**224**	P	**Pn**	**03 41 44.1**	**+0.3**
NTVZ	**North Tongarir**	**4.65**	**225**	P	**Pn**	**03 41 44.0**	**+0.1**
ETVZ	**East Tongariro**	**4.66**	**224**	P	**Pn**	**03 41 43.3**	**-0.7**
KRVZ	**Karewarewa**	**4.67**	**225**	P	**Pn**	**03 41 44.7**	**+0.5**
KRHZ	**Kereru**	**4.69**	**215**	P	**Pn**	**03 41 43.6**	**-0.8**
OTVZ	**Oturere**	**4.70**	**224**	P	**Pn**	**03 41 44.1**	**-0.5**
WTVZ	**West Tongariro**	**4.71**	**225**	P	**Pn**	**03 41 45.2**	**+0.4**
SNVZ	**South Ngauruho**	**4.73**	**224**	P	**Pn**	**03 41 44.6**	**-0.4**
NGZ	**Ngauruhoe**	**4.75**	**224**	P	**Pn**	**03 41 45.7**	**+0.4**
TWVZ	**Taurewa**	**4.77**	**226**	P	**Pn**	**03 41 46.1**	**+0.6**
COVZ	**Chateau Observ**	**4.80**	**225**	P	**Pn**	**03 41 48.1**	**+2.3**
HIZ	**Hauiti**	**4.81**	**235**	P	**Pn**	**03 41 47.5**	**+1.6**
HIZ	**Hauiti**	**4.81**	**235**	P	**Pn**	**03 41 47.2**	**+1.3**
MOVZ	**Moawhango**	**4.83**	**221**	P	**Pn**	**03 41 44.7**	**-1.5**
WHVZ	**Whangaehu Hut**	**4.83**	**224**	P	**Pn**	**03 41 48.3**	**+1.9**
FWVZ	**Far West T-bar**	**4.83**	**224**	P	**Pn**	**03 41 48.7**	**+2.3**
WNVZ	**Wahianoa**	**4.86**	**223**	P	**Pn**	**03 41 46.6**	**-0.1**
PNHZ	**Pukenui**	**4.99**	**215**	P	**Pn**	**03 41 45.9**	**-2.5**
WPHZ	**Waipukurau**	**5.00**	**212**	P	**Pn**	**03 41 46.9**	**-1.7**
PRHZ	**Porangahau**	**5.09**	**209**	P	**Pn**	**03 41 47.6**	**-2.3**
OUZ	**Omahuta**	**5.16**	**275**	P	**Pn**	**03 41 50.7**	**0.0**
TSZ	**Takapari Road**	**5.21**	**215**	P	**Pn**	**03 41 49.6**	**-1.9**
VRZ	**Vera Road**	**5.22**	**230**	P	**Pn**	**03 41 52.6**	**+1.1**
DVHZ	**Dannevirke**	**5.32**	**212**	P	**Pn**	**03 41 50.8**	**-2.1**
ANWZ	**Angora Road**	**5.32**	**209**	P	**Pn**	**03 41 51.2**	**-1.7**
WAZ	**Wanganui**	**5.49**	**223**	P	**Pn**	**03 41 55.8**	**+0.5**
POWZ	**Post Office Ro**	**5.57**	**214**	P	**Pn**	**03 41 55.4**	**-0.9**
BFZ	**Birch Farm**	**5.60**	**210**	P	**Pn**	**03 41 54.0**	**-2.8**
PRWZ	**Pori Road**	**5.61**	**212**	P	**Pn**	**03 41 56.4**	**-0.6**
KHEZ	**Kahui Hut**	**5.79**	**232**	P	**Pn**	**03 42 01.3**	**+1.9**
KHEZ	**Kahui Hut**	**5.79**	**232**	P	Pn	03 42 05.8	+6.5
MRZ	**Mangatainoka R**	**5.87**	**214**	P	**Pn**	**03 41 58.0**	**-2.5**
HOWZ	**Holdsworth Sta**	**6.09**	**213**	P	**Pn**	**03 42 00.7**	**-2.8**
KIW	**Kapiti Island**	**6.34**	**216**	P	**Pn**	**03 42 04.2**	**-2.7**
GLKZ	**Green Lake**	**6.83**	**16**	P	**Pn**	**03 42 12.6**	**-1.0**
QRZ	**Quartz Range**	**7.61**	**227**	P	**Pn**	**03 42 23.0**	**-1.3**
QRZ	**Quartz Range**	**7.61**	**227**	P	**Pn**	**03 42 21.3**	**-3.0**
MRNZ	**Matariki Terra**	**7.85**	**223**	P	**Pn**	**03 42 24.6**	**-3.0**
KHZ	**Kahutara**	**8.20**	**215**	P	**Pn**	**03 42 29.7**	**-2.5**
CTZ	**Chatham Island**	**8.32**	**162**	P	**Pn**	**03 42 35.9**	**+1.9**
LTZ	**Lake Taylor**	**9.09**	**218**	P	**Pn**	**03 42 41.5**	**-3.0**
OKCZ	**Okains Bay**	**9.45**	**212**	P	**Pn**	**03 42 46.1**	**-3.3**
ASAR	**Alice Springs**	**41.37**	**274**	P	**P**	**03 48 16.9**	**+0.4**
	1.3nm,0.7s,baz=114,slow=7.5,SNR=11						
	1.3nm,0.7s						
WRA	**Warramunga Arr**	**42.86**	**279**	P	**P**	**03 48 28.9**	**+0.3**
	1.2nm,0.4s,baz=119,slow=7.8,SNR=12						
	1.2nm,0.4s						
H03N3	**Juan Fernandez**	**79.16**	**123**	T	T	05 21 13.0	
	baz=236,slow=72,SNR=13						
H03N2	**Juan Fernandez**	**79.16**	**123**	T	T	05 21 09.1	
	baz=236,slow=72,SNR=11						
H03N1	**Juan Fernandez**	**79.18**	**123**	T	T	05 21 21.0	
	baz=236,slow=72,SNR=15						
FINES	**FINESS Array B**	**149.50**	**335**	PKPbc	**PKiKP**	**04 00 18.9**	**+0.2**
	1.9nm,0.7s,baz=35,slow=5.1,SNR=7.2						
BRTR	**Keskin Array B**	**153.13**	**288**	PKPbc	**PKPbc**	**04 00 27.2**	**+0.2**
	0.4nm,0.4s,baz=135,slow=3.2,SNR=5.0						
TORD	**Torodi Ar. Bea**	**157.33**	**185**	PKPab	**PKPab**	**04 00 59.9**	**+2.9**
	0.6nm,0.9s,baz=162,slow=4.0,SNR=3.0						

*IDC **03** 03:46:40.1±7.3, 0°.68N×123°.60E, h222km±69km, mb2.9/3, mbtmp3.6/4, Error ellipse: s-maj=108.4km s-min=23.0km az=61.0*
*DJA **03** 03:46:45.5±0.4, 1°N±5°×12°4E±°, h253km±5km, M4.0/18, MLv4.0/18*
ISC 03 03:46:44.5±0.9**, 0°.51N**±0°.10×**123°.74E**±0°.07**, h264**km**, n14,**
σ**1s.13**/16**, mb3.2**/3**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTOI	**Gorontalo**	**0.74**	**279**	P	**Pn**	**03 47 20.6**	**+0.8**
MNI	**Manado**	**1.44**	**50**	P	**Pn**	**03 47 24.6**	**+0.8**
MRSI	**Marisa**	**1.80**	**269**	P	**Pn**	**03 47 27.3**	**+0.8**
LUWI	**Luwuk**	**1.82**	**212**	P	**Pn**	**03 47 27.2**	**+0.5**
LUWI				S	**S**	**03 47 58.0**	**-2.1**
APSI	**Ampana**	**2.52**	**236**	P	**Pn**	**03 47 33.6**	**+0.6**
SANI	**Sanana**	**3.40**	**139**	P	**Pn**	**03 47 42.2**	**0.0**
TNTI	**Ternate**	**3.64**	**86**	P	**Pn**	**03 47 44.9**	**0.0**
MPSI	**Mapaga**	**3.84**	**267**	P	**Pn**	**03 47 47.9**	**+0.7**
GAMI	**Galela, Maluku**	**4.26**	**72**	P	**Pn**	**03 47 52.6**	**+0.6**
FITZ	**Fitzroy Crossi**	**18.59**	**174**	P	**P**	**03 50 43.0**	**+0.3**
	6.2nm,1.1s,baz=17,slow=14,SNR=1.7						
WRA	**Warramunga Arr**	**22.83**	**154**	P	**P**	**03 51 25.6**	**+0.4**
	0.6nm,0.3s,baz=329,slow=10,SNR=19						
	0.6nm,0.3s						
ASAR	**Alice Springs**	**25.99**	**158**	P	**P**	**03 51 55.6**	**+2.0**
	0.2nm,0.4s,baz=346,slow=14,SNR=2.0						
ASAR				PcP	**PcP**	**03 55 15.7**	**+1.1**
	0.5nm,0.4s,baz=345,slow=2.7,SNR=6.1						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**58.57**	**328**	P	**P**	**03 56 12.2**	**-1.7**
	0.2nm,0.3s,baz=126,slow=8.0,SNR=6.5						
	0.2nm,0.3s						
TORD	**Torodi Ar. Bea**	**120.98**	**286**	PKP	**PKPdf**	**04 05 06.1**	**-0.6**
	0.1nm,0.3s,baz=56,slow=2.8,SNR=6.0						

*IDC **03** 04:03:45.5±3.1, 20°.89N×144°.69E, h128km±28km, mb3.6/9, mbtmp4.1/10, MS3.7/1, Error ellipse: s-maj=26.4km s-min=14.0km az=98.0*
*NEIC **03** 04:03:47.3±0.9, 20°.89N±0°.10×144°.6E±0°.2, h137km±8km, mb4.3/60, Error ellipse: s-maj=24.7km s-min=13.7km az=84.0*
ISC 03 04:03:48.1±0.6**, 20°.92N**±0°.07×**144°.5E**±0°.1**, h150**km**, n80,**
σ**0s.66**/81**, mb4.2**/39**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**6.51**	**341**	P	**Pn**	**04 05 21.2**	**-0.4**
	75nm,0.5s,baz=296,slow=22,SNR=10						
JCJ				S	**Sn**	**04 06 33.1**	**-1.8**
	58nm,0.3s,baz=292,slow=22,SNR=8.4						
JCJ	**Chichijima**	**6.51**	**341**		**Pn**	**04 05 20.8**	**-0.8**
JCJ					**Sn**	**04 06 34.3**	**-0.6**
JGF	**Kuroka**	**15.92**	**338**	P	**P**	**04 07 25.1**	**+0.6**
JGF				IAmb	IAmb	04 07 59.5	
	comp=Z,18nm,1.2s						
COEN	**Coen**	**34.68**	**182**	P	**P**	**04 10 22.6**	**-0.9**
COEN				IAmb	IAmb	04 10 27.6	
	comp=Z,5.5nm,1.0s						
LZDM	**Lanzhou Array**	**38.61**	**302**	LR	LR	04 27 53.4	
	comp=Z,92nm,19.3s,baz=20,slow=37						
WB0	**Warramunga Arr**	**41.63**	**194**	P	**P**	**04 11 21.1**	**-0.6**
WB0				IAmb	IAmb	04 11 26.0	
	comp=Z,7.3nm,1.2s						
WR8	**Warramunga Arr**	**41.79**	**194**	P	**P**	**04 11 22.3**	**-0.6**
WB2	**Warramunga Arr**	**41.81**	**194**	P	**P**	**04 11 23.2**	**+0.1**
WB2				IAmb	IAmb	04 12 03.9	
	comp=Z,7.6nm,1.1s						
WRA	**Warramunga Arr**	**41.81**	**194**	P	**P**	**04 11 22.9**	**-0.3**
	comp=Z,2.6nm,0.5s,baz=17,slow=8.7,SNR=24						
	comp=Z,2.6nm,0.5s						
WRA	**Warramunga Arr**	**41.81**	**194**	P	**P**	**04 11 22.4**	**-0.8**
AS31	**Alice Springs**	**45.50**	**194**	P	**P**	**04 11 52.0**	**-0.7**
ASAR	**Alice Springs**	**45.50**	**194**	P	**P**	**04 11 52.0**	**-0.7**
	comp=Z,0.9nm,0.4s,baz=14,slow=7.4,SNR=19						
	comp=Z,0.9nm,0.4s						
ASAR	**Alice Springs**	**45.50**	**194**	P	**P**	**04 11 52.0**	**-0.7**
MBWA	**Marble Bar**	**48.33**	**212**	P	**P**	**04 12 15.2**	**+0.6**
FORT	**Forrest**	**53.78**	**198**	P	**P**	**04 12 54.8**	**-0.3**
J16K	**Anvik River**	**55.97**	**26**	P	**P**	**04 13 11.1**	**+0.7**
MKAR	**Makanchi Array**	**56.14**	**313**	P	**P**	**04 13 13.4**	**+1.4**
	comp=Z,0.4nm,0.7s,baz=82,slow=8.9,SNR=4.9						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**56.14**	**313**	P	**P**	**04 13 13.3**	**+1.3**
J19K	**Poorman**	**58.30**	**27**	P	**P**	**04 13 27.3**	**+0.4**
J19K				IAmb	IAmb	04 14 08.0	
	comp=Z,6.1nm,1.5s						
C19K	**Lookout Ridge**	**58.71**	**20**	P	**P**	**04 13 30.6**	**+0.9**
C19K				IAmb	IAmb	04 13 31.5	
	comp=Z,2.7nm,0.7s						
KURK	**Kurchatov**	**58.89**	**317**	P	**P**	**04 13 31.9**	**+0.7**
KURBB	**Kurchatov Arra**	**58.94**	**317**	P	**P**	**04 13 33.0**	**+1.5**
	comp=Z,1.7nm,0.3s,baz=92,slow=7.6,SNR=1.2						
D20K	**Etivluk River**	**59.54**	**21**	P	**P**	**04 13 36.0**	**+0.6**
IMAR	**Indian Mountai**	**59.67**	**25**	P	**P**	**04 13 36.2**	**-0.1**
B20K	**Meade River**	**59.86**	**20**	P	**P**	**04 13 38.1**	**+0.6**
B20K				IAmb	IAmb	04 13 39.1	
	comp=Z,3.7nm,0.9s						
D23K	**Nanushuk River**	**61.66**	**22**	P	**P**	**04 13 50.8**	**+1.1**
KLU	**Klutina**	**62.09**	**31**	P	**P**	**04 13 53.0**	**+0.2**
ILAR	**Eielson Array**	**62.17**	**27**	P	**P**	**04 13 51.9**	**-1.2**
	comp=Z,1.3nm,0.8s,baz=265,slow=5.5,SNR=13						
	comp=Z,1.3nm,0.8s						
E24K	**Your Creek**	**62.22**	**23**	P	**P**	**04 13 54.3**	**+0.8**
E24K				IAmb	IAmb	04 14 01.5	
	comp=Z,4.7nm,1.4s						
F26K	**Sheenjek River**	**63.75**	**24**	P	**P**	**04 14 04.5**	**+0.9**
F26K				IAmb	IAmb	04 14 05.1	
	comp=Z,2.0nm,0.6s						
BVAR	**Borovoye Array**	**64.07**	**320**	P	**P**	**04 14 06.3**	**+0.4**
	comp=Z,0.8nm,0.4s,baz=94,slow=6.7,SNR=6.0						
	comp=Z,0.8nm,0.4s						
M27K	**Edge Creek, AK**	**64.08**	**30**	P	**P**	**04 14 06.3**	**+0.3**
C27K	**Jago River**	**64.22**	**22**	P	**P**	**04 14 07.5**	**+0.9**
C27K				IAmb	IAmb	04 14 08.4	
	comp=Z,5.0nm,1.4s						
H27K	**Steamboat Moun**	**64.58**	**26**	P	**P**	**04 14 09.5**	**+0.4**
H27K				IAmb	IAmb	04 14 32.0	
	comp=Z,3.9nm,1.4s						
E28M	**Babbage River**	**65.58**	**23**	P	**P**	**04 14 16.4**	**+1.0**
E28M				IAmb	IAmb	04 14 46.8	

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,5.3nm,1.4s						
M29M	Somme Creek	65.68	30	P	P	04 14 16.8	+0.5
M29M				IAmb	IAmb	04 14 17.8	
	comp=Z,3.9nm,0.8s						
L29M	L29M	65.85	29	P	P	04 14 17.9	+0.7
K29M	Barlow Dome	66.14	28	P	P	04 14 19.6	+0.4
K29M				IAmb	IAmb	04 14 20.4	
	comp=Z,3.8nm,1.1s						
E29M	Blow River	66.16	23	P	P	04 14 20.1	+1.0
N30M	Aishikik Lake	66.32	31	P	P	04 14 20.7	+0.4
N30M				IAmb	IAmb	04 14 39.3	
	comp=Z,5.4nm,1.1s						
M30M	Minto, Yukon	66.45	30	P	P	04 14 21.5	+0.4
I30M	Mount Dempster	66.65	27	P	P	04 14 22.5	+0.1
J30M	Hart River	66.67	27	P	P	04 14 22.2	-0.4
J30M				IAmb	IAmb	04 14 28.5	
	comp=Z,4.0nm,1.2s						
F30M	Barrier River	66.93	24	P	P	04 14 24.8	+0.8
H31M	Peel River	67.50	26	P	P	04 14 28.0	+0.4
H31M				IAmb	IAmb	04 14 35.8	
	comp=Z,7.6nm,1.5s						
G31M	Satah River	67.51	25	P	P	04 14 28.0	+0.4
M31M	Drury Creek, Y	67.58	30	P	P	04 14 28.5	+0.3
INK	Inuvik	67.78	23	P	P	04 14 29.3	0.0
INK				IAmb	IAmb	04 14 29.4	
	comp=Z,5.0nm,1.4s						
P33M	Teslin, Yukon	68.46	32	P	P	04 14 33.9	+0.1
WRAK	Wrangell Islan	69.07	36	P	P	04 14 37.3	-0.2
R33M	Jennings River	69.47	33	P	P	04 14 40.8	+0.6
A36M	Sachs Harbour	70.36	19	P	P	04 14 45.7	+0.6
ABKAR	Akbulak array	70.97	316	P	P	04 14 50.0	+0.7
YKAW3	Yellowknife Wh	76.53	28	P	P	04 15 21.1	-0.3
YKA	Yellowknife Ar	76.56	28	P	P	04 15 21.5	-0.1
	comp=Z,1.2nm,0.7s,baz=297,slow=6.1,SNR=23						
	comp=Z,1.2nm,0.7s						
YKA	Yellowknife Ar	76.56	28	P	P	04 15 21.0	-0.6
LON	Longmire	77.49	45	P	P	04 15 26.7	-0.5
LON				IAmb	IAmb	04 15 50.7	
	comp=Z,8.9nm,1.4s						
RES	Resolute Bay	77.54	14	P	P	04 15 28.0	+1.2
PINE	Pine Mountain	78.98	47	P	P	04 15 36.0	+0.4
PINE				IAmb	IAmb	04 16 13.8	
	comp=Z,5.1nm,1.2s						
K05A	Summer Lake	79.35	48	P	P	04 15 38.0	+0.4
K05A				IAmb	IAmb	04 15 55.5	
	comp=Z,7.1nm,1.4s						
BMO	Blue Mountains	81.09	45	P	P	04 15 46.9	0.0
CMB	Columbia Colle	81.25	53	P	P	04 15 47.5	-0.2
CMB				IAmb	IAmb	04 15 48.2	
	comp=Z,2.9nm,0.7s						
PNTR	Pine Nut	81.47	52	P	P	04 15 49.2	+0.1
PNTR				IAmb	IAmb	04 15 57.6	
	comp=Z,5.0nm,0.9s						
NVAR	Mina Array Bea	82.65	52	P	P	04 15 55.5	+0.2
	comp=Z,1.8nm,0.7s,baz=268,slow=5.9,SNR=13						
	comp=Z,1.8nm,0.7s						
DSP	Deep Springs	83.27	53	P	P	04 15 58.6	+0.4
DSP				IAmb	IAmb	04 16 31.4	
	comp=Z,6.1nm,1.5s						
ILON	Igloolik, Nuna	84.08	15	P	P	04 16 01.2	-0.4
FINES	FINESS Array B	84.42	335	P	P	04 16 02.7	-0.8
	comp=Z,1.3nm,0.8s,baz=54,slow=3.3,SNR=5.4						
	comp=Z,1.3nm,0.8s						
FINES	FINESS Array B	84.42	335	P	P	04 16 02.8	-0.7
TPNV	Topopah Spring	84.70	53	P	P	04 16 05.0	-0.7
TPNV				IAmb	IAmb	04 16 05.9	
	comp=Z,2.2nm,0.6s						
YHL	Hebgen Lake	85.11	44	P	P	04 16 07.7	0.0
YHL				IAmb	IAmb	04 16 22.0	
	comp=Z,7.7nm,1.5s						
HVU	Hansel Valley	85.31	47	P	P	04 16 08.6	0.0
SPUT	South Promonto	85.72	47	P	P	04 16 10.5	-0.1
SPUT				IAmb	IAmb	04 16 47.7	
	comp=Z,4.8nm,1.3s						
FLWY	Flagg Ranch	85.75	44	P	P	04 16 10.8	0.0
FFC	Flin Flon	85.82	32	P	P	04 16 10.7	+0.1
FFC				IAmb	IAmb	04 16 11.3	
	comp=Z,2.9nm,0.9s						
DUG	Dugway, Tooele	85.92	49	P	P	04 16 11.3	-0.4
DUG				IAmb	IAmb	04 16 42.7	
	comp=Z,5.0nm,1.4s						
AHID	Auburn Hatcher	86.04	46	P	P	04 16 12.2	-0.1
RLMT	Red Lodge	86.22	43	P	P	04 16 13.0	-0.2
CCUT	Cedar City	86.59	51	P	P	04 16 15.2	+0.1
BW06	Boulder Array	87.06	45	P	P	04 16 16.8	-0.4
BW06				IAmb	IAmb	04 16 21.2	
	comp=Z,5.8nm,1.5s						
PDAR	Pinedale Array	87.06	45	P	P	04 16 16.4	-0.8
	comp=Z,0.3nm,0.5s,baz=134,slow=0.4,SNR=3.8						
	comp=Z,0.3nm,0.5s						

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*IDC **03** 04:11:01.5±2.2, 7.°86S×68.°09E, h0km, mb3.7/4, mbtmp3.7/4, MS3.3/13, Error ellipse: s-maj=79.9km s-min=39.0km az=62.0*

ISC 03 04:11:02.9±2.2**, 8.°0S**±0.°4×**67.°9E**±0.°5**, h15km, n22,** σ**0.s87**/7**,** **mb3.9**/4**, MS3.4**/12**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	19.78	40	LR	LR	04 21 19.9	
	comp=Z,109nm,19.7s,baz=228,slow=32						
BRDH	Bariadhala	38.29	37	LR	LR	04 33 42.1	
	comp=Z,98nm,19.9s,baz=138,slow=36						
LSZ	Lusaka	39.54	256	LR	LR	04 32 36.7	
	comp=Z,67nm,18.3s,baz=262,slow=33						
CMAR	Chiang Mai Arr	40.32	49	LR	LR	04 32 53.4	
	comp=Z,25nm,21.1s,baz=205,slow=33						
H04N2	CROZET ISLANDS	40.52	197	T	T	05 01 45.2	
	baz=27,slow=76,SNR=5.7						
H04N1	CROZET ISLANDS	40.53	197	T	T	05 01 45.7	
	baz=27,slow=76,SNR=6.4						
H04N3	CROZET ISLANDS	40.54	197	T	T	05 01 48.3	
	baz=27,slow=76,SNR=6.6						
BOSA	Boshof	45.10	237	LR	LR	04 35 21.5	
	comp=Z,40nm,18.6s,baz=125,slow=32						
SUR	Sutherland	49.93	234	LR	LR	04 37 44.9	
	comp=Z,28nm,19.7s,baz=100,slow=32						
TSUM	Tsumeb	50.02	252	LR	LR	04 39 12.5	
	comp=Z,35nm,18.8s,baz=134,slow=34						
MKAR	Makanchi Array	55.98	12	P	P	04 20 39.8	-1.0
	0.3nm,0.7s,baz=179,slow=6.1,SNR=3.6						
	0.3nm,0.7s						
BRTR	Keskin Array B	57.05	329	LR	LR	04 44 26.6	
	comp=Z,11nm,18.7s,baz=112,slow=35						
ZALV	Zalesovo Beam	63.29	11	P	P	04 21 30.3	-0.7
	0.3nm,0.4s,baz=183,slow=8.5,SNR=1.8						
	0.3nm,0.4s						
SONM	Songino Array	65.11	28	P	P	04 21 44.4	+1.1
	0.8nm,0.6s,baz=220,slow=5.7,SNR=5.0						
SONM				LR	LR	04 49 33.1	
	comp=Z,77nm,18.3s,baz=252,slow=36						
	0.8nm,0.6s						
WRA	Warramunga Arr	65.21	108	P	P	04 21 44.1	-0.3
	0.9nm,0.8s,baz=279,slow=6.3,SNR=5.9						
	0.9nm,0.8s						
TLY	Talaya	66.85	23	LR	LR	04 49 21.7	
	comp=Z,54nm,18.5s,baz=294,slow=34						
KSRS	Korea Array	71.89	46	LR	LR	04 54 36.8	
	comp=Z,8.2nm,18.4s,baz=175,slow=36						
MJAR	Matsushiro Arr	79.19	51	LR	LR	04 57 25.3	
	comp=Z,14nm,19.1s,baz=52,slow=35						
KLR	Kul'dur	79.48	37	LR	LR	04 58 29.8	
	comp=Z,11nm,21.9s,baz=56,slow=36						
YKA	Yellowknife Ar	125.53	1	PKP	PKPdf	04 30 03.3	0.0
	0.3nm,0.9s,baz=349,slow=3.0,SNR=4.5						
PDAR	Pinedale Array	145.25	357	PKPbc	PKPbc	04 30 40.5	+0.1
	0.3nm,0.6s,baz=66,slow=1.5,SNR=5.3						
NVAR	Mina Array Bea	149.14	10	PKPbc	PKiKP	04 30 53.2	+0.4
	0.4nm,0.6s,baz=345,slow=1.8,SNR=2.6						

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*NEIC **03** 04:12:34.7, 24.°01N×122.°58E, h14km*

*NEIC **03** 04:12:36.5±0.7, 24.°00N±0.°05×122.°52E±0.°03, h26km±5km, mb4.2/16, Mwr3.8/14, Error ellipse: s-maj=7.1km s-min=3.5km az=168.0, Moment Tensor Solution. Moment tensor: Scale 10^14Nm; Mrr3.66; Mθθ-4.51; Mφφ0.86; Mrθ3.89; Mθφ-0.57; Mφr2.11; Fault plane solution: M0 6.09000×10^14 NP1:φs284.60000°, δ25.39000°, λ125.19000°. NP2:φs66.63000°, δ69.48000°, λ74.70000°. Principal axes: T 5.8425, Plg62.0000°, Azm313.0000°; N 0.4748, Plg14.0000°, Azm72.0000°; P -6.3173, Plg23.0000°, Azm168.0000°;*

*JMA **03** 04:12:37.3±0.2, 24°N±1°×122.°5E±0.°4, h28km±3km, MV3.6/17, NW OFF ISHIGAKIJIMA IS*

*NIED **03** 04:12:37.3, 24.°03N×122.°47E, h28km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^14Nm; Mrr4.09; Mθθ-4.86; Mφφ0.77; Mrθ4.73; Mθφ0.39; Mφr2.60; Fault plane solution: M0 7.05000×10^14 NP1: φs297.00000°, δ26.00000°, λ134.00000°. NP2: φs70.00000°, δ71.00000°, λ71.00000°.*

*TAP **03** 04:12:37.8, 24.°12N×122.°45E, h28km, ML4.4, C*

*IDC **03** 04:12:39.7±3.9, 24.°30N×122.°55E, h47km±39km, mb3.5/11, mbtmp3.8/13, ML3.8/2, MS3.2/8, Error ellipse: s-maj=32.8km s-min=17.2km az=59.0*

ISC 03 04:12:36.4±0.9**, 24.°02N**±0.°02×**122.°52E**±0.°02**, h29km**±7km**, n215,** σ**1.s02**/325**, mb3.9**/19**, MS3.2**/5**, 19C-9D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS4	EOS4	0.21	300	⇑iP	Pn	04 12 43.0	-0.2
EOS4				iS	Sb	04 12 46.9	+0.9
EOS3	EOS3	0.32	326	⇓iP	Pn	04 12 44.6	-0.4
EOS3				S	Sn	04 12 49.7	-1.0
EOS2	EOS2	0.48	327	⇓iP	Pn	04 12 47.1	0.0
EOS2				S	Sn	04 12 54.4	-0.1
JYNG	Yonagunijimaku	0.58	42	iP	Pn	04 12 49.1	+0.3
JYNG				S	Sn	04 12 56.8	-0.5
YOJ	Yonaguni jima	0.63	46	P	Pn	04 12 49.9	+0.5
YOJ	Yonaguni jima	0.63	46	S	Sn	04 12 58.7	+0.2
YOJ	Yonaguni jima	0.63	46		Pn	04 12 49.9	+0.5
YOJ				Sg	Sn	04 12 57.9	-0.6
YOJ	Yonaguni jima	0.63	46	⇓iP	Pn	04 12 50.0	+0.6
YOJ				S	Sn	04 12 58.3	-0.3
YOJ	Yonaguni jima	0.63	46	eP	Pn	04 12 50.0	+0.6
YOJ				eS	Sn	04 12 58.2	-0.3
EAHA	Aohua	0.77	294	P	Pn	04 12 51.7	+0.3
EWUT	Wuta	0.80	302	P	Pn	04 12 51.5	-0.2
EWUT				S	Sb	04 13 01.5	-0.6
ETL	Fush Village	0.83	280	P	Pn	04 12 52.3	+0.1
ETL				S	Sn	04 13 03.6	+0.2
HWA	Hwalien	0.83	267	eP	Pn	04 12 53.6	+1.4
HWA				eS	Sn	04 13 03.5	0.0
TWD	Chiawan	0.84	274	eP	Pn	04 12 52.4	+0.1
TWD				eS	Sb	04 13 03.0	-0.5
TWC	Suao	0.85	314	⇓iP	Pn	04 12 52.0	-0.4
TWC				S	Sb	04 13 01.9	-1.7
TEYL	Yanliau Villag	0.85	260	eP	Pn	04 12 53.0	+0.6
TEYL				S	Sb	04 13 03.9	+0.2
NACB	Ninganchiao	0.86	281	P	Pb	04 12 52.1	-0.6
NACB	Ninganchiao	0.86	281	S	Sb	04 13 02.4	-1.4
NACB	Ninganchiao	0.86	281		Pb	04 12 52.1	-0.6
NACB				Sg	Sb	04 13 03.7	-0.1
NACB	Ninganchiao	0.86	281	⇑iP	Pn	04 12 52.4	-0.1
NACB				eS	Sb	04 13 02.1	-1.7
SHUL	Shoufeng	0.90	255	eP	Pn	04 12 53.3	+0.2
SHUL				eS	Sn	04 13 05.6	+0.4
ETM	Tongmen	0.94	267	P	Pb	04 12 53.4	-0.7
ETM				S	Sb	04 13 05.1	-1.0
NDS	Dongshan	0.95	310	eP	Pn	04 12 53.9	+0.1
NDS				eS	Sb	04 13 05.3	-1.3
ETLH	Xiulin Townshi	0.96	281	P	Pn	04 12 54.2	+0.1
ETLH				S	Sn	04 13 07.0	+0.1
EGS		0.98	327	⇓iP	Pn	04 12 54.6	+0.4
EGS				eS	Sn	04 13 07.0	-0.1
LXIB	Xiulin Townshi	1.01	270	⇑iP	Pn	04 12 54.4	-0.3
LXIB				S	Sb	04 13 07.1	-1.1
ESL	Shilin	1.01	259	eP	Pb	04 12 55.4	+0.1
ESL				eS	Sb	04 13 06.8	-1.4
ILA	Ilan	1.02	317	eP	Pb	04 12 55.9	+0.4
ILA				eS	Sn	04 13 08.5	+0.3
LATG	Datong	1.04	300	⇑iP	Pb	04 12 55.5	-0.3
LATG				eS	Sn	04 13 09.9	+1.1
NTC	Toucheng	1.04	323	eS	Sn	04 13 09.7	+1.1
TWE	Neicheng	1.04	312	⇑iP	Pb	04 12 55.8	0.0
TWE				eS	Sn	04 13 09.2	+0.5
ENTT	Nioudou	1.06	306	⇑iP	Pb	04 12 56.1	-0.1
ENTT				S	Sn	04 13 10.2	+0.9
WARBT	Fenglin Townsh	1.08	254	⇓P	Pn	04 12 55.1	-0.4
WARBT				eS	Sb	04 13 09.1	-1.0
NDT	Datong Townshi	1.08	303	eP	Pb	04 12 56.5	-0.1
NDT				eS	Sn	04 13 10.4	+0.6
TWB1	Santiao Chiao	1.10	334	P	Pb	04 12 56.3	-0.4
TWB1				eS	Sn	04 13 10.4	+0.3
FUSB	Fushanzhiwuyua	1.12	311	⇑iP	Pb	04 12 57.3	+0.1
NNS	Nan Shan	1.12	292	⇓P	Pb	04 12 56.7	-0.5
NNS				eS	Sb	04 13 10.9	-0.7
HGSD	Ruisui	1.13	243	⇓iP	Pn	04 12 56.2	-0.1
TIPB	Shuangxi	1.14	327	⇑iP	Pb	04 12 57.1	-0.4
TIPB				S	Sn	04 13 11.8	+0.6
WHF	Hehuan Shan	1.15	277	eP	Pn	04 12 57.2	+0.2
WHF				eS	Sb	04 13 11.7	-0.9
IRIF	Iriomote-Funau	1.15	74	eP	Pb	04 12 58.5	+0.8
HATJ	Hateruma jima	1.18	88	eP	Pb	04 12 59.2	+1.1
FUSS	Fushou	1.19	281	eP	Pb	04 12 57.9	-0.5
EHYH	Wanrong	1.19	244	eP	Pn	04 12 57.6	+0.5
EHYH				eS	Sn	04 13 12.5	+0.1
NWLT	Wulai	1.19	310	eP	Pb	04 12 58.0	-0.4
NWLT				eS	Sb	04 13 13.2	-0.3
ECBN	Changbin	1.20	235	eP	Pn	04 12 57.6	+0.4
ECBN				eS	Sn	04 13 12.1	-0.4
EHY	Hungye	1.21	245	eP	Pn	04 12 57.4	0.0
EHY				eS	Sn	04 13 12.5	-0.2
SXI1	Grass Mountain	1.22	332	⇑iP	Pb	04 12 58.1	-0.7
SXI1				eS	Sn	04 13 12.9	-0.3
YHNB	Yeheng	1.23	302	P	Pb	04 12 58.5	-0.4
YHNB	Yeheng	1.23	302	S	Sb	04 13 14.6	+0.2
YHNB	Yeheng	1.23	302		Pb	04 12 58.2	-0.8
YHNB	Yeheng	1.23	302	⇑iP	Pb	04 12 58.5	-0.4
YHNB				eS	Sn	04 13 13.5	+0.2
OWD	Renai	1.23	267	⇑iP	Pn	04 12 58.0	+0.2
OWD				eS	Sn	04 13 12.8	-0.6
NSK	Sanguang	1.24	302	⇑iP	Pb	04 12 58.6	-0.6
NSK				S	Sn	04 13 13.6	-0.1
NWF	Wu-fen Shan	1.24	328	eP	Pb	04 12 58.6	-0.7
NWF				eS	Sb	04 13 15.1	+0.1
WFSB	Wu-fen Shan	1.24	328	⇑iP	Pb	04 12 58.6	-0.6
WFSB				eS	Sb	04 13 14.7	-0.2
TWT	Tachien	1.25	281	eP	Pb	04 12 59.1	-0.2
TWT				eS	Sn	04 13 14.5	+0.5
TDCB	Techi	1.26	281	eP	Pb	04 12 59.0	-0.6
TDCB				eS	Sn	04 13 14.2	-0.1
WUSB	Renai	1.28	269	eP	Pb	04 12 59.1	-0.8
WUSB				eS	Sn	04 13 15.0	+0.3
YULB	Yu-li	1.28	241	P	Pn	04 12 58.7	+0.4
YULB	Yu-li	1.28	241	S	Sn	04 13 14.5	0.0
YULB	Yu-li	1.28	241		Pn	04 12 58.5	+0.2
YULB	Yu-li	1.28	241	⇓iP	Pn	04 12 58.7	+0.4
YULB				eS	Sn	04 13 14.0	-0.5
TWA	Mucha	1.28	319	⇑P	Pb	04 12 59.4	-0.5
TWA				eS	Sb	04 13 15.6	-0.4
VWDT	VWDT	1.29	258	eP	Pb	04 12 59.2	-0.7
VWDT				eS	Sn	04 13 14.6	-0.1
TWF1	Yuli	1.30	240	P	Pn	04 12 59.0	+0.4
TWF1				S	Sn	04 13 15.0	-0.1
TNOU	National Taiwa	1.31	329	P	Pb	04 12 59.2	-1.3
TNOU				eS	Sb	04 13 16.0	-0.9
TATO	Taipei	1.34	316	P	Pb	04 13 00.9	+0.1
TATO	Taipei	1.34	316	S	Sb	04 13 18.5	+1.0
TATO	Taipei	1.34	316		Pn	04 12 59.1	0.0
JKRS	Kuro-shima	1.38	81	eP	Pb	04 13 02.2	+0.7
FULB	Fuli	1.39	234	eP	Pn	04 12 59.9	+0.1
FULB				eS	Sn	04 13 17.3	+0.1
CHKT	Chengkung	1.40	229	eP	Pn	04 13 00.4	+0.5
CHKT				eS	Sn	04 13 15.8	-1.6
NFF	Wufeng Townshi	1.42	296	eP	Pb	04 13 01.5	-0.7
NFF				eS	Sb	04 13 18.9	-0.9
YM01	YM01	1.42	323	eP	Pn	04 13 00.7	+0.5
YM01				eS	Sb	04 13 18.9	-0.9
KSHI	Guanxi Townshi	1.44	302	eP	Pb	04 13 02.4	-0.1
KSHI				eS	Sb	04 13 20.3	-0.1
YM08	YM08	1.44	324	eP	Pn	04 13 00.7	+0.1
ZUZH	Zhuzihu	1.44	322	eP	Pn	04 13 01.0	+0.4
ZUZH				eS	Sb	04 13 20.7	+0.1
SSLB	Suanglung	1.45	261	P	Pb	04 13 03.4	+0.7
SSLB	Suanglung	1.45	261		Pn	04 13 01.1	+0.4
SSLB	Suanglung	1.45	261	eP	Pb	04 13 01.8	-0.9
WHP	Taichung City	1.46	281	eP	Pb	04 13 02.1	-0.8
WHP				eS	Sb	04 13 20.2	-0.9
WCS	Beigang Elemen	1.47	272	eP	Pb	04 13 02.0	-0.9
WCS				eS	Sn	04 13 20.3	+1.2
TWS1	Kuangyinshan	1.47	317	eP	Pb	04 13 01.9	-1.2
TWS1				eS	Sb	04 13 21.3	-0.1
SMLT	Sun Moon Lake	1.48	265	⇑P	Pb	04 13 02.3	-1.0
SMLT				eS	Sn	04 13 20.4	+0.6
NTST	Danshui	1.50	320	eP	Pb	04 13 02.3	-1.2
NTST				eS	Sb	04 13 22.4	+0.2
ECS	Chishang	1.50	233	eP	Pb	04 13 02.8	-0.9
ECS				eS	Sn	04 13 21.0	+0.9
LIOB	Emei	1.50	295	eP	Pb	04 13 03.3	-0.3
LIOB				eS	Sb	04 13 21.8	-0.6
TWY	Chenhua	1.50	327	eP	Pb	04 13 02.2	-1.4
NSTT	Nanjuang	1.51	294	⇑eP	Pb	04 13 03.3	-0.5
NSTT				eS	Sb	04 13 21.6	-1.0
JIJ	Ishigaki jima	1.52	77	eP	Pb	04 13 03.7	-0.3
JIJ				eS	Sb	04 13 22.6	-0.3
NCUH	Zhongli	1.54	308	eP	Pb	04 13 03.5	-0.7
NCUH				eS	Sb	04 13 22.8	-0.5
WHYT	Xinyi Township	1.56	258	eP	Pb	04 13 03.9	-0.6
TWQ1	Liyutan	1.63	282	eP	Pb	04 13 05.2	-0.5
TWQ1				eS	Sb	04 13 25.5	-0.3
ALS	Alishan	1.65	252	eP	Pb	04 13 05.1	-1.2
ALS				eS	Sn	04 13 25.3	+1.3
LDUT	Ludao	1.65	216	eP	Pn	04 13 03.3	0.0
LDUT				eS	Sn	04 13 22.0	-1.6
WJS	Zhushan	1.65	264	eP	Pb	04 13 06.0	-0.1
WJS				eS	Sb	04 13 26.7	+0.2
NSY	Sanyi	1.65	284	eP	Pb	04 13 06.2	+0.1
NSY				eS	Sb	04 13 26.9	+0.3
PCYT	Pengchaiyu	1.66	346	⇑P	Pn	04 13 04.2	+0.7
PCYT				eS	Sn	04 13 23.2	-0.6
NMLH	Miaoli	1.66	289	eP	Pb	04 13 05.7	-0.5
NMLH				eS	Sb	04 13 26.1	-0.6
WNT	Mingjian	1.68	266	eP	Pb	04 13 06.6	-0.1
WNT				eS	Sb	04 13 27.2	-0.2
TCU	Taichung	1.69	275	eP	Pb	04 13 06.1	-0.7
TCU				eS	Sb	04 13 27.6	+0.1
JISG	Ishigakijimahi	1.73	71	P	Pb	04 13 06.4	-1.1
JISG				eS	Sb	04 13 27.1	-1.8
CHN5	Tsauling	1.73	256	eP	Pb	04 13 07.3	-0.3
CHN5				eS	Sb	04 13 28.4	-0.7
WDJ	Dajia District	1.74	281	eP	Pb	04 13 07.1	-0.6
WDJ				eS	Sb	04 13 28.9	-0.3
TWGBT	Beinan	1.78	228	P	Pn	04 13 05.8	+0.6
TWGBT	Beinan	1.78	228	eP	Pn	04 13 05.4	+0.2
TWGBT				eS	Sn	04 13 26.1	-0.8
TWG	Pinlang	1.78	228		Pn	04 13 05.1	-0.1
TWG	Pinlang	1.78	228	eP	Pn	04 13 05.5	+0.2
TWG				eS	Sn	04 13 26.1	-0.9
WCHH	Zhanghua	1.79	272	eS	Sb	04 13 29.1	-1.4
WCH1	Changhua City	1.80	272	eS	Sb	04 13 30.2	-0.6
STYH	Taoyuan	1.81	243	eP	Pn	04 13 06.9	+1.4
STYH				eS	Sn	04 13 28.2	+0.7
WGK	Gukeng	1.82	260	eP	Pb	04 13 08.7	-0.3
WGK				eS	Sb	04 13 30.8	-0.6
WDL	Douliou City	1.83	261	eS	Sb	04 13 31.6	-0.2
WDLH	Douliu	1.84	260	eP	Pb	04 13 09.0	-0.4
WDLH				eS	Sb	04 13 32.2	+0.3
WCKO	Fanlu	1.84	252	eP	Pb	04 13 09.1	-0.4
WCKO				eS	Sb	04 13 31.2	-0.9
TPUB	Ta-pu	1.87	248	P	Pb	04 13 09.3	-0.6
TPUB	Ta-pu	1.87	248		Pn	04 13 06.8	+0.4
TPUB	Ta-pu	1.87	248	eP	Pb	04 13 09.2	-0.7
TPUB				eS	Sb	04 13 31.5	-1.4
WTP	Ta-pu	1.91	247	eP	Pb	04 13 08.9	-1.5
WTP				eS	Sb	04 13 32.9	-1.0
CHN2	Minshiung	1.93	256	eP	Pb	04 13 09.4	-1.5
CHN2				eS	Sb	04 13 34.6	0.0
WRL	Guolierlin Hig	1.96	267	eP	Pb	04 13 09.9	-1.4
WRL				eS	Sn	04 13 33.5	+2.2
WTK	Tuku	1.98	261	eS	Sb	04 13 35.7	-0.1
RLNB	Erlin	1.98	267	eP	Pb	04 13 10.2	-1.4
RLNB				eS	Sn	04 13 34.0	+2.3
CHY	Chiayi	1.98	255	eS	Sb	04 13 34.6	-1.6
SLGT	Liugui	2.00	240	eS	Sb	04 13 35.5	-0.9
CHN1	Nanshi	2.00	246	eP	Pb	04 13 11.5	-0.6
CHN1				eS	Sb	04 13 35.4	-1.3
SGST	Jiashian	2.00	243	eP	Pb	04 13 10.5	-1.7
SGST				eS	Sb	04 13 35.2	-1.4
TWK	Hsinying	2.00	249	eP	Pb	04 13 10.8	-1.4
TWK				eS	Sb	04 13 35.6	-1.1
ECL	Taimali	2.02	226	eP	Pn	04 13 08.4	0.0
WTCT	Ta-ch'eng	2.05	266	eS	Sn	04 13 35.4	+1.8
JTJ	Tarama	2.09	72	eP	Pb	04 13 11.6	-1.9
JTJ				eS	Sb	04 13 36.0	-3.1
WSF	Szhu	2.13	260	eS	Sb	04 13 39.5	-0.9
SSD	Sandimen	2.14	234	eP	Pb	04 13 13.0	-1.5
SSD				eS	Sb	04 13 39.1	-1.6
WSL	Shuilin Townsh	2.15	257	eP	Pb	04 13 13.1	-1.6
WSL				eS	Sb	04 13 38.8	-2.1
LAY	Lan-yu	2.16	204	eP	Pn	04 13 10.9	+0.5
LAY				eS	Sn	04 13 35.6	-0.7
LYUB	Lan-yu	2.18	203	eP	Pn	04 13 10.1	-0.7
LYUB				eS	Sn	04 13 34.4	-2.4
CHN3	Shinhua	2.19	245	eS	Sb	04 13 42.1	+0.2
CHN8	Yiju	2.22	253	eS	Sb	04 13 40.5	-2.2
SSHA	Shanhua	2.23	247	eS	Sb	04 13 42.1	-0.9
MASBT	Mashibuluo	2.23	231	eP	Pn	04 13 12.8	+1.5
MASBT				eS	Sb	04 13 42.9	-0.2
EAST	Anshuo	2.24	224	eP	Pn	04 13 11.9	+0.4
TWM1	Shoushan	2.26	239	eS	Sb	04 13 45.9	+1.8
SCLT	Jiali	2.29	249	eS	Sb	04 13 42.8	-2.1
TSCK	Chigu Township	2.39	249	eS	Sn	04 13 44.2	+2.2
SCZT	Fangliau	2.39	227	eP	Pb	04 13 16.9	-1.9
WSSB	Gushan	2.48	237	eS	Sb	04 13 49.7	-0.8
SMST	Manzhou Townsh	2.52	218	eP	Pn	04 13 16.1	+0.7
SMST				eS	Sn	04 13 44.9	-0.2
JIRB	Irabujima	2.55	71	eS	Sb	04 13 49.2	-3.2
TSEB	Hengchuen, Pin	2.58	216	eS	Sn	04 13 49.0	+2.4
HEN	Hengchun	2.59	220	eP	Pb	04 13 19.4	-2.6
HEN				eS	Sn	04 13 47.8	+1.0
TWKBT	Hengchun	2.60	218	eP	Pn	04 13 17.6	+1.2
TWKBT				eS	Sn	04 13 48.6	+1.5
TWK1	Hengchun	2.60	218	eP	Pn	04 13 18.4	+2.0
TWK1				eS	Sn	04 13 48.7	+1.7
JMJ2	Miyako jima3	2.66	74	eS	Sn	04 13 50.7	+2.0
WDGT	Dungji	2.73	255	eP	Pn	04 13 20.2	+2.0
WDGT				eS	Sn	04 13 51.6	+1.4
PHUB	P'eng-hu	2.74	260	eP	Pn	04 13 19.8	+1.4
PHUB				eS	Sn	04 13 51.1	+0.5
PNG	Penghu	2.75	261	eP	Pn	04 13 19.9	+1.3
PNG				eS	Sn	04 13 51.4	+0.6
VCHM	Qimei	2.94	255	eP	Pn	04 13 23.4	+2.2
VCHM				eS	Sn	04 13 56.6	+1.0
VWUC	VWUC	2.96	290	⇑iP	Pn	04 13 21.6	+0.2
VWUC				eS	Sn	04 13 53.9	-2.0
MATB	Ma-tsu	3.15	313	eP	Pn	04 13 24.1	0.0
PTMZ	Houxiangcun	3.26	289	⇑P	Pn	04 13 25.8	+0.3
PTMZ				eS	Sn	04 14 00.9	-2.4
LYJJ	Jianjiangzhen	3.55	316	eP	Pn	04 13 29.8	+0.3
XPSS	Dashiqiu	3.58	325	eP	Pn	04 13 29.8	-0.2
KNM	Kinmen	3.75	277	eP	Pn	04 13 34.5	+2.2
KNM				eS	Sn	04 14 15.9	+0.4
MHZQ	Yeshan	3.78	304	eP	Pn	04 13 32.6	-0.2
MHZQ				eS	Sn	04 14 14.3	-1.9
KNMB	Chin-men Tao	3.79	278	Pn	Pn	04 13 33.1	+0.3
KNMB	Chin-men Tao	3.79	278	eP	Pn	04 13 33.2	+0.3
KNMB				eS	Sn	04 14 14.2	-2.4
AXDP	Jialang	4.24	283	eP	Pn	04 13 39.4	+0.5
AXDP				eS	Sn	04 14 25.0	-2.5
ZPLA	Ao Xicun	4.36	270	eP	Pn	04 13 41.3	+0.6
ZPLA				eS	Sn	04 14 27.9	-2.7
DSXP	Dongshan	4.67	267	eP	Pn	04 13 45.7	+0.7
DSXP				eS	Sn	04 14 35.3	-2.9
SXFK	Yanhouchang	5.01	299	eP	Pn	04 13 49.6	0.0
SXFK				eS	Sn	04 14 43.8	-2.8
JOW	Kunigami	5.91	61	P	Pn	04 14 02.0	-0.1
	2.5nm,0.3s,baz=107,slow=11,SNR=2.3						
	5.2nm,0.3s						
JOW	Kunigami	5.91	61		Pn	04 14 02.2	+0.2
JNU	Nakatsue	11.67	37	LR	LR	04 19 51.3	
	comp=Z,55nm,20.6s,baz=197,slow=38						
ENH	Enshi	13.16	301	Pn	Pn	04 15 42.0	+0.6
KSRS	Korea Array	14.17	18	P	P	04 16 02.3	0.0
	7.7nm,0.8s,baz=199,slow=12,SNR=20						
KSRS				LR	LR	04 21 55.0	
	comp=Z,47nm,19.3s,baz=205,slow=40						
MJAR	Matsushiro Arr	18.39	44	LR	LR	04 23 59.9	
	comp=Z,38nm,21.6s,baz=168,slow=37						
LZDM	Lanzhou Array	20.14	311	P	P	04 17 09.5	+0.9
	baz=141,slow=9.6						
	0.7nm,0.3s						

USRK Ussuriysk Ar. 21.58 19 P P 04 17 23.1 -0.6
2.2nm,0.7s,baz=196,slow=12,SNR=3.1
2.2nm,0.7s
KLR Kul'dur 26.19 14 LR LR 04 29 12.3
comp=Z,49nm,18.6s,baz=212,slow=38
SONM Songino Array 27.01 336 P P 04 18 14.8 -1.1
0.9nm,0.6s,baz=152,slow=9.3,SNR=6.6
SONM LR LR 04 30 06.8
comp=Z,62nm,19.1s,baz=152,slow=39
0.9nm,0.6s
SONM Songino Array 27.01 336 P P 04 18 15.3 -0.6
TLY Talaya 31.19 337 LR LR 04 32 52.3
comp=Z,41nm,18.6s,baz=96,slow=39
MTN Manton Dam 37.59 166 P 04 19 48.0 -0.6
MK31 Makanchi Array 39.31 316 P P 04 20 02.7 -0.1
MKAR Makanchi Array 39.31 316 P P 04 20 02.6 -0.2
0.9nm,0.4s,baz=99,slow=9.9,SNR=24
0.9nm,0.4s
MKAR Makanchi Array 39.31 316 P P 04 20 02.8 0.0
MAKZ Makanchi 39.51 315 P 04 20 04.5 0.0
MAKZ IAmb IAmb 04 20 04.9
comp=Z,2.1nm,0.6s
ZAA0 Zalesovo Array 41.05 327 P P 04 20 16.1 -0.9
ZALV Zalesovo Beam 41.05 327 P P 04 20 16.0 -1.1
comp=Z,1.2nm,0.6s,baz=111,slow=8.1,SNR=5.6
comp=Z,1.2nm,0.6s
ZALV Zalesovo Beam 41.05 327 P P 04 20 16.3 -0.8
KDJ Kajisay 41.53 307 P P 04 20 21.3 -0.1
NRN Naryn 42.27 306 P 04 20 28.8 +1.1
NRN IAmb IAmb 04 20 30.0
comp=Z,4.0nm,0.8s
KURK Kurchatov 43.00 320 P P 04 20 32.6 -0.5
KURK IAmb IAmb 04 21 11.1
comp=Z,4.3nm,1.2s
KURBB Kurchatov Arra 43.02 320 P P 04 20 33.0 -0.2
comp=Z,6.7nm,1.0s,baz=123,slow=8.1,SNR=2.0
comp=Z,6.7nm,1.0s
WRA Warramunga Arr 45.19 164 P P 04 20 53.2 +2.3
comp=Z,0.7nm,0.8s,baz=344,slow=7.4,SNR=4.1
comp=Z,0.7nm,0.8s
WR8 Warramunga Arr 45.24 164 P P 04 20 51.6 +0.2
GAR Garm 46.34 302 P P 04 21 00.7 +0.6
TIXI Tiksi 47.80 3 LR LR 04 43 45.7
comp=Z,82nm,19.3s,baz=207,slow=39
BVAR Borovoye Array 48.57 321 P P 04 21 15.7 -1.3
comp=Z,1.0nm,0.8s,baz=107,slow=8.0,SNR=4.0
BVAR PcP PcP 04 22 42.2 -0.3
comp=Z,0.7nm,0.6s,baz=88,slow=3.3,SNR=3.1
comp=Z,1.0nm,0.8s
BORK Borovoye 48.62 321 P P 04 21 18.4 +0.9
BORK IAmb IAmb 04 21 28.3
comp=Z,4.9nm,1.2s
ASAR Alice Springs 48.67 166 P P 04 21 22.0 +3.9
comp=Z,0.3nm,0.5s,baz=342,slow=8.9,SNR=6.5
comp=Z,0.3nm,0.5s
ASAR Alice Springs 48.67 166 P P 04 21 16.8 -1.3
AB31 Akbulak array 54.43 314 P P 04 22 01.1 +0.2
AB31 IAmb IAmb 04 22 28.6
comp=Z,2.4nm,1.1s
ABKAR Akbulak array 54.43 314 P P 04 22 01.1 +0.2
L14K Kuka Creek 61.95 32 P P 04 22 54.5 +1.2
H17K Granite Mounta 63.26 28 P P 04 23 02.7 +0.7
H17K IAmb IAmb 04 23 41.0
comp=Z,4.4nm,1.4s
FINES FINESS Array B 72.20 330 P P 04 23 58.2 -0.1
comp=Z,0.6nm,0.5s,baz=28,slow=4.5,SNR=4.3
comp=Z,0.6nm,0.5s
F30M Barrier River 72.37 23 P P 04 23 59.7 +0.3
F30M IAmb IAmb 04 24 18.6
comp=Z,6.3nm,1.4s
BRTR Keskin Array B 74.25 307 P P 04 24 11.7 +0.5
comp=Z,0.5nm,0.7s,baz=120,slow=4.4,SNR=4.1
comp=Z,0.5nm,0.7s
BRTR Keskin Array B 74.25 307 P P 04 24 11.0 -0.1
HFS Hagfors 78.30 331 LR LR 05 00 30.5
comp=Z,71nm,19.7s,baz=290,slow=37
YKAW3 Yellowknife Wh 82.60 23 P P 04 24 56.3 -0.3
YKAW3 IAmb IAmb 04 25 35.3
comp=Z,2.8nm,1.3s
YKA Yellowknife Ar 82.65 23 P P 04 24 56.6 -0.2
comp=Z,0.4nm,0.8s,baz=314,slow=5.8,SNR=9.1
comp=Z,0.4nm,0.8s
YKA Yellowknife Ar 82.65 23 P P 04 24 56.2 -0.5

IDC 03 04:17:16.1±7.2, 21°.59S×170°.24E, h123km±43km, mb3.1/2, mbtmp3.6/3, Error ellipse: s-maj=175.4km s-min=47.4km az=160.0, Southeast of Loyalty Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DZM Mont Dzumac 3.56 262 P Pn 04 18 10.5 +0.6
30nm,0.3s,baz=122,slow=14,SNR=186
DZM S Sn 04 18 51.7 +0.1
31nm,0.3s,baz=105,slow=20,SNR=6.6
ASAR Alice Springs 33.55 259 P P 04 23 44.5 +0.1
0.4nm,0.6s,baz=86,slow=9.4,SNR=5.7
0.4nm,0.6s
WRA Warramunga Arr 33.57 266 P P 04 23 44.8 +0.2
0.4nm,0.5s,baz=100,slow=7.9,SNR=2.4
0.4nm,0.5s
ARCES ARCESS Array B 127.57 345 PKP PKPdf 04 36 04.3 -1.6
4.7nm,1.0s,baz=36,slow=2.1,SNR=3.9
GERES GERESS Array B 147.00 331 PKPbc PKPbc 04 36 44.4 0.0
0.9nm,0.6s,baz=48,slow=2.0,SNR=5.6

IDC 03 04:44:45.6±4.8, 2°.23S×139°.26E, h0km, mb3.8/4, mbtmp3.8/5, ML3.5/1, MS3.4/1, Error ellipse: s-maj=211.9km s-min=24.6km az=87.0, Near north coast of Irian Jaya

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 18.25 195 P Pn 04 49 00.4 -0.2
0.2nm,0.3s,baz=15,slow=12,SNR=6.0
1.1nm,0.7s
ASAR Alice Springs 21.94 193 P P 04 49 40.9 -0.1
1.2nm,0.7s,baz=21,slow=12,SNR=13
ASAR S S 04 53 36.5 -7.7
1.2nm,0.8s,baz=12,slow=24,SNR=5.0
ASAR LR LR 04 59 56.1
comp=Z,88nm,18.8s,baz=84,slow=42
1.2nm,0.7s
MKAR Makanchi Array 69.74 322 P P 04 55 57.8 +0.2
1.0nm,0.8s,baz=112,slow=7.6,SNR=11
1.0nm,0.8s
KURBB Kurchatov Arra 73.65 325 P P 04 56 20.9 -0.1
0.7nm,0.8s,baz=125,slow=6.5,SNR=4.0
0.7nm,0.8s
BVAR Borovoye Array 79.23 325 P P 04 56 52.7 0.0
1.3nm,0.6s,baz=124,slow=7.4,SNR=8.5
1.3nm,0.6s

IDC 03 04:52:33.7±10.0, 26°.01S×177°.73W, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=435.6km s-min=45.0km az=150.0, South of Fiji Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ASAR Alice Springs 43.76 262 P P 05 00 42.0 +0.7
0.2nm,0.3s,baz=96,slow=6.8,SNR=5.1
0.2nm,0.3s
WRA Warramunga Arr 44.35 268 P P 05 00 45.1 -0.9
1.1nm,0.6s,baz=108,slow=8.1,SNR=9.0
1.1nm,0.6s
ILAR Eielson Array 93.61 13 P P 05 05 51.1 -0.1
0.8nm,1.0s,baz=205,slow=4.0,SNR=4.0
0.8nm,1.0s

WEL 03 04:52:43.8±0.9, 34°S±7°×18°0E±1°5, h307km±11km, M3.8/12, mB4.2/4, ML3.7/4, MLv4.0/12, Mw(mB)3.2/4, Error ellipse: s-maj=20.5km s-min=4.8km az=112.4, confirmed, South of Kermadec Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MXZ Matakaoa Point 4.12 196 P Pn 04 53 53.5 +2.0
MXZ S S 04 54 46.9 +0.9
WMGZ Waiomatatini S 4.34 194 P Pn 04 53 54.2 +0.2
WMGZ S S 04 54 50.7 +0.3
GRZ Great Barrier 4.41 232 P Pn 04 53 53.5 -1.3
HAZ Te Kaha 4.44 201 P Pn 04 53 55.4 +0.3
HAZ S S 04 54 53.8 +1.4
PKGZ Pakihiroa 4.47 197 P Pn 04 53 57.8 +2.3
PKGZ S S 04 54 53.2 +0.3
PUZ Puketiti 4.62 195 P Pn 04 53 59.3 +2.1
PUZ S S 04 54 55.5 -0.6
RUGZ Raukumara Rang 4.67 201 P Pn 04 53 58.1 +0.3
RUGZ S S 04 54 57.1 -0.2
RAO Raoul Island 4.77 25 S S 04 54 57.3 -2.2
TWGZ Tauwhareparae 4.79 197 S S 04 55 02.1 +2.5
WCZ Waipu Caves 5.03 241 P Pn 04 54 03.7 +1.8
MWZ Matawai 5.05 200 P Pn 04 54 01.9 -0.2
MWZ S S 04 55 06.4 +1.2
TKGZ Te Karaka 5.07 197 P Pn 04 54 00.4 -1.8
URZ Urewera 5.12 204 P Pn 04 54 01.3 -1.5
URZ S S 04 55 07.0 +0.6
KNZ Kokohu 5.66 197 P Pn 04 54 10.2 +1.1
KNZ S S 04 55 18.0 0.0
MHGZ Mahia Peninsul 5.74 195 S S 04 55 18.4 -1.2
KWHZ Kaweka Forest 6.40 204 P Pn 04 54 19.3 +1.3
KWHZ S S 04 55 35.2 +1.1
ETVZ East Tongariro 6.41 209 P Pn 04 54 20.9 +2.7
KRHZ Kereru 6.61 203 P Pn 04 54 21.2 +0.7
KRHZ S S 04 55 38.5 -0.2
PNHZ Pukenui 6.91 203 P Pn 04 54 24.0 -0.1
PNHZ S S 04 55 44.9 -0.5
PRHZ Porangahau 7.10 200 P Pn 04 54 26.9 +0.5
PRHZ S S 04 55 51.8 +2.3
WAZ Wanganui 7.24 211 S S 04 55 55.0 +2.5
BFZ Birch Farm 7.60 201 P Pn 04 54 33.0 +0.6
BFZ S S 04 56 01.2 +0.7
MRZ Mangatainoka R 7.79 204 P Pn 04 54 33.3 -1.4
MRZ S S 04 56 03.2 -1.6
OGWZ Otaki Gorge 8.07 206 P Pn 04 54 38.1 -0.1
OGWZ S S 04 56 09.7 -1.4
KIW Kapiti Island 8.21 207 P Pn 04 54 40.0 +0.2
KIW S S 04 56 12.1 -2.1
CAW Cannon Point 8.37 205 P Pn 04 54 41.3 -0.5
TCW Tory Channel 8.76 208 P Pn 04 54 45.1 -1.3
TCW S S 04 56 24.0 -2.4
THZ Tophouse 9.79 212 P Pn 04 54 59.4 +0.3

IDC 03 05:03:37.5±1.6, 0°.72N×124°.53E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=209.9km s-min=22.8km az=64.0, Minahassa Peninsula, Sulawesi

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 22.68 155 P P 05 08 39.2 -1.5
0.5nm,0.3s,baz=332,slow=11,SNR=4.8
0.5nm,0.3s
ASAR Alice Springs 25.90 160 P P 05 09 12.6 +1.1
0.3nm,0.5s,baz=345,slow=11,SNR=7.0
0.3nm,0.5s
MKAR Makanchi Array 58.82 327 P P 05 13 38.5 +0.7
0.1nm,0.3s,baz=120,slow=7.9,SNR=4.6
0.1nm,0.3s
KURBB Kurchatov Arra 63.12 329 P P 05 14 06.0 -0.9
0.5nm,0.6s,baz=124,slow=6.1,SNR=3.4
0.5nm,0.6s

IDC 03 05:23:09.2±1.0, 12°.11N×143°.63E, h0km, mb3.8/10, mbtmp3.8/10, MS3.3/1, Error ellipse: s-maj=38.3km s-min=20.9km az=89.0

ISC 03 05:23:13.2±1.0, 12°.1N±0°.2×143°.5E±0°.3, h25km, n14, σ0.98/10, mb3.8/10, South of Mariana Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
H11N1 WAKE ISLAND Hy 23.70 68 T T 05 53 06.0
baz=255,slow=75,SNR=4.9
H11N2 WAKE ISLAND Hy 23.71 68 T T 05 53 05.9
baz=255,slow=75,SNR=4.0
H11N3 WAKE ISLAND Hy 23.72 68 T T 05 53 09.7
baz=255,slow=75,SNR=4.7
CTA Charters Tower 32.11 175 LR LR 05 44 25.6
comp=Z,49nm,18.4s,baz=40,slow=40
WRA Warramunga Arr 33.11 196 P P 05 29 47.0 -0.4
0.4nm,0.6s,baz=20,slow=9.5,SNR=4.7
0.4nm,0.6s
ASAR Alice Springs 36.78 195 P P 05 30 19.1 0.0
0.2nm,0.6s,baz=22,slow=11,SNR=3.7
0.2nm,0.6s
SONM Songino Array 47.20 326 P P 05 31 43.9 -0.2
0.2nm,0.4s,baz=116,slow=6.7,SNR=2.0
0.2nm,0.4s
MKAR Makanchi Array 61.64 317 P P 05 33 30.2 +1.3
0.3nm,0.6s,baz=100,slow=8.1,SNR=3.6
0.3nm,0.6s
ZALV Zalesovo Beam 62.06 325 P P 05 33 31.1 -0.5
0.7nm,0.4s,baz=107,slow=8.0,SNR=2.9
0.7nm,0.4s
KURBB Kurchatov Arra 64.90 320 P P 05 33 51.3 +0.9
1.3nm,0.6s,baz=106,slow=6.8,SNR=12
1.3nm,0.6s
BVAR Borovoye Array 70.27 322 P P 05 34 25.1 +0.8
1.2nm,0.4s,baz=109,slow=6.8,SNR=11
1.2nm,0.4s
ILAR Eielson Array 70.46 25 P P 05 34 24.2 -1.0
0.4nm,0.7s,baz=253,slow=5.9,SNR=8.1
0.4nm,0.7s
NVAR Mina Array Bea 88.87 51 P P 05 36 07.2 +1.2
0.6nm,0.7s,baz=269,slow=6.0,SNR=3.6
0.6nm,0.7s
FINES FINESS Array B 91.93 335 P P 05 36 18.6 -0.8
3.2nm,1.0s,baz=83,slow=34,SNR=1.8
3.2nm,1.0s

IDC 03 05:26:16.8±2.3, 1°.48N×126°.20E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=194.9km s-min=28.5km az=65.0, Northern Molucca Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 22.74 160 P P 05 31 19.4 -1.3
0.4nm,0.4s,baz=338,slow=10,SNR=6.1
0.4nm,0.4s
ASAR Alice Springs 26.10 164 P P 05 31 53.5 +0.9
0.2nm,0.4s,baz=348,slow=13,SNR=4.9
0.2nm,0.4s
MKAR Makanchi Array 59.10 326 P P 05 36 19.2 +0.1
0.1nm,0.3s,baz=107,slow=7.7,SNR=1.6
0.1nm,0.3s

ISK 03 05:41:13.3, 41°.10N×43°.24E, h6km, ML2.8/8

AFAD 03 05:41:13.8, 41°.07N×43°.23E, h7km±4km, ML2.8

ISC 03 05:41:13.3±1.3, 41°.11N±0°.03×43°.23E±0°.03, h4km±12km, n19, σ0.54/31, Turkey-Georgia-Armenia border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AHAN Ardahan-Merkez 0.46 277 P Pb 05 41 23.7 -0.4
AHAN S Sb 05 41 31.0 -0.3
AHAN IAML 05 41 31.0
comp=N,1μm,0.4s
KARS Kars 0.49 193 Pg Pg 05 41 23.4 +0.6
EAK Akyaka 0.51 145 P Pg 05 41 23.6 +0.5
EAK S Sg 05 41 29.1 -0.7
EAK IAML 05 41 33.0
comp=N,1μm,0.5s
EAK IAML 05 41 35.0
comp=E,830nm,0.5s
EPOS Posof 0.54 317 P Pb 05 41 25.4 -0.2
EPOS S Sb 05 41 33.2 -0.6
EPOS IAML 05 41 35.0
comp=N,578nm,0.3s
GOLE Ardahan-G¶le 0.55 240 P Pg 05 41 24.2 +0.3
GOLE S Sb 05 41 32.8 -1.1
BOZK Kars-Merkez-Bo 0.55 200 P Pg 05 41 24.1 +0.2
BOZK S Sg 05 41 32.0 +1.0
DIGO Kars 0.70 171 P Pg 05 41 26.5 -0.3
DIGO S Sg 05 41 35.5 -0.4
SENK Senkaya-Erzuru 0.86 231 Pg Pg 05 41 30.3 +0.5
SENK Sg Sb 05 41 42.6 -0.3
EOLT Oltu 1.10 240 P Pn 05 41 35.5 -0.1
DDEM Demirkent 1.14 260 P Pg 05 41 34.8 -0.3
DDEM S Sg 05 41 49.8 -0.1
DDEM IAML 05 41 54.0
comp=E,269nm,0.3s
DDEM IAML 05 41 57.0
comp=N,242nm,0.4s
DBAD Bademkaya 1.16 266 P Pg 05 41 35.5 -0.1
DBAD S Sg 05 41 50.6 0.0
DBOC Borcka 1.20 282 P Pg 05 41 36.1 -0.3
DBOC S Sg 05 41 51.8 -0.1
TBLG Delisi 1.30 61 Pn Pg 05 41 38.5 +0.3
TBLG Sn Sn 05 41 56.3 +0.3
HOMI Horasan 1.46 224 P Pb 05 41 41.2 0.0
GNI Garni 1.50 129 Pn Pb 05 41 41.2 -0.6
GNI Sn Sg 05 42 01.4 -0.1
AGRB Hanur-Agry 1.54 187 Pn Pb 05 41 41.9 -0.7
CHOM Cayeli-Rize 1.86 270 Pn Pn 05 41 46.8 +0.8
BAYT Aydıntepe-Bayb 2.45 254 Pn Pn 05 41 55.3 +1.1
GURO Guroymak-BITLI 2.71 200 Pn Pn 05 41 58.6 +0.8

IDC 03 05:43:13.9±3.6, 18°.17N×105°.20W, h0km, mb3.6/5, mbtmp3.6/8, ML3.5/3, MS3.4/13, Error ellipse: s-maj=75.1km s-min=39.0km az=32.0

MEX 03 05:43:14.6±0.9, 18°.16N×105°.29W, h16km±29km, MD4.3

NEIC 03 05:43:16.5±2.3, 18°.1N±0°.1×105°.1W±0°.1, h10km±2km, mb4.2/54, Error ellipse: s-maj=23.9km s-min=13.4km az=219.0

ISC 03 05:43:19.5±3.4, 18°.33N±0°.09×105°.0W±0°.1, h28km±22km, n70, σ1.86/54, mb4.0/9, MS3.4/9, Near coast of Jalisco

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CDAR Ciudad de Arme 1.08 56 eP Pn 05 43 36.2 -2.5
CDAR eS Sb 05 43 53.0 -0.2
CJM Chamela 1.17 356 eP Pn 05 43 34.9 -5.1
CJM eS Sn 05 43 50.7 -4.3
CEGR Campo Tres 1.48 44 eP Pn 05 43 42.3 -2.1
CEGR eS Sb 05 44 04.2 -0.7
MMIG Aquila 1.52 91 eP Pn 05 43 42.3 -2.6
MMIG eS Sn 05 44 02.8 -1.0
SOMAC Volcano de Col 1.72 46 eP Pn 05 43 47.6 -0.4
SOMAC eS Sb 05 44 10.4 -1.7
INCO Volcan de Coli 1.74 47 eP Pn 05 43 47.6 -0.7
INCO eS Sb 05 44 11.7 -1.0
ANIG Ahuacatlan 2.74 8 eP Pn 05 43 59.6 -2.1
ANIG eS Sn 05 44 32.6 -1.4
ZIIG Zihuatanejo 3.39 102 eP Pn 05 44 08.1 -2.5
ZIIG eS Sn 05 44 48.0 -2.0
MOIG Morelia 3.80 69 Pn Pn 05 44 17.3 +0.8
AAIG Aguscalientes 4.35 33 eP Pn 05 44 23.3 -0.7
AAIG iS Sn 05 45 14.6 +0.7
ZAIG Zacatecas 4.95 26 Pn 05 44 35.9 +3.7
TLIG Tlapa 6.12 96 Pn 05 44 49.5 +1.2
LPIG La Paz 7.61 320 LR LR 05 47 17.9
comp=Z,236nm,19.0s,baz=174,slow=32
CMIG Matias Romero 9.67 96 Pn Pn 05 45 37.9 +1.0
0.4nm,0.3s,baz=272,slow=9.5,SNR=5.8
0.8nm,0.3s
TX31 Lajitas Ar. Si 11.02 6 Pn 05 45 58.0 +2.7
TXAR Lajitas Array 11.02 6 Pn Pn 05 45 57.7 +2.3
0.1nm,0.3s,baz=188,slow=14,SNR=13
TXAR LR LR 05 50 22.9
comp=Z,151nm,20.0s,baz=174,slow=38
1.6nm,0.8s
TXAR Lajitas Array 11.02 6 Pn Pn 05 45 58.1 +2.8
VHRN Van Horn 12.40 360 Pn Pn 05 46 18.6 +4.2
SGCY Sterling City 13.96 14 Pn 05 46 37.3 +1.7
BRDY Brady 13.98 22 Pn 05 46 39.0 +3.3
APG El Apazote 14.27 101 LR LR 05 51 44.8
comp=Z,8.8nm,19.7s,baz=320,slow=35
128A Castleberry Fa 14.40 8 Pn 05 46 42.8 +1.2
129A Stewart Farms, 14.51 10 P P 05 46 50.0 +0.6
POST Post 15.00 11 P 05 46 53.4 -1.5
ABTX Abilene, Hawle 15.01 18 P 05 46 53.5 -1.4
SN07 Snyder 07 15.14 13 P P 05 46 56.3 -0.1
APMT Aspermont 15.55 15 Pn 05 46 59.1 +2.3
APMT IAmb IAmb 05 47 06.6
comp=Z,7.6nm,0.6s
PLPT Palo Pinto 15.61 21 Pn 05 46 58.8 +1.3
PLPT IAmb IAmb 05 47 08.3
comp=Z,12nm,0.8s
Y22A Socorro 15.65 354 Pn 05 46 59.1 +0.8
DKNS Dickens 15.69 13 P 05 47 01.5 -1.1
MSTX Muleshoe 15.70 7 Pn 05 46 57.6 -1.3
MSTX IAmb IAmb 05 47 04.8
comp=Z,22nm,1.3s
FW06 Azle 16.02 23 Pn P 05 47 05.1 -1.1
FW06 IAmb IAmb 05 47 12.9
comp=Z,15nm,0.9s
WTFS Witchita Falls 16.43 19 IAmb IAmb 05 47 11.3
comp=Z,12nm,0.9s
ANMO Albuquerque 16.60 356 Pn Pn 05 47 10.5 0.0
comp=Z,0.1nm,0.3s,baz=170,slow=7.5,SNR=6.3
ANMO LR LR 05 53 25.6
comp=Z,81nm,20.0s,baz=152,slow=36
comp=Z,1.5nm,0.8s
ANMO Albuquerque 16.60 356 Pn 05 47 11.8 +1.3
AMTX Amarillo 16.74 9 Pn 05 47 14.0 +1.8
AMTX IAmb IAmb 05 47 21.5
comp=Z,18nm,0.9s
W35A Tecumseh 18.23 22 IAmb IAmb 05 47 30.7
comp=Z,11nm,0.8s
PFO Pinyon Flats O 18.38 328 LR LR 05 53 05.9
comp=Z,70nm,21.3s,baz=94,slow=32
Z41A Richland Creek 18.43 34 IAmb IAmb 05 47 34.4
comp=Z,16nm,0.9s
CROK Carrier 19.12 17 IAmb IAmb 05 47 42.4
comp=Z,22nm,1.1s
OK048 Pawnee Station 19.35 20 IAmb IAmb 05 47 51.5
comp=Z,12nm,1.0s
OK051 E0350 and S346 19.47 20 IAmb IAmb 05 47 57.3
comp=Z,18nm,1.2s
T35A Sooner Cattle 19.95 20 Pn 05 47 51.9 +0.8
T35A IAmb IAmb 05 47 52.0
comp=Z,20nm,1.3s
PV02 Paradox Valley 20.08 351 IAmb IAmb 05 48 01.7
comp=Z,13nm,1.0s
PV18 Skein Mesa, Pa 20.14 351 P P 05 47 52.9 +1.2
PV18 IAmb IAmb 05 48 02.3
comp=Z,13nm,1.0s
PV15 Paradox Valley 20.18 352 P P 05 47 53.3 +1.2
PV15 IAmb IAmb 05 48 03.2
comp=Z,15nm,1.1s
PV12 Saucer Basin, 20.20 351 IAmb IAmb 05 48 09.2
comp=Z,19nm,1.1s
PV19 Morning Glory 20.22 351 IAmb IAmb 05 48 09.1
comp=Z,11nm,1.1s
PV20 West Nyswonger 20.25 351 IAmb IAmb 05 48 02.8
comp=Z,11nm,1.0s
PV04 Paradox Valley 20.29 351 P P 05 47 54.6 +1.4
PV04 IAmb IAmb 05 48 13.4
comp=Z,8.7nm,1.1s
PV10 Paradox Valley 20.29 351 IAmb IAmb 05 48 06.6
comp=Z,21nm,1.4s
PV23 Carpenter Ridg 20.36 351 P 05 47 54.4 +0.3
PV23 IAmb IAmb 05 48 00.0
comp=Z,12nm,1.0s
JTS Las Juntas de 20.94 110 LR LR 05 54 20.1
comp=Z,31nm,21.4s,baz=300,slow=32
LCAR Lake Charles 21.47 32 P 05 48 07.3 +1.5
LCAR IAmb IAmb 05 48 10.1
comp=Z,8.1nm,0.8s
P17A Butcher Ranch, 21.66 348 P P 05 48 07.8 -0.2
P17A IAmb IAmb 05 48 16.3
comp=Z,7.7nm,0.9s
S39A Bolivar 21.81 25 IAmb IAmb 05 48 13.6
comp=Z,5.7nm,0.9s
NVAR Mina Array Bea 23.17 333 LR LR 05 57 08.5
comp=Z,73nm,18.9s,baz=260,slow=36
PDAR Pinedale Array 24.67 352 P P 05 48 38.0 -0.2
comp=Z,0.6nm,0.8s,baz=174,slow=7.4,SNR=5.5
PDAR LR LR 05 58 48.8
comp=Z,67nm,20.7s,baz=298,slow=38
comp=Z,0.6nm,0.8s
TKL Tuckaleechee C 25.48 43 LR LR 06 01 06.2
comp=Z,33nm,20.7s,baz=264,slow=42
LOHW Long Hollow 25.65 350 IAmb IAmb 05 49 11.9
comp=Z,3.7nm,1.1s
ULM Lac du Bonnet 32.66 11 LR LR 06 03 54.9
comp=Z,100nm,18.9s,baz=184,slow=38
ULM Lac du Bonnet 32.66 11 P 05 49 51.9 +2.8
SADO Sadowa 34.05 34 LR LR 06 04 26.1
comp=Z,70nm,18.6s,baz=244,slow=37
NNA Nana 40.95 135 LR LR 06 04 22.8
comp=Z,345nm,18.2s,baz=174,slow=31
DLBC Dease Lake 44.08 341 P P 05 51 26.0 +1.0
comp=Z,3.7nm,1.0s,baz=140,slow=7.6,SNR=3.2
comp=Z,3.7nm,1.0s
YKA Yellowknife Ar 44.63 354 P P 05 51 27.3 -2.0
comp=Z,0.1nm,0.8s,baz=168,slow=7.4,SNR=4.8
comp=Z,0.1nm,0.8s
FRB Frobisher Bay 51.69 20 LR LR 06 13 56.3
comp=Z,123nm,21.9s,baz=288,slow=36

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
INK	Inuvik	53.11	347	P	P	05 52 32.9	-1.3
	comp=Z,1.9nm,1.0s,baz=139,slow=6.4,SNR=5.2						
	comp=Z,1.9nm,1.0s						
ILAR	Eielson Array	54.18	339	P	P	05 52 41.5	-0.7
	comp=Z,0.6nm,0.9s,baz=152,slow=6.5,SNR=7.7						
	comp=Z,0.6nm,0.9s						
RES	Resolute Bay	56.64	3	LR	LR	06 19 05.6	
	comp=Z,70nm,19.1s,baz=10.0,slow=38						

*BJI **03** 06:00:08.6, 16.70S×74.08W, h48km, Ms5.5/5, Ms7 5.2/5*
*IDC **03** 06:00:10.5±0.7, 16.12S×73.29W, h48km±5km, mb4.4/15, mbtmp4.6/18, MS3.7/33, Error ellipse: s-maj=18.8km s-min=12.2km az=58.0*
*NEIC **03** 06:00:10.0±2.0, 16.30S±0.08×73.41W±0.10, h41km±4km, mb4.9/167, Error ellipse: s-maj=13.6km s-min=10.8km az=71.0*
*VAO **03** 06:00:11.9±0.6, 16.20S×73.17W, h57km±5km, mb4.6, Presumed earthquake*
ISC 03 06:00:10.2±0.4**, 16.23S**±0.05×**73.25W**±0.05**, h47km**±3km**, h47km:pP-P, n309, σ1.11**/232**, mb4.9**/93**, MS3.8**/31**, 3C-1D, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	Chacalluta	3.50	128		Pn	06 01 03.5	+1.3
PB12	IPOC Station P	3.67	131		Pn	06 01 05.4	+0.9
PB18	Visviri	3.86	111		Pn	06 01 12.7	+5.2
PB16	IPOC Station P	4.15	121		Pn	06 01 13.9	+2.4
PB11	IPOC Station P	4.91	136		Pn	06 01 22.4	+0.9
LPAZ	La Paz	4.92	91	P	Pn	06 01 28.6	+6.4
	457nm,0.6s,baz=275,slow=8.7,SNR=560						
LPAZ				S	Sn	06 02 33.1	+15
	344nm,0.8s,baz=176,slow=24,SNR=7.5						
LPAZ				LR	LR	06 03 41.8	
	comp=Z,1µm,21.2s,baz=262,slow=43						
LPAZ	La Paz	4.92	91		Pn	06 01 24.4	+2.2
LPAZ	La Paz	4.92	91	eP	Pn	06 01 22.9	+0.8
LPAZ				eS	Sn	06 02 18.0	-0.2
GO01	Chusmiza	5.16	132		Pn	06 01 27.1	+1.7
TA01	Diego Aracena	5.21	146		Pn	06 01 25.6	0.0
NNA	Nana	5.47	320	P	Pn	06 01 30.7	+1.5
	51nm,0.3s,baz=123,slow=14,SNR=26						
NNA				S	Sn	06 02 38.7	+7.9
	1µm,0.7s,baz=48,slow=23,SNR=6.2						
NNA	Nana	5.47	320		Pn	06 01 30.8	+1.7
PB08	IPOC Station P	5.51	136		Pn	06 01 31.1	+1.0
PB01	IPOC Station P	5.97	144		Pn	06 01 36.3	+0.1
PB02	IPOC Station P	5.98	148		Pn	06 01 36.6	+0.3
PB07	IPOC Station P	6.33	150		Pn	06 01 40.8	-0.4
PB03	IPOC Station P	6.67	151		Pn	06 01 45.6	-0.2
PB09	IPOC Station P	6.71	146		Pn	06 01 43.8	-2.6
PB05	IPOC Station P	7.19	157		Pn	06 01 52.4	-0.5
PB06	IPOC Station P	7.32	152		Pn	06 01 49.4	-5.3
AF01	San Pedro de A	8.22	145		Pn	06 02 09.3	+2.1
PB14	IPOC Station P	8.77	163		Pn	06 02 13.0	-1.8
AC01	Pan de Azucar	10.18	166	Pn	Pn	06 02 30.9	-2.8
ATAH	Atahualpa	10.34	330	P	Pn	06 02 43.6	+7.2
	61nm,0.7s,baz=169,slow=6.8,SNR=18						
ATAH				S	Sn	06 04 41.0	+10
	36nm,0.7s,baz=287,slow=24,SNR=4.0						
AC02	Maricunga	11.23	161		Pn	06 02 49.0	+0.5
AC06	Mina Casimiro	11.40	167		Pn	06 02 49.0	-1.4
SIV	San Ignacio	11.71	91	P	Pn	06 02 56.2	+1.4
	61nm,0.4s,baz=274,slow=15						
SIV				LR	LR	06 08 26.2	
	comp=Z,303nm,18.1s,baz=288,slow=42						
AC05	El Transito	12.85	168		Pn	06 03 04.4	-5.9
VILB	Vilhena	13.05	77		Pn	06 03 13.3	+0.3
VILB	Vilhena	13.05	77	eP	Pn	06 03 13.5	+0.5
VILB				eS	Sn	06 05 36.9	+0.1
MCRA	Macar, Loja	13.50	330	P	Pn	06 03 20.0	+0.8
	24nm,0.6s						
PTLB	Pontes e Lacer	13.61	89		Pn	06 03 20.6	0.0
PTLB	Pontes e Lacer	13.61	89	eP	Pn	06 03 21.7	+1.1
CO03	El Pedregal	14.73	171	P	Pn	06 03 37.6	+1.9
TEFE	Tefe	15.22	35	eP	Pn	06 03 42.2	+0.1
MURT	Porto Murtinho	15.75	112	eP	Pn	06 03 47.4	-1.6
CFA	Coronel Fontan	15.98	164	P	P	06 03 54.3	-0.4
	10nm,0.7s,baz=345,slow=11,SNR=29						
BDQN	Bodoquena, MS	16.22	107	eP	Pn	06 03 53.5	-1.4
SLOR	San Lorenzo -	16.24	341	P	Pn	06 03 56.6	+0.9
PTLC	Puerto Leguiza	16.36	355	P	Pn	06 03 52.7	-4.1
PDRB	Porto dos Gac	16.68	76	eP	Pn	06 04 00.2	-0.6
PDRB				eS	Sn	06 07 05.0	-0.2
SALV	Santo Antonio	16.88	91	eP	Pn	06 04 03.4	+0.1
SGC2	Sao Gabriel da	17.13	22	P	Pn	06 04 02.8	-3.6
	47nm,0.8s						
OTAV	Otavalo	17.14	342		Pn	06 04 05.6	-1.4
OTAV	Otavalo	17.14	342	eP	P	06 04 08.2	+0.1
AQDB	Aquidauana	17.19	107	eP	Pn	06 04 07.4	+0.3
PP1B	Ponte de Pedra	17.64	97	eP	Pn	06 04 12.2	-0.4
CLDB	Colider	17.78	75	eP	P	06 04 14.8	+0.1
GCUF	Volcan Galeras	17.81	347	P	P	06 04 16.4	+0.9
	5µm25nm,0.9s						
FLOC	Florencia	17.85	352	P	P	06 04 16.6	+1.1
	25nm,0.9s						
H03N1	Juan Fernandez	17.89	196	T	T	06 22 35.0	
	baz=18,slow=74,SNR=3421						
H03N2	Juan Fernandez	17.89	196	T	T	06 22 34.9	
	baz=18,slow=74,SNR=3493						
H03N3	Juan Fernandez	17.90	196	T	T	06 22 34.1	
	baz=18,slow=74,SNR=3623						
CPUP	Villa Florida	17.91	127	P	Pn	06 04 15.9	0.0
	2.5nm,0.6s,baz=310,slow=13,SNR=9.1						
CPUP				LR	LR	06 12 35.4	
	comp=Z,105nm,19.6s,baz=294,slow=41						
CPUP	Villa Florida	17.91	127		Pn	06 04 15.5	-0.3
MACA	Manacapuru-AM	17.93	45		Pn	06 04 15.6	-0.6
MACA				IAmb	IAmb	06 04 19.4	
	comp=Z,94nm,0.6s						
MACA	Manacapuru-AM	17.93	45	eP	Pn	06 04 15.3	-0.9
BO01	Tunca	18.19	174		Pn	06 04 19.5	+0.2
MACC	Macarena, Meta	18.26	358	P	Pn	06 04 20.2	-0.1
	comp=Z,30nm,1.0s						
GARC	Garzon, Huila	18.43	353	P	Pn	06 04 22.7	+0.1
	comp=Z,14µmcomp=Z,102nm,0.7s						
AMBA	Amambai (Brazi	18.45	114	eP	Pn	06 04 22.6	+0.1
BBAC	Balboa, Cauca	18.56	347	P	Pn	06 04 25.1	+1.0
	comp=Z,22nm,0.8s						
POPC	Popayan, Colom	18.95	349	P	Pn	06 04 28.9	+0.1
	comp=Z,15nm,0.8s						
URMC	La Uribe, Meta	19.38	357	P	Pn	06 04 33.1	-0.7
	comp=Z,49nm,1.1s						
JAMC	Jamundi, Valle	19.61	350	P	P	06 04 34.8	-0.2
	comp=Z,25nm,0.9s						
PRAC	Prado	19.88	355	P	Pn	06 04 39.9	+0.2
VILC	Villavicencio,	20.21	359	P	Pn	06 04 43.1	-0.6
	comp=Z,590nmcomp=Z,61nm,0.9s						
YOTC	Yotoco, Valle	20.31	351	P	Pn	06 04 44.2	-0.7
	comp=Z,20nm,0.8s						
TRCB	Terra Rica	20.49	112	P	P	06 04 45.2	+0.8
TRCB	Terra Rica	20.49	112	eP	P	06 04 44.7	+0.3
PSAL	Palomas, Salto	20.55	139	eP	P	06 04 46.1	+1.2
ARAG	Araguaiana, MT	20.62	92	eP	P	06 04 46.0	+0.2
CVER	Cruz Verde, Cu	20.63	358	P	P	06 04 46.7	+0.3
CHIC	Chingaza	20.73	359	P	P	06 04 47.3	0.0
	comp=Z,29nm,1.0s						
ITTB	Itaituba	20.86	57	eP	P	06 04 48.4	+0.1
ROSC	El Rosal	20.96	357	P	Pn	06 04 53.0	+0.1
	comp=Z,27nm,0.6s,baz=24,slow=22,SNR=17						
ROSC				LR	LR	06 12 43.8	
	comp=Z,178nm,19.4s,baz=236,slow=36						
ROSC	El Rosal	20.96	357		Pn	06 04 53.1	+0.3
ROSC				IAmb	IAmb	06 04 56.8	
	comp=Z,29nm,0.6s						
ROSC	El Rosal	20.96	357	P	Pn	06 04 52.7	-0.1
PLMC	San Jos del P	21.21	352	P	P	06 04 52.7	+0.5
	comp=Z,28nm,1.1s						
GUY2C	Guyana, Caldas	21.41	354	P	P	06 04 57.1	+2.3
PTGB	Pitanga	21.55	117	eP	P	06 04 56.5	+0.6
SNDB	Serra Nova Dou	21.71	82	eP	P	06 04 57.4	-0.1
SPBC	San Pablo de B	21.75	358	P	P	06 04 57.7	-0.3
	comp=Z,23nm,0.9s						
RUSC	La Rusia	21.98	0	P	P	06 05 00.3	-0.5
	comp=Z,55nm,1.0s						
LDASE	Londrina, Braz	22.00	112	eP	P	06 05 00.5	0.0
ITRB	Iturama	22.05	102	eP	P	06 05 01.5	+0.4
CBOC	Ciudad Bolivar	22.12	353	P	P	06 05 02.0	0.0
	comp=Z,47nm,1.3s						
BOAV	Boa Vista	22.38	35		P	06 05 04.9	+0.3
BOAV	Boa Vista	22.38	35	P	P	06 05 04.3	-0.3
BOAV	Boa Vista	22.38	35	eP	P	06 05 04.7	+0.1
ITAB	Concordia	22.44	123		P	06 05 05.2	0.0
ITAB				IAmb	IAmb	06 05 07.7	
	comp=Z,37nm,0.8s						
ITAB	Concordia	22.44	123	eP	P	06 05 05.8	+0.6
BARC	Barichara	22.67	0	P	P	06 05 05.8	-2.2
	comp=Z,17nm,0.5s						
CPSB	Cacapava Do Su	22.98	131	eP	P	06 05 10.8	0.0
DBBC	Dabeiba	23.28	353	P	P	06 05 15.8	+1.8
GO06	Curarrehue	23.32	177		P	06 05 13.5	-0.8
FRTB	Fartura	23.37	111	eP	P	06 05 14.6	-0.2
PAMC	Pamplona, Colo	23.42	1	P	P	06 05 14.9	-0.9
	comp=Z,128nmcomp=Z,16nm,1.1s						
PLTB	Pedras Altas	23.63	134	P	P	06 05 17.3	+0.1
PLTB	Pedras Altas	23.63	134	eP	P	06 05 17.6	+0.4
BB19B	Bebedouro	23.91	105	eP	P	06 05 20.2	+0.3
TRQA	Tornquist	23.91	158		P	06 05 19.3	-0.4
UREC	San Jos de Ur	23.93	354	P	P	06 05 20.0	-0.1
	comp=Z,23nm,1.0s						
LR05	Currie	23.94	178		P	06 05 19.8	-0.1
LR05				IAmb	IAmb	06 05 44.9	
	comp=Z,68nm,1.6s						
IPMB	Ipameri, GO	23.99	98	eP	P	06 05 20.5	-0.3
APAC	Apartado, Choc	24.20	352	P	P	06 05 23.6	+1.1
	comp=Z,37nm,0.9s						
BDFB	Brasilia	24.27	92	P	P	06 05 23.6	+0.3
	comp=Z,17nm,0.7s,baz=269,slow=12,SNR=21						
BDFB				LR	LR	06 15 37.1	
	comp=Z,150nm,19.4s,baz=239,slow=38						
	comp=Z,17nm,0.7s						
BDFB	Brasilia	24.27	92		P	06 05 23.8	+0.4
OCAC	Ocana	24.31	360	P	P	06 05 21.5	-2.2
CNLB	Canela	24.36	126	eP	P	06 05 25.1	+1.1
PLCA	Paso Flores	24.53	175	P	P	06 05 25.9	+0.5
	comp=Z,6.9nm,0.8s,baz=343,slow=9.0,SNR=24						
PLCA				PcP	PcP	06 09 03.6	+0.8
	comp=Z,2.1nm,0.6s,baz=4.5,slow=2.6,SNR=6.7						
PLCA				LR	LR	06 13 25.9	
	comp=Z,107nm,20.3s,baz=5.0,slow=32						
	comp=Z,6.9nm,0.8s						
PLCA	Paso Flores	24.53	175		P	06 05 25.2	-0.2
PLCA	Paso Flores	24.53	175	eP	P	06 05 26.1	+0.7
RCLB	Rio Claro- Sao	25.02	108	eP	P	06 05 30.8	+0.7
MAJ01	Sao Joao Batis	25.05	120	eP	P	06 05 30.9	+0.7
SDV	Santo Domingo	25.09	6	LR	LR	06 16 24.9	
	comp=Z,182nm,18.5s,baz=202,slow=39						
SDV	Santo Domingo	25.09	6		P	06 05 30.5	-0.3
SDV	Santo Domingo	25.09	6	P	P	06 05 29.6	-1.2
	comp=Z,15nm,0.9s						
SDV	Santo Domingo	25.09	6	eP	P	06 05 30.8	0.0
SPB	Sao Paulo	25.33	111	eP	P	06 05 32.1	-0.7
PMNB	Patos De Minas	25.69	99	eP	P	06 05 37.3	+1.1
ARGC	Ariguani, Magd	25.94	358	P	P	06 05 38.1	-0.2
SJCC	San Jacinto, C	26.02	356	P	P	06 05 41.4	+2.2
SMTB	Santa Maria do	26.08	77	eP	P	06 05 40.2	+0.5
PARB	Paraibuna	26.91	110	eP	P	06 05 46.5	-0.7
SDBA	SAO DESIDERIO	27.72	86	eP	P	06 05 54.7	+0.2
JANB	Januaria	27.89	92	eP	P	06 05 56.4	+0.4
DIAM	Diamantina, MG	28.31	99	eP	P	06 06 00.9	+1.0
JTS	Las Juntas de	28.78	336	LR	LR	06 17 49.7	
	comp=Z,88nm,19.2s,baz=164,slow=37						
MDP	Montagnes des	29.41	46	LR	LR	06 18 49.2	
	comp=Z,368nm,18.9s,baz=200,slow=38						
BSFB	Barra de Sao F	30.99	100	eP	P	06 06 23.9	+0.5
RIB01	Linhares ES	31.42	101	eP	P	06 06 27.1	0.0
GUA01	Guaratinga, BA	32.07	95	eP	P	06 06 33.0	0.0
CMC01	Camacan, BA	32.45	93	eP	P	06 06 36.2	-0.1
NBIT	Itapeh - BA	32.58	92	eP	P	06 06 37.2	-0.2
NBPS	Pedro II - PI	33.37	73	eP	P	06 06 44.6	+0.2
OBIP	Obispado Ponce	34.68	11	IAmb	IAmb	06 06 55.9	
	comp=Z,16nm,0.9s						
SJG	San Juan	34.83	12	LR	LR	06 23 09.9	
	comp=Z,71nm,18.6s,baz=185,slow=40						
AOPR	Arecibo Observ	34.95	11	P	P	06 06 56.0	-1.8
RPN	Rapa Nui	35.12	246	LR	LR	06 17 12.8	
	comp=Z,311nm,19.1s,baz=70,slow=29						
RCBR	Riachuelo	38.02	79	LR	LR	06 24 09.8	
	comp=Z,124nm,19.0s,baz=250,slow=38						
RCBR	Riachuelo	38.02	79		P	06 07 25.1	+0.8
RCBR				IAmb	IAmb	06 07 25.7	
	comp=Z,16nm,0.8s						
RCBR	Riachuelo	38.02	79	eP	P	06 07 25.3	+1.0
RCBR	Riachuelo	38.02	79	P	P	06 07 24.9	+0.6
RCBR				pP	pP	06 07 37.5	+0.3
RCBR				sP	sP	06 07 42.2	-0.7
NBPV	Pedro Velho	38.41	80	eP	P	06 07 27.4	-0.1
CMIG	Matias Romero	39.38	326	LR	LR	06 23 49.0	
	comp=Z,63nm,18.7s,baz=182,slow=36						
152A	Waverly Hall	49.84	347	IAmb	IAmb	06 08 58.8	
	comp=Z,15nm,0.9s						
LRAL	Lakeview Retre	50.72	345		P	06 09 04.8	-0.4
LRAL				IAmb	IAmb	06 09 05.8	
	comp=Z,14nm,1.1s						
FPAL	Fort Paine	51.84	347	IAmb	IAmb	06 09 27.5	
	comp=Z,7.8nm,0.8s						
HNDO	Hondo	51.96	331	IAmb	IAmb	06 09 28.9	
	comp=Z,18nm,0.8s						
X48A	Hartselle	52.08	346	IAmb	IAmb	06 09 15.2	
	comp=Z,7.7nm,0.9s						
DRIO	Del Rio	52.51	330	P	P	06 09 18.9	+0.1
DRIO				PcP	PcP	06 10 28.5	-0.4
TKL	Tuckaleechee C	52.55	349	LR	LR	06 33 50.6	
	comp=Z,41nm,18.0s,baz=166,slow=38						
SWET	Sewanee	52.56	347	IAmb	IAmb	06 09 32.2	
	comp=Z,14nm,0.8s						
Z41A	Richland Creek	52.63	339	IAmb	IAmb	06 09 21.1	
	comp=Z,12nm,0.8s						
T59A	Double "B" Far	53.07	356		P	06 09 23.0	+0.3
V48A	Smith Brothers	53.26	346	IAmb	IAmb	06 09 37.4	
	comp=Z,11nm,0.8s						
WHTX	Lake Whitney,	53.26	334	P	P	06 09 23.9	-0.4
WHTX				IAmb	IAmb	06 09 39.0	
	comp=Z,11nm,1.0s						
WVT	Waverly	53.87	345	P	P	06 09 26.4	-2.2
WVT				IAmb	IAmb	06 09 41.1	
	comp=Z,9.9nm,0.9s						
UALR	University of	53.87	341	IAmb	IAmb	06 09 30.6	
	comp=Z,12nm,0.9s						
TXAR	Lajitas Array	53.98	327	P	P	06 09 29.7	0.0
	comp=Z,1.1nm,0.6s,baz=152,slow=8.4,SNR=10						
TXAR				pP	pP	06 09 42.7	-0.6
	comp=Z,1.7nm,0.6s,baz=148,slow=9.0,SNR=8.1						
	comp=Z,1.1nm,0.6s						
TXAR	Lajitas Array	53.98	327	P	P	06 09 29.2	-0.6
TX31	Lajitas Ar. Si	53.98	327	P	P	06 09 29.4	-0.3
LPIG	La Paz	54.00	317	LR	LR	06 27 40.5	
	comp=Z,61nm,18.7s,baz=211,slow=31						
WHAR	Wooly Hollow	54.33	341	IAmb	IAmb	06 09 32.8	
	comp=Z,10nm,1.0s						
PLPT	Palo Pinto	54.34	334	IAmb	IAmb	06 09 46.1	
	comp=Z,20nm,1.6s						
ABTX	Abilene, Hawle	54.75	333	IAmb	IAmb	06 09 49.7	
	comp=Z,12nm,1.0s						
FCAR	Ozark Folk Cen	54.83	341	IAmb	IAmb	06 09 36.0	
	comp=Z,8.9nm,1.1s						
R50A	Paris	55.21	349	IAmb	IAmb	06 09 38.1	
	comp=Z,7.2nm,0.8s						
WTFS	Witchita Falls	55.22	334	IAmb	IAmb	06 09 39.6	
	comp=Z,8.1nm,0.9s						
CGM3	Cape Girardeau	55.44	344	IAmb	IAmb	06 09 53.2	
	comp=Z,9.8nm,0.9s						
WCI	Wyandotte Cave	55.53	348	P	P	06 09 39.5	-1.1
WCI	Wyandotte Cave	55.53	348	P	P	06 09 39.3	-1.4
WCI				x	x	06 09 50.9	
WCI				pP	pP	06 09 52.8	-1.5
APMT	Aspermont	55.55	333	IAmb	IAmb	06 09 54.7	
	comp=Z,37nm,1.8s						
T42A	Van Buren	55.58	343	IAmb	IAmb	06 10 43.2	
	comp=Z,18nm,1.6s						
X34A	Smith Ranch, M	55.69	335	IAmb	IAmb	06 10 19.3	
	comp=Z,11nm,0.9s						
HHAR	Hobbs	55.77	340	IAmb	IAmb	06 09 42.7	
	comp=Z,7.8nm,0.9s						
VHRN	Van Horn	55.83	327	IAmb	IAmb	06 09 56.8	
	comp=Z,12nm,1.5s						
MGMO	Mountain Grove	56.04	342	IAmb	IAmb	06 09 57.9	
	comp=Z,25nm,1.4s						
TUL3	Leonard	56.07	338	IAmb	IAmb	06 09 44.9	
	comp=Z,14nm,0.9s						
FVM	French Village	56.28	344	IAmb	IAmb	06 09 47.7	
	comp=Z,12nm,1.1s						
OK052	Battle Ridge R	56.52	337	IAmb	IAmb	06 10 01.2	
	comp=Z,17nm,1.3s						
OK029	Liberty Lake	56.59	336	IAmb	IAmb	06 09 48.1	
	comp=Z,16nm,1.0s						
S39A	Bolivar	56.86	341	IAmb	IAmb	06 09 50.1	
	comp=Z,12nm,0.8s						
OK048	Pawnee Station	56.95	337	IAmb	IAmb	06 09 51.1	
	comp=Z,12nm,1.0s						
OK051	E0350 and S346	56.98	337	IAmb	IAmb	06 09 51.5	
	comp=Z,14nm,0.9s						
R40A	Maddies Statio	57.09	342	IAmb	IAmb	06 09 51.5	
	comp=Z,14nm,1.3s						
SMWD	Samnorwood	57.12	334	IAmb	IAmb	06 09 53.3	
	comp=Z,9.8nm,0.6s						
T35A	Sooner Cattle	57.23	338	IAmb	IAmb	06 09 53.9	
	comp=Z,16nm,1.0s						
O48B	Farmland	57.27	349	IAmb	IAmb	06 09 53.2	
	comp=Z,12nm,0.9s						
N49A	Columbus Grove	57.75	350	IAmb	IAmb	06 09 56.4	
	comp=Z,14nm,0.9s						
N41A	Harden Midland	58.96	344	IAmb	IAmb	06 10 17.7	
	comp=Z,14nm,0.9s						
KSU1	Kansas State U	59.22	339	IAmb	IAmb	06 10 06.0	
	comp=Z,7.0nm,0.7s						
ANMO	Albuquerque	59.87	329	LR	LR	06 35 04.4	
	comp=Z,49nm,18.3s,baz=124,slow=35						
L40A	Anamosa	60.32	345	IAmb	IAmb	06 10 27.7	
	comp=Z,14nm,1.0s						
DELO	Deloro Mine	60.58	356	IAmb	IAmb	06 10 16.3	
	comp=Z,9.4nm,0.7s						
T25A	Trinidad	60.66	332	IAmb	IAmb	06 10 52.0	
	comp=Z,12nm,1.5s						
SADO	Sadowa	60.94	355	LR	LR	06 40 22.7	
	comp=Z,38nm,18.8s,baz=214,slow=40						
I40A	Norwalk	61.90	346	IAmb	IAmb	06 10 24.0	
	comp=Z,6.4nm,0.6s						
ECSD	EROS Data Cent	63.39	341	IAmb	IAmb	06 10 48.5	
	comp=Z,12nm,0.9s						
SPMN	Marine on St.	63.69	345	IAmb	IAmb	06 10 50.4	
	comp=Z,16nm,0.9s						
LDAQ	Lac Daran	63.92	2		P	06 10 38.3	0.0
BELA	Belgrano 2	64.53	172	P	P	06 10 43.0	+1.2
BELA				IAmb	IAmb	06 10 43.4	
	comp=Z,6.0nm,0.8s						
HAYD	Hayden	64.70	332	IAmb	IAmb	06 12 28.0	
	comp=Z,5.6nm,0.4s						
SZCU	Shurtz Canyon	65.34	326	IAmb	IAmb	06 10 44.7	
	comp=Z,5.9nm,0.7s						
ICQ	Pointe Anglais	65.67	4	P	P	06 10 49.8	+0.3
VNA3	Neumayer Olymp	66.36	162	⇑P	P	06 10 54.6	+0.9
	comp=Z,17nm,0.9s						
BSUT	Blindstream Ca	66.36	330	IAmb	IAmb	06 11 31.1	
	comp=Z,14nm,1.7s						
VNA2	Neumayer--Watz	66.96	161	⇓P	P	06 10 57.4	-0.2
	comp=Z,9.9nm,0.5s,baz=284,slow=7.8						
AGMN	Agassiz Nation	67.33	344	IAmb	IAmb	06 11 00.3	
	comp=Z,10nm,0.7s						
PDAR	Pinedale Array	67.53	332	P	P	06 11 01.4	-0.4
	comp=Z,1.0nm,0.8s,baz=123,slow=5.5,SNR=7.0						
PDAR				pP	pP	06 11 13.7	-2.1
	comp=Z,1.3nm,1.0s,baz=116,slow=6.8,SNR=4.6						
PDAR				LR	LR	06 41 39.4	
	comp=Z,36nm,19.7s,baz=18,slow=37						
	comp=Z,1.0nm,0.8s						
HWUT	Hardware Ranch	67.57	330	IAmb	IAmb	06 11 04.3	
	comp=Z,25nm,1.9s						
EPLO	Experimental L	68.06	346		P	06 11 04.0	-0.8
SNAA	Sanae	68.57	161	⇑P	P	06 11 08.7	+0.8
	comp=Z,481nm,0.6s						
SNAA	Sanae	68.57	161	P	P	06 11 08.6	+0.8
	comp=Z,19nm,0.6s,baz=275,slow=6.9,SNR=22						
	comp=Z,19nm,0.6s						
SNAA	Sanae	68.57	161		P	06 11 07.4	-0.5
NVAR	Mina Array Bea	68.83	323	P	P	06 11 09.0	-1.0
	comp=Z,1.0nm,0.8s,baz=174,slow=7.7,SNR=5.7						
	comp=Z,1.0nm,0.8s						
ULM	Lac du Bonnet	69.12	345	P	P	06 11 09.9	-1.4
	comp=Z,6.9nm,0.5s,baz=151,slow=6.0,SNR=19						
ULM				LR	LR	06 43 18.7	
	comp=Z,63nm,18.6s,baz=7.0,slow=38						
	comp=Z,6.9nm,0.5s						
ULM	Lac du Bonnet	69.12	345		P	06 11 10.3	-1.1
ULM				IAmb	IAmb	06 11 10.7	
	comp=Z,9.7nm,0.7s						
YNE	Yellowstone No	69.50	333	IAmb	IAmb	06 11 15.2	
	comp=Z,12nm,0.9s						
TROLL	Troll, Antarti	70.29	161	⇑P	P	06 11 19.5	+1.0
PAHR	Pah Rah Range	70.31	324	IAmb	IAmb	06 11 20.9	
	comp=Z,6.0nm,0.8s						
SCHQ	Schefferville	70.99	4	P	P	06 11 21.2	-1.5
	comp=Z,7.0nm,0.8s,baz=197,slow=6.2,SNR=17						
	comp=Z,7.0nm,0.8s						
SCHQ	Schefferville	70.99	4	IAmb	IAmb	06 11 23.4	
	comp=Z,12nm,1.1s						
DBIC	Dimbokro	71.38	77	P	P	06 11 25.6	-0.3
	comp=Z,25nm,0.7s,baz=263,slow=5.3,SNR=23						
DBIC				LR	LR	06 41 58.2	
	comp=Z,125nm,18.2s,baz=293,slow=35						
	comp=Z,25nm,0.7s						
DBIC	Dimbokro	71.38	77		P	06 11 25.8	-0.1
DBIC	Dimbokro	71.38	77	P	P	06 11 25.7	-0.3
DBIC				pP	pP	06 11 39.2	-0.5
ORV	Oroville	71.43	323	IAmb	IAmb	06 11 41.3	
	comp=Z,12nm,1.2s						
BMO	Blue Mountains	72.79	329	IAmb	IAmb	06 12 55.8	
	comp=Z,17nm,1.9s						
F10A	Beach Ranch, E	73.55	330	IAmb	IAmb	06 13 39.4	
	comp=Z,31nm,1.9s						
QSPA	South Pole Qui	73.93	180	P	P	06 11 41.3	+0.9
	comp=Z,6.9nm,0.5s,baz=166,slow=0.9,SNR=20						
	comp=Z,6.9nm,0.5s						
QSPA	South Pole Qui	73.93	180		P	06 11 39.6	-0.7
QSPA				IAmb	IAmb	06 11 41.8	
	comp=Z,8.7nm,0.7s						
QSPA	South Pole Qui	73.93	180	P	P	06 11 41.3	+0.9
QSPA				pP	pP	06 11 54.5	+0.6
QSPA				PcP	PcP	06 11 56.1	+0.5
FFC	Flin Flon	74.78	343	P	P	06 11 44.3	-0.8
FFC				PcP	PcP	06 11 58.1	-0.9
NEW	Newport	75.16	331	LR	LR	06 47 04.5	
	comp=Z,59nm,18.4s,baz=250,slow=38						
ACRG	Accra	75.42	80	P	P	06 11 49.5	-0.2
FCC	Fort Churchill	76.65	349		P	06 11 55.4	-0.3
FCC				IAmb	IAmb	06 11 56.1	
	comp=Z,20nm,1.4s						
TORD	Torodi Ar. Bea	79.62	73	P	P	06 12 13.2	0.0
	comp=Z,38nm,0.8s,baz=249,slow=7.5,SNR=177						
TORD				LR	LR	06 47 22.8	
	comp=Z,89nm,18.8s,baz=271,slow=36						
	comp=Z,38nm,0.8s						
TORD	Torodi Ar. Bea	79.62	73	P	P	06 12 13.6	+0.4
TORD				IAmb	IAmb	06 12 14.1	
	comp=Z,18nm,0.8s						
RAR	Rarotonga	81.12	250	LR	LR	06 39 26.7	
	comp=Z,60nm,21.2s,baz=191,slow=29						
MDT	Midelt	81.68	52	LR	LR	06 46 22.0	
	comp=Z,45nm,21.3s,baz=273,slow=34						
WIN	Windhoek	84.23	112	P	P	06 12 38.1	+0.5
WIN				IAmb	IAmb	06 12 39.6	
	comp=Z,14nm,1.1s						
PAB	San Pablo	84.77	46	P	P	06 12 40.5	+0.8
SUR	Sutherland	84.81	122	LR	LR	06 48 57.8	
	comp=Z,34nm,18.5s,baz=208,slow=34						
YKAW1	Yellowknife Wh	84.86	342	IAmb	IAmb	06 12 53.6	
	comp=Z,7.7nm,1.1s						
YKA	Yellowknife Ar	84.90	342	P	P	06 12 39.2	-0.5
	comp=Z,3.5nm,0.7s,baz=138,slow=4.3,SNR=73						
YKA				pP	pP	06 12 53.5	-0.5
	comp=Z,3.3nm,0.9s,baz=141,slow=4.1,SNR=12						
	comp=Z,3.5nm,0.7s						
YKA	Yellowknife Ar	84.90	342	P	P	06 12 39.4	-0.3
YKAW3	Yellowknife Wh	84.96	342	IAmb	IAmb	06 12 40.5	
	comp=Z,7.1nm,0.7s						
ESDC	Sonseca Array	85.09	46	P	P	06 12 42.3	+1.0
	comp=Z,11nm,0.9s,baz=254,slow=5.3,SNR=37						
ESDC				pP	pP	06 12 56.8	+1.1
	comp=Z,3.6nm,0.7s,baz=253,slow=5.0,SNR=5.7						
ESDC				LR	LR	06 49 18.3	
	comp=Z,44nm,18.4s,baz=262,slow=35						
	comp=Z,11nm,0.9s						
ESDC	Sonseca Array	85.09	46	P	P	06 12 42.4	+1.0
ESDC				IAmb	IAmb	06 12 43.7	
	comp=Z,11nm,1.0s						
TSUM	Tsumeb	85.55	109	LR	LR	06 49 40.6	
	comp=Z,31nm,18.3s,baz=331,slow=35						
TSUM	Tsumeb	85.55	109		P	06 12 44.9	+0.8
TSUM				IAmb	IAmb	06 12 47.6	
	comp=Z,13nm,1.1s						
TSUM	Tsumeb	85.55	109	P	P	06 12 45.0	+0.8
ILON	Igloolik, Nuna	85.59	357	IAmb	IAmb	06 12 43.3	
	comp=Z,6.6nm,0.8s						
TAM	Tamanrasset	86.24	65	P	P	06 12 49.9	+2.4
TAM				x	x	06 13 05.8	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CCD	**Concordia, Ant**	**88.28**	**184**	P	**P**	**06 12 57.7**	**+1.0**
CCD				pP	**pP**	**06 13 11.2**	**+0.7**
POIN	**Pond Inlet**	**88.77**	**359**	IAmb	IAmb	06 12 59.8	
	comp=Z,7.7nm,0.9s						
BOSA	**Boshof**	**89.58**	**120**	P	**P**	**06 13 03.2**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=274,slow=3.2,SNR=5.2						
BOSA				LR	LR	06 50 34.4	
	comp=Z,50nm,18.8s,baz=200,slow=34						
	comp=Z,1.9nm,0.6s						
BORG	**Borgarnes**	**89.81**	**20**	LR	LR	06 53 25.1	
	comp=Z,33nm,18.5s,baz=132,slow=36						
LBTB	**Lobatse**	**90.99**	**116**	LR	LR	06 52 56.3	
	comp=Z,29nm,18.4s,baz=222,slow=35						
SUMG	**Summit**	**91.56**	**10**		**P**	**06 13 12.3**	**+0.5**
SUMG	**Summit**	**91.56**	**10**	*i* P	**P**	**06 13 12.8**	**+1.0**
SUMG				*i* S	**pP**	**06 13 25.4**	**-0.7**
KEST	**Kesra**	**93.48**	**54**	LR	LR	06 54 48.9	
	comp=Z,43nm,20.3s,baz=303,slow=35						
A36M	**Sachs Harbour**	**94.58**	**346**		**P**	**06 13 24.5**	**-0.8**
A36M				IAmb	IAmb	06 13 25.5	
	comp=Z,6.7nm,0.8s						
LSZ	**Lusaka**	**96.39**	**108**	LR	LR	06 54 32.8	
	comp=Z,62nm,21.5s,baz=158,slow=34						
DAVOX	**Davos/Dischmat**	**97.05**	**43**	LR	LR	06 55 10.6	
	comp=Z,42nm,19.2s,baz=261,slow=34						
ILAR	**Eielson Array**	**97.75**	**335**	P	**P**	**06 13 38.4**	**-1.5**
	comp=Z,0.2nm,0.6s,baz=134,slow=2.6,SNR=5.5						
	comp=Z,0.2nm,0.6s						
KBZ	**Khabaz**	**119.88**	**49**	PKP	**PKiKP**	**06 18 56.1**	**+0.5**
	comp=Z,2.9nm,0.8s,baz=245,slow=2.0,SNR=8.6						
STKA	**Stephens Creek**	**121.65**	**215**	PKP	**PKPdf**	**06 18 59.2**	**-0.2**
	comp=Z,1.8nm,0.7s,baz=315,slow=2.9,SNR=3.4						
H11N3	**WAKE ISLAND Hy**	**122.92**	**283**	T	T	08 34 12.8	
	baz=99,slow=74,SNR=11						
H11N2	**WAKE ISLAND Hy**	**122.93**	**283**	T	T	08 34 15.1	
	baz=99,slow=74,SNR=7.9						
H11N1	**WAKE ISLAND Hy**	**122.93**	**283**	T	T	08 34 12.2	
	baz=99,slow=74,SNR=4.9						
H11S2	**WAKE ISLAND Hy**	**122.95**	**282**	T	T	08 34 23.7	
	baz=99,slow=75,SNR=58						
H11S1	**WAKE ISLAND Hy**	**122.96**	**282**	T	T	08 34 20.3	
	baz=99,slow=75,SNR=55						
H11S3	**WAKE ISLAND Hy**	**122.97**	**282**	T	T	08 34 16.9	
	baz=99,slow=75,SNR=50						
SEY	**Seymchan**	**123.66**	**337**	PKP	**PKPdf**	**06 19 02.0**	**-0.2**
	comp=Z,2.8nm,0.7s,baz=87,slow=5.7,SNR=11						
AB31	**Akbulak array**	**129.84**	**38**		**PKiKP**	**06 19 15.6**	**+0.4**
ABKAR	**Akbulak array**	**129.84**	**38**		**PKiKP**	**06 19 15.1**	**-0.1**
ASAR	**Alice Springs**	**132.29**	**214**	PKP	**PKPdf**	**06 19 19.4**	**-0.6**
	comp=Z,2.7nm,0.7s,baz=128,slow=1.9,SNR=31						
BVAR	**Borovoye Array**	**133.52**	**30**	PKP	**PKiKP**	**06 19 22.0**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=299,slow=3.1,SNR=6.0						
WRA	**Warramunga Arr**	**134.98**	**218**	PKhKP	PKPpre	06 19 19.3	
	comp=Z,0.2nm,0.4s,baz=164,slow=1.7,SNR=5.9						
WRA				PKP	**PKPdf**	**06 19 24.9**	**-0.2**
	comp=Z,5.6nm,0.7s,baz=146,slow=1.9,SNR=34						
WRA	**Warramunga Arr**	**134.98**	**218**		**PKPdf**	**06 19 24.7**	**-0.4**
ZALV	**Zalesovo Beam**	**138.66**	**20**	PKP	**PKPdf**	**06 19 29.3**	**-1.5**
	comp=Z,4.7nm,0.7s,baz=297,slow=2.5,SNR=20						
ZALV	**Zalesovo Beam**	**138.66**	**20**		**PKPdf**	**06 19 29.9**	**-0.8**
KURK	**Kurchatov**	**138.85**	**27**		**PKPdf**	**06 19 31.1**	**-0.1**
KURBB	**Kurchatov Arra**	**138.88**	**27**	PKP	**PKPdf**	**06 19 31.1**	**-0.1**
	comp=Z,1.8nm,0.7s,baz=314,slow=2.4,SNR=8.7						
KLR	**Kul'dur**	**141.30**	**334**	PKP	**PKPdf**	**06 19 36.1**	**+0.3**
	comp=Z,1.4nm,0.6s,baz=94,slow=3.1,SNR=4.8						
MKAR	**Makanchi Array**	**143.38**	**28**	PKP	PKPbc	06 19 36.8	0.0
	comp=Z,2.2nm,0.8s,baz=321,slow=3.7,SNR=15						
MKAR	**Makanchi Array**	**143.38**	**28**		PKPbc	06 19 36.7	-0.1
NRN	**Naryn**	**143.50**	**40**		**PKPdf**	**06 19 39.7**	**-0.6**
KDJ	**Kajisay**	**143.82**	**38**		**PKPdf**	**06 19 39.6**	**-1.1**
KSH2	**Kashi**	**144.46**	**44**	PKPbc	**PKPdf**	**06 19 42.1**	**+0.2**
KSH2				pPKP	pPKPdf	06 19 54.3	-2.3
USRK	**Ussuriysk Ar.**	**144.88**	**328**	PKP	**PKPab**	**06 19 40.5**	**-0.8**
	comp=Z,7.9nm,0.7s,baz=94,slow=4.9,SNR=9.3						
NIL	**Nilore**	**145.23**	**54**		**PKPdf**	**06 19 43.5**	**+0.2**
MJAR	**Matsushiro Arr**	**145.54**	**312**	PKPbc	**PKPdf**	**06 19 42.8**	**-0.8**
	comp=Z,4.1nm,0.6s,baz=95,slow=3.3,SNR=9.2						
MJAR	**Matsushiro Arr**	**145.54**	**312**		**PKPdf**	**06 19 43.1**	**-0.6**
BNX	**BinXian**	**145.87**	**334**	PKPbc	**PKPdf**	**06 19 43.9**	**0.0**
WMQ	**Urumqi**	**148.09**	**27**	*e*PKPbc	**PKPdf**	**06 19 47.5**	**-0.3**
ULN	**Ulaanbaatar**	**148.45**	**360**		**PKiKP**	**06 19 52.6**	**-0.8**
SONM	**Songino Array**	**148.48**	**0**	PKPbc	**PKPbc**	**06 19 52.4**	**+0.5**
	comp=Z,12nm,0.6s,baz=334,slow=1.8,SNR=93						
XLT	**XiLinHaoTe**	**151.30**	**346**	*e*PKPbc	**PKPbc**	**06 19 59.0**	**+0.1**
XLT				sPKP	sPKPdf	06 20 13.6	+0.7
XLT				LR	LR		
	comp=N,26nm,7.2s						
XLT				LR	LR		
	comp=E,230nm,7.0s						
XLT				LR	LR		
	comp=Z,360nm,10.9s						
KSRS	**Korea Array**	**151.77**	**323**	PKP	**PKPdf**	**06 19 54.6**	**+1.0**
	comp=Z,1.7nm,0.8s,baz=202,slow=0.7,SNR=4.2						
KSRS				PKPbc	**PKiKP**	**06 20 00.8**	**+0.4**
	comp=Z,9.6nm,0.8s,baz=354,slow=2.0,SNR=18						
KSAR	**Wonju Array Be**	**151.80**	**323**		**PKPbc**	**06 19 60.0**	**-0.1**
HHC	**Hu-ho-hao-te**	**155.11**	**351**	*e*PKP	**PKPdf**	**06 19 59.2**	**+0.7**
GTA2	**Gaotai**	**156.03**	**13**	*e*PKP	**PKPdf**	**06 20 01.0**	**+1.2**
GTA2				pPKP	pPKPdf	06 20 10.2	-4.4
GTA2				PKPab	**PKPab**	**06 20 24.5**	**-2.6**
NJ2	**Nanjing**	**160.78**	**327**	*e*PKP	**PKPdf**	**06 20 04.6**	**-1.0**
XAN	**Xi'an**	**162.16**	**354**	PKP	**PKPdf**	**06 20 07.7**	**+0.7**
XAN				L	L		
	comp=Z,690nm,22.0s						
XAN				L	L		
	comp=Z,940nm,22.0s						
XAN				L	L		
	comp=Z,520nm,15.1s						
PZH	**PanZhiHua**	**168.76**	**24**	PKP	**PKPdf**	**06 20 11.6**	**-1.2**
CMAR	**Chiang Mai Arr**	**172.22**	**72**	PKP	**PKPdf**	**06 20 14.2**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=122,slow=0.9,SNR=7.2						
CMAR				PKPab	**PKPab**	**06 21 39.1**	**+0.3**
	comp=Z,1.4nm,0.3s,baz=290,slow=6.5,SNR=6.0						

SOME ***03*** *06:02:31.5, 39.°23N×75.°38E, h5km*
NNC ***03*** *06:02:34.8±3.7, 39.°41N×75.°29E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=29.8km s-min=15.3km az=140.0*
KRNET ***03*** *06:02:42.3±0.1, 39.°70N×75.°01E, h18km, mb3.0*
ISC 03 06:02:30.8±4.1**, 39.°1N**±0.°2×**75.°28E**±0.°09**, h7**km±17km**, n16, σ1.°57**/28**, 8C-10D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**1.67**	**305**	⇑*e*P	**Pg**	**06 03 05.1**	**+2.3**
SFK				⇑*e*S	**Sn**	**06 03 21.8**	**-0.6**
JNKS	**Jany-Kuch**	**2.01**	**8**	⇓*e*P	**Pg**	**06 03 09.6**	**+0.3**
JNKS				⇓*e*S	**Sn**	**06 03 29.4**	**-1.4**
SALK	**Salom-Alik**	**2.14**	**329**	⇓*e*P	**Pb**	**06 03 10.3**	**+0.4**
SALK				⇓*e*S	**Sn**	**06 03 30.8**	**-3.1**
NRN	**Naryn**	**2.44**	**13**	⇑*e*P	**Pg**	**06 03 17.1**	**-0.4**
NRN				⇑*e*S	**Sn**	**06 03 42.5**	**+1.1**
ARSB	**Arslanbob**	**2.86**	**323**	⇓*e*P	**Pb**	**06 03 22.5**	**+0.2**
ARSB				⇓*e*S	**Sn**	**06 03 51.7**	**-0.1**
ARLS	**Aral**	**2.89**	**346**	⇓*e*P	**Pb**	**06 03 22.1**	**-0.7**
ARLS				⇓*e*S	**Sn**	**06 03 51.2**	**-1.3**
UCH	**Uchtor**	**3.22**	**350**	⇓*e*P	**Pb**	**06 03 27.1**	**-1.4**
UCH				⇓*e*S	**Sn**	**06 03 59.7**	**-1.2**
BOOM	**Boomskoye usch**	**3.46**	**8**	⇑*e*P	**Pb**	**06 03 31.3**	**-1.2**
BOOM				⇑*e*S	**Sn**	**06 04 07.1**	**+0.5**
MRKS	**Merke**	**4.00**	**338**	*e*P	**Pb**	**06 03 42.0**	**+0.4**
	2.1nm,0.6s						
MRKS				*e*S	**Sb**	**06 04 32.7**	**+2.6**
	4.0nm,0.8s						
KST	**Kastek**	**4.01**	**7**	Pg	**Pb**	**06 03 42.0**	**+0.2**
	6.3nm,0.3s						
KST				Lg	Lg	06 04 32.7	
	12nm,1.1s						
KST	**Kastek**	**4.01**	**7**	*e*P	**Pb**	**06 03 42.0**	**+0.2**
	6.3nm,0.3s						
KST				*e*S	**Sb**	**06 04 32.7**	**+2.1**
	12nm,1.1s						
DGS	**Degeres**	**4.20**	**5**	Pg	**Pb**	**06 03 44.2**	**-0.8**
	6.0nm,0.4s						
DGS				Lg	Lg	06 04 36.6	
	7.0nm,0.9s						
DGS	**Degeres**	**4.20**	**5**	*e*P	**Pb**	**06 03 44.2**	**-0.8**
	6.0nm,0.4s						
DGS				*e*S	**Sb**	**06 04 36.6**	**+0.8**
	7.0nm,0.9s						
KRBS	**Karabastau**	**4.64**	**4**	Pg	**Pb**	**06 03 52.6**	**+0.1**
	0.4nm,0.1s						
KRBS				Lg	Lg	06 04 51.2	
	4.5nm,0.8s						
KRBS	**Karabastau**	**4.64**	**4**	*e*P	**Pb**	**06 03 52.6**	**+0.1**
	0.4nm,0.1s						
KRBS				*e*S	**Sb**	**06 04 51.2**	**+2.5**
	4.5nm,0.8s						
KK31	**Karatay Array**	**5.41**	**320**	⇑Pg	**Pg**	**06 04 10.7**	**-3.7**
	0.5nm,0.4s,baz=134,slow=16,SNR=3.9						
KK31				⇑Lg	Lg	06 05 16.2	
	0.6nm,0.3s,baz=135,slow=32,SNR=4.0						

NEIC ***03*** *06:08:38.7±2.0, 21.°26S±0.°06×67.°24W±0.°09, h175km±9km, mb4.4/9, Error ellipse: s-maj=12.2km s-min=7.8km az=78.0*
IDC ***03*** *06:08:39.1±1.8, 21.°19S×67.°13W, h182km±16km, mb3.5/4, mbtmp3.9/10, Error ellipse: s-maj=23.1km s-min=17.1km az=83.0*
SCB ***03*** *06:08:39.6±1.1, 21.°23S×67.°35W, h174km±11km, ML4.0/3, Error ellipse: s-maj=3.3km s-min=2.7km az=0.0*
ISC 03 06:08:37.8±0.7**, 21.°28S**±0.°04×**67.°31W**±0.°05**, h188**km±7km**, n89, σ1.°53**/100**, mb4.3**/5**, 1C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**1.56**	**89**	Pg	**Pn**	**06 09 13.7**	**+2.2**
AF01	**San Pedro de A**	**1.85**	**206**	Pn	**Pn**	**06 09 16.2**	**+2.1**
PB09	**IPOC Station P**	**1.87**	**254**	Pn	Pn	06 09 08.3	-5.9
PB09	**IPOC Station P**	**1.87**	**254**	*e*P	**Pn**	**06 09 16.7**	**+2.4**
PB09				*e*S	**S**	**06 09 44.2**	**+1.7**
YJA	**Yavi**	**1.89**	**118**	*e*P	**Pn**	**06 09 17.6**	**+2.8**
YJA	**Yavi**	**1.89**	**118**	P	**Pn**	**06 09 17.1**	**+2.3**
PB01	**IPOC Station P**	**2.05**	**276**	Pn	**Pn**	**06 09 17.5**	**+1.5**
PB01	**IPOC Station P**	**2.05**	**276**	*e*P	**Pn**	**06 09 17.6**	**+1.6**
PB01				*e*S	**S**	**06 09 45.7**	**+0.1**
PB01				IAML		06 09 48.1	
	comp=E,534nm,0.2s						
PB01	**IPOC Station P**	**2.05**	**276**	P	**Pn**	**06 09 17.1**	**+1.1**
PB08	**IPOC Station P**	**2.06**	**303**		**Pn**	**06 09 17.6**	**+1.1**
PB08	**IPOC Station P**	**2.06**	**303**	*e*P	**Pn**	**06 09 18.1**	**+1.5**
PB08				*e*S	**S**	**06 09 46.7**	**+0.2**
GO01	**Chusmiza**	**2.39**	**312**	Pn	**Pn**	**06 09 21.2**	**+1.1**
GO01	**Chusmiza**	**2.39**	**312**	P	**Pn**	**06 09 21.3**	**+1.1**
PB03	**IPOC Station P**	**2.40**	**251**	Pn	**Pn**	**06 09 21.5**	**+1.5**
PB03	**IPOC Station P**	**2.40**	**251**	*e*P	**Pn**	**06 09 21.7**	**+1.7**
PB03				*e*S	**S**	**06 09 52.8**	**+0.1**
PB03				IAML		06 09 53.8	
	comp=E,1µm,0.3s						
PB02	**IPOC Station P**	**2.41**	**269**	Pn	**Pn**	**06 09 21.6**	**+1.6**
PB02	**IPOC Station P**	**2.41**	**269**	*e*P	**Pn**	**06 09 21.6**	**+1.6**
PB02				*e*S	**S**	**06 09 52.2**	**-0.7**
PB02				IAML		06 09 54.7	
	comp=E,946nm,0.2s						
PB02	**IPOC Station P**	**2.41**	**269**	P	**Pn**	**06 09 21.3**	**+1.2**
PB02				S	**S**	**06 09 52.6**	**-0.3**
PB02				IAML		06 09 59.6	
	comp=E,613nm,0.4s						
AOVT	**TarijaAcel**	**2.44**	**96**	P	**Pn**	**06 09 22.4**	**+1.9**
PB07	**IPOC Station P**	**2.44**	**259**	Pn	**Pn**	**06 09 21.8**	**+1.3**
PB07	**IPOC Station P**	**2.44**	**259**	*e*P	**Pn**	**06 09 22.2**	**+1.8**
PB07				*e*S	**S**	**06 09 53.2**	**-0.4**
PB07				IAML		06 09 54.1	
	comp=N,960nm,0.3s						
PB06	**IPOC Station P**	**2.53**	**236**		**Pn**	**06 09 23.0**	**+1.5**
PB06	**IPOC Station P**	**2.53**	**236**	*e*P	**Pn**	**06 09 23.1**	**+1.6**
PB06				*e*S	**S**	**06 09 56.5**	**+1.0**
PB06				IAML		06 09 58.3	
	comp=E,841nm,0.6s						
PB06	**IPOC Station P**	**2.53**	**236**	P	**Pn**	**06 09 23.1**	**+1.6**
PB11	**IPOC Station P**	**2.67**	**304**	Pn	**Pn**	**06 09 23.7**	**+0.6**
PB11	**IPOC Station P**	**2.67**	**304**	*e*P	**Pn**	**06 09 23.6**	**+0.6**
PB11				*e*S	**S**	**06 09 56.6**	**-1.7**
PB11				IAML		06 09 58.4	
	comp=E,740nm,0.4s						
PB11	**IPOC Station P**	**2.67**	**304**	P	**Pn**	**06 09 23.9**	**+0.8**
PB11				S	**S**	**06 09 56.5**	**-1.7**
PB11				IAML		06 09 58.3	
	comp=E,437nm,0.3s						
SOEO	**Opoqueri**	**2.76**	**349**	P	**Pn**	**06 09 25.5**	**+1.0**
TA01	**Diego Aracena**	**2.78**	**284**	Pn	**Pn**	**06 09 24.6**	**+0.4**
SALTA		**3.06**	**163**	⇑*e*P	**Pn**	**06 09 32.0**	**+3.9**
PB05	**IPOC Station P**	**3.11**	**239**		**Pn**	**06 09 29.6**	**+1.4**
PB05	**IPOC Station P**	**3.11**	**239**	*e*P	**Pn**	**06 09 29.9**	**+1.7**
PB05				*e*S	**S**	**06 10 07.2**	**-0.4**
PB05				IAML		06 10 09.6	
	comp=E,354nm,0.3s						
SOET	**ToroToro**	**3.45**	**24**	P	**Pn**	**06 09 33.3**	**+0.6**
PB16	**IPOC Station P**	**3.59**	**324**	Pn	**Pn**	**06 09 35.7**	**+1.1**
PB16	**IPOC Station P**	**3.59**	**324**	P	**Pn**	**06 09 36.0**	**+1.4**
AOEA	**Aiquile**	**3.65**	**33**	P	**Pn**	**06 09 35.8**	**+0.7**
AOEA				S	**S**	**06 10 19.5**	**-0.4**
AOEA				IAML		06 10 21.8	
	comp=E,170nm,0.8s						
SLA	**San Lorenzo**	**3.81**	**154**	*e*P	**Pn**	**06 09 40.2**	**+3.3**
PB18	**Visviri**	**4.20**	**330**		**Pn**	**06 09 44.2**	**+1.9**
BBOJ	**La Paz, Jacaqu**	**4.36**	**349**	P	**Pn**	**06 09 45.8**	**+1.5**
SOEJ	**Jacaque**	**4.36**	**349**	P	**Pn**	**06 09 45.5**	**+1.2**
PB14	**IPOC Station P**	**4.38**	**220**		**Pn**	**06 09 45.7**	**+1.4**
PB14	**IPOC Station P**	**4.38**	**220**	P	**Pn**	**06 09 46.0**	**+1.7**
GO02	**Mina Guanaco**	**4.40**	**208**		**Pn**	**06 09 46.2**	**+1.7**
GO02	**Mina Guanaco**	**4.40**	**208**	P	**Pn**	**06 09 46.5**	**+2.0**
BBOE	**La Paz, Chanca**	**4.49**	**352**	P	**Pn**	**06 09 47.1**	**+1.1**
BBOD	**La Paz, Gloria**	**4.78**	**345**	P	**Pn**	**06 09 50.6**	**+1.0**
LPAZ	**La Paz**	**5.03**	**351**	P	**Pn**	**06 09 53.9**	**+1.0**
	comp=E,24nm,0.4s,baz=147,slow=2.1,SNR=100						
LPAZ				S	**S**	**06 10 50.4**	**-1.5**
	comp=E,6.9nm,0.6s,baz=28,slow=18,SNR=1.2						
LPAZ	**La Paz**	**5.03**	**351**		**Pn**	**06 09 53.6**	**+0.7**
LPAZ	**La Paz**	**5.03**	**351**	P	**Pn**	**06 09 53.9**	**+1.0**
BBOB	**La Paz, Bander**	**5.17**	**351**	P	**Pn**	**06 09 55.5**	**+0.8**
AC01	**Pan de Azucar**	**5.71**	**211**		**Pn**	**06 10 01.6**	**+0.6**
AC02	**Maricunga**	**5.78**	**196**		**Pn**	**06 10 04.2**	**+1.8**
SIV	**San Ignacio**	**7.91**	**49**	P	**Pn**	**06 10 28.0**	**-2.1**
	comp=E,28nm,0.5s,baz=274,slow=7.5						
SIV				S		06 11 49.0	
	baz=274,slow=19						
AC05	**El Transito**	**7.99**	**199**		**Pn**	**06 10 30.6**	**-0.4**
LCO	**Las Campanas**	**8.29**	**201**		**Pn**	**06 10 34.1**	**-1.0**
CO01	**Juntas del Tor**	**9.02**	**196**		**Pn**	**06 10 45.3**	**+0.8**
PTLB	**Pontes e Lacer**	**9.69**	**55**	Pn	**Pn**	**06 10 52.3**	**-0.9**
CO03	**El Pedregal**	**9.99**	**197**		**Pn**	**06 10 56.5**	**-0.7**
ZON	**Zonda**	**10.30**	**187**		**Pn**	**06 11 01.7**	**+0.7**
CFA	**Coronel Fontan**	**10.32**	**184**	P	**Pn**	**06 11 02.0**	**+0.7**
	comp=E,1.7nm,0.3s,baz=14,slow=14,SNR=27						
CFA				S	**S**	**06 12 52.1**	**-4.8**
	comp=E,1.1nm,0.3s,baz=130,slow=19,SNR=2.9						
CO02	**Combarbal**	**10.42**	**198**	Pn	**Pn**	**06 11 01.2**	**-1.5**
CPUP	**Villa Florida**	**10.43**	**121**	P	**Pn**	**06 11 03.4**	**+0.7**
	comp=E,2.3nm,0.9s,baz=303,slow=15,SNR=2.9						
CPUP	**Villa Florida**	**10.43**	**121**		**Pn**	**06 11 02.1**	**-0.6**
VILB	**Vilhena**	**10.71**	**40**	Pn	**Pn**	**06 11 06.1**	**-0.4**
CO04	**Los Peladeros**	**11.21**	**196**	Pn	**Pn**	**06 11 12.3**	**-0.8**
MT03	**Universidad Ad**	**12.49**	**192**		**P**	**06 11 31.2**	**-2.5**
MT13	**San Alfonso**	**12.69**	**191**	Pn	**P**	**06 11 34.5**	**-1.4**
BO04	**La Punta**	**12.99**	**192**	Pn	**P**	**06 11 37.0**	**-2.2**
MT01	**Popeta**	**13.01**	**195**		**Pn**	**06 11 36.8**	**+1.1**
BO01	**Tunca**	**13.48**	**194**		**P**	**06 11 42.9**	**-1.6**
BO02	**Sierra Bellavi**	**13.80**	**192**		**P**	**06 11 47.6**	**-0.6**
TRQA	**Tornquist**	**17.34**	**166**	P	**Pn**	**06 12 28.7**	**0.0**
GO06	**Curarrehue**	**18.59**	**190**	P	**Pn**	**06 12 42.4**	**-0.9**
GO06				IAmb	IAmb	06 12 47.4	
	comp=Z,7.5nm,0.8s						
MACA	**Manacapuru-AM**	**19.13**	**21**	P	**P**	**06 12 45.7**	**-1.0**
BDFB	**Brasilia**	**19.14**	**76**	P	**Pn**	**06 12 48.0**	**-2.1**
	comp=Z,1.1nm,0.4s,baz=200,slow=12,SNR=3.3						
BDFB	**Brasilia**	**19.14**	**76**	IAmb	IAmb	06 13 16.5	
	comp=Z,13nm,1.4s						
PLCA	**Paso Flores**	**19.59**	**187**	P	**Pn**	**06 12 56.1**	**+1.0**
	comp=Z,1.1nm,0.9s,baz=4.0,slow=12,SNR=3.0						
PLCA	**Paso Flores**	**19.59**	**187**	P	**Pn**	**06 12 54.4**	**-0.7**
BOAV	**Boa Vista**	**24.45**	**17**	P	**P**	**06 13 39.3**	**-0.2**
BOAV				IAmb	IAmb	06 13 42.4	
	comp=Z,6.4nm,0.8s						
CELP	**Cerrillos**	**39.12**	**1**	P	**P**	**06 15 47.0**	**-0.1**
CELP				IAmb	IAmb	06 15 49.4	
	comp=Z,47nm,1.4s						
PDAR	**Pinedale Array**	**74.68**	**329**	P	**P**	**06 19 58.6**	**+1.8**
	comp=Z,0.2nm,0.6s,baz=123,slow=11,SNR=4.3						
	comp=Z,0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**75.88**	**70**	P	**P**	**06 20 04.1**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=257,slow=4.5,SNR=4.9						
	comp=Z,0.7nm,0.5s						
BOSA	**Boshof**	**82.23**	**118**	P	**P**	**06 20 39.9**	**+1.4**
	comp=Z,5.8nm,1.2s,baz=242,slow=6.0,SNR=3.6						
	comp=Z,5.8nm,1.2s						
BOSA	**Boshof**	**82.23**	**118**	IAmb	IAmb	06 20 57.9	
	comp=Z,9.2nm,1.4s						
YKA	**Yellowknife Ar**	**91.48**	**340**	P	**P**	**06 21 24.1**	**+1.9**
	comp=Z,0.4nm,0.6s,baz=134,slow=3.8,SNR=12						
	comp=Z,0.4nm,0.6s						
ASAR	**Alice Springs**	**130.78**	**206**	PKP	**PKiKP**	**06 27 29.5**	**+1.3**
	comp=Z,0.4nm,0.4s,baz=134,slow=2.1,SNR=5.1						
ZALV	**Zalesovo Beam**	**141.11**	**26**	PKP	**PKiKP**	**06 27 47.9**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=316,slow=6.0,SNR=3.8						
MKAR	**Makanchi Array**	**144.57**	**37**	PKP	**PKiKP**	**06 27 53.1**	**-2.4**
	comp=Z,1.3nm,0.7s,baz=337,slow=2.3,SNR=13						
SONM	**Songino Array**	**153.03**	**9**	PKPbc	**PKiKP**	**06 28 14.7**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=346,slow=0.6,SNR=4.1						

AZER ***03*** *06:14:25.0, 38.°46N×44.°60E, h6km, ml2.4*
ISK ***03*** *06:14:25.7, 38.°38N×44.°59E, h16km, ML2.4/6*
TEH ***03*** *06:14:25.8, 38.°63N×44.°47E, h10km±990km, ML2.6, Presumed earthquake*
ISC 03 06:14:26.4±1.3**, 38.°47N**±0.°03×**44.°57E**±0.°03**, h5**km±12km**, n19, σ1.°93**/30**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ISHB	**Shabestar**	**0.85**	**103**	Pg	**Pn**	**06 14 43.2**	**-2.0**
IMRD	**Marand**	**0.92**	**74**	Pg	**Pn**	**06 14 45.5**	**-0.7**
VANB	**Van**	**0.93**	**278**	Pg	**Pb**	**06 14 44.2**	**-0.9**
VANB				Sg	**Sb**	**06 14 57.7**	**-0.2**
NAX	**Nakhchivan**	**1.01**	**46**	P	**Pn**	**06 14 46.7**	**-0.6**
NAX				S	**Sn**	**06 15 02.0**	**+0.1**
HAKT	**HAKKARI**	**1.14**	**217**	P	**Pn**	**06 14 48.0**	**-1.2**
HAKT				S	**Sn**	**06 15 07.3**	**+1.9**
SBZ	**Shahbuz**	**1.20**	**39**	P	**Pg**	**06 14 50.3**	**+0.8**
SBZ				S	**Sn**	**06 15 07.7**	**+0.9**
ORD	**Ordubad**	**1.21**	**67**	P	**Pg**	**06 14 50.2**	**+0.7**
ORD				S	**Sn**	**06 15 08.4**	**+1.6**
AKDM	**Akdamar-Van**	**1.26**	**264**	Pn	**Pn**	**06 14 48.8**	**-2.0**
AKDM				Sn	**Sg**	**06 15 06.7**	**0.0**
ITBZ	**Tabriz**	**1.26**	**100**	Pg	**Pg**	**06 14 51.5**	**+0.9**
ITBZ				Sg	**Sn**	**06 15 12.5**	**+4.1**
HYR	**Heyderabad**	**1.27**	**10**	P	**Pg**	**06 14 52.2**	**+1.5**
HYR				S	**Sn**	**06 15 12.3**	**+4.0**
IAZR	**Azarshahr**	**1.37**	**125**	Pg	**Pg**	**06 14 56.2**	**+3.6**
CUKT	**Cukurca**	**1.44**	**212**	Pn	**Pn**	**06 14 51.2**	**-2.1**
IGDI	**IGDIR**	**1.45**	**345**	P	**Pg**	**06 14 55.0**	**+0.9**
AGRB	**Hanur-Agry**	**1.65**	**312**	Pn	**Pb**	**06 14 56.1**	**-1.3**
AGRB				Sn	**Sb**	**06 15 17.7**	**-0.9**
GNI	**Garni**	**1.68**	**5**	Pn	**Pb**	**06 14 56.5**	**-1.4**
GDB	**GEDABAY**	**2.43**	**22**	P	**Pb**	**06 15 09.9**	**-0.7**
GDB				S	**Sb**	**06 15 40.5**	**-0.5**
SENK	**Senkaya-Erzuru**	**2.70**	**321**	Pn	**Pn**	**06 15 11.2**	**+0.5**
YRD	**Yardimli**	**2.91**	**80**	P	**Pb**	**06 15 14.8**	**-4.0**
YRD				S	**Sb**	**06 15 54.2**	**-0.7**
LRK	**Lerik**	**2.96**	**86**	P	**Pb**	**06 15 18.8**	**-0.9**

IDC ***03*** *06:20:54.8±2.5, 9.°19S×123.°65E, h125km±28km, mb3.2/1, mbtmp3.6/4, MS3.0/1, Error ellipse: s-maj=105.8km s-min=28.8km az=55.0*
DJA ***03*** *06:20:54.0±0.5, 9°S±3°×12°4E±°, h114km±5km, M4.1/13, mB4.7/3, mb4.4/3, MLv3.9/13, Mw(mB)4.0/3*
ISC 03 06:20:52.4±1.2**, 8.°80S**±0.°09×**123.°82E**±0.°09**, h100**km**, n17, σ1.°69**/20**, Flores region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**1.05**	**155**	P	**Pn**	**06 21 16.6**	**+3.1**
SOEI				S	**Sn**	**06 21 31.4**	**+2.1**
BATI	**Baumata**	**1.41**	**186**	P	**Pn**	**06 21 18.3**	**+0.8**
	657nm,0.3s,baz=14,slow=3.1,SNR=61						
BATI				S	**Sn**	**06 21 35.0**	**-1.6**
	406nm,0.3s,baz=109,slow=23,SNR=36						
BATI	**Baumata**	**1.41**	**186**	P	**Pn**	**06 21 18.0**	**+0.4**
BATI				S	**Sn**	**06 21 36.6**	**0.0**
MMRI	**Maumere**	**1.57**	**276**	P	**Pn**	**06 21 21.2**	**+1.6**
EDFI	**Ende, Flores**	**2.11**	**271**	P	**Pn**	**06 21 28.1**	**+1.6**
EDFI				S	**Sn**	**06 21 52.4**	**-0.1**
WSI	**Waingapu**	**3.58**	**256**	P	**Pn**	**06 21 46.1**	**+0.1**
LBFI	**Labuhan Bajo,**	**3.90**	**274**	P	**Pn**	**06 21 51.4**	**+1.2**
BSSI	**Bau Bau, Buton**	**4.23**	**308**	P	**Pn**	**06 21 52.5**	**-2.2**
WBSI	**Waikabubak, Su**	**4.45**	**259**	P	**Pn**	**06 21 56.9**	**-0.8**
DBNI	**Kabupaten Domp**	**5.45**	**273**	P	**Pn**	**06 22 12.6**	**+1.3**
	0.2nm705nm18nm,0.5s						
PLAI	**Plampang**	**5.97**	**269**	P	**Pn**	**06 22 19.3**	**+0.9**
	1µm51nm,0.5s						
TWSI	**Taliwang, Sumb**	**6.86**	**270**	P	**Pn**	**06 22 30.5**	**+0.1**
FITZ	**Fitzroy Crossi**	**9.41**	**169**	P	**Pn**	**06 23 02.1**	**-3.0**
	2.9nm,0.4s,baz=351,slow=11,SNR=8.5						
FITZ				S	Sn	06 24 37.0	-12
	18nm,0.7s,baz=190,slow=6.8,SNR=13						
WRA	**Warramunga Arr**	**15.04**	**139**	P	**Pn**	**06 24 17.2**	**-2.5**
	0.4nm,0.3s,baz=312,slow=12,SNR=13						
WRA				S	Sn	06 26 53.0	-13
	0.8nm,0.5s,baz=5.5,slow=16,SNR=6.7						
DAV	**Davao City (W)**	**15.86**	**6**	LR	LR	06 31 19.7	
	comp=Z,53nm,19.0s,baz=116,slow=38						
ASAR	**Alice Springs**	**17.65**	**148**	P	**Pn**	**06 24 51.6**	**-0.5**
	0.7nm,0.6s,baz=335,slow=13,SNR=9.5						
ASAR				S	Sn	06 27 56.4	-12
	0.8nm,0.8s,baz=312,slow=20,SNR=4.3						
MKAR	**Makanchi Array**	**66.55**	**330**	P	**P**	**06 31 32.6**	**+0.9**
	0.3nm,0.5s,baz=146,slow=5.8,SNR=4.5						
	0.3nm,0.5s						

MOS ***03*** *06:33:55.1, 41.°56N×47.°92E, h9km, MPVA4.0*
AZER ***03*** *06:33:55.7, 41.°51N×47.°98E, h8km, ml2.8*
DRS ***03*** *06:33:56.7, 41.°61N×47.°91E, h30km*
ISC 03 06:33:56.1±0.8**, 41.°55N**±0.°01×**47.°94E**±0.°02**, h9**km±6km**, n78, σ1.°31**/144**, 3C-2D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSMR	**Kasumkent**	**0.15**	**70**	*e*Pg	**Pg**	**06 33 59.6**	**+0.1**
	3µm,0.1s						
KSMR				*e*Sg	**Sg**	**06 34 01.9**	**+0.1**
	43µm,0.4s						
KSMR	**Kasumkent**	**0.15**	**70**	*e*Pg	**Pg**	**06 33 59.2**	**-0.3**
KSMR				*e*Sg	**Sg**	**06 34 01.9**	**+0.1**
KSMR	**Kasumkent**	**0.15**	**70**	*e*PG	**Pg**	**06 33 59.2**	**-0.3**
AKT	**Akhty**	**0.17**	**245**	*e*Pg	**Pg**	**06 34 00.4**	**+0.6**
	1µm,0.2s						
AKT				*e*Sg	**Sg**	**06 34 03.5**	**+1.1**
	9µm,0.3s						
AKT	**Akhty**	**0.17**	**245**	*i* Pg	**Pg**	**06 34 00.6**	**+0.8**
AKT				*e*Sg	**Sg**	**06 34 03.7**	**+1.4**
AKT	**Akhty**	**0.17**	**245**	*i* PG	**Pg**	**06 34 00.6**	**+0.8**
QSAR	**Qusar**	**0.25**	**98**	P	**Pg**	**06 34 01.4**	**+0.3**
QSAR				S	**Sg**	**06 34 05.3**	**+0.8**
XNQ	**Khinaliq**	**0.41**	**158**	P	**Pb**	**06 34 04.9**	**-0.8**
XNQ				S	**Sb**	**06 34 11.0**	**-1.1**
QUBA	**Quba, Azerbaij**	**0.46**	**115**	P	**Pb**	**06 34 05.7**	**-0.7**
QUBA				S	**Sb**	**06 34 12.7**	**-0.7**
DRN	**Derbent**	**0.56**	**32**	*e*Pg	**Pb**	**06 34 08.0**	**-0.1**
DRN				*e*Sg	**Sb**	**06 34 16.1**	**-0.1**
DRN	**Derbent**	**0.56**	**32**	⇑*i*PG	**Pb**	**06 34 08.5**	**+0.4**
DRN				*e*S	**Sb**	**06 34 17.0**	**+0.8**
DRN				pmax	pmax		
	comp=Z,469nm,0.3s						
QBL	**Gabala**	**0.61**	**187**	P	**Pb**	**06 34 08.5**	**-0.4**
QBL				S	**Sb**	**06 34 17.6**	**-0.1**
SEKA	**Sheki**	**0.65**	**239**	P	**Pb**	**06 34 09.5**	**-0.2**
SEKA				S	**Sb**	**06 34 18.8**	**-0.1**
URKR	**Urkarakh**	**0.65**	**340**	*e*Pg	**Pb**	**06 34 09.6**	**-0.2**
URKR				*e*Sg	**Sb**	**06 34 19.0**	**0.0**
URKR	**Urkarakh**	**0.65**	**340**	*e*PG	**Pb**	**06 34 10.1**	**+0.3**
URKR				*e*S	**Sb**	**06 34 19.6**	**+0.5**
URKR				pmax	pmax		
	comp=Z,137nm,0.3s						
IML	**Ismayilli**	**0.78**	**166**	P	**Pb**	**06 34 12.0**	**+0.1**
IML				S	**Sb**	**06 34 22.9**	**+0.3**
KMKR	**Kumukh**	**0.85**	**313**	*e*Pg	**Pb**	**06 34 13.1**	**-0.1**
KMKR				*e*Sg	**Sb**	**06 34 24.6**	**-0.3**
KMKR	**Kumukh**	**0.85**	**313**	*e*PG	**Pb**	**06 34 13.1**	**-0.1**
KMKR				*e*S	**Sb**	**06 34 24.5**	**-0.3**
SIZA	**Siyzn**	**0.87**	**123**	P	**Pb**	**06 34 13.5**	**+0.1**
SIZA				S	**Sb**	**06 34 25.6**	**+0.4**
PQL	**Pirkuli**	**0.91**	**147**	P	**Pn**	**06 34 14.7**	**-0.5**
PQL				S	**Sn**	**06 34 27.8**	**-0.7**
SGKR	**Sergokala**	**0.93**	**347**	*e*Pg	**Pn**	**06 34 14.4**	**-1.0**
	comp=Z,73nm,0.4s						
SGKR				*e*Sg	**Sn**	**06 34 29.1**	**+0.2**
	comp=Z,305nm,0.5s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SGKR	Sergokala	0.93	347	ePg	Pn	06 34 14.4	-1.0
SGKR				eSg	Sn	06 34 29.1	+0.2
SGKR	Sergokala	0.93	347	ePG	Pn	06 34 14.4	-1.0
SGKR				eS	Sn	06 34 29.0	+0.2
SGKR				pmax	pmax		
	comp=Z,73nm,0.4s						
ZKTA	Zakatala	0.99	275	P	Pn	06 34 15.2	-1.0
ZKTA				S	Sn	06 34 30.3	0.0
ATGJ	Altiaghaj	1.02	132	P	Pn	06 34 16.6	-0.1
ATGJ				S	Sn	06 34 30.7	-0.6
GNBR	Gunib	1.11	319	ePg	Pn	06 34 17.7	-0.1
	comp=Z,81nm,0.6s						
GNBR				eSg	Sn	06 34 33.7	+0.4
	comp=Z,234nm,0.6s						
GNBR	Gunib	1.11	319	ePg	Pn	06 34 17.7	-0.1
GNBR				eSg	Sn	06 34 33.7	+0.4
GNBR	Gunib	1.11	319	ePG	Pn	06 34 17.7	-0.1
GNBR				eS	Sn	06 34 33.7	+0.4
GNBR				pmax	pmax		
	comp=Z,81nm,0.6s						
ARKR	Arakani	1.26	327	ePg	Pg	06 34 20.6	+0.3
	comp=Z,44nm,0.4s						
ARKR				eSg	Sn	06 34 38.9	+1.8
	comp=Z,123nm,0.3s						
ARKR	Arakani	1.26	327	ePG	Pg	06 34 20.5	+0.1
ARKR				eS	Sn	06 34 38.7	+1.6
GBS	Qobustan	1.27	143	P	Pg	06 34 21.4	+1.0
GBS				S	Sn	06 34 41.1	+3.8
ZRD	Zardab	1.29	189	P	Pg	06 34 21.8	+1.0
ZRD				S	Sn	06 34 42.0	+4.5
TLTR	Tlyarata	1.31	296	ePg	Pn	06 34 20.0	-0.6
TLTR				eSg	Sn	06 34 39.2	+0.9
TLTR	Tlyarata	1.31	296	ePG	Pg	06 34 20.8	-0.4
TLTR				eS	Sn	06 34 39.2	+0.9
TLTR				pmax	pmax		
	comp=Z,24nm,0.6s						
XNZR	Khunzakh	1.35	318	ePg	Pg	06 34 22.1	+0.1
XNZR				eSg	Sg	06 34 40.2	+0.6
HNZR	Khunzah	1.35	318	ePG	Pg	06 34 22.1	0.0
BRDA	Brd	1.41	204	Pn	Pg	06 34 25.3	+2.2
BRDA				Sn	Sg	06 34 44.8	+3.4
BUJR	Buynaksk	1.41	334	ePg	Pb	06 34 22.0	-0.7
	comp=Z,80nm,0.3s						
BUJR				eSg	Sg	06 34 41.9	+0.3
	comp=Z,243nm,0.4s						
BUJR	Buynaksk	1.41	334	ePg	Pg	06 34 25.7	+2.5
BUJR				eSg	Sg	06 34 44.5	+2.9
BUJR	Buynaksk	1.41	334	ePG	Pg	06 34 25.7	+2.5
BUJR				eS	Sg	06 34 44.5	+2.9
UNCR	Uncukul	1.44	324	ePg	Pg	06 34 23.4	-0.4
UNCR				eSg	Sg	06 34 43.7	+1.3
UNCR	Uncukul	1.44	324	ePG	Pg	06 34 23.3	-0.4
UNCR				eS	Sg	06 34 43.7	+1.3
UNCR				pmax	pmax		
	comp=Z,48nm,0.4s						
MAK	Makhachkala	1.44	347	⇑iPG	Pb	06 34 22.4	-0.8
MAK				eS	Sg	06 34 43.2	+0.6
MAK				pmax	pmax		
	comp=Z,112nm,0.3s						
MAK				smax	smax		
	comp=E,341nm,0.4s						
MAK				smax	smax		
	comp=E,422nm,0.5s						
KRNR	Karanay	1.49	329	ePg	Pg	06 34 24.7	+0.1
	comp=E,22nm,0.3s						
KRNR				eSg	Sg	06 34 45.8	+1.8
	comp=E,64nm,0.6s						
KRNR	Karanay	1.49	329	ePg	Pg	06 34 24.7	+0.1
KRNR				eSg	Sg	06 34 44.6	+0.7
KRNR	Karanay	1.49	329	ePN	Pg	06 34 24.7	+0.1
KRNR				eS	Sg	06 34 45.7	+1.8
KRNR				pmax	pmax		
	comp=Z,22nm,0.3s						
GANJ	Ganja	1.52	234	Pn	Pg	06 34 26.9	+1.7
GANJ				Sn	Sg	06 34 49.4	+4.4
AGDM	Agdam	1.57	204	Pn	Pg	06 34 26.1	-0.2
AGDM				Sn	Sg	06 34 49.5	+2.9
DBC	Dubki	1.68	331	ePg	Pb	06 34 26.6	-0.6
	comp=Z,15nm,0.4s						
DBC				eSg	Sg	06 34 50.4	+0.2
	comp=Z,96nm,0.5s						
DBC	Dubki	1.68	331	ePg	Pg	06 34 27.8	-0.6
DBC				eSg	Sg	06 34 51.7	+1.5
DBC	Dubki	1.68	331	ePN	Pb	06 34 26.6	-0.6
DBC				pmax	pmax		
	comp=Z,15nm,0.4s						
BTLR	Botlikh	1.69	312	ePg	Pb	06 34 27.2	-0.3
	comp=Z,19nm,0.4s						
BTLR				eSg	Sg	06 34 50.5	0.0
	comp=Z,56nm,0.4s						
BTLR	Botlikh	1.69	312	ePg	Pb	06 34 27.2	-0.3
BTLR				eSg	Sg	06 34 50.5	0.0
BTLR	Botlikh	1.69	312	ePN	Pg	06 34 27.8	-0.8
BTLR				pmax	pmax		
	comp=Z,41nm,1.3s						
SAAT	Saatly	1.73	167	Sn	Sg	06 34 53.7	+2.0
ALIB	&Aumlli-Bayram	1.79	153	Pn	Pg	06 34 30.8	+0.4
ALIB				Sn	Sg	06 35 02.8	+9.3
DLMR	Dylym	1.80	328	ePg	Pb	06 34 28.8	-0.5
	comp=Z,52nm,0.3s						
DLMR				eSg	Sg	06 34 53.9	0.0
	comp=Z,428nm,0.4s						
DLMR	Dylym	1.80	328	ePg	Pg	06 34 29.9	-0.7
DLMR				eSg	Sg	06 34 55.1	+1.1
DLMR	Dylym	1.80	328	ePN	Pb	06 34 28.7	-0.5
DLMR				pmax	pmax		
	comp=Z,52nm,0.3s						
GDB	GEDABAY	1.84	244	Pn	Pb	06 34 30.0	-0.2
GDB				Sn	Sg	06 34 54.9	-0.6
DVE	Vedeno	1.94	317	ePN	Pb	06 34 31.6	-0.1
DVE				pmax	pmax		
	comp=Z,33nm,0.5s						
QZX	Qazax, Azerbai	1.99	257	Pn	Pg	06 34 33.0	-1.4
QZX				Sn	Sg	06 34 60.0	-0.2
QRD	Qoradiz	2.14	193	Pn	Pb	06 34 34.2	-0.9
QRD				Sn	Sg	06 35 04.9	+0.1
GROC	Groznyy	2.29	317	ePn	Pg	06 34 38.9	-1.1
GROC				eSn	Sg	06 35 09.3	-0.3
GROC	Groznyy	2.29	317	ePN	Pg	06 34 38.9	-1.1
GROC				eS	Sg	06 35 09.3	-0.3
GLBA	Clilabad	2.33	171	Pn	Pb	06 34 37.6	-0.8
GLBA				Sn	Sg	06 35 09.7	-1.4
YRD	Yardimli	2.64	175	Pn	Pb	06 34 41.4	-2.3
YRD				Sn	Sb	06 35 15.7	-0.6
GUDG	Gudauri	2.73	291	ePn	Pb	06 34 44.8	-0.5
GUDG				eSn	Sb	06 35 18.1	-0.9
GUDG	Gudauri	2.73	291	ePN	Pb	06 34 44.8	-0.5
GUDG				eS	Sb	06 35 18.1	-0.9
GNI	Garni	2.80	241	ePn	Pb	06 34 43.5	-2.9
GNI				eSn	Sb	06 35 19.9	-0.9
GNI	Garni	2.80	241	ePN	Pb	06 34 43.5	-2.9
GNI				eS	Sb	06 35 19.9	-0.9
SBZ	Shahbuz	2.82	221	Pn	Pb	06 34 44.2	-2.5
SBZ				Sn	Sb	06 35 22.4	+1.1
LRK	Lerik	2.92	174	Pn	Pb	06 34 45.6	-2.8
LRK				Sn	Sb	06 35 23.5	-0.8
ORD	Ordubad	3.01	210	Pn	Pb	06 34 47.7	-2.3
ORD				Sn	Sb	06 35 24.2	-2.7
ASTR	Astara	3.06	167	Pn	Pb	06 34 47.5	-3.2
ASTR				Sn	Sb	06 35 26.0	-2.1
KBZ	Khabaz	4.31	302	⇓iPN	Pn	06 35 02.7	+1.0
PYA1	Pyatigorsk	4.36	307	⇓iPN	Pn	06 35 02.3	-0.2
ARTI	Arti	16.32	21	ceP	Pn	06 37 45.4	0.0

*SJA **03** 06:34:01.5±0.7, 29°.98S×71°.62W, h20km±2km, ML3.4, MW3.5*
*GUC **03** 06:34:04.4±0.8, 30°.03S×71°.55W, h48km±2km, ML3.5*
ISC 03 06:34:04.4±1.4**, 29°.98S**±0°.03×**71°.64W**±0°.05**, h24**km±11km**,**
n39, σ**2°.05**/64**, 2C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.35	81	⇑iP	Pb	06 34 12.9	+0.7
CO05				eS	Sb	06 34 18.8	+1.3
CO05				IAML		06 34 19.4	
	comp=E,13μm,0.2s						
GO04	Tololo Observa	0.76	105	eP	Pb	06 34 18.0	-1.1
GO04				eS	Sb	06 34 28.1	-1.0
GO04	Tololo Observa	0.76	105	eP	Pb	06 34 12.9	-6.2
GO04				IAML		06 34 29.8	
	comp=Z,5μm,0.3s						
CO03	El Pedregal	1.19	136	eP	Pn	06 34 24.0	-1.7
CO03				eS	Sb	06 34 38.1	-3.3
CO03				IAML		06 34 40.4	
	comp=N,946nm,0.2s						
CO03	El Pedregal	1.19	136	eP	Pn	06 34 24.1	-1.7
CO03				eS	Sb	06 34 40.0	-1.5
CO03				IAML		06 34 42.6	
	comp=Z,673nm,0.5s						
LCO	Las Campanas	1.27	41	eP	Pn	06 34 26.3	-0.6
LCO				eS	Sn	06 34 43.0	-0.3
LCO				IAML		06 34 43.4	
	comp=Z,2μm,0.5s						
CO02	Combarbal	1.34	156	eP	Pn	06 34 26.8	-1.0
CO02				eS	Sn	06 34 43.2	-1.8
CO02				IAML		06 34 47.2	
	comp=E,3μm,0.2s						
CO02	Combarbal	1.34	156	eP	Pn	06 34 26.8	-1.0
CO02				eS	Sn	06 34 44.8	-0.3
CO02				IAML		06 34 46.6	
	comp=Z,868nm,0.5s						
CO01	Juntas del Tor	1.34	90	⇓iP	Pn	06 34 27.0	-1.0
CO01				eS	Sn	06 34 43.4	-1.8
CO01	Juntas del Tor	1.34	90	eP	Pn	06 34 26.9	-1.0
CO01				eS	Sn	06 34 43.8	-1.4
CO01				IAML		06 34 45.6	
	comp=Z,265nm,0.2s						
AC05	El Transito	1.65	47	⇓iP	Pn	06 34 32.1	+0.1
AC05				eS	Sn	06 34 52.4	-0.2
AC05				IAML		06 34 53.7	
	comp=E,1μm,0.3s						
AC05	El Transito	1.65	47	eP	Pn	06 34 32.1	+0.1
AC05				eS	Sn	06 34 52.9	+0.4
AC05				IAML		06 34 53.6	
	comp=Z,371nm,0.6s						
AC04	Llanos de Chal	1.83	16	⇑iP	Pn	06 34 33.8	-0.6
AC04				eS	Sb	06 35 01.6	+1.7
AC04				IAML		06 35 05.5	
	comp=N,295nm,0.3s						
AC04	Llanos de Chal	1.83	16	eP	Pn	06 34 33.9	-0.6
AC04				eS	Sn	06 34 54.5	-2.4
AC04				IAML		06 35 05.2	
	comp=Z,136nm,0.4s						
AROD	Rodeo	1.89	96	eP	Pn	06 34 36.6	+1.1
AROD				eS	Sn	06 35 00.7	+1.9
CO04	Los Peladeros	2.14	165	eP	Pn	06 34 38.6	-0.3
CO04				eS	Sn	06 35 03.6	-1.3
CO04				IAML		06 35 11.4	
	comp=E,579nm,0.1s						
ACDV	Cuesta del Vie	2.19	96	eP	Pn	06 34 40.9	+1.3
ACDV				eS	Sb	06 35 09.7	-0.7
ACDV				IAML		06 35 10.3	
	comp=Z,123nm,0.7s						
ACCO	Cerro Coronel	2.31	106	eP	Pn	06 34 43.1	+1.8
ACCO				eS	Sb	06 35 14.8	+0.9
VA06	Catapilco	2.59	174	eP	Pn	06 34 43.7	-1.2
VA06				IAML		06 35 28.0	
	comp=N,387nm,0.3s						
GO03	Copiapo	2.68	28	eP	Pn	06 34 46.1	0.0
GO03				IAML		06 35 29.6	
	comp=E,186nm,0.4s						
GO03	Copiapo	2.68	28	eP	Pn	06 34 46.2	+0.1
GO03				eS	Sn	06 35 18.2	+0.4
GO03				IAML		06 35 28.5	
	comp=Z,209nm,0.5s						
RTLS	Leoncito	2.71	133	eP	Pn	06 34 36.3	-11
RTLS				eS	Sn	06 35 19.1	0.0
RTLS				IAML		06 35 32.3	
	comp=Z,367nm,0.5s						
VA03	San Esteban	2.93	162	eP	Pn	06 34 49.9	+0.3
VA03	San Esteban	2.93	162	eP	Pn	06 34 50.0	+0.3
VA03				eS	Sn	06 35 26.7	+2.5
VA03				IAML		06 35 40.5	
	comp=Z,148nm,0.4s						
ZON	Zonda	2.99	122	eP	Pn	06 34 50.4	-0.1
ZON				eS	Sb	06 35 32.7	-0.5
ROCH	El Roble	3.03	170	eP	Pn	06 34 50.3	-0.9
ROCH				IAML		06 35 43.7	
	comp=N,158nm,0.5s						
RTLL	Cerro Villicun	3.04	117	eP	Pn	06 34 50.6	-0.6
RTLL				eS	Sn	06 35 28.9	+2.0
RTLL				IAML		06 35 46.0	
	comp=Z,187nm,0.5s						
VCA	Vinchina	3.25	68	eP	Pn	06 34 53.2	-0.8
VCA				eS	Sn	06 35 33.2	+1.2
VCA				IAML		06 35 48.2	
	comp=Z,226nm,0.7s						
PEL	Peldehue	3.26	166	eP	Pn	06 34 54.6	+0.5
PEL				eS	Sn	06 35 35.6	+3.4
PEL				IAML		06 36 03.0	
	comp=Z,93nm,0.9s						
MT02	Curacav	3.30	173	eP	Pn	06 34 53.5	-1.2
MT02				eS	Sn	06 35 33.0	-0.1
MT02				IAML		06 35 46.7	
	comp=Z,91nm,0.5s						
CFA	Coronel Fontan	3.35	120	eP	Pn	06 34 35.6	-20
CFA				eP		06 34 56.3	
CFA				eS	Sn	06 35 36.9	+2.5
CFA				IAML		06 35 52.6	
	comp=Z,84nm,0.8s						
MT05	Renca	3.49	167	eP	Pn	06 34 55.6	-1.7
MT05				eS	Sb	06 35 45.6	-1.9
MT05				IAML		06 35 57.1	
	comp=Z,96nm,0.7s						
MT03	Universidad Ad	3.64	165	eP	Pn	06 34 58.5	-0.9
MT03				IAML		06 36 00.1	
	comp=Z,122nm,0.8s						
MT01	Popeta	3.89	175	eS	Sn	06 35 48.8	+1.1
MT01				IAML		06 36 05.0	
	comp=Z,54nm,0.8s						
AC01	Pan de Azucar	3.92	14	eS	Sb	06 36 08.6	+8.5
MT13	San Alfonso	3.93	163	IAML		06 36 12.8	
	comp=Z,44nm,1.1s						
ACLC	CERRO LA CRUZ	4.12	83	IAML		06 36 04.9	
	comp=Z,41nm,0.6s						
BO01	Tunca	4.43	174	eP	Pn	06 35 07.5	-2.7
BO01				eS	Sn	06 35 57.5	-3.5
BO01				IAML		06 36 21.8	
	comp=Z,24nm,0.7s						
BO01				IAML		06 36 21.8	
	comp=Z,24nm,0.7s						
BO02	Sierra Bellavi	4.86	172	eP	Pn	06 35 15.8	-0.3
BO02				eP	Pn	06 35 15.8	-0.3
BO02				eS	Sn	06 36 18.4	+6.8
BO02				eS	Sn	06 36 18.4	+6.8
BO02				eS	Sn	06 36 18.4	+6.8
BO02				IAML		06 36 29.5	
	comp=Z,35nm,0.7s						

*TEH **03** 06:40:00.6, 39°.08N×43°.95E, h10km, ML2.7, Presumed earthquake*
*ISK **03** 06:40:01.3, 39°.15N×43°.88E, h6km, ML2.5/7*
*AFAD **03** 06:40:01.6, 39°.18N×43°.86E, h7km±2km, ML2.5*
ISC 03 06:40:01.5±1.0**, 39°.16N**±0°.02×**43°.90E**±0°.03**, h8**km±9km**,**
n21, σ**1°.03**/35**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VMUR	Van-Muradiye	0.30	237	P	Pg	06 40 07.8	+0.3
VMUR				S	Sg	06 40 12.4	+0.8
VMUR				IAML		06 40 13.0	
	comp=E,1μm,0.4s						
VMUR				IAML		06 40 13.0	
	comp=N,1μm,0.6s						
DYDN	Diyadin	0.42	338	P	Pg	06 40 09.3	-0.4
DYDN				S	Sg	06 40 15.5	+0.3
DYDN				IAML		06 40 16.0	
	comp=E,2μm,0.2s						
DYDN				IAML		06 40 16.0	
	comp=N,1μm,0.2s						
OZAP	Van, Ozalp-Mer	0.50	171	P	Pg	06 40 10.9	-0.3
OZAP				S	Sb	06 40 20.5	+0.3
MAKU	Maku	0.64	72	Pg	Pg	06 40 13.2	-0.7
MAKU				Sg	Sg	06 40 22.7	+0.4
IGDI	IGDIR	0.72	11	P	Pg	06 40 15.2	-0.2
IGDI				S	Sg	06 40 25.6	+0.8
IGDI				IAML		06 40 32.0	
	comp=N,126nm,0.3s						
TVAN	Van	0.73	211	P	Pb	06 40 16.2	-0.4
TVAN				S	Sn	06 40 30.0	+0.1
TVAN				IAML		06 40 37.0	
	comp=E,363nm,0.5s						
AGRB	Hanur-Agry	0.82	301	Pg	Pb	06 40 17.4	-0.6
AGRB				Sg	Sb	06 40 28.7	-0.6
KOTA	Agri, Merkez-K	0.84	321	P	Pg	06 40 17.0	-0.5
KOTA				S	Sg	06 40 28.5	+0.1
KOTA				IAML		06 40 30.0	
	comp=N,124nm,0.2s						
KOTA				IAML		06 40 32.0	
	comp=Z,113nm,0.3s						
KOTA				IAML		06 40 32.0	
	comp=E,88nm,0.6s						
DORK	Agr/Tutak/Do	0.90	285	P	Pg	06 40 18.3	-0.4
DORK				S	Sb	06 40 31.5	-0.1
DORK				IAML		06 40 40.0	
	comp=N,78nm,0.4s						
ADCV	BITLIS_Adilcev	0.98	249	P	Pb	06 40 20.8	0.0
ADCV				S	Sn	06 40 35.3	-0.6
ADCV				IAML		06 40 37.0	
	comp=N,100nm,0.3s						
ADCV				IAML		06 40 37.0	
	comp=E,84nm,0.2s						
MLAZ	Malazgirt-MUS	1.05	270	Pg	Pb	06 40 21.7	-0.3
GEVA	Gevas	1.07	218	P	Pb	06 40 21.8	-0.5
GEVA				S	Sn	06 40 37.3	-0.8
GEVA				IAML		06 40 44.0	
	comp=N,56nm,0.5s						
AKDM	Akdamar-Van	1.09	221	Pn	Pb	06 40 22.3	-0.5
GNI	Garni	1.19	33	Pn	Pg	06 40 24.1	-0.2
GNI				Sn	Sn	06 40 41.9	+0.9
DIGO	Kars	1.32	342	P	Pg	06 40 27.0	+0.2
DIGO				S	Sn	06 40 48.5	+4.0
DIGO				IAML		06 40 51.0	
	comp=N,275nm,0.8s						
DIGO				IAML		06 40 53.0	
	comp=E,258nm,0.7s						
IMRD	Marand	1.48	107	Pg	Pn	06 40 28.6	0.0
GURO	Guroymak-BITLI	1.57	248	Pn	Pn	06 40 29.5	-0.4
HAKT	HAKKARI	1.60	185	P	Pb	06 40 31.1	-0.4
HAKT				S	Sg	06 40 55.6	+2.6
ISHB	Shabestar	1.60	122	Pg	Pn	06 40 29.6	-0.8
SENK	Senkaya-Erzuru	1.84	320	Pn	Pb	06 40 34.4	-1.1
CUKT	Cukurca	1.92	187	Pn	Pb	06 40 35.8	-1.0

IDC 03 06:43:05.6±999.0**, 46°.47N**×**49°.56E, h0**km**, Error ellipse: s-maj=1680.0km s-min=170.9km az=54.0, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	6.87	52	I	I	07 23 20.0	
	0.3nm,0.6s,baz=238,slow=315,SNR=4.1						
I46RU	ZALESOVO INFRA	23.57	59	I	I	09 08 22.4	
	baz=266,slow=326,SNR=0.7						
I34MN	SONGINO INFRAS	37.95	67	I	I	10 35 10.0	
	baz=291,slow=337,SNR=1.1						

*IDC **03** 06:50:57.9±0.6, 11°.06N×124°.78E, h0km, mb4.2/25, mbtmp4.2/26, ML4.3/1, MS3.9/45, Error ellipse: s-maj=22.8km s-min=12.9km az=76.0*
*NEIC **03** 06:51:00.2±1.8, 11°.17N±0°.02×124°.83E±0°.10, h10km±1km, mb4.7/67, Error ellipse: s-maj=16.5km s-min=2.8km az=101.0*
*MAN **03** 06:51:01.0, 11°.47N×124°.44E, h9km, MS4.1*
MAN INTENSITY IV - LEYTE & CAPOOCAN LEYTE; ORMOC CITY: NAVAL ALMERIA CABUCGAYAN BILIRAN; . INTENSITY III - CARIGARA LEYTE; BORONGAN CITY EASTERN SAMAR . INTENSITY II - TANAUAN BARUGO PALO JARO TOLOSA DAGAMI SAN MIGUEL LAPAZ DULAG BABATNGON LEYTE; TACLOBAN CITY; LAWAAN AND MAYDOLONG EASTERN SAMAR; DANAO CITY CEBU; . INTENSITY I - CEBU CITY.
*GCMT **03** 06:51:04.7±0.3, 11°.33N±0°.02×124°.52E±0°.02, h25km±1km, MW4.9/95, Moment Tensor Solution. s26,c28; s95,c138; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.16±.12; $M_{\theta\theta}$2.47±.09; $M_{\phi\phi}$-2.31±.10; $M_{r\theta}$-1.05±.19; $M_{\theta\phi}$-0.70±.07; $M_{\phi r}$-0.76±.20; Best double couple: $M_0$2.81000×10^{16} NP1:ϕ_s323.00000°,δ62.00000°,λ-2.00000°. NP2: ϕ_s54.00000°,δ88.00000°,λ-152.00000°. Principal axes: T 2.8720, Plg18.0000°, Azm185.0000°; N -0.1230, Plg62.0000°, Azm57.0000°; P -2.7480, Plg20.0000°, Azm282.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 03 06:51:01.0±1.2**, 11°.23N**±0°.04×**124°.72E**±0°.04**, h15**km±8km**,**
n160, σ**1°.87**/129**, mb4.6**/68**, MS3.9**/49**, 1C-1D, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	1.17	219	eP	Pn	06 51 11.0	-12
LLP	Lapu-Lapu	1.17	219	eP	Pn	06 51 21.7	-1.1
LLP				i S	Sb	06 51 38.4	+0.6
MMPH	Masbate	1.55	317	i P	Pn	06 51 26.1	-1.9
MMPH				i S	Sn	06 51 45.8	-2.1
TBP	Tagbilaran	1.74	209	eP	Pn	06 51 22.5	-8.3
TBP				eS	Sn	06 51 34.2	-19
RCP	Roxas	1.96	280	i P	Pn	06 51 33.3	-0.4
RCP				i S	Sn	06 51 57.7	-0.4
SNPH	Sibulan	2.37	218	i P	Pn	06 51 40.5	+1.1
SNPH				i S	Sg	06 52 17.7	+0.4
IBAJ	Ibajay, Aklan	2.56	283	eP	Pn	06 51 30.8	-11
IBAJ				i S	Sn	06 51 43.5	-29
TSSP	Tandag City	2.62	146	eP	Pg	06 51 50.6	-0.6
TSSP				eS	Sg	06 52 28.4	+3.3
CGP	Cagayan de Oro	2.76	180	i P	Pn	06 51 44.8	+0.2
CGP				i S	Sg	06 52 31.6	+2.0
JAP	San Jose, Anti	2.76	260	eP	Pg	06 51 53.5	-0.4
DCPH	Dipolog City	2.95	207	i P	Pn	06 51 50.0	+2.7
DCPH				i S	Sb	06 52 27.9	-1.3
BIPH	Bislig	3.43	152	eP	Pb	06 52 03.7	+2.1
BIPH				eS	Sg	06 52 48.9	-2.5
CTBH	Cotabato--PC H	4.01	187	i P	Pb	06 52 11.7	+0.3
DMPH	Davao City--Mi	4.19	169	eP	Pn	06 52 09.1	+4.7
DMPH				i S	Sn	06 52 30.4	-23
KCP	Kidapawan	4.21	175	eP	Pb	06 52 11.9	-2.9
KCP				eS	Sg	06 53 24.1	+7.8
DAV	Davao City (W)	4.22	168	Pn	Pn	06 52 03.1	-1.7
TGY	Tagaytay City	4.66	308	LR	LR	06 54 10.4	
	comp=Z,2μm,18.8s,baz=216,slow=40						
TGY	Tagaytay City	4.66	308	eP	Pg	06 52 28.2	-2.1
DDMP	Don Marcelino,	5.19	169	eP	Pb	06 52 32.2	+0.8
MYLDM	Lahad Datu	8.60	226		Pn	06 53 03.8	-1.1
I39PW	PALAU INFRASON	10.37	110	I	I	07 53 20.0	
	baz=298,slow=235,SNR=0.9						
TOLI2	Tolitoli	10.78	202	Pn	Pn	06 53 33.2	-1.8
YOJ	Yonaguni jima	13.26	353	Pn	Pn	06 54 08.7	-0.1
SBUM	Sibu	15.16	236		Pn	06 54 34.1	-0.6
JOW	Kunigami	15.88	12	Pn	Pn	06 54 44.3	+0.2
	2.1nm,0.3s,baz=188,slow=14,SNR=6.0						
JOW				LR	LR	07 00 47.0	
	comp=Z,273nm,19.2s,baz=114,slow=37						
	5.9nm,0.3s						
JOW	Kunigami	15.88	12	Pn	Pn	06 54 42.8	-1.3
JOW				IAmb	IAmb	06 54 52.9	
	comp=Z,111nm,1.4s						
QIZ	Qiongzhong	16.31	300	P	P	06 54 54.3	+1.8
QIZ				S	Sn	06 57 55.3	+4.8
QIZ				LR	LR		
	comp=N,350nm,11.7s						
QIZ				LR	LR		
	comp=E,320nm,11.7s						
QIZ				LR	LR		
	comp=Z,620nm,17.2s						
KAPI	Kappang	16.88	197	LR	LR	07 02 01.7	
	comp=Z,247nm,20.7s,baz=26,slow=40						
GUMO	Guam	19.82	81	LR	LR	07 01 30.3	
	comp=Z,309nm,21.4s,baz=232,slow=32						
SOEI	Soe	20.85	181	P	P	06 55 39.5	-3.1
BATI	Baumata	21.32	183	LR	LR	07 05 21.1	
	comp=Z,324nm,20.0s,baz=347,slow=41						
NJ2	Nanjing	21.42	346	eP	P	06 55 51.7	+3.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				LR	LR		
	comp=N,410nm,15.2s						
NJ2				LR	LR		
	comp=E,490nm,19.4s						
NJ2				LR	LR		
	comp=Z,620nm,17.2s						
WHN	Wuhan	21.50	335	P	P	06 55 57.4	+8.1
JNU	Nakatsue	22.51	14	LR	LR	07 04 28.4	

comp=Z,145nm,21.6s,baz=198,slow=36
JCJ Chichijima 22.79 44 LR LR 07 03 22.0
comp=Z,188nm,21.8s,baz=106,slow=33
ENH Enshi 23.65 325 **P** **06 56 11.0 -0.9**
JMN Monobe 23.92 19 P **P** **06 56 10.8 -3.6**
IPM Ipoh 24.39 256 P **P** **06 56 18.1 -1.0**
IPM IAmb IAmb 06 56 34.5
comp=Z,23nm,0.9s
KULM Kulim 24.52 258 P **P** **06 56 18.6 -1.6**
KULM IAmb IAmb 06 56 36.7
comp=Z,30nm,1.3s
LEM Lembang 24.72 224 LR LR 07 07 17.6
comp=Z,451nm,20.0s,baz=162,slow=40
BBJI Bungbulang 25.16 223 P **P** **06 56 24.2 -1.8**
BBJI IAmb IAmb 06 56 42.7
comp=Z,29nm,1.4s
LYN LuoYang 25.76 336 *e*P **P** **06 56 32.9 +1.7**
LYN S **S** **07 00 58.4 -1.5**
LYN pmax pmax
comp=Z,19nm,0.7s
LYN LR LR
comp=N,580nm,16.7s
LYN LR LR
comp=E,1μm,19.0s
LYN LR LR
comp=Z,460nm,19.9s
JHJ Hachijo jima 2 25.81 30 LR LR 07 05 40.0
comp=Z,121nm,20.5s,baz=274,slow=34
JHJ2 Mitsune 25.82 30 P **P** **06 56 28.2 -3.5**
CMAR Chiang Mai Arr 25.91 289 P **P** **06 56 32.4 -0.4**
comp=Z,0.6nm,0.3s,baz=98,slow=7.6,SNR=10
CMAR LR LR 07 08 19.9
comp=Z,112nm,18.4s,baz=110,slow=40
comp=Z,0.6nm,0.3s
CMAR Chiang Mai Arr 25.91 289 P **P** **06 56 31.5 -1.2**
KSRS Korea Array 26.27 6 P **P** **06 56 35.7 0.0**
comp=Z,1.9nm,0.5s,baz=186,slow=10,SNR=6.6
comp=Z,1.9nm,0.5s
PZH PanZhiHua 26.45 308 P **P** **06 56 42.2 +4.5**
XAN Xi'an 26.91 330 P **P** **06 56 43.2 +1.6**
XAN pP sP 06 56 53.6 +5.5
XAN S **S** **07 01 18.1 0.0**
XAN pmax pmax
comp=Z,16nm,1.0s
XAN LR LR
comp=N,690nm,20.6s
XAN LR LR
comp=E,940nm,21.3s
XAN LR LR
comp=Z,450nm,13.1s
RPSI Rantau Prapat 26.95 254 P **P** **06 56 40.4 -1.7**
RPSI IAmb IAmb 06 57 03.6
comp=Z,19nm,1.3s
HNS HongShan 27.57 343 ⇓P **P** **06 56 48.2 +0.8**
HNS S **S** **07 01 31.8 +3.5**
HNS pmax pmax
comp=Z,8.0nm,1.2s
HNS LR LR
comp=N,330nm,15.0s
HNS LR LR
comp=E,400nm,15.2s
HNS LR LR
comp=Z,410nm,15.5s
MJAR Matsushiro Arr 27.99 24 P **P** **06 56 50.8 -0.6**
comp=Z,0.8nm,0.3s,baz=199,slow=8.0,SNR=4.1
MJAR LR LR 07 07 40.3
comp=Z,155nm,19.1s,baz=210,slow=36
comp=Z,0.8nm,0.3s
MJB9 Matsu-Tunnel 28.00 24 P **P** **06 56 49.4 -1.9**
MJB9 IAmb IAmb 06 57 24.6
comp=Z,20nm,1.4s
COEN Coen 31.00 143 P P 06 57 14.2 -4.0
COEN IAmb IAmb 06 57 38.0
comp=Z,6.8nm,0.8s
LZH Lanzhou 31.13 326 *e*P **P** **06 57 21.7 +2.4**
LZH pP sP 06 57 42.4 +17
LZH pmax pmax
comp=Z,17nm,1.4s
LZH LR LR
comp=N,1μm,16.5s
LZH LR LR
comp=E,890nm,15.2s
LZH LR LR
comp=Z,530nm,15.6s
HHC Hu-ho-hao-te 31.70 341 *e*P **P** **06 57 27.4 +3.2**
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,110nm,5.6s
HHC LR LR
comp=N,190nm,14.5s
HHC LR LR
comp=E,200nm,15.3s
HHC LR LR
comp=Z,180nm,16.2s
WB0 Warramunga Arr 32.24 163 P 06 57 24.9 -4.1
WB0 IAmb IAmb 06 57 43.9
comp=Z,13nm,1.1s
WRA Warramunga Arr 32.39 163 P **P** **06 57 26.5 -3.8**
comp=Z,5.4nm,0.8s,baz=338,slow=11,SNR=24
comp=Z,5.4nm,0.8s
WRA Warramunga Arr 32.39 163 P **P** **06 57 26.8 -3.6**
WR8 Warramunga Arr 32.45 163 P **P** **06 57 27.2 -3.7**
WR8 IAmb IAmb 06 57 39.3
comp=Z,8.2nm,0.8s
USRK Ussuriysk Ar. 33.45 10 P **P** **06 57 39.4 +0.1**
comp=Z,4.6nm,0.7s,baz=206,slow=4.8,SNR=7.3
USRK ScP **ScP** **07 04 06.4 +1.8**
comp=Z,4.4nm,0.6s,baz=152,slow=3.4,SNR=6.0
comp=Z,4.6nm,0.7s
BRDH Bariadhala 33.54 294 LR LR 07 12 34.6
comp=Z,128nm,19.1s,baz=168,slow=38
SHL Shillong 34.14 299 P **P** **06 57 45.7 -0.2**
SHL IAmb IAmb 06 57 57.0
comp=Z,9.2nm,0.9s
BNX BinXian 34.47 3 ⇑P **P** **06 57 49.4 +1.2**
BNX pmax pmax
comp=Z,7.0nm,1.1s
GTA2 Gaotai 35.82 326 *e*P **P** **06 58 02.0 +1.9**
GTA2 pP sP 06 58 16.2 +10
GTA2 pmax pmax
comp=Z,10.0nm,1.3s
GTA2 LR LR
comp=N,750nm,21.3s
GTA2 LR LR
comp=E,650nm,19.7s
GTA2 LR LR
comp=Z,460nm,16.8s
AS31 Alice Springs 35.83 166 **P** **06 57 58.8 -1.4**
ASAR Alice Springs 35.83 166 P **P** **06 57 59.2 -0.9**
comp=Z,4.1nm,0.7s,baz=340,slow=8.4,SNR=30
ASAR PcP **PcP** **07 00 28.0 +0.3**
comp=Z,0.3nm,0.4s,baz=334,slow=3.7,SNR=2.5
comp=Z,4.1nm,0.7s
ASAR Alice Springs 35.83 166 **P** **06 57 58.7 -1.4**
ASAJ Asahikawa 36.22 22 LR LR 07 13 20.3
comp=Z,110nm,19.6s,baz=208,slow=37
LSA Lhasa 36.23 306 P **P** **06 58 04.8 +0.6**
LSA IAmb IAmb 06 58 34.6
comp=Z,23nm,1.4s
LSA Lhasa 36.23 306 P **P** **06 58 00.8 -3.3**
LSA pmax pmax
comp=Z,7.0nm,1.2s
GOMU GeErMu 36.71 318 P **P** **06 58 09.6 +1.6**
GOMU pP pP 06 58 13.5 +0.9
GOMU sP sP 06 58 17.5 +3.0
GOMU pmax pmax
comp=Z,14nm,1.3s
CTA Charters Tower 37.66 146 LR LR 07 14 35.7
comp=Z,221nm,21.9s,baz=352,slow=38
KLR Kul'dur 38.33 7 P **P** **06 58 22.1 +0.9**
comp=Z,1.9nm,0.6s,baz=168,slow=11,SNR=8.2
comp=Z,1.9nm,0.6s
YSS Yuzhno-Sakhali 38.74 20 P **P** **06 58 24.5 0.0**
EVN Everest 39.19 301 **P** **06 58 29.2 -0.2**
EVN IAmb IAmb 06 58 31.9
comp=Z,24nm,1.3s
ULN Ulaanbaatar 39.42 341 P **P** **06 58 31.0 +0.5**
SONM Songino Array 39.60 341 P **P** **06 58 32.6 +0.6**
comp=Z,0.8nm,0.5s,baz=159,slow=9.8,SNR=8.2
comp=Z,0.8nm,0.5s
SONM Songino Array 39.60 341 P **P** **06 58 31.9 -0.1**
MORW Morawa 40.93 192 P **P** **06 58 43.4 +0.4**
MORW IAmb IAmb 06 58 56.1
comp=Z,26nm,1.3s
PALK Pallekele 43.59 269 LR LR 07 19 18.1
comp=Z,68nm,18.6s,baz=92,slow=39

TLY Talaya 43.83 341 LR LR 07 19 44.3
comp=Z,98nm,18.4s,baz=152,slow=39
BBOO Buckleboo 45.11 166 P **P** **06 59 16.8 -0.1**
WMQ Urumqi 45.53 322 *e*P **P** **06 59 22.0 +1.8**
WMQ pmax pmax
comp=Z,17nm,1.1s
WMQ LR LR
comp=N,1μm,20.3s
WMQ LR LR
comp=Z,440nm,19.5s
STKA Stephens Creek 45.81 160 P **P** **06 59 20.2 -2.1**
comp=Z,1.5nm,0.7s,baz=1.5,slow=16,SNR=6.0
STKA LR LR 07 19 52.8
comp=Z,113nm,21.1s,baz=353,slow=38
comp=Z,1.5nm,0.7s
PEA0B Petropavlovsk- 49.42 26 P **P** **06 59 48.6 -1.6**
PETK Petropavlovsk- 49.42 26 P **P** **06 59 52.9 +2.7**
comp=Z,2.4nm,0.7s,baz=249,slow=4.1,SNR=7.8
PETK LR LR 07 17 55.7
comp=Z,79nm,21.9s,baz=207,slow=33
PETK Petropavlovsk- 49.42 26 **P** **06 59 49.0 -1.1**
WUS Wushi 49.77 315 P **P** **06 59 54.2 +0.9**
WUS IAmb IAmb 07 00 19.8
comp=Z,9.6nm,1.2s
PET Petropavlovsk 49.77 26 P **P** **06 59 52.3 -0.5**
MKAR Makanchi Array 50.34 323 P **P** **06 59 58.9 +1.5**
comp=Z,2.4nm,0.6s,baz=122,slow=8.4,SNR=29
comp=Z,2.4nm,0.6s
MKAR Makanchi Array 50.34 323 P **P** **06 59 58.0 +0.7**
MAKZ Makanchi 50.54 323 P **P** **06 59 59.5 +0.7**
MAKZ IAmb IAmb 07 00 06.4
comp=Z,16nm,1.5s
YAK Yakutsk 50.84 3 LR LR 07 22 41.6
comp=Z,117nm,20.4s,baz=145,slow=37
TARG Taragay, Kyrgy 50.95 315 P **P** **07 00 03.4 +0.9**
KDJ Kajisay 51.54 316 **P** **07 00 06.7 +0.1**
KDJ IAmb IAmb 07 00 14.5
comp=Z,7.8nm,1.1s
KSH2 Kashi 51.63 311 P **P** **07 00 08.6 +1.2**
KSH2 pmax pmax
comp=Z,7.0nm,1.3s
NIL Nilore 51.93 304 **P** **07 00 10.1 +0.6**
MA2 Magadan 52.04 16 P **P** **07 00 11.3 +1.5**
comp=Z,1.9nm,0.4s,baz=190,slow=12,SNR=4.3
comp=Z,1.9nm,0.4s
MA2 Magadan 52.04 16 P **P** **07 00 09.4 -0.4**
MA2 IAmb IAmb 07 00 12.5
comp=Z,12nm,1.4s
ZALV Zalesovo Beam 53.06 332 P **P** **07 00 18.5 +1.0**
comp=Z,1.5nm,0.6s,baz=108,slow=6.4,SNR=11
ZALV LR LR 07 23 00.4
comp=Z,130nm,19.2s,baz=120,slow=36
comp=Z,1.5nm,0.6s
ZALV Zalesovo Beam 53.06 332 **P** **07 00 17.7 +0.2**
AAK Ala-Archa 53.57 315 P **P** **07 00 22.2 +0.5**
comp=Z,0.7nm,0.4s,baz=135,slow=8.6,SNR=2.6
comp=Z,0.7nm,0.4s
KURK Kurchatov 54.42 326 P **P** **07 00 28.1 +0.6**
KURBB Kurchatov Arra 54.42 326 P **P** **07 00 28.2 +0.7**
comp=Z,2.8nm,0.6s,baz=128,slow=7.2,SNR=37
comp=Z,2.8nm,0.6s
SEY Seymchan 55.28 15 P **P** **07 00 35.2 +1.7**
comp=Z,2.0nm,0.7s,baz=215,slow=6.7,SNR=10
comp=Z,2.0nm,0.7s
GAR Garm 55.51 310 P **P** **07 00 36.9 +1.1**
KBL Kabul 55.53 304 **P** **07 00 36.7 +0.5**
KBL IAmb IAmb 07 00 38.0
comp=Z,8.2nm,0.9s
KK31 Karatay Array 56.49 315 P **P** **07 00 42.9 +0.3**
KK31 IAmb IAmb 07 00 44.8
comp=Z,15nm,1.4s
KKAR Karatay Array 56.49 315 **P** **07 00 43.1 +0.4**
SHEM Shemya Is, Ala 57.18 33 LR LR 07 21 16.1
comp=Z,31nm,20.5s,baz=226,slow=32
BVAR Borovoye Array 60.01 325 P **P** **07 01 08.3 +1.2**
comp=Z,0.7nm,0.7s,baz=118,slow=8.6,SNR=3.9
BVAR LR LR 07 26 17.6
comp=Z,126nm,19.8s,baz=111,slow=35
comp=Z,0.7nm,0.7s
BORK Borovoye 60.06 325 **P** **07 01 07.9 +0.6**
BORK IAmb IAmb 07 01 22.9
comp=Z,6.2nm,0.9s
TIXI Tiksi 60.43 2 P **P** **07 01 08.2 -1.3**
comp=Z,2.9nm,0.5s,baz=177,slow=3.5,SNR=5.4
TIXI LR LR 07 30 18.1
comp=Z,116nm,18.9s,baz=201,slow=39
comp=Z,2.9nm,0.5s
TIXI Tiksi 60.43 2 P **P** **07 01 09.8 +0.3**
TIXI IAmb IAmb 07 01 10.9
comp=Z,7.9nm,1.1s
NRIK Noril'sk 62.72 346 P **P** **07 01 25.6 +0.5**
comp=Z,2.7nm,0.6s,baz=118,slow=4.0,SNR=4.6
NRIK LR LR 07 30 59.5
comp=Z,138nm,18.5s,baz=152,slow=38
comp=Z,2.7nm,0.6s
NRIK Noril'sk 62.72 346 **P** **07 01 25.7 +0.7**
NRIK IAmb IAmb 07 01 35.6
comp=Z,7.9nm,1.1s
BILL Bilibino 62.91 16 **P** **07 01 26.9 +0.5**
BILL IAmb IAmb 07 01 29.4
comp=Z,6.4nm,1.1s
ABKAR Akbulak array 65.16 319 P **P** **07 01 42.2 +0.8**
AKTO Aktyubinsk 66.61 320 LR LR 07 33 05.9
comp=Z,191nm,18.5s,baz=22,slow=38
ARTI Arti 67.68 327 LR LR 07 30 49.8
comp=Z,158nm,21.5s,baz=138,slow=35
KIRV Kirov 72.83 328 LR LR 07 34 35.8
comp=Z,134nm,18.9s,baz=98,slow=36
H18K Honhosa River 74.39 25 IAmb IAmb 07 02 59.6
comp=Z,12nm,1.4s
D19K Kuna River 74.92 22 IAmb IAmb 07 03 03.4
comp=Z,11nm,1.4s
E19K Redstone River 75.12 23 IAmb IAmb 07 02 56.9
comp=Z,4.7nm,0.6s
GNI Garni 75.22 309 LR LR 07 40 09.8
comp=Z,58nm,18.6s,baz=80,slow=39
B21K Ikpikpuk River 76.30 21 IAmb IAmb 07 03 14.4
comp=Z,6.8nm,1.1s
KBZ Khabaz 76.44 312 P **P** **07 02 49.5 -0.7**
comp=Z,1.2nm,0.6s,baz=341,slow=6.0,SNR=3.8
comp=Z,1.2nm,0.6s
KDAK Kodiak Island 76.69 33 LR LR 07 33 11.2
comp=Z,53nm,19.4s,baz=228,slow=33
H21K Melozitna Rive 76.74 25 IAmb IAmb 07 02 54.6
comp=Z,5.5nm,1.1s
BPAW Bear Paw Mtn. 77.49 27 P **P** **07 02 56.2 +0.4**
BPAW IAmb IAmb 07 03 11.2
comp=Z,13nm,1.4s
SCM Sheep Creek Mo 79.23 29 P **P** **07 03 03.9 -1.6**
ILAR Eielson Array 79.25 26 P **P** **07 03 05.7 +0.2**
comp=Z,0.5nm,0.8s,baz=262,slow=4.0,SNR=5.4
ILAR LR LR 07 41 20.5
comp=Z,47nm,18.0s,baz=252,slow=38
comp=Z,0.5nm,0.8s
RIDG Independent Ri 80.22 27 P **P** **07 03 10.9 +0.1**
RIDG IAmb IAmb 07 03 30.3
comp=Z,11nm,1.3s
DOT Dot Lake 80.57 27 IAmb IAmb 07 03 15.4
comp=Z,11nm,1.0s
F28M Old Crow 81.76 23 IAmb IAmb 07 03 21.8
comp=Z,7.1nm,1.1s
ASF Jabal al Asfar 82.29 301 LR LR 07 44 41.7
comp=Z,42nm,19.6s,baz=26,slow=39
ARCES ARCESS Array B 82.77 340 P **P** **07 03 24.4 +0.3**
comp=Z,3.7nm,0.8s,baz=80,slow=6.3,SNR=9.3
comp=Z,3.7nm,0.8s
SPITS Spitsbergen Ar 82.78 349 P **P** **07 03 24.5 +0.4**
comp=Z,4.9nm,0.8s,baz=64,slow=6.6,SNR=5.7
SPITS LR LR 07 44 15.3
comp=Z,76nm,18.4s,baz=84,slow=38
comp=Z,4.9nm,0.8s
MMAI Mount Meron Ar 83.41 302 LR LR 07 45 30.3
comp=Z,38nm,19.3s,baz=67,slow=39
BRTR Keskin Array B 83.75 309 P **P** **07 03 32.6 +2.6**
comp=Z,0.9nm,0.7s,baz=79,slow=7.5,SNR=3.4
BRTR LR LR 07 45 56.8
comp=Z,50nm,18.8s,baz=86,slow=39
FINES FINESS Array B 84.33 331 P **P** **07 03 31.6 -0.6**
comp=Z,0.8nm,0.4s,baz=89,slow=5.0,SNR=14
comp=Z,0.8nm,0.4s
FINES FINESS Array B 84.33 331 P **P** **07 03 31.4 -0.9**
EIL Elat 84.33 299 LR LR 07 45 25.1
comp=Z,53nm,20.1s,baz=67,slow=39
FURI Furi 84.45 278 LR LR 07 41 29.3
comp=Z,26nm,18.1s,baz=94,slow=36
AKASG Malin Array Be 84.86 321 P **P** **07 03 35.4 +0.2**
comp=Z,2.3nm,0.7s,baz=69,slow=4.6,SNR=8.1
AKASG LR LR 07 45 02.2
comp=Z,71nm,18.4s,baz=60,slow=38
comp=Z,2.3nm,0.7s
AKASG Malin Array Be 84.86 321 IAmb IAmb 07 03 42.5
comp=Z,7.6nm,1.2s
BURAR Bucovina Array 88.11 318 P **P** **07 03 51.6 +0.3**
BURAR IAmb IAmb 07 04 00.4
comp=Z,2.1nm,0.7s
BUR08 Bucovina Ar. S 88.12 318 P **P** **07 03 51.2 -0.2**
BUR08 IAmb IAmb 07 04 01.9
comp=Z,5.3nm,1.1s
MAW Mawson 90.08 200 LR LR 07 40 48.1
comp=Z,46nm,19.4s,baz=98,slow=33
HFS Hagfors 90.50 332 LR LR 07 48 15.8
comp=Z,116nm,19.3s,baz=68,slow=38
RES Resolute Bay 90.82 10 LR LR 07 49 06.1
comp=Z,35nm,19.5s,baz=357,slow=38
VNDA Vanda 91.07 172 LR LR 07 44 37.2
comp=Z,50nm,19.5s,baz=326,slow=35
NOA NORSAR Array B 91.23 333 LR LR 07 47 41.6
comp=Z,89nm,18.2s,baz=65,slow=37
VRAC Vranov 93.06 321 LR LR 07 47 49.3
comp=Z,85nm,19.9s,baz=88,slow=37
YKA Yellowknife Ar 93.50 24 P **P** **07 04 14.6 -1.4**
comp=Z,0.4nm,0.8s,baz=300,slow=5.5,SNR=6.5
comp=Z,0.4nm,0.8s
GERES GERESS Array B 95.00 322 LR LR 07 48 45.7
comp=Z,87nm,21.7s,baz=80,slow=36
DAVOX Davos/Dischmat 98.20 321 LR LR 07 51 02.8
comp=Z,86nm,19.1s,baz=76,slow=37
TXAR Lajitas Array 118.34 48 PKP **PKPdf** **07 09 47.6 -1.1**
comp=Z,0.4nm,0.8s,baz=224,slow=0.3,SNR=4.0
PLCA Paso Flores 147.67 158 PKP **PKPdf** **07 10 39.4 -3.3**
comp=Z,0.9nm,0.9s,baz=239,slow=5.9,SNR=2.8
PLCA PKPbc **PKPbc** **07 10 47.0 +1.5**
comp=Z,0.9nm,0.8s,baz=232,slow=3.0,SNR=4.2

*IDC **03** 06:52:31.3±2.6,1°.23N×126°.51E,h0km,mb3.9/6, mbtmp3.9/7,ML3.7/1,Error ellipse: s-maj=68.2km s-min=41.7km az=129.0*
*DJA **03** 06:52:32.7±0.3,1°.4N±4°×12°.6E±°,h10km,M4.0/12, MLv4.0/12*
*NEIC **03** 06:52:36.6±1.0,0°.9N±0°.1×126°.68E±0°.06,h55km±10km, mb4.4/6,Error ellipse: s-maj=14.6km s-min=9.3km az=187.0*
ISC 03 06:52:35.3±0.7,0°.90N±0°.08×126°.58E±0°.07,h39km,n23, σ1°68/23,mb4.1/9,Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.80**	**99**			**Pn**	**06 52 50.7**	**+0.6**
TNTI	**Ternate**	**0.80**	**99**	P		**Pn**	**06 52 50.9**	**+0.8**
TNTI				S		**Sn**	**06 53 03.9**	**+3.1**
GAMI	**Galela, Maluku**	**1.53**	**52**	P		**Pn**	**06 53 02.3**	**+2.2**
MNI	**Manado**	**1.82**	**287**	P		**Pn**	**06 53 02.1**	**-2.0**
GTOI	**Gorontalo**	**3.58**	**266**	P		**Pn**	**06 53 29.5**	**+1.2**
LUWI	**Luwuk**	**4.27**	**243**	Pn		**Pn**	**06 53 40.1**	**+2.3**
TOLI2	**Tolitoli**	**5.80**	**272**	Pn		**Pn**	**06 53 59.2**	**+0.3**
KAPI	**Kappang**	**9.00**	**229**	Pn		**Pn**	**06 54 45.2**	**+2.4**
	0.7nm,0.3s,baz=9.8,slow=18,SNR=1.6							
	3.0nm,0.4s							
MYLDM	**Lahad Datu**	**9.12**	**298**	Pn		**Pn**	**06 54 47.0**	**+2.6**
KNRA	**Kununurra**	**16.61**	**173**	Pn		**Pn**	**06 56 24.8**	**-0.6**
FORT	**Forrest**	**31.54**	**178**	P		**P**	**06 58 53.5**	**-0.4**
STKA	**Stephens Creek**	**35.57**	**158**	P		**P**	**06 59 27.4**	**-1.6**
STKA						IAmb	IAmb	06 59 33.8
	comp=Z,59nm,1.1s							
CAN	**Canberra**	**41.68**	**152**	P		**P**	**07 00 18.2**	**-2.1**
CAN						IAmb	IAmb	07 00 22.3
	comp=Z,8.9nm,1.0s							
TOO	**Toolangi**	**42.09**	**157**	P		**P**	**07 00 21.6**	**-2.1**
TOO						IAmb	IAmb	07 00 25.5
	comp=Z,5.9nm,1.1s							
MKAR	**Makanchi Array**	**59.80**	**326**	P		**P**	**07 02 35.9**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=127,slow=8.7,SNR=7.6							
	comp=Z,0.9nm,0.7s							
ZALV	**Zalesovo Beam**	**63.03**	**334**	P		**P**	**07 02 57.5**	**-0.8**
	comp=Z,0.6nm,0.4s,baz=115,slow=6.8,SNR=1.5							
	comp=Z,0.6nm,0.4s							
KURBB	**Kurchatov Arra**	**64.04**	**328**	P		**P**	**07 03 04.3**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=130,slow=5.9,SNR=5.4							
	comp=Z,1.0nm,0.7s							
KURK	**Kurchatov**	**64.04**	**328**	P		**P**	**07 03 04.3**	**-0.7**
KURK	**Kurchatov**	**64.04**	**328**	IAmb		IAmb	07 03 07.1	
	comp=Z,2.5nm,0.7s							
BVAR	**Borovoye Array**	**69.60**	**328**	P		**P**	**07 03 40.2**	**-0.2**
	comp=Z,1.7nm,0.9s,baz=123,slow=5.3,SNR=3.9							
	comp=Z,1.7nm,0.9s							
NRIK	**Noril'sk**	**73.13**	**346**	P		**P**	**07 04 03.1**	**+1.7**
	comp=Z,1.6nm,0.4s,baz=134,slow=6.7,SNR=3.9							
	comp=Z,1.6nm,0.4s							
ABKAR	**Akbulak array**	**74.24**	**321**	P		**P**	**07 04 07.5**	**-0.8**
ILAR	**Eielson Array**	**87.71**	**25**	P		**P**	**07 05 19.9**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=243,slow=4.0,SNR=3.3							
	comp=Z,0.2nm,0.6s							

*DJA **03** 06:55:50.0±1.2,1°.N±3°×12°.6E±°,h16km±12km,M4.6/16, mB5.2/1,mb5.1/1,MLv4.4/16,Mw(mB)4.6/1*
*NEIC **03** 06:55:53.6±2.7,0°.89N±0°.07×126°.54E±0°.04,h44km±8km, mb4.6/34,Error ellipse: s-maj=10.8km s-min=2.7km az=154.0*
*IDC **03** 06:55:53.4±3.0,0°.77N×126°.34E,h52km±29km,mb4.0/13, mbtmp4.2/15,ML3.9/2,MS3.6/1,Error ellipse: s-maj=35.5km s-min=14.0km az=71.0*
ISC 03 06:55:52.5±0.4,0°.84N±0°.05×126°.50E±0°.06,h39km,n68, σ1°39/61,mb4.5/32,Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.87**	**95**			**Pn**	**06 56 08.1**	**-0.2**
TNTI	**Ternate**	**0.87**	**95**	P		**Pn**	**06 56 08.1**	**-0.2**
TNTI				S		**Sn**	**06 56 21.3**	**+1.5**
GAMI	**Galela, Maluku**	**1.62**	**53**	P		**Pn**	**06 56 17.4**	**-1.2**
MNI	**Manado**	**1.76**	**290**	P		**Pn**	**06 56 18.9**	**-1.7**
GTOI	**Gorontalo**	**3.50**	**267**	P		**Pn**	**06 56 46.3**	**+1.9**
NLAI	**Namlea**	**4.10**	**172**	P		**Pn**	**06 56 52.7**	**0.0**
LUWI	**Luwuk**	**4.17**	**243**			**Pn**	**06 56 54.7**	**+1.0**
LUWI	**Luwuk**	**4.17**	**243**	P		**Pn**	**06 56 52.6**	**-1.1**
APSI	**Ampana**	**5.16**	**250**	P		**Pn**	**06 57 06.1**	**-1.1**
TOLI2	**Tolitoli**	**5.72**	**273**			**Pn**	**06 57 16.4**	**+1.4**
KAPI	**Kappang**	**8.90**	**229**	P		**Pn**	**06 57 58.6**	**-0.1**
	2.4nm,0.3s,baz=53,slow=4.6,SNR=5.2							
	4.0nm,0.3s							
KAPI	**Kappang**	**8.90**	**229**			**Pn**	**06 58 01.7**	**+3.0**
MYLDM	**Lahad Datu**	**9.07**	**298**			**Pn**	**06 58 03.1**	**+2.1**
MTN	**Manton Dam**	**14.36**	**161**	Pn		**Pn**	**06 59 12.7**	**-0.6**
SBUM	**Sibu**	**14.36**	**277**			**P**	**06 59 16.1**	**-3.7**
KNRA	**Kununurra**	**16.57**	**172**	Pn		**Pn**	**06 59 41.8**	**-0.3**
FITZ	**Fitzroy Crossi**	**18.84**	**183**	P		**P**	**07 00 07.3**	**-2.0**
	0.2nm,0.3s,baz=0.0,slow=11,SNR=2.3							
	4.3nm,0.9s							
BBJI	**Bungbulang**	**20.53**	**246**	P		Pn	07 00 29.4	-0.9
WB0	**Warramunga Arr**	**21.90**	**160**			**P**	**07 00 41.9**	**-0.6**
WB0						IAmb	IAmb	07 00 45.2
	comp=Z,46nm,1.2s							
WRA	**Warramunga Arr**	**22.04**	**160**	P		**P**	**07 00 43.0**	**-1.1**
	comp=Z,14nm,0.7s,baz=340,slow=11,SNR=52							
	comp=Z,14nm,0.7s							
WRA	**Warramunga Arr**	**22.04**	**160**			**P**	**07 00 42.9**	**-1.1**
WR8	**Warramunga Arr**	**22.11**	**160**			**P**	**07 00 44.2**	**-0.6**
COEN	**Coen**	**22.12**	**132**			**P**	**07 00 45.1**	**+0.3**
MBWA	**Marble Bar**	**22.85**	**196**	P		**P**	**07 00 53.1**	**+0.6**
MBWA						IAmb	IAmb	07 01 01.2
	comp=Z,38nm,1.4s							
PSA00	**Pilbara Seismi**	**23.21**	**196**	P		**P**	**07 00 56.8**	**+0.6**
PSA00						IAmb	IAmb	07 01 13.7
	comp=Z,24nm,1.2s							
AS31	**Alice Springs**	**25.40**	**164**			**P**	**07 01 17.6**	**+1.0**
ASAR	**Alice Springs**	**25.41**	**164**	P		**P**	**07 01 16.4**	**-0.1**
	comp=Z,12nm,0.8s,baz=342,slow=10,SNR=40							
ASAR				PcP		**PcP**	**07 04 48.5**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=351,slow=2.6,SNR=4.4							
	comp=Z,12nm,0.8s							
ASAR	**Alice Springs**	**25.41**	**164**			**P**	**07 01 18.2**	**+1.7**
JOW	**Kunigami**	**25.89**	**4**	P		**P**	**07 01 18.7**	**-2.2**
FORT	**Forrest**	**31.48**	**177**	P		**P**	**07 02 11.2**	**+0.5**
FORT						IAmb	IAmb	07 02 14.8
	comp=Z,11nm,0.7s							
NJ2	**Nanjing**	**31.87**	**348**	*e*P		**P**	**07 02 16.6**	**+2.6**
NJ2				pmax		pmax		
	comp=Z,9.0nm,0.5s							
BBOO	**Buckleboo**	**34.67**	**166**	P		**P**	**07 02 38.7**	**+0.2**
NWAO	**Narrogin (SRO)**	**34.71**	**194**	LR		LR	07 18 56.6	

comp=Z,79nm,18.2s,baz=290,slow=40
PZH PanZhiHua 34.90 319 P **P 07 02 43.7 +3.0**
STKA Stephens Creek 35.55 158 P **P 07 02 45.3 -0.7**
comp=Z,6.2nm,0.9s,baz=316,slow=7.2,SNR=5.9
comp=Z,6.2nm,0.9s
STKA Stephens Creek 35.55 158 P **P 07 02 46.1 0.0**
KSRS Korea Array 36.45 2 P **P 07 02 54.5 +0.8**
comp=Z,0.8nm,0.4s,baz=171,slow=8.6,SNR=2.2
comp=Z,0.8nm,0.4s
XAN Xi'an 36.90 335 P **P 07 02 56.9 -0.8**
XAN pP pP 07 03 07.2 -1.0
XAN pmax pmax
comp=Z,7.0nm,0.8s
HHC Hu-ho-hao-te 42.06 343 *e*P **P 07 03 43.3 +2.6**
HHC pmax pmax
comp=Z,86nm,4.9s
GTA2 Gaotai 45.55 331 *e*P **P 07 04 09.8 +1.0**
GTA2 pP pP 07 04 19.1 -0.3
GTA2 pmax pmax
comp=Z,3.0nm,1.2s
EVN Everest 46.56 309 **P 07 04 16.8 -0.8**
EVN IAmb IAmb 07 04 30.4
comp=Z,4.3nm,0.9s
SONM Songino Array 49.95 342 P **P 07 04 42.5 -0.2**
comp=Z,0.4nm,0.5s,baz=149,slow=8.1,SNR=4.1
SONM ScP **ScP 07 09 53.4 -2.0**
comp=Z,0.3nm,0.8s,baz=126,slow=2.0,SNR=3.8
comp=Z,0.4nm,0.5s
SONM Songino Array 49.95 342 P **P 07 04 41.6 -1.2**
PETK Petropavlovsk- 58.18 22 P **P 07 05 44.2 +1.8**
comp=Z,0.9nm,0.5s,baz=171,slow=4.3,SNR=3.5
comp=Z,0.9nm,0.5s
MKAR Makanchi Array 59.80 326 P **P 07 05 53.0 -0.9**
comp=Z,2.0nm,0.6s,baz=124,slow=8.6,SNR=23
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 59.80 326 **P 07 05 53.0 -0.9**
KDJ Kajisay 60.36 320 **P 07 05 57.3 -0.7**
KDJ IAmb IAmb 07 06 00.3
comp=Z,3.0nm,0.6s
ZALV Zalesovo Beam 63.05 334 P **P 07 06 13.7 -1.9**
comp=Z,1.5nm,0.6s,baz=96,slow=7.8,SNR=6.1
comp=Z,1.5nm,0.6s
GAR Garm 63.72 314 **P 07 06 20.2 -0.4**
KURBB Kurchatov Arra 64.04 328 P **P 07 06 21.6 -0.7**
comp=Z,2.4nm,0.6s,baz=133,slow=6.2,SNR=21
comp=Z,2.4nm,0.6s
KURK Kurchatov 64.05 328 **P 07 06 21.1 -1.2**
KURK IAmb IAmb 07 06 41.4
comp=Z,5.9nm,0.7s
BVAR Borovoye Array 69.61 328 P **P 07 06 57.6 -0.1**
comp=Z,1.7nm,0.8s,baz=128,slow=6.3,SNR=5.3
comp=Z,1.7nm,0.8s
BORK Borovoye 69.66 328 P **P 07 06 58.3 +0.3**
BORK IAmb IAmb 07 07 15.0
comp=Z,5.1nm,0.8s
TIXI Tiksi 70.71 1 P **P 07 07 03.2 -0.8**
comp=Z,3.5nm,0.3s,baz=233,slow=3.1,SNR=3.7
comp=Z,3.5nm,0.3s
TIXI Tiksi 70.71 1 IAmb IAmb 07 07 06.9
comp=Z,10nm,1.4s
NRIK Noril'sk 73.16 347 P **P 07 07 18.6 -0.2**
comp=Z,4.3nm,0.8s,baz=144,slow=8.2,SNR=7.1
comp=Z,4.3nm,0.8s
NRIK Noril'sk 73.16 347 IAmb IAmb 07 07 22.3
comp=Z,4.0nm,0.8s
AB31 Akbulak array 74.23 321 **P 07 07 24.5 -1.1**
J16K Anvik River 81.61 26 **P 07 08 08.2 +2.0**
J16K IAmb IAmb 07 08 10.3
comp=Z,5.1nm,0.9s
H17K Granite Mounta 82.32 24 IAmb IAmb 07 08 15.9
comp=Z,8.1nm,1.4s
K17K Iditarod 82.49 27 **P 07 08 11.0 +0.2**
E18K Tukpahlearik C 82.70 22 IAmb IAmb 07 08 16.1
comp=Z,6.4nm,1.1s
J18K Innoko River 83.35 26 IAmb IAmb 07 08 25.4
comp=Z,4.0nm,1.1s
G19K Purcell Mounta 83.75 23 IAmb IAmb 07 08 36.6
comp=Z,6.9nm,1.0s
D19K Kuna River 83.88 21 IAmb IAmb 07 08 36.6
comp=Z,4.5nm,0.9s
E19K Redstone River 83.97 22 **P 07 08 20.1 +1.7**
E19K IAmb IAmb 07 08 37.3
comp=Z,6.3nm,1.1s
ILAR Eielson Array 87.79 25 P **P 07 08 36.4 -1.0**
comp=Z,0.3nm,0.6s,baz=264,slow=4.0,SNR=6.7
comp=Z,0.3nm,0.6s
C27K Jago River 89.14 21 IAmb IAmb 07 08 48.2
comp=Z,2.0nm,0.8s

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*UPA **03** 07:00:28.5±0.8, 8.°77N×83.°10W, h40km±3km, MW3.8, Presumed earthquake*
*CATAC **03** 07:00:28.3±0.3, 9°N±3°×8°3W±°, h27km±3km, M3.1/12, MLv3.1/12, Error ellipse: s-maj=6.0km s-min=4.3km az=161.6, confirmed*
ISC 03 07:00:26.9±1.3**, 8.°74N**±0.°03×**83.°10W**±0.°02**, h16**km±10km**, n38,** σ**0.s78**/71**, 6C-13D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLIR3	**Monte Lirio, C**	**0.28**	**80**	⇓*i*P	**Pn**	**07 00 37.5**	**+1.2**
MLIR3				*i* S	**Sn**	**07 00 43.1**	**+0.9**
CDITO	**Canoas**	**0.28**	**127**	P	**Pn**	**07 00 36.5**	**+0.2**
CDITO				S	**Sn**	**07 00 43.3**	**+1.1**
PTJ1	**Puerto Jimnez**	**0.29**	**224**	P	**Pn**	**07 00 36.7**	**+0.3**
PTJ1				S	**Sn**	**07 00 44.6**	**+2.3**
PTJ1	**Puerto Jimnez**	**0.29**	**224**	⇓*i*P	**Pn**	**07 00 36.9**	**+0.5**
PTJ1				*i* S	**Sn**	**07 00 44.7**	**+2.3**
BRU2	**Volcan**	**0.41**	**83**	P	**Pn**	**07 00 38.3**	**+0.1**
BRU2				S	**Sn**	**07 00 46.3**	**+0.7**
BRU2	**Volcan**	**0.41**	**83**	⇓*i*P	**Pn**	**07 00 38.5**	**+0.3**
BRU2				*i* S	**Sn**	**07 00 47.0**	**+1.4**
PIRO	**Carate, Puerto**	**0.41**	**215**	P	**Pn**	**07 00 37.6**	**-0.4**
PIRO				S	**Sn**	**07 00 45.8**	**+0.5**
PIRO	**Carate, Puerto**	**0.41**	**215**	⇓*i*P	**Pn**	**07 00 37.7**	**-0.4**
PIRO				*i* S	**Sn**	**07 00 45.6**	**+0.2**
LESP3	**La Esperanza,**	**0.45**	**138**	⇑*e*P	**Pn**	**07 00 38.1**	**-0.6**
LESP3				*e*S	**Sn**	**07 00 45.8**	**-0.7**
DRK0	**Durika**	**0.54**	**344**	P	**Pb**	**07 00 38.1**	**+0.1**
DRK0				S	**Sn**	**07 00 47.6**	**-1.2**
DRK0	**Durika**	**0.54**	**344**	⇓*i*P	**Pb**	**07 00 38.2**	**+0.2**
DRK0				*i* S	**Sn**	**07 00 47.4**	**-1.4**
PTPM	**Petroterminale**	**0.58**	**158**	⇑*i*P	**Pn**	**07 00 40.1**	**-0.3**
PTPM				*i* S	**Sn**	**07 00 50.4**	**+0.9**
PTAR3	**Potrerillos Ar**	**0.60**	**95**	⇓*i*P	**Pn**	**07 00 40.9**	**+0.1**
PTAR3				*i* S	**Sn**	**07 00 50.2**	**0.0**
OCHAL	**Ojochal**	**0.65**	**303**	P	**Pn**	**07 00 41.4**	**0.0**
OCHAL				S	**Sn**	**07 00 51.7**	**+0.5**
LNBQ3	**Los Naranjos,**	**0.65**	**86**	⇓*e*P	**Pn**	**07 00 41.3**	**-0.3**
LNBQ3				*e*S	**Sn**	**07 00 50.6**	**-1.0**
BQSF3	**Alto Boquete,**	**0.66**	**90**	⇓*i*P	**Pn**	**07 00 41.4**	**-0.2**
BQSF3				*i* S	**Sn**	**07 00 51.5**	**-0.2**
LIMO3	**Limones**	**0.68**	**160**	⇑*e*P	**Pn**	**07 00 41.4**	**-0.4**
LIMO3				*i* S	**Sn**	**07 00 51.6**	**-0.4**
DVD	**David**	**0.71**	**115**	⇓*e*P	**Pn**	**07 00 41.9**	**-0.3**
DVD				*i* S	**Sn**	**07 00 52.3**	**-0.5**
LOCO3	**Loma Colorada,**	**0.75**	**116**	⇑*e*P	**Pn**	**07 00 42.4**	**-0.4**
LOCO3				*i* S	**Sn**	**07 00 53.0**	**-0.9**
LOMA3	**Las Lomas, Chi**	**0.77**	**114**	⇑*e*P	**Pn**	**07 00 42.6**	**-0.4**
LOMA3				*i* S	**Sn**	**07 00 53.6**	**-0.6**
PSOM3	**Paja de Sombre**	**0.77**	**94**	⇓*i*P	**Pn**	**07 00 42.8**	**-0.3**
PSOM3				*i* S	**Sn**	**07 00 53.6**	**-0.7**
CHIR3	**Chiriqui UPA,**	**0.84**	**114**	⇓*i*P	**Pg**	**07 00 43.6**	**+0.4**
CHIR3				*i* S	**Sn**	**07 00 55.5**	**-0.5**
CNI2	**El Empalme, Bo**	**0.92**	**42**	⇓*e*P	**Pn**	**07 00 45.9**	**+0.8**
CNI2				*i* S	**Sn**	**07 00 59.3**	**+1.4**
CHGR2	**Aguacate**	**0.96**	**78**	*e*P	**Pb**	**07 00 45.4**	**+0.2**
CHGR2				*i* S	**Sg**	**07 00 58.7**	**+0.4**
RGM0	**Gandoca**	**0.97**	**30**	S	**Sn**	**07 01 00.4**	**+1.1**
QUEP	**Quepos**	**1.25**	**303**	P	**Pn**	**07 00 48.7**	**-1.0**
QUEP				S	**Sg**	**07 01 06.5**	**-1.1**
LCR2	**La Lucha 2**	**1.34**	**318**	P	**Pn**	**07 00 50.5**	**-0.5**
LCR2				S	**Sb**	**07 01 08.2**	**-0.5**
LCR2	**La Lucha 2**	**1.34**	**318**	*e*P	**Pb**	**07 00 51.4**	**-0.3**
LCR2				*i* S	**Sb**	**07 01 08.3**	**-0.3**
TRT2	**Tortugero**	**1.91**	**341**	P	**Pn**	**07 00 58.1**	**-0.7**
TRT2				S	**Sn**	**07 01 22.9**	**+0.4**
GMAL	**Guarumal, Vera**	**2.09**	**118**	⇑*e*P	**Pn**	**07 01 01.0**	**-0.2**
GMAL				*e*S	**Sn**	**07 01 26.2**	**-0.6**
COVE	**Coope Vega, Sa**	**2.35**	**327**	P	**Pn**	**07 01 04.9**	**+0.1**
COVE				S	**Sn**	**07 01 33.5**	**+0.3**
JTS	**Las Juntas de**	**2.39**	**310**	P	**Pn**	**07 01 05.9**	**+0.6**
JTS				S	**Sn**	**07 01 34.8**	**+0.5**
CACAO	**El Cacao, Vera**	**2.62**	**122**	*e*P	**Pn**	**07 01 08.7**	**+0.2**
CMARA	**Lajas Hojancha**	**2.62**	**299**	P	**Pn**	**07 01 09.1**	**+0.5**
CMARA				S	**Sn**	**07 01 39.7**	**-0.4**
CMARA	**Lajas Hojancha**	**2.62**	**299**	⇓*i*P	**Pn**	**07 01 09.7**	**+1.1**
CMARA				*i* S	**Sn**	**07 01 39.1**	**-1.0**
CHIT3	**Chitre**	**2.77**	**106**	*e*P	**Pb**	**07 01 15.1**	**-0.9**
AZU	**Azuero**	**2.95**	**108**	*e*P	**Pn**	**07 01 14.1**	**+1.0**
ACON	**Acoyapa**	**3.80**	**328**	P	**Pn**	**07 01 25.3**	**+0.5**

IDC 03 07:05:28.8±1.1**, 18.°82N**×**144.°11E, h0**km**, mb3.5**/5**, mbtmp3.5**/5**, Error ellipse: s-maj=56.7km s-min=24.0km az=105.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**39.70**	**194**	P	P	07 13 02.2	-0.8
	0.9nm,0.9s,baz=10,slow=8.1,SNR=5.7						
	0.9nm,0.9s						
ASAR	**Alice Springs**	**43.38**	**194**	P	P	07 13 34.0	+0.7
	0.1nm,0.5s,baz=22,slow=12,SNR=3.9						
	0.1nm,0.5s						
ZALV	**Zalesovo Beam**	**57.01**	**323**	P	P	07 15 16.2	-0.1
	0.3nm,0.4s,baz=119,slow=5.4,SNR=2.0						
	0.3nm,0.4s						
ILAR	**Eielson Array**	**64.20**	**26**	P	P	07 16 06.5	+1.2
	0.2nm,0.6s,baz=259,slow=5.2,SNR=4.1						
	0.2nm,0.6s						
NVAR	**Mina Array Bea**	**84.25**	**51**	P	P	07 18 01.4	-1.5
	0.8nm,0.7s,baz=283,slow=6.5,SNR=4.8						
	0.8nm,0.7s						

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*SDD **03** 07:13:54.0±1.6, 20.°23N×70.°64W, h20km±126km, MD3.3, ML2.4, MW2.9, Presumed earthquake*
*OSPL **03** 07:13:55.8±2.2, 20.°04N×70.°52W, h0km±11km, ML2.1, Presumed earthquake*
ISC 03 07:13:54.0±1.3**, 20.°10N**±0.°04×**70.°56W**±0.°05**, h7**km±13km**, n12,** σ**0.s83**/21**, 9C-1D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOPP1	**Punta Rusia, P**	**0.65**	**248**	*i* P	**Pb**	**07 14 07.5**	**-0.1**
LOPP1				*e*S	**Sb**	**07 14 17.0**	**+0.1**
LOPP1				IAML		07 14 20.5	
	comp=Z,82nm,1.5s						
SC01	**Santiago de lo**	**0.69**	**193**	*i* P	**Pg**	**07 14 06.5**	**-0.6**
SC01				IAML		07 14 22.3	
	comp=Z,65nm,0.8s						
SFDR	**San Fco. de Ma**	**0.86**	**160**	⇑*e*Pg	**Pb**	**07 14 11.9**	**+0.7**
SFDR				⇑*e*Sg	**Sn**	**07 14 25.9**	**+0.5**
SFDR				IAML		07 14 31.6	
	comp=N,126nm,1.6s						
REDR	**Restauracion**	**1.22**	**220**	⇑*e*Pg	**Pg**	**07 14 18.3**	**+1.0**
REDR				⇑*e*Sg	**Sn**	**07 14 35.7**	**+1.6**
REDR				IAML		07 14 38.6	
	comp=N,118nm,0.2s						
SDDR	**Presa de Saban**	**1.30**	**212**	⇑*e*Pg	**Pn**	**07 14 17.7**	**-1.0**
SDDR				⇑*e*Sg	**Sb**	**07 14 34.7**	**-1.2**
SDDR				IAML		07 14 35.2	
	comp=N,38nm,1.7s						
SDDR	**Presa de Saban**	**1.30**	**212**	*i* P	**Pn**	**07 14 17.8**	**-1.0**
SDDR				*e*S	**Sb**	**07 14 34.7**	**-1.2**
SDDR				IAML		07 14 38.9	
	comp=Z,25nm,0.5s						
GRTK	**Grand Turk**	**1.50**	**339**	*i* P	**Pg**	**07 14 22.4**	**-0.4**
GRTK				*e*S	**Sg**	**07 14 43.2**	**+0.9**
GRTK				IAML		07 14 45.4	
	comp=Z,129nm,3.4s						
LONE3	**El Aguacate, B**	**1.71**	**210**	*i* P	**Pn**	**07 14 25.0**	**+0.6**
LONE3				*e*S	**Sn**	**07 14 46.7**	**+0.1**
LONE3				IAML		07 14 48.6	
	comp=Z,27nm,1.1s						
HATOM	**Hato Mayor del**	**1.71**	**139**	⇑*e*Pg	**Pb**	**07 14 25.5**	**-0.3**
HATOM				⇓*e*Sg	**Sg**	**07 14 49.5**	**+0.4**
HATOM				IAML		07 15 06.5	
	comp=N,28nm,3.6s						
LODU1	**El Espartillar**	**1.94**	**207**	*i* P	**Pb**	**07 14 29.5**	**-0.2**
LODU1				IAML		07 14 57.9	
	comp=Z,48nm,2.0s						
JIDR	**Jimani**	**2.01**	**218**	⇑*e*Pg	**Pb**	**07 14 30.0**	**-0.9**
JIDR				⇑*e*Sg	**Sb**	**07 14 56.3**	**+0.1**
JIDR				IAML		07 15 17.8	
	comp=N,31nm,2.9s						
LOBH	**Bahia de las A**	**2.45**	**205**	*i* P	**Pn**	**07 14 34.4**	**0.0**

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*MOS **03** 07:16:53.9±0.9, 48.°98N×104.°33E, h10km, mb4.1/12, Error ellipse: s-maj=9.6km s-min=6.7km az=118.3*
MOS Felt (III-IV) at Zakamensk; (II) at Angarsk, Irkutsk.
*IDC **03** 07:16:54.3±0.7, 49.°03N×104.°40E, h0km, mb4.0/12, mbtmp3.9/16, ML2.9/3, MS3.3/2, Error ellipse: s-maj=15.8km s-min=9.1km az=48.0*
*BYKL **03** 07:16:54.2±0.4, 48.°99N×104.°34E, FELT I=III-IV MSK at Zakamensk, II at Irkutsk, Angarsk*
*NEIC **03** 07:16:56.0±1.3, 48.°98N±0.°07×104.°3E±0.°1, h10km±1km, mb4.4/33, Error ellipse: s-maj=16.1km s-min=8.8km az=229.0*
ISC 03 07:16:55.6±0.4**, 49.°03N**±0.°03×**104.°40E**±0.°02**, h10**km**, n136,** σ**2.s24**/182**, mb4.2**/29**, 9C-1D, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAK	**Zakamensk**	**1.53**	**332**	*e*PN	**Pn**	**07 17 22.5**	**-0.6**
ZAK				*e*		07 17 43.1	
ZAK				pmax	pmax		
	comp=Z,2µm,0.2s						
ZAK				smax	smax		
	comp=N,4µm,0.3s						
ZAK	**Zakamensk**	**1.53**	**332**	⇑*i*Pg	**Pb**	**07 17 22.7**	**-1.5**
ZAK				Pmax		07 17 23.3	
	comp=N,2µm,0.2s						
ZAK				*e*		07 17 43.3	
ZAK				*e*Sg	**Sb**	**07 17 43.5**	**-0.2**
ZAK				max		07 17 48.3	
	comp=N,5µm,0.2s						
SONM	**Songino Array**	**1.79**	**131**	Pg	**Pb**	**07 17 27.1**	**-1.4**
	comp=N,214nm,0.3s,baz=311,slow=18,SNR=3272						
SONM				Lg	Lg	07 17 50.1	
	comp=N,1µm,0.3s,baz=307,slow=31,SNR=36						
SONM	**Songino Array**	**1.79**	**131**	*e*PN	**Pb**	**07 17 26.7**	**-1.8**
SONM				pmax	pmax		
	comp=Z,214nm,0.3s						
I34MN	**SONGINO INFRAS**	**1.82**	**132**	Pg	**Pb**	**07 17 28.1**	**-0.9**
	baz=329,slow=18						
I34MN				Lg	Lg	07 17 53.8	
	baz=18,slow=15						
I34MN				I	I	07 26 50.0	
	baz=312,slow=323,SNR=0.3						
ULN	**Ulaanbaatar**	**2.12**	**123**		**Pb**	**07 17 31.5**	**-2.7**
ULN	**Ulaanbaatar**	**2.12**	**123**	*ce*PN	**Pn**	**07 17 31.3**	**+0.1**
ULN				pmax	pmax		
	comp=Z,459nm,0.8s						
ULN	**Ulaanbaatar**	**2.12**	**123**	⇑*i*Pn	**Pb**	**07 17 31.4**	**-2.7**
ULN				*e*Pg	**Pb**	**07 17 33.1**	**-1.0**
ULN				Pmax		07 17 35.1	
	comp=Z,752nm,0.3s						
ULN				*e*Sg	**Sg**	**07 18 01.1**	**-2.5**
ULN				Smax		07 18 05.2	
	comp=Z,3µm,0.4s						
TLY	**Talaya**	**2.69**	**350**	Pn	**Pn**	**07 17 39.7**	**+0.7**
	comp=Z,127nm,0.3s,baz=170,slow=13						
TLY				Lg	Lg	07 18 19.6	
	baz=221,slow=20						
TLY	**Talaya**	**2.69**	**350**	⇑*i*PN	**Pn**	**07 17 39.8**	**+0.8**
TLY				*e*		07 17 43.0	
TLY				*e*		07 18 19.4	
TLY				pmax	pmax		
	comp=Z,302nm,0.5s						
TLY				smax	smax		
	comp=N,4µm,0.5s						
TLY	**Talaya**	**2.69**	**350**	*e*Pn	**Pn**	**07 17 39.9**	**+0.9**
TLY				*e*Pg	**Pb**	**07 17 43.1**	**-0.8**
TLY				Pmax		07 17 44.8	
	comp=N,167nm,0.2s						
TLY				*e*Sg	**Sb**	**07 18 18.5**	**+1.5**
TLY				Smax		07 18 23.1	
	comp=N,4µm,0.5s						
IVK	**Ivanovka**	**2.77**	**0**	*e*PN	**Pb**	**07 17 45.8**	**+0.6**
IVK				*e*		07 18 22.1	
IVK				pmax	pmax		
	comp=Z,648nm,0.5s						
IVK				smax	smax		
	comp=E,3µm,0.5s						
IVK	**Ivanovka**	**2.77**	**0**	*e*Pn	**Pn**	**07 17 41.2**	**+1.2**
IVK				*e*		07 17 43.3	
IVK				*e*Pg	**Pb**	**07 17 45.3**	**+0.1**
IVK				Pmax		07 17 55.3	
	comp=E,312nm,0.7s						
IVK				*e*		07 18 03.8	
IVK				*e*Sn	**Sn**	**07 18 13.5**	**0.0**
IVK				*e*Sg	**Sb**	**07 18 21.8**	**+2.6**
IVK				Smax		07 18 22.8	
	comp=E,2µm,0.6s						
IVK				*e*		07 18 23.5	
LSTR	**Listvyanka**	**2.85**	**5**	*e*PN	**Pg**	**07 17 48.2**	**-2.0**
LSTR				*e*		07 18 25.3	
LSTR				pmax	pmax		
	comp=Z,378nm,0.5s						
LSTR				smax	smax		
	comp=E,2µm,0.5s						
LSTR	**Listvyanka**	**2.85**	**5**	*e*Pn	**Pn**	**07 17 41.2**	**+0.1**
LSTR				*e*Pg	**Pb**	**07 17 46.1**	**-0.5**
LSTR				*e*		07 17 54.5	
LSTR				max		07 17 54.5	
	comp=E,252nm,0.8s						
LSTR				*e*		07 18 12.0	
LSTR				*e*Sn	**Sn**	**07 18 15.7**	**+0.2**
LSTR				*e*Sg	**Sb**	**07 18 24.2**	**+2.7**
LSTR				Smax		07 18 34.1	
	comp=E,2µm,1.0s						
VBR	**Suhoy Ruchey**	**2.95**	**20**	*e*Pg	**Pb**	**07 17 48.2**	**-0.1**
VBR				*e*Sg	**Sg**	**07 18 28.5**	**-1.9**
HRMR	**Khuramsha**	**3.07**	**31**	*e*Pn	**Pn**	**07 17 44.9**	**+0.8**
HRMR				*e*Pg	**Pb**	**07 17 49.7**	**-0.6**
HRMR				Pmax		07 17 56.4	
	comp=E,657nm,0.5s						
HRMR				*e*Sg	**Sg**	**07 18 31.9**	**-2.2**
HRMR				Smax		07 18 43.0	
	comp=E,3µm,0.7s						
BGT	**Bolshoye Golou**	**3.08**	**12**	*e*PN	**Pb**	**07 17 50.8**	**+0.3**
BGT				*e*		07 18 31.4	
BGT				pmax	pmax		
	comp=Z,197nm,0.3s						
BGT				smax	smax		
	comp=E,2µm,0.3s						
BGT	**Bolshoye Golou**	**3.08**	**12**	*e*Pn	**Pn**	**07 17 45.1**	**+0.8**
BGT				*e*Pg	**Pb**	**07 17 50.3**	**-0.2**
BGT				Pmax		07 17 54.5	
	comp=E,193nm,0.3s						
BGT				*e*Sg	**Sg**	**07 18 32.0**	**-2.6**
BGT				Smax		07 18 35.3	
	comp=E,2µm,0.3s						
ARS	**Arshan**	**3.15**	**337**	*e*PN	**Pb**	**07 17 51.9**	**+0.1**
ARS				*e*		07 18 32.9	
ARS				pmax	pmax		
	comp=Z,408nm,0.5s						
ARS				smax	smax		
	comp=E,4µm,0.5s						
ARS	**Arshan**	**3.15**	**337**	*e*Pn	**Pn**	**07 17 46.0**	**+0.6**
ARS				*e*Pg	**Pb**	**07 17 51.4**	**-0.4**
ARS				*e*		07 17 55.8	
ARS				max		07 17 57.1	
	comp=E,329nm,0.5s						
ARS				*e*Sg	**Sg**	**07 18 33.9**	**-3.0**
ARS				*e*SgSg	**SbSb**	**07 18 42.5**	**+7.1**
ARS				max		07 18 44.7	
	comp=E,3µm,0.7s						
IRK	**Irkutsk**	**3.22**	**359**	*e*PN	**Pn**	**07 17 44.8**	**-1.3**
IRK				*e*		07 17 53.2	
IRK				*e*		07 18 35.3	
IRK				pmax	pmax		
	comp=Z,468nm,0.2s						
IRK				smax	smax		
	comp=E,6µm,0.6s						
IRK	**Irkutsk**	**3.22**	**359**	*e*Pn	**Pn**	**07 17 46.9**	**+0.8**
IRK				*e*Pg	**Pb**	**07 17 53.3**	**+0.6**
IRK				Pmax		07 17 54.2	
	comp=E,459nm,0.2s						
IRK				*e*Sg	**Sb**	**07 18 35.2**	**+3.2**
IRK				Smax		07 18 38.2	
	comp=E,6µm,0.6s						
IRK				*e*SgSg	**Sg**	**07 18 41.5**	**+2.7**
KAB	**Kabansk**	**3.34**	**25**	*e*PN	**Pb**	**07 17 56.2**	**+1.3**
KAB				*e*		07 18 42.1	
KAB				pmax	pmax		
	comp=Z,717nm,0.5s						
KAB				smax	smax		
	comp=N,5µm,0.5s						
KAB	**Kabansk**	**3.34**	**25**	*e*Pg	**Pb**	**07 17 54.8**	**-0.1**
KAB				Pmax		07 18 00.5	
	comp=N,630nm,0.5s						
KAB				*e*Sg	**Sg**	**07 18 40.0**	**-2.9**
KAB				Smax		07 18 50.5	
	comp=N,4µm,0.6s						
FFNB	**Fofonovo**	**3.37**	**26**	*e*Pn	**Pn**	**07 17 49.3**	**+1.0**
FFNB				*e*Pg	**Pb**	**07 17 54.9**	**-0.5**
FFNB				*e*Sg	**Sb**	**07 18 40.4**	**+3.9**
MOY	**Mondy**	**3.42**	**322**	*e*PN	**Pb**	**07 17 55.2**	**-1.1**
MOY				*e*		07 18 42.3	
MOY	**Mondy**	**3.42**	**322**	*e*Pn	**Pn**	**07 17 49.7**	**+0.6**
MOY				⇓*i*Pg	**Pb**	**07 17 55.3**	**-1.1**
MOY				*e*		07 18 00.0	
MOY				max		07 18 01.2	
	comp=N,374nm,0.4s						
MOY				*e*Sg	**Sb**	**07 18 40.0**	**+2.0**
MOY				Smax		07 18 54.8	
	comp=N,2µm,1.1s						
UUDB	**Ulan-Yde**	**3.52**	**35**	*e*Pn	**Pn**	**07 17 51.6**	**+1.3**
UUDB				*e*Pg	**Pb**	**07 17 56.7**	**-1.2**
UUDB				Pmax		07 18 04.3	
	comp=N,413nm,0.5s						
UUDB				*e*Sg	**Sb**	**07 18 44.8**	**+4.1**
UUDB				Smax		07 18 53.4	
	comp=N,1µm,0.7s						
TRG	**Tyrgan**	**3.93**	**18**	*e*PN	**Pb**	**07 18 06.9**	**+2.0**
TRG				*e*		07 18 59.7	
TRG				pmax	pmax		
	comp=Z,236nm,0.5s						
TRG				smax	smax		
	comp=N,961nm,0.5s						
TRG	**Tyrgan**	**3.93**	**18**	*e*Pn	**Pn**	**07 17 56.5**	**+0.5**
TRG				*e*Pg	**Pb**	**07 18 04.7**	**-0.2**
TRG				Pmax		07 18 12.2	
	comp=N,92nm,0.3s						
TRG				*e*		07 18 43.5	
TRG				*e*Sg	**Sg**	**07 18 57.4**	**-4.3**
TRG				Smax		07 19 04.4	
	comp=N,707nm,0.3s						
ZRHB	**Zarechye**	**3.93**	**25**	*e*Pn	**Pn**	**07 17 55.9**	**-0.1**
ZRHB				*e*Pg	**Pb**	**07 18 05.0**	**0.0**
ZRHB				Pmax		07 18 11.7	
	comp=N,826nm,0.7s						
ZRHB				*e*Sg	**Sg**	**07 18 58.1**	**-3.7**
ZRHB				Smax		07 19 13.4	
	comp=N,5µm,1.0s						
KELR	**Kotokel**	**4.40**	**31**	*e*Pg	**Pb**	**07 18 13.5**	**+0.6**
KELR				*e*Sg	**Sg**	**07 19 12.0**	**-4.7**
ORL	**Orlik**	**4.56**	**322**	*e*PN	**Pb**	**07 18 15.8**	**+0.1**
ORL				*e*		07 19 15.6	
ORL				pmax	pmax		
	comp=Z,88nm,0.5s						
ORL				smax	smax		
	comp=N,689nm,0.9s						
ORL	**Orlik**	**4.56**	**322**	*e*Pn	**Pn**	**07 18 05.2**	**+0.5**
ORL				*e*Pg	**Pb**	**07 18 16.1**	**+0.4**
ORL				Pmax		07 18 26.0	
	comp=N,74nm,0.5s						
ORL				*e*Sn	**Sn**	**07 18 53.8**	**-4.0**
ORL				*e*Sg	**Sg**	**07 19 15.6**	**-6.3**
ORL				Smax		07 19 21.0	
	comp=N,683nm,1.0s						
GORB	**Goryachinsk**	**4.66**	**30**	*e*Pn	**Pn**	**07 18 06.8**	**+0.9**
GORB				*e*Pg	**Pb**	**07 18 18.3**	**+1.0**
GORB				*e*Sn	**Sn**	**07 18 58.4**	**-1.6**
GORB				*e*Sg	**Sg**	**07 19 19.7**	**-5.2**
KNGR	**Kungurtug, Tuv**	**4.73**	**292**	*i* PN	**Pn**	**07 18 08.2**	**+1.2**
KNGR	**Kungurtug, Tuv**	**4.73**	**292**	*e*Pg	**Pb**	**07 18 18.9**	**+0.3**
KNGR				*e*Sg	**Sg**	**07 19 21.0**	**-6.3**
UZR	**Uzur**	**4.78**	**25**	*e*Pn	**Pn**	**07 18 08.4**	**+0.8**
UZR				*e*Pg	**Pb**	**07 18 20.1**	**+0.7**
UZR				Pmax		07 18 25.3	
	comp=N,97nm,0.4s						
UZR				*e*Sg	**Sg**	**07 19 23.7**	**-5.3**
UZR				Smax		07 19 31.5	
	comp=N,484nm,0.7s						
OGRR	**Ongureny**	**5.03**	**22**	*e*PN	**Pn**	**07 18 12.4**	**+1.3**
OGRR				*e*		07 18 27.0	
OGRR				*e*		07 19 32.7	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OGRR				pmax	pmax		
	comp=Z,66nm,1.2s						
OGRR				smax	smax		
	comp=E,395nm,1.1s						
OGRR	Ongureny	5.03	22	*e*Pn	Pn	07 18 12.2	+1.1
OGRR				max		07 18 35.5	
	comp=E,67nm,0.9s						
OGRR				*e*Sn	Sn	07 19 08.2	-1.0
OGRR				*e*Sg	Sg	07 19 32.4	-4.6
OGRR				Smax		07 19 36.4	
	comp=E,396nm,0.6s						
KPC	Khapcheranga	5.25	80	*e*Pn	Pn	07 18 13.1	-1.1
KPC				*e*Pg	Pb	07 18 29.0	+1.5
KPC				*e*		07 18 34.6	
KPC				max		07 18 37.5	
	comp=E,35nm,0.4s						
KPC				*e*Sn	Sn	07 19 13.1	-1.7
KPC				*e*Sg	Sg	07 19 37.7	-6.5
KPC				Smax		07 19 42.4	
	comp=E,2µm,1.2s						
SYVR	Suvo	5.81	35	*e*Pn	Pn	07 18 22.5	+0.8
SYVR				*e*Pg	Pb	07 18 39.0	+2.1
SYVR				Pmax		07 18 47.4	
	comp=E,80nm,0.5s						
SYVR				*e*Sn	Sn	07 19 26.5	-1.8
SYVR				*e*Sg	Sg	07 19 56.2	-5.7
SYVR				Smax		07 20 08.8	
	comp=E,723nm,1.4s						
CIT	Chita	6.55	59	*e*Sg	Sg	07 20 18.8	-7.0
CIT				Smax		07 20 25.3	
	comp=E,716nm,1.1s						
YLYR	Ulyunkhan	7.19	33	*e*Pn	Pn	07 18 41.4	+0.8
YLYR				*e*Pg	Pb	07 19 04.8	+4.4
YLYR				Pmax		07 19 06.7	
	comp=E,25nm,0.6s						
YLYR				*e*Sg	Sg	07 20 39.5	-6.5
YLYR				Smax		07 20 55.8	
	comp=E,263nm,1.6s						
ARDR	Aradan	7.80	301	*e*Pn	Pn	07 18 47.5	-1.7
ARDR				*e*Pg	Pb	07 19 14.4	+3.5
ARDR				*e*Sg	Sg	07 20 55.5	-10
KMO	Kumora	8.02	29	*e*Pg	Pb	07 19 20.3	+5.8
KMO				Pmax		07 19 23.6	
	comp=E,31nm,0.4s						
KMO				*e*Sg	Sg	07 21 04.9	-7.8
KMO				Smax		07 21 43.3	
	comp=E,319nm,1.1s						
UKT	Uakit	8.59	38	*e*Pn	Pn	07 18 59.5	-0.4
UKT				*e*Pg	Pg	07 19 30.7	-9.1
UKT				Pmax		07 19 32.3	
	comp=E,16nm,0.8s						
UKT				*e*Sg	Sg	07 21 22.8	-8.1
UKT				Smax		07 21 38.7	
	comp=E,206nm,1.8s						
BTO2	Baotou	9.15	153	*e*P	Pn	07 19 12.2	+4.5
BTO2				S	Sn	07 20 57.9	+7.1
BTO2				pmax	pmax		
	comp=Z,11nm,0.5s						
BTO2				pmax	pmax		
	comp=Z,240nm,4.5s						
BTO2				LR	LR		
	comp=N,640nm,2.4s						
BTO2				LR	LR		
	comp=E,670nm,1.8s						
BTO2				LR	LR		
	comp=Z,270nm,4.6s						
GTA2	Gaotai	10.11	201	*e*P	Pn	07 19 21.6	+0.8
GTA2				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NLYR	Nelyaty	10.12	38	*e*Pn	Pn	07 19 21.3	+0.4
NLYR				*e*Pg		07 19 57.8	
NLYR				Pmax		07 19 59.6	
	comp=Z,19nm,0.9s						
NLYR				*e*Sg	Sn	07 22 09.0	+55
NLYR				Smax		07 22 22.6	
	comp=Z,528nm,1.6s						
TUP	Tupik	11.04	55	*e*Pn	Pn	07 19 33.2	-0.3
TUP				*e*Pg		07 20 15.1	
TUP				Pmax		07 20 17.4	
	comp=Z,7.0nm,0.6s						
TUP				*e*Sg		07 22 38.6	
TUP				Smax		07 22 47.2	
	comp=Z,398nm,1.4s						
DGZ	Jazzator, Alta	11.09	280	*i* P	Pn	07 19 35.0	+0.7
BJT	Baijiatuau	12.30	133	Pn	Pn	07 19 51.0	+0.3
BJT	Baijiatuau	12.30	133	P	Pn	07 19 51.0	+0.3
ZAA0	Zalesovo Array	13.14	299	Pn	Pn	07 20 04.1	+2.0
ZALV	Zalesovo Beam	13.14	299	Pn	Pn	07 20 03.5	+1.4
	comp=Z,0.4nm,0.3s,baz=77,slow=16,SNR=6.3						
ZALV				Lg	Lg	07 23 35.2	
	comp=Z,0.1nm,0.3s,baz=124,slow=22,SNR=3.6						
	comp=Z,0.3nm,0.4s						
ZALV	Zalesovo Beam	13.14	299		Pn	07 20 02.1	0.0
MK31	Makanchi Array	14.99	270	*ce*P	Pn	07 20 28.0	+0.6
MKAR	Makanchi Array	14.99	270	Pn	Pn	07 20 27.8	+0.4
	baz=86,slow=12,SNR=4.8						
MKAR				Sn	Sn	07 23 13.1	-0.3
	comp=Z,0.1nm,0.3s,baz=70,slow=17,SNR=3.5						
MKAR				Lg	Lg	07 24 41.8	
	comp=Z,0.1nm,0.3s,baz=94,slow=23,SNR=7.4						
	comp=Z,0.5nm,0.7s						
MKAR	Makanchi Array	14.99	270	*ce*P	Pn	07 20 28.2	+0.8
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MAKZ	Makanchi	15.19	270		Pn	07 20 30.2	+0.2
MAKZ	Makanchi	15.19	270	P	Pn	07 20 30.2	+0.2
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KURK	Kurchatov	16.68	286		Pn	07 20 47.8	-1.4
KURK	Kurchatov	16.68	286	P	Pn	07 20 47.8	-1.4
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURBB	Kurchatov Arra	16.75	285	Pn	Pn	07 20 49.2	-0.8
	comp=Z,0.1nm,0.3s,baz=82,slow=12,SNR=8.5						
KURBB				Lg	Lg	07 25 38.6	
	baz=81,slow=30,SNR=5.8						
	comp=Z,0.9nm,0.5s						
KLR	Kul'dur	17.87	79	Lg	Lg	07 26 17.2	
	comp=Z,0.1nm,0.3s,baz=191,slow=20,SNR=7.2						
KDJ	Kajisay	20.20	260		Pn	07 21 30.3	-2.1
KDJ	Kajisay	20.20	260	P	Pn	07 21 30.3	-2.1
KDJ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KSRS	Korea Array	20.59	115	P	Pn	07 21 38.6	+1.9
	comp=Z,5.4nm,0.6s,baz=314,slow=8.6,SNR=13						
BOOM	Boomskoye usch	20.83	262		P	07 21 35.9	-1.4
BOOM	Boomskoye usch	20.83	262	P	P	07 21 35.9	-1.4
BOOM				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BVAR	Borovoye Array	21.64	294	P	P	07 21 45.5	-0.2
	comp=Z,3.7nm,0.4s,baz=90,slow=10,SNR=29						
	comp=Z,3.7nm,0.4s						
BORK	Borovoye	21.68	294	P	P	07 21 45.3	-0.9
BORK				IAmb	IAmb	07 21 50.7	
	comp=Z,8.1nm,0.8s						
BORK	Borovoye	21.68	294	*ce*P	P	07 21 46.6	+0.4
BORK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
AAK	Ala-Archa	21.70	264	P	P	07 21 46.8	0.0
	comp=Z,1.6nm,0.4s,baz=132,slow=10.0,SNR=6.1						
	comp=Z,1.6nm,0.4s						
AAK	Ala-Archa	21.70	264	IAmb	IAmb	07 21 53.8	
	comp=Z,3.0nm,1.0s						
AAK	Ala-Archa	21.70	264	*i* P	P	07 21 46.4	-0.4
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NRIK	Noril'sk	21.96	344	P	P	07 21 48.9	-0.2
	comp=Z,2.7nm,0.5s,baz=134,slow=12,SNR=4.5						
	comp=Z,2.7nm,0.5s						
NRIK	Noril'sk	21.96	344		P	07 21 48.2	-0.9
NRIK				IAmb	IAmb	07 21 57.7	
	comp=Z,26nm,1.4s						
NRIK	Noril'sk	21.96	344	*e*P	P	07 21 51.0	+1.9
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ARSB	Arslanbob	23.32	263	P	P	07 22 01.5	-2.3
ARSB				IAmb	IAmb	07 22 30.5	
	comp=Z,9.5nm,1.1s						
ARSB	Arslanbob	23.32	263	P	P	07 22 01.5	-2.3
ARSB				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KKAR	Karatay Array	24.11	269	P	P	07 22 09.4	-1.9
KKAR	Karatay Array	24.11	269	P	P	07 22 09.4	-1.9
EVN	Everest	25.03	219	P	P	07 22 18.0	-2.4
TIXI	Tiksi	25.33	18	*i* P	P	07 22 21.4	-0.6
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.4s						
CHGR	Chuyangaron	27.23	261	*i* P	P	07 22 40.7	+1.1
ARTI	Arti	28.37	303	P	P	07 22 49.1	-0.5
	comp=Z,2.8nm,0.4s,baz=62,slow=4.4,SNR=5.8						
	comp=Z,2.8nm,0.4s						
ARTI	Arti	28.37	303	IAmb	IAmb	07 22 50.4	
	comp=Z,6.5nm,0.6s						
ARTI	Arti	28.37	303*c*	*i*P	P	07 22 49.4	-0.2
ARTI				S	S	07 27 35.1	-1.0
ARTI				SS	SnSn	07 28 52.9	-0.4
ARTI				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AB31	Akbulak array	28.77	288	P	P	07 22 53.1	-0.1
ABKAR	Akbulak array	28.77	288	P	P	07 22 52.5	-0.7
SEY	Seymchan	29.42	44	*ce*P	P	07 22 59.3	+0.5
SEY				pmax	pmax		
	comp=Z,1.0nm,1.0s						
AKTO	Aktyubinsk	29.64	291	P	P	07 23 00.3	-0.6
	comp=Z,1.5nm,0.6s,baz=98,slow=7.0,SNR=4.2						
	comp=Z,1.5nm,0.6s						
CMAR	Chiang Mai Arr	30.82	190	LR	LR	07 36 50.0	
	comp=Z,34nm,19.0s,baz=355,slow=39						
BELG	Belogornoye	35.32	298	P	P	07 23 50.4	-0.2
	comp=Z,7.3nm,0.8s,baz=106,slow=7.7,SNR=5.2						
	comp=Z,7.3nm,0.8s						
BELG	Belogornoye	35.32	298	*i* P	P	07 23 50.8	+0.3
BELG				pmax	pmax		
	comp=Z,5.0nm,2.9s						
FINES	FINESS Array B	43.59	317	P	P	07 24 59.2	-0.1
	comp=Z,1.2nm,0.6s,baz=94,slow=7.6,SNR=6.4						
	comp=Z,1.2nm,0.6s						
FINES	FINESS Array B	43.59	317	*i* P	P	07 25 00.6	+1.2
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	Malin Array Be	46.52	302	P	P	07 25 22.7	-0.1
	comp=Z,1.0nm,0.5s,baz=57,slow=8.7,SNR=2.6						
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	46.52	302	IAmb	IAmb	07 25 57.4	
	comp=Z,4.1nm,1.2s						
C18K	Utukok River	46.99	30	P	P	07 25 27.4	+1.1
C18K				IAmb	IAmb	07 25 32.4	
	comp=Z,3.4nm,0.9s						
C19K	Lookout Ridge	47.31	29	P	P	07 25 30.6	+1.7
C19K				IAmb	IAmb	07 26 11.5	
	comp=Z,5.5nm,1.4s						
D19K	Kuna River	48.07	29	P	P	07 25 36.1	+1.4
D20K	Etivluk River	48.44	29	IAmb	IAmb	07 25 43.7	
	comp=Z,5.7nm,1.0s						
B22K	Teshekpuk Lake	48.59	26	P	P	07 25 39.8	+1.3
E19K	Redstone River	48.87	30	P	P	07 25 42.3	+1.4
E19K				IAmb	IAmb	07 25 47.0	
	comp=Z,3.5nm,0.8s						
H18K	Honhosa River	49.66	33	P	P	07 25 47.7	+0.8
H18K				IAmb	IAmb	07 25 51.0	
	comp=Z,1.9nm,1.0s						
J16K	Anvik River	49.78	36	P	P	07 25 49.5	+1.7
J16K				IAmb	IAmb	07 26 21.5	
	comp=Z,3.8nm,1.2s						
IMAR	Indian Mountai	50.83	31	P	P	07 25 56.8	+1.1
E24K	Your Creek	51.31	27	P	P	07 26 00.8	+1.3
E24K				IAmb	IAmb	07 26 05.1	
	comp=Z,3.0nm,0.9s						
H21K	Melozitna Rive	51.34	31	P	P	07 26 00.3	+0.8
H21K				IAmb	IAmb	07 26 05.5	
	comp=Z,5.7nm,1.1s						
BMAR	Burnt Mountain	52.88	27	P	P	07 26 12.2	+1.1
M20K	Styx River	53.43	35	P	P	07 26 16.9	+1.6
ILAR	Eielson Array	53.86	30	P	P	07 26 19.2	+1.0
	comp=Z,2.0nm,0.9s,baz=303,slow=4.2,SNR=16						
	comp=Z,2.0nm,0.9s						
ILAR	Eielson Array	53.86	30	*e*P	P	07 26 19.1	+0.8
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
E29M	Blow River	54.13	24	P	P	07 26 21.5	+1.4
E29M				IAmb	IAmb	07 26 22.2	
	comp=Z,3.4nm,0.9s						
H27K	Steamboat Moun	54.59	27	P	P	07 26 25.0	+1.4
H27K				IAmb	IAmb	07 26 29.9	
	comp=Z,6.0nm,1.4s						
DHY	Denali Highway	54.78	32	P	P	07 26 25.9	+0.7
CLL	Collm	54.83	310	*e*P	P	07 26 26.0	+0.5
CLL	Collm	54.83	310	*e*P	P	07 26 26.0	+0.5
RIDG	Independent Ri	55.21	30	P	P	07 26 28.4	+0.3
F30M	Barrier River	55.24	24	P	P	07 26 29.1	+0.9
F30M				IAmb	IAmb	07 26 34.0	
	comp=Z,5.6nm,1.1s						
G30M	tAoh Zraii Nji	55.58	25	P	P	07 26 31.9	+1.1
G30M				IAmb	IAmb	07 26 36.3	
	comp=Z,6.4nm,1.3s						
LEM	Lembang	55.70	176	LR	LR	07 50 34.6	
	comp=Z,34nm,20.0s,baz=179,slow=36						
G31M	Satah River	56.15	24	P	P	07 26 35.1	+0.4
BCAR	Beaver Creek A	56.68	30	P	P	07 26 39.7	+1.0
H31M	Peel River	56.96	25	P	P	07 26 40.9	+0.3
H31M				IAmb	IAmb	07 26 46.3	
	comp=Z,5.8nm,1.2s						
BMRM	Bremner River	57.16	33	P	P	07 26 42.6	+0.5
BORG	Borgarnes	58.98	336	*i* P	P	07 26 56.1	+1.4
YKA	Yellowknife Ar	64.57	19	P	P	07 27 32.1	-0.2
	comp=Z,0.4nm,0.7s,baz=332,slow=7.0,SNR=9.3						
	comp=Z,0.4nm,0.7s						
YKA	Yellowknife Ar	64.57	19	*e*P	P	07 27 32.5	+0.1
WRA	Warramunga Arr	73.66	151	P	P	07 28 30.9	+1.7
	comp=Z,0.7nm,0.8s,baz=345,slow=6.8,SNR=6.0						
	comp=Z,0.7nm,0.8s						
WRA	Warramunga Arr	73.66	151	*i* P	P	07 28 29.8	+0.5
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR	Alice Springs	77.02	152	P	P	07 28 48.5	+0.1
	comp=Z,0.7nm,0.7s,baz=345,slow=5.8,SNR=7.1						
	comp=Z,0.7nm,0.7s						

IDC 03 07:26:21.8±11.0, 18°.52S×168°.94E, h0^{km}, mb4.1/3, mbtmp4.0/4, ML3.3/1, MS3.3/2, Error ellipse: s-maj=208.7km s-min=49.2km az=93.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.24	213	Pn	Pn	07 27 27.5	-0.3
	1.8nm,0.3s,baz=149,slow=9.9,SNR=42						
DZM				Sn	Sn	07 28 18.8	+0.8
	1.4nm,0.3s,baz=301,slow=19,SNR=1.4						
	5.1nm,0.3s						
CTA	Charters Tower	21.46	262	LR	LR	07 37 45.4	
	comp=Z,41nm,20.8s,baz=60,slow=32						
STKA	Stephens Creek	28.00	236	P	P	07 32 15.0	+0.5
	1.3nm,0.5s,baz=90,slow=8.1,SNR=3.1						
	1.3nm,0.5s						
WRA	Warramunga Arr	32.67	262	P	P	07 32 55.6	-0.4
	0.8nm,0.8s,baz=90,slow=7.2,SNR=6.6						
	0.8nm,0.8s						
ASAR	Alice Springs	33.03	255	P	P	07 32 59.1	0.0
	5.6nm,0.7s,baz=84,slow=9.0,SNR=31						
	5.6nm,0.7s						
TXAR	Lajitas Array	96.67	61	LR	LR	08 20 38.9	
	comp=Z,31nm,18.2s,baz=358,slow=34						

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*IDC **03** 07:38:50.3±3.3, 5°.22S×129°.21E, h201^{km}±43^{km}, mb3.6/3, mbtmp4.3/7, MS3.0/1, Error ellipse: s-maj=79.4km s-min=16.5km az=84.0*
*NEIC **03** 07:38:50.3±2.0, 5°.30S±0°.04×129°.3E±0°.2, h202^{km}±13^{km}, mb4.1/10, Error ellipse: s-maj=24.1km s-min=4.1km az=102.0*
*DJA **03** 07:38:51.3±0.4, 5°S±4°×12°9E±°, h232^{km}±6^{km}, M4.2/18, mB5.6/1, mb4.3/4, MLv4.2/18, Mw(mB)5.1/1*
ISC 03 07:38:49.3±0.7, 5°.32S±0°.05×129°.46E±0°.08, h200^{km}, n29, σ2^{s}23/32, mb3.9/5, Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.91	29	P	Pn	07 39 23.0	+4.5
MSAI	Masohi	2.03	345	P	Pn	07 39 30.3	+2.1
MSAI				S	Sn	07 39 57.3	-1.2
AAI	Ambon	2.05	322	P	Pn	07 39 30.7	+2.3
KRAI	Karang Ratu	2.25	332	P	Pn	07 39 33.5	+2.9
NLAI	Namlea	3.13	311	P	Pn	07 39 45.6	+5.1
SAUI	Saumlaki	3.22	145	Pn	Pn	07 39 43.1	+1.5
SANI	Sanana	4.75	313	P	Pn	07 40 01.5	+0.9
SIJI	Sorong	4.78	22	P	Pn	07 40 02.1	+1.1
	26nm,0.2s,baz=54,slow=14,SNR=37						
SIJI				S	Sn	07 40 53.8	-3.6
	78nm,0.2s,baz=70,slow=24,SNR=25						
SIJI	Sorong	4.78	22	P	Pn	07 40 01.6	+0.7
SWI	Sorong	4.78	22	P	Pn	07 40 00.8	-0.1
MTN	Manton Dam	7.66	168		Pn	07 40 40.2	+2.1
KNRA	Kununurra	10.32	184	Pn	Pn	07 41 14.0	+1.3
FITZ	Fitzroy Crossi	13.24	196	P	Pn	07 41 51.5	+1.7
	2.9nm,0.8s,baz=9.5,slow=12,SNR=2.1						
FITZ				S	S	07 44 12.1	-5.4
	1.3nm,0.3s,baz=86,slow=18,SNR=1.7						
WB0	Warramunga Arr	15.14	162		Pn	07 42 15.4	+2.0
WRA	Warramunga Arr	15.29	162	P	Pn	07 42 16.8	+1.6
	3.5nm,0.3s,baz=331,slow=14,SNR=55						
WRA				S	S	07 45 00.4	-4.7
	1.3nm,0.4s,baz=337,slow=23,SNR=6.4						
WRA	Warramunga Arr	15.29	162	P	Pn	07 42 15.4	+0.2
WB2	Warramunga Arr	15.29	162		P	07 42 17.2	+1.6
WB2				IAmb	IAmb	07 42 53.1	
	comp=Z,14nm,1.2s						
WR8	Warramunga Arr	15.35	162		Pn	07 42 17.6	+1.6
WR8				IAmb	IAmb	07 42 19.7	
	comp=Z,7.5nm,1.0s						
WR0	Warramunga Arr	15.37	162		Pn	07 42 17.7	+1.6
WR0				IAmb	IAmb	07 42 21.1	
	comp=Z,5.0nm,0.7s						
COEN	Coen	16.01	123		Pn	07 42 26.3	+2.5
COEN				IAmb	IAmb	07 42 27.8	
	comp=Z,8.6nm,0.9s						
AS31	Alice Springs	18.74	167		Pn	07 42 56.7	+0.6
ASAR	Alice Springs	18.74	167	P	Pn	07 42 56.5	+0.4
	comp=Z,13nm,0.4s,baz=350,slow=12,SNR=297						
ASAR				S	S	07 46 15.5	-0.5
	comp=Z,2.3nm,0.9s,baz=351,slow=24,SNR=8.6						
GUMO	Guam	24.23	39	LR	LR	07 54 02.1	
	comp=Z,36nm,20.8s,baz=94,slow=38						
EVN	Everest	52.77	311	P	P	07 47 43.8	-1.1
EVN				IAmb	IAmb	07 47 45.7	
	comp=Z,4.3nm,1.4s						
MK31	Makanchi Array	66.53	327	P	P	07 49 17.5	-0.3
MKAR	Makanchi Array	66.53	327	P	P	07 49 17.6	-0.1
	comp=Z,1.1nm,0.4s,baz=114,slow=8.1,SNR=26						
	comp=Z,1.1nm,0.4s						
ZALV	Zalesovo Beam	69.85	334	P	P	07 49 37.5	-0.7
	comp=Z,0.9nm,0.5s,baz=142,slow=4.8,SNR=2.8						
	comp=Z,0.9nm,0.5s						
KURBB	Kurchatov Arra	70.81	328	P	P	07 49 43.5	-0.5
	comp=Z,1.1nm,0.6s,baz=128,slow=4.9,SNR=12						
	comp=Z,1.1nm,0.6s						
KURK	Kurchatov	70.81	329	P	P	07 49 42.6	-1.5
KURK				IAmb	IAmb	07 49 44.5	
	comp=Z,2.3nm,0.8s						

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*CATAC **03** 07:48:26.9±0.5, 15°N±4°×9°3W±°, h77^{km}±4^{km}, M3.0/9, MLv3.0/9, Error ellipse: s-maj=10.2km s-min=3.7km az=34.4, confirmed*
*MEX **03** 07:48:27.2±1.1, 14°.95N×92°.56W, h98^{km}±9^{km}, MD3.7*
*GCG **03** 07:48:28.1±1.1, 15°.04N×92°.47W, h83^{km}±7^{km}, MD3.9, Presumed earthquake*
ISC 03 07:48:24.9±1.3, 14°.89N±0°.05×92°.59W±0°.04, h100^{km}±7^{km}, n33, σ2^{s}08/57, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
THIG		0.31	87	*e*P	Pn	07 48 40.1	+0.5
THIG				*e*S	Sn	07 48 50.0	-0.5
THIG		0.31	87	*i* P	Pn	07 48 40.3	+0.7
THIG				*i* S	Sn	07 48 50.3	-0.3
PATR	El Naranjo	0.41	56	*e*P	Pn	07 48 40.3	-0.1
PATR				*e*S	Sn	07 48 51.2	-0.8
SMCA	Catarina	0.50	94	*i* P	Pn	07 48 41.1	+0.4
SMCA				*i* S	Sn	07 48 52.7	+0.1
PAVE	Pavencul	0.50	53	*e*P	Pn	07 48 41.1	+0.1
PAVE				*e*S	Sn	07 48 52.6	-0.4
CHUJ	Union Juarez	0.51	66	*e*P	Pn	07 48 41.2	+0.1
CHUJ				*e*S	Sn	07 48 53.1	0.0
RTAL	Retalhuleu	0.94	113	*e*P	Pn	07 48 46.5	+1.8
RTAL				*e*S	Sn	07 49 01.0	+1.4
RTAL	Retalhuleu	0.94	113	P	Pn	07 48 46.0	+1.3
RTAL				S	Sn	07 49 00.2	+0.7
PCIG		1.01	323	*e*P	Pn	07 48 46.0	+0.5
PCIG				*e*S	Sn	07 49 00.9	-0.1
QUEO	Labor Ovalle	1.04	91	*i* P	Pn	07 48 48.5	+2.5
HUEH	Huehuetenango	1.13	68	*e*P	Pn	07 48 48.1	+1.1
HUEH				*e*S	Sn	07 49 04.9	+1.2
HUEH	Huehuetenango	1.13	68	P	Pn	07 48 48.0	+0.9
HUEH	Huehuetenango	1.13	68	*i* P	Pn	07 48 48.1	+1.1
HUEH				*i* S	Sn	07 49 03.0	-0.7
STG2	El Palmar, Qui	1.26	111	*i* P	Pn	07 48 45.6	-2.8
STG2				*i* S	Sn	07 49 00.7	-5.5
STG8	El Palmar, Qui	1.27	110	*i* P	Pn	07 48 46.3	-2.4
STG5	El Palmar, Qui	1.29	112	*i* P	Pn	07 48 46.6	-2.2
STG5				*i* S	Sn	07 49 01.2	-5.6
CCIG	Comitan	1.45	17	*e*P	Pn	07 48 51.6	+0.8
CCIG				*e*S	Sn	07 49 08.3	-2.0
CCIG	Comitan	1.45	17	P	Pn	07 48 51.8	+0.9
CCIG				S	Sn	07 49 10.9	+0.6
CCIG	Comitan	1.45	17	*i* P	Pn	07 48 51.7	+0.9
CCIG				*i* S	Sn	07 49 09.5	-0.8
CARR	Arriaga	1.86	317	*e*P	Pn	07 48 59.3	+3.6
CARR				*e*S	Sn	07 49 20.0	+0.9
TGIG		1.95	345	*e*P	Pn	07 48 56.7	-0.2
TGIG				*i* S	Sn	07 49 18.5	-2.8
APG	El Apazote	2.06	87	*i* P	Pn	07 49 01.0	+2.5
UXUV	UXUV	2.84	328	*e*P	Pn	07 49 09.7	+1.1
UXUV				*i* S	Sn	07 49 40.8	-1.4
NUBE	Las Nubes	2.89	109	P	Pn	07 49 11.2	+1.8
NUBE				S	Sn	07 49 45.6	+2.0
CMIG	Matias Romero	3.11	315	*e*P	Pn	07 49 13.9	+1.7
CMIG				*e*S	Sn	07 49 50.1	+1.5
JAYA	Jayaque - finc	3.28	112	S	Sn	07 49 56.2	+3.2
PETF	Flores	3.30	52	*e*P	Pn	07 49 15.6	+0.8
PETF				*e*S	Sn	07 49 49.5	-3.8
PETF	Flores	3.30	52	*i* P	Pn	07 49 15.6	+0.8
HUIG	Huatulco	3.51	285	*e*P	Pn	07 49 17.3	-0.2
HUIG				*i* S	Sn	07 49 52.8	-5.3
SARH	Santa Rosa de	3.70	91	P	Pn	07 49 21.6	+1.4
NEUV	Arroyo Zacate	4.17	313	*e*P	Pn	07 49 28.2	+1.8
SCIG	Sabancuy	4.27	18	*i* P	Pn	07 49 28.5	+0.7
SCIG				*e*S	Sn	07 50 12.4	-4.2
PNIG	Pinotepa	5.54	286	*e*P	Pn	07 49 46.2	+1.2

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*NAO **03** 07:53:57.2±0.0, 74°.07N×10°.84E, h10^{km}, ML3.3*
*BER **03** 07:53:59.5±1.9, 74°.19N×10°.06E, h15^{km}±21^{km}, Mw3.9, ML3.3(NAO), Confirmed Earthquake*
*FCIAR **03** 07:54:00.0, 74°.11N×10°.81E, h10^{km}, station SPA0 has station magnitude of 3.25*
*KOLA **03** 07:54:09.6, 73°.53N×11°.34E, h0^{km}, ML2.0, Error ellipse: s-maj=38.8km s-min=32.7km az=160.0, Norwegian sea*
ISC 03 07:53:56.0±1.9, 74°.25N±0°.06×9°.8E±0°.1, h10^{km}, n32, σ2^{s}26/49, Greenland Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BJO1	Bjornoya	2.51	80	Pg	Pn	07 54 38.5	+1.8
BJO1				Sg	Sn	07 55 08.3	+1.0
BJO1	Bjornoya	2.51	80	*e*P	Pn	07 54 38.3	+1.6
BJO1				*e*S	Sn	07 55 07.5	+0.3
BJO1				IAML		07 55 13.0	
	comp=Z,22nm,0.3s						
BEAR	Bear Island, N	2.51	80	Pg	Pn	07 54 38.3	+1.6
	baz=268,slow=18						
BEAR				Sg	Sn	07 55 08.0	+0.6
	baz=267,slow=22						
HSPB	Hornsund (broa	3.12	25	Pn	Pn	07 54 46.3	+1.3
HSPB				Sn	Sn	07 55 20.8	-1.4
HSPB	Hornsund (broa	3.12	25	*e*P	Pn	07 54 46.1	+1.1
HSPB				*e*S	Sn	07 55 20.3	-1.9
HSPB				IAML		07 55 24.5	
	comp=Z,3.1nm,0.4s						
HSPB	Hornsund (broa	3.12	25	*e*P	Pn	07 54 46.0	+1.0
HSPB				*e*S	Sn	07 55 20.3	-1.9
BRBA	Barentsburg A	3.97	13	Pn	Pn	07 54 58.5	+1.7
BRBA	Barentsburg A	3.97	13	*e*P	Pn	07 54 58.5	+1.7
BRBA				*e*S	Sn	07 55 42.8	-0.6
BRBA				IAML		07 55 44.0	
	comp=Z,9.9nm,0.3s						
BRBB	Barentsburg B	4.01	13	Pn	Pn	07 54 59.0	+1.7
BRBB				Sn	Sn	07 55 43.8	-0.4
BRBB	Barentsburg B	4.01	13	*e*P	Pn	07 54 58.8	+1.6
BRBB				*e*S	Sn	07 55 43.7	-0.4
SPA0	Spitsbergen Ar	4.25	19	Pn	Pn	07 55 02.9	+2.3
	baz=195,slow=16						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPA0				Sn	Sn	07 55 50.5	+0.3
	baz=202,slow=28						
SPA0	Spitsbergen Ar	4.25	19	Pn	Pn	07 55 02.9	+2.3
SPA0				Sn	Sn	07 55 50.5	+0.3
SPA0	Spitsbergen Ar	4.25	19	eP	Pn	07 55 02.7	+2.1
SPA0				eS	Sn	07 55 51.5	+1.3
HOPEN	Hopen	4.47	52	Pn	Pn	07 55 05.5	+1.9
HOPEN				Sn	Sn	07 55 54.3	-1.2
HOPEN	Hopen	4.47	52	eP	Pn	07 55 05.3	+1.7
HOPEN				eS	Sn	07 55 54.6	-0.9
HOPEN				IAML		07 55 59.3	
	comp=Z,16nm,0.3s						
KBS	Kingsbay	4.73	5	Pn	Pn	07 55 07.7	+0.5
KBS	Kingsbay	4.73	5	eP	Pn	07 55 07.6	+0.5
KBS				eS	Sn	07 55 58.9	-3.0
KBS				IAML		07 56 07.5	
	comp=Z,2.9nm,0.7s						
JETT	Jettan, Norway	5.75	140	eP	Pn	07 55 22.4	+1.1
LOF	Lofoten	6.27	167	eP	Pn	07 55 26.2	-2.1
LOF				eS	Sn	07 56 30.8	-9.0
KIF	Kilpisjarvi	6.31	141	eP	Pn	07 55 29.1	+0.3
KTK1	Kautokeino	6.75	134	eP	Pn	07 55 36.4	+1.5
KTK1				eS	Sn	07 56 45.9	-5.8
KTK1				IAML		07 56 57.5	
	comp=Z,1.6nm,0.8s						
ARA0	ARCESS Array S	6.79	126	eP	Pn	07 55 38.4	+2.8
ARA0				eS	Sn	07 56 43.9	-8.9
ARA0				IAML		07 57 01.1	
	comp=Z,2.2nm,1.2s						
ARCES	ARCESS Array B	6.79	126	P	Pn	07 55 38.1	+2.6
ARCES				S	Sn	07 56 44.0	-8.8
FAUS	Fauske	7.13	163	S	Sn	07 56 52.3	-8.8
VADS	Vadso	7.27	115	eP	Pn	07 55 43.3	+1.3
VADS				eS	Sn	07 57 00.3	-4.0
VADS				IAML		07 57 05.4	
	comp=Z,5.7nm,0.5s						
VADS	Vadso	7.27	115	P	Pn	07 55 43.6	+1.7
VADS				S	Sn	07 56 59.2	-5.2
HEF	Hetta	7.34	136	eP	Pn	07 55 45.6	+2.5
SALU	Saltoluokta	7.47	153	eP	Pn	07 55 45.7	+0.9
DAG	Danmarks Havn	7.50	303	eP	Pn	07 55 40.0	-5.2
DAG				eS	Sn	07 56 55.1	-15
DBG	Daneborg	8.09	285	eP	Pn	07 55 46.7	-6.6
DBG				eS	Sn	07 57 06.7	-18
ZFI2	Zemlya Franca-	10.22	34	eP	Pn	07 56 23.8	+1.4
ZFI2				eS	Sn	07 58 11.7	-5.1
OMEGA	Omega	10.23	34	eP	Pn	07 56 23.9	+1.4
OMEGA				eS	Sn	07 58 12.1	-4.8

*ASRS **03** 08:00:11.0±0.7, 53°.61N×87°.89E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 03 08:00:10.2±3.4**, 53°.63N×88°.05E, h0km, mbtmp3.1**/2**, ML2.3**/2**, Error ellipse: s-maj=31.0km s-min=17.8km az=50.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.94	281	I	I	08 14 20.0	
	baz=96,slow=334,SNR=1.3						
ZALV	Zalesovo Beam	1.94	281	Pg	Pn	08 00 45.4	+0.9
	0.7nm,0.3s,baz=94,slow=16,SNR=16						
ZALV				Lg	Lg	08 01 12.2	
	1.2nm,0.3s,baz=105,slow=23,SNR=13						
KURBB	Kurchatov Arra	6.59	247	Pn	Pn	08 01 48.9	+0.7
	baz=61,slow=14,SNR=3.5						
KURBB				Lg	Lg	08 03 36.4	
	baz=63,slow=33,SNR=6.5						
	1.3nm,0.3s						
MKAR	Makanchi Array	7.77	211	Pn	Pn	08 02 05.9	+1.4
	0.1nm,0.3s,baz=26,slow=12,SNR=5.7						
MKAR				Lg	Lg	08 04 14.6	
	baz=32,slow=28,SNR=5.6						
	0.2nm,0.4s						

NOU 03 08:00:53.9, 18°.17S×170°.81E, h124km, MLv3.9/6**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	2.30	279	P	Pn	08 01 31.5	+0.2
DVP	Devils Point	2.54	280	P	Pn	08 01 34.7	+0.4
MARNC	Mare, Loyalty	4.21	218	P	Pn	08 01 56.2	-0.1
OUENC	Ouen Island, N	5.63	221	P	Pn	08 02 16.0	+0.6
DZM	Mont Dzumac	5.65	226	P	Pn	08 02 15.3	-0.4

IDC 03 08:10:06.1±999.0**, 48°.12N×48°.45E, h0km, Error ellipse: s-maj=4014.0km s-min=152.6km az=66.0, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	6.68	66	I	I	08 50 00.0	
	0.1nm,0.6s,baz=254,slow=321,SNR=2.4						
I46RU	ZALESOVO INFRA	23.41	62	I	I	10 34 04.8	
	baz=270,slow=327,SNR=1.4						
I34MN	SONGINO INFRAS	38.01	68	I	I	12 01 40.0	
	baz=293,slow=339,SNR=0.6						

*JMA **03** 08:15:42.7±0.1, 30°.4N±0°.4×131°.1E±0°.7, h32km, MV3.3/31, NEAR TANEGASHIMA ISLAND*

*IDC **03** 08:15:45.4±2.2, 30°.44N×130°.95E, h58km±19km, mb3.6/10, mbtmp3.8/13, ML2.8/3, MS2.9/2, Error ellipse: s-maj=37.5km s-min=14.2km az=87.0*

ISC 03 08:15:42.3±0.9**, 30°.42N**±0°.05×**131°.02E**±0°.09**, h28km, n26,** σ1s.21/28**, mb3.7**/10**, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMTN	Minamitane	0.11	258	iP	Pn	08 15 48.7	+0.5
JMTN				eS	Sb	08 15 53.2	+2.4
JTN	Tanegashima 3	0.24	352	iP	Pn	08 15 49.7	-0.3
JTN				S	Sb	08 15 54.9	+1.8
JYAK	Yakushimahirau	0.48	248	iP	Pn	08 15 53.3	0.0
JYAK				S	Sn	08 16 01.3	+0.5
JKC	Kuchinoerabu	0.71	274	P	Pn	08 15 57.1	+0.6
JTSR	Tashiro 2	0.75	354	iP	Pn	08 15 57.3	+0.2
JTSR				eS	Sn	08 16 08.0	+0.5
JNAR	Kushima--Naru	1.12	11	P	Pb	08 16 03.4	+0.3
JSU	Suzuyama	1.19	336	iP	Pb	08 16 03.9	-0.3
JNKG	Nichinankitago	1.27	14	P	Pb	08 16 05.5	-0.2
JTZ	Takazaki	1.48	2	P	Pb	08 16 08.2	-0.9
JNU	Nakatsue	2.70	357	P	Pn	08 16 25.3	+1.5
	2.6nm,0.3s,baz=237,slow=4.0,SNR=15						
JNU				S	Sn	08 16 58.5	+2.9
	47nm,0.9s,baz=213,slow=21,SNR=7.7						
	9.9nm,0.3s						
JOW	Kunigami	4.31	215	P	Pn	08 16 47.8	+1.7
	0.6nm,0.3s,baz=60,slow=14,SNR=2.0						
JOW				S	Sn	08 17 35.4	0.0
	7.0nm,0.5s,baz=72,slow=20,SNR=1.5						
	5.5nm,0.5s						
KSRS	Korea Array	7.47	341	LR	LR	08 20 45.3	
	comp=Z,63nm,18.8s,baz=155,slow=40						
KLR	Kul'dur	18.80	1	P	P	08 19 59.0	-0.4
	0.1nm,0.3s,baz=199,slow=5.4,SNR=4.1						
	0.6nm,0.5s						
SONM	Songino Array	25.66	320	P	P	08 21 07.8	-2.0
	0.5nm,0.3s,baz=144,slow=10.0,SNR=5.4						
SONM				LR	LR	08 31 20.6	
	comp=Z,28nm,18.2s,baz=17,slow=36						
	0.5nm,0.3s						
H11N2	WAKE ISLAND Hy	34.06	100	T	T	08 58 27.8	
	baz=296,slow=75,SNR=7.4						
H11N1	WAKE ISLAND Hy	34.07	100	T	T	08 58 26.7	
	baz=296,slow=75,SNR=6.3						
H11N3	WAKE ISLAND Hy	34.08	100	T	T	08 58 29.3	
	baz=296,slow=75,SNR=10.0						
ZALV	Zalesovo Beam	40.56	319	P	P	08 23 18.4	-0.6
	0.6nm,0.3s,baz=97,slow=6.0,SNR=3.0						
	0.6nm,0.3s						
MKAR	Makanchi Array	40.75	308	P	P	08 23 20.8	0.0
	0.7nm,0.7s,baz=94,slow=11,SNR=7.1						
	0.7nm,0.7s						
KURBB	Kurchatov Arra	43.66	313	P	P	08 23 43.7	-0.7
	0.6nm,0.4s,baz=92,slow=7.9,SNR=9.2						
	0.6nm,0.4s						
BVAR	Borovoye Array	48.90	316	P	P	08 24 25.6	0.0
	2.5nm,0.4s,baz=97,slow=9.3,SNR=14						
	2.5nm,0.4s						
WRA	Warramunga Arr	50.17	176	P	P	08 24 34.2	-1.3
	0.3nm,0.7s,baz=346,slow=7.8,SNR=1.7						
	0.3nm,0.7s						
ASAR	Alice Springs	53.85	177	P	P	08 25 04.3	+1.5
	0.3nm,0.9s,baz=10,slow=13,SNR=4.2						
	0.3nm,0.9s						
FINES	FINESS Array B	70.44	330	P	P	08 26 53.1	-0.6
	1.5nm,0.3s,baz=68,slow=5.9,SNR=22						
	1.5nm,0.3s						
HFS	Hagfors	76.25	333	P	P	08 27 26.6	-1.4
	1.7nm,0.7s,baz=81,slow=9.2,SNR=6.5						
	1.7nm,0.7s						
NOA	NORSAR Array B	76.64	334	P	P	08 27 29.3	-0.9
	0.3nm,0.4s,baz=52,slow=5.5,SNR=1.3						
	0.3nm,0.4s						

*NEIC **03** 08:23:27.8±1.2, 19°.11N±0°.04×67°.51W±0°.04, h10km±8km, ML3.1/39, Md3.4/6(RSPR), Error ellipse: s-maj=6.9km s-min=3.8km az=218.0*

*OSPL **03** 08:23:27.8±0.4, 19°.12N×67°.78W, h87km±999km, ML2.9, Presumed earthquake*

*SDD **03** 08:23:29.1±2.5, 19°.10N×67°.58W, h19km±173km, MD3.2, ML3.5, MW3.5, Presumed earthquake*

ISC 03 08:23:27.2±1.8**, 19°.11N**±0°.06×**67°.58W**±0°.03**, h10**km±15km**, n31,** σ0s.78/45**, 4C-8D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.72	172		Pb	08 23 41.0	-0.9
IDE					Sb	08 23 51.3	-0.5
AGPR	Aguadilla, PR	0.77	145		Pb	08 23 42.7	0.0
AGPR				IAML		08 23 54.5	
	676nm,0.2s						
AGPR				IAML		08 23 54.8	
	811nm,0.2s						
PRSN	Puerto Rico Se	0.97	155	Pg	Pb	08 23 46.2	+0.1
LSP	Las Mesas	1.04	153		Pb	08 23 47.3	0.0
LSP					Sb	08 23 59.8	-1.1
AOPR	Arecibo Observ	1.09	134		Pn	08 23 48.1	-0.4
AOPR				IAML		08 24 10.0	
	419nm,0.4s						
AOPR				IAML		08 24 12.8	
	800nm,0.4s						
UUPR	Utuado, UPR, P	1.17	136		Pn	08 23 49.5	-0.2
CRPR	Cabo Rojo, PR	1.18	158		Pb	08 23 49.8	+0.1
CRPR					Sg	08 24 06.0	+0.7
CRPR	Cabo Rojo, PR	1.18	158	IAML		08 24 09.3	
	369nm,0.6s						
CRPR				IAML		08 24 11.0	
	396nm,0.5s						
CRPR	Cabo Rojo, PR	1.18	158	⇓ePg	Pb	08 23 49.6	0.0
CRPR				IAML		08 24 10.8	
	comp=N,447nm,0.6s						
CRPR	Cabo Rojo, PR	1.18	158	iP	Pb	08 23 49.8	+0.1
CRPR				eS	Sn	08 24 05.7	-0.2
CRPR				IAML		08 24 08.4	
	comp=Z,394nm,0.6s						
MLPR	Magueyes Islan	1.24	156	Pn	Pn	08 23 50.4	-0.1
MLPR				IAML		08 24 10.6	
	comp=Z,329nm,0.4s						
GBPR	Guanica, Bosqu	1.31	150		Pb	08 23 51.9	+0.1
GBPR					Sg	08 24 09.6	+0.3
ECPR	Experimental S	1.39	124		Pb	08 23 53.1	-0.2
CELP	Cerrillos	1.40	137		Pb	08 23 53.3	-0.1
CELP				IAML		08 24 18.4	
	comp=Z,260nm,0.2s						
CELP				IAML		08 24 19.2	
	comp=Z,405nm,0.2s						
OBIP	Obispado Ponce	1.40	139		Pb	08 23 53.1	-0.4
OBIP					Sb	08 24 11.6	+0.3
OBIP	Obispado Ponce	1.40	139	iP	Pn	08 23 53.0	+0.2
OBIP				eS	Sb	08 24 11.6	+0.3
OBIP				IAML		08 24 18.2	
	comp=Z,129nm,0.2s						
SMDR	Samana, DR	1.54	277		Pb	08 23 55.6	-0.2
SMDR					Sg	08 24 16.4	-0.2
SMDR	Samana, DR	1.54	277	⇑ePg	Pb	08 23 55.2	-0.5
SMDR				⇓eSg	Sg	08 24 16.4	-0.2
SMDR				IAML		08 24 17.8	
	comp=N,216nm,0.4s						
SJG	San Juan	1.68	126		Pn	08 23 55.3	-1.2
SJG				IAML		08 24 23.5	
	comp=N,197nm,0.3s						
SJG	San Juan	1.68	126	⇓ePg	Pb	08 23 58.0	-0.1
SJG				eSg	Sb	08 24 20.1	+0.9
SJG	San Juan	1.68	126	iP	Pn	08 23 56.6	+0.1
SJG				IAML		08 24 27.3	
	comp=Z,86nm,0.4s						
DR12	Loma Pena Alta	1.74	260		Pb	08 23 58.5	-0.7
HATOM	Hato Mayor del	1.74	260	⇓ePg	Pb	08 23 58.9	-0.3
HATOM				⇓eSg	Sb	08 24 22.1	+0.9
HATOM				IAML		08 24 22.7	
	comp=N,135nm,0.5s						
PDPR	Patillas Dam,	1.83	126	Pn	Pb	08 23 59.7	-1.1
HUMP	Col San Antoni	1.90	120		Pb	08 24 00.7	-1.2
HUMP					Sb	08 24 25.0	-0.6
NADR	Nagua	2.17	277	⇑ePg	Pb	08 24 04.9	-1.6
NADR				⇓eSg	Sb	08 24 34.7	+1.2
NADR				IAML		08 24 34.8	
	comp=N,614nm,0.3s						
CUPR	Culebra, Puert	2.31	110	Pn	Pn	08 24 07.1	+1.8
DR08	Loma La Naviza	2.32	267	⇓ePg	Pb	08 24 08.1	-1.0
DR08				⇓eSg	Sb	08 24 37.1	-0.8
DR08				IAML		08 24 40.5	
	comp=N,3μm,0.2s						
BANI	BANI	2.73	255	Pn	Pb	08 24 14.9	-1.3
BANI	BANI	2.73	255	⇑ePg	Pb	08 24 17.3	+1.1
BANI				⇑eSg	Sb	08 24 49.2	-0.6
BANI				IAML		08 24 56.8	
	comp=N,134nm,0.6s						
SDDR	Presa de Saban	3.52	269		Pn	08 24 23.4	+1.5
SDDR				IAML		08 25 19.4	
	comp=N,44nm,0.8s						
SDDR				IAML		08 25 22.3	
	comp=N,53nm,0.6s						

*IDC **03** 08:24:25.7±2.4, 15°.39N×145°.99E, h94km±23km, mb3.5/9, mbtmp3.8/10, Error ellipse: s-maj=29.0km s-min=20.2km az=95.0*

*NEIC **03** 08:24:26.9±0.8, 15°.41N±0°.10×145°.9E±0°.2, h96km±5km, mb4.3/23, Error ellipse: s-maj=33.2km s-min=7.9km az=111.0*

ISC 03 08:24:26.9±0.8**, 15°.4N**±0°.1×**145°.9E**±0°.2**, h100km, n41,** σ0s.56/35**, mb4.2**/22**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	2.04	208	P	Pn	08 25 00.2	+0.2
	78nm,0.3s,baz=100,slow=4.2,SNR=14						
GUMO				S	Sn	08 25 25.3	-0.1
	302nm,0.3s,baz=352,slow=23,SNR=13						
GUMO	Guam	2.04	208		Sn	08 25 25.6	+0.3
H11S3	WAKE ISLAND Hy	20.17	78	T	T	08 49 47.6	
	baz=264,slow=75,SNR=23						
H11S1	WAKE ISLAND Hy	20.18	78	T	T	08 49 53.3	
	baz=264,slow=75,SNR=10.0						
H11S2	WAKE ISLAND Hy	20.19	78	T	T	08 49 50.2	
	baz=264,slow=75,SNR=19						
H11N1	WAKE ISLAND Hy	20.51	75	T	T	08 50 11.6	
	baz=262,slow=75,SNR=13						
H11N2	WAKE ISLAND Hy	20.52	75	T	T	08 50 12.4	
	baz=262,slow=75,SNR=8.3						
H11N3	WAKE ISLAND Hy	20.53	75	T	T	08 50 15.0	
	baz=262,slow=75,SNR=11						
WR8	Warramunga Arr	36.87	198	P	P	08 31 25.9	0.0
WR8				IAmb	IAmb	08 32 06.2	
	comp=Z,6.1nm,1.3s						
WRA	Warramunga Arr	36.91	198	P	P	08 31 25.7	-0.5
	comp=Z,0.5nm,0.7s,baz=25,slow=9.5,SNR=5.1						
	comp=Z,0.5nm,0.7s						
AS31	Alice Springs	40.55	197	P	P	08 31 56.6	0.0
ASAR	Alice Springs	40.55	197	P	P	08 31 55.8	-0.9
	comp=Z,0.1nm,0.5s,baz=14,slow=7.6,SNR=4.0						
	comp=Z,0.1nm,0.5s						
K13K	Kusilvak Mount	58.07	25	P	P	08 34 09.2	-0.2
K13K				IAmb	IAmb	08 34 21.3	
	comp=Z,3.3nm,1.2s						
J16K	Anvik River	60.36	25	P	P	08 34 25.6	+0.4
ZALV	Zalesovo Beam	60.72	324	P	P	08 34 27.6	-0.2
	comp=Z,0.3nm,0.3s,baz=81,slow=9.2,SNR=1.8						
	comp=Z,0.3nm,0.3s						
MKAR	Makanchi Array	60.86	315	P	P	08 34 29.4	+0.4
	comp=Z,1.2nm,0.5s,baz=92,slow=8.0,SNR=23						
	comp=Z,1.2nm,0.5s						
K17K	Iditarod	61.06	26	P	P	08 34 31.1	+1.1
H18K	Honhosa River	62.07	23	P	P	08 34 36.5	-0.2
H18K				IAmb	IAmb	08 34 51.4	
	comp=Z,2.4nm,1.2s						
G18K	Tagagawik	62.28	22	P	P	08 34 38.1	0.0
J19K	Poorman	62.68	25	P	P	08 34 41.0	+0.2
J19K				IAmb	IAmb	08 34 51.0	
	comp=Z,6.6nm,1.5s						
D19K	Kuna River	63.63	20	P	P	08 34 47.0	0.0
D19K				IAmb	IAmb	08 35 07.8	
	comp=Z,4.4nm,1.4s						
PPLA	Purkeypile	63.74	27	P	P	08 34 48.4	+0.3
KURK	Kurchatov	63.82	319	P	P	08 34 48.8	+0.3
KURK	Kurchatov	63.82	319	IAmb	IAmb	08 34 49.1	
	comp=Z,4.7nm,0.8s						
KURBB	Kurchatov Arra	63.86	319	P	P	08 34 48.8	0.0
	comp=Z,4.9nm,0.7s,baz=97,slow=7.6,SNR=8.9						
	comp=Z,4.9nm,0.7s						
D20K	Etivluk River	64.22	20	P	P	08 34 51.0	+0.1
D20K				IAmb	IAmb	08 34 51.4	
	comp=Z,2.5nm,0.8s						
L22K	Petersville	64.26	27	P	P	08 34 50.9	-0.4
H21K	Melozitna Rive	64.41	24	P	P	08 34 52.4	+0.3
BPAW	Bear Paw Mtn.	64.63	26	P	P	08 34 53.6	0.0
BPAW				IAmb	IAmb	08 35 37.9	
	comp=Z,6.4nm,1.4s						
TRF	Thorofare Moun	64.73	26	P	P	08 34 53.9	-0.6
TRF				IAmb	IAmb	08 35 17.5	
	comp=Z,7.8nm,1.4s						
MLY	Manley	65.02	25	P	P	08 34 56.3	+0.1
WRH	Wood River Hil	65.95	26	P	P	08 35 01.4	-0.7
WRH				IAmb	IAmb	08 35 06.5	
	comp=Z,5.8nm,1.4s						
ILAR	Eielson Array	66.53	26	P	P	08 35 04.0	-1.7
	comp=Z,0.7nm,0.7s,baz=248,slow=5.8,SNR=16						
	comp=Z,0.7nm,0.7s						
J25K	Salcha River,	67.12	26	P	P	08 35 08.7	-0.9
J25K				IAmb	IAmb	08 35 15.5	
	comp=Z,8.2nm,1.4s						
RIDG	Independent Ri	67.16	27	P	P	08 35 09.7	-0.3
BCAR	Beaver Creek A	68.40	28	P	P	08 35 17.8	+0.1
BVAR	Borovoye Array	69.10	321	P	P	08 35 22.4	+0.3
	comp=Z,0.8nm,0.3s,baz=94,slow=7.4,SNR=3.6						
	comp=Z,0.8nm,0.3s						
L29M	L29M	70.06	28	P	P	08 35 28.8	+0.9
L29M				IAmb	IAmb	08 35 33.6	
	comp=Z,8.8nm,1.5s						
M30M	Minto, Yukon	70.62	29	P	P	08 35 31.6	+0.2
M30M				IAmb	IAmb	08 36 01.3	
	comp=Z,6.0nm,1.4s						
YKA	Yellowknife Ar	80.82	28	P	P	08 36 28.7	-0.7
	comp=Z,0.5nm,0.6s,baz=292,slow=5.5,SNR=8.8						
	comp=Z,0.5nm,0.6s						
NVAR	Mina Array Bea	85.05	52	P	P	08 36 52.9	+0.8
	comp=Z,0.3nm,0.5s,baz=289,slow=5.6,SNR=2.7						
	comp=Z,0.3nm,0.5s						

*NEIC **03** 08:41:58.8, 51°.05N×179°.81W, h36km*

*NEIC **03** 08:41:58.8, 50°.75N×179°.97W, h36km, Moment Tensor Solution. Duration: 1s.8 Moment tensor: Scale 10^16Nm; Mrr3.03; Mθθ-3.52; Mφφ0.50; Mrθ1.67; Mθφ-0.82; Mφr0.70; Fault plane solution: Mo3.86000×10^16 NP1: φs267.02000°, δ31.56000°, λ102.76000°. NP2: φs72.14000°, δ59.31000°, λ82.28000°. Principal axes: T 3.5107, Plg74.0000°, Azm321.0000°; N 0.6188, Plg7.0000°, Azm76.0000°; P -4.1295, Plg14.0000°, Azm168.0000°;*

*NEIC **03** 08:41:58.8±2.7, 51°.04N±0°.04×179°.80W±0°.03, h10km±1km, mb5.1/624, ML5.0/12, Mww5.0/41, ML4.5(AEIC) Error ellipse: s-maj=7.4km s-min=3.2km az=195.0*

*AEIC **03** 08:42:00.4±2.5, 51°.04N±0°.05×179°.77W±0°.05, h13km±3km, Error ellipse: s-maj=7.9km s-min=4.4km az=181.0*

*BGR **03** 08:42:00.8, 51°.00N×176°.75E, h33km, mb5.1*

*BJI **03** 08:42:01.0, 51°.20N×179°.80W, h51km, mB5.1/24, mb5.1/73, Ms4.7/48, Ms7 4.5/49*

*IDC **03** 08:42:01.4±2.1, 51°.24N×179°.69W, h30km±13km, mb4.6/33, mbtmp4.7/36, ML5.0/2, MS4.2/81, Error ellipse: s-maj=14.3km s-min=9.8km az=165.0*

*MOS **03** 08:42:01.2±1.0, 51°.27N×179°.70W, h41km, mb5.3/65, MS4.8/5, Error ellipse: s-maj=7.9km s-min=4.9km az=114.7*

*GCMT **03** 08:42:01.8±0.2, 51°.02N±0°.02×179°.63W±0°.03, h28km, MW5.1/112, Moment Tensor Solution. s68,c90; s112,c166; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.90±.16; Mθθ-3.51±.11; Mφφ-0.39±.10; Mrθ2.68±.17; Mθφ-1.37±.07; Mφr1.99±.18; Best double couple: Mo5.18300×10^16 NP1:φs260.00000°, δ26.00000°, λ108.00000°. NP2:φs59.00000°, δ65.00000°, λ81.00000°. Principal axes: T 5.1850, Plg69.0000°, Azm312.0000°; N -0.0050, Plg8.0000°, Azm63.0000°; P -5.1810, Plg20.0000°, Azm156.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 08:42:01.1±0.5**, 51°.13N**±0°.05×**179°.74W**±0°.02**, h30**km±2km**, h30km:pP-P, n1061,** σ1s.25/785**, mb5.1**/436**, MS4.3**/101**, 49C-20D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMKA	Amchitka	0.65	293		Sb	08 42 21.9	-0.9
AMKA	Amchitka	0.65	293		Pb	08 42 12.9	-1.1
AMKA				IAML		08 42 26.8	
	comp=N,37μm,0.8s						
AMKA				IAML		08 42 27.6	
	comp=E,28μm,0.5s						
GAKI	Gareloi-Kavalg	0.72	54		Pb	08 42 15.2	+0.1
GAKI					Sn	08 42 25.8	+0.5
GASW	Gareloi Southw	0.85	40		Pb	08 42 18.0	+0.6
GALAA	Gareloi Lava P	0.88	43		Pb	08 42 18.4	+0.7
GALAA					Sn	08 42 31.3	+2.2
CESW	Semis' Southwe	0.89	331		Pb	08 42 18.4	+0.5
CERB	Semis' Cerberu	0.89	334		Pb	08 42 18.8	+0.8
GAEA	Gareloi East	0.90	43		Pb	08 42 18.7	+0.5
GANO	Gareloi North	0.91	40		Pb	08 42 18.5	+0.2
GANE	Gareloi Northe	0.92	41		Pb	08 42 18.7	+0.3
GANE					Sn	08 42 33.0	+2.9
CETU	Semis' Tuman	0.96	331		Pb	08 42 19.7	+0.5
CEAP	Semis' Anvil P	0.97	334		Pb	08 42 20.1	+0.7
TASE	Tanaga Southea	1.28	56		Pb	08 42 24.1	-0.4
TASE					Sb	08 42 41.6	+1.0
TANO	Tanaga North	1.28	51		Pb	08 42 24.3	-0.3
TANO					Sb	08 42 42.2	+1.5
LSSE	Little Sitkin	1.33	308		Pn	08 42 24.4	+0.9
LSPA	Little Sitkin	1.34	309		Pb	08 42 24.8	-0.8
TAFP	Tanaga Falls P	1.34	54		Pn	08 42 24.9	+1.1
LSSA	Little Sitkin	1.36	308		Pn	08 42 25.1	+1.0
LSNW	Little Sitkin	1.38	308		Pn	08 42 25.0	+0.7
TAPA	Tanaga Point A	1.39	60		Sb	08 42 44.2	+0.5
KIMD	Kanaga Island	1.69	67		Sb	08 42 53.2	+0.8
KIWB	Kanaga Island	1.77	65		Sb	08 42 55.2	+0.5
KIWB	Kanaga Island	1.77	65		Pb	08 42 31.8	-1.1
KIWB				IAML		08 43 01.0	
	comp=N,10μm,1.0s						
KIWB				IAML		08 43 02.7	
	comp=E,12μm,0.7s						
KIRH	Kanaga Island	1.82	64		Pn	08 42 31.9	+1.5
ADK	Adak	2.05	67	P	Pb	08 42 36.1	-1.5
ADK	Adak	2.05	67		Pn	08 42 35.5	+2.0
ADK				IAML		08 43 07.9	
	comp=E,8μm,1.0s						
ADK				IAML		08 43 09.0	
	comp=E,16μm,0.7s						
ADK	Adak	2.05	67	P	Pn	08 42 35.5	+2.0
ADK						08 43 02.1	
GSCK	Great Sitkin C	2.40	67		Pn	08 42 40.1	+1.8
GSTR	Great Sitkin T	2.49	66		Pn	08 42 42.3	+2.8
GSTR				IAML		08 43 22.6	
	comp=E,10μm,1.4s						
GSIG	Igitkin Island	2.53	69		Pn	08 42 42.1	+2.0
KOKL	Mount Kliuchef	3.65	69		Pn	08 42 57.9	+2.5
KOKV	Korovin Volcan	3.68	68		Pn	08 42 58.5	+2.6
SHEM	Shemya Is, Ala	4.13	295	Pn	Pn	08 43 04.7	+2.6
	comp=E,84nm,0.3s,baz=110,slow=3.2,SNR=33						
SHEM				Sn	Sn	08 43 51.7	+2.3
	comp=E,41nm,0.3s,baz=333,slow=13,SNR=3.9						
SHEM				LR	LR	08 44 44.2	
	comp=E,6μm,18.9s,baz=136,slow=40						
SHEM	Shemya Is, Ala	4.13	295		Pn	08 43 04.7	+2.6

SHEM				IAML		08 44 08.0
	comp=E,2µm,0.8s					
SMY	**Shemya**	**4.13**	**295**	P	**Pn**	**08 43 05.1 +3.0**
SMY	**Shemya**	**4.13**	**295**	S	**Sn**	**08 43 56.0 +6.6**
SMY	**Shemya**	**4.13**	**295**		**Pn**	**08 43 04.9 +2.8**
SMY	**Shemya**	**4.13**	**295**	P	**Pn**	**08 43 04.9 +2.8**
CLES	**Cleveland East**	**6.32**	**71**	Pn	**Pn**	**08 43 35.8 +3.8**
CLCO	**Concord Point,**	**6.41**	**71**		**Pn**	**08 43 35.8 +2.4**
NIKH	**Nikolski High**	**6.96**	**70**	P	**Pn**	**08 43 43.9 +2.9**
	comp=E,331nm,1.1s					
NIKH	**Nikolski High**	**6.96**	**70**		**Pn**	**08 43 43.8 +2.9**
NIKH	**Nikolski High**	**6.96**	**70**	P	**Pn**	**08 43 43.4 +2.4**
	baz=260					
OKCE	**Okmok Cone E**	**7.46**	**68**		**Pn**	**08 43 51.0 +3.2**
OKTU	**Okmok Mt. Tuli**	**7.53**	**68**		**Pn**	**08 43 51.8 +3.1**
SPIA	**Saint Paul Isl**	**8.22**	**39**	P	**Pn**	**08 44 01.7 +3.5**
	comp=E,810nm,0.8s					
SPIA	**Saint Paul Isl**	**8.22**	**39**		**Pn**	**08 44 00.5 +2.3**
SPIA	**Saint Paul Isl**	**8.22**	**39**	P	**Pn**	**08 44 00.1 +1.9**
	baz=227,SNR=13					
MGOD	**Makushin Gods**	**8.30**	**66**		**Pn**	**08 44 02.0 +2.7**
MNAT	**Makushin Natee**	**8.43**	**66**		**Pn**	**08 44 04.0 +2.9**
UNV	**Unalaska Valle**	**8.52**	**66**		**Pn**	**08 44 04.9 +2.6**
UNV	**Unalaska Valle**	**8.52**	**66**	P	**Pn**	**08 44 04.8 +2.5**
	baz=258					
LVA	**Lava Point**	**8.87**	**65**		**Pn**	**08 44 11.1 +4.0**
ZRO	**Akutan Zero**	**8.88**	**65**		**Pn**	**08 44 10.8 +3.5**
AKBBA	**Akutan Broad B**	**8.91**	**65**		**Pn**	**08 44 11.1 +3.4**
AKUT	**Akutan**	**9.01**	**65**	P	**Pn**	**08 44 12.1 +3.1**
	comp=E,196nm,1.2s					
AKUT	**Akutan**	**9.01**	**65**		**Pn**	**08 44 11.9 +2.9**
FALS	**False Pass**	**10.52**	**63**	P	**Pn**	**08 44 33.2 +3.6**
	comp=E,152nm,1.1s					
FALS	**False Pass**	**10.52**	**63**		**Pn**	**08 44 32.6 +3.0**
FALS	**False Pass**	**10.52**	**63**	P	**Pn**	**08 44 32.6 +3.0**
	baz=256					
M11K	**Mekoryuk**	**11.98**	**34**	P	**Pn**	**08 44 53.2 +3.7**
	baz=226					
SDPT	**Sand Point**	**12.28**	**62**	P	**Pn**	**08 44 54.4 +0.8**
	comp=E,115nm,1.2s					
SDPT	**Sand Point**	**12.28**	**62**	Pn	**Pn**	**08 44 55.0 +1.4**
SDPT	**Sand Point**	**12.28**	**62**	P	**Pn**	**08 44 55.3 +1.7**
	baz=258					
CHNA	**Chernabura Isl**	**12.69**	**65**	P	**Pn**	**08 45 01.5 +2.3**
	baz=262					
M13K	**Dall Lake**	**13.06**	**38**		Pn	08 45 08.9 +4.7
M13K	**Dall Lake**	**13.06**	**38**	P	**Pn**	**08 45 05.0 +0.8**
	baz=232,SNR=28					
O14K	**Tigyukauivet M**	**13.29**	**45**	P	**Pn**	**08 45 09.5 +2.2**
	baz=241,SNR=12					
GAMB	**Gambell**	**13.38**	**16**		**Pn**	**08 45 09.1 +0.5**
GAMB	**Gambell**	**13.38**	**16**	P	**Pn**	**08 45 10.8 +2.1**
	baz=203,SNR=17					
PET	**Petropavlovsk**	**13.42**	**287**		**Pn**	**08 45 08.8 -0.4**
PET	**Petropavlovsk**	**13.42**	**287**	*e*P	**Pn**	**08 45 10.8 +1.6**
PET				*e*S	**Sn**	**08 47 35.0 -2.1**
PET				pmax	pmax	
	comp=Z,18nm,1.0s					
PET				pmax	pmax	
	comp=Z,100nm,11.0s					
PET				MLR	MLR	
	comp=Z,500nm,15.0s					
PET				MLR	MLR	
	comp=Z,400nm,14.0s					
N14K	**Kuskokwak Cree**	**13.45**	**42**	P	**Pn**	**08 45 12.2 +2.6**
	baz=238,SNR=54					
K13K	**Kusilvak Mount**	**13.61**	**32**	P	**Pn**	**08 45 13.7 +1.9**
	baz=225,SNR=8.1					
M14K	**Bethel**	**13.81**	**39**	P	**Pn**	**08 45 15.5 +1.0**
	baz=234					
L14K	**Kuka Creek**	**13.90**	**36**	P	**Pn**	**08 45 17.2 +1.5**
	baz=231					
O15K	**Ungalikthiuk R**	**13.90**	**47**		**Pn**	**08 45 18.0 +2.2**
O15K	**Ungalikthiuk R**	**13.90**	**47**	P	**Pn**	**08 45 16.7 +0.9**
	baz=244,SNR=8.9					
PEA0B	**Petropavlovsk-**	**13.99**	**287**	Pn	**Pn**	**08 45 19.4 +2.4**
PEA0B	**Petropavlovsk-**	**13.99**	**287**	*ce*P	**Pn**	**08 45 17.6 +0.5**
PETK	**Petropavlovsk-**	**13.99**	**287**	Pn	**Pn**	**08 45 19.6 +2.6**
	comp=Z,0.7nm,0.3s,baz=86,slow=19,SNR=28					
PETK				Sn	**Sn**	**08 47 45.1 -6.0**
	comp=Z,0.1nm,0.3s,baz=67,slow=19,SNR=1.2					
PETK				LR	LR	08 50 31.1
	comp=Z,1µm,21.8s,baz=95,slow=36					
PETK				PcP	**PcP**	**08 50 36.9 +0.4**
	comp=Z,4.5nm,0.8s,baz=114,slow=7.2,SNR=5.7					
PETK	**Petropavlovsk-**	**13.99**	**287**		**Pn**	**08 45 19.0 +1.9**
N15K	**Kwethluk River**	**14.26**	**43**	P	**Pn**	**08 45 22.2 +1.5**
	baz=240,SNR=49					
M15K	**Kasigluk River**	**14.29**	**41**	P	**Pn**	**08 45 24.3 +3.2**
	baz=237,SNR=39					
J14K	**Nanvaranak Lak**	**14.56**	**31**	P	**Pn**	**08 45 25.7 +1.1**
	baz=225,SNR=7.1					
L15K	**Ungalak Mounta**	**14.56**	**36**	P	**Pn**	**08 45 25.6 +0.9**
	baz=232,SNR=51					
P16K	**Nushagak River**	**14.70**	**49**		**Pn**	**08 45 28.5 +1.9**
P16K	**Nushagak River**	**14.70**	**49**	P	**Pn**	**08 45 27.0 +0.4**
	baz=247,SNR=14					
O16K	**Kokwok River B**	**14.88**	**47**	P	**Pn**	**08 45 29.5 +0.4**
	baz=245,SNR=9.7					
K15K	**Wolf Creek Mou**	**14.93**	**35**	IAmb	IAmb	08 45 38.0
	comp=Z,106nm,1.4s					
K15K	**Wolf Creek Mou**	**14.93**	**35**	P	**Pn**	**08 45 29.6 -0.1**
	baz=230,SNR=46					
N16K	**Nishlik Lake**	**14.98**	**43**	P	**Pn**	**08 45 32.3 +1.8**
	baz=241					
R17L	**Mt. Peulik Vol**	**15.05**	**55**	P	**Pn**	**08 45 33.3 +2.0**
	baz=255					
CHIR	**Chirikof Islan**	**15.07**	**62**	P	**Pn**	**08 45 30.9 -0.8**
	comp=Z,237nm,2.0s					
CHIR	**Chirikof Islan**	**15.07**	**62**	P	**Pn**	**08 45 32.0 +0.4**
	baz=262					
M16K	**Timber Creek**	**15.18**	**41**	IAmb	IAmb	08 45 41.0
	comp=Z,68nm,1.0s					
M16K	**Timber Creek**	**15.18**	**41**	P	**Pn**	**08 45 34.6 +1.5**
	baz=239,SNR=28					
Q16K	**King Salmon**	**15.22**	**51**	P	**Pn**	**08 45 33.4 -0.1**
	baz=251					
SKR	**Severo-Kuril's**	**15.22**	**278**	*ce*P	**Pn**	**08 45 35.3 +1.6**
L16K	**Owhat River**	**15.35**	**39**	P	**Pn**	**08 45 37.5 +2.2**
	baz=236					
O17K	**Koliganek Bris**	**15.42**	**47**	P	**Pn**	**08 45 36.7 +0.6**
	baz=246					
ANM	**Nome**	**15.43**	**24**		**P**	**08 45 39.2 -1.2**
ANM	**Nome**	**15.43**	**24**	P	**P**	**08 45 39.3 -1.2**
ANM				pmax	pmax	
	comp=Z,15nm,1.0s					
ANM	**Nome**	**15.43**	**24**	P	**Pn**	**08 45 36.9 +0.6**
	baz=216,SNR=20					
Q17K	**Contact Creek**	**15.47**	**53**	P	**Pn**	**08 45 38.5 +1.6**
	baz=253					
P17K	**Kvichak River**	**15.50**	**50**		**Pn**	**08 45 39.4 +2.2**
P17K				IAmb	IAmb	08 45 46.1
	comp=Z,100nm,0.8s					
P17K	**Kvichak River**	**15.50**	**50**	P	**Pn**	**08 45 39.4 +2.2**
	baz=249,SNR=12					
TNA	**Tin City**	**15.70**	**18**		**P**	**08 45 43.2 -0.3**
TNA	**Tin City**	**15.70**	**18**	P	**Pn**	**08 45 41.8 +2.1**
	baz=209,SNR=28					
N17K	**Nushagak Hills**	**15.70**	**44**	IAmb	IAmb	08 45 46.1
	comp=Z,82nm,0.9s					
N17K	**Nushagak Hills**	**15.70**	**44**	P	**Pn**	**08 45 41.9 +2.0**
	baz=244,SNR=29					
ACHA	**Angle Creek He**	**15.74**	**54**		**Pn**	**08 45 40.8 +0.4**
J16K	**Anvik River**	**15.90**	**33**	P	**P**	**08 45 44.7 -1.1**
	baz=229,SNR=24					
F14K	**Arctic Creek**	**15.96**	**21**	P	**Pn**	**08 45 44.4 +1.4**
	baz=212,SNR=31					
SII	**Sitkinak Islan**	**15.98**	**60**	P	**Pn**	**08 45 43.7 +0.3**
	comp=Z,170nm,3.0s					
SII	**Sitkinak Islan**	**15.98**	**60**	Pn	**Pn**	**08 45 43.8 +0.3**
SII				IAmb	IAmb	08 45 47.4
	comp=Z,198nm,1.1s					
SII	**Sitkinak Islan**	**15.98**	**60**	P	**Pn**	**08 45 45.0 +1.5**
	baz=261					
M17K	**Holitna River**	**16.01**	**41**	P	**Pn**	**08 45 45.2 +1.4**
	baz=240,SNR=22					
Q18K	**Katmai Hardscr**	**16.02**	**52**	P	**Pn**	**08 45 44.1 0.0**
	baz=253					
L17K	**Donlin**	**16.05**	**38**	P	**Pn**	**08 45 46.2 +1.9**
	baz=237,SNR=10.0					
G15K	**Niukluk**	**16.12**	**24**	P	**Pn**	**08 45 45.3 +0.2**
	baz=218					
P18K	**Big Mountain,**	**16.15**	**50**		**P**	**08 45 47.6 -1.0**
P18K	**Big Mountain,**	**16.15**	**50**	P	**Pn**	**08 45 45.7 0.0**
	baz=250,SNR=10					
I17K	**Unalakleet**	**16.28**	**31**	P	**Pn**	**08 45 46.9 -0.2**
	baz=228					
O18K	**Koktuh Hills**	**16.33**	**48**		**P**	**08 45 50.0 -0.5**
O18K	**Koktuh Hills**	**16.33**	**48**	P	**Pn**	**08 45 48.7 +0.8**
	baz=249,SNR=8.9					
H16K	**Elim**	**16.34**	**27**	P	**Pn**	**08 45 48.4 +0.5**
	baz=223,SNR=47					
N18K	**Kilae Creek**	**16.34**	**45**	P	**Pn**	**08 45 48.0 -0.1**
	baz=245,SNR=19					
K17K	**Iditarod**	**16.38**	**37**	P	**Pn**	**08 45 48.8 +0.3**
	baz=235,SNR=24					
F15K	**North Star Dit**	**16.54**	**22**	P	**Pn**	**08 45 50.8 +0.3**
	baz=216,SNR=40					
OHAK	**Old Harbor**	**16.58**	**58**	P	**Pn**	**08 45 47.9 -3.1**
	comp=Z,52nm,0.6s					
OHAK	**Old Harbor**	**16.58**	**58**	P	**Pn**	**08 45 51.2 +0.2**
	baz=260					
L18K	**Granite Mounta**	**16.73**	**40**	P	**Pn**	**08 45 53.3 +0.4**
	baz=239,SNR=16					
M18K	**Stony River**	**16.73**	**42**	P	**Pn**	**08 45 53.1 +0.2**
	baz=243,SNR=10					
Q19K	**Cape Douglas,**	**16.79**	**52**	P	**Pn**	**08 45 54.6 +1.0**
Q19K				IAmb	IAmb	08 46 03.9
	comp=Z,146nm,1.4s					
Q19K	**Cape Douglas,**	**16.79**	**52**	P	**Pn**	**08 45 53.2 -0.5**
	baz=254					
O19K	**Port Alsworth**	**16.87**	**48**	P	**Pn**	**08 45 53.1 -1.5**
	baz=249,SNR=10					
G16K	**Koyuk River**	**16.88**	**26**	P	**Pn**	**08 45 52.8 -1.9**
	baz=221,SNR=52					
N19K	**Bonanza Creek**	**17.03**	**46**	IAmb	IAmb	08 46 02.4
	comp=Z,105nm,1.0s					
N19K	**Bonanza Creek**	**17.03**	**46**	P	**Pn**	**08 45 56.9 +0.1**
	baz=247,SNR=31					
KDAK	**Kodiak Island**	**17.05**	**56**	Pn	**Pn**	**08 45 54.8 -2.2**
	comp=Z,2.8nm,0.3s,baz=223,slow=2.7,SNR=96					
	comp=Z,12nm,0.3s					
KDAK	**Kodiak Island**	**17.05**	**56**	Pn	**Pn**	**08 45 54.9 -2.1**
KDAK	**Kodiak Island**	**17.05**	**56**	P	**Pn**	**08 45 54.9 -2.1**
KDAK				pmax	pmax	
	comp=Z,122nm,1.5s					
KDAK	**Kodiak Island**	**17.05**	**56**	P	**Pn**	**08 45 55.9 -1.1**
	baz=259					
P19K	**Oil Pt**	**17.20**	**50**	P	**Pn**	**08 45 59.4 +0.5**
	baz=252					
H17K	**Granite Mounta**	**17.25**	**29**	P	**Pn**	**08 45 59.3 -0.1**
	baz=226,SNR=53					
J18K	**Innoko River**	**17.40**	**36**	P	**Pn**	**08 46 00.0 -1.3**
	baz=236,SNR=41					
G17K	**Kiwalik Mounta**	**17.43**	**27**	P	**Pn**	**08 46 01.5 -0.1**
	baz=224,SNR=31					
L19K	**White Mountain**	**17.46**	**41**	P	**Pn**	**08 46 03.0 +0.8**
	baz=242					
H18K	**Honhosa River**	**17.88**	**30**	P	**P**	**08 46 08.4 +0.7**
	baz=229,SNR=44					
F17K	**Baldwin Pennin**	**17.97**	**24**	P	**Pn**	**08 46 08.1 -0.1**
	baz=221,SNR=16					
HOM	**Homer**	**17.98**	**51**	P	**Pn**	**08 46 08.9 +0.5**
	baz=254					
M20K	**Styx River**	**18.06**	**43**	P	**Pn**	**08 46 08.5 -1.0**
	baz=246,SNR=20					
J19K	**Poorman**	**18.10**	**35**	P	**P**	**08 46 10.9 +0.8**
	baz=236,SNR=39					
GCSA	**Galena City Sc**	**18.10**	**32**	P	**P**	**08 46 11.4 +1.4**
	baz=232,SNR=35					
CNPM	**China Poot**	**18.14**	**51**	P	**Pn**	**08 46 10.8 +0.4**
N20K	**Mount Spurr**	**18.20**	**46**	P	**P**	**08 46 12.9 +1.6**
	baz=249					
SPCR	**Spurr Chakacha**	**18.20**	**46**	P	**P**	**08 46 12.3 +1.1**
	baz=249,SNR=34					
SPU	**Mount Spurr**	**18.27**	**46**	P	**Pn**	**08 46 13.4 +1.5**
BILL	**Bilibino**	**18.29**	**343**		**P**	**08 46 12.4 +0.3**
BILL				IAmb	IAmb	08 46 20.3
	comp=Z,144nm,1.3s					
BILL	**Bilibino**	**18.29**	**343**	*ce*P	**Pn**	**08 46 13.6 +1.4**
BILL				pmax	pmax	
	comp=Z,140nm,1.7s					
G18K	**Tagagawik**	**18.30**	**28**	P	**Pn**	**08 46 12.9 +0.6**
	baz=226,SNR=28					
E17K	**Hotham Inlet**	**18.32**	**23**	P	**Pn**	**08 46 13.7 +1.1**
	baz=218					
K20K	**Telida**	**18.35**	**38**	P	**Pn**	**08 46 14.9 +1.9**
	baz=240,SNR=12					
BRSE	**Bradley Lake S**	**18.44**	**51**	P	**Pn**	**08 46 15.3 +1.2**
	baz=255					
F18K	**Selawik**	**18.52**	**26**	P	**Pn**	**08 46 16.2 +1.3**
	baz=223					
D17K	**Noatak River**	**18.54**	**20**	P	**Pn**	**08 46 15.5 +0.3**
	baz=215					
CAPN	**Captain Cook N**	**18.54**	**48**	P	**Pn**	**08 46 16.3 +1.1**
	baz=252					
C16K	**Lisburne Hills**	**18.57**	**17**	P	**Pn**	**08 46 16.4 +0.7**
	baz=210,SNR=59					
MA2	**Magadan**	**18.64**	**308**	P	**Pn**	**08 46 17.3 +0.8**
	comp=Z,0.6nm,0.3s,baz=151,slow=9.9,SNR=4.4					
MA2				LR	LR	08 52 59.2
	comp=Z,948nm,19.3s,baz=108,slow=35					
	comp=Z,3.6nm,0.6s					
MA2	**Magadan**	**18.64**	**308**		**Pn**	**08 46 16.8 +0.4**
MA2	**Magadan**	**18.64**	**308**	*ce*P	**P**	**08 46 16.2 +0.2**
MA2				pmax	pmax	
	comp=Z,9.0nm,1.3s					
MA2	**Magadan**	**18.64**	**308**	P	**Pn**	**08 46 16.9 +0.4**
	comp=Z,12nm,0.8s					
SKT	**Skwentna**	**18.79**	**44**	IAmb	IAmb	08 46 21.2
	comp=Z,192nm,1.2s					
SKT	**Skwentna**	**18.79**	**44**	P	**P**	**08 46 17.9 +0.1**
	baz=248,SNR=49					
RDOG	**Red Dog Mine**	**18.87**	**20**	P	**P**	**08 46 18.6 +0.1**
	baz=215					
E18K	**Tukpahlearik C**	**18.89**	**23**	P	**Pn**	**08 46 19.9 +0.4**
	baz=220,SNR=30					
PPLA	**Purkeypile**	**18.89**	**41**	P	**P**	**08 46 19.1 +0.2**
	baz=244,SNR=9.9					
G19K	**Purcell Mounta**	**18.93**	**29**	P	**P**	**08 46 18.9 -0.3**
	baz=229,SNR=40					
SUA	**Susitna One**	**18.95**	**46**	P	**P**	**08 46 19.4 -0.2**
	baz=250,SNR=15					
SEY	**Seymchan**	**19.04**	**319**	P	**Pn**	**08 46 21.8 +0.5**
	comp=Z,4.2nm,0.9s,baz=120,slow=11,SNR=23					
SEY				LR	LR	08 53 50.1
	comp=Z,786nm,18.7s,baz=124,slow=37					
SEY				ScP	**ScP**	**08 54 17.2 -0.2**
	comp=Z,0.7nm,0.4s,baz=121,slow=5.7,SNR=6.9					
SEY	**Seymchan**	**19.04**	**319**	*i* P	**P**	**08 46 21.1 +0.7**
SEY				pmax	pmax	
	comp=Z,20nm,1.3s					
SEW	**Seward**	**19.16**	**50**	P	**P**	**08 46 22.0 +0.3**
	baz=256					
C17K	**DeLong Mountai**	**19.16**	**19**	P	**P**	**08 46 21.3 -0.5**
	baz=213,SNR=81					
F19K	**Shaleruckik Mo**	**19.20**	**27**	P	**P**	**08 46 22.9 +0.7**
	baz=226,SNR=55					
H20K	**Anotleneega Mo**	**19.23**	**32**	P	**P**	**08 46 23.0 +0.5**
	baz=234,SNR=33					
CHUM	**Lake Minchumin**	**19.29**	**38**	P	**P**	**08 46 23.5 +0.4**
	baz=242					
RC01	**Rabbit Creek A**	**19.30**	**47**	P	**P**	**08 46 24.2 +1.0**
	baz=253					
L22K	**Petersville**	**19.33**	**43**	IAmb	IAmb	08 46 25.5
	comp=Z,99nm,0.8s					
M22K	**Willow**	**19.34**	**45**	IAmb	IAmb	08 46 33.2
	comp=Z,170nm,1.4s					
M22K	**Willow**	**19.34**	**45**	P	**P**	**08 46 23.8 +0.2**
	baz=250					
CUT	**Chulitna**	**19.50**	**43**	P	**P**	**08 46 26.0 +0.6**
	baz=248					
C18K	**Utukok River**	**19.72**	**20**	IAmb	IAmb	08 46 31.8
	comp=Z,127nm,1.1s					
C18K	**Utukok River**	**19.72**	**20**	P	**P**	**08 46 28.9 +1.0**
	baz=217,SNR=72					
PMR	**Palmer**	**19.73**	**46**	P	**P**	**08 46 28.6 +0.7**
	baz=252,SNR=5.1					
E19K	**Redstone River**	**19.80**	**26**	P	**P**	**08 46 29.0 +0.4**
	baz=226					
GHO	**Glory Hole Cre**	**19.88**	**46**	P	**P**	**08 46 29.3 -0.4**
IMAR	**Indian Mountai**	**19.90**	**32**		**Pn**	**08 46 31.1 -0.4**
TRF	**Thorofare Moun**	**19.91**	**40**	IAmb	IAmb	08 46 45.6
	comp=Z,63nm,1.0s					
TRF	**Thorofare Moun**	**19.91**	**40**	P	**P**	**08 46 29.9 -0.1**
	baz=246,SNR=15					
BPAW	**Bear Paw Mtn.**	**19.91**	**38**	IAmb	IAmb	08 46 32.4
	comp=Z,119nm,1.2s					
BPAW	**Bear Paw Mtn.**	**19.91**	**38**	P	**P**	**08 46 30.7 +0.8**
	baz=243,SNR=41					
F20K	**Avaraart Lake**	**19.95**	**28**	P	**P**	**08 46 29.1 -1.1**
	baz=229,SNR=44					
KNK	**Knik Glacier**	**19.98**	**47**	P	**P**	**08 46 30.1 -0.6**
	baz=254,SNR=5.7					
H21K	**Melozitna Rive**	**20.03**	**33**	IAmb	IAmb	08 46 38.0
	comp=Z,120nm,1.2s					
H21K	**Melozitna Rive**	**20.03**	**33**	P	**P**	**08 46 32.2 +1.0**
	baz=237,SNR=70					
P23K	**Montague Islan**	**20.14**	**51**	P	**P**	**08 46 32.4 0.0**
	baz=259					
SML	**Sawmill**	**20.16**	**46**	P	**P**	**08 46 32.5 -0.2**
	baz=253,SNR=6.3					
G21K	**Allakaket**	**20.29**	**31**	IAmb	IAmb	08 46 37.4
	comp=Z,88nm,1.1s					
G21K	**Allakaket**	**20.29**	**31**	P	**P**	**08 46 33.7 -0.3**
	baz=234,SNR=71					
D19K	**Kuna River**	**20.32**	**23**	IAmb	IAmb	08 46 40.2
	comp=Z,64nm,0.9s					
D19K	**Kuna River**	**20.32**	**23**	P	**P**	**08 46 35.2 +0.8**
	baz=222,SNR=62					
WAT1	**Susitna Watana**	**20.40**	**43**	P	**P**	**08 46 34.3 -1.0**
	baz=250					
M23K	**Glacier View**	**20.43**	**46**	P	**P**	**08 46 35.2 -0.4**
	baz=253					
C19K	**Lookout Ridge**	**20.44**	**21**	IAmb	IAmb	08 46 42.3
	comp=Z,113nm,1.2s					
C19K	**Lookout Ridge**	**20.44**	**21**	P	**P**	**08 46 36.2 +0.5**
	baz=219,SNR=90					
MLY	**Manley**	**20.45**	**36**	P	**P**	**08 46 35.9 +0.2**
	baz=241,SNR=32					
Q23K	**Middleton Isla**	**20.56**	**53**	P	**P**	**08 46 36.0 -0.9**
	baz=261					
MCK	**McKinley**	**20.57**	**40**	P	**P**	**08 46 36.8 -0.3**
	baz=247,SNR=12					
SCM	**Sheep Creek Mo**	**20.62**	**46**	IAmb	IAmb	08 46 47.5
	comp=Z,44nm,0.7s					
SCM	**Sheep Creek Mo**	**20.62**	**46**	P	**P**	**08 46 36.6 -1.1**
	baz=254					
E20K	**Nigu River**	**20.64**	**25**	P	**P**	**08 46 39.0 +1.2**
	baz=226,SNR=131					
H22K	**Ishtalitna Cre**	**20.66**	**34**	P	**P**	**08 46 38.2 +0.2**
	baz=238,SNR=28					
WAT6	**Susitna Watana**	**20.66**	**44**	P	**P**	**08 46 36.4 -1.9**
	baz=251,SNR=39					
F21K	**Alatna River**	**20.73**	**29**	P	**P**	**08 46 39.7 +0.9**
	baz=232,SNR=60					
D20K	**Etivluk River**	**20.86**	**24**	IAmb	IAmb	08 46 42.7
	comp=Z,151nm,1.1s					
D20K	**Etivluk River**	**20.86**	**24**	P	**P**	**08 46 40.7 +0.6**
	baz=224,SNR=120					
NEA2	**Nenana**	**20.88**	**38**	IAmb	IAmb	08 46 56.9
	comp=Z,51nm,0.8s					
NEA2	**Nenana**	**20.88**	**38**	P	**P**	**08 46 39.4 -1.0**
	baz=245,SNR=51					
DHY	**Denali Highway**	**20.99**	**43**	P	**P**	**08 46 41.5 -0.2**
DHY				IAmb	IAmb	08 46 45.0
	comp=Z,110nm,0.7s					
DHY	**Denali Highway**	**20.99**	**43**	P	**P**	**08 46 40.9 -0.9**
	baz=251,SNR=54					
I23K	**Minto, Yukon-K**	**21.02**	**37**	IAmb	IAmb	08 46 56.1
	comp=Z,74nm,1.3s					
I23K	**Minto, Yukon-K**	**21.02**	**37**	P	**P**	**08 46 42.6 +0.8**
	baz=243,SNR=23					
A19K	**Wainwright**	**21.02**	**18**	P	**P**	**08 46 41.7 -0.2**
	baz=214,SNR=125					
EYAK	**Cordova Ski Ar**	**21.05**	**50**	P	**P**	**08 46 42.0 -0.3**
	baz=259					
DIV	**Divide**	**21.16**	**49**	P	**P**	**08 46 44.0 +0.5**
KLU	**Klutina**	**21.18**	**48**	P	**P**	**08 46 45.0 +1.3**
KLU	**Klutina**	**21.18**	**48**	P	**P**	**08 46 44.0 +0.3**
	baz=256,SNR=8.9					
M24K	**Tolsona, Glenn**	**21.22**	**46**	P	**P**	**08 46 44.7 +0.6**
	baz=254,SNR=14					
E21K	**Killik River**	**21.37**	**26**	P	**P**	**08 46 45.0 -0.7**
	baz=229					
COLA	**College**	**21.47**	**38**	P	**P**	**08 46 47.0 +0.3**
COLA	**College**	**21.47**	**38**	*i* P	**P**	**08 46 47.1 +0.4**
COLA				pmax	pmax	
	comp=Z,43nm,1.0s					
COLA	**College**	**21.47**	**38**	P	**P**	**08 46 46.5 -0.2**
	baz=246					
G23K	**Bananza Creek**	**21.55**	**32**	IAmb	IAmb	08 46 51.4
	comp=Z,67nm,1.1s					
G23K	**Bananza Creek**	**21.55**	**32**	P	**P**	**08 46 47.8 +0.1**
	baz=238,SNR=59					
C21K	**Knifeblade Rid**	**21.64**	**24**	P	**P**	**08 46 47.6 -0.9**
	baz=226,SNR=53					
HDA	**Harding Lake**	**21.64**	**40**	P	**P**	**08 46 49.2 +0.6**
	baz=248,SNR=13					
BMRM	**Bremner River**	**21.69**	**49**	IAmb	IAmb	08 46 59.8
	comp=Z,78nm,1.2s					
BMRM	**Bremner River**	**21.69**	**49**	P	**P**	**08 46 48.5 -0.7**
	baz=259,SNR=6.3					
POKR	**Poker Plat Res**	**21.73**	**38**	P	**P**	**08 46 50.3 +0.7**
	baz=246,SNR=19					
HARP	**HAARP**	**21.76**	**45**	P	**P**	**08 46 49.9 +0.1**
	baz=255,SNR=7.9					
COLD	**Coldfoot**	**21.77**	**31**		**P**	**08 46 51.0 +1.1**
COLD	**Coldfoot**	**21.77**	**31**	P	**P**	**08 46 49.8 -0.1**
	baz=237,SNR=22					
PAX	**Paxson**	**21.78**	**44**	P	**P**	**08 46 49.6 -0.5**
	baz=253,SNR=21					
E22K	**Anaktuvuk Pass**	**21.80**	**28**	IAmb	IAmb	08 46 53.8
	comp=Z,124nm,1.8s					
E22K	**Anaktuvuk Pass**	**21.80**	**28**	P	**P**	**08 46 50.1 -0.2**
	baz=233					
ILAR	**Eielson Array**	**21.81**	**39**	P	**P**	**08 46 47.6 -2.7**
	comp=Z,3.8nm,0.8s,baz=233,slow=7.8,SNR=49					
ILAR				PcP	**PcP**	**08 50 48.6 -0.6**
	comp=Z,1.5nm,0.9s,baz=280,slow=3.3,SNR=4.5					
ILAR				ScP	**ScP**	**08 54 22.4 -1.5**
	comp=Z,1.0nm,0.8s,baz=277,slow=3.1,SNR=6.8					
	comp=Z,3.8nm,0.8s					
ILAR	**Eielson Array**	**21.81**	**39**	P	**P**	**08 46 50.7 +0.4**
N25K	**Chitina, Valde**	**21.82**	**48**	IAmb	IAmb	08 46 53.0
	comp=Z,43nm,0.7s					
N25K	**Chitina, Valde**	**21.82**	**48**	P	**P**	**08 46 51.3 +0.7**
	baz=258,SNR=13					
H24K	**Noodor Dome**	**21.88**	**36**	IAmb	IAmb	08 46 55.2
	comp=Z,45nm,0.9s					
H24K	**Noodor Dome**	**21.88**	**36**	P	**P**	**08 46 50.6 -0.6**
	baz=243,SNR=51					
K24K	**Donnelly Dome**	**21.91**	**42**	IAmb	IAmb	08 46 54.0
	comp=Z,43nm,0.9s					
K24K	**Donnelly Dome**	**21.91**	**42**	P	**P**	**08 46 50.6 -0.9**
	baz=251,SNR=12					
B21K	**Ikpikpuk River**	**22.01**	**23**	P	**P**	**08 46 52.0 -0.4**
	baz=226					
D22K	**Ayikyak River**	**22.02**	**26**	IAmb	IAmb	08 46 56.9
	comp=Z,117nm,1.1s					
D22K	**Ayikyak River**	**22.02**	**26**	P	**P**	**08 46 52.4 -0.2**
	baz=230,SNR=88					
GLB	**Gilahina Butte**	**22.16**	**48**	IAmb	IAmb	08 46 56.6
	comp=Z,59nm,0.8s					
RIDG	**Independent Ri**	**22.28**	**42**	P	**P**	**08 46 54.1 -1.3**
	baz=252,SNR=12					
J25K	**Salcha River,**	**22.35**	**40**	P	**P**	**08 46 54.4 -1.9**
	baz=250,SNR=19					
CRQM	**Cirque**	**22.36**	**50**	IAmb	IAmb	08 46 58.6
	comp=Z,40nm,1.0s					
CRQE	**Cirque**	**22.38**	**50**	P	**P**	**08 46 55.8 -0.8**
	baz=261					
E23K	**Chandalar**	**22.42**	**30**	P	**P**	**08 46 56.2 -0.8**
	baz=236					
G24K	**Hadweenzic Riv**	**22.43**	**34**	IAmb	IAmb	08 47 01.5
	comp=Z,50nm,0.8s					
G24K	**Hadweenzic Riv**	**22.43**	**34**	P	**P**	**08 46 56.8 -0.1**
	baz=242,SNR=47					
MCARA	**McCarthy VSAT**	**22.52**	**49**	IAmb	IAmb	08 47 16.9
	comp=Z,48nm,1.0s					
MCARA	**McCarthy VSAT**	**22.52**	**49**	P	**P**	**08 46 56.8 -1.2**
	baz=260,SNR=5.5					
PRP	**Porcupine Dome**	**22.63**	**38**	P	**P**	**08 46 57.5 -1.8**
	baz=247,SNR=17					
D23K	**Nanushuk River**	**22.63**	**27**	IAmb	IAmb	08 47 03.8
	comp=Z,42nm,0.8s					
D23K	**Nanushuk River**	**22.63**	**27**	P	**P**	**08 46 58.0 -1.1**
	baz=233					
SCRK	**Sand Creek**	**22.71**	**42**	P	**P**	**08 46 57.7 -2.5**
	baz=253,SNR=18					
L26K	**Log Cabin Wild**	**22.73**	**44**	IAmb	IAmb	08 47 01.9
	comp=Z,55nm,1.0s					
L26K	**Log Cabin Wild**	**22.73**	**44**	P	**P**	**08 46 59.1 -1.1**
	baz=256,SNR=36					
M26K	**Nabesna, AK**	**22.73**	**46**	P	**P**	**08 46 59.8 -0.5**
	baz=258,SNR=14					
TOLK	**Toolik Lake Re**	**22.77**	**28**	P	**P**	**08 46 59.1 -1.5**
	baz=235,SNR=21					
E24K	**Your Creek**	**22.79**	**30**	P	**P**	**08 46 59.3 -1.5**
	baz=238					
B22K	**Teshekpuk Lake**	**22.80**	**23**	IAmb	IAmb	08 47 03.7
	comp=Z,99nm,1.4s					

B22K Teshekpuk Lake 22.80 23 P P 08 47 00.2 -0.7
baz=226
MESA MESA 22.86 52 P P 08 47 00.5 -1.4
baz=264
GRNC Granite Creek 23.03 51 IAmb IAmb 08 47 23.6
comp=Z,54nm,1.2s
FYU Fort Yukon 23.17 35 IAmb IAmb 08 47 06.5
comp=Z,86nm,1.2s
C23K Itkillik River 23.19 25 P P 08 47 04.0 -0.9
baz=231,SNR=75
M27K Edge Creek, AK 23.23 47 IAmb IAmb 08 47 07.7
comp=Z,53nm,1.0s
M27K Edge Creek, AK 23.23 47 P P 08 47 05.4 -0.1
baz=259
CTG Chitna Glacier 23.26 50 P P 08 47 04.3 -1.5
baz=263,SNR=5.0
CTGM Chitina Glacie 23.26 50 IAmb IAmb 08 47 21.3
comp=Z,43nm,1.1s
LOGN Logan Glacier 23.40 51 IAmb IAmb 08 47 08.4
comp=Z,70nm,1.3s
L27K Beaver Creek, 23.41 45 IAmb IAmb 08 47 08.8
comp=Z,72nm,1.5s
L27K Beaver Creek, 23.41 45 P P 08 47 05.5 -1.6
baz=257
BCAR Beaver Creek A 23.43 45 P 08 47 07.2 -0.2
F25K Christian Rive 23.48 33 P P 08 47 05.8 -2.0
baz=243,SNR=34
I26K Coal Creek Min 23.48 39 P P 08 47 05.4 -2.3
baz=251
TYV Tymovskoe 23.50 284 *e*P P 08 47 09.5 +1.4
TYV pmax pmax
comp=Z,40nm,0.8s
TYV pmax pmax
comp=Z,400nm,3.0s
C24K Franklin Bluff 23.65 27 IAmb IAmb 08 47 11.0
comp=Z,112nm,1.4s
C24K Franklin Bluff 23.65 27 P P 08 47 07.4 -2.0
baz=234
PINM Pinnacle 23.70 52 P P 08 47 07.7 -2.3
baz=266
BVCY Beaver Creek 23.71 47 P P 08 47 08.7 -1.3
baz=260,SNR=43
E25K Arctic Village 23.75 32 IAmb IAmb 08 47 12.9
comp=Z,76nm,1.1s
E25K Arctic Village 23.75 32 P P 08 47 09.1 -1.3
baz=242,SNR=62
BMAR Burnt Mountain 23.77 33 P 08 47 10.5 -0.1
YUK3 Moose Creek 23.79 48 P P 08 47 09.0 -2.1
baz=262,SNR=19
O28M Mount Upton 23.79 51 P P 08 47 09.8 -1.4
baz=264
G26K Porcupine Rive 23.85 35 IAmb IAmb 08 47 13.5
comp=Z,74nm,0.9s
G26K Porcupine Rive 23.85 35 P P 08 47 09.6 -1.7
baz=246,SNR=97
F26K Sheenjek River 24.04 33 P P 08 47 11.7 -1.3
baz=244,SNR=16
YUK8 Steele Glacier 24.06 50 P P 08 47 10.6 -2.9
baz=264
D25K Kavik River 24.11 29 P P 08 47 12.3 -1.4
baz=238,SNR=42
NKL Nikolayevsk 24.16 290 *e*P P 08 47 15.5 +1.2
NKL pmax pmax
comp=N,321nm,1.2s
NKL pmax pmax
comp=E,151nm,1.2s
NKL pmax pmax
comp=Z,746nm,1.2s
NKL MLR MLR
comp=N,4μm,19.0s
NKL MLR MLR
comp=E,5μm,19.0s
NKL MLR MLR
comp=Z,10μm,24.0s
I27K Kandik River 24.18 39 P P 08 47 12.9 -1.6
baz=252,SNR=9.0
UGL Uglegorsk 24.40 280 *e*P P 08 47 18.2 +1.7
UGL *e*S S 08 51 35.7 +1.6
UGL pmax pmax
comp=Z,100nm,0.8s
H27K Steamboat Moun 24.42 37 P P 08 47 14.8 -1.8
baz=251
O29M Mount Kennedy 24.55 52 P P 08 47 16.7 -1.3
baz=267
YUK4 Talbot Arm 24.60 50 P P 08 47 17.6 -0.9
baz=264
DAWY Dawson 24.69 43 P P 08 47 16.8 -2.3
baz=258,SNR=20
YUK6 Outpost Mounta 24.70 51 P P 08 47 17.0 -2.4
baz=266
YSS Yuzhno-Sakhali 24.75 275 P 08 47 21.0 +1.3
YSS IAmb IAmb 08 47 22.7
comp=Z,55nm,0.8s
YSS Yuzhno-Sakhali 24.75 275 *oe*P P 08 47 21.1 +1.4
YSS *e*S S 08 51 40.1 +0.3
YSS pmax pmax
comp=Z,200nm,6.4s
YSS pmax pmax
comp=N,200nm,4.5s
YSS pmax pmax
comp=N,20nm,0.8s
YSS pmax pmax
comp=Z,40nm,0.8s
YSS pmax pmax
comp=E,40nm,0.9s
YSS MLR MLR
comp=Z,500nm,15.0s
YSS MLR MLR
comp=N,200nm,13.0s
YSS MLR MLR
comp=E,400nm,17.0s
I28M Miner Creek 24.81 40 IAmb IAmb 08 47 21.5
comp=Z,58nm,1.1s
I28M Miner Creek 24.81 40 P P 08 47 19.3 -0.9
baz=254,SNR=49
M29M Somme Creek 24.82 47 IAmb IAmb 08 47 22.2
comp=Z,29nm,0.7s
M29M Somme Creek 24.82 47 P P 08 47 19.6 -0.7
baz=262,SNR=16
C26K Camden Bay 24.86 28 P P 08 47 19.4 -1.1
baz=239,SNR=66
L29M L29M 25.07 45 IAmb IAmb 08 47 40.2
comp=Z,75nm,1.4s
L29M L29M 25.07 45 P P 08 47 20.5 -2.0
baz=261
C27K Jago River 25.07 29 IAmb IAmb 08 47 28.8
comp=Z,21nm,0.8s
C27K Jago River 25.07 29 P P 08 47 21.3 -1.1
baz=241,SNR=34
HYT Haines Junctio 25.11 51 P P 08 47 21.7 -1.3
baz=267
E27K Coleen River 25.12 33 IAmb IAmb 08 47 34.4
comp=Z,32nm,1.2s
E27K Coleen River 25.12 33 P P 08 47 20.3 -2.6
baz=247
P30M Million Dollar 25.35 53 P P 08 47 22.4 -2.7
baz=269
N30M Aishikik Lake 25.36 49 IAmb IAmb 08 47 32.1
comp=Z,78nm,2.0s
N30M Aishikik Lake 25.36 49 P P 08 47 24.0 -1.2
baz=266
I29M Ogilvie Camp, 25.44 40 P P 08 47 24.8 -1.1
baz=256,SNR=13
K29M Barlow Dome 25.46 44 IAmb IAmb 08 47 26.5
comp=Z,26nm,0.9s
K29M Barlow Dome 25.46 44 P P 08 47 24.8 -1.3
baz=260,SNR=21
F28M Old Crow 25.51 35 IAmb IAmb 08 47 29.8
comp=Z,94nm,1.4s
F28M Old Crow 25.51 35 P P 08 47 25.9 -0.6
baz=250,SNR=42
M30M Minto, Yukon 25.60 47 P P 08 47 27.1 -0.2
baz=264
D27M Malcolm River 25.76 31 IAmb IAmb 08 47 36.4
comp=Z,66nm,1.6s
D27M Malcolm River 25.76 31 P P 08 47 28.6 -0.1
baz=245,SNR=35
S31K Pelican 25.76 58 P P 08 47 27.5 -1.2
baz=274
O30N Mendenhall 25.80 51 P P 08 47 27.0 -2.2
baz=268
E28M Babbage River 25.98 33 P P 08 47 30.1 -0.6
baz=248
J30M Hart River 26.10 42 P P 08 47 30.8 -1.1
baz=260,SNR=9.7
JKA Kamikawa-asahi 26.11 269 IAmb IAmb 08 47 34.3
comp=Z,72nm,1.1s
ASAJ Asahikawa 26.11 269 LR LR 08 57 34.1
comp=Z,352nm,20.9s,baz=96,slow=36
MAYO Mayo, Yukon 26.14 45 P P 08 47 33.0 +0.9
MAYO IAmb IAmb 08 47 59.1
comp=Z,35nm,0.8s
MAYO Mayo, Yukon 26.14 45 P P 08 47 31.2 -1.0
baz=262
I30M Mount Dempster 26.20 41 IAmb IAmb 08 47 33.4
comp=Z,38nm,1.3s
I30M Mount Dempster 26.20 41 P P 08 47 31.2 -1.7
baz=259,SNR=20
EPYK Eagle Plains 26.32 38 P P 08 47 32.0 -1.9
baz=256,SNR=7.4
SIT Sitka 26.33 60 P P 08 47 31.4 -2.5
baz=276
WHY Whitehorse 26.39 51 P P 08 47 32.3 -2.3
baz=269
E29M Blow River 26.47 34 P P 08 47 33.8 -1.3
baz=251,SNR=12
D28M Stokes Point 26.52 31 P P 08 47 34.2 -1.3
baz=248,SNR=7.6
R32K Eaglecrest 26.65 57 P P 08 47 36.2 -0.6
baz=274
G30M tAoh Zraii Nji 26.67 37 P P 08 47 35.0 -1.9
baz=255
S32K Killisnoo 26.69 59 P P 08 47 36.9 -0.2
baz=276
P32M Atlin 26.99 54 P P 08 47 39.8 -0.2
baz=273
F30M Barrier River 27.00 36 IAmb IAmb 08 47 46.5
comp=Z,40nm,1.4s
F30M Barrier River 27.00 36 P P 08 47 40.2 +0.4
baz=255,SNR=12
H31M Peel River 27.15 40 P P 08 47 40.4 -0.8
baz=260,SNR=7.4
N32M Quiet Lake 27.27 50 P P 08 47 41.0 -1.5
baz=270
GRNR Gornyy 27.32 287 ⇑ *i*P P 08 47 43.5 +0.6
GRNR pmax pmax
comp=E,10.0nm,1.0s
GRNR pmax pmax
comp=Z,20nm,1.1s
GRNR MLR MLR
comp=E,280nm,17.0s
GRNR MLR MLR
comp=N,210nm,15.0s
GRNR MLR MLR
comp=Z,290nm,17.0s
G31M Satah River 27.40 38 P P 08 47 41.4 -2.1
baz=258
P33M Teslin, Yukon 27.42 52 IAmb IAmb 08 47 44.4
comp=Z,38nm,1.5s
P33M Teslin, Yukon 27.42 52 P P 08 47 42.8 -1.0
baz=272,SNR=5.6
U33K Whale Pass 27.66 61 P P 08 47 44.1 -1.8
baz=280
F31M Tsiigehtchic 27.71 37 P P 08 47 44.4 -1.8
baz=257,SNR=7.5
INK Inuvik 28.00 35 P P 08 47 46.1 -2.6
baz=256
DLBC Dease Lake 28.99 56 LR LR 08 59 39.2
comp=Z,416nm,20.2s,baz=284,slow=37
YAK Yakutsk 29.14 312 LR LR 09 01 12.4
comp=Z,528nm,18.1s,baz=96,slow=40
YAK Yakutsk 29.14 312 *e*P P 08 47 57.6 -1.4
YAK *e**PP sP 08 48 07.6 -2.2
YAK *e*PPP PPP 08 48 57.2
YAK *e*S S 08 52 45.6 -3.2
YAK *e**SS sS 08 53 01.2 -1.7
YAK pmax pmax
comp=Z,23nm,0.9s
YAK pmax pmax
comp=N,3.0nm,0.9s
YAK pmax pmax
comp=E,21nm,1.2s
YAK pmax pmax
comp=Z,28nm,1.2s
YAK pmax pmax
comp=N,14nm,1.4s
YAK pmax pmax
comp=E,15nm,1.0s
YAK smax smax
comp=E,16nm,1.3s
YAK smax smax
comp=N,20nm,1.6s
YAK MLR MLR
comp=Z,573nm,19.0s
YAK MLR MLR
comp=E,374nm,19.0s
YAK MLR MLR
comp=N,241nm,15.0s
TIXI Tiksi 30.56 331 LR LR 09 01 29.3
comp=N,824nm,18.2s,baz=116,slow=38
KLR Kul'dur 30.68 286 LR LR 09 02 15.5
comp=N,392nm,18.2s,baz=74,slow=40
KLR Kul'dur 30.68 286 *ce*P P 08 48 13.0 +0.3
KLR pmax pmax
comp=Z,27nm,1.3s
BBB Bella Bella 31.49 68 LR LR 09 00 47.3
comp=Z,315nm,18.4s,baz=298,slow=36
C36M Paulatuk 31.56 34 P P 08 48 19.0 -1.2
baz=264,SNR=17
A36M Sachs Harbour 31.59 29 IAmb IAmb 08 48 22.3
comp=Z,26nm,0.8s
A36M Sachs Harbour 31.59 29 P P 08 48 19.2 -1.3
baz=258,SNR=20
WRGLY Wrigley 31.71 46 IAmb IAmb 08 48 22.8
comp=Z,25nm,0.9s
WRGLY Wrigley 31.71 46 P P 08 48 22.0 +0.4
baz=275,SNR=14
KOTAN Kotaneelee Air 31.79 52 P P 08 48 21.3 -1.1
baz=279
ZEA Zeya 31.80 296 *e*P P 08 48 22.3 -0.3
ZEA pmax pmax
comp=E,20nm,0.5s
ZEA pmax pmax
comp=Z,50nm,1.0s
ZEA MLR MLR
comp=E,200nm,21.0s
ZEA MLR MLR
comp=N,200nm,13.0s
ZEA MLR MLR
comp=Z,300nm,19.0s
USRK Ussuriysk Ar. 32.74 277 P P 08 48 30.9 0.0
comp=Z,6.0nm,0.6s,baz=68,slow=7.4,SNR=11
USRK PcP PcP 08 51 16.4 +0.7
comp=Z,4.7nm,0.8s,baz=66,slow=7.6,SNR=4.7
comp=Z,6.0nm,0.6s
HEH HeiHe 32.89 290 *e*P P 08 48 30.4 -1.8
HEH pmax pmax
comp=Z,24nm,1.1s
HEH L L
comp=Z,390nm,16.7s
HEH L L
comp=Z,460nm,19.1s
HEH L L
comp=Z,650nm,19.1s
H11N2 WAKE ISLAND Hy 33.06 204 T T 09 23 48.2
baz=17,slow=76,SNR=188
H11N3 WAKE ISLAND Hy 33.07 203 T T 09 23 48.5
baz=17,slow=76,SNR=138
H11N1 WAKE ISLAND Hy 33.08 204 T T 09 23 47.7
baz=17,slow=76,SNR=123
MAJO Matsushiro 33.16 260 P 08 48 36.0 +1.3
MAJO IAmb IAmb 08 48 36.7
comp=Z,26nm,1.1s
MAJO Matsushiro 33.16 260 *i* P P 08 48 35.0 +0.3
MAJO pmax pmax
comp=Z,27nm,1.1s
MJAR Matsushiro Arr 33.16 260 P P 08 48 35.5 +0.8
comp=Z,5.6nm,0.8s,baz=52,slow=7.6,SNR=13
MJAR LR LR 09 00 01.3
comp=Z,388nm,21.1s,baz=56,slow=32
comp=Z,5.6nm,0.8s
MJAR Matsushiro Arr 33.16 260 P 08 48 35.7 +1.0
MJAR Matsushiro Arr 33.16 260 P P 08 48 35.7 +1.0
MJAR pmax pmax
comp=Z,6.0nm,1.0s
MJB9 Matsu-Tunnel 33.16 260 P P 08 48 35.4 +0.7
MJB9 IAmb IAmb 08 48 37.7
comp=Z,24nm,1.1s
MDJ Mudanjiang 34.03 279 IAmb IAmb 08 48 43.3
comp=Z,16nm,0.9s
MDJ Mudanjiang 34.03 279 P P 08 48 41.6 -0.5
MDJ pmax pmax
comp=Z,22nm,1.7s
H11S1 WAKE ISLAND Hy 34.28 203 T T 09 25 21.5
baz=19,slow=76,SNR=102
JGF Kuroka 34.29 260 IAmb IAmb 08 48 46.8
comp=Z,22nm,0.9s
H11S2 WAKE ISLAND Hy 34.30 203 T T 09 25 21.5
baz=19,slow=76,SNR=62
H11S3 WAKE ISLAND Hy 34.30 203 T T 09 25 22.0
baz=19,slow=76,SNR=52
JHJ Hachijo jima 2 34.46 254 LR LR 09 00 37.1
comp=Z,139nm,20.7s,baz=88,slow=32
BNX BinXian 34.84 282 ⇑ P P 08 48 48.4 -0.7
BNX pmax pmax
comp=Z,49nm,0.9s
CLRS Cowichan Lake 35.12 71 IAmb IAmb 08 48 54.5
comp=Z,35nm,1.0s
YKAW3 Yellowknife Wh 35.81 46 IAmb IAmb 08 48 58.0
comp=Z,25nm,1.0s
YKA Yellowknife Ar 35.83 46 P P 08 48 56.9 -0.5
comp=Z,14nm,0.9s,baz=286,slow=9.1,SNR=119
YKA PcP PcP 08 51 24.6 +0.4
comp=Z,3.9nm,1.0s,baz=293,slow=3.4,SNR=9.8
YKA ScP ScP 08 55 07.5 -0.4
comp=Z,0.9nm,0.8s,baz=288,slow=3.9,SNR=6.7
YKA LR LR 09 05 15.1
comp=Z,1μm,19.2s,baz=274,slow=39
comp=Z,14nm,0.9s
YKA Yellowknife Ar 35.83 46 P P 08 48 57.0 -0.4
YKAW1 Yellowknife Wh 35.89 46 IAmb IAmb 08 48 58.7
comp=Z,29nm,1.1s
GNW Green Mountain 36.46 73 IAmb IAmb 08 49 06.2
comp=Z,21nm,1.0s
CN2 Changchun 37.01 281 P P 08 49 07.1 -0.6
CN2 S S 08 54 48.2 -3.0
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 L L
comp=Z,400nm,19.0s
CN2 L L
comp=Z,400nm,19.0s
CN2 L L
comp=Z,500nm,20.0s
F04D Rainier, OR 37.05 75 IAmb IAmb 08 49 11.0
comp=Z,49nm,0.8s
JCJ Chichijima 37.44 245 LR LR 09 01 33.8
comp=Z,241nm,21.3s,baz=112,slow=31
HIA Hailar 37.83 292 P P 08 49 14.4 -0.2
HIA IAmb IAmb 08 49 15.5
comp=Z,46nm,1.3s
HIA Hailar 37.83 292 P P 08 49 14.4 -0.2
HIA pmax pmax
comp=Z,46nm,1.3s
LTY Liberty 37.90 72 IAmb IAmb 08 49 17.6
comp=Z,29nm,1.3s
H04D Lebanon 37.99 77 IAmb IAmb 08 49 31.9
comp=Z,45nm,1.1s
B08A Colville Reser 38.18 70 IAmb IAmb 08 49 19.9
comp=Z,38nm,1.1s
H04A Detroit Lake 38.25 77 IAmb IAmb 08 49 36.0
comp=Z,67nm,1.2s
HOOD Mount Hood Mea 38.25 75 IAmb IAmb 08 49 41.2
comp=Z,23nm,0.8s
EPH Ephrata 38.49 71 IAmb IAmb 08 49 22.2
comp=Z,56nm,1.3s
G05A Wamic 38.50 75 IAmb IAmb 08 49 41.2
comp=Z,30nm,0.9s
I04A Tendick Farm, 38.57 78 IAmb IAmb 08 49 41.1
comp=Z,62nm,1.2s
E07A Sunnyside 38.73 73 IAmb IAmb 08 49 39.9
comp=Z,36nm,1.3s
WIFE Three Sisters- 38.80 77 IAmb IAmb 08 49 27.9
comp=Z,35nm,1.0s
WAH2 Wahluke Slope 38.80 72 IAmb IAmb 08 49 25.2
comp=Z,83nm,1.6s
I05D Terrebonne, OR 38.95 76 IAmb IAmb 08 49 45.9
comp=Z,41nm,1.3s
HAWA Hanford 39.00 73 IAmb IAmb 08 49 27.0
comp=Z,70nm,1.4s
D08A Wollman Farm, 39.04 71 IAmb IAmb 08 49 26.8
comp=Z,40nm,1.3s
KSRS Korea Array 39.05 270 P P 08 49 26.2 +1.3
comp=Z,13nm,0.9s,baz=59,slow=7.9,SNR=28
KSRS PcP PcP 08 51 35.3 +0.8
comp=Z,2.7nm,0.9s,baz=64,slow=2.7,SNR=5.3
KSRS LR LR 09 04 31.1
comp=Z,119nm,21.7s,baz=60,slow=34
comp=Z,13nm,0.9s
KS19 Wonju Array Si 39.05 270 IAmb IAmb 08 49 27.5
comp=Z,34nm,1.1s
C09A Chrisman Ranch 39.07 70 IAmb IAmb 08 49 26.9
comp=Z,42nm,1.1s
KSAR Wonju Array Be 39.08 270 P 08 49 26.3 +1.1
KSAR Wonju Array Be 39.08 270 P P 08 49 26.3 +1.1
PINE Pine Mountain 39.48 77 IAmb IAmb 08 49 32.6
comp=Z,38nm,1.3s
L04D Klamath Falls 39.48 80 IAmb IAmb 08 49 34.5
comp=Z,46nm,1.2s
YBH Yreka Blue Hor 39.50 81 LR LR 09 02 16.6
comp=Z,27nm,21.8s,baz=286,slow=31
YBH Yreka Blue Hor 39.50 81 P 08 49 31.0 +2.2
YBH Yreka Blue Hor 39.50 81 P P 08 49 31.0 +2.2
YBH pmax pmax
comp=Z,26nm,1.1s
NEW Newport 39.52 69 LR LR 09 06 01.3
comp=Z,125nm,18.9s,baz=302,slow=36
NEW Newport 39.52 69 IAmb IAmb 08 49 30.7
comp=Z,34nm,1.1s
J05D Fort Rock, OR 39.57 78 IAmb IAmb 08 49 48.5
comp=Z,67nm,1.6s
K04D Chiloquin, OR 39.60 79 IAmb IAmb 08 49 43.8
comp=Z,41nm,1.1s
E09A Wood Farm, Sta 39.77 72 IAmb IAmb 08 49 54.2
comp=Z,25nm,0.8s
KHBM Hayfork Bally 39.79 83 P P 08 49 33.2 +1.9
KHBM IAmb IAmb 08 49 37.4
comp=Z,43nm,1.6s
INCN Inchon 39.84 271 P 08 49 32.3 +0.7
INCN IAmb IAmb 08 49 33.7
comp=Z,57nm,1.0s
INCN Inchon 39.84 271 P P 08 49 32.3 +0.7
INCN pmax pmax
comp=Z,57nm,1.0s
JNU Nakatsue 39.95 263 LR LR 09 04 38.9
comp=Z,326nm,21.4s,baz=46,slow=34
TJN Taejon 40.07 269 P 08 49 33.4 0.0
TJN Taejon 40.07 269 P P 08 49 33.4 0.0
TJN pmax pmax
comp=Z,135nm,0.9s
K05A Summer Lake 40.08 78 P P 08 49 34.8 +1.1
K05A IAmb IAmb 08 49 53.0
comp=Z,95nm,1.6s
M03C McCloud 40.12 81 P P 08 49 35.4 +1.4
CIT Chita 40.14 298 *e*P P 08 49 34.2 +0.2
CIT *e* 08 49 43.8
CIT *e* 08 49 51.0
CIT *e* 08 51 13.6
CIT pmax pmax
comp=Z,139nm,1.1s
RES Resolute Bay 40.21 24 LR LR 09 08 20.3
comp=Z,215nm,20.5s,baz=326,slow=39
HATC Hat Creek Radi 40.80 81 P P 08 49 40.8 +1.3
HATC IAmb IAmb 08 50 07.7
comp=Z,50nm,1.1s
O03E Paynes Creek 40.88 82 P P 08 49 41.5 +1.2
O03E IAmb IAmb 08 49 58.9
comp=Z,41nm,1.2s
BMO Blue Mountains 41.13 73 IAmb IAmb 08 49 55.4
comp=Z,48nm,1.9s
MSO Missoula 42.11 69 IAmb IAmb 08 49 51.8
comp=Z,45nm,1.1s
XLT XiLinHaoTe 42.70 286 *e*P P 08 49 55.8 +0.7
XLT pP pwP 08 50 08.9 +2.1
XLT sP sP 08 50 13.1 +6.7
XLT pmax pmax
comp=Z,58nm,1.0s
XLT pmax pmax
comp=Z,180nm,6.4s
XLT L L
comp=Z,30nm,18.9s
XLT L L
comp=Z,300nm,17.7s
XLT L L
comp=Z,380nm,21.1s
PNTR Pine Nut 42.97 82 IAmb IAmb 08 50 16.0
comp=Z,18nm,0.8s
BLKN Baker Lake 43.21 39 P 08 49 57.6 -1.2
DLMT Dillon 43.68 70 IAmb IAmb 08 50 41.3
comp=Z,30nm,1.2s
EGMT Eagleton 43.92 65 IAmb IAmb 08 50 07.1
comp=Z,22nm,0.8s
LHV Little Huntoon 44.15 82 IAmb IAmb 08 50 13.9

comp=Z,34nm,1.3s
NVAR Mina Array Bea 44.17 82 P **P** **08 50 08.2 +1.0**
comp=Z,4.6nm,0.7s,baz=294,slow=8.3,SNR=18
NVAR ScP **ScP** **08 55 40.2 -0.9**
comp=Z,0.8nm,0.8s,baz=267,slow=5.9,SNR=3.6
NVAR LR LR 09 06 18.2
comp=Z,163nm,19.7s,baz=293,slow=33
comp=Z,4.6nm,0.7s
NRIK Noril'sk 44.32 330 P **P** **08 50 07.8 +0.1**
comp=Z,0.7nm,0.3s,baz=79,slow=8.6,SNR=2.2
NRIK PcP **PcP** **08 51 52.0 +0.7**
comp=Z,7.6nm,0.9s,baz=187,slow=1.3,SNR=6.3
NRIK LR LR 09 09 51.9
comp=Z,310nm,18.1s,baz=60,slow=38
comp=Z,0.7nm,0.3s
ELK Elko 44.69 77 LR LR 09 07 29.4
comp=Z,292nm,18.8s,baz=313,slow=34
ELK Elko 44.69 77 IAmb IAmb 08 50 28.0
comp=Z,16nm,0.8s
FFC Flin Flon 44.77 54 **P** **08 50 10.0 -1.4**
FFC Flin Flon 44.77 54 P **P** **08 50 10.0 -1.4**
FFC pmax pmax
comp=Z,13nm,1.0s
BJI2 Beijing 44.86 282 P **P** **08 50 13.0 +0.6**
BJI2 sP **pwP** **08 50 26.0 +0.8**
BJI2 pmax pmax
comp=Z,13nm,0.9s
BJI2 L L
comp=Z,180nm,22.8s
BJI2 L L
comp=Z,130nm,18.9s
BJI2 L L
comp=Z,220nm,17.3s
BJT Baijiatuau 44.86 282 IAmb IAmb 08 50 14.1
comp=Z,20nm,0.9s
DSP Deep Springs 45.03 83 IAmb IAmb 08 50 35.0
comp=Z,20nm,1.3s
YFT Old Faithful 45.22 70 IAmb IAmb 08 50 32.5
comp=Z,48nm,1.1s
YPP Pitchstone Pla 45.34 70 IAmb IAmb 08 50 32.9
comp=Z,33nm,1.2s
POIN Pond Inlet 45.38 24 P **P** **08 50 15.7 -0.4**
POIN IAmb IAmb 08 50 17.0
comp=Z,15nm,1.0s
TULEG Thule 45.40 18 IAmb IAmb 08 50 30.1
comp=Z,37nm,1.6s
TULEG Thule 45.40 18 *i* P **P** **08 50 15.3 -0.8**
TULEG IAmb IAmb 08 50 16.5
comp=Z,6.7nm,0.7s
YNE Yellowstone No 45.40 69 IAmb IAmb 08 50 18.4
comp=Z,30nm,0.9s
YMP Mirror Lake Pl 45.46 70 IAmb IAmb 08 50 19.5
comp=Z,40nm,1.1s
FLWY Flagg Ranch 45.51 71 IAmb IAmb 08 50 20.8
comp=Z,37nm,0.9s
HVU Hansel Valley 45.59 74 IAmb IAmb 08 50 22.0
comp=Z,23nm,1.1s
TLY Talaya 45.70 302 LR LR 09 09 53.6
comp=Z,642nm,21.4s,baz=47,slow=37
TLY Talaya 45.70 302 **P** **08 50 19.2 +0.3**
TLY IAmb IAmb 08 50 20.6
comp=Z,17nm,0.8s
TLY Talaya 45.70 302 *ce* P **P** **08 50 19.5 +0.6**
TLY pmax pmax
comp=Z,44nm,1.7s
SNOW Snow King Moun 45.83 71 IAmb IAmb 08 50 36.6
comp=Z,15nm,1.1s
ULN Ulaanbaatar 45.84 296 **P** **08 50 20.6 +0.4**
ULN IAmb IAmb 08 50 22.0
comp=Z,43nm,1.3s
ULN Ulaanbaatar 45.84 296 *ce* P **P** **08 50 20.9 +0.7**
ULN pmax pmax
comp=Z,37nm,1.3s
ULN Ulaanbaatar 45.84 296 P **P** **08 50 20.6 +0.4**
comp=Z,121nm,1.2s
BGU Big Grassy Mou 45.93 76 IAmb IAmb 08 50 35.0
comp=Z,19nm,1.2s
JOW Kunigami 45.94 258 LR LR 09 10 00.3
comp=Z,99nm,18.4s,baz=76,slow=36
ILON Igloolik, Nuna 45.95 29 P **P** **08 50 20.1 -0.4**
ILON IAmb IAmb 08 50 21.4
comp=Z,28nm,1.2s
AHID Auburn Hatcher 46.02 72 IAmb IAmb 08 50 40.4
comp=Z,15nm,0.9s
SPUT South Promonto 46.06 75 IAmb IAmb 08 50 28.1
comp=Z,13nm,1.0s
SONM Songino Array 46.23 296 P **P** **08 50 24.2 +0.9**
comp=Z,16nm,1.0s,baz=57,slow=8.7,SNR=58
SONM PcP **PcP** **08 51 58.8 +0.3**
comp=Z,5.9nm,0.8s,baz=57,slow=2.6,SNR=5.6
SONM ScP **ScP** **08 55 50.3 +0.9**
comp=Z,1.1nm,0.8s,baz=84,slow=2.5,SNR=4.3
SONM LR LR 09 11 12.5
comp=Z,912nm,18.8s,baz=56,slow=38
comp=Z,16nm,1.0s
SONM Songino Array 46.23 296 **P** **08 50 23.8 +0.5**
SONM IAmb IAmb 08 50 26.1
comp=Z,43nm,1.4s
S11A Rachel 46.24 81 IAmb IAmb 08 50 56.2
comp=Z,24nm,0.9s
FURC Furnace Creek, 46.28 83 IAmb IAmb 08 50 29.7
comp=Z,29nm,1.1s
TPNV Topopah Spring 46.37 82 IAmb IAmb 08 50 30.1
comp=Z,22nm,1.0s
DUG Dugway, Tooele 46.50 76 **P** **08 50 26.6 +1.1**
DUG Dugway, Tooele 46.50 76 P **P** **08 50 26.6 +1.1**
DUG pmax pmax
comp=Z,53nm,1.2s
FCC Fort Churchill 46.56 46 IAmb IAmb 08 50 27.0
comp=Z,39nm,1.6s
ZAK Zakamensk 46.58 301 *eP* **P** **08 50 26.0 +0.1**
ZAK pmax pmax
comp=Z,41nm,1.4s
GWY Greenwater Val 46.58 83 IAmb IAmb 08 50 36.0
comp=Z,15nm,1.0s
QSM Queen of Sheba 46.60 84 IAmb IAmb 08 51 11.3
comp=Z,12nm,0.7s
TIA Tai'an 46.61 277 P **P** **08 50 26.6 +0.4**
TIA pmax pmax
comp=Z,35nm,1.0s
TIA L L
comp=Z,270nm,19.6s
TIA L L
comp=Z,200nm,18.1s
TIA L L
comp=Z,360nm,24.0s
TCUT Toone Canyon 46.81 74 IAmb IAmb 08 50 30.2
comp=Z,23nm,1.2s
CTU Camp Tracy 46.85 75 IAmb IAmb 08 50 31.3
comp=Z,14nm,1.0s
PSUT Pine Spring 46.87 79 IAmb IAmb 08 50 32.5
comp=Z,11nm,0.8s
BW06 Boulder Array 46.95 71 IAmb IAmb 08 50 46.4
comp=Z,25nm,0.8s
PD31 Pinedale Array 46.95 71 IAmb IAmb 08 50 46.5
comp=Z,25nm,0.8s
PDAR Pinedale Array 46.95 71 P **P** **08 50 29.6 +0.5**
comp=Z,13nm,0.7s,baz=308,slow=3.6,SNR=130
PDAR LR LR 09 10 10.0
comp=Z,114nm,18.2s,baz=302,slow=36
comp=Z,13nm,0.7s
PDAR Pinedale Array 46.95 71 **P** **08 50 29.8 +0.7**
GSC Goldstone, Bar 47.06 84 IAmb IAmb 08 50 35.9
comp=Z,18nm,0.9s
GUMO Guam 47.10 230 LR LR 09 07 11.9
comp=Z,136nm,21.6s,baz=64,slow=32
MOY Mondy 47.11 303 *eP* **P** **08 50 30.7 +0.6**
MOY pmax pmax
comp=Z,41nm,1.4s
HHC Hu-ho-hao-te 47.19 286 *eP* **P** **08 50 31.8 +1.0**
HHC sP pwP 08 50 45.9 +2.2
HHC S **S** **08 57 22.0 +0.4**
HHC pmax pmax
comp=Z,20nm,0.8s
HHC pmax pmax
comp=Z,96nm,6.7s
HHC L L
comp=Z,270nm,16.2s
HHC L L
comp=Z,340nm,17.0s
HHC L L
comp=Z,330nm,18.7s
NOR Nord 47.20 3 *i* P **P** **08 50 29.9 -0.4**
NOR IAmb IAmb 08 50 31.0
comp=Z,6.7nm,0.9s
MPU Maple Canyon 47.33 76 IAmb IAmb 08 50 47.9
comp=Z,9.9nm,0.9s

HNS HongShan 47.37 280 ⇑P **P** **08 50 33.1 +1.0**
HNS pmax pmax
comp=Z,32nm,1.1s
HNS L L
comp=Z,250nm,19.7s
HNS L L
comp=Z,280nm,18.9s
HNS L L
comp=Z,400nm,18.8s
BSUT Blindstream Ca 47.55 75 IAmb IAmb 08 50 55.3
comp=Z,29nm,1.3s
NEEM North Greenlan 47.81 13 *i* P **P** **08 50 34.9 -0.6**
NEEM IAmb IAmb 08 50 35.6
comp=Z,40nm,0.7s
LCMT Little Creek M 48.20 80 IAmb IAmb 08 50 56.2
comp=Z,29nm,1.3s
P17A Butcher Ranch, 48.21 76 IAmb IAmb 08 50 42.2
comp=Z,21nm,1.2s
NJ2 Nanjing 48.23 271 *eP* **P** **08 50 39.1 +0.3**
NJ2 pmax pmax
comp=Z,3.0nm,0.5s
BTO2 Baotou 48.27 286 *eP* **P** **08 50 40.3 +1.0**
BTO2 pP **pwP** **08 50 53.1 +1.0**
BTO2 PP **PP** **08 52 32.9 +1.3**
BTO2 S **S** **08 57 37.4 +0.4**
BTO2 pmax pmax
comp=Z,82nm,0.9s
BTO2 pmax pmax
comp=Z,290nm,4.7s
Q16A Castle Valley 48.28 77 IAmb IAmb 08 50 58.2
comp=Z,27nm,1.3s
PFO Pinyon Flats O 48.37 86 LR LR 09 10 16.2
comp=Z,152nm,18.3s,baz=297,slow=35
DANC Danby, Needles 48.38 84 IAmb IAmb 08 50 49.5
comp=Z,47nm,1.8s
P18A Preston Nutter 48.41 75 IAmb IAmb 08 50 44.1
comp=Z,33nm,1.1s
KNB Kanab 48.45 80 IAmb IAmb 08 51 04.3
comp=Z,23nm,1.1s
BORC Borrego Spring 48.63 86 IAmb IAmb 08 50 43.8
comp=Z,19nm,1.1s
K22A Casper 48.82 70 IAmb IAmb 08 50 44.6
comp=Z,32nm,0.9s
IRM Iron Mountain 48.84 84 IAmb IAmb 08 51 38.5
comp=Z,14nm,1.1s
KULLO Kullorsuaq 48.88 17 *i* P **P** **08 50 43.2 -0.1**
KULLO IAmb IAmb 08 50 44.3
comp=Z,25nm,1.1s
U15A North Rim 49.16 80 IAmb IAmb 08 51 03.6
comp=Z,49nm,1.4s
HMU Henry Mountain 49.16 77 IAmb IAmb 08 51 02.7
comp=Z,28nm,0.8s
O20A White River Ci 49.32 73 IAmb IAmb 08 51 01.1
comp=Z,29nm,1.0s
RSSD Black Hills 49.40 67 P **P** **08 50 47.9 -0.1**
RSSD IAmb IAmb 08 50 48.8
comp=Z,14nm,1.1s
RSSD Black Hills 49.40 67 P **P** **08 50 47.9 -0.1**
RSSD pmax pmax
comp=Z,14nm,1.1s
BLYC Blythe 49.50 84 IAmb IAmb 08 51 10.9
comp=Z,30nm,1.4s
HAYD Hayden 49.67 72 IAmb IAmb 08 51 23.4
comp=Z,14nm,1.0s
PV21 Cone Mtn., Par 49.85 76 IAmb IAmb 08 51 04.1
comp=Z,10nm,0.8s
PV23 Carpenter Ridg 49.90 76 IAmb IAmb 08 51 22.8
comp=Z,31nm,0.9s
PV14 Lion Creek, Pa 49.94 76 IAmb IAmb 08 51 09.3
comp=Z,18nm,0.9s
PV22 Blue Mesa, Par 49.98 75 IAmb IAmb 08 50 56.2
comp=Z,24nm,1.0s
PV04 Paradox Valley 50.00 76 IAmb IAmb 08 51 21.9
comp=Z,22nm,0.8s
PV19 Morning Glory 50.00 76 IAmb IAmb 08 51 08.1
comp=Z,29nm,0.8s
KBS Kingsbay 50.02 357 *eP* **P** **08 50 52.5 +0.5**
KBS IAmb IAmb 08 50 53.1
comp=Z,31nm,1.3s
KBS Kingsbay 50.02 357 *i* P **P** **08 50 52.4 +0.5**
PV17 East Wray Mesa 50.04 76 IAmb IAmb 08 50 56.2
comp=Z,24nm,0.7s
PV16 Nyswonger Mesa 50.04 76 IAmb IAmb 08 51 08.3
comp=Z,18nm,0.8s
PV03 Paradox Valley 50.12 76 IAmb IAmb 08 50 56.9
comp=Z,32nm,1.0s
PV07 Paradox Valley 50.13 75 IAmb IAmb 08 51 06.9
comp=Z,20nm,1.1s
PV15 Paradox Valley 50.29 75 IAmb IAmb 08 50 58.1
comp=Z,20nm,1.0s
WUAZ Wupatki 50.31 80 IAmb IAmb 08 51 12.3
comp=Z,39nm,1.4s
ULM Lac du Bonnet 50.31 56 P **P** **08 50 53.6 -1.0**
comp=Z,3.3nm,0.7s,baz=317,slow=8.1,SNR=6.8
ULM PcP **PcP** **08 52 12.9 -0.1**
comp=Z,3.1nm,0.9s,baz=252,slow=3.2,SNR=3.1
ULM LR LR 09 12 54.8
comp=Z,225nm,20.8s,baz=320,slow=37
comp=Z,3.3nm,0.7s
ULM Lac du Bonnet 50.31 56 IAmb IAmb 08 51 47.0
comp=Z,25nm,1.7s
PV01 Paradox Valley 50.37 76 IAmb IAmb 08 50 58.8
comp=Z,13nm,0.7s
UPNV Upernavik 50.40 19 *i* P **P** **08 50 54.3 -0.6**
UPNV IAmb IAmb 08 50 55.2
comp=Z,18nm,1.0s
SPA0 Spitsbergen Ar 50.58 356 *eP* **P** **08 50 55.8 -0.5**
SPA0 IAmb IAmb 08 51 00.2
comp=Z,49nm,1.2s
SPITS Spitsbergen Ar 50.58 356 P **P** **08 50 55.8 -0.5**
comp=Z,4.9nm,0.4s,baz=50,slow=7.0,SNR=73
SPITS LR LR 09 12 23.3
comp=Z,166nm,21.6s,baz=12,slow=36
comp=Z,4.9nm,0.4s
SPITS Spitsbergen Ar 50.58 356 P **P** **08 50 55.6 -0.7**
SPITS pmax pmax
comp=Z,48nm,1.2s
LYN LuoYang 50.58 278 P **P** **08 50 56.7 -0.1**
LYN pP pwP 08 51 09.8 +0.2
LYN pmax pmax
comp=Z,38nm,0.7s
LYN pmax pmax
comp=Z,360nm,5.4s
LYN L L
comp=Z,290nm,16.1s
LYN L L
comp=Z,260nm,17.8s
LYN L L
comp=Z,340nm,15.7s
SPB2 Spitsbergen Ar 50.58 356 **P** **08 50 56.1 -0.2**
MVCO Mesa Verde 51.00 77 IAmb IAmb 08 51 20.3
comp=Z,21nm,1.2s
W18A Petrified Fore 51.59 79 IAmb IAmb 08 51 09.6
comp=Z,21nm,1.0s
HOPEN Hopen 51.65 353 *eP* **P** **08 51 04.2 -0.1**
HOPEN IAmb IAmb 08 51 11.3
comp=Z,148nm,1.7s
EPLO Experimental L 51.77 56 IAmb IAmb 08 51 07.0
comp=Z,52nm,1.7s
HSPB Hornsund (broa 51.77 356 *eP* **P** **08 51 05.2 0.0**
DAG Danmarks Havn 51.80 5 *i* P **P** **08 51 04.5 -0.9**
DAG IAmb IAmb 08 51 05.5
comp=Z,13nm,1.2s
X18A Snowflake 51.84 80 IAmb IAmb 08 51 23.9
comp=Z,30nm,1.4s
NUUG Nuugaatsiaq 51.94 19 *i* P **P** **08 51 05.8 -0.7**
NUUG IAmb IAmb 08 51 07.0
comp=Z,10nm,1.0s
WHN Wuhan 52.08 273 P **P** **08 51 07.7 -0.4**
WHN pmax pmax
comp=Z,60nm,0.9s
NIAQ Niaqornat 52.42 20 *i* P **P** **08 51 10.5 +0.5**
NIAQ IAmb IAmb 08 51 11.0
comp=Z,20nm,1.0s
SSLB Suanglung 52.69 262 **P** **08 51 13.0 +0.2**
TUC Tucson 52.80 83 **P** **08 51 13.9 +0.4**
TUC Tucson 52.80 83 P **P** **08 51 13.9 +0.4**
TUC pmax pmax
comp=Z,14nm,1.2s
XAN Xi'an 53.12 280 P **P** **08 51 15.6 -0.2**
XAN pP sP 08 51 25.8 -1.1
XAN pmax pmax
comp=Z,19nm,1.2s
XAN L L
comp=Z,240nm,19.2s
XAN L L
comp=Z,330nm,21.3s
XAN L L
comp=Z,460nm,18.5s
KSCO Kaye Shedlock' 53.40 71 IAmb IAmb 08 51 20.8
comp=Z,44nm,1.2s
T25A Trinidad 53.53 74 IAmb IAmb 08 51 21.8
comp=Z,34nm,1.2s
FRB Frobisher Bay 53.55 31 LR LR 09 17 29.3
comp=Z,651nm,18.3s,baz=296,slow=40
SUMG Summit 53.68 14 IAmb IAmb 08 51 20.4
comp=Z,26nm,1.1s
SUMG Summit 53.68 14 *i* P **P** **08 51 19.5 -0.3**
SUMG IAmb IAmb 08 51 20.6
comp=Z,22nm,1.0s
ANMO Albuquerque 53.72 77 LR LR 09 11 37.4
comp=Z,191nm,21.9s,baz=314,slow=33
ANMO Albuquerque 53.72 77 **P** **08 51 21.2 +0.8**
ANMO Albuquerque 53.72 77 *ce* P **P** **08 51 21.4 +1.0**
ANMO pmax pmax
comp=Z,9.0nm,1.3s
ZAA0 Zalesovo Array 53.77 313 IAmb IAmb 08 52 27.4
comp=Z,13nm,1.0s
ZALV Zalesovo Beam 53.77 313 P **P** **08 51 19.6 -0.6**
comp=Z,5.6nm,0.9s,baz=62,slow=6.9,SNR=15
ZALV PcP **PcP** **08 52 26.1 +0.3**
comp=Z,9.1nm,0.8s,baz=29,slow=3.4,SNR=8.2
ZALV LR LR 09 15 38.3
comp=Z,246nm,20.5s,baz=52,slow=38
comp=Z,5.6nm,0.9s
ZALV Zalesovo Beam 53.77 313 **P** **08 51 19.2 -1.0**
EYMN Ely 54.00 56 IAmb IAmb 08 51 22.8
comp=Z,22nm,1.0s
BJO1 Bjornoya 54.02 354 *eP* **P** **08 51 21.7 -0.1**
Y22A Socorro 54.08 79 IAmb IAmb 08 51 40.4
comp=Z,25nm,1.2s
DBG Daneborg 54.09 7 *i* P **P** **08 51 20.8 -1.4**
DBG IAmb IAmb 08 51 21.8
comp=Z,5.4nm,0.5s
ILULI Ilulissat 54.20 20 *i* P **P** **08 51 22.1 -1.0**
ILULI IAmb IAmb 08 51 22.9
comp=Z,17nm,0.9s
319A Douglas 54.37 83 IAmb IAmb 08 51 42.0
comp=Z,12nm,1.0s
E38A The Farm, Brul 54.82 57 IAmb IAmb 08 51 27.9
comp=Z,25nm,1.0s
LZH Lanzhou 54.88 286 *eP* **P** **08 51 29.6 +0.8**
LZH pP sP 08 51 39.0 -0.8
LZH sP pwP 08 51 43.3 +1.5
LZH pmax pmax
comp=Z,32nm,1.8s
LZH L L
comp=Z,450nm,14.9s
LZH L L
comp=Z,510nm,14.6s
LZH L L
comp=Z,540nm,15.9s
RTBA Rita Blanca 55.01 74 IAmb IAmb 08 51 46.3
comp=Z,15nm,1.0s
LZDM Lanzhou Array 55.06 286 P **P** **08 51 31.0 +0.7**
comp=Z,1.1nm,0.3s,baz=48,slow=2.2,SNR=8.8
LZDM LR LR 09 18 20.9
comp=Z,278nm,18.5s,baz=325,slow=40
comp=Z,1.1nm,0.3s
GTA2 Gaotai 55.09 291 P **P** **08 51 30.8 +0.6**
GTA2 pmax pmax
comp=Z,70nm,1.2s
GTA2 L L
comp=Z,350nm,14.0s
GTA2 L L
comp=Z,300nm,15.9s
GTA2 L L
comp=Z,570nm,14.9s
DGZ Jazzator, Alta 55.22 308 *c i* P **P** **08 51 31.0 -0.1**
DGZ pmax pmax
comp=Z,61nm,1.1s
ENH Enshi 55.32 277 IAmb IAmb 08 51 32.5
comp=Z,14nm,0.9s
I37A Lemond, Wasseca 55.48 61 IAmb IAmb 08 51 33.5
comp=Z,23nm,0.9s
SFJD Kangerlussuaq 56.10 22 LR LR 09 19 59.8
comp=Z,96nm,18.1s,baz=324,slow=41
PH02 Texas Public H 56.18 74 IAmb IAmb 08 51 51.3
comp=Z,25nm,0.8s
G40A Rib Lake 56.40 58 IAmb IAmb 08 51 39.7
comp=Z,24nm,1.3s
MNTX Cornudas Mount 56.58 80 IAmb IAmb 08 51 57.8
comp=Z,24nm,1.4s
MSTX Muleshoe 56.64 76 IAmb IAmb 08 51 43.3
comp=Z,23nm,1.1s
AMTX Amarillo 56.68 74 IAmb IAmb 08 51 46.0
comp=Z,17nm,1.2s
I40A Norwalk 57.08 59 IAmb IAmb 08 51 44.7
comp=Z,31nm,1.4s
VADS Vadso 57.23 349 *eP* **P** **08 51 44.6 -0.2**
VADS IAmb IAmb 08 51 45.3
comp=Z,120nm,1.5s
SMWD Sannorwood 57.40 73 IAmb IAmb 08 52 03.5
comp=Z,18nm,0.8s
KAN01 Argonia South 57.51 70 IAmb IAmb 08 51 48.8
comp=Z,38nm,1.1s
N38A Joes South For 57.69 64 IAmb IAmb 08 51 49.8
comp=Z,31nm,0.9s
128A Castleberry Fa 57.73 77 IAmb IAmb 08 52 05.9
comp=Z,13nm,1.0s
PECS Pecos 57.74 79 IAmb IAmb 08 52 05.7
comp=Z,17nm,1.4s
CROK Carrier 57.81 70 IAmb IAmb 08 52 07.2
comp=Z,16nm,0.9s
JFWS Jewell Farm 57.93 60 IAmb IAmb 08 51 50.6
comp=Z,21nm,1.0s
L40A Anamosa 57.97 61 IAmb IAmb 08 51 50.1
comp=Z,10nm,0.8s
DKNS Dickens 57.97 75 IAmb IAmb 08 52 07.5
comp=Z,11nm,0.7s
ZSN Zaisan 57.99 307 *c i* P **P** **08 51 51.0 +0.5**
ZSN pmax pmax
comp=Z,20nm,0.9s
ZSN Zaisan 57.99 307 ⇑*i* P **P** **08 51 51.1 +0.5**
comp=Z,20nm,0.9s
I42A Draeger Farm, 58.00 58 IAmb IAmb 08 51 52.2
comp=Z,14nm,0.8s
POST Post 58.03 76 IAmb IAmb 08 51 52.3
comp=Z,20nm,1.1s
TPB01 Permian Basin 58.09 79 IAmb IAmb 08 52 07.8
comp=Z,15nm,1.1s
129A Stewart Farms, 58.10 76 IAmb IAmb 08 51 53.2
comp=Z,9.4nm,1.2s
ARA0 ARCESS Array S 58.23 350 *eP* **P** **08 51 51.3 -0.6**
ARA0 IAmb IAmb 08 51 55.4
comp=Z,60nm,1.5s
ARCES ARCESS Array B 58.23 350 P **P** **08 51 51.0 -0.9**
comp=Z,8.9nm,0.9s,baz=21,slow=8.5,SNR=8.6
ARCES LR LR 09 19 48.8
comp=Z,273nm,18.6s,baz=26,slow=39
comp=Z,8.9nm,0.9s
ARCES ARCESS Array B 58.23 350 IAmb IAmb 08 51 52.1
comp=Z,41nm,1.3s
SN07 Snyder 07 58.38 75 IAmb IAmb 08 51 54.8
comp=Z,11nm,1.0s
TPB05 Hovey Rd 58.38 79 IAmb IAmb 08 52 10.1
comp=Z,13nm,1.0s
T35A Sooner Cattle 58.40 69 IAmb IAmb 08 51 54.3
comp=Z,30nm,1.1s
OK048 Pawnee Station 58.49 70 IAmb IAmb 08 51 55.2
comp=Z,36nm,1.2s
OK051 E0350 and S346 58.49 70 IAmb IAmb 08 51 55.1
comp=Z,24nm,1.1s
LVZ Lovozero 58.53 345 **P** **08 51 53.1 -1.0**
LVZ Lovozero 58.53 345 *ce* P **P** **08 51 52.3 -1.8**
LVZ pmax pmax
comp=Z,113nm,2.5s
ALPN Alpine 58.57 79 IAmb IAmb 08 52 11.3
comp=Z,14nm,1.3s
TMB01 Midkiff 58.63 77 IAmb IAmb 08 52 14.4
comp=Z,6.3nm,0.8s
APMT Aspermont 58.69 75 IAmb IAmb 08 52 08.9
comp=Z,35nm,1.6s
JETT Jettan, Norway 58.73 352 *eP* **P** **08 51 54.8 -0.6**
JETT IAmb IAmb 08 52 01.4
comp=Z,295nm,2.2s
KURK Kurchatov 58.76 313 **P** **08 51 56.2 +0.3**
KURK Kurchatov 58.76 313 *ce* P **P** **08 51 56.0 +0.2**
KURK pmax pmax
comp=Z,63nm,1.3s
QUOK Quay 58.79 70 IAmb IAmb 08 51 57.4
comp=Z,22nm,1.1s
LPIG La Paz 58.83 90 LR LR 09 14 36.7
comp=Z,57nm,18.3s,baz=240,slow=33

L42A Oliver, Polo 58.86 61 IAmb IAmb 08 51 56.6
comp=Z,19nm,1.0s
KURBB Kurchatov Arra 58.87 313 P **P** **08 51 56.7 +0.1**
comp=Z,19nm,0.5s,baz=42,slow=6.6,SNR=98
KURBB PcP **PcP** **08 52 46.0 +0.3**
comp=Z,9.7nm,1.0s,baz=46,slow=4.6,SNR=5.9
KURBB LR LR 09 18 58.6
comp=Z,332nm,18.5s,baz=172,slow=38
comp=Z,19nm,0.5s
WMQ Urumqi 58.98 302 *eP* **P** **08 51 58.4 +0.8**
WMQ pP pP 08 52 06.3 +0.6
WMQ pmax pmax
comp=Z,24nm,0.9s
WMQ pmax pmax
comp=Z,220nm,4.5s
WMQ L L
comp=Z,530nm,19.7s
WMQ L L
comp=Z,860nm,24.1s
WMQ L L
comp=Z,630nm,19.7s
KTK1 Kautokeino 58.98 351 *eP* **P** **08 51 56.8 -0.3**
KTK1 IAmb IAmb 08 51 58.3
comp=Z,48nm,1.4s
APA Apatity 59.03 346 *eP* **P** **08 51 56.0 -1.5**
APA pmax pmax
comp=Z,11nm,1.1s
TX31 Lajitas Ar. Si 59.28 80 IAmb IAmb 08 52 16.5
comp=Z,12nm,1.1s
TXAR Lajitas Array 59.28 80 P **P** **08 52 00.1 +0.2**
comp=Z,1.9nm,0.6s,baz=298,slow=5.3,SNR=19
comp=Z,1.9nm,0.6s
WTFS Witchita Falls 59.39 73 IAmb IAmb 08 52 16.5
comp=Z,16nm,1.0s
ABTX Abilene, Hawle 59.46 75 IAmb IAmb 08 52 03.1
comp=Z,19nm,0.9s
HPIG 59.72 84 IAmb IAmb 08 52 04.3
comp=Z,12nm,1.2s
MK31 Makanchi Array 59.72 308 *i* P **P** **08 52 01.4 -1.2**
MKAR Makanchi Array 59.72 308 P **P** **08 52 02.2 -0.4**
MKAR LR LR 09 18 12.9
comp=Z,314nm,21.7s,baz=30,slow=36
comp=Z,22nm,0.6s
MKAR Makanchi Array 59.72 308 **P** **08 52 02.6 0.0**
MKAR Makanchi Array 59.72 308 *i* P **P** **08 52 01.3 -1.3**
MKAR pmax pmax
comp=Z,22nm,0.6s
S39A Bolivar 59.74 66 IAmb IAmb 08 52 02.2
comp=Z,13nm,0.9s
OZNA Ozona 59.74 77 IAmb IAmb 08 52 19.1
comp=Z,16nm,1.1s
GYA Guiyang 59.76 275 P **P** **08 52 03.5 +0.2**
GYA pmax pmax
comp=Z,7.0nm,1.0s
MAKZ Makanchi 59.87 308 **P** **08 52 03.6 0.0**
MAKZ Makanchi 59.87 308 P **P** **08 52 03.6 0.0**
MAKZ pmax pmax
comp=Z,46nm,1.0s
U38A Gravette 59.98 68 IAmb IAmb 08 52 05.0
comp=Z,18nm,1.1s
TGY Tagaytay City 60.01 254 LR LR 09 14 28.5
comp=Z,98nm,21.4s,baz=236,slow=32
PLPT Palo Pinto 60.14 74 IAmb IAmb 08 52 07.6
comp=Z,21nm,1.0s
GOMU GeErMu 60.19 292 P **P** **08 52 05.6 -0.8**
GOMU S **S** **09 00 15.2 -3.1**
GOMU pmax pmax
comp=Z,16nm,0.7s
GOMU L L
comp=Z,310nm,13.6s
GOMU L L
comp=Z,140nm,13.4s
GOMU L L
comp=Z,380nm,14.2s
FW06 Azle 60.49 73 IAmb IAmb 08 52 24.2
comp=Z,12nm,0.9s
SCHQ Schefferville 60.56 38 P **P** **08 52 07.3 -1.0**
comp=Z,20nm,0.9s,baz=324,slow=5.9,SNR=21
SCHQ LR LR 09 19 58.0
comp=Z,442nm,19.7s,baz=320,slow=38
comp=Z,20nm,0.9s
SCHQ Schefferville 60.56 38 IAmb IAmb 08 52 09.1
comp=Z,29nm,1.0s
J47A Sunmer 60.62 57 IAmb IAmb 08 52 10.2
comp=Z,22nm,0.9s
LOF Lofoten 60.65 354 *eP* **P** **08 52 08.7 +0.2**
LOF IAmb IAmb 08 52 09.7
comp=Z,41nm,1.1s
CCM Cathedral Cave 60.68 65 P **P** **08 52 08.2 -1.0**
CCM Cathedral Cave 60.68 65 P **P** **08 52 08.3 -1.0**
CCM pmax pmax
comp=Z,73nm,1.7s
BVAR Borovoye Array 60.70 319 P **P** **08 52 08.7 -0.5**
comp=Z,8.7nm,0.4s,baz=50,slow=7.9,SNR=51
BVAR LR LR 09 19 47.6
comp=Z,570nm,22.0s,baz=45,slow=37
comp=Z,8.7nm,0.4s
BORK Borovoye 60.71 319 **P** **08 52 09.1 -0.1**
BORK Borovoye 60.71 319 *ceP* **P** **08 52 09.1 -0.1**
BORK pmax pmax
comp=Z,32nm,1.0s
MGMO Mountain Grove 60.71 66 IAmb IAmb 08 52 09.4
comp=Z,27nm,1.0s
STEI Steigen 60.73 354 *eP* **P** **08 52 08.3 -0.8**
STEI IAmb IAmb 08 52 14.2
comp=Z,140nm,2.1s
BRDY Brady 60.79 75 IAmb IAmb 08 52 11.3
comp=Z,11nm,1.2s
JCT Junction City 60.86 77 IAmb IAmb 08 52 27.0
comp=Z,25nm,1.4s
VLDQ Val d'Or 60.89 49 IAmb IAmb 08 52 08.9
comp=Z,18nm,1.0s
FW13 Cleburne 60.99 74 IAmb IAmb 08 52 24.7
comp=Z,14nm,0.9s
DRIO Del Rio 61.10 78 IAmb IAmb 08 52 27.8
comp=Z,14nm,1.2s
FVM French Village 61.19 64 IAmb IAmb 08 52 12.8
comp=Z,17nm,0.8s
WHTX Lake Whitney, 61.23 74 IAmb IAmb 08 52 26.3
comp=Z,15nm,0.9s
FAUS Fauske 61.27 353 *eP* **P** **08 52 12.4 -0.4**
FAUS IAmb IAmb 08 52 13.2
comp=Z,46nm,1.2s
T42A Van Buren 61.48 66 IAmb IAmb 08 52 13.9
comp=Z,10nm,0.8s
N47A Urbana 61.80 59 IAmb IAmb 08 52 16.9
comp=Z,17nm,0.7s
Z38A Mt. Pleasant 61.83 71 IAmb IAmb 08 52 35.3
comp=Z,18nm,0.7s
CGM3 Cape Girardeau 62.11 64 IAmb IAmb 08 52 19.2
comp=Z,16nm,1.3s
X40A Basin Creek Fa 62.24 69 IAmb IAmb 08 52 21.1
comp=Z,18nm,1.0s
SADO Sadowa 62.45 52 LR LR 09 20 34.8
comp=Z,159nm,19.2s,baz=339,slow=37
MOR8 Moi Rana 62.53 354 *eP* **P** **08 52 19.4 -1.8**
BLO Bloomington 62.55 61 IAmb IAmb 08 52 24.1
comp=Z,16nm,0.8s
N49A Columbus Grove 62.59 58 IAmb IAmb 08 52 22.6
comp=Z,20nm,0.9s
ARTI Arti 62.59 328 LR LR 09 22 39.8
comp=Z,195nm,18.5s,baz=35,slow=39
ARTI Arti 62.59 328 **P** **08 52 21.3 -0.5**
ARTI Arti 62.59 328 *d iP* **P** **08 52 22.0 +0.1**
ARTI 08 53 00.2
ARTI 08 54 37.2
ARTI S **S** **09 00 49.2 +1.8**
ARTI SS **SS** **09 04 51.9 +1.0**
ARTI pmax pmax
comp=Z,13nm,1.3s
LEIR Leirfjorden 62.67 354 IAmb IAmb 08 52 21.6
comp=Z,2µm,4.1s
LEIR *eP* **P** **08 52 22.0 -0.2**
PZH PanZhiHua 62.80 279 P **P** **08 52 24.8 +0.9**
HNR Honiara 62.83 203 LR LR 09 17 44.6
comp=Z,7.4nm,18.2s,baz=96,slow=34
DAV Davao City (W) 62.84 246 LR LR 09 15 34.6
comp=Z,204nm,20.8s,baz=20,slow=32
TDK Taldyqorghan 62.91 309 *c iP* **P** **08 52 24.7 +0.5**
TDK pmax pmax
comp=Z,15nm,0.9s
TDK Taldyqorghan 62.91 309⇑ *iP* **P** **08 52 24.7 +0.5**
comp=Z,15nm,0.9s
QIZ Qiongzhong 63.16 267 P **P** **08 52 26.4 +0.2**
QIZ S **S** **09 00 54.7 -0.8**
QIZ pmax pmax
comp=Z,25nm,1.5s
QIZ L L
comp=Z,170nm,15.9s
QIZ L L
comp=Z,230nm,19.3s
QIZ L L
comp=Z,200nm,19.3s
HNVL Huntsville, TX 63.30 73 IAmb IAmb 08 52 44.7
comp=Z,22nm,1.0s
WCI Wyandotte Cave 63.34 62 P **P** **08 52 27.2 +0.2**
WCI Wyandotte Cave 63.34 62 P **P** **08 52 27.3 +0.2**
WCI pmax pmax
comp=Z,33nm,1.1s
DELO Deloro Mine 63.39 51 IAmb IAmb 08 52 28.2
comp=Z,37nm,1.6s
KIRV Kirov 63.54 334 LR LR 09 22 12.3
comp=Z,265nm,20.5s,baz=29,slow=38
N51A Ashland 63.55 57 IAmb IAmb 08 52 29.4
comp=Z,20nm,0.8s
TRQ Mont Tremblant 63.62 48 IAmb IAmb 08 52 42.6
comp=Z,19nm,1.3s
HKT Hockley 63.66 74 **P** **08 52 29.9 +0.6**
HKT IAmb IAmb 08 52 31.4
comp=Z,37nm,1.7s
HKT Hockley 63.66 74 *i* P **P** **08 52 29.4 +0.2**
HKT pmax pmax
comp=Z,18nm,1.5s
SHLS Shalkode 63.71 307 *c iP* **P** **08 52 28.7 -0.9**
SHLS pmax pmax
comp=Z,15nm,1.0s
SHLS Shalkode 63.71 307⇑ *iP* **P** **08 52 28.8 -0.9**
comp=Z,15nm,1.0s
KPKS Kokpek 63.88 307 *eP* **P** **08 52 31.5 +0.8**
KPKS Kokpek 63.88 307 *eP* **P** **08 52 31.5 +0.8**
UZB Uzynbulak 63.94 307 *c iP* **P** **08 52 31.6 +0.4**
UZB pmax pmax
comp=Z,17nm,1.1s
UZB Uzynbulak 63.94 307⇑ *iP* **P** **08 52 31.6 +0.4**
comp=Z,17nm,1.1s
WVT Waverly 63.97 64 P **P** **08 52 31.6 +0.3**
WVT Waverly 63.97 64 P **P** **08 52 31.6 +0.3**
WVT pmax pmax
comp=Z,30nm,1.0s
KLMR Klimovskoe 64.01 340 *eP* **P** **08 52 28.7 -2.4**
KLMR *e*PP **sP** **08 52 40.3 -2.1**
KLMR pmax pmax
comp=Z,33nm,1.1s
PECO Prince Edward 64.12 52 IAmb IAmb 08 52 33.1
comp=Z,19nm,1.1s
P51A Williamsport 64.21 59 IAmb IAmb 08 52 35.1
comp=Z,20nm,1.3s
SATY Saty 64.32 307 *c iP* **P** **08 52 34.2 +0.6**
SATY pmax pmax
comp=Z,21nm,1.1s
SATY Saty 64.32 307⇑ *iP* **P** **08 52 34.2 +0.6**
comp=Z,21nm,1.1s
ICQ Pointe Anglais 64.40 42 IAmb IAmb 08 52 47.2
comp=Z,14nm,1.0s
LMQ La Malbaie 64.58 45 IAmb IAmb 08 52 34.8
comp=Z,19nm,1.0s
O53A New Philadelph 64.64 57 IAmb IAmb 08 52 36.5
comp=Z,18nm,0.9s
MDOK Medeo 64.92 308 *eP* **P** **08 52 37.9 +0.3**
MDOK Medeo 64.92 308 *eP* **P** **08 52 37.1 -0.5**
AAA Alma-Ata 64.95 308 *eP* **P** **08 52 38.2 +0.5**
AAA Alma-Ata 64.95 308 *eP* **P** **08 52 38.2 +0.5**
TNSS Tian-Shan 65.06 308 *eP* **P** **08 52 39.1 +0.3**
TNSS Tian-Shan 65.06 308 *eP* **P** **08 52 39.2 +0.3**
AFI Afiamalu 65.14 171 LR LR 09 17 50.2
comp=Z,190nm,18.7s,baz=322,slow=33
X48A Hartselle 65.62 65 IAmb IAmb 08 52 42.6
comp=Z,28nm,1.2s
SGDS Sogindy 65.89 310 *eP* **P** **08 52 44.4 +0.6**
FIA1 FINESS Array S 65.89 347 **P** **08 52 42.4 -1.0**
FINES FINESS Array B 65.89 347 P **P** **08 52 42.2 -1.2**
comp=Z,14nm,0.7s,baz=32,slow=7.5,SNR=29
FINES LR LR 09 27 08.3
comp=Z,268nm,18.2s,baz=15,slow=41
comp=Z,14nm,0.7s
FINES FINESS Array B 65.89 347 P **P** **08 52 42.4 -0.9**
FINES FINESS Array B 65.89 347 P **P** **08 52 42.4 -0.9**
M57A Sunshine Farm, 65.96 54 IAmb IAmb 08 52 58.5
comp=Z,27nm,1.2s
CPCT Cooper Cave 66.32 63 IAmb IAmb 08 52 48.8
comp=Z,16nm,1.0s
MOL Molde 66.50 356 *eP* **P** **08 52 47.3 +0.1**
MOL IAML 08 52 47.5
comp=Z,3.6nm,0.6s
AAK Ala-Archa 66.56 309 LR LR 09 23 06.2
comp=Z,226nm,20.4s,baz=56,slow=37
AAK Ala-Archa 66.56 309 **P** **08 52 49.0 +0.8**
AAK Ala-Archa 66.56 309 *ceP* **P** **08 52 49.2 +1.0**
AAK pmax pmax
comp=Z,66nm,1.3s
TKL Tuckaleechee C 66.59 62 LR LR 09 22 48.6
comp=Z,264nm,19.8s,baz=301,slow=37
LRAL Lakeview Retre 66.67 66 IAmb IAmb 08 52 49.4
comp=Z,16nm,0.8s
W52A Murphy 66.92 62 IAmb IAmb 08 52 51.6
comp=Z,24nm,1.0s
DOMB Dombas 66.96 356 *eP* **P** **08 52 50.0 -0.3**
DOMB IAmb IAmb 08 52 50.6
comp=Z,62nm,1.2s
LSA Lhasa 66.97 289 P **P** **08 52 49.4 -1.9**
LSA pmax pmax
comp=Z,19nm,0.7s
V53A Saluda 67.11 61 IAmb IAmb 08 52 53.2
comp=Z,25nm,1.3s
AKTO Aktyubinsk 67.54 324 LR LR 09 25 22.9
comp=Z,562nm,18.3s,baz=29,slow=39
AB31 Akbulak array 67.78 322 **P** **08 52 55.3 -0.2**
AB31 IAmb IAmb 08 52 57.7
comp=Z,16nm,1.1s
ABKAR Akbulak array 67.78 322 P **P** **08 52 55.2 -0.3**
NB2 NORSAR Subarra 67.84 354 P **P** **08 52 55.3 -0.5**
comp=Z,53nm,1.1s,baz=7.4,slow=6.9
NB2 NORSAR Subarra 67.84 354 P **P** **08 52 55.3 -0.5**
NOA NORSAR Array B 67.84 354 P **P** **08 52 55.3 -0.5**
comp=Z,25nm,0.9s,baz=7.6,slow=6.4,SNR=38
NOA LR LR 09 25 20.5
comp=Z,60nm,18.2s,baz=300,slow=38
comp=Z,25nm,0.9s
DZA Taraz 67.89 311 *eP* **P** **08 52 57.1 +0.7**
DZA pmax pmax
comp=Z,17nm,1.2s
DZA Taraz 67.89 311 *eP* **P** **08 52 57.2 +0.7**
comp=Z,17nm,1.2s
U56A King 67.94 59 IAmb IAmb 08 52 58.8
comp=Z,25nm,1.1s
KKAR Karatay Array 68.11 312 P **P** **08 52 58.2 +0.3**
KKAR Karatay Array 68.11 312 P **P** **08 52 58.2 +0.3**
NC602 NORSAR Array S 68.12 354 *eP* **P** **08 52 57.5 0.0**
NC602 IAmb IAmb 08 52 58.3
comp=Z,64nm,1.3s
SKAR Skarslia 68.35 356 *eP* **P** **08 52 59.2 +0.1**
GOGA Godfrey 68.41 63 IAmb IAmb 08 53 00.6
comp=Z,23nm,1.0s
BRLS Boroldav 68.49 312 *eP* **P** **08 53 02.2 +2.0**
BRLS Boroldav 68.49 312 *eP* **P** **08 53 02.3 +2.0**
MYLDM Lahad Datu 68.50 251 P **P** **08 53 03.4 +2.9**
comp=Z,39nm,1.1s
HFS Hagfors 68.56 353 P **P** **08 52 59.3 -1.0**
comp=Z,19nm,0.8s,baz=27,slow=5.0,SNR=27
HFS LR LR 09 24 21.9
comp=Z,67nm,19.7s,baz=4.5,slow=37
comp=Z,19nm,0.8s
MSVF Nonsavu 68.59 182 LR LR 09 17 46.9
comp=Z,120nm,21.1s,baz=311,slow=31
OSL Oslo 68.97 354 *eP* **P** **08 53 03.2 +0.4**
JSC Jenkinsville 69.00 61 IAmb IAmb 08 53 04.9
comp=Z,17nm,0.8s
MOS Moscow 69.07 338 *eP* **P** **08 53 03.2 -0.3**
MOS *e* 08 53 35.5
MOS pmax pmax
comp=Z,35nm,0.7s
IUG Iuzhnay 69.08 312 *eP* **P** **08 53 04.6 +0.6**
IUG pmax pmax
comp=Z,18nm,1.1s
IUG Iuzhnay 69.08 312 *eP* **P** **08 53 04.6 +0.6**
comp=Z,18nm,1.1s
CHM Chimkent 69.14 312 *eP* **P** **08 53 04.8 +0.6**
CHM pmax pmax
comp=Z,9.0nm,0.5s
CHM Chimkent 69.14 312 *eP* **P** **08 53 04.9 +0.6**
comp=Z,9.2nm,0.5s
KONO Kongsberg 69.32 355 P **P** **08 53 05.0 0.0**
KONO Kongsberg 69.32 355 *ceP* **P** **08 53 04.8 -0.2**
KONO Kongsberg 69.32 355 *ceP* **P** **08 53 06.0 +1.0**
KONO pmax pmax
comp=Z,103nm,2.5s
BELG Belogornoye 69.39 331 LR LR 09 26 24.9
comp=Z,172nm,19.0s,baz=65,slow=38
BELG Belogornoye 69.39 331 *i* P **P** **08 53 03.4 -2.1**
BELG pmax pmax
comp=Z,3.0nm,0.9s
STRU Stroemstad 69.83 354 *i* P **P** **08 53 08.4 +0.3**
OBN Obninsk 69.89 339 LR LR 09 28 03.0
comp=Z,412nm,18.3s,baz=360,slow=40
OBN Obninsk 69.89 339⇑ *eP* **P** **08 53 07.6 -1.0**
OBN *e* 08 53 24.1
OBN *e* 08 55 42.9
OBN *e*SS SS 09 06 41.8 -2.1
OBN pmax pmax
comp=Z,33nm,1.3s
OBN MLR MLR
comp=Z,391nm,17.0s
CHTO Chiang Mai 70.18 276 **P** **08 53 10.7 -0.3**
CHTO IAmb IAmb 08 53 11.9
comp=Z,15nm,1.1s
CHTO Chiang Mai 70.18 276 P **P** **08 53 10.7 -0.3**
CHTO pmax pmax
comp=Z,15nm,1.1s
CHTO Chiang Mai 70.18 276 P **P** **08 53 11.1 +0.1**
comp=Z,15nm,1.0s
TOLI2 Tolitoli 70.43 246 IAmb IAmb 08 53 13.3
comp=Z,16nm,0.8s
CMAR Chiang Mai Arr 70.45 275 P **P** **08 53 12.5 -0.1**
comp=Z,9.2nm,0.8s,baz=26,slow=7.0,SNR=51
comp=Z,9.2nm,0.8s
CMAR Chiang Mai Arr 70.45 275 *i* P **P** **08 53 13.1 +0.5**
CMAR pmax pmax
comp=Z,10.0nm,0.8s
SNART Snartemo 70.74 356 *i* P **P** **08 53 14.2 +0.5**
TJOU Tjoern 70.80 354 *i* P **P** **08 53 13.9 -0.1**
BORU Boraas 71.11 353 *i* P **P** **08 53 15.7 -0.4**
ONAU Onsala 71.41 353 *i* P **P** **08 53 16.8 -1.0**
MPSI Mapaga 71.57 246 P **P** **08 53 19.0 -0.4**
comp=Z,24nm,0.9s
LPSR Galich'ya Gora 71.62 336 *eP* **P** **08 53 17.2 -2.0**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
FABU Falkenberg 71.74 353 *i* P **P** **08 53 19.4 -0.5**
BRDH Bariadhala 71.84 284 LR LR 09 26 59.7
comp=Z,122nm,20.4s,baz=150,slow=38
GOET G??ttrup 71.95 355 *i* P **P** **08 53 21.1 +0.1**
GOET IAmb IAmb 08 53 22.4
comp=Z,60nm,0.8s
VRH Novokhopyorsk 72.15 334 *eP* **P** **08 53 18.5 -3.9**
VRH pmax pmax
comp=Z,10.0nm,1.0s
BLEU Blekinge 72.16 351 *i* P **P** **08 53 21.1 -1.2**
DEL Delary 72.18 352 *i* P **P** **08 53 21.4 -1.0**
CHGR Chuyangaron 72.22 310 *i* P **P** **08 53 23.5 +0.4**
MNK Minsk 72.23 344 *i* P **P** **08 53 22.2 -0.6**
comp=E,27nm,0.8s
MNK *i* P **P** **08 53 22.2 -0.6**
comp=N,14nm,0.7s
MNK *i* P **P** **08 53 22.2 -0.6**
comp=Z,24nm,0.8s,baz=18
MNK *i* PcP **PcP** **08 53 40.0 -0.9**
MNK *i* PP **PP** **08 56 02.8 +0.1**
MNK *i* PPP PPP 08 57 47.1
MNK *i* S **S** **09 02 43.4 +0.2**
MNK *i* SS **SS** **09 07 22.5 +2.7**
MNK *i* LQ LQ 09 19 17.8
MNK *i* LR LR 09 22 12.6
MNK *i* LRM MLR 09 25 36.5
comp=Z,255nm,19.4s
MNK *i* LRM MLR 09 25 46.8
comp=E,228nm,16.9s
MNK *i* LRM MLR 09 26 00.1
comp=N,168nm,15.5s
MNK Minsk 72.23 344 *i* P **P** **08 53 22.2 -0.6**
MNK *i* 08 53 39.9
MNK *i* 08 56 02.8
MNK *i* PPP PPP 08 57 47.1
MNK *i* S **S** **09 02 43.4 +0.2**
MNK *i* SS **SS** **09 07 22.5 +2.7**
MNK pmax pmax
comp=N,14nm,0.7s
MNK pmax pmax
comp=E,27nm,0.8s
MNK pmax pmax
comp=Z,24nm,0.8s
MNK MLR MLR
comp=Z,255nm,19.0s
MNK MLR MLR
comp=E,228nm,17.0s
MNK MLR MLR
comp=N,168nm,15.0s
VORR Voronezh 72.40 336 *eP* **P** **08 53 20.5 -3.3**
VORR pmax pmax
comp=Z,10.0nm,0.9s
MUD Monsted U'grnd 72.53 355 *i* P **P** **08 53 24.9 +0.4**
MUD IAmb IAmb 08 53 26.7
comp=Z,27nm,1.0s
BJUU Bjuv 72.64 353 *i* P **P** **08 53 24.9 -0.3**
VSR Storozhevoye 72.82 336 *eP* **P** **08 53 23.9 -2.5**
VSR pmax pmax
comp=Z,10.0nm,1.1s
VORD Divnogorie 73.02 335 *eP* **P** **08 53 25.2 -2.3**
VORD pmax pmax
comp=Z,10.0nm,1.0s
LUNU Lund 73.04 352 *i* P **P** **08 53 27.2 -0.3**
HAMD Hammershus, De 73.28 351 *i* P **P** **08 53 29.1 +0.2**
HAMD IAmb IAmb 08 53 31.3
comp=Z,18nm,0.8s
PPT Papeete 73.34 150 LR LR 09 17 36.3
comp=Z,156nm,21.5s,baz=347,slow=29
BSD Bornholm Skovb 73.42 351 *i* P **P** **08 53 29.2 -0.6**
BSD IAmb IAmb 08 53 29.6
comp=Z,13nm,0.9s
SHAA Shahritus 73.58 310 IAmb IAmb 08 53 33.6
comp=Z,274nm,1.3s
CMIG Matias Romero 73.69 83 LR LR 09 25 47.9
comp=Z,75nm,18.6s,baz=358,slow=36
EKA Eskdalemuir Ar 73.87 2 P **P** **08 53 32.7 +0.2**
comp=Z,16nm,0.8s,baz=351,slow=4.3,SNR=18
EKA LR LR 09 23 50.2
comp=Z,93nm,22.0s,baz=1.0,slow=34
comp=Z,16nm,0.8s
NIL Nilore 74.07 304 P **P** **08 53 35.1 +1.1**
NIL Nilore 74.07 304 P **P** **08 53 35.1 +1.1**
NIL pmax pmax
comp=Z,103nm,1.1s
RGN Rugen 74.13 352 *eP* **P** **08 53 34.5 +0.6**
comp=Z,69nm,0.9s,baz=9.0,slow=5.6
RAR Rarotonga 74.14 161 LR LR 09 19 29.5
comp=Z,322nm,20.0s,baz=322,slow=30
SBUM Sibu 74.43 254 P **P** **08 53 37.0 +0.7**
HLG Helgoland 74.86 355 *eP* **P** **08 53 39.1 +0.8**
comp=Z,115nm,1.0s,baz=9.0,slow=5.6
BSEG Bad Segeberg 74.97 354 *eP* **P** **08 53 39.3 +0.5**
comp=Z,28nm,0.9s,baz=9.0,slow=5.6
KBL Kabul 75.52 307 P **P** **08 53 42.5 -0.2**
KBL Kabul 75.52 307 P **P** **08 53 42.5 -0.2**
KBL pmax pmax
comp=Z,74nm,0.9s
RNPP9 Sopachiv 75.55 344 P **P** **08 53 41.7 -0.5**
AK23 Malin Array Si 75.56 342 P **P** **08 53 41.8 -0.5**
AK21 Malin Array Si 75.56 342 P **P** **08 53 41.4 -1.0**
AK22 Malin Array Si 75.57 342 P **P** **08 53 41.5 -0.9**
AK03 Malin Array Si 75.58 341 P **P** **08 53 41.5 -0.9**
AKASG Malin Array Be 75.60 341 P **P** **08 53 41.8 -0.7**
comp=Z,3.6nm,0.3s,baz=22,slow=5.7,SNR=42
AKASG LR LR 09 31 35.1
comp=Z,186nm,18.4s,baz=23,slow=39
comp=Z,3.6nm,0.3s
AKASG Malin Array Be 75.60 341 IAmb IAmb 08 53 43.1
comp=Z,20nm,1.5s
AKASG Malin Array Be 75.60 341 *i* P **P** **08 53 41.7 -0.9**
AKASG pmax pmax
comp=Z,3.0nm,0.3s
AKBB Malin Array Si 75.60 341 IAmb IAmb 08 53 42.9
comp=Z,21nm,0.8s
AKBB Malin Array Si 75.60 341 *ceP* **P** **08 53 42.0 -0.6**
AKBB pmax pmax
comp=Z,35nm,1.1s
AK20 Malin Array Si 75.60 342 P **P** **08 53 41.8 -0.8**
KIEV Kiev 75.61 341 ⇑P **P** **08 53 41.9 -0.8**
KIEV Kiev 75.61 341 P **P** **08 53 41.8 -0.8**

KIEV IAmb IAmb 08 53 42.9
comp=Z,19nm,0.8s
KIEV Kiev 75.61 341 P **P** **08 53 41.8 -0.8**
AK18 Malin Array Si 75.61 342 P **P** **08 53 41.7 -0.9**
AK02 Malin Array Si 75.64 341 P **P** **08 53 41.8 -1.0**
AK16 Malin Array Si 75.65 342 P **P** **08 53 42.1 -0.8**
MI28 Mi28,Pidlybu 75.68 343 P **P** **08 53 41.9 -1.1**
AK14 Malin Array Si 75.69 342 P **P** **08 53 42.5 -0.6**
GORT1 Trebel 75.84 353 *e*P **P** **08 53 43.9 +0.1**
comp=Z,37nm,1.1s,baz=9.0,slow=5.6
RETH Rethem/Aller, 76.22 354 *e*P **P** **08 53 46.3 +0.3**
comp=Z,28nm,1.1s,baz=9.0,slow=5.6
FLTG Flechtingen 76.50 353 *e*P **P** **08 53 47.1 -0.6**
comp=Z,26nm,0.9s,baz=9.0,slow=5.6
LUBAR Lubar, Ukraine 76.63 342 P **P** **08 53 47.4 -1.1**
ASSE Asse, Remlinge 76.74 353 *e*P **P** **08 53 49.0 +0.1**
comp=Z,44nm,1.3s,baz=9.0,slow=5.6
IBBN Ibbenburen 76.74 355 *e*P **P** **08 53 49.3 +0.3**
comp=Z,62nm,0.8s,baz=9.0,slow=5.6
CTA Charters Tower 76.95 213 P **P** **08 53 50.7 +0.2**
comp=Z,5.5nm,0.9s,baz=31,slow=7.8,SNR=6.0
comp=Z,5.5nm,0.9s
CTAO Charters Tower 76.95 213 P **P** **08 53 50.6 +0.1**
CTAO Charters Tower 76.95 213 P **P** **08 53 50.6 +0.1**
CTAO pmax pmax
comp=Z,7.0nm,1.0s
CLZ Clausthal 77.05 354 *e*P **P** **08 53 51.1 +0.3**
comp=Z,42nm,1.0s,baz=9.0,slow=5.6
GOF Gofitskoye 77.29 330 *ce*P **P** **08 53 52.1 -0.2**
CLL Collm 77.37 352 IAmb IAmb 08 53 52.4
comp=Z,12nm,0.9s
CLL Collm 77.37 352 *i* P **P** **08 53 51.8 -0.8**
CLL *e**PP **pwP** **08 54 06.0 +0.5**
CLL pmax pmax
comp=Z,25nm,1.3s
CLL Collm 77.37 352 *i* P **P** **08 53 51.8 -0.8**
comp=Z,25nm,1.3s
CLL *e*pP **pwP** **08 54 06.0 +0.5**
CLL *e*(SS) 09 09 12.0
CLL *e*SSSS 09 14 24.0
CLL Collm 77.37 352 *e*P **P** **08 53 51.8 -0.8**
comp=Z,11nm,0.9s,baz=9.0,slow=5.6
GTTG Gottingen 77.37 354 *e*P **P** **08 53 52.2 +0.6**
comp=Z,54nm,1.2s,baz=9.0,slow=5.6
ERBR Yeremizino-Bor 77.47 332 *e*P **P** **08 53 52.9 -0.3**
ERBR pmax pmax
comp=Z,34nm,1.0s
ERBR MLR MLR
comp=Z,598nm,19.0s
NEUB Neuenburg 77.57 353 *e*P **P** **08 53 53.6 -0.1**
comp=Z,41nm,1.0s,baz=9.0,slow=5.6
MAK Makhachkala 77.69 327 *d*P **P** **08 53 52.0 -2.5**
MAK *e* 08 56 45.2
MAK *e*PPP PPP 08 58 42.6
MAK *e*S **S** **09 03 37.7 -6.5**
MAK *e*SS **SS** **09 08 43.9 +0.9**
MAK *e*SSS SSS 09 12 03.4
MAK pmax pmax
comp=Z,145nm,1.3s
MAK MLR MLR
comp=Z,740nm,19.0s
BRG Berggiesshubel 77.71 351 *e*P **P** **08 53 53.8 -0.7**
comp=Z,17nm,1.2s,baz=9.0,slow=5.6
KASTN Kahler Asten 77.81 355 *e*P **P** **08 53 55.5 +0.4**
comp=Z,15nm,1.0s,baz=9.0,slow=5.6
DPC Dobruska-Polom 77.98 350 *e*P **P** **08 53 56.0 0.0**
DPC Dobruska-Polom 77.98 350 *e*P **P** **08 53 56.0 0.0**
DPC Dobruska-Polom 77.98 350 P **P** **08 53 56.1 0.0**
HSKC Hora Svate Kat 78.02 351 *e*P **P** **08 53 55.7 -0.6**
MOX Moxa 78.14 353 *e*P **P** **08 53 56.6 -0.4**
comp=Z,12nm,0.9s,baz=9.0,slow=5.6
KMPD K-Podol'skiy 78.18 343 P **P** **08 53 56.6 -0.5**
SORM Soroca 78.22 341 ⇑P **P** **08 53 56.9 -0.4**
SORM Soroca 78.22 341 P **P** **08 53 56.9 -0.4**
STHS Stebnicka Huta 78.24 346 *e*P **P** **08 53 57.3 -0.2**
STHS pmax pmax
comp=Z,28nm,1.2s
STHS Stebnicka Huta 78.24 346 *e*P **P** **08 53 57.3 -0.2**
PLN Plauen 78.26 352 *e*P **P** **08 53 57.1 -0.4**
comp=Z,2.6nm,0.8s,baz=9.0,slow=5.6
TANN Tannenbergstha 78.30 352 *e*P **P** **08 53 57.4 -0.5**
comp=Z,4.5nm,0.8s,baz=9.0,slow=5.6
BEBN Eben Emael 78.35 356 *d*P **P** **08 53 57.9 -0.1**
KIV Kislovodsk 78.39 330 *e*P **P** **08 53 58.5 0.0**
KIV pmax pmax
comp=Z,15nm,1.1s
MORC Moravsky Berou 78.39 349 IAmb IAmb 08 53 59.3
comp=Z,14nm,1.1s
MORC Moravsky Berou 78.39 349 *e*P **P** **08 53 58.1 -0.3**
NKC Novy Kostel 78.48 352 *e*P **P** **08 53 57.6 -1.2**
NKC Novy Kostel 78.48 352 *e*P **P** **08 53 57.6 -1.2**
MEM Membach 78.52 356 *d*P **P** **08 53 58.0 -0.9**
KBZ Khabaz 78.53 330 P **P** **08 53 59.6 +0.5**
comp=Z,5.9nm,1.0s,baz=339,slow=4.2,SNR=6.8
comp=Z,5.9nm,1.0s
KBZ Khabaz 78.53 330 *ce*P **P** **08 54 00.1 +1.0**
KBZ pmax pmax
comp=Z,9.0nm,1.1s
BTNL Ternell 78.54 356 *d*P **P** **08 53 59.5 +0.3**
comp=Z,23nm,1.0s
BSTI Sart Tilman 78.56 357 *d*P **P** **08 53 59.7 +0.5**
SHA1 Shidzhatmaz 78.60 330 *ce*P **P** **08 54 00.5 +0.6**
BCLA Clavier 78.74 357 *d*P **P** **08 54 00.1 -0.1**
comp=Z,18nm,1.0s
LANS Liptovska Anna 78.76 347 *e*P **P** **08 54 01.2 +0.8**
LANS pmax pmax
comp=Z,20nm,1.0s
LANS Liptovska Anna 78.76 347 *e*P **P** **08 54 01.1 +0.7**
MANZ Manzenberg 78.76 352 *e*P **P** **08 54 00.1 -0.3**
comp=Z,16nm,0.8s,baz=9.0,slow=5.6
BHOU Houvegnez 78.78 356 *d*P **P** **08 54 00.3 -0.1**
BGES Gesves 78.78 357 *d*P **P** **08 54 00.3 -0.1**
comp=Z,16nm,1.0s
TNS Taunus Mts 78.78 355 *e*P **P** **08 54 00.6 +0.1**
comp=Z,18nm,0.9s,baz=9.0,slow=5.6
BMRD Maredsous 78.87 357 *d*P **P** **08 54 01.0 +0.1**
comp=Z,28nm,0.9s
AKT Akhty 78.91 326 *e*P **P** **08 54 01.2 -0.3**
AKT pmax pmax
comp=Z,16nm,1.0s
AKT MLR MLR
comp=Z,632nm,21.0s
HRA Herat 78.94 312 IAmb IAmb 08 54 03.9
comp=Z,21nm,0.9s
ROTZ Rotzenmuhle 78.97 352 *e*P **P** **08 54 01.1 -0.3**
comp=Z,3.8nm,1.1s,baz=9.0,slow=5.6
VRAC Vranov 78.97 349 LR LR 09 33 17.5
comp=Z,97nm,18.7s,baz=18,slow=39
VRAC Vranov 78.97 349 ⇑P **P** **08 54 01.8 +0.3**
VRAC Vranov 78.97 349 P **P** **08 54 01.8 +0.3**
VRAC Vranov 78.97 349 *e*P **P** **08 54 01.6 +0.1**
RCHB Rochefort 79.00 357 *d*P **P** **08 54 00.6 -1.0**
comp=Z,17nm,1.0s
DOU Dourbes 79.08 357 *d*P **P** **08 54 01.9 -0.1**
comp=Z,19nm,1.2s
ZVC Zvikov 79.10 351 *e*P **P** **08 54 01.6 -0.6**
GRA1 Grafenberg Arr 79.12 353 IAmb IAmb 08 54 03.6
comp=Z,23nm,0.8s
GRF Grafenberg Arr 79.12 353 *e*P **P** **08 54 02.9 +0.5**
comp=Z,24nm,0.8s,baz=9.0,slow=5.6
GRFO Grafenberg 79.12 353 P **P** **08 54 03.5 +1.2**
GRFO Grafenberg 79.12 353 P **P** **08 54 03.5 +1.2**
KRUC Moravsky 79.24 349 *e*P **P** **08 54 02.6 -0.4**
JAVC Velka Javorina 79.28 348 *e*P **P** **08 54 04.4 +1.1**
BUR08 Bucovina Ar. S 79.30 343 IAmb IAmb 08 54 05.3
comp=Z,33nm,1.0s
BURAR Bucovina Array 79.32 343 ⇑P **P** **08 54 03.7 +0.1**
BURAR Bucovina Array 79.32 343 P **P** **08 54 03.9 +0.3**
BURAR IAmb IAmb 08 54 05.2
comp=Z,36nm,1.0s
BURAR Bucovina Array 79.32 343 P **P** **08 54 03.7 +0.1**
WLF Walferdange 79.46 356 *d*P **P** **08 54 04.7 +0.5**
comp=Z,18nm,0.9s
WLF Walferdange 79.46 356 *e*P **P** **08 54 04.5 +0.3**
comp=Z,34nm,1.1s,baz=9.0,slow=5.6
KHC Kasperske Hory 79.47 351 IAmb IAmb 08 54 05.5
comp=Z,27nm,1.2s
KHC Kasperske Hory 79.47 351 *ce*P **P** **08 54 04.7 +0.4**
KHC pmax pmax
comp=Z,34nm,1.7s
KHC Kasperske Hory 79.47 351 *e*P **P** **08 54 04.4 +0.1**
WET Wettzell 79.52 352 *e*P **P** **08 54 04.3 -0.2**
comp=Z,11nm,1.1s,baz=9.0,slow=5.6
CKRC Cesky Krumlov 79.70 351 *e*P **P** **08 54 03.2 -2.3**
CKRC Cesky Krumlov 79.70 351 *e*P **P** **08 54 03.2 -2.3**

GEC2 GERESS Array S 79.74 351 *e*P **P** **08 54 05.5 -0.3**
comp=Z,7.7nm,0.8s,baz=9.0,slow=5.6
GERES GERESS Array B 79.74 351 P **P** **08 54 05.5 -0.3**
comp=Z,3.8nm,0.6s,baz=29,slow=3.8,SNR=17
GERES LR LR 09 31 48.4
comp=Z,71nm,20.1s,baz=32,slow=38
comp=Z,3.8nm,0.6s
MODS Modra-Piesok 79.81 349 *e*P **P** **08 54 06.9 +0.8**
MODS pmax pmax
comp=Z,54nm,1.2s
MODS Modra-Piesok 79.81 349 *e*P **P** **08 54 06.9 +0.8**
PSZ Piszkesteto 79.90 347 ⇑P **P** **08 54 07.3 +0.6**
PSZ Piszkesteto 79.90 347 IAmb IAmb 08 54 09.0
comp=Z,36nm,1.2s
PSZ Piszkesteto 79.90 347 P **P** **08 54 07.2 +0.6**
RAO Raoul Island 80.05 178 LR LR 09 20 55.5
comp=Z,237nm,21.3s,baz=98,slow=29
TESR Tescani 80.11 342 ⇓P **P** **08 54 07.5 -0.3**
ONER Baraj Valea Uz 80.33 342 ⇓P **P** **08 54 09.5 +0.5**
CONA Conrad Observa 80.42 349 *i* P **P** **08 54 09.8 +0.3**
comp=Z,17nm,1.1s,SNR=5.4
DRGR 80.56 345 ⇑P **P** **08 54 10.4 +0.2**
DRGR 80.56 345 P **P** **08 54 10.4 +0.2**
RONA Rosalia, Austr 80.59 349 *i* P **P** **08 54 10.0 -0.4**
comp=Z,13nm,1.1s
MARR Marisel-Cluj 80.60 344 ⇑P **P** **08 54 10.5 0.0**
MOA Molln 80.67 350 *i* P **P** **08 54 10.4 -0.3**
comp=Z,10nm,1.3s
BFO Black Forest 80.68 355 *e*P **P** **08 54 10.6 -0.2**
comp=Z,8.7nm,0.9s,baz=9.0,slow=5.6
TGUH Tegucigalpa,Un 80.73 79 IAmb IAmb 08 54 15.1
comp=Z,42nm,1.2s
PLOR Plostina 80.74 342 ⇑P **P** **08 54 11.3 0.0**
PLOR Plostina 80.74 342 P **P** **08 54 11.2 0.0**
ECH Echery 80.86 355 IAmb IAmb 08 54 13.2
comp=Z,40nm,1.4s
DOPR Dopca 80.88 343 ⇑P **P** **08 54 12.7 +0.8**
BIOA Bad Ischl, Aus 80.89 351 *i* P **P** **08 54 12.0 +0.1**
comp=Z,26nm,1.2s
CFR Carcaliu 81.08 340 ⇑P **P** **08 54 12.8 -0.2**
CFR Carcaliu 81.08 340 P **P** **08 54 12.7 -0.2**
ARSA Arzberg 81.12 350 IAmb IAmb 08 54 14.7
comp=Z,20nm,1.1s
ARSA Arzberg 81.12 350 *e*P **P** **08 54 13.7 +0.5**
comp=Z,15nm,1.1s
GNI Garni 81.13 327 LR LR 09 35 19.2
comp=Z,360nm,19.4s,baz=31,slow=39
GNI Garni 81.13 327 *ce*P **P** **08 54 14.5 +0.9**
GNI pmax pmax
comp=Z,17nm,1.7s
UBR Ueberruh 81.21 353 *e*P **P** **08 54 14.1 +0.4**
comp=Z,9.0nm,1.0s,baz=9.0,slow=5.6
MLR Muntele Rosu 81.23 342 LR LR 09 33 12.3
comp=Z,173nm,20.4s,baz=53,slow=38
MLR Muntele Rosu 81.23 342 ⇓P **P** **08 54 14.5 +0.6**
MLR Muntele Rosu 81.23 342 IAmb IAmb 08 54 16.1
comp=Z,15nm,1.0s
MLR Muntele Rosu 81.23 342 P **P** **08 54 14.5 +0.6**
LESA Schwarzleotal 81.25 352 *i* P **P** **08 54 14.0 +0.1**
comp=Z,7.4nm,0.8s
RETA Reutte 81.35 353 *i* P **P** **08 54 14.6 +0.2**
comp=Z,15nm,1.1s
WRA Warramunga Ar 81.43 223 P **P** **08 54 14.4 -0.6**
comp=Z,3.4nm,0.8s,baz=35,slow=6.2,SNR=18
comp=Z,3.4nm,0.8s
WATA Walderalm 81.43 352 *i* P **P** **08 54 15.4 +0.4**
comp=Z,32nm,1.0s,SNR=6.0
VOIR 81.45 343 ⇓P **P** **08 54 15.7 +0.6**
VOIR 81.45 343 P **P** **08 54 15.6 +0.6**
MOTA Moosalm 81.46 353 *i* P **P** **08 54 15.3 +0.2**
comp=Z,29nm,1.1s,SNR=5.8
WTTA Wuenberg 81.50 352 *i* P **P** **08 54 15.0 -0.3**
comp=Z,32nm,0.8s,SNR=8.5
KBA Koelnbreinsper 81.53 351 *i* P **P** **08 54 15.7 +0.1**
comp=Z,49nm,0.8s,SNR=15
SQTA Sankt Quirin 81.58 352 *i* P **P** **08 54 15.5 -0.3**
comp=Z,21nm,1.0s,SNR=5.1
DAVA Damuels 81.61 353 *i* P **P** **08 54 16.0 0.0**
comp=Z,7.2nm,0.9s
LOT Lotru 81.68 344 ⇓P **P** **08 54 16.0 -0.3**
SOKA Soboh 81.74 350 *i* P **P** **08 54 16.9 +0.3**
comp=Z,47nm,1.2s,SNR=12
FETA Feichten 81.81 353 *i* P **P** **08 54 17.4 +0.4**
comp=Z,30nm,1.1s,SNR=5.2
BZS Buzias 81.88 345 ⇑P **P** **08 54 17.2 0.0**
BZS Buzias 81.88 345 P **P** **08 54 17.2 0.0**
GZR Gura Zlata 81.90 344 ⇑P **P** **08 54 17.7 +0.2**
GZR Gura Zlata 81.90 344 P **P** **08 54 17.6 +0.2**
GROS Grobnik 81.90 349 *i* P **P** **08 54 17.4 0.0**
ABTA Abfaltersbach 81.93 352 *i* P **P** **08 54 17.6 +0.1**
comp=Z,29nm,1.0s,SNR=5.4
MYKA Terra Mystica 81.94 351 *i* P **P** **08 54 18.6 +1.0**
comp=Z,12nm,1.3s
OBKA Obir 81.96 350 *i* P **P** **08 54 17.9 +0.1**
comp=Z,17nm,0.7s
PRED Cave del Predi 82.13 351 IAmb IAmb 08 54 19.5
comp=Z,19nm,1.0s
FUORN Ofenpass-Fuorn 82.25 353 IAmb IAmb 08 54 20.8
comp=Z,17nm,0.9s
PSI Prapat 82.39 265 P **P** **08 54 19.9 -0.5**
PSI pmax pmax
comp=Z,27nm,0.9s
PSI Prapat 82.39 265 P **P** **08 54 20.3 -0.1**
comp=Z,33nm,1.0s
HERR Herculane 82.46 344 ⇑P **P** **08 54 20.1 -0.1**
TUE Stuetta 82.46 354 IAmb IAmb 08 54 21.8
comp=Z,20nm,1.0s
RPSI Rantau Prapat 82.47 265 P **P** **08 54 19.9 -0.8**
MDVR Moldovita 82.68 345 ⇓P **P** **08 54 21.3 -0.1**
CEY Cerknica 82.74 350 *i* P **P** **08 54 22.1 +0.3**
SNJI Sawahan-Nganju 82.85 248 P **P** **08 54 23.6 +0.8**
comp=Z,14nm,1.2s
PLVB Pleven 83.51 342 ⇓P **P** **08 54 25.7 0.0**
HYB Hyderabad 83.75 290 *e*P **P** **08 54 28.1 +0.8**
ARPR Arapgir-MALATY 84.17 331 IAmb IAmb 08 54 32.0
comp=Z,22nm,1.0s
KLSI 84.61 256 P **P** **08 54 30.6 -1.1**
MDSI Maura Dua 84.79 256 P **P** **08 54 30.7 -1.9**
comp=Z,25nm,1.1s
JUD3 Juan Diaz 3 84.80 80 P **P** **08 54 33.9 +1.2**
AS31 Alice Springs 84.90 222 P **P** **08 54 33.0 +0.1**
ASAR Alice Springs 84.91 222 P **P** **08 54 32.9 0.0**
comp=Z,4.7nm,0.8s,baz=28,slow=4.9,SNR=29
comp=Z,4.7nm,0.8s
BR131 Keskin Array S 84.92 335 IAmb IAmb 08 54 33.9
comp=Z,11nm,0.9s
BRTR Keskin Array B 84.92 335 P **P** **08 54 32.7 -0.4**
comp=Z,8.3nm,0.9s,baz=45,slow=2.4,SNR=31
BRTR LR LR 09 35 59.7
comp=Z,73nm,21.0s,baz=335,slow=38
comp=Z,8.3nm,0.9s
BRTR Keskin Array B 84.92 335 *i* P **P** **08 54 33.0 -0.1**
BRTR pmax pmax
comp=Z,8.0nm,0.9s
JTS Las Juntas de 85.06 80 LR LR 09 34 26.2
comp=Z,44nm,18.3s,baz=318,slow=37
BNN Bunyan 85.12 333 IAmb IAmb 08 54 36.2
comp=Z,14nm,0.9s
BORA Eskisehir 85.59 337 IAmb IAmb 08 54 37.6
comp=Z,22nm,1.1s
GAZ Gaziantep 86.28 331 IAmb IAmb 08 54 41.8
comp=Z,14nm,0.9s
URZ Urewera 89.06 182 LR LR 09 29 00.4
comp=Z,151nm,20.2s,baz=34,slow=32
STKA Stephens Creek 89.40 212 P **P** **08 54 55.3 +0.9**
comp=Z,10.0nm,0.9s,baz=351,slow=7.3,SNR=12
STKA LR LR 09 32 29.6
comp=Z,172nm,18.8s,baz=24,slow=34
comp=Z,10.0nm,0.9s
STKA Stephens Creek 89.40 212 P **P** **08 54 55.6 +1.3**
STKA Stephens Creek 89.40 212 P **P** **08 54 55.7 +1.3**
STKA pmax pmax
comp=Z,80nm,1.1s
ESDC Sonseca Array 89.50 3 P **P** **08 54 54.2 -0.9**
comp=Z,4.9nm,1.2s,baz=336,slow=4.5,SNR=8.4
ESDC LR LR 09 37 50.9
comp=Z,43nm,18.5s,baz=343,slow=38
comp=Z,4.9nm,1.2s
ESDC Sonseca Array 89.50 3 P **P** **08 54 54.3 -0.9**
SJG San Juan 89.99 61 LR LR 09 39 30.8
comp=Z,116nm,18.6s,baz=304,slow=38
MMAI Mount Meron Ar 90.68 331 LR LR 09 40 04.8
comp=Z,96nm,21.5s,baz=13,slow=38
VAE Valguarnera 90.89 349 LR LR 09 40 56.5
comp=Z,56nm,18.2s,baz=322,slow=39
ASF Jabal al Asfar 90.99 330 LR LR 09 41 53.5
comp=Z,146nm,18.9s,baz=26,slow=40

IDI Anoyia 91.26 340 LR LR 09 41 32.4
comp=Z,120nm,18.8s,baz=82,slow=39
EIL Elat 93.93 330 LR LR 09 44 14.8
comp=Z,147nm,18.1s,baz=60,slow=40
RPZ Rata Peaks 94.80 187 LR LR 09 31 54.7
comp=Z,211nm,21.4s,baz=9.0,slow=32
SDV Santo Domingo 94.86 70 LR LR 09 39 38.6
comp=Z,51nm,21.1s,baz=301,slow=36
RAYN Ar Rayn 95.69 319 P **P** **08 55 23.4 -0.6**
RAYN IAmb IAmb 08 55 25.0
comp=Z,4.1nm,0.9s
RAYN Ar Rayn 95.69 319 P **P** **08 55 23.4 -0.6**
RAYN pmax pmax
comp=Z,4.0nm,1.0s
MDT Midelt 96.31 4 LR LR 09 37 19.6
comp=Z,32nm,19.7s,baz=16,slow=34
RPN Rapa Nui 99.43 122 LR LR 09 31 29.1
comp=Z,55nm,19.5s,baz=302,slow=30
TORD Torodi Ar. Bea 115.98 358 PKKPbc PKKPbc 09 11 11.2 +1.4
comp=Z,1.0nm,0.8s,baz=193,slow=4.0,SNR=3.6
H03N2 Juan Fernandez 121.65 105 T T 11 14 12.1
baz=316,slow=76,SNR=6.7
H03N1 Juan Fernandez 121.66 105 T T 11 14 13.5
baz=316,slow=76,SNR=12
H03N3 Juan Fernandez 121.66 105 T T 11 14 09.6
baz=316,SNR=20
CPUP Villa Florida 130.22 83 PKP **PKPdf** **09 01 08.5 +0.6**
comp=Z,2.1nm,0.9s,baz=323,slow=9.5,SNR=4.1
PLCA Paso Flores 131.46 107 PKP **PKPdf** **09 01 10.5 +0.6**
comp=Z,7.7nm,1.1s,baz=314,slow=1.7,SNR=13
TRQA Tornquist 135.10 98 **PKPdf** **09 01 16.9 +0.1**
TRQA Tornquist 135.10 98 PKIKP **PKPdf** **09 01 16.9 +0.1**
QSPA South Pole Qui 140.88 180 PKhKP PKPpre 09 01 22.0
comp=Z,3.1nm,0.8s,baz=306,slow=3.5,SNR=5.3
BROLN Tlhalogang 143.30 315 *i* P PKPbc 09 01 30.4 +0.9
KHWEE KHWEE 144.88 317 *i* P PKPbc 09 01 35.0 +0.7
TSUM Tsumeb 145.32 330 **PKPbc** **09 01 36.1 +0.3**
LPHEP Lephephe 145.94 315 *i* P **PKPdf** **09 01 36.0 -0.9**
GRTLG Ghanzi 146.07 323 *i* P **PKPbc** **09 01 38.2 +0.1**
KDWAN Kaudwane 146.48 317 *i* P **PKPdf** **09 01 38.3 +0.5**
KGCAE Kacgae 147.03 321 *i* P **PKPbc** **09 01 40.5 -0.4**
KOOLE Kule 147.93 324 *i* P **PKPbc** **09 01 42.4 -0.9**
BOSA Boshof 150.70 311 PKPbc **PKPbc** **09 01 50.5 +0.4**
comp=Z,11nm,0.7s,baz=29,slow=2.4,SNR=31
BOSA Boshof 150.70 311 **PKPbc** **09 01 50.4 +0.3**
NVL N'lazarevskaya 159.59 191 *e*PKIKP **PKPdf** **09 01 56.5 +1.4**
NVL *e* 09 06 17.6
NVL *e* 09 08 57.6
NVL *e*PPP PPP 09 09 57.5
NVL *e*SSS SSS 09 32 31.5
NVL pmax pmax
comp=Z,26nm,1.9s

*MOS **03** 09:09:42.7±0.7,48.°73N×156.°03E,h25km,mb4.1/4, Error ellipse: s-maj=17.1km s-min=4.3km az=76.9*
*KRSC **03** 09:09:43.8±2.8,48.°97N×156.°79E,h9km±44km,Ml4.6*
*SKHL **03** 09:09:45.4±0.0,48.°90N×156.°10E,h46km±4km,mb5.0/4*
*NEIC **03** 09:09:48.2±1.0,49.°1N±0.°1×155.°3E±0.°2,h60km±6km, mb4.1/27, Error ellipse: s-maj=17.0km s-min=12.2km az=135.0*
*IDC **03** 09:09:50.4±2.6,49.°18N×155.°13E,h85km±23km,mb3.4/12, mbtmp3.8/16,MS3.4/8, Error ellipse: s-maj=21.9km s-min=13.4km az=147.0*

ISC 03 09:09:44.9±0.6,48.°85N±0.°07×155.°80E±0.°07,h35km,n144, σ1§93/144,**mb4.1**/29,**MS3.6**/3,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.85**	**6**	*e*PN	**Pn**	**09 10 13.4**	**-0.7**
SKR				*e*S	**Sn**	**09 10 35.3**	**-0.8**
SKR				pmax	pmax		
	comp=Z,300nm,0.4s						
SKR				smax	smax		
	comp=E,2μm,0.5s						
SKR				smax	smax		
	comp=N,3μm,0.6s						
SKR	**Severo-Kuril's**	**1.85**	**6**	*e*P	**Pn**	**09 10 13.4**	**-0.7**
SKR				*e*S	**Sn**	**09 10 34.1**	**-2.0**
SKR	**Severo-Kuril's**	**1.85**	**6**	*e*P	**Pn**	**09 10 13.3**	**-0.7**
SKR				AMB	AMB	09 10 15.5	
	comp=N,290nm,0.2s						
SKR				*e*S	**Sn**	**09 10 34.2**	**-2.0**
SKR				A	A	09 10 37.2	
	comp=N,2μm,0.5s						
SKR				A	A	09 10 37.2	
	comp=N,1μm,0.5s						
PAU	**Pauzhetka**	**2.70**	**14**	PN	**Pn**	**09 10 25.9**	**+0.1**
PAU	**Pauzhetka**	**2.70**	**14**	*e*P	**Pn**	**09 10 25.9**	**+0.1**
PAU				*e*S	**Sn**	**09 10 56.9**	**-0.3**
PAU	**Pauzhetka**	**2.70**	**14**	*e*P	**Pn**	**09 10 25.9**	**+0.1**
PAU				AMB	AMB	09 10 34.1	
	comp=N,230nm,0.4s						
PAU				*e*S	**Sn**	**09 10 56.3**	**-0.9**
PAU				A	A	09 11 01.7	
	comp=N,90nm,0.5s						
PAU				A	A	09 11 01.7	
	comp=N,850nm,0.5s						
KDTR	**Khodutka, Kamc**	**3.30**	**25**	PN	**Pn**	**09 10 34.0**	**0.0**
KDTR	**Khodutka, Kamc**	**3.30**	**25**	*e*P	**Pn**	**09 10 34.1**	**0.0**
KDTR				*e*S	**Sn**	**09 11 10.5**	**-1.6**
MIPR	**Malaya Ipel'ka**	**3.48**	**10**	PN	**Pn**	**09 10 37.5**	**+1.0**
MIPR	**Malaya Ipel'ka**	**3.48**	**10**	*e*P	**Pn**	**09 10 37.6**	**+1.0**
ASAK	**Asacha**	**3.78**	**20**	PN	**Pn**	**09 10 41.9**	**+1.2**
ASAK	**Asacha**	**3.78**	**20**	*e*P	**Pn**	**09 10 42.0**	**+1.2**
MTVR	**Mutnovka**	**3.94**	**22**	PN	**Pn**	**09 10 44.5**	**+1.5**
MTVR	**Mutnovka**	**3.94**	**22**	*e*P	**Pn**	**09 10 44.5**	**+1.5**
MTVR				*e*S	**Sn**	**09 11 29.4**	**+1.4**
GRL	**Gorelyy**	**3.98**	**20**	PN	**Pn**	**09 10 44.5**	**+1.1**
GRL	**Gorelyy**	**3.98**	**20**	*e*P	**Pn**	**09 10 44.6**	**+1.1**
GRL				*e*S	**Sn**	**09 11 29.9**	**+1.0**
RUS	**Russkaya**	**3.98**	**25**	PN	**Pn**	**09 10 44.4**	**+1.0**
RUS	**Russkaya**	**3.98**	**25**	*e*P	**Pn**	**09 10 44.4**	**+1.0**
RUS				*e*S	**Sn**	**09 11 27.5**	**-1.2**
APC	**Apacha**	**4.17**	**11**	PN	**Pn**	**09 10 49.3**	**+3.3**
APC	**Apacha**	**4.17**	**11**	*e*P	**Pn**	**09 10 49.3**	**+3.3**
KRMR	**Karymshinskiy**	**4.25**	**19**	PN	**Pn**	**09 10 49.1**	**+2.1**
KRMR	**Karymshinskiy**	**4.25**	**19**	*e*P	**Pn**	**09 10 49.2**	**+2.1**
PEA0B	**Petropavlovsk-**	**4.43**	**15**		**Pn**	**09 10 51.4**	**+1.9**
PEA0B	**Petropavlovsk-**	**4.43**	**15**	PN	**Pn**	**09 10 51.4**	**+1.9**
PETK	**Petropavlovsk-**	**4.43**	**15**	P	**Pn**	**09 10 51.2**	**+1.7**
	comp=N,15nm,0.4s,baz=167,slow=13,SNR=123						
PETK				S	**Sn**	**09 11 46.6**	**+6.7**
	comp=N,11nm,0.5s,baz=153,slow=16,SNR=1.6						
PETK				LR	LR	09 12 51.3	
	comp=N,249nm,19.1s,baz=158,slow=42						
PETK	**Petropavlovsk-**	**4.43**	**15**		**Pn**	**09 10 51.0**	**+1.4**
PET	**Petropavlovsk**	**4.55**	**22**		**Pn**	**09 10 53.0**	**+1.8**
PET	**Petropavlovsk**	**4.55**	**22**	*e*PN	**Pn**	**09 10 52.8**	**+1.6**
PET				pmax	pmax		
	comp=Z,38nm,0.6s						
PET	**Petropavlovsk**	**4.55**	**22**	*e*P	**Pn**	**09 10 52.8**	**+1.6**
PET				*e*S	**Sn**	**09 11 44.7**	**+1.9**
PET	**Petropavlovsk**	**4.55**	**22**	*e*P	**Pn**	**09 10 52.2**	**+1.0**
PET				AMB	AMB	09 11 01.4	
	comp=Z,40nm,0.2s						
PET				*e*S	**Sn**	**09 11 41.7**	**-1.1**
PET				A	A	09 11 54.2	
	comp=Z,210nm,0.4s						
PET				A	A	09 11 54.2	
	comp=Z,190nm,0.4s						
DALK	**Dalny**	**4.58**	**23**	PN	**Pn**	**09 10 53.0**	**+1.4**
DALK	**Dalny**	**4.58**	**23**	*e*P	**Pn**	**09 10 53.0**	**+1.4**
DALK				*e*S	**Sn**	**09 11 44.7**	**+1.1**
UGLR	**Uglovaya**	**4.76**	**22**	PN	**Pn**	**09 10 56.6**	**+2.4**
UGLR	**Uglovaya**	**4.76**	**22**	*e*P	**Pn**	**09 10 56.6**	**+2.4**
AVH	**Avacha**	**4.79**	**22**	PN	**Pn**	**09 10 57.0**	**+2.4**
AVH	**Avacha**	**4.79**	**22**	*e*P	**Pn**	**09 10 57.1**	**+2.4**
AVH	**Avacha**	**4.79**	**22**	*e*P	**Pn**	**09 10 57.0**	**+2.4**
KOK	**Koryaka**	**4.79**	**21**	PN	**Pn**	**09 10 57.5**	**+2.9**
KOK	**Koryaka**	**4.79**	**21**	*e*P	**Pn**	**09 10 57.6**	**+2.9**
KOK	**Koryaka**	**4.79**	**21**	*e*P	**Pn**	**09 10 57.5**	**+2.9**
KRER	**Koryakskii**	**4.83**	**22**	PN	**Pn**	**09 10 57.5**	**+2.3**
KRER	**Koryakskii**	**4.83**	**22**	*e*P	**Pn**	**09 10 57.5**	**+2.3**
SDLR	**Sedlovina**	**4.84**	**23**	PN	**Pn**	**09 10 57.0**	**+1.7**
SDLR	**Sedlovina**	**4.84**	**23**	*e*P	**Pn**	**09 10 57.1**	**+1.7**
KRX	**Arik**	**4.86**	**21**	PN	**Pn**	**09 10 58.0**	**+2.5**
KRX	**Arik**	**4.86**	**21**	*e*P	**Pn**	**09 10 58.1**	**+2.5**
SPN	**Mys Shipunski**	**5.02**	**31**	PN	**Pn**	**09 10 57.8**	**+0.2**
SPN	**Mys Shipunski**	**5.02**	**31**	*e*P	**Pn**	**09 10 57.9**	**+0.2**
SPN				*e*S	**Sn**	**09 11 54.1**	**-0.3**
GNL	**Ganaly**	**5.03**	**15**	PN	**Pn**	**09 11 01.0**	**+3.1**

GNL	**Ganaly**	**5.03**	**15**	*e*P	**Pn**	**09 11 01.1**	**+3.1**
KII	**Karymskiy**	**5.67**	**22**	PN	**Pn**	**09 11 09.5**	**+2.8**
KII	**Karymskiy**	**5.67**	**22**	*e*P	**Pn**	**09 11 09.5**	**+2.8**
KUR	**Kuril'sk**	**6.52**	**239**	*e*PN	**Pn**	**09 11 21.6**	**+3.4**
KUR	**Kuril'sk**	**6.52**	**239**	*e*P	Pn	09 11 22.3	+4.1
KUR				AMB	AMB	09 11 27.7	
	comp=Z,60nm,0.4s						
KUR				*e*S	**Sn**	**09 12 35.5**	**+4.3**
KUR				A	A	09 12 44.8	
	comp=Z,40nm,0.4s						
KUR				A	A	09 12 44.8	
	comp=Z,30nm,0.4s						
MKZ	**Mys Kozlova**	**6.80**	**31**	PN	**Pn**	**09 11 21.3**	**-0.7**
MKZ	**Mys Kozlova**	**6.80**	**31**	*e*P	**Pn**	**09 11 21.3**	**-0.7**
YUK	**Yuzh-Kuril'sk**	**8.38**	**239**	*e*P	Pn	09 11 48.6	+4.8
KBTR	**Krutoberegovo**	**8.52**	**27**	PN	**Pn**	**09 11 44.4**	**-1.2**
KBTR	**Krutoberegovo**	**8.52**	**27**	*e*P	**Pn**	**09 11 44.5**	**-1.2**
KBTR				*e*S	**Sn**	**09 13 19.0**	**-1.4**
TYV	**Tymovskoe**	**8.73**	**288**	*e*PN	**Pn**	**09 11 52.1**	**+3.6**
TYV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TYV				pmax	pmax		
	comp=Z,100nm,4.0s						
TYV	**Tymovskoe**	**8.73**	**288**	*e*P	Pn	09 11 52.8	+4.3
YSS	**Yuzhno-Sakhali**	**8.97**	**263**	*e*PN	Pn	09 11 59.4	+7.6
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YSS	**Yuzhno-Sakhali**	**8.97**	**263**	*e*P	Pn	09 11 56.1	+4.3
JKA	**Kamikawa-asahi**	**10.26**	**247**		**Pn**	**09 12 10.0**	**+0.5**
JKA	**Kamikawa-asahi**	**10.26**	**247**	*e*P	**Pn**	**09 12 12.8**	**+3.3**
ASAJ	**Asahikawa**	**10.26**	**247**	P	**Pn**	**09 12 12.8**	**+3.2**
	comp=Z,15nm,0.6s,baz=70,slow=9.4,SNR=17						
NKL	**Nikolayevsk**	**10.45**	**300**	*e*P	**Pn**	**09 12 14.9**	**+2.8**
MA2	**Magadan**	**11.14**	**347**	P	**Pn**	**09 12 19.9**	**-1.5**
	comp=Z,0.8nm,0.3s,baz=177,slow=9.4,SNR=5.0						
MA2				LR	LR	09 16 08.8	
	comp=Z,134nm,18.3s,baz=164,slow=35						
MA2	**Magadan**	**11.14**	**347**		**Pn**	**09 12 20.1**	**-1.4**
MA2	**Magadan**	**11.14**	**347**	*i* PN	**Pn**	**09 12 20.5**	**-1.0**
MA2	**Magadan**	**11.14**	**347**	*e*P	**Pn**	**09 12 20.5**	**-1.0**
SHEM	**Shemya Is, Ala**	**12.21**	**65**	LR	LR	09 17 39.1	
	comp=Z,57nm,20.3s,baz=280,slow=38						
SEY	**Seymchan**	**14.24**	**354**	P	**Pn**	**09 13 04.3**	**+0.5**
	comp=Z,1.5nm,0.8s,baz=141,slow=14,SNR=7.3						
SEY	**Seymchan**	**14.24**	**354**	*e*P	**Pn**	**09 13 02.8**	**-1.0**
SEY				pmax	pmax		
	comp=Z,6.0nm,1.5s						
SEY	**Seymchan**	**14.24**	**354**	*e*P	**Pn**	**09 13 03.4**	**-0.4**
KLR	**Kul'dur**	**15.76**	**280**	P	**P**	**09 13 25.4**	**-2.2**
	comp=Z,3.8nm,1.0s,baz=90,slow=10,SNR=6.4						
KLR				LR	LR	09 19 52.3	
	comp=Z,144nm,18.1s,baz=72,slow=39						
ZEA	**Zeya**	**18.44**	**296**	*e*P	**Pn**	**09 14 00.1**	**+2.6**
ZEA	**Zeya**	**18.44**	**296**	*e*P	**Pn**	**09 14 01.0**	**+3.5**
YAK	**Yakutsk**	**19.66**	**322**	LR	LR	09 21 17.7	
	comp=Z,97nm,20.5s,baz=104,slow=36						
YAK	**Yakutsk**	**19.66**	**322**	*i* P	**Pn**	**09 14 11.3**	**-0.6**
YAK				pmax	pmax		
	comp=Z,14nm,0.7s						
BILL	**Bilibino**	**19.95**	**12**	P	**P**	**09 14 13.6**	**+0.1**
BILL	**Bilibino**	**19.95**	**12**	*i* P	**Pn**	**09 14 15.5**	**+0.1**
BILL				pmax	pmax		
	comp=Z,26nm,4.1s						
BILL	**Bilibino**	**19.95**	**12**	*e*P	**Pn**	**09 14 15.5**	**+0.1**
GAMB	**Gambell**	**23.05**	**38**		**P**	**09 14 46.0**	**-0.8**
GAMB				IAmb	IAmb	09 14 50.3	
	comp=Z,6.3nm,0.9s						
KSRS	**Korea Array**	**23.18**	**251**	P	**P**	**09 14 48.7**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=50,slow=10,SNR=6.2						
	comp=Z,1.9nm,0.7s						
ANM	**Nome**	**25.92**	**38**	P	**P**	**09 15 14.3**	**+0.9**
ANM	**Nome**	**25.92**	**38**	P	**P**	**09 15 14.3**	**+0.9**
ANM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
J14K	**Nanvaranak Lak**	**26.20**	**43**	P	**P**	**09 15 17.7**	**+1.8**
J14K				IAmb	IAmb	09 15 45.1	
	comp=Z,3.4nm,0.7s						
L14K	**Kuka Creek**	**26.34**	**46**	P	**P**	**09 15 18.1**	**+1.0**
L14K				IAmb	IAmb	09 15 31.9	
	comp=Z,5.6nm,1.3s						
C16K	**Lisburne Hills**	**27.34**	**31**	P	**P**	**09 15 26.5**	**+0.5**
C18K	**Utukok River**	**28.89**	**31**	P	**P**	**09 15 40.7**	**+0.7**
C18K				IAmb	IAmb	09 16 19.3	
	comp=Z,7.0nm,1.4s						
N17K	**Nushagak Hills**	**28.92**	**48**	P	**P**	**09 15 42.4**	**+2.1**
N17K				IAmb	IAmb	09 16 14.9	
	comp=Z,8.5nm,1.4s						
N18K	**Kilae Creek**	**29.57**	**48**	P	**P**	**09 15 47.4**	**+1.4**
F19K	**Shaleruckik Mo**	**29.58**	**35**	P	**P**	**09 15 46.8**	**+0.8**
C19K	**Lookout Ridge**	**29.60**	**31**	P	**P**	**09 15 46.4**	**+0.1**
C19K				IAmb	IAmb	09 15 58.8	
	comp=Z,6.7nm,1.4s						
D19K	**Kuna River**	**29.91**	**32**	P	**P**	**09 15 49.2**	**+0.2**
D19K				IAmb	IAmb	09 15 53.4	
	comp=Z,8.1nm,1.4s						
J19K	**Poorman**	**29.94**	**41**	P	**P**	**09 15 50.5**	**+1.2**
J19K				IAmb	IAmb	09 16 05.0	
	comp=Z,4.9nm,1.5s						
H11N2	**WAKE ISLAND Hy**	**30.40**	**159**	T	T	09 48 19.4	
	baz=343,slow=76,SNR=12						
H11N1	**WAKE ISLAND Hy**	**30.41**	**159**	T	T	09 48 30.6	
	baz=343,slow=76,SNR=13						
H11N3	**WAKE ISLAND Hy**	**30.41**	**159**	T	T	09 48 28.4	
	baz=343,slow=76,SNR=9.6						
D20K	**Etivluk River**	**30.50**	**32**	P	**P**	**09 15 55.1**	**+0.9**
D20K				IAmb	IAmb	09 16 02.9	
	comp=Z,4.3nm,1.2s						
M20K	**Styx River**	**30.93**	**46**	P	**P**	**09 15 59.4**	**+1.3**
M20K				IAmb	IAmb	09 16 36.6	
	comp=Z,4.5nm,1.1s						
B21K	**Ikpikpuk River**	**31.44**	**31**	P	**P**	**09 16 03.2**	**+0.9**
H11S1	**WAKE ISLAND Hy**	**31.53**	**160**	T	T	09 49 39.4	
	baz=346,slow=76,SNR=131						
H11S3	**WAKE ISLAND Hy**	**31.54**	**160**	T	T	09 49 38.3	
	baz=346,slow=76,SNR=335						
H11S2	**WAKE ISLAND Hy**	**31.55**	**160**	T	T	09 49 40.8	
	baz=346,slow=76,SNR=158						
E24K	**Your Creek**	**33.32**	**34**	P	**P**	**09 16 20.4**	**+1.4**
E24K				IAmb	IAmb	09 16 21.8	
	comp=Z,2.9nm,1.0s						
COLA	**College**	**33.36**	**40**	*i* P	**P**	**09 16 19.7**	**+0.4**
COLA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
D25K	**Kavik River**	**34.23**	**32**	P	**P**	**09 16 27.7**	**+0.8**
D27M	**Malcolm River**	**36.15**	**33**	P	**P**	**09 16 45.0**	**+1.6**
D27M				IAmb	IAmb	09 17 19.2	
	comp=Z,5.1nm,1.4s						
A36M	**Sachs Harbour**	**41.16**	**28**		**P**	**09 17 26.3**	**+1.1**
MKAR	**Makanchi Array**	**47.60**	**297**	P	**P**	**09 18 14.3**	**-2.8**
	comp=Z,1.1nm,0.6s,baz=66,slow=7.3,SNR=15						
	comp=Z,1.1nm,0.6s						
MKAR	**Makanchi Array**	**47.60**	**297**	P	**P**	**09 18 14.1**	**-2.9**
MKAR	**Makanchi Array**	**47.60**	**297**	P	**P**	**09 18 14.1**	**-2.9**
KURK	**Kurchatov**	**47.72**	**303**	P	**P**	**09 18 14.3**	**-3.6**
KURK				IAmb	IAmb	09 18 16.5	
	comp=Z,2.8nm,1.1s						
KURK	**Kurchatov**	**47.72**	**303**	P	**P**	**09 18 14.3**	**-3.6**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KURBB	**Kurchatov Arra**	**47.82**	**303**	P	**P**	**09 18 15.0**	**-3.6**
	comp=Z,0.8nm,0.6s,baz=64,slow=8.0,SNR=4.9						
KURBB				LR	LR	09 42 01.8	
	comp=Z,55nm,18.3s,baz=167,slow=41						
	comp=Z,0.8nm,0.6s						
YKA	**Yellowknife Ar**	**48.15**	**39**	P	**P**	**09 18 22.1**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=298,slow=7.7,SNR=4.7						
	comp=Z,0.2nm,0.6s						
YKA	**Yellowknife Ar**	**48.15**	**39**	P	**P**	**09 18 22.2**	**+1.1**
YKA	**Yellowknife Ar**	**48.15**	**39**	*i* P	**P**	**09 18 22.5**	**+1.4**
BVAR	**Borovoye Array**	**50.93**	**309**	P	P	09 18 36.7	-5.7
	comp=Z,0.4nm,0.4s,baz=67,slow=11,SNR=2.6						
	comp=Z,0.4nm,0.4s						
CMAR	**Chiang Mai Arr**	**54.62**	**257**	P	**P**	**09 19 05.8**	**-4.3**
	comp=Z,0.5nm,0.3s,baz=36,slow=7.3,SNR=8.2						
	comp=Z,0.5nm,0.3s						
ARCES	**ARCESS Array B**	**56.45**	**341**	LR	LR	09 46 25.7	
	comp=Z,69nm,18.5s,baz=0.5,slow=39						
AB31	**Akbulak array**	**58.46**	**310**	P	**P**	**09 19 34.8**	**-2.2**
AB31				IAmb	IAmb	09 19 49.9	
	comp=Z,2.8nm,1.3s						
ABKAR	**Akbulak array**	**58.46**	**310**	P	**P**	**09 19 34.4**	**-2.5**
NVAR	**Mina Array Bea**	**59.88**	**65**	P	**P**	**09 19 48.8**	**+1.5**
	comp=Z,0.6nm,0.7s,baz=293,slow=5.4,SNR=5.1						
	comp=Z,0.6nm,0.7s						
PDAR	**Pinedale Array**	**62.06**	**56**	P	**P**	**09 20 03.2**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=297,slow=4.2,SNR=6.7						
	comp=Z,0.5nm,0.7s						
FIA1	**FINESS Array S**	**62.89**	**335**	P	**P**	**09 20 04.5**	**-2.5**
FINES	**FINESS Array B**	**62.90**	**335**	P	**P**	**09 20 03.8**	**-3.1**
	comp=Z,1.4nm,0.7s,baz=357,slow=12,SNR=2.0						
	comp=Z,1.4nm,0.7s						
FINES	**FINESS Array B**	**62.90**	**335**	P	**P**	**09 20 04.8**	**-2.2**
NOA	**NORSAR Array B**	**66.80**	**342**	LR	LR	09 54 08.9	
	comp=Z,27nm,18.3s,baz=335,slow=40						
WB0	**Warramunga Arr**	**70.93**	**201**	P	**P**	**09 20 58.9**	**+0.5**
WRA	**Warramunga Arr**	**71.11**	**201**	P	**P**	**09 20 59.3**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=17,slow=6.6,SNR=6.3						
	comp=Z,0.6nm,0.5s						
WRA	**Warramunga Arr**	**71.11**	**201**	P	**P**	**09 20 59.7**	**+0.1**
WRA	**Warramunga Arr**	**71.11**	**201**	P	**P**	**09 20 59.7**	**+0.1**
AS31	**Alice Springs**	**74.79**	**201**	P	**P**	**09 21 23.0**	**+1.7**
ASAR	**Alice Springs**	**74.80**	**201**	P	**P**	**09 21 22.6**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=14,slow=5.5,SNR=10						
	comp=Z,0.6nm,0.6s						
ASAR	**Alice Springs**	**74.80**	**201**	P	**P**	**09 21 22.3**	**+0.9**
ASAR	**Alice Springs**	**74.80**	**201**	P	**P**	**09 21 22.3**	**+0.9**
TX31	**Lajitas Ar. Si**	**74.90**	**63**	P	**P**	**09 21 23.2**	**+1.0**
TX31				IAmb	IAmb	09 21 24.1	
	comp=Z,5.1nm,1.4s						
TXAR	**Lajitas Array**	**74.90**	**63**	P	**P**	**09 21 24.0**	**+1.8**
	comp=Z,0.8nm,0.6s,baz=314,slow=4.6,SNR=11						
	comp=Z,0.8nm,0.6s						
TXAR	**Lajitas Array**	**74.90**	**63**	P	**P**	**09 21 23.2**	**+1.0**
TXAR	**Lajitas Array**	**74.90**	**63**	P	**P**	**09 21 23.3**	**+1.0**
PLCA	**Paso Flores**	**146.56**	**94**	PKPbc	**PKPab**	**09 29 22.8**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=272,slow=2.6,SNR=5.8						

NEIC ***03*** *09:10:43.3±2.6, 14°.77S±0°.10×71°.7W±0°.1, h131km±18km, mb4.1/11, Error ellipse: s-maj=16.2km s-min=11.9km az=225.0*

VAO ***03*** *09:10:44.4±0.6, 14°.66S×71°.55W, h137km±4km, mb4.4, Presumed earthquake*

IDC ***03*** *09:10:45.9±1.4, 14°.66S×71°.46W, h141km±14km, mb3.3/5, mbtmp4.0/11, Error ellipse: s-maj=25.4km s-min=12.7km az=35.0*

ISC 03 09:10:44.2±0.6**, 14°.74S**±0°.06×**71°.61W**±0°.06**, h150**km**, n60, σ1s.56**/65**, mb3.8**/5**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB18	**Visviri**	**3.49**	**144**		**Pn**	**09 11 38.8**	**+0.5**
LPAZ	**La Paz**	**3.69**	**115**	P	**Pn**	**09 11 42.1**	**+1.2**
	43nm,0.3s,baz=307,slow=8.5,SNR=406						
LPAZ				S	**Sn**	**09 12 25.2**	**+0.4**
	18nm,0.5s,baz=31,slow=19,SNR=8.5						
LPAZ	**La Paz**	**3.69**	**115**		**Pn**	**09 11 41.8**	**+0.9**
LPAZ				Sn	**Sn**	**09 12 24.3**	**-0.6**
LPAZ	**La Paz**	**3.69**	**115**	*e*P	**Pn**	**09 11 40.4**	**-0.6**
LPAZ				*e*S	**Sn**	**09 12 23.9**	**-1.0**
AP01	**Chacalluta**	**3.81**	**162**		**Pn**	**09 11 41.0**	**-0.9**
AP01				Sn	**Sn**	**09 12 27.4**	**+0.7**
PB12	**IPOC Station P**	**4.04**	**162**		**Pn**	**09 11 44.3**	**-0.7**
PB16	**IPOC Station P**	**4.10**	**151**		**Pn**	**09 11 47.1**	**+0.8**
PB16				Sn	**Sn**	**09 12 36.1**	**+1.6**
PB11	**IPOC Station P**	**5.33**	**160**		**Pn**	**09 12 00.7**	**-1.4**
GO01	**Chusmiza**	**5.41**	**155**		**Pn**	**09 12 04.0**	**+0.5**
NNA	**Nana**	**5.78**	**298**	P	**Pn**	**09 12 10.0**	**+1.9**
	24nm,0.3s,baz=134,slow=9.4,SNR=17						
NNA				S	**Sn**	**09 13 10.6**	**-3.0**
	26nm,0.4s,baz=108,slow=11,SNR=6.5						
NNA	**Nana**	**5.78**	**298**	Pn	**Pn**	**09 12 07.4**	**-0.7**
NNA				Sn	**Sn**	**09 13 11.5**	**-2.2**
PB08	**IPOC Station P**	**5.86**	**157**		**Pn**	**09 12 08.7**	**-0.6**
TA01	**Diego Aracena**	**5.95**	**167**		**Pn**	**09 12 08.2**	**-1.9**
PB01	**IPOC Station P**	**6.58**	**162**		**Pn**	**09 12 16.6**	**-2.1**
PB02	**IPOC Station P**	**6.74**	**166**		**Pn**	**09 12 19.3**	**-1.6**
PB07	**IPOC Station P**	**7.14**	**167**		**Pn**	**09 12 24.4**	**-1.8**
PB09	**IPOC Station P**	**7.37**	**163**		**Pn**	**09 12 28.2**	**-1.1**
PB03	**IPOC Station P**	**7.48**	**167**		**Pn**	**09 12 29.0**	**-1.8**
PB06	**IPOC Station P**	**8.15**	**167**		**Pn**	**09 12 37.1**	**-2.7**
PB14	**IPOC Station P**	**9.90**	**174**		**Pn**	**09 13 00.8**	**-2.3**
ATAH	**Atahualpa**	**10.07**	**318**	P	**Pn**	**09 13 07.8**	**+2.2**
	7.6nm,0.8s,baz=357,slow=13,SNR=6.1						
SIV	**San Ignacio**	**10.24**	**98**	P	**Pn**	**09 13 05.8**	**-1.7**
	2.9nm,0.3s,baz=274,slow=14						
GO02	**Mina Guanaco**	**10.54**	**170**		**Pn**	**09 13 10.0**	**-1.6**
VILB	**Vilhena**	**11.22**	**82**	Pn	**Pn**	**09 13 18.3**	**-2.1**
VILB	**Vilhena**	**11.22**	**82**	*e*P	**Pn**	**09 13 17.6**	**-2.8**
AC01	**Pan de Azucar**	**11.39**	**175**	Pn	**Pn**	**09 13 20.5**	**-1.9**
PTLB	**Pontes e Lacer**	**12.06**	**95**		**Pn**	**09 13 30.3**	**-1.1**
PTLB	**Pontes e Lacer**	**12.06**	**95**	*e*P	**Pn**	**09 13 31.1**	**-0.2**
AC02	**Maricunga**	**12.25**	**170**		**Pn**	**09 13 33.4**	**-0.8**
AC04	**Llanos de Chal**	**13.40**	**178**	Pn	**Pn**	**09 13 47.5**	**-1.1**
AC05	**El Transito**	**14.08**	**175**	Pn	**P**	**09 13 57.8**	**-2.5**
LCO	**Las Campanas**	**14.22**	**177**	Pn	**P**	**09 13 59.5**	**-2.6**
MACA	**Manacapuru-AM**	**15.76**	**44**	P	**P**	**09 14 19.0**	**+0.1**
MACA	**Manacapuru-AM**	**15.76**	**44**	*e*P	**P**	**09 14 18.1**	**-0.8**
CFA	**Coronel Fontan**	**17.07**	**170**	P	**Pn**	**09 14 35.5**	**+1.7**
	3.8nm,0.5s,baz=346,slow=11,SNR=14						
CO04	**Los Peladeros**	**17.23**	**178**	P	**Pn**	**09 14 35.9**	**-0.2**
CO04				IAmb	IAmb	09 14 48.7	
	comp=Z,7.0nm,0.8s						
CPUP	**Villa Florida**	**17.64**	**133**	P	**Pn**	**09 14 41.1**	**+0.4**
	comp=Z,2.3nm,0.7s,baz=319,slow=12,SNR=7.1						
CPUP	**Villa Florida**	**17.64**	**133**	P	**Pn**	**09 14 39.4**	**-1.3**
VA03	**San Esteban**	**17.97**	**177**	P	**Pn**	**09 14 43.8**	**-0.9**
VA03				IAmb	IAmb	09 14 48.4	
	comp=Z,5.8nm,0.8s						
MT02	**Curacav**	**18.44**	**179**	P	**Pn**	**09 14 48.9**	**-1.2**
MT02				IAmb	IAmb	09 15 32.1	
	comp=Z,12nm,1.3s						
ITTB	**Itaituba**	**18.73**	**58**	*e*P	**Pn**	**09 14 52.1**	**-1.5**
MT09	**Talagante**	**18.96**	**178**	P	**Pn**	**09 14 55.3**	**-1.1**
MT09				IAmb	IAmb	09 15 04.3	
	comp=Z,14nm,1.2s						
MT01	**Popeta**	**19.04**	**179**	P	**P**	**09 14 54.3**	**-0.4**
MT01				IAmb	IAmb	09 15 02.1	
	comp=Z,11nm,0.9s						
SNDB	**Serra Nova Dou**	**19.95**	**85**	*e*P	**Pn**	**09 15 05.9**	**-2.2**
BO02	**Sierra Bellavi**	**19.98**	**178**	P	**P**	**09 15 04.5**	**-0.5**
BO02				IAmb	IAmb	09 15 09.6	
	comp=Z,6.2nm,0.8s						
PTGB	**Pitanga**	**20.88**	**121**	*e*P	Pn	09 15 15.9	-3.2
BI02	**San Fabin de**	**21.83**	**179**	P	**P**	**09 15 25.2**	**+0.5**
BI02				IAmb	IAmb	09 15 30.0	
	comp=Z,8.1nm,0.9s						
ITAB	**Concordia**	**21.99**	**128**	P	**P**	**09 15 26.4**	**+0.1**
ITAB	**Concordia**	**21.99**	**128**	*e*P	**P**	**09 15 27.7**	**+1.4**
IPMB	**Ipameri, GO**	**22.68**	**101**	*e*P	**P**	**09 15 33.1**	**0.0**
BDFB	**Brasilia**	**22.79**	**95**	P	**P**	**09 15 34.3**	**0.0**
	comp=Z,2.5nm,0.6s,baz=265,slow=14,SNR=4.7						
	comp=Z,2.5nm,0.6s						
SMTB	**Santa Maria do**	**24.22**	**79**	*e*P	**P**	**09 15 48.6**	**+1.4**
PMNB	**Patos De Minas**	**24.40**	**102**	*e*P	**P**	**09 15 50.1**	**+1.2**
PLCA	**Paso Flores**	**25.91**	**178**	P	**P**	**09 16 05.5**	**+3.1**
	comp=Z,2.6nm,0.9s,baz=7.2,slow=12,SNR=6.9						
	comp=Z,2.6nm,0.9s						
PLCA	**Paso Flores**	**25.91**	**178**	P	**P**	**09 16 04.2**	**+1.8**
PLCA	**Paso Flores**	**25.91**	**178**	*e*P	**P**	**09 16 05.0**	**+2.7**
TXAR	**Lajitas Array**	**53.65**	**325**	P	**P**	**09 19 52.5**	**+2.0**
	comp=Z,0.3nm,0.7s,baz=115,slow=3.5,SNR=2.0						
	comp=Z,0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**77.67**	**73**	P	**P**	**09 22 25.5**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=253,slow=3.8,SNR=4.1						
	comp=Z,0.4nm,0.3s						
YKA	**Yellowknife Ar**	**84.00**	**341**	P	P	09 23 00.7	+3.4
	comp=Z,0.2nm,0.6s,baz=138,slow=4.3,SNR=6.7						
	comp=Z,0.2nm,0.6s						
SONM	**Songino Array**	**146.96**	**2**	PKPbc	**PKiKP**	**09 30 13.3**	**+1.6**
	comp=Z,0.6nm,0.3s,baz=298,slow=2.5,SNR=4.1						

NOU 03 09:18:07.1, 18°.20S×**170°.88E, h0**km**, mb4.1**/8**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INH	**Isangel**	**2.03**	**228**	P	Pn	09 18 41.5	-1.1
RTV	**Rentapao**	**2.37**	**279**	P	Pn	09 18 47.7	+0.4
DVP	**Devils Point**	**2.61**	**280**	P	Pn	09 18 50.6	+0.1
MARNC	**Mare, Loyalty**	**4.22**	**219**	P	Pn	09 19 12.2	-0.6
OUENC	**Ouen Island, N**	**5.65**	**221**	P	Pn	09 19 32.8	+0.4
DZM	**Mont Dzumac**	**5.67**	**227**	P	Pn	09 19 31.9	-0.9
ONTNC	**Ouen Toro**	**5.83**	**225**	P	Pn	09 19 35.7	+0.9

NDI ***03*** *09:18:41.7±3.8, 16°.73N×94°.03E, h37km±26km, ML4.4, MW4.1, Presumed earthquake*

IDC ***03*** *09:18:47.5±0.5, 17°.52N×94°.19E, h0km, mb4.4/30, mbtmp4.4/31, ML5.5/1, MS3.6/3, Error ellipse: s-maj=16.8km s-min=12.1km az=50.0*

NEIC ***03*** *09:18:50.4±1.6, 17°.63N±0°.07×94°.31E±0°.09, h10km±1km, mb4.9/95, Error ellipse: s-maj=14.6km s-min=12.5km az=271.0*

BKK ***03*** *09:18:51.1±2.5, 18°N±7°×9°4E±2°0, h25km, M4.5/17, mB5.0/6, Mjma4.2/17, ML5.1/13, Mw(mB)4.3/6*

BJI ***03*** *09:18:52.1, 17°.42N×94°.26E, h59km, mB4.8/9, mb4.4/47, Ms4.2/6, Ms7 4.1/6*

ISC 03 09:18:52.5±2.9**, 17°.60N**±0°.06×**94°.20E**±0°.05**, h31**km±20km**, n190, σ1s.26**/158**, mb4.7**/89**, MS3.9**/3**, 1C-1D, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM13	**Chiang Mai Arr**	**4.55**	**79**	P	**Pn**	**09 19 59.3**	**0.0**
CM15	**Chiang Mai Arr**	**4.58**	**79**	P	**Pn**	**09 19 59.7**	**+0.1**
CM05	**Chiang Mai Arr**	**4.58**	**79**	P	**Pn**	**09 19 59.7**	**-0.1**
CM02	**Chiang Mai Arr**	**4.59**	**79**	P	**Pn**	**09 19 59.9**	**0.0**
CM31	**Chiang Mai Arr**	**4.59**	**79**		**Pn**	**09 20 00.0**	**+0.2**
CMAR	**Chiang Mai Arr**	**4.59**	**79**	Pn	**Pn**	**09 19 60.0**	**+0.1**
	58nm,0.3s,baz=260,slow=15,SNR=323						
CMAR				Sn	**Sn**	**09 20 50.8**	**-1.5**
	18nm,0.3s,baz=152,slow=29,SNR=5.8						
	114nm,0.3s						
CMAR	**Chiang Mai Arr**	**4.59**	**79**		**Pn**	**09 19 59.8**	**-0.1**
CM04	**Chiang Mai Arr**	**4.62**	**79**	P	**Pn**	**09 20 00.2**	**0.0**
CHTO	**Chiang Mai**	**4.67**	**74**		**Pn**	**09 20 00.7**	**-0.2**
CHTO	**Chiang Mai**	**4.67**	**74**	P	**Pn**	**09 20 01.0**	**+0.1**
SAIH	**SAIHA**	**5.00**	**347**	*e*P	**Pn**	**09 20 06.8**	**+1.2**
SAIH				*e*S	**Sn**	**09 21 04.7**	**+2.2**
SAIH				IAML		09 21 07.9	
	comp=N,111nm,0.4s						
SAIH				IAML		09 21 08.4	
	comp=E,153nm,0.4s						
CMAI	**Chiengmai2**	**5.14**	**62**	P	**Pn**	**09 20 08.3**	**+0.7**
LAMP	**Lampang**	**5.25**	**79**	P	**Pn**	**09 20 08.8**	**-0.1**
UTHA	**Uthaitani**	**5.42**	**111**	P	**Pn**	**09 20 10.9**	**-0.4**
BRDH	**Bariadhala**	**5.60**	**335**	Sn	**Sn**	**09 21 17.8**	**+0.9**
	comp=E,60nm,0.3s,baz=246,slow=23,SNR=12						
UTTA	**Uttaradit**	**6.06**	**88**	P	**Pn**	**09 20 19.3**	**-0.7**
PBA	**Port Blair**	**6.07**	**194**	Pn	**Pn**	**09 20 21.3**	**+1.2**
PBA	**Port Blair**	**6.07**	**194**	IAML		09 21 32.5	
	comp=N,2μm,0.7s						
PBA				IAML		09 21 32.9	
	comp=E,2μm,0.5s						
BELO	**BELONIA**	**6.19**	**336**	*e*S	**Sn**	**09 21 32.1**	**+0.7**
IMP	**Imphal**	**7.20**	**358**	*e*P	**Pn**	**09 20 37.2**	**+1.4**
IMP				*e*S	**Sn**	**09 21 59.6**	**+2.9**
IMP				IAML		09 22 02.0	
	comp=N,70nm,0.8s						
IMP				IAML		09 22 02.7	
	comp=E,87nm,0.7s						
KOHI	**KOHIMA**	**8.09**	**359**	*e*P	**Pn**	**09 20 48.9**	**+0.9**
KOHI				*e*S	**Sn**	**09 22 20.0**	**+1.5**
KOHI				IAML		09 22 21.5	
	comp=N,236nm,0.6s						
KOHI				IAML		09 22 22.5	
	comp=E,296nm,0.5s						
SHL	**Shillong**	**8.22**	**345**		**Pn**	**09 20 50.6**	**+0.8**
SHL	**Shillong**	**8.22**	**345**	*e*S	**Sn**	**09 22 19.8**	**-2.0**
SHL				IAML		09 22 20.4	
	comp=E,92nm,0.3s						
SHL				IAML		09 22 20.6	
	comp=N,828nm,0.3s						
MOKO	**MOKOCHONG**	**8.69**	**2**	*e*P	**Pn**	**09 20 53.0**	**-3.2**
MOKO				*e*S	**Sn**	**09 22 33.2**	**0.0**
MOKO				IAML		09 22 37.2	
	comp=N,299nm,0.6s						
MOKO				IAML		09 22 40.5	
	comp=E,153nm,0.5s						
GUWA	**GUWAHATI**	**8.87**	**345**	*e*P	**Pn**	**09 20 57.5**	**-1.1**
GUWA				*e*S	**Sn**	**09 22 36.1**	**-1.3**
GUWA				IAML		09 22 36.1	
	comp=E,68nm,0.5s						
GUWA				IAML		09 22 36.4	
	comp=N,78nm,0.4s						
TEZP	**TEZPUR**	**9.07**	**352**	*e*P	**Pn**	**09 21 01.9**	**+0.6**
TEZP				IAML		09 22 40.9	
	comp=N,80nm,0.4s						
TEZP				IAML		09 22 41.0	
	comp=E,61nm,0.3s						
TEZP				*e*S	**Sn**	**09 22 44.3**	**+1.8**
DHUB	**DHUBRI**	**9.25**	**336**	*e*P	**Pn**	**09 21 00.6**	**-3.1**
DHUB				*e*S	**Sn**	**09 22 42.3**	**-4.5**
DHUB				IAML		09 22 46.2	
	comp=N,218nm,0.3s						
DHUB				IAML		09 22 46.8	
	comp=E,108nm,0.2s						
ITAN	**ITANAGAR**	**9.51**	**357**	*e*S	**Sn**	**09 22 51.5**	**-1.9**
ITAN				IAML		09 22 53.3	
	comp=N,266nm,0.3s						
ITAN				IAML		09 22 54.5	
	comp=E,162nm,0.4s						
ZIRO	**ZIRO**	**9.89**	**358**	*e*P	**Pn**	**09 21 12.7**	**-0.1**
ZIRO				*e*S	**Sn**	**09 23 00.8**	**-2.0**
ZIRO				IAML		09 23 07.4	
	comp=N,272nm,0.4s						
ZIRO				IAML		09 23 09.3	
	comp=E,250nm,0.6s						
BOK	**Bokaro**	**9.93**	**310**	*e*P	Pn	09 21 07.2	-6.0
BOK				*e*S	Sn	09 22 53.0	-11
BOK				IAML		09 23 04.0	
	comp=N,208nm,0.5s						
BOK				IAML		09 23 06.7	
	comp=E,273nm,0.4s						
PASG	**PASIGHAT**	**10.47**	**5**	*e*P	**Pn**	**09 21 21.0**	**+0.5**
GTK	**Tadong**	**10.97**	**333**	*e*P	**Pn**	**09 21 24.2**	**-3.3**
GTK				*e*S	**Sn**	**09 23 26.0**	**-3.3**
GTK				IAML		09 23 30.3	
	comp=N,75nm,1.0s						
PZH	**PanZhiHua**	**11.29**	**37**	P	**Pn**	**09 21 35.6**	**+3.8**
LSA	**Lhasa**	**12.37**	**348**	Pn	**Pn**	**09 21 46.3**	**-0.6**
LSA				Sn	Sn	09 23 32.4	-32
LSA				smax	smax		
	comp=N,12nm,0.6s						
LSA				smax	smax		
	comp=E,11nm,0.7s						
QIZ	**Qiongzhong**	**14.92**	**82**	P	**Pn**	**09 22 20.2**	**-1.2**
QIZ				S	**Sn**	**09 25 06.9**	**+1.1**
QIZ				pmax	pmax		
	comp=E,20nm,1.6s						
QIZ				L	L		
	comp=E,300nm,8.5s						
QIZ				L	L		
	comp=E,180nm,9.4s						
QIZ				L	L		
	comp=E,170nm,10.3s						
HYB	**Hyderabad**	**14.93**	**272**	*e*P	**P**	**09 22 28.0**	**+1.2**
PALK	**Pallekele**	**16.69**	**234**	LR	LR	09 29 00.6	
	comp=E,141nm,19.3s,baz=40,slow=37						
ENH	**Enshi**	**18.80**	**45**	P	**P**	**09 23 09.4**	**-0.1**
LZDM	**Lanzhou Array**	**20.13**	**23**	P	**P**	**09 23 24.9**	**+0.4**
	comp=E,1.9nm,0.3s,baz=187,slow=10,SNR=5.9						
	comp=E,1.9nm,0.3s						
LZH	**Lanzhou**	**20.30**	**23**	*e*P	**P**	**09 23 26.5**	**+0.4**
LZH				pmax	pmax		
	comp=E,29nm,1.3s						
XAN	**Xi'an**	**21.02**	**36**	P	**P**	**09 23 35.8**	**+2.0**
XAN				sP	sP	09 23 50.6	+4.7
XAN				pmax	pmax		
	comp=E,39nm,0.8s						
XAN	**Xi'an**	**21.02**	**36**	S	SKiKP	09 38 44.3	-12
XAN				pmax	pmax		
	comp=Z,15nm,1.3s						
XAN				LR	LR		
	comp=N,280nm,14.4s						
XAN				LR	LR		
	comp=E,790nm,15.8s						
XAN				LR	LR		
	comp=Z,620nm,15.8s						
GTA2	**Gaotai**	**22.34**	**11**	*e*P	**P**	**09 23 46.5**	**-1.5**
GTA2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LYN	**LuoYang**	**23.48**	**40**	P	**P**	**09 23 55.2**	**-4.4**
LYN				pmax	pmax		
	comp=Z,21nm,0.5s						
NIL	**Nilore**	**24.67**	**314**	P	**P**	**09 24 12.0**	**+1.3**
NIL				IAmb	IAmb	09 24 13.2	
	comp=Z,19nm,0.6s						
NJ2	**Nanjing**	**26.52**	**52**	*e*P	**P**	**09 24 29.3**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						

WMQ Urumqi 26.72 349 *e*P P 09 24 32.0 +2.8
WMQ pmax pmax
comp=Z,15nm,1.1s
HNS HongShan 26.73 38 ⇓P P 09 24 28.9 -0.3
HNS pmax pmax
comp=Z,7.0nm,0.9s
WUS Wushi 26.82 334 P 09 24 31.8 +1.6
KSH2 Kashi 26.91 327 P P 09 24 30.6 -0.5
KSH2 pP sP 09 24 42.8 -0.9
KSH2 pmax pmax
comp=Z,11nm,0.7s
HHC Hu-ho-hao-te 27.58 29 *e*P P 09 24 40.3 +3.3
HHC pmax pmax
comp=Z,17nm,0.6s
HHC pmax pmax
comp=Z,110nm,4.7s
TARG Taragay, Kyrgy 27.85 333 P 09 24 40.8 +1.0
GAR Garm 29.79 321 P 09 24 57.4 +0.7
ARSB Arslanbob 29.85 327 P P 09 24 58.4 +1.1
AAK Ala-Archa 30.07 330 P P 09 24 58.1 -1.2
comp=Z,1.0nm,0.5s,baz=206,slow=2.2,SNR=5.1
comp=Z,1.0nm,0.5s
AAK Ala-Archa 30.07 330 P P 09 24 59.6 +0.3
CHGR Chuyangaron 30.29 319 P 09 25 01.8 +0.7
CHGR IAmb IAmb 09 25 06.7
comp=Z,17nm,1.2s
SHAA Shahritus 30.32 316 P 09 25 01.8 +0.4
SHAA IAmb IAmb 09 25 06.3
comp=Z,23nm,0.9s
MK31 Makanchi Array 30.74 344 P P 09 25 05.5 +0.6
MKAR Makanchi Array 30.74 344 P P 09 25 05.5 +0.6
comp=Z,5.0nm,0.6s,baz=163,slow=9.2,SNR=59
comp=Z,5.0nm,0.6s
MKAR Makanchi Array 30.74 344 P 09 25 05.2 +0.3
MAKZ Makanchi 30.83 344 P P 09 25 06.2 +0.4
SONM Songino Array 31.77 16 P P 09 25 14.2 +0.1
comp=Z,1.9nm,0.6s,baz=197,slow=9.3,SNR=7.7
SONM PcP PcP 09 28 05.7 +0.7
comp=Z,1.3nm,0.7s,baz=191,slow=2.7,SNR=3.9
comp=Z,1.9nm,0.6s
SONM Songino Array 31.77 16 P P 09 25 13.8 -0.3
SONM PcP 09 28 04.5 -0.4
ULN Ulaanbaatar 31.97 16 P P 09 25 15.6 -0.3
JOW Kunigami 32.77 68 P P 09 25 22.7 -0.3
comp=Z,11nm,0.5s,baz=225,slow=8.8,SNR=3.7
comp=Z,11nm,0.5s
JOW Kunigami 32.77 68 P P 09 25 22.6 -0.3
H08S3 Diego Garcia H 32.99 222 T T 09 59 50.1
baz=40,slow=76,SNR=84
H08S2 Diego Garcia H 33.00 222 T T 09 59 52.2
baz=40,slow=76,SNR=26
H08S1 Diego Carcia H 33.01 222 T T 09 59 52.3
baz=40,slow=76,SNR=14
KURBB Kurchatov Arra 35.26 343 P P 09 25 44.7 +0.5
comp=Z,5.3nm,0.8s,baz=161,slow=7.6,SNR=18
KURBB PcP PcP 09 28 15.1 +0.6
comp=Z,1.2nm,0.7s,baz=151,slow=2.3,SNR=4.3
comp=Z,5.3nm,0.8s
KURK Kurchatov 35.31 343 P 09 25 45.2 +0.5
KSRS Korea Array 35.58 49 P P 09 25 46.1 -1.1
comp=Z,0.8nm,0.5s,baz=240,slow=9.7,SNR=3.2
comp=Z,0.8nm,0.5s
ZAA0 Zalesovo Array 37.00 351 P 09 25 59.4 +0.3
ZALV Zalesovo Beam 37.00 351 P P 09 25 59.3 +0.2
comp=Z,4.6nm,0.6s,baz=174,slow=8.9,SNR=19
comp=Z,4.6nm,0.6s
ZALV Zalesovo Beam 37.00 351 P 09 25 59.5 +0.4
BNX BinXian 39.34 37 ⇑P P 09 26 17.7 -1.2
BNX pmax pmax
comp=Z,10.0nm,0.9s
BVAR Borovoye Array 39.96 338 P P 09 26 24.1 +0.1
comp=Z,1.2nm,0.6s,baz=128,slow=9.6,SNR=5.3
BVAR PcP PcP 09 28 29.4 +0.5
comp=Z,1.9nm,0.6s,baz=156,slow=4.4,SNR=5.3
BVAR LR LR 09 47 51.5
comp=Z,81nm,19.8s,baz=63,slow=44
comp=Z,1.2nm,0.6s
BORK Borovoye 40.00 338 P P 09 26 24.1 -0.2
USRK Ussuriysk Ar. 41.33 42 P P 09 26 34.5 -1.0
comp=Z,1.3nm,0.4s,baz=261,slow=9.2,SNR=6.9
comp=Z,1.3nm,0.4s
AB31 Akbulak array 41.97 327 P 09 26 40.9 +0.3
ABKAR Akbulak array 41.97 327 P P 09 26 41.3 +0.7
HEH HeiHe 42.04 32 *e*P P 09 26 40.7 -0.5
HEH pmax pmax
comp=Z,6.0nm,0.6s
KLR Kul'dur 43.73 35 P P 09 26 56.4 +1.5
comp=Z,0.8nm,0.5s,baz=240,slow=12,SNR=4.2
comp=Z,0.8nm,0.5s
ARTI Arti 47.17 334 P P 09 27 22.2 +0.3
comp=Z,3.7nm,0.8s,baz=258,slow=1.9,SNR=3.5
comp=Z,3.7nm,0.8s
KIV Kislovodsk 50.47 313 P P 09 27 49.0 +1.3
NRIK Noril'sk 51.89 357 P P 09 27 58.1 +0.3
comp=Z,1.6nm,0.4s,baz=152,slow=9.4,SNR=5.1
comp=Z,1.6nm,0.4s
WB0 Warramunga Arr 54.19 131 IAmb IAmb 09 28 15.4
comp=Z,11nm,0.7s
WRA Warramunga Arr 54.26 132 P P 09 28 14.8 -1.1
comp=Z,8.5nm,0.6s,baz=314,slow=7.3,SNR=56
WRA PcP PcP 09 29 19.7 -0.3
comp=Z,1.6nm,0.6s,baz=316,slow=3.7,SNR=11
comp=Z,8.5nm,0.6s
WRA Warramunga Arr 54.26 132 P 09 28 15.1 -0.9
WRA PcP PcP 09 29 20.1 0.0
WRAB Tennant Creek 54.26 132 P P 09 28 15.4 -0.6
WRAB IAmb IAmb 09 28 16.2
comp=Z,9.3nm,0.7s
WR8 Warramunga Arr 54.38 132 IAmb IAmb 09 28 16.9
comp=Z,11nm,0.7s
AS31 Alice Springs 56.43 135 P 09 28 31.3 -0.3
ASAR Alice Springs 56.43 135 P P 09 28 31.3 -0.3
comp=Z,6.5nm,0.6s,baz=316,slow=6.9,SNR=120
comp=Z,6.5nm,0.6s
BR104 Keskin Array S 56.44 306 P P 09 28 31.8 +0.2
comp=Z,2.7nm,1.1s
BRTR Keskin Array B 56.44 306 P P 09 28 30.2 -1.4
comp=Z,1.0nm,0.7s,baz=118,slow=7.1,SNR=6.3
comp=Z,1.0nm,0.7s
BR106 Keskin Array S 56.46 306 P P 09 28 32.2 +0.4
comp=Z,2.3nm,0.9s
TIXI Tiksi 57.76 12 P P 09 28 39.6 -0.6
comp=Z,5.7nm,0.4s,baz=281,slow=1.3,SNR=5.0
comp=Z,5.7nm,0.4s
TIXI Tiksi 57.76 12 P P 09 28 39.5 -0.7
TIXI IAmb IAmb 09 28 44.0
comp=Z,8.2nm,0.6s
MA2 Magadan 58.26 30 P P 09 28 43.5 -0.4
MA2 Magadan 58.26 30 P P 09 28 43.7 -0.2
comp=Z,11nm,2.3s
AK09 Malin Array Si 60.71 319 P P 09 29 00.7 -0.3
AK07 Malin Array Si 60.75 318 P P 09 29 01.2 -0.1
AK06 Malin Array Si 60.76 319 P P 09 29 01.2 -0.1
AKASG Malin Array Be 60.76 319 P P 09 29 00.8 -0.6
comp=Z,2.3nm,0.6s,baz=84,slow=6.2,SNR=5.8
comp=Z,2.3nm,0.6s
AKBB Malin Array Si 60.76 319 P 09 29 01.2 -0.1
AKBB Malin Array Si 60.76 319 P P 09 29 00.9 -0.4
AK01 Malin Array Si 60.77 319 P P 09 29 01.0 -0.4
KIEV Kiev 60.77 319 P 09 29 00.9 -0.5
KIEV Kiev 60.77 319 P P 09 29 00.9 -0.5
comp=Z,32nm,1.2s
AK22 Malin Array Si 60.87 319 P P 09 29 01.6 -0.4
AK21 Malin Array Si 60.89 319 P P 09 29 01.5 -0.7
LUBAR Lubar, Ukraine 61.60 318 P P 09 29 06.7 -0.3
MLR Muntele Rosu 62.48 313 P P 09 29 14.7 +1.5
INKA Innaminka 63.75 134 P P 09 29 22.4 +0.8
INKA IAmb IAmb 09 29 29.2
comp=Z,9.7nm,1.5s
FINES FINESS Array B 64.26 330 P P 09 29 24.6 +0.1
comp=Z,3.1nm,0.6s,baz=106,slow=5.6,SNR=21
comp=Z,3.1nm,0.6s
FINES FINESS Array B 64.26 330 P P 09 29 24.7 +0.2
PABE Paberze 64.49 324 P P 09 29 27.0 +0.9
ARCES ARCESS Array B 66.22 339 P P 09 29 37.7 +0.5
comp=Z,9.2nm,1.0s,baz=81,slow=7.2,SNR=11
comp=Z,9.2nm,1.0s
ARCES ARCESS Array B 66.22 339 P P 09 29 38.0 +0.8
STKA Stephens Creek 66.96 137 P P 09 29 41.5 -0.8
comp=Z,2.6nm,0.7s,baz=328,slow=6.1,SNR=6.8
comp=Z,2.6nm,0.7s
STKA Stephens Creek 66.96 137 P P 09 29 41.9 -0.5
BILL Bilibino 67.12 23 P P 09 29 42.5 -0.3
BILL IAmb IAmb 09 29 47.1
comp=Z,4.5nm,0.7s
HFS Hagfors 70.19 328 P P 09 30 02.5 +0.4
comp=Z,3.6nm,0.4s,baz=104,slow=4.9,SNR=27
comp=Z,3.6nm,0.4s
GEC2 GERESS Array S 70.76 316 IAmb IAmb 09 30 11.4
comp=Z,7.0nm,0.8s
GERES GERESS Array B 70.76 316 P P 09 30 06.8 +0.9
comp=Z,4.1nm,0.8s,baz=90,slow=5.3,SNR=11
comp=Z,4.1nm,0.8s
CLL Collm 71.00 319 *e*P P 09 30 08.0 +0.7
CLL *e*x x 09 30 12.0
CLL *e*sP PcP 09 30 25.0 -2.5
CLL *e*PP PP 09 32 49.0 +4.4
NB2 NORSAR Subarra 71.39 329 P P 09 30 09.1 -0.4
comp=Z,3.3nm,0.7s,baz=87,slow=6.2
NOA NORSAR Array B 71.39 329 P P 09 30 09.2 -0.3
comp=Z,1.9nm,0.6s,baz=87,slow=6.0,SNR=8.2
comp=Z,1.9nm,0.6s
LSZ Lusaka 72.81 247 P P 09 30 19.3 +0.5
LSZ IAmb IAmb 09 30 24.4
comp=Z,7.1nm,0.8s
H04N2 CROZET ISLANDS 74.13 209 T T 10 51 18.7
baz=41,slow=75,SNR=60
H04N1 CROZET ISLANDS 74.14 209 T T 10 51 18.7
baz=41,slow=75,SNR=58
H04N3 CROZET ISLANDS 74.15 209 T T 10 51 20.6
baz=41,slow=75,SNR=57
C16K Lisburne Hills 77.62 22 IAmb IAmb 09 30 46.8
comp=Z,7.8nm,1.2s
ANM Nome 78.67 26 P P 09 30 52.1 +0.7
ANM IAmb IAmb 09 31 02.8
comp=Z,16nm,1.9s
C18K Utukok River 78.96 21 IAmb IAmb 09 30 58.4
comp=Z,6.5nm,0.8s
C19K Lookout Ridge 79.34 21 IAmb IAmb 09 31 01.0
comp=Z,5.8nm,0.8s
E18K Tukpahlearik C 79.59 22 IAmb IAmb 09 31 02.0
comp=Z,8.1nm,0.8s
F17K Baldwin Pennin 79.70 23 IAmb IAmb 09 31 02.6
comp=Z,9.3nm,0.8s
EKA Eskdalemuir Ar 79.82 325 P P 09 30 58.4 +0.6
comp=Z,3.7nm,0.7s,baz=82,slow=6.0,SNR=6.0
comp=Z,3.7nm,0.7s
D19K Kuna River 80.07 21 IAmb IAmb 09 31 04.6
comp=Z,8.8nm,0.8s
D20K Etivluk River 80.49 20 IAmb IAmb 09 31 06.9
comp=Z,14nm,0.8s
B21K Ikpikpuk River 80.75 19 IAmb IAmb 09 31 08.5
comp=Z,11nm,0.9s
H17K Granite Mounta 80.76 25 IAmb IAmb 09 31 08.2
comp=Z,7.6nm,0.7s
E19K Redstone River 80.79 22 IAmb IAmb 09 31 08.2
comp=Z,6.7nm,0.8s
B22K Teshekpuk Lake 80.80 18 IAmb IAmb 09 31 09.0
comp=Z,11nm,0.8s
BOSA Boshof 80.90 236 P P 09 31 04.7 +0.5
comp=Z,2.5nm,0.6s,baz=55,slow=3.5,SNR=8.3
comp=Z,2.5nm,0.6s
J16K Anvik River 81.08 26 IAmb IAmb 09 31 10.4
comp=Z,12nm,0.8s
M14K Bethel 81.39 29 P 09 31 06.5 +0.5
M14K IAmb IAmb 09 31 10.8
comp=Z,12nm,1.1s
D22K Ayikyak River 81.70 20 IAmb IAmb 09 31 09.7
comp=Z,7.4nm,0.8s
C23K Itkillik River 81.89 18 IAmb IAmb 09 31 14.5
comp=Z,11nm,0.8s
F21K Alatna River 82.20 21 IAmb IAmb 09 31 15.7
comp=Z,6.2nm,0.8s
K17K Iditarod 82.27 26 IAmb IAmb 09 31 16.3
comp=Z,7.0nm,0.8s
G21K Allakaket 82.51 22 IAmb IAmb 09 31 17.2
comp=Z,5.7nm,0.7s
C24K Franklin Bluff 82.52 18 IAmb IAmb 09 33 35.9
comp=Z,20nm,1.7s
E23K Chandalar 83.09 20 IAmb IAmb 09 31 16.7
comp=Z,4.9nm,0.8s
H21K Melozitna Rive 83.17 23 IAmb IAmb 09 31 21.7
comp=Z,11nm,1.0s
G23K Bananza Creek 83.64 21 IAmb IAmb 09 31 23.5
comp=Z,7.4nm,0.9s
TSUM Tsumeb 83.66 248 LR LR 10 06 34.0
comp=Z,50nm,19.8s,baz=331,slow=34
C27K Jago River 84.03 17 IAmb IAmb 09 31 27.6
comp=Z,14nm,1.6s
G24K Hadweenzic Riv 84.51 21 IAmb IAmb 09 31 28.0
comp=Z,5.4nm,0.8s
BPAW Bear Paw Mtn. 84.60 24 IAmb IAmb 09 31 28.8
comp=Z,7.2nm,0.9s
F25K Christian Rive 84.62 19 IAmb IAmb 09 31 29.4
comp=Z,6.4nm,0.9s
I23K Minto, Yukon-K 84.67 22 IAmb IAmb 09 31 30.2
comp=Z,5.4nm,0.7s
H24K Noodor Dome 84.84 21 IAmb IAmb 09 31 29.5
comp=Z,6.9nm,1.0s
F26K Sheenjek River 85.03 19 IAmb IAmb 09 31 30.7
comp=Z,6.8nm,0.7s
ESDC Sonseca Array 85.04 310 P P 09 31 24.6 -0.9
comp=Z,0.8nm,0.8s,baz=83,slow=7.1,SNR=4.0
comp=Z,0.8nm,0.8s
D27M Malcolm River 85.04 17 IAmb IAmb 09 31 30.5
comp=Z,4.7nm,0.6s
BMAR Burnt Mountain 85.05 19 P P 09 31 25.9 +0.9
E27K Coleen River 85.51 18 IAmb IAmb 09 31 31.8
comp=Z,12nm,1.6s
MCK McKinley 85.57 23 P 09 31 27.8 +0.3
G26K Porcupine Rive 85.58 20 IAmb IAmb 09 31 33.5
comp=Z,5.8nm,0.8s
IL31 85.77 22 IAmb IAmb 09 31 28.9
comp=Z,6.2nm,0.9s
ILAR Eielson Array 85.77 22 P P 09 31 27.8 -0.7
comp=Z,2.7nm,0.7s,baz=312,slow=5.6,SNR=32
comp=Z,2.7nm,0.7s
PRP Porcupine Dome 85.83 21 IAmb IAmb 09 31 34.5
comp=Z,7.3nm,0.7s
E28M Babbage River 85.84 17 P P 09 31 29.5 +0.6
E29M Blow River 86.44 17 IAmb IAmb 09 31 37.1
comp=Z,4.2nm,0.7s
INK Inuvik 87.69 16 IAmb IAmb 09 31 42.6
comp=Z,5.8nm,0.8s
I28M Miner Creek 87.74 20 IAmb IAmb 09 31 43.3
comp=Z,3.2nm,0.7s
TORD Torodi Ar. Bea 88.44 283 P P 09 31 42.8 +0.4
comp=Z,2.4nm,0.8s,baz=132,slow=2.5,SNR=5.9
comp=Z,2.4nm,0.8s
TORD Torodi Ar. Bea 88.44 283 P P 09 31 40.5 -2.0
I30M Mount Dempster 89.01 19 IAmb IAmb 09 31 49.2
comp=Z,5.8nm,0.8s
YKA Yellowknife Ar 97.00 13 P P 09 32 20.8 -0.2
comp=Z,0.7nm,0.7s,baz=336,slow=5.2,SNR=12
comp=Z,0.7nm,0.7s
YKA Yellowknife Ar 97.00 13 P P 09 32 20.4 -0.6
PDAR Pinedale Array 116.08 19 PKP PKiKP 09 37 32.5 -0.6
comp=Z,0.2nm,0.4s,baz=80,slow=3.2,SNR=4.2
TXAR Lajitas Array 130.26 21 PKP PKiKP 09 38 00.9 -0.3
comp=Z,0.6nm,0.6s,baz=156,slow=1.0,SNR=5.1
CCIG Comitan 145.76 11 PKPbc PKPdf 09 38 28.9 -0.3
ITAB Concordia 147.52 247 PKPbc PKPbc 09 38 34.5 +0.3
BOAV Boa Vista 148.13 306 PKPbc PKPbc 09 38 35.8 -0.4
CPUP Villa Florida 152.25 247 PKPbc PKPbc 09 38 45.2 -0.7
comp=Z,1.1nm,0.6s,baz=108,slow=6.4,SNR=3.8

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*CNRM **03** 09:27:04.5, 34°.25N×5°.85W, h13km, ML3.1*
*MDD **03** 09:27:04.7±0.4, 34°.35N×5°.80W, h0km, mb_Lg3.0/7, Error ellipse: s-maj=4.7km s-min=3.4km az=84.0*
*IGIL **03** 09:27:05.9, 34°.29N×5°.75W, h18km, ML2.5*
*INMG **03** 09:27:06.1±1.2, 34°.29N×5°.75W, h23km±3km, ML2.6, Error ellipse: s-maj=4.1km s-min=1.8km az=83.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NW Fez (Marr)*
*SFS **03** 09:27:06.3, 34°.27N×5°.75W, h23km, ML3.7/7, ML3.3/9, MLv3.1/9*
ISC 03 09:27:04.9±1.1, **34°.31N**±0°.02×**5°.79W**±0°.03, **h24**km±12km, **n52**, σ1**s**.**25**/94, **Morocco**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
SICH Sidi Chahed 0.44 117 P Pb 09 27 13.4 -0.7
SICH S Sb 09 27 20.3 0.0
RSA Sarsar 0.58 357 P Pb 09 27 17.0 +0.4
RSA S Sn 09 27 26.4 -0.1
CHEFC Chefchaouen 0.88 25 P Pn 09 27 23.1 +1.2
CHEFC S Sn 09 27 37.0 +3.0
RTC Rabat Centre 0.94 251 Pn Pn 09 27 23.0 +0.4
RTC Sg Sn 09 27 36.1 +0.8
IFR Ifrane 0.96 145 Pg Pn 09 27 22.4 -0.7
IFR Sg Sb 09 27 34.7 -0.6
LCRM LCR 0.99 128 P Pb 09 27 23.1 -0.4
LCRM S Sn 09 27 38.6 +1.9
CZD Col de Zad 1.41 154 P Pb 09 27 30.0 -0.8
CZD S Sb 09 27 49.3 +0.8
SMIR Smir Dam 1.41 13 P Pb 09 27 30.2 -0.5
SMIR S Sb 09 27 50.4 +2.2
AKLM AKL 1.60 82 P Pb 09 27 33.1 -0.8
AKLM S Sb 09 27 54.5 +0.8
MD31 MD31 1.67 149 P Pb 09 27 33.7 -1.4
MD31 S Sb 09 27 55.6 -0.1
AVE Averroes 1.69 234 Pn Pn 09 27 33.9 +1.0
AVE Sg Sb 09 27 57.7 +1.6
AVE Averroes 1.69 234 P Pn 09 27 33.0 +0.1
AVE S Sn 09 27 55.4 +1.6
MDT Midelt 1.78 146 P Pn 09 27 34.7 +0.4
MDT S Sb 09 27 58.2 -0.8
EJIF Jimena Fronter 2.16 7 Pn Pb 09 27 42.0 -1.3
EJIF Sn Sb 09 28 08.4 -1.3
SRHM Skhour des Reh 2.54 225 P Pb 09 27 48.1 -1.8
SRHM S Sb 09 28 22.1 +1.3
ESPR Espera 2.56 359 Sn Sn 09 28 17.1 +1.9
ESPR *i* IVmb_Lg 09 28 21.2
TISM Timmit 2.63 192 P Pn 09 27 46.5 +0.6
TISM S Sn 09 28 17.9 +0.8
JBK JBK 2.66 88 P Pn 09 27 46.3 -0.2
JBK S Sn 09 28 19.0 +0.8
ELGU Los Guajares, 3.10 34 Pn Pn 09 27 53.9 +1.4
ELGU Sn Sn 09 28 29.5 +0.7
PBDV Barranco-do-Ve 3.41 330 *e*Pn Pn 09 27 57.2 +0.6
PBDV *e*Sn Sn 09 28 35.7 -0.6
PBDV *i* IAML 09 28 38.9
PBDV *i* IAML 09 28 39.4
PBDV *i* IAML 09 28 40.6
PVAQ Vaqueiros 3.47 334 *e*Pn Pn 09 27 58.0 +0.7
PVAQ *e*Sn Sn 09 28 36.9 -0.7
PVAQ *i* IAML 09 28 38.8
PVAQ *i* IAML 09 28 38.9
PVAQ *i* IAML 09 28 39.6
PVAQ Vaqueiros 3.47 334 P Pn 09 27 57.9 +0.5
PVAQ S Sn 09 28 39.4 +1.8
EGRO El Granado 3.50 337 Pn Pn 09 27 58.7 +0.9
EGRO Sn Sn 09 28 38.1 -0.4
EGRO El Granado 3.50 337 Pn Pn 09 27 58.8 +0.9
EGRO Sn Sn 09 28 37.5 -1.0
EGRO *i* IVmb_Lg 09 28 40.7
EMIN Mina Concepcio 3.53 349 Pn Pn 09 27 58.9 +0.7
EMIN Sn Sn 09 28 37.6 -1.6
EMIN Mina Concepcio 3.53 349 Pn Pn 09 27 59.0 +0.7
EMIN Sn Sn 09 28 37.2 -2.0
EMIN *i* IVmb_Lg 09 28 41.7
PFVI Vila Bisbo 3.75 320 Pn Pn 09 28 03.4 +2.1
PFVI Vila Bisbo 3.75 320 *e*Pn Pn 09 28 02.3 +1.1
PFVI *e*Sn Sn 09 28 44.2 -0.5
PFVI *i* IAML 09 28 47.7
PFVI *i* IAML 09 28 49.3
ECAB El Cabril 3.77 4 Pn Pn 09 28 03.2 +1.6
ECAB Sn Sn 09 28 43.3 -2.0
ECAB El Cabril 3.77 4 Pn Pn 09 28 03.4 +1.8
ECAB Sn Sn 09 28 43.3 -2.0
ECAB *i* IVmb_Lg 09 28 50.5
PCVE Castro Verde 3.79 332 *e*Pn Pn 09 28 02.6 +0.8
PCVE *e*Sn Sn 09 28 45.0 -0.6
PCVE *i* IAML 09 28 48.2
PCVE *i* IAML 09 28 48.8
PCVE *i* IAML 09 28 49.4
MORF Marmelete 3.79 323 *e*P Pn 09 28 02.2 +0.4
MORF *e*S Sn 09 28 43.6 -2.1
MORF IAML 09 28 48.0
comp=N,11nm,0.2s
MORF Marmelete 3.79 323 *e*Pn Pn 09 28 02.5 +0.6
MORF *e*Sn Sn 09 28 45.4 -0.3
MORF *i* IAML 09 28 48.1
MORF *i* IAML 09 28 50.1
MORF *i* IAML 09 28 53.7
EADA Adamuz 3.98 14 Pn Pn 09 28 05.9 +1.5
EADA Sn Sn 09 28 49.1 -1.1
EADA Adamuz 3.98 14 Pn Pn 09 28 05.7 +1.3
EADA Sn Sn 09 28 49.2 -1.1
EADA *i* IVmb_Lg 09 28 51.3
PBAR Barrancos 3.99 346 Pn Pn 09 28 05.3 +0.7
PBAR Sn Sn 09 28 49.1 -1.5
PBAR Barrancos 3.99 346 *e*Pn Pn 09 28 05.4 +0.7
PBAR *e*Sn Sn 09 28 49.5 -1.1
PBAR *i* IAML 09 28 50.2
PBAR *i* IAML 09 28 50.5
PBAR *i* IAML 09 28 52.9
PTEO Sao Teotonio 4.02 324 *e*Pn Pn 09 28 05.6 +0.7
PTEO *e*Sn Sn 09 28 50.7 -0.5
PTEO *i* IAML 09 28 54.2
PTEO *i* IAML 09 28 54.4
PTEO *i* IAML 09 28 57.5
MESJ Messejana 4.04 332 *e*P Pn 09 28 05.8 +0.5
MESJ Messejana 4.04 332 *e*Pn Pn 09 28 05.9 +0.6
MESJ *e*Sn Sn 09 28 51.4 -0.4
MESJ *i* IAML 09 28 54.8
MESJ *i* IAML 09 28 54.8
MESJ *i* IAML 09 28 54.9
PBEJ Beja 4.08 336 *e*Sn Sn 09 28 52.3 -0.4
PBEJ *i* IAML 09 28 53.0
PBEJ *i* IAML 09 28 54.0
PBEJ *i* IAML 09 28 56.1
EQES Quesada 4.13 31 Sn Sn 09 28 54.7 +0.6
MOE Montemor 4.69 335 *e*Pn Pn 09 28 15.2 +1.0
MOE *e*Sn Sn 09 29 07.0 -0.8
MOE *i* IAML 09 29 08.1
MOE *i* IAML 09 29 09.9
MOE *i* IAML 09 29 10.7
PESTR Estremoz 4.78 343 *e*Sn Sn 09 29 09.5 -0.5
PESTR *i* IAML 09 29 10.1
PESTR *i* IAML 09 29 10.2
PESTR *i* IAML 09 29 13.1
PSIM Granatula de C 4.79 19 Sn Sn 09 29 09.3 -1.1
PARRA Arraiolos 4.85 339 *e*Pn Pn 09 28 17.4 +1.0
PARRA *e*Sn Sn 09 29 10.6 -1.3
PARRA *i* IAML 09 29 11.6
PARRA *i* IAML 09 29 12.2
PARRA *i* IAML 09 29 13.0
PMTG Montargil 5.14 338 *e*Pn Pn 09 28 21.5 +1.1
PMTG *e*Sn Sn 09 29 18.1 -0.9
PMTG *i* IAML 09 29 19.6
PMTG *i* IAML 09 29 19.9
PMTG *i* IAML 09 29 20.5
PMRV Marv??o 5.27 346 *e*Pn Pn 09 28 23.8 +1.6
PMRV *e*Sn Sn 09 29 21.1 -1.1
PMRV *i* IAML 09 29 21.7
PMRV *i* IAML 09 29 22.1
PMRV *i* IAML 09 29 22.3
PAB San Pablo 5.36 12 Sn Sn 09 29 20.6 -3.8
PAB *i* IVmb_Lg 09 29 23.2
PSARD Sardoal 5.62 341 *e*Pn Pn 09 28 28.0 +1.1
PSARD *e*Sn Sn 09 29 28.8 -1.9
PSARD *i* IAML 09 29 30.0
PSARD *i* IAML 09 29 30.6
PSARD *i* IAML 09 29 31.4
MTE Manteigas 6.24 348 *e*Sn Sn 09 29 44.7 -1.5
MTE *i* IAML 09 29 45.0
MTE *i* IAML 09 29 45.3
MTE *i* IAML 09 29 45.4
MVO Moncorvo 6.92 352 *e*Sn Sn 09 30 00.7 -2.1
MVO *i* IAML 09 30 02.5
MVO *i* IAML 09 30 02.8
MVO *i* IAML 09 30 03.3

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*JMA **03** 09:31:10.9±0.1, 30°.4N±0°.4×131°.1E±0°.6, h32km, MD4.4/34, MV4.5/34, NEAR TANEGASHIMA ISLAND*
JMA Felt II J1 at NEAR TANEGASHIMA ISLAND .
*NIED **03** 09:31:10.9, 30°.40N×131°.10E, h32km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}5.18; $M_{\theta\theta}$-2.29; $M_{\phi\phi}$-2.89; $M_{r\theta}$4.01; $M_{\theta\phi}$-2.01; $M_{\phi r}$5.78; Fault plane solution: $M_0$8.57000×10^{15} NP1: ϕ_s224.00000°, δ18.00000°, λ98.00000°. NP2:ϕ_s36.00000°, δ73.00000°, λ88.00000°.*
*MOS **03** 09:31:11.0±0.9, 30°.49N×130°.97E, h44km, mb4.9/33 Error ellipse: s-maj=8.6km s-min=4.8km az=114.9*
*IDC **03** 09:31:12.4±1.2, 30°.40N×130°.92E, h49km±10km, mb4.2/28, mbtmp4.4/34, ML3.3/6, MS3.9/45, Error ellipse: s-maj=15.0km s-min=8.1km az=106.0*

NEIC ***03*** *09:31:14.0±1.5, 30.52N±0.06×131.00E±0.08, h51km±5km, mb4.8/94, Error ellipse: s-maj=9.9km s-min=8.9km az=87.0*

BJI ***03*** *09:31:14.2, 30.40N×131.02E, h79km, mB4.9/14, mb4.4/48, Ms4.2/30, Ms7 4.1/34*

ISC 03 09:31:10.6±0.4**, 30.43N**±0.04×**131.02E**±0.04**, h28km, n464,** σ**1.17**/421**, mb4.7**/107**, MS4.0**/44**, 17C-14D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMTN	**Minamitane**	**0.11**	**255**	⇓*i*P	**Pn**	**09 31 16.9**	**+0.4**
JMTN				A	A	09 31 16.9	
	comp=N,144nm,1.2s,comp=E,156nm,1.0s						
JMTN				⇓S	**Sb**	**09 31 21.4**	**+2.3**
JTN	**Tanegashima 3**	**0.23**	**351**	⇓P	**Pb**	**09 31 17.9**	**+1.0**
JTN				A	A	09 31 17.9	
	comp=N,52nm,0.4s,comp=E,108nm,1.3s						
JTN				⇓S	**Sn**	**09 31 23.2**	**+1.9**
JYAK	**Yakushimahirau**	**0.48**	**247**	⇓*i*P	**Pb**	**09 31 21.5**	**+0.9**
JYAK				A	A	09 31 21.5	
	comp=N,27nm,0.8s,comp=E,19nm,0.7s						
JYAK				⇓S	**Sb**	**09 31 29.4**	**+2.0**
JKC	**Kuchinoerabu**	**0.71**	**273**	⇓*i*P	**Pb**	**09 31 25.3**	**+0.9**
JKC				⇓S	**Sn**	**09 31 36.3**	**+1.4**
JTSR	**Tashiro 2**	**0.74**	**353**	⇓*i*P	**Pb**	**09 31 25.4**	**+0.5**
JTSR				A	A	09 31 25.4	
	comp=N,49nm,0.7s,comp=E,37nm,0.7s						
JTSR				⇓S	**Sn**	**09 31 36.4**	**+0.8**
JNAR	**Kushima--Naru**	**1.12**	**11**	P	**Pb**	**09 31 31.4**	**+0.1**
JNAR				A	A	09 31 31.4	
	comp=N,18nm,1.5s,comp=E,13nm,0.8s						
JNN	**Nakanoshima**	**1.15**	**240**	P	**Pb**	**09 31 32.1**	**+0.2**
JNN				A	A	09 31 32.1	
	comp=N,9.0nm,2.4s,comp=E,11nm,1.5s						
JNN				S	**Sb**	**09 31 48.7**	**+2.3**
JSU	**Suzuyama**	**1.18**	**336**		**Pn**	**09 31 32.1**	**+0.9**
JSU					**Sb**	**09 31 48.1**	**+0.9**
JSU	**Suzuyama**	**1.18**	**336**	⇓P	**Pn**	**09 31 32.1**	**+0.9**
JSU				A	A	09 31 32.1	
	comp=N,14nm,0.4s,comp=E,13nm,1.8s						
JSU				⇓S	**Sb**	**09 31 48.2**	**+0.9**
JNKG	**Nichinankitago**	**1.27**	**14**	P	**Pb**	**09 31 33.7**	**-0.1**
JNKG				*e*S	**Sb**	**09 31 51.0**	**+1.3**
JTZ	**Takazaki**	**1.47**	**2**	P	**Pn**	**09 31 36.2**	**+1.0**
JZO	**Okuchi**	**1.75**	**348**	A	A	09 31 40.6	
	comp=N,10.0nm,1.2s,comp=E,8.0nm,0.9s						
JNU	**Nakatsue**	**2.69**	**357**	P	**Pn**	**09 31 53.7**	**+1.7**
	comp=E,9.2nm,0.3s,baz=154,slow=4.5,SNR=67						
JNU				S	**Sn**	**09 32 26.2**	**+2.5**
	comp=E,640nm,0.9s,baz=225,slow=23,SNR=11						
JNU				LR	LR	09 32 42.1	
	comp=E,283nm,20.1s,baz=192,slow=33						
	comp=E,206nm,0.9s						
JMN	**Monobe**	**4.09**	**36**		**Pn**	**09 32 12.1**	**+0.9**
JOW	**Kunigami**	**4.32**	**215**	P	**Pn**	**09 32 15.9**	**+1.5**
	comp=E,1.3nm,0.3s,baz=115,slow=29,SNR=17						
JOW				S	**Sn**	**09 33 01.5**	**-2.4**
	comp=E,28nm,0.2s,baz=133,slow=26,SNR=9.8						
JOW				LR	LR	09 33 34.7	
	comp=E,129nm,21.7s,baz=42,slow=34						
	comp=E,4.8nm,0.3s						
JOW	**Kunigami**	**4.32**	**215**	Pn	**Pn**	**09 32 15.6**	**+1.2**
TJN	**Taejon**	**6.68**	**334**		**Pn**	**09 32 46.6**	**-0.1**
TJN	**Taejon**	**6.68**	**334**	P	**Pn**	**09 32 46.6**	**-0.1**
INU	**Inuyama**	**7.04**	**44**		**Pn**	**09 32 53.7**	**+2.0**
JGF	**Kuroka**	**7.41**	**44**		**Pn**	**09 32 58.6**	**+1.7**
KSAR	**Wonju Array Be**	**7.47**	**340**	Pn	**Pn**	**09 33 01.3**	**+3.7**
KSAR	**Wonju Array Be**	**7.47**	**340**	P	**Pn**	**09 33 01.3**	**+3.7**
KSRS	**Korea Array**	**7.47**	**341**	P	**Pn**	**09 33 00.1**	**+2.5**
	comp=E,1.2nm,0.3s,baz=159,slow=14,SNR=16						
KSRS				LR	LR	09 36 23.2	
	comp=E,677nm,18.3s,baz=155,slow=42						
	comp=E,4.7nm,0.5s						
KS19	**Wonju Array Si**	**7.53**	**340**	Pn	**Pn**	**09 33 01.5**	**+3.1**
JHJ	**Hachijo jima 2**	**7.93**	**68**	LR	LR	09 35 59.3	
	comp=E,249nm,20.4s,baz=276,slow=36						
MAJO	**Matsushiro**	**8.55**	**43**		**Pn**	**09 33 14.0**	**+1.5**
MAJO	**Matsushiro**	**8.55**	**43**	*i*P	**Pn**	**09 33 14.2**	**+1.7**
MJAR	**Matsushiro Arr**	**8.55**	**43**	P	**Pn**	**09 33 14.6**	**+2.1**
	comp=E,0.2nm,0.3s,baz=205,slow=13,SNR=9.3						
	comp=E,2.9nm,0.8s						
MJB9	**Matsu-Tunnel**	**8.55**	**43**		**Pn**	**09 33 15.0**	**+2.5**
JCJ	**Chichijima**	**10.34**	**106**	LR	LR	09 37 05.6	
	comp=E,331nm,21.4s,baz=124,slow=34						
NJ2	**Nanjing**	**10.54**	**282**	*e*P	**Pn**	**09 33 41.8**	**+2.0**
NJ2				pmax	pmax		
	comp=E,10.0nm,0.5s						
NJ2				L	L		
	comp=E,450nm,17.0s						
NJ2				L	L		
	comp=E,410nm,17.1s						
NJ2				L	L		
	comp=E,840nm,19.6s						
TIA	**Tai'an**	**12.97**	**300**	P	Pn	09 34 17.8	+4.8
TIA				pmax	pmax		
	comp=E,34nm,1.0s						
TIA				pmax	pmax		
	comp=E,260nm,4.6s						
TIA				L	L		
	comp=E,450nm,19.0s						
TIA				L	L		
	comp=E,720nm,16.1s						
TIA				L	L		
	comp=E,810nm,14.5s						
USRK	**Ussuriysk Ar.**	**13.77**	**3**	P	**P**	**09 34 32.8**	**+0.7**
	comp=E,14nm,0.8s,baz=180,slow=10,SNR=20						
HNS	**HongShan**	**15.22**	**302**	⇑P	**Pn**	**09 34 45.9**	**+2.5**
HNS				pmax	pmax		
	comp=E,8.0nm,0.8s						
HNS				L	L		
	comp=E,450nm,17.6s						
HNS				L	L		
	comp=E,440nm,17.3s						
HNS				L	L		
	comp=E,550nm,15.3s						
BJI2	**Beijing**	**15.44**	**312**	P	**P**	**09 34 52.8**	**+2.2**
BJI2				pmax	pmax		
	comp=E,9.0nm,1.1s						
BJI2				L	L		
	comp=E,190nm,16.0s						
BJI2				L	L		
	comp=E,280nm,13.5s						
BJI2				L	L		
	comp=E,430nm,14.5s						
BJT	**Baijiatuau**	**15.44**	**312**		**Pn**	**09 34 47.0**	**+0.7**
BJT	**Baijiatuau**	**15.44**	**312**	P	**Pn**	**09 34 47.0**	**+0.7**
BJT				pmax	pmax		
	comp=Z,15nm,0.9s						
BNX	**BinXian**	**15.55**	**351**	⇓P	**P**	**09 34 52.9**	**+1.1**
BNX				pmax	pmax		
	comp=Z,20nm,1.0s						
LYN	**LuoYang**	**16.18**	**290**	P	**P**	**09 35 02.4**	**+3.5**
LYN				pP	sP	09 35 09.1	-0.9
LYN				L	L		
	comp=Z,350nm,14.1s						
LYN				L	L		
	comp=Z,710nm,19.8s						
LYN				L	L		
	comp=Z,1μm,18.6s						
ASAJ	**Asahikawa**	**16.45**	**31**	P	**Pn**	**09 34 59.8**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=208,slow=16,SNR=4.5						
ASAJ				LR	LR	09 41 36.2	
	comp=Z,250nm,18.3s,baz=239,slow=38						
	comp=Z,2.7nm,0.6s						
JKA	**Kamikawa-asahi**	**16.46**	**31**	P	**Pn**	**09 35 00.3**	**+0.9**
ENH	**Enshi**	**18.59**	**275**	P	**Pn**	**09 35 27.6**	**+1.6**
KLR	**Kul'dur**	**18.79**	**1**	P	**P**	**09 35 27.8**	**+0.2**
	comp=Z,0.9nm,0.3s,baz=189,slow=6.4,SNR=24						
KLR				LR	LR	09 42 42.5	
	comp=Z,170nm,19.6s,baz=194,slow=37						
	comp=Z,5.5nm,0.6s						
KLR	**Kul'dur**	**18.79**	**1**	*i*P	**P**	**09 35 27.0**	**-0.6**
YSS	**Yuzhno-Sakhali**	**18.84**	**26**	P	**P**	**09 35 27.5**	**-0.6**
YSS	**Yuzhno-Sakhali**	**18.84**	**26**	*ce*P	**Pn**	**09 35 28.6**	**-0.2**
YSS				pmax	pmax		
	comp=Z,18nm,1.3s						
HHC	**Hu-ho-hao-te**	**18.89**	**309**	*e*P	**Pn**	**09 35 32.9**	**+3.3**
HHC				pP	sP	09 35 43.7	+3.7
HHC				*e*S	**Sn**	**09 38 51.9**	**-8.4**
HHC				pmax	pmax		
	comp=Z,11nm,0.5s						
HHC				pmax	pmax		
	comp=Z,180nm,6.2s						
HHC				L	L		
	comp=Z,320nm,14.9s						
HHC				L	L		
	comp=Z,360nm,15.3s						
HHC				L	L		
	comp=Z,460nm,16.2s						
HEH	**HeiHe**	**19.99**	**353**	*e*P	**P**	**09 35 41.1**	**+0.4**
HEH				pmax	pmax		
	comp=Z,20nm,1.0s						
BTO2	**Baotou**	**20.00**	**307**	*e*P	Pn	09 35 43.8	+0.9
BTO2				pP	sP	09 35 54.3	+2.1
BTO2				PP	**PnPn**	**09 36 03.9**	**+6.6**
BTO2				pmax	pmax		
	comp=Z,25nm,0.8s						
BTO2				pmax	pmax		
	comp=Z,490nm,5.2s						
BTO2				L	L		
	comp=Z,790nm,11.3s						
BTO2				L	L		
	comp=Z,940nm,14.7s						
BTO2				L	L		
	comp=Z,1μm,13.7s						
HIA	**Hailar**	**20.67**	**339**	P	**P**	**09 35 48.1**	**-0.1**
HIA	**Hailar**	**20.67**	**339**	P	**P**	**09 35 48.1**	**-0.1**
HIA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GUMO	**Guam**	**21.07**	**140**	LR	LR	09 43 45.8	
	comp=Z,145nm,18.5s,baz=14,slow=36						
TYV	**Tymovskoe**	**22.19**	**20**	*e*P	**P**	**09 36 05.0**	**+0.6**
TYV				*e*S	**S**	**09 40 05.9**	**-1.2**
TYV				pmax	pmax		
	comp=Z,100nm,4.3s						
TYV				pmax	pmax		
	comp=Z,13nm,1.0s						
TYV				smax	smax		
	comp=N,500nm,6.1s						
TYV				smax	smax		
	comp=E,200nm,6.1s						
QIZ	**Qiongzhong**	**22.29**	**244**	P	**P**	**09 36 05.5**	**-0.3**
QIZ				pmax	pmax		
	comp=E,19nm,1.1s						
QIZ				L	L		
	comp=E,250nm,11.9s						
QIZ				L	L		
	comp=E,200nm,11.3s						
QIZ				L	L		
	comp=E,250nm,14.4s						
LZH	**Lanzhou**	**23.38**	**291**	*e*P	P	09 36 26.9	+10
LZH				pP	sP	09 36 32.2	+3.7
ZEA	**Zeya**	**23.46**	**354**	*e*P	**P**	**09 36 15.9**	**-1.6**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.4s						
ZEA				pmax	pmax		
	comp=N,10.0nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
LZDM	**Lanzhou Array**	**23.48**	**291**	P	**P**	**09 36 17.6**	**-0.8**
	comp=Z,1.7nm,0.4s,baz=124,slow=7.7,SNR=5.2						
LZDM				LR	LR	09 46 56.5	
	comp=Z,503nm,18.3s,baz=20,slow=40						
	comp=Z,1.7nm,0.4s						
ULN	**Ulaanbaatar**	**25.31**	**320**		**P**	**09 36 34.6**	**-0.3**
ULN	**Ulaanbaatar**	**25.31**	**320**	*ce*P	**P**	**09 36 35.3**	**+0.4**
ULN				pmax	pmax		
	comp=Z,20nm,1.3s						
SONM	**Songino Array**	**25.66**	**320**	P	**P**	**09 36 37.6**	**-0.5**
	comp=Z,3.1nm,0.7s,baz=131,slow=11,SNR=11						
SONM				LR	LR	09 48 26.0	
	comp=Z,288nm,18.2s,baz=148,slow=40						
	comp=Z,3.1nm,0.7s						
SONM	**Songino Array**	**25.66**	**320**	P	**P**	**09 36 37.5**	**-0.5**
SONM	**Songino Array**	**25.66**	**320**	P	**P**	**09 36 37.5**	**-0.5**
SONM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PZH	**PanZhiHua**	**26.00**	**269**	P	**P**	**09 36 43.2**	**+1.9**
GTA2	**Gaotai**	**27.06**	**298**	*e*P	**P**	**09 36 51.1**	**+0.3**
GTA2				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GTA2				L	L		
	comp=Z,280nm,14.6s						
GTA2				L	L		
	comp=Z,310nm,13.0s						
GTA2				L	L		
	comp=Z,400nm,14.0s						
TLY	**Talaya**	**29.32**	**324**	LR	LR	09 50 14.7	
	comp=Z,253nm,18.5s,baz=120,slow=39						
TLY	**Talaya**	**29.32**	**324**	*i*P	**P**	**09 37 09.4**	**-1.3**
TLY				pmax	pmax		
	comp=Z,5.0nm,1.8s						
PETK	**Petropavlovsk-**	**29.85**	**33**	P	**P**	**09 37 15.8**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=239,slow=7.8,SNR=3.8						
PETK				LR	LR	09 49 20.0	
	comp=Z,102nm,19.7s,baz=198,slow=36						
	comp=Z,1.5nm,0.8s						
PET	**Petropavlovsk**	**30.25**	**34**	*ce*P	**P**	**09 37 21.8**	**+3.0**
PET				pmax	pmax		
	comp=Z,26nm,2.5s						
CMAR	**Chiang Mai Arr**	**31.43**	**255**	LR	LR	09 51 16.0	
	comp=Z,125nm,19.7s,baz=65,slow=38						
YAK	**Yakutsk**	**31.62**	**359**	*ce*P	**P**	**09 37 30.8**	**0.0**
YAK				pmax	pmax		
	comp=Z,15nm,0.8s						
MA2	**Magadan**	**32.06**	**19**	LR	LR	09 51 29.5	
	comp=Z,124nm,18.2s,baz=230,slow=38						
MA2	**Magadan**	**32.06**	**19**	*ce*P	**P**	**09 37 35.5**	**+0.8**
MA2				pmax	pmax		
	comp=Z,12nm,1.7s						
KNGR	**Kungurtug, Tuv**	**32.08**	**319**	*i*P	**P**	**09 37 33.2**	**-2.0**
KNGR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**34.06**	**100**	T	T	10 13 50.7	
	baz=296,slow=75,SNR=23						
H11N1	**WAKE ISLAND Hy**	**34.06**	**100**	T	T	10 13 50.6	
	baz=296,slow=75,SNR=46						
H11N3	**WAKE ISLAND Hy**	**34.08**	**100**	T	T	10 13 51.8	
	baz=296,slow=75,SNR=54						
SEY	**Seymchan**	**35.30**	**17**	*ce*P	**P**	**09 38 04.0**	**+1.1**
SEY				pmax	pmax		
	comp=Z,7.0nm,1.7s						
BRDH	**Bariadhala**	**35.92**	**267**	LR	LR	09 53 53.1	
	comp=Z,93nm,18.8s,baz=116,slow=38						
WMQ	**Urumqi**	**36.63**	**304**	*e*P	**P**	**09 38 15.2**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				L	L		
	comp=Z,180nm,18.1s						
DGZ	**Jazzator, Alta**	**37.87**	**313**	*i*P	**P**	**09 38 23.6**	**-1.5**
DGZ				pmax	pmax		
	comp=Z,12nm,3.1s						
ZSN	**Zaisan**	**39.09**	**309**	*e*P	**P**	**09 38 35.1**	**-0.1**
ZSN	**Zaisan**	**39.09**	**309**	*e*P	**P**	**09 38 35.1**	**-0.1**
ZAA0	**Zalesovo Array**	**40.55**	**319**		**P**	**09 38 46.7**	**-0.5**
ZAA0				IAmb	IAmb	09 38 47.9	
	comp=Z,19nm,1.4s						
ZALV	**Zalesovo Beam**	**40.55**	**319**	P	**P**	**09 38 46.6**	**-0.6**
	comp=Z,3.7nm,0.6s,baz=100,slow=8.1,SNR=14						
ZALV				LR	LR	09 56 52.7	
	comp=Z,244nm,18.3s,baz=108,slow=38						
	comp=Z,3.7nm,0.6s						
ZALV	**Zalesovo Beam**	**40.55**	**319**		**P**	**09 38 46.4**	**-0.9**
ZALV	**Zalesovo Beam**	**40.55**	**319**	P	**P**	**09 38 46.4**	**-0.9**
MKAR	**Makanchi Array**	**40.75**	**308**	P	**P**	**09 38 48.5**	**-0.5**
	comp=Z,5.2nm,0.8s,baz=100,slow=9.6,SNR=7.1						
MKAR				LR	LR	09 57 24.4	
	comp=Z,173nm,18.2s,baz=83,slow=39						
	comp=Z,5.2nm,0.8s						
MKAR	**Makanchi Array**	**40.75**	**308**		**P**	**09 38 48.6**	**-0.4**
TIXI	**Tiksi**	**41.29**	**359**	P	**P**	**09 38 52.5**	**-0.6**
TIXI	**Tiksi**	**41.29**	**359**	*ce*P	**P**	**09 38 53.3**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PMG	**Port Moresby**	**42.53**	**156**	LR	LR	09 55 59.5	
	comp=Z,44nm,21.6s,baz=340,slow=35						
SHLS	**Shalkode**	**42.58**	**302**	*e*P	**P**	**09 39 01.0**	**-3.1**
SHLS	**Shalkode**	**42.58**	**302**	*e*P	**P**	**09 39 01.1**	**-3.1**
WUS	**Wushi**	**42.80**	**299**	P	**P**	**09 39 06.2**	**+0.2**
UZB	**Uzynbulak**	**42.90**	**302**	*e*P	**P**	**09 39 06.5**	**-0.3**
UZB	**Uzynbulak**	**42.90**	**302**	*e*P	**P**	**09 39 06.5**	**-0.3**
BILL	**Bilibino**	**42.93**	**19**	P	**P**	**09 39 06.9**	**+0.4**
BILL	**Bilibino**	**42.93**	**19**	*ce*P	**P**	**09 39 07.3**	**+0.8**
BILL				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KPKS	**Kokpek**	**43.14**	**303**	*e*P	**P**	**09 39 08.6**	**-0.1**
KPKS	**Kokpek**	**43.14**	**303**	*e*P	**P**	**09 39 08.7**	**-0.1**
TDK	**Taldyqorghan**	**43.35**	**305**	*e*P	**P**	**09 39 10.0**	**-0.2**
TDK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
TDK	**Taldyqorghan**	**43.35**	**305**	*e*P	**P**	**09 39 10.1**	**-0.2**
	comp=Z,8.5nm,0.7s						
SATY	**Saty**	**43.35**	**302**	*e*P	**P**	**09 39 10.2**	**-0.2**
SATY	**Saty**	**43.35**	**302**	*e*P	**P**	**09 39 10.3**	**-0.2**
KURK	**Kurchatov**	**43.62**	**313**	*ce*P	**P**	**09 39 12.3**	**0.0**
KURK				pmax	pmax		
	comp=Z,17nm,1.7s						
KURBB	**Kurchatov Arra**	**43.66**	**313**	P	**P**	**09 39 12.1**	**-0.5**
	comp=Z,4.3nm,0.6s,baz=93,slow=8.4,SNR=23						
KURBB				LR	LR	09 59 14.3	
	comp=Z,384nm,18.1s,baz=168,slow=39						
	comp=Z,4.3nm,0.6s						
TARG	**Taragay, Kyrgy**	**43.84**	**300**		**P**	**09 39 15.2**	**+0.5**
TARG				IAmb	IAmb	09 39 16.2	
	comp=Z,11nm,0.7s						
TARG	**Taragay, Kyrgy**	**43.84**	**300**	P	**P**	**09 39 15.2**	**+0.5**
TARG				pmax	pmax		
	comp=Z,11nm,0.7s						
KDJ	**Kajisay**	**44.29**	**301**	P	**P**	**09 39 18.1**	**0.0**
KDJ	**Kajisay**	**44.29**	**301**	P	**P**	**09 39 18.1**	**0.0**
KDJ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MDOK	**Medeo**	**44.34**	**302**	*e*P	**P**	**09 39 18.3**	**-0.1**
MDOK	**Medeo**	**44.34**	**302**	*e*P	**P**	**09 39 18.4**	**-0.1**
TNSS	**Tian-Shan**	**44.42**	**302**	*e*P	**P**	**09 39 18.9**	**-0.4**
TNSS	**Tian-Shan**	**44.42**	**302**	*e*P	**P**	**09 39 18.9**	**-0.4**
AAA	**Alma-Ata**	**44.44**	**302**	*e*P	**P**	**09 39 18.9**	**-0.2**
AAA	**Alma-Ata**	**44.44**	**302**	*e*P	**P**	**09 39 19.0**	**-0.2**
NRN	**Naryn**	**45.21**	**300**	P	**P**	**09 39 25.9**	**+0.3**
NRN				IAmb	IAmb	09 39 26.6	
	comp=Z,8.4nm,1.0s						
NRN	**Naryn**	**45.21**	**300**	P	**P**	**09 39 25.9**	**+0.3**
NRN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KSH2	**Kashi**	**45.76**	**297**	P	**P**	**09 39 30.7**	**+0.9**
KSH2				pmax	pmax		
	comp=Z,11nm,0.8s						
NRIK	**Noril'sk**	**46.09**	**340**	P	**P**	**09 39 30.1**	**-1.6**
	comp=Z,14nm,0.8s,baz=119,slow=9.7,SNR=26						
NRIK				LR	LR	10 00 31.1	
	comp=Z,169nm,18.1s,baz=146,slow=38						
	comp=Z,14nm,0.8s						
NRIK	**Noril'sk**	**46.09**	**340**		**P**	**09 39 30.1**	**-1.6**
NRIK				IAmb	IAmb	09 39 30.7	
	comp=Z,13nm,0.8s						
NRIK	**Noril'sk**	**46.09**	**340**	*i*P	**P**	**09 39 29.6**	**-2.1**
NRIK				pmax	pmax		
	comp=Z,16nm,0.9s						
AAK	**Ala-Archa**	**46.24**	**302**	P	**P**	**09 39 33.2**	**-0.4**
	comp=Z,4.4nm,0.7s,baz=146,slow=5.7,SNR=15						
AAK				LR	LR	10 01 55.0	
	comp=Z,156nm,18.4s,baz=86,slow=40						
	comp=Z,4.4nm,0.7s						
AAK	**Ala-Archa**	**46.24**	**302**		**P**	**09 39 33.1**	**-0.4**
AAK	**Ala-Archa**	**46.24**	**302**	*ce*P	**P**	**09 39 33.9**	**+0.4**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AAK	**Ala-Archa**	**46.24**	**302**	P	**P**	**09 39 33.8**	**+0.2**
AAK				PcP	**PcP**	**09 41 08.0**	**-0.8**
ARSB	**Arslanbob**	**47.48**	**300**	IAmb	IAmb	09 39 45.1	
	comp=Z,17nm,1.4s						
DZA	**Taraz**	**48.54**	**302**	*e*P	**P**	**09 39 51.2**	**0.0**
DZA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
DZA	**Taraz**	**48.54**	**302**	*e*P	**P**	**09 39 51.3**	**0.0**
	comp=Z,5.6nm,0.5s						
BVAR	**Borovoye Array**	**48.90**	**316**	P	**P**	**09 39 53.5**	**-0.3**
	comp=Z,15nm,0.5s,baz=98,slow=8.9,SNR=74						
BVAR				LR	LR	10 02 23.6	
	comp=Z,211nm,18.6s,baz=107,slow=38						
	comp=Z,15nm,0.5s						
BORK	**Borovoye**	**48.94**	**316**		**P**	**09 39 53.8**	**-0.3**
BORK	**Borovoye**	**48.94**	**316**	*ce*P	**P**	**09 39 53.9**	**-0.2**
BORK				pmax	pmax		
	comp=Z,42nm,1.0s						
BORK	**Borovoye**	**48.94**	**316**	P	**P**	**09 39 53.6**	**-0.4**
KK31	**Karatay Array**	**49.12**	**303**		**P**	**09 39 55.5**	**-0.2**
KK31				IAmb	IAmb	09 39 56.4	
	comp=Z,7.5nm,0.8s						
KK31	**Karatay Array**	**49.12**	**303**	P	**P**	**09 39 55.5**	**-0.2**
KK31				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KKAR	**Karatay Array**	**49.12**	**303**		**P**	**09 39 55.7**	**+0.1**
KKAR	**Karatay Array**	**49.12**	**303**	P	**P**	**09 39 55.7**	**+0.1**
BTK	**Batken**	**49.27**	**298**	P	**P**	**09 39 57.2**	**+0.2**
BTK				IAmb	IAmb	09 39 58.2	
	comp=Z,12nm,1.3s						
BTK	**Batken**	**49.27**	**298**	P	**P**	**09 39 57.2**	**+0.2**
BTK				pmax	pmax		
	comp=Z,12nm,1.3s						
IUG	**Iuzhnay**	**49.58**	**301**	*e*P	**P**	**09 39 59.2**	**-0.1**
IUG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
IUG	**Iuzhnay**	**49.58**	**301**	*e*P	**P**	**09 39 59.3**	**-0.1**
	comp=Z,7.9nm,0.9s						
BRLS	**Borolday**	**49.62**	**302**	*e*P	**P**	**09 40 00.3**	**+0.8**
BRLS	**Borolday**	**49.62**	**302**	*e*P	**P**	**09 40 00.4**	**+0.8**
CHM	**Chimkent**	**49.87**	**302**	*e*P	**P**	**09 40 01.4**	**0.0**
CHM	**Chimkent**	**49.87**	**302**	*e*P	**P**	**09 40 01.4**	**0.0**
UNV	**Unalaska Valle**	**50.02**	**43**	P	**P**	**09 40 02.9**	**+0.6**
	baz=268						
WRA	**Warramunga Arr**	**50.18**	**176**	P	**P**	**09 40 03.4**	**-0.5**
	comp=Z,1.6nm,0.9s,baz=350,slow=7.5,SNR=5.7						
	comp=Z,1.6nm,0.9s						
WRA	**Warramunga Arr**	**50.18**	**176**	*i*P	**P**	**09 40 05.0**	**+1.2**
WRA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
CHGR	**Chuyangaron**	**50.77**	**297**	*i*P	**P**	**09 40 07.5**	**-0.9**
TNA	**Tin City**	**50.79**	**28**	P	**P**	**09 40 08.7**	**+0.8**
	baz=257						
F14K	**Arctic Creek**	**51.42**	**28**	P	**P**	**09 40 13.9**	**+1.2**
	baz=259,SNR=6.8						
K13K	**Kusilvak Mount**	**51.61**	**33**	P	**P**	**09 40 14.4**	**+0.3**
	baz=263						
ANM	**Nome**	**51.66**	**30**	P	**P**	**09 40 15.2**	**+0.7**
	baz=261						
KBL	**Kabul**	**51.73**	**292**		**P**	**09 40 16.0**	**+0.2**
KBL	**Kabul**	**51.73**	**292**	P	**P**	**09 40 16.0**	**+0.2**
KBL				pmax	pmax		
	comp=Z,23nm,1.5s						
SHAA	**Shahritus**	**51.79**	**296**	IAmb	IAmb	09 40 17.9	
	comp=Z,43nm,1.0s						
FALS	**False Pass**	**51.85**	**42**	P	**P**	**09 40 16.8**	**+0.8**
	baz=270						
M13K	**Dall Lake**	**52.09**	**35**	P	**P**	**09 40 18.5**	**+0.8**
	baz=266						
F15K	**North Star Dit**	**52.15**	**28**	P	**P**	**09 40 18.3**	**+0.1**
	baz=260						
J14K	**Nanvaranak Lak**	**52.21**	**32**	P	**P**	**09 40 18.2**	**-0.4**
	baz=264						
G15K	**Niukluk**	**52.29**	**29**	P	**P**	**09 40 19.1**	**-0.1**
	baz=262						
CTA	**Charters Tower**	**52.32**	**162**	LR	LR	09 59 53.5	
	comp=Z,36nm,21.5s,baz=204,slow=33						
C16K	**Lisburne Hills**	**52.37**	**25**	IAmb	IAmb	09 40 26.1	
	comp=Z,28nm,2.0s						
C16K	**Lisburne Hills**	**52.37**	**25**	P	**P**	**09 40 19.6**	**-0.2**
	baz=258						
PALK	**Pallekele**	**52.38**	**255**	LR	LR	10 03 56.7	
	comp=Z,74nm,19.9s,baz=40,slow=38						
G16K	**Koyuk River**	**53.05**	**29**	P	**P**	**09 40 25.0**	**+0.3**
	baz=263						
L15K	**Ungalak Mounta**	**53.09**	**33**	P	**P**	**09 40 25.1**	**0.0**
	baz=266						
O14K	**Tigyukauivet M**	**53.09**	**36**	P	**P**	**09 40 26.0**	**+0.8**
	baz=269						
D17K	**Noatak River**	**53.10**	**26**	P	**P**	**09 40 25.4**	**+0.2**
	baz=260						
K15K	**Wolf Creek Mou**	**53.11**	**33**	P	**P**	**09 40 26.1**	**+0.8**
	baz=266						
C17K	**DeLong Mountai**	**53.20**	**25**	P	**P**	**09 40 26.6**	**+0.7**
	baz=260						
RDOG	**Red Dog Mine**	**53.23**	**25**	P	**P**	**09 40 26.2**	**+0.1**
	baz=260						
M15K	**Kasigluk River**	**53.42**	**35**	P	**P**	**09 40 28.1**	**+0.5**
	baz=268						
E17K	**Hotham Inlet**	**53.49**	**27**	P	**P**	**09 40 28.4**	**+0.5**
	baz=262						
SDPT	**Sand Point**	**53.53**	**41**	P	**P**	**09 40 28.8**	**+0.4**
	baz=272						
I17K	**Unalakleet**	**53.61**	**31**	P	**P**	**09 40 29.3**	**+0.4**
	baz=266						
F17K	**Baldwin Pennin**	**53.63**	**28**	P	**P**	**09 40 29.4**	**+0.4**
	baz=263						
N15K	**Kwethluk River**	**53.70**	**35**	P	**P**	**09 40 30.0**	**+0.3**
	baz=269						
G17K	**Kiwalik Mounta**	**53.77**	**29**	P	**P**	**09 40 30.4**	**+0.3**
	baz=264						

O15K **Ungalikthiuk R** 53.83 37 P P 09 40 30.8 +0.2
baz=270
ASAR **Alice Springs** 53.85 177 P P 09 40 32.3 +1.1
comp=Z,0.8nm,0.8s,baz=9.4,slow=13,SNR=7.6
ASAR LR LR 10 02 43.7
comp=Z,43nm,20.3s,baz=9.0,slow=35
comp=Z,0.8nm,0.8s
C18K **Utukok River** 53.95 25 IAmb IAmb 09 40 38.3
comp=Z,6.7nm,1.1s
C18K **Utukok River** 53.95 25 P P 09 40 31.7 +0.2
baz=262
E18K **Tukpahlearik C** 54.00 26 P 09 40 33.1 +1.4
E18K **Tukpahlearik C** 54.00 26 P P 09 40 32.7 +0.9
baz=263,SNR=5.4
H17K **Granite Mounta** 54.03 29 P P 09 40 32.5 +0.5
baz=266
L16K **Owhat River** 54.05 33 P P 09 40 32.8 +0.7
baz=268
A19K **Wainwright** 54.24 23 P P 09 40 33.7 +0.4
baz=261
M16K **Timber Creek** 54.28 34 P P 09 40 34.4 +0.5
baz=269
F18K **Selawik** 54.28 27 P P 09 40 34.5 +0.7
baz=265
N16K **Nishlik Lake** 54.37 35 P P 09 40 35.1 +0.5
baz=270
C19K **Lookout Ridge** 54.59 24 P P 09 40 36.3 +0.2
baz=263
L17K **Donlin** 54.61 33 P P 09 40 36.8 +0.5
baz=269
K17K **Iditarod** 54.62 32 P P 09 40 36.4 +0.1
baz=269
G18K **Tagagawik** 54.63 28 IAmb IAmb 09 40 38.8
comp=Z,10nm,1.2s
G18K **Tagagawik** 54.63 28 P P 09 40 36.8 +0.4
baz=266,SNR=6.3
H18K **Honhosa River** 54.70 29 P P 09 40 37.1 +0.2
baz=267
O16K **Kokwok River B** 54.71 36 P P 09 40 37.0 0.0
baz=271
P16K **Nushagak River** 54.77 37 P P 09 40 36.8 -0.7
baz=272
M17K **Holitna River** 55.02 34 P P 09 40 39.9 +0.6
baz=270
R16K **Pilot Point** 55.05 39 P P 09 40 40.0 +0.6
baz=273
F19K **Shaleruckik Mo** 55.05 27 P P 09 40 39.8 +0.4
baz=266
D19K **Kuna River** 55.05 25 P P 09 40 40.4 +0.9
D19K **Kuna River** 55.05 25 P P 09 40 39.9 +0.5
baz=265
O17K **Koliganek Bris** 55.21 36 P P 09 40 41.1 +0.4
baz=272
G19K **Purcell Mounta** 55.28 28 P P 09 40 41.2 +0.2
baz=267
E19K **Redstone River** 55.30 26 P P 09 40 41.5 +0.3
baz=266
GCSA **Galena City Sc** 55.31 30 P P 09 40 41.3 0.0
baz=268
L18K **Granite Mounta** 55.37 33 P P 09 40 41.9 +0.2
baz=270
Q16K **King Salmon** 55.48 37 P P 09 40 42.1 -0.4
baz=273
P17K **Kvichak River** 55.57 37 P P 09 40 43.1 -0.1
baz=273
D20K **Etivluk River** 55.62 25 P P 09 40 43.3 -0.2
baz=266
ABKAR **Akbulak array** 55.65 311 P 09 40 43.3 -0.7
R17L **Mt. Peulik Vol** 55.70 38 P P 09 40 44.0 -0.2
baz=274
E20K **Nigu River** 55.75 26 P P 09 40 44.1 -0.4
baz=267
N18K **Kilae Creek** 55.78 35 P P 09 40 44.7 -0.1
baz=272
M18K **Stony River** 55.79 34 P P 09 40 44.8 +0.1
baz=272
ARTI **Arti** 55.80 320 P P 09 40 44.1 -0.8
comp=Z,18nm,0.6s,baz=98,slow=3.1,SNR=31
ARTI LR LR 10 07 23.2
comp=Z,387nm,19.2s,baz=76,slow=39
comp=Z,18nm,0.6s
ARTI **Arti** 55.80 320 P P 09 40 44.0 -0.8
ARTI **Arti** 55.80 320 *d iP* P 09 40 44.2 -0.8
ARTI 09 41 39.5
ARTI 09 42 46.1
ARTI S S 09 48 27.0 -3.0
ARTI SS SS 09 52 09.8 -5.5
ARTI pmax pmax
comp=Z,18nm,0.7s
ARTI **Arti** 55.80 320 P P 09 40 44.0 -0.9
J19K **Poorman** 55.85 31 IAmb IAmb 09 40 53.3
comp=Z,18nm,1.6s
J19K **Poorman** 55.85 31 P P 09 40 45.3 +0.2
baz=270
Q17K **Contact Creek** 55.91 38 P P 09 40 46.0 +0.2
baz=274
O18K **Koktuh Hills** 56.16 36 P P 09 40 47.7 +0.2
baz=273
H20K **Anotleneega Mo** 56.17 29 P P 09 40 47.8 +0.4
baz=270
P18K **Big Mountain,** 56.18 36 P P 09 40 47.6 0.0
baz=274
L19K **White Mountain** 56.23 33 P P 09 40 47.8 -0.1
baz=272
CHIR **Chirikof Islan** 56.25 41 P P 09 40 47.7 -0.4
baz=276
C21K **Knifeblade Rid** 56.31 24 P P 09 40 48.5 +0.1
baz=267
Q18K **Katmai Hardscr** 56.34 37 P P 09 40 48.6 -0.3
baz=274
B21K **Ikpikpuk River** 56.39 24 IAmb IAmb 09 40 50.7
comp=Z,5.9nm,0.8s
B21K **Ikpikpuk River** 56.39 24 P P 09 40 49.0 +0.1
baz=267
N19K **Bonanza Creek** 56.47 35 P P 09 40 49.7 -0.1
baz=273
K20K **Telida** 56.55 31 P P 09 40 49.7 -0.6
baz=272
E21K **Killik River** 56.58 25 P P 09 40 50.4 +0.1
baz=269
O19K **Port Alsworth** 56.59 35 P P 09 40 50.2 -0.3
baz=274
AKTO **Aktyubinsk** 56.71 313 P P 09 40 51.3 -0.3
comp=Z,10nm,0.9s,baz=91,slow=5.4,SNR=19
AKTO LR LR 10 07 08.1
comp=Z,505nm,18.5s,baz=92,slow=38
comp=Z,10nm,0.9s
G21K **Allakaket** 56.73 28 P P 09 40 51.5 0.0
baz=270
F21K **Alatna River** 56.74 27 P P 09 40 51.8 +0.2
baz=270
B22K **Teshekpuk Lake** 56.83 23 P P 09 40 52.2 +0.2
baz=268
SII **Sitkinak Islan** 56.97 40 P P 09 40 53.3 0.0
baz=276
Q19K **Cape Douglas,** 57.02 37 P P 09 40 53.7 0.0
baz=275
H21K **Melozitna Rive** 57.03 29 P P 09 40 53.6 0.0
baz=272
M20K **Styx River** 57.05 33 P P 09 40 53.4 -0.5
baz=274
D22K **Ayikyak River** 57.06 25 P 09 40 54.7 +1.0
D22K IAmb IAmb 09 40 59.1
comp=Z,6.3nm,0.8s
D22K **Ayikyak River** 57.06 25 P P 09 40 53.8 +0.1
baz=270,SNR=5.1
P19K **Oil Pt** 57.17 36 P P 09 40 54.6 -0.1
baz=275
HRA **Herat** 57.19 293 IAmb IAmb 09 40 57.3
comp=Z,11nm,0.9s
CHUM **Lake Minchumin** 57.31 31 P P 09 40 55.8 +0.3
baz=273
E22K **Anaktuvuk Pass** 57.38 26 IAmb IAmb 09 40 57.9
comp=Z,7.1nm,1.0s
E22K **Anaktuvuk Pass** 57.38 26 P P 09 40 56.1 +0.1
baz=271
OHAK **Old Harbor** 57.39 39 P P 09 40 56.3 +0.2
baz=277
PPLA **Purkeypile** 57.43 32 P P 09 40 56.3 -0.3
baz=274
N20K **Mount Spurr** 57.55 34 P P 09 40 56.6 -0.8
baz=275
SPCR **Spurr Chakacha** 57.55 34 P P 09 40 57.0 -0.3
baz=275
H22K **Ishtalitna Cre** 57.61 28 IAmb IAmb 09 41 11.2
comp=Z,7.1nm,1.2s
H22K **Ishtalitna Cre** 57.61 28 P P 09 40 57.6 -0.1
baz=273

KDAK **Kodiak Island** 57.70 38 P P 09 40 58.3 -0.1
baz=277
Q20K **Shuyak Island** 57.71 37 P P 09 40 58.2 -0.2
baz=276
D23K **Nanushuk River** 57.78 25 IAmb IAmb 09 41 04.4
comp=Z,12nm,1.3s
D23K **Nanushuk River** 57.78 25 P P 09 40 59.1 +0.3
baz=271
C23K **Itkillik River** 57.79 24 P P 09 40 58.9 +0.1
baz=271
SKT **Skwentna** 57.80 33 P P 09 40 58.1 -0.9
baz=275
BPAW **Bear Paw Mtn.** 57.88 30 P P 09 40 59.6 0.0
baz=274
MLY **Manley** 57.93 29 P P 09 40 59.3 -0.7
baz=274
COLD **Coldfoot** 58.02 27 P P 09 41 00.6 +0.1
baz=273
G23K **Bananza Creek** 58.12 27 IAmb IAmb 09 41 09.1
comp=Z,5.2nm,1.1s
G23K **Bananza Creek** 58.12 27 P P 09 41 01.1 -0.2
baz=273
TOLK **Toolik Lake Re** 58.19 25 P P 09 41 01.3 -0.4
baz=273
E23K **Chandalar** 58.20 26 IAmb IAmb 09 41 03.9
comp=Z,7.8nm,0.8s
E23K **Chandalar** 58.20 26 P P 09 41 01.8 -0.1
baz=273
SUA **Susitna One** 58.22 34 P P 09 41 01.9 -0.3
baz=276
TRF **Thorofare Moun** 58.24 31 P P 09 41 02.1 -0.2
baz=275
BRSE **Bradley Lake S** 58.42 36 P P 09 41 03.1 -0.4
baz=277
C24K **Franklin Bluff** 58.46 24 P P 09 41 03.4 -0.1
baz=273
I23K **Minto, Yukon-K** 58.50 29 P P 09 41 03.9 0.0
baz=275
E24K **Your Creek** 58.63 26 IAmb IAmb 09 41 06.8
comp=Z,6.6nm,0.9s
E24K **Your Creek** 58.63 26 P P 09 41 04.9 +0.1
baz=274
NEA2 **Nenana** 58.67 30 IAmb IAmb 09 41 08.1
comp=Z,11nm,1.2s
NEA2 **Nenana** 58.67 30 P P 09 41 05.4 +0.3
baz=276
RC01 **Rabbit Creek A** 58.75 34 P P 09 41 05.9 +0.2
baz=277
MCK **McKinley** 58.82 31 P P 09 41 06.1 -0.1
baz=276
O22K **Cooper Landing** 58.83 35 P P 09 41 06.1 -0.1
baz=278
PMR **Palmer** 58.98 33 P P 09 41 07.0 -0.2
baz=277
SEW **Seward** 59.02 35 P P 09 41 07.4 -0.1
baz=278
H24K **Noodor Dome** 59.05 28 IAmb IAmb 09 41 10.1
comp=Z,6.7nm,1.2s
H24K **Noodor Dome** 59.05 28 P P 09 41 07.3 -0.4
baz=276
WAT1 **Susitna Watana** 59.09 32 P P 09 41 07.2 -0.9
baz=277
G24K **Hadweenzic Riv** 59.13 27 P P 09 41 08.0 -0.3
baz=276
COLA **College** 59.17 29 P P 09 41 08.2 -0.2
baz=276
D25K **Kavik River** 59.30 24 IAmb IAmb 09 41 11.0
comp=Z,5.7nm,0.8s
D25K **Kavik River** 59.30 24 P P 09 41 09.3 -0.1
baz=275,SNR=8.3
POKR **Poker Plat Res** 59.31 29 P P 09 41 09.5 -0.1
baz=277
KNK **Knik Glacier** 59.32 33 P P 09 41 09.4 -0.3
baz=278
SML **Sawmill** 59.33 33 P P 09 41 09.1 -0.7
baz=278
WAT6 **Susitna Watana** 59.50 32 P P 09 41 10.7 -0.3
baz=278
ILAR **Eielson Array** 59.59 29 P P 09 41 10.3 -1.1
comp=Z,1.4nm,1.0s,baz=291,slow=6.4,SNR=11
comp=Z,1.4nm,1.0s
ILAR **Eielson Array** 59.59 29 P P 09 41 12.0 +0.6
ILAR **Eielson Array** 59.59 29 P P 09 41 12.0 +0.6
DHY **Denali Highway** 59.60 31 P P 09 41 11.6 -0.1
baz=278
HDA **Harding Lake** 59.61 30 P P 09 41 11.9 +0.3
baz=278
M23K **Glacier View** 59.61 33 P P 09 41 11.7 +0.1
baz=278
E25K **Arctic Village** 59.71 26 IAmb IAmb 09 41 14.5
comp=Z,1.8nm,1.1s
E25K **Arctic Village** 59.71 26 P P 09 41 12.5 +0.3
baz=277
F25K **Christian Rive** 59.74 26 IAmb IAmb 09 41 15.0
comp=Z,5.1nm,0.8s
F25K **Christian Rive** 59.74 26 P P 09 41 12.5 0.0
baz=277
C26K **Camden Bay** 59.75 23 P P 09 41 12.4 0.0
baz=276
SCM **Sheep Creek Mo** 59.80 33 P P 09 41 13.0 0.0
baz=279
P23K **Montague Islan** 60.05 35 P P 09 41 14.8 +0.1
baz=280
PRP **Porcupine Dome** 60.06 29 P P 09 41 14.7 -0.1
baz=278
C27K **Jago River** 60.20 24 IAmb IAmb 09 41 17.5
comp=Z,5.9nm,0.8s
C27K **Jago River** 60.20 24 P P 09 41 15.9 +0.3
baz=277,SNR=8.7
K24K **Donnelly Dome** 60.20 31 P P 09 41 15.6 -0.1
baz=279
J25K **Salcha River,** 60.26 30 P P 09 41 15.3 -0.8
baz=279
M24K **Tolsona, Glenn** 60.29 32 P P 09 41 15.8 -0.6
baz=280
F26K **Sheenjek River** 60.30 26 IAmb IAmb 09 41 18.9
comp=Z,6.8nm,0.8s
F26K **Sheenjek River** 60.30 26 P P 09 41 16.1 -0.2
baz=278
KIRV **Kirov** 60.31 323 P P 09 41 15.6 -0.9
comp=Z,22nm,0.6s,baz=106,slow=2.0,SNR=6.0
comp=Z,22nm,0.6s
KIRV **Kirov** 60.31 323 *ce*P P 09 41 16.0 -0.4
PAX **Paxson** 60.47 31 P P 09 41 17.7 +0.1
baz=280
KLU **Klutina** 60.51 33 P P 09 41 17.3 -0.6
baz=280
G26K **Porcupine Rive** 60.55 27 IAmb IAmb 09 41 26.0
comp=Z,8.0nm,1.1s
G26K **Porcupine Rive** 60.55 27 P P 09 41 18.4 +0.4
baz=279
RIDG **Independent Ri** 60.62 31 P P 09 41 18.2 -0.4
baz=280
HARP **HAARP** 60.71 32 P P 09 41 19.6 +0.4
baz=280
EYAK **Cordova Ski Ar** 60.76 34 P P 09 41 19.7 +0.2
baz=281
SCRK **Sand Creek** 60.95 30 P 09 41 21.6 +0.7
SCRK IAmb IAmb 09 41 22.6
comp=Z,18nm,1.6s
SCRK **Sand Creek** 60.95 30 P P 09 41 21.2 +0.2
baz=280
N25K **Chitina, Valde** 61.12 33 P P 09 41 22.3 +0.3
baz=281
E27K **Coleen River** 61.17 25 IAmb IAmb 09 41 24.4
comp=Z,4.8nm,0.8s
E27K **Coleen River** 61.17 25 P P 09 41 22.6 +0.3
baz=280
D27M **Malcolm River** 61.22 24 P P 09 41 23.1 +0.5
baz=280
BMRM **Bremner River** 61.24 34 P P 09 41 23.1 +0.3
baz=281
L26K **Log Cabin Wild** 61.41 31 P P 09 41 24.8 +0.8
baz=281
KAIM **Kayak Island** 61.54 35 P P 09 41 25.2 +0.4
baz=282
H27K **Steamboat Moun** 61.56 27 P P 09 41 24.4 -0.5
baz=281
I27K **Kandik River** 61.65 28 P P 09 41 26.4 +0.9
baz=282
M26K **Nabesna, AK** 61.70 32 P P 09 41 26.5 +0.5
baz=282
E28M **Babbage River** 61.85 25 IAmb IAmb 09 41 28.8
comp=Z,6.2nm,0.8s
E28M **Babbage River** 61.85 25 P P 09 41 27.3 +0.6
baz=282
MCARA **McCarthy VSAT** 61.90 33 P P 09 41 26.9 -0.3
baz=282

F28M **Old Crow** 61.92 26 P 09 41 28.7 +1.4
F28M IAmb IAmb 09 41 29.6
comp=Z,8.1nm,1.1s
F28M **Old Crow** 61.92 26 P P 09 41 27.8 +0.5
baz=282,SNR=5.9
D28M **Stokes Point** 61.98 24 P P 09 41 28.2 +0.6
baz=282
L27K **Beaver Creek,** 62.08 31 P P 09 41 28.8 +0.3
baz=283
M27K **Edge Creek, AK** 62.22 32 P P 09 41 29.9 +0.4
baz=283
I28M **Miner Creek** 62.36 28 IAmb IAmb 09 41 32.6
comp=Z,6.9nm,0.9s
I28M **Miner Creek** 62.36 28 P P 09 41 30.2 -0.2
baz=283,SNR=5.3
E29M **Blow River** 62.48 25 IAmb IAmb 09 41 32.9
comp=Z,6.0nm,1.1s
E29M **Blow River** 62.48 25 P P 09 41 31.3 +0.2
baz=283
BVCY **Beaver Creek** 62.66 32 P P 09 41 32.6 +0.2
baz=284
BELG **Belogornoye** 62.67 317 *i* P P 09 41 31.1 -1.4
BELG pmax pmax
comp=Z,7.0nm,0.9s
MESA **MESA** 62.69 34 P P 09 41 32.3 -0.4
baz=284
STKA **Stephens Creek** 62.77 170 LR LR 10 08 23.1
comp=Z,54nm,20.0s,baz=24,slow=36
CTG **Chitna Glacier** 62.79 33 P P 09 41 33.0 -0.4
baz=284
YUK3 **Moose Creek** 63.00 32 P P 09 41 34.7 -0.1
baz=284
I29M **Ogilvie Camp,** 63.05 28 P P 09 41 34.9 +0.1
baz=284
J29N **Klondike Camp** 63.31 29 P P 09 41 37.0 +0.3
baz=285
O28M **Mount Upton** 63.38 33 P P 09 41 37.1 -0.3
baz=285
EPYK **Eagle Plains** 63.42 27 P P 09 41 37.3 -0.1
baz=285,SNR=6.6
F30M **Barrier River** 63.45 25 IAmb IAmb 09 41 39.3
comp=Z,9.2nm,0.8s
F30M **Barrier River** 63.45 25 P P 09 41 37.3 -0.1
baz=286,SNR=5.9
G30M **tAoh Zraii Nji** 63.45 26 P P 09 41 37.7 +0.2
baz=285
YUK8 **Steele Glacier** 63.45 33 P P 09 41 37.7 -0.2
baz=285
PINM **Pinnacle** 63.53 34 P P 09 41 38.2 0.0
baz=285
L29M **L29M** 63.71 30 P P 09 41 38.8 -0.5
baz=286
M29M **Somme Creek** 63.74 31 P P 09 41 39.1 -0.5
baz=286
K29M **Barlow Dome** 63.77 30 P P 09 41 39.9 +0.1
baz=286
I30M **Mount Dempster** 63.87 28 IAmb IAmb 09 41 42.3
comp=Z,11nm,1.1s
I30M **Mount Dempster** 63.87 28 P P 09 41 40.6 +0.2
baz=286
YUK4 **Talbot Arm** 63.95 32 P P 09 41 40.9 -0.2
baz=286
J30M **Hart River** 64.07 29 P P 09 41 41.6 -0.2
baz=286
INK **Inuvik** 64.07 24 IAmb IAmb 09 41 42.6
comp=Z,4.2nm,0.7s
INK **Inuvik** 64.07 24 P P 09 41 41.4 -0.1
baz=287,SNR=5.5
YUK6 **Outpost Mounta** 64.20 33 P P 09 41 42.5 -0.3
baz=286
G31M **Satah River** 64.20 26 P P 09 41 42.4 0.0
baz=287
F31M **Tsiigehtchic** 64.25 25 IAmb IAmb 09 41 43.6
comp=Z,6.6nm,1.0s
F31M **Tsiigehtchic** 64.25 25 P P 09 41 42.8 +0.2
baz=287
O29M **Mount Kennedy** 64.28 34 P P 09 41 43.2 0.0
baz=287
M30M **Minto, Yukon** 64.44 31 P P 09 41 43.8 -0.3
baz=287
H31M **Peel River** 64.51 27 P 09 41 44.7 +0.2
H31M IAmb IAmb 09 41 47.1
comp=Z,20nm,1.4s
H31M **Peel River** 64.51 27 P P 09 41 44.0 -0.5
baz=288
KLMR **Klimovskoe** 64.64 327 *e*P P 09 41 43.1 -2.2
KLMR pmax pmax
comp=Z,34nm,1.3s
P30M **Million Dollar** 65.10 33 P P 09 41 47.4 -1.1
baz=288
SPITS **Spitsbergen Ar** 65.24 348 P P 09 41 47.8 -1.3
comp=Z,4.7nm,0.6s,baz=81,slow=10,SNR=15
SPITS LR LR 10 12 18.2
comp=Z,60nm,18.7s,baz=67,slow=38
comp=Z,4.7nm,0.6s
O30N **Mendenhall** 65.31 33 P P 09 41 49.7 -0.1
baz=288
A36M **Sachs Harbour** 65.47 19 P P 09 41 50.5 -0.1
baz=293,SNR=19
KBS **Kingsbay** 65.59 349 *i* P P 09 41 51.3 0.0
AKT **Akhty** 65.90 305 *e*P P 09 41 53.4 -0.6
AKT *e*PPP PPP 09 45 52.8
AKT pmax pmax
comp=Z,32nm,1.1s
S31K **Pelican** 66.15 36 P P 09 41 54.9 -0.3
baz=290
R32K **Eaglecrest** 66.90 35 P P 09 41 59.6 -0.4
baz=291
C36M **Paulatuk** 66.90 22 P P 09 41 59.4 -0.4
baz=295,SNR=5.3
SIT **Sitka** 66.92 36 P P 09 41 59.8 -0.3
baz=291
NOR **Nord** 66.98 355 *i* P P 09 42 00.9 +0.8
NOR IAmb IAmb 09 42 01.7
comp=Z,1.9nm,0.7s
ARCES **ARCESS Array B** 67.02 338 P P 09 41 59.6 -0.9
comp=Z,6.0nm,0.9s,baz=46,slow=6.9,SNR=6.8
ARCES LR LR 10 15 46.0
comp=Z,143nm,18.4s,baz=66,slow=40
comp=Z,6.0nm,0.9s
P33M **Teslin, Yukon** 67.03 33 P P 09 41 59.9 -0.9
baz=291
OBN **Obninsk** 68.04 322 *e*P P 09 42 06.6 -0.6
OBN *e* 09 44 35.6
OBN *e*S S 09 51 08.6 +3.9
OBN *e*SS SS 09 55 18.2 -8.3
OBN pmax pmax
comp=Z,8.0nm,0.5s
OBN MLR MLR
comp=Z,144nm,19.0s
R33M **Jennings River** 68.20 33 P P 09 42 07.7 -0.7
baz=293
U33K **Whale Pass** 68.40 37 P P 09 42 09.0 -0.4
baz=293
KBZ **Khabaz** 68.43 309 P P 09 42 09.8 0.0
comp=Z,14nm,1.0s
KBZ LR LR 10 15 49.7
comp=Z,81nm,19.9s,slow=39
comp=Z,14nm,1.0s
KIV **Kislovodsk** 68.49 309 P P 09 42 10.1 -0.3
KIV **Kislovodsk** 68.49 309 *e*P P 09 42 10.1 -0.3
KIV pmax pmax
comp=Z,29nm,1.1s
KIV MLR MLR
comp=Z,73nm,17.0s
GNI **Garni** 68.50 305 LR LR 10 16 50.2
comp=Z,37nm,18.5s,baz=36,slow=40
GNI **Garni** 68.50 305 *ce*P P 09 42 12.3 +1.7
GNI pmax pmax
comp=Z,17nm,1.3s
SHA1 **Shidzhatmaz** 68.59 309 *ce*P P 09 42 11.5 +0.3
CRAG **Craig** 68.65 37 P P 09 42 10.7 -0.3
baz=293
DLBC **Dease Lake** 69.03 34 P P 09 42 12.6 -0.9
baz=294
ERBR **Yeremizino-Bor** 69.28 311 *e*P P 09 42 14.7 -0.4
ERBR pmax pmax
comp=Z,47nm,0.7s
V35K **Ketchikan** 69.50 37 P P 09 42 15.5 -0.8
baz=294
T35M **Bob Quinn** 69.52 35 P P 09 42 15.8 -0.7
baz=294
WRGLY **Wrigley** 69.84 28 P P 09 42 17.5 -0.7
baz=298
GEVA **Gevas** 70.41 303 P 09 42 22.5 0.0
FIA1 **FINESS Array S** 70.43 330 P P 09 42 20.9 -1.0
FINES **FINESS Array B** 70.44 330 P P 09 42 20.4 -1.5
comp=Z,6.3nm,0.4s,baz=64,slow=4.4,SNR=64

FINES LR LR 10 15 21.5
comp=Z,114nm,18.8s,baz=40,slow=38
comp=Z,6.3nm,0.4s
FINES FINESS Array B 70.44 330 P P 09 42 21.4 -0.5
FINES FINESS Array B 70.44 330 i P P 09 42 19.1 -2.8
FINES pmax pmax
comp=Z,6.0nm,0.4s
RES Resolute Bay 70.97 12 IAmb IAmb 09 42 25.6
comp=Z,9.6nm,0.7s
KOTAN Kotaneelee Air 71.04 31 P P 09 42 25.1 -0.6
baz=298
DAG Danmarks Havn 71.42 353 i P P 09 42 26.5 -1.1
VSU Vasula 71.54 328 ceP P 09 42 28.3 -0.4
VSU pmax pmax
comp=Z,52nm,2.5s
NEEM North Greenlan 72.37 0 i P P 09 42 33.2 -0.6
NEEM IAmb IAmb 09 42 34.3
comp=Z,13nm,1.1s
MARD Mardin 72.47 303 IAmb IAmb 09 42 35.4
comp=Z,13nm,0.8s
TULEG Thule 72.57 5 i P P 09 42 33.5 -1.1
TULEG IAmb IAmb 09 42 34.4
comp=Z,5.2nm,1.1s
YKA Yellowknife Ar 73.69 26 P P 09 42 41.3 -0.1
comp=Z,1.0nm,0.8s,baz=305,slow=6.2,SNR=19
YKA LR LR 10 19 47.2
comp=Z,47nm,18.2s,baz=343,slow=40
comp=Z,1.0nm,0.8s
YKA Yellowknife Ar 73.69 26 P P 09 42 41.9 +0.5
YKA Yellowknife Ar 73.69 26 i P P 09 42 41.7 +0.3
YKA pmax pmax
comp=Z,1.0nm,0.8s
AKASG Malin Array Be 73.94 320 P P 09 42 42.0 -1.2
comp=Z,1.8nm,0.5s,baz=52,slow=5.8,SNR=6.9
AKASG LR LR 10 18 00.0
comp=Z,151nm,18.1s,baz=61,slow=38
comp=Z,1.8nm,0.5s
AKASG Malin Array Be 73.94 320 i P P 09 42 40.9 -2.2
AKASG pmax pmax
comp=Z,2.0nm,0.5s
RAYN Ar Rayn 74.82 289 P P 09 42 48.3 -0.4
RAYN IAmb IAmb 09 42 49.4
comp=Z,11nm,1.1s
RAYN Ar Rayn 74.82 289 P P 09 42 48.3 -0.4
RAYN pmax pmax
comp=Z,11nm,1.2s
RAYN Ar Rayn 74.82 289 P P 09 42 48.5 -0.2
POIN Pond Inlet 75.24 9 IAmb IAmb 09 44 14.7
comp=Z,13nm,1.7s
BNN Bunyan 75.29 306 IAmb IAmb 09 42 51.8
comp=Z,14nm,1.4s
HFS Hagfors 76.24 333 P P 09 42 55.5 -0.7
comp=Z,2.3nm,0.4s,baz=83,slow=4.6,SNR=16
HFS LR LR 10 21 39.9
comp=Z,93nm,19.4s,baz=28,slow=40
comp=Z,2.3nm,0.4s
BRTR Keskin Array B 76.40 308 P P 09 42 57.0 -0.6
comp=Z,2.1nm,0.8s,baz=114,slow=4.5,SNR=13
BRTR LR LR 10 21 27.7
comp=Z,52nm,19.1s,baz=76,slow=40
comp=Z,2.1nm,0.8s
BRTR Keskin Array B 76.40 308 P P 09 42 56.4 -1.3
BRTR Keskin Array B 76.40 308 P P 09 42 56.4 -1.3
NB2 NORSAR Subarra 76.63 334 P P 09 42 57.2 -1.3
comp=Z,1.3nm,0.5s,baz=48,slow=5.9
NOA NORSAR Array B 76.63 334 P P 09 42 56.5 -1.9
comp=Z,1.7nm,0.5s,baz=50,slow=5.6,SNR=7.5
NOA LR LR 10 18 40.6
comp=Z,63nm,19.2s,baz=30,slow=37
comp=Z,1.7nm,0.5s
SUMG Summit 77.02 357 P P 09 43 00.6 -0.3
SUMG Summit 77.02 357 P P 09 43 00.6 -0.3
SUMG pmax pmax
comp=Z,40nm,1.7s
SUMG Summit 77.02 357 i P P 09 43 00.7 -0.1
SUMG IAmb IAmb 09 43 01.3
comp=Z,6.5nm,0.6s
ILON Igloolik, Nuna 77.64 11 IAmb IAmb 09 43 04.0
comp=Z,7.8nm,0.9s
BUR08 Bucovina Ar. S 77.76 318 P P 09 43 05.2 +0.1
BUR08 IAmb IAmb 09 45 08.3
comp=Z,25nm,1.9s
BURAR Bucovina Array 77.77 318 P P 09 43 05.5 +0.4
MLR Muntele Rosu 78.46 316 LR LR 10 21 08.6
comp=Z,132nm,20.3s,baz=60,slow=38
EIL Elat 80.29 299 LR LR 10 24 36.3
comp=Z,35nm,19.3s,baz=54,slow=40
VRAC Vranov 81.54 323 LR LR 10 23 05.1
comp=Z,130nm,20.5s,baz=123,slow=38
CLL Collm 82.09 326 i P P 09 43 28.9 +0.6
CLL pmax pmax
comp=Z,8.0nm,0.8s
CLL Collm 82.09 326 i P P 09 43 28.9 +0.6
comp=Z,8.0nm,0.8s
SFJD Kangerlussuaq 82.88 1 LR LR 10 21 50.9
comp=Z,89nm,18.3s,baz=346,slow=37
FFC Flin Flon 83.75 28 P P 09 43 36.8 -0.1
FFC PcP PcP 09 43 39.7 -1.2
FFC x x 09 43 57.8
NVAR Mina Array Bea 85.85 47 P P 09 43 49.2 +1.1
comp=Z,0.6nm,0.7s,baz=307,slow=3.8,SNR=4.5
comp=Z,0.6nm,0.7s
EKA Eskdalemuir Ar 86.01 336 P P 09 43 46.1 -2.1
comp=Z,0.9nm,0.4s,baz=38,slow=4.4,SNR=7.2
EKA LR LR 10 24 27.2
comp=Z,127nm,18.6s,baz=18,slow=37
comp=Z,0.9nm,0.4s
PDAR Pinedale Array 88.37 40 P P 09 43 59.3 -0.9
comp=Z,0.5nm,0.9s,baz=335,slow=2.5,SNR=3.7
comp=Z,0.5nm,0.9s
ULM Lac du Bonnet 89.57 28 P P 09 44 04.5 -0.9
comp=Z,1.7nm,0.6s,baz=1.0,slow=5.4,SNR=4.7
ULM LR LR 10 28 05.3
comp=Z,41nm,18.1s,baz=11,slow=38
comp=Z,1.7nm,0.6s
PPT2 Papeete2 89.99 110 eLR LR 10 12 57.4
comp=Z,33nm,21.5s
PV10 Paradox Valley 91.56 43 P P 09 44 16.7 +1.5
PV19 Morning Glory 91.64 43 P P 09 44 17.2 +1.6
TBI Tubuai 93.10 115 eLR LR 10 14 20.5
comp=Z,914nm,29.8s
TBI eLR LR 10 14 26.8
comp=Z,390nm,31.2s
TAOE Nuku Hiva Isla 93.42 98 eLR LR 10 14 29.7
comp=Z,104nm,22.8s
SCHQ Schefferville 93.71 10 LR LR 10 29 57.3
comp=Z,34nm,18.2s,baz=337,slow=38
ESDC Sonseca Array 98.68 326 LR LR 10 36 46.3
comp=Z,91nm,19.4s,baz=332,slow=40

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*ISK **03** 09:31:59.4, 36.46N×28.69E, h5km, ML2.7/20*
*THE **03** 09:32:01.1, 36°N±2°×2°9E±°, h0km±3km, M2.5/5, MLh2.5/5*
*AFAD **03** 09:32:01.1, 36.48N×28.70E, h7km±5km, ML2.2*
ISC 03 09:32:01.0±1.1**, 36.47N**±0.02×**28.69E**±0.02**, h3**km±10km**, n40, σ0.87**/63**, Dodecanese Islands**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
DALY Dalyan (Mula) 0.35 355 Pg Pg 09 32 07.4 -0.4
DALY Sg Sg 09 32 13.7 +1.3
FETY Fethiye 0.36 62 P Pg 09 32 07.6 -0.4
FETY S Sg 09 32 13.4 +0.8
FETY Fethiye 0.36 62 Pg Pg 09 32 07.5 -0.4
FETY Fethiye 0.36 62 P Pb 09 32 09.5 -0.6
FETY S Sb 09 32 16.1 -0.1
SABU Mula-Dalaman 0.42 32 P Pg 09 32 07.9 -1.3
SABU S Sg 09 32 15.2 +0.6
IZZE Mula-Seydike 0.43 94 P Pg 09 32 08.7 -0.6
IZZE S Sg 09 32 15.2 +0.3
IZZE IAML 09 32 19.0
comp=N,733nm,0.5s
IZZE IAML 09 32 19.0
comp=E,319nm,0.4s
TURN Turunc 0.47 311 Pg Pg 09 32 09.7 -0.4
TURN Sg Sg 09 32 17.5 +1.2
TURN Turunc 0.47 311 P Pg 09 32 10.3 +0.2
TURN S Sg 09 32 17.7 +1.4
TURN IAML 09 32 19.0
comp=N,271nm,0.5s
TURN IAML 09 32 19.0
comp=E,204nm,0.4s
ARG Arkhangelos 0.52 242 P Pg 09 32 10.2 -0.7
ARG S Sg 09 32 19.0 +1.3
ARG Arkhangelos 0.52 242 Pg Pg 09 32 10.3 -0.7
ARG Sg Sg 09 32 18.7 +1.0
CAME Cameli-Denizli 0.69 46 Pg Pg 09 32 14.5 +0.3
YER Yerkesik 0.74 334 P Pg 09 32 15.1 -0.2
YER S Sb 09 32 26.5 -0.8
YER Yerkesik 0.74 334 Pg Pg 09 32 15.6 +0.3
YER Sg Sb 09 32 26.5 -0.8
AKAS Kas 0.77 107 Pg Pg 09 32 15.8 -0.1
AKAS Kas 0.77 107 P Pg 09 32 14.4 -1.4
AKAS S Sb 09 32 28.4 +0.2
KSL Kastellorizon 0.79 113 P Pg 09 32 16.2 +0.1
KSL S Sb 09 32 27.8 -0.6
KNIK Mula-Seydike 0.81 62 P Pg 09 32 16.9 +0.4
KNIK IAML 09 32 29.0
comp=E,52nm,0.9s
KNIK IAML 09 32 30.0
comp=N,97nm,1.1s
DNZT Denizli-Tavas- 0.86 18 P Pg 09 32 16.1 -1.4
DNZT S Sn 09 32 34.1 +0.9
DNZT IAML 09 32 39.0
comp=N,26nm,0.5s
DAT Datca 0.93 287 Pg Pg 09 32 18.5 -0.4
TAVA DENIZLI_Tavas 1.01 10 P Pg 09 32 20.2 -0.3
TAVA S Sn 09 32 38.2 +1.0
TAVA IAML 09 32 40.0
comp=E,41nm,0.4s
TAVA IAML 09 32 46.0
comp=N,36nm,0.4s
MLSB Milas 1.11 319 Pn Pg 09 32 22.0 -0.3
APMY Acipayam-Deniz 1.12 26 Pn Pg 09 32 22.4 -0.1
DNIZ Denizli-Tavas- 1.19 13 P Pb 09 32 24.3 -0.1
DNIZ S Sb 09 32 39.8 -0.4
DNIZ IAML 09 32 46.0
comp=N,153nm,0.3s
DNIZ IAML 09 32 47.0
comp=E,242nm,0.3s
BODT Bodrum 1.26 299 P Pn 09 32 25.5 -0.1
BODT S Sn 09 32 43.0 0.0
BODT Bodrum 1.26 299 Pn Pg 09 32 25.2 0.0
AKUM Antalya-Kumluc 1.34 96 P Pn 09 32 25.9 -0.8
AKUM S Sn 09 32 48.0 +3.0
AKUM IAML 09 32 55.0
comp=E,37nm,1.1s
AKUM IAML 09 32 57.0
comp=N,34nm,0.9s
ESEN Aydn-Nazilli 1.36 348 P Pn 09 32 26.7 -0.2
ESEN S Sn 09 32 44.8 -0.7
ESEN IAML 09 32 49.0
comp=N,37nm,0.7s
ESEN IAML 09 32 50.0
comp=E,49nm,0.4s
INCE Denizli-Bozkur 1.43 29 P Pn 09 32 25.9 -2.1
INCE S Sn 09 32 49.7 +2.3
KORT Korkueli 1.44 68 Pn Pg 09 32 29.0 +0.4
NAZL Nazilli-Aydin 1.53 348 Pn Pn 09 32 29.2 -0.1
KARP Karpathos 1.54 234 P Pn 09 32 29.5 0.0
KARP S Sg 09 32 50.5 0.0
KARP Karpathos 1.54 234 Pn Pn 09 32 29.0 -0.5
SULTU Buldan 1.59 2 P Pn 09 32 29.2 -1.0
SULTU S Sn 09 32 50.5 -0.8
SULTU IAML 09 32 55.0
comp=E,67nm,0.5s
SULTU IAML 09 33 09.0
comp=N,34nm,0.7s
AYDB Zeytinkoy-Aydi 1.61 337 Pn Pn 09 32 30.1 -0.4
GCAM G?zelcaml? 1.70 317 Pn Pn 09 32 31.5 -0.1
ODEM Odemis-Izmir 1.87 345 Pn Pn 09 32 34.3 +0.2
KULA Kula-Manisa 2.05 359 Pn Pn 09 32 36.6 +0.1
ZKR Zakros 2.42 237 Pn Pn 09 32 42.2 +0.7
NPS Neapolis 2.77 245 P Pn 09 32 46.0 -0.4
NPS S Sn 09 33 20.1 -0.3
IDI Anoyia 3.30 250 Pn Pn 09 32 53.4 -0.3

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*NIED **03** 09:44:47.4, 30.39N×131.11E, h32km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.56; $M_{\theta\theta}$-0.16; $M_{\phi\phi}$-0.40; $M_{r\theta}$0.63; $M_{\theta\phi}$-0.42; $M_{\phi r}$0.85; Fault plane solution: $M_0$1.24000×10^{15} NP1: ϕ_s218.00000°, δ16.00000°, λ91.00000°. NP2: ϕ_s37.00000°, δ74.00000°, λ90.00000°.*
*JMA **03** 09:44:47.4±0.1, 30.4N±0.4×131.1E±0.7, h32km, MV3.6/34, NEAR TANEGASHIMA ISLAND*
JMA Felt I J1 at NEAR TANEGASHIMA ISLAND .
*NEIC **03** 09:44:48.6±0.9, 30.43N±0.06×131.0E±0.1, h35km±2km, mb4.5/26, Error ellipse: s-maj=14.7km s-min=9.3km az=83.0*
*IDC **03** 09:44:49.2±1.6, 30.43N×130.95E, h49km±12km, mb3.9/21, mbtmp4.1/25, ML3.0/4, MS3.1/6, Error ellipse: s-maj=23.9km s-min=9.5km az=100.0*
ISC 03 09:44:47.8±0.8**, 30.42N**±0.04×**131.02E**±0.05**, h33**km±2km**, n85, σ1.07**/89**, mb4.3**/35**, MS3.1**/3**, 1C-8D, Kyushu**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
JMTN Minamitane 0.11 260 ⇓P Pb 09 44 53.5 -0.2
JMTN ⇓S Sb 09 44 58.1 +0.4
JTN Tanegashima 3 0.24 351 ⇓P Pn 09 44 54.5 -0.1
JTN ⇓S Sb 09 44 59.9 +0.2
JYAK Yakushimahirau 0.48 248 ⇓iP Pn 09 44 58.2 -0.1
JYAK ⇓S Sn 09 45 06.1 +0.6
JKC Kuchinoerabu 0.72 274 P Pb 09 45 02.1 +0.2
JKC S Sb 09 45 13.4 +1.8
JTSR Tashiro 2 0.75 353 ⇓P Pn 09 45 02.1 0.0
JTSR ⇓S Sb 09 45 13.2 +0.6
JNAR Kushima--Naru 1.13 11 P Pn 09 45 08.4 +1.1
JNN Nakanoshima 1.15 240 P Pb 09 45 08.7 -0.4
JNN eS Sb 09 45 25.4 +1.6
JSU Suzuyama 1.19 336 Pn 09 45 08.9 +0.7
JSU Sb 09 45 24.9 -0.1
JSU Suzuyama 1.19 336 P Pn 09 45 09.1 +0.9
JNKG Nichinankitago 1.28 14 P Pn 09 45 10.3 +1.0
JTZ Takazaki 1.48 2 P Pn 09 45 13.2 +1.0
JNU Nakatsue 2.70 357 P Pn 09 45 30.1 +1.2
4.0nm,0.3s,baz=245,slow=4.0,SNR=39
JNU S Sn 09 46 02.0 +1.5
73nm,0.8s,baz=166,slow=11,SNR=4.6
JNU LR LR 09 46 54.0
comp=Z,264nm,19.2s,baz=206,slow=46
36nm,0.7s
JMN Monobe 4.10 36 Pn 09 45 49.0 +0.9
JOW Kunigami 4.31 215 P Pn 09 45 51.6 +0.5
0.6nm,0.3s,baz=99,slow=18,SNR=1.6
JOW S Sn 09 46 40.6 +0.5
7.9nm,0.5s,baz=73,slow=19,SNR=1.4
3.6nm,0.5s
JOW Kunigami 4.31 215 Pn Pn 09 45 51.8 +0.8
INU Inuyama 7.04 44 Pn 09 46 29.6 +1.1
JGF Kuroka 7.42 44 Pn 09 46 34.6 +0.9
KSRS Korea Array 7.48 341 P Pn 09 46 35.4 +0.9
0.3nm,0.3s,baz=171,slow=15,SNR=4.5
KSRS LR LR 09 49 59.5
comp=Z,119nm,18.1s,baz=155,slow=42
0.7nm,0.3s
NJ2 Nanjing 10.55 282 eP Pn 09 47 18.0 +1.4
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
BNX BinXian 15.56 351 ⇑P Pn 09 48 26.7 +2.1
BNX pmax pmax
comp=Z,6.0nm,1.2s
KLR Kul'dur 18.80 1 P P 09 49 05.1 +0.8
comp=Z,0.2nm,0.3s,baz=211,slow=5.7,SNR=5.4
KLR LR LR 09 56 00.7
comp=Z,63nm,19.4s,baz=196,slow=36
comp=Z,1.4nm,0.6s
HHC Hu-ho-hao-te 18.90 309 eP Pn 09 49 06.3 -0.1
HHC pmax pmax
comp=Z,12nm,0.5s
HHC pmax pmax
comp=Z,110nm,6.4s
XAN Xi'an 19.04 287 eP Pn 09 49 11.5 +3.4
XAN sP sP 09 49 28.1 +8.5
XAN pmax pmax
comp=Z,8.0nm,1.0s
ULN Ulaanbaatar 25.32 320 P P 09 50 11.5 0.0
SONM Songino Array 25.67 320 P P 09 50 14.4 -0.3
comp=Z,1.2nm,0.4s,baz=142,slow=10,SNR=10
SONM LR LR 10 01 05.9
comp=Z,60nm,20.6s,baz=168,slow=38
comp=Z,1.2nm,0.4s
SONM Songino Array 25.67 320 P P 09 50 12.1 -2.5
PZH PanZhiHua 26.00 269 P P 09 50 18.8 +0.9
TLY Talaya 29.33 324 LR LR 10 03 50.2
comp=Z,61nm,18.4s,baz=147,slow=39
CMAR Chiang Mai Arr 31.43 255 LR LR 10 04 10.6
comp=Z,28nm,18.4s,baz=300,slow=37
H11N2 WAKE ISLAND Hy 34.06 100 T T 10 27 27.0
baz=296,slow=75,SNR=19
H11N1 WAKE ISLAND Hy 34.06 100 T T 10 27 26.5
baz=296,slow=75,SNR=11
H11N3 WAKE ISLAND Hy 34.08 100 T T 10 27 27.2
baz=296,slow=75,SNR=21
WMQ Urumqi 36.64 304 eP P 09 51 53.5 +2.3
ZAA0 Zalesovo Array 40.56 319 P P 09 52 23.1 -0.7
ZALV Zalesovo Beam 40.56 319 P P 09 52 21.3 -2.5
comp=Z,0.9nm,0.3s,baz=100,slow=8.3,SNR=4.2
comp=Z,0.9nm,0.3s
ZALV Zalesovo Beam 40.56 319 P P 09 52 23.1 -0.7
MKAR Makanchi Array 40.76 308 P P 09 52 25.1 -0.5
comp=Z,1.4nm,0.7s,baz=95,slow=10,SNR=15
comp=Z,1.4nm,0.7s
MKAR Makanchi Array 40.76 308 P P 09 52 25.5 -0.1
KURK Kurchatov 43.62 313 P 09 52 48.4 -0.4
KURBB Kurchatov Arra 43.67 313 P P 09 52 48.9 -0.3
comp=Z,1.3nm,0.5s,baz=91,slow=8.1,SNR=21
comp=Z,1.3nm,0.5s
TARG Taragay, Kyrgy 43.85 300 P P 09 52 50.5 -0.8
TARG IAmb IAmb 09 52 52.9
comp=Z,3.6nm,0.7s
NRN Naryn 45.22 300 P 09 53 02.3 +0.2
NRN IAmb IAmb 09 53 03.2
comp=Z,2.7nm,0.6s
KSH2 Kashi 45.76 297 P P 09 53 07.6 +1.3
KSH2 pmax pmax
comp=Z,5.0nm,0.8s
KNRA Kununurra 45.88 183 P P 09 53 07.8 +0.8
NRIK Noril'sk 46.10 340 P P 09 53 06.1 -2.1
comp=Z,2.9nm,0.5s,baz=109,slow=8.5,SNR=6.3
comp=Z,2.9nm,0.5s
NRIK Noril'sk 46.10 340 P P 09 53 07.0 -1.3
NRIK IAmb IAmb 09 53 07.4
comp=Z,3.4nm,0.7s
AAK Ala-Archa 46.25 302 P P 09 53 09.1 -1.0
comp=Z,1.7nm,0.6s,baz=92,slow=6.5,SNR=5.6
comp=Z,1.7nm,0.6s
BVAR Borovoye Array 48.90 316 P P 09 53 30.4 +0.1
comp=Z,5.1nm,0.4s,baz=96,slow=9.1,SNR=32
comp=Z,5.1nm,0.4s
BORK Borovoye 48.95 316 P 09 53 30.6 0.0
KK31 Karatay Array 49.12 303 P P 09 53 31.9 -0.3
KK31 IAmb IAmb 09 53 33.5
comp=Z,3.5nm,0.9s
KKAR Karatay Array 49.12 303 P P 09 53 31.9 -0.3
GAR Garm 49.83 297 P 09 53 37.4 -0.3
GAR IAmb IAmb 09 53 39.0
comp=Z,16nm,1.1s
WRA Warramunga Arr 50.17 176 P P 09 53 39.7 -0.5
comp=Z,0.4nm,0.8s,baz=356,slow=7.6,SNR=2.5
comp=Z,0.4nm,0.8s
CHGR Chuyangaron 50.78 297 P 09 53 44.8 -0.1
KBL Kabul 51.73 292 P P 09 53 51.9 -0.4
KBL IAmb IAmb 09 53 58.8
comp=Z,2.7nm,0.7s
SHAA Shahritus 51.79 296 P P 09 53 52.1 -0.4
SHAA IAmb IAmb 09 53 54.5
comp=Z,28nm,1.4s
ASAR Alice Springs 53.84 177 P P 09 54 07.8 +0.2
comp=Z,0.5nm,0.8s,baz=9.0,slow=13,SNR=8.6
comp=Z,0.5nm,0.8s
AB31 Akbulak array 55.66 311 P 09 54 20.3 -0.2
AB31 IAmb IAmb 09 54 21.1
comp=Z,4.1nm,0.6s
ABKAR Akbulak array 55.66 311 P 09 54 20.3 -0.2
ARTI Arti 55.80 320 P P 09 54 20.7 -0.8
comp=Z,7.8nm,0.5s,baz=119,slow=3.4,SNR=11
comp=Z,7.8nm,0.5s
ARTI Arti 55.80 320 P P 09 54 20.9 -0.6
AKTO Aktyubinsk 56.72 313 P P 09 54 27.4 -0.7
comp=Z,1.7nm,0.5s,baz=79,slow=8.3,SNR=6.3
comp=Z,1.7nm,0.5s
BMAR Burnt Mountain 60.18 26 P P 09 54 54.6 +2.6
C27K Jago River 60.21 24 P P 09 54 53.5 +1.4
C27K IAmb IAmb 09 54 54.2
comp=Z,1.8nm,0.8s
D27M Malcolm River 61.23 24 P P 09 55 00.6 +1.5
D27M IAmb IAmb 09 55 01.2
comp=Z,1.5nm,0.7s
G30M tAoh Zraii Nji 63.46 26 P P 09 55 14.6 +0.5
G30M IAmb IAmb 09 55 15.4
comp=Z,5.4nm,1.0s
INK Inuvik 64.08 24 P P 09 55 18.6 +0.6
INK IAmb IAmb 09 55 18.8
comp=Z,5.6nm,1.4s
SPITS Spitsbergen Ar 65.25 348 P P 09 55 25.4 -0.2
comp=Z,5.3nm,0.8s,baz=69,slow=7.9,SNR=11
comp=Z,5.3nm,0.8s
A36M Sachs Harbour 65.48 19 P P 09 55 27.6 +0.5
A36M IAmb IAmb 09 55 28.4
comp=Z,4.6nm,0.8s
ARCES ARCESS Array B 67.03 338 P P 09 55 36.2 -0.8
comp=Z,4.9nm,1.0s,baz=50,slow=6.5,SNR=4.3
comp=Z,4.9nm,1.0s
KBZ Khabaz 68.44 309 P P 09 55 46.9 +0.5
comp=Z,2.7nm,0.9s
comp=Z,2.7nm,0.9s
FIA1 FINESS Array S 70.44 330 P P 09 55 57.3 -1.1
FINES FINESS Array B 70.44 330 P P 09 55 57.1 -1.3
comp=Z,4.0nm,0.4s,baz=59,slow=5.6,SNR=6.2
comp=Z,4.0nm,0.4s
FINES FINESS Array B 70.44 330 P P 09 55 57.5 -1.0
RES Resolute Bay 70.98 12 P 09 56 01.8 +0.3
RES IAmb IAmb 09 56 02.2
comp=Z,3.1nm,0.7s
YKA Yellowknife Ar 73.70 26 P P 09 56 18.0 +0.1
comp=Z,0.2nm,0.8s,baz=304,slow=5.6,SNR=4.4
comp=Z,0.2nm,0.8s
AKASG Malin Array Be 73.95 320 P P 09 56 18.1 -1.5
comp=Z,0.8nm,0.4s,baz=56,slow=6.8,SNR=4.6
comp=Z,0.8nm,0.4s
POIN Pond Inlet 75.25 9 P P 09 56 26.5 -0.3
HFS Hagfors 76.25 333 P P 09 56 32.2 -0.5
comp=Z,1.3nm,0.4s,baz=74,slow=5.4,SNR=11
comp=Z,1.3nm,0.4s
NC405 NORSAR Array S 76.41 334 P P 09 56 33.8 +0.2
NC405 IAmb IAmb 09 57 08.4
comp=Z,7.7nm,1.2s
BRTR Keskin Array B 76.41 308 P P 09 56 33.3 -0.9
comp=Z,0.4nm,0.6s,baz=101,slow=3.9,SNR=3.8
comp=Z,0.4nm,0.6s
NB2 NORSAR Subarra 76.64 334 P P 09 56 34.7 -0.3
comp=Z,0.6nm,0.5s,baz=48,slow=5.6
NOA NORSAR Array B 76.64 334 P P 09 56 33.8 -1.1
comp=Z,0.7nm,0.5s,baz=49,slow=5.5,SNR=4.4
comp=Z,0.7nm,0.5s
ILON Igloolik, Nuna 77.65 11 P P 09 56 39.9 -0.5
EKA Eskdalemuir Ar 86.02 336 P P 09 57 22.8 -1.9
comp=Z,0.5nm,0.3s,baz=35,slow=5.4,SNR=5.8
comp=Z,0.5nm,0.3s

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*JMA **03** 09:47:28.8±0.1, 30.4N±0.3×131.1E±0.6, h32km, MV3.1/34, NEAR TANEGASHIMA ISLAND*
*IDC **03** 09:47:30.1±4.0, 30.44N×130.80E, h40km±19km, mb3.5/5, mbtmp3.7/7, ML2.1/2, Error ellipse: s-maj=88.7km s-min=11.0km az=107.0*
ISC 03 09:47:28.6±1.3**, 30.40N**±0.06×**131.04E**±0.09**, h33**km±4km**, n17, σ1.01**/25**, mb3.5**/5**, Kyushu**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
JMTN Minamitane 0.12 267 P Pb 09 47 34.9 +0.4
JMTN S Sb 09 47 39.3 +0.8
JTN Tanegashima 3 0.26 349 P Pb 09 47 35.7 -0.2
JTN S Sb 09 47 40.9 +0.1
JYAK Yakushimahirau 0.48 250 P Pn 09 47 39.5 +0.3
JYAK S Sn 09 47 47.3 +0.7
JKC Kuchinoerabu 0.73 275 P Pn 09 47 43.3 +0.7
JKC eS Sn 09 47 54.3 +1.7
JTSR Tashiro 2 0.77 353 P Pb 09 47 43.2 -0.4
JTSR S Sb 09 47 53.7 -0.1
JNAR Kushima--Naru 1.14 10 eP Pn 09 47 49.3 +1.0
JNN Nakanoshima 1.15 241 P Pb 09 47 50.2 +0.2
JSU Suzuyama 1.21 336 P Pn 09 47 49.9 +0.7
JNKG Nichinankitago 1.29 13 P Pn 09 47 51.4 +1.1
JNKG eS Sn 09 48 07.5 +1.1
JTZ Takazaki 1.49 2 P Pn 09 47 54.1 +0.9
JNU Nakatsue 2.71 357 P Pn 09 48 11.4 +1.5
1.0nm,0.3s,baz=181,slow=3.8,SNR=6.5
JNU S Sn 09 48 42.1 +0.4
21nm,0.7s,baz=153,slow=4.5,SNR=3.2
5.5nm,0.5s

JOW	**Kunigami**	**4.31**	**215**	P	**Pn**	**09 48 33.8**	**+1.9**
	0.1nm,0.3s,baz=112,slow=18,SNR=1.7						
JOW				S	**Sn**	**09 49 19.4**	**-1.6**
	4.9nm,0.3s,baz=60,slow=20,SNR=2.0						
	16nm,1.1s						
SONM	**Songino Array**	**25.68**	**320**	P	**P**	**09 52 54.8**	**-0.9**
	0.2nm,0.3s,baz=141,slow=11,SNR=2.7						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**40.77**	**308**	P	**P**	**09 55 07.0**	**+0.4**
	0.4nm,0.7s,baz=95,slow=10,SNR=4.1						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**43.69**	**313**	P	**P**	**09 55 29.3**	**-1.0**
	0.5nm,0.5s,baz=100,slow=6.9,SNR=7.5						
	0.5nm,0.5s						
BVAR	**Borovoye Array**	**48.92**	**316**	P	**P**	**09 56 10.3**	**-1.0**
	1.3nm,0.4s,baz=96,slow=10,SNR=9.1						
	1.3nm,0.4s						
FINES	**FINESS Array B**	**70.46**	**330**	P	**P**	**09 58 38.9**	**-0.6**
	0.8nm,0.3s,baz=55,slow=5.4,SNR=10						
	0.8nm,0.3s						

IDC 03 09:57:07.0±2.8**, 7°.14S×128°.66E, h0km, mb3.4**/1**, mbtmp3.4**/3**, ML3.8**/2**, Error ellipse: s-maj=303.9km s-min=31.9km az=66.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.87**	**157**	Pn	Pn	10 00 23.6	-1.3
	0.5nm,0.3s,baz=333,slow=13,SNR=19						
WRA				Sn	Sn	10 02 46.2	-14
	0.6nm,0.3s,baz=334,slow=22,SNR=12						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**17.18**	**164**	P	P	10 01 09.8	-0.6
	0.3nm,0.3s,baz=345,slow=10.0,SNR=15						
ASAR				S	Sn	10 04 09.8	-11
	0.2nm,0.3s,baz=318,slow=16,SNR=6.5						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**67.62**	**327**	P	P	10 08 05.8	0.0
	0.1nm,0.4s,baz=128,slow=5.8,SNR=5.3						
	0.1nm,0.4s						

*NNC **03** 10:09:06.5±2.6, 41°.68N×81°.07E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=19.6km s-min=14.0km az=9.0*

*SOME **03** 10:09:06.0, 41°.78N×81°.27E, h10km*

ISC 03 10:09:05.2±3.2**, 41°.5N**±0°.2×**80°.9E**±0°.1**, h10km, n10, σ1s.51**/15**, 3C-2D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**1.96**	**327**	P	**Pn**	**10 09 37.9**	**-0.7**
	9.2nm,0.2s						
SHLS				S	**Sn**	**10 10 00.8**	**-2.6**
	28nm,0.5s						
SHLS	**Shalkode**	**1.96**	**327**	*e*P	**Pn**	**10 09 37.9**	**-0.7**
	9.2nm,0.2s						
SHLS				*e*S	**Sn**	**10 10 00.8**	**-2.6**
	28nm,0.5s						
PDGK	**Podgornoye**	**2.09**	**330**	⇓Pg	**Pb**	**10 09 42.6**	**-0.7**
	6.7nm,0.8s						
PDGK				⇑Lg	Lg	10 10 13.5	
	36nm,0.9s						
UZB	**Uzynbulak**	**2.15**	**320**	Pg	**Pb**	**10 09 46.0**	**+1.7**
	8.1nm,0.3s						
UZB				Lg	Lg	10 10 14.8	
	31nm,0.4s						
UZB	**Uzynbulak**	**2.15**	**320**	*e*P	**Pb**	**10 09 46.0**	**+1.7**
	8.1nm,0.3s						
UZB				*e*S	**Sg**	**10 10 14.8**	**+0.6**
	31nm,0.4s						
SATY	**Saty**	**2.42**	**310**	Pg	**Pg**	**10 09 51.8**	**+0.3**
	15nm,0.6s						
SATY				Lg	Lg	10 10 25.1	
	34nm,0.8s						
KPKS	**Kokpek**	**2.55**	**320**	Pg	**Pb**	**10 09 51.7**	**+0.5**
	0.2nm,0.1s						
KPKS				Lg	Lg	10 10 24.5	
	9.8nm,0.6s						
KPKS	**Kokpek**	**2.55**	**320**	*e*P	**Pb**	**10 09 51.7**	**+0.5**
	0.2nm,0.1s						
KPKS				*e*S	**Sb**	**10 10 24.6**	**+2.0**
	9.8nm,0.6s						
BLB	**Baldybastay**	**3.14**	**326**	Pg	**Pb**	**10 10 00.0**	**-1.2**
	5.7nm,0.3s						
BLB				Lg	Lg	10 10 40.5	
	16nm,0.7s						
MK31	**Makanchi Array**	**5.36**	**10**	⇑Pn	**Pn**	**10 10 25.1**	**-0.2**
	0.8nm,0.9s,baz=193,slow=15,SNR=5.5						
MK31				⇓Sn	**Sn**	**10 11 27.9**	**+0.8**
	1.1nm,0.8s						
MK31				⇑Lg	Lg	10 11 51.2	
	1.1nm,0.7s,baz=193,slow=28,SNR=3.5						

*IDC **03** 10:12:20.7±6.0, 2°.49N×128°.29E, h95km±67km, mb3.3/5, mbtmp3.6/6, ML2.6/1, Error ellipse: s-maj=113.1km s-min=19.5km az=70.0*

ISC 03 10:12:20.9±1.3**, 2°.5N**±0°.3×**128°.3E**±0°.4**, h100km, n6, σ1s.18**/7**, mb3.7**/5**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.43**	**138**	P	**Pn**	**10 13 25.1**	**-0.9**
	0.3nm,0.3s,baz=175,slow=22,SNR=1.4						
SIJI				S	**Sn**	**10 14 17.9**	**+1.3**
	4.6nm,0.2s,baz=229,slow=23,SNR=7.0						
	6.4nm,0.7s						
WRA	**Warramunga Arr**	**23.04**	**165**	P	**P**	**10 17 18.4**	**+0.6**
	0.7nm,0.6s,baz=343,slow=10.0,SNR=9.2						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**26.54**	**168**	P	**P**	**10 17 50.6**	**+1.1**
	0.2nm,0.5s,baz=359,slow=7.6,SNR=7.1						
	0.2nm,0.5s						
STKA	**Stephens Creek**	**36.41**	**161**	P	**P**	**10 19 14.8**	**-1.1**
	1.0nm,0.5s,baz=340,slow=14,SNR=2.9						
	1.0nm,0.5s						
MKAR	**Makanchi Array**	**59.49**	**325**	P	**P**	**10 22 13.8**	**+0.1**
	0.4nm,0.5s,baz=120,slow=7.6,SNR=7.9						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**63.65**	**327**	P	**P**	**10 22 42.0**	**+0.5**
	0.5nm,0.5s,baz=123,slow=6.1,SNR=5.1						
	0.5nm,0.5s						

*NEIC **03** 10:14:36.3±1.5, 59°.67S±0°.10×26°.3W±0°.2, h67km±6km, mb5.0/67, Error ellipse: s-maj=15.6km s-min=13.1km az=50.0*

*GCMT **03** 10:14:36.3±0.3, 60°.03S±0°.02×25°.84W±0°.04, h48km±1km, MW5.0/87, Moment Tensor Solution. s50,c67; s87,c110; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.32±.18; $M_{\theta\theta}$1.46±.16; $M_{\phi\phi}$-3.78±.13; $M_{r\theta}$-1.11±.13; $M_{\theta\phi}$-2.04±.11; $M_{\phi r}$1.09±.11; Best double couple: $M_0$4.11200×10^{16} NP1:ϕ_s234.00000°,δ54.00000°,λ146.00000°. NP2: ϕ_s345.00000°,δ64.00000°,λ41.00000°. Principal axes: T 3.6760, Plg47.0000°, Azm204.0000°; N 0.8730, Plg42.0000°, Azm12.0000°; P -4.5490, Plg6.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **03** 10:14:38.1±4.9, 59°.65S×26°.47W, h89km±42km, mb4.2/12, mbtmp4.5/13, MS4.0/33 Error ellipse: s-maj=20.1km s-min=14.5km az=72.0*

ISC 03 10:14:35.6±0.3**, 59°.66S**±0°.07×**26°.18W**±0°.07**, h67km, n157, σ1s.23**/111**, mb4.9**/39**, 7C-2D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.79**	**309**	Pn	**Pn**	**10 16 29.7**	**+3.6**
VNA1	**Neumayer--Stat**	**13.27**	**153**	⇓P	**Pn**	**10 17 38.0**	**-2.6**
	comp=Z,43nm,0.2s						
VNA3	**Neumayer Olymp**	**13.42**	**157**	⇑P	**Pn**	**10 17 39.6**	**-3.1**
	comp=Z,111nm,0.2s						
VNA3				⇑S	Sn	10 19 54.6	-15
	comp=N,19nm,0.4s						
VNA2	**Neumayer--Watz**	**13.67**	**153**	⇑P	**Pn**	**10 17 42.4**	**-3.6**
	comp=Z,22nm,0.2s,baz=309,slow=11						
VNA2				⇑S	Sn	10 20 03.2	-13
	comp=E,3.7nm,0.2s,baz=301,slow=23						
ESPZ	**Base Esperanza**	**15.08**	**242**		**Pn**	**10 18 04.3**	**-0.1**
SNAA	**Sanae**	**15.25**	**152**	⇑P	**Pn**	**10 18 04.5**	**-2.1**
	comp=Z,319nm,0.2s						
SNAA				⇑S	Sn	10 20 40.7	-14
	comp=E,447nm,0.5s						
SNAA	**Sanae**	**15.25**	**152**	P	**Pn**	**10 18 04.6**	**-2.1**
	comp=E,31nm,0.6s,baz=105,slow=1.5,SNR=21						
SNAA				S	Sn	10 20 39.0	-15
	comp=E,29nm,0.9s,baz=129,slow=23,SNR=5.9						
SNAA				LR	LR	10 22 50.3	
	comp=E,629nm,20.7s,baz=313,slow=32						
SNAA	**Sanae**	**15.25**	**152**		**Pn**	**10 18 04.8**	**-1.9**
TROLL	**Troll, Antarti**	**16.81**	**149**	⇓P	**Pn**	**10 18 25.0**	**-1.3**
PMSA	**Palmer Station**	**18.16**	**238**	P	**P**	**10 18 41.9**	**-0.4**
	comp=E,12nm,0.6s,baz=301,slow=5.9,SNR=1.8						
PMSA				LR	LR	10 24 55.4	
	comp=E,790nm,19.2s,baz=80,slow=34						
PMSA	**Palmer Station**	**18.16**	**238**	P	**Pn**	**10 18 43.3**	**+0.5**
BELA	**Belgrano 2**	**18.52**	**186**	P	**P**	**10 18 46.0**	**-0.1**
EFI	**East Falkland**	**19.52**	**280**	P	**Pn**	**10 18 58.3**	**-0.7**
EFI				IAmb	IAmb	10 19 03.2	
	comp=Z,38nm,0.6s						
MG02	**Cerro Sombrero**	**24.53**	**267**	P	**P**	**10 19 47.0**	**-1.5**
MG03	**Isla Dawson**	**24.58**	**264**	P	**P**	**10 19 47.4**	**-1.5**
MG03				IAmb	IAmb	10 19 56.7	
	comp=Z,68nm,1.4s						
GO10	**Punta Arenas**	**25.25**	**265**	P	**P**	**10 19 54.0**	**-1.0**
MG05	**Puerto Natales**	**26.82**	**267**		**P**	**10 20 07.6**	**-1.5**
MG05				IAmb	IAmb	10 20 07.8	
	comp=Z,20nm,0.6s						
GO09	**Cerro Castillo**	**26.97**	**267**	P	**P**	**10 20 08.8**	**-1.8**
GO09				IAmb	IAmb	10 20 37.5	
	comp=Z,61nm,1.5s						
GO08	**Villa O'Higgin**	**28.82**	**272**		**P**	**10 20 26.7**	**-0.4**
QSPA	**South Pole Qui**	**30.58**	**180**	P	**P**	**10 20 43.0**	**+0.3**
	comp=Z,5.9nm,0.5s,baz=209,slow=0.8,SNR=18						
QSPA				PcP	**PcP**	**10 23 39.0**	**-0.5**
	comp=Z,2.5nm,0.7s,baz=348,slow=12,SNR=1.8						
QSPA				LR	LR	10 32 45.7	
	comp=Z,523nm,19.5s,baz=188,slow=36						
	comp=Z,5.9nm,0.5s						
QSPA	**South Pole Qui**	**30.58**	**180**	P	**P**	**10 20 44.1**	**+1.4**
QSPA				IAmb	IAmb	10 20 45.2	
	comp=Z,18nm,1.1s						
QSPA	**South Pole Qui**	**30.58**	**180**	P	**P**	**10 20 44.0**	**+1.4**
QSPA				PcP	**PcP**	**10 23 40.2**	**+0.7**
TRQA	**Tornquist**	**31.36**	**297**		**P**	**10 20 49.8**	**+0.1**
AY01	**Puyuhuapi**	**31.63**	**278**	P	**P**	**10 20 50.7**	**-1.1**
PLCA	**Paso Flores**	**33.30**	**285**	P	**P**	**10 21 05.5**	**-1.2**
	comp=Z,4.6nm,0.7s,baz=149,slow=8.1,SNR=28						
PLCA				PcP	**PcP**	**10 23 46.5**	**-0.7**
	comp=Z,0.7nm,0.9s,baz=150,slow=8.2,SNR=1.6						
PLCA				LR	LR	10 34 51.6	
	comp=Z,181nm,18.9s,baz=140,slow=37						
	comp=Z,4.6nm,0.7s						
PLCA	**Paso Flores**	**33.30**	**285**		**P**	**10 21 06.0**	**-0.7**
PLCA	**Paso Flores**	**33.30**	**285**	P	**P**	**10 21 05.7**	**-1.0**
PLCA				pP	**pP**	**10 21 21.9**	**-0.6**
PLCA				PcP	**PcP**	**10 23 48.5**	**+1.3**
PLTB	**Pedras Altas**	**33.37**	**314**		**P**	**10 21 07.5**	**+0.3**
LR05	**Currie**	**34.40**	**284**	P	**P**	**10 21 15.1**	**-1.0**
LR05				IAmb	IAmb	10 21 30.9	
	comp=Z,22nm,1.2s						
GO06	**Curarrehue**	**34.64**	**285**		**P**	**10 21 17.9**	**-0.4**
BI02	**San Fabin de**	**36.83**	**288**		**P**	**10 21 36.7**	**-0.4**
MAW	**Mawson**	**36.96**	**140**	LR	LR	10 35 25.1	
	comp=Z,422nm,19.7s,baz=247,slow=34						
BI05	**Punta Hualpn**	**37.70**	**286**	P	**P**	**10 21 44.2**	**-0.1**
BO02	**Sierra Bellavi**	**38.11**	**291**	IAmb	IAmb	10 22 03.4	
	comp=Z,14nm,0.7s						
GO05	**Hualane**	**38.48**	**289**	IAmb	IAmb	10 22 08.9	
	comp=Z,24nm,1.1s						
BO01	**Tunca**	**38.58**	**291**	IAmb	IAmb	10 22 03.5	
	comp=Z,22nm,1.1s						
BO04	**La Punta**	**38.68**	**291**	IAmb	IAmb	10 22 09.9	
	comp=Z,14nm,0.9s						
MT13	**San Alfonso**	**38.73**	**292**	P	**P**	**10 21 52.1**	**-1.0**
MT08	**Bocatoma Ro**	**38.85**	**293**	IAmb	IAmb	10 22 07.7	
	comp=Z,17nm,0.8s						
MT03	**Universidad Ad**	**39.04**	**292**	P	**P**	**10 21 56.3**	**+0.5**
MT01	**Popeta**	**39.09**	**291**	P	**P**	**10 21 55.2**	**-0.7**
PEL	**Peldehue**	**39.41**	**292**	P	**P**	**10 21 58.5**	**-0.2**
PEL				pP	**pP**	**10 22 15.9**	**+1.2**
MT02	**Curacav**	**39.53**	**292**	IAmb	IAmb	10 22 11.1	
	comp=Z,22nm,0.8s						
CPUP	**Villa Florida**	**39.65**	**313**	P	**P**	**10 22 00.3**	**-0.4**
	comp=Z,1.2nm,0.3s,baz=167,slow=8.4,SNR=8.4						
CPUP				LR	LR	10 38 10.6	
	comp=Z,131nm,19.9s,baz=153,slow=36						
	comp=Z,1.2nm,0.3s						
CPUP	**Villa Florida**	**39.65**	**313**	IAmb	IAmb	10 23 33.0	
	comp=Z,22nm,1.8s						
ZON	**Zonda**	**39.82**	**296**	IAmb	IAmb	10 22 14.2	
	comp=Z,57nm,1.7s						
CO04	**Los Peladeros**	**40.46**	**293**	P	**P**	**10 22 07.8**	**+0.1**
CO04				IAmb	IAmb	10 22 25.8	
	comp=Z,27nm,1.1s						
CO02	**Combarbal**	**41.17**	**293**	P	**P**	**10 22 13.4**	**0.0**
CO02				IAmb	IAmb	10 22 25.1	
	comp=Z,14nm,0.9s						
SUR	**Sutherland**	**41.22**	**70**	LR	LR	10 35 11.1	
	comp=Z,274nm,19.2s,baz=200,slow=30						
CO03	**El Pedregal**	**41.34**	**294**	P	**P**	**10 22 15.0**	**+0.3**
CO03				IAmb	IAmb	10 22 30.9	
	comp=Z,30nm,1.4s						
CO01	**Juntas del Tor**	**41.79**	**295**	IAmb	IAmb	10 22 32.1	
	comp=Z,20nm,0.9s						
LCO	**Las Campanas**	**42.89**	**296**	P	**P**	**10 22 27.2**	**-0.4**
VNDA	**Vanda**	**42.98**	**183**	P	**P**	**10 22 28.1**	**+0.7**
	comp=Z,7.9nm,0.8s,baz=178,slow=6.6,SNR=9.9						
VNDA				LR	LR	10 38 58.0	
	comp=Z,167nm,21.8s,baz=177,slow=34						
	comp=Z,7.9nm,0.8s						
VNDA	**Vanda**	**42.98**	**183**	P	**P**	**10 22 29.1**	**+1.6**
VNDA				IAmb	IAmb	10 24 00.4	
	comp=Z,81nm,1.9s						
VNDA	**Vanda**	**42.98**	**183**	P	**P**	**10 22 29.3**	**+1.9**
AC04	**Llanos de Chal**	**43.74**	**296**	IAmb	IAmb	10 22 46.5	
	comp=Z,47nm,1.1s						
CCD	**Concordia, Ant**	**44.02**	**169**	P	**P**	**10 22 36.7**	**+0.5**
CCD				pP	**pP**	**10 22 53.6**	**+1.6**
AC02	**Maricunga**	**44.04**	**299**	IAmb	IAmb	10 22 54.8	
	comp=Z,16nm,1.1s						
H04S2	**CROZET ISLANDS**	**45.68**	**110**	T	T	11 13 08.8	
	baz=225,slow=75,SNR=50						
H04S3	**CROZET ISLANDS**	**45.69**	**110**	T	T	11 13 10.3	
	baz=225,slow=75,SNR=42						
GO02	**Mina Guanaco**	**45.69**	**300**	IAmb	IAmb	10 23 08.1	
	comp=Z,16nm,0.8s						
H04S1	**CROZET ISLANDS**	**45.70**	**110**	T	T	11 13 10.3	
	baz=225,slow=75,SNR=50						
BOSA	**Boshof**	**46.47**	**71**	P	**P**	**10 22 55.9**	**0.0**
	comp=Z,2.3nm,0.7s,baz=212,slow=6.1,SNR=6.0						
BOSA				LR	LR	10 39 03.0	
	comp=Z,219nm,18.9s,baz=208,slow=31						
	comp=Z,2.3nm,0.7s						
BOSA	**Boshof**	**46.47**	**71**	P	**P**	**10 22 56.5**	**+0.6**
BOSA				IAmb	IAmb	10 23 12.3	
	comp=Z,19nm,1.3s						
BDFB	**Brasilia**	**46.78**	**331**	P	**P**	**10 22 57.4**	**-0.9**
	comp=Z,2.0nm,0.5s,baz=118,slow=4.1,SNR=3.6						
BDFB				LR	LR	10 39 32.5	
	comp=Z,200nm,20.8s,baz=153,slow=32						
	comp=Z,2.0nm,0.5s						
PB03	**IPOC Station P**	**48.49**	**301**	IAmb	IAmb	10 23 23.8	
	comp=Z,24nm,1.2s						
PB02	**IPOC Station P**	**49.19**	**302**	IAmb	IAmb	10 23 44.4	
	comp=Z,20nm,1.0s						
LBTB	**Lobatse**	**49.66**	**69**	LR	LR	10 40 12.4	
	comp=Z,299nm,20.7s,baz=202,slow=31						
LBTB	**Lobatse**	**49.66**	**69**	P	**P**	**10 23 21.2**	**+0.7**
LBTB				IAmb	IAmb	10 23 36.6	
	comp=Z,11nm,1.0s						
PB08	**IPOC Station P**	**49.92**	**303**	P	**P**	**10 23 23.0**	**+0.2**
PB08				IAmb	IAmb	10 23 39.7	
	comp=Z,21nm,1.4s						
KGCAE	**Kacgae**	**49.93**	**64**	*i* P	**P**	**10 23 19.3**	**-3.3**
KGCAE	**Kacgae**	**49.93**	**64**	P	**P**	**10 23 23.6**	**+1.0**
KGCAE				IAmb	IAmb	10 23 24.9	
	comp=Z,15nm,0.9s						
PTLB	**Pontes e Lacer**	**50.30**	**317**	P	**P**	**10 23 23.7**	**-1.5**
PTLB				IAmb	IAmb	10 23 25.5	
	comp=Z,7.0nm,0.7s						
GO01	**Chusmiza**	**50.35**	**303**	IAmb	IAmb	10 23 37.8	
	comp=Z,43nm,1.8s						
PB11	**IPOC Station P**	**50.47**	**303**	P	**P**	**10 23 26.0**	**-0.7**
PB11				IAmb	IAmb	10 23 43.0	
	comp=Z,22nm,1.1s						
SIV	**San Ignacio**	**50.48**	**314**	LR	LR	10 44 30.1	
	comp=Z,130nm,20.0s,baz=126,slow=36						
KDWAN	**Kaudwane**	**50.61**	**67**	*i* P	P	10 23 16.1	-12
TSUM	**Tsumeb**	**51.08**	**57**	LR	LR	10 40 31.8	
	comp=Z,308nm,21.2s,baz=156,slow=30						
LPHEP	**Lephephe**	**51.19**	**68**	*i* P	P	10 23 19.6	-12
H10S2	**ASCENSION HYDR**	**51.34**	**15**	T	T	11 19 09.6	
	baz=187,slow=74,SNR=19						
H10S3	**ASCENSION HYDR**	**51.34**	**15**	T	T	11 19 12.5	
	baz=33,slow=74,SNR=17						
PB16	**IPOC Station P**	**51.67**	**304**	P	**P**	**10 23 36.0**	**-0.2**
PB16				IAmb	IAmb	10 23 53.0	
	comp=Z,30nm,1.8s						
KHWEE	**KHWEE**	**52.21**	**67**	*i* P	P	10 23 34.7	-5.0
H10N1	**ASCENSION HYDR**	**52.46**	**15**	T	T	11 20 36.5	
	baz=190,slow=71,SNR=4.7						
H10N3	**ASCENSION HYDR**	**52.46**	**15**	T	T	11 20 35.6	
	baz=190,slow=71,SNR=9.9						
H10N2	**ASCENSION HYDR**	**52.47**	**15**	T	T	11 20 42.0	
	baz=190,slow=71,SNR=9.5						
LPAZ	**La Paz**	**52.94**	**306**	P	**P**	**10 23 45.1**	**-0.5**
	comp=Z,3.5nm,0.4s,baz=89,slow=7.0,SNR=19						
LPAZ				LR	LR	10 46 49.3	
	comp=Z,89nm,21.0s,baz=150,slow=37						
	comp=Z,3.5nm,0.4s						
LPAZ	**La Paz**	**52.94**	**306**	P	**P**	**10 23 45.1**	**-0.5**
LPAZ	**La Paz**	**52.94**	**306**	P	**P**	**10 23 45.2**	**-0.5**
LPAZ				pP	**pP**	**10 24 03.0**	**+0.7**
LPAZ				sP	**sP**	**10 24 09.2**	**-0.3**
DRV	**Dumont d'Urvil**	**53.57**	**173**	P	**P**	**10 23 49.7**	**+0.8**
DRV				sP	**sP**	**10 24 15.8**	**+3.0**
SOOWA	**Sowa**	**53.76**	**67**	*i* P	**P**	**10 23 50.1**	**-1.0**
BROLN	**Tlhalogang**	**53.83**	**68**	*i* P	**P**	**10 23 50.1**	**-1.5**
LSZ	**Lusaka**	**59.27**	**66**	LR	LR	10 46 08.9	
	comp=Z,340nm,21.8s,baz=204,slow=32						
LSZ	**Lusaka**	**59.27**	**66**	P	**P**	**10 24 30.9**	**+0.7**
NNA	**Nana**	**60.48**	**300**	LR	LR	10 48 48.4	
	comp=Z,103nm,21.2s,baz=150,slow=34						
ATAH	**Atahualpa**	**65.48**	**300**	LR	LR	10 50 15.8	
	comp=Z,60nm,21.1s,baz=172,slow=33						
OPO	**Ambohidratompo**	**65.76**	**85**	LR	LR	10 47 53.7	
	comp=Z,109nm,19.4s,baz=354,slow=30						
BOAV	**Boa Vista**	**67.48**	**322**	P	**P**	**10 25 22.1**	**-2.1**
MDP	**Montagnes des**	**67.88**	**331**	LR	LR	10 52 06.1	
	comp=Z,158nm,21.9s,baz=147,slow=33						
DBIC	**Dimbokro**	**68.26**	**23**	P	**P**	**10 25 30.3**	**+1.2**
	comp=Z,1.1nm,0.4s,baz=255,slow=19,SNR=1.7						
DBIC				LR	LR	10 48 54.3	
	comp=Z,87nm,21.4s,baz=169,slow=30						
	comp=Z,1.1nm,0.4s						
DBIC	**Dimbokro**	**68.26**	**23**	P	**P**	**10 25 30.6**	**+1.5**
DBIC				IAmb	IAmb	10 27 14.6	
	comp=Z,22nm,1.4s						
MBAR	**Mbarara**	**73.38**	**61**	LR	LR	10 53 51.1	
	comp=Z,220nm,21.9s,baz=246,slow=32						
ROSC	**El Rosal**	**74.61**	**310**	LR	LR	11 02 12.8	
	comp=Z,39nm,18.9s,baz=173,slow=38						
TORD	**Torodi Ar. Bea**	**75.97**	**28**	P	**P**	**10 26 15.8**	**+0.8**
	comp=Z,4.0nm,0.6s,baz=203,slow=8.8,SNR=24						
	comp=Z,4.0nm,0.6s						
TORD	**Torodi Ar. Bea**	**75.97**	**28**	P	**P**	**10 26 15.8**	**+0.8**
SDV	**Santo Domingo**	**76.95**	**315**	LR	LR	11 00 16.5	
	comp=Z,246nm,21.3s,baz=150,slow=36						
URZ	**Urewera**	**80.55**	**198**	LR	LR	10 57 26.8	
	comp=Z,104nm,21.9s,baz=168,slow=32						
HIZ	**Hauiti**	**80.64**	**197**	P	**P**	**10 26 40.8**	**+0.1**
TOZ	**Tahuroa Road**	**81.32**	**197**	P	**P**	**10 26 44.8**	**+0.5**
TOZ				IAmb	IAmb	10 26 54.8	
	comp=Z,45nm,1.8s						
JTS	**Las Juntas de**	**83.91**	**302**	LR	LR	11 07 02.5	
	comp=Z,27nm,19.0s,baz=148,slow=38						
SJG	**San Juan**	**84.04**	**322**	LR	LR	11 05 45.3	
	comp=Z,53nm,19.8s,baz=165,slow=36						
TBI	**Tubuai**	**85.21**	**230**	*e*LR	LR	10 53 51.4	
	comp=Z,487nm,30.0s						
FURI	**Furi**	**85.37**	**64**	LR	LR	11 03 18.4	
	comp=Z,172nm,18.7s,baz=180,slow=34						
BBOO	**Buckleboo**	**86.70**	**165**	P	**P**	**10 27 12.4**	**+0.6**
FORT	**Forrest**	**87.41**	**158**	P	**P**	**10 27 16.3**	**+1.1**
FORT				IAmb	IAmb	10 29 50.4	
	comp=Z,9.6nm,0.9s						
STKA	**Stephens Creek**	**88.24**	**170**	P	**P**	**10 27 18.6**	**-0.6**
	comp=Z,1.7nm,0.7s,baz=205,slow=12,SNR=3.2						
STKA				LR	LR	11 04 24.9	
	comp=Z,54nm,19.7s,baz=201,slow=34						
	comp=Z,1.7nm,0.7s						
STKA	**Stephens Creek**	**88.24**	**170**	P	**P**	**10 27 19.9**	**+0.7**
PPT2	**Papeete2**	**90.45**	**233**	*e*LR	LR	10 56 12.3	
	comp=Z,154nm,25.2s						
PPT2				*e*LR	LR	10 56 18.2	
	comp=Z,175nm,23.8s						
PPT	**Papeete**	**90.47**	**233**	LR	LR	11 00 34.3	
	comp=Z,96nm,20.3s,baz=160,slow=30						
RAR	**Rarotonga**	**90.96**	**223**	LR	LR	11 02 24.8	
	comp=Z,49nm,19.4s,baz=190,slow=32						
MDT	**Midelt**	**93.85**	**18**	LR	LR	11 03 39.4	
	comp=Z,90nm,21.1s,baz=42,slow=31						
TAOE	**Nuku Hiva Isla**	**94.13**	**245**	*e*LR	LR	10 58 11.0	
	comp=Z,279nm,25.5s						
CMIG	**Matias Romero**	**94.32**	**297**	LR	LR	11 05 37.9	
	comp=Z,52nm,20.6s,baz=178,slow=32						
ASAR	**Alice Springs**	**95.38**	**162**	P	**P**	**10 27 52.2**	**-0.2**
	comp=Z,1.8nm,0.7s,baz=184,slow=4.3,SNR=24						
	comp=Z,1.8nm,0.7s						
ASAR	**Alice Springs**	**95.38**	**162**	P	**P**	**10 27 52.4**	**-0.1**
AS31	**Alice Springs**	**95.38**	**162**	P	**P**	**10 27 52.4**	**-0.1**
DZM	**Mont Dzumac**	**97.91**	**192**	*e*LR	LR	10 59 42.0	
	comp=Z,152nm,23.2s						
WRA	**Warramunga Arr**	**99.10**	**161**	P	**Pdif**	**10 28 08.4**	**-0.8**
	comp=Z,0.6nm,0.9s,baz=190,slow=4.8,SNR=2.5						
	comp=Z,0.6nm,0.9s						
FITZ	**Fitzroy Crossi**	**99.18**	**153**	LR	LR	11 10 01.6	
	comp=Z,67nm,20.8s,baz=200,slow=34						
SCHQ	**Schefferville**	**118.68**	**335**	PKP	**PKPdf**	**10 33 13.6**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=40,slow=2.5,SNR=6.1						
PDAR	**Pinedale Array**	**122.67**	**300**	PKP	**PKPdf**	**10 33 20.6**	**-2.3**
	comp=Z,0.2nm,0.5s,baz=131,slow=5.7,SNR=5.1						
ULM	**Lac du Bonnet**	**123.20**	**314**	PKP	**PKPdf**	**10 33 21.4**	**-1.9**
	comp=Z,1.1nm,0.5s,baz=174,slow=5.5,SNR=4.9						
NVAR	**Mina Array Bea**	**123.24**	**290**	PKP	**PKPdf**	**10 33 22.9**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=121,slow=2.8,SNR=3.8						
CMAR	**Chiang Mai Arr**	**123.25**	**112**	PKP	**PKPdf**	**10 33 25.1**	**+0.7**
	comp=Z,1.2nm,0.6s,baz=235,slow=3.9,SNR=9.9						
HFS	**Hagfors**	**123.43**	**23**	PKP	**PKPdf**	**10 33 22.1**	**-1.4**
	comp=Z,1.6nm,0.8s,baz=259,slow=2.9,SNR=1.6						
NOA	**NORSAR Array B**	**123.80**	**21**	PKP	**PKPdf**	**10 33 23.8**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=196,slow=2.2,SNR=2.3						
FINES	**FINESS Array B**	**127.32**	**29**	PKP	**PKPdf**	**10 33 30.9**	**+0.1**
	comp=Z,1.7nm,0.6s,baz=145,slow=1.6,SNR=14						
AKTO	**Aktyubinsk**	**129.01**	**55**	PKP	**PKPdf**	**10 33 34.1**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=250,slow=3.5,SNR=4.7						
PZH	**PanZhiHua**	**131.45**	**109**	PKP	**PKiKP**	**10 33 42.6**	**+1.6**
ARCES	**ARCESS Array B**	**134.09**	**23**	PKP	**PKPdf**	**10 33 43.4**	**-0.1**
	comp=Z,1.5nm,0.6s,baz=190,slow=1.4,SNR=9.7						
BVAR	**Borovoye Array**	**136.19**	**60**	PKP	**PKPdf**	**10 33 47.8**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=222,slow=2.0,SNR=4.4						
MKAR	**Makanchi Array**	**137.43**	**74**	PKhKP	PKPpre	10 33 40.8	
	comp=Z,0.7nm,0.9s,baz=255,slow=2.8,SNR=6.1						
KURBB	**Kurchatov Arra**	**138.27**	**68**	PKhKP	PKPpre	10 33 44.0	
	comp=Z,0.7nm,0.7s,baz=235,slow=2.5,SNR=4.3						
YKA	**Yellowknife Ar**	**139.17**	**315**	PKP	**PKPdf**	**10 33 52.2**	**-0.9**
	comp=Z,0.7nm,0.6s,baz=121,slow=2.0,SNR=20						
SPITS	**Spitsbergen Ar**	**139.99**	**13**	PKhKP	PKPpre	10 33 48.0	
	comp=Z,4.5nm,0.9s,baz=139,slow=4.4,SNR=5.0						
SPITS				PKP	**PKPdf**	**10 33 53.5**	**-0.7**
	comp=Z,2.4nm,0.7s,baz=138,slow=6.8,SNR=4.6						
JOW	**Kunigami**	**142.76**	**140**	PKP	**PKPdf**	**10 34 00.3**	**-0.4**
	comp=Z,7.7nm,0.8s,baz=229,slow=19,SNR=1.8						
ZALV	**Zalesovo Beam**	**143.36**	**68**	PKhKP	PKPpre	10 33 57.7	
	comp=Z,1.6nm,0.4s,baz=217,slow=3.5,SNR=9.5						
NJ2	**Nanjing**	**143.93**	**124**	*e*P	**PKPdf**	**10 34 04.1**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
HNS	**HongShan**	**146.59**	**114**	⇑PKPbc	**PKPbc**	**10 34 09.4**	**+0.8**
HHC	**Hu-ho-hao-te**	**147.82**	**107**	*e*P	**PKPdf**	**10 34 08.4**	**-0.7**
SONM	**Songino Array**	**150.23**	**92**	PKPbc	**PKPbc**	**10 34 18.3**	**+0.3**
	comp=Z,6.6nm,0.7s,baz=223,slow=2.9,SNR=46						
SONM	**Songino Array**	**150.23**	**92**	PKPbc	**PKPbc**	**10 34 18.6**	**+0.6**
JMN	**Monobe**	**150.91**	**144**	PKPbc	**PKiKP**	**10 34 21.5**	**+1.0**
NRIK	**Noril'sk**	**151.40**	**43**	PKPbc	**PKPbc**	**10 34 19.9**	**0.0**
	comp=Z,1.2nm,0.4s,baz=194,slow=7.0,SNR=1.9						
ILAR	**Eielson Array**	**152.81**	**306**	PKPbc	**PKPbc**	**10 34 22.3**	**-0.9**
	comp=Z,1.6nm,0.7s,baz=180,slow=1.1,SNR=11						
USRK	**Ussuriysk Ar.**	**159.64**	**130**	PKPab	PKPab	10 34 50.1	-14
	comp=Z,1.0nm,0.6s,baz=90,slow=1.4,SNR=3.3						
PETK	**Petropavlovsk-**	**173.09**	**200**	PKPab	**PKPab**	**10 36 03.3**	**-0.2**
	comp=Z,2.1nm,0.8s,baz=160,slow=4.8,SNR=5.4						

*KOLA **03** 10:15:14.1, 69°.63N×29°.73E, h0km, ML1.8, Error ellipse:*

s-maj=9.0km s-min=4.2km az=130.0, Kirkenes, Norway
HEL 03 10:15:16.5±0.5**, 70°.37N×28°.55E, h0^{km}, ML1.3, Explosion, Northern Norway**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VADS	**Vadso**	**0.37**	**132**	P	Pg	10 15 23.4	-0.1
VADS				S	Sg	10 15 29.9	+1.6
KEV	**Kevo**	**0.81**	**222**	PG	Pg	10 15 31.1	-0.9
KEV				SB	Sg	10 15 42.6	+0.1
ARA0	**ARCESS Array S**	**1.34**	**233**	PG	Pg	10 15 40.8	-1.4
ARA0				SN	Sb	10 16 00.4	+0.2
ARCES	**ARCESS Array B**	**1.34**	**233**	P	Pg	10 15 40.5	-1.7
ARCES				S	Sb	10 15 59.9	-0.3
RAJF	**Raja-Jooseppi**	**1.90**	**183**	PG	Pn	10 15 50.7	+0.6
RAJF				SG	Sn	10 16 15.4	+0.6
KTK1	**Kautokeino**	**2.30**	**236**	PB	Pn	10 15 56.7	+1.1
KTK1				SB	Sb	10 16 26.9	-0.9
HEF	**Hetta**	**2.62**	**224**	PG	Pb	10 16 03.1	-1.2
HEF				smax	smax	10 16 33.7	
	comp=Z,0.9nm,0.2s						
HEF				SB	Sb	10 16 35.8	-1.1
VRF	**Varrio**	**2.66**	**171**	smax	smax	10 16 34.8	
	comp=Z,1.0nm,0.2s						
VRF				SG	Sb	10 16 37.8	-0.2
KIF	**Kilpisjarvi**	**3.03**	**247**	SN	Sn	10 16 40.1	-2.4
KIF				smax	smax	10 16 44.9	
	comp=Z,0.7nm,0.2s						
TRO	**Tromso**	**3.39**	**262**	PB	Pb	10 16 14.1	-3.2

*CNRM **03** 10:28:03.6, 34°.15N×5°.91W, h0^{km}, ML2.6*
*INMG **03** 10:28:06.5±1.1, 34°.38N×5°.51W, h22^{km}±5^{km}, ML1.8, Error ellipse: s-maj=7.0km s-min=2.4km az=80.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NW Fez (Marr)*
ISC 03 10:28:04.1±1.7**, 34°.27N**±0°.03×**5°.83W**±0°.06**, h11**^{km}±14^{km}**, n11,** σ**1^{s}32**/21**, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSA	**Sarsar**	**0.61**	**1**	P	**Pb**	**10 28 16.8**	**-0.1**
RSA				S	**Sn**	**10 28 28.3**	**-0.4**
CHEFC	**Chefchaouen**	**0.93**	**26**	P	**Pn**	**10 28 25.8**	**+2.7**
CHEFC				S	**Sn**	**10 28 37.8**	**+1.3**
LCRM	**LCR**	**1.00**	**126**	P	**Pb**	**10 28 22.9**	**-0.7**
LCRM				S	**Sg**	**10 28 36.5**	**+0.1**
AKLM	**AKL**	**1.65**	**81**	P	**Pg**	**10 28 35.4**	**-0.4**
AKLM				S	**Sg**	**10 28 57.2**	**+0.2**
MD31	**MD31**	**1.66**	**147**	P	**Pb**	**10 28 34.9**	**0.0**
MD31				S	**Sg**	**10 28 56.9**	**-0.7**
MDT	**Midelt**	**1.78**	**145**	P	**Pn**	**10 28 34.9**	**0.0**
MDT				S	**Sn**	**10 28 56.4**	**-1.1**
SRHM	**Skhour des Reh**	**2.49**	**224**	P	**Pn**	**10 28 46.6**	**+1.9**
SRHM				S	**Sb**	**10 29 20.9**	**+1.3**
PBDV	**Barranco-do-Ve**	**3.42**	**331**	*e*P	**Pn**	**10 28 57.7**	**+0.3**
PBDV				*e*S	**Sn**	**10 29 37.5**	**-0.4**
PVAQ	**Vaqueiros**	**3.48**	**334**	*e*P	**Pn**	**10 28 58.4**	**+0.2**
PVAQ				*e*S	**Sn**	**10 29 37.9**	**-1.5**
PVAQ				*i* IAML		10 29 38.4	
PVAQ				*i* IAML		10 29 39.2	
PVAQ				*i* IAML		10 29 39.4	
PBAR	**Barrancos**	**4.01**	**346**	*e*P	**Pn**	**10 29 05.6**	**+0.1**
PBAR				*e*S	**Sn**	**10 29 49.9**	**-2.7**
PBAR				*i* IAML		10 29 50.7	
PBAR				*i* IAML		10 29 50.7	
PBAR				*i* IAML		10 29 51.0	
PARRA	**Arraiolos**	**4.87**	**339**	*e*S	**Sn**	**10 30 11.8**	**-1.9**

IDC 03 10:57:53.8±2.2**, 2°.23N×127°.25E, h0**^{km}**, mb3.3**/4**, mbtmp3.3**/4**, Error ellipse: s-maj=199.8km s-min=23.5km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.11**	**163**	P	P	11 03 00.9	-0.7
	0.5nm,0.3s,baz=341,slow=9.3,SNR=23						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**26.54**	**166**	P	P	11 03 33.5	-0.1
	0.2nm,0.8s,baz=346,slow=9.1,SNR=2.0						
	0.2nm,0.8s						
MKAR	**Makanchi Array**	**59.08**	**326**	P	P	11 07 56.8	+0.8
	0.2nm,0.5s,baz=122,slow=8.0,SNR=2.8						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**63.27**	**328**	P	P	11 08 24.2	-0.1
	0.2nm,0.5s,baz=123,slow=7.8,SNR=1.8						
	0.2nm,0.5s						

*TRN **03** 11:10:47.5, 10°.92N×62°.38W, h58^{km}, MD3.3, North of the Paria peninsula.*
*FUNV **03** 11:10:47.5, 10°.88N×62°.14W, h100^{km}, MW3.6, Presumed earthquake*
ISC 03 11:10:47.8±2.0**, 10°.93N**±0°.07×**62°.33W**±0°.09**, h67**^{km}±40^{km}**, n17,** σ**1^{s}00**/30**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMDM	**Guralp CMG5TDE**	**0.80**	**107**	*e*P	**Pn**	**11 11 03.6**	**0.0**
DMDM				*e*S	**Sn**	**11 11 16.2**	**+0.9**
PSMG	**Mucurapo Girls**	**0.82**	**108**	*e*P	**Pn**	**11 11 04.3**	**+0.3**
PSMG				*e*S	**Sn**	**11 11 16.2**	**+0.3**
TRN	**Trinidad (W)**	**0.95**	**107**	*e*P	**Pn**	**11 11 05.4**	**-0.1**
TRN				*e*S	**Sn**	**11 11 18.2**	**-0.6**
TRN	**Trinidad (W)**	**0.95**	**107**	*e*P	**Pn**	**11 11 05.3**	**-0.2**
TRN				*e*S	**Sn**	**11 11 17.9**	**-0.8**
GRFF	**Grenada Fort F**	**1.25**	**27**	*e*P	**Pn**	**11 11 09.1**	**-0.4**
GRFF				*e*S	**Sn**	**11 11 25.1**	**-0.6**
GRGR	**Grenville**	**1.36**	**29**	*e*P	**Pn**	**11 11 10.6**	**-0.4**
GRGR				*e*S	**Sn**	**11 11 27.9**	**-0.4**
GRW	**Mount Saint Ca**	**1.39**	**28**	*e*P	**Pn**	**11 11 12.2**	**+0.9**
GRW				*e*S	**Sn**	**11 11 29.3**	**+0.4**
GRSS	**Sisters**	**1.53**	**27**	*e*P	**Pn**	**11 11 13.1**	**0.0**
GRSS				*e*S	**Sn**	**11 11 32.2**	**0.0**
GCMP	**Grenada, Carri**	**1.78**	**30**	*e*P	**Pn**	**11 11 16.2**	**-0.3**
GCMP				*e*S	**Sn**	**11 11 37.2**	**-1.0**
GCMP	**Grenada, Carri**	**1.78**	**30**	*e*P	**Pn**	**11 11 16.0**	**-0.5**
GCMP				*e*S	**Sn**	**11 11 37.6**	**-0.6**
PCRV	**Puerto La Cruz**	**2.39**	**252**	*e*P	**Pn**	**11 11 26.4**	**+1.7**
SVB	**Belmont**	**2.55**	**24**	*e*P	**Pn**	**11 11 28.3**	**+1.3**
SVB				*e*S	**Sn**	**11 11 57.4**	**+0.4**
BIM	**Bigot**	**3.77**	**19**	*e*P	**Pn**	**11 11 44.2**	**+0.6**
TACV	**Tcata**	**4.69**	**261**	*e*P	**Pn**	**11 11 57.1**	**+1.0**
TACV				*e*S	**Sn**	**11 12 48.0**	**-1.3**
BENV	**Beln**	**5.27**	**260**	*e*P	**Pn**	**11 12 05.4**	**+1.2**
BENV				*e*S	**Sn**	**11 13 01.8**	**-1.8**
CACV	**CAICARA DEL OR**	**5.33**	**232**	*e*P	Pn	11 11 58.9	-6.1
CACV				*e*S	Sn	11 12 52.6	-13
TURV	**Turiamo**	**5.44**	**265**	*e*P	**Pn**	**11 12 07.4**	**+1.0**
TURV				*e*S	**Sn**	**11 13 05.0**	**-2.6**

*IDC **03** 11:31:03.7±2.2, 39°.41N×73°.19E, h0^{km}, mb3.4/3, mbtmp3.4/7, ML3.0/3, MS3.2/2, Error ellipse: s-maj=49.5km s-min=20.3km az=86.0*
*SOME **03** 11:31:05.2, 39°.70N×73°.27E, h10^{km}*
*KRNET **03** 11:31:06.5±0.1, 39°.53N×73°.58E, h13^{km}, mb3.8*
*NNC **03** 11:31:11.3±2.5, 39°.77N×73°.76E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=18.9km s-min=9.9km az=179.0*
ISC 03 11:31:07.4±0.8**, 39°.57N**±0°.04×**73°.52E**±0°.03**, h10**^{km}**, n51,** σ**2^{s}56**/78**, mb3.5**/3**, 21C-17D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**0.44**	**358**	⇓*i*P	**Pg**	**11 31 16.4**	**+0.2**
SFK				⇓*e*S	**Sg**	**11 31 23.5**	**+1.4**
OHH	**Osh**	**1.11**	**330**	⇑*e*P	**Pb**	**11 31 28.6**	**-0.2**
OHH				⇑*e*S	**Sn**	**11 31 45.1**	**+0.6**
DRK	**Karamyk**	**1.33**	**267**	⇑*e*P	**Pb**	**11 31 32.6**	**-0.1**
DRK				⇑*e*S	**Sg**	**11 31 51.6**	**+1.2**
SALK	**Salom-Alik**	**1.33**	**10**	⇓*e*P	**Pb**	**11 31 32.4**	**-0.3**
SALK				⇓*i*S	**Sg**	**11 31 51.3**	**+0.9**
ARSB	**Arslanbob**	**1.80**	**347**	⇓*e*P	**Pb**	**11 31 41.1**	**+0.5**
ARSB				⇓*e*S	**Sg**	**11 32 06.2**	**+0.8**
JNKS	**Jany-Kuch**	**2.19**	**47**	⇑*e*P	**Pb**	**11 31 46.7**	**-0.6**
JNKS				⇑*i*S	**Sg**	**11 32 15.6**	**-2.2**
ARLS	**Aral**	**2.37**	**15**	⇑*i*P	**Pb**	**11 31 49.1**	**-1.2**
ARLS				⇑*e*S	**Sb**	**11 32 20.2**	**+0.5**
ARK	**Arkit**	**2.52**	**333**	⇑*e*P	**Pb**	**11 31 51.8**	**-1.1**
ARK				⇑*e*S	**Sb**	**11 32 24.7**	**+0.7**
GAR	**Garm**	**2.55**	**258**	⇓*i*P	**Pb**	**11 31 51.6**	**-1.8**
GAR				⇓*i*S	**Sb**	**11 32 24.5**	**-0.3**
NRN	**Naryn**	**2.65**	**45**	⇓*i*P	**Pb**	**11 31 52.2**	**-3.1**
NRN				⇓*i*S	**Sb**	**11 32 25.9**	**-2.1**
TRKS	**Terek-Say**	**2.67**	**318**	⇑*i*P	**Pn**	**11 31 52.8**	**+2.1**
TRKS				⇑*i*S	**Sb**	**11 32 26.7**	**-1.6**
MNAS	**Manas**	**3.02**	**346**	⇓*e*P	**Pb**	**11 31 58.5**	**-2.8**
MNAS				⇓*i*S	**Sb**	**11 32 36.4**	**-1.8**
AAK	**Ala-Archa**	**3.15**	**13**	Pn	**Pb**	**11 32 01.1**	**-2.5**
	4.8nm,0.3s,baz=154,slow=8.2,SNR=36						
AAK				Lg	Lg	11 32 45.3	
	6.0nm,0.3s,baz=314,slow=22,SNR=15						
	8.5nm,0.3s						
AAK	**Ala-Archa**	**3.15**	**13**	⇓Pg	**Pb**	**11 32 02.0**	**-1.7**
	5.9nm,0.5s						
AAK				⇑Lg	Lg	11 32 46.4	
	31nm,0.6s						
MRKS	**Merke**	**3.18**	**356**	Pg	**Pb**	**11 32 01.6**	**-2.5**
	9.1nm,0.3s						
MRKS				Lg	Lg	11 32 41.7	
	145nm,0.8s						
MRKS	**Merke**	**3.18**	**356**	*e*P	**Pb**	**11 32 01.6**	**-2.5**
	9.1nm,0.3s						
MRKS				*e*S	**Sb**	**11 32 41.7**	**-1.3**
	145nm,0.8s						
FRU1	**Bishkek**	**3.34**	**14**	⇑*i*P	**Pb**	**11 32 03.0**	**-3.9**
FRU1				⇑*i*S	**Sb**	**11 32 44.1**	**-3.5**
BOOM	**Boomskoye usch**	**3.44**	**31**	⇑*e*P	**Pn**	**11 32 03.8**	**+2.5**
BOOM				⇑*e*S	**Sn**	**11 32 45.9**	**+3.6**
IUG	**Iuzhnay**	**3.69**	**315**	*e*P	**Pb**	**11 32 10.4**	**-2.5**
	37nm,0.3s						
IUG				*e*S	**Sb**	**11 32 56.1**	**-1.6**
	72nm,0.5s						
KDJ	**Kajisay**	**3.77**	**46**	⇓*i*P	**Pn**	**11 32 08.5**	**+2.6**
KDJ				⇓*i*S	**Sn**	**11 32 53.4**	**+2.9**
KST	**Kastek**	**3.93**	**27**	*e*P	**Pb**	**11 32 16.4**	**-0.5**
	5.8nm,0.4s						
KST				*e*S	**Sb**	**11 33 06.6**	**+2.1**
	62nm,0.8s						
DGS	**Degeres**	**4.04**	**24**	Pg	**Pb**	**11 32 21.1**	**+2.3**
	17nm,0.6s						
DGS				Lg	Lg	11 33 14.7	
	35nm,1.2s						
DGS	**Degeres**	**4.04**	**24**	*e*P	**Pb**	**11 32 21.1**	**+2.3**
	17nm,0.6s						
DGS				*e*S	**Sg**	**11 33 14.7**	**-2.6**
	35nm,1.2s						
MTBS	**Maitube**	**4.18**	**31**	Pg	**Pb**	**11 32 23.3**	**+2.2**
	10nm,0.6s						
MTBS				Lg	Lg	11 33 18.3	
	25nm,0.3s						
MTBS	**Maitube**	**4.18**	**31**	*e*P	**Pb**	**11 32 23.3**	**+2.2**
	10nm,0.6s						
MTBS				*e*S	**Sg**	**11 33 18.2**	**-3.3**
	25nm,0.3s						
KK31	**Karatay Array**	**4.20**	**328**	Pn	**Pn**	**11 32 15.7**	**+4.2**
	2.3nm,0.3s,baz=133,slow=14,SNR=20						
KK31				⇓Pg	**Pg**	**11 32 28.5**	**+0.8**
	6.0nm,0.5s,baz=138,slow=15,SNR=7.1						
KK31				⇓Sn	**Sb**	**11 33 07.8**	**-4.3**
	7.4nm,0.4s,baz=32,slow=55,SNR=4.2						
KK31				⇑Lg	Lg	11 33 21.3	
	19nm,0.5s,baz=145,slow=30,SNR=4.2						
TNSS	**Tian-Shan**	**4.32**	**36**	Pg	**Pb**	**11 32 24.1**	**+0.4**
	3.4nm,0.3s						
TNSS				Lg	Lg	11 33 19.8	
	9.3nm,0.6s						
TNSS	**Tian-Shan**	**4.32**	**36**	*e*P	**Pb**	**11 32 24.1**	**+0.4**
	3.4nm,0.3s						
TNSS				*e*S	**Sb**	**11 33 19.8**	**+3.8**
	9.3nm,0.6s						
KRBS	**Karabastau**	**4.43**	**21**	*e*P	**Pb**	**11 32 28.3**	**+2.9**
	7.0nm,0.3s						
KRBS				*e*S	**Sg**	**11 33 26.7**	**-2.9**
	40nm,0.7s						
BRLS	**Borolday**	**4.43**	**322**	*e*P	**Pn**	**11 32 19.3**	**+4.5**
	4.0nm,0.2s						
BRLS				*e*S	**Sn**	**11 33 11.3**	**+4.9**
	7.4nm,0.2s						
MDOK	**Medeo**	**4.47**	**35**	Pg	**Pb**	**11 32 28.2**	**+2.1**
	8.0nm,0.5s						
MDOK				Lg	Lg	11 33 26.8	
	40nm,0.8s						
KOTS	**Kotyrbulak**	**4.55**	**35**	Pg	**Pb**	**11 32 30.1**	**+2.6**
	7.8nm,0.6s						
KOTS				Lg	Lg	11 33 30.0	
	65nm,0.6s						
KOTS	**Kotyrbulak**	**4.55**	**35**	*e*P	**Pb**	**11 32 30.1**	**+2.6**
	7.8nm,0.6s						
KOTS				*e*S	**Sg**	**11 33 30.0**	**-3.5**
	65nm,0.6s						
KTBS	**Karatobe**	**4.77**	**29**	Pg	**Pb**	**11 32 33.6**	**+2.4**
KTBS				Lg	Lg	11 33 35.5	
KTBS	**Karatobe**	**4.77**	**29**	*e*P	**Pb**	**11 32 33.5**	**+2.4**
KTBS				*e*S	**Sg**	**11 33 35.5**	**-5.0**
KUU	**Kurty**	**4.81**	**25**	Pg	**Pb**	**11 32 32.4**	**+0.6**
KUU				Lg	Lg	11 33 33.6	
KUU	**Kurty**	**4.81**	**25**	*e*P	**Pb**	**11 32 32.4**	**+0.6**
KUU				*e*S	**Sb**	**11 33 33.6**	**+3.9**
SATY	**Saty**	**5.07**	**45**	Pg	**Pb**	**11 32 38.9**	**+2.6**
	2.5nm,0.3s						
SATY				Lg	Lg	11 33 45.0	
	17nm,0.4s						
KPKS	**Kokpek**	**5.49**	**43**	Pg	**Pb**	**11 32 46.3**	**+2.8**
KPKS				Lg	Lg	11 33 57.9	
KPKS	**Kokpek**	**5.49**	**43**	*e*P	**Pb**	**11 32 46.3**	**+2.8**
KPKS				*e*S	**Sg**	**11 33 57.9**	**-5.8**
BLB	**Baldybastay**	**5.85**	**38**	Pg	**Pb**	**11 32 52.8**	**+3.3**
	12nm,0.6s						
BLB				Lg	Lg	11 34 09.1	
	29nm,0.9s						
PDGK	**Podgornoye**	**5.85**	**48**	⇑Pn	**Pn**	**11 32 36.0**	**+1.7**
	2.6nm,0.9s						
PDGK				⇑Pg	**Pg**	**11 32 55.2**	**-4.3**
	3.8nm,0.6s						
PDGK				⇑Lg	Lg	11 34 08.4	
	14nm,0.9s						
MKAR	**Makanchi Array**	**9.65**	**39**	Pn	**Pn**	**11 33 29.6**	**+3.2**
	0.5nm,1.0s,baz=223,slow=14,SNR=3.0						
MKAR				Lg	Lg	11 36 10.8	
	0.1nm,0.3s,baz=230,slow=30,SNR=3.7						
KURBB	**Kurchatov Arra**	**11.60**	**16**	Lg	Lg	11 37 10.8	
	baz=206,slow=29						
BVAR	**Borovoye Array**	**13.63**	**352**	Pn	**Pn**	**11 34 18.0**	**-2.7**
	baz=160,slow=13,SNR=3.0						
	1.3nm,0.8s						
ZALV	**Zalesovo Beam**	**16.30**	**24**	Pn	**Pn**	**11 34 56.5**	**+0.2**
	0.2nm,0.3s,baz=215,slow=10,SNR=5.2						
	1.0nm,0.6s						
KBZ	**Khabaz**	**23.19**	**290**	LR	LR	11 47 09.6	
	comp=Z,40nm,20.9s,baz=150,slow=42						
SONM	**Songino Array**	**25.01**	**60**	P	**P**	**11 36 31.7**	**+0.2**
	0.3nm,0.6s,baz=251,slow=9.0,SNR=2.5						
	0.3nm,0.6s						
MJAR	**Matsushiro Arr**	**50.04**	**72**	LR	LR	12 02 20.0	
	comp=Z,43nm,19.4s,baz=343,slow=37						
WRA	**Warramunga Arr**	**81.99**	**124**	P	**P**	**11 43 26.4**	**-1.3**
	0.3nm,0.6s,baz=325,slow=4.9,SNR=4.7						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**84.44**	**127**	P	**P**	**11 43 38.8**	**-1.5**
	0.2nm,0.6s,baz=306,slow=5.4,SNR=4.3						
	0.2nm,0.6s						

*IDC **03** 11:31:24.6±0.7, 27°.10N×54°.83E, h0^{km}, mb4.1/26, mbtmp4.1/30, ML4.1/4, MS3.5/14, Error ellipse: s-maj=16.2km s-min=13.8km az=167.0*
*NEIC **03** 11:31:26.9±1.3, 27°.17N±0°.07×54°.70E±0°.08, h10^{km}±1^{km}, mb4.3/22, Error ellipse: s-maj=13.0km s-min=11.5km az=52.0*
*DSN **03** 11:31:27.2±1.6, 27°.22N×54°.78E, h15^{km}, ML3.8/19, Error ellipse: s-maj=20.0km s-min=5.0km az=12.0*
*THR **03** 11:31:27.4±0.0, 27°.11N×54°.75E, h25^{km}±2^{km}, ML4.4, Presumed earthquake*
*TEH **03** 11:31:27.6, 27°.09N×54°.84E, h19^{km}±19^{km}, ML4.2, Presumed earthquake*
*MOS **03** 11:31:28.8±1.2, 27°.06N×54°.87E, h44^{km}, mb4.2/13, Error ellipse: s-maj=10.2km s-min=6.1km az=91.9*
*OMAN **03** 11:31:28.0±0.4, 27°.23N×54°.83E, h20^{km}, mb4.2/9, ml4.1/21, Error ellipse: s-maj=4.2km s-min=1.9km az=2.0*
ISC 03 11:31:31.4±0.5**, 27°.14N**±0°.04×**54°.80E**±0°.03**, h48**^{km}±4^{km}**, n196,** σ**1^{s}33**/210**, mb4.0**/43**, MS3.3**/11**, 12C-2D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**1.25**	**78**	*e*Pg	**Pn**	**11 31 51.2**	**-1.5**
BNDS				IAML		11 32 30.4	
	comp=Z,6μm,1.0s						
GENO	**Geno**	**1.25**	**78**	Pg	**Pn**	**11 31 50.9**	**-1.8**
KHL1	**Khalili_Fars**	**1.42**	**291**	Pg	**Pn**	**11 31 54.7**	**-0.2**
LMD1	**Lamerd**	**1.47**	**278**	Pg	**Pn**	**11 31 56.2**	**+0.7**
IBND	**Bandar-abas**	**1.58**	**78**	Pg	**Pn**	**11 31 56.1**	**-0.9**
SHME	**Shamm**	**1.62**	**132**	*e*P	**Pn**	**11 31 56.1**	**-1.5**
	SNR=10						
SHME				S	**Sn**	**11 32 17.4**	**+0.1**
SHME	**Shamm**	**1.62**	**132**	P	**Pn**	**11 31 56.0**	**-1.6**
	SNR=6.4						
SHME				S	**Sn**	**11 32 17.2**	**-0.1**
JHRM	**Jahrom**	**1.74**	**322**	Pg	**Pn**	**11 32 00.1**	**+0.8**
UMQ	**Umm Al-Quwin**	**1.78**	**154**	P	**Pn**	**11 31 58.5**	**-1.3**
BANOM	**Banah**	**1.81**	**132**	*e*P	**Pn**	**11 31 59.0**	**-1.3**
	SNR=33						
BANOM				S	**Sn**	**11 32 22.1**	**+0.1**
BANOM	**Banah**	**1.81**	**132**	P	**Pn**	**11 31 59.1**	**-1.1**
BANOM				S	**Sn**	**11 32 22.3**	**+0.3**
MASF	**Masafi**	**2.14**	**145**	P	**Pn**	**11 32 04.1**	**-0.7**
	SNR=19						
MSFE	**Esma-Masafi**	**2.15**	**145**	*e*P	**Pn**	**11 32 04.2**	**-0.8**
	SNR=19						
MDH	**Madha**	**2.27**	**143**	*e*P	**Pn**	**11 32 05.8**	**-0.7**
	SNR=14						
MDH	**Madha**	**2.27**	**143**	P	**Pn**	**11 32 05.8**	**-0.7**
	SNR=14						
NAZ	**Nazwa, Dubai**	**2.28**	**160**	*e*P	**Pn**	**11 32 06.6**	**0.0**
	SNR=19						
NAZ	**Nazwa, Dubai**	**2.28**	**160**	P	**Pn**	**11 32 06.7**	**+0.1**
	SNR=19						
UOSS	**Minazif**	**2.52**	**150**		**Pn**	**11 32 09.2**	**-0.8**
UOSS	**Minazif**	**2.52**	**150**	*e*P	**Pn**	**11 32 09.4**	**-0.6**
	SNR=11						
UOSS	**Minazif**	**2.52**	**150**	P	**Pn**	**11 32 09.1**	**-0.9**
UOSS	**Minazif**	**2.52**	**150**	Pn	**Pn**	**11 32 08.9**	**-1.1**
ASUD	**Al Ashush, Dub**	**2.55**	**169**	*e*P	**Pn**	**11 32 10.4**	**+0.1**
	SNR=6.9						
ASUD	**Al Ashush, Dub**	**2.55**	**169**	P	**Pn**	**11 32 10.5**	**+0.2**
	SNR=6.8						
ASUD				S	**Sn**	**11 32 41.5**	**+1.5**
AJN	**Ajban**	**2.57**	**176**	*e*P	**Pn**	**11 32 10.2**	**-0.4**
	SNR=7.0						
AJN	**Ajban**	**2.57**	**176**	P	**Pn**	**11 32 10.5**	**-0.1**
	SNR=6.4						
HATD	**Hatta, Dubai**	**2.60**	**152**	*e*P	**Pn**	**11 32 10.6**	**-0.4**
	SNR=18						
HATD	**Hatta, Dubai**	**2.60**	**152**	P	**Pn**	**11 32 10.6**	**-0.4**
	SNR=18						
ASHO	**Ashiyiah**	**2.69**	**155**	*e*P	**Pn**	**11 32 12.3**	**-0.1**
	SNR=18						
ASHO	**Ashiyiah**	**2.69**	**155**	P	**Pn**	**11 32 11.8**	**-0.6**
	SNR=18						
NGRK	**Negar Kerman**	**3.02**	**34**	Pn	**Pn**	**11 32 16.2**	**-0.9**
JASK	**Jask - Hormozg**	**3.03**	**114**	P	**Pn**	**11 32 15.7**	**-1.2**
JASK	**Jask - Hormozg**	**3.03**	**114**	Pn	**Pn**	**11 32 15.4**	**-1.5**
ALNE	**Al Ain**	**3.19**	**164**	*i* P	**Pn**	**11 32 19.0**	**-0.1**
	SNR=17						
ALNE	**Al Ain**	**3.19**	**164**	P	**Pn**	**11 32 18.9**	**-0.3**
	SNR=17						
SOHO	**SOHO**	**3.38**	**152**	*i* P	**Pn**	**11 32 20.4**	**-1.3**
	SNR=9.0						
SOHO	**SOHO**	**3.38**	**152**	P	**Pn**	**11 32 20.4**	**-1.3**
MZWR	**Madinat Zayed**	**3.46**	**194**	P	**Pn**	**11 32 22.4**	**-0.5**
MZWR				S	**Sn**	**11 33 04.9**	**+2.3**
KHGB	**Koh Gabri**	**3.55**	**24**	Pn	**Pn**	**11 32 24.2**	**0.0**
GHWR	**Ruwais**	**3.60**	**209**	P	**Pn**	**11 32 24.3**	**-0.6**
CHMN	**Cheshme madani**	**3.63**	**41**	Pn	**Pn**	**11 32 25.0**	**-0.5**
SHMA	**Al-Shehemyia**	**3.66**	**250**	P	**Pn**	**11 32 24.7**	**-0.9**
	SNR=20						
SHMA				S	**Sn**	**11 33 09.7**	**+2.2**
KBAM	**BAM**	**3.79**	**58**	Pn	**Pn**	**11 32 27.3**	**-0.2**
TRNA	**Turayna**	**4.02**	**234**	P	**Pn**	**11 32 30.1**	**-0.3**
	SNR=14						
ARQ	**Araqi**	**4.09**	**157**	P	**Pn**	**11 32 31.0**	**-0.6**
	SNR=20						
ZRDN	**Zarand Kerman**	**4.11**	**21**	Pn	**Pn**	**11 32 31.8**	**-0.1**
SLWR	**Sila**	**4.15**	**223**	P	**Pn**	**11 32 31.0**	**-1.2**
HOQ	**Hoqain**	**4.21**	**147**	Pn	**Pn**	**11 32 31.5**	**-1.6**
IMEH	**Mehriz**	**4.24**	**358**	Pn	**Pn**	**11 32 34.4**	**+0.7**
MZR	**Muzera**	**4.29**	**196**	*i* P	**Pn**	**11 32 33.1**	**-1.1**
	SNR=10						
MZR	**Muzera**	**4.29**	**196**	P	**Pn**	**11 32 33.5**	**-0.7**
	SNR=10						
MZR				S	**Sn**	**11 33 25.0**	**+2.0**
SMRA	**Abu-Samra**	**4.30**	**237**	P	**Pn**	**11 32 34.2**	**-0.1**
	SNR=6.9						
SMRA				S	**Sn**	**11 33 24.5**	**+1.4**
UMZA	**Um Al Zommool**	**4.42**	**176**	P	**Pn**	**11 32 35.6**	**-0.4**
IBAF	**Bafgh**	**4.49**	**8**	Pn	**Pn**	**11 32 36.9**	**-0.1**
TAFT	**Taft - Yazd**	**4.60**	**353**	Pn	**Pn**	**11 32 39.0**	**+0.3**
BIDO	**Bidbid**	**4.70**	**139**	P	**Pn**	**11 32 38.2**	**-1.6**
BIDO				S	**Sn**	**11 33 33.6**	**+0.6**
KLNJ	**Kolanjah**	**4.77**	**325**	*e*Pn	**Pn**	**11 32 40.1**	**-1.0**
KLNJ				IAML		11 34 35.0	
	comp=Z,180nm,1.0s						
KLNJ	**Kolanjah**	**4.77**	**325**	Pn	**Pn**	**11 32 41.6**	**+0.5**
DOBD	**Dorbid, Yazd**	**4.84**	**357**	Pn	**Pn**	**11 32 42.0**	**+0.1**
BSY	**Bisya**	**4.89**	**153**	P	**Pn**	**11 32 41.8**	**-0.7**
SMDO	**Samad**	**5.02**	**143**	P	**Pn**	**11 32 43.9**	**-0.4**
	SNR=18						
SMDO				S	**Sn**	**11 33 42.8**	**+1.6**
IRAM	**Ramesheh**	**5.11**	**336**	Pn	**Pn**	**11 32 46.0**	**+0.3**
WSAR	**Wadi Sarin**	**5.21**	**137**	P	**Pn**	**11 32 46.1**	**-0.8**
	SNR=40						
YZKH	**Yazd**	**5.24**	**358**	*e*Pn	**Pn**	**11 32 47.0**	**-0.3**
YZKH				IAML		11 34 30.8	
	comp=Z,51nm,1.0s						
CHBR	**Chabahar**	**5.33**	**105**	Pn	**Pn**	**11 32 47.8**	**-0.7**
WBK	**Wadi Bani Khal**	**5.89**	**139**	P	**Pn**	**11 32 54.7**	**-1.6**
	SNR=19						
WBK	**Wadi Bani Khal**	**5.89**	**139**	Pn	**Pn**	**11 32 54.6**	**-1.6**
NASN	**Na'in**	**5.90**	**343**	*e*Pn	**Pn**	**11 32 56.3**	**-0.3**
NASN				IAML		11 33 36.3	
	comp=Z,25nm,1.0s						
NGCH	**Negor - Chabah**	**5.96**	**106**	P	**Pn**	**11 32 56.2**	**-1.0**
	SNR=7.1						
NGCH				S	**Sn**	**11 34 03.5**	**-0.6**
NGCH	**Negor - Chabah**	**5.96**	**106**	Pn	**Pn**	**11 32 56.2**	**-1.0**
BSRN	**Basiran**	**6.11**	**37**	*e*Pn	**Pn**	**11 32 58.4**	**-0.9**
JLN	**Jalan Bani Buh**	**6.50**	**139**	P	**Pn**	**11 33 02.3**	**-2.3**
	SNR=14						
SRVN	**Saravan**	**6.77**	**86**	*e*Pn	**Pn**	**11 33 08.4**	**0.0**
SRVN				IAML		11 33 11.5	
	comp=Z,23nm,1.0s						
SRVN	**Saravan**	**6.77**	**86**	Pn	**Pn**	**11 33 07.8**	**-0.6**
MHTO	**MHTO**	**6.78**	**154**	P	**Pn**	**11 33 07.2**	**-1.1**
	SNR=50						
MHTO				S	**Sn**	**11 34 24.0**	**-0.1**
	SNR=9.1						
TABS	**Tabas**	**6.79**	**17**	*e*Pn	**Pn**	**11 33 08.6**	**0.0**
TABS				IAML		11 34 24.2	
	comp=Z,2.2nm,1.0s						
GTMR	**Gotvand**	**7.25**	**318**	*e*Pn	**Pn**	**11 33 14.5**	**-0.4**
GTMR				IAML		11 34 49.7	
	comp=Z,52nm,1.0s						
DQM	**DQM**	**7.60**	**160**	P	**Pn**	**11 33 17.7**	**-2.0**
	SNR=7.0						
DOK	**Doka**	**8.50**	**184**	P	**Pn**	**11 33 30.7**	**-1.3**
	SNR=29						
SHAO	**Shalim**	**9.10**	**175**	*i* P	**Pn**	**11 33 38.2**	**-2.1**
	SNR=9.4						
SHAO	**Shalim**	**9.10**	**175**	P	**Pn**	**11 33 38.4**	**-1.9**
	SNR=45						
RAYN	**Ar Rayn**	**9.14**	**249**		**Pn**	**11 33 37.9**	**-3.0**
RAYN	**Ar Rayn**	**9.14**	**249**	*i* P	**Pn**	**11 33 36.6**	**-4.2**
	SNR=9.8						
RAYN	**Ar Rayn**	**9.14**	**249**	P	**Pn**	**11 33 37.9**	**-3.0**
RAYN	**Ar Rayn**	**9.14**	**249**	P	**Pn**	**11 33 37.8**	**-3.0**
WHFO	**Wadi Hawf**	**9.22**	**186**	P	**Pn**	**11 33 40.3**	**-1.6**
	SNR=81						
DMTO	**DMTO**	**9.38**	**179**	P	**Pn**	**11 33 42.0**	**-2.1**
	SNR=18						
RBK	**Rabkut**	**9.60**	**183**	P	**Pn**	**11 33 45.7**	**-1.5**
HRA	**Herat**	**9.65**	**40**	Pn	**Pn**	**11 33 46.8**	**-1.1**
GEVA	**Gevas**	**14.88**	**321**		**Pn**	**11 34 54.3**	**-4.6**
GNI	**Garni**	**15.43**	**330**	Pn	**Pn**	**11 35 07.3**	**+1.3**
	comp=Z,2.1nm,0.3s,baz=181,slow=2.4,SNR=6.9						
GNI				LR	LR	11 42 16.3	
	comp=Z,73nm,19.6s,baz=157,slow=42						
	comp=Z,12nm,0.7s						
GNI	**Garni**	**15.43**	**330**		**Pn**	**11 35 02.8**	**-3.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GNI				IAmb	IAmb	11 35 14.4	
	comp=Z,16nm,0.6s						
GNI	**Garni**	**15.43**	**330**	P	**Pn**	**11 35 02.8**	**-3.2**
GNI				pmax	pmax		
	comp=Z,17nm,0.6s						
AKT	**Akhty**	**15.44**	**340**	*e*P	**Pn**	**11 35 07.8**	**+1.6**
AKT				*e*S	**Sn**	**11 37 56.3**	**+0.1**
AKT				pmax	pmax		
	comp=Z,35nm,2.0s						
GURO	**Guroymak-BITLI**	**15.62**	**320**		**Pn**	**11 35 06.0**	**-2.5**
ASF	**Jabal al Asfar**	**16.34**	**292**	Pn	**Pn**	**11 35 16.4**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=70,slow=21,SNR=4.0						
ASF				Sn	**Sn**	**11 38 12.0**	**-6.1**
	comp=Z,0.2nm,0.3s,baz=116,slow=22,SNR=1.9						
	comp=Z,1.9nm,0.5s						
BTLR	**Botlikh**	**17.00**	**338**	*c i*P	**P**	**11 35 28.6**	**+1.5**
BTLR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
EIL	**Elat**	**17.64**	**283**	LR	LR	11 44 08.0	
	comp=Z,92nm,19.4s,baz=54,slow=43						
MMAI	**Mount Meron Ar**	**17.77**	**294**	P	**Pn**	**11 35 34.6**	**-0.8**
	comp=Z,4.2nm,0.3s,baz=187,slow=13,SNR=4.1						
	comp=Z,1.2nm,0.5s						
ARPR	**Arapgir-MALATY**	**18.19**	**315**	P	**P**	**11 35 37.1**	**-3.3**
KBZ	**Khabaz**	**19.15**	**333**	P	**P**	**11 35 51.0**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=134,slow=11,SNR=5.3						
	comp=Z,1.7nm,0.7s						
KBZ	**Khabaz**	**19.15**	**333**	⇑*i*P	**Pn**	**11 35 52.0**	**+0.1**
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ATD	**Arta Tunnel**	**19.16**	**218**	LR	LR	11 43 52.6	
	comp=Z,4.1nm,18.3s,baz=34,slow=39						
SHA1	**Shidzhatmaz**	**19.25**	**332**	⇑*e*P	**Pn**	**11 35 53.8**	**+0.4**
PYA1	**Pyatigorsk**	**19.35**	**334**	⇑*i*P	**Pn**	**11 35 55.8**	**+1.5**
KVAR	**Kislovodsk Arr**	**19.42**	**333**	LR	LR	11 43 25.4	
	comp=Z,695nm,20.4s,baz=104,slow=37						
KIV	**Kislovodsk**	**19.42**	**333**	Pn	**P**	**11 35 54.3**	**+0.5**
KIV				IAmb	IAmb	11 36 05.1	
	comp=Z,27nm,0.9s						
KIV	**Kislovodsk**	**19.42**	**333**	*e*P	**Pn**	**11 35 56.6**	**+1.3**
KIV				pmax	pmax		
	comp=Z,18nm,1.0s						
KIV				MLR	MLR		
	comp=Z,21nm,14.0s						
BNN	**Bunyan**	**19.68**	**311**		**P**	**11 35 56.8**	**+0.1**
KK31	**Karatay Array**	**20.41**	**35**	P	**P**	**11 36 03.9**	**-0.6**
KK31				IAmb	IAmb	11 36 07.1	
	comp=Z,9.4nm,1.1s						
KK31	**Karatay Array**	**20.41**	**35**	P	**P**	**11 36 03.9**	**-0.6**
KK31				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KKAR	**Karatay Array**	**20.41**	**35**		**P**	**11 36 04.3**	**-0.2**
KKAR	**Karatay Array**	**20.41**	**35**	P	**P**	**11 36 04.3**	**-0.2**
ARSB	**Arslanbob**	**20.59**	**42**	P	**P**	**11 36 05.5**	**-1.1**
ARSB				IAmb	IAmb	11 36 07.1	
	comp=Z,7.7nm,0.8s						
ARSB	**Arslanbob**	**20.59**	**42**	P	**P**	**11 36 05.5**	**-1.1**
ARSB				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KSH2	**Kashi**	**21.06**	**50**	P	**P**	**11 36 13.5**	**+1.8**
KSH2				PP	**PnPn**	**11 36 34.2**	**+2.1**
KSH2				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BR131	**Keskin Array S**	**21.60**	**311**	P	**P**	**11 36 16.1**	**-1.3**
BR131				IAmb	IAmb	11 36 34.9	
	comp=Z,6.3nm,0.7s						
BR131	**Keskin Array S**	**21.60**	**311**	⇑*i*P	**P**	**11 36 17.5**	**+0.1**
BR131				*i* *PP	**sP**	**11 36 34.3**	**-0.8**
BRTR	**Keskin Array B**	**21.60**	**311**	P	**P**	**11 36 17.6**	**+0.1**
	comp=Z,3.0nm,0.8s,baz=130,slow=13,SNR=16						
	comp=Z,3.0nm,0.8s						
BRTR	**Keskin Array B**	**21.60**	**311**		**P**	**11 36 15.3**	**-2.1**
BRTR	**Keskin Array B**	**21.60**	**311**	*e*P	**P**	**11 36 18.0**	**+0.6**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AAK	**Ala-Archa**	**22.28**	**41**	P	**P**	**11 36 24.5**	**-0.3**
	comp=Z,2.5nm,0.7s,baz=232,slow=12,SNR=3.8						
AAK				LR	LR	11 47 12.7	
	comp=Z,49nm,18.2s,baz=234,slow=42						
	comp=Z,2.5nm,0.7s						
AAK	**Ala-Archa**	**22.28**	**41**	P	**P**	**11 36 23.8**	**-0.9**
AAK	**Ala-Archa**	**22.28**	**41**	⇑*i*P	**P**	**11 36 24.6**	**-0.2**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
AB31	**Akbulak array**	**22.44**	**9**		**P**	**11 36 25.8**	**-0.4**
AB31				IAmb	IAmb	11 36 26.5	
	comp=Z,7.6nm,0.8s						
ABKAR	**Akbulak array**	**22.44**	**9**		**P**	**11 36 25.4**	**-0.8**
BOOM	**Boomskoye usch**	**23.06**	**43**	P	**P**	**11 36 32.2**	**-0.7**
BOOM				IAmb	IAmb	11 36 35.1	
	comp=Z,7.6nm,1.2s						
BOOM	**Boomskoye usch**	**23.06**	**43**	P	**P**	**11 36 32.2**	**-0.7**
BOOM				pmax	pmax		
	comp=Z,8.0nm,1.2s						
AKTO	**Aktyubinsk**	**23.39**	**5**	P	**P**	**11 36 36.7**	**+0.8**
	comp=Z,10nm,0.9s,baz=189,slow=9.2,SNR=14						
AKTO				LR	LR	11 46 25.9	
	comp=Z,64nm,19.1s,baz=80,slow=38						
	comp=Z,10nm,0.9s						
BELG	**Belogornoye**	**25.79**	**350**	P	**P**	**11 36 57.7**	**0.0**
	comp=Z,5.3nm,0.7s,baz=90,slow=3.4,SNR=4.0						
	comp=Z,5.3nm,0.7s						
BORK	**Borovoye**	**28.35**	**20**	P	**P**	**11 37 20.1**	**-0.6**
BORK				IAmb	IAmb	11 37 21.3	
	comp=Z,4.8nm,1.0s						
BORK	**Borovoye**	**28.35**	**20**	*i* P	**P**	**11 37 19.8**	**-0.9**
BORK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BVAR	**Borovoye Array**	**28.35**	**20**	P	**P**	**11 37 20.1**	**-0.6**
	comp=Z,4.6nm,0.8s,baz=201,slow=7.8,SNR=13						
BVAR				LR	LR	11 50 17.4	
	comp=Z,61nm,18.9s,baz=213,slow=40						
	comp=Z,4.6nm,0.8s						
MK31	**Makanchi Array**	**29.22**	**41**	P	**P**	**11 37 27.3**	**-1.2**
MK31	**Makanchi Array**	**29.22**	**41**	P	**P**	**11 37 27.3**	**-1.2**
MK31				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**29.22**	**41**	P	**P**	**11 37 28.0**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=227,slow=12,SNR=4.8						
MKAR				PcP	**PcP**	**11 40 34.2**	**-0.6**
	comp=Z,0.4nm,0.9s,baz=250,slow=3.3,SNR=1.9						
MKAR				LR	LR	11 51 12.5	
	comp=Z,77nm,19.4s,baz=245,slow=41						
	comp=Z,0.5nm,0.6s						
MKAR	**Makanchi Array**	**29.22**	**41**	P	**P**	**11 37 28.0**	**-0.5**
KURBB	**Kurchatov Arra**	**29.61**	**31**	P	**P**	**11 37 31.1**	**-0.9**
	comp=Z,1.5nm,0.7s,baz=232,slow=9.2,SNR=4.2						
KURBB				LR	LR	11 51 37.3	
	comp=Z,81nm,18.1s,baz=180,slow=41						
	comp=Z,1.5nm,0.7s						
KURK	**Kurchatov**	**29.72**	**31**	P	**P**	**11 37 31.1**	**-1.8**
AKBB	**Malin Array Si**	**30.53**	**327**	⇑*i*P	**P**	**11 37 42.3**	**+2.2**
AKBB				*i* *PP	**sP**	**11 38 02.4**	**+3.8**
AKBB				pmax	pmax		
	comp=Z,3.0nm,1.0s						
OBN	**Obninsk**	**30.95**	**340**	⇓*e*P	**P**	**11 37 45.0**	**+1.4**
OBN				*e*		11 38 47.9	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WMQ	**Urumqi**	**31.28**	**49**	*e*P	**P**	**11 37 49.5**	**+2.6**
DGZ	**Jazzator, Alta**	**33.66**	**39**	⇑*i*P	**P**	**11 38 08.0**	**+0.2**
DGZ				*i* *PP	**sP**	**11 38 26.8**	**+0.4**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ZAA0	**Zalesovo Array**	**34.71**	**31**	IAmb	IAmb	11 38 16.9	
	comp=Z,6.2nm,0.7s						
ZALV	**Zalesovo Beam**	**34.71**	**31**	P	**P**	**11 38 16.3**	**-0.2**
	comp=Z,5.5nm,0.6s,baz=239,slow=9.4,SNR=29						
ZALV				PcP	**PcP**	**11 40 49.2**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=214,slow=4.9,SNR=2.0						
ZALV				LR	LR	11 54 36.7	
	comp=Z,59nm,19.6s,baz=251,slow=40						
	comp=Z,5.5nm,0.6s						
ZALV	**Zalesovo Beam**	**34.71**	**31**		**P**	**11 38 16.0**	**-0.5**
VRAC	**Vranov**	**36.74**	**317**	LR	LR	11 55 48.6	
	comp=Z,50nm,19.0s,baz=266,slow=40						
GTA2	**Gaotai**	**39.17**	**60**	P	**P**	**11 38 56.0**	**+1.2**
GTA2				pP	pP	11 38 59.4	-8.3
GTA2				pmax	pmax		
	comp=Z,11nm,1.0s						
FIA1	**FINESS Array S**	**39.34**	**339**	P	**P**	**11 38 56.0**	**+0.3**
FINES	**FINESS Array B**	**39.34**	**339**	P	**P**	**11 38 56.0**	**+0.3**
	comp=Z,1.1nm,0.4s,baz=141,slow=8.6,SNR=11						
	comp=Z,1.1nm,0.4s						
FINES	**FINESS Array B**	**39.34**	**339**	P	**P**	**11 38 56.0**	**+0.3**
CMAR	**Chiang Mai Arr**	**41.43**	**92**	P	**P**	**11 39 13.8**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=282,slow=8.5,SNR=4.7						
	comp=Z,0.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**41.43**	**92**	*e*P	**P**	**11 39 16.6**	**+3.0**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HFS	**Hagfors**	**43.21**	**331**	P	**P**	**11 39 27.3**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=122,slow=7.3,SNR=5.9						
	comp=Z,1.2nm,0.6s						
NB2	**NORSAR Subarra**	**44.72**	**332**	P	**P**	**11 39 38.9**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=118,slow=7.9						
NOA	**NORSAR Array B**	**44.72**	**332**	P	**P**	**11 39 38.2**	**-1.5**
	comp=Z,0.9nm,0.7s,baz=118,slow=8.0,SNR=3.9						
	comp=Z,0.9nm,0.7s						
NOA	**NORSAR Array B**	**44.72**	**332**	*e*P	**P**	**11 39 39.2**	**-0.5**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SONM	**Songino Array**	**44.91**	**48**	P	**P**	**11 39 41.6**	**+0.1**
	comp=Z,0.7nm,0.9s,baz=258,slow=7.4,SNR=3.8						
	comp=Z,0.7nm,0.9s						
SONM	**Songino Array**	**44.91**	**48**	*e*P	**P**	**11 39 43.6**	**+2.1**
ARCES	**ARCESS Array B**	**45.73**	**346**	P	**P**	**11 39 47.0**	**-0.5**
	comp=Z,2.7nm,0.8s,baz=148,slow=7.3,SNR=3.9						
	comp=Z,2.7nm,0.8s						
ARCES	**ARCESS Array B**	**45.73**	**346**	P	**P**	**11 39 46.9**	**-0.6**
ARCES	**ARCESS Array B**	**45.73**	**346**	P	**P**	**11 39 46.9**	**-0.6**
ARCES				pmax	pmax		
	comp=Z,30nm,1.5s						
HHC	**Hu-ho-hao-te**	**48.23**	**58**	*e*P	**P**	**11 40 06.3**	**-1.3**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,180nm,6.0s						
ESDC	**Sonseca Array**	**49.82**	**300**	P	**P**	**11 40 19.6**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=68,slow=8.6,SNR=4.5						
	comp=Z,0.7nm,0.7s						
TORD	**Torodi Ar. Bea**	**51.41**	**265**	P	**P**	**11 40 31.4**	**-0.5**
	comp=Z,2.4nm,0.6s,baz=66,slow=4.6,SNR=15						
	comp=Z,2.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**51.41**	**265**	P	**P**	**11 40 31.2**	**-0.7**
TORD				IAmb	IAmb	11 40 37.0	
	comp=Z,2.3nm,0.7s						
SPITS	**Spitsbergen Ar**	**53.99**	**351**	P	**P**	**11 40 49.9**	**-0.3**
	comp=Z,9.0nm,1.1s,baz=131,slow=8.1,SNR=1.5						
	comp=Z,9.0nm,1.1s						
TSUM	**Tsumeb**	**58.51**	**222**	LR	LR	12 10 09.2	
	comp=Z,42nm,18.8s,baz=158,slow=40						
DBIC	**Dimbokro**	**60.03**	**262**	P	**P**	**11 41 33.8**	**0.0**
	comp=Z,6.3nm,0.9s,baz=56,slow=6.3,SNR=5.6						
DBIC				LR	LR	12 08 18.9	
	comp=Z,41nm,18.6s,baz=141,slow=37						
	comp=Z,6.3nm,0.9s						
DBIC	**Dimbokro**	**60.03**	**262**	P	**P**	**11 41 32.7**	**-1.0**
DBIC	**Dimbokro**	**60.03**	**262**	P	**P**	**11 41 32.7**	**-1.0**
DBIC				pmax	pmax		
	comp=Z,22nm,1.5s						
KSRS	**Korea Array**	**61.28**	**60**	P	**P**	**11 41 41.2**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=277,slow=5.5,SNR=2.3						
	comp=Z,0.9nm,0.7s						
KLR	**Kul'dur**	**61.67**	**47**	⇑*i*P	**P**	**11 41 44.4**	**0.0**
KLR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BOSA	**Boshof**	**62.26**	**209**	P	**P**	**11 41 49.2**	**+0.6**
	comp=Z,1.6nm,0.5s,baz=50,slow=6.6,SNR=9.3						
BOSA				LR	LR	12 09 25.5	
	comp=Z,31nm,18.2s,baz=30,slow=37						
	comp=Z,1.6nm,0.5s						
BOSA	**Boshof**	**62.26**	**209**	P	**P**	**11 41 48.6**	**-0.1**
BOSA	**Boshof**	**62.26**	**209**	P	**P**	**11 41 48.6**	**-0.1**
BOSA				pmax	pmax		
	comp=Z,11nm,1.5s						
SEY	**Seymchan**	**69.53**	**29**	LR	LR	12 17 10.5	
	comp=Z,166nm,21.9s,baz=346,slow=40						
SEY	**Seymchan**	**69.53**	**29**	⇓*i*P	**P**	**11 42 35.6**	**+0.7**
SEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MA2	**Magadan**	**69.92**	**33**	⇑*i*P	**P**	**11 42 37.7**	**+0.4**
MA2				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BILL	**Bilibino**	**72.68**	**22**	⇑*i*P	**P**	**11 42 54.4**	**+0.6**
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
PETK	**Petropavlovsk-**	**76.00**	**37**	P	**P**	**11 43 12.7**	**-0.7**
	comp=Z,1.6nm,0.8s,baz=257,slow=5.6,SNR=3.9						
	comp=Z,1.6nm,0.8s						
C18K	**Utukok River**	**80.90**	**13**	P	**P**	**11 43 40.5**	**+0.3**
C18K				IAmb	IAmb	11 43 41.3	
	comp=Z,3.7nm,0.9s						
A36M	**Sachs Harbour**	**81.14**	**0**	P	**P**	**11 43 42.1**	**+0.8**
E18K	**Tukpahlearik C**	**82.07**	**13**	P	**P**	**11 43 46.8**	**+0.5**
E18K				IAmb	IAmb	11 43 47.9	
	comp=Z,2.3nm,0.8s						
SCHQ	**Schefferville**	**84.28**	**330**	P	**P**	**11 43 57.7**	**-0.3**
	comp=Z,1.7nm,0.9s,baz=243,slow=7.1,SNR=1.6						
	comp=Z,1.7nm,0.9s						
BMAR	**Burnt Mountain**	**84.61**	**7**	P	**P**	**11 44 00.8**	**+1.3**
IMAR	**Indian Mountai**	**84.63**	**11**	P	**P**	**11 44 00.1**	**+0.5**
ILAR	**Eielson Array**	**86.85**	**9**	P	**P**	**11 44 09.8**	**-0.8**
	comp=Z,0.8nm,0.8s,baz=330,slow=4.6,SNR=8.9						
	comp=Z,0.8nm,0.8s						
ILAR	**Eielson Array**	**86.85**	**9**	P	**P**	**11 44 10.5**	**0.0**
ILAR	**Eielson Array**	**86.85**	**9**	*e*P	**P**	**11 44 09.2**	**-1.4**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BCAR	**Beaver Creek A**	**89.14**	**7**	P	**P**	**11 44 22.2**	**+0.6**
WRA	**Warramunga Arr**	**90.10**	**112**	P	**P**	**11 44 26.5**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=306,slow=4.8,SNR=5.4						
	comp=Z,0.5nm,0.7s						
WRA	**Warramunga Arr**	**90.10**	**112**	*ce*P	**P**	**11 44 29.7**	**+3.0**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**90.28**	**355**	P	**P**	**11 44 27.6**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=1.6,slow=5.6,SNR=22						
	comp=Z,0.7nm,0.8s						
YKA	**Yellowknife Ar**	**90.28**	**355**	P	**P**	**11 44 27.2**	**+0.4**
YKA	**Yellowknife Ar**	**90.28**	**355**	*e*P	**P**	**11 44 28.0**	**+1.2**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**91.53**	**116**	P	**P**	**11 44 33.1**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=314,slow=4.2,SNR=4.9						
	comp=Z,0.3nm,0.6s						

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*WEL **03** 11:32:57.7±0.3, 44˚S±2˚×17˚0E±˚, h5km, M3.6/14, ML3.4/17, MLv3.6/14, Error ellipse: s-maj=2.7km s-min=2.2km az=145.0, confirmed*
*NOU **03** 11:32:58.1, 44˚.54S×169˚.56E, h0km, MLv4.2/14, South Island, New Zealand*
ISC 03 11:32:57.6±1.1, **44˚.49S**±0˚.02×**169˚.57E**±0˚.02, **h6**km±10km, **n59**, σ**1s.02**/75, **South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBZ	**Lake Benmore**	**0.45**	**77**	P	**Pb**	**11 33 07.4**	**-0.7**
LBZ				S	**Sg**	**11 33 13.1**	**+0.7**
WKZ	**Wanaka**	**0.52**	**229**	P	**Pg**	**11 33 08.0**	**+0.4**
WKZ				S	**Sg**	**11 33 15.0**	**+0.6**
JCZ	**Jackson Bay**	**0.70**	**306**	P	**Pb**	**11 33 11.5**	**-0.8**
JCZ	**Jackson Bay**	**0.70**	**306**	S	**Sb**	**11 33 21.6**	**-0.6**
JCZ	**Jackson Bay**	**0.70**	**306**	P	**Pb**	**11 33 11.6**	**-0.7**
JCZ				S	**Sb**	**11 33 20.8**	**-1.4**
HDWS	**Haast DOC Work**	**0.71**	**328**	P	**Pb**	**11 33 11.7**	**-0.7**
HDWS				S	**Sg**	**11 33 20.0**	**-0.6**
EAZ	**Earnscleugh**	**0.77**	**194**	P	**Pg**	**11 33 12.3**	**0.0**
NSBS	**Neils Beach**	**0.82**	**307**	P	**Pb**	**11 33 13.9**	**-0.3**
NSBS				S	**Sb**	**11 33 24.4**	**-1.0**
MCNS	**Mount Cook Ann**	**0.84**	**27**	P	**Pg**	**11 33 14.0**	**+0.2**
MCNS				S	**Sg**	**11 33 24.1**	**-0.6**
QTPS	**Queenstown Pol**	**0.84**	**229**	P	**Pb**	**11 33 14.8**	**+0.1**
QTPS				S	**Sg**	**11 33 24.7**	**-0.1**
ODZ	**Otahua Downs**	**0.95**	**126**	P	**Pg**	**11 33 15.8**	**0.0**
ODZ	**Otahua Downs**	**0.95**	**126**	S	**Sg**	**11 33 27.2**	**-0.9**
ODZ	**Otahua Downs**	**0.95**	**126**	P	**Pg**	**11 33 15.8**	**0.0**
FOZ	**Fox Glacier**	**0.97**	**11**	P	**Pg**	**11 33 16.0**	**-0.3**
FOZ				S	**Sg**	**11 33 27.5**	**-1.4**
TMZ	**Timaru**	**1.04**	**85**	P	**Pn**	**11 33 18.2**	**-0.5**
TMZ				S	**Sb**	**11 33 31.5**	**-0.4**
OAMS	**Oamaru North O**	**1.17**	**122**	P	**Pb**	**11 33 20.0**	**-0.3**
MSZ	**Milford Sound**	**1.19**	**260**	P	**Pb**	**11 33 20.0**	**-0.6**
MSZ				S	**Sg**	**11 33 35.8**	**0.0**
ARCZ	**Arundel**	**1.28**	**66**	P	**Pb**	**11 33 22.0**	**-0.2**
GCSZ	**Gaunt Creek Bo**	**1.29**	**25**	P	**Pg**	**11 33 22.5**	**+0.1**
RPZ	**Rata Peaks**	**1.32**	**55**	P	**Pg**	**11 33 22.9**	**-0.1**
RPZ	**Rata Peaks**	**1.32**	**55**	S	**Sg**	**11 33 42.2**	**+2.1**
RPZ	**Rata Peaks**	**1.32**	**55**	P	**Pb**	**11 33 22.7**	**-0.1**
MLZ	**Mavora Lakes**	**1.35**	**229**	P	**Pn**	**11 33 23.0**	**-0.1**
MLZ				S	**Sg**	**11 33 41.3**	**+0.2**
MOSS	**Mossburn Schoo**	**1.51**	**218**	P	**Pn**	**11 33 25.1**	**-0.1**
MOSS				S	**Sg**	**11 33 46.4**	**+0.2**
DUNS	**Dunedin Corsto**	**1.55**	**156**	P	**Pb**	**11 33 26.5**	**-0.3**
DUNS				S	**Sn**	**11 33 46.1**	**-0.2**
HHSZ	**Highcliff Hill**	**1.57**	**153**	P	**Pn**	**11 33 26.5**	**+0.3**
HHSZ				S	**Sn**	**11 33 46.6**	**-0.3**
WVZ	**Waitaha Valley**	**1.65**	**31**	P	**Pb**	**11 33 28.4**	**0.0**
WVZ				S	**Sg**	**11 33 50.8**	**+0.2**
WACZ	**Wakanui South**	**1.72**	**72**	P	**Pn**	**11 33 28.0**	**-0.1**
MHCZ	**Mount Hutt**	**1.73**	**57**	P	**Pn**	**11 33 28.1**	**-0.3**
WHZ	**Wether Hill Ro**	**1.81**	**219**	P	**Pn**	**11 33 29.0**	**-0.5**
WHZ				S	**Sb**	**11 33 54.9**	**+0.8**
DCZ	**Deep Cove**	**1.97**	**239**	P	**Pn**	**11 33 32.2**	**+0.6**
RACZ	**Rakaia**	**2.00**	**69**	P	**Pg**	**11 33 35.7**	**-0.3**
SYZ	**Scrubby Hill**	**2.07**	**188**	P	**Pn**	**11 33 32.5**	**-0.4**
SYZ	**Scrubby Hill**	**2.07**	**188**	S	**Sb**	**11 34 01.3**	**-0.3**
SYZ	**Scrubby Hill**	**2.07**	**188**	P	**Pn**	**11 33 32.2**	**-0.7**
OXZ	**Oxford**	**2.13**	**58**	P	**Pn**	**11 33 32.9**	**-0.8**
INZ	**Inchbonnie**	**2.23**	**38**	P	**Pn**	**11 33 35.5**	**+0.4**
MQZ	**McQueen's Vall**	**2.36**	**72**	P	**Pn**	**11 33 36.3**	**-0.5**
RCBS	**Redcliffs Bore**	**2.47**	**69**	P	**Pn**	**11 33 38.5**	**+0.2**
AKCZ	**Akaroa Harbour**	**2.48**	**77**	P	**Pn**	**11 33 38.2**	**-0.4**
APZ	**The Paps**	**2.59**	**205**	P	**Pn**	**11 33 39.1**	**-1.0**
LTZ	**Lake Taylor**	**2.60**	**50**	P	**Pn**	**11 33 40.0**	**-0.3**
OKCZ	**Okains Bay**	**2.63**	**74**	P	**Pn**	**11 33 40.9**	**+0.2**
PYZ	**Puysegur Point**	**2.64**	**229**	P	**Pn**	**11 33 41.0**	**+0.2**
PYZ	**Puysegur Point**	**2.64**	**229**	S	**Sn**	**11 34 13.8**	**+0.7**
PYZ	**Puysegur Point**	**2.64**	**229**	P	**Pn**	**11 33 40.4**	**-0.3**
GVZ	**Greta Valley S**	**2.94**	**60**	P	**Pn**	**11 33 44.2**	**-0.7**
DSZ	**Denniston Nort**	**3.19**	**32**	P	**Pn**	**11 33 48.5**	**+0.1**
KHZ	**Kahutara**	**3.56**	**56**	P	**Pn**	**11 33 53.3**	**-0.1**
KHZ	**Kahutara**	**3.56**	**56**	P	**Pn**	**11 33 51.2**	**-2.2**
THZ	**Tophouse**	**3.66**	**43**	P	**Pn**	**11 33 54.5**	**-0.3**
MRNZ	**Matariki Terra**	**3.88**	**38**	P	**Pn**	**11 33 57.5**	**-0.3**
TKNZ	**Takaka Hill**	**4.26**	**37**	P	**Pn**	**11 34 05.8**	**+2.7**
QRZ	**Quartz Range**	**4.26**	**32**	P	**Pn**	**11 34 04.9**	**+1.8**
QRZ	**Quartz Range**	**4.26**	**32**	P	**Pn**	**11 34 03.0**	**-0.1**
KHEZ	**Kahui Hut**	**6.16**	**34**	P	**Pn**	**11 34 31.3**	**+2.1**
KHEZ	**Kahui Hut**	**6.16**	**34**	P	**Pn**	**11 34 32.6**	**+3.4**
VRZ	**Vera Road**	**6.61**	**38**	P	**Pn**	**11 34 39.4**	**+4.0**
HIZ	**Hauiti**	**7.17**	**35**	P	**Pn**	**11 34 45.0**	**+2.0**

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*IDC **03** 11:52:56.4±0.9, 18˚.10S×168˚.02E, h0km, mb4.0/11, mbtmp4.0/12, ML3.6/1, MS3.5/7, Error ellipse: s-maj=28.1km s-min=19.7km az=135.0*
*NEIC **03** 11:52:59.6±1.9, 17˚.95S±0˚.06×167˚.7E±0˚.1, h10km±1km, mb4.7/12, Error ellipse: s-maj=16.9km s-min=10.1km az=84.0*
*NOU **03** 11:53:01.0, 17˚.94S×167˚.80E, h18km, MLv4.6/19, Vanuatu Islands*
ISC 03 11:53:01.9±0.5, **17˚.97S**±0˚.05×**167˚.79E**±0˚.06, **h32**km, **n53**, σ**1s.66**/49, **mb4.2**/16, **MS3.4**/5, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**0.45**	**57**	P	**Pb**	**11 53 10.6**	**-1.1**
DVP	**Devils Point**	**0.45**	**57**	S	**Sb**	**11 53 19.0**	**+0.7**
RTV	**Rentapao**	**0.63**	**74**	P	**Pn**	**11 53 13.6**	**-1.0**
RTV	**Rentapao**	**0.63**	**74**	S	**Sb**	**11 53 23.5**	**+0.3**
INH	**Isangel**	**2.11**	**138**	P	**Pn**	**11 53 35.2**	**+0.2**
SANVU	**Saraoutou**	**2.57**	**347**	P	**Pn**	**11 53 39.5**	**-1.9**
SANVU	**Saraoutou**	**2.57**	**347**	Pn	**Pn**	**11 53 39.7**	**-1.7**
MARNC	**Mare, Loyalty**	**3.50**	**176**	P	**Pn**	**11 53 54.1**	**-0.1**
MARNC	**Mare, Loyalty**	**3.50**	**176**	Pn	**Pn**	**11 53 51.8**	**-2.4**
DZM	**Mont Dzumac**	**4.28**	**197**	*e*Pn	**Pn**	**11 54 07.5**	**+2.6**
	35nm,0.8s						
DZM				*e*Sn	**Sn**	**11 54 52.4**	**-1.4**
	135nm,0.9s						
DZM				*e*LR	LR	11 55 07.1	
	204nm,24.3s						
DZM	**Mont Dzumac**	**4.28**	**197**	Pn	**Pn**	**11 54 04.0**	**-0.9**
	3.1nm,0.3s,baz=78,slow=5.1,SNR=23						
DZM				Sn	**Sn**	**11 54 49.5**	**-4.3**
	15nm,0.3s,baz=146,slow=23,SNR=11						
DZM				LR	LR	11 55 00.2	
	comp=Z,100nm,18.5s,baz=83,slow=29						
	11nm,0.5s						
DZM	**Mont Dzumac**	**4.28**	**197**	P	**Pn**	**11 54 04.6**	**-0.3**
DZM	**Mont Dzumac**	**4.28**	**197**		**Pn**	**11 54 04.4**	**-0.5**
ONTNC	**Ouen Toro**	**4.50**	**196**	P	**Pn**	**11 54 10.2**	**+2.3**
ONTNC	**Ouen Toro**	**4.50**	**196**	Pn	**Pn**	**11 54 08.0**	**+0.1**
OUENC	**Ouen Island, N**	**4.52**	**191**	P	**Pn**	**11 54 10.0**	**+1.8**
OUENC	**Ouen Island, N**	**4.52**	**191**	Pn	**Pn**	**11 54 08.5**	**+0.3**
MSVF	**Nonsavu**	**9.77**	**90**	Pn	**Pn**	**11 55 23.4**	**+3.0**
	baz=195,slow=16,SNR=1.7						
MSVF				LR	LR	11 58 36.2	
	comp=Z,810nm,19.0s,baz=124,slow=36						
MSVF	**Nonsavu**	**9.77**	**90**		**Pn**	**11 55 23.6**	**+3.2**
NGOA	**Tingoa Renbel**	**9.82**	**309**	P	**Pn**	**11 55 20.4**	**-0.6**
HNR	**Honiara**	**11.40**	**317**	LR	LR	11 59 17.8	
	comp=Z,7.2nm,18.4s,baz=239,slow=33						
SAVO	**Savo Central**	**11.70**	**317**	P	**Pn**	**11 55 48.2**	**+1.4**
TATA	**Tatamba Isabel**	**12.29**	**320**	P	**Pn**	**11 55 56.1**	**+1.3**
AFI	**Afiamalu**	**20.05**	**81**	LR	LR	12 03 40.1	
	comp=Z,77nm,20.1s,baz=272,slow=32						
CTA	**Charters Tower**	**20.47**	**261**	P	Pn	11 57 38.8	-0.7
	7.4nm,1.1s,baz=73,slow=11,SNR=6.4						
CTA				LR	LR	12 04 21.0	
	comp=Z,128nm,19.3s,baz=52,slow=33						
	7.4nm,1.1s						
CTAO	**Charters Tower**	**20.47**	**261**	P	**P**	**11 57 37.4**	**+0.2**
URZ	**Urewera**	**21.80**	**160**	P	**P**	**11 57 46.8**	**-4.5**
	2.3nm,0.8s,baz=212,slow=12,SNR=1.4						
	2.3nm,0.8s						
BKZ	**Black Stump Fm**	**22.44**	**162**	P	**P**	**11 57 57.5**	**-0.7**
BKZ				IAmb	IAmb	11 58 01.6	
	comp=Z,41nm,1.4s						
STKA	**Stephens Creek**	**27.41**	**235**	P	**P**	**11 58 45.9**	**+1.1**
	comp=Z,3.3nm,1.0s,baz=119,slow=22,SNR=3.2						
STKA				LR	LR	12 09 31.5	
	comp=Z,93nm,18.4s,baz=21,slow=36						
	comp=Z,3.3nm,1.0s						
WR8	**Warramunga Arr**	**31.52**	**261**	P	**P**	**11 59 21.0**	**-0.4**
WB0	**Warramunga Arr**	**31.63**	**261**	P	**P**	**11 59 20.7**	**-1.6**
WRA	**Warramunga Arr**	**31.67**	**261**	P	**P**	**11 59 21.8**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=92,slow=8.9,SNR=6.6						
	comp=Z,0.7nm,0.8s						
BBOO	**Buckleboo**	**32.10**	**236**	P	**P**	**11 59 24.1**	**-2.3**
ASAR	**Alice Springs**	**32.13**	**254**	P	**P**	**11 59 26.3**	**-0.4**
	comp=Z,1.5nm,0.6s,baz=83,slow=8.7,SNR=16						
ASAR				LR	LR	12 12 23.4	
	comp=Z,131nm,18.7s,baz=108,slow=36						
	comp=Z,1.5nm,0.6s						
ASAR	**Alice Springs**	**32.13**	**254**	P	**P**	**11 59 24.9**	**-1.8**
KNRA	**Kununurra**	**37.38**	**268**	P	**P**	**12 00 12.5**	**+0.4**
KNRA				IAmb	IAmb	12 00 55.0	
	comp=Z,31nm,1.4s						
FORT	**Forrest**	**38.18**	**243**	P	**P**	**12 00 17.7**	**-0.9**
FORT				IAmb	IAmb	12 00 22.1	
	comp=Z,15nm,1.1s						
FITZ	**Fitzroy Crossi**	**40.02**	**263**	LR	LR	12 16 49.1	
	comp=Z,102nm,18.6s,baz=84,slow=36						
TBI	**Tubuai**	**40.25**	**105**	*e*LR	LR	12 10 53.5	
	comp=Z,458nm,41.8s						
PPT2	**Papeete2**	**40.53**	**96**	*e*LR	LR	12 11 50.7	
	comp=Z,70nm,24.8s						
PEA0B	**Petropavlovsk-**	**71.32**	**354**	P	**P**	**12 04 18.8**	**+0.6**
PETK	**Petropavlovsk-**	**71.32**	**354**	P	**P**	**12 04 19.0**	**+0.8**
	comp=Z,4.6nm,0.9s,baz=159,slow=5.4,SNR=8.7						
	comp=Z,4.6nm,0.9s						
PETK	**Petropavlovsk-**	**71.32**	**354**	P	**P**	**12 04 19.1**	**+0.9**
QSPA	**South Pole Qui**	**72.08**	**180**	P	**P**	**12 04 24.9**	**+2.0**
QSPA				IAmb	IAmb	12 04 34.5	
	comp=Z,4.2nm,0.8s						
CM31	**Chiang Mai Arr**	**76.73**	**295**	P	**P**	**12 04 49.9**	**-0.7**
CM31				IAmb	IAmb	12 05 21.3	
	comp=Z,4.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**76.73**	**295**	P	**P**	**12 04 53.0**	**+2.3**
	comp=Z,0.5nm,0.4s,baz=141,slow=4.1,SNR=6.5						
	comp=Z,0.5nm,0.4s						
CMAR	**Chiang Mai Arr**	**76.73**	**295**	P	**P**	**12 04 49.8**	**-0.8**
BELA	**Belgrano 2**	**83.47**	**175**	P	**P**	**12 05 26.8**	**+0.8**
BELA				IAmb	IAmb	12 05 47.4	
	comp=Z,6.6nm,1.3s						
SONM	**Songino Array**	**85.39**	**324**	P	**P**	**12 05 36.9**	**+0.7**
	comp=Z,2.0nm,1.1s,baz=150,slow=4.5,SNR=6.4						
	comp=Z,2.0nm,1.1s						
PPLA	**Purkeypile**	**86.48**	**17**	P	**P**	**12 05 42.2**	**+0.9**
NVAR	**Mina Array Bea**	**89.00**	**49**	P	**P**	**12 05 53.5**	**-0.6**
	comp=Z,1.0nm,0.8s,baz=251,slow=7.2,SNR=5.4						
	comp=Z,1.0nm,0.8s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ILAR	Eielson Array	89.44	18	P	P	12 05 53.9	-1.3
	comp=Z,0.4nm,0.7s,baz=240,slow=5.1,SNR=5.5						
	comp=Z,0.4nm,0.7s						
TXAR	Lajitas Array	97.37	62	P	P	12 06 31.9	-0.8
	comp=Z,0.4nm,0.8s,baz=257,slow=4.0,SNR=3.4						
	comp=Z,0.4nm,0.8s						

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*IDC **03** 11:57:21.9±0.4, 79.°95N×0.°11W, h0km, mb4.3/31, mbtmp4.3/35, ML3.6/3, MS3.8/71, Error ellipse: s-maj=11.5km s-min=9.2km az=32.0*

*MOS **03** 11:57:21.5±1.2, 79.°84N×0.°34W, h10km, mb5.0/55, Error ellipse: s-maj=26.1km s-min=5.1km az=93.2*

*DNK **03** 11:57:22.2±1.8, 80.°02N×0.°65E, h30km±14km, ML3.6, Presumed earthquake*

*NEIC **03** 11:57:23.6±1.2, 79.°98N±0.°10×0.°4W±0.°5, h10km±1km, mb5.0/424, Error ellipse: s-maj=16.3km s-min=14.4km az=345.0*

*BER **03** 11:57:23.8±3.7, 80.°23N×0.°75E, h27km±22km, Mw4.8, ML4.3(NAO), Confirmed Earthquake*

*GFZ **03** 11:57:24.4, 79.°93N×1.°50W, h12km, MW4.7, Moment Tensor Solution. s44 Moment tensor: M_{rr}1.05; $M_{\theta\theta}$-1.07; $M_{\phi\phi}$0.02; $M_{r\theta}$0.64; $M_{\theta\phi}$-0.05; $M_{\phi r}$0.01; Fault plane solution: NP1:ϕ_s88.00000°, δ60.00000°, λ90.00000°. NP2:ϕ_s266.00000°, δ29.00000°, λ88.00000°.*

*NAO **03** 11:57:25.0, 79.°95N×0.°11W, h0km, MB3.7*

*FCIAR **03** 11:57:26.0, 80.°09N×3.°03E, h10km, station ZFI2 has station magnitude of 4.30 station OMEGA has station magnitude of 4.40*

*GCMT **03** 11:57:26.6±0.3, 79.°98N±0.°02×0.°4E±0.°1, h22km±1km, MW4.7/81, Moment Tensor Solution. s7,c7; s81,c109; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.60±.13; $M_{\theta\theta}$-1.65±.10; $M_{\phi\phi}$1.06±.08; $M_{r\theta}$-0.30±.13; $M_{\theta\phi}$-0.65±.06; $M_{\phi r}$0.27±.13; Best double couple: $M_0$1.58900×10^{16} NP1:ϕ_s34.00000°, δ69.00000°, λ14.00000°. NP2: ϕ_s299.00000°, δ77.00000°, λ159.00000°. Principal axes: T 1.3570, Plg24.0000°, Azm255.0000°; N 0.4740, Plg65.0000°, Azm90.0000°; P -1.8220, Plg5.0000°, Azm348.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*KOLA **03** 11:57:27.0, 80.°37N×5.°39E, h0km, ML3.2 Error ellipse: s-maj=60.0km s-min=19.3km az=60.0, Greenland sea*

ISC 03 11:57:23.0±0.5**, 79.°94N**±0.°03×**0.°22W**±0.°03**, h10**km±3km**, h10**km**:pP-P, n820,** σ2.s04/639**, mb4.9**/296**, MS3.8**/83**, 18C-4D, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	2.46	108	Pn	Pn	11 57 59.1	-3.9
KBS				Sn	Sn	11 58 25.9	-7.1
KBS	Kingsbay	2.46	108	eP	Pn	11 57 59.1	-3.9
KBS				eS	Sn	11 58 24.5	-8.4
KBS				IAML		11 58 35.1	
	comp=Z,227nm,0.8s						
KBS	Kingsbay	2.46	108	eP	Pn	11 57 59.1	-3.9
KBS				i S	Sn	11 58 24.6	-8.4
KBS	Kingsbay	2.46	108	P	Pn	11 57 58.7	-4.2
KBS				S	Sn	11 58 20.3	-13
NOR	Nord	3.13	310	Pn	Pn	11 58 10.7	-1.5
NOR				Sn	Sn	11 58 44.6	-4.8
NOR	Nord	3.13	310	eP	Pn	11 58 10.2	-1.9
NOR				i S	Sn	11 58 45.1	-4.3
NOR				IAML		11 58 51.1	
	comp=Z,163nm,0.4s						
NOR	Nord	3.13	310	eP	Pn	11 58 10.2	-1.9
NOR				i S	Sn	11 58 45.1	-4.3
NOR				IAML		11 58 51.1	
	comp=Z,163nm,0.4s						
BRBB	Barentsburg B	3.32	117	Pn	Pn	11 58 12.9	-1.8
BRBB				Sn	Sn	11 58 49.9	-4.2
BRBB	Barentsburg B	3.32	117	P	Pn	11 58 12.6	-2.1
BRBB				S	Sn	11 58 47.1	-7.0
BRBA	Barentsburg A	3.34	117	Pn	Pn	11 58 13.3	-1.8
BRBA				Sn	Sn	11 58 49.9	-4.7
SPA0	Spitsbergen Ar	3.61	111	Pn	Pn	11 58 15.9	-2.9
	baz=323,slow=7.4						
SPA0				Sn	Sn	11 58 54.1	-7.3
	baz=314,slow=12						
SPA0	Spitsbergen Ar	3.61	111	Pn	Pn	11 58 15.9	-2.9
SPA0				Sn	Sn	11 58 54.1	-7.3
SPA0	Spitsbergen Ar	3.61	111	eP	Pn	11 58 15.8	-3.0
SPA0				eS	Sn	11 58 52.6	-8.8
SPITS	Spitsbergen Ar	3.61	111	Pn	Pn	11 58 16.2	-2.7
	comp=Z,52nm,0.3s,baz=324,slow=8.3,SNR=1071						
SPITS				Sn	Sn	11 58 53.6	-7.8
	baz=341,slow=28						
SPITS	Spitsbergen Ar	3.61	111	P	Pn	11 58 15.6	-3.2
SPITS	Spitsbergen Ar	3.61	111	P	Pn	11 58 14.9	-4.0
SPITS				S	Sn	11 58 52.1	-9.3
SPB2	Spitsbergen Ar	3.62	111	Pn	Pn	11 58 15.7	-3.2
HSPB	Hornsund (broa	4.30	125	Pn	Pn	11 58 25.9	-2.4
HSPB				Sn	Sn	11 59 13.4	-5.1
HSPB	Hornsund (broa	4.30	125	eP	Pn	11 58 26.0	-2.4
HSPB				eS	Sn	11 59 11.5	-6.9
HSPB				IAML		11 59 18.4	
	comp=Z,93nm,0.6s						
HSPB	Hornsund (broa	4.30	125	eP	Pn	11 58 25.7	-2.6
HSPB				eS	Sn	11 59 09.8	-8.6
HSPB	Hornsund (broa	4.30	125	P	Pn	11 58 26.5	-1.8
HSPB				S	Sn	11 59 12.1	-6.3
DAG	Danmarks Havn	4.88	239⇑	iP	Pn	11 58 35.6	-0.5
DAG				i S	Sn	11 59 27.8	-4.8
DAG				IAML		11 59 31.7	
	comp=Z,336nm,0.2s						
DAG	Danmarks Havn	4.88	239⇑	iP	Pn	11 58 35.6	-0.5
DAG				i S	Sn	11 59 27.8	-4.8
DAG				IAML		11 59 31.7	
	comp=Z,336nm,0.2s						
HOPEN	Hopen	6.14	111	Pn	Pn	11 58 49.9	-3.6
HOPEN				Sn	Sn	11 59 54.4	-9.3
HOPEN	Hopen	6.14	111	eP	Pn	11 58 50.1	-3.4
HOPEN				eS	Sn	11 59 53.9	-10
HOPEN				IAML		11 59 58.2	
	comp=Z,52nm,0.4s						
BJO1	Bjornoya	6.87	132	Pn	Pn	11 59 02.4	-1.1
BJO1	Bjornoya	6.87	132	eP	Pn	11 59 02.9	-0.6
BJO1				eS	Sn	12 00 15.5	-6.1
BJO1				IAML		12 00 18.0	
	comp=Z,11nm,0.7s						
BEAR	Bear Island, N	6.88	132	Pn	Pn	11 59 02.3	-1.3
	baz=338,slow=18						
BEAR				Sn	Sn	12 00 16.1	-5.6
	baz=338,slow=37						
DBG	Daneborg	7.14	228	P	Pn	11 59 06.7	-0.6
DBG				Sn	Sn	12 00 22.1	-6.2
DBG	Daneborg	7.14	228	eP	Pn	11 59 06.8	-0.4
DBG				i S	Sn	12 00 22.8	-5.5
DBG				IAML		12 00 27.4	
	comp=Z,366nm,0.7s						
DBG	Daneborg	7.14	228	eP	Pn	11 59 06.8	-0.4
DBG				i S	Sn	12 00 22.8	-5.5
DBG				IAML		12 00 27.4	
	comp=Z,366nm,0.7s						
ZFI2	Zemlya Franca-	7.87	61	eP	Pn	11 59 12.7	-4.6
ZFI2				eS	Sn	12 00 31.7	-14
	comp=Z,92nm,1.1s						
OMEGA	Omega	7.89	61	eP	Pn	11 59 12.7	-4.8
OMEGA				eS	Sn	12 00 31.7	-15
	comp=Z,113nm,1.1s						
JNW	Jan Mayen West	9.17	197	eP	Pn	11 59 35.5	+0.5
JNW				eS	Sn	12 01 13.1	-5.0
JNW				IAML		12 01 19.2	
	comp=Z,140nm,0.7s						
JNE	Jan Mayen East	9.21	197	eP	Pn	11 59 35.9	+0.4
JMIC	Jan Mayen	9.22	197	Pn	Pn	11 59 35.6	-0.1
	comp=Z,37nm,0.3s,baz=130,slow=7.6,SNR=8.8						
JMIC				Sn	Sn	12 01 11.5	-7.7
	comp=Z,40nm,0.3s,baz=152,slow=17,SNR=17						
JMIC				LR	LR	12 02 09.9	
	comp=Z,502nm,20.7s,baz=13,slow=31						
JMIC	Jan Mayen	9.22	197	P	Pn	11 59 36.5	+0.8
JMIC	Jan Mayen	9.22	197	eP	Pn	11 59 36.1	+0.5
JMIC				eS	Sn	12 01 13.7	-5.6
JMIC				IAML		12 01 17.9	
	comp=Z,204nm,0.5s						
JMI	Jan Mayen	9.29	198	P	Pn	11 59 37.7	+1.1
JMI	Jan Mayen	9.29	198	eP	Pn	11 59 37.3	+0.7
JMI				eS	Sn	12 01 16.0	-4.9
JMI				IAML		12 01 27.2	
	comp=Z,108nm,0.6s						
NEEM	North Greenlan	9.98	282	eP	Pn	11 59 42.5	-3.9
NEEM				eS	Sn	12 01 28.2	-10
NEEM	North Greenlan	9.98	282	eP	Pn	11 59 42.5	-3.9
NEEM				eS	Sn	12 01 28.2	-10
SCO	Scoresbysund	10.87	221		Pn	11 59 58.8	+0.6
SCO	Scoresbysund	10.87	221	i P	Pn	11 59 58.5	+0.3
SCO				i S	Sn	12 01 54.5	-5.2
SCO	Scoresbysund	10.87	221	P	Pn	11 59 58.8	+0.6
SCO	Scoresbysund	10.87	221	i P	Pn	11 59 58.5	+0.3
SCO				i S	Sn	12 01 54.5	-5.2
SUMG	Summit	11.39	251		Pn	12 00 03.5	-2.3
SUMG	Summit	11.39	251	i P	Pn	12 00 04.3	-1.5
SUMG				i S	Sn	12 02 05.2	-7.8
SUMG	Summit	11.39	251	P	Pn	12 00 03.5	-2.3
SUMG	Summit	11.39	251	i P	Pn	12 00 04.3	-1.5
SUMG				i S	Sn	12 02 05.2	-7.8
VADS	Vadso	12.22	127	P	Pn	12 00 15.4	-1.2
VADS	Vadso	12.22	127	eP	Pn	12 00 14.3	-2.4
VADS				eS	Sn	12 02 19.5	-13
VADS				IAML		12 02 25.5	
	comp=Z,6.5nm,0.6s						
ARA0	ARCESS Array S	12.24	134	Pn	Pn	12 00 16.0	-1.0
	baz=343,slow=11						
ARA0	ARCESS Array S	12.24	134	Pn	Pn	12 00 16.0	-1.0
ARA0				eS	Sn	12 02 24.7	-8.7
ARA0				IAML		12 02 40.2	
	comp=Z,3.0nm,0.7s						
ARCES	ARCESS Array B	12.24	134	Pn	Pn	12 00 16.4	-0.7
	comp=Z,0.4nm,0.3s,baz=347,slow=11,SNR=16						
ARCES				Sn	Sn	12 02 19.7	-14
	comp=Z,0.1nm,0.3s,baz=337,slow=19,SNR=1.8						
	comp=Z,5.4nm,0.8s						
ARCES	ARCESS Array B	12.24	134		Pn	12 00 15.9	-1.1
ARCES	ARCESS Array B	12.24	134	P	Pn	12 00 15.9	-1.1
LOF	Lofoten	12.39	155	eP	Pn	12 00 20.3	+1.3
KTK1	Kautokeino	12.46	138	eP	Pn	12 00 20.7	+0.7
STEI	Steigen	12.71	153	eP	Pn	12 00 26.5	+3.0
KULLO	Kullorsuaq	13.06	277	i P	Pn	12 00 24.3	-3.8
KULLO				i S	Sn	12 02 41.9	-11
KULLO	Kullorsuaq	13.06	277	i P	Pn	12 00 24.3	-3.8
KULLO				i S	Sn	12 02 41.9	-11
FAUS	Fauske	13.26	153	eP	Pn	12 00 34.2	+3.4
TULEG	Thule	13.58	292		Pn	12 00 29.6	-5.6
TULEG	Thule	13.58	292	i P	Pn	12 00 29.6	-5.6
TULEG				eS	Sn	12 02 51.0	-15
TULEG	Thule	13.58	292	i P	Pn	12 00 29.6	-5.6
TULEG				eS	Sn	12 02 51.0	-15
VAGH	Vaagaholmen	13.75	157	eP	Pn	12 00 39.5	+2.0
KONS	Konsvik	13.97	157	eP	Pn	12 00 43.4	+2.9
KONS				eS	Sn	12 03 07.2	-8.2
KONS				IAML		12 03 08.5	
	comp=Z,9.7nm,0.5s						
STOK	Stokkvaagen	14.13	158	eP	Pn	12 00 45.9	+3.2
UPNV	Upernavik	14.28	271	i P	Pn	12 00 39.5	-5.2
UPNV				i S	Sn	12 03 07.4	-15
UPNV	Upernavik	14.28	271	i P	Pn	12 00 39.5	-5.2
UPNV				i S	Sn	12 03 07.4	-15
NUUG	Nuugaatsiaq	14.79	265	i P	Pn	12 00 47.2	-4.6
NUUG				i S	Sn	12 03 20.4	-15
NUUG	Nuugaatsiaq	14.79	265	i P	Pn	12 00 47.2	-4.6
NUUG				i S	Sn	12 03 20.4	-15
SAATT	Saattut	15.13	262	i P	Pn	12 00 51.0	-5.4
SAATT				i S	Sn	12 03 28.0	-16
APA	Apatity	15.15	126⇓	iP	Pn	12 00 57.3	+0.7
APA				i		12 03 45.4	
APA				pmax	pmax		
	comp=Z,22nm,1.1s						
NIAQ	Niaqornat	15.51	264	i P	Pn	12 00 57.5	-3.8
NIAQ				i S	Sn	12 03 40.2	-13
SAQQ	Saqqaq	15.88	261	i P	Pn	12 01 00.1	-5.9
SAQQ				i S	Sn	12 03 44.8	-17
SVZ	Severnaya Zeml	16.22	41	eP	Pn	12 01 04.0	-6.3
SVZ				eS	Sn	12 03 48.9	-21
BORG	Borgarnes	16.34	213	Pn	Pn	12 01 11.4	-0.5
	comp=Z,0.9nm,0.3s,baz=45,slow=22,SNR=20						
	comp=Z,20nm,1.0s						
ILULI	Ilulissat	16.43	258	Pn	Pn	12 01 06.7	-6.4
ILULI				IAmb	IAmb	12 01 19.4	
	comp=Z,64nm,0.8s						
ILULI	Ilulissat	16.43	258	i P	Pn	12 01 08.5	-4.6
ILULI				i S	Sn	12 03 58.1	-17
ILULI	Ilulissat	16.43	258	P	Pn	12 01 06.7	-6.4
ILULI				pmax	pmax		
	comp=Z,64nm,0.8s						
ILULI	Ilulissat	16.43	258	i P	Pn	12 01 08.5	-4.6
ILULI				i S	Sn	12 03 58.1	-17
GDH	Godhavn	16.82	261	i P	Pn	12 01 12.7	-5.3
GDH				i S	Sn	12 04 09.2	-15
GDH	Godhavn	16.82	261	i P	Pn	12 01 12.7	-5.3
GDH				i S	Sn	12 04 09.2	-15
POIN	Pond Inlet	18.11	290	P	Pn	12 01 27.6	-6.4
VAF	Ylistaro	18.18	145	eP	P	12 01 38.3	+3.1
SFJD	Kangerlussuaq	18.33	254	P	P	12 01 32.0	-4.9
	comp=Z,40nm,0.6s,baz=15,slow=13,SNR=24						
SFJD				S	Sn	12 04 41.1	-20
	comp=Z,29nm,0.5s,baz=107,slow=12,SNR=6.8						
SFJD				LR	LR	12 09 22.4	
	comp=Z,762nm,20.4s,baz=14,slow=39						
SFJD	Kangerlussuaq	18.33	254		P	12 01 31.9	-4.9
SFJD				IAmb	IAmb	12 01 40.2	
	comp=Z,107nm,1.1s						
SFJD	Kangerlussuaq	18.33	254	P	P	12 01 31.9	-4.9
SFJD				pmax	pmax		
	comp=Z,107nm,1.1s						
SUF	Sumiainen	18.86	141	eP	Pn	12 01 46.9	+3.6
NC204	NORSAR Array S	19.03	164		P	12 01 44.4	-0.3
RES	Resolute Bay	19.06	306	P	P	12 01 41.5	-3.3
	comp=Z,7.7nm,0.7s,baz=40,slow=12,SNR=45						
RES				S	Sn	12 04 59.1	-19
	comp=Z,15nm,0.9s,baz=296,slow=20,SNR=6.4						
RES	Resolute Bay	19.06	306		P	12 01 40.5	-4.3
RES	Resolute Bay	19.06	306	P	P	12 01 40.5	-4.3
RES				pmax	pmax		
	comp=Z,8.0nm,0.6s						
NC303	NORSAR Array S	19.11	163		Pn	12 01 47.8	+1.5
NC405	NORSAR Array S	19.24	162	P	Pn	12 01 48.9	+1.0
KEF	Keuruu	19.26	143	eP	Pn	12 01 50.4	+2.3
NBO00	NORSAR Array S	19.28	164	P	Pn	12 01 49.5	+1.2
ADZR	Andozero	19.28	124	eP	Pn	12 01 53.1	+4.8
ADZR				pmax	pmax		
	comp=Z,45nm,1.1s						
JOF	Joensuu	19.29	134	eP	Pn	12 01 50.4	+2.0
NB2	NORSAR Subarra	19.29	163	P	Pn	12 01 50.5	+2.0
	comp=Z,3.7nm,0.8s,baz=354,slow=11						
NOA	NORSAR Array B	19.29	163	P	Pn	12 01 50.0	+1.5
	baz=348,slow=9.2,SNR=12						
NOA				LR	LR	12 08 02.7	
	comp=Z,245nm,19.6s,baz=345,slow=33						
	comp=Z,3.7nm,0.9s						
NOA	NORSAR Array B	19.29	163	P	Pn	12 01 50.0	+1.5
LSH	Leshukonskoye	19.54	113	eP	Pn	12 01 54.2	+2.9
	comp=Z,33nm,0.8s						
NRA0	NORESS Array S	19.61	163	P	Pn	12 01 53.8	+1.5
	baz=358,slow=10						
NRA0	NORESS Array S	19.61	163	P	Pn	12 01 53.8	+1.5
FIA1	FINESS Array S	20.10	142	P	Pn	12 01 56.7	-1.4
FIA0	FINESS Array S	20.10	142	P	Pn	12 01 57.6	-0.4
	baz=346,slow=11						
FIA0	FINESS Array S	20.10	142	P	Pn	12 01 57.6	-0.4
FINES	FINESS Array B	20.10	142	P	Pn	12 01 57.4	-0.7
	comp=Z,14nm,0.7s,baz=343,slow=8.1,SNR=15						
FINES				LR	LR	12 09 17.6	
	comp=Z,352nm,20.7s,baz=7.5,slow=36						
	comp=Z,14nm,0.7s						
FINES	FINESS Array B	20.10	142	P	Pn	12 01 57.5	-0.5
HFS	Hagfors	20.33	160	P	Pn	12 02 00.2	-0.6
	comp=Z,16nm,0.8s,baz=4.1,slow=10,SNR=11						
HFS				LR	LR	12 08 35.4	
	comp=Z,336nm,18.6s,baz=348,slow=33						
	comp=Z,16nm,0.8s						
HFS	Hagfors	20.33	160	P	Pn	12 02 00.2	-0.6
	baz=2.3,slow=9.3						
HFS	Hagfors	20.33	160	P	Pn	12 02 00.2	-0.6
KONO	Kongsberg	20.60	166	i P	P	12 01 59.9	-1.8
KONO				pmax	pmax		
	comp=Z,162nm,3.2s						
AAL	Aland	20.75	151	eP	P	12 02 03.5	+0.3
MEF	Metsahovi	21.12	145	eP	P	12 02 10.5	+3.2
ILON	Igloolik, Nuna	21.62	288		P	12 02 12.1	-0.5
ARBE	Arbavere	22.06	143	eP	P	12 02 16.9	-0.4
KLMR	Klimovskoe	22.39	125	eP	P	12 02 20.9	0.0
KLMR				e		12 02 43.9	
KLMR				pmax	pmax		
	comp=Z,114nm,1.2s						
KLMR	Klimovskoe	22.39	125	eP	P	12 02 20.9	0.0
	comp=Z,85nm,1.1s						
MTSE	Matsula	22.55	146	eP	P	12 02 23.9	+1.4
NRIK	Noril'sk	22.67	67	P	P	12 02 25.3	+1.5
	comp=Z,13nm,0.9s,baz=341,slow=9.0,SNR=7.9						
NRIK				LR	LR	12 12 50.5	
	comp=Z,386nm,18.0s,baz=322,slow=41						
	comp=Z,13nm,0.9s						
NRIK	Noril'sk	22.67	67		P	12 02 23.3	-0.5
NRIK	Noril'sk	22.67	67	i P	P	12 02 23.3	-0.5
NRIK				pmax	pmax		
	comp=Z,102nm,0.9s						
NRS	Narsarsuaq	22.92	242	P	P	12 02 25.5	-1.0
NRS	Narsarsuaq	22.92	242	P	P	12 02 25.5	-1.0
NRS				pmax	pmax		
	comp=Z,178nm,1.0s						
VSU	Vasula	23.09	143	i P	P	12 02 27.1	-1.2
VSU				pmax	pmax		
	comp=Z,75nm,1.0s						
VSU	Vasula	23.09	143	eP	P	12 02 29.3	+1.0
IVI	Ivigtut	23.31	245		P	12 02 29.9	-0.5
FRB	Frobisher Bay	24.41	269	LR	LR	12 12 59.5	
	comp=Z,168nm,18.7s,baz=13,slow=38						
EKA	Eskdalemuir Ar	24.73	184	P	P	12 02 43.0	-1.0
	comp=Z,2.0nm,0.8s,baz=12,slow=10,SNR=3.6						
EKA				LR	LR	12 10 03.7	
	comp=Z,303nm,21.1s,baz=6.0,slow=31						
	comp=Z,2.0nm,0.8s						
EKA	Eskdalemuir Ar	24.73	184	P	P	12 02 43.0	-1.0
A36M	Sachs Harbour	25.29	323		P	12 02 49.1	+0.2
A36M	Sachs Harbour	25.29	323	P	P	12 02 49.8	+0.9
	baz=20,SNR=15						
PABE	Paberze	25.73	148	P	P	12 02 53.0	+0.1
PABE	Paberze	25.73	148	eP	P	12 02 52.4	-0.5
TIXI	Tiksi	26.03	34	P	P	12 02 56.5	+1.0
TIXI	Tiksi	26.03	34c	eP	P	12 02 54.7	-0.8
TIXI				pmax	pmax		
	comp=Z,15nm,1.4s						
KIRV	Kirov	26.07	115	i P	P	12 02 55.9	-0.1
NACGM	Naroch	26.60	144	eP	P	12 03 00.2	-0.6
MNK	Minsk	27.11	143	i P	P	12 03 07.3	+1.9
	comp=E,19nm,0.9s						
MNK				i P	P	12 03 07.3	+1.9
	comp=N,15nm,0.9s						
MNK				i P	P	12 03 07.3	+1.9
	comp=Z,25nm,0.7s,baz=350						
MNK				i PP	PnPn	12 03 50.9	+2.9
MNK				i PPP	PPP	12 03 59.0	
MNK				i S	S	12 07 47.6	+4.4
MNK				i SS	SnSn	12 08 57.0	+7.5
MNK				i LQ	LQ	12 11 44.5	
MNK				i LR	LR	12 12 25.5	
	comp=Z,161nm,12.6s						
MNK				i LRM	MLR	12 13 11.6	
	comp=N,110nm,13.6s						
MNK				i LRM	MLR	12 13 17.0	
	comp=Z,243nm,15.0s						
MNK				i LRM	MLR	12 13 24.1	
	comp=E,183nm,14.4s						
MNK	Minsk	27.11	143	i P	P	12 03 07.3	+1.9
MNK				i		12 03 50.9	
MNK				i PPP	PPP	12 03 59.0	
MNK				i		12 06 26.6	
MNK				i S	S	12 07 47.5	+4.4
MNK				i SS	SnSn	12 08 56.9	+7.5
MNK				pmax	pmax		
	comp=E,19nm,0.9s						
MNK				pmax	pmax		
	comp=N,15nm,0.9s						
MNK				pmax	pmax		
	comp=Z,25nm,0.7s						
MNK				MLR	MLR		
	comp=Z,161nm,13.0s						
MNK				MLR	MLR		
	comp=N,110nm,14.0s						
MNK				MLR	MLR		
	comp=Z,243nm,15.0s						
MNK				MLR	MLR		
	comp=E,183nm,14.0s						
OBN	Obninsk	27.54	132	LR	LR	12 14 13.8	
	comp=E,208nm,18.5s,baz=6.5,slow=37						
OBN	Obninsk	27.54	132⇑	eP	P	12 03 08.8	-0.5
OBN				i		12 03 17.2	
OBN				e		12 03 53.0	
OBN				eS	S	12 07 55.0	+5.1
OBN				eSS	SnSn	12 09 04.7	+4.8
OBN				pmax	pmax		
	comp=Z,91nm,3.7s						
OBN				MLR	MLR		
	comp=Z,220nm,20.0s						
C36M	Paulatuk	27.67	321		P	12 03 10.6	+0.2
C36M	Paulatuk	27.67	321	P	P	12 03 11.4	+1.1
	baz=18						
BLKN	Baker Lake	28.56	295		P	12 03 18.7	+0.5
BLKN				IAmb	IAmb	12 03 21.2	
	comp=Z,20nm,0.9s						
C26K	Camden Bay	29.05	336	P	P	12 03 23.6	+1.1
	baz=12						
CLL	Collm	29.09	163	i P	P	12 03 24.6	+1.5
CLL				pmax	pmax		
	comp=Z,18nm,1.4s						
CLL	Collm	29.09	163	i P	P	12 03 24.6	+1.5
	comp=Z,18nm,1.4s						
CLL				i x	x	12 03 36.4	
CLL				ePP	PP	12 04 32.0	+3.4
B22K	Teshekpuk Lake	29.17	342	P	P	12 03 24.1	+0.5
	baz=9.5						
C27K	Jago River	29.24	335	P	P	12 03 24.0	-0.3
C27K	Jago River	29.24	335	P	P	12 03 24.1	-0.2
	baz=12						
D27M	Malcolm River	29.41	333	P	P	12 03 25.5	-0.3
	baz=13						
C24K	Franklin Bluff	29.50	338	IAmb	IAmb	12 03 36.8	
	comp=Z,29nm,1.0s						
C24K	Franklin Bluff	29.50	338	P	P	12 03 26.4	-0.1
	baz=11						
C23K	Itkillik River	29.51	340	IAmb	IAmb	12 03 36.9	
	comp=Z,19nm,1.0s						
C23K	Itkillik River	29.51	340	P	P	12 03 26.8	+0.2
	baz=10						
ARTI	Arti	29.65	106		P	12 03 28.3	+0.3
ARTI				IAmb	IAmb	12 03 36.9	
	comp=Z,19nm,0.6s						
ARTI	Arti	29.65	106d	iP	P	12 03 29.5	+1.5
ARTI				S	S	12 08 25.5	+2.5
ARTI				SS	SnSn	12 09 50.9	-0.2
ARTI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
INK	Inuvik	29.66	327	LR	LR	12 18 15.3	
	comp=Z,151nm,18.3s,baz=303,slow=42						
INK	Inuvik	29.66	327		P	12 03 28.3	+0.3
INK	Inuvik	29.66	327	P	P	12 03 28.3	+0.3
INK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
INK	Inuvik	29.66	327	P	P	12 03 27.9	-0.1
	baz=15,SNR=5.6						
KUQ	Kuujjuuaa	29.66	265		P	12 03 28.9	+0.8
KUQ				IAmb	IAmb	12 03 29.7	
	comp=Z,14nm,0.8s						
A19K	Wainwright	29.67	347	P	P	12 03 27.5	-0.5
	baz=6.8						
D25K	Kavik River	29.74	336	P	P	12 03 28.8	+0.1
	baz=12,SNR=5.8						
KSP	Ksiaz	29.75	159	P	P	12 03 30.4	+1.4
E28M	Babbage River	29.91	331	P	P	12 03 29.7	-0.5
	baz=13						
B21K	Ikpikpuk River	29.95	342	P	P	12 03 30.1	-0.4
	baz=8.9						
E29M	Blow River	29.98	330	IAmb	IAmb	12 03 40.7	
	comp=Z,17nm,0.8s						
E29M	Blow River	29.98	330	P	P	12 03 31.4	+0.5
	baz=14						
D24K	Happy Valley	30.07	338	P	P	12 03 30.8	-0.8
	baz=11						
NKC	Novy Kostel	30.14	164	eP	P	12 03 34.6	+2.1
NKC				e*PP	pwP	12 03 38.7	+0.4
NKC	Novy Kostel	30.14	164	eP	P	12 03 34.6	+2.1
NKC				epP	pwP	12 03 38.7	+0.4
LPSR	Galich'ya Gora	30.31	130	eP	P	12 03 33.3	-0.6
LPSR				pmax	pmax		
	comp=Z,40nm,1.0s						
D23K	Nanushuk River	30.37	339	IAmb	IAmb	12 03 47.1	
	comp=Z,31nm,1.5s						

D23K Nanushuk River 30.37 339 P **P** 12 03 35.7 +1.4
baz=10.0
C21K Knifeblade Rid 30.42 342 P **P** 12 03 36.3 +1.5
baz=8.7
E27K Coleen River 30.49 333 P **P** 12 03 36.4 +1.0
baz=13
F31M Tsiigehtchic 30.52 327 P **P** 12 03 34.7 -0.9
baz=15
KRLC Kraliky 30.55 158 *e*P **P** 12 03 38.8 +2.7
KRLC Kraliky 30.55 158 *e*P **P** 12 03 38.8 +2.7
F30M Barrier River 30.55 328 P **P** 12 03 34.6 -1.3
baz=14
D22K Ayikyak River 30.58 341 P **P** 12 03 35.7 -0.5
baz=9.3
GRF Grafenberg Arr 30.62 165 *e*P **P** 12 03 39.0 +2.3
comp=Z,18nm,1.0s,baz=356,slow=8.8
TOLK Toolik Lake Re 30.62 338 P **P** 12 03 37.6 +1.0
baz=10
C19K Lookout Ridge 30.70 346 IAmb IAmb 12 03 48.1
comp=Z,15nm,0.9s
C19K Lookout Ridge 30.70 346 P **P** 12 03 37.9 +0.6
baz=7.1,SNR=12
E25K Arctic Village 30.86 335 IAmb IAmb 12 03 48.5
comp=Z,12nm,0.9s
E25K Arctic Village 30.86 335 P **P** 12 03 40.0 +1.3
baz=11,SNR=6.8
MORC Moravsky Berou 30.89 157 **P** 12 03 39.4 +0.3
MORC Moravsky Berou 30.89 157 P **P** 12 03 39.4 +0.3
MORC pmax pmax
comp=Z,11nm,1.1s
AK21 Malin Array Si 30.91 143 P **P** 12 03 39.2 0.0
F28M Old Crow 30.91 331 IAmb IAmb 12 03 49.0
comp=Z,16nm,0.8s
F28M Old Crow 30.91 331 P **P** 12 03 38.9 -0.2
baz=13,SNR=8.3
AK22 Malin Array Si 30.93 143 P **P** 12 03 39.3 0.0
AK20 Malin Array Si 30.94 143 P **P** 12 03 39.3 -0.1
D20K Etiviluk River 30.95 343 P **P** 12 03 39.0 -0.5
baz=8.0
AK19 Malin Array Si 30.96 143 P **P** 12 03 39.6 0.0
AK18 Malin Array Si 30.96 143 P **P** 12 03 39.7 0.0
AK04 Malin Array Si 30.98 143 P **P** 12 03 39.7 -0.1
AK17 Malin Array Si 31.00 143 P **P** 12 03 40.1 +0.1
AKASG Malin Array Be 31.00 143 P **P** 12 03 40.0 0.0
comp=Z,4.5nm,0.7s,baz=349,slow=9.4,SNR=14
AKASG LR LR 12 15 37.8
comp=Z,310nm,22.0s,baz=8.5,slow=35
comp=Z,4.5nm,0.7s
AKASG Malin Array Be 31.00 143 P **P** 12 03 40.0 0.0
AKBB Malin Array Si 31.00 143 *ce*P **P** 12 03 38.0 -2.0
AKBB pmax pmax
comp=Z,40nm,1.5s
KIEV Kiev 31.01 143 P **P** 12 03 40.4 +0.4
KIEV IAmb IAmb 12 03 48.9
comp=Z,43nm,1.4s
KIEV Kiev 31.01 143 P **P** 12 03 40.4 +0.4
KIEV pmax pmax
comp=Z,43nm,1.5s
AK11 Malin Array Si 31.02 143 P **P** 12 03 40.1 0.0
AK11 sP **pwP** 12 03 46.0 0.0
AK16 Malin Array Si 31.02 143 P **P** 12 03 40.3 +0.1
ZVC Zvikov 31.02 162 *e*P **P** 12 03 42.8 +2.6
ZVC *e*pP **pwP** 12 03 45.9 -0.2
AK02 Malin Array Si 31.04 143 P **P** 12 03 40.5 +0.1
AK12 Malin Array Si 31.05 143 P **P** 12 03 40.5 +0.1
AK14 Malin Array Si 31.06 143 P **P** 12 03 40.5 0.0
AK08 Malin Array Si 31.07 143 P **P** 12 03 40.5 -0.1
AK13 Malin Array Si 31.07 143 P **P** 12 03 40.7 +0.1
G31M Satah River 31.08 327 IAmb IAmb 12 03 49.5
comp=Z,19nm,0.8s
G31M Satah River 31.08 327 P **P** 12 03 40.3 -0.2
baz=14
AK05 Malin Array Si 31.08 143 P **P** 12 03 40.8 +0.1
E21K Killik River 31.09 342 P **P** 12 03 41.5 +0.9
baz=8.8
AK09 Malin Array Si 31.09 143 P **P** 12 03 40.8 0.0
AK10 Malin Array Si 31.11 143 P **P** 12 03 40.9 0.0
E24K Your Creek 31.11 338 P **P** 12 03 42.0 +1.1
baz=10
AK06 Malin Array Si 31.11 143 P **P** 12 03 41.1 +0.1
AK07 Malin Array Si 31.15 143 P **P** 12 03 41.4 +0.1
F26K Sheenjek River 31.18 334 P **P** 12 03 40.9 -0.6
baz=12
E23K Chandalar 31.20 338 P **P** 12 03 41.5 -0.3
baz=10
G30M tAoh Zraii Nji 31.20 328 P **P** 12 03 41.1 -0.6
baz=14
C18K Utukok River 31.23 347 IAmb IAmb 12 03 56.4
comp=Z,23nm,1.2s
C18K Utukok River 31.23 347 P **P** 12 03 41.8 -0.2
baz=6.5,SNR=16
D19K Kuna River 31.25 344 IAmb IAmb 12 03 51.7
comp=Z,13nm,0.8s
D19K Kuna River 31.25 344 P **P** 12 03 41.6 -0.5
baz=7.5,SNR=9.6
E22K Anaktuvuk Pass 31.27 340 P **P** 12 03 41.7 -0.6
baz=9.4,SNR=9.6
VRAC Vranov 31.30 159 LR LR 12 15 25.2
comp=Z,186nm,19.0s,baz=332,slow=35
KHC Kasperske Hory 31.30 162 **P** 12 03 44.9 +2.2
KHC Kasperske Hory 31.30 162 *i* P **P** 12 03 41.3 -1.4
KHC pmax pmax
comp=Z,12nm,1.1s
KHC Kasperske Hory 31.30 162 *e*P **P** 12 03 44.7 +2.0
KHC *e*pP **pwP** 12 03 52.2 +3.6
E20K Nigu River 31.39 343 P **P** 12 03 42.1 -1.2
baz=8.0
F25K Christian Rive 31.39 335 P **P** 12 03 43.4 +0.1
baz=11
BMAR Burnt Mountain 31.47 334 **P** 12 03 43.5 -0.6
C17K DeLong Mountai 31.48 348 P **P** 12 03 43.6 -0.4
baz=5.8
STHS Stebnicka Huta 31.53 153 *e*P **P** 12 03 46.7 +2.0
STHS pmax pmax
comp=Z,8.0nm,1.0s
STHS Stebnicka Huta 31.53 153 *e*P **P** 12 03 46.7 +2.0
STHS *e*PP **PP** 12 04 59.8 +4.2
KRUC Moravsky 31.53 159 *e*P **P** 12 03 46.2 +1.5
GEC2 GERESS Array S 31.59 162 IAmb IAmb 12 03 48.8
comp=Z,18nm,1.0s
GERES GERESS Array B 31.59 162 P **P** 12 03 46.7 +1.3
comp=Z,9.0nm,0.9s,baz=2.3,slow=6.7,SNR=27
GERES LR LR 12 16 57.1
comp=Z,114nm,18.4s,baz=50,slow=37
comp=Z,9.0nm,0.9s
LUBAR Lubar, Ukraine 31.62 145 P **P** 12 03 44.7 -0.8
VSR Storozhevoye 31.70 131 *e*P **P** 12 03 45.3 -0.8
VSR pmax pmax
comp=Z,10.0nm,1.0s
C16K Lisburne Hills 31.75 350 IAmb IAmb 12 03 57.0
comp=Z,20nm,1.1s
C16K Lisburne Hills 31.75 350 P **P** 12 03 46.7 +0.3
baz=5.0
BELG Belogornoye 31.76 120 *i* P **P** 12 03 45.2 -1.4
BELG pmax pmax
comp=Z,18nm,1.0s
EPYK Eagle Plains 31.85 328 IAmb IAmb 12 03 56.3
comp=Z,13nm,0.9s
EPYK Eagle Plains 31.85 328 P **P** 12 03 45.3 -2.1
baz=13
G26K Porcupine Rive 31.88 334 IAmb IAmb 12 03 58.3
comp=Z,15nm,0.9s
G26K Porcupine Rive 31.88 334 P **P** 12 03 47.4 -0.2
baz=12
RDOG Red Dog Mine 31.89 348 **P** 12 03 48.3 +0.7
RDOG IAmb IAmb 12 03 57.8
comp=Z,27nm,0.9s
RDOG Red Dog Mine 31.89 348 P **P** 12 03 47.4 -0.3
baz=5.8,SNR=10
ECH Echery 31.95 171 IAmb IAmb 12 03 51.4
comp=Z,16nm,1.0s
VORD Divnogorie 31.96 131 *e*P **P** 12 03 47.6 -0.8
VORD pmax pmax
comp=Z,10.0nm,1.0s
BILL Bilibino 32.03 10 *ce*P **P** 12 03 47.6 -1.3
BILL pmax pmax
comp=Z,7.0nm,1.5s
VRH Novokhopyorsk 32.06 128 *e*P **P** 12 03 48.6 -0.7
VRH pmax pmax
comp=Z,30nm,0.9s
COLD Coldfoot 32.06 338 **P** 12 03 50.4 +1.2
COLD IAmb IAmb 12 03 59.3
comp=Z,13nm,1.0s
COLD Coldfoot 32.06 338 P **P** 12 03 48.5 -0.8
baz=9.7,SNR=7.8
H31M Peel River 32.17 326 IAmb IAmb 12 03 59.9
comp=Z,18nm,1.2s
H31M Peel River 32.17 326 P **P** 12 03 50.1 -0.1
baz=14
E19K Redstone River 32.24 344 IAmb IAmb 12 04 00.8
comp=Z,15nm,0.8s
E19K Redstone River 32.24 344 P **P** 12 03 50.8 +0.1
baz=7.5
D17K Noatak River 32.25 348 P **P** 12 03 50.4 -0.4
baz=5.7,SNR=27
F21K Alatna River 32.27 341 P **P** 12 03 51.3 +0.2
baz=8.6
MODS Modra-Piesok 32.27 158 *e*P **P** 12 03 54.2 +3.0
MODS pmax pmax
comp=Z,38nm,1.2s
MODS Modra-Piesok 32.27 158 *e*P **P** 12 03 54.2 +3.0
FYU Fort Yukon 32.37 335 IAmb IAmb 12 04 02.7
comp=Z,28nm,0.9s
G24K Hadweenzic Riv 32.40 336 IAmb IAmb 12 04 02.8
comp=Z,15nm,1.0s
G24K Hadweenzic Riv 32.40 336 P **P** 12 03 52.0 -0.2
baz=10
H27K Steamboat Moun 32.41 332 P **P** 12 03 52.6 +0.3
baz=12
E18K Tukpahlearik C 32.43 346 IAmb IAmb 12 04 02.8
comp=Z,19nm,0.8s
E18K Tukpahlearik C 32.43 346 P **P** 12 03 52.5 +0.1
baz=6.4
HOLU Holmats 32.50 152 P **P** 12 03 54.0 +0.8
SCHQ Schefferville 32.51 261 P **P** 12 03 54.0 +0.7
comp=Z,8.0nm,0.7s,baz=19,slow=7.3,SNR=30
SCHQ LR LR 12 17 31.5
comp=Z,81nm,21.2s,baz=25,slow=37
comp=Z,8.0nm,0.7s
SCHQ Schefferville 32.51 261 **P** 12 03 54.1 +0.8
SCHQ IAmb IAmb 12 03 55.6
comp=Z,9.6nm,0.8s
G23K Bananza Creek 32.56 338 P **P** 12 03 53.8 +0.1
baz=9.6
F20K Avaraart Lake 32.57 342 P **P** 12 03 53.5 -0.1
baz=7.9
MOA Molln 32.61 162 *e*P **P** 12 03 55.9 +1.7
comp=Z,8.8nm,0.8s
CONA Conrad Observa 32.63 160 *e*P **P** 12 03 56.5 +2.1
comp=Z,10nm,0.9s
RETA Reutte 32.80 166 *e*P **P** 12 03 58.2 +2.2
comp=Z,4.0nm,0.8s
E17K Hotham Inlet 32.82 347 P **P** 12 03 55.7 -0.1
baz=6.0,SNR=14
KMPD K-Podol'skiy 32.84 147 P **P** 12 03 55.9 -0.2
RONA Rosalia, Austr 32.88 159 *e*P **P** 12 03 58.6 +2.1
comp=Z,15nm,1.1s
I30M Mount Dempster 32.94 328 IAmb IAmb 12 04 06.5
comp=Z,15nm,0.8s
I30M Mount Dempster 32.94 328 P **P** 12 03 56.6 -0.4
baz=13
MOTA Moosalm 32.96 166 *e*P **P** 12 03 59.7 +2.3
comp=Z,17nm,0.9s
DAVA Damuels 32.97 167 *e*P **P** 12 03 59.6 +2.1
comp=Z,14nm,1.2s
G21K Allakaket 32.97 341 IAmb IAmb 12 04 11.4
comp=Z,16nm,1.1s
G21K Allakaket 32.97 341 P **P** 12 03 57.2 0.0
baz=8.5
I29M Ogilvie Camp, 32.98 329 IAmb IAmb 12 04 06.5
comp=Z,25nm,1.0s
I29M Ogilvie Camp, 32.98 329 P **P** 12 03 56.8 -0.5
baz=12
WATA Walderalm 32.99 165 *e*P **P** 12 04 00.0 +2.4
comp=Z,19nm,1.0s
I27K Kandik River 33.03 332 IAmb IAmb 12 04 12.7
comp=Z,21nm,1.2s
I27K Kandik River 33.03 332 P **P** 12 03 58.0 +0.3
baz=12
I28M Miner Creek 33.04 330 P **P** 12 03 57.9 0.0
baz=12
YKA Yellowknife Ar 33.05 309 P **P** 12 03 58.6 +0.7
comp=Z,2.0nm,1.0s,baz=14,slow=9.7,SNR=28
YKA PcP **PcP** 12 06 41.9 +1.0
comp=Z,1.5nm,0.8s,baz=2.2,slow=3.1,SNR=11
YKA LR LR 12 17 10.6
comp=Z,326nm,18.1s,baz=310,slow=36
comp=Z,2.0nm,1.0s
WTTA Wattenberg 33.07 165 *e*P **P** 12 04 00.8 +2.5
comp=Z,14nm,1.4s
SQTA Sankt Quirin 33.09 166 *e*P **P** 12 04 01.0 +2.4
comp=Z,14nm,1.0s
F18K Selawik 33.21 345 P **P** 12 03 59.1 -0.1
baz=6.6,SNR=18
FETA Feichten 33.27 166 *e*P **P** 12 04 02.6 +2.4
comp=Z,10nm,1.4s
ARSA Arzberg 33.28 160 *e*P **P** 12 04 02.1 +2.0
comp=Z,5.4nm,1.0s
H24K Noodor Dome 33.28 336 IAmb IAmb 12 04 10.7
comp=Z,18nm,1.1s
H24K Noodor Dome 33.28 336 P **P** 12 04 00.1 +0.1
baz=10.0,SNR=7.3
KBA Koelnbreinsper 33.33 163 *e*P **P** 12 04 03.0 +2.3
comp=Z,15nm,1.1s
PRP Porcupine Dome 33.43 334 **P** 12 04 01.2 -0.1
PRP IAmb IAmb 12 04 12.3
comp=Z,16nm,0.9s
PRP Porcupine Dome 33.43 334 P **P** 12 04 01.3 -0.1
baz=11,SNR=6.2
F17K Baldwin Pennin 33.43 346 IAmb IAmb 12 04 10.6
comp=Z,16nm,0.8s
F17K Baldwin Pennin 33.43 346 P **P** 12 04 00.6 -0.5
baz=6.1
SORM Soroca 33.45 144 P **P** 12 04 01.8 +0.4
comp=Z,33nm,1.1s
I26K Coal Creek Min 33.45 333 IAmb IAmb 12 04 12.7
comp=Z,21nm,1.1s
I26K Coal Creek Min 33.45 333 P **P** 12 04 01.3 -0.1
baz=11,SNR=6.6
H22K Ishtalitna Cre 33.46 339 IAmb IAmb 12 04 12.5
comp=Z,13nm,1.0s
H22K Ishtalitna Cre 33.46 339 P **P** 12 04 01.0 -0.4
baz=8.9,SNR=6.5
DAVOX Davos/Dischmat 33.48 167 LR LR 12 17 12.7
comp=Z,253nm,18.1s,baz=22,slow=36
WRGLY Wrigley 33.49 317 P **P** 12 04 00.9 -0.7
baz=16
FCC Fort Churchill 33.49 290 **P** 12 04 02.5 +0.8
FCC IAmb IAmb 12 04 03.4
comp=Z,13nm,0.8s
FCC Fort Churchill 33.49 290 P **P** 12 04 02.5 +0.8
FCC pmax pmax
comp=Z,13nm,0.8s
IMAR Indian Mountai 33.52 341 **P** 12 04 01.7 -0.2
G19K Purcell Mounta 33.54 343 P **P** 12 04 02.3 +0.2
baz=7.3
J30M Hart River 33.57 327 IAmb IAmb 12 04 12.0
comp=Z,15nm,0.9s
J30M Hart River 33.57 327 P **P** 12 04 02.5 -0.1
baz=13
ABTA Abfaltersbach 33.62 164 *e*P **P** 12 04 05.1 +1.9
comp=Z,7.2nm,1.2s
BUR08 Bucovina Ar. S 33.63 148 IAmb IAmb 12 04 14.5
comp=Z,21nm,1.6s
FUORN Ofenpass-Fuorn 33.65 167 IAmb IAmb 12 04 07.2
comp=Z,13nm,1.0s
BURAR Bucovina Array 33.66 148 P **P** 12 04 04.4 +0.9
TUE Stuetta 33.76 168 **P** 12 04 05.0 +0.5
TUE IAmb IAmb 12 04 08.3
comp=Z,15nm,0.9s
H21K Melozitna Rive 33.78 340 P **P** 12 04 04.6 +0.3
baz=8.5,SNR=5.6
MYKA Terra Mystica 33.80 163 *e*P **P** 12 04 07.1 +2.5
comp=Z,11nm,0.8s
SOKA Soboth 33.82 161 *e*P **P** 12 04 06.1 +1.2
comp=Z,18nm,1.5s
G18K Tagagawik 33.86 344 P **P** 12 04 05.3 +0.4
baz=6.8
J29N Klondike Camp 33.86 329 P **P** 12 04 05.0 0.0
baz=12
POKR Poker Plat Res 33.96 336 P **P** 12 04 06.1 +0.3
baz=9.9,SNR=6.5
OBKA Obir 33.97 162 *e*pP pP 12 04 08.8 +0.3
comp=Z,32nm,1.0s
H20K Anotleneega Mo 34.07 341 P **P** 12 04 07.5 +0.7
baz=7.8
I23K Minto, Yukon-K 34.07 337 IAmb IAmb 12 04 17.9
comp=Z,27nm,1.1s
I23K Minto, Yukon-K 34.07 337 P **P** 12 04 07.3 +0.6
baz=9.4,SNR=6.0
STAL STALIGIAL 34.12 164 **P** 12 04 08.8 +1.4
STAL IAmb IAmb 12 04 10.7
comp=Z,15nm,1.1s
COLA College 34.23 336 *i* P **P** 12 04 08.3 +0.2
COLA pmax pmax
comp=Z,13nm,1.0s
COLA College 34.23 336 P **P** 12 04 08.7 +0.6
baz=9.7
IL31 34.27 335 IAmb IAmb 12 04 19.4
comp=Z,16nm,1.1s
ILAR Eielson Array 34.27 335 P **P** 12 04 09.9 +1.5
comp=Z,2.0nm,0.8s,baz=7.3,slow=7.6,SNR=23
ILAR PcP **PcP** 12 06 44.6 +0.3
comp=Z,1.4nm,0.8s,baz=334,slow=3.5,SNR=7.3
ILAR LR LR 12 17 33.5
comp=Z,73nm,20.9s,baz=322,slow=35
comp=Z,2.0nm,0.8s
ILAR Eielson Array 34.27 335 P **P** 12 04 08.8 +0.3
MLY Manley 34.28 338 P **P** 12 04 09.5 +0.9
baz=8.9
CTI Castel Tesino 34.28 165 IAmb IAmb 12 04 11.9
comp=Z,27nm,0.9s
F15K North Star Dit 34.30 349 IAmb IAmb 12 04 21.8
comp=Z,14nm,1.1s
F15K North Star Dit 34.30 349 P **P** 12 04 08.7 0.0
baz=4.9
J25K Salcha River, 34.31 334 P **P** 12 04 09.1 +0.2
baz=10
G17K Kiwalik Mounta 34.35 346 P **P** 12 04 09.3 +0.2
baz=6.1,SNR=6.1
DAWY Dawson 34.35 329 IAmb IAmb 12 04 19.1
comp=Z,9.6nm,0.8s
DAWY Dawson 34.35 329 P **P** 12 04 09.8 +0.6
baz=12
K29M Barlow Dome 34.40 328 IAmb IAmb 12 04 20.5
comp=Z,23nm,1.1s
K29M Barlow Dome 34.40 328 P **P** 12 04 09.4 -0.3
baz=12
CCB Clear Creek Bu 34.46 336 IAmb IAmb 12 04 20.4
comp=Z,14nm,1.0s
MAYO Mayo, Yukon 34.48 327 P **P** 12 04 10.0 -0.4
baz=13
G16K Koyuk River 34.53 347 IAmb IAmb 12 04 24.1
comp=Z,14nm,1.1s
G16K Koyuk River 34.53 347 P **P** 12 04 10.7 0.0
baz=5.6
TNA Tin City 34.55 351 P **P** 12 04 11.3 +0.5
baz=3.9
F14K Arctic Creek 34.59 350 P **P** 12 04 11.4 +0.3
baz=4.4
H18K Honhosa River 34.59 344 IAmb IAmb 12 04 21.5
comp=Z,11nm,0.8s
H18K Honhosa River 34.59 344 P **P** 12 04 09.8 -1.4
baz=6.7
NEA2 Nenana 34.60 337 P **P** 12 04 11.4 +0.1
baz=9.3
HDA Harding Lake 34.63 335 IAmb IAmb 12 04 21.7
comp=Z,15nm,0.9s
HDA Harding Lake 34.63 335 P **P** 12 04 11.9 +0.3
baz=9.9
WRH Wood River Hil 34.65 336 IAmb IAmb 12 04 22.5
comp=Z,17nm,1.0s
SCRK Sand Creek 34.83 333 P **P** 12 04 14.2 +0.7
baz=11
H17K Granite Mounta 34.88 345 IAmb IAmb 12 04 28.4
comp=Z,19nm,1.4s
H17K Granite Mounta 34.88 345 P **P** 12 04 13.9 +0.2
baz=6.2
BORK Borovoye 34.90 96 *i* P **P** 12 04 15.2 +1.2
BORK pmax pmax
comp=Z,9.0nm,0.9s
GCSA Galena City Sc 34.92 343 P **P** 12 04 14.6 +0.6
baz=7.1,SNR=8.6
BVAR Borovoye Array 34.93 96 P **P** 12 04 14.9 +0.6
comp=Z,1.7nm,0.8s,baz=352,slow=9.0,SNR=7.7
BVAR LR LR 12 19 45.2
comp=Z,142nm,20.4s,baz=331,slow=38
comp=Z,1.7nm,0.8s
G15K Niukluk 34.99 348 P **P** 12 04 15.3 +0.6
baz=5.0,SNR=10.0
RIDG Independent Ri 35.13 333 P **P** 12 04 16.2 +0.2
baz=10
K24K Donnelly Dome 35.14 334 P **P** 12 04 16.9 +0.8
baz=10.0
DOT Dot Lake 35.16 333 IAmb IAmb 12 04 26.6
comp=Z,13nm,0.9s
L29M L29M 35.18 328 IAmb IAmb 12 04 26.4
comp=Z,13nm,0.9s
L29M L29M 35.18 328 P **P** 12 04 16.9 +0.6
baz=12
BPAW Bear Paw Mtn. 35.22 338 P **P** 12 04 17.0 +0.3
baz=8.7
AKTO Aktyubinsk 35.31 110 LR LR 12 22 06.6
comp=Z,149nm,18.9s,baz=360,slow=42
YAK Yakutsk 35.42 39 LR LR 12 17 45.0
comp=Z,82nm,21.9s,baz=320,slow=35
YAK Yakutsk 35.42 39 *e*P **P** 12 04 16.8 -1.5
YAK *e**PP **pP** 12 04 20.2 -0.5
YAK *e*S **S** 12 09 52.0 -0.5
YAK *e**SS **sS** 12 09 58.7 +2.4
YAK *e*SS **SnSn** 12 12 11.0 0.0
YAK pmax pmax
comp=Z,23nm,1.0s
YAK pmax pmax
comp=N,13nm,1.3s
YAK pmax pmax
comp=E,3.0nm,1.3s
YAK pmax pmax
comp=Z,107nm,3.7s
YAK pmax pmax
comp=N,56nm,3.8s
YAK pmax pmax
comp=E,48nm,3.1s
YAK smax smax
comp=E,104nm,4.0s
YAK smax smax
comp=N,50nm,3.5s
MCK McKinley 35.44 337 P **P** 12 04 19.1 +0.5
baz=9.2
ANM Nome 35.47 349 P **P** 12 04 19.0 +0.2
baz=4.6,SNR=9.4
CHUM Lake Minchumin 35.52 339 P **P** 12 04 19.7 +0.5
baz=8.2
BCAR Beaver Creek A 35.55 331 **P** 12 04 19.3 -0.2
L27K Beaver Creek, 35.55 331 IAmb IAmb 12 04 30.3
comp=Z,14nm,0.9s
L27K Beaver Creek, 35.55 331 P **P** 12 04 19.8 +0.2
baz=11
M30M Minto, Yukon 35.57 327 IAmb IAmb 12 04 30.5
comp=Z,16nm,1.1s
M30M Minto, Yukon 35.57 327 P **P** 12 04 20.7 +0.9
baz=12
J19K Poorman 35.60 342 P **P** 12 04 20.9 +0.9
baz=7.3
L26K Log Cabin Wild 35.72 332 P **P** 12 04 21.5 +0.5
baz=10
TRF Thorofare Moun 35.82 337 P **P** 12 04 22.1 +0.1
baz=8.7
MLR Muntele Rosu 35.83 148 LR LR 12 20 24.8
comp=Z,186nm,18.4s,baz=14,slow=39
M29M Somme Creek 35.86 328 P **P** 12 04 22.6 +0.3
baz=12
PAX Paxson 35.94 334 P **P** 12 04 22.4 -0.6
baz=9.9,SNR=5.2
I17K Unalakleet 35.96 345 P **P** 12 04 23.2 +0.2
baz=5.8
DHY Denali Highway 35.98 335 IAmb IAmb 12 04 33.9
comp=Z,27nm,1.2s
DHY Denali Highway 35.98 335 P **P** 12 04 23.1 -0.3
baz=9.4
BVCY Beaver Creek 36.11 330 P **P** 12 04 24.3 0.0
baz=11
K20K Telida 36.15 340 P **P** 12 04 23.5 -1.1
baz=7.7
J18K Innoko River 36.19 342 P **P** 12 04 24.9 -0.1
baz=6.9
M27K Edge Creek, AK 36.25 331 P **P** 12 04 25.0 -0.7
baz=11
DRLN Deer Lake 36.30 249 IAmb IAmb 12 04 27.8
comp=Z,24nm,0.9s
M26K Nabesna, AK 36.30 332 P **P** 12 04 25.6 -0.4
baz=10,SNR=5.9
WAT1 Susitna Watana 36.31 336 P **P** 12 04 25.9 -0.2
baz=9.1
GAMB Gambell 36.43 354 P **P** 12 04 26.8 -0.1
baz=2.6,SNR=8.3
HARP HAARP 36.48 333 P **P** 12 04 27.1 -0.4
baz=9.9
PPLA Purkeypile 36.49 339 P **P** 12 04 27.4 -0.3
baz=8.1
SEY Seymchan 36.49 21 *ce*P **P** 12 04 27.5 -0.1
SEY pmax pmax

comp=Z,8.0nm,1.2s
WAT6 Susitna Watana 36.50 335 P **P** **12 04 26.5 -1.3**
baz=9.2
J16K Anvik River 36.56 345 P **P** **12 04 29.0 +0.9**
baz=5.8
KOTAN Kotaneelee Air 36.56 316 P **P** **12 04 28.6 +0.3**
baz=14
ZALV Zalesovo Beam 36.58 81 P **P** **12 04 28.8 +0.4**
comp=Z,0.9nm,0.7s,baz=352,slow=9.6,SNR=5.4
ZALV LR LR 12 23 23.7
comp=Z,185nm,18.1s,baz=332,slow=43
comp=Z,0.9nm,0.7s
ZALV Zalesovo Beam 36.58 81 P **P** **12 04 28.6 +0.2**
N32M Quiet Lake 36.60 323 IAmb IAmb 12 04 39.4
comp=Z,26nm,1.0s
N32M Quiet Lake 36.60 323 P **P** **12 04 28.7 +0.1**
baz=12
YUK3 Moose Creek 36.70 329 P **P** **12 04 30.0 +0.4**
baz=11
L22K Petersville 36.77 338 P **P** **12 04 30.1 +0.1**
ABKAR Akbulak array 36.77 108 P **P** **12 04 30.8 +0.8**
M24K Tolsona, Glenn 36.85 334 P **P** **12 04 30.5 -0.2**
baz=9.5
CUT Chulitna 36.85 337 P **P** **12 04 31.6 +0.9**
baz=8.5
YUK4 Talbot Arm 36.96 328 P **P** **12 04 31.9 +0.1**
baz=11
K17K Iditarod 37.02 343 P **P** **12 04 32.6 +0.5**
baz=6.4
YUK8 Steele Glacier 37.12 329 P **P** **12 04 33.5 +0.3**
baz=11
WTLY Watson Lake, Y 37.14 320 P **P** **12 04 33.9 +0.7**
baz=13
SCM Sheep Creek Mo 37.21 335 P **P** **12 04 33.9 +0.1**
baz=9.2
J14K Nanvaranak Lak 37.22 347 P **P** **12 04 33.7 0.0**
baz=4.9
N25K Chitina, Valde 37.22 333 P **P** **12 04 35.1 +1.2**
baz=9.8
WHY Whitehorse 37.27 325 P **P** **12 04 34.5 +0.2**
baz=12
O30N Mendenhall 37.28 326 P **P** **12 04 34.1 -0.3**
baz=12
M23K Glacier View 37.28 335 P **P** **12 04 34.7 +0.4**
baz=9.1
SML Sawmill 37.31 336 P **P** **12 04 34.6 0.0**
baz=8.9
MCARA McCarthy VSAT 37.31 331 P **P** **12 04 35.1 +0.6**
baz=10
YUK6 Outpost Mounta 37.33 328 P **P** **12 04 34.7 -0.3**
baz=11
SKT Skwentna 37.36 338 P **P** **12 04 35.4 +0.4**
baz=8.1
HYT Haines Junctio 37.36 327 IAmb IAmb 12 04 45.7
comp=Z,19nm,0.9s
HYT Haines Junctio 37.36 327 P **P** **12 04 35.2 0.0**
baz=11
L19K White Mountain 37.37 341 P **P** **12 04 35.3 +0.2**
baz=7.2
L18K Granite Mounta 37.43 342 P **P** **12 04 36.2 +0.7**
baz=6.7
KLU Klutina 37.44 334 P **P** **12 04 35.6 -0.1**
baz=9.5
M22K Willow 37.49 337 P **P** **12 04 35.9 -0.1**
baz=8.4
P33M Teslin, Yukon 37.49 323 P **P** **12 04 36.4 +0.2**
baz=12
NRCA Norcia 37.56 164 IAmb IAmb 12 04 40.6
comp=Z,44nm,1.1s
M20K Styx River 37.56 339 P **P** **12 04 36.7 -0.1**
baz=7.6
CTG Chitna Glacier 37.58 330 P **P** **12 04 36.1 -0.9**
baz=10
PMR Palmer 37.58 336 P **P** **12 04 35.7 -1.1**
baz=8.7
K15K Wolf Creek Mou 37.59 346 P **P** **12 04 35.8 -1.1**
baz=5.4
L17K Donlin 37.60 343 P **P** **12 04 36.1 -0.9**
baz=6.3
M19K Big River Lodg 37.61 340 P **P** **12 04 35.4 -1.7**
baz=7.3
O28M Mount Upton 37.67 329 P **P** **12 04 37.3 -0.6**
baz=11
KNK Knik Glacier 37.71 336 P **P** **12 04 37.3 -0.6**
baz=8.8
SUA Susitna One 37.82 337 P **P** **12 04 38.4 -0.6**
baz=8.2
BMRM Bremner River 37.85 332 P **P** **12 04 37.8 -1.5**
baz=9.7
CRQE Cirque 37.94 331 P **P** **12 04 38.7 -1.3**
baz=10.0
O29M Mount Kennedy 37.98 327 P **P** **12 04 39.3 -1.0**
baz=11
P30M Million Dollar 38.00 326 P **P** **12 04 39.7 -0.7**
baz=11
K13K Kusilvak Mount 38.08 348 P **P** **12 04 40.7 -0.2**
baz=4.5
L16K Owhat River 38.08 344 P **P** **12 04 40.9 -0.2**
baz=5.9
R33M Jennings River 38.09 321 P **P** **12 04 40.7 -0.6**
baz=12
M18K Stony River 38.11 341 P **P** **12 04 41.2 -0.1**
baz=6.8
RC01 Rabbit Creek A 38.12 336 P **P** **12 04 41.3 -0.1**
baz=8.4
N20K Mount Spurr 38.18 338 P **P** **12 04 41.3 -0.7**
baz=7.8
SPCR Spurr Chakacha 38.18 338 P **P** **12 04 41.6 -0.3**
baz=7.8
P32M Atlin 38.20 323 IAmb IAmb 12 04 52.5
comp=Z,24nm,0.9s
P32M Atlin 38.20 323 P **P** **12 04 42.0 0.0**
baz=12
M17K Holitna River 38.29 343 P **P** **12 04 42.0 -0.8**
baz=6.4
PINM Pinnacle 38.34 329 P **P** **12 04 43.2 -0.2**
baz=11
EYAK Cordova Ski Ar 38.36 333 P **P** **12 04 42.5 -0.9**
baz=9.3
MESA MESA 38.41 330 P **P** **12 04 43.1 -1.0**
baz=10
SKAG Skagway 38.49 325 P **P** **12 04 44.1 -0.4**
baz=12
CAPN Captain Cook N 38.54 337 P **P** **12 04 44.5 -0.3**
baz=8.0
L14K Kuka Creek 38.59 347 P **P** **12 04 44.7 -0.6**
baz=5.0
KURK Kurchatov 38.60 89 **P** **12 04 46.7 +1.2**
KURK Kurchatov 38.60 89 *ce*P **P** **12 04 45.2 -0.3**
KURK pmax pmax
comp=Z,15nm,1.1s
FFC Flin Flon 38.64 295 P **P** **12 04 46.8 +0.9**
FFC Flin Flon 38.64 295 P **P** **12 04 46.8 +0.9**
FFC pmax pmax
comp=Z,10.0nm,0.9s
KURBB Kurchatov Arra 38.67 89 P **P** **12 04 46.4 +0.3**
comp=Z,5.7nm,0.9s,baz=340,slow=7.8,SNR=14
KURBB LR LR 12 25 30.5
comp=Z,122nm,19.1s,baz=178,slow=44
comp=Z,5.7nm,0.9s
N19K Bonanza Creek 38.71 340 P **P** **12 04 45.8 -0.6**
baz=7.1
O22K Cooper Landing 38.73 336 P **P** **12 04 45.8 -0.7**
baz=8.3
M16K Timber Creek 38.74 344 P **P** **12 04 46.2 -0.4**
baz=6.0
KAIM Kayak Island 38.87 332 P **P** **12 04 46.8 -0.8**
baz=9.5
N18K Kilae Creek 38.92 341 P **P** **12 04 47.8 -0.4**
baz=6.7
DLBC Dease Lake 38.92 320 LR LR 12 21 52.7
comp=Z,202nm,18.1s,baz=314,slow=38
DLBC Dease Lake 38.92 320 P **P** **12 04 47.2 -1.0**
baz=12
P23K Montague Islan 39.03 334 P **P** **12 04 48.3 -0.7**
baz=8.8
SEW Seward 39.08 336 P **P** **12 04 49.5 +0.1**
baz=8.3
N17K Nushagak Hills 39.15 342 P **P** **12 04 49.9 -0.1**
baz=6.3
M14K Bethel 39.15 346 P **P** **12 04 48.8 -1.2**
baz=5.1
M15K Kasigluk River 39.15 345 P **P** **12 04 48.4 -1.6**
baz=5.4
N16K Nishlik Lake 39.28 343 P **P** **12 04 49.9 -1.3**
baz=5.9
KIV Kislovodsk 39.29 129 *e*P **P** **12 04 49.0 -2.5**
KIV pmax pmax
comp=Z,7.0nm,1.0s
KIV MLR MLR
comp=Z,71nm,16.0s
O19K Port Alsworth 39.31 340 P **P** **12 04 50.1 -1.2**
baz=7.0
SHA1 Shidzhatmaz 39.50 129 *ce*P **P** **12 04 53.9 +0.5**
Q23K Middleton Isla 39.52 333 P **P** **12 04 51.7 -1.4**
BRSE Bradley Lake S 39.53 337 P **P** **12 04 52.9 -0.3**
baz=7.9
KBZ Khabaz 39.54 129 P **P** **12 04 54.8 +1.4**
comp=Z,7.0nm,0.8s
KBZ LR LR 12 21 16.5
comp=Z,132nm,19.3s,baz=334,slow=36
comp=Z,7.0nm,0.8s
M13K Dall Lake 39.55 347 P **P** **12 04 53.5 +0.2**
baz=4.7
R31K City Hall, Gus 39.56 325 P **P** **12 04 53.3 -0.2**
baz=11
S34M Telegraph Cree 39.56 321 P **P** **12 04 53.1 -0.3**
baz=12
R32K Eaglecrest 39.57 324 P **P** **12 04 53.1 -0.5**
baz=11
BATG Bathurst New B 39.65 257 IAmb IAmb 12 04 57.4
comp=Z,25nm,0.9s
N15K Kwethluk River 39.65 344 P **P** **12 04 54.4 +0.2**
baz=5.5
HOM Homer 39.67 338 P **P** **12 04 54.2 -0.2**
baz=7.7
M11K Mekoryuk 39.68 349 P **P** **12 04 54.3 -0.1**
baz=3.9
O18K Koktuh Hills 39.70 340 P **P** **12 04 54.4 -0.3**
baz=6.8
MA2 Magadan 39.73 23 LR LR 12 20 14.3
comp=Z,110nm,21.7s,baz=348,slow=35
MA2 Magadan 39.73 23 *ce*P **P** **12 04 55.4 +0.6**
MA2 pmax pmax
comp=Z,10.0nm,1.0s
P19K Oil Pt 39.78 339 P **P** **12 04 55.1 -0.3**
baz=7.2
O17K Koliganek Bris 39.89 342 P **P** **12 04 56.0 -0.2**
baz=6.3
N14K Kuskokwak Cree 39.97 346 P **P** **12 04 56.5 -0.3**
baz=5.1
S31K Pelican 40.05 325 P **P** **12 04 57.0 -0.5**
baz=11
LMQ La Malbaie 40.12 261 IAmb IAmb 12 05 01.1
comp=Z,26nm,0.9s
O16K Kokwok River B 40.12 343 P **P** **12 04 57.9 -0.2**
baz=6.0
P18K Big Mountain, 40.17 340 P **P** **12 04 57.9 -0.6**
baz=6.7
S32K Killisnoo 40.37 323 P **P** **12 04 59.5 -0.6**
baz=11
T35M Bob Quinn 40.38 320 P **P** **12 05 00.0 -0.3**
baz=12
ESDC Sonseca Array 40.41 184 P **P** **12 05 01.3 +0.5**
comp=Z,2.4nm,0.9s,baz=356,slow=8.3,SNR=7.1
ESDC LR LR 12 20 06.7
comp=Z,88nm,21.5s,baz=334,slow=34
comp=Z,2.4nm,0.9s
P17K Kvichak River 40.43 341 P **P** **12 05 00.6 -0.1**
baz=4.4
Q19K Cape Douglas, 40.53 339 P **P** **12 05 01.7 +0.2**
baz=7.0
O14K Tigyukauivet M 40.62 345 P **P** **12 05 01.3 -0.9**
baz=5.1
O15K Ungalikthiuk R 40.63 344 P **P** **12 05 00.6 -1.7**
baz=5.5
P16K Nushagak River 40.68 343 P **P** **12 05 02.0 -0.6**
baz=6.0
Q20K Shuyak Island 40.77 338 P **P** **12 05 02.6 -0.8**
baz=7.3
VLDQ Val d'Or 40.83 269 **P** **12 05 04.5 +0.5**
VLDQ IAmb IAmb 12 05 06.7
comp=Z,27nm,1.3s
T33K Petersburg 40.84 322 P **P** **12 05 03.4 -0.6**
baz=11
SIT Sitka 40.85 324 P **P** **12 05 03.0 -1.1**
baz=11
E62A Clayton Lake 40.88 260 **P** **12 05 04.8 +0.2**
E62A IAmb IAmb 12 05 07.7
comp=Z,27nm,1.1s
Q18K Katmai Hardscr 40.89 340 P **P** **12 05 03.5 -1.2**
baz=6.7
MAK Makhachkala 40.95 124 *d i*P **P** **12 05 01.2 -3.9**
MAK *e*S **S** **12 11 11.2 -5.2**
MAK pmax pmax
comp=Z,144nm,1.4s
MAK MLR MLR
comp=Z,215nm,17.0s
Q16K King Salmon 40.96 341 P **P** **12 05 04.6 -0.4**
baz=6.2
DGZ Jazzator, Alta 41.12 81 *i*P **P** **12 05 07.2 +0.5**
DGZ pmax pmax
comp=Z,6.0nm,1.4s
WRAK Wrangell Islan 41.16 321 P **P** **12 05 06.4 -0.3**
baz=12
MDUB Mudurnu 41.32 143 IAmb IAmb 12 05 18.7
comp=Z,27nm,0.9s
U35K Hyder 41.40 319 P **P** **12 05 08.6 0.0**
baz=12
IRK Irkutsk 41.47 64 *e*P **P** **12 05 08.5 -0.9**
IRK *e* 12 06 53.0
IRK pmax pmax
comp=Z,29nm,1.1s
MOY Mondy 41.51 67 *e*P **P** **12 05 10.6 +0.8**
MOY pmax pmax
comp=Z,23nm,1.6s
U33K Whale Pass 41.55 322 P **P** **12 05 09.9 0.0**
baz=11
KDAK Kodiak Island 41.60 338 LR LR 12 21 50.6
comp=Z,160nm,21.3s,baz=12,slow=35
KDAK Kodiak Island 41.60 338 P **P** **12 05 10.3 0.0**
baz=7.1
EDM Edmonton 41.84 304 **P** **12 05 13.5 +1.1**
EDM IAmb IAmb 12 05 22.4
comp=Z,28nm,1.0s
EDM Edmonton 41.84 304 P **P** **12 05 13.5 +1.1**
EDM pmax pmax
comp=Z,28nm,1.0s
TLY Talaya 41.92 65 LR LR 12 24 21.7
comp=Z,87nm,18.1s,baz=348,slow=39
TLY Talaya 41.92 65 *i*P **P** **12 05 13.8 +0.8**
TLY pmax pmax
comp=Z,9.0nm,0.9s
ULM Lac du Bonnet 41.96 287 P **P** **12 05 14.2 +0.9**
comp=Z,9.3nm,1.0s,baz=7.5,slow=8.7,SNR=9.7
ULM LR LR 12 23 18.9
comp=Z,155nm,18.0s,baz=11,slow=37
comp=Z,9.3nm,1.0s
ULM Lac du Bonnet 41.96 287 **P** **12 05 13.9 +0.6**
ULM Lac du Bonnet 41.96 287 P **P** **12 05 13.9 +0.6**
ULM pmax pmax
comp=Z,14nm,1.1s
KNGR Kungurtug, Tuv 41.96 71 *i*P **P** **12 05 15.2 +1.7**
KNGR pmax pmax
comp=Z,7.0nm,0.8s
R17L Mt. Peulik Vol 41.99 341 P **P** **12 05 13.2 -0.3**
baz=6.2
R16K Pilot Point 42.12 342 P **P** **12 05 14.3 -0.2**
baz=5.9
TRQ Mont Tremblant 42.15 265 **P** **12 05 15.2 +0.2**
EPLO Experimental L 42.15 285 IAmb IAmb 12 05 17.0
comp=Z,19nm,0.8s
CRAG Craig 42.18 322 P **P** **12 05 14.7 -0.3**
baz=11
OHAK Old Harbor 42.21 338 P **P** **12 05 15.0 -0.3**
baz=6.9
BR131 Keskin Array S 42.33 140 **P** **12 05 17.9 +1.2**
BR131 Keskin Array S 42.33 140 *i*P **P** **12 05 17.2 +0.6**
BRTR Keskin Array B 42.33 140 P **P** **12 05 17.5 +0.8**
comp=Z,3.5nm,1.0s,baz=336,slow=5.8,SNR=12
BRTR LR LR 12 24 03.6
comp=Z,79nm,20.6s,baz=360,slow=38
comp=Z,3.5nm,1.0s
BRTR Keskin Array B 42.33 140 **P** **12 05 18.0 +1.4**
TBO Thunder Bay 42.40 280 IAmb IAmb 12 05 19.8
comp=Z,24nm,0.9s
AKT Akhty 42.43 124 *e*P **P** **12 05 18.2 +0.8**
AKT *e* 12 06 57.6
AKT *e* 12 07 11.4
AKT *e*PPP PPP 12 07 27.0
AKT *e*S **S** **12 11 41.5 +2.8**
AKT pmax pmax
comp=Z,71nm,1.3s
MNTQ Montreal, Queb 42.68 264 IAmb IAmb 12 05 21.4
comp=Z,19nm,0.9s
ZSN Zaisan 42.84 84 *e*P **P** **12 05 22.9 +2.3**
ZSN Zaisan 42.84 84 *e*P **P** **12 05 22.9 +2.3**
MAKZ Makanchi 42.96 87 **P** **12 05 22.7 +1.2**
MAKZ Makanchi 42.96 87 P **P** **12 05 22.7 +1.2**
MAKZ pmax pmax
comp=Z,17nm,1.2s
VAE Valguarnera 42.96 163 LR LR 12 25 05.0
comp=Z,146nm,18.7s,baz=340,slow=39
MANT Manisa 43.02 146 IAmb IAmb 12 05 32.6
comp=Z,29nm,1.1s
MK31 Makanchi Array 43.03 87 *ce*P **P** **12 05 23.4 +1.3**
MKAR Makanchi Array 43.03 87 P **P** **12 05 22.5 +0.4**
comp=Z,2.1nm,0.7s,baz=345,slow=6.4,SNR=21
MKAR LR LR 12 25 38.1
comp=Z,145nm,18.4s,baz=326,slow=39
comp=Z,2.1nm,0.7s
MKAR Makanchi Array 43.03 87 **P** **12 05 23.2 +1.1**
ZAK Zakamensk 43.12 66 *e*P **P** **12 05 23.1 +0.2**
ZEA Zeya 43.26 43 *e*P **P** **12 05 25.0 +1.2**
ZEA pmax pmax
comp=Z,10.0nm,1.0s
ZEA MLR MLR
comp=N,100nm,18.0s
ZEA MLR MLR
comp=Z,300nm,22.0s
GNI Garni 43.31 128 LR LR 12 24 52.1
comp=Z,63nm,18.6s,baz=350,slow=38
GNI Garni 43.31 128 *i*P **P** **12 05 25.3 +0.7**
GNI pmax pmax
comp=Z,10.0nm,1.1s
EYMN Ely 43.44 282 IAmb IAmb 12 05 27.8
comp=Z,28nm,0.8s
LONY Lake Ozonia 43.70 264 IAmb IAmb 12 06 28.2
comp=Z,44nm,1.8s
E46A Sault Ste Mari 43.72 275 IAmb IAmb 12 05 30.2
comp=Z,15nm,0.8s
BUKO Buck Lake 43.75 270 IAmb IAmb 12 05 30.5
comp=Z,23nm,1.0s
AGMN Agassiz Nation 43.84 286 IAmb IAmb 12 05 31.0
comp=Z,21nm,1.2s
TDK Taldyqorghan 44.08 91 *e*P **P** **12 05 32.9 +2.3**
TDK pmax pmax
comp=Z,12nm,0.5s
TDK Taldyqorghan 44.08 91 *e*P **P** **12 05 33.0 +2.3**
comp=Z,12nm,0.5s
SADO Sadowa 44.36 269 LR LR 12 24 35.4
comp=Z,221nm,21.4s,baz=52,slow=37
KEST Kesra 44.48 169 P **P** **12 05 34.4 +0.5**
comp=Z,8.1nm,1.0s,baz=354,slow=11,SNR=2.4
KEST LR LR 12 23 05.6
comp=Z,65nm,21.4s,baz=283,slow=35
comp=Z,8.1nm,1.0s
KKAR Karatay Array 44.54 100 P **P** **12 05 36.1 +1.8**
KKAR Karatay Array 44.54 100 P **P** **12 05 36.1 +1.8**
BBB Bella Bella 44.83 316 LR LR 12 26 15.6
comp=Z,122nm,18.4s,baz=15,slow=39
DZA Taraz 44.89 99 *e*P **P** **12 05 39.2 +2.2**
DZA Taraz 44.89 99 *e*P **P** **12 05 39.3 +2.2**
CHM Chimkent 45.14 101 *e*P **P** **12 05 41.2 +2.1**
CHM Chimkent 45.14 101 *e*P **P** **12 05 41.2 +2.1**
IUG Iuzhnay 45.38 101 *e*P **P** **12 05 43.1 +2.0**
IUG pmax pmax
comp=Z,4.0nm,0.7s
IUG Iuzhnay 45.38 101 *e*P **P** **12 05 43.2 +2.0**
comp=Z,3.9nm,0.7s
LLLB Lillooet 45.58 311 IAmb IAmb 12 05 45.8
comp=Z,12nm,1.1s
MDOK Medeo 45.62 93 *e*P **P** **12 05 45.1 +2.1**
MDOK Medeo 45.62 93 *e*P **P** **12 05 45.2 +2.1**
AAK Ala-Archa 45.69 96 LR LR 12 27 28.5
comp=Z,179nm,18.0s,baz=340,slow=40
AAK Ala-Archa 45.69 96 **P** **12 05 44.7 +1.1**
AAK IAmb IAmb 12 05 53.7
comp=Z,10nm,0.9s
AAK Ala-Archa 45.69 96 *i*P **P** **12 05 44.4 +0.8**
AAK pmax pmax
comp=Z,12nm,1.0s
TNSS Tian-Shan 45.73 93 *e*P **P** **12 05 46.0 +1.8**
TNSS Tian-Shan 45.73 93 *e*P **P** **12 05 46.0 +1.8**
G40A Rib Lake 45.81 280 IAmb IAmb 12 05 46.6
comp=Z,21nm,1.0s
IDI Anoyia 45.86 151 LR LR 12 25 40.6
comp=Z,76nm,20.3s,baz=74,slow=37
SATY Saty 45.96 92 *e*P **P** **12 05 47.9 +2.2**
SATY pmax pmax
comp=Z,6.0nm,1.0s
SATY Saty 45.96 92 *e*P **P** **12 05 47.9 +2.2**
comp=Z,5.6nm,1.0s
UZB Uzynbulak 45.99 91 *e*P **P** **12 05 48.1 +2.2**
UZB Uzynbulak 45.99 91 *e*P **P** **12 05 48.1 +2.2**
SHLS Shalkode 46.05 91 *e*P **P** **12 05 49.1 +2.7**
SHLS pmax pmax
comp=Z,10.0nm,0.8s
SHLS Shalkode 46.05 91 *e*P **P** **12 05 49.2 +2.7**
comp=Z,10nm,0.8s
BOOM Boomskoye usch 46.08 94 IAmb IAmb 12 05 57.4
comp=Z,15nm,0.9s
SONM Songino Array 46.09 64 P **P** **12 05 47.0 +0.4**
comp=Z,2.0nm,1.1s,baz=342,slow=7.8,SNR=8.9
SONM PP **PP** **12 07 36.0 +1.7**
comp=Z,1.9nm,1.0s,baz=347,slow=8.9,SNR=3.8
SONM LR LR 12 26 54.3
comp=Z,571nm,18.1s,baz=354,slow=38
comp=Z,2.0nm,1.1s
SONM Songino Array 46.09 64 **P** **12 05 46.9 +0.3**
SONM Songino Array 46.09 64 P **P** **12 05 46.9 +0.3**
SONM pmax pmax
comp=Z,8.0nm,1.1s
MMNY Mt. Morris Dam 46.12 267 IAmb IAmb 12 05 49.4
comp=Z,24nm,0.9s
ULN Ulaanbaatar 46.16 63 **P** **12 05 47.5 +0.3**
ULN IAmb IAmb 12 05 56.5
comp=Z,20nm,0.8s
ULN Ulaanbaatar 46.16 63 *ce*P **P** **12 05 46.6 -0.7**
ULN pmax pmax
comp=Z,10.0nm,1.1s
ULN Ulaanbaatar 46.16 63 P **P** **12 05 48.2 +0.9**
comp=Z,2µmcomp=Z,108nm,1.0s
H43A Windswept, Lux 46.16 277 IAmb IAmb 12 05 49.5
comp=Z,19nm,0.9s
PETK Petropavlovsk- 46.60 18 LR LR 12 24 57.2
comp=Z,68nm,18.7s,baz=342,slow=36
HEH HeiHe 46.70 44 *e*P **P** **12 05 51.2 0.0**
HEH pmax pmax
comp=Z,4.0nm,1.0s
WMQ Urumqi 46.85 82 *e*P **P** **12 05 56.4 +3.8**
WMQ L L
comp=Z,520nm,15.1s
WMQ L L
comp=Z,140nm,17.5s
LAO LASA Array 47.11 295 IAmb IAmb 12 06 02.4
comp=Z,20nm,1.0s
TARG Taragay, Kyrgy 47.15 93 IAmb IAmb 12 06 07.3
comp=Z,7.2nm,0.8s
NEW Newport 47.22 306 LR LR 12 25 50.9
comp=Z,229nm,18.2s,baz=20,slow=36
NEW Newport 47.22 306 IAmb IAmb 12 05 58.0
comp=Z,8.8nm,0.9s
MDT Midelt 47.26 185 LR LR 12 24 27.0
comp=Z,53nm,19.1s,baz=53,slow=34
B08A Colville Reser 47.44 308 IAmb IAmb 12 05 59.6
comp=Z,8.1nm,0.8s
PAOC Oil Creek Stat 47.61 269 IAmb IAmb 12 06 01.3
comp=Z,16nm,1.0s
WUS Wushi 47.91 92 IAmb IAmb 12 06 11.1
comp=Z,8.0nm,0.8s
KLR Kul'dur 48.22 41 LR LR 12 27 28.4
comp=Z,104nm,19.0s,baz=349,slow=38
KLR Kul'dur 48.22 41 *ce*P **P** **12 06 02.6 -0.5**
KLR pmax pmax
comp=Z,10.0nm,2.0s
N53A Lisbon 48.50 269 IAmb IAmb 12 06 08.7
comp=Z,17nm,1.1s
CHGR Chuyangaron 48.63 102 *e*P **P** **12 06 07.1 +0.6**
GNW Green Mountain 48.69 311 IAmb IAmb 12 06 09.5
comp=Z,14nm,0.9s
L42A Oliver, Polo 48.89 278 IAmb IAmb 12 06 10.4
comp=Z,23nm,0.9s
SDMD Soldier's Deli 49.16 265 IAmb IAmb 12 06 12.9
comp=Z,14nm,0.9s
MMAI Mount Meron Ar 49.16 140 P **P** **12 06 11.5 +1.0**
comp=Z,4.8nm,0.8s,baz=354,slow=12,SNR=2.1
MMAI LR LR 12 28 57.7
comp=Z,50nm,20.0s,baz=358,slow=39
comp=Z,4.8nm,0.8s
RSSD Black Hills 49.26 293 **P** **12 06 12.8 +1.4**

RSSD IAmb IAmb 12 06 14.9
comp=Z,10nm,0.7s

RSSD Black Hills 49.26 293 P P 12 06 12.8 +1.4
RSSD pmax pmax
comp=Z,11nm,0.7s

KSH2 Kashi 49.27 96 P P 12 06 15.7 +4.3
KSH2 pmax pmax
comp=Z,6.0nm,1.1s

KSH2 L L
comp=Z,220nm,16.1s

KSH2 L L
comp=Z,550nm,20.1s

KSH2 L L
comp=Z,330nm,16.2s

N47A Urbana 49.28 274 IAmb IAmb 12 06 13.4
comp=Z,20nm,1.0s

LON Longmire 49.35 309 IAmb IAmb 12 06 22.5
comp=Z,33nm,1.6s

HAWA Hanford 49.39 307 IAmb IAmb 12 06 14.5
comp=Z,11nm,1.1s

YHL Hebgen Lake 49.67 299 IAmb IAmb 12 06 17.3
comp=Z,10nm,0.9s

YHB Horse Butte 49.77 299 IAmb IAmb 12 06 17.9
comp=Z,12nm,0.9s

O48B Farmland 49.80 274 IAmb IAmb 12 06 17.4
comp=Z,19nm,1.0s

P53A Whipple 49.88 270 IAmb IAmb 12 06 18.1
comp=Z,24nm,1.0s

Q56A Snyder Ridge, 49.93 267 IAmb IAmb 12 06 19.6
comp=Z,26nm,1.0s

H17A Grant Village 50.02 299 IAmb IAmb 12 06 21.0
comp=Z,12nm,1.0s

ASF Jabal al Asfar 50.16 138 LR LR 12 29 49.5
comp=Z,60nm,19.1s,baz=27,slow=39

YPP Pitchstone Pla 50.18 299 IAmb IAmb 12 06 22.3
comp=Z,13nm,0.8s

HDIL Hopedale 50.23 278 IAmb IAmb 12 06 20.9
comp=Z,29nm,1.0s

Q54A Coxs Mills 50.27 269 IAmb IAmb 12 06 21.1
comp=Z,18nm,0.8s

FLWY Flagg Ranch 50.35 299 IAmb IAmb 12 06 35.5
comp=Z,37nm,1.8s

P48A Milroy 50.62 274 IAmb IAmb 12 06 23.4
comp=Z,16nm,0.8s

N38A Joes South For 50.68 281 IAmb IAmb 12 06 23.6
comp=Z,19nm,0.9s

K22A Casper 51.09 294 IAmb IAmb 12 06 26.5
comp=Z,16nm,0.7s

BNX BinXian 51.13 45 ⇑P **P 12 06 25.2 -0.1**
BNX pmax pmax
comp=Z,7.0nm,1.0s

XLT XiLinHaoTe 51.40 56 *e*P P 12 06 35.9 +8.5
XLT pmax pmax
comp=Z,13nm,0.8s

XLT pmax pmax
comp=Z,67nm,4.4s

XLT LR LR
comp=N,13nm,10.7s

XLT LR LR
comp=E,230nm,8.2s

XLT LR LR
comp=Z,140nm,7.6s

PDAR Pinedale Array 51.46 297 P **P 12 06 28.2 +0.1**
comp=Z,3.6nm,1.1s,baz=33,slow=5.7,SNR=13

PDAR PP **PP 12 08 25.7 +0.9**
comp=Z,0.9nm,0.8s,baz=32,slow=8.7,SNR=3.6

PDAR LR LR 12 29 59.9
comp=Z,85nm,18.2s,baz=358,slow=38

PDAR Pinedale Array 51.46 297 P **P 12 06 27.8 -0.3**
comp=Z,3.6nm,1.1s

R50A Paris 51.57 272 IAmb IAmb 12 06 30.5
comp=Z,12nm,0.8s

YSS Yuzhno-Sakhali 51.61 32 *e*P P 12 06 36.2 +7.4
YSS MLR MLR
comp=Z,100nm,19.0s

P40A Paris 51.71 280 IAmb IAmb 12 06 30.9
comp=Z,12nm,0.8s

R49A Shelbyville 51.71 273 IAmb IAmb 12 06 31.7
comp=Z,12nm,0.8s

P38A Dawn 51.87 281 IAmb IAmb 12 06 32.1
comp=Z,21nm,1.1s

BLA Blacksburg 51.93 268 IAmb IAmb 12 06 33.8
comp=Z,26nm,0.9s

WIFE Three Sisters- 51.99 309 IAmb IAmb 12 06 35.4
comp=Z,12nm,0.9s

EIL Elat 52.41 141 LR LR 12 30 58.5
comp=Z,42nm,20.2s,baz=52,slow=38

KBL Kabul 52.62 104 **P 12 06 37.8 +1.0**
KBL IAmb IAmb 12 06 46.4
comp=Z,17nm,0.9s

KBL Kabul 52.62 104 P **P 12 06 37.8 +1.0**
KBL pmax pmax
comp=Z,17nm,0.9s

J05D Fort Rock, OR 52.67 308 IAmb IAmb 12 06 40.6
comp=Z,15nm,0.8s

CN2 Changchun 52.79 48 P P 12 06 43.5 +5.8
CN2 pmax pmax
comp=Z,10.0nm,0.7s

CN2 L L
comp=Z,200nm,11.0s

CN2 L L
comp=Z,200nm,11.0s

CN2 L L
comp=Z,400nm,15.0s

T50A Nancy 52.89 272 IAmb IAmb 12 06 40.2
comp=Z,14nm,0.8s

KSU1 Kansas State U 52.91 284 IAmb IAmb 12 06 40.1
comp=Z,14nm,0.8s

FVM French Village 52.93 278 IAmb IAmb 12 06 39.7
comp=Z,18nm,1.3s

CCM Cathedral Cave 53.00 279 **P 12 06 39.4 +0.1**
CCM IAmb IAmb 12 06 40.0
comp=Z,14nm,0.8s

CCM Cathedral Cave 53.00 279 P **P 12 06 39.4 +0.1**
CCM pmax pmax
comp=Z,14nm,0.8s

S44A Carbondale 53.01 277 IAmb IAmb 12 06 40.9
comp=Z,24nm,0.8s

GTA2 Gaotai 53.14 72 *e*P **P 12 06 40.6 +0.2**
GTA2 sP pwP 12 06 48.3 +1.9
GTA2 pmax pmax
comp=Z,4.0nm,1.2s

GTA2 L L
comp=Z,250nm,15.2s

GTA2 L L
comp=Z,190nm,16.5s

GTA2 L L
comp=Z,360nm,15.2s

USRK Ussuriysk Ar. 53.21 42 P **P 12 06 40.0 -0.7**
comp=Z,3.0nm,0.8s,baz=352,slow=8.9,SNR=4.4
comp=Z,3.0nm,0.8s

T47A Sharon Grove 53.32 274 IAmb IAmb 12 06 43.2
comp=Z,14nm,1.1s

CGM3 Cape Girardeau 53.46 277 IAmb IAmb 12 06 43.8
comp=Z,13nm,0.8s

BTO2 Baotou 53.55 63 *e*P **P 12 06 44.7 +1.2**
BTO2 pP **pwP 12 06 49.5 +0.1**
BTO2 PP **PP 12 08 50.2 +6.5**
BTO2 S **S 12 14 18.7 +2.6**
BTO2 pmax pmax
comp=Z,15nm,0.5s

BTO2 pmax pmax
comp=Z,200nm,4.8s

BTO2 L L
comp=Z,350nm,6.9s

BTO2 L L
comp=Z,630nm,16.0s

BTO2 L L
comp=Z,330nm,6.7s

HHC Hu-ho-hao-te 53.71 61 *e*P **P 12 06 46.8 +2.2**
HHC pmax pmax
comp=Z,9.0nm,0.6s

HHC pmax pmax
comp=Z,78nm,5.2s

HHC L L
comp=Z,260nm,19.6s

HHC L L
comp=Z,130nm,17.9s

HHC L L
comp=Z,380nm,17.9s

S39A Bolivar 53.72 281 IAmb IAmb 12 06 46.3
comp=Z,20nm,0.8s

BSUT Blindstream Ca 53.82 298 IAmb IAmb 12 06 48.2
comp=Z,13nm,0.9s

V53A Saluda 53.85 270 IAmb IAmb 12 06 47.9
comp=Z,20nm,1.0s

T42A Van Buren 53.97 278 IAmb IAmb 12 06 47.5
comp=Z,18nm,1.1s

TKL Tuckaleechee C 54.03 271 LR LR 12 30 15.8
comp=Z,166nm,18.9s,baz=5.5,slow=36

CLTN Cedars of Leba 54.06 273 IAmb IAmb 12 06 49.1
comp=Z,10.0nm,1.0s

ELK Elko 54.30 302 IAmb IAmb 12 06 51.7
comp=Z,8.2nm,0.8s

Q24A Divide 54.47 292 IAmb IAmb 12 06 52.5
comp=Z,20nm,0.9s

V48A Smith Brothers 54.48 274 IAmb IAmb 12 06 51.3
comp=Z,12nm,0.8s

PAULI Pauline 54.50 269 IAmb IAmb 12 06 52.4
comp=Z,17nm,0.9s

BG3 Lake Jocassee 54.53 270 IAmb IAmb 12 06 52.6
comp=Z,18nm,0.9s

W52A Murphy 54.60 271 IAmb IAmb 12 06 52.9
comp=Z,18nm,0.9s

P17A Butcher Ranch, 54.86 298 IAmb IAmb 12 07 31.4
comp=Z,17nm,1.8s

LCAR Lake Charles 54.92 278 IAmb IAmb 12 06 54.7
comp=Z,13nm,0.8s

JSC Jenkinsville 54.93 268 IAmb IAmb 12 06 55.6
comp=Z,15nm,0.8s

T35A Sooner Cattle 55.02 284 IAmb IAmb 12 06 55.4
comp=Z,23nm,1.0s

HODGE Hodges 55.15 269 IAmb IAmb 12 06 56.9
comp=Z,22nm,0.9s

HHAR Hobbs 55.20 281 IAmb IAmb 12 06 55.9
comp=Z,46nm,2.0s

FCAR Ozark Folk Cen 55.27 279 IAmb IAmb 12 06 56.9
comp=Z,15nm,0.9s

FPAL Fort Paine 55.44 272 IAmb IAmb 12 06 58.0
comp=Z,9.3nm,1.0s

RLO Rose Lookout 55.50 282 IAmb IAmb 12 06 58.1
comp=Z,8.8nm,0.9s

PV07 Paradox Valley 55.54 295 IAmb IAmb 12 07 00.4
comp=Z,10nm,0.8s

PV15 Paradox Valley 55.61 295 IAmb IAmb 12 07 00.9
comp=Z,14nm,0.8s

O03E Paynes Creek 55.69 308 IAmb IAmb 12 07 12.1
comp=Z,20nm,1.2s

PV16 Nyswonger Mesa 55.71 296 IAmb IAmb 12 07 01.8
comp=Z,24nm,1.0s

SDCO Great Sand Dun 55.71 292 IAmb IAmb 12 07 01.5
comp=Z,11nm,0.8s

PV03 Paradox Valley 55.76 296 IAmb IAmb 12 07 02.1
comp=Z,21nm,1.0s

TUL3 Leonard 55.88 283 IAmb IAmb 12 07 00.9
comp=Z,10.0nm,0.9s

GOGA Godfrey 56.16 270 IAmb IAmb 12 07 03.9
comp=Z,12nm,0.8s

PSUT Pine Spring 56.26 300 IAmb IAmb 12 07 05.9
comp=Z,11nm,0.8s

UALR University of 56.39 279 IAmb IAmb 12 07 05.4
comp=Z,19nm,0.8s

RTBA Rita Blanca 56.54 289 IAmb IAmb 12 07 06.1
comp=Z,12nm,1.1s

PNTR Pine Nut 56.56 306 IAmb IAmb 12 07 08.2
comp=Z,16nm,0.8s

MVCO Mesa Verde 56.72 295 IAmb IAmb 12 07 09.4
comp=Z,21nm,1.1s

X40A Basin Creek Fa 56.76 279 IAmb IAmb 12 07 07.8
comp=Z,17nm,0.7s

NVAR Mina Array Bea 57.02 304 P **P 12 07 10.2 +1.6**
comp=Z,6.4nm,0.8s,baz=14,slow=4.9,SNR=32

NVAR LR LR 12 31 44.5
comp=Z,82nm,20.5s,baz=4.0,slow=36

LZDM Lanzhou Array 57.24 69 P **P 12 07 11.0 +0.7**
comp=Z,6.4nm,0.8s
comp=Z,1.4nm,0.3s,baz=298,slow=6.4,SNR=5.4
comp=Z,1.4nm,0.3s

TAM Tamanrasset 57.27 174 **P 12 07 10.7 +0.3**
TAM Tamanrasset 57.27 174 P **P 12 07 10.7 +0.3**
TAM pmax pmax
comp=Z,40nm,0.3s

HNS HongShan 57.57 59 ⇑P P 12 07 21.0 +8.9
HNS pmax pmax
comp=Z,24nm,1.0s

HNS LR LR
comp=E,220nm,14.9s

HNS LR LR
comp=Z,290nm,17.1s

KNB Kanab 57.59 299 IAmb IAmb 12 07 15.5
comp=Z,16nm,1.0s

U15A North Rim 58.08 298 IAmb IAmb 12 07 18.2
comp=Z,8.9nm,0.9s

WTFS Witchita Falls 58.43 285 IAmb IAmb 12 07 21.9
comp=Z,14nm,0.9s

ANMO Albuquerque 58.61 292 LR LR 12 31 47.9
comp=Z,140nm,18.7s,baz=24,slow=35

ANMO Albuquerque 58.61 292 **P 12 07 19.8 0.0**
ANMO IAmb IAmb 12 07 21.8
comp=Z,6.3nm,0.8s

ANMO Albuquerque 58.61 292 IAmb IAmb 12 07 21.9
comp=Z,7.9nm,0.8s

ANMO Albuquerque 58.61 292 *ce*P **P 12 07 19.0 -0.8**
ANMO pmax pmax
comp=Z,17nm,1.7s

WUAZ Wupatki 58.83 297 IAmb IAmb 12 07 23.8
comp=Z,17nm,0.8s

MSTX Muleshoe 58.95 289 IAmb IAmb 12 07 24.1
comp=Z,8.7nm,0.9s

TIA Tai'an 59.09 57 P P 12 07 30.6 +7.7
TIA pmax pmax
comp=Z,27nm,0.9s

APMT Aspermont 59.14 286 IAmb IAmb 12 07 26.3
comp=Z,9.3nm,0.8s

V12A Nelson 59.16 301 IAmb IAmb 12 07 26.2
comp=Z,14nm,0.8s

KSRS Korea Array 59.36 47 P **P 12 07 25.1 +0.4**
comp=Z,2.0nm,1.0s,baz=351,slow=6.2,SNR=6.8

KSRS LR LR 12 34 30.3
comp=Z,138nm,18.1s,baz=0.0,slow=38
comp=Z,2.0nm,1.0s

CCCA Chr Cany lake 59.74 303 IAmb IAmb 12 07 30.9
comp=Z,15nm,0.8s

ABTX Abilene, Hawle 59.74 285 IAmb IAmb 12 07 30.2
comp=Z,18nm,1.4s

RAYN Ar Rayn 59.77 130 P **P 12 07 28.8 +1.0**
RAYN IAmb IAmb 12 07 37.9
comp=Z,18nm,1.3s

RAYN Ar Rayn 59.77 130 P **P 12 07 28.8 +1.0**
RAYN pmax pmax
comp=Z,18nm,1.3s

GSC Goldstone, Bar 59.87 302 IAmb IAmb 12 07 31.7
comp=Z,9.2nm,0.9s

X16A Lo Mia Camp, P 59.92 297 IAmb IAmb 12 07 31.4
comp=Z,9.1nm,1.1s

XAN Xi'an 59.96 65 P **P 12 07 31.6 +2.7**
XAN pmax pmax
comp=Z,9.0nm,1.4s

XAN L L
comp=Z,540nm,16.5s

XAN L L
comp=Z,350nm,19.2s

XAN L L
comp=Z,500nm,19.9s

WHTX Lake Whitney, 59.99 283 IAmb IAmb 12 07 30.7
comp=Z,8.5nm,0.7s

128A Castleberry Fa 60.22 288 IAmb IAmb 12 07 33.2
comp=Z,14nm,1.5s

TJN Taejon 60.35 47 P **P 12 07 32.8 +1.3**
TJN Taejon 60.35 47 P **P 12 07 32.8 +1.3**
TJN pmax pmax
comp=Z,104nm,0.7s

Y14A Wickenburg 60.63 298 IAmb IAmb 12 07 36.4
comp=Z,7.8nm,0.9s

BRDY Brady 60.94 285 IAmb IAmb 12 07 37.4
comp=Z,12nm,0.7s

BLYC Blythe 61.05 300 IAmb IAmb 12 07 39.2
comp=Z,9.8nm,1.0s

MJAR Matsushiro Arr 61.47 37 P **P 12 07 38.6 -0.6**
comp=Z,3.7nm,1.0s,baz=343,slow=5.7,SNR=5.7

MJAR LR LR 12 35 05.1
comp=Z,64nm,18.7s,baz=28,slow=37
comp=Z,3.7nm,1.0s

MJAR Matsushiro Arr 61.47 37 **P 12 07 39.7 +0.6**
MJAR IAmb IAmb 12 07 48.1
comp=Z,25nm,2.0s

MJAR Matsushiro Arr 61.47 37 P **P 12 07 39.7 +0.6**
MJAR pmax pmax
comp=Z,25nm,2.0s

PFO Pinyon Flats O 61.48 302 LR LR 12 35 20.4
comp=Z,137nm,20.6s,baz=340,slow=37

MNHN Monahans 61.52 288 IAmb IAmb 12 07 41.6
comp=Z,20nm,1.1s

MNTX Cornudas Mount 61.61 291 IAmb IAmb 12 07 42.2
comp=Z,6.6nm,0.8s

OZNA Ozona 61.66 287 P **P 12 07 40.9 +0.3**

PECS Pecos 61.68 289 IAmb IAmb 12 07 43.1
comp=Z,8.2nm,0.8s

HKT Hockley 61.70 281 P **P 12 07 41.2 +0.6**
HKT IAmb IAmb 12 07 42.7
comp=Z,12nm,1.0s

HKT Hockley 61.70 281 P **P 12 07 41.2 +0.6**
HKT pmax pmax
comp=Z,12nm,1.0s

TUC Tucson 61.88 296 **P 12 07 44.1 +2.1**
TUC IAmb IAmb 12 07 44.8
comp=Z,14nm,0.8s

TUC Tucson 61.88 296 P **P 12 07 44.1 +2.1**
TUC pmax pmax
comp=Z,14nm,0.9s

TPB05 Hovey Rd 62.03 289 IAmb IAmb 12 07 46.5
comp=Z,10nm,1.0s

TPB01 Permian Basin 62.08 289 IAmb IAmb 12 07 45.8
comp=Z,13nm,0.9s

SAND Sanderson 62.77 287 IAmb IAmb 12 07 49.9
comp=Z,18nm,1.8s

NJ2 Nanjing 63.43 56 *e*P **P 12 07 53.8 +1.6**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s

TX31 Lajitas Ar. Si 63.64 289 IAmb IAmb 12 07 55.7
comp=Z,12nm,1.0s

TXAR Lajitas Array 63.64 289 P **P 12 07 54.4 +0.6**
comp=Z,4.9nm,0.8s,baz=38,slow=5.3,SNR=45
comp=Z,4.9nm,0.8s

TXAR Lajitas Array 63.64 289 **P 12 07 54.6 +0.8**
TXAR Lajitas Array 63.64 289 P **P 12 07 54.6 +0.8**
ENH Enshi 63.74 65 P **P 12 07 56.7 +2.4**
ENH IAmb IAmb 12 08 03.0
comp=Z,9.6nm,0.7s

JNU Nakatsue 64.00 45 LR LR 12 36 41.6
comp=Z,61nm,18.3s,baz=30,slow=37

WHN Wuhan 64.23 61 P P 12 08 05.3 +7.7
WHN pmax pmax
comp=Z,26nm,0.7s

JHJ Hachijo jima 2 65.02 37 LR LR 12 36 44.8
comp=Z,28nm,21.9s,baz=66,slow=36

PZH PanZhiHua 66.16 73 P **P 12 08 13.5 +3.2**
HPIG 66.31 290 IAmb IAmb 12 08 21.7
comp=Z,28nm,2.0s

TORD Torodi Ar. Bea 66.81 178 P **P 12 08 15.2 +0.8**
comp=Z,17nm,1.0s,baz=327,slow=4.4,SNR=50
comp=Z,17nm,1.0s

TORD Torodi Ar. Bea 66.81 178 P **P 12 08 15.3 +1.0**
TORD IAmb IAmb 12 08 16.4
comp=Z,18nm,1.1s

SJG San Juan 68.14 249 LR LR 12 35 58.6
comp=Z,58nm,21.9s,baz=71,slow=34

JOW Kunigami 69.87 48 LR LR 12 40 49.2
comp=Z,79nm,18.0s,baz=306,slow=37

CHTO Chiang Mai 73.20 78 P **P 12 08 57.9 +4.3**
comp=Z,4.0nm,1.0s

DBIC Dimbokro 73.28 185 P **P 12 08 53.6 -0.4**
comp=Z,4.1nm,0.9s,baz=113,slow=2.1,SNR=2.6

DBIC LR LR 12 40 50.7
comp=Z,58nm,18.1s,baz=8.5,slow=36
comp=Z,4.1nm,0.9s

FURI Furi 73.35 140 LR LR 12 41 39.0
comp=Z,28nm,21.8s,baz=131,slow=36

CMAR Chiang Mai Arr 73.55 78 P **P 12 08 55.3 -0.3**
comp=Z,1.4nm,0.9s,baz=342,slow=6.9,SNR=13

CMAR LR LR 12 45 25.4
comp=Z,82nm,18.7s,baz=355,slow=39
comp=Z,1.4nm,0.9s

CMAR Chiang Mai Arr 73.55 78 P **P 12 08 56.4 +0.8**
CMAR Chiang Mai Arr 73.55 78 P **P 12 08 56.4 +0.8**
CMIG Matias Romero 74.11 278 LR LR 12 43 23.2
comp=Z,57nm,21.3s,baz=357,slow=37

QIZ Qiongzhong 74.81 67 P **P 12 09 03.2 +0.2**
QIZ S **S 12 18 42.2 +2.8**
QIZ L L
comp=Z,230nm,17.9s

QIZ L L
comp=Z,210nm,12.4s

QIZ L L
comp=Z,320nm,17.9s

SIUN Universidad Ur 75.63 267 IAmb IAmb 12 09 10.4
comp=Z,11nm,1.1s

MTO3 Montecristo 75.77 272 P **P 12 09 09.2 +0.4**
EDA Edea 76.28 169 P **P 12 09 12.6 +1.1**
EDA IAmb IAmb 12 09 21.1
comp=Z,10nm,1.2s

SDV Santo Domingo 77.92 252 LR LR 12 46 09.7
comp=Z,27nm,18.1s,baz=28,slow=38

SDV Santo Domingo 77.92 252 P **P 12 09 21.5 +0.6**
SDV IAmb IAmb 12 09 23.0
comp=Z,17nm,0.8s

MDP Montagnes des 78.83 234 LR LR 12 36 23.8
comp=Z,35nm,21.2s,baz=302,slow=30

JTS Las Juntas de 79.01 267 LR LR 12 46 12.5
comp=Z,107nm,18.5s,baz=354,slow=37

ROSC El Rosal 82.50 255 P **P 12 09 46.0 +0.2**
comp=Z,8.9nm,0.4s,baz=145,slow=22,SNR=1.7

ROSC LR LR 12 46 18.9
comp=Z,57nm,19.4s,baz=248,slow=36
comp=Z,8.9nm,0.4s

BOAV Boa Vista 82.65 241 P **P 12 09 47.1 +1.0**
BOAV IAmb IAmb 12 09 48.1
comp=Z,9.8nm,1.0s

OTAV Otavalo 87.71 258 P **P 12 10 13.2 +1.2**
OTAV IAmb IAmb 12 10 16.0
comp=Z,13nm,1.1s

OTAV Otavalo 87.71 258 P **P 12 10 13.2 +1.2**
OTAV pmax pmax
comp=Z,13nm,1.1s

ATAH Atahualpa 94.92 257 LR LR 12 53 56.6
comp=Z,42nm,21.9s,baz=28,slow=36

LSZ Lusaka 96.22 152 LR LR 12 56 50.7
comp=Z,24nm,18.2s,baz=135,slow=37

TSUM Tsumeb 99.41 163 LR LR 12 57 55.6
comp=Z,26nm,19.2s,baz=332,slow=36

LEM Lembang 99.77 74 LR LR 13 02 40.0
comp=Z,74nm,18.2s,baz=356,slow=39

KAPI Kappang 99.96 61 LR LR 13 00 49.0
comp=Z,16nm,18.2s,baz=326,slow=38

PPT2 Papeete2 116.11 327 *e*LR LR 12 51 08.2
comp=Z,47nm,24.2s

PPT2 *e*LR LR 12 51 09.7
comp=Z,136nm,31.8s

ASAR Alice Springs 120.35 50 PKP **PKPdf 12 16 12.9 -0.6**
comp=Z,0.6nm,0.7s,baz=347,slow=3.0,SNR=7.6

ASAR PKKPbc **PKKPab 12 26 19.5 -1.8**
comp=Z,0.4nm,0.8s,baz=152,slow=3.1,SNR=5.1

ASAR Alice Springs 120.35 50 PKIKP **PKPdf 12 16 13.0 -0.6**
TBI Tubuai 121.80 326 *e*LR LR 12 53 39.6
comp=Z,329nm,37.0s

PLCA Paso Flores 126.50 243 PKP **PKPdf 12 16 25.1 +0.2**
comp=Z,1.5nm,0.8s,baz=270,slow=4.3,SNR=6.6

SYO Syowa Base 150.41 152⇑ *e*P **PKiKP 12 17 12.7 -0.3**
SYO Syowa Base 150.41 152⇑ *e*P **PKPab 12 17 20.5 +1.6**
NVL N'lazarevskaya 150.66 172 *e*PKIKP **PKPbc 12 17 10.9 -1.9**
NVL *e* 12 20 53.9
NVL *e*PPP PPP 12 24 16.5
NVL *e*SSS SSS 12 45 58.0
NVL pmax pmax
comp=Z,12nm,0.9s

SNAA Sanae 151.43 182 PKPbc **PKiKP 12 17 15.3 +0.1**
comp=Z,3.6nm,0.7s,baz=350,slow=3.1,SNR=4.5

ELIB Princess Elisa 152.26 164 *d*PKP **PKiKP 12 17 17.8 +0.8**

NOU 03 12:04:04.6, 15.83S×168.15E, h160km, MLv4.2/16,
Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.99	293	P	Pn	12 04 29.5	-0.7
SANVU	Saraoutou	0.99	293	S	Sn	12 04 50.3	+0.5
DVP	Devils Point	1.89	179	P	Pn	12 04 39.2	+0.2
DVP	Devils Point	1.89	179	P	Sn	12 05 06.8	+1.1
RTV	Rentapao	1.97	172	P	Pn	12 04 40.0	0.0
RTV	Rentapao	1.97	172	S	Sn	12 05 07.5	+0.1
MARNC	Mare, Loyalty	5.62	181	P	Pn	12 05 24.9	-1.5
DZM	Mont Dzumac	6.41	194	P	Pn	12 05 37.7	+0.7
DZM	Mont Dzumac	6.41	194	S	Sn	12 06 48.9	-0.6
ONTNC	Ouen Toro	6.64	194	P	Pn	12 05 40.8	+0.9
OUENC	Ouen Island, N	6.67	190	P	Pn	12 05 41.6	+1.3
SAVO	Savo Central	10.50	308	P	Pn	12 06 31.2	0.0

IDC 03 12:34:32.8±7.5, 24.38S×179.72E, h528km±60km, mb3.2/3,
mbtmp4.0/4, Error ellipse: s-maj=134.1km
s-min=39.7km az=142.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.79	346	P	P	12 36 18.1	-0.1
	3.5nm,0.6s,baz=171,slow=20,SNR=2.7						
STKA	Stephens Creek	34.31	249	P	P	12 40 34.5	-0.6
	0.8nm,0.4s,baz=89,slow=12,SNR=3.7						
	0.8nm,0.4s						
ASAR	Alice Springs	41.70	261	P	P	12 41 35.3	-0.3
	0.8nm,0.4s,baz=92,slow=7.4,SNR=68						
	0.8nm,0.4s						
WRA	Warramunga Arr	42.12	267	P	P	12 41 39.1	+0.2
	2.4nm,0.3s,baz=102,slow=8.1,SNR=35						
	2.4nm,0.3s						
HFS	Hagfors	142.97	348	PKP	PKPdf	12 53 05.1	-0.7
	0.7nm,0.3s,baz=354,slow=4.3,SNR=2.0						

*BER **03** 12:35:49.8±3.0, 80°.14N×0°.13E, h10km, Mw3.4, ML2.2(DNK), Confirmed Earthquake*
*DNK **03** 12:35:54.0±2.1, 79°.87N×0°.71E, h36km±19km, ML2.2, Presumed earthquake*
*FCIAR **03** 12:35:55.0, 79°.97N×2°.71E, h10km, station ZFI2 has station magnitude of 3.30 station OMEGA has station magnitude of 3.30*
*KOLA **03** 12:35:56.6, 79°.95N×3°.39E, h0km, ML2.2, Error ellipse: s-maj=75.6km s-min=27.9km az=30.0, Greenland sea, Knipovich ridge, north*
ISC 03 12:35:47.6±1.1**, 80°.08N**±0°.07×**0°.63E**±0°.05**, h10km, n22, σ2s88/37, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	Kingsbay	2.37	114	eP	Pn	12 36 27.5	+1.1
KBS				e		12 36 53.0	
KBS				IAML		12 36 59.1	
	comp=Z,14nm,1.1s						
KBS	Kingsbay	2.37	114	i P	Pn	12 36 27.6	+1.2
KBS				i S	Sn	12 36 53.6	-1.9
KBS	Kingsbay	2.37	114	P	Pn	12 36 27.5	+1.1
KBS				S	Sn	12 36 50.4	-5.1
BRBB	Barentsburg B	3.26	121	eP	Pn	12 36 41.8	+3.2
BRBB				eS	Sn	12 37 18.3	+1.1
BRBB	Barentsburg B	3.26	121	P	Pn	12 36 41.4	+2.8
BRBB				S	Sn	12 37 16.4	-0.9
BRBA	Barentsburg A	3.28	121	eP	Pn	12 36 42.3	+3.3
BRBA				eS	Sn	12 37 19.0	+1.1
BRBA				IAML		12 37 43.8	
	comp=Z,10nm,0.1s						
SPA0	Spitsbergen Ar	3.53	115	eP	Pn	12 36 44.3	+1.9
SPA0				eS	Sn	12 37 22.0	-2.1
SPA0				IAML		12 37 33.6	
	comp=Z,7.1nm,0.5s						
SPA0	Spitsbergen Ar	3.53	115	eP	Pn	12 36 44.3	+1.9
SPA0				eS	Sn	12 37 21.5	-2.6
SPITS	Spitsbergen Ar	3.53	115	P	Pn	12 36 44.4	+1.9
SPITS				S	Sn	12 37 20.1	-4.0
HSPB	Hornsund (broa	4.27	129	eP	Pn	12 36 55.1	+2.6
HSPB				eS	Sn	12 37 41.2	-1.1
HSPB				IAML		12 37 43.9	
	comp=Z,3.5nm,0.3s						
HSPB	Hornsund (broa	4.27	129	eP	Pn	12 36 55.1	+2.6
HSPB				eS	Sn	12 37 39.8	-2.5
HSPB	Hornsund (broa	4.27	129	P	Pn	12 36 54.9	+2.3
HSPB				S	Sn	12 37 38.2	-4.1
DAG	Danmarks Havn	5.08	239	i P	Pn	12 37 03.9	+0.3
DAG				i S	Sn	12 37 55.8	-6.3
DAG				IAML		12 38 00.4	
	comp=Z,10nm,0.2s						
DAG	Danmarks Havn	5.08	239	i P	Pn	12 37 03.9	+0.3
DAG				i S	Sn	12 37 55.8	-6.3
DAG				IAML		12 38 00.4	
	comp=Z,10nm,0.2s						
HOPEN	Hopen	6.06	113	eP	Pn	12 37 18.6	+1.6
HOPEN				eS	Sn	12 38 22.6	-3.8
HOPEN				IAML		12 38 24.3	
	comp=Z,5.4nm,0.2s						
DBG	Daneborg	7.35	229	i P	Pn	12 37 35.9	+1.2
DBG				i S	Sn	12 38 49.8	-8.3
DBG				IAML		12 38 55.1	
	comp=Z,6.9nm,0.3s						
DBG	Daneborg	7.35	229	i P	Pn	12 37 35.9	+1.2
DBG				i S	Sn	12 38 49.8	-8.3
DBG				IAML		12 38 55.1	
	comp=Z,6.9nm,0.3s						
ZFI2	Zemlya Franca-	7.67	62	eP	Pn	12 37 41.4	+2.3
ZFI2				eS	Sn	12 39 01.2	-4.8
	comp=Z,8.7nm,2.4s						
OMEGA	Omega	7.70	62	eP	Pn	12 37 41.6	+2.1
OMEGA				eS	Sn	12 39 01.3	-5.1
	comp=Z,8.9nm,2.6s						
JNW	Jan Mayen West	9.36	198	eP	Pn	12 38 03.6	+1.5
NEEM	North Greenlan	10.10	282	i P	Pn	12 38 13.1	+0.4
NEEM				i S	Sn	12 39 56.5	-9.3
NEEM	North Greenlan	10.10	282	i P	Pn	12 38 13.1	+0.4
NEEM				i S	Sn	12 39 56.5	-9.3

*IDC **03** 12:35:43.4±1.3, 4°.41N×126°.07E, h0km, mb3.8/4, mbtmp3.8/5, ML3.7/1, Error ellipse: s-maj=115.7km s-min=21.5km az=60.0*
*MAN **03** 12:35:55.0, 5°.16N×127°.34E, h164km, MS3.2*
ISC 03 12:35:53.9±1.0**, 4°.9N**±0°.2×**127°.3E**±0°.4**, h100km, n6, σ0s21/7, mb3.8/4, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	Bislig	3.41	345	i P	Pn	12 36 45.2	+0.1
BIPH				i S	Sn	12 37 07.8	-17
SIJI	Sorong	6.97	145	Pn	Pn	12 37 33.5	0.0
	1.3nm,0.3s,baz=147,slow=20,SNR=7.2						
SIJI				Sn	Sn	12 38 51.2	-0.1
	0.7nm,0.3s,baz=172,slow=23,SNR=1.4						
	4.0nm,0.4s						
WRA	Warramunga Arr	25.63	164	P	P	12 41 14.1	-0.2
	0.6nm,0.6s,baz=342,slow=10.0,SNR=4.8						
	0.6nm,0.6s						
STKA	Stephens Creek	39.02	160	P	P	12 43 11.1	+0.3
	1.1nm,0.4s,baz=331,slow=13,SNR=4.4						
	1.1nm,0.4s						
MKAR	Makanchi Array	56.92	325	P	P	12 45 28.6	-0.1
	0.3nm,0.5s,baz=121,slow=7.8,SNR=5.7						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	61.07	327	P	P	12 45 57.0	-0.1
	0.5nm,0.2s,baz=136,slow=5.8,SNR=2.7						
	0.5nm,0.2s						

TEH 03 13:08:03.2, 31°.70N×56°.32E, h14km±17km, ML3.5, Presumed earthquake, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBAF	Bafgh	0.65	261	Pg	Pb	13 08 16.6	+0.2
ZRDN	Zarand Kerman	0.75	166	Pg	Pb	13 08 18.6	+0.4
KHGB	Koh Gabri	1.33	174	Pg	Pg	13 08 30.2	+1.4
TPRV	Parvadeh(Tabas	1.36	13	Pg	Pg	13 08 30.1	+0.7
KRM1	Kerman Provinc	1.45	145	Pg	Pg	13 08 31.9	+0.8
IMEH	Mehriz	1.49	258	Pg	Pg	13 08 32.5	+0.6
DOBD	Dorbid, Yazd	1.56	281	Pg	Pg	13 08 34.0	+0.7
ICHK	Chekchek	1.71	289	Pg	Pg	13 08 36.9	+0.7
TAFT	Taft - Yazd	1.83	271	Pn	Pg	13 08 38.9	+0.5
TKDS	Koohdasht(Taba	2.02	19	Pn	Pb	13 08 40.2	+0.3
CHMN	Cheshme madani	2.11	150	Pn	Pb	13 08 41.6	+0.1
TNSJ	Nastanj	2.27	6	Pn	Pb	13 08 43.1	-0.9
ITEG	Tejag	2.38	59	Pn	Pb	13 08 44.2	-1.7
IKOO	Kooshah	2.39	72	Pn	Pb	13 08 45.0	-1.2
BSRN	Basiran	2.40	83	Pn	Pb	13 08 45.0	-1.3
ANAR	Anarak	2.65	305	Pn	Pb	13 08 48.5	-2.0
BAGH	Bagheran - Bir	2.67	65	Pn	Pb	13 08 49.2	-1.8
AFRZ	Afriz	2.85	52	Pn	Pn	13 08 51.1	+2.7
TAPT	Tabas- Tapeh t	3.25	12	Pn	Pn	13 08 56.6	+2.7
JRKH	Jarkhoshk	5.37	38	Pn	Pn	13 09 26.3	+3.3

IDC 03 13:32:50.0±2.2**, 7°.62S×127°.27E, h0km, mb3.3/1, mbtmp3.1/3, ML3.1/2, Error ellipse: s-maj=302.6km s-min=32.6km az=63.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.03	151	Pn	Pn	13 36 08.8	-1.5
	0.1nm,0.3s,baz=329,slow=13,SNR=7.8						
WRA				Sn	Sn	13 38 31.0	-16
	0.1nm,0.3s,baz=325,slow=24,SNR=4.6						
	0.1nm,0.3s						
ASAR	Alice Springs	17.18	159	P	P	13 36 52.8	-0.5
	baz=333,slow=9.7,SNR=4.5						
	0.2nm,0.8s						
MKAR	Makanchi Array	67.29	328	P	P	13 43 46.6	0.0
	0.2nm,0.5s,baz=135,slow=7.1,SNR=5.1						
	0.2nm,0.5s						

*NEIC **03** 13:47:16.9±0.5, 17°.98N±0°.02×66°.936W±0°.008, h10km±1km, ML3.6/33, Md3.4/5(RSPR), Error ellipse: s-maj=3.8km s-min=2.0km az=180.0*
*OSPL **03** 13:47:16.6±0.3, 17°.98N×66°.95W, h19km±5km, ML3.4, Presumed earthquake*
*SDD **03** 13:47:17.3±1.0, 17°.93N×66°.91W, h12km±11km, MD2.9, ML3.1, MW3.4, Presumed earthquake*
ISC 03 13:47:16.1±1.0**, 17°.93N**±0°.06×**66°.92W**±0°.02**, h16km±5km, n27, σ0s43/38, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.06	42		Pg	13 47 19.1	0.0
GBPR					Sg	13 47 20.9	-0.1
MLPR	Magueyes Islan	0.12	288		Pg	13 47 19.5	-0.3
MLPR				IAML		13 47 22.1	
	25µm,0.5s						
CRPR	Cabo Rojo, PR	0.20	292		Pg	13 47 20.6	-0.1
CRPR					Sg	13 47 23.6	-0.3
CRPR	Cabo Rojo, PR	0.20	292	IAML		13 47 23.8	
	8µm,0.4s						
CRPR				IAML		13 47 24.0	
	7µm,0.7s						
CRPR	Cabo Rojo, PR	0.20	292	ePg	Pg	13 47 20.7	-0.1
CRPR				eSg	Sg	13 47 23.7	-0.2
CRPR				IAML		13 47 23.7	
	comp=N,4µm,0.4s						
CRPR	Cabo Rojo, PR	0.20	292	i P	Pg	13 47 20.6	-0.1
CRPR				eS	Sg	13 47 23.5	-0.3
CRPR				IAML		13 47 23.8	
	comp=Z,8µm,0.4s						
LSP	Las Mesas	0.29	327		Pg	13 47 22.3	-0.1
LSP					Sg	13 47 26.0	-0.6
OBIP	Obispado Ponce	0.32	70		Pg	13 47 23.0	+0.2
OBIP					Sg	13 47 27.9	+0.5
OBIP	Obispado Ponce	0.32	70	i P	Pg	13 47 23.1	+0.3
OBIP				eS	Sg	13 47 28.1	+0.7
OBIP				IAML		13 47 28.8	
	comp=Z,3µm,0.2s						
CELP	Cerrillos	0.35	66		Pg	13 47 23.7	+0.2
CELP				IAML		13 47 29.4	
	comp=Z,4µm,0.3s						
CELP				IAML		13 47 29.6	
	comp=Z,11µm,0.3s						
PRSN	Puerto Rico Se	0.35	323		Pg	13 47 23.2	-0.3
PRSN				IAML		13 47 30.8	
	comp=Z,7µm,0.4s						
PRSN				IAML		13 47 33.5	
	comp=Z,5µm,0.4s						
UUPR	Utuado, UPR, P	0.37	31		Pg	13 47 23.6	-0.1
AOPR	Arecibo Observ	0.44	21		Pg	13 47 24.8	-0.2
AOPR				IAML		13 47 32.4	
	comp=Z,10µm,0.3s						
AGPR	Aguadilla, PR	0.56	341		Pg	13 47 26.9	-0.4
AGPR				IAML		13 47 34.9	
	comp=Z,5µm,0.4s						
ECPR	Experimental S	0.66	54		Pg	13 47 28.6	-0.4
ECPR				IAML		13 47 41.0	
	comp=Z,4µm,0.2s						
ECPR				IAML		13 47 42.1	
	comp=Z,4µm,0.2s						
EMPR	Esperanza - Ma	0.66	34		Pg	13 47 29.1	0.0
EMPR					Sg	13 47 38.0	+0.2
IDE	Isla Desecheo	0.69	311		Pg	13 47 29.2	-0.5
IDE					Sb	13 47 39.1	-0.2
SJG	San Juan	0.76	76		Pg	13 47 30.4	-0.5
SJG				IAML		13 47 42.4	
	comp=Z,2µm,0.3s						
SJG				IAML		13 47 43.1	
	comp=Z,2µm,0.3s						
SJG	San Juan	0.76	76	ePg	Pg	13 47 30.2	-0.6
SJG				eSg	Sg	13 47 40.6	-0.2
SJG	San Juan	0.76	76	i P	Pg	13 47 30.4	-0.5
SJG				eS	Sg	13 47 40.6	-0.2
SJG				IAML		13 47 42.2	
	comp=Z,2µm,0.2s						
PDPR	Patillas Dam,	0.86	84		Pg	13 47 32.2	-0.6
PDPR				IAML		13 47 45.0	
	comp=Z,1µm,0.8s						
HUMP	Col San Antoni	1.04	78		Sb	13 47 48.9	-0.3
HUMP	Col San Antoni	1.04	78	Pg	Pb	13 47 34.9	-0.9
CUPR	Culebra, Puert	1.60	76		Pn	13 47 44.5	+0.8
DR12	Loma Pena Alta	2.49	290		Pn	13 47 56.4	+0.4
HATOM	Hato Mayor del	2.49	290	ePg	Pb	13 48 00.7	+0.2
HATOM				eSg	Sb	13 48 31.8	+0.9
HATOM				IAML		13 48 37.0	
	comp=N,86nm,0.6s						
SDDR	Presa de Saban	4.28	285	Pn	Pn	13 48 20.9	+0.2

*AFAD **03** 13:48:03.9, 38°.39N×44°.53E, h9km±2km, ML2.4*
*ISK **03** 13:48:03.4, 38°.07N×44°.48E, h6km, ML2.6/4*
*AZER **03** 13:48:03.4, 38°.26N×44°.57E, h5km, ml2.4*
ISC 03 13:48:03.9±1.3**, 38°.25N**±0°.04×**44°.51E**±0°.03**, h4km±11km, n20, σ1s61/39, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.58	316	P	Pg	13 48 14.0	-1.0
OZAP				S	Sg	13 48 21.9	-0.8
OZAP				IAML		13 48 24.0	
	comp=N,381nm,0.6s						
YOVA	Hakkari_Yksek	0.68	195	P	Pn	13 48 20.1	-0.3
YOVA				S	Sn	13 48 32.0	+0.4
YOVA				IAML		13 48 36.0	
	comp=N,91nm,0.7s						
TVAN	Van	0.91	288	P	Pg	13 48 20.9	-0.5
TVAN				S	Sb	13 48 34.2	-0.7
TVAN				IAML		13 48 44.0	
	comp=N,146nm,0.5s						
TVAN				IAML		13 48 47.0	
	comp=E,108nm,0.8s						
HAKT	HAKKARI	0.94	223	P	Pn	13 48 23.3	-0.7
HAKT				S	Sn	13 48 39.3	+1.4
HAKT				IAML		13 48 41.0	
	comp=E,72nm,0.3s						
HAKT	HAKKARI	0.94	223	P	Pn	13 48 23.7	-0.3
HAKT				S	Sn	13 48 40.6	+2.6
VANB	Van	0.95	292	Pg	Pb	13 48 22.2	-0.7
VANB				Sg	Sb	13 48 35.7	-0.1
VMUR	Van-Muradiye	1.04	316	P	Pg	13 48 22.3	-1.6
VMUR				S	Sb	13 48 38.4	-0.3
VMUR				IAML		13 48 40.0	
	comp=N,101nm,0.5s						
VMUR				IAML		13 48 41.0	
	comp=E,130nm,0.4s						
GEVA	Gevas	1.14	274	P	Pg	13 48 24.7	-1.2
GEVA				S	Sn	13 48 42.5	-0.5
GEVA				IAML		13 48 45.0	
	comp=N,57nm,0.3s						
NAX	Nakhchivan	1.20	40	P	Pn	13 48 26.7	-0.8
NAX				S	Sn	13 48 44.4	+0.1
AKDM	Akdamar-Van	1.21	274	Pn	Pg	13 48 26.9	-0.1
AKDM				Sn	Sn	13 48 44.2	-0.3
ORD	Ordubad	1.35	59	P	Pg	13 48 30.4	+0.7
ORD				S	Sn	13 48 49.9	+2.0
SBZ	Shahbuz	1.41	35	P	Pg	13 48 30.8	-0.1
SBZ				S	Sn	13 48 51.6	+2.1
HYR	Heyderabad	1.49	10	P	Pg	13 48 33.6	+1.1
HYR				S	Sg	13 48 56.2	+4.3
PERV	Siirt/Pervari-	1.58	260	P	Pb	13 48 33.7	0.0
PERV				IAML		13 49 02.0	
	comp=E,67nm,0.5s						
PERV				IAML		13 49 05.0	
	comp=N,84nm,0.6s						
IGDI	IGDIR	1.65	348	P	Pg	13 48 35.6	0.0
IGDI				S	Sg	13 49 01.3	+4.3
AGRB	Hanur-Agry	1.78	319	Pn	Pg	13 48 37.2	-0.8
AGRB				Sn	Sg	13 49 02.0	+1.0
GNI	Garni	1.91	5	Pn	Pg	13 48 39.9	-0.6
GNI				Sn	Sg	13 49 06.6	+1.4
SRTM	Siirt_Merkez	2.06	264	P	Pb	13 48 42.3	+0.5
SRTM				S	Sg	13 49 12.4	+2.5
SRTM				IAML		13 49 14.0	
	comp=E,29nm,0.8s						
SRTM				IAML		13 49 23.0	
	comp=N,38nm,0.7s						
GDB	GEDABAY	2.65	21	P	Pb	13 48 51.1	-0.9
GDB				S	Sg	13 49 26.7	-2.4
YRD	Yardimli	3.00	76	P	Pb	13 48 55.0	-3.0
YRD				S	Sb	13 49 34.7	-0.3

*HEL **03** 13:49:26.9±0.1, 61°.14N×29°.84E, h0km, ML1.8, Explosion*
*IDC **03** 13:49:26.6±3.2, 61°.23N×29°.82E, h0km, mbtmp3.8/1, ML2.7/1, Error ellipse: s-maj=30.0km s-min=13.2km az=161.0*
ISC 03 13:49:24.5±1.3**, 61°.20N**±0°.05×**29°.79E**±0°.05**, h0km, n18, σ1s40/24, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUF	Ruokolahti	0.46	299	eP	Pb	13 49 36.3	+0.8
RUF				smax	smax	13 49 43.0	
	comp=Z,16nm,0.2s						
RUF				eS	S	13 49 43.0	+3.7
VJF	Virojoki	1.28	240	eP	Pn	13 49 49.3	-0.3
VJF				smax	smax	13 50 03.2	
	comp=Z,11nm,0.2s						
VJF				eS	Sb	13 50 06.3	-0.1
FIA0	FINESS Array S	1.81	279	eP	Pg	13 49 59.3	+0.2
FIA0				smax	smax	13 50 20.3	
	comp=Z,4.9nm,0.2s						
FIA0				eSG	Sg	13 50 23.5	+1.0
FINES	FINESS Array B	1.81	279	Pg	Pg	13 49 59.6	+0.5
	comp=Z,0.9nm,0.3s,baz=99,slow=16,SNR=36						
FINES				Lg	Lg	13 50 23.4	
	comp=Z,5.2nm,0.3s,baz=95,slow=31,SNR=58						
JOF	Joensuu	1.87	22	eP	Pg	13 50 01.7	+1.4
JOF	Joensuu	1.87	22	eP	Pg	13 50 00.8	+0.5
JOF				eSG	Sg	13 50 26.0	+1.5
PVF	Pernaja	2.03	253	ePB	Pb	13 50 02.7	+0.5
PVF				smax	smax	13 50 25.4	
	comp=Z,12nm,0.2s						
PVF				eS	Sg	13 50 29.7	0.0
SUF	Sumiainen	2.29	313	eP	Pg	13 50 08.8	+0.3
SUF	Sumiainen	2.29	313	eP	Pg	13 50 08.3	-0.2
SUF				smax	smax	13 50 36.3	
	comp=Z,2.1nm,0.2s						
SUF				eS	Sg	13 50 39.0	+0.8
NIF	Nilsia	2.38	338	ePB	Pg	13 50 09.3	-0.9
NIF				smax	smax	13 50 40.0	
	comp=Z,1.8nm,0.2s						
NIF				eSB	Sg	13 50 40.8	-0.2
KEF	Keuruu	2.54	295	eP	Pb	13 50 11.3	+0.5
KEF	Keuruu	2.54	295	ePB	Pb	13 50 11.2	+0.4
KEF				smax	smax	13 50 42.0	
	comp=Z,3.0nm,0.2s						
KEF				eSB	Sb	13 50 43.8	+1.2
MEF	Metsahovi	2.83	252	smax	smax	13 50 48.2	
	comp=Z,3.1nm,0.2s						
VAF	Ylistaro	3.82	302	eP	Pb	13 50 29.8	-2.9
OUL	Oulu	4.28	337	eSG	Sg	13 51 40.2	-1.6
I43RU	DUBNA INFRASON	5.91	136	I	I	14 22 30.0	
	baz=324,slow=327,SNR=3.5						
HFS	Hagfors	7.97	269	Sn	Sn	13 52 50.3	-2.1
	comp=Z,0.1nm,0.3s,baz=81,slow=31,SNR=1.5						
HFS				Lg	Lg	13 53 32.2	
	comp=Z,0.2nm,0.3s,baz=83,slow=28,SNR=2.1						
ARCES	ARCESS Array B	8.55	350	Pn	Pn	13 51 28.1	-1.4
	comp=Z,0.1nm,0.3s,baz=168,slow=14,SNR=1.4						
ARCES				Lg	Lg	13 53 47.5	
	comp=Z,0.2nm,0.3s,baz=52,slow=14,SNR=2.1						
	comp=Z,5.7nm,1.2s						

*NOU **03** 14:06:30.2, 37°.00S×177°.69E, h198km, MLv4.1/17, Off E. Coast of N. Island, N.Z.*
*NEIC **03** 14:06:33.7±1.5, 37°.23S±0°.07×177°.5E±0°.1, h173km±10km, mb4.4/6, Error ellipse: s-maj=16.4km s-min=4.3km az=129.0*
*WEL **03** 14:06:33.6±1.1, 37°S±7°×17°7E±°, h154km±11km, M3.6/25, ML3.7/8, MLv3.6/25, Error ellipse: s-maj=9.6km s-min=7.0km az=42.2, confirmed*
*IDC **03** 14:06:34.3±1.3, 37°.13S×177°.40E, h182km±17km, mb3.5/2, mbtmp4.1/4, Error ellipse: s-maj=52.5km s-min=21.2km az=125.0*
ISC 03 14:06:33.4±0.8**, 37°.06S**±0°.05×**177°.45E**±0°.06**, h185km±6km, n191, σ1s49/201, mb4.1/5, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	Te Kaha	0.75	159	P	Pn	14 06 58.3	-1.6
HAZ				S	Sn	14 07 17.7	-2.8
MXZ	Matakaoa Point	0.85	127	P	Pn	14 06 58.8	-1.7
MXZ	Matakaoa Point	0.85	127	S	Sn	14 07 20.6	-1.0
MXZ	Matakaoa Point	0.85	127		Pn	14 06 58.6	-2.0
MXZ	Matakaoa Point	0.85	127	P	Pn	14 06 58.9	-1.7
WHRZ	Whale Island	0.88	205	P	Pn	14 07 00.3	-0.5
RUGZ	Raukumara Rang	0.93	169	P	Pn	14 06 59.4	-1.8
PKGZ	Pakihiroa	0.95	148	P	Pn	14 07 00.4	-0.9
PKGZ				S	Sn	14 07 20.8	-2.1
MYRZ	Mayor Island	0.99	257	P	Pn	14 06 59.8	-1.7
OPRZ	Ohinepanea	1.06	222	P	Pn	14 07 00.9	-1.1
WMGZ	Waiomatatini S	1.08	135	P	Pn	14 07 01.0	-1.1
MARZ	Manawahe	1.11	213	P	Pn	14 07 01.8	-0.6
TGRZ	Tauranga	1.16	234	P	Pn	14 07 01.7	-1.0
EDRZ	Edgecumbe	1.19	208	P	Pn	14 07 02.6	-0.4
TWGZ	Tauwhareparae	1.20	159	P	Pn	14 07 03.2	0.0
PUZ	Puketiti	1.20	148	P	Pn	14 07 02.2	-1.0
URZ	Urewera	1.23	192	P	Pn	14 07 03.0	-0.3
	220nm,0.3s,baz=353,slow=5.8,SNR=1540						
URZ				S	Sn	14 07 26.1	-0.5
	209nm,0.3s,baz=156,slow=22,SNR=19						
URZ	Urewera	1.23	192	P	Pn	14 07 02.5	-0.8
URZ	Urewera	1.23	192	S	Sn	14 07 27.1	+0.4
URZ	Urewera	1.23	192	P	Pn	14 07 02.8	-0.5
URZ				S	Sn	14 07 26.4	-0.2
LIRZ	Lichensteins R	1.27	221	P	Pn	14 07 03.1	-0.6
MWZ	Matawai	1.28	177	P	Pn	14 07 03.4	-0.4
MWZ				S	Sn	14 07 26.6	-0.9
MKRZ	Makatiti	1.33	215	P	Pn	14 07 05.1	+0.7
OMRZ	Omania	1.35	219	P	Pn	14 07 04.2	-0.2
KARZ	Kaharoa	1.35	224	P	Pn	14 07 04.2	-0.3
TARZ	Mount Tarawera	1.39	212	P	Pn	14 07 05.6	+0.7
TKGZ	Te Karaka	1.42	167	P	Pn	14 07 04.8	-0.2
KMRZ	Kaimai	1.43	236	P	Pn	14 07 04.8	-0.4
RAGZ	Rawiri	1.44	181	P	Pn	14 07 05.4	+0.2
NGRZ	Ngongotaha	1.44	223	P	Pn	14 07 05.5	+0.2
HLRZ	Highlands Stat	1.48	216	P	Pn	14 07 05.9	+0.4
RRRZ	Republican Roa	1.48	210	P	Pn	14 07 06.1	+0.5
UTU	Utuhina	1.50	221	P	Pn	14 07 04.2	-1.5
MUGZ	Murupara	1.52	200	P	Pn	14 07 05.9	0.0
CNGZ	Carnagh Statio	1.55	157	P	Pn	14 07 06.5	+0.4
HSRZ	Hossack Road	1.57	217	P	Pn	14 07 07.7	+1.3
RTZ	Ruatahuna	1.60	193		Pn	14 07 05.9	-0.9
RTZ	Ruatahuna	1.60	193	P	Pn	14 07 06.5	-0.3
HRRZ	Handcock Road	1.62	214	P	Pn	14 07 07.5	+0.6
PRRZ	Plateau Road	1.66	210	P	Pn	14 07 07.9	+0.5
RIGZ	Rimuhau	1.67	171	P	Pn	14 07 07.3	0.0
TOZ	Tahuroa Road	1.69	246		Pn	14 07 07.3	-0.3
TOZ	Tahuroa Road	1.69	246	P	Pn	14 07 07.4	-0.1
SNGZ	Shannon Statio	1.72	183	P	Pn	14 07 08.0	+0.1
ALRZ	Allen Road	1.74	210	P	Pn	14 07 08.8	+0.7
WPRZ	Whakapapatarin	1.78	214	P	Pn	14 07 09.5	+1.0
GRZ	Great Barrier	1.79	296	P	Pn	14 07 05.5	-3.1
MKAZ	Moumakai	1.83	268	P	Pn	14 07 07.7	-1.3
MTHZ	Maungataniwha	1.85	195	P	Pn	14 07 09.6	+0.3
WIAZ	Waiheke Island	1.87	277	P	Pn	14 07 07.6	-1.8
RAHZ	Arahi	1.88	189	P	Pn	14 07 09.9	+0.4
KUTZ	Kaahu Road	1.92	221	P	Pn	14 07 11.2	+1.2
MRHZ	Matea Rd	1.95	204	P	Pn	14 07 10.5	+0.2
KNZ	Kokohu	1.97	175	P	Pn	14 07 10.5	+0.1
TLZ	Tolley Road	1.98	229	P	Pn	14 07 11.3	+0.7
WHTZ	Whakaora	1.99	216	P	Pn	14 07 12.5	+1.7
ETAZ	East Tamaki Re	2.02	272	P	Pn	14 07 10.0	-0.9
WHHZ	Waihua	2.02	185	P	Pn	14 07 11.5	+0.4
KBAZ	Karaka Road Bo	2.04	268	P	Pn	14 07 10.9	-0.4
MBAZ	Motutapu North	2.06	277	P	Pn	14 07 10.1	-1.4
NMHZ	Naumai	2.10	194	P	Pn	14 07 12.7	+0.8
HATZ	Hinemaiaia	2.12	210	P	Pn	14 07 13.0	+0.9
MHGZ	Mahia Peninsul	2.12	170	P	Pn	14 07 12.4	+0.3
WATZ	Wairara	2.13	219	P	Pn	14 07 13.7	+1.4
ABAZ	Army Bay	2.15	281	P	Pn	14 07 10.8	-1.6

ARHZ	Aropaoanui	2.23	189	P	Pn	14 07 13.6	+0.3
BKZ	Black Stump Fm	2.23	199	P	Pn	14 07 13.2	-0.2
BKZ	Black Stump Fm	2.23	199	P	Sn	14 07 47.1	+2.5
BKZ	Black Stump Fm	2.23	199		Pn	14 07 12.4	-1.0
BKZ	Black Stump Fm	2.23	199	P	Pn	14 07 13.3	-0.1
RATZ	Rangitukua	2.24	216	P	Pn	14 07 14.5	+1.1
AWAZ	Awhitu Peninsu	2.24	269	P	Pn	14 07 12.7	-0.7
RITZ	Rihia Road	2.29	213	P	Pn	14 07 14.9	+0.9
WTAZ	Waiatarua	2.30	272	P	Pn	14 07 13.4	-0.7
RVAZ	Riverhead Bore	2.31	276	P	Pn	14 07 13.2	-1.1
KATZ	Kakaramea	2.36	215	P	Pn	14 07 15.7	+0.8
MCHZ	McNeill Hill	2.46	194	P	Pn	14 07 16.4	+0.6
NTVZ	North Tongarir	2.47	214	P	Pn	14 07 17.2	+1.1
TMVZ	Te Maari	2.47	213	P	Pn	14 07 16.9	+0.8
KRVZ	Karewarewa	2.48	214	P	Pn	14 07 17.6	+1.3
ETVZ	East Tongariro	2.49	213	P	Pn	14 07 17.1	+0.8
KWHZ	Kaweka Forest	2.50	198	P	Pn	14 07 16.5	+0.2
HIZ	Hauiti	2.51	234	P	Pn	14 07 17.7	+1.2
HIZ	Hauiti	2.51	234		Pn	14 07 17.5	+1.0
HIZ	Hauiti	2.51	234	P	Pn	14 07 17.8	+1.3
WTVZ	West Tongariro	2.52	215	P	Pn	14 07 17.5	+0.8
OTVZ	Oturere	2.53	213	P	Pn	14 07 17.7	+0.9
SNVZ	South Ngauruho	2.56	213	P	Pn	14 07 18.1	+0.9
TWVZ	Taurewa	2.56	218	P	Pn	14 07 18.2	+1.0
NGZ	Ngauruhoe	2.57	214	P	Pn	14 07 18.5	+1.2
CKHZ	Cape Kidnapper	2.61	186	P	Pn	14 07 17.9	+0.3
COVZ	Chateau Observ	2.61	214	P	Pn	14 07 19.0	+1.3
TUVZ	Tukino	2.62	212	P	Pn	14 07 18.7	+0.8
TUVZ				S	Sn	14 07 53.8	+1.2
FWVZ	Far West T-bar	2.65	214	P	Pn	14 07 19.0	+0.7
MAVZ	Matarangi	2.66	213	P	Pn	14 07 19.9	+1.4
WHVZ	Whangaehu Hut	2.66	213	P	Pn	14 07 19.3	+0.9
WNVZ	Wahianoa	2.69	212	P	Pn	14 07 19.2	+0.4
MOVZ	Moawhango	2.70	209	P	Pn	14 07 18.6	-0.1
KRHZ	Kereru	2.72	198	P	Pn	14 07 18.5	-0.3
WCZ	Waipu Caves	2.74	293	P	Pn	14 07 16.6	-2.5
KAHZ	Kahuranaki	2.77	189	P	Pn	14 07 19.7	+0.1
PKVZ	Pokaka	2.77	216	P	Pn	14 07 20.6	+1.0
MTVZ	Mangateitei	2.80	213	P	Pn	14 07 20.7	+0.8
VRZ	Vera Road	2.96	225	P	Pn	14 07 24.4	+2.7
PXZ	Pawanui	3.00	189	P	Pn	14 07 21.7	-0.5
PNHZ	Pukenui	3.02	199	P	Pn	14 07 21.8	-0.6
WPHZ	Waipukurau	3.10	194	P	Pn	14 07 23.0	-0.5
TSZ	Takapari Road	3.21	201	P	Pn	14 07 24.3	-0.6
PRHZ	Porangahau	3.27	191	P	Pn	14 07 25.0	-0.5
WAZ	Wanganui	3.31	215	P	Pn	14 07 26.8	+0.7
DVHZ	Dannevirke	3.39	197	P	Pn	14 07 26.0	-1.0
LREZ	Lake Rotokare	3.39	224	P	Pn	14 07 29.8	+2.8
PREZ	Palmer Road	3.45	228	P	Pn	14 07 31.3	+3.6
ANWZ	Angora Road	3.48	192	P	Pn	14 07 27.5	-0.6
KHEZ	Kahui Hut	3.51	229	P	Pn	14 07 29.9	+1.4
KHEZ	Kahui Hut	3.51	229	P	Pn	14 07 31.5	+2.9
OHWZ	Ohakea	3.56	207	P	Pn	14 07 29.6	+0.5
POWZ	Post Office Ro	3.58	201	P	Pn	14 07 28.6	-0.7
OUZ	Omahuta	3.62	299	P	Pn	14 07 27.5	-2.3
OUZ	Omahuta	3.62	299	P	Pn	14 07 27.5	-2.3
PRWZ	Pori Road	3.68	198	P	Pn	14 07 29.8	-0.7
BFZ	Birch Farm	3.74	194	P	Pn	14 07 30.4	-0.9
BFZ	Birch Farm	3.74	194	S	Sn	14 08 16.8	0.0
BFZ	Birch Farm	3.74	194		Pn	14 07 30.2	-1.1
BFZ	Birch Farm	3.74	194	P	Pn	14 07 30.4	-0.9
MRZ	Mangatainoka R	3.88	201		Pn	14 07 31.8	-1.3
MRZ	Mangatainoka R	3.88	201	P	Pn	14 07 31.9	-1.3
TIWZ	Tintock	3.91	198	P	Pn	14 07 32.6	-0.8
CPWZ	Castlepoint	3.97	194	P	Pn	14 07 34.0	-0.2
HOWZ	Holdsworth Sta	4.12	201	P	Pn	14 07 34.5	-1.6
OGWZ	Otaki Gorge	4.15	205	P	Pn	14 07 35.3	-1.3
TMWZ	Te Maipa	4.22	196	P	Pn	14 07 36.1	-1.3
KIW	Kapiti Island	4.28	207	P	Pn	14 07 36.8	-1.4
MTW	Mount Morrison	4.37	200	P	Pn	14 07 37.4	-1.9
CAW	Cannon Point	4.45	204	P	Pn	14 07 38.6	-1.7
TRWZ	Traveller	4.54	197	P	Pn	14 07 40.0	-1.6
PAWZ	Paruwai Farm	4.59	199	P	Pn	14 07 40.2	-2.0
DUWZ	D'Urville Isla	4.64	215	P	Pn	14 07 41.5	-1.3
MSWZ	Moikau Station	4.67	201	Pn	Pn	14 07 40.8	-2.4
MSWZ					Sn	14 08 35.5	-2.7
MSWZ	Moikau Station	4.67	201	P	Pn	14 07 41.0	-2.2
WEL	Wellington	4.71	205	P	Pn	14 07 41.8	-1.8
SNZO	South Karori	4.75	206	P	Pn	14 07 42.3	-1.9
SNZO	South Karori	4.75	206	S	Sn	14 08 38.7	-1.1
SNZO	South Karori	4.75	206		Sn	14 08 38.7	-1.1
BHW	Baring Head	4.78	204	Pn	Pn	14 07 42.0	-2.6
BHW					Sn	14 08 39.8	-0.8
BHW	Baring Head	4.78	204	P	Pn	14 07 42.4	-2.2
PLWZ	Palliser	4.81	200		Pn	14 07 42.6	-2.5
PLWZ					Sn	14 08 39.1	-2.4
PLWZ	Palliser	4.81	200	P	Pn	14 07 42.7	-2.3
TCW	Tory Channel	4.82	210		Pn	14 07 42.9	-2.2
TCW	Tory Channel	4.82	210	P	Pn	14 07 43.1	-2.1
TUWZ	Tuamarina	5.14	211		Pn	14 07 47.1	-2.1
TUWZ	Tuamarina	5.14	211	P	Pn	14 07 47.6	-1.6
NNZ	Nelson	5.22	216	Pn	Pn	14 07 49.3	-0.9
NNZ	Nelson	5.22	216	P	Pn	14 07 48.9	-1.3
TKNZ	Takaka Hill	5.29	220	P	Pn	14 07 49.3	-1.9
QRZ	Quartz Range	5.37	224	P	Pn	14 07 51.5	-0.7
QRZ	Quartz Range	5.37	224	P	Pn	14 07 50.4	-1.8
BSWZ	Blackbirch Sta	5.41	210	P	Pn	14 07 51.3	-1.4
MRNZ	Matariki Terra	5.66	219	P	Pn	14 07 53.8	-2.2
THZ	Tophouse	5.87	215	P	Pn	14 07 56.7	-2.1
KHZ	Kahutara	6.14	208	P	Pn	14 08 00.2	-2.0
KHZ	Kahutara	6.14	208	P	Pn	14 07 59.7	-2.5
DSZ	Denniston Nort	6.40	221	P	Pn	14 08 04.2	-1.5
LTZ	Lake Taylor	6.96	213	P	Pn	14 08 10.6	-2.4
INZ	Inchbonnie	7.30	217	Pn	Pn	14 08 15.8	-1.7
INZ	Inchbonnie	7.30	217	P	Pn	14 08 15.7	-1.7
OKCZ	Okains Bay	7.45	205	P	Pn	14 08 16.8	-2.7
OXZ	Oxford	7.50	212	P	Pn	14 08 17.0	-3.0
MQZ	McQueen's Vall	7.58	207	P	Pn	14 08 17.5	-3.6
RACZ	Rakaia	7.79	210	P	Pn	14 08 21.1	-2.7
MHCZ	Mount Hutt	7.87	213	P	Pn	14 08 22.4	-2.6
WACZ	Wakanui South	8.09	210	P	Pn	14 08 25.0	-2.8
RPZ	Rata Peaks	8.24	214	P	Pn	14 08 28.8	-1.0
	4.1nm,0.3s,baz=9.5,slow=6.1,SNR=11						
RPZ				S	Sn	14 09 56.9	-5.3
	8.8nm,0.3s,baz=296,slow=0.4,SNR=6.8						
RPZ	Rata Peaks	8.24	214	P	Pn	14 08 28.9	-0.9
RPZ	Rata Peaks	8.24	214	P	Pn	14 08 28.5	-1.4
ARCZ	Arundel	8.37	213	P	Pn	14 08 29.6	-2.0
TMZ	Timaru	8.80	212	P	Pn	14 08 34.8	-2.3
ODZ	Otahua Downs	9.48	211	P	Pn	14 08 44.0	-2.0
ODZ	Otahua Downs	9.48	211	P	Pn	14 08 43.6	-2.4
JCZ	Jackson Bay	9.61	221	P	Pn	14 08 46.7	-1.2
MSVF	Nonsavu	19.26	2	P	P	14 10 43.9	-0.1
	6.3nm,0.7s,baz=201,slow=11,SNR=5.7						
MSVF	Nonsavu	19.26	2	P	P	14 10 43.8	-0.2
MSVF				IAmb	IAmb	14 11 02.0	
	comp=Z,33nm,1.5s						
NIUE	Niue	21.06	35	P	P	14 11 05.3	+2.1
SANVU	Saraoutou	23.37	334	P	P	14 11 27.1	+1.7
SANVU				IAmb	IAmb	14 11 37.4	
	comp=Z,18nm,0.8s						
AS31	Alice Springs	39.54	277	P	P	14 13 47.9	+1.4
ASAR	Alice Springs	39.54	277	P	P	14 13 48.3	+1.7
	comp=Z,1.6nm,0.6s,baz=120,slow=8.0,SNR=54						
	comp=Z,1.6nm,0.6s						
ASAR	Alice Springs	39.54	277	P	P	14 13 47.5	+0.9
WR8	Warramunga Arr	41.02	282	P	P	14 13 59.9	+1.2
WR8				IAmb	IAmb	14 14 20.6	
	comp=Z,8.7nm,1.4s						
WRA	Warramunga Arr	41.16	282	P	P	14 14 00.7	+0.9
	comp=Z,0.8nm,0.4s,baz=121,slow=7.8,SNR=21						
	comp=Z,0.8nm,0.4s						
WB0	Warramunga Arr	41.21	283	P	P	14 14 01.5	+1.2
WB0				IAmb	IAmb	14 14 11.3	
	comp=Z,12nm,1.4s						
FINES	FINESS Array B	149.72	333	PKPbc	PKiKP	14 26 01.6	+0.4
	comp=Z,4.7nm,1.1s,baz=90,slow=3.5,SNR=3.5						

*KRSC **03** 14:19:43.5±2.5, 50°.58N×155°.77E, h201km±18km, Ml3.7*
*IDC **03** 14:19:46.0±1.6, 51°.06N×155°.01E, h209km±12km, mb3.2/11, mbtmp3.7/17, MS2.7/1, Error ellipse: s-maj=23.9km s-min=12.5km az=162.0*
ISC 03 14:19:44.2±0.8**, 50°.82N**±0°.09×**155°.32E**±0°.08**, h204**km±6km**, n44,** σ**1.78**/60**, mb3.2**/11**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.52	105	eP	Pn	14 20 10.4	-1.5
PAU	Pauzhetka	1.14	55	eP	Pn	14 20 14.4	-0.9
PAU				eS	S	14 20 38.7	-0.7
MIPR	Malaya Ipel'ka	1.71	31	eP	Pn	14 20 20.1	0.0
MIPR				eS	S	14 20 47.6	-0.3
KDTR	Khodutka, Kamc	1.99	59	eP	Pn	14 20 22.4	-0.5
KDTR				eS	S	14 20 50.5	-2.1
ASAK	Asacha	2.24	45	eP	Pn	14 20 26.1	+0.6
APC	Apacha	2.40	28	eP	Pn	14 20 26.9	-0.2
APC				eS	S	14 21 00.6	+0.5
GRL	Gorelyy	2.44	44	eS	S	14 21 03.0	+1.8
MTVR	Mutnovka	2.44	46	eP	Pn	14 20 29.5	+1.8
MTVR				eS	S	14 21 02.2	+1.0
RUS	Russkaya	2.56	50	eS	S	14 21 02.6	-0.8
KRMR	Karymshinskiy	2.66	40	eP	Pn	14 20 30.6	+0.5
KRMR				eS	S	14 21 05.5	+0.1
PETK	Petropavlovsk-	2.72	32	P	Pn	14 20 31.1	+0.3
	8.2nm,0.6s,baz=217,slow=9.7,SNR=57						
PETK				S	S	14 21 08.5	+1.7
	3.6nm,0.7s,baz=185,slow=15,SNR=2.1						
PET	Petropavlovsk	3.02	42	eP	Pn	14 20 36.2	+2.0
PET				eS	S	14 21 14.5	+1.7
DALK	Dalny	3.07	42	eP	Pn	14 20 35.9	+1.2
DALK				eS	S	14 21 13.5	-0.3
KOK	Koryaka	3.21	38	eP	Pn	14 20 38.3	+1.7
UGLR	Uglovaya	3.23	41	eP	Pn	14 20 38.9	+2.2
UGLR				eS	S	14 21 18.9	+1.5
AVH	Avacha	3.23	39	eP	Pn	14 20 38.8	+2.0
AVH				eS	S	14 21 18.8	+1.4
SMAR	Somma	3.26	40	eP	Pn	14 20 39.3	+2.1
KRER	Koryakskii	3.27	39	eP	Pn	14 20 39.7	+2.4
KRER				eS	S	14 21 19.6	+1.2
KRX	Arik	3.27	38	eP	Pn	14 20 38.8	+1.6
GNL	Ganaly	3.30	28	eP	Pn	14 20 38.0	+0.4
SDLR	Sedlovina	3.30	40	eP	Pn	14 20 39.5	+1.8
SDLR				eS	S	14 21 19.2	+0.2
NLC	Nalytchevo	3.42	45	eS	S	14 21 19.3	-2.1
SPN	Mys Shipunski	3.70	50	eP	Pn	14 20 41.9	-0.3
SPN				eS	S	14 21 23.9	-3.4
MKZ	Mys Kozlova	5.40	44	eP	Pn	14 21 03.1	-0.6
MKZ				eS	S	14 22 02.4	-3.8
KBG	Krutoberegovo	7.00	36	eS	S	14 22 41.5	-2.1
KBTR	Krutoberegovo	7.00	37	eP	Pn	14 21 25.4	+1.0
KBTR				eS	S	14 22 42.7	-1.1
BKI	Bering	7.78	52	eP	Pn	14 21 34.0	-0.3
BKI				eS	S	14 22 55.0	-7.0
MA2	Magadan	9.15	345	P	Pn	14 21 51.2	-1.0
	0.7nm,0.5s,baz=139,slow=11,SNR=3.8						
SEY	Seymchan	12.25	354	P	Pn	14 22 30.0	-1.8
	0.4nm,0.5s,baz=203,slow=8.8,SNR=4.0						
KLR	Kul'dur	15.22	273	P	Pn	14 23 09.0	+0.2
	0.7nm,0.5s,baz=67,slow=15,SNR=2.3						
YAK	Yakutsk	17.94	319	P	P	14 23 37.4	-1.3
	12nm,0.5s,baz=228,slow=1.8,SNR=8.2						
MJAR	Matsushiro Arr	18.82	227	P	P	14 23 49.3	+0.7
	1.1nm,0.8s,baz=29,slow=6.2,SNR=2.2						
JHJ	Hachijo jima 2	21.05	219	LR	LR	14 33 19.7	
	comp=Z,20nm,20.4s,baz=54,slow=39						
ILAR	Eielson Array	32.50	42	P	P	14 25 55.6	+0.4
	0.3nm,0.6s,baz=267,slow=6.5,SNR=9.1						
	0.3nm,0.6s						
MKAR	Makanchi Array	46.46	295	P	P	14 27 49.1	-1.3
	0.2nm,0.4s,baz=58,slow=6.1,SNR=10						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	46.51	301	P	P	14 27 49.4	-1.3
	0.7nm,0.6s,baz=64,slow=7.5,SNR=6.5						
	0.7nm,0.6s						
YKA	Yellowknife Ar	46.82	40	P	P	14 27 54.8	+1.9
	0.2nm,0.5s,baz=304,slow=8.3,SNR=4.6						
	0.2nm,0.5s						
SPITS	Spitsbergen Ar	48.87	350	P	P	14 28 07.5	-1.0
	7.4nm,1.0s,baz=46,slow=8.3,SNR=2.3						
	7.4nm,1.0s						
BVAR	Borovoye Array	49.46	308	P	P	14 28 12.2	-1.1
	0.8nm,0.5s,baz=56,slow=8.5,SNR=6.5						
	0.8nm,0.5s						
CMAR	Chiang Mai Arr	54.78	255	P	P	14 28 54.2	+1.3
	0.2nm,0.4s,baz=37,slow=5.9,SNR=1.6						
	0.2nm,0.4s						
FINES	FINESS Array B	60.98	335	P	P	14 29 33.5	-1.7
	1.2nm,0.7s,baz=43,slow=8.6,SNR=5.7						
	1.2nm,0.7s						
PDAR	Pinedale Array	61.23	57	P	P	14 29 39.0	+1.4
	0.1nm,0.5s,baz=318,slow=0.8,SNR=2.5						
	0.1nm,0.5s						
SCHQ	Schefferville	68.99	25	P	P	14 30 27.3	+0.3
	3.6nm,1.1s,baz=26,slow=19,SNR=5.4						
	3.6nm,1.1s						
TXAR	Lajitas Array	74.28	63	P	P	14 31 01.3	+2.2
	0.2nm,0.5s,baz=330,slow=8.8,SNR=2.3						
	0.2nm,0.5s						

*SNET **03** 14:23:15.8±3.1, 12°.58N×87°.87W, h46km, ML3.4, Presumed earthquake*
*CATAC **03** 14:23:15.7±0.3, 13°N±2°×8°8W±°, h29km, M3.7/24, MLv3.7/24, Error ellipse: s-maj=5.5km s-min=2.3km az=29.1, confirmed*
ISC 03 14:23:15.7±1.4**, 12°.58N**±0°.06×**87°.90W**±0°.04**, h62**km±13km**, n38,** σ**0.76**/60**, 3C-11D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSGN	Cosiguina Volc	0.51	40	⇓P	Pn	14 23 27.7	-0.4
CSGN				S	Sn	14 23 37.5	+0.4
CNCH	Conchagua	0.70	5	⇓P	Pn	14 23 30.0	-0.1
CNCH				S	Sn	14 23 41.1	+0.3
CNCH	Conchagua	0.70	5	iP	Pn	14 23 30.1	-0.1
CNCH				eS	Sn	14 23 40.9	+0.1
CRIN	San Cristobal	0.83	82	P	Pn	14 23 32.2	+0.4
CRIN				S	Sn	14 23 45.3	+1.6
PKGN	Cerro Pekin	0.90	84	P	Pn	14 23 32.8	+0.3
PKGN				S	Sn	14 23 45.3	+0.3
BLLM	Bellamira	0.92	339	eP	Pn	14 23 32.9	0.0
LCY	Lacayo	0.93	335	eP	Pn	14 23 33.1	0.0
RANC	El Ranchito	0.93	336	P	Pn	14 23 33.2	0.0
RANC				S	Sn	14 23 46.0	0.0
RANC	El Ranchito	0.93	336	eP	Pn	14 23 29.8	-3.3
PACA	Pacayal	0.98	335	P	Pn	14 23 33.3	-0.4
PACA				S	Sn	14 23 46.9	-0.2
HERN	Volcan Telica	1.04	88	⇓P	Pn	14 23 34.3	-0.1
HERN				S	Sn	14 23 48.4	+0.1
HOYN	Al Sur del Vol	1.04	89	⇓P	Pn	14 23 34.4	0.0
HOYN				S	Sn	14 23 48.9	+0.6
POLN	Al Sur del Vol	1.06	86	⇓P	Pn	14 23 34.7	+0.1
POLN				S	Sn	14 23 49.2	+0.5
TECA	Tecapa	1.09	327	eP	Pn	14 23 35.4	+0.3
CNGN	Cerro Negro	1.17	94	⇓P	Pn	14 23 36.0	-0.2
CNGN				S	Sn	14 23 51.4	0.0
MACN	El Madrono	1.20	95	⇑P	Pn	14 23 36.5	+0.1
MACN				S	Sn	14 23 51.6	-0.3
PQSS	Presa 15 de Se	1.23	328	P	Pn	14 23 37.0	+0.2
PQSS				S	Sn	14 23 53.1	+0.6
TECO	Alcaldia de Te	1.29	318	P	Pn	14 23 37.5	-0.1
COPN	Copaltepe	1.33	107	⇓P	Pn	14 23 37.5	-0.7
MOMN	Momotombo	1.33	97	P	Pn	14 23 37.5	-0.8
MOMN				S	Sn	14 23 53.9	-1.2
SCLA	Alcaldia de Sa	1.38	324	P	Pn	14 23 39.4	+0.5
SCLA	Alcaldia de Sa	1.38	324	eP	Pn	14 23 39.5	+0.5
COEG	Centro de Oper	1.41	317	P	Pn	14 23 40.6	+1.3
AMTN	Mateare	1.47	103	S	Sn	14 23 57.5	-0.8
SAPS	Ciudad Sandino	1.51	105	P	Pn	14 23 41.2	+0.6
SAPS				S	Sn	14 23 58.7	-0.7
LIMN	Finca el Limon	1.57	72	⇑P	Pn	14 23 41.6	+0.2
LIMN				S	Sn	14 24 00.6	-0.3
TGUH	Tegucigalpa,Un	1.59	22	⇓P	Pn	14 23 42.5	+0.6
TGUH				S	Sn	14 24 01.1	-0.3
UNAN	Cigeo UNAN	1.65	106	P	Pn	14 23 43.1	+0.5
UNAN				S	Sn	14 24 02.7	-0.1
YUSH	Yuscaran	1.71	37	⇓P	Pn	14 23 43.9	+0.5
YUSH				S	Sn	14 24 03.0	-1.3
NANN	Nandasmo	1.85	110	P	Pn	14 23 46.4	+1.3
NANN				S	Sn	14 24 06.9	-0.6
JAYA	Jayaque - finc	1.85	305	P	Pn	14 23 46.0	+0.6
JAYA				S	Sn	14 24 06.9	-1.0
JAYA	Jayaque - finc	1.85	305	eP	Pn	14 23 47.8	+2.4
RCFN	Al S de San Ju	1.89	60	⇓P	Pn	14 23 46.7	+0.7
RCFN				S	Sn	14 24 08.6	-0.3
RCON	San Juan de Ri	1.92	62	P	Pn	14 23 47.1	+0.8
RCVN	Varillal2	1.94	59	⇑P	Pn	14 23 47.2	+0.7
MATN	Matagalpa	1.95	79	P	Pn	14 23 45.8	-0.9
MATN				S	Sn	14 24 09.1	-1.1
BOAB	BOACO BROADBAN	2.18	93	⇓P	Pn	14 23 49.7	0.0
MTO3	Montecristo	2.30	322	P	Pn	14 23 51.6	0.0

*LDG **03** 14:27:34.4±0.1, 43°.73N×6°.70E, h2km, Md2.5/2, Ml2.5/9, Error ellipse: s-maj=1.5km s-min=1.1km az=8.0*
*STR **03** 14:27:34.1±0.0, 43°.75N±0°.07×6°.69E±0°.04, h9km, MLv2.1/24, LOCSAT earthModelID alpes_taup-2.11 preliminary*
*GEN **03** 14:27:34.6, 43°.82N×6°.79E, h0km±4km, Ml1.2*
ISC 03 14:27:34.2±0.9**, 43°.75N**±0°.02×**6°.68E**±0°.02**, h9**km±6km**, n53,** σ**0.92**/98**, Near south coast of France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALSA	La sagne	0.14	2	Pg	Pg	14 27 36.3	-1.1
SALSA				Sg	Sg	14 27 38.5	-1.1
CALF	Calern	0.17	87	Pg	Pg	14 27 37.8	-0.2
CALF				Sg	Sg	14 27 40.8	+0.3
TRIGF	Trigance	0.20	271	Pg	Pg	14 27 37.9	-0.5
TRIGF				Sg	Sg	14 27 42.3	+1.1
ENAUX	Enaux	0.37	10	Pg	Pg	14 27 40.9	-0.6
ENAUX				Sg	Sg	14 27 46.8	+0.3
MVIF	Mont Vial	0.37	66	Pg	Pg	14 27 41.5	-0.1
MVIF				Sg	Sg	14 27 47.3	+0.8
MVIF	Mont Vial	0.37	66	P	Pg	14 27 42.0	+0.4
MVIF				S	Sg	14 27 47.6	+1.1
EILF	Villa Eilenroc	0.38	121	Pg	Pg	14 27 42.0	+0.3
EILF				Sg	Sg	14 27 47.8	+1.2
LMR	La Mourre	0.43	197	ePg	Pg	14 27 42.7	+0.1
LMR				eSg	Sg	14 27 47.9	-0.3
	87nm,0.2s						
BLAF	les Blancs	0.51	294	Pg	Pg	14 27 44.1	+0.1
BLAF				Sg	Sg	14 27 51.0	+0.3
SPIF	crte de Spivo	0.51	52	Pg	Pg	14 27 43.6	-0.5
SPIF				Sg	Sg	14 27 51.2	+0.4
ESCA	l'Escarene	0.51	80	Pg	Pg	14 27 44.2	+0.1
ESCA				Sg	Sg	14 27 51.5	+0.8
ESCA	l'Escarene	0.51	80	P	Pg	14 27 44.6	+0.5
ESCA				S	Sg	14 27 51.9	+1.1
ISO	Isola	0.51	31	Pg	Pg	14 27 43.7	-0.5
ISO				Sg	Sg	14 27 51.3	+0.4
ISO	Isola	0.51	31	P	Pg	14 27 44.2	0.0
ISO				S	Sg	14 27 51.4	+0.4
SBF	Sospel	0.56	77	ePg	Pg	14 27 44.9	-0.1
SBF				eSg	Sg	14 27 50.8	-1.6
	77nm,0.2s						
BURY	Giardini Botan	0.63	86	S	Sg	14 27 55.4	+0.6
ARTF	Artigues	0.66	256	Pg	Pg	14 27 46.9	0.0
SAOF	Saorge	0.68	69	Pg	Pg	14 27 46.9	-0.4
SAOF				Sg	Sg	14 27 56.9	+0.8
SAOF	Saorge	0.68	69	P	Pg	14 27 47.4	+0.1
SAOF				S	Sb	14 27 57.3	-0.4
STV	Sant Anna di V	0.68	43	Pg	Pg	14 27 46.9	-0.5
STV				Sg	Sg	14 27 56.1	-0.2
JAUF	Jausiers	0.69	4	Pg	Pg	14 27 44.8	-2.7
OGAG	Argentiere	0.72	352	Pg	Pn	14 27 53.9	+3.2
ENR	Entracque	0.72	48	Pg	Pg	14 27 47.5	-0.6
ENR				Sg	Sg	14 27 58.2	+0.7
SURF	Saint Ours	0.74	7	Pg	Pg	14 27 48.2	-0.4
LEPF	PUYLOUBIER	0.75	253	Pg	Pg	14 27 48.5	-0.1
BSTF	la Bastide-des	0.76	281	Pg	Pg	14 27 48.7	-0.2
BSTF				Sg	Sg	14 27 59.0	+0.1
PIAF	les Granges de	0.77	61	Pg	Pg	14 27 48.6	-0.5
PIAF				Sg	Sg	14 27 59.1	-0.1
CREF	Crivoux	0.81	357	Pg	Pg	14 27 49.5	-0.3
PZZ	Stroppo	0.82	22	Pg	Pg	14 27 49.5	-0.6
PZZ				Sg	Sg	14 28 00.7	-0.1
SMRF	Simiane la Rot	0.83	286	ePg	Pg	14 27 50.7	+0.4
SMRF				eSg	Sg	14 28 01.9	+0.8
	27nm,0.3s						
RUSF	Rustrel	0.89	283	Pg	Pg	14 27 51.6	+0.3
IMI	Imperia	0.89	79	P	Pg	14 27 51.6	+0.3
IMI				S	Sg	14 28 03.6	+0.6
GBOS	Grotte di Boss	0.97	59	Pg	Pg	14 27 52.2	-0.7
GBOS				Sg	Sg	14 28 05.5	-0.1
GBOS	Grotte di Boss	0.97	59	P	Pg	14 27 52.3	-0.7
MBDF	Montbardon	0.98	4	ePg	Pg	14 27 53.2	+0.1
MBDF				eSg	Sg	14 28 06.6	+0.6
	9.5nm,0.2s						
ARBF	Arbois	1.01	256	Pg	Pb	14 27 54.7	+0.8
ARBF				Sg	Sb	14 28 09.2	+1.9
RORO	Rocca Rossa	1.06	69	Pg	Pg	14 27 53.6	-1.0
SAUF	chteau de Sau	1.16	280	Pg	Pg	14 27 56.5	+0.1
CANO	Canova, Maglio	1.21	67	Pg	Pg	14 27 57.1	-0.4
ORIF	Oris-en-Rattie	1.31	334	ePg	Pb	14 27 59.8	+0.8
ORIF				eSg	Sg	14 28 16.5	+0.2
	20nm,0.4s						
ORIF	Oris-en-Rattie	1.31	334	Pg	Pb	14 27 59.7	+0.8
ORIF				Sg	Sn	14 28 17.8	+1.5
PCP	Piancastagn	1.56	59	Pn	Pn	14 28 03.0	+0.8
PCP				Sg	Sg	14 28 25.4	+1.0
LPG	La Plagne	1.75	2	ePn	Pn	14 28 04.5	-0.6
LPG				ePg	Pb	14 28 07.2	+0.5
LPG				eSg	Sb	14 28 29.9	+1.0
	5.1nm,0.3s						
LPL	La Plagne	1.77	1	ePn	Pn	14 28 04.6	-0.6
LPL				ePg	Pb	14 28 07.4	+0.4
LPL				eSg	Sb	14 28 30.6	+1.2
	4.5nm,0.3s						
VIVF	Saint-Julien-l	1.82	308	ePn	Pn	14 28 05.2	-0.5
VIVF				ePg	Pb	14 28 08.0	+0.3
VIVF				eSn	Sn	14 28 27.6	-1.4
VIVF				eSg	Sb	14 28 31.9	+1.3
	7.0nm,0.3s						
TRBF	Trabuc cave	2.00	281	Pn	Pn	14 28 07.2	-1.0
TRBF				S	Sn	14 28 31.7	-1.6
LASF	Ste Croix	2.07	280	ePn	Pn	14 28 08.4	-0.7
LASF				ePg	Pb	14 28 12.3	+0.4
LASF				eSn	Sn	14 28 32.9	-2.1
LASF				eSg	Sg	14 28 40.2	-0.5
	3.0nm,0.2s						
PGF	Pioggiola	2.08	124	ePn	Pn	14 28 07.7	-1.6
PGF				eSn	Sn	14 28 32.9	-2.4
	9.8nm,0.2s						
SSB	Saint Sauveur	2.17	316	S	Sn	14 28 36.2	-1.4
LEUC	Leucamp	3.13	290	Pn	Pn	14 28 23.8	+0.1
LEUC				Sn	Sn	14 28 59.9	-1.5
MTLF	Montolieu	3.27	264	Pn	Pn	14 28 25.2	-0.4
MTLF				Sn	Sn	14 29 03.6	-1.0
SLVF	La Salvetat-Pe	3.29	279	P	Pn	14 28 25.5	-0.4
SLVF				Sn	Sn	14 29 03.4	-1.7
FNEB	Nbias	3.44	257	Pn	Pn	14 28 28.1	0.0

DJA 03 14:54:01.7±0.9**, 8°S**±3°×**11°8E**±°**, h17**km±9km**, M3.7**/19**, mb3.7**/2**, MLv3.7**/19**, Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBNI	Kabupaten Domp	0.65	143	P	Pn	14 54 15.4	-0.7
PLAI	Plampang	0.85	190	P	Pb	14 54 17.9	-0.2
TWSI	Taliwang, Sumb	1.27	234	P	Pn	14 54 23.8	-0.9
LBFI	Labuhan Bajo,	2.01	104	P	Pn	14 54 34.6	-0.3
WBSI	Waikabubak, Su	2.20	139	P	Pn	14 54 37.7	+0.2
KHKI	Kahang-Kahang	2.32	260	P	Pn	14 54 39.4	+0.3
IGBI	Denpasar	2.87	253	P	Pn	14 54 46.6	-0.1
WSI	Waingapu	2.89	126	P	Pn	14 54 46.7	-0.3
RTBI	Rangdo, Negare	2.99	261	P	Pn	14 54 48.5	+0.2
BSSI	Bau Bau, Buton	3.14	55	P	Pn	14 54 50.2	-0.2
BKSI	Bulukumba	3.43	40	P	Pn	14 54 54.2	-0.2
KAPI	Kappang	3.46	32	P	Pn	14 54 54.4	-0.5
JAGI	Jajag, Banyuwa	3.76	262	P	Pn	14 54 58.4	-0.6
EDFI	Ende, Flores	3.81	102	P	Pn	14 55 00.3	+0.6
MMRI	Maumere	4.32	99	P	Pn	14 55 06.7	0.0
SPSI	Sidrap Palu	4.39	25	P	Pn	14 55 07.8	+0.1
PMSI	Majene	4.56	13	P	Pn	14 55 09.9	-0.1
MMSI	Mamuju	5.35	11	P	Pn	14 55 20.5	-0.3

*BJI **03** 14:55:30.9, 7°.17N×122°.47E, h40km, mB5.0/22, mb4.5/62, Ms4.5/48, Ms7 4.3/50*
*MAN **03** 14:55:34.0, 7°.74N×121°.91E, h31km, MS4.9*
MAN INTENSITY IV - SIOCON ZAMBOANGA DEL NORTE . INTENSITY III - ZAMBOANGA CITY; TAMPILISAN LILOY GUTALAC AND BALIGUIAN ZAMBOANGA DEL NORTE; IPIL ZAMBOANGA SIBUGAY; ISABELA CITY BASILAN; . INTENSITY II - SINDANGAN ZAMBOANGA DEL NORTE; . INTENSITY I - MOLAVE ZAMBOANGA DEL SUR.
*DJA **03** 14:55:35.8±0.5, 8°N±5°×12°2E±°, h10km, M4.9/45, mb4.8/45, mB5.4/25, MLv5.3/9, Mw(mB)4.8/25, MwMwp5.0/4, Mwp5.3/4*

*GCMT **03** 14:55:36.9±0.2, 7°.69N±0°.02×121°.91E±0°.01, h26km, MW5.0/97, Moment Tensor Solution. s51,c61; s97,c143; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.58±.14; Mθθ0.01±.09; Mφφ-3.59±.10; Mrθ1.30±.16; Mθφ0.45±.06; Mφr-0.76±.15; Best double couple: M0 3.90600×10^16 NP1:φs9.00000°,δ40.00000°,λ116.00000°. NP2: φs157.00000°,δ54.00000°,λ70.00000°. Principal axes: T 4.0490, Plg72.0000°, Azm15.0000°; N -0.2830, Plg16.0000°, Azm169.0000°; P -3.7640, Plg7.0000°, Azm261.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **03** 14:55:36.7±0.9, 7°.70N×122°.03E, h47km, mb5.1/53, MS4.1/6 Error ellipse: s-maj=10.7km s-min=4.9km az=117.7*

*GFZ **03** 14:55:37.0, 7°.75N×121°.99E, h30km, MW4.9, Moment Tensor Solution. s36 Moment tensor: Mrr2.73; Mθθ-0.47; Mφφ-2.26; Mrθ0.42; Mθφ0.20; Mφr-0.94; Fault plane solution: NP1:φs167.00000°,δ55.00000°, λ84.00000°. NP2:φs358.00000°,δ34.00000°,λ98.00000°. Principal axes: T 2.9400, Plg78.0000°, Azm57.0000°; N -0.4800, Plg4.0000°, Azm171.0000°; P -2.4700, Plg10.0000°, Azm262.0000°;*

*NEIC **03** 14:55:37.9±1.3, 7°.70N±0°.02×121°.97E±0°.06, h33km±4km, mb5.0/129, Mww4.9/15 Error ellipse: s-maj=9.5km s-min=1.9km az=106.0*

*NEIC **03** 14:55:38.4, 7°.82N×122°.19E, h30km, Moment Tensor Solution. Duration: 1s6 Moment tensor: Scale 10^16Nm; Mrr2.73; Mθθ0.64; Mφφ-3.37; Mrθ0.68; Mθφ0.02; Mφr-0.24; Fault plane solution: M0 3.18000×10^16 NP1:φs15.79000°, δ45.04000°,λ113.52000°. NP2:φs164.16000°,δ49.55000°, λ68.22000°. Principal axes: T 2.9362, Plg73.0000°, Azm7.0000°; N 0.4441, Plg16.0000°, Azm179.0000°; P -3.3803, Plg2.0000°, Azm269.0000°;*

*NEIC **03** 14:55:38.4, 7°.72N×121°.99E, h30km*

*IDC **03** 14:55:39.2±2.4, 7°.71N×122°.08E, h51km±21km, mb4.2/24, mbtmp4.5/27, ML4.9/4, MS3.9/60, Error ellipse: s-maj=19.4km s-min=10.5km az=71.0*

ISC 03 14:55:36.7±0.7, **7°.71N**±0°.03×**122°.02E**±0°.03, **h30**km±4km, **n609**, σ1s**32**/532, **mb5.0**/163, **MS4.0**/77, **14C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZCP	**Zamboanga City**	**0.78**	**176**	*i* P	**Pb**	**14 55 50.6**	**-1.1**
ZCP				*i* s	**Sn**	**14 55 59.8**	**-2.5**
DCPH	**Dipolog City**	**1.58**	**57**	*i* P	**Pn**	**14 56 02.0**	**-0.7**
SNPH	**Sibulan**	**2.02**	**37**	*i* P	**Pn**	**14 56 08.5**	**-0.3**
SNPH				*i* S	**Sn**	**14 56 33.4**	**+0.2**
CTBH	**Cotabato--PC H**	**2.26**	**102**	*e*P	**Pn**	**14 56 11.8**	**-0.3**
CTBH				*i* S	**Sb**	**14 56 46.8**	**+2.2**
TBP	**Tagbilaran**	**2.68**	**43**	*e*P	**Pn**	**14 56 17.3**	**-0.6**
TBP				*e*S	**Sn**	**14 56 49.6**	**+0.2**
CGP	**Cagayan de Oro**	**2.75**	**74**	*e*P	**Pn**	**14 56 19.7**	**+0.9**
CGP				*i* S	**Sn**	**14 56 48.7**	**-2.4**
JAP	**San Jose, Anti**	**3.02**	**359**	*e*P	**Pn**	**14 56 22.0**	**-0.5**
KCP	**Kidapawan**	**3.13**	**103**	*e*P	**Pb**	**14 56 28.1**	**-3.5**
KCP				*i* S	**Sb**	**14 57 06.6**	**-2.8**
LLP	**Lapu-Lapu**	**3.23**	**36**	*e*P	**Pn**	**14 56 24.6**	**-0.7**
LLP				*e*S	**Sn**	**14 57 01.4**	**-1.4**
GSPH	**General Santos**	**3.33**	**119**	*i* P	**Pb**	**14 56 32.1**	**-3.0**
GSPH				*i* S	**Sb**	**14 57 20.1**	**+4.8**
DMPH	**Davao City--Mi**	**3.52**	**100**	*i* P	**Pn**	**14 56 32.3**	**+2.9**
DMPH				*e*S	**Sn**	**14 57 11.5**	**+1.4**
DAV	**Davao City (W)**	**3.59**	**100**	P	**Pn**	**14 56 30.9**	**+0.5**
	69nm,0.3s,baz=116,slow=4.9,SNR=9.5						
DAV				S	**Sn**	**14 57 16.7**	**+4.9**
	568nm,0.6s,baz=324,slow=12,SNR=4.5						
	237nm,0.5s						
DAV	**Davao City (W)**	**3.59**	**100**	P	**Pb**	**14 56 41.6**	**+2.1**
DAV	**Davao City (W)**	**3.59**	**100**		**Pn**	**14 56 32.1**	**+1.7**
DAV	**Davao City (W)**	**3.59**	**100**	P	**Pn**	**14 56 32.1**	**+1.7**
DAV	**Davao City (W)**	**3.59**	**100**	P	**Pb**	**14 56 38.0**	**-1.5**
PPR	**Puerto Princes**	**3.84**	**303**	*e*P	**Pn**	**14 56 31.6**	**-2.2**
RCP	**Roxas**	**3.89**	**11**	*e*P	**Pn**	**14 56 34.8**	**+0.3**
RCP				*i* S	**Sn**	**14 57 19.5**	**+0.2**
DDMP	**Don Marcelino,**	**4.00**	**113**	*e*P	**Pn**	**14 56 37.4**	**+1.4**
DDMP				*e*S	**Sn**	**14 57 28.2**	**+6.2**
BIPH	**Bislig**	**4.33**	**83**	*e*P	**Pn**	**14 56 43.5**	**+2.9**
BIPH				*e*S	Sb	14 57 53.6	+10
TSSP	**Tandag City**	**4.34**	**72**	*e*P	**Pn**	**14 56 41.6**	**+0.8**
TSSP				*e*S	**Sn**	**14 57 29.3**	**-1.2**
MMPH	**Masbate**	**4.88**	**19**	*e*P	**Pn**	**14 56 48.9**	**+0.8**
MMPH				*i* S	**Sn**	**14 57 45.3**	**+1.7**
SGSI	**Sangihe**	**5.31**	**139**	P	**Pn**	**14 56 53.9**	**-0.2**
SGSI				S	**Sn**	**14 57 51.6**	**-2.7**
KKM	**Kota Kinabalu**	**5.99**	**254**	P	Pn	14 57 04.5	+1.0
KKM	**Kota Kinabalu**	**5.99**	**254**	S	**Sn**	**14 58 10.2**	**-1.1**
KKM	**Kota Kinabalu**	**5.99**	**254**		**Pn**	**14 57 03.8**	**+0.2**
KKM	**Kota Kinabalu**	**5.99**	**254**	P	**Pn**	**14 57 03.9**	**+0.4**
	3µm39nm,1.0s						
TGY	**Tagaytay City**	**6.44**	**351**	P	Pn	14 57 11.4	+1.8
	142nm,0.3s,baz=335,slow=5.3,SNR=5.4						
TGY				LR	LR	14 59 41.4	
	comp=Z,1µm,19.8s,baz=140,slow=38						
TOLI2	**Tolitoli**	**6.67**	**191**		**Pn**	**14 57 11.6**	**-1.2**
MNI	**Manado**	**6.83**	**156**	P	**Pn**	**14 57 15.3**	**+0.3**
QVPH	**Quezon City--P**	**6.96**	**352**	*e*P	Pn	14 57 06.6	-10
GTOI	**Gorontalo**	**7.10**	**172**	P	**Pn**	**14 57 17.0**	**-1.6**
	0.6nm1µm103nm,0.9s						
MRSI	**Marisa**	**7.19**	**181**	P	**Pn**	**14 57 21.2**	**+1.4**
	0.5nm54nm,0.6s						
MPSI	**Mapaga**	**7.62**	**196**	P	**Pn**	**14 57 25.1**	**-0.7**
APSI	**Ampana**	**8.57**	**182**	P	Pn	14 57 42.3	+3.4
	1µm99nm,1.0s						
LUWI	**Luwuk**	**8.73**	**175**	P	Pn	14 57 46.6	+5.6
LUWI	**Luwuk**	**8.73**	**175**	S	Sn	14 59 27.3	+8.8
LUWI	**Luwuk**	**8.73**	**175**		**Pn**	**14 57 42.7**	**+1.7**
LUWI	**Luwuk**	**8.73**	**175**	P	Pn	14 57 45.7	+4.7
PCI	**Palu**	**8.83**	**194**	P	Pn	14 57 47.3	+4.8
	2µm33nm,1.3s						
SANI	**Sanana**	**10.47**	**158**	P	**Pn**	**14 58 05.7**	**+0.7**
	30nm,1.5s						
TTSI	**Tana Toraja**	**10.91**	**192**	P	Pn	14 58 29.5	+19
SBUM	**Sibu**	**11.07**	**242**	P	Pn	14 58 14.2	+1.1
SBUM	**Sibu**	**11.07**	**242**		**Pn**	**14 58 13.1**	**0.0**
SBUM	**Sibu**	**11.07**	**242**	P	**Pn**	**14 58 13.6**	**+0.5**
SIJI	**Sorong**	**12.56**	**132**	LR	LR	15 03 56.2	
	comp=Z,589nm,19.8s,baz=291,slow=40						
KRAI	**Karang Ratu**	**12.67**	**150**	P	**Pn**	**14 58 37.8**	**+2.8**
	35nm,1.3s						
KAPI	**Kappang**	**12.84**	**190**	LR	LR	15 03 42.4	
	comp=Z,882nm,19.9s,baz=1.5,slow=38						
AAI	**Ambon**	**12.89**	**151**	P	P	14 58 58.2	+10
MSAI	**Masohi**	**12.97**	**148**	P	**Pn**	**14 58 37.5**	**-1.6**
BNDI	**Bandanaira**	**14.48**	**147**	P	P	14 59 09.9	+3.8
TPUB	**Ta-pu**	**15.56**	**355**	P	**P**	**14 59 19.6**	**+1.5**
TPUB	**Ta-pu**	**15.56**	**355**		**P**	**14 59 14.9**	**-3.2**
TPUB				IAmb	IAmb	14 59 21.1	
	comp=Z,177nm,1.4s						
YULB	**Yu-li**	**15.61**	**358**	Pn	**P**	**14 59 15.4**	**-3.2**
SSLB	**Suanglung**	**16.02**	**356**	P	**P**	**14 59 25.6**	**+2.4**
SSLB	**Suanglung**	**16.02**	**356**		**P**	**14 59 23.8**	**+0.6**
SSLB				IAmb	IAmb	14 59 26.1	
	comp=Z,135nm,1.5s						
QIZ	**Qiongzhong**	**16.32**	**315**	P	**P**	**14 59 28.5**	**+1.9**
QIZ				sP	pwP	14 59 43.7	+5.5
QIZ				S	**S**	**15 02 30.7**	**-5.4**
QIZ				pmax	pmax		
	comp=Z,25nm,1.4s						
QIZ				L	L		
	comp=Z,560nm,12.6s						
QIZ				L	L		
	comp=Z,380nm,11.4s						
QIZ				L	L		
	comp=Z,510nm,14.4s						
DBNI	**Kabupaten Domp**	**16.52**	**193**	P	**P**	**14 59 31.2**	**+2.4**
	comp=Z,34nm,1.3s						
YHNB	**Yeheng**	**16.87**	**358**	P	**P**	**14 59 34.6**	**+1.9**
YHNB	**Yeheng**	**16.87**	**358**		**P**	**14 59 33.4**	**+0.7**
PLAI	**Plampang**	**16.96**	**195**	P	**P**	**14 59 37.0**	**+3.3**
PLAI	**Plampang**	**16.96**	**195**	P	**P**	**14 59 36.5**	**+2.8**
	comp=Z,846nmcomp=Z,92nm,0.8s						
QZH2	**Quanzhou**	**17.45**	**350**	P	**P**	**14 59 40.8**	**+1.8**
QZH2				L	L		
	comp=Z,670nm,16.5s						
QZH2				L	L		
	comp=Z,510nm,14.7s						
QZH2				L	L		
	comp=Z,940nm,17.2s						
SOEI	**Soe**	**17.50**	**173**	P	P	14 59 46.4	+6.7
SOEI	**Soe**	**17.50**	**173**		**P**	**14 59 40.8**	**+1.1**
SOEI	**Soe**	**17.50**	**173**	P	**P**	**14 59 41.3**	**+1.6**
	comp=Z,61nm,1.3s						
BATI	**Baumata**	**17.88**	**175**	P	**P**	**14 59 45.0**	**+1.2**
	comp=Z,4.0nm,0.3s,baz=276,slow=2.9,SNR=12						
BATI				LR	LR	15 08 05.0	
	comp=Z,288nm,18.4s,baz=340,slow=42						
	comp=Z,47nm,0.7s						
BATI	**Baumata**	**17.88**	**175**	P	**P**	**14 59 45.6**	**+1.8**
	comp=Z,66nm,1.0s						
JAGI	**Jajag, Banyuwa**	**17.89**	**206**	P	**P**	**14 59 47.3**	**+3.4**
	comp=Z,731nmcomp=Z,39nm,1.1s						
SJI	**Sawahan**	**18.44**	**214**	P	Pn	14 59 55.5	+5.2
SNJI	**Sawahan-Nganju**	**18.48**	**214**	P	**Pn**	**14 59 54.3**	**+3.4**
PCJI	**Pacitan**	**19.14**	**215**	P	**Pn**	**15 00 01.8**	**+3.1**
	comp=Z,46nm,1.4s						
JOW	**Kunigami**	**19.92**	**17**	P	**Pn**	**15 00 07.2**	**-0.8**
	comp=Z,2.6nm,0.3s,baz=191,slow=13,SNR=9.6						
JOW				LR	LR	15 07 29.7	
	comp=Z,723nm,21.0s,baz=196,slow=36						
	comp=Z,19nm,0.6s						
JOW	**Kunigami**	**19.92**	**17**		**Pn**	**15 00 06.5**	**-1.4**
JOW				IAmb	IAmb	15 00 08.3	
	comp=Z,127nm,1.4s						
LEM	**Lembang**	**20.37**	**225**	P	Pn	15 00 13.0	-0.5
	comp=Z,23nm,0.6s,baz=78,slow=8.6,SNR=5.2						
LEM				LR	LR	15 08 18.3	
	comp=Z,143nm,18.0s,baz=29,slow=37						
	comp=Z,23nm,0.6s						
LEM	**Lembang**	**20.37**	**225**	P	Pn	15 00 13.0	-0.4
GULI	**GuiLin**	**20.72**	**329**	P	Pn	15 00 16.4	-0.9
GULI				S	Sn	15 04 10.0	-0.4
GULI				pmax	pmax		
	comp=Z,28nm,1.3s						
GULI				pmax	pmax		
	comp=Z,310nm,11.6s						
GULI				L	L		
	comp=Z,520nm,16.9s						
GULI				L	L		
	comp=Z,480nm,13.1s						
GULI				L	L		
	comp=Z,810nm,17.6s						
BBJI	**Bungbulang**	**20.80**	**224**		Pn	15 00 18.5	+0.1
BBJI				IAmb	IAmb	15 00 32.9	
	comp=Z,99nm,1.7s						
BBJI	**Bungbulang**	**20.80**	**224**	P	Pn	15 00 18.6	+0.3
GENI	**Genyem**	**20.80**	**119**	P	Pn	15 00 18.2	-0.2
	comp=Z,2µmcomp=Z,113nm,1.3s						
IPM	**Ipoh**	**21.12**	**262**	P	**P**	**15 00 19.7**	**+0.5**
KLSI		**21.20**	**235**	P	P	15 00 24.2	+4.1
KULM	**Kulim**	**21.36**	**265**	P	**P**	**15 00 21.7**	**-0.2**
MDSI	**Maura Dua**	**21.53**	**236**	P	**P**	**15 00 25.5**	**+1.8**
	comp=Z,35nm,1.0s						
CGJI	**Cibinong**	**21.62**	**229**	P	**P**	**15 00 27.3**	**+2.7**
	comp=Z,316µmcomp=Z,3µmcomp=Z,19nm,0.9s						
PSI	**Prapat**	**23.50**	**259**	P	**P**	**15 00 44.6**	**+0.1**
PSI				pmax	pmax		
	comp=Z,28nm,1.1s						
RPSI	**Rantau Prapat**	**23.52**	**259**	P	**P**	**15 00 44.6**	**+0.1**
GYA	**Guiyang**	**23.68**	**324**	P	**P**	**15 00 44.0**	**-2.1**
GYA				L	L		
	comp=Z,340nm,16.2s						
GYA				L	L		
	comp=Z,730nm,15.8s						
GYA				L	L		
	comp=Z,420nm,14.8s						
WHN	**Wuhan**	**23.82**	**343**	P	**P**	**15 00 47.6**	**+0.4**
WHN				S	**S**	**15 05 02.8**	**+1.6**
WHN				pmax	pmax		
	comp=Z,66nm,1.3s						
WHN				L	L		
	comp=Z,1µm,14.0s						
WHN				L	L		
	comp=Z,910nm,13.1s						
WHN				L	L		
	comp=Z,2µm,14.0s						
NJ2	**Nanjing**	**24.40**	**353**	⇑P	**P**	**15 00 52.8**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,13nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,270nm,4.9s						
NJ2				L	L		
	comp=Z,310nm,9.0s						
NJ2				L	L		
	comp=Z,160nm,9.0s						
NJ2				L	L		
	comp=Z,410nm,15.7s						
CMAR	**Chiang Mai Arr**	**24.85**	**298**	P	**P**	**15 00 57.5**	**+0.7**
	comp=Z,3.9nm,1.0s,baz=123,slow=8.1,SNR=28						
CMAR				PcP	**PcP**	**15 04 33.7**	**+1.0**
	comp=Z,1.8nm,0.9s,baz=96,slow=2.3,SNR=8.0						
CMAR				LR	LR	15 09 33.3	
	comp=Z,218nm,21.0s,baz=110,slow=34						
	comp=Z,3.9nm,1.0s						
CMAR	**Chiang Mai Arr**	**24.85**	**298**	P	**P**	**15 00 56.8**	**0.0**
CMAR					**PcP**	**15 04 33.5**	**+0.9**
CMAR	**Chiang Mai Arr**	**24.85**	**298**	P	**P**	**15 00 56.8**	**0.0**
CMAR						15 04 33.6	
CHTO	**Chiang Mai**	**24.99**	**298**	P	**P**	**15 00 58.3**	**+0.2**
CHTO	**Chiang Mai**	**24.99**	**298**	P	**P**	**15 00 58.3**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,48nm,2.0s						
GSI	**Gunungsitoli**	**25.17**	**257**	IAmb	IAmb	15 01 01.9	
	comp=Z,48nm,0.7s						
KMI2	**Kunming**	**25.28**	**316**	P	**P**	**15 01 03.9**	**+3.0**
KMI2				S	**S**	**15 05 30.3**	**+5.1**
KMI2				sS	sS	15 05 44.7	+7.4
KMI2				pmax	pmax		
	comp=Z,15nm,1.6s						
KMI2				pmax	pmax		
	comp=Z,250nm,5.6s						
KMI2				L	L		
	comp=Z,380nm,14.4s						
KMI2				L	L		
	comp=Z,310nm,15.0s						
KMI2				L	L		
	comp=Z,460nm,14.6s						
JNU	**Nakatsue**	**26.59**	**17**	LR	LR	15 11 41.4	
	comp=Z,307nm,20.9s,baz=200,slow=36						
PZH	**PanZhiHua**	**26.84**	**317**	P	**P**	**15 01 17.6**	**+2.7**
LYN	**LuoYang**	**28.12**	**343**	P	**P**	**15 01 26.1**	**0.0**
LYN				S	**S**	**15 06 12.7**	**+3.3**
LYN				pmax	pmax		
	comp=Z,25nm,0.9s						
LYN				pmax	pmax		
	comp=Z,250nm,6.9s						
LYN				L	L		
	comp=Z,590nm,14.7s						
LYN				L	L		
	comp=Z,470nm,14.1s						
LYN				L	L		
	comp=Z,760nm,16.3s						
TNCH	**TengChong**	**28.28**	**310**	*e*P	P	15 01 32.9	+5.0
TNCH				S	**S**	**15 06 15.3**	**+2.7**
TNCH				pmax	pmax		
	comp=Z,11nm,1.3s						
TNCH				L	L		
	comp=Z,330nm,10.3s						
TNCH				L	L		
	comp=Z,350nm,11.0s						
TNCH				L	L		
	comp=Z,430nm,13.9s						
CD2	**Chengdu**	**28.71**	**326**	P	P	15 01 33.0	+1.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2				L	L		
	comp=Z,570nm,14.6s						
CD2				L	L		
	comp=Z,680nm,14.0s						
CD2				L	L		
	comp=Z,710nm,15.9s						
XAN	**Xi'an**	**28.85**	**337**	P	**P**	**15 01 32.5**	**-0.2**
XAN				S	**S**	**15 06 25.7**	**+4.6**
XAN				pmax	pmax		
	comp=Z,17nm,1.7s						
XAN				L	L		
	comp=Z,370nm,17.2s						
XAN				L	L		
	comp=Z,280nm,16.5s						
XAN				L	L		
	comp=Z,520nm,13.7s						
PSA00	**Pilbara Seismi**	**29.18**	**184**	P	**P**	**15 01 35.2**	**-0.5**
PSA00				IAmb	IAmb	15 01 49.7	
	comp=Z,88nm,1.9s						
WB0	**Warramunga Arr**	**29.90**	**156**	P	**P**	**15 01 41.6**	**-0.5**
WB0				IAmb	IAmb	15 01 42.5	
	comp=Z,22nm,1.1s						
WRAB	**Tennant Creek**	**30.03**	**156**	P	**P**	**15 01 42.9**	**-0.4**
WRAB	**Tennant Creek**	**30.03**	**156**	*ce*P	**P**	**15 01 42.9**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,19nm,1.3s						
WRA	**Warramunga Arr**	**30.04**	**156**	P	**P**	**15 01 42.5**	**-0.8**
	comp=Z,8.1nm,1.0s,baz=339,slow=9.5,SNR=18						
WRA				PcP	**PcP**	**15 04 44.1**	**-1.0**
	comp=Z,1.3nm,0.6s,baz=328,slow=2.5,SNR=7.7						
	comp=Z,8.1nm,1.0s						
WRA	**Warramunga Arr**	**30.04**	**156**	P	**P**	**15 01 43.1**	**-0.2**
KSRS	**Korea Array**	**30.09**	**9**	P	**P**	**15 01 44.0**	**+0.5**
	comp=Z,1.9nm,0.8s,baz=210,slow=9.4,SNR=3.2						
KSRS				LR	LR	15 13 43.5	
	comp=Z,322nm,20.8s,baz=185,slow=36						
	comp=Z,1.9nm,0.8s						
WR8	**Warramunga Arr**	**30.11**	**156**	P	**P**	**15 01 43.4**	**-0.6**
JHJ	**Hachijo jima 2**	**30.17**	**31**	LR	LR	15 12 37.6	
	comp=Z,296nm,20.1s,baz=276,slow=34						
PMG	**Port Moresby**	**30.27**	**124**	LR	LR	15 15 56.5	
	comp=Z,197nm,18.7s,baz=342,slow=40						
HNS	**HongShan**	**30.29**	**348**	⇓P	**P**	**15 01 45.6**	**+0.3**
HNS				pmax	pmax		
	comp=Z,9.0nm,1.8s						
HNS				L	L		
	comp=Z,420nm,15.7s						
HNS				L	L		
	comp=Z,450nm,14.5s						
MORE	**Moreh**	**31.20**	**305**	IAmb	IAmb	15 01 55.9	
	comp=Z,12nm,0.4s						
SAIH	**SAIHA**	**31.55**	**301**	*e*P	**P**	**15 01 56.5**	**-0.3**
SAIH				IAmb	IAmb	15 01 58.2	
	comp=Z,32nm,0.8s						
KOHI	**KOHIMA**	**32.05**	**307**	*e*P	**P**	**15 01 60.0**	**-1.3**
KOHI				IAmb	IAmb	15 02 01.3	
	comp=Z,14nm,1.0s						
MJAR	**Matsushiro Arr**	**32.27**	**25**	PcP	**PcP**	**15 04 50.3**	**-0.5**
	comp=Z,3.2nm,1.1s,baz=185,slow=2.8,SNR=5.9						
MJAR				LR	LR	15 14 27.2	
	comp=Z,200nm,19.9s,baz=206,slow=35						
LZH	**Lanzhou**	**32.76**	**332**	*e*P	P	15 02 10.1	+2.7
LZH				sP	pwP	15 02 24.0	+4.6
LZH				S	S	15 07 27.8	+5.3
LZH				sS	sS	15 07 40.1	+5.4
LZH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
LZH				L	L		
	comp=Z,550nm,14.6s						
LZH				L	L		
	comp=Z,600nm,14.3s						
LZH				L	L		
	comp=Z,790nm,15.9s						
BRDH	**Bariadhala**	**32.77**	**300**	LR	LR	15 17 08.8	
	comp=Z,235nm,18.1s,baz=168,slow=39						
ZIRO	**ZIRO**	**33.16**	**310**	*e*P	**P**	**15 02 11.0**	**+0.1**
ZIRO				IAmb	IAmb	15 02 12.6	
	comp=Z,9.4nm,0.5s						
AS31	**Alice Springs**	**33.28**	**160**	P	**P**	**15 02 11.3**	**-0.5**
ASAR	**Alice Springs**	**33.28**	**160**	P	**P**	**15 02 11.7**	**-0.1**
	comp=Z,3.4nm,0.9s,baz=336,slow=6.8,SNR=55						
ASAR				PcP	**PcP**	**15 04 52.7**	**-1.1**
	comp=Z,2.0nm,1.0s,baz=337,slow=2.7,SNR=4.6						
ASAR				LR	LR	15 17 59.3	
	comp=Z,136nm,18.3s,baz=357,slow=40						
	comp=Z,3.4nm,0.9s						
ASAR	**Alice Springs**	**33.28**	**160**	P	**P**	**15 02 11.3**	**-0.5**
TEZP	**TEZPUR**	**33.51**	**308**	*e*P	**P**	**15 02 11.6**	**-2.2**
TEZP				IAmb	IAmb	15 02 15.9	
	comp=Z,12nm,0.9s						
HHC	**Hu-ho-hao-te**	**34.29**	**346**	*e*P	P	15 02 24.1	+3.6
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,6.1s						
HHC				L	L		
	comp=Z,170nm,16.2s						
HHC				L	L		
	comp=Z,210nm,15.3s						
HHC				L	L		
	comp=Z,140nm,15.3s						
BTO2	**Baotou**	**34.63**	**344**	*e*P	P	15 02 26.8	+3.3
BTO2				pP	pwP	15 02 35.9	+0.3
BTO2				S	S	15 07 56.6	+5.4
BTO2				pmax	pmax		
	comp=Z,12nm,0.6s						
BTO2				pmax	pmax		
	comp=Z,240nm,6.1s						
BTO2				L	L		
	comp=Z,500nm,7.5s						
BTO2				L	L		
	comp=Z,330nm,7.5s						
BTO2				L	L		
	comp=Z,770nm,13.9s						
TAWA	**Tawang**	**34.71**	**308**	*e*P	P	15 02 26.1	+1.5
TAWA				IAmb	IAmb	15 02 27.8	
	comp=Z,28nm,0.5s						
LSA	**Lhasa**	**36.30**	**311**	P	**P**	**15 02 36.7**	**-1.8**
LSA				pmax	pmax		
	comp=Z,16nm,0.8s						
LSA	**Lhasa**	**36.30**	**311**	P	**P**	**15 02 39.1**	**+0.7**
XLT	**XiLinHaoTe**	**36.42**	**353**	*e*P	**P**	**15 02 38.2**	**-0.6**
XLT				pP	pwP	15 02 50.7	-0.3
XLT				pmax	pmax		
	comp=Z,14nm,1.6s						
XLT				pmax	pmax		
	comp=Z,190nm,7.6s						
XLT				L	L		
	comp=Z,170nm,14.9s						
XLT				L	L		
	comp=Z,250nm,18.2s						
CTA	**Charters Tower**	**36.50**	**140**	LR	LR	15 20 57.7	
	comp=Z,101nm,18.8s,baz=323,slow=42						
CTAO	**Charters Tower**	**36.50**	**140**	P	**P**	**15 02 40.3**	**+0.7**
CTAO	**Charters Tower**	**36.50**	**140**	P	**P**	**15 02 40.3**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,16nm,1.2s						
CTAO	**Charters Tower**	**36.50**	**140**	P	**P**	**15 02 40.1**	**+0.5**
MDJ	**Mudanjiang**	**37.35**	**9**	P	**P**	**15 02 46.4**	**-0.2**
MDJ				PcP	**PcP**	**15 05 04.8**	**-0.5**
USRK	**Ussuriysk Ar.**	**37.38**	**12**	P	**P**	**15 02 46.6**	**-0.1**
	comp=Z,6.7nm,0.9s,baz=193,slow=5.9,SNR=8.3						
	comp=Z,6.7nm,0.9s						
GTA2	**Gaotai**	**37.42**	**331**	P	P	15 02 48.7	+1.3
GTA2				pP	pwP	15 02 57.5	-1.4
GTA2				pmax	pmax		
	comp=Z,21nm,1.8s						
GTA2				L	L		
	comp=Z,430nm,14.9s						
GTA2				L	L		
	comp=Z,590nm,16.5s						
GTA2				L	L		
	comp=Z,830nm,16.2s						
BNX	**BinXian**	**38.17**	**6**	⇓P	**P**	**15 02 53.5**	**0.0**
BNX				pmax	pmax		
	comp=Z,25nm,1.3s						
FORT	**Forrest**	**38.71**	**172**	P	**P**	**15 02 58.5**	**+0.3**
EVN	**Everest**	**38.87**	**306**	P	**P**	**15 03 01.1**	**+0.7**
ASAJ	**Asahikawa**	**40.47**	**23**	LR	LR	15 19 37.7	
	comp=Z,152nm,22.0s,baz=226,slow=36						
NWAO	**Narrogin (SRO)**	**40.67**	**186**	LR	LR	15 20 21.0	
	comp=Z,107nm,19.9s,baz=358,slow=36						
ULN	**Ulaanbaatar**	**41.99**	**345**	P	**P**	**15 03 24.9**	**-0.4**
ULN	**Ulaanbaatar**	**41.99**	**345**	*ce*P	**P**	**15 03 26.1**	**+0.8**
ULN				pmax	pmax		
	comp=Z,23nm,1.7s						
ULN	**Ulaanbaatar**	**41.99**	**345**	P	**P**	**15 03 24.9**	**-0.4**
SONM	**Songino Array**	**42.13**	**344**	P	**P**	**15 03 26.9**	**+0.4**
	comp=Z,3.4nm,0.8s,baz=165,slow=8.5,SNR=27						
SONM				PcP	**PcP**	**15 05 20.5**	**-0.1**
	comp=Z,2.9nm,1.2s,baz=180,slow=4.2,SNR=2.4						
SONM				LR	LR	15 21 31.3	
	comp=Z,180nm,21.2s,baz=178,slow=37						
	comp=Z,3.4nm,0.8s						
SONM	**Songino Array**	**42.13**	**344**	P	**P**	**15 03 26.1**	**-0.4**
SONM				IAmb	IAmb	15 03 28.2	
	comp=Z,41nm,1.8s						
SONM	**Songino Array**	**42.13**	**344**	P	**P**	**15 03 26.1**	**-0.4**
SONM						15 05 20.5	
SONM				pmax	pmax		
	comp=Z,41nm,1.8s						
KLR	**Kul'dur**	**42.18**	**10**	LR	LR	15 20 44.5	
	comp=Z,187nm,21.2s,baz=200,slow=36						
KLR	**Kul'dur**	**42.18**	**10**	*ce*P	**P**	**15 03 26.7**	**0.0**
KLR				pmax	pmax		
	comp=Z,19nm,1.0s						

HEH HeiHe 42.64 5 *e*P P **15 03 29.9 -0.5**
HEH pmax pmax
comp=Z,31nm,1.2s
YSS Yuzhno-Sakhali 42.94 21 *e*P P **15 03 29.2 -3.7**
YSS MLR MLR
comp=Z,200nm,14.0s
NGP Nagpur 43.55 293 *e*P P **15 03 38.7 +0.4**
STKA Stephens Creek 43.58 156 P P **15 03 38.8 +0.5**
comp=Z,14nm,1.0s,baz=328,slow=8.6,SNR=16
comp=Z,14nm,1.0s
STKA Stephens Creek 43.58 156 lAmb lAmb 15 03 40.0
comp=Z,83nm,1.1s
STKA Stephens Creek 43.58 156 *i* P P **15 03 36.7 -1.6**
KOD Kodaikanal 44.05 277 *e*P P **15 03 41.8 -0.9**
KOD lAmb lAmb 15 03 44.6
comp=Z,6.3nm,0.7s
LGTI Lohaghat 44.88 304 *e*P P **15 03 48.2 -0.9**
LGTI lAmb lAmb 15 03 49.2
comp=Z,8.6nm,0.8s
ZAK Zakamensk 45.31 343 *e*P P **15 03 51.5 -0.5**
ZAK pmax pmax
comp=Z,11nm,1.5s
BHPL Bhopal 45.45 295 *e*P P **15 03 54.0 +0.5**
BHPL lAmb lAmb 15 03 54.8
comp=Z,20nm,0.7s
ZEA Zeya 46.09 4 *e*P P **15 03 57.7 -0.2**
ZEA pmax pmax
comp=Z,10.0nm,1.5s
ZEA MLR MLR
comp=E,100nm,17.0s
ZEA MLR MLR
comp=N,100nm,16.0s
ZEA MLR MLR
comp=Z,100nm,16.0s
TLY Talaya 46.38 344 LR LR 15 25 05.4
comp=Z,182nm,19.2s,baz=142,slow=38
TLY Talaya 46.38 344 P P **15 04 00.8 +0.5**
TLY Talaya 46.38 344 *ce*P P **15 04 00.9 +0.6**
TLY pmax pmax
comp=Z,25nm,1.7s
IRK Irkutsk 46.72 345 *e*P P **15 04 02.3 -0.6**
IRK pmax pmax
comp=Z,26nm,1.0s
WMQ Urumqi 46.81 326 *e*P P 15 04 05.3 +1.5
WMQ L L
comp=Z,560nm,17.3s
WMQ L L
comp=Z,290nm,18.9s
SONA Sohna 47.04 302 *e*P P **15 04 05.1 -0.7**
SONA lAmb lAmb 15 04 06.2
comp=Z,22nm,0.5s
KLP Kalpa 47.12 306 *e*P P **15 04 07.2 +0.5**
KLP lAmb lAmb 15 04 10.9
comp=Z,9.0nm,0.6s
MOY Mondy 47.12 342 *e*P P **15 04 06.7 +0.5**
MOY pmax pmax
comp=Z,33nm,1.8s
KNGR Kungurtug, Tuv 47.36 339 *i* P P **15 04 08.0 -0.1**
KNGR pmax pmax
comp=Z,34nm,1.7s
KUDL Kundal 47.49 301 *e*P P **15 04 08.9 -0.4**
KUDL lAmb lAmb 15 04 09.8
comp=Z,28nm,0.5s
SMLA Simla 47.85 305 *e*P P **15 04 12.9 +0.9**
SMLA lAmb lAmb 15 04 13.8
comp=Z,21nm,0.6s
DHRM DHARAMSHALA 48.92 306 *e*P P **15 04 20.6 0.0**
DHRM lAmb lAmb 15 04 30.9
comp=Z,9.7nm,0.9s
UDPR Udaipur 49.05 296 *e*P P **15 04 22.1 +0.5**
UDPR lAmb lAmb 15 04 23.2
comp=Z,29nm,0.7s
CAN Canberra 49.80 151 P P **15 04 28.1 +1.1**
CAN Canberra 49.80 151 P P **15 04 28.1 +1.1**
CAN pmax pmax
comp=Z,40nm,1.2s
CAN Canberra 49.80 151 P P **15 04 28.5 +1.6**
SANVU Saraoutou 50.33 117 P P **15 04 31.9 +0.6**
SANVU Saraoutou 50.33 117 P P **15 04 32.2 +0.9**
SANVU PcP **PcP** **15 05 49.4 -0.4**
ZSN Zaisan 50.65 328 *e*P P 15 04 34.9 +1.6
ZSN Zaisan 50.65 328 *e*P P 15 04 34.9 +1.7
DGZ Jazzator, Alta 50.86 332 *i* P P **15 04 35.7 +0.7**
DGZ pmax pmax
comp=Z,40nm,1.8s
SHLS Shalkode 51.31 321 *e*P P **15 04 37.5 -0.9**
SHLS pmax pmax
comp=Z,10.0nm,1.2s
SHLS Shalkode 51.31 321 *e*P P **15 04 37.6 -0.9**
comp=Z,9.7nm,1.2s
UZB Uzynbulak 51.58 320 *e*P P **15 04 41.4 +0.9**
UZB Uzynbulak 51.58 320 *e*P P **15 04 41.5 +0.9**
MK31 Makanchi Array 51.64 326 *ce*P P **15 04 41.7 +1.0**
MKAR Makanchi Array 51.64 326 P P **15 04 41.5 +0.8**
comp=Z,3.3nm,0.6s,baz=130,slow=8.1,SNR=53
MKAR PcP **PcP** **15 05 53.9 -0.2**
comp=Z,1.1nm,0.6s,baz=127,slow=3.8,SNR=3.7
MKAR LR LR 15 27 38.6
comp=Z,441nm,18.4s,baz=118,slow=37
comp=Z,3.3nm,0.6s
MKAR Makanchi Array 51.64 326 P P **15 04 41.0 +0.2**
NIL Nilore 51.80 307 P P **15 04 42.8 +0.7**
NIL lAmb lAmb 15 04 44.2
comp=Z,29nm,0.9s
NIL Nilore 51.80 307 P P **15 04 42.8 +0.7**
NIL pmax pmax
comp=Z,29nm,1.0s
MAKZ Makanchi 51.83 326 P P **15 04 42.5 +0.4**
MAKZ lAmb lAmb 15 04 44.2
comp=Z,17nm,1.2s
MAKZ Makanchi 51.83 326 P P **15 04 42.5 +0.4**
MAKZ pmax pmax
comp=Z,17nm,1.2s
MAKZ Makanchi 51.83 326 P P **15 04 42.9 +0.8**
MAKZ PcP **PcP** **15 05 53.9 -0.9**
SATY Saty 51.93 320 *e*P P **15 04 44.0 +1.0**
SATY Saty 51.93 320 *e*P P **15 04 44.1 +1.0**
KSH2 Kashi 52.06 314 P P 15 04 45.4 +1.2
KSH2 pmax pmax
comp=Z,7.0nm,1.4s
KSH2 L L
comp=Z,140nm,14.4s
KSH2 L L
comp=Z,310nm,12.7s
KSH2 L L
comp=Z,310nm,15.7s
DZM Mont Dzumac 52.65 125 *e*S **S** **15 12 08.5 -6.1**
comp=Z,62nm,24.6s
DZM *e*SS **SS** **15 15 51.9 -1.6**
comp=Z,77nm,24.9s
DZM *e*LR LR 15 20 01.4
comp=Z,144nm,22.3s
DZM Mont Dzumac 52.65 125 LR LR 15 25 31.7
comp=Z,92nm,21.7s,baz=356,slow=34
DZM Mont Dzumac 52.65 125 P P **15 04 49.6 +1.0**
DZM lAmb lAmb 15 04 51.0
comp=Z,34nm,1.4s
MDOK Medeo 52.85 320 *e*P P **15 04 50.9 +1.0**
MDOK Medeo 52.85 320 *e*P P **15 04 50.1 +0.2**
TNSS Tian-Shan 52.85 319 *e*P P **15 04 50.8 +0.6**
TNSS Tian-Shan 52.85 319 *e*P P **15 04 50.9 +0.6**
TDK Taldyqorghan 52.91 322 *e*P P **15 04 51.3 +1.1**
TDK Taldyqorghan 52.91 322 *e*P P **15 04 51.3 +1.1**
AAA Alma-Ata 52.96 320 *e*P P **15 04 51.7 +1.1**
AAA pmax pmax
comp=Z,11nm,0.5s
AAA Alma-Ata 52.96 320 *e*P P **15 04 51.7 +1.1**
comp=Z,11nm,0.5s
PETK Petropavlovsk- 53.72 26 P P **15 04 56.1 +0.1**
comp=Z,1.3nm,0.5s,baz=226,slow=6.6,SNR=2.9
PETK LR LR 15 30 26.4
comp=Z,65nm,18.4s,baz=235,slow=39
comp=Z,1.3nm,0.5s
PET Petropavlovsk 54.08 26 P P **15 04 58.6 +0.1**
PET Petropavlovsk 54.08 26 *ce*P P **15 05 00.0 +1.5**
PET pmax pmax
comp=Z,32nm,1.7s
AAK Ala-Archa 54.28 318 LR LR 15 29 48.3
comp=Z,182nm,19.3s,baz=106,slow=38
AAK Ala-Archa 54.28 318 P P **15 05 01.1 +0.7**
AAK Ala-Archa 54.28 318 *ce*P P **15 05 00.4 0.0**
AAK pmax pmax
comp=Z,13nm,1.8s
AAK Ala-Archa 54.28 318 P P **15 05 01.6 +1.2**
YAK Yakutsk 54.51 4 LR LR 15 28 37.9
comp=Z,193nm,20.8s,baz=214,slow=36
YAK Yakutsk 54.51 4 P P **15 05 01.0 -0.4**
YAK Yakutsk 54.51 4 *e*P P **15 05 01.0 -0.4**
YAK *e**PP **pwP** **15 05 10.9 +0.6**
YAK *e* 15 06 02.2
YAK *e* 15 07 01.7
YAK *e*PPP PPP 15 08 11.4
YAK *e*S S **15 12 36.9 -1.5**
YAK *e**SS sS 15 12 57.1 +5.5
YAK *e*SS **SS** **15 16 21.9 +0.8**
YAK pmax pmax
comp=Z,37nm,1.3s
YAK pmax pmax
comp=N,21nm,1.2s
YAK pmax pmax
comp=E,8.0nm,1.4s
YAK pmax pmax
comp=Z,100nm,4.3s
YAK pmax pmax
comp=E,66nm,4.6s
YAK pmax pmax
comp=N,83nm,4.7s
YAK smax smax
comp=N,63nm,3.7s
YAK smax smax
comp=E,75nm,4.1s
YAK MLR MLR
comp=Z,200nm,20.0s
YAK MLR MLR
comp=N,131nm,20.0s
YAK MLR MLR
comp=E,33nm,15.0s
YAK Yakutsk 54.51 4 P P **15 05 01.4 -0.1**
ARSB Arslanbob 54.76 316 lAmb lAmb 15 05 06.6
comp=Z,46nm,2.0s
ZALV Zalesovo Beam 54.96 334 P P **15 05 04.6 -0.3**
comp=Z,3.4nm,0.5s,baz=126,slow=7.6,SNR=18
ZALV LR LR 15 30 10.7
comp=Z,107nm,18.1s,baz=130,slow=38
comp=Z,3.4nm,0.5s
ZALV Zalesovo Beam 54.96 334 P P **15 05 04.4 -0.5**
KBL Kabul 55.40 307 P P **15 05 08.4 -0.3**
KBL lAmb lAmb 15 05 10.8
comp=Z,33nm,1.6s
KBL Kabul 55.40 307 P P **15 05 08.4 -0.3**
KBL pmax pmax
comp=Z,33nm,1.6s
BTK Batken 55.80 314 lAmb lAmb 15 05 13.9
comp=Z,14nm,1.2s
KURBB Kurchatov Arra 55.89 328 P P **15 05 12.3 +0.6**
comp=Z,7.7nm,0.7s,baz=118,slow=8.8,SNR=70
KURBB LR LR 15 29 38.6
comp=Z,54nm,20.2s,baz=179,slow=36
comp=Z,7.7nm,0.7s
KURK Kurchatov 55.90 328 P P **15 05 11.8 +0.1**
KURK Kurchatov 55.90 328 P P **15 05 11.8 +0.1**
KURK pmax pmax
comp=Z,47nm,1.2s
KURK Kurchatov 55.90 328 P P **15 05 12.2 +0.5**
MA2 Magadan 56.15 17 LR LR 15 27 39.3
comp=Z,50nm,21.7s,baz=218,slow=34
MA2 Magadan 56.15 17 *ce*P P **15 05 14.2 +0.8**
MA2 pmax pmax
comp=Z,33nm,2.5s
CHGR Chuyangaron 56.53 312 P P **15 05 14.7 -2.0**
IUG Iuzhnay 57.11 316 *e*P P **15 05 21.6 +0.9**
IUG pmax pmax
comp=Z,11nm,1.1s
IUG Iuzhnay 57.11 316 *e*P P **15 05 21.7 +0.9**
comp=Z,11nm,1.1s
KK31 Karatay Array 57.14 317 lAmb lAmb 15 05 22.7
comp=Z,46nm,1.8s
KKAR Karatay Array 57.14 317 P P **15 05 21.1 +0.3**
KKAR Karatay Array 57.14 317 P P **15 05 21.1 +0.3**
CHM Chimkent 57.47 316 *e*P P **15 05 24.1 +1.0**
CHM Chimkent 57.47 316 *e*P P **15 05 24.1 +1.0**
BRLS Boroldoy 57.57 317 *e*P P **15 05 24.5 +0.7**
BRLS Boroldoy 57.57 317 *e*P P **15 05 24.5 +0.7**
SEY Seymchan 59.35 16 *ce*P P **15 05 37.3 +1.5**
SEY pmax pmax
comp=Z,38nm,2.5s
MSVF Nonsavu 60.83 115 LR LR 15 30 48.1
comp=Z,115nm,19.5s,baz=274,slow=35
MSVF Nonsavu 60.83 115 *i* P P **15 05 46.2 -0.6**
MSVF pmax pmax
comp=Z,35nm,1.3s
BVAR Borovoye Array 61.45 327 P P **15 05 50.6 +0.2**
comp=Z,2.7nm,0.5s,baz=120,slow=8.8,SNR=30
BVAR LR LR 15 33 04.2
comp=Z,126nm,20.1s,baz=119,slow=36
comp=Z,2.7nm,0.5s
BORK Borovoye 61.50 327 P P **15 05 50.8 0.0**
BORK Borovoye 61.50 327 *ce*P P **15 05 51.2 +0.5**
BORK pmax pmax
comp=Z,30nm,1.3s
SHEM Shemya Is, Ala 61.56 33 LR LR 15 29 21.9
comp=Z,36nm,21.1s,baz=252,slow=33
TIXI Tiksi 64.02 2 LR LR 15 35 27.0
comp=Z,259nm,20.3s,baz=204,slow=37
TIXI Tiksi 64.02 2 *ce*P P **15 06 07.2 +0.1**
TIXI pmax pmax
comp=Z,40nm,2.5s
NRIK Noril'sk 65.50 347 P P **15 06 16.6 -0.2**
comp=Z,3.6nm,0.5s,baz=100,slow=4.8,SNR=7.7
NRIK LR LR 15 38 22.0
comp=Z,112nm,18.2s,baz=149,slow=39
comp=Z,3.6nm,0.5s
NRIK Noril'sk 65.50 347 *i* P P **15 06 16.4 -0.4**
NRIK pmax pmax
comp=Z,8.0nm,0.8s
ABKAR Akbulak array 66.12 321 P P **15 06 21.2 0.0**
BILL Bilibino 67.01 17 P P **15 06 26.0 -0.5**
BILL lAmb lAmb 15 06 27.7
comp=Z,21nm,1.4s
BILL Bilibino 67.01 17 *ce*P P **15 06 26.7 +0.1**
BILL pmax pmax
comp=Z,16nm,1.3s
AKTO Aktyubinsk 67.65 322 LR LR 15 37 51.2
comp=Z,358nm,19.1s,baz=102,slow=37
URZ Urewera 68.64 136 LR LR 15 37 21.2
comp=Z,85nm,19.5s,baz=324,slow=36
BKZ Black Stump Fm 68.67 137 P P **15 06 36.9 -0.7**
BKZ lAmb lAmb 15 06 38.2
comp=Z,26nm,1.1s
AFI Afiamalu 69.12 108 LR LR 15 32 09.4
comp=Z,61nm,21.8s,baz=286,slow=32
ARTI Arti 69.17 328 LR LR 15 38 50.8
comp=Z,117nm,19.5s,baz=96,slow=37
ARTI Arti 69.17 328 P P **15 06 39.0 -1.3**
ARTI lAmb lAmb 15 06 41.5
comp=Z,10nm,0.8s
ARTI Arti 69.17 328 *d i* P P **15 06 40.5 +0.2**
ARTI 15 09 08.8
ARTI S S **15 15 44.4 +0.3**
ARTI SS **SS** **15 20 11.1 +0.5**
ARTI pmax pmax
comp=Z,20nm,1.2s
GAMB Gambell 72.75 25 P P **15 07 02.0 +0.2**
GAMB lAmb lAmb 15 07 03.6
comp=Z,27nm,1.2s
GAMB Gambell 72.75 25 P P **15 07 02.3 +0.5**
baz=252
UNV Unalaska Valle 72.91 36 P P **15 07 03.4 +0.5**
baz=260
AKT Akhty 73.16 311 *e*P P **15 07 04.1 -0.9**
AKT *e* 15 07 19.8
AKT *e* 15 09 47.8
AKT pmax pmax
comp=Z,37nm,1.5s
M11K Mekoryuk 74.36 29 lAmb lAmb 15 07 13.0
comp=Z,14nm,1.1s
M11K Mekoryuk 74.36 29 P P **15 07 12.3 +0.9**
baz=258
KIRV Kirov 74.41 329 LR LR 15 44 29.2
comp=Z,52nm,18.0s,baz=106,slow=39
KIRV Kirov 74.41 329 *ce*P P **15 07 11.5 -0.2**
BELG Belogornoye 74.41 322 *i* P P **15 07 09.7 -2.1**
BELG pmax pmax
comp=Z,8.0nm,1.1s
RAYN Ar Rayn 74.63 292 P P **15 07 13.5 -0.3**
RAYN Ar Rayn 74.63 292 P P **15 07 13.5 -0.3**
RAYN pmax pmax
comp=Z,4.0nm,0.8s
TNA Tin City 74.82 24 P P **15 07 14.6 +0.6**
baz=255
FALS False Pass 74.85 35 P P **15 07 15.1 +0.8**
baz=262
GNI Garni 75.35 309 LR LR 15 45 07.7
comp=Z,45nm,21.4s,baz=94,slow=39
GNI Garni 75.35 309 P P **15 07 18.1 +0.3**
GNI Garni 75.35 309 *i* P P **15 07 16.5 -1.3**
GNI pmax pmax
comp=Z,40nm,1.6s
K13K Kusilvak Mount 75.41 28 P P **15 07 18.1 +0.7**
baz=259
F14K Arctic Creek 75.44 24 P P **15 07 18.6 +1.1**
baz=256
ANM Nome 75.63 25 P P **15 07 19.2 +0.5**
ANM lAmb lAmb 15 07 20.6
comp=Z,18nm,1.3s
ANM Nome 75.63 25 P P **15 07 19.2 +0.5**
ANM pmax pmax
comp=Z,18nm,1.3s
ANM Nome 75.63 25 P P **15 07 19.5 +0.8**
baz=258
M13K Dall Lake 75.75 30 P P **15 07 20.4 +1.0**
baz=260
J14K Nanvaranak Lak 76.07 27 P P **15 07 21.7 +0.5**
baz=260
F15K North Star Dit 76.18 24 lAmb lAmb 15 07 23.8
comp=Z,23nm,1.2s
F15K North Star Dit 76.18 24 P P **15 07 22.6 +0.8**
baz=258
L14K Kuka Creek 76.23 29 P P **15 07 22.7 +0.6**
baz=261
G15K Niukluk 76.28 25 P P **15 07 22.8 +0.4**
baz=259
C16K Lisburne Hills 76.48 21 P P **15 07 24.0 +0.5**
baz=257
M14K Bethel 76.49 29 P P **15 07 24.0 +0.4**
baz=262
N14K Kuskokwak Cree 76.50 30 P P **15 07 24.1 +0.4**
baz=262
SDPT Sand Point 76.59 35 P P **15 07 24.8 +0.5**
baz=264
GEVA Gevas 76.61 307 lAmb lAmb 15 07 27.6
comp=Z,41nm,1.7s
O14K Tigyukauivet M 76.62 31 P P **15 07 25.0 +0.6**
baz=262
L15K Ungalak Mounta 76.85 28 P P **15 07 26.2 +0.5**
baz=262
KBZ Khabaz 76.85 313 P P **15 07 26.4 +0.4**
comp=Z,5.4nm,1.1s,baz=94,slow=4.0,SNR=8.7
KBZ LR LR 15 45 45.7
comp=Z,64nm,19.0s,baz=36,slow=39
comp=Z,5.4nm,1.1s
KBZ Khabaz 76.85 313 *i* P P **15 07 23.0 -3.0**
KBZ pmax pmax
comp=Z,14nm,1.4s
K15K Wolf Creek Mou 76.92 28 P P **15 07 26.7 +0.7**
baz=262
KIV Kislovodsk 77.01 313 *e*P P **15 07 25.9 -1.2**
KIV pmax pmax
comp=Z,14nm,1.0s
KIV MLR MLR
comp=Z,52nm,19.0s
KIV Kislovodsk 77.01 313 P P **15 07 27.4 +0.3**
comp=Z,15nm,1.6s
CHNA Chernabura Isl 77.05 36 P P **15 07 27.3 +0.4**
baz=265
G16K Koyuk River 77.05 25 lAmb lAmb 15 07 28.5
comp=Z,22nm,1.2s
G16K Koyuk River 77.05 25 P P **15 07 27.5 +0.7**
baz=260
M15K Kasigluk River 77.10 29 P P **15 07 27.3 +0.2**
baz=263
D17K Noatak River 77.19 22 P P **15 07 28.6 +1.2**
baz=259
C17K DeLong Mountai 77.31 21 P P **15 07 28.9 +0.8**
baz=259
RDOG Red Dog Mine 77.32 22 lAmb lAmb 15 07 30.4
comp=Z,28nm,1.3s
RDOG Red Dog Mine 77.32 22 P P **15 07 29.1 +0.9**
baz=259
N15K Kwethluk River 77.33 30 P P **15 07 28.8 +0.4**
baz=263
O15K Ungalikthiuk R 77.35 31 P P **15 07 28.3 -0.3**
baz=264
J16K Anvik River 77.48 27 P P **15 07 29.8 +0.7**
baz=262
I17K Unalakleet 77.52 26 lAmb lAmb 15 07 31.6
comp=Z,26nm,1.2s
I17K Unalakleet 77.52 26 P P **15 07 30.5 +1.1**
baz=262
E17K Hotham Inlet 77.55 23 P P **15 07 30.6 +1.1**
baz=260
F17K Baldwin Pennin 77.67 24 lAmb lAmb 15 07 32.3
comp=Z,31nm,1.4s
F17K Baldwin Pennin 77.67 24 P P **15 07 31.1 +1.0**
baz=261
G17K Kiwalik Mounta 77.77 25 P P **15 07 31.6 +0.9**
baz=262
L16K Owhat River 77.80 29 lAmb lAmb 15 07 33.4
comp=Z,33nm,1.4s
L16K Owhat River 77.80 29 P P **15 07 31.6 +0.6**
baz=264
VRH Novokhopyorsk 77.95 321 *e*P P **15 07 30.0 -2.0**
VRH pmax pmax
comp=Z,10.0nm,1.0s
M16K Timber Creek 77.98 29 P P **15 07 32.5 +0.5**
baz=264
H17K Granite Mounta 78.00 25 P P **15 07 33.0 +0.9**
baz=262
N16K Nishlik Lake 78.01 30 P P **15 07 33.0 +0.7**
baz=264
C18K Utukok River 78.05 21 P P **15 07 32.9 +0.6**
baz=260
E18K Tukpahlearik C 78.08 23 lAmb lAmb 15 07 34.7
comp=Z,28nm,1.3s
E18K Tukpahlearik C 78.08 23 P P **15 07 33.5 +1.0**
baz=261
O16K Kokwok River B 78.27 31 P P **15 07 34.4 +0.7**
baz=265
P16K Nushagak River 78.28 31 P P **15 07 34.3 +0.7**
baz=265
F18K Selawik 78.33 24 P P **15 07 34.7 +0.9**
baz=262
A19K Wainwright 78.36 20 P P **15 07 35.2 +1.4**
baz=260
R16K Pilot Point 78.39 33 P P **15 07 34.6 +0.3**
baz=266
L17K Donlin 78.40 28 P P **15 07 35.2 +0.9**
baz=264
MARD Mardin 78.41 306 P P **15 07 36.0 +0.9**
MARD lAmb lAmb 15 07 37.5
comp=Z,16nm,0.6s
K17K Iditarod 78.46 28 lAmb lAmb 15 07 36.8
comp=Z,19nm,1.2s
K17K Iditarod 78.46 28 P P **15 07 35.5 +0.9**
baz=264
KOPT Kop Dagi 78.60 309 lAmb lAmb 15 07 39.3
comp=Z,29nm,1.4s
ERBR Yeremizino-Bor 78.62 315 *e*P P **15 07 34.6 -1.3**
ERBR pmax pmax
comp=Z,20nm,0.7s
G18K Tagagawik 78.64 24 P P **15 07 36.1 +0.5**
baz=263
H18K Honhosa River 78.68 25 P P **15 07 36.5 +0.6**
baz=264
C19K Lookout Ridge 78.70 21 P P **15 07 37.1 +1.2**
baz=262,SNR=30
M17K Holitna River 78.74 29 P P **15 07 36.9 +0.7**
baz=265
O17K Koliganek Bris 78.79 31 P P **15 07 37.1 +0.6**
baz=266
N17K Nushagak Hills 78.80 30 P P **15 07 37.3 +0.7**
baz=266
Q16K King Salmon 78.95 32 P P **15 07 38.1 +0.8**
baz=267
P17K Kvichak River 79.09 31 P P **15 07 38.5 +0.4**
baz=267
F19K Shaleruckik Mo 79.10 23 P P **15 07 38.3 +0.3**
baz=264
D19K Kuna River 79.15 22 P P **15 07 39.1 +0.7**
baz=263,SNR=23
L18K Granite Mounta 79.16 28 P P **15 07 39.0 +0.6**
baz=266
J18K Innoko River 79.24 27 P P **15 07 39.4 +0.5**
baz=266
GCSA Galena City Sc 79.27 26 P P **15 07 39.6 +0.6**
baz=265
G19K Purcell Mounta 79.31 24 lAmb lAmb 15 07 41.2
comp=Z,19nm,1.4s
G19K Purcell Mounta 79.31 24 P P **15 07 39.7 +0.5**

baz=265
CHIR Chirikof Islan 79.37 35 P P 15 07 40.4 +0.6
baz=268
E19K Redstone River 79.37 23 IAmb IAmb 15 07 41.7
comp=Z,30nm,1.1s
E19K Redstone River 79.37 23 P P 15 07 40.4 +0.8
baz=264
N18K Kilae Creek 79.45 30 P P 15 07 40.8 +0.7
baz=267
VORD Divnogorie 79.48 320 eP P 15 07 38.7 -1.7
VORD pmax pmax
comp=Z,9.0nm,1.0s
VORR Voronezh 79.54 321 eP P 15 07 39.4 -1.3
VORR pmax pmax
comp=Z,52nm,0.7s
VSR Storozhevoye 79.56 321 eP P 15 07 37.7 -3.2
VSR pmax pmax
comp=Z,8.0nm,1.0s
KLMR Klimovskoe 79.65 330 eP P 15 07 38.8 -2.4
KLMR e*PP pwP 15 07 50.5 -3.2
KLMR pmax pmax
comp=Z,39nm,1.5s
P18K Big Mountain, 79.72 31 P P 15 07 42.0 +0.4
baz=268
D20K Etivluk River 79.72 22 P P 15 07 42.0 +0.6
baz=265
LPSR Galich'ya Gora 79.72 322 eP P 15 07 39.0 -2.7
LPSR pmax pmax
comp=Z,10.0nm,0.9s
O18K Koktuh Hills 79.75 31 P P 15 07 42.3 +0.5
baz=268
J19K Poorman 79.76 26 P P 15 07 42.4 +0.7
baz=267
E20K Nigu River 79.84 22 P P 15 07 42.9 +0.7
baz=265,SNR=15
F20K Avaraart Lake 79.92 23 P P 15 07 43.5 +0.9
baz=266
L19K White Mountain 80.02 28 IAmb IAmb 15 07 45.0
comp=Z,14nm,1.2s
L19K White Mountain 80.02 28 P P 15 07 44.0 +0.8
baz=268
N19K Bonanza Creek 80.14 30 P P 15 07 44.6 +0.6
baz=268
H20K Anotleneega Mo 80.17 25 P P 15 07 44.8 +0.9
baz=267
SII Sitkinak Islan 80.20 34 P P 15 07 45.0 +0.8
baz=269
O19K Port Alsworth 80.20 30 P P 15 07 44.9 +0.7
baz=268
M19K Big River Lodg 80.22 29 P P 15 07 44.9 +0.6
baz=268
C21K Knifeblade Rid 80.42 21 P P 15 07 46.2 +1.0
baz=266
K20K Telida 80.42 27 P P 15 07 46.3 +1.0
baz=268
B21K Ikpikpuk River 80.51 21 P P 15 07 46.6 +1.0
baz=266
Q19K Cape Douglas, 80.52 32 P P 15 07 46.7 +0.7
baz=269
IMAR Indian Mountai 80.66 24 P P 15 07 46.8 +0.3
E21K Killik River 80.67 22 P P 15 07 47.4 +0.8
baz=267
OHAK Old Harbor 80.69 33 P P 15 07 47.6 +0.7
baz=270
P19K Oil Pt 80.74 31 P P 15 07 47.4 +0.3
baz=269
G21K Allakaket 80.77 24 P P 15 07 47.9 +0.7
baz=268
ANN Anapa 80.78 314 eP P 15 07 47.6 0.0
ANN pmax pmax
comp=Z,65nm,1.1s
F21K Alatna River 80.81 23 P P 15 07 47.9 +0.5
baz=268
M20K Styx River 80.82 29 P P 15 07 48.4 +0.8
baz=269
B22K Teshekpuk Lake 80.95 20 P P 15 07 48.7 +0.7
baz=268
H21K Melozitna Rive 81.03 25 IAmb IAmb 15 07 50.8
comp=Z,17nm,1.3s
H21K Melozitna Rive 81.03 25 P P 15 07 49.5 +1.0
baz=269,SNR=8.6
KDAK Kodiak Island 81.07 33 LR LR 15 42 19.0
comp=Z,73nm,20.3s,baz=253,slow=34
KDAK Kodiak Island 81.07 33 P P 15 07 49.9 +1.0
baz=270
OBN Obninsk 81.12 325⇓ eP P 15 07 48.8 -0.4
OBN e 15 10 53.1
OBN pmax pmax
comp=Z,38nm,1.6s
OBN MLR MLR
comp=Z,120nm,17.0s
D22K Ayikyak River 81.16 21 IAmb IAmb 15 07 51.6
comp=Z,43nm,1.6s
D22K Ayikyak River 81.16 21 P P 15 07 50.2 +1.0
baz=268
Q20K Shuyak Island 81.17 32 P P 15 07 49.8 +0.4
baz=270
CHUM Lake Minchumin 81.22 27 P P 15 07 49.9 +0.4
baz=270
N20K Mount Spurr 81.26 29 P P 15 07 49.6 -0.4
baz=270
SPCR Spurr Chakacha 81.26 29 P P 15 07 49.8 -0.1
baz=270
PPLA Purkeypile 81.27 28 P P 15 07 49.9 -0.2
baz=270
I21K Tanana 81.37 25 P P 15 07 51.1 +0.8
baz=270
E22K Anaktuvuk Pass 81.47 22 IAmb IAmb 15 07 53.1
comp=Z,22nm,1.3s
E22K Anaktuvuk Pass 81.47 22 P P 15 07 51.2 +0.4
baz=269,SNR=9.6
SKT Skwentna 81.58 28 IAmb IAmb 15 07 52.0
comp=Z,17nm,1.2s
SKT Skwentna 81.58 28 P P 15 07 50.9 -0.6
baz=271
H22K Ishtalitna Cre 81.62 24 IAmb IAmb 15 07 54.2
comp=Z,21nm,1.3s
H22K Ishtalitna Cre 81.62 24 P P 15 07 52.1 +0.4
baz=270,SNR=10
CAPN Captain Cook N 81.78 30 P P 15 07 52.8 +0.3
baz=271
BPAW Bear Paw Mtn. 81.80 26 IAmb IAmb 15 07 54.3
comp=Z,26nm,1.3s
BPAW Bear Paw Mtn. 81.80 26 P P 15 07 52.5 -0.1
baz=271,SNR=10
ASF Jabal al Asfar 81.83 301 LR LR 15 49 17.6
comp=Z,22nm,19.4s,baz=35,slow=39
D23K Nanushuk River 81.89 21 P P 15 07 54.2 +1.2
baz=270,SNR=15
MLY Manley 81.90 25 IAmb IAmb 15 07 55.0
comp=Z,16nm,1.4s
MLY Manley 81.90 25 P P 15 07 53.4 +0.2
baz=271,SNR=6.8
C23K Itkillik River 81.91 20 P P 15 07 53.5 +0.5
baz=270
L22K Petersville 81.93 28 IAmb IAmb 15 07 54.1
comp=Z,24nm,1.2s
SUA Susitna One 81.96 29 IAmb IAmb 15 07 54.1
comp=Z,19nm,1.1s
SUA Susitna One 81.96 29 P P 15 07 53.5 -0.1
baz=271,SNR=5.6
BRSE Bradley Lake S 82.00 31 P P 15 07 54.2 +0.4
baz=272
COLD Coldfoot 82.08 23 IAmb IAmb 15 07 56.5
comp=Z,17nm,1.2s
COLD Coldfoot 82.08 23 P P 15 07 54.5 +0.4
baz=271,SNR=11
TRF Thorofare Moun 82.12 27 P P 15 07 55.2 +0.6
baz=271
CUT Chulitna 82.16 28 P P 15 07 54.1 -0.5
baz=272
G23K Bananza Creek 82.16 24 IAmb IAmb 15 07 57.0
comp=Z,20nm,1.3s
G23K Bananza Creek 82.16 24 P P 15 07 55.1 +0.6
baz=271
M22K Willow 82.25 29 P P 15 07 54.4 -0.6
baz=272
E23K Chandalar 82.29 22 P P 15 07 55.9 +0.6
baz=271
TOLK Toolik Lake Re 82.29 22 P P 15 07 55.8 +0.6
baz=271,SNR=12
FURI Furi 82.29 278 LR LR 15 44 57.8
comp=Z,48nm,18.7s,baz=105,slow=36
RC01 Rabbit Creek A 82.46 29 P P 15 07 55.6 -0.5
baz=272
I23K Minto, Yukon-K 82.48 25 IAmb IAmb 15 09 19.9
comp=Z,20nm,1.7s
I23K Minto, Yukon-K 82.48 25 P P 15 07 56.2 0.0
baz=272
O22K Cooper Landing 82.49 30 P P 15 07 55.9 -0.4
baz=272
D24K Happy Valley 82.55 21 P P 15 07 57.1 +0.7
baz=272,SNR=7.0
C24K Franklin Bluff 82.57 21 P P 15 07 57.0 +0.5
baz=272
NEA2 Nenana 82.62 26 P P 15 07 56.7 -0.3
baz=272
SEW Seward 82.64 30 P P 15 07 56.8 -0.3
baz=273
E24K Your Creek 82.71 22 P P 15 07 58.0 +0.6
baz=272
MCK McKinley 82.72 27 IAmb IAmb 15 07 58.4
comp=Z,26nm,1.2s
MCK McKinley 82.72 27 P P 15 07 57.4 -0.1
baz=273,SNR=7.7
PMR Palmer 82.73 29 P P 15 07 57.5 0.0
baz=273
WAT1 Susitna Watana 82.94 28 P P 15 07 59.2 +0.6
baz=273
MMAI Mount Meron Ar 83.02 302 P P 15 08 01.0 +1.2
comp=Z,4.1nm,0.8s,baz=116,slow=9.8,SNR=2.3
MMAI LR LR 15 49 23.2
comp=Z,40nm,20.8s,baz=92,slow=39
comp=Z,4.1nm,0.8s
MMAI Mount Meron Ar 83.02 302 P P 15 08 01.0 +1.2
KNK Knik Glacier 83.06 29 P P 15 07 58.9 -0.3
baz=273
H24K Noodor Dome 83.06 24 P P 15 07 59.3 0.0
baz=273
SML Sawmill 83.10 29 P P 15 07 59.5 0.0
baz=273
COLA College 83.13 25 eP P 15 07 58.7 -0.8
COLA pmax pmax
comp=Z,18nm,3.3s
COLA College 83.13 25 P P 15 07 59.8 +0.2
baz=273
CCB Clear Creek Bu 83.17 26 IAmb IAmb 15 08 03.4
comp=Z,24nm,1.6s
G24K Hadweenzic Riv 83.18 24 P P 15 08 00.8 +1.1
baz=274
POKR Poker Plat Res 83.29 25 P P 15 08 00.7 +0.3
baz=274
WAT6 Susitna Watana 83.33 28 P P 15 08 01.1 +0.3
baz=274
M23K Glacier View 83.39 29 P P 15 08 00.9 -0.1
baz=274
D25K Kavik River 83.41 21 P P 15 08 01.5 +0.5
baz=274
DHY Denali Highway 83.46 27 P P 15 08 01.1 -0.4
baz=274
ILAR Eielson Array 83.55 26 P P 15 08 01.2 -0.5
comp=Z,1.2nm,0.9s,baz=255,slow=5.1,SNR=9.5
ILAR PP PP 15 11 14.4 +0.3
comp=Z,0.2nm,0.6s,baz=269,slow=5.5,SNR=4.4
comp=Z,1.2nm,0.9s
HDA Harding Lake 83.55 26 IAmb IAmb 15 08 01.3
comp=Z,17nm,1.5s
HDA Harding Lake 83.55 26 P P 15 08 01.0 -0.8
baz=274
SCM Sheep Creek Mo 83.57 29 P P 15 08 02.3 +0.3
baz=274
P23K Montague Islan 83.67 30 P P 15 08 02.4 0.0
baz=274
EIL Elat 83.70 299 LR LR 15 51 45.8
comp=Z,38nm,19.0s,baz=55,slow=40
E25K Arctic Village 83.80 22 IAmb IAmb 15 08 05.8
comp=Z,28nm,1.4s
E25K Arctic Village 83.80 22 P P 15 08 03.3 +0.3
baz=275
F25K Christian Rive 83.82 23 P P 15 08 04.1 +0.9
baz=275
C26K Camden Bay 83.87 20 P P 15 08 04.0 +0.8
baz=276
BR104 Keskin Array S 83.89 309 P P 15 08 04.0 -0.2
comp=Z,67nmcomp=Z,5.9nm,1.1s
BR131 Keskin Array S 83.89 309 IAmb IAmb 15 08 05.4
comp=Z,11nm,1.2s
BRTR Keskin Array B 83.89 309 P P 15 08 04.1 -0.1
comp=Z,4.6nm,1.0s,baz=107,slow=4.1,SNR=20
comp=Z,4.6nm,1.0s
BRTR Keskin Array B 83.89 309 P P 15 08 03.5 -0.7
BR106 Keskin Array S 83.90 309 P P 15 08 04.1 -0.1
comp=Z,63nmcomp=Z,5.4nm,1.1s
BR105 Keskin Array S 83.90 309 P P 15 08 04.2 -0.1
comp=Z,84nmcomp=Z,7.1nm,1.1s
PRP Porcupine Dome 84.06 25 P P 15 08 05.2 +0.7
baz=276
M24K Tolsona, Glenn 84.09 28 P P 15 08 04.8 +0.2
baz=275
K24K Donnelly Dome 84.11 26 P P 15 08 04.7 0.0
baz=275
J25K Salcha River, 84.21 26 P P 15 08 04.9 -0.3
baz=276
BMAR Burnt Mountain 84.25 23 P P 15 08 06.6 +1.3
Q23K Middleton Isla 84.25 31 P P 15 08 05.3 -0.1
baz=275
KLU Klutina 84.27 29 P P 15 08 05.7 +0.1
baz=276
C27K Jago River 84.32 21 P P 15 08 07.0 +1.4
baz=277
PAX Paxson 84.33 27 IAmb IAmb 15 08 07.7
comp=Z,28nm,1.5s
PAX Paxson 84.33 27 P P 15 08 06.0 +0.1
baz=276,SNR=5.2
KIBK Kibwezi 84.34 267 P P 15 08 06.7 -0.2
KIBK IAmb IAmb 15 08 09.4
comp=Z,12nm,1.3s
F26K Shenjek River 84.38 23 P P 15 08 06.8 +0.8
baz=276
EYAK Cordova Ski Ar 84.44 30 P P 15 08 06.2 -0.1
baz=276
RIDG Independent Ri 84.53 26 P P 15 08 07.0 +0.2
baz=276,SNR=6.8
HARP HAARP 84.54 28 P P 15 08 07.0 +0.2
baz=276
CSS Mathiatis 84.57 304 P P 15 08 07.8 +0.2
comp=Z,25nm,1.1s
G26K Porcupine Rive 84.61 23 P P 15 08 07.3 +0.2
baz=277
SCRK Sand Creek 84.88 26 IAmb IAmb 15 08 10.3
comp=Z,28nm,1.5s
SCRK Sand Creek 84.88 26 P P 15 08 08.8 +0.1
baz=277,SNR=5.5
N25K Chitina, Valde 84.89 29 P P 15 08 09.2 +0.5
baz=277
BMRM Bremner River 84.96 29 P P 15 08 09.3 +0.3
baz=277
I26K Coal Creek Min 85.07 25 P P 15 08 09.8 +0.4
baz=278
ARCES ARCESS Array B 85.11 339 P P 15 08 09.8 +0.3
comp=Z,1.6nm,0.7s,baz=107,slow=6.1,SNR=4.2
comp=Z,1.6nm,0.7s
KAIM Kayak Island 85.17 30 P P 15 08 10.2 +0.2
baz=277
E27K Coleen River 85.27 22 P P 15 08 10.9 +0.4
baz=279
L26K Log Cabin Wild 85.29 27 P P 15 08 11.0 +0.4
baz=278
D27M Malcolm River 85.33 21 P P 15 08 11.3 +0.5
baz=279
M26K Nabesna, AK 85.53 28 P P 15 08 12.3 +0.4
baz=278
H27K Steamboat Moun 85.60 24 IAmb IAmb 15 08 14.9
comp=Z,22nm,1.2s
H27K Steamboat Moun 85.60 24 P P 15 08 13.5 +1.4
baz=279
I27K Kandik River 85.66 24 P P 15 08 13.1 +0.6
baz=279
MCARA McCarthy VSAT 85.66 29 P P 15 08 13.2 +0.7
baz=278
SPITS Spitsbergen Ar 85.68 349 P P 15 08 12.6 +0.3
comp=Z,7.0nm,0.9s,baz=64,slow=6.6,SNR=4.3
SPITS LR LR 15 53 22.0
comp=Z,72nm,18.7s,baz=40,slow=40
comp=Z,7.0nm,0.9s
CRQE Cirque 85.72 29 P P 15 08 12.6 -0.3
baz=278
AK09 Malin Array Si 85.83 320 P P 15 08 12.6 -0.9
AK08 Malin Array Si 85.85 320 P P 15 08 12.8 -0.8
AK10 Malin Array Si 85.86 320 P P 15 08 12.9 -0.7
AK03 Malin Array Si 85.86 320 P P 15 08 12.5 -1.1
AKASG Malin Array Be 85.86 320 P P 15 08 12.7 -1.0
comp=Z,3.6nm,0.7s,baz=72,slow=4.4,SNR=14
AKASG LR LR 15 48 30.0
comp=Z,118nm,19.7s,baz=74,slow=37
comp=Z,3.6nm,0.7s
AKASG Malin Array Be 85.86 320 IAmb IAmb 15 08 14.3
comp=Z,25nm,1.6s
AKASG Malin Array Be 85.86 320 *i* P P 15 08 12.6 -1.0
AKASG pmax pmax
comp=Z,5.0nm,0.7s
AKBB Malin Array Si 85.86 320 *i* P P 15 08 12.7 -0.9
AKBB pmax pmax
comp=Z,29nm,1.7s
AK01 Malin Array Si 85.87 320 P P 15 08 12.8 -0.9
KIEV Kiev 85.87 320 P P 15 08 12.4 -1.3
KIEV Kiev 85.87 320 P P 15 08 12.4 -1.3
KIEV pmax pmax
comp=Z,51nm,1.8s
AK02 Malin Array Si 85.88 320 P P 15 08 12.7 -1.0
AK05 Malin Array Si 85.88 320 P P 15 08 13.0 -0.8
AK12 Malin Array Si 85.91 320 P P 15 08 13.1 -0.8
E28M Babbage River 85.95 21 P P 15 08 13.9 +0.1
baz=281
AK18 Malin Array Si 85.96 320 P P 15 08 13.4 -0.7
L27K Beaver Creek, 85.97 27 P P 15 08 13.8 -0.2
baz=279
BCAR Beaver Creek A 85.99 27 P P 15 08 14.9 +0.8
F28M Old Crow 86.01 22 P P 15 08 14.5 +0.4
baz=280
M27K Edge Creek, AK 86.06 28 IAmb IAmb 15 08 16.7
comp=Z,16nm,1.2s
M27K Edge Creek, AK 86.06 28 P P 15 08 14.7 +0.1
baz=279
D28M Stokes Point 86.10 21 P P 15 08 14.9 +0.5
baz=281
FINES FINESS Array B 86.12 331 P P 15 08 14.0 -0.6
comp=Z,2.4nm,0.7s,baz=64,slow=8.7,SNR=6.7
comp=Z,2.4nm,0.7s
MNK Minsk 86.18 324 *i* P P 15 08 14.4 -0.7
comp=E,10.0nm,0.8s
MNK *i* P P 15 08 14.4 -0.7
comp=N,18nm,0.8s
MNK *i* P P 15 08 14.4 -0.7
comp=Z,15nm,0.7s,baz=82
MNK *i* PcP PcP 15 08 16.7 -1.0
MNK *i* PP PP 15 11 35.3 -0.4
MNK *i* PPP PPP 15 13 29.4
MNK *i* S SKSac 15 18 37.2 -2.0
MNK *i* PS PnS 15 19 57.2 +9.0
MNK *i* SS SS 15 23 51.8 -35
MNK *i* SSS SSS 15 28 00.8
MNK *i* LQ LQ 15 42 20.2
MNK *i* LR LR 15 46 28.3
MNK *i* LRM MLR 15 48 02.6
comp=Z,191nm,18.0s
MNK *i* LRM MLR 15 48 19.0
comp=E,81nm,16.4s
MNK *i* LRM MLR 15 48 26.7
comp=N,82nm,14.2s
MNK Minsk 86.18 324 *i* P P 15 08 14.4 -0.7
MNK *i* 15 11 35.2
MNK *i* PPP PPP 15 13 29.4
MNK *i* S SKSac 15 18 37.2 -2.0
MNK *i* PS PnS 15 19 57.2 +9.0
MNK *i* SSS SSS 15 28 00.7
MNK pmax pmax
comp=E,10.0nm,0.8s
MNK pmax pmax
comp=Z,15nm,0.7s
MNK pmax pmax
comp=N,18nm,0.8s
MNK MLR MLR
comp=Z,191nm,18.0s
MNK MLR MLR
comp=E,81nm,16.0s
MNK MLR MLR
comp=N,82nm,14.0s
BORA Eskisehir 86.31 310 IAmb IAmb 15 08 17.0
comp=Z,8.9nm,0.9s
MESA MESA 86.36 30 P P 15 08 16.0 -0.2
baz=279
I28M Miner Creek 86.38 24 P P 15 08 15.9 -0.1
baz=280
BVCY Beaver Creek 86.52 28 P P 15 08 16.7 0.0
baz=280
CTG Chitna Glacier 86.53 29 P P 15 08 16.2 -0.8
baz=280
E29M Blow River 86.59 21 IAmb IAmb 15 08 19.1
comp=Z,22nm,1.4s
E29M Blow River 86.59 21 P P 15 08 17.0 +0.1
baz=282
DAWY Dawson 86.87 26 IAmb IAmb 15 08 20.4
comp=Z,21nm,1.5s
DAWY Dawson 86.87 26 P P 15 08 18.4 0.0
baz=281
LUBAR Lubar, Ukraine 86.90 320 P P 15 08 17.8 -1.0
EPYK Eagle Plains 87.48 23 P P 15 08 21.1 -0.2
baz=283
G30M tAoh Zraii Nji 87.53 23 P P 15 08 21.5 -0.1
baz=284
F30M Barrier River 87.54 22 P P 15 08 21.6 +0.1
baz=284
M29M Somme Creek 87.61 27 P P 15 08 22.3 +0.2
baz=282
L29M L29M 87.61 27 P P 15 08 22.4 +0.3
baz=282
K29M Barlow Dome 87.72 26 P P 15 08 22.4 -0.2
baz=283
YUK4 Talbot Arm 87.75 28 P P 15 08 22.8 -0.1
baz=282
I30M Mount Dempster 87.89 24 P P 15 08 23.2 -0.2
baz=284
YUK6 Outpost Mounta 87.97 29 P P 15 08 23.4 -0.6
baz=282
VNDA Vanda 87.97 172 LR LR 15 47 56.1
comp=Z,43nm,18.1s,baz=335,slow=36
O29M Mount Kennedy 88.00 29 P P 15 08 23.8 -0.2
baz=282
J30M Hart River 88.06 25 P P 15 08 24.2 0.0
baz=284
TESR Tescani 88.14 317 P P 15 08 24.4 -0.5
comp=Z,22nm,0.6s
INK Inuvik 88.18 21 IAmb IAmb 15 11 50.5
comp=Z,6.2nm,0.9s
INK Inuvik 88.18 21 P P 15 08 24.2 -0.4
baz=286
G31M Satah River 88.29 23 P P 15 08 24.8 -0.3
baz=286
M30M Minto, Yukon 88.33 27 P P 15 08 25.4 -0.1
baz=284
F31M Tsiigehtchic 88.34 22 IAmb IAmb 15 08 25.4
comp=Z,5.2nm,0.8s
F31M Tsiigehtchic 88.34 22 P P 15 08 24.9 -0.4
baz=286
H31M Peel River 88.56 24 P P 15 08 25.7 -0.7
baz=286
MLR Muntele Rosu 88.80 316 LR LR 15 52 18.2
comp=Z,101nm,20.2s,baz=66,slow=38
P30M Million Dollar 88.82 29 P P 15 08 27.3 -0.5
baz=283
O30N Mendenhall 89.09 29 P P 15 08 28.7 -0.4
baz=284
A36M Sachs Harbour 89.57 17 P P 15 08 31.0 0.0
baz=294
WHY Whitehorse 89.69 29 P P 15 08 32.0 0.0
baz=285
N32M Quiet Lake 90.40 28 P P 15 08 35.0 -0.2
baz=287
SIT Sitka 90.40 32 P P 15 08 34.7 -0.4
baz=285
R32K Eaglecrest 90.50 31 P P 15 08 35.4 -0.3
baz=286
P32M Atlin 90.54 30 P P 15 08 35.9 0.0
baz=286
S32K Killisnoo 90.69 32 P P 15 08 36.0 -0.5
baz=285
PPT2 Papeete2 90.79 108 eS S 15 19 31.2 -1.9
comp=Z,41nm,23.0s
PPT2 eLR LR 15 37 34.2
comp=Z,98nm,25.0s
C36M Paulatuk 91.03 19 P P 15 08 37.9 0.0
baz=295
MBAR Mbarara 91.35 270 LR LR 15 47 56.1
comp=Z,50nm,19.7s,baz=70,slow=34
TBI Tubuai 91.66 113 eLR LR 15 38 12.4
comp=Z,445nm,28.8s
U33K Whale Pass 91.83 33 P P 15 08 42.1 +0.3
baz=287
R33M Jennings River 91.94 29 P P 15 08 42.5 0.0
baz=289
CRAG Craig 92.01 33 P P 15 08 42.8 +0.1
baz=287

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRAK	**Wrangell Islan**	**92.16**	**32**	P	**P**	**15 08 43.8**	**+0.5**
	baz=287						
HFS	**Hagfors**	**92.32**	**332**	P	**P**	**15 08 42.6**	**-1.5**
	comp=Z,2.3nm,0.7s,baz=111,slow=8.1,SNR=7.2						
HFS				LR	LR	15 55 03.0	
	comp=Z,107nm,18.6s,baz=72,slow=39						
	comp=Z,2.3nm,0.7s						
S34M	**Telegraph Cree**	**92.33**	**31**	P	**P**	**15 08 44.2**	**+0.1**
	baz=288						
DAG	**Danmarks Havn**	**92.68**	**352**	*i* P	**P**	**15 08 44.4**	**-1.0**
DAG				IAmb	IAmb	15 08 45.1	
	comp=Z,6.1nm,0.9s						
DLBC	**Dease Lake**	**92.71**	**30**	LR	LR	15 51 06.8	
	comp=Z,24nm,21.2s,baz=260,slow=36						
DLBC	**Dease Lake**	**92.71**	**30**	P	**P**	**15 08 46.1**	**+0.1**
	baz=289						
WTLY	**Watson Lake, Y**	**92.74**	**28**	P	**P**	**15 08 46.0**	**0.0**
	baz=290						
V35K	**Ketchikan**	**92.88**	**33**	P	**P**	**15 08 46.7**	**0.0**
	baz=288						
T35M	**Bob Quinn**	**93.08**	**31**	P	**P**	**15 08 47.7**	**0.0**
	baz=289						
NOA	**NORSAR Array B**	**93.14**	**333**	LR	LR	15 53 30.6	
	comp=Z,124nm,18.6s,baz=65,slow=37						
WRGLY	**Wrigley**	**93.87**	**24**	P	**P**	**15 08 51.5**	**+0.4**
	baz=295						
VRAC	**Vranov**	**94.11**	**321**	LR	LR	15 53 54.7	
	comp=Z,75nm,18.6s,baz=58,slow=37						
RES	**Resolute Bay**	**94.71**	**9**	LR	LR	15 53 56.0	
	comp=Z,67nm,20.5s,baz=355,slow=37						
RES	**Resolute Bay**	**94.71**	**9**	IAmb	IAmb	15 08 55.2	
	comp=Z,5.4nm,1.1s						
DBG	**Daneborg**	**94.87**	**350**	*i* P	**P**	**15 08 55.0**	**-0.5**
DBG				IAmb	IAmb	15 08 57.0	
	comp=Z,16nm,1.3s						
NEEM	**North Greenlan**	**94.89**	**358**	*i* P	**P**	**15 08 55.6**	**-0.3**
NEEM				IAmb	IAmb	15 08 56.4	
	comp=Z,7.0nm,0.7s						
KOTAN	**Kotaneelee Air**	**94.92**	**27**	P	**P**	**15 08 56.4**	**+0.4**
	baz=295						
LSZ	**Lusaka**	**95.67**	**255**	LR	LR	15 52 29.3	
	comp=Z,49nm,18.2s,baz=119,slow=36						
CLL	**Collm**	**95.68**	**323**	*e*P	**P**	**15 08 59.0**	**-0.6**
CLL	**Collm**	**95.68**	**323**	*e*P	**P**	**15 08 59.0**	**-0.6**
GERES	**GERESS Array B**	**96.06**	**321**	LR	LR	15 57 49.0	
	comp=Z,64nm,18.0s,baz=40,slow=39						
QSPA	**South Pole Qui**	**97.59**	**180**	LR	LR	15 54 13.5	
	comp=Z,56nm,18.8s,baz=13,slow=36						
YKA	**Yellowknife Ar**	**97.76**	**23**	P	Pdif	15 09 08.6	-0.3
	comp=Z,0.6nm,0.8s,baz=306,slow=5.5,SNR=11						
	comp=Z,0.6nm,0.8s						
TAOE	**Nuku Hiva Isla**	**98.85**	**98**	*e*LR	LR	15 41 31.1	
	comp=Z,148nm,22.1s						
LBTB	**Lobatse**	**99.01**	**246**	LR	LR	15 51 27.4	
	comp=Z,50nm,18.3s,baz=100,slow=34						
BOSA	**Boshof**	**99.56**	**242**	LR	LR	15 51 44.1	
	comp=Z,44nm,18.3s,baz=116,slow=34						
PDAR	**Pinedale Array**	**111.31**	**38**	PKiKP	**PKiKP**	**15 14 08.8**	**+0.4**
	comp=Z,0.1nm,0.5s,baz=295,slow=1.4,SNR=2.1						
TORD	**Torodi Ar. Bea**	**117.21**	**289**	PKP	**PKiKP**	**15 14 19.2**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=209,slow=1.5,SNR=3.7						
TXAR	**Lajitas Array**	**122.66**	**48**	PKP	**PKiKP**	**15 14 30.4**	**-0.2**
	comp=Z,1.3nm,0.9s,baz=270,slow=0.9,SNR=7.4						
PLCA	**Paso Flores**	**145.26**	**163**	PKPbc	**PKPdf**	**15 15 11.1**	**-0.9**
	comp=Z,7.2nm,0.9s,baz=205,slow=3.5,SNR=14						

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*IDC **03** 15:01:00.2±1.2, 36.̊42N×120.̊57W, h0^{km}, mb3.5/2, mbtmp3.4/6, ML3.8/5, MS3.3/10, Error ellipse: s-maj=13.9km s-min=8.8km az=74.0*

*NCEDC **03** 15:01:01.5±1.6, 36.̊50N±0.̊01×120.̊62W±0.̊02, h11^{km}±8^{km}, Error ellipse: s-maj=2.6km s-min=1.1km az=63.0*

*NEIC **03** 15:01:01.8±1.0, 36.̊52N±0.̊01×120.̊58W±0.̊02, h10^{km}±2^{km}, mb3.9/1, ML3.9/140, Mwr4.0/5(NCEDC), Error ellipse: s-maj=3.1km s-min=2.6km az=237.0*

*NEIC **03** 15:01:01.4, 36.̊49N×120.̊61W, h9^{km}*

*NEIC **03** 15:01:01.4, 36.̊49N×120.̊61W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.10; $M_{\theta\theta}$-0.47; $M_{\phi\phi}$-0.63; $M_{r\theta}$-0.36; $M_{\theta\phi}$0.61; $M_{\phi r}$0.04; Fault plane solution: $M_0$1.19000×10^{15} NP1:ϕ_s306.99000°, δ52.87000°, λ74.96000°. NP2:ϕ_s150.98000°, δ39.65000°, λ108.92000°. Principal axes: T 1.1842, Plg76.0000°, Azm167.0000°; N 0.0093, Plg12.0000°, Azm316.0000°; P -1.1935, Plg7.0000°, Azm48.0000°;*

ISC 03 15:01:01.9±1.0**, 36.̊50N**±0.̊02×**120.̊59W**±0.̊02**, h9**^{km}±8^{km}**, n185, σ1§16**/168**, MS3.5**/4**, Central California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BMSM	**Mercy Hot Spri**	**0.23**	**315**		**Pg**	**15 01 06.9**	**+0.2**
PMPB	**Monarch Peak**	**0.33**	**211**		**Pg**	**15 01 08.8**	**+0.3**
PMPB				IAML		15 01 16.3	
	comp=N,24μm,0.8s						
PMPB				IAML		15 01 19.9	
	comp=E,16μm,0.6s						
PMPB	**Monarch Peak**	**0.33**	**211**		**Sb**	**15 01 14.2**	**-1.2**
LRV	**Little Rabbit**	**0.35**	**258**		**Pb**	**15 01 09.5**	**-0.9**
BBGB	**Big Mountain B**	**0.37**	**283**		**Pg**	**15 01 09.5**	**+0.2**
BBGB				IAML		15 01 21.2	
	comp=N,23μm,0.8s						
BBGB	**Big Mountain B**	**0.37**	**283**		**Sg**	**15 01 15.2**	**+1.0**
PPTM	**Peach Tree Val**	**0.40**	**195**		**Pb**	**15 01 10.2**	**-1.0**
WSRE	**Westside REC,**	**0.41**	**112**		**Pb**	**15 01 11.4**	**+0.1**
WSRE					**Sb**	**15 01 20.3**	**+2.6**
PSMM	**Smith Mountain**	**0.43**	**180**		**Pb**	**15 01 11.1**	**-0.5**
PSMM					**Sb**	**15 01 17.5**	**-0.7**
BVL	**Bear Valley**	**0.49**	**279**		**Pg**	**15 01 11.6**	**+0.1**
PHPM	**Hope Ranch**	**0.52**	**181**		**Pb**	**15 01 12.4**	**-0.8**
PSAM	**San Ardo**	**0.53**	**207**		**Pg**	**15 01 12.3**	**+0.2**
PSAM					**Sg**	**15 01 19.8**	**+0.7**
AVNL	**Avenal, CA USA**	**0.54**	**153**		**Pb**	**15 01 13.1**	**-0.4**
AVNL					**Sb**	**15 01 22.0**	**+0.7**
BSGM	**Shirttail Gulc**	**0.54**	**261**		**Pg**	**15 01 12.1**	**-0.3**
BSGM					**Sg**	**15 01 20.2**	**+0.7**
PKD	**Bear Valley Ra**	**0.55**	**176**		**Pb**	**15 01 12.8**	**-1.0**
TRC	**Taylor Ranch**	**0.56**	**170**		**Pb**	**15 01 13.4**	**-0.4**
PSTM	**Stockdale Moun**	**0.57**	**173**		**Pb**	**15 01 13.4**	**-0.7**
PVCM	**Vineyard Canyo**	**0.57**	**176**		**Pb**	**15 01 13.4**	**-0.8**
BJOM	**Mount Johnson**	**0.60**	**283**		**Pg**	**15 01 13.1**	**-0.4**
CTM	**Castle Mountai**	**0.60**	**160**		**Pb**	**15 01 14.5**	**-0.2**
PCCM	**Crazy Canyon**	**0.61**	**229**		**Pg**	**15 01 14.0**	**+0.1**
PHFM	**Heflinger Ranc**	**0.63**	**166**		**Pb**	**15 01 14.9**	**-0.3**
BJCM	**Johnson Can.**	**0.65**	**275**		**Pg**	**15 01 13.9**	**-0.6**
SCZ	**Santa Cruz**	**0.66**	**279**		**Pg**	**15 01 14.2**	**-0.6**
BSMM	**Soledad Missio**	**0.69**	**261**		**Pg**	**15 01 15.0**	**-0.1**
GHIB	**Gold Hill**	**0.69**	**163**		**Pb**	**15 01 15.6**	**-0.6**
GHIB	**Gold Hill**	**0.69**	**163**		**Pb**	**15 01 15.4**	**-0.7**
LTR	**Lone Tree Road**	**0.69**	**304**		**Pg**	**15 01 15.3**	**0.0**
HULI	**Fort Hunter Li**	**0.70**	**228**		**Pb**	**15 01 15.7**	**-0.7**
HULI				IAML		15 01 36.5	
	comp=N,4μm,0.6s						
SAO	**San Andreas Ge**	**0.74**	**291**		**Pg**	**15 01 15.8**	**-0.4**
PKLM	**Kerr Lake**	**0.75**	**164**		**Pb**	**15 01 16.7**	**-0.5**
BSRM	**Salinas Radio**	**0.77**	**283**		**Pg**	**15 01 16.1**	**-0.7**
PMRM	**Maxey Ranch**	**0.77**	**158**		**Pb**	**15 01 16.7**	**-0.7**
FRP	**Fremont Peak**	**0.77**	**290**		**Pg**	**15 01 15.9**	**-0.9**
FRP	**Fremont Peak**	**0.77**	**290**		**Pg**	**15 01 16.1**	**-0.6**
SLD	**San Luis Dam**	**0.77**	**319**		**Pg**	**15 01 16.6**	**-0.2**
SCKWR	**San Luis Creek**	**0.79**	**331**		**Pb**	**15 01 17.4**	**-0.3**
HPCM	**Pacheco Lake**	**0.79**	**316**		**Pg**	**15 01 16.9**	**-0.2**
HSFM	**Saint Francis**	**0.80**	**294**		**Pb**	**15 01 17.6**	**-0.4**
LEGD	**La Grand CA**	**0.80**	**26**		**Pg**	**15 01 16.5**	**-0.9**
LEGD	**La Grand CA**	**0.80**	**26**	IAML		15 01 27.9	
	comp=N,4μm,0.4s						
LEGD				IAML		15 01 35.5	
	comp=E,3μm,0.6s						
PAGB	**Antelope Grade**	**0.81**	**160**		**Pg**	**15 01 17.3**	**-0.3**
HFEM	**San Felipe**	**0.81**	**307**		**Pg**	**15 01 17.4**	**-0.1**
TCHL	**Shandon**	**0.82**	**169**		**Pb**	**15 01 18.1**	**-0.3**
THIS	**South End of C**	**0.82**	**159**		**Pg**	**15 01 17.5**	**-0.3**
MHDM	**Hidden Dam**	**0.83**	**42**		**Pg**	**15 01 17.1**	**-1.0**
BPCNC	**Pine Canyon**	**0.84**	**276**		**Pg**	**15 01 17.7**	**-0.4**
FRI	**Friant**	**0.86**	**55**		**Pg**	**15 01 17.5**	**-1.1**
KARE	**Kearney REC, C**	**0.88**	**83**		**Pg**	**15 01 17.9**	**-1.0**
TCAS	**Cass Winery, P**	**0.89**	**178**		**Pn**	**15 01 19.6**	**-1.0**
RAMR	**Ramage Ranch**	**0.89**	**195**		**Pg**	**15 01 15.7**	**-3.3**
CDC	**Canada Road**	**0.89**	**307**		**Pb**	**15 01 19.0**	**-0.6**
HCAM	**Canada Road**	**0.89**	**307**		**Pb**	**15 01 19.3**	**-0.3**
CSR	**Chase Ranch**	**0.92**	**300**		**Pg**	**15 01 19.1**	**-0.6**
BPRM	**Ponciano Ridge**	**0.92**	**265**		**Pg**	**15 01 19.3**	**-0.4**
HERM	**Elkhorn Road**	**0.95**	**289**		**Pg**	**15 01 19.6**	**-0.6**
HCBM	**Chamberlain**	**0.96**	**297**		**Pg**	**15 01 19.5**	**-1.0**
TSCN	**Private Proper**	**0.97**	**168**		**Pb**	**15 01 20.6**	**-0.4**
FORD	**Fort Ord Natur**	**0.98**	**282**		**Pg**	**15 01 20.5**	**-0.2**
FORD				IAML		15 01 50.5	
	comp=N,4μm,0.8s						
FORD				IAML		15 01 53.3	
	comp=E,5μm,0.7s						
HCOM	**Corn Cob Canyo**	**0.98**	**294**		**Pg**	**15 01 19.8**	**-0.9**
VOG	**Valley Oaks Go**	**0.99**	**100**		**Pg**	**15 01 19.8**	**-1.2**
HLPM	**Lions Peak**	**1.00**	**303**		**Pg**	**15 01 20.0**	**-1.1**
PBPM	**Bitterwater Pu**	**1.00**	**155**		**Pg**	**15 01 20.4**	**-0.8**
TRAY	**Twisselman Ran**	**1.01**	**158**		**Pg**	**15 01 20.6**	**-0.8**
PCBM	**Cambria**	**1.05**	**201**		**Pb**	**15 01 22.1**	**-0.1**
HMOM	**Monterey**	**1.07**	**276**		**Pg**	**15 01 21.1**	**-1.4**
JELB	**Ellicott, Sant**	**1.08**	**294**		**Pb**	**15 01 21.6**	**-1.3**
JLAB	**Laurel Hill**	**1.13**	**306**		**Pb**	**15 01 21.3**	**-2.3**
ARN	**Arnold Ranch**	**1.14**	**319**		**Pb**	**15 01 21.2**	**-2.6**
MBUM	**Mount Bullion**	**1.14**	**21**		**Pb**	**15 01 22.2**	**-1.7**
MMIM	**Miami Mountain**	**1.14**	**36**		**Pb**	**15 01 22.5**	**-1.4**
CCOB	**Coe Ranch Numb**	**1.16**	**312**		**Pb**	**15 01 22.8**	**-1.3**
MTOS	**Mt Oso, Westle**	**1.17**	**330**		**Pb**	**15 01 22.3**	**-2.0**
YEG	**Yeguas Mountai**	**1.18**	**154**		**Pb**	**15 01 23.0**	**-1.5**
MHC	**Mount Hamilton**	**1.19**	**315**		**Pb**	**15 01 23.0**	**-1.8**
MHC				IAML		15 01 48.0	
	comp=N,2μm,0.7s						
CMMM	**Mount Mocho**	**1.20**	**323**		**Pb**	**15 01 23.6**	**-1.4**
BUCR	**Buckhorn Ranch**	**1.23**	**17**		**Pn**	**15 01 23.8**	**-1.5**
MHR	**Mount Hamilton**	**1.27**	**313**		**Pn**	**15 01 24.7**	**-1.2**
SMMC	**Simmler**	**1.27**	**158**		**Pn**	**15 01 24.6**	**-1.4**
JUCM	**University of**	**1.27**	**294**		**Pn**	**15 01 23.8**	**-2.2**
CMLM	**Mount Lewis**	**1.30**	**319**		**Pn**	**15 01 24.8**	**-1.5**
KCC	**Kaiser Creek**	**1.31**	**51**		**Pn**	**15 01 25.4**	**-1.1**
JJOM	**Saint Joseph's**	**1.32**	**303**		**Pn**	**15 01 24.7**	**-1.8**
CARC	**Carrizo Plain**	**1.33**	**153**		**Pn**	**15 01 25.2**	**-1.6**
CSTL	**Corral Hollow**	**1.35**	**328**		**Pn**	**15 01 25.9**	**-1.1**
CALM	**Calaveras Res.**	**1.36**	**315**		**Pn**	**15 01 25.4**	**-1.7**
JBNB	**Ben Lomond Mou**	**1.40**	**297**		**Pn**	**15 01 25.8**	**-1.9**
CRGC	**Crocker Grade**	**1.44**	**150**		**Pn**	**15 01 26.6**	**-1.6**
WENL	**Wente Vineyard**	**1.46**	**321**		**Pn**	**15 01 27.8**	**-0.7**
JSJM	**St Joseph**	**1.47**	**305**		**Pn**	**15 01 28.0**	**-0.5**
JBMM	**Black Mountain**	**1.50**	**304**		**Pn**	**15 01 27.8**	**-1.3**
SPG2	**Springville 2**	**1.50**	**101**		**Pn**	**15 01 27.6**	**-1.5**
CVLM	**Vallecito**	**1.50**	**319**		**Pn**	**15 01 28.4**	**-0.7**
JPC	**Peters Creek,**	**1.51**	**301**		**Pn**	**15 01 27.8**	**-1.4**
CMB	**Columbia Colle**	**1.54**	**6**		**Pn**	**15 01 28.5**	**-1.2**
CMB				IAML		15 01 51.3	
	comp=N,2μm,0.6s						
CMB				IAML		15 01 51.6	
	comp=E,1μm,0.5s						
JFP	**Foothills Park**	**1.54**	**304**		**Pn**	**15 01 28.3**	**-1.4**
JSFB	**Stanford Teles**	**1.56**	**306**		**Pn**	**15 01 29.1**	**-0.7**
CNIC	**Niles Canyon**	**1.56**	**316**		**Pn**	**15 01 28.5**	**-1.4**
JPSM		**1.57**	**297**		**Pn**	**15 01 28.3**	**-1.7**
JRSC	**Jasper Ridge**	**1.60**	**305**		**Pn**	**15 01 29.2**	**-1.2**
MDPB	**Devils Postpil**	**1.66**	**46**		**Pb**	**15 01 31.5**	**-1.3**
MMPM	**Mammoth Pass**	**1.67**	**48**		**Pb**	**15 01 32.1**	**-1.0**
MINS	**Minaret Summit**	**1.68**	**46**		**Pb**	**15 01 32.1**	**-1.2**
MLIM	**Lincoln Peak**	**1.70**	**47**		**Pb**	**15 01 32.5**	**-1.0**
MLIM	**Lincoln Peak**	**1.70**	**47**		**Pb**	**15 01 32.7**	**-0.8**
MDYM	**Dry Creek**	**1.71**	**47**		**Pb**	**15 01 33.0**	**-0.8**
PKM	**Mcpherson Peak**	**1.72**	**158**		**Pn**	**15 01 31.6**	**-0.7**
CSLM	**San Leandro Hi**	**1.73**	**316**		**Pn**	**15 01 32.4**	**+0.2**
MDCM	**Deadman Creek**	**1.73**	**45**		**Pb**	**15 01 33.0**	**-1.1**
MMLB	**Mammoth Lakes**	**1.73**	**48**		**Pb**	**15 01 33.4**	**-0.8**
MLCM	**Laurel Creek C**	**1.74**	**50**		**Pb**	**15 01 33.2**	**-1.0**
JCHM	**Cahill Ridge**	**1.75**	**306**		**Pn**	**15 01 31.4**	**-1.1**
MEMM	**East Mammoth H**	**1.76**	**48**		**Pb**	**15 01 33.7**	**-0.9**
MCMM	**Convict Lake**	**1.77**	**51**		**Pb**	**15 01 33.9**	**-0.7**
MCBM	**Casa Benchmark**	**1.77**	**49**		**Pb**	**15 01 33.9**	**-0.9**
MCSM	**Casa Diablo Ho**	**1.78**	**49**		**Pb**	**15 01 34.0**	**-0.8**
MCVM	**Convict Lake**	**1.78**	**52**		**Pb**	**15 01 33.7**	**-1.2**
MLAC	**Mammoth, Mammo**	**1.80**	**51**		**Pb**	**15 01 34.4**	**-0.9**
MDRNC	**Doe Ridge**	**1.81**	**50**		**Pb**	**15 01 34.4**	**-0.9**
WASM	**Alta Sierra Ca**	**1.81**	**114**		**Pn**	**15 01 32.5**	**-1.0**
SAC	**San Andreas**	**1.82**	**307**		**Pn**	**15 01 31.0**	**-2.4**
BCW	**Bitter Crk WRg**	**1.82**	**148**		**Pn**	**15 01 31.5**	**-2.1**
FIGC	**Figueroa Mtn.**	**1.83**	**164**		**Pn**	**15 01 33.3**	**-0.3**
BRIB	**Briones**	**1.89**	**319**		**Pn**	**15 01 33.8**	**-0.6**
BKS	**Berkeley--Byer**	**1.90**	**317**		**Pn**	**15 01 32.8**	**-1.8**
ISA	**Isabella, Lake**	**1.91**	**115**		**Pn**	**15 01 33.9**	**-0.7**
ISA				IAML		15 02 00.4	
	comp=N,2μm,0.6s						
WELL	**Weller Preserv**	**1.94**	**357**		**Pn**	**15 01 34.6**	**-0.5**
WELL	**Weller Preserv**	**1.94**	**357**	IAML		15 02 06.2	
	comp=E,874nm,0.6s						
WELL				IAML		15 02 08.0	
	comp=N,635nm,0.5s						
CPIM	**Pinole Ridge**	**1.98**	**319**		**Pn**	**15 01 34.9**	**-0.7**
TIN	**Tinemaha, Big**	**1.98**	**73**		**Pb**	**15 01 36.8**	**-1.4**
ARVC	**Arvin**	**1.98**	**133**		**Pn**	**15 01 34.3**	**-1.3**
NJQ	**Nojoqui County**	**1.99**	**170**		**Pn**	**15 01 35.2**	**-0.5**
TEJ	**El Tejon**	**2.00**	**129**		**Pn**	**15 01 34.5**	**-1.4**
MCDM	**Chidago Canyon**	**2.01**	**58**		**Pb**	**15 01 37.8**	**-1.0**
SYP	**Santa Ynez Pea**	**2.03**	**166**		**Pn**	**15 01 35.7**	**-0.6**
MRCM	**Red Rock Canyo**	**2.04**	**54**		**Pb**	**15 01 38.0**	**-1.3**
NLHM	**Lake Herman**	**2.04**	**323**		**Pn**	**15 01 35.4**	**-1.1**
WORM	**Onyx Ranch**	**2.06**	**112**		**Pn**	**15 01 36.8**	**-0.1**
TJR	**Tejon Ranch**	**2.10**	**134**		**Pn**	**15 01 35.6**	**-1.6**
LOK	**Lockwood Valle**	**2.15**	**145**		**Pn**	**15 01 36.7**	**-1.4**
SVIN	**Saint Vincent'**	**2.18**	**315**		**Pn**	**15 01 37.1**	**-1.2**
THC	**Tehachapi Micr**	**2.23**	**135**		**Pn**	**15 01 37.5**	**-1.7**
MFS	**McCloud Flat S**	**2.24**	**99**		**Pb**	**15 01 40.7**	**-2.0**
SNT	**Sears Point**	**2.24**	**319**		**Pn**	**15 01 38.7**	**-0.5**
CVS	**Carmenet Viney**	**2.37**	**322**		**Pn**	**15 01 39.9**	**-1.1**
OSI	**Osito Audit: C**	**2.42**	**140**	IAML		15 02 31.8	
	comp=E,580nm,0.8s						
OSI				IAML		15 02 32.0	
	comp=N,635nm,0.8s						
MCCM	**Marconi Confer**	**2.46**	**313**	Pn	**Pn**	**15 01 40.9**	**-1.3**
AFDM	**Forest Hills D**	**2.47**	**353**		**Pn**	**15 01 41.0**	**-1.3**
AFDM				IAML		15 02 26.7	
	comp=E,370nm,0.6s						
AFDM				IAML		15 02 28.8	
	comp=N,448nm,0.6s						
TPO	**Tropico Hills**	**2.51**	**129**		**Pn**	**15 01 42.4**	**-0.6**
TPO				IAML		15 02 23.2	
	comp=E,666nm,0.8s						
TPO				IAML		15 02 40.8	
	comp=N,357nm,1.2s						
CLC	**China Lake**	**2.52**	**105**		**Pn**	**15 01 42.3**	**-0.7**
CLC				IAML		15 02 24.7	
	comp=N,418nm,1.0s						
CLC				IAML		15 02 30.9	
	comp=E,524nm,1.0s						
LRMC	**Laurel Mtn Rad**	**2.57**	**112**		**Pn**	**15 01 42.7**	**-1.1**
LRMC				IAML		15 02 25.6	
	comp=N,709nm,0.6s						
LRMC				IAML		15 02 25.7	
	comp=E,690nm,0.7s						
NVAR	**Mina Array Bea**	**2.65**	**43**	Pn	**Pn**	**15 01 45.8**	**+0.7**
	comp=E,30nm,0.3s,baz=227,slow=12,SNR=173						
NVAR				Pg	**Pb**	**15 01 49.5**	**-0.2**
	comp=E,104nm,0.3s,baz=226,slow=19,SNR=233						
NVAR				Lg	Lg	15 02 25.8	
	comp=E,89nm,0.3s,baz=223,slow=26,SNR=9.1						
NVAR				LR	LR	15 02 54.6	
	comp=E,440nm,18.2s,baz=232,slow=41						
DONR	**Donner Summit**	**2.86**	**4**		**Pn**	**15 01 49.0**	**+1.1**
SUTB	**Sutter Butte**	**2.89**	**341**		**Pn**	**15 01 46.8**	**-1.3**
PASC	**Pasadena Art C**	**3.04**	**139**		**Pn**	**15 01 49.0**	**-1.2**
PASC				IAML		15 02 44.0	
	comp=E,248nm,0.9s						
QSM	**Queen of Sheba**	**3.06**	**99**	IAML		15 02 48.4	
	comp=E,295nm,0.7s						
QSM				IAML		15 02 48.6	
	comp=N,435nm,1.1s						
ORV	**Oroville**	**3.14**	**347**		**Pn**	**15 01 50.5**	**-1.0**
ORV				IAML		15 02 44.7	
	comp=E,243nm,0.6s						
GWY	**Greenwater Val**	**3.18**	**94**		**Pn**	**15 01 51.2**	**-1.0**
GWY				IAML		15 02 47.1	
	comp=N,386nm,0.8s						
WCT	**Wildcat Mounta**	**3.20**	**84**	IAML		15 02 45.0	
	comp=E,238nm,0.9s						
GSC	**Goldstone, Bar**	**3.30**	**110**	IAML		15 02 51.6	
	comp=N,478nm,1.3s						
TPNV	**Topopah Spring**	**3.52**	**81**	IAML		15 03 01.4	
	comp=N,397nm,1.0s						
TPNV				IAML		15 03 06.9	
	comp=N,330nm,1.4s						
O03E	**Paynes Creek**	**3.91**	**346**	IAML		15 03 27.8	
	comp=N,235nm,0.8s						
MTPC	**Mountain Pass**	**4.21**	**102**	IAML		15 03 14.9	
	comp=E,90nm,0.8s						
MTPC				IAML		15 03 27.7	
	comp=N,134nm,1.2s						
HATC	**Hat Creek Radi**	**4.37**	**351**	IAML		15 03 47.2	
	comp=E,230nm,2.0s						
HATC				IAML		15 03 51.4	
	comp=N,238nm,2.5s						
PFO	**Pinyon Flats O**	**4.45**	**129**	Pn	**Pn**	**15 02 08.2**	**-1.4**
	comp=N,3.4nm,0.3s,baz=309,slow=12,SNR=25						
PFO				Sn	**Sn**	**15 03 01.5**	**-0.1**
	comp=N,2.2nm,0.3s,baz=323,slow=20,SNR=12						
PFO				Lg	Lg	15 03 20.4	
	comp=N,2.3nm,0.3s,baz=8.2,slow=18,SNR=4.6						
	comp=N,6.0nm,0.3s						
BORC	**Borrego Spring**	**4.71**	**132**	IAML		15 03 56.0	
	comp=N,64nm,1.0s						
V12A	**Nelson**	**4.71**	**98**	IAML		15 03 54.9	
	comp=N,86nm,1.6s						
N02D	**Trinity Center**	**4.77**	**340**	IAML		15 03 42.4	
	comp=E,78nm,0.7s						
N02D				IAML		15 03 51.8	
	comp=N,58nm,0.7s						
M03C	**McCloud**	**4.92**	**346**	IAML		15 03 40.3	
	comp=E,159nm,1.0s						
M03C				IAML		15 03 55.0	
	comp=N,132nm,0.9s						
IRM	**Iron Mountain**	**5.03**	**116**	IAML		15 03 44.6	
	comp=N,60nm,3.0s						
IRM				IAML		15 03 59.1	
	comp=E,56nm,1.4s						
BC3	**Big Chuckawall**	**5.08**	**122**	IAML		15 03 54.4	
	comp=E,76nm,1.0s						
BC3				IAML		15 04 18.2	
	comp=N,80nm,1.3s						
YBH	**Yreka Blue Hor**	**5.48**	**343**	Pn	**Pn**	**15 02 25.3**	**+1.4**
	baz=168,slow=9.3,SNR=2.4						
YBH				Lg	Lg	15 03 56.9	
	comp=N,0.1nm,0.3s,baz=119,slow=6.9,SNR=5.3						
YBH				LR	LR	15 04 25.7	
	comp=N,5.4nm,21.0s,baz=69,slow=37						
ELK	**Elko**	**5.96**	**43**	Pn	**Pn**	**15 02 32.2**	**+1.7**
	comp=N,0.3nm,0.3s,baz=227,slow=14,SNR=9.8						
ELK				Lg	Lg	15 04 08.6	
	comp=N,6.3nm,0.3s,baz=122,slow=7.4,SNR=11						
ELK				LR	LR	15 05 09.7	
	comp=N,279nm,20.6s,baz=244,slow=42						
	comp=N,1.9nm,0.4s						
PDAR	**Pinedale Array**	**10.56**	**50**	Pn	**Pn**	**15 03 37.5**	**+3.9**
	comp=N,0.1nm,0.3s,baz=238,slow=12,SNR=8.1						
PDAR				LR	LR	15 08 07.7	
	comp=N,147nm,19.9s,baz=245,slow=40						
	comp=N,0.9nm,0.8s						
ANMO	**Albuquerque**	**11.59**	**94**	LR	LR	15 08 15.2	
	comp=N,40nm,21.1s,baz=284,slow=38						
NEW	**Newport**	**12.04**	**11**	LR	LR	15 07 47.9	
	comp=N,84nm,21.6s,baz=198,slow=34						
LPIG	**La Paz**	**15.20**	**142**	LR	LR	15 10 44.1	
	comp=N,124nm,18.5s,baz=331,slow=39						
TXAR	**Lajitas Array**	**15.89**	**112**	Pn	**P**	**15 04 48.6**	**-1.0**
	comp=N,0.1nm,0.3s,baz=289,slow=12,SNR=4.6						
	comp=N,0.5nm,0.7s						
ULM	**Lac du Bonnet**	**22.49**	**45**	LR	LR	15 15 23.3	
	comp=N,109nm,21.8s,baz=190,slow=38						
CMIG	**Matias Romero**	**29.85**	**124**	LR	LR	15 20 13.3	
	comp=N,81nm,19.4s,baz=359,slow=39						
ILAR	**Eielson Array**	**32.37**	**339**	P	**P**	**15 07 32.2**	**+0.8**
	comp=N,0.2nm,0.6s,baz=126,slow=9.0,SNR=1.6						
	comp=N,0.2nm,0.6s						
SCHQ	**Schefferville**	**40.66**	**46**	LR	LR	15 26 35.5	
	comp=N,120nm,19.3s,baz=219,slow=38						
FRB	**Frobisher Bay**	**41.34**	**32**	LR	LR	15 27 50.9	
	comp=N,72nm,19.7s,baz=82,slow=39						
SONM	**Songino Array**	**86.14**	**330**	P	**P**	**15 13 44.8**	**+1.4**
	comp=N,0.5nm,0.7s,baz=26,slow=3.8,SNR=4.6						
	comp=N,0.5nm,0.7s						
SONM	**Songino Array**	**86.14**	**330**	IAmb	IAmb	15 13 45.6	
	comp=Z,0.8nm,0.8s						

IDC 03 15:04:06.1±4.3**, 7.̊01S**×**130.̊43E, h142**^{km}±60^{km}**, mb2.8**/1**, mbtmp3.5**/4**, Error ellipse: s-maj=118.5km s-min=20.0km az=82.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.15**	**8**	P	Pn	15 05 35.0	+0.2
	7.0nm,0.8s,baz=182,slow=23,SNR=7.4						
SIJI				S	Sn	15 06 44.7	+0.5
	2.5nm,0.4s,baz=256,slow=23,SNR=5.2						
WRA	**Warramunga Arr**	**13.41**	**164**	P	Pn	15 07 10.1	-0.8
	0.4nm,0.5s,baz=346,slow=13,SNR=8.8						
WRA				S	Sn	15 09 32.9	-6.4
	1.5nm,0.5s,baz=329,slow=22,SNR=11						
ASAR	**Alice Springs**	**16.90**	**169**	P	Pn	15 07 54.7	+0.4
	1.0nm,0.6s,baz=341,slow=10.0,SNR=22						
ASAR				S	S	15 10 55.6	-7.2
	0.3nm,0.4s,baz=348,slow=27,SNR=6.0						
MKAR	**Makanchi Array**	**68.46**	**327**	P	P	15 14 52.8	0.0
	0.1nm,0.4s,baz=121,slow=5.6,SNR=2.6						
	0.1nm,0.4s						

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*BGSI **03** 15:28:11.4±1.1, 24.̊60S×29.̊44E, h326^{km}±22^{km}, ML2.3*

PRE 03 15:28:15.1±1.1**, 26.̊00S**×**28.̊88E, h0**^{km}**, ML2.1, Explosion, South Africa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HRAO	**HartRAO**	**1.08**	**275**	*e*P	Pg	15 28 35.5	-0.3
HRAO				*e*S	Sb	15 28 51.2	-0.3
HRAO				IAML		15 28 55.4	
	comp=Z,37nm,0.2s						
LEPH	**Lephalale, Lim**	**2.34**	**335**	*e*P	Pn	15 28 55.3	+0.3
LEPH				*e*S	Sn	15 29 25.3	+0.7
LEPH				IAML		15 29 33.9	
	comp=Z,14nm,0.5s						
PMBG	**Pietermaritzbu**	**3.79**	**158**	*e*P	Pn	15 29 15.5	+0.7
PMBG				*e*S	Sn	15 29 59.5	-0.7
PMBG				IAML		15 30 04.6	
	comp=Z,16nm,0.4s						
LPHEP	**Lephephe**	**3.80**	**313**	*i* P	Pn	15 29 13.2	-1.8
LPHEP				*i* S	Sn	15 29 59.0	-1.4
LPHEP				IAML		15 30 22.7	
	comp=N,6.3nm,0.4s						
MUSN	**Musina, Limpop**	**3.80**	**14**	*e*P	Pn	15 29 16.6	+1.7
MUSN				*e*S	Sn	15 29 59.9	-0.5
MUSN				IAML		15 30 07.1	
	comp=Z,8.0nm,0.6s						
BOSA	**Boshof**	**4.15**	**230**	*e*P	Pn	15 29 21.2	+1.3
BOSA				*e*S	Sn	15 30 09.2	+0.1
BOSA				IAML		15 30 25.8	
	comp=Z,9.6nm,0.5s						
KSTD	**Kokstad**	**4.62**	**175**	*e*P	Pn	15 29 26.5	+0.1
KSTD				*e*S	Sn	15 30 20.8	0.0
KSTD				IAML		15 30 35.6	
	comp=Z,6.7nm,0.4s						
KDWAN	**Kaudwane**	**4.64**	**303**	*i* P	Pn	15 29 23.6	-2.9
KDWAN				IAML		15 30 50.0	
	comp=N,17nm,1.2s						
BROLN	**Tlhalogang**	**5.08**	**343**	*i* P	Pn	15 29 19.1	-14
BROLN				*i* S	Sn	15 30 07.4	-25
BROLN				IAML		15 30 54.2	
	comp=N,3.1nm,0.4s						
KGCAE	**Kacgae**	**6.84**	**296**	*i* P	Pn	15 29 51.5	-5.4
KGCAE				*i* S	Sn	15 31 05.9	-10
KGCAE				IAML		15 32 06.2	
	comp=N,8.0nm,0.6s						
ALKP	**Alkanpan, Nort**	**7.06**	**235**	*e*P	Pn	15 30 00.3	+0.5
ALKP				*e*S	Sn	15 31 17.3	-3.6
ALKP				IAML		15 31 27.5	
	comp=Z,1.7nm,0.2s						
FRAZ	**Fraserburg**	**8.82**	**226**	*e*P	Pn	15 30 25.0	+1.0
FRAZ				*e*S	Sn	15 32 00.1	-4.1
FRAZ				IAML		15 32 40.6	
	comp=Z,0.9nm,0.7s						

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*IDC **03** 15:39:07.4±0.9, 11.̊29N×124.̊51E, h0^{km}, mb3.7/13, mbtmp3.8/14, ML3.9/1, MS3.2/20, Error ellipse: s-maj=32.4km s-min=17.6km az=74.0*

*NEIC **03** 15:39:09.9±1.0, 11.̊4N±0.̊1×124.̊7E±0.̊1, h10^{km}±1^{km}, mb4.5/19, Error ellipse: s-maj=20.5km s-min=16.6km az=107.0*

*MAN **03** 15:39:09.0, 11.̊38N×124.̊49E, h5^{km}, MS4.1*

MAN INTENSITY III - LEYTE CAPOOCAN KANANGA AND ORMOC CITY LEYTE; NAVAL CABUCGAYAN AND

ALMERIA BILIRAN; . INTENSITY II - TABANGO AND ALANGALANG LEYTE.

ISC 03 15:39:09.1±0.5**,11°.39N**±0°.04×**124°.58E**±0°.04**,h10km,n72, σ1.44**/62**,mb3.9**/22**,MS3.1**/17**,Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**1.23**	**209**	eP	**Pn**	**15 39 30.4**	**-1.9**
LLP				i S	**Sb**	**15 39 47.0**	**-1.3**
MMPH	**Masbate**	**1.34**	**316**	eP	**Pg**	**15 39 33.2**	**-1.7**
MMPH				i S	**Sg**	**15 39 52.1**	**-0.2**
RCP	**Roxas**	**1.81**	**275**	i P	**Pb**	**15 39 40.2**	**-2.1**
RCP				i S	**Sg**	**15 40 05.3**	**-2.0**
TBP	**Tagbilaran**	**1.83**	**203**	eP	**Pn**	**15 39 40.6**	**-0.1**
TBP				i S	**Sg**	**15 40 06.7**	**-1.3**
SNPH	**Sibulan**	**2.43**	**213**	i P	**Pn**	**15 39 48.2**	**-0.7**
SNPH				i S	**Sn**	**15 40 18.5**	**-0.3**
JAP	**San Jose, Anti**	**2.66**	**256**	eP	**Pb**	**15 39 55.8**	**-1.1**
TSSP	**Tandag City**	**2.83**	**145**	eP	**Pb**	**15 39 57.0**	**-2.7**
CGP	**Cagayan de Oro**	**2.92**	**178**	eP	**Pn**	**15 39 56.5**	**+0.8**
CGP				eS	**Sb**	**15 40 38.6**	**+1.4**
DCPH	**Dipolog City**	**3.04**	**204**	i P	**Pn**	**15 39 59.3**	**+2.0**
DCPH				i S	**Sb**	**15 40 42.4**	**+1.8**
BIPH	**Bislig**	**3.64**	**151**	eP	**Pb**	**15 40 10.2**	**-3.5**
BIPH				eS	**Sb**	**15 40 55.5**	**-2.4**
CTBH	**Cotabato--PC H**	**4.16**	**185**	i P	**Pn**	**15 40 14.8**	**+2.1**
DMPH	**Davao City--Mi**	**4.38**	**168**	eP	**Pb**	**15 40 25.1**	**-1.1**
DMPH				eS	**Sn**	**15 41 11.9**	**+5.0**
DAV	**Davao City (W)**	**4.41**	**167**	Pn	**Pn**	**15 40 17.2**	**+1.1**
KKM	**Kota Kinabalu**	**9.83**	**238**	Pn	**Pn**	**15 41 33.6**	**+2.9**
BKB	**Balikpapan**	**14.71**	**212**	Pn	**Pn**	**15 42 37.0**	**-0.4**
SBUM	**Sibu**	**15.14**	**235**	P	**P**	**15 42 50.5**	**+2.1**
SBUM				IAmb	IAmb	15 42 58.9	
	comp=Z,11nm,1.2s						
JOW	**Kunigami**	**15.75**	**12**	Pn	**P**	**15 42 53.8**	**-1.3**
	comp=Z,0.8nm,0.3s,baz=216,slow=8.7,SNR=2.8						
JOW				LR	LR	15 48 54.4	
	comp=Z,42nm,19.7s,baz=186,slow=37						
	comp=Z,12nm,0.9s						
JOW	**Kunigami**	**15.75**	**12**	P	**P**	**15 42 54.3**	**-0.8**
JOW				IAmb	IAmb	15 43 00.5	
	comp=Z,20nm,1.0s						
KAPI	**Kappang**	**16.99**	**197**	LR	LR	15 50 07.7	
	comp=Z,43nm,21.4s,baz=35,slow=39						
GUMO	**Guam**	**19.93**	**82**	LR	LR	15 49 38.6	
	comp=Z,67nm,21.4s,baz=98,slow=32						
SAUI	**Saumlaki**	**20.38**	**161**	P	Pn	15 43 47.1	-1.1
SAUI				IAmb	IAmb	15 44 02.0	
	comp=Z,71nm,0.8s						
BATI	**Baumata**	**21.48**	**182**	LR	LR	15 54 02.2	
	comp=Z,45nm,19.2s,baz=312,slow=42						
JCJ	**Chichijima**	**22.76**	**44**	LR	LR	15 51 29.1	
	comp=Z,33nm,21.7s,baz=104,slow=32						
LEM	**Lembang**	**24.75**	**224**	LR	LR	15 55 24.7	
	comp=Z,98nm,18.0s,baz=8.0,slow=40						
CMAR	**Chiang Mai Arr**	**25.73**	**289**	P	**P**	**15 44 39.5**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=107,slow=8.2,SNR=4.1						
CMAR				LR	LR	15 56 27.4	
	comp=Z,20nm,18.1s,baz=110,slow=40						
	comp=Z,0.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**25.73**	**289**	P	**P**	**15 44 40.5**	**+0.5**
JHJ	**Hachijo jima 2**	**25.74**	**30**	LR	LR	15 54 15.8	
	comp=Z,27nm,19.9s,baz=69,slow=35						
KSRS	**Korea Array**	**26.12**	**6**	P	**P**	**15 44 44.2**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=182,slow=12,SNR=3.2						
KSRS				LR	LR	15 54 26.9	
	comp=Z,21nm,20.6s,baz=185,slow=35						
	comp=Z,1.2nm,0.8s						
MJAR	**Matsushiro Arr**	**27.90**	**24**	LR	LR	15 55 60.0	
	comp=Z,20nm,20.4s,baz=206,slow=36						
GSI	**Gunungsitoli**	**28.61**	**251**	P	**P**	**15 45 05.6**	**-0.4**
GSI				IAmb	IAmb	15 45 45.9	
	comp=Z,19nm,1.2s						
WRA	**Warramunga Arr**	**32.59**	**163**	P	**P**	**15 45 40.7**	**-0.3**
	comp=Z,0.9nm,1.0s,baz=341,slow=9.0,SNR=3.6						
	comp=Z,0.9nm,1.0s						
WRA	**Warramunga Arr**	**32.59**	**163**	P	**P**	**15 45 40.3**	**-0.7**
WR8	**Warramunga Arr**	**32.65**	**163**	P	**P**	**15 45 40.8**	**-0.7**
WR8				IAmb	IAmb	15 46 15.6	
	comp=Z,13nm,1.5s						
USRK	**Ussuriysk Ar.**	**33.31**	**10**	P	**P**	**15 45 46.7**	**-0.3**
	comp=Z,3.4nm,0.8s,baz=206,slow=9.6,SNR=3.7						
	comp=Z,3.4nm,0.8s						
BRDH	**Bariadhala**	**33.35**	**294**	LR	LR	15 59 13.1	
	comp=Z,42nm,21.3s,baz=172,slow=36						
GTA2	**Gaotai**	**35.61**	**326**	eP	**P**	**15 46 08.8**	**+1.6**
GTA2				pmax	pmax		
	comp=Z,2.0nm,1.3s						
AS31	**Alice Springs**	**36.02**	**165**	P	**P**	**15 46 09.3**	**-1.4**
ASAR	**Alice Springs**	**36.02**	**165**	P	**P**	**15 46 09.6**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=343,slow=6.9,SNR=13						
	comp=Z,0.5nm,0.7s						
ASAJ	**Asahikawa**	**36.12**	**22**	LR	LR	16 01 35.9	
	comp=Z,31nm,19.1s,baz=198,slow=37						
EVN	**Everest**	**38.99**	**301**	P	**P**	**15 46 37.0**	**+0.4**
SONM	**Songino Array**	**39.41**	**341**	P	**P**	**15 46 40.9**	**+1.6**
	comp=Z,0.3nm,0.4s,baz=161,slow=9.2,SNR=2.5						
	comp=Z,0.3nm,0.4s						
H11N1	**WAKE ISLAND Hy**	**41.50**	**73**	T	T	16 30 16.5	
	baz=266,slow=74,SNR=7.5						
H11N2	**WAKE ISLAND Hy**	**41.51**	**73**	T	T	16 30 20.3	
	baz=266,slow=74,SNR=8.1						
H11N3	**WAKE ISLAND Hy**	**41.52**	**73**	T	T	16 30 24.1	
	baz=266,slow=74,SNR=6.0						
PALK	**Pallekele**	**43.46**	**269**	LR	LR	16 07 33.7	
	comp=Z,28nm,18.7s,baz=117,slow=39						
BBOO	**Buckleboo**	**45.30**	**166**	P	**P**	**15 47 27.3**	**0.0**
STKA	**Stephens Creek**	**46.01**	**160**	P	**P**	**15 47 32.7**	**-0.2**
PEA0B	**Petropavlovsk-**	**49.33**	**26**	P	**P**	**15 47 59.5**	**+1.0**
PEA0B				IAmb	IAmb	15 48 30.5	
	comp=Z,11nm,1.2s						
PETK	**Petropavlovsk-**	**49.33**	**26**	P	**P**	**15 47 59.5**	**+1.1**
	comp=Z,0.8nm,0.7s,baz=221,slow=7.0,SNR=1.7						
PETK				LR	LR	16 08 13.4	
	comp=Z,22nm,21.2s,baz=178,slow=35						
	comp=Z,0.8nm,0.7s						
MKAR	**Makanchi Array**	**50.13**	**323**	P	**P**	**15 48 05.5**	**+0.8**
	comp=Z,0.6nm,0.6s,baz=123,slow=8.2,SNR=10						
	comp=Z,0.6nm,0.6s						
MKAR	**Makanchi Array**	**50.13**	**323**	P	**P**	**15 48 05.3**	**+0.5**
MAKZ	**Makanchi**	**50.33**	**323**	P	**P**	**15 48 07.0**	**+0.8**
YAK	**Yakutsk**	**50.69**	**3**	LR	LR	16 11 10.7	
	comp=Z,23nm,20.2s,baz=116,slow=38						
KDJ	**Kajisay**	**51.33**	**315**	P	**P**	**15 48 14.8**	**+0.8**
KDJ				IAmb	IAmb	15 48 49.6	
	comp=Z,3.6nm,1.1s						
ZALV	**Zalesovo Beam**	**52.85**	**332**	P	**P**	**15 48 24.7**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=125,slow=12,SNR=2.0						
	comp=Z,0.4nm,0.5s						
AAK	**Ala-Archa**	**53.36**	**315**	LR	LR	16 10 43.2	
	comp=Z,36nm,20.5s,baz=91,slow=36						
KURK	**Kurchatov**	**54.21**	**326**	P	**P**	**15 48 35.6**	**+0.7**
KURK				IAmb	IAmb	15 48 45.0	
	comp=Z,2.2nm,0.7s						
KURBB	**Kurchatov Arra**	**54.21**	**326**	P	**P**	**15 48 35.3**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=129,slow=7.2,SNR=14						
	comp=Z,0.7nm,0.6s						
KKAR	**Karatay Array**	**56.28**	**315**	P	**P**	**15 48 50.5**	**+0.4**
BVAR	**Borovoye Array**	**59.80**	**325**	P	**P**	**15 49 13.8**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=122,slow=5.2,SNR=2.3						
BVAR				LR	LR	16 14 15.6	
	comp=Z,49nm,19.0s,baz=92,slow=35						
	comp=Z,0.5nm,0.6s						
NRIK	**Noril'sk**	**62.53**	**346**	LR	LR	16 17 26.4	
	comp=Z,39nm,18.6s,baz=232,slow=37						
D19K	**Kuna River**	**74.82**	**22**	P	**P**	**15 50 50.0**	**+0.6**
D19K				IAmb	IAmb	15 51 25.2	
	comp=Z,3.6nm,1.3s						
KBZ	**Khabaz**	**76.23**	**312**	LR	LR	16 29 22.9	
	comp=Z,35nm,18.3s,baz=234,slow=40						
IMAR	**Indian Mountai**	**76.28**	**25**	P	**P**	**15 50 57.9**	**+0.1**
BRLK	**Bradley Lake**	**77.50**	**31**	P	**P**	**15 51 04.7**	**-0.2**
L22K	**Petersville**	**77.51**	**28**	P	**P**	**15 51 05.0**	**0.0**
L22K				IAmb	IAmb	15 51 36.9	
	comp=Z,6.8nm,1.5s						
G24K	**Hadweenzic Riv**	**78.81**	**24**	P	**P**	**15 51 12.5**	**+0.5**
G24K				IAmb	IAmb	15 51 14.0	
	comp=Z,5.4nm,1.3s						
FINES	**FINESS Array B**	**84.12**	**331**	P	**P**	**15 51 38.9**	**-1.3**
	comp=Z,2.1nm,1.0s,baz=68,slow=5.9,SNR=5.0						
	comp=Z,2.1nm,1.0s						
FINES	**FINESS Array B**	**84.12**	**331**	P	**P**	**15 51 39.5**	**-0.7**
S31K	**Pelican**	**85.26**	**32**	P	**P**	**15 51 45.9**	**-0.2**
HFS	**Hagfors**	**90.29**	**332**	LR	LR	16 34 54.3	
	comp=Z,52nm,18.2s,baz=2.5,slow=37						
YKA	**Yellowknife Ar**	**93.41**	**24**	P	**P**	**15 52 24.6**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=304,slow=5.4,SNR=3.8						
	comp=Z,0.2nm,0.7s						

*MDD **03** 15:46:04.2±0.7,36°.64N×11°.31W,h36km,Mb4.6/11, M_mb4.1/11,Error ellipse: s-maj=6.1km s-min=3.9km az=69.0*
*IGIL **03** 15:46:06.5,36°.65N×11°.08W,h18km,ML2.4*
*CNRM **03** 15:46:07.5,36°.50N×10°.98W,h35km,ML3.3*
*INMG **03** 15:46:07.1±1.3,36°.64N×11°.16W,h39km,ML2.6,Error ellipse: s-maj=5.5km s-min=2.8km az=86.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe*

ISC 03 15:46:05.2±1.8**,36°.67N**±0°.04×**11°.10W**±0°.09**,h35km,n63, σ1.41**/112**,10C,Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.88**	**75**	eP	**Pn**	**15 46 35.9**	**+1.1**
PFVI				eS	**Sn**	**15 46 57.9**	**+0.6**
PFVI				i IAML		15 46 58.3	
PFVI				i IAML		15 46 58.6	
PFVI				i IAML		15 46 58.8	
PFVI	**Vila Bisbo**	**1.88**	**75**	P	**Pn**	**15 46 35.9**	**+1.1**
PFVI				S	**Sn**	**15 46 58.9**	**+1.6**
MORF	**Marmelete**	**2.06**	**71**	eP	**Pn**	**15 46 38.5**	**+1.2**
MORF				eS	**Sn**	**15 47 01.8**	**0.0**
MORF				IAML		15 47 04.0	
	comp=N,47nm,0.3s						
MORF	**Marmelete**	**2.06**	**71**	eP	**Pn**	**15 46 38.6**	**+1.3**
MORF				eS	**Sn**	**15 47 02.2**	**+0.4**
MORF				i IAML		15 47 04.3	
MORF				i IAML		15 47 04.9	
MORF				i IAML		15 47 06.4	
PTEO	**Sao Teotonio**	**2.09**	**65**	eP	**Pn**	**15 46 39.1**	**+1.4**
PTEO				eS	**Sn**	**15 47 02.8**	**+0.3**
PTEO				i IAML		15 47 04.3	
PTEO				i IAML		15 47 10.4	
PTEO				i IAML		15 47 10.6	
MESJ	**Messejana**	**2.58**	**62**	eP	**Pn**	**15 46 46.0**	**+1.6**
MESJ				eS	**Sn**	**15 47 14.5**	**-0.1**
MESJ				IAML		15 47 16.8	
	comp=N,7.9nm,0.1s						
MESJ	**Messejana**	**2.58**	**62**	eP	**Pn**	**15 46 46.1**	**+1.7**
MESJ				eS	**Sn**	**15 47 15.2**	**+0.6**
MESJ				i IAML		15 47 20.6	
MESJ				i IAML		15 47 20.7	
MESJ				i IAML		15 47 22.3	
PBDV	**Barranco-do-Ve**	**2.60**	**76**	P	**Pn**	**15 46 46.6**	**+1.8**
PBDV				S	**Sn**	**15 47 16.5**	**+1.3**
PBDV	**Barranco-do-Ve**	**2.60**	**76**	eP	**Pn**	**15 46 46.4**	**+1.6**
PBDV				eS	**Sn**	**15 47 14.8**	**-0.3**
PBDV				i IAML		15 47 22.5	
PBDV				i IAML		15 47 22.7	
PBDV				i IAML		15 47 23.2	
PCVE	**Castro Verde**	**2.63**	**68**	P	**Pn**	**15 46 46.1**	**+1.0**
PCVE				S	**Sn**	**15 47 15.0**	**-0.8**
PCVE	**Castro Verde**	**2.63**	**68**	eP	**Pn**	**15 46 46.5**	**+1.4**
PCVE				eS	**Sn**	**15 47 15.8**	**0.0**
PCVE				i IAML		15 47 18.1	
PCVE				i IAML		15 47 19.2	
PCVE				i IAML		15 47 23.1	
PMAFR	**Mafra**	**2.70**	**32**	P	**Pn**	**15 46 46.9**	**+0.8**
PMAFR				S	**Sn**	**15 47 17.1**	**-0.4**
PMAFR	**Mafra**	**2.70**	**32**	eP	**Pn**	**15 46 46.9**	**+0.8**
PMAFR				eS	**Sn**	**15 47 17.4**	**-0.2**
PMAFR				i IAML		15 47 19.4	
PMAFR				i IAML		15 47 19.8	
PMAFR				i IAML		15 47 21.4	
PVAQ	**Vaqueiros**	**2.81**	**74**	eP	**Pn**	**15 46 49.0**	**+1.5**
PVAQ				eS	**Sn**	**15 47 20.4**	**+0.3**
PVAQ				i IAML		15 47 24.9	
PVAQ				i IAML		15 47 31.2	
PVAQ				i IAML		15 47 31.4	
PVAQ	**Vaqueiros**	**2.81**	**74**	P	**Pn**	**15 46 49.1**	**+1.5**
PVAQ				S	**Sn**	**15 47 22.6**	**+2.5**
MOE	**Montemor**	**2.86**	**49**	eP	**Pn**	**15 46 49.2**	**+0.9**
MOE				eS	**Sn**	**15 47 21.7**	**+0.1**
MOE				i IAML		15 47 22.6	
MOE				i IAML		15 47 23.0	
MOE				i IAML		15 47 24.9	
PBEJ	**Beja**	**2.91**	**61**	eS	**Sn**	**15 47 22.9**	**+0.2**
PBEJ				i IAML		15 47 25.1	
PBEJ				i IAML		15 47 25.8	
PBEJ				i IAML		15 47 26.8	
EGRO	**El Granado**	**3.02**	**72**	P	**Pn**	**15 46 51.4**	**+1.0**
EGRO				S	**Sn**	**15 47 25.4**	**0.0**
EGRO	**El Granado**	**3.02**	**72**	P	**Pn**	**15 46 51.7**	**+1.3**
EGRO				S	**Sn**	**15 47 26.3**	**+0.9**
EVO	**Evora**	**3.08**	**52**	P	**Pn**	**15 46 52.1**	**+0.8**
EVO				S	**Sn**	**15 47 26.6**	**-0.2**
EVO	**Evora**	**3.08**	**52**	eS	**Sn**	**15 47 26.9**	**0.0**
EVO				i IAML		15 47 29.0	
EVO				i IAML		15 47 29.7	
EVO				i IAML		15 47 31.6	
PARRA	**Arraiolos**	**3.24**	**48**	eP	**Pn**	**15 46 55.0**	**+1.5**
PARRA				eS	**Sn**	**15 47 30.6**	**-0.2**
PARRA				i IAML		15 47 33.2	
PARRA				i IAML		15 47 33.8	
PARRA				i IAML		15 47 38.3	
PMTG	**Montargil**	**3.31**	**43**	eP	**Pn**	**15 46 55.4**	**+1.0**
PMTG				eS	**Sn**	**15 47 32.7**	**+0.3**
PMTG				i IAML		15 47 36.1	
PMTG				i IAML		15 47 36.8	
PMTG				i IAML		15 47 38.0	
PSBE	**So Bento**	**3.38**	**32**	eS	**Sn**	**15 47 34.4**	**+0.2**
PSBE				i IAML		15 47 35.9	
PSBE				i IAML		15 47 39.1	
PSBE				i IAML		15 47 39.7	
PESTR	**Estremoz**	**3.54**	**51**	P	**Pn**	**15 46 59.2**	**+1.6**
PESTR				S	**Sn**	**15 47 38.4**	**+0.1**
PESTR	**Estremoz**	**3.54**	**51**	eS	**Sn**	**15 47 38.6**	**+0.2**
PESTR				i IAML		15 47 42.3	
PESTR				i IAML		15 47 43.6	
PESTR				i IAML		15 47 44.8	
PBAR	**Barrancos**	**3.57**	**64**	P	**Pn**	**15 46 59.5**	**+1.5**
PBAR				S	**Sn**	**15 47 38.1**	**-0.8**
PBAR	**Barrancos**	**3.57**	**64**	eP	**Pn**	**15 46 59.9**	**+2.0**
PBAR				eS	**Sn**	**15 47 38.5**	**-0.4**
PBAR				i IAML		15 47 42.1	
PBAR				i IAML		15 47 43.0	
PBAR				i IAML		15 47 43.9	
EMIN	**Mina Concepcio**	**3.70**	**71**	P	**Pn**	**15 47 00.7**	**+0.9**
EMIN				S	**Sn**	**15 47 41.0**	**-1.3**
EMIN	**Mina Concepcio**	**3.70**	**71**	P	**Pn**	**15 47 01.3**	**+1.4**
EMIN				⇑i IVmb_VC		15 47 02.8	
	comp=N,232nm,SNR=2.0						
EMIN				S	**Sn**	**15 47 41.2**	**-1.1**
PSARD	**Sardoal**	**3.73**	**37**	eP	**Pn**	**15 47 01.8**	**+1.5**
PSARD				eS	**Sn**	**15 47 42.9**	**-0.2**
PSARD				i IAML		15 47 44.5	
PSARD				i IAML		15 47 44.6	
PSARD				i IAML		15 47 44.9	
PCAS	**Casmilo, Conde**	**3.95**	**30**	eP	**Pn**	**15 47 04.2**	**+0.9**
PCAS				eS	**Sn**	**15 47 48.6**	**+0.2**
PCAS				i IAML		15 47 50.8	
PCAS				i IAML		15 47 54.0	
PCAS				i IAML		15 47 55.9	
PMRV	**Marv??o**	**4.02**	**46**	eP	**Pn**	**15 47 05.2**	**+0.9**
PMRV				eS	**Sn**	**15 47 49.0**	**-1.2**
PMRV				i IAML		15 47 50.6	
PMRV				i IAML		15 47 51.5	
PMRV				i IAML		15 47 51.8	
ESPR	**Espera**	**4.22**	**86**	P	**Pn**	**15 47 08.1**	**+1.2**
ESPR				S	**Sn**	**15 47 55.4**	**+0.5**
ESPR	**Espera**	**4.22**	**86**	P	**Pn**	**15 47 08.5**	**+1.6**
ESPR				⇑i IVmb_VC		15 47 11.3	
	comp=N,333nm,SNR=2.8						
ESPR				S	**Sn**	**15 47 55.0**	**+0.1**
PCBR	**Castelo Branco**	**4.26**	**41**	eP	**Pn**	**15 47 08.8**	**+1.2**
PCBR				eS	**Sn**	**15 47 55.2**	**-0.8**
PCBR				i IAML		15 47 56.2	
PCBR				i IAML		15 47 56.3	
PCBR				i IAML		15 47 57.2	
AVE	**Averroes**	**4.52**	**137**	S	**Sn**	**15 48 02.4**	**-0.1**
EJIF	**Jimena Fronter**	**4.54**	**91**	P	**Pn**	**15 47 12.1**	**+0.7**
EJIF				S	**Sn**	**15 48 02.0**	**-0.9**
ECAB	**El Cabril**	**4.74**	**71**	P	**Pn**	**15 47 15.3**	**+1.2**
ECAB				S	**Sn**	**15 48 06.1**	**-1.8**
ECAB	**El Cabril**	**4.74**	**71**	P	**Pn**	**15 47 15.4**	**+1.3**
ECAB				⇑i IVmb_VC		15 47 21.2	
	comp=N,233nm,SNR=1.9						
ECAB				S	**Sn**	**15 48 06.2**	**-1.7**
PVIS	**Viseu**	**4.76**	**31**	eP	**Pn**	**15 47 14.8**	**+0.4**
PVIS				eS	**Sn**	**15 48 07.2**	**-1.2**
SRHM	**Skhour des Reh**	**4.95**	**147**	P	**Pn**	**15 47 18.4**	**+1.3**
SRHM				S	**Sn**	**15 48 16.6**	**+3.5**
EPLA	**Plasencia**	**5.20**	**48**	P	**Pn**	**15 47 21.7**	**+1.2**
EPLA				⇑i IVmb_VC		15 47 28.8	
	comp=N,218nm,SNR=1.2						
EPLA				S	**Sn**	**15 48 18.4**	**-0.8**
POLO	**Lamas de Olo**	**5.36**	**28**	eS	**Sn**	**15 48 20.8**	**-2.4**
POLO				i IAML		15 48 22.0	
POLO				i IAML		15 48 22.9	
POLO				i IAML		15 48 23.7	
EADA	**Adamuz**	**5.41**	**72**	P	**Pn**	**15 47 24.7**	**+1.4**
EADA				S	**Sn**	**15 48 23.2**	**-1.1**
EADA	**Adamuz**	**5.41**	**72**	P	**Pn**	**15 47 24.0**	**+0.7**
EADA				⇑i IVmb_VC		15 47 33.9	
	comp=N,182nm,SNR=1.1						
EADA				S	**Sn**	**15 48 23.2**	**-1.1**
MVO	**Moncorvo**	**5.50**	**34**	eP	**Pn**	**15 47 24.9**	**+0.3**
MVO				eS	**Sn**	**15 48 24.4**	**-2.2**
MVO				i IAML		15 48 26.1	
MVO				i IAML		15 48 26.9	
MVO				i IAML		15 48 28.6	
PCAB	**Cabril**	**5.57**	**24**	eS	**Sn**	**15 48 26.4**	**-2.0**
PCAB				i IAML		15 48 27.4	
ELOB	**Lobios**	**5.70**	**23**	P	**Pn**	**15 47 26.6**	**-0.8**
ELOB				⇑i IVmb_VC		15 47 36.5	
	comp=N,469nm,SNR=1.4						
ELOB				S	**Sn**	**15 48 28.0**	**-3.7**
PGAV	**Gavieira, Arco**	**5.73**	**22**	eS	**Sn**	**15 48 29.2**	**-3.1**
PGAV				i IAML		15 48 31.7	
PGAV				i IAML		15 48 31.8	
PGAV				i IAML		15 48 32.0	
IFR	**Ifrane**	**5.82**	**121**	P	**Pn**	**15 47 30.6**	**+1.5**
IFR				S	**Sn**	**15 48 30.5**	**-4.2**
PAB	**San Pablo**	**6.05**	**60**	P	**Pn**	**15 47 31.6**	**-0.6**
PAB				⇑i IVmb_VC		15 47 41.5	
	comp=N,161nm,SNR=1.5						
PAB				S	**Sn**	**15 48 36.6**	**-3.7**
PSIM	**Granatula de C**	**6.20**	**68**	P	**Pn**	**15 47 35.3**	**+1.0**
PSIM				S	**Sn**	**15 48 42.5**	**-1.5**
ECAL	**Calabor**	**6.26**	**31**	P	**Pn**	**15 47 35.1**	**+0.1**
ECAL				⇑i IVmb_VC		15 47 36.8	
	comp=N,761nm,SNR=1.2						
ECAL				S	**Sn**	**15 48 43.4**	**-2.0**
TISM	**Timmit**	**6.26**	**141**	P	**Pn**	**15 47 33.6**	**-1.5**
TISM				S	**Sn**	**15 48 43.2**	**-2.1**
MD31	**MD31**	**6.45**	**124**	P	**Pn**	**15 47 38.1**	**+0.4**
MD31				S	**Sn**	**15 48 49.3**	**-0.8**
EMAZ	**Mazaricos**	**6.48**	**14**	P	Pn	15 47 36.5	-1.5
EMAZ				S	Sn	15 48 44.0	-6.8
TTIG	**Tnine Tigouga,**	**6.49**	**159**	P	**Pn**	**15 47 37.9**	**-0.4**
TTIG				S	**Sn**	**15 48 50.3**	**-0.9**
EAGO	**Agolada(Pontev**	**6.55**	**20**	P	Pn	15 47 38.0	-1.0
EAGO				⇑i IVmb_VC		15 47 44.0	
	comp=N,476nm,SNR=1.3						
EAGO				S	Sn	15 48 47.4	-5.1
TIO	**Tiouine**	**6.56**	**150**	P	**Pn**	**15 47 39.1**	**-0.1**
TIO				S	**Sn**	**15 48 49.0**	**-3.9**
MDT	**Midelt**	**6.58**	**124**	P	**Pn**	**15 47 40.2**	**+0.7**
MDT				S	**Sn**	**15 48 52.5**	**-0.9**
OUZM	**OUZ**	**6.78**	**147**	P	**Pn**	**15 47 42.9**	**+0.6**
OUZM				S	**Sn**	**15 48 56.8**	**-1.7**
EPON	**Pontenova**	**7.31**	**23**	P	Pn	15 47 47.9	-1.5
EPON				⇑i IVmb_VC		15 47 53.4	
	comp=N,462nm,SNR=0.7						
EPON				S	Sn	15 49 06.8	-4.3

*NOU **03** 15:51:30.3,17°.67S×167°.30E,h29km,ML4.9/4,Vanuatu Islands*
*IDC **03** 15:51:33.0±1.4,18°.15S×167°.88E,h0km,mb3.8/7, mbtmp3.9/7,MS3.7/4,Error ellipse: s-maj=36.8km s-min=23.8km az=134.0*
*NEIC **03** 15:51:34.6±1.1,18°.06S±0°.06×167°.78E±0°.09,h10km±1km, mb4.3/7,Error ellipse: s-maj=14.3km s-min=10.1km az=89.0*

ISC 03 15:51:37.7±0.6**,18°.07S**±0°.05×**167°.84E**±0°.07**,h32km,n29, σ1.63**/25**,mb4.0**/10**,MS3.7**/4**,1D,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	**Devils Point**	**0.47**	**45**	P	**Pb**	**15 51 46.4**	**-1.4**
RTV	**Rentapao**	**0.62**	**64**	P	**Pb**	**15 51 49.5**	**-0.7**
INH	**Isangel**	**2.01**	**138**	P	**Pb**	**15 52 11.0**	**-2.5**
SANVU	**Saraoutou**	**2.67**	**347**	Pn	**Pn**	**15 52 15.3**	**-3.2**
MARNC	**Mare, Loyalty**	**3.40**	**177**	Pn	**Pn**	**15 52 27.6**	**-0.9**
DZM	**Mont Dzumac**	**4.20**	**198**	Pn	**Pn**	**15 52 39.1**	**-0.5**
	baz=84,slow=19						
DZM				Sn	**Sn**	**15 53 27.2**	**-0.3**
	14nm,0.3s,baz=134,slow=21,SNR=9.4						
DZM	**Mont Dzumac**	**4.20**	**198**		**Pn**	**15 52 38.8**	**-0.8**
ONTNC	**Ouen Toro**	**4.42**	**197**	Pn	**Pn**	**15 52 41.4**	**-1.1**
MSVF	**Nonsavu**	**9.73**	**90**	Pn	**Pn**	**15 53 57.2**	**+1.6**
	0.2nm,0.3s,baz=270,slow=12,SNR=5.1						
MSVF	**Nonsavu**	**9.73**	**90**		**Pn**	**15 53 56.5**	**+0.9**
CTA	**Charters Tower**	**20.50**	**261**	P	**P**	**15 56 13.7**	**+0.5**
	5.5nm,1.1s,baz=56,slow=21,SNR=4.5						
	5.5nm,1.1s						
CTAO	**Charters Tower**	**20.50**	**261**	Pn	**P**	**15 56 14.6**	**+1.3**
CTAO				IAmb	IAmb	15 56 34.9	
	comp=Z,12nm,1.3s						
PMG	**Port Moresby**	**21.84**	**290**	P	**P**	**15 56 28.5**	**+0.9**
	comp=Z,7.2nm,0.9s,baz=139,slow=11,SNR=3.6						
	comp=Z,7.2nm,0.9s						
PMG	**Port Moresby**	**21.84**	**290**	IAmb	IAmb	15 57 01.9	
	comp=Z,15nm,1.1s						
BKZ	**Black Stump Fm**	**22.33**	**162**	P	**P**	**15 56 31.9**	**-1.0**
BKZ				IAmb	IAmb	15 57 13.6	
	comp=Z,33nm,1.5s						
WRA	**Warramunga Arr**	**31.70**	**261**	P	**P**	**15 57 57.3**	**-1.4**
	comp=Z,0.6nm,0.9s,baz=92,slow=9.3,SNR=2.3						
	comp=Z,0.6nm,0.9s						
AS31	**Alice Springs**	**32.14**	**254**	P	**P**	**15 57 59.1**	**-3.5**
AS31				IAmb	IAmb	15 58 33.6	
	comp=Z,1.9nm,1.3s						
ASAR	**Alice Springs**	**32.14**	**254**	P	**P**	**15 58 01.4**	**-1.2**
	comp=Z,1.0nm,0.6s,baz=85,slow=8.1,SNR=8.4						
JCJ	**Chichijima**	**51.33**	**330**	LR	LR	16 21 36.7	
	comp=Z,48nm,19.9s,baz=104,slow=35						
JHJ	**Hachijo jima 2**	**57.52**	**332**	LR	LR	16 29 17.1	
	comp=Z,33nm,18.1s,baz=53,slow=39						
JOW	**Kunigami**	**58.87**	**318**	LR	LR	16 24 42.8	
	comp=Z,85nm,20.9s,baz=120,slow=34						
CMAR	**Chiang Mai Arr**	**76.81**	**295**	P	**P**	**16 03 28.5**	**+1.7**
	comp=Z,0.4nm,0.3s,baz=129,slow=4.8,SNR=5.2						
	comp=Z,0.4nm,0.3s						
N19K	**Bonanza Creek**	**84.24**	**18**	P	**P**	**16 04 05.9**	**+0.1**
SONM	**Songino Array**	**85.49**	**324**	P	**P**	**16 04 14.7**	**+2.2**
	comp=Z,1.2nm,1.1s,baz=116,slow=6.6,SNR=4.3						
	comp=Z,1.2nm,1.1s						
BILL	**Bilibino**	**85.86**	**359**	P	**P**	**16 04 14.0**	**+0.3**
BILL				IAmb	IAmb	16 04 15.0	
	comp=Z,4.1nm,0.9s						
NVAR	**Mina Array Bea**	**89.03**	**49**	P	**P**	**16 04 30.9**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=259,slow=4.4,SNR=2.4						
	comp=Z,0.7nm,0.7s						
ILAR	**Eielson Array**	**89.52**	**18**	P	**P**	**16 04 30.1**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=227,slow=5.9,SNR=5.7						
	comp=Z,0.3nm,0.7s						
ELK	**Elko**	**92.11**	**48**	LR	LR	16 37 31.2	
	comp=Z,74nm,21.6s,baz=256,slow=30						
WLF	**Walferdange**	**145.20**	**339**	dPKP	**PKPdf**	**16 11 13.5**	**+1.5**

*IDC **03** 15:53:50.3±0.6,17°.93S×167°.82E,h0km,mb4.5/17, mbtmp4.5/18,ML4.3/1,MS3.8/26,Error ellipse: s-maj=18.6km s-min=15.9km az=136.0*
*MOS **03** 15:53:50.6±1.3,17°.98S×167°.66E,h16km,mb5.1/16,Error ellipse: s-maj=13.1km s-min=10.3km az=12.9*
*NEIC **03** 15:53:52.6±1.5,18°.02S±0°.05×167°.63E±0°.09,h10km±1km, mb5.0/71,Error ellipse: s-maj=14.1km s-min=9.3km az=91.0*
*BJI **03** 15:53:52.3,17°.72S×167°.72E,h11km,mB5.3/8,mb4.5/33, Ms5.2/2*
*GCMT **03** 15:53:55.6±0.3,17°.98S±0°.04×167°.62E±0°.02,h19km±1km, MW4.8/74,Moment Tensor Solution. s20,c21; s74,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.85±.14; $M_{\theta\theta}$-0.02±.08; $M_{\phi\phi}$-1.83±.10; $M_{r\theta}$0.76±.23; $M_{\theta\phi}$0.38±.05;*

$M_{\phi r}$-1.19±.19; Best double couple: $M_0$2.34900×10^16 NP1:ϕ_s1.00000°,δ29.00000°,λ112.00000°. NP2: ϕ_s156.00000°,δ64.00000°,λ79.00000°. Principal axes: T 2.3660, Plg69.0000°, Azm43.0000°; N -0.0350, Plg10.0000°, Azm161.0000°; P -2.3310, Plg18.0000°, Azm255.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 03 15:53:53.9±0.3**, 18.03S**±0.04×**167.70E**±0.06**, h23km, n157, σ1.46**/124**, mb5.0**/64**, MS3.9**/25**, 9C-7D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	2.61	349	Pn	Pn	15 54 32.3	-2.4
MARNC	Mare, Loyalty	3.45	175	Pn	Pn	15 54 45.5	-0.8
DZM	Mont Dzumac	4.19	196	*e*Pn	Pn	15 54 57.1	+0.5
	161nm,1.1s						
DZM				*e*Sn	Sn	15 55 43.1	-1.8
	424nm,0.9s						
DZM	Mont Dzumac	4.19	196	Pn	Pn	15 54 56.5	0.0
	15nm,0.3s,baz=209,slow=20,SNR=5.7						
DZM				LR	LR	15 55 36.3	
	comp=Z,373nm,20.6s,baz=86,slow=25						
DZM				Sn	Sn	15 55 44.1	-0.8
	20nm,0.3s,baz=127,slow=23,SNR=16						
	24nm,0.6s						
DZM	Mont Dzumac	4.19	196	Pn	Pn	15 54 55.5	-1.0
ONTNC	Ouen Toro	4.42	195	Pn	Pn	15 54 59.1	-0.4
MSVF	Nonsavu	9.86	90	Pn	Pn	15 56 16.6	+2.2
	0.7nm,0.3s,baz=218,slow=8.9,SNR=13						
MSVF				LR	LR	15 59 18.6	
	comp=Z,2μm,19.5s,baz=239,slow=34						
MSVF	Nonsavu	9.86	90		Pn	15 56 18.6	+4.3
MSVF	Nonsavu	9.86	90	*i* P	Pn	15 56 15.6	+1.3
LHI	Lord Howe Isla	15.55	209	Pn	Pn	15 57 31.4	-0.3
LHI				IAmb	IAmb	15 57 35.4	
	comp=Z,125nm,1.2s						
ARMA	Armidale	19.13	227	P	P	15 58 15.5	-0.1
AFI	Afiamalu	20.14	81	P	P	15 58 26.7	0.0
	comp=Z,21nm,0.9s,baz=148,slow=17,SNR=3.5						
AFI				LR	LR	16 04 31.6	
	comp=Z,374nm,19.0s,baz=261,slow=32						
	comp=Z,21nm,0.9s						
CTA	Charters Tower	20.38	261	P	Pn	15 58 30.9	-0.4
	comp=Z,22nm,1.0s,baz=77,slow=12,SNR=8.0						
CTA				LR	LR	16 05 52.9	
	comp=Z,580nm,18.3s,baz=61,slow=35						
	comp=Z,22nm,1.0s						
CTA	Charters Tower	20.38	261	P	Pn	15 58 31.0	-0.3
CTAO	Charters Tower	20.38	261		Pn	15 58 30.0	-1.4
CTAO	Charters Tower	20.38	261	P	Pn	15 58 30.0	-1.3
CTAO				pmax	pmax		
	comp=Z,58nm,1.3s						
TOZ	Tahuroa Road	20.79	162		Pn	15 58 35.3	-0.6
PMG	Port Moresby	21.70	291	P	P	15 58 45.2	+1.7
	comp=Z,7.3nm,0.8s,baz=164,slow=15,SNR=2.8						
	comp=Z,7.3nm,0.8s						
PMG	Port Moresby	21.70	291	P	P	15 58 40.9	-2.6
PMG	Port Moresby	21.70	291	*i* P	P	15 58 39.9	-3.6
PMG				pmax	pmax		
	comp=Z,21nm,1.1s						
URZ	Urewera	21.77	160	P	P	15 58 45.6	+1.6
	comp=Z,15nm,0.8s,baz=334,slow=4.5,SNR=7.8						
	comp=Z,15nm,0.8s						
RTZ	Ruatahuna	22.05	160		P	15 58 47.1	0.0
MRZ	Mangatainoka R	23.55	165	P	P	15 59 03.0	+0.4
TCW	Tory Channel	23.79	168	P	P	15 59 05.5	+0.6
PLWZ	Palliser	24.34	166	P	P	15 59 10.5	+0.4
INKA	Innaminka	26.60	244		P	15 59 30.4	-0.2
STKA	Stephens Creek	27.30	235	P	P	15 59 37.9	+0.9
	comp=Z,9.6nm,0.9s,baz=50,slow=7.0,SNR=9.2						
STKA				LR	LR	16 10 23.3	
	comp=Z,406nm,18.3s,baz=44,slow=36						
	comp=Z,9.6nm,0.9s						
STKA	Stephens Creek	27.30	235	P	P	15 59 36.2	-0.7
STKA	Stephens Creek	27.30	235	*i* P	P	15 59 35.4	-1.6
RAR	Rarotonga	30.77	101	LR	LR	16 10 04.8	
	comp=Z,117nm,20.6s,baz=286,slow=32						
WB0	Warramunga Arr	31.54	261	P	P	16 00 13.7	-1.0
WB0				IAmb	IAmb	16 00 30.8	
	comp=Z,23nm,1.6s						
WRA	Warramunga Arr	31.58	261	P	P	16 00 14.2	-0.8
	comp=Z,4.6nm,1.3s,baz=93,slow=8.4,SNR=6.4						
	comp=Z,4.6nm,1.3s						
WRA	Warramunga Arr	31.58	261	P	P	16 00 13.3	-1.7
WRA	Warramunga Arr	31.58	261	P	P	16 00 13.3	-1.7
WRA				pmax	pmax		
	comp=Z,1.0nm,1.6s						
AS31	Alice Springs	32.03	254	P	P	16 00 18.0	-1.0
ASAR	Alice Springs	32.03	254	P	P	16 00 18.6	-0.4
	comp=Z,11nm,0.3s,baz=88,slow=8.3,SNR=16						
ASAR				LR	LR	16 13 15.0	
	comp=Z,494nm,18.1s,baz=94,slow=36						
	comp=Z,11nm,0.3s						
KNRA	Kununurra	37.30	268	P	P	16 01 03.7	-0.8
KNRA				IAmb	IAmb	16 01 47.8	
	comp=Z,32nm,1.2s						
FORT	Forrest	38.07	243	P	P	16 01 11.1	+0.2
GUMO	Guam	38.66	323	LR	LR	16 14 46.2	
	comp=Z,111nm,21.2s,baz=141,slow=32						
SIJI	Sorong	39.64	291	LR	LR	16 18 17.7	
	comp=Z,195nm,19.0s,baz=206,slow=37						
FITZ	Fitzroy Crossi	39.93	263	LR	LR	16 17 41.6	
	comp=Z,495nm,19.0s,baz=100,slow=36						
TBI	Tubuai	40.31	105	*e*S	S	16 07 38.6	+2.2
	comp=Z,833nm,32.2s						
TBI				*e*LQ	LQ	16 10 43.0	
	comp=Z,3μm,28.2s						
TBI				*e*LR	LR	16 12 33.1	
	comp=Z,898nm,27.2s						
PPT2	Papeete2	40.61	96	*e*P	P	16 01 28.7	-3.7
	comp=Z,44nm,26.2s						
PPT2				*e*S	S	16 07 39.4	-1.7
	comp=Z,116nm,24.8s						
PPT2				*e*LQ	LQ	16 10 50.1	
	comp=Z,300nm,28.2s						
PPT2				*e*LR	LR	16 12 48.0	
	comp=Z,349nm,25.8s						
PPT2				*e*LR	LR	16 12 50.7	
	comp=Z,268nm,28.0s						
PPT	Papeete	40.61	96	LR	LR	16 16 32.2	
	comp=Z,126nm,18.9s,baz=240,slow=34						
BATI	Baumata	43.33	274	LR	LR	16 19 55.4	
	comp=Z,171nm,19.4s,baz=152,slow=36						
SANI	Sanana	43.88	286	P	P	16 01 58.1	-0.9
	comp=Z,18nm,1.2s						
NWAO	Narrogin (SRO)	47.49	242	LR	LR	16 22 20.4	
	comp=Z,247nm,18.6s,baz=96,slow=36						
MIDW	Midway	48.19	18	P	P	16 02 33.3	+0.7
MORW	Morawa	48.29	247	P	P	16 02 33.4	-0.2
MORW				IAmb	IAmb	16 02 52.2	
	comp=Z,13nm,1.1s						
KAPI	Kappang	48.58	279	LR	LR	16 24 19.1	
	comp=Z,55nm,18.1s,baz=90,slow=38						
TWSI	Taliwang, Sumb	50.16	274	P	P	16 02 48.4	+0.3
	comp=Z,24nm,1.1s						
MPSI	Mapaga	50.41	286	P	P	16 02 49.9	-0.1
	comp=Z,13nm,1.6s						
TAOE	Nuku Hiva Isla	51.39	87	*e*S	S	16 10 15.0	-1.2
	comp=Z,162nm,24.6s						
TAOE				*e*LR	LR	16 17 47.9	
	comp=Z,388nm,25.3s						
VNDA	Vanda	59.59	181	LR	LR	16 26 47.6	
	comp=Z,71nm,18.9s,baz=340,slow=33						
MJAR	Matsushiro Arr	61.01	333	P	P	16 04 06.1	+0.4
	comp=Z,4.6nm,0.9s,baz=166,slow=5.8,SNR=8.7						
	comp=Z,4.6nm,0.9s						
MJAR	Matsushiro Arr	61.01	333	P	P	16 04 05.4	-0.2
MJAR	Matsushiro Arr	61.01	333	P	P	16 04 05.4	-0.2
MAJO	Matsushiro	61.01	333	P	P	16 04 05.6	-0.1
MAJO				IAmb	IAmb	16 04 18.4	
	comp=Z,15nm,1.2s						
MAJO	Matsushiro	61.01	333	P	P	16 04 05.6	-0.1
MAJO				pmax	pmax		
	comp=Z,15nm,1.3s						
JNU	Nakatsue	61.84	325	LR	LR	16 27 17.2	
	comp=Z,40nm,21.7s,baz=120,slow=32						
MNAI	Manna	64.66	274	P	P	16 04 29.8	-0.7
KSRS	Korea Array	66.69	326	LR	LR	16 33 05.4	
	comp=Z,36nm,19.3s,baz=140,slow=35						
NJ2	Nanjing	68.33	317	*e*P	P	16 04 54.2	+0.7
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YSS	Yuzhno-Sakhali	68.47	342	*e*P	P	16 04 55.3	+1.3
YSS				*e*S	S	16 13 58.0	+3.5
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
PET	Petropavlovsk	71.19	354	*ce*P	P	16 05 08.2	-2.4
PET				pmax	pmax		
	comp=Z,15nm,1.3s						
PETK	Petropavlovsk-	71.37	354	P	P	16 05 11.6	-0.2
	comp=Z,15nm,0.9s,baz=177,slow=6.4,SNR=23						
	comp=Z,15nm,0.9s						
QSPA	South Pole Qui	72.02	180	P	P	16 05 16.7	+0.9
	comp=Z,14nm,1.0s,baz=19,slow=3.1,SNR=14						
QSPA				LR	LR	16 33 59.8	
	comp=Z,67nm,19.6s,baz=40,slow=33						
	comp=Z,14nm,1.0s						
QSPA	South Pole Qui	72.02	180	P	P	16 05 16.6	+0.8
QSPA				IAmb	IAmb	16 05 33.6	
	comp=Z,14nm,0.9s						
CN2	Changchun	72.68	329	P	P	16 05 21.1	+1.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BNX	BinXian	73.22	332	⇑P	P	16 05 23.6	+0.6
BNX				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KLR	Kul'dur	74.18	336	LR	LR	16 38 25.5	
	comp=Z,32nm,18.5s,baz=150,slow=36						
KLR	Kul'dur	74.18	336	*ce*P	P	16 05 26.6	-1.9
KLR				pmax	pmax		
	comp=Z,2.0nm,1.7s						
HNS	HongShan	74.33	319	⇓P	P	16 05 30.3	+0.6
HNS				pmax	pmax		
	comp=Z,5.0nm,1.0s						
RPN	Rapa Nui	75.91	114	LR	LR	16 34 32.3	
	comp=Z,122nm,19.1s,baz=60,slow=32						
KMI2	Kunming	76.41	302	P	P	16 05 44.3	+2.1
KMI2				pP	pP	16 05 48.2	0.0
KMI2				pmax	pmax		
	comp=Z,14nm,0.6s						
CMAR	Chiang Mai Arr	76.68	295	P	P	16 05 45.5	+2.0
	comp=Z,2.2nm,0.8s,baz=129,slow=4.2,SNR=9.7						
CMAR				LR	LR	16 41 03.6	
	comp=Z,6.2nm,18.2s,baz=125,slow=37						
	comp=Z,2.2nm,0.8s						
PZH	PanZhiHua	77.83	303	P	P	16 05 51.7	+1.7
HHC	Hu-ho-hao-te	78.36	320	*e*P	P	16 05 53.9	+1.3
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,5.5s						
MA2	Magadan	78.55	351	*ce*P	P	16 05 52.9	-0.2
MA2				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BTO2	Baotou	79.34	319	*e*P	P	16 05 58.8	+0.8
BTO2				PP	PP	16 08 59.6	+1.2
BTO2				S	S	16 16 01.8	+4.3
BTO2				pmax	pmax		
	comp=Z,11nm,0.6s						
BTO2				pmax	pmax		
	comp=Z,160nm,3.8s						
BTO2				L	L		
	comp=Z,220nm,4.7s						
BTO2				L	L		
	comp=Z,330nm,6.5s						
ZEA	Zeya	79.47	337	*e*P	P	16 05 58.9	+0.6
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LZH	Lanzhou	80.84	313	*e*P	P	16 06 06.0	-0.3
LZH				pP	sP	16 06 13.6	-1.3
LZH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SEY	Seymchan	81.59	353	*ce*P	P	16 06 09.4	0.0
SEY				pmax	pmax		
	comp=Z,32nm,1.7s						
M14K	Bethel	82.22	14	P	P	16 06 13.5	+0.8
M14K				IAmb	IAmb	16 07 46.7	
	comp=Z,15nm,1.3s						
BELA	Belgrano 2	83.42	175	P	P	16 06 18.4	-0.6
L16K	Owhat River	83.66	15	P	P	16 06 20.7	+0.5
K15K	Wolf Creek Mou	83.67	14	IAmb	IAmb	16 06 22.0	
	comp=Z,14nm,1.2s						
BRDH	Bariadhala	84.62	296	LR	LR	16 46 31.6	
	comp=Z,36nm,18.7s,baz=194,slow=37						
ULN	Ulaanbaatar	85.03	324		P	16 06 28.6	+0.9
ULN				IAmb	IAmb	16 06 31.6	
	comp=Z,12nm,1.1s						
ULN	Ulaanbaatar	85.03	324	*ce*P	P	16 06 24.0	-3.7
ULN				pmax	pmax		
	comp=Z,15nm,1.3s						
ULN	Ulaanbaatar	85.03	324	P	P	16 06 29.0	+1.3
YAK	Yakutsk	85.29	343	LR	LR	16 45 23.3	
	comp=Z,46nm,18.1s,baz=102,slow=36						
YAK	Yakutsk	85.29	343	*e*P	P	16 06 28.0	-0.4
YAK				*e**PP	sP	16 06 35.7	-1.4
YAK				*e*PPP	PPP	16 11 37.2	
YAK				*e*S	SKSac	16 16 52.0	+0.4
YAK				*e*SS	SS	16 22 36.2	+3.7
YAK				pmax	pmax		
	comp=Z,29nm,1.1s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,101nm,4.0s						
YAK				pmax	pmax		
	comp=E,50nm,4.9s						
YAK				pmax	pmax		
	comp=N,77nm,5.5s						
YAK				smax	smax		
	comp=N,105nm,4.6s						
YAK				smax	smax		
	comp=E,71nm,3.7s						
GTA2	Gaotai	85.31	314	*e*P	P	16 06 31.5	+2.2
GTA2				pmax	pmax		
	comp=E,4.0nm,1.2s						
SONM	Songino Array	85.38	324	P	P	16 06 29.2	-0.3
	comp=E,5.3nm,1.1s,baz=147,slow=3.9,SNR=20						
	comp=E,5.3nm,1.1s						
SONM	Songino Array	85.38	324		P	16 06 29.9	+0.5
SONM				IAmb	IAmb	16 06 33.1	
	comp=Z,11nm,1.2s						
BILL	Bilibino	85.83	359	*ce*P	P	16 06 30.7	-0.3
BILL				pmax	pmax		
	comp=Z,33nm,1.3s						
SKT	Skwentna	86.03	18	P	P	16 06 32.5	+0.3
KMRM	Mail Ridge	86.09	46	P	P	16 06 33.1	0.0
KHMM	Horse Mountain	86.38	45	P	P	16 06 34.8	+0.2
O02D	Mt. Diablo Mer	86.70	46	IAmb	IAmb	16 06 45.5	
	comp=Z,9.1nm,0.8s						
ELIB	Princess Elisa	87.07	190	*d*P	P	16 06 39.2	+1.7
N02D	Trinity Center	87.12	45	P	P	16 06 38.5	+0.4
M02C	Callahan	87.20	45	P	P	16 06 38.5	-0.1
CMB	Columbia Colle	87.44	49	IAmb	IAmb	16 06 39.7	
	comp=Z,10.0nm,1.2s						
ISA	Isabella, Lake	87.86	52	IAmb	IAmb	16 06 42.1	
	comp=Z,9.2nm,1.1s						
L04D	Klamath Falls	87.94	44	P	P	16 06 42.0	-0.1
MDPB	Devils Postpil	88.22	50	IAmb	IAmb	16 06 43.9	
	comp=Z,7.8nm,0.9s						
ZAK	Zakamensk	88.47	325	*e*P	P	16 06 43.9	-0.5
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.8s						
CLC	China Lake	88.57	52	IAmb	IAmb	16 06 45.6	
	comp=Z,10.0nm,1.2s						
PAHR	Pah Rah Range	88.86	48	IAmb	IAmb	16 06 46.8	
	comp=Z,8.5nm,1.2s						
LHV	Little Huntoon	88.89	49	IAmb	IAmb	16 06 47.3	
	comp=Z,8.2nm,1.1s						
DSP	Deep Springs	88.92	50	P	P	16 06 46.1	-0.5
DSP				IAmb	IAmb	16 06 47.3	
	comp=Z,10nm,1.1s						
TLY	Talaya	88.94	326	*ce*P	P	16 06 46.0	-0.5
TLY				pmax	pmax		
	comp=Z,6.0nm,1.7s						
NVAR	Mina Array Bea	89.10	49	P	P	16 06 47.2	-0.6
	comp=Z,3.6nm,0.9s,baz=227,slow=7.7,SNR=14						
	comp=Z,3.6nm,0.9s						
GWY	Greenwater Val	89.41	52	IAmb	IAmb	16 06 58.1	
	comp=Z,13nm,1.4s						
ILAR	Eielson Array	89.52	18	P	P	16 06 46.7	-2.2
	comp=Z,1.3nm,0.7s,baz=238,slow=4.9,SNR=16						
	comp=Z,1.3nm,0.7s						
WCT	Wildcat Mounta	89.68	51	IAmb	IAmb	16 06 50.6	
	comp=Z,10nm,1.3s						
TPNV	Topopah Spring	90.02	51	IAmb	IAmb	16 06 52.4	
	comp=Z,8.3nm,0.9s						
WVOR	Wild Horse Val	90.49	45	IAmb	IAmb	16 09 05.5	
	comp=Z,7.5nm,1.0s						
I07A	Izee	90.59	44	IAmb	IAmb	16 06 54.9	
	comp=Z,7.6nm,1.0s						
W13A	Hualapai Mount	91.11	53	IAmb	IAmb	16 06 58.1	
	comp=Z,7.2nm,0.9s						
E07A	Sunnyside	91.41	41	IAmb	IAmb	16 06 58.5	
	comp=Z,6.7nm,0.8s						
G08A	Pilot Rock	91.45	43	IAmb	IAmb	16 06 58.7	
	comp=Z,6.3nm,0.9s						
ELK	Elko	92.18	48	LR	LR	16 49 25.3	
	comp=Z,66nm,18.1s,baz=256,slow=36						
TUC	Tucson	92.56	57	P	P	16 07 03.7	-0.2
TUC				IAmb	IAmb	16 07 04.5	
	comp=Z,4.7nm,1.0s						
TUC	Tucson	92.56	57	P	P	16 07 03.7	-0.2
TUC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
U15A	North Rim	92.79	53	IAmb	IAmb	16 07 05.7	
	comp=Z,6.0nm,0.8s						
WUAZ	Wupatki	93.18	54		P	16 07 06.7	0.0
WUAZ				IAmb	IAmb	16 07 07.2	
	comp=Z,5.9nm,0.8s						
TIXI	Tiksi	93.27	349	LR	LR	16 45 15.2	
	comp=Z,24nm,19.8s,baz=210,slow=33						
TIXI	Tiksi	93.27	349	*ce*P	P	16 07 05.0	-1.1
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MTPU	Mount Pierson	93.42	51	IAmb	IAmb	16 08 39.4	
	comp=Z,9.8nm,1.7s						
WMQ	Urumqi	95.32	314	*e*P	P	16 07 18.0	+1.7
PDAR	Pinedale Array	96.87	47	P	P	16 07 21.8	-1.8
	comp=Z,0.2nm,0.5s,baz=247,slow=5.1,SNR=2.0						
	comp=Z,0.2nm,0.5s						
DGZ	Jazzator, Alta	97.44	320	*i* P	P	16 07 22.5	-3.4
DGZ				pmax	pmax		
	comp=Z,9.0nm,4.3s						
TXAR	Lajitas Array	97.47	62	P	P	16 07 25.5	-1.0
	comp=Z,0.9nm,0.9s,baz=259,slow=4.9,SNR=3.7						
TXAR				LR	LR	16 45 38.3	
	comp=Z,81nm,19.2s,baz=232,slow=32						
	comp=Z,0.9nm,0.9s						
MK31	Makanchi Array	99.86	316	*i* P	Pdif	16 07 33.4	-3.2
MKAR	Makanchi Array	99.86	316	P	Pdif	16 07 37.3	+0.7
	comp=Z,0.5nm,1.0s,baz=99,slow=6.2,SNR=4.4						
	comp=Z,0.5nm,1.0s						
YKA	Yellowknife Ar	100.27	27	P	Pdif	16 07 36.8	-1.2
	comp=Z,0.4nm,0.6s,baz=265,slow=4.8,SNR=7.6						
ZALV	Zalesovo Beam	100.28	323	P	Pdif	16 07 38.5	+0.3
	comp=Z,0.4nm,0.6s,baz=96,slow=5.1,SNR=2.1						
ARCES	ARCESS Array B	123.53	345	PKP	PKPdf	16 12 47.2	-1.5
	comp=Z,2.3nm,0.8s,baz=51,slow=3.2,SNR=1.6						
WINA	Alland / Wiene	142.13	329	*e*PKP	PKPdf	16 13 21.9	-2.4
	comp=Z,11nm,0.8s						
KBA	Koelnbreinsper	144.18	330	*e*PKP	PKPbc	16 13 26.0	-0.2
	comp=Z,3.8nm,0.9s						
LESA	Schwarzleotal	144.24	331	*e*PKP	PKPdf	16 13 26.9	-1.2
	comp=Z,7.4nm,1.0s						
MEM	Membach	144.36	340	*d*PKPdf	PKPdf	16 13 26.9	-1.2
BCLA	Clavier	144.75	340	*d*PKPdf	PKPbc	16 13 27.5	-0.2
ABTA	Abfaltersbach	144.81	330	*e*PKP	PKPbc	16 13 27.8	-0.3
	comp=Z,6.7nm,0.9s						
WTTA	Wattenberg	144.84	331	*e*PKP	PKPdf	16 13 28.4	-0.9
	comp=Z,8.0nm,1.0s						
BGES	Gesves	144.85	341	*d*PKPdf	PKPdf	16 13 29.5	+0.6
RCHB	Rochefort	145.00	340	*d*PKPdf	PKPdf	16 13 28.9	-0.3
BMRD	Maredsous	145.02	341	*d*PKPdf	PKPdf	16 13 29.4	+0.2
MOTA	Moosalm	145.02	332	*e*PKP	PKPdf	16 13 28.8	-0.7
	comp=Z,17nm,1.0s						
RETA	Reutte	145.07	332	*e*PKP	PKPdf	16 13 29.4	-0.1
	comp=Z,3.5nm,0.5s						
SQTA	Sankt Quirin	145.07	332	*e*PKP	PKPdf	16 13 29.6	0.0
	comp=Z,7.8nm,0.9s						
FETA	Feichten	145.43	332	*e*PKP	PKPab	16 13 30.3	-0.2
	comp=Z,13nm,0.8s						
DAVA	Damuels	145.61	333	*e*PKP	PKPab	16 13 30.9	-0.2
	comp=Z,8.4nm,0.8s						
TORD	Torodi Ar. Bea	165.68	252	PKP	PKPdf	16 13 57.2	-0.5
	comp=Z,2.1nm,1.0s,baz=197,slow=1.3,SNR=5.5						
TORD				PKPab	PKPab	16 14 59.0	+2.3
	comp=Z,0.2nm,0.4s,baz=120,slow=4.2,SNR=2.5						

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*MDD **03** 15:54:00.5±0.6, 35.17N×14.67W, h34km, Mb4.4/4, M_mb3.8/4, Error ellipse: s-maj=9.0km s-min=4.2km az=142.0*

*CNRM **03** 15:54:00.1, 35.25N×14.74W, h29km, ML3.7*

*IGIL **03** 15:54:04.2, 35.29N×14.53W, h22km, ML2.3*

*INMG **03** 15:54:07.4±1.2, 35.26N×14.52W, h25km, ML2.6, Error ellipse: s-maj=16.6km s-min=6.9km az=114.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Horseshoe-Ampere*

ISC 03 15:53:56.2±1.5**, 35.35N**±0.06×**14.65W**±0.08**, h10km, n43, σ3.11**/68**, 4C, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMAR	Madeira	3.23	216	P	Pn	15 54 46.5	-0.5
PMAR				S	Sn	15 55 24.4	-1.2
PMOZ	Porto Moniz, M	3.29	221	P	Pn	15 54 45.7	-2.1
PMOZ				S	Sn	15 55 19.6	-7.5
PMOZ	Porto Moniz, M	3.29	221	P	Pn	15 54 47.4	-0.4
PMOZ				S	Sn	15 55 25.6	-1.5
PFVI	Vila Bisbo	5.03	68	P	Pn	15 55 14.3	+2.6
PFVI				S	Sn	15 56 06.7	-3.2
PFVI	Vila Bisbo	5.03	68	*e*P	Pn	15 55 15.5	+3.8
PFVI				*e*S	Sn	15 56 06.9	-3.0
PFVI				*i* IAML		15 56 08.6	
PFVI				*i* IAML		15 56 09.4	
PFVI				*i* IAML		15 56 10.1	
PFVI	Vila Bisbo	5.03	68	P	Pn	15 55 15.4	+3.7
PFVI				S	Sn	15 56 13.6	+3.7
MORF	Marmelete	5.22	66	*e*P	Pn	15 55 18.3	+4.0
MORF				*e*S	Sn	15 56 12.4	-2.2
MORF				IAML		15 56 15.1	
	comp=N,8.2nm,0.2s						
MORF	Marmelete	5.22	66	*e*P	Pn	15 55 18.4	+4.1
MORF				*e*S	Sn	15 56 12.4	-2.2
MORF				*i* IAML		15 56 16.2	
MORF				*i* IAML		15 56 22.6	
MORF				*i* IAML		15 56 22.9	
PTEO	Sao Teotonio	5.26	64	*e*P	Pn	15 55 19.2	+4.5
PTEO				*e*S	Sn	15 56 13.8	-1.6
PTEO				*i* IAML		15 56 16.7	
PTEO				*i* IAML		15 56 17.0	
PTEO				*i* IAML		15 56 23.7	
PMAFR	Mafra	5.60	48	S	Sn	15 56 21.7	-2.1
PMAFR	Mafra	5.60	48	*e*S	Sn	15 56 22.5	-1.3
PMAFR				*i* IAML		15 56 23.9	
PMAFR				*i* IAML		15 56 25.2	
PMAFR				*i* IAML		15 56 25.7	
MESJ	Messejana	5.74	63	*e*S	Sn	15 56 24.6	-2.7
MESJ				IAML		15 56 28.6	
	comp=N,2.2nm,0.1s						
MESJ	Messejana	5.74	63	*e*S	Sn	15 56 24.7	-2.7
MESJ				*i* IAML		15 56 31.0	
MESJ				*i* IAML		15 56 31.3	
MESJ				*i* IAML		15 56 32.9	
PBDV	Barranco-do-Ve	5.75	69	S	Sn	15 56 25.1	-2.5
PBDV	Barranco-do-Ve	5.75	69	*e*S	Sn	15 56 24.2	-3.3
PBDV				*i* IAML		15 56 30.0	
PBDV				*i* IAML		15 56 30.1	
PBDV				*i* IAML		15 56 30.8	
PCVE	Castro Verde	5.79	65	P	Pn	15 55 25.5	+3.4
PCVE				S	Sn	15 56 25.9	-2.8
PCVE	Castro Verde	5.79	65	*e*S	Sn	15 56 26.2	-2.5
PCVE				*i* IAML		15 56 30.2	
PCVE				*i* IAML		15 56 31.1	
PCVE				*i* IAML		15 56 31.1	
MOE	Montemor	5.96	56	*e*S	Sn	15 56 29.7	-3.0
MOE				*i* IAML		15 56 31.9	
PVAQ	Vaqueiros	5.96	68	*e*P	Pn	15 55 29.0	+4.5
PVAQ				*e*S	Sn	15 56 29.7	-3.0
PVAQ				*i* IAML		15 56 32.2	
PVAQ				*i* IAML		15 56 35.6	
PVAQ				*i* IAML		15 56 36.0	
PVAQ	Vaqueiros	5.96	68	P	Pn	15 55 28.5	+4.1
PVAQ				S	Sn	15 56 36.4	+3.7
EGRO	El Granado	6.17	67	P	Pn	15 55 30.8	+3.4
EGRO				S	Sn	15 56 35.1	-3.0
EGRO	El Granado	6.17	67	P	Pn	15 55 30.4	+3.0
EGRO				⇑*i* IVmb_VC		15 55 32.3	
	comp=N,138nm,SNR=0.8						
EGRO				S	Sn	15 56 35.5	-2.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
EVO	Evora	6.19	57	P	Pn	15 55 31.2	+3.6
EVO				S	Sn	15 56 37.7	-0.7
PARRA	Arraiolos	6.31	55	eS	Sn	15 56 38.1	-3.4
PARRA				i IAML		15 56 39.5	
PARRA				i IAML		15 56 42.8	
PARRA				i IAML		15 56 44.7	
PMTG	Montargil	6.33	52	eS	Sn	15 56 38.6	-3.2
PMTG				i IAML		15 56 42.4	
PMTG				i IAML		15 56 43.0	
PMTG				i IAML		15 56 45.7	
AVE	Averroes	6.33	107	P	Pn	15 55 32.3	+2.8
AVE				S	Sn	15 56 39.5	-2.4
PSARD	Sardoal	6.68	49	eS	Sn	15 56 47.7	-2.8
PSARD				i IAML		15 56 51.4	
PSARD				i IAML		15 56 54.9	
PSARD				i IAML		15 56 55.4	
PBAR	Barrancos	6.73	63	P	Pn	15 55 38.4	+3.4
PBAR				S	Sn	15 56 48.0	-3.7
PBAR	Barrancos	6.73	63	eP	Pn	15 55 39.8	+4.8
PBAR				eS	Sn	15 56 47.5	-4.1
PBAR				i IAML		15 56 55.5	
EMIN	Mina Concepcio	6.86	67	P	Pn	15 55 40.1	+3.3
EMIN				S	Sn	15 56 51.9	-3.0
EMIN	Mina Concepcio	6.86	67	P	Pn	15 55 39.1	+2.3
EMIN				⇑iIVmb_VC		15 55 48.4	
	comp=N,126nm,SNR=1.2						
EMIN				S	Sn	15 56 50.5	-4.4
PMRV	Marv??o	7.07	53	eS	Sn	15 56 56.4	-3.6
PMRV				i IAML		15 56 58.0	
PMRV				i IAML		15 56 58.0	
PMRV				i IAML		15 56 58.9	
ESPR	Espera	7.28	75	S	Sn	15 57 02.6	-2.6
ESPR	Espera	7.28	75	S	Sn	15 57 01.6	-3.6
TISM	Timmit	7.75	116	P	Pn	15 55 49.3	+0.2
TISM				S	Sn	15 57 19.5	+2.6
E1302	La Puebla de C	7.81	74	S	Sn	15 57 17.7	-0.5
ECAB	El Cabril	7.90	67	⇑iIVmb_VC		15 55 51.9	
	comp=N,143nm,SNR=1.0						
ECAB				P	Pn	15 55 52.9	+1.8
ECAB				S	Sn	15 57 15.7	-4.8
OUZM	OUZ	7.96	122	P	Pn	15 55 54.4	+2.3
OUZM				S	Sn	15 57 22.8	+0.4
IFR	Ifrane	8.08	100	P	Pn	15 55 55.0	+1.2
IFR				S	Sn	15 57 18.2	-7.0
ELOB	Lobios	8.30	36	S	Sn	15 57 26.6	-3.9
EADA	Adamuz	8.56	68	P	Pn	15 56 01.8	+1.7
EADA				⇑iIVmb_VC		15 56 02.3	
	comp=N,128nm,SNR=1.0						
EADA				S	Sn	15 57 33.5	-3.3
MD31	MD31	8.57	104	P	Pn	15 56 03.1	+2.8
MD31				S	Sn	15 57 39.3	+2.1
MDT	Midelt	8.71	104	P	Pn	15 56 04.8	+2.5
MDT				S	Sn	15 57 43.1	+2.5

*IDC **03** 16:03:06.7±1.7, 19°.79S×177°.04W, h560km±17km, mb3.3/5, mbtmp4.2/9, Error ellipse: s-maj=33.3km s-min=18.9km az=142.0*
*NEIC **03** 16:03:08.8±1.1, 19°.3S±0°.2×177°.3W±0°.1, h567km±10km, mb4.2/15, Error ellipse: s-maj=29.7km s-min=15.4km az=153.0*
ISC 03 16:03:07.2±0.9**, 19°.4S**±0°.2×**177°.3W**±0°.1**, h550**km**, n27, σ1s.08**/28**, mb4.2**/12**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.75	290	P	P	16 04 38.0	+2.9
	6.0nm,0.5s,baz=130,slow=17,SNR=14						
AFI	Afiamalu	7.61	45	P	P	16 05 02.3	+1.0
	8.4nm,0.5s,baz=196,slow=15,SNR=4.2						
AFI				S	S	16 06 33.9	-0.7
	10.0nm,0.4s,baz=229,slow=17,SNR=4.7						
DZM	Mont Dzumac	15.46	257	P	P	16 06 22.3	+0.8
	6.4nm,0.9s,baz=74,slow=12,SNR=2.4						
DZM	Mont Dzumac	15.46	257	IAmb	IAmb	16 06 34.6	
	comp=Z,11nm,1.1s						
URZ	Urewera	19.38	193	P	P	16 06 53.1	-4.4
	comp=Z,1.5nm,0.4s,baz=34,slow=6.3,SNR=1.4						
BKZ	Black Stump Fm	20.39	194	P	P	16 07 08.9	+2.2
CTA	Charters Tower	34.29	263	P	P	16 09 08.0	-0.3
	comp=Z,2.3nm,0.5s,baz=92,slow=9.2,SNR=7.3						
	comp=Z,2.3nm,0.5s						
CTAO	Charters Tower	34.29	263	P	P	16 09 08.0	-0.3
CTAO				IAmb	IAmb	16 09 33.4	
	comp=Z,7.5nm,1.3s						
TOO	Toolangi	37.08	233	P	P	16 09 31.1	-0.1
TOO				IAmb	IAmb	16 09 38.1	
	comp=Z,11nm,1.4s						
COEN	Coen	38.21	272	P	P	16 09 40.5	-0.2
COEN				IAmb	IAmb	16 10 03.4	
	comp=Z,10nm,1.4s						
STKA	Stephens Creek	38.87	243	P	P	16 09 46.2	+0.3
	comp=Z,1.6nm,0.6s,baz=90,slow=8.1,SNR=4.8						
	comp=Z,1.6nm,0.6s						
STKA	Stephens Creek	38.87	243	P	P	16 09 46.1	+0.3
BBOO	Buckleboo	43.64	243	P	P	16 10 23.5	-0.1
BBOO				IAmb	IAmb	16 10 36.9	
	comp=Z,14nm,1.2s						
WR8	Warramunga Arr	45.28	261	P	P	16 10 35.4	-1.0
WR8				IAmb	IAmb	16 10 48.2	
	comp=Z,6.3nm,1.2s						
WB0	Warramunga Arr	45.41	261	P	P	16 10 36.3	-1.1
WB0				IAmb	IAmb	16 11 17.2	
	comp=Z,6.7nm,1.1s						
AS31	Alice Springs	45.44	256	P	P	16 10 37.1	-0.5
WRA	Warramunga Arr	45.44	261	P	P	16 10 36.8	-0.8
	comp=Z,1.3nm,0.3s,baz=98,slow=7.5,SNR=43						
WRA				PcP	PcP	16 12 04.4	-0.7
	comp=Z,0.5nm,0.7s,baz=98,slow=3.0,SNR=2.6						
	comp=Z,1.3nm,0.3s						
WRA	Warramunga Arr	45.44	261	P	P	16 10 36.7	-0.8
ASAR	Alice Springs	45.44	256	P	P	16 10 37.4	-0.2
	comp=Z,11nm,0.4s,baz=94,slow=7.6,SNR=16						
ASAR				PcP	PcP	16 12 04.1	-1.1
	comp=Z,0.7nm,0.8s,baz=99,slow=3.5,SNR=3.7						
	comp=Z,11nm,0.4s						
FORT	Forrest	50.35	246	P	P	16 11 13.3	-0.7
FORT				IAmb	IAmb	16 11 31.0	
	comp=Z,8.4nm,0.9s						
PSA00	Pilbara Seismi	58.58	256	P	P	16 12 11.1	-0.9
MBWA	Marble Bar	58.76	257	P	P	16 12 12.5	-0.6
MBWA				IAmb	IAmb	16 12 21.5	
	comp=Z,33nm,1.5s						
UGM	Wanagama	70.67	268	P	P	16 13 27.6	-0.9
ILAR	Eielson Array	87.13	13	P	P	16 14 54.2	-0.2
	comp=Z,0.3nm,0.8s,baz=210,slow=4.8,SNR=4.4						
	comp=Z,0.3nm,0.8s						
BVAR	Borovoye Array	118.70	320	PKP	PKPdf	16 20 51.8	-1.0
	comp=Z,0.4nm,0.3s,baz=103,slow=3.3,SNR=5.4						
BRTR	Keskin Array B	146.61	314	PKPbc	PKPdf	16 21 46.7	+1.5
	comp=Z,0.2nm,0.4s,baz=99,slow=1.1,SNR=2.8						
BRTR	Keskin Array B	146.61	314	PKPdf	PKPdf	16 21 43.8	-1.4

*AFAD **03** 16:21:47.5, 39°.09N×27°.79E, h7km±3km, MW3.4*
*ISK **03** 16:21:47.5, 39°.10N×27°.78E, h7km, ML3.6/21*
*THE **03** 16:21:49.7, 39°N±3°×2°8E±°, h11km±19km, M3.2/10, MLh3.2/10*
*ATH **03** 16:21:51.2, 39°.12N×27°.68E, h32km±15km, ML3.2/7, Latitude uncertainty: 1 km; Longitude uncertainty: 3 km*
ISC 03 16:21:47.3±0.9**, 39°.11N**±0°.02×**27°.85E**±0°.02**, h12**km±7km**, n69, σ0s.76**/107**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	0.23	187	P	Pg	16 21 52.6	+0.5
AKHS				S	Sg	16 21 56.2	+0.7
AKHS				IAML		16 21 57.0	
	comp=E,6µm,0.3s						
SOMA	Soma-Manisa	0.25	282	Pg	Pg	16 21 52.2	-0.4
SOMA				Sg	Sg	16 21 55.6	-0.5
GORD	Gordes-Manisa	0.32	127	Pg	Pb	16 21 55.1	+0.1
GOMA	Golmarmara-Man	0.40	172	Pg	Pb	16 21 55.8	-0.5
GOMA				Sg	Sb	16 22 02.1	-0.2
KTTT	Salihli	0.46	155	P	Pb	16 21 57.0	-0.4
KTTT				S	Sb	16 22 03.6	-0.5
KTTT				IAML		16 22 04.0	
	comp=N,1µm,0.3s						
BALB	Balikesir	0.54	3	Pg	Pb	16 21 58.7	+0.1
BALB				Sg	Sb	16 22 07.3	+1.0
CAMT	Merkez	0.55	230	P	Pg	16 21 58.3	+0.2
ZEDA	zmir-Bergama	0.62	257	P	Pg	16 21 59.4	+0.1
ZEDA				S	Sg	16 22 07.6	+0.2
ZEDA				IAML		16 22 08.0	
	comp=N,1µm,0.2s						
ZEDA				IAML		16 22 08.0	
	comp=E,956nm,0.3s						
BKES	Balkesir-Mer	0.63	6	P	Pb	16 22 00.6	+0.3
BALY	Balya	0.66	344	P	Pb	16 22 01.0	+0.2
BALY				S	Sg	16 22 08.5	-0.4
BALY				IAML		16 22 10.0	
	comp=E,1µm,0.3s						
DEMI	Demirci	0.68	95	P	Pn	16 22 01.9	-0.8
DURS	Dursunbey	0.69	44	P	Pb	16 22 01.2	-0.1
BUHA	Balikesir, Bur	0.72	304	P	Pg	16 22 01.1	-0.1
IZMD	zmir-Dikili-	0.73	261	P	Pg	16 22 01.5	+0.2
IZMD				P	Pg	16 22 01.6	+0.2
IZMD				S	Sg	16 22 10.3	-0.6
IZMD				S	Sg	16 22 10.4	-0.6
IZMD				IAML		16 22 11.0	
	comp=N,308nm,0.2s						
IZMD				IAML		16 22 11.0	
	comp=N,358nm,0.2s						
DKL	Dikili	0.73	268	Pg	Pg	16 22 01.2	-0.3
DKL				Sg	Sg	16 22 11.3	+0.1
BLKS	Balkesir-Sus	0.77	7	P	Pb	16 22 02.4	-0.3
BLKS				P	Pn	16 22 02.8	-1.3
BLKS				S	Sb	16 22 13.4	+0.2
BLKS				S	Sb	16 22 13.5	+0.2
BLKS				IAML		16 22 16.0	
	comp=E,357nm,0.6s						
BLKS				IAML		16 22 16.0	
	comp=E,358nm,0.6s						
DST	Dursunbey	0.78	50	Pg	Pn	16 22 03.9	-0.2
DST				Sg	Sn	16 22 15.9	+0.1
MANT	Manisa	0.83	138	P	Pn	16 22 04.1	-0.8
MANT				S	Sb	16 22 15.4	+0.5
MANT				IAML		16 22 19.0	
	comp=E,620nm,0.2s						
ODEM	Odemis-Izmir	0.85	168	Pg	Pn	16 22 04.6	-0.5
KULA	Kula-Manisa	0.87	133	Pg	Pn	16 22 04.8	-0.6
SUSR	Susurluk-Balik	0.88	12	Pg	Pn	16 22 04.8	-0.6
SMAA	Simav-Kutahya	0.88	90	Pg	Pn	16 22 05.8	+0.2
SIMA	Simav-Kutahya	0.88	91	Pg	Pn	16 22 05.8	+0.2
BAGT	Foa	0.90	240	P	Pg	16 22 04.6	0.0
BAGT				S	Sg	16 22 15.7	-0.7
BAGT				IAML		16 22 17.0	
	comp=N,2µm,0.7s						
CMHT	Manyas	0.91	6	P	Pn	16 22 05.2	-0.7
AYVA	Ayvalik	0.92	283	P	Pb	16 22 05.1	-0.1
AYVA				S	Sg	16 22 17.1	-0.1
AYVA				IAML		16 22 20.0	
	comp=N,2µm,0.7s						
DUVT	Torbali	0.94	200	P	Pb	16 22 05.6	+0.1
GONE	Gonen-Balikesi	0.95	352	Pg	Pn	16 22 06.0	-0.4
YENI	Yenice-Canakka	0.95	331	Pg	Pb	16 22 05.6	-0.2
FOCM	Foa	0.95	246	Pg	Pg	16 22 05.1	-0.6
BLCB	Balcova	0.96	222	P	Pb	16 22 05.8	+0.1
BLCB				S	Sb	16 22 19.0	+0.7
BLCB	Balcova	0.96	222	Pg	Pg	16 22 05.6	-0.1
IZMR	zmir-demi	0.97	175	P	Pb	16 22 06.2	+0.2
IZMR				P	Pn	16 22 07.4	+0.7
IZMR				S	Sg	16 22 17.3	-1.3
IZMR				S	Sb	16 22 17.6	-1.1
USAK	Uak-Merkez	0.99	113	P	Pn	16 22 07.4	+0.4
USAK				S	Sn	16 22 19.8	-1.2
USAK				IAML		16 22 25.0	
	comp=E,434nm,0.4s						
ATIT	Gnen	1.00	347	P	Pn	16 22 06.8	-0.4
KIRA	zmir-Kiraz	1.00	154	P	Pn	16 22 07.1	-0.2
KIRA				S	Sn	16 22 21.2	-0.2
KIRA				IAML		16 22 22.0	
	comp=N,572nm,0.2s						
SHAP	Saphane-Kutahy	1.07	94	Pn	Pn	16 22 09.4	+1.2
CANM	Can-anakkale	1.09	326	Pg	Pn	16 22 08.3	-0.1
KRBN	Karaburun	1.13	244	Pn	Pg	16 22 08.7	-0.4
AYDB	Zeytinkoy-Aydi	1.16	178	Pn	Pn	16 22 09.8	+0.4
EMET	Ktahya-Emet	1.18	76	P	Pn	16 22 11.2	+1.6
NAZL	Nazilli-Aydin	1.19	163	Pn	Pn	16 22 11.1	+1.3
KARB	zmir-Karabur	1.20	249	P	Pg	16 22 09.9	-0.6
GEDZ	Gediz	1.22	92	Pn	Pn	16 22 12.3	+2.1
PRK	Paraskevi	1.23	277	P	Pn	16 22 10.8	+0.4
PRK				S	Sg	16 22 27.1	0.0
PRK	Paraskevi	1.23	277	P	Pg	16 22 10.5	-0.5
PRK				S	Sg	16 22 24.6	-2.5
GMLD	Gumuldur	1.26	216	Pn	Pb	16 22 11.4	+0.5
DGB	zmir	1.29	216	P	Pn	16 22 11.1	0.0
ESEN	Aydn-Nazilli	1.36	163	P	Pg	16 22 12.8	-0.7
ZEYE	Izmir, Urla-Ze	1.36	231	P	Pn	16 22 12.1	0.0
EZN	Ezine	1.38	302	P	Pb	16 22 12.9	-0.1
EZN				S	Sb	16 22 31.3	+0.7
EAG2	Marmaro, Chios	1.47	248	P	Pn	16 22 13.9	+0.4
EAG2				S	Sn	16 22 30.9	-1.8
GCAM	G?zelcaml?	1.48	199	Pn	Pb	16 22 14.9	+0.1
SIGR	SIGRI	1.55	275	P	Pn	16 22 14.9	+0.1
SIGR				S	Sn	16 22 34.2	-0.5
SIGR	SIGRI	1.55	275	P	Pn	16 22 14.8	+0.1
SIGR				S	Sn	16 22 32.8	-2.0
SMG	Samos	1.60	210	P	Pb	16 22 17.1	+0.3
SMG				S	Sn	16 22 37.4	+1.4
SMG	Samos	1.60	210	P	Pb	16 22 16.9	0.0
SMG				S	Sn	16 22 36.2	+0.1
GADA	Gvkgeada	1.85	306	P	Pn	16 22 19.6	+0.7
GADA				S	Sn	16 22 42.5	+0.2
BODT	Bodrum	2.08	192	P	Pn	16 22 23.0	+1.0
BODT				S	Sn	16 22 49.9	+2.0
ENEZ	Enez	2.09	322	P	Pn	16 22 23.3	+1.2
ENEZ				S	Sn	16 22 48.5	+0.6
LIA	Limnos Island	2.21	292	P	Pn	16 22 24.3	+0.5
LIA				S	Sn	16 22 50.7	-0.2
LIA	Limnos Island	2.21	292	P	Pn	16 22 24.0	+0.3
SMTH	Samothraki Isl	2.25	308	P	Pn	16 22 24.8	+0.6
SMTH				S	Sn	16 22 52.1	+0.2
SMTH	Samothraki Isl	2.25	308	P	Pn	16 22 24.6	+0.3
ALN	Alexandroupoli	2.26	323	P	Pn	16 22 25.4	+0.9
ALN				S	Sn	16 22 54.2	+1.9
ALN	Alexandroupoli	2.26	323	P	Pn	16 22 25.2	+0.7
RDO	Rodhopi	2.70	320	P	Pn	16 22 31.2	+0.7
KAVA	Kavala	3.18	308	P	Pn	16 22 37.5	+0.4
OUR	Ouranopolis	3.23	294	P	Pn	16 22 37.9	+0.2

*TEH **03** 16:25:32.6, 38°.54N×44°.53E, h10km±132km, ML2.7, Presumed earthquake*
*AZER **03** 16:25:33.5, 38°.58N×44°.55E, h10km, ml2.7*
*AFAD **03** 16:25:33.0, 38°.54N×44°.51E, h3km±7km, ML2.7*
*ISK **03** 16:25:34.6, 38°.49N×44°.41E, h5km, ML2.6/6*
ISC 03 16:25:33.9±1.1**, 38°.54N**±0°.02×**44°.53E**±0°.02**, h10**km±10km**, n44, σ1s.36**/68**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.44	287	P	Pg	16 25 42.1	-0.4
MAKU	Maku	0.83	8	Pg	Pg	16 25 48.7	-1.2
VMUR	Van-Muradiye	0.88	301	P	Pg	16 25 50.4	-0.4
TVAN	Van	0.88	270	P	Pg	16 25 48.5	-2.4
TVAN				S	Sn	16 26 04.2	-1.4
ISHB	Shabestar	0.89	106	Pg	Pg	16 25 49.8	-1.3
IMRD	Marand	0.94	79	Pg	Pg	16 25 51.5	-0.4
IMRD				Sg	Sb	16 26 04.8	0.0
YOVA	Hakkari_Yksek	0.97	191	P	Pb	16 25 52.3	-0.5
YOVA				S	Sn	16 26 07.0	-0.7
YOVA				IAML		16 26 12.0	
	comp=E,150nm,0.6s						
NAX	Nakhchivan	0.99	49	P	Pg	16 25 52.4	-0.4
NAX				S	Sn	16 26 07.3	-0.7
SBZ	Shahbuz	1.17	43	P	Pb	16 25 55.6	-0.7
SBZ				S	Sn	16 26 12.9	+0.3
HAKT	HAKKARI	1.17	214	P	Pb	16 25 55.8	-0.6
HAKT				S	Sn	16 26 15.2	+2.4
GEVA	Gevas	1.18	260	P	Pb	16 25 54.0	-2.5
GEVA				S	Sg	16 26 11.7	-0.2
DYDN	Diyadin	1.20	327	P	Pb	16 25 55.7	-1.2
HYR	Heyderabad	1.21	12	P	Pg	16 25 57.4	+0.3
HYR				S	Sn	16 26 14.6	+1.1
ORD	Ordubad	1.21	71	P	Pb	16 25 56.3	-0.7
ORD				S	Sn	16 26 13.7	+0.2
AKDM	Akdamar-Van	1.24	261	Pn	Pn	16 25 56.5	-0.9
AKDM				Sn	Sn	16 26 14.1	-0.2
ITBZ	Tabriz	1.30	103	Pg	Pn	16 25 57.5	-0.9
IGDI	IGDIR	1.38	345	P	Pb	16 25 59.2	-0.6
IGDI	IGDIR	1.38	345	P	Pg	16 26 00.5	+0.2
IGDI				S	Sg	16 26 19.7	+1.5
IAZR	Azarshahr	1.43	126	Pg	Pb	16 26 00.7	-0.1
ADCV	BITLIS_Adilcev	1.44	281	P	Pb	16 26 00.6	-0.3
CUKT	Cukurca	1.48	210	Pn	Pg	16 26 02.4	+0.1
CUKT				Sn	Sg	16 26 22.6	+1.1
CUKT	Cukurca	1.48	210	P	Pg	16 26 04.2	+1.9
AGRB	Hanur-Agry	1.58	311	Pn	Pg	16 26 04.2	-0.1
AGRB				Sn	Sg	16 26 26.3	+1.4
DORK	Agr/Tutak/Do	1.61	302	P	Pb	16 26 03.4	-0.4
GNI	Garni	1.62	6	Pn	Pg	16 26 05.4	+0.4
GNI				Sn	Sg	16 26 29.5	+3.5
KOTA	Agri, Merkez-K	1.63	321	P	Pg	16 26 04.2	-1.0
MLAZ	Malazgirt-MUS	1.66	292	Pn	Pg	16 26 05.4	-0.4
PERV	Siirt/Pervari-	1.67	250	P	Pg	16 26 07.5	+1.5
GURO	Guroymak-BITLI	1.96	271	Pn	Pb	16 26 09.4	-0.4
IHRS	Heris	1.98	96	Pn	Pb	16 26 10.1	-0.2
SRTM	Siirt_Merkez	2.12	256	P	Pb	16 26 12.5	-0.1
SRTM				S	Sg	16 26 42.3	+0.2
SRTM				IAML		16 26 55.0	
	comp=N,97nm,0.7s						
EAK	Akyaka	2.26	342	P	Pg	16 26 16.1	-1.2
QRD	Qoradiz	2.36	66	P	Pb	16 26 15.9	-0.7
QRD				S	Sb	16 26 46.1	+0.4
MUSM	Mu-Merkez	2.37	275	P	Pb	16 26 16.7	-0.2
GDB	GEDABAY	2.38	23	P	Pb	16 26 15.2	-1.7
GDB				S	Sb	16 26 47.7	+1.3
GANJ	Ganja	2.52	33	P	Pb	16 26 17.3	-2.0
GANJ				S	Sb	16 26 51.0	+0.6
HOMI	Horasan	2.53	307	P	Pb	16 26 20.5	+0.9
AGDM	Agdam	2.54	51	P	Pb	16 26 18.1	-1.6
AGDM				S	Sb	16 26 51.5	+0.5
QZX	Qazax, Azerbai	2.60	14	P	Pb	16 26 18.7	-1.9
QZX				S	Sb	16 26 52.2	-0.4
SVAN	Silvan-Diyarba	2.65	263	Pn	Pb	16 26 19.1	-2.4
YRD	Yardimli	2.93	81	P	Pn	16 26 23.0	+2.3
YRD				S	Sb	16 26 59.7	-2.6
LRK	Lerik	2.99	87	P	Pb	16 26 26.0	-1.3
LRK				S	Sb	16 27 04.2	+0.3
GLBA	Clilabad	3.10	76	P	Pb	16 26 26.0	-3.0
GLBA				S	Sb	16 27 05.2	-1.6
ASTR	Astara	3.34	88	P	Pn	16 26 28.7	+2.5
ASTR				S	Sb	16 27 11.4	-2.5

*SJA **03** 16:32:33.2±0.6, 21°.66S×68°.42W, h146km±4km, ML3.5, MW3.6*
*GUC **03** 16:32:36.5±0.6, 21°.62S×68°.42W, h123km±5km, ML3.6*
ISC 03 16:32:33.3±1.5**, 21°.68S**±0°.03×**68°.47W**±0°.06**, h152**km±10km**, n34, σ1s.56**/56**, 10C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.73	260	⇑iP	Pn	16 32 56.8	+0.5
PB09				i S	Sn	16 33 12.2	-1.7
PB09	IPOC Station P	0.73	260	eP	Pn	16 32 56.8	+0.5
PB09				IAML		16 33 16.8	
	comp=Z,458nm,0.2s						
PB01	IPOC Station P	1.14	303	⇑iP	Pn	16 32 59.7	+0.1
PB01				i S	Sn	16 33 17.7	-1.9
PB01				IAML		16 33 21.9	
	comp=N,1µm,0.3s						
PB01	IPOC Station P	1.14	303	eP	Pn	16 32 59.7	+0.1
PB01				eS	Sn	16 33 22.0	+2.4
PB01				IAML		16 33 22.6	
	comp=Z,632nm,0.2s						
PB03	IPOC Station P	1.25	253	⇑iP	Pn	16 33 01.4	+0.8
PB03				i S	Sn	16 33 21.0	-0.6
PB03				IAML		16 33 23.7	
	comp=N,595nm,0.3s						
PB03	IPOC Station P	1.25	253	eP	Pn	16 33 00.9	+0.2
PB03				eS	Sn	16 33 21.8	+0.3
PB03				IAML		16 33 23.9	
	comp=Z,670nm,0.1s						
AF01	San Pedro de A	1.30	168	eP	Pn	16 33 00.2	-1.1
AF01				eS	Sn	16 33 22.1	-0.7
AF01				IAML		16 33 39.4	
	comp=Z,188nm,0.6s						
PB07	IPOC Station P	1.32	268	⇑iP	Pn	16 33 02.1	+0.7
PB07				i S	Sn	16 33 21.9	-0.8
PB07				IAML		16 33 26.8	
	comp=E,836nm,0.3s						
PB07	IPOC Station P	1.32	268	eP	Pn	16 33 02.0	+0.7
PB07				eS	Sn	16 33 22.7	-0.1
PB07				IAML		16 33 25.9	
	comp=Z,780nm,0.3s						
PB02	IPOC Station P	1.38	285	⇑iP	Pn	16 33 02.4	+0.5
PB02				i S	Sn	16 33 22.6	-1.0
PB02				IAML		16 33 24.8	
	comp=N,1µm,0.2s						
PB02	IPOC Station P	1.38	285	eP	Pn	16 33 02.6	+0.7
PB02				eS	Sn	16 33 23.9	+0.2
PB06	IPOC Station P	1.45	225	⇑iP	Pn	16 33 04.0	+1.3
PB06				i S	Sn	16 33 25.7	+0.6
PB06				IAML		16 33 27.3	
	comp=E,565nm,0.4s						
PB06	IPOC Station P	1.45	225	eP	Pn	16 33 03.4	+0.8
PB06				eS	Sn	16 33 26.7	+1.6
PB06				IAML		16 33 27.0	
	comp=Z,326nm,0.3s						
PX03	IPOC Station P	1.67	319	i P	Pn	16 33 04.6	-0.4
PX03				i S	Sn	16 33 28.1	-1.1
HMBC	Humberstone	1.92	316	⇑iP	Pn	16 33 08.2	+0.4
HMBC				i S	Sn	16 33 32.6	-1.6
HMBC				IAML		16 33 37.2	
	comp=N,869nm,0.2s						
HMBC	Humberstone	1.92	316	eP	Pn	16 33 08.2	+0.4
HMBC				eS	Sn	16 33 34.4	+0.1
HMBC				IAML		16 33 36.7	
	comp=Z,645nm,0.1s						
TA01	Diego Aracena	1.94	304	IAML		16 33 35.0	
	comp=E,781nm,0.2s						
TA01	Diego Aracena	1.94	304	eP	Pn	16 33 08.6	+0.7
TA01				eS	Sn	16 33 34.9	+0.5
TA01				IAML		16 33 35.6	
	comp=Z,230nm,0.1s						
TA02	Huaiquique	2.09	312	i P	Pn	16 33 09.9	+0.3
TA02	Huaiquique	2.09	312	eP	Pn	16 33 10.1	+0.5
TA02				eS	Sn	16 33 38.4	+0.9
TA02				IAML		16 33 40.5	
	comp=Z,527nm,0.1s						
GO01	Chusmiza	2.11	341	⇑iP	Pn	16 33 11.1	+0.7
GO01				i S	Sn	16 33 37.6	-1.2
GO01	Chusmiza	2.11	341	eP	Pn	16 33 10.6	+0.2
GO01				IAML		16 33 43.5	
	comp=Z,146nm,0.3s						
PB11	IPOC Station P	2.21	330	⇑iP	Pn	16 33 11.4	+0.3
PB11				i S	Sn	16 33 39.1	-1.2
PB11				IAML		16 33 41.4	
	comp=E,791nm,0.2s						
PB11	IPOC Station P	2.21	330	eP	Pn	16 33 11.5	+0.3
PB11				eS	Sn	16 33 40.3	0.0
PB11				IAML		16 33 40.8	
	comp=Z,209nm,0.2s						
YJA	Yavi	2.79	101	eP	Pn	16 33 20.1	+1.6
SALTA		3.21	143	eP	Pn	16 33 10.8	-13
SALTA				eP		16 33 27.5	
HJA	Humahuaca	3.21	119	eP	Pn	16 33 10.0	-14
HJA				IAML		16 33 59.4	
	comp=Z,204nm,2.7s						
PB14	IPOC Station P	3.43	211	eP	Pn	16 33 13.1	-13
PB14				eS	Sn	16 34 05.5	-2.4
PB14				IAML		16 34 22.1	
	comp=Z,50nm,0.7s						
PB16	IPOC Station P	3.46	343	⇑iP	Pn	16 33 28.3	+1.1
PB16				i S	Sn	16 34 03.1	-5.9
PB16	IPOC Station P	3.46	343	eP	Pn	16 33 28.1	+0.8
PB16				eS	Sn	16 34 14.0	+5.0
PB16				IAML		16 34 15.0	
	comp=Z,31nm,0.3s						
PB12	IPOC Station P	3.51	330	i P	Pn	16 33 26.4	-1.0
PB12	IPOC Station P	3.51	330	eP	Pn	16 33 26.9	-0.5
PB12				eS	Sn	16 34 08.7	-0.7
PB12				IAML		16 34 08.8	
	comp=Z,48nm,0.2s						
GO02	Mina Guanaco	3.62	196	eP	Pn	16 33 31.1	+2.2
GO02				eS	Sn	16 34 08.3	-3.8
GO02				IAML		16 34 18.6	
	comp=Z,52nm,0.2s						
AC01	Pan de Azucar	4.86	203	eP	Pn	16 33 45.6	+0.7
AC01				eS	Sn	16 34 40.0	-0.7
AC01				IAML		16 35 00.8	
	comp=Z,20nm,0.5s						

*IDC **03** 16:36:42.0±1.2, 31°.01S×178°.37W, h107km±10km, mb4.2/4, mbtmp4.5/7, Error ellipse: s-maj=23.8km s-min=11.2km az=111.0*
*NEIC **03** 16:36:43.5±1.1, 31°.03S±0°.09×178°.3W±0°.2, h115km±9km, mb4.5/15, Error ellipse: s-maj=28.6km s-min=12.2km az=103.0*
ISC 03 16:36:41.8±0.7**, 31°.17S**±0°.06×**178°.3W**±0°.1**, h100km, n67, σ1s.83**/74**, mb4.5**/10**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.94**	**10**	P	**Pn**	**16 37 13.8**	**+0.1**
	279nm,0.4s,baz=241,slow=23,SNR=1.8						
RAO				S	**Sn**	**16 37 35.5**	**-2.4**
	582nm,0.2s,baz=114,slow=23,SNR=11						
RAO	**Raoul Island**	**1.94**	**10**		**Pn**	**16 37 14.2**	**+0.5**
RAO				Sn	**Sn**	**16 37 36.7**	**-1.2**
RAO	**Raoul Island**	**1.94**	**10**	P	**Pn**	**16 37 13.6**	**0.0**
RAO				S	**Sn**	**16 37 37.2**	**-0.7**
MXZ	**Matakaoa Point**	**6.96**	**203**	P	**Pn**	**16 38 21.0**	**-0.2**
MXZ				S	**Sn**	**16 39 38.1**	**-0.8**
WMGZ	**Waiomatatini S**	**7.17**	**201**	P	**Pn**	**16 38 24.4**	**+0.5**
WMGZ				S	**Sn**	**16 39 43.8**	**+0.1**
PKGZ	**Pakihiroa**	**7.32**	**203**	P	**Pn**	**16 38 25.9**	**-0.1**
PKGZ				S	**Sn**	**16 39 47.4**	**-0.1**
HAZ	**Te Kaha**	**7.32**	**205**	P	**Pn**	**16 38 26.6**	**+0.6**
HAZ				S	**Sn**	**16 39 48.0**	**+0.5**
PUZ	**Puketiti**	**7.45**	**201**	P	**Pn**	**16 38 27.0**	**-0.8**
PUZ				S	**Sn**	**16 39 48.8**	**-1.8**
RUGZ	**Raukumara Rang**	**7.54**	**205**	P	**Pn**	**16 38 29.0**	**-0.2**
TWGZ	**Tauwhareparae**	**7.63**	**203**	P	**Pn**	**16 38 30.1**	**-0.2**
TWGZ				S	**Sn**	**16 39 54.2**	**-0.9**
WCZ	**Waipu Caves**	**7.76**	**230**	P	Pn	16 38 38.2	+6.1
CNGZ	**Carnagh Statio**	**7.84**	**201**	P	Pn	16 38 31.8	-1.3
CNGZ				S	**Sn**	**16 39 57.1**	**-3.0**
OUZ	**Omahuta**	**7.90**	**237**	P	Pn	16 38 40.0	+6.1
TKGZ	**Te Karaka**	**7.91**	**203**	S	**Sn**	**16 40 00.3**	**-1.6**
MWZ	**Matawai**	**7.93**	**205**	P	**Pn**	**16 38 33.1**	**-1.2**
MWZ				S	**Sn**	**16 40 04.8**	**+2.4**
URZ	**Urewera**	**8.02**	**207**	P	**Pn**	**16 38 35.1**	**-0.3**
	7.8nm,0.3s,baz=278,slow=7.1,SNR=57						
URZ				S	**Sn**	**16 40 06.2**	**+1.8**
	53nm,0.4s,baz=155,slow=20,SNR=25						
URZ	**Urewera**	**8.02**	**207**	P	**Pn**	**16 38 34.9**	**-0.6**
URZ				S	**Sn**	**16 40 03.4**	**-1.0**
RAGZ	**Rawiri**	**8.11**	**205**	S	**Sn**	**16 40 04.2**	**-2.6**
TOZ	**Tahuroa Road**	**8.31**	**216**	Pn	**Pn**	**16 38 42.5**	**+3.1**
MUGZ	**Murupara**	**8.34**	**208**	P	**Pn**	**16 38 38.8**	**-1.1**
MUGZ				S	**Sn**	**16 40 11.8**	**-0.5**
KNZ	**Kokohu**	**8.50**	**202**	P	Pn	16 38 39.9	-2.1
KNZ				S	Sn	16 40 11.5	-4.6
RAHZ	**Arahi**	**8.60**	**205**	P	**Pn**	**16 38 42.4**	**-1.1**
RAHZ				S	**Sn**	**16 40 18.0**	**-0.8**
BKZ	**Black Stump Fm**	**9.04**	**207**	P	Pn	16 38 47.4	-2.1
MCHZ	**McNeill Hill**	**9.21**	**205**	P	Pn	16 38 48.0	-3.7
MCHZ				S	**Sn**	**16 40 32.5**	**-1.0**
HIZ	**Hauiti**	**9.23**	**216**	P	**Pn**	**16 38 56.1**	**+4.1**
NTVZ	**North Tongarir**	**9.32**	**210**	P	**Pn**	**16 38 52.0**	**-1.3**
TMVZ	**Te Maari**	**9.32**	**210**	P	**Pn**	**16 38 52.8**	**-0.6**
TMVZ				S	**Sn**	**16 40 33.5**	**-2.9**
ETVZ	**East Tongariro**	**9.34**	**210**	P	**Pn**	**16 38 54.9**	**+1.4**
KAHZ	**Kahuranaki**	**9.46**	**203**	P	Pn	16 38 52.4	-2.8
PXZ	**Pawanui**	**9.68**	**203**	P	Pn	16 38 54.9	-3.1
PNHZ	**Pukenui**	**9.80**	**206**	P	Pn	16 38 56.1	-3.7
PNHZ				S	**Sn**	**16 40 44.9**	**-3.2**
PRHZ	**Porangahau**	**9.96**	**203**	P	Pn	16 38 58.2	-3.8
PRHZ				S	**Sn**	**16 40 48.5**	**-3.3**
RPZ	**Rata Peaks**	**15.09**	**211**	P	**Pn**	**16 40 09.4**	**-0.2**
	12nm,0.7s,baz=0.0,slow=1.0,SNR=5.9						
ODZ	**Otahua Downs**	**16.33**	**209**	P	**Pn**	**16 40 28.3**	**+3.2**
DZM	**Mont Dzumac**	**16.36**	**300**	P	**Pn**	**16 40 23.7**	**-2.0**
	9.8nm,1.0s,baz=83,slow=13,SNR=4.8						
DZM	**Mont Dzumac**	**16.36**	**300**	P	**Pn**	**16 40 26.9**	**+1.2**
CAN	**Canberra**	**27.59**	**253**	P	**P**	**16 42 20.3**	**+0.6**
CAN				IAmb	IAmb	16 42 21.8	
	comp=Z,17nm,1.3s						
TOO	**Toolangi**	**30.43**	**248**	P	**P**	**16 42 45.4**	**+0.6**
TOO				IAmb	IAmb	16 42 50.2	
	comp=Z,11nm,1.5s						
TARA	**Tarawa**	**33.41**	**344**	P	**P**	**16 43 10.1**	**-0.9**
CTAO	**Charters Tower**	**33.68**	**281**		**P**	**16 43 13.4**	**0.0**
CTAO				IAmb	IAmb	16 43 14.8	
	comp=Z,11nm,0.8s						
STKA	**Stephens Creek**	**34.06**	**258**	P	**P**	**16 43 16.9**	**+0.3**
	comp=Z,21nm,0.8s,baz=101,slow=11,SNR=35						
	comp=Z,21nm,0.8s						
STKA	**Stephens Creek**	**34.06**	**258**	P	**P**	**16 43 17.7**	**+1.1**
INKA	**Innaminka**	**35.69**	**265**	P	**P**	**16 43 31.5**	**+0.9**
BBOO	**Buckleboo**	**38.52**	**255**	P	**P**	**16 43 54.5**	**-0.1**
COEN	**Coen**	**39.24**	**287**	P	**P**	**16 44 00.4**	**-0.3**
AS31	**Alice Springs**	**42.82**	**268**		**P**	**16 44 29.1**	**-1.0**
ASAR	**Alice Springs**	**42.82**	**268**	P	**P**	**16 44 29.1**	**-1.0**
	comp=Z,2.5nm,0.6s,baz=104,slow=7.2,SNR=4.3						
ASAR				PcP	**PcP**	**16 46 18.4**	**-1.2**
	comp=Z,0.4nm,0.5s,baz=106,slow=3.6,SNR=2.0						
	comp=Z,2.5nm,0.6s						
WR8	**Warramunga Arr**	**43.73**	**273**	P	**P**	**16 44 36.3**	**-1.1**
WR8				IAmb	IAmb	16 44 37.6	
	comp=Z,5.2nm,0.8s						
WRAB	**Tennant Creek**	**43.87**	**273**	P	**P**	**16 44 37.4**	**-1.1**
WRAB				IAmb	IAmb	16 45 08.5	
	comp=Z,5.0nm,0.6s						
WRA	**Warramunga Arr**	**43.88**	**273**	P	**P**	**16 44 37.4**	**-1.2**
	comp=Z,4.1nm,0.3s,baz=111,slow=8.2,SNR=98						
	comp=Z,4.1nm,0.3s						
WB0	**Warramunga Arr**	**43.90**	**273**	P	**P**	**16 44 37.5**	**-1.3**
WB0				IAmb	IAmb	16 44 38.6	
	comp=Z,7.0nm,0.6s						
MTN	**Manton Dam**	**49.85**	**280**	P	**P**	**16 45 23.9**	**-1.2**
QSPA	**South Pole Qui**	**58.94**	**180**	P	**P**	**16 46 31.6**	**+1.2**
	comp=Z,2.0nm,0.7s,baz=32,slow=4.9,SNR=16						
	comp=Z,2.0nm,0.7s						
H03N3	**Juan Fernandez**	**80.45**	**123**	T	T	18 18 03.6	
	baz=241,slow=72,SNR=5.3						
H03N2	**Juan Fernandez**	**80.45**	**123**	T	T	18 18 04.5	
	baz=241,slow=72,SNR=3.5						
H03N1	**Juan Fernandez**	**80.47**	**123**	T	T	18 18 02.5	
	baz=241,slow=72,SNR=9.5						
MKAR	**Makanchi Array**	**118.07**	**310**	PKP	**PKPdf**	**16 55 13.7**	**-3.0**
	comp=Z,0.1nm,0.5s,baz=125,slow=1.5,SNR=1.9						
KURK	**Kurchatov**	**121.39**	**313**		**PKPdf**	**16 55 20.9**	**-2.0**
KURBB	**Kurchatov Arra**	**121.43**	**313**	PKP	**PKPdf**	**16 55 20.9**	**-2.1**
	comp=Z,0.2nm,0.6s,baz=117,slow=1.9,SNR=8.4						
BVAR	**Borovoye Array**	**126.78**	**315**	PKP	**PKPdf**	**16 55 31.6**	**-1.6**
	comp=Z,0.4nm,0.4s,baz=259,slow=2.4,SNR=4.7						
FINES	**FINESS Array B**	**145.78**	**339**	PKPbc	**PKPdf**	**16 56 06.6**	**-1.3**
	comp=Z,4.9nm,0.6s,baz=49,slow=4.1,SNR=36						
NB2	**NORSAR Subarra**	**149.47**	**351**	PKP	**PKPdf**	**16 56 17.2**	**+3.1**
	comp=Z,0.8nm,0.6s,baz=18,slow=2.8						
NOA	**NORSAR Array B**	**149.47**	**351**	PKPbc	**PKPdf**	**16 56 16.6**	**+2.5**
	comp=Z,1.5nm,0.8s,baz=16,slow=4.2,SNR=5.2						
HFS	**Hagfors**	**149.94**	**348**	PKPbc	**PKPdf**	**16 56 18.2**	**+3.4**
	comp=Z,1.5nm,0.7s,baz=35,slow=5.3,SNR=4.1						
AKASG	**Malin Array Be**	**151.75**	**322**	PKPbc	**PKPdf**	**16 56 22.6**	**+4.7**
	comp=Z,3.1nm,0.8s,baz=60,slow=2.3,SNR=5.9						
BRTR	**Keskin Array B**	**152.73**	**297**	PKPbc	**PKPdf**	**16 56 25.1**	**+5.2**
	comp=Z,0.7nm,0.9s,baz=182,slow=3.3,SNR=3.7						
TORD	**Torodi Ar. Bea**	**162.06**	**180**	PKPab	**PKPab**	**16 57 19.6**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=201,slow=6.6,SNR=4.2						

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*UPP **03** 16:42:42.8±0.0, 67°.85N×20°.22E, h0km, ML2.2, Confirmed Induced event*
*IDC **03** 16:42:43.7±1.1, 67°.80N×20°.77E, h0km, mbtmp2.9/4, ML2.1/4, Error ellipse: s-maj=18.1km s-min=6.8km az=119.0*
*HEL **03** 16:42:43.7±0.2, 67°.85N×20°.26E, h0km, ML1.9, Suspected explosion*
ISC 03 16:42:42.9±0.7**, 67°.84N**±0°.02×**20°.24E**±0°.02**, h0km, n37, σ1s.31**/67**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.12**	**17**	P	**Pg**	**16 42 45.3**	**+0.1**
	baz=222						
KUA				S	**Sg**	**16 42 47.0**	**+0.3**
RATU	**Laukkuluspa**	**0.25**	**266**	P	**Pg**	**16 42 47.5**	**-0.1**
RATU				S	**Sg**	**16 42 50.8**	**-0.1**
KOVU	**Salmi**	**0.39**	**355**	P	**Pg**	**16 42 50.1**	**-0.2**
	baz=157						
KOVU				S	**Sg**	**16 42 55.3**	**0.0**
NIKU	**Nikkaluokta**	**0.46**	**274**	P	**Pg**	**16 42 51.4**	**-0.3**
NIKU				S	**Sg**	**16 42 57.6**	**0.0**
LANU	**Lannavaara**	**0.69**	**72**	P	**Pg**	**16 42 56.0**	**-0.1**
LANU				S	**Sg**	**16 43 05.3**	**+0.2**
LANU	**Lannavaara**	**0.69**	**72**	PG	**Pg**	**16 42 56.3**	**+0.1**
LANU				SG	**Sg**	**16 43 04.4**	**-0.7**
DUNU	**Dundret**	**0.73**	**170**	P	**Pg**	**16 42 56.6**	**-0.3**
DUNU				S	**Sg**	**16 43 06.8**	**+0.4**
MASU	**Masugnsbyn**	**0.77**	**119**	P	**Pg**	**16 42 57.6**	**-0.1**
SALU	**Saltoluokta**	**0.81**	**236**	P	**Pg**	**16 42 57.9**	**-0.5**
SALU				S	**Sg**	**16 43 09.1**	**+0.2**
KIF	**Kilpisjarvi**	**1.19**	**10**	*e*P	**Pb**	**16 43 06.4**	**+0.2**
KIF	**Kilpisjarvi**	**1.19**	**10**	PG	**Pg**	**16 43 05.7**	**+0.1**
KIF				smax	smax	16 43 20.5	
	comp=Z,18nm,0.2s						
KIF				SB	**Sg**	**16 43 21.3**	**+0.3**
HEF	**Hetta**	**1.40**	**64**	*e*P	**Pn**	**16 43 08.7**	**-0.9**
HEF	**Hetta**	**1.40**	**64**	PG	**Pn**	**16 43 08.8**	**-0.9**
	baz=248						
HEF				smax	smax	16 43 25.7	
	comp=Z,7.0nm,0.2s						
HEF				SB	**Sg**	**16 43 27.0**	**-0.9**
ERTU	**Ertsjaerv**	**1.50**	**149**	P	**Pn**	**16 43 10.3**	**-0.7**
ERTU				S	**Sn**	**16 43 31.3**	**0.0**
ERTU	**Ertsjaerv**	**1.50**	**149**	PG	**Pn**	**16 43 10.4**	**-0.7**
ERTU				SG	**Sg**	**16 43 31.1**	**+0.1**
KLF	**Kolari**	**1.55**	**111**	PG	**Pn**	**16 43 11.4**	**-0.4**
KLF				smax	smax	16 43 30.4	
	comp=Z,9.7nm,0.2s						
KLF				SN	**Sg**	**16 43 33.1**	**+0.4**
KTK1	**Kautokeino**	**1.61**	**42**	PG	**Pn**	**16 43 12.4**	**-0.2**
KTK1				SN	**Sg**	**16 43 35.0**	**+0.2**
HARU	**Harads**	**1.71**	**170**	P	**Pn**	**16 43 13.8**	**-0.1**
TRO	**Tromso**	**1.86**	**346**	PG	**Pn**	**16 43 16.6**	**+0.6**
TRO				SN	**Sn**	**16 43 40.6**	**+0.4**
TOF	**Tornio**	**2.39**	**136**	PN	**Pn**	**16 43 24.6**	**+1.4**
	baz=324						
TOF				smax	smax	16 43 54.4	
	comp=Z,5.6nm,0.2s						
TOF				SG	**Sb**	**16 43 57.0**	**+0.4**
RNF	**Rovaniemi**	**2.56**	**116**	PN	**Pn**	**16 43 24.5**	**-1.1**
RNF				SG	**Sb**	**16 44 01.7**	**0.0**
ARA0	**ARCESS Array S**	**2.57**	**46**	PB	**Pn**	**16 43 27.0**	**+1.3**
ARA0				SB	**Sb**	**16 44 00.1**	**-1.7**
ARCES	**ARCESS Array B**	**2.57**	**46**	Pn	**Pn**	**16 43 26.2**	**+0.5**
	comp=Z,0.9nm,0.3s,baz=225,slow=15,SNR=29						
ARCES				Lg	Lg	16 43 59.8	
	comp=Z,2.1nm,0.3s,baz=226,slow=26,SNR=14						
	comp=Z,1.7nm,0.3s						
RAJF	**Raja-Jooseppi**	**3.08**	**74**	PN	**Pn**	**16 43 31.9**	**-0.8**
RAJF				SG	**Sb**	**16 44 16.2**	**-0.5**
KEV	**Kevo**	**3.12**	**49**	PN	**Pn**	**16 43 34.3**	**+1.1**
KEV				SN	**Sn**	**16 44 12.1**	**+1.0**
RANF	**Ranua**	**3.16**	**122**	PN	**Pn**	**16 43 34.9**	**+1.1**
RANF				SG	**Sb**	**16 44 20.3**	**+1.4**
BURU	**Burvik**	**3.30**	**171**	PN	**Pn**	**16 43 37.4**	**+1.6**
BURU				SB	**Sb**	**16 44 19.8**	**-3.1**
VRF	**Varrio**	**3.56**	**87**	PN	**Pn**	**16 43 42.0**	**+2.7**
VRF				SG	**Sb**	**16 44 31.0**	**+0.7**
OUL	**Oulu**	**3.58**	**138**	PG	**Pb**	**16 43 49.0**	**+2.0**
	baz=322						
OUL				SG	**Sb**	**16 44 32.1**	**+1.3**
KU2	**Taivalkoski**	**3.82**	**120**	PN	**Pn**	**16 43 44.0**	**+1.1**
OLKF	**Oulanka, Finla**	**3.89**	**109**	PN	**Pn**	**16 43 44.8**	**+0.9**
OLKF				SG	**Sg**	**16 44 45.0**	**-2.8**
MSF	**Maaselka**	**3.97**	**115**	PN	**Pn**	**16 43 46.6**	**+1.6**
MSF				SG	**Sb**	**16 44 44.3**	**+2.1**
UMAU	**Umeaa**	**3.98**	**177**	PN	**Pn**	**16 43 47.3**	**+2.3**
	baz=358						
UMAU				SN	**Sn**	**16 44 34.2**	**+1.8**
KU6	**Riekki**	**4.21**	**111**	PN	**Pn**	**16 43 48.9**	**+0.7**
	baz=299						
KU6				SG	**Sg**	**16 44 54.5**	**-3.5**
FINES	**FINESS Array B**	**6.89**	**156**	Pn	**Pn**	**16 44 25.1**	**0.0**
	comp=Z,0.1nm,0.3s,baz=346,slow=16,SNR=1.2						
FINES				Sn	**Sn**	**16 45 42.0**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=344,slow=20,SNR=4.4						
FINES				Lg	Lg	16 46 14.5	
	comp=Z,0.5nm,0.3s,baz=341,slow=25,SNR=5.8						
	comp=Z,0.7nm,0.7s						
NOA	**NORSAR Array B**	**7.86**	**214**	Pn	**Pn**	**16 44 39.0**	**+0.7**
	baz=22,slow=12,SNR=1.7						
NOA				Lg	Lg	16 46 50.8	
	baz=49,slow=24,SNR=4.0						
	comp=Z,0.2nm,0.5s						
HFS	**Hagfors**	**8.25**	**203**	Pn	**Pn**	**16 44 43.0**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=23,slow=13,SNR=1.0						
HFS				Sn	**Sn**	**16 46 12.9**	**-4.5**
	comp=Z,0.1nm,0.3s,baz=1.2,slow=20,SNR=1.6						
	comp=Z,1.1nm,0.8s						

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*CNRM **03** 17:05:10.3, 36°.60N×7°.95W, h72km*
*IGIL **03** 17:05:11.8, 36°.53N×7°.95W, h27km, ML1.5*
*INMG **03** 17:05:11.9±1.1, 36°.55N×7°.95W, h26km±4km, ML1.7, Error ellipse: s-maj=3.2km s-min=3.2km az=104.0, #DIST_RANGE: LOCAL #IPMA_REGION: Golfo de Cadiz*
*SFS **03** 17:05:11.5, 36°.56N×7°.95W, h32km, ML2.6/8, ML2.6/8, MLv2.7/8*
*MDD **03** 17:05:11.8±1.2, 36°.60N×7°.96W, h34km±5km, mb_Lg2.4/5, Error ellipse: s-maj=16.2km s-min=5.5km az=171.0*
ISC 03 17:05:11.0±1.3**, 36°.57N**±0°.04×**7°.92W**±0°.03**, h35km, n36, σ0s.86**/67**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.68**	**359**	P	**Pn**	**17 05 24.8**	**+0.6**
PBDV				S	**Sn**	**17 05 33.5**	**-0.1**
PBDV	**Barranco-do-Ve**	**0.68**	**359**	*e*P	**Pn**	**17 05 24.7**	**+0.5**
PBDV				*e*S	**Sn**	**17 05 34.2**	**+0.6**
PBDV				*i* IAML		17 05 37.0	
PBDV				*i* IAML		17 05 37.4	
PBDV				*i* IAML		17 05 38.7	
PVAQ	**Vaqueiros**	**0.85**	**11**	*e*P	**Pn**	**17 05 27.1**	**+0.6**
PVAQ				*e*S	**Sn**	**17 05 38.2**	**+0.3**
PVAQ				*i* IAML		17 05 38.2	
PVAQ				*i* IAML		17 05 39.8	
PVAQ				*i* IAML		17 05 40.7	
PVAQ	**Vaqueiros**	**0.85**	**11**	P	**Pn**	**17 05 27.1**	**+0.6**
PVAQ				S	**Sn**	**17 05 39.1**	**+1.2**
PFVI	**Vila Bisbo**	**0.92**	**308**	P	**Pn**	**17 05 26.8**	**-0.7**
PFVI				S	**Sn**	**17 05 39.0**	**-0.6**
PFVI	**Vila Bisbo**	**0.92**	**308**	*e*P	**Pn**	**17 05 27.4**	**-0.1**
PFVI				*e*S	**Sn**	**17 05 39.4**	**-0.2**
PFVI				*i* IAML		17 05 42.0	
PFVI				*i* IAML		17 05 42.5	
PFVI				*i* IAML		17 05 43.1	
PFVI	**Vila Bisbo**	**0.92**	**308**	P	**Pn**	**17 05 27.5**	**0.0**
PFVI				S	**Sn**	**17 05 40.6**	**+1.0**
MORF	**Marmelete**	**0.94**	**322**	*e*P	**Pn**	**17 05 27.8**	**0.0**
MORF	**Marmelete**	**0.94**	**322**	*e*P	**Pn**	**17 05 27.8**	**0.0**
MORF				*e*S	**Sn**	**17 05 40.1**	**0.0**
MORF				*i* IAML		17 05 45.4	
MORF				*i* IAML		17 05 45.9	
MORF				*i* IAML		17 05 46.6	
EGRO	**El Granado**	**1.03**	**20**	P	**Pn**	**17 05 27.8**	**-1.2**
EGRO				S	**Sn**	**17 05 41.0**	**-1.1**
EGRO	**El Granado**	**1.03**	**20**	Pg	**Pn**	**17 05 29.5**	**+0.5**
EGRO				Sg	**Sn**	**17 05 41.9**	**-0.2**
EGRO				*i* IVmb_Lg		17 05 46.5	
PCVE	**Castro Verde**	**1.07**	**355**	P	**Pn**	**17 05 29.9**	**+0.4**
PCVE				S	**Sn**	**17 05 43.1**	**-0.1**
PCVE	**Castro Verde**	**1.07**	**355**	*e*P	**Pn**	**17 05 30.2**	**+0.7**
PCVE				*e*S	**Sn**	**17 05 43.5**	**+0.3**
PCVE				*i* IAML		17 05 43.6	
PCVE				*i* IAML		17 05 43.6	
PCVE				*i* IAML		17 05 44.3	
PTEO	**Sao Teotonio**	**1.17**	**327**	*e*P	**Pn**	**17 05 31.4**	**+0.4**
PTEO				*e*S	**Sn**	**17 05 45.7**	**0.0**
PTEO				*i* IAML		17 05 52.5	
PTEO				*i* IAML		17 05 53.6	
PTEO				*i* IAML		17 05 54.5	
MESJ	**Messejana**	**1.29**	**349**	*e*P	**Pn**	**17 05 33.2**	**+0.6**
MESJ				*e*S	**Sn**	**17 05 48.6**	**-0.1**
MESJ				IAML		17 05 50.2	
	comp=N,6.6nm,0.1s						
MESJ	**Messejana**	**1.29**	**349**	*e*P	**Pn**	**17 05 33.4**	**+0.7**
MESJ				*e*S	**Sn**	**17 05 49.0**	**+0.3**
MESJ				*i* IAML		17 05 52.6	
MESJ				*i* IAML		17 06 00.3	
MESJ				*i* IAML		17 06 01.0	
PBEJ	**Beja**	**1.46**	**2**	*e*S	**Sn**	**17 05 52.9**	**+0.1**
PBEJ				*i* IAML		17 05 53.2	
PBEJ				*i* IAML		17 05 55.1	
PBEJ				*i* IAML		17 05 55.4	
EMIN	**Mina Concepcio**	**1.56**	**39**	P	**Pn**	**17 05 36.2**	**-0.1**
EMIN				S	**Sn**	**17 05 55.1**	**-0.2**
EMIN	**Mina Concepcio**	**1.56**	**39**	Pn	**Pn**	**17 05 37.4**	**+1.2**
EMIN				Sn	**Sn**	**17 05 56.5**	**+1.2**
EMIN				*i* IVmb_Lg		17 06 01.3	
ESPR	**Espera**	**1.68**	**79**	S	**Sn**	**17 05 58.2**	**-0.1**
PBAR	**Barrancos**	**1.75**	**23**	P	**Pn**	**17 05 39.2**	**+0.2**
PBAR				S	**Sn**	**17 06 01.0**	**+1.0**
PBAR	**Barrancos**	**1.75**	**23**	*e*P	**Pn**	**17 05 39.6**	**+0.7**
PBAR				*e*S	**Sn**	**17 06 00.1**	**+0.1**
PBAR				*i* IAML		17 06 02.6	
PBAR				*i* IAML		17 06 02.9	
PBAR				*i* IAML		17 06 11.8	
EVO	**Evora**	**1.96**	**358**	P	**Pn**	**17 05 42.1**	**+0.3**
MOE	**Montemor**	**1.98**	**350**	*e*P	**Pn**	**17 05 43.0**	**+0.9**
MOE				*e*S	**Sn**	**17 06 05.9**	**+0.1**
MOE				*i* IAML		17 06 17.6	
MOE				*i* IAML		17 06 22.1	
MOE				*i* IAML		17 06 23.6	
PARRA	**Arraiolos**	**2.25**	**358**	*e*P	**Pn**	**17 05 46.3**	**+0.5**
PARRA				*e*S	**Sn**	**17 06 11.7**	**-0.6**
PARRA				*i* IAML		17 06 12.8	
PARRA				*i* IAML		17 06 13.4	
PARRA				*i* IAML		17 06 14.4	
ECAB	**El Cabril**	**2.50**	**52**	P	**Pn**	**17 05 49.2**	**0.0**
ECAB				S	**Sn**	**17 06 17.1**	**-1.4**
ECAB	**El Cabril**	**2.50**	**52**	Pn	**Pn**	**17 05 49.4**	**+0.2**
ECAB				Sn	**Sn**	**17 06 16.1**	**-2.3**
ECAB				*i* IVmb_Lg		17 06 40.1	
PMTG	**Montargil**	**2.51**	**355**	*e*P	**Pn**	**17 05 49.8**	**+0.5**
PMTG				*e*S	**Sn**	**17 06 18.4**	**-0.4**
PMTG				*i* IAML		17 06 19.4	
PMTG				*i* IAML		17 06 19.5	
PMTG				*i* IAML		17 06 19.6	
PMAFR	**Mafra**	**2.62**	**336**	P	**Pn**	**17 05 50.5**	**-0.3**
PMAFR				S	**Sn**	**17 06 19.0**	**-2.5**
PMRV	**Marv??o**	**2.89**	**8**	*e*P	**Pn**	**17 05 54.8**	**+0.2**
PMRV				*e*S	**Sn**	**17 06 27.9**	**-0.2**
PMRV				*i* IAML		17 06 28.0	
PMRV				*i* IAML		17 06 29.2	
PMRV				*i* IAML		17 06 32.7	
PSBE	**So Bento**	**3.02**	**347**	*e*P	**Pn**	**17 05 57.0**	**+0.5**
PSARD	**Sardoal**	**3.04**	**356**	*e*P	**Pn**	**17 05 57.3**	**+0.7**
PSARD				*e*S	**Sn**	**17 06 30.7**	**-1.0**
PSARD				*i* IAML		17 06 32.9	
PSARD				*i* IAML		17 06 33.0	
PSARD				*i* IAML		17 06 33.4	
EADA	**Adamuz**	**3.10**	**58**	P	**Pn**	**17 05 58.5**	**+0.9**
EADA				S	**Sn**	**17 06 32.2**	**-1.2**
EADA	**Adamuz**	**3.10**	**58**	Pn	**Pn**	**17 05 58.4**	**+0.9**
EADA				Sn	**Sn**	**17 06 30.8**	**-2.6**
EADA				*i* IVmb_Lg		17 08 08.2	
MD31	**MD31**	**4.51**	**144**	P	**Pn**	**17 06 16.6**	**-0.3**
MD31				S	**Sn**	**17 07 08.4**	**+0.1**
MDT	**Midelt**	**4.63**	**143**	P	**Pn**	**17 06 18.1**	**-0.4**
MDT				S	**Sn**	**17 07 13.4**	**+2.3**

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*IDC **03** 17:14:26.5±3.1, 9°.82S×154°.32E, h0km, mb3.7/5, mbtmp3.7/5, MS3.4/13, Error ellipse: s-maj=82.2km s-min=27.7km az=102.0*
ISC 03 17:14:29.5±3.0**, 9°.8S**±0°.2×**154°.3E**±0°.6**, h18km, n18, σ0s.83**/6**, mb3.7**/6**, MS3.3**/11**, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.59**	**86**	LR	LR	17 17 39.7	
	comp=Z,7.1nm,19.8s,baz=348,slow=35						
CTA	**Charters Tower**	**12.82**	**216**	LR	LR	17 22 05.6	
	comp=Z,128nm,19.0s,baz=50,slow=36						
DZM	**Mont Dzumac**	**16.86**	**138**	LR	LR	17 23 34.4	
	comp=Z,350nm,20.5s,baz=344,slow=32						
WRA	**Warramunga Arr**	**21.73**	**240**	P	**P**	**17 19 19.4**	**-0.6**
	1.3nm,0.8s,baz=64,slow=9.6,SNR=9.3						
	1.3nm,0.8s						
ASAR	**Alice Springs**	**23.84**	**232**	P	**P**	**17 19 41.6**	**-0.3**
	2.6nm,0.9s,baz=58,slow=8.7,SNR=13						
ASAR				LR	LR	17 28 52.8	
	comp=Z,76nm,18.9s,baz=112,slow=36						
MSVF	**Nonsavu**	**24.35**	**111**	LR	LR	17 26 50.7	
	comp=Z,106nm,21.1s,baz=295,slow=31						
STKA	**Stephens Creek**	**24.90**	**206**	P	**P**	**17 19 51.9**	**+0.5**
	2.2nm,0.7s,baz=32,slow=12,SNR=5.7						
STKA				LR	LR	17 28 52.8	
	comp=Z,118nm,18.4s,baz=22,slow=35						
	2.2nm,0.7s						
BATI	**Baumata**	**30.16**	**267**	LR	LR	17 34 23.3	
	comp=Z,83nm,18.3s,baz=192,slow=40						
URZ	**Urewera**	**34.95**	**148**	LR	LR	17 34 14.4	
	comp=Z,89nm,18.9s,baz=325,slow=34						
RPZ	**Rata Peaks**	**36.77**	**160**	LR	LR	17 35 38.6	
	comp=Z,141nm,20.6s,baz=66,slow=35						
JCJ	**Chichijima**	**38.54**	**343**	LR	LR	17 34 57.2	
	comp=Z,43nm,20.5s,baz=95,slow=32						
JOW	**Kunigami**	**44.34**	**326**	LR	LR	17 38 19.8	
	comp=Z,37nm,19.4s,baz=66,slow=32						
MJAR	**Matsushiro Arr**	**48.54**	**343**	LR	LR	17 43 13.1	
	comp=Z,18nm,18.3s,baz=166,slow=36						
KSRS	**Korea Array**	**53.13**	**334**	LR	LR	17 45 27.9	
	comp=Z,12nm,19.3s,baz=205,slow=35						
CMAR	**Chiang Mai Arr**	**61.41**	**297**	P	**P**	**17 24 46.0**	**+0.9**
	1.2nm,0.9s,baz=130,slow=5.3,SNR=9.5						
	1.2nm,0.9s						
SHEM	**Shemya Is, Ala**	**64.58**	**13**	LR	LR	17 48 42.6	
	comp=Z,46nm,19.3s,baz=290,slow=32						
SONM	**Songino Array**	**71.34**	**328**	P	**P**	**17 25 48.4**	**+0.1**
	0.3nm,0.5s,baz=120,slow=5.2,SNR=2.7						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**85.07**	**319**	P	**P**	**17 27 03.5**	**-0.8**
	0.3nm,0.7s,baz=96,slow=5.0,SNR=3.8						
	0.3nm,0.7s						

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*VIE **03** 17:30:02.8±0.3, 49°.83N×18°.45E, h0km, mb2.4/6, ml2.8/6, Error ellipse: s-maj=2.7km s-min=1.9km az=114.0 14 km E of Ostrava Suspected Mining induced.*
*IPEC **03** 17:30:03.4±0.3, 49°.83N×18°.55E, h1km, ML2.6/6, Error ellipse: s-maj=1.8km s-min=1.4km az=80.0*
*KRSZO **03** 17:30:04.3±1.0, 49°.76N×18°.52E, h3km±13km, ML2.8/13, Error ellipse: s-maj=9.2km s-min=3.6km az=21.0*
*PRU **03** 17:30:04.9, 49°.86N×18°.47E, h0km, Mining Induced Event Csm, E=1.5e+06*
ISC 03 17:30:02.5±0.7**, 49°.85N**±0°.03×**18°.52E**±0°.02**, h0km, n69, σ0s.80**/115**, 9C-8D, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.24**	**267**	*e*PG	**Pb**	**17 30 09.0**	**+1.9**
OKC				*e*SG	**Sb**	**17 30 12.6**	**+2.4**
	comp=Z,237nm,0.4s						
OKC	**Ostrava-Krasne**	**0.24**	**267**	Pg	**Pb**	**17 30 08.7**	**+1.6**
OKC				Lg	Lg	17 30 13.2	
RAC	**Raciborz**	**0.32**	**318**	*e*PG	**Pb**	**17 30 10.8**	**-0.2**
RAC				*e*SG	**Sb**	**17 30 16.5**	**-0.2**
STEB	**Steborice**	**0.49**	**280**	*e*PG	**Pb**	**17 30 13.6**	**-0.4**
STEB				*e*SG	**Sb**	**17 30 20.1**	**-1.7**
	comp=Z,129nm,0.4s						
MORC	**Moravsky Berou**	**0.64**	**264**	⇓P	**Pb**	**17 30 16.5**	**-0.1**
MORC				⇑S	**Sb**	**17 30 24.7**	**-1.3**
MORC	**Moravsky Berou**	**0.64**	**264**	Pg	**Pb**	**17 30 16.7**	**+0.1**
MORC				Lg	Lg	17 30 24.9	
MORC	**Moravsky Berou**	**0.64**	**264**	*e*Pg	**Pb**	**17 30 16.2**	**-0.3**
	baz=85						
MORC				*e*Sg	**Sg**	**17 30 23.9**	**+0.9**
	148nm,0.4s,baz=85						
MAUC	**Maruska**	**0.66**	**223**	*e*PG	**Pb**	**17 30 16.5**	**-0.4**
MAUC				*e*SG	**Sb**	**17 30 26.0**	**-0.7**
	comp=Z,346nm,0.5s						
ANAC	**Anensky vrch**	**0.77**	**287**	*e*Pg	**Pb**	**17 30 18.4**	**-0.4**
	baz=108						
ANAC				*e*Sg	**Sg**	**17 30 28.3**	**+1.1**
	80nm,0.4s,baz=108						
LOSC	**Losov**	**0.78**	**253**	*e*Pg	**Pb**	**17 30 18.6**	**-0.3**
	baz=74						
LOSC				*e*Sg	**Sg**	**17 30 28.4**	**+0.9**
	126nm,0.4s,baz=74						
LANS	**Liptovska Anna**	**0.93**	**138**	Pg	**Pg**	**17 30 20.7**	**+0.3**
LANS				Lg	Lg	17 30 34.5	
LANS	**Liptovska Anna**	**0.93**	**138**	*e*PG	**Pg**	**17 30 20.8**	**+0.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LANS				eSG	Sb	17 30 35.0	+0.5
LANS				eLG	Lg	17 30 36.4	
JAVC	Velka Javorina	1.14	210	Pn	Pn	17 30 25.8	+0.1
JAVC				Lg	Lg	17 30 41.9	
JAVC	Velka Javorina	1.14	210	ePg	Pb	17 30 25.2	+0.2
	baz=30						
JAVC	Velka Javorina	1.14	210	ePG	Pb	17 30 25.3	+0.2
KRLC	Kraliky	1.15	282	ePG	Pg	17 30 24.6	+0.2
KRLC				eSG	Sb	17 30 40.6	0.0
	comp=Z,75nm,0.3s						
NIE	Niedzica	1.23	110	ePg	Pn	17 30 27.2	+0.2
NIE				eSg	Sn	17 30 44.9	+0.4
VRAC	Vranov	1.37	247	⇓P	Pg	17 30 28.7	0.0
VRAC				⇓S	Sg	17 30 46.7	+0.3
VRAC	Vranov	1.37	247	Pn	Pg	17 30 28.6	0.0
VRAC				Lg	Lg	17 30 46.3	
VRAC	Vranov	1.37	247	ePg	Pb	17 30 29.1	+0.2
	baz=67						
VRAC				eSg	Sg	17 30 46.5	+0.1
	74nm,0.3s,baz=67						
DPC	Dobruska-Polom	1.50	290	ePG	Pg	17 30 31.0	-0.3
DPC				eSG	Sn	17 30 51.6	+0.6
	comp=Z,45nm,0.4s						
KRUC	Moravsky	1.59	241	Pn	Pn	17 30 32.3	+0.3
KRUC				Sn	Sb	17 30 53.8	+0.3
KRUC	Moravsky	1.59	241	ePg	Pn	17 30 32.4	+0.5
	baz=61						
KRUC				eSg	Sn	17 30 53.5	+0.3
	46nm,0.3s,baz=61						
KRUC	Moravsky	1.59	241	ePG	Pn	17 30 32.5	+0.5
KRUC				eSG	Sn	17 30 53.6	+0.3
OSTC	Ostas	1.64	296	ePG	Pg	17 30 33.7	-0.2
OSTC				eSG	Sg	17 30 55.4	+0.2
	comp=Z,36nm,0.6s						
MODS	Modra-Piesok	1.69	209	Pn	Pn	17 30 33.6	+0.3
MODS				Sn	Sn	17 30 55.6	0.0
MODS	Modra-Piesok	1.69	209	ePG	Pn	17 30 33.2	-0.1
MODS				eSG	Sn	17 30 55.5	-0.1
KSP	Ksiaz	1.74	306	ePg	Pg	17 30 36.0	+0.2
KSP				eSg	Sg	17 30 59.0	+0.6
KSP	Ksiaz	1.74	306	Pn	Pn	17 30 34.2	+0.2
UPC	Upice	1.74	293	ePG	Pg	17 30 35.6	-0.3
UPC				eSG	Sg	17 30 59.4	+1.0
	comp=Z,26nm,0.5s						
CHVC	Chvalec	1.75	296	ePG	Pb	17 30 35.5	0.0
CHVC				eSG	Sg	17 30 59.4	+0.8
	comp=Z,18nm,0.4s						
STHS	Stebnicka Huta	1.82	103	Pn	Pb	17 30 36.5	-0.2
STHS	Stebnicka Huta	1.82	103	ePG	Pg	17 30 37.0	-0.4
STHS				eSG	Sg	17 31 02.2	+1.2
KECS	Kecovo	1.88	136	Pn	Pn	17 30 35.4	-0.5
KECS				Sn	Sn	17 31 00.8	+0.5
KECS	Kecovo	1.88	136	ePN	Pn	17 30 35.4	-0.5
KECS				eSN	Sn	17 30 59.0	-1.3
ZST	Bratislava	1.90	210	Pn	Pn	17 30 36.9	+0.7
TREC	Trest	2.05	255	Pn	Pb	17 30 40.6	0.0
TREC				Sn	Sb	17 31 07.5	+0.9
PSZ	Piszkesteto	2.13	154	⇓P	Pn	17 30 40.0	+0.6
PSZ	Piszkesteto	2.13	154	Pn	Pn	17 30 39.8	+0.3
PSZ				Sn	Sn	17 31 07.6	+1.0
ABAH	Abaujker	2.37	130	Pn	Pn	17 30 42.4	-0.1
WINA	Alland / Wiene	2.38	224	Pn	Pn	17 30 42.3	-0.4
	1.0nm,0.2s						
CSKK	Cskako	2.50	184	Pn	Pn	17 30 44.1	-0.2
CSKK				Sn	Sn	17 31 14.8	-0.6
EGYH	Egyhazaskeszo	2.56	198	Sn	Sn	17 31 17.5	+0.5
PRU	Pruhonice	2.58	275	ePG	Pg	17 30 51.4	-0.4
PRU				eSG	Sg	17 31 25.0	-0.2
	comp=Z,19nm,0.4s						
CONA	Conrad Observa	2.60	223	ePn	Pn	17 30 45.5	-0.4
	3.0nm,0.3s						
CONA				Sn	Sn	17 31 17.6	-0.6
	8.3nm,0.3s						
CONA	Conrad Observa	2.60	223	Pn	Pn	17 30 46.3	+0.4
RONA	Rosalia, Austr	2.61	215	Pn	Pn	17 30 45.2	-0.7
	1.9nm,0.2s						
RONA				Sn	Sn	17 31 17.6	-0.7
	5.1nm,0.2s						
PVCC	Panska Ves	2.63	286	ePG	Pg	17 30 51.6	-1.3
PVCC				eSG	Sg	17 31 26.6	-0.3
	comp=Z,18nm,0.3s						
MPLH	Magyarpolny	2.76	194	Pn	Pn	17 30 49.0	+1.0
MPLH				Sn	Sn	17 31 22.7	+0.7
ZVC	Zvikov	2.84	263	ePG	Pb	17 30 54.9	+0.8
ZVC				eSG	Sg	17 31 34.2	+0.4
	comp=Z,22nm,0.6s						
CKRC	Cesky Krumlov	2.94	251	ePG	Pg	17 30 57.9	-0.9
CKRC				eSG	Sg	17 31 36.6	-0.3
	comp=Z,16nm,0.4s						
TRPA	Tarpa	3.16	122	Pn	Pn	17 30 53.8	+0.4
ARSA	Arzberg	3.28	219	eSn	Sn	17 31 34.6	-0.1
	5.4nm,0.5s						
KHC	Kasperske Hory	3.30	259	ePN	Pn	17 30 56.7	+1.2
KHC				ePG	Pb	17 31 03.4	+1.5
KHC				eSG	Sg	17 31 49.3	+0.8
	comp=Z,19nm,0.4s						
HSKC	Hora Svate Kat	3.35	285	ePG	Pg	17 31 04.7	-2.0
HSKC				eSG	Sg	17 31 50.9	+0.7
MOA	Molln	3.45	236	ePn	Pn	17 30 55.9	-1.6
	0.8nm,0.2s						
MOA				eSn	Sn	17 31 38.8	-0.3
	2.6nm,0.3s						
MORH	Mrgy, Hungar	3.64	179	⇑P	Pn	17 30 60.0	-0.1
MORH				⇑S	Sn	17 31 40.0	-3.6
CLL	Collm	3.81	295	ePg	Pg	17 31 15.0	-0.4
CLL				eSg	Sg	17 32 04.0	-0.7
	comp=Z,15nm,0.5s						
BIOA	Bad Ischl, Aus	3.88	238	Sg	Sg	17 32 06.6	-0.6
	comp=Z,9.9nm,0.3s						
NKC	Novy Kostel	3.93	278	eSG	Sg	17 32 08.2	-0.6
DRGR		4.14	136	⇓P	Pn	17 31 07.2	+0.1
DRGR				⇑S	Sn	17 31 55.1	-1.1
MARR	Marisel-Cluj	4.42	134	⇓P	Pn	17 31 10.9	+0.1
MARR				⇑S	Sn	17 32 03.0	0.0
CJR	Cluj-Napoca	4.62	131	⇓P	Pn	17 31 14.1	+0.5
CJR				⇓S	Sn	17 32 08.4	+0.5
BZS	Buzias	4.72	153	⇑P	Pn	17 31 14.7	-0.3
BURAR	Bucovina Array	4.96	114	⇑P	Pn	17 31 20.0	+1.7
BURAR				⇑S	Sn	17 32 16.4	-0.1
GZR	Gura Zlata	5.31	146	⇑P	Pn	17 31 23.1	+0.1
LUNU	Lund	6.56	334	i P	Pn	17 31 39.7	-0.4
BLEU	Blekinge	6.67	347	i P	Pn	17 31 41.0	-0.6
DEL	Delary	7.20	339	i P	Pn	17 31 47.6	-1.2

*IDC **03** 17:30:20.6±8.1, 14°.36S×167°.17E, h132km±85km, mb3.4/5, mbtmp3.8/6, Error ellipse: s-maj=73.0km s-min=30.8km az=148.0*

*NEIC **03** 17:30:22.5±1.5, 14°.6S±0°.1×167°.4E±0°.1, h162km±6km, mb4.4/11, Error ellipse: s-maj=19.9km s-min=13.2km az=136.0*

ISC 03 17:30:22.6±1.0**, 14°.61S**±0°.08×**167°.5E**±0°.2**, h170km, n24,** σ**1§37**/28**, mb4.2**/12**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.87	196		Pn	17 30 47.8	-0.5
SANVU				Sn	Sn	17 31 06.9	-1.4
MARNC	Mare, Loyalty	6.86	175	Pn	Pn	17 31 58.2	-2.6
MARNC				Sn	Sn	17 33 18.8	+0.7
DZM	Mont Dzumac	7.48	187	P	Pn	17 32 10.6	+1.5
	3.0nm,0.3s,baz=18,slow=20,SNR=14						
DZM				S	Sn	17 33 35.6	+2.4
	1.8nm,0.4s,baz=312,slow=24,SNR=1.3						
DZM	Mont Dzumac	7.48	187		Pn	17 32 07.4	-1.8
DZM				Sn	Sn	17 33 32.7	-0.6
ONTNC	Ouen Toro	7.72	187	Pn	Pn	17 32 09.2	-3.0
OUENC	Ouen Island, N	7.79	184	Pn	Pn	17 32 11.6	-1.6
OUENC				Sn	Sn	17 33 41.5	+1.1
INKA	Innaminka	28.04	238	P	P	17 35 57.6	-0.5
STKA	Stephens Creek	29.20	229	P	P	17 36 10.0	+1.7
	2.0nm,0.4s,baz=48,slow=15,SNR=7.6						
	2.0nm,0.4s						
STKA	Stephens Creek	29.20	229	P	P	17 36 08.9	+0.6
WR8	Warramunga Arr	31.87	256	P	P	17 36 31.8	-0.2
WR8				IAmb	IAmb	17 36 38.0	
	comp=Z,4.7nm,1.1s						
WB0	Warramunga Arr	31.96	256	P	P	17 36 32.0	-0.7
WB0				IAmb	IAmb	17 36 35.1	
	comp=Z,13nm,1.4s						
WRA	Warramunga Arr	32.02	256	P	P	17 36 32.6	-0.7
	comp=Z,0.6nm,0.8s,baz=85,slow=8.9,SNR=5.3						
	comp=Z,0.6nm,0.8s						
AS31	Alice Springs	32.88	249	P	P	17 36 40.1	-0.6
ASAR	Alice Springs	32.88	249	P	P	17 36 40.3	-0.4
	comp=Z,0.9nm,0.6s,baz=80,slow=9.3,SNR=7.9						
BBOO	Buckleboo	33.79	232	P	P	17 36 49.5	+1.0
BBOO				IAmb	IAmb	17 36 55.7	
	comp=Z,12nm,1.1s						
KNRA	Kununurra	37.33	263	P	P	17 37 17.4	-1.4
FORT	Forrest	39.51	239	P	P	17 37 37.5	+0.7
FORT				IAmb	IAmb	17 37 37.9	
	comp=Z,6.9nm,0.9s						
MBWA	Marble Bar	45.74	255	P	P	17 38 26.3	-1.0
MBWA				IAmb	IAmb	17 38 34.9	
	comp=Z,15nm,1.4s						
VNDA	Vanda	62.99	181	P	P	17 40 32.0	+1.3
VNDA				IAmb	IAmb	17 40 43.4	
	comp=Z,11nm,1.2s						
CMAR	Chiang Mai Arr	75.06	294	P	P	17 41 47.2	+1.0
	comp=Z,0.3nm,0.7s,baz=104,slow=6.6,SNR=1.9						
	comp=Z,0.3nm,0.7s						
N15K	Kwethluk River	78.97	16	P	P	17 42 06.2	-0.9
N15K				IAmb	IAmb	17 42 23.4	
	comp=Z,11nm,1.4s						
ILAR	Eielson Array	86.36	18	P	P	17 42 46.2	+1.1
	comp=Z,0.4nm,0.6s,baz=228,slow=4.7,SNR=5.5						
	comp=Z,0.4nm,0.6s						
MKAR	Makanchi Array	97.24	316	P	Pdif	17 43 37.3	+1.2
	comp=Z,0.2nm,0.6s,baz=86,slow=7.4,SNR=2.3						
	comp=Z,0.2nm,0.6s						
MKAR	Makanchi Array	97.24	316	P	P	17 43 36.2	+0.2

*JMA **03** 17:30:38.4±0.4, 44°N±1°×14°8E±°, h0km, MV4.0/38, E OFF HOKKAIDO*

*NIED **03** 17:30:38.4, 43°.72N×147°.92E, h0km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; Mrr1.82; Mθθ2.19; Mφφ-4.01; Mrθ-2.36; Mθφ0.49; Mφr-1.41; Fault plane solution: M0 4.46000×10^{14} NP1: φs320.00000°, δ50.00000°, λ25.00000°. NP2: φs213.00000°, δ71.00000°, λ137.00000°.*

*SKHL **03** 17:30:38.4±0.2, 43°.70N×148°.40E, h36km±6km, mb4.9/4*

*MOS **03** 17:30:39.0±1.2, 43°.84N×148°.15E, h31km, mb4.6/1, Error ellipse: s-maj=13.2km s-min=11.4km az=8.9*

*IDC **03** 17:30:41.5±1.0, 43°.88N×148°.05E, h33km±5km, mb3.4/9, mbtmp3.6/12, ML3.2/3, MS3.4/2, Error ellipse: s-maj=26.9km s-min=16.3km az=159.0*

ISC 03 17:30:41.1±0.7**, 43°.81N**±0°.07×**148°.24E**±0°.06**, h35km, n60,** σ**1§72**/65**, mb3.7**/9**, 1D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	Shikotan	1.02	274	eP	Pn	17 31 06.9	+8.1
SHO				AMB	AMB	17 31 08.2	
	550nm,0.5s						
SHO				eS	Sn	17 31 18.0	+6.1
SHO				A	A	17 31 22.6	
	2μm,0.4s						
SHO				A	A	17 31 22.6	
	2μm,0.4s						
KUR	Kuril'sk	1.45	350	ePN	Pn	17 31 01.5	-3.2
KUR				i S	Sn	17 31 19.0	-3.4
KUR	Kuril'sk	1.45	350	eP	Pn	17 31 02.7	-2.0
KUR				AMB	AMB	17 31 06.9	
	150nm,0.5s						
KUR				eS	Sn	17 31 20.8	-1.6
KUR				A	A	17 31 23.9	
	370nm,0.3s						
KUR				A	A	17 31 23.9	
	650nm,0.3s						
YUK	Yuzh-Kuril'sk	1.73	278	ePN	Pn	17 31 06.5	-2.1
YUK				i S	Sn	17 31 27.5	-2.0
YUK				pmax	pmax		
	comp=Z,627nm,0.2s						
YUK				pmax	pmax		
	comp=N,159nm,0.1s						
YUK				pmax	pmax		
	comp=E,363nm,0.2s						
YUK				smax	smax		
	comp=N,2μm,0.3s						
YUK				smax	smax		
	comp=E,1μm,0.2s						
YUK	Yuzh-Kuril'sk	1.73	278	eP	Pn	17 31 06.3	-2.3
YUK				AMB	AMB	17 31 12.1	
	comp=E,610nm,0.3s						
YUK				i S	Sn	17 31 27.4	-2.0
YUK				A	A	17 31 30.7	
	comp=E,2μm,0.4s						
YUK				A	A	17 31 30.7	
	comp=E,2μm,0.4s						
NEM2	Nemuro 2	1.86	257	P	Pn	17 31 08.3	-2.1
NEM2				eS	Sn	17 31 30.2	-2.6
NMR	Nemuro--Hokkai	1.88	257	ePN	Pn	17 31 08.1	-2.5
NMR				i S	Sn	17 31 31.2	-1.8
NMR	Nemuro--Hokkai	1.88	257	eP	Pn	17 31 08.2	-2.4
NMR				eS	Sn	17 31 31.2	-1.8
GLVR	Golovnino	1.97	269	ePN	Pn	17 31 10.4	-1.5
GLVR				i S	Sn	17 31 33.9	-1.4
GLVR				pmax	pmax		
	comp=Z,695nm,0.3s						
GLVR				pmax	pmax		
	comp=N,100nm,0.2s						
GLVR				pmax	pmax		
	comp=E,95nm,0.3s						
GLVR				smax	smax		
	comp=N,2μm,0.3s						
GLVR				smax	smax		
	comp=E,1μm,0.3s						
GLVR	Golovnino	1.97	269	eP	Pn	17 31 10.4	-1.5
GLVR				AMB	AMB	17 31 10.9	
	comp=E,700nm,0.5s						
GLVR				eS	Sn	17 31 34.1	-1.2
GLVR				A	A	17 31 38.2	
	comp=E,2μm,0.5s						
GLVR				A	A	17 31 38.2	
	comp=E,1μm,0.5s						
RUSJ	Misakicho	2.18	279	⇓iPN	Pn	17 31 13.7	-1.0
RUSJ				i S	Sn	17 31 39.5	-1.0
JRA	Rausu	2.25	274	P	Pn	17 31 14.6	-1.2
JRA				eS	Sn	17 31 40.4	-1.9
JNSB	Nemuroshibetsu	2.34	270	P	Pn	17 31 15.8	-1.1
JNSB				eS	Sn	17 31 43.0	-1.4
JKHN	Kushirohamanak	2.35	253	eP	Pn	17 31 15.7	-1.5
JNK	Nakash	2.56	266	P	Pn	17 31 18.5	-1.6
AKK	Akkeshi	2.60	253	eP	Pn	17 31 19.2	-1.3
JAK	Akkeshi	2.71	254	eP	Pn	17 31 20.2	-1.7
JTKR	Abashiri--Toko	3.13	274	P	Pn	17 31 27.4	-0.4
JAR	Ashorobuto	3.29	263	P	Pn	17 31 29.2	-0.9
JOB	Onbets	3.33	256	P	Pn	17 31 29.7	-1.0
JMP	Maruseppu	3.53	275	P	Pn	17 31 33.1	-0.3
JCH	Churui	3.76	253	eP	Pn	17 31 35.8	-0.7
JKK2	Kamakawa 2	3.97	273	eP	Pn	17 31 40.5	+1.1
JKA	Kamikawa-asahi	4.08	276	eP	Pn	17 31 41.3	+0.4
ASAJ	Asahikawa	4.08	276	Pn	Pn	17 31 41.3	+0.4
	comp=E,2.5nm,0.3s,baz=74,slow=10,SNR=28						
	comp=E,6.3nm,0.4s						
ASAJ	Asahikawa	4.08	276	eP	Pn	17 31 42.0	+1.1
JSE	Soyaes	4.21	288	eP	Pn	17 31 42.4	-0.3
JNBK	Urakawa-nobuka	4.30	251	eP	Pn	17 31 42.6	-1.3
JHR	Hokuryu	4.71	271	eP	Pn	17 31 52.2	+2.6
JWK2	Keihoku	4.77	291	eP	Pn	17 31 53.5	+3.1
YSS	Yuzhno-Sakhali	4.98	311	ePN	Pn	17 31 52.4	-0.8
YSS	Yuzhno-Sakhali	4.98	311	eP	Pn	17 31 52.8	-0.4
JEW	Eniwo	5.04	261	eP	Pn	17 31 54.7	+0.6
TYV	Tymovskoe	8.01	334	eP	Pn	17 32 36.1	+1.4
SKR	Severo-Kuril's	8.71	35	eP	Pn	17 32 44.9	+0.5
MJAR	Matsushiro Arr	10.56	230	Pn	Pn	17 33 09.1	-0.7
	comp=E,0.1nm,0.3s,baz=31,slow=14,SNR=3.8						
	comp=E,1.1nm,0.6s						
KLR	Kul'dur	12.57	301	LR	LR	17 38 53.7	
	comp=E,69nm,18.7s,baz=86,slow=40						
KSRS	Korea Array	16.66	255	Pn	Pn	17 34 32.0	+0.3
	comp=E,0.1nm,0.3s,baz=30,slow=13,SNR=1.8						
	comp=E,1.5nm,0.9s						
KSRS	Korea Array	16.66	255	P	Pn	17 34 32.0	+0.3
H11N2	WAKE ISLAND Hy	28.64	141	T	T	18 07 06.2	
	baz=331,slow=76						
H11N1	WAKE ISLAND Hy	28.66	141	T	T	18 07 10.6	
	baz=331,slow=76						
H11N3	WAKE ISLAND Hy	28.66	141	T	T	18 07 13.0	
	baz=331,slow=76						
H11S1	WAKE ISLAND Hy	29.63	143	T	T	18 08 24.9	
	baz=333,slow=76						
H11S3	WAKE ISLAND Hy	29.63	143	T	T	18 08 22.1	
	baz=333,slow=76						
H11S2	WAKE ISLAND Hy	29.64	143	T	T	18 08 23.5	
	baz=333,slow=76						
ILAR	Eielson Array	40.97	36	P	P	17 38 19.9	-0.1
	comp=E,0.3nm,0.6s,baz=276,slow=9.0,SNR=6.4						
ILAR				pP	sP	17 38 31.3	-1.8
	comp=E,0.5nm,0.9s,baz=270,slow=8.2,SNR=5.4						
	comp=E,0.3nm,0.6s						
MKAR	Makanchi Array	45.25	298	P	P	17 38 53.8	-1.1
	comp=E,0.5nm,0.7s,baz=81,slow=7.8,SNR=7.5						
	comp=E,0.5nm,0.7s						
KURK	Kurchatov	46.15	304	P	P	17 39 02.1	+0.3
KURK	Kurchatov	46.15	304	eP	P	17 39 02.1	+0.3
KURBB	Kurchatov Arra	46.23	304	P	P	17 39 02.0	-0.4
	comp=E,0.3nm,0.5s,baz=75,slow=7.9,SNR=4.5						
	comp=E,0.3nm,0.5s						
YKA	Yellowknife Ar	55.31	34	P	P	17 40 12.0	+1.3
	comp=E,0.1nm,0.4s,baz=304,slow=7.5,SNR=8.6						
YKA				pP	pP	17 40 21.1	+1.0
	comp=E,0.5nm,0.5s,baz=255,slow=6.1,SNR=6.9						
	comp=E,0.1nm,0.4s						
WRA	Warramunga Arr	64.71	194	P	P	17 41 16.2	+0.7
	comp=E,0.5nm,0.8s,baz=11,slow=6.7,SNR=5.3						
	comp=E,0.5nm,0.8s						
FINES	FINESS Array B	65.17	333	P	P	17 41 17.7	-0.4
	comp=E,0.6nm,0.6s,baz=350,slow=9.7,SNR=3.7						
FINES				pP	pP	17 41 27.9	-0.6
	comp=E,1.3nm,0.8s,baz=46,slow=5.5,SNR=3.4						
	comp=E,0.6nm,0.6s						
OBN	Obninsk	65.73	324	LR	LR	18 13 59.2	
	comp=E,70nm,19.2s,baz=202,slow=40						
NVAR	Mina Array Bea	66.88	58	P	P	17 41 31.2	+1.4
	comp=E,0.7nm,0.5s,baz=292,slow=6.2,SNR=4.9						
	comp=E,0.7nm,0.5s						
PDAR	Pinedale Array	69.27	50	P	P	17 41 45.8	+1.1
	comp=E,0.4nm,0.5s,baz=243,slow=0.5,SNR=8.0						
	comp=E,0.4nm,0.5s						
TXAR	Lajitas Array	81.96	57	P	P	17 42 58.9	+1.5
	comp=E,0.5nm,0.5s,baz=285,slow=4.0,SNR=6.8						
TXAR				pP	sP	17 43 09.2	-1.7
	comp=E,0.6nm,0.5s,baz=300,slow=3.9,SNR=4.4						
	comp=E,0.5nm,0.5s						
H03N2	Juan Fernandez	142.18	90	T	T	20 29 06.2	
	baz=300,slow=77						
H03N3	Juan Fernandez	142.19	90	T	T	20 29 11.1	
	baz=300,slow=77						
H03N1	Juan Fernandez	142.19	90	T	T	20 29 04.8	
	baz=300,slow=77						

*BGR **03** 17:31:11.5, 5°.14S×68°.16E, h33km, mb4.7*

*IDC **03** 17:31:12.4±0.6, 3°.96S×68°.36E, h0km, mb4.4/29, mbtmp4.4/30, ML4.8/1, MS4.1/54, Error ellipse: s-maj=17.1km s-min=13.5km az=26.0*

*MOS **03** 17:31:13.0±1.2, 4°.04S×68°.34E, h17km, mb4.9/38, MS4.3/5, Error ellipse: s-maj=9.8km s-min=5.6km az=90.7*

*NEIC **03** 17:31:13.6±1.4, 4°.01S±0°.07×68°.42E±0°.07, h10km±1km, mb4.9/116, Error ellipse: s-maj=12.8km s-min=11.8km az=146.0*

*BJI **03** 17:31:14.7, 4°.19S×68°.28E, h39km, mB5.1/11, mb4.7/59, Ms4.6/19, Ms7 4.4/22*

*GCMT **03** 17:31:15.6±0.2, 4°.11S±0°.01×68°.41E±0°.01, h12km, MW5.0/122, Moment Tensor Solution. s44,c59; s122,c209; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr-0.99±.08; Mθθ-3.20±.07; Mφφ4.19±.07; Mrθ-0.06±.21; Mθφ-0.88±.07; Mφr-0.16±.20; Best double couple: M0 3.80300×10^{16} NP1: φs128.00000°, δ87.00000°, λ-180.00000°. NP2: φs38.00000°, δ90.00000°, λ-3.00000°. Principal axes: T 4.2990, Plg2.0000°, Azm83.0000°; N -0.9960, Plg87.0000°, Azm214.0000°; P -3.3070, Plg2.0000°, Azm353.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 17:31:14.3±0.9**, 4°.02S**±0°.05×**68°.43E**±0°.05**, h16km**±5km**, n313,** σ**1§61**/293**, mb4.8**/135**, MS4.1**/68**, 15C-3D, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGAR	Diego Garcia	5.24	130		Pn	17 32 28.1	-3.9
DGAR	Diego Garcia	5.24	130	i P	Pn	17 32 31.1	-0.9
H08S3	Diego Garcia H	5.40	132	Pn	Pn	17 32 33.4	-0.6
	baz=327,slow=19						
H08S3				T	T	17 38 16.9	
	baz=310,slow=71						
H08S1	Diego Carcia H	5.40	132	Pn	Pn	17 32 33.5	-0.6
	baz=327,slow=19						
H08S1				T	T	17 38 23.4	
	baz=310,slow=71						
H08S2	Diego Garcia H	5.42	132	Pn	Pn	17 32 33.8	-0.4
	baz=327,slow=19						
H08S2				T	T	17 38 32.3	
	baz=310,slow=71						
KAAM	Kaadhehdhoo	6.39	46		Pn	17 32 44.8	-3.1
KAAM	Kaadhehdhoo	6.39	46	P	Pn	17 32 46.1	-1.8
	1.2nm106nm,1.8s						
KAAM				S	Sn	17 33 53.3	-7.3
	1.2nm106nm,1.8s						
HMDM	Hanimaadhoo	11.72	24	Pn	Pn	17 33 58.2	-2.8
MSEY	Mahe Island	12.93	267		Pn	17 34 13.1	-4.4
PALK	Pallekele	16.61	48	Pn	Pn	17 35 07.3	+0.6
	3.2nm,0.3s,baz=241,slow=12,SNR=22						
PALK				Sn	Sn	17 38 00.8	-10
	0.9nm,0.3s,baz=65,slow=16,SNR=5.8						
PALK				LR	LR	17 40 05.4	
	comp=Z,1μm,20.0s,baz=224,slow=32						
	13nm,0.5s						
PALK	Pallekele	16.61	48		Pn	17 35 04.2	-2.5
PALK	Pallekele	16.61	48	P	Pn	17 35 06.4	-0.3
ATD	Arta Tunnel	29.77	302	LR	LR	17 46 38.0	
	comp=Z,18nm,21.6s,baz=118,slow=31						
KCSI	Kotacane, Aceh	30.26	76	P	P	17 37 25.5	+0.6
FURI	Furi	32.31	293	LR	LR	17 49 39.4	
	comp=Z,763nm,18.8s,baz=116,slow=34						
KULM	Kulim	33.49	74	P	P	17 37 51.2	-2.1
KULM				IAmb	IAmb	17 37 55.8	
	comp=Z,18nm,1.0s						
IPM	Ipoh	33.64	76	P	P	17 37 53.7	-0.9
IPM				IAmb	IAmb	17 37 57.4	
	comp=Z,29nm,1.5s						
LODK	Lodwar	33.86	282		P	17 37 54.8	-1.8
MNAI	Manna	34.44	92	P	P	17 37 59.7	-1.8
AIS	Amsterdam Isla	34.65	167	P	P	17 38 00.5	-2.4
BRDH	Bariadhala	34.91	40	LR	LR	17 53 38.2	
	comp=Z,340nm,18.1s,baz=240,slow=39						
RAYN	Ar Rayn	35.34	322		P	17 38 06.8	-2.4
MDSI	Maura Dua	35.65	92	P	P	17 38 14.5	+2.5
	comp=Z,16nm,1.0s						
MYKOM	Kota Tinggi	35.87	81	P	P	17 38 11.9	-2.0
KLSI		36.20	92	P	P	17 38 18.9	+2.2
EVN	Everest	36.40	28	P	P	17 38 16.7	-2.2
EVN				IAmb	IAmb	17 38 36.5	
	comp=Z,24nm,1.3s						
SHL	Shillong	37.18	37		P	17 38 23.4	-1.7
SHL				IAmb	IAmb	17 38 32.3	
	comp=Z,20nm,1.1s						
CGJI	Cibinong	37.19	96	P	P	17 38 26.8	+1.7
	comp=Z,37nm,0.8s						
CM31	Chiang Mai Arr	37.45	52	P	P	17 38 26.6	-0.7
CM31				IAmb	IAmb	17 38 37.5	
	comp=Z,24nm,1.2s						
CMAR	Chiang Mai Arr	37.45	52	P	P	17 38 28.6	+1.4
	comp=Z,5.8nm,0.8s,baz=241,slow=8.8,SNR=46						
CMAR				PcP	PcP	17 40 47.1	+1.3
	comp=Z,1.8nm,0.8s,baz=215,slow=3.6,SNR=4.0						
CMAR				LR	LR	17 51 50.9	
	comp=Z,184nm,21.2s,baz=240,slow=33						
	comp=Z,5.8nm,0.8s						
CMAR	Chiang Mai Arr	37.45	52	P	P	17 38 27.0	-0.3
CMAR					PcP	17 40 45.5	-0.4
CHTO	Chiang Mai	37.65	52		P	17 38 29.6	+0.7
CHTO				IAmb	IAmb	17 38 31.4	
	comp=Z,31nm,1.3s						
CHTO	Chiang Mai	37.65	52	P	P	17 38 29.3	+0.3
	comp=Z,347nmcomp=Z,24nm,1.2s						
MBAR	Mbarara	37.80	274	LR	LR	17 53 38.8	
	comp=Z,349nm,18.3s,baz=96,slow=36						
MBAR	Mbarara	37.80	274	P	P	17 38 29.4	-1.1
MBAR				IAmb	IAmb	17 38 44.1	
	comp=Z,18nm,1.3s						
MBAR	Mbarara	37.80	274	i P	P	17 38 31.3	+0.7
MBAR				pmax	pmax		
	comp=Z,22nm,1.8s						
KBL	Kabul	38.36	1	P	P	17 38 35.2	+0.3

HRA Herat 38.64 352 P **P** 17 38 36.8 -0.5
LEM Lembang 39.11 96 LR LR 17 53 53.4
comp=Z,535nm,18.3s,baz=209,slow=35
BBJI Bungbulang 39.16 97 **P** 17 38 41.5 -0.4
BBJI Bungbulang 39.16 97 P **P** 17 38 43.3 +1.4
comp=Z,19nm,0.8s
LSA Lhasa 39.98 32 P **P** 17 38 47.6 -1.2
LSA IAmb IAmb 17 38 59.3
comp=Z,64nm,1.7s
LSA Lhasa 39.98 32 P **P** 17 38 47.2 -1.7
LSA pmax pmax
comp=Z,5.0nm,0.9s
TNCH TengChong 41.09 44 P **P** 17 38 59.6 +1.8
TNCH PP **PnPn** 17 40 40.9 +3.8
TNCH S **S** 17 45 11.1 +0.8
TNCH SS **SS** 17 48 07.7 -5.4
TNCH pmax pmax
comp=Z,54nm,0.9s
TNCH pmax pmax
comp=Z,140nm,4.2s
TNCH L L
comp=Z,300nm,12.8s
TNCH L L
comp=Z,210nm,12.1s
TNCH L L
comp=Z,420nm,15.0s
LSZ Lusaka 41.13 251 LR LR 17 53 04.6
comp=Z,638nm,21.1s,baz=91,slow=32
LSZ Lusaka 41.13 251 P **P** 17 38 57.2 -1.1
SHAA Shahritus 41.37 360 P **P** 17 38 59.2 -0.5
SHAA IAmb IAmb 17 39 51.1
comp=Z,21nm,1.2s
UGM Wanagama 42.03 97 P **P** 17 39 05.4 -0.1
CHGR Chuyangaron 42.47 1 P **P** 17 39 08.2 -0.5
CHGR Chuyangaron 42.47 1 *i* P **P** 17 39 10.0 +1.3
GAR Garm 42.84 2 P **P** 17 39 11.6 -0.2
DRK Karamyk 43.39 4 P **P** 17 39 15.9 -0.6
KSH2 Kashi 43.45 8 P **P** 17 39 17.3 +0.5
KSH2 pmax pmax
comp=Z,12nm,0.9s
KSH2 L L
comp=Z,430nm,20.0s
KSH2 L L
comp=Z,300nm,12.0s
KSH2 L L
comp=Z,530nm,16.7s
KMI2 Kunming 44.17 47 P **P** 17 39 24.0 +1.1
KMI2 S **S** 17 46 01.3 +5.5
KMI2 pmax pmax
comp=Z,14nm,1.0s
KMI2 L L
comp=Z,270nm,15.2s
KMI2 L L
comp=Z,220nm,20.0s
KMI2 L L
comp=Z,230nm,15.5s
SBUM Sibu 44.23 82 P **P** 17 39 23.1 -0.2
SBUM Sibu 44.23 82 P **P** 17 39 24.4 +1.1
comp=Z,9.3nm,0.9s
PZH PanZhiHua 44.26 45 P **P** 17 39 25.2 +1.7
H04N2 CROZET ISLANDS 44.41 197 T T 18 27 21.0
baz=23,slow=75
H04N1 CROZET ISLANDS 44.41 197 T T 18 27 26.4
baz=23,slow=75
H04N3 CROZET ISLANDS 44.42 197 T T 18 27 21.4
baz=23,slow=75
KSANE Kasane 44.50 249 P **P** 17 39 24.5 -1.1
KSANE IAmb IAmb 17 39 42.8
comp=Z,13nm,1.2s
CRZF Crozet Islands 44.63 196 P **P** 17 39 25.9 -0.1
KHWEE KHWEE 45.30 243 P **P** 17 39 30.9 -1.0
KHWEE IAmb IAmb 17 39 51.8
comp=Z,11nm,0.7s
ARSB Arslanbob 45.31 5 P **P** 17 39 32.4 +0.7
KMMI Kalianget 45.41 96 P **P** 17 39 33.3 +0.6
comp=Z,63nm,1.4s
JAGI Jajag, Banyuwa 45.65 98 P **P** 17 39 34.0 -0.6
ABJI Asem Bagus 45.70 97 P **P** 17 39 35.5 +0.5
NRN Naryn 45.76 8 P **P** 17 39 35.1 -0.3
IUG Iuzhnay 45.97 2 *e*P **P** 17 39 38.6 +1.8
IUG pmax pmax
comp=Z,13nm,1.2s
IUG Iuzhnay 45.97 2 *e*P **P** 17 39 38.7 +1.8
comp=Z,13nm,1.2s
CHM Chimkent 46.13 1 *e*P **P** 17 39 39.9 +1.9
CHM pmax pmax
comp=Z,10.0nm,1.0s
CHM Chimkent 46.13 1 *e*P **P** 17 39 39.9 +1.9
comp=Z,9.5nm,1.0s
TARG Taragay, Kyrgy 46.32 10 P **P** 17 39 39.5 -0.4
EIL Elat 46.38 318 LR LR 17 56 41.6
comp=Z,173nm,19.5s,baz=93,slow=33
KDJ Kajisay 46.61 9 P **P** 17 39 41.7 -0.3
KDJ IAmb IAmb 17 39 51.0
comp=Z,8.9nm,0.8s
QIZ Qiongzhong 46.75 59 P **P** 17 39 44.1 +0.9
QIZ S **S** 17 46 34.3 +1.5
QIZ L L
comp=Z,300nm,11.8s
QIZ L L
comp=Z,270nm,14.5s
QIZ L L
comp=Z,270nm,15.4s
AAK Ala-Archa 46.76 6 LR LR 17 58 20.1
comp=Z,149nm,19.2s,baz=194,slow=35
AAK Ala-Archa 46.76 6 P **P** 17 39 43.0 -0.1
AAK IAmb IAmb 17 39 52.5
comp=Z,6.3nm,0.8s
AAK Ala-Archa 46.76 6*ce*P **P** 17 39 44.8 +1.7
AAK pmax pmax
comp=Z,7.0nm,0.8s
ASF Jabal al Asfar 46.83 323 LR LR 17 57 41.5
comp=Z,159nm,18.6s,baz=123,slow=34
BRLS Borolday 46.85 1 *e*P **P** 17 39 43.3 -0.3
BRLS Borolday 46.85 1 *e*P **P** 17 39 43.3 -0.3
KK31 Karatay Array 46.94 2 P **P** 17 39 44.5 +0.2
KKAR Karatay Array 46.94 2 P **P** 17 39 44.2 -0.1
FRU1 Bishkek 46.95 6 P **P** 17 39 44.3 -0.1
GHAJ Ghor Haditha 47.06 321 P **P** 17 39 45.1 -0.3
GHAJ IAmb IAmb 17 39 49.5
comp=Z,24nm,1.4s
PRZ Przheval'sk 47.16 10 P **P** 17 39 46.7 +0.4
PRZ IAmb IAmb 17 40 28.3
comp=Z,11nm,1.1s
TNSS Tian-Shan 47.47 8 *e*P **P** 17 39 50.3 +1.5
TNSS Tian-Shan 47.47 8 *e*P **P** 17 39 50.4 +1.5
SGDS Sogindy 47.58 6 *e*P **P** 17 39 51.1 +1.8
MDOK Medeo 47.60 9 *e*P **P** 17 39 51.3 +1.7
MDOK Medeo 47.60 9 *e*P **P** 17 39 51.4 +1.7
AAA Alma-Ata 47.63 8 *e*P **P** 17 39 51.3 +1.6
AAA pmax pmax
comp=Z,8.0nm,1.0s
AAA Alma-Ata 47.63 8 *e*P **P** 17 39 51.4 +1.6
comp=Z,8.4nm,1.0s
BOSA Boshof 47.72 234 P **P** 17 39 50.5 -0.2
comp=Z,6.8nm,0.8s,baz=73,slow=9.3,SNR=14
BOSA LR LR 17 57 32.3
comp=Z,368nm,19.1s,baz=72,slow=33
comp=Z,6.8nm,0.8s
BOSA Boshof 47.72 234 P **P** 17 39 49.5 -1.3
BOSA IAmb IAmb 17 40 11.6
comp=Z,8.3nm,0.9s
SATY Saty 47.72 10 *e*P **P** 17 39 51.9 +1.4
SATY pmax pmax
comp=Z,9.0nm,1.0s
SATY Saty 47.72 10 *e*P **P** 17 39 52.0 +1.4
comp=Z,9.2nm,1.0s
GYA Guiyang 47.81 48 ⇑P **P** 17 39 51.5 0.0
GYA pmax pmax
comp=Z,7.0nm,1.1s
UZB Uzynbulak 47.91 10 *e*P **P** 17 39 53.8 +1.8
UZB Uzynbulak 47.91 10 *e*P **P** 17 39 53.9 +1.8
SHLS Shalkode 48.01 11 *e*P **P** 17 39 54.9 +2.2
SHLS pmax pmax
comp=Z,7.0nm,0.9s
SHLS Shalkode 48.01 11 *e*P **P** 17 39 54.9 +2.2
comp=Z,6.8nm,0.9s
GEVA Gevas 48.23 333 P **P** 17 39 54.2 -0.4
GEVA IAmb IAmb 17 39 58.4
comp=Z,24nm,1.7s
MMAI Mount Meron Ar 48.32 322 LR LR 17 58 37.2
comp=Z,156nm,18.9s,baz=132,slow=34
TWSI Taliwang, Sumb 48.35 98 P **P** 17 39 54.8 -1.0
comp=Z,22nm,0.9s
CD2 Chengdu 48.40 42 P **P** 17 39 56.4 +0.5
CD2 pmax pmax
comp=Z,20nm,1.0s
KGCAE Kacgae 48.43 243 P **P** 17 39 54.9 -1.4
KGCAE IAmb IAmb 17 40 13.1
comp=Z,18nm,1.1s
MARD Mardin 48.51 330 P **P** 17 39 56.2 -0.5
KKM Kota Kinabalu 48.75 78 P **P** 17 39 59.1 +0.2
GURO Guroymak-BITLI 48.89 332 P **P** 17 39 59.9 +0.3
GURO IAmb IAmb 17 40 02.6
comp=Z,11nm,1.0s
GNI Garni 49.04 336 LR LR 18 00 11.0
comp=Z,205nm,21.3s,baz=141,slow=36
GNI Garni 49.04 336 P **P** 17 40 00.7 -0.1
GNI Garni 49.04 336*ce*P **P** 17 40 01.2 +0.4
GNI pmax pmax
comp=Z,31nm,1.3s
AKT Akhty 49.06 339 *e*P **P** 17 40 00.5 -0.4
AKT *e* 17 41 25.2
AKT pmax pmax
comp=Z,15nm,1.1s
TDK Taldyqorghan 49.61 9 *e*P **P** 17 40 06.4 +1.6
TDK pmax pmax
comp=Z,13nm,1.3s
TDK Taldyqorghan 49.61 9 *e*P **P** 17 40 06.5 +1.6
comp=Z,13nm,1.3s
KARS Kars 50.13 335 P **P** 17 40 08.9 -0.2
KARS IAmb IAmb 17 41 00.6
comp=Z,27nm,1.4s
GAZ Gaziantep 50.24 327 P **P** 17 40 09.7 -0.2
GAZ IAmb IAmb 17 40 13.4
comp=Z,18nm,1.2s
KOOLE Kule 50.26 243 P **P** 17 40 09.2 -1.1
KOOLE IAmb IAmb 17 40 32.3
comp=Z,16nm,0.8s
MMSI Mamuju 50.41 90 P **P** 17 40 11.9 +0.4
WMQ Urumqi 50.68 18 *e*P **P** 17 40 15.1 +2.0
WMQ pmax pmax
comp=Z,12nm,1.1s
WMQ L L
comp=Z,430nm,20.3s
WMQ L L
comp=Z,310nm,20.9s
KOPT Kop Dagi 50.78 332 P **P** 17 40 13.7 -0.5
KOPT IAmb IAmb 17 40 27.2
comp=Z,15nm,1.3s
CSS Mathiatis 50.90 323 P **P** 17 40 15.6 +0.7
ARPR Arapgir-MALATY 51.10 330 P **P** 17 40 16.1 -0.4
ARPR IAmb IAmb 17 40 20.7
comp=Z,20nm,1.2s
KAPI Kappang 51.16 93 LR LR 17 59 41.7
comp=Z,486nm,21.9s,baz=258,slow=33
MPSI Mapaga 51.61 86 P **P** 17 40 20.7 +0.2
comp=Z,15nm,1.2s
TSUM Tsumeb 51.83 249 LR LR 18 00 12.3
comp=Z,133nm,20.4s,baz=72,slow=34
MAKZ Makanchi 52.01 12 P **P** 17 40 22.3 -0.7
GTA2 Gaotai 52.02 31 *e*P **P** 17 40 23.9 +0.6
GTA2 pmax pmax
comp=Z,3.0nm,1.1s
GTA2 L L
comp=Z,190nm,14.0s
GTA2 L L
comp=Z,150nm,16.2s
GTA2 L L
comp=Z,190nm,14.9s
MK31 Makanchi Array 52.06 12*ce*P **P** 17 40 24.2 +0.9
MKAR Makanchi Array 52.06 12 P **P** 17 40 22.9 -0.4
comp=Z,1.5nm,0.7s,baz=201,slow=7.5,SNR=17
MKAR PcP **PcP** 17 41 36.1 +0.8
comp=Z,0.9nm,0.8s,baz=220,slow=3.9,SNR=2.3
comp=Z,1.5nm,0.7s
MKAR Makanchi Array 52.06 12 P **P** 17 40 23.1 -0.2
BNN Bunyan 52.20 328 P **P** 17 40 24.6 0.0
H01W3 Cape Leeuwin H 52.24 132 T T 18 36 42.0
baz=294
H01W2 Cape Leeuwin H 52.25 132 T T 18 36 48.4
baz=294,slow=74,SNR=14
H01W1 Cape Leeuwin H 52.26 132 T T 18 36 46.6
baz=294,slow=74,SNR=19
TOLI2 Tolitoli 52.57 86 P **P** 17 40 27.2 -0.4
TOLI2 IAmb IAmb 17 40 36.2
comp=Z,15nm,0.9s
SUR Sutherland 52.69 232 LR LR 18 00 37.3
comp=Z,251nm,18.8s,baz=60,slow=34
KBZ Khabaz 52.80 337 P **P** 17 40 28.6 -0.1
KBZ LR LR 18 03 29.8
comp=Z,98nm,21.6s,baz=150,slow=37
comp=Z,9.3nm,0.9s
KBZ Khabaz 52.80 337*ce*P **P** 17 40 28.5 -0.3
KBZ pmax pmax
comp=Z,18nm,1.1s
PSA00 Pilbara Seismi 52.81 114 P **P** 17 40 28.7 -0.6
PSA00 IAmb IAmb 17 40 41.7
comp=Z,22nm,1.4s
PSA00 Pilbara Seismi 52.81 114 P **P** 17 40 28.7 -0.6
WIN Windhoek 52.93 245 P **P** 17 40 29.9 -0.6
WIN IAmb IAmb 17 41 32.2
comp=Z,31nm,2.0s
TOKA Tokat 52.97 330 P **P** 17 40 30.1 -0.1
TOKA IAmb IAmb 17 40 33.1
comp=Z,32nm,1.4s
KIV Kislovodsk 53.07 337 *e*P **P** 17 40 32.0 +1.1
KIV pmax pmax
comp=Z,6.0nm,1.0s
KIV MLR MLR
comp=Z,54nm,17.0s
ZSN Zaisan 53.25 14 *e*P **P** 17 40 33.8 +1.7
ZSN Zaisan 53.25 14 *e*P **P** 17 40 33.9 +1.7
AB31 Akbulak array 53.57 353 P **P** 17 40 33.7 -0.6
AB31 IAmb IAmb 17 40 37.1
comp=Z,20nm,1.4s
ABKAR Akbulak array 53.57 353 P **P** 17 40 33.7 -0.6
MMRI Maumere 53.64 98 P **P** 17 40 34.4 -1.2
XAN Xi'an 53.76 42 P **P** 17 40 36.1 0.0
XAN pP pwP 17 40 44.4 +0.2
XAN pmax pmax
comp=Z,23nm,1.0s
XAN L L
comp=Z,190nm,17.2s
XAN L L
comp=Z,200nm,19.2s
XAN L L
comp=Z,250nm,19.9s
NWAO Narrogin (SRO) 53.83 128 LR LR 17 58 45.6
comp=Z,256nm,21.1s,baz=304,slow=31
GOF Gofitskoye 53.87 338*ce*P **P** 17 40 38.4 +1.8
BRZS Berezniki 53.91 3 *e*P **P** 17 40 38.6 +1.7
BRZS Berezniki 53.91 3 *e*P **P** 17 40 38.6 +1.7
BR131 Keskin Array S 54.02 327 P **P** 17 40 37.3 -0.8
BR131 Keskin Array S 54.02 327 *i* P **P** 17 40 36.9 -1.1
BRTR Keskin Array B 54.02 327 P **P** 17 40 37.1 -1.0
comp=Z,3.9nm,1.1s,baz=120,slow=12,SNR=17
BRTR LR LR 18 01 26.5
comp=Z,67nm,21.6s,baz=118,slow=34
comp=Z,3.9nm,1.1s
BRTR Keskin Array B 54.02 327 *i* P **P** 17 40 37.0 -1.0
BRTR pmax pmax
comp=Z,5.0nm,1.1s
AKAS Kas 54.02 321 P **P** 17 40 37.8 -0.4
ELL Elmali 54.17 322 P **P** 17 40 39.0 -0.1
ILGA Ilgaz 54.92 328 P **P** 17 40 44.0 -0.7
BATI Baumata 55.10 100 LR LR 18 03 26.7
comp=Z,447nm,21.5s,baz=285,slow=35
BATI Baumata 55.10 100 P **P** 17 40 48.2 +2.0
comp=Z,34nm,1.3s
KURBB Kurchatov Arra 55.12 8 P **P** 17 40 45.5 -0.1
comp=Z,4.2nm,1.0s,baz=204,slow=7.6,SNR=21
KURBB PcP **PcP** 17 41 47.7 +0.9
comp=Z,0.8nm,0.8s,baz=200,slow=3.7,SNR=4.5
comp=Z,4.2nm,1.0s
KARP Karpathos 55.17 319 P **P** 17 40 45.9 -0.4
KURK Kurchatov 55.22 8 P **P** 17 40 46.1 -0.2
KURK IAmb IAmb 17 41 01.6
comp=Z,14nm,1.1s
KURK Kurchatov 55.22 8 **PcP** 17 41 47.7 +0.5
KURK Kurchatov 55.22 8*ce*P **P** 17 40 47.9 +1.6
KURK pmax pmax
comp=Z,11nm,1.3s
BZK Bozkurt 55.43 329 P **P** 17 40 47.8 -0.3
SOEI Soe 55.68 99 P **P** 17 40 49.1 -1.4
SOEI Soe 55.68 99 P **P** 17 40 52.1 +1.6
MDUB Mudurnu 55.88 326 P **P** 17 40 50.6 -0.9
BORA Eskisehir 55.90 325 P **P** 17 40 50.7 -0.9
DGZ Jazzator, Alta 55.98 15 *i* P **P** 17 40 51.9 -0.2
DGZ pmax pmax
comp=Z,10.0nm,1.6s
LYN LuoYang 56.45 44 *e*P P 17 41 04.6 +9.1
LYN LR LR
comp=N,290nm,12.4s
LYN LR LR
comp=Z,220nm,18.2s
BVAR Borovoye Array 56.85 1 P **P** 17 40 58.1 +0.1
comp=Z,1.8nm,0.9s,baz=163,slow=5.7,SNR=7.3
comp=Z,1.8nm,0.9s
BORK Borovoye 56.87 1 P **P** 17 40 58.2 0.0
BORK Borovoye 56.87 1*ce*P **P** 17 41 01.0 +2.8
BORK pmax pmax
comp=Z,7.0nm,1.2s
BALB Balikesir 57.24 323 P **P** 17 41 00.8 -0.3
FITZ Fitzroy Crossi 57.64 109 LR LR 18 02 33.1
comp=Z,181nm,20.9s,baz=284,slow=33
DAV Davao City (W) 58.09 79 LR LR 18 08 16.5
comp=Z,115nm,18.4s,baz=306,slow=38
YULB Yu-li 58.28 59 P **P** 17 41 09.0 +0.3
EDA Edea 58.74 277 P **P** 17 41 11.5 -0.6
EDA IAmb IAmb 17 41 21.6
comp=Z,23nm,1.4s
BELG Belogornoye 58.90 345 *i* P **P** 17 41 10.3 -2.1
BELG pmax pmax
comp=Z,4.0nm,1.1s
ZAA0 Zalesovo Array 59.37 11 P **P** 17 41 14.9 -0.7
ZAA0 IAmb IAmb 17 41 29.8
comp=Z,5.5nm,0.7s
ZALV Zalesovo Beam 59.37 11 P **P** 17 41 15.1 -0.5
comp=Z,2.8nm,0.6s,baz=216,slow=7.1,SNR=18
ZALV LR LR 18 06 03.2
comp=Z,136nm,21.7s,baz=208,slow=35
comp=Z,2.8nm,0.6s
ZALV Zalesovo Beam 59.37 11 P **P** 17 41 14.4 -1.2
HNS HongShan 59.54 42 ⇓P **P** 17 41 18.2 +1.1
HNS pmax pmax
comp=Z,12nm,1.4s
HHC Hu-ho-hao-te 59.54 37 *e*P P 17 41 22.1 +4.8
HHC pmax pmax
comp=Z,11nm,0.7s
HHC pmax pmax
comp=Z,200nm,4.6s
VRH Novokhopyorsk 59.56 341 *e*P **P** 17 41 15.8 -1.2
VRH pmax pmax
comp=Z,10.0nm,1.0s
NJ2 Nanjing 59.81 49 *e*P **P** 17 41 18.9 -0.2
NJ2 pmax pmax
comp=Z,11nm,0.7s
KNGR Kungurtug, Tuv 59.88 21 *i* P **P** 17 41 21.3 +1.9
KNGR pmax pmax
comp=Z,11nm,1.3s
VSR Storozhevoye 60.45 339 *e*P **P** 17 41 22.0 -1.1
VSR pmax pmax
comp=Z,10.0nm,0.8s
ARTI Arti 60.76 354 LR LR 18 07 23.9
comp=Z,64nm,20.9s,baz=180,slow=36
ARTI Arti 60.76 354 P **P** 17 41 24.1 -1.0
ARTI Arti 60.76 354*c i*P **P** 17 41 26.5 +1.4
ARTI 17 42 05.2
ARTI S **S** 17 49 41.0 -0.4
ARTI SS **SS** 17 53 36.6 -4.0
ARTI pmax pmax
comp=Z,21nm,1.6s
VORR Voronezh 60.81 340 *e*P **P** 17 41 25.3 -0.2
VORR pmax pmax
comp=Z,13nm,1.4s
LIT Litokhoron 60.82 321 P **P** 17 41 25.4 -0.5
SONM Songino Array 61.42 28 P **P** 17 41 31.0 +1.1
comp=Z,4.4nm,0.8s,baz=220,slow=6.8,SNR=26
SONM LR LR 18 08 49.5
comp=Z,189nm,18.6s,baz=210,slow=37
comp=Z,4.4nm,0.8s
SONM Songino Array 61.42 28 P **P** 17 41 30.4 +0.5
SONM IAmb IAmb 17 41 37.4
comp=Z,13nm,1.0s
LPSR Galich'ya Gora 61.68 340 *e*P **P** 17 41 29.7 -1.7
LPSR pmax pmax
comp=Z,10.0nm,1.0s
ULN Ulaanbaatar 61.75 28 P **P** 17 41 32.2 0.0
ULN IAmb IAmb 17 41 56.1
comp=Z,5.9nm,1.1s
ULN Ulaanbaatar 61.75 28*ce*P **P** 17 41 34.9 +2.7
ULN pmax pmax
comp=Z,16nm,2.0s
BJT Baijiatuau 61.92 40 IAmb IAmb 17 41 40.8
comp=Z,7.2nm,1.0s
FORT Forrest 62.00 123 P **P** 17 41 33.0 -1.1
FORT IAmb IAmb 17 41 35.5
comp=Z,12nm,1.1s
MLR Muntele Rosu 62.09 327 P **P** 17 41 34.3 -0.3
MLR IAmb IAmb 17 41 37.8
comp=Z,20nm,1.4s
KEK Kerkira 62.34 319 P **P** 17 41 35.4 -0.7
SIJI Sorong 62.85 89 LR LR 18 08 57.7
comp=Z,70nm,19.5s,baz=149,slow=36
TLY Talaya 63.07 24 LR LR 18 08 57.4
comp=Z,140nm,19.9s,baz=211,slow=36
TLY Talaya 63.07 24 P **P** 17 41 42.2 +1.4
TLY pmax pmax
comp=Z,11nm,1.8s
MAW Mawson 63.59 182 LR LR 18 02 30.9
comp=Z,271nm,21.8s,baz=0.5,slow=30
BURAR Bucovina Array 63.85 329 P **P** 17 41 45.5 -0.7
BUR08 Bucovina Ar. S 63.88 329 P **P** 17 41 45.9 -0.5
BUR08 IAmb IAmb 17 42 04.7
comp=Z,8.2nm,1.2s
AKASG Malin Array Be 64.03 333 P **P** 17 41 46.5 -0.7
comp=Z,2.6nm,0.8s,baz=137,slow=5.4,SNR=13
AKASG LR LR 18 12 27.3
comp=Z,52nm,18.6s,baz=166,slow=39
comp=Z,2.6nm,0.8s
AKASG Malin Array Be 64.03 333 IAmb IAmb 17 41 48.2
comp=Z,4.9nm,1.1s
AKASG Malin Array Be 64.03 333 *i* P **P** 17 41 47.0 -0.1
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKBB Malin Array Si 64.03 333 P **P** 17 41 46.6 -0.6
AKBB Malin Array Si 64.03 333*ce*P **P** 17 41 47.9 +0.8
KIEV Kiev 64.03 333 P **P** 17 41 46.7 -0.5
KIRV Kirov 64.23 349 LR LR 18 11 38.8
comp=Z,84nm,18.3s,baz=155,slow=38
KIRV Kirov 64.23 349*ce*P **P** 17 41 49.5 +1.3
OBN Obninsk 64.54 340⇑*e*P **P** 17 41 51.4 +1.1
OBN *e* 17 44 14.1
OBN pmax pmax
comp=Z,8.0nm,1.1s
OBN MLR MLR
comp=Z,85nm,18.0s
MOS Moscow 64.71 341 *e*P **P** 17 41 51.6 +0.2
MOS *e* 17 42 03.2
MOS pmax pmax
comp=Z,34nm,0.7s
JOW Kunigami 65.39 58 LR LR 18 11 51.8
comp=Z,62nm,18.1s,baz=242,slow=37
JOW Kunigami 65.39 58 P **P** 17 41 56.3 -0.2
ASAR Alice Springs 65.96 114 P **P** 17 42 00.8 +0.5
comp=Z,1.8nm,0.7s,baz=275,slow=6.4,SNR=12
AS31 Alice Springs 65.96 114 P **P** 17 41 59.5 -0.8
WRA Warramunga Arr 66.01 110 P **P** 17 42 01.5 +0.8
comp=Z,4.4nm,0.6s,baz=274,slow=6.3,SNR=36
comp=Z,4.4nm,0.6s
WRA Warramunga Arr 66.01 110 P **P** 17 41 59.4 -1.3
WRAB Tennant Creek 66.02 110 P **P** 17 41 58.2 -2.5
WRAB IAmb IAmb 17 42 03.5
comp=Z,7.8nm,0.7s
SGRT San Giovanni R 66.03 319 P **P** 17 41 58.8 -1.6
WB0 Warramunga Arr 66.04 110 P **P** 17 41 59.6 -1.3
WB0 IAmb IAmb 17 42 03.5
comp=Z,6.0nm,0.8s
WR8 Warramunga Arr 66.16 110 P **P** 17 42 00.1 -1.5
WR8 IAmb IAmb 17 42 04.3
comp=Z,8.6nm,0.7s
PSZ Piszkesteto 66.87 327 P **P** 17 42 04.6 -1.1
PSZ IAmb IAmb 17 42 45.8
comp=Z,12nm,1.4s
TAM Tamanrasset 66.89 297 P **P** 17 42 04.1 -2.3
MNK Minsk 67.32 336 *i* P **P** 17 42 09.0 +0.7
comp=E,14nm,0.9s
MNK *i* P **P** 17 42 09.0 +0.7
comp=N,12nm,0.8s
MNK *i* P **P** 17 42 09.0 +0.7
comp=Z,17nm,0.9s,baz=135
MNK *i* PcP **PcP** 17 42 36.2 +0.3
MNK *i* PP **PP** 17 44 37.5 +0.7
MNK *i* PPP PPP 17 46 14.4

MNK i S S 17 51 05.9 +3.0
MNK i PS PnS 17 51 31.4 +5.9
MNK i SS SS 17 55 30.8 +7.9
MNK i SSS SSS 17 58 40.6
MNK i LQ LQ 18 07 34.5
MNK i LR LR 18 11 20.9
MNK i LRM MLR 18 14 03.2
comp=N,85nm,13.6s
MNK i LRM MLR 18 14 11.5
comp=E,101nm,13.6s
MNK i LRM MLR 18 14 25.2
comp=Z,40nm,12.4s
MNK Minsk 67.32 336 i P **P 17 42 09.0 +0.7**
MNK i 17 42 36.1
MNK i 17 44 37.5
MNK i PPP PPP 17 46 14.4
MNK i S **S 17 51 05.9 +3.0**
MNK i PS **PnS 17 51 31.4 +5.9**
MNK pmax pmax
comp=Z,17nm,0.9s
MNK pmax pmax
comp=N,12nm,0.8s
MNK pmax pmax
comp=E,14nm,0.9s
MNK MLR MLR
comp=N,85nm,14.0s
MNK MLR MLR
comp=E,101nm,14.0s
MNK MLR MLR
comp=Z,40nm,12.0s
CIT Chita 67.65 28 eP **P 17 42 14.8 +4.3**
CIT e 17 42 23.2
CIT e 17 42 44.8
CIT pmax pmax
comp=Z,38nm,2.2s
KEST Kesra 67.88 311 LR LR 18 11 57.9
comp=Z,66nm,18.2s,baz=31,slow=36
TORD Torodi Ar. Bea 68.40 286 P **P 17 42 15.3 -0.6**
comp=Z,1.3nm,0.9s,baz=102,slow=3.2,SNR=5.7
comp=Z,1.3nm,0.9s
KLMR Klimovskoe 68.48 345 eP **P 17 42 14.8 -0.7**
KLMR e*PP **pwP 17 42 27.0 +3.1**
KLMR pmax pmax
comp=Z,33nm,1.4s
KSRS Korea Array 68.85 47 P **P 17 42 18.1 -0.2**
comp=Z,1.9nm,0.8s,baz=248,slow=7.2,SNR=5.8
KSRS LR LR 18 12 41.4
comp=Z,168nm,20.3s,baz=235,slow=36
comp=Z,1.9nm,0.8s
CONA Conrad Observa 69.13 325 eP **P 17 42 20.3 +0.4**
comp=Z,11nm,1.4s
JNU Nakatsue 69.55 53 P **P 17 42 24.1 +1.3**
comp=Z,9.7nm,0.9s,baz=152,slow=5.6,SNR=4.4
comp=Z,9.7nm,0.9s
CN2 Changchun 69.81 40 P **P 17 42 24.6 +0.5**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
ABTA Abfaltersbach 70.49 323 eP **P 17 42 28.9 +0.6**
comp=Z,8.1nm,1.1s
KHC Kasperske Hory 71.05 325 ceP **P 17 42 30.6 -1.0**
KHC pmax pmax
comp=Z,3.0nm,1.3s
WTTA Wattenberg 71.27 323 eP **P 17 42 33.5 +0.4**
comp=Z,5.4nm,0.9s
WATA Walderalm 71.34 323 eP **P 17 42 34.0 +0.4**
comp=Z,1.3nm,0.4s
SQTA Sankt Quirin 71.50 323 eP **P 17 42 34.9 +0.4**
comp=Z,6.6nm,0.9s
MOTA Moosalm 71.62 323 P **P 17 42 35.3 0.0**
comp=Z,5.8nm,0.8s
FETA Feichten 71.70 322 eP **P 17 42 36.1 +0.3**
comp=Z,11nm,1.6s
FUORN Ofenpass-Fuorn 71.80 322 P **P 17 42 35.1 -1.4**
FUORN IAmb IAmb 17 42 51.6
comp=Z,10nm,0.8s
RETA Reutte 71.90 323 eP **P 17 42 37.1 +0.3**
comp=Z,4.7nm,0.8s
BNX BinXian 71.92 39 ⇑P **P 17 42 37.2 +0.3**
BNX pmax pmax
comp=Z,7.0nm,1.3s
DAVA Damuels 72.34 322 eP **P 17 42 39.7 +0.1**
comp=Z,9.5nm,0.8s
CLL Collm 72.47 327 i P **P 17 42 40.0 -0.1**
CLL pmax pmax
comp=Z,28nm,1.6s
CLL Collm 72.47 327 i P **P 17 42 40.0 -0.1**
comp=Z,28nm,1.6s
INKA Innaminka 72.50 118 P **P 17 42 38.8 -1.9**
INKA IAmb IAmb 17 42 56.9
comp=Z,9.9nm,0.9s
GRF Grafenberg Arr 72.66 325 eP **P 17 42 41.6 +0.3**
comp=Z,5.9nm,0.9s,baz=121,slow=7.2
MDJ Mudanjiang 72.85 41 IAmb IAmb 17 42 48.2
comp=Z,19nm,1.2s
FINES FINESS Array B 72.95 340 P **P 17 42 44.8 +2.1**
comp=Z,6.3nm,1.1s,baz=148,slow=22,SNR=4.1
FINES LR LR 18 17 10.2
comp=Z,82nm,18.4s,baz=194,slow=38
comp=Z,6.3nm,1.1s
FINES FINESS Array B 72.95 340 P **P 17 42 42.6 0.0**
ELIB Princess Elisa 73.40 193 dP **P 17 42 45.0 -0.4**
comp=Z,5.3nm,1.1s
ELIB dpP **pwP 17 42 54.7 +1.7**
SENIN Lac Senin/Sane 73.54 321 P **P 17 42 45.6 -1.1**
STKA Stephens Creek 73.60 122 P **P 17 42 49.2 +1.9**
comp=Z,2.3nm,0.6s,baz=276,slow=8.6,SNR=4.6
STKA LR LR 18 13 21.9
comp=Z,374nm,18.7s,baz=248,slow=34
comp=Z,2.3nm,0.6s
DBIC Dimbokro 73.92 278 P **P 17 42 50.7 +1.3**
comp=Z,4.4nm,0.6s,baz=120,slow=4.5,SNR=5.5
DBIC LR LR 18 15 57.6
comp=Z,127nm,18.2s,baz=150,slow=36
comp=Z,4.4nm,0.6s
DBIC Dimbokro 73.92 278 P **P 17 42 48.6 -0.8**
NRIK Noril'sk 74.37 7 P **P 17 42 51.2 +0.3**
comp=Z,0.8nm,0.4s,baz=205,slow=3.2,SNR=6.3
NRIK LR LR 18 16 09.3
comp=Z,103nm,21.1s,baz=192,slow=36
comp=Z,0.8nm,0.4s
NRIK Noril'sk 74.37 7 i P **P 17 42 50.7 -0.2**
NRIK pmax pmax
comp=Z,7.0nm,1.5s
ZEA Zeya 75.47 32 eP **P 17 43 01.3 +3.7**
ZEA pmax pmax
comp=Z,10.0nm,1.5s
ZEA MLR MLR
comp=E,100nm,15.0s
ZEA MLR MLR
comp=N,100nm,22.0s
ZEA MLR MLR
comp=Z,200nm,20.0s
NVL N'lazarevskaya 75.66 197 eP **P 17 42 58.6 +0.2**
NVL e 17 45 47.9
NVL ePPP PPP 17 47 34.0
NVL eS **S 17 52 40.5 +1.7**
NVL eSS **SS 17 57 32.6 +2.6**
NVL pmax pmax
comp=Z,12nm,0.8s
NVL MLR MLR
comp=Z,400nm,19.0s
KLR Kul'dur 76.05 37 P **P 17 43 00.7 -0.3**
comp=Z,3.6nm,0.9s,baz=254,slow=8.0,SNR=8.2
KLR LR LR 18 18 35.0
comp=Z,94nm,21.1s,baz=240,slow=37
comp=Z,3.6nm,0.9s
KLR Kul'dur 76.05 37 i P **P 17 42 59.9 -1.1**
KLR pmax pmax
comp=Z,10.0nm,1.1s
MJAR Matsushiro Arr 76.33 51 P **P 17 43 03.1 +0.2**
comp=Z,2.1nm,0.8s,baz=359,slow=16,SNR=5.0
MJAR LR LR 18 17 16.5
comp=Z,103nm,20.0s,baz=236,slow=36
comp=Z,2.1nm,0.8s
MJAR Matsushiro Arr 76.33 51 **P 17 43 03.0 +0.1**
JHJ Hachijo jima 2 76.72 55 LR LR 18 18 30.8
comp=Z,44nm,18.6s,baz=30,slow=37
HFS Hagfors 76.82 335 P **P 17 43 06.2 +1.1**
comp=Z,7.9nm,1.0s,baz=128,slow=6.2,SNR=6.2
HFS LR LR 18 19 45.1
comp=Z,58nm,18.2s,baz=114,slow=38
comp=Z,7.9nm,1.0s
CTA Charters Tower 77.20 110 P **P 17 43 09.7 +1.5**
comp=Z,3.2nm,0.6s,baz=244,slow=8.4,SNR=4.9
CTA LR LR 18 15 20.6
comp=Z,116nm,20.4s,baz=259,slow=34
comp=Z,3.2nm,0.6s
GUMO Guam 77.81 75 LR LR 18 14 47.6
comp=Z,67nm,20.7s,baz=86,slow=34
MDT Midelt 78.02 305 LR LR 18 19 25.2
comp=Z,96nm,18.0s,baz=54,slow=37
PMG Port Moresby 78.25 99 P **P 17 43 15.6 +1.5**
comp=Z,6.7nm,0.9s,baz=199,slow=7.3,SNR=3.6
comp=Z,6.7nm,0.9s
PMG Port Moresby 78.25 99 P **P 17 43 13.8 -0.3**
NOA NORSAR Array B 78.34 335 P **P 17 43 13.9 +0.3**
comp=Z,2.1nm,1.1s,baz=113,slow=6.0,SNR=3.3
NOA LR LR 18 19 40.5
comp=Z,50nm,18.5s,baz=100,slow=37
comp=Z,2.1nm,1.1s
ARCES ARCESS Array B 78.94 346 LR LR 18 20 26.1
comp=Z,72nm,18.9s,baz=124,slow=37
ESDC Sonseca Array 79.12 311 P **P 17 43 19.1 +0.7**
comp=Z,3.0nm,0.9s,baz=95,slow=5.6,SNR=8.6
comp=Z,3.0nm,0.9s
ESDC Sonseca Array 79.12 311 P **P 17 43 16.8 -1.7**
ESDC IAmb IAmb 17 43 22.8
comp=Z,12nm,1.4s
YAK Yakutsk 80.51 25 LR LR 18 20 40.4
comp=Z,106nm,20.6s,baz=260,slow=37
YAK Yakutsk 80.51 25 i P **P 17 43 25.4 0.0**
YAK pmax pmax
comp=Z,11nm,1.7s
ASAJ Asahikawa 81.50 44 LR LR 18 20 25.4
comp=Z,70nm,19.7s,baz=260,slow=36
YSS Yuzhno-Sakhali 82.30 42 P **P 17 43 34.0 -1.2**
YSS IAmb IAmb 17 43 50.1
comp=Z,15nm,1.1s
YSS Yuzhno-Sakhali 82.30 42 eP **P 17 43 35.0 -0.2**
YSS pmax pmax
comp=Z,10.0nm,1.3s
YSS MLR MLR
comp=Z,200nm,15.0s
EKA Eskdalemuir Ar 82.94 327 P **P 17 43 38.9 +0.6**
comp=Z,2.5nm,1.0s,baz=106,slow=8.9,SNR=3.5
comp=Z,2.5nm,1.0s
TIXI Tiksi 84.84 16 LR LR 18 22 30.1
comp=Z,204nm,19.2s,baz=254,slow=36
TIXI Tiksi 84.84 16 P **P 17 43 47.2 -0.5**
TIXI IAmb IAmb 17 43 56.0
comp=Z,7.5nm,0.8s
QSPA South Pole Qui 85.99 180 LR LR 18 16 06.2
comp=Z,144nm,22.0s,baz=286,slow=31
SPITS Spitsbergen Ar 86.65 351 P **P 17 43 58.8 +2.2**
comp=Z,7.0nm,0.8s,baz=151,slow=19,SNR=4.1
SPITS LR LR 18 25 29.4
comp=Z,52nm,18.3s,baz=128,slow=38
comp=Z,7.0nm,0.8s
VNDA Vanda 86.85 167 LR LR 18 18 18.8
comp=Z,119nm,19.8s,baz=262,slow=32
MA2 Magadan 89.56 30 P **P 17 44 12.2 +1.3**
comp=Z,4.1nm,0.8s,baz=319,slow=1.5,SNR=7.8
MA2 LR LR 18 25 53.9
comp=Z,69nm,19.3s,baz=266,slow=37
comp=Z,4.1nm,0.8s
MA2 Magadan 89.56 30 P **P 17 44 08.6 -2.2**
MA2 IAmb IAmb 17 44 17.4
comp=Z,7.5nm,1.0s
SEY Seymchan 90.79 27 P **P 17 44 18.7 +2.2**
comp=Z,0.6nm,0.3s,baz=254,slow=2.3,SNR=8.4
comp=Z,0.6nm,0.3s
SEY Seymchan 90.79 27 i P **P 17 44 17.7 +1.2**
SEY pmax pmax
comp=Z,6.0nm,1.4s
BORG Borgarnes 93.50 335 LR LR 18 28 31.3
comp=Z,112nm,18.1s,baz=104,slow=37
BILL Bilibino 96.64 22 i P **P 17 44 43.7 +0.4**
BILL pmax pmax
comp=Z,8.0nm,2.5s
ILAR Eielson Array 114.31 16 PKP PKPdf 17 49 53.5 +0.6
comp=Z,0.2nm,0.6s,baz=305,slow=3.2,SNR=2.4
YKA Yellowknife Ar 121.61 2 PKP **PKiKP 17 50 07.5 +0.4**
comp=Z,0.3nm,0.6s,baz=345,slow=2.9,SNR=7.6
YKA PP **PP 17 51 38.8 +0.3**
comp=Z,0.1nm,0.4s,baz=357,slow=8.5,SNR=7.3
YKA Yellowknife Ar 121.61 2 **PKPdf 17 50 05.7 -1.3**
PDAR Pinedale Array 141.37 358 PKP **PKPdf 17 50 46.1 +1.0**
comp=Z,0.7nm,0.6s,baz=62,slow=1.9,SNR=8.7
NVAR Mina Array Bea 145.20 9 PKPbc **PKPdf 17 50 53.5 +1.5**
comp=Z,3.7nm,0.7s,baz=8.8,slow=2.8,SNR=15
TXAR Lajitas Array 153.73 344 PKPbc **PKiKP 17 51 14.2 +0.6**
comp=Z,0.3nm,0.5s,baz=341,slow=4.1,SNR=4.5
TXAR Lajitas Array 153.73 344 **PKPdf 17 51 02.8 -2.9**
TXAR PKPbc **PKPbc 17 51 13.4 -0.1**

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*DNK **03** 17:36:08.8±1.9, 51.°39N×16.°05E, h23km±67km, ML2.8, Presumed earthquake*
*IPEC **03** 17:36:10.1±0.2, 51.°53N×16.°21E, h1km, ML1.9/6, Error ellipse: s-maj=1.8km s-min=1.4km az=54.0*
*PRU **03** 17:36:12.7, 51.°45N×16.°09E, h0km*
ISC 03 17:36:08.8±0.8, **51.°60N**±0.°03×**16.°17E**±0.°03, **h0km, n29,** σ**1.s05**/57, **Poland**

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

KSP Ksiaz 0.76 174 ePg **Pg 17 36 23.5 +0.2**
KSP eSg **Sg 17 36 32.4 -0.6**
CHVC Chvalec 1.01 184 ePG **Pg 17 36 28.4 +0.3**
CHVC eSG **Sb 17 36 43.8 +0.8**
comp=Z,23nm,0.4s
OSTC Ostas 1.04 178 ePG **Pg 17 36 29.0 +0.3**
OSTC eSG **Sg 17 36 41.9 -0.2**
comp=Z,20nm,0.4s
UPC Upice 1.09 185 ePG **Pg 17 36 29.7 0.0**
UPC eSG **Sg 17 36 43.1 -0.7**
comp=Z,47nm,0.3s
DPC Dobruska-Polom 1.25 176 ePG **Pg 17 36 32.4 -0.3**
DPC eSG **Sg 17 36 48.2 -0.7**
comp=Z,15nm,0.3s
PIVO Bartosovice 1.43 170 ePg **Pn 17 36 35.8 -0.2**
baz=351
PIVO eSg **Sg 17 36 52.5 -2.2**
16nm,0.2s,baz=351
PVCC Panska Ves 1.47 224 ePG **Pb 17 36 37.1 +0.1**
PVCC eSG **Sg 17 36 55.1 -0.8**
comp=Z,79nm,0.4s
KRLC Kraliky 1.57 165 ePG **Pn 17 36 38.0 +0.1**
KRLC eSG **Sn 17 36 58.3 -0.7**
comp=Z,14nm,0.4s
RYBC Ceska Rybna 1.79 182 ePn **Pn 17 36 41.1 +0.2**
baz=3.1
RYBC eSg **Sn 17 37 04.1 -0.2**
12nm,0.1s,baz=3.1
STEB Steborice 1.95 148 ePG **Pg 17 36 45.7 -0.4**
19nm,0.5s
STEB eSG **Sg 17 37 12.5 +1.1**
HSKC Hora Svate Kat 1.99 241 ePG **Pb 17 36 45.7 -0.1**
HSKC eSG **Sb 17 37 11.5 +0.4**
comp=Z,19nm,0.4s
CLL Collm 2.00 263 ePg **Pg 17 36 47.0 -0.1**
CLL eSg **Sb 17 37 12.0 +0.5**
comp=Z,17nm,0.5s
MORC Moravsky Berou 2.02 154 ePn **Pn 17 36 44.0 -0.1**
baz=335
MORC eSg **Sb 17 37 11.3 -0.7**
comp=Z,10.0nm,0.5s,baz=335
OKC Ostrava-Krasne 2.16 144 ePG **Pg 17 36 49.9 -0.3**
OKC eSG **Sg 17 37 17.6 -0.6**
comp=Z,9.2nm,0.5s
VRAC Vranov 2.31 173 ePn **Pn 17 36 48.3 +0.3**
baz=354
VRAC eSg **Sb 17 37 20.0 -0.2**
comp=Z,7.0nm,0.3s,baz=354
MAUC Maruska 2.47 154 ePG **Pg 17 36 55.3 -0.8**
MAUC eSG **Sg 17 37 28.1 0.0**
comp=Z,10nm,0.3s
ZVC Zvikov 2.50 211 ePG **Pb 17 36 55.3 +0.8**
ZVC eSG **Sb 17 37 27.4 +1.6**
comp=Z,6.5nm,0.3s
KRUC Moravsky 2.54 177 ePn **Pn 17 36 51.5 +0.3**
baz=357
KRUC eSg **Sb 17 37 27.6 +0.6**
comp=Z,4.1nm,0.3s,baz=357
NKC Novy Kostel 2.72 241 eSG **Sg 17 37 36.4 +0.3**
comp=Z,29nm,0.4s
KHC Kasperske Hory 2.97 215 ePN **Pn 17 36 56.5 -0.7**
KHC ePG **Pb 17 37 03.4 +0.8**
KHC eSN **Sn 17 37 31.0 -2.6**
KHC eSG **Sb 17 37 41.6 +2.1**
comp=Z,6.9nm,0.5s
CKRC Cesky Krumlov 3.02 204 eSG **Sb 17 37 43.3 +2.4**
comp=Z,4.0nm,0.2s
LANS Liptovska Anna 3.23 138 ePG **Pg 17 37 11.6 +0.9**
LANS eSG **Sg 17 37 51.8 -0.7**
LANS eLG Lg 17 37 54.7
MODS Modra-Piesok 3.30 167 ePG Pg 17 37 19.2 +7.2
MODS eSG **Sg 17 37 56.6 +1.8**
BSD Bornholm Skovb 3.60 348 i P **Pn 17 37 06.0 +0.2**
BSD i S **Sn 17 37 46.4 -2.6**
BSD IAML 17 38 00.1
comp=Z,9.2nm,0.8s
HAMD Hammershus, De 3.78 348 i P **Pn 17 37 08.9 +0.7**
HAMD i S **Sn 17 37 52.5 -0.7**
HAMD IAML 17 38 19.9
comp=Z,14nm,1.0s
LUNU Lund 4.36 339 i P **Pn 17 37 16.4 +0.2**
LUNU i S **Sn 17 38 07.5 0.0**
BLEU Blekinge 4.72 358 i P **Pn 17 37 22.8 +1.6**
BLEU i S **Sn 17 38 16.4 -0.2**
BJUU Bjuv 4.86 339 i P **Pn 17 37 23.2 +0.2**
BJUU i S **Sn 17 38 17.9 -2.0**
DEL Delary 5.07 345 i P **Pn 17 37 26.5 +0.6**
DEL i S **Sn 17 38 22.8 -2.3**

IDC 03 17:45:04.5±332.0, **67.°37N**×**42.°93E, h0km, Error ellipse: s-maj=166.7km s-min=142.6km az=14.0, Baltic States-Belarus-Northwestern Russia**

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

I37NO I37NO 9.17 292 I I 18 40 00.0
baz=91,slow=328,SNR=0.5
I31KZ AKTYUBINSK INF 18.62 149 I I 19 40 42.6
0.1nm,1.2s,baz=341,slow=332,SNR=2.5
I46RU ZALESOVO INFRA 23.93 103 I I 20 10 00.0
baz=322,slow=329,SNR=4.7

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*JMA **03** 17:46:47.9±0.2, 24.°N±1.°×122.°4E±0.°6, h18km, MV2.1/11, TAIWAN REGION*
*TAP **03** 17:46:48.3, 24.°03N×122.°37E, h23km, ML2.6, D*
ISC 03 17:46:46.0±1.1, **23.°98N**±0.°02×**122.°41E**±0.°02, **h7km**±9km, **n84,** σ**0.s72**/148, **Taiwan region**

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

JYNG Yonagunijimaku 0.68 46 P **Pn 17 47 01.4 -0.7**
JYNG eS **Sb 17 47 10.3 +0.4**
EAHA Aohua 0.70 300 eP **Pb 17 47 00.8 +0.1**
EAHA eS **Sb 17 47 10.8 +0.2**
YOJ Yonaguni jima 0.73 49 P **Pn 17 47 02.5 -0.3**
YOJ eS **Sn 17 47 13.6 -0.7**
YOJ Yonaguni jima 0.73 49 P **Pn 17 47 02.9 +0.1**
YOJ S **Sn 17 47 14.2 -0.1**
HWA Hwalien 0.74 270 eP **Pb 17 47 01.9 +0.8**
HWA eS **Sb 17 47 11.5 +0.1**
ETL Fush Village 0.74 284 eP **Pb 17 47 02.1 +0.8**
ETL eS **Sb 17 47 11.5 -0.2**
EWUT Wuta 0.74 309 eP **Pb 17 47 01.6 +0.3**
TEYL Yanliau Villag 0.75 262 eP **Pb 17 47 02.1 +0.7**
TEYL eS **Sb 17 47 12.1 +0.2**
TWD Chiawan 0.75 278 eP **Pb 17 47 01.7 +0.3**
TWD S **Sb 17 47 11.4 -0.5**
ENA Nanau 0.76 306 P **Pb 17 47 01.9 +0.3**
ENA S **Sb 17 47 12.2 +0.1**
NACB Ninganchiao 0.77 285 P **Pb 17 47 02.0 +0.2**
NACB eS **Sb 17 47 12.8 +0.3**
ESAO Su ao 0.79 319 eP **Pb 17 47 02.3 +0.2**
ESAO eS **Sg 17 47 11.5 0.0**
SHUL Shoufeng 0.80 257 eP **Pb 17 47 03.1 +0.9**
SHUL eS **Sb 17 47 14.1 +0.8**
TWC Suao 0.81 321 i P **Pb 17 47 02.3 -0.2**
TWC eS **Sg 17 47 12.2 0.0**
ETM Tongmen 0.84 269 P **Pb 17 47 03.0 0.0**
ETM S **Sg 17 47 13.8 +0.8**
ETLH Xiulin Townshi 0.88 285 P **Pb 17 47 03.8 +0.1**
ETLH eS **Sb 17 47 15.8 +0.1**
ESL Shilin 0.91 260 eP **Pg 17 47 03.8 +0.4**
NDS Dongshan 0.91 316 i P **Pb 17 47 04.1 -0.1**
NDS eS **Sg 17 47 15.4 +0.1**
LXIB Xiulin Townshi 0.91 273 eP **Pg 17 47 04.1 +0.6**
LXIB eS **Sg 17 47 15.6 +0.2**
WARBT Fenglin Townsh 0.97 255 eP **Pg 17 47 04.8 +0.1**
LATG Datong 0.98 305 P **Pb 17 47 05.7 +0.3**
LATG S **Sb 17 47 19.5 +0.9**
TWE Neicheng 1.00 318 P **Pn 17 47 06.6 0.0**
TWE eS **Sg 17 47 17.9 -0.5**
ENTT Nioudou 1.01 311 P **Pb 17 47 06.3 +0.4**
ENTT eS **Sb 17 47 19.9 +0.3**
HGSD Ruisui 1.02 242 eP **Pb 17 47 06.5 +0.4**
HGSD eS **Sg 17 47 18.5 -0.5**
NDT Datong Townshi 1.03 307 eP **Pn 17 47 06.8 -0.1**
NDT eS **Sb 17 47 19.8 -0.2**
NNSB Datong 1.04 296 i P **Pb 17 47 06.7 +0.2**
NNSB eS **Sb 17 47 20.3 0.0**
NNS Nan Shan 1.05 296 i P **Pb 17 47 06.9 +0.2**
NNS S **Sb 17 47 20.6 -0.2**
WHF Hehuan Shan 1.06 279 eP **Pb 17 47 07.0 0.0**
WHF eS **Sg 17 47 20.1 -0.1**
FUSB Fushanzhiwuyua 1.08 316 i P **Pn 17 47 07.8 0.0**
FUSB S **Sn 17 47 22.2 -0.9**
EHYH Wanrong 1.09 244 eP **Pn 17 47 08.4 +0.7**
EHYH eS **Sg 17 47 20.9 -0.1**
TWB1 Santiao Chiao 1.10 340 eP **Pb 17 47 07.3 -0.1**
ECBN Changbin 1.10 233 eS **Sg 17 47 21.1 -0.2**
FUSS Fushou 1.10 284 P **Pn 17 47 08.2 +0.1**
FUSS eS **Sb 17 47 22.0 -0.2**
EHY Hungye 1.10 245 eP **Pg 17 47 07.7 +0.5**
EHY eS **Sg 17 47 20.8 -0.6**
TIPB Shuangxi 1.12 332 eP **Pn 17 47 08.1 -0.1**
TIPB eS **Sg 17 47 22.0 -0.3**
OWD Renai 1.13 269 eP **Pg 17 47 07.8 +0.1**
OWD eS **Sg 17 47 21.6 -0.8**
NWLT Wulai 1.15 314 eP **Pn 17 47 08.6 0.0**
NWLT eS **Sb 17 47 23.8 +0.4**
TWT Tachien 1.16 284 P **Pn 17 47 09.3 +0.4**
YHNB Yeheng 1.17 306 i P **Pn 17 47 08.8 -0.1**
YHNB eS **Sg 17 47 22.8 -0.8**
YULB Yu-li 1.17 241 eP **Pg 17 47 08.4 -0.2**
YULB eS **Sg 17 47 22.9 -0.9**
TDCB Techi 1.18 284 eP **Pb 17 47 08.8 +0.1**
TDCB eS **Sg 17 47 22.8 -1.1**
VWDT VWDT 1.18 259 eP **Pg 17 47 09.1 +0.4**
VWDT eS **Sg 17 47 23.3 -0.8**
WUSB Renai 1.18 271 eP **Pn 17 47 09.5 +0.3**
NSK Sanguang 1.19 306 P **Pb 17 47 08.9 0.0**
NSK eS **Sg 17 47 23.5 -0.7**
TWF1 Yuli 1.19 239 eP **Pg 17 47 08.8 -0.1**
TWF1 eS **Sg 17 47 23.8 -0.7**
SXI1 Grass Mountain 1.21 337 P **Pb 17 47 09.1 -0.3**
CHKH Chenggong 1.22 230 eP **Pg 17 47 09.5 +0.2**
IRIF Iriomote-Funau 1.26 73 P **Pn 17 47 11.6 +1.5**
IRIF eS **Sn 17 47 28.9 +1.6**
FULB Fuli 1.28 233 eP **Pn 17 47 10.4 -0.1**
FULB eS **Sg 17 47 25.6 -1.7**
CHKT Chengkung 1.30 228 eP **Pg 17 47 12.7 +1.8**
SSLB Suanglung 1.34 262 P **Pn 17 47 11.6 +0.3**
SSLB eS **Sb 17 47 27.5 -1.6**
NFF Wufeng Townshi 1.35 299 P **Pg 17 47 12.0 +0.1**
NFF eS **Sn 17 47 29.6 0.0**
DPDB Guoxing 1.36 273 eP **Pn 17 47 11.9 +0.4**
WHP Taichung City 1.37 283 eP **Pg 17 47 12.5 +0.2**
WHP eS **Sb 17 47 29.3 -0.5**
EHD Haiduan 1.38 233 eP **Pn 17 47 11.1 -0.6**
EHD eS **Sb 17 47 28.7 -1.3**
KSHI Guanxi Townshi 1.38 306 eP **Pg 17 47 12.5 +0.1**
KSHI eS **Sb 17 47 29.6 -0.4**
SMLT Sun Moon Lake 1.38 266 eP **Pn 17 47 12.4 +0.4**
SMLT eS **Sb 17 47 28.9 -1.4**
YM01 YM01 1.39 327 eP **Pb 17 47 12.3 -0.2**
ZUZH Zhuzihu 1.42 326 P **Pg 17 47 12.9 -0.3**
TYC Yuchr 1.42 267 eP **Pn 17 47 12.6 +0.3**
LIOB Emei 1.44 298 eP **Pg 17 47 13.6 0.0**
LIOB eS **Sn 17 47 31.9 +0.2**
NSTT Nanjuang 1.44 297 i P **Pg 17 47 13.7 +0.1**
NSTT S **Sb 17 47 31.2 -0.6**
WHYT Xinyi Township 1.45 259 eP **Pb 17 47 14.0 +0.5**
JKRS Kuro-shima 1.48 80 P **Pg 17 47 15.2 +0.6**
ELDTW Lidau 1.50 239 eP **Pn 17 47 12.8 -0.7**
ELDTW eS **Sn 17 47 30.3 -3.0**
TWQ1 Liyutan 1.54 284 eP **Pn 17 47 14.3 +0.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ALS	Alishan	1.54	253	P	Pb	17 47 15.7	+0.5
WNT	Mingjian	1.58	267	eP	Pb	17 47 16.1	+0.5
WNT				eS	Sb	17 47 36.1	+0.3
TCU	Taichung	1.59	276	eP	Pb	17 47 15.6	-0.2
TCU				eS	Sb	17 47 36.7	+0.5
JIJ	Ishigaki jima	1.63	76	P	Pb	17 47 16.7	+0.3
JIJ				eS	Sg	17 47 37.8	-0.6
TWGBT	Beinan	1.68	227	eP	Pn	17 47 15.1	-0.8
TWGBT				eS	Sn	17 47 35.6	-2.1
TWG	Pinlang	1.68	227	eP	Pn	17 47 15.1	-0.8
STYH	Taoyuan	1.70	242	eP	Pn	17 47 17.2	+1.1
STYH				eS	Sn	17 47 37.3	-0.9
WDLH	Douliu	1.74	261	eS	Sb	17 47 40.4	+0.1
WCKO	Fanlu	1.74	252	eP	Pb	17 47 18.5	+0.2
WCKO				eS	Sn	17 47 40.1	+1.0
TPUB	Ta-pu	1.77	248	eP	Pb	17 47 18.7	-0.1
TPUB				eS	Sn	17 47 40.4	+0.5
WTP	Ta-pu	1.80	247	eP	Pb	17 47 19.3	-0.1
WTP				eS	Sn	17 47 41.5	+0.8
JISG	Ishigakijimahi	1.84	70	P	Pb	17 47 19.1	-1.0
JISG				eS	Sn	17 47 41.3	-0.3
CHN1	Nanshi	1.90	246	eP	Pb	17 47 20.8	-0.2
CHN1				eS	Sn	17 47 44.6	+1.5
SGST	Jiashian	1.90	242	eP	Pb	17 47 20.8	-0.2
SGST				eS	Sn	17 47 43.9	+0.8
TWK	Hsinying	1.90	249	eP	Pn	17 47 20.3	+1.4
TWK				eS	Sn	17 47 43.8	+0.7
ECL	Taimali	1.92	225	eP	Pn	17 47 19.2	+0.1
ECL				eS	Sn	17 47 41.1	-2.5
WSF	Szhu	2.03	261	eP	Pn	17 47 21.3	+0.6
WSF				eS	Sn	17 47 47.7	+1.4
MASBT	Mashibuluo	2.12	231	eP	Pn	17 47 23.4	+1.4
MASBT				eS	Sn	17 47 49.3	+0.6

*IDC **03** 17:50:31.5±0.9, 9°.11S×157°.25E, h0km, mb4.1/10, mbtmp4.1/11, ML2.9/2, MS3.4/2, Error ellipse: s-maj=24.8km s-min=18.9km az=109.0*
*NEIC **03** 17:50:35.6±1.4, 9°.21S±0°.07×157°.38E±0°.06, h29km±4km, mb4.4/19, Error ellipse: s-maj=11.1km s-min=7.9km az=215.0*
ISC 03 17:50:33.2±0.5, **9°.23S**±0°.07×**157°.34E**±0°.06, **h17**km, **n41**, σ**1s.41**/42, **mb4.3**/18, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	2.58	95	Pn	Pn	17 51 15.6	+1.4
	0.7nm,0.3s,baz=316,slow=23,SNR=18						
HNR				Sn	Sn	17 51 44.5	-0.8
	3.8nm,0.3s,baz=97,slow=23,SNR=12						
HNR	Honiara	2.58	95		Pn	17 51 14.3	+0.1
HNR	Honiara	2.58	95	Sn	Sn	17 51 44.7	-0.6
RABL	Rabaul	7.17	314	Pn	Pn	17 52 17.4	0.0
RABL				Sn	Sn	17 53 39.0	+0.5
SANVU	Saraoutou	11.45	124	Pn	Pn	17 53 15.7	-0.4
COEN	Coen	14.65	250	Pn	Pn	17 54 01.0	+1.2
CTA	Charters Tower	15.21	224	LR	LR	17 59 30.7	
	comp=Z,88nm,18.5s,baz=27,slow=35						
CTAO	Charters Tower	15.21	224	Pn	Pn	17 54 09.0	+1.7
DZM	Mont Dzumac	15.48	147	Pn	P	17 54 14.8	-0.6
	0.2nm,0.3s,baz=307,slow=20,SNR=1.8						
DZM				LR	LR	17 58 52.3	
	comp=Z,197nm,19.5s,baz=345,slow=32						
	5.3nm,0.9s						
DZM	Mont Dzumac	15.48	147		Pn	17 54 10.4	-0.5
DZM				IAmb	IAmb	17 54 20.8	
	comp=Z,15nm,1.2s						
PATS	Pohnpei	15.99	4	Pn	Pn	17 54 15.3	-2.1
ARMA	Armidale	21.75	193	P	P	17 55 24.5	+0.4
ARMA				IAmb	IAmb	17 56 01.2	
	comp=Z,32nm,1.5s						
INKA	Innaminka	24.17	218	P	P	17 55 49.1	+0.4
WR8	Warramunga Arr	24.51	242		P	17 55 52.4	+0.4
WR8				IAmb	IAmb	17 56 14.0	
	comp=Z,8.2nm,1.1s						
WB0	Warramunga Arr	24.53	242	P	P	17 55 52.6	+0.4
WB0				IAmb	IAmb	17 56 02.7	
	comp=Z,16nm,1.2s						
WRA	Warramunga Arr	24.64	242	P	P	17 55 54.2	+1.0
	comp=Z,4.5nm,0.8s,baz=68,slow=9.4,SNR=32						
WRA				S	S	18 00 06.8	-7.3
	comp=Z,0.2nm,0.5s,baz=112,slow=6.0,SNR=1.2						
	comp=Z,4.5nm,0.8s						
AS31	Alice Springs	26.61	235	P	P	17 56 10.7	-0.3
ASAR	Alice Springs	26.61	235	P	P	17 56 11.3	+0.3
	comp=Z,0.6nm,0.6s,baz=72,slow=9.2,SNR=5.9						
STKA	Stephens Creek	26.86	211	P	P	17 56 14.2	+1.1
	comp=Z,4.2nm,0.7s,baz=36,slow=15,SNR=11						
	comp=Z,4.2nm,0.7s						
STKA	Stephens Creek	26.86	211	P	P	17 56 13.5	+0.4
KNRA	Kununurra	28.61	254	P	P	17 56 28.6	-0.3
BBOO	Buckleboo	30.62	217	P	P	17 56 47.0	+0.5
BBOO				IAmb	IAmb	17 57 21.9	
	comp=Z,27nm,1.4s						
JMN	Monobe	48.19	334	P	P	17 59 13.7	+0.8
JGF	Kuroka	48.41	338	P	P	17 59 15.0	+0.5
JGF				IAmb	IAmb	17 59 34.8	
	comp=Z,13nm,1.3s						
MJAR	Matsushiro Arr	48.95	340	P	P	17 59 18.2	-0.5
	comp=Z,1.4nm,0.7s,baz=168,slow=8.3,SNR=5.0						
	comp=Z,1.4nm,0.7s						
MJAR	Matsushiro Arr	48.95	340	P	P	17 59 17.3	-1.4
JNU	Nakatsue	49.08	330	P	P	17 59 19.3	-0.5
	comp=Z,7.7nm,0.8s,baz=100,slow=5.1,SNR=4.9						
	comp=Z,7.7nm,0.8s						
KSRS	Korea Array	53.99	331	P	P	17 59 56.5	+0.1
	comp=Z,2.4nm,0.7s,baz=146,slow=7.0,SNR=5.4						
	comp=Z,2.4nm,0.7s						
CMAR	Chiang Mai Arr	63.84	296	P	P	18 01 05.5	+0.3
	comp=Z,0.5nm,0.6s,baz=128,slow=5.5,SNR=5.0						
	comp=Z,0.5nm,0.6s						
CMAR	Chiang Mai Arr	63.84	296	P	P	18 01 04.7	-0.5
CASY	Casey	65.22	199		P	18 01 13.7	+0.2
MA2	Magadan	68.78	356	P	P	18 01 35.9	-0.2
	comp=Z,0.5nm,0.3s,baz=126,slow=4.1,SNR=4.5						
	comp=Z,0.5nm,0.3s						
MA2	Magadan	68.78	356	P	P	18 01 35.2	-0.9
MA2				IAmb	IAmb	18 01 45.4	
	comp=Z,4.0nm,1.3s						
ULN	Ulaanbaatar	72.12	327	P	P	18 01 58.0	+1.0
ULN				IAmb	IAmb	18 02 00.4	
	comp=Z,3.1nm,1.1s						
SHL	Shillong	72.42	300	P	P	18 01 60.0	+0.7
SHL				IAmb	IAmb	18 02 01.1	
	comp=Z,5.1nm,1.1s						
SONM	Songino Array	72.46	327	P	P	18 01 59.8	+0.9
	comp=Z,2.0nm,0.8s,baz=138,slow=6.3,SNR=13						
	comp=Z,2.0nm,0.8s						
SONM	Songino Array	72.46	327	IAmb	IAmb	18 02 01.6	
	comp=Z,2.6nm,1.0s						
ILAR	Eielson Array	84.60	21	P	P	18 03 06.4	+1.0
	comp=Z,0.9nm,1.1s,baz=265,slow=5.7,SNR=4.2						
	comp=Z,0.9nm,1.1s						
ILAR	Eielson Array	84.60	21	P	P	18 03 06.0	+0.6
MKAR	Makanchi Array	86.60	318	P	P	18 03 15.9	+0.2
	comp=Z,0.6nm,0.6s,baz=93,slow=5.8,SNR=9.3						
	comp=Z,0.6nm,0.6s						
MKAR	Makanchi Array	86.60	318	P	P	18 03 15.1	-0.7

*SOME **03** 17:51:51.7, 40°.28N×78°.33E, h5km*
*NNC **03** 17:51:54.0±1.4, 40°.37N×78°.41E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=9.8km s-min=7.1km az=164.0*
*KRNET **03** 17:51:54.0±0.1, 40°.28N×78°.25E, mb3.3*
ISC 03 17:51:50.1±2.4, **40°.21N**±0°.10×**78°.37E**±0°.05, **h10**km, **n34**, σ**1s.63**/50, **12C-8D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.58	344	⇑iP	Pg	17 52 21.8	+1.4
TARG				⇑iS	Sg	17 52 42.2	+1.3
KDJ	Kajisay	2.12	335	⇓eP	Pg	17 52 31.0	+0.2
KDJ				⇓iS	Sg	17 52 57.7	-0.5
NRN	Naryn	2.17	305	⇑iP	Pg	17 52 31.7	-0.2
NRN				⇑iS	Sg	17 52 59.2	-0.9
JNKS	Jany-Kuch	2.25	293	⇓eP	Pg	17 52 32.5	-0.8
JNKS				⇓iS	Sg	17 53 00.5	-2.0
ULHL	Ulahol	2.59	322	⇓iP	Pb	17 52 37.5	+0.7
ULHL				⇓iS	Sb	17 53 09.1	+0.3
ANVS	Anan'yevo	2.62	349	⇑iP	Pb	17 52 38.5	+1.1
ANVS				⇑iS	Sb	17 53 10.8	+1.0
SATY	Saty	2.85	1	Pg	Pg	17 52 44.3	-0.4
	14nm,0.8s						
SATY				Lg	Lg	17 53 22.4	
	41nm,0.8s						
UZB	Uzynbulak	2.98	9	Pg	Pg	17 52 45.1	-2.0
	9.3nm,0.5s						
UZB				Lg	Lg	17 53 23.9	
	35nm,0.5s						
UZB	Uzynbulak	2.98	9	eP	Pg	17 52 45.1	-2.0
	9.3nm,0.5s						
UZB				eS	Sg	17 53 23.9	-1.9
	35nm,0.5s						
TNSS	Tian-Shan	3.02	340	Pg	Pg	17 52 46.8	-1.2
	3.7nm,0.4s						
TNSS				Lg	Lg	17 53 27.0	
	9.2nm,0.5s						
TNSS	Tian-Shan	3.02	340	eP	Pg	17 52 46.8	-1.2
	3.7nm,0.4s						
TNSS				eS	Sg	17 53 27.0	-0.2
	9.2nm,0.5s						
SHLS	Shalkode	3.06	15	Pg	Pg	17 52 48.1	-0.6
	19nm,0.6s						
SHLS				Lg	Lg	17 53 28.7	
	38nm,0.4s						
SHLS	Shalkode	3.06	15	eP	Pg	17 52 48.1	-0.6
	19nm,0.6s						
SHLS				eS	Sg	17 53 28.7	+0.4
	38nm,0.4s						
MDOK	Medeo	3.11	342	Pg	Pg	17 52 48.5	-1.3
	14nm,0.5s						
MDOK				Lg	Lg	17 53 29.7	
	79nm,0.4s						
KOTS	Kotyrbulak	3.17	343	Pg	Pg	17 52 49.8	-1.0
	12nm,0.5s						
KOTS				Lg	Lg	17 53 31.9	
	48nm,0.3s						
KOTS	Kotyrbulak	3.17	343	eP	Pg	17 52 49.8	-1.0
	12nm,0.5s						
KOTS				eS	Sg	17 53 31.9	+0.1
	48nm,0.3s						
PDGK	Podgornoye	3.23	15	⇑Pg	Pb	17 52 48.0	+0.4
	7.1nm,0.4s						
PDGK				⇓Lg	Lg	17 53 29.3	
	41nm,1.1s						
MTBS	Maitube	3.26	334	Pg	Pg	17 52 51.1	-1.5
	12nm,0.3s						
MTBS				Lg	Lg	17 53 34.1	
	23nm,0.2s						
MTBS	Maitube	3.26	334	eP	Pg	17 52 51.1	-1.5
	12nm,0.3s						
MTBS				eS	Sg	17 53 34.1	-0.7
	23nm,0.2s						
KPKS	Kokpek	3.26	4	Pg	Pb	17 52 49.7	+1.5
	0.2nm,0.1s						
KPKS				Lg	Lg	17 53 31.7	
	34nm,0.3s						
KPKS	Kokpek	3.26	4	eP	Pb	17 52 49.7	+1.5
	0.2nm,0.1s						
KPKS				eS	Sg	17 53 31.7	-3.2
	34nm,0.3s						
KURS	Kuram	3.28	357	Pg	Pb	17 52 49.8	+1.4
	10nm,0.8s						
KURS				Lg	Lg	17 53 31.9	
	24nm,0.3s						
KST	Kastek	3.36	328	Pg	Pg	17 52 52.8	-1.7
	7.1nm,0.2s						
KST				Lg	Lg	17 53 36.9	
	25nm,0.3s						
KST	Kastek	3.36	328	eP	Pg	17 52 52.8	-1.7
	7.1nm,0.2s						
KST				eS	Sg	17 53 36.9	-1.0
	25nm,0.3s						
KTBS	Karatobe	3.72	341	Pg	Pg	17 52 59.4	-2.0
	6.3nm,0.3s						
KTBS				Lg	Lg	17 53 48.0	
	0.6nm,0.5s						
KTBS	Karatobe	3.72	341	eP	Pg	17 52 59.4	-2.0
	6.3nm,0.3s						
KTBS				eS	Sg	17 53 48.0	-1.5
	0.6nm,0.5s						
AAK	Ala-Archa	3.79	311	⇑Pg	Pg	17 53 01.5	-1.3
	2.1nm,0.6s						
AAK				⇑Lg	Lg	17 53 49.3	
	13nm,0.9s						
BLB	Baldybastay	3.88	1	Pg	Pg	17 53 01.9	-2.7
	0.3nm,0.2s						
BLB				Lg	Lg	17 53 52.8	
	33nm,0.5s						
KRBS	Karabastau	4.02	331	Pg	Pg	17 53 04.6	-2.6
	4.9nm,0.3s						
KRBS				Lg	Lg	17 53 57.2	
	2.4nm,0.4s						
KRBS	Karabastau	4.02	331	eP	Pg	17 53 04.5	-2.6
	4.9nm,0.3s						
KRBS				eS	Sg	17 53 57.2	-2.0
	2.4nm,0.4s						
DJR	Jarkent	4.25	14	Pg	Pg	17 53 09.0	-2.5
	1.7nm,0.3s						
DJR				Lg	Lg	17 54 05.0	
	7.7nm,0.3s						
DJR	Jarkent	4.25	14	eP	Pg	17 53 09.0	-2.5
	1.7nm,0.3s						
DJR				eS	Sg	17 54 05.0	-1.7
	7.7nm,0.3s						
KK31	Karatay Array	6.56	299	⇑Pg	Pg	17 53 54.7	-1.0
	0.4nm,0.5s,baz=114,slow=17,SNR=4.0						
KK31				⇑Lg	Lg	17 55 17.4	
	1.7nm,0.7s,baz=110,slow=28,SNR=5.4						
MK31	Makanchi Array	7.17	22	Pn	Pn	17 53 41.6	+6.5
	0.4nm,0.6s,baz=204,slow=13,SNR=11						
MK31				⇓Sn	Sn	17 54 59.9	+3.4
	0.3nm,0.5s						
MK31				⇑Lg	Lg	17 55 36.9	
	0.5nm,0.5s						

*NEIC **03** 17:54:13.6±2.7, 6°.2S±0°.1×11°.37W±0°.10, h10km±1km, mb4.6/24, Error ellipse: s-maj=21.7km s-min=14.2km az=149.0*
*IDC **03** 17:54:14.7±6.2, 6°.01S×11°.23W, h0km, mb4.0/6, mbtmp4.0/6, MS3.5/10, Error ellipse: s-maj=186.6km s-min=87.1km az=151.0*
ISC 03 17:54:12.8±0.6, **6°.2S**±0°.1×**11°.37W**±0°.10, **h10**km, **n46**, σ**1s.41**/31, **mb4.6**/14, **MS3.5**/10, **Ascension Island region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASCN	Ascension	3.44	239	Pn	Pn	17 55 07.4	+0.9
H10N2	ASCENSION HYDR	3.50	242	T	T	17 58 35.1	
	baz=64,slow=74						
H10N1	ASCENSION HYDR	3.50	242	T	T	17 58 35.1	
	baz=64,slow=74						
H10N3	ASCENSION HYDR	3.52	242	T	T	17 58 34.5	
	baz=64,slow=74						
H10S2	ASCENSION HYDR	4.26	229	T	T	17 59 17.2	
	baz=54,slow=74,SNR=36						
H10S3	ASCENSION HYDR	4.27	230	T	T	17 59 16.9	
	baz=166,slow=74,SNR=31						
TORD	Torodi Ar. Bea	23.18	34	P	P	17 59 20.6	+0.8
	4.4nm,1.0s,baz=214,slow=12,SNR=15						
	4.4nm,1.0s						
TORD	Torodi Ar. Bea	23.18	34	P	P	17 59 17.1	-2.7
EDA	Edea	23.66	66	P	P	17 59 23.2	-1.5
RCBR	Riachuelo	24.40	270	LR	LR	18 06 43.3	
	comp=Z,48nm,19.8s,baz=82,slow=30						
RCBR	Riachuelo	24.40	270	P	P	17 59 30.4	-1.3
RCBR				IAmb	IAmb	18 00 03.6	
	comp=Z,23nm,1.4s						
TSUM	Tsumeb	31.00	117	LR	LR	18 10 38.3	
	comp=Z,96nm,19.3s,baz=311,slow=32						
KOOLE	Kule	34.70	122	P	P	18 01 02.7	-0.5
GRTLG	Ghanzi	34.95	119	P	P	18 01 05.3	-0.2
BDFB	Brasilia	37.13	252	P	P	18 01 24.4	+0.2
KHWEE	KHWEE	38.86	118	P	P	18 01 38.7	0.0
KHWEE				IAmb	IAmb	18 01 45.1	
	comp=Z,14nm,1.2s						
SUR	Sutherland	39.73	135	LR	LR	18 15 47.0	
	comp=Z,32nm,20.7s,baz=352,slow=32						
LSZ	Lusaka	39.84	106	LR	LR	18 15 58.3	
	comp=Z,70nm,18.8s,baz=310,slow=33						
MBAR	Mbarara	42.38	84	LR	LR	18 18 04.4	
	comp=Z,184nm,20.6s,baz=250,slow=34						
MORF	Marmelete	43.33	3	P	P	18 02 14.5	-0.7
LODK	Lodwar	47.63	80	P	P	18 02 49.8	0.0
LODK				IAmb	IAmb	18 02 53.6	
	comp=Z,5.7nm,1.5s						
BOAV	Boa Vista	49.81	278	P	P	18 03 07.1	+0.7
BOAV				IAmb	IAmb	18 03 15.6	
	comp=Z,9.4nm,1.3s						
FURI	Furi	52.09	74	LR	LR	18 23 24.2	
	comp=Z,48nm,20.4s,baz=88,slow=34						
EIL	Elat	56.98	49	LR	LR	18 29 04.0	
	comp=Z,45nm,19.1s,baz=237,slow=37						
GO02	Mina Guanaco	58.69	244	P	P	18 04 11.8	+0.4
GERES	GERESS Array B	59.03	19	P	P	18 04 15.8	+2.9
	comp=Z,1.6nm,0.9s,baz=198,slow=8.1,SNR=8.4						
	comp=Z,1.6nm,0.9s						
ASF	Jabal al Asfar	59.70	47	LR	LR	18 30 42.8	
	comp=Z,40nm,18.1s,baz=207,slow=37						
CO01	Juntas del Tor	59.93	239	P	P	18 04 20.8	+0.9
CO01				IAmb	IAmb	18 04 22.0	
	comp=Z,11nm,1.5s						
BO01	Tunca	61.66	234	P	P	18 04 30.0	-1.2
BO01				IAmb	IAmb	18 04 53.2	
	comp=Z,5.7nm,1.1s						
BRTR	Keskin Array B	61.70	38	P	P	18 04 33.7	+2.1
	comp=Z,0.5nm,0.7s,baz=234,slow=6.6,SNR=3.7						
	comp=Z,0.5nm,0.7s						
BRTR	Keskin Array B	61.70	38	P	P	18 04 29.9	-1.6
LL02	Futaleuf	64.45	225	P	P	18 04 48.9	-0.8
NNA	Nana	64.79	260	P	P	18 04 52.6	+0.2
KIEV	Kiev	66.56	27	P	P	18 05 03.8	+0.8
KIEV				IAmb	IAmb	18 05 20.8	
	comp=Z,7.5nm,1.4s						
AKASG	Malin Array Be	66.57	27	P	P	18 05 05.1	+2.0
	comp=Z,0.2nm,0.3s,baz=231,slow=6.9,SNR=5.1						
	comp=Z,0.2nm,0.3s						
AKBB	Malin Array Si	66.57	27	P	P	18 05 03.8	+0.7
AKBB				IAmb	IAmb	18 05 20.7	
	comp=Z,8.4nm,1.4s						
MG05	Puerto Natales	67.51	216	P	P	18 05 09.0	-0.1
HFS	Hagfors	69.01	13	P	P	18 05 20.0	+1.7
	comp=Z,2.7nm,0.8s,baz=203,slow=5.6,SNR=4.5						
	comp=Z,2.7nm,0.8s						
NOA	NORSAR Array B	69.31	12	LR	LR	18 35 33.6	
	comp=Z,16nm,19.1s,baz=115,slow=36						
NC204	NORSAR Array S	69.43	11	P	P	18 05 19.9	-1.0
NC204				IAmb	IAmb	18 05 42.8	
	comp=Z,7.6nm,1.1s						
FINES	FINESS Array B	73.41	18	P	P	18 05 47.0	+2.1
	comp=Z,3.5nm,0.9s,baz=222,slow=10,SNR=8.7						
	comp=Z,3.5nm,0.9s						
FINES	FINESS Array B	73.41	18	P	P	18 05 44.2	-0.7
J57A	Williamstown	76.27	317	P	P	18 05 59.8	-2.1
U56A	King	77.03	309	P	P	18 06 04.8	-1.6
FVM	French Village	85.20	309	P	P	18 06 48.6	-1.2
PALK	Pallekele	92.82	83	LR	LR	18 45 28.8	
	comp=Z,24nm,20.3s,baz=74,slow=33						

*IDC **03** 18:01:22.4±0.8, 49°.83N×157°.38E, h0km, mb3.6/15, mbtmp3.7/19, ML3.7/4, MS2.7/1, Error ellipse: s-maj=19.5km s-min=14.9km az=149.0*
*MOS **03** 18:01:26.5±1.4, 49°.52N×157°.33E, h44km, mb3.8/1, Error ellipse: s-maj=13.3km s-min=3.9km az=82.8*
*KRSC **03** 18:01:28.0±2.3, 49°.71N×157°.91E, h47km±50km, Ml4.2*
ISC 03 18:01:28.2±1.7, **49°.58N**±0°.09×**157°.57E**±0°.07, **h47**km±15km, **n84**, σ**1s.41**/112, **mb3.7**/15, **1D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.45	320	⇓iPN	Pn	18 01 51.6	-0.4
SKR				iS	Sn	18 02 08.4	-1.3
SKR				pmax	pmax		
	comp=Z,1μm,0.6s						
SKR				pmax	pmax		
	comp=Z,100nm,4.2s						
SKR				smax	smax		
	comp=N,5μm,0.5s						
SKR				smax	smax		
	comp=E,3μm,0.3s						
SKR	Severo-Kuril's	1.45	320	eP	Pn	18 01 51.6	-0.4
SKR				eS	Sn	18 02 08.6	-1.1
PAU	Pauzhetka	1.95	346	PN	Pn	18 01 59.6	+0.8
PAU				S	Sn	18 02 22.0	-0.1
PAU	Pauzhetka	1.95	346	eP	Pn	18 01 59.6	+0.8
PAU				eS	Sn	18 02 22.1	-0.1
KDTR	Khodutka, Kamc	2.26	8	PN	Pn	18 02 03.6	+0.6
KDTR				S	Sn	18 02 28.3	-1.2
KDTR	Khodutka, Kamc	2.26	8	eP	Pn	18 02 03.6	+0.6
KDTR				eS	Sn	18 02 28.4	-1.2
MIPR	Malaya Ipel'ka	2.75	350	PN	Pn	18 02 10.6	+0.8
MIPR				S	Sn	18 02 44.2	+2.5
MIPR	Malaya Ipel'ka	2.75	350	eP	Pn	18 02 10.6	+0.8
MIPR				eS	Sn	18 02 44.3	+2.5
ASAK	Asacha	2.81	4	PN	Pn	18 02 12.0	+1.2
ASAK				S	Sn	18 02 43.5	+0.1
ASAK	Asacha	2.81	4	eP	Pn	18 02 12.0	+1.2
ASAK				eS	Sn	18 02 43.6	+0.1
RUS	Russkaya	2.92	11	PN	Pn	18 02 12.6	+0.5
RUS				S	Sn	18 02 45.5	-0.4
RUS	Russkaya	2.92	11	eP	Pn	18 02 12.6	+0.5
RUS				eS	Sn	18 02 45.5	-0.4
MTVR	Mutnovka	2.93	7	PN	Pn	18 02 13.5	+1.1
MTVR				S	Sn	18 02 45.8	-0.7
MTVR	Mutnovka	2.93	7	eP	Pn	18 02 13.5	+1.1
MTVR				eS	Sn	18 02 45.9	-0.7
GRL	Gorelyy	2.99	6	PN	Pn	18 02 14.6	+1.3
GRL				S	Sn	18 02 47.7	-0.2
GRL	Gorelyy	2.99	6	eP	Pn	18 02 14.6	+1.3
GRL				eS	Sn	18 02 47.8	-0.2
KRMR	Karymshinskiy	3.27	6	PN	Pn	18 02 18.6	+1.6
KRMR				S	Sn	18 02 56.6	+2.0
KRMR	Karymshinskiy	3.27	6	eP	Pn	18 02 18.6	+1.6
KRMR				eS	Sn	18 02 56.6	+2.0
APC	Apacha	3.36	356	PN	Pn	18 02 19.7	+1.6
APC	Apacha	3.36	356	eP	Pn	18 02 19.7	+1.6
PET	Petropavlovsk	3.52	11	ePN	Pn	18 02 21.4	+1.1
PET				eS	Sn	18 03 00.1	-0.5
PET				pmax	pmax		
	comp=Z,41nm,0.5s						
PET				smax	smax		
	comp=N,116nm,0.7s						
PET				smax	smax		
	comp=E,79nm,0.5s						
PET	Petropavlovsk	3.52	11	eP	Pn	18 02 21.4	+1.1
PET				eS	Sn	18 03 00.1	-0.5
DALK	Dalny	3.54	12	PN	Pn	18 02 21.7	+1.2
DALK	Dalny	3.54	12	eP	Pn	18 02 21.7	+1.2
DALK				eS	Sn	18 03 00.2	-0.9
INSR	Institute	3.55	10	PN	Pn	18 02 22.7	+2.0
INSR				S	Sn	18 03 01.7	+0.3
INSR	Institute	3.55	10	eP	Pn	18 02 22.8	+2.0
INSR				eS	Sn	18 03 01.8	+0.3
UGLR	Uglovaya	3.72	12	PN	Pn	18 02 24.9	+1.7
UGLR				S	Sn	18 03 06.6	+0.9
UGLR	Uglovaya	3.72	12	eP	Pn	18 02 25.0	+1.7
UGLR				eS	Sn	18 03 06.7	+0.9
AVH	Avacha	3.76	11	PN	Pn	18 02 25.8	+2.1
AVH				S	Sn	18 03 08.6	+1.8
AVH	Avacha	3.76	11	eP	Pn	18 02 25.9	+2.1
AVH				eS	Sn	18 03 08.6	+1.8
NLC	Nalytchevo	3.77	16	PN	Pn	18 02 23.7	+0.1
NLC	Nalytchevo	3.77	16	eP	Pn	18 02 23.8	+0.1
NLC				eS	Sn	18 03 04.3	-2.3
SMAR	Somma	3.77	11	PN	Pn	18 02 25.4	+1.5
SMAR				S	Sn	18 03 08.5	+1.4
SMAR	Somma	3.77	11	eP	Pn	18 02 25.5	+1.5
SMAR				eS	Sn	18 03 08.5	+1.4
KOK	Koryaka	3.78	10	PN	Pn	18 02 26.3	+2.3
KOK				S	Sn	18 03 07.7	+0.6
KOK	Koryaka	3.78	10	eP	Pn	18 02 26.4	+2.4
KOK				eS	Sn	18 03 07.8	+0.6
SDLR	Sedlovina	3.79	12	PN	Pn	18 02 25.3	+1.1
SDLR	Sedlovina	3.79	12	eP	Pn	18 02 25.3	+1.1
SDLR				eS	Sn	18 03 07.6	0.0
KRER	Koryakskii	3.80	11	PN	Pn	18 02 26.4	+2.0
KRER				S	Sn	18 03 09.2	+1.3
KRER	Koryakskii	3.80	11	eP	Pn	18 02 26.4	+2.0
KRER				eS	Sn	18 03 09.2	+1.3
KRX	Arik	3.84	10	PN	Pn	18 02 26.9	+2.0
KRX				S	Sn	18 03 09.4	+0.6
KRX	Arik	3.84	10	eP	Pn	18 02 26.9	+2.0
KRX				eS	Sn	18 03 09.5	+0.6
SPN	Mys Shipunski	3.84	23	PN	Pn	18 02 25.8	+1.1
SPN	Mys Shipunski	3.84	23	eP	Pn	18 02 25.9	+1.1
SPN				eS	Sn	18 03 07.9	-0.8
GNL	Ganaly	4.13	3	PN	Pn	18 02 30.9	+2.1
GNL	Ganaly	4.13	3	eP	Pn	18 02 30.9	+2.1
KII	Karymskiy	4.61	14	PN	Pn	18 02 37.6	+2.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KII	**Karymskiy**	**4.61**	**14**	*e*P	Pn	18 02 37.7	+2.2
KII				*e*S	**Sn**	**18 03 29.3**	**+1.6**
MKZ	**Mys Kozlova**	**5.61**	**26**	PN	**Pn**	**18 02 49.3**	**+0.4**
MKZ	**Mys Kozlova**	**5.61**	**26**	*e*P	**Pn**	**18 02 49.3**	**+0.4**
MKZ				*e*S	**Sn**	**18 03 48.7**	**-3.2**
KMNR	**Kamenistaya**	**6.40**	**14**	PN	Pn	18 03 02.3	+2.4
KMNR	**Kamenistaya**	**6.40**	**14**	*e*P	Pn	18 03 02.3	+2.5
KBTR	**Krutoberegovo**	**7.36**	**24**	PN	**Pn**	**18 03 13.9**	**+1.0**
KBTR	**Krutoberegovo**	**7.36**	**24**	*e*P	**Pn**	**18 03 13.9**	**+1.0**
KBTR				*e*S	**Sn**	**18 04 30.6**	**-4.3**
SMKR	**Semkarok**	**7.40**	**17**	PN	**Pn**	**18 03 14.4**	**+0.9**
SMKR	**Semkarok**	**7.40**	**17**	*e*P	**Pn**	**18 03 14.4**	**+0.9**
YSS	**Yuzhno-Sakhali**	**10.22**	**261**	*e*PN	Pn	18 03 48.4	-3.8
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MA2	**Magadan**	**10.76**	**341**	Pn	**Pn**	**18 03 58.7**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=145,slow=16,SNR=4.0						
	comp=Z,0.9nm,0.3s						
SHEM	**Shemya Is, Ala**	**10.85**	**67**	LR	LR	18 08 35.7	
	comp=Z,35nm,18.8s,baz=11,slow=40						
ASAJ	**Asahikawa**	**11.61**	**248**	Pn	**Pn**	**18 04 10.8**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=82,slow=16,SNR=6.2						
	comp=Z,2.2nm,0.5s						
KLR	**Kul'dur**	**16.79**	**279**	Pn	**Pn**	**18 05 17.9**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=79,slow=12,SNR=5.3						
	comp=Z,0.4nm,0.5s						
MJAR	**Matsushiro Arr**	**19.16**	**234**	P	**P**	**18 05 47.9**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=33,slow=9.8,SNR=7.0						
	comp=Z,2.4nm,0.8s						
KSRS	**Korea Array**	**24.51**	**252**	P	**P**	**18 06 43.7**	**+0.8**
	comp=Z,2.5nm,0.8s,baz=49,slow=11,SNR=5.8						
	comp=Z,2.5nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**30.70**	**163**	T	T	18 40 51.2	
	baz=347						
H11N1	**WAKE ISLAND Hy**	**30.72**	**163**	T	T	18 40 56.2	
	baz=347,slow=74,SNR=3.7						
H11N3	**WAKE ISLAND Hy**	**30.72**	**163**	T	T	18 40 52.2	
	baz=347,slow=74,SNR=5.3						
H11S1	**WAKE ISLAND Hy**	**31.86**	**163**	T	T	18 42 10.5	
	baz=347,slow=76,SNR=9.2						
H11S3	**WAKE ISLAND Hy**	**31.87**	**163**	T	T	18 42 19.4	
	baz=347,slow=76,SNR=14						
H11S2	**WAKE ISLAND Hy**	**31.88**	**163**	T	T	18 42 21.9	
	baz=347,slow=76,SNR=13						
ILAR	**Eielson Array**	**32.46**	**41**	P	**P**	**18 07 53.7**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=262,slow=6.3,SNR=4.8						
	comp=Z,0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**43.41**	**305**	P	**P**	**18 09 23.9**	**-2.0**
	comp=Z,0.4nm,0.4s,baz=73,slow=6.5,SNR=2.3						
	comp=Z,0.4nm,0.4s						
YKA	**Yellowknife Ar**	**46.86**	**39**	P	**P**	**18 09 53.6**	**+0.6**
	comp=Z,0.2nm,0.7s,baz=302,slow=9.0,SNR=2.1						
	comp=Z,0.2nm,0.7s						
KURK	**Kurchatov**	**48.29**	**303**	P	**P**	**18 10 03.2**	**-1.1**
MKAR	**Makanchi Array**	**48.30**	**297**	P	**P**	**18 10 03.2**	**-1.3**
	comp=Z,0.5nm,0.6s,baz=59,slow=7.6,SNR=12						
	comp=Z,0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**48.39**	**303**	P	**P**	**18 10 03.2**	**-1.9**
	comp=Z,1.0nm,0.6s,baz=64,slow=8.2,SNR=8.0						
	comp=Z,1.0nm,0.6s						
BVAR	**Borovoye Array**	**51.37**	**309**	P	**P**	**18 10 25.6**	**-2.1**
	comp=Z,0.7nm,0.5s,baz=54,slow=7.3,SNR=2.3						
	comp=Z,0.7nm,0.5s						
CMAR	**Chiang Mai Arr**	**55.91**	**258**	P	**P**	**18 11 03.3**	**+2.0**
	comp=Z,0.5nm,0.6s,baz=44,slow=6.3,SNR=5.0						
	comp=Z,0.5nm,0.6s						
ARCES	**ARCESS Array B**	**56.13**	**342**	P	**P**	**18 11 00.4**	**-1.8**
	comp=Z,3.3nm,0.8s,baz=35,slow=11,SNR=1.8						
	comp=Z,3.3nm,0.8s						
NVAR	**Mina Array Bea**	**58.52**	**66**	P	**P**	**18 11 19.1**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=327,slow=9.3,SNR=2.1						
	comp=Z,0.3nm,0.6s						
PDAR	**Pinedale Array**	**60.69**	**58**	P	**P**	**18 11 35.4**	**+0.7**
	comp=Z,0.8nm,0.9s,baz=317,slow=8.3,SNR=3.5						
	comp=Z,0.8nm,0.9s						
WRA	**Warramunga Arr**	**72.22**	**203**	P	**P**	**18 12 48.7**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=13,slow=6.0,SNR=2.6						
	comp=Z,0.5nm,0.7s						
TXAR	**Lajitas Array**	**73.54**	**64**	P	**P**	**18 12 58.2**	**+2.1**
	comp=Z,1.2nm,0.8s,baz=316,slow=4.7,SNR=6.5						
	comp=Z,1.2nm,0.8s						
ASAR	**Alice Springs**	**75.90**	**202**	P	**P**	**18 13 11.4**	**+1.8**
	comp=Z,0.2nm,0.5s,baz=18,slow=5.5,SNR=2.2						
	comp=Z,0.2nm,0.5s						
BRTR	**Keskin Array B**	**78.29**	**319**	P	**P**	**18 13 21.7**	**-1.4**
	comp=Z,0.3nm,0.7s,baz=33,slow=5.5,SNR=1.8						
	comp=Z,0.3nm,0.7s						

*IDC **03** 18:17:18.4±1.5, 0°.88N×126°.45E, h0km, mb3.7/4, mbtmp3.8/4, Error ellipse: s-maj=176.8km s-min=20.3km az=66.0*

*NEIC **03** 18:17:23.8±1.3, 1°.0N±0°.1×126°.44E±0°.05, h52km±9km, mb4.1/14, Error ellipse: s-maj=14.7km s-min=7.0km az=183.0*

*DJA **03** 18:17:26.4±1.2, 1°N±4°×12°7E±°, h30km±19km, M3.5/13, MLv3.5/13*

ISC 03 18:17:22.7±0.7**, 1°.00N**±0°.08×**126°.40E**±0°.05**, h39**km**, n29, σ1s33**/33**, mb3.9**/10**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.99**	**103**		**Pn**	**18 17 41.5**	**+1.4**
TNTI				Sn	**Sn**	**18 17 53.4**	**+0.4**
TNTI	**Ternate**	**0.99**	**103**	P	**Pn**	**18 17 42.5**	**+2.4**
MNI	**Manado**	**1.62**	**286**	P	Pn	18 17 54.9	+6.2
SANI	**Sanana**	**3.06**	**188**	P	**Pn**	**18 18 09.3**	**+0.8**
GTOI	**Gorontalo**	**3.41**	**264**	P	Pn	18 18 21.5	+8.2
LUWI	**Luwuk**	**4.16**	**241**	Pn	**Pn**	**18 18 25.4**	**+1.8**
LUWI				Sn	**Sn**	**18 19 12.8**	**+1.8**
NLAI	**Namlea**	**4.27**	**171**	P	**Pn**	**18 18 27.5**	**+2.3**
TOLI2	**Tolitoli**	**5.62**	**271**	Pn	**Pn**	**18 18 44.0**	**+0.3**
MTN	**Manton Dam**	**14.53**	**161**	Pn	**Pn**	**18 20 44.5**	**-1.3**
KNRA	**Kununurra**	**16.73**	**172**	Pn	**Pn**	**18 21 14.4**	**+0.1**
WB0	**Warramunga Arr**	**22.08**	**160**	P	**P**	**18 22 14.2**	**-0.3**
WB0				IAmb	IAmb	18 22 16.3	
	comp=Z,8.4nm,1.2s						
WRA	**Warramunga Arr**	**22.22**	**160**	P	**P**	**18 22 15.5**	**-0.5**
	comp=Z,1.6nm,0.4s,baz=338,slow=10,SNR=11						
	comp=Z,1.6nm,0.4s						
WRA	**Warramunga Arr**	**22.22**	**160**	P	**P**	**18 22 15.6**	**-0.5**
WR8	**Warramunga Arr**	**22.29**	**160**	P	**P**	**18 22 16.2**	**-0.6**
WR8				IAmb	IAmb	18 22 47.5	
	comp=Z,4.8nm,1.1s						
COEN	**Coen**	**22.30**	**132**	P	**P**	**18 22 17.1**	**+0.2**
COEN				IAmb	IAmb	18 22 53.9	
	comp=Z,13nm,1.5s						
AS31	**Alice Springs**	**25.58**	**164**	P	**P**	**18 22 47.0**	**-1.3**
ASAR	**Alice Springs**	**25.58**	**164**	P	**P**	**18 22 48.5**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=342,slow=9.3,SNR=26						
ASAR				PcP	**PcP**	**18 26 19.8**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=347,slow=3.0,SNR=4.7						
	comp=Z,0.6nm,0.4s						
ASAR	**Alice Springs**	**25.58**	**164**	P	**P**	**18 22 46.6**	**-1.7**
ASAR					**PcP**	**18 26 19.1**	**+0.1**
CTAO	**Charters Tower**	**28.60**	**138**	P	**P**	**18 23 13.7**	**-1.8**
CTAO				IAmb	IAmb	18 23 41.7	
	comp=Z,8.3nm,1.4s						
NWAO	**Narrogin (SRO)**	**34.84**	**194**	P	**P**	**18 24 08.9**	**-1.2**
BBOO	**Buckleboo**	**34.84**	**166**	P	**P**	**18 24 10.3**	**+0.2**
STKA	**Stephens Creek**	**35.73**	**158**	P	**P**	**18 24 17.4**	**-0.4**
PEA0B	**Petropavlovsk-**	**58.07**	**22**	P	**P**	**18 27 10.8**	**-1.1**
MKAR	**Makanchi Array**	**59.61**	**326**	P	**P**	**18 27 25.3**	**+2.6**
	comp=Z,0.3nm,0.3s,baz=121,slow=7.9,SNR=12						
MKAR				PcP	**PcP**	**18 28 11.6**	**+1.9**
	comp=Z,0.2nm,0.6s,baz=122,slow=5.2,SNR=1.8						
	comp=Z,0.3nm,0.3s						
MKAR	**Makanchi Array**	**59.61**	**326**	P	**P**	**18 27 22.9**	**+0.2**
MKAR					**PcP**	**18 28 10.2**	**+0.6**
MAKZ	**Makanchi**	**59.79**	**326**	P	**P**	**18 27 23.4**	**-0.6**
MAKZ				IAmb	IAmb	18 27 27.9	
	comp=Z,1.4nm,1.2s						
KDJ	**Kajisay**	**60.17**	**320**	P	**P**	**18 27 26.3**	**-0.6**
KDJ				IAmb	IAmb	18 27 49.6	
	comp=Z,2.0nm,1.0s						
KURBB	**Kurchatov Arra**	**63.86**	**328**	P	**P**	**18 27 53.6**	**+2.4**
	comp=Z,0.5nm,0.4s,baz=132,slow=6.4,SNR=5.0						
	comp=Z,0.5nm,0.4s						
KURK	**Kurchatov**	**63.86**	**328**	P	**P**	**18 27 50.1**	**-1.1**

*IDC **03** 18:19:13.1±3.1, 10°.95S×162°.75E, h74km±22km, mb3.4/5, mbtmp3.7/8, Error ellipse: s-maj=36.8km s-min=16.3km az=55.0*

ISC 03 18:19:09.7±1.5**, 10°.8S**±0°.1×**162°.7E**±0°.2**, h35**km**, n8, σ2s00**/8**, mb3.5**/5**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.04**	**297**	P	Pn	18 19 59.8	+4.5
	7.2nm,0.6s,baz=126,slow=1.0,SNR=28						
HNR				S	Sn	18 20 37.4	+6.8
	8.3nm,0.5s,baz=131,slow=19,SNR=10						
DZM	**Mont Dzumac**	**11.73**	**163**	P	**Pn**	**18 21 57.3**	**+2.6**
	4.9nm,1.0s,baz=343,slow=14,SNR=12						
DZM				S	**Sn**	**18 24 01.3**	**-3.2**
	2.3nm,0.8s,baz=324,slow=19,SNR=1.1						
CTA	**Charters Tower**	**18.30**	**238**	P	**Pn**	**18 23 22.0**	**+1.0**
	1.2nm,0.7s,baz=60,slow=15,SNR=1.6						
WRA	**Warramunga Arr**	**28.75**	**248**	P	**P**	**18 25 04.0**	**-0.3**
	0.4nm,0.4s,baz=73,slow=9.0,SNR=2.2						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**30.23**	**241**	P	**P**	**18 25 17.3**	**-0.1**
	0.3nm,0.5s,baz=69,slow=8.9,SNR=6.7						
	0.3nm,0.5s						
FITZ	**Fitzroy Crossi**	**36.54**	**254**	P	**P**	**18 26 11.6**	**-0.7**
	1.3nm,0.4s,baz=63,slow=6.8,SNR=2.2						
	1.3nm,0.4s						
SONM	**Songino Array**	**76.75**	**325**	P	**P**	**18 30 56.5**	**-1.1**
	0.4nm,0.8s,baz=139,slow=7.5,SNR=2.8						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**91.33**	**317**	P	**P**	**18 32 12.3**	**+0.4**
	0.3nm,0.7s,baz=101,slow=6.6,SNR=3.3						
	0.3nm,0.7s						

*RSNC **03** 18:21:05.8±0.0, 7°N±1°×7°3W±°, h149km±2km, M3.1, mb3.6, ML2.8*

*FUNV **03** 18:21:06.9, 6°.87N×73°.18W, h147km, MW3.8, Presumed earthquake*

ISC 03 18:21:04.5±1.3**, 6°.86N**±0°.03×**73°.12W**±0°.03**, h155**km±7km**, n37, σ1s27**/70**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.28**	**192**	P	**Pn**	**18 21 26.0**	**+0.2**
BARC				S	**Sn**	**18 21 40.4**	**-1.7**
BRJC	**Barrancabermej**	**0.63**	**280**	P	**Pn**	**18 21 27.7**	**+0.7**
BRJC				S	**Sn**	**18 21 44.6**	**+0.4**
PAMC	**Pamplona, Colo**	**0.63**	**42**	P	**Pn**	**18 21 28.9**	**+1.2**
PAMC				S	**Sn**	**18 21 46.1**	**+0.8**
RUSC	**La Rusia**	**0.96**	**178**	P	**Pn**	**18 21 30.0**	**0.0**
RUSC				S	**Sn**	**18 21 48.5**	**-1.0**
RUSC	**La Rusia**	**0.96**	**178**	*e*P	**Pn**	**18 21 30.1**	**+0.1**
RUSC				*e*S	**Sn**	**18 21 48.2**	**-1.3**
CAPV	**Capacho**	**1.28**	**39**	*e*P	**Pn**	**18 21 33.8**	**+1.4**
CAPV				*e*S	**Sn**	**18 21 54.2**	**+0.3**
PTBC	**PUERTO BERRIO,**	**1.36**	**256**	P	**Pn**	**18 21 32.5**	**-0.5**
PTBC				S	**Sn**	**18 21 53.8**	**-1.1**
OCAC	**Ocana**	**1.38**	**352**	P	**Pn**	**18 21 34.4**	**+1.0**
OCAC				S	**Sn**	**18 21 55.8**	**+0.2**
SPBC	**San Pablo de B**	**1.53**	**218**	P	**Pn**	**18 21 34.8**	**0.0**
SPBC				S	**Sn**	**18 21 56.3**	**-1.8**
NORC	**Norcasia**	**2.16**	**233**	P	**Pn**	**18 21 42.0**	**+0.1**
NORC				S	**Sn**	**18 22 09.7**	**-1.0**
CHIC	**Chingaza**	**2.30**	**195**	P	**Pn**	**18 21 44.1**	**+0.2**
CHIC				S	**Sn**	**18 22 13.6**	**-0.6**
ROSC	**El Rosal**	**2.34**	**211**	P	**Pn**	**18 21 45.9**	**+1.6**
ROSC				S	**Sn**	**18 22 17.0**	**+2.1**
HELC	**Santa Helena**	**2.48**	**255**	P	**Pn**	**18 21 47.2**	**+1.3**
HELC				S	**Sn**	**18 22 16.9**	**-1.0**
HELC	**Santa Helena**	**2.48**	**255**	*e*P	**Pn**	**18 21 47.3**	**+1.3**
CVER	**Cruz Verde, Cu**	**2.51**	**202**	P	**Pn**	**18 21 47.6**	**+1.1**
CVER				S	**Sn**	**18 22 19.7**	**+0.9**
UREC	**San Jos de Ur**	**2.55**	**290**	P	**Pn**	**18 21 45.8**	**-0.6**
UREC				S	**Sn**	**18 22 17.2**	**-1.6**
SOCV	**Socops**	**2.66**	**58**	*e*P	**Pn**	**18 21 49.0**	**+1.2**
SOCV				*e*S	**Sn**	**18 22 20.5**	**-0.7**
GUY2C	**Guyana, Caldas**	**2.76**	**234**	P	**Pn**	**18 21 50.6**	**+1.1**
GUY2C				S	**Sn**	**18 22 24.2**	**-0.1**
VILC	**Villavicencio,**	**2.79**	**192**	P	**Pn**	**18 21 49.6**	**0.0**
VILC				S	**Sn**	**18 22 24.1**	**-0.4**
PTGC	**Puerto Gaitan,**	**2.82**	**160**	P	**Pn**	**18 21 49.2**	**-0.7**
PTGC				S	**Sn**	**18 22 22.4**	**-2.6**
NIZA	**Niza - Manizal**	**2.94**	**233**	P	**Pn**	**18 21 54.7**	**+3.1**
CBOC	**Ciudad Bolivar**	**3.04**	**251**	P	**Pn**	**18 21 54.1**	**+1.4**
CBOC				S	**Sn**	**18 22 30.1**	**+0.1**
DBBC	**Dabeiba**	**3.07**	**273**	P	**Pn**	**18 21 53.4**	**+0.4**
DBBC				S	**Sn**	**18 22 29.0**	**-1.5**
ARGC	**Ariguani, Magd**	**3.18**	**340**	P	**Pn**	**18 21 57.2**	**+2.9**
ARGC				S	**Sn**	**18 22 35.3**	**+2.3**
SDV	**Santo Domingo**	**3.18**	**51**	P	**Pn**	**18 21 55.6**	**+1.0**
SDV				S	**Sn**	**18 22 33.4**	**+0.1**
SDV	**Santo Domingo**	**3.18**	**51**	*e*P	**Pn**	**18 21 55.9**	**+1.3**
SDV				*e*S	**Sn**	**18 22 32.6**	**-0.7**
MCQV	**Machiques**	**3.22**	**10**	*e*P	**Pn**	**18 21 56.4**	**+1.6**
MCQV				*e*S	**Sn**	**18 22 31.5**	**-2.4**
APAC	**Apartado, Choc**	**3.58**	**287**	P	**Pn**	**18 21 59.7**	**+0.3**
APAC				S	**Sn**	**18 22 42.8**	**+0.7**
PRAC	**Prado**	**3.59**	**209**	P	**Pn**	**18 21 59.8**	**+0.2**
PRAC				S	**Sn**	**18 22 42.3**	**-0.1**
ORTC	**Ortega, Tolima**	**3.62**	**216**	P	**Pn**	**18 22 00.6**	**+0.6**
ORTC				S	**Sn**	**18 22 43.7**	**+0.6**
SJCC	**San Jacinto, C**	**3.64**	**326**	P	**Pn**	**18 21 59.8**	**-0.4**
SJCC				S	**Sn**	**18 22 41.3**	**-2.3**
SJCC	**San Jacinto, C**	**3.64**	**326**	*e*P	**Pn**	**18 22 00.4**	**+0.1**
SJCC				*e*S	**Sn**	**18 22 40.1**	**-3.5**
PLMC	**San Jos del P**	**3.70**	**238**	P	**Pn**	**18 22 01.7**	**+0.7**
PLMC				S	**Sn**	**18 22 45.3**	**+0.4**
URMC	**La Uribe, Meta**	**3.80**	**199**	P	**Pn**	**18 22 02.7**	**+0.2**
URMC				S	**Sn**	**18 22 47.4**	**-0.1**
CRJC	**Cerrejon, Guaj**	**4.14**	**3**	P	**Pn**	**18 22 06.5**	**-0.3**
CRJC				S	**Sn**	**18 22 53.4**	**-1.9**
YOTC	**Yotoco, Valle**	**4.30**	**228**	P	**Pn**	**18 22 09.4**	**+0.5**
URIC	**Uribia, Colomb**	**4.94**	**13**	P	**Pn**	**18 22 16.7**	**-0.5**
	14nm,1.3s						

*IDC **03** 18:21:32.4±1.9, 39°.40N×123°.06W, h0km, mb3.3/1, mbtmp3.0/4, ML2.8/3, MS2.9/3, Error ellipse: s-maj=22.4km s-min=10.9km az=51.0*

*NEIC **03** 18:21:32.4±2.4, 39°.272N±0°.010×123°.19W±0°.02, h5km±1km, ML3.3/110, Mwr3.6/4(NCEDC), Error ellipse: s-maj=2.6km s-min=2.1km az=226.0*

*NCEDC **03** 18:21:32.9±2.8, 39°.26N±0°.01×123°.22W±0°.02, h6km±4km, Error ellipse: s-maj=2.0km s-min=1.5km az=69.0*

*NEIC **03** 18:21:33, 39°.26N×123°.22W, h5km, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; M_{rr}0.84; $M_{\theta\theta}$-2.48; $M_{\phi\phi}$1.64; $M_{r\theta}$-0.70; $M_{\theta\phi}$2.41; $M_{\phi r}$-0.02; Fault plane solution: $M_0$3.33000×10^14 NP1:ϕ_s159.90000°, δ77.80000°, λ179.04000°. NP2:ϕ_s250.11000°, δ89.06000°, λ12.20000°. Principal axes: T 2.7975, Plg9.0000°, Azm116.0000°; N 0.8808, Plg78.0000°, Azm254.0000°; P -3.6783, Plg8.0000°, Azm24.0000°;*

*NEIC **03** 18:21:33, 39°.26N×123°.22W, h6km*

ISC 03 18:21:32.1±1.0**, 39°.27N**±0°.02×**123°.18W**±0°.02**, h7**km±9km**, n111, σ1s20**/113**, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GWRM	**Wonder Ranch**	**0.11**	**238**		**Pg**	**18 21 35.3**	**+0.6**
HOPS	**Hopland Field**	**0.29**	**163**		**Pg**	**18 21 39.1**	**+1.3**
HOPS					**Sb**	**18 21 43.9**	**-0.6**
HOPS	**Hopland Field**	**0.29**	**163**	IAML		18 21 45.4	
	comp=E,21μm,0.7s						
HOPS				IAML		18 21 46.7	
	comp=N,11μm,0.6s						
KRKM	**Rackout Spring**	**0.29**	**359**		**Pb**	**18 21 39.6**	**-0.2**
KRKM					**Sb**	**18 21 44.7**	**-0.2**
GHGM	**Hogback Ridge**	**0.31**	**117**		**Pb**	**18 21 40.0**	**0.0**
BONV	**Boonville, CA**	**0.31**	**206**		**Pg**	**18 21 39.2**	**+1.1**
BONV					**Sb**	**18 21 44.2**	**-1.0**
GNAM	**Navarro Ridge**	**0.36**	**259**		**Pg**	**18 21 39.9**	**+0.8**
GNAM					**Sb**	**18 21 45.4**	**-1.2**
GHOM	**Hamilton Openi**	**0.36**	**232**		**Pg**	**18 21 40.0**	**+0.9**
KFPM	**Farley Peak**	**0.42**	**333**		**Pb**	**18 21 41.4**	**-0.5**
MNDO	**Woodland Fire**	**0.44**	**276**		**Pg**	**18 21 41.4**	**+0.7**
MNDO					**Sb**	**18 21 48.2**	**-0.8**
GPMM	**Pine Mountain**	**0.46**	**157**		**Pb**	**18 21 42.4**	**-0.1**
GCVM	**Cloverdale**	**0.51**	**166**		**Pb**	**18 21 43.6**	**+0.2**
GRTM	**Round Top Moun**	**0.51**	**130**		**Pb**	**18 21 43.7**	**+0.2**
KCPM	**Cahto Peak**	**0.52**	**323**		**Pb**	**18 21 43.6**	**-0.1**
GSGM	**Seigler Mounta**	**0.54**	**138**		**Pb**	**18 21 44.3**	**+0.4**
GDXM	**Geysers**	**0.55**	**147**		**Pb**	**18 21 44.0**	**0.0**
GDXM				Sg	**Sg**	**18 21 51.2**	**+1.4**
GDXM				IAML		18 21 55.1	
	comp=N,1μm,0.8s						
GGPM	**Geyser Peak**	**0.56**	**153**		**Pb**	**18 21 44.7**	**+0.4**
KIPM	**Iron Peak**	**0.59**	**337**		**Pb**	**18 21 44.9**	**+0.1**
GBGM	**Boggs Mountain**	**0.60**	**139**		**Pb**	**18 21 45.5**	**+0.6**
KBNM	**Bluenose Ridge**	**0.62**	**359**		**Pb**	**18 21 46.4**	**+1.0**
GCK	**Clark Valley**	**0.64**	**64**		**Pn**	**18 21 47.5**	**0.0**
GVV	**Valley View**	**0.64**	**37**		**Pb**	**18 21 46.7**	**+1.1**
RVIT	**Round Valley I**	**0.66**	**346**		**Pb**	**18 21 46.3**	**+0.4**
MNRC	**McLaughlin Min**	**0.69**	**124**		**Sg**	**18 21 47.5**	**-6.9**
MNRC	**McLaughlin Min**	**0.69**	**124**	Pg	**Pb**	**18 21 47.4**	**+0.9**
MNRC				IAML		18 22 03.7	
	comp=E,1μm,1.2s						
MNRC				IAML		18 22 04.8	
	comp=N,1μm,1.1s						
NMTM	**Middletown**	**0.73**	**129**		**Pb**	**18 21 47.8**	**+0.6**
GROM	**Round Mountain**	**0.76**	**31**		**Pb**	**18 21 48.9**	**+1.2**
NWRM	**Wright Ranch**	**0.84**	**164**		**Pg**	**18 21 48.6**	**+0.4**
O02D	**Mt. Diablo Mer**	**0.96**	**18**		**Pn**	**18 21 52.4**	**+0.4**
O02D	**Mt. Diablo Mer**	**0.96**	**18**	Sg	**Sb**	**18 22 05.5**	**+1.6**
O02D				IAML		18 22 08.8	
	comp=N,750nm,0.9s						
O02D				IAML		18 22 09.6	
	comp=E,778nm,0.9s						
O02D	**Mt. Diablo Mer**	**0.96**	**18**	Pg	**Pn**	**18 21 52.1**	**+0.1**
BRIC	**Briceland Vine**	**1.01**	**327**		**Pg**	**18 21 51.4**	**-0.1**
OAKV	**Oakville Exper**	**1.03**	**144**		**Pg**	**18 21 52.6**	**+0.8**
OSUM	**Sutter Buttes**	**1.03**	**89**		**Pg**	**18 21 52.1**	**+0.3**
KMRM	**Mail Ridge**	**1.04**	**337**	Pg	**Pg**	**18 21 52.2**	**+0.2**
KMRM				Sg	**Sb**	**18 22 06.4**	**+0.2**
CVS	**Carmenet Viney**	**1.08**	**148**		**Pb**	**18 21 53.6**	**+0.6**
SUTB	**Sutter Butte**	**1.08**	**92**		**Pg**	**18 21 52.5**	**-0.3**
SUTB				Sg	**Sg**	**18 22 06.4**	**-0.4**
SUTB				IAML		18 22 11.2	
	comp=E,774nm,0.4s						
SUTB				IAML		18 22 12.9	
	comp=N,981nm,0.5s						
NAPC	**Atlas Peak**	**1.10**	**139**		**Pg**	**18 21 53.2**	**+0.1**
NDHM	**Dunnigan Hills**	**1.11**	**117**		**Pn**	**18 21 55.9**	**+2.0**
QRDG	**Quail Ridge Na**	**1.13**	**134**		**Pg**	**18 21 53.6**	**-0.1**
MCCM	**Marconi Confer**	**1.15**	**168**		**Pn**	**18 21 55.4**	**+1.0**
MCCM				Sg	**Sb**	**18 22 10.4**	**+1.2**
MCCM				IAML		18 22 19.9	
	comp=E,925nm,1.1s						
MCCM				IAML		18 22 20.4	
	comp=N,746nm,1.2s						
LOC	**Lincoln School**	**1.17**	**162**		**Pg**	**18 21 53.1**	**-1.4**
OSTM	**Stimpson Lane**	**1.23**	**85**		**Pg**	**18 21 54.9**	**-0.8**
LTCM	**Tuscan Springs**	**1.24**	**41**		**Pg**	**18 21 55.8**	**-0.2**
RUSS	**Russell Ranch**	**1.25**	**125**		**Pn**	**18 21 59.0**	**+3.0**
RUSS	**Russell Ranch**	**1.25**	**125**	IAML		18 22 28.8	
	comp=N,477nm,1.0s						
RUSS				IAML		18 22 37.0	
	comp=E,554nm,0.9s						
OGOM	**Van Goodin Ran**	**1.27**	**72**		**Pn**	**18 21 55.5**	**-0.8**
PAM	**Palermo**	**1.30**	**81**		**Pn**	**18 21 55.6**	**-1.0**
ORV	**Oroville**	**1.33**	**77**		**Pn**	**18 21 56.5**	**-0.6**
SVIN	**Saint Vincent'**	**1.33**	**157**		**Pn**	**18 21 55.5**	**-1.6**
KMPM	**Mount Pierce**	**1.36**	**328**		**Pn**	**18 21 57.3**	**-0.2**
PETL	**Petrolia**	**1.36**	**319**		**Pn**	**18 21 56.0**	**-1.4**
KHBM	**Hayfork Bally**	**1.39**	**359**		**Pn**	**18 21 57.8**	**-0.3**
KHBM				IAML		18 22 35.7	
	comp=E,393nm,0.9s						
SFRE	**Sierra Foothil**	**1.44**	**90**		**Pn**	**18 21 57.8**	**-0.8**
O03E	**Paynes Creek**	**1.48**	**45**		**Pn**	**18 21 60.0**	**+0.9**
O03E				IAML		18 22 39.2	
	comp=E,365nm,1.5s						
WEAV	**Weaverville**	**1.48**	**6**		**Pn**	**18 22 00.1**	**+0.9**
DMOR	**Dinsmores, CA**	**1.50**	**344**		**Pn**	**18 21 59.6**	**+0.1**
KHMM	**Horse Mountain**	**1.66**	**345**		**Pn**	**18 22 01.8**	**0.0**
JCC	**Jacoby Creek,**	**1.68**	**337**		**Pb**	**18 22 03.7**	**+0.4**
JCC				IAML		18 22 45.4	
	comp=E,555nm,1.6s						
JCC				IAML		18 22 50.8	
	comp=N,369nm,2.2s						
N02D	**Trinity Center**	**1.74**	**12**	Pn	**Pn**	**18 22 03.2**	**+0.4**
N02D				IAML		18 22 50.8	
	comp=N,270nm,1.1s						
N02D				IAML		18 22 51.3	
	comp=E,290nm,1.1s						
AFDM	**Forest Hills D**	**1.75**	**100**		**Pn**	**18 22 03.0**	**+0.2**
KRPM	**Rodgers**	**2.00**	**341**		**Pn**	**18 22 07.6**	**+1.3**
KRPM				IAML		18 23 07.8	
	comp=E,334nm,1.4s						
JRSC	**Jasper Ridge**	**2.00**	**158**		**Pn**	**18 22 07.9**	**+1.6**
JRSC				IAML		18 22 48.3	
	comp=E,202nm,2.1s						
JRSC				IAML		18 22 50.0	
	comp=N,241nm,1.6s						
HATC	**Hat Creek Radi**	**2.03**	**40**		**Pn**	**18 22 08.1**	**+1.4**
HATC				IAML		18 22 57.6	
	comp=E,329nm,1.6s						
M02C	**Callahan**	**2.14**	**7**		**Pn**	**18 22 09.4**	**+1.2**
M02C				IAML		18 22 49.8	
	comp=E,149nm,1.4s						
M03C	**McCloud**	**2.16**	**22**		**Pn**	**18 22 10.2**	**+1.6**
M03C				IAML		18 22 49.7	
	comp=N,309nm,1.1s						
M03C				IAML		18 23 02.3	
	comp=E,329nm,0.9s						
BEKR	**Beckworth**	**2.26**	**74**	Pn	**Pn**	**18 22 11.2**	**+1.2**
MHC	**Mount Hamilton**	**2.27**	**147**		**Pn**	**18 22 10.0**	**-0.1**
MPK	**Martis Peak**	**2.44**	**88**		**Pn**	**18 22 13.9**	**+1.3**
YBH	**Yreka Blue Hor**	**2.49**	**8**	Pn	**Pn**	**18 22 14.6**	**+1.5**
	comp=E,0.1nm,0.3s,baz=184,slow=6.5,SNR=10						
YBH				Lg	Lg	18 22 45.7	
	comp=E,0.1nm,0.3s,baz=186,slow=19,SNR=4.2						
YBH	**Yreka Blue Hor**	**2.49**	**8**		**Pn**	**18 22 13.7**	**+0.6**
CMB	**Columbia Colle**	**2.51**	**119**		**Pn**	**18 22 14.7**	**+1.4**
PNTR	**Pine Nut**	**2.79**	**93**		**Pn**	**18 22 18.6**	**+1.3**
HMOM	**Monterey**	**2.84**	**159**		**Pn**	**18 22 15.4**	**-2.4**
SAO	**San Andreas Ge**	**2.85**	**151**	Pn	**Pn**	**18 22 19.2**	**+1.3**
L02F	**Cave Junction**	**2.87**	**354**		**Pn**	**18 22 20.7**	**+2.5**
PAHR	**Pah Rah Range**	**2.97**	**80**		**Pn**	**18 22 20.2**	**+0.4**
PAHR				IAML		18 23 17.5	
	comp=E,83nm,1.2s						
PAHR				IAML		18 23 20.8	
	comp=N,112nm,2.0s						
L04D	**Klamath Falls**	**3.02**	**12**		**Pn**	**18 22 20.3**	**-0.2**
L04D				IAML		18 23 22.7	
	comp=N,79nm,1.6s						
L04D				IAML		18 23 23.3	
	comp=E,133nm,2.4s						
KBO	**Bosley Butte**	**3.05**	**345**	Pn	**Pn**	**18 22 20.5**	**-0.2**
KBO				IAML		18 23 36.5	
	comp=E,110nm,2.7s						
KBO				IAML		18 23 45.8	
	comp=N,96nm,3.0s						
BBGB	**Big Mountain B**	**3.17**	**147**	Pn	**Pn**	**18 22 24.4**	**+1.9**
BBGB				IAML		18 23 44.3	
	comp=N,110nm,1.4s						
BBGB				IAML		18 23 58.2	
	comp=E,108nm,2.4s						
K02D	**Willamette Mer**	**3.44**	**354**		**Pn**	**18 22 26.9**	**+0.7**
K04D	**Chiloquin, OR**	**3.52**	**17**		**Pn**	**18 22 28.4**	**+1.0**
PCCM	**Crazy Canyon**	**3.55**	**153**		**Pn**	**18 22 27.4**	**-0.2**
PMPB	**Monarch Peak**	**3.58**	**148**	Pn	**Pn**	**18 22 28.6**	**+0.6**
PMPB				IAML		18 24 11.6	
	comp=E,68nm,2.1s						
PMPB				IAML		18 24 11.8	
	comp=N,75nm,2.9s						
MDPB	**Devils Postpil**	**3.61**	**116**		**Pn**	**18 22 29.3**	**+0.6**
MDPB				IAML		18 23 27.1	
	comp=N,40nm,1.0s						
MDPB				IAML		18 23 51.8	
	comp=E,46nm,0.9s						
LHV	**Little Huntoon**	**3.79**	**104**		**Pn**	**18 22 31.8**	**+0.9**
K05A	**Summer Lake**	**3.86**	**26**		**Pn**	**18 22 32.5**	**+0.5**
K05A				IAML		18 24 05.8	
	comp=E,36nm,3.1s						
NVAR	**Mina Array Bea**	**3.90**	**101**	Pn	**Pn**	**18 22 33.0**	**+0.5**
	comp=E,0.5nm,0.3s,baz=286,slow=15,SNR=17						
NVAR				Lg	Lg	18 23 33.1	
	comp=E,1.2nm,0.3s,baz=284,slow=30,SNR=5.7						
NVAR				LR	LR	18 24 28.1	
	comp=E,90nm,18.9s,baz=279,slow=44						
	comp=E,1.8nm,0.7s						
J01E	**Myrtle Point**	**3.93**	**352**		**Pn**	**18 22 33.7**	**+0.9**
J01E				IAML		18 24 08.2	
	comp=E,67nm,1.9s						
J01E				IAML		18 24 42.8	
	comp=N,53nm,4.3s						
AVNL	**Avenal, CA USA**	**3.97**	**144**		**Pn**	**18 22 35.0**	**+1.6**
J04A	**Umpqua Nationa**	**4.05**	**11**		**Pn**	**18 22 35.9**	**+1.2**
J05D	**Fort Rock, OR**	**4.27**	**19**		**Pn**	**18 22 37.1**	**-0.5**

J05D				IAML		18 24 13.3	
	comp=E,38nm,4.7s						
J05D				IAML		18 24 28.3	
	comp=N,36nm,4.8s						
I03D	Drain, OR	4.43	358	Pn	Pn	18 22 40.5	+0.9
I03D				IAML		18 23 34.7	
	comp=N,32nm,4.9s						
I03D				IAML		18 24 18.1	
	comp=E,37nm,3.1s						
DSP	Deep Springs	4.51	113		Pn	18 22 41.0	+0.2
WVOR	Wild Horse Val	4.67	46		Pn	18 22 42.7	-0.5
PINE	Pine Mountain	4.82	20		Pn	18 22 45.1	-0.1
PINE				IAML		18 24 12.3	
	comp=N,24nm,4.8s						
PINE				IAML		18 24 29.6	
	comp=E,25nm,4.8s						
WIFE	Three Sisters-	4.89	12		Pn	18 22 47.5	+1.2
ISA	Isabella, Lake	5.19	132	Pn	Pn	18 22 51.9	+1.7
ISA				IAML		18 24 49.9	
	comp=E,14nm,1.8s						
MPMC	Manual Prospec	5.53	124		Pn	18 22 54.7	-0.4
I07A	Izee	5.54	29		Pn	18 22 56.2	+1.1
TPNV	Topopah Spring	5.93	111		Pn	18 22 59.3	-1.2
ELK	Elko	6.27	74	Pn	Pn	18 23 05.5	+0.4
	baz=259,slow=16,SNR=1.6						
ELK				Lg	Lg	18 24 46.4	
	comp=E,0.1nm,0.3s,baz=332,slow=18,SNR=1.3						
	comp=E,0.2nm,0.3s						
ELK	Elko	6.27	74	Pn	Pn	18 23 04.3	-0.9
PFO	Pinyon Flats O	7.82	134	LR	LR	18 27 03.8	
	comp=E,112nm,18.5s,baz=329,slow=42						
NEW	Newport	10.00	24	LR	LR	18 28 13.5	
	comp=E,89nm,18.5s,baz=235,slow=41						
TXAR	Lajitas Array	18.89	116	P	Pn	18 25 55.6	+2.0
	baz=307,slow=14,SNR=1.7						
	comp=E,0.9nm,1.0s						
TXAR	Lajitas Array	18.89	116	P	P	18 25 52.9	-0.2
ILAR	Eielson Array	29.05	339	P	P	18 27 31.7	-0.9
	comp=E,0.3nm,0.8s,baz=132,slow=8.8,SNR=1.9						
	comp=E,0.3nm,0.8s						
H11S1	WAKE ISLAND Hy	63.30	273	T	T	19 40 20.2	
	baz=54,slow=75,SNR=10						
H11S2	WAKE ISLAND Hy	63.30	273	T	T	19 40 20.8	
	baz=54,slow=75						
H11S3	WAKE ISLAND Hy	63.31	273	T	T	19 40 23.0	
	baz=54,slow=75,SNR=10						

*IDC **03** 18:34:47.1±1.5, 1°.00N×126°.57E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=168.8km s-min=20.1km az=66.0*

*DJA **03** 18:34:55.7±1.1, 1°N±5°×12°7E±°, h38km±33km, M3.5/12, mb3.6/1, MLv3.5/12*

ISC 03 18:34:53.7±1.0, **1°.0N**±0°.1×**126°.63E**±0°.08, **h39**km, **n8**, σ**2.s17**/10, **mb3.8**/4, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.76	105	P	Pn	18 35 10.9	+2.9
MNI	Manado	1.85	285	P	Pn	18 35 24.7	+1.8
SANI	Sanana	3.07	192	P	Pn	18 35 40.9	+1.3
GTOI	Gorontalo	3.63	265	P	Pn	18 35 50.8	+3.4
WRA	Warramunga Arr	22.12	160	P	P	18 39 45.4	-0.6
	0.9nm,0.3s,baz=339,slow=11,SNR=30						
	0.9nm,0.3s						
ASAR	Alice Springs	25.49	164	P	P	18 40 17.8	-0.7
	0.5nm,0.7s,baz=343,slow=11,SNR=33						
ASAR				PcP	PcP	18 43 48.7	-1.1
	0.2nm,0.7s,baz=344,slow=1.8,SNR=4.4						
	0.5nm,0.7s						
MKAR	Makanchi Array	59.76	326	P	P	18 44 53.8	-1.0
	0.3nm,0.4s,baz=124,slow=8.0,SNR=17						
MKAR				PcP	PcP	18 45 39.1	-2.2
	0.2nm,0.5s,baz=131,slow=5.1,SNR=2.3						
	0.3nm,0.4s						
KURBB	Kurchatov Arra	64.00	328	P	P	18 45 22.6	-0.6
	0.5nm,0.5s,baz=124,slow=6.1,SNR=4.5						
	0.5nm,0.5s						

*IDC **03** 18:47:37.6±1.2, 11°.16N×143°.74E, h0km, mb3.9/11, mbtmp4.0/12, ML4.3/1, MS3.0/2, Error ellipse: s-maj=34.8km s-min=19.7km az=94.0*

*NEIC **03** 18:47:39.0±1.9, 11°.15N±0°.08×143°.9E±0°.1, h10km±1km, mb4.4/25, Error ellipse: s-maj=22.5km s-min=13.3km az=105.0*

ISC 03 18:47:41.9±0.6, **11°.12N**±0°.07×**143°.91E**±0°.09, **h35**km, **n49**, σ**0.s84**/44, **mb4.2**/23, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	2.63	21	Pn	Pn	18 48 23.2	+1.4
	54nm,0.3s,baz=194,slow=8.3,SNR=45						
GUMO				Sn	Sn	18 48 51.8	-0.7
	90nm,0.3s,baz=180,slow=20,SNR=9.5						
GUMO				LR	LR	18 49 02.8	
	comp=Z,30nm,19.2s,baz=90,slow=32						
	148nm,0.3s						
GUMO	Guam	2.63	21		Pn	18 48 23.3	+1.5
GUMO				Sn	Sn	18 48 51.0	-1.5
PATS	Pohnpei	14.85	105	Pn	Pn	18 51 08.9	-0.6
JOW	Kunigami	21.47	319	P	P	18 52 27.0	-0.5
	14nm,0.6s,baz=138,slow=13,SNR=7.0						
	14nm,0.6s						
JOW	Kunigami	21.47	319	P	P	18 52 26.5	-1.0
JOW				IAmb	IAmb	18 52 31.0	
	comp=Z,12nm,0.7s						
H11S3	WAKE ISLAND Hy	23.20	69	T	T	19 16 14.8	
	baz=253,slow=75,SNR=9.9						
H11S1	WAKE ISLAND Hy	23.21	69	T	T	19 16 15.9	
	baz=253,slow=75,SNR=5.5						
H11S2	WAKE ISLAND Hy	23.21	69	T	T	19 16 22.0	
	baz=253,slow=75,SNR=13						
H11N1	WAKE ISLAND Hy	23.72	66	T	T	19 17 52.8	
	baz=249,slow=74,SNR=4.6						
H11N2	WAKE ISLAND Hy	23.73	66	T	T	19 18 42.5	
	baz=249						
H11N3	WAKE ISLAND Hy	23.74	66	T	T	19 17 27.8	
	baz=249,slow=74,SNR=6.3						
LUWI	Luwuk	24.24	241	P	P	18 52 56.1	+0.4
YULB	Yu-li	24.75	302	P	P	18 53 00.7	+0.3
SSLB	Suanglung	25.21	303	P	P	18 53 04.0	-0.5
YHNB	Yeheng	25.27	305	P	P	18 53 04.5	-0.6
MAJO	Matsushiro	25.83	349	P	P	18 53 10.3	+0.3
MAJO				IAmb	IAmb	18 53 14.9	
	comp=Z,11nm,1.4s						
MJB9	Matsu-Tunnel	25.83	349	P	P	18 53 09.4	-0.6
MJB9				IAmb	IAmb	18 53 15.9	
	comp=Z,10nm,1.3s						
KSRS	Korea Array	29.90	334	P	P	18 53 45.9	-0.4
	comp=Z,1.0nm,0.7s,baz=147,slow=9.6,SNR=2.5						
	comp=Z,1.0nm,0.7s						
WB0	Warramunga Arr	32.09	197	P	P	18 54 06.2	+0.3
WR8	Warramunga Arr	32.24	197	P	P	18 54 07.5	+0.3
WRA	Warramunga Arr	32.27	197	P	P	18 54 08.1	+0.7
	comp=Z,0.4nm,0.6s,baz=18,slow=9.0,SNR=1.8						
	comp=Z,0.4nm,0.6s						
AS31	Alice Springs	35.93	196	P	P	18 54 39.2	0.0
ASAR	Alice Springs	35.93	196	P	P	18 54 40.0	+0.8
	comp=Z,0.2nm,0.6s,baz=17,slow=11,SNR=5.4						
	comp=Z,0.2nm,0.6s						
ENH	Enshi	37.20	306	P	P	18 54 50.7	+0.7
ENH				IAmb	IAmb	18 54 51.7	
	comp=Z,5.6nm,0.8s						
BJT	Baijiatuau	37.83	324	P	P	18 54 55.3	+0.1
BJT				IAmb	IAmb	18 55 12.1	
	comp=Z,6.8nm,1.2s						
DZM	Mont Dzumac	39.71	146	LR	LR	19 07 11.4	
	comp=Z,164nm,21.8s,baz=94,slow=30						
OUENC	Ouen Island, N	40.21	146	P	P	18 55 14.4	-0.9
OUENC				IAmb	IAmb	18 55 15.9	
	comp=Z,13nm,1.0s						
CM31	Chiang Mai Arr	43.99	285	P	P	18 55 45.6	-0.6
CM31				IAmb	IAmb	18 55 48.7	
	comp=Z,5.0nm,1.2s						
CMAR	Chiang Mai Arr	43.99	285	P	P	18 55 46.8	+0.6
	comp=Z,1.1nm,0.6s,baz=93,slow=8.2,SNR=12						
	comp=Z,1.1nm,0.6s						
SONM	Songino Array	48.23	327	P	P	18 56 19.9	+0.6
	comp=Z,0.9nm,0.5s,baz=141,slow=8.7,SNR=10						
	comp=Z,0.9nm,0.5s						
SONM	Songino Array	48.23	327	P	P	18 56 19.1	-0.2
MK31	Makanchi Array	62.62	317	P	P	18 58 02.2	-0.7
MKAR	Makanchi Array	62.62	317	P	P	18 58 02.9	+0.1
	comp=Z,0.4nm,0.6s,baz=92,slow=9.0,SNR=6.9						
	comp=Z,0.4nm,0.6s						
MKAR	Makanchi Array	62.62	317	P	P	18 58 01.9	-1.0
MAKZ	Makanchi	62.84	317	P	P	18 58 04.0	-0.3
MAKZ				IAmb	IAmb	18 58 07.3	
	comp=Z,2.4nm,1.1s						
ZAA0	Zalesovo Array	63.09	325	P	P	18 58 04.7	-1.0
ZAA0				IAmb	IAmb	18 58 17.9	
	comp=Z,1.8nm,0.9s						
ZALV	Zalesovo Beam	63.09	325	P	P	18 58 04.8	-0.9
	comp=Z,0.6nm,0.3s,baz=107,slow=7.4,SNR=4.5						
	comp=Z,0.6nm,0.3s						
ZALV	Zalesovo Beam	63.09	325	P	P	18 58 04.4	-1.4
KURK	Kurchatov	65.87	321	P	P	18 58 23.5	-0.4
KURK				IAmb	IAmb	18 58 24.8	
	comp=Z,2.4nm,0.8s						
KURBB	Kurchatov Arra	65.91	321	P	P	18 58 24.3	+0.1
	comp=Z,2.4nm,0.2s,baz=108,slow=6.3,SNR=6.8						
	comp=Z,2.4nm,0.2s						
D19K	Kuna River	68.28	20	P	P	18 58 39.7	+0.6
ILAR	Eielson Array	71.19	25	P	P	18 58 58.5	+1.6
	comp=Z,0.4nm,0.6s,baz=269,slow=7.6,SNR=2.6						
	comp=Z,0.4nm,0.6s						
BVAR	Borovoye Array	71.28	322	P	P	18 58 57.5	-0.3
	comp=Z,1.8nm,0.5s,baz=101,slow=7.5,SNR=16						
	comp=Z,1.8nm,0.5s						
BORK	Borovoye	71.33	322	P	P	18 58 58.0	0.0
BORK				IAmb	IAmb	18 58 58.9	
	comp=Z,2.3nm,0.7s						
BMAR	Burnt Mountain	72.73	23	P	P	18 59 07.2	+1.0
CTGM	Chitina Glacie	72.95	29	P	P	18 59 09.0	+1.3
H27K	Steamboat Moun	73.68	24	P	P	18 59 12.8	+1.0
H27K				IAmb	IAmb	18 59 16.5	
	comp=Z,5.3nm,1.4s						
AB31	Akbulak array	77.74	318	P	P	18 59 34.1	-1.1
AB31				IAmb	IAmb	18 59 49.9	
	comp=Z,4.1nm,1.5s						
ABKAR	Akbulak array	77.74	318	P	P	18 59 33.7	-1.6

*IDC **03** 18:47:48.6±0.6, 18°.90S×173°.28W, h0km, mb4.3/15, mbtmp4.2/17, ML4.6/2, MS3.6/23, Error ellipse: s-maj=24.7km s-min=16.6km az=149.0*

*NEIC **03** 18:47:48.7±2.7, 19°.1S±0°.1×172°.86W±0°.08, h10km±1km, mb4.7/39, Error ellipse: s-maj=17.2km s-min=12.8km az=193.0*

ISC 03 18:47:47.5±0.5, **19°.6S**±0°.1×**172°.73W**±0°.06, **h10**km, **n94**, σ**1.s32**/63, **mb4.6**/36, **MS3.8**/22, **1C**, **Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	2.69	80		Pn	18 48 30.3	-0.6
NIUE				Sn	Sn	18 49 00.8	-2.7
AFI	Afiamalu	5.71	9	Pn	Pn	18 49 03.2	-9.3
	4.8nm,0.3s,baz=197,slow=14,SNR=4.6						
AFI				Sn	Sn	18 49 54.7	-24
	12nm,0.3s,baz=171,slow=19,SNR=6.1						
MSVF	Nonsavu	8.93	280	Pn	Pn	18 49 51.2	-5.6
	0.4nm,0.3s,baz=103,slow=14,SNR=5.0						
MSVF				LR	LR	18 52 44.7	
	comp=Z,452nm,21.9s,baz=105,slow=36						
	3.5nm,0.8s						
MSVF	Nonsavu	8.93	280		Pn	18 49 59.6	+2.8
RAR	Rarotonga	12.26	100	LR	LR	18 54 22.0	
	comp=Z,205nm,18.7s,baz=284,slow=30						
RAR	Rarotonga	12.26	100	Pn	Pn	18 50 43.8	+1.6
DZM	Mont Dzumac	19.63	259	P	P	18 52 15.9	-0.6
	0.8nm,0.3s,baz=86,slow=18,SNR=7.3						
	6.0nm,0.8s						
DZM	Mont Dzumac	19.63	259	P	P	18 52 15.6	-0.9
URZ	Urewera	20.60	203	P	Pn	18 52 35.5	+6.5
	17nm,0.8s,baz=26,slow=2.3,SNR=9.3						
	17nm,0.8s						
PPT	Papeete	22.03	89	LR	LR	18 59 50.4	
	comp=Z,131nm,18.1s,baz=250,slow=32						
LTZ	Lake Taylor	26.37	205	P	P	18 53 26.5	+2.5
HNR	Honiara	28.27	287	LR	LR	19 03 11.1	
	comp=Z,7.1nm,19.9s,baz=200,slow=34						
ARMA	Armidale	33.93	244	P	P	18 54 30.6	-0.6
CTA	Charters Tower	38.52	262	LR	LR	19 10 24.3	
	comp=Z,148nm,19.1s,baz=44,slow=36						
CTAO	Charters Tower	38.52	262		P	18 55 08.8	-1.6
CTAO				IAmb	IAmb	18 55 10.0	
	comp=Z,9.1nm,0.8s						
COEN	Coen	42.50	271	P	P	18 55 42.5	-0.9
STKA	Stephens Creek	42.65	244	P	P	18 55 45.4	+0.9
	comp=Z,1.3nm,0.4s,baz=75,slow=19,SNR=3.0						
	comp=Z,1.3nm,0.4s						
STKA	Stephens Creek	42.65	244	IAmb	IAmb	18 56 25.1	
	comp=Z,32nm,1.3s						
BBOO	Buckleboo	47.39	243	P	P	18 56 21.7	-0.5
WR8	Warramunga Arr	49.49	260	P	P	18 56 37.3	-1.2
WR8				IAmb	IAmb	18 57 18.6	
	comp=Z,9.4nm,1.2s						
AS31	Alice Springs	49.55	255		P	18 56 38.4	-0.6
ASAR	Alice Springs	49.55	255	P	P	18 56 38.3	-0.8
	comp=Z,12nm,0.3s,baz=94,slow=7.7,SNR=4.8						
ASAR				LR	LR	19 17 29.3	
	comp=Z,97nm,18.8s,baz=94,slow=36						
	comp=Z,12nm,0.3s						
WB0	Warramunga Arr	49.62	260	P	P	18 56 38.4	-1.1
WB0				IAmb	IAmb	18 56 42.7	
	comp=Z,6.7nm,0.9s						
WRA	Warramunga Arr	49.64	260	P	P	18 56 37.8	-1.9
	comp=Z,2.1nm,0.6s,baz=98,slow=8.5,SNR=44						
	comp=Z,2.1nm,0.6s						
GUMO	Guam	53.19	305	LR	LR	19 17 44.6	
	comp=Z,30nm,19.8s,baz=100,slow=34						
MTN	Manton Dam	54.13	268	P	P	18 57 11.2	-2.0
FORT	Forrest	54.20	246	P	P	18 57 12.3	-1.2
FORT				IAmb	IAmb	18 57 33.7	
	comp=Z,7.4nm,0.8s						
SIJI	Sorong	57.85	282	P	P	18 57 37.1	-2.8
	comp=Z,6.1nm,0.6s,baz=122,slow=15,SNR=2.0						
	comp=Z,6.1nm,0.6s						
RPN	Rapa Nui	58.17	110	LR	LR	19 17 45.1	
	comp=Z,72nm,19.3s,baz=32,slow=30						
PSA00	Pilbara Seismi	62.70	255	P	P	18 58 12.9	-0.1
PSA00				IAmb	IAmb	18 58 34.3	
	comp=Z,5.4nm,1.1s						
PSA00	Pilbara Seismi	62.70	255	P	P	18 58 12.7	-0.4
PSA00				IAmb	IAmb	18 58 44.3	
	comp=Z,19nm,1.2s						
MBWA	Marble Bar	62.89	256	P	P	18 58 14.8	+0.5
JCJ	Chichijima	63.73	315	LR	LR	19 21 44.2	
	comp=Z,105nm,19.7s,baz=134,slow=32						
TOLI2	Tolitoli	68.31	279	P	P	18 58 49.5	0.0
QSPA	South Pole Qui	70.49	180	P	P	18 59 09.1	+6.9
	comp=Z,2.8nm,1.0s,baz=52,slow=0.9,SNR=4.8						
	comp=Z,2.8nm,1.0s						
MJAR	Matsushiro Arr	72.54	320	P	P	18 59 13.1	-1.7
	comp=Z,3.1nm,1.0s,baz=142,slow=6.2,SNR=5.2						
MJAR				LR	LR	19 23 53.0	
	comp=Z,54nm,21.7s,baz=158,slow=30						
	comp=Z,3.1nm,1.0s						
MJAR	Matsushiro Arr	72.54	320	IAmb	IAmb	18 59 21.2	
	comp=Z,4.9nm,1.4s						
SHEM	Shemya Is, Ala	72.91	352	LR	LR	19 25 40.2	
	comp=Z,46nm,18.9s,baz=44,slow=32						
TGY	Tagaytay City	73.35	292	LR	LR	19 28 56.3	
	comp=Z,62nm,20.1s,baz=114,slow=34						
JOW	Kunigami	73.48	307	LR	LR	19 26 42.9	
	comp=Z,50nm,18.9s,baz=134,slow=32						
JNU	Nakatsue	75.12	314	LR	LR	19 24 40.4	
	comp=Z,46nm,20.9s,baz=113,slow=30						
ASAJ	Asahikawa	75.41	328	LR	LR	19 28 07.0	
	comp=Z,46nm,19.4s,baz=154,slow=32						
NVAR	Mina Array Bea	77.02	41	P	P	18 59 42.7	+1.7
	comp=Z,2.0nm,0.8s,baz=241,slow=4.1,SNR=7.8						
	comp=Z,2.0nm,0.8s						
KSRS	Korea Array	79.58	316	P	P	18 59 54.9	0.0
	comp=Z,4.2nm,1.1s,baz=123,slow=4.5,SNR=7.0						
KSRS				LR	LR	19 31 32.4	
	comp=Z,30nm,19.5s,baz=150,slow=33						
	comp=Z,4.2nm,1.1s						
K15K	Wolf Creek Mou	82.08	5	P	P	19 00 07.7	0.0
K15K				IAmb	IAmb	19 00 22.3	
	comp=Z,11nm,1.0s						
VHRN	Van Horn	82.08	54	P	P	19 00 08.3	-0.4
MNTX	Cornudas Mount	82.22	53	P	P	19 00 09.1	-0.1
MNTX				IAmb	IAmb	19 00 42.1	
	comp=Z,5.8nm,1.4s						
TXAR	Lajitas Array	82.42	55	P	P	19 00 13.4	+3.0
	comp=Z,3.0nm,1.1s,baz=250,slow=4.6,SNR=8.2						
	comp=Z,3.0nm,1.1s						
TXAR	Lajitas Array	82.42	55	P	P	19 00 10.3	-0.1
HLID	Hailey	82.45	39	P	P	19 00 11.0	+0.6
PV19	Morning Glory	82.96	45	P	P	19 00 12.7	-0.5
PV23	Carpenter Ridg	83.02	45		P	19 00 13.1	-0.5
PV03	Paradox Valley	83.02	45	IAmb	IAmb	19 00 18.2	
	comp=Z,5.0nm,1.1s						
PV01	Paradox Valley	83.15	46	IAmb	IAmb	19 00 18.7	
	comp=Z,3.1nm,0.8s						
NJ2	Nanjing	83.19	307	*e*P	P	19 00 16.4	+2.2
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MA2	Magadan	84.32	342	LR	LR	19 30 27.1	
	comp=Z,17nm,21.0s,baz=127,slow=31						
KLR	Kul'dur	84.36	327	LR	LR	19 32 44.3	
	comp=Z,20nm,19.1s,baz=138,slow=32						
CN2	Changchun	84.69	320	P	P	19 00 27.9	+6.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
128A	Castleberry Fa	84.82	53	IAmb	IAmb	19 00 26.9	
	comp=Z,2.9nm,0.7s						
PD31	Pinedale Array	84.95	41		P	19 00 22.9	-0.4
PDAR	Pinedale Array	84.95	41	P	P	19 00 24.8	+1.5
	comp=Z,1.4nm,0.8s,baz=244,slow=4.1,SNR=12						
	comp=Z,1.4nm,0.8s						
PDAR	Pinedale Array	84.95	41	P	P	19 00 23.4	+0.2
YHL	Hebgen Lake	85.10	39	IAmb	IAmb	19 00 28.2	
	comp=Z,7.5nm,1.0s						
G18K	Tagagawik	85.88	6	IAmb	IAmb	19 00 43.4	
	comp=Z,3.8nm,1.1s						
WRH	Wood River Hil	85.92	10		P	19 00 26.8	-0.5
WRH				IAmb	IAmb	19 00 42.3	
	comp=Z,9.5nm,1.1s						
CCB	Clear Creek Bu	86.13	10		P	19 00 27.7	-0.6
CCB				IAmb	IAmb	19 00 30.6	
	comp=Z,5.6nm,1.2s						
PLCA	Paso Flores	86.25	132	P	P	19 00 37.1	+7.3
	comp=Z,1.3nm,0.9s,baz=229,slow=11,SNR=2.8						
PLCA				LR	LR	19 32 29.7	
	comp=Z,39nm,18.7s,baz=229,slow=31						
	comp=Z,1.3nm,0.9s						
G19K	Purcell Mounta	86.27	6	IAmb	IAmb	19 00 30.7	
	comp=Z,7.8nm,1.4s						
COLA	College	86.33	10	P	P	19 00 30.5	+1.3
ILAR	Eielson Array	86.40	11	P	P	19 00 29.2	-0.5
	comp=Z,1.2nm,0.9s,baz=209,slow=6.1,SNR=6.9						
	comp=Z,1.2nm,0.9s						
F19K	Shaleruckik Mo	86.88	6	IAmb	IAmb	19 00 46.8	
	comp=Z,4.8nm,1.2s						
E18K	Tukpahlearik C	87.21	5		P	19 00 33.9	+0.3
E18K				IAmb	IAmb	19 00 35.8	
	comp=Z,9.4nm,1.4s						
PRP	Porcupine Dome	87.33	11		P	19 00 33.8	-0.5
PRP				IAmb	IAmb	19 00 36.5	
	comp=Z,12nm,1.5s						
HNS	HongShan	88.65	311	⇑P	P	19 00 43.6	+2.5
HNS				pmax	pmax		
	comp=Z,5.0nm,1.6s						
ENH	Enshi	89.69	302	P	P	19 00 46.7	+0.5
ATAH	Atahualpa	91.69	98	LR	LR	19 34 09.2	
	comp=Z,60nm,18.3s,baz=305,slow=30						
HHC	Hu-ho-hao-te	92.32	313	*e*P	P	19 00 59.6	+1.3
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,5.5s						
YAK	Yakutsk	93.18	337	LR	LR	19 40 49.2	
	comp=Z,14nm,20.6s,baz=102,slow=34						
YKA	Yellowknife Ar	93.66	23	P	P	19 01 04.6	+0.9
	comp=Z,0.1nm,0.5s,baz=233,slow=4.6,SNR=2.1						
	comp=Z,0.1nm,0.5s						
YKA	Yellowknife Ar	93.66	23	P	P	19 01 04.0	+0.2
CMAR	Chiang Mai Arr	94.52	288	P	P	19 01 08.8	0.0
	comp=Z,0.6nm,0.9s,baz=98,slow=5.4,SNR=6.7						
CMAR				LR	LR	19 42 14.1	
	comp=Z,13nm,19.2s,baz=140,slow=35						
	comp=Z,0.6nm,0.9s						
PZH	PanZhiHua	94.70	296	P	P	19 01 11.5	+1.9
LPAZ	La Paz	97.78	110	LR	LR	19 37 32.7	
	comp=Z,40nm,20.0s,baz=262,slow=30						
SONM	Songino Array	98.36	318	LR	LR	19 41 06.3	
	comp=Z,24nm,20.9s,baz=26,slow=33						
MKAR	Makanchi Array	114.17	313	PKiKP	PKiKP	19 06 26.9	-0.3
	comp=Z,0.3nm,0.8s,baz=90,slow=2.9,SNR=1.9						
MKAR	Makanchi Array	114.17	313		PKiKP	19 06 25.9	-1.3
KURK	Kurchatov	116.67	318		PKiKP	19 06 32.3	+0.5
KURBB	Kurchatov Arra	116.73	318	PKP	PKPdf	19 06 32.3	+0.4
	comp=Z,0.5nm,0.3s,baz=74,slow=1.4,SNR=2.3						
BVAR	Borovoye Array	121.53	321	PKP	PKiKP	19 06 41.7	+0.4
	comp=Z,1.2nm,0.8s,baz=113,slow=3.7,SNR=5.2						
AKASG	Malin Array Be	144.41	336	PKP	PKPdf	19 07 24.9	+1.0
	comp=Z,1.4nm,0.8s,baz=38,slow=1.6,SNR=2.2						
CLL	Collm	148.02	353	*i* PKPbc	PKPab	19 07 34.6	-1.2
	comp=Z,29nm,1.9s						
CLL				*i* PKPab	sPKPab	19 07 36.5	-0.6
CLL				*i* x	x	19 07 46.4	
BRTR	Keskin Array B	149.72	317	PKPbc	PKPbc	19 07 36.7	-1.3
	comp=Z,2.1nm,1.1s,baz=66,slow=4.9,SNR=8.3						
BRTR	Keskin Array B	149.72	317		PKPdf	19 07 31.1	-2.2
GERES	GERESS Array B	150.35	351	PKPbc	PKiKP	19 07 41.3	+1.3
	comp=Z,0.6nm,0.8s,baz=11,slow=2.3,SNR=5.6						

*IDC **03** 18:54:23.4±2.2, 7°.32S×121°.57E, h0km, mb3.9/3, mbtmp3.9/4, ML3.7/1, MS2.8/1, Error ellipse: s-maj=273.6km s-min=25.5km az=56.0*

*DJA **03** 18:54:30.3±0.7, 8°S±2°×12°1E±°, h28km±8km, M4.2/20, mB4.9/3, mb4.4/4, MLv4.0/20, Mw(mB)4.2/3*

ISC 03 18:54:29.5±1.1, **8°.27S**±0°.05×**120°.64E**±0°.05, **h35**km, **n26**, σ**1.s75**/24, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBFI	Labuhan Bajo,	0.77	254	P	Pn	18 54 44.9	+1.1
EDFI	Ende, Flores	1.14	115	P	Pn	18 54 50.5	+1.4
WSI	Waingapu	1.43	194	P	Pn	18 54 55.1	+2.2
MMRI	Maumere	1.62	103	P	Pn	18 54 57.1	+1.5
MMRI	Maumere	1.62	103	P	Pn	18 54 56.8	+1.2
WBSI	Waikabubak, Su	1.83	222	P	Pn	18 55 00.2	+1.6
BSSI	Bau Bau, Buton	2.12	356	P	Pn	18 55 02.8	+0.3
DBNI	Kabupaten Domp	2.31	264	P	Pn	18 55 06.1	+1.0
PLAI	Plampang	2.88	259	P	Pn	18 55 14.9	+2.0
PLAI	Plampang	2.88	259	P	Pn	18 55 14.8	+1.9
BKSI	Bulukumba	2.98	350	P	Pn	18 55 15.1	+0.9
MKS	Makassar	3.25	339	P	Pn	18 55 19.6	+1.6
KAPI	Kappang	3.35	345	LR	LR	18 56 42.5	
	comp=Z,160nm,21.3s,baz=168,slow=48						
KAPI	Kappang	3.35	345	P	Pn	18 55 21.3	+1.9
KAPI	Kappang	3.35	345	P	Pn	18 55 21.0	+1.6
BATI	Baumata	3.55	123	P	Pn	18 55 23.5	+1.3
KKSI	Kolaka, Sulawe	4.20	14	P	Pn	18 55 33.1	+2.1
PMSI	Majene	5.04	340	P	Pn	18 55 44.0	+1.3
	0.3nm815nm62nm,0.6s						
IGBI	Denpasar	5.46	264	P	Pn	18 55 51.0	+2.6
	5μm133nm,0.4s						
MMSI	Mamuju	5.81	343	P	Pn	18 55 54.7	+1.5
JAGI	Jajag, Banyuwa	6.42	268	P	Pn	18 56 03.4	+1.8
SANI	Sanana	8.16	41	P	Pn	18 56 27.8	+2.3
WRA	Warramunga Arr	17.62	133	P	Pn	18 58 31.0	-1.4
	0.3nm,0.3s,baz=307,slow=12,SNR=12						
	0.8nm,0.6s						
ASAR	Alice Springs	19.90	142	P	Pn	18 58 58.9	-1.0
	15nm,0.4s,baz=323,slow=9.9,SNR=8.4						
	15nm,0.4s						
MKAR	Makanchi Array	64.57	332	P	P	19 05 01.2	-2.0
	0.2nm,0.5s,baz=136,slow=7.4,SNR=5.6						
	0.2nm,0.5s						
ZALV	Zalesovo Beam	68.96	338	P	P	19 05 25.4	-5.5
	0.4nm,0.3s,baz=133,slow=8.1,SNR=4.4						
	0.4nm,0.3s						

JMA 03 19:29:11.7±0.5, **30°.6N**±1°.0×**12°8E**±°, **h2**km, **MV2.6**/13, **SW OFF KYUSHU, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNN	Nakanoshima	1.48	122	P	Pn	19 29 39.4	0.0
JNN				S	Sg	19 29 59.5	+0.1
JKC	Kuchinoerabu	1.54	96	*e*P	Pn	19 29 40.2	+0.1
JSU	Suzuyama	1.94	63	*e*P	Pn	19 29 45.2	-0.5

TAP 03 19:31:14.6, 24°.42N×121°.42E, h9km, ML1.7, 1C-1D, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNSB	Datong	0.03	286	⇓*i*P	Pg	19 31 17.1	+0.6
NNSB				*i* S	Sg	19 31 18.0	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NNS	Nan Shan	0.04	297	iP	Pg	19 31 17.2	+0.6
NNS				S	Sg	19 31 18.4	+0.3
LATG	Datong	0.15	41	⇑iP	Pg	19 31 19.0	+1.0
LATG				iS	Sg	19 31 21.7	+1.2
NDT	Datong Townshi	0.20	26	eP	Pg	19 31 20.0	+1.2
NDT				eS	Sg	19 31 23.8	+2.1
ETLH	Xiulin Townshi	0.22	164	eP	Pg	19 31 20.9	+1.7
ETLH				eS	Sg	19 31 23.6	+1.4
FUSS	Fushou	0.23	222	P	Pg	19 31 20.5	+1.1
FUSS				eS	Sg	19 31 23.9	+1.1
YHNB	Yeheng	0.25	352	iP	Pb	19 31 21.2	-0.1
YHNB				iS	Sg	19 31 24.2	+1.0
ENTT	Nioudou	0.26	32	iP	Pb	19 31 21.1	-0.4
ENTT				iS	Sg	19 31 24.7	+1.3
NSK	Sanguang	0.26	348	P	Pb	19 31 21.4	-0.1
NSK				S	Sg	19 31 24.8	+1.3
TWT	Tachien	0.27	233	eP	Pb	19 31 21.2	-0.6
TWT				eS	Sb	19 31 27.1	+0.5
TDCB	Techi	0.29	235	P	Pb	19 31 21.3	-0.7
TDCB				eS	Sg	19 31 25.6	+1.3
NACB	Ninganchiao	0.29	146	P	Pb	19 31 21.9	-0.1
NACB				S	Sb	19 31 25.9	-1.1
ENA	Nanau	0.30	88	eP	Pb	19 31 22.1	+0.1
WHF	Hehuan Shan	0.31	207	eP	Pb	19 31 22.0	-0.5
WHF				eS	Sb	19 31 26.6	-1.2
EWUT	Wuta	0.33	86	eP	Pb	19 31 22.3	-0.4
EWUT				eS	Sg	19 31 26.8	+1.1
FUSB	Fushanzhiwuyua	0.37	25	P	Pb	19 31 23.0	-0.4
FUSB				eS	Sb	19 31 28.3	-1.1
TWE	Neicheng	0.38	37	eP	Pb	19 31 23.2	-0.3
LXIB	Xiulin Townshi	0.40	180	eP	Pb	19 31 23.7	-0.2
LXIB				eS	Sb	19 31 29.5	-0.6
WUSB	Renai	0.51	213	iP	Pb	19 31 25.1	-0.6
WUSB				eS	Sb	19 31 33.0	-0.2

*JMA **03** 19:31:21.6±0.2,24°N±2°×122°.4E±0°.5,h17km,TAIWAN REGION*
*TAP **03** 19:31:22.3,24°.30N×122°.41E,h60km±1km,ML2.7,D*
ISC 03 19:31:22.7±1.4,**24°.16N**±0°.07×**122°.35E**±0°.02,**h21**km±5km, **n22**,σ**0s.55**/38,**Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EAHA	Aohua	0.58	287	eP	Pn	19 31 35.4	-0.3
EAHA				eS	Sn	19 31 46.0	+1.2
EWUT	Wuta	0.60	299	eP	Pb	19 31 34.5	0.0
EWUT				eS	Sn	19 31 45.1	+0.2
JYNG	Yonagunijimaku	0.61	62	P	Pb	19 31 34.5	-0.3
JYNG				eS	Sb	19 31 43.3	+0.3
ENA	Nanau	0.62	296	eP	Pb	19 31 35.3	+0.5
ENA				eS	Sn	19 31 46.0	+0.5
TWC	Suao	0.64	314	P	Pb	19 31 35.3	+0.1
TWC				eS	Sb	19 31 44.8	+1.0
YOJ	Yonaguni jima	0.67	63	iP	Pb	19 31 35.6	-0.1
YOJ				iS	Sb	19 31 44.5	-0.2
YOJ	Yonaguni jima	0.67	63	P	Pb	19 31 36.1	+0.3
NDS	Dongshan	0.75	309	eP	Pb	19 31 37.2	+0.2
NDS				eS	Sn	19 31 48.2	-0.6
ETLH	Xiulin Townshi	0.80	274	eP	Pb	19 31 37.2	-0.6
ETLH				eS	Sb	19 31 49.0	+0.8
TWE	Neicheng	0.84	312	eP	Pn	19 31 39.0	-0.2
TWE				eS	Sn	19 31 50.4	-0.6
LATG	Datong	0.84	297	P	Pb	19 31 38.8	+0.1
LATG				eS	Sn	19 31 50.9	-0.4
ENTT	Nioudou	0.86	304	eP	Pb	19 31 39.1	+0.1
ENTT				eS	Sn	19 31 51.0	-0.6
FUSB	Fushanzhiwuyua	0.92	311	eP	Pn	19 31 40.7	+0.2
FUSB				S	Sb	19 31 52.0	+0.2
NNSB	Datong	0.93	287	P	Pb	19 31 39.7	-0.4
NNSB				eS	Sb	19 31 51.0	-0.9
NNS	Nan Shan	0.94	288	P	Pb	19 31 39.7	-0.5
NNS				eS	Sb	19 31 51.7	-0.6
FUSS	Fushou	1.02	275	eP	Pb	19 31 41.4	-0.3
YHNB	Yeheng	1.03	300	eP	Pb	19 31 41.8	0.0
SXI1	Grass Mountain	1.03	335	eP	Pb	19 31 41.5	-0.3
SXI1				eS	Sb	19 31 53.4	-1.5
TDCB	Techi	1.09	275	eP	Pn	19 31 42.8	-0.1
IRIF	Iriomote-Funau	1.27	82	P	Pn	19 31 44.8	-0.4
IRIF				eS	Sn	19 32 01.2	-0.4
JKRS	Kuro-shima	1.52	87	eP	Pb	19 31 49.9	-0.2
JISG	Ishigakijimahi	1.84	76	eP	Pn	19 31 53.3	+0.3

*JMA **03** 19:31:32.9±0.2,24°N±1°×122°.4E±0°.4,h16km±3km, MV2.4/12,TAIWAN REGION*
ISC 03 19:31:32.3±1.4,**24°.01N**±0°.09×**122°.35E**±0°.03,**h15**km±11km, **n15**,σ**0s.68**/21,**Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.70	51	eP	Pg	19 31 46.0	0.0
JYNG				eS	Sg	19 31 54.8	-0.3
NACB	Ninganchiao	0.71	283	P	Pg	19 31 45.6	-0.6
YOJ	Yonaguni jima	0.75	53	P	Pb	19 31 47.9	+0.8
YOJ	Yonaguni jima	0.75	53	S	Sn	19 31 58.8	-0.7
YOJ	Yonaguni jima	0.75	53	eP	Pg	19 31 47.1	+0.2
YOJ				eS	Sg	19 31 56.6	-0.2
YHNB	Yeheng	1.10	307	P	Pb	19 31 53.8	+0.6
YHNB	Yeheng	1.10	307	S	Pb	19 31 53.9	+0.6
YULB	Yu-li	1.15	238	P	Pn	19 31 53.8	-0.1
YULB	Yu-li	1.15	238	S	Sb	19 32 07.9	-0.7
SSLB	Suanglung	1.30	260	P	Pb	19 31 57.7	+1.2
SSLB	Suanglung	1.30	260	S	Sn	19 32 13.1	0.0
IRIF	Iriomote-Funau	1.30	75	P	Pn	19 31 56.1	+0.1
IRIF				eS	Sn	19 32 13.4	+0.3
JKRS	Kuro-shima	1.53	81	eP	Pb	19 32 00.5	+0.1
JKRS				eS	Sb	19 32 19.5	-0.2
JIJ	Ishigaki jima	1.67	78	eP	Pn	19 32 01.8	+0.7
JIJ				eS	Sn	19 32 22.8	+0.5
JISG	Ishigakijimahi	1.88	72	P	Pn	19 32 03.7	-0.2
JISG				eS	Sn	19 32 25.8	-1.6

TAP 03 19:31:46.1,24°.03N×122°.35E,h43km±2km,ML3.0,D, Taiwan region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EAHA	Aohua	0.64	298	eP	Pn	19 31 58.1	-0.6
ETL	Fush Village	0.68	281	eP	Pn	19 31 59.0	-0.4
ENA	Nanau	0.69	306	eP	Pn	19 31 59.4	0.0
TWD	Chiawan	0.69	275	eP	Pn	19 31 58.5	-1.0
TWD				eS	Sn	19 32 08.7	-0.5
NACB	Ninganchiao	0.71	282	eP	Pn	19 31 58.7	-1.0
TEYL	Yanliau Villag	0.71	257	P	Pn	19 31 59.3	-0.4
TEYL				eS	Sn	19 32 09.7	+0.2
ESAO	Su ao	0.72	320	eP	Pn	19 32 00.2	+0.4
TWC	Suao	0.74	322	eP	Pn	19 31 59.9	-0.3
TWC				eS	Sn	19 32 10.2	-0.1
ETM	Tongmen	0.79	266	eP	Pn	19 32 00.5	-0.4
ETM				eS	Sn	19 32 11.6	+0.1
ETLH	Xiulin Townshi	0.82	283	eP	Pn	19 32 00.9	-0.3
ETLH				eS	Sn	19 32 12.7	+0.4
NDS	Dongshan	0.84	316	eP	Pn	19 32 01.7	+0.2
LXIB	Xiulin Townshi	0.86	270	eP	Pn	19 32 01.6	-0.3
LXIB				eS	Sn	19 32 13.5	0.0
LATG	Datong	0.91	304	eP	Pn	19 32 02.9	+0.3
TWE	Neicheng	0.93	318	eP	Pn	19 32 03.2	+0.4
ENTT	Nioudou	0.94	310	eP	Pn	19 32 03.8	+0.9
NDT	Datong Townshi	0.96	307	eP	Pn	19 32 03.7	+0.5
NNSB	Datong	0.97	294	eP	Pn	19 32 03.7	+0.3
NNSB				eS	Sn	19 32 17.7	+1.5
NNS	Nan Shan	0.98	295	P	Pn	19 32 04.1	+0.5
NNS				eS	Sn	19 32 17.0	+0.5
WHF	Hehuan Shan	1.00	277	eP	Pn	19 32 04.8	+0.7
FUSB	Fushanzhiwuyua	1.01	316	eP	Pn	19 32 04.8	+0.9
TWB1	Santiao Chiao	1.03	341	eP	Pn	19 32 04.4	+0.3
FUSS	Fushou	1.04	282	eP	Pn	19 32 04.7	+0.3
TIPB	Shuangxi	1.06	333	eP	Pn	19 32 06.1	+1.6
TIPB				eS	Sn	19 32 19.6	+1.5
NWLT	Wulai	1.08	314	eP	Pn	19 32 05.5	+0.7
YHNB	Yeheng	1.10	306	eP	Pn	19 32 05.5	+0.4
NSK	Sanguang	1.11	306	eP	Pn	19 32 06.0	+0.6
TDCB	Techi	1.11	282	eP	Pn	19 32 06.1	+0.7
SXI1	Grass Mountain	1.15	338	eP	Pn	19 32 07.1	+1.3
LIOB	Emei	1.37	297	eP	Pn	19 32 10.9	+2.1
NSTT	Nanjuang	1.37	296	eP	Pn	19 32 10.4	+1.6

*JMA **03** 19:32:23.2±0.2,24°N±1°×122°.4E±0°.4,h17km±3km, MV2.4/11,TAIWAN REGION*
*TAP **03** 19:32:23.4,24°.04N×122°.36E,h28km,ML3.1,D*
ISC 03 19:32:22.8±1.0,**24°.00N**±0°.02×**122°.38E**±0°.02,**h20**km±12km, **n136**,σ**0s.70**/229,**Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EAHA	Aohua	0.67	300	P	Pb	19 32 35.9	+0.1
EAHA				S	Sn	19 32 46.3	-0.8
JYNG	Yonagunijimaku	0.69	49	P	Pb	19 32 36.2	+0.1
JYNG				S	Sb	19 32 44.8	-0.4
EWUT	Wuta	0.70	309	eP	Pb	19 32 36.5	+0.1
HWA	Hwalien	0.71	268	eP	Pb	19 32 36.6	+0.2
HWA				eS	Sn	19 32 47.1	-0.9
ETL	Fush Village	0.71	283	P	Pb	19 32 36.8	+0.3
ETL				eS	Sb	19 32 46.3	+0.5
TWD	Chiawan	0.72	277	P	Pb	19 32 36.4	-0.2
TWD				eS	Sb	19 32 46.0	-0.1
ENA	Nanau	0.72	306	P	Pb	19 32 36.8	+0.1
ENA				S	Sb	19 32 46.4	+0.2
TEYL	Yanliau Villag	0.72	260	eP	Pb	19 32 37.0	+0.2
TEYL				eS	Sb	19 32 47.1	+0.8
NACB	Ninganchiao	0.74	284	P	Pb	19 32 36.7	-0.3
NACB				S	Sb	19 32 46.6	0.0
YOJ	Yonaguni jima	0.74	51	P	Pb	19 32 37.7	+0.7
YOJ				iS	Sb	19 32 46.5	-0.3
YOJ	Yonaguni jima	0.74	51	eP	Pb	19 32 37.1	+0.1
YOJ				eS	Sb	19 32 46.4	-0.3
ESAO	Su ao	0.75	320	P	Pb	19 32 36.9	-0.4
ESAO				eS	Sb	19 32 46.6	-0.4
SHUL	Shoufeng	0.78	254	eP	Pn	19 32 38.8	+0.2
SHUL				eS	Sb	19 32 48.1	+0.4
TWC	Suao	0.78	322	P	Pb	19 32 37.1	-0.5
TWC				S	Sb	19 32 46.8	-0.9
ETM	Tongmen	0.81	268	eP	Pb	19 32 37.9	-0.3
ETM				eS	Sb	19 32 48.4	-0.3
ETLH	Xiulin Townshi	0.84	284	P	Pb	19 32 38.5	-0.3
ETLH				S	Sb	19 32 50.2	+0.4
NDS	Dongshan	0.87	316	P	Pb	19 32 39.1	-0.2
NDS				eS	Sb	19 32 50.7	+0.2
LXIB	Xiulin Townshi	0.88	272	P	Pb	19 32 39.3	-0.2
LXIB				eS	Sb	19 32 50.4	-0.5
ESL	Shilin	0.88	258	eP	Pn	19 32 40.6	+0.5
EGFH	Guangfu	0.93	250	eP	Pb	19 32 39.9	-0.4
EGFH				eS	Sb	19 32 52.0	-0.2
EGS		0.94	334	eP	Pb	19 32 40.4	0.0
EGS				eS	Sn	19 32 52.8	-0.8
LATG	Datong	0.94	305	P	Pb	19 32 40.7	+0.1
LATG				iS	Sn	19 32 54.0	0.0
WARBT	Fenglin Townsh	0.95	253	eP	Pb	19 32 40.2	-0.4
WARBT				eS	Sb	19 32 51.6	-1.2
ILA	Ilan	0.96	323	eP	Pn	19 32 41.2	+0.1
TWE	Neicheng	0.97	318	P	Pn	19 32 41.1	-0.2
ENTT	Nioudou	0.98	311	P	Pb	19 32 41.2	+0.1
ENTT				eS	Sn	19 32 54.1	-0.6
NDT	Datong Townshi	0.99	307	P	Pb	19 32 41.4	+0.1
NDT				S	Sn	19 32 54.3	-0.8
NNSB	Datong	1.00	295	P	Pb	19 32 41.4	-0.2
NNSB				S	Sb	19 32 54.5	+0.1
HGSD	Ruisui	1.01	240	eP	Pn	19 32 41.1	-0.7
HGSD				eS	Sb	19 32 53.0	-1.4
NNS	Nan Shan	1.02	296	iP	Pb	19 32 41.6	-0.2
NNS				S	Sb	19 32 54.9	+0.1
WHF	Hehuan Shan	1.03	278	eP	Pb	19 32 41.9	-0.3
WHF				S	Sb	19 32 54.9	-0.5
FUSB	Fushanzhiwuyua	1.05	317	iP	Pb	19 32 42.4	+0.1
FUSB				iS	Sn	19 32 56.2	-0.2
FUSS	Fushou	1.06	284	eP	Pn	19 32 42.7	-0.1
FUSS				eS	Sb	19 32 55.9	-0.4
TWB1	Santiao Chiao	1.07	341	eP	Pn	19 32 41.3	-1.3
EHYH	Wanrong	1.07	242	eP	Pn	19 32 43.1	+0.4
EHYH				eS	Sb	19 32 55.4	-0.8
EHY	Hungye	1.08	243	eP	Pn	19 32 42.5	-0.4
EHY				eS	Sb	19 32 55.5	-1.1
ECBN	Changbin	1.09	232	eP	Pn	19 32 43.3	+0.4
ECBN				S	Sb	19 32 55.7	-1.0
TIPB	Shuangxi	1.09	333	eP	Pb	19 32 43.3	+0.2
TIPB				eS	Sn	19 32 56.9	-0.6
OWD	Renai	1.10	268	eP	Pn	19 32 42.3	-0.9
NWLT	Wulai	1.11	314	P	Pn	19 32 43.2	-0.1
NWLT				eS	Sn	19 32 58.3	+0.2
TWT	Tachien	1.13	283	P	Pb	19 32 44.0	+0.3
TWT				S	Sn	19 32 58.4	-0.2
YHNB	Yeheng	1.13	306	P	Pn	19 32 43.2	-0.4
YHNB				iS	Sb	19 32 57.8	-0.3
TDCB	Techi	1.14	283	eP	Pn	19 32 43.4	-0.4
TDCB				eS	Sb	19 32 58.0	-0.4
NSK	Sanguang	1.15	306	P	Pn	19 32 43.6	-0.2
NSK				S	Sb	19 32 58.4	-0.1
WUSB	Renai	1.15	270	eP	Pn	19 32 43.6	-0.3
WUSB				eS	Sb	19 32 58.5	-0.2
VWDT	VWDT	1.16	258	eP	Pb	19 32 44.9	+0.8
VWDT				S	Sb	19 32 58.3	-0.4
YULB	Yu-li	1.16	239	P	Pn	19 32 42.7	-1.2
YULB				eS	Sn	19 32 57.3	-1.9
EYUL	Yuli	1.17	236	eP	Pn	19 32 43.5	-0.5
EYUL				eS	Sn	19 32 58.3	-1.0
TWF1	Yuli	1.18	237	eP	Pn	19 32 43.8	-0.5
TWF1				eS	Sn	19 32 58.9	-0.9
SXI1	Grass Mountain	1.18	337	P	Pn	19 32 43.7	-0.6
SXI1				eS	Sn	19 33 00.3	+0.4
NWF	Wu-fen Shan	1.20	333	eP	Pb	19 32 45.1	+0.2
NWF				eS	Sb	19 33 01.1	+1.1
WFSB	Wu-fen Shan	1.20	333	eP	Pn	19 32 44.0	-0.5
WFSB				eS	Sb	19 33 00.1	+0.2
CHKH	Chenggong	1.21	228	eP	Pb	19 32 45.5	+0.5
TWA	Mucha	1.22	324	eP	Pb	19 32 45.0	-0.1
TWA				eS	Sb	19 33 01.4	+0.9
TATO	Taipei	1.27	320	eP	Pb	19 32 46.0	0.0
TATO				S	Sb	19 33 01.9	0.0
TNOU	National Taiwa	1.27	334	eP	Pn	19 32 44.7	-0.7
TNOU				eS	Sb	19 33 02.1	+0.1
FULB	Fuli	1.27	232	eP	Pn	19 32 45.6	+0.1
IRIF	Iriomote-Funau	1.28	75	eP	Pb	19 32 46.6	+0.4
IRIF				eS	Sb	19 33 03.5	+1.3
CHKT	Chengkung	1.29	226	eP	Pn	19 32 44.7	-0.9
WPL	Puli Township	1.30	271	eP	Pn	19 32 45.8	0.0
NFF	Wufeng Townshi	1.31	299	P	Pb	19 32 46.6	-0.2
NFF				eS	Sb	19 33 03.5	+0.3
SSLB	Suanglung	1.32	261	eP	Pb	19 32 47.0	+0.1
DPDB	Guoxing	1.33	272	eP	Pn	19 32 46.7	+0.5
WHP	Taichung City	1.34	282	eP	Pb	19 32 47.3	0.0
KSHI	Guanxi Townshi	1.34	306	eP	Pb	19 32 47.4	+0.1
KSHI				eS	Sb	19 33 05.4	+1.3
SMLT	Sun Moon Lake	1.36	265	eP	Pn	19 32 47.4	+0.7
YM01	YM01	1.36	327	eP	Pb	19 32 47.2	-0.4
YM01				eS	Sb	19 33 04.8	+0.2
EHD	Haiduan	1.37	232	eP	Pn	19 32 46.4	-0.4
YM08	YM08	1.39	329	eP	Pn	19 32 47.2	+0.2
ZUZH	Zhuzihu	1.39	327	P	Pb	19 32 47.6	-0.4
ZUZH				eS	Sb	19 33 05.4	+0.1
NJD	Zhudong	1.39	302	eP	Pn	19 32 47.5	+0.4
NJD				eS	Sb	19 33 05.8	+0.5
ECS	Chishang	1.39	230	eP	Pn	19 32 47.8	+0.7
TYC	Yuchr	1.39	266	eP	Pb	19 32 48.7	+0.5
LIOB	Emei	1.40	298	P	Pb	19 32 48.3	+0.1
LIOB				eS	Sb	19 33 05.9	+0.2
YUS	Yu-Shan	1.40	249	eP	Pn	19 32 47.8	+0.2
TWS1	Kuangyinshan	1.40	322	eP	Pb	19 32 47.8	-0.5
NSTT	Nanjuang	1.41	297	P	Pb	19 32 48.0	-0.3
NSTT				S	Sb	19 33 05.7	-0.2
ANP	Anpu	1.42	327	eP	Pn	19 32 47.8	+0.2
TWY	Chenhua	1.46	331	eP	Pn	19 32 48.5	+0.5
TWY				eS	Sb	19 33 06.9	-0.4
HSN1	Hsinchu	1.46	302	eP	Pn	19 32 48.0	-0.1
TWQ1	Liyutan	1.51	284	P	Pb	19 32 49.7	-0.4
TWQ1				eS	Sb	19 33 08.6	-0.2
JKRS	Kuro-shima	1.51	81	eP	Pb	19 32 50.2	+0.1
JKRS				eS	Sb	19 33 09.8	+1.0
ALS	Alishan	1.52	252	eP	Pn	19 32 50.0	+0.8
ALS				eS	Sn	19 33 08.4	-0.1
WWF	Wufeng	1.54	272	eP	Pb	19 32 50.4	-0.1
NMLH	Miaoli	1.54	291	eP	Pb	19 32 50.3	-0.4
NMLH				eS	Sb	19 33 09.8	0.0
WNT	Mingjian	1.55	266	eP	Pb	19 32 50.8	-0.1
WNT				eS	Sb	19 33 10.2	0.0
WNT1	Nantou City	1.56	267	eP	Pb	19 32 50.9	-0.1
WNT1				eS	Sb	19 33 10.7	+0.5
LDUT	Ludao	1.56	213	eP	Pn	19 32 47.9	-1.5
TCU	Taichung	1.56	276	eP	Pn	19 32 50.3	+0.9
TCU				eS	Sb	19 33 11.0	+0.6
CHN5	Tsauling	1.61	256	eP	Pn	19 32 50.5	+0.3
CHN5				eS	Sn	19 33 11.2	+0.8
WYL	Yuanlin Townsh	1.65	269	eP	Pb	19 32 52.1	-0.3
JIJ	Ishigaki jima	1.65	77	eP	Pb	19 32 52.2	-0.3
JIJ				eS	Sb	19 33 13.3	+0.4
TWGBT	Beinan	1.67	226	eP	Pn	19 32 49.8	-1.2
WCH1	Changhua City	1.68	273	eP	Pn	19 32 51.5	+0.5
WCH1				eS	Sb	19 33 13.3	-0.3
TTN	Taitung	1.68	223	eP	Pn	19 32 52.0	+1.0
TWG	Pinlang	1.68	226	eP	Pn	19 32 50.1	-0.9
TWG				eS	Sn	19 33 10.1	-1.9
STYH	Taoyuan	1.69	241	eP	Pn	19 32 51.5	+0.3
STYH				eS	Sn	19 33 12.4	+0.3
WGK	Gukeng	1.69	260	eP	Pb	19 32 53.6	+0.4
STYT	Tauyuan	1.70	241	eP	Pn	19 32 53.0	+1.5
WDL	Douliou City	1.71	261	eP	Pn	19 32 52.6	+1.2
WDL				eS	Sb	19 33 15.5	+1.0
WDLH	Douliu	1.71	260	eP	Pn	19 32 52.6	+1.1
WDLH				eS	Sb	19 33 14.8	+0.1
WCKO	Fanlu	1.72	251	eP	Pn	19 32 52.7	+1.1
WCKO				eS	Sb	19 33 14.8	-0.1
TPUB	Ta-pu	1.75	247	eP	Pn	19 32 52.9	+0.8
TPUB				eS	Sn	19 33 14.4	+0.7
CHN4	Tsaushan	1.76	249	eP	Pn	19 32 52.9	+0.7
CHN4				eS	Sn	19 33 15.2	+1.2
WTP	Ta-pu	1.78	246	eP	Pb	19 32 54.5	-0.3
WTP				eS	Sn	19 33 15.4	+0.7
WRL	Guolierlin Hig	1.83	267	eP	Pn	19 32 54.1	+0.9
WRL				eS	Sb	19 33 18.1	0.0
WTK	Tuku	1.85	261	eP	Pn	19 32 54.0	+0.6
WTK				eS	Sb	19 33 18.6	0.0
RLNB	Erlin	1.85	267	eP	Pn	19 32 54.2	+0.9
RLNB				eS	Sb	19 33 18.6	-0.1
CHY	Chiayi	1.86	255	eP	Pn	19 32 54.7	+1.2
CHY				eS	Sn	19 33 17.5	+1.1
JISG	Ishigakijimahi	1.86	71	eP	Pb	19 32 55.6	-0.5
JISG				eS	Sb	19 33 18.3	-0.6
CHN1	Nanshi	1.88	245	eP	Pn	19 32 54.5	+0.6
TWK	Hsinying	1.88	248	eP	Pn	19 32 55.5	+1.7
TWK				eS	Sb	19 33 18.9	-0.7
SGST	Jiashian	1.88	241	eP	Pn	19 32 55.0	+1.1
SGST				eS	Sn	19 33 18.7	+1.6
ECL	Taimali	1.91	223	eP	Pn	19 32 55.2	+0.9
WSF	Szhu	2.01	260	eP	Pn	19 32 56.3	+0.8
WSF				eS	Sb	19 33 22.4	-0.7
WSL	Shuilin Townsh	2.03	257	eP	Pn	19 32 57.1	+1.3
SSD	Sandimen	2.03	232	eP	Pn	19 32 57.5	+1.6
SSD				eS	Sn	19 33 21.7	+1.0
CHN8	Yiju	2.09	252	eP	Pn	19 32 56.0	-0.7
CHN8				eS	Sn	19 33 23.7	+1.6
LAY	Lan-yu	2.09	201	eP	Pn	19 32 55.3	-1.5
MASBT	Mashibuluo	2.12	230	eP	Pn	19 32 58.0	+0.9
LYUB	Lan-yu	2.12	200	eP	Pn	19 32 58.2	+1.1
EAST	Anshuo	2.14	222	eP	Pn	19 32 58.8	+1.4
EAST				eS	Sn	19 33 22.5	-0.9
TWM1	Shoushan	2.14	237	eP	Pn	19 32 57.8	+0.3
TAWH	Dawu Township	2.15	220	eP	Pn	19 32 58.7	+1.2
SCZT	Fangliau	2.29	225	eP	Pn	19 33 00.6	+1.2
SCZT				eS	Sn	19 33 27.2	+0.2
SMST	Manzhou Townsh	2.43	216	eP	Pn	19 33 01.9	+0.5
SMST				eS	Sn	19 33 28.8	-1.7
HEN	Hengchun	2.49	218	eP	Pn	19 33 03.6	+1.4
HEN				eS	Sn	19 33 31.7	-0.4
TWKBT	Hengchun	2.50	215	eP	Pn	19 33 03.4	+1.0
TWKBT				eS	Sn	19 33 31.2	-1.2
PHUB	P'eng-hu	2.62	260	eP	Pn	19 33 04.2	+0.3
PHUB				eS	Sn	19 33 35.0	-0.1
PNG	Penghu	2.62	261	eP	Pn	19 33 05.5	+1.5
PNG				eS	Sn	19 33 35.5	+0.3
VWUC	VWUC	2.84	291	eP	Pn	19 33 06.7	-0.4
MATB	Ma-tsu	3.08	315	eP	Pn	19 33 10.1	-0.2
PTMZ	Houxiangcun	3.14	290	eP	Pn	19 33 10.4	-0.7
XPSS	Dashiqiu	3.53	326	eP	Pn	19 33 16.2	-0.2
KNMB	Chin-men Tao	3.67	278	eP	Pn	19 33 17.8	-0.7
AXDP	Jialang	4.12	283	eP	Pn	19 33 24.7	+0.2

*JMA **03** 19:40:04.3±0.2,24°N±1°×122°.4E±0°.4,h19km±3km, MV2.5/13,TAIWAN REGION*
*TAP **03** 19:40:04.1,24°.04N×122°.37E,h26km,ML3.1,D*
ISC 03 19:40:02.3±1.0,**23°.98N**±0°.02×**122°.37E**±0°.02,**h15**km±8km, **n127**,σ**0s.87**/229,**Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EAHA	Aohua	0.68	301	eP	Pb	19 40 16.0	+0.2
EAHA				eS	Sb	19 40 25.5	+0.5
JYNG	Yonagunijimaku	0.70	48	P	Pn	19 40 17.2	-0.6
JYNG				eS	Sb	19 40 26.1	+0.4
HWA	Hwalien	0.70	270	eP	Pn	19 40 17.8	0.0
HWA				S	Sn	19 40 28.6	+0.2
ETL	Fush Village	0.71	285	iP	Pn	19 40 17.8	-0.1
ETL				S	Sn	19 40 27.5	-1.1
EWUT	Wuta	0.71	310	iP	Pn	19 40 17.1	-0.8
EWUT				S	Sn	19 40 26.9	-1.7
TWD	Chiawan	0.72	278	P	Pn	19 40 17.5	-0.5
TWD				S	Sn	19 40 27.5	-1.2
TEYL	Yanliau Villag	0.72	261	P	Pn	19 40 17.8	-0.2
TEYL				eS	Sn	19 40 28.4	-0.4
NACB	Ninganchiao	0.74	285	iP	Pn	19 40 17.8	-0.4
NACB				S	Sn	19 40 28.0	-1.2
YOJ	Yonaguni jima	0.75	50	iP	Pn	19 40 18.1	-0.4
YOJ				iS	Sb	19 40 27.4	+0.2
YOJ	Yonaguni jima	0.75	50	P	Pn	19 40 18.0	-0.4
YOJ				eS	Sb	19 40 27.4	+0.2
ESAO	Su ao	0.76	321	P	Pn	19 40 17.9	-0.7
ESAO				eS	Sb	19 40 27.8	+0.2
SHUL	Shoufeng	0.77	256	eP	Pb	19 40 18.2	+0.8
SHUL				S	Sn	19 40 29.7	-0.2
TWC	Suao	0.79	323	iP	Pn	19 40 18.1	-0.8
TWC				iS	Sb	19 40 28.3	0.0
ETM	Tongmen	0.81	269	iP	Pb	19 40 18.7	+0.6
ETM				S	Sb	19 40 29.4	+0.6
ETLH	Xiulin Townshi	0.85	286	iP	Pn	19 40 19.6	-0.3
ETLH				S	Sn	19 40 31.4	-0.7
ESL	Shilin	0.88	259	eP	Pb	19 40 19.8	+0.5
ESL				eS	Sg	19 40 30.4	-0.4
LXIB	Xiulin Townshi	0.88	273	P	Pb	19 40 20.0	+0.6
LXIB				eS	Sb	19 40 31.4	+0.4
NDS	Dongshan	0.88	317	iP	Pn	19 40 19.9	-0.4
NDS				eS	Sg	19 40 29.9	-1.2
WARBT	Fenglin Townsh	0.94	254	P	Pb	19 40 20.6	+0.3
WARBT				eS	Sg	19 40 32.6	-0.4
EGS		0.95	335	P	Pn	19 40 21.5	+0.3
EGS				S	Sg	19 40 30.7	-2.5
LATG	Datong	0.95	306	P	Pn	19 40 21.5	+0.2
LATG				eS	Sn	19 40 34.3	-0.3
ILA	Ilan	0.97	324	eP	Pn	19 40 21.9	+0.6
ILA				S	Sb	19 40 32.9	-0.5
TWE	Neicheng	0.98	319	P	Pn	19 40 22.1	+0.6
TWE				eS	Sn	19 40 35.4	+0.2
ENTT	Nioudou	0.99	312	iP	Pn	19 40 22.2	+0.5
HGSD	Ruisui	1.00	241	iP	Pb	19 40 21.5	+0.1
HGSD				eS	Sb	19 40 32.7	-1.6
NDT	Datong Townshi	1.00	308	iP	Pn	19 40 22.6	+0.7
NDT				S	Sn	19 40 35.1	-0.6
NNSB	Datong	1.01	296	iP	Pn	19 40 22.4	+0.4
NNSB				iS	Sn	19 40 35.9	-0.2
NNS	Nan Shan	1.02	297	iP	Pn	19 40 22.7	+0.4
NNS				S	Sn	19 40 36.4	0.0
WHF	Hehuan Shan	1.03	279	P	Pn	19 40 22.7	+0.1
WHF				eS	Sn	19 40 36.4	-0.6
FUSB	Fushanzhiwuyua	1.05	317	iP	Pn	19 40 23.4	+0.8
FUSB				eS	Sn	19 40 36.6	-0.5
EHYH	Wanrong	1.06	243	P	Pb	19 40 23.0	+0.6
EHYH				S	Sb	19 40 37.0	+0.8
FUSS	Fushou	1.07	285	P	Pn	19 40 23.6	+0.6
FUSS				S	Sn	19 40 37.6	-0.1
EHY	Hungye	1.07	244	P	Pb	19 40 22.8	+0.2
EHY				eS	Sb	19 40 36.5	0.0
ECBN	Changbin	1.07	232	eP	Pb	19 40 22.5	-0.1
ECBN				S	Sb	19 40 36.7	+0.2
TWB1	Santiao Chiao	1.08	341	eP	Pn	19 40 23.9	+1.0
TWB1				eS	Sg	19 40 36.6	-0.8
OWD	Renai	1.10	269	P	Pg	19 40 23.5	-0.1
OWD				eS	Sb	19 40 37.2	-0.1
TIPB	Shuangxi	1.10	333	P	Pn	19 40 23.9	+0.6

TIPB				S	Sn	19 40 38.3	0.0
NWLT	**Wulai**	**1.12**	**315**	*i* P	**Pg**	**19 40 24.3**	**+0.3**
NWLT				*i* S	**Sn**	**19 40 39.5**	**+0.8**
TWT	**Tachien**	**1.13**	**284**	P	**Pg**	**19 40 25.1**	**+1.0**
TWT				*e*S	**Sn**	**19 40 39.9**	**+0.8**
YHNB	**Yeheng**	**1.14**	**307**	*i* P	**Pg**	**19 40 24.6**	**+0.2**
YHNB				*e*S	**Sn**	**19 40 38.6**	**-0.6**
TDCB	**Techi**	**1.14**	**284**	P	**Pg**	**19 40 24.5**	**+0.1**
WUSB	**Renai**	**1.15**	**271**	P	**Pg**	**19 40 24.6**	**0.0**
YULB	**Yu-li**	**1.15**	**239**	*i* P	**Pb**	**19 40 24.1**	**+0.2**
YULB				S	**Sb**	**19 40 38.7**	**+0.1**
VWDT	**VWDT**	**1.15**	**259**	P	**Pg**	**19 40 24.8**	**+0.2**
VWDT				*e*S	**Sb**	**19 40 37.7**	**-1.0**
EYUL	**Yuli**	**1.16**	**237**	*e*P	**Pn**	**19 40 24.0**	**0.0**
EYUL				*e*S	**Sg**	**19 40 40.0**	**+0.3**
NSK	**Sanguang**	**1.16**	**307**	*i* P	**Pg**	**19 40 24.7**	**0.0**
NSK				*i* S	**Sn**	**19 40 39.3**	**-0.3**
TWF1	**Yuli**	**1.17**	**238**	P	**Pn**	**19 40 24.5**	**+0.3**
TWF1				*e*S	**Sb**	**19 40 39.5**	**+0.2**
SXI1	**Grass Mountain**	**1.20**	**338**	*i* P	**Pg**	**19 40 24.9**	**-0.5**
SXI1				*e*S	**Sn**	**19 40 42.5**	**+1.8**
NWF	**Wu-fen Shan**	**1.21**	**334**	*e*P	**Pg**	**19 40 25.0**	**-0.7**
NWF				*e*S	**Sn**	**19 40 41.0**	**0.0**
WFSB	**Wu-fen Shan**	**1.21**	**334**	*e*P	**Pg**	**19 40 24.9**	**-0.8**
WFSB				*e*S	**Sn**	**19 40 42.1**	**+1.1**
TWA	**Mucha**	**1.23**	**324**	*e*P	**Pg**	**19 40 26.9**	**+0.9**
NHDH	**Xindian Distri**	**1.25**	**322**	*e*P	**Pg**	**19 40 26.9**	**+0.5**
FULB	**Fuli**	**1.26**	**232**	*e*P	**Pn**	**19 40 25.7**	**+0.3**
FULB				*e*S	**Sb**	**19 40 41.0**	**-0.9**
CHKT	**Chengkung**	**1.28**	**227**	*e*S	**Sb**	**19 40 40.6**	**-1.7**
NHY	**Taipei**	**1.28**	**325**	*e*P	**Pg**	**19 40 27.6**	**+0.5**
NHY				*e*S	**Sg**	**19 40 44.8**	**+1.0**
IRIF	**Iriomote-Funau**	**1.29**	**74**	P	**Pg**	**19 40 27.5**	**+0.4**
IRIF				*e*S	**Sg**	**19 40 44.8**	**+0.9**
HATJ	**Hateruma jima**	**1.31**	**86**	*e*S	**Sb**	**19 40 43.9**	**+0.6**
SSLB	**Suanglung**	**1.31**	**262**	*e*P	**Pg**	**19 40 27.7**	**0.0**
SSLB				*i* S	**Sb**	**19 40 43.1**	**-0.4**
NFF	**Wufeng Townshi**	**1.32**	**300**	*e*P	**Pg**	**19 40 27.5**	**-0.2**
NFF				*e*S	**Sg**	**19 40 45.1**	**+0.3**
WHP	**Taichung City**	**1.34**	**283**	*e*P	**Pg**	**19 40 28.4**	**+0.2**
WHP				*e*S	**Sg**	**19 40 45.1**	**-0.5**
WCS	**Beigang Elemen**	**1.34**	**273**	*e*P	**Pg**	**19 40 27.7**	**-0.4**
WCS				S	**Sn**	**19 40 44.8**	**+0.7**
KSHI	**Guanxi Townshi**	**1.35**	**306**	P	**Pg**	**19 40 28.6**	**+0.3**
KSHI				*e*S	**Sg**	**19 40 47.3**	**+1.4**
SMLT	**Sun Moon Lake**	**1.35**	**266**	*e*P	**Pg**	**19 40 28.1**	**-0.3**
EHD	**Haiduan**	**1.35**	**232**	*e*P	**Pn**	**19 40 26.7**	**-0.1**
EHD				*e*S	**Sn**	**19 40 43.3**	**-1.2**
YM01	**YM01**	**1.37**	**328**	*e*P	**Pg**	**19 40 28.4**	**-0.3**
YM01				*e*S	**Sg**	**19 40 46.1**	**-0.5**
YM08	**YM08**	**1.40**	**329**	*e*P	**Pb**	**19 40 28.2**	**0.0**
YM08				*e*S	**Sg**	**19 40 46.7**	**-0.7**
ZUZH	**Zhuzihu**	**1.40**	**327**	*e*P	**Pb**	**19 40 27.9**	**-0.3**
ZUZH				*e*S	**Sg**	**19 40 47.0**	**-0.4**
LIOB	**Emei**	**1.40**	**298**	*i* P	**Pg**	**19 40 29.4**	**0.0**
LIOB				*e*S	**Sg**	**19 40 47.8**	**+0.1**
NSTT	**Nanjuang**	**1.41**	**298**	P	**Pg**	**19 40 29.4**	**0.0**
NSTT				S	**Sg**	**19 40 47.0**	**-0.8**
TWS1	**Kuangyinshan**	**1.41**	**322**	P	**Pg**	**19 40 28.9**	**-0.6**
TWS1				*e*S	**Sg**	**19 40 46.6**	**-1.4**
WHYT	**Xinyi Township**	**1.42**	**259**	*e*P	**Pg**	**19 40 29.8**	**+0.1**
ANP	**Anpu**	**1.43**	**327**	*e*P	**Pb**	**19 40 28.8**	**0.0**
ANP				*e*S	**Sn**	**19 40 44.4**	**-2.1**
NTST	**Danshui**	**1.45**	**325**	*e*P	**Pg**	**19 40 29.4**	**-0.8**
TWY	**Chenhua**	**1.47**	**331**	*e*P	**Pg**	**19 40 30.0**	**-0.6**
ELDTW	**Lidau**	**1.47**	**238**	*e*P	**Pn**	**19 40 28.9**	**+0.4**
TWQ1	**Liyutan**	**1.51**	**284**	P	**Pg**	**19 40 31.1**	**-0.2**
TWQ1				*e*S	**Sg**	**19 40 50.2**	**-0.8**
ALS	**Alishan**	**1.51**	**252**	*e*P	**Pb**	**19 40 30.6**	**+0.3**
WJS	**Zhushan**	**1.52**	**264**	*e*P	**Pg**	**19 40 31.6**	**+0.2**
JKRS	**Kuro-shima**	**1.52**	**80**	*e*P	**Pb**	**19 40 31.2**	**+1.0**
LDUT	**Ludao**	**1.55**	**213**	*i* P	**Pn**	**19 40 29.0**	**-0.3**
LDUT				S	**Sn**	**19 40 47.5**	**-1.6**
WNT	**Mingjian**	**1.55**	**267**	P	**Pg**	**19 40 32.0**	**-0.1**
WNT				*e*S	**Sg**	**19 40 51.4**	**-0.9**
TCU	**Taichung**	**1.56**	**276**	P	**Pg**	**19 40 31.9**	**-0.4**
TCU				*e*S	**Sg**	**19 40 52.2**	**-0.5**
CHN5	**Tsauling**	**1.60**	**256**	*e*P	**Pg**	**19 40 34.2**	**+1.1**
CHN5				S	**Sb**	**19 40 52.9**	**+1.2**
JIJ	**Ishigaki jima**	**1.66**	**76**	P	**Pb**	**19 40 32.6**	**0.0**
JIJ				*e*S	**Sb**	**19 40 53.5**	**+0.1**
TWGBT	**Beinan**	**1.66**	**226**	*e*P	**Pn**	**19 40 30.8**	**-0.2**
TWGBT				*e*S	**Sn**	**19 40 51.1**	**-0.9**
WCHH	**Zhanghua**	**1.66**	**274**	*e*P	**Pb**	**19 40 33.4**	**+0.7**
WCHH				*e*S	**Sg**	**19 40 54.8**	**-1.1**
TWG	**Pinlang**	**1.66**	**226**	*e*P	**Pn**	**19 40 31.4**	**+0.4**
TWG				*e*S	**Sn**	**19 40 50.9**	**-1.2**
WCH1	**Changhua City**	**1.67**	**273**	*e*P	**Pb**	**19 40 33.0**	**+0.2**
WCH1				*e*S	**Sg**	**19 40 55.9**	**-0.4**
STYH	**Taoyuan**	**1.67**	**241**	*e*P	**Pn**	**19 40 32.2**	**+1.1**
STYH				*e*S	**Sn**	**19 40 53.1**	**+0.8**
WGK	**Gukeng**	**1.69**	**260**	*e*S	**Sg**	**19 40 56.4**	**-0.2**
WDLH	**Douliu**	**1.71**	**261**	*e*P	**Pb**	**19 40 34.0**	**+0.5**
WDLH				S	**Sb**	**19 40 55.5**	**+0.8**
WCKO	**Fanlu**	**1.71**	**252**	S	**Sb**	**19 40 56.0**	**+1.2**
TPUB	**Ta-pu**	**1.74**	**247**	P	**Pb**	**19 40 34.3**	**+0.3**
TPUB				*e*S	**Sn**	**19 40 55.2**	**+1.3**
WTP	**Ta-pu**	**1.77**	**246**	*e*P	**Pb**	**19 40 35.3**	**+0.7**
WTP				*e*S	**Sb**	**19 40 57.0**	**+0.3**
WRL	**Guolierlin Hig**	**1.83**	**268**	*e*P	**Pb**	**19 40 35.4**	**-0.1**
WRL				*e*S	**Sb**	**19 40 59.1**	**+0.9**
WTK	**Tuku**	**1.84**	**261**	P	**Pb**	**19 40 36.4**	**+0.7**
WTK				*e*S	**Sb**	**19 41 00.1**	**+1.5**
RLNB	**Erlin**	**1.85**	**268**	*e*S	**Sb**	**19 40 60.0**	**+1.2**
JISG	**Ishigakijimahi**	**1.87**	**71**	P	**Pn**	**19 40 34.7**	**+0.9**
JISG				*e*S	**Sn**	**19 40 57.2**	**+0.1**
CHN1	**Nanshi**	**1.87**	**245**	*e*P	**Pb**	**19 40 37.4**	**+1.2**
CHN1				*e*S	**Sb**	**19 41 00.4**	**+0.9**
TWK	**Hsinying**	**1.87**	**248**	*e*P	**Pb**	**19 40 36.5**	**+0.2**
TWK				S	**Sb**	**19 41 00.4**	**+0.9**
SGST	**Jiashian**	**1.87**	**242**	P	**Pb**	**19 40 36.2**	**0.0**
SGST				S	**Sb**	**19 41 00.3**	**+0.8**
ECL	**Taimali**	**1.90**	**224**	*e*P	**Pn**	**19 40 34.1**	**-0.1**
ECL				*e*S	**Sn**	**19 40 54.6**	**-3.3**
WSF	**Szhu**	**2.00**	**261**	*e*S	**Sb**	**19 41 04.3**	**+1.2**
SSD	**Sandimen**	**2.02**	**233**	*e*P	**Pb**	**19 40 38.3**	**-0.4**
SSD				*e*S	**Sb**	**19 41 03.6**	**-0.1**
WSL	**Shuilin Townsh**	**2.02**	**257**	*e*S	**Sb**	**19 41 03.7**	**0.0**
SCST	**Cishan**	**2.04**	**238**	*e*S	**Sg**	**19 41 07.4**	**-0.7**
LAY	**Lan-yu**	**2.08**	**202**	*e*P	**Pn**	**19 40 36.8**	**+0.1**
LAY				*e*S	**Sn**	**19 40 59.7**	**-2.7**
CHN8	**Yiju**	**2.08**	**253**	*e*S	**Sb**	**19 41 05.7**	**+0.1**
LYUB	**Lan-yu**	**2.10**	**200**	*e*P	**Pn**	**19 40 35.9**	**-1.1**
LYUB				*e*S	**Sn**	**19 41 00.1**	**-2.8**
MASBT	**Mashibuluo**	**2.10**	**230**	*e*P	**Pn**	**19 40 38.4**	**+1.4**
MASBT				*e*S	**Sb**	**19 41 06.3**	**+0.1**
EAST	**Anshuo**	**2.12**	**222**	*e*P	**Pn**	**19 40 38.7**	**+1.4**
EAST				*e*S	**Sn**	**19 41 03.2**	**-0.3**
TSCK	**Chigu Township**	**2.26**	**249**	*e*S	**Sn**	**19 41 09.1**	**+2.3**
SCZT	**Fangliau**	**2.27**	**226**	*e*P	**Pn**	**19 40 40.9**	**+1.5**
SCZT				*e*S	**Sb**	**19 41 11.0**	**-0.1**
SLIU	**Shizi**	**2.28**	**220**	*e*S	**Sn**	**19 41 06.4**	**-0.9**
SMST	**Manzhou Townsh**	**2.41**	**216**	*e*P	**Pn**	**19 40 42.9**	**+1.6**
SMST				*e*S	**Sn**	**19 41 09.0**	**-1.6**
TWKBT	**Hengchun**	**2.49**	**216**	*e*P	**Pn**	**19 40 44.1**	**+1.8**
TWKBT				*e*S	**Sn**	**19 41 12.3**	**-0.2**
WDGT	**Dungji**	**2.59**	**254**	*e*P	**Pn**	**19 40 45.6**	**+1.8**
WDGT				*e*S	**Sn**	**19 41 16.3**	**+1.3**
PHUB	**P'eng-hu**	**2.61**	**260**	*e*P	**Pn**	**19 40 45.1**	**+1.1**
PHUB				*e*S	**Sn**	**19 41 16.3**	**+0.9**
PNG	**Penghu**	**2.62**	**261**	*e*P	**Pn**	**19 40 45.2**	**+1.1**
PNG				*e*S	**Sn**	**19 41 16.7**	**+1.1**
VCHM	**Qimei**	**2.81**	**255**	*e*P	**Pn**	**19 40 47.5**	**+0.7**
VCHM				*e*S	**Sn**	**19 41 18.9**	**-1.5**
VWUC	**VWUC**	**2.85**	**291**	*e*P	**Pn**	**19 40 47.6**	**+0.3**
VWUC				*e*S	**Sn**	**19 41 19.5**	**-1.8**
MATB	**Ma-tsu**	**3.08**	**315**	*e*P	**Pn**	**19 40 50.9**	**+0.4**
MATB				*e*S	**Sn**	**19 41 25.7**	**-1.5**
PTMZ	**Houxiangcun**	**3.15**	**290**	*e*P	**Pn**	**19 40 51.8**	**+0.5**
PTMZ				*e*S	**Sn**	**19 41 27.6**	**-1.1**
XPSS	**Dashiqiu**	**3.54**	**327**	*e*P	**Pn**	**19 40 57.3**	**+0.5**
XPSS				*e*S	**Sn**	**19 41 37.3**	**-1.0**
KNMB	**Chin-men Tao**	**3.67**	**278**	*e*P	**Pn**	**19 40 59.1**	**+0.5**
KNMB				*e*S	**Sn**	**19 41 39.5**	**-2.1**
MHZQ	**Yeshan**	**3.69**	**306**	*e*P	**Pn**	**19 40 58.7**	**-0.2**
AXDP	**Jialang**	**4.12**	**284**	*e*P	**Pn**	**19 41 05.3**	**+0.6**
AXDP				*e*S	**Sn**	**19 41 50.8**	**-1.8**

*UCR **03** 19:41:15.9±0.9, 10°.35N×86°.27W, h7km±23km, MW3.6, Presumed earthquake*
*CATAC **03** 19:41:16.8±0.8, 10°N±4°×8°6W±°, h18km±6km, M3.1/6, MLv3.1/6, Error ellipse: s-maj=9.8km s-min=6.9km az=31.8, confirmed*
ISC 03 19:41:14.4±1.8**, 10°.28N**±0°.07×**86°.32W**±0°.08**, h20**km±11km**,**
n43, σ0s95/49**, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SACU	**Santa Cruz**	**0.73**	**91**	*e*P	**Pn**	**19 41 30.0**	**+0.4**
SACU				*e*S	**Sn**	**19 41 39.4**	**-0.8**
ELI1	**Hacienda Flor**	**0.84**	**64**	P	**Pn**	**19 41 31.9**	**+0.7**
ELI1				S	**Sn**	**19 41 43.4**	**+0.5**
ELI1	**Hacienda Flor**	**0.84**	**64**	*e*P	**Pn**	**19 41 32.0**	**+0.9**
CMARA	**Lajas Hojancha**	**0.92**	**106**	P	**Pn**	**19 41 33.9**	**+1.6**
CMARA				S	**Sn**	**19 41 44.4**	**-0.6**
CMARA	**Lajas Hojancha**	**0.92**	**106**	*e*P	**Pn**	**19 41 32.2**	**-0.1**
PLVR	**Palo Verde**	**0.96**	**86**	*e*P	**Pn**	**19 41 33.5**	**+0.6**
PLVR				*e*S	**Sn**	**19 41 46.3**	**+0.2**
ELVJ	**El Viejo (Barb**	**1.00**	**80**	*e*P	**Pb**	**19 41 31.6**	**-1.4**
LAPC	**Finca la Perla**	**1.00**	**61**	*e*P	**Pn**	**19 41 33.5**	**+0.1**
LCRUZ	**La Cruz**	**1.05**	**41**	*e*P	**Pn**	**19 41 34.6**	**+0.5**
GPS2	**Hotel Rincn d**	**1.06**	**64**	*e*P	**Pn**	**19 41 34.4**	**+0.1**
VRLE	**La Escondida,**	**1.07**	**62**	*e*P	**Pn**	**19 41 34.7**	**+0.3**
VORI	**VORI**	**1.10**	**61**	*e*P	**Pb**	**19 41 34.9**	**0.0**
BUAI	**Buenos Aires**	**1.14**	**59**	*e*P	**Pb**	**19 41 35.8**	**+0.2**
COLC	**Colonia**	**1.17**	**71**	*e*P	**Pb**	**19 41 36.4**	**+0.4**
PEJA	**Penjamo Buenos**	**1.17**	**58**	*e*P	**Pb**	**19 41 36.7**	**+0.7**
CARN	**Rivas**	**1.20**	**41**	*e*P	**Pb**	**19 41 37.2**	**+0.8**
CUI	**Cuipilapa**	**1.20**	**72**	*e*P	**Pb**	**19 41 36.8**	**+0.3**
MESS	**Mesas**	**1.20**	**67**	*e*P	**Pb**	**19 41 37.0**	**+0.4**
HORNC	**Hornillas**	**1.21**	**69**	*e*P	**Pb**	**19 41 37.1**	**+0.4**
INVE	**Universidad In**	**1.25**	**81**	*e*P	**Pb**	**19 41 38.1**	**+0.7**
TIMP	**Tierras Morena**	**1.32**	**77**	*e*P	**Pb**	**19 41 38.8**	**+0.2**
TILA	**Tilaran**	**1.34**	**82**	*e*P	**Pb**	**19 41 40.0**	**+1.0**
JTS	**Las Juntas de**	**1.35**	**89**	P	**Pb**	**19 41 39.3**	**+0.2**
JTS				S	**Sb**	**19 41 57.0**	**+1.1**
JTS	**Las Juntas de**	**1.35**	**89**	*e*P	**Pb**	**19 41 39.2**	**+0.2**
TENO	**El Achiote**	**1.39**	**72**	*e*P	**Pn**	**19 41 38.8**	**0.0**
QUEB	**Quebradon, Cot**	**1.45**	**76**	*e*P	**Pb**	**19 41 40.8**	**+0.1**
MTEVE	**Monteverde**	**1.47**	**88**	*e*P	**Pn**	**19 41 39.4**	**-0.6**
ARE1	**Arenal 1**	**1.59**	**83**	*e*P	**Pb**	**19 41 44.5**	**+1.3**
VARE2	**V. Arenal**	**1.59**	**83**	*e*P	**Pb**	**19 41 43.9**	**+0.7**
CEDE	**Laguna Cedeo**	**1.61**	**82**	*e*P	**Pb**	**19 41 44.3**	**+0.8**
COPN	**Copaltepe**	**1.91**	**352**	P	**Pb**	**19 41 48.1**	**-0.5**
COPN	**Copaltepe**	**1.91**	**352**	*e*P	**Pb**	**19 41 48.1**	**-0.5**
SARCI	**Sarchi**	**1.96**	**95**	*e*P	**Pb**	**19 41 49.3**	**-0.2**
ACON	**Acoyapa**	**2.02**	**34**	P	**Pb**	**19 41 49.4**	**-1.1**
ACON				S	**Sb**	**19 42 13.9**	**-1.4**
MACN	**El Madrono**	**2.20**	**351**	P	**Pb**	**19 41 53.6**	**0.0**
BOAB	**BOACO BROADBAN**	**2.25**	**17**	P	**Pn**	**19 41 52.4**	**+1.8**
CVTG	**V. Turrialba,**	**2.51**	**93**	*e*P	**Pb**	**19 41 57.7**	**-1.3**
CVTR	**Volcan Turrial**	**2.54**	**96**	*e*P	**Pb**	**19 41 59.1**	**-0.5**
TRT2	**Tortugero**	**2.56**	**84**	*e*P	**Pb**	**19 41 59.5**	**-0.2**
VTCV	**VTCV, Calle Va**	**2.57**	**96**	*e*P	**Pn**	**19 41 52.3**	**-2.9**
ABRB	**Las Abras (San**	**2.58**	**96**	*e*P	**Pb**	**19 41 59.0**	**-1.2**
BUS1	**Rivas**	**2.64**	**106**	*e*P	**Pb**	**19 42 01.4**	**+0.1**
SAJE	**San Jernim**	**2.92**	**108**	*e*P	**Pb**	**19 42 08.6**	**+2.5**

*JMA **03** 19:42:56.8±0.2, 24°N±1°×122°.4E±0°.4, h18km±3km, MV2.4/12, TAIWAN REGION*
*TAP **03** 19:42:56.9, 24°.07N×122°.41E, h31km, ML2.9, D*
ISC 03 19:42:55.3±1.1**, 24°.01N**±0°.02×**122°.39E**±0°.02**, h8**km±9km**,**
n105, σ0s61/156**, 1C-4D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.67**	**49**	P	**Pn**	**19 43 10.0**	**-1.1**
JYNG				S	**Sb**	**19 43 19.0**	**+0.3**
EAHA	**Aohua**	**0.68**	**298**	*e*P	**Pn**	**19 43 10.4**	**-0.8**
EAHA				S	**Sb**	**19 43 20.2**	**+1.3**
ETL	**Fush Village**	**0.72**	**282**	P	**Pn**	**19 43 11.0**	**-0.8**
ETL				*e*S	**Sb**	**19 43 21.4**	**+1.2**
HWA	**Hwalien**	**0.72**	**268**	*e*P	**Pb**	**19 43 11.0**	**+0.9**
HWA				*e*S	**Sb**	**19 43 21.7**	**+1.5**
YOJ	**Yonaguni jima**	**0.72**	**51**	P	**Pn**	**19 43 11.4**	**-0.5**
YOJ	**Yonaguni jima**	**0.72**	**51**	S	**Sb**	**19 43 20.4**	**+0.1**
YOJ	**Yonaguni jima**	**0.72**	**51**	P	**Pn**	**19 43 11.2**	**-0.6**
YOJ				*i* S	**Sb**	**19 43 20.2**	**-0.1**
YOJ	**Yonaguni jima**	**0.72**	**51**	*e*P	**Pn**	**19 43 11.3**	**-0.5**
YOJ				*e*S	**Sb**	**19 43 20.4**	**+0.1**
ENA	**Nanau**	**0.73**	**305**	P	**Pb**	**19 43 10.6**	**+0.4**
ENA				*e*S	**Sb**	**19 43 20.8**	**+0.5**
TWD	**Chiawan**	**0.73**	**276**	*i* P	**Pb**	**19 43 10.3**	**+0.1**
TWD				*e*S	**Sb**	**19 43 19.9**	**-0.6**
TEYL	**Yanliau Villag**	**0.74**	**259**	*e*P	**Pb**	**19 43 10.8**	**+0.4**
TEYL				*e*S	**Sg**	**19 43 20.0**	**+0.8**
NACB	**Ninganchiao**	**0.75**	**283**	P	**Pb**	**19 43 10.7**	**+0.2**
NACB	**Ninganchiao**	**0.75**	**283**	S	**Sb**	**19 43 21.3**	**+0.4**
NACB	**Ninganchiao**	**0.75**	**283**	⇑*i*P	**Pb**	**19 43 10.8**	**+0.2**
NACB				*i* S	**Sb**	**19 43 21.1**	**+0.1**
ESAO	**Su ao**	**0.75**	**319**	*e*P	**Pb**	**19 43 10.4**	**-0.3**
TWC	**Suao**	**0.78**	**321**	*i* P	**Pb**	**19 43 11.0**	**-0.1**
TWC				S	**Sb**	**19 43 21.1**	**-0.7**
SHUL	**Shoufeng**	**0.79**	**254**	*e*P	**Pb**	**19 43 11.7**	**+0.5**
SHUL				S	**Sb**	**19 43 22.6**	**+0.5**
ETM	**Tongmen**	**0.82**	**267**	*e*P	**Pg**	**19 43 11.4**	**+0.2**
ETLH	**Xiulin Townshi**	**0.85**	**284**	*e*P	**Pb**	**19 43 12.5**	**0.0**
ETLH				*e*S	**Sb**	**19 43 24.2**	**0.0**
NDS	**Dongshan**	**0.88**	**315**	P	**Pb**	**19 43 12.9**	**+0.1**
NDS				*e*S	**Sb**	**19 43 24.9**	**+0.3**
LXIB	**Xiulin Townshi**	**0.90**	**271**	*e*P	**Pg**	**19 43 12.9**	**+0.4**
LXIB				*e*S	**Sg**	**19 43 24.7**	**+0.6**
ESL	**Shilin**	**0.90**	**258**	*e*P	**Pb**	**19 43 13.1**	**0.0**
ESL				*e*S	**Sg**	**19 43 24.3**	**0.0**
EGS		**0.93**	**333**	*e*P	**Pb**	**19 43 13.8**	**+0.1**
LATG	**Datong**	**0.95**	**304**	P	**Pb**	**19 43 14.5**	**+0.4**
LATG				S	**Sb**	**19 43 27.6**	**+0.8**
WARBT	**Fenglin Townsh**	**0.96**	**253**	P	**Pg**	**19 43 13.9**	**0.0**
WARBT				S	**Sg**	**19 43 27.1**	**+0.7**
TWE	**Neicheng**	**0.97**	**317**	P	**Pn**	**19 43 14.7**	**-0.5**
TWE				*e*S	**Sn**	**19 43 28.0**	**-1.2**
ENTT	**Nioudou**	**0.98**	**310**	P	**Pn**	**19 43 14.9**	**-0.5**
ENTT				*e*S	**Sb**	**19 43 28.3**	**+0.5**
NDT	**Datong Townshi**	**1.00**	**307**	*e*P	**Pn**	**19 43 15.3**	**-0.3**
NDT				*e*S	**Sb**	**19 43 28.1**	**0.0**
NNSB	**Datong**	**1.01**	**295**	P	**Pb**	**19 43 15.4**	**+0.2**
NNSB				*i* S	**Sb**	**19 43 28.8**	**+0.1**
HGSD	**Ruisui**	**1.02**	**240**	*e*P	**Pg**	**19 43 14.9**	**-0.1**
HGSD				*e*S	**Sg**	**19 43 28.0**	**-0.3**
NNS	**Nan Shan**	**1.02**	**295**	⇓*i*P	**Pb**	**19 43 15.7**	**+0.3**
NNS				S	**Sb**	**19 43 29.3**	**+0.2**
WHF	**Hehuan Shan**	**1.04**	**278**	*e*P	**Pg**	**19 43 15.6**	**+0.3**
WHF				*e*S	**Sg**	**19 43 28.9**	**0.0**
FUSB	**Fushanzhiwuyua**	**1.05**	**316**	⇓P	**Pn**	**19 43 16.4**	**0.0**
FUSB				S	**Sb**	**19 43 30.1**	**+0.4**
TWB1	**Santiao Chiao**	**1.06**	**340**	*e*P	**Pg**	**19 43 14.9**	**-0.8**
FUSS	**Fushou**	**1.07**	**283**	*e*P	**Pb**	**19 43 16.6**	**+0.2**
FUSS				S	**Sb**	**19 43 31.1**	**+0.5**
EHYH	**Wanrong**	**1.09**	**242**	*e*P	**Pg**	**19 43 16.2**	**0.0**
EHYH				*e*S	**Sg**	**19 43 30.0**	**-0.3**
TIPB	**Shuangxi**	**1.09**	**332**	*e*P	**Pn**	**19 43 16.7**	**-0.2**
TIPB				*e*S	**Sb**	**19 43 30.8**	**-0.1**
EHY	**Hungye**	**1.10**	**243**	P	**Pg**	**19 43 16.0**	**-0.4**
ECBN	**Changbin**	**1.10**	**232**	*e*S	**Sg**	**19 43 30.0**	**-0.8**
OWD	**Renai**	**1.11**	**268**	*e*P	**Pg**	**19 43 16.5**	**-0.2**
OWD				*e*S	**Sg**	**19 43 30.5**	**-0.7**
NWLT	**Wulai**	**1.11**	**314**	*e*P	**Pn**	**19 43 17.1**	**-0.2**
NWLT				*e*S	**Sb**	**19 43 31.9**	**+0.3**
TWT	**Tachien**	**1.14**	**283**	P	**Pn**	**19 43 17.8**	**+0.1**
TWT				*e*S	**Sb**	**19 43 32.3**	**-0.1**
YHNB	**Yeheng**	**1.14**	**306**	P	**Pn**	**19 43 17.4**	**-0.2**
YHNB	**Yeheng**	**1.14**	**306**	⇓P	**Pn**	**19 43 17.6**	**-0.1**
YHNB				*i* S	**Sb**	**19 43 32.3**	**0.0**
TDCB	**Techi**	**1.15**	**282**	*e*P	**Pg**	**19 43 17.6**	**+0.1**
TDCB				*e*S	**Sg**	**19 43 32.4**	**-0.1**
NSK	**Sanguang**	**1.15**	**305**	⇓*i*P	**Pn**	**19 43 17.6**	**-0.2**
NSK				*e*S	**Sb**	**19 43 32.5**	**-0.3**
WUSB	**Renai**	**1.17**	**269**	*e*P	**Pg**	**19 43 17.5**	**-0.2**
VWDT	**VWDT**	**1.17**	**258**	*e*P	**Pb**	**19 43 17.9**	**0.0**
VWDT				S	**Sg**	**19 43 31.9**	**-1.1**
YULB	**Yu-li**	**1.18**	**239**	*e*P	**Pb**	**19 43 16.9**	**-1.0**
YULB				*e*S	**Sg**	**19 43 31.4**	**-1.7**
SXI1	**Grass Mountain**	**1.18**	**337**	P	**Pg**	**19 43 17.7**	**-0.3**
TWF1	**Yuli**	**1.20**	**237**	*e*P	**Pb**	**19 43 17.2**	**-1.0**
TWF1				*e*S	**Sg**	**19 43 32.4**	**-1.4**
TWA	**Mucha**	**1.22**	**323**	*e*P	**Pn**	**19 43 19.4**	**+0.8**
CHKH	**Chenggong**	**1.22**	**229**	*e*P	**Pn**	**19 43 17.4**	**-1.3**
IRIF	**Iriomote-Funau**	**1.27**	**75**	P	**Pg**	**19 43 20.4**	**+0.8**
IRIF				*e*S	**Sn**	**19 43 37.3**	**+0.8**
TATO	**Taipei**	**1.27**	**320**	P	**Pg**	**19 43 20.2**	**+0.6**
TATO	**Taipei**	**1.27**	**320**	*e*P	**Pb**	**19 43 19.3**	**-0.1**
FULB	**Fuli**	**1.29**	**232**	*e*P	**Pn**	**19 43 19.1**	**-0.5**
CHKT	**Chengkung**	**1.31**	**226**	*e*P	**Pn**	**19 43 18.7**	**-1.2**
NFF	**Wufeng Townshi**	**1.32**	**298**	*e*P	**Pn**	**19 43 19.9**	**-0.2**
NFF				*e*S	**Sn**	**19 43 37.8**	**-0.1**
SSLB	**Suanglung**	**1.33**	**261**	P	**Pg**	**19 43 22.9**	**+2.0**
SSLB	**Suanglung**	**1.33**	**261**	*e*P	**Pn**	**19 43 20.2**	**-0.1**
DPDB	**Guoxing**	**1.34**	**271**	*e*P	**Pn**	**19 43 20.1**	**-0.3**
KSHI	**Guanxi Townshi**	**1.35**	**305**	*e*P	**Pg**	**19 43 21.0**	**-0.2**
WHP	**Taichung City**	**1.35**	**282**	*e*P	**Pb**	**19 43 21.0**	**+0.1**
YM01	**YM01**	**1.36**	**327**	*e*P	**Pn**	**19 43 20.6**	**0.0**
SMLT	**Sun Moon Lake**	**1.37**	**265**	*e*P	**Pn**	**19 43 21.2**	**+0.3**
YM08	**YM08**	**1.38**	**328**	*e*P	**Pn**	**19 43 20.6**	**-0.3**
EHD	**Haiduan**	**1.38**	**232**	*e*P	**Pn**	**19 43 19.6**	**-1.4**
ZUZH	**Zhuzihu**	**1.38**	**326**	*e*P	**Pb**	**19 43 21.1**	**-0.3**
NJD	**Zhudong**	**1.39**	**302**	*e*P	**Pn**	**19 43 21.0**	**-0.1**
TWS1	**Kuangyinshan**	**1.40**	**321**	*e*P	**Pn**	**19 43 20.9**	**-0.3**
LIOB	**Emei**	**1.41**	**297**	*e*P	**Pg**	**19 43 22.1**	**-0.2**
LIOB				*e*S	**Sb**	**19 43 39.8**	**-0.2**
ECS	**Chishang**	**1.41**	**230**	*e*P	**Pn**	**19 43 20.8**	**-0.5**
TYC	**Yuchr**	**1.41**	**266**	*e*P	**Pb**	**19 43 22.2**	**+0.4**
NSTT	**Nanjuang**	**1.41**	**296**	P	**Pg**	**19 43 22.3**	**-0.1**
NSTT				S	**Sb**	**19 43 39.6**	**-0.5**
ANP	**Anpu**	**1.42**	**326**	*e*P	**Pn**	**19 43 21.3**	**-0.2**
YUS	**Yu-Shan**	**1.42**	**249**	*e*P	**Pn**	**19 43 21.9**	**0.0**
WHYT	**Xinyi Township**	**1.44**	**258**	*e*P	**Pb**	**19 43 22.4**	**-0.1**
JKRS	**Kuro-shima**	**1.50**	**81**	*e*P	**Pg**	**19 43 24.7**	**+0.7**
JKRS				*e*S	**Sg**	**19 43 43.5**	**+0.1**
ELDTW	**Lidau**	**1.50**	**237**	*e*P	**Pn**	**19 43 21.5**	**-1.2**
TWQ1	**Liyutan**	**1.52**	**283**	*e*P	**Pb**	**19 43 23.4**	**-0.3**
TWQ1				*e*S	**Sn**	**19 43 41.8**	**-0.9**
WJS	**Zhushan**	**1.53**	**263**	*e*P	**Pn**	**19 43 23.5**	**+0.5**
ALS	**Alishan**	**1.54**	**252**	P	**Pn**	**19 43 23.4**	**+0.1**
WNT	**Mingjian**	**1.57**	**266**	*e*P	**Pn**	**19 43 24.2**	**+0.7**
WNT				*e*S	**Sn**	**19 43 44.1**	**+0.2**
LDUT	**Ludao**	**1.58**	**213**	*e*P	**Pn**	**19 43 21.8**	**-1.8**
CHN5	**Tsauling**	**1.62**	**256**	*e*P	**Pn**	**19 43 24.8**	**+0.5**
JIJ	**Ishigaki jima**	**1.64**	**77**	*e*P	**Pb**	**19 43 25.8**	**0.0**
JIJ				*e*S	**Sb**	**19 43 46.7**	**+0.1**
WYL	**Yuanlin Townsh**	**1.66**	**269**	*e*P	**Pn**	**19 43 24.7**	**0.0**
WCH1	**Changhua City**	**1.69**	**273**	*e*P	**Pn**	**19 43 26.0**	**+0.9**
TWGBT	**Beinan**	**1.69**	**226**	*e*P	**Pn**	**19 43 24.5**	**-0.7**
TWG	**Pinlang**	**1.69**	**226**	*e*P	**Pn**	**19 43 24.6**	**-0.5**
STYH	**Taoyuan**	**1.70**	**241**	*e*P	**Pn**	**19 43 24.9**	**-0.4**
WGK	**Gukeng**	**1.71**	**260**	*e*P	**Pn**	**19 43 26.2**	**+0.9**
WDLH	**Douliu**	**1.73**	**260**	*e*P	**Pn**	**19 43 25.8**	**+0.2**
WCKO	**Fanlu**	**1.73**	**251**	*e*P	**Pb**	**19 43 27.0**	**-0.4**
WCKO				*e*S	**Sn**	**19 43 48.9**	**+0.8**
TPUB	**Ta-pu**	**1.76**	**247**	P	**Pb**	**19 43 28.3**	**+0.4**
TPUB	**Ta-pu**	**1.76**	**247**	*e*P	**Pn**	**19 43 27.0**	**+0.8**
TPUB				*e*S	**Sn**	**19 43 49.5**	**+0.6**
CHN4	**Tsaushan**	**1.77**	**249**	*e*P	**Pn**	**19 43 27.1**	**+0.8**
CHN4				*e*S	**Sn**	**19 43 49.7**	**+0.6**
WTP	**Ta-pu**	**1.80**	**245**	*e*P	**Pb**	**19 43 27.9**	**-0.6**
WTP				*e*S	**Sn**	**19 43 49.5**	**-0.3**
JISG	**Ishigakijimahi**	**1.84**	**71**	*e*P	**Pn**	**19 43 27.9**	**+0.6**
JISG				*e*S	**Sn**	**19 43 50.1**	**-0.7**
TWK	**Hsinying**	**1.90**	**247**	*e*P	**Pn**	**19 43 28.8**	**+0.7**
SSD	**Sandimen**	**2.05**	**233**	*e*P	**Pn**	**19 43 31.1**	**+1.0**
LYUB	**Lan-yu**	**2.13**	**201**	*e*P	**Pn**	**19 43 31.1**	**-0.1**
MASBT	**Mashibuluo**	**2.13**	**230**	*e*P	**Pn**	**19 43 31.3**	**0.0**
TWKBT	**Hengchun**	**2.52**	**216**	*e*P	**Pn**	**19 43 37.5**	**+0.9**

*IDC **03** 19:44:02.9±2.3, 24°.23N×122°.50E, h0km, mb3.5/4, mbtmp3.5/4, MS3.1/2, Error ellipse: s-maj=170.5km s-min=28.0km az=65.0*
*TAP **03** 19:44:06.7, 24°.02N×122°.41E, h35km, ML3.6, D*
*JMA **03** 19:44:07.4±0.2, 24°N±1°×122°.4E±0°.4, h20km±3km, MV3.1/13, TAIWAN REGION*
ISC 03 19:44:04.8±1.1**, 23°.97N**±0°.02×**122°.40E**±0°.02**, h11**km±8km**,**
n155, σ0s79/236**, mb3.4**/4**, 5C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.69**	**46**	P	**Pn**	**19 44 20.1**	**-0.5**
JYNG				S	**Sb**	**19 44 28.9**	**+0.3**
EAHA	**Aohua**	**0.70**	**301**	P	**Pb**	**19 44 20.1**	**+1.1**
EAHA				*e*S	**Sb**	**19 44 30.8**	**+2.1**
HWA	**Hwalien**	**0.72**	**271**	*e*P	**Pb**	**19 44 20.5**	**+1.1**
HWA				*e*S	**Sb**	**19 44 31.1**	**+1.7**
ETL	**Fush Village**	**0.73**	**285**	P	**Pb**	**19 44 20.6**	**+1.0**
ETL				*e*S	**Sb**	**19 44 30.8**	**+1.1**
EWUT	**Wuta**	**0.73**	**310**	P	**Pb**	**19 44 20.0**	**+0.3**
EWUT				*e*S	**Sb**	**19 44 30.4**	**+0.7**
TEYL	**Yanliau Villag**	**0.74**	**262**	*e*P	**Pb**	**19 44 20.6**	**+0.9**
TEYL				*e*S	**Sb**	**19 44 31.3**	**+1.5**
TWD	**Chiawan**	**0.74**	**279**	*i* P	**Pb**	**19 44 20.2**	**+0.5**
TWD				*i* S	**Sb**	**19 44 30.4**	**+0.5**
YOJ	**Yonaguni jima**	**0.74**	**49**	⇑*i*P	**Pn**	**19 44 21.2**	**-0.1**
YOJ				*i* S	**Sb**	**19 44 30.2**	**+0.2**
YOJ	**Yonaguni jima**	**0.74**	**49**	P	**Pn**	**19 44 21.2**	**-0.1**
YOJ				*e*S	**Sb**	**19 44 30.6**	**+0.6**
ENA	**Nanau**	**0.75**	**307**	P	**Pb**	**19 44 20.6**	**+0.7**
ENA				*e*S	**Sb**	**19 44 31.8**	**+1.5**
NACB	**Ninganchiao**	**0.76**	**286**	P	**Pb**	**19 44 20.6**	**+0.5**
NACB				S	**Sb**	**19 44 31.2**	**+0.7**
ESAO	**Su ao**	**0.78**	**320**	*e*P	**Pb**	**19 44 20.7**	**+0.2**
ESAO				*e*S	**Sb**	**19 44 32.0**	**+0.8**
SHUL	**Shoufeng**	**0.78**	**257**	*e*P	**Pn**	**19 44 21.8**	**-0.1**
SHUL				*e*S	**Sb**	**19 44 32.9**	**+1.7**
TWC	**Suao**	**0.81**	**322**	⇑P	**Pb**	**19 44 20.9**	**0.0**
TWC				S	**Sb**	**19 44 31.9**	**0.0**
ETM	**Tongmen**	**0.83**	**270**	P	**Pb**	**19 44 21.5**	**+0.3**
ETM				*e*S	**Sb**	**19 44 32.8**	**+0.4**
ETLH	**Xiulin Townshi**	**0.87**	**286**	*e*P	**Pb**	**19 44 22.4**	**+0.4**
ETLH				*e*S	**Sb**	**19 44 33.8**	**+0.1**
ESL	**Shilin**	**0.90**	**260**	*e*P	**Pb**	**19 44 22.9**	**+0.5**
ESL				*e*S	**Sg**	**19 44 34.5**	**+0.7**
LXIB	**Xiulin Townshi**	**0.90**	**273**	*e*P	**Pb**	**19 44 22.9**	**+0.3**
LXIB				*e*S	**Sb**	**19 44 34.8**	**+0.1**
NDS	**Dongshan**	**0.91**	**317**	P	**Pb**	**19 44 23.0**	**+0.4**
NDS				*e*S	**Sb**	**19 44 35.8**	**+1.1**
WARBT	**Fenglin Townsh**	**0.96**	**255**	*e*P	**Pb**	**19 44 23.7**	**+0.2**
WARBT				*e*S	**Sg**	**19 44 35.3**	**-0.5**
EGS		**0.97**	**334**	*e*P	**Pb**	**19 44 23.9**	**+0.3**
EGS				*e*S	**Sb**	**19 44 37.0**	**+0.6**
LATG	**Datong**	**0.97**	**305**	*i* P	**Pb**	**19 44 24.2**	**+0.4**
LATG				*i* S	**Sb**	**19 44 37.4**	**+0.7**
ILA	**Ilan**	**0.99**	**323**	*e*P	**Pn**	**19 44 24.8**	**+0.1**
ILA				*e*S	**Sn**	**19 44 38.6**	**0.0**
TWE	**Neicheng**	**1.00**	**318**	*i* P	**Pb**	**19 44 24.5**	**+0.4**
TWE				S	**Sb**	**19 44 38.0**	**+0.6**
ENTT	**Nioudou**	**1.01**	**311**	P	**Pb**	**19 44 25.0**	**+0.7**
ENTT				S	**Sb**	**19 44 38.4**	**+0.7**
HGSD	**Ruisui**	**1.01**	**242**	*e*P	**Pb**	**19 44 24.8**	**+0.4**
HGSD				*e*S	**Sg**	**19 44 37.4**	**0.0**
NDT	**Datong Townshi**	**1.02**	**308**	P	**Pn**	**19 44 25.4**	**+0.2**
NDT				*e*S	**Sb**	**19 44 38.7**	**+0.6**
NNSB	**Datong**	**1.03**	**296**	⇑*i*P	**Pb**	**19 44 25.2**	**+0.4**
NNSB				S	**Sb**	**19 44 38.6**	**+0.2**
NNS	**Nan Shan**	**1.04**	**297**	⇑P	**Pb**	**19 44 25.4**	**+0.4**
NNS				S	**Sb**	**19 44 39.3**	**+0.5**
WHF	**Hehuan Shan**	**1.05**	**280**	P	**Pb**	**19 44 25.6**	**+0.3**
WHF				S	**Sg**	**19 44 38.9**	**+0.1**
EHYH	**Wanrong**	**1.07**	**244**	*e*P	**Pn**	**19 44 26.4**	**+0.5**
EHYH				*e*S	**Sg**	**19 44 39.8**	**+0.4**
FUSB	**Fushanzhiwuyua**	**1.08**	**317**	P	**Pn**	**19 44 26.2**	**+0.2**
FUSB				S	**Sb**	**19 44 40.6**	**+0.9**
ECBN	**Changbin**	**1.08**	**233**	*e*P	**Pg**	**19 44 25.8**	**+0.1**
ECBN				*e*S	**Sg**	**19 44 40.1**	**+0.4**
EHY	**Hungye**	**1.09**	**245**	*e*P	**Pg**	**19 44 25.7**	**0.0**
EHY				S	**Sg**	**19 44 40.3**	**+0.4**
FUSS	**Fushou**	**1.09**	**285**	*e*P	**Pb**	**19 44 26.5**	**+0.6**
FUSS				*e*S	**Sb**	**19 44 41.1**	**+1.0**
TWB1	**Santiao Chiao**	**1.10**	**340**	P	**Pb**	**19 44 25.9**	**+0.1**
TWB1				*e*S	**Sb**	**19 44 40.4**	**+0.2**
OWD	**Renai**	**1.12**	**269**	*e*P	**Pg**	**19 44 26.4**	**+0.1**
OWD				*e*S	**Sg**	**19 44 40.8**	**0.0**
TIPB	**Shuangxi**	**1.12**	**333**	*e*P	**Pb**	**19 44 26.8**	**+0.5**
TIPB				*e*S	**Sg**	**19 44 40.7**	**-0.4**
NWLT	**Wulai**	**1.14**	**315**	P	**Pb**	**19 44 27.0**	**+0.3**
NWLT				*e*S	**Sb**	**19 44 42.1**	**+0.5**
TWT	**Tachien**	**1.15**	**284**	*e*P	**Pb**	**19 44 27.4**	**+0.6**
TWT				*e*S	**Sb**	**19 44 42.6**	**+0.7**
YULB	**Yu-li**	**1.16**	**240**	*e*P	**Pg**	**19 44 26.8**	**-0.3**

YULB				eS	Sg	19 44 41.6	-0.7
YHNB	Yeheng	1.16	307	P	Pb	19 44 27.3	+0.3
YHNB				eS	Sg	19 44 42.0	-0.3
TDCB	Techi	1.17	284	eP	Pg	19 44 27.3	0.0
TDCB				S	Sg	19 44 42.1	-0.3
EYUL	Yuli	1.17	238	eP	Pn	19 44 28.0	+0.8
VWDT	VWDT	1.17	260	eP	Pg	19 44 27.3	0.0
VWDT				eS	Sg	19 44 42.0	-0.5
WUSB	Renai	1.17	271	eP	Pg	19 44 27.4	+0.1
WUSB				eS	Sg	19 44 42.2	-0.4
NSK	Sanguang	1.18	307	eP	Pg	19 44 27.3	-0.1
NSK				eS	Sg	19 44 42.5	-0.3
TWF1	Yuli	1.18	239	eP	Pg	19 44 27.2	-0.3
TWF1				eS	Sg	19 44 42.4	-0.5
CHKH	Chenggong	1.20	230	eP	Pn	19 44 28.4	+0.8
CHKH				eS	Sg	19 44 42.7	-0.8
SXI1	Grass Mountain	1.21	337	⇑iP	Pg	19 44 27.7	-0.5
NWF	Wu-fen Shan	1.23	333	eP	Pg	19 44 28.0	-0.4
NWF				eS	Sb	19 44 44.7	+0.6
WFSB	Wu-fen Shan	1.23	333	eP	Pb	19 44 28.3	+0.2
WFSB				eS	Sb	19 44 44.4	+0.4
TWA	Mucha	1.25	324	eP	Pn	19 44 29.3	+1.0
NHDH	Xindian Distri	1.27	321	eP	Pn	19 44 29.6	+1.1
FULB	Fuli	1.27	233	eP	Pg	19 44 28.6	-0.6
FULB				eS	Sg	19 44 45.1	-0.6
IRIF	Iriomote-Funau	1.27	73	P	Pn	19 44 30.5	+1.9
IRIF				eS	Sn	19 44 46.5	+0.8
CHKT	Chengkung	1.28	228	eP	Pn	19 44 28.2	-0.6
CHKT				eS	Sg	19 44 44.2	-2.0
HATJ	Hateruma jima	1.29	86	eS	Sn	19 44 46.8	+0.6
TATO	Taipei	1.30	321	P	Pn	19 44 29.4	+0.5
TATO				eS	Sg	19 44 46.0	-0.6
NHY	Taipei	1.30	325	eP	Pn	19 44 29.3	+0.3
WPL	Puli Township	1.32	272	eP	Pn	19 44 29.7	+0.5
SSLB	Suanglung	1.33	262	eP	Pb	19 44 30.2	+0.4
SSLB				S	Sg	19 44 46.3	-1.4
TAP	Taipei	1.34	323	eP	Pb	19 44 30.1	+0.1
NFF	Wufeng Townshi	1.34	300	eP	Pg	19 44 30.8	+0.2
DPDB	Guoxing	1.34	273	eP	Pn	19 44 30.2	+0.5
WHP	Taichung City	1.36	283	eP	Pb	19 44 30.8	+0.4
EHD	Haiduan	1.36	233	eP	Pn	19 44 29.5	-0.4
KSHI	Guanxi Townshi	1.37	306	eP	Pg	19 44 31.0	-0.1
SMLT	Sun Moon Lake	1.37	267	eP	Pn	19 44 30.7	+0.7
SMLT				eS	Sb	19 44 47.6	-0.6
ECS	Chishang	1.39	231	eP	Pn	19 44 30.5	+0.3
ECS				eS	Sb	19 44 49.1	+0.6
YM01	YM01	1.39	327	eP	Pn	19 44 30.4	+0.2
YUS	Yu-Shan	1.41	250	eP	Pn	19 44 31.2	+0.3
YUS				eS	Sg	19 44 48.8	-1.5
TYC	Yuchr	1.41	268	eP	Pg	19 44 31.9	0.0
NJD	Zhudong	1.41	303	eP	Pn	19 44 31.0	+0.5
YM08	YM08	1.42	329	eP	Pn	19 44 31.0	+0.4
ZUZH	Zhuzihu	1.42	327	eP	Pb	19 44 31.3	0.0
LIOB	Emei	1.43	298	P	Pb	19 44 31.9	+0.4
LIOB				eS	Sb	19 44 50.3	+0.6
NSTT	Nanjuang	1.43	298	⇓iP	Pg	19 44 32.3	0.0
NSTT				eS	Sb	19 44 49.9	+0.1
TWS1	Kuangyinshan	1.43	322	eP	Pb	19 44 31.7	+0.1
WHYT	Xinyi Township	1.44	259	eP	Pg	19 44 32.8	+0.3
WHYT				eS	Sb	19 44 50.7	+0.6
ANP	Anpu	1.45	327	eP	Pn	19 44 31.2	+0.1
NTST	Danshui	1.47	324	eP	Pn	19 44 31.4	+0.1
NCU	National Centr	1.48	312	eP	Pn	19 44 31.5	0.0
ELDTW	Lidau	1.48	239	eP	Pn	19 44 31.4	-0.2
ELDTW				eS	Sn	19 44 49.1	-2.0
TWY	Chenhua	1.49	331	eP	Pn	19 44 32.3	+0.7
JKRS	Kuro-shima	1.50	80	eP	Pg	19 44 34.8	+1.2
JKRS				eS	Sg	19 44 54.2	+1.1
ALS	Alishan	1.53	253	eP	Pb	19 44 33.5	+0.1
TWQ1	Liyutan	1.53	285	eP	Pb	19 44 33.6	+0.4
WJS	Zhushan	1.53	265	eP	Pb	19 44 33.6	+0.3
LDUT	Ludao	1.55	214	eP	Pn	19 44 32.1	-0.3
WWF	Wufeng	1.55	273	eP	Pb	19 44 34.2	+0.5
NSY	Sanyi	1.56	287	eP	Pn	19 44 33.6	+1.0
NSY				eS	Sb	19 44 54.5	+1.0
NMLH	Miaoli	1.57	291	eP	Pn	19 44 33.8	+1.1
WNT	Mingjian	1.57	267	eP	Pb	19 44 34.6	+0.7
WNT1	Nantou City	1.57	268	eP	Pb	19 44 34.6	+0.7
TCU	Taichung	1.58	277	eP	Pb	19 44 34.1	0.0
CHN5	Tsauling	1.62	257	eP	Pb	19 44 35.5	+0.7
CHN5				eS	Sn	19 44 54.4	0.0
JIJ	Ishigaki jima	1.64	76	P	Pb	19 44 35.2	0.0
WYL	Yuanlin Townsh	1.66	270	eP	Pb	19 44 35.7	+0.2
WYL				eS	Sb	19 44 57.3	+0.8
TWGBT	Beinan	1.67	227	eP	Pn	19 44 34.3	+0.3
TWGBT				eS	Sn	19 44 54.1	-1.3
TWG	Pinlang	1.67	227	eP	Pn	19 44 34.0	-0.1
TWG				eS	Sn	19 44 55.0	-0.5
PCYT	Pengchaiyu	1.68	350	eP	Pn	19 44 34.2	0.0
WCHH	Zhanghua	1.68	274	eP	Pn	19 44 35.3	+1.1
WCHH				eS	Sb	19 44 58.2	+1.2
STYH	Taoyuan	1.69	242	eP	Pn	19 44 35.4	+1.1
WCH1	Changhua City	1.69	274	eP	Pb	19 44 36.1	+0.1
WGK	Gukeng	1.70	261	eP	Pb	19 44 36.3	+0.1
STYT	Tauyuan	1.71	242	eP	Pn	19 44 35.7	+1.1
WDLH	Douliu	1.72	261	eP	Pb	19 44 36.3	-0.2
WCKO	Fanlu	1.73	252	eP	Pb	19 44 36.8	+0.3
WCKO				eS	Sb	19 44 59.3	+1.0
TPUB	Ta-pu	1.75	248	eP	Pb	19 44 37.4	+0.3
TPUB				eS	Sn	19 44 59.3	+1.7
CHN4	Tsaushan	1.76	250	eP	Pb	19 44 37.9	+0.7
CHN4				eS	Sn	19 44 58.9	+1.0
WTP	Ta-pu	1.79	247	eP	Pb	19 44 38.1	+0.5
WTP				eS	Sn	19 44 59.6	+1.1
WRL	Guolierlin Hig	1.85	268	eP	Pn	19 44 38.0	+1.5
WRL				eS	Sn	19 45 01.4	+1.4
JISG	Ishigakijimahi	1.85	70	P	Pb	19 44 38.3	-0.4
JISG				eS	Sn	19 45 01.1	+1.1
RLNB	Erlin	1.86	268	eP	Pb	19 44 39.3	+0.4
CHY	Chiayi	1.87	256	eP	Pb	19 44 39.5	+0.5
CHN1	Nanshi	1.88	246	eP	Pb	19 44 39.9	+0.6
CHN1				eS	Sn	19 45 02.0	+1.2
SGST	Jiashian	1.89	242	eP	Pn	19 44 38.4	+1.4
TWK	Hsinying	1.89	249	eP	Pb	19 44 38.9	-0.4
TWK				eS	Sn	19 45 00.8	-0.1
ECL	Taimali	1.91	224	eP	Pn	19 44 37.9	+0.6
ECL				eS	Sn	19 45 00.5	-0.8
WSF	Szhu	2.02	261	eP	Pn	19 44 40.5	+1.7
SSD	Sandimen	2.03	233	eP	Pb	19 44 41.0	-0.7
WSL	Shuilin Townsh	2.04	258	eP	Pn	19 44 40.6	+1.6
WSL				eS	Sn	19 45 06.0	+1.4
LAY	Lan-yu	2.08	202	eP	Pn	19 44 39.5	-0.2
CHN8	Yiju	2.10	253	eP	Pn	19 44 41.8	+1.8
LYUB	Lan-yu	2.10	201	eP	Pn	19 44 38.5	-1.4
SSHA	Shanhua	2.10	247	eP	Pn	19 44 41.4	+1.4
MASBT	Mashibuluo	2.11	230	eP	Pn	19 44 40.8	+0.7
TAWH	Dawu Township	2.14	221	eP	Pn	19 44 41.2	+0.7
SSPT	Xinbi	2.24	229	eP	Pb	19 44 44.6	-0.8
SCZT	Fangliau	2.28	226	eP	Pn	19 44 44.3	+1.9
SMST	Manzhou Townsh	2.42	217	eP	Pn	19 44 45.1	+0.8
HEN	Hengchun	2.48	218	eP	Pn	19 44 46.6	+1.4
TWKBT	Hengchun	2.49	216	eP	Pn	19 44 46.2	+0.8
TWKBT				eS	Sn	19 45 15.7	-0.1
TWK1	Hengchun	2.50	216	eP	Pn	19 44 46.7	+1.3
WDGT	Dungji	2.61	255	eP	Pn	19 44 48.5	+1.5
WDGT				eS	Sn	19 45 19.1	+0.4
PHUB	P'eng-hu	2.63	261	eP	Pn	19 44 48.6	+1.4
PHUB				eS	Sn	19 45 18.9	-0.2
PNG	Penghu	2.63	262	eP	Pn	19 44 48.1	+0.8
PNG				eS	Sn	19 45 19.5	+0.2
JMJ	Miyako jima 2	2.77	72	eP	Pn	19 44 49.7	+0.5
VCHM	Qimei	2.83	255	eP	Pn	19 44 51.4	+1.5
VWUC	VWUC	2.87	291	eP	Pn	19 44 50.2	-0.3
MATB	Ma-tsu	3.11	315	eP	Pn	19 44 54.1	+0.3
PTMZ	Houxiangcun	3.17	290	eP	Pn	19 44 54.6	-0.1
LYJJ	Jianjiangzhen	3.50	318	eP	Pn	19 44 58.6	-0.7
XPSS	Dashiqiu	3.56	326	eP	Pn	19 45 00.1	+0.1
MHZQ	Yeshan	3.72	305	eP	Pn	19 45 02.0	-0.2
AXDP	Jialang	4.14	284	eP	Pn	19 45 08.4	+0.4
ZPLA	Ao Xicun	4.25	270	eP	Pn	19 45 10.0	+0.4
DSXP	Dongshan	4.56	268	eP	Pn	19 45 14.6	+0.8
KSRS	Korea Array	14.25	18	LR	LR	19 53 17.7	
	comp=Z,19nm,19.0s,baz=145,slow=40						
SONM	Songino Array	27.00	336	P	P	19 49 44.8	-2.2
	0.8nm,0.8s,baz=148,slow=8.5,SNR=5.7						
	0.8nm,0.8s						
MKAR	Makanchi Array	39.26	316	P	P	19 51 32.2	-1.3
	0.3nm,0.5s,baz=104,slow=9.5,SNR=7.0						
	0.3nm,0.5s						
ZALV	Zalesovo Beam	41.03	327	P	P	19 51 46.2	-1.8
	1.1nm,0.7s,baz=111,slow=6.3,SNR=5.1						
	1.1nm,0.7s						
WRA	Warramunga Arr	45.17	164	P	P	19 52 23.2	+1.3
	0.3nm,0.8s,baz=344,slow=7.9,SNR=1.5						
	0.3nm,0.8s						
IDI	Anoyia	82.26	305	LR	LR	20 37 07.8	
	comp=Z,40nm,20.0s,baz=281,slow=39						

TAP **03** *19:46:03.2,24°.00N×122°.40E,h25km,ML3.0,D*
JMA **03** *19:46:04.1±0.2,24°N±1°×122°.4E±0°.3,h20km±2km, MV2.3/11,TAIWAN REGION*
ISC 03 19:46:01.4±1.0**,24°.01N**±0°.02×**122°.43E**±0°.02**,h14**km±8km**, n114,**σ**0s.79**/170**,4C-1D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.65	47	P	Pn	19 46 16.4	+0.3
JYNG				eS	Sn	19 46 25.3	-0.9
YOJ	Yonaguni jima	0.70	49	i P	Pn	19 46 17.3	+0.5
YOJ				i S	Sn	19 46 26.5	-0.9
YOJ	Yonaguni jima	0.70	49	eP	Pn	19 46 17.4	+0.5
YOJ				eS	Sn	19 46 26.8	-0.6
EAHA	Aohua	0.71	297	P	Pn	19 46 16.7	-0.3
EAHA				eS	Sb	19 46 26.2	+1.1
EWUT	Wuta	0.74	306	eP	Pb	19 46 16.5	+0.5
EWUT				eS	Sb	19 46 26.4	+0.5
ETL	Fush Village	0.75	282	eP	Pn	19 46 17.4	-0.3
ETL				S	Sb	19 46 27.2	+0.7
ENA	Nanau	0.76	304	P	Pn	19 46 17.1	-0.6
ENA				S	Sb	19 46 27.6	+1.1
HWA	Hwalien	0.76	268	eP	Pn	19 46 17.4	-0.3
HWA				eS	Sb	19 46 28.1	+1.6
TWD	Chiawan	0.77	276	eP	Pb	19 46 16.8	+0.2
TWD				eS	Sg	19 46 26.6	+0.2
TEYL	Yanliau Villag	0.77	260	eP	Pb	19 46 17.5	+0.8
TEYL				eS	Sb	19 46 27.8	+0.7
ESAO	Su ao	0.78	317	eP	Pb	19 46 17.0	+0.2
ESAO				S	Sb	19 46 27.7	+0.5
NACB	Ninganchiao	0.78	282	P	Pb	19 46 17.1	+0.3
NACB				S	Sg	19 46 27.3	+0.4
TWC	Suao	0.80	319	⇓iP	Pb	19 46 17.3	+0.2
TWC				eS	Sg	19 46 27.1	-0.4
SHUL	Shoufeng	0.82	255	eP	Pb	19 46 18.1	+0.5
SHUL				eS	Sg	19 46 29.1	+0.9
ETM	Tongmen	0.86	267	eP	Pg	19 46 18.0	-0.1
ETM				eS	Sg	19 46 28.7	-0.6
ETLH	Xiulin Townshi	0.89	283	eP	Pb	19 46 18.9	+0.2
ETLH				eS	Sb	19 46 31.0	+0.6
NDS	Dongshan	0.90	314	⇑P	Pn	19 46 19.5	-0.2
NDS				eS	Sn	19 46 31.5	-1.0
LXIB	Xiulin Townshi	0.93	271	eP	Pg	19 46 19.4	-0.1
LXIB				eS	Sg	19 46 31.4	-0.3
ESL	Shilin	0.93	258	eP	Pb	19 46 19.2	-0.2
EGS		0.95	332	eP	Pn	19 46 20.4	+0.1
LATG	Datong	0.98	303	P	Pn	19 46 20.8	0.0
LATG				S	Sb	19 46 33.6	+0.6
TWE	Neicheng	0.99	316	P	Pn	19 46 21.1	+0.1
TWE				eS	Sg	19 46 33.6	-0.1
WARBT	Fenglin Townsh	1.00	253	eP	Pb	19 46 20.0	-0.6
WARBT				eS	Sb	19 46 32.5	-1.0
ENTT	Nioudou	1.01	309	P	Pn	19 46 21.4	+0.2
ENTT				eS	Sg	19 46 34.4	+0.2
NDT	Datong Townshi	1.02	305	eP	Pn	19 46 21.5	+0.1
NDT				eS	Sb	19 46 34.1	-0.2
NNSB	Datong	1.04	294	⇑iP	Pn	19 46 21.7	-0.1
NNSB				S	Sb	19 46 35.3	+0.4
HGSD	Ruisui	1.05	241	eP	Pb	19 46 20.9	-0.5
NNS	Nan Shan	1.06	294	P	Pg	19 46 21.8	0.0
NNS				S	Sb	19 46 35.4	+0.1
FUSB	Fushanzhiwuyua	1.07	314	⇑P	Pn	19 46 22.7	+0.6
FUSB				eS	Sn	19 46 36.4	-0.5
WHF	Hehuan Shan	1.07	278	eP	Pb	19 46 22.0	-0.1
WHF				eS	Sb	19 46 35.4	-0.7
TWB1	Santiao Chiao	1.07	338	eP	Pn	19 46 22.3	+0.2
TIPB	Shuangxi	1.11	330	eP	Pn	19 46 23.3	+0.7
TIPB				eS	Sg	19 46 36.5	-0.8
FUSS	Fushou	1.11	283	eP	Pn	19 46 22.9	+0.2
FUSS				eS	Sb	19 46 37.1	+0.1
EHYH	Wanrong	1.12	243	eP	Pg	19 46 23.9	+0.9
ECBN	Changbin	1.13	233	eP	Pn	19 46 22.4	-0.5
EHY	Hungye	1.13	244	eP	Pn	19 46 22.2	-0.7
EHY				eS	Sb	19 46 35.9	-1.4
NWLT	Wulai	1.14	312	eP	Pg	19 46 23.3	-0.1
NWLT				eS	Sn	19 46 38.3	-0.1
OWD	Renai	1.15	268	eP	Pb	19 46 22.6	-0.5
OWD				eS	Sb	19 46 36.9	-1.1
YHNB	Yeheng	1.17	305	P	Pg	19 46 23.7	-0.3
YHNB				i S	Sb	19 46 38.2	-0.2
TWT	Tachien	1.17	282	eP	Pg	19 46 24.1	+0.1
TWT				eS	Sb	19 46 38.8	+0.1
NSK	Sanguang	1.18	304	P	Pb	19 46 23.8	+0.1
NSK				eS	Sb	19 46 38.2	-0.7
TDCB	Techi	1.19	282	eP	Pb	19 46 24.1	+0.3
TDCB				eS	Sb	19 46 38.4	-0.7
SXI1	Grass Mountain	1.19	335	⇑P	Pg	19 46 24.1	-0.4
SXI1				S	Sn	19 46 40.6	+0.7
WUSB	Renai	1.20	270	eP	Pn	19 46 23.9	0.0
WUSB				eS	Sb	19 46 39.0	-0.4
YULB	Yu-li	1.21	240	P	Pn	19 46 23.3	-0.5
YULB				eS	Sb	19 46 37.9	-1.6
VWDT	VWDT	1.21	258	eP	Pn	19 46 23.7	-0.2
VWDT				eS	Sb	19 46 38.8	-0.7
NWF	Wu-fen Shan	1.21	331	eP	Pg	19 46 24.6	-0.2
WFSB	Wu-fen Shan	1.21	331	eP	Pg	19 46 24.5	-0.4
WFSB				eS	Sg	19 46 40.7	0.0
TWF1	Yuli	1.23	238	eP	Pn	19 46 23.7	-0.4
TWF1				eS	Sb	19 46 39.0	-1.1
IRIF	Iriomote-Funau	1.23	74	P	Pg	19 46 26.7	+1.5
IRIF				eS	Sn	19 46 44.0	+3.3
NHDH	Xindian Distri	1.26	319	eP	Pg	19 46 25.9	+0.2
TATO	Taipei	1.29	319	eP	Pb	19 46 25.4	-0.1
TATO				eS	Sn	19 46 42.1	+0.1
FULB	Fuli	1.32	233	eP	Pn	19 46 25.5	0.0
CHKT	Chengkung	1.33	227	P	Pn	19 46 25.2	-0.4
NFF	Wufeng Townshi	1.35	298	eP	Pb	19 46 26.8	+0.3
SSLB	Suanglung	1.37	261	eP	Pn	19 46 26.5	+0.3
DPDB	Guoxing	1.38	271	eP	Pn	19 46 26.7	+0.5
KSHI	Guanxi Townshi	1.38	304	eP	Pg	19 46 27.5	-0.4
YM01	YM01	1.38	326	eP	Pb	19 46 26.9	-0.2
WHP	Taichung City	1.38	282	P	Pb	19 46 27.0	-0.1
YM08	YM08	1.40	327	eP	Pb	19 46 26.6	-0.8
ZUZH	Zhuzihu	1.40	325	eP	Pb	19 46 27.0	-0.5
SMLT	Sun Moon Lake	1.41	265	eP	Pn	19 46 27.4	+0.7
EHD	Haiduan	1.41	233	eP	Pn	19 46 26.2	-0.5
TWS1	Kuangyinshan	1.43	320	eP	Pb	19 46 27.6	-0.2
ANP	Anpu	1.44	325	eP	Pb	19 46 27.5	-0.6
LIOB	Emei	1.44	296	eP	Pb	19 46 28.3	+0.3
TYC	Yuchr	1.44	266	eP	Pg	19 46 29.0	-0.2
NSTT	Nanjuang	1.44	296	eP	Pb	19 46 28.4	+0.3
YUS	Yu-Shan	1.45	249	eP	Pn	19 46 27.9	+0.2
NTST	Danshui	1.46	322	eP	Pb	19 46 27.8	-0.5
JKRS	Kuro-shima	1.46	81	eP	Pg	19 46 31.2	+1.6
JKRS				eS	Sg	19 46 50.1	+1.5
TWY	Chenhua	1.47	329	eP	Pn	19 46 27.5	0.0
WHYT	Xinyi Township	1.48	258	eP	Pb	19 46 29.2	+0.5
ELDTW	Lidau	1.53	238	eP	Pn	19 46 27.8	-0.7
ELDTW				eS	Sn	19 46 45.8	-2.4
TWQ1	Liyutan	1.55	283	eP	Pb	19 46 30.1	+0.1
WJS	Zhushan	1.57	264	eP	Pb	19 46 30.4	+0.2
ALS	Alishan	1.57	252	eP	Pn	19 46 29.8	+0.7
WWF	Wufeng	1.58	272	eP	Pb	19 46 30.9	+0.4
NMLH	Miaoli	1.59	290	eP	Pb	19 46 30.3	-0.3
LDUT	Ludao	1.59	214	eP	Pn	19 46 28.3	-0.9
WNT	Mingjian	1.60	266	eP	Pb	19 46 31.0	+0.2
JIJ	Ishigaki jima	1.60	77	eP	Pg	19 46 31.9	-0.4
JIJ				eS	Sg	19 46 52.3	-0.8
WNT1	Nantou City	1.60	267	eP	Pb	19 46 30.6	-0.2
TCU	Taichung	1.61	275	eP	Pb	19 46 30.7	-0.2
CHN5	Tsauling	1.66	256	eP	Pn	19 46 31.0	+0.9
TWGBT	Beinan	1.71	227	eP	Pn	19 46 31.1	+0.2
TWG	Pinlang	1.72	227	eP	Pn	19 46 31.0	0.0
STYH	Taoyuan	1.73	242	eP	Pn	19 46 31.6	+0.5
STYT	Tauyuan	1.75	242	eP	Pn	19 46 32.0	+0.6
WCKO	Fanlu	1.77	252	eP	Pb	19 46 34.0	+0.4
TPUB	Ta-pu	1.79	247	eP	Pn	19 46 33.3	+1.3
TPUB				eS	Sn	19 46 54.4	-0.2
CHN4	Tsaushan	1.81	249	eP	Pn	19 46 33.6	+1.5
CHN4				eS	Sn	19 46 55.6	+0.8
JISG	Ishigakijimahi	1.81	71	eP	Pg	19 46 34.6	-1.6
JISG				eS	Sg	19 46 56.9	-2.9
WTP	Ta-pu	1.83	246	eP	Pn	19 46 33.9	+1.4
WTP				eS	Sn	19 46 56.4	+0.9
WRL	Guolierlin Hig	1.88	267	eP	Pn	19 46 34.4	+1.3
CHN1	Nanshi	1.93	245	eP	Pn	19 46 35.5	+1.7
CHN1				eS	Sn	19 46 58.9	+1.0
TWK	Hsinying	1.93	248	eP	Pn	19 46 35.1	+1.2
TWK				eS	Sn	19 46 57.8	-0.2
SGST	Jiashian	1.93	242	eP	Pn	19 46 35.0	+1.1
SGST				eS	Sn	19 46 59.0	+1.1
ECL	Taimali	1.95	224	eP	Pn	19 46 34.6	+0.5
SSD	Sandimen	2.08	233	eP	Pn	19 46 37.5	+1.7
SSD				eS	Sn	19 47 02.9	+1.4
LAY	Lan-yu	2.12	203	eP	Pn	19 46 35.8	-0.7
LYUB	Lan-yu	2.14	201	eP	Pn	19 46 34.7	-2.0
MASBT	Mashibuluo	2.16	230	eP	Pn	19 46 37.5	+0.5
EAST	Anshuo	2.18	222	eP	Pn	19 46 37.9	+0.6
TAWH	Dawu Township	2.18	221	eP	Pn	19 46 37.7	+0.3
SMST	Manzhou Townsh	2.46	217	eP	Pn	19 46 41.5	+0.3
TWKBT	Hengchun	2.54	216	eP	Pn	19 46 43.0	+0.7
PHUB	P'eng-hu	2.66	260	eP	Pn	19 46 44.3	+0.4
PHUB				eS	Sn	19 47 15.2	-0.8
VWUC	VWUC	2.89	290	eP	Pn	19 46 46.8	-0.2
MATB	Ma-tsu	3.10	314	eP	Pn	19 46 50.4	+0.4
PTMZ	Houxiangcun	3.19	290	eP	Pn	19 46 50.7	-0.4
XPSS	Dashiqiu	3.54	326	eP	Pn	19 46 56.3	+0.2
AXDP	Jialang	4.16	283	eP	Pn	19 47 04.8	+0.3

IDC **03** *19:55:21.4±9.4,38°.78N×142°.18E,h0km,mb3.2/3, mbtmp3.1/4,ML2.3/1,Error ellipse: s-maj=182.0km s-min=38.5km az=116.0*
JMA **03** *19:55:29.6±0.1,38°.6N±0°.2×141°.8E±0°.5,h57km,MV3.6/40, KINKAZAN REGION*
JMA Felt I J1 at KINKAZAN REGION .
ISC 03 19:55:29.5±1.6**,38°.56N**±0°.04×**141°.9E**±0°.1**,h51**km±8km**, n22,**σ**1s.45**/28**,mb3.2**/3**,11D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKMT	Kesennumamotoy	0.43	305	i P	Pn	19 55 40.2	+0.2
JKMT				eS	Sn	19 55 47.5	0.0
JIKH	Ishinomakikobu	0.44	235	⇓iP	Pn	19 55 40.2	+0.1
JIKH				⇓S	Sn	19 55 47.8	+0.2
JIO	Ouri	0.46	256	⇓P	Pn	19 55 40.4	0.0
JIO				⇓S	Sn	19 55 47.8	-0.3
OFUJ	Ofunato	0.55	339	P	Pn	19 55 41.7	+0.2
OFUJ				S	Sn	19 55 50.4	+0.3
JMK	Ichinoseki	0.67	306	i P	Pn	19 55 42.9	0.0
JMK				S	Sn	19 55 52.4	-0.2
JOU	Okura	1.00	259	⇓iP	Pn	19 55 46.8	-0.6
JOU				⇓S	Sn	19 55 59.8	-0.7
JOM	Ohasama	1.03	332	i P	Pn	19 55 47.7	0.0
JOM				S	Sn	19 56 01.3	+0.3
JMM	Marumori	1.13	232	⇓iP	Pn	19 55 48.2	-0.7
JMM				⇓S	Sn	19 56 02.4	-1.0
JYK	Kaneyama	1.27	287	⇓iP	Pn	19 55 50.5	-0.3
JYK				⇓S	Sn	19 56 06.2	-0.6
JRG	Rokugo	1.30	310	i P	Pn	19 55 51.2	-0.1
JRG				S	Sn	19 56 07.8	+0.2
JFK	Kawauchi	1.45	215	i P	Pn	19 55 53.1	-0.3
JFK				S	Sn	19 56 10.6	-0.8
JYS	Shirataka	1.50	257	⇓iP	Pn	19 55 53.7	-0.2
MJAR	Matsushiro Arr	3.57	237	Pn	Pn	19 56 21.0	-1.4
	0.2nm,0.3s,baz=45,slow=10,SNR=12						
MJAR				Sn	Sn	19 57 09.6	+6.3
	0.2nm,0.3s,baz=33,slow=16,SNR=2.1						
	2.0nm,0.5s						
H11N2	WAKE ISLAND Hy	28.63	124	T	T	20 31 42.5	
	baz=317,slow=75,SNR=13						
H11N1	WAKE ISLAND Hy	28.64	124	T	T	20 31 40.2	
	baz=317,slow=75,SNR=21						
H11N3	WAKE ISLAND Hy	28.64	124	T	T	20 31 52.4	
	baz=317,slow=75,SNR=22						
H11S1	WAKE ISLAND Hy	29.39	126	T	T	20 32 36.5	
	baz=318,slow=76,SNR=14						
H11S3	WAKE ISLAND Hy	29.39	126	T	T	20 32 36.6	
	baz=318,slow=76,SNR=18						
H11S2	WAKE ISLAND Hy	29.41	126	T	T	20 32 37.7	
	baz=318,slow=76,SNR=15						
CMAR	Chiang Mai Arr	42.28	254	P	P	20 03 19.5	+1.4
	0.2nm,0.4s,baz=54,slow=8.1,SNR=1.5						
	0.2nm,0.4s						
MKAR	Makanchi Array	43.66	301	P	P	20 03 28.4	-0.7
	0.1nm,0.6s,baz=95,slow=6.1,SNR=2.2						
	0.1nm,0.6s						
KURBB	Kurchatov Arra	45.39	307	P	P	20 03 41.1	-1.6
	0.2nm,0.3s,baz=80,slow=7.8,SNR=2.5						
	0.2nm,0.3s						

UCR **03** *19:56:55.7±0.8,10°.40N×86°.25W,h14km±7km,MW4.1, Presumed earthquake*
CATAC **03** *19:56:56.1±0.6,10°N±3°×8°6W±°,h17km±5km,M4.2/19, MLv4.2/19,Error ellipse: s-maj=6.4km s-min=4.8km az=34.2,confirmed*
ISC 03 19:56:55.5±1.6**,10°.37N**±0°.04×**86°.19W**±0°.05**,h17**km±11km**, n98,**σ**1s.14**/112**,Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SACU	Santa Cruz	0.60	100	eP	Pn	19 57 08.7	-0.6
SACU				eS	Sn	19 57 18.1	-0.6
DELF	Filadelfia	0.63	82	eP	Pn	19 57 09.1	-0.5
DELF				eS	Sn	19 57 19.3	0.0
JUD3	Juan Diaz 3	0.67	107	eP	Pn	19 57 09.9	-0.4
ELI1	Hacienda Flor	0.68	66	P	Pn	19 57 10.5	+0.1
ELI1				S	Sn	19 57 22.8	+2.1
ELI1	Hacienda Flor	0.68	66	eP	Pn	19 57 10.6	+0.2
ERIA	Liberia	0.78	70	eP	Pn	19 57 12.0	+0.2
PLVR	Palo Verde	0.82	91	eP	Pn	19 57 12.3	-0.2
PLVR				eS	Sn	19 57 25.1	+0.7
CMARA	Lajas Hojancha	0.83	115	P	Pn	19 57 12.1	-0.3
CMARA				S	Sn	19 57 23.8	-0.5
CMARA	Lajas Hojancha	0.83	115	eP	Pn	19 57 12.2	-0.3
LAPC	Finca la Perla	0.84	62	eP	Pn	19 57 12.3	-0.3
ELVJ	El Viejo (Barb	0.85	84	eP	Pb	19 57 10.6	-1.3
GPS3	Bodega del ICE	0.90	64	eP	Pn	19 57 13.8	+0.4
LCRUZ	La Cruz	0.90	38	eP	Pn	19 57 13.2	-0.1
LCRUZ				eS	Sn	19 57 26.6	+0.6
GPS2	Hotel Rincn d	0.91	65	eP	Pn	19 57 13.6	0.0
VRLE	La Escondida,	0.91	62	eP	Pg	19 57 13.4	+0.1
VORI	VORI	0.94	61	eP	Pg	19 57 13.9	+0.1
BUAI	Buenos Aires	0.98	59	eP	Pg	19 57 14.9	+0.2
PEJA	Penjamo Buenos	1.01	58	eP	Pg	19 57 15.3	+0.2
COLC	Colonia	1.01	73	eP	Pg	19 57 15.1	-0.1
MESS	Mesas	1.04	69	eP	Pg	19 57 15.6	-0.2
CARN	Rivas	1.05	39	P	Pg	19 57 16.1	+0.2
CARN				S	Sn	19 57 32.2	+2.5
CARN	Rivas	1.05	39	eP	Pg	19 57 15.9	+0.1
CUI	Cuipilapa	1.05	74	eP	Pg	19 57 15.8	-0.1
HORNC	Hornillas	1.05	71	eP	Pg	19 57 15.8	-0.1
CLARA	Aguas Claras	1.08	67	eP	Pg	19 57 16.3	-0.2
CNAS	Canas	1.08	86	eP	Pg	19 57 16.5	0.0
INVE	Universidad In	1.11	84	eP	Pg	19 57 16.9	-0.2
ARIN	Rivas	1.14	18	eP	Pn	19 57 12.3	-4.3
VMAR	Armenia, Volca	1.15	67	eP	Pg	19 57 17.4	-0.3
TIMP	Tierras Morena	1.17	79	eP	Pb	19 57 17.5	+0.1
TILA	Tilaran	1.20	85	eP	Pb	19 57 18.1	+0.2
JUNT	Juntas	1.21	94	eP	Pb	19 57 18.0	0.0
JTS	Las Juntas de	1.22	93	P	Pb	19 57 18.1	0.0
JTS	Las Juntas de	1.22	93	eP	Pb	19 57 18.0	0.0
TENO	El Achiote	1.24	74	eP	Pn	19 57 18.0	-0.1
CHIK	Chiripa	1.26	86	eP	Pb	19 57 19.2	+0.3
MORN	Al O del Volca	1.29	24	P	Pb	19 57 19.6	+0.2
QUEB	Quebradon, Cot	1.30	78	eP	Pn	19 57 18.7	-0.2
MTEVE	Monteverde	1.34	92	eP	Pb	19 57 20.3	0.0
PAQE	Paquera	1.35	114	eP	Pb	19 57 20.7	+0.3
TABAC	Tabacon	1.40	84	eP	Pb	19 57 21.8	+0.5
CASO	Castillo	1.43	87	eP	Pg	19 57 22.9	-0.2
ARE1	Arenal 1	1.45	86	eP	Pg	19 57 22.7	-0.8
VARE2	V. Arenal	1.45	86	eP	Pb	19 57 22.4	+0.3
CEDE	Laguna Cedeo	1.46	85	eP	Pg	19 57 23.0	-0.8
REZ	Monterrey de S	1.47	84	eP	Pb	19 57 22.8	+0.3
VACR	Volcan Arenal	1.49	86	eP	Pb	19 57 23.2	+0.4
FORC	Fortuna	1.50	86	eP	Pb	19 57 23.0	+0.1
NANN	Nandasmo	1.56	2	P	Pb	19 57 24.3	+0.2
MASN	Masaya	1.61	1	P	Pb	19 57 25.2	+0.3
MAS3	Al N del Volca	1.65	0	P	Pb	19 57 26.0	+0.5
UNAN	Cigeo UNAN	1.74	357	P	Pb	19 57 26.1	-0.9

UNAN				S	Sb	19 57 49.0	+0.4
MGAN	**Managua**	**1.77**	**358**	*e*P	**Pn**	**19 57 26.1**	**+0.7**
ATEO	**Atenas**	**1.82**	**102**	*e*P	**Pb**	**19 57 27.3**	**-1.1**
COPN	**Copaltepe**	**1.85**	**348**	P	**Pn**	**19 57 26.7**	**+0.3**
COPN	**Copaltepe**	**1.85**	**348**	*e*P	**Pn**	**19 57 26.7**	**+0.3**
ACON	**Acoyapa**	**1.88**	**32**	P	**Pn**	**19 57 27.5**	**+0.6**
ACON				S	**Sb**	**19 57 53.3**	**+0.8**
VPS8	**V Poas**	**1.92**	**95**	*e*P	**Pb**	**19 57 29.2**	**-1.1**
ARTO	**Ro Cuarto**	**1.94**	**90**	*e*P	**Pb**	**19 57 29.1**	**-1.4**
SANTA	**Santa Ana**	**2.02**	**102**	*e*P	**Pb**	**19 57 32.7**	**+0.9**
HEME	**Heredia, Merce**	**2.05**	**100**	*e*P	**Pb**	**19 57 32.4**	**-0.1**
MOMN	**Momotombo**	**2.06**	**350**	P	**Pn**	**19 57 29.5**	**+0.1**
LEVN	**Ruinas Leon Vi**	**2.07**	**348**	P	**Pn**	**19 57 29.3**	**-0.2**
ACOS	**Acosta**	**2.07**	**106**	*e*P	**Pb**	**19 57 33.3**	**+0.6**
HDC	**Heredia**	**2.07**	**100**	*e*P	**Pg**	**19 57 34.9**	**-0.5**
BOAB	**BOACO BROADBAN**	**2.13**	**14**	P	**Pn**	**19 57 30.9**	**+0.5**
MACN	**El Madrono**	**2.14**	**347**	P	**Pn**	**19 57 31.5**	**+1.0**
CNGN	**Cerro Negro**	**2.18**	**347**	P	**Pb**	**19 57 33.2**	**-1.3**
CNGN	**Cerro Negro**	**2.18**	**347**	*e*P	**Pb**	**19 57 33.5**	**-1.0**
CVIMO	**Finca Echandi**	**2.23**	**99**	*e*P	**Pb**	**19 57 34.2**	**-1.4**
VICA	**Volcano Irazu**	**2.34**	**99**	*e*P	**Pb**	**19 57 37.0**	**-0.5**
POLN	**Al Sur del Vol**	**2.35**	**345**	P	**Pn**	**19 57 34.9**	**+1.5**
PILE	**Guapiles**	**2.37**	**93**	*e*P	**Pb**	**19 57 36.9**	**-0.8**
CVTG	**V. Turrialba,**	**2.38**	**95**	*e*P	**Pb**	**19 57 37.9**	**-0.2**
CVTQ	**Turrialba Volc**	**2.41**	**98**	*e*P	**Pb**	**19 57 36.6**	**-2.0**
VTR0	**Volcan Turrial**	**2.41**	**98**	*e*P	**Pn**	**19 57 36.6**	**+2.0**
CVTR	**Volcan Turrial**	**2.42**	**98**	*e*P	**Pb**	**19 57 37.9**	**-0.9**
PKGN	**Cerro Pekin**	**2.42**	**341**	P	**Pn**	**19 57 35.1**	**+0.8**
TRT2	**Tortugero**	**2.42**	**85**	P	**Pb**	**19 57 37.7**	**-0.9**
TRT2	**Tortugero**	**2.42**	**85**	*e*P	**Pn**	**19 57 36.3**	**+2.0**
CVTV	**Tajo**	**2.43**	**98**	*e*P	**Pn**	**19 57 30.6**	**-4.1**
ABRB	**Las Abras (San**	**2.46**	**98**	*e*P	**Pb**	**19 57 38.5**	**-1.0**
VERB	**Verbena**	**2.49**	**99**	*e*P	**Pb**	**19 57 38.0**	**-1.9**
BUS1	**Rivas**	**2.54**	**108**	*e*P	**Pn**	**19 57 37.7**	**+1.4**
MATN	**Matagalpa**	**2.56**	**6**	P	**Pn**	**19 57 36.2**	**-0.1**
LIMN	**Finca el Limon**	**2.69**	**356**	P	**Pn**	**19 57 38.8**	**+0.8**
SAJE	**San Jernim**	**2.83**	**111**	*e*P	**Pn**	**19 57 41.1**	**+1.0**
EDPE	**Pejibaye, P**	**2.84**	**115**	*e*P	**Pb**	**19 57 46.6**	**+0.7**
CSGN	**Cosiguina Volc**	**2.92**	**333**	P	**Pn**	**19 57 42.5**	**+1.2**
CSGN				S	**Sn**	**19 58 14.7**	**-1.4**
CSGN	**Cosiguina Volc**	**2.92**	**333**	*e*P	**Pn**	**19 57 42.2**	**+0.9**
DRK0	**Durika**	**3.10**	**110**	P	**Pn**	**19 57 43.1**	**-0.7**
DRK0				S	**Sn**	**19 58 18.4**	**-2.2**
DRK0	**Durika**	**3.10**	**110**	*e*P	**Pn**	**19 57 43.1**	**-0.7**
RCON	**San Juan de Ri**	**3.10**	**1**	P	**Pn**	**19 57 45.0**	**+1.2**
RCVN	**Varillal2**	**3.20**	**360**	P	**Pn**	**19 57 46.5**	**+1.3**
RCVN				S	**Sn**	**19 58 19.8**	**-3.2**
CNCH	**Conchagua**	**3.31**	**331**	P	**Pn**	**19 57 48.5**	**+1.8**
CNCH				S	**Sn**	**19 58 24.0**	**-1.8**
PIRO	**Carate, Puerto**	**3.42**	**124**	P	**Pn**	**19 57 50.8**	**+2.7**
PIRO				S	**Sn**	**19 58 27.9**	**-0.4**
PIRO	**Carate, Puerto**	**3.42**	**124**	*e*P	**Pn**	**19 57 50.4**	**+2.3**
YUSH	**Yuscaran**	**3.62**	**350**	P	**Pn**	**19 57 52.8**	**+1.9**

BER 03 20:00:45.8±1.7, 77°.79N×7°.86E, h10km, Mw2.3, Confirmed Earthquake, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.41**	**34**	*e*P	Pn	20 01 09.8	-1.6
KBS				*e*S	Sn	20 01 26.1	-3.9
KBS				IAML		20 01 26.8	
	comp=Z,1.9nm,0.7s						
SPA0	**Spitsbergen Ar**	**1.82**	**74**	*e*P	Pn	20 01 16.7	-0.4
SPA0				*e*S	Sn	20 01 38.0	-2.3
SPA0				IAML		20 01 40.7	
	comp=Z,2.6nm,1.1s						
HSPB	**Hornsund (broa**	**1.86**	**112**	*e*P	Pn	20 01 15.1	-2.5
HOPEN	**Hopen**	**4.03**	**100**	*e*P	Pn	20 01 45.7	-1.8

BER 03 20:01:34.6±1.4, 77°.73N×18°.12E, h15km±20km, ML0.8, Confirmed Earthquake, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRBA	**Barentsburg A**	**0.89**	**294**	*e*S	Sb	20 02 02.3	-1.0
BRBA				IAML		20 02 07.6	
	comp=Z,4.0nm,0.2s						
BRBB	**Barentsburg B**	**0.90**	**296**	*e*P	Pb	20 01 50.8	-1.1
BRBB				*e*S	Sb	20 02 02.4	-1.2
HSPB	**Hornsund (broa**	**0.93**	**219**	*e*P	Pb	20 01 50.3	-2.1
HSPB				*e*S	Sb	20 02 03.2	-1.3
HSPB				IAML		20 02 09.2	
	comp=Z,2.2nm,0.5s						
KBS	**Kingsbay**	**1.74**	**317**	*e*Pg	Pn	20 02 03.4	-0.8
KBS				*e*Sg	Sn	20 02 26.6	+0.6
KBS				IAML		20 02 33.5	
	comp=Z,2.1nm,1.3s						
HOPEN	**Hopen**	**1.97**	**125**	*e*P	Pn	20 02 05.4	-1.9
HOPEN				*e*S	Sn	20 02 29.6	-2.2
HOPEN				IAML		20 02 31.2	
	comp=Z,2.2nm,0.3s						
HOPEN	**Hopen**	**1.97**	**125**	*e*S	Sn	20 02 29.5	-2.3
HOPEN				IAML		20 02 31.2	
	comp=Z,2.2nm,0.3s						

*IDC **03** 21:13:46.1±3.0, 21°.80N×144°.43E, h113km±25km, mb3.5/14, mbtmp3.9/15, Error ellipse: s-maj=32.0km s-min=13.8km az=86.0*

ISC 03 21:13:44.5±1.1, 21°.72N±0°.10×144°.5E±0°.2, h100km, n21, σ1ˢ16/16, mb3.9/14, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.74**	**339**	P	**Pn**	**21 15 08.9**	**+1.6**
	45nm,0.9s,baz=255,slow=22,SNR=1.8						
JCJ				S	**Sn**	**21 16 10.1**	**-1.7**
	17nm,0.3s,baz=281,slow=23,SNR=7.3						
H11N1	**WAKE ISLAND Hy**	**21.07**	**91**	T	T	21 40 29.9	
	baz=277						
H11N2	**WAKE ISLAND Hy**	**21.07**	**91**	T	T	21 41 13.7	
	baz=277						
H11N3	**WAKE ISLAND Hy**	**21.08**	**91**	T	T	21 41 07.0	
	baz=277						
H11S3	**WAKE ISLAND Hy**	**21.11**	**95**	T	T	21 41 15.5	
	baz=282						
H11S1	**WAKE ISLAND Hy**	**21.12**	**95**	T	T	21 41 10.9	
	baz=282						
H11S2	**WAKE ISLAND Hy**	**21.12**	**95**	T	T	21 41 17.0	
	baz=282						
KSRS	**Korea Array**	**21.23**	**321**	P	**P**	**21 18 23.9**	**+1.5**
	2.5nm,0.8s,baz=145,slow=9.4,SNR=8.6						
	2.5nm,0.8s						
LZDM	**Lanzhou Array**	**38.15**	**301**	P	**P**	**21 20 55.4**	**+0.9**
	1.7nm,0.4s,baz=168,slow=7.6,SNR=2.4						
	1.7nm,0.4s						
SONM	**Songino Array**	**40.09**	**320**	P	**P**	**21 21 09.7**	**-0.6**
	0.3nm,0.4s,baz=130,slow=6.8,SNR=5.1						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**42.58**	**194**	P	P	21 21 31.7	+1.0
	1.4nm,0.3s,baz=14,slow=8.8,SNR=47						
	1.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**42.77**	**274**	P	**P**	**21 21 32.6**	**+0.2**
	0.3nm,0.3s,baz=70,slow=8.8,SNR=1.3						
	0.3nm,0.3s						
FITZ	**Fitzroy Crossi**	**43.66**	**206**	P	**P**	**21 21 39.4**	**0.0**
	1.1nm,0.4s,baz=7.1,slow=8.1,SNR=1.4						
	1.1nm,0.4s						
ASAR	**Alice Springs**	**46.27**	**193**	P	**P**	**21 22 00.1**	**0.0**
	0.5nm,0.6s,baz=9.9,slow=7.4,SNR=6.3						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**54.94**	**321**	P	**P**	**21 23 04.2**	**-0.7**
	0.5nm,0.4s,baz=101,slow=7.7,SNR=3.6						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**55.56**	**313**	P	**P**	**21 23 09.3**	**-0.3**
	0.3nm,0.4s,baz=94,slow=7.6,SNR=6.2						
MKAR				PcP	**PcP**	**21 24 07.5**	**-0.8**
	0.3nm,0.6s,baz=98,slow=4.7,SNR=4.1						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**58.32**	**317**	P	**P**	**21 23 28.4**	**-0.5**
	0.7nm,0.5s,baz=94,slow=7.7,SNR=11						
	0.7nm,0.5s						
ILAR	**Eielson Array**	**61.48**	**27**	P	**P**	**21 23 51.4**	**+1.1**
	0.3nm,0.7s,baz=262,slow=5.6,SNR=4.5						
	0.3nm,0.7s						
ARCES	**ARCESS Array B**	**79.28**	**342**	P	**P**	**21 25 38.4**	**-0.2**
	4.9nm,1.1s,baz=59,slow=6.7,SNR=3.6						
	4.9nm,1.1s						
FINES	**FINESS Array B**	**83.67**	**335**	P	**P**	**21 26 00.4**	**-1.4**
	1.0nm,0.4s,baz=71,slow=4.8,SNR=19						
	1.0nm,0.4s						
HFS	**Hagfors**	**89.16**	**338**	P	**P**	**21 26 26.7**	**-2.0**
	0.9nm,0.7s,baz=64,slow=6.6,SNR=1.1						
	0.9nm,0.7s						

*IDC **03** 21:29:50.7±2.0, 7°.67S×128°.79E, h134km±22km, mb3.5/7, mbtmp4.1/13, Error ellipse: s-maj=24.5km s-min=20.2km az=80.0*

ISC 03 21:29:50.5±0.6, 7°.78S±0°.06×128°.78E±0°.06, h150km, n21, σ3ˢ25/26, mb3.8/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.50**	**95**	P	**Pn**	**21 30 33.8**	**+2.1**
SOEI	**Soe**	**4.88**	**246**	P	**Pn**	**21 31 04.7**	**+2.3**
DRS	**Darwin Rock St**	**5.07**	**156**	P	**Pn**	**21 31 08.6**	**+3.7**
BATI	**Baumata**	**5.60**	**244**	P	**Pn**	**21 31 13.1**	**+1.1**
	74nm,0.4s,baz=76,slow=2.9,SNR=50						
BATI				S	**Sn**	**21 32 10.8**	**-4.8**
	132nm,0.6s,baz=98,slow=21,SNR=17						
MMRI	**Maumere**	**6.53**	**262**	P	**Pn**	**21 31 25.6**	**+1.2**
SIJI	**Sorong**	**7.30**	**20**	P	**Pn**	**21 31 33.0**	**-1.6**
	3.8nm,0.4s,baz=14,slow=23,SNR=9.8						
SIJI				S	**Sn**	**21 32 47.8**	**-8.5**
	18nm,0.2s,baz=276,slow=23,SNR=8.4						
FITZ	**Fitzroy Crossi**	**10.71**	**196**	P	**Pn**	**21 32 21.8**	**+1.9**
	1.6nm,0.3s,baz=20,slow=12,SNR=12						
FITZ				S	**Sn**	**21 34 13.1**	**-5.2**
	8.7nm,0.3s,baz=65,slow=20,SNR=5.3						
PLAI	**Plampang**	**10.94**	**264**	P	**Pn**	**21 32 23.7**	**+0.7**
WRAB	**Tennant Creek**	**13.23**	**156**	P	**Pn**	**21 32 54.6**	**+1.8**
WRA	**Warramunga Arr**	**13.24**	**157**	P	**Pn**	**21 32 53.6**	**+0.7**
	1.9nm,0.3s,baz=333,slow=13,SNR=54						
WRA				S	**Sn**	**21 35 14.0**	**-5.4**
	7.8nm,0.7s,baz=338,slow=23,SNR=12						
COEN	**Coen**	**15.41**	**115**	P	**P**	**21 33 22.8**	**+1.4**
QIS	**Mount Isa**	**16.46**	**142**	P	**Pn**	**21 33 37.1**	**+4.1**
ASAR	**Alice Springs**	**16.55**	**163**	P	**Pn**	**21 33 36.7**	**+2.7**
	2.8nm,0.6s,baz=339,slow=9.3,SNR=21						
ASAR				S	**S**	**21 36 34.1**	**-3.9**
	2.4nm,0.7s,baz=340,slow=24,SNR=7.9						
PMG	**Port Moresby**	**18.24**	**96**	P	**Pn**	**21 33 54.8**	**+0.5**
	14nm,0.8s,baz=244,slow=8.0,SNR=4.4						
CMAR	**Chiang Mai Arr**	**39.32**	**312**	P	**P**	**21 37 06.4**	**+1.1**
	0.3nm,0.4s,baz=122,slow=8.4,SNR=1.6						
	0.3nm,0.4s						
LZDM	**Lanzhou Array**	**49.49**	**333**	P	**P**	**21 38 27.5**	**+1.4**
	1.4nm,0.4s,baz=189,slow=8.6,SNR=5.1						
	1.4nm,0.4s						
SONM	**Songino Array**	**58.80**	**343**	P	**P**	**21 39 34.7**	**+1.6**
	0.4nm,0.5s,baz=162,slow=8.6,SNR=2.6						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**68.22**	**328**	P	**P**	**21 40 36.5**	**+1.6**
	1.4nm,0.6s,baz=120,slow=8.1,SNR=32						
	1.4nm,0.6s						
ZALV	**Zalesovo Beam**	**71.75**	**334**	P	**P**	**21 40 57.0**	**+0.8**
	1.2nm,0.5s,baz=137,slow=5.4,SNR=7.0						
	1.2nm,0.5s						
KURBB	**Kurchatov Arra**	**72.54**	**329**	P	**P**	**21 41 02.7**	**+1.7**
	1.0nm,0.5s,baz=131,slow=5.0,SNR=19						
	1.0nm,0.5s						
BVAR	**Borovoye Array**	**78.08**	**328**	P	**P**	**21 41 33.9**	**+1.3**
	0.3nm,0.4s,baz=120,slow=9.8,SNR=4.3						
	0.3nm,0.4s						

*IDC **03** 21:39:33.9±1.2, 44°.97N×106°.80W, h0km, mbtmp3.2/3, ML3.6/2, Error ellipse: s-maj=20.4km s-min=9.5km az=133.0*

*NEIC **03** 21:39:33.1±1.1, 45°.04N±0°.03×106°.72W±0°.07, h0km±1km, ML2.8/40, Error ellipse: s-maj=8.8km s-min=5.9km az=275.0*

ISC 03 21:39:34.4±1.2, 45°.16N±0°.07×106°.63W±0°.08, h0km, n27, σ0ˢ83/26, Montana

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAO	**LASA Array**	**1.56**	**10**		**Pg**	**21 40 04.9**	**+0.6**
LAO				IAML		21 40 36.9	
	131nm,1.0s						
RLMT	**Red Lodge**	**1.87**	**270**	Pn	**Pn**	**21 40 05.9**	**-2.0**
RLMT				IAML		21 40 41.1	
	87nm,1.0s						
RLMT				IAML		21 40 42.4	
	66nm,1.0s						
RSSD	**Black Hills**	**2.12**	**118**	Pn	**Pn**	**21 40 11.2**	**-0.1**
RSSD				IAML		21 40 45.3	
	82nm,0.7s						
RSSD				IAML		21 40 49.5	
	75nm,1.1s						
YNE	**Yellowstone No**	**2.40**	**268**	Pn	**Pn**	**21 40 13.7**	**-1.5**
YNE				IAML		21 40 49.3	
	comp=N,59nm,0.8s						
YNE				IAML		21 40 54.1	
	comp=E,45nm,1.0s						
K22A	**Casper**	**2.51**	**178**	Pn	**Pn**	**21 40 14.9**	**-1.7**
K22A				IAML		21 40 54.2	
	comp=E,41nm,0.9s						
K22A				IAML		21 40 54.4	
	comp=E,46nm,0.6s						
YMP	**Mirror Lake Pl**	**2.54**	**262**	Pn	**Pn**	**21 40 16.1**	**-1.1**
YNR	**Norris Junctio**	**2.91**	**263**	Pn	**Pn**	**21 40 21.9**	**-0.3**
YNR				IAML		21 41 00.9	
	comp=N,30nm,0.7s						
YNR				IAML		21 42 07.3	
	comp=E,26nm,3.9s						
H17A	**Grant Village**	**2.91**	**256**	Pn	**Pn**	**21 40 21.8**	**-0.4**
YHH	**Holmes Hill**	**3.02**	**264**	Pn	**Pn**	**21 40 22.7**	**-1.0**
FLWY	**Flagg Ranch**	**3.10**	**251**	Pn	**Pn**	**21 40 24.2**	**-0.5**
FLWY				IAML		21 41 19.4	
	comp=E,36nm,1.0s						
FLWY				IAML		21 41 28.1	
	comp=E,47nm,1.1s						
YPP	**Pitchstone Pla**	**3.10**	**255**	Pn	**Pn**	**21 40 25.3**	**+0.3**
YMR	**Madison River**	**3.12**	**263**	Pn	**Pn**	**21 40 25.1**	**+0.1**
BW06	**Boulder Array**	**3.19**	**223**	Pn	**Pn**	**21 40 26.3**	**+0.2**
PD31	**Pinedale Array**	**3.19**	**223**	Pn	**Pn**	**21 40 25.7**	**-0.4**
PDAR	**Pinedale Array**	**3.19**	**223**	Pn	**Pn**	**21 40 25.7**	**-0.4**
	comp=E,1.3nm,0.3s,baz=49,slow=17,SNR=47						
PDAR				Lg	Lg	21 41 06.0	
	comp=E,1.6nm,0.3s,baz=33,slow=20,SNR=27						
	comp=E,1.3nm,0.4s						
PDAR	**Pinedale Array**	**3.19**	**223**	Pn	**Pn**	**21 40 26.0**	**-0.1**
LOHW	**Long Hollow**	**3.24**	**243**	Pn	**Pn**	**21 40 27.6**	**+0.9**
YHL	**Hebgen Lake**	**3.24**	**266**	Pn	**Pn**	**21 40 27.8**	**+0.9**
YHL				IAML		21 41 28.4	
	comp=N,29nm,1.1s						
MOOW	**Moose Ponds**	**3.27**	**246**	Pn	**Pn**	**21 40 27.2**	**+0.2**
YHB	**Horse Butte**	**3.27**	**264**	Pn	**Pn**	**21 40 27.1**	**0.0**
YHB				IAML		21 41 25.5	
	comp=N,25nm,1.0s						
YHB				IAML		21 41 27.8	
	comp=E,28nm,1.1s						
SNOW	**Snow King Moun**	**3.41**	**242**	Pn	**Pn**	**21 40 28.8**	**-0.3**
SNOW				IAML		21 41 39.5	
	comp=E,23nm,1.0s						
SNOW				IAML		21 42 00.8	
	comp=E,23nm,3.9s						
DLMT	**Dillon**	**4.22**	**275**	Pn	**Pn**	**21 40 40.5**	**+0.4**
TCUT	**Toone Canyon**	**5.34**	**223**	Pn	**Pn**	**21 40 55.6**	**0.0**
P18A	**Preston Nutter**	**6.14**	**207**	Pn	**Pn**	**21 41 06.4**	**-0.3**
NEW	**Newport**	**7.85**	**297**	Pn	**Pn**	**21 41 29.1**	**-0.8**
	comp=E,0.2nm,0.3s,baz=78,slow=19,SNR=2.2						
NEW				Lg	Lg	21 43 35.7	
	comp=E,0.1nm,0.3s,baz=10,slow=20,SNR=2.1						
	comp=E,1.7nm,0.7s						
I10CA	**LAC DU BONNET**	**8.75**	**51**	I	I	22 34 50.0	
	baz=237,slow=339,SNR=2.1						
ULM	**Lac du Bonnet**	**8.86**	**51**	Pn	**Pn**	**21 41 43.2**	**-0.5**
	comp=E,1.6nm,0.5s,baz=221,slow=14,SNR=2.7						
ULM				Lg	Lg	21 44 15.6	
	comp=E,0.2nm,0.3s,baz=330,slow=20,SNR=4.1						

IDC 03 21:49:29.9±1.6, 0°.54S×134°.08E, h0km, mb3.4/3, mbtmp3.4/5, ML3.4/2, Error ellipse: s-maj=36.3km s-min=23.9km az=72.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.83**	**263**	Pn	Pn	21 50 17.9	+1.5
	3.6nm,0.3s,baz=117,slow=24,SNR=40						
SIJI				Sn	Sn	21 50 52.5	+1.2
	7.5nm,0.3s,baz=259,slow=22,SNR=8.9						
	9.8nm,0.2s						
WRA	**Warramunga Arr**	**19.29**	**179**	P	P	21 53 56.3	-0.2
	0.1nm,0.3s,baz=355,slow=12,SNR=10						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**22.99**	**180**	P	P	21 54 36.5	0.0
	0.6nm,0.7s,baz=1.8,slow=6.7,SNR=7.8						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**65.28**	**324**	P	P	22 00 13.4	-0.3
	0.4nm,0.6s,baz=115,slow=8.0,SNR=5.0						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**69.32**	**326**	P	P	22 00 39.1	-0.1
	0.5nm,0.9s,baz=120,slow=6.2,SNR=5.8						
	0.5nm,0.9s						

*NEIC **03** 22:07:08.9±1.1, 3°.10S±0°.08×148°.97E±0°.09, h10km±5km, mb4.2/10, Error ellipse: s-maj=15.9km s-min=8.2km az=48.0*

*IDC **03** 22:07:09.4±1.6, 3°.18S×148°.71E, h0km, mb3.8/8, mbtmp3.8/10, ML3.4/1, MS3.8/42, Error ellipse: s-maj=54.8km s-min=19.4km az=99.0*

*GCMT **03** 22:07:13.9±0.2, 3°.29S±0°.01×148°.93E±0°.01, h20km±1km, MW4.9/113, Moment Tensor Solution. s34,c40; s113,c156; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.43±.11; $M_{\theta\theta}$2.05±.09; $M_{\phi\phi}$-1.62±.09; $M_{r\theta}$0.14±.14; $M_{\theta\phi}$2.22±.08; $M_{\phi r}$0.28±.16; Best double couple: $M_0$2.89700×10^{16} NP1:ϕ_s110.00000°, δ84.00000°, λ-1.00000°. NP2:ϕ_s200.00000°, δ89.00000°, λ-174.00000°. Principal axes: T 3.1120, Plg4.0000°, Azm335.0000°; N -0.4320, Plg84.0000°, Azm206.0000°; P -2.6820, Plg5.0000°, Azm65.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 22:07:09.3±0.7, 3°.21S±0°.06×148°.93E±0°.09, h10km, n68, σ1ˢ49/29, mb4.0/14, MS3.9/39, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**1.94**	**307**	Pn	**Pn**	**22 07 41.2**	**-1.3**
RABL	**Rabaul**	**3.37**	**107**	Pn	**Pn**	**22 08 01.2**	**-0.9**
PMG	**Port Moresby**	**6.40**	**196**	Pn	**Pn**	**22 08 46.8**	**+3.1**
	11nm,0.8s,baz=22,slow=9.5,SNR=4.0						
PMG				Sn	**Sn**	**22 09 51.9**	**-4.9**
	0.7nm,0.3s,baz=36,slow=6.1,SNR=3.0						
PMG				LR	LR	22 11 17.7	
	comp=Z,1μm,18.5s,baz=36,slow=39						
PMG	**Port Moresby**	**6.40**	**196**	Pn	**Pn**	**22 08 45.6**	**+1.8**
HNR	**Honiara**	**12.57**	**120**	LR	LR	22 15 03.0	
	comp=Z,22nm,18.2s,baz=18,slow=37						
CTA	**Charters Tower**	**16.97**	**189**	Pn	**P**	**22 11 09.2**	**+0.2**
	0.1nm,0.3s,baz=3.5,slow=14,SNR=4.3						
CTA				LR	LR	22 18 08.1	
	comp=Z,398nm,18.8s,baz=8.5,slow=39						
	1.7nm,0.7s						
CTAO	**Charters Tower**	**16.97**	**189**		**P**	**22 11 09.0**	**0.0**
GUMO	**Guam**	**17.17**	**347**	LR	LR	22 17 01.7	
	comp=Z,236nm,20.2s,baz=159,slow=35						
WB0	**Warramunga Arr**	**21.73**	**220**	P	**P**	**22 12 00.4**	**-0.6**
WB0				IAmb	IAmb	22 12 09.9	
	comp=Z,22nm,1.4s						
WR8	**Warramunga Arr**	**21.80**	**219**	P	**P**	**22 12 01.6**	**-0.2**
WR8				IAmb	IAmb	22 12 17.8	
	comp=Z,17nm,1.2s						
WRAB	**Tennant Creek**	**21.87**	**219**	P	**P**	**22 12 02.7**	**+0.2**
WRAB				IAmb	IAmb	22 12 25.2	
	comp=Z,11nm,0.9s						
WRA	**Warramunga Arr**	**21.89**	**219**	P	**P**	**22 12 02.2**	**-0.5**
	comp=Z,2.2nm,0.6s,baz=42,slow=10,SNR=18						
	comp=Z,2.2nm,0.6s						
WRA	**Warramunga Arr**	**21.89**	**219**	P	**P**	**22 12 01.2**	**-1.5**
AS31	**Alice Springs**	**24.98**	**214**	P	**P**	**22 12 33.0**	**-0.5**
AS31				IAmb	IAmb	22 12 55.3	
	comp=Z,2.5nm,0.8s						
ASAR	**Alice Springs**	**24.99**	**214**	P	**P**	**22 12 33.5**	**0.0**
	comp=Z,7.6nm,1.0s,baz=49,slow=8.0,SNR=30						
ASAR				LR	LR	22 23 11.9	
	comp=Z,325nm,18.5s,baz=40,slow=39						
	comp=Z,7.6nm,1.0s						
ASAR	**Alice Springs**	**24.99**	**214**	P	**P**	**22 12 33.2**	**-0.3**
INKA	**Innaminka**	**25.61**	**197**	P	**P**	**22 12 39.4**	**+0.4**
INKA				IAmb	IAmb	22 12 53.0	
	comp=Z,5.4nm,1.2s						
BATI	**Baumata**	**26.02**	**253**	LR	LR	22 25 25.3	
	comp=Z,370nm,18.7s,baz=102,slow=42						
FITZ	**Fitzroy Crossi**	**27.19**	**235**	LR	LR	22 24 04.4	
	comp=Z,413nm,19.5s,baz=58,slow=38						
H11S3	**WAKE ISLAND Hy**	**27.77**	**38**	T	T	22 42 09.2	
	baz=220,slow=76,SNR=331						
H11S2	**WAKE ISLAND Hy**	**27.78**	**38**	T	T	22 42 09.8	
	baz=220,slow=76,SNR=334						
H11S1	**WAKE ISLAND Hy**	**27.79**	**38**	T	T	22 42 10.6	
	baz=220,slow=76,SNR=414						
H11N1	**WAKE ISLAND Hy**	**28.82**	**37**	T	T	22 43 27.6	
	baz=218,slow=76,SNR=478						
H11N3	**WAKE ISLAND Hy**	**28.84**	**37**	T	T	22 43 28.7	
	baz=218,slow=76,SNR=381						
H11N2	**WAKE ISLAND Hy**	**28.84**	**37**	T	T	22 43 28.9	
	baz=218,slow=76,SNR=648						
KAPI	**Kappang**	**29.15**	**265**	LR	LR	22 24 40.0	
	comp=Z,90nm,22.0s,baz=72,slow=36						
STKA	**Stephens Creek**	**29.34**	**193**	LR	LR	22 25 36.6	
	comp=Z,327nm,20.6s,baz=13,slow=38						
JCJ	**Chichijima**	**30.83**	**348**	LR	LR	22 25 30.3	
	comp=Z,143nm,18.3s,baz=152,slow=36						
JOW	**Kunigami**	**35.92**	**328**	LR	LR	22 25 31.4	
	comp=Z,230nm,21.7s,baz=132,slow=31						
JHJ	**Hachijo jima 2**	**37.16**	**347**	LR	LR	22 27 55.5	
	comp=Z,123nm,21.2s,baz=38,slow=34						
MORW	**Morawa**	**40.45**	**227**	P	**P**	**22 14 46.4**	**-2.0**
MJAR	**Matsushiro Arr**	**40.80**	**347**	LR	LR	22 31 32.5	
	comp=Z,189nm,18.2s,baz=176,slow=36						
LEM	**Lembang**	**41.29**	**263**	LR	LR	22 33 44.9	
	comp=Z,81nm,21.9s,baz=60,slow=39						
NWAO	**Narrogin (SRO)**	**41.87**	**221**	LR	LR	22 32 16.5	
	comp=Z,274nm,19.6s,baz=60,slow=36						
URZ	**Urewera**	**43.35**	**147**	LR	LR	22 32 44.6	
	comp=Z,326nm,18.6s,baz=338,slow=35						
ASAJ	**Asahikawa**	**47.46**	**354**	LR	LR	22 34 23.4	
	comp=Z,122nm,22.0s,baz=182,slow=34						
CMAR	**Chiang Mai Arr**	**53.71**	**296**	P	**P**	**22 16 33.0**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=106,slow=7.2,SNR=5.7						
CMAR				LR	LR	22 39 31.9	
	comp=Z,24nm,20.1s,baz=140,slow=36						
	comp=Z,0.6nm,0.3s						
CMAR	**Chiang Mai Arr**	**53.71**	**296**	P	**P**	**22 16 32.3**	**+0.3**
KLR	**Kul'dur**	**54.32**	**346**	LR	LR	22 37 55.3	
	comp=Z,91nm,21.0s,baz=156,slow=34						
PETK	**Petropavlovsk-**	**56.60**	**6**	LR	LR	22 37 45.6	
	comp=Z,67nm,21.6s,baz=185,slow=32						
BRDH	**Bariadhala**	**61.51**	**298**	LR	LR	22 44 49.7	
	comp=Z,40nm,19.0s,baz=178,slow=37						
MA2	**Magadan**	**62.62**	**1**	LR	LR	22 46 45.1	
	comp=Z,54nm,18.2s,baz=175,slow=38						
SONM	**Songino Array**	**62.96**	**329**	P	**P**	**22 17 37.8**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=145,slow=5.4,SNR=4.3						
SONM				LR	LR	22 44 26.9	
	comp=Z,90nm,21.3s,baz=139,slow=36						
	comp=Z,0.2nm,0.5s						
SEY	**Seymchan**	**66.02**	**2**	LR	LR	22 41 19.3	
	comp=Z,70nm,21.4s,baz=153,slow=31						
TLY	**Talaya**	**66.81**	**331**	LR	LR	22 45 20.2	
	comp=Z,89nm,21.2s,baz=122,slow=34						
EVN	**Everest**	**67.22**	**302**	P	**P**	**22 18 05.9**	**+0.9**
L14K	**Kuka Creek**	**74.29**	**22**	P	**P**	**22 18 45.8**	**-0.7**
L14K				IAmb	IAmb	22 19 16.8	
	comp=Z,4.3nm,1.1s						
VNDA	**Vanda**	**74.57**	**177**	LR	LR	22 50 04.3	
	comp=Z,74nm,18.0s,baz=348,slow=34						
TIXI	**Tiksi**	**75.86**	**354**	LR	LR	22 54 07.4	
	comp=Z,39nm,19.5s,baz=214,slow=37						
MKAR	**Makanchi Array**	**76.61**	**320**	P	**P**	**22 19 00.1**	**-0.3**
	comp=Z,0.5nm,0.9s,baz=99,slow=6.3,SNR=12						
MKAR				LR	LR	22 53 25.3	
	comp=Z,76nm,18.3s,baz=103,slow=36						
	comp=Z,0.5nm,0.9s						
MKAR	**Makanchi Array**	**76.61**	**320**	P	**P**	**22 19 00.5**	**+0.2**
ZALV	**Zalesovo Beam**	**77.71**	**327**	P	**P**	**22 19 07.2**	**+0.9**
	comp=Z,1.2nm,1.0s,baz=114,slow=3.6,SNR=4.8						
ZALV				LR	LR	22 53 47.0	
	comp=Z,55nm,19.9s,baz=132,slow=36						
	comp=Z,1.2nm,1.0s						
ZALV	**Zalesovo Beam**	**77.71**	**327**	P	**P**	**22 19 05.1**	**-1.2**
KURBB	**Kurchatov Arra**	**80.19**	**322**	P	**P**	**22 19 20.8**	**+0.8**
	comp=Z,2.1nm,1.1s,baz=105,slow=5.0,SNR=6.9						
KURBB				LR	LR	22 55 52.0	
	comp=Z,50nm,19.2s,baz=185,slow=36						
	comp=Z,2.1nm,1.1s						
AAK	**Ala-Archa**	**80.78**	**314**	LR	LR	22 55 34.0	

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	comp=Z,52nm,20.3s,baz=108,slow=36						
ILAR	**Eielson Array**	**82.18**	**23**	P	**P**	**22 19 32.0**	**+1.7**
	comp=Z,0.2nm,0.4s,baz=263,slow=6.2,SNR=2.4						
ILAR				LR	LR	22 52 10.3	
	comp=Z,45nm,21.9s,baz=227,slow=33						
	comp=Z,0.2nm,0.4s						
NRIK	**Noril'sk**	**83.24**	**342**	LR	LR	22 56 35.5	
	comp=Z,36nm,20.1s,baz=114,slow=36						
MAW	**Mawson**	**85.54**	**203**	LR	LR	22 56 12.1	
	comp=Z,82nm,20.6s,baz=86,slow=34						
BVAR	**Borovoye Array**	**85.67**	**324**	LR	LR	22 59 46.6	
	comp=Z,44nm,18.6s,baz=86,slow=37						
QSPA	**South Pole Qui**	**86.73**	**180**	LR	LR	22 56 31.2	
	comp=Z,86nm,19.7s,baz=44,slow=34						
INK	**Inuvik**	**88.38**	**21**	LR	LR	22 57 53.9	
	comp=Z,29nm,19.0s,baz=290,slow=34						
ARTI	**Arti**	**92.95**	**326**	LR	LR	23 01 51.0	
	comp=Z,128nm,21.8s,baz=78,slow=35						
AKTO	**Aktyubinsk**	**93.03**	**320**	LR	LR	23 01 46.2	
	comp=Z,89nm,20.8s,baz=319,slow=35						
NVAR	**Mina Array Bea**	**94.15**	**52**	LR	LR	22 55 24.9	
	comp=Z,60nm,20.1s,baz=272,slow=31						
PFO	**Pinyon Flats O**	**95.61**	**57**	LR	LR	22 55 07.5	
	comp=Z,48nm,19.0s,baz=260,slow=30						
KIRV	**Kirov**	**97.69**	**329**	LR	LR	23 06 12.5	
	comp=Z,40nm,21.5s,baz=84,slow=36						
RES	**Resolute Bay**	**99.83**	**14**	LR	LR	23 06 19.0	
	comp=Z,51nm,18.9s,baz=2.0,slow=36						
TORD	**Torodi Ar. Bea**	**146.14**	**289**	PKPbc	**PKPab**	**22 26 52.1**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=136,slow=0.5,SNR=5.5						

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*RSNC **03** 22:16:49.2±0.3, 3°S±2°×8°0W±°, h0km, M4.1, mB4.9, mb4.6, ML3.6, Mw(mB)4.2*

*IGQ **03** 22:16:50.2±0.2, 3°S±1°×8°0W±°, h6km±1km, M4.1/19, Mjma4.3/18, Mjma4.0/2, MLv4.0/19, MLv4.0/2*

ISC 03 22:16:49.7±1.1**, 2°.75S**±0°.02×**80°.04W**±0°.02**, h9**km±9km**, n105,** σ**2^{s}02**/124**, 20C-7D, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISPG	**Isla Puna-Puer**	**0.26**	**210**	⇓P	**Pg**	**22 16 57.7**	**+2.8**
MORR	**Playas El Morr**	**0.32**	**289**	⇓P	**Pb**	**22 16 58.7**	**+1.1**
MORR				S	**Sb**	**22 17 05.3**	**+2.5**
ACH2	**Ecuador-Machal**	**0.56**	**156**	P	**Pg**	**22 17 00.3**	**-0.3**
ACH2				S	**Sg**	**22 17 08.8**	**+0.7**
AC07	**Ecuador-Guayaq**	**0.59**	**5**	P	**Pb**	**22 17 02.9**	**+0.5**
GYE3	**Ecuador-Guayaq**	**0.60**	**13**	P	**Pb**	**22 17 03.1**	**+0.6**
GYE3				S	**Sb**	**22 17 12.7**	**+1.6**
MILO	**Milagro-Astudi**	**0.67**	**46**	⇑P	**Pb**	**22 17 03.9**	**+0.3**
AGUAY	**Guayaquil**	**0.69**	**7**	P	**Pg**	**22 17 04.1**	**+1.0**
AGUAY				S	**Sb**	**22 17 14.1**	**+0.5**
PCRA	**Pucara 2**	**0.70**	**131**	⇓P	**Pg**	**22 17 00.7**	**-2.8**
PCRA				S	**Sg**	**22 17 09.8**	**-2.9**
ARNL	**Arenillas**	**0.80**	**182**	⇑P	**Pg**	**22 17 04.9**	**-0.2**
ARNL				S	**Sb**	**22 17 15.8**	**-1.0**
COHC	**Cochancay**	**0.83**	**71**	⇑P	**Pg**	**22 17 04.3**	**-1.4**
COHC				S	**Sg**	**22 17 17.8**	**+1.2**
COHC	**Cochancay**	**0.83**	**71**	P	**Pg**	**22 17 04.7**	**-1.1**
COHC				S	**Sg**	**22 17 18.1**	**+1.5**
ABAB	**Ecuador-Univer**	**1.08**	**29**	P	**Pg**	**22 17 07.9**	**-2.5**
ACUE	**Ecuador-Cuenca**	**1.09**	**99**	P	**Pg**	**22 17 10.2**	**-0.6**
SALI	**Salinas**	**1.10**	**300**	P	**Pn**	**22 17 12.3**	**+0.9**
CSOL	**CASCOL**	**1.15**	**339**	⇑P	**Pg**	**22 17 10.9**	**-1.0**
AZOG	**Ecuador-Azogue**	**1.19**	**90**	P	**Pg**	**22 17 11.5**	**-1.1**
LAMO	**ALAMOR**	**1.26**	**179**	P	**Pn**	**22 17 17.2**	**+3.5**
PPLP	**Puerto Lpez**	**1.40**	**328**	P	**Pn**	**22 17 14.1**	**-1.5**
PPLP	**Puerto Lpez**	**1.40**	**328**	P	**Pn**	**22 17 14.1**	**-1.5**
PPLP				S	**Sg**	**22 17 29.7**	**-5.2**
JIPI	**JIPIJAPA**	**1.47**	**339**	P	**Pn**	**22 17 15.4**	**-1.0**
JSCH	**Cashca Tororas**	**1.47**	**46**	⇑P	**Pn**	**22 17 14.6**	**-2.3**
BOSC	**San Juan Bosco**	**1.59**	**105**	⇓P	**Pn**	**22 17 19.0**	**+0.7**
BOSC				S	**Sn**	**22 17 40.5**	**+1.4**
AMCR	**Ecuador-Macara**	**1.61**	**177**	P	**Pn**	**22 17 18.3**	**-0.2**
GONZ	**Gonzanam**	**1.61**	**157**	P	**Pn**	**22 17 19.0**	**+0.2**
GONZ				S	**Sn**	**22 17 38.9**	**-1.0**
MCRA	**Macar, Loja**	**1.62**	**177**	P	**Pn**	**22 17 18.3**	**-0.2**
MCRA				S	**Sn**	**22 17 39.7**	**+0.2**
MCRA	**Macar, Loja**	**1.62**	**177**	P	**Pn**	**22 17 17.7**	**-0.8**
MCRA				S	**Sn**	**22 17 38.7**	**-0.8**
AZAM	**Ecuador-Zamora**	**1.70**	**141**	P	**Pb**	**22 17 21.3**	**0.0**
AZAM				S	**Sn**	**22 17 41.1**	**-0.7**
CHSH	**Refugio Sur-Vo**	**1.71**	**43**	P	**Pn**	**22 17 19.7**	**-0.6**
TAMH	**Tambohuasha Ch**	**1.73**	**47**	⇑P	**Pn**	**22 17 19.3**	**-1.2**
ISPT	**Isla de la Pla**	**1.80**	**325**	P	**Pb**	**22 17 22.8**	**-0.1**
SANGA	**Volcan Sangay**	**1.80**	**68**	P	**Pn**	**22 17 21.9**	**+0.4**
SANGA				S	**Sg**	**22 17 48.7**	**+0.9**
IGUA	**Igualata**	**1.87**	**48**	P	**Pn**	**22 17 21.7**	**-0.8**
PECV	**Mancha de Ca P**	**1.96**	**360**	⇓P	**Pn**	**22 17 23.3**	**+0.1**
BMAS	**Trigal station**	**1.99**	**52**	P	**Pn**	**22 17 22.8**	**-1.1**
BBIL	**Ulba Tungurahu**	**2.02**	**50**	P	**Pn**	**22 17 25.4**	**+1.2**
BPAT	**Tungurahua Vol**	**2.02**	**52**	P	**Pn**	**22 17 25.4**	**+0.9**
JUI6	**Juive**	**2.05**	**50**	P	**Pn**	**22 17 24.9**	**+0.2**
ZUMB	**Zumba**	**2.29**	**157**	⇑P	**Pb**	**22 17 30.0**	**-1.3**
ZUMB				S	**Sb**	**22 17 59.5**	**-0.2**
PIS1	**Pisayambo**	**2.35**	**45**	P	**Pn**	**22 17 30.6**	**+1.5**
PUYO	**Puyo, Santa Ro**	**2.37**	**58**	P	**Pb**	**22 17 33.6**	**+0.9**
ILLI	**Illinizas Sur**	**2.41**	**33**	⇑P	**Pn**	**22 17 30.8**	**+1.0**
APUY	**Puyo**	**2.41**	**58**	P	**Pn**	**22 17 31.4**	**+2.0**
SRAM	**San Ramn-Vol**	**2.47**	**37**	P	**Pn**	**22 17 31.3**	**+0.7**
BRRN	**Barrancas-Volc**	**2.50**	**39**	P	**Pn**	**22 17 32.5**	**+1.4**
SLOR	**San Lorenzo -**	**2.53**	**38**	⇑P	**Pn**	**22 17 32.8**	**+1.4**
BMOR	**Cotopaxi Volca**	**2.55**	**38**	P	**Pn**	**22 17 33.8**	**+2.0**
TAIS	**Taisha**	**2.56**	**82**	⇑P	**Pn**	**22 17 34.3**	**+2.8**
SUCR	**Mariscal Sucre**	**2.60**	**36**	⇑P	**Pn**	**22 17 34.3**	**+1.9**
BREF	**Cotopaxi Volca**	**2.61**	**38**	⇑P	**Pn**	**22 17 35.0**	**+2.3**
BTAM	**Cotopaxi Volca**	**2.63**	**39**	P	**Pn**	**22 17 35.2**	**+2.2**
TAMB	**Tambo**	**2.63**	**39**	P	**Pn**	**22 17 35.2**	**+2.2**
BVC2	**Cotopaxi Volca**	**2.64**	**38**	P	**Pn**	**22 17 35.2**	**+2.2**
VC1	**Cotopaxi 1**	**2.65**	**38**	⇓P	**Pn**	**22 17 36.0**	**+2.8**
PKYU	**Pakayacu**	**2.67**	**66**	P	**Pn**	**22 17 35.6**	**+2.6**
PITA	**Cotopaxi Volc**	**2.70**	**36**	P	**Pn**	**22 17 36.3**	**+2.5**
TOMA	**Boca Toma-Volc**	**2.75**	**36**	⇑P	**Pn**	**22 17 37.3**	**+2.9**
ARDO	**Archidona, Ten**	**2.83**	**52**	P	**Pn**	**22 17 38.3**	**+3.0**
ANTM	**Antisana-La Mi**	**2.85**	**40**	⇓P	**Pn**	**22 17 39.2**	**+3.3**
ANTG	**Antisana-Guama**	**2.85**	**39**	⇑P	**Pn**	**22 17 38.3**	**+2.3**
GGPT	**Toaza - Volcan**	**2.88**	**30**	⇑P	**Pn**	**22 17 37.7**	**+1.5**
JUA2	**San Juan 2**	**2.90**	**30**	⇑P	**Pn**	**22 17 38.5**	**+2.1**
ANTS	**Antisana-Sarah**	**2.91**	**40**	⇑P	**Pn**	**22 17 39.1**	**+2.2**
GGPC	**Guagua Pichinc**	**2.93**	**30**	⇑P	**Pn**	**22 17 38.7**	**+1.6**
TERV	**Terraza Guagua**	**2.93**	**29**	⇑P	**Pn**	**22 17 38.7**	**+1.7**
ANTI	**Antisana**	**2.95**	**39**	P	**Pn**	**22 17 39.4**	**+2.0**
YANA	**Yana**	**2.99**	**29**	P	**Pn**	**22 17 39.4**	**+1.5**
BV15	**Puerto Quito-O**	**3.00**	**16**	⇑P	**Pn**	**22 17 36.4**	**-1.1**
PUEM	**Granja Avicola**	**3.08**	**33**	P	**Pn**	**22 17 42.4**	**+3.5**
PULU	**Pululahua**	**3.15**	**29**	P	**Pn**	**22 17 41.8**	**+1.9**
PAC1	**Pacto, Paraso**	**3.24**	**23**	P	**Pn**	**22 17 42.5**	**+1.5**
PAC1	**Pacto, Paraso**	**3.24**	**23**	P	**Pn**	**22 17 41.8**	**+0.8**
PAC1				S	**Sn**	**22 18 20.8**	**+1.0**
OTAV	**Otavalo**	**3.36**	**28**	P	**Pn**	**22 17 44.6**	**+1.6**
OTAV	**Otavalo**	**3.36**	**28**	P	**Pn**	**22 17 44.5**	**+1.6**
OTAV				S	**Sn**	**22 18 24.7**	**+1.5**
CAYR	**Refugio Cayamb**	**3.41**	**37**	P	**Pn**	**22 17 46.3**	**+2.6**
CUSE	**Cuicocha Este**	**3.44**	**28**	P	**Pn**	**22 17 47.0**	**+2.9**
CUSE	**Cuicocha Este**	**3.44**	**28**	P	**Pn**	**22 17 46.1**	**+2.1**
CUSE				S	**Sb**	**22 18 31.5**	**-1.9**
CUIC	**Cuicocha-Domo**	**3.46**	**29**	P	**Pn**	**22 17 46.3**	**+2.0**
COTA	**Cotacachi**	**3.50**	**29**	P	**Pb**	**22 17 50.0**	**-2.2**
IMBA	**Imbabura, San**	**3.52**	**32**	P	**Pn**	**22 17 49.0**	**+3.9**
URCU	**Urcuqui**	**3.63**	**29**	P	**Pn**	**22 17 51.0**	**+4.4**
YAHU	**Yahuarcocha**	**3.67**	**32**	P	**Pn**	**22 17 50.6**	**+3.6**
RVRD	**Rio Verde**	**3.84**	**10**	P	**Pn**	**22 17 48.6**	**-0.6**
CASC	**Dorado de Casc**	**3.94**	**43**	P	**Pn**	**22 17 52.7**	**+2.2**
LNGL	**El Angel-Carch**	**4.02**	**30**	P	**Pn**	**22 17 55.0**	**+3.1**
CHL1	**Volc¡n Chiles**	**4.09**	**31**	P	**Pn**	**22 17 55.0**	**+2.0**
CHMA	**Chilma**	**4.09**	**29**	P	**Pn**	**22 17 56.2**	**+3.4**
ECEN	**Cerro Negro**	**4.10**	**30**	P	**Pn**	**22 17 56.8**	**+3.5**
TULM	**Tulcn-Chalpat**	**4.11**	**33**	P	**Pn**	**22 17 56.2**	**+3.0**
TULM	**Tulcn-Chalpat**	**4.11**	**33**	P	**Pn**	**22 17 55.5**	**+2.3**
CHL2	**Volc¡n Chiles**	**4.11**	**31**	P	**Pn**	**22 17 57.1**	**+3.8**
SNLR	**San Lorenzo-Es**	**4.18**	**17**	P	**Pn**	**22 17 54.6**	**+0.8**
CMBC	**Cumbal**	**4.28**	**31**	P	**Pn**	**22 18 00.3**	**+4.8**
GCUF	**Volcan Galeras**	**4.78**	**34**	P	**Pn**	**22 18 05.2**	**+2.8**
BBAC	**Balboa, Cauca**	**5.50**	**31**	P	**Pn**	**22 18 12.9**	**+0.9**
BBAC	**Balboa, Cauca**	**5.50**	**31**	P	**Pn**	**22 18 14.5**	**+2.4**
	671nm52nm,0.7s						
PTLC	**Puerto Leguiza**	**5.99**	**61**	P	**Pn**	**22 18 21.2**	**+2.6**
PTLC	**Puerto Leguiza**	**5.99**	**61**	P	**Pn**	**22 18 20.4**	**+1.8**
	1μm101nm,0.7s						
GR1C	**Gorgona, Isla**	**6.01**	**18**	P	**Pn**	**22 18 18.5**	**-0.4**
FLOC	**Florencia**	**6.14**	**46**	P	**Pn**	**22 18 21.6**	**+0.8**
FLOC	**Florencia**	**6.14**	**46**	P	**Pn**	**22 18 22.6**	**+1.8**
	693nm48nm,1.2s						
POPC	**Popayan, Colom**	**6.24**	**33**	P	**Pn**	**22 18 23.6**	**+1.4**
	17nm,1.3s						
JAMC	**Jamundi, Valle**	**6.81**	**30**	P	**Pn**	**22 18 30.8**	**+0.7**
URMC	**La Uribe, Meta**	**8.21**	**44**	P	**Pn**	**22 18 50.4**	**+1.1**
	24nm,0.8s						
PRAC	**Prado**	**8.23**	**39**	P	**Pn**	**22 18 51.7**	**+2.3**
PLMC	**San Jos del P**	**8.48**	**26**	P	**Pn**	**22 18 55.4**	**+2.5**

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*IDC **03** 22:21:57.4±1.0, 17°.88S×167°.64E, h0km, mb4.2/9, mbtmp4.3/12, ML6.0/1, MS3.8/20, Error ellipse: s-maj=23.2km s-min=20.7km az=24.0*

*NOU **03** 22:21:59.8, 17°.91S×167°.75E, h14km, MLv4.7/15, Vanuatu Islands*

*NEIC **03** 22:21:59.1±1.6, 17°.93S±0°.06×167°.8E±0°.1, h10km±1km, mb4.8/20, Error ellipse: s-maj=21.4km s-min=10.0km az=84.0*

*GCMT **03** 22:22:03.0±0.4, 18°.06S±0°.04×167°.44E±0°.03, h28km±1km, MW4.9/60, Moment Tensor Solution. s26,c27; s60,c74; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.07±.17; $M_{\theta\theta}$-0.37±.10; $M_{\phi\phi}$-1.70±.10; $M_{r\theta}$0.53±.17; $M_{\theta\phi}$0.27±.08; $M_{\phi r}$-1.55±.13; Best double couple: $M_0$2.51600×10^{16} NP1:ϕ_s352.00000°,δ25.00000°,λ97.00000°. NP2: ϕ_s164.00000°,δ65.00000°,λ87.00000°. Principal axes: T 2.6820, Plg69.0000°, Azm67.0000°; N -0.3340, Plg3.0000°, Azm166.0000°; P -2.3510, Plg20.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 22:22:00.8±0.4**, 17°.99S**±0°.05×**167°.71E**±0°.05**, h23**km**, n82,** σ**1^{s}60**/67**, mb4.6**/20**, MS3.8**/19**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**0.52**	**60**	P	**Pb**	**22 22 09.7**	**-1.6**
RTV	**Rentapao**	**0.70**	**74**	P	**Pb**	**22 22 12.8**	**-1.6**
RTV	**Rentapao**	**0.70**	**74**	S	**Sn**	**22 22 23.6**	**-1.9**
INH	**Isangel**	**2.14**	**137**	P	**Pn**	**22 22 34.7**	**-0.4**
SANVU	**Saraoutou**	**2.57**	**349**	P	**Pn**	**22 22 39.3**	**-1.8**
SANVU	**Saraoutou**	**2.57**	**349**		**Pn**	**22 22 38.3**	**-2.8**
MARNC	**Mare, Loyalty**	**3.49**	**175**	P	**Pn**	**22 22 56.0**	**+2.4**
MARNC	**Mare, Loyalty**	**3.49**	**175**	Pn	**Pn**	**22 22 52.5**	**-1.1**
DZM	**Mont Dzumac**	**4.23**	**196**	*e*Pn	**Pn**	**22 23 03.4**	**-0.6**
	58nm,0.7s						
DZM				*e*Sn	**Sn**	**22 23 49.1**	**-3.7**
	237nm,0.8s						
DZM	**Mont Dzumac**	**4.23**	**196**	Pn	**Pn**	**22 23 02.8**	**-1.3**
	9.0nm,0.4s,baz=52,slow=14,SNR=17						
DZM				Sn	**Sn**	**22 23 50.7**	**-2.1**
	18nm,0.3s,baz=321,slow=21,SNR=9.8						
DZM	**Mont Dzumac**	**4.23**	**196**	P	**Pn**	**22 23 04.0**	**0.0**
DZM	**Mont Dzumac**	**4.23**	**196**	Pn	**Pn**	**22 23 02.9**	**-1.1**
ONTNC	**Ouen Toro**	**4.46**	**195**	P	**Pn**	**22 23 08.8**	**+1.8**
ONTNC	**Ouen Toro**	**4.46**	**195**	Pn	**Pn**	**22 23 07.1**	**+0.1**
NGOA	**Tingoa Renbel**	**9.78**	**310**	P	**Pn**	**22 24 20.2**	**+0.1**
MSVF	**Nonsavu**	**9.85**	**90**	Pn	**Pn**	**22 24 23.0**	**+1.9**
	5.0nm,0.3s,baz=270,slow=20,SNR=8.7						
MSVF				LR	LR	22 27 26.0	
	comp=Z,2μm,19.3s,baz=212,slow=33						
	5.9nm,0.3s						
MSVF	**Nonsavu**	**9.85**	**90**	Pn	Pn	22 24 26.1	+5.0
HNR	**Honiara**	**11.37**	**317**	Pn	**Pn**	**22 24 40.4**	**-1.5**
	3.5nm,0.5s,baz=350,slow=2.0,SNR=3.9						
HNR				LR	LR	22 28 16.5	
	comp=Z,15nm,20.9s,baz=246,slow=34						
HNR	**Honiara**	**11.37**	**317**	Pn	**Pn**	**22 24 40.5**	**-1.4**
SAVO	**Savo Central**	**11.67**	**318**	P	**Pn**	**22 24 46.1**	**+0.1**
CTA	**Charters Tower**	**20.39**	**261**	P	**P**	**22 26 36.7**	**+0.4**
	5.6nm,0.8s,baz=89,slow=10,SNR=6.5						
CTA				LR	LR	22 33 59.3	
	comp=Z,439nm,18.7s,baz=49,slow=36						
	5.6nm,0.8s						
CTAO	**Charters Tower**	**20.39**	**261**	P	**P**	**22 26 37.0**	**+0.8**
CTAO				IAmb	IAmb	22 26 42.5	
	comp=Z,32nm,1.1s						
RABL	**Rabaul**	**20.49**	**310**	P	Pn	22 26 39.8	+0.3
PMG	**Port Moresby**	**21.70**	**290**	LR	LR	22 34 14.8	
	comp=Z,329nm,18.4s,baz=163,slow=34						
URZ	**Urewera**	**21.80**	**160**	P	**P**	**22 26 53.9**	**+2.7**
	comp=Z,14nm,1.1s,baz=300,slow=8.7,SNR=4.5						
	comp=Z,14nm,1.1s						
RTZ	**Ruatahuna**	**22.09**	**160**	P	**P**	**22 26 55.3**	**+1.0**
RTZ				IAmb	IAmb	22 27 05.8	
	comp=Z,67nm,1.5s						
INKA	**Innaminka**	**26.63**	**244**	P	**P**	**22 27 37.7**	**-0.1**
STKA	**Stephens Creek**	**27.34**	**235**	P	**P**	**22 27 45.3**	**+1.1**
	comp=Z,4.2nm,0.9s,baz=24,slow=8.8,SNR=4.7						
STKA				LR	LR	22 37 35.1	
	comp=Z,269nm,19.2s,baz=36,slow=34						
	comp=Z,4.2nm,0.9s						
STKA	**Stephens Creek**	**27.34**	**235**	P	**P**	**22 27 44.2**	**+0.1**
RAR	**Rarotonga**	**30.77**	**101**	LR	LR	22 38 11.9	
	comp=Z,85nm,20.5s,baz=290,slow=32						
WR0	**Warramunga Arr**	**31.41**	**261**	P	**P**	**22 28 20.1**	**-0.3**
WR0				IAmb	IAmb	22 28 48.2	
	comp=Z,18nm,1.7s						
WR8	**Warramunga Arr**	**31.44**	**261**	P	**P**	**22 28 21.1**	**+0.3**
WR8				IAmb	IAmb	22 28 32.9	
	comp=Z,29nm,1.9s						
WB0	**Warramunga Arr**	**31.55**	**261**	P	**P**	**22 28 21.3**	**-0.4**
WRA	**Warramunga Arr**	**31.60**	**261**	P	**P**	**22 28 21.3**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=92,slow=9.4,SNR=11						
	comp=Z,1.2nm,0.8s						
WRA	**Warramunga Arr**	**31.60**	**261**	P	**P**	**22 28 21.0**	**-1.1**
AS31	**Alice Springs**	**32.05**	**254**	P	**P**	**22 28 25.8**	**-0.3**
ASAR	**Alice Springs**	**32.05**	**254**	P	**P**	**22 28 25.2**	**-0.9**
	comp=Z,2.1nm,0.6s,baz=84,slow=8.8,SNR=16						
ASAR				LR	LR	22 41 21.5	
	comp=Z,403nm,18.1s,baz=85,slow=36						
	comp=Z,2.1nm,0.6s						
ASAR	**Alice Springs**	**32.05**	**254**	P	**P**	**22 28 25.5**	**-0.6**
KNRA	**Kununurra**	**37.31**	**268**	P	**P**	**22 29 09.6**	**-2.0**
FORT	**Forrest**	**38.10**	**243**	P	**P**	**22 29 17.1**	**-1.0**
FORT				IAmb	IAmb	22 29 35.4	
	comp=Z,10nm,0.8s						
GUMO	**Guam**	**38.63**	**323**	LR	LR	22 42 54.8	
	comp=Z,88nm,21.1s,baz=114,slow=33						
SIJI	**Sorong**	**39.64**	**291**	LR	LR	22 46 05.1	
	comp=Z,139nm,19.7s,baz=140,slow=37						
FITZ	**Fitzroy Crossi**	**39.94**	**263**	LR	LR	22 45 57.4	
	comp=Z,344nm,18.4s,baz=82,slow=36						
TBI	**Tubuai**	**40.31**	**105**	*e*P	P	22 29 28.4	-8.3
	comp=Z,501nm,46.2s						
TBI				*e*S	**S**	**22 35 48.0**	**+4.7**
	comp=Z,507nm,29.2s						
TBI				*e*LQ	LQ	22 38 54.4	
	comp=Z,2μm,27.5s						
TBI				*e*LR	LR	22 40 42.0	
	comp=Z,1μm,32.2s						
PPT2	**Papeete2**	**40.60**	**96**	*e*S	**S**	**22 35 43.4**	**-4.5**
	comp=Z,127nm,28.8s						
PPT2				*e*LQ	LQ	22 38 43.6	
	comp=Z,1μm,44.0s						
PPT	**Papeete**	**40.61**	**96**	LR	LR	22 41 39.4	
	comp=Z,124nm,20.3s,baz=235,slow=29						
BATI	**Baumata**	**43.33**	**274**	LR	LR	22 48 01.1	
	comp=Z,106nm,19.1s,baz=132,slow=36						
NWAO	**Narrogin (SRO)**	**47.51**	**242**	P	**P**	**22 30 33.3**	**-1.1**
DAV	**Davao City (W)**	**48.48**	**297**	LR	LR	22 52 08.0	
	comp=Z,42nm,18.2s,baz=7.0,slow=37						
KAPI	**Kappang**	**48.58**	**279**	LR	LR	22 52 27.6	
	comp=Z,38nm,18.6s,baz=114,slow=38						
TAOE	**Nuku Hiva Isla**	**51.38**	**87**	*e*S	**S**	**22 38 23.1**	**+0.2**
	comp=Z,172nm,25.4s						
TAOE				*e*LR	LR	22 45 47.8	
	comp=Z,274nm,22.2s						
LEM	**Lembang**	**59.51**	**273**	LR	LR	22 59 32.7	
	comp=Z,77nm,18.9s,baz=160,slow=38						
ASAJ	**Asahikawa**	**65.94**	**340**	LR	LR	23 02 02.2	
	comp=Z,33nm,18.1s,baz=152,slow=36						
NJ2	**Nanjing**	**68.31**	**317**	*e*P	**P**	**22 33 01.9**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
SHEM	**Shemya Is, Ala**	**70.64**	**4**	LR	LR	23 01 17.8	
	comp=Z,53nm,18.5s,baz=154,slow=34						
QSPA	**South Pole Qui**	**72.06**	**180**	P	**P**	**22 33 23.3**	**+0.3**
	comp=Z,5.7nm,1.1s,baz=17,slow=3.9,SNR=5.1						
	comp=Z,5.7nm,1.1s						
QSPA	**South Pole Qui**	**72.06**	**180**		**P**	**22 33 23.4**	**+0.5**
QSPA				IAmb	IAmb	22 33 24.6	
	comp=Z,18nm,1.4s						
XAN	**Xi'an**	**76.20**	**313**	P	**P**	**22 33 51.2**	**+3.7**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KMI2	**Kunming**	**76.39**	**302**	P	**P**	**22 33 50.7**	**+1.7**
KMI2				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**76.67**	**295**	P	**P**	**22 33 50.1**	**-0.3**
	comp=Z,1.7nm,0.3s,baz=128,slow=3.9,SNR=11						
	comp=Z,1.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**76.67**	**295**	P	**P**	**22 33 50.8**	**+0.4**
PZH	**PanZhiHua**	**77.82**	**303**	P	**P**	**22 33 58.4**	**+1.5**
HHC	**Hu-ho-hao-te**	**78.34**	**320**	*e*P	**P**	**22 33 59.6**	**+0.2**
MA2	**Magadan**	**78.52**	**351**	LR	LR	23 06 55.1	
	comp=Z,35nm,18.7s,baz=118,slow=34						
BTO2	**Baotou**	**79.32**	**319**	*e*P	**P**	**22 34 06.4**	**+1.6**
BTO2	**Baotou**	**79.32**	**319**	S	**S**	**22 44 08.1**	**+3.9**
BTO2				pmax	pmax		
	comp=Z,12nm,0.6s						
BTO2				pmax	pmax		
	comp=Z,170nm,5.0s						
BTO2				LR	LR		
	comp=N,220nm,5.1s						
BTO2				LR	LR		
	comp=E,260nm,4.9s						
BTO2				LR	LR		
	comp=Z,250nm,7.3s						
KDAK	**Kodiak Island**	**82.35**	**20**	LR	LR	23 04 23.5	
	comp=Z,70nm,21.8s,baz=216,slow=31						
ULN	**Ulaanbaatar**	**85.01**	**324**	P	**P**	**22 34 34.8**	**+0.3**
ULN				IAmb	IAmb	22 34 38.4	
	comp=Z,13nm,1.6s						
YAK	**Yakutsk**	**85.26**	**343**	P	**P**	**22 34 35.6**	**+0.5**
GTA2	**Gaotai**	**85.30**	**314**	*e*P	**P**	**22 34 36.9**	**+0.8**
GTA2				sP	pwP	22 34 46.9	-0.3
GTA2				pmax	pmax		
	comp=Z,2.0nm,1.4s						
SONM	**Songino Array**	**85.36**	**324**	P	**P**	**22 34 36.4**	**+0.2**
	comp=Z,2.2nm,1.1s,baz=141,slow=2.2,SNR=10						
SONM				LR	LR	23 12 04.0	
	comp=Z,18nm,20.1s,baz=182,slow=35						
	comp=Z,2.2nm,1.1s						
SONM	**Songino Array**	**85.36**	**324**	P	**P**	**22 34 36.6**	**+0.3**
SONM				IAmb	IAmb	22 34 40.0	
	comp=Z,6.6nm,1.4s						
BILL	**Bilibino**	**85.79**	**359**	P	**P**	**22 34 37.1**	**-0.6**
BILL				IAmb	IAmb	22 34 42.8	
	comp=Z,23nm,1.4s						
NVAR	**Mina Array Bea**	**89.07**	**49**	P	**P**	**22 34 53.8**	**-0.8**
	comp=Z,1.1nm,0.9s,baz=228,slow=5.8,SNR=5.2						
	comp=Z,1.1nm,0.9s						
PALK	**Pallekele**	**89.39**	**278**	LR	LR	23 17 17.0	
	comp=Z,38nm,19.5s,baz=120,slow=37						
W13A	**Hualapai Mount**	**91.08**	**53**		**P**	**22 35 03.9**	**-0.2**
W13A				IAmb	IAmb	22 35 05.2	
	comp=Z,3.2nm,1.1s						
KBA	**Koelnbreinsper**	**144.15**	**330**	PKP	**PKPdf**	**22 41 34.7**	**-0.3**
	comp=Z,8.0nm,1.4s						
MOTA	**Moosalm**	**144.99**	**332**	*e*PKP	**PKPab**	**22 41 35.0**	**-0.7**
	comp=Z,6.1nm,1.2s						
SQTA	**Sankt Quirin**	**145.04**	**332**	*e*PKP	**PKPab**	**22 41 35.6**	**-0.3**
	comp=Z,6.0nm,1.4s						
FETA	**Feichten**	**145.41**	**332**	*e*PKP	**PKPbc**	**22 41 36.7**	**-0.3**
	comp=Z,6.3nm,1.1s						
FUORN	**Ofenpass-Fuorn**	**145.92**	**332**		**PKPbc**	**22 41 38.3**	**-0.5**
ECH	**Echery**	**145.94**	**337**	PKPdf	**PKPdf**	**22 41 37.5**	**-0.4**

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*IDC **03** 22:40:54.7±2.3, 32°.51N×85°.30E, h0km, mb3.3/4, mbtmp3.5/7, ML3.1/2, MS3.9/3, Error ellipse: s-maj=73.3km s-min=21.5km az=72.0*

ISC 03 22:40:59.2±2.1**, 32°.6N**±0°.2×**85°.3E**±0°.4**, h35**km**, n10,** σ**1^{s}40**/7**, mb3.3**/4**, MS4.0**/3**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**14.38**	**352**	Pn	**Pn**	**22 44 18.7**	**-1.5**
	baz=156,slow=13,SNR=5.1						
	0.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**18.69**	**136**	P	**P**	**22 45 12.9**	**-1.6**
	0.6nm,0.3s,baz=321,slow=12,SNR=8.0						
KURBB	**Kurchatov Arra**	**18.70**	**347**	P	**Pn**	**22 45 15.3**	**+0.3**
	0.1nm,0.3s,baz=159,slow=13,SNR=4.6						
	0.6nm,0.3s						
ZALV	**Zalesovo Beam**	**21.36**	**359**	P	**P**	**22 45 44.2**	**+0.9**
	0.5nm,0.4s,baz=191,slow=11,SNR=4.1						
	0.5nm,0.4s						
SONM	**Songino Array**	**22.09**	**40**	P	**P**	**22 45 52.0**	**+0.7**
	0.8nm,0.9s,baz=232,slow=9.3,SNR=5.0						
	0.8nm,0.9s						
VRAC	**Vranov**	**52.68**	**310**	LR	LR	23 16 54.2	
	comp=Z,133nm,21.5s,baz=58,slow=41						
GERES	**GERESS Array B**	**54.63**	**310**	LR	LR	23 18 54.0	
	comp=Z,128nm,20.0s,baz=66,slow=42						
DAVOX	**Davos/Dischmat**	**57.60**	**308**	LR	LR	23 21 02.5	
	comp=Z,109nm,19.6s,baz=48,slow=42						
WRA	**Warramunga Arr**	**70.21**	**131**	P	**P**	**22 52 08.9**	**+0.2**
	0.5nm,0.7s,baz=320,slow=6.1,SNR=6.4						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**72.69**	**134**	P	**P**	**22 52 25.0**	**+1.4**
	0.3nm,0.7s,baz=318,slow=6.8,SNR=2.3						
	0.3nm,0.7s						

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*NOU **03** 22:42:19.9, 10°.36S×160°.99E, h0km, MLv4.4/10, Solomon Islands*

*IDC **03** 22:42:27.0±1.0, 9°.04S×159°.36E, h0km, mb3.6/5, mbtmp3.7/6, ML3.8/1, MS3.3/1, Error ellipse: s-maj=28.7km s-min=18.2km az=23.0*

ISC 03 22:42:20.4±0.8**, 10°.35S**±0°.05×**160°.97E**±0°.05**, h10**km**, n17,** σ**1^{s}61**/18**, mb3.6**/5**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HURO	**Huro Makira**	**0.92**	**97**	P	**Pg**	**22 42 37.1**	**-1.1**
HURO	**Huro Makira**	**0.92**	**97**	S	**Sg**	**22 42 49.2**	**-1.0**
HNR	**Honiara**	**1.36**	**312**	Pn	**Pn**	**22 42 44.4**	**-1.1**
	7.0nm,0.3s,baz=246,slow=2.6,SNR=140						
HNR				Sn	**Sb**	**22 43 01.8**	**-1.6**
	14nm,0.3s,baz=180,slow=8.7,SNR=7.9						
HNR	**Honiara**	**1.36**	**312**	P	**Pn**	**22 42 44.5**	**-1.0**
HNR	**Honiara**	**1.36**	**312**	S	**Sb**	**22 43 03.1**	**-0.4**
NGOA	**Tingoa Renbel**	**1.50**	**217**	P	**Pn**	**22 42 47.3**	**-0.1**
NGOA	**Tingoa Renbel**	**1.50**	**217**	S	**Sg**	**22 43 07.5**	**-1.1**
SAVO	**Savo Central**	**1.65**	**316**	P	**Pn**	**22 42 49.0**	**-0.5**
SAVO	**Savo Central**	**1.65**	**316**	S	**Sb**	**22 43 12.4**	**+0.5**
TATA	**Tatamba Isabel**	**2.27**	**329**	P	**Pn**	**22 42 59.3**	**+1.4**
TATA	**Tatamba Isabel**	**2.27**	**329**	S	**Sb**	**22 43 29.5**	**0.0**
CTA	**Charters Tower**	**17.18**	**234**	Pn	**P**	**22 46 23.1**	**+0.8**
	0.3nm,0.3s,baz=60,slow=9.8,SNR=8.3						
CTA				LR	LR	22 52 03.4	
	comp=Z,95nm,18.5s,baz=44,slow=34						
	6.0nm,0.8s						
WRA	**Warramunga Arr**	**27.38**	**246**	P	**P**	**22 48 06.0**	**-0.2**
	0.3nm,0.7s,baz=73,slow=9.0,SNR=6.5						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**29.01**	**239**	P	**P**	**22 48 23.3**	**+2.6**
	0.4nm,0.4s,baz=56,slow=9.8,SNR=4.3						
	0.4nm,0.4s						
SONM	**Songino Array**	**75.38**	**325**	P	**P**	**22 54 02.2**	**-2.3**
	0.2nm,0.4s,baz=134,slow=4.6,SNR=4.0						
	0.2nm,0.4s						
ILAR	**Eielson Array**	**84.40**	**20**	P	**P**	**22 54 56.5**	**+3.7**
	0.7nm,1.0s,baz=230,slow=5.4,SNR=2.9						
	0.7nm,1.0s						
MKAR	**Makanchi Array**	**89.83**	**318**	P	**P**	**22 55 18.2**	**-1.4**
	0.4nm,0.9s,baz=103,slow=6.4,SNR=2.9						
	0.4nm,0.9s						

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*IDC **03** 22:55:58.4±1.2, 52°.19N×169°.36W, h0km, mb3.9/16, mbtmp3.9/16, MS3.2/2, Error ellipse: s-maj=32.3km s-min=21.2km az=1.0*

*AEIC **03** 22:56:02.0±2.8, 52°.08N±0°.07×169°.27W±0°.08, h24km±6km, Error ellipse: s-maj=10.2km s-min=7.3km az=161.0*

*NEIC **03** 22:56:04.3±2.4, 52°.22N±0°.06×169°.4W±0°.1, h40km±9km, mb4.1/32, ML3.8/18, ML3.3(AEIC), Error ellipse: s-maj=8.9km s-min=8.8km az=94.0*

ISC 03 22:56:03.0±0.7**, 52°.14N**±0°.08×**169°.30W**±0°.05**, h30**km**, n128,** σ**1^{s}54**/123**, mb4.0**/20**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLCO	**Concord Point,**	**0.70**	**338**		**Pb**	**22 56 16.2**	**-0.5**
CLES	**Cleveland East**	**0.78**	**332**		**Pb**	**22 56 16.6**	**-1.4**
CLES				IAML		22 56 36.0	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=N,7µm,0.4s						
CLES	**Cleveland East**	**0.78**	**332**		**Sn**	**22 56 29.6**	**+1.1**
NIKH	**Nikolski High**	**0.88**	**18**	Pn	**Pn**	**22 56 18.3**	**-1.0**
NIKH				IAML		22 56 33.6	
	comp=E,3µm,0.6s						
NIKH	**Nikolski High**	**0.88**	**18**		**Sn**	**22 56 32.0**	**+1.0**
OKCE	**Okmok Cone E**	**1.46**	**28**		**Pn**	**22 56 27.5**	**+0.1**
OKTU	**Okmok Mt. Tuli**	**1.46**	**31**		**Pn**	**22 56 27.5**	**+0.1**
MAPS	**Pakushin South**	**2.19**	**40**		**Pn**	**22 56 37.9**	**+0.4**
MNAT	**Makushin Natee**	**2.35**	**41**		**Pn**	**22 56 40.1**	**+0.5**
UNV	**Unalaska Valle**	**2.40**	**44**	Pn	**Pn**	**22 56 40.3**	**0.0**
UNV				IAML		22 57 21.0	
	comp=N,263nm,0.5s						
UNV	**Unalaska Valle**	**2.40**	**44**		**Sn**	**22 57 10.3**	**+1.7**
AKRB	**Akutan Reef Bi**	**2.78**	**43**		**Pn**	**22 56 46.0**	**+0.4**
ZRO	**Akutan Zero**	**2.80**	**44**		**Pn**	**22 56 45.9**	**+0.2**
ZRO					**Sn**	**22 57 21.4**	**+3.0**
LVA	**Lava Point**	**2.82**	**43**	Pn	**Pn**	**22 56 46.6**	**+0.5**
LVA				IAML		22 57 23.6	
	comp=E,270nm,0.6s						
LVA				IAML		22 57 38.0	
	comp=N,443nm,0.8s						
AHB	**Akutan Harbor**	**2.88**	**45**		**Sn**	**22 57 24.0**	**+3.5**
AKUT	**Akutan**	**2.92**	**45**	Pn	**Pn**	**22 56 48.3**	**+1.0**
KOFP	**Korovin Flat P**	**2.96**	**274**		**Pn**	**22 56 48.6**	**+0.6**
KOKV	**Korovin Volcan**	**3.00**	**276**		**Pn**	**22 56 49.0**	**+0.4**
KOKV					**Sn**	**22 57 26.3**	**+2.8**
KOKL	**Mount Kliuchef**	**3.02**	**275**		**Pn**	**22 56 49.5**	**+0.7**
KONW	**Korovin Northw**	**3.03**	**277**		**Pn**	**22 56 49.8**	**+0.9**
GSIG	**Igitkin Island**	**4.09**	**270**		**Pn**	**22 57 03.9**	**+0.4**
GSTR	**Great Sitkin T**	**4.17**	**272**	Pn	**Pn**	**22 57 05.0**	**+0.4**
GSMY	**Great Sitkin M**	**4.17**	**271**		**Pn**	**22 57 05.1**	**+0.5**
GSTD	**Great Sitkin T**	**4.22**	**272**		**Pn**	**22 57 05.7**	**+0.3**
GSTD					**Sn**	**22 57 55.1**	**+1.5**
ETKA	**Kagalaska Isla**	**4.40**	**269**		**Pn**	**22 57 08.2**	**+0.4**
ADAG	**Mount Adagdak**	**4.51**	**271**		**Pn**	**22 57 09.8**	**+0.6**
ADK	**Adak**	**4.57**	**270**	Pn	**Pn**	**22 57 10.9**	**+0.8**
ADK				IAML		22 58 22.0	
	comp=N,75nm,0.7s						
ADK				IAML		22 58 27.0	
	comp=N,72nm,0.6s						
KIRH	**Kanaga Island**	**4.82**	**270**		**Pn**	**22 57 14.1**	**+0.6**
KIWB	**Kanaga Island**	**4.86**	**270**	Pn	**Pn**	**22 57 14.9**	**+0.8**
KIWB				IAML		22 58 14.4	
	comp=E,76nm,1.3s						
KIWB				IAML		22 58 35.2	
	comp=N,53nm,0.6s						
KIMD	**Kanaga Island**	**4.92**	**269**		**Pn**	**22 57 15.9**	**+0.9**
SPIA	**Saint Paul Isl**	**5.08**	**354**	Pn	**Pn**	**22 57 17.9**	**+1.0**
SPIA				IAML		22 59 47.1	
	comp=E,111nm,1.4s						
DT1	**Dutton Round H**	**5.12**	**52**		**Pn**	**22 57 18.5**	**+0.8**
TAFL	**Tanaga Flats**	**5.33**	**269**		**Pn**	**22 57 21.0**	**+0.5**
TASE	**Tanaga Southea**	**5.41**	**270**		**Pn**	**22 57 22.9**	**+1.2**
GANE	**Gareloi Northe**	**5.87**	**271**		**Pn**	**22 57 29.4**	**+1.5**
GANO	**Gareloi North**	**5.88**	**271**		**Pn**	**22 57 29.4**	**+1.3**
GAKI	**Gareloi-Kavalg**	**5.93**	**268**		**Pn**	**22 57 30.1**	**+1.5**
CNBA	**Chernabura Isl**	**6.39**	**61**	Pn	**Pn**	**22 57 37.3**	**+2.3**
AMKA	**Amchitka**	**7.12**	**268**	Pn	**Pn**	**22 57 45.8**	**+0.8**
O14K	**Tigyukauivet M**	**8.44**	**29**	Pn	**Pn**	**22 58 05.3**	**+2.2**
O15K	**Ungalikthiuk R**	**8.85**	**33**	Pn	**Pn**	**22 58 11.0**	**+2.4**
N14K	**Kuskokwak Cree**	**8.88**	**26**	Pn	**Pn**	**22 58 12.1**	**+3.0**
M13K	**Dall Lake**	**8.92**	**19**	Pn	**Pn**	**22 58 12.1**	**+2.4**
PLK4	**Peulik 4**	**9.26**	**48**	Pn	**Pn**	**22 58 15.2**	**+0.7**
N15K	**Kwethluk River**	**9.54**	**29**	Pn	**Pn**	**22 58 21.1**	**+2.9**
O16K	**Kokwok River B**	**9.76**	**36**	Pn	**Pn**	**22 58 23.3**	**+2.2**
L14K	**Kuka Creek**	**9.91**	**19**	Pn	**Pn**	**22 58 25.9**	**+2.8**
K13K	**Kusilvak Mount**	**10.13**	**13**	Pn	**Pn**	**22 58 28.7**	**+2.4**
M16K	**Timber Creek**	**10.56**	**28**	Pn	**Pn**	**22 58 34.1**	**+2.0**
P18K	**Big Mountain,**	**10.73**	**42**	Pn	**Pn**	**22 58 36.4**	**+1.9**
N17K	**Nushagak Hills**	**10.74**	**34**	Pn	**Pn**	**22 58 38.5**	**+3.9**
L16K	**Owhat River**	**10.98**	**25**	Pn	**Pn**	**22 58 40.9**	**+3.1**
KDAK	**Kodiak Island**	**11.13**	**53**	Pn	**Pn**	**22 58 38.2**	**-1.8**
	comp=E,0.4nm,0.3s,baz=229,slow=5.8,SNR=5.5						
KDAK	**Kodiak Island**	**11.13**	**53**	Pn	**Pn**	**22 58 39.1**	**-0.8**
Q19K	**Cape Douglas,**	**11.16**	**46**	Pn	**Pn**	**22 58 42.1**	**+1.8**
GAMB	**Gambell**	**11.74**	**355**	Pn	**Pn**	**22 58 50.0**	**+1.8**
N19K	**Bonanza Creek**	**11.91**	**37**	Pn	**Pn**	**22 58 53.3**	**+2.6**
K17K	**Iditarod**	**12.12**	**25**	Pn	**Pn**	**22 58 55.6**	**+2.2**
L18K	**Granite Mounta**	**12.17**	**29**	Pn	**Pn**	**22 58 56.3**	**+2.1**
SLKM	**Skilak Lake**	**13.45**	**44**	Pn	**Pn**	**22 59 10.5**	**-1.2**
SEW	**Seward**	**13.60**	**46**	Pn	**Pn**	**22 59 12.1**	**-1.5**
SUA	**Susitna One**	**13.75**	**40**	Pn	**Pn**	**22 59 16.2**	**+0.4**
H18K	**Honhosa River**	**14.20**	**19**	P	**P**	**22 59 28.1**	**-0.8**
L22K	**Petersville**	**14.37**	**36**	Pn	**Pn**	**22 59 23.1**	**-1.1**
GHO	**Glory Hole Cre**	**14.65**	**41**	Pn	**Pn**	**22 59 27.7**	**-0.3**
KNK	**Knik Glacier**	**14.65**	**43**	Pn	**Pn**	**22 59 26.0**	**-2.0**
SML	**Sawmill**	**14.91**	**41**	Pn	**Pn**	**22 59 29.1**	**-2.4**
KTH	**Kantishna Hill**	**14.97**	**33**	Pn	**Pn**	**22 59 29.4**	**-3.0**
HIN	**Hinchinbrook I**	**15.05**	**48**	Pn	**Pn**	**22 59 31.5**	**-1.9**
SCM	**Sheep Creek Mo**	**15.33**	**42**	Pn	**Pn**	**22 59 33.7**	**-3.4**
KLU	**Klutina**	**15.77**	**44**	Pn	**Pn**	**22 59 39.7**	**-3.1**
KLU				IAmb	IAmb	22 59 54.3	
	comp=Z,13nm,1.2s						
BMRM	**Bremner River**	**16.14**	**47**	Pn	**Pn**	**22 59 45.3**	**-2.1**
BMRM				IAmb	IAmb	23 00 23.2	
	comp=Z,12nm,1.1s						
BERG	**Berg Lake**	**16.35**	**50**	Pn	**Pn**	**22 59 49.0**	**-1.1**
N25K	**Chitina, Valde**	**16.39**	**45**	Pn	**Pn**	**22 59 48.8**	**-1.9**
N25K				IAmb	IAmb	23 00 22.6	
	comp=Z,24nm,1.4s						
GLB	**Gilahina Butte**	**16.67**	**46**	Pn	**Pn**	**22 59 52.9**	**-1.3**
CRQM	**Cirque**	**16.73**	**49**	Pn	**Pn**	**22 59 53.7**	**-1.4**
VRDI	**Verde Repeater**	**16.75**	**47**	Pn	**Pn**	**22 59 53.3**	**-2.1**
TGL	**Tana Glacier**	**16.88**	**49**	Pn	**Pn**	**22 59 55.5**	**-1.3**
TGL				IAmb	IAmb	23 00 28.6	
	comp=Z,28nm,1.5s						
GRNC	**Granite Creek**	**17.37**	**50**	Pn	**Pn**	**23 00 02.4**	**-0.7**
GRNC				IAmb	IAmb	23 00 36.6	
	comp=Z,12nm,1.0s						
BARN	**Barnard Glacie**	**17.51**	**49**	Pn	**Pn**	**23 00 02.8**	**-2.1**
BARN				IAmb	IAmb	23 00 11.8	
	comp=Z,15nm,1.4s						
CTGM	**Chitina Glacie**	**17.64**	**49**		**Pn**	**23 00 07.2**	**+0.9**
CTGM				IAmb	IAmb	23 00 50.9	
	comp=Z,14nm,1.3s						
E21K	**Killik River**	**17.93**	**19**		**Pn**	**23 00 09.6**	**-0.2**
L27K	**Beaver Creek,**	**18.17**	**42**	P	**Pn**	**23 00 09.6**	**-3.1**
BCAR	**Beaver Creek A**	**18.19**	**42**		**Pn**	**23 00 10.7**	**-2.3**
O29M	**Mount Kennedy**	**18.78**	**52**	P	**P**	**23 00 20.7**	**+1.0**
O29M				IAmb	IAmb	23 00 57.4	
	comp=Z,13nm,1.2s						
M29M	**Somme Creek**	**19.39**	**46**	P	**P**	**23 00 26.6**	**+0.3**
HYT	**Haines Junctio**	**19.41**	**51**		**Pn**	**23 00 28.9**	**+1.0**
HYT				IAmb	IAmb	23 00 34.3	
	comp=Z,19nm,1.4s						
N30M	**Aishikik Lake**	**19.75**	**49**	P	**P**	**23 00 31.0**	**+0.8**
N30M				IAmb	IAmb	23 00 51.6	
	comp=Z,15nm,1.5s						
O30N	**Mendenhall**	**20.08**	**52**	P	**P**	**23 00 35.4**	**+1.6**
O30N				IAmb	IAmb	23 00 37.1	
	comp=Z,9.2nm,1.0s						
N31M	**Braeburn, Yuko**	**20.37**	**50**	P	**P**	**23 00 37.2**	**+0.3**
N31M				IAmb	IAmb	23 01 03.8	
	comp=Z,12nm,1.1s						
WHY	**Whitehorse**	**20.65**	**52**	P	**P**	**23 00 39.8**	**-0.2**
N32M	**Quiet Lake**	**21.59**	**51**	P	**P**	**23 00 50.9**	**+0.8**
N32M				IAmb	IAmb	23 01 04.5	
	comp=Z,6.3nm,0.8s						
P33M	**Teslin, Yukon**	**21.60**	**54**	P	**P**	**23 00 51.3**	**+1.1**
MMPY	**Sheldon Lake,**	**22.67**	**48**	P	**P**	**23 01 01.4**	**-0.2**
MMPY				IAmb	IAmb	23 01 25.8	
	comp=Z,11nm,1.4s						
G31M	**Satah River**	**22.68**	**36**	P	**P**	**23 00 59.8**	**-1.8**
INK	**Inuvik**	**23.51**	**33**	P	**P**	**23 01 08.4**	**-1.5**
YKAW3	**Yellowknife Wh**	**30.35**	**48**	P	**P**	**23 02 12.2**	**+0.5**
YKAW3				IAmb	IAmb	23 02 24.1	
	comp=Z,5.0nm,1.4s						
YKA	**Yellowknife Ar**	**30.36**	**49**	P	**P**	**23 02 11.0**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=277,slow=9.0,SNR=4.4						
	comp=Z,0.3nm,0.4s						
KLR	**Kul'dur**	**36.58**	**290**	LR	LR	23 19 17.9	
	comp=Z,29nm,18.3s,baz=134,slow=38						
H11N2	**WAKE ISLAND Hy**	**37.30**	**219**	T	T	23 43 08.2	
	baz=21						
H11N3	**WAKE ISLAND Hy**	**37.31**	**219**	T	T	23 43 18.7	
	baz=21,slow=74						
H11N1	**WAKE ISLAND Hy**	**37.32**	**219**	T	T	23 43 19.7	
	baz=21,slow=74						
H11S1	**WAKE ISLAND Hy**	**38.49**	**218**	T	T	23 44 28.5	
	baz=23,slow=76,SNR=31						
H11S2	**WAKE ISLAND Hy**	**38.50**	**218**	T	T	23 44 34.6	
	baz=23,slow=76,SNR=24						
H11S3	**WAKE ISLAND Hy**	**38.51**	**218**	T	T	23 44 34.8	
	baz=23,slow=76,SNR=18						
PDAR	**Pinedale Array**	**40.40**	**79**	P	**P**	**23 03 38.7**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=299,slow=8.6,SNR=3.0						
	comp=Z,0.4nm,0.7s						
PDAR	**Pinedale Array**	**40.40**	**79**	P	**P**	**23 03 38.9**	**+0.5**
SPITS	**Spitsbergen Ar**	**49.90**	**358**	P	**P**	**23 04 52.3**	**-0.8**
	comp=Z,17nm,1.1s,baz=107,slow=2.8,SNR=4.4						
	comp=Z,17nm,1.1s						
SONM	**Songino Array**	**51.45**	**301**	P	**P**	**23 05 05.1**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=71,slow=6.2,SNR=2.6						
	comp=Z,0.2nm,0.3s						
TXAR	**Lajitas Array**	**52.71**	**89**	P	**P**	**23 05 15.4**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=324,slow=8.2,SNR=2.4						
	comp=Z,0.2nm,0.5s						
ARCES	**ARCESS Array B**	**58.15**	**354**	P	**P**	**23 05 52.8**	**-0.5**
	comp=Z,3.9nm,1.0s,baz=25,slow=6.8,SNR=1.2						
	comp=Z,3.9nm,1.0s						
KURK	**Kurchatov**	**62.57**	**318**	P	**P**	**23 06 23.0**	**-0.8**
KURBB	**Kurchatov Arra**	**62.68**	**318**	P	**P**	**23 06 24.0**	**-0.5**
	comp=Z,1.2nm,0.8s,baz=45,slow=7.1,SNR=11						
	comp=Z,1.2nm,0.8s						
BVAR	**Borovoye Array**	**63.91**	**325**	P	**P**	**23 06 32.5**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=52,slow=6.2,SNR=23						
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	**63.99**	**314**	P	**P**	**23 06 32.8**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=50,slow=8.0,SNR=4.7						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**63.99**	**314**	P	**P**	**23 06 32.0**	**-1.2**
FINES	**FINESS Array B**	**66.10**	**352**	P	**P**	**23 06 45.9**	**-0.8**
	comp=Z,3.4nm,1.0s,baz=35,slow=7.0,SNR=6.0						
	comp=Z,3.4nm,1.0s						
FINES	**FINESS Array B**	**66.10**	**352**	P	**P**	**23 06 46.4**	**-0.3**
NOA	**NORSAR Array B**	**67.17**	**360**	P	**P**	**23 06 53.5**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=2.8,slow=11,SNR=3.3						
	comp=Z,0.7nm,0.8s						
HFS	**Hagfors**	**68.05**	**358**	P	**P**	**23 06 58.4**	**-0.7**
	comp=Z,1.4nm,0.5s,baz=11,slow=3.0,SNR=9.7						
	comp=Z,1.4nm,0.5s						
AAK	**Ala-Archa**	**70.69**	**315**	P	**P**	**23 07 15.5**	**-0.4**
AAK				IAmb	IAmb	23 07 17.3	
	comp=Z,2.0nm,0.9s						
GAR	**Garm**	**75.48**	**316**	P	**P**	**23 07 43.4**	**-0.9**
CHGR	**Chuyangaron**	**76.26**	**317**	P	**P**	**23 07 48.8**	**+0.2**
AKASG	**Malin Array Be**	**76.34**	**348**	P	**P**	**23 07 48.2**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=15,slow=4.9,SNR=3.2						
	comp=Z,0.7nm,0.4s						
CMAR	**Chiang Mai Arr**	**76.71**	**283**	P	**P**	**23 07 51.5**	**+0.1**
	comp=Z,1.0nm,0.9s,baz=22,slow=6.9,SNR=7.9						
	comp=Z,1.0nm,0.9s						
KBZ	**Khabaz**	**80.54**	**337**	P	**P**	**23 08 12.8**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=37,slow=1.9,SNR=3.8						
	comp=Z,0.9nm,0.7s						
GNI	**Garni**	**83.43**	**334**	LR	LR	23 52 29.6	
	comp=Z,12nm,18.5s,baz=290,slow=41						
ASAR	**Alice Springs**	**90.28**	**230**	P	**P**	**23 08 60.0**	**-0.8**
	comp=Z,0.7nm,1.0s,baz=54,slow=6.5,SNR=4.3						
	comp=Z,0.7nm,1.0s						

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*NEIC **03** 22:56:46.0±2.2, 3°.57N±0°.08×124°.70E±0°.09, h206^{km}±13^{km}, mb4.3/11, Error ellipse: s-maj=14.0km s-min=10.1km az=47.0*
*IDC **03** 22:56:52.2±2.1, 3°.78N×125°.16E, h291^{km}±31^{km}, mb3.5/5, mbtmp4.2/6, Error ellipse: s-maj=60.8km s-min=13.8km az=62.0*
ISC 03 22:56:45.1±0.8**, 3°.57N**±0°.07×**124°.8E**±0°.1**, h200**^{km}**, n23,** σ**1^s.42**/22**, mb4.2**/11**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**3.56**	**12**	P	Pn	22 57 50.4	+8.8
	126nm,0.5s,baz=250,slow=21,SNR=4.2						
DAV	**Davao City (W)**	**3.56**	**12**		**Pn**	**22 57 41.9**	**+0.3**
TOLI2	**Tolitoli**	**4.71**	**239**	Pn	**Pn**	**22 57 55.2**	**-0.6**
KKM	**Kota Kinabalu**	**8.91**	**286**		**Pn**	**22 58 50.3**	**-0.1**
MTN	**Manton Dam**	**17.47**	**159**		**P**	**23 00 31.9**	**-3.3**
MTN				IAmb	IAmb	23 00 57.5	
	comp=Z,17nm,1.1s						
KNRA	**Kununurra**	**19.52**	**169**	P	**P**	**23 00 57.2**	**-0.1**
KNRA				IAmb	IAmb	23 01 04.0	
	comp=Z,15nm,1.1s						
FITZ	**Fitzroy Crossi**	**21.54**	**178**	P	**P**	**23 01 21.3**	**+2.5**
	comp=Z,5.2nm,0.7s,baz=16,slow=9.4,SNR=7.0						
	comp=Z,5.2nm,0.7s						
WB0	**Warramunga Arr**	**25.03**	**158**	P	**P**	**23 01 50.0**	**-0.9**
WRAB	**Tennant Creek**	**25.16**	**158**	P	**P**	**23 01 52.0**	**-0.2**
WRAB				IAmb	IAmb	23 01 54.5	
	comp=Z,8.2nm,0.9s						
WRA	**Warramunga Arr**	**25.17**	**159**	P	**P**	**23 01 52.0**	**-0.2**
	comp=Z,4.9nm,0.7s,baz=335,slow=11,SNR=47						
	comp=Z,4.9nm,0.7s						
WRA	**Warramunga Arr**	**25.17**	**159**	P	**P**	**23 01 51.4**	**-0.8**
WR8	**Warramunga Arr**	**25.24**	**158**	P	**P**	**23 01 53.3**	**+0.4**
WR8				IAmb	IAmb	23 01 54.7	
	comp=Z,10.0nm,1.1s						
AS31	**Alice Springs**	**28.48**	**162**	P	**P**	**23 02 22.2**	**+0.4**
AS31				IAmb	IAmb	23 02 24.1	
	comp=Z,0.8nm,0.7s						
ASAR	**Alice Springs**	**28.48**	**162**	P	**P**	**23 02 21.7**	**-0.1**
	comp=Z,0.7nm,0.4s,baz=342,slow=7.2,SNR=28						
	comp=Z,0.7nm,0.4s						
ASAR	**Alice Springs**	**28.48**	**162**	P	**P**	**23 02 21.8**	**0.0**
CMAR	**Chiang Mai Arr**	**29.32**	**302**	P	**P**	**23 02 30.2**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=110,slow=6.3,SNR=4.7						
	comp=Z,0.7nm,0.3s						
FORT	**Forrest**	**34.29**	**175**	P	**P**	**23 03 15.0**	**+2.5**
FORT				IAmb	IAmb	23 03 31.2	
	comp=Z,6.6nm,0.9s						
BBOO	**Buckleboo**	**37.72**	**164**	P	**P**	**23 03 42.9**	**+1.4**
BBOO				IAmb	IAmb	23 03 44.2	
	comp=Z,12nm,1.1s						
STKA	**Stephens Creek**	**38.69**	**157**	P	**P**	**23 03 49.2**	**-0.5**
	comp=Z,3.2nm,0.6s,baz=322,slow=9.2,SNR=5.6						
	comp=Z,3.2nm,0.6s						
STKA	**Stephens Creek**	**38.69**	**157**	P	**P**	**23 03 50.0**	**+0.3**
MKAR	**Makanchi Array**	**56.61**	**326**	P	**P**	**23 06 05.3**	**-1.9**
	comp=Z,0.1nm,0.4s,baz=116,slow=7.9,SNR=5.7						
MKAR	**Makanchi Array**	**56.61**	**326**	P	**P**	**23 06 05.6**	**-1.6**
MAKZ	**Makanchi**	**56.79**	**326**	P	**P**	**23 06 06.8**	**-1.7**

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*IDC **03** 23:32:19.2±2.7, 36°.63N×69°.23E, h0^{km}, mb3.5/5, mbtmp3.6/8, ML3.2/3, Error ellipse: s-maj=44.6km s-min=24.2km az=160.0*
ISC 03 23:32:19.6±1.7**, 36°.5N**±0°.1×**69°.1E**±0°.1**, h10**^{km}**, n10,** σ**1^s.78**/14**, mb3.4**/4**, 5C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.68**	**9**	⇑Pn	**Pn**	**23 33 58.3**	**+0.5**
	1.9nm,0.5s,baz=170,slow=8.5,SNR=26						
KK31				⇑Pg	**Pb**	**23 34 19.6**	**+3.7**
	3.0nm,0.6s						
KK31				⇓Sn	**Sn**	**23 35 11.9**	**-2.1**
	5.2nm,0.7s,baz=199,slow=25,SNR=4.1						
KK31				⇓Lg	Lg	23 35 46.8	
	6.0nm,0.5s,baz=193,slow=28,SNR=7.4						
AAK	**Ala-Archa**	**7.39**	**32**	Pn	**Pn**	**23 34 09.0**	**+1.2**
	1.3nm,0.3s,baz=217,slow=9.1,SNR=46						
AAK				Sn	**Sn**	**23 35 29.9**	**-1.9**
	0.7nm,0.3s,baz=254,slow=20,SNR=5.9						
	5.2nm,0.5s						
AAK	**Ala-Archa**	**7.39**	**32**	⇑Pn	**Pn**	**23 34 08.2**	**+0.5**
	5.1nm,0.7s						
AAK				⇑Sn	**Sn**	**23 35 30.9**	**-0.9**
	3.6nm,0.7s						
AAK				⇑Lg	Lg	23 36 05.9	
	11nm,1.2s						
MKAR	**Makanchi Array**	**14.21**	**40**	Pn	**Pn**	**23 35 40.8**	**-0.1**
	baz=226,slow=12,SNR=8.3						
	0.8nm,0.8s						
AKTO	**Aktyubinsk**	**16.08**	**334**	Pn	**Pn**	**23 36 03.7**	**-1.9**
	0.1nm,0.3s,baz=144,slow=12,SNR=3.7						
	1.9nm,0.8s						
ZALV	**Zalesovo Beam**	**20.57**	**27**	P	**P**	**23 36 55.9**	**-2.5**
	0.5nm,0.3s,baz=214,slow=10,SNR=4.7						
	0.5nm,0.3s						
ARTI	**Arti**	**21.18**	**343**	P	**P**	**23 37 04.5**	**-0.4**
	0.8nm,0.4s,baz=149,slow=12,SNR=3.4						
	0.8nm,0.4s						
SONM	**Songino Array**	**29.57**	**56**	P	**P**	**23 38 25.0**	**+0.3**
	0.2nm,0.4s,baz=256,slow=9.8,SNR=2.7						
	0.2nm,0.4s						
NOA	**NORSAR Array B**	**43.48**	**323**	P	**P**	**23 40 23.4**	**+0.6**
	0.7nm,0.8s,baz=96,slow=8.1,SNR=2.1						
	0.7nm,0.8s						
YKA	**Yellowknife Ar**	**81.31**	**2**	P	**P**	**23 44 35.7**	**-0.1**
	0.2nm,0.6s,baz=356,slow=5.7,SNR=4.2						
	0.2nm,0.6s						

IDC 03 23:36:55.7±8.9**, 10°.53S**×**165°.86E, h187**^{km}±92^{km}**, mb3.3**/3**, mbtmp3.9**/4**, Error ellipse: s-maj=74.4km s-min=32.6km az=153.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.49**	**177**	P	Pn	23 39 34.6	+0.1
	5.7nm,0.4s,baz=43,slow=18,SNR=16						
WRA	**Warramunga Arr**	**31.77**	**249**	P	P	23 43 02.5	-0.1
	0.4nm,0.5s,baz=81,slow=9.1,SNR=8.9						
WRA				PcP	PcP	23 45 49.3	-0.1
	0.3nm,0.9s,baz=66,slow=2.7,SNR=1.8						
	0.4nm,0.5s						
ILAR	**Eielson Array**	**82.99**	**18**	P	P	23 48 59.4	-0.1
	0.5nm,0.6s,baz=232,slow=5.0,SNR=8.3						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**93.23**	**317**	P	P	23 49 48.9	-0.1
	0.4nm,0.7s,baz=93,slow=6.8,SNR=6.4						
	0.4nm,0.7s						

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*IDC **04** 00:07:57.4±2.7, 7°.02S×147°.39E, h95^{km}±27^{km}, mb3.5/3, mbtmp3.9/5, Error ellipse: s-maj=58.3km s-min=19.0km az=110.0*
ISC 04 00:07:52.9±1.7**, 6°.9S**±0°.1×**147°.0E**±0°.3**, h33**^{km}**, n6,** σ**2^s.63**/8**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.48**	**176**	P	**Pn**	**00 08 33.5**	**+2.5**
	198nm,0.5s,baz=18,slow=5.0,SNR=24						
PMG				S	**Sb**	**00 09 04.8**	**-2.3**
	102nm,0.5s,baz=3.4,slow=13,SNR=3.3						
WRA	**Warramunga Arr**	**17.84**	**222**	P	**P**	**00 12 00.1**	**+0.8**
	0.8nm,0.3s,baz=51,slow=11,SNR=41						
ASAR	**Alice Springs**	**20.86**	**216**	P	**P**	**00 12 33.0**	**+0.7**
	3.2nm,0.6s,baz=52,slow=9.1,SNR=64						
ASAR				S	**S**	**00 16 23.4**	**0.0**
	1.1nm,1.0s,baz=35,slow=23,SNR=4.2						
	3.2nm,0.6s						
STKA	**Stephens Creek**	**25.34**	**191**	P	**P**	**00 13 16.4**	**-0.5**
	3.4nm,0.5s,baz=350,slow=9.3,SNR=7.4						
	3.4nm,0.5s						
MKAR	**Makanchi Array**	**78.19**	**321**	P	**P**	**00 19 50.4**	**+1.2**
	0.1nm,0.3s,baz=106,slow=6.4,SNR=2.4						
	0.1nm,0.3s						
TORD	**Torodi Ar. Bea**	**145.29**	**283**	PKPbc	**PKPbc**	**00 27 23.6**	**-4.5**
	0.3nm,0.4s,baz=72,slow=4.4,SNR=7.8						

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*NDI **04** 00:19:59.9±4.2, 24°.31N×96°.71E, h39^{km}±113^{km}, mb4.6, ML4.6, MW4.7, Presumed earthquake*
*IDC **04** 00:20:00.1±0.6, 24°.24N×95°.91E, h0^{km}, mb4.3/22, mbtmp4.3/25, ML4.4/3, MS4.2/78, Error ellipse: s-maj=15.2km s-min=12.2km az=50.0*
*BJI **04** 00:20:01.4, 24°.39N×95°.99E, h17^{km}, mB5.0/29, mb4.5/60, ML4.5/6, Ms4.9/65, Ms7 4.5/60*
*BKK **04** 00:20:03.3±1.0, 24°N±10°×9°6E±°, h10^{km}, M4.7/28, mB5.2/20, mb5.2/25, Mjma5.4/28, MLv4.6/3, Mw(mB)4.5/20, MwMwp4.4/5, Mwp4.8/5*
*NEIC **04** 00:20:03.2±1.9, 24°.42N±0°.06×96°.10E±0°.06, h10^{km}±1^{km}, mb4.8/121, Error ellipse: s-maj=11.0km s-min=8.7km az=191.0*
*GCMT **04** 00:20:04.2±0.2, 24°.35N±0°.01×96°.16E±0°.01, h13^{km}±1^{km}, MW4.9/113, Moment Tensor Solution. s29,c35; s113,c169; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.11±.07; $M_{\theta\theta}$1.02±.07; $M_{\phi\phi}$-0.91±.07; $M_{r\theta}$0.99±.20; $M_{\theta\phi}$2.39±.08; $M_{\phi r}$0.49±.17; Best double couple: $M_0$2.77400×10^{16} NP1:ϕ_s9.00000°, δ74.00000°, λ169.00000°. NP2:ϕ_s102.00000°, δ79.00000°, λ17.00000°. Principal axes: T 3.0170, Plg19.0000°, Azm327.0000°; N -0.4800, Plg70.0000°, Azm134.0000°; P -2.5320, Plg4.0000°, Azm235.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 04 00:20:03.7±0.7**, 24°.39N**±0°.04×**96°.08E**±0°.03**, h17**^{km}±4^{km}**, n506,** σ**1^s.36**/458**, mb4.7**/101**, MS4.2**/89**, 8C-7D, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MORE	**Moreh**	**1.63**	**265**		**Pn**	**00 20 32.1**	**+0.5**
MORE					**Sn**	**00 20 54.1**	**+1.8**
IMP	**Imphal**	**1.99**	**283**	*e*P	**Pn**	**00 20 38.5**	**+1.8**
IMP				*e*S	**Sg**	**00 21 06.8**	**-1.0**
IMP				IAML		00 21 12.0	
	comp=N,3µm,0.9s						
IMP				IAML		00 21 15.7	
	comp=E,4µm,0.9s						
KOHI	**KOHIMA**	**2.23**	**307**	*e*P	**Pn**	**00 20 42.5**	**+2.5**
KOHI				*e*S	**Sb**	**00 21 13.9**	**+3.0**
KOHI				IAML		00 21 26.3	
	comp=E,8µm,1.2s						
KOHI				IAML		00 21 26.7	
	comp=N,4µm,1.0s						
TNCH	**TengChong**	**2.31**	**74**	Pn	**Pn**	**00 20 40.7**	**-0.4**
TNCH				Pg	**Pb**	**00 20 44.7**	**-0.3**
TNCH				Sg	**Sn**	**00 21 10.7**	**+1.5**
TNCH				SMN			
	comp=N,9µm,1.0s						
TNCH				SME			
	comp=N,8µm,1.9s						
MOKO	**MOKOCHONG**	**2.39**	**324**	*e*P	**Pn**	**00 20 44.7**	**+2.5**
MOKO				*e*S	**Sb**	**00 21 15.5**	**-0.1**
MOKO				IAML		00 21 22.8	
	comp=E,8µm,0.8s						
MOKO				IAML		00 21 25.3	
	comp=N,5µm,1.3s						
SAIH	**SAIHA**	**3.41**	**237**	*e*P	**Pn**	**00 20 58.0**	**+1.7**
SAIH				*e*S	**Sn**	**00 21 40.4**	**+3.9**
SAIH				IAML		00 21 55.9	
	comp=E,1µm,0.7s						
SAIH				IAML		00 22 08.6	
	comp=N,2µm,1.4s						
ITAN	**ITANAGAR**	**3.47**	**323**	*e*P	**Pn**	**00 20 58.7**	**+1.7**
ITAN				*e*S	**Sn**	**00 21 39.2**	**+1.6**
ITAN				IAML		00 21 53.5	
	comp=N,2µm,1.6s						
ITAN				IAML		00 21 59.7	
	comp=E,3µm,1.3s						
TEZP	**TEZPUR**	**3.70**	**307**	*e*P	**Pn**	**00 21 00.5**	**+0.4**
TEZP				*e*S	**Sn**	**00 21 44.0**	**+0.7**
TEZP				IAML		00 22 07.4	
	comp=N,9µm,1.9s						
TEZP				IAML		00 22 07.7	
	comp=E,10µm,2.8s						
ZIRO	**ZIRO**	**3.71**	**328**	*e*P	**Pn**	**00 21 00.9**	**+0.5**
ZIRO				*e*S	**Sn**	**00 21 42.1**	**-1.8**
ZIRO				IAML		00 22 08.9	
	comp=E,4µm,0.5s						
ZIRO				IAML		00 22 13.0	
	comp=N,3µm,0.6s						
PASG	**PASIGHAT**	**3.72**	**350**	*e*P	**Pn**	**00 20 59.8**	**-0.6**
SHL	**Shillong**	**3.98**	**288**	Pn	**Pn**	**00 21 04.8**	**+0.6**
SHL	**Shillong**	**3.98**	**288**	*e*P	**Pn**	**00 21 05.2**	**+0.9**
SHL				*e*S	**Sn**	**00 21 51.9**	**+1.3**
SHL				IAML		00 21 53.8	
	comp=N,1µm,0.5s						
SHL				IAML		00 22 00.3	
	comp=E,2µm,0.6s						
GUWA	**GUWAHATI**	**4.36**	**295**	*e*P	**Pn**	**00 21 09.2**	**+0.1**
GUWA				*e*S	**Sn**	**00 21 59.7**	**+0.1**
GUWA				*e*S	**Sn**	**00 22 01.2**	**+1.6**
GUWA				IAML		00 22 02.2	
	comp=N,1µm,0.6s						
GUWA				IAML		00 22 04.9	
	comp=E,1µm,0.5s						
BRDH	**Bariadhala**	**4.42**	**248**	Pn	Pn	00 21 06.2	-3.8
	comp=E,35nm,0.3s,baz=66,slow=12,SNR=8.2						
BRDH				Lg	Lg	00 22 10.3	
	comp=E,64nm,0.3s,baz=71,slow=16,SNR=4.5						
BRDH				LR	LR	00 23 22.6	
	comp=E,4µm,18.3s,baz=46,slow=48						
	comp=E,100nm,0.4s						
TAWA	**Tawang**	**4.96**	**311**	*e*P	**Pn**	**00 21 18.8**	**+1.1**
TAWA				*e*S	**Sn**	**00 22 17.1**	**+2.3**
TAWA				IAML		00 22 25.6	
	comp=N,2µm,0.8s						
CMAI	**Chiengmai2**	**5.22**	**148**	P	**Pn**	**00 21 21.0**	**-0.2**

comp=N,18nmcomp=N,2μmcomp=N,133nm,0.8s
PZH PanZhiHua 5.53 66 Pn **Pn** **00 21 28.2 +2.8**
PZH Sg **Sg** **00 22 57.2 -4.2**
PZH SMN
comp=N,170nm,1.5s
PZH SME
comp=N,200nm,1.4s
PZH L L
comp=N,7μm,5.1s
PZH L L
comp=N,6μm,6.1s
PZH L L
comp=N,3μm,6.9s
DHUB DHUBRI 5.75 288 *e*P **Pn** **00 21 28.2 0.0**
DHUB *e*S **Sn** **00 22 34.0 +0.2**
DHUB IAML 00 22 37.8
comp=N,1μm,0.7s
DHUB IAML 00 22 41.0
comp=E,1μm,1.0s
KMI2 Kunming 6.11 82 Pn **Pn** **00 21 36.8 +3.4**
KMI2 Sg **Sg** **00 23 16.8 -3.0**
KMI2 SMN
comp=E,430nm,1.4s
KMI2 SME
comp=E,220nm,1.4s
KMI2 L L
comp=E,22μm,9.0s
KMI2 L L
comp=E,6μm,6.7s
KMI2 L L
comp=E,3μm,12.8s
CHTO Chiang Mai 6.16 154 Pn **Pn** **00 21 34.0 +0.1**
CHTO Chiang Mai 6.16 154 P **Pn** **00 21 34.2 +0.3**
comp=E,10nmcomp=E,2μmcomp=E,706nmcomp=E,48nm,0.9s
CHTO Chiang Mai 6.16 154 P **Pn** **00 21 34.2 +0.3**
comp=E,1.2nmcomp=E,2μmcomp=E,49nm,0.9s
CM31 Chiang Mai Arr 6.48 155 Pn **Pn** **00 21 38.5 +0.2**
CMAR Chiang Mai Arr 6.48 155 Pn **Pn** **00 21 36.3 -2.0**
comp=E,3.3nm,0.3s,baz=328,slow=14,SNR=40
CMAR Lg Lg 00 23 26.2
comp=E,0.7nm,0.3s,baz=336,slow=26,SNR=2.4
CMAR LR LR 00 24 21.2
comp=E,6μm,18.3s,baz=330,slow=41
comp=E,7.9nm,0.5s
CMAR Chiang Mai Arr 6.48 155 Pn **Pn** **00 21 38.8 +0.5**
CM13 Chiang Mai Arr 6.50 156 P **Pn** **00 21 39.0 +0.4**
comp=E,1.1nmcomp=E,554nmcomp=E,44nm,1.2s
CM02 Chiang Mai Arr 6.50 155 P **Pn** **00 21 39.6 +1.0**
comp=E,1.2nmcomp=E,619nmcomp=E,81nm,0.7s
CM09 Chiang Mai Arr 6.51 155 P **Pn** **00 21 39.6 +0.8**
comp=E,1.6nmcomp=E,614nmcomp=E,81nm,0.8s
CM01 Chiang Mai Arr 6.52 155 P **Pn** **00 21 39.1 +0.2**
comp=E,1.4nmcomp=E,593nmcomp=E,65nm,1.0s
CM05 Chiang Mai Arr 6.53 155 P **Pn** **00 21 39.5 +0.5**
comp=E,1.0nmcomp=E,506nmcomp=E,32nm,0.9s
CM04 Chiang Mai Arr 6.54 155 P **Pn** **00 21 39.9 +0.7**
comp=E,1.4nmcomp=E,28nmcomp=E,576nmcomp=E,47nm,0.6s
LAMP Lampang 6.71 150 P **Pn** **00 21 41.6 +0.1**
comp=E,10nmcomp=E,778nmcomp=E,59nm,0.8s
LSA Lhasa 6.88 321 **Pn** **00 21 44.5 +0.3**
LSA Lhasa 6.88 321 Pn **Pn** **00 21 43.3 -0.9**
LSA Sn **Sn** **00 23 02.8 +0.5**
LSA L L
comp=E,3μm,15.8s
LSA L L
comp=E,3μm,9.7s
LSA L L
comp=E,5μm,16.2s
GTK Tadong 7.34 295 *e*P **Pn** **00 21 50.4 +0.1**
GTK *e*S **Sn** **00 23 12.0 -1.3**
UTTA Uttaradit 7.82 147 P **Pn** **00 21 56.7 0.0**
comp=E,1.2nmcomp=E,620nmcomp=E,74nm,0.6s
EVN Everest 9.05 295 Pn **Pn** **00 22 14.0 -0.1**
BOK Bokaro 9.33 268 *e*P **Pn** **00 22 18.0 +0.4**
BOK *e*S **Sn** **00 23 58.0 -4.2**
BOK IAML 00 24 06.4
comp=N,197nm,1.3s
BOK IAML 00 24 11.8
comp=E,198nm,1.1s
UTHA Uthaitani 9.34 160 P **Pn** **00 22 18.4 +0.8**
CD2 Chengdu 9.40 45 P **Pn** **00 22 21.3 +2.8**
CD2 S **Sn** **00 24 09.5 +5.6**
CD2 pmax pmax
comp=E,10.0nm,0.6s
CD2 pmax pmax
comp=E,420nm,7.9s
CD2 L L
comp=E,7μm,10.2s
CD2 L L
comp=E,7μm,11.4s
CD2 L L
comp=E,5μm,12.7s
GYA Guiyang 9.79 76 ⇑P **Pn** **00 22 25.3 +1.5**
GYA S **Sn** **00 24 15.2 +1.8**
GYA pmax pmax
comp=E,21nm,1.4s
GYA L L
comp=E,2μm,5.3s
GYA L L
comp=E,7μm,9.1s
GYA L L
comp=E,4μm,10.6s
KHLT Khaolaem Dam 9.83 166 P **Pn** **00 22 25.6 +1.2**
GAYA Gaya 9.88 275 *e*P **Pn** **00 22 25.1 +0.1**
GAYA *e*S **Sn** **00 24 12.3 -3.2**
PANO Nakornpanom 10.75 130 P **Pn** **00 22 40.4 +3.5**
comp=E,0.4nmcomp=E,186nmcomp=E,14nm,1.2s
GOMU GeErMu 11.82 355 P **Pn** **00 22 49.5 -2.4**
GOMU pP 00 22 53.3
GOMU sP 00 22 57.6
GOMU pmax pmax
comp=E,3.0nm,0.7s
GOMU L L
comp=E,1μm,13.5s
GOMU L L
comp=E,5μm,13.6s
GOMU L L
comp=E,640nm,14.0s
LZDM Lanzhou Array 13.27 28 Pn **Pn** **00 23 10.8 -0.8**
baz=208,slow=12
comp=E,15nm,0.9s
ENH Enshi 13.27 61 Pn **Pn** **00 23 10.6 -0.8**
LZH Lanzhou 13.44 28 *e*P **Pn** **00 23 14.7 +0.9**
LZH sP P 00 23 29.7 +6.5
LZH S **Sn** **00 25 46.7 +3.7**
LZH pmax pmax
comp=E,42nm,1.7s
LZH pmax pmax
comp=E,160nm,4.0s
LZH L L
comp=E,3μm,12.4s
LZH L L
comp=E,5μm,14.0s
LZH L L
comp=E,2μm,13.6s
QIZ Qiongzhong 13.86 110 P **Pn** **00 23 17.7 -1.7**
QIZ S **Sn** **00 25 52.3 -0.6**
QIZ L L
comp=E,5μm,17.6s
QIZ L L
comp=E,3μm,17.3s
QIZ L L
comp=E,3μm,13.5s
XAN Xi'an 14.76 46 P **Pn** **00 23 30.9 -0.8**
XAN S **Sn** **00 26 14.7 -0.2**
XAN pmax pmax
comp=E,41nm,1.1s
XAN L L
comp=E,6μm,15.1s
XAN L L
comp=E,3μm,13.7s
XAN L L
comp=E,3μm,14.3s
RNTT Ranong 15.09 171 P **Pn** **00 23 40.1 +3.9**
GTA2 Gaotai 15.37 11 *e*P **Pn** **00 23 37.1 -2.8**
GTA2 sP P 00 23 45.3 +0.8
GTA2 S **Sn** **00 26 32.2 +2.4**
GTA2 ScS **ScS** **00 35 55.0 -0.7**
GTA2 L L
comp=E,910nm,10.8s
GTA2 L L
comp=E,6μm,14.0s
GTA2 L L
comp=E,3μm,9.8s
CNSH ChangSha 15.58 72 P **Pn** **00 23 42.2 -0.3**
CNSH S **Sn** **00 26 36.1 +1.3**
CNSH pmax pmax
comp=E,9.0nm,0.8s
CNSH L L
comp=E,7μm,10.5s
CNSH L L
comp=E,2μm,10.2s
CNSH L L
comp=E,3μm,10.4s
BHPL Bhopal 17.11 270 *e*P **Pn** **00 24 03.3 +1.1**
BHPL IAmb IAmb 00 24 21.0
comp=E,45nm,0.9s
BHPL *e*S **Sn** **00 27 04.1 -8.2**
KLP Kalpa 17.27 298 *e*P **Pn** **00 24 03.4 -1.1**
KLP *e*S Sn 00 27 07.5 -8.9
LYN LuoYang 17.47 51 P **Pn** **00 24 06.1 -0.5**
LYN pP P 00 24 10.8 +3.1
LYN PP **PnPn** **00 24 19.6 +2.6**
LYN S **Sn** **00 27 14.4 -6.4**
LYN sS S 00 27 28.0 -0.8
LYN SS **SnSn** **00 27 39.0 +4.7**
LYN pmax pmax
comp=E,62nm,1.2s
LYN pmax pmax
comp=E,370nm,5.2s
LYN L L
comp=E,4μm,11.7s
LYN L L
comp=E,4μm,12.7s
LYN L L
comp=E,6μm,13.7s
HYB Hyderabad 17.78 250 *e*P P 00 24 20.8 +10
KULM Kulim 19.49 166 **Pn** **00 24 32.7 +1.4**
KULM Kulim 19.49 166 P **Pn** **00 24 33.1 +1.8**
BTO2 Baotou 19.98 32 *e*P **P** **00 24 33.3 -2.1**
BTO2 pP **sP** **00 24 42.0 -0.6**
BTO2 PP **PnPn** **00 24 50.2 -1.3**
BTO2 S **S** **00 28 14.7 -5.0**
BTO2 pmax pmax
comp=E,14nm,0.6s
BTO2 pmax pmax
comp=E,690nm,6.7s
BTO2 L L
comp=E,4μm,13.1s
BTO2 L L
comp=E,8μm,14.3s
BTO2 L L
comp=E,3μm,10.8s
HNS HongShan 20.53 46 ⇓P **P** **00 24 43.5 +2.3**
HNS S **S** **00 28 30.8 +0.5**
HNS pmax pmax
comp=E,18nm,1.4s
HNS L L
comp=E,2μm,15.1s
HNS L L
comp=E,2μm,15.0s
HNS L L
comp=E,2μm,16.3s
WMQ Urumqi 20.57 343 *e*P **P** **00 24 43.1 +1.5**
WMQ PP **PnPn** **00 25 06.9 +7.5**
WMQ S **S** **00 28 32.1 +1.1**
WMQ pmax pmax
comp=E,40nm,1.3s
WMQ pmax pmax
comp=E,160nm,3.8s
WMQ L L
comp=E,810nm,23.5s
WMQ L L
comp=E,1μm,23.5s
WMQ L L
comp=E,420nm,17.7s
KCSI Kotacane, Aceh 20.81 175 P **P** **00 24 46.2 +1.8**
comp=E,23nm,1.4s
HHC Hu-ho-hao-te 20.91 35 *e*P **P** **00 24 46.5 +1.1**
HHC pP sP 00 24 51.5 -1.1
HHC PP **PnPn** **00 25 12.0 +7.9**
HHC S **S** **00 28 34.7 -3.3**
HHC L L
comp=E,1μm,12.1s
HHC L L
comp=E,1μm,9.7s
HHC L L
comp=E,1μm,10.2s
NJ2 Nanjing 21.44 64 *e*P **P** **00 24 52.2 +1.1**
NJ2 pP **pP** **00 24 56.7 +0.6**
NJ2 S **S** **00 28 44.8 -3.7**
NJ2 pmax pmax
comp=E,26nm,1.3s
NJ2 L L
comp=E,3μm,13.3s
NJ2 L L
comp=E,1μm,10.9s
NJ2 L L
comp=E,2μm,15.2s
PSI Prapat 21.64 172 P **P** **00 24 54.9 +1.5**
comp=E,12nm,1.4s
RPSI Rantau Prapat 21.74 172 P **P** **00 24 54.8 +0.4**
WUS Wushi 21.89 324 P **P** **00 24 55.1 -0.9**
WUS IAmb IAmb 00 25 14.8
comp=E,42nm,1.0s
NIL Nilore 21.95 300 P **P** **00 24 56.3 -0.3**
PALK Pallekele 22.51 223 P **P** **00 25 04.5 +1.7**
PALK Pallekele 22.51 223 P **P** **00 25 02.7 0.0**
KSH2 Kashi 22.74 315 P **P** **00 25 05.0 -0.2**
KSH2 S **S** **00 29 15.0 +1.7**
KSH2 pmax pmax
comp=E,40nm,1.7s
KSH2 L L
comp=E,590nm,16.9s
KSH2 L L
comp=E,960nm,15.3s
KSH2 L L
comp=E,1μm,18.0s
BJT Baijiatuau 22.98 43 P **P** **00 25 07.5 0.0**
BJI2 Beijing 22.98 43 P **P** **00 25 10.6 +3.1**
BJI2 S **S** **00 29 16.3 -0.8**
BJI2 pmax pmax
comp=E,6.0nm,1.4s
BJI2 L L
comp=E,420nm,15.0s
BJI2 L L
comp=E,380nm,14.9s
BJI2 L L
comp=E,530nm,10.3s
GSI Gunungsitoli 23.00 176 P **P** **00 25 10.8 +3.0**
GSI IAmb IAmb 00 25 28.6
comp=E,44nm,1.3s
TARG Taragay, Kyrgy 23.02 323 P **P** **00 25 09.0 +0.7**
SSE Sheshan 23.17 68 P **P** **00 25 08.0 -1.5**
SSE S **S** **00 29 17.8 -2.7**
SSE pmax pmax
comp=E,11nm,1.8s
SSE pmax pmax
comp=E,120nm,8.8s
SSE L L
comp=E,740nm,17.9s
SSE L L
comp=E,1μm,17.2s
SHLS Shalkode 23.19 328 ⇑*i*P **P** **00 25 07.9 -1.8**
comp=E,16nm,1.1s
PRZ Przheval'sk 23.23 325 P **P** **00 25 10.7 +0.5**
UZB Uzynbulak 23.39 327 *e*P **P** **00 25 12.1 +0.3**
comp=E,20nm,1.3s
KDJ Kajisay 23.63 323 P **P** **00 25 15.1 +0.9**
SATY Saty 23.64 326 ⇑*i*P **P** **00 25 14.5 +0.4**
comp=E,30nm,1.4s
NRN Naryn 23.84 320 P **P** **00 25 16.8 +0.4**
NRN IAmb IAmb 00 25 19.4
comp=E,82nm,1.9s
TNSS Tian-Shan 24.38 324 *e*P **P** **00 25 21.6 +0.1**
MDOK Medeo 24.41 325 *e*P **P** **00 25 21.9 +0.4**
AAA Alma-Ata 24.51 325 *e*P **P** **00 25 22.9 +0.6**
BOOM Boomskoye usch 24.56 322 P **P** **00 25 23.5 +0.6**
ZSN Zaisan 24.69 342 *e*P **P** **00 25 24.8 +1.1**
comp=E,13nm,0.8s
SONM Songino Array 24.79 17 P **P** **00 25 25.3 +0.5**
comp=E,1.4nm,0.7s,baz=199,slow=10,SNR=12
SONM LR LR 00 37 01.8
comp=E,476nm,19.0s,baz=200,slow=41
comp=E,1.4nm,0.7s
SONM Songino Array 24.79 17 P **P** **00 25 24.7 -0.1**
MKAR Makanchi Array 24.94 337 P **P** **00 25 26.7 +0.7**
comp=E,24nm,0.7s,baz=147,slow=10.0,SNR=313
MKAR LR LR 00 36 35.4
comp=E,488nm,18.1s,baz=150,slow=40
comp=E,24nm,0.7s
MKAR Makanchi Array 24.94 337 P **P** **00 25 26.3 +0.3**
ULN Ulaanbaatar 25.00 18 P **P** **00 25 26.4 -0.3**
ULN Ulaanbaatar 25.00 18 P **P** **00 25 27.4 +0.7**
comp=E,42nm,1.3s
MAKZ Makanchi 25.06 337 P **P** **00 25 27.3 +0.2**
TDK Taldyqorghan 25.08 329 *e*P **P** **00 25 27.9 +0.6**
comp=E,20nm,0.7s
DRK Karamyk 25.41 312 P **P** **00 25 30.6 0.0**
DRK IAmb IAmb 00 25 38.8
comp=E,20nm,0.7s
XLT XiLinHaoTe 25.43 35 *e*P **P** **00 25 34.4 +3.8**
XLT S **S** **00 30 00.8 +4.0**
XLT pmax pmax
comp=E,13nm,1.4s
XLT pmax pmax
comp=E,110nm,3.8s
XLT L L
comp=E,880nm,12.9s
XLT L L
comp=E,830nm,18.7s
AAK Ala-Archa 25.47 321 LR LR 00 36 53.4
comp=E,657nm,21.3s,baz=116,slow=40
AAK Ala-Archa 25.47 321 P **P** **00 25 32.1 +1.1**
FRU1 Bishkek 25.50 321 P **P** **00 25 31.9 +0.6**
KBL Kabul 25.55 300 P **P** **00 25 32.3 +0.3**
KBL IAmb IAmb 00 26 07.3
comp=E,28nm,1.1s
TGY Tagaytay City 25.56 109 LR LR 00 35 26.8
comp=E,481nm,19.9s,baz=254,slow=36
SGDS Sogindy 25.91 322 *e*P **P** **00 25 35.4 +0.4**
DL2 Dalian 26.01 50 P **P** **00 25 35.5 -0.3**
DL2 S **S** **00 30 04.9 -0.9**
DL2 pmax pmax
comp=E,47nm,1.6s
DL2 pmax pmax
comp=E,540nm,3.8s
DL2 L L
comp=E,1μm,19.5s
DL2 L L
comp=E,1μm,18.4s
DL2 L L
comp=E,2μm,18.6s
BTK Batken 26.35 312 P **P** **00 25 39.5 +0.6**
BTK IAmb IAmb 00 26 03.5
comp=E,40nm,1.2s
CHGR Chuyangaron 26.88 308 IAmb IAmb 00 26 10.9
comp=E,38nm,1.1s
SHAA Shahritus 27.21 305 IAmb IAmb 00 26 08.5
comp=E,124nm,1.4s
DZA Taraz 27.50 318 *e*P **P** **00 25 49.6 +0.4**
TLY Talaya 27.86 10 LR LR 00 37 59.2
comp=E,452nm,20.1s,baz=186,slow=38
TLY Talaya 27.86 10 P **P** **00 25 52.4 +0.1**
IUG Iuzhnay 27.91 316 *e*P **P** **00 25 53.4 +0.4**
comp=E,28nm,1.1s
KK31 Karatay Array 28.11 318 P **P** **00 25 54.6 -0.1**
KK31 IAmb IAmb 00 25 56.3
comp=E,35nm,1.9s
KKAR Karatay Array 28.11 318 P **P** **00 25 54.7 0.0**
CHM Chimkent 28.27 316 *e*P **P** **00 25 56.7 +0.7**
BRLS Borolday 28.49 317 ⇑*i*P **P** **00 25 58.2 +0.1**
comp=E,8.0nm,1.4s
SNY Shenyang 28.68 46 ⇑P **P** **00 26 04.4 +4.7**
SNY S **S** **00 30 51.7 +3.8**
SNY pmax pmax
comp=E,13nm,1.7s
SNY pmax pmax
comp=E,230nm,6.3s
SNY L L
comp=E,560nm,14.1s
SNY L L
comp=E,760nm,16.1s
SNY L L
comp=E,860nm,15.9s
JOW Kunigami 29.09 78 LR LR 00 38 29.8
comp=E,834nm,18.1s,baz=238,slow=38
KURBB Kurchatov Arra 29.50 337 P **P** **00 26 07.6 +0.7**
comp=E,5.0nm,0.8s,baz=148,slow=8.7,SNR=18
KURBB LR LR 00 39 11.8
comp=E,432nm,20.7s,baz=158,slow=39
comp=E,5.0nm,0.8s
KURK Kurchatov 29.55 337 P **P** **00 26 07.3 0.0**
KSRS Korea Array 30.11 57 LR LR 00 39 35.4
comp=E,763nm,18.3s,baz=245,slow=39
ZAA0 Zalesovo Array 30.70 347 P **P** **00 26 17.5 0.0**
ZAA0 IAmb IAmb 00 26 18.9
comp=E,27nm,1.3s
ZALV Zalesovo Beam 30.70 347 P **P** **00 26 18.1 +0.6**
comp=E,5.8nm,0.6s,baz=157,slow=8.0,SNR=43
ZALV LR LR 00 40 20.3
comp=E,149nm,21.7s,baz=183,slow=40
comp=E,5.8nm,0.6s
ZALV Zalesovo Beam 30.70 347 P **P** **00 26 17.5 0.0**
HRA Herat 31.00 297 P **P** **00 26 21.2 +0.6**
BRZS Berezniki 31.37 330 *e*P **P** **00 26 24.5 +1.0**
JNU Nakatsue 31.61 66 LR LR 00 40 21.8
comp=E,619nm,18.7s,baz=260,slow=38
LEM Lembang 33.00 159 LR LR 00 41 16.8
comp=E,576nm,19.1s,baz=322,slow=39
BNX BinXian 33.01 42 ⇓P **P** **00 26 39.5 +1.7**
BNX pmax pmax
comp=E,13nm,1.1s
DAV Davao City (W) 33.09 116 LR LR 00 39 31.7
comp=E,403nm,21.3s,baz=330,slow=35
BVAR Borovoye Array 34.55 333 P **P** **00 26 51.6 +0.4**
comp=E,4.6nm,0.8s,baz=128,slow=9.6,SNR=20
BVAR LR LR 00 43 03.7
comp=E,580nm,18.6s,baz=131,slow=40
comp=E,4.6nm,0.8s
BORK Borovoye 34.60 332 P **P** **00 26 51.1 -0.5**
USRK Ussuriysk Ar. 35.27 47 P **P** **00 26 59.2 +1.7**
comp=E,3.9nm,0.8s,baz=250,slow=12,SNR=6.9
comp=E,3.9nm,0.8s
HEH HeiHe 35.43 35 *e*P **P** **00 26 59.6 +0.8**
HEH pmax pmax
comp=E,13nm,1.5s
HEH L L
comp=E,690nm,12.9s
HEH L L
comp=E,620nm,12.3s
HEH L L
comp=E,740nm,13.6s
KAPI Kappang 37.22 139 LR LR 00 44 02.4
comp=E,617nm,21.4s,baz=326,slow=39
KLR Kul'dur 37.28 39 LR LR 00 45 50.4
comp=E,234nm,18.7s,baz=240,slow=41
AB31 Akbulak array 37.56 321 P **P** **00 27 17.5 +0.5**
AB31 IAmb IAmb 00 27 18.8
comp=E,21nm,1.1s
ABKAR Akbulak array 37.56 321 P **P** **00 27 17.1 +0.1**
MJAR Matsushiro Arr 38.00 61 P **P** **00 27 21.5 +0.6**
comp=E,8.1nm,1.0s,baz=268,slow=8.4,SNR=16
MJAR LR LR 00 44 17.2
comp=E,365nm,19.2s,baz=259,slow=38
comp=E,8.1nm,1.0s
MJAR Matsushiro Arr 38.00 61 P **P** **00 27 21.0 +0.1**
JHJ Hachijo jima 2 39.06 67 LR LR 00 45 13.1
comp=E,247nm,18.3s,baz=328,slow=38
AKTO Aktyubinsk 39.22 321 LR LR 00 45 52.7
comp=E,403nm,21.6s,baz=74,slow=40
JCJ Chichijima 41.44 76 LR LR 00 46 03.0
comp=E,292nm,18.4s,baz=152,slow=38
ARTI Arti 42.05 329 LR LR 00 47 43.0
comp=E,518nm,18.2s,baz=113,slow=40
ARTI Arti 42.05 329 P **P** **00 27 53.9 -0.4**
ARTI IAmb IAmb 00 27 55.0
comp=E,15nm,0.6s
SIJI Sorong 42.36 121 LR LR 00 47 28.2
comp=E,114nm,20.3s,baz=273,slow=39
ASAJ Asahikawa 42.54 51 LR LR 00 46 40.6
comp=E,233nm,18.9s,baz=278,slow=37
BATI Baumata 43.68 139 LR LR 00 49 41.8
comp=E,351nm,20.4s,baz=322,slow=41
YAK Yakutsk 43.93 22 LR LR 00 48 36.2
comp=E,325nm,21.0s,baz=224,slow=39
NRIK Noril'sk 45.26 356 P **P** **00 28 20.1 +0.2**
comp=E,4.7nm,0.7s,baz=152,slow=5.9,SNR=12
NRIK LR LR 00 46 53.9
comp=E,198nm,20.9s,baz=174,slow=36
comp=E,4.7nm,0.7s
NRIK Noril'sk 45.26 356 P **P** **00 28 18.8 -1.0**
GNI Garni 45.55 303 LR LR 00 52 02.8
comp=E,86nm,20.8s,baz=93,slow=42
GNI Garni 45.55 303 P **P** **00 28 23.5 +0.7**
GNI IAmb IAmb 00 28 25.6
comp=E,26nm,1.4s
BELG Belogornoye 45.97 320 LR LR 00 50 07.8
comp=E,320nm,18.8s,baz=91,slow=39

RAYN Ar Rayn 46.02 280 P P 00 28 26.6 -0.1
KARS Kars 46.84 304 P P 00 28 33.9 +0.9
KBZ Khabaz 47.24 308 P P 00 28 35.6 -0.2
comp=Z,1.3nm,0.8s,baz=88,slow=8.4,SNR=3.5
KBZ LR LR 00 52 34.8
comp=Z,279nm,18.8s,baz=82,slow=41
comp=Z,1.3nm,0.8s
KIRV Kirov 47.35 329 LR LR 00 50 41.8
comp=Z,386nm,18.3s,baz=115,slow=39
KIV Kislovodsk 47.41 308 ⇓P P 00 28 37.7 +0.4
KIV Kislovodsk 47.41 308 P P 00 28 36.8 -0.5
GURO Guroymak-BITLI 47.58 301 P P 00 28 39.4 +0.6
GURO IAmb IAmb 00 28 47.6
comp=Z,11nm,1.0s
MARD Mardin 48.57 299 P P 00 28 46.8 +0.3
ARPR Arapgir-MALATY 50.46 301 P P 00 29 01.3 +0.4
ARPR IAmb IAmb 00 29 12.5
comp=Z,16nm,1.2s
TIXI Tiksi 50.78 13 LR LR 00 52 02.1
comp=Z,214nm,18.9s,baz=238,slow=38
FITZ Fitzroy Crossi 51.13 143 LR LR 00 52 08.5
comp=Z,229nm,21.5s,baz=338,slow=38
MA2 Magadan 51.56 32 LR LR 00 53 33.2
comp=Z,239nm,18.1s,baz=250,slow=39
MA2 Magadan 51.56 32 P P 00 29 08.5 -0.1
TOKA Tokat 51.87 303 P P 00 29 11.7 +0.4
TOKA IAmb IAmb 00 29 48.5
comp=Z,16nm,1.4s
ATD Arta Tunnel 51.94 266 LR LR 00 52 02.0
comp=Z,6.4nm,19.0s,baz=64,slow=37
ASF Jabal al Asfar 52.14 293 LR LR 00 55 15.3
comp=Z,56nm,18.6s,baz=137,slow=41
BNN Bunyan 52.41 301 P P 00 29 16.2 +0.8
OBN Obninsk 52.99 322 LR LR 00 54 00.2
comp=Z,236nm,19.6s,baz=149,slow=38
MMAI Mount Meron Ar 53.28 294 LR LR 00 55 14.3
comp=Z,94nm,19.9s,baz=74,slow=40
SEY Seymchan 53.37 28 LR LR 00 54 04.0
comp=Z,524nm,18.7s,baz=251,slow=38
KIRS Kirsehir-Merke 53.90 302 ⇑P P 00 29 26.3 0.0
PETK Petropavlovsk- 53.92 41 LR LR 00 54 51.9
comp=Z,201nm,18.8s,baz=255,slow=39
BR131 Keskin Array S 54.07 302 P P 00 29 26.7 -1.0
BR131 IAmb IAmb 00 29 44.6
comp=Z,17nm,1.6s
BRTR Keskin Array B 54.07 302 P P 00 29 27.1 -0.7
comp=Z,0.7nm,0.7s,baz=97,slow=6.3,SNR=7.4
BRTR LR LR 00 57 31.5
comp=Z,85nm,18.0s,baz=105,slow=42
comp=Z,0.7nm,0.7s
BRTR Keskin Array B 54.07 302 P P 00 29 26.6 -1.1
EIL Elat 54.17 290 LR LR 00 56 53.3
comp=Z,152nm,18.4s,baz=66,slow=41
FURI Furi 56.74 265 LR LR 00 54 44.9
comp=Z,71nm,18.1s,baz=76,slow=37
AKASG Malin Array Be 56.99 316 P P 00 29 46.8 -1.5
comp=Z,1.5nm,0.5s,baz=82,slow=6.1,SNR=7.1
AKASG LR LR 00 57 28.3
comp=Z,268nm,18.4s,baz=90,slow=40
comp=Z,1.5nm,0.5s
AKASG Malin Array Be 56.99 316 P P 00 29 46.9 -1.4
AKBB Malin Array Si 56.99 316 P P 00 29 46.5 -1.7
AKBB IAmb IAmb 00 29 47.9
comp=Z,9.4nm,1.1s
KIEV Kiev 57.00 316 ⇓P P 00 29 47.2 -1.1
KIEV Kiev 57.00 316 P P 00 29 46.9 -1.4
KIEV IAmb IAmb 00 29 47.9
comp=Z,8.5nm,1.1s
ELL Elmali 57.28 299 P P 00 29 50.3 -0.5
WRA Warramunga Arr 57.70 136 P P 00 29 52.7 -1.0
comp=Z,0.5nm,0.5s,baz=321,slow=7.5,SNR=10
comp=Z,0.5nm,0.5s
WRA Warramunga Arr 57.70 136 P P 00 29 53.3 -0.4
WRAB Tennant Creek 57.70 136 P P 00 29 53.8 +0.1
WRAB IAmb IAmb 00 30 20.4
comp=Z,9.7nm,1.2s
WR8 Warramunga Arr 57.81 136 P P 00 29 54.7 +0.2
VRI Vrincioaia 58.77 310 ⇑P P 00 30 01.0 +0.1
PLOR Plostina 58.83 310 ⇓P P 00 30 01.9 +0.6
FINES FINESS Array B 59.34 328 P P 00 30 03.4 -1.1
comp=Z,6.8nm,0.7s,baz=91,slow=7.7,SNR=20
FINES LR LR 00 59 03.0
comp=Z,114nm,18.1s,baz=52,slow=40
comp=Z,6.8nm,0.7s
FINES FINESS Array B 59.34 328 P P 00 30 04.0 -0.5
MLR Muntele Rosu 59.35 310 LR LR 01 00 12.8
comp=Z,316nm,19.1s,baz=68,slow=41
MLR Muntele Rosu 59.35 310 ⇓P P 00 30 05.6 +0.5
MLR Muntele Rosu 59.35 310 P P 00 30 05.3 +0.2
BURAR Bucovina Array 59.69 312 ⇑P P 00 30 07.4 0.0
PABE Paberze 60.20 321 P P 00 30 09.8 -0.7
BILL Bilibino 60.22 24 P P 00 30 09.6 -0.9
BILL IAmb IAmb 00 30 23.0
comp=Z,4.0nm,0.6s
ASAR Alice Springs 60.23 140 P P 00 30 10.4 -0.8
comp=Z,1.2nm,0.6s,baz=323,slow=6.6,SNR=13
ASAR LR LR 00 58 14.3
comp=Z,195nm,20.9s,baz=306,slow=38
comp=Z,1.2nm,0.6s
ASAR Alice Springs 60.23 140 P P 00 30 09.7 -1.6
NWAO Narrogin (SRO) 60.46 160 LR LR 00 57 16.4
comp=Z,161nm,19.9s,baz=350,slow=37
ARCES ARCESS Array B 60.59 338 P P 00 30 13.1 +0.1
comp=Z,5.2nm,0.8s,baz=75,slow=5.3,SNR=4.8
ARCES LR LR 00 59 44.5
comp=Z,253nm,19.0s,baz=102,slow=39
comp=Z,5.2nm,0.8s
ARCES ARCESS Array B 60.59 338 P P 00 30 12.1 -0.9
SUW Suwalki 60.68 320 P P 00 30 12.7 -1.1
IDI Anoyia 61.53 298 LR LR 01 03 03.0
comp=Z,51nm,18.1s,baz=254,slow=42
LANS Liptovska Anna 63.36 314 eP P 00 30 33.7 +1.6
SHEM Shemya Is, Ala 63.83 42 LR LR 00 58 34.4
comp=Z,142nm,21.9s,baz=286,slow=36
SPITS Spitsbergen Ar 64.19 347 LR LR 01 05 44.9
comp=Z,104nm,18.3s,baz=92,slow=43
MORC Moravsky Berou 64.52 315 eP P 00 30 39.4 -0.3
VRAC Vranov 65.21 315 LR LR 01 02 20.1
comp=Z,267nm,18.6s,baz=83,slow=39
VRAC Vranov 65.21 315 eP P 00 30 43.2 -0.9
KRUC Moravsky 65.37 315 eP P 00 30 44.1 -1.1
HFS Hagfors 65.42 327 P P 00 30 44.7 -0.6
comp=Z,6.7nm,0.8s,baz=94,slow=4.9,SNR=12
HFS LR LR 01 01 50.7
comp=Z,433nm,19.0s,baz=75,slow=38
comp=Z,6.7nm,0.8s
CTA Charters Tower 65.88 128 LR LR 01 03 01.9
comp=Z,99nm,19.7s,baz=234,slow=39
NB2 NORSAR Subarra 66.52 328 P P 00 30 51.4 -1.0
comp=Z,4.7nm,0.8s,baz=82,slow=6.5
NOA NORSAR Array B 66.52 328 P P 00 30 51.1 -1.3
comp=Z,3.1nm,0.8s,baz=82,slow=6.4,SNR=7.7
NOA LR LR 01 02 34.6
comp=Z,221nm,20.7s,baz=85,slow=38
comp=Z,3.1nm,0.8s
CLL Collm 67.13 317 eP P 00 30 56.0 -0.4
CLL eP cP P cP 00 31 25.0 +0.6
CLL AMS AMS 01 03 00.0
comp=Z,200nm,20.1s
GERES GERESS Array B 67.16 315 P P 00 30 55.7 -1.0
comp=Z,1.3nm,0.8s,baz=103,slow=4.7,SNR=8.3
GERES LR LR 01 03 38.2
comp=Z,266nm,18.3s,baz=77,slow=39
comp=Z,1.3nm,0.8s
MBAR Mbarara 67.91 259 LR LR 01 00 53.9
comp=Z,127nm,21.2s,baz=74,slow=36
GRF Grafenberg Arr 68.57 316 eP P 00 31 05.3 -0.2
comp=Z,4.5nm,1.1s,baz=77,slow=5.4
GAMB Gambell 69.38 28 P P 00 31 09.2 -1.0
baz=283
DAVOX Davos/Dischmat 70.13 313 LR LR 01 06 03.1
comp=Z,142nm,21.3s,baz=65,slow=39
TNA Tin City 70.50 26 P P 00 31 16.9 -0.2
baz=286
C16K Lisburne Hills 70.70 23 IAmb IAmb 00 31 19.2
comp=Z,10.0nm,1.1s
C16K Lisburne Hills 70.70 23 P P 00 31 18.0 -0.3
baz=287,SNR=9.0
STKA Stephens Creek 70.87 140 LR LR 01 06 34.3
comp=Z,238nm,19.2s,baz=305,slow=39
F14K Arctic Creek 71.16 26 P P 00 31 20.7 -0.5
baz=287
C17K DeLong Mountai 71.40 22 P P 00 31 22.3 -0.2
baz=289,SNR=6.5
A19K Wainwright 71.52 21 P P 00 31 23.0 -0.1
baz=290
MEM Membach 71.59 318 dP P 00 31 23.4 -0.6

RDOG Red Dog Mine 71.63 23 P P 00 31 22.5 -1.4
RDOG Red Dog Mine 71.63 23 P P 00 31 23.5 -0.5
baz=289
D17K Noatak River 71.69 23 P P 00 31 24.0 -0.3
baz=289,SNR=12
F15K North Star Dit 71.75 25 P P 00 31 24.3 -0.4
baz=289
SPIA Saint Paul Isl 71.78 35 P P 00 31 24.1 -0.9
baz=287
ANM Nome 71.83 27 P P 00 31 24.9 -0.3
baz=288
C18K Utukok River 72.03 22 IAmb IAmb 00 32 00.8
comp=Z,9.2nm,1.3s
C18K Utukok River 72.03 22 P P 00 31 25.5 -0.9
baz=291
G15K Niukluk 72.23 26 P P 00 31 27.1 -0.5
baz=289
E17K Hotham Inlet 72.36 24 P P 00 31 28.1 -0.2
baz=291,SNR=7.0
C19K Lookout Ridge 72.40 21 IAmb IAmb 00 31 44.3
comp=Z,17nm,1.6s
C19K Lookout Ridge 72.40 21 P P 00 31 28.3 -0.3
baz=292
E18K Tukpahlearik C 72.68 23 IAmb IAmb 00 31 40.9
comp=Z,7.8nm,1.1s
E18K Tukpahlearik C 72.68 23 P P 00 31 29.9 -0.4
baz=292
G16K Koyuk River 72.76 25 P P 00 31 30.6 -0.1
baz=291,SNR=5.0
F17K Baldwin Pennin 72.80 24 IAmb IAmb 00 31 32.4
comp=Z,7.1nm,0.9s
F17K Baldwin Pennin 72.80 24 P P 00 31 30.9 0.0
baz=291,SNR=7.4
M11K Mekoryuk 72.81 31 P P 00 31 30.6 -0.4
baz=289
K13K Kusilvak Mount 73.00 29 P P 00 31 31.5 -0.7
baz=290
A22K Sinclair Lake 73.08 19 P P 00 31 32.5 0.0
baz=296
D19K Kuna River 73.13 22 IAmb IAmb 00 31 38.2
comp=Z,7.7nm,1.0s
D19K Kuna River 73.13 22 P P 00 31 32.6 -0.4
baz=294
J14K Nanvaranak Lak 73.20 28 P P 00 31 32.9 -0.4
baz=290
F18K Selawik 73.34 24 P P 00 31 33.4 -0.7
baz=293
G17K Kiwalik Mounta 73.38 25 P P 00 31 34.1 -0.3
baz=292
D20K Etivluk River 73.55 21 IAmb IAmb 00 31 36.7
comp=Z,12nm,1.1s
D20K Etivluk River 73.55 21 P P 00 31 35.1 -0.3
baz=295
B21K Ikpikpuk River 73.80 20 IAmb IAmb 00 31 38.0
comp=Z,7.8nm,1.1s
B21K Ikpikpuk River 73.80 20 P P 00 31 36.3 -0.4
baz=296,SNR=5.1
NIKH Nikolski High 73.84 39 P P 00 31 36.6 -0.7
baz=289
B22K Teshekpuk Lake 73.84 19 P P 00 31 36.7 -0.3
baz=297
E19K Redstone River 73.86 23 P P 00 31 37.0 -0.3
baz=295
E20K Nigu River 73.88 22 P P 00 31 36.6 -0.8
baz=295
H17K Granite Mounta 73.89 25 P P 00 31 37.2 -0.2
baz=293
F19K Shaleruckik Mo 73.93 23 P P 00 31 37.3 -0.2
baz=294
C21K Knifeblade Rid 73.95 21 P P 00 31 37.5 -0.2
baz=296
I17K Unalakleet 73.98 27 P P 00 31 37.9 0.0
baz=293
G18K Tagagawik 73.99 24 P P 00 31 37.8 -0.2
baz=294
L14K Kuka Creek 74.09 29 P P 00 31 38.2 -0.4
baz=292
M13K Dall Lake 74.12 30 P P 00 31 38.5 -0.3
baz=291
K15K Wolf Creek Mou 74.24 28 P P 00 31 39.5 0.0
baz=292
J16K Anvik River 74.25 27 IAmb IAmb 00 31 40.9
comp=Z,8.5nm,1.1s
J16K Anvik River 74.25 27 P P 00 31 38.9 -0.7
baz=293
H18K Honhosa River 74.40 25 P P 00 31 39.8 -0.7
baz=294
G19K Purcell Mounta 74.47 24 IAmb IAmb 00 32 48.0
comp=Z,22nm,1.9s
G19K Purcell Mounta 74.47 24 P P 00 31 40.5 -0.3
baz=295
L15K Ungalak Mounta 74.49 29 P P 00 31 40.4 -0.6
baz=292
E21K Killik River 74.54 21 IAmb IAmb 00 31 42.1
comp=Z,7.7nm,1.0s
E21K Killik River 74.54 21 P P 00 31 40.8 -0.4
baz=297
F20K Avaraart Lake 74.57 23 P P 00 31 41.1 -0.2
baz=296
M14K Bethel 74.64 30 P P 00 31 40.8 -1.0
M14K Bethel 74.64 30 P P 00 31 41.8 0.0
baz=292
D22K Ayikyak River 74.75 20 IAmb IAmb 00 31 53.3
comp=Z,7.8nm,1.1s
D22K Ayikyak River 74.75 20 P P 00 31 42.3 0.0
baz=298
UNV Unalaska Valle 74.87 37 P P 00 31 42.6 -0.6
baz=291
C23K Itkillik River 74.92 19 IAmb IAmb 00 33 23.1
comp=Z,22nm,1.6s
C23K Itkillik River 74.92 19 P P 00 31 43.2 -0.1
baz=300
N14K Kuskokwak Cree 75.08 31 P P 00 31 43.9 -0.4
baz=293
GCSA Galena City Sc 75.15 25 P P 00 31 44.6 0.0
baz=296
M15K Kasigluk River 75.23 30 P P 00 31 45.0 -0.2
baz=293
F21K Alatna River 75.27 22 P P 00 31 45.1 -0.3
baz=298
EKA Eskdalemuir Ar 75.32 324 P P 00 31 44.8 -1.1
comp=Z,1.8nm,0.8s,baz=69,slow=6.3,SNR=5.3
EKA LR LR 01 09 11.0
comp=Z,272nm,18.9s,baz=62,slow=39
comp=Z,1.8nm,0.8s
D23K Nanushuk River 75.34 20 IAmb IAmb 00 31 57.9
comp=Z,9.0nm,1.1s
D23K Nanushuk River 75.34 20 P P 00 31 45.5 -0.3
baz=300,SNR=6.6
L16K Owhat River 75.36 28 P P 00 31 45.7 -0.3
baz=294
E22K Anaktuvuk Pass 75.39 21 P P 00 31 46.1 -0.1
E22K Anaktuvuk Pass 75.39 21 P P 00 31 46.3 +0.1
baz=299
K17K Iditarod 75.44 27 IAmb IAmb 00 31 52.0
comp=Z,14nm,1.0s
K17K Iditarod 75.44 27 P P 00 31 46.1 -0.3
baz=295
O14K Tigyukauivet M 75.54 31 P P 00 31 47.2 +0.1
baz=293
C24K Franklin Bluff 75.56 19 IAmb IAmb 00 32 02.4
comp=Z,8.0nm,0.9s
C24K Franklin Bluff 75.56 19 P P 00 31 47.1 +0.1
baz=302
H20K Anotleneega Mo 75.57 24 P P 00 31 47.4 +0.2
baz=297
G21K Aliakaket 75.59 23 P P 00 31 47.1 -0.2
baz=298
L17K Donlin 75.69 28 P P 00 31 47.8 -0.1
baz=295
N15K Kwethluk River 75.72 30 P P 00 31 47.9 -0.2
baz=294
IMAR Indian Mountai 75.76 23 P P 00 31 47.2 -1.0
J18K Innoko River 75.77 26 IAmb IAmb 00 31 49.2
comp=Z,9.1nm,1.1s
J18K Innoko River 75.77 26 P P 00 31 47.9 -0.5
baz=296
D24K Happy Valley 75.82 20 IAmb IAmb 00 31 54.9
comp=Z,11nm,1.2s
D24K Happy Valley 75.82 20 P P 00 31 48.0 -0.5
baz=302
TOLK Toolik Lake Re 75.85 20 P P 00 31 48.6 -0.2
baz=301
M16K Timber Creek 75.87 29 P P 00 31 48.8 -0.1
baz=295
J19K Poorman 75.97 26 IAmb IAmb 00 31 50.8
comp=Z,8.5nm,1.1s
J19K Poorman 75.97 26 P P 00 31 49.1 -0.3
baz=297
E23K Chandalar 76.14 21 P P 00 31 49.9 -0.6
baz=301
FALS False Pass 76.17 36 P P 00 31 50.3 -0.4
baz=293
N16K Nishlik Lake 76.19 29 P P 00 31 50.6 -0.2
baz=295
O15K Ungalikthiuk R 76.25 31 P P 00 31 51.0 -0.2
baz=294
H21K Melozitna Rive 76.26 23 IAmb IAmb 00 31 52.4
comp=Z,9.9nm,1.0s
H21K Melozitna Rive 76.26 23 P P 00 31 50.8 -0.3
baz=299
L18K Granite Mounta 76.33 27 P P 00 31 51.2 -0.3
baz=296
M17K Holitna River 76.38 28 P P 00 31 51.8 0.0
baz=296
COLD Coldfoot 76.38 22 P P 00 31 51.9 +0.2
baz=301
D25K Kavik River 76.46 19 IAmb IAmb 00 31 53.5
comp=Z,8.4nm,1.2s
D25K Kavik River 76.46 19 P P 00 31 52.4 +0.1
baz=304
E24K Your Creek 76.49 20 IAmb IAmb 00 31 53.7
comp=Z,7.7nm,1.1s
E24K Your Creek 76.49 20 P P 00 31 52.4 0.0
baz=302,SNR=7.9
C26K Camden Bay 76.55 18 P P 00 31 53.0 +0.4
baz=305
H22K Ishtalitna Cre 76.65 23 P P 00 31 53.1 -0.2
baz=300
G23K Bananza Creek 76.71 22 P P 00 31 53.6 0.0
baz=301
N17K Nushagak Hills 76.87 29 P P 00 31 54.5 -0.1
baz=296
O16K Kokwok River B 76.88 30 P P 00 31 54.5 -0.1
baz=296
K20K Telida 76.88 26 IAmb IAmb 00 32 08.5
comp=Z,10nm,1.4s
K20K Telida 76.88 26 P P 00 31 54.5 -0.1
baz=298
M18K Stony River 77.03 28 P P 00 31 55.3 -0.2
baz=297
C27K Jago River 77.06 18 IAmb IAmb 00 31 57.3
comp=Z,17nm,1.4s
C27K Jago River 77.06 18 P P 00 31 55.7 +0.2
baz=306
LSZ Lusaka 77.08 247 LR LR 01 06 29.0
comp=Z,66nm,18.4s,baz=47,slow=36
L19K White Mountain 77.12 27 P P 00 31 55.5 -0.5
baz=298
P16K Nushagak River 77.17 31 P P 00 31 55.9 -0.4
baz=296
O17K Koliganek Bris 77.25 30 P P 00 31 56.4 -0.4
baz=297
CHUM Lake Minchumin 77.31 25 P P 00 31 57.0 0.0
baz=300
MLY Manley 77.32 24 P P 00 31 56.4 -0.7
MLY Manley 77.32 24 P P 00 31 57.1 -0.1
baz=301
N18K Kilae Creek 77.38 29 P P 00 31 57.1 -0.4
baz=297
E25K Arctic Village 77.38 20 P P 00 31 57.7 +0.2
baz=305
M19K Big River Lodg 77.44 27 P P 00 31 57.4 -0.4
baz=298
SDPT Sand Point 77.53 35 P P 00 31 58.4 +0.1
baz=295
G24K Hadweenzic Riv 77.57 21 P P 00 31 58.1 -0.3
baz=303
F25K Christian Rive 77.66 20 IAmb IAmb 00 32 00.9
comp=Z,8.4nm,1.3s
F25K Christian Rive 77.66 20 P P 00 31 58.9 -0.1
baz=305
BPAW Bear Paw Mtn. 77.71 24 P P 00 31 58.6 -0.7
BPAW IAmb IAmb 00 32 01.4
comp=Z,6.7nm,0.9s
BPAW Bear Paw Mtn. 77.71 24 P P 00 31 59.0 -0.3
baz=301
I23K Minto, Yukon-K 77.76 23 P P 00 31 59.7 +0.2
baz=302
P17K Kvichak River 77.81 30 P P 00 31 59.7 -0.1
baz=297
PPLA Purkeypile 77.85 26 P P 00 31 59.7 -0.5
baz=300
H24K Noodor Dome 77.91 22 P P 00 32 00.3 -0.2
baz=303
N19K Bonanza Creek 77.92 28 P P 00 32 00.2 -0.4
baz=298
M20K Styx River 77.97 27 IAmb IAmb 00 32 18.4
comp=Z,17nm,1.4s
M20K Styx River 77.97 27 P P 00 32 00.2 -0.7
baz=299
R16K Pilot Point 78.02 32 P P 00 32 00.8 -0.3
baz=297
O18K Koktuh Hills 78.06 29 P P 00 32 01.0 -0.3
baz=298
D27M Malcolm River 78.06 18 P P 00 32 00.9 -0.4
baz=309
F26K Sheenjek River 78.07 20 P P 00 32 01.5 +0.2
baz=306
BMAR Burnt Mountain 78.09 20 P P 00 32 01.3 -0.1
NEA2 Nenana 78.16 24 P P 00 32 01.2 -0.6
baz=302
CHNA Chernabura Isl 78.21 35 P P 00 32 02.2 0.0
baz=296
P18K Big Mountain, 78.27 30 P P 00 32 02.2 -0.3
baz=298
TRF Thorofare Moun 78.31 25 P P 00 32 02.0 -0.8
baz=302
POKR Poker Plat Res 78.46 23 P P 00 32 03.1 -0.3
baz=304
Q17K Contact Creek 78.50 31 P P 00 32 03.4 -0.4
baz=298
E27K Coleen River 78.54 19 P P 00 32 03.6 -0.2
baz=308
R17L Mt. Peulik Vol 78.57 32 P P 00 32 03.6 -0.6
baz=298
SKT Skwentna 78.58 26 P P 00 32 03.1 -1.1
SKT IAmb IAmb 00 32 04.4
comp=Z,11nm,1.1s
SKT Skwentna 78.58 26 P P 00 32 03.5 -0.6
baz=301
L22K Petersville 78.61 26 P P 00 32 03.2 -1.1
L22K IAmb IAmb 00 32 06.6
comp=Z,7.9nm,0.7s
G26K Porcupine Rive 78.62 20 IAmb IAmb 00 32 06.2
comp=Z,8.9nm,1.1s
G26K Porcupine Rive 78.62 20 P P 00 32 04.1 -0.2
baz=306
MCK McKinley 78.67 24 P P 00 32 04.4 -0.3
baz=303
Q18K Katmai Hardscr 78.72 30 P P 00 32 04.6 -0.6
baz=298
ILAR Eielson Array 78.85 23 P P 00 32 04.3 -1.3
comp=Z,1.3nm,0.9s,baz=298,slow=5.3,SNR=12
ILAR LR LR 01 10 31.0
comp=Z,174nm,19.9s,baz=270,slow=38
comp=Z,1.3nm,0.9s
CUT Chulitna 78.87 26 P P 00 32 05.5 -0.2
baz=302
E28M Babbage River 78.87 18 P P 00 32 05.3 -0.3
baz=310
TULEG Thule 78.87 356 IAmb IAmb 00 32 06.0
comp=Z,8.6nm,0.9s
PRP Porcupine Dome 78.89 22 P P 00 32 05.4 -0.5
PRP Porcupine Dome 78.89 22 P P 00 32 05.5 -0.5
baz=305
BORG Borgarnes 78.99 337 LR LR 01 07 31.2
comp=Z,72nm,20.7s,baz=42,slow=36
P19K Oil Pt 79.03 29 P P 00 32 06.5 -0.2
baz=300
SUA Susitna One 79.17 27 P P 00 32 07.0 -0.5
baz=301
M22K Willow 79.27 26 P P 00 32 07.5 -0.3
baz=302
WAT1 Susitna Watana 79.31 25 P P 00 32 07.9 -0.3
baz=303
CAPN Captain Cook N 79.36 27 P P 00 32 08.2 -0.2
baz=301
F28M Old Crow 79.41 19 P P 00 32 08.3 -0.3
baz=310
E29M Blow River 79.47 18 IAmb IAmb 00 32 18.3
comp=Z,6.0nm,0.7s
E29M Blow River 79.47 18 P P 00 32 08.6 -0.3
baz=311
J25K Salcha River, 79.47 23 P P 00 32 09.0 -0.1
baz=306

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
DHY	**Denali Highway**	**79.62**	**24**	P	**P**	**00 32 09.2**	**-0.8**
	baz=304						
HOM	**Homer**	**79.73**	**29**	P	**P**	**00 32 09.2**	**-1.2**
	baz=301						
PMR	**Palmer**	**79.76**	**26**	P	**P**	**00 32 10.3**	**-0.2**
	baz=303						
WAT6	**Susitna Watana**	**79.76**	**25**	P	**P**	**00 32 10.4**	**-0.4**
	baz=304						
CHIR	**Chirikof Islan**	**79.78**	**33**	P	**P**	**00 32 10.4**	**-0.3**
	baz=298						
H27K	**Steamboat Moun**	**79.78**	**20**	P	**P**	**00 32 10.6**	**-0.1**
	baz=309						
RC01	**Rabbit Creek A**	**79.78**	**27**	P	**P**	**00 32 10.1**	**-0.6**
	baz=302						
A36M	**Sachs Harbour**	**79.79**	**12**	P	**P**	**00 32 09.3**	**-1.2**
A36M				IAmb	IAmb	00 32 19.0	
	comp=Z,11nm,0.9s						
A36M	**Sachs Harbour**	**79.79**	**12**	P	**P**	**00 32 10.5**	**-0.1**
	baz=322						
K24K	**Donnelly Dome**	**79.80**	**23**	P	**P**	**00 32 09.7**	**-1.1**
K24K				IAmb	IAmb	00 32 12.4	
	comp=Z,11nm,0.8s						
K24K	**Donnelly Dome**	**79.80**	**23**	P	**P**	**00 32 10.5**	**-0.3**
	baz=305						
I26K	**Coal Creek Min**	**79.82**	**22**	P	**P**	**00 32 10.6**	**-0.2**
	baz=307						
SML	**Sawmill**	**79.96**	**26**	P	**P**	**00 32 10.6**	**-1.1**
	baz=303						
BRSE	**Bradley Lake S**	**80.08**	**28**	P	**P**	**00 32 11.3**	**-1.0**
	baz=302						
KNK	**Knik Glacier**	**80.12**	**26**	P	**P**	**00 32 12.1**	**-0.5**
	baz=303						
SII	**Sitkinak Islan**	**80.12**	**32**	P	**P**	**00 32 12.1**	**-0.6**
	baz=300						
I27K	**Kandik River**	**80.14**	**21**	IAmb	IAmb	00 32 14.5	
	comp=Z,15nm,1.3s						
I27K	**Kandik River**	**80.14**	**21**	P	**P**	**00 32 12.4**	**-0.3**
	baz=309						
RIDG	**Independent Ri**	**80.17**	**23**	P	**P**	**00 32 12.3**	**-0.6**
	baz=306						
M23K	**Glacier View**	**80.20**	**26**	P	**P**	**00 32 12.7**	**-0.3**
	baz=304						
OHAK	**Old Harbor**	**80.22**	**31**	P	**P**	**00 32 12.8**	**-0.3**
	baz=300						
KDAK	**Kodiak Island**	**80.27**	**30**	LR	LR	01 10 03.6	
	comp=Z,210nm,18.4s,baz=306,slow=37						
KDAK	**Kodiak Island**	**80.27**	**30**	P	**P**	**00 32 13.0**	**-0.4**
	baz=300						
SCRK	**Sand Creek**	**80.34**	**23**	P	**P**	**00 32 13.6**	**-0.2**
	baz=307						
SCM	**Sheep Creek Mo**	**80.34**	**25**	P	**P**	**00 32 13.5**	**-0.3**
	baz=304						
PAX	**Paxson**	**80.40**	**24**	P	**P**	**00 32 13.3**	**-0.8**
	baz=306						
SEW	**Seward**	**80.43**	**28**	P	**P**	**00 32 13.7**	**-0.5**
	baz=303						
F30M	**Barrier River**	**80.58**	**18**	P	**P**	**00 32 14.5**	**-0.4**
	baz=313						
M24K	**Tolsona, Glenn**	**80.63**	**25**	P	**P**	**00 32 15.0**	**-0.4**
	baz=305						
INK	**Inuvik**	**80.70**	**17**	LR	LR	01 13 34.3	
	comp=Z,135nm,18.2s,baz=339,slow=40						
INK	**Inuvik**	**80.70**	**17**	P	**P**	**00 32 15.3**	**-0.2**
	baz=315						
I28M	**Miner Creek**	**80.78**	**21**	IAmb	IAmb	00 32 17.8	
	comp=Z,31nm,1.9s						
I28M	**Miner Creek**	**80.78**	**21**	P	**P**	**00 32 15.7**	**-0.5**
	baz=310						
HARP	**HAARP**	**80.85**	**24**	P	**P**	**00 32 16.0**	**-0.4**
	baz=306						
G30M	**tAoh Zraii Nji**	**80.89**	**18**	P	**P**	**00 32 16.1**	**-0.5**
	baz=313						
GLI	**Glacier Island**	**80.97**	**26**	P	**P**	**00 32 16.9**	**-0.2**
	baz=305						
KLU	**Klutina**	**81.08**	**25**	P	**P**	**00 32 17.8**	**-0.1**
	baz=306						
L26K	**Log Cabin Wild**	**81.14**	**23**	P	**P**	**00 32 17.5**	**-0.5**
	baz=307						
EPYK	**Eagle Plains**	**81.16**	**19**	P	**P**	**00 32 18.0**	**-0.1**
	baz=313						
F31M	**Tsiigehtchic**	**81.26**	**17**	P	**P**	**00 32 18.3**	**-0.2**
	baz=315						
P23K	**Montague Islan**	**81.35**	**27**	P	**P**	**00 32 19.0**	**-0.1**
	baz=304						
I29M	**Ogilvie Camp,**	**81.36**	**20**	P	**P**	**00 32 19.1**	**-0.1**
	baz=311						
G31M	**Satah River**	**81.48**	**18**	P	**P**	**00 32 19.9**	**+0.2**
	baz=315						
N25K	**Chitina, Valde**	**81.53**	**25**	P	**P**	**00 32 19.7**	**-0.5**
	baz=307						
M26K	**Nabesna, AK**	**81.65**	**24**	P	**P**	**00 32 20.8**	**0.0**
	baz=308						
L27K	**Beaver Creek,**	**81.67**	**23**	IAmb	IAmb	00 32 22.7	
	comp=Z,11nm,1.2s						
L27K	**Beaver Creek,**	**81.67**	**23**	P	**P**	**00 32 20.4**	**-0.5**
	baz=309						
BCAR	**Beaver Creek A**	**81.68**	**23**	P	**P**	**00 32 21.2**	**+0.3**
DAWY	**Dawson**	**81.86**	**21**	P	**P**	**00 32 21.4**	**-0.5**
	baz=311						
BMRM	**Bremner River**	**81.91**	**25**	P	**P**	**00 32 21.9**	**-0.3**
	baz=307						
ESDC	**Sonseca Array**	**82.05**	**310**	LR	LR	01 14 05.2	
	comp=Z,59nm,19.3s,baz=38,slow=40						
I30M	**Mount Dempster**	**82.05**	**20**	IAmb	IAmb	00 32 24.2	
	comp=Z,10.0nm,1.3s						
I30M	**Mount Dempster**	**82.05**	**20**	P	**P**	**00 32 22.6**	**-0.3**
	baz=313						
M27K	**Edge Creek, AK**	**82.09**	**24**	P	**P**	**00 32 22.7**	**-0.5**
	baz=309						
Q23K	**Middleton Isla**	**82.11**	**27**	P	**P**	**00 32 23.0**	**-0.1**
	baz=305						
C36M	**Paulatuk**	**82.14**	**13**	P	**P**	**00 32 22.8**	**-0.4**
	baz=324						
H31M	**Peel River**	**82.26**	**19**	IAmb	IAmb	00 32 24.5	
	comp=Z,15nm,1.2s						
H31M	**Peel River**	**82.26**	**19**	P	**P**	**00 32 23.1**	**-0.7**
	baz=315						
MCARA	**McCarthy VSAT**	**82.27**	**25**	P	**P**	**00 32 23.2**	**-0.8**
	baz=308						
BVCY	**Beaver Creek**	**82.42**	**23**	P	**P**	**00 32 24.1**	**-0.7**
	baz=310						
DZM	**Mont Dzumac**	**82.48**	**118**	*e*LR	LR	00 58 15.9	
	comp=Z,175nm,29.9s						
J30M	**Hart River**	**82.51**	**20**	P	**P**	**00 32 24.2**	**-1.1**
	baz=313						
KAIM	**Kayak Island**	**82.61**	**26**	P	**P**	**00 32 25.2**	**-0.5**
	baz=307						
K29M	**Barlow Dome**	**82.63**	**21**	P	**P**	**00 32 25.7**	**-0.2**
	baz=312						
CRQE	**Cirque**	**82.63**	**25**	P	**P**	**00 32 25.7**	**-0.4**
	baz=308						
YUK3	**Moose Creek**	**82.97**	**24**	P	**P**	**00 32 27.4**	**-0.5**
	baz=310						
POIN	**Pond Inlet**	**83.08**	**358**	P	**P**	**00 32 27.2**	**-0.8**
POIN				IAmb	IAmb	00 32 28.3	
	comp=Z,7.0nm,1.1s						
CTG	**Chitna Glacier**	**83.17**	**24**	P	**P**	**00 32 28.4**	**-0.4**
	baz=309						
M29M	**Somme Creek**	**83.25**	**22**	P	**P**	**00 32 28.7**	**-0.5**
	baz=312						
O28M	**Mount Upton**	**83.72**	**24**	P	**P**	**00 32 31.5**	**-0.4**
	baz=310						
M30M	**Minto, Yukon**	**83.73**	**22**	P	**P**	**00 32 31.4**	**-0.1**
	baz=313						
YUK4	**Talbot Arm**	**83.92**	**23**	P	**P**	**00 32 31.2**	**-1.5**
	baz=312						
PINM	**Pinnacle**	**84.14**	**25**	P	**P**	**00 32 33.5**	**-0.2**
	baz=310						
YUK6	**Outpost Mounta**	**84.29**	**24**	P	**P**	**00 32 34.5**	**-0.2**
	baz=312						
N30M	**Aishikik Lake**	**84.39**	**23**	P	**P**	**00 32 35.2**	**+0.2**
	baz=313						
O29M	**Mount Kennedy**	**84.64**	**24**	P	**P**	**00 32 36.0**	**-0.3**
	baz=312						
HYT	**Haines Junctio**	**84.68**	**23**	P	**P**	**00 32 36.3**	**-0.2**
	baz=313						
O30N	**Mendenhall**	**85.22**	**23**	P	**P**	**00 32 39.1**	**-0.1**
	baz=314						
P30M	**Million Dollar**	**85.35**	**24**	P	**P**	**00 32 39.2**	**-0.7**
	baz=313						
MMPY	**Sheldon Lake,**	**85.50**	**20**	P	**P**	**00 32 40.0**	**-0.5**
	baz=318						
SFJD	**Kangerlussuaq**	**85.52**	**348**	LR	LR	01 14 22.8	
	comp=Z,85nm,18.3s,baz=356,slow=38						
WHY	**Whitehorse**	**85.72**	**23**	P	**P**	**00 32 40.9**	**-0.8**
	baz=315						
N32M	**Quiet Lake**	**85.99**	**22**	P	**P**	**00 32 42.1**	**-0.9**
	baz=316						
BOSA	**Boshof**	**86.12**	**236**	P	**P**	**00 32 42.7**	**-1.5**
	comp=Z,1.8nm,0.8s,baz=116,slow=3.9,SNR=4.2						
BOSA				LR	LR	01 06 27.3	
	comp=Z,79nm,21.6s,baz=25,slow=32						
	comp=Z,1.8nm,0.8s						
BOSA	**Boshof**	**86.12**	**236**	P	**P**	**00 32 43.3**	**-0.9**
ILON	**Igloolik, Nuna**	**86.50**	**359**	P	**P**	**00 32 44.5**	**-0.7**
ILON				IAmb	IAmb	00 32 44.9	
	comp=Z,6.4nm,1.0s						
TSUM	**Tsumeb**	**87.85**	**248**	LR	LR	01 12 02.6	
	comp=Z,81nm,19.8s,baz=340,slow=36						
TORD	**Torodi Ar. Bea**	**88.57**	**284**	LR	LR	01 17 52.8	
	comp=Z,142nm,18.7s,baz=87,slow=39						
DLBC	**Dease Lake**	**89.04**	**22**	LR	LR	01 16 28.9	
	comp=Z,260nm,19.6s,baz=268,slow=38						
U33K	**Whale Pass**	**89.63**	**25**	P	**P**	**00 32 59.0**	**-1.4**
	baz=316						
WRAK	**Wrangell Islan**	**89.70**	**25**	P	**P**	**00 32 59.6**	**-1.2**
	baz=317						
YKA	**Yellowknife Ar**	**90.02**	**14**	P	**P**	**00 33 01.4**	**-0.7**
	comp=Z,0.8nm,0.9s,baz=327,slow=5.1,SNR=9.1						
	comp=Z,0.8nm,0.9s						
V35K	**Ketchikan**	**90.78**	**25**	P	**P**	**00 33 04.9**	**-0.9**
	baz=318						
BLKN	**Baker Lake**	**91.08**	**5**	P	**P**	**00 33 07.4**	**+0.4**
SUR	**Sutherland**	**91.30**	**235**	LR	LR	01 15 19.3	
	comp=Z,152nm,18.1s,baz=62,slow=36						
FRB	**Frobisher Bay**	**91.33**	**353**	LR	LR	01 16 36.0	
	comp=Z,90nm,21.2s,baz=8.0,slow=37						
BBB	**Bella Bella**	**94.53**	**26**	LR	LR	01 19 25.5	
	comp=Z,193nm,19.5s,baz=346,slow=38						
MAW	**Mawson**	**94.99**	**192**	LR	LR	01 09 32.7	
	comp=Z,63nm,20.5s,baz=28,slow=31						
RPZ	**Rata Peaks**	**96.39**	**135**	LR	LR	01 18 47.9	
	comp=Z,107nm,21.8s,baz=230,slow=37						
FCC	**Fort Churchill**	**96.73**	**5**	P	**P**	**00 33 34.3**	**+1.3**
DBIC	**Dimbokro**	**97.15**	**281**	LR	LR	01 24 20.8	
	comp=Z,83nm,18.7s,baz=72,slow=40						
SCHQ	**Schefferville**	**99.75**	**350**	LR	LR	01 24 07.4	
	comp=Z,45nm,21.5s,baz=360,slow=38						
PPT2	**Papeete2**	**118.80**	**97**	*e*LR	LR	01 15 03.9	
	comp=Z,125nm,25.8s						
PPT2				*e*LR	LR	01 15 06.4	
	comp=Z,91nm,23.0s						
TXAR	**Lajitas Array**	**123.31**	**21**	PKPdf	**PKPdf**	**00 38 59.5**	**-0.9**
SDV	**Santo Domingo**	**144.47**	**337**	PKPdf	**PKPab**	**00 39 36.9**	**-1.6**
LPAZ	**La Paz**	**163.15**	**296**	PKP	**PKPdf**	**00 40 05.5**	**-1.4**
	comp=Z,1.6nm,0.9s,baz=7.0,slow=5.7,SNR=3.9						

*UPP **04** 00:32:34.7±0.0, 67°.85N×20°.21E, h0km, ML2.4, Suspected explosion*
*IDC **04** 00:32:35.5±1.2, 67°.82N×20°.37E, h0km, mbtmp3.0/4, ML1.9/4, Error ellipse: s-maj=19.8km s-min=9.1km az=115.0*
*HEL **04** 00:32:35.0±0.1, 67°.84N×20°.20E, h0km, ML1.8, Suspected explosion*
ISC 04 00:32:34.9±0.8**, 67°.84N**±0°.02×**20°.24E**±0°.03**, h0km, n36, σ0s.94**/53**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.12**	**18**	P	**Pg**	**00 32 37.2**	**0.0**
KUA				S	**Sg**	**00 32 38.8**	**+0.1**
RATU	**Laukkuluspa**	**0.25**	**266**	P	**Pg**	**00 32 39.4**	**-0.3**
RATU				S	**Sg**	**00 32 42.9**	**0.0**
NIKU	**Nikkaluokta**	**0.46**	**274**	P	**Pg**	**00 32 43.2**	**-0.4**
LANU	**Lannavaara**	**0.69**	**72**	P	**Pg**	**00 32 47.9**	**-0.3**
LANU	**Lannavaara**	**0.69**	**72**	PG	**Pg**	**00 32 47.7**	**-0.5**
LANU				SG	**Sg**	**00 32 57.2**	**+0.1**
DUNU	**Dundret**	**0.74**	**170**	P	**Pg**	**00 32 48.6**	**-0.4**
MASU	**Masugnsbyn**	**0.78**	**119**	P	**Pg**	**00 32 49.5**	**-0.3**
SALU	**Saltoluokta**	**0.81**	**236**	P	**Pg**	**00 32 49.7**	**-0.7**
KIF	**Kilpisjarvi**	**1.19**	**10**	*e*P	**Pg**	**00 32 57.7**	**+0.1**
KIF	**Kilpisjarvi**	**1.19**	**10**	PG	**Pg**	**00 32 57.5**	**-0.1**
KIF				smax	smax	00 33 12.3	
	comp=Z,16nm,0.2s						
KIF				SG	**Sg**	**00 33 12.9**	**0.0**
HEF	**Hetta**	**1.40**	**65**	*e*P	**Pn**	**00 33 00.5**	**-1.2**
HEF	**Hetta**	**1.40**	**65**	PG	**Pn**	**00 33 00.4**	**-1.2**
	baz=246						
HEF				smax	smax	00 33 17.8	
	comp=Z,7.6nm,0.2s						
HEF				SG	**Sg**	**00 33 19.2**	**-0.6**
ERTU	**Ertsjaerv**	**1.50**	**149**	P	**Pn**	**00 33 02.3**	**-0.8**
ERTU	**Ertsjaerv**	**1.50**	**149**	PG	**Pn**	**00 33 02.2**	**-0.9**
ERTU				SN	**Sb**	**00 33 23.0**	**-0.1**
KLF	**Kolari**	**1.56**	**111**	PG	**Pn**	**00 33 03.0**	**-0.8**
	baz=298						
KLF				smax	smax	00 33 21.9	
	comp=Z,6.1nm,0.2s						
KLF				SN	**Sb**	**00 33 24.8**	**+0.1**
HARU	**Harads**	**1.71**	**170**	P	**Pn**	**00 33 05.7**	**-0.2**
TRO	**Tromso**	**1.86**	**346**	PG	**Pn**	**00 33 08.3**	**+0.3**
TRO				SG	**Sb**	**00 33 33.0**	**-0.5**
TOF	**Tornio**	**2.39**	**136**	PB	**Pn**	**00 33 16.6**	**+1.3**
TOF				smax	smax	00 33 46.0	
	comp=Z,3.1nm,0.2s						
TOF				SG	**Sb**	**00 33 48.0**	**-0.8**
RNF	**Rovaniemi**	**2.56**	**116**	PB	**Pn**	**00 33 19.3**	**+1.6**
	baz=302						
RNF				SG	**Sb**	**00 33 53.0**	**-0.7**
ARA0	**ARCESS Array S**	**2.57**	**46**	PN	**Pn**	**00 33 18.1**	**+0.5**
ARA0				SB	**Sb**	**00 33 52.1**	**-1.7**
ARCES	**ARCESS Array B**	**2.57**	**46**	Pn	**Pn**	**00 33 18.1**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=226,slow=15,SNR=13						
ARCES				Sn	**Sn**	**00 33 51.7**	**+2.1**
	comp=Z,1.6nm,0.3s,baz=229,slow=24,SNR=16						
	comp=Z,0.9nm,0.2s						
RAJF	**Raja-Jooseppi**	**3.08**	**74**	PN	**Pn**	**00 33 24.9**	**+0.1**
RAJF				SG	**Sb**	**00 34 07.5**	**-1.1**
KEV	**Kevo**	**3.12**	**49**	PN	**Pn**	**00 33 25.8**	**+0.5**
KEV				SN	**Sn**	**00 34 04.2**	**+1.1**
RANF	**Ranua**	**3.17**	**122**	PN	**Pn**	**00 33 27.0**	**+1.1**
RANF				SG	**Sb**	**00 34 12.0**	**+1.0**
BURU	**Burvik**	**3.31**	**171**	PB	**Pn**	**00 33 29.5**	**+1.7**
VRF	**Varrio**	**3.56**	**87**	PG	**Pb**	**00 33 38.1**	**-0.5**
	baz=275						
OUL	**Oulu**	**3.58**	**138**	PG	**Pb**	**00 33 39.3**	**+0.3**
	baz=318						
OUL				SG	**Sb**	**00 34 23.8**	**+0.9**
KU2	**Taivalkoski**	**3.82**	**120**	PN	**Pn**	**00 33 36.0**	**+1.1**
OLKF	**Oulanka, Finla**	**3.90**	**109**	PN	**Pn**	**00 33 36.8**	**+0.9**
MSF	**Maaselka**	**3.98**	**115**	PN	**Pn**	**00 33 38.6**	**+1.5**
UMAU	**Umeaa**	**3.98**	**177**	PN	**Pn**	**00 33 39.0**	**+1.9**
KU6	**Riekki**	**4.21**	**111**	PN	**Pn**	**00 33 41.1**	**+0.8**
	baz=304						
KU1	**Kurvinen**	**4.35**	**117**	PN	**Pn**	**00 33 43.5**	**+1.3**
FINES	**FINESS Array B**	**6.89**	**156**	Pn	**Pn**	**00 34 16.9**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=347,slow=13,SNR=1.0						
FINES				Sn	**Sn**	**00 35 34.9**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=343,slow=23,SNR=1.6						
FINES				Lg	Lg	00 36 11.5	
	comp=Z,0.3nm,0.3s,baz=342,slow=24,SNR=4.2						
	comp=Z,1.0nm,0.8s						
NOA	**NORSAR Array B**	**7.86**	**214**	Pn	**Pn**	**00 34 29.9**	**-0.5**
	baz=21,slow=11,SNR=1.3						
	comp=Z,0.4nm,0.8s						
HFS	**Hagfors**	**8.25**	**203**	Pn	**Pn**	**00 34 34.2**	**-1.5**
	baz=8.9,slow=10,SNR=1.4						
HFS				Lg	Lg	00 36 54.2	
	comp=Z,0.2nm,0.3s,baz=37,slow=27,SNR=4.1						
	comp=Z,3.6nm,1.1s						

*IDC **04** 00:49:12.7±2.6, 7°.76S×74°.83W, h171km±40km, mb3.5/3, mbtmp3.8/7, MS3.8/2, Error ellipse: s-maj=42.8km s-min=14.5km az=60.0*
ISC 04 00:49:11.8±1.0**, 7°.70S**±0°.10×**74°.72W**±0°.09**, h154km, n9, σ0s.54**/9**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**3.69**	**279**	P	**Pn**	**00 50 08.4**	**-0.1**
	15nm,0.2s,baz=121,slow=12,SNR=154						
ATAH				S	**Sn**	**00 50 53.0**	**+0.4**
	66nm,0.6s,baz=356,slow=22,SNR=21						
NNA	**Nana**	**4.75**	**206**	P	**Pn**	**00 50 21.9**	**-0.1**
	4.8nm,0.4s,baz=5.8,slow=13,SNR=2.0						
NNA				S	**Sn**	**00 51 16.6**	**-0.2**
	45nm,0.3s,baz=251,slow=15,SNR=13						
LPAZ	**La Paz**	**10.69**	**144**	P	**Pn**	**00 51 41.4**	**0.0**
	0.8nm,0.6s,baz=309,slow=5.4,SNR=4.7						
SIV	**San Ignacio**	**15.68**	**123**	P	**P**	**00 52 46.4**	**+1.0**
	0.5nm,0.3s,baz=274,slow=14						
CPUP	**Villa Florida**	**24.83**	**140**	P	**P**	**00 54 20.2**	**+0.3**
	0.4nm,0.3s,baz=294,slow=20,SNR=1.5						
	0.4nm,0.3s						
PFO	**Pinyon Flats O**	**57.06**	**319**	LR	LR	01 22 36.9	
	comp=Z,92nm,21.6s,baz=330,slow=35						
PDAR	**Pinedale Array**	**59.41**	**331**	LR	LR	01 27 30.3	
	comp=Z,59nm,19.2s,baz=330,slow=39						
DBIC	**Dimbokro**	**71.12**	**80**	P	**P**	**01 00 13.8**	**-0.3**
	2.1nm,0.5s,baz=241,slow=13,SNR=4.0						
	2.1nm,0.5s						
TORD	**Torodi Ar. Bea**	**78.65**	**75**	P	**P**	**01 00 56.8**	**-0.5**
	0.2nm,0.3s,baz=270,slow=4.7,SNR=11						
	0.2nm,0.3s						

*DJA **04** 01:00:26.4±0.2, 2°S±2°×12°2E±°, h10km, M4.3/28, mb4.6/2, MLv4.2/28*
*IDC **04** 01:00:32.0±1.8, 3°.11S×122°.50E, h0km, mb3.3/3, mbtmp3.5/4, ML3.7/1, MS3.1/2, Error ellipse: s-maj=35.5km s-min=27.7km az=48.0*
ISC 04 01:00:29.0±1.2**, 2°.26S**±0°.04×**122°.34E**±0°.07**, h35km, n19, σ0s.83**/19**, mb3.5**/3**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.28**	**20**	P	**Pn**	**01 00 49.8**	**-0.6**
LUWI				S	**Sn**	**01 01 07.2**	**+0.8**
APSI	**Ampana**	**1.51**	**333**	P	**Pn**	**01 00 52.4**	**-1.1**
KDI	**Kendari**	**1.71**	**171**	P	**Pn**	**01 00 56.5**	**+0.2**
KKSI	**Kolaka, Sulawe**	**2.02**	**200**	P	**Pn**	**01 01 01.5**	**+0.9**
TTSI	**Tana Toraja**	**2.64**	**253**	P	**Pn**	**01 01 07.5**	**-1.6**
MRSI	**Marisa**	**2.75**	**352**	P	**Pn**	**01 01 09.6**	**-1.0**
PCI	**Palu**	**2.84**	**298**	P	**Pn**	**01 01 13.1**	**+1.2**
GTOI	**Gorontalo**	**2.95**	**13**	P	**Pn**	**01 01 14.2**	**+0.8**
SPSI	**Sidrap Palu**	**3.08**	**237**	P	**Pn**	**01 01 14.9**	**-0.2**
MMSI	**Mamuju**	**3.46**	**263**	P	**Pn**	**01 01 21.3**	**+0.9**
MPSI	**Mapaga**	**3.55**	**316**	P	**Pn**	**01 01 22.6**	**+0.9**
PMSI	**Majene**	**3.64**	**250**	P	**Pn**	**01 01 23.2**	**+0.3**
KAPI	**Kappang**	**3.77**	**223**	Pn	**Pn**	**01 01 24.4**	**-0.2**
	8.4nm,0.3s,baz=360,slow=8.1,SNR=9.1						
KAPI				Sn	**Sn**	**01 02 07.3**	**-0.4**
	2.3nm,0.3s,baz=216,slow=20,SNR=3.7						
	22nm,0.4s						
KAPI	**Kappang**	**3.77**	**223**	P	**Pn**	**01 01 24.5**	**-0.1**
BSSI	**Bau Bau, Buton**	**4.28**	**206**	P	**Pn**	**01 01 31.5**	**-0.2**
BATI	**Baumata**	**8.01**	**171**	LR	LR	01 05 21.7	
	comp=Z,130nm,20.3s,baz=295,slow=40						
WRA	**Warramunga Arr**	**21.13**	**147**	P	**P**	**01 05 10.9**	**-0.1**
	1.1nm,0.9s,baz=333,slow=9.8,SNR=6.4						
	1.1nm,0.9s						
ASAR	**Alice Springs**	**24.05**	**153**	P	**P**	**01 05 40.6**	**-0.5**
	1.2nm,0.8s,baz=336,slow=9.2,SNR=10						
ASAR				LR	LR	01 15 31.4	
	comp=Z,57nm,18.6s,baz=302,slow=39						
	1.2nm,0.8s						
MKAR	**Makanchi Array**	**60.19**	**329**	P	P	01 10 47.6	+14
	0.3nm,0.8s,baz=141,slow=7.3,SNR=2.8						
	0.3nm,0.8s						

*BGR **04** 01:04:42.5, 23°.31S×177°.18W, h33km*
*NEIC **04** 01:05:12.7±1.7, 22°.47S±0°.07×177°.2W±0°.1, h268km±7km, mb4.4/18, Error ellipse: s-maj=18.7km s-min=5.0km az=119.0*
*IDC **04** 01:05:15.3±4.0, 22°.30S×177°.48W, h287km±29km, mb3.6/8, mbtmp4.3/11, Error ellipse: s-maj=59.8km s-min=15.1km az=150.0*
ISC 04 01:05:10.1±0.5**, 22°.67S**±0°.09×**177°.14W**±0°.08**, h250km, n145, σ0s.69**/138**, mb4.3**/16**, 11C-8D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**6.60**	**186**	S	S	01 08 09.5	+7.3
	413nm,0.4s,baz=68,slow=20,SNR=4.0						
MSVF	**Nonsavu**	**6.67**	**316**	P	**Pn**	**01 06 47.3**	**+0.5**
	6.2nm,0.4s,baz=126,slow=15,SNR=9.4						
MSVF	**Nonsavu**	**6.67**	**316**		**Pn**	**01 06 47.8**	**+1.0**
NIUE	**Niue**	**7.63**	**63**	Pn	**Pn**	**01 06 59.1**	**+0.4**
AFI	**Afiamalu**	**10.09**	**31**	P	**Pn**	**01 07 31.9**	**+2.0**
	12nm,0.3s,baz=78,slow=17,SNR=4.9						
AFI				S	S	01 09 08.9	-15
	41nm,0.6s,baz=38,slow=23,SNR=8.8						
MARNC	**Mare, Loyalty**	**13.80**	**272**		**P**	**01 08 17.3**	**+0.6**
FUNA	**Funafuti**	**14.49**	**345**	P	**Pn**	**01 08 23.4**	**-1.0**
OUENC	**Ouen Island, N**	**14.81**	**268**		**Pn**	**01 08 30.4**	**+2.4**
DZM	**Mont Dzumac**	**15.20**	**269**	P	**Pn**	**01 08 33.0**	**+0.1**
	12nm,0.7s,baz=77,slow=19,SNR=23						
DZM	**Mont Dzumac**	**15.20**	**269**	P	**Pn**	**01 08 34.0**	**+1.1**
DZM				IAmb	IAmb	01 08 38.4	
	comp=Z,26nm,0.8s						
URZ	**Urewera**	**16.31**	**196**	S	**S**	**01 11 41.2**	**-0.7**
	comp=Z,22nm,0.5s,baz=88,slow=23,SNR=12						
RTZ	**Ruatahuna**	**16.68**	**196**	P	**Pn**	**01 08 51.9**	**+1.8**
RTZ				IAmb	IAmb	01 09 17.3	
	comp=Z,6.5nm,0.9s						
QRZ	**Quartz Range**	**20.10**	**203**	P	Pn	01 09 29.0	-1.1
CTAO	**Charters Tower**	**34.14**	**267**	P	**P**	**01 11 32.0**	**+0.1**
CTAO				IAmb	IAmb	01 11 33.0	
	comp=Z,5.5nm,0.6s						
PMG	**Port Moresby**	**36.65**	**285**	P	**P**	**01 11 52.3**	**-0.9**
PMG				IAmb	IAmb	01 11 54.1	
	comp=Z,18nm,1.0s						
STKA	**Stephens Creek**	**37.63**	**247**	P	**P**	**01 12 02.4**	**+1.2**
	comp=Z,1.8nm,0.8s,baz=62,slow=17,SNR=2.9						
	comp=Z,1.8nm,0.8s						
COEN	**Coen**	**38.56**	**276**	P	**P**	**01 12 09.8**	**+0.6**
COEN				IAmb	IAmb	01 12 13.3	
	comp=Z,6.7nm,1.1s						
BBOO	**Buckleboo**	**42.35**	**246**	P	**P**	**01 12 40.1**	**+0.1**
AS31	**Alice Springs**	**44.84**	**259**	P	**P**	**01 13 00.0**	**0.0**
ASAR	**Alice Springs**	**44.85**	**259**	P	**P**	**01 12 59.6**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=80,slow=10,SNR=12						
	comp=Z,0.6nm,0.4s						
WB0	**Warramunga Arr**	**45.12**	**264**	P	**P**	**01 13 01.2**	**-1.0**
WRA	**Warramunga Arr**	**45.14**	**264**	P	**P**	**01 13 01.2**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=96,slow=8.3,SNR=73						
	comp=Z,0.6nm,0.3s						
WRA	**Warramunga Arr**	**45.14**	**264**	P	**P**	**01 13 01.2**	**-1.1**
FORT	**Forrest**	**49.21**	**248**	P	**P**	**01 13 33.0**	**-0.4**
FORT				IAmb	IAmb	01 13 55.5	
	comp=Z,6.8nm,0.9s						
KNRA	**Kununurra**	**51.35**	**268**	P	**P**	**01 13 48.4**	**-1.2**
KNRA				IAmb	IAmb	01 13 50.4	
	comp=Z,17nm,1.1s						
SIJI	**Sorong**	**54.59**	**286**	P	**P**	**01 14 12.4**	**-0.9**
	comp=Z,8.9nm,0.5s,baz=125,slow=15,SNR=2.8						
	comp=Z,8.9nm,0.5s						
M16K	**Timber Creek**	**84.68**	**9**	P	**P**	**01 17 16.3**	**+1.0**
M16K				IAmb	IAmb	01 17 16.7	
	comp=Z,7.0nm,0.8s						
N18K	**Kilae Creek**	**84.83**	**10**	P	**P**	**01 17 15.3**	**-0.8**
N18K				IAmb	IAmb	01 17 36.2	
	comp=Z,4.0nm,0.8s						
SLKM	**Skilak Lake**	**85.72**	**13**	P	**P**	**01 17 20.4**	**-0.1**
SUA	**Susitna One**	**86.49**	**12**	P	**P**	**01 17 24.1**	**-0.2**
SUA				IAmb	IAmb	01 17 25.0	
	comp=Z,9.1nm,0.7s						
GHO	**Glory Hole Cre**	**87.14**	**13**	P	**P**	**01 17 27.4**	**0.0**
TXAR	**Lajitas Array**	**87.55**	**57**	P	**P**	**01 17 33.3**	**+3.1**
	comp=Z,0.3nm,0.8s,baz=213,slow=8.3,SNR=5.0						
	comp=Z,0.3nm,0.8s						
K20K	**Telida**	**87.64**	**10**	P	**P**	**01 17 29.4**	**-0.3**
TRF	**Thorofare Moun**	**88.39**	**12**		**P**	**01 17 32.6**	**-0.8**
BCAR	**Beaver Creek A**	**89.89**	**15**	P	**P**	**01 17 40.7**	**+0.4**
PDAR	**Pinedale Array**	**89.99**	**43**	P	**P**	**01 17 41.9**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=204,slow=3.3,SNR=4.4						
	comp=Z,0.4nm,0.8s						
PDAR	**Pinedale Array**	**89.99**	**43**	P	**P**	**01 17 41.3**	**-0.1**
IMAR	**Indian Mountai**	**90.15**	**9**	P	**P**	**01 17 41.2**	**-0.2**
ILAR	**Eielson Array**	**90.24**	**12**	P	**P**	**01 17 41.1**	**-0.7**
	comp=Z,3.1nm,0.9s,baz=218,slow=5.7,SNR=31						
	comp=Z,3.1nm,0.9s						
ILAR	**Eielson Array**	**90.24**	**12**	P	**P**	**01 17 40.7**	**-1.1**
CMAR	**Chiang Mai Arr**	**91.59**	**289**	P	**P**	**01 17 48.8**	**-0.3**
	comp=Z,1.5nm,0.3s,baz=139,slow=3.7,SNR=5.7						
	comp=Z,1.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**91.59**	**289**	P	**P**	**01 17 49.2**	**+0.1**
ZALV	**Zalesovo Beam**	**112.67**	**321**	PKiKP	**PKiKP**	**01 23 15.4**	**-1.1**
	comp=Z,0.7nm,0.5s,baz=171,slow=1.2,SNR=5.0						
MKAR	**Makanchi Array**	**113.26**	**313**	PKiKP	**PKiKP**	**01 23 16.5**	**-1.3**
	comp=Z,0.4nm,0.4s,baz=168,slow=0.5,SNR=10.0						
KURBB	**Kurchatov Arra**	**116.17**	**317**	PKP	**PKPdf**	**01 23 22.0**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=99,slow=1.8,SNR=8.7						
BVAR	**Borovoye Array**	**121.24**	**319**	PKP	**PKPdf**	**01 23 32.5**	**-0.4**
	comp=Z,1.9nm,0.4s,baz=127,slow=1.8,SNR=20						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ARCES	**ARCESS Array B**	**131.19**	**350**	PKP	**PKiKP**	**01 23 52.0**	**-0.4**
	comp=Z,3.0nm,0.6s,baz=48,slow=1.8,SNR=12						
ARCES	**ARCESS Array B**	**131.19**	**350**		**PKPdf**	**01 23 51.3**	**-0.2**
FINES	**FINESS Array B**	**138.07**	**344**	PKhKP	PKPpre	01 23 53.4	
	comp=Z,1.2nm,0.7s,baz=212,slow=1.8,SNR=5.0						
FINES				PKP	**PKPdf**	**01 24 04.1**	**-0.4**
	comp=Z,1.6nm,0.5s,baz=66,slow=3.1,SNR=9.6						
NB2	**NORSAR Subarra**	**141.22**	**354**	PKP	PKPpre	01 24 02.3	
	comp=Z,0.2nm,0.4s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**141.22**	**354**	PKhKP	PKPpre	01 24 02.8	
	comp=Z,0.3nm,0.7s,baz=22,slow=1.7,SNR=3.9						
NOA				PKP	**PKiKP**	**01 24 12.3**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=13,slow=4.1,SNR=4.5						
HFS	**Hagfors**	**141.79**	**351**	PKhKP	PKPpre	01 24 04.8	
	comp=Z,1.5nm,0.5s,baz=37,slow=3.7,SNR=13						
STRU	**Stroemstad**	**143.18**	**353**	*i* P	PKPab	01 24 10.2	+0.1
TJOU	**Tjoern**	**144.11**	**352**	*i* P	**PKPab**	**01 24 13.1**	**-0.7**
HOMB	**Homborsund**	**144.20**	**355**	*i* P	**PKPab**	**01 24 14.0**	**-0.1**
SNART	**Snartemo**	**144.23**	**356**	*i* P	**PKPab**	**01 24 14.2**	**0.0**
BORU	**Boraas**	**144.34**	**351**	*i* P	**PKPab**	**01 24 13.5**	**-1.2**
ONAU	**Onsala**	**144.69**	**352**	*i* P	PKPbc	01 24 14.8	-1.2
FABU	**Falkenberg**	**144.95**	**351**	*i* P	**PKPbc**	**01 24 15.8**	**-1.0**
BLEU	**Blekinge**	**145.07**	**347**	*i* P	**PKPdf**	**01 24 15.9**	**-1.3**
DEL	**Delary**	**145.28**	**349**	*i* P	**PKPdf**	**01 24 17.1**	**-0.4**
AKASG	**Malin Array Be**	**145.29**	**330**	PKP	**PKPdf**	**01 24 16.8**	**-1.0**
	comp=Z,2.8nm,0.4s,baz=43,slow=4.3,SNR=21						
AKASG	**Malin Array Be**	**145.29**	**330**		**PKPdf**	**01 24 16.2**	**-1.5**
KIEV	**Kiev**	**145.30**	**330**	⇓P	**PKPdf**	**01 24 16.8**	**-0.9**
BJUU	**Bjuv**	**145.80**	**350**	*i* P	**PKPbc**	**01 24 18.9**	**-0.5**
MUD	**Monsted U'grnd**	**145.93**	**354**	*i* P	**PKPbc**	**01 24 19.7**	**-0.1**
LUNU	**Lund**	**146.15**	**349**	*i* P	**PKPbc**	**01 24 19.9**	**-0.5**
EKA	**Eskdalemuir Ar**	**147.07**	**6**	PKPbc	**PKPbc**	**01 24 22.8**	**-0.3**
	comp=Z,1.7nm,0.4s,baz=329,slow=2.8,SNR=17						
SORM	**Soroca**	**147.46**	**328**	⇑P	**PKPbc**	**01 24 23.7**	**-0.7**
BSEG	**Bad Segeberg**	**148.27**	**352**	*e*PKPbc	**PKPbc**	**01 24 26.8**	**+0.6**
	baz=16,slow=2.3						
BRTR	**Keskin Array B**	**148.87**	**310**	PKPbc	**PKPbc**	**01 24 27.8**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=146,slow=4.8,SNR=11						
BRTR	**Keskin Array B**	**148.87**	**310**		**PKPbc**	**01 24 27.7**	**-0.8**
KIRS	**Kirsehir-Merke**	**148.90**	**309**	⇑P	**PKPbc**	**01 24 28.4**	**-0.2**
GORT1	**Trebel**	**149.04**	**350**	*e*PKPbc	**PKiKP**	**01 24 28.7**	**-0.6**
	baz=16,slow=2.3						
RUE	**Ruedersdorf**	**149.08**	**347**	*e*PKPbc	**PKiKP**	**01 24 28.9**	**-0.6**
	baz=16,slow=2.3						
MMAI	**Mount Meron Ar**	**149.55**	**297**	PKPbc	**PKPbc**	**01 24 30.5**	**+0.2**
	comp=Z,1.5nm,0.4s,baz=67,slow=8.4,SNR=20						
ONER	**Baraj Valea Uz**	**149.66**	**327**	⇓P	**PKiKP**	**01 24 30.7**	**-0.3**
FLTG	**Flechtingen**	**149.69**	**350**	*e*PKPbc	**PKPbc**	**01 24 30.1**	**+0.2**
	baz=16,slow=2.3						
MANR	**Mangalia**	**150.08**	**321**	⇑P	**PKPbc**	**01 24 31.3**	**+0.2**
OSTC	**Ostas**	**150.27**	**343**	*e*PKP	**PKiKP**	**01 24 32.3**	**+0.2**
CHVC	**Chvalec**	**150.28**	**343**	*e*PKP	**PKiKP**	**01 24 32.2**	**+0.1**
CLZ	**Clausthal**	**150.30**	**351**	*e*PKPbc	**PKiKP**	**01 24 32.1**	**0.0**
	baz=16,slow=2.3						
NEHR	**Nehoiu**	**150.33**	**326**	⇑P	**PKPbc**	**01 24 30.8**	**-0.9**
CLL	**Collm**	**150.34**	**347**	⇓*i*PKP	**PKiKP**	**01 24 31.9**	**-0.3**
	comp=Z,22nm,1.0s						
CLL	**Collm**	**150.34**	**347**	*e*PKPbc	**PKiKP**	**01 24 31.9**	**-0.3**
	baz=16,slow=2.3						
STEB	**Steborice**	**150.37**	**340**	*e*PKP	**PKiKP**	**01 24 31.8**	**-0.5**
UPC	**Upice**	**150.37**	**343**	*e*PKP	**PKiKP**	**01 24 32.3**	**0.0**
DPC	**Dobruska-Polom**	**150.42**	**342**	*e*PKP	**PKiKP**	**01 24 32.6**	**+0.1**
LANS	**Liptovska Anna**	**150.48**	**338**	*e*P	**PKiKP**	**01 24 33.4**	**+0.8**
KRLC	**Kraliky**	**150.54**	**342**	*e*PKP	**PKiKP**	**01 24 32.5**	**-0.2**
BRG	**Berggiesshubel**	**150.55**	**346**	*e*PKPbc	**PKiKP**	**01 24 32.5**	**-0.1**
	baz=16,slow=2.3						
MORC	**Moravsky Berou**	**150.58**	**340**	⇑P	**PKiKP**	**01 24 32.5**	**-0.3**
MORC	**Moravsky Berou**	**150.58**	**340**	*e*PKP	**PKiKP**	**01 24 32.5**	**-0.3**
NEUB	**Neuenburg**	**150.68**	**349**	*e*PKPbc	**PKiKP**	**01 24 32.8**	**0.0**
	baz=16,slow=2.3						
PVCC	**Panska Ves**	**150.72**	**345**	*e*PKP	**PKiKP**	**01 24 33.2**	**+0.2**
CJR	**Cluj-Napoca**	**150.74**	**330**	⇑P	**PKiKP**	**01 24 33.2**	**0.0**
MAUC	**Maruska**	**150.85**	**340**	*e*PKP	**PKiKP**	**01 24 33.6**	**+0.3**
HSKC	**Hora Svate Kat**	**150.91**	**346**	*e*PKP	**PKiKP**	**01 24 33.2**	**-0.2**
MARR	**Marisel-Cluj**	**150.99**	**331**	⇓P	**PKPbc**	**01 24 33.3**	**0.0**
BUG	**Bochum--Univer**	**151.07**	**354**	*e*PKPbc	**PKiKP**	**01 24 33.5**	**-0.2**
	baz=16,slow=2.3						
DRGR		**151.09**	**331**	⇓P	**PKPbc**	**01 24 33.5**	**0.0**
KASTN	**Kahler Asten**	**151.19**	**353**	*e*PKPbc	**PKiKP**	**01 24 34.2**	**+0.2**
	baz=16,slow=2.3						
ARR	**Arges**	**151.22**	**327**	⇑P	**PKiKP**	**01 24 35.0**	**+0.7**
PRU	**Pruhonice**	**151.23**	**344**	*e*PKP	**PKiKP**	**01 24 34.2**	**+0.2**
MOX	**Moxa**	**151.25**	**348**	*e*PKPbc	**PKiKP**	**01 24 34.1**	**0.0**
	baz=16,slow=2.3						
VRAC	**Vranov**	**151.28**	**341**	PKPbc	**PKPbc**	**01 24 33.5**	**-0.2**
	comp=Z,2.7nm,0.7s,baz=260,slow=2.7,SNR=5.2						
VRAC	**Vranov**	**151.28**	**341**	⇑P	**PKiKP**	**01 24 34.0**	**-0.2**
VRAC	**Vranov**	**151.28**	**341**	*e*PKP	**PKPbc**	**01 24 33.8**	**0.0**
PLN	**Plauen**	**151.30**	**348**	*e*PKPbc	**PKiKP**	**01 24 34.3**	**+0.1**
	baz=16,slow=2.3						
TANN	**Tannenbergstha**	**151.30**	**347**	*e*PKPbc	**PKiKP**	**01 24 34.2**	**0.0**
	baz=16,slow=2.3						
JAVC	**Velka Javorina**	**151.34**	**339**	*e*PKP	**PKiKP**	**01 24 34.6**	**+0.2**
PSZ	**Piszkesteto**	**151.35**	**336**	⇓P	**PKiKP**	**01 24 34.1**	**-0.4**
NKC	**Novy Kostel**	**151.48**	**347**	*e*PKP	**PKiKP**	**01 24 34.3**	**-0.3**
KRUC	**Moravsky**	**151.56**	**341**	*e*PKP	**PKiKP**	**01 24 34.6**	**-0.2**
LOT	**Lotru**	**151.59**	**328**	⇑P	**PKPbc**	**01 24 34.0**	**-0.7**
MANZ	**Manzenberg**	**151.78**	**347**	*e*PKPbc	**PKiKP**	**01 24 35.5**	**+0.2**
	baz=16,slow=2.3						
ZVC	**Zvikov**	**151.82**	**344**	*e*PKP	**PKiKP**	**01 24 35.2**	**-0.1**
MODS	**Modra-Piesok**	**151.89**	**339**	*e*P	**PKiKP**	**01 24 36.3**	**+0.8**
GZR	**Gura Zlata**	**152.11**	**329**	⇑P	**PKPbc**	**01 24 35.3**	**-0.6**
TNS	**Taunus Mts**	**152.15**	**352**	*e*PKPbc	**PKiKP**	**01 24 36.3**	**+0.3**
	baz=16,slow=2.3						
KHC	**Kasperske Hory**	**152.26**	**345**	*e*PKP	**PKiKP**	**01 24 36.4**	**+0.1**
CKRC	**Cesky Krumlov**	**152.36**	**344**	*e*PKP	**PKiKP**	**01 24 36.6**	**+0.1**
BZS	**Buzias**	**152.47**	**331**	⇑P	**PKPbc**	**01 24 36.4**	**-0.2**
GEC2	**GERESS Array S**	**152.49**	**344**	*e*PKPbc	**PKiKP**	**01 24 37.0**	**+0.1**
	baz=16,slow=2.3						
GERES	**GERESS Array B**	**152.49**	**344**	PKPbc	**PKiKP**	**01 24 36.7**	**-0.1**
	comp=Z,2.5nm,0.5s,baz=29,slow=3.0,SNR=18						
WINA	**Alland / Wiene**	**152.51**	**341**	*e*PKP	**PKiKP**	**01 24 36.9**	**+0.2**
	comp=Z,4.1nm,0.7s						
HERR	**Herculane**	**152.66**	**329**	⇓P	**PKPbc**	**01 24 36.3**	**-0.6**
CONA	**Conrad Observa**	**152.73**	**341**	*e*PKP	**PKiKP**	**01 24 37.3**	**0.0**
	comp=Z,2.2nm,0.5s						
RONA	**Rosalia, Austr**	**152.80**	**340**	*e*PKP	**PKiKP**	**01 24 37.7**	**+0.3**
	comp=Z,2.8nm,0.5s						
MORH	**Mrgy, Hungar**	**153.25**	**335**	⇓P	**PKiKP**	**01 24 38.2**	**-0.1**
MOA	**Molln**	**153.26**	**343**	*e*PKP	**PKiKP**	**01 24 38.3**	**-0.1**
	comp=Z,5.6nm,1.1s						
STU	**Stuttgart**	**153.47**	**351**	*e*PKPbc	**PKiKP**	**01 24 39.2**	**+0.4**
	baz=16,slow=2.3						
BIOA	**Bad Ischl, Aus**	**153.58**	**344**	*e*PKP	**PKiKP**	**01 24 38.9**	**-0.2**
	comp=Z,7.3nm,1.1s						
FUR	**Furstenfeldbru**	**153.68**	**347**	*e*PKPbc	**PKiKP**	**01 24 39.5**	**+0.2**
	baz=16,slow=2.3						
LESA	**Schwarzleotal**	**154.07**	**345**	*e*PKP	**PKiKP**	**01 24 40.3**	**+0.1**
	comp=Z,1.3nm,0.4s						
SOKA	**Soboth**	**154.10**	**341**	*e*PKP	**PKPbc**	**01 24 39.9**	**-0.3**
	comp=Z,1.0nm,0.6s						
UBR	**Ueberruh**	**154.37**	**349**	*e*PKPbc	**PKiKP**	**01 24 41.0**	**+0.3**
	baz=16,slow=2.3						
RETA	**Reutte**	**154.43**	**348**	*e*PKP	**PKiKP**	**01 24 41.4**	**+0.5**
	comp=Z,0.1nm,0.1s						
WTTA	**Wattenberg**	**154.46**	**346**	*e*PKP	**PKiKP**	**01 24 41.3**	**+0.3**
	comp=Z,3.3nm,0.4s						
MOTA	**Moosalm**	**154.50**	**347**	*e*PKP	**PKiKP**	**01 24 41.0**	**-0.1**
	comp=Z,1.6nm,0.6s						
MYKA	**Terra Mystica**	**154.55**	**343**	*e*PKP	**PKPbc**	**01 24 40.6**	**-0.6**
	comp=Z,2.1nm,0.4s						
SQTA	**Sankt Quirin**	**154.60**	**347**	*e*PKP	**PKiKP**	**01 24 41.6**	**+0.3**
	comp=Z,4.1nm,1.1s						
ABTA	**Abfaltersbach**	**154.74**	**344**	*e*PKP	**PKPbc**	**01 24 41.3**	**-0.2**
	comp=Z,2.3nm,0.5s						
FETA	**Feichten**	**154.89**	**347**	*e*PKP	**PKiKP**	**01 24 42.3**	**+0.4**
	comp=Z,0.7nm,0.5s						
DAVOX	**Davos/Dischmat**	**155.28**	**348**	PKPbc	PKPdf	01 24 42.8	+9.1
	comp=Z,2.3nm,0.5s,baz=341,slow=1.4,SNR=7.1						

IDC ***04*** *01:09:09.1±7.5, 37.°41N×135.°03E, h380km±126km, mbtmp3.6/4, Error ellipse: s-maj=80.4km s-min=29.5km az=171.0*

JMA ***04*** *01:09:10.9±0.3, 37°N±2°×13°5E±°, h377km, MV3.1/19, SEA OF JAPAN*

ISC 04 01:09:09.0±1.5**, 37.°4N**±0.°2×**135.°1E**±0.°1**, h378**km**, n9, σ1.s57**/10**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
JSZ	**Suzu**	**1.80**	**88**	*e*P	**Pn**	**01 10 03.1**	**+1.4**
JNG	**Nsakai**	**2.60**	**111**	*e*P	**Pn**	**01 10 08.6**	**+1.2**
MJAR	**Matsushiro Arr**	**2.63**	**108**	P	**Pn**	**01 10 08.7**	**+1.2**
	6.9nm,0.7s,baz=288,slow=9.3,SNR=13						
JFK	**Kawauchi**	**4.60**	**89**	*e*P	**Pn**	**01 10 26.0**	**+0.2**
JFK				*e*S	**S**	**01 11 26.1**	**-1.9**
JRG	**Rokugo**	**4.79**	**64**	*e*P	**Pn**	**01 10 29.6**	**+2.0**
JIW	**Iwasaki**	**4.98**	**49**	*e*P	**Pn**	**01 10 31.6**	**+2.0**
KSRS	**Korea Array**	**5.71**	**273**	P	**Pn**	**01 10 37.4**	**-0.2**
	1.8nm,0.5s,baz=88,slow=12,SNR=4.8						
USRK	**Ussuriysk Ar.**	**7.20**	**342**	P	**P**	**01 10 54.4**	**-0.8**
	3.2nm,0.6s,baz=166,slow=11,SNR=5.9						
ASAJ	**Asahikawa**	**8.80**	**38**	P	**Pn**	**01 11 12.7**	**-0.1**
	6.0nm,0.3s,baz=220,slow=7.9,SNR=6.3						

IDC 04 01:19:05.2±1.7**, 7.°73S**×**129.°58E, h0**km**, mb3.4**/2**, mbtmp3.7**/6**, ML3.9**/4**, Error ellipse: s-maj=49.0km s-min=26.2km az=82.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BATI	**Baumata**	**6.34**	**247**	Pn	Pn	01 20 40.7	+0.6
	9.0nm,0.3s,baz=250,slow=12,SNR=4.4						
	26nm,0.4s						
FITZ	**Fitzroy Crossi**	**11.00**	**200**	Pn	Pn	01 21 42.4	-1.6
	1.2nm,0.3s,baz=19,slow=10,SNR=14						
FITZ				Sn	Sn	01 23 32.3	-16
	1.2nm,0.3s,baz=180,slow=14,SNR=3.4						
	2.5nm,0.3s						
WRA	**Warramunga Arr**	**12.99**	**160**	Pn	Pn	01 22 12.4	+1.2
	0.4nm,0.3s,baz=340,slow=10,SNR=8.1						
WRA				Sn	Sn	01 24 27.7	-8.9
	1.3nm,0.3s,baz=326,slow=22,SNR=16						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**16.39**	**166**	Pn	Pn	01 22 57.0	+0.2
	0.2nm,0.3s,baz=340,slow=12,SNR=7.1						
ASAR				Sn	Sn	01 25 49.4	-10
	0.4nm,0.3s,baz=350,slow=27,SNR=4.9						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**68.60**	**327**	P	P	01 30 09.9	-0.3
	0.2nm,0.5s,baz=128,slow=8.0,SNR=3.6						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**72.91**	**329**	P	P	01 30 36.5	+0.3
	0.3nm,0.6s,baz=131,slow=5.1,SNR=4.7						
	0.3nm,0.6s						

NEIC ***04*** *01:42:08.1±0.7, 19.°25N±0.°05×67.°05W±0.°02, h10km±2km, ML3.0/37, Md3.3/7(RSPR), Error ellipse: s-maj=8.6km s-min=3.0km az=1.0*

SDD ***04*** *01:42:08.9±2.0, 19.°27N×67.°20W, h18km±29km, MD3.5, ML3.1, MW3.3, Presumed earthquake*

OSPL ***04*** *01:42:10.9±1.0, 19.°15N×67.°16W, h94km±999km, ML2.8, Presumed earthquake*

ISC 04 01:42:09.1±1.9**, 19.°22N**±0.°07×**67.°05W**±0.°04**, h14**km±11km**, n31, σ0.s52**/40**, 2C-5D, Mona Passage**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AGPR	**Aguadilla, PR**	**0.75**	**185**		**Pb**	**01 42 24.4**	**+0.5**
AGPR				Sn	**Sn**	**01 42 35.7**	**-0.7**
AGPR				IAML		01 42 37.5	
	939nm,0.3s						
AGPR				IAML		01 42 37.5	
	589nm,0.3s						
EMPR	**Esperanza - Ma**	**0.89**	**146**		**Pn**	**01 42 28.0**	**+0.9**
EMPR					**Sn**	**01 42 39.8**	**0.0**
AOPR	**Arecibo Observ**	**0.91**	**162**		**Pn**	**01 42 27.1**	**-0.4**
AOPR				Sn	**Sn**	**01 42 40.9**	**+0.5**
AOPR				IAML		01 42 44.0	
	468nm,0.2s						
AOPR				IAML		01 42 46.1	
	758nm,0.3s						
IDE	**Isla Desecheo**	**0.92**	**206**		**Pb**	**01 42 26.9**	**0.0**
IDE					**Sn**	**01 42 41.0**	**+0.3**
PRSN	**Puerto Rico Se**	**1.00**	**185**		**Pb**	**01 42 28.3**	**+0.1**
UUPR	**Utuado, UPR, P**	**1.01**	**162**		**Pn**	**01 42 28.6**	**-0.3**
LSP	**Las Mesas**	**1.04**	**182**		**Pn**	**01 42 29.2**	**-0.1**
ECPR	**Experimental S**	**1.10**	**144**		**Pn**	**01 42 30.2**	**0.0**
ECPR				IAML		01 42 51.6	
	576nm,0.2s						
CRPR	**Cabo Rojo, PR**	**1.21**	**183**		**Pn**	**01 42 31.1**	**-0.5**
CRPR				IAML		01 42 50.0	
	292nm,0.9s						
CRPR				IAML		01 42 52.1	
	222nm,0.5s						
CRPR	**Cabo Rojo, PR**	**1.21**	**183**		**Sb**	**01 42 47.4**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.21**	**183**	⇓*e*Pg	**Pg**	**01 42 32.1**	**-0.3**
CRPR				⇓*e*Sg	**Sb**	**01 42 46.6**	**-0.6**
CRPR				IAML		01 42 51.2	
	comp=N,337nm,0.4s						
CRPR	**Cabo Rojo, PR**	**1.21**	**183**	*i* P	**Pg**	**01 42 32.1**	**-0.3**
CRPR				*e*S	**Sb**	**01 42 46.4**	**-0.8**
CRPR				IAML		01 42 49.2	
	comp=Z,236nm,0.3s						
CELP	**Cerrillos**	**1.22**	**159**		**Pn**	**01 42 31.6**	**-0.1**
CELP				IAML		01 42 50.2	
	comp=Z,252nm,0.8s						
CELP				IAML		01 42 52.5	
	comp=Z,229nm,0.5s						
OBIP	**Obispado Ponce**	**1.24**	**160**		**Pn**	**01 42 31.9**	**-0.2**
OBIP					**Sb**	**01 42 48.8**	**+0.6**
OBIP	**Obispado Ponce**	**1.24**	**160**	*i* P	**Pn**	**01 42 32.0**	**0.0**
OBIP				*e*S	**Sb**	**01 42 48.8**	**+0.6**
OBIP				IAML		01 42 51.4	
	comp=Z,118nm,0.3s						
MLPR	**Magueyes Islan**	**1.24**	**180**		**Pn**	**01 42 31.6**	**-0.5**
MLPR				IAML		01 42 50.3	
	comp=Z,140nm,0.7s						
GBPR	**Guanica, Bosqu**	**1.25**	**173**		**Pb**	**01 42 32.5**	**0.0**
GBPR					**Sg**	**01 42 49.5**	**+0.1**
SJG	**San Juan**	**1.39**	**142**		**Pn**	**01 42 33.9**	**-0.2**
SJG	**San Juan**	**1.39**	**142**	⇓*e*Pg	**Pb**	**01 42 34.6**	**-0.2**
SJG				⇑*e*Sg	**Sg**	**01 42 54.8**	**+0.8**
SJG	**San Juan**	**1.39**	**142**	*i* P	**Pb**	**01 42 34.7**	**-0.2**
SJG				IAML		01 42 56.3	
	comp=Z,55nm,0.3s						
PDPR	**Patillas Dam,**	**1.54**	**141**	Pn	**Pn**	**01 42 36.3**	**+0.2**
HUMP	**Col San Antoni**	**1.56**	**133**		**Pn**	**01 42 36.0**	**-0.5**
HUMP				IAML		01 43 08.4	
	comp=Z,116nm,0.2s						
HUMP	**Col San Antoni**	**1.56**	**133**		**Sb**	**01 42 57.4**	**0.0**
HIDR	**Higuey Centro**	**1.70**	**249**	*i* P	Pn	01 42 33.1	-5.3
HIDR				IAML		01 43 05.0	
	comp=N,131nm,0.2s						
CUPR	**Culebra, Puert**	**1.90**	**118**	Pn	**Pn**	**01 42 40.4**	**-0.7**
SMDR	**Samana, DR**	**2.02**	**272**	⇓*e*Pg	**Pn**	**01 42 41.6**	**-1.2**
SMDR				IAML		01 43 29.0	
	comp=N,110nm,0.6s						
DR12	**Loma Pena Alta**	**2.25**	**259**	Pn	**Pn**	**01 42 45.6**	**-0.4**
HATOM	**Hato Mayor del**	**2.25**	**259**	⇓*e*Pg	**Pn**	**01 42 46.0**	**0.0**
HATOM				IAML		01 43 35.5	
	comp=N,33nm,1.6s						
DR08	**Loma La Naviza**	**2.83**	**265**	⇑*e*Pg	**Pn**	**01 42 55.0**	**+1.1**
DR08				IAML		01 43 41.7	
	comp=N,782nm,0.2s						
BANI	**BANI**	**3.24**	**256**	Pn	**Pn**	**01 42 59.4**	**-0.3**
SDDR	**Presa de Saban**	**4.02**	**267**	Pn	**Pn**	**01 43 11.2**	**+0.9**
SDDR				IAML		01 44 24.0	
	comp=N,33nm,0.8s						
SDDR				IAML		01 44 46.4	
	comp=N,29nm,3.2s						

NAO ***04*** *02:02:26.6±0.8, 77.°22N×7.°84E, h10km, ML3.1*

BER ***04*** *02:02:27.7±4.3, 77.°24N×7.°68E, h10km, Mw3.9, ML3.1(NAO), Confirmed Earthquake*

KOLA ***04*** *02:02:28.7, 77.°29N×9.°09E, h0km, ML2.7, Error ellipse: s-maj=16.1km s-min=10.5km az=80.0, Greenland sea*

DNK ***04*** *02:02:29.3±1.3, 77.°35N×7.°08E, h25km±13km, ML1.9, Presumed earthquake*

IDC ***04*** *02:02:31.1±1.2, 77.°03N×9.°26E, h0km, mb3.3/4, mbtmp3.3/6, ML3.2/1, MS3.1/22, Error ellipse: s-maj=17.0km s-min=11.6km az=78.0*

FCIAR ***04*** *02:02:31.0, 77.°00N×9.°11E, h10km, station SPA0 has station magnitude of 3.09*

ISC 04 02:02:23.0±0.7**, 77.°15N**±0.°04×**7.°45E**±0.°04**, h10**km**, n75, σ2.s61**/85**, mb3.2**/4**, MS3.0**/17**, 3D, Svalbard region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BRBA	**Barentsburg A**	**1.73**	**55**	Pb	**Pg**	**02 02 55.7**	**-0.4**
BRBA				Sb	**Sn**	**02 03 13.2**	**-1.8**
BRBA	**Barentsburg A**	**1.73**	**55**	⇓*i*P	**Pg**	**02 02 55.5**	**-0.5**
BRBA				*e*S	**Sn**	**02 03 14.2**	**-0.8**
BRBA				IAML		02 03 15.3	
	comp=Z,139nm,0.3s						
BRBB	**Barentsburg B**	**1.74**	**54**	Pb	**Pg**	**02 02 55.9**	**-0.4**
BRBB				Sb	**Sn**	**02 03 14.5**	**-0.9**
BRBB	**Barentsburg B**	**1.74**	**54**	⇓*i*P	**Pg**	**02 02 55.7**	**-0.6**
BRBB				*e*S	**Sn**	**02 03 14.6**	**-0.8**
BRBB	**Barentsburg B**	**1.74**	**54**	P	**Pb**	**02 02 54.9**	**-0.1**
BRBB				S	**Sn**	**02 03 12.9**	**-2.5**
HSPB	**Hornsund (broa**	**1.82**	**91**	Pn	**Pb**	**02 02 56.9**	**+0.5**
HSPB				Sn	**Sn**	**02 03 17.2**	**-0.2**
HSPB	**Hornsund (broa**	**1.82**	**91**	*e*P	**Pb**	**02 02 56.7**	**+0.3**
HSPB				*e*S	**Sn**	**02 03 16.5**	**-0.9**
HSPB				IAML		02 03 18.4	
	comp=Z,201nm,0.3s						
HSPB	**Hornsund (broa**	**1.82**	**91**	*e*P	**Pb**	**02 02 56.6**	**+0.3**
HSPB				*e*S	**Sn**	**02 03 15.0**	**-2.4**
HSPB	**Hornsund (broa**	**1.82**	**91**	P	**Pb**	**02 02 56.5**	**+0.1**
HSPB				S	**Sn**	**02 03 15.2**	**-2.2**
KBS	**Kingsbay**	**2.02**	**25**	Pn	**Pb**	**02 02 59.4**	**-0.4**
KBS				Sn	**Sb**	**02 03 22.3**	**-2.6**
KBS	**Kingsbay**	**2.02**	**25**	*i* P	**Pb**	**02 02 59.5**	**-0.3**
KBS				*i* S	**Sn**	**02 03 21.8**	**-0.6**
KBS	**Kingsbay**	**2.02**	**25**	P	**Pb**	**02 02 59.1**	**-0.7**
KBS				S	**Sn**	**02 03 20.6**	**-1.7**
SPA0	**Spitsbergen Ar**	**2.18**	**57**	Pn	**Pb**	**02 03 03.1**	**+0.6**
	baz=237,slow=12						
SPA0				Sb	**Sb**	**02 03 27.5**	**-1.9**
	baz=236,slow=56						
SPA0	**Spitsbergen Ar**	**2.18**	**57**	Pn	**Pb**	**02 03 03.1**	**+0.6**
SPA0				Sb	**Sb**	**02 03 27.5**	**-1.9**
SPA0	**Spitsbergen Ar**	**2.18**	**57**	⇓*i*P	**Pb**	**02 03 03.0**	**+0.6**
SPA0				*e*S	**Sb**	**02 03 27.7**	**-1.8**
SPITS	**Spitsbergen Ar**	**2.18**	**57**	Pn	**Pb**	**02 03 03.0**	**+0.6**
	baz=229,slow=13						
SPITS				Sn	**Sb**	**02 03 27.7**	**-1.8**
	baz=232,slow=26						
SPITS	**Spitsbergen Ar**	**2.18**	**57**	P	**Pb**	**02 03 02.6**	**+0.2**
SPITS				S	**Sn**	**02 03 26.1**	**-0.1**
BJO1	**Bjornoya**	**3.88**	**127**	*e*P	**Pn**	**02 03 25.6**	**+3.0**
BJO1				*e*S	**Sn**	**02 04 06.3**	**-1.9**
BJO1				IAML		02 04 14.5	
	comp=Z,7.7nm,1.1s						
BEAR	**Bear Island, N**	**3.89**	**127**	Pn	**Pn**	**02 03 25.6**	**+2.9**
	baz=317,slow=16						
BEAR				Sn	**Sn**	**02 04 06.3**	**-2.0**
	baz=320,slow=28						
HOPEN	**Hopen**	**4.06**	**90**	Pn	**Pn**	**02 03 28.1**	**+3.0**
HOPEN				Sn	**Sn**	**02 04 11.9**	**-0.7**
HOPEN	**Hopen**	**4.06**	**90**	*e*P	**Pn**	**02 03 28.1**	**+3.0**
HOPEN				*e*S	**Sn**	**02 04 11.8**	**-0.7**
HOPEN				IAML		02 04 14.0	
	comp=Z,58nm,0.3s						
DAG	**Danmarks Havn**	**5.89**	**279**	*i* P	**Pn**	**02 03 51.6**	**+1.5**
DAG				*i* S	**Sn**	**02 04 53.7**	**-3.9**
DAG				IAML		02 04 57.3	
	comp=Z,5.6nm,0.6s						
DAG	**Danmarks Havn**	**5.89**	**279**	*i* P	**Pn**	**02 03 51.6**	**+1.5**
DAG				*i* S	**Sn**	**02 04 53.7**	**-3.9**
DAG				IAML		02 04 57.3	
	comp=Z,5.6nm,0.6s						
NOR	**Nord**	**6.25**	**326**	Pn	**Pn**	**02 03 56.8**	**+1.8**
NOR	**Nord**	**6.25**	**326**	*i* P	**Pn**	**02 03 56.6**	**+1.6**
NOR	**Nord**	**6.25**	**326**	*i* P	**Pn**	**02 03 56.6**	**+1.6**
DBG	**Daneborg**	**7.35**	**261**	Pn	**Pn**	**02 04 13.1**	**+3.0**
DBG	**Daneborg**	**7.35**	**261**	*i* P	**Pn**	**02 04 12.8**	**+2.7**
DBG				*i* S	**Sn**	**02 05 29.6**	**-3.8**
DBG				IAML		02 05 35.5	
	comp=Z,2.8nm,0.7s						
DBG	**Daneborg**	**7.35**	**261**	*i* P	**Pn**	**02 04 12.8**	**+2.7**
DBG				*i* S	**Sn**	**02 05 29.6**	**-3.8**
DBG				IAML		02 05 35.5	
	comp=Z,2.8nm,0.7s						
HAMF	**Hammerfest**	**7.90**	**137**	*e*P	**Pn**	**02 04 20.5**	**+2.8**
TRO	**Tromso**	**8.21**	**151**	Pn	**Pn**	**02 04 24.4**	**+2.5**
ZFI2	**Zemlya Franca-**	**8.34**	**46**	*e*P	**Pn**	**02 04 27.2**	**+3.5**
ZFI2				*e*S	**Sn**	**02 05 54.3**	**-3.4**
OMEGA	**Omega**	**8.35**	**46**	*e*P	**Pn**	**02 04 27.2**	**+3.4**
OMEGA				*e*S	**Sn**	**02 05 54.3**	**-3.7**
KIF	**Kilpisjarvi**	**9.02**	**148**	Pn	**Pn**	**02 04 35.2**	**+2.1**
KIF	**Kilpisjarvi**	**9.02**	**148**	*e*P	**Pn**	**02 04 35.4**	**+2.4**
KIF				*e*S	**Sn**	**02 06 11.6**	**-2.9**
ARA0	**ARCESS Array S**	**9.17**	**137**	Pn	**Pn**	**02 04 36.8**	**+1.7**
	baz=333,slow=12						
ARA0				Sn	Sn	02 06 10.9	-7.3
	baz=326,slow=22						
ARA0	**ARCESS Array S**	**9.17**	**137**	Pn	**Pn**	**02 04 36.8**	**+1.7**
ARA0				Sn	Sn	02 06 10.9	-7.3
ARA0				IAML		02 06 37.2	
	comp=Z,1.6nm,0.7s						
ARCES	**ARCESS Array B**	**9.17**	**137**	Pn	**Pn**	**02 04 37.7**	**+2.5**
	comp=Z,0.3nm,0.3s,baz=333,slow=11,SNR=13						
ARCES				Sn	Sn	02 06 10.6	-7.6
	comp=Z,0.1nm,0.3s,baz=336,slow=22,SNR=1.8						
ARCES				LR	LR	02 08 18.7	
	comp=Z,69nm,19.5s,baz=308,slow=39						
	comp=Z,0.7nm,0.4s						
ARCES	**ARCESS Array B**	**9.17**	**137**	P	**Pn**	**02 04 37.3**	**+2.1**
ARCES				S	**Sn**	**02 06 11.8**	**-6.4**
KEV	**Kevo**	**9.21**	**133**	*e*P	**Pn**	**02 04 38.0**	**+2.3**
KEV				*e*S	**Sn**	**02 06 14.4**	**-4.7**
LOF	**Lofoten**	**9.23**	**166**	*e*P	**Pn**	**02 04 39.8**	**+3.8**
VADS	**Vadso**	**9.29**	**128**	Pn	**Pn**	**02 04 39.7**	**+3.0**
VADS				Sn	**Sn**	**02 06 16.1**	**-5.1**
VADS	**Vadso**	**9.29**	**128**	*e*P	**Pn**	**02 04 39.8**	**+3.0**
VADS				*e*S	**Sn**	**02 06 15.1**	**-6.1**
VADS				IAML		02 06 50.7	
	comp=Z,5.5nm,0.8s						
VADS	**Vadso**	**9.29**	**128**	P	**Pn**	**02 04 39.4**	**+2.6**
VADS				S	**Sn**	**02 06 15.9**	**-5.2**
STEI	**Steigen**	**9.54**	**162**	*e*P	**Pn**	**02 04 43.9**	**+3.8**
HEF	**Hetta**	**9.95**	**143**	*e*P	**Pn**	**02 04 47.6**	**+1.9**
SALU	**Saltoluokta**	**10.34**	**156**	*e*P	**Pn**	**02 04 55.8**	**+4.6**
VAGH	**Vaagaholmen**	**10.61**	**167**	*e*P	**Pn**	**02 04 59.0**	**+4.1**
TERR	**Teriberka**	**11.14**	**121**	S	**Sn**	**02 07 03.1**	**-3.3**
KVDA	**Kovda**	**12.94**	**130**	P	**Pn**	**02 05 28.7**	**+2.1**
BORG	**Borgarnes**	**15.30**	**232**	LR	LR	02 10 13.8	
	comp=Z,54nm,18.7s,baz=265,slow=30						
NOA	**NORSAR Array B**	**16.23**	**173**	LR	LR	02 11 44.2	
	comp=Z,20nm,19.8s,baz=335,slow=34						
FINES	**FINESS Array B**	**16.93**	**148**	Pn	**P**	**02 06 23.0**	**+1.5**
	comp=Z,1.4nm,0.9s,baz=337,slow=10,SNR=1.2						
FINES				LR	LR	02 13 21.3	
	comp=Z,68nm,18.8s,baz=24,slow=39						
LSH	**Leshukonskoye**	**16.99**	**115**	*e*P	**Pn**	**02 06 20.7**	**+0.4**
	comp=Z,14nm,1.2s						
SFJD	**Kangerlussuaq**	**19.49**	**271**	LR	LR	02 13 44.5	
	comp=Z,62nm,18.9s,baz=360,slow=34						
RES	**Resolute Bay**	**22.05**	**316**	LR	LR	02 15 54.7	
	comp=Z,62nm,19.6s,baz=344,slow=36						
NRIK	**Noril'sk**	**22.36**	**67**	LR	LR	02 18 41.6	
	comp=Z,43nm,18.3s,baz=329,slow=44						
KIRV	**Kirov**	**23.45**	**118**	LR	LR	02 16 54.1	
	comp=Z,46nm,21.8s,baz=359,slow=38						
FRB	**Frobisher Bay**	**26.23**	**283**	LR	LR	02 18 47.1	
	comp=Z,102nm,18.1s,baz=26,slow=37						
ARTI	**Arti**	**27.32**	**110**	LR	LR	02 22 49.3	
	comp=Z,18nm,20.7s,baz=28,slow=45						
AKASG	**Malin Array Be**	**27.82**	**150**	LR	LR	02 19 44.1	
	comp=Z,55nm,18.8s,baz=351,slow=38						
GERES	**GERESS Array B**	**28.51**	**171**	LR	LR	02 19 13.7	
	comp=Z,38nm,20.0s,baz=328,slow=35						
MLR	**Muntele Rosu**	**32.64**	**156**	LR	LR	02 22 55.4	
	comp=Z,40nm,20.2s,baz=12,slow=38						
AKTO	**Aktyubinsk**	**32.84**	**114**	LR	LR	02 22 58.7	
	comp=Z,50nm,19.4s,baz=48,slow=38						
BVAR	**Borovoye Array**	**33.04**	**99**	LR	LR	02 25 48.0	
	comp=Z,59nm,18.7s,baz=349,slow=43						
SCHQ	**Schefferville**	**33.90**	**273**	LR	LR	02 21 59.9	
	comp=Z,57nm,20.5s,baz=32,slow=34						
ZALV	**Zalesovo Beam**	**35.41**	**85**	LR	LR	02 26 43.9	
	comp=Z,24nm,18.2s,baz=358,slow=42						
YKA	**Yellowknife Ar**	**36.10**	**318**	P	P	02 09 35.5	+11
	comp=Z,0.4nm,0.9s,baz=16,slow=9.5,SNR=7.6						
	comp=Z,0.4nm,0.9s						
KURBB	**Kurchatov Arra**	**37.10**	**93**	P	P	02 09 40.9	+7.9
	comp=Z,0.3nm,0.6s,baz=331,slow=7.4,SNR=3.2						
KURBB				LR	LR	02 28 21.7	
	comp=Z,27nm,20.3s,baz=167,slow=42						
	comp=Z,0.3nm,0.6s						
ILAR	**Eielson Array**	**37.43**	**342**	P	P	02 09 47.5	+12
	comp=Z,0.7nm,0.9s,baz=359,slow=7.6,SNR=8.2						
	comp=Z,0.7nm,0.9s						
BRTR	**Keskin Array B**	**39.16**	**147**	LR	LR	02 28 18.4	
	comp=Z,22nm,18.1s,baz=108,slow=40						
GNI	**Garni**	**40.32**	**134**	LR	LR	02 26 47.7	
	comp=Z,21nm,20.1s,baz=334,slow=36						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	41.55	91	P	P	02 10 16.9	+6.7
	comp=Z,0.1nm,0.7s,baz=336,slow=5.6,SNR=5.7						
	comp=Z,0.1nm,0.7s						
AAK	Ala-Archa	43.76	101	LR	LR	02 31 49.2	
	comp=Z,28nm,18.2s,baz=24,slow=41						
ULM	Lac du Bonnet	44.43	297	LR	LR	02 28 11.3	
	comp=Z,54nm,18.7s,baz=9.0,slow=34						

IDC 04 02:04:31.4±9.3, 18°.89S×177°.57W, h571km±44km, mb3.0/3, mbtmp3.9/4, Error ellipse: s-maj=249.8km s-min=30.3km az=141.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.32	285	P	P	02 05 57.3	+0.1
	18nm,0.6s,baz=127,slow=10,SNR=11						
WRA	Warramunga Arr	45.25	260	P	P	02 11 58.4	-0.4
	0.8nm,0.5s,baz=96,slow=6.9,SNR=16						
	0.8nm,0.5s						
ASAR	Alice Springs	45.30	255	P	P	02 11 59.3	+0.1
	4.1nm,0.6s,baz=87,slow=8.9,SNR=57						
	4.1nm,0.6s						
ILAR	Eielson Array	86.66	13	P	P	02 16 14.1	-0.4
	0.1nm,0.4s,baz=221,slow=4.6,SNR=4.3						
	0.1nm,0.4s						
BRTR	Keskin Array B	146.03	314	PKPbc	PKPbc	02 23 08.0	-0.3
	0.3nm,0.7s,baz=62,slow=6.7,SNR=2.4						

*NEIC **04** 02:05:52.2±1.0, 19°.21N±0°.02×67°.04W±0°.04, h10km±1km, ML2.7/37, Md3.0/6(RSPR), Error ellipse: s-maj=5.9km s-min=4.4km az=65.0*
*OSPL **04** 02:05:54.8±0.6, 19°.12N×67°.12W, h93km±999km, ML2.4, Presumed earthquake*
ISC 04 02:05:51.5±2.2, 19°.20N±0°.08×67°.05W±0°.05, h5km±12km, n21, σ0s.54/33, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.73	185		Pb	02 06 07.8	+1.0
AGPR					Sb	02 06 17.1	-0.1
AGPR				IAML		02 06 20.6	
	273nm,0.4s						
AGPR				IAML		02 06 20.8	
	462nm,0.4s						
EMPR	Esperanza - Ma	0.87	146		Pn	02 06 10.8	+0.3
AOPR	Arecibo Observ	0.90	162		Pb	02 06 10.4	+0.8
AOPR					Sb	02 06 21.3	-0.6
AOPR				IAML		02 06 27.7	
	214nm,0.4s						
AOPR				IAML		02 06 29.2	
	365nm,0.4s						
IDE	Isla Desecheo	0.91	206		Pb	02 06 10.2	+0.5
IDE					Sn	02 06 24.8	+0.4
PRSN	Puerto Rico Se	0.98	185		Pb	02 06 11.9	+0.8
UUPR	Utuado, UPR, P	0.99	162		Pn	02 06 12.7	+0.5
UUPR					Sb	02 06 23.9	-0.8
LSP	Las Mesas	1.02	182		Pb	02 06 12.5	+0.7
ECPR	Experimental S	1.09	143		Pb	02 06 13.4	+0.4
ECPR				Sn	Sg	02 06 26.9	+0.2
ECPR				IAML		02 06 34.8	
	275nm,0.2s						
CRPR	Cabo Rojo, PR	1.19	183		Pb	02 06 15.0	+0.4
CRPR				Sn	Sb	02 06 30.1	-0.2
CRPR				IAML		02 06 33.4	
	127nm,0.7s						
CRPR				IAML		02 06 35.2	
	90nm,0.5s						
CRPR	Cabo Rojo, PR	1.19	183	*i* P	Pb	02 06 15.2	+0.6
CRPR				*e*S	Sg	02 06 29.6	-0.3
CRPR				IAML		02 06 32.4	
	comp=Z,104nm,0.3s						
CELP	Cerrillos	1.21	158		Pb	02 06 15.2	+0.3
CELP				Sn	Sb	02 06 30.4	-0.4
CELP				IAML		02 06 33.4	
	comp=Z,109nm,0.8s						
CELP				IAML		02 06 35.6	
	comp=Z,104nm,0.5s						
MLPR	Magueyes Islan	1.23	180	Pn	Pb	02 06 15.6	+0.4
MLPR				Sn	Sg	02 06 29.8	-1.1
MLPR				IAML		02 06 37.1	
	comp=Z,79nm,1.1s						
OBIP	Obispado Ponce	1.23	160		Pg	02 06 15.0	-0.1
OBIP				Sn	Sn	02 06 32.0	-0.4
OBIP	Obispado Ponce	1.23	160	*i* P	Pb	02 06 15.6	+0.3
OBIP				*e*S	Sb	02 06 31.4	0.0
OBIP				IAML		02 06 35.9	
	comp=Z,59nm,0.3s						
SJG	San Juan	1.38	142	Pn	Pn	02 06 17.7	+0.2
SJG	San Juan	1.38	142	*i* P	Pn	02 06 17.8	+0.3
SJG				IAML		02 06 41.1	
	comp=Z,26nm,0.3s						
PDPR	Patillas Dam,	1.53	140	Pn	Pn	02 06 19.8	+0.3
PDPR				Sn	Sn	02 06 39.1	-0.7
HUMP	Col San Antoni	1.55	133		Pn	02 06 20.1	+0.3
HUMP				IAML		02 06 51.5	
	comp=Z,52nm,0.2s						
CUPR	Culebra, Puert	1.90	118	Pn	Pn	02 06 24.5	-0.1
DR12	Loma Pena Alta	2.24	260	Pn	Pn	02 06 29.0	-0.5
SDDR	Presa de Saban	4.01	268	Pn	Pn	02 06 53.9	+0.1
SDDR				IAML		02 08 03.1	
	comp=Z,16nm,1.4s						
SDDR				IAML		02 09 17.7	
	comp=Z,16nm,1.3s						

*IDC **04** 02:19:10.9±2.4, 3°.98S×67°.22E, h0km, mb3.7/7, mbtmp3.7/7, MS3.3/10, Error ellipse: s-maj=67.5km s-min=28.3km az=55.0*
ISC 04 02:19:12.8±2.3, 3°.9S±0°.3×67°.3E±0°.4, h10km, n20, σ1s.14/7, mb3.9/7, MS3.3/9, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S3	Diego Garcia H	6.34	126	T	T	02 27 25.3	
	baz=309,slow=76,SNR=12						
H08S1	Diego Carcia H	6.34	126	T	T	02 27 21.1	
	baz=309,slow=76,SNR=5.0						
H08S2	Diego Garcia H	6.36	126	T	T	02 27 20.0	
	baz=309,slow=76,SNR=6.7						
PALK	Pallekele	17.42	50	LR	LR	02 27 55.1	
	comp=Z,94nm,20.8s,baz=211,slow=30						
OPO	Ambohidratompo	24.45	232	LR	LR	02 32 02.6	
	comp=Z,41nm,19.2s,baz=234,slow=32						
FURI	Furi	31.24	294	LR	LR	02 37 14.3	
	comp=Z,60nm,18.7s,baz=100,slow=35						
MBAR	Mbarara	36.66	274	LR	LR	02 40 20.6	
	comp=Z,40nm,18.2s,baz=67,slow=35						
CMAR	Chiang Mai Arr	38.32	53	P	P	02 26 34.0	-0.1
	0.9nm,0.2s,baz=241,slow=10,SNR=5.5						
	0.9nm,0.2s						
LSZ	Lusaka	40.08	251	LR	LR	02 41 54.2	
	comp=Z,85nm,18.3s,baz=128,slow=34						
LEM	Lembang	40.25	96	LR	LR	02 41 11.6	
	comp=Z,63nm,19.4s,baz=158,slow=33						
AAK	Ala-Archa	46.81	7	LR	LR	02 45 21.7	
	comp=Z,23nm,20.2s,baz=202,slow=34						
BOSA	Boshof	46.84	234	LR	LR	02 44 33.8	
	comp=Z,25nm,18.5s,baz=22,slow=33						
KBZ	Khabaz	52.28	338	P	P	02 28 24.2	-0.3
	0.9nm,0.7s,baz=147,slow=16,SNR=3.6						
	0.9nm,0.7s						
KAPI	Kappang	52.31	93	LR	LR	02 47 42.1	
	comp=Z,38nm,21.6s,baz=258,slow=33						
KURBB	Kurchatov Arra	55.20	9	LR	LR	02 50 25.6	
	comp=Z,34nm,18.9s,baz=169,slow=34						
BVAR	Borovoye Array	56.81	2	P	P	02 28 58.1	+0.9
	1.3nm,1.1s,baz=145,slow=5.3,SNR=4.0						
	1.3nm,1.1s						
ZALV	Zalesovo Beam	59.51	12	P	P	02 29 14.3	-1.8
	0.3nm,0.4s,baz=224,slow=4.0,SNR=1.9						
	0.3nm,0.4s						
SONM	Songino Array	61.89	29	P	P	02 29 33.7	+1.0
	1.3nm,0.8s,baz=222,slow=6.4,SNR=6.7						
	1.3nm,0.8s						
ASAR	Alice Springs	67.03	114	P	P	02 30 06.8	+0.1
	0.2nm,0.7s,baz=273,slow=6.7,SNR=4.6						
	0.2nm,0.7s						
WRA	Warramunga Arr	67.11	110	P	P	02 30 07.2	-0.1
	0.8nm,1.0s,baz=274,slow=6.6,SNR=2.8						
	0.8nm,1.0s						

*IDC **04** 02:20:36.2±0.8, 24°.27N×125°.11E, h0km, mb3.7/13, mbtmp3.7/15, ML2.9/2, MS3.3/7, Error ellipse: s-maj=25.1km s-min=18.5km az=67.0*
*NIED **04** 02:20:40.7, 24°.24N×125°.27E, h38km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.09; $M_{\theta\theta}$0.11; $M_{\phi\phi}$-0.20; $M_{r\theta}$0.74; $M_{\theta\phi}$-0.33; $M_{\phi r}$0.60; Fault plane solution: $M_0$1.00000×10^{15} NP1: ϕ_s166.00000°, δ15.00000°, λ21.00000°. NP2: ϕ_s55.00000°, δ84.00000°, λ104.00000°.*
*JMA **04** 02:20:40.7±0.2, 24°N±1°×125°.3E±0°.7, h38km±4km, MV3.6/10, NEAR MIYAKOJIMA ISLAND*
ISC 04 02:20:40.8±1.4, 24°.27N±0°.07×125°.25E±0°.05, h32km±8km, n37, σ0s.69/42, mb3.7/13, MS3.3/6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMJ2	Miyako jima3	0.47	9	*i* P	Pb	02 20 51.1	+0.1
JMJ2				S	Sb	02 20 58.8	+0.9
JOGS	Gusukube	0.51	17	*i* P	Pb	02 20 51.7	+0.2
JOGS				S	Sn	02 20 59.9	+0.4
JMJ	Miyako jima 2	0.54	5	P	Pb	02 20 51.0	-1.1
JMJ	Miyako jima 2	0.54	5	S	Sb	02 20 59.0	-0.7
JTJ	Tarama	0.62	307	*i* P	Pb	02 20 53.1	-0.1
JTJ				*e*S	Sn	02 21 02.4	+0.2
JIKM	Ikemajima	0.65	0	P	Pn	02 20 53.6	-0.3
JIKM				S	Sb	02 21 03.4	+0.7
JISG	Ishigakijimahi	0.91	290	*i* P	Pn	02 20 57.3	-0.1
JISG				S	Sn	02 21 09.7	+0.3
JIJ	Ishigaki jima	1.01	275	*i* P	Pb	02 20 59.4	-0.4
JKRS	Kuro-shima	1.13	269	P	Pb	02 21 01.5	-0.3
JKRS				*e*S	Sb	02 21 16.5	+0.4
HATJ	Hateruma jima	1.33	261	P	Pn	02 21 03.6	+0.4
HATJ				*e*S	Sn	02 21 20.5	+0.6
IRIF	Iriomote-Funau	1.38	273	P	Pn	02 21 04.7	+0.8
YOJ	Yonaguni jima	2.05	276	P	Pn	02 21 13.5	+0.4
NACB	Ninganchiao	3.33	269	P	Pn	02 21 30.7	-0.1
YHNB	Yeheng	3.55	277	P	Pn	02 21 34.2	+0.4
YULB	Yu-li	3.72	257	P	Pn	02 21 35.3	-0.8
JOW	Kunigami	3.74	46	Pn	Pn	02 21 36.3	-0.1
	1.3nm,0.3s,baz=138,slow=19,SNR=16						
JOW				Sn	Sn	02 22 19.7	+0.3
	4.9nm,0.3s,baz=273,slow=18,SNR=4.8						
	3.6nm,0.3s						
JOW	Kunigami	3.74	46	P	Pn	02 21 36.3	-0.1
SSLB	Suanglung	3.95	264	P	Pn	02 21 39.4	+0.1
TWGBT	Beinan	4.09	250	P	Pn	02 21 39.7	-1.4
TPUB	Ta-pu	4.34	258	P	Pn	02 21 45.5	+0.9
KSRS	Korea Array	13.34	9	LR	LR	02 29 25.2	
	comp=Z,42nm,18.3s,baz=195,slow=40						
MJAR	Matsushiro Arr	16.55	39	Pn	P	02 24 32.9	0.0
	0.1nm,0.3s,baz=223,slow=9.4,SNR=1.7						
	1.2nm,0.3s						
SONM	Songino Array	27.88	332	P	P	02 26 26.3	-1.5
	0.4nm,0.5s,baz=143,slow=10,SNR=2.6						
SONM				LR	LR	02 39 12.3	
	comp=Z,88nm,18.6s,baz=325,slow=40						
	0.4nm,0.5s						
TLY	Talaya	31.99	334	LR	LR	02 41 47.2	
	comp=Z,55nm,20.2s,baz=108,slow=40						
PETK	Petropavlovsk-	37.78	32	P	P	02 27 53.6	-0.3
	1.0nm,0.5s,baz=224,slow=7.6,SNR=2.5						
	1.0nm,0.5s						
MKAR	Makanchi Array	40.89	314	P	P	02 28 20.0	-0.1
	1.7nm,0.5s,baz=101,slow=10,SNR=29						
MKAR				LR	LR	02 46 50.6	
	comp=Z,32nm,18.4s,baz=316,slow=39						
	1.7nm,0.5s						
ZALV	Zalesovo Beam	42.24	325	P	P	02 28 29.6	-1.2
	0.8nm,0.5s,baz=119,slow=8.8,SNR=5.2						
ZALV				LR	LR	02 47 56.2	
	comp=Z,29nm,20.4s,baz=1.5,slow=39						
	0.8nm,0.5s						
KURBB	Kurchatov Arra	44.47	319	P	P	02 28 48.1	-0.8
	1.3nm,0.7s,baz=105,slow=8.2,SNR=8.1						
	1.3nm,0.7s						
WRA	Warramunga Arr	44.83	168	P	P	02 28 51.7	-0.4
	0.3nm,0.5s,baz=347,slow=8.7,SNR=6.3						
	0.3nm,0.5s						
ASAR	Alice Springs	48.39	169	P	P	02 29 20.6	+0.7
	0.2nm,0.4s,baz=354,slow=7.7,SNR=6.3						
	0.2nm,0.4s						
BVAR	Borovoye Array	49.98	320	P	P	02 29 31.6	-0.2
	0.8nm,0.5s,baz=106,slow=6.7,SNR=6.8						
BVAR				LR	LR	02 51 05.6	
	comp=Z,37nm,19.6s,baz=206,slow=37						
	0.8nm,0.5s						
ILAR	Eielson Array	67.43	28	P	P	02 31 34.9	+1.9
	0.1nm,0.5s,baz=281,slow=6.8,SNR=1.4						
	0.1nm,0.5s						
FINES	FINESS Array B	73.22	330	P	P	02 32 08.3	-0.2
	1.8nm,0.7s,baz=100,slow=5.8,SNR=8.0						
	1.8nm,0.7s						
AKASG	Malin Array Be	75.25	319	P	P	02 32 20.4	-0.1
	0.3nm,0.3s,baz=74,slow=6.6,SNR=2.4						
	0.3nm,0.3s						
BRTR	Keskin Array B	76.08	307	P	P	02 32 26.1	+0.3
	0.3nm,0.6s,baz=126,slow=7.3,SNR=2.9						
	0.3nm,0.6s						
YKA	Yellowknife Ar	81.42	24	P	P	02 32 54.4	0.0
	0.1nm,0.6s,baz=306,slow=6.4,SNR=2.8						
	0.1nm,0.6s						
EKA	Eskdalemuir Ar	89.34	333	LR	LR	03 16 13.4	
	comp=Z,44nm,20.1s,baz=356,slow=37						

*IDC **04** 02:25:08.1±1.8, 22°.44N×44°.92W, h0km, mb3.7/10, mbtmp3.7/10, MS3.6/53, Error ellipse: s-maj=60.2km s-min=23.1km az=11.0*
ISC 04 02:25:10.0±1.7, 22°.4N±0°.4×44°.9W±0°.2, h14km, n63, σ0s.56/11, mb3.7/9, MS3.6/52, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H05S1	Guadeloupe/Mar	17.04	245	T	T	02 46 27.7	
	SNR=10						
MDP	Montagnes des	18.74	205	LR	LR	02 35 09.7	
	comp=Z,89nm,20.5s,baz=98,slow=32						
SJG	San Juan	20.36	262	LR	LR	02 36 07.5	
	comp=Z,102nm,20.9s,baz=81,slow=32						
SDV	Santo Domingo	28.10	246	LR	LR	02 41 26.1	
	comp=Z,56nm,21.3s,baz=89,slow=35						
RCBR	Riachuelo	29.40	161	LR	LR	02 39 57.8	
	comp=Z,54nm,19.7s,baz=56,slow=30						
ROSC	El Rosal	33.36	243	LR	LR	02 46 12.6	
	comp=Z,98nm,18.9s,baz=17,slow=38						
TKL	Tuckaleechee C	36.22	300	LR	LR	02 44 42.4	
	comp=Z,143nm,19.1s,baz=122,slow=32						
SCHQ	Schefferville	36.33	339	LR	LR	02 44 53.9	
	comp=Z,92nm,21.3s,baz=150,slow=33						
MDT	Midelt	37.01	65	LR	LR	02 43 32.1	
	comp=Z,92nm,20.3s,baz=271,slow=30						
BDFB	Brasilia	37.91	185	LR	LR	02 46 56.2	
	comp=Z,64nm,18.1s,baz=41,slow=34						
ESDC	Sonseca Array	38.72	54	LR	LR	02 44 45.7	
	comp=Z,75nm,19.8s,baz=257,slow=30						
JTS	Las Juntas de	40.12	259	LR	LR	02 47 37.7	
	comp=Z,57nm,20.5s,baz=38,slow=34						
DBIC	Dimbokro	41.65	106	LR	LR	02 47 06.5	
	comp=Z,132nm,21.1s,baz=348,slow=32						
H10N2	ASCENSION HYDR	42.32	132	T	T	03 18 05.9	
	baz=316,slow=75,SNR=789						
H10N3	ASCENSION HYDR	42.32	132	T	T	03 18 05.9	
	baz=316,slow=75,SNR=1212						
H10N1	ASCENSION HYDR	42.34	132	T	T	03 18 07.2	
	baz=316,slow=75,SNR=1666						
H10S3	ASCENSION HYDR	43.01	133	T	T	03 18 57.9	
	baz=314,slow=74,SNR=60						
H10S2	ASCENSION HYDR	43.02	133	T	T	03 18 59.4	
	baz=266,slow=74,SNR=66						
ATAH	Atahualpa	43.99	232	LR	LR	02 51 50.1	
	comp=Z,53nm,21.6s,baz=46,slow=36						
FRB	Frobisher Bay	44.25	345	LR	LR	02 50 07.1	
	comp=Z,118nm,20.1s,baz=140,slow=34						
LPAZ	La Paz	44.65	213	LR	LR	02 51 02.2	
	comp=Z,73nm,20.9s,baz=38,slow=35						
SFJD	Kangerlussuaq	44.75	357	LR	LR	02 47 55.6	
	comp=Z,60nm,19.4s,baz=168,slow=31						
TORD	Torodi Ar. Bea	45.18	94	P	P	02 33 26.4	-0.5
	1.5nm,0.7s,baz=284,slow=8.6,SNR=7.1						
	1.5nm,0.7s						
CMIG	Matias Romero	47.15	273	LR	LR	02 51 56.2	
	comp=Z,62nm,20.9s,baz=1.0,slow=34						
ULM	Lac du Bonnet	48.34	318	LR	LR	02 51 16.4	
	comp=Z,111nm,21.7s,baz=118,slow=32						
KEST	Kesra	48.71	62	LR	LR	02 51 57.3	
	comp=Z,75nm,21.6s,baz=334,slow=33						
CPUP	Villa Florida	49.90	195	LR	LR	02 53 35.4	
	comp=Z,17nm,21.1s,baz=236,slow=34						
DAVOX	Davos/Dischmat	50.08	47	LR	LR	02 51 16.9	
	comp=Z,32nm,20.6s,baz=262,slow=31						
TXAR	Lajitas Array	52.85	291	P	P	02 34 25.8	+0.2
	0.2nm,0.6s,baz=71,slow=4.6,SNR=2.3						
TXAR				LR	LR	02 55 43.2	
	comp=Z,50nm,21.8s,baz=57,slow=35						
	0.2nm,0.6s						
NOA	NORSAR Array B	54.42	30	LR	LR	02 54 09.8	
	comp=Z,44nm,18.2s,baz=250,slow=32						
ANMO	Albuquerque	54.67	298	LR	LR	02 58 04.2	
	comp=Z,25nm,18.5s,baz=102,slow=36						
HFS	Hagfors	55.31	31	P	P	02 34 42.9	-0.1
	2.8nm,0.8s,baz=258,slow=7.4,SNR=5.0						
HFS				LR	LR	02 53 58.6	
	comp=Z,54nm,18.7s,baz=258,slow=31						
	2.8nm,0.8s						
PDAR	Pinedale Array	56.76	307	P	P	02 34 53.5	-0.4
	0.5nm,0.8s,baz=111,slow=8.1,SNR=4.9						
PDAR				LR	LR	02 57 30.5	
	comp=Z,33nm,18.6s,baz=82,slow=34						
	0.5nm,0.8s						
RES	Resolute Bay	58.45	346	LR	LR	02 58 47.9	
	comp=Z,54nm,19.3s,baz=344,slow=35						
LPIG	La Paz	59.60	286	LR	LR	03 00 19.5	
	comp=Z,31nm,21.5s,baz=48,slow=35						
YKA	Yellowknife Ar	61.02	330	P	P	02 35 22.6	-0.2
	0.2nm,0.7s,baz=97,slow=6.2,SNR=6.1						
YKA				LR	LR	03 00 13.5	
	comp=Z,68nm,19.9s,baz=52,slow=35						
	0.2nm,0.7s						
ELK	Elko	61.12	305	LR	LR	02 59 16.1	
	comp=Z,100nm,21.9s,baz=94,slow=34						
MLR	Muntele Rosu	61.15	49	LR	LR	03 00 44.2	
	comp=Z,28nm,18.6s,baz=239,slow=35						
FINES	FINESS Array B	61.52	31	LR	LR	02 57 39.6	
	comp=Z,62nm,19.6s,baz=164,slow=32						
NEW	Newport	61.91	314	LR	LR	02 59 46.0	
	comp=Z,108nm,20.8s,baz=66,slow=34						
PFO	Pinyon Flats O	63.05	297	LR	LR	02 59 56.9	
	comp=Z,48nm,21.5s,baz=58,slow=33						
AKASG	Malin Array Be	63.06	43	P	P	02 35 36.2	-0.7
	1.1nm,0.7s,baz=280,slow=5.5,SNR=2.6						
AKASG				LR	LR	02 59 16.9	
	comp=Z,34nm,19.6s,baz=358,slow=32						
	1.1nm,0.7s						
NVAR	Mina Array Bea	63.75	303	LR	LR	03 01 31.1	
	comp=Z,110nm,20.8s,baz=95,slow=34						
YBH	Yreka Blue Hor	66.57	307	LR	LR	03 03 23.0	
	comp=Z,7.1nm,19.1s,baz=72,slow=34						
PLCA	Paso Flores	67.17	201	LR	LR	03 07 05.0	
	comp=Z,18nm,18.5s,baz=104,slow=37						
BRTR	Keskin Array B	67.50	55	P	P	02 36 07.0	+1.0
	0.5nm,0.6s,baz=297,slow=4.5,SNR=2.9						
	0.5nm,0.6s						
BBB	Bella Bella	68.53	319	LR	LR	03 05 04.1	
	comp=Z,104nm,18.1s,baz=355,slow=35						
INK	Inuvik	68.91	337	LR	LR	03 05 25.4	
	comp=Z,85nm,18.8s,baz=344,slow=35						
EIL	Elat	70.84	65	LR	LR	03 08 55.2	
	comp=Z,42nm,18.8s,baz=240,slow=37						
ASF	Jabal al Asfar	71.80	62	LR	LR	03 10 52.1	
	comp=Z,20nm,18.5s,baz=210,slow=38						
TSUM	Tsumeb	73.74	119	LR	LR	03 02 40.2	
	comp=Z,52nm,19.9s,baz=331,slow=30						
ILAR	Eielson Array	74.94	334	P	P	02 36 50.7	+0.3
	0.5nm,0.8s,baz=72,slow=4.0,SNR=5.8						
ILAR				LR	LR	03 09 29.8	
	comp=Z,80nm,19.1s,baz=76,slow=36						
	0.5nm,0.8s						
MBAR	Mbarara	76.98	96	LR	LR	03 08 22.4	
	comp=Z,62nm,21.1s,baz=294,slow=34						
ARTI	Arti	78.68	34	LR	LR	03 08 22.1	
	comp=Z,22nm,18.9s,baz=173,slow=33						
KDAK	Kodiak Island	80.25	329	LR	LR	03 12 33.4	
	comp=Z,61nm,19.4s,baz=68,slow=36						
LSZ	Lusaka	80.77	111	LR	LR	03 06 28.1	
	comp=Z,38nm,20.6s,baz=161,slow=31						
SUR	Sutherland	83.11	129	LR	LR	03 07 25.8	
	comp=Z,32nm,20.6s,baz=302,slow=30						
BOSA	Boshof	84.52	124	LR	LR	03 09 27.0	
	comp=Z,30nm,19.2s,baz=356,slow=32						
KURBB	Kurchatov Arra	91.89	32	P	P	02 38 17.7	-0.2
	0.4nm,0.7s,baz=308,slow=5.3,SNR=4.7						
	0.4nm,0.7s						
ZALV	Zalesovo Beam	92.54	27	LR	LR	03 18 06.6	
	comp=Z,18nm,18.2s,baz=112,slow=34						
AAK	Ala-Archa	94.58	40	LR	LR	03 21 11.9	
	comp=Z,18nm,18.2s,baz=328,slow=36						
MKAR	Makanchi Array	96.28	33	P	P	02 38 38.8	+0.6
	0.2nm,0.7s,baz=337,slow=3.3,SNR=2.5						
MKAR				LR	LR	03 19 51.4	
	comp=Z,25nm,18.7s,baz=334,slow=34						
	0.2nm,0.7s						
CMAR	Chiang Mai Arr	126.18	44	PKP	PKiKP	02 44 13.7	+0.3
	0.8nm,0.3s,baz=315,slow=3.7,SNR=4.3						

GUC 04 02:26:39.2±0.6, 22°.92S×66°.89W, h201km±5km, ML3.7, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALTA		1.39	159	*i* S	S	02 27 37.7	-0.6
YJA	Yavi	1.47	60	*e*P	Pn	02 27 12.6	-0.6
PB09	IPOC Station P	2.45	297	*e*P	Pn	02 27 22.5	-0.2
PB09				*i* S	S	02 27 55.4	-0.6
PB06	IPOC Station P	2.48	274	*e*P	Pn	02 27 22.3	-0.9
PB06				*i* S	S	02 27 55.8	-0.9
PB06				IAML		02 28 01.2	
	comp=N,182nm,0.1s						
PB03	IPOC Station P	2.79	288	*e*P	Pn	02 27 25.5	-1.1
PB03				*i* S	S	02 28 01.0	-1.8
PB03				IAML		02 28 01.4	
	comp=E,116nm,0.2s						
PB07	IPOC Station P	3.02	293	*e*P	Pn	02 27 28.4	-0.9
PB07				*i* S	S	02 28 05.3	-2.5
PB01	IPOC Station P	3.05	307	*e*P	Pn	02 27 28.9	-0.7
PB01				*i* S	S	02 28 06.7	-1.6
PB01				IAML		02 28 09.3	
	comp=E,104nm,0.2s						
PB02	IPOC Station P	3.21	299	*e*P	Pn	02 27 30.6	-1.0
PB02				*i* S	S	02 28 08.9	-2.9
GO02	Mina Guanaco	3.33	227	*e*P	Pn	02 27 32.3	-0.8
GO02				*i* S	S	02 28 13.2	-1.4
PB08	IPOC Station P	3.48	322	*e*P	Pn	02 27 34.9	-0.1
PB08				*i* S	S	02 28 17.8	-0.2
TA01	Diego Aracena	3.85	307	*e*P	Pn	02 27 38.0	-1.3
TA01				*i* S	S	02 28 22.2	-3.5
GO01	Chusmiza	3.88	326	*e*P	Pn	02 27 39.7	-0.4
GO01				*i* S	S	02 28 26.0	-1.2
PB11	IPOC Station P	4.07	320	*e*P	Pn	02 27 40.4	-1.7
PB11				*i* S	S	02 28 28.0	-2.8
PB16	IPOC Station P	5.18	331	*e*P	Pn	02 27 56.4	-0.1
PB16				*i* S	S	02 28 55.7	-1.2

*IDC **04** 02:29:27.2±3.6, 15°.96S×75°.97W, h0km, mb3.8/2, mbtmp3.8/3, ML3.9/1, MS2.4/1, Error ellipse: s-maj=95.1km s-min=52.1km az=23.0*
*NEIC **04** 02:29:33.8±1.4, 16°.14S±0°.02×75°.4W±0°.1, h10km±2km, mb4.1/2, Error ellipse: s-maj=17.4km s-min=3.1km az=278.0*
ISC 04 02:29:34.5±1.2, 16°.14S±0°.09×75°.4W±0°.1, h25km, n31, σ1s.52/22, Off coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	4.36	341		Pn	02 30 39.7	+0.4
NNA				Sn	Sn	02 31 31.2	+1.9
AP01	Chacalluta	5.31	115	Pn	Pn	02 30 51.8	-0.5
PB12	IPOC Station P	5.43	118		Pn	02 30 54.2	+0.2
PB18	Visviri	5.84	105		Pn	02 31 00.5	+0.4
PB16	IPOC Station P	6.04	112		Pn	02 31 03.9	+1.1
PB11	IPOC Station P	6.54	124		Pn	02 31 10.2	+0.8
TA01	Diego Aracena	6.63	132		Pn	02 31 11.3	+1.0
GO01	Chusmiza	6.87	122		Pn	02 31 15.0	+0.9
LPAZ	La Paz	6.98	92	Pn	Pn	02 31 18.1	+2.3
	0.8nm,0.3s,baz=272,slow=9.8,SNR=17						
LPAZ				Sn	Sn	02 32 48.5	+14
	baz=32,slow=23						
	2.2nm,0.4s						
LPAZ	La Paz	6.98	92		Pn	02 31 17.1	+1.3
PB08	IPOC Station P	7.14	125		Pn	02 31 19.0	+1.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB02	IPOC Station P	7.33	136		Pn	02 31 18.1	-2.0
PB01	IPOC Station P	7.43	132	Pn	Pn	02 31 20.4	-1.0
PB07	IPOC Station P	7.62	138	Pn	Pn	02 31 25.1	+1.0
PB09	IPOC Station P	8.10	135	Pn	Pn	02 31 32.3	+1.6
PB06	IPOC Station P	8.53	141	Pn	Pn	02 31 36.7	0.0
ATAH	Atahualpa	9.42	341	LR	LR	02 35 39.7	
	comp=Z,23nm,18.5s,baz=169,slow=41						
AC02	Maricunga	12.13	152	Pn	Pn	02 32 27.9	+1.6
H03N1	Juan Fernandez	17.52	190	T	T	02 52 04.8	
	baz=12,slow=74,SNR=347						
H03N2	Juan Fernandez	17.52	190	T	T	02 52 04.4	
	baz=12,slow=74,SNR=180						
H03N3	Juan Fernandez	17.54	190	T	T	02 52 02.4	
	baz=12,slow=74,SNR=270						
CPUP	Villa Florida	19.64	124	P	Pn	02 34 03.6	+0.8
	1.9nm,1.0s,baz=304,slow=3.6,SNR=3.2						
	1.9nm,1.0s						
BOAV	Boa Vista	23.56	40	P	P	02 34 39.4	-3.9
BOAV				IAmb	IAmb	02 34 58.6	
	comp=Z,6.7nm,1.2s						
GO06	Curarrehue	23.61	172	P	P	02 34 44.3	+0.7
GO06				IAmb	IAmb	02 35 02.2	
	comp=Z,7.1nm,1.4s						
TORD	Torodi Ar. Bea	81.56	74	P	P	02 41 50.1	-0.6
	comp=Z,1.7nm,0.9s,baz=246,slow=6.8,SNR=6.7						
	comp=Z,1.7nm,0.9s						
H11N3	WAKE ISLAND Hy	120.89	284	T	T	05 01 03.7	
	baz=97						
H11N2	WAKE ISLAND Hy	120.91	284	T	T	05 01 06.0	
	baz=97						
H11N1	WAKE ISLAND Hy	120.91	284	T	T	05 01 04.8	
	baz=97						
H11S2	WAKE ISLAND Hy	120.92	282	T	T	05 01 05.6	
	baz=88,slow=75,SNR=4.5						
H11S1	WAKE ISLAND Hy	120.93	282	T	T	05 01 06.6	
	baz=88						
H11S3	WAKE ISLAND Hy	120.94	282	T	T	05 01 06.9	
	baz=88,slow=75,SNR=3.6						

IDC 04 02:36:35.0±2.8**,23°.53N**×**94°.39E,h0**^{km}**,mb3.4**/3**, mbtmp3.4**/4**,ML4.0**/1**,Error ellipse: s-maj=209.4km s-min=25.6km az=59.0,Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	6.61	139	Pn	Pn	02 38 15.4	+2.1
	0.9nm,0.3s,baz=314,slow=13,SNR=4.3						
	2.0nm,0.3s						
MKAR	Makanchi Array	25.17	340	P	P	02 42 02.2	+0.3
	0.5nm,0.7s,baz=144,slow=10,SNR=6.9						
	0.5nm,0.7s						
WRA	Warramunga Arr	58.18	135	P	P	02 46 30.4	-0.7
	0.2nm,0.5s,baz=316,slow=7.3,SNR=1.9						
	0.2nm,0.5s						
ASAR	Alice Springs	60.62	138	P	P	02 46 47.6	-0.3
	0.2nm,0.5s,baz=319,slow=7.1,SNR=5.2						
	0.2nm,0.5s						

*IDC **04** 02:38:44.5±2.5, 34°.47N×137°.43E, h247^{km}±61^{km}, mb2.9/3, mbtmp3.4/4, Error ellipse: s-maj=119.4km s-min=27.5km az=57.0*
*JMA **04** 02:38:45.7±0.3, 35°N±2°×13°8E±°, h289^{km}±2^{km}, MV3.1/23, NE AICHI PREF*
ISC 04 02:38:45.7±1.1**,34°.9N**±0°.1×**137°.7E**±0°.1**,h300**^{km}**,n11, σ1^{s}86**/15**,mb2.9**/3**,Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYN	Shimob	0.87	49	P	Pn	02 39 25.1	-0.4
JYTA	Yamagatataniai	1.05	309	P	Pn	02 39 24.8	-1.4
JOD2	Odawara 2	1.16	73	P	Pn	02 39 26.8	0.0
JRY	Ryogami san	1.44	41	*i*P	Pn	02 39 28.7	+0.3
JRY				*e*S	S	02 40 01.6	-0.8
MAT	Matsushiro	1.65	13	P	Pn	02 39 29.3	-0.5
MAT				S	S	02 40 03.1	-1.8
MJAR	Matsushiro Arr	1.65	13	P	Pn	02 39 29.2	-0.6
	9.7nm,0.3s,baz=192,slow=8.8,SNR=29						
MJAR				S	S	02 40 02.9	-2.1
	3.5nm,0.6s,baz=198,slow=14,SNR=6.5						
JAG	Ashikaga	2.04	43	*i*P	Pn	02 39 32.0	-0.7
JAG				S	S	02 40 07.2	-3.0
JTNC	Tanabenakahech	2.08	238	*e*P	Pn	02 39 31.2	-1.9
SONM	Songino Array	26.62	309	P	P	02 44 01.3	+4.0
	0.2nm,0.4s,baz=108,slow=9.3,SNR=1.7						
	0.2nm,0.4s						
WRA	Warramunga Arr	54.67	184	P	P	02 47 44.5	+0.3
	0.3nm,0.3s,baz=0.1,slow=7.6,SNR=7.1						
	0.3nm,0.3s						
ASAR	Alice Springs	58.39	184	P	P	02 48 11.0	+0.7
	0.4nm,1.0s,baz=13,slow=8.1,SNR=2.5						
	0.4nm,1.0s						

*AZER **04** 02:42:29.1, 38°.75N×48°.58E, h12^{km}, ml2.7*
*TEH **04** 02:42:31.0, 38°.62N×48°.49E, h20^{km}±33^{km}, ML2.8, Presumed earthquake*
ISC 04 02:42:30.1±0.9**,38°.76N**±0°.02×**48°.56E**±0°.02**,h15**^{km}±7^{km}**, n41,**σ1^{s}**52**/76**,Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKRN	Lenkeran, Azer	0.18	106	P	Pb	02 42 34.7	-0.4
LKRN				P	Pb	02 42 34.8	-0.4
LKRN				S	Sg	02 42 38.4	+1.1
LRK	Lerik	0.21	236	P	Pb	02 42 36.2	+0.4
LRK				S	Sg	02 42 40.8	+2.6
ASTR	Astara	0.27	138	P	Pb	02 42 35.8	-0.9
YRD	Yardimli	0.29	302	P	Pb	02 42 37.8	+0.5
YRD				S	Sb	02 42 43.4	+1.4
GAS1	Astara - Iran	0.43	149	Pg	Pb	02 42 38.2	-1.3
GAS1				Sg	Sb	02 42 44.5	-1.3
GLBA	Clilabad	0.50	345	P	Pb	02 42 41.0	+0.4
GLBA				S	Sn	02 42 49.9	-1.2
GRMI	Germi	0.52	275	Pg	Pb	02 42 41.0	-0.1
SAAT	Saatly	1.10	355	P	Pg	02 42 51.5	+0.1
SAAT				S	Sn	02 43 08.4	+2.4
QRD	Qoradiz	1.19	306	P	Pb	02 42 52.1	-0.3
QRD				S	Sg	02 43 09.5	+0.9
BLQ	Beylaqan	1.23	321	P	Pg	02 42 53.0	-1.0
BLQ				S	Sg	02 43 10.6	+0.6
ALIB	&Aumlli-Bayram	1.25	16	P	Pg	02 42 53.1	-1.0
ALIB				S	Sg	02 43 11.6	+1.3
IHRS	Heris	1.27	250	Pg	Pg	02 42 53.6	-1.0
KDMR	Kurdemir	1.64	350	Pn	Pb	02 42 59.5	-0.6
KDMR				Sn	Sg	02 43 22.3	-0.6
ZRD	Zardab	1.66	336	Pn	Pg	02 43 00.6	-1.4
AGDM	Agdam	1.75	321	Pn	Pb	02 43 01.1	-1.0
AGDM				Sn	Sg	02 43 25.1	-1.5
IHSH	Hashtrud	1.78	216	Pg	Pb	02 43 01.3	-1.3
GBS	Qobustan	1.80	9	Pn	Pb	02 43 01.6	-1.2
GBS				Sn	Sb	02 43 25.6	+0.4
BRDA	Brd	1.84	325	Pn	Pb	02 43 03.1	-0.4
BRDA				Sn	Sg	02 43 29.9	+0.5
ORD	Ordubad	2.01	276	Pn	Pb	02 43 05.7	-0.7
ORD				Sn	Sg	02 43 33.0	-1.8
PQL	Pirkuli	2.03	1	Pn	Pb	02 43 05.2	-1.6
PQL				Sn	Sb	02 43 31.7	-0.1
IML	Ismayilli	2.05	352	Pn	Pb	02 43 06.1	-1.0
IML				Sn	Sb	02 43 32.8	+0.3
ATGJ	Altiaghaj	2.12	8	Pn	Pb	02 43 07.5	-0.8
ATGJ				Sn	Sb	02 43 33.7	-0.8
IMRD	Marand	2.23	270	Pn	Pb	02 43 08.6	-1.7
QBL	Gabala	2.25	346	Pn	Pn	02 43 08.1	+1.1
QBL				Sn	Sb	02 43 37.1	-1.2
MNGR	Mingechevir, A	2.31	331	Pn	Pn	02 43 07.8	+0.1
MNGR				Sn	Sb	02 43 39.3	-0.5
SIZA	Siyzn	2.33	6	Pn	Pb	02 43 09.8	-2.1
SIZA				Sn	Sb	02 43 39.5	-0.9
NAX	Nakhchivan	2.42	281	Pg	Pb	02 43 12.9	-0.6
NAX				Sg	Sg	02 43 45.6	-2.4
SBZ	Shahbuz	2.42	286	Pg	Pb	02 43 12.7	-0.8
SBZ				Sg	Sg	02 43 45.4	-2.7
XNQ	Khinaliq	2.43	353	Pn	Pn	02 43 11.0	+1.4
XNQ				Sn	Sb	02 43 44.0	+0.5
GANJ	Ganja	2.55	318	Pn	Pn	02 43 11.5	+0.5
GANJ				Sn	Sn	02 43 43.4	+1.5
QUBA	Quba, Azerbaij	2.59	359	Pn	Pn	02 43 12.9	+1.3
QUBA				Sn	Sb	02 43 45.9	-2.1
SEKA	Sheki	2.66	337	Pn	Pn	02 43 13.6	+1.1
SEKA				Sn	Sn	02 43 47.0	+2.5
QSAR	Qusar	2.76	355	Pn	Pn	02 43 14.6	+0.7
QSAR				Sn	Sn	02 43 49.1	+2.1
GDB	GEDABAY	2.92	313	Pn	Pn	02 43 17.5	+1.3
GDB				Sn	Sn	02 43 52.6	+1.6
VSHL	Vashlovani	2.97	327	P	Pb	02 43 19.3	-3.5
VSHL				S	Sb	02 43 56.7	-2.3
HYR	Heyderabad	3.03	290	Pg	Pb	02 43 24.8	+0.9
HYR				Sg	Sg	02 44 06.5	-1.1
ZKTA	Zakatala	3.23	333	Pn	Pn	02 43 22.4	+2.0
ZKTA				Sn	Sn	02 44 01.2	+2.6
DDFL	Dedoflistskaro	3.27	326	P	Pb	02 43 23.9	-4.0
DDFL				S	Sb	02 44 06.4	-1.1
QZX	Qazax, Azerbai	3.36	314	Pn	Pn	02 43 24.1	+2.0
QZX				Sn	Sn	02 44 05.0	+3.3
CHRG	Chargali	4.51	323	P	Pn	02 43 39.2	+1.2
CHRG				S	Sn	02 44 31.8	+1.4
SHTL	Shatili	4.67	327	P	Pn	02 43 42.0	+1.7

*IDC **04** 02:52:15.1±1.1, 18°.00S×167°.75E, h0^{km}, mb4.0/9, mbtmp4.0/11, ML3.2/1, MS3.5/8, Error ellipse: s-maj=36.4km s-min=20.3km az=152.0*
*NOU **04** 02:52:17.7, 17°.93S×167°.71E, h12^{km}, MLv4.4/14, Vanuatu Islands*
*NEIC **04** 02:52:17.0±1.2, 18°.00S±0°.06×167°.7E±0°.1, h10^{km}±1^{km}, mb4.5/10, Error ellipse: s-maj=16.4km s-min=10.6km az=86.0*
ISC 04 02:52:18.4±0.6**,17°.97S**±0°.05×**167°.71E**±0°.05**,h23**^{km}**,n42, σ1^{s}14**/40**,mb4.2**/12**,MS3.6**/6**,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.52	62	P	Pb	02 52 28.4	-0.5
DVP	Devils Point	0.52	62	S	Sb	02 52 36.6	+0.7
RTV	Rentapao	0.70	75	P	Pb	02 52 31.5	-0.5
RTV	Rentapao	0.70	75	S	Sn	02 52 42.8	-0.3
INH	Isangel	2.16	137	P	Pn	02 52 52.8	-0.2
SANVU	Saraoutou	2.56	349	P	Pn	02 52 58.5	0.0
SANVU	Saraoutou	2.56	349	Pn	Pn	02 52 56.4	-2.1
MARNC	Mare, Loyalty	3.50	175	P	Pn	02 53 12.7	+1.2
MARNC	Mare, Loyalty	3.50	175	Pn	Pn	02 53 09.7	-1.8
YATNC	Mamie plateau,	4.14	191	P	Pn	02 53 21.9	+1.6
DZM	Mont Dzumac	4.25	196	Pn	Pn	02 53 21.5	-0.4
	1.5nm,0.3s,baz=20,slow=13,SNR=16						
DZM				Sn	Sn	02 54 08.5	-2.3
	6.5nm,0.3s,baz=159,slow=22,SNR=9.3						
DZM				LR	LR	02 54 15.2	
	comp=Z,95nm,19.4s,baz=86,slow=28						
	7.8nm,0.5s						
DZM	Mont Dzumac	4.25	196	P	Pn	02 53 22.0	+0.2
DZM	Mont Dzumac	4.25	196		Pn	02 53 21.0	-0.8
ONTNC	Ouen Toro	4.47	195	P	Pn	02 53 26.5	+1.7
ONTNC	Ouen Toro	4.47	195	Pn	Pn	02 53 22.2	-2.7
OUENC	Ouen Island, N	4.50	190	Pn	Pn	02 53 23.8	-1.4
MSVF	Nonsavu	9.85	90	Pn	Pn	02 54 38.9	+0.1
	0.8nm,0.3s,baz=244,slow=10.0,SNR=5.4						
MSVF				LR	LR	02 57 44.3	
	comp=Z,374nm,21.1s,baz=171,slow=34						
MSVF	Nonsavu	9.85	90		Pn	02 54 39.2	+0.4
HNR	Honiara	11.35	317	LR	LR	02 58 35.0	
	comp=Z,7.5nm,19.3s,baz=328,slow=33						
AFI	Afiamalu	20.13	81	LR	LR	03 02 35.3	
	comp=Z,97nm,21.8s,baz=283,slow=31						
CTA	Charters Tower	20.39	261	P	P	02 56 55.1	+1.3
	3.5nm,0.6s,baz=96,slow=12,SNR=5.0						
CTA				LR	LR	03 03 46.1	
	comp=Z,118nm,18.9s,baz=49,slow=34						
	3.5nm,0.6s						
CTAO	Charters Tower	20.39	261	P	P	02 56 53.7	-0.2
CTAO				IAmb	IAmb	02 57 08.2	
	comp=Z,8.6nm,0.9s						
STKA	Stephens Creek	27.34	235	P	P	02 58 02.5	+0.7
	comp=Z,3.3nm,0.9s,baz=68,slow=10,SNR=6.0						
STKA				LR	LR	03 08 03.4	
	comp=Z,122nm,18.1s,baz=25,slow=35						
	comp=Z,3.3nm,0.9s						
STKA	Stephens Creek	27.34	235	P	P	02 58 01.1	-0.8
WB0	Warramunga Arr	31.55	261	P	P	02 58 39.9	+0.6
WB0				IAmb	IAmb	02 59 08.0	
	comp=Z,13nm,1.4s						
WRA	Warramunga Arr	31.59	261	P	P	02 58 39.0	-0.7
	comp=Z,0.8nm,0.8s,baz=92,slow=8.9,SNR=8.1						
	comp=Z,0.8nm,0.8s						
WRA	Warramunga Arr	31.59	261	P	P	02 58 38.7	-1.0
AS31	Alice Springs	32.05	254	P	P	02 58 43.6	-0.1
ASAR	Alice Springs	32.05	254	P	P	02 58 43.5	-0.2
	comp=Z,1.3nm,0.8s,baz=81,slow=8.2,SNR=16						
ASAR				LR	LR	03 11 09.9	
	comp=Z,168nm,18.8s,baz=109,slow=35						
	comp=Z,1.3nm,0.8s						
ASAR	Alice Springs	32.05	254	P	P	02 58 43.2	-0.6
KNRA	Kununurra	37.31	268	P	P	02 59 29.0	-0.1
KNRA				IAmb	IAmb	02 59 42.0	
	comp=Z,35nm,1.4s						
FAKI	Fak Fak	37.84	289	P	P	02 59 34.2	+0.6
FORT	Forrest	38.10	243	P	P	02 59 35.9	+0.1
FORT				IAmb	IAmb	02 59 54.0	
	comp=Z,8.6nm,0.9s						
FITZ	Fitzroy Crossi	39.94	263	P	P	02 59 50.8	-0.5
	comp=Z,4.3nm,0.8s,baz=142,slow=2.2,SNR=4.8						
FITZ				LR	LR	03 16 24.9	
	comp=Z,124nm,18.0s,baz=92,slow=36						
	comp=Z,4.3nm,0.8s						
CMAR	Chiang Mai Arr	76.66	295	P	P	03 04 09.9	+1.9
	comp=Z,1.9nm,0.3s,baz=133,slow=5.3,SNR=6.5						
	comp=Z,1.9nm,0.3s						
CMAR	Chiang Mai Arr	76.66	295	P	P	03 04 07.8	-0.2
SONM	Songino Array	85.34	324	P	P	03 04 56.1	+2.3
	comp=Z,1.0nm,0.9s,baz=134,slow=4.3,SNR=4.7						
	comp=Z,1.0nm,0.9s						
SONM	Songino Array	85.34	324	P	P	03 04 54.7	+0.9
SONM				IAmb	IAmb	03 04 59.0	
	comp=Z,3.0nm,1.4s						
BILL	Bilibino	85.77	359	P	P	03 04 55.1	-0.2
BILL				IAmb	IAmb	03 04 57.0	
	comp=Z,5.3nm,1.0s						
NVAR	Mina Array Bea	89.06	49	P	P	03 05 12.0	-0.2
	comp=Z,0.4nm,0.7s,baz=238,slow=8.5,SNR=4.6						
	comp=Z,0.4nm,0.7s						
ILAR	Eielson Array	89.47	18	P	P	03 05 11.9	-1.2
	comp=Z,0.2nm,0.7s,baz=239,slow=5.8,SNR=4.5						
	comp=Z,0.2nm,0.7s						
LPIG	La Paz	90.18	65	LR	LR	03 38 18.1	
	comp=Z,50nm,18.7s,baz=34,slow=31						

*IDC **04** 02:57:52.6±1.7, 2°.60S×139°.19E, h0^{km}, mb3.6/6, mbtmp3.6/7, ML3.6/1, Error ellipse: s-maj=72.0km s-min=24.7km az=91.0*
*DJA **04** 02:57:56.8±0.4, 2°S±7°×13°9E±°, h10^{km}, M3.6/6, MLv3.6/6*
ISC 04 02:57:55.1±0.9**,2°.64S**±0°.10×**138°.91E**±0°.07**,h10**^{km}**,n11, σ0^{s}89**/12**,mb3.7**/6**,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.68	343	P	Pg	02 58 07.7	-0.5
GENI	Genyem	1.26	88	P	Pn	02 58 19.2	+0.4
JAY	Jayapura	1.80	86	P	Pn	02 58 27.3	+1.0
JAY				S	Sn	02 58 50.2	+1.0
BAKI	Biak	3.15	297	P	Pn	02 58 46.2	+1.4
WRA	Warramunga Arr	17.77	194	P	Pn	03 02 02.3	-0.5
	0.2nm,0.3s,baz=18,slow=12,SNR=7.3						
	0.6nm,0.6s						
ASAR	Alice Springs	21.46	193	P	P	03 02 43.7	-0.2
	0.4nm,0.5s,baz=18,slow=10,SNR=7.9						
	0.4nm,0.5s						
MKAR	Makanchi Array	69.86	322	P	P	03 09 06.4	+0.2
	0.6nm,0.6s,baz=111,slow=6.8,SNR=7.3						
	0.6nm,0.6s						
ZALV	Zalesovo Beam	71.97	330	P	P	03 09 17.7	-1.2
	0.3nm,0.3s,baz=116,slow=6.6,SNR=2.2						
	0.3nm,0.3s						
KURBB	Kurchatov Arra	73.78	325	P	P	03 09 29.8	+0.1
	0.2nm,0.5s,baz=108,slow=5.0,SNR=3.9						
	0.2nm,0.5s						
BVAR	Borovoye Array	79.37	325	P	P	03 10 01.2	0.0
	0.9nm,0.6s,baz=115,slow=6.7,SNR=6.0						
	0.9nm,0.6s						
ILAR	Eielson Array	85.69	24	P	P	03 10 33.0	-1.0
	0.5nm,1.0s,baz=252,slow=4.9,SNR=2.9						
	0.5nm,1.0s						

*SOME **04** 03:02:36.8, 40°.03N×77°.00E, h5^{km}*
*KRNET **04** 03:02:37.2±0.1, 39°.96N×77°.09E, h29^{km}, mb3.0*
*NNC **04** 03:02:38.6±0.6, 40°.07N×77°.02E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=4.2km s-min=3.0km az=171.0*
ISC 04 03:02:40.0±1.6**,40°.06N**±0°.07×**76°.97E**±0°.04**,h10**^{km}**,n38, σ1^{s}62**/59**,20C-2D,Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNKS	Jany-Kuch	1.42	314	⇑*i*P	Pn	03 03 05.5	-0.7
JNKS				⇑*i*S	Sb	03 03 26.4	+1.3
NRN	Naryn	1.56	332	⇑*i*P	Pn	03 03 07.8	-0.3
NRN				⇑*i*S	Sb	03 03 30.4	+1.4
TARG	Taragay, Kyrgy	1.78	21	⇑*i*P	Pn	03 03 10.4	-0.8
TARG				⇑*i*S	Sb	03 03 34.9	-0.6
KDJ	Kajisay	2.07	4	⇑*i*P	Pn	03 03 14.9	-0.1
KDJ				⇑*e*S	Sn	03 03 42.0	+1.0
ULHL	Ulahol	2.25	346	*i*P	Pn	03 03 17.7	+0.2
ULHL				*e*S	Sn	03 03 47.2	+1.8
SALK	Salom-Alik	2.54	290	⇓*i*P	Pn	03 03 21.6	+0.2
SALK				⇓*i*S	Sn	03 03 54.2	+1.7
BOOM	Boomskoye usch	2.55	343	⇑*i*P	Pn	03 03 21.6	+0.1
BOOM				⇑*i*S	Sn	03 03 54.2	+1.5
SFK	Sufi-Kurgan	2.66	270	⇑*i*P	Pn	03 03 23.0	-0.2
SFK				⇑*e*S	Sn	03 03 56.3	+0.6
ARLS	Aral	2.69	313	⇑*i*P	Pn	03 03 23.8	+0.3
ARLS				⇑*i*S	Sn	03 03 57.8	+1.5
UCH	Uchtor	2.85	320	⇑*e*P	Pn	03 03 26.3	+0.3
UCH				⇑*i*S	Sn	03 04 02.2	+1.6
TNSS	Tian-Shan	2.97	360	Pg	Pb	03 03 33.4	+0.1
	1.6nm,0.4s						
TNSS				Lg	Lg	03 04 14.0	
	3.8nm,0.7s						
TNSS	Tian-Shan	2.97	360	*e*P	Pb	03 03 33.4	+0.1
	1.6nm,0.4s						
TNSS				*e*S	Sg	03 04 14.0	-1.5
	3.8nm,0.7s						
KST	Kastek	3.07	346	Pg	Pb	03 03 34.6	-0.2
	6.7nm,0.4s						
KST				Lg	Lg	03 04 16.2	
	20nm,0.6s						
KST	Kastek	3.07	346	*e*P	Pb	03 03 34.6	-0.2
	6.7nm,0.4s						
KST				*e*S	Sb	03 04 16.1	+3.7
	20nm,0.6s						
MTBS	Maitube	3.09	353	Pg	Pb	03 03 34.8	-0.3
	4.8nm,0.4s						
MTBS				Lg	Lg	03 04 16.6	
	22nm,0.4s						
MTBS	Maitube	3.09	353	*e*P	Pb	03 03 34.8	-0.3
	4.8nm,0.4s						
MTBS				*e*S	Sb	03 04 16.6	+3.7
	22nm,0.4s						
MDOK	Medeo	3.10	1	Pg	Pb	03 03 35.4	+0.1
	10nm,0.6s						
MDOK				Lg	Lg	03 04 17.7	
	30nm,0.6s						
KOTS	Kotyrbulak	3.17	2	Pg	Pb	03 03 36.7	+0.2
	10nm,0.5s						
KOTS				Lg	Lg	03 04 19.8	
	60nm,0.7s						
KOTS	Kotyrbulak	3.17	2	*e*P	Pb	03 03 36.7	+0.2
	10nm,0.5s						
KOTS				*e*S	Sg	03 04 19.8	-2.0
	60nm,0.7s						
AAK	Ala-Archa	3.18	325	⇑Pg	Pb	03 03 36.8	+0.2
	5.8nm,1.0s						
AAK				⇑Lg	Lg	03 04 21.5	
	5.4nm,0.6s						
SATY	Saty	3.18	19	Pg	Pb	03 03 36.5	-0.2
	6.6nm,0.5s						
SATY				Lg	Lg	03 04 19.5	
	16nm,0.5s						
UZB	Uzynbulak	3.44	26	Pg	Pb	03 03 40.7	-0.5
	5.0nm,0.4s						
UZB				Lg	Lg	03 04 26.6	
	4.0nm,0.4s						
UZB	Uzynbulak	3.44	26	*e*P	Pb	03 03 40.7	-0.5
	5.0nm,0.4s						
UZB				*e*S	Sb	03 04 26.6	+3.4
	4.0nm,0.4s						
KURS	Kuram	3.54	14	Pg	Pb	03 03 42.7	-0.1
	7.5nm,1.0s						
KURS				Lg	Lg	03 04 30.1	
	6.7nm,0.7s						
SHLS	Shalkode	3.61	30	Pg	Pg	03 03 46.8	-2.4
	4.2nm,0.4s						
SHLS				Lg	Lg	03 04 37.1	
	11nm,0.6s						
SHLS	Shalkode	3.61	30	*e*P	Pg	03 03 46.8	-2.4
	4.2nm,0.4s						
SHLS				*e*S	Sg	03 04 37.1	+1.1
	11nm,0.6s						
KPKS	Kokpek	3.63	20	Pg	Pb	03 03 44.0	-0.3
	0.5nm,0.2s						
KPKS				Lg	Lg	03 04 32.3	
	5.9nm,0.4s						
KPKS	Kokpek	3.63	20	*e*P	Pb	03 03 44.0	-0.3
	0.5nm,0.2s						
KPKS				*e*S	Sb	03 04 32.3	+3.7
	5.9nm,0.4s						
KTBS	Karatobe	3.65	357	Pg	Pb	03 03 45.1	+0.4
	6.8nm,0.7s						
KTBS				Lg	Lg	03 04 34.3	
KTBS	Karatobe	3.65	357	*e*P	Pb	03 03 45.1	+0.4
	1.6nm,0.6s						
KTBS				*e*S	Sg	03 04 34.3	-3.0
	0.2nm,0.2s						
KRBS	Karabastau	3.76	345	Pg	Pb	03 03 47.1	+0.7
	2.4nm,0.4s						
KRBS				Lg	Lg	03 04 37.7	
	16nm,0.5s						
KRBS	Karabastau	3.76	345	*e*P	Pb	03 03 47.1	+0.7
	2.4nm,0.4s						
KRBS				*e*S	Sg	03 04 37.7	-2.9
	16nm,0.5s						
PDGK	Podgornoye	3.77	29	⇑Pg	Pb	03 03 47.4	+0.7
	3.5nm,0.6s						
PDGK				⇑Lg	Lg	03 04 37.7	
	6.6nm,0.6s						
MRKS	Merke	3.89	315	Pg	Pb	03 03 49.4	+0.7
	2.8nm,0.5s						
MRKS				Lg	Lg	03 04 41.5	
	4.1nm,0.4s						
MRKS	Merke	3.89	315	*e*P	Pb	03 03 49.4	+0.7
	2.8nm,0.5s						
MRKS				*e*S	Sg	03 04 41.5	-3.4
	4.1nm,0.4s						
KNOS	Konyrlen	4.59	20	Pg	Pb	03 04 02.6	+1.8
	1.1nm,0.4s						
KNOS				Lg	Lg	03 05 04.1	
	2.6nm,0.5s						
DJR	Jarkent	4.75	25	Pg	Pb	03 04 05.5	+2.1
	1.2nm,0.3s						
DJR				Lg	Lg	03 05 09.3	
	2.0nm,0.5s						
DJR	Jarkent	4.75	25	*e*P	Pb	03 04 05.5	+2.1
	1.2nm,0.3s						
DJR				*e*S	Sg	03 05 09.3	-3.3
	2.0nm,0.5s						

*IDC **04** 03:09:13.7±20.0, 18°.50S×176°.98W, h528^{km}±32^{km}, mb3.5/4, mbtmp4.4/5, Error ellipse: s-maj=350.7km s-min=102.1km az=75.0*
*NEIC **04** 03:09:15.4±1.0, 18°.77S±0°.06×177°.1W±0°.1, h521^{km}±8^{km}, mb4.4/27, Error ellipse: s-maj=17.3km s-min=8.0km az=87.0*
ISC 04 03:09:13.6±0.7**,18°.7S**±0°.2×**177°.19W**±0°.10**,h500**^{km}**,n35, σ0^{s}84**/35**,mb4.4**/17**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.63	282	P	P	03 10 40.5	+3.1
	7.0nm,0.3s,baz=106,slow=6.3,SNR=14						
NIUE	Niue	6.89	94	P	P	03 11 00.6	+1.9
QRZ	Quartz Range	23.73	200	P	P	03 13 44.9	-0.8
EIDS	Eidsvold	30.09	252	P	P	03 14 41.6	-0.3
EIDS				IAmb	IAmb	03 15 24.9	
	comp=Z,21nm,1.5s						
ARMA	Armidale	30.55	242	P	P	03 14 45.8	-0.1
ARMA				IAmb	IAmb	03 15 00.3	
	comp=Z,20nm,1.3s						
CTA	Charters Tower	34.46	262	P	P	03 15 19.4	+0.2
	comp=Z,1.6nm,0.3s,baz=83,slow=9.4,SNR=5.4						
	comp=Z,1.6nm,0.3s						
CTAO	Charters Tower	34.46	262	P	P	03 15 19.4	+0.2
CTAO				IAmb	IAmb	03 15 43.0	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,6.7nm,1.2s						
COEN	**Coen**	**38.27**	**271**	P	**P**	**03 15 51.1**	**+0.3**
COEN				IAmb	IAmb	03 16 11.3	
	comp=Z,10nm,1.3s						
STKA	**Stephens Creek**	**39.27**	**242**	P	**P**	**03 15 59.3**	**+0.6**
	comp=Z,1.6nm,0.5s,baz=86,slow=8.5,SNR=7.4						
	comp=Z,1.6nm,0.5s						
STKA	**Stephens Creek**	**39.27**	**242**	P	**P**	**03 15 59.0**	**+0.3**
STKA				IAmb	IAmb	03 15 59.4	
	comp=Z,13nm,0.8s						
BBOO	**Buckleboo**	**44.03**	**242**	P	**P**	**03 16 36.7**	**+0.3**
BBOO				IAmb	IAmb	03 17 18.1	
	comp=Z,26nm,1.4s						
WR8	**Warramunga Arr**	**45.48**	**260**	P	**P**	**03 16 47.3**	**-0.5**
WR8				IAmb	IAmb	03 16 55.6	
	comp=Z,12nm,1.5s						
WB0	**Warramunga Arr**	**45.60**	**260**	P	**P**	**03 16 48.3**	**-0.4**
WB0				IAmb	IAmb	03 16 49.1	
	comp=Z,3.5nm,0.5s						
WRA	**Warramunga Arr**	**45.63**	**260**	P	**P**	**03 16 48.5**	**-0.5**
	comp=Z,1.8nm,0.4s,baz=98,slow=6.5,SNR=65						
	comp=Z,1.8nm,0.4s						
WRA	**Warramunga Arr**	**45.63**	**260**	P	**P**	**03 16 48.4**	**-0.5**
AS31	**Alice Springs**	**45.69**	**255**	P	**P**	**03 16 49.3**	**-0.1**
ASAR	**Alice Springs**	**45.69**	**255**	P	**P**	**03 16 49.4**	**0.0**
	comp=Z,10.0nm,0.5s,baz=90,slow=8.7,SNR=198						
	comp=Z,10.0nm,0.5s						
ASAR	**Alice Springs**	**45.69**	**255**	P	**P**	**03 16 48.9**	**-0.5**
MTN	**Manton Dam**	**49.94**	**269**	P	**P**	**03 17 21.3**	**0.0**
MTN				IAmb	IAmb	03 18 00.0	
	comp=Z,22nm,1.2s						
FORT	**Forrest**	**50.71**	**245**	P	**P**	**03 17 26.9**	**+0.1**
FORT				IAmb	IAmb	03 17 34.0	
	comp=Z,8.0nm,0.9s						
KNRA	**Kununurra**	**51.56**	**265**	P	**P**	**03 17 33.3**	**+0.2**
KNRA				IAmb	IAmb	03 18 07.8	
	comp=Z,15nm,1.2s						
MBWA	**Marble Bar**	**59.00**	**256**	P	**P**	**03 18 25.0**	**-0.1**
MBWA				IAmb	IAmb	03 19 02.2	
	comp=Z,38nm,1.5s						
GIRL	**Giralia**	**63.77**	**253**	P	**P**	**03 18 55.6**	**-0.8**
MJAR	**Matsushiro Arr**	**69.25**	**323**	P	**P**	**03 19 30.2**	**+0.2**
SSLB	**Suanglung**	**73.65**	**303**	P	**P**	**03 19 55.7**	**-0.4**
TATO	**Taipei**	**73.81**	**304**	P	**P**	**03 19 55.9**	**-1.0**
VTX	**Valle De La Tr**	**77.14**	**50**	P	**P**	**03 20 15.5**	**0.0**
VTX				IAmb	IAmb	03 20 42.6	
	comp=Z,20nm,1.3s						
ELS	**Elsinore Mount**	**77.17**	**48**	P	**P**	**03 20 14.9**	**-0.7**
PMBI	**Palembang**	**77.74**	**271**	P	**P**	**03 20 18.2**	**-0.8**
AFDM	**Forest Hills D**	**77.81**	**42**	P	**P**	**03 20 18.3**	**-0.6**
SLBS	**Sierra La Lagu**	**77.96**	**60**	P	**P**	**03 20 19.6**	**-0.5**
SLBS				IAmb	IAmb	03 20 24.0	
	comp=Z,35nm,1.4s						
MNAI	**Manna**	**79.01**	**269**	P	**P**	**03 20 25.3**	**-0.7**
214A	**Organ Pipe Nat**	**79.61**	**51**	P	**P**	**03 20 27.4**	**-1.3**
N18K	**Kilae Creek**	**80.97**	**10**	P	**P**	**03 20 35.0**	**-0.1**
N18K				IAmb	IAmb	03 20 55.7	
	comp=Z,19nm,1.4s						
ABKAR	**Akbulak array**	**125.31**	**318**	PKPdf	**PKPdf**	**03 27 16.1**	**-0.9**

*OSPL **04** 03:09:51.5±0.3, 17°.82N×66°.81W, h10km±7km, ML1.6, Presumed earthquake*

SDD 04 03:09:51.0±0.5**, 17°.77N×66°.84W, h20**km±43km**, MD3.2, ML2.6, MW2.9, 1C-1D, Presumed earthquake, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OBIP	**Obispado Ponce**	**0.35**	**39**	*i* P	Pb	03 09 57.1	-1.4
OBIP				*e*S	Sb	03 10 01.3	-2.3
OBIP				IAML		03 10 03.0	
	comp=Z,44nm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.35**	**312**	⇓*e*Pg	Pb	03 09 57.9	-0.6
CRPR				⇑*e*Sg	Sb	03 10 02.5	-1.2
CRPR				IAML		03 10 03.0	
	comp=N,588nm,0.1s						
CRPR	**Cabo Rojo, PR**	**0.35**	**312**	*i* P	Pb	03 09 57.9	-0.7
CRPR				*e*S	Sb	03 10 02.5	-1.2
CRPR				IAML		03 10 04.6	
	comp=Z,516nm,0.2s						
SJG	**San Juan**	**0.73**	**62**	*e*Pg	Pb	03 10 04.1	-1.0
SJG	**San Juan**	**0.73**	**62**	*i* P	Pb	03 10 04.1	-1.1
SJG				IAML		03 10 19.0	
	comp=Z,30nm,0.8s						
HATOM	**Hato Mayor del**	**2.62**	**293**	*e*Pg	Pb	03 10 35.8	-1.5
HATOM				IAML		03 11 28.9	
	comp=N,30nm,2.2s						

*KRNET **04** 03:17:01.6±0.1, 39°.99N×77°.12E, h11km, mb3.3*
*SOME **04** 03:17:01.3, 40°.03N×77°.18E, h5km*
*NNC **04** 03:17:03.5±0.6, 40°.08N×77°.20E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=4.1km s-min=3.0km az=159.0*

ISC 04 03:17:02.5±1.4**, 40°.06N**±0°.06×**77°.08E**±0°.03**, h10**km**, n52, σ2**s**18**/82**, 27C-7D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNKS	**Jany-Kuch**	**1.48**	**312**	⇑*e*P	**Pb**	**03 17 30.4**	**+0.1**
JNKS				⇑*i*S	**Sg**	**03 17 51.9**	**+1.6**
NRN	**Naryn**	**1.60**	**330**	⇑*e*P	**Pb**	**03 17 32.8**	**+0.5**
NRN				⇑*i*S	**Sg**	**03 17 55.8**	**+1.9**
TARG	**Taragay, Kyrgy**	**1.76**	**18**	⇑*e*P	**Pg**	**03 17 35.4**	**-0.8**
TARG				⇑*e*S	**Sg**	**03 18 00.2**	**+1.1**
KDJ	**Kajisay**	**2.07**	**2**	⇑*e*P	**Pb**	**03 17 40.4**	**+0.1**
KDJ				⇑*e*S	**Sg**	**03 18 08.8**	**-0.2**
ULHL	**Ulahol**	**2.27**	**344**	⇑*e*P	**Pb**	**03 17 43.3**	**-0.5**
ULHL				⇑*e*S	**Sg**	**03 18 13.8**	**-1.8**
BOOM	**Boomskoye usch**	**2.58**	**341**	⇑*e*P	**Pb**	**03 17 47.5**	**-1.4**
BOOM				⇑*e*S	**Sb**	**03 18 21.1**	**+0.5**
SALK	**Salom-Alik**	**2.62**	**289**	⇑*i*P	**Pb**	**03 17 47.9**	**-1.7**
SALK				⇑*e*S	**Sb**	**03 18 21.5**	**-0.3**
SFK	**Sufi-Kurgan**	**2.74**	**270**	⇑*e*P	**Pn**	**03 17 49.6**	**+2.8**
SFK				⇑*e*S	**Sb**	**03 18 24.4**	**-1.1**
ARLS	**Aral**	**2.75**	**312**	⇓*i*P	**Pb**	**03 17 49.9**	**-2.0**
ARLS				⇓*e*S	**Sb**	**03 18 25.2**	**-0.6**
ANVS	**Anan'yevo**	**2.76**	**9**	⇑*e*P	**Pb**	**03 17 49.9**	**-2.1**
ANVS				⇑*e*S	**Sb**	**03 18 25.5**	**-0.4**
UCH	**Uchtor**	**2.90**	**319**	⇓*e*P	**Pb**	**03 17 52.5**	**-2.1**
UCH				⇓*e*S	**Sb**	**03 18 29.4**	**-1.0**
TNSS	**Tian-Shan**	**2.98**	**358**	Pg	**Pg**	**03 17 57.8**	**-1.7**
	2.7nm,0.4s						
TNSS				Lg	Lg	03 18 38.8	
	8.2nm,0.6s						
TNSS	**Tian-Shan**	**2.98**	**358**	*e*P	**Pg**	**03 17 57.8**	**-1.7**
	2.7nm,0.4s						
TNSS				*e*S	**Sg**	**03 18 38.8**	**+0.6**
	8.2nm,0.6s						
KBK	**Karagaybulak**	**3.05**	**329**	⇑*i*P	**Pb**	**03 17 54.1**	**-2.8**
KBK				⇑*i*S	**Sb**	**03 18 32.7**	**-1.6**
TKM2	**Tokmak 2**	**3.07**	**339**	⇓*e*P	**Pb**	**03 17 54.5**	**-2.8**
TKM2				⇓*e*S	**Sb**	**03 18 33.1**	**-1.7**
KST	**Kastek**	**3.10**	**345**	Pg	**Pg**	**03 17 59.7**	**-2.1**
	4.8nm,0.7s						
KST				Lg	Lg	03 18 41.8	
	49nm,0.7s						
KST	**Kastek**	**3.10**	**345**	*e*P	**Pg**	**03 17 59.7**	**-2.1**
	4.8nm,0.7s						
KST				*e*S	**Sg**	**03 18 41.8**	**-0.1**
	49nm,0.7s						
MDOK	**Medeo**	**3.10**	**360**	Pg	**Pg**	**03 17 59.9**	**-2.0**
	9.7nm,0.3s						
MDOK				Lg	Lg	03 18 42.3	
	73nm,0.5s						
MTBS	**Maitube**	**3.11**	**351**	Pg	**Pg**	**03 17 59.7**	**-2.3**
	2.9nm,0.2s						
MTBS				Lg	Lg	03 18 42.0	
	38nm,0.6s						
MTBS	**Maitube**	**3.11**	**351**	*e*P	**Pg**	**03 17 59.7**	**-2.3**
	2.9nm,0.2s						
MTBS				*e*S	**Sg**	**03 18 42.0**	**-0.2**
	38nm,0.6s						
SATY	**Saty**	**3.16**	**18**	Pg	**Pg**	**03 18 00.4**	**-2.6**
	9.6nm,0.5s						
SATY				Lg	Lg	03 18 43.2	
	36nm,0.6s						
KOTS	**Kotyrbulak**	**3.17**	**0**	Pg	**Pb**	**03 18 00.0**	**+1.0**
	7.6nm,0.3s						
KOTS				Lg	Lg	03 18 44.1	
	125nm,0.6s						
KOTS	**Kotyrbulak**	**3.17**	**0**	*e*P	**Pg**	**03 18 01.0**	**-2.3**
	7.6nm,0.3s						
KOTS				*e*S	**Sg**	**03 18 44.1**	**-0.3**
	125nm,0.6s						
AAK	**Ala-Archa**	**3.23**	**324**	⇓Pn	**Pn**	**03 17 56.8**	**+3.5**
	2.4nm,0.6s						
AAK				⇑Lg	Lg	03 18 46.3	
	11nm,0.6s						
AAK	**Ala-Archa**	**3.23**	**324**	⇑*i*P	**Pn**	**03 17 56.6**	**+3.2**
AAK				⇑*i*S	**Sb**	**03 18 36.8**	**-2.6**
UZB	**Uzynbulak**	**3.41**	**25**	Pg	**Pb**	**03 18 04.3**	**+1.2**
	11nm,0.7s						
UZB				Lg	Lg	03 18 49.8	
	11nm,0.6s						
UZB	**Uzynbulak**	**3.41**	**25**	*e*P	**Pb**	**03 18 04.3**	**+1.2**
	11nm,0.7s						
UZB				*e*S	**Sg**	**03 18 49.8**	**-2.3**
	11nm,0.6s						
KURS	**Kuram**	**3.52**	**13**	Pg	**Pb**	**03 18 06.9**	**+2.0**
	7.4nm,1.2s						
KURS				Lg	Lg	03 18 54.1	
	9.6nm,0.9s						
SHLS	**Shalkode**	**3.58**	**29**	Pg	**Pg**	**03 18 10.1**	**-0.8**
	10.0nm,0.4s						
SHLS				Lg	Lg	03 18 59.7	
	28nm,0.6s						
SHLS	**Shalkode**	**3.58**	**29**	*e*P	**Pg**	**03 18 10.2**	**-0.8**
	10.0nm,0.4s						
SHLS				*e*S	**Sg**	**03 18 59.7**	**+2.4**
	28nm,0.6s						
KPKS	**Kokpek**	**3.61**	**19**	Pg	**Pb**	**03 18 07.7**	**+1.3**
	0.5nm,0.2s						
KPKS				Lg	Lg	03 18 55.5	
	26nm,0.7s						
KPKS	**Kokpek**	**3.61**	**19**	*e*P	**Pb**	**03 18 07.7**	**+1.3**
	0.5nm,0.2s						
KPKS				*e*S	**Sg**	**03 18 55.5**	**-2.9**
	26nm,0.7s						
KTBS	**Karatobe**	**3.66**	**356**	Pg	**Pg**	**03 18 10.2**	**-2.5**
	4.9nm,0.5s						
KTBS				Lg	Lg	03 18 59.9	
	16nm,0.8s						
KTBS	**Karatobe**	**3.66**	**356**	*e*P	**Pg**	**03 18 10.2**	**-2.5**
	4.9nm,0.5s						
KTBS				*e*S	**Sg**	**03 18 59.9**	**-0.2**
	0.4nm,0.5s						
USP	**Ospenovka**	**3.74**	**330**	⇑*i*P	**Pn**	**03 18 03.8**	**+3.5**
USP				⇑*i*S	**Sn**	**03 18 49.0**	**+4.6**
KRBS	**Karabastau**	**3.78**	**344**	Pg	**Pg**	**03 18 12.7**	**-2.2**
	5.3nm,0.6s						
KRBS				Lg	Lg	03 19 04.1	
	35nm,0.6s						
KRBS	**Karabastau**	**3.78**	**344**	*e*P	**Pg**	**03 18 12.7**	**-2.2**
	5.3nm,0.6s						
KRBS				*e*S	**Sg**	**03 19 04.1**	**+0.2**
	35nm,0.6s						
KUU	**Kurty**	**3.87**	**352**	Pg	**Pg**	**03 18 14.4**	**-2.3**
	3.7nm,0.0s						
KUU				Lg	Lg	03 19 06.9	
	8.0nm,0.1s						
KUU	**Kurty**	**3.87**	**352**	*e*P	**Pg**	**03 18 14.3**	**-2.3**
	3.7nm,0.0s						
KUU				*e*S	**Sg**	**03 19 06.9**	**+0.2**
	8.0nm,0.1s						
MRKS	**Merke**	**3.95**	**314**	Pg	**Pg**	**03 18 15.8**	**-2.3**
	4.5nm,0.8s						
MRKS				Lg	Lg	03 19 09.4	
	9.7nm,0.4s						
MRKS	**Merke**	**3.95**	**314**	*e*P	**Pg**	**03 18 15.8**	**-2.3**
	4.5nm,0.8s						
MRKS				*e*S	**Sg**	**03 19 09.4**	**+0.2**
	9.7nm,0.4s						
BLB	**Baldybastay**	**4.17**	**14**	Pg	**Pg**	**03 18 19.1**	**-3.2**
	0.4nm,0.2s						
BLB				Lg	Lg	03 19 14.8	
	18nm,0.4s						
KTMS	**Ketmen**	**4.18**	**35**	Pg	**Pg**	**03 18 18.8**	**-3.8**
	1.2nm,0.2s						
KTMS				Lg	Lg	03 19 14.1	
	9.3nm,0.2s						
KTMS	**Ketmen**	**4.18**	**35**	*e*P	**Pg**	**03 18 18.8**	**-3.8**
	1.2nm,0.2s						
KTMS				*e*S	**Sg**	**03 19 14.1**	**-2.5**
	9.3nm,0.2s						
ARXS	**Arharly**	**4.19**	**7**	Pg	**Pg**	**03 18 19.8**	**-2.9**
	2.3nm,0.5s						
ARXS				Lg	Lg	03 19 16.2	
	19nm,0.6s						
ARXS	**Arharly**	**4.19**	**7**	*e*P	**Pg**	**03 18 19.8**	**-2.9**
	2.3nm,0.5s						
ARXS				*e*S	**Sg**	**03 19 16.2**	**-0.8**
	19nm,0.6s						
KNOS	**Konyrlen**	**4.57**	**19**	Pg	**Pg**	**03 18 26.4**	**-3.7**
	3.4nm,0.4s						
KNOS				Lg	Lg	03 19 27.5	
	5.5nm,0.5s						
DJR	**Jarkent**	**4.72**	**24**	Pg	**Pg**	**03 18 28.9**	**-4.0**
	2.0nm,0.4s						
DJR				Lg	Lg	03 19 31.6	
	6.0nm,0.4s						
DJR	**Jarkent**	**4.72**	**24**	*e*P	**Pg**	**03 18 28.9**	**-4.0**
	2.0nm,0.4s						
DJR				*e*S	**Sg**	**03 19 31.6**	**-2.4**
	6.0nm,0.4s						
BTLS	**Baital**	**5.46**	**337**	Pg	**Pg**	**03 18 44.6**	**-2.3**
	7.4nm,1.3s						
BTLS				Lg	Lg	03 19 58.5	
	3.9nm,0.7s						
BTLS	**Baital**	**5.46**	**337**	*e*P	**Pg**	**03 18 44.6**	**-2.3**
	7.4nm,1.3s						
BTLS				*e*S	**Sg**	**03 19 58.5**	**+0.8**
	3.9nm,0.7s						
KK31	**Karatay Array**	**5.79**	**304**	⇑Pg	**Pg**	**03 18 50.3**	**-3.0**
	0.7nm,0.5s,baz=128,slow=16,SNR=5.0						
KK31				⇑Lg	Lg	03 20 09.6	
	1.5nm,0.5s,baz=135,slow=18,SNR=4.0						

*IDC **04** 03:39:20.8±2.5, 14°.90S×74°.55W, h0km, mb3.2/2, mbtmp3.5/3, ML4.4/1, MS2.5/1, Error ellipse: s-maj=113.7km s-min=36.7km az=31.0*
*NEIC **04** 03:39:28.5±1.6, 15°.4S±0°.1×74°.4W±0°.1, h71km±9km, mb4.4/8, Error ellipse: s-maj=26.4km s-min=6.0km az=47.0*

ISC 04 03:39:26.6±0.7**, 15°.30S**±0°.09×**74°.5W**±0°.1**, h54**km**, n30, σ1**s**20**/30**, mb3.9**/4**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**4.02**	**325**	Pn	**Pn**	**03 40 28.7**	**+2.9**
PB12	**IPOC Station P**	**5.15**	**130**		**Pn**	**03 40 42.4**	**+1.1**
PB18	**Visviri**	**5.30**	**116**		**Pn**	**03 40 44.7**	**+1.0**
PB16	**IPOC Station P**	**5.62**	**123**		**Pn**	**03 40 49.6**	**+1.4**
LPAZ	**La Paz**	**6.18**	**100**	Pn	**Pn**	**03 40 56.1**	**+0.3**
	4.3nm,0.3s,baz=296,slow=7.0,SNR=65						
LPAZ				LR	LR	03 43 34.6	
	comp=Z,46nm,20.4s,baz=295,slow=40						
	15nm,0.4s						
LPAZ	**La Paz**	**6.18**	**100**		**Pn**	**03 40 55.5**	**-0.3**
PB11	**IPOC Station P**	**6.38**	**135**		**Pn**	**03 40 59.5**	**+1.3**
TA01	**Diego Aracena**	**6.64**	**143**	Pn	**Pn**	**03 41 02.0**	**+0.4**
GO01	**Chusmiza**	**6.64**	**132**		**Pn**	**03 41 04.2**	**+2.0**
PB08	**IPOC Station P**	**6.99**	**134**		**Pn**	**03 41 08.2**	**+1.5**
PB02	**IPOC Station P**	**7.39**	**145**	Pn	**Pn**	**03 41 12.9**	**+0.9**
PB01	**IPOC Station P**	**7.42**	**141**	Pn	**Pn**	**03 41 12.8**	**+0.4**
PB07	**IPOC Station P**	**7.73**	**146**	Pn	**Pn**	**03 41 16.6**	**-0.1**
PB03	**IPOC Station P**	**8.06**	**147**	Pn	**Pn**	**03 41 23.1**	**+1.8**
PB09	**IPOC Station P**	**8.14**	**143**	Pn	**Pn**	**03 41 23.1**	**+0.8**
MT16	**CCHEN**	**18.40**	**170**	P	**P**	**03 43 36.2**	**-1.1**
MT16				IAmb	IAmb	03 43 39.8	
	comp=Z,8.7nm,0.9s						
BO01	**Tunca**	**19.25**	**171**	P	**P**	**03 43 45.6**	**-1.0**
GO05	**Hualane**	**19.76**	**174**	P	**P**	**03 43 51.6**	**-0.6**
GO05				IAmb	IAmb	03 43 56.9	
	comp=Z,28nm,1.4s						
BI05	**Punta Hualpn**	**21.39**	**177**	P	**P**	**03 44 08.5**	**-1.2**
ITAB	**Concordia**	**23.92**	**123**	P	**P**	**03 44 37.0**	**+1.4**
ITAB				IAmb	IAmb	03 44 38.4	
	comp=Z,18nm,1.2s						
BLA	**Blacksburg**	**52.53**	**354**	P	**P**	**03 48 33.5**	**-1.0**
BLA				IAmb	IAmb	03 48 37.3	
	comp=Z,9.1nm,0.9s						
TXAR	**Lajitas Array**	**52.58**	**328**	P	**P**	**03 48 34.0**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=132,slow=9.6,SNR=2.6						
	comp=Z,0.1nm,0.3s						
TXAR	**Lajitas Array**	**52.58**	**328**	P	**P**	**03 48 34.2**	**-0.9**
OZNA	**Ozona**	**52.62**	**331**	P	**P**	**03 48 34.2**	**-1.2**
SNAA	**Sanae**	**69.82**	**161**	P	**P**	**03 50 30.4**	**-0.7**
YKA	**Yellowknife Ar**	**83.67**	**342**	P	**P**	**03 51 48.5**	**-0.6**
	comp=Z,0.3nm,0.8s,baz=135,slow=3.4,SNR=3.6						
	comp=Z,0.3nm,0.8s						
WRA	**Warramunga Arr**	**134.96**	**220**	PKP	**PKiKP**	**03 58 42.8**	**+0.7**
	comp=Z,0.6nm,1.1s,baz=113,slow=2.5,SNR=2.3						
WRA	**Warramunga Arr**	**134.96**	**220**		**PKPdf**	**03 58 40.1**	**-0.5**
SONM	**Songino Array**	**147.55**	**359**	PKPbc	**PKPbc**	**03 59 05.3**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=343,slow=1.8,SNR=2.3						
SONM	**Songino Array**	**147.55**	**359**	PKPdf	**PKPdf**	**03 59 01.4**	**-0.9**

*IDC **04** 03:39:58.3±2.2, 14°.90S×74°.63W, h0km, mb3.7/3, mbtmp3.9/4, ML4.8/1, Error ellipse: s-maj=93.2km s-min=34.6km az=29.0*
*NEIC **04** 03:40:06.9±2.0, 15°.22S±0°.09×74°.3W±0°.1, h75km±3km, mb4.3/17, Error ellipse: s-maj=18.7km s-min=8.7km az=50.0*

ISC 04 03:40:04.6±0.6**, 15°.26S**±0°.08×**74°.27W**±0°.10**, h54**km**, n41, σ1**s**64**/39**, mb4.3**/7**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**4.11**	**322**	Pn	**Pn**	**03 41 07.1**	**+2.2**
NNA				Sn	**Sn**	**03 41 55.0**	**+3.3**
AP01	**Chacalluta**	**4.87**	**130**	Pn	**Pn**	**03 41 17.7**	**+2.4**
PB12	**IPOC Station P**	**5.03**	**132**	Pn	**Pn**	**03 41 19.6**	**+1.9**
PB18	**Visviri**	**5.14**	**117**	Pn	**Pn**	**03 41 21.3**	**+1.7**
PB16	**IPOC Station P**	**5.49**	**125**	Pn	**Pn**	**03 41 25.7**	**+1.4**
LPAZ	**La Paz**	**5.99**	**101**	Pn	**Pn**	**03 41 33.4**	**+2.0**
	11nm,0.3s,baz=307,slow=7.4,SNR=35						
	30nm,0.3s						
LPAZ	**La Paz**	**5.99**	**101**		**Pn**	**03 41 32.7**	**+1.3**
PB11	**IPOC Station P**	**6.28**	**136**	Pn	**Pn**	**03 41 35.5**	**+0.8**
GO01	**Chusmiza**	**6.53**	**133**	Pn	**Pn**	**03 41 40.6**	**+2.1**
PB08	**IPOC Station P**	**6.88**	**136**		**Pn**	**03 41 44.2**	**+1.0**
PB01	**IPOC Station P**	**7.33**	**142**	Pn	**Pn**	**03 41 51.4**	**+2.3**
PB03	**IPOC Station P**	**7.99**	**148**	Pn	**Pn**	**03 42 00.8**	**+2.5**
PB14	**IPOC Station P**	**10.00**	**159**	Pn	**Pn**	**03 42 26.5**	**+0.6**
AC02	**Maricunga**	**12.47**	**158**	Pn	**Pn**	**03 42 58.8**	**-1.1**
ZON	**Zonda**	**17.00**	**163**	Pn	**Pn**	**03 43 56.8**	**-1.9**
MACA	**Manacapuru-AM**	**17.99**	**49**		**P**	**03 44 09.5**	**-1.4**
MACA				IAmb	IAmb	03 44 49.3	
	comp=Z,12nm,0.4s						
AQDB	**Aquidauana**	**18.41**	**109**	P	**P**	**03 44 14.8**	**-0.7**
H03N1	**Juan Fernandez**	**18.59**	**192**	T	T	04 02 33.3	
	baz=14,slow=74,SNR=85						
H03N2	**Juan Fernandez**	**18.59**	**192**	T	T	04 02 31.4	
	baz=14,slow=74,SNR=72						
H03N3	**Juan Fernandez**	**18.60**	**192**	T	T	04 02 31.3	
	baz=14,SNR=96						
MT09	**Talagante**	**18.67**	**171**	P	**P**	**03 44 18.2**	**-0.2**
MT09				IAmb	IAmb	03 44 21.9	
	comp=Z,16nm,1.4s						
ROSC	**El Rosal**	**19.97**	**360**	P	**P**	**03 44 31.2**	**-1.8**
ROSC				IAmb	IAmb	03 44 31.8	
	comp=Z,5.1nm,0.6s						
TRCB	**Terra Rica**	**21.76**	**113**	P	**P**	**03 44 52.6**	**+0.7**
TRCB				IAmb	IAmb	03 44 53.2	
	comp=Z,12nm,0.7s						
SDV	**Santo Domingo**	**24.26**	**9**	P	**P**	**03 45 16.4**	**-0.6**
SDV				IAmb	IAmb	03 45 44.9	
	comp=Z,8.6nm,1.4s						
BDFB	**Brasilia**	**25.30**	**94**	P	**P**	**03 45 28.3**	**+1.8**
RGM0	**Gandoca**	**26.04**	**341**	P	**P**	**03 45 32.1**	**-0.9**
SPB	**Sao Paulo**	**26.59**	**112**	P	**P**	**03 45 37.9**	**-0.1**
SPB				IAmb	IAmb	03 45 40.5	
	comp=Z,41nm,1.4s						
LL02	**Futaleuf**	**27.91**	**176**	P	**P**	**03 45 49.7**	**+0.1**
ULM	**Lac du Bonnet**	**67.94**	**345**	P	**P**	**03 50 55.5**	**-2.1**
	comp=Z,1.2nm,0.7s,baz=155,slow=6.9,SNR=2.9						
	comp=Z,1.2nm,0.7s						
ULM	**Lac du Bonnet**	**67.94**	**345**	P	**P**	**03 50 55.8**	**-1.9**
ULM				IAmb	IAmb	03 51 36.7	
	comp=Z,8.1nm,1.4s						
SNAA	**Sanae**	**69.80**	**161**	P	**P**	**03 51 09.7**	**+0.6**
YBH	**Yreka Blue Hor**	**72.20**	**324**	P	**P**	**03 51 24.2**	**+0.2**
YBH				IAmb	IAmb	03 52 00.2	
	comp=Z,12nm,1.5s						
TORD	**Torodi Ar. Bea**	**80.27**	**73**	P	**P**	**03 52 13.9**	**+3.6**
	comp=Z,0.5nm,0.9s,baz=247,slow=3.7,SNR=5.0						
	comp=Z,0.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**80.27**	**73**	P	**P**	**03 52 09.1**	**-1.2**
TORD				IAmb	IAmb	03 52 46.3	
	comp=Z,3.0nm,0.8s						
YKA	**Yellowknife Ar**	**83.69**	**342**	P	**P**	**03 52 26.8**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=143,slow=4.0,SNR=5.1						
	comp=Z,0.4nm,0.8s						
YKA	**Yellowknife Ar**	**83.69**	**342**	P	**P**	**03 52 25.5**	**-1.6**
WRA	**Warramunga Arr**	**135.11**	**220**	PKP	**PKiKP**	**03 59 20.7**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=157,slow=2.2,SNR=4.7						
WRA	**Warramunga Arr**	**135.11**	**220**		**PKPdf**	**03 59 18.1**	**-0.8**
ZALV	**Zalesovo Beam**	**138.06**	**18**	PKP	**PKPdf**	**03 59 23.1**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=90,slow=1.5,SNR=3.6						
SONM	**Songino Array**	**147.51**	**359**	PKPbc	**PKPbc**	**03 59 42.2**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=17,slow=1.9,SNR=4.3						
SONM	**Songino Array**	**147.51**	**359**		**PKPbc**	**03 59 41.7**	**-1.3**

*IDC **04** 03:41:15.0±5.2, 18°.38S×178°.31W, h554km±26km, mb2.8/3, mbtmp3.8/4, Error ellipse: s-maj=156.2km s-min=28.1km az=142.0*
*NEIC **04** 03:41:20.2±1.5, 17°.59S±0°.08×179°.0W±0°.1, h567km±7km, mb4.5/15, Error ellipse: s-maj=21.0km s-min=9.4km az=68.0*

ISC 04 03:41:18.1±0.9**, 17°.6S**±0°.1×**178°.9W**±0°.2**, h550**km**, n28, σ1**s**30**/26**, mb4.2**/12**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.93**	**267**	P	**P**	**03 42 34.4**	**+1.6**
	77nm,0.7s,baz=121,slow=6.1,SNR=47						
MSVF	**Nonsavu**	**2.93**	**267**	P	**P**	**03 42 34.7**	**+1.9**
MARNC	**Mare, Loyalty**	**12.92**	**251**	P	**P**	**03 44 06.7**	**+0.5**
DZM	**Mont Dzumac**	**14.50**	**250**	P	**P**	**03 44 24.0**	**+1.4**
MXZ	**Matakaoa Point**	**20.02**	**187**	P	**P**	**03 45 14.2**	**0.0**
TCW	**Tory Channel**	**24.24**	**193**	P	**P**	**03 45 52.9**	**+1.0**
SNZO	**South Karori**	**24.25**	**192**	P	**P**	**03 45 53.0**	**+1.0**
FOZ	**Fox Glacier**	**27.55**	**198**	P	**P**	**03 46 19.7**	**-1.4**
ARMA	**Armidale**	**29.70**	**239**	P	**P**	**03 46 40.4**	**+0.3**
ARMA				IAmb	IAmb	03 47 16.5	
	comp=Z,21nm,1.4s						
BBOO	**Buckleboo**	**43.15**	**241**	P	**P**	**03 48 30.3**	**-0.4**
BBOO				IAmb	IAmb	03 48 37.9	
	comp=Z,30nm,1.5s						
WR8	**Warramunga Arr**	**44.09**	**259**	P	**P**	**03 48 37.7**	**-0.4**
WR8				IAmb	IAmb	03 49 07.9	
	comp=Z,7.7nm,1.3s						
WB0	**Warramunga Arr**	**44.21**	**260**	P	**P**	**03 48 38.4**	**-0.6**
WB0				IAmb	IAmb	03 49 17.0	
	comp=Z,14nm,1.5s						
WRA	**Warramunga Arr**	**44.24**	**259**	P	**P**	**03 48 37.7**	**-1.6**
	comp=Z,0.4nm,0.6s,baz=92,slow=7.7,SNR=10						
	comp=Z,0.4nm,0.6s						
WRA	**Warramunga Arr**	**44.24**	**259**	P	**P**	**03 48 37.8**	**-1.6**
AS31	**Alice Springs**	**44.44**	**254**	P	**P**	**03 48 40.1**	**-0.7**
ASAR	**Alice Springs**	**44.44**	**254**	P	**P**	**03 48 40.1**	**-0.7**
	comp=Z,3.2nm,0.6s,baz=88,slow=8.1,SNR=48						
ASAR				PcP	**PcP**	**03 50 10.3**	**-2.2**
	comp=Z,0.3nm,0.5s,baz=97,slow=4.3,SNR=4.0						
	comp=Z,3.2nm,0.6s						
ASAR	**Alice Springs**	**44.44**	**254**	P	**P**	**03 48 39.7**	**-1.1**
KNRA	**Kununurra**	**50.07**	**264**	P	**P**	**03 49 22.7**	**-0.4**
KNRA				IAmb	IAmb	03 49 40.6	
	comp=Z,42nm,1.5s						
CASY	**Casey**	**66.21**	**205**	P	**P**	**03 51 10.3**	**-1.0**
CASY				IAmb	IAmb	03 51 21.4	
	comp=Z,58nm,1.5s						
MJAR	**Matsushiro Arr**	**67.41**	**324**	P	**P**	**03 51 18.2**	**-1.0**
ADK	**Adak**	**69.23**	**1**	P	**P**	**03 51 29.5**	**-0.3**
ADK				IAmb	IAmb	03 52 00.6	
	comp=Z,45nm,1.1s						
F19K	**Shaleruckik Mo**	**85.66**	**8**	P	**P**	**03 52 59.7**	**+1.4**
F19K				IAmb	IAmb	03 53 05.3	
	comp=Z,8.0nm,1.4s						
ILAR	**Eielson Array**	**85.71**	**13**	P	**P**	**03 52 56.5**	**-2.1**
	comp=Z,0.2nm,0.5s,baz=212,slow=4.7,SNR=1.9						
	comp=Z,0.2nm,0.5s						
BOZ	**Bozeman (W)**	**87.44**	**40**	P	**P**	**03 53 08.6**	**+1.1**
BOZ				IAmb	IAmb	03 53 11.8	
	comp=Z,3.3nm,0.7s						
BNN	**Bunyan**	**143.13**	**312**		PKPab	03 59 47.7	-0.3
BRTR	**Keskin Array B**	**144.26**	**315**	PKPbc	PKPbc	03 59 50.7	-1.2
	comp=Z,0.8nm,0.8s,baz=90,slow=2.5,SNR=6.1						
BRTR	**Keskin Array B**	**144.26**	**315**		PKPbc	03 59 50.6	-1.3
GERES	**GERESS Array B**	**147.22**	**345**	PKPbc	**PKPdf**	**03 59 58.7**	**+1.9**

comp=Z,0.4nm,0.4s,baz=29,slow=3.0,SNR=4.0

*IDC **04** 04:23:04.3±6.1, 36°.39N×71°.06E, h168km±51km, mb3.4/7, mbtmp3.8/11, Error ellipse: s-maj=49.8km s-min=18.7km az=39.0*
*NEIC **04** 04:23:06.3±2.7, 36°.61N±0°.06×70°.91E±0°.06, h202km±18km, mb4.0/7, Error ellipse: s-maj=9.7km s-min=6.2km az=149.0*
*NNC **04** 04:23:12.3±4.6, 37°.05N×70°.66E, h194km±88km, mb2.7, mpv3.5, Error ellipse: s-maj=51.1km s-min=27.2km az=20.0*
ISC 04 04:23:05.6±0.7, **36°.55N**±0°.05×**70°.96E**±0°.05, **h181**km±8km, **n50**, σ**1s.72**/68, **mb3.9**/9, **4C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHAA	Shahritus	2.48	295		Pn	04 23 50.0	+1.8
SHAA				Sn	Sn	04 24 20.8	-0.6
GAR	Garm	2.50	348		Pn	04 23 50.4	+1.9
GAR				Sn	Sn	04 24 21.0	-0.9
KBL	Kabul	2.54	219		Pn	04 23 51.5	+2.4
KBL				Sn	Sn	04 24 23.3	+0.5
CHGR	Chuyangaron	2.55	326		Pn	04 23 50.3	+1.3
CHGR				Sn	Sn	04 24 22.3	-0.4
DRK	Karamyk	3.00	13		Pn	04 23 55.2	+0.6
DRK					Sn	04 24 31.6	-1.3
NIL	Nilore	3.45	146	Pn	Pn	04 24 02.6	+2.7
NIL				Sn	Sn	04 24 44.4	+2.2
BTK	Batken	3.51	358		Pn	04 24 03.0	+2.4
BTK				Sn	Sn	04 24 42.9	-0.8
KSH2	Kashi	4.47	53	Pn	Pn	04 24 17.0	+4.1
KSH2				Sn	Sn	04 25 08.5	+2.8
KSH2				smax	smax		
	comp=N,52nm,0.6s						
KSH2				smax	smax		
	comp=E,41nm,0.6s						
ARSB	Arslanbob	5.02	18		Pn	04 24 21.2	+1.2
ALCI	Alchi Leh	5.59	113	eP	Pn	04 24 28.9	+1.2
ALCI				eS	Sn	04 25 32.1	+0.1
ALCI				IAML		04 25 36.1	
	comp=E,58nm,0.1s						
ALCI				IAML		04 25 36.5	
	comp=N,47nm,0.2s						
TSSA	Tissa	5.65	129	eP	Pn	04 24 30.1	+1.8
TSSA				eS	Sn	04 25 32.0	-1.3
TSSA				IAML		04 25 33.6	
	comp=E,85nm,0.2s						
TSSA				IAML		04 25 34.3	
	comp=N,85nm,0.2s						
DHRM	DHARAMSHALA	6.15	133	eP	Pn	04 24 36.8	+1.9
DHRM				eS	Sn	04 25 44.6	-0.5
DHRM				IAML		04 25 46.9	
	comp=E,66nm,0.4s						
DHRM				IAML		04 25 47.1	
	comp=N,56nm,0.3s						
NRN	Naryn	6.26	37	Pn	Pn	04 24 37.2	+0.9
KK31	Karatay Array	6.56	357	Pn	Pn	04 24 40.7	+0.9
KK31				Sn	Sn	04 25 50.4	-3.8
KK31	Karatay Array	6.56	357	⇑P	Pn	04 24 40.8	+0.9
	comp=N,2.3nm,0.3s,baz=185,slow=12,SNR=56						
KK31				⇑S	Sn	04 25 49.7	-4.6
	comp=N,12nm,0.5s,baz=181,slow=20,SNR=23						
KKAR	Karatay Array	6.56	357	Pn	Pn	04 24 40.8	+0.9
AAK	Ala-Archa	6.67	23	P	Pn	04 24 42.6	+1.2
	comp=N,3.4nm,0.3s,baz=166,slow=5.1,SNR=18						
AAK				S	Sn	04 25 56.7	-0.4
	comp=N,4.6nm,0.5s,baz=218,slow=22,SNR=9.8						
AAK	Ala-Archa	6.67	23	Pn	Pn	04 24 42.6	+1.2
AAK				Sn	Sn	04 25 54.9	-2.2
AAK	Ala-Archa	6.67	23	⇑P	Pn	04 24 42.9	+1.5
	comp=N,3.1nm,0.8s						
AAK				⇓S	Sn	04 25 56.6	-0.5
	comp=N,12nm,1.1s						
BOOM	Boomskoye usch	7.07	31		Pn	04 24 47.9	+1.1
TARG	Taragay, Kyrgy	7.42	44	Pn	Pn	04 24 51.7	+0.1
SMLA	Simla	7.47	135	eP	Pn	04 24 52.8	+0.8
SMLA				eS	Sn	04 26 14.3	-1.7
SMLA				IAML		04 26 16.5	
	comp=N,64nm,0.3s						
SMLA				IAML		04 26 18.0	
	comp=E,75nm,0.3s						
KLP	Kalpa	7.85	127	eP	Pn	04 24 59.4	+2.2
KLP				eS	Sn	04 26 22.0	-3.5
KLP				IAML		04 26 26.4	
	comp=N,75nm,0.9s						
KLP				IAML		04 26 26.9	
	comp=E,63nm,0.5s						
MKAR	Makanchi Array	13.27	36	P	Pn	04 26 08.2	+1.2
	comp=E,0.2nm,0.5s,baz=238,slow=8.2,SNR=3.2						
WMQ	Urumqi	14.70	55	eP	Pn	04 26 22.0	-2.9
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
AB31	Akbulak array	15.03	331		Pn	04 26 27.9	-0.9
AB31	Akbulak array	15.03	331	⇑P	Pn	04 26 28.1	-0.7
	comp=Z,2.5nm,0.8s,baz=148,slow=12,SNR=21						
ABKAR	Akbulak array	15.03	331		Pn	04 26 27.4	-1.4
EVN	Everest	15.90	118	P	P	04 26 40.0	-0.4
EVN				IAmb	IAmb	04 26 41.9	
	comp=Z,3.8nm,0.6s						
BVAR	Borovoye Array	16.48	359	P	Pn	04 26 48.6	+2.2
	comp=Z,0.7nm,0.4s,baz=178,slow=8.2,SNR=3.6						
AKTO	Aktyubinsk	16.72	330	P	Pn	04 26 49.7	+0.3
	comp=Z,1.1nm,0.3s,baz=163,slow=7.1,SNR=5.5						
ZAA0	Zalesovo Array	19.89	25	P	P	04 27 22.4	-0.4
ZAA0				IAmb	IAmb	04 27 38.5	
	comp=Z,1.3nm,0.7s						
ZALV	Zalesovo Beam	19.89	25	P	P	04 27 23.9	+1.0
	comp=Z,0.4nm,0.3s,baz=220,slow=11,SNR=3.6						
ZALV	Zalesovo Beam	19.89	25	P	P	04 27 21.3	-1.6
ARTI	Arti	21.59	341	P	P	04 27 39.1	-1.8
ARTI				IAmb	IAmb	04 27 40.7	
	comp=Z,11nm,1.4s						
PZH	PanZhiHua	27.98	102	P	P	04 28 41.0	+1.3
HHC	Hu-ho-hao-te	31.78	70	eP	P	04 29 14.2	+1.2
HHC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
FINES	FINESS Array B	37.43	326	P	P	04 30 02.3	+1.4
	comp=Z,2.4nm,0.8s,baz=134,slow=12,SNR=4.0						
	comp=Z,2.4nm,0.8s						
FINES	FINESS Array B	37.43	326	P	P	04 30 01.8	+0.9
ARCES	ARCESS Array B	41.09	338	P	P	04 30 32.1	+1.0
	comp=Z,2.6nm,0.8s,baz=109,slow=7.7,SNR=3.7						
	comp=Z,2.6nm,0.8s						
ARCES	ARCESS Array B	41.09	338	P	P	04 30 32.5	+1.3
ARCES				IAmb	IAmb	04 30 48.5	
	comp=Z,16nm,1.4s						
HFS	Hagfors	43.01	322	P	P	04 30 47.7	+0.9
	comp=Z,5.4nm,1.1s,baz=95,slow=13,SNR=2.5						
	comp=Z,5.4nm,1.1s						
NOA	NORSAR Array B	44.32	323	P	P	04 30 58.2	+0.8
	comp=Z,0.7nm,0.9s,baz=96,slow=7.9,SNR=1.6						
	comp=Z,0.7nm,0.9s						
VSL	Villasalto	47.77	293	P	P	04 31 24.9	+0.4
YKA	Yellowknife Ar	81.20	3	P	P	04 35 02.2	+1.4
	comp=Z,0.1nm,0.4s,baz=351,slow=6.0,SNR=4.2						
	comp=Z,0.1nm,0.4s						
YKA	Yellowknife Ar	81.20	3	P	P	04 35 01.8	+1.0
WRA	Warramunga Arr	82.04	122	P	P	04 35 04.7	-1.1
	comp=Z,0.5nm,0.5s,baz=323,slow=4.9,SNR=7.9						
	comp=Z,0.5nm,0.5s						
WRA	Warramunga Arr	82.04	122	P	P	04 35 03.9	-2.0
ASAR	Alice Springs	84.31	125	P	P	04 35 16.8	-0.6
	comp=Z,0.7nm,0.6s,baz=311,slow=5.1,SNR=11						
	comp=Z,0.7nm,0.6s						
ASAR	Alice Springs	84.31	125	P	P	04 35 16.2	-1.1

*IDC **04** 04:23:19.1±1.8, 31°.27S×178°.71W, h0km, mb4.2/2, mbtmp4.2/3, ML3.4/1, Error ellipse: s-maj=57.5km s-min=37.1km az=137.0*
*NEIC **04** 04:23:25.0±0.4, 31°.43S±0°.08×178°.7W±0°.2, h35km±2km, mb4.5/13, Error ellipse: s-maj=24.0km s-min=13.9km az=87.0*
ISC 04 04:23:25.8±1.1, **31°.45S**±0°.10×**178°.9W**±0°.2, **h35**km, **n27**, σ**1s.50**/28, **mb4.3**/9, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	6.52	200	Pn	Pn	04 24 59.3	+0.1
URZ	Urewera	7.54	205	Pn	Pn	04 25 13.5	+0.3
	0.6nm,0.3s,baz=272,slow=4.8,SNR=9.5						
URZ				Sn	Sn	04 26 37.6	+0.1
	3.0nm,0.3s,baz=222,slow=23,SNR=19						
	15nm,1.1s						
RTZ	Ruatahuna	7.91	204	Pn	Pn	04 25 18.5	+0.2
BKZ	Black Stump Fm	8.57	205	Pn	Pn	04 25 27.1	-0.3
HIZ	Hauiti	8.71	214	Pn	Pn	04 25 29.4	+0.2
TCW	Tory Channel	11.19	208	Pn	Pn	04 26 04.4	+1.3
CAN	Canberra	27.02	253	P	P	04 29 04.7	0.0
CAN				IAmb	IAmb	04 29 05.5	
	comp=Z,34nm,1.5s						
EIDS	Eidsvold	27.04	275	P	P	04 29 04.9	+0.1
EIDS				IAmb	IAmb	04 29 08.4	
	comp=Z,18nm,1.5s						
CTAO	Charters Tower	33.23	281	P	P	04 30 00.2	+0.6
CTAO				IAmb	IAmb	04 30 03.3	
	comp=Z,3.2nm,0.7s						
BBOO	Buckleboo	37.95	256	P	P	04 30 40.1	0.0
BBOO				IAmb	IAmb	04 30 47.1	
	comp=Z,18nm,1.4s						
PMG	Port Moresby	38.38	297	P	P	04 30 41.9	-1.9
COEN	Coen	38.84	288	P	P	04 30 48.5	+0.8
ASAR	Alice Springs	42.30	268	P	P	04 31 15.9	-0.3
	comp=Z,1.5nm,0.5s,baz=104,slow=7.4,SNR=26						
	comp=Z,1.5nm,0.5s						
ASAR	Alice Springs	42.30	268	P	P	04 31 15.6	-0.7
WR8	Warramunga Arr	43.24	274	P	P	04 31 23.5	-0.4
WR8				IAmb	IAmb	04 31 30.3	
	comp=Z,12nm,1.4s						
WRAB	Tennant Creek	43.38	274	P	P	04 31 24.6	-0.4
WRAB				IAmb	IAmb	04 31 27.7	
	comp=Z,6.7nm,1.3s						
WRA	Warramunga Arr	43.38	274	P	P	04 31 24.7	-0.3
	comp=Z,1.7nm,0.3s,baz=111,slow=8.0,SNR=52						
	comp=Z,1.7nm,0.3s						
WRA	Warramunga Arr	43.38	274	P	P	04 31 24.8	-0.3
WB0	Warramunga Arr	43.41	274	P	P	04 31 25.0	-0.3
KNRA	Kununurra	50.03	276	P	P	04 32 16.8	-0.3
MAW	Mawson	71.06	201	P	P	04 34 39.5	-0.3
MAW				IAmb	IAmb	04 34 46.4	
	comp=Z,3.2nm,1.1s						
PMSA	Palmer Station	71.63	156	P	P	04 34 41.5	-1.7
KBZ	Khabaz	145.04	303	PKPbc	PKPbc	04 42 56.4	-2.1
	comp=Z,0.5nm,0.7s,baz=72,slow=4.1,SNR=3.5						
FINES	FINESS Array B	145.85	339	PKPbc	PKPdf	04 42 59.0	-1.0
	comp=Z,2.8nm,0.8s,baz=42,slow=2.3,SNR=6.0						
FINES	FINESS Array B	145.85	339		PKPdf	04 42 58.7	-1.2
HFS	Hagfors	150.11	347	PKPbc	PKPdf	04 43 11.1	+4.1
	comp=Z,3.0nm,1.0s,baz=20,slow=4.7,SNR=4.2						
BRTR	Keskin Array B	152.40	296	PKPbc	PKPdf	04 43 16.0	+4.6
	comp=Z,0.4nm,0.5s,baz=98,slow=4.7,SNR=3.6						

*ISK **04** 04:25:56.1, 38°.45N×39°.28E, h4km, ML3.8/9*
*AFAD **04** 04:25:56.5, 38°.45N×39°.27E, h18km, MW3.8*
*IDC **04** 04:25:57.6±1.2, 38°.47N×39°.30E, h0km, mb3.5/5, mbtmp3.4/11, ML2.9/6, MS3.1/10, Error ellipse: s-maj=24.4km s-min=12.4km az=165.0*
ISC 04 04:25:56.7±0.9, **38°.44N**±0°.02×**39°.28E**±0°.02, **h2**km±6km, **n69**, σ**1s.21**/78, **mb3.4**/5, **MS2.9**/4, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESIJ	Sivrice-Elazig	0.02	79	Pg	Pg	04 25 57.6	+0.2
ESIJ				Sg	Sg	04 25 58.4	+0.5
SVRC	Sivrice-ELAZID	0.07	165	Pg	Pg	04 25 57.9	-0.3
SVRC				Sg	Sg	04 25 58.9	-0.2
ESGZ	Sivrice-Elazig	0.17	265	Pg	Pg	04 26 00.5	+0.3
ESGZ				Sg	Sg	04 26 03.5	+1.0
CNGT	ngs	0.23	177	P	Pg	04 26 00.9	-0.3
MDYL	Doganyol-Malat	0.23	236	Pg	Pg	04 26 01.3	+0.1
MDYL				Sg	Sg	04 26 05.3	+1.0
ELZG	Elazig	0.24	283	P	Pg	04 26 01.8	+0.4
ELZ	Elazig	0.25	346	P	Pg	04 26 02.4	+0.7
ELZ				S	Sg	04 26 06.9	+2.0
ELZ				IAML		04 26 07.0	
	comp=E,5µm,0.4s						
MDNT	Maden	0.32	99	P	Pg	04 26 03.4	+0.6
KOVA	Elazig, Kovanc	0.49	58	P	Pg	04 26 06.4	+0.2
MAYA	Malatya/Merkez	0.69	260	P	Pg	04 26 09.6	-0.3
MAYA				S	Sb	04 26 19.9	-1.6
MAYA				IAML		04 26 23.0	
	comp=N,3µm,0.5s						
NARI	Adyaman-Kaht	0.69	217	P	Pg	04 26 10.4	+0.4
TNCL	Tunceli-Merkez	0.70	17	P	Pg	04 26 09.8	-0.3
MCKZ	Bingol	0.72	340	P	Pg	04 26 10.5	0.0
MCKZ				S	Sb	04 26 20.8	-1.6
MCKZ				IAML		04 26 21.0	
	comp=E,8µm,0.4s						
KAHTU	Kahta	0.83	220	P	Pb	04 26 13.3	-0.6
DYBB	Diyarbakir	0.83	126	Pg	Pg	04 26 13.1	+0.4
DYBB				Sg	Sb	04 26 25.3	-0.4
DIYA	Diyarbakir	0.84	128	P	Pn	04 26 16.2	+0.5
MAYK		0.89	71	P	Pg	04 26 13.8	-0.1
HANM	anlurfa/Hi	0.92	200	P	Pg	04 26 14.6	+0.3
HANM				S	Sb	04 26 27.0	-1.2
HANM				IAML		04 26 34.0	
	comp=N,2µm,0.6s						
ARPR	Arapgir-MALATY	0.98	311	Pg	Pg	04 26 15.3	-0.3
AZEY	Adyaman-Merk	1.03	233	P	Pb	04 26 16.8	-0.6
AZEY				S	Sn	04 26 32.8	-0.6
AZEY				IAML		04 26 39.0	
	comp=E,1µm,0.6s						
AKCD	Akcadag	1.08	263	P	Pg	04 26 16.6	-0.8
AKCD				S	Sg	04 26 31.1	-0.3
AKCD				IAML		04 26 37.0	
	comp=N,2µm,0.6s						
HEKM	Malatya_Hekimh	1.12	293	P	Pg	04 26 17.8	-0.5
ILIC	ilic-Erzincan	1.15	331	Pn	Pg	04 26 17.8	-1.0
ERZN	Erzincan	1.19	17	Pn	Pg	04 26 18.7	-0.9
BNGB	Bingl	1.22	63	Pn	Pg	04 26 19.7	-0.4
ATAB	Bozova	1.25	219	P	Pn	04 26 21.4	+0.1
SANL	SANLIURFA_Merk	1.29	190	P	Pg	04 26 21.3	-0.2
SANL				S	Sn	04 26 39.4	-0.3
SANL				IAML		04 26 51.0	
	comp=E,905nm,0.6s						
EUZM	Uzumlu	1.30	14	P	Pg	04 26 21.3	-0.4
EUZM				S	Sn	04 26 39.4	-0.7
EUZM				IAML		04 26 49.0	
	comp=N,465nm,0.8s						
MDIV		1.30	313	P	Pg	04 26 20.7	-1.1
MDIV				S	Sn	04 26 39.4	-0.8
MDIV				IAML		04 26 48.0	
	comp=N,691nm,0.8s						
MIMR	Divri	1.30	313	P	Pb	04 26 28.3	+6.2
MIMR				S	Sn	04 26 51.6	+11
YEDI	Yedisu-Bingol	1.40	44	Pn	Pn	04 26 22.9	-0.5
AKCA	Adyaman/G¶l	1.42	243	P	Pg	04 26 23.8	-0.1
AKCA				S	Sn	04 26 44.4	+1.5
AKCA				IAML		04 26 50.0	
	comp=N,3µm,0.7s						
SLHN	Bingol, Solhan	1.46	69	P	Pb	04 26 24.3	-0.3
SVAN	Silvan-Diyarba	1.54	100	Pn	Pn	04 26 24.8	-0.4
SVAN	Silvan-Diyarba	1.54	100	P	Pn	04 26 24.7	-0.4
KARO	Karliova-Bingo	1.63	57	Pn	Pn	04 26 26.2	-0.4
MARD	Mardin	1.64	133	P	Pn	04 26 26.0	-0.6
SURC	SANLIURFA_SURC	1.65	199	P	Pn	04 26 26.6	-0.2
MBOZ		1.68	343	P	Pg	04 26 28.4	-0.6
ELBS	KAHRAMANMARAS	1.69	267	P	Pg	04 26 29.5	+0.3
ELBS				S	Sg	04 26 52.9	+1.7
KELT	Kelkit	1.70	359	P	Pg	04 26 29.0	-0.4
GZT	Gaziantep	1.74	232	P	Pn	04 26 27.8	-0.3
VRTB	Varto-Mus	1.84	66	Pn	Pn	04 26 29.5	0.0
NZIP	Nizip/Gaziante	1.89	223	P	Pn	04 26 30.2	0.0
KAHM	Kahramanmaras,	2.04	244	P	Pn	04 26 31.9	-0.2
BAYT	Aydıntepe-Bayb	2.06	19	Pn	Pn	04 26 32.7	+0.2
GAZ	Gaziantep	2.08	233	Pn	Pn	04 26 32.7	0.0
KMRS	Kahramanmaras	2.10	244	Pn	Pn	04 26 33.1	+0.1
GURO	Guroymak-BITLI	2.16	86	Pn	Pn	04 26 33.6	-0.3
SARI	SarD1z-Kayseri	2.25	270	Pn	Pn	04 26 35.3	+0.1
SVSK	Karacayir	2.31	310	Pn	Pn	04 26 36.2	+0.5
GNI	Garni	4.56	66	Pn	Pn	04 27 09.1	+2.1
	0.3nm,0.3s,baz=123,slow=6.8,SNR=3.9						
	4.2nm,0.5s						
BRTR	Keskin Array B	4.58	288	Pn	Pn	04 27 09.7	+2.6
	0.7nm,0.3s,baz=110,slow=12,SNR=26						
BRTR				Lg	Lg	04 28 29.2	
	0.2nm,0.3s,baz=102,slow=24,SNR=3.9						
BRTR				LR	LR	04 29 11.3	
	comp=Z,316nm,18.2s,baz=100,slow=42						
	3.9nm,0.8s						
KBZ	Khabaz	5.94	26	Pn	Pn	04 27 27.9	+2.2
	baz=240,slow=20,SNR=2.1						
KBZ				LR	LR	04 30 10.0	
	comp=Z,157nm,18.2s,baz=213,slow=43						
	0.7nm,0.8s						
MMAI	Mount Meron Ar	6.27	211	Pn	Pn	04 27 32.2	+1.9
	0.9nm,0.3s,baz=52,slow=12,SNR=1.9						
	1.2nm,0.5s						
ASF	Jabal al Asfar	6.55	198	Pn	Pn	04 27 34.9	+0.6
	0.3nm,0.3s,baz=49,slow=9.9,SNR=7.5						
ASF				Lg	Lg	04 29 28.6	
	0.9nm,0.3s,baz=227,slow=21,SNR=4.1						
ASF				LR	LR	04 30 29.5	
	comp=Z,142nm,18.3s,baz=38,slow=41						
	4.9nm,0.9s						
EIL	Elat	9.46	204	LR	LR	04 32 22.6	
	comp=Z,134nm,19.5s,baz=53,slow=41						
MLR	Muntele Rosu	12.16	310	LR	LR	04 34 00.3	
	comp=Z,63nm,20.1s,baz=97,slow=40						
LANS	Liptovska Anna	17.81	313	ePN	Pn	04 29 59.1	-6.6
AKTO	Aktyubinsk	17.90	42	P	P	04 30 08.5	+1.0
	0.1nm,0.3s,baz=232,slow=12,SNR=2.4						
	1.2nm,0.6s						
VRAC	Vranov	19.56	311	LR	LR	04 38 13.5	
	comp=Z,36nm,18.2s,baz=76,slow=38						
GERES	GERESS Array B	21.14	308	P	P	04 30 45.3	+2.4
	0.5nm,0.8s,baz=158,slow=5.3,SNR=4.5						
	0.5nm,0.8s						
ARTI	Arti	21.99	29	P	P	04 30 53.2	+1.4
	1.8nm,0.5s,baz=184,slow=9.3,SNR=3.5						
ARTI				LR	LR	04 40 31.2	
	comp=Z,52nm,20.9s,baz=240,slow=40						
	1.8nm,0.5s						
BVAR	Borovoye Array	25.90	46	P	P	04 31 31.1	+1.2
	0.4nm,0.5s,baz=223,slow=6.1,SNR=3.7						
	0.4nm,0.5s						
NOA	NORSAR Array B	28.58	331	LR	LR	04 45 37.3	
	comp=Z,26nm,19.2s,baz=250,slow=41						
KURBB	Kurchatov Arra	30.15	53	P	P	04 32 09.7	+1.8
	1.4nm,0.8s,baz=267,slow=8.7,SNR=7.0						
	1.4nm,0.8s						
MKAR	Makanchi Array	32.39	61	P	P	04 32 29.4	+1.7
	0.3nm,0.7s,baz=262,slow=9.3,SNR=3.5						
	0.3nm,0.7s						
ZALV	Zalesovo Beam	34.46	48	LR	LR	04 48 08.9	
	comp=Z,22nm,18.5s,baz=353,slow=39						
KLR	Kul'dur	63.55	47	LR	LR	05 09 24.6	
	comp=Z,30nm,19.2s,baz=142,slow=41						

*IDC **04** 04:36:02.0±4.2, 3°.05S×139°.82E, h0km, mb3.5/3, mbtmp3.7/4, ML3.9/1, Error ellipse: s-maj=135.3km s-min=31.5km az=91.0*
*DJA **04** 04:36:06.4±0.4, 3°S±4°×14°0E±°, h14km±5km, M4.2/7, mB4.9/1, mb4.7/1, MLv3.9/7, Mw(mB)4.2/1*
ISC 04 04:36:07.4±1.0, **3°.04S**±0°.10×**139°.98E**±0°.09, **h54**km, **n8**, σ**1s.19**/9, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	Genyem	0.48	22	P	Pn	04 36 17.6	-1.1
JAY	Jayapura	0.89	54	P	Pn	04 36 23.0	-0.8
JAY				S	Sn	04 36 36.8	+0.9
WAMI	Wamena	1.52	237	P	Pn	04 36 31.9	-0.3
SMPI	Sarmi	1.65	309	P	Pn	04 36 32.9	-1.0
WRA	Warramunga Arr	17.68	198	P	Pn	04 40 08.5	-1.4
	0.4nm,0.3s,baz=12,slow=13,SNR=21						
	1.7nm,0.7s						
FITZ	Fitzroy Crossi	20.53	222	P	P	04 40 41.4	-0.1
	4.5nm,0.9s,baz=57,slow=10,SNR=4.4						
	4.5nm,0.9s						
ASAR	Alice Springs	21.33	195	P	P	04 40 50.4	+0.3
	1.0nm,0.6s,baz=21,slow=11,SNR=15						
	1.0nm,0.6s						
MKAR	Makanchi Array	70.83	322	P	P	04 47 20.1	+1.6
	0.1nm,0.4s,baz=113,slow=6.2,SNR=2.5						
	0.1nm,0.4s						

*IDC **04** 04:40:32.5±1.7, 5°.60S×152°.64E, h0km, mb4.1/6, mbtmp4.1/6, MS3.2/3, Error ellipse: s-maj=65.6km s-min=32.6km az=95.0*
*NEIC **04** 04:40:35.6±1.1, 5°.57S±0°.04×152°.3E±0°.1, h10km±1km, mb4.4/11, Error ellipse: s-maj=24.1km s-min=6.5km az=81.0*
ISC 04 04:40:38.8±0.6, **5°.59S**±0°.07×**152°.3E**±0°.1, **h40**km, **n28**, σ**0s.77**/27, **mb4.3**/11, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	1.40	354	Pn	Pn	04 41 01.2	-0.7
RABL				Sn	Sn	04 41 19.1	0.0
CTA	Charters Tower	15.57	202	LR	LR	04 49 01.3	
	comp=Z,81nm,19.6s,baz=47,slow=32						
SANVU	Saraoutou	17.60	125		P	04 44 41.5	-0.3
SANVU				IAmb	IAmb	04 45 11.5	
	comp=Z,32nm,1.1s						
DZM	Mont Dzumac	21.34	142	P	P	04 45 22.6	-0.2
WB0	Warramunga Arr	22.42	229	P	P	04 45 33.9	-0.5
WB0				IAmb	IAmb	04 45 36.5	
	comp=Z,9.6nm,1.1s						
INKA	Innaminka	24.63	205	P	P	04 45 55.0	-0.6
ASAR	Alice Springs	25.25	223	P	P	04 46 02.5	+1.1
	comp=Z,1.4nm,0.9s,baz=46,slow=10,SNR=7.3						
ASAR				LR	LR	04 56 10.7	
	comp=Z,46nm,18.1s,baz=98,slow=37						
	comp=Z,1.4nm,0.9s						
ASAR	Alice Springs	25.25	223	P	P	04 46 01.5	+0.1
STKA	Stephens Creek	28.02	200	LR	LR	04 56 55.6	
	comp=Z,56nm,18.5s,baz=26,slow=35						
CAN	Canberra	29.75	185	P	P	04 46 41.3	-0.3
CAN				IAmb	IAmb	04 47 13.2	
	comp=Z,40nm,1.5s						
FORT	Forrest	33.88	219	P	P	04 47 18.6	+0.7
FORT				IAmb	IAmb	04 47 39.3	
	comp=Z,7.9nm,0.9s						
PSA00	Pilbara Seismi	35.22	240	P	P	04 47 30.4	+0.8
PSA00				IAmb	IAmb	04 47 48.4	
	comp=Z,4.0nm,1.1s						
BKB	Balikpapan	35.61	276	P	P	04 47 31.9	-1.2
NIUE	Niue	39.13	113	P	P	04 48 03.2	+0.3
AMCZ	Amberley	41.52	157	P	P	04 48 22.5	+0.2
SONM	Songino Array	66.73	328	P	P	04 51 27.5	+1.4
	comp=Z,0.5nm,0.4s,baz=148,slow=4.4,SNR=4.5						
	comp=Z,0.5nm,0.4s						
SONM	Songino Array	66.73	328	P	P	04 51 26.3	+0.2
SONM				IAmb	IAmb	04 51 30.6	
	comp=Z,3.5nm,1.5s						
MKAR	Makanchi Array	80.60	319	P	P	04 52 48.5	+1.1
	comp=Z,0.6nm,0.8s,baz=102,slow=7.4,SNR=5.5						
	comp=Z,0.6nm,0.8s						
MKAR	Makanchi Array	80.60	319	P	P	04 52 46.7	-0.7
ZALV	Zalesovo Beam	81.54	326	P	P	04 52 52.8	+0.6
	comp=Z,0.9nm,0.5s,baz=116,slow=6.8,SNR=5.2						
	comp=Z,0.9nm,0.5s						
ZALV	Zalesovo Beam	81.54	326	P	P	04 52 52.5	+0.4
KURK	Kurchatov	84.09	322	P	P	04 53 05.0	-0.5
KURK				IAmb	IAmb	04 53 08.3	
	comp=Z,2.7nm,1.1s						
KURBB	Kurchatov Arra	84.12	322	P	P	04 53 06.0	+0.4
	comp=Z,1.4nm,0.2s,baz=108,slow=4.0,SNR=6.2						
	comp=Z,1.4nm,0.2s						
BVAR	Borovoye Array	89.58	323	P	P	04 53 32.8	+0.6
	comp=Z,3.0nm,0.9s,baz=101,slow=5.3,SNR=8.8						
	comp=Z,3.0nm,0.9s						
TORD	Torodi Ar. Bea	150.08	287	PKPbc	PKPbc	05 00 26.5	+0.2
	comp=Z,0.9nm,0.7s,baz=59,slow=0.2,SNR=7.1						
TORD	Torodi Ar. Bea	150.08	287		PKPdf	05 00 22.4	+1.1
BDFB	Brasilia	150.84	137	PKPbc	PKPbc	05 00 27.6	-0.7
	comp=Z,1.5nm,0.6s,baz=189,slow=9.7,SNR=3.3						
BDFB	Brasilia	150.84	137		PKPbc	05 00 26.7	-1.5

*NEIC **04** 04:47:20.2±1.6, 52°.12N±0°.10×177°.51E±0°.09, h123km±7km, mb4.1/35, ML3.6/10, ML3.4(AEIC), Error ellipse: s-maj=14.7km s-min=7.1km az=192.0*
*AEIC **04** 04:47:20.7±1.4, 52°.0N±0°.1×177°.47E±0°.03, h126km±5km, Error ellipse: s-maj=16.3km s-min=2.6km az=181.0*
*IDC **04** 04:47:20.4±1.7, 52°.22N×177°.52E, h122km±12km, mb3.6/15, mbtmp4.1/18, Error ellipse: s-maj=20.5km s-min=13.7km az=168.0*
ISC 04 04:47:20.3±0.7, **52°.09N**±0°.10×**177°.52E**±0°.03, **h125**km±6km, **n97**, σ**0s.70**/105, **mb4.1**/21, **Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSNW	Little Sitkin	0.63	101		Pn	04 47 39.7	0.0
LSPA	Little Sitkin	0.67	101		Pn	04 47 39.9	0.0
LSPA					Sn	04 47 56.5	+1.7
LSSE	Little Sitkin	0.67	103		Pn	04 47 39.9	-0.1

CETU	Semis' Tuman	1.23	95		Pn	04 47 44.7	-0.4
CESW	Semis' Southwe	1.28	98		Pn	04 47 45.5	-0.2
AMKA	Amchitka	1.32	122		Pn	04 47 45.8	-0.3
AMKA					Sn	04 48 04.5	-1.1
AMKA				IAML		04 48 05.8	
	comp=E,881nm,0.5s						
SHEM	Shemya Is, Ala	2.19	288	P	Pn	04 47 55.7	-0.6
	comp=E,208nm,0.3s,baz=133,slow=3.9,SNR=73						
SHEM				S	Sn	04 48 23.5	-0.4
	comp=E,116nm,0.3s,baz=315,slow=19,SNR=18						
SHEM	Shemya Is, Ala	2.19	288	Pn	Pn	04 47 55.7	-0.6
SHEM					Sn	04 48 24.2	+0.3
SMY	Shemya	2.19	288		Pn	04 47 55.7	-0.6
SMY					Sn	04 48 24.6	+0.7
SMY				IAML		04 48 26.5	
	comp=E,362nm,0.7s						
GASW	Gareloi Southw	2.27	97		Pn	04 47 56.9	-0.4
GASW					Sn	04 48 25.2	-0.5
GANO	Gareloi North	2.29	95		Pn	04 47 57.3	-0.4
GANO					Sn	04 48 25.9	-0.4
GANE	Gareloi Northe	2.31	95		Pn	04 47 57.5	-0.4
GAKI	Gareloi-Kavalg	2.34	102		Pn	04 47 57.6	-0.7
GAKI					Sn	04 48 27.1	-0.3
TANO	Tanaga North	2.70	92		Pn	04 48 02.7	-0.1
TANO					Sn	04 48 36.2	+0.6
TASE	Tanaga Southea	2.76	94		Pn	04 48 03.3	-0.4
TASE					Sn	04 48 37.6	+0.6
KIMD	Kanaga Island	3.27	94		Pn	04 48 09.5	-0.7
KIMD					Sn	04 48 47.6	-1.1
KIKV	Kanaga Island	3.29	92		Pn	04 48 10.4	-0.1
KIKV					Sn	04 48 48.7	-0.7
KIWB	Kanaga Island	3.31	92	Pn	Pn	04 48 10.0	-0.8
KIWB				IAML		04 48 54.5	
	comp=N,93nm,0.5s						
KIWB				IAML		04 49 02.5	
	comp=E,119nm,0.8s						
KIWB	Kanaga Island	3.31	92		Sn	04 48 49.1	-0.6
ADK	Adak	3.59	91	Pn	Pn	04 48 13.4	-1.0
ADK				IAML		04 48 56.9	
	comp=E,79nm,0.9s						
ADK				IAML		04 49 07.4	
	comp=E,81nm,0.3s						
ADK	Adak	3.59	91		Sn	04 48 55.3	-1.1
ADAG	Mount Adagdak	3.63	89		Pn	04 48 14.1	-1.0
ADAG					Sn	04 48 59.0	+1.6
ETKA	Kagalaska Isla	3.77	91		Pn	04 48 16.0	-0.8
ETKA					Sn	04 49 01.9	+1.4
GSMY	Great Sitkin M	3.97	88		Pn	04 48 18.9	-0.6
KOFP	Korovin Flat P	5.16	85		Pn	04 48 36.5	+1.0
UNV	Unalaska Valle	9.80	73	Pn	Pn	04 49 38.5	+0.7
PEA0B	Petropavlovsk-	12.09	283	Pn	Pn	04 50 07.5	-0.8
PETK	Petropavlovsk-	12.09	283	P	Pn	04 50 08.6	+0.2
	comp=E,6.2nm,0.8s,baz=88,slow=18,SNR=21						
N14K	Kuskokwak Cree	13.98	48	Pn	Pn	04 50 32.5	-0.2
L14K	Kuka Creek	14.22	42	Pn	Pn	04 50 36.0	+0.3
O15K	Ungalikthiuk R	14.58	52	Pn	Pn	04 50 40.6	+0.3
O16K	Kokwok River B	15.55	52		Pn	04 50 52.8	+0.4
O16K				IAmb	IAmb	04 50 55.1	
	comp=Z,8.0nm,1.1s						
M16K	Timber Creek	15.67	46		Pn	04 50 54.5	+0.7
M16K				IAmb	IAmb	04 51 06.8	
	comp=Z,14nm,1.4s						
L16K	Owhat River	15.74	43		P	04 50 56.4	+0.3
L16K				IAmb	IAmb	04 51 32.2	
	comp=Z,12nm,1.4s						
N17K	Nushagak Hills	16.29	49		Pn	04 51 01.9	+0.4
N17K				IAmb	IAmb	04 51 44.7	
	comp=Z,12nm,1.2s						
P18K	Big Mountain,	16.90	54		Pn	04 51 07.3	-1.8
P18K				IAmb	IAmb	04 51 17.5	
	comp=Z,22nm,1.5s						
N18K	Kilae Creek	16.94	49		Pn	04 51 10.6	+1.1
N18K				IAmb	IAmb	04 51 46.8	
	comp=Z,9.6nm,1.3s						
L18K	Granite Mounta	17.15	44		P	04 51 10.5	-1.2
OHAK	Old Harbor	17.57	62	P	P	04 51 15.5	-0.8
Q19K	Cape Douglas,	17.60	56		P	04 51 16.8	+0.1
N19K	Bonanza Creek	17.64	49		P	04 51 17.6	+0.5
N19K				IAmb	IAmb	04 51 48.9	
	comp=Z,20nm,1.4s						
F17K	Baldwin Pennin	17.87	28	P	P	04 51 18.6	-0.8
L19K	White Mountain	17.93	45		Pn	04 51 21.0	-0.4
P19K	Oil Pt	17.95	54	P	P	04 51 21.0	+0.5
KDAK	Kodiak Island	18.00	60	P	P	04 51 19.4	-1.6
	comp=Z,14nm,1.1s,baz=310,slow=17,SNR=10.0						
KDAK	Kodiak Island	18.00	60	P	P	04 51 19.7	-1.3
C16K	Lisburne Hills	18.21	21	Pn	Pn	04 51 24.4	-0.2
CNPM	China Poot	18.93	55	P	P	04 51 31.3	+0.1
BRLK	Bradley Lake	19.14	54	P	P	04 51 33.3	-0.2
SLKM	Skilak Lake	19.60	52	P	P	04 51 38.7	+0.2
SLKM				IAmb	IAmb	04 52 00.6	
	comp=Z,27nm,1.4s						
L22K	Petersville	19.84	46	P	P	04 51 41.5	+0.5
L22K				IAmb	IAmb	04 52 04.8	
	comp=Z,16nm,1.5s						
IMAR	Indian Mountai	20.04	35	P	P	04 51 43.0	-0.1
BPAW	Bear Paw Mtn.	20.27	41	P	P	04 51 46.3	+0.7
BPAW				IAmb	IAmb	04 52 28.2	
	comp=Z,8.2nm,1.4s						
G21K	Allakaket	20.39	34	P	P	04 51 47.8	+0.9
G21K				IAmb	IAmb	04 52 15.2	
	comp=Z,8.1nm,1.5s						
GHO	Glory Hole Cre	20.48	49	P	P	04 51 48.7	+0.8
GHO				IAmb	IAmb	04 51 51.8	
	comp=Z,10nm,0.8s						
KNK	Knik Glacier	20.62	50	P	P	04 51 50.1	+0.7
D20K	Etivluk River	20.71	27	P	P	04 51 50.9	+0.6
H11N2	WAKE ISLAND Hy	33.35	198	T	T	05 29 25.4	
	baz=11,slow=76,SNR=18						
H11N3	WAKE ISLAND Hy	33.36	198	T	T	05 29 26.2	
	baz=11,slow=76,SNR=25						
H11N1	WAKE ISLAND Hy	33.37	198	T	T	05 29 26.8	
	baz=11,slow=76,SNR=29						
H11S1	WAKE ISLAND Hy	34.58	198	T	T	05 30 56.1	
	baz=10,slow=76,SNR=8.3						
H11S2	WAKE ISLAND Hy	34.59	198	T	T	05 30 52.7	
	baz=10,slow=76,SNR=3.1						
H11S3	WAKE ISLAND Hy	34.59	198	T	T	05 31 02.8	
	baz=10,slow=76,SNR=6.0						
YKA	Yellowknife Ar	36.40	46	P	P	04 54 12.4	+0.3
	comp=Z,0.3nm,0.4s,baz=277,slow=9.4,SNR=10						
	comp=Z,0.3nm,0.4s						
YKA	Yellowknife Ar	36.40	46	P	P	04 54 12.0	-0.1
SONM	Songino Array	44.27	294	P	P	04 55 18.3	+1.0
	comp=Z,0.9nm,0.5s,baz=63,slow=7.7,SNR=7.9						
	comp=Z,0.9nm,0.5s						
SONM	Songino Array	44.27	294	P	P	04 55 18.0	+0.8
NVAR	Mina Array Bea	45.72	81	P	P	04 55 29.8	+0.9
	comp=Z,0.4nm,0.7s,baz=318,slow=11,SNR=2.8						
	comp=Z,0.4nm,0.7s						
SPITS	Spitsbergen Ar	49.48	355	P	P	04 55 56.3	-0.9
	comp=Z,3.8nm,0.8s,baz=15,slow=6.9,SNR=11						
	comp=Z,3.8nm,0.8s						
KURK	Kurchatov	56.85	311	P	P	04 56 51.3	-0.1
KURK				IAmb	IAmb	04 56 52.2	
	comp=Z,2.1nm,0.8s						
KURBB	Kurchatov Arra	56.95	311	P	P	04 56 52.1	0.0
	comp=Z,2.2nm,0.6s,baz=42,slow=6.7,SNR=9.0						
	comp=Z,2.2nm,0.6s						
MKAR	Makanchi Array	57.78	306	P	P	04 56 57.5	-0.5
	comp=Z,0.7nm,0.4s,baz=50,slow=6.2,SNR=16						
	comp=Z,0.7nm,0.4s						
MKAR	Makanchi Array	57.78	306	P	P	04 56 57.3	-0.7
BVAR	Borovoye Array	58.84	318	P	P	04 57 05.1	-0.2
	comp=Z,1.2nm,0.4s,baz=52,slow=5.7,SNR=7.5						
	comp=Z,1.2nm,0.4s						
TXAR	Lajitas Array	60.79	79	P	P	04 57 18.8	-0.3
	comp=Z,0.3nm,0.5s,baz=302,slow=7.0,SNR=4.2						
	comp=Z,0.3nm,0.5s						
TXAR	Lajitas Array	60.79	79	P	P	04 57 18.6	-0.4
KDJ	Kajisay	63.66	305	P	P	04 57 39.0	+0.8
KDJ				IAmb	IAmb	04 58 04.4	
	comp=Z,4.8nm,1.3s						
BOOM	Boomskoye usch	64.02	306	P	P	04 57 40.2	-0.3
BOOM				IAmb	IAmb	04 57 55.1	
	comp=Z,2.6nm,1.1s						
FINES	FINESS Array B	64.54	345	P	P	04 57 42.3	-1.0
	comp=Z,4.3nm,1.1s,baz=14,slow=8.5,SNR=3.8						
	comp=Z,4.3nm,1.1s						
FINES	FINESS Array B	64.54	345	P	P	04 57 42.6	-0.7
AB31	Akbulak array	65.96	321	P	P	04 57 53.2	+0.6
AB31				IAmb	IAmb	04 58 24.8	
	comp=Z,3.2nm,1.4s						
ABKAR	Akbulak array	65.96	321	P	P	04 57 53.0	+0.4
NB2	NORSAR Subarra	66.69	353	P	P	04 57 57.0	-0.1
	comp=Z,0.5nm,0.5s,baz=6.4,slow=6.2						
NOA	NORSAR Array B	66.69	353	P	P	04 57 57.2	0.0
	comp=Z,0.8nm,0.6s,baz=14,slow=3.7,SNR=5.4						
	comp=Z,0.8nm,0.6s						
HFS	Hagfors	67.37	351	P	P	04 58 00.4	-1.0
	comp=Z,1.3nm,0.5s,baz=24,slow=1.7,SNR=7.7						
	comp=Z,1.3nm,0.5s						
CMAR	Chiang Mai Arr	68.67	273	P	P	04 58 10.3	+0.1
	comp=Z,2.1nm,0.3s,baz=26,slow=7.5,SNR=5.8						
	comp=Z,2.1nm,0.3s						
CMAR	Chiang Mai Arr	68.67	273	P	P	04 58 09.7	-0.6
AKASG	Malin Array Be	74.12	340	P	P	04 58 42.1	-0.3
	comp=Z,0.8nm,0.5s,baz=22,slow=6.3,SNR=3.0						
	comp=Z,0.8nm,0.5s						
AKASG	Malin Array Be	74.12	340	P	P	04 58 42.3	-0.1
AKASG				IAmb	IAmb	04 59 01.4	
	comp=Z,3.6nm,1.2s						
BURAR	Bucovina Array	77.88	341	P	P	04 59 04.7	+0.8
WB0	Warramunga Arr	80.82	221	P	P	04 59 19.9	0.0
WR8	Warramunga Arr	80.95	221	P	P	04 59 20.8	+0.1
WR8				IAmb	IAmb	04 59 23.9	
	comp=Z,9.9nm,1.3s						
WRA	Warramunga Arr	81.00	221	P	P	04 59 21.5	+0.6
	comp=Z,1.0nm,0.7s,baz=30,slow=5.8,SNR=9.0						
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	81.00	221	P	P	04 59 21.4	+0.4
FUORN	Ofenpass-Fuorn	81.06	351	P	P	04 59 21.7	+0.3
FUORN				IAmb	IAmb	04 59 45.9	
	comp=Z,5.7nm,1.2s						
ASAR	Alice Springs	84.53	219	P	P	04 59 40.1	+1.0
	comp=Z,0.6nm,0.7s,baz=19,slow=5.7,SNR=6.8						
	comp=Z,0.6nm,0.7s						
ASAR	Alice Springs	84.53	219	P	P	04 59 39.6	+0.6

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*NEIC **04** 04:52:27.4±1.0, 36°.38S±0°.04×72°.37W±0°.05, h58km±2km, mb4.4/15, ML3.9(GUC), Error ellipse: s-maj=6.8km s-min=5.1km az=146.0*

*GUC **04** 04:52:27.7±0.7, 36°.39S×72°.34W, h64km±3km, ML3.9*

ISC 04 04:52:27.3±0.8**, 36°.38S**±0°.04×**72°.38W**±0°.04**, h59**km±8km**, n73, σ0s72**/82**, mb4.7**/5**, 2C-5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BI05	Punta Hualpn	0.75	240		Pn	04 52 42.1	0.0
BI05				Sn	Sn	04 52 53.4	+0.5
BI05	Punta Hualpn	0.75	240	eP	Pn	04 52 42.6	+0.5
BI05				eS	Sn	04 52 53.9	+1.0
BI05				IAML		04 52 55.0	
	comp=N,16μm,0.2s						
BI02	San Fabin de	0.94	108		Pn	04 52 44.4	-0.2
BI02				Sn	Sn	04 52 56.8	-0.6
BI02	San Fabin de	0.94	108	⇑iP	Pn	04 52 44.5	-0.2
BI02				eS	Sn	04 52 57.0	-0.4
BI02				IAML		04 52 57.5	
	comp=N,4μm,0.3s						
ML02	Panimavida	0.99	52		Pn	04 52 45.1	-0.1
ML02				Sn	Sn	04 52 58.8	+0.4
ML02	Panimavida	0.99	52	eP	Pn	04 52 45.6	+0.4
ML02				eS	Sn	04 52 59.0	+0.6
ML02				IAML		04 53 04.7	
	comp=N,5μm,0.4s						
GO05	Hualane	1.41	15		Pn	04 52 51.5	+0.6
GO05	Hualane	1.41	15	⇓iP	Pn	04 52 51.6	+0.8
GO05				eS	Sn	04 53 09.2	+0.7
BO02	Sierra Bellavi	2.05	40		Pn	04 52 60.0	+0.5
BO02	Sierra Bellavi	2.05	40	⇓iP	Pn	04 53 00.1	+0.5
BO02				eS	Sn	04 53 23.9	-0.1
BO02				IAML		04 53 25.7	
	comp=E,3μm,0.4s						
BO01	Tunca	2.25	29		Pn	04 53 02.1	0.0
BO01	Tunca	2.25	29	⇓iP	Pn	04 53 02.2	+0.1
BO01				eS	Sn	04 53 28.4	-0.3
BI04	Isla Mocha	2.36	210	eP	Pn	04 53 02.5	-1.1
BI04				IAML		04 53 33.2	
	comp=E,732nm,0.2s						
LC02	Puerto Saavedr	2.54	198	eP	Pn	04 53 05.5	-0.5
LC02				IAML		04 53 36.6	
	comp=E,862nm,0.4s						
LC01	Cunco	2.55	171	eP	Pn	04 53 06.1	-0.1
LC01				IAML		04 53 36.4	
	comp=E,756nm,0.1s						
MT01	Popeta	2.67	21		Pn	04 53 08.1	+0.1
MT01	Popeta	2.67	21	⇓iP	Pn	04 53 08.2	+0.3
MT01				IAML		04 53 46.3	
	comp=E,294nm,0.2s						
BO04	La Punta	2.79	32		Pn	04 53 09.3	-0.3
BO04	La Punta	2.79	32	eP	Pn	04 53 09.7	+0.1
BO04				IAML		04 53 47.7	
	comp=E,675nm,0.4s						
MT09	Talagante	2.83	24		Pn	04 53 10.5	+0.2
MT09	Talagante	2.83	24	eP	Pn	04 53 10.4	+0.1
MT09				IAML		04 53 54.7	
	comp=N,440nm,0.2s						
MT12	Pirque	3.04	30	eP	Pn	04 53 13.2	+0.3
MT12				IAML		04 54 09.1	
	comp=N,237nm,0.6s						
LMEL	Las Melosas	3.09	36	eP	Pn	04 53 15.0	+1.2
LMEL				IAML		04 53 57.1	
	comp=N,157nm,0.1s						
MT13	San Alfonso	3.14	34		Pn	04 53 15.2	+0.8
MT13	San Alfonso	3.14	34	eP	Pn	04 53 15.6	+1.2
MT15	Las Vizcachas	3.17	30	eP	Pn	04 53 15.1	+0.3
MT03	Universidad Ad	3.26	29		Pn	04 53 16.2	+0.1
MT03	Universidad Ad	3.26	29	eP	Pn	04 53 16.2	+0.1
MT05	Renca	3.27	25		Pn	04 53 16.4	+0.3
MT05	Renca	3.27	25	eP	Pn	04 53 16.5	+0.3
MT02	Curacav	3.27	19		Pn	04 53 15.9	-0.3
MT02	Curacav	3.27	19	eP	Pn	04 53 15.9	-0.3
GO06	Curarrehue	3.28	168		Pn	04 53 17.1	+0.7
GO06	Curarrehue	3.28	168	⇓eP	Pn	04 53 17.1	+0.7
MT16	CCHEN	3.31	28		Pn	04 53 17.1	+0.3
MT16	CCHEN	3.31	28	eP	Pn	04 53 17.0	+0.3
MT14	Cerro Cal¡n	3.34	28	eP	Pn	04 53 17.5	+0.4
VA01	Torpederas	3.40	10		Pn	04 53 17.0	-0.9
MT10	Hacienda Santa	3.45	27	eP	Pn	04 53 18.8	+0.1
MT04	Ro Olivares	3.49	33	eP	Pn	04 53 20.3	+0.9
MT08	Bocatoma Ro	3.51	34		Pn	04 53 21.0	+1.4
MT08	Bocatoma Ro	3.51	34	⇑eP	Pn	04 53 21.3	+1.7
PEL	Peldehue	3.51	24		Pn	04 53 19.8	+0.2
LR04	Corral	3.59	193		Pn	04 53 19.4	-1.1
LR05	Currie	3.86	176		Pn	04 53 24.7	+0.5
LR05	Currie	3.86	176	eP	Pn	04 53 24.6	+0.5
VA03	San Esteban	3.91	23		Pn	04 53 25.1	+0.1
VA06	Catapilco	3.91	14		Pn	04 53 24.2	-0.7
VA06	Catapilco	3.91	14	eP	Pn	04 53 24.2	-0.7
CO04	Los Peladeros	4.48	16		Pn	04 53 32.1	-0.8
PLCA	Paso Flores	4.58	162	Pn	Pn	04 53 35.1	+1.0
CO02	Combarbal	5.29	13		Pn	04 53 43.3	-0.5
CO03	El Pedregal	5.70	15	Pn	Pn	04 53 49.1	-0.4
VA04	Juan Fernndez	5.95	295	Pn	Pn	04 53 53.4	+0.6
CO01	Juntas del Tor	6.66	17	Pn	Pn	04 54 02.4	-0.4
LCO	Las Campanas	7.48	11	Pn	Pn	04 54 13.2	-0.8
AC05	El Transito	7.72	14	Pn	Pn	04 54 15.9	-1.4
PB02	IPOC Station P	15.16	9		P	04 56 00.2	-1.7
PB02				IAmb	IAmb	04 56 08.7	
	comp=Z,20nm,1.2s						
PB01	IPOC Station P	15.49	10		P	04 56 05.6	+0.1
PB11	IPOC Station P	16.73	9		Pn	04 56 18.6	+0.8
PB12	IPOC Station P	17.79	6		Pn	04 56 30.5	-0.4
PB12				IAmb	IAmb	04 56 47.8	
	comp=Z,28nm,1.4s						
MG01	Puerto William	18.84	171		P	04 56 42.3	+0.1
ITAB	Concordia	19.45	68	P	P	04 56 48.6	-0.4
ITAB				IAmb	IAmb	04 56 54.0	
	comp=Z,34nm,1.4s						
TRCB	Terra Rica	21.81	57	P	P	04 57 14.3	-0.2
TRCB				IAmb	IAmb	04 57 21.2	
	comp=Z,24nm,1.5s						
MACA	Manacapuru-AM	34.77	21	P	P	04 59 12.0	-0.1
MACA				IAmb	IAmb	04 59 21.7	
	comp=Z,7.4nm,0.7s						
OTAV	Otavalo	36.86	350	P	P	04 59 29.9	-0.7
SNAA	Sanae	49.50	157	P	P	05 01 10.4	-1.0
MTDJ	Mount Denham	54.52	354	P	P	05 01 49.0	-0.3
BINY	Binghamton	78.27	357	P	P	05 04 20.9	+0.5
BINY				IAmb	IAmb	05 04 40.8	
	comp=Z,10nm,1.1s						
BOSA	Boshof	79.22	117	P	P	05 04 25.9	-0.5
BOSA				IAmb	IAmb	05 04 40.3	
	comp=Z,7.2nm,1.4s						
TORD	Torodi Ar. Bea	85.28	70	P	P	05 04 58.7	+0.7
TORD				IAmb	IAmb	05 04 59.6	
	comp=Z,3.8nm,0.6s						
PZH	PanZhiHua	168.96	151	PKP	PKPdf	05 12 28.1	+0.1
HHC	Hu-ho-hao-te	174.57	327	eP	PKPdf	05 12 33.0	+2.8

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*IDC **04** 04:58:34.1±1.4, 40°.53S×174°.59E, h0km, mb3.9/2, mbtmp3.7/4, ML3.5/2, Error ellipse: s-maj=42.6km s-min=17.3km az=140.0*

*NOU **04** 04:58:41.7, 40°.65S×174°.68E, h62km, MLv4.2/19, Cook Strait, New Zealand*

ISC 04 04:58:42.5±0.9**, 40°.64S**±0°.04×**174°.68E**±0°.05**, h80**km**, n26, σ1s60**/27**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNZO	South Karori	0.67	179	P	Pn	04 58 56.7	-1.1
SNZO	South Karori	0.67	179	S	Sn	04 59 07.6	-1.6
BFZ	Birch Farm	1.19	92	P	Pn	04 59 02.9	-0.9
KHEZ	Kahui Hut	1.44	339	P	Pn	04 59 06.4	-0.7
KHEZ	Kahui Hut	1.44	339	S	Sn	04 59 24.7	-1.0
QRZ	Quartz Range	1.65	263	P	Pn	04 59 08.1	-1.6
QRZ	Quartz Range	1.65	263	S	Sn	04 59 28.0	-2.4
KHZ	Kahutara	1.97	205	P	Pn	04 59 13.7	-0.2
BKZ	Black Stump Fm	2.03	44	P	Pn	04 59 14.1	-0.7
HIZ	Hauiti	2.13	4	P	Pn	04 59 16.0	-0.1
HIZ	Hauiti	2.13	4	S	Sn	04 59 41.2	-0.6
URZ	Urewera	3.03	39	Pn	Pn	04 59 25.0	-3.3
	3.4nm,0.3s,baz=232,slow=7.7,SNR=12						
URZ				Lg	Lg	05 00 09.9	
	23nm,0.3s,baz=342,slow=14,SNR=8.9						
	7.5nm,0.3s						
URZ	Urewera	3.03	39	P	Pn	04 59 25.9	-2.3
URZ	Urewera	3.03	39	S	Sn	05 00 03.0	-0.5
RPZ	Rata Peaks	4.09	220	Pn	Pn	04 59 40.6	-1.9
	6.6nm,0.3s,baz=193,slow=0.2,SNR=8.2						
	6.8nm,0.4s						
RPZ	Rata Peaks	4.09	220	P	Pn	04 59 41.9	-0.7
MXZ	Matakaoa Point	4.17	44	P	Pn	04 59 41.3	-2.4
ODZ	Otahua Downs	5.31	213	P	Pn	04 59 57.7	-1.5
OUZ	Omahuta	5.48	351	P	Pn	05 00 01.2	-0.4
JCZ	Jackson Bay	5.55	230	P	Pn	05 00 01.0	-1.6
CTZ	Chatham Island	7.16	118	P	Pn	05 00 24.0	-0.4
ASAR	Alice Springs	38.07	284	P	P	05 05 54.1	+0.7
	0.4nm,0.3s,baz=116,slow=7.0,SNR=14						
ASAR				PcP	PcP	05 08 10.1	+2.9
	0.3nm,0.4s,baz=116,slow=3.7,SNR=5.4						
	0.4nm,0.3s						
WRA	Warramunga Arr	40.04	289	P	P	05 06 10.4	+0.5
	1.4nm,0.5s,baz=126,slow=8.3,SNR=24						
	1.4nm,0.5s						
ARCES	ARCESS Array B	146.84	341	PKPbc	PKPbc	05 18 14.2	-0.1
	4.5nm,1.0s,baz=39,slow=2.2,SNR=4.5						
BRTR	Keskin Array B	150.39	281	PKPbc	PKiKP	05 18 24.9	-0.4
	0.4nm,0.6s,baz=93,slow=2.9,SNR=2.4						
TORD	Torodi Ar. Bea	151.93	195	PKPbc	PKiKP	05 18 31.3	+2.4
	0.8nm,1.0s,baz=205,slow=2.8,SNR=3.5						

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*IDC **04** 05:08:59.6±4.6, 23°.45N×121°.72E, h0km, mb3.5/3, mbtmp3.5/3, MS3.1/3, Error ellipse: s-maj=325.4km s-min=28.7km az=60.0*

*NIED **04** 05:09:03.5, 22°.96N×120°.49E, h0km, MW4.0, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.47; $M_{\theta\theta}$1.06; $M_{\phi\phi}$-0.59; $M_{r\theta}$-0.61; $M_{\theta\phi}$0.77; $M_{\phi r}$-0.42; Fault plane solution: $M_0$1.30000×10^{15} NP1: ϕ_s295.00000°, δ55.00000°, λ-7.00000°. NP2: ϕ_s29.00000°, δ84.00000°, λ-145.00000°.*

*JMA **04** 05:09:03.5±0.2, 23°.0N±0°.3×120°.5E±0°.5, h0km, MV3.8/14, TAIWAN REGION*

*TAP **04** 05:09:04.2, 22°.93N×120°.57E, h16km, ML3.9, B*

ISC 04 05:09:05.2±0.8**, 22°.93N**±0°.01×**120°.56E**±0°.01**, h19**km±1km**, n133, σ0s94**/211**, mb3.6**/3**, MS3.0**/3**, 10C-9D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCST	Cishan	0.07	235	i P	Pg	05 09 08.3	-0.5
SCST				i S	Sg	05 09 11.3	+0.2
SLGT	Liugui	0.10	51	i P	Pg	05 09 08.4	-0.7
SLGT				i S	Sg	05 09 11.4	-0.2
SGST	Jiashian	0.16	8	P	Pb	05 09 08.3	0.0
SGST				eS	Sg	05 09 11.9	-0.7
TWM1	Shoushan	0.16	231	⇓iP	Pg	05 09 10.2	+0.5
TWM1				eS	Sg	05 09 14.9	+2.1
SSD	Sandimen	0.19	159	⇑iP	Pb	05 09 09.4	0.0
SSD				S	Sg	05 09 13.2	-0.2
SGLT	Jiouru	0.21	197	⇑iP	Pg	05 09 10.9	+0.6
SGLT				S	Sg	05 09 16.4	+2.5
SHHT	Tainan City	0.21	296	P	Pg	05 09 11.5	+1.0
SHHT				eS	Sg	05 09 18.4	+4.4
CHN3	Shinhua	0.23	310	eP	Pg	05 09 11.6	+0.9
CHN3				eS	Sg	05 09 17.8	+3.4
TSMG	Majia	0.23	160	⇑iP	Pb	05 09 10.1	-0.4
TSMG				eS	Sb	05 09 14.2	+0.1
CHN1	Nanshi	0.26	354	⇑iP	Pb	05 09 11.0	-0.1
CHN1				eS	Sg	05 09 16.3	+1.0
STYH	Taoyuan	0.32	40	⇓iP	Pg	05 09 12.0	-0.1
STYH				eS	Sb	05 09 17.6	+0.5
MASBT	Mashibuluo	0.32	168	⇑iP	Pg	05 09 11.5	-0.6
MASBT				i S	Sg	05 09 16.6	-0.2
WTP	Ta-pu	0.32	9	P	Pg	05 09 12.2	-0.1
WTP				eS	Sb	05 09 17.9	+0.6
SSHA	Shanhua	0.32	310	eP	Pb	05 09 13.3	+0.9
SSHA				eS	Sn	05 09 20.0	-1.1
TAI1	Yung-k'ang	0.32	290	eS	Sn	05 09 19.9	-1.2
TWK	Hsinying	0.34	349	eP	Pg	05 09 12.7	+0.1
TWK				eS	Sb	05 09 18.9	+0.9
TPUB	Ta-pu	0.38	10	eP	Pg	05 09 13.0	-0.2
TPUB				eS	Sb	05 09 19.4	+0.3
WSSB	Gushan	0.39	224	eP	Pb	05 09 14.5	+0.8
WSSB				eS	Sn	05 09 22.5	-0.4
SCLT	Jiali	0.42	306	eP	Pb	05 09 14.3	+0.2
SCLT				eS	Sn	05 09 22.1	-1.4
SSPT	Xinbi	0.44	179	eP	Pg	05 09 14.3	+0.1
SSPT				eS	Sb	05 09 22.1	+1.4
TWG	Pinlang	0.49	102	⇓iP	Pg	05 09 14.9	-0.1
TWG				eS	Sb	05 09 22.1	+0.1
TSCK	Chigu Township	0.49	297	eP	Pg	05 09 14.9	-0.1
TSCK				eS	Sb	05 09 23.3	+1.3
ECL	Taimali	0.49	132	⇑iP	Pg	05 09 14.5	-0.7
ECL				S	Sg	05 09 21.3	-0.5
TWGBT	Beinan	0.49	103	P	Pg	05 09 15.3	+0.1
TWGBT	Beinan	0.49	103	S	Sb	05 09 23.5	+1.3
TWGBT	Beinan	0.49	103	⇓iP	Pg	05 09 14.9	-0.3
TWGBT				eS	Sg	05 09 22.1	+0.1
ELDTW	Lidau	0.50	58	eP	Pg	05 09 15.2	-0.1
ELDTW				eS	Sb	05 09 22.5	+0.1
ICHU	Yijhu	0.50	329	eP	Pg	05 09 15.9	+0.6
ICHU				eS	Sn	05 09 24.3	-1.2
WCKO	Fanlu	0.51	5	eS	Sb	05 09 23.5	+0.8
CHN8	Yiju	0.53	323	eS	Sn	05 09 25.1	-1.0
LONT	Longtian	0.53	92	eP	Pb	05 09 15.7	-0.1
LONT				eS	Sg	05 09 23.7	+0.7
SCZT	Fangliau	0.56	174	⇑P	Pb	05 09 15.8	-0.5
TTN	Taitung	0.57	107	eP	Pg	05 09 17.3	+0.7
TTN				eS	Sn	05 09 26.6	-0.6
CHY	Chiayi	0.58	348	eP	Pb	05 09 16.8	+0.1
CHY				eS	Sn	05 09 26.5	-1.0
WLCH	Liuqiu	0.60	196	eP	Pn	05 09 19.2	+0.5
WLCH				eS	Sn	05 09 30.6	+2.7
EAST	Anshuo	0.60	154	⇑iP	Pb	05 09 16.8	-0.3
EAST				eS	Sg	05 09 25.5	+0.2
TWP	Hsiaoliuchiu	0.61	197	eP	Pn	05 09 19.2	+0.4
TWP				eS	Sn	05 09 30.5	+2.4
ALS	Alishan	0.62	21	⇓iP	Pb	05 09 17.3	-0.3
ALS				eS	Sg	05 09 27.0	+0.9
ECS	Chishang	0.63	74	eP	Pg	05 09 17.9	+0.1
ECS				eS	Sg	05 09 27.6	+1.3
EHD	Haiduan	0.64	70	⇓P	Pb	05 09 17.5	-0.2
EHD				S	Sb	05 09 26.4	+0.2
TAW	Tawu	0.65	151	⇑P	Pb	05 09 17.5	-0.3
TAW				eS	Sg	05 09 27.1	+0.4
WSL	Shuilin Townsh	0.67	333	eP	Pb	05 09 18.3	+0.1
WSL				eS	Sn	05 09 29.4	-0.2
CHN5	Tsauling	0.68	9	eP	Pb	05 09 18.1	-0.3
CHN5				eS	Sg	05 09 28.9	+1.2
FULB	Fuli	0.73	68	eP	Pg	05 09 19.8	+0.2
FULB				eS	Sn	05 09 31.0	-0.2
SLIU	Shizi	0.74	162	eP	Pb	05 09 19.2	-0.3
WGK	Gukeng	0.76	0	eP	Pb	05 09 19.5	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WGK				eS	Sn	05 09 32.4	+0.5
WDLH	Douliu	0.76	359	eP	Pg	05 09 20.1	0.0
WDLH				eS	Sn	05 09 31.6	-0.3
CHKT	Chengkung	0.76	77	eP	Pg	05 09 20.3	+0.1
CHKT				eS	Sn	05 09 32.6	+0.6
WSF	Szhu	0.77	336	eP	Pb	05 09 20.2	+0.1
WSF				eS	Sg	05 09 31.5	+0.8
WTK	Tuku	0.77	348	eS	Sn	05 09 32.4	+0.1
TWF1	Yuli	0.80	58	⇑iP	Pb	05 09 20.3	-0.2
TWF1				eS	Sb	05 09 31.4	+0.4
WHYT	Xinyi Township	0.81	19	eP	Pb	05 09 20.8	0.0
WHYT				eS	Sg	05 09 32.6	+0.6
CHKH	Chenggong	0.81	71	eP	Pb	05 09 20.8	+0.1
EYUL	Yuli	0.82	59	eP	Pb	05 09 20.8	0.0
EYUL				eS	Sb	05 09 31.8	+0.4
YULB	Yu-li	0.82	56	P	Pb	05 09 20.7	-0.2
YULB	Yu-li	0.82	56	S	Sn	05 09 34.0	+0.5
YULB	Yu-li	0.82	56	eP	Pb	05 09 20.5	-0.5
YULB				eS	Sb	05 09 31.6	0.0
LDUT	Ludao	0.88	107	eP	Pb	05 09 21.6	-0.2
WDGT	Dungji	0.89	292	⇓P	Pb	05 09 21.0	-1.1
WDGT				eS	Sb	05 09 33.0	-0.6
WJS	Zhushan	0.91	10	eP	Pb	05 09 22.6	+0.3
WJS				eS	Sn	05 09 35.9	+0.3
ECBN	Changbin	0.91	65	eP	Pg	05 09 23.3	+0.4
EHY	Hungye	0.91	50	eP	Pb	05 09 22.1	-0.3
EHY				eS	Sg	05 09 35.2	+0.2
EHYH	Wanrong	0.92	52	eP	Pb	05 09 22.3	-0.2
EHYH				eS	Sg	05 09 35.3	+0.1
SSLB	Suanglung	0.93	23	P	Pb	05 09 22.5	-0.3
SSLB	Suanglung	0.93	23	S	Sg	05 09 36.0	+0.3
SSLB	Suanglung	0.93	23	⇓P	Pb	05 09 22.4	-0.3
SSLB				eS	Sg	05 09 35.5	-0.2
HEN	Hengchun	0.93	170	eP	Pn	05 09 23.2	-0.1
HEN				eS	Sn	05 09 37.1	+0.9
SMST	Manzhou Townsh	0.94	164	eP	Pn	05 09 23.1	-0.3
SMST				eS	Sn	05 09 36.4	+0.1
WNT	Mingjian	0.95	7	eP	Pb	05 09 23.4	+0.3
WNT				eS	Sn	05 09 37.3	+0.5
HGSD	Ruisui	0.97	55	eP	Pn	05 09 23.9	0.0
RLNB	Erlin	0.98	349	eP	Pb	05 09 23.5	-0.1
RLNB				eS	Sg	05 09 37.5	+0.3
VWDT	VWDT	0.98	33	eP	Pb	05 09 23.4	-0.2
VWDT				eS	Sn	05 09 37.4	0.0
WRL	Guolierlin Hig	0.98	350	eP	Pb	05 09 23.4	-0.2
WRL				eS	Sb	05 09 36.8	+0.5
SMLT	Sun Moon Lake	1.00	18	eP	Pn	05 09 24.5	+0.1
SMLT				eS	Sg	05 09 38.6	+0.7
TWK1	Hengchun	1.00	167	eP	Pb	05 09 24.1	+0.1
TWKBT	Hengchun	1.01	166	eP	Pb	05 09 23.9	-0.2
TYC	Yuchr	1.01	16	eP	Pb	05 09 24.3	+0.2
TYC				eS	Sg	05 09 39.1	+1.0
TSEB	Hengchuen, Pin	1.07	163	eP	Pb	05 09 25.0	-0.1
TSEB				eS	Sg	05 09 40.3	+0.3
VCHM	Qimei	1.08	285	eP	Pb	05 09 23.4	-1.8
VCHM				eS	Sb	05 09 38.1	-0.8
PHUB	P'eng-hu	1.08	303	eP	Pb	05 09 23.5	-1.8
PHUB				eS	Sb	05 09 37.6	-1.4
WARBT	Fenglin Townsh	1.09	44	⇓P	Pn	05 09 25.3	-0.3
WARBT				eS	Sn	05 09 40.3	+0.1
PNG	Penghu	1.12	305	eP	Pn	05 09 24.2	-1.7
PNG				eS	Sb	05 09 38.9	-1.4
WCHH	Zhanghua	1.15	0	eS	Sg	05 09 42.4	-0.1
OWD	Renai	1.17	29	eP	Pn	05 09 26.6	-0.1
OWD				eS	Sg	05 09 43.1	-0.2
WCS	Beigang Elemen	1.17	16	eP	Pb	05 09 27.1	+0.2
WCS				eS	Sg	05 09 43.0	-0.3
WUSB	Renai	1.18	26	eP	Pn	05 09 26.8	-0.1
WUSB				eS	Sg	05 09 43.2	-0.3
ESL	Shilin	1.19	42	eP	Pb	05 09 27.3	+0.1
ESL				eS	Sg	05 09 44.8	+0.8
TCU	Taichung	1.22	5	eS	Sn	05 09 44.1	+0.8
SHUL	Shoufeng	1.26	47	eP	Pb	05 09 28.8	+0.4
LAY	Lan-yu	1.27	134	eP	Pn	05 09 27.2	-0.9
LYUB	Lan-yu	1.32	134	eP	Pn	05 09 26.6	-2.1
LXIB	Xiulin Townshi	1.34	36	eP	Pn	05 09 29.4	+0.2
LXIB				eS	Sg	05 09 48.8	0.0
ETM	Tongmen	1.34	40	eP	Pb	05 09 29.8	0.0
WHF	Hehuan Shan	1.38	28	eP	Pb	05 09 30.8	+0.2
WHF				eS	Sg	05 09 51.7	+1.8
WHP	Taichung City	1.39	15	eP	Pn	05 09 30.1	+0.4
WHP				eS	Sb	05 09 49.0	+0.9
TWQ1	Liyutan	1.43	8	eP	Pg	05 09 32.3	-0.4
TWQ1				eS	Sb	05 09 49.8	+0.7
TDCB	Techi	1.43	23	eP	Pb	05 09 31.4	0.0
FUSS	Fushou	1.46	25	eP	Pb	05 09 32.1	+0.2
TWD	Chiawan	1.49	39	eP	Pb	05 09 32.2	-0.2
ETLH	Xiulin Townshi	1.53	33	eP	Pb	05 09 33.2	+0.2
ETLH				eS	Sg	05 09 54.6	-0.1
NACB	Ninganchiao	1.56	37	P	Pb	05 09 33.3	-0.3
NACB	Ninganchiao	1.56	37	eP	Pn	05 09 32.8	+0.8
NNSB	Datong	1.68	27	eP	Pb	05 09 34.8	-0.7
NNSB				eS	Sb	05 09 56.9	+0.6
NNS	Nan Shan	1.68	26	eP	Pb	05 09 35.2	-0.5
LIOB	Emei	1.76	14	eP	Pb	05 09 36.2	-0.7
NFF	Wufeng Townshi	1.77	17	eP	Pb	05 09 36.3	-0.8
LATG	Datong	1.83	29	eP	Pb	05 09 37.1	-1.1
LATG				eS	Sg	05 10 03.4	-0.9
NDT	Datong Townshi	1.88	27	eP	Pb	05 09 38.8	-0.2
NSK	Sanguang	1.89	23	eP	Pb	05 09 38.9	-0.3
YHNB	Yeheng	1.89	23	P	Pb	05 09 38.4	-0.8
YHNB	Yeheng	1.89	23	eP	Pb	05 09 38.2	-1.0
NDS	Dongshan	2.00	32	eP	Pb	05 09 40.4	-0.7
NWLT	Wulai	2.04	25	eP	Pb	05 09 41.3	-0.3
TWC	Suao	2.05	35	eP	Pb	05 09 41.0	-0.8
FUSB	Fushanzhiwuyua	2.05	27	eP	Pb	05 09 40.9	-1.1
TATO	Taipei	2.21	22	P	Pn	05 09 42.6	+1.7
TIPB	Shuangxi	2.34	29	eP	Pn	05 09 44.3	+1.5
JYNG	Yonagunijimaku	2.66	55	P	Pn	05 09 49.2	+2.1
JYNG				S	Sn	05 10 21.8	+2.9
YOJ	Yonaguni jima	2.72	55	P	Pn	05 09 49.3	+1.4
YOJ	Yonaguni jima	2.72	55	eP	Pn	05 09 49.1	+1.3
YOJ	Yonaguni jima	2.72	55	eP	Pn	05 09 49.8	+1.9
YOJ				eS	Sb	05 10 23.4	-2.8
HATJ	Hateruma jima	3.19	69	eP	Pn	05 09 55.5	+1.2
HATJ				eS	Sn	05 10 32.6	+0.8
IRIF	Iriomote-Funau	3.23	64	eP	Pn	05 09 56.6	+1.7
JKRS	Kuro-shima	3.42	67	eP	Pn	05 09 58.9	+1.3
JIJ	Ishigaki jima	3.58	66	eP	Pn	05 10 00.6	+0.8
JIJ				eS	Sn	05 10 42.6	+1.0
JISG	Ishigakijimahi	3.81	64	eP	Pn	05 10 03.8	+0.8
JISG				eS	Sn	05 10 48.9	+1.6
JTJ	Tarama	4.16	65	eP	Pn	05 10 08.8	+1.0
JTJ				eS	Sn	05 10 57.4	+1.5
CMAR	Chiang Mai Arr	20.70	262	LR	LR	05 23 28.3	
	comp=Z,31nm,18.1s,baz=85,slow=40						
KAPI	Kappang	27.78	182	LR	LR	05 27 19.5	
	comp=Z,35nm,18.4s,baz=296,slow=39						
MKAR	Makanchi Array	38.85	317	P	P	05 16 29.4	+0.2
	0.2nm,0.9s,baz=112,slow=9.8,SNR=4.1						
	0.2nm,0.9s						
WRA	Warramunga Arr	44.68	161	P	P	05 17 14.6	-2.5
	1.3nm,0.7s,baz=343,slow=8.5,SNR=7.4						
	1.3nm,0.7s						
ASAR	Alice Springs	48.10	163	P	P	05 17 43.9	0.0
	0.4nm,0.7s,baz=350,slow=7.3,SNR=5.2						
	0.4nm,0.7s						
NOA	NORSAR Array B	79.06	332	LR	LR	05 59 25.2	
	comp=Z,16nm,20.4s,baz=300,slow=38						

NNC 04 05:51:32.9±2.4, 51°.48N×82°.97E, h0km, mb2.7, mpv2.4, Error ellipse: s-maj=18.9km s-min=8.5km az=39.0, Suspected Mining explosion.
IDC 04 05:51:38.2±1.4, 51°.60N×82°.56E, h0km, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=16.0km s-min=11.5km az=129.0
ISC 04 05:51:33.6±1.1, 51°.24N±0°.07×82°.83E±0°.09, h0km, n8, σ0^s.74/7, 6C-1D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KURK	Kurchatov	2.71	260	⇓Pg	Pg	05 52 24.8	-0.7
	0.6nm,0.7s						
KURK				⇑Lg	Lg	05 53 03.1	
	3.6nm,0.9s						
KURBB	Kurchatov Arra	2.79	259	Pg	Pg	05 52 26.9	-0.1
	0.1nm,0.3s,baz=71,slow=19,SNR=6.3						
KURBB				Lg	Lg	05 53 02.4	
	0.2nm,0.3s,baz=72,slow=33,SNR=7.4						
KURBB	Kurchatov Arra	2.79	259	⇑Pg	Pg	05 52 26.7	-0.4
	1.2nm,0.5s						
KURBB				⇑Lg	Lg	05 53 05.3	
	7.0nm,0.6s						
I46RU	ZALESOVO INFRA	2.97	23	I	I	06 09 20.0	
	baz=207,slow=319,SNR=1.0						
ZALV	Zalesovo Beam	2.97	23	Pn	Pn	05 52 21.9	-0.1
	1.8nm,0.3s,baz=209,slow=12,SNR=16						
ZALV				Sn	Sn	05 52 58.3	0.0
	0.6nm,0.3s,baz=212,slow=25,SNR=5.5						
ZALV				Lg	Lg	05 53 04.0	
	0.7nm,0.3s,baz=210,slow=28,SNR=4.4						
	3.8nm,0.3s						
MK31	Makanchi Array	4.46	185	⇑Pg	Pg	05 52 58.3	-0.8
	0.3nm,0.4s,baz=12,slow=12,SNR=14						
MK31				⇑Lg	Lg	05 54 03.4	
	1.4nm,0.6s,baz=11,slow=27,SNR=10						
MKAR	Makanchi Array	4.46	185	Pn	Pb	05 52 53.7	+0.9
	0.3nm,0.3s,baz=6.7,slow=11,SNR=8.1						
MKAR				Lg	Lg	05 54 10.0	
	0.3nm,0.3s,baz=10,slow=28,SNR=19						
	0.6nm,0.3s						
MAKZ	Makanchi	4.47	188	⇑Lg	Lg	05 54 03.4	
	2.7nm,1.4s						

IDC 04 05:53:44.5±1.9, 13°.24S×169°.34E, h0km, mb3.7/3, mbtmp3.8/4, ML4.0/1, MS3.2/9, Error ellipse: s-maj=70.4km s-min=29.8km az=129.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	9.21	197	Pn	Pn	05 55 58.8	0.0
	1.7nm,0.3s,baz=168,slow=18,SNR=20						
	4.9nm,0.4s						
MSVF	Nonsavu	9.51	119	LR	LR	05 58 49.2	
	comp=Z,146nm,19.0s,baz=330,slow=32						
CTA	Charters Tower	23.13	250	LR	LR	06 06 45.0	
	comp=Z,35nm,19.1s,baz=54,slow=34						
STKA	Stephens Creek	31.49	229	LR	LR	06 10 59.8	
	comp=Z,108nm,18.4s,baz=38,slow=33						
WRA	Warramunga Arr	34.15	254	P	P	06 00 32.0	+0.3
	0.5nm,0.9s,baz=86,slow=9.4,SNR=2.7						
	0.5nm,0.9s						
ASAR	Alice Springs	35.09	248	P	P	06 00 39.5	-0.3
	0.4nm,0.5s,baz=75,slow=9.2,SNR=9.1						
	0.4nm,0.5s						
MJAR	Matsushiro Arr	57.56	330	LR	LR	06 26 29.0	
	comp=Z,14nm,18.6s,baz=144,slow=34						
ASAJ	Asahikawa	62.06	338	LR	LR	06 29 15.4	
	comp=Z,24nm,18.5s,baz=186,slow=34						
PETK	Petropavlovsk-	66.83	352	LR	LR	06 28 47.1	
	comp=Z,15nm,20.5s,baz=166,slow=32						
CMAR	Chiang Mai Arr	76.20	293	LR	LR	06 42 51.4	
	comp=Z,4.1nm,18.2s,baz=200,slow=39						
BRDH	Bariadhala	84.01	295	LR	LR	06 44 22.3	
	comp=Z,24nm,19.9s,baz=114,slow=36						
ILAR	Eielson Array	84.50	17	P	P	06 06 18.9	0.0
	0.9nm,0.7s,baz=232,slow=5.3,SNR=10						
	0.9nm,0.7s						
NVAR	Mina Array Bea	84.78	49	LR	LR	06 36 24.8	
	comp=Z,19nm,21.2s,baz=294,slow=30						

TEH 04 05:54:41.7, 38°.41N×44°.50E, h6km±88km, ML2.9, Presumed earthquake
AZER 04 05:54:42.2, 38°.48N×44°.56E, h5km, ml3.0
ISK 04 05:54:42.7, 38°.32N×44°.38E, h8km, ML3.3/7
ISC 04 05:54:41.3±1.3, 38°.37N±0°.04×44°.48E±0°.03, h5km±11km, n26, σ1^s.45/41, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VANB	Van	0.89	285	Pg	Pg	05 54 58.5	+0.1
VANB				Sg	Sg	05 55 09.9	0.0
ISHB	Shabestar	0.90	95	Pg	Pg	05 54 58.4	-0.2
MAKU	Maku	1.00	9	Pg	Pg	05 54 59.7	-0.9
IMRD	Marand	1.02	70	Pg	Pg	05 55 01.0	+0.1
NAX	Nakhchivan	1.13	44	P	Pg	05 55 03.3	+0.3
NAX				S	Sn	05 55 19.8	-0.1
AKDM	Akdamar-Van	1.18	269	Pn	Pg	05 55 03.8	-0.2
AKDM				Sn	Sg	05 55 19.8	+0.5
ORD	Ordubad	1.31	64	P	Pn	05 55 06.5	+0.2
ORD				S	Sn	05 55 25.3	+1.0
CUKT	Cukurca	1.31	212	Pn	Pn	05 55 06.9	+0.5
ITBZ	Tabriz	1.32	95	Pg	Pn	05 55 05.4	-1.1
SBZ	Shahbuz	1.33	39	P	Pn	05 55 06.5	-0.1
SBZ				S	Sn	05 55 25.9	+1.2
IAZR	Azarshahr	1.37	120	Pg	Pn	05 55 08.0	+0.7
HYR	Heyderabad	1.38	12	P	Pg	05 55 08.6	+0.8
HYR				S	Sn	05 55 27.0	+1.0
IGDI	IGDIR	1.53	348	P	Pg	05 55 10.9	+0.2
IGDI				S	Sg	05 55 33.0	+2.5
AGRB	Hanur-Agry	1.67	317	Pn	Pn	05 55 11.9	+0.4
MLAZ	Malazgirt-MUS	1.70	298	Pn	Pn	05 55 12.9	+1.2
MLAZ				Sn	Sn	05 55 34.5	+0.6
GNI	Garni	1.79	6	Pn	Pg	05 55 15.5	-0.2
GURO	Guroymak-BITLI	1.93	276	Pn	Pn	05 55 15.8	+0.9
IHRS	Heris	2.02	91	Pn	Pb	05 55 19.2	+0.7
GDB	GEDABAY	2.55	22	P	Pb	05 55 26.1	-1.6
GDB				S	Sb	05 55 58.6	-0.7
AGDM	Agdam	2.68	49	P	Pb	05 55 28.2	-1.6
AGDM				S	Sb	05 56 01.9	-1.1
GANJ	Ganja	2.69	31	P	Pb	05 55 28.5	-1.4
GANJ				S	Sb	05 56 01.6	-1.5
GRMI	Germi	2.71	80	Pn	Pn	05 55 27.5	+1.9
QZX	Qazax, Azerbai	2.77	14	P	Pb	05 55 29.9	-1.4
QZX				S	Sb	05 56 04.0	-1.7
YRD	Yardimli	3.00	78	P	Pb	05 55 33.1	-2.2
YRD				S	Sb	05 56 12.0	-0.2
ASTR	Astara	3.39	85	P	Pn	05 55 38.6	+3.8
ASTR				S	Sb	05 56 20.9	-2.4
XNQ	Khinaliq	3.98	44	P	Pn	05 55 45.9	+2.8
XNQ				S	Sb	05 56 37.3	-3.1

ASRS 04 06:05:06.0±1.5, 54°.38N×86°.80E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.
NNC 04 06:04:58.3±6.9, 54°.87N×87°.08E, h0km, mb3.0, mpv2.8, 3C, Error ellipse: s-maj=58.9km s-min=31.5km az=53.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.62	236	⇑Pn	Pn	06 05 27.3	-0.6
	0.8nm,0.2s,baz=51,slow=16						
ZAA0				⇑Sn	Sg	06 05 50.5	+0.4
	2.5nm,0.3s,baz=56,slow=26						
KURBB	Kurchatov Arra	6.71	234	⇑Pn	Pn	06 06 40.2	+2.2
	0.5nm,0.3s						
MK31	Makanchi Array	8.64	202	Pn	Pn	06 07 06.2	+1.8
	0.1nm,0.2s,baz=55,slow=6.1,SNR=7.8						

IDC 04 06:06:52.1±2.6, 6°.02S×154°.50E, h0km, mb3.4/3, mbtmp3.4/3, MS3.5/1, Error ellipse: s-maj=177.2km s-min=30.6km az=130.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.98	233	P	P	06 12 09.2	+0.7
	0.6nm,0.5s,baz=59,slow=9.3,SNR=13						
	0.6nm,0.5s						
ASAR	Alice Springs	26.46	226	P	P	06 12 30.1	-1.0
	0.3nm,0.6s,baz=51,slow=9.4,SNR=2.3						
	0.3nm,0.6s						
DAV	Davao City (W)	31.65	294	LR	LR	06 23 33.9	
	comp=Z,90nm,20.9s,baz=112,slow=32						
ILAR	Eielson Array	82.66	22	P	P	06 19 17.3	+0.1
	0.2nm,0.4s,baz=255,slow=5.5,SNR=4.8						
	0.2nm,0.4s						

IDC 04 06:07:40.5±1.0, 16°.93N×119°.36E, h0km, mb3.7/6, mbtmp3.8/6, MS3.1/3, Error ellipse: s-maj=57.3km s-min=18.2km az=67.0
ISC 04 06:07:44.8±1.2, 17°.0N±0°.2×119°.4E±0°.4, h30km, n9, σ0^s.82/6, mb3.7/6, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	19.56	277	LR	LR	06 19 17.9	
	comp=Z,16nm,18.4s,baz=190,slow=36						
KSRS	Korea Array	21.75	19	P	P	06 12 34.2	+0.4
	1.3nm,0.6s,baz=210,slow=13,SNR=4.4						
	1.3nm,0.6s						
PALK	Pallekele	38.98	260	LR	LR	06 29 48.6	
	comp=Z,67nm,20.4s,baz=150,slow=34						
WRA	Warramunga Arr	39.49	158	P	P	06 15 12.6	-0.3
	0.5nm,0.4s,baz=338,slow=9.1,SNR=9.7						
	0.5nm,0.4s						
MKAR	Makanchi Array	42.70	322	P	P	06 15 39.5	+0.4
	0.8nm,0.9s,baz=124,slow=7.9,SNR=8.4						
	0.8nm,0.9s						
ASAR	Alice Springs	42.79	160	P	P	06 15 40.2	+0.3
	0.6nm,0.4s,baz=339,slow=6.8,SNR=16						
	0.6nm,0.4s						
CTA	Charters Tower	45.28	143	LR	LR	06 36 60.0	
	comp=Z,27nm,19.1s,baz=230,slow=39						
ZALV	Zalesovo Beam	45.61	332	P	P	06 16 01.0	-1.2
	0.7nm,0.7s,baz=132,slow=12,SNR=2.3						
	0.7nm,0.7s						
KURBB	Kurchatov Arra	46.81	325	P	P	06 16 11.9	+0.2
	1.8nm,0.7s,baz=123,slow=8.4,SNR=11						
	1.8nm,0.7s						

RSNC 04 06:10:56.7±0.0, 2°N±4°×8°0W±°, h15km±4km, M3.2, mB5.6, mb3.8, ML2.6, MLv3.4, Mw(mB)5.1, South of Panama

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GR1C	Gorgona, Isla	1.69	64	P	Pn	06 11 20.8	-4.9
GR1C				S	Sn	06 11 40.6	-6.5
PAC1	Pacto, Paraso	2.17	156	P	Pn	06 11 31.1	-1.4
PAC1				S	Sn	06 11 57.2	-2.1
CUSE	Cuicocha Este	2.33	146	P	Pn	06 11 33.9	-1.0
CUSE				S	Sn	06 12 01.3	-2.3
OTAV	Otavalo	2.36	148	P	Pn	06 11 34.8	-0.6
OTAV				S	Sn	06 12 03.3	-1.0
BBAC	Balboa, Cauca	2.45	95	P	Pn	06 11 34.2	-2.2
BBAC				S	Sn	06 12 05.0	-1.3
GCUF	Volcan Galeras	2.56	114	P	Pn	06 11 37.7	-0.4
GCUF				S	Sn	06 12 08.1	-1.2
CRUC	La Cruz	2.82	104	P	Pn	06 11 41.4	-0.2
CRUC				S	Sn	06 12 15.8	+0.2
POPC	Popayan, Colom	3.02	85	P	Pn	06 11 41.5	-2.8
POPC				S	Sn	06 12 16.2	-4.2
JAMC	Jamundi, Valle	3.16	72	P	Pn	06 11 42.5	-3.6
JAMC				S	Sn	06 12 16.8	-6.9
PIZC	Pizarro, Choco	3.55	41	P	Pn	06 11 44.6	-6.8
YOTC	Yotoco, Valle	3.75	63	P	Pn	06 11 49.4	-4.8
YOTC				S	Sn	06 12 30.1	-8.2
FLOC	Florencia	4.09	99	P	Pn	06 11 59.2	+0.4
FLOC				S	Sn	06 12 46.7	+0.2
GARC	Garzon, Huila	4.20	91	P	Pn	06 12 00.0	-0.4
GARC				S	Sn	06 12 48.2	-1.1
PRAC	Prado	5.01	73	P	Pn	06 12 10.3	-1.2
	0.1nm11nm,1.0s						
PRAC				S	Sn	06 13 05.9	-3.3
	0.1nm11nm,1.0s						
CBOC	Ciudad Bolivar	5.13	46	P	Pn	06 12 09.6	-3.6
GUY2C	Guyana, Caldas	5.22	56	P	Pn	06 12 12.5	-2.3
	0.0nm4.0nm,0.8s						
GUY2C				S	Sn	06 13 07.7	-7.3
	0.0nm4.0nm,0.8s						
URMC	La Uribe, Meta	5.39	79	P	Pn	06 12 15.5	-1.3
	0.0nm3.7nm,0.6s						
URMC				S	Sn	06 13 15.0	-3.7
	0.0nm3.7nm,0.6s						
MACC	Macarena, Meta	5.84	91	P	Pn	06 12 22.6	-0.2
	14nm,0.6s						
MACC				S	Sn	06 13 27.3	-2.3
	14nm,0.6s						
VILC	Villavicencio,	6.26	73	P	Pn	06 12 27.8	-1.0
	263nm9.4nm,0.5s						
VILC				S	Sn	06 13 38.7	-1.5
	263nm9.4nm,0.5s						
CHIC	Chingaza	6.40	68	P	Pn	06 12 29.2	-1.6
	9.0nm,1.0s						
CHIC				S	Sn	06 13 39.5	-4.4
	9.0nm,1.0s						
SPBC	San Pablo de B	6.54	59	P	Pn	06 12 29.8	-2.7

IDC 04 06:33:21.1±1.1, 46°.75N×27°.23W, h0km, mb3.4/7, mbtmp3.4/8, ML4.2/1, MS3.3/11, Error ellipse: s-maj=47.8km s-min=22.3km az=28.0
ISC 04 06:33:22.6±1.0, 46°.7N±0°.3×27°.3W±0°.2, h10km, n22, σ0^s.72/8, mb3.6/6, MS3.1/10, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ESDC	Sonseca Array	18.34	104	P	P	06 37 37.5	+0.4
	0.1nm,0.3s,baz=301,slow=12,SNR=2.9						
ESDC				LR	LR	06 42 26.0	
	comp=Z,54nm,20.0s,baz=296,slow=30						
	0.7nm,0.7s						
DAVOX	Davos/Dischmat	25.29	76	LR	LR	06 47 09.7	
	comp=Z,44nm,20.1s,baz=292,slow=33						
SCHQ	Schefferville	26.01	303	LR	LR	06 47 03.8	
	comp=Z,76nm,18.6s,baz=114,slow=32						
GERES	GERESS Array B	27.36	70	LR	LR	06 49 31.0	
	comp=Z,30nm,19.2s,baz=250,slow=36						
FRB	Frobisher Bay	28.37	322	LR	LR	06 47 59.6	
	comp=Z,51nm,19.4s,baz=323,slow=31						
VRAC	Vranov	29.14	69	LR	LR	06 50 35.9	
	comp=Z,51nm,18.4s,baz=311,slow=36						
VAE	Valguarnera	31.94	92	LR	LR	06 51 40.2	
	comp=Z,36nm,18.2s,baz=205,slow=34						
TORD	Torodi Ar. Bea	41.37	134	P	P	06 41 08.8	-0.1
	0.4nm,0.7s,baz=314,slow=8.0,SNR=3.6						
TORD				LR	LR	06 57 10.7	
	comp=Z,142nm,20.9s,baz=352,slow=34						
	0.4nm,0.7s						
SJG	San Juan	42.83	241	LR	LR	06 54 27.3	
	comp=Z,26nm,21.2s,baz=49,slow=30						
TKL	Tuckaleechee C	43.10	276	LR	LR	06 57 18.7	
	comp=Z,38nm,19.1s,baz=92,slow=33						
ULM	Lac du Bonnet	44.16	301	LR	LR	06 57 39.8	
	comp=Z,44nm,18.2s,baz=22,slow=33						
YKA	Yellowknife Ar	48.89	322	P	P	06 42 07.3	-0.7
	0.5nm,0.9s,baz=61,slow=6.9,SNR=5.9						
	0.5nm,0.9s						
H10N2	ASCENSION HYDR	55.49	165	T	T	07 42 40.4	
	baz=350						
H10N3	ASCENSION HYDR	55.50	165	T	T	07 42 37.9	
	baz=350,slow=74						
H10N1	ASCENSION HYDR	55.51	165	T	T	07 42 40.8	
	baz=350,slow=74						
PDAR	Pinedale Array	56.02	298	P	P	06 43 02.2	+0.6
	1.0nm,0.9s,baz=30,slow=8.0,SNR=5.9						
	1.0nm,0.9s						
H10S3	ASCENSION HYDR	56.56	165	T	T	07 43 57.0	
	baz=123,slow=74,SNR=7.4						
H10S2	ASCENSION HYDR	56.57	165	T	T	07 43 57.7	
	baz=97,slow=74,SNR=8.0						
ILAR	Eielson Array	59.34	334	P	P	06 43 25.2	+0.9
	0.4nm,0.8s,baz=47,slow=7.2,SNR=3.3						
	0.4nm,0.8s						
TXAR	Lajitas Array	60.34	282	P	P	06 43 31.4	-0.5
	0.2nm,0.7s,baz=52,slow=7.9,SNR=2.5						
	0.2nm,0.7s						
NVAR	Mina Array Bea	63.94	299	P	P	06 43 56.2	+0.2
	0.3nm,0.7s,baz=26,slow=6.0,SNR=2.3						
	0.3nm,0.7s						
MKAR	Makanchi Array	68.33	44	P	P	06 44 23.2	-0.6
	0.2nm,0.7s,baz=306,slow=4.8,SNR=2.2						
	0.2nm,0.7s						

IDC 04 06:35:01.5±3.1, 53°.41N×87°.62E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=31.4km s-min=16.6km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.75	289	I	I	06 47 30.0	
	baz=110,slow=342,SNR=4.1						
ZALV	Zalesovo Beam	1.75	289	Pn	Pn	06 35 32.0	-1.0
	1.5nm,0.3s,baz=104,slow=14,SNR=18						
ZALV				Lg	Lg	06 35 57.1	
	3.7nm,0.3s,baz=104,slow=23,SNR=19						
KURBB	Kurchatov Arra	6.26	247	Pn	Pn	06 36 35.6	+0.6
	0.1nm,0.3s,baz=65,slow=15,SNR=2.6						
	0.4nm,0.3s						
MKAR	Makanchi Array	7.45	209	Pn	Pn	06 36 52.9	+1.4
	0.1nm,0.3s,baz=28,slow=13,SNR=6.8						
	0.1nm,0.2s						

*TEH **04** 06:39:32.4,38.33N×44.27E,h10km±999km,ML2.5, Presumed earthquake*
*AFAD **04** 06:39:32.1,38.49N×44.73E,h6km±3km,ML2.4*
*ISK **04** 06:39:34.6,38.28N×44.49E,h18km,ML2.5/5*
*AZER **04** 06:39:35.9,38.39N×44.69E,h5km,ml2.2*
ISC 04 06:39:35.2±1.2,**38.41N**±0.03×**44.49E**±0.02,**h5**km±10km, **n24,**σ**1.36**/40,**Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.46**	**303**	P	**Pg**	**06 39 43.8**	**-0.3**
OZAP				S	**Sb**	**06 39 52.9**	**-0.3**
OZAP				IAML		06 39 56.0	
	comp=N,178nm,0.6s						
YOVA	**Hakkari_Yksek**	**0.84**	**191**	P	**Pg**	**06 39 51.3**	**0.0**
YOVA				S	**Sb**	**06 40 04.7**	**+0.7**
TVAN	**Van**	**0.86**	**278**	P	**Pg**	**06 39 49.8**	**-1.8**
TVAN				S	**Sn**	**06 40 07.2**	**0.0**
TVAN				IAML		06 40 18.0	
	comp=E,98nm,1.3s						
TVAN				IAML		06 40 20.0	
	comp=N,182nm,1.0s						
VANB	**Van**	**0.88**	**282**	Pg	**Pg**	**06 39 52.1**	**0.0**
VANB				Sg	**Sg**	**06 40 04.9**	**+1.3**
ISHB	**Shabestar**	**0.90**	**98**	Pg	**Pg**	**06 39 52.1**	**-0.3**
VMUR	**Van-Muradiye**	**0.92**	**309**	P	**Pg**	**06 39 51.8**	**-1.1**
VMUR				S	**Sb**	**06 40 07.4**	**+1.0**
VMUR				IAML		06 40 14.0	
	comp=E,58nm,0.4s						
MAKU	**Maku**	**0.95**	**9**	Pg	**Pg**	**06 39 52.6**	**-0.9**
MAKU				Sg	**Sb**	**06 40 07.7**	**+0.3**
IMRD	**Marand**	**1.00**	**72**	Pg	**Pb**	**06 39 54.6**	**-0.5**
ERCV	**ERCIS-VAN**	**1.08**	**304**	Pn	**Pg**	**06 39 56.5**	**+0.5**
NAX	**Nakhchivan**	**1.10**	**46**	P	**Pb**	**06 39 56.5**	**-0.2**
NAX				S	**Sn**	**06 40 12.3**	**-0.5**
GEVA	**Gevas**	**1.13**	**265**	P	**Pg**	**06 39 55.1**	**-1.7**
GEVA				S	**Sn**	**06 40 14.1**	**+0.4**
GEVA				IAML		06 40 18.0	
	comp=N,42nm,0.3s						
AKDM	**Akdamar-Van**	**1.19**	**267**	Pn	**Pg**	**06 39 56.7**	**-1.3**
AKDM				Sn	**Sg**	**06 40 13.1**	**-0.3**
ORD	**Ordubad**	**1.29**	**66**	P	**Pn**	**06 39 59.7**	**-0.3**
ORD				S	**Sn**	**06 40 17.9**	**+0.3**
SBZ	**Shahbuz**	**1.29**	**40**	P	**Pn**	**06 39 60.0**	**0.0**
SBZ				S	**Sn**	**06 40 20.3**	**+2.6**
DYDN	**Diyadin**	**1.29**	**331**	P	**Pg**	**06 39 59.5**	**-0.4**
DYDN				S	**Sg**	**06 40 16.4**	**-0.4**
DYDN				IAML		06 40 23.0	
	comp=N,54nm,0.9s						
DYDN				IAML		06 40 23.0	
	comp=E,80nm,0.6s						
ITBZ	**Tabriz**	**1.32**	**97**	Pg	**Pg**	**06 39 59.7**	**-0.8**
CUKT	**Cukurca**	**1.35**	**211**	Pn	**Pn**	**06 39 57.7**	**-3.2**
ADCV	**BITLIS_Adilcev**	**1.44**	**287**	P	**Pg**	**06 40 03.1**	**+0.3**
PERV	**Siirt/Pervari-**	**1.60**	**254**	P	**Pg**	**06 40 06.3**	**+0.4**
PERV				S	**Sg**	**06 40 31.6**	**+4.9**
AGRB	**Hanur-Agry**	**1.65**	**315**	Pn	**Pn**	**06 40 04.9**	**-0.1**
AGRB				Sn	**Sn**	**06 40 26.8**	**+0.2**
DORK	**Agr/Tutak/Do**	**1.65**	**307**	P	**Pn**	**06 40 04.3**	**-0.7**
IHRS	**Heris**	**2.01**	**92**	Pn	**Pg**	**06 40 13.9**	**+0.1**
GDB	**GEDABAY**	**2.51**	**23**	P	**Pb**	**06 40 20.4**	**-0.4**
GDB				S	**Sg**	**06 40 55.5**	**-0.2**
YRD	**Yardimli**	**2.98**	**79**	P	**Pn**	**06 40 25.4**	**+2.1**
YRD				S	**Sb**	**06 41 03.4**	**-2.3**

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*NEIC **04** 06:42:42.6±1.4,35.96N±0.04×0.8W±0.2,h10km±2km, ML2.3/4,Error ellipse: s-maj=32.8km s-min=4.8km az=97.0*
*CRAAG **04** 06:42:43.8,35.75N×0.63W,Ml3.3,Algrie 05km N Oran*
*MDD **04** 06:42:44.1±1.1,35.74N×0.61W,h26km±19km,mb_Lg2.6/7, Error ellipse: s-maj=18.8km s-min=5.5km az=153.0*
*CNRM **04** 06:42:45.3,35.99N×0.77W,h92km,ML2.9*
ISC 04 06:42:42.5±1.5,**35.92N**±0.03×**0.75W**±0.04,**h7**km±12km, **n31,**σ**1.36**/45,**Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USTO	**Oran**	**0.25**	**139**	P	**Pg**	**06 42 46.0**	**-1.4**
OFRG	**Douar Fergoug**	**0.76**	**122**	P	**Pg**	**06 42 56.5**	**-0.6**
OLHC	**Oulhaca**	**0.86**	**219**	P	**Pn**	**06 43 01.7**	**+0.6**
OSBL	**Sidi Abdelli**	**0.90**	**201**	P	**Pb**	**06 43 00.1**	**-0.2**
OJBR	**Djebel Berber**	**0.95**	**110**	P	Pb	06 42 49.0	-12
ESMB	**Sidi M'hamed B**	**1.14**	**107**	P	**Pn**	**06 43 02.6**	**-2.2**
EKMS	**Oued Kramis**	**1.19**	**70**	P	**Pg**	**06 43 08.0**	**+2.6**
OBBL	**Beni Bahdel**	**1.36**	**207**	P	**Pn**	**06 43 06.7**	**-1.2**
EANR	**'Ain N'Sour**	**1.50**	**88**	P	**Pg**	**06 43 13.2**	**+1.9**
ENIJ	**Nijar**	**1.57**	**312**	Pn	**Pn**	**06 43 10.5**	**-0.3**
ENIJ				Sn	**Sb**	**06 43 32.4**	**+0.4**
ENIJ				*i* IVmb_Lg		06 43 34.7	
CART	**Cartagena**	**1.67**	**353**	Pn	**Pn**	**06 43 11.6**	**-0.5**
CART				Sn	**Sn**	**06 43 31.2**	**-2.6**
CART				IAML		06 43 40.3	
	comp=E,27nm,1.2s						
CART	**Cartagena**	**1.67**	**353**	P	**Pn**	**06 43 12.2**	**+0.1**
CART				S	**Sn**	**06 43 33.7**	**-0.1**
EMUR	**La Murta**	**1.96**	**349**	Pn	**Pn**	**06 43 16.9**	**+0.8**
EMUR				Sn	**Sn**	**06 43 39.9**	**-0.9**
EMUR				*i* IVmb_Lg		06 43 41.9	
EBER	**Berja**	**1.98**	**300**	Pn	**Pn**	**06 43 17.4**	**+0.9**
EBER				Sn	**Sn**	**06 43 42.6**	**+0.9**
EADEB	**Ain Deheb**	**2.17**	**119**	P	**Pb**	**06 43 22.6**	**+0.5**
ELGU	**Los Guajares,**	**2.50**	**293**	Pn	**Pn**	**06 43 23.9**	**+0.2**
ELGU				Sn	**Sn**	**06 43 53.4**	**-1.0**
ELGU				*i* IVmb_Lg		06 43 56.8	
EQES	**Quesada**	**2.64**	**316**	Pn	**Pb**	**06 43 29.1**	**-1.0**
EQES				Sn	**Sb**	**06 44 01.3**	**-1.6**
EQES				*i* IVmb_Lg		06 44 03.0	
ETOB	**Tobarra**	**2.79**	**347**	Pn	**Pn**	**06 43 30.1**	**+2.5**
ETOB				Sn	**Sn**	**06 44 02.7**	**+1.2**
AKLM	**AKL**	**2.91**	**242**	P	**Pn**	**06 43 30.4**	**+1.1**
AKLM				S	**Sn**	**06 44 05.9**	**+1.4**
EGOR	**Sierra Gorda,**	**2.95**	**295**	Pn	**Pn**	**06 43 32.3**	**+2.4**
EIBI	**Ibiza**	**3.52**	**28**	Pn	**Pn**	**06 43 38.5**	**+1.0**
EIBI				Sn	**Sn**	**06 44 17.0**	**-2.4**
FIGM	**Figuig**	**3.80**	**187**	P	**Pn**	**06 43 43.3**	**+1.8**
FIGM				S	**Sn**	**06 44 27.9**	**+1.3**
ECAB	**El Cabril**	**4.31**	**301**	Pn	**Pn**	**06 43 49.0**	**+0.6**
ECAB				Sn	**Sn**	**06 44 38.1**	**-0.9**
EMOS	**Mosqueruela**	**4.44**	**3**	Sn	**Sn**	**06 44 40.9**	**-1.4**
MDT	**Midelt**	**4.45**	**227**	P	**Pn**	**06 43 51.0**	**+0.6**
MDT				S	**Sn**	**06 44 42.8**	**+0.4**
MD01	**Midelt array s**	**4.50**	**229**	Pn	**Pn**	**06 43 51.1**	**-0.1**
MD31	**MD31**	**4.50**	**229**	Pn	**Pn**	**06 43 50.8**	**-0.3**
MD31	**MD31**	**4.50**	**229**	P	**Pn**	**06 43 51.7**	**+0.6**
MD31				S	**Sn**	**06 44 44.2**	**+0.4**
PAB	**San Pablo**	**4.61**	**323**	Pn	**Pn**	**06 43 53.0**	**+0.5**
PAB				IAML		06 46 36.8	
	comp=E,2.9nm,1.2s						
PVAQ	**Vaqueiros**	**5.79**	**287**	Pn	**Pn**	**06 44 07.1**	**-1.6**
PVAQ	**Vaqueiros**	**5.79**	**287**	P	**Pn**	**06 44 08.2**	**-0.6**
PVAQ				S	**Sn**	**06 45 13.3**	**-2.1**

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*NNC **04** 06:51:02.3±5.1,36.84N×70.35E,h166km±76km,mb2.9, mpv3.7,Error ellipse: s-maj=48.5km s-min=30.8km az=9.0*
*IDC **04** 06:51:03.4±10.0,36.55N×70.73E,h248km±126km, mb3.3/3,mbtmp3.7/7,Error ellipse: s-maj=75.3km s-min=50.0km az=114.0*
ISC 04 06:51:00.8±1.8,**36.7N**±0.2×**70.5E**±0.1,**h204**km,**n11,** σ**1.03**/14,**3C-1D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.37**	**0**	⇑P	**Pn**	**06 52 32.6**	**-0.1**
	2.4nm,0.2s,baz=156,slow=7.4,SNR=31						
KK31				⇓S	**S**	**06 53 43.7**	**-1.7**
	1.9nm,0.3s,baz=192,slow=28,SNR=5.2						
AAK	**Ala-Archa**	**6.65**	**26**	⇑P	**Pn**	**06 52 37.1**	**+0.5**
	3.1nm,0.6s						
AAK				⇑S	**S**	**06 53 52.4**	**0.0**
	2.5nm,0.5s						
MK31	**Makanchi Array**	**13.34**	**37**	P	**P**	**06 54 04.9**	**0.0**
	0.4nm,0.4s,baz=216,slow=11,SNR=10						
MKAR	**Makanchi Array**	**13.34**	**37**	P	**P**	**06 54 03.4**	**-1.5**
	0.5nm,0.4s,baz=224,slow=14,SNR=12						
MKAR				S	**S**	**06 56 29.9**	**-0.7**
	0.1nm,0.3s,baz=257,slow=24,SNR=1.3						
AB31	**Akbulak array**	**14.69**	**332**	P	**P**	**06 54 20.1**	**+0.3**
	0.7nm,0.3s,baz=153,slow=12,SNR=46						
KURBB	**Kurchatov Arra**	**15.04**	**20**	P	**P**	**06 54 24.8**	**+1.3**
	0.3nm,0.5s,baz=213,slow=9.4,SNR=1.6						
BVAR	**Borovoye Array**	**16.29**	**360**	P	**Pn**	**06 54 39.6**	**+1.4**
	0.7nm,0.5s,baz=171,slow=12,SNR=3.1						
ZALV	**Zalesovo Beam**	**19.87**	**25**	P	**P**	**06 55 17.1**	**+0.8**
	1.7nm,0.4s,baz=218,slow=10.0,SNR=8.8						
FINES	**FINESS Array B**	**37.07**	**326**	P	**P**	**06 57 50.9**	**0.0**
	1.5nm,0.7s,baz=99,slow=7.2,SNR=1.4						
	1.5nm,0.7s						
ARCES	**ARCESS Array B**	**40.78**	**338**	P	**P**	**06 58 22.2**	**+0.6**
	2.9nm,0.9s,baz=117,slow=7.4,SNR=4.7						
	2.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**65.33**	**268**	P	**P**	**07 01 20.4**	**-1.0**
	0.4nm,0.7s,baz=51,slow=6.6,SNR=4.1						
	0.4nm,0.7s						

GCMT 04 06:51:45.0±0.3,**39.84S**±0.04×**15.75W**±0.03,**h17**km±1km, **MW4.9**/105,**Moment Tensor Solution. s17,c17; s105,c136; Duration: 0 Moment tensor: Scale** 10^{16} **Nm;** Mrr-2.72±.19; Mθθ0.65±.11; Mϕϕ2.08±.12; Mrθ-1.10±.35; Mθϕ-0.40±.06; Mϕr0.10±.32; **Best double couple:** M₀2.63300×10^{16} **NP1:**ϕs359.00000°,δ42.00000°, λ-66.00000°. **NP2:**ϕs148.00000°,δ52.00000°, λ-110.00000°. **Principal axes:** T 2.2190, Plg5.0000°, Azm252.0000°; N 0.8360, Plg16.0000°, Azm161.0000°; P -3.0480, Plg73.0000°, Azm359.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Tristan da Cunha region**

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*ASRS **04** 07:10:13.0±1.2,54.20N×87.12E,h0km,M2.5(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 04 07:10:14.9±3.4,**54.23N**×**87.25E,h0**km,**mbtmp2.6**/2, **ML2.3**/2,**Error ellipse: s-maj=29.7km s-min=17.7km az=62.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.46**	**260**	I	I	07 20 20.0	
	baz=83,slow=344,SNR=1.3						
ZALV	**Zalesovo Beam**	**1.46**	**260**	Pg	Pn	07 10 40.0	-2.6
	0.8nm,0.3s,baz=80,slow=18,SNR=15						
ZALV				Lg	Lg	07 11 01.6	
	1.1nm,0.3s,baz=77,slow=25,SNR=5.9						
KURBB	**Kurchatov Arra**	**6.44**	**239**	Pn	Pn	07 11 51.5	+0.6
	0.1nm,0.3s,baz=55,slow=14,SNR=1.6						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**8.09**	**205**	Pn	Pn	07 12 15.1	+1.6
	baz=28,slow=12,SNR=1.7						
MKAR				Sn	Sn	07 13 46.2	+0.6
	0.1nm,0.3s,baz=18,slow=24,SNR=1.2						
	0.1nm,0.4s						

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*NEIC **04** 07:25:44.8±2.5,35.70N±0.06×141.13E±0.10,h38km±7km, mb4.0/5,Error ellipse: s-maj=11.8km s-min=8.2km az=77.0*
*NIED **04** 07:25:44.2,35.77N×141.03E,h37km,MW4.1,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr-1.17; Mθθ1.23; Mϕϕ-0.05; Mrθ0.94; Mθϕ-0.22; Mϕr0.84; Fault plane solution: M₀1.73000×10¹⁵ NP1: ϕs120.00000°,δ32.00000°,λ-44.00000°. NP2: ϕs249.00000°,δ68.00000°,λ-115.00000°.*
*IDC **04** 07:25:44.9±1.8,35.67N×141.00E,h44km±17km,mb3.5/16, mbtmp3.8/21,ML3.2/4,MS3.1/12 Error ellipse: s-maj=18.0km s-min=8.8km az=72.0*
*JMA **04** 07:25:44.2±0.2,35.8N±0.6×14 1E± ,h37km±1km, MD4.2/38,MV3.8/38,NEAR CHOSHI CITY*
JMA Felt II J1 at NEAR CHOSHI CITY .
ISC 04 07:25:43.3±1.6,**35.76N**±0.04×**141.15E**±0.06,**h31**km±12km, **n65,**σ**1.25**/50,**mb3.9**/17,**MS3.1**/8,**6D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCAJ	**Choshiashikaji**	**0.24**	**262**	A	A	07 25 50.7	
	comp=N,180nm,0.4s,comp=E,136nm,0.3s						
JIHU	**Itakohorinouch**	**0.55**	**293**	⇓*i*P	**Pn**	**07 25 54.6**	**-0.3**
JIHU				⇓*e*S	**Sn**	**07 26 02.5**	**-0.6**
JSMT	**Sammumatsuo**	**0.58**	**259**	⇓*i*P	**Pn**	**07 25 55.0**	**-0.5**
JSMT				⇓S	**Sn**	**07 26 03.0**	**-1.0**
JHYU	**Hitachinakayam**	**0.74**	**322**	⇓*i*P	**Pn**	**07 25 57.6**	**0.0**
JHYU				A	A	07 25 57.6	
	comp=N,11nm,1.0s,comp=E,11nm,1.6s						
JCCN	**Chibachonan**	**0.83**	**244**	P	**Pb**	**07 25 59.8**	**+0.5**
JYT	**Yasato**	**0.91**	**301**	*i* P	**Pn**	**07 25 59.0**	**-0.9**
JYT				*e*S	**Sn**	**07 26 09.7**	**-2.2**
JHO	**Hitachi**	**0.97**	**331**	⇓*i*P	**Pb**	**07 26 00.9**	**-0.7**
BSO4	**Boso 4**	**1.01**	**221**	*e*P	**Pb**	**07 26 01.5**	**-0.7**
BSO3	**Boso 3**	**1.09**	**209**	*i* P	**Pn**	**07 26 02.4**	**+0.2**
BSO1	**Boso 1**	**1.11**	**187**	P	**Pn**	**07 26 02.8**	**+0.6**
MJAR	**Matsushiro Arr**	**2.51**	**289**	P	**Pn**	**07 26 21.4**	**-0.6**
	comp=E,2.2nm,0.3s,baz=166,slow=1.5,SNR=30						
MJAR				S	**Sn**	**07 26 50.9**	**-0.6**
	comp=E,26nm,0.5s,baz=333,slow=22,SNR=2.2						
MJAR				LR	LR	07 27 30.4	
	comp=E,304nm,20.9s,baz=98,slow=43						
	comp=E,8.3nm,0.3s						
MJAR	**Matsushiro Arr**	**2.51**	**289**		**Pn**	**07 26 22.9**	**+0.9**
MAJO	**Matsushiro**	**2.51**	**289**		**Pn**	**07 26 23.1**	**+1.2**
MJB9	**Matsu-Tunnel**	**2.51**	**289**		**Pn**	**07 26 23.9**	**+1.9**
JSG	**Sagara**	**2.66**	**247**		**Pn**	**07 26 25.5**	**+1.6**
JHJ2	**Mitsune**	**2.86**	**203**	Pn	**Pn**	**07 26 28.4**	**+1.7**
JHJ	**Hachijo jima 2**	**2.86**	**204**	P	**Pn**	**07 26 25.8**	**-1.1**
	comp=E,28nm,0.3s,baz=327,slow=22,SNR=18						
JHJ				S	**Sn**	**07 26 58.5**	**-1.8**
	comp=E,252nm,0.3s,baz=253,slow=21,SNR=13						
	comp=E,63nm,0.3s						
JGF	**Kuroka**	**3.09**	**268**		**Pn**	**07 26 32.6**	**+2.6**
INU	**Inuyama**	**3.40**	**264**		**Pn**	**07 26 35.2**	**+1.1**
ASAJ	**Asahikawa**	**8.42**	**7**	P	**Pn**	**07 27 42.9**	**-0.3**
	comp=E,5.3nm,0.4s,baz=229,slow=8.5,SNR=9.3						
ASAJ				S	**Sn**	**07 29 14.4**	**-2.7**
	comp=E,6.0nm,0.7s,baz=64,slow=32,SNR=1.1						
JKA	**Kamikawa-asahi**	**8.42**	**7**		**Pn**	**07 27 42.3**	**-0.9**
JCJ	**Chichijima**	**8.68**	**174**	P	**Pn**	**07 27 44.9**	**-1.9**
	comp=E,23nm,0.3s,baz=281,slow=23,SNR=7.8						
JCJ				S	Sn	07 29 14.1	-9.5
	comp=E,38nm,0.4s,baz=279,slow=22,SNR=1.8						
JNU	**Nakatsue**	**8.88**	**256**	LR	LR	07 31 36.0	
	comp=E,136nm,19.1s,baz=60,slow=40						
KSRS	**Korea Array**	**10.77**	**283**	P	**Pn**	**07 28 16.9**	**+1.6**
	comp=E,0.2nm,0.3s,baz=94,slow=15,SNR=2.8						
KSRS				LR	LR	07 32 27.0	
	comp=E,81nm,21.7s,baz=95,slow=38						
	comp=E,2.1nm,0.8s						
USRK	**Ussuriysk Ar.**	**10.97**	**323**	P	**Pn**	**07 28 19.6**	**+1.6**
	comp=E,0.2nm,0.3s,baz=129,slow=13,SNR=2.2						
	comp=E,2.8nm,0.8s						
KLR	**Kul'dur**	**15.13**	**336**	LR	LR	07 34 13.9	
	comp=E,65nm,21.8s,baz=142,slow=34						
PETK	**Petropavlovsk-**	**20.90**	**29**	P	**P**	**07 30 24.0**	**+1.1**
	comp=E,2.5nm,0.8s,baz=217,slow=9.1,SNR=3.9						
PETK				LR	LR	07 39 02.5	
	comp=E,25nm,21.3s,baz=216,slow=38						
	comp=E,2.5nm,0.8s						
MA2	**Magadan**	**24.64**	**12**	LR	LR	07 40 59.4	
	comp=E,27nm,19.7s,baz=194,slow=37						
YAK	**Yakutsk**	**27.27**	**348**	LR	LR	07 41 50.0	
	comp=E,53nm,18.9s,baz=150,slow=35						
H11N2	**WAKE ISLAND Hy**	**27.70**	**118**	T	T	08 00 34.2	
	baz=311,slow=75,SNR=110						
H11N1	**WAKE ISLAND Hy**	**27.71**	**118**	T	T	08 00 28.9	
	baz=311,slow=75,SNR=141						
H11N3	**WAKE ISLAND Hy**	**27.72**	**118**	T	T	08 00 36.2	
	baz=311,slow=75,SNR=140						
SEY	**Seymchan**	**28.08**	**11**	LR	LR	07 44 38.4	
	comp=E,54nm,19.2s,baz=326,slow=40						
SONM	**Songino Array**	**28.34**	**306**	P	**P**	**07 31 33.0**	**-1.5**
	comp=E,0.5nm,0.6s,baz=77,slow=6.5,SNR=1.4						
SONM				LR	LR	07 42 09.3	
	comp=E,51nm,18.8s,baz=187,slow=35						
	comp=E,0.5nm,0.6s						
SONM	**Songino Array**	**28.34**	**306**	IAmb	IAmb	07 32 09.6	
	comp=Z,2.2nm,1.4s						
H11S1	**WAKE ISLAND Hy**	**28.37**	**121**	T	T	08 01 28.5	
	baz=312,slow=76,SNR=320						
H11S3	**WAKE ISLAND Hy**	**28.37**	**121**	T	T	08 01 24.7	
	baz=312,slow=76,SNR=258						
H11S2	**WAKE ISLAND Hy**	**28.39**	**121**	T	T	08 01 25.8	
	baz=312,slow=76,SNR=226						
TLY	**Talaya**	**31.02**	**313**	LR	LR	07 44 31.0	
	comp=Z,29nm,20.9s,baz=74,slow=36						
ZALV	**Zalesovo Beam**	**42.63**	**313**	P	**P**	**07 33 35.8**	**-0.8**
	comp=Z,0.8nm,0.5s,baz=102,slow=8.1,SNR=3.0						
	comp=Z,0.8nm,0.5s						
MKAR	**Makanchi Array**	**44.63**	**303**	P	**P**	**07 33 52.3**	**-0.5**
	comp=Z,1.7nm,0.7s,baz=90,slow=9.2,SNR=24						
	comp=Z,1.7nm,0.7s						
MKAR	**Makanchi Array**	**44.63**	**303**	P	**P**	**07 33 52.8**	**0.0**
BRDH	**Bariadhala**	**44.70**	**267**	LR	LR	07 56 13.7	
	comp=Z,100nm,19.6s,baz=22,slow=41						
MAKZ	**Makanchi**	**44.84**	**303**	P	**P**	**07 33 55.4**	**+0.9**
MAKZ				IAmb	IAmb	07 34 05.7	
	comp=Z,2.4nm,0.9s						
KAPI	**Kappang**	**45.26**	**211**	LR	LR	07 51 31.4	
	comp=Z,24nm,20.0s,baz=222,slow=34						
KURK	**Kurchatov**	**46.56**	**309**	P	**P**	**07 34 07.8**	**-0.2**
KURK				IAmb	IAmb	07 34 16.2	
	comp=Z,3.8nm,0.8s						
KURBB	**Kurchatov Arra**	**46.63**	**309**	P	**P**	**07 34 07.2**	**-1.3**
	comp=Z,1.2nm,0.4s,baz=84,slow=7.8,SNR=15						
	comp=Z,1.2nm,0.4s						
ILAR	**Eielson Array**	**50.69**	**32**	P	**P**	**07 34 40.9**	**+1.4**
	comp=Z,0.4nm,0.7s,baz=272,slow=7.7,SNR=5.5						
	comp=Z,0.4nm,0.7s						
BVAR	**Borovoye Array**	**51.28**	**313**	P	**P**	**07 34 44.6**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=69,slow=7.9,SNR=3.6						
	comp=Z,0.7nm,0.6s						
WRA	**Warramunga Arr**	**55.77**	**188**	P	**P**	**07 35 16.5**	**-0.8**
	comp=Z,2.1nm,0.8s,baz=6.5,slow=7.4,SNR=14						
	comp=Z,2.1nm,0.8s						
WRA	**Warramunga Arr**	**55.77**	**188**	IAmb	IAmb	07 35 17.6	
	comp=Z,0.2nm,0.9s						
ASAR	**Alice Springs**	**59.50**	**188**	P	**P**	**07 35 43.2**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=20,slow=10.0,SNR=8.7						
	comp=Z,0.8nm,0.8s						
YKA	**Yellowknife Ar**	**65.02**	**30**	P	**P**	**07 36 20.7**	**+0.6**
	comp=Z,0.1nm,0.7s,baz=303,slow=7.7,SNR=2.9						
	comp=Z,0.1nm,0.7s						
STKA	**Stephens Creek**	**67.28**	**180**	P	**P**	**07 36 34.5**	**-0.3**
	comp=Z,2.2nm,0.9s,baz=307,slow=3.9,SNR=3.1						
	comp=Z,2.2nm,0.9s						
STKA	**Stephens Creek**	**67.28**	**180**	IAmb	IAmb	07 36 36.0	
	comp=Z,17nm,1.1s						
FINES	**FINESS Array B**	**69.84**	**332**	P	**P**	**07 36 49.6**	**-1.0**
	comp=Z,2.4nm,0.8s,baz=36,slow=12,SNR=1.7						
	comp=Z,2.4nm,0.8s						
NOA	**NORSAR Array B**	**75.28**	**337**	P	**P**	**07 37 23.1**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=44,slow=2.3,SNR=2.0						
	comp=Z,0.3nm,0.5s						
NVAR	**Mina Array Bea**	**75.92**	**53**	P	**P**	**07 37 30.0**	**+2.6**
	comp=Z,0.2nm,0.5s,baz=316,slow=6.8,SNR=3.3						
	comp=Z,0.2nm,0.5s						
PDAR	**Pinedale Array**	**78.71**	**45**	P	**P**	**07 37 42.0**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=277,slow=5.1,SNR=2.3						
	comp=Z,0.2nm,0.5s						
TXAR	**Lajitas Array**	**91.07**	**52**	P	**P**	**07 38 46.8**	**+1.6**
	comp=Z,0.4nm,0.7s,baz=305,slow=2.5,SNR=5.2						
	comp=Z,0.4nm,0.7s						
H03N2	**Juan Fernandez**	**147.08**	**98**	T	T	10 29 52.8	
	baz=290,slow=76,SNR=57						
H03N3	**Juan Fernandez**	**147.09**	**98**	T	T	10 29 55.1	
	baz=290,slow=76,SNR=92						
H03N1	**Juan Fernandez**	**147.10**	**98**	T	T	10 29 53.4	
	baz=290,slow=76,SNR=87						
LPAZ	**La Paz**	**147.51**	**61**	PKPbc	**PKPbc**	**07 45 25.1**	**-0.5**
	comp=Z,2.8nm,0.9s,baz=354,slow=8.1,SNR=8.5						
LPAZ	**La Paz**	**147.51**	**61**		**PKiKP**	**07 45 27.2**	**-0.5**

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*ASRS **04** 07:30:27.0±1.1,53.60N×87.83E,h0km,M2.7(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 04 07:30:30.9±2.9,**53.56N**×**87.88E,h0**km,**mbtmp2.8**/2, **ML2.5**/2,**Error ellipse: s-maj=25.6km s-min=17.9km az=48.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.86**	**283**	I	I	07 43 50.0	
	baz=100,slow=344,SNR=3.3						
ZALV	**Zalesovo Beam**	**1.86**	**283**	Pn	Pn	07 31 03.6	-0.3
	1.0nm,0.3s,baz=102,slow=16,SNR=11						
ZALV				Lg	Lg	07 31 30.0	
	2.2nm,0.3s,baz=104,slow=23,SNR=11						
KURBB	**Kurchatov Arra**	**6.47**	**247**	Pn	Pn	07 32 07.2	-0.1
	0.1nm,0.3s,baz=63,slow=14,SNR=9.4						
KURBB				Sn	Sn	07 33 21.2	-0.5
	baz=65,slow=24,SNR=1.6						
KURBB				Lg	Lg	07 33 56.2	
	baz=64,slow=32,SNR=4.6						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**7.67**	**210**	Pn	Pn	07 32 25.6	+1.8
	0.1nm,0.3s,baz=30,slow=12,SNR=5.8						
	0.1nm,0.2s						
KSH2	**Kashi**	**16.70**	**215**	P	P	07 34 33.1	+4.4
KSH2				pmax	pmax		
	comp=Z,2.0nm,0.8s						

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*FUNV **04** 07:31:51.8,6.79N×73.12W,h160km,MW3.4,Presumed earthquake*
*RSNC **04** 07:31:52.3±0.0,7 N±1 ×7 3W± ,h147km±1km,M2.7,mb3.0, ML2.4,MLv3.0*
ISC 04 07:31:50.3±1.3,**6.84N**±0.03×**73.12W**±0.04,**h159**km±8km, **n32,**σ**1.20**/60,**Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.26**	**194**	P	**Pn**	**07 32 12.3**	**+0.2**
BARC				S	**Sn**	**07 32 27.8**	**-0.9**
BRJC	**Barrancabermej**	**0.63**	**282**	P	**Pn**	**07 32 13.9**	**+0.6**
BRJC				S	**Sn**	**07 32 31.0**	**+0.1**
PAMC	**Pamplona, Colo**	**0.65**	**40**	P	**Pn**	**07 32 15.0**	**+1.0**
PAMC				S	**Sn**	**07 32 31.8**	**-0.3**
RUSC	**La Rusia**	**0.95**	**178**	P	**Pn**	**07 32 16.2**	**+0.2**
RUSC				S	**Sn**	**07 32 35.1**	**-0.7**
RUSC	**La Rusia**	**0.95**	**178**	*e*P	**Pn**	**07 32 16.3**	**+0.2**
RUSC				*e*S	**Sn**	**07 32 34.6**	**-1.1**
CAPV	**Capacho**	**1.29**	**38**	*e*P	**Pn**	**07 32 20.2**	**+1.5**
CAPV				*e*S	**Sn**	**07 32 39.9**	**-0.6**
PTBC	**PUERTO BERRIO,**	**1.36**	**257**	P	**Pn**	**07 32 19.0**	**-0.1**
PTBC				S	**Sn**	**07 32 40.0**	**-1.3**
OCAC	**Ocana**	**1.40**	**352**	P	**Pn**	**07 32 20.3**	**+0.6**
OCAC				S	**Sn**	**07 32 42.3**	**0.0**
SPBC	**San Pablo de B**	**1.52**	**219**	P	**Pn**	**07 32 21.3**	**+0.5**
SPBC				S	**Sn**	**07 32 43.7**	**-0.5**
CHIC	**Chingaza**	**2.28**	**195**	P	**Pn**	**07 32 30.6**	**+0.9**
CHIC				S	**Sn**	**07 32 59.8**	**-0.3**
ROSC	**El Rosal**	**2.32**	**211**	P	**Pn**	**07 32 32.6**	**+2.5**
ROSC				S	**Sn**	**07 33 01.9**	**+1.1**
CVER	**Cruz Verde, Cu**	**2.50**	**202**	P	**Pn**	**07 32 33.6**	**+1.3**
CVER				S	**Sn**	**07 33 06.5**	**+1.8**
UREC	**San Jos de Ur**	**2.56**	**291**	P	**Pn**	**07 32 32.1**	**-0.5**
UREC				S	**Sn**	**07 33 03.0**	**-2.2**
SOCV	**Socops**	**2.66**	**57**	*e*P	**Pn**	**07 32 34.8**	**+1.0**
SOCV				*e*S	**Sn**	**07 33 06.7**	**-0.8**
GUY2C	**Guyana, Caldas**	**2.75**	**234**	P	**Pn**	**07 32 37.0**	**+1.6**
GUY2C				S	**Sn**	**07 33 10.3**	**+0.1**
VILC	**Villavicencio,**	**2.77**	**192**	P	**Pn**	**07 32 36.1**	**+0.7**
VILC				S	**Sn**	**07 33 10.4**	**+0.1**
CBOC	**Ciudad Bolivar**	**3.04**	**251**	P	**Pn**	**07 32 40.1**	**+1.5**
CBOC				S	**Sn**	**07 33 15.9**	**-0.1**
DBBC	**Dabeiba**	**3.07**	**273**	P	**Pn**	**07 32 40.0**	**+1.0**
DBBC				S	**Sn**	**07 33 15.5**	**-1.2**
SDV	**Santo Domingo**	**3.19**	**50**	P	**Pn**	**07 32 42.0**	**+1.4**
SDV				S	**Sn**	**07 33 18.6**	**-1.0**
SDV	**Santo Domingo**	**3.19**	**50**	*e*P	**Pn**	**07 32 41.6**	**+1.0**
SDV				*e*S	**Sn**	**07 33 18.7**	**-0.9**
ARGC	**Ariguani, Magd**	**3.19**	**340**	P	**Pn**	**07 32 42.4**	**+1.9**
ARGC				S	**Sn**	**07 33 20.1**	**+0.6**
PRAC	**Prado**	**3.57**	**210**	P	**Pn**	**07 32 46.2**	**+0.9**
PRAC				S	**Sn**	**07 33 28.2**	**+0.1**
APAC	**Apartado, Choc**	**3.59**	**287**	P	**Pn**	**07 32 46.1**	**+0.6**
APAC				S	**Sn**	**07 33 29.4**	**+1.0**
SJCC	**San Jacinto, C**	**3.65**	**326**	P	**Pn**	**07 32 46.0**	**-0.4**
SJCC				S	**Sn**	**07 33 28.0**	**-2.0**
PLMC	**San Jos del P**	**3.69**	**239**	P	**Pn**	**07 32 47.7**	**+0.8**
PLMC				S	**Sn**	**07 33 30.3**	**-0.5**
URMC	**La Uribe, Meta**	**3.79**	**199**	P	**Pn**	**07 32 48.9**	**+0.8**
URMC				S	**Sn**	**07 33 32.2**	**-1.0**
CRJC	**Cerrejon, Guaj**	**4.16**	**3**	P	**Pn**	**07 32 52.3**	**-0.6**
CRJC				S	**Sn**	**07 33 40.7**	**-1.0**
MACC	**Macarena, Meta**	**4.72**	**189**	P	**Pn**	**07 32 59.5**	**-0.8**
MACC				S	**Sn**	**07 33 50.8**	**-4.2**

MAPV	**Macapo**	**5.49**	**57**	*e*P	**Pn**	**07 33 09.9**	**-0.4**
FLOC	**Florencia**	**5.80**	**206**	P	**Pn**	**07 33 15.2**	**+0.6**
FLOC				S	**Sn**	**07 34 18.3**	**-2.3**
BENV	**Beln**	**6.28**	**60**	*e*P	**Pn**	**07 33 21.1**	**+0.2**
CACV	**CAICARA DEL OR**	**6.57**	**83**	*e*P	Pn	07 33 30.0	+5.4

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*ASRS **04** 07:50:36.0±0.8, 53°.80N×88°.16E, h0^{km}, M2.9(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

NNC 04 07:50:38.0±2.1**, 53°.66N×88°.38E, h0**^{km}**, mb3.6, mpv3.2, 3C-5D, Error ellipse: s-maj=18.0km s-min=9.7km az=51.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**2.13**	**279**	⇓Pn	Pn	07 51 14.5	-0.3
	6.3nm,0.7s						
ZAA0				⇓Sn	Sn	07 51 43.0	+1.1
	32nm,0.9s						
KURBB	**Kurchatov Arra**	**6.78**	**247**	⇓Pn	Pn	07 52 17.9	-0.7
	1.1nm,0.3s						
KURBB				⇓Sn	Sn	07 53 36.8	+0.3
	4.0nm,0.7s						
KURBB				⇑Lg	Lg	07 54 12.7	
	6.6nm,0.8s						
MK31	**Makanchi Array**	**7.91**	**212**	⇑Pn	Pn	07 52 35.9	+1.8
	baz=31,slow=13,SNR=7.4						
MK31				⇓Sn	Sn	07 54 04.9	+0.7
	0.7nm,0.8s,baz=34,slow=27,SNR=4.8						
MK31				⇑Lg	Lg	07 54 50.8	
	1.2nm,0.7s						

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*IDC **04** 07:57:39.1±1.1, 46°.66N×27°.34W, h0^{km}, mb3.5/7, mbtmp3.4/8, MS3.4/32, Error ellipse: s-maj=45.5km s-min=21.5km az=29.0*

ISC 04 07:57:41.7±1.0**, 46°.7N**±0°.3×**27°.3W**±0°.2**, h16**^{km}**, n38, σ0^{s}88**/8**, mb3.6**/6**, MS3.3**/31**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**18.39**	**104**	P	**Pn**	**08 01 57.1**	**+1.1**
	0.4nm,0.3s,baz=299,slow=13,SNR=1.9						
ESDC				LR	LR	08 07 33.9	
	comp=Z,133nm,18.7s,baz=281,slow=32						
MDT	**Midelt**	**22.19**	**120**	LR	LR	08 09 37.9	
	comp=Z,50nm,19.7s,baz=341,slow=32						
SFJD	**Kangerlussuaq**	**23.75**	**337**	LR	LR	08 10 04.3	
	comp=Z,122nm,20.3s,baz=164,slow=31						
DAVOX	**Davos/Dischmat**	**25.37**	**76**	LR	LR	08 11 39.6	
	comp=Z,67nm,21.3s,baz=257,slow=33						
SCHQ	**Schefferville**	**25.99**	**303**	LR	LR	08 11 11.0	
	comp=Z,86nm,20.8s,baz=96,slow=31						
HFS	**Hagfors**	**27.42**	**46**	LR	LR	08 12 43.6	
	comp=Z,60nm,18.3s,baz=35,slow=33						
GERES	**GERESS Array B**	**27.45**	**70**	LR	LR	08 13 26.7	
	comp=Z,85nm,20.1s,baz=263,slow=34						
FRB	**Frobisher Bay**	**28.38**	**322**	LR	LR	08 12 05.4	
	comp=Z,74nm,18.6s,baz=90,slow=30						
VRAC	**Vranov**	**29.22**	**68**	LR	LR	08 15 04.6	
	comp=Z,109nm,18.7s,baz=270,slow=36						
KEST	**Kesra**	**29.44**	**98**	LR	LR	08 13 55.6	
	comp=Z,161nm,21.7s,baz=304,slow=33						
FINES	**FINESS Array B**	**33.59**	**44**	LR	LR	08 16 20.6	
	comp=Z,35nm,18.9s,baz=14,slow=33						
AKASG	**Malin Array Be**	**36.79**	**62**	LR	LR	08 19 34.1	
	comp=Z,33nm,18.2s,baz=290,slow=36						
RES	**Resolute Bay**	**39.76**	**337**	LR	LR	08 18 41.3	
	comp=Z,76nm,18.5s,baz=16,slow=32						
OBN	**Obninsk**	**39.88**	**54**	LR	LR	08 21 51.5	
	comp=Z,75nm,18.1s,baz=284,slow=36						
TORD	**Torodi Ar. Bea**	**41.37**	**134**	P	**P**	**08 05 26.2**	**-0.8**
	1.0nm,0.8s,baz=310,slow=7.7,SNR=5.8						
	1.0nm,0.8s						
SJG	**San Juan**	**42.73**	**241**	LR	LR	08 21 03.4	
	comp=Z,37nm,19.1s,baz=43,slow=33						
TKL	**Tuckaleechee C**	**43.04**	**276**	LR	LR	08 22 57.5	
	comp=Z,66nm,18.5s,baz=74,slow=35						
BRTR	**Keskin Array B**	**44.02**	**76**	LR	LR	08 23 57.6	
	comp=Z,33nm,21.1s,baz=282,slow=36						
ULM	**Lac du Bonnet**	**44.14**	**301**	LR	LR	08 21 24.7	
	comp=Z,47nm,18.6s,baz=46,slow=32						
DBIC	**Dimbokro**	**44.29**	**147**	LR	LR	08 22 47.9	
	comp=Z,68nm,18.1s,baz=10.0,slow=34						
MDP	**Montagnes des**	**46.81**	**216**	LR	LR	08 22 05.4	
	comp=Z,21nm,18.0s,baz=130,slow=31						
YKA	**Yellowknife Ar**	**48.90**	**322**	P	**P**	**08 06 26.1**	**-0.3**
	0.5nm,0.9s,baz=61,slow=6.8,SNR=5.6						
	0.5nm,0.9s						
GNI	**Garni**	**51.10**	**70**	LR	LR	08 31 04.9	
	comp=Z,15nm,18.1s,baz=320,slow=39						
SDV	**Santo Domingo**	**52.65**	**238**	LR	LR	08 25 01.6	
	comp=Z,16nm,21.2s,baz=320,slow=31						
PDAR	**Pinedale Array**	**56.00**	**298**	P	**P**	**08 07 18.9**	**-0.6**
	0.6nm,0.8s,baz=70,slow=7.1,SNR=5.6						
PDAR				LR	LR	08 29 33.7	
	comp=Z,28nm,18.3s,baz=36,slow=34						
	0.6nm,0.8s						
ROSC	**El Rosal**	**58.06**	**239**	LR	LR	08 29 27.8	
	comp=Z,26nm,21.5s,baz=44,slow=33						
ANMO	**Albuquerque**	**58.65**	**289**	LR	LR	08 31 09.7	
	comp=Z,30nm,19.4s,baz=40,slow=34						
ILAR	**Eielson Array**	**59.37**	**334**	P	**P**	**08 07 42.9**	**+0.2**
	0.3nm,0.6s,baz=47,slow=6.1,SNR=4.5						
	0.3nm,0.6s						
TXAR	**Lajitas Array**	**60.29**	**282**	P	**P**	**08 07 50.7**	**+1.1**
	0.3nm,0.6s,baz=40,slow=6.3,SNR=2.9						
	0.3nm,0.6s						
BBB	**Bella Bella**	**60.53**	**316**	LR	LR	08 29 50.5	
	comp=Z,23nm,19.2s,baz=161,slow=32						
JTS	**Las Juntas de**	**60.54**	**253**	LR	LR	08 32 22.8	
	comp=Z,17nm,18.8s,baz=58,slow=34						
CMIG	**Matias Romero**	**62.39**	**266**	LR	LR	08 31 36.0	
	comp=Z,46nm,21.8s,baz=0.5,slow=33						
NVAR	**Mina Array Bea**	**63.92**	**299**	P	**P**	**08 08 13.7**	**-0.2**
	0.2nm,0.6s,baz=18,slow=9.1,SNR=2.1						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**63.97**	**43**	P	**P**	**08 08 13.5**	**-0.4**
	0.4nm,0.8s,baz=320,slow=6.1,SNR=2.0						
	0.4nm,0.8s						
ZALV	**Zalesovo Beam**	**64.46**	**37**	LR	LR	08 35 53.6	
	comp=Z,14nm,18.5s,baz=6.5,slow=36						
AAK	**Ala-Archa**	**67.36**	**51**	LR	LR	08 36 54.8	
	comp=Z,16nm,20.4s,baz=340,slow=35						
LPIG	**La Paz**	**68.19**	**282**	LR	LR	08 37 27.5	
	comp=Z,72nm,19.4s,baz=38,slow=35						
TLY	**Talaya**	**73.38**	**29**	LR	LR	08 43 36.6	
	comp=Z,13nm,19.0s,baz=37,slow=38						

ISC 04 08:12:21.2±1.2**, 16°.58N**±0°.03×**95°.02W**±0°.02**, h10**^{km}±9^{km}**, n29, σ1^{s}85**/58**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.53**	**14**	*e*P	**Pg**	**08 12 31.7**	**+0.2**
CMIG				*e*S	**Sg**	**08 12 38.9**	**+0.4**
CARR	**Arriaga**	**1.11**	**107**	*e*P	**Pg**	**08 12 42.0**	**-0.6**
CARR				*e*S	**Sg**	**08 12 56.4**	**-0.7**
UXUV	**UXUV**	**1.11**	**48**	*e*P	**Pg**	**08 12 42.1**	**-0.6**
UXUV				*e*S	**Sg**	**08 12 57.2**	**0.0**
HUIG	**Huatulco**	**1.32**	**233**	*e*P	**Pn**	**08 12 44.4**	**-1.4**
HUIG				*e*S	**Sg**	**08 13 01.4**	**-2.3**
NEUV	**Arroyo Zacate**	**1.35**	**327**	*e*P	**Pn**	**08 12 45.9**	**-0.3**
NEUV				*e*S	**Sg**	**08 13 03.4**	**-1.5**
OXLC	**Oaxaca**	**1.68**	**287**	*e*P	**Pn**	**08 12 49.5**	**-1.4**
OXLC				*e*S	**Sn**	**08 13 13.1**	**+0.4**
VHO	**Vista Hermosa**	**1.71**	**287**	*e*P	**Pn**	**08 12 52.2**	**+0.9**
VHO				*e*S	**Sn**	**08 13 14.2**	**+0.8**
TGIG		**1.83**	**83**	*e*P	**Pn**	**08 12 54.0**	**+1.2**
TGIG				*e*S	**Sb**	**08 13 18.6**	**+0.8**
PCIG		**1.94**	**116**	*e*P	**Pn**	**08 12 54.1**	**0.0**
PCIG				*e*S	**Sn**	**08 13 15.3**	**-3.2**
PEIG	**Puerto Escondi**	**2.12**	**255**	*e*P	**Pn**	**08 12 55.8**	**-1.0**
PEIG				*e*S	**Sn**	**08 13 22.5**	**-0.8**
YOIG	**Yosondua**	**2.44**	**277**	*e*P	**Pn**	**08 13 03.1**	**+1.8**
YOIG				*e*S	**Sn**	**08 13 33.6**	**+2.2**
TOIG	**Toxpalan**	**2.47**	**308**	*e*P	**Pn**	**08 13 03.3**	**+1.6**
TOIG				*e*S	**Sn**	**08 13 31.6**	**-0.3**
TXIG	**Tlaxiaco**	**2.72**	**285**	*e*P	**Pn**	**08 13 07.3**	**+2.1**
TXIG				*e*S	**Sb**	**08 13 43.7**	**+0.1**
CCIG	**Comitan**	**2.78**	**96**	*e*P	**Pn**	**08 13 08.2**	**+2.2**
CCIG				*e*S	**Sb**	**08 13 44.5**	**-0.8**
TPIG	**Tehuac#an**	**2.89**	**310**	*e*P	**Pb**	**08 13 13.6**	**+0.6**
TPIG				*e*S	**Sn**	**08 13 43.0**	**+0.6**
HLIG	**Huajuapan de L**	**2.94**	**295**	*e*P	**Pb**	**08 13 13.2**	**-0.6**
HLIG				*e*S	**Sn**	**08 13 45.6**	**+1.9**
PNIG	**Pinotepa**	**2.99**	**267**	*e*P	**Pn**	**08 13 08.4**	**-0.3**
PNIG				*e*S	**Sn**	**08 13 43.5**	**-1.1**
PATR	**El Naranjo**	**3.05**	**118**	*e*P	**Pn**	**08 13 11.3**	**+1.6**
PATR				*e*S	**Sn**	**08 13 46.6**	**+0.2**
PAVE	**Pavencul**	**3.06**	**116**	*e*P	**Pn**	**08 13 10.9**	**+1.0**
PAVE				*e*S	**Sn**	**08 13 47.4**	**+0.7**
CHUJ	**Union Juarez**	**3.17**	**117**	*e*P	**Pn**	**08 13 12.9**	**+1.5**
CHUJ				*e*S	**Sn**	**08 13 48.5**	**-0.8**
JAUV	**Jalcomulco**	**3.25**	**329**	*e*P	**Pn**	**08 13 12.6**	**+0.2**
JAUV				*e*S	**Sn**	**08 13 48.6**	**-2.6**
FTIG	**Fresnillo de T**	**3.26**	**294**	*e*P	**Pn**	**08 13 17.3**	**+4.8**
FTIG				*e*S	**Sb**	**08 14 01.8**	**+2.8**
MGIG	**Malinaltepec**	**3.52**	**281**	*e*P	**Pn**	**08 13 17.6**	**+1.4**
MGIG				*e*S	**Sb**	**08 14 07.9**	**+1.2**
TLIG	**Tlapa**	**3.53**	**287**	*e*P	**Pn**	**08 13 18.5**	**+2.2**
TLIG				*e*S	**Sb**	**08 14 06.8**	**-0.1**
HUEH	**Huehuetenango**	**3.61**	**110**	*e*P	**Pb**	**08 13 27.3**	**+2.0**
HUEH				*e*S	**Sb**	**08 14 08.8**	**-0.4**
CRIG	**Cruz Grande**	**3.94**	**273**	*e*P	**Pn**	**08 13 23.1**	**+1.2**
CRIG				*e*S	**Sb**	**08 14 18.7**	**0.0**
CXUV	**Coxquihui**	**4.33**	**326**	*e*P	**Pn**	**08 13 26.8**	**-0.4**
CXUV				*e*S	**Sn**	**08 14 11.2**	**-6.6**
SCIG	**Sabancuy**	**4.36**	**56**	*e*P	**Pn**	**08 13 28.2**	**+0.6**
SCIG				*e*S	**Sn**	**08 14 14.4**	**-4.0**
ARIG	**Puente Sto Nin**	**5.36**	**289**	*e*P	**Pn**	**08 13 43.4**	**+2.0**
ARIG				*e*S	**Sn**	**08 14 40.6**	**-2.6**

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*NEIC **04** 08:28:04.6±1.4, 23°.5S±0°.1×179°.7W±0°.1, h511^{km}±9^{km}, mb4.4/22, Error ellipse: s-maj=21.6km s-min=16.3km az=138.0*

*IDC **04** 08:28:04.6±1.7, 23°.49S×179°.76W, h513^{km}±17^{km}, mb3.3/7, mbtmp4.1/9, Error ellipse: s-maj=28.6km s-min=16.8km az=143.0*

ISC 04 08:28:05.7±0.6**, 23°.59S**±0°.09×**179°.69W**±0°.10**, h536**^{km}**, n36, σ1^{s}61**/37**, mb4.3**/17**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.20**	**340**	P	**P**	**08 29 43.5**	**-2.2**
	3.8nm,0.5s,baz=116,slow=24,SNR=6.7						
NIUE	**Niue**	**10.14**	**66**	P	**P**	**08 30 22.1**	**-2.8**
MARNC	**Mare, Loyalty**	**11.54**	**278**	P	**P**	**08 30 37.4**	**-2.1**
URZ	**Urewera**	**14.88**	**190**	P	**P**	**08 31 14.7**	**+0.8**
	5.9nm,0.9s,baz=153,slow=9.3,SNR=1.3						
URZ				S	**S**	**08 33 44.1**	**-5.0**
	3.4nm,0.5s,baz=352,slow=13,SNR=1.6						
BKZ	**Black Stump Fm**	**15.87**	**191**	P	**P**	**08 31 23.8**	**-0.4**
MRNZ	**Matariki Terra**	**18.86**	**198**	P	**P**	**08 31 52.6**	**+0.7**
DSZ	**Denniston Nort**	**19.45**	**199**	P	**P**	**08 31 58.8**	**+1.4**
KHZ	**Kahutara**	**19.61**	**195**	P	**P**	**08 31 59.7**	**+1.1**
LTZ	**Lake Taylor**	**20.27**	**197**	P	**P**	**08 32 04.9**	**+0.1**
LTZ				IAmb	IAmb	08 32 42.1	
	comp=Z,11nm,1.1s						
INZ	**Inchbonnie**	**20.46**	**199**	P	**P**	**08 32 06.9**	**+0.5**
RPZ	**Rata Peaks**	**21.48**	**199**	P	**P**	**08 32 15.8**	**+0.2**
	comp=Z,9.1nm,0.8s,baz=24,slow=3.7,SNR=1.5						
	comp=Z,9.1nm,0.8s						
WHZ	**Wether Hill Ro**	**24.41**	**201**	P	**P**	**08 32 42.8**	**+1.1**
ARMA	**Armidale**	**26.40**	**249**	P	**P**	**08 33 00.7**	**+1.0**
ARMA				IAmb	IAmb	08 33 02.1	
	comp=Z,20nm,1.4s						
EIDS	**Eidsvold**	**26.64**	**260**	P	**P**	**08 33 02.3**	**+0.6**
EIDS				IAmb	IAmb	08 33 10.6	
	comp=Z,23nm,1.4s						
CTAO	**Charters Tower**	**31.76**	**270**	P	**P**	**08 33 46.7**	**+0.5**
CTAO				IAmb	IAmb	08 33 47.2	
	comp=Z,13nm,0.6s						
TOO	**Toolangi**	**32.86**	**237**	P	**P**	**08 33 56.1**	**+0.8**
TOO				IAmb	IAmb	08 34 25.8	
	comp=Z,9.9nm,1.5s						
STKA	**Stephens Creek**	**35.10**	**248**	P	**P**	**08 34 14.8**	**+0.6**
	comp=Z,2.7nm,0.4s,baz=95,slow=11,SNR=15						
	comp=Z,2.7nm,0.4s						
STKA	**Stephens Creek**	**35.10**	**248**	IAmb	IAmb	08 34 18.6	
	comp=Z,21nm,1.1s						
INKA	**Innaminka**	**35.80**	**255**	P	**P**	**08 34 21.1**	**+1.1**
BBOO	**Buckleboo**	**39.83**	**247**	P	**P**	**08 34 52.5**	**-0.4**
BBOO				IAmb	IAmb	08 35 06.2	
	comp=Z,12nm,1.2s						
AS31	**Alice Springs**	**42.37**	**260**	P	**P**	**08 35 13.2**	**0.0**
ASAR	**Alice Springs**	**42.37**	**260**	P	**P**	**08 35 13.2**	**-0.1**
	comp=Z,4.0nm,0.5s,baz=92,slow=7.5,SNR=86						
ASAR				ScP	**ScP**	**08 39 57.0**	**+2.9**
	comp=Z,0.5nm,0.9s,baz=91,slow=5.2,SNR=4.3						
	comp=Z,4.0nm,0.5s						
WR8	**Warramunga Arr**	**42.56**	**266**	P	**P**	**08 35 14.2**	**-0.6**
WR8				IAmb	IAmb	08 35 52.3	
	comp=Z,12nm,1.4s						
WB0	**Warramunga Arr**	**42.70**	**266**	P	**P**	**08 35 15.2**	**-0.7**
WB0				IAmb	IAmb	08 35 15.8	
	comp=Z,8.2nm,0.7s						
WRA	**Warramunga Arr**	**42.71**	**266**	P	**P**	**08 35 15.1**	**-0.9**
	comp=Z,5.3nm,0.6s,baz=102,slow=8.1,SNR=176						
WRA				ScP	**ScP**	**08 39 59.5**	**+4.1**
	comp=Z,0.5nm,1.2s,baz=102,slow=3.4,SNR=4.7						
	comp=Z,5.3nm,0.6s						
WRA	**Warramunga Arr**	**42.71**	**266**	P	**P**	**08 35 15.3**	**-0.6**
FORT	**Forrest**	**46.69**	**249**	P	**P**	**08 35 46.1**	**-0.2**
FORT				IAmb	IAmb	08 35 47.3	
	comp=Z,6.8nm,0.8s						
KNRA	**Kununurra**	**48.98**	**269**	P	**P**	**08 36 03.4**	**-0.2**
KNRA				IAmb	IAmb	08 36 10.7	
	comp=Z,20nm,1.4s						
MORW	**Morawa**	**57.25**	**250**	P	**P**	**08 37 02.4**	**0.0**
BELA	**Belgrano 2**	**76.71**	**173**	P	**P**	**08 39 03.1**	**+1.9**
NVAR	**Mina Array Bea**	**84.33**	**44**	P	**P**	**08 39 42.3**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=242,slow=4.4,SNR=2.3						
	comp=Z,0.3nm,0.6s						
N15K	**Kwethluk River**	**84.98**	**10**	P	**P**	**08 39 44.7**	**+0.7**
N15K				IAmb	IAmb	08 39 45.8	
	comp=Z,20nm,1.3s						
TXAR	**Lajitas Array**	**90.02**	**58**	P	**P**	**08 40 10.5**	**+1.9**
	comp=Z,0.4nm,0.7s,baz=208,slow=7.0,SNR=4.3						
	comp=Z,0.4nm,0.7s						
PDAR	**Pinedale Array**	**92.27**	**44**	P	**P**	**08 40 19.3**	**+0.5**
	comp=Z,0.3nm,0.8s,baz=244,slow=4.7,SNR=2.1						
	comp=Z,0.3nm,0.8s						
HFS	**Hagfors**	**142.29**	**349**	PKhKP	PKPpre	08 46 32.8	
	comp=Z,2.1nm,0.3s,baz=67,slow=3.9,SNR=21						
EKA	**Eskdalemuir Ar**	**148.19**	**4**	PKPbc	**PKPbc**	**08 46 50.5**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=345,slow=2.1,SNR=5.7						

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*FUNV **04** 08:28:06.9, 11°.01N×73°.61W, h35^{km}, MW3.6, Presumed earthquake*

*RSNC **04** 08:28:09.3±0.0, 11°N±1°×7°3W±°, h69^{km}±2^{km}, M2.5, ML2.3, MLv2.9*

ISC 04 08:28:08.2±1.6**, 10°.87N**±0°.06×**73°.43W**±0°.04**, h77**^{km}±15^{km}**, n16, σ0^{s}88**/31**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRJC	**Cerrejon, Guaj**	**0.56**	**74**	P	**Pn**	**08 28 21.8**	**-0.6**
CRJC				S	**Sn**	**08 28 32.2**	**-0.6**
MCQV	**Machiques**	**1.19**	**133**	*e*P	**Pn**	**08 28 30.4**	**+0.9**
MCQV				*e*S	**Sn**	**08 28 47.6**	**+2.1**
ARGC	**Ariguani, Magd**	**1.29**	**219**	P	**Pn**	**08 28 30.5**	**-0.2**
ARGC				S	**Sn**	**08 28 47.7**	**+0.1**
URIC	**Uribia, Colomb**	**1.63**	**59**	P	**Pn**	**08 28 35.5**	**+0.3**
URIC				S	**Sn**	**08 28 56.3**	**+0.7**
SJCC	**San Jacinto, C**	**1.98**	**241**	P	**Pn**	**08 28 39.6**	**-0.2**
SJCC				S	**Sn**	**08 29 04.4**	**+0.5**
OCAC	**Ocana**	**2.61**	**178**	P	**Pn**	**08 28 47.6**	**-0.9**
OCAC				S	**Sn**	**08 29 19.1**	**-0.2**
CAPV	**Capacho**	**3.18**	**160**	*e*P	**Pn**	**08 28 55.8**	**-0.4**
CAPV				*e*S	**Sn**	**08 29 32.7**	**-0.4**
SDV	**Santo Domingo**	**3.38**	**125**	P	**Pn**	**08 28 59.2**	**+0.3**
SDV				S	**Sn**	**08 29 37.0**	**-1.1**
SDV	**Santo Domingo**	**3.38**	**125**	*e*P	**Pn**	**08 28 58.5**	**-0.5**
SDV				*e*S	**Sn**	**08 29 37.3**	**-0.8**
PAMC	**Pamplona, Colo**	**3.58**	**168**	P	**Pn**	**08 29 02.0**	**+0.1**
PAMC				S	**Sn**	**08 29 43.1**	**-0.1**
SOCV	**Socops**	**3.60**	**135**	*e*P	**Pn**	**08 29 02.4**	**+0.6**
SOCV				*e*S	**Sn**	**08 29 43.0**	**-0.3**
UREC	**San Jos de Ur**	**3.73**	**214**	P	**Pn**	**08 29 05.1**	**+1.6**
UREC				S	**Sn**	**08 29 43.8**	**-2.5**
BARC	**Barichara**	**4.25**	**177**	P	**Pn**	**08 29 10.5**	**-0.4**
BARC				S	**Sn**	**08 29 59.3**	**-0.1**
PTBC	**PUERTO BERRIO,**	**4.42**	**193**	P	**Pn**	**08 29 13.9**	**+1.0**
PTBC				S	**Sn**	**08 30 03.4**	**+0.3**
RUSC	**La Rusia**	**4.95**	**176**	P	**Pn**	**08 29 21.4**	**+0.8**
RUSC				S	**Sn**	**08 30 16.7**	**-0.2**
BENV	**Beln**	**5.80**	**98**	*e*P	**Pn**	**08 29 31.5**	**-0.3**

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*IDC **04** 08:39:36.4±3.8, 4°.78S×104°.32E, h0^{km}, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=207.1km s-min=20.8km az=53.0*

*DJA **04** 08:39:43.9±0.6, 6°S±4°×10°4E±°, h26^{km}±5^{km}, M3.6/12, MLv3.6/12*

ISC 04 08:39:44.0±1.1**, 5°.78S**±0°.07×**103°.84E**±0°.06**, h42**^{km}**, n19, σ0^{s}60**/14**, mb3.3**/5**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**0.70**	**69**	P	**Pn**	**08 39 56.9**	**-0.5**
KASI				S	**Sn**	**08 40 07.0**	**-0.1**
LWLI	**Liwa**	**0.79**	**16**	P	**Pn**	**08 39 58.3**	**-0.5**
LWLI				S	**Sn**	**08 40 09.6**	**+0.2**
MDSI	**Maura Dua**	**1.33**	**15**	P	**Pn**	**08 40 06.6**	**+0.5**
MDSI				S	**Sn**	**08 40 23.6**	**+1.1**
KLI	**Kotabumi**	**1.36**	**48**	P	**Pn**	**08 40 07.2**	**+0.7**
KLSI		**1.40**	**39**	P	**Pn**	**08 40 07.3**	**+0.3**
EGSI	**Enggano, Bengk**	**1.61**	**285**	P	**Pn**	**08 40 10.4**	**+0.4**
MNAI	**Manna**	**1.66**	**328**	P	**Pn**	**08 40 10.4**	**-0.3**
CGJI	**Cibinong**	**2.02**	**114**	P	**Pn**	**08 40 16.3**	**+0.8**
WRA	**Warramunga Arr**	**32.81**	**118**	P	**P**	**08 46 13.1**	**-0.7**
	0.3nm,0.8s,baz=298,slow=8.6,SNR=6.8						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**33.95**	**125**	P	**P**	**08 46 23.4**	**-0.3**
	0.1nm,0.4s,baz=302,slow=8.2,SNR=18						
	0.1nm,0.4s						
STKA	**Stephens Creek**	**43.79**	**131**	P	**P**	**08 47 45.8**	**-0.1**
	1.7nm,0.7s,baz=319,slow=11,SNR=3.2						
	1.7nm,0.7s						
MKAR	**Makanchi Array**	**55.73**	**342**	P	P	08 49 08.4	-8.0
	0.2nm,0.6s,baz=169,slow=8.8,SNR=8.8						
	0.2nm,0.6s						
H04N2	**CROZET ISLANDS**	**60.18**	**219**	T	T	09 55 49.5	
	baz=65,slow=75,SNR=13						
H04N1	**CROZET ISLANDS**	**60.19**	**219**	T	T	09 55 52.2	
	baz=65,slow=75,SNR=22						
H04N3	**CROZET ISLANDS**	**60.20**	**219**	T	T	09 55 46.1	
	baz=65,slow=75,SNR=14						
H04S1	**CROZET ISLANDS**	**60.40**	**218**	T	T	09 56 12.2	
	baz=63,slow=75,SNR=4.1						
H04S3	**CROZET ISLANDS**	**60.42**	**218**	T	T	09 56 11.8	
	baz=63,slow=75,SNR=6.9						
H04S2	**CROZET ISLANDS**	**60.42**	**218**	T	T	09 56 11.6	
	baz=63,slow=75,SNR=5.2						
ZALV	**Zalesovo Beam**	**61.62**	**347**	P	P	08 49 50.5	-6.7
	1.0nm,0.4s,baz=161,slow=5.7,SNR=6.8						
	1.0nm,0.4s						

IDC 04 09:00:39.8±2.1**, 49°.79S**×**122°.59E, h0**^{km}**, mb3.6**/1**, mbtmp3.6**/1**, MS3.1**/3**, Error ellipse: s-maj=125.9km s-min=56.2km az=122.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**16.12**	**334**	T	T	09 21 07.6	
	baz=159						
H01W2	**Cape Leeuwin H**	**16.12**	**334**	T	T	09 21 02.8	
	baz=159						
H01W3	**Cape Leeuwin H**	**16.13**	**334**	T	T	09 21 06.2	
	baz=159						
STKA	**Stephens Creek**	**22.84**	**46**	LR	LR	09 12 51.5	
	comp=Z,52nm,19.7s,baz=206,slow=32						
ASAR	**Alice Springs**	**27.54**	**23**	P	P	09 06 28.1	0.0
	0.5nm,0.7s,baz=199,slow=8.7,SNR=7.3						
ASAR				LR	LR	09 16 17.3	
	comp=Z,79nm,21.5s,baz=158,slow=34						
	0.5nm,0.7s						
HNR	**Honiara**	**50.78**	**51**	LR	LR	09 30 05.3	
	comp=Z,7.4nm,18.9s,baz=233,slow=35						
PDAR	**Pinedale Array**	**143.91**	**81**	PKP	PKPbc	09 20 14.7	+0.2
	0.3nm,0.8s,baz=236,slow=3.9,SNR=2.0						
YKA	**Yellowknife Ar**	**146.87**	**46**	PKPbc	PKPbc	09 20 22.2	-0.5
	0.5nm,0.7s,baz=280,slow=3.3,SNR=13						
EKA	**Eskdalemuir Ar**	**147.28**	**301**	PKPbc	PKPbc	09 20 23.4	-0.7
	0.4nm,0.5s,baz=104,slow=3.0,SNR=3.7						

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*NEIC **04** 09:05:57.5±0.6, 35°.95N±0°.04×0°.8W±0°.2, h10^{km}±2^{km}, ML2.4/4, Error ellipse: s-maj=23.1km s-min=4.0km az=106.0*

*CRAAG **04** 09:05:57.4, 35°.74N×0°.65W, Ml3.2, Algrie 05km NW Oran*

*MDD **04** 09:05:58.6±1.0, 35°.71N×0°.63W, h27^{km}, mb_Lg2.9/10, Error ellipse: s-maj=8.3km s-min=4.7km az=159.0*

*CNRM **04** 09:06:00.5, 36°.01N×1°.04W, h64^{km}, ML2.9*

ISC 04 09:05:56.3±1.4**, 35°.87N**±0°.03×**0°.74W**±0°.04**, h8**^{km}±12^{km}**, n43, σ1^{s}66**/57**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USTO	**Oran**	**0.21**	**131**	P	**Pg**	**09 05 59.0**	**-1.6**
OFRG	**Douar Fergoug**	**0.73**	**119**	P	**Pg**	**09 06 10.6**	**+0.2**
OLHC	**Oulhaca**	**0.83**	**222**	P	**Pn**	**09 06 15.7**	**+1.3**
OSBL	**Sidi Abdelli**	**0.85**	**203**	P	**Pb**	**09 06 14.5**	**+1.1**
OJBR	**Djebel Berber**	**0.93**	**108**	P	Pb	09 06 10.0	-4.8
ESMB	**Sidi M'hamed B**	**1.12**	**105**	P	**Pb**	**09 06 16.5**	**-1.4**
OKGL	**Djebel Kef Gue**	**1.14**	**81**	P	Pb	09 06 09.0	-9.3
EKMS	**Oued Kramis**	**1.21**	**68**	P	**Pg**	**09 06 23.2**	**+3.7**
OJGS	**Djebel Guires**	**1.27**	**106**	P	Pn	09 06 12.0	-8.5
OBBL	**Beni Bahdel**	**1.32**	**208**	P	**Pg**	**09 06 23.4**	**+1.8**
EANR	**'Ain N'Sour**	**1.50**	**87**	P	**Pb**	**09 06 24.9**	**+0.4**
ENIJ	**Nijar**	**1.61**	**313**	Pn	**Pn**	**09 06 25.9**	**+0.8**
ENIJ				Sn	**Sn**	**09 06 45.7**	**-0.3**
ENIJ				*i* IVmb_Lg		09 06 47.2	
CART	**Cartagena**	**1.72**	**353**	Pn	**Pn**	**09 06 26.5**	**-0.1**
CART				Sn	**Sn**	**09 06 47.5**	**-1.3**
CART				IAML		09 07 08.2	
	comp=N,34nm,1.4s						
CART	**Cartagena**	**1.72**	**353**	P	**Pn**	**09 06 25.9**	**-0.7**
CART				S	**Sn**	**09 06 46.0**	**-2.8**
TAF	**Taforalt**	**1.73**	**233**	P	**Pb**	**09 06 28.3**	**0.0**
TAF				S	**Sn**	**09 06 48.7**	**-0.3**
EMUR	**La Murta**	**2.01**	**349**	Pn	**Pn**	**09 06 31.0**	**+0.4**
EMUR				Sn	**Sn**	**09 06 55.5**	**-0.3**
EMUR				*i* IVmb_Lg		09 06 58.3	
EBER	**Berja**	**2.01**	**301**	Pn	**Pn**	**09 06 31.9**	**+1.2**
EBER				Sn	**Sn**	**09 06 56.8**	**+0.7**
EADEB	**Ain Deheb**	**2.14**	**118**	P	Pn	09 06 24.9	-7.5
JBK	**JBK**	**2.14**	**225**	P	**Pn**	**09 06 34.0**	**+1.5**
JBK				S	**Sn**	**09 06 59.8**	**+0.4**
ELGU	**Los Guajares,**	**2.53**	**294**	Pn	**Pn**	**09 06 38.6**	**+0.8**
ELGU				Sn	**Sn**	**09 07 07.6**	**-1.2**
ELGU				*i* IVmb_Lg		09 07 11.0	
EQES	**Quesada**	**2.68**	**317**	Pn	**Pb**	**09 06 43.2**	**-1.5**
EQES				Sn	**Sb**	**09 07 16.0**	**-1.8**
EQES				*i* IVmb_Lg		09 07 18.7	
EZEK	**Zmalet El Emir**	**2.69**	**111**	P	**Pg**	**09 06 48.1**	**+0.3**
ETOB	**Tobarra**	**2.84**	**347**	Pn	**Pn**	**09 06 43.8**	**+1.8**
ETOB				Sn	**Sn**	**09 07 17.2**	**+0.7**
ETOB				*i* IVmb_Lg		09 07 21.8	
AKLM	**AKL**	**2.89**	**243**	P	**Pn**	**09 06 43.6**	**+0.9**
AKLM				S	**Sn**	**09 07 16.9**	**-0.9**
EGOR	**Sierra Gorda,**	**2.98**	**295**	Pn	**Pn**	**09 06 46.5**	**+2.5**
EGOR				Sn	**Sn**	**09 07 22.3**	**+2.3**
EGOR				*i* IVmb_Lg		09 07 32.0	
EIBI	**Ibiza**	**3.56**	**27**	Pn	**Pn**	**09 06 52.6**	**+0.7**
EIBI				Sn	**Sn**	**09 07 31.4**	**-2.7**
SMIR	**Smir Dam**	**3.77**	**268**	P	**Pn**	**09 06 53.6**	**-1.2**
SMIR				S	**Sn**	**09 07 34.4**	**-5.0**
ECAB	**El Cabril**	**4.34**	**302**	Pn	**Pn**	**09 07 02.6**	**0.0**
ECAB				Sn	**Sn**	**09 07 52.9**	**-0.5**
MDT	**Midelt**	**4.42**	**227**	P	**Pn**	**09 07 04.5**	**+0.8**
MD01	**Midelt array s**	**4.47**	**229**	Pn	**Pn**	**09 07 05.8**	**+1.3**
MD31	**MD31**	**4.47**	**229**	Pn	**Pn**	**09 07 05.7**	**+1.2**
MD31	**MD31**	**4.47**	**229**	P	**Pn**	**09 07 05.2**	**+0.7**
MD31				S	**Sn**	**09 07 54.4**	**-2.3**
EMOS	**Mosqueruela**	**4.49**	**3**	Pn	**Pn**	**09 07 07.4**	**+2.6**
EMOS				Sn	**Sn**	**09 07 56.1**	**-1.2**
ESBB	**Sonseca Array**	**4.57**	**327**	Pn	**Pn**	**09 07 07.3**	**+1.5**
ESDC	**Sonseca Array**	**4.57**	**327**	Pn	**Pn**	**09 07 07.4**	**+1.5**
PAB	**San Pablo**	**4.65**	**323**	Pn	**Pn**	**09 07 08.1**	**+1.2**
PAB				IAML		09 08 55.3	
	comp=N,3.6nm,1.3s						
PAB	**San Pablo**	**4.65**	**323**	Pn	**Pn**	**09 07 10.6**	**+3.7**
PAB				Sn	**Sn**	**09 08 00.9**	**-0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PVAQ	Vaqueiros	5.81	287	Pn	Pn	09 07 23.1	+0.3
PVAQ	Vaqueiros	5.81	287	P	Pn	09 07 20.1	-2.7
AVE	Averroes	6.07	247	Pn	Pn	09 07 27.8	+1.4
MESJ	Messejana	6.31	290	Pn	Pn	09 07 29.6	0.0
CORI	Orista	6.47	19	Pn	Pn	09 07 32.3	+0.5
MORF	Marmelete	6.52	285	Pn	Pn	09 07 31.7	-0.9

*NOU **04** 09:11:30.6, 30°.23S×174°.66W, h30km, mb4.8/21, Kermadec Islands Region*
*IDC **04** 09:11:32.9±0.7, 29°.68S×176°.13W, h0km, mb4.4/10, mbtmp4.4/14, ML4.3/4, MS4.1/41, Error ellipse: s-maj=30.6km s-min=14.6km az=172.0*
*NEIC **04** 09:11:34.7±0.8, 29°.8S±0°.1×176°.1W±0°.1, h10km±1km, mb5.0/66, Error ellipse: s-maj=29.0km s-min=5.7km az=210.0*
*BJI **04** 09:11:34.0, 29°.92S×176°.22W, h10km, mb5.1/11, Ms5.3/1, Ms7 4.9/1*
*GCMT **04** 09:11:37.7±0.3, 29°.46S±0°.04×175°.90W±0°.02, h20km±1km, MW4.9/73, Moment Tensor Solution. s17,c18; s73,c95; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-2.37±.20; Mθθ0.35±.11; Mφφ2.01±.11; Mrθ-0.19±.25; Mθφ0.22±.06; Mφr1.34±.16; Best double couple: Mo2.58300×10^16 NP1:φs13.00000°, δ30.00000°, λ-79.00000°. NP2: φs180.00000°, δ61.00000°, λ-96.00000°. Principal axes: T 2.4000, Plg15.0000°, Azm275.0000°; N 0.3590, Plg5.0000°, Azm183.0000°; P -2.7660, Plg74.0000°, Azm74.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 04 09:11:34.9±0.5**, 29°.78S**±0°.05×**176°.14W**±0°.07**, h10**km**, n166,** σ1s.37/100**, mb5.0**/48**, MS4.1**/39**, 3D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.63	288	P	Pn	09 12 03.8	+0.1
GLKZ				S	Sn	09 12 24.5	-0.2
RAO	Raoul Island	1.63	288	Pn	Pn	09 12 04.3	+0.5
	506nm,0.3s,baz=92,slow=6.8,SNR=22						
RAO				Sn	Sn	09 12 24.9	+0.1
	3µm,0.3s,baz=127,slow=22,SNR=12						
RAO	Raoul Island	1.63	288	Pn	Pn	09 12 04.0	+0.2
RIZ	Raoul Island	1.65	288	P	Pn	09 11 57.0	-6.9
RIZ				S	Sn	09 12 17.7	-7.4
MXZ	Matakaoa Point	9.04	209	P	Pn	09 13 43.3	-2.1
MXZ	Matakaoa Point	9.04	209	S	Sn	09 15 28.3	+1.0
MXZ	Matakaoa Point	9.04	209	Pn	Pn	09 13 45.3	-0.1
MXZ	Matakaoa Point	9.04	209	P	Pn	09 13 44.1	-1.4
MXZ				S	Sn	09 15 27.6	+0.3
WMGZ	Waiomatatini S	9.21	208	P	Pn	09 13 46.9	-1.0
WMGZ				S	Sn	09 15 33.5	+2.0
PKGZ	Pakihiroa	9.39	209	P	Pn	09 13 48.5	-1.8
PKGZ				S	Sn	09 15 35.9	0.0
HAZ	Te Kaha	9.43	211	P	Pn	09 13 49.3	-1.5
HAZ				S	Sn	09 15 38.0	+1.2
PUZ	Puketiti	9.49	208	P	Pn	09 13 49.6	-2.0
PUZ				S	Sn	09 15 37.6	-0.9
RUGZ	Raukumara Rang	9.65	211	P	Pn	09 13 52.6	-1.4
TWGZ	Tauwhareparae	9.69	209	P	Pn	09 13 52.7	-1.8
TWGZ				S	Sn	09 15 43.7	+0.3
CNGZ	Carnagh Statio	9.87	207	P	Pn	09 13 54.5	-2.3
CNGZ				S	Sn	09 15 49.5	+1.9
TKGZ	Te Karaka	9.97	208	P	Pn	09 13 56.3	-2.0
MWZ	Matawai	10.02	210	P	Pn	09 13 56.5	-2.5
MWZ				S	Sn	09 15 49.4	-2.1
OPRZ	Ohinepanea	10.08	215	P	Pn	09 13 59.9	+0.2
WCZ	Waipu Caves	10.09	230	P	Pn	09 14 05.9	+6.1
TGRZ	Tauranga	10.14	217	P	Pn	09 14 00.9	+0.3
URZ	Urewera	10.14	212	Pn	Pn	09 13 58.1	-2.5
	2.5nm,0.3s,baz=17,slow=2.7,SNR=24						
URZ				Sn	Sn	09 15 52.4	-2.0
	25nm,0.3s,baz=90,slow=20,SNR=24						
URZ	Urewera	10.14	212	P	Pn	09 13 57.8	-2.8
URZ	Urewera	10.14	212	S	Sn	09 15 56.1	+1.7
URZ	Urewera	10.14	212	P	Pn	09 13 58.2	-2.4
OUZ	Omahuta	10.22	235	P	Pn	09 14 08.3	+6.6
OUZ	Omahuta	10.22	235	P	Pn	09 14 08.2	+6.5
RIGZ	Rimuhau	10.23	208	P	Pn	09 13 59.1	-2.8
RIGZ				S	Sn	09 15 55.8	-0.9
PRGZ	Paritu Road	10.37	207	P	Pn	09 14 00.5	-3.2
PRGZ				S	Sn	09 15 59.1	-1.0
MHGZ	Mahia Peninsul	10.56	206	P	Pn	09 14 03.9	-2.4
MHGZ				S	Sn	09 16 03.5	-1.2
RAHZ	Arahi	10.69	210	P	Pn	09 14 06.1	-2.1
RAHZ				S	Sn	09 16 06.7	-1.3
MTHZ	Maungataniwha	10.75	211	P	Pn	09 14 06.9	-2.0
MTHZ				S	Sn	09 16 09.6	+0.3
NMHZ	Naumai	10.96	210	P	Pn	09 14 10.3	-1.6
NMHZ				S	Sn	09 16 13.0	-1.7
ARHZ	Aropaoanui	11.02	209	P	Pn	09 14 10.6	-2.0
ARHZ				S	Sn	09 16 14.6	-1.4
BKZ	Black Stump Fm	11.16	211	P	Pn	09 14 10.8	-3.8
BKZ	Black Stump Fm	11.16	211	P	Pn	09 14 10.7	-3.9
BKZ				S	Sn	09 16 16.7	-2.7
MCHZ	McNeill Hill	11.30	210	P	Pn	09 14 13.6	-2.9
MCHZ				S	Sn	09 16 21.4	-1.4
HIZ	Hauiti	11.46	218	P	Pn	09 14 19.6	+0.9
NIUE	Niue	12.06	29	P	Pn	09 14 17.7	-9.2
NIUE	Niue	12.06	29	P	Pn	09 14 17.1	-10
NIUE				S	Sn	09 16 14.2	-27
BFZ	Birch Farm	12.53	208	P	Pn	09 14 29.9	-3.3
MSVF	Nonsavu	13.11	335	Pn	Pn	09 14 38.8	-2.5
	0.3nm,0.3s,baz=79,slow=22,SNR=2.4						
MSVF				LR	LR	09 19 01.8	
	comp=Z,901nm,19.8s,baz=168,slow=34						
	2.6nm,0.8s						
SNZO	South Karori	13.70	210	P	Pn	09 14 46.9	-2.3
CTZ	Chatham Island	13.94	181	S	Sn	09 17 12.0	-15
QRZ	Quartz Range	14.38	217	P	Pn	09 14 57.9	-0.6
KHZ	Kahutara	15.11	211	P	Pn	09 15 05.4	-2.9
AFI	Afiamalu	16.30	15	Pn	Pn	09 15 22.4	-1.7
	1.8nm,0.3s,baz=189,slow=13,SNR=1.6						
AFI				Sn	Sn	09 18 01.4	-24
	1.8nm,0.3s,baz=202,slow=22,SNR=1.4						
	4.0nm,0.3s						
INH	Isangel	16.70	304	P	P	09 15 41.4	+10
RAR	Rarotonga	17.05	64	Pn	Pn	09 15 31.4	-2.1
	1.4nm,0.3s,baz=246,slow=11,SNR=4.3						
RAR				Sn	Sn	09 18 18.4	-25
	1.4nm,0.3s,baz=169,slow=18,SNR=2.8						
RAR				LR	LR	09 20 10.5	
	comp=Z,586nm,20.7s,baz=280,slow=30						
	25nm,0.9s						
RPZ	Rata Peaks	17.26	213	P	Pn	09 15 33.5	-2.5
	10nm,0.4s,baz=9.7,slow=0.2,SNR=14						
RPZ				S	Sn	09 18 35.2	-13
	14nm,0.4s,baz=4.9,slow=16,SNR=6.0						
RPZ	Rata Peaks	17.26	213	P	Pn	09 15 33.8	-2.2
DZM	Mont Dzumac	17.43	292	P	Pn	09 15 36.6	-1.7
	0.3nm,0.3s,baz=104,slow=16,SNR=7.0						
DZM				LR	LR	09 21 58.9	
	comp=Z,874nm,18.0s,baz=165,slow=36						
	2.6nm,0.8s						
ODZ	Otahua Downs	18.47	211	P	P	09 15 49.9	-0.9
ODZ	Otahua Downs	18.47	211	P	P	09 15 50.7	-0.1
JCZ	Jackson Bay	18.63	216	P	P	09 15 50.5	-2.3
SYZ	Scrubby Hill	20.29	210	P	P	09 16 09.1	-1.6
PPT	Papeete	27.12	69	LR	LR	09 26 33.7	
	comp=Z,472nm,18.3s,baz=244,slow=33						
CTA	Charters Tower	35.30	277	P	P	09 18 31.1	+0.7
	3.8nm,0.6s,baz=107,slow=9.8,SNR=9.7						
CTA				LR	LR	09 32 14.9	
	comp=Z,329nm,18.1s,baz=60,slow=35						
	3.8nm,0.6s						
CTAO	Charters Tower	35.30	277	P	P	09 18 31.5	+1.1
STKA	Stephens Creek	36.19	256	P	P	09 18 38.7	+0.8
	6.4nm,0.9s,baz=104,slow=11,SNR=12						
STKA				LR	LR	09 32 58.3	
	comp=Z,245nm,18.2s,baz=70,slow=36						
	6.4nm,0.9s						
STKA	Stephens Creek	36.19	256	P	P	09 18 39.1	+1.2
STKA	Stephens Creek	36.19	256		P	09 18 36.2	-1.7
HTT	Hallett	38.22	253	P	P	09 18 56.7	+1.5
ASAR	Alice Springs	44.76	265	P	P	09 19 47.6	-1.2
	1.3nm,0.7s,baz=105,slow=8.0,SNR=12						
ASAR				LR	LR	09 38 28.5	
	comp=Z,386nm,18.8s,baz=110,slow=36						
	1.3nm,0.7s						
ASAR	Alice Springs	44.76	265		P	09 19 48.4	-0.5
WR8	Warramunga Arr	45.55	271	P	P	09 19 53.9	-1.3
WRA	Warramunga Arr	45.69	271	P	P	09 19 55.1	-1.3
	2.4nm,0.5s,baz=110,slow=7.8,SNR=27						
	2.4nm,0.5s						
WRA	Warramunga Arr	45.69	271		P	09 19 55.0	-1.3
WB0	Warramunga Arr	45.71	271		P	09 19 55.2	-1.2
WB0				IAmb	IAmb	09 20 01.3	
	comp=Z,33nm,1.6s						
VNDA	Vanda	48.88	186	LR	LR	09 37 15.7	
	comp=Z,79nm,20.9s,baz=341,slow=32						
KNRA	Kununurra	52.27	273	P	P	09 20 45.7	-1.2
KNRA				IAmb	IAmb	09 21 55.5	
	comp=Z,21nm,1.3s						
FITZ	Fitzroy Crossi	53.98	269	LR	LR	09 43 59.3	
	comp=Z,127nm,18.7s,baz=88,slow=36						
GUMO	Guam	57.20	313	LR	LR	09 46 24.1	
	comp=Z,56nm,18.0s,baz=124,slow=37						
SIJI	Sorong	57.62	290	LR	LR	09 44 33.3	
	comp=Z,90nm,21.5s,baz=138,slow=34						
RPN	Rapa Nui	58.05	105	LR	LR	09 41 54.9	
	comp=Z,225nm,18.6s,baz=322,slow=31						
BATI	Baumata	59.18	276	LR	LR	09 48 11.3	
	comp=Z,362nm,18.1s,baz=130,slow=37						
QSPA	South Pole Qui	60.33	180	P	P	09 21 46.5	+2.7
	comp=Z,13nm,1.0s,baz=28,slow=5.0,SNR=16						
QSPA				LR	LR	09 46 42.7	
	comp=Z,184nm,18.0s,baz=74,slow=35						
QSPA	South Pole Qui	60.33	180		P	09 21 44.0	+0.1
KAPI	Kappang	65.09	279	LR	LR	09 51 47.9	
	comp=Z,72nm,18.4s,baz=128,slow=37						
DAV	Davao City (W)	66.84	293	LR	LR	09 50 12.8	
	comp=Z,44nm,19.5s,baz=356,slow=35						
PMSA	Palmer Station	72.16	155	LR	LR	09 49 04.3	
	comp=Z,226nm,18.2s,baz=324,slow=31						
LEM	Lembang	74.71	271	LR	LR	09 59 31.7	
	comp=Z,52nm,18.3s,baz=179,slow=38						
JOW	Kunigami	77.45	311	LR	LR	09 52 42.3	
	comp=Z,96nm,20.4s,baz=103,slow=32						
ELIB	Princess Elisa	77.65	186	*d*P	P	09 23 33.4	+2.1
TROLL	Troll, Antarti	78.49	180	P	P	09 23 37.8	+1.8
MJAR	Matsushiro Arr	78.67	324	LR	LR	09 57 01.2	
	comp=Z,12nm,19.6s,baz=148,slow=35						
VNA3	Neumayer Olymp	78.81	176	⇓P	P	09 23 39.3	+1.7
	comp=Z,8.0nm,0.8s						
VNA2	Neumayer--Watz	79.26	176	⇓P	P	09 23 41.6	+1.5
	comp=Z,7.2nm,0.8s,baz=195,slow=2.4						
VNA1	Neumayer--Stat	79.48	176	P	P	09 23 40.4	-0.8
	comp=Z,8.8nm,1.1s						
JNU	Nakatsue	80.18	317	LR	LR	09 56 08.4	
	comp=Z,15nm,20.9s,baz=90,slow=33						
PLCA	Paso Flores	81.74	132	LR	LR	09 53 26.4	
	comp=Z,154nm,18.6s,baz=239,slow=31						
SHEM	Shemya Is, Ala	82.60	354	LR	LR	09 54 18.5	
	comp=Z,158nm,20.6s,baz=143,slow=31						
ASAJ	Asahikawa	82.65	331	LR	LR	09 54 05.9	
	comp=Z,176nm,20.8s,baz=153,slow=31						
LPIG	La Paz	82.84	57	LR	LR	09 55 17.1	
	comp=Z,313nm,18.4s,baz=224,slow=32						
PFO	Pinyon Flats O	84.61	46	LR	LR	09 55 21.8	
	comp=Z,176nm,19.4s,baz=234,slow=31						
ISA	Isabella, Lake	84.73	44	P	P	09 24 08.9	-0.4
ISA				IAmb	IAmb	09 24 24.3	
	comp=Z,20nm,1.6s						
KSRS	Korea Array	84.93	319	LR	LR	10 01 16.2	
	comp=Z,24nm,18.1s,baz=130,slow=35						
CMB	Columbia Colle	85.23	41	P	P	09 24 11.0	-0.7
BC3	Big Chuckawall	85.27	47		P	09 24 11.5	-0.6
CLC	China Lake	85.36	44	P	P	09 24 11.5	-0.9
CLC				IAmb	IAmb	09 24 13.6	
	comp=Z,18nm,1.5s						
O02D	Mt. Diablo Mer	85.41	38	P	P	09 24 12.1	-0.5
GSC	Goldstone, Bar	85.50	45	P	P	09 24 13.0	-0.2
GSC				IAmb	IAmb	09 24 14.3	
	comp=Z,10nm,1.2s						
AFDM	Forest Hills D	85.53	40		P	09 24 11.5	-1.7
AFDM				IAmb	IAmb	09 24 51.7	
	comp=Z,8.6nm,1.0s						
ORV	Oroville	85.67	39		P	09 24 13.1	-0.7
ORV				IAmb	IAmb	09 24 55.3	
	comp=Z,5.0nm,0.6s						
IRM	Iron Mountain	85.79	47	P	P	09 24 14.1	-0.5
IRM				IAmb	IAmb	09 24 29.2	
	comp=Z,19nm,1.5s						
QSM	Queen of Sheba	85.90	44	P	P	09 24 14.6	-0.5
N02D	Trinity Center	86.02	38	P	P	09 24 15.7	0.0
N02D				IAmb	IAmb	09 24 35.4	
	comp=Z,22nm,1.4s						
O03E	Paynes Creek	86.02	39	IAmb	IAmb	09 24 15.7	
	comp=Z,20nm,1.2s						
YBH	Yreka Blue Hor	86.56	37	LR	LR	09 58 35.8	
	comp=Z,6.5nm,18.5s,baz=248,slow=33						
NVAR	Mina Array Bea	86.70	42	P	P	09 24 18.8	-0.4
	comp=Z,2.3nm,0.8s,baz=224,slow=8.2,SNR=16						
NVAR				LR	LR	09 58 18.4	
	comp=Z,202nm,18.3s,baz=234,slow=32						
	comp=Z,2.3nm,0.8s						
PAHR	Pah Rah Range	86.95	40		P	09 24 20.9	+0.5
Y14A	Wickenburg	87.02	48		P	09 24 20.9	+0.3
Y14A				IAmb	IAmb	09 24 22.1	
	comp=Z,14nm,1.4s						
NJ2	Nanjing	87.08	310	*e*P	P	09 24 21.9	+1.0
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
TUC	Tucson	87.47	50		P	09 24 22.1	-0.8
TUC				IAmb	IAmb	09 24 24.7	
	comp=Z,12nm,1.3s						
U15A	North Rim	89.03	46	IAmb	IAmb	09 24 32.2	
	comp=Z,11nm,1.1s						
WUAZ	Wupatki	89.05	48	IAmb	IAmb	09 24 32.0	
	comp=Z,11nm,1.1s						
CCUT	Cedar City	89.07	45	IAmb	IAmb	09 24 45.3	
	comp=Z,14nm,1.5s						
KDAK	Kodiak Island	89.44	12	LR	LR	10 00 38.4	
	comp=Z,67nm,19.2s,baz=181,slow=33						
PKCU	Pink Cliffs	89.65	46	IAmb	IAmb	09 24 35.1	
	comp=Z,8.2nm,1.0s						
W18A	Petrified Fore	89.87	49	IAmb	IAmb	09 24 35.9	
	comp=Z,15nm,1.4s						
ELK	Elko	90.00	42	LR	LR	10 00 13.6	
	comp=Z,216nm,18.7s,baz=270,slow=32						
VHRN	Van Horn	90.57	55	IAmb	IAmb	09 24 38.8	
	comp=Z,22nm,1.9s						
TX31	Lajitas Ar. Si	90.70	56	IAmb	IAmb	09 24 39.4	
	comp=Z,8.3nm,1.4s						
TXAR	Lajitas Array	90.70	56	P	P	09 24 38.0	-0.2
	comp=Z,2.1nm,1.0s,baz=216,slow=6.2,SNR=12						
	comp=Z,2.1nm,1.0s						
G08A	Pilot Rock	91.00	36	IAmb	IAmb	09 24 40.0	
	comp=Z,12nm,1.2s						
Y22A	Socorro	91.01	51	IAmb	IAmb	09 24 40.3	
	comp=Z,6.4nm,1.1s						
CMIG	Matias Romero	91.03	71	P	P	09 24 40.1	+0.2
	comp=Z,3.1nm,0.8s,baz=235,slow=5.2,SNR=4.2						
CMIG				LR	LR	09 57 33.5	
	comp=Z,92nm,19.2s,baz=172,slow=30						
	comp=Z,3.1nm,0.8s						
ALPN	Alpine	91.30	56	IAmb	IAmb	09 24 41.7	
	comp=Z,7.7nm,1.2s						
KLR	Kul'dur	91.32	329	LR	LR	10 01 32.5	
	comp=Z,54nm,19.6s,baz=146,slow=33						
HAWA	Hanford	91.46	35	IAmb	IAmb	09 24 42.1	
	comp=Z,11nm,1.1s						
SRU	San Rafael Swe	91.79	45	IAmb	IAmb	09 24 43.9	
	comp=Z,5.6nm,1.0s						
ANMO	Albuquerque	91.94	50	LR	LR	10 01 53.3	
	comp=Z,142nm,18.2s,baz=236,slow=33						
HVU	Hansel Valley	92.09	42	IAmb	IAmb	09 24 45.2	
	comp=Z,10nm,1.4s						
D08A	Wollman Farm,	92.22	35		P	09 24 44.8	0.0
HLID	Hailey	92.29	40	IAmb	IAmb	09 24 46.1	
	comp=Z,5.2nm,1.1s						
PV02	Paradox Valley	92.36	47	IAmb	IAmb	09 24 46.1	
	comp=Z,6.1nm,0.9s						
PV12	Saucer Basin,	92.38	47	IAmb	IAmb	09 24 46.7	
	comp=Z,12nm,1.2s						
PLID	Pearl Lake	92.41	38		P	09 24 45.2	-0.7
PLID				IAmb	IAmb	09 24 46.3	
	comp=Z,9.0nm,1.1s						
ENH	Enshi	92.59	303		P	09 24 45.8	-1.1
MA2	Magadan	93.13	344	LR	LR	10 00 42.8	
	comp=Z,38nm,21.8s,baz=125,slow=32						
ATAH	Atahualpa	93.17	100	LR	LR	09 59 04.7	
	comp=Z,133nm,18.3s,baz=236,slow=31						
LOHW	Long Hollow	94.48	42	IAmb	IAmb	09 25 09.1	
	comp=Z,12nm,1.6s						
PDAR	Pinedale Array	94.58	43	P	P	09 24 54.5	-1.6
	comp=Z,0.6nm,0.8s,baz=198,slow=4.4,SNR=5.3						
PDAR				LR	LR	10 03 03.8	
	comp=Z,119nm,18.3s,baz=238,slow=33						
	comp=Z,0.6nm,0.8s						
CMAR	Chiang Mai Arr	94.72	288	P	P	09 24 55.6	-1.4
	comp=Z,0.7nm,0.3s,baz=136,slow=3.1,SNR=4.3						
CMAR				LR	LR	10 07 41.8	
	comp=Z,26nm,20.4s,baz=105,slow=36						
	comp=Z,0.7nm,0.3s						
CMAR	Chiang Mai Arr	94.72	288	P	P	09 24 55.3	-1.6
YHL	Hebgen Lake	94.91	40	IAmb	IAmb	09 27 11.1	
	comp=Z,7.2nm,0.9s						
XAN	Xi'an	95.03	306	*e*P	P	09 24 59.6	+1.5
XAN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
DLBC	Dease Lake	95.92	22	LR	LR	09 59 09.7	
	comp=Z,44nm,19.7s,baz=173,slow=30						
JTS	Las Juntas de	96.05	82	LR	LR	10 00 06.0	
	comp=Z,169nm,18.6s,baz=260,slow=30						
PZH	PanZhiHua	96.46	297	P	P	09 25 06.9	+2.1
LPAZ	La Paz	96.92	113	LR	LR	10 02 42.7	
	comp=Z,106nm,18.5s,baz=232,slow=32						
ILAR	Eielson Array	96.97	12	P	P	09 25 04.5	-1.5
	comp=Z,1.6nm,1.0s,baz=219,slow=5.3,SNR=6.9						
	comp=Z,1.6nm,1.0s						
HHC	Hu-ho-hao-te	96.97	313	*e*P	P	09 25 08.3	+1.5
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BTO2	Baotou	97.99	312	*e*P	P	09 25 12.2	+0.8
CPUP	Villa Florida	99.09	127	LR	LR	10 05 03.8	
	comp=Z,123nm,18.4s,baz=212,slow=32						
WMQ	Urumqi	114.11	308	*e*PKP	PKPdf	09 30 14.7	+0.3
MKAR	Makanchi Array	118.61	310	PKP	PKPdf	09 30 21.4	-1.5
	comp=Z,0.7nm,0.9s,baz=44,slow=4.0,SNR=5.2						
MKAR	Makanchi Array	118.61	310		PKPdf	09 30 22.0	-0.9
BVAR	Borovoye Array	127.08	316	PKP	PKPdf	09 30 37.9	-1.1
	comp=Z,0.3nm,0.4s,baz=86,slow=4.5,SNR=2.8						
FINES	FINESS Array B	145.09	341	PKPbc	PKPbc	09 31 09.9	-1.5
	comp=Z,6.4nm,0.9s,baz=46,slow=5.5,SNR=3.3						
FINES	FINESS Array B	145.09	341		PKPbc	09 31 10.2	-1.2
KBZ	Khabaz	146.09	305	PKPbc	PKPdf	09 31 13.6	-0.5
	comp=Z,1.8nm,1.0s,baz=66,slow=4.6,SNR=5.8						
NB2	NORSAR Subarra	148.35	353	PKP	PKPdf	09 31 19.6	+2.1
	comp=Z,1.3nm,0.8s,baz=8.5,slow=2.7						
NOA	NORSAR Array B	148.35	353	PKPbc	PKPdf	09 31 19.5	+2.1
	comp=Z,2.8nm,0.9s,baz=14,slow=4.5,SNR=5.6						
HFS	Hagfors	148.93	350	PKPbc	PKPdf	09 31 20.6	+2.3
	comp=Z,3.4nm,0.8s,baz=5.7,slow=1.4,SNR=4.5						
AKASG	Malin Array Be	151.75	325	PKPbc	PKPdf	09 31 26.7	+3.6
	comp=Z,3.3nm,0.7s,baz=46,slow=2.3,SNR=7.2						
TORD	Torodi Ar. Bea	163.33	173	PKPab	PKPab	09 32 30.1	+1.1
	comp=Z,3.8nm,0.8s,baz=204,slow=6.2,SNR=15						

*SDD **04** 09:18:11.8±0.6, 17°.79N×66°.87W, h20km±27km, MD3.2, ML2.9, MW3.1, Presumed earthquake*
*NEIC **04** 09:18:12.7±1.0, 17°.90N±0°.02×66°.83W±0°.01, h10km±1km, ML2.9/35, Md3.0/4(RSPR), Error ellipse: s-maj=3.7km s-min=2.6km az=184.0*
*OSPL **04** 09:18:12.9±0.3, 17°.90N×66°.85W, h16km±14km, ML2.4, Presumed earthquake*
ISC 04 09:18:11.1±1.1**, 17°.93N**±0°.07×**66°.87W**±0°.02**, h27**km±6km**, n24,** σ0s.65/40**, 2D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.04	353		Pb	09 18 15.6	-0.1
GBPR					Sb	09 18 17.6	-1.2
MLPR	Magueyes Islan	0.17	282		Pn	09 18 17.2	-0.7
MLPR				Sg	Sb	09 18 20.5	+0.2
MLPR				IAML		09 18 20.9	
	3µm,0.4s						
MLPR				IAML		09 18 21.8	
	2µm,0.2s						
CRPR	Cabo Rojo, PR	0.24	288	Pg	Pn	09 18 18.1	-0.7
CRPR				Sg	Sb	09 18 22.3	+0.7
CRPR				IAML		09 18 22.6	
	2µm,0.2s						
CRPR				IAML		09 18 22.8	
	3µm,0.2s						
CRPR	Cabo Rojo, PR	0.24	288	⇓*e*Pg	Pn	09 18 18.4	-0.5
CRPR				⇓*e*Sg	Sb	09 18 22.4	+0.7
CRPR				IAML		09 18 22.6	
	comp=N,3µm,0.2s						
CRPR	Cabo Rojo, PR	0.24	288	*i* P	Pn	09 18 18.4	-0.5
CRPR				*e*S	Sb	09 18 22.4	+0.7
CRPR				IAML		09 18 22.6	
	comp=Z,3µm,0.2s						
OBIP	Obispado Ponce	0.28	67		Pb	09 18 18.2	+0.2
OBIP					Sb	09 18 22.4	-0.2
OBIP	Obispado Ponce	0.28	67	*i* P	Pb	09 18 18.3	+0.3
OBIP				*e*S	Sb	09 18 22.5	-0.2
OBIP				IAML		09 18 23.4	
	comp=Z,452nm,0.2s						
CELP	Cerrillos	0.31	63		Pb	09 18 18.9	+0.4
CELP				IAML		09 18 24.5	
	comp=Z,2µm,0.2s						
LSP	Las Mesas	0.31	320		Pn	09 18 19.8	-0.2
LSP					Sn	09 18 25.4	-0.3
UUPR	Utuado, UPR, P	0.35	25		Pn	09 18 19.7	-0.7
UUPR				Sg	Sb	09 18 24.9	+0.5
PRSN	Puerto Rico Se	0.38	318		Pn	09 18 20.8	-0.1
PRSN				Sg	Sn	09 18 27.0	-0.3
AOPR	Arecibo Observ	0.43	16		Pn	09 18 21.1	-0.4
AOPR				Sg	Sn	09 18 27.4	-1.1
AOPR				IAML		09 18 28.0	
	comp=Z,1µm,0.2s						
AGPR	Aguadilla, PR	0.58	337		Pn	09 18 24.0	+0.5
AGPR				Sg	Sn	09 18 32.4	+0.2
ECPR	Experimental S	0.62	52		Pn	09 18 24.0	-0.2
ECPR				Sg	Sn	09 18 32.3	-0.9
ECPR				IAML		09 18 33.1	
	comp=Z,848nm,0.2s						
ECPR				IAML		09 18 35.0	
	comp=Z,789nm,0.2s						
SJG	San Juan	0.71	75		Pn	09 18 25.3	0.0
SJG	San Juan	0.71	75	*e*Pg	Pn	09 18 25.4	0.0
SJG				*e*Sg	Sn	09 18 35.2	-0.2
SJG	San Juan	0.71	75	*i* P	Pn	09 18 25.5	+0.1
SJG				*e*S	Sn	09 18 34.6	-0.9
SJG				IAML		09 18 35.8	
	comp=Z,154nm,0.3s						
IDE	Isla Desecheo	0.73	308		Pn	09 18 26.9	+1.3
IDE					Sn	09 18 37.2	+1.3
PDPR	Patillas Dam,	0.81	84		Pn	09 18 27.0	+0.2
HUMP	Col San Antoni	1.00	78	Pg	Pb	09 18 29.9	+0.2
HUMP				IAML		09 18 46.8	
	comp=Z,221nm,0.2s						
HUMP	Col San Antoni	1.00	78		Sn	09 18 43.6	+1.1
CUPR	Culebra, Puert	1.56	76	Pn	Pb	09 18 39.7	+0.4
DR12	Loma Pena Alta	2.53	290	Pn	Pb	09 18 54.7	-1.2
HATOM	Hato Mayor del	2.53	290	*e*Pg	Pb	09 18 56.0	+0.2
HATOM				IAML		09 19 36.8	
	comp=N,24nm,1.1s						

*NNC **04** 09:21:06.8±1.1, 43°.15N×78°.06E, h0km, mpv3.0, Error ellipse: s-maj=7.7km s-min=3.3km az=47.0*
*SOME **04** 09:21:07.6, 43°.15N×78°.08E, h10km*
ISC 04 09:21:07.1±1.3**, 43°.14N**±0°.04×**78°.09E**±0°.03**, h15**km±16km**, n10,** σ0s.21/20**, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	0.25	109	P	Pg	09 21 12.4	-0.1
	27nm,0.1s						
SATY				S	Sg	09 21 16.2	-0.1
	531nm,0.1s						
KPKS	Kokpek	0.54	53	P	Pg	09 21 17.9	0.0
	0.5nm,0.1s						
KPKS				S	Sg	09 21 25.4	+0.3
	13nm,0.1s						
KPKS	Kokpek	0.54	53	*e*P	Pg	09 21 17.9	0.0
	0.5nm,0.1s						
KPKS				*e*S	Sg	09 21 25.4	+0.3
	13nm,0.1s						
UZB	Uzynbulak	0.68	89	P	Pg	09 21 20.3	-0.2
	7.1nm,0.1s						
UZB				S	Sg	09 21 29.5	0.0
	8.0nm,0.1s						
UZB	Uzynbulak	0.68	89	*e*P	Pg	09 21 20.3	-0.2
	7.1nm,0.1s						
UZB				*e*S	Sg	09 21 29.5	0.0
	8.0nm,0.1s						
KOTS	Kotyrbulak	0.72	278	*e*P	Pg	09 21 21.1	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	8.9nm,0.2s						
KOTS				eS	Sg	09 21 30.7	0.0
	11nm,0.4s						
TNSS	**Tian-Shan**	**0.84**	**263**	eP	**Pg**	**09 21 23.6**	**+0.1**
	0.4nm,0.2s						
TNSS				eS	**Sb**	**09 21 35.1**	**+0.1**
	1.7nm,0.3s						
BLB	**Baldybastay**	**1.00**	**16**	P	**Pg**	**09 21 26.2**	**-0.2**
	6.1nm,0.1s						
BLB				S	**Sg**	**09 21 39.7**	**+0.3**
	7.9nm,0.3s						
ARXS	**Arharly**	**1.09**	**350**	P	**Pg**	**09 21 27.8**	**-0.3**
	1.5nm,0.1s						
ARXS				S	**Sg**	**09 21 42.4**	**+0.1**
	3.4nm,0.2s						
ARXS	**Arharly**	**1.09**	**350**	eP	**Pg**	**09 21 27.8**	**-0.3**
	1.5nm,0.1s						
ARXS				eS	**Sg**	**09 21 42.4**	**+0.1**
	3.4nm,0.2s						

*MEX **04** 09:24:18.8±0.7, 14.°75N×92.°50W, h82km±6km, MD3.9*
*GCG **04** 09:24:19.4±1.3, 14.°65N×92.°37W, h64km±12km, MD3.6, ML3.3, Presumed earthquake*
ISC 04 09:24:14.4±1.9**, 14.°50N**±0.°09×**92.°47W**±0.°07**, h89**km±12km**, n17,** σ**2.s58**/31**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
THIG		**0.45**	**26**	eP	**Pn**	**09 24 29.9**	**+1.2**
THIG				i S	**Sn**	**09 24 38.3**	**-1.0**
THIG		**0.45**	**26**	i P	**Pn**	**09 24 29.9**	**+1.2**
SMCA	**Catarina**	**0.52**	**47**	i P	**Pn**	**09 24 30.5**	**+1.3**
SMCA				i S	**Sn**	**09 24 38.9**	**-1.4**
PATR	**El Naranjo**	**0.66**	**20**	eP	**Pn**	**09 24 30.8**	**+0.1**
PATR				eS	**Sn**	**09 24 40.6**	**-2.1**
CHUJ	**Union Juarez**	**0.69**	**30**	eP	**Pn**	**09 24 31.5**	**+0.5**
CHUJ				eS	**Sn**	**09 24 42.0**	**-1.4**
PAVE	**Pavencul**	**0.75**	**22**	eP	**Pn**	**09 24 32.1**	**+0.5**
PAVE				eS	**Sn**	**09 24 42.6**	**-1.7**
RTAL	**Retalhuleu**	**0.75**	**88**	eP	**Pn**	**09 24 34.0**	**+2.7**
RTAL				eS	**Sn**	**09 24 46.3**	**+2.3**
QUEO	**Labor Ovalle**	**1.00**	**68**	i P	**Pn**	**09 24 37.1**	**+2.9**
STG2	**El Palmar, Qui**	**1.06**	**93**	i P	**Pn**	**09 24 34.4**	**-0.4**
STG2				i S	**Sn**	**09 24 45.9**	**-4.3**
STG2				IAML		09 24 47.5	
	comp=N,3µm,0.1s						
STG8	**El Palmar, Qui**	**1.08**	**92**	i P	**Pn**	**09 24 34.9**	**-0.3**
STG8				IAML		09 24 50.1	
	comp=N,746nm,0.2s						
STG5	**El Palmar, Qui**	**1.09**	**95**	i P	**Pn**	**09 24 34.9**	**-0.2**
STG5				i S	**Sn**	**09 24 47.4**	**-3.3**
HUEH	**Huehuetenango**	**1.24**	**49**	eP	**Pn**	**09 24 39.0**	**+1.9**
HUEH				eS	**Sn**	**09 24 56.2**	**+2.0**
HUEH	**Huehuetenango**	**1.24**	**49**	i P	**Pn**	**09 24 38.4**	**+1.3**
HUEH				i S	**Sn**	**09 24 56.1**	**+2.0**
HUEH				IAML		09 24 58.3	
	comp=N,258nm,0.5s						
PCIG		**1.40**	**329**	eP	**Pn**	**09 24 41.2**	**+2.4**
PCIG				eS	**Sn**	**09 24 57.3**	**0.0**
CCIG	**Comitan**	**1.80**	**10**	eP	**Pn**	**09 24 46.9**	**+2.7**
CCIG				eS	**Sn**	**09 25 01.9**	**-4.9**
TGIG		**2.35**	**345**	eP	**Pn**	**09 24 53.0**	**+1.7**
TGIG				eS	**Sn**	**09 25 13.9**	**-5.6**
CMIG	**Matias Romero**	**3.47**	**318**	eP	**Pn**	**09 25 09.6**	**+3.3**
CMIG				eS	**Sn**	**09 25 42.6**	**-3.8**

*IDC **04** 09:24:21.9±3.1, 60.°77N×28.°90E, h0km, mbtmp3.5/1, ML2.5/1, Error ellipse: s-maj=23.8km s-min=13.8km az=168.0*
*HEL **04** 09:24:22.1±0.3, 60.°97N×29.°06E, h0km, ML1.5, Suspected explosion*
ISC 04 09:24:21.4±1.2**, 61.°04N**±0.°05×**28.°98E**±0.°06**, h0**km**, n15,** σ**0.s94**/23**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RUF	**Ruokolahti**	**0.39**	**358**	PG	**Pb**	**09 24 30.7**	**-0.5**
RUF				SG	**Sb**	**09 24 36.4**	**-1.3**
RUF				smax	smax	09 24 37.2	
	comp=Z,8.2nm,0.2s						
VJF	**Virojoki**	**0.86**	**235**	PG	**Pg**	**09 24 37.5**	**-0.4**
VJF				smax	smax	09 24 48.6	
	comp=Z,8.6nm,0.2s						
VJF				SG	**Sg**	**09 24 49.0**	**+0.1**
FIA0	**FINESS Array S**	**1.46**	**287**	PG	**Pg**	**09 24 48.8**	**-0.6**
FIA0				smax	smax	09 25 07.7	
	comp=Z,5.2nm,0.2s						
FINES	**FINESS Array B**	**1.46**	**287**	Pg	**Pb**	**09 24 48.9**	**-0.5**
	comp=Z,1.3nm,0.3s,baz=114,slow=16,SNR=31						
FINES				Lg	Lg	09 25 09.8	
	comp=Z,1.7nm,0.3s,baz=112,slow=28,SNR=16						
PVF	**Pernaja**	**1.61**	**253**	PB	**Pn**	**09 24 50.5**	**-0.5**
PVF				smax	smax	09 25 10.8	
	comp=Z,4.2nm,0.2s						
PVF				SG	**Sg**	**09 25 14.5**	**+1.5**
SUF	**Sumiainen**	**2.16**	**323**	PG	**Pg**	**09 25 02.1**	**-0.5**
SUF				smax	smax	09 25 28.2	
	comp=Z,1.5nm,0.2s						
SUF				SG	**Sg**	**09 25 31.8**	**+1.2**
JOF	**Joensuu**	**2.19**	**29**	PG	**Pg**	**09 25 02.2**	**-1.0**
JOF				SG	**Sb**	**09 25 29.6**	**+0.3**
NUR	**Nurmijarvi**	**2.19**	**258**	PB	**Pb**	**09 25 01.2**	**-0.6**
	baz=77						
NUR				smax	smax	09 25 27.7	
	comp=Z,1.7nm,0.2s						
KEF	**Keuruu**	**2.27**	**302**	PB	**Pb**	**09 25 03.1**	**0.0**
KEF				smax	smax	09 25 31.3	
	comp=Z,1.1nm,0.2s						
KEF				SG	**Sg**	**09 25 34.5**	**+0.3**
MEF	**Metsahovi**	**2.41**	**252**	PN	**Pb**	**09 25 04.9**	**-0.6**
MEF				smax	smax	09 25 33.6	
	comp=Z,2.6nm,0.2s						
MEF				SN	**Sb**	**09 25 34.6**	**-1.1**
NIF	**Nilsia**	**2.42**	**347**	PG	**Pb**	**09 25 06.0**	**+0.2**
	baz=162						
NIF				smax	smax	09 25 36.0	
	comp=Z,2.1nm,0.2s						
NIF				SG	**Sg**	**09 25 38.8**	**-0.4**
OUL	**Oulu**	**4.30**	**342**	SG	**Sg**	**09 26 38.0**	**-1.3**
KU1	**Kurvinen**	**4.55**	**3**	PN	**Pn**	**09 25 32.8**	**+1.4**
I43RU	**DUBNA INFRASON**	**6.08**	**132**	I	I	09 58 21.9	
	baz=320,slow=324,SNR=3.1						
ARCES	**ARCESS Array B**	**8.66**	**352**	Pn	**Pn**	**09 26 29.5**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=172,slow=14,SNR=1.2						
ARCES				Sn	**Sn**	**09 28 06.2**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=172,slow=26,SNR=1.4						
	comp=Z,3.0nm,1.1s						

*IDC **04** 09:29:44.6±12.0, 1.°75N×127.°70E, h152km±125km, mb3.6/7, mbtmp4.0/8, ML4.3/1, Error ellipse: s-maj=42.4km s-min=22.9km az=80.0*
*DJA **04** 09:29:48.9±1.4, 2°N±5°×12°8E±°, h203km±12km, M3.8/11, MLv3.8/11*
*NEIC **04** 09:29:50.1±0.9, 1.°75N±0.°09×127.°7E±0.°1, h207km±9km, mb4.2/22, Error ellipse: s-maj=19.4km s-min=8.8km az=121.0*
ISC 04 09:29:49.2±0.6**, 1.°71N**±0.°07×**127.°75E**±0.°10**, h200**km**, n41,** σ**0.s65**/41**, mb4.0**/19**, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.01**	**202**	Pn	**Pn**	**09 30 20.6**	**+1.6**
TNTI	**Ternate**	**1.01**	**202**	P	**Pn**	**09 30 19.6**	**+0.6**
MNI	**Manado**	**2.92**	**265**	P	**Pn**	**09 30 37.8**	**-0.1**
SANI	**Sanana**	**4.13**	**205**	P	**Pn**	**09 30 51.5**	**-1.1**
GTOI	**Gorontalo**	**4.85**	**257**	P	**Pn**	**09 31 02.3**	**+0.5**
LUWI	**Luwuk**	**5.68**	**241**	Pn	**Pn**	**09 31 12.7**	**+0.3**
TOLI2	**Tolitoli**	**6.99**	**265**	Pn	**Pn**	**09 31 29.3**	**0.0**
SOEI	**Soe**	**11.91**	**197**		**P**	**09 32 38.6**	**+0.6**
MTN	**Manton Dam**	**14.85**	**167**		**Pn**	**09 33 09.5**	**-0.2**
KNRA	**Kununurra**	**17.31**	**177**	P	**P**	**09 33 38.5**	**+0.9**
FITZ	**Fitzroy Crossi**	**19.79**	**186**	P	**P**	**09 34 04.2**	**-0.3**
	0.6nm,0.3s,baz=11,slow=9.8,SNR=6.3						
	1.7nm,0.5s						
COEN	**Coen**	**21.82**	**136**	P	**P**	**09 34 25.7**	**-0.2**
COEN				IAmb	IAmb	09 34 26.6	
	comp=Z,6.4nm,1.1s						
WB0	**Warramunga Arr**	**22.32**	**163**	P	**P**	**09 34 30.7**	**+0.2**
WB0				IAmb	IAmb	09 34 30.9	
	comp=Z,5.2nm,0.5s						
WRA	**Warramunga Arr**	**22.47**	**164**	P	**P**	**09 34 31.7**	**-0.2**
	comp=Z,2.3nm,0.5s,baz=344,slow=8.7,SNR=31						
	comp=Z,2.3nm,0.5s						
WRA	**Warramunga Arr**	**22.47**	**164**	P	**P**	**09 34 30.6**	**-1.4**
WB2	**Warramunga Arr**	**22.47**	**164**	P	**P**	**09 34 31.7**	**-0.3**
WB2				IAmb	IAmb	09 34 33.5	
	comp=Z,9.0nm,0.8s						
WR8	**Warramunga Arr**	**22.53**	**163**	P	**P**	**09 34 32.4**	**-0.1**
WR8				IAmb	IAmb	09 34 58.1	
	comp=Z,4.7nm,1.1s						
WR0	**Warramunga Arr**	**22.54**	**163**	P	**P**	**09 34 32.3**	**-0.3**
WR0				IAmb	IAmb	09 34 34.3	
	comp=Z,3.1nm,0.8s						
MBWA	**Marble Bar**	**24.05**	**199**	P	**P**	**09 34 45.6**	**-0.5**
MBWA				IAmb	IAmb	09 34 49.6	
	comp=Z,9.8nm,1.1s						
PSA00	**Pilbara Seismi**	**24.40**	**198**	P	**P**	**09 34 49.4**	**+0.1**
PSA00				IAmb	IAmb	09 35 17.5	
	comp=Z,9.8nm,1.1s						
RABL	**Rabaul**	**25.10**	**104**	P	**P**	**09 34 55.1**	**-0.8**
AS31	**Alice Springs**	**25.93**	**167**	P	**P**	**09 35 03.7**	**+0.5**
ASAR	**Alice Springs**	**25.93**	**167**	P	**P**	**09 35 03.1**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=339,slow=8.7,SNR=17						
	comp=Z,0.6nm,0.3s						
ASAR	**Alice Springs**	**25.93**	**167**	P	**P**	**09 35 03.6**	**+0.4**
FORT	**Forrest**	**32.31**	**179**	P	**P**	**09 35 59.0**	**-0.5**
FORT				IAmb	IAmb	09 36 24.8	
	comp=Z,4.4nm,0.8s						
MORW	**Morawa**	**32.59**	**199**	P	**P**	**09 36 01.6**	**-0.3**
MORW				IAmb	IAmb	09 36 08.3	
	comp=Z,6.8nm,1.1s						
BBOO	**Buckleboo**	**35.22**	**168**	P	**P**	**09 36 24.9**	**+0.3**
BBOO				IAmb	IAmb	09 36 26.6	
	comp=Z,6.7nm,0.9s						
NWAO	**Narrogin (SRO)**	**35.85**	**195**	P	**P**	**09 36 30.0**	**0.0**
NWAO				IAmb	IAmb	09 36 44.0	
	comp=Z,8.2nm,1.1s						
STKA	**Stephens Creek**	**35.90**	**160**	P	**P**	**09 36 30.7**	**+0.3**
	comp=Z,3.1nm,0.6s,baz=335,slow=8.9,SNR=6.6						
	comp=Z,3.1nm,0.6s						
STKA	**Stephens Creek**	**35.90**	**160**	P	**P**	**09 36 31.2**	**+0.8**
MJAR	**Matsushiro Arr**	**35.98**	**14**	P	**P**	**09 36 30.2**	**-0.9**
	comp=Z,0.9nm,0.4s,baz=189,slow=8.6,SNR=2.8						
	comp=Z,0.9nm,0.4s						
PETK	**Petropavlovsk-**	**56.92**	**21**	P	**P**	**09 39 14.1**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=224,slow=7.2,SNR=1.2						
	comp=Z,0.8nm,0.7s						
MKAR	**Makanchi Array**	**59.78**	**325**	P	**P**	**09 39 33.5**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=120,slow=8.2,SNR=7.7						
	comp=Z,0.5nm,0.3s						
MKAR	**Makanchi Array**	**59.78**	**325**	P	**P**	**09 39 32.9**	**-0.4**
KURBB	**Kurchatov Arra**	**63.98**	**328**	P	**P**	**09 40 00.9**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=126,slow=6.4,SNR=7.3						
	comp=Z,0.7nm,0.4s						
KURK	**Kurchatov**	**63.98**	**328**	P	**P**	**09 40 00.9**	**-0.2**
KURK				IAmb	IAmb	09 40 01.4	
	comp=Z,1.3nm,0.7s						
D19K	**Kuna River**	**82.63**	**21**	P	**P**	**09 41 51.1**	**+1.3**
E19K	**Redstone River**	**82.71**	**22**	P	**P**	**09 41 51.0**	**+0.8**
E24K	**Your Creek**	**86.09**	**22**	P	**P**	**09 42 07.2**	**-0.1**
GLI	**Glacier Island**	**86.15**	**29**	P	**P**	**09 42 06.4**	**-1.2**
LOGN	**Logan Glacier**	**89.13**	**29**	P	**P**	**09 42 21.6**	**-0.3**

IDC 04 09:39:53.6±5.2**, 2.°42S**×**138.°37E, h0**km**, mb3.0**/2**, mbtmp3.2**/3**, ML3.0**/1**, Error ellipse: s-maj=216.2km s-min=32.5km az=85.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.85**	**192**	P	Pn	09 44 02.8	-0.8
	0.1nm,0.3s,baz=15,slow=12,SNR=2.1						
	0.7nm,1.1s						
ASAR	**Alice Springs**	**21.56**	**191**	P	P	09 44 45.4	+0.5
	0.1nm,0.4s,baz=16,slow=10,SNR=4.2						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**69.36**	**322**	P	P	09 51 03.2	0.0
	0.4nm,0.9s,baz=118,slow=6.3,SNR=1.9						
	0.4nm,0.9s						

*IDC **04** 09:40:34.2±3.0, 6.°14N×127.°23E, h0km, mb3.4/4, mbtmp3.4/4, MS3.5/5, Error ellipse: s-maj=280.0km s-min=23.8km az=67.0*
*MAN **04** 09:40:35.0, 5.°34N×126.°59E, h1km, MS3.1*
ISC 04 09:40:36.0±1.4**, 6.°1N**±0.°2×**126.°9E**±0.°1**, h10**km**, n9,** σ**1.s00**/8**, mb3.3**/4**, MS3.6**/5**, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.16**	**272**	eP	**Pn**	**09 40 57.5**	**-0.9**
DDMP				eS	**Sn**	**09 41 15.6**	**+1.3**
DMPH	**Davao City--Mi**	**1.69**	**307**	eP	**Pg**	**09 41 08.2**	**-0.4**
DMPH				i S	**Sb**	**09 41 28.4**	**-0.3**
WRA	**Warramunga Arr**	**26.87**	**164**	P	**P**	**09 46 16.1**	**-1.1**
	0.3nm,0.6s,baz=344,slow=9.2,SNR=6.1						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**30.34**	**167**	P	**P**	**09 46 48.5**	**+0.4**
	0.2nm,0.6s,baz=350,slow=8.2,SNR=1.7						
	0.2nm,0.6s						
PALK	**Pallekele**	**45.87**	**274**	LR	LR	10 10 18.7	
	comp=Z,29nm,21.3s,baz=130,slow=39						
MKAR	**Makanchi Array**	**55.74**	**324**	P	**P**	**09 50 13.8**	**+0.8**
	0.2nm,0.4s,baz=117,slow=6.8,SNR=4.3						
MKAR				LR	LR	10 16 22.5	
	comp=Z,37nm,19.7s,baz=90,slow=38						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**58.59**	**332**	LR	LR	10 17 34.5	
	comp=Z,41nm,18.4s,baz=70,slow=38						
KURBB	**Kurchatov Arra**	**59.87**	**327**	P	**P**	**09 50 42.4**	**+0.5**
	0.5nm,0.6s,baz=123,slow=6.7,SNR=4.3						
KURBB				LR	LR	10 19 22.4	
	comp=Z,49nm,18.8s,baz=163,slow=39						
	0.5nm,0.6s						
BVAR	**Borovoye Array**	**65.46**	**326**	LR	LR	10 22 52.5	
	comp=Z,50nm,18.7s,baz=98,slow=39						

IDC 04 09:44:45.0±4.0**, 17.°21N**×**94.°50E, h0**km**, mb3.4**/2**, mbtmp3.5**/3**, ML4.2**/1**, Error ellipse: s-maj=68.4km s-min=39.7km az=124.0, Myanmar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**4.41**	**73**	Pn	Pn	09 45 54.2	+0.9
	3.0nm,0.3s,baz=259,slow=15,SNR=16						
CMAR				Sn	Sn	09 46 44.8	-0.6
	baz=255,slow=18						
	6.4nm,0.3s						
WRA	**Warramunga Arr**	**53.79**	**132**	P	P	09 54 09.4	-0.4
	0.4nm,0.7s,baz=313,slow=8.2,SNR=2.4						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**55.96**	**135**	P	P	09 54 25.5	0.0
	0.4nm,0.6s,baz=315,slow=6.5,SNR=4.8						
	0.4nm,0.6s						

GUC 04 09:54:36.7±0.7**, 24.°01S**×**67.°17W, h192**km±7km**, ML3.7, 4C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SALTA		**0.79**	**106**⇓	eP	Pn	09 55 04.3	-0.6
AF01	**San Pedro de A**	**1.40**	**319**	eP	Pn	09 55 10.3	+1.1
AF01				eS	Sn	09 55 36.1	+1.8
SLA	**San Lorenzo**	**1.68**	**115**⇓	eP	Pn	09 55 11.4	-0.1
SLA				eS	Sn	09 55 37.7	-0.8
GO02	**Mina Guanaco**	**2.48**	**242**⇑	eP	Pn	09 55 20.5	+0.4
GO02				eS	Sn	09 55 53.5	-0.5
GO02				IAML		09 55 54.5	
	comp=N,145nm,0.1s						
PB06	**IPOC Station P**	**2.56**	**300**⇑	eP	Pn	09 55 21.7	+0.7
PB06				eS	Sn	09 55 54.5	-0.9
PB06				IAML		09 55 56.7	
	comp=E,195nm,0.2s						
PB09	**IPOC Station P**	**2.92**	**319**	eP	Pn	09 55 26.3	+1.2
PB09				eS	Sn	09 56 02.8	-0.1
PB09				IAML		09 56 04.1	
	comp=N,73nm,0.6s						
PB14	**IPOC Station P**	**3.01**	**258**	eP	Pn	09 55 26.3	-0.1
PB14				eS	Sn	09 56 02.7	-2.3
PB03	**IPOC Station P**	**3.08**	**309**	eP	Pn	09 55 27.5	+0.4
PB03				eS	Sn	09 56 04.2	-2.1
PB03				IAML		09 56 06.5	
	comp=E,139nm,0.3s						
AC02	**Maricunga**	**3.32**	**212**⇑	eP	Pn	09 55 30.6	+0.3
AC02				eS	Sn	09 56 11.8	-0.4
PB07	**IPOC Station P**	**3.38**	**312**	eP	Pn	09 55 31.0	+0.3
PB07				eS	Sn	09 56 10.5	-2.5
PB01	**IPOC Station P**	**3.65**	**324**	eP	Pn	09 55 34.1	+0.1
PB01				eS	Sn	09 56 16.7	-2.1
PB02	**IPOC Station P**	**3.68**	**316**	eP	Pn	09 55 34.3	0.0
PB02				eS	Sn	09 56 16.7	-2.7
AC01	**Pan de Azucar**	**3.76**	**235**	eP	Pn	09 55 34.2	-1.0
AC01				eS	Sn	09 56 17.6	-3.5
PB08	**IPOC Station P**	**4.27**	**334**⇑	eP	Pn	09 55 43.5	+1.5
PB08				eS	Sn	09 56 32.2	-1.0
AC06	**Mina Casimiro**	**4.39**	**220**	eP	Pn	09 55 42.0	-1.2
AC06				eS	Sn	09 56 32.0	-3.5
GO03	**Copiapo**	**4.51**	**217**	eP	Pn	09 55 43.5	-1.2
GO03				eS	Sn	09 56 34.9	-3.3

IDC 04 09:55:32.5±1.2**, 16.°93S**×**175.°89E, h0**km**, mb3.6**/4**, mbtmp3.5**/5**, ML4.8**/1**, Error ellipse: s-maj=49.8km s-min=20.7km az=0.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.21**	**111**	Pn	Pn	09 56 11.3	+0.8
	13nm,0.3s,baz=284,slow=19,SNR=25						
MSVF				Sn	Sn	09 56 39.1	+0.5
	11nm,0.3s,baz=288,slow=20,SNR=6.3						
	19nm,0.4s						
H11S2	**WAKE ISLAND Hy**	**36.34**	**345**	T	T	10 40 37.1	
	baz=166,slow=76,SNR=62						
H11S3	**WAKE ISLAND Hy**	**36.35**	**345**	T	T	10 40 39.4	
	baz=166,slow=76,SNR=50						
H11S1	**WAKE ISLAND Hy**	**36.36**	**345**	T	T	10 40 38.5	
	baz=166,slow=76,SNR=38						
H11N1	**WAKE ISLAND Hy**	**37.48**	**346**	T	T	10 42 02.3	
	baz=164,slow=76,SNR=23						
H11N3	**WAKE ISLAND Hy**	**37.48**	**346**	T	T	10 42 02.2	
	baz=164,slow=76,SNR=14						
H11N2	**WAKE ISLAND Hy**	**37.49**	**346**	T	T	10 42 03.7	
	baz=164,slow=76,SNR=8.7						
WRA	**Warramunga Arr**	**39.46**	**259**	P	P	10 03 04.8	-0.1
	0.6nm,0.9s,baz=97,slow=8.3,SNR=2.6						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**39.84**	**253**	P	P	10 03 08.0	0.0
	1.1nm,0.8s,baz=81,slow=8.9,SNR=12						
	1.1nm,0.8s						
NVAR	**Mina Array Bea**	**82.59**	**46**	P	P	10 07 57.5	-0.5
	0.4nm,0.7s,baz=247,slow=7.8,SNR=3.6						
	0.4nm,0.7s						
TXAR	**Lajitas Array**	**90.13**	**59**	P	P	10 08 35.1	0.0
	0.1nm,0.6s,baz=277,slow=4.1,SNR=2.0						
	0.1nm,0.6s						

*IDC **04** 09:56:12.7±2.8, 29.°91S×177.°40W, h0km, mb4.0/3, mbtmp4.0/4, ML3.2/1, Error ellipse: s-maj=52.1km s-min=20.5km az=82.0*
*NEIC **04** 09:56:17.4±0.3, 29.°9S±0.°1×177.°4W±0.°2, h35km±2km, mb4.2/12, Error ellipse: s-maj=32.7km s-min=6.7km az=42.0*
ISC 04 09:56:17.7±1.5**, 29.°96S**±0.°07×**177.°5W**±0.°2**, h35**km**, n19,** σ**0.s62**/22**, mb4.1**/9**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.79**	**332**	Pn	**Pn**	**09 56 32.1**	**-0.2**
	531nm,0.3s,baz=151,slow=13,SNR=16						
RAO				Sn	**Sn**	**09 56 43.5**	**+0.6**
	620nm,0.3s,baz=143,slow=20,SNR=13						
RAO	**Raoul Island**	**0.79**	**332**		**Pn**	**09 56 32.1**	**-0.2**
RAO					**Sn**	**09 56 42.5**	**-0.4**
URZ	**Urewera**	**9.41**	**207**	Pn	**Pn**	**09 58 31.3**	**+0.6**
	0.2nm,0.3s,baz=29,slow=19,SNR=1.9						
URZ				Sn	**Sn**	**10 00 14.1**	**-1.2**
	1.1nm,0.3s,baz=37,slow=20,SNR=7.9						
	13nm,1.0s						
STKA	**Stephens Creek**	**35.00**	**256**	P	**P**	**10 03 08.7**	**+1.8**
	1.6nm,0.6s,baz=90,slow=9.1,SNR=3.0						
	1.6nm,0.6s						
PMG	**Port Moresby**	**38.81**	**294**	P	**P**	**10 03 39.3**	**-0.1**
PMG				IAmb	IAmb	10 03 58.6	
	comp=Z,5.6nm,0.8s						
BBOO	**Buckleboo**	**39.51**	**254**	P	**P**	**10 03 45.2**	**+0.2**
BBOO				IAmb	IAmb	10 03 49.9	
	comp=Z,4.4nm,0.8s						
COEN	**Coen**	**39.57**	**285**	P	**P**	**10 03 45.1**	**-0.7**
COEN				IAmb	IAmb	10 04 02.9	
	comp=Z,3.2nm,1.0s						
AS31	**Alice Springs**	**43.57**	**266**	P	**P**	**10 04 18.2**	**-0.3**
ASAR	**Alice Springs**	**43.57**	**266**	P	**P**	**10 04 18.2**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=102,slow=7.4,SNR=8.5						
	comp=Z,0.9nm,0.6s						
WR0	**Warramunga Arr**	**44.34**	**272**	P	**P**	**10 04 24.9**	**+0.2**
WR8	**Warramunga Arr**	**44.37**	**271**	P	**P**	**10 04 24.6**	**-0.3**
WR8				IAmb	IAmb	10 04 27.1	
	comp=Z,3.5nm,0.9s						
WB2	**Warramunga Arr**	**44.51**	**271**	P	**P**	**10 04 26.1**	**+0.1**
WRA	**Warramunga Arr**	**44.52**	**271**	P	**P**	**10 04 26.6**	**+0.5**
	comp=Z,1.4nm,0.6s,baz=110,slow=8.0,SNR=12						
	comp=Z,1.4nm,0.6s						
WRA	**Warramunga Arr**	**44.52**	**271**	P	**P**	**10 04 26.1**	**-0.1**
WB0	**Warramunga Arr**	**44.54**	**272**	P	**P**	**10 04 25.6**	**-0.7**
WB0				IAmb	IAmb	10 04 35.6	
	comp=Z,2.8nm,0.9s						
FORT	**Forrest**	**46.58**	**255**	P	**P**	**10 04 42.3**	**0.0**
CASY	**Casey**	**55.73**	**208**	P	**P**	**10 05 50.3**	**-0.1**
BELA	**Belgrano 2**	**70.16**	**172**	P	**P**	**10 07 26.4**	**+0.2**
BELA				IAmb	IAmb	10 07 35.1	
	comp=Z,2.5nm,1.0s						
FINES	**FINESS Array B**	**144.88**	**340**	PKP	**PKPdf**	**10 15 49.6**	**-0.6**
	comp=Z,5.7nm,0.9s,baz=35,slow=3.4,SNR=5.3						

*NEIC **04** 10:04:56.0±0.8, 18.°55S±0.°09×177.°6W±0.°2, h635km±11km, mb4.1/20, Error ellipse: s-maj=26.9km s-min=11.3km az=103.0*
*IDC **04** 10:04:58.4±2.3, 18.°57S×178.°00W, h638km±22km, mb3.1/4, mbtmp4.2/6, Error ellipse: s-maj=115.6km s-min=20.3km az=156.0*
ISC 04 10:04:58.3±0.8**, 18.°5S**±0.°1×**177.°9W**±0.°1**, h650**km**, n29,** σ**0.s88**/31**, mb4.0**/14**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.88**	**280**	P	**P**	**10 06 25.3**	**-1.6**
	22nm,0.7s,baz=127,slow=14,SNR=16						
MSVF	**Nonsavu**	**3.88**	**280**	P	**P**	**10 06 25.5**	**-1.4**
AFI	**Afiamalu**	**7.46**	**53**	P	**P**	**10 06 55.4**	**+0.6**
	18nm,0.6s,baz=230,slow=16,SNR=2.2						
FUNA	**Funafuti**	**10.27**	**344**	P	**P**	**10 07 19.1**	**-1.8**
ARMA	**Armidale**	**30.05**	**241**	P	**P**	**10 10 17.8**	**-0.3**
CAN	**Canberra**	**33.72**	**233**	P	**P**	**10 10 48.9**	**0.0**
CTAO	**Charters Tower**	**33.80**	**261**	P	**P**	**10 10 50.6**	**+0.9**
CTAO				IAmb	IAmb	10 10 51.1	
	comp=Z,4.7nm,0.8s						
TOO	**Toolangi**	**37.16**	**232**	P	**P**	**10 11 16.6**	**-0.5**
COEN	**Coen**	**37.56**	**271**	P	**P**	**10 11 22.3**	**+1.8**
COEN				IAmb	IAmb	10 11 22.9	
	comp=Z,6.5nm,0.7s						
STKA	**Stephens Creek**	**38.75**	**242**	P	**P**	**10 11 30.2**	**+0.3**
	comp=Z,1.3nm,0.4s,baz=68,slow=11,SNR=4.1						
	comp=Z,1.3nm,0.4s						
STKA	**Stephens Creek**	**38.75**	**242**	P	**P**	**10 11 30.3**	**+0.3**
INKA	**Innaminka**	**38.95**	**249**	P	**P**	**10 11 32.9**	**+1.3**
BBOO	**Buckleboo**	**43.53**	**242**	P	**P**	**10 12 07.2**	**-0.2**
BBOO				IAmb	IAmb	10 12 43.1	
	comp=Z,13nm,1.2s						
WR8	**Warramunga Arr**	**44.82**	**260**	P	**P**	**10 12 17.6**	**+0.2**
WR8				IAmb	IAmb	10 12 42.7	
	comp=Z,7.9nm,1.3s						
WB0	**Warramunga Arr**	**44.94**	**260**	P	**P**	**10 12 18.7**	**+0.3**
WB0				IAmb	IAmb	10 12 35.4	
	comp=Z,7.5nm,1.4s						
WB2	**Warramunga Arr**	**44.96**	**260**	P	**P**	**10 12 19.0**	**+0.5**
WRA	**Warramunga Arr**	**44.97**	**260**	P	**P**	**10 12 18.8**	**+0.2**
	comp=Z,2.3nm,0.4s,baz=97,slow=7.6,SNR=50						
WRA				PcP	**PcP**	**10 13 45.7**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=95,slow=3.6,SNR=2.8						
	comp=Z,2.3nm,0.4s						
WRA	**Warramunga Arr**	**44.97**	**260**	P	**P**	**10 12 18.6**	**+0.1**
AS31	**Alice Springs**	**45.07**	**255**	P	**P**	**10 12 19.5**	**+0.1**
ASAR	**Alice Springs**	**45.07**	**255**	P	**P**	**10 12 19.6**	**+0.2**
	comp=Z,4.1nm,0.7s,baz=88,slow=8.0,SNR=75						
ASAR				PcP	**PcP**	**10 13 45.9**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=103,slow=3.7,SNR=7.1						
	comp=Z,4.1nm,0.7s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	45.07	255	P	P	10 12 19.3	-0.1
FORT	Forrest	50.17	245	P	P	10 12 56.6	-0.3
FORT				IAmb	IAmb	10 13 23.2	
	comp=Z,6.9nm,0.8s						
KNRA	Kununurra	50.88	265	P	P	10 13 03.5	+1.3
KNRA				IAmb	IAmb	10 13 04.1	
	comp=Z,16nm,1.2s						
PSA00	Pilbara Seismi	58.20	256	P	P	10 13 53.2	+0.1
PSA00				IAmb	IAmb	10 14 06.7	
	comp=Z,16nm,1.3s						
PSA00	Pilbara Seismi	58.20	256	P	P	10 13 52.8	-0.3
PSA00				IAmb	IAmb	10 13 54.8	
	comp=Z,10.0nm,1.4s						
MBWA	Marble Bar	58.37	256	P	P	10 13 54.5	+0.3
MBWA				IAmb	IAmb	10 14 05.8	
	comp=Z,17nm,1.3s						
SBA	Scott Base	59.89	184		P	10 14 02.4	-0.8
BELA	Belgrano 2	81.55	173	P	P	10 16 08.3	-1.3
BELA				IAmb	IAmb	10 16 20.6	
	comp=Z,12nm,1.5s						
TXAR	Lajitas Array	85.92	57	P	P	10 16 33.6	+1.6
	comp=Z,0.5nm,0.8s,baz=243,slow=4.8,SNR=5.2						
	comp=Z,0.5nm,0.8s						

*MOS **04** 10:14:34.4±1.1, 50°.93N×149°.61E, h605km, mb3.6/1, Error ellipse: s-maj=20.6km s-min=10.0km az=48.5*
*SKHL **04** 10:14:34.3±0.5, 50°.70N×149°.60E, h585km±7km, mb4.2/5, msh4.8/2*
*IDC **04** 10:14:35.0±1.8, 50°.87N×149°.30E, h581km±42km, mb2.7/5, mbtmp3.6/9, Error ellipse: s-maj=51.8km s-min=20.6km az=58.0*
*KRSC **04** 10:14:35.6±2.4, 50°.80N×150°.41E, h627km±39km, Ml4.0*
ISC 04 10:14:33.7±0.7**, 50°.91N**±0°.10×**149°.81E**±0°.07**, h600km, n63, σ2s35**/76**, mb3.2**/5**, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PAU	Pauzhetka	4.44	80	eP	P	10 16 02.3	+0.2
PAU				AMB	AMB	10 16 18.4	
	20nm,0.5s						
TYV	Tymovskoe	4.53	272	eP	P	10 16 01.7	-1.1
TYV				eS	S	10 17 13.6	-2.1
APC	Apacha	4.98	63	P	P	10 16 07.5	+1.4
APC	Apacha	4.98	63	eP	P	10 16 07.5	+1.4
OKH	Okha	4.99	305	eP	P	10 16 06.2	+0.1
OKH				AMB	AMB	10 16 10.9	
	40nm,0.4s						
OKH				eS	S	10 17 20.8	-1.2
OKH				A	A	10 17 28.4	
	40nm,0.6s						
OKH				A	A	10 17 28.4	
	40nm,0.6s						
ASAK	Asacha	5.25	71	P	P	10 16 11.2	+2.8
ASAK	Asacha	5.25	71	eP	P	10 16 11.3	+2.8
KDTR	Khodutka, Kamc	5.26	77	P	P	10 16 09.5	+1.1
KDTR				S	S	10 17 23.4	-2.6
KDTR	Khodutka, Kamc	5.26	77	eP	P	10 16 09.6	+1.1
KDTR				eS	S	10 17 23.5	-2.6
KDTR	Khodutka, Kamc	5.26	77	eP	P	10 16 09.5	+1.1
KDTR				eS	S	10 17 23.4	-2.6
UGL	Uglegorsk	5.32	253	eP	P	10 16 07.2	-1.8
UGL				AMB	AMB	10 16 19.4	
	40nm,0.6s						
PEA0B	Petropavlovsk-	5.35	63	P	P	10 16 11.6	+2.5
PETK	Petropavlovsk-	5.35	63	P	P	10 16 11.6	+2.5
	2.3nm,0.5s,baz=262,slow=9.0,SNR=24						
KRMR	Karymshinskiy	5.50	66	P	P	10 16 14.7	+4.4
KRMR	Karymshinskiy	5.50	66	eP	P	10 16 14.7	+4.4
KRMR	Karymshinskiy	5.50	66	eP	P	10 16 14.7	+4.4
RUS	Russkaya	5.63	71	P	P	10 16 13.1	+1.7
RUS	Russkaya	5.63	71	eP	P	10 16 13.1	+1.7
RUS	Russkaya	5.63	71	eP	P	10 16 13.1	+1.7
GNL	Ganaly	5.72	58	P	P	10 16 14.9	+2.7
GNL	Ganaly	5.72	58	eP	P	10 16 15.0	+2.7
KUR	Kuril'sk	5.83	194	eP	P	10 16 08.3	-5.0
PET	Petropavlovsk	5.86	65	eP	P	10 16 17.4	+4.0
PET				pmax	pmax		
	comp=Z,22nm,0.5s						
PET	Petropavlovsk	5.86	65	eP	P	10 16 15.9	+2.5
DALK	Dalny	5.92	66	P	P	10 16 16.0	+2.1
DALK	Dalny	5.92	66	eP	P	10 16 16.1	+2.1
DALK	Dalny	5.92	66	eP	P	10 16 16.0	+2.1
KOK	Koryaka	5.94	63	P	P	10 16 17.3	+3.1
KOK	Koryaka	5.94	63	eP	P	10 16 17.3	+3.1
KOK	Koryaka	5.94	63	eP	P	10 16 17.3	+3.1
KRX	Arik	5.97	62	P	P	10 16 17.1	+2.6
KRX	Arik	5.97	62	eP	P	10 16 17.2	+2.6
AVH	Avacha	5.99	63	P	P	10 16 17.7	+3.2
AVH	Avacha	5.99	63	eP	P	10 16 17.7	+3.2
KRER	Koryakskii	6.01	63	P	P	10 16 18.0	+3.2
KRER	Koryakskii	6.01	63	eP	P	10 16 18.1	+3.2
UGLR	Uglovaya	6.02	64	P	P	10 16 17.9	+3.0
UGLR	Uglovaya	6.02	64	eP	P	10 16 17.9	+3.0
SMAR	Somma	6.02	63	P	P	10 16 17.2	+2.2
SMAR	Somma	6.02	63	eP	P	10 16 17.3	+2.2
NKL	Nikolayevsk	6.07	295	eP	P	10 16 14.4	-0.7
NKL				AMB	AMB	10 16 15.4	
	comp=Z,20nm,0.5s						
NKL				eS	S	10 17 34.8	-3.5
NKL				A	A	10 17 40.4	
	comp=Z,20nm,0.5s						
NKL				A	A	10 17 40.4	
	comp=Z,20nm,0.5s						
SDLR	Sedlovina	6.08	63	P	P	10 16 17.7	+2.4
SDLR	Sedlovina	6.08	63	eP	P	10 16 17.8	+2.4
YSS	Yuzhno-Sakhali	6.10	232	eP	P	10 16 13.0	-2.6
SPN	Mys Shipunski	6.68	67	P	P	10 16 21.5	+1.0
SPN				S	S	10 17 45.5	-2.7
SPN	Mys Shipunski	6.68	67	eP	P	10 16 21.6	+1.0
SPN				eS	S	10 17 45.5	-2.7
SPN	Mys Shipunski	6.68	67	eP	P	10 16 21.5	+1.0
SPN				eS	S	10 17 45.5	-2.7
NMR	Nemuro--Hokkai	8.04	202	eP	P	10 16 32.1	-1.2
MKZ	Mys Kozlova	8.11	59	P	P	10 16 35.4	+1.8
MKZ				S	S	10 18 11.7	-0.5
MKZ	Mys Kozlova	8.11	59	eP	P	10 16 35.4	+1.8
MKZ				eS	S	10 18 11.7	-0.5
MKZ	Mys Kozlova	8.11	59	eP	P	10 16 35.4	+1.8
MKZ				eS	S	10 18 11.7	-0.5
MA2	Magadan	8.70	3	P	P	10 16 41.5	+2.1
	comp=Z,1.7nm,0.5s,baz=185,slow=12,SNR=5.0						
KBTR	Krutoberegovo	9.38	51	P	P	10 16 45.7	-0.3
KBTR				S	S	10 18 31.7	-3.1
KBTR	Krutoberegovo	9.38	51	eP	P	10 16 45.7	-0.3
KBTR				eS	S	10 18 31.7	-3.1
SEY	Seymchan	12.14	6	P	P	10 17 15.7	+2.4
	comp=Z,1.1nm,0.5s,baz=180,slow=8.0,SNR=5.3						
MJAR	Matsushiro Arr	16.60	215	P	P	10 17 56.9	+0.4
	comp=Z,1.5nm,0.6s,baz=17,slow=9.3,SNR=6.3						
MKAR	Makanchi Array	43.22	292	P	P	10 21 43.1	+0.1
	comp=Z,0.6nm,0.7s,baz=68,slow=7.9,SNR=6.2						
	comp=Z,0.6nm,0.7s						
KURK	Kurchatov	43.34	299	P	P	10 21 45.1	+1.2
KURK	Kurchatov	43.34	299	eP	P	10 21 45.1	+1.2
KURBB	Kurchatov Arra	43.44	299	P	P	10 21 45.1	+0.5
	comp=Z,0.5nm,0.5s,baz=71,slow=8.3,SNR=3.2						
	comp=Z,0.5nm,0.5s						
BVAR	Borovoye Array	46.60	305	P	P	10 22 09.3	+0.6
	comp=Z,0.7nm,0.4s,baz=49,slow=9.4,SNR=4.1						
	comp=Z,0.7nm,0.4s						
WRA	Warramunga Arr	71.84	195	P	P	10 24 58.7	+1.8
	comp=Z,0.1nm,0.3s,baz=9.6,slow=6.3,SNR=1.7						
	comp=Z,0.1nm,0.3s						
ASAR	Alice Springs	75.56	195	P	P	10 25 20.4	+2.5
	comp=Z,0.6nm,0.7s,baz=9.6,slow=4.8,SNR=7.6						
	comp=Z,0.6nm,0.7s						

MAN 04 10:22:58.0, 13°.65N×120°.51E, h76km, MS3.0, Mindoro

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.61	43	eS	Sn	10 23 27.8	+4.5
TGY	Tagaytay City	0.61	43	eP	Pn	10 23 14.6	+2.1

*JMA **04** 10:23:46.0±0.3, 44°N±1°×14°8E±°, h0km, MV3.7/23, SE OFF ETOROFU*
*SKHL **04** 10:23:48.1±0.3, 44°.30N×148°.20E, h43km±4km, mb4.2/4*
ISC 04 10:23:44.5±3.3**, 44°.2N**±0°.1×**148°.5E**±0°.2**, h50km, n15, σ2s08**/25**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.11	336	eP	Pn	10 24 04.2	+0.5
KUR				AMB	AMB	10 24 04.6	
	180nm,0.3s						
KUR				eS	Sn	10 24 16.3	-1.6
KUR				A	A	10 24 16.9	
	280nm,0.4s						
KUR				A	A	10 24 16.9	
	480nm,0.4s						
SHO	Shikotan	1.26	254	eP	Pn	10 24 16.0	+10
SHO				AMB	AMB	10 24 16.5	
	70nm,0.3s						
SHO				eS	Sn	10 24 27.7	+6.1
SHO				A	A	10 24 28.9	
	200nm,0.3s						
SHO				A	A	10 24 28.9	
	600nm,0.3s						
YUK	Yuzh-Kuril'sk	1.92	265	eP	Pn	10 24 14.6	-0.1
YUK				AMB	AMB	10 24 17.0	
	230nm,0.4s						
YUK				eS	Sn	10 24 34.7	-2.9
YUK				A	A	10 24 39.5	
	370nm,0.5s						
YUK				A	A	10 24 39.5	
	370nm,0.5s						
NEM2	Nemuro 2	2.18	248	P	Pn	10 24 18.1	-0.1
NEM2				eS	Sn	10 24 41.2	-2.9
NMR	Nemuro--Hokkai	2.19	248	i P	Pn	10 24 18.2	-0.2
NMR				eS	Sn	10 24 41.2	-3.0
JRA	Rausu	2.46	265	P	Pn	10 24 23.1	+1.0
JRA				eS	Sn	10 24 49.5	-1.3
JNSB	Nemuroshibetsu	2.57	261	eP	Pn	10 24 24.3	+0.7
JNSB				eS	Sn	10 24 53.3	-0.3
JKHN	Kushirohamanak	2.69	246	eP	Pn	10 24 25.4	+0.2
JNK	Nakash	2.81	258	P	Pn	10 24 27.9	+0.9
JNK				eS	Sn	10 24 57.5	-2.2
AKK	Akkeshi	2.92	247	eP	Pn	10 24 28.8	+0.3
JAK	Akkeshi	3.03	247	eP	Pn	10 24 30.4	+0.5
JAK				eS	Sn	10 25 03.4	-1.6
JTKR	Abashiri--Toko	3.33	267	eP	Pn	10 24 36.8	+2.9
JAR	Ashorobuto	3.56	257	eP	Pn	10 24 38.8	+1.7
JAR				eS	Sn	10 25 17.5	-0.4
JCH	Churui	4.08	249	eP	Pn	10 24 45.1	+0.8
JCH				eS	Sn	10 25 29.4	-1.4
JNBK	Urakawa-nobuka	4.63	247	eP	Pn	10 24 53.7	+1.8

IDC 04 10:24:16.0±2.1**, 2°.72N×122°.06E, h0km, mb3.2**/3**, mbtmp3.2**/3**, Error ellipse: s-maj=360.1km s-min=29.7km az=62.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.54	152	P	P	10 29 46.4	-0.2
	0.5nm,0.8s,baz=330,slow=9.9,SNR=3.1						
	0.5nm,0.8s						
ASAR	Alice Springs	28.65	157	P	P	10 30 14.8	+0.2
	0.1nm,0.4s,baz=341,slow=9.0,SNR=4.5						
	0.1nm,0.4s						
MKAR	Makanchi Array	55.83	328	P	P	10 33 55.1	-0.1
	0.1nm,0.4s,baz=132,slow=8.0,SNR=1.6						
	0.1nm,0.4s						

*MAN **04** 10:29:14.0, 4°.25N×125°.72E, h156km, MS3.7*
*NEIC **04** 10:29:15.4±0.9, 4°.29N±0°.05×125°.71E±0°.06, h159km±8km, mb4.5/27, Error ellipse: s-maj=10.4km s-min=3.8km az=127.0*
*IDC **04** 10:29:15.6±0.9, 4°.30N×125°.73E, h169km±8km, mb3.8/10, mbtmp4.4/14, Error ellipse: s-maj=23.8km s-min=7.7km az=71.0*
*DJA **04** 10:29:16.7±0.6, 4°N±4°×12°6E±°, h150km±6km, M4.6/15, mB5.0/4, mb4.6/7, MLv4.6/15, Mw(mB)4.3/4*
ISC 04 10:29:15.4±0.6**, 4°.28N**±0°.04×**125°.70E**±0°.07**, h164km**±5km**, n88, σ1s28**/106**, mb4.3**/22**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	0.61	196	P	Pn	10 29 38.4	-0.6
DDMP	Don Marcelino,	1.82	0	i P	Pn	10 29 48.8	-0.6
DDMP				i S	Sn	10 30 14.6	-1.2
GSPH	General Santos	1.95	338	i P	Pn	10 29 49.3	-1.7
GSPH				i S	Sn	10 30 16.1	-2.4
DAV	Davao City (W)	2.78	358	P	Pn	10 30 00.0	-0.7
	299nm,0.5s,baz=256,slow=16,SNR=4.6						
DAV				S	Sn	10 30 35.9	+0.1
	780nm,0.6s,baz=220,slow=22,SNR=9.7						
DAV	Davao City (W)	2.78	358	Pn	Pn	10 29 59.9	-0.7
DAV	Davao City (W)	2.78	358	P	Pn	10 30 03.2	+2.5
KCP	Kidapawan	2.78	348	i P	Pn	10 30 01.2	+0.5
KCP				i S	Sn	10 30 35.4	-0.6
DMPH	Davao City--Mi	2.79	356	i P	Pn	10 30 01.0	+0.1
DMPH				i S	Sn	10 30 34.3	-1.9
MNI	Manado	2.94	197	P	Pn	10 30 02.4	-0.3
CTBH	Cotabato--PC H	3.26	334	i P	Pn	10 30 06.9	+0.2
CTBH				i S	Sn	10 30 47.7	+1.2
TNTI	Ternate	3.86	154	P	Pn	10 30 13.6	-0.7
TNTI	Ternate	3.86	154	S	Sn	10 30 58.1	-2.1
TNTI	Ternate	3.86	154		Pn	10 30 13.3	-1.0
TNTI				Sn	Sn	10 30 58.4	-1.8
TNTI	Ternate	3.86	154	P	Pn	10 30 13.1	-1.2
CGP	Cagayan de Oro	4.27	347	eP	Pn	10 30 20.1	+0.5
CGP				eS	Sn	10 31 05.3	-4.3
GTOI	Gorontalo	4.50	217	P	Pn	10 30 22.9	+0.3
TSSP	Tandag City	4.76	6	eP	Pn	10 30 25.3	-0.7
TSSP				eS	Sn	10 31 10.0	-11
MRSI	Marisa	5.32	225	P	Pn	10 30 32.8	-0.6
	0.2nm56nm,0.7s						
TOLI2	Tolitoli	5.83	237	P	Pn	10 30 40.6	+0.5
TOLI2	Tolitoli	5.83	237		Pn	10 30 40.1	0.0
LUWI	Luwuk	6.04	209	Pn	Pn	10 30 42.4	-0.5
SANI	Sanana	6.29	177	P	Pn	10 30 43.4	-2.8
	5µm114nm,0.6s						
APSI	Ampana	6.55	218	P	Pn	10 30 51.4	+1.8
	0.2nm785nm66nm,0.8s						
MYLDM	Lahad Datu	7.23	277	Pn	Pn	10 30 58.4	-0.2
SIJI	Sorong	7.56	132	P	Pn	10 31 03.2	+0.3
	20nm,0.4s,baz=332,slow=11,SNR=20						
SIJI				S	Sn	10 32 27.6	-0.1
	4.4nm,0.4s,baz=44,slow=22,SNR=1.5						
FAKI	Fak Fak	9.69	137	P	Pn	10 31 32.2	+0.9
FAKI	Fak Fak	9.69	137		Pn	10 31 30.7	-0.6
KAPI	Kappang	10.97	213	P	Pn	10 31 48.6	+0.5
	58nm,0.8s,baz=6.0,slow=7.3,SNR=14						
KAPI	Kappang	10.97	213		Pn	10 31 48.5	+0.4
SBUM	Sibu	13.57	263		Pn	10 32 21.4	-0.1
SOEI	Soe	14.01	186	Pn	Pn	10 32 27.2	+0.1
BATI	Baumata	14.53	188	P	Pn	10 32 34.8	+1.3
	57nm,0.4s,baz=334,slow=7.7,SNR=9.9						
BATI				S	S	10 35 20.9	+0.1
	11nm,0.4s,baz=315,slow=19,SNR=1.5						
PLAI	Plampang	15.22	211	P	Pn	10 32 43.0	+0.9
JAGI	Jajag, Banyuwa	17.11	222	P	Pn	10 33 06.7	+1.6
JAGI	Jajag, Banyuwa	17.11	222	P	P	10 33 04.2	0.0
JAGI				IAmb	IAmb	10 33 06.4	
	comp=Z,30nm,1.1s						
DRS	Darwin Rock St	17.39	163	P	P	10 33 08.0	+0.9
MTN	Manton Dam	17.85	162	P	P	10 33 12.7	+0.5
MTN				IAmb	IAmb	10 33 41.0	
	comp=Z,18nm,1.3s						
YULB	Yu-li	19.47	348	P	P	10 33 26.6	-3.2
YULB				IAmb	IAmb	10 33 26.7	
	comp=Z,44nm,1.4s						
SSLB	Suanglung	19.93	347	P	P	10 33 33.9	-0.8
SSLB				IAmb	IAmb	10 33 40.3	
	comp=Z,57nm,1.3s						
KNRA	Kununurra	20.06	171		P	10 33 36.0	0.0
WB0	Warramunga Arr	25.38	161	P	P	10 34 27.5	-0.2
WB0				IAmb	IAmb	10 34 30.7	
	comp=Z,6.8nm,0.7s						
WRAB	Tennant Creek	25.52	161	P	P	10 34 28.6	-0.3
WRA	Warramunga Arr	25.52	161	P	P	10 34 28.6	-0.3
	comp=Z,2.3nm,0.4s,baz=342,slow=9.8,SNR=30						
WRA				PcP	PcP	10 37 56.4	+0.1
	comp=Z,0.6nm,0.6s,baz=338,slow=2.1,SNR=2.9						
WRA				S	S	10 38 41.2	-3.2
	comp=Z,0.7nm,0.7s,baz=343,slow=15,SNR=3.4						
WRA				ScP	ScP	10 41 19.7	-0.6
	comp=Z,0.3nm,0.5s,baz=346,slow=2.8,SNR=2.5						
	comp=Z,2.3nm,0.4s						
WRA	Warramunga Arr	25.52	161	IAmb	IAmb	10 34 31.7	
	comp=Z,0.2nm,0.7s						
WR8	Warramunga Arr	25.59	161	P	P	10 34 29.3	-0.3
WR8				IAmb	IAmb	10 34 48.2	
	comp=Z,12nm,1.4s						
MBWA	Marble Bar	25.95	193	P	P	10 34 32.4	-0.3
MBWA	Marble Bar	25.95	193	P	P	10 34 32.5	-0.3
MBWA				IAmb	IAmb	10 34 35.1	
	comp=Z,12nm,0.8s						
PSA00	Pilbara Seismi	26.32	192	P	P	10 34 35.9	-0.2
PSA00	Pilbara Seismi	26.32	192		P	10 34 35.9	-0.2
PSA00	Pilbara Seismi	26.32	192		P	10 34 35.0	-1.1
PSA00				IAmb	IAmb	10 34 36.5	
	comp=Z,13nm,0.8s						
QIS	Mount Isa	28.21	152	P	P	10 34 53.9	+0.9
NJ2	Nanjing	28.37	348	eP	P	10 34 55.9	+1.7
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
AS31	Alice Springs	28.90	164		P	10 34 59.1	0.0
AS31				IAmb	IAmb	10 35 01.0	
	comp=Z,2.1nm,0.3s						
ASAR	Alice Springs	28.90	164	P	P	10 34 59.2	+0.1
	comp=Z,2.1nm,0.5s,baz=346,slow=7.7,SNR=60						
ASAR				PcP	PcP	10 38 04.4	0.0
	comp=Z,0.8nm,0.4s,baz=346,slow=2.8,SNR=5.3						
ASAR				S	S	10 39 36.0	-1.6
	comp=Z,0.7nm,0.8s,baz=346,slow=17,SNR=4.7						
ASAR				ScP	ScP	10 41 29.9	-0.6
	comp=Z,0.3nm,0.3s,baz=341,slow=2.6,SNR=3.6						
	comp=Z,2.1nm,0.5s						
ASAR	Alice Springs	28.90	164	P	P	10 34 59.0	-0.2
GIRL	Giralia	29.01	202	P	P	10 34 58.8	-1.2
CMAR	Chiang Mai Arr	29.71	300	P	P	10 35 06.1	-0.2
	comp=Z,0.6nm,0.3s,baz=102,slow=8.1,SNR=1.9						
CMAR				ScP	ScP	10 41 32.2	-1.0
	comp=Z,0.5nm,0.3s,baz=160,slow=1.0,SNR=5.4						
	comp=Z,0.6nm,0.3s						
CMAR	Chiang Mai Arr	29.71	300	P	P	10 35 05.0	-1.3
PZH	PanZhiHua	31.84	316	P	P	10 35 27.5	+2.4
KSRS	Korea Array	33.08	3	P	P	10 35 35.9	+0.3
	comp=Z,2.2nm,0.8s,baz=181,slow=9.4,SNR=5.0						
	comp=Z,2.2nm,0.8s						
MORW	Morawa	34.43	195	P	P	10 35 46.7	-0.6
MORW				IAmb	IAmb	10 35 48.5	
	comp=Z,13nm,1.1s						
FORT	Forrest	34.93	176	P	P	10 35 51.9	+0.3
FORT				IAmb	IAmb	10 35 52.4	
	comp=Z,5.6nm,0.7s						
INKA	Innaminka	34.99	156	P	P	10 35 53.1	+1.0
INKA				IAmb	IAmb	10 35 53.6	
	comp=Z,2.1nm,0.4s						
NWAO	Narrogin (SRO)	37.86	192	P	P	10 36 16.5	+0.1
BBOO	Buckleboo	38.17	166	P	P	10 36 19.6	+0.5
EIDS	Eidsvold	38.42	141	P	P	10 36 20.7	-0.5
EIDS				IAmb	IAmb	10 36 43.4	
	comp=Z,8.2nm,1.1s						
HHC	Hu-ho-hao-te	38.57	343	eP	P	10 36 25.7	+3.3
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
STKA	Stephens Creek	39.01	158	P	P	10 36 26.6	+0.6
	comp=Z,3.4nm,0.4s,baz=351,slow=7.8,SNR=16						
STKA				PcP	PcP	10 38 33.0	-0.1
	comp=Z,1.2nm,0.4s,baz=315,slow=2.9,SNR=3.3						
	comp=Z,3.4nm,0.4s						
STKA	Stephens Creek	39.01	158	P	P	10 36 26.5	+0.5
CAN	Canberra	45.06	153	P	P	10 37 17.1	+2.0
CAN				IAmb	IAmb	10 37 28.1	
	comp=Z,20nm,1.2s						
TOO	Toolangi	45.53	158	P	P	10 37 20.7	+2.0
SONM	Songino Array	46.46	342	PcP	PcP	10 38 58.0	+0.2
	comp=Z,1.6nm,0.8s,baz=152,slow=3.4,SNR=5.4						
WMQ	Urumqi	51.69	325	eP	P	10 38 07.8	+2.0
WMQ				PcP	PcP	10 39 12.7	-4.3
WMQ				S	S	10 45 02.2	-12
MKAR	Makanchi Array	56.52	326	P	P	10 38 39.6	-1.0
	comp=Z,1.1nm,0.5s,baz=120,slow=7.6,SNR=21						
MKAR				PcP	sP	10 39 34.9	+0.3
	comp=Z,0.8nm,0.6s,baz=123,slow=5.3,SNR=5.8						
	comp=Z,1.1nm,0.5s						
MKAR	Makanchi Array	56.52	326	P	P	10 38 39.9	-0.7
MAKZ	Makanchi	56.71	325	P	P	10 38 42.2	+0.2
ZALV	Zalesovo Beam	59.64	333	P	P	10 39 01.0	-1.1
	comp=Z,0.7nm,0.5s,baz=122,slow=9.7,SNR=2.5						
	comp=Z,0.7nm,0.5s						
KURBB	Kurchatov Arra	60.73	328	P	P	10 39 08.7	-0.9
	comp=Z,1.6nm,0.2s,baz=127,slow=6.3,SNR=5.8						
	comp=Z,1.6nm,0.2s						
AB31	Akbulak array	71.08	321	P	P	10 40 14.4	-1.3
ABKAR	Akbulak array	71.08	321	P	P	10 40 14.5	-1.2
F19K	Shaleruckik Mo	80.80	23	P	P	10 41 09.4	-1.0
D19K	Kuna River	80.99	21	P	P	10 41 12.1	+0.6
VNDA	Vanda	84.10	173	P	P	10 41 28.0	+0.7
	comp=Z,2.5nm,0.8s,baz=332,slow=8.8,SNR=1.8						
	comp=Z,2.5nm,0.8s						
VNDA	Vanda	84.10	173	IAmb	IAmb	10 41 34.1	
	comp=Z,7.4nm,1.1s						
QSPA	South Pole Qui	94.18	180	P	P	10 42 15.9	+0.4
	comp=Z,1.6nm,0.7s,baz=45,slow=1.4,SNR=3.7						
	comp=Z,1.6nm,0.7s						
SCHQ	Schefferville	120.19	8	PKP	PKPdf	10 47 46.1	-0.7
	comp=Z,1.3nm,0.9s,baz=39,slow=3.9,SNR=5.1						
TORD	Torodi Ar. Bea	121.77	288	PKP	PKPdf	10 47 50.0	-0.9
	comp=Z,0.9nm,0.9s,baz=69,slow=2.1,SNR=4.3						
TXAR	Lajitas Array	122.07	51	PKP	PKPdf	10 47 52.0	+0.7
	comp=Z,0.1nm,0.6s,baz=323,slow=2.4,SNR=4.0						

*ASRS **04** 10:38:47.0±2.3, 53°.68N×91°.05E, h0km, M3.2(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
NNC 04 10:38:56.4±1.6**, 52°.98N×91°.17E, h0km, mb3.7, mpv3.4, 5C-5D, Error ellipse: s-maj=14.0km s-min=9.0km az=52.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	3.92	287	⇑P	Pn	10 39 57.5	-0.3
	6.5nm,0.6s						
ZAA0				⇓S	Sn	10 40 45.7	+1.2
	35nm,1.1s						
KURK	Kurchatov	8.10	259	⇑Pn	Pn	10 40 54.5	-0.6
	0.5nm,0.2s						
KURK				⇑Lg	Lg	10 43 12.0	
	6.7nm,0.8s						
KURBB	Kurchatov Arra	8.18	258	⇓Pn	Pn	10 40 56.9	+0.6
	2.3nm,0.6s						
KURBB				⇓Sn	Sn	10 42 30.9	+1.5
	21nm,0.8s						
KURBB				⇓Lg	Lg	10 43 13.9	
	28nm,0.8s						
MK31	Makanchi Array	8.43	226	⇓Pn	Pn	10 41 00.1	+0.3
	0.2nm,0.3s,baz=35,slow=14,SNR=18						
MK31				⇑Lg	Lg	10 43 25.9	
	7.4nm,0.9s,baz=45,slow=32,SNR=4.6						
MAKZ	Makanchi	8.56	227	⇑Lg	Lg	10 43 27.5	
	11nm,1.4s						

*MDD **04** 11:07:25.0±1.3, 36°.73N×11°.00W, h0km, mb_Lg2.5/5, Error ellipse: s-maj=11.8km s-min=9.8km az=178.0*
*IGIL **04** 11:07:24.9, 36°.58N×11°.18W, h23km, ML1.8*
*INMG **04** 11:07:26.0±1.2, 36°.61N×11°.16W, h22km, ML2.0, Error ellipse: s-maj=6.6km s-min=5.4km az=97.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe*
*CNRM **04** 11:07:30.5, 36°.31N×10°.45W, h65km*
ISC 04 11:07:21.8±1.9**, 36°.46N**±0°.04×**11°.23W**±0°.10**, h35km, n40, σ2s03**/74**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	2.04	70	P	Pn	11 07 55.6	+1.9
PFVI				S	Sn	11 08 17.9	-0.1
PFVI	Vila Bisbo	2.04	70	eP	Pn	11 07 55.6	+1.9
PFVI				eS	Sn	11 08 18.0	0.0
PFVI				i IAML		11 08 19.3	
PFVI				i IAML		11 08 19.5	
PFVI				i IAML		11 08 22.9	
PFVI	Vila Bisbo	2.04	70	P	Pn	11 07 54.6	+0.9
PFVI				S	Sn	11 08 16.1	-1.9
MORF	Marmelete	2.23	67	eP	Pn	11 07 58.3	+1.9
MORF				eS	Sn	11 08 22.4	-0.3
MORF				IAML		11 08 24.1	
	comp=E,12nm,0.3s						
MORF	Marmelete	2.23	67	eP	Pn	11 07 58.3	+1.9
MORF				eS	Sn	11 08 23.1	+0.4
MORF				i IAML		11 08 25.1	
MORF				i IAML		11 08 25.2	

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORF				*i* IAML		11 08 28.3	
PTEO	Sao Teotonio	2.28	61	*e*P	Pn	11 07 58.9	+2.0
PTEO				*e*S	Sn	11 08 23.8	-0.1
PTEO				*i* IAML		11 08 24.7	
PTEO				*i* IAML		11 08 25.0	
PTEO				*i* IAML		11 08 30.1	
PBDV	Barranco-do-Ve	2.76	73	S	Sn	11 08 37.1	+1.4
PBDV	Barranco-do-Ve	2.76	73	*e*S	Sn	11 08 35.9	+0.1
MESJ	Messejana	2.77	59	*e*P	Pn	11 08 05.4	+1.7
MESJ				*e*S	Sn	11 08 35.1	-0.9
MESJ				IAML		11 08 36.4	
	comp=N,1.6nm,0.2s						
MESJ	Messejana	2.77	59	*e*P	Pn	11 08 05.4	+1.7
MESJ				*e*S	Sn	11 08 35.3	-0.7
MESJ				*i* IAML		11 08 39.4	
MESJ				*i* IAML		11 08 45.3	
MESJ				*i* IAML		11 08 46.9	
PCVE	Castro Verde	2.81	64	P	Pn	11 08 05.8	+1.6
PCVE				S	Sn	11 08 36.2	-0.7
PCVE	Castro Verde	2.81	64	*e*P	Pn	11 08 06.2	+2.0
PCVE				*e*S	Sn	11 08 36.3	-0.6
PCVE				*i* IAML		11 08 37.7	
PCVE				*i* IAML		11 08 41.3	
PCVE				*i* IAML		11 08 50.4	
PMAFR	Mafra	2.93	31	P	Pn	11 08 05.9	0.0
PMAFR				S	Sn	11 08 37.9	-2.1
PMAFR	Mafra	2.93	31	*e*S	Sn	11 08 38.6	-1.3
PMAFR				*i* IAML		11 08 40.2	
PMAFR				*i* IAML		11 08 40.6	
PMAFR				*i* IAML		11 08 52.3	
PVAQ	Vaqueiros	2.97	70	*e*P	Pn	11 08 08.7	+2.3
PVAQ				*e*S	Sn	11 08 40.8	-0.1
PVAQ				*i* IAML		11 08 43.7	
PVAQ				*i* IAML		11 08 46.0	
PVAQ				*i* IAML		11 08 46.0	
PVAQ	Vaqueiros	2.97	70	P	Pn	11 08 07.9	+1.4
PVAQ				S	Sn	11 08 37.3	-3.5
MOE	Montemor	3.08	47	*e*P	Pn	11 08 09.2	+1.3
MOE				*e*S	Sn	11 08 41.9	-1.7
MOE				*i* IAML		11 08 44.6	
MOE				*i* IAML		11 08 45.3	
MOE				*i* IAML		11 08 46.7	
EGRO	El Granado	3.19	69	P	Pn	11 08 11.5	+2.1
EGRO				S	Sn	11 08 46.2	+0.1
EGRO	El Granado	3.19	69	Pn	Pn	11 08 12.1	+2.7
EGRO				Sn	Sn	11 08 45.9	-0.3
EGRO				*i* IVmb_Lg		11 08 51.9	
EVO	Evora	3.29	50	S	Sn	11 08 46.2	-2.5
EVO	Evora	3.29	50	*e*S	Sn	11 08 47.5	-1.3
EVO				*i* IAML		11 08 49.3	
EVO				*i* IAML		11 08 50.7	
EVO				*i* IAML		11 08 54.7	
PARRA	Arraiolos	3.46	46	*e*P	Pn	11 08 14.8	+1.6
PARRA				*e*S	Sn	11 08 50.7	-2.2
PARRA				*i* IAML		11 08 52.3	
PARRA				*i* IAML		11 08 53.1	
PARRA				*i* IAML		11 09 07.8	
PBAR	Barrancos	3.76	62	P	Pn	11 08 19.1	+1.9
PBAR				S	Sn	11 08 58.7	-1.5
PBAR	Barrancos	3.76	62	*e*P	Pn	11 08 19.6	+2.3
PBAR				*e*S	Sn	11 08 59.0	-1.3
PBAR				*i* IAML		11 09 00.5	
PBAR				*i* IAML		11 09 02.5	
PBAR				*i* IAML		11 09 02.8	
PESTR	Estremoz	3.76	49	P	Pn	11 08 16.7	-0.6
PESTR				S	Sn	11 08 58.7	-1.6
PESTR	Estremoz	3.76	49	*e*P	Pn	11 08 18.1	+0.8
PESTR				*e*S	Sn	11 08 58.9	-1.5
EMIN	Mina Concepcio	3.87	69	P	Pn	11 08 20.7	+1.9
EMIN				S	Sn	11 09 02.1	-0.9
EMIN	Mina Concepcio	3.87	69	Pn	Pn	11 08 20.8	+2.0
EMIN				Sn	Sn	11 09 02.2	-0.9
EMIN				*i* IVmb_Lg		11 10 08.6	
PSARD	Sardoal	3.96	37	*e*P	Pn	11 08 21.7	+1.6
PSARD				*e*S	Sn	11 09 03.2	-2.2
PSARD				*i* IAML		11 09 05.1	
PSARD				*i* IAML		11 09 05.3	
PSARD				*i* IAML		11 09 06.2	
PCAS	Casmilo, Conde	4.18	30	*e*S	Sn	11 09 08.4	-2.3
PMRV	Marv??o	4.24	45	*e*P	Pn	11 08 25.0	+1.1
PMRV				*e*S	Sn	11 09 09.6	-2.7
PMRV				*i* IAML		11 09 11.7	
PMRV				*i* IAML		11 09 12.4	
PMRV				*i* IAML		11 09 12.8	
ECAB	El Cabril	4.91	69	P	Pn	11 08 34.9	+1.8
ECAB				S	Sn	11 09 27.1	-1.6
ECAB	El Cabril	4.91	69	Pn	Pn	11 08 35.0	+1.9
ECAB				Sn	Sn	11 09 26.8	-2.0
ECAB				*i* IVmb_Lg		11 11 40.9	
EADA	Adamuz	5.57	70	P	Pn	11 08 44.3	+2.0
EADA				S	Sn	11 09 43.6	-1.5
EADA	Adamuz	5.57	70	Pn	Pn	11 08 44.0	+1.8
EADA				Sn	Sn	11 09 43.5	-1.5
EADA				*i* IVmb_Lg		11 10 56.3	
OUK	Oukaimeden	5.94	151	P	Pn	11 08 51.9	+4.3
OUK				S	Sn	11 09 53.4	-1.2
TISM	Timmit	6.17	139	P	Pn	11 08 52.5	+2.1
TISM				S	Sn	11 09 55.7	-4.1
MD31	MD31	6.42	122	P	Pn	11 08 54.6	+0.6
MD31				S	Sn	11 09 59.9	-6.3
MDT	Midelt	6.56	122	P	Pn	11 08 56.3	+0.4
MDT				S	Sn	11 10 03.7	-5.8
OUZM	OUZ	6.67	145	P	Pn	11 09 00.2	+2.8
OUZM				S	Sn	11 10 11.3	-1.0

IDC 04 11:17:31.8±28.0**, 23°.09S×171°.98W, h0**km**, mb3.7**/4**, mbtmp3.7**/4**, Error ellipse: s-maj=527.9km s-min=166.8km az=79.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	38.86	266	P	P	11 24 59.5	+0.5
	0.7nm,0.3s,baz=78,slow=9.3,SNR=1.9						
	0.7nm,0.3s						
STKA	Stephens Creek	41.84	248	P	P	11 25 22.9	-0.9
	0.6nm,0.5s,baz=106,slow=15,SNR=2.9						
	0.6nm,0.5s						
ASAR	Alice Springs	49.42	258	P	P	11 26 23.2	-0.7
	0.2nm,0.4s,baz=90,slow=7.2,SNR=14						
	0.2nm,0.4s						
WRA	Warramunga Arr	49.81	263	P	P	11 26 27.5	+0.6
	0.3nm,0.4s,baz=102,slow=8.0,SNR=8.4						
	0.3nm,0.4s						

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*ISK **04** 11:21:46.8, 40°.16N×41°.02E, h6km, ML2.6/15*
*TIF **04** 11:21:47.7, 40°.24N×40°.99E, h13km±3km*
ISC 04 11:21:47.1±0.9**, 40°.16N**±0°.03×**40°.99E**±0°.03**, h9**km**, n17, σ0s.77**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDAM	Erzurum-Paland	0.34	140	Pg	Pg	11 21 53.8	0.0
EDAM				Sg	Sg	11 21 58.7	+0.5
BAYT	Aydıntepe-Bayb	0.69	290	Pg	Pb	11 22 01.1	-0.3
BAYT				Sg	Sb	11 22 11.2	+0.1
YEDI	Yedisu-Bingol	0.80	206	Pg	Pb	11 22 03.2	+0.1
YEDI				Sg	Sb	11 22 14.3	+0.2
KARO	Karliova-Bingo	0.85	177	Pg	Pb	11 22 03.7	-0.3
KARO				Sg	Sb	11 22 15.9	+0.3
CHOM	Cayeli-Rize	0.96	350	Pg	Pg	11 22 05.1	-0.4
VRTB	Varto-Mus	1.06	160	Pg	Pb	11 22 07.4	-0.2
SENK	Senkaya-Erzuru	1.12	68	Pn	Pg	11 22 07.7	-0.8
ERZN	Erzincan	1.13	240	Pn	Pb	11 22 08.9	+0.1
BNGB	Bingl	1.19	192	Pn	Pn	11 22 09.9	0.0
MLAZ	Malazgirt-MUS	1.57	130	Pn	Pb	11 22 15.5	-0.9
AGRB	Hanur-Agry	1.65	110	Pn	Pb	11 22 17.0	-0.7
KARS	Kars	1.66	73	Pn	Pb	11 22 17.2	-0.8
GURO	Guroymak-BITLI	1.79	153	Pn	Pb	11 22 18.9	-1.3
SVRC	Sivrice-ELAZID	2.20	217	Pn	Pn	11 22 24.7	+0.7
ARPR	Arapgir-MALATY	2.31	243	Pn	Pb	11 22 27.2	-1.7
AKDM	Akdamar-Van	2.39	139	Pn	Pn	11 22 27.5	+0.9
GARIG	Gari	3.08	37	P	Pb	11 22 41.8	-0.2
GARIG				S	Sb	11 23 21.0	+1.3

IDC 04 11:23:46.8±2.3**, 9°.29N×92°.44E, h0**km**, mb3.4**/3**, mbtmp3.5**/4**, ML4.1**/1**, Error ellipse: s-maj=74.5km s-min=27.0km az=66.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.09	34	Pn	Pn	11 26 26.9	+0.1
	0.4nm,0.3s,baz=225,slow=15,SNR=13						
	1.6nm,0.6s						
H08S3	Diego Garcia H	26.03	230	T	T	11 56 50.4	
	baz=51						
H08S2	Diego Garcia H	26.03	230	T	T	11 56 50.4	
	baz=51						
H08S1	Diego Carcia H	26.05	230	T	T	11 56 50.9	
	baz=51						
MKAR	Makanchi Array	38.37	349	P	P	11 31 09.5	-0.2
	0.3nm,0.5s,baz=178,slow=8.3,SNR=5.1						
	0.3nm,0.5s						
WRA	Warramunga Arr	50.45	125	P	P	11 32 46.4	-0.3
	0.2nm,0.3s,baz=305,slow=8.3,SNR=6.5						
	0.2nm,0.3s						
ASAR	Alice Springs	52.11	130	P	P	11 32 59.2	+0.1
	0.3nm,0.6s,baz=306,slow=7.3,SNR=6.6						
	0.3nm,0.6s						

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*AFAD **04** 11:33:42.0, 38°.31N×44°.65E, h7km±4km, ML3.9*
*TIF **04** 11:33:43.4, 38°.29N×44°.45E, h3km±2km*
*AZER **04** 11:33:43.4, 38°.33N×44°.45E, h2km, ml4.1*
*NSSP **04** 11:33:44.0, 38°.28N×44°.62E, h10km, Ms3.9*
*ISK **04** 11:33:44.6, 38°.28N×44°.46E, h5km, ML4.1/20*
*TEH **04** 11:33:45.6, 38°.38N×44°.48E, h6km±41km, ML3.9, Presumed earthquake*
*NEIC **04** 11:33:47.6±1.5, 38°.42N±0°.06×44°.28E±0°.05, h10km±1km, mb4.0/13, Error ellipse: s-maj=9.6km s-min=6.6km az=170.0*
*IDC **04** 11:33:51.8±2.8, 38°.54N×44°.30E, h29km±20km, mb3.7/12, mbtmp3.8/18, ML3.3/5, MS3.2/15, Error ellipse: s-maj=17.5km s-min=10.5km az=145.0*
ISC 04 11:33:46.6±1.2**, 38°.29N**±0°.02×**44°.35E**±0°.02**, h5**km±8km**, n148, σ1s.65**/187**, mb3.9**/15**, MS3.1**/10**, 1C-1D, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.46	322	P	Pg	11 33 54.9	-0.7
OZAP				IAML		11 34 04.0	
	comp=N,2μm,0.6s						
OZAP	Van, Ozalp-Mer	0.46	322	Pg	Pg	11 33 54.8	-0.7
TVAN	Van	0.78	288	P	Pg	11 34 01.3	-0.3
TVAN				S	Sn	11 34 16.5	-0.1
TVAN				IAML		11 34 25.0	
	comp=N,7μm,0.5s						
TVAN				IAML		11 34 27.0	
	comp=E,5μm,0.8s						
VANB	Van	0.81	292	Pg	Pg	11 34 02.4	+0.2
VANB				Sg	Sn	11 34 15.3	-2.0
HAKT	HAKKARI	0.90	215	P	Pb	11 34 03.8	-0.9
HAKT				S	Sn	11 34 20.4	+1.0
VMUR	Van-Muradiye	0.93	319	P	Pb	11 34 03.4	-1.9
VMUR				S	Sn	11 34 19.2	-1.0
VMUR				IAML		11 34 21.0	
	comp=N,6μm,0.5s						
VMUR				IAML		11 34 21.0	
	comp=E,6μm,0.4s						
VMUR	Van-Muradiye	0.93	319	Pg	Pb	11 34 03.3	-1.9
ISHB	Shabestar	0.99	90	Pg	Pb	11 34 02.1	-4.3
GEVA	Gevas	1.02	271		Pb	11 34 05.6	-1.2
GEVA				Sn	Sn	11 34 22.5	+0.1
GEVA	Gevas	1.02	271	P	Pb	11 34 05.3	-1.5
GEVA				IAML		11 34 26.0	
	comp=N,3μm,0.5s						
GEVA				IAML		11 34 29.0	
	comp=E,2μm,0.5s						
ERCV	ERCIS-VAN	1.08	313	Pn	Pb	11 34 06.5	-1.3
AKDM	Akdamar-Van	1.08	272	Pn	Pb	11 34 06.0	-1.9
AKDM				Sn	Sn	11 34 25.2	+1.2
MAKU	Maku	1.09	14	Pg	Pb	11 34 04.2	-3.8
IMRD	Marand	1.14	68	Pg	Pn	11 34 05.3	-4.0
CUKT	Cukurca	1.20	210	Pn	Pg	11 34 09.3	-0.3
CUKT				Sn	Sn	11 34 27.6	+0.8
NAX	Nakhchivan	1.25	45	P	Pn	11 34 07.5	-3.3
NAX				S	Sb	11 34 25.1	-2.1
DYDN	Diyadin	1.35	338	P	Pn	11 34 09.0	-3.3
DYDN				S	Sg	11 34 32.1	+2.0
DYDN				IAML		11 34 34.0	
	comp=N,1μm,0.8s						
DYDN				IAML		11 34 34.0	
	comp=E,2μm,1.0s						
ADCV	BITLIS_Adilcev	1.38	292	P	Pb	11 34 12.9	0.0
ADCV				S	Sg	11 34 34.1	+3.3
ADCV				IAML		11 34 36.0	
	comp=N,3μm,0.6s						
ADCV				IAML		11 34 38.0	
	comp=E,1μm,1.0s						
ADCV	BITLIS_Adilcev	1.38	292	Pg	Pb	11 34 12.9	0.0
ITBZ	Tabriz	1.41	92	Pg	Pn	11 34 09.7	-3.4
IAZR	Azarshahr	1.42	115	Pg	Pn	11 34 12.3	-1.1
ORD	Ordubad	1.43	63	P	Pn	11 34 10.6	-2.7
ORD				S	Sn	11 34 30.7	-1.8
SBZ	Shahbuz	1.45	40	P	Pn	11 34 11.1	-2.4
SBZ				S	Sn	11 34 33.5	+0.6
HYR	Heyderabad	1.48	15	P	Pn	11 34 12.3	-1.6
HYR				S	Sg	11 34 35.9	+1.9
IGDI	IGDIR	1.59	352	P	Pn	11 34 14.4	-1.0
IGDI				IAML		11 34 39.0	
	comp=E,929nm,0.6s						
IGDI				IAML		11 34 40.0	
	comp=N,738nm,0.8s						
IGDI	IGDIR	1.59	352	Pg	Pn	11 34 14.4	-1.0
IGDI	IGDIR	1.59	352	P	Pn	11 34 15.5	+0.1
IGDI				S	Sg	11 34 39.1	+1.5
VAYK	Vayk	1.63	31	*i* P	Pn	11 34 14.0	-2.0
VAYK				*i* S	Sn	11 34 35.9	-1.5
DORK	Agr/Tutak/Do	1.64	312	P	Pn	11 34 15.9	-0.4
DORK				S	Sg	11 34 39.7	+0.3
DORK				IAML		11 34 44.0	
	comp=E,1μm,0.7s						
DORK				IAML		11 34 47.0	
	comp=N,1μm,0.7s						
MLAZ	Malazgirt-MUS	1.65	301	Pn	Pb	11 34 17.2	-0.3
MLAZ				Sn	Sg	11 34 40.5	+1.0
AGRB	Hanur-Agry	1.66	321	Pn	Pn	11 34 16.0	-0.5
AGRB				Sn	Sg	11 34 40.6	+0.6
KOTA	Agri, Merkez-K	1.75	330	P	Pn	11 34 16.7	-1.1
KOTA				S	Sg	11 34 43.3	+0.4
BLIS	Bitlis-Merkez	1.76	275	P	Pb	11 34 19.4	-0.1
BLIS				IAML		11 34 51.0	
	comp=N,1μm,0.9s						
BLIS				IAML		11 34 57.0	
	comp=E,1μm,0.7s						
BLIS	Bitlis-Merkez	1.76	275	Pn	Pb	11 34 19.3	-0.1
GURO	Guroymak-BITLI	1.84	279		Pn	11 34 18.6	-0.4
GURO	Guroymak-BITLI	1.84	279	Pn	Pb	11 34 19.9	-0.9
GURO				Sn	Sg	11 34 45.6	-0.2
VNNZ	Vanand	1.85	347	*e*P	Pn	11 34 19.3	+0.3
VNNZ				*e*S	Sb	11 34 46.0	+1.5
MAHB	Mahabad	1.86	144	Pn	Pb	11 34 20.5	-0.7
GNI	Garni	1.88	9	Pn	Pn	11 34 19.4	0.0
	65nm,0.3s,baz=264,slow=1.7,SNR=86						
GNI				Lg	Lg	11 34 45.2	
	68nm,0.3s,baz=202,slow=21,SNR=9.3						
GNI	Garni	1.88	9		Pn	11 34 19.0	-0.5
GNI	Garni	1.88	9	Pn	Pn	11 34 19.1	-0.4
GNI				Sn	Sn	11 34 44.3	+0.7
GNI	Garni	1.88	9	*e*P	Pn	11 34 19.3	-0.1
GNI				*e*S	Sn	11 34 43.3	-0.3
EGVZ	Egvard	1.95	61	*e*P	Pn	11 34 18.9	-1.5
EGVZ				*e*S	Sn	11 34 44.4	-0.9
GRS	Goris	1.96	51	*i*P	Pn	11 34 18.0	-2.6
GRS				*i*S	Sn	11 34 43.0	-2.6
ARUZ	Aruch	2.00	354	*e*P	Pn	11 34 20.6	-0.4
ARUZ				*e*S	Sn	11 34 47.4	+0.9
KAPZ	Kaputan	2.04	7	*e*P	Pn	11 34 21.5	-0.3
KAPZ				*e*S	Sn	11 34 49.6	+1.9
AMBZ	Amberd	2.09	358	*e*P	Pn	11 34 22.5	0.0
AMBZ				*e*S	Sn	11 34 50.2	+1.2
IHRS	Heris	2.12	89	Pn	Pn	11 34 22.6	-0.1
AYRK	Ayrk	2.13	31	*e*P	Pn	11 34 22.8	-0.3
AYRK				*e*S	Sn	11 34 51.1	+1.1
EATA	Eleskirt	2.13	318	P	Pb	11 34 24.8	-1.1
EATA				IAML		11 35 15.0	
	comp=E,407nm,1.2s						
EATA	Eleskirt	2.13	318	Pn	Pb	11 34 24.7	-1.1
VRTB	Varto-Mus	2.43	292	Pn	Pn	11 34 28.3	+1.3
BTMN	Batman	2.47	262	P	Pn	11 34 28.3	+0.8
BTMN				S	Sg	11 35 07.4	+1.6
BTMN				IAML		11 35 12.0	
	comp=N,1μm,0.9s						
BTMN				IAML		11 35 29.0	
	comp=E,930nm,0.9s						
SVAN	Silvan-Diyarba	2.49	268	Pn	Pn	11 34 29.1	+1.3
SVAN	Silvan-Diyarba	2.49	268	P	Pb	11 34 31.6	-0.1
SVAN				IAML		11 35 23.0	
	comp=N,278nm,1.9s						
IHSH	Hashtrud	2.51	112	Pn	Pn	11 34 28.3	+0.1
KARS	Kars	2.53	337	Pn	Pn	11 34 28.9	+0.5
QRD	Qoradiz	2.59	62	P	Pn	11 34 28.5	-0.6
QRD				S	Sn	11 35 03.8	+2.8
GDB	GEDABAY	2.66	24	P	Pn	11 34 30.6	+0.4
GDB				S	Sb	11 35 07.7	+0.1
ISRB	Sarab	2.66	99	Pn	Pn	11 34 30.6	+0.3
SENK	Senkaya-Erzuru	2.75	326	Pn	Pn	11 34 32.5	+1.1
SRTK	Saratovka	2.77	360	*e*P	Pb	11 34 34.9	-1.7
SRTK				*e*S	Sb	11 35 12.1	+1.2
KARO	Karliova-Bingo	2.77	292	Pn	Pn	11 34 33.3	+1.5
GANJ	Ganja	2.80	32	P	Pn	11 34 32.6	+0.6
GANJ				S	Sb	11 35 11.2	-0.4
AGDM	Agdam	2.80	49	P	Pn	11 34 32.3	+0.2
AGDM				S	Sb	11 35 10.2	-1.6
GRMI	Germi	2.82	78	Pn	Pn	11 34 32.1	-0.3
QZX	Qazax, Azerbai	2.87	16	P	Pn	11 34 33.8	+0.8
QZX				S	Sb	11 35 11.7	-2.0
BLQ	Beylaqan	2.88	59	P	Pn	11 34 33.2	+0.2
BLQ				S	Sn	11 35 11.6	+3.6
BRDA	Brd	2.94	47	P	Pn	11 34 34.2	+0.2
BRDA				S	Sb	11 35 14.3	-1.5
BNGB	Bingl	2.96	285	Pn	Pn	11 34 35.9	+1.6
MARD	Mardin	3.00	252		Pn	11 34 36.4	+1.6
MARD	Mardin	3.00	252	P	Pn	11 34 36.0	+1.2
MARD				IAML		11 35 36.0	
	comp=N,979nm,0.8s						
MARD				IAML		11 35 38.0	
	comp=E,474nm,0.6s						
BGD	Bogdanovka	3.02	349	P	Pb	11 34 40.8	-0.2
YRD	Yardimli	3.11	77	P	Pn	11 34 37.1	+0.7
YRD				S	Sn	11 35 15.9	+1.9
LRK	Lerik	3.15	82	P	Pn	11 34 37.4	+0.4
LRK				S	Sn	11 35 18.0	+3.0
AKH	Akhalkalaki	3.18	348	P	Pb	11 34 43.4	-0.3
YEDI	Yedisu-Bingol	3.19	292	Pn	Pn	11 34 39.1	+1.7
TRLG	Trialeti	3.25	357	P	Pn	11 34 38.6	+0.3
DGRG	David-gareji	3.25	14	P	Pn	11 34 40.1	+1.9
DGRG				S	Sg	11 35 34.1	+3.2
GLBA	Clilabad	3.30	72	P	Pn	11 34 39.3	+0.5
VSHL	Vashlovani	3.33	28	P	Pn	11 34 41.0	+1.7
VSHL				S	Sb	11 35 31.4	+4.5
DYBB	Diyarbakir	3.34	265	Pn	Pn	11 34 41.1	+1.6
ASTR	Astara	3.50	84	P	Pn	11 34 41.7	+0.2
ASTR				S	Sn	11 35 26.2	+2.9
LKRN	Lenkeran, Azer	3.50	82	P	Pn	11 34 42.2	+0.7
LKRN				S	Sn	11 35 26.0	+2.8
KOVA	Elazig, Kovanc	3.59	278	P	Pb	11 34 47.6	-2.9
SEKA	Sheki	3.64	36	P	Pn	11 34 44.4	+0.7
ZKTA	Zakatala	3.77	27	P	Pn	11 34 46.8	+1.5
ZKTA				S	Sn	11 35 33.4	+3.4
QBL	Gabala	3.77	44	P	Pn	11 34 47.0	+1.6
QBL				S	Sn	11 35 33.8	+3.5
ERZN	Erzincan	3.83	291	Pn	Pn	11 34 48.5	+2.2
ALIG	Mtskhetisjvari	3.84	352	P	Pn	11 34 49.0	+2.6
IML	Ismayilli	3.87	49	P	Pn	11 34 47.5	+0.8
BAYT	Aydıntepe-Bayb	3.88	304	Pn	Pn	11 34 49.0	+2.0
CHOM	Cayeli-Rize	3.94	316	Pn	Pn	11 34 49.6	+1.9
IDHR	Dehrash	3.94	155	Pn	Pn	11 34 50.0	+2.1
SVRC	Sivrice-ELAZID	3.97	273	Pn	Pn	11 34 49.8	+1.6
ALIB	&Aumlli-Bayram	3.98	64	P	Pn	11 34 49.1	+0.9
ALIB				S	Sn	11 35 38.9	+3.7
CHRG	Chargali	4.05	6	P	Pn	11 34 50.1	+0.7
GLG1	Gilan-e-Gharb	4.36	163	Pn	Pn	11 34 55.3	+1.8
GARIG	Gari	4.36	351	P	Pn	11 34 55.5	+2.0
ATGJ	Altiaghaj	4.37	53	P	Pn	11 34 55.1	+1.4
ATGJ				S	Sn	11 35 49.1	+4.1
SHTL	Shatili	4.40	8	P	Pn	11 34 55.0	+0.9
QSAR	Qusar	4.40	42	P	Pn	11 34 55.7	+1.7
QSAR				S	Sn	11 35 48.6	+2.9
SIZA	Siyzn	4.47	50	P	Pn	11 34 56.8	+1.7
SIZA				S	Sn	11 35 51.8	+4.3
KBZ	Khabaz	5.54	349	Pn	Pn	11 35 11.9	+2.3
	0.1nm,0.3s,baz=158,slow=13,SNR=6.5						
KBZ				Lg	Lg	11 36 37.5	
	0.1nm,0.3s,baz=93,slow=7.0,SNR=3.7						
	1.9nm,0.7s						
BNN	Bunyan	6.69	277	Pn	Pn	11 35 25.3	-0.2
BRTR	Keskin Array B	8.46	283	Pn	Pn	11 35 54.8	+4.8
	0.1nm,0.3s,baz=123,slow=14,SNR=3.9						
BRTR				LR	LR	11 39 05.2	
	comp=Z,65nm,19.0s,baz=104,slow=37						
	0.9nm,0.7s						
ASF	Jabal al Asfar	8.63	227	Pn	Pn	11 35 55.5	+3.4
	0.9nm,0.3s,baz=23,slow=5.7,SNR=4.2						
ASF				Lg	Lg	11 38 28.8	
	0.3nm,0.3s,baz=14,slow=20,SNR=1.4						
ASF				LR	LR	11 39 23.4	
	comp=Z,89nm,20.8s,baz=33,slow=38						
	3.2nm,0.3s						
MMAI	Mount Meron Ar	8.99	237	Pn	Pn	11 36 00.1	+3.0
	1.8nm,0.3s,baz=312,slow=11,SNR=2.5						
MMAI				Lg	Lg	11 38 40.4	
	0.5nm,0.3s,baz=224,slow=56,SNR=1.3						
MMAI				LR	LR	11 39 46.2	
	comp=Z,156nm,19.9s,baz=60,slow=39						
	2.4nm,0.5s						
EIL	Elat	11.61	225	Lg	Lg	11 40 05.7	
	0.3nm,0.3s,baz=86,slow=21,SNR=2.4						
EIL				LR	LR	11 41 47.8	
	comp=Z,106nm,18.0s,baz=62,slow=40						
RAYN	Ar Rayn	14.76	176	Pn	Pn	11 37 15.8	-0.2
AKTO	Aktyubinsk	15.55	34	Pn	Pn	11 37 25.7	-0.6
	0.4nm,0.3s,baz=231,slow=12,SNR=7.5						
	3.4nm,0.7s						
AB31	Akbulak array	15.68	41		Pn	11 37 25.6	-2.4
ABKAR	Akbulak array	15.68	41	Pn	Pn	11 37 25.9	-2.1
AKASG	Malin Array Be	16.40	324	Pn	Pn	11 37 36.6	-0.7
	5.7nm,0.8s,baz=133,slow=12,SNR=9.2						
AKASG				LR	LR	11 45 09.6	
	comp=Z,51nm,18.5s,baz=178,slow=42						
BURAR	Bucovina Array	16.79	310	Pn	Pn	11 37 40.9	-1.5
BUR08	Bucovina Ar. S	16.81	310	Pn	Pn	11 37 40.7	-2.0
KBL	Kabul	20.20	93	P	Pn	11 38 23.4	-0.8
KBL				IAmb	IAmb	11 38 30.2	
	comp=Z,9.2nm,1.3s						
GAR	Garm	20.27	80	P	P	11 38 23.9	+0.8
GAR				IAmb	IAmb	11 38 35.9	
	comp=Z,11nm,1.2s						
KK31	Karatay Array	20.37	68		P	11 38 24.2	+0.3
KK31				IAmb	IAmb	11 38 32.5	
	comp=Z,4.3nm,0.8s						
KKAR	Karatay Array	20.37	68		P	11 38 24.3	+0.3
ARTI	Arti	20.37	23	P	P	11 38 24.5	+0.7
	comp=Z,7.8nm,0.7s,baz=197,slow=7.9,SNR=6.6						
ARTI				LR	LR	11 48 44.3	
	comp=Z,78nm,18.4s,baz=194,slow=44						
	comp=Z,7.8nm,0.7s						
ARTI	Arti	20.37	23		P	11 38 21.8	-2.1
DRK	Karamyk	21.37	78	P	P	11 38 35.5	+0.4
DRK				IAmb	IAmb	11 38 37.0	
	comp=Z,8.1nm,1.1s						
ARSB	Arslanbob	22.16	73	P	P	11 38 41.4	-1.9
BVAR	Borovoye Array	23.23	42	P	P	11 38 53.7	-0.8
	comp=Z,1.0nm,0.6s,baz=230,slow=11,SNR=2.3						
	comp=Z,1.0nm,0.6s						
AAK	Ala-Archa	23.27	70	LR	LR	11 48 38.4	
	comp=Z,39nm,18.4s,baz=270,slow=38						
GERES	GERESS Array B	24.43	305	P	P	11 39 06.5	+0.4
	comp=Z,0.3nm,0.4s,baz=94,slow=18,SNR=4.3						
	comp=Z,0.3nm,0.4s						
TARG	Taragay, Kyrgy	25.76	72	P	P	11 39 18.2	-0.4
TARG				IAmb	IAmb	11 39 38.8	
	comp=Z,1.9nm,0.7s						
FINES	FINESS Array B	25.81	340	P	P	11 39 17.9	-0.4
	comp=Z,3.6nm,0.9s,baz=173,slow=17,SNR=3.9						
	comp=Z,3.6nm,0.9s						
FINES	FINESS Array B	25.81	340	P	P	11 39 17.1	-1.2
KURBB	Kurchatov Arra	27.08	52	P	P	11 39 31.0	+1.1
	comp=Z,1.7nm,0.7s,baz=262,slow=8.9,SNR=11						
KURBB				LR	LR	11 51 57.4	
	comp=Z,39nm,19.5s,baz=170,slow=40						
	comp=Z,1.7nm,0.7s						
KURK	Kurchatov	27.16	52	P	P	11 39 30.7	+0.1
KURK				IAmb	IAmb	11 39 49.4	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,3.1nm,0.8s						
SENIN	**Lac Senin/Sane**	**28.35**	**299**		**P**	**11 39 39.9**	**-1.7**
SENIN				IAmb	IAmb	11 39 51.1	
	comp=Z,6.2nm,1.2s						
MKAR	**Makanchi Array**	**28.98**	**61**	P	**P**	**11 39 47.5**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=260,slow=7.8,SNR=9.8						
MKAR				LR	LR	11 52 34.0	
	comp=Z,34nm,19.3s,baz=273,slow=39						
	comp=Z,0.7nm,0.6s						
MKAR	**Makanchi Array**	**28.98**	**61**	P	**P**	**11 39 46.3**	**-0.7**
HFS	**Hagfors**	**29.19**	**328**	P	**P**	**11 39 48.6**	**0.0**
	comp=Z,4.5nm,1.0s,baz=103,slow=18,SNR=2.6						
	comp=Z,4.5nm,1.0s						
NOA	**NORSAR Array B**	**30.71**	**329**	LR	LR	11 53 57.3	
	comp=Z,36nm,18.6s,baz=280,slow=40						
ZALV	**Zalesovo Beam**	**31.61**	**47**	P	**P**	**11 40 10.1**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=263,slow=11,SNR=4.9						
ZALV				LR	LR	11 56 03.0	
	comp=Z,29nm,18.0s,baz=65,slow=42						
	comp=Z,0.8nm,0.4s						
ZALV	**Zalesovo Beam**	**31.61**	**47**	P	**P**	**11 40 09.5**	**-0.6**
EKA	**Eskdalemuir Ar**	**35.89**	**314**	P	**P**	**11 40 47.0**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=93,slow=10,SNR=5.4						
	comp=Z,1.3nm,0.7s						
EVN	**Everest**	**36.75**	**93**		**P**	**11 40 55.7**	**+0.1**
ESDC	**Sonseca Array**	**37.22**	**288**	P	**P**	**11 40 58.7**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=79,slow=8.5,SNR=2.3						
	comp=Z,0.7nm,0.7s						
SONM	**Songino Array**	**45.20**	**57**	LR	LR	12 03 10.7	
	comp=Z,31nm,21.2s,baz=306,slow=39						
CMAR	**Chiang Mai Arr**	**51.17**	**97**	P	**P**	**11 42 53.6**	**+2.8**
	comp=Z,0.7nm,0.3s,baz=297,slow=7.7,SNR=5.8						
	comp=Z,0.7nm,0.3s						
SFJD	**Kangerlussuaq**	**57.27**	**332**	LR	LR	12 08 15.7	
	comp=Z,32nm,19.8s,baz=212,slow=36						
TSUM	**Tsumeb**	**62.47**	**209**	LR	LR	12 11 57.1	
	comp=Z,25nm,18.1s,baz=320,slow=36						
FRB	**Frobisher Bay**	**65.38**	**333**	LR	LR	12 11 48.6	
	comp=Z,37nm,18.7s,baz=182,slow=35						
YKA	**Yellowknife Ar**	**78.14**	**350**	P	**P**	**11 45 44.8**	**-1.5**
	comp=Z,0.3nm,0.9s,baz=17,slow=5.7,SNR=2.3						
	comp=Z,0.3nm,0.9s						

*IDC **04** 11:34:29.9±1.9, 30°.45S×177°.62W, h0km, mb4.0/3, mbtmp4.0/4, ML3.1/1, Error ellipse: s-maj=46.3km s-min=21.3km az=103.0*

*NEIC **04** 11:34:31.7±0.7, 30°.32S±0°.09×177°.5W±0°.2, h10km±1km, mb4.1/9, Error ellipse: s-maj=34.2km s-min=10.7km az=69.0*

ISC 04 11:34:35.2±1.1**, 30°.49S**±0°.07×**177°.8W**±0°.2**, h35**km**, n24,** σ**1.45**/20**, mb4.1**/8**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.24**	**353**	Pn	**Pn**	**11 34 54.7**	**-1.4**
	153nm,0.3s,baz=84,slow=19,SNR=3.7						
RAO				Sn	**Sn**	**11 35 10.5**	**-1.1**
	738nm,0.3s,baz=90,slow=19,SNR=15						
RAO	**Raoul Island**	**1.24**	**353**		**Pn**	**11 34 54.0**	**-2.2**
URZ	**Urewera**	**8.84**	**207**	Pn	**Pn**	**11 36 37.8**	**-2.6**
	0.2nm,0.3s,baz=76,slow=4.2,SNR=1.4						
URZ				Sn	**Sn**	**11 38 16.0**	**-2.7**
	1.6nm,0.3s,baz=352,slow=18,SNR=8.2						
	6.3nm,0.8s						
CTAO	**Charters Tower**	**34.03**	**279**	P	**P**	**11 41 17.4**	**+1.3**
STKA	**Stephens Creek**	**34.67**	**257**	P	**P**	**11 41 23.6**	**+2.0**
	2.9nm,0.6s,baz=95,slow=7.4,SNR=6.1						
	2.9nm,0.6s						
STKA	**Stephens Creek**	**34.67**	**257**	P	**P**	**11 41 22.9**	**+1.3**
AS31	**Alice Springs**	**43.32**	**267**	P	**P**	**11 42 35.2**	**+1.1**
ASAR	**Alice Springs**	**43.32**	**267**	P	**P**	**11 42 34.6**	**+0.5**
	0.4nm,0.6s,baz=105,slow=7.6,SNR=16						
ASAR				PcP	**PcP**	**11 44 22.3**	**-0.3**
	0.5nm,1.1s,baz=102,slow=3.8,SNR=1.6						
	0.4nm,0.6s						
WR8	**Warramunga Arr**	**44.17**	**272**		**P**	**11 42 41.8**	**+0.9**
WR8				IAmb	IAmb	11 42 54.9	
	comp=Z,4.3nm,1.1s						
WRA	**Warramunga Arr**	**44.32**	**272**	P	**P**	**11 42 42.1**	**0.0**
	comp=Z,1.0nm,0.3s,baz=110,slow=8.2,SNR=25						
	comp=Z,1.0nm,0.3s						
WRA	**Warramunga Arr**	**44.32**	**272**	P	**P**	**11 42 42.9**	**+0.8**
WB0	**Warramunga Arr**	**44.34**	**272**	P	**P**	**11 42 42.4**	**+0.1**
WB0				IAmb	IAmb	11 42 51.8	
	comp=Z,2.3nm,0.9s						
VNDA	**Vanda**	**48.03**	**186**	P	**P**	**11 43 11.6**	**+1.1**
VNDA				IAmb	IAmb	11 43 42.3	
	comp=Z,2.0nm,0.8s						
PSA00	**Pilbara Seismi**	**56.17**	**263**	P	**P**	**11 44 12.2**	**+0.4**
QSPA	**South Pole Qui**	**59.62**	**180**	P	P	11 44 42.9	+7.4
	comp=Z,1.1nm,0.4s,baz=45,slow=1.4,SNR=5.2						
BELA	**Belgrano 2**	**69.67**	**172**	P	**P**	**11 45 42.0**	**+1.3**
BELA				IAmb	IAmb	11 45 56.7	
	comp=Z,0.7nm,0.8s						
H03S2	**Juan Fernandez**	**80.23**	**123**	T	T	13 15 57.3	
	baz=237						
H03S1	**Juan Fernandez**	**80.24**	**123**	T	T	13 15 52.5	
	baz=237						
H03S3	**Juan Fernandez**	**80.25**	**123**	T	T	13 15 54.3	
	baz=237						
H03N3	**Juan Fernandez**	**80.42**	**123**	T	T	13 16 09.2	
	baz=241,slow=74						
H03N2	**Juan Fernandez**	**80.43**	**123**	T	T	13 16 05.1	
	baz=241						
H03N1	**Juan Fernandez**	**80.44**	**123**	T	T	13 16 05.2	
	baz=241,slow=74,SNR=8.0						
KURBB	**Kurchatov Arra**	**121.31**	**314**	PKP	**PKPdf**	**11 53 23.9**	**-0.3**
	comp=Z,0.1nm,0.4s,baz=94,slow=2.3,SNR=4.8						
FINES	**FINESS Array B**	**145.31**	**340**	PKPbc	**PKPdf**	**11 54 08.6**	**+0.1**
	comp=Z,1.9nm,0.5s,baz=44,slow=3.8,SNR=17						

*IDC **04** 11:42:31.1±2.0, 33°.39N×75°.71E, h0km, mb3.7/5, mbtmp3.6/8, ML3.3/3, Error ellipse: s-maj=44.9km s-min=20.4km az=59.0*

*NDI **04** 11:42:35.0±3.2, 33°.26N×75°.75E, h10km, ML3.4, MW3.3, Presumed earthquake*

ISC 04 11:42:32.7±1.3**, 33°.35N**±0°.04×**75°.70E**±0°.05**, h10**km±9km**, n18,** σ**1.73**/28**, mb3.8**/5**, Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TSSA	**Tissa**	**0.64**	**143**	*e*P	**Pg**	**11 42 44.6**	**-0.5**
TSSA				*e*S	**Sg**	**11 42 52.8**	**-0.8**
TSSA				IAML		11 42 54.3	
	comp=E,588nm,0.2s						
TSSA				IAML		11 42 54.5	
	comp=N,628nm,0.3s						
THN	**Thein Dam**	**0.91**	**177**	*e*P	**Pg**	**11 42 49.7**	**-0.5**
THN				*e*S	**Sg**	**11 43 00.9**	**-1.1**
THN				IAML		11 43 09.8	
	comp=N,840nm,0.3s						
THN				IAML		11 43 09.8	
	comp=E,647nm,0.4s						
JMU	**Jammu**	**0.92**	**232**	*e*P	**Pb**	**11 42 51.4**	**+0.6**
JMU				*e*S	**Sn**	**11 43 07.5**	**+2.4**
DHRM	**DHARAMSHALA**	**1.21**	**155**	*e*P	**Pn**	**11 42 56.7**	**+0.8**
DHRM				*e*S	**Sn**	**11 43 14.0**	**+1.5**
DHRM				IAML		11 43 16.6	
	comp=N,548nm,0.3s						
DHRM				IAML		11 43 16.8	
	comp=E,506nm,0.3s						
ALCI	**Alchi Leh**	**1.51**	**55**	*e*P	**Pg**	**11 43 01.7**	**0.0**
ALCI				*e*S	**Sn**	**11 43 23.1**	**+3.0**
ALCI				IAML		11 43 28.6	
	comp=E,934nm,0.5s						
ALCI				IAML		11 43 30.5	
	comp=N,482nm,0.7s						
BHK	**Bhakra**	**2.04**	**163**	*e*P	**Pb**	**11 43 09.9**	**+0.1**
BHK				*e*S	**Sb**	**11 43 35.9**	**+0.7**
BHK				IAML		11 43 37.5	
	comp=E,997nm,0.2s						
BHK				IAML		11 43 38.2	
	comp=N,833nm,0.5s						
SMLA	**Simla**	**2.54**	**150**	*e*P	**Pn**	**11 43 16.7**	**+2.7**
SMLA				*e*S	**Sn**	**11 43 46.1**	**+1.1**
SMLA				IAML		11 43 51.4	
	comp=N,535nm,0.4s						
SMLA				IAML		11 43 51.9	
	comp=E,687nm,0.4s						
KLP	**Kalpa**	**2.82**	**129**	*e*P	**Pn**	**11 43 20.2**	**+2.0**
KLP				*e*S	**Sn**	**11 43 52.8**	**+0.5**
KLP				IAML		11 43 59.6	
	comp=E,200nm,0.7s						
KLP				IAML		11 44 05.7	
	comp=N,166nm,0.4s						
JOSI	**Joshimath**	**4.31**	**129**	*e*S	**Sn**	**11 44 28.3**	**-0.6**
KUDL	**Kundal**	**5.24**	**172**	*e*S	**Sn**	**11 44 48.0**	**-3.4**
AAK	**Ala-Archa**	**9.32**	**355**	Pn	**Pn**	**11 44 47.5**	**+0.3**
	comp=N,0.3nm,0.3s,baz=180,slow=14,SNR=2.3						
AAK				Sn	**Sn**	**11 46 30.5**	**-1.6**
	comp=N,0.1nm,0.3s,baz=163,slow=23,SNR=1.4						
	comp=N,0.8nm,0.4s						
MKAR	**Makanchi Array**	**14.34**	**19**	Pn	**Pn**	**11 45 56.0**	**+0.3**
	comp=N,0.1nm,0.3s,baz=205,slow=11,SNR=5.4						
MKAR				Sn	**Sn**	**11 48 30.1**	**-4.6**
	comp=N,0.1nm,0.3s,baz=195,slow=22,SNR=1.6						
	comp=N,0.1nm,0.4s						
BVAR	**Borovoye Array**	**20.03**	**351**	P	**P**	**11 47 06.3**	**+0.7**
	comp=N,0.1nm,0.3s,baz=161,slow=9.9,SNR=6.3						
	comp=N,1.4nm,0.4s						
AKTO	**Aktyubinsk**	**21.46**	**328**	P	**P**	**11 47 20.9**	**-0.2**
	comp=N,2.6nm,0.7s,baz=134,slow=12,SNR=5.5						
	comp=N,2.6nm,0.7s						
ZALV	**Zalesovo Beam**	**21.59**	**15**	P	**P**	**11 47 21.7**	**-0.7**
	comp=N,0.6nm,0.4s,baz=211,slow=9.3,SNR=4.3						
	comp=N,0.6nm,0.4s						
LZDM	**Lanzhou Array**	**23.15**	**76**	P	**P**	**11 47 39.9**	**+0.4**
	comp=N,1.0nm,0.3s,baz=255,slow=11,SNR=2.1						
	comp=N,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**25.55**	**120**	P	**P**	**11 48 01.6**	**-0.3**
	comp=N,1.5nm,0.8s,baz=311,slow=10,SNR=12						
	comp=N,1.5nm,0.8s						
YKA	**Yellowknife Ar**	**84.13**	**5**	P	**P**	**11 55 03.2**	**-0.3**
	comp=N,0.4nm,0.6s,baz=344,slow=5.6,SNR=9.3						
	comp=N,0.4nm,0.6s						

*IDC **04** 11:50:13.3±1.4, 9°.91S×126°.97E, h0km, mb3.7/3, mbtmp3.8/7, ML3.9/4, MS3.6/2, Error ellipse: s-maj=37.5km s-min=20.4km az=51.0*

ISC 04 11:50:17.6±1.1**, 10°.03S**±0°.09×**127°.03E**±0°.10**, h35**km**, n9,** σ**2.12**/11**, mb3.6**/3**, Timor Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.32**	**267**	Pn	**Pn**	**11 51 06.2**	**-0.9**
	5.8nm,0.3s,baz=102,slow=20,SNR=4.1						
BATI				Sn	**Sn**	**11 51 46.0**	**+0.7**
	7.8nm,0.3s,baz=90,slow=20,SNR=2.2						
	18nm,0.4s						
FITZ	**Fitzroy Crossi**	**8.14**	**189**	Pn	**Pn**	**11 52 16.0**	**+2.7**
	1.3nm,0.3s,baz=11,slow=16,SNR=13						
FITZ				Sn	**Sn**	**11 53 42.0**	**-2.0**
	1.5nm,0.3s,baz=121,slow=10,SNR=3.6						
	3.9nm,0.4s						
WRA	**Warramunga Arr**	**12.12**	**145**	Pn	**Pn**	**11 53 09.1**	**+1.2**
	1.0nm,0.3s,baz=318,slow=15,SNR=39						
WRA				Sn	**Sn**	**11 55 19.8**	**-2.1**
	0.4nm,0.3s,baz=320,slow=24,SNR=3.2						
	4.4nm,0.7s						
ASAR	**Alice Springs**	**15.07**	**155**	Pn	**Pn**	**11 53 49.1**	**+1.1**
	0.8nm,0.3s,baz=327,slow=12,SNR=116						
ASAR				Sn	**Sn**	**11 56 30.4**	**-3.5**
	0.1nm,0.3s,baz=328,slow=24,SNR=5.0						
	1.3nm,0.5s						
DAV	**Davao City (W)**	**17.04**	**355**	LR	LR	12 00 58.6	
	comp=Z,580nm,18.9s,baz=180,slow=38						
STKA	**Stephens Creek**	**25.59**	**150**	P	**P**	**11 55 44.7**	**+1.1**
	0.9nm,0.5s,baz=318,slow=10,SNR=3.8						
	0.9nm,0.5s						
JOW	**Kunigami**	**36.66**	**2**	LR	LR	12 15 35.5	
	comp=Z,32nm,18.9s,baz=58,slow=42						
CMAR	**Chiang Mai Arr**	**39.61**	**316**	P	**P**	**11 57 45.0**	**-1.1**
	0.4nm,0.3s,baz=136,slow=6.2,SNR=5.8						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**69.21**	**329**	P	**P**	**12 01 22.0**	**+1.3**
	0.3nm,0.8s,baz=139,slow=4.5,SNR=2.6						
	0.3nm,0.8s						

*IDC **04** 11:51:51.3±1.6, 31°.66S×68°.97W, h106km±12km, mb3.2/2, mbtmp3.4/3, Error ellipse: s-maj=43.9km s-min=32.3km az=119.0*

ISC 04 11:51:51.6±1.1**, 31°.7S**±0°.2×**69°.0W**±0°.2**, h110**km**, n6,** σ**0.41**/7**, San Juan Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CFA	**Coronel Fontan**	**0.64**	**82**	P	**Pn**	**11 52 09.3**	**-0.1**
	123nm,0.3s,baz=280,slow=11,SNR=830						
CFA				S	**Sn**	**11 52 23.0**	**+0.1**
	220nm,0.3s,baz=156,slow=20,SNR=27						
PLCA	**Paso Flores**	**9.11**	**188**	P	**Pn**	**11 54 00.1**	**0.0**
	0.6nm,0.6s,baz=359,slow=14,SNR=4.8						
TXAR	**Lajitas Array**	**69.07**	**328**	P	**P**	**12 02 45.8**	**+0.1**
	0.3nm,0.6s,baz=161,slow=8.4,SNR=4.4						
	0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**80.98**	**69**	P	**P**	**12 03 54.7**	**+0.3**
	0.3nm,0.5s,baz=237,slow=5.0,SNR=1.9						
	0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**150.90**	**32**	PKPbc	**PKPbc**	**12 11 30.8**	**+0.1**
	1.3nm,0.5s,baz=298,slow=3.1,SNR=5.8						
MKAR	**Makanchi Array**	**153.31**	**47**	PKPab	**PKPab**	**12 11 48.2**	**-0.7**
	0.3nm,0.6s,baz=289,slow=4.4,SNR=3.0						

*MAN **04** 11:59:25.0, 5°.28N×126°.63E, h4km, MS3.9*

*NEIC **04** 11:59:30.5±0.9, 5°.80N±0°.07×127°.0E±0°.1, h51km±6km, mb4.2/22, Error ellipse: s-maj=18.2km s-min=7.7km az=62.0*

*IDC **04** 11:59:30.5±2.0, 5°.83N×127°.04E, h55km±16km, mb3.6/11, mbtmp3.9/12, ML3.8/1, MS3.3/2, Error ellipse: s-maj=38.7km s-min=10.6km az=57.0*

ISC 04 11:59:30.4±1.0**, 5°.51N**±0°.06×**126°.69E**±0°.08**, h52**km±9km**, n55,** σ**1.59**/58**, mb4.0**/20**, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.13**	**301**	*e*P	**Pn**	**11 59 47.7**	**-2.4**
DDMP				*e*S	**Sn**	**12 00 03.8**	**-0.8**
GSPH	**General Santos**	**1.82**	**288**	*i* P	Pn	11 59 48.9	-11
GSPH				*i* S	**Sn**	**12 00 17.7**	**-3.8**
DAV	**Davao City (W)**	**1.90**	**325**	P	**Pn**	**12 00 02.2**	**+1.8**
	190nm,0.4s,baz=229,slow=1.6,SNR=6.6						
DAV				S	**Sn**	**12 00 24.3**	**+1.1**
	272nm,0.4s,baz=102,slow=22,SNR=4.2						
DAV	**Davao City (W)**	**1.90**	**325**	Pn	**Pn**	**12 00 00.1**	**-0.3**
DMPH	**Davao City--Mi**	**1.95**	**323**	*e*P	**Pn**	**12 00 02.5**	**+1.3**
DMPH				*i* S	Sn	12 00 32.0	+7.5
KCP	**Kidapawan**	**2.17**	**313**	*i* P	**Pn**	**12 00 05.0**	**+0.7**
KCP				*e*S	**Sn**	**12 00 32.3**	**+2.2**
CTBH	**Cotabato--PC H**	**2.96**	**305**	*i* P	**Pn**	**12 00 16.4**	**+1.4**
CTBH				*i* S	Sn	12 00 57.3	+8.0
CGP	**Cagayan de Oro**	**3.53**	**326**	*e*P	Pn	12 00 26.2	+3.5
CGP				*e*S	Sn	12 01 15.8	+13
TSSP	**Tandag City**	**3.54**	**352**	*e*P	Pn	12 00 27.2	+4.2
TOLI2	**Tolitoli**	**7.34**	**234**	Pn	**Pn**	**12 01 13.6**	**-1.5**
LUWI	**Luwuk**	**7.59**	**211**	Pn	Pn	12 01 23.5	+4.9
SIJI	**Sorong**	**7.82**	**144**	P	**Pn**	**12 01 22.6**	**+0.9**
	1.4nm,0.3s,baz=341,slow=21,SNR=4.4						
SIJI				S	**Sn**	**12 02 45.7**	**-3.2**
	3.8nm,0.5s,baz=250,slow=23,SNR=1.7						
	5.1nm,0.5s						
FAKI	**Fak Fak**	**10.05**	**146**	Pn	**Pn**	**12 01 53.0**	**+0.8**
KAPI	**Kappang**	**12.54**	**214**	LR	LR	12 07 35.6	
	comp=Z,66nm,20.0s,baz=72,slow=37						
KAPI	**Kappang**	**12.54**	**214**	Pn	P	12 02 32.8	-3.6
MMRI	**Maumere**	**14.74**	**198**	Pn	**P**	**12 03 01.7**	**+0.8**
SBUM	**Sibu**	**14.75**	**259**	Pn	**P**	**12 03 00.6**	**-0.3**
SOEI	**Soe**	**15.36**	**189**	Pn	**P**	**12 03 09.0**	**+1.1**
SOEI				IAmb	IAmb	12 03 18.4	
	comp=Z,20nm,1.1s						
JAGI	**Jajag, Banyuwa**	**18.69**	**222**	P	**Pn**	**12 03 48.7**	**+3.3**
JAGI				IAmb	IAmb	12 03 52.1	
	comp=Z,16nm,0.9s						
MTN	**Manton Dam**	**18.77**	**166**		**P**	**12 03 43.3**	**-2.1**
MTN				IAmb	IAmb	12 03 55.8	
	comp=Z,9.7nm,1.1s						
KNRA	**Kununurra**	**21.15**	**174**	P	**P**	**12 04 12.5**	**+1.2**
KNRA				IAmb	IAmb	12 04 28.3	
	comp=Z,7.9nm,0.8s						
COEN	**Coen**	**25.34**	**140**	P	**P**	**12 04 52.2**	**-0.5**
WB0	**Warramunga Arr**	**26.24**	**163**	P	**P**	**12 05 02.3**	**+1.5**
WB0				IAmb	IAmb	12 05 13.0	
	comp=Z,8.9nm,0.8s						
WRA	**Warramunga Arr**	**26.39**	**164**	P	**P**	**12 05 04.0**	**+1.8**
	comp=Z,2.7nm,1.0s,baz=343,slow=10,SNR=15						
WRA				PcP	**PcP**	**12 08 26.8**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=352,slow=2.3,SNR=1.3						
WRA				ScP	**ScP**	**12 12 02.6**	**0.0**
	comp=Z,0.6nm,0.9s,baz=342,slow=3.6,SNR=2.8						
	comp=Z,2.7nm,1.0s						
WRA	**Warramunga Arr**	**26.39**	**164**	P	**P**	**12 05 03.0**	**+0.8**
WR8	**Warramunga Arr**	**26.45**	**163**	P	**P**	**12 05 05.6**	**+2.9**
WR8				IAmb	IAmb	12 05 14.6	
	comp=Z,5.5nm,0.8s						
AS31	**Alice Springs**	**29.84**	**167**	P	**P**	**12 05 35.0**	**+2.0**
ASAR	**Alice Springs**	**29.85**	**167**	P	**P**	**12 05 34.4**	**+1.4**
	comp=Z,0.4nm,0.5s,baz=352,slow=8.0,SNR=18						
ASAR				PcP	**PcP**	**12 08 36.3**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=349,slow=2.6,SNR=4.4						
ASAR				ScP	**ScP**	**12 12 15.4**	**+2.2**
	comp=Z,0.3nm,0.9s,baz=336,slow=3.3,SNR=2.1						
	comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**29.85**	**167**	P	**P**	**12 05 34.5**	**+1.5**
CMAR	**Chiang Mai Arr**	**29.97**	**298**	P	**P**	**12 05 34.8**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=108,slow=7.8,SNR=2.1						
	comp=Z,0.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**29.97**	**298**	P	**P**	**12 05 34.2**	**0.0**
INKA	**Innaminka**	**35.74**	**158**	P	**P**	**12 06 25.3**	**+0.9**
INKA				IAmb	IAmb	12 06 34.2	
	comp=Z,1.6nm,0.9s						
BBOO	**Buckleboo**	**39.14**	**167**	P	**P**	**12 06 53.8**	**+0.7**
NWAO	**Narrogin (SRO)**	**39.27**	**193**	P	**P**	**12 06 55.1**	**+1.0**
STKA	**Stephens Creek**	**39.81**	**160**	P	**P**	**12 06 59.6**	**+1.0**
	comp=Z,1.9nm,0.8s,baz=317,slow=12,SNR=3.6						
	comp=Z,1.9nm,0.8s						
STKA	**Stephens Creek**	**39.81**	**160**	P	**P**	**12 06 58.4**	**-0.2**
ARMA	**Armidale**	**42.98**	**148**	P	**P**	**12 07 24.7**	**-0.1**
ARMA				IAmb	IAmb	12 07 46.3	
	comp=Z,7.7nm,1.1s						
EVN	**Everest**	**43.92**	**305**	P	**P**	**12 07 33.0**	**-0.1**
EVN				IAmb	IAmb	12 07 48.6	
	comp=Z,2.2nm,0.6s						
SONM	**Songino Array**	**45.61**	**341**	P	**P**	**12 07 43.2**	**-2.5**
	comp=Z,0.3nm,0.6s,baz=146,slow=8.0,SNR=1.3						
	comp=Z,0.3nm,0.6s						
SONM	**Songino Array**	**45.61**	**341**	P	**P**	**12 07 43.7**	**-2.0**
MKAR	**Makanchi Array**	**56.08**	**325**	P	**P**	**12 09 03.6**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=120,slow=8.4,SNR=9.1						
MKAR				PcP	**PcP**	**12 10 01.3**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=131,slow=3.7,SNR=4.0						
	comp=Z,0.9nm,0.6s						
MKAR	**Makanchi Array**	**56.08**	**325**	P	**P**	**12 09 03.8**	**-0.5**
TARG	**Taragay, Kyrgy**	**56.41**	**317**	P	**P**	**12 09 07.0**	**-0.2**
TARG				IAmb	IAmb	12 09 25.0	
	comp=Z,2.4nm,1.0s						
BOOM	**Boomskoye usch**	**57.99**	**318**	P	**P**	**12 09 17.1**	**-1.0**
BOOM				IAmb	IAmb	12 09 34.0	
	comp=Z,2.1nm,1.0s						
ZALV	**Zalesovo Beam**	**58.99**	**333**	P	**P**	**12 09 21.7**	**-2.9**
	comp=Z,0.5nm,0.5s,baz=134,slow=4.2,SNR=2.4						
	comp=Z,0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**58.99**	**333**	P	**P**	**12 09 21.8**	**-2.8**
KURK	**Kurchatov**	**60.23**	**327**		**P**	**12 09 32.6**	**-0.6**
KURBB	**Kurchatov Arra**	**60.23**	**327**	P	**P**	**12 09 31.9**	**-1.3**
	comp=Z,2.3nm,0.6s,baz=124,slow=6.3,SNR=22						
	comp=Z,2.3nm,0.6s						
BVAR	**Borovoye Array**	**65.81**	**327**	P	**P**	**12 10 09.7**	**-0.5**
	comp=Z,1.3nm,0.6s,baz=126,slow=7.5,SNR=9.5						
	comp=Z,1.3nm,0.6s						
BORK	**Borovoye**	**65.86**	**327**		**P**	**12 10 10.9**	**+0.4**
BORK				IAmb	IAmb	12 10 20.3	
	comp=Z,2.7nm,0.7s						
ABKAR	**Akbulak array**	**70.75**	**320**	P	**P**	**12 10 40.9**	**-0.3**
AKTO	**Aktyubinsk**	**72.25**	**321**	P	**P**	**12 10 49.9**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=74,slow=7.4,SNR=4.4						
	comp=Z,0.9nm,0.5s						
ILAR	**Eielson Array**	**83.52**	**25**	P	**P**	**12 11 51.4**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=257,slow=5.9,SNR=5.2						
	comp=Z,0.2nm,0.6s						
ILAR	**Eielson Array**	**83.52**	**25**	P	**P**	**12 11 50.3**	**-2.2**
NOA	**NORSAR Array B**	**97.18**	**334**	LR	LR	12 59 53.3	
	comp=Z,27nm,18.2s,baz=355,slow=37						

*IDC **04** 12:23:48.2±1.1, 56°.10N×162°.53E, h0km, mb3.5/7, mbtmp3.5/11, ML3.6/3, MS2.9/5, Error ellipse: s-maj=27.2km s-min=15.6km az=169.0*

*KRSC **04** 12:23:49.5±0.8, 55°.66N×162°.77E, h28km±17km, Ml4.2*

*MOS **04** 12:23:51.1±0.7, 55°.74N×162°.83E, h32km, mb3.8/1, Error ellipse: s-maj=8.7km s-min=5.1km az=66.9*

ISC 04 12:23:52.6±1.1**, 55°.75N**±0°.03×**162°.75E**±0°.03**, h38**km±2km**, n93,** σ**1.45**/98**, mb3.4**/7**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.46**	**5**	PN	**Pn**	**12 24 00.6**	**-1.9**
KBTR				S	**Sn**	**12 24 10.6**	**+1.0**
KBTR	**Krutoberegovo**	**0.46**	**5**	*e*P	**Pn**	**12 24 00.6**	**-1.9**
KBTR				*e*S	**Sn**	**12 24 10.6**	**+1.0**
KBG	**Krutoberegovo**	**0.50**	**357**	PN	**Pn**	**12 24 01.1**	**-2.1**
KBG				S	**Sn**	**12 24 11.4**	**+0.7**
KBG	**Krutoberegovo**	**0.50**	**357**	*e*P	**Pn**	**12 24 01.1**	**-2.1**
KBG				*e*S	**Sn**	**12 24 11.4**	**+0.7**
SMKR	**Semkarok**	**1.10**	**320**	PN	**Pn**	**12 24 10.5**	**-0.9**
SMKR	**Semkarok**	**1.10**	**320**	*e*P	**Pn**	**12 24 10.6**	**-0.9**
ZLN	**Zelenaya**	**1.13**	**284**	PN	**Pn**	**12 24 11.0**	**-0.9**
ZLN	**Zelenaya**	**1.13**	**284**	*e*P	**Pn**	**12 24 11.1**	**-0.9**
BZGR	**Bezymyannyi-Gr**	**1.18**	**280**	PN	**Pn**	**12 24 11.6**	**-0.9**
BZGR	**Bezymyannyi-Gr**	**1.18**	**280**	*e*P	**Pn**	**12 24 11.6**	**-0.9**
BDR	**Baidarnaya**	**1.19**	**314**	*e*S	**Sn**	**12 24 28.2**	**+0.6**
BZWR	**Bezymyannyi-We**	**1.29**	**280**	PN	**Pn**	**12 24 13.5**	**-0.6**
BZWR	**Bezymyannyi-We**	**1.29**	**280**	*e*P	**Pn**	**12 24 13.6**	**-0.6**
KLY	**Klyuchi**	**1.31**	**296**	PN	**Pn**	**12 24 11.6**	**-2.6**
KLY	**Klyuchi**	**1.31**	**296**	*e*P	**Pn**	**12 24 11.7**	**-2.6**
MKZ	**Mys Kozlova**	**1.34**	**207**	PN	**Pn**	**12 24 13.8**	**-0.8**
MKZ	**Mys Kozlova**	**1.34**	**207**	*e*P	**Pn**	**12 24 13.9**	**-0.8**
KIRR	**Kirishev**	**1.38**	**279**	PN	**Pn**	**12 24 14.8**	**-0.5**
KIRR	**Kirishev**	**1.38**	**279**	*e*P	**Pn**	**12 24 14.8**	**-0.5**
KMNR	**Kamenistaya**	**1.42**	**271**	PN	**Pn**	**12 24 15.8**	**-0.1**
KMNR	**Kamenistaya**	**1.42**	**271**	*e*P	**Pn**	**12 24 15.9**	**-0.1**
KPT	**Kopyto**	**1.44**	**280**	PN	**Pn**	**12 24 15.7**	**-0.5**
KPT	**Kopyto**	**1.44**	**280**	*e*P	**Pn**	**12 24 15.7**	**-0.5**
TUMD	**Tumrok D**	**1.45**	**249**	PN	**Pn**	**12 24 15.2**	**-1.0**
TUMD				S	**Sn**	**12 24 33.7**	**-0.2**
TUMD	**Tumrok D**	**1.45**	**249**	*e*P	**Pn**	**12 24 15.2**	**-1.0**
TUMD				*e*S	**Sn**	**12 24 33.8**	**-0.2**
KOZ	**Kozyrevsk**	**1.65**	**282**	PN	**Pn**	**12 24 19.3**	**+0.3**
KOZ	**Kozyrevsk**	**1.65**	**282**	*e*P	**Pn**	**12 24 19.3**	**+0.3**
SRDR	**Sredinnyy**	**1.80**	**290**	PN	**Pn**	**12 24 21.2**	**+0.2**
SRDR				S	**Sn**	**12 24 44.2**	**+1.7**
SRDR	**Sredinnyy**	**1.80**	**290**	*e*P	**Pn**	**12 24 21.2**	**+0.2**
SRDR				*e*S	**Sn**	**12 24 44.3**	**+1.7**
BKI	**Bering**	**1.91**	**105**	PN	**Pn**	**12 24 22.4**	**-0.1**
BKI				S	**Sn**	**12 24 46.0**	**+0.7**
BKI	**Bering**	**1.91**	**105**	*e*P	**Pn**	**12 24 22.4**	**-0.1**
BKI				*e*S	**Sn**	**12 24 46.1**	**+0.7**
ESO	**Esso**	**2.29**	**276**	PN	**Pn**	**12 24 28.2**	**+0.4**
ESO	**Esso**	**2.29**	**276**	*e*P	**Pn**	**12 24 28.3**	**+0.4**
KII	**Karymskiy**	**2.57**	**229**	PN	**Pn**	**12 24 31.5**	**-0.2**
KII	**Karymskiy**	**2.57**	**229**	*e*P	**Pn**	**12 24 31.5**	**-0.2**
TIGL	**Tigil**	**3.02**	**314**	PN	**Pn**	**12 24 41.5**	**+3.8**
TIGL	**Tigil**	**3.02**	**314**	*e*P	**Pn**	**12 24 41.5**	**+3.8**
SPN	**Mys Shipunski**	**3.10**	**212**	PN	**Pn**	**12 24 37.4**	**-1.5**
SPN	**Mys Shipunski**	**3.10**	**212**	*e*P	**Pn**	**12 24 37.4**	**-1.5**
SPN				*e*S	**Sn**	**12 25 12.1**	**-2.6**
NLC	**Nalytchevo**	**3.26**	**219**	*e*S	**Sn**	**12 25 16.8**	**-1.8**
SDLR	**Sedlovina**	**3.35**	**224**	PN	**Pn**	**12 24 42.4**	**0.0**
SDLR	**Sedlovina**	**3.35**	**224**	*e*P	**Pn**	**12 24 42.4**	**0.0**
KRER	**Koryakskii**	**3.39**	**225**	PN	**Pn**	**12 24 43.7**	**+0.7**
KRER	**Koryakskii**	**3.39**	**225**	*e*P	**Pn**	**12 24 43.8**	**+0.7**
KRX	**Arik**	**3.39**	**227**	PN	**Pn**	**12 24 44.0**	**+1.1**
KRX	**Arik**	**3.39**	**227**	*e*P	**Pn**	**12 24 44.0**	**+1.1**
SMAR	**Somma**	**3.40**	**224**	PN	**Pn**	**12 24 43.0**	**-0.1**
SMAR	**Somma**	**3.40**	**224**	*e*P	**Pn**	**12 24 43.1**	**-0.1**
AVH	**Avacha**	**3.42**	**225**	PN	**Pn**	**12 24 43.5**	**+0.2**
AVH	**Avacha**	**3.42**	**225**	*e*P	**Pn**	**12 24 43.5**	**+0.2**
UGLR	**Uglovaya**	**3.43**	**224**	PN	**Pn**	**12 24 43.4**	**-0.1**
UGLR	**Uglovaya**	**3.43**	**224**	*e*P	**Pn**	**12 24 43.4**	**-0.1**
KOK	**Koryaka**	**3.44**	**226**	PN	**Pn**	**12 24 43.9**	**+0.2**
KOK	**Koryaka**	**3.44**	**226**	*e*P	**Pn**	**12 24 43.9**	**+0.2**
GNL	**Ganaly**	**3.47**	**236**	PN	**Pn**	**12 24 44.7**	**+0.7**
GNL	**Ganaly**	**3.47**	**236**	*e*P	**Pn**	**12 24 44.8**	**+0.7**
OSSR	**Ossora**	**3.51**	**3**	PN	**Pn**	**12 24 45.9**	**+1.4**
OSSR	**Ossora**	**3.51**	**3**	*e*P	**Pn**	**12 24 45.9**	**+1.4**
DALK	**Dalny**	**3.59**	**222**	PN	**Pn**	**12 24 44.9**	**-0.7**
DALK	**Dalny**	**3.59**	**222**	*e*P	**Pn**	**12 24 45.0**	**-0.7**
DALK				*e*S	**Sn**	**12 25 26.0**	**-0.7**
PET	**Petropavlovsk**	**3.64**	**223**	*e*PN	**Pn**	**12 24 47.0**	**+0.8**
PET				*e*S	**Sn**	**12 25 28.1**	**+0.3**
PET				pmax	pmax		

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,41nm,0.5s						
PET				smax	smax		
	comp=N,113nm,0.8s						
PET				smax	smax		
	comp=E,90nm,0.6s						
PET	Petropavlovsk	3.64	223	eP	Pn	12 24 47.8	+1.6
PALN	Palana	3.67	337	PN	Pn	12 24 51.7	+5.1
PALN	Palana	3.67	337	eP	Pn	12 24 51.7	+5.1
PETK	Petropavlovsk-	3.97	230	Pn	Pn	12 24 51.3	+0.5
	comp=E,4.8nm,0.6s,baz=62,slow=17,SNR=26						
PETK				Sn	Sn	12 25 42.2	+6.2
	comp=E,1.6nm,0.3s,baz=206,slow=20,SNR=5.4						
PETK				LR	LR	12 26 36.9	
	comp=E,58nm,21.2s,baz=147,slow=41						
KRMR	Karymshinskiy	3.99	225	PN	Pn	12 24 52.9	+1.8
KRMR	Karymshinskiy	3.99	225	eP	Pn	12 24 52.9	+1.8
GRL	Gorelyy	4.23	223	PN	Pn	12 24 55.3	+0.9
GRL	Gorelyy	4.23	223	eP	Pn	12 24 55.4	+0.9
MTVR	Mutnovka	4.24	221	PN	Pn	12 24 55.3	+0.7
MTVR	Mutnovka	4.24	221	eP	Pn	12 24 55.4	+0.7
APC	Apacha	4.33	231	PN	Pn	12 24 58.6	+2.9
APC	Apacha	4.33	231	eP	Pn	12 24 58.6	+2.9
ASAK	Asacha	4.42	222	PN	Pn	12 24 57.5	+0.4
ASAK	Asacha	4.42	222	eP	Pn	12 24 57.5	+0.4
TILK	Tilichiki	5.04	20	PN	Pn	12 25 07.6	+2.2
TILK	Tilichiki	5.04	20	eP	Pn	12 25 07.6	+2.2
MA2	Magadan	7.48	306	Pn	Pn	12 25 35.5	-3.5
	comp=E,0.2nm,0.3s,baz=131,slow=19,SNR=1.5						
MA2				LR	LR	12 28 47.9	
	comp=E,52nm,19.5s,baz=114,slow=42						
	comp=E,0.6nm,0.3s						
ASAJ	Asahikawa	17.36	236	P	P	12 27 53.7	+1.0
	comp=E,0.2nm,0.3s,baz=88,slow=12,SNR=5.0						
	comp=E,2.9nm,0.6s						
KLR	Kul'dur	19.86	264	P	Pn	12 28 21.5	-0.3
	comp=E,0.1nm,0.3s,baz=64,slow=8.8,SNR=5.0						
KLR				LR	LR	12 36 33.9	
	comp=E,27nm,19.2s,baz=99,slow=39						
	comp=E,1.2nm,0.6s						
TIXI	Tiksi	21.40	331	P	P	12 28 34.9	-1.6
	comp=E,0.9nm,0.2s,baz=141,slow=4.0,SNR=4.5						
	comp=E,0.9nm,0.2s						
ILAR	Eielson Array	25.86	49	P	P	12 29 20.1	0.0
	comp=E,0.7nm,0.9s,baz=269,slow=8.4,SNR=6.1						
	comp=E,0.7nm,0.9s						
TLY	Talaya	34.29	288	LR	LR	12 45 32.9	
	comp=E,34nm,19.7s,baz=56,slow=38						
H11N2	WAKE ISLAND Hy	36.10	173	T	T	13 09 26.7	
	baz=356,slow=76,SNR=36						
H11N3	WAKE ISLAND Hy	36.12	173	T	T	13 09 22.2	
	baz=356,slow=76,SNR=22						
H11N1	WAKE ISLAND Hy	36.12	173	T	T	13 09 22.9	
	baz=356,slow=76,SNR=22						
YKA	Yellowknife Ar	40.17	46	P	P	12 31 23.7	-0.8
	comp=E,0.1nm,0.4s,baz=305,slow=9.4,SNR=5.4						
	comp=E,0.1nm,0.4s						
KURK	Kurchatov	47.67	301	P	P	12 32 24.0	-0.7
KURBB	Kurchatov Arra	47.77	301	P	P	12 32 24.0	-1.5
	comp=E,0.9nm,0.2s,baz=57,slow=7.8,SNR=4.7						
	comp=E,0.9nm,0.2s						
MKAR	Makanchi Array	48.42	295	P	P	12 32 28.9	-1.8
	comp=E,0.2nm,0.5s,baz=48,slow=6.2,SNR=3.1						
	comp=E,0.2nm,0.5s						
BVAR	Borovoye Array	49.96	308	LR	LR	12 56 39.7	
	comp=E,30nm,20.2s,baz=295,slow=40						
NVAR	Mina Array Bea	53.44	74	P	P	12 33 09.3	+0.5
	comp=E,0.2nm,0.7s,baz=334,slow=5.7,SNR=1.7						
	comp=E,0.2nm,0.7s						
TXAR	Lajitas Array	68.21	70	P	P	12 34 51.1	+2.0
	comp=E,0.2nm,0.5s,baz=321,slow=5.4,SNR=5.4						
	comp=E,0.2nm,0.5s						

*UCR **04** 12:27:41.1±1.0, 10°56N×86°11W, h6km±12km, MW3.8, Presumed earthquake*

*CATAC **04** 12:27:41.2±0.4, 11°N±2°×8°6W±°, h13km±2km, M3.6/18, MLv3.6/18, Error ellipse: s-maj=5.9km s-min=3.5km az=59.2, confirmed*

ISC 04 12:27:40.8±1.4, **10°52N**±0°03×**86°13W**±0°04, **h10**km±9km, **n72**, σ**0§83**/114, **11C-14D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DELF	Filadelfia	0.57	97	eP	Pb	12 27 52.9	0.0
ELI1	Hacienda Flor	0.58	77	P	Pb	12 27 53.8	+0.8
ELI1				S	Sn	12 28 03.6	-1.1
ELI1	Hacienda Flor	0.58	77	⇓iP	Pb	12 27 53.8	+0.8
ELI1				eS	Sn	12 28 03.5	-1.1
SACU	Santa Cruz	0.59	115	eP	Pb	12 27 53.2	-0.1
SACU				eS	Sb	12 28 02.2	+0.6
ERIA	Liberia	0.69	80	⇑iP	Pb	12 27 55.3	+0.5
ERIA				eS	Sn	12 28 06.0	-1.4
LAPC	Finca la Perla	0.73	70	⇓iP	Pg	12 27 55.0	+0.1
LAPC				eS	Sb	12 28 05.1	-0.5
LCRUZ	La Cruz	0.74	41	⇓iP	Pb	12 27 55.6	-0.2
LCRUZ				eS	Sb	12 28 06.4	+0.4
PLVR	Palo Verde	0.78	102	⇑eP	Pb	12 27 56.5	-0.1
PLVR				eS	Sb	12 28 07.6	+0.3
GPS3	Bodega del ICE	0.79	72	⇑iP	Pn	12 27 57.8	-0.2
GPS3				eS	Sb	12 28 08.3	+1.0
ELVJ	El Viejo (Barb	0.79	95	⇑iP	Pg	12 27 54.8	-1.3
ELVJ				eS	Sg	12 28 04.5	-2.0
VRLE	La Escondida,	0.80	70	eP	Pg	12 27 56.2	+0.1
GPS2	Hotel Rincn d	0.80	73	⇓iP	Pg	12 27 56.4	+0.2
GPS2				eS	Sb	12 28 08.1	+0.5
GPS1	Guardaparques	0.81	71	⇓iP	Pg	12 27 56.5	+0.1
GPS1				eS	Sb	12 28 07.7	-0.3
VORI	VORI	0.82	69	⇓iP	Pg	12 27 56.8	+0.1
VORI				eS	Sb	12 28 09.1	+0.6
CMARA	Lajas Hojancha	0.85	125	P	Pg	12 27 57.3	+0.1
CMARA				S	Sb	12 28 10.3	+1.1
CMARA	Lajas Hojancha	0.85	125	eP	Pg	12 27 57.6	+0.4
CMARA				eS	Sb	12 28 10.1	+0.9
BAGA	Bagaces	0.85	89	⇓eP	Pb	12 27 58.0	+0.3
BAGA				eS	Sn	12 28 10.5	-0.9
BUAI	Buenos Aires	0.86	65	⇓eP	Pg	12 27 57.6	+0.2
PEJA	Penjamo Buenos	0.88	65	⇓eP	Pg	12 27 58.0	+0.1
INDI	Punta indio, G	0.89	136	P	Pn	12 27 59.1	-0.3
CARN	Rivas	0.89	42	P	Pb	12 27 58.4	-0.1
CARN				S	Sn	12 28 12.0	-0.4
CARN	Rivas	0.89	42	⇑eP	Pg	12 27 58.0	0.0
CARN				eS	Sn	12 28 12.2	-0.2
COLC	Colonia	0.92	81	⇑eP	Pg	12 27 58.6	+0.1
COLC				eS	Sb	12 28 11.4	+0.2
MESS	Mesas	0.94	76	⇓eP	Pg	12 27 58.7	-0.3
MESS				eS	Sb	12 28 12.0	+0.1
HORNC	Hornillas	0.95	78	⇑iP	Pg	12 27 59.1	-0.1
HORNC				eS	Sb	12 28 12.0	-0.2
CUI	Cuipilapa	0.96	81	eP	Pg	12 27 59.0	-0.2
CUI				eS	Sb	12 28 12.1	-0.2
CLARA	Aguas Claras	0.97	74	⇓eP	Pg	12 27 59.3	-0.3
CLARA				eS	Sb	12 28 13.6	+0.9
CNAS	Canas	1.02	95	eP	Pg	12 27 59.4	-1.1
VMAR	Armenia, Volca	1.04	73	⇓eP	Pg	12 28 00.4	-0.4
VMAR				eS	Sg	12 28 13.1	-1.2
INVE	Universidad In	1.05	92	⇓eP	Pg	12 28 00.7	-0.3
INVE				eS	Sb	12 28 14.9	+0.1
TIMP	Tierras Morena	1.09	86	⇑iP	Pb	12 28 01.1	-0.7
TIMP				eS	Sg	12 28 15.9	-0.1
MORN	Al O del Volca	1.13	25	P	Pb	12 28 02.1	-0.4
TILA	Tilaran	1.14	92	eP	Pb	12 28 01.6	-1.0
TILA				eS	Sb	12 28 17.2	-0.3
TENO	El Achiote	1.15	81	⇓eP	Pb	12 28 01.5	-1.2
TENO				eS	Sb	12 28 15.8	-1.9
CONN	Concepcion	1.15	25	P	Pb	12 27 57.4	-5.5
JTS	Las Juntas de	1.18	101	P	Pb	12 28 02.2	-1.1
JTS				S	Sn	12 28 19.8	+0.4
JTS	Las Juntas de	1.18	101	⇑iP	Pb	12 28 02.2	-1.1
JTS				eS	Sb	12 28 18.5	-0.1
JCR1	Jicaral	1.20	123	eP	Pb	12 28 02.4	-1.2
CHIK	Chiripa	1.20	93	eP	Pg	12 28 05.0	+1.0
QUEB	Quebradon, Cot	1.22	85	eP	Pn	12 28 03.4	-0.5
QUEB				eS	Sg	12 28 20.3	+0.3
NADN	Granada	1.23	4	P	Pn	12 28 03.8	-0.2
NADN				S	Sn	12 28 21.0	+0.2
MTEVE	Monteverde	1.29	99	eP	Pn	12 28 04.4	-0.7
MTEVE				eS	Sn	12 28 22.5	-0.1
TABAC	Tabacon	1.34	91	eP	Pn	12 28 05.5	-0.1
TABAC				eS	Sg	12 28 27.7	+3.8
CASO	Castillo	1.37	93	eP	Pn	12 28 06.4	+0.3
CASO				eS	Sn	12 28 24.6	+0.2
ARE1	Arenal 1	1.39	92	eP	Pn	12 28 06.1	-0.2
ARE1				eS	Sg	12 28 27.5	+2.0
VARE2	V. Arenal	1.39	92	eP	Pn	12 28 06.0	-0.3
VARE2				eS	Sg	12 28 27.0	+1.5
CEDE	Laguna Cedeo	1.40	91	eP	Pn	12 28 06.3	-0.2
REZ	Monterrey de S	1.40	89	eP	Pn	12 28 06.8	+0.3
NANN	Nandasmo	1.41	0	P	Pb	12 28 07.2	-0.1
NANN				S	Sn	12 28 25.5	+0.1
VACR	Volcan Arenal	1.43	92	eP	Pn	12 28 06.4	-0.4
FORC	Fortuna	1.43	92	eP	Pb	12 28 07.7	0.0
MAS3	Al N del Volca	1.50	358	P	Pn	12 28 07.6	-0.2
MAS3				S	Sg	12 28 29.4	+0.3
UNAN	Cigeo UNAN	1.59	355	P	Pn	12 28 09.3	+0.3
UNAN				S	Sb	12 28 31.2	+0.7
AERN	Aeropuerto Man	1.62	359	P	Pn	12 28 09.9	+0.5
TISN	Laguna Tiscapa	1.62	355	P	Pn	12 28 08.6	-0.9
MGAN	Managua	1.62	356	P	Pn	12 28 09.5	0.0
MGAN				S	Sb	12 28 31.2	-0.3
ALLN	Telcor Managua	1.64	355	S	Sg	12 28 33.0	-0.4
COVE	Coope Vega, Sa	1.71	83	P	Pn	12 28 11.3	+0.7
COPN	Copaltepe	1.72	345	P	Pn	12 28 10.9	+0.2
COPN	Copaltepe	1.72	345	eP	Pn	12 28 10.2	-0.5
ACON	Acoyapa	1.72	33	P	Pn	12 28 10.1	-0.7
ACON				S	Sn	12 28 32.5	-0.4
NARAN	Naranjo de Ala	1.77	103	eP	Pb	12 28 13.2	-0.2
VPS8	V Poas	1.88	100	eP	Pn	12 28 14.4	+1.0
LEVN	Ruinas Leon Vi	1.93	346	P	Pn	12 28 14.5	+0.7
LEVN				S	Sn	12 28 38.8	+0.6
VICA	Volcano Irazu	2.31	103	eP	Pn	12 28 21.2	+1.9
PIEC	Cerro El Cedra	2.31	112	eP	Pb	12 28 21.5	-1.3
CVTG	V. Turrialba,	2.34	99	⇑iP	Pb	12 28 23.4	+0.2
TRT2	Tortugero	2.35	89	P	Pn	12 28 20.4	+0.9
TRT2				S	Sb	12 28 53.7	+1.3
CVTQ	Turrialba Volc	2.38	102	⇑eP	Pb	12 28 22.7	-1.3
ABRB	Las Abras (San	2.42	102	eP	Pn	12 28 21.0	+0.2
RESJ	San Isidro (Tu	2.49	101	eP	Pn	12 28 22.9	+1.4
BUS1	Rivas	2.53	112	eP	Pb	12 28 24.8	-1.8

*BJI **04** 12:46:18.1, 28°52N×142°77E, h16km, mB4.9/20, mb4.9/68, Ms4.5/46, Ms7 4.4/48*

*IDC **04** 12:46:20.6±0.4, 28°63N×142°48E, h0km, mb4.6/34, mbtmp4.6/39, ML4.1/5, MS3.9/59, Error ellipse: s-maj=14.4km s-min=9.2km az=87.0*

*NEIC **04** 12:46:22.0±1.2, 28°63N±0°06×142°7E±0°1, h10km±1km, mb4.9/207, Error ellipse: s-maj=16.0km s-min=9.4km az=92.0*

*NIED **04** 12:46:23.6, 28°65N×142°31E, h35km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr4.18; Mθθ-0.83; Mφφ-3.36; Mrθ5.33; Mθφ-3.25; Mφr1.65; Fault plane solution: M0 7.51000×10^15 NP1: φs188.00000°, δ30.00000°, λ40.00000°. NP2: φs62.00000°, δ71.00000°, λ114.00000°.*

*JMA **04** 12:46:23.6±0.1, 28°7N±0°3×14°2E±°, h35km, MV4.7/18, MW4.7/18, NEAR CHICHIJIMA ISLAND*

*GCMT **04** 12:46:26.0±0.5, 28°59N±0°05×142°60E±0°03, h20km±1km, MW4.7/69, Moment Tensor Solution. s15,c18; s69,c85; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr1.55±.13; Mθθ-0.24±.07; Mφφ-1.31±.08; Mrθ0.24±.19; Mθφ-0.02±.05; Mφr0.68±.14; Best double couple: M0 1.60100×10^16 NP1: φs176.00000°, δ32.00000°, λ79.00000°. NP2: φs8.00000°, δ58.00000°, λ97.00000°. Principal axes: T 1.7320, Plg76.0000°, Azm298.0000°; N -0.2630, Plg6.0000°, Azm185.0000°; P -1.4690, Plg13.0000°, Azm93.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 12:46:22.4±0.9, **28°66N**±0°03×**142°51E**±0°05, **h14**km±5km, **n344**, σ**1§31**/258, **mb4.9**/170, **MS4.0**/74, **4C-5D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.58	191	P	Pn	12 46 49.7	-0.4
CBIJ				A	A	12 46 49.7	
	comp=N,17nm,5.0s,comp=E,22nm,4.8s						
CBIJ				S	Sn	12 47 08.9	-1.5
JCJ	Chichijima	1.58	191	Pn	Pn	12 46 49.2	-0.9
	comp=E,66nm,0.3s,baz=351,slow=5.8,SNR=39						
JCJ				Sn	Sn	12 47 07.9	-2.5
	comp=E,301nm,0.3s,baz=74,slow=21,SNR=13						
JCJ				LR	LR	12 47 14.2	
	comp=E,547nm,18.1s,baz=346,slow=35						
JCJ	Chichijima	1.58	191		Pn	12 46 49.8	-0.3
JHH2	Haha-jima-NKT2	2.04	188	P	Pn	12 46 56.4	+0.1
JHH2				A	A	12 46 56.4	
	comp=N,12nm,4.1s,comp=E,13nm,1.4s						
JHH2				eS	Sn	12 47 20.2	-1.4
JHJ2	Mitsune	5.01	333	Pn	Pn	12 47 37.4	+0.2
JHJ2	Mitsune	5.01	333	eP	Pn	12 47 37.6	+0.5
JHJ2				eS	Sn	12 48 33.6	-1.3
JHJ	Hachijo jima 2	5.03	333	Pn	Pn	12 47 37.7	+0.3
	comp=E,24nm,0.3s,baz=35,slow=21,SNR=4.6						
JHJ				Sn	Sn	12 48 32.8	-2.6
	comp=E,17nm,0.3s,baz=93,slow=13,SNR=1.8						
JHJ				LR	LR	12 49 34.2	
	comp=E,2µm,19.1s,baz=121,slow=38						
	comp=E,43nm,0.4s						
JMKN	Mikurajimanish	5.79	335	eP	Pn	12 47 48.7	+0.8
JMKN				eS	Sn	12 48 53.2	-0.8
BSO1	Boso 1	6.12	348	P	Pn	12 47 51.6	-0.4
JOD2	Odawara 2	7.20	337	eP	Pn	12 48 08.4	+1.1
JOD2				eS	Sn	12 49 28.0	-0.9
JTNC	Tanabenakahech	7.83	313	eP	Pn	12 48 17.7	+1.6
JRY	Ryogami san	7.95	338	P	Pn	12 48 18.7	+1.1
JRY				eS	Sn	12 49 44.7	-2.6
INU	Inuyama	8.14	326		Pn	12 48 21.4	+1.2
JGF	Kuroka	8.19	329		Pn	12 48 22.2	+1.3
MJAR	Matsushiro Arr	8.66	336	Pn	Pn	12 48 28.2	+0.9
	comp=E,1.6nm,0.3s,baz=158,slow=13,SNR=63						
MJAR				Sn	Sn	12 50 03.0	-1.8
	comp=E,0.3nm,0.3s,baz=112,slow=27,SNR=4.6						
MJAR				LR	LR	12 51 37.0	
	comp=E,572nm,20.6s,baz=158,slow=36						
	comp=E,12nm,0.3s						
MJAR	Matsushiro Arr	8.66	336		Pn	12 48 28.4	+1.1
MAJO	Matsushiro	8.66	336		Pn	12 48 28.8	+1.4
MJB9	Matsu-Tunnel	8.66	336		Pn	12 48 29.6	+2.2
JHS	Saijyo	10.19	311	eP	Pn	12 48 52.8	+4.5
JMZ	Minamidaito 2	10.44	257	Pn	Pn	12 48 54.6	+3.0
JMZ	Minamidaito 2	10.44	257	eP	Pn	12 48 54.7	+3.0
JNU	Nakatsue	10.94	297	Pn	Pn	12 49 02.8	+4.2
	comp=E,0.2nm,0.3s,baz=126,slow=14,SNR=6.0						
JNU				LR	LR	12 53 03.5	
	comp=E,1µm,18.4s,baz=116,slow=37						
JOW	Kunigami	12.74	265	LR	LR	12 53 51.3	
	comp=E,1µm,20.3s,baz=134,slow=36						
KSRS	Korea Array	15.04	309	Pn	Pn	12 49 54.8	+0.2
	comp=E,1.2nm,0.3s,baz=124,slow=10,SNR=18						
KSRS				LR	LR	12 55 41.6	
	comp=E,672nm,18.4s,baz=120,slow=37						
	comp=E,1.9nm,0.7s						
KSAR	Wonju Array Be	15.06	309	Pn	Pn	12 49 56.4	+1.6
ASAJ	Asahikawa	15.43	0	Pn	Pn	12 49 58.3	-1.3
	comp=E,1.0nm,0.3s,baz=200,slow=11,SNR=18						
ASAJ				Sn	Sn	12 52 43.5	-6.8
	comp=E,0.5nm,0.3s,baz=253,slow=23,SNR=4.2						
ASAJ				LR	LR	12 57 18.3	
	comp=E,259nm,21.1s,baz=172,slow=43						
	comp=E,4.2nm,0.4s						
JKA	Kamikawa-asahi	15.43	0		Pn	12 49 56.7	-2.9
INCN	Inchon	15.94	308		Pn	12 50 08.1	+1.7
INCN				IAmb	IAmb	12 50 11.2	
	comp=Z,63nm,0.9s						
USRK	Ussuriysk Ar.	17.65	334	P	Pn	12 50 27.2	-0.6
	comp=Z,1.2nm,0.3s,baz=164,slow=9.9,SNR=24						
	comp=Z,25nm,0.8s						
YSS	Yuzhno-Sakhali	18.27	1	P	Pn	12 50 34.5	-0.9
MDJ	Mudanjiang	18.96	331		P	12 50 41.6	-1.6
MDJ				IAmb	IAmb	12 50 46.9	
	comp=Z,68nm,1.2s						
MDJ	Mudanjiang	18.96	331	P	P	12 50 43.2	-0.1
MDJ				pmax	pmax		
	comp=Z,64nm,2.4s						
NACB	Ninganchiao	19.25	261	P	P	12 50 47.4	+0.8
NACB				IAmb	IAmb	12 50 55.6	
	comp=Z,106nm,1.4s						
YHNB	Yeheng	19.30	263		P	12 50 48.3	+1.1
YHNB				IAmb	IAmb	12 50 52.3	
	comp=Z,130nm,1.3s						
YULB	Yu-li	19.76	259		P	12 50 53.9	+1.6
SSLB	Suanglung	19.93	261		Pn	12 50 56.1	+0.3
DL2	Dalian	20.10	306	P	Pn	12 51 01.1	+3.5
DL2				pmax	pmax		
	comp=Z,43nm,0.8s						
DL2				pmax	pmax		
	comp=Z,620nm,3.7s						
DL2				L	L		
	comp=Z,1µm,18.6s						
DL2				L	L		
	comp=Z,1µm,17.3s						
DL2				L	L		
	comp=Z,2µm,17.2s						
TPUB	Ta-pu	20.37	260	P	P	12 51 00.1	+1.2
TPUB				IAmb	IAmb	12 51 05.7	
	comp=Z,138nm,1.4s						
CN2	Changchun	20.38	322	eP	P	12 50 59.1	+0.4
CN2				eS	S	12 54 44.7	-2.0
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CN2				pmax	pmax		
	comp=Z,100nm,4.0s						
CN2				L	L		
	comp=Z,200nm,11.0s						
CN2				L	L		
	comp=Z,300nm,11.0s						
CN2				L	L		
	comp=Z,200nm,12.0s						
NJ2	Nanjing	20.68	285	⇓iP	P	12 51 02.3	+0.2
NJ2				pmax	pmax		
	comp=Z,63nm,0.9s						
BNX	BinXian	20.81	329	⇓P	P	12 51 04.2	+0.8
BNX				pmax	pmax		
	comp=Z,78nm,0.8s						
KLR	Kul'dur	22.14	341	P	P	12 51 17.9	+0.3
	comp=Z,28nm,1.1s,baz=148,slow=7.3,SNR=26						
KLR				LR	LR	13 00 10.1	
	comp=Z,281nm,18.3s,baz=164,slow=37						
	comp=Z,28nm,1.1s						
TIA	Tai'an	22.67	296	P	P	12 51 22.4	-1.1
TIA				pmax	pmax		
	comp=Z,13nm,0.9s						
H11N2	WAKE ISLAND Hy	23.92	106	T	T	13 16 31.8	
	baz=297,slow=74,SNR=98						
H11N1	WAKE ISLAND Hy	23.92	106	T	T	13 16 32.1	
	baz=297,slow=74,SNR=73						
H11N3	WAKE ISLAND Hy	23.93	106	T	T	13 16 33.0	
	baz=297,slow=74,SNR=107						
H11S3	WAKE ISLAND Hy	24.31	109	T	T	13 17 14.3	
	baz=304,slow=75,SNR=14						
H11S1	WAKE ISLAND Hy	24.32	109	T	T	13 16 57.4	
	baz=304,slow=75,SNR=13						
H11S2	WAKE ISLAND Hy	24.33	109	T	T	13 17 00.5	
	baz=304,slow=75,SNR=8.0						
HEH	HeiHe	24.43	336	eP	P	12 51 41.2	+0.7
HEH				pP	pwP	12 51 47.3	-1.0
HEH				S	S	12 56 02.9	+3.1
HEH				pmax	pmax		
	comp=Z,32nm,1.6s						
HEH				pmax	pmax		
	comp=Z,240nm,6.7s						
HEH				L	L		
	comp=Z,300nm,15.2s						
HEH				L	L		
	comp=Z,400nm,13.0s						
HEH				L	L		
	comp=Z,440nm,15.0s						
BJI2	Beijing	24.44	305	P	P	12 51 38.9	-1.9
BJI2				L	L		
	comp=Z,220nm,15.7s						
BJI2				L	L		
	comp=Z,370nm,15.9s						
BJI2				L	L		
	comp=Z,470nm,16.3s						
BJT	Baijiatuau	24.44	305		P	12 51 39.5	-1.3
WHN	Wuhan	24.54	281	P	P	12 51 41.9	+0.2
WHN				pmax	pmax		
	comp=Z,230nm,1.4s						
TGY	Tagaytay City	24.70	239	P	P	12 51 44.6	+1.2
	comp=Z,161nm,0.5s,baz=312,slow=9.6,SNR=5.6						
TGY				LR	LR	13 01 10.1	
	comp=Z,244nm,19.4s,baz=286,slow=36						
HNS	HongShan	24.82	298	⇓P	P	12 51 42.7	-1.5
HNS				pmax	pmax		
	comp=Z,14nm,1.1s						
HNS				L	L		
	comp=Z,490nm,16.8s						
HNS				L	L		
	comp=Z,370nm,15.4s						
HNS				L	L		
	comp=Z,500nm,16.9s						
XLT	XiLinHaoTe	26.03	313	eP	P	12 51 54.7	-0.6
XLT				pmax	pmax		
	comp=Z,18nm,0.8s						
XLT				pmax	pmax		
	comp=Z,170nm,6.0s						
XLT				L	L		
	comp=Z,30nm,14.2s						
XLT				L	L		
	comp=Z,280nm,12.5s						
XLT				L	L		
	comp=Z,270nm,14.5s						
LYN	LuoYang	26.20	291	P	P	12 51 57.1	+0.3
LYN				pmax	pmax		
	comp=Z,19nm,0.8s						
LYN				pmax	pmax		
	comp=Z,210nm,7.6s						
LYN				L	L		
	comp=Z,370nm,15.1s						
LYN				L	L		
	comp=Z,330nm,15.1s						
LYN				L	L		
	comp=Z,1µm,15.8s						
DAV	Davao City (W)	26.78	220	LR	LR	13 00 41.2	
	comp=Z,172nm,21.3s,baz=10.0,slow=32						
PETK	Petropavlovsk-	26.88	20	P	P	12 52 03.6	+1.0
	comp=Z,1.5nm,0.6s,baz=198,slow=3.6,SNR=6.9						
PETK				LR	LR	13 02 22.7	
	comp=Z,70nm,21.9s,baz=192,slow=36						
	comp=Z,1.5nm,0.6s						
HIA	Hailar	26.96	326		P	12 52 04.8	+1.2
HIA				IAmb	IAmb	12 52 07.9	
	comp=Z,52nm,1.2s						
HHC	Hu-ho-hao-te	28.04	304	⇓iP	P	12 52 12.4	-1.0
HHC				S	S	12 56 54.2	-3.4
HHC				pmax	pmax		
	comp=Z,21nm,0.8s						
HHC				pmax	pmax		
	comp=Z,48nm,4.7s						
HHC				L	L		
	comp=Z,470nm,17.8s						
HHC				L	L		
	comp=Z,690nm,16.8s						
HHC				L	L		
	comp=Z,960nm,16.0s						
ENH	Enshi	28.75	281		P	12 52 18.6	-1.1
ENH				IAmb	IAmb	12 52 19.6	
	comp=Z,18nm,0.9s						
XAN	Xi'an	29.10	289	P	P	12 52 20.5	-2.4
XAN				S	S	12 57 12.0	-2.4
XAN				pmax	pmax		
	comp=Z,20nm,1.0s						
XAN				L	L		
	comp=Z,400nm,17.3s						
XAN				L	L		
	comp=Z,730nm,18.2s						
XAN				L	L		
	comp=Z,760nm,15.9s						
BTO2	Baotou	29.25	303	eP	P	12 52 22.8	-1.4
BTO2				pP	pP	12 52 26.3	-0.9
BTO2				PP	PnPn	12 53 17.0	-0.2
BTO2				S	S	12 57 15.3	-1.4
BTO2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BTO2				pmax	pmax		
	comp=Z,320nm,4.0s						
BTO2				L	L		
	comp=Z,1µm,14.5s						
BTO2				L	L		
	comp=Z,2µm,16.1s						
BTO2				L	L		
	comp=Z,3µm,15.1s						
MANU	Manus Island	30.88	171	P	P	12 52 37.4	-1.2
SIJI	Sorong	31.27	202	LR	LR	13 03 20.5	
	comp=Z,168nm,18.1s,baz=144,slow=33						
QIZ	Qiongzhong	31.29	259	P	P	12 52 42.1	-0.2
QIZ				S	S	12 57 51.5	+2.6
QIZ				L	L		
	comp=Z,190nm,16.1s						

QIZ L L
comp=Z,340nm,16.5s
QIZ L L
comp=Z,330nm,14.9s
MA2 Magadan 31.42 8 P P 12 52 43.1 +0.1
MA2 IAmb IAmb 12 52 50.2
comp=Z,21nm,1.6s
MA2 Magadan 31.42 8 P P 12 52 43.1 +0.1
comp=Z,8.6nm,0.7s
GYA Guiyang 31.79 275 ⇓P **P 12 52 46.6 -0.1**
GYA pmax pmax
comp=Z,22nm,1.1s
GYA L L
comp=Z,290nm,19.4s
FAKI Fak Fak 32.91 199 P P 12 52 55.0 -1.5
LZH Lanzhou 33.32 293 *eP* **P 12 52 58.0 -2.2**
LZH sP sP 12 53 05.5 +1.1
LZH pmax pmax
comp=Z,11nm,1.3s
LZH L L
comp=Z,410nm,14.3s
LZH L L
comp=Z,400nm,15.2s
LZH L L
comp=Z,620nm,14.9s
ULN Ulaanbaatar 33.41 315 P 12 53 01.6 +0.8
ULN IAmb IAmb 12 53 02.8
comp=Z,27nm,1.2s
ULN Ulaanbaatar 33.41 315 P P 12 53 01.3 +0.5
comp=Z,77nm,1.2s
LZDM Lanzhou Array 33.44 293 P P 12 53 00.4 -1.0
comp=Z,1.6nm,0.3s,baz=139,slow=7.3,SNR=3.8
comp=Z,1.6nm,0.3s
SHEM Shemya Is, Ala 33.49 35 LR LR 13 04 07.5
comp=Z,86nm,20.1s,baz=250,slow=32
KKM Kota Kinabalu 33.54 233 P P 12 53 03.2 +1.0
CD2 Chengdu 33.60 284 P P 12 53 01.7 -0.8
CD2 pmax pmax
comp=Z,50nm,0.7s
CD2 L L
comp=Z,350nm,11.4s
CD2 L L
comp=Z,750nm,14.6s
CD2 L L
comp=Z,820nm,15.2s
SONM Songino Array 33.81 314 P P 12 53 04.8 +0.5
comp=Z,5.9nm,0.7s,baz=121,slow=8.4,SNR=26
SONM PcP **PcP 12 55 42.9 -0.2**
comp=Z,1.6nm,0.7s,baz=138,slow=1.5,SNR=5.1
SONM LR LR 13 07 26.2
comp=Z,238nm,18.5s,baz=104,slow=37
comp=Z,5.9nm,0.7s
SONM Songino Array 33.81 314 P 12 53 04.7 +0.4
MRSI Marisa 34.24 219 P P 12 53 08.9 +0.9
TOLI2 Tolitoli 34.37 221 P 12 53 09.2 0.0
TOLI2 IAmb IAmb 12 53 09.9
comp=Z,23nm,1.1s
SANI Sanana 34.40 210 P P 12 53 08.1 -1.4
comp=Z,45nm,0.8s
YAK Yakutsk 34.44 349 P P 12 53 10.1 +0.8
comp=Z,21nm,0.8s,baz=170,slow=0.4,SNR=6.7
YAK LR LR 13 08 10.6
comp=Z,124nm,19.2s,baz=110,slow=38
comp=Z,21nm,0.8s
YAK Yakutsk 34.44 349 P 12 53 09.5 +0.3
YAK IAmb IAmb 12 53 12.0
comp=Z,21nm,0.8s
KRAI Karang Ratu 34.57 205 P P 12 53 12.1 +1.2
SEY Seymchan 34.88 8 P P 12 53 14.2 +1.1
comp=Z,6.5nm,0.7s,baz=194,slow=7.0,SNR=39
comp=Z,6.5nm,0.7s
KMI2 Kunming 35.52 274 ⇑P **P 12 53 19.6 +0.2**
KMI2 pmax pmax
comp=Z,22nm,0.9s
KMI2 L L
comp=Z,250nm,18.3s
KMI2 L L
comp=Z,420nm,18.4s
KMI2 L L
comp=Z,470nm,19.7s
PZH PanZhiHua 36.08 276 P P 12 53 23.2 -0.9
PZH S **S 12 59 00.6 -2.6**
PZH pmax pmax
comp=Z,40nm,1.3s
PZH L L
comp=Z,240nm,17.8s
PZH L L
comp=Z,230nm,17.3s
PZH L L
comp=Z,300nm,17.7s
GTA2 Gaotai 36.72 299 *eP* **P 12 53 27.8 -1.6**
GTA2 sP pwP 12 53 37.6 -0.1
GTA2 PcP **PcP 12 55 53.4 +1.6**
GTA2 sS sS 12 59 25.3 +7.1
GTA2 ScP **ScP 12 59 39.1 +0.8**
GTA2 pmax pmax
comp=Z,11nm,1.1s
GTA2 L L
comp=Z,310nm,15.6s
GTA2 L L
comp=Z,190nm,14.0s
GTA2 L L
comp=Z,360nm,15.6s
TLY Talaya 36.93 319 P P 12 53 31.2 +0.3
comp=Z,22nm,0.8s
TLY LR LR 13 09 15.1
comp=Z,352nm,18.9s,baz=112,slow=37
comp=Z,22nm,0.8s
TLY Talaya 36.93 319 P 12 53 31.7 +0.8
TLY IAmb IAmb 12 53 33.7
comp=Z,24nm,0.8s
KIWB Kanaga Island 37.84 41 P P 12 53 37.3 -1.2
KIWB IAmb IAmb 12 53 41.0
comp=Z,39nm,1.1s
PMG Port Moresby 38.11 173 P P 12 53 40.9 -0.2
comp=Z,4.7nm,0.7s,baz=40,slow=7.1,SNR=3.5
comp=Z,4.7nm,0.7s
PMG Port Moresby 38.11 173 P 12 53 39.4 -1.7
SBUM Sibu 38.88 233 P P 12 53 48.2 +0.4
SBUM Sibu 38.88 233 P P 12 53 47.4 -0.3
TNCH TengChong 39.26 275 ⇑P **P 12 53 51.0 0.0**
TNCH pP pP 12 53 53.8 -0.6
TNCH sP sP 12 53 56.2 +0.4
TNCH S **S 12 59 51.6 +0.1**
TNCH SS **SS 13 02 37.5 -7.3**
TNCH pmax pmax
comp=Z,78nm,1.0s
TNCH L L
comp=Z,300nm,7.0s
TNCH L L
comp=Z,620nm,16.9s
TNCH L L
comp=Z,850nm,17.7s
KAPI Kappang 40.01 217 LR LR 13 10 22.4
comp=Z,63nm,20.6s,baz=52,slow=36
CHTO Chiang Mai 40.88 266 P 12 54 04.0 -0.4
CHTO IAmb IAmb 12 54 05.1
comp=Z,24nm,0.8s
CHTO Chiang Mai 40.88 266 P P 12 54 03.9 -0.4
comp=Z,32nm,1.1s
CM31 Chiang Mai Arr 41.01 265 P P 12 54 05.6 +0.1
CMAR Chiang Mai Arr 41.01 265 P P 12 54 05.8 +0.3
comp=Z,5.7nm,0.7s,baz=49,slow=9.0,SNR=61
CMAR PcP **PcP 12 56 07.2 +1.7**
comp=Z,1.8nm,0.8s,baz=76,slow=1.2,SNR=9.0
CMAR LR LR 13 10 51.4
comp=Z,195nm,20.4s,baz=75,slow=36
comp=Z,5.7nm,0.7s
CMAR Chiang Mai Arr 41.01 265 P 12 54 04.9 -0.5
HNR Honiara 41.44 153 LR LR 13 08 33.6
comp=Z,5.0nm,19.6s,baz=47,slow=32
BILL Bilibino 41.87 13 P 12 54 11.7 -0.1
SOEI Soe 42.06 207 P 12 54 13.3 -0.8
SOEI Soe 42.06 207 P P 12 54 13.2 -0.8
comp=Z,61nm,0.9s
EDFI Ende, Flores 42.28 211 P P 12 54 15.4 -0.4
comp=Z,41nm,0.9s
COEN Coen 42.37 179 P P 12 54 17.2 +0.8
comp=Z,11nm,0.7s
COEN Coen 42.37 179 P 12 54 15.4 -1.0
MTN Manton Dam 42.70 196 P P 12 54 17.5 -1.6
comp=Z,29nm,0.7s
MTN Manton Dam 42.70 196 P 12 54 17.8 -1.3
MTN IAmb IAmb 12 54 19.2
comp=Z,20nm,0.6s
BATI Baumata 42.72 208 LR LR 13 12 17.8
comp=Z,105nm,18.7s,baz=26,slow=36
BATI Baumata 42.72 208 P P 12 54 17.9 -1.4
comp=Z,45nm,1.1s
TIXI Tiksi 43.69 354 P P 12 54 26.6 0.0
comp=Z,3.5nm,0.4s,baz=148,slow=5.4,SNR=21
TIXI LR LR 13 19 44.7
comp=Z,40nm,18.0s,baz=188,slow=46
comp=Z,3.5nm,0.4s
TIXI Tiksi 43.69 354 P P 12 54 26.4 -0.2
TWSI Taliwang, Sumb 44.66 217 P P 12 54 34.5 -0.5
comp=Z,32nm,0.8s
SHL Shillong 44.90 278 P P 12 54 36.2 -0.9
KHKI Kahang-Kahang 45.05 219 P P 12 54 39.1 +1.1
WMQ Urumqi 45.91 305 *eP* **P 12 54 45.1 +0.3**
WMQ PcP **PcP 12 56 23.0 +1.3**
WMQ pmax pmax
comp=Z,29nm,1.5s
WMQ L L
comp=Z,140nm,24.2s
KULM Kulim 45.94 248 P P 12 54 46.7 +1.5
comp=Z,21nm,1.1s
BRDH Bariadhala 45.96 275 LR LR 13 16 25.1
comp=Z,174nm,18.1s,baz=158,slow=39
IPM Ipoh 46.10 246 IAmb IAmb 12 56 24.8
comp=Z,10nm,1.0s
K13K Kusilvak Mount 47.82 31 IAmb IAmb 12 55 05.1
comp=Z,10.0nm,1.1s
ZSN Zaisan 47.97 309 *eP* **P 12 55 00.7 0.0**
comp=Z,7.9nm,0.9s
KPJI Karang Pucung 48.26 227 P P 12 55 03.0 -0.2
ANM Nome 48.44 27 IAmb IAmb 12 55 09.9
comp=Z,11nm,1.0s
ZAA0 Zalesovo Array 48.51 318 P 12 55 05.2 +0.4
ZALV Zalesovo Beam 48.51 318 P P 12 55 05.2 +0.4
comp=Z,24nm,0.8s,baz=100,slow=7.2,SNR=111
ZALV PcP **PcP 12 56 30.9 +0.3**
comp=Z,5.1nm,0.6s,baz=112,slow=3.7,SNR=6.1
ZALV LR LR 13 16 07.5
comp=Z,216nm,19.4s,baz=103,slow=37
comp=Z,24nm,0.8s
ZALV Zalesovo Beam 48.51 318 P 12 55 05.3 +0.6
L14K Kuka Creek 48.53 32 IAmb IAmb 12 55 10.6
comp=Z,19nm,1.4s
J14K Nanvaranak Lak 48.57 30 IAmb IAmb 12 55 10.6
comp=Z,12nm,1.3s
CTA Charters Tower 48.59 175 P P 12 55 05.9 +0.2
comp=Z,2.5nm,0.7s,baz=6.9,slow=11,SNR=6.0
CTA LR LR 13 14 40.6
comp=Z,49nm,19.5s,baz=39,slow=35
comp=Z,2.5nm,0.7s
EVN Everest 48.65 283 P 12 55 06.6 -0.4
EVN IAmb IAmb 12 56 34.2
comp=Z,9.7nm,0.6s
M14K Bethel 48.71 33 IAmb IAmb 12 55 12.4
comp=Z,11nm,0.9s
LEM Lembang 48.74 229 P P 12 55 07.1 0.0
comp=Z,95nm,0.8s,baz=77,slow=7.3,SNR=11
WB0 Warramunga Arr 48.78 190 P 12 55 06.4 -0.8
PSI Prapat 48.78 246 P P 12 55 07.9 +0.4
comp=Z,25nm,1.4s
RPSI Rantau Prapat 48.84 246 IAmb IAmb 12 55 08.7
comp=Z,17nm,0.8s
WR8 Warramunga Arr 48.95 190 P P 12 55 07.1 -1.3
WRAB Tennant Creek 48.95 190 P P 12 55 07.7 -0.8
WRA Warramunga Arr 48.96 190 P P 12 55 08.1 -0.4
comp=Z,29nm,0.8s,baz=11,slow=8.2,SNR=101
WRA PcP **PcP 12 56 32.9 +0.3**
comp=Z,2.8nm,0.7s,baz=8.9,slow=3.6,SNR=2.1
comp=Z,29nm,0.8s
WRA Warramunga Arr 48.96 190 P 12 55 07.0 -1.5
QIS Mount Isa 49.01 184 P P 12 55 09.1 +0.2
comp=Z,18nm,1.1s
F15K North Star Dit 49.16 26 IAmb IAmb 12 55 18.1
comp=Z,9.7nm,1.2s
KLSI 49.19 234 P P 12 55 11.0 +0.6
FITZ Fitzroy Crossi 49.26 201 LR LR 13 15 03.8
comp=Z,47nm,21.8s,baz=26,slow=35
KCSI Kotacane, Aceh 49.29 248 P P 12 55 19.6 +8.3
K15K Wolf Creek Mou 49.33 31 IAmb IAmb 12 55 13.9
comp=Z,8.4nm,0.8s
O15K Ungalikthiuk R 49.38 35 IAmb IAmb 12 55 16.6
comp=Z,16nm,1.1s
MDSI Maura Dua 49.44 234 P P 12 55 12.0 -0.4
N15K Kwethluk River 49.46 34 IAmb IAmb 12 55 17.5
comp=Z,12nm,0.9s
PPI Padang Panjang 49.60 242 P P 12 55 13.5 -0.1
comp=Z,15nm,1.0s
MKAR Makanchi Array 49.72 309 P P 12 55 14.2 0.0
comp=Z,15nm,0.8s,baz=92,slow=9.4,SNR=163
MKAR PcP **PcP 12 56 35.9 +0.7**
comp=Z,5.4nm,1.0s,baz=76,slow=5.1,SNR=5.4
MKAR LR LR 13 17 14.2
comp=Z,343nm,18.9s,baz=86,slow=37
comp=Z,15nm,0.8s
MKAR Makanchi Array 49.72 309 P 12 55 14.4 +0.3
MAKZ Makanchi 49.93 309 P 12 55 15.6 -0.2
MAKZ IAmb IAmb 12 55 17.0
comp=Z,11nm,0.8s
C16K Lisburne Hills 49.94 23 IAmb IAmb 12 55 20.7
comp=Z,8.5nm,0.8s
MASI Maura Aman, Be 49.94 237 P P 12 55 16.8 +0.6
F17K Baldwin Pennin 50.72 26 IAmb IAmb 12 55 24.0
comp=Z,8.2nm,0.7s
GSI Gunungsitoli 50.75 246 P 12 55 21.4 -0.9
K17K Iditarod 50.88 31 IAmb IAmb 12 55 28.7
comp=Z,16nm,0.9s
M17K Holitna River 51.00 32 IAmb IAmb 12 55 30.6
comp=Z,28nm,1.1s
NRIK Noril'sk 51.31 338 P P 12 55 26.1 +0.3
comp=Z,14nm,1.0s,baz=107,slow=9.5,SNR=18
NRIK LR LR 13 17 17.3
comp=Z,171nm,21.4s,baz=118,slow=36
comp=Z,14nm,1.0s
NRIK Noril'sk 51.31 338 P P 12 55 26.3 +0.5
NRIK IAmb IAmb 12 55 28.3
comp=Z,25nm,1.2s
L18K Granite Mounta 51.51 32 IAmb IAmb 12 55 34.0
comp=Z,11nm,1.1s
G18K Tagagawik 51.55 27 IAmb IAmb 12 55 33.7
comp=Z,10nm,1.1s
SHLS Shalkode 51.93 304 ⇑*i*P **P 12 55 28.3 -2.7**
comp=Z,6.0nm,1.0s
KURK Kurchatov 52.11 314 P 12 55 32.4 +0.3
KURBB Kurchatov Arra 52.17 314 P **P 12 55 32.9 +0.4**
comp=Z,16nm,0.6s,baz=88,slow=7.0,SNR=153
KURBB LR LR 13 19 44.6
comp=Z,168nm,18.6s,baz=167,slow=38
comp=Z,16nm,0.6s
C19K Lookout Ridge 52.20 23 IAmb IAmb 12 55 35.2
comp=Z,12nm,0.7s
G19K Purcell Mounta 52.24 27 IAmb IAmb 12 57 06.8
comp=Z,22nm,1.9s
UZB Uzynbulak 52.25 304 *eP* **P 12 55 33.0 -0.5**
comp=Z,7.7nm,0.7s
WUS Wushi 52.33 302 IAmb IAmb 12 55 35.4
comp=Z,25nm,1.3s
KPKS Kokpek 52.46 305 *eP* **P 12 55 35.0 0.0**
D19K Kuna River 52.51 24 IAmb IAmb 12 55 40.2
comp=Z,9.8nm,0.9s
E19K Redstone River 52.53 25 IAmb IAmb 12 55 40.6
comp=Z,12nm,0.8s
AS31 Alice Springs 52.68 190 P P 12 55 36.0 -0.5
ASAR Alice Springs 52.68 190 P P 12 55 35.9 -0.6
comp=Z,2.3nm,0.9s,baz=1.8,slow=4.9,SNR=25
ASAR PcP **PcP 12 56 45.3 -1.1**
comp=Z,1.5nm,0.8s,baz=12,slow=3.9,SNR=2.3
ASAR LR LR 13 16 21.4
comp=Z,119nm,21.7s,baz=14,slow=34
comp=Z,2.3nm,0.9s
ASAR Alice Springs 52.68 190 P 12 55 35.3 -1.2
SATY Saty 52.71 304 ⇑*i*P **P 12 55 36.7 -0.2**
K20K Telida 52.90 30 IAmb IAmb 12 55 43.7
comp=Z,12nm,0.9s
KDAK Kodiak Island 52.95 37 LR LR 13 18 29.3
comp=Z,96nm,19.1s,baz=244,slow=36
TARG Targay, Kyrgy 53.31 302 IAmb IAmb 12 55 43.8
comp=Z,22nm,1.0s
MDOK Medeo 53.68 304 *eP* **P 12 55 44.2 +0.2**
KDJ Kajisay 53.72 303 IAmb IAmb 12 55 45.6
comp=Z,11nm,1.0s
TNSS Tian-Shan 53.77 304 *eP* **P 12 55 44.5 -0.5**
AAA Alma-Ata 53.77 304 *eP* **P 12 55 44.6 0.0**
comp=Z,14nm,0.8s
H21K Melozitna Rive 53.85 28 IAmb IAmb 12 55 50.6
comp=Z,17nm,1.5s
E21K Killik River 53.97 24 IAmb IAmb 12 55 51.5
comp=Z,14nm,0.9s
B21K Ikpikpuk River 54.04 23 IAmb IAmb 12 55 48.5
comp=Z,11nm,0.8s
KUU Kurty 54.10 305 *eP* **P 12 55 46.7 -0.2**
comp=Z,11nm,0.8s
D22K Ayikyak River 54.53 24 IAmb IAmb 12 55 58.6
comp=Z,19nm,1.1s
BOOM Boomskoye usch 54.58 304 IAmb IAmb 12 55 52.0
comp=Z,14nm,0.8s
E22K Anaktuvuk Pass 54.69 25 IAmb IAmb 12 55 53.4
comp=Z,9.9nm,0.8s
NRN Naryn 54.70 302 IAmb IAmb 12 55 53.0
comp=Z,12nm,1.0s
WRKA Warakurna 55.11 196 P **P 12 55 55.3 +1.0**
comp=Z,3.0nm,0.9s
G23K Bananza Creek 55.13 27 IAmb IAmb 12 55 57.4
comp=Z,23nm,1.5s
MCK McKinley 55.23 30 IAmb IAmb 12 55 59.5
comp=Z,9.0nm,1.0s
D23K Nanushuk River 55.26 24 IAmb IAmb 12 56 01.1
comp=Z,17nm,0.8s
SGDS Sogindy 55.39 305 *eP* **P 12 55 56.2 -0.1**
KSH2 Kashi 55.42 300 P **P 12 55 56.9 +0.2**
KSH2 sP pwP 12 56 05.4 +0.3
KSH2 pmax pmax
comp=Z,24nm,0.8s
KSH2 L L
comp=Z,190nm,18.6s
KSH2 L L
comp=Z,290nm,15.8s
KSH2 L L
comp=Z,350nm,16.5s
E23K Chandalar 55.49 25 IAmb IAmb 12 56 05.2
comp=Z,13nm,0.9s
AAK Ala-Archa 55.62 304 LR LR 13 20 40.7
comp=Z,122nm,18.9s,baz=68,slow=37
AAK Ala-Archa 55.62 304 P 12 55 58.1 +0.1
AAK IAmb IAmb 12 55 59.3
comp=Z,11nm,0.8s
E24K Your Creek 55.91 25 IAmb IAmb 12 56 05.7
comp=Z,16nm,1.2s
BRZS Berezniki 55.95 313 *eP* **P 12 56 00.1 -0.1**
G24K Hadweenzic Riv 56.14 27 IAmb IAmb 12 56 08.0
comp=Z,9.7nm,1.1s
IL31 56.21 29 IAmb IAmb 12 56 06.0
comp=Z,9.9nm,1.1s
ILAR Eielson Array 56.21 29 P P 12 56 01.9 +0.1
comp=Z,4.4nm,1.0s,baz=253,slow=5.6,SNR=16
ILAR LR LR 13 19 48.9
comp=Z,36nm,19.8s,baz=252,slow=36
comp=Z,4.4nm,1.0s
ILAR Eielson Array 56.21 29 P P 12 56 01.7 0.0
D25K Kavik River 56.84 24 IAmb IAmb 12 56 11.9
comp=Z,9.7nm,0.8s
ARSB Arslanbob 56.95 303 IAmb IAmb 12 56 09.4
comp=Z,17nm,0.8s
FYU Fort Yukon 57.02 27 IAmb IAmb 12 56 27.3
comp=Z,23nm,1.4s
BVAR Borovoye Array 57.10 317 P P 12 56 09.1 +0.8
comp=Z,17nm,0.6s,baz=87,slow=6.7,SNR=72
BVAR LR LR 13 21 35.8
comp=Z,186nm,19.2s,baz=74,slow=37
comp=Z,17nm,0.6s
BORK Borovoye 57.14 317 P 12 56 09.1 +0.6
SCRK Sand Creek 57.43 30 P 12 56 11.1 +0.4
SCRK IAmb IAmb 12 56 15.4
comp=Z,9.7nm,1.2s
MSVF Nonsavu 57.51 139 LR LR 13 19 21.5
comp=Z,116nm,18.2s,baz=352,slow=34
F26K Sheenjek River 57.51 26 IAmb IAmb 12 56 17.7
comp=Z,11nm,1.2s
G26K Porcupine Rive 57.61 27 IAmb IAmb 12 56 29.4
comp=Z,22nm,1.6s
C27K Jago River 57.80 23 IAmb IAmb 12 56 19.5
comp=Z,14nm,0.9s
DZA Taraz 57.87 305 *eP* **P 12 56 13.8 -0.1**
comp=Z,8.6nm,0.6s
KKAR Karatay Array 58.42 305 P 12 56 18.3 +0.6
NIL Nilore 58.48 294 P 12 56 18.7 +0.3
E27K Coleen River 58.49 25 IAmb IAmb 12 56 24.7
comp=Z,20nm,1.8s
H27K Steamboat Moun 58.50 27 IAmb IAmb 12 56 24.1
comp=Z,21nm,1.2s
D27M Malcolm River 58.75 24 IAmb IAmb 12 56 25.9
comp=Z,10nm,0.9s
BRLS Borolday 58.92 305 *eP* **P 12 56 22.3 +1.1**
comp=Z,5.1nm,0.9s
IUG Iuzhnay 58.96 304 *eP* **P 12 56 21.6 -0.1**
F28M Old Crow 59.14 26 IAmb IAmb 12 56 35.5
comp=Z,6.7nm,1.1s
I28M Miner Creek 59.16 28 IAmb IAmb 12 56 28.1
comp=Z,6.1nm,0.9s
CHM Chimkent 59.23 304 *eP* **P 12 56 23.4 0.0**
E28M Babbage River 59.26 25 IAmb IAmb 12 56 30.2
comp=Z,14nm,1.0s
I29M Ogilvie Camp, 59.85 28 IAmb IAmb 12 56 47.1
comp=Z,13nm,1.4s
E29M Blow River 59.87 25 IAmb IAmb 12 56 39.7
comp=Z,7.4nm,0.9s
M29M Somme Creek 59.99 32 IAmb IAmb 12 56 38.6
comp=Z,13nm,1.2s
STKA Stephens Creek 60.21 181 P P 12 56 26.2 -3.8
comp=Z,20nm,0.7s
STKA Stephens Creek 60.21 181 P P 12 56 30.1 +0.1
comp=Z,4.8nm,0.9s,baz=354,slow=7.8,SNR=7.4
comp=Z,4.8nm,0.9s
G30M tAoh Zraii Nji 60.59 27 IAmb IAmb 12 56 44.9
comp=Z,18nm,1.1s
AFI Afiamalu 61.19 128 LR LR 13 17 45.6
comp=Z,30nm,21.4s,baz=249,slow=31
G31M Satah River 61.35 26 IAmb IAmb 12 56 42.8
comp=Z,12nm,0.9s
H31M Peel River 61.45 28 IAmb IAmb 12 56 51.5
comp=Z,18nm,1.4s
INK Inuvik 61.49 25 P 12 56 39.4 +1.1
INK IAmb IAmb 12 58 30.9
comp=Z,8.6nm,0.6s
PALK Pallekele 61.84 263 LR LR 13 23 26.1
comp=Z,63nm,20.8s,baz=59,slow=36
PALK Pallekele 61.84 263 P 12 56 41.4 -0.2
PALK IAmb IAmb 12 56 42.4
comp=Z,6.1nm,0.8s
ARTI Arti 63.48 322 LR LR 13 26 15.4
comp=Z,122nm,19.1s,baz=88,slow=38
ARTI Arti 63.48 322 P P 12 56 52.2 +0.3
A36M Sachs Harbour 63.72 20 IAmb IAmb 12 57 13.5
comp=Z,9.5nm,1.0s
AB31 Akbulak array 64.22 314 P P 12 56 57.7 +0.8
ABKAR Akbulak array 64.22 314 P P 12 56 57.7 +0.8
C36M Paulatuk 64.69 23 IAmb IAmb 12 57 19.0
comp=Z,9.2nm,0.9s
DLBC Dease Lake 64.77 36 LR LR 13 22 15.6
comp=Z,56nm,21.9s,baz=284,slow=33
AKTO Aktyubinsk 65.12 315 LR LR 13 26 33.3
comp=Z,215nm,19.5s,baz=23,slow=37
KIRV Kirov 67.57 326 LR LR 13 29 29.3
comp=Z,190nm,18.5s,baz=74,slow=38
SPITS Spitsbergen Ar 68.90 350 P P 12 57 26.0 -0.3
comp=Z,15nm,1.0s,baz=109,slow=6.3,SNR=8.3
comp=Z,15nm,1.0s
YKAW3 Yellowknife Wh 70.61 29 IAmb IAmb 12 57 39.3
comp=Z,15nm,1.7s
YKA Yellowknife Ar 70.64 29 P P 12 57 37.7 +0.5
comp=Z,1.5nm,0.8s,baz=299,slow=6.8,SNR=19
comp=Z,1.5nm,0.8s
YKA Yellowknife Ar 70.64 29 P P 12 57 37.4 +0.2
ARCES ARCESS Array B 72.17 341 P P 12 57 46.4 0.0
comp=Z,8.5nm,0.8s,baz=46,slow=6.9,SNR=8.7
ARCES LR LR 13 32 08.9
comp=Z,105nm,21.9s,baz=76,slow=38
comp=Z,8.5nm,0.8s
ARCES ARCESS Array B 72.17 341 P P 12 57 46.9 +0.6
GNW Green Mountain 72.38 45 P P 12 57 47.7 -0.3
RAR Rarotonga 74.55 125 LR LR 13 27 07.8
comp=Z,118nm,20.2s,baz=296,slow=33
YBH Yreka Blue Hor 74.83 51 LR LR 13 24 37.7
comp=Z,9.4nm,20.6s,baz=290,slow=31
NEW Newport 75.56 43 LR LR 13 24 53.5
comp=Z,43nm,21.6s,baz=300,slow=31
FINES FINESS Array B 76.68 334 P **P 12 58 12.6 -0.2**
comp=Z,2.8nm,0.4s,baz=58,slow=4.7,SNR=18
comp=Z,2.8nm,0.4s
FINES FINESS Array B 76.68 334 P P 12 58 12.4 -0.3
BLKN Baker Lake 76.74 22 IAmb IAmb 12 58 28.1
comp=Z,10nm,1.3s
KBZ Khabaz 77.16 313 P P 12 58 16.9 +1.1
comp=Z,13nm,0.8s,baz=68,slow=6.1,SNR=37
KBZ LR LR 13 33 09.1
comp=Z,86nm,21.8s,baz=68,slow=36
comp=Z,13nm,0.8s

KIV Kislovodsk 77.19 313 P 12 58 16.4 +0.3
KIV Kislovodsk 77.19 313 P P 12 58 17.0 +0.9
comp=Z,22nm,0.8s
GNI Garni 77.56 309 LR LR 13 35 54.8
comp=Z,101nm,18.2s,baz=62,slow=38
GNI Garni 77.56 309 P P 12 58 17.8 -0.6
GNI Garni 77.56 309 P P 12 58 19.2 +0.8
comp=Z,21nm,1.3s
MFID Camas Ranch 78.62 47 IAmb IAmb 12 58 29.4
comp=Z,24nm,1.8s
SUMG Summit 79.04 0 IAmb IAmb 12 58 35.1
comp=Z,8.5nm,0.9s
NVAR Mina Array Bea 79.33 52 P P 12 58 29.4 +1.2
comp=Z,1.5nm,0.6s,baz=298,slow=5.8,SNR=16
NVAR LR LR 13 28 50.0
comp=Z,73nm,19.5s,baz=273,slow=32
comp=Z,1.5nm,0.6s
GEVA Gevas 79.57 308 IAmb IAmb 12 58 32.7
comp=Z,22nm,1.2s
GURO Guroymak-BITLI 80.17 309 IAmb IAmb 12 58 36.1
comp=Z,14nm,0.9s
FFC Flin Flon 80.27 32 P P 12 58 33.1 +0.4
ELK Elko 80.30 49 LR LR 13 28 12.0
comp=Z,81nm,20.6s,baz=300,slow=31
AK03 Malin Array Si 81.52 324 P P 12 58 39.2 -0.2
AKASG Malin Array Be 81.53 324 P P 12 58 39.5 0.0
comp=Z,2.7nm,0.5s,baz=51,slow=5.4,SNR=10.0
AKASG LR LR 13 37 18.6
comp=Z,248nm,18.4s,baz=52,slow=38
comp=Z,2.7nm,0.5s
AKASG Malin Array Be 81.53 324 P P 12 58 39.5 0.0
AKBB Malin Array Si 81.53 324 P 12 58 39.8 +0.3
AKBB IAmb IAmb 12 58 46.0
comp=Z,5.8nm,0.8s
AK01 Malin Array Si 81.54 324 P P 12 58 39.0 -0.6
KIEV Kiev 81.54 324 P 12 58 39.8 +0.3
AK04 Malin Array Si 81.55 324 P P 12 58 39.0 -0.6
AK09 Malin Array Si 81.55 324 P P 12 58 39.0 -0.6
AK08 Malin Array Si 81.56 324 P P 12 58 39.1 -0.5
AK02 Malin Array Si 81.57 324 P P 12 58 39.6 -0.1
AK11 Malin Array Si 81.58 324 P P 12 58 39.4 -0.3
AK10 Malin Array Si 81.58 324 P P 12 58 39.4 -0.3
AK22 Malin Array Si 81.58 324 P P 12 58 39.4 -0.3
AK12 Malin Array Si 81.60 324 P P 12 58 39.5 -0.4
AK16 Malin Array Si 81.61 324 P P 12 58 39.2 -0.7
AK20 Malin Array Si 81.62 324 P P 12 58 39.3 -0.7
AK17 Malin Array Si 81.63 324 P P 12 58 39.6 -0.4
AK19 Malin Array Si 81.63 324 P P 12 58 39.6 -0.4
HFS Hagfors 82.11 337 P P 12 58 42.3 -0.1
comp=Z,5.4nm,0.8s,baz=108,slow=4.8,SNR=10
HFS LR LR 13 38 28.8
comp=Z,59nm,19.3s,baz=44,slow=38
comp=Z,5.4nm,0.8s
DUG Dugway, Tooele 82.17 48 IAmb IAmb 12 58 48.5
comp=Z,18nm,1.8s
NB2 NORSAR Subarra 82.27 338 P P 12 58 43.1 -0.2
comp=Z,7.1nm,0.8s,baz=43,slow=5.3
NOA NORSAR Array B 82.27 338 P P 12 58 43.1 -0.2
comp=Z,3.9nm,0.7s,baz=40,slow=5.2,SNR=10
NOA LR LR 13 40 20.4
comp=Z,60nm,18.2s,baz=50,slow=39
comp=Z,3.9nm,0.7s
PDAR Pinedale Array 82.90 45 P P 12 58 47.8 +0.6
comp=Z,0.6nm,0.6s,baz=266,slow=1.8,SNR=8.3
PDAR LR LR 13 37 15.6
comp=Z,40nm,18.1s,baz=308,slow=37
comp=Z,0.6nm,0.6s
PDAR Pinedale Array 82.90 45 P P 12 58 46.7 -0.5
RNPP5 Staryi Chortor 82.92 326 P P 12 58 46.7 0.0
PFO Pinyon Flats O 82.96 56 LR LR 13 30 32.7
comp=Z,59nm,19.3s,baz=292,slow=32
BZK Bozkurt 83.70 315 P P 12 58 51.0 0.0
comp=Z,33nm,1.0s
KNB Kanab 83.81 51 IAmb IAmb 12 58 56.6
comp=Z,4.5nm,0.7s
RDMU Red Mountain 84.08 47 IAmb IAmb 12 59 02.9
comp=Z,5.7nm,1.0s
SRU San Rafael Swe 84.25 48 IAmb IAmb 12 59 14.8
comp=Z,22nm,1.9s
KMPD K-Podol'skiy 84.25 323 P P 12 58 52.6 -1.0
RAYN Ar Rayn 84.78 294 P P 12 58 57.7 +0.8
BR131 Keskin Array S 85.16 313 P 12 58 58.6 0.0
BRTR Keskin Array B 85.16 313 P P 12 58 59.4 +0.7
comp=Z,11nm,0.8s,baz=101,slow=4.3,SNR=46
BRTR LR LR 13 39 49.6
comp=Z,55nm,21.9s,baz=94,slow=38
comp=Z,11nm,0.8s
BRTR Keskin Array B 85.16 313 P 12 58 58.8 +0.2
BR104 Keskin Array S 85.16 313 P P 12 58 58.9 +0.3
comp=Z,121nmcomp=Z,17nm,0.8s
BR106 Keskin Array S 85.16 313 P P 12 58 58.9 +0.3
comp=Z,92nmcomp=Z,13nm,0.9s
BR105 Keskin Array S 85.17 313 P P 12 58 58.9 +0.2
PV21 Cone Mtn., Par 85.56 48 IAmb IAmb 12 59 09.6
comp=Z,6.6nm,0.8s
PV14 Lion Creek, Pa 85.63 48 IAmb IAmb 12 59 02.6
comp=Z,5.6nm,0.6s
PV20 West Nyswonger 85.69 48 IAmb IAmb 12 59 02.9
comp=Z,8.6nm,0.7s
PV16 Nyswonger Mesa 85.74 48 IAmb IAmb 12 59 06.9
comp=Z,5.7nm,0.7s
PV05 Paradox Valley 85.74 49 IAmb IAmb 12 59 03.3
comp=Z,5.0nm,0.8s
PV11 David Mesa, Pa 85.77 48 IAmb IAmb 12 59 04.8
comp=Z,7.9nm,0.8s
PV18 Skein Mesa, Pa 85.78 48 IAmb IAmb 12 59 02.9
comp=Z,7.0nm,0.9s
PV12 Saucer Basin, 85.81 48 P P 12 59 03.9 +1.9
PV13 Radium Mtn., P 85.88 48 IAmb IAmb 12 59 12.0
comp=Z,24nm,1.8s
PV02 Paradox Valley 85.91 48 P P 12 59 03.8 +1.2
ULM Lac du Bonnet 85.98 33 LR LR 13 40 34.9
comp=Z,30nm,18.1s,baz=1.5,slow=38
PV01 Paradox Valley 86.06 48 P P 12 59 04.1 +0.9
STHS Stebnicka Huta 86.36 326 eP P 12 59 08.7 +4.4
MMAI Mount Meron Ar 87.62 307 P P 12 59 11.9 +1.1
comp=Z,1.6nm,0.4s,baz=1.2,slow=13,SNR=2.6
comp=Z,1.6nm,0.4s
VRAC Vranov 88.67 328 LR LR 13 42 43.6
comp=Z,132nm,18.1s,baz=62,slow=38
ANMO Albuquerque 89.26 50 LR LR 13 31 39.6
comp=Z,54nm,20.9s,baz=302,slow=30
GERES GERESS Array B 90.33 329 LR LR 13 45 09.7
comp=Z,86nm,18.2s,baz=66,slow=39
EKA Eskdalemuir Ar 91.33 341 P P 12 59 28.6 +1.0
comp=Z,1.8nm,1.0s,baz=311,slow=6.5,SNR=2.9
comp=Z,1.8nm,1.0s
LPIG La Paz 92.49 61 LR LR 13 35 22.4
comp=Z,42nm,19.8s,baz=278,slow=32
SCHQ Schefferville 93.10 16 LR LR 13 44 51.5
comp=Z,31nm,19.2s,baz=325,slow=38
TX31 Lajitas Ar. Si 94.44 53 IAmb IAmb 12 59 45.2
comp=Z,8.2nm,1.6s
TXAR Lajitas Array 94.44 53 P P 12 59 44.4 +1.7
comp=Z,0.8nm,0.6s,baz=313,slow=3.1,SNR=15
TXAR LR LR 13 39 18.7
comp=Z,45nm,20.2s,baz=294,slow=34
comp=Z,0.8nm,0.6s
QSPA South Pole Qui 118.42 180 PKP PKPdf 13 05 08.6 -0.3
comp=Z,1.5nm,0.7s,baz=12,slow=3.8,SNR=3.8
TORD Torodi Ar. Bea 123.76 312 PKP PKPdf 13 05 20.8 +0.1
comp=Z,1.4nm,0.7s,baz=340,slow=1.0,SNR=7.4
LPAZ La Paz 149.22 73 PKPbc PKiKP 13 06 12.9 -0.4
comp=Z,4.8nm,0.8s,baz=311,slow=2.7,SNR=15
PLCA Paso Flores 150.44 123 PKPbc PKiKP 13 06 14.8 +0.3
comp=Z,2.5nm,1.0s,baz=221,slow=3.6,SNR=5.1

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*NDI **04** 13:28:05.8±3.7, 34.°13N×96.°84E, h10km, ML4.3, MW3.8, Presumed earthquake*
*IDC **04** 13:28:34.9±0.8, 31.°88N×94.°83E, h0km, mb3.9/13, mbtmp3.9/18, ML3.8/5, MS3.3/14, Error ellipse: s-maj=26.9km s-min=14.4km az=55.0*
*MOS **04** 13:28:37.6±1.3, 32.°03N×94.°71E, h12km, mb4.5/17, Error ellipse: s-maj=9.7km s-min=5.4km az=110.2*
*NEIC **04** 13:28:38.6±1.8, 32.°02N±0.°08×94.°79E±0.°09, h10km±1km, mb4.3/25, Error ellipse: s-maj=16.3km s-min=9.9km az=317.0*
*BJI **04** 13:28:39.0, 31.°85N×95.°03E, h7km, mb4.2/22, ML3.8/8, Ms3.9/21, Ms7 3.9/23*
ISC 04 13:28:37.6±0.4**, 31.°92N**±0.°03×**94.°82E**±0.°04**, h10km, n115,** σ1.s95/119**, mb4.2**/27**, MS3.4**/10**, 11C-1D, Xizang**

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

LSA Lhasa 3.86 236 Pn Pn 13 29 39.4 +2.0
LSA Sn Sb 13 30 30.0 -2.9
LSA SMN
79nm,0.9s
LSA SME
120nm,0.9s
PASG PASIGHAT 3.87 173 eP Pn 13 29 38.3 +1.2
GOMU GeErMu 4.27 360 Pn Pb 13 29 48.9 -4.1
ITAN ITANAGAR 4.85 192 eS Sg 13 31 12.8 -0.6
TAWA Tawang 5.02 212 eP Pn 13 29 58.5 +5.2
TEZP TEZPUR 5.57 199 eP Pn 13 30 02.7 +2.2
TEZP eS Sg 13 31 32.2 -4.2
MOKO MOKOCHONG 5.58 183 eP Pn 13 30 04.8 +4.0
MOKO eS Sb 13 31 29.4 +7.1
KOHI KOHIMA 6.21 186 eP Pn 13 30 11.0 +1.6
KOHI eS Sb 13 31 39.3 -0.9
KOHI IAML 13 32 08.0
comp=N,81nm,0.5s
KOHI IAML 13 32 10.9
comp=E,135nm,1.5s
GUWA GUWAHATI 6.33 206 eP Pn 13 30 14.2 +3.3
GUWA IAML 13 31 33.1
comp=E,15nm,0.6s
GUWA IAML 13 31 33.3
comp=N,15nm,0.6s
SHL Shillong 6.83 203 Pn 13 30 19.1 +1.1
SHL Sn Sn 13 31 38.6 +2.6
SHL Shillong 6.83 203 P Pn 13 30 19.1 +1.1
SHL 13 31 38.6
TNCH TengChong 7.59 154 Pg Pg 13 31 01.0 -2.0
TNCH P* Pb 13 31 13.1 +24
TNCH S* Sb 13 32 18.4 -1.8
TNCH Sg Sg 13 32 39.8 -1.6
TNCH smax smax
comp=N,110nm,1.4s
TNCH smax smax
comp=E,190nm,2.1s
TNCH LR LR
comp=N,2µm,6.2s
TNCH LR LR
comp=E,990nm,4.4s
TNCH LR LR
comp=Z,1µm,6.5s
MORE Moreh 7.67 184 Pn Pn 13 30 31.6 +2.3
EVN Everest 7.99 242 Pn 13 30 34.5 +0.2
PZH PanZhiHua 8.10 130 P Pn 13 30 35.3 -0.1
PZH S Sn 13 32 06.1 -1.1
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH L L
comp=Z,1µm,10.6s
PZH L L
comp=Z,890nm,8.8s
LZDM Lanzhou Array 8.40 59 Pn Pn 13 30 39.9 +0.2
baz=269,slow=14
LZDM LR LR 13 34 05.5
comp=Z,299nm,18.8s,baz=250,slow=39
comp=Z,2.2nm,0.5s
GTA2 Gaotai 8.55 27 eP Pn 13 30 41.6 +0.1
GTA2 pmax pmax
comp=Z,4.0nm,1.7s
GTA2 L L
comp=Z,430nm,8.9s
GTA2 L L
comp=Z,230nm,9.2s
GTA2 L L
comp=Z,400nm,10.8s
KMI2 Kunming 9.70 132 P Pn 13 31 01.2 +3.9
KMI2 pmax pmax
comp=Z,8.0nm,0.8s
KMI2 L L
comp=Z,660nm,7.9s
KMI2 L L
comp=Z,840nm,7.8s
VLK Valmikinagar 10.47 248 eS Sn 13 33 22.1 +17
VLK eS 13 33 49.1
VLK IAML 13 33 51.1
comp=E,631nm,0.2s
VLK IAML 13 33 51.8
comp=N,993nm,0.4s
GAYA Gaya 11.02 232 eS Sn 13 33 40.9 +22
GAYA eS 13 34 18.6
BOK Bokaro 11.31 227 eP Pn 13 31 23.7 +4.5
BOK eS Sn 13 33 49.2 +23
XAN Xi'an 12.03 76 eP Pn 13 31 26.0 -3.1
XAN S Sn 13 33 36.5 -6.9
XAN pmax pmax
comp=Z,11nm,1.0s
XAN LR LR
comp=N,2µm,14.1s
XAN LR LR
comp=E,340nm,13.4s
XAN LR LR
comp=Z,1µm,8.9s
WMQ Urumqi 13.14 337 eP P 13 31 50.4 -4.1
WMQ PP PnPn 13 31 56.1 +3.9
WMQ L L
comp=Z,540nm,12.9s
WMQ L L
comp=Z,110nm,11.7s
CMAR Chiang Mai Arr 13.91 164 Pn Pn 13 31 54.1 -0.7
comp=Z,0.3nm,0.3s,baz=337,slow=14,SNR=6.2
CMAR LR LR 13 37 47.2
comp=Z,122nm,19.7s,baz=330,slow=40
comp=Z,0.3nm,0.4s
CMAR Chiang Mai Arr 13.91 164 i P P 13 32 01.2 -1.9
CMAR pmax pmax
comp=Z,1.0nm,0.4s
BTO2 Baotou 14.98 50 eP Pn 13 32 12.0 +2.6
BTO2 S Sn 13 34 59.4 +4.0
BTO2 pmax pmax
comp=Z,6.0nm,0.5s
BTO2 L L
comp=Z,770nm,13.7s
BTO2 L L
comp=Z,570nm,11.7s
BTO2 L L
comp=Z,460nm,7.0s
WUS Wushi 15.57 311 Pn Pn 13 32 17.4 +0.2
HHC Hu-ho-hao-te 16.14 52 eP P 13 32 27.9 0.0
HHC pmax pmax
comp=Z,7.0nm,1.4s
TARG Taragay, Kyrgy 16.75 311 Pn 13 32 32.6 -0.1
TARG IAmb IAmb 13 32 46.0
comp=Z,13nm,1.1s
TARG Taragay, Kyrgy 16.75 311 P Pn 13 32 32.6 -0.1
TARG pmax pmax
comp=Z,13nm,1.1s
KSH2 Kashi 17.24 300 P P 13 32 44.5 +4.4
KSH2 pmax pmax
comp=Z,6.0nm,1.5s
KSH2 L L
comp=Z,190nm,7.5s
KSH2 L L
comp=Z,320nm,14.5s
HNS HongShan 17.24 66 ⇑P P 13 32 43.6 +3.7
HNS pmax pmax
comp=Z,6.0nm,1.0s
HNS L L
comp=Z,490nm,12.5s
HNS L L
comp=Z,870nm,11.4s
HNS L L
comp=Z,750nm,11.2s
KDJ Kajisay 17.36 311 P Pn 13 32 39.7 -0.4
KDJ Kajisay 17.36 311 P Pn 13 32 39.7 -0.4
KDJ pmax pmax
comp=Z,7.0nm,1.0s
MK31 Makanchi Array 17.70 331 P Pn 13 32 43.9 -0.3
MK31 Makanchi Array 17.70 331 ceP P 13 32 45.6 +0.6
MKAR Makanchi Array 17.70 331 P Pn 13 32 43.4 -0.7
comp=Z,0.2nm,0.3s,baz=140,slow=13,SNR=14
MKAR LR LR 13 39 28.8
comp=Z,55nm,19.2s,baz=141,slow=37
comp=Z,0.6nm,0.5s
MKAR Makanchi Array 17.70 331 Pn 13 32 43.2 -0.9
NRN Naryn 17.81 308 P Pn 13 32 45.4 -0.4
NRN Naryn 17.81 308 P Pn 13 32 45.4 -0.4
NRN pmax pmax
comp=Z,9.0nm,1.1s
MAKZ Makanchi 17.84 330 Pn 13 32 46.0 +0.1
MAKZ Makanchi 17.84 330 P Pn 13 32 46.0 +0.1
MAKZ pmax pmax
comp=Z,7.0nm,1.1s
SONM Songino Array 18.18 26 P Pn 13 32 50.8 +0.8
comp=Z,0.2nm,0.3s,baz=212,slow=12,SNR=8.8
SONM LR LR 13 40 35.9
comp=Z,76nm,21.8s,baz=352,slow=40
comp=Z,2.8nm,0.9s
SONM Songino Array 18.18 26 P Pn 13 32 50.9 +0.8
NIL Nilore 18.22 281 P P 13 32 51.3 +0.5
NIL IAmb IAmb 13 32 58.5
comp=Z,16nm,0.8s
NIL Nilore 18.22 281 P P 13 32 51.3 +0.5
NIL pmax pmax
comp=Z,16nm,0.9s
BOOM Boomskoye usch 18.34 310 P Pn 13 32 51.9 -0.2
BOOM IAmb IAmb 13 33 01.3
comp=Z,9.4nm,1.0s
BOOM Boomskoye usch 18.34 310 P Pn 13 32 51.9 -0.2
BOOM pmax pmax
comp=Z,9.0nm,1.0s
ULN Ulaanbaatar 18.45 27 P P 13 32 52.9 -0.5
ULN Ulaanbaatar 18.45 27 ceP Pn 13 32 54.6 +1.2
ULN pmax pmax
comp=Z,6.0nm,1.7s
DGZ Jazzator, Alta 18.61 345 i P Pn 13 32 56.1 +0.7
DGZ pmax pmax
comp=Z,8.0nm,1.3s
KNGR Kungurtug, Tuv 18.78 5 i P Pn 13 32 59.0 +1.6
KNGR pmax pmax
comp=Z,8.0nm,1.2s
AAK Ala-Archa 19.35 309 P Pn 13 33 04.2 -0.2
comp=Z,0.2nm,0.3s,baz=147,slow=10,SNR=12
AAK LR LR 13 42 03.5
comp=Z,144nm,21.3s,baz=115,slow=42
comp=Z,1.7nm,0.7s
AAK Ala-Archa 19.35 309 P 13 33 02.5 -0.8
AAK IAmb IAmb 13 33 12.7
comp=Z,22nm,1.4s
AAK Ala-Archa 19.35 309 ceP Pn 13 33 04.9 +0.5
AAK pmax pmax
comp=Z,21nm,1.5s
ZAK Zakamensk 19.49 16 eP P 13 33 03.8 -0.9
ZAK pmax pmax
comp=Z,7.0nm,1.3s
DRK Karamyk 20.13 298 P P 13 33 11.4 -0.6
DRK IAmb IAmb 13 33 21.3
comp=Z,14nm,0.5s
DRK Karamyk 20.13 298 P P 13 33 11.4 -0.6
DRK pmax pmax
comp=Z,14nm,0.5s
MOY Mondy 20.25 11 eP P 13 33 13.3 +0.3
MOY pmax pmax
comp=Z,19nm,1.8s
XLT XiLinHaoTe 20.54 48 eP P 13 33 18.2 +2.0
XLT pP sP 13 33 22.7 +0.4
XLT pmax pmax
comp=Z,9.0nm,1.3s
XLT L L
comp=Z,190nm,9.9s
XLT L L
comp=Z,300nm,9.2s
TLY Talaya 20.78 16 LR LR 13 41 47.8
comp=Z,52nm,20.4s,baz=194,slow=38
GAR Garm 21.14 296 P 13 33 22.5 -0.3
KBL Kabul 21.71 284 P 13 33 30.0 +1.0
KBL Kabul 21.71 284 P P 13 33 30.0 +1.0
KBL pmax pmax
comp=Z,36nm,1.1s
CHGR Chuyangaron 21.96 295 P 13 33 31.6 0.0
CHGR Chuyangaron 21.96 295 i P P 13 33 32.0 +0.4
CHGR pmax pmax
comp=Z,52nm,0.8s
KK31 Karatay Array 22.20 307 P 13 33 33.7 -0.4
KK31 IAmb IAmb 13 33 41.9
comp=Z,8.3nm,0.9s
KK31 Karatay Array 22.20 307 P P 13 33 33.7 -0.4
KK31 pmax pmax
comp=Z,8.0nm,1.0s
KKAR Karatay Array 22.20 307 P P 13 33 34.2 +0.1
KKAR Karatay Array 22.20 307 P P 13 33 34.2 +0.1
KURBB Kurchatov Arra 22.25 332 P P 13 33 34.4 -0.1
comp=Z,4.9nm,1.0s,baz=139,slow=11,SNR=22
KURBB LR LR 13 42 57.6
comp=Z,54nm,18.2s,baz=189,slow=39
comp=Z,4.9nm,1.0s
KURK Kurchatov 22.29 332 P P 13 33 33.9 -1.0
KURK IAmb IAmb 13 33 40.1
comp=Z,28nm,1.3s
KURK Kurchatov 22.29 332 ceP P 13 33 34.9 0.0
KURK pmax pmax
comp=Z,23nm,1.2s
SHAA Shahritus 22.61 292 P 13 33 37.9 -0.7
SHAA IAmb IAmb 13 33 46.1
comp=Z,47nm,1.3s
ZAA0 Zalesovo Array 23.16 345 P 13 33 43.7 -0.2
ZAA0 IAmb IAmb 13 33 50.1
comp=Z,12nm,1.2s
ZALV Zalesovo Beam 23.16 345 P P 13 33 43.4 -0.6
comp=Z,1.4nm,0.8s,baz=158,slow=12,SNR=13
ZALV LR LR 13 43 10.6
comp=Z,33nm,19.6s,baz=110,slow=38
comp=Z,1.4nm,0.8s
ZALV Zalesovo Beam 23.16 345 P P 13 33 42.8 -1.2
ZALV Zalesovo Beam 23.16 345 P P 13 33 42.8 -1.2
BVAR Borovoye Array 27.50 327 P P 13 34 22.8 -1.2
comp=Z,0.4nm,0.5s,baz=133,slow=11,SNR=12
BVAR LR LR 13 45 54.8
comp=Z,93nm,20.9s,baz=111,slow=38
comp=Z,0.4nm,0.5s
BORK Borovoye 27.55 327 P P 13 34 25.0 +0.6
BORK IAmb IAmb 13 34 33.3
comp=Z,4.7nm,0.9s
BORK Borovoye 27.55 327 i P P 13 34 26.4 +2.0
BORK pmax pmax
comp=Z,5.0nm,0.9s
KSRS Korea Array 27.68 69 LR LR 13 46 22.6
comp=Z,108nm,20.4s,baz=265,slow=39
AB31 Akbulak array 31.29 314 P P 13 34 58.0 +0.4
AB31 IAmb IAmb 13 35 03.6
comp=Z,2.7nm,0.8s
ABKAR Akbulak array 31.29 314 P P 13 34 58.1 +0.5
ZEA Zeya 31.83 37 eP P 13 35 04.6 +2.3
KLR Kul'dur 32.55 47 ceP P 13 35 10.2 +1.5
KLR pmax pmax
comp=Z,3.0nm,1.0s
AKTO Aktyubinsk 32.87 315 P P 13 35 10.2 -1.3
comp=Z,1.2nm,0.8s,baz=127,slow=10,SNR=4.1
AKTO LR LR 13 49 53.5
comp=Z,81nm,19.7s,baz=274,slow=39
comp=Z,1.2nm,0.8s
ARTI Arti 35.14 325 P P 13 35 29.2 -1.9
comp=Z,1.4nm,0.5s,baz=135,slow=4.4,SNR=3.3
ARTI LR LR 13 51 23.1
comp=Z,58nm,18.5s,baz=112,slow=39
comp=Z,1.4nm,0.5s
ARTI Arti 35.14 325 d iP P 13 35 31.6 +0.5
ARTI 13 36 43.0
ARTI S S 13 41 03.9 +0.1
ARTI pmax pmax
comp=Z,13nm,2.2s
YAK Yakutsk 37.53 26 P P 13 35 52.4 +0.9
YAK IAmb IAmb 13 35 53.7
comp=Z,10.0nm,0.8s
YAK Yakutsk 37.53 26 eP P 13 35 52.3 +0.9
YAK pmax pmax
comp=Z,10.0nm,0.9s
YAK pmax pmax
comp=N,4.0nm,1.3s
YAK pmax pmax
comp=E,3.0nm,1.5s
NRIK Noril'sk 37.70 356 P P 13 35 51.5 -1.3
comp=E,1.5nm,0.6s,baz=163,slow=8.1,SNR=5.1
comp=E,1.5nm,0.6s
NRIK Noril'sk 37.70 356 P 13 35 51.0 -1.8
NRIK IAmb IAmb 13 35 57.5
comp=Z,7.2nm,1.1s
NRIK Noril'sk 37.70 356 P P 13 35 51.0 -1.8
NRIK pmax pmax
comp=Z,7.0nm,1.2s
JMM Marumori 37.87 68 P P 13 35 54.8 +0.1
KIRV Kirov 40.45 325 ceP P 13 36 16.7 +0.7
KIV Kislovodsk 42.19 302 eP P 13 36 32.3 +1.7
KIV pmax pmax
comp=Z,5.0nm,1.0s
KIV MLR MLR
comp=Z,56nm,16.0s
TIXI Tiksi 43.76 15 P P 13 36 42.0 -0.8
TIXI IAmb IAmb 13 36 44.8
comp=Z,6.7nm,1.2s

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TIXI	**Tiksi**	**43.76**	**15**	*ce*P	**P**	**13 36 43.9**	**+1.1**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KLMR	**Klimovskoe**	**45.91**	**326**	*e*P	**P**	**13 36 59.2**	**-0.9**
KLMR				pmax	pmax		
	comp=Z,15nm,1.6s						
MA2	**Magadan**	**45.95**	**36**	*ce*P	**P**	**13 37 02.2**	**+1.8**
MA2				pmax	pmax		
	comp=Z,6.0nm,1.7s						
SEY	**Seymchan**	**47.43**	**32**	*ce*P	**P**	**13 37 14.9**	**+3.0**
SEY				pmax	pmax		
	comp=Z,9.0nm,2.5s						
AKASG	**Malin Array Be**	**50.99**	**312**	P	**P**	**13 37 38.5**	**-0.9**
	comp=Z,1.8nm,0.7s,baz=74,slow=7.1,SNR=3.7						
	comp=Z,1.8nm,0.7s						
LANS	**Liptovska Anna**	**57.45**	**311**	*e*P	P	13 38 34.8	+8.2
LANS	**Liptovska Anna**	**57.45**	**311**	*e*	P	13 38 34.8	+8.2
HFS	**Hagfors**	**58.59**	**325**	LR	LR	14 04 47.7	
	comp=Z,79nm,19.6s,baz=78,slow=37						
NOA	**NORSAR Array B**	**59.62**	**326**	P	**P**	**13 38 39.8**	**-1.7**
	comp=Z,0.5nm,0.8s,baz=78,slow=6.7,SNR=1.7						
NOA				LR	LR	14 04 09.0	
	comp=Z,16nm,18.4s,baz=245,slow=36						
	comp=Z,0.5nm,0.8s						
WRAB	**Tennant Creek**	**63.97**	**138**	*ce*P	**P**	**13 39 14.2**	**+3.0**
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.3s						
WRA	**Warramunga Arr**	**63.97**	**138**	P	**P**	**13 39 09.6**	**-1.6**
	comp=Z,3.2nm,1.0s,baz=331,slow=7.1,SNR=11						
	comp=Z,3.2nm,1.0s						
WRA	**Warramunga Arr**	**63.97**	**138**	*i* P	**P**	**13 39 13.8**	**+2.6**
WRA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ASAR	**Alice Springs**	**66.72**	**141**	P	**P**	**13 39 28.0**	**-1.0**
	comp=Z,2.1nm,0.8s,baz=323,slow=6.0,SNR=12						
	comp=Z,2.1nm,0.8s						
ILAR	**Eielson Array**	**72.38**	**23**	P	**P**	**13 40 02.6**	**-0.9**
	comp=Z,1.2nm,0.9s,baz=301,slow=5.8,SNR=11						
	comp=Z,1.2nm,0.9s						
YKA	**Yellowknife Ar**	**82.99**	**13**	P	**P**	**13 41 00.9**	**-1.6**
	comp=Z,1.3nm,1.2s,baz=331,slow=5.7,SNR=8.1						
	comp=Z,1.3nm,1.2s						
YKA	**Yellowknife Ar**	**82.99**	**13**	*i* P	**P**	**13 41 04.5**	**+1.9**
YKA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
TORD	**Torodi Ar. Bea**	**85.77**	**283**	P	**P**	**13 41 17.2**	**-0.3**
	comp=Z,3.7nm,1.1s,baz=52,slow=2.3,SNR=8.3						
	comp=Z,3.7nm,1.1s						

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*IDC **04** 13:32:41.5±1.6,27°.56N×85°.65E,h0km,mb3.6/6, mbtmp3.5/8,ML4.1/2,MS3.8/2,Error ellipse: s-maj=58.9km s-min=20.6km az=62.0*

ISC 04 13:32:46.7±1.6**,27°.6N**±0°.2×**85°.7E**±0°.3**,h35**km**,n10, σ0s95**/8**,mb3.4**/6**,Nepal**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.18**	**124**	Pn	**Pn**	**13 36 18.2**	**-0.4**
	0.8nm,0.3s,baz=318,slow=11,SNR=6.4						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**19.34**	**353**	P	**P**	**13 37 09.8**	**+0.7**
	0.2nm,0.3s,baz=174,slow=9.2,SNR=10						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**23.63**	**348**	P	**P**	**13 37 55.9**	**+1.5**
	0.5nm,0.6s,baz=163,slow=9.4,SNR=5.8						
	0.5nm,0.6s						
SONM	**Songino Array**	**25.82**	**33**	P	**P**	**13 38 14.3**	**-0.5**
	0.4nm,0.6s,baz=238,slow=8.3,SNR=1.6						
	0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**26.32**	**359**	P	**P**	**13 38 18.9**	**-0.1**
	0.5nm,0.3s,baz=189,slow=8.2,SNR=2.1						
	0.5nm,0.3s						
ASF	**Jabal al Asfar**	**42.30**	**288**	LR	LR	14 01 25.9	
	comp=Z,33nm,18.3s,baz=19,slow=41						
JHJ	**Hachijo jima 2**	**46.53**	**69**	LR	LR	14 01 50.0	
	comp=Z,352nm,21.1s,baz=109,slow=38						
HFS	**Hagfors**	**57.58**	**326**	P	**P**	**13 42 31.8**	**-0.9**
	4.2nm,0.9s,baz=99,slow=8.9,SNR=4.3						
	4.2nm,0.9s						
WRA	**Warramunga Arr**	**66.69**	**130**	P	**P**	**13 43 35.1**	**+0.7**
	0.3nm,0.6s,baz=322,slow=6.5,SNR=5.0						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**68.98**	**133**	P	**P**	**13 43 49.1**	**+0.3**
	0.2nm,0.6s,baz=325,slow=6.6,SNR=1.9						
	0.2nm,0.6s						

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*IDC **04** 13:36:44.8±0.4,3°.47S×99°.63E,h0km,mb4.7/37, mbtmp4.7/38,ML5.3/1,MS4.0/54,Error ellipse: s-maj=15.4km s-min=8.3km az=46.0*

*DJA **04** 13:36:44.2±0.3,4°S±2°×9°9E±°,h10km,M5.0/58,mB5.5/36, mb5.4/58,MLv5.5/43,Mw4.9/24,Mw(mB)5.0/36, MwMwp4.6/11,Mwp5.0/11*

*BJI **04** 13:36:44.0,3°.40S×99°.70E,h5km,mB5.1/22,mb4.8/67, Ms4.8/47,Ms7 4.5/49*

*MOS **04** 13:36:45.3±0.9,3°.38S×99°.71E,h15km,mb5.1/61, MS4.5/6,Error ellipse: s-maj=9.2km s-min=4.3km az=111.0*

*NEIC **04** 13:36:46.5±1.3,3°.46S±0°.06×99°.61E±0°.07,h10km±1km, mb5.1/69,Mww5.0/18,Error ellipse: s-maj=12.0km s-min=9.9km az=237.0*

*NEIC **04** 13:36:46.5,3°.46S×99°.62E,h20km*

*NEIC **04** 13:36:46.5,3°.46S×99°.82E,h20km,Moment Tensor Solution. Duration: 1s5 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.00; $M_{\theta\theta}$1.69; $M_{\phi\phi}$1.32; $M_{r\theta}$1.30; $M_{\theta\phi}$-1.95; $M_{\phi r}$-2.87; Fault plane solution: $M_0$4.53000×10^{16} NP1: ϕ_s114.55000°,δ26.28000°,λ-121.41000°. NP2: ϕ_s328.81000°,δ67.80000°,λ-75.57000°. Principal axes: T 4.6037, Plg22.0000°, Azm48.0000°; N -0.1527, Plg13.0000°, Azm143.0000°; P -4.4510, Plg64.0000°, Azm263.0000°;*

*GFZ **04** 13:36:47.4,3°.40S×99°.77E,h10km,MW4.8,Moment Tensor Solution. s25 Moment tensor: M_{rr}-1.86; $M_{\theta\theta}$0.76; $M_{\phi\phi}$1.11; $M_{r\theta}$0.38; $M_{\theta\phi}$-1.21; $M_{\phi r}$-0.50; Fault plane solution: NP1:ϕ_s137.00000°,δ36.00000°, λ-92.00000°. NP2:ϕ_s320.00000°,δ53.00000°, λ-88.00000°. Principal axes: T 2.2500, Plg8.0000°, Azm49.0000°; N -0.2900, Plg1.0000°, Azm139.0000°; P -1.9600, Plg81.0000°, Azm237.0000°;*

*GCMT **04** 13:36:48.5±0.2,3°.42S±0°.02×99°.56E±0°.01,h12km, MW4.9/88,Moment Tensor Solution. s42,c54; s88,c140; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.36±.06; $M_{\theta\theta}$0.50±.06; $M_{\phi\phi}$1.86±.06; $M_{r\theta}$1.31±.20; $M_{\theta\phi}$-1.79±.05; $M_{\phi r}$-0.86±.20; Best double couple: $M_0$3.17000×10^{16} NP1:ϕ_s162.00000°,δ33.00000°,λ-64.00000°. NP2: ϕ_s312.00000°,δ61.00000°,λ-106.00000°. Principal axes: T 3.4630, Plg14.0000°, Azm53.0000°; N -0.5890, Plg14.0000°, Azm320.0000°; P -2.8760, Plg70.0000°, Azm187.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 13:36:46.4±0.5**,3°.42S**±0°.04×**99°.62E**±0°.04**,h13**km±2km**, h13**km**:pP-P,n466,**σ**1s45**/456**,mb4.9**/146**,MS4.2**/75**, 20C-3D,Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.76**	**31**	P	**Pn**	**13 37 02.9**	**0.0**
KRJI	**Kerinci**	**2.27**	**54**	P	**Pn**	**13 37 23.9**	**+0.2**
PDSI	**Padang**	**2.63**	**19**	P	**Pn**	**13 37 28.4**	**-0.2**
MASI	**Maura Aman, Be**	**2.63**	**84**	P	**Pn**	**13 37 28.0**	**-0.7**
UBSI	**University, Be**	**2.67**	**97**	P	**Pn**	**13 37 28.7**	**-0.5**
KSI	**Kapahiang**	**2.98**	**95**	P	**Pn**	**13 37 33.3**	**-0.2**
PPI	**Padang Panjang**	**3.04**	**15**	P	**Pn**	**13 37 34.7**	**+0.4**
MNAI	**Manna**	**3.46**	**106**	P	**Pn**	**13 37 40.9**	**+0.8**
MNAI	**Manna**	**3.46**	**106**	S	**Sn**	**13 38 18.4**	**-2.6**
MNAI	**Manna**	**3.46**	**106**		**Pn**	**13 37 39.8**	**-0.3**
MNAI	**Manna**	**3.46**	**106**	P	**Pn**	**13 37 40.2**	**+0.1**
PBSI	**Pulau Batu**	**3.60**	**338**	P	**Pn**	**13 37 41.5**	**-0.4**
BKNI	**Bangkinang**	**3.98**	**21**	P	**Pn**	**13 37 48.7**	**+1.5**
BKNI	**Bangkinang**	**3.98**	**21**	Pn	**Pn**	**13 37 48.0**	**+0.7**
BKNI	**Bangkinang**	**3.98**	**21**	P	**Pb**	**13 37 56.7**	**+0.2**
MNSI	**Mandailing Nat**	**4.19**	**359**	P	**Pn**	**13 37 49.5**	**-0.5**
JMBI	**JAMBI**	**4.39**	**66**	P	**Pn**	**13 37 53.0**	**+0.1**
MDSI	**Maura Dua**	**4.67**	**103**	P	**Pn**	**13 37 56.9**	**+0.2**
LWLI	**Liwa**	**4.71**	**110**	P	**Pn**	**13 37 56.8**	**-0.5**
GSI	**Gunungsitoli**	**5.12**	**336**	P	**Pn**	**13 38 05.5**	**+2.7**
GSI	**Gunungsitoli**	**5.12**	**336**	Pn	**Pn**	**13 38 02.5**	**-0.3**
GSI	**Gunungsitoli**	**5.12**	**336**	P	**Pn**	**13 38 01.8**	**-1.0**
	2.5nm2μm5μm211nm,0.6s						
PMBI	**Palembang**	**5.17**	**85**	Pn	**Pn**	**13 38 02.7**	**-0.9**
KLSI		**5.25**	**104**	P	**Pn**	**13 38 05.6**	**+0.9**
KASI	**Kota Agung**	**5.29**	**113**	P	**Pn**	**13 38 04.5**	**-0.8**
	3μm15μm472nm,0.7s						
KLI	**Kotabumi**	**5.42**	**106**	P	**Pn**	**13 38 08.0**	**+1.0**
	5.1nm463nm,0.8s						
DSRI	**Dabo**	**5.75**	**60**	P	**Pn**	**13 38 10.9**	**-0.7**
	2μm110nm,0.8s						
BLSI	**Bandar Lampung**	**5.94**	**109**	P	**Pn**	**13 38 14.6**	**+0.5**
	3.3nm460nm,0.4s						
RPSI	**Rantau Prapat**	**6.11**	**353**	Pn	**Pn**	**13 38 15.7**	**-0.8**
PSI	**Prapat**	**6.22**	**354**	P	**Pn**	**13 38 18.1**	**0.0**
PSI	**Prapat**	**6.22**	**354**	P	**Pn**	**13 38 15.7**	**-2.4**
PSI	**Prapat**	**6.22**	**354**	P	**Pn**	**13 38 15.2**	**-2.9**
TPRI	**Tanjung Pinang**	**6.53**	**49**	P	**Pn**	**13 38 22.5**	**+0.2**
	0.7nm3μm181nm,0.6s						
MYKOM	**Kota Tinggi**	**6.68**	**39**	P	**Pn**	**13 38 24.5**	**+0.1**
MYKOM	**Kota Tinggi**	**6.68**	**39**		**Pn**	**13 38 24.4**	**+0.1**
MYKOM	**Kota Tinggi**	**6.68**	**39**	P	**Pn**	**13 38 24.2**	**-0.2**
	1μm96nm,0.9s						
CGJI	**Cibinong**	**6.83**	**118**	P	**Pn**	**13 38 24.2**	**-2.2**
SBJI	**Serang**	**7.02**	**113**	P	**Pn**	**13 38 28.7**	**-0.3**
	1.7nm6μm374nm,0.8s						
KCSI	**Kotacane, Aceh**	**7.14**	**345**	P	**Pn**	**13 38 29.1**	**-1.5**
TNG	**Tangerang**	**7.52**	**112**	P	**Pn**	**13 38 36.7**	**+0.8**
TNG				P	**Pn**	**13 38 36.0**	**+0.1**
	42nm,0.6s						
DBJI	**Dramaga**	**7.76**	**114**	P	**Pn**	**13 38 38.8**	**-0.4**
	1.8nm11μm406nm,0.7s						
IPM	**Ipoh**	**7.97**	**10**	P	**Pn**	**13 38 44.8**	**+2.7**
IPM	**Ipoh**	**7.97**	**10**		**Pn**	**13 38 42.9**	**+0.8**
IPM	**Ipoh**	**7.97**	**10**	P	**Pn**	**13 38 43.5**	**+1.4**
	2μm755nm47nm,0.7s						
TPI	**Tanjungpandan**	**8.05**	**86**	P	**Pn**	**13 38 42.5**	**-0.7**
MLSI	**Meulaboh, Aceh**	**8.28**	**337**	P	**Pn**	**13 38 47.1**	**+0.8**
	2μm170nm,0.9s						
LEM	**Lembang**	**8.66**	**113**	Pn	**Pn**	**13 38 52.4**	**+0.7**
	38nm,0.3s,baz=323,slow=9.7,SNR=17						
LEM				Sn	**Sn**	**13 40 25.0**	**-4.3**
	12nm,0.3s,baz=195,slow=23,SNR=1.3						
LEM				LR	LR	13 42 38.7	
	comp=Z,538nm,21.1s,baz=316,slow=41						
	113nm,0.4s						
LEM	**Lembang**	**8.66**	**113**	P	**Pn**	**13 38 52.1**	**+0.5**
	3μm378nm,0.7s						
KULM	**Kulim**	**8.71**	**7**	P	**Pn**	**13 38 51.7**	**-0.5**
KULM	**Kulim**	**8.71**	**7**		**Pn**	**13 38 51.8**	**-0.4**
KULM	**Kulim**	**8.71**	**7**	P	**Pn**	**13 38 52.1**	**-0.1**
	47nm,0.8s						
BBJI	**Bungbulang**	**8.95**	**117**	P	**Pn**	**13 38 53.3**	**-2.3**
BBJI	**Bungbulang**	**8.95**	**117**		**Pn**	**13 38 53.2**	**-2.4**
BBJI	**Bungbulang**	**8.95**	**117**	P	**Pn**	**13 38 53.5**	**-2.1**
LHMI	**Lhok Sumawe**	**8.99**	**343**	Pn	**Pn**	**13 38 56.2**	**+0.1**
COCO	**West Island**	**9.14**	**197**		**Pn**	**13 38 55.9**	**-2.2**
COCO	**West Island**	**9.14**	**197**	P	**Pn**	**13 38 55.9**	**-2.2**
KPJI	**Karang Pucung**	**10.05**	**113**	P	**Pn**	**13 39 10.1**	**-0.6**
	4μm409nm,0.7s						
CTJI	**Waduk Cacaban**	**10.17**	**111**	P	**Pn**	**13 39 12.2**	**-0.1**
	257nm,0.8s						
SMRI	**Semarang**	**11.37**	**109**	P	**Pn**	**13 39 29.4**	**+0.8**
SMRI	**Semarang**	**11.37**	**109**		**Pn**	**13 39 28.7**	**0.0**
SMRI	**Semarang**	**11.37**	**109**	P	**Pn**	**13 39 29.2**	**+0.6**
	157nm,0.7s						
YOGI	**Yogyakarta**	**11.49**	**113**	P	**Pn**	**13 39 29.1**	**-1.2**
	164nm,0.8s						
UGM	**Wanagama**	**11.73**	**113**		**Pn**	**13 39 31.9**	**-1.8**
UGM	**Wanagama**	**11.73**	**113**	P	**Pn**	**13 39 31.9**	**-1.8**
	158nm,0.7s						
NGJI	**Ngawi**	**12.43**	**109**	P	**Pn**	**13 39 44.4**	**+1.3**
	90nm,0.8s						
PCJI	**Pacitan**	**12.44**	**113**	P	**Pn**	**13 39 40.7**	**-2.6**
	78nm,0.7s						
SJI	**Sawahan**	**12.83**	**110**	P	**Pn**	**13 39 47.8**	**-0.9**
	2μm132nm,0.7s						
SNJI	**Sawahan-Nganju**	**12.84**	**110**	P	**Pn**	**13 39 48.5**	**-0.4**
	159nm,0.7s						
SBUM	**Sibu**	**13.88**	**65**	P	**Pn**	**13 40 04.3**	**+1.3**
SBUM	**Sibu**	**13.88**	**65**	Pn	**Pn**	**13 40 03.5**	**+0.5**
SBUM	**Sibu**	**13.88**	**65**	P	**Pn**	**13 40 03.7**	**+0.7**
KMMI	**Kalianget**	**14.74**	**105**	P	**P**	**13 40 23.2**	**+2.4**
ABJI	**Asem Bagus**	**15.18**	**107**	P	**Pn**	**13 40 17.4**	**-3.3**
	172nm,0.6s						
BBKI	**Banjar Baru**	**15.20**	**91**	P	**P**	**13 40 26.2**	**+0.2**
JAGI	**Jajag, Banyuwa**	**15.30**	**110**	P	**Pn**	**13 40 21.3**	**-1.0**
JAGI	**Jajag, Banyuwa**	**15.30**	**110**	P	**Pn**	**13 40 18.7**	**-3.6**
	2μm80nm,0.7s						
IGBI	**Denpasar**	**16.34**	**110**	P	**Pn**	**13 40 33.5**	**-2.3**
	60nm,0.6s						
KHKI	**Kahang-Kahang**	**16.64**	**108**	P	**Pn**	**13 40 39.0**	**-0.6**
PLAI	**Plampang**	**18.83**	**107**	P	**P**	**13 41 04.5**	**-1.7**
PLAI	**Plampang**	**18.83**	**107**	P	**P**	**13 41 03.3**	**-2.9**
	62nm,0.7s						
KKM	**Kota Kinabalu**	**19.05**	**60**	P	**Pn**	**13 41 09.1**	**-0.4**
KKM	**Kota Kinabalu**	**19.05**	**60**	P	**P**	**13 41 08.2**	**-0.5**
KKM				IAmb	IAmb	13 41 11.5	
	comp=Z,189nm,1.8s						
KKM	**Kota Kinabalu**	**19.05**	**60**	P	**P**	**13 41 07.8**	**-1.0**
	comp=Z,1μmcomp=Z,72nm,1.0s						
DBNI	**Kabupaten Domp**	**19.26**	**106**	P	**P**	**13 41 08.8**	**-2.2**
KAPI	**Kappang**	**20.14**	**95**	P	**P**	**13 41 20.6**	**0.0**
	comp=Z,23nm,0.5s,baz=281,slow=6.9,SNR=8.9						
KAPI				LR	LR	13 50 08.9	
	comp=Z,462nm,18.0s,baz=284,slow=40						
	comp=Z,23nm,0.5s						
KAPI	**Kappang**	**20.14**	**95**	P	Pn	13 41 22.4	0.0
KAPI	**Kappang**	**20.14**	**95**	P	**P**	**13 41 19.3**	**-1.2**
KAPI				IAmb	IAmb	13 41 35.5	
	comp=Z,171nm,1.4s						
KAPI	**Kappang**	**20.14**	**95**	P	**P**	**13 41 19.3**	**-1.2**
KAPI				pmax	pmax		
	comp=Z,171nm,1.4s						
TOLI2	**Tolitoli**	**21.63**	**78**	P	**P**	**13 41 36.1**	**-0.5**
TOLI2	**Tolitoli**	**21.63**	**78**		**P**	**13 41 35.5**	**-1.2**
TOLI2				IAmb	IAmb	13 41 51.2	
	comp=Z,50nm,0.7s						
PALK	**Pallekele**	**21.66**	**299**	P	**P**	**13 41 38.4**	**+1.4**
	comp=Z,5.1nm,0.8s,baz=119,slow=10,SNR=5.6						
PALK				S	**S**	**13 45 30.4**	**-6.5**
	comp=Z,0.7nm,0.2s,baz=86,slow=21,SNR=1.0						
PALK				LR	LR	13 48 44.4	
	comp=Z,357nm,19.5s,baz=124,slow=33						
	comp=Z,5.1nm,0.8s						
PALK	**Pallekele**	**21.66**	**299**		**P**	**13 41 36.3**	**-0.7**
CM31	**Chiang Mai Arr**	**21.75**	**358**	P	**P**	**13 41 37.8**	**-0.1**
CM31				IAmb	IAmb	13 41 57.3	
	comp=Z,43nm,0.8s						
CMAR	**Chiang Mai Arr**	**21.75**	**358**	P	**P**	**13 41 38.6**	**+0.7**
	comp=Z,14nm,0.6s,baz=185,slow=9.0,SNR=109						
CMAR				PcP	**PcP**	**13 45 39.0**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=210,slow=3.5,SNR=4.5						
CMAR				LR	LR	13 50 46.6	
	comp=Z,422nm,18.7s,baz=175,slow=39						
	comp=Z,14nm,0.6s						
CMAR	**Chiang Mai Arr**	**21.75**	**358**		**P**	**13 41 37.2**	**-0.6**
CMAR	**Chiang Mai Arr**	**21.75**	**358**	*i* P	**P**	**13 41 38.5**	**+0.7**
CMAR				pmax	pmax		
	comp=Z,15nm,0.6s						
CHTO	**Chiang Mai**	**22.10**	**358**	P	**P**	**13 41 42.1**	**+0.4**
CHTO	**Chiang Mai**	**22.10**	**358**		**P**	**13 41 41.8**	**+0.1**
CHTO	**Chiang Mai**	**22.10**	**358**	P	**P**	**13 41 41.8**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,22nm,0.9s						
QIZ	**Qiongzhong**	**24.47**	**24**	P	**P**	**13 42 05.1**	**-0.3**
QIZ				S	**S**	**13 46 28.4**	**+2.9**
QIZ				pmax	pmax		
	comp=Z,73nm,1.7s						
QIZ				pmax	pmax		
	comp=Z,440nm,5.4s						
QIZ				L	L		
	comp=Z,540nm,11.0s						
QIZ				L	L		
	comp=Z,720nm,11.9s						
QIZ				L	L		
	comp=Z,750nm,10.2s						
BATI	**Baumata**	**24.80**	**107**	S	**S**	**13 46 25.1**	**-5.9**
	comp=Z,34nm,0.5s,baz=311,slow=20,SNR=9.3						
SOEI	**Soe**	**25.27**	**106**	P	**P**	**13 42 13.4**	**+0.5**
SOEI	**Soe**	**25.27**	**106**		**P**	**13 42 12.5**	**-0.4**
SOEI				IAmb	IAmb	13 42 36.3	
	comp=Z,39nm,0.7s						
MBWA	**Marble Bar**	**26.34**	**134**	P	**P**	**13 42 24.1**	**+1.7**
	comp=Z,20nm,0.9s						
MBWA	**Marble Bar**	**26.34**	**134**	P	**P**	**13 42 22.7**	**+0.3**
SANI	**Sanana**	**26.38**	**88**	P	**P**	**13 42 21.5**	**-1.3**
PSAC1	**Pilbara Seismi**	**26.63**	**134**	P	**P**	**13 42 25.4**	**+0.4**
	comp=Z,17nm,0.8s						
PSA00	**Pilbara Seismi**	**26.68**	**134**	P	**P**	**13 42 26.0**	**+0.5**
PSA00	**Pilbara Seismi**	**26.68**	**134**	P	**P**	**13 42 25.0**	**-0.5**
BRDH	**Bariadhala**	**27.08**	**344**	LR	LR	13 55 38.7	
	comp=Z,450nm,20.3s,baz=164,slow=42						
H08S2	**Diego Garcia H**	**27.32**	**260**	T	T	14 11 48.5	
	baz=82,slow=75,SNR=350						
H08S3	**Diego Garcia H**	**27.32**	**260**	T	T	14 11 53.3	
	baz=82,slow=75,SNR=362						
H08S1	**Diego Carcia H**	**27.33**	**260**	T	T	14 11 50.2	
	baz=82,slow=75,SNR=390						
DAV	**Davao City (W)**	**27.93**	**68**	LR	LR	13 54 54.3	
	comp=Z,421nm,19.6s,baz=278,slow=39						
TNCH	**TengChong**	**28.30**	**358**	P	**P**	**13 42 40.7**	**+0.6**
TNCH				pP	sP	13 42 44.9	+1.5
TNCH				sP	pwP	13 42 51.7	+2.9
TNCH				S	**S**	**13 47 23.9**	**-2.5**
TNCH				ScS	**ScS**	**13 53 23.3**	**-4.1**
TNCH				pmax	pmax		
	comp=Z,27nm,0.6s						
TNCH				pmax	pmax		
	comp=Z,160nm,3.9s						
TNCH				L	L		
	comp=Z,900nm,9.1s						
TNCH				L	L		
	comp=Z,660nm,13.7s						
TNCH				L	L		
	comp=Z,2μm,11.9s						
KMI2	**Kunming**	**28.56**	**6**	P	**P**	**13 42 44.4**	**+1.9**
KMI2				pmax	pmax		
	comp=Z,16nm,1.2s						
KMI2				pmax	pmax		
	comp=Z,200nm,10.7s						
KMI2				L	L		
	comp=Z,350nm,15.7s						
KMI2				L	L		
	comp=Z,1μm,22.1s						
KMI2				L	L		
	comp=Z,600nm,11.7s						
HYB	**Hyderabad**	**29.34**	**316**	*e*P	**P**	**13 42 49.4**	**+0.1**
MEEK	**Meekatharra**	**29.40**	**144**	P	**P**	**13 42 50.5**	**+0.8**
	comp=Z,15nm,1.4s						
MEEK	**Meekatharra**	**29.40**	**144**	P	**P**	**13 42 50.0**	**+0.3**
SHL	**Shillong**	**29.77**	**346**		**P**	**13 42 52.1**	**-1.1**
SHL	**Shillong**	**29.77**	**346**	P	**P**	**13 42 52.1**	**-1.1**
SHL				pmax	pmax		
	comp=Z,41nm,0.8s						
PZH	**PanZhiHua**	**29.82**	**4**	P	**P**	**13 42 54.3**	**+0.8**
PZH				S	**S**	**13 47 53.1**	**+2.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				L	L		
	comp=Z,380nm,13.1s						
PZH				L	L		
	comp=Z,490nm,13.5s						
PZH				L	L		
	comp=Z,590nm,17.1s						
KNRA	**Kununurra**	**31.16**	**115**	P	**P**	**13 43 03.3**	**-2.1**
	comp=Z,24nm,1.2s						
KNRA	**Kununurra**	**31.16**	**115**		**P**	**13 43 04.1**	**-1.3**
KNRA				IAmb	IAmb	13 43 21.1	
	comp=Z,45nm,1.6s						
AUDHS	**Darwin High Sc**	**32.15**	**108**	P	**P**	**13 43 13.0**	**-1.1**
MUN	**Mundaring**	**32.41**	**153**	P	**P**	**13 43 16.7**	**+0.5**
	comp=Z,25nm,0.9s						
EVN	**Everest**	**33.54**	**339**	P	**P**	**13 43 27.7**	**+0.8**
EVN				IAmb	IAmb	13 43 47.9	
	comp=Z,13nm,0.8s						
NWAO	**Narrogin (SRO)**	**33.67**	**153**	P	**P**	**13 43 27.7**	**+0.5**
	comp=Z,56nm,0.8s						
NWAO	**Narrogin (SRO)**	**33.67**	**153**	LR	LR	13 55 23.3	
	comp=Z,354nm,19.3s,baz=326,slow=33						
NWAO	**Narrogin (SRO)**	**33.67**	**153**	P	**P**	**13 43 27.5**	**+0.3**
NWAO	**Narrogin (SRO)**	**33.67**	**153**	P	**P**	**13 43 26.9**	**-0.3**
NWAO	**Narrogin (SRO)**	**33.67**	**153**	P	**P**	**13 43 26.9**	**-0.3**
NWAO				pmax	pmax		
	comp=Z,37nm,0.8s						
KDU	**Kakadu**	**33.77**	**108**	P	**P**	**13 43 26.4**	**-1.9**
	comp=Z,8.0nm,0.7s						
H01W3	**Cape Leeuwin H**	**34.09**	**158**	T	T	14 19 27.2	
	baz=336,slow=76,SNR=103						
H01W2	**Cape Leeuwin H**	**34.10**	**158**	T	T	14 19 57.0	
	baz=336,slow=76,SNR=107						
H01W1	**Cape Leeuwin H**	**34.10**	**158**	T	T	14 19 45.3	
	baz=336,slow=76,SNR=206						
CD2	**Chengdu**	**34.36**	**6**	P	**P**	**13 43 33.0**	**-0.3**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CD2				L	L		
	comp=Z,710nm,14.0s						
CD2				L	L		
	comp=Z,2μm,17.8s						
CD2				L	L		
	comp=Z,690nm,17.8s						
ENH	**Enshi**	**34.80**	**15**	P	**P**	**13 43 37.3**	**+0.2**
ENH	**Enshi**	**34.80**	**15**		**P**	**13 43 37.3**	**+0.2**
KMBL	**Kambalda**	**34.82**	**145**	P	**P**	**13 43 38.1**	**+0.8**
	comp=Z,16nm,0.9s						
WRKA	**Warakurna**	**34.98**	**131**	P	**P**	**13 43 39.0**	**+0.2**
	comp=Z,8.8nm,0.8s						
RKGY	**Rocky Gully**	**34.98**	**155**	P	**P**	**13 43 39.6**	**+1.1**
	comp=Z,82nm,0.8s						
WHN	**Wuhan**	**36.59**	**22**	P	**P**	**13 43 53.0**	**+0.7**
WHN				pmax	pmax		
	comp=Z,52nm,0.7s						
WB9	**Warramunga Arr**	**37.62**	**118**	P	**P**	**13 44 01.3**	**0.0**
	comp=Z,24nm,0.8s						
WR1	**Warramunga Arr**	**37.63**	**119**	P	**P**	**13 44 01.3**	**-0.2**
	comp=Z,46nm,0.7s						
WRA	**Warramunga Arr**	**37.63**	**119**	P	**P**	**13 44 01.0**	**-0.5**
	comp=Z,23nm,0.7s,baz=291,slow=8.8,SNR=116						
WRA				PcP	**PcP**	**13 46 19.3**	**+0.2**
	comp=Z,3.2nm,0.7s,baz=300,slow=2.2,SNR=5.3						
WRA				S	**S**	**13 49 51.7**	**+0.5**
	comp=Z,1.2nm,0.8s,baz=292,slow=17,SNR=5.5						
	comp=Z,23nm,0.7s						
WRA	**Warramunga Arr**	**37.63**	**119**	P	**P**	**13 44 00.8**	**-0.7**
WRAB	**Tennant Creek**	**37.64**	**119**	P	**P**	**13 44 01.6**	**+0.1**
WRAB	**Tennant Creek**	**37.64**	**119**	P	**P**	**13 44 00.6**	**-0.9**
WRAB				IAmb	IAmb	13 44 02.8	
	comp=Z,34nm,0.8s						
WRAB	**Tennant Creek**	**37.64**	**119**	*ce*P	**P**	**13 44 01.4**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,42nm,0.8s						
WB2	**Warramunga Arr**	**37.64**	**119**	P	**P**	**13 44 01.7**	**+0.1**
	comp=Z,55nm,0.8s						
WB1	**Warramunga Ar.**	**37.64**	**119**	P	**P**	**13 44 01.2**	**-0.4**
WR0	**Warramunga Arr**	**37.81**	**119**	P	**P**	**13 44 03.0**	**0.0**
	comp=Z,54nm,0.7s						
FORT	**Forrest**	**38.22**	**139**	P	**P**	**13 44 07.3**	**+1.0**
	comp=Z,24nm,0.7s						
XAN	**Xi'an**	**38.28**	**13**	P	**P**	**13 44 06.8**	**+0.1**
XAN				S	**S**	**13 50 03.8**	**+3.2**
XAN				pmax	pmax		
	comp=Z,49nm,0.7s						
XAN				L	L		
	comp=Z,920nm,14.4s						
XAN				L	L		
	comp=Z,710nm,13.1s						
XAN				L	L		
	comp=Z,960nm,13.3s						
AS31	**Alice Springs**	**38.75**	**124**	P	**P**	**13 44 10.4**	**-0.5**
ASAR	**Alice Springs**	**38.75**	**124**	P	**P**	**13 44 10.9**	**+0.1**
	comp=Z,12nm,0.7s,baz=294,slow=8.0,SNR=195						
ASAR				PcP	**PcP**	**13 46 23.1**	**+0.6**
	comp=Z,3.5nm,0.7s,baz=295,slow=2.2,SNR=5.9						
ASAR				S	**S**	**13 50 11.4**	**+3.3**
	comp=Z,2.1nm,0.7s,baz=296,slow=15,SNR=12						
	comp=Z,12nm,0.7s						
ASAR	**Alice Springs**	**38.75**	**124**	P	**P**	**13 44 10.7**	**-0.2**
LZDM	**Lanzhou Array**	**39.35**	**5**	P	**P**	**13 44 17.1**	**+1.1**
	comp=Z,6.2nm,0.5s,baz=188,slow=10,SNR=5.2						
LZDM				LR	LR	14 01 51.0	
	comp=Z,311nm,20.6s,baz=200,slow=38						
	comp=Z,6.2nm,0.5s						
LZH	**Lanzhou**	**39.50**	**5**	*e*P	**P**	**13 44 18.1**	**+1.1**
LZH				sP	pwP	13 44 29.2	+3.4
LZH				pmax	pmax		
	comp=Z,17nm,1.5s						
LZH				L	L		
	comp=Z,560nm,13.6s						
LZH				L	L		
	comp=Z,1μm,15.6s						
LZH				L	L		
	comp=Z,770nm,14.9s						
LYN	**LuoYang**	**39.66**	**17**	⇑*i*P	**P**	**13 44 19.7**	**+1.5**

LYN S **S** **13 50 20.9 -0.4**
LYN SS **SS** **13 53 11.3 -5.6**
LYN pmax pmax
comp=Z,430nm,4.4s
LYN L L
comp=Z,360nm,19.6s
LYN L L
comp=Z,650nm,19.6s
LYN L L
comp=Z,730nm,17.5s
NJ2 Nanjing 39.73 26 *e*P **P** **13 44 22.0 +3.2**
NJ2 pmax pmax
comp=Z,12nm,0.5s
JOW Kunigami 40.88 41 LR LR 14 01 54.1
comp=Z,118nm,19.3s,baz=120,slow=37
QIS Mount Isa 42.49 117 P **P** **13 44 42.2 +0.3**
comp=Z,24nm,0.7s
QIS Mount Isa 42.49 117 P **P** **13 44 41.7 -0.1**
TIA Tai'an 42.69 21 P **P** **13 44 44.5 +1.4**
TIA pmax pmax
comp=Z,12nm,0.8s
TIA L L
comp=Z,550nm,20.4s
TIA L L
comp=Z,830nm,17.7s
TIA L L
comp=Z,1μm,13.5s
GTA2 Gaotai 42.69 0 P **P** **13 44 44.3 +1.0**
GTA2 sP pwP 13 44 50.2 -1.8
GTA2 PcP **PcP** **13 46 31.6 -3.5**
GTA2 pmax pmax
comp=Z,4.0nm,1.3s
GTA2 L L
comp=Z,560nm,11.7s
GTA2 L L
comp=Z,270nm,11.4s
GTA2 L L
comp=Z,610nm,12.7s
HNS HongShan 42.97 18 ⇑P **P** **13 44 46.6 +1.3**
HNS S **S** **13 51 15.9 +5.6**
HNS pmax pmax
comp=Z,31nm,1.0s
HNS L L
comp=Z,380nm,14.3s
HNS L L
comp=Z,490nm,13.9s
HNS L L
comp=Z,490nm,15.9s
NIL Nilore 44.49 328 **P** **13 44 58.0 +0.2**
NIL IAmb IAmb 13 45 13.8
comp=Z,23nm,0.6s
NIL Nilore 44.49 328 P **P** **13 44 58.0 +0.2**
NIL pmax pmax
comp=Z,23nm,0.6s
BTO2 Baotou 44.94 11 *e*P **P** **13 45 02.2 +0.9**
BTO2 sP **pwP** **13 45 09.2 -0.9**
BTO2 PP **PcP** **13 46 42.8 +0.1**
BTO2 S **S** **13 51 41.9 +2.5**
BTO2 pmax pmax
comp=Z,27nm,0.8s
BTO2 pmax pmax
comp=Z,430nm,4.7s
BTO2 L L
comp=Z,660nm,19.6s
BTO2 L L
comp=Z,2μm,20.3s
BTO2 L L
comp=Z,830nm,21.0s
HHC Hu-ho-hao-te 45.39 13⇓ *i*P **P** **13 45 07.0 +2.1**
HHC sP pwP 13 45 17.7 +4.0
HHC S **S** **13 51 48.8 +2.9**
HHC pmax pmax
comp=Z,12nm,0.8s
HHC pmax pmax
comp=Z,150nm,5.7s
HHC L L
comp=Z,420nm,13.4s
HHC L L
comp=Z,440nm,15.0s
HHC L L
comp=Z,340nm,13.2s
BJT Baijiatuau 45.82 18 P **P** **13 45 09.4 +1.3**
BJT Baijiatuau 45.82 18 **P** **13 45 08.8 +0.6**
BJT IAmb IAmb 13 45 21.4
comp=Z,18nm,0.7s
BJT Baijiatuau 45.82 18 P **P** **13 45 08.8 +0.6**
BJT pmax pmax
comp=Z,18nm,0.7s
BJI2 Beijing 45.82 18 P **P** **13 45 09.6 +1.4**
BJI2 pP **sP** **13 45 13.3 +1.7**
BJI2 pmax pmax
comp=Z,10.0nm,1.1s
BJI2 L L
comp=Z,280nm,14.9s
BJI2 L L
comp=Z,160nm,11.3s
BJI2 L L
comp=Z,380nm,15.4s
INKA Innaminka 46.06 126 P **P** **13 45 10.8 +0.5**
MTSU Mount Surprise 46.13 112 P **P** **13 45 11.3 +0.3**
comp=Z,17nm,0.8s
MTSU Mount Surprise 46.13 112 P **P** **13 45 11.4 +0.4**
JNU Nakatsue 46.85 37 LR LR 14 05 34.4
comp=Z,195nm,21.1s,baz=213,slow=37
HTT Hallett 47.28 134 P **P** **13 45 20.6 +0.8**
comp=Z,5.5nm,0.7s
HTT Hallett 47.28 134 P **P** **13 45 20.3 +0.4**
PMG Port Moresby 47.58 100 P **P** **13 45 22.5 +0.1**
comp=Z,16nm,0.7s,baz=296,slow=2.9,SNR=17
PMG LR LR 14 09 16.2
comp=Z,97nm,18.3s,baz=311,slow=41
comp=Z,16nm,0.7s
PMG Port Moresby 47.58 100 P **P** **13 45 22.8 +0.4**
PMG Port Moresby 47.58 100 P **P** **13 45 22.5 +0.1**
PMG Port Moresby 47.58 100 P **P** **13 45 22.0 -0.4**
PMG IAmb IAmb 13 45 34.5
comp=Z,19nm,0.8s
PMG Port Moresby 47.58 100 P **P** **13 45 22.0 -0.4**
PMG pmax pmax
comp=Z,19nm,0.8s
KSH2 Kashi 47.81 335 P **P** **13 45 25.0 +1.1**
KSH2 pP pwP 13 45 35.3 +2.7
KSH2 pmax pmax
comp=Z,9.0nm,0.7s
KSH2 L L
comp=Z,160nm,14.4s
KSH2 L L
comp=Z,260nm,16.1s
KSH2 L L
comp=Z,190nm,17.3s
WUS Wushi 48.15 339 **P** **13 45 27.3 +0.8**
WMQ Urumqi 48.23 348 *e*P **P** **13 45 28.8 +1.8**
WMQ sP pwP 13 45 35.2 -0.6
WMQ S **S** **13 52 24.7 -1.6**
WMQ SS **SS** **13 55 47.2 -8.8**
WMQ pmax pmax
comp=Z,33nm,1.5s
WMQ pmax pmax
comp=Z,110nm,3.7s
CTA Charters Tower 48.36 114 LR LR 14 07 14.3
comp=Z,170nm,19.3s,baz=254,slow=38
CTA Charters Tower 48.36 114 P **P** **13 45 29.0 +0.6**
CTAO Charters Tower 48.36 114 P **P** **13 45 29.0 +0.6**
CTAO Charters Tower 48.36 114 P **P** **13 45 28.6 +0.2**
CTAO IAmb IAmb 13 45 41.8
comp=Z,24nm,1.1s
CTAO Charters Tower 48.36 114 P **P** **13 45 28.6 +0.2**
CTAO pmax pmax
comp=Z,25nm,1.1s
KSAR Wonju Array Be 48.40 30 P **P** **13 45 28.4 +0.1**
KSAR Wonju Array Be 48.40 30 P **P** **13 45 28.4 +0.1**
KSRS Korea Array 48.43 30 P **P** **13 45 28.9 +0.4**
comp=Z,12nm,0.9s,baz=228,slow=7.7,SNR=20
KSRS LR LR 14 06 42.7
comp=Z,118nm,19.5s,baz=220,slow=37
comp=Z,12nm,0.9s
KSRS Korea Array 48.43 30 P **P** **13 45 29.0 +0.4**
KS19 Wonju Array Si 48.44 30 P **P** **13 45 28.6 0.0**
QLP Quilpie 48.50 123 P **P** **13 45 30.5 +1.2**
comp=Z,57nm,0.7s
QLP Quilpie 48.50 123 P **P** **13 45 30.2 +0.9**
STKA Stephens Creek 48.51 131 P **P** **13 45 30.1 +0.8**
STKA Stephens Creek 48.51 131 P **P** **13 45 29.9 +0.6**
comp=Z,25nm,0.7s,baz=303,slow=8.6,SNR=55
STKA LR LR 14 06 14.3
comp=Z,145nm,20.4s,baz=260,slow=36
comp=Z,25nm,0.7s
STKA Stephens Creek 48.51 131 P **P** **13 45 30.0 +0.6**
STKA Stephens Creek 48.51 131 P **P** **13 45 29.8 +0.4**
STKA Stephens Creek 48.51 131 P **P** **13 45 29.8 +0.4**
STKA pmax pmax
comp=Z,118nm,0.8s
TARG Taragay, Kyrgy 49.12 338 P **P** **13 45 34.5 +0.1**
TARG IAmb IAmb 13 45 50.5
comp=Z,14nm,0.6s
TARG Taragay, Kyrgy 49.12 338 P **P** **13 45 34.5 +0.1**
TARG pmax pmax
comp=Z,14nm,0.6s
XLT XiLinHaoTe 49.38 16 *e*P **P** **13 45 36.4 +0.6**
XLT sP pwP 13 45 47.8 +3.1
XLT pmax pmax
comp=Z,10.0nm,1.3s
XLT pmax pmax
comp=Z,96nm,4.0s
XLT L L
comp=Z,350nm,11.0s
XLT L L
comp=Z,300nm,18.0s
NRN Naryn 49.56 337 **P** **13 45 38.5 +0.9**
NRN Naryn 49.56 337 P **P** **13 45 38.5 +0.9**
NRN pmax pmax
comp=Z,53nm,1.4s
KDJ Kajisay 49.70 338 P **P** **13 45 39.4 +0.9**
KDJ Kajisay 49.70 338 P **P** **13 45 39.4 +0.9**
KDJ pmax pmax
comp=Z,59nm,1.0s
SHLS Shalkode 49.80 341 *e*P **P** **13 45 39.8 +0.6**
SHLS pmax pmax
comp=Z,5.0nm,0.5s
SHLS Shalkode 49.80 341 *e*P **P** **13 45 39.9 +0.6**
comp=Z,5.0nm,0.5s
UZB Uzynbulak 49.94 340 *e*P **P** **13 45 41.8 +1.5**
UZB pmax pmax
comp=Z,10.0nm,1.0s
UZB Uzynbulak 49.94 340 *e*P **P** **13 45 41.8 +1.5**
comp=Z,9.6nm,1.0s
PDGK Podgornoye 49.95 341 P **P** **13 45 40.9 +0.6**
SATY Saty 50.08 340 *e*P **P** **13 45 42.8 +1.6**
SATY pmax pmax
comp=Z,8.0nm,0.8s
SATY Saty 50.08 340 *e*P **P** **13 45 42.9 +1.6**
comp=Z,7.6nm,0.8s
GAR Garm 50.12 330 P **P** **13 45 41.4 -0.2**
GAR IAmb IAmb 13 46 16.2
comp=Z,13nm,0.8s
SHAA Shahritus 50.17 327 P **P** **13 45 41.8 -0.3**
SHAA IAmb IAmb 13 46 08.0
comp=Z,37nm,0.8s
CHGR Chuyangaron 50.44 329 P **P** **13 45 43.8 -0.3**
CHGR IAmb IAmb 13 47 05.1
comp=Z,22nm,0.8s
CHGR Chuyangaron 50.44 329 P **P** **13 45 43.8 -0.3**
CHGR pmax pmax
comp=Z,22nm,0.8s
BOOM Boomskoye usch 50.48 337 **P** **13 45 45.5 +1.2**
BOOM Boomskoye usch 50.48 337 P **P** **13 45 45.6 +1.2**
BOOM pmax pmax
comp=Z,88nm,1.6s
TNSS Tian-Shan 50.57 339 *e*P **P** **13 45 46.7 +1.4**
TNSS Tian-Shan 50.57 339 *e*P **P** **13 45 46.8 +1.4**
MDOK Medeo 50.65 339 *e*P **P** **13 45 47.3 +1.7**
MDOK Medeo 50.65 339 *e*P **P** **13 45 47.3 +1.7**
BTK Batken 50.70 331 P **P** **13 45 46.6 +0.6**
BTK IAmb IAmb 13 46 01.2
comp=Z,35nm,1.4s
BTK Batken 50.70 331 P **P** **13 45 46.6 +0.6**
BTK pmax pmax
comp=Z,35nm,1.4s
AAA Alma-Ata 50.73 339 *e*P **P** **13 45 47.8 +1.7**
AAA pmax pmax
comp=Z,8.0nm,0.4s
AAA Alma-Ata 50.73 339 *e*P **P** **13 45 47.9 +1.7**
comp=Z,8.4nm,0.4s
JCJ Chichijima 51.05 51 LR LR 14 07 53.2
comp=Z,111nm,19.9s,baz=156,slow=37
AAK Ala-Archa 51.17 336 P **P** **13 45 50.2 +0.6**
comp=Z,4.4nm,0.7s,baz=162,slow=6.4,SNR=14
AAK LR LR 14 10 52.4
comp=Z,256nm,18.6s,baz=169,slow=40
comp=Z,4.4nm,0.7s
AAK Ala-Archa 51.17 336 P **P** **13 45 50.1 +0.5**
AAK IAmb IAmb 13 46 04.4
comp=Z,29nm,1.4s
AAK Ala-Archa 51.17 336 P **P** **13 45 50.1 +0.5**
AAK pmax pmax
comp=Z,29nm,1.4s
SONM Songino Array 51.38 6 P **P** **13 45 52.6 +1.6**
comp=Z,13nm,0.8s,baz=190,slow=8.8,SNR=51
SONM LR LR 14 08 27.8
comp=Z,170nm,19.0s,baz=179,slow=37
comp=Z,13nm,0.8s
SONM Songino Array 51.38 6 P **P** **13 45 52.4 +1.3**
SONM IAmb IAmb 13 46 07.5
comp=Z,18nm,0.8s
SONM Songino Array 51.38 6 P **P** **13 45 52.4 +1.3**
SONM pmax pmax
comp=Z,18nm,0.8s
ULN Ulaanbaatar 51.48 6 P **P** **13 45 52.7 +0.9**
ULN IAmb IAmb 13 46 05.3
comp=Z,13nm,0.8s
ULN Ulaanbaatar 51.48 6*ce*P **P** **13 45 53.4 +1.6**
ULN pmax pmax
comp=Z,15nm,1.0s
CMSA Cobar Meteorol 51.53 128 P **P** **13 45 53.5 +1.2**
CMSA Cobar Meteorol 51.53 128 P **P** **13 45 52.9 +0.6**
TDK Taldyqorghan 51.79 341 *e*P **P** **13 45 55.6 +1.6**
TDK pmax pmax
comp=Z,10.0nm,0.5s
TDK Taldyqorghan 51.79 341 *e*P **P** **13 45 55.6 +1.6**
comp=Z,10.0nm,0.5s
MK31 Makanchi Array 52.29 345 *e*P **P** **13 45 58.1 +0.4**
MKAR Makanchi Array 52.29 345 P **P** **13 45 58.7 +1.0**
comp=Z,8.3nm,0.6s,baz=154,slow=8.3,SNR=86
MKAR LR LR 14 11 54.5
comp=Z,55nm,20.8s,baz=147,slow=40
comp=Z,8.3nm,0.6s
MKAR Makanchi Array 52.29 345 P **P** **13 45 58.1 +0.5**
ZSN Zaisan 52.29 347 *e*P **P** **13 45 59.5 +1.8**
ZSN pmax pmax
comp=Z,9.0nm,1.0s
ZSN Zaisan 52.29 347 *e*P **P** **13 45 59.5 +1.8**
comp=Z,9.1nm,1.0s
MAKZ Makanchi 52.38 345 P **P** **13 45 58.5 +0.1**
MAKZ IAmb IAmb 13 46 13.2
comp=Z,12nm,0.8s
MAKZ Makanchi 52.38 345 P **P** **13 45 58.5 +0.1**
MAKZ pmax pmax
comp=Z,12nm,0.9s
IUG Iuzhnay 52.70 333 *e*P **P** **13 46 02.3 +1.4**
IUG pmax pmax
comp=Z,9.0nm,0.8s
IUG Iuzhnay 52.70 333 *e*P **P** **13 46 02.4 +1.4**
comp=Z,8.8nm,0.8s
BRAT Ballarat 52.87 136 P **P** **13 46 04.3 +2.2**
CHM Chimkent 53.03 332 *e*P **P** **13 46 04.8 +1.5**
CHM pmax pmax
comp=Z,8.0nm,0.7s
CHM Chimkent 53.03 332 *e*P **P** **13 46 04.8 +1.5**
comp=Z,7.8nm,0.7s
KK31 Karatay Array 53.24 334 **P** **13 46 04.6 -0.2**
KK31 IAmb IAmb 13 46 19.1
comp=Z,39nm,1.8s
KK31 Karatay Array 53.24 334 P **P** **13 46 04.6 -0.2**
KK31 pmax pmax
comp=Z,39nm,1.8s
KKAR Karatay Array 53.24 334 P **P** **13 46 04.9 +0.1**
KKAR Karatay Array 53.24 334 P **P** **13 46 04.9 +0.1**
MJAR Matsushiro Arr 53.61 39 P **P** **13 46 07.0 -0.6**
comp=Z,3.1nm,0.7s,baz=206,slow=6.4,SNR=10
MJAR LR LR 14 09 35.4
comp=Z,105nm,19.9s,baz=215,slow=37
comp=Z,3.1nm,0.7s
MJAR Matsushiro Arr 53.61 39 P **P** **13 46 07.2 -0.4**
MJAR Matsushiro Arr 53.61 39 P **P** **13 46 07.3 -0.4**
MJAR pmax pmax
comp=Z,12nm,1.4s
ZAK Zakamensk 53.68 3 *e*P **P** **13 46 08.2 +0.2**
ZAK pmax pmax
comp=Z,5.0nm,0.9s
KNGR Kungurtug, Tuv 53.84 358 *i*P **P** **13 46 09.7 +0.5**
KNGR pmax pmax
comp=Z,8.0nm,0.9s
DGZ Jazzator, Alta 53.95 350 *i*P **P** **13 46 11.6 +1.6**
DGZ pmax pmax
comp=Z,18nm,0.8s
EIDS Eidsvold 53.99 119 P **P** **13 46 11.7 +1.0**
JYT Yasato 54.68 40 P **P** **13 46 15.7 +0.3**
YNG Young 54.70 130 P **P** **13 46 17.0 +1.3**
BNX BinXian 54.82 24 ⇑P **P** **13 46 16.7 +0.5**
BNX pmax pmax
comp=Z,25nm,1.4s
MOY Mondy 54.89 1 *e*P P 13 46 29.3 +13
TLY Talaya 55.00 3 P **P** **13 46 18.6 +1.1**
comp=Z,4.0nm,0.6s,baz=172,slow=7.1
TLY LR LR 14 11 17.8
comp=Z,162nm,21.0s,baz=174,slow=38
comp=Z,4.0nm,0.6s
TLY Talaya 55.00 3*ce*P **P** **13 46 18.8 +1.4**
TLY pmax pmax
comp=Z,5.0nm,0.7s
USRK Ussuriysk Ar. 55.58 28 P **P** **13 46 22.8 +1.0**
comp=Z,30nm,0.7s,baz=217,slow=6.2,SNR=20
comp=Z,30nm,0.7s
KURBB Kurchatov Arra 56.80 344 P **P** **13 46 30.8 +0.5**
comp=Z,4.0nm,0.9s,baz=163,slow=6.9,SNR=36
KURBB LR LR 14 14 41.7
comp=Z,145nm,18.6s,baz=174,slow=40
comp=Z,4.0nm,0.9s
KURBB Kurchatov Arra 56.80 344 P **P** **13 46 30.5 +0.2**
KURK Kurchatov 56.86 344 P **P** **13 46 31.1 +0.3**
KURK IAmb IAmb 13 46 44.5
comp=Z,18nm,1.0s
KURK Kurchatov 56.86 344*ce*P **P** **13 46 31.6 +0.9**
KURK pmax pmax
comp=Z,9.0nm,0.9s
BRZS Berezniki 58.04 340 *e*P **P** **13 46 40.8 +1.6**
BRZS Berezniki 58.04 340 *e*P **P** **13 46 40.8 +1.6**
ZAA0 Zalesovo Array 58.48 350 P **P** **13 46 42.4 +0.3**
ZALV Zalesovo Beam 58.48 350 P **P** **13 46 43.0 +0.8**
comp=Z,18nm,0.8s,baz=178,slow=4.5,SNR=69
ZALV LR LR 14 17 24.4
comp=Z,59nm,20.2s,baz=135,slow=42
comp=Z,18nm,0.8s
ZALV Zalesovo Beam 58.48 350 P **P** **13 46 42.1 0.0**
ZALV Zalesovo Beam 58.48 350 P **P** **13 46 43.0 +0.8**
HEH HeiHe 58.57 21 *e*P **P** **13 46 43.3 +0.5**
HEH pmax pmax
comp=Z,11nm,1.5s
HEH pmax pmax
comp=Z,230nm,6.3s
RAYN Ar Rayn 59.10 300 P **P** **13 46 47.0 -0.1**
RAYN Ar Rayn 59.10 300 P **P** **13 46 47.0 -0.1**
RAYN pmax pmax
comp=Z,3.0nm,0.8s
KLR Kul'dur 59.38 24 LR LR 14 14 33.5
comp=Z,387nm,18.2s,baz=218,slow=38
KLR Kul'dur 59.38 24*ce*P **P** **13 46 49.3 +0.9**
KLR pmax pmax
comp=Z,7.0nm,2.5s
H04N2 CROZET ISLANDS 59.44 217 T T 14 52 15.5
baz=60,slow=75,SNR=25
H04N1 CROZET ISLANDS 59.45 217 T T 14 52 12.4
baz=60,slow=75,SNR=998
H04N3 CROZET ISLANDS 59.45 217 T T 14 52 05.8
baz=60,slow=75,SNR=926
H04S1 CROZET ISLANDS 59.72 216 T T 14 52 26.8
baz=59,slow=76,SNR=29
H04S3 CROZET ISLANDS 59.73 216 T T 14 52 25.0
baz=59,slow=76,SNR=36
H04S2 CROZET ISLANDS 59.74 216 T T 14 52 30.8
baz=59,slow=76,SNR=28
ASAJ Asahikawa 60.99 34 LR LR 14 12 23.4
comp=Z,55nm,21.2s,baz=209,slow=35
BVA0 Borovoye Array 61.38 340 *i*P **P** **13 47 01.5 -0.6**
BVAR Borovoye Array 61.38 340 P **P** **13 47 02.1 0.0**
comp=Z,4.3nm,0.6s,baz=141,slow=7.6,SNR=29
BVAR LR LR 14 17 32.0
comp=Z,172nm,18.6s,baz=133,slow=40
comp=Z,4.3nm,0.6s
BORK Borovoye 61.42 340 P **P** **13 47 01.6 -0.8**
BORK IAmb IAmb 13 47 25.3
comp=Z,8.3nm,0.7s
BORK Borovoye 61.42 340*ce*P **P** **13 47 02.3 0.0**
BORK pmax pmax
comp=Z,6.0nm,0.7s
ZEA Zeya 61.46 18 *e*P **P** **13 47 03.5 +0.9**
ZEA pmax pmax
comp=Z,10.0nm,1.3s
FURI Furi 61.96 282 LR LR 14 10 30.3
comp=Z,71nm,18.8s,baz=150,slow=33
BOD Bodaibo 62.13 9 *e*P **P** **13 47 06.9 -0.1**
BOD pmax pmax
comp=Z,24nm,1.7s
AB31 Akbulak array 62.70 332 P **P** **13 47 10.5 -0.5**
AB31 Akbulak array 62.70 332 *i*P **P** **13 47 10.5 -0.5**
ABKAR Akbulak array 62.70 332 P **P** **13 47 10.5 -0.5**
YSS Yuzhno-Sakhali 62.88 32 P **P** **13 47 13.6 +1.4**
YSS Yuzhno-Sakhali 62.88 32 P **P** **13 47 12.4 +0.2**
YSS Yuzhno-Sakhali 62.88 32 *e*P **P** **13 47 12.8 +0.6**
YSS *e* 13 47 17.8
YSS *e* 13 47 51.9
YSS pmax pmax
comp=Z,20nm,0.7s
YSS MLR MLR
comp=Z,400nm,16.0s
YSS MLR MLR
comp=N,200nm,15.0s
YSS MLR MLR
comp=E,200nm,15.0s
AKTO Aktyubinsk 64.42 332 P **P** **13 47 22.4 0.0**
comp=E,4.0nm,0.9s,baz=114,slow=9.1,SNR=7.6
AKTO LR LR 14 18 56.1
comp=E,80nm,18.8s,baz=89,slow=39
comp=E,4.0nm,0.9s
LODK Lodvar 64.58 275 P **P** **13 47 24.5 +0.3**
AKT Akhty 64.92 319 *e*P **P** **13 47 25.6 -0.4**
AKT *e* 13 47 59.0
AKT pmax pmax
comp=Z,19nm,1.4s
AKT MLR MLR
comp=Z,40nm,4.0s
TYV Tymovskoe 65.38 28 *e*P P 13 47 34.0 +5.4
TYV pmax pmax
comp=Z,100nm,3.4s
TYV pmax pmax
comp=Z,5.0nm,1.1s
MAK Makhachkala 65.81 321 *e*P **P** **13 47 27.4 -4.1**
MAK *e* 13 50 00.8
MAK *e*PPP PPP 13 51 28.5
MAK *e*S **S** **13 56 11.3 -6.7**
MAK *e*SS **SS** **14 00 26.0 -6.9**
MAK pmax pmax
comp=Z,46nm,0.7s
GNI Garni 66.28 317 LR LR 14 16 51.9
comp=Z,69nm,20.6s,baz=128,slow=36
GEVA Gevas 66.66 314 P **P** **13 47 37.6 +0.2**
DZM Mont Dzumac 67.26 112 P **P** **13 47 41.0 -0.4**
comp=Z,4.5nm,0.7s,baz=290,slow=12,SNR=2.4
comp=Z,4.5nm,0.7s
DZM Mont Dzumac 67.26 112 *e*LR LR 14 07 59.3
comp=Z,161nm,24.7s
SVE Sverdlovsk 67.84 338 *e*P **P** **13 47 45.3 +1.1**
SVE pmax pmax
comp=Z,23nm,1.4s
ARTI Arti 68.39 337 P **P** **13 47 47.9 +0.3**
comp=Z,6.3nm,0.6s,baz=159,slow=4.6,SNR=6.8
ARTI LR LR 14 21 14.7
comp=Z,128nm,18.7s,baz=128,slow=39
comp=Z,6.3nm,0.6s
ARTI Arti 68.39 337 P **P** **13 47 48.0 +0.3**
ARTI IAmb IAmb 13 48 02.4
comp=Z,14nm,0.7s
ARTI Arti 68.39 337*c i*P **P** **13 47 48.6 +0.9**
ARTI 13 48 15.6
ARTI S **S** **13 56 52.3 +3.6**
ARTI SS **SS** **14 01 10.2 -2.3**
ARTI pmax pmax
comp=Z,8.0nm,0.8s
MAW Mawson 68.83 194 LR LR 14 09 55.9
comp=Z,136nm,20.7s,baz=32,slow=29
MBAR Mbarara 68.88 271 LR LR 14 17 16.8
comp=Z,41nm,18.2s,baz=83,slow=35
NEUR Neytrino 69.05 319 *i*P **P** **13 47 54.0 +1.7**
NEUR pmax pmax
comp=Z,12nm,1.7s
ASF Jabal al Asfar 69.11 306 LR LR 14 19 22.3
comp=Z,150nm,18.0s,baz=54,slow=37
KBZ Khabaz 69.13 320 P **P** **13 47 54.1 +1.6**

comp=Z,6.5nm,0.7s,baz=133,slow=4.8,SNR=19
comp=Z,6.5nm,0.7s
KBZ Khabaz 69.13 320 *ce*P **P 13 47 54.4 +1.9**
YAK Yakutsk 69.20 15 LR LR 14 21 44.3
comp=Z,165nm,19.3s,baz=212,slow=39
YAK Yakutsk 69.20 15 P **P 13 47 52.1 -0.4**
YAK Yakutsk 69.20 15 *e*P **P 13 47 51.0 -1.6**
YAK *e**PP **pwP 13 47 58.7 -2.8**
YAK *e*S **S 13 56 57.7 -0.4**
YAK *e*SS **SS 14 01 23.6 -1.2**
YAK *e*SSS SSS 14 04 33.8
YAK pmax pmax
comp=Z,38nm,1.0s
YAK pmax pmax
comp=N,11nm,1.1s
YAK pmax pmax
comp=E,7.0nm,1.3s
YAK pmax pmax
comp=Z,145nm,4.3s
YAK pmax pmax
comp=N,110nm,4.8s
YAK pmax pmax
comp=E,99nm,5.1s
YAK smax smax
comp=N,54nm,3.5s
YAK smax smax
comp=E,14nm,2.5s
YAK MLR MLR
comp=N,234nm,20.0s
YAK MLR MLR
comp=E,180nm,17.0s
YAK MLR MLR
comp=Z,294nm,14.0s
SHA1 Shidzhatmaz 69.29 319 *ce*P **P 13 47 55.1 +1.3**
KIV Kislovodsk 69.36 320 *e*P **P 13 47 55.6 +1.5**
KIV pmax pmax
comp=Z,8.0nm,1.0s
KIV MLR MLR
comp=Z,41nm,17.0s
EIL Elat 69.97 303 LR LR 14 17 30.7
comp=Z,124nm,19.9s,baz=62,slow=35
MMAI Mount Meron Ar 70.56 307 P **P 13 48 03.1 +1.4**
comp=Z,3.4nm,0.7s,baz=103,slow=6.4,SNR=2.1
MMAI LR LR 14 20 29.5
comp=Z,171nm,18.1s,baz=103,slow=37
comp=Z,3.4nm,0.7s
BELG Belogornoye 70.74 329 *i* P **P 13 48 01.3 -0.9**
BELG pmax pmax
comp=Z,3.0nm,1.2s
NRIK Noril'sk 73.08 356 P **P 13 48 16.4 +0.4**
comp=Z,7.8nm,0.8s,baz=153,slow=5.1,SNR=12
NRIK LR LR 14 22 47.1
comp=Z,102nm,20.9s,baz=164,slow=38
comp=Z,7.8nm,0.8s
NRIK Noril'sk 73.08 356 P **P 13 48 15.9 -0.1**
NRIK IAmb IAmb 13 48 28.4
comp=Z,13nm,0.8s
NRIK Noril'sk 73.08 356 *i* P **P 13 48 15.7 -0.3**
NRIK pmax pmax
comp=Z,13nm,0.8s
VRH Novokhopyorsk 73.28 326 *e*P **P 13 48 17.0 -0.5**
VRH pmax pmax
comp=Z,20nm,0.8s
KIRV Kirov 73.49 335 LR LR 14 24 06.4
comp=Z,139nm,18.3s,baz=102,slow=39
KIRV Kirov 73.49 335 *ce*P **P 13 48 20.2 +1.7**
BR104 Keskin Array S 73.99 313 P **P 13 48 22.2 +0.1**
comp=Z,57mcomp=Z,4.5nm,0.7s
BR131 Keskin Array S 74.00 313 P **P 13 48 21.5 -0.7**
BR131 Keskin Array S 74.00 313 P **P 13 48 21.5 -0.7**
BR131 pmax pmax
comp=Z,5.0nm,0.8s
BRTR Keskin Array B 74.00 313 P **P 13 48 22.3 +0.1**
comp=Z,2.7nm,0.7s,baz=136,slow=6.7,SNR=14
BRTR LR LR 14 22 41.4
comp=Z,63nm,19.4s,baz=111,slow=37
comp=Z,2.7nm,0.7s
BRTR Keskin Array B 74.00 313 P **P 13 48 22.1 -0.1**
BRTR Keskin Array B 74.00 313 *i* P **P 13 48 22.2 +0.1**
BRTR pmax pmax
comp=Z,2.0nm,0.6s
BR105 Keskin Array S 74.01 313 P **P 13 48 22.3 0.0**
comp=Z,5.4nm,0.7s
BR106 Keskin Array S 74.01 313 P **P 13 48 22.3 0.0**
comp=Z,4.2nm,0.7s
KSANE Kasane 74.17 253 P **P 13 48 24.2 +0.7**
RPZ Rata Peaks 74.26 134 LR LR 14 21 00.8
comp=Z,122nm,19.1s,baz=108,slow=36
PETK Petropavlovsk- 74.28 32 P **P 13 48 23.3 -0.1**
comp=Z,4.5nm,0.9s,baz=194,slow=0.4,SNR=6.1
PETK LR LR 14 23 12.0
comp=Z,50nm,18.0s,baz=263,slow=38
comp=Z,4.5nm,0.9s
MA2 Magadan 74.47 24 LR LR 14 23 35.6
comp=Z,113nm,18.6s,baz=235,slow=38
MA2 Magadan 74.47 24 P **P 13 48 25.4 +1.1**
MA2 Magadan 74.47 24 P **P 13 48 25.0 +0.6**
MA2 IAmb IAmb 13 48 32.9
comp=Z,8.8nm,0.7s
MA2 Magadan 74.47 24 *ce*P **P 13 48 24.9 +0.6**
MA2 pmax pmax
comp=Z,8.0nm,0.9s
MA2 Magadan 74.47 24 P **P 13 48 24.6 +0.3**
comp=Z,17nm,1.6s
VORD Divnogorie 74.54 325 *e*P **P 13 48 24.0 -0.9**
VORD pmax pmax
comp=Z,8.0nm,0.6s
BOSA Boshof 74.64 241 P **P 13 48 26.7 +0.5**
comp=Z,4.2nm,0.6s,baz=100,slow=4.6,SNR=15
comp=Z,4.2nm,0.6s
BOSA Boshof 74.64 241 P **P 13 48 26.1 -0.1**
BOSA IAmb IAmb 13 48 39.6
comp=Z,8.9nm,0.8s
BOSA Boshof 74.64 241 P **P 13 48 26.1 -0.1**
BOSA pmax pmax
comp=Z,9.0nm,0.8s
VSR Storozhevoye 74.72 325 *e*P **P 13 48 25.3 -0.6**
VSR pmax pmax
comp=Z,10.0nm,0.8s
PET Petropavlovsk 74.75 32 *e*P **P 13 48 26.3 +0.2**
PET pmax pmax
comp=Z,18nm,1.0s
PET MLR MLR
comp=Z,200nm,17.0s
PET Petropavlovsk 74.75 32 P **P 13 48 26.3 +0.2**
comp=Z,18nm,1.1s
THZ Tophouse 75.28 132 P **P 13 48 29.5 -0.1**
LPSR Galich'ya Gora 75.45 327 *e*P **P 13 48 27.0 -3.1**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
PKVZ Pokaka 76.80 129 P **P 13 48 38.5 +0.2**
WTVZ West Tongariro 76.97 129 P **P 13 48 39.9 +0.6**
NGZ Ngauruhoe 76.99 129 P **P 13 48 40.5 +1.0**
SNVZ South Ngauruho 77.02 129 P **P 13 48 40.8 +1.2**
OTVZ Oturere 77.03 129 P **P 13 48 40.8 +1.1**
SEY Seymchan 77.08 22 LR LR 14 25 42.2
comp=Z,170nm,18.8s,baz=232,slow=38
SEY Seymchan 77.08 22 *ce*P **P 13 48 40.1 +0.9**
SEY pmax pmax
comp=Z,13nm,1.0s
TIXI Tiksi 77.31 9 LR LR 14 28 53.4
comp=Z,341nm,18.1s,baz=224,slow=40
TIXI Tiksi 77.31 9 *ce*P **P 13 48 40.0 -0.3**
TIXI pmax pmax
comp=Z,6.0nm,0.8s
MOS Moscow 77.51 329 *e*P **P 13 48 42.2 +0.5**
MOS *e* 13 48 51.6
PNHZ Pukenui 77.53 130 P **P 13 48 42.7 +0.4**
BFZ Birch Farm 77.64 131 P **P 13 48 43.6 +0.8**
BKZ Black Stump Fm 77.67 129 P **P 13 48 43.8 +0.6**
BKZ Black Stump Fm 77.67 129 P **P 13 48 43.5 +0.3**
WPHZ Waipukurau 77.72 130 P **P 13 48 44.1 +0.8**
OBN Obninsk 77.79 328 ǁ*i*P **P 13 48 44.4 +1.1**
OBN *e**PP **sP 13 48 47.0 +0.2**
OBN *e**SP **pwP 13 48 50.5 -1.6**
OBN *i* 13 48 56.7
OBN S S 13 58 49.0 +13
OBN pmax pmax
comp=Z,11nm,0.9s
OBN MLR MLR
comp=Z,77nm,16.0s
QNGWA Qangwa 77.98 251 P **P 13 48 46.0 +0.7**
RTZ Ruatahuna 78.00 129 P **P 13 48 44.8 -0.2**
URZ Urewera 78.07 128 LR LR 14 24 22.3
comp=Z,156nm,18.8s,baz=280,slow=37
URZ Urewera 78.07 128 P **P 13 48 46.3 +1.0**
URZ Urewera 78.07 128 P **P 13 48 44.3 -1.0**
MWZ Matawai 78.41 128 P **P 13 48 47.1 -0.1**
HAZ Te Kaha 78.56 128 P **P 13 48 47.6 -0.3**
SUR Sutherland 78.72 238 LR LR 14 18 05.4
comp=Z,146nm,18.5s,baz=152,slow=32
KLMR Klimovskoe 78.93 334 *e*P **P 13 48 49.5 0.0**
KLMR *e* 13 48 58.7
KLMR pmax pmax
comp=Z,31nm,1.5s
SORM Soroca 80.17 320 P **P 13 48 56.5 0.0**
AK09 Malin Array Si 80.31 323 P **P 13 48 56.9 -0.3**
AK07 Malin Array Si 80.33 322 P **P 13 48 57.2 -0.2**
AK06 Malin Array Si 80.35 322 P **P 13 48 57.3 -0.1**
AKASG Malin Array Be 80.37 323 P **P 13 48 58.0 +0.5**
comp=Z,1.4nm,0.8s,baz=103,slow=2.9,SNR=2.0
comp=Z,1.4nm,0.8s
AKASG Malin Array Be 80.37 323 P **P 13 48 58.0 +0.5**
AKBB Malin Array Si 80.37 323 *ce*P **P 13 48 57.5 0.0**
AKBB pmax pmax
comp=Z,10.0nm,1.6s
VNDA Vanda 80.85 169 P **P 13 48 59.0 -0.6**
comp=Z,1.9nm,0.7s,baz=313,slow=5.6,SNR=2.4
VNDA LR LR 14 17 38.5
comp=Z,68nm,20.4s,baz=318,slow=30
comp=Z,1.9nm,0.7s
MLR Muntele Rosu 81.06 317 P **P 13 49 01.6 0.0**
MLR IAmb IAmb 13 49 15.9
comp=Z,18nm,1.3s
MLR Muntele Rosu 81.06 317 P **P 13 49 01.6 0.0**
MLR pmax pmax
comp=Z,18nm,1.3s
TSUM Tsumeb 81.37 251 P **P 13 49 03.0 -0.7**
KMPD K-Podol'skiy 81.50 320 P **P 13 49 03.8 +0.2**
BURAR Bucovina Array 82.07 319 P **P 13 49 07.6 +0.8**
BUR08 Bucovina Ar. S 82.08 319 P **P 13 49 07.5 +0.6**
BUR08 IAmb IAmb 13 49 12.5
comp=Z,13nm,1.3s
MNK Minsk 82.28 326 *i* P **P 13 49 08.2 +0.6**
comp=E,12nm,0.8s
MNK *i* P **P 13 49 08.2 +0.6**
comp=N,21nm,1.0s
MNK *i* P **P 13 49 08.2 +0.6**
comp=Z,9.0nm,0.9s,baz=107
MNK *i* PP **PP 13 52 17.9 +1.7**
MNK *i* PPP PPP 13 54 07.9
MNK *i* S **S 13 59 24.6 +1.7**
MNK *i* SS **SS 14 04 43.8 +0.5**
MNK *i* SSS SSS 14 08 13.6
MNK *i* LQ LQ 14 20 26.4
MNK *i* LR LR 14 26 52.1
MNK *i* LRM MLR 14 27 58.0
comp=N,81nm,22.8s
MNK *i* LRM MLR 14 28 16.3
comp=E,64nm,16.3s
MNK *i* LRM MLR 14 28 47.4
comp=Z,43nm,16.2s
MNK Minsk 82.28 326 *i* P **P 13 49 08.1 +0.6**
MNK *i* 13 52 17.9
MNK *i* PPP PPP 13 54 07.9
MNK *i* S **S 13 59 24.6 +1.7**
MNK *i* SS **SS 14 04 43.7 +0.5**
MNK *i* SSS SSS 14 08 13.5
MNK pmax pmax
comp=E,12nm,0.8s
MNK pmax pmax
comp=Z,9.0nm,0.9s
MNK pmax pmax
comp=N,21nm,1.0s
MNK MLR MLR
comp=N,81nm,23.0s
MNK MLR MLR
MNK MLR MLR
comp=E,64nm,16.0s
comp=Z,43nm,16.0s
SHEM Shemya Is, Ala 83.37 36 LR LR 14 31 47.2
comp=Z,22nm,18.1s,baz=153,slow=40
APA Apatity 84.27 339 *e*P **P 13 49 14.2 -3.4**
APA *e* 13 52 29.7
APA pmax pmax
comp=Z,5.0nm,1.2s
APA MLR MLR
comp=Z,949nm,5.1s
BILL Bilibino 84.61 20 P **P 13 49 19.8 +0.5**
BILL Bilibino 84.61 20 *ce*P **P 13 49 20.7 +1.4**
BILL pmax pmax
comp=Z,4.0nm,1.0s
STHS Stebnicka Huta 85.04 320 *e*P P 13 49 27.1 +5.2
STHS Stebnicka Huta 85.04 320 *e*P P 13 49 27.1 +5.2
FINES FINESS Array B 85.18 332 P **P 13 49 23.5 +1.2**
comp=Z,3.0nm,0.5s,baz=120,slow=5.4,SNR=18
FINES LR LR 14 31 35.9
comp=Z,92nm,18.0s,baz=200,slow=39
comp=Z,3.0nm,0.5s
NVL N'lazarevskaya 86.06 199 *i* P **P 13 49 28.0 +1.4**
NVL *e* 13 52 47.8
NVL *e*PPP PPP 13 54 41.4
NVL *e*S **SKSac 13 59 53.1 +1.0**
NVL *e*SS **SS 14 05 41.8 +3.6**
NVL *e*SSS SSS 14 09 13.4
NVL pmax pmax
comp=Z,21nm,1.3s
NVL MLR MLR
comp=Z,607nm,19.0s
QSPA South Pole Qui 86.55 180 P **P 13 49 29.4 +0.2**
comp=Z,4.5nm,0.8s,baz=284,slow=0.8,SNR=11
QSPA LR LR 14 24 29.6
comp=Z,173nm,18.1s,baz=312,slow=33
comp=Z,4.5nm,0.8s
QSPA South Pole Qui 86.55 180 P **P 13 49 28.7 -0.6**
QSPA IAmb IAmb 13 49 31.4
comp=Z,9.4nm,1.1s
ARCES ARCESS Array B 87.67 340 P **P 13 49 35.5 +1.1**
comp=Z,3.3nm,0.7s,baz=100,slow=3.7,SNR=6.3
ARCES LR LR 14 32 35.0
comp=Z,91nm,19.9s,baz=64,slow=38
comp=Z,3.3nm,0.7s
AFI Afiamalu 87.84 104 LR LR 14 30 26.7
comp=Z,69nm,18.2s,baz=254,slow=37
GERES GERESS Array B 89.86 319 P **P 13 49 46.3 +1.0**
comp=Z,1.5nm,0.7s,baz=113,slow=3.5,SNR=10
comp=Z,1.5nm,0.7s
KHC Kasperske Hory 89.96 319 *ce*P **P 13 49 47.8 +2.1**
KHC pmax pmax
comp=Z,12nm,2.5s
CLL Collm 90.52 321 *e*P **P 13 49 50.0 +1.8**
CLL Collm 90.52 321 *e*P **P 13 49 50.0 +1.8**
CLL *i* x x 13 49 58.4
SNAA Sanae 90.68 198 LR LR 14 23 09.9
comp=Z,135nm,19.1s,baz=68,slow=31
HFS Hagfors 90.90 330 P **P 13 49 51.1 +1.3**
comp=Z,7.0nm,1.0s,baz=175,slow=6.7,SNR=3.8
comp=Z,7.0nm,1.0s
WTTA Wattenberg 91.11 317 pPKiKP **PKiKP 13 54 47.8 +3.6**
comp=Z,3.3nm,0.5s
MOTA Moosalm 91.48 317 *e*PKiKP **PKiKP 13 54 44.8 0.0**
comp=Z,2.2nm,0.4s
SPITS Spitsbergen Ar 91.93 348 P **P 13 49 55.4 +1.1**
comp=Z,5.5nm,0.8s,baz=40,slow=1.4,SNR=4.2
SPITS LR LR 14 38 42.6
comp=Z,102nm,18.8s,baz=64,slow=40
comp=Z,5.5nm,0.8s
NOA NORSAR Array B 92.19 331 P **P 13 49 56.6 +0.8**
comp=Z,1.1nm,0.8s,baz=93,slow=4.5,SNR=2.4
comp=Z,1.1nm,0.8s
VNA2 Neumayer--Watz 92.30 198 ǁP **P 13 49 57.3 +1.2**
comp=Z,4.6nm,0.7s,baz=87,slow=4.5
VNA3 Neumayer Olymp 92.90 198 ǁP **P 13 50 00.7 +1.8**
comp=Z,2.0nm,0.7s
BFO Black Forest 93.39 318 *i* P **P 13 50 04.0 +2.4**
C16K Lisburne Hills 95.03 22 P P **13 50 09.0 +0.4**
G16K Koyuk River 96.44 25 P **P 13 50 15.7 +0.6**
G16K IAmb IAmb 13 50 17.3
comp=Z,4.9nm,0.9s
C18K Utukok River 96.52 21 **P 13 50 15.9 +0.4**
C18K IAmb IAmb 13 50 28.8
comp=Z,3.6nm,0.9s
C19K Lookout Ridge 97.03 21 P **P 13 50 17.3 -0.5**
C19K IAmb IAmb 13 50 25.9
comp=Z,6.5nm,1.2s
TORD Torodi Ar. Bea 98.48 283 P Pdif 13 50 25.6 +0.1
comp=Z,0.4nm,0.6s,baz=119,slow=5.1,SNR=2.6
comp=Z,0.4nm,0.6s
RAR Rarotonga 98.64 112 LR LR 14 35 23.1
comp=Z,78nm,20.1s,baz=220,slow=36
TBI Tubuai 107.72 116 *e*LR LR 14 26 33.1
comp=Z,244nm,22.8s
PPT2 Papeete2 108.69 110 *e*LR LR 14 26 55.4
comp=Z,221nm,37.8s
PPT2 *e*LR LR 14 26 57.5
comp=Z,76nm,24.8s
YKA Yellowknife Ar 115.83 17 PKP **PKiKP 13 55 28.4 -0.2**
comp=Z,0.5nm,0.8s,baz=330,slow=2.5,SNR=9.0
TAOE Nuku Hiva Isla 119.19 102 *e*LR LR 14 31 55.0
comp=Z,39nm,26.9s
SCHQ Schefferville 127.57 350 PKP **PKiKP 13 55 52.4 +0.4**
comp=Z,1.6nm,0.8s,baz=43,slow=5.6,SNR=4.0
NVAR Mina Array Bea 130.93 40 PKP **PKiKP 13 56 00.8 +1.3**
comp=Z,1.4nm,0.7s,baz=261,slow=2.4,SNR=12
ULM Lac du Bonnet 131.53 13 PKP **PKiKP 13 55 59.6 -0.4**
comp=Z,2.3nm,0.6s,baz=354,slow=1.6,SNR=5.1
PDAR Pinedale Array 132.99 29 PKP **PKiKP 13 56 03.2 -0.3**
comp=Z,0.3nm,0.5s,baz=75,slow=2.8,SNR=4.7
BDFB Brasilia 142.79 239 PKhKP PKPpre 13 56 18.1
comp=Z,1.9nm,0.4s,baz=319,slow=7.5,SNR=3.4
CPUP Villa Florida 142.96 216 PKhKP PKPpre 13 56 17.8
comp=Z,0.6nm,0.3s,baz=155,slow=14,SNR=3.1
CFA Coronel Fontan 143.30 197 PKhKP PKPpre 13 56 18.4
comp=Z,1.9nm,0.6s,baz=151,slow=0.8,SNR=6.4
ACDV Cuesta del Vie 144.91 197 *i* P **PKPdf 13 56 24.3 0.0**
VCA Vinchina 145.96 199 *i* P **PKPab 13 56 27.2 -0.1**
TXAR Lajitas Array 146.05 38 PKPbc **PKPab 13 56 27.9 +0.4**
comp=Z,9.4nm,0.7s,baz=291,slow=0.7,SNR=105
TXAR Lajitas Array 146.05 38 PKP2 **PKPab 13 56 28.0 +0.4**
TINO Tinogasta 146.36 201 *i* P **PKPbc 13 56 27.8 -0.2**
FSA Cafayete 147.50 205 *i* P **PKPdf 13 56 30.0 +1.1**
GO03 Copiapo 147.65 197 *i* P **PKPdf 13 56 30.1 +1.2**
TKL Tuckaleechee C 147.77 5 PKPbc **PKPbc 13 56 30.9 -0.7**
comp=Z,7.0nm,0.7s,baz=151,slow=1.6,SNR=4.9
SLA San Lorenzo 148.51 207 *i* P **PKPdf 13 56 32.1 +1.5**
SIV San Ignacio 152.86 224 PKPbc **PKPbc 13 56 43.7 -0.8**
LPAZ La Paz 156.97 211 PKPab **PKPab 13 57 13.7 +0.1**
comp=Z,1.5nm,0.6s,baz=177,slow=7.5,SNR=5.5

NEIC ***04*** *13:47:47.2±2.2, 16°.3S±0°.1×174°.77W±0°.07, h269km±9km, mb4.3/13, Error ellipse: s-maj=15.3km s-min=10.0km az=181.0*
IDC ***04*** *13:47:47.5±1.9, 16°.28S×174°.83W, h274km±19km, mb3.8/9, mbtmp4.4/11, Error ellipse: s-maj=39.2km s-min=13.4km az=144.0*
ISC 04 13:47:46.1±0.6, 16°.2S±0°.1×175°.00W±0°.08, h250km, n31, σ1§10/29, mb4.2/15, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.85**	**54**	P	**Pn**	**13 48 50.3**	**+2.0**
	102nm,0.4s,baz=245,slow=14,SNR=43						
AFI				S	**S**	**13 49 36.7**	**-1.0**
	422nm,0.5s,baz=44,slow=23,SNR=17						
NIUE	**Niue**	**5.63**	**121**		**Pn**	**13 49 10.1**	**+0.5**
MSVF	**Nonsavu**	**6.83**	**256**	P	Pn	13 49 31.3	+6.6
	32nm,1.0s,baz=105,slow=11,SNR=7.8						
MSVF	**Nonsavu**	**6.83**	**256**		Pn	13 49 31.4	+6.8
DZM	**Mont Dzumac**	**18.48**	**249**	P	**P**	**13 51 43.7**	**-0.4**
	4.3nm,1.0s,baz=97,slow=17,SNR=1.9						
DZM	**Mont Dzumac**	**18.48**	**249**	P	**P**	**13 51 44.5**	**+0.4**
DZM				IAmb	IAmb	13 51 59.9	
	comp=Z,12nm,1.2s						
TOZ	**Tahuroa Road**	**23.04**	**200**	P	**P**	**13 52 29.4**	**-0.1**
EIDS	**Eidsvold**	**32.92**	**248**	P	**P**	**13 53 56.9**	**-0.5**
EIDS				IAmb	IAmb	13 54 40.6	
	comp=Z,18nm,1.4s						
ARMA	**Armidale**	**33.62**	**239**	P	**P**	**13 54 03.4**	**0.0**
ARMA				IAmb	IAmb	13 54 04.6	
	comp=Z,9.5nm,0.8s						
CTAO	**Charters Tower**	**36.97**	**258**	P	P	13 54 31.2	-0.7
CTAO				IAmb	IAmb	13 54 49.4	
	comp=Z,13nm,1.4s						
COEN	**Coen**	**40.40**	**267**	P	**P**	**13 55 01.5**	**+1.1**
COEN				IAmb	IAmb	13 55 03.6	
	comp=Z,11nm,1.1s						
STKA	**Stephens Creek**	**42.31**	**240**	P	**P**	**13 55 16.1**	**+0.3**
	comp=Z,4.5nm,0.5s,baz=81,slow=10,SNR=12						
	comp=Z,4.5nm,0.5s						
WR8	**Warramunga Arr**	**48.01**	**258**		**P**	**13 56 00.5**	**-0.1**
WRA	**Warramunga Arr**	**48.17**	**258**	P	**P**	**13 56 01.3**	**-0.5**
	comp=Z,3.5nm,0.4s,baz=95,slow=6.5,SNR=100						
WRA				PcP	**sP**	**13 57 23.9**	**+1.9**
	comp=Z,0.7nm,0.6s,baz=97,slow=3.2,SNR=2.8						
	comp=Z,3.5nm,0.4s						
WRA	**Warramunga Arr**	**48.17**	**258**		**P**	**13 56 01.2**	**-0.6**
AS31	**Alice Springs**	**48.40**	**253**		**P**	**13 56 02.9**	**-0.6**
ASAR	**Alice Springs**	**48.40**	**253**	P	**P**	**13 56 03.5**	**-0.1**
	comp=Z,10.0nm,0.5s,baz=89,slow=7.7,SNR=295						
	comp=Z,10.0nm,0.5s						
ASAR	**Alice Springs**	**48.40**	**253**	P	P	13 56 02.5	-1.1
SIJI	**Sorong**	**55.08**	**280**	P	**P**	**13 56 53.9**	**+1.0**
	comp=Z,30nm,0.6s,baz=121,slow=5.6,SNR=16						
	comp=Z,30nm,0.6s						
MJAR	**Matsushiro Arr**	**68.56**	**321**	P	**P**	**13 58 21.3**	**-0.7**
	comp=Z,2.1nm,1.0s,baz=148,slow=6.3,SNR=2.8						
	comp=Z,2.1nm,1.0s						
PEA0B	**Petropavlovsk-**	**72.92**	**343**	P	**P**	**13 58 47.2**	**-0.6**
PETK	**Petropavlovsk-**	**72.92**	**343**	P	**P**	**13 58 47.2**	**-0.7**
	comp=Z,3.7nm,0.7s,baz=128,slow=9.6,SNR=18						
	comp=Z,3.7nm,0.7s						
NVAR	**Mina Array Bea**	**75.95**	**43**	P	**P**	**13 59 04.7**	**-1.2**
	comp=Z,0.9nm,0.8s,baz=223,slow=9.0,SNR=6.3						
	comp=Z,0.9nm,0.8s						
L14K	**Kuka Creek**	**77.89**	**6**	P	**P**	**13 59 15.8**	**0.0**
L14K				IAmb	IAmb	13 59 24.8	
	comp=Z,8.9nm,1.4s						
M16K	**Timber Creek**	**78.01**	**8**	P	**P**	**13 59 16.3**	**-0.3**
K15K	**Wolf Creek Mou**	**78.94**	**6**	P	**P**	**13 59 21.4**	**-0.2**
K15K				IAmb	IAmb	13 59 48.7	
	comp=Z,7.4nm,1.4s						
PDAR	**Pinedale Array**	**83.88**	**42**	P	**P**	**13 59 46.1**	**-2.1**
	comp=Z,0.6nm,0.7s,baz=217,slow=3.3,SNR=5.1						
	comp=Z,0.6nm,0.7s						
PDAR	**Pinedale Array**	**83.88**	**42**	P	**P**	**13 59 45.6**	**-2.6**
CMAR	**Chiang Mai Arr**	**91.40**	**289**	P	**P**	**14 00 24.7**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=101,slow=2.6,SNR=6.1						
	comp=Z,0.7nm,0.6s						
MKAR	**Makanchi Array**	**110.28**	**314**	PKiKP	**PKiKP**	**14 05 46.2**	**-2.2**
	comp=Z,0.2nm,0.7s,baz=106,slow=0.9,SNR=2.3						
BRTR	**Keskin Array B**	**145.76**	**319**	PKPbc	**PKPdf**	**14 06 55.2**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=123,slow=1.8,SNR=8.9						

IDC ***04*** *13:54:51.2±6.1, 12°.18N×88°.23W, h0km, mb3.5/3, mbtmp3.6/4, ML2.6/2, MS3.0/2, Error ellipse: s-maj=122.1km s-min=34.4km az=19.0*
CATAC ***04*** *13:54:51.1±0.7, 12°.N±4°×8°.9W±°, h13km±6km, M3.5/19, MLv3.5/19, Error ellipse: s-maj=9.6km s-min=3.7km az=22.8, confirmed*
SNET ***04*** *13:54:55.2±0.6, 12°.09N×88°.64W, h12km, ML3.5, Presumed earthquake*
ISC 04 13:54:52.5±2.8, 11°.88N±0°.09×88°.58W±0°.05, h18km±15km, n38, σ1§04/55, mb3.5/3, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**1.48**	**43**	P	**Pn**	**13 55 18.7**	**+0.4**
CSGN				S	**Sg**	**13 55 39.9**	**-0.4**
CNCH	**Conchagua**	**1.57**	**28**	P	**Pn**	**13 55 19.8**	**+0.1**
CNCH				S	**Sg**	**13 55 43.2**	**0.0**
CNCH	**Conchagua**	**1.57**	**28**	*e*P	**Pn**	**13 55 20.0**	**+0.4**
RANC	**El Ranchito**	**1.57**	**11**	P	**Pn**	**13 55 18.9**	**-0.7**
PACA	**Pacayal**	**1.60**	**9**	P	**Pn**	**13 55 19.9**	**-0.1**
PACA				S	**Sb**	**13 55 42.1**	**+0.6**
TECO	**Alcaldia de Te**	**1.66**	**353**	P	**Pn**	**13 55 20.9**	**+0.2**
PQSS	**Presa 15 de Se**	**1.73**	**1**	P	**Pn**	**13 55 22.1**	**+0.3**
COEG	**Centro de Oper**	**1.75**	**351**	P	**Pn**	**13 55 21.2**	**-0.9**
COEG				S	**Sn**	**13 55 44.0**	**0.0**
LALI	**Alcalda de L**	**1.75**	**336**	P	**Pn**	**13 55 21.1**	**-1.0**
PKGN	**Cerro Pekin**	**1.75**	**63**	P	**Pb**	**13 55 23.9**	**-0.2**
PKGN				S	**Sb**	**13 55 47.8**	**+1.9**
SCLA	**Alcaldia de Sa**	**1.81**	**356**	P	**Pn**	**13 55 23.2**	**+0.3**
PAVA	**Las Pavas**	**1.85**	**349**	P	**Pn**	**13 55 23.8**	**+0.3**
PAVA				S	**Sn**	**13 55 45.5**	**-1.1**
HOYN	**Al Sur del Vol**	**1.86**	**67**	P	**Pn**	**13 55 23.8**	**+0.2**
HOYN				S	**Sb**	**13 55 49.9**	**+0.9**
HERN	**Volcan Telica**	**1.86**	**67**	P	**Pn**	**13 55 23.4**	**-0.2**
HERN				S	**Sb**	**13 55 49.4**	**+0.3**
POLN	**Al Sur del Vol**	**1.89**	**66**	P	**Pn**	**13 55 24.4**	**+0.4**
POLN				S	**Sb**	**13 55 49.7**	**-0.2**
CNGN	**Cerro Negro**	**1.94**	**71**	P	**Pn**	**13 55 25.8**	**+1.1**
CNGN				S	**Sb**	**13 55 52.8**	**+1.4**
JAVA	**Jayaque - finc**	**1.95**	**334**	P	**Pn**	**13 55 24.1**	**-0.9**
JAVA	**Jayaque - finc**	**1.95**	**334**	*e*P	**Pn**	**13 55 24.7**	**-0.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
JAYA				eS	Sn	13 55 47.8	-1.3
PMON	Piamonte	1.95	339	P	Pn	13 55 24.2	-0.7
PMON				S	Sn	13 55 47.6	-1.4
MACN	El Madrono	1.96	73	P	Pn	13 55 25.1	+0.2
COPN	Copaltepe	1.97	81	P	Pn	13 55 24.7	-0.4
LEVN	Ruinas Leon Vi	1.99	75	S	Sb	13 55 52.3	-0.5
P5NO	Presa 5 de nov	2.10	355	P	Pn	13 55 27.7	+0.9
P5NO				S	Sn	13 55 53.8	+1.3
CEVE	Cerro Verde	2.18	332	P	Pn	13 55 28.1	-0.1
CEVE				S	Sn	13 55 55.7	+0.8
SBLS	San Blas	2.19	333	eP	Pn	13 55 28.6	+0.3
APQ2	Apoyeque	2.23	82	P	Pn	13 55 28.4	-0.2
NUBE	Las Nubes	2.32	330	P	Pn	13 55 30.3	+0.3
NUBE	Las Nubes	2.32	330	eP	Pn	13 55 30.2	+0.1
NUBE				eS	Sn	13 55 56.9	-1.3
FAME	Alcaldia de Sa	2.40	325	P	Pn	13 55 30.3	-0.6
FAME				S	Sn	13 55 57.2	-2.7
RBDL	Robledal	2.46	334	eP	Pn	13 55 32.7	+0.7
RBDL				eS	Sn	13 56 02.0	+0.2
SARH	Santa Rosa de	2.88	357	P	Pn	13 55 36.7	-0.9
APG	El Apazote	3.60	330	Pn	Pn	13 55 48.8	+1.1
	0.1nm,0.3s,baz=146,slow=11,SNR=4.5						
APG				Sn	Sn	13 56 30.8	+0.8
	0.1nm,0.3s,baz=240,slow=20,SNR=1.9						
JTS	Las Juntas de	3.90	114	LR	LR	13 57 24.1	
	comp=Z,45nm,21.6s,baz=293,slow=41						
CMIG	Matias Romero	8.00	311	Pn	Pn	13 56 49.8	+1.8
	0.5nm,0.3s,baz=134,slow=14,SNR=2.7						
CMIG				Sn	Sn	13 58 21.4	+3.3
	0.1nm,0.3s,baz=174,slow=4.9,SNR=1.1						
	1.1nm,0.3s						
TXAR	Lajitas Array	22.33	323	P	P	13 59 51.5	+1.9
	0.6nm,0.5s,baz=142,slow=8.2,SNR=7.4						
	0.6nm,0.5s						
SCHQ	Schefferville	46.14	17	P	P	14 03 14.4	-1.4
	0.9nm,0.4s,baz=207,slow=8.0,SNR=6.5						
	0.9nm,0.4s						
YKA	Yellowknife Ar	53.87	345	P	P	14 04 13.7	-0.7
	0.4nm,0.8s,baz=144,slow=6.7,SNR=5.5						
	0.4nm,0.8s						
ILAR	Eielson Array	66.09	336	LR	LR	14 38 43.0	
	comp=Z,54nm,18.4s,baz=315,slow=40						

*SJA **04** 14:09:02.4±0.7,21°.72S×68°.53W,h140km,ML3.5,MW3.6*
*GUC **04** 14:09:04.3±0.6,21°.65S×68°.53W,h132km±4km,ML3.5*
ISC 04 14:09:02.0±1.4,**21°.68S**±0°.03×**68°.51W**±0°.05, **h148**km±10km,**n31**,σ1s**99**/50,**5C,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.69	261⇑	iP	Pn	14 09 24.7	+0.2
PB09				eS	Sn	14 09 40.2	-1.3
PB09				IAML		14 09 42.6	
	comp=E,707nm,0.2s						
PB09	IPOC Station P	0.69	261	eP	Pn	14 09 24.4	0.0
PB09				eS	Sn	14 09 41.0	-0.5
PB09				IAML		14 09 43.0	
	comp=Z,723nm,0.2s						
PB01	IPOC Station P	1.11	305⇑	eP	Pn	14 09 27.8	+0.1
PB01				eS	Sn	14 09 45.9	-1.4
PB01				IAML		14 09 46.8	
	comp=N,2μm,0.2s						
PB01	IPOC Station P	1.11	305	eP	Pn	14 09 27.9	+0.1
PB01				eS	Sn	14 09 46.9	-0.4
PB01				IAML		14 09 47.0	
	comp=Z,803nm,0.2s						
PB03	IPOC Station P	1.21	252⇑	eP	Pn	14 09 29.2	+0.5
PB03				eS	Sn	14 09 48.4	-0.6
PB03				IAML		14 09 48.8	
	comp=N,2μm,0.2s						
PB03	IPOC Station P	1.21	252	eP	Pn	14 09 23.6	-5.1
PB03				eS	Sn	14 09 48.4	-0.6
PB03				IAML		14 09 49.8	
	comp=Z,2μm,0.2s						
PB07	IPOC Station P	1.28	268	eP	Pn	14 09 30.0	+0.5
PB07				IAML		14 09 50.2	
	comp=N,2μm,0.1s						
PB07	IPOC Station P	1.28	268	eP	Pn	14 09 29.7	+0.3
PB07				eS	Sn	14 09 50.4	+0.1
PB07				IAML		14 09 52.5	
	comp=Z,2μm,0.1s						
AF01	San Pedro de A	1.30	167	eP	Pn	14 09 47.9	+18
AF01				eS	Sn	14 09 49.9	-1.0
AF01				IAML		14 10 09.3	
	comp=Z,397nm,1.1s						
PB02	IPOC Station P	1.34	285	eP	Pn	14 09 30.4	+0.5
PB02	IPOC Station P	1.34	285	eP	Pn	14 09 30.1	+0.2
PB02				eS	Sn	14 09 51.1	-0.2
PB06	IPOC Station P	1.42	224⇑	eP	Pn	14 09 31.7	+1.0
PB06				eS	Sn	14 09 52.4	-0.3
PB06				IAML		14 09 53.6	
	comp=N,1μm,0.1s						
PB06	IPOC Station P	1.42	224	eP	Pn	14 09 26.4	-4.3
PB06				eS	Sn	14 09 53.7	+1.0
PB06				IAML		14 09 54.7	
	comp=Z,538nm,0.2s						
PB08	IPOC Station P	1.65	338⇑	eP	Pn	14 09 34.7	+1.2
PB08				eS	Sn	14 09 57.1	-0.4
PB08				IAML		14 09 59.7	
	comp=N,286nm,0.2s						
PB08	IPOC Station P	1.65	338	eP	Pn	14 09 34.7	+1.2
PB08				eS	Sn	14 09 58.1	+0.6
PB08				IAML		14 09 59.4	
	comp=Z,228nm,0.3s						
TA01	Diego Aracena	1.92	305	eP	Pn	14 09 36.9	+0.8
TA01				eS	Sn	14 10 01.4	-0.8
TA01	Diego Aracena	1.92	305	eP	Pn	14 09 36.3	+0.2
TA01				eS	Sn	14 10 02.3	+0.1
TA01				IAML		14 10 02.7	
	comp=Z,480nm,0.6s						
TA02	Huaiquique	2.07	313	eP	Pn	14 09 38.6	+0.8
TA02	Huaiquique	2.07	313	eP	Pn	14 09 39.8	+1.9
TA02				eS	Sn	14 10 07.4	+2.1
TA02				IAML		14 10 09.5	
	comp=Z,482nm,0.3s						
GO01	Chusmiza	2.11	342	eP	Pn	14 09 39.9	+1.0
GO01				IAML		14 10 10.3	
	comp=N,694nm,0.1s						
GO01	Chusmiza	2.11	342	eP	Pn	14 09 40.2	+1.4
GO01				eS	Sn	14 10 08.8	+1.8
GO01				IAML		14 10 09.2	
	comp=Z,113nm,0.3s						
PB11	IPOC Station P	2.20	330	eP	Pn	14 09 40.1	+0.6
PB11				eS	Sn	14 10 07.8	-0.5
PB11	IPOC Station P	2.20	330	eP	Pn	14 09 40.2	+0.6
PB11				eS	Sn	14 10 08.2	-0.2
PB11				IAML		14 10 09.7	
	comp=Z,400nm,0.5s						
YJA	Yavi	2.82	101	eP	Pn	14 09 47.7	+0.2
YJA				eS	Sn	14 10 24.4	+2.0
SALTA		3.22	142	eP	Pn	14 09 37.8	-15
HJA	Humahuaca	3.24	118	eP	Pn	14 09 50.2	-2.5
PB14	IPOC Station P	3.41	210	eP	Pn	14 09 51.2	-3.7
PB14				eS	Sn	14 10 29.2	-6.6
PB14				IAML		14 10 49.7	
	comp=Z,68nm,0.4s						
PB16	IPOC Station P	3.46	344	eP	Pn	14 09 57.9	+2.0
PB16				eS	Sn	14 10 29.2	-8.2
PB16				IAML		14 11 11.9	
	comp=Z,29nm,0.4s						
PB12	IPOC Station P	3.50	330	eP	Pn	14 09 55.7	-0.1
PB12				eS	Sn	14 10 26.4	-11
PB12				IAML		14 11 04.4	
	comp=Z,66nm,0.6s						
AC01	Pan de Azucar	4.84	203	eP	Pn	14 10 13.2	0.0
AC01				eS	Sn	14 11 07.0	-1.8
AC01				IAML		14 11 29.6	
	comp=Z,19nm,0.4s						
AC02	Maricunga	5.16	186	eP	Pn	14 10 20.8	+2.8
AC02				eS	Sn	14 11 21.4	+4.2
AC02				IAML		14 12 02.7	
	comp=Z,13nm,0.6s						

*JMA **04** 14:15:11.3±0.8,21°N±3°×12°2E±°,h6km,MV4.7/19, PHILIPPINE ISL REGION*
*NIED **04** 14:15:11.3,20°.63N×121°.85E,h6km,MW4.2,Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}1.71; $M_{\theta\theta}$-1.07; $M_{\phi\phi}$-0.64; $M_{r\theta}$0.09; $M_{\theta\phi}$-1.40; $M_{\phi r}$-1.21; Fault plane solution: $M_0$2.38000×10^{15} NP1:ϕ_s75.00000°, δ42.00000°,λ133.00000°. NP2:ϕ_s204.00000°,δ61.00000°, λ59.00000°.*
*BJI **04** 14:15:12.9,20°.37N×121°.77E,h7km,mB4.6/2,mb4.0/18, ML4.2/1,Ms4.2/3,Ms7 4.0/2*
*NEIC **04** 14:15:13.5±1.4,20°.57N±0°.08×122°.02E±0°.09,h10km±1km, mb4.5/41,Error ellipse: s-maj=14.1km s-min=12.9km az=136.0*
*MAN **04** 14:15:15.0,20°.30N×121°.87E,h1km,MS4.0*
MAN INTENSITY IV - SABTANG AND IVANA BATANES; . INTENSITY III - BASCO MAHATAO AND UYUGAN BATANES; . INTENSITY II - ITBAYAT BATANES.
*IDC **04** 14:15:17.2±2.4,20°.53N×122°.06E,h42km±22km,mb3.9/24, mbtmp4.2/27,ML4.2/4,MS3.5/25,Error ellipse: s-maj=17.8km s-min=11.9km az=73.0*
ISC 04 14:15:13.1±0.4,**20°.58N**±0°.04×**121°.98E**±0°.05,**h10**km,**n135**, σ1s**19**/125,**mb4.3**/46,**MS3.5**/23,**Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWGBT	Beinan	2.38	340	P	Pn	14 15 50.8	-1.3
TWG	Pinlang	2.38	339		Pn	14 15 50.3	-1.9
PIP	Pasuquin	2.59	210	eP	Pn	14 15 55.0	-0.1
PIP				eS	Sn	14 16 23.4	-3.2
YULB	Yu-li	2.87	347	P	Pn	14 15 58.9	0.0
YULB	Yu-li	2.87	347		Pn	14 15 59.0	0.0
CVP	Callao Caves	2.87	183	eP	Pn	14 16 00.4	+1.5
TPUB	Ta-pu	2.98	335	P	Pn	14 16 01.9	+1.4
TPUB	Ta-pu	2.98	335		Pn	14 16 01.0	+0.5
SSLB	Suanglung	3.33	344	P	Pn	14 16 07.1	+1.8
SSLB	Suanglung	3.33	344		Pn	14 16 06.5	+1.2
NACB	Ninganchiao	3.59	354	P	Pn	14 16 08.2	-0.7
NACB	Ninganchiao	3.59	354		Pn	14 16 07.9	-0.9
HATJ	Hateruma jima	3.85	26	eP	Pn	14 16 13.0	+0.6
JYNG	Yonagunijimaku	3.95	13	eS	Sn	14 16 59.7	-0.5
YOJ	Yonaguni jima	3.98	14	P	Pn	14 16 15.4	+1.3
YOJ	Yonaguni jima	3.98	14		Pn	14 16 14.0	-0.1
YOJ	Yonaguni jima	3.98	14	eS	Sn	14 17 00.9	+0.1
IRIF	Iriomote-Funau	4.07	23	eP	Pn	14 16 16.0	+0.6
IRIF				eS	Sn	14 17 02.7	-0.4
JKRS	Kuro-shima	4.09	27	eP	Pn	14 16 16.9	+1.2
YHNB	Yeheng	4.11	352	P	Pn	14 16 17.4	+1.4
YHNB	Yeheng	4.11	352		Pn	14 16 16.1	+0.1
JIJ	Ishigaki jima	4.26	28	eP	Pn	14 16 18.6	+0.5
JIJ				S	Sn	14 17 04.9	-3.0
TATO	Taipei	4.39	354	P	Pn	14 16 21.5	+1.6
TATO	Taipei	4.39	354		Pn	14 16 20.3	+0.4
JISG	Ishigakijimahi	4.53	28	eP	Pn	14 16 21.5	-0.3
JISG				S	Sn	14 17 11.5	-3.0
JTJ	Tarama	4.76	31	S	Sn	14 17 19.3	-0.8
KNMB	Chin-men Tao	5.09	320	Pn	Pn	14 16 28.2	-1.3
JMJ2	Miyako jima3	5.17	36	eP	Pn	14 16 31.6	+1.1
JMJ	Miyako jima 2	5.21	35	P	Pn	14 16 31.5	+0.5
PCPS	Palayan City	5.96	189	eP	Pn	14 16 31.2	-10
PCPS				eS	Sn	14 17 32.9	-17
TGY	Tagaytay City	6.52	189	P	Pn	14 16 49.5	+0.3
	22nm,0.3s,baz=6.0,slow=19,SNR=1.1						
GQP	Guinayangan	6.66	176	eP	Pn	14 16 53.4	+2.4
GQP				eS	Sn	14 18 07.0	0.0
HKPS	Hong Kong Po S	7.49	284	Pn	Pn	14 17 03.4	+0.9
JIH	Iheya	8.44	39	eP	Pn	14 17 16.6	+1.1
JOW	Kunigami	8.48	42	P	Pn	14 17 16.0	-0.1
	9.6nm,0.3s,baz=188,slow=13,SNR=21						
	30nm,0.5s						
JOW	Kunigami	8.48	42	P	Pn	14 17 16.3	+0.2
JOW	Kunigami	8.48	42	Pn	Pn	14 17 15.8	-0.3
JOW	Kunigami	8.48	42	eP	Pn	14 17 16.5	+0.5
JYRO	Yoronjima	8.73	41	eP	Pn	14 17 19.7	+0.2
QIZ	Qiongzhong	11.53	264	Pn	Pn	14 17 56.9	-0.9
QIZ	Qiongzhong	11.53	264	P	Pn	14 17 57.8	0.0
QIZ				S	Sn	14 20 06.3	-0.4
QIZ				L	L		
	comp=N,400nm,10.6s						
QIZ				L	L		
	comp=E,380nm,12.0s						
DAV	Davao City (W)	13.88	165	LR	LR	14 23 53.3	
	comp=Z,312nm,20.0s,baz=326,slow=37						
JNU	Nakatsue	14.79	31	P	Pn	14 18 43.5	+1.1
	0.4nm,0.3s,baz=180,slow=9.1,SNR=1.6						
JNU				LR	LR	14 24 20.5	
	comp=Z,83nm,19.2s,baz=206,slow=37						
	8.2nm,0.8s						
LYN	LuoYang	16.25	331	P	P	14 19 06.6	+2.0
LYN				pmax	pmax		
	comp=Z,11nm,0.7s						
LYN				L	L		
	comp=N,510nm,12.7s						
LYN				L	L		
	comp=E,480nm,12.4s						
LYN				L	L		
	comp=Z,540nm,11.3s						
KSRS	Korea Array	17.59	16	P	P	14 19 19.6	+0.3
	0.4nm,0.3s,baz=198,slow=11,SNR=13						
KSRS				LR	LR	14 26 23.8	
	comp=Z,67nm,18.3s,baz=195,slow=38						
	2.2nm,0.7s						
BJT	Baijiatuau	20.00	347		P	14 19 45.9	0.0
BJT				IAmb	IAmb	14 19 52.5	
	comp=Z,17nm,0.9s						
SBUM	Sibu	20.38	209		P	14 19 50.6	+0.4
SBUM				IAmb	IAmb	14 19 52.2	
	comp=Z,19nm,1.0s						
MJAR	Matsushiro Arr	21.30	38	P	P	14 20 01.7	+1.7
	comp=Z,1.0nm,0.7s,baz=231,slow=8.2,SNR=4.3						
	comp=Z,1.0nm,0.7s						
CHTO	Chiang Mai	21.76	269		P	14 20 06.6	+1.5
CM31	Chiang Mai Arr	21.81	268	P	P	14 20 06.1	+0.5
CM31				IAmb	IAmb	14 20 08.3	
	comp=Z,10nm,0.8s						
CMAR	Chiang Mai Arr	21.81	268	P	P	14 20 07.6	+2.0
	comp=Z,6.2nm,0.7s,baz=75,slow=9.1,SNR=54						
CMAR				PcP	PcP	14 24 04.8	-1.0
	comp=Z,0.4nm,0.3s,baz=111,slow=3.0,SNR=4.3						
CMAR				LR	LR	14 28 34.2	
	comp=Z,84nm,19.0s,baz=90,slow=36						
	comp=Z,6.2nm,0.7s						
CMAR	Chiang Mai Arr	21.81	268		P	14 20 07.2	+1.5
LZH	Lanzhou	22.15	318	eP	P	14 20 14.1	+4.8
LZH				pP	sP	14 20 19.0	+5.9
LZH				S	Sn	14 24 20.3	-4.3
LZH				pmax	pmax		
	comp=Z,11nm,1.4s						
LZH				L	L		
	comp=Z,250nm,11.8s						
LZH				L	L		
	comp=Z,260nm,12.4s						
LZH				L	L		
	comp=Z,260nm,14.3s						
LZDM	Lanzhou Array	22.16	318	P	P	14 20 10.6	+1.0
	comp=Z,2.3nm,0.4s,baz=146,slow=11,SNR=6.1						
	comp=Z,2.3nm,0.4s						
GUMO	Guam	22.94	104	LR	LR	14 27 06.2	
	comp=Z,42nm,22.0s,baz=94,slow=31						
SIJI	Sorong	23.18	156	LR	LR	14 31 22.5	
	comp=Z,26nm,19.1s,baz=158,slow=42						
KULM	Kulim	25.70	237	P	P	14 20 43.6	0.0
KULM				IAmb	IAmb	14 20 53.5	
	comp=Z,21nm,1.4s						
IPM	Ipoh	25.91	235		P	14 20 45.0	-0.6
GTA2	Gaotai	26.80	320	eP	P	14 20 55.2	+1.6
GTA2				pP	sP	14 20 58.7	+1.2
GTA2				pmax	pmax		
	comp=Z,2.0nm,1.3s						
BRDH	Bariadhala	28.25	280	LR	LR	14 32 42.1	
	comp=Z,52nm,19.0s,baz=239,slow=37						
RPSI	Rantau Prapat	28.66	235	P	P	14 21 09.2	-1.0
RPSI				IAmb	IAmb	14 21 10.9	
	comp=Z,12nm,1.4s						
KLR	Kul'dur	29.63	13	LR	LR	14 32 55.2	
	comp=Z,71nm,19.4s,baz=206,slow=36						
ULN	Ulaanbaatar	29.77	340		P	14 21 20.0	-0.1
SONM	Songino Array	29.97	339	P	P	14 21 22.0	+0.3
	comp=Z,1.1nm,0.5s,baz=157,slow=11,SNR=7.5						
SONM				LR	LR	14 33 40.6	
	comp=Z,143nm,20.4s,baz=162,slow=37						
	comp=Z,1.1nm,0.5s						
SONM	Songino Array	29.97	339	P	P	14 21 22.1	+0.3
GSI	Gunungsitoli	30.58	234	P	P	14 21 26.9	-0.4
EVN	Everest	32.80	290		P	14 21 48.1	+0.6
EVN				IAmb	IAmb	14 21 50.0	
	comp=Z,3.9nm,0.6s						
TLY	Talaya	34.19	340	LR	LR	14 36 28.6	
	comp=Z,93nm,19.5s,baz=142,slow=37						
KNRA	Kununurra	36.64	169	P	P	14 22 18.5	-1.4
KNRA				IAmb	IAmb	14 22 24.9	
	comp=Z,6.3nm,1.1s						
MKAR	Makanchi Array	41.47	319	P	P	14 23 01.2	+1.0
	comp=Z,3.8nm,0.5s,baz=108,slow=8.7,SNR=60						
MKAR				PcP	PcP	14 24 57.2	-0.7
	comp=Z,0.3nm,0.6s,baz=127,slow=3.8,SNR=1.9						
MKAR				LR	LR	14 42 03.3	
	comp=Z,51nm,19.9s,baz=121,slow=39						
	comp=Z,3.8nm,0.5s						
MKAR	Makanchi Array	41.47	319		P	14 23 00.4	+0.2
MAKZ	Makanchi	41.67	318		P	14 23 02.5	+0.6
YAK	Yakutsk	41.76	5	LR	LR	14 40 53.2	
	comp=Z,40nm,18.9s,baz=96,slow=37						
WB0	Warramunga Arr	41.90	162	P	P	14 23 01.1	-2.8
WB0				IAmb	IAmb	14 23 15.4	
	comp=Z,5.1nm,0.8s						
WRA	Warramunga Arr	42.05	163	P	P	14 23 03.3	-1.9
	comp=Z,2.6nm,0.8s,baz=342,slow=9.1,SNR=15						
WRA				PcP	PcP	14 24 58.5	-1.6
	comp=Z,0.3nm,0.6s,baz=320,slow=4.5,SNR=2.0						
	comp=Z,2.6nm,0.8s						
WRA	Warramunga Arr	42.05	163	P	P	14 23 02.9	-2.3
PALK	Pallekele	42.05	258	LR	LR	14 40 39.5	
	comp=Z,36nm,18.8s,baz=123,slow=36						
H11N1	WAKE ISLAND Hy	42.07	83	T	T	15 08 05.5	
	baz=278,slow=75,SNR=78						
H11N2	WAKE ISLAND Hy	42.07	83	T	T	15 08 09.8	
	baz=278,slow=75,SNR=102						
H11N3	WAKE ISLAND Hy	42.09	83	T	T	15 08 04.0	
	baz=278,slow=75,SNR=83						
H11S3	WAKE ISLAND Hy	42.09	85	T	T	15 08 07.4	
	baz=281,slow=75,SNR=1096						
H11S1	WAKE ISLAND Hy	42.10	85	T	T	15 08 08.3	
	baz=281,slow=75,SNR=955						
H11S2	WAKE ISLAND Hy	42.11	85	T	T	15 08 08.6	
	baz=281,slow=75,SNR=936						
WR8	Warramunga Arr	42.11	162	P	P	14 23 03.1	-2.6
PETK	Petropavlovsk-	42.49	31	P	P	14 23 08.2	-0.2
	comp=Z,1.0nm,0.7s,baz=224,slow=6.2,SNR=4.8						
	comp=Z,1.0nm,0.7s						
ZAA0	Zalesovo Array	43.67	329		P	14 23 18.2	+0.2
ZALV	Zalesovo Beam	43.67	329	P	P	14 23 18.0	0.0
	comp=Z,17nm,0.6s,baz=113,slow=7.8,SNR=80						
ZALV				LR	LR	14 42 52.8	
	comp=Z,71nm,19.0s,baz=126,slow=38						
	comp=Z,17nm,0.6s						
KSH2	Kashi	43.77	305	P	P	14 23 21.5	+2.3
KSH2				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BOOM	Boomskoye usch	44.25	310	P	P	14 23 24.0	+1.0
BOOM				IAmb	IAmb	14 24 04.7	
	comp=Z,7.8nm,1.5s						
AAK	Ala-Archa	45.32	310	LR	LR	14 45 05.6	
	comp=Z,74nm,19.4s,baz=93,slow=39						
KURK	Kurchatov	45.34	322		P	14 23 31.5	+0.1
KURK				IAmb	IAmb	14 23 35.4	
	comp=Z,3.7nm,0.6s						
KURBB	Kurchatov Arra	45.36	322	P	P	14 23 31.9	+0.5
	comp=Z,5.3nm,0.8s,baz=115,slow=7.7,SNR=29						
	comp=Z,5.3nm,0.8s						
AS31	Alice Springs	45.49	165	P	P	14 23 31.9	-0.9
ASAR	Alice Springs	45.49	165	P	P	14 23 32.1	-0.7
	comp=Z,1.0nm,0.4s,baz=344,slow=6.8,SNR=18						
ASAR				PcP	PcP	14 25 10.4	-1.3
	comp=Z,0.4nm,0.9s,baz=352,slow=3.9,SNR=1.8						
	comp=Z,1.0nm,0.4s						
ASAR	Alice Springs	45.49	165	P	P	14 23 32.9	+0.1
CTA	Charters Tower	46.89	148	LR	LR	14 41 36.8	
	comp=Z,51nm,21.8s,baz=46,slow=34						
GAR	Garm	47.79	304		P	14 23 51.4	+0.5
CHGR	Chuyangaron	48.65	304		P	14 23 58.7	+1.2
BVAR	Borovoye Array	50.94	322	P	P	14 24 15.3	+0.7
	comp=Z,2.1nm,0.5s,baz=103,slow=7.6,SNR=8.0						
BVAR				PcP	PcP	14 25 29.5	-1.3
	comp=Z,0.8nm,0.5s,baz=112,slow=3.9,SNR=3.8						
	comp=Z,2.1nm,0.5s						
BORK	Borovoye	50.99	322		P	14 24 15.0	+0.1
BORK				IAmb	IAmb	14 24 25.2	
	comp=Z,3.4nm,0.7s						
INKA	Innaminka	51.36	159	P	P	14 24 17.0	-0.9
NRIK	Noril'sk	53.06	345	P	P	14 24 29.3	-0.8
	comp=Z,1.6nm,0.6s,baz=146,slow=7.9,SNR=3.8						
NRIK				LR	LR	14 48 46.8	
	comp=Z,50nm,18.5s,baz=142,slow=38						
	comp=Z,1.6nm,0.6s						
BILL	Bilibino	54.82	19		P	14 24 42.8	-0.2
BILL				IAmb	IAmb	14 24 47.4	
	comp=Z,2.7nm,0.7s						
STKA	Stephens Creek	55.45	160	P	P	14 24 48.0	+0.1
	comp=Z,0.9nm,0.3s,baz=338,slow=10,SNR=3.0						
	comp=Z,0.9nm,0.3s						
AB31	Akbulak array	56.50	316		P	14 24 56.1	+0.7
ARTI	Arti	58.52	324	LR	LR	14 51 08.2	
	comp=Z,51nm,18.9s,baz=69,slow=37						
ARTI	Arti	58.52	324		P	14 25 09.0	-0.5
K15K	Wolf Creek Mou	65.72	30	P	P	14 25 58.4	+0.7
C18K	Utukok River	66.21	23	P	P	14 26 01.2	+0.3
C19K	Lookout Ridge	66.82	22	P	P	14 26 05.3	+0.5
C19K				IAmb	IAmb	14 26 30.6	
	comp=Z,4.6nm,1.2s						
D19K	Kuna River	67.33	23	P	P	14 26 08.4	+0.4
GNI	Garni	67.47	306	LR	LR	15 01 25.6	
	comp=Z,21nm,20.2s,baz=55,slow=41						
E19K	Redstone River	67.65	24	P	P	14 26 09.8	-0.2
E19K				IAmb	IAmb	14 26 30.6	
	comp=Z,3.7nm,1.1s						
D20K	Etivluk River	67.89	23	P	P	14 26 12.0	+0.5
D20K				IAmb	IAmb	14 26 13.5	
	comp=Z,6.0nm,1.1s						
KBZ	Khabaz	68.32	310	P	P	14 26 16.1	+1.5
	comp=Z,2.3nm,0.8s,baz=84,slow=2.0,SNR=8.1						
	comp=Z,2.3nm,0.8s						
B21K	Ikpikpuk River	68.59	22	P	P	14 26 16.4	+0.6
GEVA	Gevas	69.06	304		P	14 26 20.5	+1.0
GEVA				IAmb	IAmb	14 26 31.9	
	comp=Z,3.6nm,0.9s						
RAYN	Ar Rayn	70.13	288		P	14 26 26.4	+0.1
RAYN				IAmb	IAmb	14 26 27.9	
	comp=Z,5.9nm,0.9s						
E24K	Your Creek	70.93	23	P	P	14 26 30.7	+0.3
E24K				IAmb	IAmb	14 26 32.0	
	comp=Z,2.5nm,0.8s						
F25K	Christian Rive	72.07	24		P	14 26 38.4	+1.2
F25K				IAmb	IAmb	14 27 15.8	
	comp=Z,3.6nm,1.2s						
ILAR	Eielson Array	72.07	27	P	P	14 26 37.9	+0.6
	comp=Z,0.5nm,0.8s,baz=266,slow=5.1,SNR=6.7						
	comp=Z,0.5nm,0.8s						
ARCES	ARCESS Array B	73.14	339	P	P	14 26 42.9	-0.7
	comp=Z,3.8nm,1.1s,baz=84,slow=4.8,SNR=1.3						
	comp=Z,3.8nm,1.1s						
SPITS	Spitsbergen Ar	73.14	348	P	P	14 26 43.9	+0.5
	comp=Z,9.7nm,0.9s,baz=72,slow=4.7,SNR=4.8						
	comp=Z,9.7nm,0.9s						
I28M	Miner Creek	74.78	25	P	P	14 26 54.0	+0.6
FINES	FINESS Array B	74.92	330	P	P	14 26 53.5	-0.6
	comp=Z,5.8nm,1.0s,baz=57,slow=7.0,SNR=5.7						
	comp=Z,5.8nm,1.0s						
F30M	Barrier River	75.71	23		P	14 26 58.7	+0.2
F30M				IAmb	IAmb	14 27 10.3	
	comp=Z,3.9nm,0.9s						
BRTR	Keskin Array B	75.91	307	P	P	14 27 00.2	-0.1
	comp=Z,0.9nm,0.7s,baz=107,slow=6.7,SNR=5.8						
BRTR				LR	LR	15 07 02.0	
	comp=Z,26nm,19.2s,baz=9.0,slow=41						
	comp=Z,0.9nm,0.7s						
AKASG	Malin Array Be	76.05	319	P	P	14 26 59.9	-0.9
	comp=Z,0.5nm,0.3s,baz=64,slow=5.6,SNR=5.9						
AKASG				LR	LR	15 02 57.2	
	comp=Z,63nm,18.2s,baz=25,slow=38						
	comp=Z,0.5nm,0.3s						
BUR08	Bucovina Ar. S	79.47	317		P	14 27 19.6	-0.5
BUR08				IAmb	IAmb	14 27 20.6	
	comp=Z,3.3nm,0.8s						
HFS	Hagfors	81.06	331	P	P	14 27 26.9	-1.2
	comp=Z,1.2nm,0.6s,baz=106,slow=8.1,SNR=6.0						
HFS				LR	LR	15 06 31.1	
	comp=Z,102nm,18.9s,baz=62,slow=38						
	comp=Z,1.2nm,0.6s						
NOA	NORSAR Array B	81.74	333	P	P	14 27 30.4	-1.4
	comp=Z,0.8nm,0.8s,baz=66,slow=4.5,SNR=2.1						
NOA				LR	LR	15 06 51.8	
	comp=Z,56nm,18.3s,baz=60,slow=38						
	comp=Z,0.8nm,0.8s						
VRAC	Vranov	84.17	321	LR	LR	15 08 50.7	
	comp=Z,70nm,18.7s,baz=6.0,slow=38						
YKA	Yellowknife Ar	85.99	23	P	P	14 27 53.0	-0.4
	comp=Z,0.4nm,0.5s,baz=313,slow=5.2,SNR=14						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	comp=Z,0.4nm,0.5s						
GERES	**GERESS Array B**	**86.08**	**321**	P	**P**	**14 27 54.3**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=311,slow=6.5,SNR=3.7						
	comp=Z,0.3nm,0.4s						
EKA	**Eskdalemuir Ar**	**91.22**	**332**	LR	LR	15 14 04.7	
	comp=Z,174nm,20.1s,baz=33,slow=39						

*JSN **04** 14:25:21.2±1.2, 19.°38N×81.°23W, h15km±999km, MD4.3, Presumed earthquake*
*SSNC **04** 14:25:21.4±1.4, 18.°80N×81.°53W, h20km±25km, MD3.6, ML3.3, Presumed earthquake*
ISC 04 14:25:20.3±3.0**, 18.°92N**±0.°10×**81.°2W**±0.°1**, h10km, n10, σ2.s86**/20**, 3D, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGV	**Manicaragua**	**3.38**	**20**	eP	**Pn**	**14 26 14.4**	**+1.3**
MGV				eS	**Sn**	**14 26 53.4**	**0.0**
MGV				⇓eSg	**Sb**	**14 26 55.9**	**-5.6**
MGV				IAML		14 26 56.0	
	comp=E,39nm,0.2s						
MGV				IAML		14 26 56.3	
	comp=N,24nm,0.1s						
MTDJ	**Mount Denham**	**3.58**	**101**	eP	**Pn**	**14 26 17.1**	**+1.2**
MTDJ				⇓eS	**Sn**	**14 26 55.1**	**-3.3**
MTDJ				IAML		14 26 59.3	
	comp=N,85nm,0.2s						
MTDJ				IAML		14 27 00.8	
	comp=N,54nm,0.2s						
CAIB	**Caibarien**	**3.92**	**25**	eP	**Pn**	**14 26 23.7**	**+3.2**
CAIB				eS	**Sn**	**14 27 09.4**	**+2.8**
CAIB				IAML		14 27 12.4	
	comp=N,7.4nm,0.1s						
CAIB				IAML		14 27 13.1	
	comp=E,10nm,0.1s						
CCCC	**Cccc**	**3.97**	**55**	eP	**Pb**	**14 26 27.9**	**-2.4**
CCCC				eS	**Sb**	**14 27 17.3**	**-1.2**
CCCC				IAML		14 27 21.7	
	comp=E,5.1nm,0.2s						
CCCC				IAML		14 27 22.9	
	comp=N,3.7nm,0.2s						
LMGC	**Las Mercedes**	**4.15**	**73**	eP	**Pn**	**14 26 25.9**	**+2.2**
LMGC				eS	**Sn**	**14 27 12.6**	**+0.3**
LMGC				IAML		14 27 15.8	
	comp=N,16nm,0.2s						
LMGC				IAML		14 27 16.6	
	comp=E,14nm,0.1s						
STH	**Stony Hill**	**4.28**	**101**	⇓iP	**Pn**	**14 26 26.7**	**+1.1**
YAR	**Yar**	**4.81**	**72**	eP	**Pn**	**14 26 36.1**	**+3.2**
YAR				eS	**Sn**	**14 27 30.9**	**+2.1**
MARVS	**Santiago de Cu**	**5.15**	**77**	eP	**Pn**	**14 26 40.4**	**+3.0**
MARVS				eS	**Sn**	**14 27 37.6**	**+0.7**
MARVS				IAML		14 27 43.7	
	comp=E,7.3nm,0.2s						
MARVS				IAML		14 27 44.3	
	comp=N,7.2nm,0.3s						
PINC	**Pinares de May**	**5.36**	**72**	eP	**Pn**	**14 26 44.9**	**+4.6**
PINC				eS	**Sn**	**14 27 44.9**	**+2.8**
PINC				IAML		14 27 52.6	
	comp=E,2.8nm,0.1s						
PINC				IAML		14 27 56.8	
	comp=N,1.6nm,0.1s						
QMBU	**Quimbuelo**	**6.19**	**77**	eP	**Pn**	**14 26 54.8**	**+3.1**
QMBU				eS	**Sn**	**14 28 03.0**	**+0.3**
QMBU				IAML		14 28 06.5	
	comp=N,1.4nm,0.2s						
QMBU				IAML		14 28 06.8	
	comp=E,1.7nm,0.1s						

*AFAD **04** 14:40:54.4, 38.°38N×44.°57E, h7km±4km, ML3.1*
*ISK **04** 14:40:55.0, 38.°32N×44.°45E, h5km, ML3.4/5*
*AZER **04** 14:40:55.5, 38.°42N×44.°50E, h10km, ml3.2*
*NSSP **04** 14:40:56.3, 38.°37N×44.°53E, h10km, Ms3.2*
*TEH **04** 14:40:56.5, 38.°41N×44.°55E, h6km±59km, ML2.9, Presumed earthquake*
ISC 04 14:40:55.2±1.1**, 38.°37N**±0.°02×**44.°51E**±0.°02**, h3km**±10km**, n55, σ1.s53**/87**, 1C-1D, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.50**	**306**	P	**Pg**	**14 41 05.1**	**+0.4**
OZAP				IAML		14 41 14.0	
	comp=N,3μm,0.6s						
YOVA	**Hakkari_Yksek**	**0.80**	**192**	P	**Pg**	**14 41 10.6**	**+0.1**
YOVA				S	**Sb**	**14 41 23.9**	**+0.8**
YOVA				IAML		14 41 29.0	
	comp=N,556nm,0.6s						
ISHB	**Shabestar**	**0.88**	**95**	Pg	**Pg**	**14 41 12.2**	**+0.2**
TVAN	**Van**	**0.88**	**281**	P	**Pg**	**14 41 10.4**	**-1.6**
TVAN				S	**Sb**	**14 41 25.6**	**+0.1**
VMUR	**Van-Muradiye**	**0.96**	**311**	P	**Pg**	**14 41 12.4**	**-1.1**
VMUR				S	**Sn**	**14 41 29.1**	**-0.9**
VMUR				IAML		14 41 31.0	
	comp=N,719nm,0.5s						
VMUR				IAML		14 41 31.0	
	comp=E,736nm,0.4s						
MAKU	**Maku**	**0.99**	**8**	Pg	**Pg**	**14 41 14.3**	**0.0**
IMRD	**Marand**	**1.00**	**70**	Pg	**Pb**	**14 41 15.2**	**0.0**
HAKT	**HAKKARI**	**1.03**	**218**	P	**Pg**	**14 41 14.4**	**-0.4**
HAKT				S	**Sb**	**14 41 31.1**	**+1.3**
HAKT				IAML		14 41 33.0	
	comp=N,439nm,0.3s						
HAKT				IAML		14 41 33.0	
	comp=E,469nm,0.5s						
NAX	**Nakhchivan**	**1.11**	**44**	P	**Pn**	**14 41 17.6**	**-0.3**
NAX				S	**Sn**	**14 41 33.4**	**-0.3**
GEVA	**Gevas**	**1.14**	**268**	P	**Pg**	**14 41 15.3**	**-1.7**
GEVA				S	**Sb**	**14 41 33.9**	**+0.9**
AKDM	**Akdamar-Van**	**1.20**	**269**	Pn	**Pg**	**14 41 16.9**	**-1.3**
AKDM				Sn	**Sb**	**14 41 35.6**	**+0.9**
ORD	**Ordubad**	**1.29**	**64**	P	**Pg**	**14 41 20.8**	**+0.9**
ORD				S	**Sn**	**14 41 40.0**	**+1.9**
ITBZ	**Tabriz**	**1.30**	**95**	Pg	**Pn**	**14 41 19.9**	**-0.5**
SBZ	**Shahbuz**	**1.31**	**38**	P	**Pg**	**14 41 21.1**	**+0.7**
SBZ				S	**Sn**	**14 41 40.2**	**+1.6**
CUKT	**Cukurca**	**1.33**	**213**	Pn	**Pn**	**14 41 20.1**	**-0.7**
CUKT				Sn	**Sg**	**14 41 38.8**	**+1.0**
CUKT	**Cukurca**	**1.33**	**213**	P	**Pn**	**14 41 20.5**	**-0.3**
CUKT				S	**Sn**	**14 41 39.0**	**0.0**
CUKT				IAML		14 41 41.0	
	comp=N,712nm,0.9s						
CUKT				IAML		14 41 43.0	
	comp=E,629nm,0.4s						
DYDN	**Diyadin**	**1.33**	**332**	P	**Pn**	**14 41 19.3**	**-1.7**
DYDN				S	**Sn**	**14 41 39.8**	**+0.4**
DYDN				IAML		14 41 45.0	
	comp=N,306nm,0.7s						
DYDN				IAML		14 41 47.0	
	comp=E,332nm,0.7s						
IAZR	**Azarshahr**	**1.35**	**120**	Pg	**Pg**	**14 41 22.3**	**+1.2**
HYR	**Heyderabad**	**1.38**	**11**	P	**Pg**	**14 41 22.8**	**+1.2**
HYR				S	**Sn**	**14 41 42.8**	**+2.6**
VAYK	**Vayk**	**1.51**	**28**	i P	**Pg**	**14 41 24.2**	**+0.2**
VAYK				i S	**Sg**	**14 41 45.6**	**+2.1**
IGDI	**IGDIR**	**1.53**	**348**	P	**Pb**	**14 41 24.0**	**-0.3**
IGDI	**IGDIR**	**1.53**	**348**	P	**Pb**	**14 41 24.3**	**0.0**
IGDI				S	**Sg**	**14 41 47.0**	**+2.5**
PERV	**Siirt/Pervari-**	**1.60**	**255**	P	**Pn**	**14 41 24.4**	**-0.2**
AGRB	**Hanur-Agry**	**1.69**	**316**	Pn	**Pb**	**14 41 26.5**	**-0.5**
AGRB				Sn	**Sg**	**14 41 50.4**	**+1.0**
DORK	**Agr/Tutak/Do**	**1.69**	**308**	P	**Pn**	**14 41 25.6**	**-0.2**
DORK				S	**Sg**	**14 41 49.8**	**+0.3**
MLAZ	**Malazgirt-MUS**	**1.71**	**297**	Pn	**Pb**	**14 41 27.1**	**-0.3**
KOTA	**Agri, Merkez-K**	**1.75**	**325**	P	**Pb**	**14 41 27.8**	**-0.4**
KOTA				S	**Sg**	**14 41 53.3**	**+1.8**
GNI	**Garni**	**1.79**	**6**	Pn	**Pg**	**14 41 29.5**	**+0.1**
GNI	**Garni**	**1.79**	**6**	eP	**Pg**	**14 41 30.0**	**+0.6**
GNI				eS	**Sg**	**14 41 53.6**	**+1.0**
EGVZ	**Egvard**	**1.81**	**61**	eP	**Pb**	**14 41 28.6**	**-0.4**
EGVZ				eS	**Sg**	**14 41 54.3**	**+1.1**
GRS	**Goris**	**1.82**	**51**	⇓iP	**Pg**	**14 41 30.0**	**0.0**
GRS				⇑iS	**Sg**	**14 41 54.0**	**+0.4**
MAHB	**Mahabad**	**1.86**	**149**	Pn	**Pg**	**14 41 31.2**	**+0.4**
GURO	**Guroymak-BITLI**	**1.95**	**276**	Pn	**Pn**	**14 41 30.4**	**+1.0**
IHRS	**Heris**	**2.00**	**91**	Pn	**Pg**	**14 41 32.7**	**-0.7**
AYRK	**Ayrk**	**2.01**	**29**	eP	**Pg**	**14 41 33.1**	**-0.6**
AYRK				eS	**Sg**	**14 42 00.6**	**+0.9**
MUSM	**Mu-Merkez**	**2.37**	**280**	P	**Pb**	**14 41 37.8**	**-0.9**
IHSH	**Hashtrud**	**2.43**	**115**	Pn	**Pb**	**14 41 39.4**	**-0.3**
QRD	**Qoradiz**	**2.45**	**63**	P	**Pb**	**14 41 39.1**	**-0.8**
QRD				S	**Sg**	**14 42 13.1**	**-0.8**
VRTB	**Varto-Mus**	**2.51**	**289**	Pn	**Pn**	**14 41 38.5**	**+1.4**
GDB	**GEDABAY**	**2.54**	**22**	P	**Pb**	**14 41 39.7**	**-1.8**
GDB				S	**Sg**	**14 42 14.6**	**-2.1**
BTMN	**Batman**	**2.60**	**260**	P	**Pb**	**14 41 40.8**	**-1.6**
LSVT	**Lusahovit**	**2.60**	**12**	eP	**Pg**	**14 41 44.7**	**-0.3**
LSVT				eS	**Sg**	**14 42 18.4**	**-0.2**
SVAN	**Silvan-Diyarba**	**2.61**	**266**	Pn	**Pn**	**14 41 39.6**	**+1.2**
AGDM	**Agdam**	**2.67**	**49**	P	**Pb**	**14 41 42.3**	**-1.2**
AGDM				S	**Sb**	**14 42 17.0**	**+0.3**
GANJ	**Ganja**	**2.67**	**31**	P	**Pb**	**14 41 42.1**	**-1.6**
GANJ				S	**Sb**	**14 42 17.2**	**+0.3**
GRMI	**Germi**	**2.69**	**80**	Pn	**Pb**	**14 41 42.3**	**-1.8**
YRD	**Yardimli**	**2.98**	**78**	P	**Pb**	**14 41 47.1**	**-1.9**
YRD				S	**Sb**	**14 42 26.4**	**+0.6**
LRK	**Lerik**	**3.02**	**84**	P	**Pb**	**14 41 47.1**	**-2.6**
LRK				S	**Sb**	**14 42 25.8**	**-1.3**
TRLG	**Trialeti**	**3.18**	**355**	P	**Pb**	**14 41 53.6**	**+1.1**
VSHL	**Vashlovani**	**3.21**	**26**	P	**Pb**	**14 41 51.8**	**-1.1**
VSHL				S	**Sg**	**14 42 43.4**	**+5.1**
DDFL	**Dedoflistskaro**	**3.31**	**21**	P	**Pg**	**14 42 00.1**	**+1.4**
XNQ	**Khinaliq**	**3.96**	**44**	P	**Pn**	**14 41 59.7**	**+2.7**
XNQ				S	**Sb**	**14 42 50.8**	**-3.3**
CHRG	**Chargali**	**3.97**	**5**	P	**Pg**	**14 42 09.0**	**-2.2**
PQL	**Pirkuli**	**3.98**	**51**	P	**Pb**	**14 42 01.2**	**-4.7**
PQL				S	**Sb**	**14 42 50.1**	**-4.5**
SHTL	**Shatili**	**4.31**	**6**	P	**Pg**	**14 42 15.6**	**-2.1**

*NEIC **04** 14:54:37.6±1.7, 17.°6S±0.°3×178.°7W±0.°2, h625km±15km, mb4.1/11, Error ellipse: s-maj=47.3km s-min=21.2km az=155.0*
*IDC **04** 14:54:37.5±2.1, 17.°61S×178.°72W, h626km±20km, mb3.0/7, mbtmp4.0/8, Error ellipse: s-maj=84.5km s-min=17.4km az=149.0*
ISC 04 14:54:34.9±1.1**, 17.°9S**±0.°2×**178.°4W**±0.°2**, h600km, n25, σ1.s19**/26**, mb4.1**/14**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.36**	**272**	P	**P**	**14 55 59.2**	**+2.9**
	22nm,0.7s,baz=173,slow=1.5,SNR=20						
MSVF	**Nonsavu**	**3.36**	**272**	P	**P**	**14 55 58.9**	**+2.6**
SANVU	**Saraoutou**	**13.99**	**278**	P	**P**	**14 57 34.6**	**+0.8**
OUENC	**Ouen Island, N**	**14.55**	**250**	P	**P**	**14 57 39.1**	**+0.1**
CTAO	**Charters Tower**	**33.44**	**260**	P	**P**	**15 00 25.8**	**-0.2**
CTAO				IAmb	IAmb	15 00 28.2	
	comp=Z,10nm,1.4s						
PMG	**Port Moresby**	**34.44**	**280**	P	**P**	**15 00 34.0**	**-0.4**
COEN	**Coen**	**37.09**	**270**	P	**P**	**15 00 55.8**	**-0.4**
STKA	**Stephens Creek**	**38.63**	**241**	P	**P**	**15 01 08.4**	**0.0**
	comp=Z,2.2nm,0.5s,baz=101,slow=8.7,SNR=9.1						
	comp=Z,2.2nm,0.5s						
INKA	**Innaminka**	**38.74**	**248**	P	**P**	**15 01 09.8**	**+0.5**
WR8	**Warramunga Arr**	**44.47**	**260**	P	**P**	**15 01 52.7**	**-1.8**
WR8				IAmb	IAmb	15 02 00.1	
	comp=Z,10nm,1.4s						
WRA	**Warramunga Arr**	**44.62**	**260**	P	**P**	**15 01 54.9**	**-0.8**
	comp=Z,1.4nm,0.3s,baz=95,slow=7.4,SNR=62						
	comp=Z,1.4nm,0.3s						
WRA	**Warramunga Arr**	**44.62**	**260**	P	**P**	**15 01 54.3**	**-1.4**
AS31	**Alice Springs**	**44.78**	**254**	P	**P**	**15 01 56.3**	**-0.6**
AS31				IAmb	IAmb	15 01 57.3	
	comp=Z,2.9nm,0.5s						
ASAR	**Alice Springs**	**44.78**	**254**	P	**P**	**15 01 56.4**	**-0.6**
	comp=Z,7.2nm,0.5s,baz=88,slow=8.6,SNR=238						
ASAR				PcP	**PcP**	**15 03 24.8**	**-1.0**
	comp=Z,0.2nm,0.4s,baz=96,slow=3.4,SNR=1.8						
	comp=Z,7.2nm,0.5s						
ASAR	**Alice Springs**	**44.78**	**254**	P	**P**	**15 01 55.8**	**-1.1**
KNRA	**Kununurra**	**50.48**	**264**	P	**P**	**15 02 38.1**	**-1.2**
KNRA				IAmb	IAmb	15 03 22.3	
	comp=Z,6.6nm,1.1s						
PETK	**Petropavlovsk-**	**73.66**	**345**	P	**P**	**15 05 06.8**	**-1.4**
NVAR	**Mina Array Bea**	**79.42**	**44**	P	**P**	**15 05 41.5**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=244,slow=6.8,SNR=3.4						
	comp=Z,0.5nm,0.7s						
M16K	**Timber Creek**	**80.18**	**9**	P	**P**	**15 05 43.8**	**+0.3**
M16K				IAmb	IAmb	15 06 25.6	
	comp=Z,17nm,1.4s						
K15K	**Wolf Creek Mou**	**81.03**	**8**	P	**P**	**15 05 48.0**	**+0.2**
K15K				IAmb	IAmb	15 06 08.4	
	comp=Z,12nm,1.4s						
J16K	**Anvik River**	**82.10**	**8**	P	**P**	**15 05 52.9**	**-0.4**
J16K				IAmb	IAmb	15 06 29.1	
	comp=Z,9.0nm,1.4s						
ILAR	**Eielson Array**	**85.87**	**13**	P	**P**	**15 06 10.8**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=212,slow=4.8,SNR=6.5						
	comp=Z,0.2nm,0.4s						
TXAR	**Lajitas Array**	**86.00**	**58**	P	**P**	**15 06 14.1**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=250,slow=4.2,SNR=2.3						
	comp=Z,0.3nm,0.6s						
PDAR	**Pinedale Array**	**87.35**	**43**	P	**P**	**15 06 19.4**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=236,slow=6.2,SNR=3.5						
	comp=Z,0.3nm,0.6s						
PDAR	**Pinedale Array**	**87.35**	**43**	P	**P**	**15 06 18.5**	**-1.0**

*IDC **04** 14:57:53.6±1.3, 13.°09N×144.°93E, h57km±10km, mb3.2/5, mbtmp3.5/5, MS3.4/1, Error ellipse: s-maj=42.0km s-min=19.0km az=95.0*
*NEIC **04** 14:57:54.0±1.0, 12.°99N±0.°09×145.°1E±0.°1, h54km±8km, mb3.8/7, Error ellipse: s-maj=22.0km s-min=9.7km az=67.0*
ISC 04 14:57:53.6±0.8**, 12.°98N**±0.°09×**145.°0E**±0.°1**, h57km, n23, σ0.s94**/16**, mb3.6**/9**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.62**	**348**	P	**Pn**	**14 58 06.9**	**+0.2**
	2μm,0.3s,baz=165,slow=10,SNR=444						
GUMO				LR	LR	14 58 08.6	
	comp=Z,36nm,20.9s,baz=136,slow=30						
GUMO				S	**Sn**	**14 58 16.1**	**-0.2**
	2μm,0.4s,baz=30,slow=20,SNR=82						
PATS	**Pohnpei**	**14.46**	**114**	Pn	**Pn**	**15 01 14.4**	**-0.9**
MANU	**Manus Island**	**15.11**	**171**	Pn	**Pn**	**15 01 24.2**	**+0.4**
MANU				IAmb	IAmb	15 01 44.3	
	comp=Z,17nm,0.9s						
H11S3	**WAKE ISLAND Hy**	**21.57**	**73**	T	T	15 25 20.5	
	baz=259,slow=75,SNR=9.6						
H11S1	**WAKE ISLAND Hy**	**21.59**	**72**	T	T	15 25 17.2	
	baz=259,slow=75,SNR=8.2						
H11S2	**WAKE ISLAND Hy**	**21.59**	**73**	T	T	15 25 20.6	
	baz=259,slow=75,SNR=10						
H11N1	**WAKE ISLAND Hy**	**22.03**	**69**	T	T	15 25 50.5	
	baz=256,slow=75,SNR=22						
H11N2	**WAKE ISLAND Hy**	**22.04**	**69**	T	T	15 25 50.5	
	baz=256,slow=75,SNR=9.9						
H11N3	**WAKE ISLAND Hy**	**22.05**	**69**	T	T	15 25 53.3	
	baz=256,slow=75,SNR=19						
WRA	**Warramunga Arr**	**34.36**	**198**	P	**P**	**15 04 35.4**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=21,slow=9.5,SNR=7.8						
	comp=Z,0.8nm,0.7s						
AS31	**Alice Springs**	**38.00**	**197**	P	**P**	**15 05 06.7**	**+0.4**
AS31				IAmb	IAmb	15 05 26.9	
	comp=Z,0.7nm,1.1s						
ASAR	**Alice Springs**	**38.01**	**197**	P	**P**	**15 05 07.2**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=15,slow=8.9,SNR=9.4						
	comp=Z,0.3nm,0.7s						
ASAR	**Alice Springs**	**38.01**	**197**	P	**P**	**15 05 06.6**	**+0.2**
LEM	**Lembang**	**42.03**	**244**	LR	LR	15 23 45.2	
	comp=Z,54nm,21.1s,baz=155,slow=37						
CHTO	**Chiang Mai**	**44.58**	**284**	P	**P**	**15 06 00.2**	**-0.2**
CHTO				IAmb	IAmb	15 06 14.7	
	comp=Z,1.7nm,0.9s						
MKAR	**Makanchi Array**	**62.02**	**316**	P	**P**	**15 08 07.2**	**-0.9**
	comp=Z,0.1nm,0.4s,baz=90,slow=7.2,SNR=6.1						
	comp=Z,0.1nm,0.4s						
MKAR	**Makanchi Array**	**62.02**	**316**	P	**P**	**15 08 07.4**	**-0.7**
K17K	**Iditarod**	**63.59**	**25**	P	**P**	**15 08 20.9**	**+2.7**
KURK	**Kurchatov**	**65.13**	**320**	P	**P**	**15 08 28.0**	**-0.5**
KURK	**Kurchatov**	**65.13**	**320**	IAmb	IAmb	15 08 49.1	
	comp=Z,0.8nm,0.8s						
KURBB	**Kurchatov Arra**	**65.17**	**320**	P	**P**	**15 08 28.0**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=104,slow=6.7,SNR=4.0						
	comp=Z,0.1nm,0.3s						
J19K	**Poorman**	**65.21**	**25**	P	**P**	**15 08 29.1**	**+0.3**
J19K				IAmb	IAmb	15 08 52.5	
	comp=Z,0.7nm,0.9s						
ILAR	**Eielson Array**	**69.06**	**25**	P	**P**	**15 08 52.9**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=250,slow=5.9,SNR=8.3						
	comp=Z,0.5nm,0.6s						

*IDC **04** 14:59:50.6±1.3, 18.°92N×81.°18W, h0km, mb3.6/8, mbtmp3.7/10, ML3.7/2, MS3.3/10, Error ellipse: s-maj=33.2km s-min=26.9km az=24.0*
*JSN **04** 14:59:53.2±0.8, 19.°40N×81.°24W, h50km±999km, MD4.2, Presumed earthquake*
*SSNC **04** 14:59:55.0±2.6, 18.°75N×81.°20W, h25km±20km, MB4.4, MD3.7, ML4.1, Presumed earthquake*
ISC 04 14:59:51.2±0.8**, 18.°75N**±0.°07×**81.°20W**±0.°07**, h10km, n34, σ2.s59**/41**, mb3.7**/8**, MS3.2**/8**, 3D, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTDJ	**Mount Denham**	**3.52**	**98**	⇓iP	**Pn**	**15 00 47.0**	**+1.0**
MTDJ				⇓iS	**Sn**	**15 01 27.4**	**-0.3**
MTDJ	**Mount Denham**	**3.52**	**98**	eP	**Pn**	**15 00 47.7**	**+1.6**
MTDJ				eS	**Sn**	**15 01 23.1**	**-4.7**
MTDJ				IAML		15 01 30.3	
	509nm,0.4s						
MTDJ				IAML		15 01 31.6	
	comp=Z,340nm,0.2s						
CCCC	**Cccc**	**4.05**	**52**	eP	**Pn**	**15 00 58.0**	**+4.7**
CCCC				eS	**Sn**	**15 01 45.3**	**+4.6**
CAIB	**Caibarien**	**4.06**	**23**	eP	**Pn**	**15 00 54.1**	**+0.6**
CAIB				eS	**Sn**	**15 01 36.3**	**-4.8**
CAIB				IAML		15 01 42.5	
	comp=E,144nm,0.3s						
CAIB				IAML		15 01 46.2	
	comp=N,162nm,0.2s						
LMGC	**Las Mercedes**	**4.17**	**71**	eP	**Pn**	**15 00 56.2**	**+1.2**
LMGC				eS	**Sn**	**15 01 39.4**	**-4.3**
LMGC				IAML		15 01 46.6	
	comp=E,58nm,0.2s						
LMGC				IAML		15 01 48.2	
	comp=N,75nm,0.2s						
STH	**Stony Hill**	**4.22**	**98**	⇓iP	**Pn**	**15 00 56.7**	**+1.0**
HOJ	**Hope**	**4.29**	**99**	i P	**Pn**	**15 00 57.9**	**+1.4**
CHIV	**Chivirico**	**4.68**	**74**	eP	**Pn**	**15 01 02.5**	**+0.6**
CHIV				eS	**Sn**	**15 01 51.4**	**-4.9**
CHIV				eSg	**Sn**	**15 01 57.7**	**+1.4**
YAR	**Yar**	**4.84**	**70**	eP	**Pn**	**15 01 06.6**	**+2.4**
YAR				eS	**Sn**	**15 02 00.5**	**+0.2**
MARVS	**Santiago de Cu**	**5.16**	**75**	eP	**Pn**	**15 01 08.8**	**+0.3**
MARVS				eS	**Sn**	**15 02 04.0**	**-4.0**
HLGC	**Holguin**	**5.29**	**65**	eP	**Pn**	**15 01 12.7**	**+2.4**
HLGC				eS	**Sn**	**15 02 11.3**	**-0.1**
RCC	**Rio Carpintero**	**5.34**	**76**	eP	**Pn**	**15 01 09.9**	**-1.2**
RCC				eS	**Sn**	**15 02 07.8**	**-4.8**
PINC	**Pinares de May**	**5.38**	**70**	eP	**Pn**	**15 01 15.4**	**+3.8**
PINC				eS	**Sn**	**15 02 14.7**	**+1.0**
GTBY	**Guantanamo Bay**	**5.87**	**77**	eP	**Pn**	**15 01 20.7**	**+2.5**
GTBY				eS	**Sn**	**15 02 25.3**	**-0.3**
QMBU	**Quimbuelo**	**6.20**	**75**	eP	**Pn**	**15 01 24.2**	**+1.4**
QMBU				eS	**Sn**	**15 02 31.0**	**-2.8**
SDV	**Santo Domingo**	**14.18**	**132**	Pn	**Pn**	**15 03 13.0**	**+0.6**
	comp=N,3.0nm,0.3s,baz=340,slow=13,SNR=15						
SDV				LR	LR	15 09 12.0	
	comp=N,64nm,18.7s,baz=288,slow=39						
	comp=N,10nm,0.4s						
TKL	**Tuckaleechee C**	**17.00**	**353**	Pn	**Pn**	**15 03 46.9**	**-2.3**
	comp=N,0.3nm,0.3s,baz=184,slow=16,SNR=1.9						
TKL				LR	LR	15 09 32.7	
	comp=N,99nm,19.0s,baz=346,slow=35						
	comp=N,3.2nm,0.7s						
TXAR	**Lajitas Array**	**23.03**	**301**	P	**P**	**15 04 56.1**	**-0.7**
	comp=N,0.3nm,0.7s,baz=110,slow=11,SNR=4.0						
	comp=N,0.3nm,0.7s						
SADO	**Sadowa**	**26.01**	**3**	LR	LR	15 14 44.1	
	comp=N,65nm,19.2s,baz=141,slow=35						
LPIG	**La Paz**	**27.59**	**286**	LR	LR	15 18 07.8	
	comp=N,55nm,18.1s,baz=47,slow=40						
PDAR	**Pinedale Array**	**33.88**	**321**	P	**P**	**15 06 33.6**	**-0.9**
	comp=N,0.5nm,0.7s,baz=141,slow=7.4,SNR=3.5						
	comp=N,0.5nm,0.7s						
LPAZ	**La Paz**	**37.11**	**159**	LR	LR	15 23 58.8	
	comp=N,42nm,18.4s,baz=38,slow=39						
SCHQ	**Schefferville**	**37.66**	**14**	P	**P**	**15 07 07.7**	**+1.2**
	comp=N,1.8nm,0.7s,baz=210,slow=8.2,SNR=4.3						
SCHQ				LR	LR	15 22 26.5	
	comp=N,42nm,19.9s,baz=188,slow=36						
	comp=N,1.8nm,0.7s						
NVAR	**Mina Array Bea**	**37.70**	**309**	LR	LR	15 26 20.0	
	comp=N,37nm,18.5s,baz=117,slow=42						
FRB	**Frobisher Bay**	**45.79**	**8**	LR	LR	15 26 59.6	
	comp=N,61nm,18.8s,baz=337,slow=36						
YKA	**Yellowknife Ar**	**49.44**	**340**	P	**P**	**15 08 39.8**	**-1.4**
	comp=N,0.1nm,0.4s,baz=135,slow=7.4,SNR=2.2						
	comp=N,0.1nm,0.4s						
SFJD	**Kangerlussuaq**	**52.09**	**15**	LR	LR	15 32 00.8	
	comp=N,20nm,18.1s,baz=176,slow=37						
ILAR	**Eielson Array**	**62.88**	**334**	P	**P**	**15 10 18.1**	**+0.8**
	comp=N,0.3nm,0.8s,baz=98,slow=5.9,SNR=8.1						
	comp=N,0.3nm,0.8s						
EKA	**Eskdalemuir Ar**	**68.02**	**37**	P	**P**	**15 10 50.5**	**-0.2**
	comp=N,1.4nm,0.9s,baz=274,slow=7.2,SNR=1.7						
	comp=N,1.4nm,0.9s						
ESDC	**Sonseca Array**	**68.61**	**54**	P	**P**	**15 10 55.4**	**+0.7**
	comp=N,0.5nm,0.7s,baz=277,slow=5.2,SNR=2.6						
	comp=N,0.5nm,0.7s						
SPITS	**Spitsbergen Ar**	**73.33**	**12**	LR	LR	15 43 46.0	
	comp=N,32nm,19.7s,baz=227,slow=36						
ARCES	**ARCESS Array B**	**78.27**	**20**	P	**P**	**15 11 49.4**	**-1.7**
	comp=N,1.9nm,0.8s,baz=293,slow=4.5,SNR=3.6						
	comp=N,1.9nm,0.8s						
WRA	**Warramunga Arr**	**146.49**	**262**	PKPbc	**PKPdf**	**15 19 34.7**	**+2.5**
	comp=N,1.1nm,0.9s,baz=80,slow=2.9,SNR=4.6						
ASAR	**Alice Springs**	**146.96**	**255**	PKPbc	**PKPdf**	**15 19 36.0**	**+3.1**
	comp=N,0.7nm,0.8s,baz=104,slow=4.2,SNR=5.2						

KRSC 04 15:13:49.6±0.8**, 55.°30N**×**164.°47E, h51km**±18km**, Ml3.8, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.87**	**96**	eP	Pn	15 14 06.4	+0.9
BKI				eS	Sn	15 14 18.2	+1.0
KBTR	**Krutoberegovo**	**1.30**	**315**	eP	Pn	15 14 12.7	+1.2
KBTR				eS	Sn	15 14 28.9	+1.2
KBG	**Krutoberegovo**	**1.38**	**315**	eP	Pn	15 14 13.9	+1.4
KBG				eS	Sn	15 14 31.4	+1.8
MKZ	**Mys Kozlova**	**1.74**	**246**	eP	Pn	15 14 19.6	+2.2
MKZ				eS	Sn	15 14 40.8	+2.4
SMKR	**Semkarok**	**2.12**	**309**	eS	Sn	15 14 51.5	+3.7
TUMD	**Tumrok D**	**2.33**	**269**	eS	Sn	15 14 56.9	+4.1
KOZ	**Kozyrevsk**	**2.71**	**288**	eP	Pn	15 14 34.4	+3.7
KII	**Karymskiy**	**3.17**	**249**	eP	Pn	15 14 41.0	+4.0
ESO	**Esso**	**3.33**	**283**	eP	Pn	15 14 43.5	+4.4
SPN	**Mys Shipunski**	**3.41**	**232**	eP	Pn	15 14 43.3	+3.1
SPN				eS	Sn	15 15 19.7	+0.3
SDLR	**Sedlovina**	**3.84**	**241**	eP	Pn	15 14 50.4	+4.1
SMAR	**Somma**	**3.90**	**241**	eP	Pn	15 14 51.2	+4.2
SMAR				eS	Sn	15 15 33.7	+2.1
KRER	**Koryakskii**	**3.90**	**242**	eP	Pn	15 14 51.3	+4.3
KRER				eS	Sn	15 15 34.5	+2.9
UGLR	**Uglovaya**	**3.91**	**240**	eP	Pn	15 14 51.1	+3.9
KRX	**Arik**	**3.92**	**243**	eP	Pn	15 14 51.5	+4.1
AVH	**Avacha**	**3.92**	**241**	eP	Pn	15 14 51.7	+4.3
AVH				eS	Sn	15 15 36.0	+3.9
KOK	**Koryaka**	**3.96**	**242**	eP	Pn	15 14 52.3	+4.4
OSSR	**Ossora**	**4.04**	**350**	eP	Pn	15 14 51.9	+3.2
DALK	**Dalny**	**4.05**	**238**	eP	Pn	15 14 53.0	+4.1
DALK				eS	Sn	15 15 37.8	+2.7
GNL	**Ganaly**	**4.13**	**250**	eP	Pn	15 14 54.5	+4.3
KRMR	**Karymshinskiy**	**4.48**	**239**	eP	Pn	15 14 59.0	+4.2
MTVR	**Mutnovka**	**4.66**	**235**	eP	Pn	15 15 01.5	+4.0
MTVR				eS	Sn	15 15 53.3	+3.0
GRL	**Gorelyy**	**4.67**	**237**	eP	Pn	15 15 01.6	+4.0
ASAK	**Asacha**	**4.86**	**236**	eP	Pn	15 15 04.3	+4.1
TILK	**Tilichiki**	**5.24**	**9**	eP	Pn	15 15 09.3	+4.1

*DNK **04** 15:22:01.6±1.5, 59.°46N×11.°99E, h0km, ML2.0(UPP), Suspected explosion*
UPP 04 15:21:48.1±1.1**, 59.°92N**×**10.°07E, h0km, ML2.0, Presumed earthquake, Southern Norway**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STRU	**Stroemstad**	**1.05**	**147**	P	Pg	15 22 08.0	-0.2
STRU				S	Sg	15 22 20.6	-1.3
STRU	**Stroemstad**	**1.05**	**147**	P	Pg	15 22 08.0	-0.2
STRU				S	Sg	15 22 20.6	-1.3
FINU	**Finntorp**	**1.33**	**112**	P	Pg	15 22 12.6	-0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FINU	Finntorp	1.33	112	P	Pg	15 22 12.6	-0.9
VANU	Vaenersborg	1.76	143	P	Pn	15 22 19.6	-0.2
VANU	Vaenersborg	1.76	143	P	Pn	15 22 19.6	-0.2
UDD	Uddeholm	1.79	83	P	Pn	15 22 20.6	+0.5
UDD	Uddeholm	1.79	83	P	Pn	15 22 20.6	+0.5

IDC 04 15:28:17.9±4.9**,17.˚26S**×**175.˚24W,h177**km±37km**,**
mb3.3/3**,mbtmp3.9**/4**,Error ellipse: s-maj=265.6km s-min=25.3km az=141.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	4.72	46	P	Pn	15 29 30.0	+1.7
	23nm,0.4s,baz=280,slow=18,SNR=11						
AFI				S	Sn	15 30 22.8	-0.6
	39nm,0.6s,baz=87,slow=23,SNR=10						
WRA	Warramunga Arr	47.72	259	P	P	15 36 37.1	-0.1
	0.3nm,0.5s,baz=97,slow=7.6,SNR=7.1						
	0.3nm,0.5s						
ASAR	Alice Springs	47.87	253	P	P	15 36 38.0	-0.4
	1.6nm,0.6s,baz=91,slow=8.1,SNR=41						
	1.6nm,0.6s						
ILAR	Eielson Array	84.61	12	P	P	15 40 31.1	+0.2
	0.8nm,1.1s,baz=200,slow=4.5,SNR=4.8						
	0.8nm,1.1s						

*OMAN **04** 15:36:15.7±0.6,26.˚80N×55.˚48E,h8km,mb4.1/7,ml4.0/23, Error ellipse: s-maj=4.8km s-min=2.8km az=10.0*
*DSN **04** 15:36:17.0±1.5,26.˚77N×55.˚59E,h10km,ML3.7/17,Error ellipse: s-maj=19.7km s-min=3.8km az=31.0*
*IDC **04** 15:36:16.2±1.0,26.˚45N×55.˚56E,h0km,mb4.0/20, mbtmp4.0/21,ML4.3/1,MS3.0/2,Error ellipse: s-maj=23.0km s-min=16.5km az=18.0*
*THR **04** 15:36:17.1±0.0,26.˚50N×55.˚47E,h10km±8km,ML4.0, Presumed earthquake*
*NEIC **04** 15:36:18.4±1.5,26.˚55N±0.˚04×55.˚48E±0.˚08,h10km±1km, mb4.2/30,Error ellipse: s-maj=12.9km s-min=4.3km az=116.0*
*TEH **04** 15:36:18.3,26.˚54N×55.˚54E,h13km±22km,ML4.1, Presumed earthquake*
ISC 04 15:36:18.5±1.2**,26.˚59N**±0.˚03×**55.˚49E**±0.˚03**,h9**km±8km**,**
n152,σ1**s18**/162**,mb4.1**/32**,Southern Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SHME	Shamm	0.80	133	eP	Pg	15 36 32.4	-1.4
	SNR=30						
SHME				S	Sb	15 36 45.6	+0.2
SHME	Shamm	0.80	133	P	Pb	15 36 34.2	-0.3
	SNR=46						
SHME				S	Sn	15 36 46.3	-1.5
	SNR=6.6						
BANOM	Banah	0.98	132	eP	Pg	15 36 36.8	-0.7
	SNR=68						
BANOM				S	Sn	15 36 52.1	-0.5
BANOM	Banah	0.98	132	P	Pn	15 36 37.7	-0.9
BANOM				S	Sn	15 36 53.0	+0.4
BNDS	Bandar-Abbas	1.01	37	ePg	Pg	15 36 37.6	-0.3
BNDS				IAML		15 37 20.5	
	comp=Z,1µm,1.0s						
BNDS	Bandar-Abbas	1.01	37	Pg	Pg	15 36 37.7	-0.2
GENO	Geno	1.01	37	Pg	Pg	15 36 37.7	-0.3
GENO				Sg	Sb	15 36 52.7	+1.0
UMQ	Umm Al-Quwin	1.07	172	eP	Pn	15 36 41.7	+2.0
	SNR=12						
UMQ	Umm Al-Quwin	1.07	172	P	Pn	15 36 40.5	+0.7
	SNR=12						
UMQ				S	Sn	15 36 59.2	+4.5
IBND	Bandar-abas	1.27	47	Pg	Pn	15 36 42.4	0.0
MASF	Masafi	1.36	154	P	Pg	15 36 45.0	+0.4
	SNR=42						
MASF				S	Sg	15 37 04.6	+2.4
MSFE	Esma-Masafi	1.37	154	eP	Pg	15 36 44.9	+0.1
	SNR=65						
MDH	Madha	1.48	150	eP	Pg	15 36 46.1	-0.9
	SNR=28						
MDH	Madha	1.48	150	P	Pg	15 36 46.3	-0.6
	SNR=28						
MDH				S	Sg	15 37 07.4	+1.3
NAZ	Nazwa, Dubai	1.60	174	eP	Pg	15 36 48.6	-0.8
	SNR=21						
NAZ	Nazwa, Dubai	1.60	174	P	Pg	15 36 49.2	-0.1
	SNR=21						
NAZ				S	Sg	15 37 11.4	+1.3
UOSS	Minazif	1.76	158		Pn	15 36 47.7	-1.5
UOSS	Minazif	1.76	158	eP	Pb	15 36 49.9	-1.1
	SNR=11						
UOSS	Minazif	1.76	158	P	Pg	15 36 50.9	-1.4
UOSS	Minazif	1.76	158	Pg	Pb	15 36 49.4	-1.6
FAQ	Al Faqa, Dubai	1.84	177	eP	Pb	15 36 51.8	-0.6
	SNR=7.4						
FAQ	Al Faqa, Dubai	1.84	177	P	Pb	15 36 50.8	-1.5
	SNR=7.5						
HATD	Hatta, Dubai	1.85	162	eP	Pn	15 36 50.6	+0.2
	SNR=24						
HATD	Hatta, Dubai	1.85	162	P	Pb	15 36 52.2	-0.4
	SNR=24						
ASUD	Al Ashush, Dub	1.96	184	eP	Pb	15 36 53.7	-0.7
	SNR=18						
ASUD	Al Ashush, Dub	1.96	184	P	Pb	15 36 53.8	-0.6
	SNR=18						
ASHO	Ashiyiah	1.97	165	eP	Pb	15 36 53.5	-1.0
	SNR=18						
ASHO	Ashiyiah	1.97	165	P	Pb	15 36 53.9	-0.7
	SNR=18						
AJN	Ajban	2.07	193	P	Pb	15 36 54.7	-1.6
KHL1	Khalili_Fars	2.21	299	Pn	Pb	15 36 57.1	-1.6
JASK	Jask - Hormozg	2.25	108	P	Pn	15 36 56.0	0.0
	SNR=20						
JASK	Jask - Hormozg	2.25	108	Pn	Pn	15 36 56.1	+0.2
KHNJ	Kahnooj	2.39	55	Pn	Pn	15 36 58.2	+0.3
ALNE	Al Ain	2.54	175	eP	Pb	15 37 01.3	-2.9
	SNR=8.1						
ALNE	Al Ain	2.54	175	P	Pb	15 37 02.0	-2.3
	SNR=7.6						
JHRM	Jahrom	2.55	319	Pn	Pn	15 37 01.9	+1.7
SOHO	SOHO	2.62	159	eP	Pn	15 37 01.4	+0.4
	SNR=12						
SOHO	SOHO	2.62	159	P	Pn	15 37 02.1	+1.0
NGRK	Negar Kerman	3.23	20	Pn	Pn	15 37 11.4	+1.6
ARQ	Araqi	3.37	164	P	Pn	15 37 12.5	+1.1
	SNR=17						
HOQ	Hoqain	3.42	151	P	Pn	15 37 12.0	0.0
HOQ	Hoqain	3.42	151	Pn	Pn	15 37 12.2	+0.2
GHWR	Ruwais	3.53	223	P	Pn	15 37 13.1	-0.4
GHWR				S	Sn	15 37 56.4	+1.0
KHGB	Koh Gabri	3.87	13	Pn	Pn	15 37 19.8	+1.4
UMZA	Um Al Zommool	3.87	185	P	Pn	15 37 19.6	+1.3
UMZA				S	Sn	15 38 07.0	+3.2
BIDO	Bidbid	3.88	141	P	Pn	15 37 17.2	-1.2
BIDO				S	Sn	15 38 05.7	+1.7
MZR	Muzera	4.01	208	P	Pn	15 37 19.4	-0.8
BSY	Bisya	4.13	158	P	Pn	15 37 22.0	+0.1
SMDO	Samad	4.22	146	P	Pn	15 37 22.8	-0.3
TRNA	Turayna	4.28	245	S	Sn	15 38 13.7	-0.2
CHBR	Chabahar	4.60	101	Pn	Pn	15 37 28.3	+0.1
JMDO	Jabal Madar	4.83	150	P	Pn	15 37 31.1	-0.3
IMEH	Mehriz	4.84	351	Pn	Pn	15 37 33.7	+1.9
IBAF	Bafgh	4.98	1	Pn	Pn	15 37 35.7	+2.0
WBK	Wadi Bani Khal	5.07	141	P	Pn	15 37 34.6	-0.2
WBK	Wadi Bani Khal	5.07	141	Pn	Pn	15 37 35.2	+0.4
NGCH	Negor - Chabah	5.23	102	Pn	Pn	15 37 37.2	+0.3
TAFT	Taft - Yazd	5.24	348	Pn	Pn	15 37 39.4	+2.1
DOBD	Dorbid, Yazd	5.45	351	Pn	Pn	15 37 42.0	+2.0
KLNJ	Kolanjah	5.57	323	ePn	Pn	15 37 43.3	+1.4
KLNJ				IAML		15 38 51.3	
	comp=Z,49nm,1.0s						
KLNJ	Kolanjah	5.57	323	Pn	Pn	15 37 44.0	+2.0
JLN	Jalan Bani Buh	5.69	140	P	Pn	15 37 42.8	-0.4
YZKH	Yazd	5.83	352	ePn	Pn	15 37 47.3	+2.1
YZKH				IAML		15 38 23.7	
	comp=Z,58nm,1.0s						
IRAM	Ramesheh	5.87	333	Pn	Pn	15 37 47.9	+2.1
MHTO	MHTO	6.02	157	P	Pn	15 37 48.3	+0.5
	SNR=7.1						
SRVN	Saravan	6.21	81	ePn	Pn	15 37 51.5	+0.9
SRVN	Saravan	6.21	81	Pn	Pn	15 37 51.7	+1.2
NASN	Na'in	6.61	340	ePn	Pn	15 37 57.4	+1.2
NASN				IAML		15 39 16.7	
	comp=Z,30nm,1.0s						
TABS	Tabas	7.17	11	ePn	Pn	15 38 06.2	+2.5
TABS				IAML		15 38 43.1	
	comp=Z,2.3nm,1.0s						
DOK	Doka	8.04	189	P	Pn	15 38 15.5	0.0
	SNR=7.6						
GTMR	Gotvand	8.07	318	ePn	Pn	15 38 17.1	+1.1
SHRT	Shahrakht	8.16	29	ePn	Pn	15 38 19.3	+2.0
SHAO	Shalim	8.53	179	P	Pn	15 38 22.5	+0.2
	SNR=27						
KHMZ	Khomeyn	8.58	327	ePn	Pn	15 38 24.4	+1.3
WHFO	Wadi Hawf	8.78	191	P	Pn	15 38 25.1	-0.6
	SNR=56						
DMTO	DMTO	8.85	183	P	Pn	15 38 26.4	-0.2
	SNR=9.8						
RBK	Rabkut	9.12	188	P	Pn	15 38 31.0	+0.5
	SNR=6.3						
ASAO	Ashtian	9.22	331	ePn	Pn	15 38 33.1	+1.2
DAMV	Damavand	9.50	342	ePn	Pn	15 38 37.4	+1.6
RAYN	Ar Rayn	9.56	254	Pn	Pn	15 38 35.0	-1.4
RAYN	Ar Rayn	9.56	254	P	Pn	15 38 34.9	-1.5
SNGE	Sanandaj	10.98	322	ePn	Pn	15 38 59.7	+3.6
SHAA	Shahritus	15.29	41	Pn	Pn	15 39 55.4	+0.7
SHAA				IAmb	IAmb	15 40 01.7	
	comp=Z,15nm,1.0s						
GEVA	Gevas	15.69	321	Pn	Pn	15 39 57.8	-2.1
GNI	Garni	16.21	329	Pn	P	15 40 09.9	+0.1
	comp=Z,1.0nm,0.3s,baz=9.4,slow=5.0,SNR=4.5						
	comp=Z,6.2nm,0.6s						
GNI	Garni	16.21	329	Pn	Pn	15 40 06.4	-0.3
GNI				IAmb	IAmb	15 40 14.6	
	comp=Z,7.4nm,0.8s						
MARD	Mardin	16.41	314	Pn	Pn	15 40 07.6	-1.6
MARD				IAmb	IAmb	15 40 18.8	
	comp=Z,14nm,0.6s						
GURO	Guroymak-BITLI	16.44	320	Pn	Pn	15 40 09.0	-0.5
GAR	Garm	17.53	41	Pn	Pn	15 40 22.2	-1.1
GAR				IAmb	IAmb	15 40 26.8	
	comp=Z,9.1nm,0.9s						
MMAI	Mount Meron Ar	18.56	295	LR	LR	15 50 10.3	
	comp=Z,26nm,18.1s,baz=134,slow=45						
ARPR	Arapgir-MALATY	19.02	315	P	Pn	15 40 41.7	+0.1
ARPR				IAmb	IAmb	15 40 49.0	
	comp=Z,15nm,1.1s						
KBZ	Khabaz	19.92	332	P	Pn	15 40 52.7	+0.6
	comp=Z,6.3nm,0.6s,baz=151,slow=7.4,SNR=33						
	comp=Z,6.3nm,0.6s						
KVAR	Kislovodsk Arr	20.19	332	P	Pn	15 40 55.8	+0.5
	comp=Z,4.2nm,0.5s,baz=86,slow=17,SNR=4.8						
KVAR				LR	LR	15 49 34.4	
	comp=Z,77nm,18.5s,baz=105,slow=39						
	comp=Z,4.2nm,0.5s						
KIV	Kislovodsk	20.19	332	P	P	15 40 53.2	-0.3
KIV				IAmb	IAmb	15 41 01.1	
	comp=Z,32nm,0.9s						
KK31	Karatay Array	20.52	33	P	P	15 40 56.4	-0.6
KKAR	Karatay Array	20.52	33	P	P	15 40 57.2	+0.2
ARSB	Arslanbob	20.59	40	P	P	15 40 57.6	-0.4
ARSB				IAmb	IAmb	15 41 02.7	
	comp=Z,4.4nm,0.6s						
KSH2	Kashi	20.95	48	P	P	15 41 00.1	-1.7
KSH2				pP	sP	15 41 06.3	+0.6
KSH2				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AAK	Ala-Archa	22.30	39	P	P	15 41 16.1	-0.2
BR131	Keskin Array S	22.43	311	P	P	15 41 17.9	+0.2
BRTR	Keskin Array B	22.43	311	P	P	15 41 19.0	+1.2
	comp=Z,3.0nm,1.1s,baz=131,slow=13,SNR=9.4						
	comp=Z,3.0nm,1.1s						
BRTR	Keskin Array B	22.43	311	P	P	15 41 18.0	+0.3
NRN	Naryn	22.46	44	P	P	15 41 17.3	-1.0
NRN				IAmb	IAmb	15 41 19.0	
	comp=Z,5.8nm,0.7s						
AB31	Akbulak array	22.89	8	P	P	15 41 21.9	-0.4
AB31				IAmb	IAmb	15 41 27.0	
	comp=Z,3.3nm,0.8s						
ABKAR	Akbulak array	22.89	8	P	P	15 41 21.6	-0.7
TARG	Taragay, Kyrgy	23.75	45	P	P	15 41 31.5	-0.1
AKTO	Aktyubinsk	23.89	4	P	P	15 41 33.4	+1.1
	comp=Z,2.3nm,0.5s,baz=174,slow=7.1,SNR=8.6						
	comp=Z,2.3nm,0.5s						
BVAR	Borovoye Array	28.66	19	P	P	15 42 15.2	-0.2
	comp=Z,0.5nm,0.4s,baz=224,slow=10,SNR=4.6						
	comp=Z,0.5nm,0.4s						
MKAR	Makanchi Array	29.23	39	P	P	15 42 20.9	+0.3
	comp=Z,0.7nm,0.6s,baz=226,slow=9.4,SNR=9.9						
	comp=Z,0.7nm,0.6s						
MKAR	Makanchi Array	29.23	39	P	P	15 42 20.1	-0.6
KURBB	Kurchatov Arra	29.76	30	P	P	15 42 25.1	-0.1
	comp=Z,1.1nm,0.8s,baz=229,slow=8.5,SNR=8.2						
	comp=Z,1.1nm,0.8s						
KURK	Kurchatov	29.87	30	P	P	15 42 24.7	-1.5
WMQ	Urumqi	31.17	48	eP	P	15 42 39.4	+1.5
AKASG	Malin Array Be	31.33	327	P	P	15 42 38.5	-0.5
	comp=Z,1.0nm,0.6s,baz=137,slow=8.6,SNR=4.1						
	comp=Z,1.0nm,0.6s						
ZAA0	Zalesovo Array	34.86	30	P	P	15 43 09.2	-0.7
ZAA0				IAmb	IAmb	15 43 10.0	
	comp=Z,2.8nm,0.7s						
ZALV	Zalesovo Beam	34.86	30	P	P	15 43 09.4	-0.5
	comp=Z,2.8nm,0.4s,baz=240,slow=8.9,SNR=25						
	comp=Z,2.8nm,0.4s						
ZALV	Zalesovo Beam	34.86	30	P	P	15 43 09.2	-0.6
LANS	Liptovska Anna	35.78	319	eP	P	15 43 18.0	+0.1
PABE	Paberze	36.83	330	P	P	15 43 26.3	-0.4
GTA2	Gaotai	38.91	59	eP	P	15 43 45.3	+0.6
GTA2				pP	sP	15 43 48.5	-0.3
GTA2				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GERES	GERESS Array B	39.17	316	P	P	15 43 46.8	+0.1
	comp=Z,0.3nm,0.4s,baz=90,slow=7.9,SNR=2.6						
	comp=Z,0.3nm,0.4s						
KHC	Kasperske Hory	39.34	316	P	P	15 43 48.2	+0.1
KHC				IAmb	IAmb	15 43 52.3	
	comp=Z,4.9nm,1.2s						
WTTA	Wattenberg	40.02	313	eP	P	15 43 53.9	0.0
	comp=Z,2.9nm,0.4s						
FIA1	FINESS Array S	40.07	338	P	P	15 43 53.8	0.0
FINES	FINESS Array B	40.07	338	P	P	15 43 53.4	-0.5
	comp=Z,1.9nm,0.5s,baz=142,slow=11,SNR=18						
	comp=Z,1.9nm,0.5s						
SQTA	Sankt Quirin	40.30	313	eP	P	15 43 56.0	-0.1
	comp=Z,5.9nm,0.5s						
MOTA	Moosalm	40.40	313	i P	P	15 43 56.5	-0.5
	comp=Z,1.5nm,0.3s						
FETA	Feichten	40.56	312	i P	P	15 43 58.5	+0.1
	comp=Z,1.6nm,0.5s						
DAVA	Damuels	41.19	312	eP	P	15 44 03.3	-0.2
	comp=Z,10nm,0.4s						
PZH	PanZhiHua	41.20	79	P	P	15 44 04.7	+0.9
HFS	Hagfors	43.98	331	P	P	15 44 25.7	-0.2
	comp=Z,3.6nm,0.8s,baz=120,slow=8.8,SNR=12						
	comp=Z,3.6nm,0.8s						
SONM	Songino Array	44.81	48	P	P	15 44 33.3	+0.5
	comp=Z,1.2nm,0.7s,baz=256,slow=11,SNR=7.6						
	comp=Z,1.2nm,0.7s						
SONM	Songino Array	44.81	48	P	P	15 44 34.0	+1.2
SONM				IAmb	IAmb	15 44 37.1	
	comp=Z,1.5nm,0.9s						
NC405	NORSAR Array S	45.32	332	P	P	15 44 35.9	-0.6
NOA	NORSAR Array B	45.49	332	P	P	15 44 37.1	-0.9
	comp=Z,0.7nm,0.5s,baz=119,slow=7.5,SNR=3.9						
	comp=Z,0.7nm,0.5s						
HHC	Hu-ho-hao-te	47.99	58	eP	P	15 44 58.4	+0.5
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
TORD	Torodi Ar. Bea	51.99	266	P	P	15 45 28.5	0.0
	comp=Z,2.2nm,0.8s,baz=85,slow=3.5,SNR=12						
	comp=Z,2.2nm,0.8s						
TORD	Torodi Ar. Bea	51.99	266	P	P	15 45 27.6	-0.9
TORD				IAmb	IAmb	15 45 30.6	
	comp=Z,5.5nm,1.4s						
SPB2	Spitsbergen Ar	54.62	351	P	P	15 45 45.6	-1.4
SPITS	Spitsbergen Ar	54.63	351	P	P	15 45 47.5	+0.5
	comp=Z,3.3nm,0.7s,baz=143,slow=5.0,SNR=5.8						
	comp=Z,3.3nm,0.7s						
TIXI	Tiksi	59.77	21	P	P	15 46 23.7	+0.3
TIXI				IAmb	IAmb	15 46 27.5	
	comp=Z,1.9nm,0.8s						
KSRS	Korea Array	61.01	60	P	P	15 46 31.5	-1.0
	comp=Z,1.4nm,0.7s,baz=274,slow=5.8,SNR=4.2						
	comp=Z,1.4nm,0.7s						
SUMG	Summit	66.05	341	P	P	15 47 07.3	+1.6
SUMG				IAmb	IAmb	15 47 07.6	
	comp=Z,2.0nm,0.7s						
ILAR	Eielson Array	87.28	9	P	P	15 49 04.1	-1.2
	comp=Z,0.3nm,0.7s,baz=318,slow=5.5,SNR=6.0						
	comp=Z,0.3nm,0.7s						
ILAR	Eielson Array	87.28	9	P	P	15 49 04.2	-1.1
K20K	Telida	87.35	13	P	P	15 49 05.2	-0.4
K20K				IAmb	IAmb	15 49 06.8	
	comp=Z,5.3nm,1.2s						
H31M	Peel River	87.59	4	P	P	15 49 06.5	-0.3
K29M	Barlow Dome	89.29	6	P	P	15 49 15.6	+0.6
WRA	Warramunga Arr	89.31	113	P	P	15 49 13.7	-2.0
	comp=Z,0.4nm,0.6s,baz=313,slow=4.1,SNR=6.9						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	90.73	116	P	P	15 49 21.4	-0.8
	comp=Z,0.9nm,0.7s,baz=305,slow=4.9,SNR=15						
	comp=Z,0.9nm,0.7s						
ASAR	Alice Springs	90.73	116	P	P	15 49 21.0	-1.2
TRQA	Tornquist	126.83	241	PKPdf	PKPdf	15 55 22.4	-0.4

*NEIC **04** 15:51:49.7±1.8,0.˚12S±0.˚07×123.˚10E±0.˚06,h116km±8km, mb4.2/26,Error ellipse: s-maj=10.5km s-min=8.1km az=214.0*
*IDC **04** 15:51:49.4±1.6,0.˚03S×123.˚20E,h125km±14km,mb3.7/13, mbtmp4.1/16,Error ellipse: s-maj=24.5km s-min=11.4km az=64.0*
*DJA **04** 15:51:50.4±0.2,0˚S±3˚×12˚3E±˚,h105km±6km,M4.3/36, mB4.8/7,mb4.4/14,MLv4.5/36,Mw(mB)4.0/7*
ISC 04 15:51:47.6±0.4**,0.˚04S**±0.˚04×**123.˚15E**±0.˚05**,h100**km**,n94,**
σ1**s93**/103**,mb4.2**/28**,Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GTOI	Gorontalo	0.69	348	P	Pn	15 52 10.9	+6.0
LUWI	Luwuk	1.06	201	P	Pn	15 52 10.2	+1.4
LUWI	Luwuk	1.06	201	P	Sn	15 52 27.1	+2.4
LUWI	Luwuk	1.06	201	Pn	Pn	15 52 10.7	+2.0
LUWI				Sn	Sn	15 52 26.6	+2.0
LUWI	Luwuk	1.06	201	P	Pn	15 52 11.1	+2.4
MRSI	Marisa	1.31	293	P	Pn	15 52 13.8	+2.2
APSI	Ampana	1.73	240	P	Pn	15 52 18.6	+1.9
MNI	Manado	2.24	49	P	Pn	15 52 27.9	+4.5
TOLI2	Tolitoli	2.63	296	P	Pn	15 52 30.4	+2.0
TOLI2	Tolitoli	2.63	296	Pn	Pn	15 52 29.8	+1.4
TOLI2				Sn	Sn	15 52 59.9	+0.1
MPSI	Mapaga	3.27	277	P	Pn	15 52 39.5	+2.5
PCI	Palu	3.42	255	P	Pn	15 52 41.3	+2.3
SANI	Sanana	3.47	125	P	Pn	15 52 41.0	+1.3
SANI	Sanana	3.47	125	S	Sn	15 53 19.4	-0.5
SANI	Sanana	3.47	125	P	Pn	15 52 40.8	+1.1
KDI	Kendari	3.93	188	P	Pn	15 52 47.2	+1.4
TNTI	Ternate	4.29	79	P	Pn	15 52 56.3	+5.5
TNTI	Ternate	4.29	79	Pn	Pn	15 52 54.6	+3.8
TNTI	Ternate	4.29	79	P	Pn	15 52 54.9	+4.1
KKSI	Kolaka, Sulawe	4.37	200	P	Pn	15 52 53.1	+1.3
TTSI	Tana Toraja	4.47	228	P	Pn	15 52 54.8	+1.6
MMSI	Mamuju	4.99	238	P	Pn	15 53 01.3	+1.1
NLAI	Namlea	5.07	129	P	Pn	15 53 04.8	+3.5
	80nm,0.5s						
SPSI	Sidrap Palu	5.16	221	P	Pn	15 53 04.2	+1.7
KAPI	Kappang	5.99	214	P	Pn	15 53 16.0	+2.2
	26nm,0.3s,baz=27,slow=4.2,SNR=17						
KAPI				S	Sn	15 54 20.2	-0.9
	20nm,0.6s,baz=217,slow=23,SNR=6.0						
KAPI	Kappang	5.99	214	Pn	Pn	15 53 14.5	+0.7
KAPI	Kappang	5.99	214	P	Pn	15 53 15.2	+1.3
	20nm,0.8s						
BKSI	Bulukumba	6.05	210	P	Pn	15 53 16.9	+2.2
KRAI	Karang Ratu	6.17	122	P	Pn	15 53 18.8	+2.5
	0.4nm821nm22nm,0.6s						
BSSI	Bau Bau, Buton	6.62	204	P	Pn	15 53 25.0	+2.7
	0.3nm66nm,0.6s						
SWI	Sorong	8.15	96	P	Pn	15 53 47.7	+4.5
	19nm,1.0s						
SIJI	Sorong	8.16	96	P	Pn	15 53 46.3	+3.0
	7.5nm,0.7s,baz=254,slow=23,SNR=8.4						
SIJI				S	Sn	15 55 13.7	-0.3
	2.4nm,0.3s,baz=242,slow=23,SNR=1.1						
EDFI	Ende, Flores	8.77	189	P	Pn	15 53 54.9	+3.1
KKM	Kota Kinabalu	9.19	311	P	Pn	15 54 02.7	+5.3
KKM	Kota Kinabalu	9.19	311	Pn	Pn	15 54 02.1	+4.7
FAKI	Fak Fak	9.54	108	P	Pn	15 54 04.5	+2.4
FAKI	Fak Fak	9.54	108	Pn	Pn	15 54 04.3	+2.3
FAKI	Fak Fak	9.54	108	P	Pn	15 54 04.5	+2.4
SAUI	Saumlaki	11.33	134	Pn	Pn	15 54 27.5	+1.2
MTN	Manton Dam	14.98	148	Pn	Pn	15 55 14.7	+0.5
KNRA	Kununurra	16.50	161		Pn	15 55 34.3	+1.1
KNRA				IAmb	IAmb	15 55 37.5	
	comp=Z,6.7nm,0.6s						
FITZ	Fitzroy Crossi	18.11	172	P	P	15 55 52.3	+0.5
	comp=Z,4.4nm,0.6s,baz=1.9,slow=9.2,SNR=9.9						
MYKOM	Kota Tinggi	19.38	275	P	P	15 56 06.0	+0.3
MYKOM				IAmb	IAmb	15 56 07.3	
	comp=Z,10nm,0.6s						
WB0	Warramunga Arr	22.49	151	P	P	15 56 38.0	-1.0
WB0				IAmb	IAmb	15 57 11.4	
	comp=Z,11nm,1.4s						
IPM	Ipoh	22.55	282	P	P	15 56 40.6	+0.9
IPM				IAmb	IAmb	15 56 59.5	
	comp=Z,14nm,1.5s						
WRAB	Tennant Creek	22.61	152	P	P	15 56 39.5	-0.7
WRAB	Tennant Creek	22.61	152	P	P	15 56 38.9	-1.4
WRAB				IAmb	IAmb	15 56 41.2	
	comp=Z,8.5nm,1.1s						
WRA	Warramunga Arr	22.61	152	P	P	15 56 39.5	-0.8
	comp=Z,3.5nm,0.7s,baz=332,slow=10,SNR=53						
WRA				PcP	PcP	16 00 29.1	-0.8
	comp=Z,0.8nm,1.2s,baz=324,slow=2.6,SNR=2.3						
WRA				ScP	ScP	16 03 55.5	-3.2
	comp=Z,0.4nm,0.4s,baz=325,slow=2.5,SNR=11						
	comp=Z,3.5nm,0.7s						
WRA	Warramunga Arr	22.61	152	P	P	15 56 38.5	-1.8
WR8	Warramunga Arr	22.70	151	P	P	15 56 40.1	-1.0
WR8				IAmb	IAmb	15 56 41.7	
	comp=Z,6.5nm,0.5s						
KULM	Kulim	23.08	284	P	P	15 56 43.8	-1.1
COEN	Coen	24.17	126	P	P	15 56 56.9	+2.1
COEN	Coen	24.17	126	P	P	15 56 54.4	-0.4
AS31	Alice Springs	25.70	157	P	P	15 57 08.1	-0.6
ASAR	Alice Springs	25.70	157	P	P	15 57 08.2	-0.4
	comp=Z,0.7nm,0.6s,baz=332,slow=9.4,SNR=30						
ASAR				PcP	PcP	16 00 35.6	-1.0
	comp=Z,0.3nm,0.2s,baz=342,slow=2.1,SNR=8.2						
ASAR				ScP	ScP	16 04 04.8	-2.5
	comp=Z,0.7nm,0.6s,baz=341,slow=2.8,SNR=12						
	comp=Z,0.7nm,0.6s						
ASAR	Alice Springs	25.70	157	P	P	15 57 08.1	-0.6
QIS	Mount Isa	25.98	143	P	P	15 57 12.1	+0.9
CMAR	Chiang Mai Arr	30.06	309	P	P	15 57 49.0	+1.4
	comp=Z,1.3nm,0.6s,baz=135,slow=7.4,SNR=16						
CMAR				PcP	PcP	16 00 46.0	-1.3
	comp=Z,0.5nm,0.4s,baz=121,slow=2.8,SNR=6.8						
	comp=Z,1.3nm,0.6s						
CMAR	Chiang Mai Arr	30.06	309	P	P	15 57 48.2	+0.7
CHTO	Chiang Mai	30.26	310	P	P	15 57 50.7	+1.3
CHTO				IAmb	IAmb	15 57 51.5	
	comp=Z,3.8nm,0.8s						
INKA	Innaminka	32.31	150	P	P	15 58 06.2	-1.0
INKA				IAmb	IAmb	15 58 20.5	
	comp=Z,4.7nm,1.5s						
ENH	Enshi	32.83	338	P	P	15 58 12.3	+0.6
PZH	PanZhiHua	33.49	324	P	P	15 58 19.6	+1.9
STKA	Stephens Creek	36.16	153	P	P	15 58 38.8	-1.7
	comp=Z,1.7nm,0.6s,baz=336,slow=8.2,SNR=7.1						
	comp=Z,1.7nm,0.6s						
STKA	Stephens Creek	36.16	153	P	P	15 58 40.5	+0.1
SHL	Shillong	39.49	313	P	P	15 59 08.1	-0.7
SHL				IAmb	IAmb	15 59 11.0	
	comp=Z,6.5nm,1.1s						
HHC	Hu-ho-hao-te	42.04	347	eP	P	15 59 32.4	+3.0
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
LSA	Lhasa	42.48	317	P	P	15 59 33.9	+0.3
LSA				IAmb	IAmb	15 59 37.5	
	comp=Z,3.1nm,0.6s						
LSA	Lhasa	42.48	317	Pn	P	15 59 31.6	-2.0
LSA				smax	smax		
	comp=N,2.0nm,0.5s						
LSA				smax	smax		
	comp=E,2.0nm,0.7s						
CAN	Canberra	42.58	148	P	P	15 59 35.3	+1.4
EVN	Everest	44.58	312	P	P	15 59 50.6	-0.1
GTA2	Gaotai	44.78	334	eP	P	15 59 54.5	+3.0
GTA2				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	Songino Array	49.86	345	P	P	16 00 31.0	+0.2
	comp=Z,0.9nm,0.8s,baz=178,slow=5.8,SNR=3.8						
SONM				PcP	PcP	16 01 49.2	-0.7
	comp=Z,0.3nm,0.5s,baz=124,slow=2.6,SNR=1.5						

	comp=Z,0.9nm,0.8s						
SONM	**Songino Array**	**49.86**	**345**	P	**P**	**16 00 31.8**	**+1.1**
MKAR	**Makanchi Array**	**58.73**	**328**	P	**P**	**16 01 34.7**	**-0.3**
	comp=Z,1.1nm,0.4s,baz=119,slow=8.4,SNR=53						
MKAR				PcP	**PcP**	**16 02 22.1**	**-1.6**
	comp=Z,0.7nm,0.5s,baz=167,slow=3.1,SNR=9.1						
MKAR				ScP	**ScP**	**16 06 10.8**	**-4.5**
	comp=Z,0.6nm,0.8s,baz=130,slow=4.3,SNR=6.1						
	comp=Z,1.1nm,0.4s						
MKAR	**Makanchi Array**	**58.73**	**328**	P	**P**	**16 01 34.5**	**-0.4**
MAKZ	**Makanchi**	**58.90**	**328**	P	**P**	**16 01 35.5**	**-0.7**
MAKZ				IAmb	IAmb	16 01 37.5	
	comp=Z,3.4nm,1.4s						
PETK	**Petropavlovsk-**	**60.26**	**23**	P	**P**	**16 01 44.9**	**-0.5**
	comp=Z,2.1nm,1.0s,baz=219,slow=7.1,SNR=2.0						
	comp=Z,2.1nm,1.0s						
PETK	**Petropavlovsk-**	**60.26**	**23**	P	**P**	**16 01 45.5**	**+0.1**
KBL	**Kabul**	**61.08**	**310**	P	**P**	**16 01 51.3**	**-0.3**
KBL				IAmb	IAmb	16 01 52.1	
	comp=Z,3.7nm,0.8s						
ZALV	**Zalesovo Beam**	**62.41**	**336**	P	**P**	**16 01 58.3**	**-1.6**
	comp=Z,0.4nm,0.4s,baz=128,slow=5.7,SNR=2.9						
	comp=Z,0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**63.07**	**330**	P	**P**	**16 02 02.5**	**-1.8**
	comp=Z,2.2nm,0.2s,baz=128,slow=6.2,SNR=4.1						
	comp=Z,2.2nm,0.2s						
KURK	**Kurchatov**	**63.08**	**330**	P	**P**	**16 02 03.4**	**-0.9**
BVAR	**Borovoye Array**	**68.59**	**329**	P	**P**	**16 02 38.4**	**-1.3**
	comp=Z,0.4nm,0.4s,baz=141,slow=8.6,SNR=4.4						
	comp=Z,0.4nm,0.4s						
ABKAR	**Akbulak array**	**72.85**	**322**	P	**P**	**16 03 06.6**	**+1.0**
H17K	**Granite Mounta**	**84.51**	**25**	P	**P**	**16 04 09.6**	**+0.4**
C18K	**Utukok River**	**84.83**	**21**	P	**P**	**16 04 11.7**	**+0.9**
C18K				IAmb	IAmb	16 04 38.0	
	comp=Z,2.8nm,1.3s						
C19K	**Lookout Ridge**	**85.50**	**21**	P	**P**	**16 04 14.4**	**+0.3**
C19K				IAmb	IAmb	16 04 16.7	
	comp=Z,6.4nm,1.5s						
ILAR	**Eielson Array**	**90.02**	**25**	P	**P**	**16 04 33.4**	**-2.4**
	comp=Z,0.1nm,0.6s,baz=262,slow=6.4,SNR=1.7						
	comp=Z,0.1nm,0.6s						
ARCES	**ARCESS Array B**	**92.72**	**340**	P	**P**	**16 04 45.6**	**-2.5**
	comp=Z,6.3nm,1.1s,baz=75,slow=5.5,SNR=5.7						
	comp=Z,6.3nm,1.1s						
FINES	**FINESS Array B**	**93.43**	**331**	P	**P**	**16 04 49.1**	**-2.5**
	comp=Z,3.6nm,1.0s,baz=55,slow=6.2,SNR=1.5						
	comp=Z,3.6nm,1.0s						
SPB2	**Spitsbergen Ar**	**93.45**	**349**	P	**P**	**16 04 49.3**	**-2.1**
SPITS	**Spitsbergen Ar**	**93.45**	**349**	P	**P**	**16 04 49.0**	**-2.4**
	comp=Z,9.6nm,1.1s,baz=79,slow=7.5,SNR=13						
TORD	**Torodi Ar. Bea**	**120.56**	**285**	PKP	**PKPdf**	**16 10 27.1**	**-1.6**
	comp=Z,1.2nm,0.6s,baz=94,slow=2.1,SNR=8.2						

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*IDC **04** 15:56:05.5±1.5, 7.°44N×93.°45E, h0km, mb3.4/6, mbtmp3.4/7, ML3.9/1, Error ellipse: s-maj=58.3km s-min=23.4km az=57.0*

ISC 04 15:56:13.2±1.4**, 7.°7N**±0.°2×**93.°7E**±0.°2**, h55**km**, n13,** σ1**s**34/7, **mb3.5**/6**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**11.86**	**25**	Pn	**Pn**	**15 58 59.0**	**-0.7**
	0.2nm,0.3s,baz=201,slow=16,SNR=1.6						
	0.6nm,0.4s						
H08S3	**Diego Garcia H**	**26.07**	**235**	T	T	16 28 30.0	
	baz=54,slow=76,SNR=13						
H08S2	**Diego Garcia H**	**26.07**	**235**	T	T	16 28 37.7	
	baz=54,slow=76,SNR=5.8						
H08S1	**Diego Carcia H**	**26.09**	**235**	T	T	16 28 32.0	
	baz=54,slow=76,SNR=4.6						
MKAR	**Makanchi Array**	**40.19**	**348**	P	**P**	**16 03 45.9**	**+1.7**
	0.5nm,0.7s,baz=178,slow=8.5,SNR=3.6						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**44.64**	**346**	P	**P**	**16 04 21.5**	**+1.4**
	0.5nm,0.6s,baz=169,slow=7.4,SNR=5.5						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**46.70**	**353**	P	**P**	**16 04 36.8**	**+0.5**
	0.3nm,0.4s,baz=171,slow=8.9,SNR=2.1						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**48.48**	**125**	P	**P**	**16 04 51.0**	**+0.2**
	0.3nm,0.9s,baz=301,slow=7.3,SNR=1.8						
	0.3nm,0.9s						
ASAR	**Alice Springs**	**50.11**	**130**	P	**P**	**16 05 03.2**	**+0.1**
	0.1nm,0.6s,baz=302,slow=8.1,SNR=1.2						
	0.1nm,0.6s						
BRTR	**Keskin Array B**	**62.24**	**311**	P	**P**	**16 06 28.4**	**-1.3**
	0.3nm,0.6s,baz=142,slow=4.9,SNR=1.9						
	0.3nm,0.6s						
H04N2	**CROZET ISLANDS**	**65.35**	**211**	T	T	17 17 55.8	
	baz=47,slow=74						
H04N1	**CROZET ISLANDS**	**65.36**	**211**	T	T	17 17 59.7	
	baz=47,slow=74						
H04N3	**CROZET ISLANDS**	**65.37**	**211**	T	T	17 17 47.0	
	baz=47,slow=74						

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*IDC **04** 16:24:19.9±2.5, 22.°24N×143.°50E, h259km±23km, mb3.1/9, mbtmp3.8/11, Error ellipse: s-maj=49.1km s-min=14.3km az=76.0*

ISC 04 16:24:19.2±1.5**, 22.°3N**±0.°1×**143.°5E**±0.°4**, h250**km**, n12,** σ1**s**09/13**, mb3.2**/8**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**4.96**	**346**	P	**Pn**	**16 25 35.4**	**+1.0**
	21nm,0.4s,baz=17,slow=23,SNR=16						
JCJ				S	**S**	**16 26 31.8**	**-2.6**
	20nm,0.2s,baz=148,slow=23,SNR=7.3						
MJAR	**Matsushiro Arr**	**14.95**	**343**	P	**Pn**	**16 27 39.5**	**+0.8**
	0.9nm,0.5s,baz=94,slow=16,SNR=5.3						
KSRS	**Korea Array**	**20.24**	**322**	P	**P**	**16 28 36.8**	**+1.1**
	1.1nm,0.7s,baz=145,slow=9.3,SNR=1.9						
	1.1nm,0.7s						
SONM	**Songino Array**	**39.09**	**320**	P	**P**	**16 31 22.4**	**-0.1**
	0.2nm,0.4s,baz=119,slow=7.5,SNR=2.1						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**42.89**	**193**	P	**P**	**16 31 53.2**	**-0.3**
	0.6nm,0.6s,baz=12,slow=8.6,SNR=6.8						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**46.60**	**192**	P	**P**	**16 32 22.1**	**-0.5**
	0.2nm,0.6s,baz=13,slow=6.5,SNR=7.3						
	0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**53.95**	**321**	P	**P**	**16 33 16.6**	**-0.5**
	0.4nm,0.4s,baz=93,slow=7.5,SNR=2.3						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**54.53**	**312**	P	**P**	**16 33 21.3**	**-0.3**
	0.3nm,0.6s,baz=87,slow=6.2,SNR=3.6						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**57.31**	**317**	P	**P**	**16 33 40.2**	**-0.9**
	0.6nm,0.2s,baz=97,slow=7.2,SNR=4.8						
	0.6nm,0.2s						
BVAR	**Borovoye Array**	**62.43**	**319**	P	**P**	**16 34 15.6**	**-0.2**
	1.2nm,0.3s,baz=99,slow=8.2,SNR=14						
	1.2nm,0.3s						
FINES	**FINESS Array B**	**82.80**	**335**	P	**P**	**16 36 15.8**	**+0.7**
	3.8nm,0.9s,baz=72,slow=3.6,SNR=9.9						
	3.8nm,0.9s						
PLCA	**Paso Flores**	**145.91**	**131**	PKPbc	**PKPdf**	**16 43 27.8**	**-0.6**
	1.4nm,0.9s,baz=259,slow=5.2,SNR=3.9						

IDC 04 16:32:37.7±2.3**, 6.°85S**×**131.°95E, h0**km**, mb3.5**/1**, mbtmp3.3**/5**, ML3.1**/4**, Error ellipse: s-maj=98.5km s-min=26.0km az=84.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.98**	**353**	Pn	Pn	16 34 07.2	-0.3
	0.9nm,0.3s,baz=169,slow=18,SNR=1.4						
SIJI				Sn	Sn	16 35 09.2	-7.7
	0.5nm,0.3s,baz=252,slow=23,SNR=5.7						
	1.9nm,0.3s						
FITZ	**Fitzroy Crossi**	**12.76**	**208**	Pn	Pn	16 35 39.8	-0.7
	0.1nm,0.3s,baz=33,slow=17,SNR=1.3						
FITZ				Sn	Sn	16 37 57.0	-6.4
	0.2nm,0.3s,baz=241,slow=15,SNR=1.7						
	0.6nm,0.4s						
WRA	**Warramunga Arr**	**13.22**	**170**	Pn	Pn	16 35 47.4	+0.6
	0.1nm,0.3s,baz=352,slow=13,SNR=2.2						
WRA				Sn	Sn	16 38 10.2	-4.5
	0.1nm,0.3s,baz=352,slow=23,SNR=4.9						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**16.82**	**174**	Pn	Pn	16 36 34.7	-0.1
	baz=352,slow=11,SNR=6.3						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**69.17**	**326**	P	P	16 43 46.3	+0.1
	0.2nm,0.3s,baz=117,slow=7.6,SNR=6.7						
	0.2nm,0.3s						

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*DJA **04** 16:35:05.1±0.2, 8°S±4°×11°7E±°, h10km, M4.0/18, mb4.1/5, MLv4.0/18*

*IDC **04** 16:35:05.2±1.5, 8.°80S×116.°75E, h0km, mb3.4/4, mbtmp3.7/6, ML3.9/2, MS2.5/1, Error ellipse: s-maj=37.3km s-min=20.5km az=46.0*

ISC 04 16:35:04.7±0.8**, 8.°33S**±0.°06×**116.°83E**±0.°04**, h10**km**, n22,** σ1**s**79/23**, mb3.7**/3**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWSI	**Taliwang, Sumb**	**0.41**	**172**	P	**Pb**	**16 35 13.5**	**-0.5**
PLAI	**Plampang**	**1.06**	**118**	P	**Pb**	**16 35 24.8**	**-0.4**
KHKI	**Kahang-Kahang**	**1.21**	**268**	P	**Pg**	**16 35 27.8**	**-0.1**
DBNI	**Kabupaten Domp**	**1.48**	**97**	P	**Pn**	**16 35 31.4**	**0.0**
IGBI	**Denpasar**	**1.73**	**254**	P	**Pb**	**16 35 35.3**	**-1.3**
RTBI	**Rangdo, Negare**	**1.87**	**266**	P	**Pn**	**16 35 36.5**	**-0.3**
JAGI	**Jajag, Banyuwa**	**2.65**	**267**	P	**Pn**	**16 35 46.8**	**-0.7**
WBSI	**Waikabubak, Su**	**2.85**	**117**	P	**Pn**	**16 35 50.5**	**+0.2**
LBFI	**Labuhan Bajo,**	**3.04**	**93**	P	**Pn**	**16 35 52.5**	**-0.3**
WSI	**Waingapu**	**3.68**	**111**	P	**Pn**	**16 36 03.0**	**+1.4**
BSSI	**Bau Bau, Buton**	**4.24**	**59**	P	**Pn**	**16 36 08.3**	**-1.0**
KAPI	**Kappang**	**4.39**	**42**	Pn	**Pb**	**16 36 19.4**	**-2.6**
	3.2nm,0.3s,baz=209,slow=11,SNR=5.2						
KAPI				Sn	**Sb**	**16 37 16.6**	**+1.5**
	5.3nm,0.3s,baz=244,slow=19,SNR=4.9						
KAPI				LR	LR	16 38 47.2	
	comp=Z,52nm,18.0s,baz=248,slow=46						
	7.2nm,0.3s						
EDFI	**Ende, Flores**	**4.83**	**95**	P	**Pn**	**16 36 17.9**	**+0.3**
SNJI	**Sawahan-Nganju**	**5.05**	**276**	P	**Pn**	**16 36 21.6**	**+1.0**
	0.2nm16nm,1.8s						
PCJI	**Pacitan**	**5.59**	**271**	P	**Pn**	**16 36 28.6**	**+0.6**
	35nm,1.1s						
BATI	**Baumata**	**7.00**	**106**	Pn	**Pn**	**16 36 48.5**	**+1.2**
	3.5nm,0.3s,baz=282,slow=19,SNR=6.8						
BATI				Sn	**Sn**	**16 38 08.7**	**+1.5**
	baz=318,slow=22						
	12nm,0.5s						
BATI	**Baumata**	**7.00**	**106**	P	**Pn**	**16 36 48.7**	**+1.3**
FITZ	**Fitzroy Crossi**	**12.95**	**139**	Sn	**Sn**	**16 40 27.6**	**-5.7**
	0.2nm,0.3s,baz=239,slow=8.6,SNR=2.1						
WRA	**Warramunga Arr**	**20.51**	**126**	P	**P**	**16 39 42.4**	**-0.8**
	1.5nm,0.6s,baz=300,slow=12,SNR=16						
	1.5nm,0.6s						
ASAR	**Alice Springs**	**22.36**	**135**	P	**P**	**16 40 02.8**	**-0.4**
	1.0nm,0.8s,baz=310,slow=9.4,SNR=16						
	1.0nm,0.8s						
MKAR	**Makanchi Array**	**62.90**	**334**	P	P	16 45 36.9	+5.7
	0.4nm,0.7s,baz=134,slow=7.0,SNR=6.3						
	0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**67.67**	**340**	P	**P**	**16 46 05.0**	**+3.2**
	0.2nm,0.4s,baz=165,slow=6.3,SNR=1.7						
	0.2nm,0.4s						

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*MOS **04** 16:47:52.7±1.0, 59.°72S×26.°42W, h39km, mb5.1/11, Error ellipse: s-maj=26.4km s-min=11.5km az=110.8*

*IDC **04** 16:47:55.3±2.1, 59.°64S×26.°53W, h52km±17km, mb4.5/12, mbtmp4.7/13, ML4.4/1, MS4.2/38, Error ellipse: s-maj=18.5km s-min=15.3km az=57.0*

*NEIC **04** 16:47:56.8±1.9, 59.°6S±0.°1×26.°6W±0.°2, h59km±4km, mb5.1/90, Error ellipse: s-maj=15.8km s-min=15.2km az=194.0*

*GCMT **04** 16:47:57.8±0.2, 59.°99S±0.°01×25.°92W±0.°03, h45km±1km, MW5.0/103, Moment Tensor Solution. s75,c99; s103,c145; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.30±.15; Mθθ0.57±.13; Mφφ-3.87±.11; Mrθ-1.58±.10; Mθφ-2.03±.07; Mφr1.84±.10; Best double couple: Mo4.80600×10^16 NP1:φs229.00000°, δ45.00000°, λ137.00000°. NP2:φs353.00000°, δ61.00000°, λ54.00000°. Principal axes: T 4.7770, Plg57.0000°, Azm212.0000°; N 0.0600, Plg31.0000°, Azm13.0000°; P -4.8350, Plg9.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 16:47:56.1±0.4**, 59.°65S**±0.°05×**26.°41W**±0.°06**, h62**km±2km**, h62**km**:pP-P, n277,** σ1**s**33/256**, mb5.1**/52**, 9C-4D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.69**	**310**	Pn	Pn	16 49 52.2	+7.0
HOPE	**Hope Point**	**7.69**	**310**	P	Pn	16 49 52.3	+7.0
VNA1	**Neumayer--Stat**	**13.33**	**153**	⇑P	Pn	16 50 58.5	-3.5
	comp=Z,164nm,0.4s						
VNA1				⇑sP	**P**	**16 51 11.7**	**+2.0**
VNA1				⇑S	Sn	16 53 13.3	-15
VNA1				⇓PcP	**PcP**	**16 56 25.9**	**-0.2**
VNA3	**Neumayer Olymp**	**13.48**	**156**	⇑P	**Pn**	**16 51 00.7**	**-3.4**
	comp=Z,161nm,0.3s						
VNA3				⇑S	Sn	16 53 15.4	-17
VNA3				⇓PcP	**PcP**	**16 56 26.2**	**-0.1**
VNA2	**Neumayer--Watz**	**13.73**	**153**	⇑P	Pn	16 51 03.1	-4.4
	comp=Z,7.5nm,0.4s,baz=311,slow=15						
VNA2				⇑S	Sn	16 53 24.4	-14
	baz=310,slow=20						
VNA2				⇓PcP	**PcP**	**16 56 26.9**	**+0.2**
	baz=311,slow=13						
ESPZ	**Base Esperanza**	**14.97**	**242**	Pn	**Pn**	**16 51 21.9**	**-1.9**
SNAA	**Sanae**	**15.32**	**151**	⇑P	**Pn**	**16 51 25.3**	**-3.0**
	comp=Z,1µm,0.4s						
SNAA				⇓S	Sn	16 54 04.6	-12
SNAA	**Sanae**	**15.32**	**151**	P	**Pn**	**16 51 24.7**	**-3.5**
	comp=Z,41nm,0.4s,baz=312,slow=14,SNR=53						
SNAA				S	Sn	16 54 00.2	-16
	comp=Z,18nm,0.6s,baz=303,slow=22,SNR=6.4						
SNAA				LR	LR	16 56 10.7	
	comp=Z,1µm,20.2s,baz=308,slow=32						
SNAA	**Sanae**	**15.32**	**151**		**Pn**	**16 51 25.2**	**-3.0**
SNAA				IAmb	IAmb	16 51 28.4	
	comp=Z,67nm,0.5s						
SNAA	**Sanae**	**15.32**	**151**	P	**Pn**	**16 51 25.2**	**-3.0**
SNAA				pmax	pmax		
	comp=Z,67nm,0.5s						
TROLL	**Troll, Antarti**	**16.88**	**149**	P	**Pn**	**16 51 45.5**	**-2.5**
TROLL				S	Sn	16 54 41.5	-13
PMSA	**Palmer Station**	**18.07**	**238**	P	**P**	**16 51 59.9**	**-2.1**
	comp=Z,1.4nm,0.3s,baz=83,slow=7.1,SNR=6.0						
PMSA				LR	LR	16 58 26.3	
	comp=Z,1µm,18.8s,baz=87,slow=35						
	comp=Z,12nm,0.8s						
PMSA	**Palmer Station**	**18.07**	**238**	P	**Pn**	**16 52 05.2**	**+2.8**
PMSA				IAmb	IAmb	16 52 10.6	
	comp=Z,115nm,1.4s						
BELA	**Belgrano 2**	**18.51**	**185**	P	**P**	**16 52 06.7**	**-0.2**
NVL	**N'lazarevskaya**	**19.10**	**141**	*i* P	**P**	**16 52 12.5**	**-0.8**
NVL				*e*S	**S**	**16 55 44.6**	**-1.7**
NVL				pmax	pmax		
	comp=Z,36nm,0.9s						
EFI	**East Falkland**	**19.40**	**280**	P	**Pn**	**16 52 18.6**	**+0.2**
EFI				IAmb	IAmb	16 52 20.4	
	comp=Z,270nm,1.7s						
EFI	**East Falkland**	**19.40**	**280**	*e*P	**Pn**	**16 52 17.8**	**-0.6**
EFI				pmax	pmax		
	comp=Z,57nm,0.6s						
MG02	**Cerro Sombrero**	**24.41**	**267**	P	**P**	**16 53 07.5**	**-0.8**
MG03	**Isla Dawson**	**24.46**	**264**	P	**P**	**16 53 08.8**	**0.0**
MG03				IAmb	IAmb	16 53 11.5	
	comp=Z,42nm,1.1s						
GO10	**Punta Arenas**	**25.13**	**265**	P	**P**	**16 53 15.3**	**+0.4**
GO10				IAmb	IAmb	16 53 40.3	
	comp=Z,70nm,0.9s						
MG04	**Isla Riesco**	**25.56**	**265**		**P**	**16 53 19.6**	**+0.9**
MG04				IAmb	IAmb	16 53 40.7	
	comp=Z,199nm,1.8s						
MG05	**Puerto Natales**	**26.70**	**267**		**P**	**16 53 28.3**	**-0.7**
MG05				IAmb	IAmb	16 53 29.6	
	comp=Z,40nm,0.6s						
GO09	**Cerro Castillo**	**26.85**	**268**	P	**P**	**16 53 29.9**	**-0.6**
GO09				IAmb	IAmb	16 53 31.8	
	comp=Z,27nm,0.8s						
GO08	**Villa O'Higgin**	**28.70**	**272**	P	**P**	**16 53 47.8**	**+0.8**
GO08				IAmb	IAmb	16 53 48.8	
	comp=Z,18nm,0.7s						
COYC	**Coyhaique**	**30.41**	**277**	P	**P**	**16 54 02.8**	**+0.6**
QSPA	**South Pole Qui**	**30.59**	**180**	PcP	**PcP**	**16 57 01.2**	**+0.7**
	comp=Z,11nm,1.0s,baz=182,slow=3.5,SNR=4.7						
QSPA				LR	LR	17 06 06.4	
	comp=Z,806nm,19.6s,baz=188,slow=36						
QSPA	**South Pole Qui**	**30.59**	**180**	P	**P**	**16 54 05.1**	**+1.4**
QSPA				IAmb	IAmb	16 54 06.4	
	comp=Z,54nm,1.2s						
QSPA	**South Pole Qui**	**30.59**	**180**	P	**P**	**16 54 05.2**	**+1.4**
QSPA				pP	**pP**	**16 54 19.7**	**+1.8**
QSPA				PcP	**PcP**	**16 57 01.3**	**+0.7**
TRQA	**Tornquist**	**31.25**	**298**		**P**	**16 54 10.6**	**+1.0**
TRQA				IAmb	IAmb	16 54 12.9	
	comp=Z,18nm,0.7s						
TRQA	**Tornquist**	**31.25**	**298**	P	**P**	**16 54 10.6**	**+1.0**
TRQA				pmax	pmax		
	comp=Z,18nm,0.7s						
AY01	**Puyuhuapi**	**31.51**	**278**	P	**P**	**16 54 12.1**	**+0.4**
AY01				IAmb	IAmb	16 54 13.2	
	comp=Z,22nm,0.8s						
LL02	**Futaleuf**	**31.99**	**280**		**P**	**16 54 16.1**	**0.0**
PLCA	**Paso Flores**	**33.19**	**285**	P	**P**	**16 54 26.8**	**+0.2**
	comp=Z,7.7nm,0.7s,baz=137,slow=8.1,SNR=38						
PLCA				LR	LR	17 08 12.6	
	comp=Z,343nm,18.3s,baz=142,slow=37						
	comp=Z,7.7nm,0.7s						
PLCA	**Paso Flores**	**33.19**	**285**	P	**P**	**16 54 26.6**	**0.0**
PLCA	**Paso Flores**	**33.19**	**285**	*e*P	**P**	**16 54 26.6**	**0.0**
PLCA	**Paso Flores**	**33.19**	**285**	*e*P	**P**	**16 54 26.8**	**+0.2**
PLCA	**Paso Flores**	**33.19**	**285**	P	**P**	**16 54 26.9**	**+0.2**
PLCA				pP	**pP**	**16 54 40.7**	**-0.8**
PLCA				sP	**sP**	**16 54 48.5**	**-0.1**
PLCA				PcP	**PcP**	**16 57 08.4**	**+0.4**
PLTB	**Pedras Altas**	**33.28**	**315**		**P**	**16 54 27.4**	**0.0**
PLTB	**Pedras Altas**	**33.28**	**315**	*e*P	**P**	**16 54 27.9**	**+0.5**
LR05	**Currie**	**34.28**	**284**		**P**	**16 54 36.2**	**+0.2**
LR05				IAmb	IAmb	16 54 37.4	
	comp=Z,17nm,0.7s						
GO06	**Curarrehue**	**34.52**	**285**	P	**P**	**16 54 38.1**	**-0.1**
LR04	**Corral**	**35.25**	**283**	P	**P**	**16 54 45.2**	**+0.8**
PSAL	**Palomas, Salto**	**35.39**	**310**	*e*P	**P**	**16 54 45.4**	**-0.3**
BI02	**San Fabin de**	**36.72**	**288**	P	**P**	**16 54 57.2**	**+0.2**
MAW	**Mawson**	**37.05**	**141**	LR	LR	17 08 36.0	
	comp=Z,583nm,20.1s,baz=242,slow=33						
BO02	**Sierra Bellavi**	**37.99**	**291**	IAmb	IAmb	16 55 14.8	
	comp=Z,27nm,1.1s						
GO05	**Hualane**	**38.36**	**289**	P	**P**	**16 55 11.1**	**+0.2**
GO05				IAmb	IAmb	16 55 15.2	
	comp=Z,32nm,0.8s						
BO01	**Tunca**	**38.46**	**291**	IAmb	IAmb	16 55 28.2	
	comp=Z,40nm,1.0s						
AAGR	**Agrelo**	**38.48**	**294**	*i* P	**P**	**16 55 14.3**	**+2.2**
BO04	**La Punta**	**38.57**	**292**	IAmb	IAmb	16 55 29.6	
	comp=Z,35nm,0.8s						
MT08	**Bocatoma Ro**	**38.74**	**293**	IAmb	IAmb	16 55 32.6	
	comp=Z,47nm,1.1s						
ASAL	**Salagasta**	**38.90**	**295**	*i* P	**P**	**16 55 16.9**	**+1.4**
MT09	**Talagante**	**38.92**	**291**	P	**P**	**16 55 16.5**	**+0.7**
MT01	**Popeta**	**38.97**	**291**	IAmb	IAmb	16 55 28.2	
	comp=Z,40nm,0.8s						
PEL	**Peldehue**	**39.30**	**292**	P	**P**	**16 55 20.4**	**+1.6**
PEL	**Peldehue**	**39.30**	**292**	P	**P**	**16 55 20.4**	**+1.6**
PEL				pmax	pmax		
	comp=Z,60nm,0.7s						
PEL	**Peldehue**	**39.30**	**292**	*i* P	**P**	**16 55 20.2**	**+1.4**
PEL	**Peldehue**	**39.30**	**292**	P	**P**	**16 55 19.8**	**+1.0**
PEL				pP	**pP**	**16 55 35.0**	**+1.1**
PEL				x	x	16 55 36.1	
CFA	**Coronel Fontan**	**39.45**	**296**	LR	LR	17 10 38.3	
	comp=Z,166nm,21.4s,baz=194,slow=35						
AUSP	**Uspallata**	**39.46**	**295**	*i* P	**P**	**16 55 22.5**	**+2.1**
VA03	**San Esteban**	**39.55**	**293**	*i* P	**P**	**16 55 22.5**	**+1.6**
CPUP	**Villa Florida**	**39.55**	**314**	P	**P**	**16 55 20.0**	**-0.8**
	comp=Z,4.6nm,0.6s,baz=161,slow=9.9,SNR=12						
CPUP				LR	LR	17 11 22.2	
	comp=Z,197nm,20.0s,baz=164,slow=36						
	comp=Z,4.6nm,0.6s						
CPUP	**Villa Florida**	**39.55**	**314**	P	**P**	**16 55 21.0**	**+0.1**
CPUP	**Villa Florida**	**39.55**	**314**	P	**P**	**16 55 21.0**	**+0.1**
CPUP				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CPUP	**Villa Florida**	**39.55**	**314**	P	**P**	**16 55 20.6**	**-0.3**
ZON	**Zonda**	**39.70**	**296**	P	**P**	**16 55 22.5**	**+0.3**
ZON				IAmb	IAmb	16 55 25.9	
	comp=Z,63nm,1.5s						
ZON	**Zonda**	**39.70**	**296**	P	**P**	**16 55 22.5**	**+0.3**
ZON				pmax	pmax		
	comp=Z,63nm,1.5s						
ZON	**Zonda**	**39.70**	**296**	*i* P	**P**	**16 55 23.7**	**+1.5**
RTLS	**Leoncito**	**39.77**	**295**	*i* P	**P**	**16 55 25.8**	**+2.7**
VA06	**Catapilco**	**40.07**	**292**	P	**P**	**16 55 25.6**	**+0.5**
CO04	**Los Peladeros**	**40.35**	**293**	P	**P**	**16 55 28.2**	**+0.4**
CO04				IAmb	IAmb	16 55 49.9	
	comp=Z,25nm,0.7s						
ACCO	**Cerro Coronel**	**40.69**	**296**	*i* P	**P**	**16 55 33.2**	**+2.5**
ACLC	**CERRO LA CRUZ**	**40.73**	**300**	*i* P	**P**	**16 55 32.0**	**+1.1**
CO02	**Combarbal**	**41.06**	**294**	IAmb	IAmb	16 55 51.0	
	comp=Z,39nm,1.0s						
ACDV	**Cuesta del Vie**	**41.07**	**297**	*i* P	**P**	**16 55 35.8**	**+2.3**
CO03	**El Pedregal**	**41.22**	**294**	IAmb	IAmb	16 55 52.0	
	comp=Z,30nm,1.1s						
AROD	**Rodeo**	**41.23**	**296**	*i* P	**P**	**16 55 37.3**	**+2.2**
SUR	**Sutherland**	**41.33**	**70**	LR	LR	17 09 01.2	
	comp=Z,425nm,18.7s,baz=204,slow=31						
CO01	**Juntas del Tor**	**41.68**	**296**	P	**P**	**16 55 40.7**	**+2.0**
CO01				IAmb	IAmb	16 55 59.0	
	comp=Z,41nm,1.1s						
CO06	**Fray Jorge**	**41.80**	**293**	P	**P**	**16 55 40.0**	**+0.6**
CO06				IAmb	IAmb	16 55 41.0	
	comp=Z,34nm,1.1s						
VCA	**Vinchina**	**41.88**	**299**	*i* P	**P**	**16 55 42.6**	**+2.4**
TINO	**Tinogasta**	**42.18**	**300**	*i* P	**P**	**16 55 45.0**	**+2.4**
CO05	**La Serena**	**42.25**	**294**	IAmb	IAmb	16 55 59.5	
	comp=Z,39nm,0.7s						
SJMB	**Sao Joao De Ma**	**42.27**	**339**	*e*P	**P**	**16 55 43.2**	**0.0**
LCO	**Las Campanas**	**42.77**	**296**	P	**P**	**16 55 49.0**	**+1.4**
LCO				IAmb	IAmb	16 56 06.5	
	comp=Z,18nm,0.8s						
LCO	**Las Campanas**	**42.77**	**296**	P	**P**	**16 55 49.0**	**+1.4**
LCO				pmax	pmax		
	comp=Z,18nm,0.9s						
VNDA	**Vanda**	**42.99**	**183**	P	**P**	**16 55 49.8**	**+1.3**
	comp=Z,18nm,0.8s,baz=185,slow=6.7,SNR=6.4						
VNDA				PcP	**PcP**	**16 57 38.3**	**+0.8**
	comp=Z,6.6nm,0.9s,baz=202,slow=1.5,SNR=4.5						
VNDA				LR	LR	17 12 30.6	
	comp=Z,248nm,21.4s,baz=172,slow=34						
	comp=Z,18nm,0.8s						
VNDA	**Vanda**	**42.99**	**183**	P	**P**	**16 55 50.0**	**+1.6**
VNDA				IAmb	IAmb	16 55 51.6	
	comp=Z,22nm,0.8s						
VNDA	**Vanda**	**42.99**	**183**	P	**P**	**16 55 50.1**	**+1.6**
VNDA				pmax	pmax		
	comp=Z,22nm,0.8s						
VNDA	**Vanda**	**42.99**	**183**	P	**P**	**16 55 50.5**	**+2.0**
VNDA				pP	**pwP**	**16 56 05.5**	**-1.3**
VNDA				sP	**sP**	**16 56 12.4**	**+2.3**
VNDA				x	x	16 56 15.7	
VNDA				PcP	**PcP**	**16 57 37.8**	**+0.2**
AC02	**Maricunga**	**43.93**	**299**	IAmb	IAmb	16 56 25.0	
	comp=Z,25nm,1.1s						
CCD	**Concordia, Ant**	**44.05**	**169**	P	**P**	**16 55 57.7**	**+0.2**
CCD				pP	**pP**	**16 56 11.9**	**-0.5**
CCD				x	x	16 56 16.6	
CCD				PcP	**PP**	**16 57 40.5**	**-0.2**
GUA01	**Guaratinga, BA**	**44.10**	**341**	*e*P	**P**	**16 55 57.9**	**-0.2**
AC01	**Pan de Azucar**	**45.18**	**298**	P	**P**	**16 56 07.3**	**+0.7**
CMC01	**Camacan, BA**	**45.26**	**342**	*e*P	**P**	**16 56 07.4**	**+0.2**
NBIT	**Itapeh - BA**	**45.67**	**342**	*e*P	**P**	**16 56 10.6**	**+0.2**
H04S2	**CROZET ISLANDS**	**45.80**	**110**	T	T	17 46 33.1	
	baz=224,slow=75,SNR=108						
H04S3	**CROZET ISLANDS**	**45.81**	**110**	T	T	17 46 34.3	
	baz=224,slow=75,SNR=67						
H04S1	**CROZET ISLANDS**	**45.82**	**110**	T	T	17 46 34.3	
	baz=224,slow=75,SNR=59						
JANB	**Januaria**	**46.43**	**336**	*e*P	**P**	**16 56 16.2**	**-0.3**
BOSA	**Boshof**	**46.58**	**72**	P	**P**	**16 56 17.7**	**0.0**
	comp=Z,5.9nm,0.9s,baz=210,slow=5.6,SNR=8.3						
BOSA				PcP	**PcP**	**16 57 51.6**	**+0.7**
	comp=Z,4.5nm,0.9s,baz=236,slow=2.2,SNR=4.0						
BOSA				LR	LR	17 12 33.6	
	comp=Z,303nm,18.3s,baz=208,slow=32						
	comp=Z,5.9nm,0.9s						
BOSA	**Boshof**	**46.58**	**72**	P	**P**	**16 56 17.8**	**+0.1**
BOSA	**Boshof**	**46.58**	**72**	P	**P**	**16 56 17.8**	**+0.1**
BOSA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BOSA	**Boshof**	**46.58**	**72**	P	**P**	**16 56 17.9**	**+0.2**
BOSA				pP	**pP**	**16 56 32.6**	**-0.1**
BOSA				x	x	16 56 34.5	
BOSA				PcP	**PcP**	**16 57 51.3**	**+0.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BDFB	Brasilia	46.71	331	P	P	16 56 18.2	-0.5
	comp=Z,4.1nm,0.4s,baz=147,slow=5.7,SNR=7.5						
BDFB				LR	LR	17 13 16.1	
	comp=Z,280nm,21.8s,baz=165,slow=33						
	comp=Z,4.1nm,0.4s						
BDFB	Brasilia	46.71	331	P	P	16 56 18.8	0.0
BDFB	Brasilia	46.71	331	P	P	16 56 18.8	0.0
BDFB				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PP1B	Ponte de Pedra	46.79	321	*e*P	P	16 56 18.9	-0.4
ARAG	Araguaiana, MT	47.66	326	*e*P	P	16 56 26.1	+0.1
PB06	IPOC Station P	47.73	301	IAmb	IAmb	16 56 29.0	
	comp=Z,19nm,0.9s						
PB03	IPOC Station P	48.38	302	IAmb	IAmb	16 56 33.4	
	comp=Z,20nm,0.7s						
SALV	Santo Antonio	48.64	321	*e*P	P	16 56 33.1	-0.5
KOOLE	Kule	49.00	63	*i* P	P	16 56 33.3	-3.2
PB01	IPOC Station P	49.16	303	P	P	16 56 38.2	+0.6
LBTB	Lobatse	49.77	69	LR	LR	17 13 33.2	
	comp=Z,465nm,20.6s,baz=204,slow=31						
LBTB	Lobatse	49.77	69	P	P	16 56 42.8	+0.5
LBTB				pP	pP	16 56 58.7	+1.2
LBTB				PcP	PcP	16 58 04.1	+1.7
PB08	IPOC Station P	49.81	303	IAmb	IAmb	16 57 03.0	
	comp=Z,25nm,1.2s						
HMBC	Humberstone	50.00	303	IAmb	IAmb	16 56 52.8	
	comp=Z,15nm,0.6s						
KGCAE	Kacgae	50.03	65	*i* P	P	16 56 42.4	-1.9
KGCAE	Kacgae	50.03	65	IAmb	IAmb	16 56 46.0	
	comp=Z,19nm,0.8s						
GO01	Chusmiza	50.25	304	IAmb	IAmb	16 57 06.0	
	comp=Z,20nm,0.9s						
SIV	San Ignacio	50.39	315	LR	LR	17 19 01.3	
	comp=Z,131nm,19.4s,baz=164,slow=37						
KDWAN	Kaudwane	50.72	67	*i* P	P	16 56 48.0	-1.5
GRTLG	Ghanzi	50.88	63	*i* P	P	16 56 46.6	-4.1
SNDB	Serra Nova Dou	51.07	328	*e*P	P	16 56 51.7	-0.4
TSUM	Tsumeb	51.18	57	LR	LR	17 13 42.1	
	comp=Z,452nm,21.8s,baz=157,slow=30						
TSUM	Tsumeb	51.18	57	P	P	16 56 57.6	+4.6
LPHEP	Lephephe	51.30	69	*i* P	P	16 56 50.8	-3.0
KHWEE	KHWEE	52.32	67	*i* P	P	16 56 57.9	-3.6
H10N1	ASCENSION HYDR	52.48	15	T	T	17 53 55.7	
	baz=191,slow=71						
H10N3	ASCENSION HYDR	52.48	15	T	T	17 53 58.2	
	baz=191,slow=71						
H10N2	ASCENSION HYDR	52.49	15	T	T	17 54 01.6	
	baz=191,slow=71						
LPAZ	La Paz	52.83	307	P	P	16 57 06.5	+0.6
	comp=Z,4.5nm,0.3s,baz=139,slow=6.2,SNR=23						
LPAZ				LR	LR	17 19 40.4	
	comp=Z,108nm,21.4s,baz=160,slow=36						
	comp=Z,4.5nm,0.3s						
LPAZ	La Paz	52.83	307	IAmb	IAmb	16 57 25.4	
	comp=Z,32nm,1.4s						
LPAZ	La Paz	52.83	307	*e*P	P	16 57 06.3	+0.4
LPAZ	La Paz	52.83	307	P	P	16 57 06.7	+0.8
LPAZ				pP	pP	16 57 22.2	+0.6
LPAZ				sP	sP	16 57 28.1	-0.5
VILB	Vilhena	52.89	317	P	P	16 57 05.1	-0.5
VILB				IAmb	IAmb	16 57 06.3	
	comp=Z,22nm,0.7s						
VILB	Vilhena	52.89	317	*e*P	P	16 57 05.1	-0.5
PDRB	Porto dos Gac	53.00	322	*e*P	P	16 57 05.3	-1.1
SMTB	Santa Maria do	53.15	334	*e*P	P	16 57 07.9	+0.4
CLDB	Colider	53.41	323	*e*P	P	16 57 08.9	-0.5
NBPV	Pedro Velho	53.54	349	*e*P	P	16 57 10.4	+0.1
SOOWA	Sowa	53.87	67	*i* P	P	16 57 08.9	-4.0
BROLN	Tlhalogang	53.93	69	*i* P	P	16 57 09.7	-3.6
RCBR	Riachuelo	54.18	348	LR	LR	17 15 37.4	
	comp=Z,52nm,21.8s,baz=202,slow=31						
NBPA	Parau_RN	54.39	347	*e*P	P	16 57 16.2	-0.3
NBPS	Pedro II - PI	56.32	342	*e*P	P	16 57 29.9	-0.6
LSZ	Lusaka	59.37	66	LR	LR	17 19 29.9	
	comp=Z,538nm,21.8s,baz=168,slow=32						
LSZ	Lusaka	59.37	66	P	P	16 57 51.9	-0.1
LSZ				IAmb	IAmb	16 57 54.4	
	comp=Z,9.4nm,0.8s						
LSZ	Lusaka	59.37	66	P	P	16 57 51.9	-0.1
LSZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LSZ	Lusaka	59.37	66	P	P	16 57 50.4	-1.5
LSZ				pP	pP	16 58 07.0	-0.6
NNA	Nana	60.38	300	LR	LR	17 21 58.7	
	comp=Z,160nm,21.6s,baz=158,slow=34						
NNA	Nana	60.38	300	*i* P	P	16 57 59.0	+0.2
NNA				pmax	pmax		
	comp=Z,10.0nm,0.3s						
TEFE	Tefe	63.22	316	*e*P	P	16 58 16.8	-1.0
ATAH	Atahualpa	65.38	301	LR	LR	17 23 37.3	
	comp=Z,92nm,21.9s,baz=167,slow=33						
BOAV	Boa Vista	67.40	323	P	P	16 58 43.4	-1.4
BOAV				IAmb	IAmb	16 58 44.1	
	comp=Z,10nm,0.7s						
BOAV	Boa Vista	67.40	323	*e*P	P	16 58 43.3	-1.4
MDP	Montagnes des	67.81	332	LR	LR	17 25 27.8	
	comp=Z,210nm,22.0s,baz=134,slow=33						
DBIC	Dimbokro	68.30	23	P	P	16 58 50.9	+0.6
	comp=Z,4.5nm,0.7s,baz=200,slow=3.9,SNR=4.9						
DBIC				LR	LR	17 22 48.3	
	comp=Z,62nm,21.4s,baz=172,slow=31						
	comp=Z,4.5nm,0.7s						
DBIC	Dimbokro	68.30	23	P	P	16 58 51.4	+1.0
DBIC				IAmb	IAmb	17 00 47.0	
	comp=Z,34nm,1.6s						
DBIC	Dimbokro	68.30	23	P	P	16 58 51.4	+1.0
DBIC				pmax	pmax		
	comp=Z,34nm,1.6s						
DBIC	Dimbokro	68.30	23	P	P	16 58 51.0	+0.6
DBIC				pP	pP	16 59 07.0	+0.7
DBIC				PcP	PcP	16 59 16.4	+0.8
OTAV	Otavalo	72.01	304	P	P	16 59 13.6	-0.1
OTAV	Otavalo	72.01	304	P	P	16 59 13.6	-0.1
OTAV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
OTAV	Otavalo	72.01	304	*e*P	P	16 59 12.7	-1.1
OTAV	Otavalo	72.01	304	P	P	16 59 14.1	+0.4
OTAV				PcP	PcP	16 59 32.1	+0.2
OTAV				sP	sP	16 59 36.4	-0.2
MBAR	Mbarara	73.47	61	LR	LR	17 28 13.4	
	comp=Z,344nm,20.3s,baz=201,slow=33						
ROSC	El Rosal	74.51	310	LR	LR	17 33 43.8	
	comp=Z,79nm,22.0s,baz=139,slow=37						
RPZ	Rata Peaks	76.00	193	LR	LR	17 30 33.0	
	comp=Z,122nm,19.2s,baz=169,slow=34						
TORD	Torodi Ar. Bea	76.02	28	P	P	16 59 37.6	+1.2
	comp=Z,6.3nm,0.4s,baz=203,slow=8.5,SNR=50						
	comp=Z,6.3nm,0.4s						
SDV	Santo Domingo	76.86	315	LR	LR	17 33 38.2	
	comp=Z,376nm,21.4s,baz=136,slow=36						
SDV	Santo Domingo	76.86	315	P	P	16 59 40.8	-0.7
SDV				IAmb	IAmb	16 59 41.8	
	comp=Z,12nm,0.7s						
SDV	Santo Domingo	76.86	315	*e*P	P	16 59 39.9	-1.5
SNZO	South Karori	77.90	196	P	P	16 59 48.3	+1.5
RTZ	Ruatahuna	80.19	198	P	P	17 00 00.6	+1.1
URZ	Urewera	80.52	199	LR	LR	17 30 58.9	
	comp=Z,118nm,21.9s,baz=180,slow=32						
TOO	Toolangi	82.90	174	P	P	17 00 14.3	+0.5
TOO	Toolangi	82.90	174	P	P	17 00 14.3	+0.5
TOO				pmax	pmax		
	comp=Z,19nm,1.7s						
NWAO	Narrogin (SRO)	82.99	150	LR	LR	17 34 14.2	
	comp=Z,84nm,18.9s,baz=84,slow=34						
JTS	Las Juntas de	83.81	302	LR	LR	17 39 43.8	
	comp=Z,29nm,19.2s,baz=169,slow=37						
PDPR	Patillas Dam,	83.83	322	P	P	17 00 17.2	-1.3
PDPR				IAmb	IAmb	17 03 25.7	
	comp=Z,31nm,1.3s						
SJG	San Juan	83.96	322	LR	LR	17 39 07.5	
	comp=Z,66nm,20.2s,baz=88,slow=37						
TBI	Tubuai	85.13	231	*e*P	P	17 00 21.4	-3.8
	comp=Z,380nm,29.0s						
TBI				*e*S	S	17 10 49.0	-0.8
	comp=Z,415nm,26.5s						
TBI				*e*LR	LR	17 27 12.1	
	comp=Z,407nm,23.0s						
FURI	Furi	85.47	64	LR	LR	17 36 48.6	
	comp=Z,258nm,18.4s,baz=202,slow=34						
BBOO	Buckleboo	86.74	165	P	P	17 00 33.2	+0.1
FORT	Forrest	87.46	158	P	P	17 00 37.1	+0.6
FORT				IAmb	IAmb	17 00 38.2	
	comp=Z,12nm,0.8s						
STKA	Stephens Creek	88.27	170	P	P	17 00 41.0	+0.5
	comp=Z,7.5nm,0.8s,baz=156,slow=8.0,SNR=15						
STKA				LR	LR	17 40 18.8	
	comp=Z,162nm,18.1s,baz=203,slow=36						
	comp=Z,7.5nm,0.8s						
STKA	Stephens Creek	88.27	170	P	P	17 00 41.0	+0.5
STKA	Stephens Creek	88.27	170	*e*P	P	17 00 39.2	-1.3
STKA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
RAO	Raoul Island	88.35	205	LR	LR	17 34 14.7	
	comp=Z,194nm,19.5s,baz=138,slow=32						
ATD	Arta Tunnel	89.70	66	LR	LR	17 37 17.3	
	comp=Z,7.7nm,21.9s,baz=170,slow=33						
PPT2	Papeete2	90.36	233	*e*S	S	17 11 45.3	+5.3
	comp=Z,122nm,29.0s						
PPT2				*e*LR	LR	17 29 39.1	
	comp=Z,276nm,24.0s						
PPT2				*e*LR	LR	17 29 51.4	
	comp=Z,210nm,26.0s						
PPT	Papeete	90.38	233	LR	LR	17 33 54.3	
	comp=Z,151nm,20.0s,baz=150,slow=30						
RAR	Rarotonga	90.89	223	LR	LR	17 34 48.6	
	comp=Z,56nm,19.2s,baz=161,slow=31						
INKA	Innaminka	92.29	169	P	P	17 00 58.7	-0.5
INKA				IAmb	IAmb	17 01 01.1	
	comp=Z,6.0nm,0.9s						
MDT	Midelt	93.88	18	LR	LR	17 37 00.6	
	comp=Z,138nm,21.7s,baz=214,slow=31						
TAOE	Nuku Hiva Isla	94.03	245	*e*LR	LR	17 31 25.3	
	comp=Z,498nm,27.8s						
PSA00	Pilbara Seismi	94.48	149	P	P	17 01 09.7	+0.3
PSA00				IAmb	IAmb	17 01 10.2	
	comp=Z,4.4nm,0.9s						
ASAR	Alice Springs	95.42	162	P	P	17 01 13.3	-0.4
	comp=Z,5.7nm,0.8s,baz=184,slow=3.9,SNR=70						
ASAR				PP	PP	17 05 05.7	+1.6
	comp=Z,0.8nm,0.9s,baz=193,slow=8.0,SNR=5.3						
ASAR				LR	LR	17 40 57.7	
	comp=Z,439nm,21.5s,baz=186,slow=33						
	comp=Z,5.7nm,0.8s						
ASAR	Alice Springs	95.42	162	P	P	17 01 13.1	-0.6
AS31	Alice Springs	95.43	162	P	P	17 01 12.9	-0.8
DZM	Mont Dzumac	97.90	192	*e*LR	LR	17 33 10.4	
	comp=Z,211nm,23.2s						
WRA	Warramunga Arr	99.15	162	P	Pdif	17 01 29.9	-0.6
	comp=Z,1.2nm,0.9s,baz=198,slow=4.5,SNR=6.5						
	comp=Z,1.2nm,0.9s						
WRA	Warramunga Arr	99.15	162	P	Pdif	17 01 30.5	0.0
WRA	Warramunga Arr	99.15	162	P	Pdif	17 01 30.5	0.0
FITZ	Fitzroy Crossi	99.25	153	P	Pdif	17 01 30.7	-0.3
	comp=Z,1.5nm,0.7s,baz=196,slow=7.4,SNR=1.8						
FITZ				LR	LR	17 43 53.4	
	comp=Z,103nm,20.4s,baz=195,slow=34						
	comp=Z,1.5nm,0.7s						
WB0	Warramunga Arr	99.33	162	P	Pdif	17 01 30.9	-0.4
WB0				IAmb	IAmb	17 04 57.8	
	comp=Z,12nm,1.5s						
KEST	Kesra	99.53	29	LR	LR	17 41 26.2	
	comp=Z,71nm,18.8s,baz=227,slow=32						
CLL	Collm	115.11	26	*e*PKIKP	PKPdf	17 06 29.0	+0.2
CLL	Collm	115.11	26	*e*PKiKP	PKPdf	17 06 29.0	+0.2
CLL				*e*PS	PS	17 17 12.0	+2.7
CLL				*e*SSS	SSS	17 27 36.0	
CLL				*e*SSSS		17 31 12.0	
CLL				AMS	AMS	17 47 00.0	
	comp=Z,100nm,19.9s						
KBZ	Khabaz	117.60	50	*e*PKIKP	PKPdf	17 06 33.9	+0.1
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KIV	Kislovodsk	117.71	50	*i* PKIKP	PKPdf	17 06 34.1	-0.1
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,67nm,22.0s						
SCHQ	Schefferville	118.62	335	PKP	PKPdf	17 06 34.5	-1.1
	comp=Z,2.4nm,0.7s,baz=82,slow=1.6,SNR=11						
SCHQ	Schefferville	118.62	335		PKPdf	17 06 34.3	-1.2
AKASG	Malin Array Be	118.85	37	PKP	PKPdf	17 06 35.7	-0.4
	comp=Z,0.7nm,0.5s,baz=276,slow=0.5,SNR=1.9						
QSM	Queen of Sheba	120.46	290	PKPdf	PKPdf	17 06 40.5	+0.8
PDAR	Pinedale Array	122.56	300	PKP	PKPdf	17 06 43.1	-0.7
	comp=Z,0.4nm,0.5s,baz=131,slow=4.0,SNR=5.1						
PDAR	Pinedale Array	122.56	300	PKPdf	PKPdf	17 06 42.8	-1.0
ULM	Lac du Bonnet	123.10	314	PKP	PKPdf	17 06 43.8	-0.4
	comp=Z,1.4nm,0.4s,baz=130,slow=5.3,SNR=5.0						
NVAR	Mina Array Bea	123.12	290	PKP	PKPdf	17 06 45.6	+0.6
	comp=Z,0.8nm,0.6s,baz=138,slow=3.9,SNR=5.1						
CMAR	Chiang Mai Arr	123.37	112	PKP	PKPdf	17 06 46.4	+0.6
	comp=Z,4.9nm,0.8s,baz=231,slow=3.7,SNR=33						
CMAR	Chiang Mai Arr	123.37	112	PKPdf	PKPdf	17 06 46.1	+0.3
HFS	Hagfors	123.46	23	PKP	PKPdf	17 06 44.0	-0.6
	comp=Z,0.7nm,0.4s,baz=182,slow=5.8,SNR=6.8						
NB2	NORSAR Subarra	123.83	21	PKPdf	PKPdf	17 06 45.6	+0.2
	comp=Z,0.5nm,0.6s,baz=202,slow=1.9						
NOA	NORSAR Array B	123.83	21	PKP	PKPdf	17 06 44.9	-0.5
	comp=Z,1.8nm,0.9s,baz=200,slow=1.7,SNR=3.9						
NOA	NORSAR Array B	123.83	21	*e*PKIKP	PKPdf	17 06 46.0	+0.6
NOA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
EVN	Everest	125.37	94	PKPdf	PKPdf	17 06 50.6	+0.4
FINES	FINESS Array B	127.37	29	PKP	PKPdf	17 06 52.8	+0.8
	comp=Z,3.4nm,0.8s,baz=178,slow=1.4,SNR=19						
KSH2	Kashi	128.58	77	PKP	PKPdf	17 06 51.4	-3.9
LSA	Lhasa	128.98	97	PKP	PKPdf	17 06 54.2	-2.6
ABKAR	Akbulak array	129.02	57	PKPdf	PKPdf	17 06 55.4	-0.2
KKAR	Karatay Array	129.15	70	PKPdf	PKPdf	17 06 55.6	-0.5
KKAR	Karatay Array	129.15	70	PKIKP	PKPdf	17 06 55.6	-0.5
ILULI	Ilulissat	129.79	349	*i* P	PKPdf	17 06 56.6	+0.2
GDH	Godhavn	130.08	348	*i* P	PKPdf	17 06 57.1	+0.1
PZH	PanZhiHua	131.57	110	PKP	PKPdf	17 07 00.7	-0.7
SUMG	Summit	132.21	355	*i* P	PKiKP	17 07 03.2	+0.6
ARCES	ARCESS Array B	134.13	23	PKP	PKPdf	17 07 04.8	+0.1
	comp=Z,1.3nm,0.4s,baz=236,slow=0.5,SNR=15						
ARCES				SKPab	SKPab	17 10 32.5	+1.1
	comp=Z,1.7nm,0.8s,baz=194,slow=1.9,SNR=3.6						
ARCES	ARCESS Array B	134.13	23	*e*PKIKP	PKPdf	17 07 04.1	-0.6
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ILON	Igloolik, Nuna	134.70	336	PKPdf	PKPdf	17 07 05.8	+0.1
KULLO	Kullorsuaq	135.51	349	*i* P	PKPdf	17 07 07.6	+0.5
DAG	Danmarks Havn	136.25	3	*i* P	PKPdf	17 07 08.5	0.0
BVAR	Borovoye Array	136.29	60	PKP	PKPdf	17 07 10.1	+0.9
	comp=Z,2.8nm,0.7s,baz=270,slow=2.5,SNR=10						
MKAR	Makanchi Array	137.54	75	PKhKP	PKPpre	17 07 00.5	
	comp=Z,0.4nm,0.6s,baz=248,slow=5.0,SNR=5.7						
MKAR				PKP	PKPdf	17 07 11.4	-0.4
	comp=Z,1.8nm,0.8s,baz=254,slow=2.4,SNR=11						
MKAR				SKPbc	SKPbc	17 10 40.1	+0.5
	comp=Z,0.9nm,1.0s,baz=270,slow=0.8,SNR=4.7						
NEEM	North Greenlan	137.70	352	*i* P	PKPdf	17 07 12.4	+0.9
WMQ	Urumqi	138.12	82	*e*PKP	PKiKP	17 07 16.2	+1.2
WMQ				L	L		
	comp=Z,120nm,23.9s						
KURBB	Kurchatov Arra	138.37	68	PKhKP	PKPpre	17 07 05.1	
	comp=Z,0.5nm,0.3s,baz=234,slow=3.7,SNR=5.0						
KURBB				PKP	PKPdf	17 07 14.3	+1.2
	comp=Z,2.0nm,0.7s,baz=234,slow=2.6,SNR=9.3						
KURK	Kurchatov	138.48	68	PKIKP	PKPdf	17 07 14.3	+1.0
YKA	Yellowknife Ar	139.07	315	PKP	PKPdf	17 07 14.1	+0.1
	comp=Z,1.8nm,0.8s,baz=124,slow=1.8,SNR=14						
YKA				PP	PP	17 10 06.0	-2.5
	comp=Z,0.5nm,0.9s,baz=129,slow=5.4,SNR=5.1						
YKA				SKPbc	SKPbc	17 10 43.5	+0.2
	comp=Z,0.9nm,0.8s,baz=119,slow=1.2,SNR=9.5						
SPITS	Spitsbergen Ar	140.00	13	PKhKP	PKPpre	17 07 09.4	
	comp=Z,4.7nm,0.9s,baz=148,slow=4.9,SNR=13						
SPITS				PKP	PKPdf	17 07 17.3	+1.9
	comp=Z,9.2nm,0.9s,baz=167,slow=4.0,SNR=9.9						
KBS	Kingsbay	140.19	11	*i* P	PKPdf	17 07 17.0	+1.4
LZH	Lanzhou	140.44	104	*e*PKP	PKPdf	17 07 14.0	-3.6
GTA2	Gaotai	141.04	97	*e*PKP	PKPdf	17 07 14.5	-4.0
XAN	Xi'an	141.25	111	PKP	PKiKP	17 07 21.9	+0.2
XAN				sPKP	sPKPdf	17 07 36.2	-6.4
ZAA0	Zalesovo Array	143.47	68	PKPpre	PKPpre	17 07 18.9	
ZALV	Zalesovo Beam	143.47	68	PKhKP	PKPpre	17 07 19.3	
	comp=Z,3.4nm,0.4s,baz=223,slow=3.7,SNR=27						
ZALV				PKP	PKPdf	17 07 24.1	+1.9
	comp=Z,3.4nm,0.6s,baz=248,slow=2.9,SNR=13						
NJ2	Nanjing	144.03	125	*e*PKP	PKPdf	17 07 24.8	+0.9
TIY	Taiyuan	145.89	111	PKPbc	PKPdf	17 07 28.3	+1.3
HNS	HongShan	146.70	114	⇑PKPbc	PKPbc	17 07 30.5	+0.5
TIA	Tai'an	146.82	119	PKPbc	PKPbc	17 07 30.9	+0.4
BTO2	Baotou	147.03	105	*e*PKPbc	PKPdf	17 07 29.9	+1.0
BTO2				PKPab	PKiKP	17 07 35.6	+2.1
HHC	Hu-ho-hao-te	147.94	107	*e*PKPbc	PKPdf	17 07 31.8	+1.4
INK	Inuvik	148.79	317		PKPbc	17 07 34.4	-0.3
INK	Inuvik	148.79	317	PKP2	PKPbc	17 07 34.4	-0.3
MOY	Mondy	150.01	82	*e*PKIKP	PKPbc	17 07 38.7	+0.3
MOY				pmax	pmax		
	comp=Z,46nm,2.0s						
SONM	Songino Array	150.35	92	PKPbc	PKPbc	17 07 39.7	+0.4
	comp=Z,20nm,0.8s,baz=220,slow=2.9,SNR=105						
ZAK	Zakamensk	150.39	86	*e*PKIKP	PKPbc	17 07 39.3	0.0
ZAK				pmax	pmax		
	comp=Z,31nm,1.2s						
NRIK	Noril'sk	151.47	43	PKPbc	PKPbc	17 07 41.3	+0.1
	comp=Z,3.6nm,0.9s,baz=187,slow=1.6,SNR=12						
KSAR	Wonju Array Be	152.34	132	PKPbc	PKPbc	17 07 45.0	+0.9
KSAR	Wonju Array Be	152.34	132	PKIKP	PKPbc	17 07 45.0	+0.9
KSRS	Korea Array	152.36	132	PKPbc	PKPbc	17 07 44.6	+0.5
	comp=Z,4.9nm,0.8s,baz=196,slow=2.7,SNR=8.6						
XLT	XiLinHaoTe	152.43	108	*e*PKPbc	PKPbc	17 07 44.5	+0.3
XLT				pPKP	pPKPdf	17 07 55.3	+0.8
ILAR	Eielson Array	152.71	306	PKPbc	PKPbc	17 07 43.5	-0.6
	comp=Z,5.0nm,0.7s,baz=110,slow=3.5,SNR=49						
MJAR	Matsushiro Arr	154.82	150	PKPbc	PKPbc	17 07 49.6	+0.1
	comp=Z,1.6nm,0.9s,baz=120,slow=7.2,SNR=4.0						
MJAR				PKPab	sPKPdf	17 08 04.8	+0.3
	comp=Z,3.1nm,0.8s,baz=173,slow=4.4,SNR=5.1						
K13K	Kusilvak Mount	159.75	294	PKPab	PKPab	17 08 26.2	+0.6
PETK	Petropavlovsk-	173.06	201	PKPab	PKPab	17 09 24.7	+0.3
	comp=Z,4.4nm,0.8s,baz=123,slow=8.0,SNR=6.3						
SEY	Seymchan	176.65	10	*e*PKIKP	PKPdf	17 07 53.1	-4.4
SEY				pmax	pmax		
	comp=Z,5.0nm,1.7s						

AZER ***04*** *17:09:09.1, 38°.32N×44°.56E, h2km, ml3.2*
ISK ***04*** *17:09:10.8, 38°.35N×44°.51E, h5km, ML3.0/7*
NSSP ***04*** *17:09:11.6, 38°.30N×44°.60E, h10km, Ms3.0*
TEH ***04*** *17:09:12.2, 38°.42N×44°.55E, h6km±45km, ML2.8, Presumed earthquake*
ISC 04 17:09:11.6±1.2**, 38°.38N**±0°.03×**44°.53E**±0°.02**, h4km**±10km**,**
n45, σ1§85/73**, 1C-3D, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHB	Shabestar	0.86	96	Pg	Pg	17 09 27.9	-0.2
IMRD	Marand	0.98	70	Pg	Pb	17 09 30.8	-0.4
MAKU	Maku	0.98	7	Pg	Pg	17 09 29.9	-0.5
HAKT	HAKKARI	1.04	219	P	Pg	17 09 31.0	-0.5
HAKT				S	Sn	17 09 48.3	0.0
NAX	Nakhchivan	1.10	43	P	Pn	17 09 33.0	-0.8
NAX				S	Sn	17 09 49.4	-0.1
AKDM	Akdamar-Van	1.22	268	Pn	Pn	17 09 33.2	-2.3
AKDM				Sn	Sn	17 09 52.8	+0.3
ORD	Ordubad	1.27	64	P	Pg	17 09 36.2	+0.2
ORD				S	Sn	17 09 55.0	+1.2
ITBZ	Tabriz	1.28	96	Pg	Pn	17 09 35.8	-0.6
SBZ	Shahbuz	1.29	38	P	Pg	17 09 36.6	+0.2
SBZ				S	Sn	17 09 56.4	+2.0
CUKT	Cukurca	1.34	213	Pn	Pn	17 09 37.1	-0.1
CUKT				Sn	Sn	17 09 56.3	+0.8
IAZR	Azarshahr	1.34	121	Pg	Pg	17 09 38.0	+0.7
HYR	Heyderabad	1.36	11	P	Pg	17 09 38.7	+1.0
HYR				S	Sg	17 10 02.0	+6.7
VAYK	Vayk	1.49	28	⇓*e*P	Pg	17 09 39.8	-0.3
VAYK				⇓*e*S	Sg	17 10 01.4	+1.9
IGDI	IGDIR	1.53	347	P	Pg	17 09 41.2	+0.4
IGDI				S	Sg	17 10 05.0	+4.3
AGRB	Hanur-Agry	1.69	315	Pn	Pb	17 09 42.9	-0.4
AGRB				Sn	Sg	17 10 06.2	+0.3
MLAZ	Malazgirt-MUS	1.72	297	Pn	Pb	17 09 43.2	-0.7
GNI	Garni	1.78	5	Pn	Pb	17 09 44.2	-0.6
GNI	Garni	1.78	5	*e*P	Pg	17 09 44.9	-0.7
GNI				*e*S	Sg	17 10 10.6	+1.9
EGVZ	Egvard	1.79	61	*e*P	Pb	17 09 44.6	-0.3
EGVZ				*e*S	Sg	17 10 08.4	-0.6
GRS	Goris	1.80	51	⇓*i*P	Pg	17 09 47.0	+0.9
GRS				⇑*i*S	Sg	17 10 10.0	+0.6
MAHB	Mahabad	1.86	149	Pn	Pb	17 09 47.0	+0.8
GURO	Guroymak-BITLI	1.97	276	Pn	Pn	17 09 46.3	+0.5
IHRS	Heris	1.98	91	Pn	Pb	17 09 48.8	+0.5
AYRK	Ayrk	1.99	29	*e*P	Pb	17 09 48.6	+0.1
AYRK				*e*S	Sg	17 10 16.6	+1.0
IHSH	Hashtrud	2.42	115	Pn	Pn	17 09 54.0	+1.8
QRD	Qoradiz	2.43	63	P	Pn	17 09 53.4	+1.3
QRD				S	Sg	17 10 27.7	-2.0
GDB	GEDABAY	2.52	22	P	Pb	17 09 55.5	-2.0
GDB				S	Sg	17 10 30.9	-1.8
LSVT	Lusahovit	2.59	11	*e*P	Pb	17 09 56.9	-1.6
LSVT				*e*S	Sg	17 10 34.8	+0.1
SVAN	Silvan-Diyarba	2.63	266	Pn	Pn	17 09 55.9	+1.1
AGDM	Agdam	2.65	48	P	Pb	17 09 56.9	-2.6
AGDM				S	Sb	17 10 32.3	-0.1
GANJ	Ganja	2.66	31	P	Pb	17 09 57.9	-1.8
GANJ				S	Sg	17 10 35.0	-2.0
GRMI	Germi	2.67	80	Pn	Pn	17 09 57.2	+1.8
BLQ	Beylaqan	2.71	59	P	Pb	17 09 58.2	-2.5
BLQ				S	Sg	17 10 36.3	-2.5
QZX	Qazax, Azerbai	2.75	13	P	Pb	17 09 59.1	-2.3
QZX				S	Sg	17 10 38.7	-1.4
BRDA	Brd	2.79	47	P	Pb	17 09 59.3	-2.6
BRDA				S	Sg	17 10 37.8	-3.3
YRD	Yardimli	2.96	78	P	Pn	17 10 01.4	+2.0
YRD				S	Sb	17 10 40.8	-0.7
LRK	Lerik	3.00	84	P	Pn	17 10 02.4	+2.3
LRK				S	Sb	17 10 42.1	-0.6
DGRG	David-gareji	3.14	12	P	Pb	17 10 07.0	-0.9
GLBA	Clilabad	3.14	73	P	Pn	17 10 03.5	+1.7
GLBA				S	Sb	17 10 46.3	-0.2
VSHL	Vashlovani	3.19	26	P	Pb	17 10 06.7	-2.2
VSHL				S	Sg	17 10 56.6	+2.5
DDFL	Dedoflistskaro	3.30	21	P	Pg	17 10 15.5	+0.7
ASTR	Astara	3.35	86	P	Pn	17 10 06.9	+2.2
ASTR				S	Sb	17 10 49.5	-3.1
QBL	Gabala	3.62	44	P	Pn	17 10 11.3	+2.9
QBL				S	Sb	17 10 57.3	-3.1
CHRG	Chargali	3.96	4	P	Pg	17 10 24.5	-2.9
SHTL	Shatili	4.30	6	P	Pb	17 10 30.0	+2.3

AZER ***04*** *17:28:30.5, 38°.37N×44°.63E, h2km, ml3.3*
ISK ***04*** *17:28:31.3, 38°.35N×44°.45E, h5km, ML3.0/8*
AFAD ***04*** *17:28:31.4, 38°.39N×44°.45E, h9km±2km, ML3.1*
NSSP ***04*** *17:28:31.5, 38°.37N×44°.50E, h10km, Ms3.1*
TEH ***04*** *17:28:32.2, 38°.41N×44°.55E, h5km, ML2.9, Presumed earthquake*
ISC 04 17:28:31.4±1.0**, 38°.37N**±0°.02×**44°.51E**±0°.02**, h9km**±10km**,**
n65, σ1§70/106**, 1C-3D, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.50	306	P	Pg	17 28 40.7	-0.5
YOVA	Hakkari_Yksek	0.80	192	P	Pb	17 28 47.2	-0.3
YOVA				S	Sb	17 28 59.1	+0.7
ISHB	Shabestar	0.88	95	Pg	Pg	17 28 47.9	-0.5
TVAN	Van	0.88	281	P	Pg	17 28 47.2	-1.1
TVAN				S	Sg	17 28 59.8	0.0
VMUR	Van-Muradiye	0.96	311	P	Pg	17 28 49.4	-0.5
VMUR				S	Sb	17 29 03.0	-0.1
VMUR				IAML		17 29 08.0	
	comp=E,581nm,0.7s						
MAKU	Maku	1.00	8	Pg	Pg	17 28 50.0	-0.6
IMRD	Marand	1.00	69	Pg	Pb	17 28 51.0	+0.1
HAKT	HAKKARI	1.02	218	P	Pg	17 28 50.8	-0.3
HAKT				S	Sn	17 29 08.1	+1.4
NAX	Nakhchivan	1.12	43	P	Pn	17 28 53.2	-0.1
NAX				S	Sn	17 29 09.7	+1.0
GEVA	Gevas	1.14	268	P	Pb	17 28 51.3	-2.0
GEVA				S	Sn	17 29 08.5	-1.0
AKDM	Akdamar-Van	1.20	269	Pn	Pb	17 28 52.8	-1.6
AKDM				Sn	Sn	17 29 11.9	+1.0
ORD	Ordubad	1.29	64	P	Pg	17 28 56.2	-0.1
ORD				S	Sg	17 29 15.2	+2.1
ITBZ	Tabriz	1.30	95	Pg	Pn	17 28 55.3	-0.5
SBZ	Shahbuz	1.31	38	P	Pg	17 28 56.6	-0.1
SBZ				S	Sg	17 29 16.9	+3.2
CUKT	Cukurca	1.32	213	Pn	Pg	17 28 57.1	+0.3
CUKT				Sn	Sg	17 29 15.9	+1.9
CUKT	Cukurca	1.32	213	P	Pg	17 28 56.9	+0.1
CUKT				S	Sg	17 29 15.0	+1.0
CUKT				IAML		17 29 24.0	
	comp=E,434nm,0.8s						
CUKT				IAML		17 29 29.0	
	comp=N,350nm,0.6s						
DYDN	Diyadin	1.34	332	P	Pb	17 28 56.6	-0.2
DYDN				S	Sb	17 29 12.2	-1.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
IAZR	**Azarshahr**	**1.35**	**120**	Pg	**Pg**	**17 28 57.9**	**+0.5**
HYR	**Heyderabad**	**1.38**	**11**	P	**Pg**	**17 28 58.7**	**+0.9**
HYR				S	**Sg**	**17 29 19.7**	**+4.0**
ADCV	**BITLIS_Adilcev**	**1.46**	**288**	P	**Pb**	**17 28 58.5**	**-0.4**
ADCV				S	**Sg**	**17 29 19.5**	**+1.0**
VAYK	**Vayk**	**1.51**	**28**	⇓*e*P	**Pg**	**17 28 59.8**	**-0.5**
VAYK				⇓*e*S	**Sg**	**17 29 21.6**	**+1.7**
IGDI	**IGDIR**	**1.54**	**348**	P	**Pg**	**17 29 00.5**	**-0.4**
IGDI				S	**Sg**	**17 29 21.4**	**+0.6**
IGDI				IAML		17 29 25.0	
	comp=N,310nm,1.2s						
IGDI				IAML		17 29 25.0	
	comp=E,344nm,0.6s						
IGDI	**IGDIR**	**1.54**	**348**	P	**Pg**	**17 29 01.5**	**+0.6**
IGDI				S	**Sg**	**17 29 25.0**	**+4.1**
PERV	**Siirt/Pervari-**	**1.60**	**255**	P	**Pn**	**17 28 59.8**	**-0.1**
PERV				S	**Sg**	**17 29 23.4**	**+0.4**
AGRB	**Hanur-Agry**	**1.69**	**316**	Pn	**Pb**	**17 29 02.7**	**0.0**
AGRB				Sn	**Sg**	**17 29 26.0**	**+0.3**
DORK	**Agr/Tutak/Do**	**1.69**	**308**	P	**Pb**	**17 29 02.5**	**-0.2**
DORK				S	**Sb**	**17 29 24.5**	**+0.3**
MLAZ	**Malazgirt-MUS**	**1.71**	**297**	Pn	**Pb**	**17 29 02.9**	**-0.2**
KOTA	**Agri, Merkez-K**	**1.75**	**325**	P	**Pb**	**17 29 02.9**	**-0.9**
KOTA				S	**Sb**	**17 29 26.5**	**+0.5**
GNI	**Garni**	**1.79**	**6**	Pn	**Pg**	**17 29 04.9**	**-0.8**
GNI				Sn	**Sg**	**17 29 29.3**	**+0.3**
GNI	**Garni**	**1.79**	**6**	*e*P	**Pg**	**17 29 05.0**	**-0.8**
GNI				*e*S	**Sg**	**17 29 29.7**	**+0.7**
GRS	**Goris**	**1.82**	**51**	⇓*i*P	**Pg**	**17 29 08.0**	**+1.7**
GRS				⇑*i*S	**Sg**	**17 29 30.0**	**+0.1**
BLIS	**Bitlis-Merkez**	**1.88**	**272**	P	**Pb**	**17 29 05.0**	**-1.0**
GURO	**Guroymak-BITLI**	**1.95**	**276**	Pn	**Pb**	**17 29 06.3**	**-0.8**
IHRS	**Heris**	**2.00**	**91**	Pn	**Pb**	**17 29 08.1**	**+0.1**
SRTM	**Siirt_Merkez**	**2.07**	**260**	P	**Pb**	**17 29 08.6**	**-0.6**
SRTM				S	**Sg**	**17 29 37.2**	**-0.7**
SRTM				IAML		17 29 50.0	
	comp=E,142nm,0.7s						
SRTM				IAML		17 29 51.0	
	comp=N,191nm,0.7s						
EATA	**Eleskirt**	**2.17**	**314**	P	**Pb**	**17 29 11.4**	**+0.5**
EATA				S	**Sb**	**17 29 38.7**	**+0.8**
DIGO	**Kars**	**2.23**	**337**	P	**Pg**	**17 29 13.6**	**-0.5**
MUSM	**Mu-Merkez**	**2.38**	**280**	P	**Pb**	**17 29 14.4**	**+0.1**
EAK	**Akyaka**	**2.42**	**344**	P	**Pg**	**17 29 17.2**	**-0.6**
EAK				S	**Sg**	**17 29 48.2**	**-1.0**
IHSH	**Hashtrud**	**2.43**	**115**	Pn	**Pb**	**17 29 14.5**	**-0.9**
QRD	**Qoradiz**	**2.45**	**63**	P	**Pb**	**17 29 13.9**	**-1.7**
QRD				S	**Sb**	**17 29 46.6**	**+0.7**
VRTB	**Varto-Mus**	**2.51**	**289**	Pn	**Pb**	**17 29 14.3**	**-2.4**
VRTB	**Varto-Mus**	**2.51**	**289**	P	**Pb**	**17 29 16.9**	**+0.1**
GDB	**GEDABAY**	**2.54**	**22**	P	**Pb**	**17 29 15.7**	**-1.6**
GDB				S	**Sg**	**17 29 51.7**	**-1.4**
ISRB	**Sarab**	**2.55**	**101**	Pn	**Pb**	**17 29 15.4**	**-2.0**
BTMN	**Batman**	**2.59**	**260**	P	**Pb**	**17 29 15.6**	**-2.4**
BTMN				S	**Sb**	**17 29 49.0**	**-1.1**
BTMN				IAML		17 30 13.0	
	comp=E,74nm,0.8s						
SVAN	**Silvan-Diyarba**	**2.61**	**266**	Pn	**Pb**	**17 29 15.9**	**-2.5**
SVAN	**Silvan-Diyarba**	**2.61**	**266**	P	**Pn**	**17 29 14.7**	**+1.0**
HOMI	**Horasan**	**2.62**	**311**	P	**Pb**	**17 29 19.8**	**+1.1**
MIDY	**Mardin/Midyat-**	**2.64**	**250**	P	**Pb**	**17 29 16.2**	**-2.7**
AGDM	**Agdam**	**2.67**	**48**	P	**Pb**	**17 29 17.7**	**-1.6**
AGDM				S	**Sb**	**17 29 54.3**	**+2.2**
GANJ	**Ganja**	**2.68**	**31**	P	**Pb**	**17 29 18.0**	**-1.5**
GANJ				S	**Sg**	**17 29 55.0**	**-2.3**
GRMI	**Germi**	**2.69**	**80**	Pn	**Pb**	**17 29 17.9**	**-1.9**
BLQ	**Beylaqan**	**2.73**	**59**	P	**Pb**	**17 29 18.4**	**-2.1**
BLQ				S	**Sb**	**17 29 53.1**	**-0.9**
SENK	**Senkaya-Erzuru**	**2.75**	**323**	Pn	**Pb**	**17 29 18.4**	**-2.5**
QZX	**Qazax, Azerbai**	**2.77**	**14**	P	**Pb**	**17 29 19.6**	**-1.4**
QZX				S	**Sg**	**17 29 57.9**	**-2.4**
BRDA	**Brd**	**2.81**	**47**	P	**Pb**	**17 29 20.2**	**-1.4**
BRDA				S	**Sb**	**17 29 55.7**	**-0.4**
YRD	**Yardimli**	**2.98**	**78**	P	**Pb**	**17 29 22.3**	**-2.4**
YRD				S	**Sb**	**17 29 58.5**	**-2.7**
LRK	**Lerik**	**3.02**	**84**	P	**Pb**	**17 29 23.1**	**-2.3**
LRK				S	**Sb**	**17 30 00.8**	**-1.7**
GLBA	**Clilabad**	**3.16**	**73**	P	**Pb**	**17 29 24.9**	**-2.8**
GLBA				S	**Sb**	**17 30 04.9**	**-1.4**
ASTR	**Astara**	**3.37**	**85**	P	**Pb**	**17 29 27.7**	**-3.5**
ASTR				S	**Sb**	**17 30 09.3**	**-3.0**
ZNJK	**Zanjan**	**3.73**	**116**	Pn	**Pn**	**17 29 32.4**	**+3.1**
XNQ	**Khinaliq**	**3.96**	**44**	P	**Pn**	**17 29 35.8**	**+3.3**
XNQ				S	**Sb**	**17 30 25.1**	**-4.4**
PQL	**Pirkuli**	**3.98**	**51**	P	**Pn**	**17 29 35.4**	**+2.8**
PQL				S	**Sb**	**17 30 26.4**	**-3.6**
ATGJ	**Altiaghaj**	**4.23**	**53**	P	**Pn**	**17 29 39.7**	**+3.6**

*NOU **04** 17:44:19.7, 23°.27S×179°.83E, h563km, mb4.6/47, South of Fiji Islands*

*IDC **04** 17:44:21.7±0.9, 23°.46S×179°.33E, h541km±9km, mb3.8/19, mbtmp4.6/21, Error ellipse: s-maj=9.9km s-min=9.4km az=67.0*

*NEIC **04** 17:44:21.2±2.1, 23°.51S±0°.09×179°.4E±0°.1, h536km±6km, mb4.6/63, Error ellipse: s-maj=15.4km s-min=13.3km az=80.0*

*BGR **04** 17:44:22.6, 23°.59S×179°.64W, h563km*

ISC 04 17:44:21.6±0.5**, 23°.55S**±0°.05×**179°.40E**±0°.05**, h546**km±5km**, h547**km**:pP-P, n323, σ1ˢ33**/353**, mb4.6**/63**, 33C-16D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.92**	**347**	P	**P**	**17 45 58.0**	**-1.6**
	6.7nm,0.5s,baz=144,slow=14,SNR=13						
MSVF				S	**S**	**17 47 15.8**	**-3.7**
	2.7nm,0.5s,baz=151,slow=22,SNR=0.8						
RAO	**Raoul Island**	**6.17**	**158**	P	**P**	**17 46 00.3**	**-1.1**
	427nm,0.3s,baz=59,slow=19,SNR=3.6						
RAO				S	**S**	**17 47 22.1**	**-1.1**
	391nm,0.3s,baz=213,slow=23,SNR=2.6						
MARNC	**Mare, Loyalty**	**10.71**	**279**	P	**P**	**17 46 47.7**	**+0.9**
MARNC	**Mare, Loyalty**	**10.71**	**279**	P	**P**	**17 46 47.3**	**+0.5**
NIUE	**Niue**	**10.90**	**68**	P	**P**	**17 46 47.2**	**-1.7**
NIUE	**Niue**	**10.90**	**68**	P	**P**	**17 46 46.6**	**-2.3**
NIUE				S	**S**	**17 48 50.9**	**+0.9**
OUENC	**Ouen Island, N**	**11.62**	**273**	P	**P**	**17 46 58.9**	**+2.6**
DZM	**Mont Dzumac**	**12.04**	**274**	P	**P**	**17 47 00.6**	**-0.1**
	7.3nm,0.7s,baz=92,slow=15,SNR=11						
DZM	**Mont Dzumac**	**12.04**	**274**	P	**P**	**17 47 03.1**	**+2.4**
DZM	**Mont Dzumac**	**12.04**	**274**	P	**P**	**17 47 01.0**	**+0.3**
OUZ	**Omahuta**	**12.67**	**202**	P	**P**	**17 47 09.7**	**+2.7**
OUZ	**Omahuta**	**12.67**	**202**	P	**P**	**17 47 09.8**	**+2.9**
AFI	**Afiamalu**	**12.72**	**43**	P	P	17 47 03.2	-4.6
	35nm,0.4s,baz=221,slow=17,SNR=9.7						
WCZ	**Waipu Caves**	**13.10**	**198**	P	**P**	**17 47 14.6**	**+3.2**
WIAZ	**Waiheke Island**	**13.70**	**195**	P	**P**	**17 47 20.2**	**+2.6**
MBAZ	**Motutapu North**	**13.73**	**195**	P	**P**	**17 47 21.1**	**+3.2**
WTAZ	**Waiatarua**	**13.97**	**196**	P	**P**	**17 47 23.0**	**+2.6**
MKAZ	**Moumakai**	**13.99**	**194**	P	**P**	**17 47 23.0**	**+2.5**
MXZ	**Matakaoa Point**	**14.00**	**184**	P	**P**	**17 47 21.8**	**+1.2**
MXZ	**Matakaoa Point**	**14.00**	**184**	P	**P**	**17 47 17.9**	**-2.7**
MXZ	**Matakaoa Point**	**14.00**	**184**	P	**P**	**17 47 20.1**	**-0.5**
MXZ				S	**S**	**17 49 46.3**	**-1.7**
AWAZ	**Awhitu Peninsu**	**14.07**	**196**	P	**P**	**17 47 23.8**	**+2.4**
HAZ	**Te Kaha**	**14.23**	**185**	P	**P**	**17 47 22.0**	**-1.0**
HAZ				S	**S**	**17 49 48.8**	**-3.6**
WMGZ	**Waiomatatini S**	**14.25**	**183**	P	**P**	**17 47 22.4**	**-0.8**
WMGZ				S	**S**	**17 49 48.3**	**-4.5**
RUGZ	**Raukumara Rang**	**14.44**	**185**	P	**P**	**17 47 25.5**	**+0.1**
RUGZ				S	**S**	**17 49 52.0**	**-4.8**
PUZ	**Puketiti**	**14.51**	**184**	P	**P**	**17 47 24.9**	**-1.0**
PUZ				S	**S**	**17 49 51.2**	**-6.6**
TOZ	**Tahuroa Road**	**14.52**	**192**		**P**	**17 47 27.6**	**+1.6**
TOZ	**Tahuroa Road**	**14.52**	**192**	P	**P**	**17 47 28.2**	**+2.2**
TWGZ	**Tauwhareparae**	**14.63**	**184**	P	**P**	**17 47 26.4**	**-0.8**
TWGZ				S	**S**	**17 49 59.8**	**-0.3**
URZ	**Urewera**	**14.79**	**187**	P	**P**	**17 47 27.3**	**-1.5**
	131nm,0.5s,baz=23,slow=2.3,SNR=63						
URZ				S	**S**	**17 49 58.2**	**-4.9**
	21nm,0.5s,baz=197,slow=23,SNR=18						
URZ	**Urewera**	**14.79**	**187**	P	**P**	**17 47 27.3**	**-1.5**
URZ				S	**S**	**17 49 57.4**	**-5.7**
RTZ	**Ruatahuna**	**15.16**	**187**	P	**P**	**17 47 31.4**	**-1.3**
HIZ	**Hauiti**	**15.41**	**194**	P	**P**	**17 47 36.0**	**+0.8**
HIZ	**Hauiti**	**15.41**	**194**	P	**P**	**17 47 33.2**	**-2.0**
BKZ	**Black Stump Fm**	**15.76**	**188**	P	**P**	**17 47 37.9**	**-0.9**
KHEZ	**Kahui Hut**	**16.35**	**195**	P	**P**	**17 47 45.0**	**+0.5**
BFZ	**Birch Farm**	**17.28**	**188**	P	**P**	**17 47 53.3**	**+0.4**
BFZ	**Birch Farm**	**17.28**	**188**	P	**P**	**17 47 51.0**	**-1.9**
MRZ	**Mangatainoka R**	**17.36**	**190**	P	**P**	**17 47 51.3**	**-2.4**
MRZ				IAmb	IAmb	17 47 57.0	
	comp=Z,44nm,1.0s						
TCW	**Tory Channel**	**18.12**	**192**	P	**P**	**17 48 00.8**	**+0.2**
SNZO	**South Karori**	**18.14**	**191**	P	**P**	**17 48 01.1**	**+0.4**
SNZO	**South Karori**	**18.14**	**191**	P	**P**	**17 47 59.9**	**-0.8**
QRZ	**Quartz Range**	**18.16**	**197**	P	**P**	**17 48 02.6**	**+1.6**
QRZ	**Quartz Range**	**18.16**	**197**	P	**P**	**17 48 02.7**	**+1.7**
TKNZ	**Takaka Hill**	**18.25**	**196**	P	**P**	**17 48 03.1**	**+1.3**
NNZ	**Nelson**	**18.32**	**195**	P	**P**	**17 48 02.7**	**+0.2**
TUWZ	**Tuamarina**	**18.40**	**193**	P	**P**	**17 48 04.1**	**+0.9**
MRNZ	**Matariki Terra**	**18.64**	**196**	P	**P**	**17 48 06.2**	**+0.8**
BSWZ	**Blackbirch Sta**	**18.69**	**193**	P	**P**	**17 48 05.7**	**-0.1**
THZ	**Tophouse**	**18.95**	**195**		**P**	**17 48 08.9**	**+0.6**
KHZ	**Kahutara**	**19.43**	**193**	P	**P**	**17 48 12.6**	**+0.1**
KHZ	**Kahutara**	**19.43**	**193**		**P**	**17 48 11.7**	**-0.8**
GVZ	**Greta Valley S**	**20.07**	**194**	P	**P**	**17 48 18.1**	**-0.2**
LTZ	**Lake Taylor**	**20.07**	**195**		**P**	**17 48 17.6**	**-0.8**
INZ	**Inchbonnie**	**20.23**	**197**	P	**P**	**17 48 19.4**	**-0.3**
MQZ	**McQueen's Vall**	**20.86**	**194**	P	**P**	**17 48 25.1**	**-0.3**
MQZ				IAmb	IAmb	17 48 28.8	
	comp=Z,25nm,0.9s						
RPZ	**Rata Peaks**	**21.25**	**197**	P	**P**	**17 48 30.2**	**+1.2**
	comp=Z,21nm,0.5s,baz=5.5,slow=8.7,SNR=13						
	comp=Z,21nm,0.5s						
RPZ	**Rata Peaks**	**21.25**	**197**	P	**P**	**17 48 30.1**	**+1.1**
RPZ	**Rata Peaks**	**21.25**	**197**	P	**P**	**17 48 29.5**	**+0.5**
JCZ	**Jackson Bay**	**22.25**	**201**	P	**P**	**17 48 38.8**	**+0.7**
ODZ	**Otahua Downs**	**22.60**	**196**	P	**P**	**17 48 41.4**	**+0.4**
DCZ	**Deep Cove**	**24.02**	**202**	P	**P**	**17 48 54.8**	**+1.2**
DCZ				IAmb	IAmb	17 48 59.9	
	comp=Z,33nm,1.4s						
TATA	**Tatamba Isabel**	**24.08**	**306**	P	**P**	**17 48 53.1**	**-1.5**
ARMA	**Armidale**	**25.63**	**248**	P	**P**	**17 49 09.7**	**+1.4**
ARMA	**Armidale**	**25.63**	**248**	P	**P**	**17 49 10.4**	**+2.1**
ARMA				IAmb	IAmb	17 49 11.1	
	comp=Z,12nm,0.8s						
EIDS	**Eidsvold**	**25.82**	**260**	P	**P**	**17 49 08.6**	**-1.3**
MGCD	**Mangrove Creek**	**26.61**	**242**	P	**P**	**17 49 18.9**	**+2.1**
CNB	**Canberra Magne**	**28.55**	**239**	P	**P**	**17 49 35.5**	**+1.7**
CAN	**Canberra**	**28.84**	**239**	P	**P**	**17 49 38.1**	**+1.8**
CAN	**Canberra**	**28.84**	**239**	P	**P**	**17 49 38.2**	**+1.9**
CAN				IAmb	IAmb	17 49 38.8	
	comp=Z,18nm,0.6s						
CMSA	**Cobar Meteorol**	**30.83**	**248**	P	**P**	**17 49 54.3**	**+0.8**
CTA	**Charters Tower**	**30.92**	**270**	P	**P**	**17 49 55.2**	**+0.8**
	comp=Z,28nm,0.5s,baz=93,slow=9.9,SNR=105						
CTA				PcP	**PcP**	**17 52 34.7**	**+0.7**
	comp=Z,4.8nm,0.7s,baz=116,slow=4.6,SNR=4.6						
	comp=Z,28nm,0.5s						
CTAO	**Charters Tower**	**30.92**	**270**	P	**P**	**17 49 55.0**	**+0.6**
CTAO	**Charters Tower**	**30.92**	**270**		**P**	**17 49 55.1**	**+0.6**
GLAD	**Gladstone**	**31.50**	**229**	P	**P**	**17 50 00.2**	**+1.2**
QLP	**Quilpie**	**31.93**	**257**	P	**P**	**17 50 03.5**	**+0.5**
TOO	**Toolangi**	**32.17**	**236**	P	**P**	**17 50 05.8**	**+0.9**
TAU	**Tasmania Unive**	**32.77**	**226**	P	**P**	**17 50 10.8**	**+1.0**
TAU	**Tasmania Unive**	**32.77**	**226**	P	**P**	**17 50 09.6**	**-0.2**
TAU				IAmb	IAmb	17 50 46.8	
	comp=Z,18nm,1.2s						
MTSU	**Mount Surprise**	**33.17**	**273**	P	**P**	**17 50 13.7**	**+0.1**
PMG	**Port Moresby**	**33.86**	**289**	P	**P**	**17 50 19.5**	**+0.1**
	comp=Z,40nm,0.7s,baz=84,slow=5.5,SNR=36						
	comp=Z,40nm,0.7s						
PMG	**Port Moresby**	**33.86**	**289**	P	**P**	**17 50 19.0**	**-0.3**
PMG	**Port Moresby**	**33.86**	**289**	P	**P**	**17 50 18.8**	**-0.6**
PMG	**Port Moresby**	**33.86**	**289**	P	**P**	**17 50 19.4**	**+0.1**
	comp=Z,475nmcomp=Z,57nm,0.8s						
STKA	**Stephens Creek**	**34.34**	**248**	P	**P**	**17 50 24.3**	**+1.1**
	comp=Z,10nm,0.6s,baz=98,slow=11,SNR=24						
STKA				PcP	**PcP**	**17 52 44.5**	**+0.9**
	comp=Z,2.6nm,0.5s,baz=72,slow=2.9,SNR=5.0						
	comp=Z,10nm,0.6s						
STKA	**Stephens Creek**	**34.34**	**248**	P	**P**	**17 50 23.8**	**+0.6**
COEN	**Coen**	**35.51**	**279**	P	**P**	**17 50 33.7**	**+0.5**
COEN				IAmb	IAmb	17 50 34.9	
	comp=Z,16nm,1.3s						
HTT	**Hallett**	**36.71**	**245**	P	**P**	**17 50 43.4**	**+0.5**
QIS	**Mount Isa**	**36.92**	**267**	P	**P**	**17 50 44.3**	**-0.5**
GHSS	**Government Hou**	**37.12**	**243**	P	**P**	**17 50 46.3**	**+0.1**
BBOO	**Buckleboo**	**39.07**	**246**	P	**P**	**17 51 02.1**	**0.0**
BBOO	**Buckleboo**	**39.07**	**246**	P	**P**	**17 51 01.9**	**-0.2**
BBOO				IAmb	IAmb	17 51 02.9	
	comp=Z,18nm,0.9s						
ASAR	**Alice Springs**	**41.55**	**260**	P	**P**	**17 51 22.1**	**+0.1**
	comp=Z,17nm,0.8s,baz=100,slow=6.5,SNR=127						
ASAR				PcP	**PcP**	**17 53 06.9**	**+0.4**
	comp=Z,4.3nm,0.8s,baz=100,slow=3.3,SNR=12						
ASAR				S	**S**	**17 56 57.2**	**-1.6**
	comp=Z,1.2nm,0.7s,baz=95,slow=14,SNR=7.7						
	comp=Z,17nm,0.8s						
ASAR	**Alice Springs**	**41.55**	**260**	P	**P**	**17 51 21.8**	**-0.2**
ASAR					**PcP**	**17 53 06.4**	**0.0**
WR8	**Warramunga Arr**	**41.73**	**266**	P	**P**	**17 51 22.4**	**-1.1**
WR8				IAmb	IAmb	17 51 23.8	
	comp=Z,13nm,0.8s						
WB0	**Warramunga Arr**	**41.87**	**266**	IAmb	IAmb	17 51 24.9	
	comp=Z,24nm,0.8s						
WRAB	**Tennant Creek**	**41.87**	**266**	P	**P**	**17 51 23.9**	**-0.7**
WRAB	**Tennant Creek**	**41.87**	**266**	P	**P**	**17 51 23.9**	**-0.7**
WRAB				IAmb	IAmb	17 51 24.9	
	comp=Z,17nm,0.8s						
WRA	**Warramunga Arr**	**41.88**	**266**	P	**P**	**17 51 24.1**	**-0.5**
	comp=Z,16nm,0.7s,baz=90,slow=5.8,SNR=157						
WRA				PcP	**PcP**	**17 53 07.8**	**+0.2**
	comp=Z,4.1nm,0.8s,baz=100,slow=3.5,SNR=8.5						
WRA				S	**S**	**17 57 00.4**	**-3.3**
	comp=Z,2.7nm,0.9s,baz=102,slow=14,SNR=7.5						
	comp=Z,16nm,0.7s						
WRA	**Warramunga Arr**	**41.88**	**266**	P	**P**	**17 51 23.7**	**-0.9**
FORT	**Forrest**	**45.91**	**249**	P	**P**	**17 51 55.3**	**-0.4**
FORT				IAmb	IAmb	17 51 56.6	
	comp=Z,31nm,0.7s						
MTN	**Manton Dam**	**46.88**	**274**	P	**P**	**17 52 02.4**	**-0.8**
KNRA	**Kununurra**	**48.13**	**270**	P	**P**	**17 52 12.3**	**-0.3**
KNRA				IAmb	IAmb	17 52 13.0	
	comp=Z,19nm,0.5s						
SIJI	**Sorong**	**51.80**	**289**	P	**P**	**17 52 38.9**	**-0.6**
	comp=Z,39nm,0.8s						
SWI	**Sorong**	**51.81**	**289**	P	**P**	**17 52 39.3**	**-0.2**
	comp=Z,46nm,0.9s						
KRAI	**Karang Ratu**	**53.17**	**284**	P	**P**	**17 52 49.2**	**-0.1**
	comp=Z,19nm,0.8s						
SOEI	**Soe**	**54.26**	**275**	P	**P**	**17 52 56.5**	**-0.7**
SOEI	**Soe**	**54.26**	**275**	P	**P**	**17 52 58.0**	**+0.8**
SOEI				IAmb	IAmb	17 53 14.2	
	comp=Z,39nm,0.8s						
SOEI	**Soe**	**54.26**	**275**	P	**P**	**17 52 58.5**	**+1.3**
	comp=Z,60nm,0.9s						
KLBR	**Kellerberrin**	**54.61**	**247**	P	**P**	**17 52 59.3**	**0.0**
VNDA	**Vanda**	**54.68**	**185**	P	**P**	**17 53 00.6**	**+1.7**
	comp=Z,2.2nm,0.8s,baz=12,slow=5.8,SNR=2.6						
VNDA				PcP	**PcP**	**17 53 54.5**	**+1.2**
	comp=Z,2.2nm,0.7s,baz=45,slow=1.4,SNR=2.5						
	comp=Z,2.2nm,0.8s						
MEEK	**Meekatharra**	**54.68**	**253**	P	**P**	**17 52 59.1**	**-0.8**
PSA00	**Pilbara Seismi**	**54.68**	**260**	P	**P**	**17 52 59.8**	**-0.1**
PSA00	**Pilbara Seismi**	**54.68**	**260**	P	**P**	**17 52 59.1**	**-0.8**
PSA00	**Pilbara Seismi**	**54.68**	**260**	P	**P**	**17 52 57.6**	**-2.2**
PSA00				IAmb	IAmb	17 53 01.0	
	comp=Z,9.8nm,0.7s						
NWAO	**Narrogin (SRO)**	**54.88**	**245**	P	**P**	**17 53 01.0**	**-0.1**
NWAO	**Narrogin (SRO)**	**54.88**	**245**	P	**P**	**17 53 01.0**	**-0.1**
MBWA	**Marble Bar**	**54.89**	**260**	P	**P**	**17 53 00.9**	**-0.4**
MBWA	**Marble Bar**	**54.89**	**260**	P	**P**	**17 53 00.5**	**-0.8**
MBWA				IAmb	IAmb	17 53 01.8	
	comp=Z,22nm,0.9s						
BLDU	**Ballidu**	**55.64**	**248**	P	**P**	**17 53 06.1**	**-0.3**
MUN	**Mundaring**	**55.86**	**246**	P	**P**	**17 53 08.2**	**+0.3**
SANI	**Sanana**	**55.89**	**284**	P	**P**	**17 53 07.6**	**-0.8**
MORW	**Morawa**	**56.47**	**250**	P	**P**	**17 53 12.1**	**-0.1**
MORW	**Morawa**	**56.47**	**250**	P	**P**	**17 53 11.9**	**-0.3**
MORW				IAmb	IAmb	17 53 13.0	
	comp=Z,22nm,1.0s						
EDFI	**Ende, Flores**	**57.00**	**275**	P	**P**	**17 53 15.5**	**-0.6**
	comp=Z,44nm,0.8s						
LBFI	**Labuhan Bajo,**	**58.74**	**274**	P	**P**	**17 53 28.0**	**+0.2**
GIRL	**Giralia**	**59.45**	**257**	P	**P**	**17 53 33.3**	**+0.8**
GIRL				IAmb	IAmb	17 54 12.5	
	comp=Z,66nm,1.5s						
DBNI	**Kabupaten Domp**	**60.18**	**274**	P	**P**	**17 53 36.9**	**-0.5**
	comp=Z,32nm,0.8s						
CASY	**Casey**	**60.18**	**206**	P	**P**	**17 53 37.1**	**+0.6**
CASY				IAmb	IAmb	17 53 37.8	
	comp=Z,28nm,0.8s						
PLAI	**Plampang**	**60.55**	**273**	P	**P**	**17 53 39.5**	**-0.3**
PLAI	**Plampang**	**60.55**	**273**	P	**P**	**17 53 39.6**	**-0.3**
	comp=Z,55nm,0.8s						
TOLI2	**Tolitoli**	**61.95**	**285**	P	**P**	**17 53 47.8**	**-1.2**
TOLI2	**Tolitoli**	**61.95**	**285**		**P**	**17 53 47.8**	**-1.2**
TOLI2				IAmb	IAmb	17 53 49.0	
	comp=Z,17nm,0.9s						
QSPA	**South Pole Qui**	**66.53**	**180**	P	**P**	**17 54 19.1**	**+1.7**
	comp=Z,21nm,0.8s,baz=18,slow=1.5,SNR=47						
	comp=Z,21nm,0.8s						
QSPA	**South Pole Qui**	**66.53**	**180**	P	**P**	**17 54 18.0**	**+0.7**
QSPA				IAmb	IAmb	17 54 20.2	
	comp=Z,26nm,1.0s						
MJAR	**Matsushiro Arr**	**71.30**	**326**	P	**P**	**17 54 45.7**	**-0.6**
	comp=Z,4.8nm,0.8s,baz=154,slow=5.5,SNR=9.6						
	comp=Z,4.8nm,0.8s						
BELA	**Belgrano 2**	**76.85**	**173**	P	**P**	**17 55 17.3**	**+0.3**
BELA				IAmb	IAmb	17 55 18.7	
	comp=Z,25nm,0.8s						
KSRS	**Korea Array**	**77.63**	**320**	P	**P**	**17 55 22.4**	**+0.6**
	comp=Z,2.5nm,0.8s,baz=136,slow=6.1,SNR=6.0						
	comp=Z,2.5nm,0.8s						
PETK	**Petropavlovsk-**	**78.64**	**347**	P	**P**	**17 55 27.2**	**+0.4**
	comp=Z,7.4nm,0.8s,baz=119,slow=6.5,SNR=12						
	comp=Z,7.4nm,0.8s						
NJ2	**Nanjing**	**80.02**	**311**	*e*P	**P**	**17 55 36.0**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
USRK	**Ussuriysk Ar.**	**80.17**	**327**	P	**P**	**17 55 36.2**	**+1.0**
	comp=Z,7.0nm,0.8s,baz=133,slow=8.4,SNR=7.0						
	comp=Z,7.0nm,0.8s						
IPM	**Ipoh**	**81.16**	**279**		**P**	**17 55 40.0**	**-1.1**
IPM				IAmb	IAmb	17 55 41.9	
	comp=Z,14nm,0.8s						
IPM	**Ipoh**	**81.16**	**279**	P	**P**	**17 55 41.0**	**-0.1**
	comp=Z,22nm,1.0s						
KULM	**Kulim**	**81.84**	**279**	P	**P**	**17 55 43.8**	**-0.7**
GSI	**Gunungsitoli**	**83.02**	**274**		**P**	**17 55 50.8**	**+0.3**
GSI				IAmb	IAmb	17 55 51.9	
	comp=Z,17nm,0.7s						
ELIB	**Princess Elisa**	**83.34**	**187**	*d*P	**P**	**17 55 51.5**	**+0.4**
	comp=Z,4.9nm,0.6s						
BNX	**BinXian**	**83.56**	**326**	⇑P	**P**	**17 55 52.6**	**+0.2**
BNX				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TIA	**Tai'an**	**83.59**	**314**	P	**P**	**17 55 53.9**	**+1.1**
TIA				pmax	pmax		
	comp=Z,22nm,0.9s						
TROLL	**Troll, Antarti**	**84.67**	**181**	P	**P**	**17 55 59.1**	**+1.3**
NVAR	**Mina Array Bea**	**84.89**	**44**	P	**P**	**17 56 00.4**	**+1.0**
	comp=Z,0.9nm,0.8s,baz=216,slow=7.6,SNR=5.4						
	comp=Z,0.9nm,0.8s						
SNAA	**Sanae**	**85.02**	**179**	P	**P**	**17 55 59.6**	**+0.3**
	comp=Z,135nm,0.5s						
SNAA	**Sanae**	**85.02**	**179**	P	**P**	**17 55 59.4**	**0.0**
	comp=Z,4.6nm,0.5s,baz=201,slow=7.3,SNR=8.6						
	comp=Z,4.6nm,0.5s						
SNAA	**Sanae**	**85.02**	**179**	IAmb	IAmb	17 55 59.9	
	comp=Z,5.2nm,0.5s						
VNA3	**Neumayer Olymp**	**85.25**	**177**	⇓P	**P**	**17 56 01.0**	**+0.6**
	comp=Z,15nm,0.7s						
VNA2	**Neumayer--Watz**	**85.66**	**178**	⇓P	**P**	**17 56 02.6**	**+0.3**
	comp=Z,17nm,0.6s,baz=180,slow=4.3						
HNS	**HongShan**	**85.86**	**314**	⇑P	**P**	**17 56 05.5**	**+1.7**
HNS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
VNA1	**Neumayer--Stat**	**85.90**	**177**	⇓P	**P**	**17 56 03.9**	**+0.5**
	comp=Z,8.3nm,1.0s						
MA2	**Magadan**	**86.11**	**346**		**P**	**17 56 03.7**	**-0.7**
MA2				IAmb	IAmb	17 56 05.3	
	comp=Z,11nm,1.0s						
MA2	**Magadan**	**86.11**	**346**	P	**P**	**17 56 04.2**	**-0.2**
LL02	**Futaleuf**	**86.84**	**136**		**P**	**17 56 08.1**	**-0.4**
LL02				IAmb	IAmb	17 56 11.5	
	comp=Z,9.4nm,0.8s						
XAN	**Xi'an**	**88.09**	**308**	P	**P**	**17 56 15.7**	**+1.2**
XAN				pP	pP	17 58 13.9	+1.3
XAN				pmax	pmax		
	comp=Z,16nm,1.0s						
CM31	**Chiang Mai Arr**	**88.89**	**291**	P	**P**	**17 56 20.0**	**+1.6**
CM31				IAmb	IAmb	17 56 21.1	
	comp=Z,8.1nm,1.1s						
CMAR	**Chiang Mai Arr**	**88.89**	**291**	P	**P**	**17 56 19.6**	**+1.2**
	comp=Z,3.5nm,1.0s,baz=132,slow=2.9,SNR=29						
CMAR				PKKPbc	**PKKPbc**	**18 13 54.2**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=289,slow=3.1,SNR=4.6						
	comp=Z,3.5nm,1.0s						
CMAR	**Chiang Mai Arr**	**88.89**	**291**		**P**	**17 56 19.3**	**+0.8**
PLCA	**Paso Flores**	**88.90**	**134**	P	**P**	**17 56 20.2**	**+1.9**
	comp=Z,1.7nm,0.8s,baz=237,slow=8.1,SNR=5.5						
	comp=Z,1.7nm,0.8s						
CHTO	**Chiang Mai**	**89.04**	**291**		**P**	**17 56 20.4**	**+1.2**
CHTO				IAmb	IAmb	17 56 21.5	
	comp=Z,9.0nm,1.1s						
CHTO	**Chiang Mai**	**89.04**	**291**	P	**P**	**17 56 20.3**	**+1.2**
TNA	**Tin City**	**89.36**	**5**	P	**P**	**17 56 20.2**	**+0.7**
HHC	**Hu-ho-hao-te**	**89.78**	**315**	*e*P	**P**	**17 56 23.7**	**+1.5**
HHC				pmax	pmax		
	comp=Z,14nm,0.6s						
TMUT	**Trail Mountain**	**90.00**	**47**	P	**P**	**17 56 24.4**	**+0.8**
TMUT				IAmb	IAmb	17 56 26.1	
	comp=Z,5.4nm,0.9s						
PZH	**PanZhiHua**	**90.03**	**299**	P	**P**	**17 56 26.0**	**+2.3**
SRU	**San Rafael Swe**	**90.37**	**47**	P	**P**	**17 56 26.0**	**+0.9**
TXAR	**Lajitas Array**	**90.72**	**58**	P	**P**	**17 56 28.1**	**+1.2**
	comp=Z,1.1nm,0.8s,baz=202,slow=6.5,SNR=7.3						
	comp=Z,1.1nm,0.8s						
BSUT	**Blindstream Ca**	**90.93**	**46**		**P**	**17 56 29.0**	**+1.1**
BSUT				IAmb	IAmb	17 56 30.0	
	comp=Z,4.7nm,0.9s						
ILAR	**Eielson Array**	**91.83**	**14**	P	**P**	**17 56 29.9**	**-1.0**
	comp=Z,0.6nm,0.9s,baz=234,slow=4.3,SNR=4.5						
ILAR				PP	**PP**	**18 00 19.3**	**-0.8**
	comp=Z,0.4nm,0.9s,baz=213,slow=6.5,SNR=4.1						
	comp=Z,0.6nm,0.9s						
BILL	**Bilibino**	**91.83**	**355**		**P**	**17 56 31.1**	**+0.2**
BILL				IAmb	IAmb	17 56 32.2	
	comp=Z,3.9nm,0.9s						
E18K	**Tukpahlearik C**	**91.92**	**8**	P	**P**	**17 56 31.8**	**+0.5**
E18K				IAmb	IAmb	17 56 32.5	
	comp=Z,4.1nm,0.9s						
AC06	**Mina Casimiro**	**95.79**	**123**		**P**	**17 56 52.7**	**+2.7**
SONM	**Songino Array**	**96.48**	**320**	P	**P**	**17 56 52.1**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=141,slow=5.0,SNR=4.4						
	comp=Z,0.6nm,0.8s						
SONM	**Songino Array**	**96.48**	**320**	P	**P**	**17 56 51.8**	**-0.9**
WMQ	**Urumqi**	**107.09**	**311**	Pdif	**Pdif**	**17 57 40.8**	**+0.9**
WMQ				LR	LR		
	comp=Z,130nm,24.3s						
ZALV	**Zalesovo Beam**	**111.33**	**321**	PKiKP	**PKiKP**	**18 01 51.8**	**-1.6**
	comp=Z,0.5nm,0.5s,baz=64,slow=3.4,SNR=3.6						
MKAR	**Makanchi Array**	**111.51**	**313**	PKiKP	**PKiKP**	**18 01 53.0**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=104,slow=0.9,SNR=10.0						
MKAR				PKKPbc	**PKKPbc**	**18 12 50.6**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=300,slow=2.1,SNR=2.4						
MKAR				PKKP	**PKKPab**	**18 13 01.6**	**+1.3**
	comp=Z,0.7nm,0.6s,baz=286,slow=3.4,SNR=7.0						
KURK	**Kurchatov**	**114.57**	**317**		PKPdf	18 01 59.0	-0.7
KURBB	**Kurchatov Arra**	**114.61**	**317**	PKP	PKPdf	18 01 58.6	-1.1
	comp=Z,1.4nm,0.7s,baz=103,slow=1.8,SNR=18						
KURBB				PKKPbc	**PKKPbc**	**18 12 39.9**	**-0.8**
	comp=Z,0.1nm,0.6s,baz=280,slow=3.9,SNR=4.7						
KK31	**Karatay Array**	**119.21**	**307**		**PKPdf**	**18 02 08.3**	**-0.6**
BDFB	**Brasilia**	**119.46**	**125**	PKP	**PKPdf**	**18 02 09.7**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=148,slow=9.5,SNR=3.4						
BVAR	**Borovoye Array**	**119.81**	**319**	PKP	**PKPdf**	**18 02 09.2**	**-0.6**
	comp=Z,1.9nm,0.4s,baz=98,slow=2.1,SNR=8.8						
BOSA	**Boshof**	**122.46**	**207**	PKP	**PKiKP**	**18 02 16.2**	**+0.1**
	comp=Z,2.2nm,0.7s,baz=143,slow=2.0,SNR=6.0						
SCHQ	**Schefferville**	**122.55**	**39**	PKP	**PKPdf**	**18 02 13.3**	**-1.6**
	comp=Z,2.4nm,0.9s,baz=11,slow=5.2,SNR=1.9						
SPITS	**Spitsbergen Ar**	**124.73**	**356**	PKP	**PKPdf**	**18 02 17.6**	**-1.0**
	comp=Z,7.6nm,0.8s,baz=109,slow=4.5,SNR=14						
SPITS				PKKPbc	**PKKPbc**	**18 12 03.3**	**-1.2**
	comp=Z,11nm,1.0s,baz=190,slow=4.4,SNR=6.5						
ARTI	**Arti**	**126.38**	**324**		**PKPdf**	**18 02 21.9**	**-0.3**
AB31	**Akbulak array**	**126.57**	**315**		**PKPdf**	**18 02 22.6**	**-0.1**
KGCAE	**Kacgae**	**128.82**	**207**		**PKiKP**	**18 02 28.8**	**0.0**
ARCES	**ARCESS Array B**	**131.43**	**348**	PKP	**PKPdf**	**18 02 31.0**	**-0.4**
	comp=Z,2.7nm,0.6s,baz=68,slow=1.6,SNR=9.6						
FINES	**FINESS Array B**	**137.94**	**341**	PKhKP	PKPpre	18 02 35.4	
	comp=Z,2.5nm,0.9s,baz=41,slow=4.4,SNR=5.9						
FINES				PKP	**PKPdf**	**18 02 43.8**	**+0.1**
	comp=Z,7.3nm,1.0s,baz=31,slow=3.2,SNR=7.7						
FINES				SKPbc	**SKPbc**	**18 05 27.2**	**+0.6**
	comp=Z,2.1nm,0.8s,baz=57,slow=5.1,SNR=4.9						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NB2	NORSAR Subarra	141.65	351	PKP	PKPdf	18 02 46.2	-4.4
	comp=Z,1.8nm,0.8s,baz=20,slow=3.1						
NOA	NORSAR Array B	141.65	351	PKhKP	PKPpre	18 02 45.4	
	comp=Z,1.9nm,0.7s,baz=16,slow=3.1,SNR=9.9						
KOPT	Kop Dagi	141.77	305		PKPdf	18 02 50.2	-1.6
HFS	Hagfors	142.10	348	PKhKP	PKPpre	18 02 47.0	
	comp=Z,6.2nm,0.4s,baz=54,slow=2.5,SNR=68						
KONO	Kongsberg	143.22	351		PKPab	18 02 51.2	0.0
STRU	Stroemstad	143.57	350	*i* P	PKPab	18 02 52.1	-0.4
AK03	Malin Array Si	144.37	327	PKP	PKPdf	18 02 54.6	-0.9
AKASG	Malin Array Be	144.38	327	PKP	PKPdf	18 02 54.9	-0.6
	comp=Z,7.0nm,0.6s,baz=46,slow=4.1,SNR=26						
AKASG	Malin Array Be	144.38	327		PKPdf	18 02 54.0	-1.6
AKBB	Malin Array Si	144.38	327	PKP	PKPdf	18 02 54.8	-0.8
AK01	Malin Array Si	144.39	327	PKP	PKPdf	18 02 54.9	-0.7
AK23	Malin Array Si	144.39	327	PKP	PKPdf	18 02 54.8	-0.8
KIEV	Kiev	144.39	327	⇓P	PKPdf	18 02 55.5	-0.1
KIEV	Kiev	144.39	327		PKPdf	18 02 54.6	-1.0
KIEV	Kiev	144.39	327	PKP	PKPdf	18 02 54.6	-1.0
AK04	Malin Array Si	144.40	327	PKP	PKPdf	18 02 54.9	-0.7
AK09	Malin Array Si	144.40	327	PKP	PKPdf	18 02 55.0	-0.6
TJOU	Tjoern	144.45	349	*i* P	PKPdf	18 02 54.9	-0.5
AK14	Malin Array Si	144.48	327	PKP	PKPdf	18 02 55.3	-0.4
BORU	Boraas	144.60	348	*i* P	PKPdf	18 02 55.3	-0.4
HOMB	Homborsund	144.70	352	*i* P	PKPdf	18 02 56.3	+0.5
SUW	Suwalki	144.72	336	*e*PKP	PKPdf	18 02 56.0	0.0
ONAU	Onsala	144.99	348	*i* P	PKPdf	18 02 56.3	-0.1
MI28	Mi28,Pidlybu	144.99	328	PKP	PKPdf	18 02 56.0	-0.6
BLEU	Blekinge	145.14	344	*i* P	PKPdf	18 02 56.8	+0.1
FABU	Falkenberg	145.21	347	*i* P	PKPdf	18 02 57.2	+0.4
DEL	Delary	145.45	346	*i* P	PKPdf	18 02 58.1	+0.9
RNPP9	Sopachiv	145.50	330	PKP	PKPdf	18 02 58.0	+0.5
BNN	Bunyan	145.55	305		PKPbc	18 02 59.6	0.0
LUBAR	Lubar, Ukraine	145.60	327	PKP	PKPdf	18 02 57.4	-0.3
BJUU	Bjuv	146.00	346	*i* P	PKPbc	18 02 59.8	-0.3
LUNU	Lund	146.31	346	*i* P	PKPbc	18 03 00.8	-0.1
SORM	Soroca	146.40	324	⇑P	PKPdf	18 02 59.2	+0.1
SORM	Soroca	146.40	324	PKP	PKPdf	18 02 58.6	-0.5
ILGA	Ilgaz	146.42	310		PKPbc	18 03 01.5	-0.6
BSD	Bornholm Skovb	146.43	344	*i* P	PKPbc	18 03 01.4	+0.1
KIRS	Kirsehir-Merke	146.91	306	⇓P	PKPbc	18 03 02.9	-0.3
BRTR	Keskin Array B	146.93	307	PKPbc	PKPbc	18 03 02.8	-0.6
	comp=Z,5.9nm,0.7s,baz=136,slow=4.0,SNR=20						
BRTR	Keskin Array B	146.93	307		PKPbc	18 03 02.6	-0.8
BR104	Keskin Array S	146.93	307	PKP	PKPdf	18 02 59.7	-0.8
MMAI	Mount Meron Ar	147.05	295	PKPbc	PKPbc	18 03 04.8	+1.0
	comp=Z,11nm,0.6s,baz=41,slow=7.7,SNR=25						
BEL	Belsk	147.33	335	*e*PKP	PKPbc	18 03 04.0	+0.2
GIRR	Girov	148.11	324	⇓P	PKPbc	18 03 06.3	+0.3
GHRR		148.14	322	⇓P	PKiKP	18 03 07.2	-0.2
KWP	Kalwaria Pacla	148.20	331	*e*PKP	PKPbc	18 03 06.6	+0.5
EKA	Eskdalemuir Ar	148.20	3	PKPbc	PKPbc	18 03 05.2	-0.7
	comp=Z,1.2nm,0.5s,baz=332,slow=2.6,SNR=13						
CFR	Carcaliu	148.21	320	⇓P	PKPbc	18 03 06.2	0.0
TPGR	Topolog	148.21	319	⇑P	PKPdf	18 02 58.6	-3.7
TESR	Tescani	148.30	323	⇓P	PKPbc	18 03 05.1	-1.4
BURAR	Bucovina Array	148.37	326	⇓P	PKiKP	18 03 08.0	0.0
BURAR	Bucovina Array	148.37	326		PKPbc	18 03 07.5	+0.7
ONER	Baraj Valea Uz	148.54	323	⇓P	PKPbc	18 03 07.2	+0.1
BSEG	Bad Segeberg	148.56	348	*e*PKPbc	PKPbc	18 03 07.2	+0.4
	baz=22,slow=2.2						
VRI	Vrincioaia	148.64	322	⇑P	PKPbc	18 03 07.5	+0.2
PLOR	Plostina	148.69	322	⇓P	PKPbc	18 03 06.0	-1.5
TURR	Turia	148.92	323	⇑P	PKPbc	18 03 08.0	-0.1
OJC	Ojcow	148.98	334	*e*PKP	PKPbc	18 03 08.3	+0.2
STHS	Stebnicka Huta	149.00	332	*e*PKP	PKPbc	18 03 07.7	-0.4
RUE	Ruedersdorf	149.09	343	*e*PKPbc	PKPbc	18 03 08.7	+0.5
	baz=22,slow=2.2						
GORT1	Trebel	149.24	346	*e*PKPbc	PKPbc	18 03 09.3	+0.8
	baz=22,slow=2.2						
MLR	Muntele Rosu	149.30	322	⇑P	PKPbc	18 03 09.2	0.0
DOPR	Dopca	149.32	323	⇑P	PKPbc	18 03 09.2	+0.2
NIE	Niedzica	149.40	333	*e*PKP	PKiKP	18 03 10.1	+0.2
KSP	Ksiaz	149.76	339	*e*PKP	PKPbc	18 03 10.6	+0.7
CJR	Cluj-Napoca	149.80	326	⇑P	PKPbc	18 03 10.9	+0.7
MESR	Meseseni	149.83	327	⇑P	PKiKP	18 03 11.4	+0.5
VOIR		149.84	323	⇑P	PKPdf	18 03 08.0	+3.1
FLTG	Flechtingen	149.87	345	*e*PKPbc	PKPbc	18 03 10.4	+0.3
	baz=22,slow=2.2						
RETH	Rethem/Aller,	149.88	348	*e*PKPbc	PKPbc	18 03 10.6	+0.5
	baz=22,slow=2.2						
OKC	Ostrava-Krasne	149.93	335	⇑*e*PKP	PKPbc	18 03 10.7	+0.4
LANS	Liptovska Anna	149.95	333	*e*PKP	PKiKP	18 03 12.0	+0.9
LANS				*e*		18 03 17.9	
STEB	Steborice	150.00	336	⇑*e*PKP	PKPbc	18 03 11.0	+0.5
OSTC	Ostas	150.03	338	⇑*e*PKP	PKiKP	18 03 11.4	+0.2
CHVC	Chvalec	150.06	339	⇑*e*PKP	PKPbc	18 03 11.2	+0.6
MARR	Marisel-Cluj	150.07	326	⇓P	PKPbc	18 03 11.1	+0.3
ARR	Arges	150.11	323	⇑P	PKiKP	18 03 12.0	+0.4
UPC	Upice	150.14	338	⇑*e*PKP	PKPbc	18 03 11.4	+0.6
DPC	Dobruska-Polom	150.17	338	⇑*e*PKP	PKiKP	18 03 11.7	+0.2
ASSE	Asse, Remlinge	150.18	346	*e*PKPbc	PKiKP	18 03 11.4	+0.1
	baz=22,slow=2.2						
DRGR		150.20	327	⇑P	PKPbc	18 03 11.2	0.0
MORC	Moravsky Berou	150.21	336	⇑P	PKPbc	18 03 11.1	+0.1
MORC	Moravsky Berou	150.21	336	*e*PKP	PKPbc	18 03 11.7	+0.7
KRLC	Kraliky	150.24	337	⇑*e*PKP	PKPbc	18 03 11.3	+0.2
CLL	Collm	150.36	343	⇓*i*PKPbc	PKPbc	18 03 11.6	+0.3
	comp=Z,32nm,0.8s						
CLL				*i* PKPab	PKPab	18 03 20.3	+0.2
	comp=Z,7.0nm,1.1s						
CLL				*e*pPKPbc	pPKPab	18 05 20.0	-0.8
CLL				*i* pPKPab	pPKPbc	18 05 25.2	+8.2
CLL	Collm	150.36	343	*e*PKPbc	PKPbc	18 03 11.5	+0.3
	baz=22,slow=2.2						
HUMR	Humele	150.42	321	⇑P	PKPbc	18 03 10.7	-0.9
MAUC	Maruska	150.44	335	⇑*e*PKP	PKiKP	18 03 12.3	+0.2
BRG	Berggiesshubel	150.48	341	*e*PKPbc	PKPbc	18 03 12.0	+0.4
	baz=22,slow=2.2						
CLZ	Clausthal	150.52	346	*e*PKPbc	PKPbc	18 03 12.1	+0.5
	baz=22,slow=2.2						
IBBN	Ibbenburen	150.58	350	*e*PKPbc	PKPbc	18 03 12.3	+0.6
	baz=22,slow=2.2						
IBBN				*e*pPKPbc	pPKPab	18 05 22.9	+1.2
PVCC	Panska Ves	150.59	340	⇑*e*PKP	PKiKP	18 03 12.6	+0.3
PVCC				*e*PKPAB	PKPab	18 03 21.8	+0.7
NEUB	Neuenburg	150.78	344	*e*PKPbc	PKPbc	18 03 12.7	+0.5
	baz=22,slow=2.2						
ELND	Elena	150.80	318	⇑P	PKPbc	18 03 12.8	+0.2
GTTG	Gottingen	150.89	346	*e*PKPbc	PKPbc	18 03 12.8	+0.3
	baz=22,slow=2.2						
GTTG				*e*pPKPbc	pPKPab	18 05 23.4	+0.4
JAVC	Velka Javorina	150.91	335	*e*PKP	PKiKP	18 03 14.4	+1.3
VRAC	Vranov	150.95	337	⇑P	PKPbc	18 03 13.1	+0.4
VRAC	Vranov	150.95	337	*e*PKP	PKPbc	18 03 13.2	+0.5
VRAC				*e*		18 03 23.4	
PRU	Pruhonice	151.07	340	⇑*e*PKP	PKPbc	18 03 12.9	0.0
GZR	Gura Zlata	151.10	325	⇑P	PKPbc	18 03 12.8	-0.4
KRUC	Moravsky	151.22	336	*e*PKP	PKPbc	18 03 13.7	+0.4
KRUC				*e*		18 03 24.1	
PLVB	Pleven	151.30	320	⇑P	PKPbc	18 03 13.8	+0.1
TANN	Tannenbergstha	151.31	342	*e*PKPbc	PKPbc	18 03 13.9	+0.4
	baz=22,slow=2.2						
MOX	Moxa	151.33	344	*e*PKPbc	PKPbc	18 03 13.8	+0.2
	baz=22,slow=2.2						
PLN	Plauen	151.34	343	*e*PKPbc	PKPbc	18 03 13.8	+0.2
	baz=22,slow=2.2						
PLN				*e*pPKPbc	pPKPab	18 05 24.2	-0.6
MODS	Modra-Piesok	151.45	335	*e*PKP	PKPdf	18 03 07.9	+0.7
MODS				*e*		18 03 14.8	
MODS				*e*		18 03 26.0	
KASTN	Kahler Asten	151.53	348	*e*PKPbc	PKPbc	18 03 14.1	+0.1
	baz=22,slow=2.2						
HERR	Herculane	151.63	324	⇓P	PKPbc	18 03 14.8	+0.4
MANZ	Manzenberg	151.80	343	*e*PKPbc	PKPbc	18 03 15.0	+0.4
	baz=22,slow=2.2						
ROTZ	Rotzenmuhle	151.97	342	*e*PKPbc	PKPbc	18 03 15.3	+0.3
	baz=22,slow=2.2						
MDVR	Moldovita	152.07	325	⇑P	PKPbc	18 03 14.6	-0.8
KHC	Kasperske Hory	152.13	340	⇑*e*PKP	PKPbc	18 03 15.6	+0.2
KHC				*e*PKPAB	PKPab	18 03 27.7	0.0
CKRC	Cesky Krumlov	152.16	339	⇑*e*PKP	PKPbc	18 03 15.3	-0.1
WET	Wettzell	152.33	341	*e*PKPbc	PKPbc	18 03 16.1	+0.3
	baz=22,slow=2.2						
GEC2	GERESS Array S	152.34	339		PKPbc	18 03 15.6	-0.4
GEC2	GERESS Array S	152.34	339	*e*PKPbc	PKPbc	18 03 16.3	+0.4
	baz=22,slow=2.2						
GERES	GERESS Array B	152.34	339	PKPbc	PKPbc	18 03 15.7	-0.3
	comp=Z,2.3nm,0.7s,baz=5.7,slow=1.3,SNR=13						
GERES				PKPab	PKPab	18 03 28.3	-0.3
	comp=Z,0.9nm,0.6s,baz=20,slow=3.3,SNR=4.2						
CONA	Conrad Observa	152.36	336	*e*PKiKP	PKPbc	18 03 16.4	+0.4
	comp=Z,1.4nm,0.3s						
CONA				*e*PKP	PKPab	18 03 29.8	+1.1
	comp=Z,5.1nm,0.7s						
RONA	Rosalia, Austr	152.39	335	*e*PKP	PKPbc	18 03 16.3	+0.3
	comp=Z,4.8nm,0.7s						
TNS	Taunus Mts	152.46	347	*e*PKPbc	PKPbc	18 03 16.2	+0.1
	baz=22,slow=2.2						
MORH	Mrgy, Hungar	152.56	330	⇑P	PKPbc	18 03 16.2	-0.1
UBR	Ueberruh	154.45	343	*e*PKPbc	PKiKP	18 03 20.7	+0.2
	baz=22,slow=2.2						
ABTA	Abfaltersbach	154.56	339	*e*PKP	PKiKP	18 03 20.2	-0.5
	comp=Z,1.8nm,0.5s						
DBIC	Dimbokro	162.72	166	PKP	PKPdf	18 03 21.0	-1.1
	comp=Z,2.7nm,0.6s,baz=270,slow=6.1,SNR=4.0						
DBIC				PKPab	PKPab	18 04 14.2	-0.2
	comp=Z,4.0nm,0.8s,baz=172,slow=3.9,SNR=4.4						
ESDC	Sonseca Array	163.68	9	PKPab	PKPab	18 04 17.5	-0.5
	comp=Z,1.5nm,1.0s,baz=350,slow=6.9,SNR=6.4						
ESDC	Sonseca Array	163.68	9		PKPab	18 04 16.8	-1.2
TORD	Torodi Ar. Bea	169.42	192	PKP	PKPdf	18 03 26.5	-0.8
	comp=Z,2.5nm,1.0s,baz=241,slow=3.6,SNR=8.0						
TORD				PKPab	PKPab	18 04 44.2	+0.4
	comp=Z,5.8nm,0.8s,baz=202,slow=7.6,SNR=21						
TORD				PP	PP	18 08 34.7	+1.5
	comp=Z,1.2nm,0.8s,baz=180,slow=6.2,SNR=4.3						
MD01	Midelt array s	170.02	21	PKPdf	PKPdf	18 03 27.4	0.0

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*AZER **04** 17:54:40.8, 38°.48N×44°.47E, h10^{km}, ml2.3*
*AFAD **04** 17:54:41.9, 38°.43N×44°.46E, h4^{km}±2^{km}, ML2.2*
*ISK **04** 17:54:42.5, 38°.44N×44°.33E, h5^{km}, ML2.3/5*
*TEH **04** 17:54:42.0, 38°.45N×44°.53E, h6^{km}±64^{km}, ML2.5, Presumed earthquake*
ISC 04 17:54:42.0±1.1**, 38°.45N**±0°.02×**44°.50E**±0°.02**, h4**^{km}±10^{km}**, n37,** σ**0^{s}95**/59**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.45	298	P	Pg	17 54 51.1	+0.4
OZAP				S	Sg	17 54 57.1	+0.4
OZAP				IAML		17 55 01.0	
	comp=N,188nm,0.8s						
TVAN	Van	0.86	276	P	Pg	17 54 57.9	-0.7
TVAN				S	Sb	17 55 11.0	-0.7
TVAN				IAML		17 55 25.0	
	comp=E,96nm,1.1s						
YOVA	Hakkari_Yksek	0.88	191	P	Pg	17 54 59.0	+0.1
YOVA				S	Sg	17 55 10.5	+0.3
YOVA				IAML		17 55 16.0	
	comp=E,76nm,1.0s						
ISHB	Shabestar	0.89	100	Pg	Pg	17 54 58.1	-1.1
VMUR	Van-Muradiye	0.91	307	P	Pg	17 54 59.1	-0.4
VMUR				S	Sn	17 55 13.8	-1.5
VMUR				IAML		17 55 16.0	
	comp=N,72nm,0.7s						
VMUR				IAML		17 55 17.0	
	comp=E,75nm,0.6s						
MAKU	Maku	0.91	9	Pg	Pg	17 54 59.2	-0.3
IMRD	Marand	0.98	74	Pg	Pg	17 55 00.6	-0.1
NAX	Nakhchivan	1.06	47	P	Pg	17 55 02.4	0.0
NAX				S	Sb	17 55 18.1	+0.9
HAKT	HAKKARI	1.09	215	P	Pg	17 55 02.1	-0.8
HAKT				S	Sb	17 55 17.6	-0.6
HAKT				IAML		17 55 25.0	
	comp=N,74nm,0.6s						
HAKT	HAKKARI	1.09	215	P	Pg	17 55 02.4	-0.5
HAKT				S	Sn	17 55 20.2	+0.3
GEVA	Gevas	1.14	264	P	Pg	17 55 02.2	-1.7
GEVA				S	Sb	17 55 19.3	-0.4
AKDM	Akdamar-Van	1.20	265	Pg	Pg	17 55 04.0	-1.1
SBZ	Shahbuz	1.25	41	P	Pg	17 55 06.0	0.0
SBZ				S	Sn	17 55 24.2	+0.5
ORD	Ordubad	1.26	67	P	Pn	17 55 05.9	-0.6
ORD				S	Sb	17 55 23.6	+0.6
DYDN	Diyadin	1.26	330	P	Pg	17 55 05.4	-0.9
DYDN				S	Sg	17 55 21.5	-1.1
ITBZ	Tabriz	1.31	99	Pg	Pn	17 55 05.9	-1.4
CUKT	Cukurca	1.40	211	Pn	Pg	17 55 08.8	0.0
CUKT				Sn	Sn	17 55 28.3	+1.0
CUKT	Cukurca	1.40	211	P	Pg	17 55 09.0	+0.3
CUKT				S	Sn	17 55 27.0	-0.3
CUKT				IAML		17 55 30.0	
	comp=N,80nm,0.8s						
IAZR	Azarshahr	1.40	123	Pg	Pn	17 55 08.2	-0.3
ADCV	BITLIS_Adilcev	1.44	285	P	Pg	17 55 09.8	+0.2
ADCV				S	Sn	17 55 29.2	+0.8
IGDI	IGDIR	1.45	347	S	Sg	17 55 30.1	+1.3
PERV	Siirt/Pervari-	1.62	253	P	Pg	17 55 13.5	+0.3
PERV				S	Sg	17 55 35.5	+1.3
AGRB	Hanur-Agry	1.63	314	Pn	Pb	17 55 12.4	-0.3
DORK	Agr/Tutak/Do	1.64	305	P	Pn	17 55 11.4	-0.4
DORK				S	Sg	17 55 36.0	+1.3
KOTA	Agri, Merkez-K	1.69	324	P	Pg	17 55 14.0	-0.3
KOTA				S	Sg	17 55 37.2	+1.0
GNI	Garni	1.71	6	Pn	Pg	17 55 14.9	+0.1
BLIS	Bitlis-Merkez	1.88	270	P	Pg	17 55 18.0	0.0
GURO	Guroymak-BITLI	1.94	274	Pn	Pn	17 55 16.1	+0.2
IHRS	Heris	2.00	93	Pn	Pb	17 55 18.6	-0.4
SRTM	Siirt_Merkez	2.08	258	P	Pb	17 55 20.2	-0.2
SRTM				S	Sb	17 55 46.3	-0.4
SRTM				IAML		17 55 58.0	
	comp=N,31nm,0.6s						
SRTM				IAML		17 55 58.0	
	comp=E,30nm,0.7s						
DIGO	Kars	2.15	336	P	Pg	17 55 23.2	0.0
MUSM	Mu-Merkez	2.36	278	P	Pn	17 55 22.8	+1.1
GDB	GEDABAY	2.46	23	P	Pb	17 55 25.1	-1.8
GDB				S	Sb	17 55 56.2	-1.6
GANJ	Ganja	2.60	32	P	Pn	17 55 26.8	+1.9
GANJ				S	Sb	17 56 00.8	-0.8
GRMI	Germi	2.68	81	Pn	Pn	17 55 27.7	+1.7
YRD	Yardimli	2.96	80	P	Pn	17 55 32.4	+2.5
YRD				S	Sb	17 56 10.9	-1.2
LRK	Lerik	3.02	85	P	Pn	17 55 32.3	+1.6
LRK				S	Sb	17 56 13.3	-0.2

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*IDC **04** 18:04:22.0±1.0, 10°.24N×93°.63E, h0^{km}, mb3.8/10, mbtmp3.7/11, ML3.1/1, MS3.2/7, Error ellipse: s-maj=37.5km s-min=18.6km az=54.0*
*BKK **04** 18:04:28.6±1.2, 10°N±5°×9°4E±°, h29^{km}±14^{km}, M3.9/9, mB4.8/5, mb4.1/8, Mjma3.7/9, MLv3.9/5, Mw(mB)4.0/5*
ISC 04 18:04:25.4±1.0**, 10°.2N**±0°.1×**93°.7E**±0°.1**, h24**^{km}**, n20,** σ**0^{s}96**/15**, mb3.8**/10**, MS3.3**/5**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RNTT	Ranong	4.75	99	P	Pn	18 05 34.8	-0.8
PKDT	Phuket	5.09	116	P	Pn	18 05 38.9	-1.4
KHLT	Khaolaem Dam	6.60	46	P	Pn	18 05 59.9	-1.1
	0.0nm0.2nm5.5nm,0.9s						
UTHA	Uthaitani	7.72	46	P	Pn	18 06 17.1	+0.7
CMAR	Chiang Mai Arr	9.65	31	Pn	Pn	18 06 43.0	+0.1
	0.1nm,0.3s,baz=229,slow=13,SNR=6.1						
CMAR				LR	LR	18 10 14.4	
	comp=Z,54nm,19.6s,baz=240,slow=36						
	0.1nm,0.4s						
PALK	Pallekele	13.19	258	LR	LR	18 12 29.6	
	comp=Z,30nm,19.0s,baz=102,slow=37						
AAK	Ala-Archa	36.44	336	LR	LR	18 27 39.8	
	comp=Z,47nm,20.1s,baz=116,slow=38						
MKAR	Makanchi Array	37.76	347	P	P	18 11 38.5	-0.9
	0.7nm,0.7s,baz=153,slow=8.2,SNR=10						
	0.7nm,0.7s						
SONM	Songino Array	39.02	14	P	P	18 11 50.3	+0.1
	0.9nm,1.0s,baz=206,slow=6.3,SNR=4.5						
	0.9nm,1.0s						
KURBB	Kurchatov Arra	42.22	346	P	P	18 12 15.6	-0.8
	0.6nm,0.8s,baz=165,slow=7.7,SNR=8.0						
	0.6nm,0.8s						
ZALV	Zalesovo Beam	44.23	352	P	P	18 12 32.4	-0.2
	2.7nm,0.9s,baz=170,slow=10,SNR=11						
	2.7nm,0.9s						
WRA	Warramunga Arr	49.95	127	P	P	18 13 18.9	+1.1
	0.7nm,0.8s,baz=305,slow=8.7,SNR=6.5						
	0.7nm,0.8s						
ASAR	Alice Springs	51.72	131	P	P	18 13 32.1	+1.0
	0.5nm,0.7s,baz=303,slow=6.6,SNR=11						
	0.5nm,0.7s						
KBZ	Khabaz	55.12	317	P	P	18 13 57.0	+1.3
	1.3nm,0.8s,baz=199,slow=3.2,SNR=5.5						
	1.3nm,0.8s						
CTA	Charters Tower	59.81	120	LR	LR	18 41 00.2	
	comp=Z,15nm,18.9s,baz=58,slow=37						
BRTR	Keskin Array B	60.63	310	P	P	18 14 33.5	-1.2
	0.9nm,0.8s,baz=119,slow=6.6,SNR=5.5						
BRTR				LR	LR	18 44 13.9	
	comp=Z,19nm,18.1s,baz=341,slow=40						
	0.9nm,0.8s						
ARCES	ARCESS Array B	72.97	340	LR	LR	18 50 42.7	
	comp=Z,34nm,18.3s,baz=321,slow=38						
GERES	GERESS Array B	75.84	318	P	P	18 16 09.8	-0.1
	0.8nm,0.9s,baz=107,slow=2.4,SNR=3.9						
	0.8nm,0.9s						
HFS	Hagfors	76.27	330	LR	LR	18 52 36.6	
	comp=Z,39nm,19.3s,baz=59,slow=38						
ILAR	Eielson Array	92.77	22	P	P	18 17 35.8	+0.2
	1.0nm,1.2s,baz=283,slow=5.9,SNR=2.6						
	1.0nm,1.2s						

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*SNET **04** 18:11:31.0±0.9, 13°.64N×90°.28W, h66^{km}±6^{km}, ML2.7, Presumed earthquake*
*GCG **04** 18:11:31.7±0.8, 13°.64N×90°.25W, h60^{km}±11^{km}, MD3.8, ML3.6, Presumed earthquake*
*CATAC **04** 18:11:31.5±0.5, 14°N±4°×9°0W±°, h38^{km}±4^{km}, M2.9/6, MLv2.9/6, Error ellipse: s-maj=9.1km s-min=3.4km az=17.6, confirmed*
ISC 04 18:11:32.2±1.8**, 13°.57N**±0°.09×**90°.24W**±0°.06**, h65**^{km}±12^{km}**, n35,** σ**1^{s}08**/44**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FAME	Alcaldia de Sa	0.34	39	P	Pn	18 11 41.9	-1.3
NUBE	Las Nubes	0.55	54	P	Pn	18 11 44.5	-0.8
NUBE				S	Sn	18 11 54.7	-0.2
NUBE	Las Nubes	0.55	54	*i* P	Pn	18 11 44.5	-0.8
NUBE	Las Nubes	0.55	54	*e*P	Pn	18 11 44.5	-0.8
NUBE				IAML		18 11 56.4	
	comp=Z,168nm,0.4s						
SLOZ	Alcaldia de Sa	0.63	44	P	Pn	18 11 45.3	-0.7
SLOZ				S	Sn	18 11 55.9	-0.3
CEVE	Cerro Verde	0.65	67	P	Pn	18 11 45.9	-0.6
CEVE				S	Sn	18 11 56.7	-0.2
CEVE	Cerro Verde	0.65	67	*e*P	Pn	18 11 45.6	-0.9
CEVE				*e*S	Sn	18 11 57.6	+0.7
PCG5	San Vicente Pa	0.65	348	*i* P	Pn	18 11 48.1	+1.7
PCG5				*i* S	Sn	18 12 00.8	+4.0
SBLS	San Blas	0.65	66	*e*P	Pn	18 11 45.8	-0.7
SBLS				*e*P		18 11 46.0	
SBLS				*e*S	Sn	18 11 57.3	+0.3
SBLS				IAML		18 11 59.4	
	comp=Z,481nm,0.1s						
SNJE	San Jose	0.68	64	*e*P	Pn	18 11 46.1	-0.7
SNJE				*e*S	Sn	18 11 58.2	+0.8
FG16	Alotenango, Sa	0.74	339	*i* P	Pn	18 11 50.5	+3.0
FG16				*i* S	Sn	18 12 05.3	+6.5
FG8	Yepocapa, Chim	0.75	335	*i* P	Pn	18 11 50.8	+3.3
FG8				*i* S	Sn	18 12 05.6	+6.8
RBDL	Robledal	0.76	45	*e*P	Pn	18 11 46.9	-0.7
RBDL				*e*S	Sn	18 11 59.4	+0.4
JAYA	Jayaque - finc	0.77	84	P	Pn	18 11 47.2	-0.6
JAYA	Jayaque - finc	0.77	84	*i* P	Pn	18 11 47.0	-0.8
JAYA				*i* S	Sn	18 11 58.5	-0.8
JAYA				IAML		18 12 00.5	
	comp=N,1μm,0.4s						
JAYA	Jayaque - finc	0.77	84	*e*P	Pn	18 11 47.0	-0.8
JAYA				*e*S	Sn	18 11 59.6	+0.3
UNIC	Universidad Ca	0.78	59	S	Sn	18 11 59.4	0.0
CEDA	San Andres	0.85	74	S	Sn	18 12 01.6	+0.8
LALI	Alcalda de L	0.90	95	S	Sn	18 12 02.1	+0.4
PMON	Piamonte	0.91	81	P	Pn	18 11 49.3	-0.1
PMON				S	Sn	18 12 02.5	+0.3
UEES	Universidad Ev	0.98	82	S	Sn	18 12 04.5	+0.7
MTO3	Montecristo	1.18	46	P	Pn	18 11 52.0	-1.0
MTO3	Montecristo	1.18	46	*i* P	Pn	18 11 52.1	-1.0
MTO3	Montecristo	1.18	46	*e*P	Pn	18 11 52.0	-1.0
MTO3				*e*S	Sn	18 12 08.7	+0.1
PAVA	Las Pavas	1.27	84	S	Sn	18 12 11.2	+0.6
ESQI	Esquipulas	1.31	41	S	Sn	18 12 11.1	-0.3
COEG	Centro de Oper	1.32	88	S	Sn	18 12 12.6	+1.0
LLGN	La Laguna	1.39	65	S	Sn	18 12 13.5	+0.3
STG8	El Palmar, Qui	1.39	309	*i* P	Pn	18 12 00.1	+4.3
STG8				*e*S	Sn	18 12 21.5	+8.1
TECO	Alcaldia de Te	1.42	91	S	Sn	18 12 14.9	+1.1
APG	El Apazote	1.44	351	*i* P	Pn	18 11 56.1	-0.4
SCLA	Alcaldia de Sa	1.47	85	S	Sn	18 12 16.6	+1.4
RTAL	Retalhuleu	1.70	304	S	Sn	18 12 18.2	-2.4
PACA	Pacayal	1.86	93	S	Sn	18 12 26.0	+1.3
CSGN	Cosiguina Volc	2.67	103	P	Pn	18 12 13.4	+0.4

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*BGSI **04** 18:20:21.6±1.5, 26°.00S×26°.99E, h305^{km}±34^{km}, ML2.4*
PRE 04 18:20:18.8±1.1**, 26°.40S×27°.39E, h2**^{km}**, ML2.0, Presumed earthquake, South Africa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PRYS	Parys	0.53	183	*e*P	Pg	18 20 28.7	-0.3
PRYS				*e*S	Sg	18 20 36.8	+1.0
PRYS				IAML		18 20 38.8	
	comp=Z,61nm,0.4s						
HRAO	HartRAO	0.57	28	*e*P	Pg	18 20 29.6	-0.1
HRAO				*e*S	Sg	18 20 37.5	+0.4
HRAO				IAML		18 20 37.6	
	comp=Z,83nm,0.1s						
LBTB	Lobatse	2.13	310	*e*P	Pn	18 20 56.3	+0.8
LBTB				*e*S	Sb	18 21 23.9	-1.2
LBTB				IAML		18 21 31.4	
	comp=Z,20nm,0.3s						
BOSA	Boshof	2.91	220	*e*P	Pn	18 21 06.3	0.0
BOSA				*e*S	Sn	18 21 42.5	+0.6
BOSA				IAML		18 21 53.6	
	comp=Z,5.5nm,0.3s						
LPHEP	Lephephe	3.33	335	*i* P	Pn	18 21 14.1	+2.1
LPHEP				*i* S	Sn	18 21 54.8	+2.6
LPHEP				IAML		18 22 10.2	
	comp=E,14nm,0.4s						
PILG	Pilgrimsrest,	3.33	65	*e*P	Pn	18 21 12.6	+0.5
PILG				*e*S	Sn	18 21 51.5	-0.8
PILG				IAML		18 22 03.8	
	comp=Z,11nm,0.7s						
KDWAN	Kaudwane	3.90	320	*i* P	Pn	18 21 20.5	+0.7
KDWAN				*i* S	Sn	18 22 04.1	-2.2
KDWAN				IAML		18 22 25.9	
	comp=N,27nm,0.7s						
PMBG	Pietermaritzbu	4.15	139	*e*P	Pn	18 21 23.2	-0.1
PMBG				*e*S	Sn	18 22 12.7	+0.3
PMBG				IAML		18 22 25.4	
	comp=Z,7.1nm,0.3s						
KSTD	Kokstad	4.53	159	*e*P	Pn	18 21 30.0	+1.4
KSTD				*e*S	Sn	18 22 21.8	-0.1
KSTD				IAML		18 22 40.6	
	comp=Z,4.3nm,0.4s						
MUSN	Musina, Limpop	4.67	29	*e*P	Pn	18 21 32.0	+1.6
MUSN				*e*S	Sn	18 22 24.8	-0.4
MUSN				IAML		18 22 49.3	
	comp=Z,2.8nm,0.4s						
BROLN	Tlhalogang	5.27	359	*i* P	Pn	18 21 38.3	-0.5
BROLN				*i* S	Sn	18 22 32.8	-7.5
ALKP	Alkanpan, Nort	5.75	231	*e*P	Pn	18 21 46.3	+0.9
ALKP				*e*S	Sn	18 22 49.8	-2.2
ALKP				IAML		18 23 23.1	
	comp=Z,4.1nm,0.7s						
KGCAE	Kacgae	5.89	306	*i* P	Pn	18 21 42.7	-4.6
BRAK	Brakfontein	6.65	215	*e*P	Pn	18 21 58.4	+0.8
BRAK				*e*S	Sn	18 23 11.1	-3.1
BRAK				IAML		18 23 15.9	
	comp=Z,1.5nm,0.6s						
ARMS	Ukamas	7.01	255	*e*P	Pn	18 22 04.2	+1.6
ARMS				*e*S	Sn	18 23 20.6	-2.3
FRAZ	Fraserburg	7.60	222	*e*P	Pn	18 22 12.0	+1.3
FRAZ				*e*S	Sn	18 23 33.8	-3.7
FRAZ				IAML		18 24 16.3	
	comp=Z,1.0nm,0.5s						

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*IDC **04** 18:27:21.5±4.8, 47°.63N×92°.42W, h0^{km}, mbtmp2.6/2, ML2.2/2, Error ellipse: s-maj=62.6km s-min=40.5km az=46.0*
*NEIC **04** 18:27:22.3±1.7, 47°.55N±0°.01×92°.60W±0°.03, h0^{km}±1^{km}, mb_Lg3.0/25, Error ellipse: s-maj=3.8km s-min=2.9km az=73.0*
ISC 04 18:27:20.9±0.9**, 47°.59N**±0°.04×**92°.61W**±0°.05**, h0**^{km}**, n25,** σ**0^{s}76**/19**, Minnesota**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EYMN	Ely	0.83	64		Pb	18 27 37.6	-0.7
E38A	The Farm, Brul	1.22	143		Pg	18 27 44.1	-0.2
EPLO	Experimental L	2.21	341		Pb	18 28 01.1	-0.7
EPLO				IAmb_Lg		18 28 35.4	
	comp=Z,59nm,1.2s						
AGMN	Agassiz Nation	2.30	289		Pn	18 28 00.4	+0.4
SPMN	Marine on St.	2.37	183		Pn	18 28 01.8	+0.7
SPMN				IAmb_Lg		18 28 35.1	
	comp=Z,49nm,0.8s						
TBO	Thunder Bay	2.39	63		Pb	18 28 05.6	+0.8
TBO				IAmb_Lg		18 28 39.3	
	comp=Z,79nm,1.1s						
G40A	Rib Lake	2.86	143		Pn	18 28 07.9	+0.1
F33A	5 Mile Ranch,	3.08	237		Pn	18 28 11.8	+1.0
ULM	Lac du Bonnet	3.42	322	Pn	Pn	18 28 16.6	+1.1
	comp=Z,1.1nm,0.3s,baz=143,slow=16,SNR=14						
ULM				Pg	Pb	18 28 22.7	+0.3
	comp=Z,1.1nm,0.3s,baz=139,slow=16,SNR=9.6						
ULM				Sn	Sn	18 28 56.5	-0.3
	comp=Z,1.0nm,0.3s,baz=87,slow=18,SNR=4.2						
ULM				Lg	Lg	18 29 06.2	
	comp=Z,1.3nm,0.3s,baz=230,slow=21,SNR=6.2						
	comp=Z,0.5nm,0.3s						
ULM	Lac du Bonnet	3.42	322	IAmb_Lg		18 29 13.1	
	comp=Z,42nm,1.2s						
I10CA	LAC DU BONNET	3.45	320	I	I	18 52 30.0	
	baz=135,slow=324,SNR=0.5						
F42A	Maple Grove Fa	3.58	119	IAmb_Lg		18 29 15.5	
	comp=Z,37nm,0.8s						
I37A	Lemond, Waseca	3.62	189		Pn	18 28 17.9	-0.4
I37A				IAmb_Lg		18 29 18.7	
	comp=Z,33nm,1.0s						
I40A	Norwalk	3.95	159		Pn	18 28 22.6	-0.2
MDND	Maddock	4.73	276	IAmb_Lg		18 30 01.8	
	comp=Z,29nm,1.0s						
ECSD	EROS Data Cent	4.77	217		Pb	18 28 45.1	-0.2
ECSD				IAmb_Lg		18 29 51.4	
	comp=Z,23nm,1.1s						
JFWS	Jewell Farm	4.96	160	Pn	Pn	18 28 38.1	+1.4
JFWS					Pb	18 28 48.6	-0.1
JFWS				IAmb_Lg		18 30 01.6	
	comp=Z,18nm,0.9s						
L40A	Anamosa	5.62	169	Pn	Pn	18 28 46.8	+1.1
SCIA	State Center	5.70	185	IAmb_Lg		18 30 29.9	
	comp=Z,20nm,0.9s						
N38A	Joes South For	6.81	184	IAmb_Lg		18 30 55.7	
	comp=Z,25nm,1.0s						
N41A	Harden Midland	7.00	169	IAmb_Lg		18 31 09.6	
	comp=Z,20nm,0.7s						
HDIL	Hopedale	7.43	160	Pn	Pn	18 29 10.9	+0.4
KSU1	Kansas State U	8.97	200	IAmb_Lg		18 32 03.4	
	comp=Z,15nm,1.0s						
PDAR	Pinedale Array	12.89	254	Lg	Lg	18 34 01.1	
	comp=Z,0.1nm,0.3s,baz=70,slow=33,SNR=3.0						
YKA	Yellowknife Ar	19.38	328	P	P	18 31 47.0	-1.0
	baz=125,slow=11,SNR=1.5						
	comp=Z,0.1nm,0.5s						

*IDC **04** 18:29:49.5±1.9, 22°.86N×121°.67E, h0km, mb3.2/7, mbtmp3.2/7, Error ellipse: s-maj=160.6km s-min=20.1km az=64.0*

*JMA **04** 18:29:53.0±0.1, 22°.9N±0°.5×12°1E±°, h34km, MV3.4/11, TAIWAN REGION*

*TAP **04** 18:29:53.7, 22°.90N×121°.33E, h22km, ML3.8, B*

ISC 04 18:29:53.5±0.8**, 22°.88N**±0°.02×**121°.42E**±0°.02**, h26**km±5km**, n167, σ1s.25**/237**, mb3.1**/7**, 2C-13D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LDUT	Ludao	0.21	168	⇓iP	Pb	18 29 59.9	+0.6
LDUT				S	Sb	18 30 04.6	+1.3
CHKT	Chengkung	0.23	346	⇑iP	Pb	18 29 59.3	-0.2
CHKT				iS	Sb	18 30 03.3	-0.4
LONT	Longtian	0.27	276	⇓P	Pb	18 29 59.5	-0.7
TTN	Taitung	0.28	244	P	Pb	18 29 59.8	-0.5
TTN				S	Sb	18 30 04.6	-0.4
ECS	Chishang	0.29	319	⇑iP	Pb	18 30 00.0	-0.4
ECS				S	Sb	18 30 05.2	+0.1
CHKH	Chenggong	0.31	355	iP	Pb	18 30 00.6	-0.1
CHKH				S	Sb	18 30 05.7	0.0
TWGBT	Beinan	0.32	259	P	Pb	18 29 59.8	-1.1
TWGBT	Beinan	0.32	259	P	Pn	18 30 04.4	+1.9
TWGBT	Beinan	0.32	259	⇓iP	Pb	18 29 59.9	-1.1
TWGBT				S	Pn	18 30 04.3	+1.9
TWG	Pinlang	0.33	260	⇓iP	Pb	18 29 59.9	-1.1
TWG				S	Sb	18 30 04.3	-1.8
EHD	Haiduan	0.34	323	⇓iP	Pb	18 30 00.3	-0.8
FULB	Fuli	0.34	339	iP	Pb	18 30 00.6	-0.6
FULB				S	Sb	18 30 06.3	-0.2
ECBN	Changbin	0.44	3	P	Pn	18 30 02.7	-1.3
ECBN				S	Sn	18 30 09.4	-1.8
TWF1	Yuli	0.48	346	⇓iP	Pb	18 30 02.7	-0.8
TWF1				S	Sb	18 30 09.2	-1.1
ELDTW	Lidau	0.49	310	⇓iP	Pb	18 30 01.9	-1.7
ELDTW				S	Sb	18 30 07.4	-3.0
ECL	Taimali	0.52	237	⇓iP	Pb	18 30 02.5	-1.5
ECL				iS	Sb	18 30 09.0	-2.2
YULB	Yu-li	0.52	347	P	Pb	18 30 03.5	-0.7
YULB	Yu-li	0.52	347	S	Sb	18 30 09.2	-2.2
YULB	Yu-li	0.52	347	⇓iP	Pb	18 30 03.1	-1.0
YULB				iS	Sb	18 30 09.8	-1.7
HGSD	Ruisui	0.61	360	P	Pb	18 30 05.4	-0.2
HGSD				S	Sn	18 30 14.5	-1.0
EHYH	Wanrong	0.62	353	P	Pb	18 30 04.8	-0.9
EHYH				S	Sb	18 30 12.6	-1.4
EHY	Hungye	0.63	351	eP	Pb	18 30 04.8	-1.1
STYH	Taoyuan	0.66	296	⇓P	Pb	18 30 05.0	-1.5
TAW	Tawu	0.71	223	eP	Pb	18 30 06.0	-1.2
TAW				S	Sb	18 30 14.6	-2.1
EAST	Anshuo	0.73	227	eP	Pb	18 30 06.0	-1.5
SLGT	Liugui	0.73	279	eP	Pb	18 30 06.2	-1.3
SLGT				eS	Sb	18 30 14.6	-2.5
SSD	Sandimen	0.74	260	⇓eP	Pb	18 30 06.0	-1.8
SSD				eS	Sb	18 30 13.9	-3.7
YUS	Yu-Shan	0.75	325	eP	Pb	18 30 06.8	-1.3
MASBT	Mashibuluo	0.78	250	⇓iP	Pb	18 30 06.8	-1.5
MASBT				S	Sb	18 30 15.3	-3.2
EGFH	Guangfu	0.79	0	eP	Pn	18 30 09.5	+0.6
SGST	Jiashian	0.80	285	eP	Pb	18 30 07.0	-1.8
WTP	Ta-pu	0.83	296	iP	Pb	18 30 08.4	-0.9
WTP				S	Sn	18 30 20.2	-0.8
TEGC	Jichi Village	0.83	7	P	Pn	18 30 09.3	-0.2
TEGC				eS	Sn	18 30 22.6	+1.7
WARBT	Fenglin Townsh	0.84	358	P	Pb	18 30 07.6	-1.8
WARBT				eS	Sb	18 30 18.3	-2.0
TPUB	Ta-pu	0.84	300	P	Pb	18 30 08.7	-0.8
TPUB	Ta-pu	0.84	300	S	Sb	18 30 19.5	-1.0
TPUB	Ta-pu	0.84	300	iP	Pb	18 30 08.5	-1.0
TPUB				S	Sn	18 30 20.6	-0.6
LAY	Lan-yu	0.84	172	P	Pb	18 30 08.6	-0.9
LAY				eS	Sb	18 30 20.7	+0.2
ALS	Alishan	0.85	318	⇓P	Pb	18 30 08.9	-0.9
ALS				eS	Sb	18 30 19.1	-1.8
SCST	Cishan	0.86	271	eP	Pb	18 30 09.2	-0.5
SGLT	Jiouru	0.87	260	eP	Pn	18 30 09.7	-0.4
CHN1	Nanshi	0.88	290	iP	Pb	18 30 09.6	-0.6
CHN1				eS	Sb	18 30 21.1	-0.4
SSPT	Xinbi	0.88	244	P	Pb	18 30 09.4	-0.7
SSPT				eS	Sb	18 30 20.0	-1.5
LYUB	Lan-yu	0.89	170	eP	Pb	18 30 08.3	-1.9
SCZT	Fangliau	0.90	236	eP	Pb	18 30 09.2	-1.2
SCZT				eS	Sb	18 30 19.5	-2.5
VWDT	VWDT	0.91	343	P	Pb	18 30 09.8	-0.8
SHUL	Shoufeng	0.91	8	eP	Pn	18 30 10.6	-0.1
SHUL				eS	Sn	18 30 23.6	+0.6
TWM1	Shoushan	0.93	267	eP	Pn	18 30 11.5	+0.7
ESL	Shilin	0.93	1	eP	Pb	18 30 09.4	-1.5
WCKO	Fanlu	0.94	307	iP	Pn	18 30 10.6	-0.4
WCKO				S	Sn	18 30 23.4	-0.2
TWK	Hsinying	0.94	294	eP	Pb	18 30 10.5	-0.7
TWK				eS	Sn	18 30 23.5	-0.3
WHYT	Xinyi Township	0.97	327	P	Pn	18 30 11.2	-0.3
WHYT				S	Sb	18 30 23.3	-0.8
CHN3	Shinhua	0.99	282	iP	Pn	18 30 12.8	+1.1
CHN3				eS	Sn	18 30 27.1	+2.2
TEYL	Yanliau Villag	1.00	9	eP	Pn	18 30 12.1	+0.3
SHHT	Tainan City	1.00	278	eP	Pn	18 30 13.2	+1.4
SSLB	Suanglung	1.00	335	P	Pn	18 30 11.5	-0.4
SSLB	Suanglung	1.00	335	eP	Pn	18 30 11.5	-0.4
SSLB				eS	Sn	18 30 24.6	-0.6
SMST	Manzhou Townsh	1.01	213	eP	Pb	18 30 10.3	-2.0
HEN	Hengchun	1.08	216	eP	Pb	18 30 14.5	+1.1
SSHA	Shanhua	1.08	284	P	Pb	18 30 13.9	+0.5
SSHA				S	Sn	18 30 29.9	+2.9
ETM	Tongmen	1.08	3	eP	Pn	18 30 11.7	-1.3
ETM				eS	Sb	18 30 24.7	-2.6
TSEB	Hengchuen, Pin	1.09	207	eP	Pb	18 30 14.1	+0.5
TSEB				eS	Sb	18 30 26.7	-0.8
CHN2	Minshiung	1.09	307	P	Pb	18 30 13.8	+0.1
CHN2				S	Sn	18 30 28.8	+1.5
TWKBT	Hengchun	1.09	211	P	Pn	18 30 12.2	-0.8
TWKBT				S	Sb	18 30 26.2	-1.4
TWK1	Hengchun	1.09	212	eP	Pn	18 30 12.1	-1.0
TWK1				eS	Sb	18 30 26.1	-1.4
OWD	Renai	1.09	348	P	Pn	18 30 12.8	-0.5
OWD				eS	Sb	18 30 25.9	-1.9
WSSB	Gushan	1.10	258	P	Pb	18 30 14.8	+1.0
WSSB				S	Sn	18 30 31.1	+3.6
WLCH	Liuqiu	1.10	242	eP	Pb	18 30 15.6	+1.8
HWA	Hwalien	1.11	9	eP	Pb	18 30 13.1	-0.8
CHY	Chiayi	1.11	304	P	Pb	18 30 13.9	0.0
CHY				eS	Sn	18 30 29.2	+1.5
SMLT	Sun Moon Lake	1.11	334	eP	Pb	18 30 14.0	-0.1
SMLT				eS	Sn	18 30 28.8	+0.8
TAI1	Yung-k'ang	1.11	279	eP	Pb	18 30 14.6	+0.5
TWP	Hsiaoliuchiu	1.11	242	eP	Pb	18 30 16.0	+2.0
WGK	Gukeng	1.13	316	P	Pb	18 30 14.5	+0.2
WGK				S	Sn	18 30 30.2	+1.9
LXIB	Xiulin Townshi	1.14	360	eP	Pn	18 30 12.6	-1.2
WUSB	Renai	1.14	346	eP	Pn	18 30 13.7	-0.3
WUSB				eS	Sb	18 30 27.7	-1.5
TYC	Yuchr	1.15	333	eP	Pb	18 30 14.7	+0.1
TYC				eS	Sn	18 30 29.4	+0.7
WDLH	Douliu	1.15	315	iP	Pb	18 30 14.9	+0.2
WDLH				eS	Sn	18 30 30.4	+1.7
WDL	Douliou City	1.16	316	eP	Pb	18 30 15.1	+0.2
WDL				eS	Sn	18 30 30.8	+1.6
WNT	Mingjian	1.21	326	iP	Pb	18 30 15.9	+0.2
WNT				S	Sn	18 30 31.7	+1.6
TWD	Chiawan	1.21	7	eP	Pn	18 30 14.0	-0.7
CHN8	Yiju	1.21	293	P	Pb	18 30 15.3	-0.4
CHN8				S	Sn	18 30 32.0	+1.7
TSCK	Chigu Township	1.26	282	eP	Pb	18 30 16.3	-0.3
TSCK				eS	Sb	18 30 32.6	+0.3
WCS	Beigang Elemen	1.26	338	P	Pb	18 30 16.2	-0.5
WHF	Hehuan Shan	1.27	353	eP	Pn	18 30 15.8	-0.2
WHF				eS	Sb	18 30 30.9	-2.1
WSL	Shuilin Townsh	1.27	300	iP	Pb	18 30 16.0	-0.8
WSL				eS	Sb	18 30 33.0	+0.3
ETL	Fush Village	1.29	8	eP	Pb	18 30 15.9	-1.1
NACB	Ninganchiao	1.30	7	P	Pb	18 30 17.0	-0.2
NACB	Ninganchiao	1.30	7	S	Sb	18 30 35.6	+2.1
NACB	Ninganchiao	1.30	7	eP	Pn	18 30 15.2	-0.8
ETLH	Xiulin Townshi	1.32	2	eP	Pn	18 30 15.7	-0.6
WSF	Szhu	1.34	305	eP	Pn	18 30 16.3	-0.2
WSF				eS	Sb	18 30 34.1	-0.6
TWT	Tachien	1.39	351	eP	Pb	18 30 17.7	-1.1
TDCB	Techi	1.39	350	eP	Pb	18 30 17.7	-1.1
WRL	Guolierlin Hig	1.40	317	eP	Pb	18 30 17.8	-1.2
WRL				S	Sb	18 30 36.2	-0.2
RLNB	Erlin	1.40	316	eP	Pn	18 30 16.7	-0.6
WCH1	Changhua City	1.44	326	eP	Pb	18 30 19.4	-0.1
WCH1				eS	Sb	18 30 38.1	+0.7
WCHH	Zhanghua	1.44	327	eP	Pb	18 30 19.1	-0.4
WCHH				S	Sb	18 30 38.0	+0.6
TCU	Taichung	1.44	332	eP	Pb	18 30 19.6	0.0
TCU				eS	Sb	18 30 38.7	+1.2
WHP	Taichung City	1.46	343	eP	Pb	18 30 20.1	0.0
WHP				eS	Sb	18 30 40.0	+1.8
EAHA	Aohua	1.47	11	eP	Pb	18 30 19.1	-1.0
NNSB	Datong	1.54	359	eP	Pn	18 30 19.5	+0.1
NNS	Nan Shan	1.56	358	eP	Pb	18 30 20.9	-0.8
TWQ1	Liyutan	1.58	338	eP	Pb	18 30 22.0	0.0
TWQ1				S	Sb	18 30 42.8	+1.2
EWUT	Wuta	1.59	12	eP	Pn	18 30 20.3	+0.3
WDJ	Dajia District	1.63	334	P	Pb	18 30 22.9	+0.1
WDJ				eS	Sb	18 30 45.0	+2.0
NSY	Sanyi	1.65	338	eP	Pb	18 30 23.7	+0.5
NSY				eS	Sb	18 30 45.4	+1.9
LATG	Datong	1.65	3	eP	Pn	18 30 21.0	+0.1
NDT	Datong Townshi	1.72	3	eP	Pb	18 30 23.8	-0.6
NMLH	Miaoli	1.75	341	eP	Pb	18 30 23.2	-1.7
NMLH				eS	Sb	18 30 47.4	+0.9
ENTT	Nioudou	1.76	4	eP	Pn	18 30 22.8	+0.5
TWC	Suao	1.77	13	eP	Pb	18 30 23.5	-1.6
TWC				eS	Sb	18 30 45.6	-1.3
NDS	Dongshan	1.77	9	eP	Pb	18 30 23.3	-1.9
NFF	Wufeng Townshi	1.77	351	eP	Pb	18 30 24.4	-0.8
NFF				eS	Sb	18 30 48.0	+0.9
YHNB	Yeheng	1.78	359	P	Pb	18 30 25.0	-0.5
YHNB	Yeheng	1.78	359	eP	Pb	18 30 23.6	-1.9
NSTT	Nanjuang	1.79	348	eP	Pb	18 30 24.4	-1.2
NSTT				eS	Sb	18 30 46.9	-0.7
NSK	Sanguang	1.79	358	eP	Pb	18 30 24.2	-1.4
LIOB	Emei	1.80	348	eP	Pb	18 30 25.0	-0.8
PHUB	P'eng-hu	1.82	291	P	Pn	18 30 22.2	-0.8
PHUB				eS	Sn	18 30 42.4	-2.8
TWE	Neicheng	1.85	7	eP	Pb	18 30 24.9	-1.7
PNG	Penghu	1.85	292	eP	Pn	18 30 23.2	-0.4
PNG				eS	Sn	18 30 45.1	-1.0
FUSB	Fushanzhiwuyua	1.88	5	eP	Pb	18 30 25.3	-1.9
NWLT	Wulai	1.89	2	eP	Pn	18 30 25.1	+0.9
KSHI	Guanxi Townshi	1.90	353	eP	Pb	18 30 26.9	-0.7
TATO	Taipei	2.09	2	P	Pb	18 30 29.1	-1.6
TWA	Mucha	2.10	4	eP	Pb	18 30 28.6	-2.2
TIPB	Shuangxi	2.12	10	eP	Pn	18 30 28.4	+1.1
YOJ	Yonaguni jima	2.15	42	eS	Sn	18 30 54.9	+1.5
NWF	Wu-fen Shan	2.21	8	eP	Pb	18 30 30.3	-2.5
WFSB	Wu-fen Shan	2.21	8	eP	Pb	18 30 31.1	-1.6
TWS1	Kuangyinshan	2.21	360	eP	Pb	18 30 32.0	-0.8
SXI1	Grass Mountain	2.24	11	eP	Pb	18 30 32.0	-1.4
YM01	YM01	2.26	3	eP	Pb	18 30 31.6	-2.0
ZUZH	Zhuzihu	2.28	3	eP	Pn	18 30 31.0	+1.5
ZUZH				eS	Sn	18 30 57.1	+0.5
ANP	Anpu	2.30	2	eP	Pb	18 30 32.5	-1.8
YM08	YM08	2.30	4	eP	Pn	18 30 30.4	+0.6
HATJ	Hateruma jima	2.48	61	eP	Pn	18 30 31.9	-0.3
HATJ				eS	Sn	18 31 02.1	+0.4
IRIF	Iriomote-Funau	2.56	55	eP	Pn	18 30 34.7	+1.4
IRIF				eS	Sn	18 31 04.5	+0.8
JKRS	Kuro-shima	2.73	60	eP	Pn	18 30 36.0	+0.4
JKRS				eS	Sn	18 31 08.7	+0.9
VWUC	VWUC	2.77	320	eP	Pn	18 30 36.4	+0.2
VWUC				iS	Sn	18 31 08.3	-0.5
JIJ	Ishigaki jima	2.90	59	eP	Pn	18 30 38.7	+0.7
JIJ				eS	Sn	18 31 12.8	+0.8
PTMZ	Houxiangcun	3.01	316	eP	Pn	18 30 39.1	-0.3
KNM	Kinmen	3.14	300	eP	Pn	18 30 42.0	+0.7
JISG	Ishigakijimahi	3.15	57	eP	Pn	18 30 41.9	+0.6
JISG				eS	Sn	18 31 18.7	+0.7
KNMB	Chin-men Tao	3.20	300	eP	Pn	18 30 41.6	-0.5
MATB	Ma-tsu	3.52	338	eP	Pn	18 30 46.7	+0.1
ZPLA	Ao Xicun	3.53	288	eP	Pn	18 30 46.8	+0.2
AXDP	Jialang	3.75	303	eP	Pn	18 30 49.0	-0.6
DSXP	Dongshan	3.77	283	eP	Pn	18 30 50.3	+0.4
MHZQ	Yeshan	3.88	326	eP	Pn	18 30 51.8	+0.4
LYJJ	Jianjiangzhen	3.96	338	eP	Pn	18 30 53.2	+0.8
XPSS	Dashiqiu	4.19	345	eP	Pn	18 30 54.8	-0.9
SXFK	Yanhouchang	4.91	316	eP	Pn	18 31 05.6	-0.1
SONM	Songino Array	27.65	338	P	P	18 35 39.5	+0.3
	0.3nm,0.7s,baz=157,slow=9.1,SNR=2.2						
	0.3nm,0.7s						
MKAR	Makanchi Array	39.43	317	P	P	18 37 22.9	+1.5
	0.2nm,0.7s,baz=119,slow=9.5,SNR=3.5						
	0.2nm,0.7s						
ZALV	Zalesovo Beam	41.46	328	P	P	18 37 38.8	+0.9
	0.4nm,0.4s,baz=120,slow=8.8,SNR=2.6						
	0.4nm,0.4s						
H11N1	WAKE ISLAND Hy	42.36	85	T	T	19 23 00.1	
	baz=283,slow=75,SNR=30						
H11N2	WAKE ISLAND Hy	42.36	85	T	T	19 23 01.3	
	baz=283,slow=75,SNR=43						
H11N3	WAKE ISLAND Hy	42.37	85	T	T	19 23 02.4	
	baz=283,slow=75,SNR=33						
H11S3	WAKE ISLAND Hy	42.45	87	T	T	19 23 07.7	
	baz=284,slow=75,SNR=56						
H11S1	WAKE ISLAND Hy	42.45	87	T	T	19 23 07.9	
	baz=284,slow=75,SNR=48						
H11S2	WAKE ISLAND Hy	42.46	87	T	T	19 23 09.0	
	baz=284,slow=75,SNR=61						
KURBB	Kurchatov Arra	43.25	321	P	P	18 37 53.2	+0.6
	0.2nm,0.7s,baz=94,slow=9.2,SNR=1.9						
	0.2nm,0.7s						
WRA	Warramunga Arr	44.39	163	P	P	18 38 00.9	-1.1
	0.2nm,0.6s,baz=343,slow=8.0,SNR=1.4						
	0.2nm,0.6s						
ASAR	Alice Springs	47.83	164	P	P	18 38 28.6	-0.5
	0.1nm,0.4s,baz=341,slow=7.0,SNR=6.7						
	0.1nm,0.4s						
BVAR	Borovoye Array	48.82	321	P	P	18 38 38.5	+2.0
	0.2nm,0.5s,baz=108,slow=9.3,SNR=1.8						
	0.2nm,0.5s						

*IDC **04** 18:42:01.1±5.2, 1°.74N×127°.34E, h110km±57km, mb3.5/7, mbtmp3.8/9, Error ellipse: s-maj=75.0km s-min=16.2km az=74.0*

*DJA **04** 18:42:03.9±0.7, 2°N±5°×12°7E±°, h122km±9km, M3.6/13, mb3.8/3, MLv3.5/13*

*NEIC **04** 18:42:04.3±1.0, 1°.8N±0°.1×127°.50E±0°.09, h139km±9km, mb4.1/14, Error ellipse: s-maj=16.1km s-min=12.0km az=199.0*

ISC 04 18:42:04.4±0.7**, 1°.73N**±0°.07×**127°.44E**±0°.08**, h150**km**, n34, σ0s.84**/34**, mb4.0**/13**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.95	185		Pn	18 42 28.2	-0.6
TNTI	Ternate	0.95	185	P	Pn	18 42 28.3	-0.5
MNI	Manado	2.62	264	P	Pn	18 42 45.5	-1.5
SANI	Sanana	4.02	201	P	Pn	18 43 04.6	-0.4
GTOI	Gorontalo	4.56	256	P	Pn	18 43 12.8	+0.7
SIJI	Sorong	4.61	124	P	Pn	18 43 11.1	-1.7
	3.4nm,0.5s,baz=292,slow=16,SNR=4.4						
NLAI	Namlea	4.94	184	P	Pn	18 43 18.4	+1.3
	25nm,1.0s						
LUWI	Luwuk	5.42	240	Pn	Pn	18 43 24.6	+1.2
LUWI				Sn	Sn	18 44 24.8	-0.4
LUWI	Luwuk	5.42	240	P	Pn	18 43 24.3	+0.8
TOLI2	Tolitoli	6.69	265	Pn	Pn	18 43 39.3	-1.1
MTN	Manton Dam	14.93	166		P	18 45 29.2	-0.7
KNRA	Kununurra	17.34	176	P	Pn	18 45 57.0	-0.5
KNRA				IAmb	IAmb	18 46 01.3	
	comp=Z,9.7nm,1.1s						
FITZ	Fitzroy Crossi	19.78	185	P	Pn	18 46 24.6	-1.6
	comp=Z,0.8nm,0.4s,baz=5.2,slow=11,SNR=1.7						
WB0	Warramunga Arr	22.42	163	P	P	18 46 51.4	+0.5
WB0				IAmb	IAmb	18 46 52.4	
	comp=Z,5.9nm,0.6s						
TPUB	Ta-pu	22.44	343	P	P	18 46 50.3	-0.8
WRA	Warramunga Arr	22.57	163	P	P	18 46 52.9	+0.6
	comp=Z,4.1nm,0.5s,baz=341,slow=11,SNR=54						
	comp=Z,4.1nm,0.5s						
WRA	Warramunga Arr	22.57	163	P	P	18 46 51.7	-0.6
WR8	Warramunga Arr	22.63	163	P	P	18 46 53.4	+0.5
WR8				IAmb	IAmb	18 46 54.4	
	comp=Z,3.8nm,0.6s						
AS31	Alice Springs	26.01	166	P	P	18 47 24.3	+0.7
ASAR	Alice Springs	26.01	166	P	P	18 47 24.4	+0.7
	comp=Z,1.2nm,0.5s,baz=345,slow=7.6,SNR=52						
	comp=Z,1.2nm,0.5s						
FORT	Forrest	32.33	179	P	P	18 48 20.1	+0.7
FORT				IAmb	IAmb	18 48 44.5	
	comp=Z,6.5nm,1.0s						
BBOO	Buckleboo	35.30	167	P	P	18 48 46.1	+1.0
STKA	Stephens Creek	36.02	159	P	P	18 48 50.7	-0.5
	comp=Z,1.4nm,0.6s,baz=327,slow=12,SNR=3.2						
	comp=Z,1.4nm,0.6s						
STKA	Stephens Creek	36.02	159	P	P	18 48 50.7	-0.5
STKA				IAmb	IAmb	18 49 08.9	
	comp=Z,7.5nm,0.8s						
SONM	Songino Array	49.41	341	P	P	18 50 39.6	+0.5
	comp=Z,0.3nm,0.5s,baz=160,slow=4.6,SNR=2.8						
	comp=Z,0.3nm,0.5s						
SONM	Songino Array	49.41	341	P	P	18 50 39.0	-0.1
MK31	Makanchi Array	59.60	326	P	P	18 51 53.2	+0.6
MK31				IAmb	IAmb	18 51 53.6	
	comp=Z,0.8nm,0.5s						
MKAR	Makanchi Array	59.60	326	P	P	18 51 53.3	+0.8
	comp=Z,0.8nm,0.4s,baz=114,slow=7.9,SNR=25						
	comp=Z,0.8nm,0.4s						
MKAR	Makanchi Array	59.60	326	P	P	18 51 53.1	+0.6
KURBB	Kurchatov Arra	63.80	328	P	P	18 52 20.7	+0.2
	comp=Z,0.7nm,0.5s,baz=128,slow=6.2,SNR=14						
	comp=Z,0.7nm,0.5s						
KURK	Kurchatov	63.80	328	P	P	18 52 20.5	0.0
KURK				IAmb	IAmb	18 52 25.1	
	comp=Z,1.4nm,0.5s						
BVAR	Borovoye Array	69.38	327	P	P	18 52 56.4	+0.6
	comp=Z,0.2nm,0.4s,baz=108,slow=4.7,SNR=2.0						
	comp=Z,0.2nm,0.4s						
F17K	Baldwin Pennin	81.02	23	P	P	18 54 02.9	+0.7
F17K				IAmb	IAmb	18 54 07.7	
	comp=Z,3.3nm,1.4s						
CHIR	Chirikof Islan	81.24	34	P	P	18 54 04.7	+1.1

*IDC **04** 18:53:39.3±2.1, 9°.03S×159°.32E, h114km±62km, mb3.2/3, mbtmp3.5/3, Error ellipse: s-maj=145.3km s-min=22.5km az=123.0*

ISC 04 18:53:39.7±1.0**, 9°.13S**±0°.07×**159°.6E**±0°.2**, h132**km**, n17, σ0s.50**/12**, mb3.3**/3**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAVO	Savo Central	0.27	95	P	Pn	18 53 57.4	-0.6
HNR	Honiara	0.50	127	P	Pn	18 53 58.6	-0.4
	3.1nm,0.4s,baz=293,slow=15,SNR=21						
HNR				S	Sn	18 54 13.9	+0.3
	11nm,0.4s,baz=299,slow=23,SNR=17						
HNR	Honiara	0.50	127	P	Pn	18 53 59.5	+0.5
HNR	Honiara	0.50	127	P	Sn	18 54 14.1	+0.5
TATA	Tatamba Isabel	0.78	19	P	Pn	18 54 00.9	0.0
TATA	Tatamba Isabel	0.78	19	S	Sn	18 54 16.8	-0.1
NGOA	Tingoa Renbel	2.47	168	P	Pn	18 54 19.7	+0.1
NGOA	Tingoa Renbel	2.47	168	S	Sn	18 54 49.5	-0.7
WRA	Warramunga Arr	26.62	243	P	P	18 59 06.8	+0.7
	0.5nm,0.6s,baz=70,slow=9.8,SNR=9.8						
	0.5nm,0.6s						
H11S2	WAKE ISLAND Hy	28.34	14	T	T	19 28 26.9	
	baz=194,slow=76,SNR=65						
H11S3	WAKE ISLAND Hy	28.34	14	T	T	19 28 38.9	
	baz=194,slow=76,SNR=42						
H11S1	WAKE ISLAND Hy	28.35	14	T	T	19 28 23.6	
	baz=194,slow=76,SNR=35						
ASAR	Alice Springs	28.46	236	P	P	18 59 22.5	0.0
	0.3nm,0.5s,baz=62,slow=10,SNR=13						
	0.3nm,0.5s						
H11N1	WAKE ISLAND Hy	29.56	14	T	T	19 29 55.7	
	baz=193,slow=76						
H11N3	WAKE ISLAND Hy	29.57	14	T	T	19 29 47.4	
	baz=193,slow=76						
H11N2	WAKE ISLAND Hy	29.57	14	T	T	19 29 51.0	
	baz=193,slow=76						
MKAR	Makanchi Array	87.98	318	P	P	19 06 14.7	-0.2
	0.2nm,0.5s,baz=107,slow=4.7,SNR=2.4						
	0.2nm,0.5s						

*BJI **04** 19:37:08.0, 12°.95N×145°.36E, h55km, mB5.1/11, mb4.7/58, Ms4.4/11, Ms7 4.1/14*

*DJA **04** 19:37:13.6±0.4, 13°N±3°×14°5E±°, h50km±3km, M4.8/49, mb5.2/49, mB5.5/18, MLv4.0/1, Mw(mB)5.0/18*

*IDC **04** 19:37:13.7±0.8, 13°.39N×144°.99E, h54km±5km, mb4.2/27, mbtmp4.5/28, MS3.7/59, Error ellipse: s-maj=17.4km s-min=11.3km az=84.0*

*NEIC **04** 19:37:14.4±1.4, 13°.37N±0°.07×145°.03E±0°.09, h55km±4km, mb4.9/145, Error ellipse: s-maj=14.9km s-min=7.9km az=57.0*

*GCMT **04** 19:37:15.4±0.3, 13°.14N±0°.02×144°.98E±0°.02, h54km±1km, MW4.9/84, Moment Tensor Solution. s37,c48; s84,c114; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.87±.14; $M_{\theta\theta}$-0.31±.10; $M_{\phi\phi}$-1.56±.10; $M_{r\theta}$-0.30±.06; $M_{\theta\phi}$-1.28±.08; $M_{\phi r}$1.29±.08; Best double couple: $M_0$2.53000×10^{16} NP1:ϕ_s236.00000°, δ38.00000°, λ130.00000°. NP2: ϕ_s9.00000°, δ62.00000°, λ63.00000°. Principal axes: T 2.4900, Plg63.0000°, Azm234.0000°; N 0.0790, Plg23.0000°, Azm22.0000°; P -2.5700, Plg13.0000°, Azm118.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular*

moment-rate function

ISC 04 19:37:13.9±0.5**, 13.31N**±0.04×**145.00E**±0.06**, h56km**±3km**,**
h56km:pP-P, n314, σ**0.97**/276**, mb4.9**/124**, MS3.8**/67**, 1C-2D,**
Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.31	335	P	Pn	19 37 23.9	+0.2
	6μm,0.3s,baz=123,slow=1.8,SNR=1108						
GUMO	Guam	0.31	335	P	Pn	19 37 24.1	+0.4
GUMO	Guam	0.31	335	S	Sn	19 37 30.3	-0.4
GUMO	Guam	0.31	335		Pn	19 37 23.9	+0.2
GUMO				Sn	Sn	19 37 30.4	-0.3
PATS	Pohnpei	14.59	115	Pn	Pn	19 40 35.2	-2.0
JAY	Jayapura	16.29	195	P	Pn	19 40 59.5	+0.4
GENI	Genyem	16.51	197	P	Pn	19 41 02.0	+0.2
	74nm,1.2s						
JMZ	Minamidaito 2	17.97	316	P	Pn	19 41 19.8	0.0
RABL	Rabaul	18.78	157	P	P	19 41 27.9	-0.8
RABL				IAmb	IAmb	19 41 32.7	
	comp=Z,36nm,0.6s						
SIJI	Sorong	19.59	225	P	Pn	19 41 38.9	-0.5
	comp=Z,26nm,0.8s,baz=26,slow=13,SNR=14						
SIJI				LR	LR	19 48 36.4	
	comp=Z,223nm,18.7s,baz=349,slow=35						
SIJI	Sorong	19.59	225	P	Pn	19 41 39.2	-0.2
SIJI	Sorong	19.59	225	P	Pn	19 41 39.1	-0.3
	comp=Z,56nm,1.2s						
SWI	Sorong	19.59	225	P	Pn	19 41 38.6	-0.8
	comp=Z,83nm,1.1s						
DAV	Davao City (W)	20.09	254	LR	LR	19 48 12.9	
	comp=Z,247nm,21.0s,baz=80,slow=33						
DAV	Davao City (W)	20.09	254	P	P	19 41 42.5	-0.5
JHJ	Hachijo jima 2	20.29	347	LR	LR	19 48 33.2	
	comp=Z,543nm,21.6s,baz=106,slow=34						
FAKI	Fak Fak	20.50	219	P	P	19 41 45.3	-2.1
FAKI	Fak Fak	20.50	219	P	P	19 41 46.1	-1.4
FAKI	Fak Fak	20.50	219	P	P	19 41 45.0	-2.4
FAKI	Fak Fak	20.50	219	P	P	19 41 44.5	-2.9
FAKI	Fak Fak	20.50	219	P	P	19 41 46.0	-1.4
	comp=Z,2μmcomp=Z,151nm,1.3s						
JOW	Kunigami	20.66	313	P	P	19 41 50.4	+1.3
	comp=Z,46nm,0.6s,baz=126,slow=12,SNR=5.2						
JOW				LR	LR	19 48 11.5	
	comp=Z,357nm,21.8s,baz=356,slow=32						
	comp=Z,46nm,0.6s						
JOW	Kunigami	20.66	313	P	P	19 41 49.2	+0.1
JOW				IAmb	IAmb	19 41 53.6	
	comp=Z,57nm,0.7s						
H11S3	WAKE ISLAND Hy	21.48	73	T	T	20 04 35.8	
	baz=259,slow=75,SNR=93						
H11S1	WAKE ISLAND Hy	21.49	73	T	T	20 04 37.6	
	baz=259,slow=75,SNR=143						
H11S2	WAKE ISLAND Hy	21.49	73	T	T	20 04 36.2	
	baz=259,slow=75,SNR=59						
H11N1	WAKE ISLAND Hy	21.92	70	T	T	20 05 08.5	
	baz=256,slow=75,SNR=183						
H11N2	WAKE ISLAND Hy	21.93	70	T	T	20 05 11.1	
	baz=256,slow=75,SNR=82						
H11N3	WAKE ISLAND Hy	21.94	70	T	T	20 05 09.6	
	baz=256,slow=75,SNR=185						
PMG	Port Moresby	22.66	174	LR	LR	19 50 09.9	
	comp=Z,102nm,21.4s,baz=320,slow=34						
PMG	Port Moresby	22.66	174	P	P	19 42 10.1	-0.6
PMG	Port Moresby	22.66	174	P	P	19 42 10.3	-0.4
PMG	Port Moresby	22.66	174		P	19 42 09.5	-1.2
PMG	Port Moresby	22.66	174	P	P	19 42 10.1	-0.6
MNI	Manado	23.18	241	P	P	19 42 15.9	-0.1
JGF	Kuroka	23.25	344	P	P	19 42 16.0	-0.5
JGF				IAmb	IAmb	19 42 36.0	
	comp=Z,124nm,1.9s						
KRAI	Karang Ratu	23.34	226	P	P	19 42 18.5	+1.1
TGY	Tagaytay City	23.39	275	LR	LR	19 51 37.5	
	comp=Z,173nm,19.1s,baz=104,slow=37						
AAI	Ambon	23.74	226	P	P	19 42 20.9	-0.3
	comp=Z,1μmcomp=Z,107nm,1.1s						
MJAR	Matsushiro Arr	23.93	346	P	P	19 42 22.2	-0.6
	comp=Z,5.2nm,0.7s,baz=174,slow=7.3,SNR=13						
MJAR				LR	LR	19 51 49.9	
	comp=Z,130nm,18.0s,baz=160,slow=37						
	comp=Z,5.2nm,0.7s						
MJAR	Matsushiro Arr	23.93	346		P	19 42 23.3	+0.6
MAJO	Matsushiro	23.93	346	P	P	19 42 25.2	+2.4
MAJO	Matsushiro	23.93	346	P	P	19 42 22.7	-0.1
MAJO				IAmb	IAmb	19 42 45.1	
	comp=Z,18nm,0.7s						
MJB9	Matsu-Tunnel	23.93	346	P	P	19 42 23.0	+0.2
MJB9				IAmb	IAmb	19 42 46.1	
	comp=Z,17nm,0.8s						
NLAI	Namlea	24.21	228	P	P	19 42 18.0	-7.5
SANI	Sanana	24.26	232	P	P	19 42 25.4	-0.6
SANI	Sanana	24.26	232	P	P	19 42 24.5	-1.5
YULB	Yu-li	24.60	297	P	P	19 42 28.6	-0.4
YULB				IAmb	IAmb	19 42 30.5	
	comp=Z,25nm,0.7s						
TWG	Pinlang	24.61	296	P	P	19 42 28.4	-0.7
TWG				IAmb	IAmb	19 42 32.9	
	comp=Z,27nm,0.8s						
NACB	Ninganchiao	24.62	299	P	P	19 42 28.8	-0.4
NACB				IAmb	IAmb	19 42 35.6	
	comp=Z,57nm,1.1s						
SSLB	Suanglung	25.03	298	P	P	19 42 34.1	+1.1
SSLB	Suanglung	25.03	298	P	P	19 42 32.7	-0.2
SSLB				IAmb	IAmb	19 42 53.8	
	comp=Z,42nm,0.8s						
TPUB	Ta-pu	25.15	297	P	P	19 42 33.9	-0.2
GTOI	Gorontalo	25.16	242	P	P	19 42 35.4	+1.3
	comp=Z,56nm,0.8s						
MRSI	Marisa	26.16	243	P	P	19 42 43.3	+0.1
	comp=Z,1μmcomp=Z,124nm,1.1s						
LUWI	Luwuk	26.25	239	P	P	19 42 43.4	-0.6
LUWI	Luwuk	26.25	239		P	19 42 43.0	-1.0
LUWI	Luwuk	26.25	239	P	P	19 42 43.3	-0.7
	comp=Z,1μmcomp=Z,159nm,1.2s						
TOLI2	Tolitoli	26.87	245	P	P	19 42 49.6	0.0
TOLI2	Tolitoli	26.87	245		P	19 42 49.0	-0.6
HNR	Honiara	27.03	146	LR	LR	19 52 48.9	
	comp=Z,12nm,21.8s,baz=46,slow=34						
APSI	Ampana	27.12	240	P	P	19 42 52.7	+0.8
	comp=Z,63nm,0.9s						
COEN	Coen	27.15	184	P	P	19 42 53.3	+1.3
COEN	Coen	27.15	184		P	19 42 52.3	+0.2
MPSI	Mapaga	28.01	245	P	P	19 42 59.8	0.0
	comp=Z,24nm,1.3s						
KSRS	Korea Array	28.48	331	P	P	19 43 03.5	-0.2
	comp=Z,5.9nm,0.6s,baz=144,slow=9.7,SNR=18						
KSRS				PcP	PcP	19 46 13.3	-1.2
	comp=Z,5.5nm,1.1s,baz=168,slow=3.1,SNR=5.7						
	comp=Z,5.9nm,0.6s						
KSAR	Wonju Array Be	28.48	331	P	P	19 43 03.6	-0.2
KS19	Wonju Array Si	28.54	331	P	P	19 43 05.3	+1.0
TARAI	Tarakan	28.86	252	P	P	19 43 25.2	+18
KKM	Kota Kinabalu	29.26	258	P	P	19 43 11.5	+0.5
MTN	Manton Dam	29.39	208		P	19 43 11.9	-0.2
MTN				IAmb	IAmb	19 43 13.1	
	comp=Z,23nm,0.8s						
NJ2	Nanjing	30.36	312	*e*P	P	19 43 20.9	+0.4
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
SOEI	Soe	30.80	223	P	P	19 43 24.0	-0.7
SOEI				IAmb	IAmb	19 43 31.3	
	comp=Z,29nm,0.8s						
BATI	Baumata	31.53	223	LR	LR	19 59 03.1	
	comp=Z,47nm,18.4s,baz=68,slow=42						
USRK	Ussuriysk Ar.	32.75	343	P	P	19 43 41.9	+0.6
	comp=Z,3.7nm,0.7s,baz=144,slow=10.0,SNR=4.0						
	comp=Z,3.7nm,0.7s						
DL2	Dalian	32.83	325	P	P	19 43 43.0	+0.9
DL2				pP	pP	19 43 56.6	+0.4
DL2				*e*S	S	19 48 59.7	+4.1
DL2				pmax	pmax		
	comp=Z,32nm,0.9s						
DL2				L	L		
	comp=Z,370nm,16.8s						
DL2				L	L		
	comp=Z,310nm,16.4s						
DL2				L	L		
	comp=Z,350nm,18.9s						
KNRA	Kununurra	32.97	210	P	P	19 43 43.7	+0.2
CTA	Charters Tower	33.21	178	LR	LR	19 57 10.2	
	comp=Z,44nm,20.0s,baz=36,slow=36						
CTAO	Charters Tower	33.21	178	P	P	19 43 46.7	+1.1
CTAO				IAmb	IAmb	19 44 34.4	
	comp=Z,28nm,1.9s						
TIA	Tai'an	33.86	317	P	P	19 43 51.9	+0.7
TIA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
QIS	Mount Isa	34.07	189	P	P	19 43 54.1	+1.0
SBUM	Sibu	34.16	254	P	P	19 43 54.6	+0.5
SBUM	Sibu	34.16	254	P	P	19 43 53.7	-0.4
SBUM				IAmb	IAmb	19 43 55.4	
	comp=Z,22nm,1.4s						
SBUM	Sibu	34.16	254	P	P	19 43 54.5	+0.5
	comp=Z,12nm,1.2s						
QIZ	Qiongzhong	34.20	284	P	P	19 43 53.9	-0.5
QIZ				S	S	19 49 17.6	+0.3
QIZ				L	L		
	comp=Z,230nm,11.7s						
QIZ				L	L		
	comp=Z,350nm,12.8s						
QIZ				L	L		
	comp=Z,390nm,17.1s						
WB0	Warramunga Arr	34.48	198	IAmb	IAmb	19 43 57.9	
	comp=Z,20nm,0.7s						
WR8	Warramunga Arr	34.63	198	IAmb	IAmb	19 43 59.3	
	comp=Z,16nm,0.7s						
WRAB	Tennant Creek	34.65	198	P	P	19 43 58.7	+0.6
WRAB	Tennant Creek	34.65	198	P	P	19 43 58.6	+0.4
WRAB	Tennant Creek	34.65	198	P	P	19 43 58.4	+0.3
WRAB				pP	pP	19 44 13.3	+2.2
WRAB				x	x	19 44 18.6	
WRA	Warramunga Arr	34.67	198	P	P	19 43 58.1	-0.2
	comp=Z,20nm,0.8s,baz=20,slow=9.6,SNR=54						
WRA				PcP	PcP	19 46 32.4	+0.9
	comp=Z,2.5nm,0.9s,baz=11,slow=3.1,SNR=5.7						
WRA				ScP	ScP	19 50 12.8	+0.5
	comp=Z,0.4nm,0.8s,baz=20,slow=3.5,SNR=1.8						
	comp=Z,20nm,0.8s						
WRA	Warramunga Arr	34.67	198	P	P	19 43 57.7	-0.5
BNX	BinXian	35.60	339	⇑P	P	19 44 07.3	+1.3
BNX				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HNS	HongShan	36.13	317	⇓P	P	19 44 11.4	+0.7
HNS				pmax	pmax		
	comp=Z,45nm,0.8s						
HNS				L	L		
	comp=Z,220nm,14.7s						
HNS				L	L		
	comp=Z,200nm,13.8s						
HNS				L	L		
	comp=Z,290nm,18.0s						
LYN	LuoYang	36.24	311	P	P	19 44 12.2	+0.5
LYN				sP	sP	19 44 31.7	-0.8
LYN				pmax	pmax		
	comp=Z,28nm,0.8s						
KHKI	Kahang-Kahang	36.27	235	P	P	19 44 12.8	+0.7
	comp=Z,59nm,1.1s						
BJI2	Beijing	36.74	322	P	P	19 44 16.4	+0.6
BJI2				pP	pP	19 44 29.3	-0.7
BJI2				sP	sP	19 44 35.7	-0.9
BJI2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BJT	Baijiatuau	36.74	322	P	P	19 44 16.1	+0.3
BJT	Baijiatuau	36.74	322	IAmb	IAmb	19 44 37.2	
	comp=Z,20nm,1.2s						
BJT	Baijiatuau	36.74	322	P	P	19 44 16.2	+0.3
BJT				pP	pP	19 44 29.9	-0.2
BJT				x	x	19 44 36.2	
ENH	Enshi	36.85	303	P	P	19 44 17.2	+0.2
ENH	Enshi	36.85	303	IAmb	IAmb	19 44 20.3	
	comp=Z,11nm,0.8s						
ENH	Enshi	36.85	303	P	P	19 44 17.0	0.0
ENH				pP	pP	19 44 31.6	+0.4
ENH				PcP	PcP	19 46 38.5	+0.6
RTBI	Rangdo, Negare	36.86	236	P	P	19 44 17.1	-0.1
ABJI	Asem Bagus	37.06	237	P	P	19 44 19.5	+0.7
	comp=Z,52nm,0.9s						
KLR	Kul'dur	37.45	346	LR	LR	19 58 28.7	
	comp=Z,130nm,19.7s,baz=160,slow=34						
BLJI	Banyuglugur	37.55	238	P	P	19 44 23.4	+0.4
	comp=Z,1μmcomp=Z,79nm,0.9s						
GYA	Guiyang	38.20	296	P	P	19 44 30.8	+2.2
GYA				pP	pP	19 44 44.3	+1.5
GYA				L	L		
	comp=Z,180nm,22.0s						
AS31	Alice Springs	38.31	197	IAmb	IAmb	19 44 32.0	
	comp=Z,9.1nm,0.6s						
ASAR	Alice Springs	38.31	197	P	P	19 44 29.4	0.0
	comp=Z,9.2nm,0.6s,baz=22,slow=12,SNR=108						
ASAR				PcP	PcP	19 46 43.5	+1.0
	comp=Z,3.1nm,1.0s,baz=21,slow=3.6,SNR=4.7						
ASAR				ScP	ScP	19 50 24.6	-1.1
	comp=Z,0.8nm,1.2s,baz=18,slow=3.2,SNR=2.1						
ASAR				LR	LR	20 00 24.9	
	comp=Z,152nm,21.9s,baz=20,slow=36						
	comp=Z,9.2nm,0.6s						
ASAR	Alice Springs	38.31	197	P	P	19 44 29.1	-0.3
XAN	Xi'an	38.67	308	P	P	19 44 31.9	-0.4
XAN				pP	pP	19 44 47.1	+0.4
XAN				pmax	pmax		
	comp=Z,15nm,0.9s						
XAN				L	L		
	comp=Z,210nm,9.4s						
XAN				L	L		
	comp=Z,270nm,18.6s						
EIDS	Eidsvold	38.89	171	P	P	19 44 34.6	+0.5
EIDS				IAmb	IAmb	19 44 35.7	
	comp=Z,36nm,1.6s						
SJI	Sawahan	39.07	240	P	P	19 44 36.1	+0.2
	comp=Z,63nm,0.9s						
SNJI	Sawahan-Nganju	39.10	239	P	P	19 44 36.8	+0.5
	comp=Z,44nm,1.7s						
HEH	HeiHe	39.55	342	*e*P	P	19 44 40.3	+0.9
HEH				pmax	pmax		
	comp=Z,17nm,0.8s						
QLP	Quilpie	39.66	181	P	P	19 44 41.1	+0.7
HHC	Hu-ho-hao-te	40.07	320	⇓*i*P	P	19 44 44.6	+0.6
HHC				sP	sP	19 45 05.1	+0.3
HHC				S	S	19 50 46.3	+0.1
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				L	L		
	comp=Z,160nm,14.2s						
HHC				L	L		
	comp=Z,180nm,13.3s						
HHC				L	L		
	comp=Z,180nm,18.0s						
UGM	Wanagama	40.21	240	P	P	19 44 44.9	-0.5
DZM	Mont Dzumac	40.97	149	P	P	19 44 53.8	+2.3
PETK	Petropavlovsk-	40.97	12	LR	LR	20 04 10.1	
	comp=Z,50nm,18.4s,baz=198,slow=40						
INKA	Innaminka	41.01	186	P	P	19 44 52.0	+0.4
BTO2	Baotou	41.09	318	*e*P	P	19 44 53.0	+0.6
BTO2				pP	pP	19 45 08.1	+1.3
BTO2				S	S	19 51 02.9	+1.4
BTO2				pmax	pmax		
	comp=Z,48nm,0.8s						
BTO2				pmax	pmax		
	comp=Z,170nm,4.7s						
BTO2				L	L		
	comp=Z,270nm,4.8s						
BTO2				L	L		
	comp=Z,430nm,11.3s						
KMI2	Kunming	41.44	293	P	P	19 44 57.7	+2.1
KMI2				pP	pP	19 45 11.2	+1.2
KMI2				pmax	pmax		
	comp=Z,16nm,0.5s						
KMI2				L	L		
	comp=Z,230nm,26.6s						
HIA	Hailar	41.45	335	P	P	19 44 56.1	+0.9
LEM	Lembang	42.17	244	LR	LR	20 04 15.0	
	comp=Z,32nm,18.8s,baz=123,slow=38						
MYKOM	Kota Tinggi	42.29	258	P	P	19 45 02.6	+0.2
MYKOM	Kota Tinggi	42.29	258	P	P	19 45 02.4	0.0
MYKOM				IAmb	IAmb	19 45 03.3	
	comp=Z,25nm,1.0s						
MBWA	Marble Bar	42.30	216	P	P	19 45 02.8	+0.5
MBWA	Marble Bar	42.30	216	P	P	19 45 02.5	+0.2
MBWA	Marble Bar	42.30	216	P	P	19 45 02.8	+0.5
MBWA				pP	pwP	19 45 18.0	-1.5
PZH	PanZhiHua	42.54	295	P	P	19 45 04.5	0.0
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PSA00	Pilbara Seismi	42.56	216	P	P	19 45 05.1	+0.7
PSA00	Pilbara Seismi	42.56	216	P	P	19 45 04.8	+0.4
LZH	Lanzhou	43.30	309	*e*P	P	19 45 11.4	+0.9
LZH				pP	pP	19 45 26.8	+1.8
LZH				pmax	pmax		
	comp=Z,9.0nm,1.5s						
LZDM	Lanzhou Array	43.37	309	P	P	19 45 10.1	-1.1
	comp=Z,1.6nm,0.4s,baz=152,slow=6.5,SNR=6.2						
LZDM				LR	LR	20 02 33.1	
	comp=Z,86nm,21.9s,baz=270,slow=35						
	comp=Z,1.6nm,0.4s						
ARMA	Armidale	43.94	172	P	P	19 45 15.9	+0.4
ARMA				IAmb	IAmb	19 45 48.7	
	comp=Z,34nm,1.4s						
MDSI	Maura Dua	44.22	249	P	P	19 45 17.1	-0.9
	comp=Z,32nm,1.1s						
KULM	Kulim	44.43	264	P	P	19 45 19.8	+0.1
KULM				IAmb	IAmb	19 45 20.9	
	comp=Z,16nm,1.0s						
CHTO	Chiang Mai	44.51	283	P	P	19 45 20.5	+0.3
CHTO	Chiang Mai	44.51	283	P	P	19 45 19.9	-0.3
CHTO	Chiang Mai	44.51	283	P	P	19 45 20.1	-0.1
CHTO	Chiang Mai	44.51	283	P	P	19 45 20.4	+0.1
CHTO				PcP	PcP	19 47 03.7	+0.8
CM31	Chiang Mai Arr	44.51	283	P	P	19 45 19.9	-0.3
CM31				IAmb	IAmb	19 45 21.6	
	comp=Z,11nm,0.9s						
CMAR	Chiang Mai Arr	44.51	283	P	P	19 45 20.4	+0.1
	comp=Z,5.4nm,0.7s,baz=83,slow=6.2,SNR=56						
CMAR				PcP	PcP	19 47 03.5	+0.6
	comp=Z,3.1nm,0.7s,baz=90,slow=2.0,SNR=13						
CMAR				LR	LR	20 02 03.6	
	comp=Z,86nm,21.6s,baz=95,slow=34						
	comp=Z,5.4nm,0.7s						
CMAR	Chiang Mai Arr	44.51	283	P	P	19 45 20.0	-0.3
CMAR					PcP	19 47 03.6	+0.6
CMSA	Cobar Meteorol	44.59	179	P	P	19 45 21.0	+0.4
STKA	Stephens Creek	45.04	184	P	P	19 45 24.7	+0.5
	comp=Z,4.0nm,0.7s,baz=349,slow=8.3,SNR=10.0						
STKA				LR	LR	20 05 42.5	
	comp=Z,58nm,19.0s,baz=18,slow=38						
	comp=Z,4.0nm,0.7s						
STKA	Stephens Creek	45.04	184	P	P	19 45 24.7	+0.5
STKA	Stephens Creek	45.04	184	P	P	19 45 24.3	+0.2
MNAI	Manna	45.28	250	P	P	19 45 25.4	-1.1
SHEM	Shemya Is, Ala	45.66	24	LR	LR	20 01 11.5	
	comp=Z,91nm,21.9s,baz=239,slow=32						
MA2	Magadan	46.39	4	LR	LR	20 03 05.5	
	comp=Z,76nm,20.4s,baz=178,slow=34						
MA2	Magadan	46.39	4	P	P	19 45 35.3	+0.8
MA2	Magadan	46.39	4	P	P	19 45 34.0	-0.4
BBOO	Buckleboo	46.65	190	P	P	19 45 37.2	+0.4
BBOO	Buckleboo	46.65	190	P	P	19 45 37.0	+0.2
ULN	Ulaanbaatar	46.69	325	P	P	19 45 37.7	+0.5
ULN	Ulaanbaatar	46.69	325	P	P	19 45 37.9	+0.7
	comp=Z,30nm,0.8s						
ULN	Ulaanbaatar	46.69	325	P	P	19 45 37.8	+0.5
GIRL	Giralia	46.75	220	P	P	19 45 39.5	+1.8
FORT	Forrest	46.76	200	P	P	19 45 38.4	+0.7
FORT				IAmb	IAmb	19 45 39.5	
	comp=Z,10nm,0.9s						
HTT	Hallett	46.83	187	P	P	19 45 39.4	+1.1
SONM	Songino Array	47.04	325	P	P	19 45 40.2	+0.3
	comp=Z,3.4nm,0.7s,baz=142,slow=8.2,SNR=34						
SONM				PcP	PcP	19 47 11.1	-0.3
	comp=Z,1.0nm,0.6s,baz=135,slow=2.9,SNR=1.8						
SONM				ScP	ScP	19 50 59.8	-0.8
	comp=Z,1.5nm,1.3s,baz=131,slow=4.0,SNR=3.5						
SONM				LR	LR	20 05 23.6	
	comp=Z,141nm,19.6s,baz=140,slow=36						
	comp=Z,3.4nm,0.7s						
SONM	Songino Array	47.04	325	P	P	19 45 40.1	+0.1
MEEK	Meekatharra	47.27	213	P	P	19 45 42.0	+0.2
GTA2	Gaotai	47.52	312	*e*P	P	19 45 44.2	+0.3
GTA2				pP	pP	19 45 59.0	+0.5
GTA2				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KCSI	Kotacane, Aceh	47.64	263	P	P	19 45 44.1	-0.9
AUMAR	Marden Senior	48.31	187	P	P	19 45 51.3	+1.6
GSI	Gunungsitoli	48.42	260	P	P	19 45 49.2	-1.8
GSI				IAmb	IAmb	19 47 25.7	
	comp=Z,16nm,1.0s						
AUMBR	Murray Bridge	48.48	186	P	P	19 45 52.4	+1.5
MORE	Moreh	48.99	291	IAmb	IAmb	19 46 14.8	
	comp=Z,11nm,0.5s						
KIWB	Kanaga Island	48.99	30	P	P	19 45 56.1	+1.3
ADK	Adak	49.24	30	P	P	19 45 57.2	+0.5
YAK	Yakutsk	49.89	351	LR	LR	20 07 25.6	
	comp=Z,100nm,20.0s,baz=118,slow=36						
YAK	Yakutsk	49.89	351	P	P	19 46 01.6	+0.2
YAK				IAmb	IAmb	19 46 05.1	
	comp=Z,12nm,0.6s						
MORW	Morawa	50.57	213	P	P	19 46 07.3	+0.2
BRAT	Ballarat	50.59	181	P	P	19 46 09.4	+2.4
TOO	Toolangi	50.61	179	IAmb	IAmb	19 46 10.6	
	comp=Z,10nm,0.9s						
AFI	Afiamalu	50.63	121	LR	LR	20 04 03.4	
	comp=Z,91nm,20.0s,baz=290,slow=32						
AUMTC	Mt Clear Colle	50.65	181	P	P	19 46 09.5	+2.0
TLY	Talaya	50.66	328	LR	LR	20 07 48.9	
	comp=Z,59nm,20.0s,baz=120,slow=36						
TLY	Talaya	50.66	328	P	P	19 46 07.9	+0.4
TLY				IAmb	IAmb	19 46 09.2	
	comp=Z,6.4nm,0.8s						
SHL	Shillong	51.26	292	IAmb	IAmb	19 46 13.2	
	comp=Z,15nm,0.8s						
BRDH	Bariadhala	51.37	288	LR	LR	20 08 45.7	
	comp=Z,89nm,19.9s,baz=235,slow=37						
BLDU	Ballidu	51.46	211	P	P	19 46 13.7	0.0
KLBR	Kellerberrin	51.73	210	P	P	19 46 15.6	-0.1
LSA	Lhasa	52.24	297	IAmb	IAmb	19 46 22.6	
	comp=Z,12nm,0.8s						
LSA	Lhasa	52.24	297	P	P	19 46 17.1	-3.1
LSA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
LSA	Lhasa	52.24	297	P	P	19 46 20.5	+0.3
LSA				x	x	19 46 41.2	
AUKUL	Kulin High Sch	52.43	209	P	P	19 46 20.9	0.0
MUN	Mundaring	52.81	211	P	P	19 46 24.2	+0.5
CLES	Cleveland East	53.22	32	P	P	19 46 26.5	+0.1
RAO	Raoul Island	55.42	140	LR	LR	20 08 34.4	
	comp=Z,18nm,20.1s,baz=108,slow=34						
AKUT	Akutan	56.01	33	P	P	19 46 45.0	-1.7
WMQ	Urumqi	57.43	314	*e*P	P	19 46 57.7	+0.7
WMQ				pP	pP	19 47 13.8	+1.7
WMQ				sP	sP	19 47 19.6	+1.1
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TIXI	Tiksi	59.13	354	LR	LR	20 14 27.9	
	comp=Z,19nm,21.1s,baz=160,slow=38						
TIXI	Tiksi	59.13	354	P	P	19 47 07.5	-0.8
URZ	Urewera	59.46	151	LR	LR	20 10 36.5	
	comp=Z,96nm,20.9s,baz=324,slow=34						
K13K	Kusilvak Mount	60.31	25	P	P	19 47 15.7	-0.9
K13K				IAmb	IAmb	19 47 32.3	
	comp=Z,9.5nm,1.2s						
O14K	Tigyukauivet M	60.52	28	P	P	19 47 17.6	-0.5
THZ	Tophouse	60.53	156	P	P	19 47 20.7	+2.3
TCW	Tory Channel	60.62	155	P	P	19 47 20.8	+1.9
N14K	Kuskokwak Cree	60.63	28	P	P	19 47 19.1	+0.4
L14K	Kuka Creek	60.84	26	P	P	19 47 19.9	-0.3
L14K				IAmb	IAmb	19 47 35.8	
	comp=Z,10nm,1.1s						
M14K	Bethel	60.88	27	P	P	19 47 20.4	-0.1
M14K				IAmb	IAmb	19 48 20.2	
	comp=Z,22nm,1.4s						
TNA	Tin City	61.07	20	P	P	19 47 21.4	-0.2
TNA				IAmb	IAmb	19 47 56.5	
	comp=Z,16nm,1.8s						
O15K	Ungalikthiuk R	61.16	29	P	P	19 47 22.7	+0.3
ANM	Nome	61.41	22	P	P	19 47 22.9	-1.1
ANM				IAmb	IAmb	19 47 58.7	
	comp=Z,16nm,1.8s						
N15K	Kwethluk River	61.45	28	P	P	19 47 24.5	+0.1
K15K	Wolf Creek Mou	61.77	25	P	P	19 47 25.3	-1.2
MKAR	Makanchi Array	61.78	316	P	P	19 47 26.3	-0.6
	comp=Z,5.1nm,0.6s,baz=92,slow=8.9,SNR=78						
MKAR				LR	LR	20 14 03.7	
	comp=Z,70nm,21.5s,baz=80,slow=36						
MKAR				PKP2bc	P'P'bc	20 16 44.4	-3.5
	comp=Z,0.5nm,0.8s,baz=286,slow=1.0,SNR=4.2						
	comp=Z,5.1nm,0.6s						
MKAR	Makanchi Array	61.78	316	P	P	19 47 26.4	-0.5
DCZ	Deep Cove	61.83	162	P	P	19 47 26.2	-0.8
ZAA0	Zalesovo Array	61.93	324	P	P	19 47 26.7	-1.0
ZALV	Zalesovo Beam	61.93	324	P	P	19 47 26.7	-1.0
	comp=Z,1.1nm,0.4s,baz=110,slow=6.2,SNR=8.8						
ZALV				LR	LR	20 14 25.4	
	comp=Z,75nm,19.6s,baz=104,slow=36						
	comp=Z,1.1nm,0.4s						
MAKZ	Makanchi	62.00	316	P	P	19 47 28.3	-0.1
MAKZ				IAmb	IAmb	19 47 29.4	
	comp=Z,7.1nm,0.7s						

MAKZ	**Makanchi**	**62.00**	**316**	P	**P**	**19 47 28.4**	**+0.1**
MAKZ				pP	**pP**	**19 47 44.1**	**+0.7**
MAKZ				x	x	19 47 49.7	
O16K	**Kokwok River B**	**62.14**	**29**	P	**P**	**19 47 29.2**	**+0.2**
F15K	**North Star Dit**	**62.28**	**21**		**P**	**19 47 29.5**	**-0.4**
F15K				IAmb	IAmb	19 48 08.2	
	comp=Z,11nm,1.6s						
M16K	**Timber Creek**	**62.32**	**27**	P	**P**	**19 47 30.8**	**+0.6**
L16K	**Owhat River**	**62.38**	**26**	P	**P**	**19 47 30.0**	**-0.6**
L16K				IAmb	IAmb	19 48 57.3	
	comp=Z,15nm,1.4s						
J16K	**Anvik River**	**62.60**	**24**	P	**P**	**19 47 31.9**	**-0.2**
J16K				IAmb	IAmb	19 49 03.7	
	comp=Z,22nm,1.8s						
N17K	**Nushagak Hills**	**62.92**	**28**	P	**P**	**19 47 34.9**	**+0.7**
K17K	**Iditarod**	**63.30**	**26**	P	**P**	**19 47 37.3**	**+0.6**
K17K				IAmb	IAmb	19 47 50.0	
	comp=Z,12nm,1.1s						
PALK	**Pallekele**	**63.41**	**272**	LR	LR	20 12 45.8	
	comp=Z,54nm,21.7s,baz=90,slow=34						
C16K	**Lisburne Hills**	**63.46**	**18**	P	**P**	**19 47 36.7**	**-0.8**
H17K	**Granite Mounta**	**63.63**	**23**	P	**P**	**19 47 38.5**	**-0.3**
H17K				IAmb	IAmb	19 48 15.5	
	comp=Z,14nm,1.8s						
L18K	**Granite Mounta**	**63.79**	**26**	P	**P**	**19 47 40.3**	**+0.4**
L18K				IAmb	IAmb	19 48 34.0	
	comp=Z,25nm,1.6s						
F17K	**Baldwin Pennin**	**63.85**	**21**	P	**P**	**19 47 39.9**	**-0.3**
F17K				IAmb	IAmb	19 48 02.9	
	comp=Z,20nm,1.7s						
KDAK	**Kodiak Island**	**64.24**	**32**	P	**P**	**19 47 42.5**	**-0.4**
J18K	**Innoko River**	**64.27**	**25**	P	**P**	**19 47 42.7**	**-0.3**
J18K				IAmb	IAmb	19 48 35.7	
	comp=Z,24nm,1.9s						
N19K	**Bonanza Creek**	**64.27**	**28**	P	**P**	**19 47 43.4**	**+0.2**
H18K	**Honhosa River**	**64.31**	**23**	P	**P**	**19 47 42.1**	**-1.2**
H18K				IAmb	IAmb	19 48 22.6	
	comp=Z,25nm,1.9s						
L19K	**White Mountain**	**64.58**	**27**	P	**P**	**19 47 43.4**	**-1.7**
KDJ	**Kajisay**	**64.78**	**310**	P	**P**	**19 47 46.8**	**-0.2**
KURK	**Kurchatov**	**64.88**	**320**	P	**P**	**19 47 46.2**	**-1.0**
KURK				IAmb	IAmb	19 47 47.7	
	comp=Z,8.7nm,0.7s						
KURK	**Kurchatov**	**64.88**	**320**	P	**P**	**19 47 46.7**	**-0.6**
J19K	**Poorman**	**64.92**	**25**	P	**P**	**19 47 47.2**	**-0.1**
J19K				IAmb	IAmb	19 48 14.3	
	comp=Z,22nm,1.6s						
KURBB	**Kurchatov Arra**	**64.92**	**320**	P	**P**	**19 47 46.8**	**-0.7**
	comp=Z,9.1nm,0.6s,baz=103,slow=6.6,SNR=111						
KURBB				LR	LR	20 16 03.9	
	comp=Z,122nm,21.1s,baz=168,slow=36						
KURBB				PKP2bc	**P'P'bc**	**20 16 37.0**	**-2.5**
	comp=Z,0.6nm,0.8s,baz=287,slow=3.6,SNR=5.9						
	comp=Z,9.1nm,0.6s						
C18K	**Utukok River**	**64.95**	**19**	P	**P**	**19 47 46.3**	**-1.2**
C18K				IAmb	IAmb	19 49 06.6	
	comp=Z,15nm,1.8s						
G19K	**Purcell Mounta**	**65.21**	**22**	P	**P**	**19 47 48.7**	**-0.5**
G19K				IAmb	IAmb	19 47 53.3	
	comp=Z,23nm,2.0s						
M20K	**Styx River**	**65.24**	**27**	P	**P**	**19 47 49.3**	**-0.2**
M20K				IAmb	IAmb	19 49 31.2	
	comp=Z,37nm,1.7s						
K20K	**Telida**	**65.33**	**26**	P	**P**	**19 47 50.2**	**+0.3**
K20K				IAmb	IAmb	19 48 37.7	
	comp=Z,36nm,1.9s						
CNPM	**China Poot**	**65.41**	**30**	P	**P**	**19 47 50.4**	**-0.2**
BRLK	**Bradley Lake**	**65.65**	**30**	P	**P**	**19 47 51.3**	**-0.8**
C19K	**Lookout Ridge**	**65.69**	**19**	P	**P**	**19 47 52.1**	**-0.1**
C19K				IAmb	IAmb	19 48 25.8	
	comp=Z,25nm,1.6s						
KSH2	**Kashi**	**65.82**	**307**	P	**P**	**19 47 54.0**	**+0.2**
KSH2				sP	sP	19 48 14.8	-0.6
KSH2				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NRIK	**Noril'sk**	**66.44**	**341**	P	**P**	**19 47 56.2**	**-0.8**
	comp=Z,1.3nm,0.5s,baz=105,slow=4.8,SNR=5.2						
NRIK				LR	LR	20 17 40.6	
	comp=Z,55nm,18.6s,baz=122,slow=37						
	comp=Z,1.3nm,0.5s						
D20K	**Etivluk River**	**66.47**	**20**	IAmb	IAmb	19 48 37.3	
	comp=Z,21nm,1.9s						
AAK	**Ala-Archa**	**66.80**	**311**	P	**P**	**19 47 59.0**	**-1.0**
	comp=Z,0.5nm,0.4s,baz=128,slow=9.2,SNR=4.3						
AAK				LR	LR	20 19 02.7	
	comp=Z,75nm,19.4s,baz=80,slow=38						
	comp=Z,0.5nm,0.4s						
B20K	**Meade River**	**66.86**	**18**	IAmb	IAmb	19 48 16.7	
	comp=Z,5.9nm,0.6s						
NIL	**Nilore**	**67.64**	**301**		**P**	**19 48 04.0**	**-1.3**
D22K	**Ayikyak River**	**67.85**	**20**	IAmb	IAmb	19 48 35.9	
	comp=Z,22nm,1.8s						
E22K	**Anaktuvuk Pass**	**67.88**	**21**	P	**P**	**19 48 06.2**	**0.0**
IL31		**68.77**	**25**	IAmb	IAmb	19 48 11.3	
	comp=Z,4.6nm,0.5s						
ILAR	**Eielson Array**	**68.77**	**25**	P	**P**	**19 48 10.1**	**-1.6**
	comp=Z,2.3nm,0.4s,baz=253,slow=5.7,SNR=62						
ILAR				LR	LR	20 14 24.8	
	comp=Z,43nm,22.0s,baz=260,slow=32						
	comp=Z,2.3nm,0.4s						
D24K	**Happy Valley**	**69.25**	**20**	IAmb	IAmb	19 48 54.4	
	comp=Z,28nm,1.7s						
KKAR	**Karatay Array**	**69.74**	**311**	P	**P**	**19 48 17.7**	**-0.4**
BVAR	**Borovoye Array**	**70.23**	**322**	P	**P**	**19 48 20.2**	**-0.8**
	comp=Z,4.4nm,0.6s,baz=104,slow=7.5,SNR=46						
BVAR				LR	LR	20 19 24.6	
	comp=Z,126nm,21.4s,baz=95,slow=36						
	comp=Z,4.4nm,0.6s						
BORK	**Borovoye**	**70.27**	**322**	P	**P**	**19 48 20.8**	**-0.4**
BORK	**Borovoye**	**70.27**	**322**	P	**P**	**19 48 20.9**	**-0.4**
BORK				pP	**pP**	**19 48 36.6**	**0.0**
G26K	**Porcupine Rive**	**70.51**	**23**	IAmb	IAmb	19 50 42.5	
	comp=Z,7.2nm,0.4s						
L29M	**L29M**	**72.29**	**28**	IAmb	IAmb	19 48 35.9	
	comp=Z,13nm,1.1s						
G31M	**Satah River**	**74.22**	**24**	IAmb	IAmb	19 49 12.2	
	comp=Z,13nm,1.1s						
INK	**Inuvik**	**74.58**	**22**	P	**P**	**19 48 46.5**	**0.0**
INK				IAmb	IAmb	19 51 05.5	
	comp=Z,24nm,1.9s						
ARTI	**Arti**	**77.17**	**325**	LR	LR	20 24 57.7	
	comp=Z,51nm,18.2s,baz=76,slow=37						
AKTO	**Aktyubinsk**	**77.96**	**319**	P	**P**	**19 49 06.0**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=84,slow=6.9,SNR=4.8						
AKTO				LR	LR	20 24 31.0	
	comp=Z,94nm,19.7s,baz=46,slow=36						
	comp=Z,1.3nm,0.6s						
KIRV	**Kirov**	**81.65**	**328**	LR	LR	20 28 04.3	
	comp=Z,63nm,18.2s,baz=76,slow=37						
YKAW3	**Yellowknife Wh**	**83.03**	**27**	P	**P**	**19 49 33.3**	**+0.3**
YKAW3				IAmb	IAmb	19 52 17.3	
	comp=Z,26nm,2.0s						
YKA	**Yellowknife Ar**	**83.05**	**27**	P	**P**	**19 49 32.9**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=302,slow=8.2,SNR=15						
YKA				LR	LR	20 26 00.8	
	comp=Z,42nm,19.2s,baz=66,slow=35						
	comp=Z,1.0nm,0.6s						
YKA	**Yellowknife Ar**	**83.05**	**27**	P	**P**	**19 49 32.5**	**-0.6**
J05D	**Fort Rock, OR**	**83.71**	**47**	P	**P**	**19 49 37.7**	**+0.5**
J05D				IAmb	IAmb	19 49 40.5	
	comp=Z,12nm,0.8s						
K05A	**Summer Lake**	**84.07**	**48**	IAmb	IAmb	19 49 42.4	
	comp=Z,9.4nm,0.8s						
ORV	**Oroville**	**84.31**	**51**	IAmb	IAmb	19 51 01.9	
	comp=Z,22nm,2.0s						
SPITS	**Spitsbergen Ar**	**84.35**	**351**	P	**P**	**19 49 39.1**	**-0.5**
	comp=Z,5.2nm,0.8s,baz=79,slow=6.0,SNR=7.5						
SPITS				LR	LR	20 29 42.0	
	comp=Z,42nm,18.2s,baz=28,slow=37						
	comp=Z,5.2nm,0.8s						
RES	**Resolute Bay**	**84.80**	**13**	P	**P**	**19 49 42.0**	**+0.2**
	comp=Z,1.7nm,0.5s,baz=335,slow=4.1,SNR=10						
	comp=Z,1.7nm,0.5s						
NEW	**Newport**	**85.35**	**42**	LR	LR	20 23 19.0	
	comp=Z,14nm,21.4s,baz=69,slow=32						
BMO	**Blue Mountains**	**86.10**	**45**	P	**P**	**19 49 49.6**	**+0.6**
BMO				IAmb	IAmb	19 49 51.5	
	comp=Z,8.9nm,1.0s						
PLID	**Pearl Lake**	**86.93**	**44**	P	**P**	**19 49 52.6**	**-0.7**
PLID				IAmb	IAmb	19 49 55.0	
	comp=Z,5.5nm,0.7s						
NVAR	**Mina Array Bea**	**86.99**	**51**	P	**P**	**19 49 55.2**	**+1.5**
	comp=Z,2.8nm,0.6s,baz=276,slow=5.6,SNR=13						
	comp=Z,2.8nm,0.6s						
ARCES	**ARCESS Array B**	**87.39**	**342**	P	**P**	**19 49 55.2**	**+0.5**
	comp=Z,2.9nm,0.9s,baz=52,slow=6.1,SNR=3.9						
ARCES				LR	LR	20 32 36.6	
	comp=Z,52nm,19.0s,baz=78,slow=38						
	comp=Z,2.9nm,0.9s						
MFID	**Camas Ranch**	**87.50**	**46**	IAmb	IAmb	19 49 58.7	
	comp=Z,10nm,0.8s						
DSP	**Deep Springs**	**87.52**	**52**	P	**P**	**19 49 55.6**	**-0.3**
DSP				IAmb	IAmb	19 50 23.6	
	comp=Z,7.1nm,1.3s						
TPNV	**Topopah Spring**	**88.95**	**52**	IAmb	IAmb	19 50 28.7	
	comp=Z,5.5nm,1.0s						
GNI	**Garni**	**89.20**	**311**	LR	LR	20 33 54.0	
	comp=Z,42nm,19.5s,baz=56,slow=38						
CCD	**Concordia, Ant**	**89.25**	**185**	P	**P**	**19 50 05.6**	**+1.9**
KBZ	**Khabaz**	**89.45**	**315**	LR	LR	20 34 42.3	
	comp=Z,59nm,18.4s,baz=34,slow=39						
PFO	**Pinyon Flats O**	**89.69**	**56**	LR	LR	20 24 04.7	
	comp=Z,38nm,19.9s,baz=252,slow=31						
VNDA	**Vanda**	**91.18**	**176**	LR	LR	20 30 39.8	
	comp=Z,48nm,18.1s,baz=356,slow=35						
FINES	**FINESS Array B**	**91.47**	**335**	P	**P**	**19 50 11.8**	**-2.2**
	comp=Z,1.9nm,0.8s,baz=58,slow=4.6,SNR=8.7						
FINES				LR	LR	20 34 12.7	
	comp=Z,34nm,18.4s,baz=320,slow=37						
	comp=Z,1.9nm,0.8s						
FINES	**FINESS Array B**	**91.47**	**335**	P	**P**	**19 50 11.9**	**-2.1**
PDAR	**Pinedale Array**	**92.07**	**45**	P	**P**	**19 50 17.6**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=280,slow=4.2,SNR=5.4						
PDAR				LR	LR	20 24 46.6	
	comp=Z,32nm,20.6s,baz=286,slow=31						
	comp=Z,0.5nm,0.5s						
AKASG	**Malin Array Be**	**95.32**	**325**	LR	LR	20 36 35.6	
	comp=Z,78nm,18.2s,baz=42,slow=37						
HFS	**Hagfors**	**97.10**	**338**	P	**P**	**19 50 38.1**	**-1.7**
	comp=Z,3.7nm,0.9s,baz=82,slow=3.1,SNR=2.4						
HFS				LR	LR	20 35 07.3	
	comp=Z,27nm,19.5s,baz=64,slow=36						
	comp=Z,3.7nm,0.9s						
ANMO	**Albuquerque**	**97.12**	**52**	LR	LR	20 34 02.6	
	comp=Z,27nm,18.9s,baz=275,slow=35						
BRTR	**Keskin Array B**	**97.35**	**314**	P	**P**	**19 50 39.6**	**-2.0**
	comp=Z,0.3nm,0.5s,baz=108,slow=5.1,SNR=2.5						
BRTR				LR	LR	20 38 43.1	
	comp=Z,30nm,20.9s,baz=316,slow=38						
	comp=Z,0.3nm,0.5s						
NOA	**NORSAR Array B**	**97.36**	**339**	LR	LR	20 36 09.8	
	comp=Z,50nm,21.7s,baz=40,slow=36						
LPIG	**La Paz**	**97.63**	**63**	LR	LR	20 25 26.5	
	comp=Z,37nm,21.5s,baz=24,slow=30						
ASF	**Jabal al Asfar**	**97.78**	**306**	LR	LR	20 39 53.4	
	comp=Z,22nm,19.8s,baz=25,slow=38						
MMAI	**Mount Meron Ar**	**98.65**	**307**	LR	LR	20 39 13.4	
	comp=Z,24nm,21.8s,baz=58,slow=38						
FRB	**Frobisher Bay**	**98.97**	**14**	LR	LR	20 39 41.3	
	comp=Z,12nm,18.9s,baz=326,slow=38						
SFJD	**Kangerlussuaq**	**99.10**	**6**	LR	LR	20 33 56.4	
	comp=Z,22nm,21.4s,baz=344,slow=34						
MAW	**Mawson**	**99.22**	**203**	LR	LR	20 29 11.0	
	comp=Z,72nm,21.6s,baz=98,slow=31						
MLR	**Muntele Rosu**	**99.79**	**321**	LR	LR	20 39 57.2	
	comp=Z,43nm,18.2s,baz=56,slow=38						
CLL	**Collm**	**103.35**	**331**	*e*PP	**PP**	**19 55 23.0**	**-0.2**
BOSA	**Boshof**	**122.25**	**245**	PKP	**PKiKP**	**19 56 03.7**	**+0.2**
	comp=Z,2.6nm,0.7s,baz=25,slow=0.6,SNR=4.4						
TORD	**Torodi Ar. Bea**	**135.13**	**304**	PKP	**PKPdf**	**19 56 28.6**	**+0.6**
	comp=Z,5.3nm,0.9s,baz=23,slow=1.0,SNR=23						
TORD				SKPbc	**SKPbc**	**19 59 53.6**	**-0.7**
	comp=Z,1.8nm,0.9s,baz=31,slow=2.8,SNR=6.7						
PLCA	**Paso Flores**	**138.63**	**138**	PKP	**PKPdf**	**19 56 33.4**	**-0.5**
	comp=Z,2.9nm,1.0s,baz=239,slow=5.9,SNR=5.0						
DBIC	**Dimbokro**	**144.08**	**302**	PKP	PKPbc	19 56 42.2	-0.2
	comp=Z,12nm,0.6s,baz=88,slow=2.7,SNR=18						
DBIC	**Dimbokro**	**144.08**	**302**		PKPbc	19 56 42.6	+0.2
LPAZ	**La Paz**	**147.85**	**99**	PKPbc	**PKPbc**	**19 56 52.9**	**-1.5**
	comp=Z,8.5nm,1.1s,baz=250,slow=2.8,SNR=11						
LPAZ	**La Paz**	**147.85**	**99**		**PKPbc**	**19 56 53.2**	**-1.2**
CPUP	**Villa Florida**	**155.37**	**125**	PKP	**PKPdf**	**19 57 03.2**	**+1.5**
	comp=Z,1.0nm,0.3s,baz=189,slow=2.9,SNR=2.3						
CPUP				PKPab	**PKPab**	**19 57 28.1**	**+0.8**
	comp=Z,1.3nm,0.6s,baz=278,slow=7.1,SNR=4.5						

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*DJA **04** 19:39:33.1±0.9, 7°S±5°×12°4E±°, h661km±14km, M3.9/23, mb3.9/17, mB4.3/6, MLv4.1/23, Mw(mB)3.4/6*
*NEIC **04** 19:39:36.7±1.2, 6.°6S±0.°1×124.°16E±0.°09, h620km±13km, mb4.1/14, Error ellipse: s-maj=17.0km s-min=12.4km az=163.0*
*IDC **04** 19:39:38.5±1.4, 7.°06S×123.°72E, h630km±29km, mb2.8/3, mbtmp3.9/7, Error ellipse: s-maj=124.1km s-min=15.5km az=59.0*
ISC 04 19:39:35.9±0.6**, 6.°64S**±0.°08×**124.°2E**±0.°1**, h600**km**, n56,** σ**1.s65**/57**, mb4.0**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	**Maumere**	**2.79**	**225**	P	**P**	**19 40 56.3**	**+2.4**
SOEI	**Soe**	**3.10**	**179**	P	**P**	**19 40 58.0**	**+2.2**
SOEI	**Soe**	**3.10**	**179**	P	**P**	**19 40 58.0**	**+2.2**
SOEI				S	**S**	**19 41 57.7**	**-3.1**
SOEI	**Soe**	**3.10**	**179**	P	**P**	**19 40 57.9**	**+2.2**
EDFI	**Ende, Flores**	**3.27**	**230**	P	**P**	**19 40 57.7**	**+0.9**
KKSI	**Kolaka, Sulawe**	**3.54**	**314**	P	**P**	**19 41 01.2**	**+2.8**
BATI	**Baumata**	**3.58**	**189**	P	**P**	**19 41 00.6**	**+2.0**
	16nm,0.4s,baz=106,slow=2.5,SNR=12						
BATI				S	**S**	**19 42 08.2**	**+2.1**
	22nm,0.4s,baz=294,slow=18,SNR=9.5						
BATI	**Baumata**	**3.58**	**189**	P	**P**	**19 41 00.7**	**+2.0**
BSSI	**Bau Bau, Buton**	**3.74**	**277**	P	**P**	**19 41 02.5**	**+2.9**
NLAI	**Namlea**	**4.43**	**40**	P	**P**	**19 41 06.0**	**+1.5**
LBFI	**Labuhan Bajo,**	**4.66**	**247**	P	**P**	**19 41 06.6**	**+0.4**
KAPI	**Kappang**	**4.73**	**290**	P	**P**	**19 41 09.4**	**+2.7**
	9.5nm,0.4s,baz=112,slow=8.6,SNR=8.2						
KAPI	**Kappang**	**4.73**	**290**	P	**P**	**19 41 10.0**	**+3.3**
SPSI	**Sidrap Palu**	**5.17**	**301**	P	**P**	**19 41 11.9**	**+1.7**
	0.2nm41nm,0.6s						
KRAI	**Karang Ratu**	**5.31**	**52**	P	**P**	**19 41 11.2**	**-0.1**
WBSI	**Waikabubak, Su**	**5.63**	**238**	P	**P**	**19 41 13.5**	**-0.5**
	0.1nm27nm,1.0s						
LUWI	**Luwuk**	**5.75**	**345**	P	**P**	**19 41 15.9**	**+0.9**
LUWI	**Luwuk**	**5.75**	**345**	P	**P**	**19 41 14.6**	**-0.4**
BNDI	**Bandanaira**	**6.04**	**70**	P	**P**	**19 41 19.6**	**+2.2**
PMSI	**Majene**	**6.13**	**300**	P	**P**	**19 41 20.3**	**+2.0**
	0.2nm40nm,0.8s						
DBNI	**Kabupaten Domp**	**6.14**	**252**	P	**P**	**19 41 18.0**	**-0.3**
MMSI	**Mamuju**	**6.59**	**306**	P	**P**	**19 41 24.1**	**+1.8**
	0.1nm39nm,0.7s						
PLAI	**Plampang**	**6.74**	**251**	P	**P**	**19 41 23.7**	**+0.1**
PLAI	**Plampang**	**6.74**	**251**	P	**P**	**19 41 23.6**	**0.0**
	0.1nm648nm17nm,0.8s						
MRSI	**Marisa**	**7.43**	**342**	P	**P**	**19 41 30.9**	**+1.0**
	54nm,0.9s						
MPSI	**Mapaga**	**8.16**	**328**	P	**P**	**19 41 38.1**	**+1.3**
TOLI2	**Tolitoli**	**8.43**	**336**	P	**P**	**19 41 39.9**	**+0.5**
TOLI2	**Tolitoli**	**8.43**	**336**	P	**P**	**19 41 39.4**	**-0.1**
SWI	**Sorong**	**9.07**	**51**	P	P	19 41 39.8	-5.8
MTN	**Manton Dam**	**9.19**	**133**	P	**P**	**19 41 48.3**	**+1.6**
KNRA	**Kununurra**	**10.02**	**154**	P	**P**	**19 41 56.1**	**+1.2**
JAGI	**Jajag, Banyuwa**	**10.14**	**259**	P	**P**	**19 41 55.7**	**-0.5**
JAGI	**Jajag, Banyuwa**	**10.14**	**259**	P	**P**	**19 41 54.0**	**-2.1**
UGM	**Wanagama**	**13.64**	**264**	P	**P**	**19 42 29.2**	**-2.2**
KKM	**Kota Kinabalu**	**14.92**	**327**	P	**P**	**19 42 43.3**	**-0.3**
PSA00	**Pilbara Seismi**	**15.44**	**195**	P	**P**	**19 42 48.2**	**+0.1**
WB0	**Warramunga Arr**	**16.37**	**144**	P	**P**	**19 42 57.0**	**+0.3**
WB0				IAmb	IAmb	19 42 59.6	
	comp=Z,3.5nm,0.8s						
BBJI	**Bungbulang**	**16.46**	**266**	P	**P**	**19 42 57.6**	**-0.1**
BBJI	**Bungbulang**	**16.46**	**266**	P	**P**	**19 42 56.9**	**-0.9**
BBJI				IAmb	IAmb	19 42 57.1	
	comp=Z,14nm,0.8s						
WRA	**Warramunga Arr**	**16.48**	**144**	P	**P**	**19 42 58.1**	**+0.4**
	comp=Z,1.4nm,0.3s,baz=328,slow=8.5,SNR=48						
WRA	**Warramunga Arr**	**16.48**	**144**	P	**P**	**19 42 57.4**	**-0.2**
WR8	**Warramunga Arr**	**16.58**	**144**	P	**P**	**19 42 59.2**	**+0.6**
WR8				IAmb	IAmb	19 43 00.0	
	comp=Z,8.3nm,0.7s						
AS31	**Alice Springs**	**19.32**	**152**	P	**P**	**19 43 24.4**	**+0.8**
ASAR	**Alice Springs**	**19.32**	**152**	P	**P**	**19 43 23.9**	**+0.4**
	comp=Z,1.1nm,0.3s,baz=327,slow=8.9,SNR=30						
ASAR	**Alice Springs**	**19.32**	**152**	P	**P**	**19 43 24.4**	**+0.8**
FORT	**Forrest**	**24.28**	**172**	P	**P**	**19 44 08.0**	**+0.3**
FORT				IAmb	IAmb	19 44 09.2	
	comp=Z,4.0nm,0.6s						
INKA	**Innaminka**	**26.20**	**145**	P	**P**	**19 44 24.8**	**+0.2**
INKA				IAmb	IAmb	19 44 54.1	
	comp=Z,3.0nm,0.8s						
BBOO	**Buckleboo**	**28.27**	**159**	P	**P**	**19 44 43.3**	**+0.6**
BBOO				IAmb	IAmb	19 45 05.4	
	comp=Z,4.3nm,0.9s						
STKA	**Stephens Creek**	**29.89**	**149**	P	**P**	**19 44 57.4**	**+0.6**
	comp=Z,4.6nm,0.6s,baz=340,slow=8.3,SNR=21						
	comp=Z,4.6nm,0.6s						
STKA	**Stephens Creek**	**29.89**	**149**	P	**P**	**19 44 57.3**	**+0.6**
CAN	**Canberra**	**36.52**	**145**	P	**P**	**19 45 50.9**	**-1.5**
CAN				IAmb	IAmb	19 45 58.7	
	comp=Z,9.9nm,1.0s						
SONM	**Songino Array**	**56.48**	**346**	P	**P**	**19 48 26.2**	**+4.0**
	comp=Z,0.4nm,0.7s,baz=159,slow=4.3,SNR=1.3						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**64.89**	**330**	P	**P**	**19 49 16.8**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=142,slow=7.3,SNR=1.1						
	comp=Z,0.3nm,0.5s						
KIV	**Kislovodsk**	**88.50**	**314**	P	**P**	**19 51 24.2**	**-1.6**
P18K	**Big Mountain,**	**90.88**	**30**	P	**P**	**19 51 33.6**	**-2.8**
P18K				IAmb	IAmb	19 52 03.0	
	comp=Z,0.9nm,0.7s						
SPU	**Mount Spurr**	**92.75**	**29**	P	**P**	**19 51 43.8**	**-1.2**

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*IDC **04** 19:49:20.8±3.9, 36.°30N×70.°99E, h198km±34km, mb3.2/11, mbtmp3.8/16, Error ellipse: s-maj=28.1km s-min=17.5km az=32.0*
*NNC **04** 19:49:27.3±3.0, 36.°90N×70.°73E, h198km±34km, mb2.7, mpv3.8, Error ellipse: s-maj=27.3km s-min=17.7km az=10.0*
ISC 04 19:49:21.2±0.7**, 36.°49N**±0.°06×**70.°82E**±0.°08**, h188**km**, n33,** σ**2.s24**/46**, mb3.2**/9**, 3C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRNI	**Srinagar**	**4.07**	**126**	*e*S	**Sn**	**19 51 11.4**	**-1.0**
ALCI	**Alchi Leh**	**5.67**	**112**	*e*P	**Pn**	**19 50 47.3**	**+2.9**
ALCI				*e*S	**Sn**	**19 51 49.9**	**0.0**
ALCI				IAML		19 51 52.1	
	comp=N,70nm,0.6s						
ALCI				IAML		19 51 52.2	
	comp=E,87nm,0.3s						
TSSA	**Tissa**	**5.71**	**128**	*e*P	**Pn**	**19 50 48.2**	**+3.6**
TSSA				*e*S	**Sn**	**19 51 50.2**	**-0.1**
TSSA				IAML		19 51 54.2	
	comp=N,80nm,0.2s						
TSSA				IAML		19 51 54.4	
	comp=E,97nm,0.2s						
THN	**Thein Dam**	**5.74**	**133**	*e*P	**Pn**	**19 50 48.9**	**+3.9**
THN				*e*S	**Sn**	**19 51 52.6**	**+1.7**
THN				IAML		19 51 53.8	
	comp=E,122nm,0.4s						
THN				IAML		19 51 56.7	
	comp=N,80nm,0.4s						
DHRM	**DHARAMSHALA**	**6.20**	**131**	*e*P	**Pn**	**19 50 55.0**	**+3.9**
DHRM				*e*S	**Sn**	**19 52 03.0**	**+1.1**
DHRM				IAML		19 52 05.5	
	comp=E,89nm,0.7s						
DHRM				IAML		19 52 05.7	
	comp=N,76nm,0.5s						
KK31	**Karatay Array**	**6.61**	**358**	P	**Pn**	**19 50 57.7**	**+1.5**
	comp=N,3.2nm,0.3s,baz=185,slow=12,SNR=50						
KK31				⇑S	**Sn**	**19 52 08.3**	**-3.1**
	comp=N,11nm,0.5s,baz=181,slow=22,SNR=8.4						
AAK	**Ala-Archa**	**6.76**	**24**	P	**Pn**	**19 50 59.7**	**+1.4**
	comp=N,10nm,0.3s,baz=175,slow=5.0,SNR=67						
AAK				S	**Sn**	**19 52 13.1**	**-2.0**
	comp=N,12nm,0.6s,baz=337,slow=22,SNR=12						
AAK	**Ala-Archa**	**6.76**	**24**	⇑P	**Pn**	**19 50 59.9**	**+1.5**
	comp=N,2.5nm,0.4s						
AAK				⇓S	**Sn**	**19 52 14.5**	**-0.7**
	comp=N,17nm,0.8s						
BHK	**Bhakra**	**6.87**	**136**	IAML		19 52 19.6	
	comp=E,50nm,0.3s						
BHK				IAML		19 52 20.1	
	comp=N,43nm,0.5s						
BHK				*e*S	**Sn**	**19 52 21.7**	**+4.2**
SMLA	**Simla**	**7.51**	**134**	*e*P	**Pn**	**19 51 11.1**	**+3.0**
SMLA				*e*S	**Sn**	**19 52 32.0**	**-0.7**
SMLA				IAML		19 52 34.0	
	comp=E,50nm,0.6s						
SMLA				IAML		19 52 34.2	
	comp=N,54nm,0.5s						
KLP	**Kalpa**	**7.90**	**127**	*e*P	**Pn**	**19 51 16.1**	**+2.6**
KLP				*e*S	**Sn**	**19 52 38.0**	**-4.5**
KLP				IAML		19 52 42.1	
	comp=N,43nm,0.5s						
KLP				IAML		19 52 49.1	
	comp=E,43nm,0.7s						
JOSI	**Joshimath**	**9.39**	**127**	*e*P	**Pn**	**19 51 34.8**	**+2.0**
JOSI				*e*S	**Sn**	**19 53 15.8**	**-2.0**
JOSI				IAML		19 53 21.5	
	comp=N,28nm,0.9s						
JOSI				IAML		19 53 22.5	
	comp=E,21nm,0.5s						
KUDL	**Kundal**	**9.60**	**148**	*e*P	**Pn**	**19 51 37.2**	**+1.8**
KUDL				*e*S	**Sn**	**19 53 18.6**	**-4.0**
KUDL				IAML		19 53 20.7	
	comp=E,12nm,1.0s						
KUDL				IAML		19 53 22.6	
	comp=N,6.5nm,0.6s						
PTH	**Pithoragarh**	**10.46**	**128**	*e*P	**Pn**	**19 51 47.9**	**+1.2**
PTH				*e*S	**Sn**	**19 53 39.6**	**-3.7**
LGTI	**Lohaghat**	**10.51**	**130**	*e*P	**Pn**	**19 51 48.4**	**+1.0**
LGTI				*e*S	**Sn**	**19 53 40.5**	**-4.2**
LGTI				IAML		19 53 43.9	
	comp=N,4.9nm,0.5s						
LGTI				IAML		19 53 45.2	
	comp=E,6.0nm,0.7s						
MK31	**Makanchi Array**	**13.39**	**36**	P	**Pn**	**19 52 24.9**	**+1.1**
	comp=E,0.7nm,0.7s,baz=222,slow=16,SNR=4.8						
MKAR	**Makanchi Array**	**13.39**	**36**	P	**Pn**	**19 52 24.4**	**+0.6**
	comp=E,0.3nm,0.5s,baz=223,slow=17,SNR=3.2						
AB31	**Akbulak array**	**15.03**	**332**	P	**P**	**19 52 44.5**	**-0.4**
	comp=E,0.8nm,0.4s,baz=144,slow=12,SNR=28						
KURBB	**Kurchatov Arra**	**15.18**	**19**	P	**Pn**	**19 52 45.1**	**-0.8**
	comp=E,0.2nm,0.4s,baz=212,slow=11,SNR=4.6						
BVA0	**Borovoye Array**	**16.54**	**359**	⇑P	**Pn**	**19 53 03.9**	**+1.6**
	comp=E,0.6nm,0.6s,baz=160,slow=11,SNR=14						
BVAR	**Borovoye Array**	**16.54**	**359**	P	**Pn**	**19 53 03.4**	**+1.1**
	comp=E,1.2nm,0.5s,baz=161,slow=10,SNR=14						
AKTO	**Aktyubinsk**	**16.72**	**330**	P	**Pn**	**19 53 05.9**	**+1.4**
	comp=E,2.4nm,0.5s,baz=142,slow=8.7,SNR=8.5						
ZALV	**Zalesovo Beam**	**19.99**	**25**	P	**P**	**19 53 38.6**	**-0.4**
	comp=E,0.7nm,0.3s,baz=225,slow=11,SNR=4.8						
	comp=E,0.7nm,0.3s						
FINES	**FINESS Array B**	**37.41**	**326**	P	**P**	**19 56 16.4**	**+0.7**
	comp=E,0.9nm,0.4s,baz=117,slow=10,SNR=7.3						
	comp=E,0.9nm,0.4s						
ARCES	**ARCESS Array B**	**41.10**	**338**	P	**P**	**19 56 46.9**	**+0.7**
	comp=E,3.5nm,0.9s,baz=118,slow=8.0,SNR=8.0						
	comp=E,3.5nm,0.9s						
HFS	**Hagfors**	**42.99**	**322**	P	**P**	**19 57 02.1**	**+0.6**
	comp=E,0.8nm,0.5s,baz=106,slow=11,SNR=6.1						
	comp=E,0.8nm,0.5s						
NOA	**NORSAR Array B**	**44.30**	**323**	P	**P**	**19 57 12.2**	**+0.2**
	comp=E,0.6nm,0.7s,baz=97,slow=7.9,SNR=2.2						
	comp=E,0.6nm,0.7s						
SPITS	**Spitsbergen Ar**	**47.47**	**347**	P	**P**	**19 57 37.3**	**+0.8**
	comp=E,4.2nm,1.0s,baz=74,slow=11,SNR=1.2						
	comp=E,4.2nm,1.0s						
TORD	**Torodi Ar. Bea**	**65.57**	**269**	P	**P**	**19 59 44.1**	**-1.0**
	comp=E,0.5nm,0.5s,baz=50,slow=4.7,SNR=7.9						
	comp=E,0.5nm,0.5s						
ILAR	**Eielson Array**	**74.83**	**16**	P	**P**	**20 00 38.9**	**-1.5**
	comp=E,0.3nm,0.7s,baz=331,slow=5.6,SNR=3.0						
	comp=E,0.3nm,0.7s						
YKA	**Yellowknife Ar**	**81.26**	**3**	P	**P**	**20 01 15.6**	**-0.2**
	comp=E,0.2nm,0.5s,baz=350,slow=6.1,SNR=4.1						
	comp=E,0.2nm,0.5s						
WRA	**Warramunga Arr**	**82.11**	**122**	P	**P**	**20 01 19.1**	**-1.7**
	comp=E,0.2nm,0.5s,baz=326,slow=5.1,SNR=6.4						
	comp=E,0.2nm,0.5s						
ASAR	**Alice Springs**	**84.37**	**125**	P	**P**	**20 01 29.5**	**-2.9**
	comp=E,0.2nm,0.5s,baz=309,slow=4.7,SNR=5.8						
	comp=E,0.2nm,0.5s						

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*IDC **04** 20:07:14.8±3.1, 6.°78S×146.°96E, h99km±50km, mb3.2/3, mbtmp3.5/5, MS3.5/2, Error ellipse: s-maj=58.1km s-min=17.3km az=118.0*
ISC 04 20:07:10.0±1.8**, 6.°5S**±0.°1×**146.°8E**±0.°2**, h49**km**, n8,** σ**0.s97**/7**, mb3.2**/3**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.93**	**173**	P	**Pn**	**20 07 54.5**	**+0.4**
	9.3nm,0.4s,baz=359,slow=12,SNR=9.8						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG				S	Sn	20 08 27.8	-0.3
	7.9nm,0.3s,baz=0.0,slow=20,SNR=6.5						
WRA	Warramunga Arr	18.04	221	P	Pn	20 11 17.3	0.0
	0.5nm,0.6s,baz=52,slow=11,SNR=8.2						
WRA				S	Sn	20 14 39.0	+1.2
	0.3nm,0.6s,baz=35,slow=23,SNR=1.8						
GUMO	Guam	20.03	355	P	Pn	20 11 45.1	+4.0
	51nm,0.4s,baz=190,slow=11,SNR=4.9						
ASAR	Alice Springs	21.11	215	P	P	20 11 50.2	-0.5
	0.8nm,0.7s,baz=54,slow=8.7,SNR=14						
	0.8nm,0.7s						
FITZ	Fitzroy Crossi	23.64	239	P	P	20 12 15.8	-1.3
	2.9nm,0.5s,baz=56,slow=9.3,SNR=7.5						
	2.9nm,0.5s						
MJAR	Matsushiro Arr	43.55	350	LR	LR	20 31 19.7	
	comp=Z,60nm,18.9s,baz=138,slow=33						
LZDM	Lanzhou Array	58.46	319	LR	LR	20 42 06.5	
	comp=Z,37nm,20.1s,baz=265,slow=36						
MKAR	Makanchi Array	77.74	321	P	P	20 19 02.4	+0.5
	0.2nm,0.8s,baz=101,slow=4.6,SNR=1.7						
	0.2nm,0.8s						

IDC 04 20:08:19.3±6.1**, 1°.58S**×**148°.99E, h0**km**, mb3.9**/4**, mbtmp3.9**/4**, MS2.9**/2**, Error ellipse: s-maj=181.6km s-min=36.1km az=100.0, Admiralty Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	18.59	188	LR	LR	20 19 05.5	
	comp=Z,40nm,20.1s,baz=44,slow=35						
WRA	Warramunga Arr	23.20	217	P	P	20 13 26.8	-1.3
	3.5nm,1.0s,baz=40,slow=9.8,SNR=9.8						
	3.5nm,1.0s						
ASAR	Alice Springs	26.38	212	P	P	20 13 58.0	+0.4
	2.1nm,0.9s,baz=42,slow=7.3,SNR=6.8						
	2.1nm,0.9s						
FITZ	Fitzroy Crossi	28.20	233	P	P	20 14 14.9	+1.0
	2.8nm,0.8s,baz=53,slow=5.1,SNR=4.2						
	2.8nm,0.8s						
MA2	Magadan	60.99	1	LR	LR	20 47 04.5	
	comp=Z,8.6nm,18.6s,baz=176,slow=38						
MKAR	Makanchi Array	75.42	319	P	P	20 20 05.1	-0.1
	0.2nm,0.6s,baz=108,slow=5.4,SNR=2.3						
	0.2nm,0.6s						

*NEIC **04** 20:14:04.1±1.9, 50°.96N±0°.04×179°.77W±0°.04, h10km±1km, mb4.1/49, ML4.2/12, ML4.0(AEIC), Error ellipse: s-maj=7.3km s-min=4.0km az=174.0*

*AEIC **04** 20:14:05.5±1.9, 51°.03N±0°.05×179°.81W±0°.05, h13km±4km, Error ellipse: s-maj=7.7km s-min=4.6km az=176.0*

*IDC **04** 20:14:11.2±3.0, 51°.20N×179°.74W, h70km±24km, mb3.6/19, mbtmp3.9/21, MS3.3/12, Error ellipse: s-maj=21.9km s-min=13.5km az=166.0*

ISC 04 20:14:04.4±1.7**, 51°.04N**±0°.07×**179°.81W**±0°.02**, h15**km±10km**, n124,** σ**1s.58**/107**, mb4.0**/35**, MS3.2**/10**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	Amchitka	0.66	302		Sb	20 14 28.0	+1.5
AMKA	Amchitka	0.66	302		Pb	20 14 17.7	+0.1
GAKI	Gareloi-Kavalg	0.81	50		Pb	20 14 20.7	+0.5
GAKI					Sb	20 14 31.9	+0.9
GAKI					Sn	20 14 33.3	+0.2
CESW	Semis' Southwe	0.95	336		Pn	20 14 23.5	+0.2
GASW	Gareloi Southw	0.95	38		Pb	20 14 23.1	+0.4
GASW					Pn	20 14 23.3	+0.1
GASW					Sb	20 14 36.2	+1.1
CERB	Semis' Cerberu	0.96	339		Pn	20 14 24.1	+0.7
CERB					Sb	20 14 37.2	+1.8
GALAA	Gareloi Lava P	0.97	41		Pn	20 14 23.7	+0.2
GALAA					Sb	20 14 37.2	+1.5
GAEA	Gareloi East	1.00	41		Pn	20 14 24.2	+0.3
GAEA					Sn	20 14 39.2	+1.5
GANO	Gareloi North	1.01	38		Pg	20 14 23.3	-0.6
GANE	Gareloi Northe	1.02	39		Pb	20 14 24.0	+0.3
CETU	Semis' Tuman	1.03	335		Pn	20 14 24.6	+0.2
LSSE	Little Sitkin	1.36	312		Pg	20 14 29.6	-0.9
TASE	Tanaga Southea	1.37	53		Pn	20 14 29.5	+0.5
TASE					Sn	20 14 48.7	+1.9
LSPA	Little Sitkin	1.37	313		Pg	20 14 29.8	-0.9
LSPA					Sn	20 14 49.0	+2.2
TANO	Tanaga North	1.38	49		Pb	20 14 29.8	0.0
TANO					Sn	20 14 49.0	+2.1
TAFL	Tanaga Flats	1.40	58		Pb	20 14 30.3	+0.1
TAFL					Sn	20 14 49.3	+1.8
LSNW	Little Sitkin	1.40	312		Pg	20 14 30.0	-1.5
KIMD	Kanaga Island	1.77	65		Sb	20 14 59.0	+0.5
KIKV	Kanaga Island	1.85	62		Sb	20 15 01.5	+0.5
KIWB	Kanaga Island	1.85	63		Sn	20 15 01.1	+2.3
KIWB	Kanaga Island	1.85	63		Pn	20 14 36.6	+1.0
KIWB				IAML		20 15 06.7	
	comp=N,2μm,0.8s						
ADK	Adak	2.13	65		Sn	20 15 07.8	+2.3
ADK	Adak	2.13	65		Pn	20 14 40.0	+0.6
ADK				IAML		20 15 16.8	
	comp=N,2μm,0.6s						
ADAG	Mount Adagdak	2.21	63		Pn	20 14 42.3	+1.7
ETKA	Kagalaska Isla	2.28	67		Sn	20 15 11.3	+1.9
GSCK	Great Sitkin C	2.48	65		Pn	20 14 45.9	+1.7
GSCK					Sn	20 15 17.0	+2.8
GSSP	Great Sitkin S	2.50	64		Sn	20 15 18.6	+3.8
GSTD	Great Sitkin T	2.50	65		Sn	20 15 17.9	+3.0
GSTR	Great Sitkin T	2.57	64		Pn	20 14 46.8	+1.3
GSTR				IAML		20 15 27.7	
	comp=E,1μm,0.6s						
KOWE	Korovin West	3.71	67		Pn	20 15 03.6	+2.5
KOFP	Korovin Flat P	3.77	69		Pn	20 15 04.2	+2.2
SHEM	Shemya Is, Ala	4.14	297	P	Pn	20 15 10.6	+3.7
	comp=E,66nm,0.4s,baz=102,slow=4.7,SNR=15						
SHEM				S	Sn	20 15 59.1	+4.0
	comp=E,127nm,0.7s,baz=320,slow=22,SNR=7.3						
SHEM	Shemya Is, Ala	4.14	297	IAML		20 16 14.0	
	comp=E,133nm,0.5s						
SMY	Shemya	4.14	297		Pn	20 15 08.9	+1.9
SMY				IAML		20 16 12.6	
	comp=E,248nm,0.9s						
SMY				IAML		20 16 17.6	
	comp=N,236nm,0.8s						
CLCO	Concord Point,	6.48	70		Pn	20 15 42.4	+3.2
NIKH	Nikolski High	7.04	70		Pn	20 15 45.7	-1.0
SPIA	Saint Paul Isl	8.32	39		Pn	20 16 06.6	+2.2
UNV	Unalaska Valle	8.60	66		Pn	20 16 10.7	+2.5
GAMB	Gambell	13.48	16		Pn	20 17 16.4	+1.6
PETK	Petropavlovsk-	13.98	287	LR	LR	20 22 31.8	
	comp=N,81nm,21.3s,baz=107,slow=36						
N15K	Kwethluk River	14.36	43		Pn	20 17 29.3	+2.4
K15K	Wolf Creek Mou	15.04	34		Pn	20 17 36.9	+0.8
K15K				IAmb	IAmb	20 17 47.0	
	comp=Z,13nm,1.1s						
N17K	Nushagak Hills	15.80	44		Pn	20 17 48.3	+2.2
N17K				IAmb	IAmb	20 17 56.2	
	comp=Z,22nm,1.4s						
K17K	Iditarod	16.48	37		Pn	20 17 56.2	+1.4
G16K	Koyuk River	16.98	25		Pn	20 18 01.2	+0.1
N19K	Bonanza Creek	17.12	45		Pn	20 18 02.9	-0.1
N19K				IAmb	IAmb	20 18 11.7	
	comp=Z,24nm,1.1s						
KDAK	Kodiak Island	17.14	56	P	Pn	20 18 01.0	-2.2
	comp=Z,4.8nm,0.4s,baz=281,slow=10,SNR=16						
KDAK				S	Sn	20 21 08.4	-4.8
	comp=Z,11nm,1.0s,baz=350,slow=18,SNR=1.2						
J19K	Poorman	18.20	35	P	Pn	20 18 15.6	-0.7
J19K				IAmb	IAmb	20 18 33.9	
	comp=Z,14nm,1.4s						
STLK	Strandline Lak	18.58	45	IAmb	IAmb	20 18 28.6	
	comp=Z,10nm,1.0s						
C16K	Lisburne Hills	18.68	17		Pn	20 18 23.1	+1.1
SKT	Skwentna	18.89	44		Pn	20 18 25.2	+0.6
SKT				IAmb	IAmb	20 18 30.1	
	comp=Z,15nm,0.9s						
G19K	Purcell Mounta	19.04	29		P	20 18 26.4	+0.8
SEY	Seymchan	19.08	319	P	Pn	20 18 27.2	+0.3
	comp=Z,0.2nm,0.3s,baz=126,slow=19,SNR=3.9						
SEY				LR	LR	20 25 27.2	
	comp=Z,55nm,18.9s,baz=124,slow=36						
F19K	Shaleruckik Mo	19.31	27	P	P	20 18 28.5	0.0
L22K	Petersville	19.43	43	P	P	20 18 30.8	+0.8
L22K				IAmb	IAmb	20 18 41.7	
	comp=Z,16nm,1.2s						
KTH	Kantishna Hill	19.79	40	P	P	20 18 34.9	+1.0
IMAR	Indian Mountai	20.00	32	P	P	20 18 36.7	+0.6
BPAW	Bear Paw Mtn.	20.01	38		P	20 18 36.7	+0.4
H21K	Melozitna Rive	20.13	33	IAmb	IAmb	20 18 46.0	
	comp=Z,8.0nm,0.9s						
G21K	Allakaket	20.40	31	IAmb	IAmb	20 18 45.6	
	comp=Z,6.3nm,0.8s						
C19K	Lookout Ridge	20.55	21	IAmb	IAmb	20 19 03.7	
	comp=Z,10nm,1.3s						
F21K	Alatna River	20.83	29	IAmb	IAmb	20 18 51.1	
	comp=Z,4.1nm,0.7s						
NEA2	Nenana	20.98	38	P	P	20 18 49.0	+2.2
NEA2				IAmb	IAmb	20 18 54.9	
	comp=Z,9.8nm,0.9s						
DHY	Denali Highway	21.08	43		P	20 18 49.1	+1.1
DHY				IAmb	IAmb	20 18 51.2	
	comp=Z,11nm,0.9s						
E21K	Killik River	21.47	26	IAmb	IAmb	20 18 58.4	
	comp=Z,4.9nm,0.9s						
B20K	Meade River	21.79	21	IAmb	IAmb	20 19 02.0	
	comp=Z,12nm,1.4s						
E22K	Anaktuvuk Pass	21.90	28		P	20 18 59.2	+2.6
E22K				IAmb	IAmb	20 19 00.9	
	comp=Z,8.1nm,1.4s						
ILAR	Eielson Array	21.91	39	P	P	20 18 56.5	-0.1
	comp=Z,0.6nm,0.7s,baz=232,slow=8.6,SNR=7.7						
ILAR				LR	LR	20 27 10.0	
	comp=Z,90nm,18.2s,baz=292,slow=36						
	comp=Z,0.6nm,0.7s						
B21K	Ikpikpuk River	22.11	23	IAmb	IAmb	20 19 01.3	
	comp=Z,4.6nm,0.8s						
D22K	Ayikyak River	22.12	26	IAmb	IAmb	20 19 05.4	
	comp=Z,9.5nm,0.9s						
G24K	Hadweenzic Riv	22.53	34	IAmb	IAmb	20 19 10.7	
	comp=Z,5.0nm,0.8s						
SCRK	Sand Creek	22.81	42	P	P	20 19 05.2	-1.3
SCRK				IAmb	IAmb	20 19 10.2	
	comp=Z,5.5nm,1.1s						
E25K	Arctic Village	23.86	31		P	20 19 16.3	-0.4
I28M	Miner Creek	24.91	39	IAmb	IAmb	20 19 30.9	
	comp=Z,3.1nm,0.8s						
M29M	Somme Creek	24.91	47	P	P	20 19 27.1	+0.5
M29M				IAmb	IAmb	20 19 37.4	
	comp=Z,8.2nm,1.2s						
F28M	Old Crow	25.61	35	IAmb	IAmb	20 19 38.6	
	comp=Z,3.6nm,1.1s						
DLBC	Dease Lake	29.08	56	LR	LR	20 31 48.3	
	comp=Z,57nm,18.9s,baz=160,slow=36						
YAK	Yakutsk	29.17	312	LR	LR	20 30 48.1	
	comp=Z,32nm,21.9s,baz=104,slow=34						
KLR	Kul'dur	30.66	286	LR	LR	20 33 20.6	
	comp=Z,40nm,19.4s,baz=106,slow=38						
H11N2	WAKE ISLAND Hy	32.96	203	T	T	20 56 05.2	
	baz=17,slow=75						
H11N3	WAKE ISLAND Hy	32.97	203	T	T	20 56 01.9	
	baz=17,slow=75						
H11N1	WAKE ISLAND Hy	32.98	203	T	T	20 56 07.7	
	baz=17,slow=75						
H11S1	WAKE ISLAND Hy	34.18	203	T	T	20 57 37.0	
	baz=18,slow=76						
H11S2	WAKE ISLAND Hy	34.20	203	T	T	20 57 40.3	
	baz=18,slow=76						
H11S3	WAKE ISLAND Hy	34.20	203	T	T	20 57 41.9	
	baz=18,slow=76						
YKA	Yellowknife Ar	35.93	46	P	P	20 21 02.5	-1.2
	comp=Z,0.4nm,0.6s,baz=286,slow=9.0,SNR=8.4						
	comp=Z,0.4nm,0.6s						
NEW	Newport	39.60	69	LR	LR	20 34 57.5	
	comp=Z,35nm,21.1s,baz=114,slow=32						
JNU	Nakatsue	39.90	263	LR	LR	20 36 33.6	
	comp=Z,22nm,20.7s,baz=42,slow=34						
TLY	Talaya	45.71	302	LR	LR	20 42 06.3	
	comp=Z,30nm,18.2s,baz=50,slow=37						
SONM	Songino Array	46.23	296	P	P	20 22 29.8	+1.0
	comp=Z,0.7nm,0.7s,baz=64,slow=6.2,SNR=5.9						
SONM				PcP	PcP	20 24 04.3	+0.1
	comp=Z,0.3nm,0.6s,baz=80,slow=2.8,SNR=3.6						
	comp=Z,0.7nm,0.7s						
SONM	Songino Array	46.23	296	IAmb	IAmb	20 22 48.4	
	comp=Z,1.5nm,1.2s						
PDAR	Pinedale Array	47.02	71	P	P	20 22 35.3	+0.1
	comp=Z,1.8nm,0.8s,baz=305,slow=2.9,SNR=11						
	comp=Z,1.8nm,0.8s						
PDAR	Pinedale Array	47.02	71		P	20 22 35.7	+0.5
HHC	Hu-ho-hao-te	47.17	286	eP	P	20 22 36.5	+0.3
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ULM	Lac du Bonnet	50.40	56	LR	LR	20 44 40.8	
	comp=Z,54nm,18.5s,baz=11,slow=36						
SPITS	Spitsbergen Ar	50.67	356	P	P	20 23 01.6	-0.8
	comp=Z,8.5nm,1.0s,baz=39,slow=6.8,SNR=12						
	comp=Z,8.5nm,1.0s						
GTA2	Gaotai	55.09	291	eP	P	20 23 36.1	+0.4
GTA2				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ARCES	ARCESS Array B	58.32	350	P	P	20 23 54.5	-3.6
	comp=Z,2.8nm,0.8s,baz=14,slow=7.2,SNR=1.9						
KURK	Kurchatov	58.80	313		PcP	20 24 51.1	0.0
KURK	Kurchatov	58.80	313	P	P	20 24 00.9	-0.7
KURK	Kurchatov	58.80	313	IAmb	IAmb	20 24 02.3	
	comp=Z,1.7nm,0.7s						
KURBB	Kurchatov Arra	58.90	313	P	P	20 24 00.9	-1.5
	comp=Z,1.7nm,0.6s,baz=297,slow=8.4,SNR=4.3						
KURBB				PcP	PcP	20 24 51.1	-0.4
	comp=Z,0.5nm,0.2s,baz=54,slow=3.7,SNR=6.0						
	comp=Z,1.7nm,0.6s						
TXAR	Lajitas Array	59.34	80	P	P	20 24 05.6	-0.2
	comp=Z,0.2nm,0.4s,baz=318,slow=6.8,SNR=1.9						
	comp=Z,0.2nm,0.4s						
MKAR	Makanchi Array	59.75	308	P	P	20 24 08.0	-0.3
	comp=Z,1.4nm,0.5s,baz=50,slow=6.1,SNR=28						
	comp=Z,1.4nm,0.5s						
MKAR	Makanchi Array	59.75	308		P	20 24 08.0	-0.3
BVAR	Borovoye Array	60.74	319	P	P	20 24 13.8	-1.2
	comp=Z,0.6nm,0.3s,baz=57,slow=7.4,SNR=7.5						
BVAR				LR	LR	20 53 24.7	
	comp=Z,27nm,18.4s,baz=44,slow=39						
	comp=Z,0.6nm,0.3s						
PZH	PanZhiHua	62.77	279	P	P	20 24 31.4	+2.2
FINES	FINESS Array B	65.97	347	P	P	20 24 47.4	-2.0
	comp=Z,3.4nm,0.9s,baz=35,slow=7.0,SNR=3.4						
	comp=Z,3.4nm,0.9s						
AAK	Ala-Archa	66.59	309	LR	LR	20 54 38.1	
	comp=Z,37nm,18.6s,baz=62,slow=36						
NB2	NORSAR Subarra	67.93	354	P	P	20 25 01.2	-0.8
	comp=Z,0.6nm,0.5s,baz=8.6,slow=6.5						
NOA	NORSAR Array B	67.93	354	P	P	20 25 00.9	-1.1
	comp=Z,0.5nm,0.5s,baz=12,slow=6.9,SNR=7.6						
	comp=Z,0.5nm,0.5s						
HFS	Hagfors	68.65	353	P	P	20 25 05.0	-1.4
	comp=Z,0.8nm,0.4s,baz=44,slow=4.5,SNR=7.3						
	comp=Z,0.8nm,0.4s						
KSH2	Kashi	68.68	306	P	P	20 25 08.4	+1.2
KSH2				pmax	pmax		
	comp=Z,3.0nm,1.6s						
CMAR	Chiang Mai Arr	70.42	275	P	P	20 25 18.2	+0.2
	comp=Z,0.4nm,0.6s,baz=29,slow=7.4,SNR=6.2						
	comp=Z,0.4nm,0.6s						
EKA	Eskdalemuir Ar	73.96	2	P	P	20 25 37.9	-0.7
	comp=Z,0.9nm,0.7s,baz=357,slow=5.3,SNR=6.0						
	comp=Z,0.9nm,0.7s						
AKASG	Malin Array Be	75.67	341	P	P	20 25 47.1	-1.5
	comp=Z,0.4nm,0.3s,baz=20,slow=6.5,SNR=3.6						
	comp=Z,0.4nm,0.3s						
GERES	GERESS Array B	79.83	351	P	P	20 26 11.1	-0.8
	comp=Z,0.3nm,0.5s,baz=271,slow=26,SNR=2.4						
	comp=Z,0.3nm,0.5s						
WRA	Warramunga Arr	81.33	223	P	P	20 26 19.9	-0.2
	comp=Z,0.3nm,0.5s,baz=31,slow=5.9,SNR=2.9						
	comp=Z,0.3nm,0.5s						
FITZ	Fitzroy Crossi	83.75	231	P	P	20 26 32.1	-0.6
	comp=Z,3.8nm,0.9s,baz=136,slow=5.2,SNR=4.1						
	comp=Z,3.8nm,0.9s						
ASAR	Alice Springs	84.81	222	P	P	20 26 38.5	+0.4
	comp=Z,0.9nm,0.8s,baz=30,slow=4.4,SNR=6.6						
	comp=Z,0.9nm,0.8s						
H03N2	Juan Fernandez	121.66	105	T	T	22 46 12.3	
	baz=317,slow=77						
H03N1	Juan Fernandez	121.68	105	T	T	22 46 12.3	
	baz=317,slow=77						
H03N3	Juan Fernandez	121.68	105	T	T	22 46 12.3	
	baz=317,slow=77						
BOSA	Boshof	150.73	310	PKPbc	PKPbc	20 33 56.0	+0.1
	comp=Z,1.5nm,1.0s,baz=54,slow=1.7,SNR=5.3						

*MAN **04** 20:16:07.0, 5°.15N×126°.75E, h7km, MS4.1*

*NEIC **04** 20:16:13.7±2.1, 5°.53N±0°.06×126°.5E±0°.1, h40km±5km, mb4.4/26, Error ellipse: s-maj=15.8km s-min=6.9km az=66.0*

*DJA **04** 20:16:13.5±0.6, 5°N±5°×12°7E±°, h10km, M4.5/12, mB4.9/2, mb4.7/8, MLv4.4/12, Mw(mB)4.2/2*

*IDC **04** 20:16:18.1±1.5, 5°.48N×126°.68E, h76km±11km, mb3.8/16, mbtmp4.1/18, MS3.1/6, Error ellipse: s-maj=37.5km s-min=9.3km az=65.0*

ISC 04 20:16:14.6±1.0**, 5°.44N**±0°.05×**126°.50E**±0°.07**, h53**km±9km**, n80,** σ**1s.75**/82**, mb4.3**/30**, MS3.1**/5**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.02	310	*i* P	Pn	20 16 32.1	-0.7
DDMP				*e*S	Sn	20 16 45.4	-0.9
GSPH	General Santos	1.67	293	*i* P	Pn	20 16 39.6	-2.0
GSPH				*i* S	Sn	20 17 01.5	-0.5
DAV	Davao City (W)	1.86	331	P	Pn	20 16 47.1	+3.0
	159nm,0.3s,baz=94,slow=16,SNR=8.1						
DAV				S	Sn	20 17 13.7	+7.2
	361nm,0.6s,baz=198,slow=20,SNR=11						
DAV	Davao City (W)	1.86	331		Pn	20 16 41.9	-2.3
DAV					Sn	20 17 03.9	-2.7
DAV	Davao City (W)	1.86	331	P	Pn	20 16 45.9	+1.7
DMPH	Davao City--Mi	1.91	329	*e*P	Pn	20 16 46.9	+2.1
DMPH				*i* S	Sn	20 17 15.5	+7.8
SGSI	Sangihe	1.99	209	P	Pn	20 16 44.4	-1.5
KCP	Kidapawan	2.10	318	*e*P	Pn	20 16 49.2	+1.8
KCP				*e*S	Sn	20 17 17.4	+5.0
CTBH	Cotabato--PC H	2.85	309	*i* P	Pn	20 17 00.0	+2.3
CGP	Cagayan de Oro	3.49	329	*e*P	Pn	20 17 08.2	+1.7
CGP				*e*S	Sn	20 17 55.6	+9.0
TSSP	Tandag City	3.60	355	*e*P	Pn	20 17 07.3	-0.7
TSSP				*e*S	Sn	20 17 54.6	+5.5
DCPH	Dipolog City	4.42	315	*e*P	Pn	20 17 25.1	+5.9
TNTI	Ternate	4.71	169		Pn	20 17 23.3	+0.1
TNTI	Ternate	4.71	169	P	Pn	20 17 26.7	+3.5
GTOI	Gorontalo	5.90	216	P	Pn	20 17 41.5	+2.0
	0.1nm31nm,0.5s						
MRSI	Marisa	6.70	223	P	Pn	20 17 52.7	+2.2
RCP	Roxas	7.13	329	*e*P	Pn	20 18 00.8	+4.4
TOLI2	Tolitoli	7.14	233		Pn	20 17 56.6	+0.1
LUWI	Luwuk	7.43	210		Pn	20 18 00.3	-0.2
LUWI	Luwuk	7.43	210	P	Pn	20 18 04.1	+3.6
	48nm,0.9s						
SANI	Sanana	7.45	184	P	Pn	20 18 01.3	+0.5
SWI	Sorong	7.86	143	P	Pn	20 18 07.8	+1.4
SIJI	Sorong	7.87	143	P	Pn	20 18 07.0	+0.5
	1.4nm,0.3s,baz=302,slow=22,SNR=1.6						
SIJI				S	Sn	20 19 31.6	-2.7
	3.8nm,0.6s,baz=313,slow=22,SNR=1.4						
SIJI				LR	LR	20 21 16.8	
	comp=Z,100nm,20.5s,baz=0.5,slow=38						
BATI	Baumata	15.79	190	P	P	20 19 56.3	-0.4
	6.5nm,0.5s,baz=299,slow=11,SNR=4.3						
MTN	Manton Dam	18.73	166	P	P	20 20 27.8	-1.3
KNRA	Kununurra	21.10	174		P	20 20 56.0	+1.2
KNRA				IAmb	IAmb	20 21 09.5	
	comp=Z,11nm,0.9s						
FITZ	Fitzroy Crossi	23.40	182	P	P	20 21 20.3	+1.3
	comp=Z,1.5nm,0.4s,baz=281,slow=20,SNR=3.2						
	comp=Z,1.5nm,0.4s						
WB0	Warramunga Arr	26.22	163		P	20 21 46.9	+2.1
WB0				IAmb	IAmb	20 21 56.2	
	comp=Z,7.7nm,0.7s						
WRA	Warramunga Arr	26.37	163	P	P	20 21 48.6	+2.5
	comp=Z,0.9nm,0.6s,baz=342,slow=10,SNR=11						
	comp=Z,0.9nm,0.6s						
WRA	Warramunga Arr	26.37	163	P	P	20 21 46.9	+0.8
WR8	Warramunga Arr	26.43	163	P	P	20 21 49.4	+2.7
WR8				IAmb	IAmb	20 22 10.4	
	comp=Z,7.6nm,0.9s						
PSA00	Pilbara Seismi	27.62	193	P	P	20 21 57.5	+0.3
PSA00	Pilbara Seismi	27.62	193	P	P	20 21 56.2	-1.0
PSA00				IAmb	IAmb	20 22 00.5	
	comp=Z,16nm,1.2s						
AS31	Alice Springs	29.81	166	P	P	20 22 16.7	-0.1
ASAR	Alice Springs	29.81	166	P	P	20 22 18.6	+1.8
	comp=Z,0.3nm,0.6s,baz=349,slow=7.8,SNR=7.6						
ASAR				PcP	PcP	20 25 20.2	+0.9
	comp=Z,0.5nm,0.6s,baz=352,slow=3.0,SNR=4.5						
ASAR				ScP	ScP	20 28 56.3	-0.8
	comp=Z,0.3nm,0.7s,baz=352,slow=2.5,SNR=4.6						
	comp=Z,0.3nm,0.6s						
ASAR	Alice Springs	29.81	166	P	P	20 22 15.8	-1.0
CMAR	Chiang Mai Arr	29.84	298	P	P	20 22 19.1	+2.0
	comp=Z,0.7nm,0.7s,baz=111,slow=7.3,SNR=6.7						
CMAR				LR	LR	20 34 49.4	
	comp=Z,17nm,18.8s,baz=125,slow=37						
	comp=Z,0.7nm,0.7s						
KSRS	Korea Array	31.90	2	LR	LR	20 38 10.6	
	comp=Z,18nm,18.2s,baz=65,slow=41						
FORT	Forrest	36.04	178	P	P	20 23 12.6	+1.6
FORT				IAmb	IAmb	20 23 21.3	
	comp=Z,6.7nm,1.1s						
SHL	Shillong	38.70	305		P	20 23 32.9	-1.0
SHL				IAmb	IAmb	20 23 36.7	
	comp=Z,3.1nm,0.7s						
BBOO	Buckleboo	39.10	167	P	P	20 23 37.1	+0.2
BBOO				IAmb	IAmb	20 23 42.4	
	comp=Z,17nm,1.4s						
STKA	Stephens Creek	39.80	160	P	P	20 23 44.3	+1.7
	comp=Z,1.7nm,0.9s,baz=326,slow=9.4,SNR=3.9						
	comp=Z,1.7nm,0.9s						
STKA	Stephens Creek	39.80	160	P	P	20 23 43.4	+0.7
ASAJ	Asahikawa	41.04	18	LR	LR	20 40 21.9	
	comp=Z,25nm,20.3s,baz=170,slow=35						
JKA	Kamikawa-asahi	41.05	18	P	P	20 23 49.8	-3.0
H11N1	WAKE ISLAND Hy	41.77	66	T	T	21 08 26.8	
	baz=254,slow=76						
H11N2	WAKE ISLAND Hy	41.78	66	T	T	21 08 24.5	
	baz=254,slow=76						
H11N3	WAKE ISLAND Hy	41.78	66	T	T	21 08 26.8	
	baz=254,slow=76						
ULN	Ulaanbaatar	45.44	342	P	P	20 24 27.6	-0.9
SONM	Songino Array	45.62	341	P	P	20 24 32.0	+2.2
	comp=Z,0.8nm,0.9s,baz=153,slow=11,SNR=4.4						
SONM				PcP	PcP	20 26 08.5	+1.1
	comp=Z,0.3nm,0.5s,baz=132,slow=2.1,SNR=3.0						
	comp=Z,0.8nm,0.9s						
MKAR	Makanchi Array	56.03	325	P	P	20 25 48.4	+0.3
	comp=Z,1.2nm,0.6s,baz=118,slow=8.2,SNR=12						
MKAR				PcP	PcP	20 26 47.0	+1.1
	comp=Z,1.3nm,0.7s,baz=116,slow=4.8,SNR=4.6						
MKAR				ScP	ScP	20 30 41.4	+0.7
	comp=Z,0.1nm,0.4s,baz=129,slow=2.0,SNR=5.8						
	comp=Z,1.2nm,0.6s						
MKAR	Makanchi Array	56.03	325	P	P	20 25 48.3	+0.2
MAKZ	Makanchi	56.22	325	P	P	20 25 47.5	-1.9
MAKZ				IAmb	IAmb	20 25 49.9	
	comp=Z,2.1nm,0.6s						
NIL	Nilore	56.71	307	P	P	20 25 50.4	-2.8
ZAA0	Zalesovo Array	58.97	333	P	P	20 26 09.4	+0.9
ZAA0				IAmb	IAmb	20 26 11.3	
	comp=Z,3.8nm,1.1s						
ZALV	Zalesovo Beam	58.97	333	P	P	20 26 09.4	+0.9
	comp=Z,0.7nm,0.4s,baz=124,slow=7.9,SNR=4.4						
ZALV				LR	LR	20 56 24.3	
	comp=Z,20nm,18.6s,baz=296,slow=41						
	comp=Z,0.7nm,0.4s						
ZALV	Zalesovo Beam	58.97	333	P	P	20 26 08.7	+0.1
DRK	Karamyk	59.68	313	P	P	20 26 13.4	-0.7
DRK				IAmb	IAmb	20 26 16.2	
	comp=Z,3.5nm,0.8s						
KURBB	Kurchatov Arra	60.19	327	P	P	20 26 17.7	+0.7
	comp=Z,2.3nm,0.6s,baz=126,slow=6.4,SNR=19						
	comp=Z,2.3nm,0.6s						
KURK	Kurchatov	60.19	327		P	20 26 16.4	-0.6
GAR	Garm	60.61	312		P	20 26 20.0	-0.3
KK31	Karatay Array	61.84	316	P	P	20 26 27.4	-1.0
KK31				IAmb	IAmb	20 27 09.3	
	comp=Z,3.9nm,1.4s						
KKAR	Karatay Array	61.84	316	P	P	20 26 26.8	-1.6
BVAR	Borovoye Array	65.77	327	P	P	20 26 55.1	+1.0
	comp=Z,2.0nm,0.6s,baz=143,slow=8.1,SNR=11						
	comp=Z,2.0nm,0.6s						
BORK	Borovoye	65.82	327		P	20 26 54.8	+0.4
BORK				IAmb	IAmb	20 26 58.2	
	comp=Z,3.1nm,0.7s						
TIXI	Tiksi	66.15	1	P	P	20 26 54.9	-1.2
TIXI				IAmb	IAmb	20 27 37.9	
	comp=Z,3.1nm,1.1s						
NRIK	Noril'sk	68.73	346	P	P	20 27 14.2	+1.8
	comp=Z,2.0nm,0.6s,baz=109,slow=6.7,SNR=4.1						
	comp=Z,2.0nm,0.6s						
AB31	Akbulak array	70.69	320	P	P	20 27 21.9	-3.1
AB31				IAmb	IAmb	20 27 45.0	
	comp=Z,3.7nm,1.4s						
ABKAR	Akbulak array	70.69	320	P	P	20 27 22.1	-2.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ILAR	Eielson Array	83.67	25	P	P	20 28 38.2	+0.9
	comp=Z,0.3nm,0.8s,baz=255,slow=5.5,SNR=4.3						
	comp=Z,0.3nm,0.8s						
ILAR	Eielson Array	83.67	25	P	P	20 28 37.1	-0.3
SPITS	Spitsbergen Ar	88.77	349	P	P	20 29 01.8	-0.4
	comp=Z,8.0nm,1.0s,baz=75,slow=7.8,SNR=1.9						
	comp=Z,8.0nm,1.0s						
ARCES	ARCESS Array B	88.78	340	P	P	20 29 01.9	-0.5
	comp=Z,3.4nm,0.8s,baz=107,slow=6.0,SNR=4.5						
	comp=Z,3.4nm,0.8s						
ARCES	ARCESS Array B	88.78	340	P	P	20 29 01.6	-0.8
FINES	FINESS Array B	90.23	332	P	P	20 29 10.2	+0.9
	comp=Z,2.9nm,0.9s,baz=62,slow=4.5,SNR=4.4						
	comp=Z,2.9nm,0.9s						
FINES	FINESS Array B	90.23	332	P	P	20 29 09.2	0.0
HFS	Hagfors	96.41	332	P	P	20 29 37.7	0.0
	comp=Z,1.3nm,0.8s,baz=46,slow=4.2,SNR=1.5						
	comp=Z,1.3nm,0.8s						
NOA	NORSAR Array B	97.17	334	LR	LR	21 16 35.9	
	comp=Z,20nm,20.7s,baz=280,slow=37						
TORD	Torodi Ar. Bea	122.16	289	PKP	PKiKP	20 35 05.5	+0.8
	comp=Z,0.3nm,0.6s,baz=47,slow=2.8,SNR=4.8						
PLCA	Paso Flores	141.67	159	PKP	PKPdf	20 35 41.9	+1.3
	comp=Z,0.5nm,0.6s,baz=326,slow=3.6,SNR=1.3						

IDC 04 20:26:40.8±441.0, 52°.11S×91°.15E, h0km, Error ellipse: s-maj=326.2km s-min=153.8km az=1.0, South Indian Ocean

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
I03AU	Davis Base, An	17.67	196	I	I	22 09 40.0	
	baz=26,slow=337,SNR=0.6						

NEIC 04 20:31:57.1±1.2, 47°.68N±0°.07×152°.3E±0°.2, h160km±7km, mb4.0/9, Error ellipse: s-maj=18.9km s-min=9.9km az=96.0

IDC 04 20:31:57.5±2.1, 47°.66N×152°.31E, h167km±19km, mb3.3/16, mbtmp3.8/19, Error ellipse: s-maj=21.6km s-min=13.7km az=123.0

ISC 04 20:31:55.6±1.0, 47°.6N±0°.1×152°.3E±0°.2, h150km, n43, σ0s.66/34, mb3.8/23, Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PEA0B	Petropavlovsk-	6.54	30	Pn	Pn	20 33 29.0	-0.4
PETK	Petropavlovsk-	6.54	30	P	Pn	20 33 29.5	+0.1
	2.3nm,0.5s,baz=200,slow=11,SNR=14						
PETK				S	Sn	20 34 43.2	+0.3
	1.8nm,0.8s,baz=147,slow=19,SNR=1.5						
JKA	Kamikawa-asahi	7.57	246		Pn	20 33 45.9	+2.6
ASAJ	Asahikawa	7.57	246	P	Pn	20 33 46.8	+3.5
	3.1nm,0.6s,baz=55,slow=14,SNR=7.2						
SEY	Seymchan	15.39	0	P	P	20 35 26.6	+0.8
	2.9nm,0.6s,baz=171,slow=9.7,SNR=14						
C16K	Lisburne Hills	29.64	31	P	P	20 37 46.0	-0.4
C16K				IAmb	IAmb	20 37 51.1	
	comp=Z,4.1nm,1.5s						
H11N2	WAKE ISLAND Hy	30.23	152	T	T	21 09 37.0	
	baz=340						
H11N1	WAKE ISLAND Hy	30.24	152	T	T	21 09 37.6	
	baz=340						
H11N3	WAKE ISLAND Hy	30.25	152	T	T	21 09 43.4	
	baz=340						
C18K	Utukok River	31.21	31	P	P	20 38 00.1	-0.2
C18K				IAmb	IAmb	20 38 11.2	
	comp=Z,3.3nm,1.4s						
H11S1	WAKE ISLAND Hy	31.31	153	T	T	21 10 55.3	
	baz=341,slow=76						
H11S3	WAKE ISLAND Hy	31.32	153	T	T	21 11 01.6	
	baz=341,slow=76						
H11S2	WAKE ISLAND Hy	31.33	153	T	T	21 10 52.2	
	baz=341,slow=76						
G18K	Tagagawik	31.45	37	P	P	20 38 01.7	-0.7
G18K				IAmb	IAmb	20 38 03.7	
	comp=Z,3.0nm,1.3s						
C19K	Lookout Ridge	31.90	30	P	P	20 38 06.7	+0.3
C19K				IAmb	IAmb	20 38 38.7	
	comp=Z,3.8nm,1.5s						
B20K	Meade River	32.98	29	P	P	20 38 15.8	+0.2
IMAR	Indian Mountai	33.45	37	P	P	20 38 19.6	-0.2
KTH	Kantishna Hill	34.52	41	P	P	20 38 28.8	-0.4
ILAR	Eielson Array	36.27	39	P	P	20 38 43.5	-0.6
	comp=Z,0.4nm,0.8s,baz=266,slow=7.5,SNR=7.2						
	comp=Z,0.4nm,0.8s						
ZALV	Zalesovo Beam	41.65	305	P	P	20 39 28.6	-0.2
	comp=Z,0.6nm,0.4s,baz=41,slow=5.3,SNR=3.7						
	comp=Z,0.6nm,0.4s						
ZALV	Zalesovo Beam	41.65	305	P	P	20 39 28.7	-0.1
MKAR	Makanchi Array	46.04	296	P	P	20 40 04.1	+0.1
	comp=Z,0.2nm,0.3s,baz=69,slow=6.9,SNR=7.5						
	comp=Z,0.2nm,0.3s						
MKAR	Makanchi Array	46.04	296	P	P	20 40 02.6	-1.4
KURK	Kurchatov	46.41	303	P	P	20 40 07.1	+0.3
KURBB	Kurchatov Arra	46.51	303	P	P	20 40 07.3	-0.2
	comp=Z,1.3nm,0.9s,baz=64,slow=8.2,SNR=6.2						
	comp=Z,1.3nm,0.9s						
BVAR	Borovoye Array	49.88	309	P	P	20 40 33.5	+0.2
	comp=Z,0.7nm,0.4s,baz=53,slow=7.4,SNR=7.0						
	comp=Z,0.7nm,0.4s						
CMAR	Chiang Mai Arr	52.00	255	P	P	20 40 49.0	-0.6
	comp=Z,0.3nm,0.4s,baz=40,slow=5.8,SNR=4.6						
	comp=Z,0.3nm,0.4s						
FINES	FINESS Array B	63.04	334	P	P	20 42 05.8	-0.4
	comp=Z,2.6nm,0.6s,baz=32,slow=6.9,SNR=11						
	comp=Z,2.6nm,0.6s						
NOA	NORSAR Array B	67.25	341	P	P	20 42 33.3	-0.1
	comp=Z,0.4nm,0.5s,baz=29,slow=6.6,SNR=4.9						
	comp=Z,0.4nm,0.5s						
HFS	Hagfors	67.47	339	P	P	20 42 34.3	-0.4
	comp=Z,1.4nm,0.4s,baz=64,slow=6.8,SNR=11						
	comp=Z,1.4nm,0.4s						
WRA	Warramunga Arr	69.11	198	P	P	20 42 45.9	+0.6
	comp=Z,0.2nm,0.6s,baz=16,slow=6.7,SNR=1.7						
	comp=Z,0.2nm,0.6s						
WRA	Warramunga Arr	69.11	198	IAmb	IAmb	20 42 52.9	
	comp=Z,0.4nm,1.4s						
KBZ	Khabaz	69.86	313	P	P	20 42 49.9	+0.1
	comp=Z,0.7nm,0.7s,baz=198,slow=9.2,SNR=2.6						
	comp=Z,0.7nm,0.7s						
AKASG	Malin Array Be	70.53	326	P	P	20 42 52.3	-1.4
	comp=Z,1.0nm,0.4s,baz=37,slow=6.4,SNR=3.1						
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	70.53	326	IAmb	IAmb	20 43 08.0	
	comp=Z,5.5nm,1.4s						
ASAR	Alice Springs	72.81	198	P	P	20 43 08.4	+0.8
	comp=Z,0.6nm,0.7s,baz=5.0,slow=5.4,SNR=6.5						
	comp=Z,0.6nm,0.7s						
ASAR	Alice Springs	72.81	198	P	P	20 43 07.5	-0.2
EKA	Eskdalemuir Ar	75.39	346	P	P	20 43 21.9	-0.3
	comp=Z,0.3nm,0.5s,baz=21,slow=3.6,SNR=4.5						
	comp=Z,0.3nm,0.5s						
GERES	GERESS Array B	77.45	333	P	P	20 43 33.7	-0.4
	comp=Z,0.5nm,0.5s,baz=28,slow=6.0,SNR=4.4						
	comp=Z,0.5nm,0.5s						
CONA	Conrad Observa	77.58	332	*e*P	P	20 43 36.0	+1.1
	comp=Z,1.2nm,0.5s						
KBA	Koelnbreinsper	79.13	333	*e*P	P	20 43 43.3	-0.2
	comp=Z,1.9nm,0.5s						
WTTA	Wattenberg	79.48	334	*e*P	P	20 43 46.7	+1.3
	comp=Z,2.2nm,0.4s						
MMAI	Mount Meron Ar	81.82	311	P	P	20 43 59.5	+1.5
	comp=Z,1.1nm,0.5s,baz=24,slow=8.2,SNR=2.2						
	comp=Z,1.1nm,0.5s						

AFAD 04 20:38:16.8, 39°.02N×27°.85E, h11km±2km, MW3.5

ISK 04 20:38:16.6, 39°.03N×27°.84E, h9km, ML3.4/17

THE 04 20:38:17.4, 39°N±2°×2°8E±°, h0km±9km, M3.0/14, MLh3.0/14

ISC 04 20:38:17.1±0.8, 39°.03N±0°.01×27°.86E±0°.02, h14km±6km, n77, σ0s.55/117, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AKHS	Akhisar	0.15	193	P	Pg	20 38 20.7	-0.3
AKHS				S	Sg	20 38 23.6	0.0
GORD	Gordes-Manisa	0.28	116	Pg	Pg	20 38 23.0	0.0
GORD				Sg	Sg	20 38 27.6	+0.7
SOMA	Soma-Manisa	0.28	297	Pg	Pg	20 38 22.6	-0.5
SOMA				Sg	Sg	20 38 27.2	+0.1
GOMA	Golmarmara-Man	0.33	172	Pg	Pg	20 38 23.8	0.0
GOMA				Sg	Sg	20 38 28.9	+0.6
STEP	BALIKESIR_Sava	0.36	342	P	Pg	20 38 24.4	-0.1
STEP				S	Sg	20 38 29.8	+0.2
KTTT	Salihli	0.39	152	P	Pg	20 38 24.9	0.0
KTTT				S	Sg	20 38 30.0	-0.2
CAMT	Merkez	0.51	237	P	Pb	20 38 27.3	-0.6
CAMT				S	Sb	20 38 34.8	-0.4
BALB	Balikesir	0.61	1	Pg	Pb	20 38 29.1	-0.5
BALB				Sg	Sb	20 38 38.1	+0.1
ZEDA	zmir-Bergama	0.61	264	P	Pb	20 38 29.3	-0.3
ZEDA				S	Sb	20 38 37.7	-0.4
DEMI	Demirci	0.67	89	P	Pg	20 38 30.3	+0.1
DEMI				S	Sg	20 38 38.8	-0.3
BKES	Balkesir-Mer	0.70	4	P	Pb	20 38 31.0	-0.2
BKES				S	Sg	20 38 40.2	+0.1
IZMD	zmir-Dikili-	0.73	267	P	Pb	20 38 31.4	-0.3
IZMD				S	Sb	20 38 41.1	-0.4
BALY	Balya	0.73	345	P	Pb	20 38 31.5	-0.2
BALY				S	Sb	20 38 41.6	-0.1
DURS	Dursunbey	0.74	40	P	Pg	20 38 31.3	-0.3
DURS				S	Sb	20 38 41.8	-0.2
DKL	Dikili	0.74	273	Pg	Pb	20 38 31.8	0.0
MANT	Manisa	0.77	134	P	Pg	20 38 31.8	-0.2
MANT				S	Sg	20 38 42.0	-0.1
BUHA	Balikesir, Bur	0.77	308	P	Pb	20 38 31.8	-0.4
BUHA				S	Sb	20 38 42.8	+0.2
ODEM	Odemis-Izmir	0.77	167	Pg	Pg	20 38 32.1	0.0
KULA	Kula-Manisa	0.81	129	Pg	Pg	20 38 32.6	-0.3
DST	Dursunbey	0.82	46	Pg	Pg	20 38 32.7	-0.4
BLKS	Balkesir-Sus	0.85	6	P	Pg	20 38 33.2	-0.4
BLKS				S	Sg	20 38 43.8	-1.0
DUVT	Torbali	0.87	202	P	Pb	20 38 33.9	-0.1
DUVT				S	Sg	20 38 45.0	-0.4
BAGT	Foa	0.87	245	P	Pb	20 38 34.0	0.0
BAGT				S	Sb	20 38 45.2	-0.3
SIMA	Simav-Kutahya	0.88	86	Pg	Pg	20 38 33.9	-0.2
IZMR	zmir-demi	0.90	175	P	Pg	20 38 34.3	-0.2
IZMR				S	Sg	20 38 44.9	-1.3
BLCB	Balcova	0.91	225	P	Pb	20 38 34.5	-0.2
BLCB				S	Sb	20 38 47.4	+0.8
BLCB	Balcova	0.91	225	Pg	Pg	20 38 34.0	-0.7
KIRA	zmir-Kiraz	0.93	153	P	Pb	20 38 35.2	+0.1
KIRA				S	Sg	20 38 47.4	0.0
FOCM	Foa	0.94	251	Pg	Pg	20 38 34.7	-0.5
SUSR	Susurluk-Balik	0.95	10	Pg	Pg	20 38 35.0	-0.5
AYVA	Ayvalik	0.95	287	P	Pb	20 38 35.5	+0.2
AYVA				S	Sb	20 38 48.3	+0.5
USAK	Uak-Merkez	0.96	109	P	Pg	20 38 35.2	-0.4
USAK				S	Sg	20 38 46.8	-1.4
CMHT	Manyas	0.98	5	P	Pg	20 38 35.8	-0.3
CMHT				S	Sg	20 38 48.2	-0.8
GONE	Gonen-Balikesi	1.02	353	Pg	Pg	20 38 36.5	-0.4
YENI	Yenice-Canakka	1.02	332	Pg	Pb	20 38 36.5	-0.1
SHAP	Saphane-Kutahy	1.06	90	Pg	Pg	20 38 37.5	-0.1
ATIT	Gnen	1.08	348	P	Pn	20 38 38.0	+0.3
AYDB	Zeytinkoy-Aydi	1.08	179	Pn	Pg	20 38 37.7	-0.3
NAZL	Nazilli-Aydin	1.12	162	Pn	Pg	20 38 38.1	-0.6
CANM	Can-anakkale	1.16	328	Pn	Pb	20 38 38.9	-0.1
EMET	Ktahya-Emet	1.19	73	P	Pn	20 38 40.1	+0.7
EMET				S	Sg	20 38 54.5	-1.0
KARB	zmir-Karabur	1.19	253	P	Pn	20 38 39.8	+0.5
KARB				S	Sb	20 38 54.9	+0.3
SULTU	Buldan	1.21	144	P	Pb	20 38 39.6	-0.2
SULTU				S	Sg	20 38 55.0	-1.1
GEDZ	Gediz	1.21	89	Pn	Pg	20 38 40.5	+0.1
BAYC	CANAKKALE_Bayr	1.24	305	P	Pg	20 38 40.3	-0.7
DGB	zmir	1.24	218	P	Pg	20 38 40.6	-0.4
DGB				S	Sb	20 38 56.0	-0.2
PRK	Paraskevi	1.25	280	P	Pg	20 38 40.8	-0.5
PRK				S	Sn	20 38 58.0	+1.1
GDZ	Gediz	1.26	87	P	Pg	20 38 41.3	-0.2
GDZ				S	Sb	20 38 56.9	-0.1
ESEN	Aydn-Nazilli	1.29	163	P	Pn	20 38 41.1	+0.4
ESEN				S	Sb	20 38 56.2	-1.3
KCTX	Karacabey (Bur	1.29	17	Pn	Pn	20 38 40.9	+0.1
ORLT	Orhaneli	1.29	38	Pn	Pg	20 38 41.6	-0.4
ORLT	Orhaneli	1.29	38	P	Pb	20 38 41.3	+0.1
TVSB	Tavsanli	1.31	71	Pn	Pb	20 38 41.8	+0.2
EDC	Edincik	1.31	0	Pn	Pn	20 38 41.4	+0.3
ZEYE	Izmir, Urla-Ze	1.32	234	P	Pn	20 38 41.0	-0.1
BIGA	Biga-Canakkale	1.36	337	Pn	Pn	20 38 42.0	+0.3
AYDN	Tasoluk	1.37	179	P	Pn	20 38 41.7	-0.1
AYDN				S	Sb	20 39 00.1	+0.3
GCAM	G?zelcaml?	1.42	201	Pn	Pn	20 38 41.9	-0.5
GCAM	G?zelcaml?	1.42	201	P	Pn	20 38 41.7	-0.7
KOCA	Canakkale, Ayv	1.42	290	P	Pb	20 38 43.1	-0.2
KRBG	Karabiga-Canak	1.43	343	Pn	Pn	20 38 42.9	+0.3
EZN	Ezine	1.43	304	P	Pn	20 38 43.1	+0.4
EZN				S	Sg	20 39 03.7	+0.5
EZN	Ezine	1.43	304	Pn	Pn	20 38 43.0	+0.4
PASA	Karahalli, USA	1.45	118	P	Pb	20 38 43.9	0.0
SMG	Samos	1.54	212	P	Pg	20 38 46.0	-0.8
SMG				S	Sg	20 39 08.0	+1.1
CHOS	Chios island	1.55	246	P	Pn	20 38 45.0	+0.7
CHOS				S	Sg	20 39 07.4	+0.3
CHOS	Chios island	1.55	246	Pn	Pn	20 38 45.1	+0.7
SIGR	SIGRI	1.57	277	P	Pn	20 38 45.0	+0.4
SIGR				S	Sg	20 39 07.3	-0.4
SIGR	SIGRI	1.57	277	Pn	Pn	20 38 44.8	+0.3
GADA	Gvkgeada	1.91	308	P	Pn	20 38 49.8	+0.6
GADA				S	Sb	20 39 15.7	+0.3
YER	Yerkesik	1.92	170	P	Pn	20 38 50.7	+1.2
YER				S	Sg	20 39 18.0	-1.0
BODT	Bodrum	2.01	193	P	Pn	20 38 52.0	+1.4
ENEZ	Enez	2.15	323	P	Pn	20 38 53.4	+0.9
LIA	Limnos Island	2.25	294	P	Pn	20 38 54.5	+0.6
SMTH	Samothraki Isl	2.30	309	P	Pn	20 38 55.2	+0.5
ALN	Alexandroupoli	2.33	324	P	Pn	20 38 55.6	+0.6
ALN				S	Sb	20 39 26.1	-1.3
RDO	Rodhopi	2.76	321	P	Pn	20 39 02.0	+1.0

IDC 04 20:43:26.8±0.9, 11°.96N×143°.34E, h0km, mb3.8/13, mbtmp3.8/14, ML3.9/1, Error ellipse: s-maj=25.6km s-min=18.5km az=120.0

NEIC 04 20:43:29.5±1.6, 12°.0N±0°.1×143°.3E±0°.1, h10km±1km, mb4.7/23, Error ellipse: s-maj=21.8km s-min=12.9km az=136.0

ISC 04 20:43:30.8±0.7, 11°.9N±0°.1×143°.3E±0°.1, h25km, n43, σ0s.81/41, mb4.5/26, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GUMO	Guam	2.26	43	Pn	Pn	20 44 05.4	-1.2
	32nm,0.3s,baz=184,slow=7.4,SNR=18						
GUMO				Sn	Sn	20 44 33.9	+0.2
	43nm,0.3s,baz=199,slow=23,SNR=5.9						
	83nm,0.4s						
GUMO	Guam	2.26	43		Pn	20 44 06.9	+0.3
GUMO					Sn	20 44 33.4	-0.3
H11N1	WAKE ISLAND Hy	23.97	68	T	T	21 13 39.7	
	baz=254,slow=75						
H11N2	WAKE ISLAND Hy	23.98	68	T	T	21 13 43.8	
	baz=254,slow=75						
H11N3	WAKE ISLAND Hy	23.99	68	T	T	21 13 40.1	
	baz=254,slow=75						
WB0	Warramunga Arr	32.69	196	P	P	20 50 01.9	+0.5
WB0				IAmb	IAmb	20 50 12.0	
	comp=Z,12nm,1.4s						
WR8	Warramunga Arr	32.85	195	P	P	20 50 03.1	+0.4
WR8				IAmb	IAmb	20 50 34.9	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	32.88	196	P	P	20 50 03.4	+0.3
	comp=Z,0.9nm,1.0s,baz=20,slow=9.8,SNR=8.1						
	comp=Z,0.9nm,1.0s						
ASAR	Alice Springs	36.55	195	P	P	20 50 34.5	-0.3
	comp=Z,0.1nm,0.5s,baz=20,slow=10,SNR=1.9						
	comp=Z,0.1nm,0.5s						
ASAR	Alice Springs	36.55	195	P	P	20 50 33.1	-1.7
CMAR	Chiang Mai Arr	43.20	284	P	P	20 51 30.3	+0.1
	comp=Z,0.1nm,0.4s,baz=96,slow=8.1,SNR=2.0						
	comp=Z,0.1nm,0.4s						
SONM	Songino Array	47.22	327	P	P	20 52 01.8	0.0
	comp=Z,0.3nm,0.5s,baz=145,slow=6.3,SNR=2.8						
	comp=Z,0.3nm,0.5s						
TAU	Tasmania Unive	54.70	176	P	P	20 52 57.9	+0.1
MKAR	Makanchi Array	61.62	317	P	P	20 53 47.5	+1.0
	comp=Z,0.6nm,0.9s,baz=88,slow=8.8,SNR=7.8						
	comp=Z,0.6nm,0.9s						
MKAR	Makanchi Array	61.62	317	P	P	20 53 46.3	-0.2
ZALV	Zalesovo Beam	62.08	325	P	P	20 53 49.2	-0.2
	comp=Z,0.4nm,0.5s,baz=126,slow=9.8,SNR=1.9						
	comp=Z,0.4nm,0.5s						
N14K	Kuskokwak Cree	62.61	28	P	P	20 53 53.6	+0.9
O15K	Ungalikthiuk R	63.17	29	P	P	20 53 57.0	+0.4
O15K				IAmb	IAmb	20 54 28.0	
	comp=Z,12nm,1.3s						
KURK	Kurchatov	64.86	321	P	P	20 54 07.5	-0.3
KURBB	Kurchatov Arra	64.90	320	P	P	20 54 08.2	+0.2
	comp=Z,1.0nm,0.7s,baz=104,slow=6.8,SNR=11						
	comp=Z,1.0nm,0.7s						
C16K	Lisburne Hills	65.28	19	P	P	20 54 11.2	+0.9
C16K				IAmb	IAmb	20 54 34.5	
	comp=Z,6.7nm,1.5s						
F17K	Baldwin Pennin	65.73	21	P	P	20 54 14.2	+1.0
F17K				IAmb	IAmb	20 54 15.1	
	comp=Z,4.6nm,1.2s						
RDOG	Red Dog Mine	65.95	19		P	20 54 13.3	-1.3
G18K	Tagagawik	66.43	22	P	P	20 54 18.1	+0.4
C18K	Utukok River	66.79	19	P	P	20 54 19.9	-0.1
G19K	Purcell Mounta	67.11	22	P	P	20 54 22.7	+0.6
PPLA	Purkeypile	67.95	26	P	P	20 54 28.5	+0.9
PPLA				IAmb	IAmb	20 54 28.7	
	comp=Z,10.0nm,1.2s						
SKT	Skwentna	67.97	28	P	P	20 54 27.5	0.0
D20K	Etivluk River	68.32	20	P	P	20 54 30.9	+1.2
D20K				IAmb	IAmb	20 54 31.5	
	comp=Z,4.2nm,0.5s						
COLD	Coldfoot	70.06	22		P	20 54 41.7	+1.3
COLD				IAmb	IAmb	20 54 42.6	
	comp=Z,2.9nm,0.8s						
WRH	Wood River Hil	70.14	25	P	P	20 54 40.9	0.0
WRH				IAmb	IAmb	20 54 46.4	
	comp=Z,13nm,1.4s						
BVAR	Borovoye Array	70.27	322	P	P	20 54 41.3	-0.7
	comp=Z,0.9nm,0.5s,baz=100,slow=8.3,SNR=6.0						
	comp=Z,0.9nm,0.5s						
D23K	Nanushuk River	70.42	20	P	P	20 54 44.3	+1.7
D23K				IAmb	IAmb	20 55 09.5	
	comp=Z,5.3nm,1.4s						
E23K	Chandalar	70.52	22	P	P	20 54 44.2	+0.9
E23K				IAmb	IAmb	20 54 45.9	
	comp=Z,4.2nm,0.8s						
IL31		70.72	25	P	P	20 54 43.4	-1.0
IL31				IAmb	IAmb	20 54 54.6	
	comp=Z,8.2nm,1.4s						
ILAR	Eielson Array	70.72	25	P	P	20 54 43.4	-1.1
	comp=Z,1.6nm,0.7s,baz=249,slow=6.0,SNR=24						
	comp=Z,1.6nm,0.7s						
ILAR	Eielson Array	70.72	25	P	P	20 54 43.6	-0.9
H27K	Steamboat Moun	73.19	24	IAmb	IAmb	20 55 01.4	
	comp=Z,3.6nm,0.8s						
YKA	Yellowknife Ar	85.03	27	P	P	20 56 04.3	+0.2
	comp=Z,0.2nm,0.5s,baz=288,slow=4.9,SNR=5.5						
	comp=Z,0.2nm,0.5s						
ARCES	ARCESS Array B	88.17	342	P	P	20 56 19.5	+0.2
	comp=Z,4.4nm,1.0s,baz=41,slow=7.5,SNR=3.7						
	comp=Z,4.4nm,1.0s						
NVAR	Mina Array Bea	89.16	51	P	P	20 56 25.6	+0.6
	comp=Z,1.0nm,0.6s,baz=314,slow=6.4,SNR=3.5						
	comp=Z,1.0nm,0.6s						
FINES	FINESS Array B	92.00	335	P	P	20 56 36.3	-1.0
	comp=Z,0.5nm,0.3s,baz=57,slow=5.1,SNR=5.8						
	comp=Z,0.5nm,0.3s						
FINES	FINESS Array B	92.00	335	P	P	20 56 36.5	-0.8

NEIC 04 20:45:37.1±1.9, 23°.2S±0°.2×175°.00W±0°.08, h10km±1km, mb4.6/13, Error ellipse: s-maj=26.4km s-min=12.8km az=186.0

IDC 04 20:46:02.3±7.7, 22°.78S×176°.46W, h159km±54km, mb3.8/10, mbtmp4.2/11, MS3.7/1, Error ellipse: s-maj=69.9km s-min=20.9km az=131.0

ISC 04 20:45:37.3±0.6, 23°.2S±0°.1×174°.92W±0°.08, h10km, n43, σ2s.24/41, mb4.5/15, Tonga Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NIUE	Niue	6.18	50		Pn	20 47 08.8	+0.1
NIUE					Sn	20 48 13.4	-5.9
MSVF	Nonsavu	8.51	308	P	Pn	20 47 44.9	+4.1
	6.0nm,0.3s,baz=132,slow=15,SNR=7.9						
MSVF				LR	LR	20 50 33.4	
	comp=Z,550nm,20.1s,baz=150,slow=38						
MSVF	Nonsavu	8.51	308		Pn	20 47 40.0	-0.8
RAR	Rarotonga	14.16	85	Pn	Pn	20 48 58.6	+0.5
DZM	Mont Dzumac	17.24	270	P	P	20 49 40.0	0.0
	8.1nm,0.8s,baz=86,slow=15,SNR=7.2						
DZM	Mont Dzumac	17.24	270	*e*LR	LR	20 54 04.0	
	134nm,21.4s						
DZM	Mont Dzumac	17.24	270	IAmb	IAmb	20 49 43.2	
	comp=Z,8.6nm,0.8s						
BFZ	Birch Farm	19.00	201	P	Pn	20 50 00.2	+0.4
BFZ				IAmb	IAmb	20 50 33.2	
	comp=Z,57nm,1.2s						
THZ	Tophouse	21.17	206	P	P	20 50 25.1	+2.3
THZ				IAmb	IAmb	20 50 46.7	
	comp=Z,29nm,1.4s						
TBI	Tubuai	23.39	96	*e*LR	LR	20 56 20.6	
	comp=Z,399nm,29.2s						
PPT2	Papeete2	24.38	82	*e*LR	LR	20 57 14.0	
	comp=Z,84nm,22.5s						
CTA	Charters Tower	36.16	267	P	P	20 52 38.6	-1.5
	comp=Z,2.8nm,0.5s,baz=91,slow=10,SNR=14						
	comp=Z,2.8nm,0.5s						
CTAO	Charters Tower	36.16	267	P	P	20 52 38.8	-1.3
CTAO				IAmb	IAmb	20 52 51.7	
	comp=Z,7.7nm,0.8s						
STKA	Stephens Creek	39.32	248	P	P	20 53 05.7	-1.1
	comp=Z,1.1nm,0.5s,baz=101,slow=10,SNR=6.9						
	comp=Z,1.1nm,0.5s						
STKA	Stephens Creek	39.32	248	P	P	20 53 05.3	-1.5
BBOO	Buckleboo	44.02	246	P	P	20 53 43.2	-2.1
BBOO				IAmb	IAmb	20 54 25.3	
	comp=Z,12nm,1.1s						
ASAR	Alice Springs	46.76	259	P	P	20 54 05.7	-1.5
	comp=Z,1.4nm,0.8s,baz=84,slow=8.3,SNR=12						
ASAR				PcP	PcP	20 55 41.9	+1.4
	comp=Z,0.3nm,0.6s,baz=103,slow=4.0,SNR=1.6						
	comp=Z,1.4nm,0.8s						
ASAR	Alice Springs	46.76	259	P	P	20 54 04.6	-2.6
WR8	Warramunga Arr	46.97	264	P	P	20 54 06.5	-2.3
WR8				IAmb	IAmb	20 54 21.9	
	comp=Z,3.2nm,0.7s						
WB0	Warramunga Arr	47.11	264	P	P	20 54 07.2	-2.7
WB0				IAmb	IAmb	20 54 23.7	
	comp=Z,5.8nm,0.8s						
WRA	Warramunga Arr	47.12	264	P	P	20 54 07.5	-2.5
	comp=Z,3.2nm,0.7s,baz=103,slow=8.0,SNR=20						
WRA				PcP	PcP	20 55 43.3	+1.4
	comp=Z,0.4nm,0.7s,baz=95,slow=4.1,SNR=1.7						
	comp=Z,3.2nm,0.7s						
WRA	Warramunga Arr	47.12	264	P	P	20 54 07.2	-2.8
FORT	Forrest	50.93	248	P	P	20 54 36.5	-2.6
FORT				IAmb	IAmb	20 55 19.3	
	comp=Z,5.5nm,0.9s						
KNRA	Kununurra	53.37	267	P	P	20 54 54.9	-2.5
SIJI	Sorong	56.69	285	P	P	20 55 18.5	-3.0
	comp=Z,10nm,0.8s,baz=40,slow=6.5,SNR=5.6						
	comp=Z,10nm,0.8s						
MORW	Morawa	61.50	248	P	P	20 55 53.1	-1.6
MJAR	Matsushiro Arr	74.04	322	P	P	20 57 13.2	-0.2
	comp=Z,0.6nm,0.5s,baz=221,slow=48,SNR=1.5						
	comp=Z,0.6nm,0.5s						
PETK	Petropavlovsk-	79.58	344	P	P	20 57 47.3	+3.0
	comp=Z,2.6nm,0.7s,baz=109,slow=7.0,SNR=4.6						
	comp=Z,2.6nm,0.7s						
PETK	Petropavlovsk-	79.58	344	P	P	20 57 46.6	+2.3
SEY	Seymchan	89.62	346	P	P	20 58 38.0	+3.3
	comp=Z,0.6nm,0.4s,baz=156,slow=10.0,SNR=5.7						
	comp=Z,0.6nm,0.4s						
ILAR	Eielson Array	90.29	12	P	P	20 58 45.8	+8.0
	comp=Z,0.3nm,0.8s,baz=276,slow=32,SNR=2.3						
	comp=Z,0.3nm,0.8s						
CMAR	Chiang Mai Arr	93.68	288	P	P	20 58 55.3	+0.6
	comp=Z,3.0nm,0.9s,baz=133,slow=3.2,SNR=28						
	comp=Z,3.0nm,0.9s						
CMAR	Chiang Mai Arr	93.68	288		P	20 58 55.9	+1.2
KURBB	Kurchatov Arra	117.93	316	PKP	PKiKP	21 04 25.7	+1.7
	comp=Z,0.1nm,0.5s,baz=87,slow=1.4,SNR=4.5						
AKASG	Malin Array Be	146.70	332	PKPbc	PKiKP	21 05 21.0	-0.9
	comp=Z,1.0nm,0.5s,baz=43,slow=3.3,SNR=4.9						
AKBB	Malin Array Si	146.70	332	PKPdf	PKPdf	21 05 16.1	-1.4
KIEV	Kiev	146.71	332	PKPdf	PKPdf	21 05 15.9	-1.6
EKA	Eskdalemuir Ar	147.28	9	PKPbc	PKiKP	21 05 25.2	+2.2
	comp=Z,0.7nm,0.7s,baz=346,slow=2.9,SNR=2.6						
BR131	Keskin Array S	150.73	311	PKPbc	PKiKP	21 05 31.5	+0.7
BRTR	Keskin Array B	150.73	311	PKPbc	PKiKP	21 05 32.0	+1.1
	comp=Z,0.8nm,0.7s,baz=129,slow=4.9,SNR=7.0						
BRTR	Keskin Array B	150.73	311		PKiKP	21 05 31.8	+0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BURAR	Bucovina Array	150.76	332	PKPbc	PKiKP	21 05 33.1	+2.6
MMAI	Mount Meron Ar	151.59	297	PKPbc	PKiKP	21 05 35.5	+2.8
	comp=Z,1.3nm,0.6s,baz=232,slow=50,SNR=2.6						

*IDC **04** 20:57:14.0±0.9, 17°.93S×168°.03E, $h0^{km}$, mb4.1/11, mbtmp4.1/13, ML3.5/2, MS4.0/43, Error ellipse: s-maj=23.4km s-min=19.5km az=104.0*

*NEIC **04** 20:57:17.4±2.8, 17°.99S±0°.05×167°.63E±0°.07, $h10^{km}\pm1^{km}$, mb4.8/35, Error ellipse: s-maj=12.5km s-min=6.4km az=120.0*

*NOU **04** 20:57:18.0, 17°.93S×167°.75E, $h13^{km}$, MLv4.9/14, Vanuatu Islands*

*GCMT **04** 20:57:23.4±0.2, 17°.84S±0°.02×167°.53E±0°.01, $h15^{km}\pm1^{km}$, MW5.0/94, Moment Tensor Solution. s48,c61; s94,c127; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.37±.13; $M_{\theta\theta}$0.29±.09; $M_{\phi\phi}$-2.66±.10; $M_{r\theta}$0.69±.20; $M_{\theta\phi}$0.37±.07; $M_{\phi r}$-2.94±.26; Best double couple: $M_0$3.94600×10^{16} NP1:ϕ_s359.00000°, δ20.00000°, λ100.00000°. NP2: ϕ_s168.00000°, δ70.00000°, λ86.00000°. Principal axes: T 3.7880, Plg65.0000°, Azm72.0000°; N 0.3120, Plg4.0000°, Azm169.0000°; P -4.1040, Plg25.0000°, Azm261.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 20:57:17.0±0.4, **18°.04S**±0°.05×**167°.62E**±0°.05, **$h10^{km}$, n131, σ1.79**/95, **mb4.8**/29, **MS4.0**/43, **4D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DVP	Devils Point	0.63	60	P	Pg	20 57 28.3	-0.9
RTV	Rentapao	0.81	72	P	Pg	20 57 31.9	-0.7
INH	Isangel	2.17	134	P	Pn	20 57 54.2	+1.1
SANVU	Saraoutou	2.61	351	P	Pn	20 57 57.0	-2.2
SANVU	Saraoutou	2.61	351		Pn	20 57 57.0	-2.2
MARNC	Mare, Loyalty	3.44	174	P	Pn	20 58 13.3	+2.6
MARNC	Mare, Loyalty	3.44	174		Pn	20 58 10.3	-0.3
YATNC	Mamie plateau,	4.05	190	P	Pn	20 58 20.4	+1.3
DZM	Mont Dzumac	4.16	195	Pn	Pn	20 58 21.5	+0.9
	2.9nm,0.3s,baz=71,slow=18,SNR=30						
DZM				LR	LR	20 59 03.2	
	comp=Z,681nm,20.7s,baz=62,slow=25						
DZM				Sn	Sn	20 59 10.7	+1.4
	25nm,0.3s,baz=127,slow=20,SNR=7.9						
	7.2nm,0.3s						
DZM	Mont Dzumac	4.16	195	ePn	Pn	20 58 23.0	+2.4
	29nm,1.0s						
DZM	Mont Dzumac	4.16	195	P	Pn	20 58 22.8	+2.2
DZM	Mont Dzumac	4.16	195		Pn	20 58 21.2	+0.7
DZM					Sn	20 59 05.2	-4.1
ONTNC	Ouen Toro	4.38	194		Pn	20 58 22.3	-1.2
OUENC	Ouen Island, N	4.41	189	P	Pn	20 58 27.1	+3.1
NGOA	Tingoa Renbel	9.74	310	P	Pn	20 59 38.4	+1.1
MSVF	Nonsavu	9.94	90	Pn	Pn	20 59 43.7	+3.7
	baz=220,slow=15						
MSVF				LR	LR	21 02 45.4	
	comp=Z,3µm,19.6s,baz=237,slow=35						
MSVF	Nonsavu	9.94	90		Pn	20 59 43.5	+3.4
HNR	Honiara	11.35	318	Pn	Pn	20 59 59.8	+0.6
	0.3nm,0.3s,baz=104,slow=4.2,SNR=1.9						
HNR				LR	LR	21 03 57.9	
	comp=Z,33nm,21.1s,baz=231,slow=35						
	1.6nm,0.4s						
HNR	Honiara	11.35	318		Pn	20 59 57.7	-1.5
SAVO	Savo Central	11.64	318	P	Pn	21 00 05.0	+1.6
TATA	Tatamba Isabel	12.24	321	P	Pn	21 00 12.8	+1.3
EIDS	Eidsvold	17.00	242		Pn	21 01 13.9	-1.0
ARMA	Armidale	19.06	227	P	P	21 01 38.2	-1.5
AFI	Afiamalu	20.23	81	LR	LR	21 07 48.6	
	comp=Z,766nm,21.7s,baz=264,slow=32						
CTA	Charters Tower	20.29	261	P	Pn	21 01 56.7	+1.6
	16nm,0.8s,baz=85,slow=11,SNR=9.6						
CTA				LR	LR	21 08 48.6	
	comp=Z,878nm,19.9s,baz=52,slow=34						
	16nm,0.8s						
CTAO	Charters Tower	20.29	261		P	21 01 51.0	-2.1
CTAO				IAmb	IAmb	21 02 01.8	
	comp=Z,40nm,1.1s						
RABL	Rabaul	20.45	310	P	P	21 01 53.9	-1.0
RABL				IAmb	IAmb	21 02 08.3	
	comp=Z,61nm,1.0s						
PMG	Port Moresby	21.63	291	LR	LR	21 09 24.7	
	comp=Z,767nm,18.3s,baz=100,slow=33						
PMG	Port Moresby	21.63	291	P	P	21 02 07.1	-0.5
PMG	Port Moresby	21.63	291	P	P	21 02 08.8	+1.3
URZ	Urewera	21.79	160	P	P	21 02 07.9	-1.1
	comp=Z,4.7nm,0.6s,baz=324,slow=11,SNR=1.7						
	comp=Z,4.7nm,0.6s						
RTZ	Ruatahuna	22.07	160	P	P	21 02 12.0	-0.1
COEN	Coen	23.84	276		P	21 02 30.4	-0.2
CAN	Canberra	23.86	220	P	P	21 02 30.2	-0.4
CAN				IAmb	IAmb	21 02 44.2	
	comp=Z,32nm,1.0s						
THZ	Tophouse	24.07	170	P	P	21 02 32.4	-0.1
THZ				IAmb	IAmb	21 02 58.4	
	comp=Z,45nm,1.1s						
MSWZ	Moikau Station	24.20	166	P	P	21 02 32.7	-1.0
RPZ	Rata Peaks	25.75	174	LR	LR	21 12 59.3	
	comp=Z,812nm,18.2s,baz=27,slow=37						
PATS	Pohnpei	26.37	339	P	P	21 02 54.5	+0.9
INKA	Innaminka	26.52	244	P	P	21 02 54.5	-0.4
STKA	Stephens Creek	27.23	235	P	P	21 03 03.2	+2.0
	comp=Z,2.0nm,0.6s,baz=76,slow=9.6,SNR=6.9						
STKA				LR	LR	21 13 58.7	
	comp=Z,519nm,18.2s,baz=54,slow=36						
	comp=Z,2.0nm,0.6s						
STKA	Stephens Creek	27.23	235		P	21 02 59.1	-2.1
RAR	Rarotonga	30.85	101	LR	LR	21 13 43.4	
	comp=Z,193nm,21.4s,baz=290,slow=32						
WR8	Warramunga Arr	31.34	261	P	P	21 03 34.7	-3.3
WR8				IAmb	IAmb	21 03 54.3	
	comp=Z,34nm,1.9s						
WB0	Warramunga Arr	31.45	261	P	P	21 03 34.8	-4.1
WRAB	Tennant Creek	31.48	261	P	P	21 03 39.8	+0.6
WRAB				IAmb	IAmb	21 04 41.4	
	comp=Z,22nm,1.9s						
WRA	Warramunga Arr	31.49	261	P	P	21 03 40.7	+1.4
	comp=Z,6.6nm,1.1s,baz=94,slow=8.8,SNR=13						
	comp=Z,6.6nm,1.1s						
WRA	Warramunga Arr	31.49	261	P	P	21 03 39.8	+0.5
BBOO	Buckleboo	31.92	236	P	P	21 03 40.8	-2.2
AS31	Alice Springs	31.95	254		P	21 03 41.2	-2.0
ASAR	Alice Springs	31.95	254	P	P	21 03 44.9	+1.6
	comp=Z,3.8nm,0.9s,baz=80,slow=7.9,SNR=23						
ASAR				LR	LR	21 16 11.9	
	comp=Z,818nm,20.1s,baz=92,slow=35						
	comp=Z,3.8nm,0.9s						
ASAR	Alice Springs	31.95	254		P	21 03 41.2	-2.0
KNRA	Kununurra	37.21	268		P	21 04 27.5	-1.3
KNRA				IAmb	IAmb	21 04 34.7	
	comp=Z,11nm,0.9s						
FORT	Forrest	37.99	243		P	21 04 35.8	+0.5
FORT				IAmb	IAmb	21 04 42.5	
	comp=Z,9.5nm,0.7s						
GUMO	Guam	38.62	323	LR	LR	21 18 42.6	
	comp=Z,173nm,19.2s,baz=136,slow=33						
SIJI	Sorong	39.57	292	LR	LR	21 21 34.4	
	comp=Z,259nm,19.7s,baz=108,slow=37						
FITZ	Fitzroy Crossi	39.84	263	LR	LR	21 21 16.8	
	comp=Z,654nm,18.4s,baz=98,slow=36						
TBI	Tubuai	40.39	105	eS	S	21 11 01.1	-2.7
	comp=Z,991nm,29.8s						
TBI				eLQ	LQ	21 14 16.3	
	comp=Z,3µm,27.0s						
TBI				eLR	LR	21 15 58.7	
	comp=Z,2µm,30.8s						
PPT2	Papeete2	40.69	96	eS	S	21 11 07.0	-1.6
	comp=Z,164nm,24.0s						
PPT2				eLQ	LQ	21 14 21.7	
	comp=Z,524nm,26.5s						
PPT2				eLR	LR	21 16 10.6	
	comp=Z,415nm,28.5s						
PPT2				eLR	LR	21 16 11.5	
	comp=Z,519nm,25.8s						
PPT	Papeete	40.69	96	LR	LR	21 17 38.9	
	comp=Z,255nm,18.7s,baz=218,slow=30						
BATI	Baumata	43.24	274	LR	LR	21 23 20.7	
	comp=Z,251nm,19.4s,baz=144,slow=36						
LUWI	Luwuk	47.15	286	P	P	21 05 50.2	+0.2
NWAO	Narrogin (SRO)	47.41	242	LR	LR	21 25 46.7	
	comp=Z,406nm,18.9s,baz=68,slow=36						
NWAO	Narrogin (SRO)	47.41	242	P	P	21 05 50.1	-1.6
NWAO				IAmb	IAmb	21 06 03.2	
	comp=Z,16nm,0.8s						
DAV	Davao City (W)	48.42	297	LR	LR	21 27 18.6	
	comp=Z,78nm,18.1s,baz=51,slow=37						
KAPI	Kappang	48.50	279	LR	LR	21 26 25.8	
	comp=Z,97nm,19.8s,baz=110,slow=36						
TOLI2	Tolitoli	49.85	287	P	P	21 06 10.0	-0.7
TOLI2				IAmb	IAmb	21 06 37.1	
	comp=Z,16nm,1.2s						
PCI	Palu	49.90	285	P	P	21 06 15.2	+4.0
MMSI	Mamuju	50.09	282	P	P	21 06 10.3	-2.4
MPSI	Mapaga	50.34	286	P	P	21 06 19.5	+5.0
	comp=Z,32nm,1.0s						
TAOE	Nuku Hiva Isla	51.47	87	eS	S	21 13 41.5	-2.2
	comp=Z,273nm,25.9s						
TAOE				eLR	LR	21 21 11.2	
	comp=Z,590nm,25.4s						
LEM	Lembang	59.42	273	LR	LR	21 34 32.3	
	comp=Z,111nm,19.0s,baz=136,slow=37						
VNDA	Vanda	59.57	181	LR	LR	21 31 21.3	
	comp=Z,96nm,18.2s,baz=26,slow=34						
MJAR	Matsushiro Arr	60.99	333	LR	LR	21 35 06.6	
	comp=Z,37nm,18.5s,baz=182,slow=37						
JNU	Nakatsue	61.81	325	LR	LR	21 31 04.9	
	comp=Z,58nm,21.2s,baz=131,slow=33						
ASAJ	Asahikawa	65.96	341	LR	LR	21 36 45.0	
	comp=Z,71nm,18.1s,baz=179,slow=36						
NJ2	Nanjing	68.29	317	eP	P	21 08 20.1	+1.8
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
PEA0B	Petropavlovsk-	71.37	354	P	P	21 08 37.0	+0.1
PETK	Petropavlovsk-	71.37	354	P	P	21 08 36.2	-0.7
	comp=Z,2.5nm,0.7s,baz=201,slow=7.9,SNR=4.2						
PETK				LR	LR	21 36 15.4	
	comp=Z,97nm,20.6s,baz=151,slow=33						
	comp=Z,2.5nm,0.7s						
PETK	Petropavlovsk-	71.37	354	P	P	21 08 37.9	+1.0
QSPA	South Pole Qui	72.00	180	P	P	21 08 40.6	-0.3
	comp=Z,2.0nm,0.6s,baz=192,slow=9.3,SNR=11						
QSPA				LR	LR	21 37 46.6	
	comp=Z,120nm,18.7s,baz=37,slow=34						
	comp=Z,2.0nm,0.6s						
QSPA	South Pole Qui	72.00	180	P	P	21 08 42.4	+1.5
QSPA				IAmb	IAmb	21 09 13.4	
	comp=Z,11nm,1.1s						
KLR	Kul'dur	74.16	336	LR	LR	21 41 50.9	
	comp=Z,47nm,18.5s,baz=197,slow=36						
CM31	Chiang Mai Arr	76.61	295	P	P	21 09 08.5	+0.1
CM31				IAmb	IAmb	21 09 16.3	
	comp=Z,9.4nm,1.2s						
CMAR	Chiang Mai Arr	76.61	295	P	P	21 09 10.4	+2.1
	comp=Z,1.8nm,0.8s,baz=129,slow=4.8,SNR=14						
	comp=Z,1.8nm,0.8s						
CMAR	Chiang Mai Arr	76.61	295		P	21 09 08.8	+0.5
CHTO	Chiang Mai	76.76	295		P	21 09 10.3	+1.2
CHTO				IAmb	IAmb	21 09 21.3	
	comp=Z,18nm,1.7s						
CHTO	Chiang Mai	76.76	295	P	P	21 09 13.3	+4.1
	comp=Z,5.0nm,1.3s						
PZH	PanZhiHua	77.77	303	P	P	21 09 17.5	+2.7
HHC	Hu-ho-hao-te	78.32	320	eP	P	21 09 19.7	+2.1
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MA2	Magadan	78.56	351	LR	LR	21 41 45.3	
	comp=Z,56nm,19.0s,baz=169,slow=34						
MAW	Mawson	78.95	202	LR	LR	21 38 44.7	
	comp=Z,94nm,21.6s,baz=105,slow=31						
KDAK	Kodiak Island	82.44	20	LR	LR	21 43 28.4	
	comp=Z,70nm,19.4s,baz=200,slow=34						
BELA	Belgrano 2	83.41	175	P	P	21 09 44.4	+0.2
BELA				IAmb	IAmb	21 09 52.6	
	comp=Z,12nm,1.1s						
ULN	Ulaanbaatar	85.00	324	P	P	21 09 53.6	+0.9
ULN				IAmb	IAmb	21 10 10.5	
	comp=Z,6.1nm,1.1s						
ULN	Ulaanbaatar	85.00	324	P	P	21 09 54.4	+1.7
	comp=Z,22nm,2.2s						
GTA2	Gaotai	85.27	314	eP	P	21 10 01.7	+7.4
GTA2				pmax	pmax		
	comp=Z,3.0nm,1.3s						
YAK	Yakutsk	85.28	343	LR	LR	21 48 01.6	
	comp=Z,60nm,18.4s,baz=115,slow=36						
SONM	Songino Array	85.35	324	P	P	21 09 52.9	-1.6
	comp=Z,0.1nm,0.2s,baz=162,slow=6.7,SNR=6.3						
SONM				LR	LR	21 47 21.6	
	comp=Z,44nm,19.3s,baz=164,slow=35						
	comp=Z,0.1nm,0.2s						
SONM	Songino Array	85.35	324	P	P	21 09 55.0	+0.6
SONM				IAmb	IAmb	21 10 00.1	
	comp=Z,12nm,1.8s						
TNA	Tin City	85.39	10	P	P	21 09 54.9	+0.9
SHL	Shillong	85.43	299	P	P	21 09 56.3	+0.8
SHL				IAmb	IAmb	21 10 16.6	
	comp=Z,14nm,1.4s						
BILL	Bilibino	85.84	359	P	P	21 09 56.7	+0.4
ELIB	Princess Elisa	87.03	191	dP	P	21 10 03.5	+0.9
YBH	Yreka Blue Hor	87.52	45	LR	LR	21 43 32.8	
	comp=Z,5.3nm,18.1s,baz=268,slow=32						
PFO	Pinyon Flats O	88.66	54	LR	LR	21 42 04.3	
	comp=Z,78nm,19.5s,baz=245,slow=30						
TLY	Talaya	88.91	326	LR	LR	21 48 11.4	
	comp=Z,29nm,20.8s,baz=119,slow=34						
NVAR	Mina Array Bea	89.18	49	P	P	21 10 10.1	-3.3
	comp=Z,0.5nm,0.7s,baz=225,slow=7.8,SNR=3.5						
NVAR				LR	LR	21 44 16.7	
	comp=Z,69nm,18.5s,baz=264,slow=32						
	comp=Z,0.5nm,0.7s						
PALK	Pallekele	89.31	278	LR	LR	21 55 09.0	
	comp=Z,44nm,18.3s,baz=132,slow=39						
ILAR	Eielson Array	89.56	18	P	P	21 10 10.7	-3.6
	comp=Z,0.3nm,0.7s,baz=250,slow=4.3,SNR=5.7						
ILAR				LR	LR	21 45 49.5	
	comp=Z,69nm,18.9s,baz=234,slow=33						
	comp=Z,0.3nm,0.7s						
TROLL	Troll, Antarti	89.60	185	P	P	21 10 16.3	+1.5
SNAA	Sanae	90.27	183	P	P	21 10 18.2	+0.5
	comp=Z,36nm,0.6s						
SNAA	Sanae	90.27	183	LR	LR	21 48 05.7	
	comp=Z,38nm,19.8s,baz=189,slow=34						
LPIG	La Paz	90.30	65	LR	LR	21 44 14.0	
	comp=Z,180nm,18.0s,baz=230,slow=31						
VNA3	Neumayer Olymp	90.92	181	⇓P	P	21 10 20.7	0.0
	comp=Z,4.5nm,0.7s						
VNA2	Neumayer--Watz	91.19	182	⇓P	P	21 10 23.8	+1.8
	comp=Z,3.9nm,0.7s,baz=166,slow=4.3						
DLBC	Dease Lake	91.70	28	LR	LR	21 48 13.4	
	comp=Z,84nm,18.6s,baz=212,slow=34						
TIXI	Tiksi	93.27	349	LR	LR	21 53 23.8	
	comp=Z,35nm,18.0s,baz=166,slow=36						
NEW	Newport	93.86	40	LR	LR	21 49 28.6	
	comp=Z,41nm,18.9s,baz=190,slow=34						
WMQ	Urumqi	95.27	314	eP	P	21 10 43.0	+1.8
WMQ				LR	LR		
	comp=E,570nm,24.2s						
WMQ				LR	LR		
	comp=Z,150nm,24.1s						
ANMO	Albuquerque	96.89	56	LR	LR	21 51 07.3	
	comp=Z,42nm,18.4s,baz=252,slow=34						
PDAR	Pinedale Array	96.94	47	LR	LR	21 48 21.3	
	comp=Z,26nm,18.9s,baz=253,slow=32						
TXAR	Lajitas Array	97.55	62	LR	LR	21 49 03.1	
	comp=Z,93nm,18.1s,baz=251,slow=32						
MKAR	Makanchi Array	99.81	316	P	Pdif	21 11 00.8	-0.8
	comp=Z,0.1nm,0.6s,baz=108,slow=4.7,SNR=1.7						
LESA	Schwarzleotal	144.22	331	epPKP	pPKPdf	21 16 55.2	-0.2
	comp=Z,1.5nm,0.5s						
MEM	Membach	144.34	340	dPKPdf	PKPdf	21 16 54.4	+1.1
ABTA	Abfaltersbach	144.78	330	i pPKP	pPKPdf	21 16 56.5	+0.1
	comp=Z,5.4nm,0.9s						
WTTA	Wattenberg	144.82	331	ePKP	PKPab	21 16 54.0	+0.5
	comp=Z,1.2nm,0.4s						
MOTA	Moosalm	145.00	332	ePKP	PKPdf	21 16 55.5	+0.7
	comp=Z,9.1nm,1.0s						
FETA	Feichten	145.41	332	ePKP	PKPab	21 16 56.3	+0.7
	comp=Z,6.0nm,1.0s						
FETA				ePKiKP	PKiKP	21 16 59.7	+0.3
	comp=Z,5.5nm,0.9s						
DAVA	Damuels	145.58	333	ePKiKP	PKiKP	21 16 60.0	+0.2
	comp=Z,10nm,0.9s						
TORD	Torodi Ar. Bea	165.59	252	PKPab	PKPab	21 18 21.1	-0.4
	comp=Z,1.0nm,0.9s,baz=169,slow=4.3,SNR=3.8						

*MDD **04** 20:59:23.9±0.1, 39°.99N×0°.51W, $h0^{km}$, mb_Lg3.0/74, Error ellipse: s-maj=1.4km s-min=0.9km az=135.0*

*INMG **04** 20:59:23.8±1.6, 39°.98N×0°.52W, $h2^{km}$, ML2.7, Error ellipse: s-maj=2.8km s-min=1.4km az=101.0,*

#DIST_RANGE: REGIONAL #IPMA_REGION: W Castellon de La Plana

*LDG **04** 20:59:24.4±0.1, 39°.96N×0°.50W, $h2^{km}$, Ml3.0/10, Error ellipse: s-maj=1.9km s-min=1.3km az=122.0*

*SFS **04** 20:59:24.2, 39°.98N×0°.50W, $h9^{km}$, ML3.4/11, ML3.6/11, MLv3.5/11*

ISC 04 20:59:23.0±1.0, **39°.98N**±0°.02×**0°.51W**±0°.02, **$h16^{km}$**±8^{km}, **n85, σ1.43**/163, **1C-2D, Spain**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EMOS	Mosqueruela	0.38	4	⇓Pg	Pg	20 59 31.2	+0.2
EMOS				Sg	Sg	20 59 35.9	-0.4
EMOS				i IVmb_Lg		20 59 37.1	
ECHE	Chera	0.53	222	Pg	Pb	20 59 34.6	+0.7
ECHE				Sg	Sg	20 59 40.3	-0.3
ECHE	Chera	0.53	222	⇑Pg	Pb	20 59 34.6	+0.7
ECHE				Sg	Sb	20 59 41.0	-0.4
ECHE				i IVmb_Lg		20 59 44.3	
E0901	Celadas (Terue	0.69	317	Pg	Pg	20 59 35.7	-0.8
E0901				Sg	Sg	20 59 46.0	+0.4
E0901				i IVmb_Lg		20 59 49.5	
EVIV	Cofrentes, Val	0.86	214	Pg	Pn	20 59 41.0	+0.5
EVIV				Sg	Sn	20 59 52.9	+0.2
EVIV				i IVmb_Lg		20 59 53.8	
ECOL	Islas Columbre	0.92	95	Pg	Pb	20 59 41.1	+0.5
ECOL				Sg	Sn	20 59 54.4	+0.2
ERTA	Horta de San J	1.17	33	Pg	Pn	20 59 46.0	+1.3
ERTA				Sg	Sb	21 00 01.0	+1.3
ERTA				i IVmb_Lg		21 00 03.8	
AFON	Font Roja	1.32	181	Pg	Pg	20 59 48.2	-0.2
AFON				Sg	Sn	21 00 05.6	+1.5
AFON				i IVmb_Lg		21 00 15.7	
EBEN2	Beniarda presa	1.33	169	Pg	Pg	20 59 48.6	0.0
EBEN2				Sg	Sn	21 00 06.2	+1.9
EBEN2				i IVmb_Lg		21 00 09.5	
ETOR	Torete	1.45	306	Pn	Pb	20 59 50.0	+0.3
ETOR				Sn	Sg	21 00 09.5	-0.2
ETOR				i IVmb_Lg		21 00 12.7	
ETOB	Tobarra	1.56	211	Pn	Pn	20 59 50.6	+0.4
ETOB				Sn	Sn	21 00 10.6	+0.5
ETOB	Tobarra	1.56	211	Pn	Pb	20 59 51.2	-0.4
ETOB				Sn	Sb	21 00 11.0	-0.1
ETOB				i IVmb_Lg		21 00 19.6	
EIBI	Ibiza	1.72	123	Pn	Pn	20 59 52.5	+0.1
EIBI				Sn	Sn	21 00 13.0	-1.0
EIBI	Ibiza	1.72	123	Pn	Pn	20 59 52.9	+0.6
EIBI				Sn	Sn	21 00 13.5	-0.5
EIBI				i IVmb_Lg		21 00 14.3	
ESAC	San Caprasio	1.74	1	Pn	Pb	20 59 54.9	+0.4
ESAC				Sn	Sb	21 00 16.7	+0.5
EPOB	Poblet	1.82	41	Sn	Sn	21 00 18.3	+1.6
EPOB				i IVmb_Lg		21 00 23.3	
YEBES	Yebes (Guadala	2.05	286	Pn	Pn	20 59 58.3	+1.4
YEBES				Sn	Sn	21 00 23.9	+1.7
YEBES				i IVmb_Lg		21 00 34.4	
UCM	Universidad Co	2.12	280	Pn	Pn	20 59 58.9	+1.1
UCM				Sn	Sn	21 00 23.6	-0.3
EMUR	La Murta	2.21	195	Pn	Pb	21 00 01.4	-1.2
EMUR	La Murta	2.21	195	Pn	Pn	21 00 00.4	+1.3
EMUR				Sn	Sn	21 00 26.9	+0.8
EMUR				Sg	Sg	21 00 35.5	+1.4
EMUR				i IVmb_Lg		21 00 42.1	
EMIR	Miracle	2.47	38	Pn	Pn	21 00 04.1	+1.4
EMIR				Sn	Sn	21 00 33.3	+0.8
EMIR				Sg	Sg	21 00 42.1	-0.3
EMIR				i IVmb_Lg		21 00 47.6	
ETOS	Mallorca	2.57	94	Pn	Pn	21 00 04.5	+0.5
ETOS				Sn	Sn	21 00 34.1	-0.8
ETOS	Mallorca	2.57	94	Pn	Pn	21 00 04.7	+0.7
ETOS				Sn	Sn	21 00 33.8	-1.1
ETOS				i IVmb_Lg		21 00 57.8	
ESBB	Sonseca Array	2.68	265	Pn	Pn	21 00 06.5	+1.0
ESBB				Sn	Sn	21 00 38.8	+1.2
ESDC	Sonseca Array	2.68	264	Pn	Pn	21 00 06.5	+1.0
ESDC				Sn	Sn	21 00 38.1	+0.5
ESDC				i IVmb_Lg		21 00 48.9	
ECHI	Chisagues Biel	2.73	11	Pn	Pn	21 00 07.7	+1.4
ECHI				Sn	Sn	21 00 40.2	+1.1
ECHI				i IVmb_Lg		21 00 56.6	
PSIM	Granatula de C	2.77	246	Pn	Pn	21 00 07.6	+0.8
PSIM				Sn	Sn	21 00 40.2	+0.3
EARA	Aranguren	2.90	344	Pn	Pn	21 00 10.2	+1.6
EARA				Sn	Sn	21 00 44.9	+1.7
EARA				i IVmb_Lg		21 00 56.5	
ETSF	Etsaut	2.91	359	ePn	Pn	21 00 11.1	+2.3
ETSF				eSn	Sn	21 00 43.2	-0.3
	9.7nm,0.3s						
EQES	Quesada	2.96	223	Pn	Pn	21 00 10.7	+1.3
EQES				Sn	Sn	21 00 46.0	+1.4
EQES				i IVmb_Lg		21 01 04.7	
E0802	Ubeda,Jaen	2.97	230	Pn	Pn	21 00 10.7	+1.2
E0802				Sn	Sn	21 00 45.0	+0.2
EORO	Oroz-Betelu	2.97	349	Pn	Pn	21 00 11.1	+1.5
EORO				Sn	Sn	21 00 45.9	+1.0
EORO				Sg	Sg	21 00 58.0	-0.4
EORO				i IVmb_Lg		21 01 00.2	
PAB	San Pablo	2.99	263	Pn	Pn	21 00 10.6	+0.7
PAB				Sn	Sn	21 00 45.5	+0.1
PAB				i IVmb_Lg		21 01 02.9	
EPF	Esparros	3.11	12	ePn	Pn	21 00 13.7	+2.2
EPF				eSg	Sb	21 00 59.2	+3.5
	19nm,0.2s						
SJPF	Ste Jean	3.17	350	ePn	Pn	21 00 14.3	+2.0
SJPF				eSn	Sn	21 00 47.8	-2.1
	10nm,0.3s						
EALK	Alkurruntz	3.32	347	Pn	Pn	21 00 16.4	+2.0
EALK				Sn	Sn	21 00 53.5	-0.1
EALK				Sg	Sg	21 01 09.6	0.0
EALK				i IVmb_Lg		21 01 11.7	
EJON	La Jonquera	3.56	45	Pn	Pn	21 00 19.3	+1.7
EJON				Sn	Sn	21 00 58.5	-0.7
EJON	La Jonquera	3.56	45	Pn	Pn	21 00 19.4	+1.9
EJON				Sn	Sn	21 01 00.4	+1.1
EJON				Sg	Sg	21 01 16.5	-0.6
EJON				i IVmb_Lg		21 01 19.0	
EQTA	Presa de Quent	3.60	221	Sn	Sn	21 01 00.4	-0.1
EBER	Berja	3.60	212	Pn	Pn	21 00 21.5	+3.1
EADA	Adamuz	3.65	241	Pn	Pn	21 00 19.2	+0.3
EADA				Sn	Sn	21 00 59.5	-2.1
EADA	Adamuz	3.65	241	Pn	Pn	21 00 20.0	+1.1
EADA				Sn	Sn	21 01 01.5	-0.1
EADA				i IVmb_Lg		21 01 21.6	
ELAN	Lanestosa	3.92	327	Pn	Pn	21 00 24.3	+1.8
ELAN				Sn	Sn	21 01 09.7	+1.4
ELAN				Sg	Sg	21 01 28.4	-0.3
ELAN				i IVmb_Lg		21 01 30.7	
MTLF	Montolieu	3.93	30	ePn	Pn	21 00 24.4	+1.7
MTLF				ePg	Pg	21 00 37.3	-0.9
MTLF				eSg	Sg	21 01 27.5	-1.6
	21nm,0.4s						
EGOR	Sierra Gorda,	4.02	226	Sn	Sn	21 01 08.8	-2.2
EGOR	Sierra Gorda,	4.02	226	Pn	Pn	21 00 24.8	+0.6
EGOR				Sn	Sn	21 01 11.3	+0.3
EGOR				i IVmb_Lg		21 01 34.3	
ECAB	El Cabril	4.27	245	Pn	Pn	21 00 27.8	+0.4
ECAB				Sn	Sn	21 01 15.9	-1.1
ECAB	El Cabril	4.27	245	Pn	Pn	21 00 27.7	+0.4
ECAB				Sn	Sn	21 01 16.2	-0.8
ECAB				i IVmb_Lg		21 01 44.1	
EPLA	Plasencia	4.28	273	Pn	Pn	21 00 27.9	+0.4
EPLA				Sn	Sn	21 01 15.8	-1.3
EPLA				i IVmb_Lg		21 01 40.3	
ALT04	Santillana del	4.33	323	Pn	Pn	21 00 29.9	+1.7
ALT04				Sn	Sn	21 01 19.6	+1.2
EARI	Arriondas	4.84	315	Pn	Pn	21 00 36.6	+1.4
EARI				Sn	Sn	21 01 30.8	-0.1
EARI				i IVmb_Lg		21 01 49.5	
LFF	La Frestale	5.04	10	ePn	Pn	21 00 39.2	+1.3
LFF				eSn	Sn	21 01 32.3	-3.5
	5.2nm,0.3s						
PBRG	Braganca	5.06	293	ePn	Pn	21 00 38.9	+0.6
PBRG				eSn	Sn	21 01 34.0	-2.5
PBRG				i IAML		21 01 35.4	
PBRG				i IAML		21 01 35.5	
PBRG				i IAML		21 01 37.0	
MVO	Moncorvo	5.10	285	ePn	Pn	21 00 39.5	+0.6
MVO				eSn	Sn	21 01 35.8	-1.7
MVO				i IAML		21 01 36.9	
MVO				i IAML		21 01 37.2	

MVO				i IAML		21 01 39.0	
ECAL	Calabor	5.10	295	Pn	Pn	21 00 39.3	+0.4
ECAL				Sn	Sn	21 01 35.7	-1.8
ECAL	Calabor	5.10	295	Pn	Pn	21 00 39.3	+0.4
ECAL				Sn	Sn	21 01 36.0	-1.5
ECAL				i IVmb_Lg		21 01 44.3	
ESPR	Espera	5.22	235	Pn	Pn	21 00 40.3	-0.2
ESPR				Sn	Sn	21 01 40.1	-0.2
LASF	Ste Croix	5.22	37	ePn	Pn	21 00 42.0	+1.5
LASF				ePg	Pg	21 01 01.7	-1.3
LASF				eSg	Sg	21 02 08.3	-2.4
	6.8nm,0.4s						
CAF	Calviac	5.29	20	ePn	Pn	21 00 42.5	+1.0
CAF				eSn	Sn	21 01 40.8	-1.3
	1.6nm,0.3s						
PMRV	Marv??o	5.34	266	ePn	Pn	21 00 42.4	+0.4
PMRV				eSn	Sn	21 01 41.1	-2.1
PMRV				i IAML		21 02 13.8	
PMRV				i IAML		21 02 14.1	
PMRV				i IAML		21 02 20.0	
PCBR	Castelo Branco	5.36	271	ePn	Pn	21 00 42.7	+0.4
PCBR				eSn	Sn	21 01 41.8	-1.9
PCBR				i IAML		21 01 56.8	
PCBR				i IAML		21 02 16.7	
PBAR	Barrancos	5.39	253	Pn	Pn	21 00 43.2	+0.4
PBAR				Sn	Sn	21 01 43.7	-0.9
PBAR	Barrancos	5.39	253	ePn	Pn	21 00 43.0	+0.3
PBAR				eSn	Sn	21 01 44.0	-0.5
PBAR				i IAML		21 02 24.9	
PBAR				i IAML		21 02 25.0	
PBAR				i IAML		21 02 25.7	
MTE	Manteigas	5.40	277	ePn	Pn	21 00 43.0	0.0
MTE				eSn	Sn	21 01 43.5	-1.4
MTE				i IAML		21 02 18.3	
MTE				i IAML		21 02 21.6	
MTE				i IAML		21 02 27.9	
RJF	Les Rejaudoux	5.52	15	ePn	Pn	21 00 45.2	+0.6
RJF				eSn	Sn	21 01 44.3	-3.5
	3.6nm,0.3s						
PESTR	Estremoz	5.59	261	Sn	Sn	21 01 46.7	-2.8
PVIS	Viseu	5.69	280	ePn	Pn	21 00 46.8	-0.1
PVIS				eSn	Sn	21 01 49.0	-2.9
POLO	Lamas de Olo	5.71	286	ePn	Pn	21 00 47.4	+0.1
POLO				eSn	Sn	21 01 50.2	-2.3
POLO				i IAML		21 01 51.9	
POLO				i IAML		21 01 52.3	
PSARD	Sardoal	5.91	269⇓	ePn	Pn	21 00 49.9	+0.1
PSARD				eSn	Sn	21 01 54.0	-3.2
PSARD				i IAML		21 02 36.8	
PSARD				i IAML		21 02 36.9	
PSARD				i IAML		21 02 41.2	
PARRA	Arraiolos	5.95	261	ePn	Pn	21 00 50.9	+0.4
PARRA				eSn	Sn	21 01 55.6	-2.6
PARRA				i IAML		21 01 55.7	
PARRA				i IAML		21 02 35.2	
PARRA				i IAML		21 02 43.1	
EVO	Evora	6.00	258	Sn	Sn	21 01 56.9	-2.6
ELOB	Lobios	6.02	291	Pn	Pn	21 00 51.8	+0.3
ELOB				Sn	Sn	21 01 57.6	-2.5
ELOB				i IVmb_Lg		21 01 59.5	
PMTG	Montargil	6.04	264	ePn	Pn	21 00 51.9	+0.2
PMTG				eSn	Sn	21 01 57.9	-2.5
PMTG				i IAML		21 02 48.1	
PMTG				i IAML		21 02 49.7	
PMTG				i IAML		21 03 01.4	
PCAS	Casmilo, Conde	6.13	273	ePn	Pn	21 00 53.2	+0.2
PCAS				eSn	Sn	21 02 00.9	-1.9
PCAS				i IAML		21 02 46.8	
PCAS				i IAML		21 02 49.6	
PCAS				i IAML		21 02 53.3	
VIVF	Saint-Julien-l	6.20	37	ePn	Pn	21 00 55.0	+1.1
VIVF				eSg	Sg	21 02 38.0	-3.8
	3.0nm,0.3s						
PGAV	Gavieira, Arco	6.20	291	ePn	Pn	21 00 54.3	+0.3
PGAV				i IAML		21 01 59.2	
PGAV				i IAML		21 02 02.9	
PGAV				i IAML		21 02 03.3	
PVAQ	Vaqueiros	6.20	248	ePn	Pn	21 00 55.4	+1.6
PVAQ				eSn	Sn	21 02 03.6	-0.8
PVAQ				i IAML		21 02 44.9	
PVAQ				i IAML		21 02 47.3	
PVAQ				i IAML		21 02 52.6	
LMR	La Mourre	6.23	55	eSn	Sn	21 02 03.5	-1.7
	1.4nm,0.2s						
MOE	Montemor	6.26	259	ePn	Pn	21 00 56.6	+1.9
MOE				eSn	Sn	21 02 05.6	-0.3
MOE				i IAML		21 02 44.3	
MOE				i IAML		21 02 47.6	
MOE				i IAML		21 02 55.9	
PCVE	Castro Verde	6.33	251	Sn	Sn	21 02 02.7	-5.0
TCF	Toulx Ste Croi	6.61	17	ePn	Pn	21 00 58.6	-0.9
MFF	Saint Martin d	6.62	2	ePn	Pn	21 00 59.7	+0.1
BGF	Bois d'Agland	7.01	19	ePn	Pn	21 01 04.8	-0.2
AVF	Avril sur Loir	7.36	21	ePn	Pn	21 01 10.2	+0.4
SMF	Signal de Mont	7.38	24	ePn	Pn	21 01 11.3	+1.3

*BER **04** 21:12:27.3±3.0, 81°.19N×4°.01W, h10km, Mw3.0, ML1.7(DNK), Confirmed Earthquake*
*DNK **04** 21:12:28.5±4.0, 81°.24N×3°.53W, h36km±38km, ML1.7, Presumed earthquake*
*FCIAR **04** 21:12:31.0, 80°.82N×2°.11W, h10km, station ZFI2 has station magnitude of 3.20*
ISC 04 21:12:24.2±1.2**, 81°.11N**±0°.07×**4°.01W**±0°.05**, h10**km**, n17, σ2s.62**/26**, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOR	Nord	1.98	291	i P	Pn	21 13 01.3	+3.7
NOR				i S	Sn	21 13 18.8	-3.6
NOR				IAML		21 13 29.4	
	comp=Z,5.5nm,0.6s						
NOR	Nord	1.98	291	i P	Pn	21 13 01.3	+3.7
NOR				i S	Sn	21 13 18.8	-3.6
NOR				IAML		21 13 29.4	
	comp=Z,5.5nm,0.6s						
KBS	Kingsbay	3.53	120	eP	Pn	21 13 19.5	+0.6
KBS				eS	Sn	21 13 55.4	-5.2
KBS				IAML		21 14 02.1	
	comp=Z,2.4nm,0.5s						
KBS	Kingsbay	3.53	120	eP	Pn	21 13 19.5	+0.6
KBS				i S	Sn	21 13 56.2	-4.4
BRBB	Barentsburg B	4.46	123	eP	Pn	21 13 33.9	+2.2
BRBB				eS	Sn	21 14 21.6	-1.8
BRBA	Barentsburg A	4.48	124	eP	Pn	21 13 34.7	+2.7
BRBA				eS	Sn	21 14 23.4	-0.7
BRBA				IAML		21 14 29.0	
	comp=Z,2.4nm,0.6s						
SPA0	Spitsbergen Ar	4.68	118	eP	Pn	21 13 36.3	+1.6
SPA0				eS	Sn	21 14 27.3	-1.7
SPA0				IAML		21 14 34.6	
	comp=Z,2.5nm,0.8s						
SPA0	Spitsbergen Ar	4.68	118	eP	Pn	21 13 35.7	+1.0
SPA0				eS	Sn	21 14 22.7	-6.3
DAG	Danmarks Havn	5.17	220	i P	Pn	21 13 44.2	+2.8
DAG				i S	Sn	21 14 38.0	-3.0
DAG				IAML		21 14 50.9	
	comp=Z,2.2nm,0.3s						
DAG	Danmarks Havn	5.17	220	i P	Pn	21 13 44.2	+2.8
DAG				i S	Sn	21 14 38.0	-3.0
DAG				IAML		21 14 50.9	
	comp=Z,2.2nm,0.3s						
HSPB	Hornsund (broa	5.52	128	eP	Pn	21 13 48.1	+1.9
HSPB				IAML		21 14 46.4	
	comp=Z,1.2nm,0.8s						
HSPB				eS	Sn	21 14 47.2	-2.4
HSPB	Hornsund (broa	5.52	128	eP	Pn	21 13 48.0	+1.8
HSPB				S	Sn	21 14 44.1	-5.4
HOPEN	Hopen	7.18	114	eP	Pn	21 14 09.5	+0.5
HOPEN				eS	Sn	21 15 24.4	-6.1
HOPEN				IAML		21 15 35.0	
	comp=Z,1.9nm,1.1s						
DBG	Daneborg	7.61	215	i P	Pn	21 14 17.9	+3.0
DBG				i S	Sn	21 15 35.8	-5.3
DBG				IAML		21 16 02.7	
	comp=Z,3.8nm,1.1s						
DBG	Daneborg	7.61	215	i P	Pn	21 14 17.9	+3.0
DBG				i S	Sn	21 15 35.8	-5.3
DBG				IAML		21 16 02.7	
	comp=Z,3.8nm,1.1s						
ZFI2	Zemlya Franca-	7.91	66	eP	Pn	21 14 19.3	+0.3
ZFI2				eS	Sn	21 15 40.0	-8.3
	comp=Z,6.1nm,3.2s						
OMEGA	Omega	7.93	67	eP	Pn	21 14 19.5	+0.2
OMEGA				eS	Sn	21 15 40.0	-8.9

*FUNV **04** 21:38:30.2, 10°.36N×72°.45W, h14km, MW3.6, Presumed earthquake*
*RSNC **04** 21:38:30.5±0.0, 10°N±1°×7°2W±°, h0km±3km, M2.6, ML2.5*
ISC 04 21:38:28.4±1.8**, 10°.30N**±0°.03×**72°.40W**±0°.03**, h1**km±15km**, n18, σ1s.74**/30**, 1C, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQV	Machiques	0.28	208⇑	iP	Pb	21 38 36.4	+0.2
MCQV				eS	Sb	21 38 41.5	+0.1
CRJC	Cerrejon, Guaj	0.86	327	P	Pb	21 38 45.7	-0.4
CRJC				S	Sg	21 38 57.1	+1.1
URIC	Uribia, Colomb	1.45	16	P	Pn	21 38 55.8	0.0
URIC				S	Sg	21 39 16.3	+1.2
ARGC	Ariguani, Magd	1.87	257	P	Pn	21 39 00.9	-0.6
ARGC				S	Sn	21 39 24.4	-1.3
SMRC	Santa Marta, M	1.99	296	P	Pb	21 39 04.5	-0.8
SMRC				S	Sn	21 39 28.9	+0.2
OCAC	Ocana	2.24	204	P	Pb	21 39 08.1	-1.6
OCAC				S	Sb	21 39 37.2	-0.8
SDV	Santo Domingo	2.24	129	P	Pn	21 39 06.9	+0.1
SDV				S	Sg	21 39 40.2	-0.2
CAPV	Capacho	2.42	178	eP	Pn	21 39 09.8	+0.5
CAPV				eS	Sn	21 39 38.4	-1.3
SOCV	Socops	2.52	143	eP	Pn	21 39 11.2	+0.7
SOCV				eS	Sn	21 39 41.7	-0.1
SJCC	San Jacinto, C	2.76	262	P	Pn	21 39 15.1	+1.2
SJCC				S	Sn	21 39 48.7	+0.7
PAMC	Pamplona, Colo	2.96	186	P	Pn	21 39 18.0	+1.1
PAMC				S	Sn	21 39 55.2	+1.9
TEPV	Terepaima	3.18	96	eP	Pn	21 39 20.2	+0.6
MAPV	Macapo	3.91	96	eP	Pn	21 39 29.4	-0.2
MAPV				eS	Sn	21 40 12.5	-3.9
RUSC	La Rusia	4.43	189	eP	Pn	21 39 36.8	-0.4
TURV	Turiamo	4.49	88	eP	Pn	21 39 37.1	-0.6
BENV	Beln	4.74	94	eP	Pn	21 39 40.7	-0.4
TACV	Tcata	5.29	91	eP	Pn	21 39 47.5	-1.2
CACV	CAICARA DEL OR	6.40	115	eP	Pn	21 40 09.8	+5.9
CACV				eS	Sn	21 41 24.1	+6.6

*SJA **04** 21:48:35.9±0.6, 20°.32S×69°.21W, h124km±3km, ML3.8, MW3.7*
*GUC **04** 21:48:37.8±0.8, 20°.33S×69°.15W, h114km±3km, ML3.9*
ISC 04 21:48:36.6±1.5**, 20°.35S**±0°.03×**69°.25W**±0°.07**, h123**km±7km**, n30, σ0s.88**/55**, 5C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.23	23⇓	iP	Pn	21 48 54.2	-0.1
PB08				i S	Sn	21 49 06.0	-1.4
PB08				IAML		21 49 07.2	
	comp=N,4μm,0.2s						
PB08	IPOC Station P	0.23	23	eP	Pn	21 48 54.0	-0.2
PB08				eS	Sn	21 49 07.1	-0.3
PB08				IAML		21 49 07.3	
	comp=Z,2μm,0.2s						
PX03	IPOC Station P	0.36	262	i P	Pn	21 48 53.8	-0.5
HMBC	Humberstone	0.61	277⇑	iP	Pn	21 48 55.8	0.0
HMBC				i S	Sn	21 49 09.2	-1.0
HMBC				IAML		21 49 15.3	
	comp=N,3μm,0.4s						
HMBC	Humberstone	0.61	277	eP	Pn	21 48 55.8	0.0
HMBC				eS	Sn	21 49 10.1	-0.1
HMBC				IAML		21 49 14.6	
	comp=Z,2μm,0.3s						
GO01	Chusmiza	0.68	4⇓	iP	Pn	21 48 56.5	-0.2
GO01				i S	Sn	21 49 11.0	-0.8
GO01				IAML		21 49 12.6	
	comp=N,4μm,0.2s						
GO01	Chusmiza	0.68	4	eP	Pn	21 48 56.6	-0.2
GO01				eS	Sn	21 49 11.6	-0.2
GO01				IAML		21 49 13.1	
	comp=Z,942nm,0.3s						
PB11	IPOC Station P	0.70	327⇓	iP	Pn	21 48 56.7	+0.2
PB11				i S	Sn	21 49 11.2	-0.3
PB11				IAML		21 49 12.4	
	comp=E,9μm,0.4s						
PB11	IPOC Station P	0.70	327	eP	Pn	21 48 56.6	+0.2
PB11				eS	Sn	21 49 11.6	+0.1
PB11				IAML		21 49 13.8	
	comp=Z,2μm,0.2s						
PB01	IPOC Station P	0.73	198⇑	iP	Pn	21 48 57.0	+0.4
PB01				i S	Sn	21 49 11.4	-0.3
PB01				IAML		21 49 12.3	
	comp=E,6μm,0.2s						
PB01	IPOC Station P	0.73	198	eP	Pn	21 48 57.0	+0.4
PB01				eS	Sn	21 49 11.8	+0.1
PB01				IAML		21 49 12.9	
	comp=Z,5μm,0.1s						
TA02	Huaiquique	0.83	275	i P	Pn	21 48 57.9	+0.5
TA02				i S	Sn	21 49 13.1	+0.1
TA02	Huaiquique	0.83	275	eP	Pn	21 48 58.0	+0.5
TA02				eS	Sn	21 49 14.0	+1.0
TA02				IAML		21 49 14.9	
	comp=Z,2μm,0.3s						
PB02	IPOC Station P	1.14	212⇑	iP	Pn	21 49 01.3	+0.8
PB02				i S	Sn	21 49 19.3	+0.7
PB02				IAML		21 49 21.0	
	comp=E,4μm,0.2s						
PB02	IPOC Station P	1.14	212	eP	Pn	21 49 00.8	+0.3
PB02				eS	Sn	21 49 19.7	+1.2
PB02				IAML		21 49 25.7	
	comp=Z,3μm,0.2s						
PB09	IPOC Station P	1.44	180⇑	iP	Pn	21 49 04.7	+0.9
PB09				i S	Sn	21 49 24.9	+0.5
PB09				IAML		21 49 27.5	
	comp=E,1μm,0.4s						
PB09	IPOC Station P	1.44	180	eP	Pn	21 49 04.5	+0.7
PB09				eS	Sn	21 49 25.7	+1.3
PB09				IAML		21 49 27.9	
	comp=Z,1μm,0.5s						
PB07	IPOC Station P	1.50	203⇑	iP	Pn	21 49 05.0	+0.6
PB07				i S	Sn	21 49 25.5	0.0
PB07				IAML		21 49 27.8	
	comp=N,1μm,0.1s						
PB07	IPOC Station P	1.50	203	eP	Pn	21 49 04.9	+0.5
PB07				eS	Sn	21 49 26.4	+0.8
PB07				IAML		21 49 31.5	
	comp=Z,809nm,0.1s						
PB12	IPOC Station P	2.01	329	i P	Pn	21 49 10.4	0.0
PB12				i S	Sn	21 49 35.0	-1.2
PB12	IPOC Station P	2.01	329	eP	Pn	21 49 10.5	0.0
PB12				eS	Sn	21 49 35.6	-0.7
PB12				IAML		21 49 37.9	
	comp=Z,207nm,0.5s						
PB16	IPOC Station P	2.02	353	i P	Pn	21 49 12.1	+1.0
PB16				i S	Sn	21 49 37.9	+0.6
PB16	IPOC Station P	2.02	353	eP	Pn	21 49 12.7	+1.6
PB16				eS	Sn	21 49 39.0	+1.7
AP01	Chacalluta	2.22	332	eP	Pn	21 49 13.4	+0.3
AP01				IAML		21 50 05.6	
	comp=N,579nm,0.4s						
AP01	Chacalluta	2.22	332	eP	Pn	21 49 19.8	+6.7
AP01				eS	Sn	21 49 39.5	-1.5
AP01				IAML		21 49 49.7	
	comp=Z,295nm,0.6s						
PB06	IPOC Station P	2.36	187	i P	Pn	21 49 15.4	+0.4
PB06				i S	Sn	21 49 42.2	-2.2
PB06				IAML		21 49 50.0	
	comp=E,538nm,0.4s						
PB06	IPOC Station P	2.36	187	eP	Pn	21 49 15.7	+0.7
PB06				eS	Sn	21 49 45.5	+1.1
PB06				IAML		21 49 52.6	
	comp=Z,350nm,0.1s						
PB18	Visviri	2.75	355	eP	Pn	21 49 25.2	+4.8
PB14	IPOC Station P	4.39	194	eP	Pn	21 49 40.7	-1.0
PB14				eS	Sn	21 50 29.6	-2.6
PB14				IAML		21 50 32.1	
	comp=Z,54nm,0.3s						
GO02	Mina Guanaco	4.80	184	eP	Pn	21 49 47.3	0.0
GO02				eS	Sn	21 50 41.3	-0.8
GO02				IAML		21 50 45.1	
	comp=Z,94nm,0.1s						

DJA 04 22:07:03.2±0.4**, 4°S**±2°×**12°0E**±°**, h10**km**, M1.9**/7**, MLv1.9**/7**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPSI	Sidrap Palu	0.14	145	P	Pg	22 07 07.6	+1.2
SPSI				S	Sg	22 07 10.1	+1.5
PMSI	Majene	0.85	294	P	Pg	22 07 19.8	+0.2

*IDC **04** 22:08:15.5±0.5, 56°.78S×23°.44W, h0km, mb4.5/11, mbtmp4.5/12, ML4.7/1, MS3.6/20, Error ellipse: s-maj=19.5km s-min=17.4km az=77.0*
*NEIC **04** 22:08:17.6±1.2, 56°.91S±0°.10×23°.6W±0°.2, h10km±1km, mb4.9/36, Error ellipse: s-maj=16.9km s-min=14.3km az=204.0*
ISC 04 22:08:17.1±0.3**, 56°.91S**±0°.07×**23°.57W**±0°.07**, h10**km**, n93, σ1s.43**/80**, mb4.8**/18**, MS3.7**/19**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	7.78	284		Pn	22 10 09.6	-0.6
SNAA	Sanae	17.16	158	P	P	22 12 20.9	+2.6
SNAA	Sanae	17.16	158	P	P	22 12 18.7	+0.5
	2.5nm,0.3s,baz=335,slow=17,SNR=20						
SNAA				S	Sn	22 15 19.5	-7.7
	2.0nm,0.7s,baz=242,slow=18,SNR=1.6						
SNAA				LR	LR	22 17 10.5	
	comp=Z,85nm,18.1s,baz=182,slow=31						
	6.0nm,0.3s						
SNAA	Sanae	17.16	158		Pn	22 12 17.4	+0.7
ESPZ	Base Esperanza	17.70	235	Pn	Pn	22 12 22.4	-0.9
ESPZ				IAmb	IAmb	22 12 23.0	
	comp=Z,97nm,1.2s						
TROLL	Troll, Antarti	18.59	155	P	Pn	22 12 38.9	+4.5
EFI	East Falkland	20.65	270	P	P	22 12 55.9	-0.7
EFI				IAmb	IAmb	22 13 01.0	
	comp=Z,123nm,1.5s						
PMSA	Palmer Station	20.89	231	P	P	22 13 00.5	+1.5
	comp=Z,19nm,0.4s,baz=82,slow=7.2,SNR=11						
PMSA				LR	LR	22 19 42.0	
	comp=Z,304nm,19.3s,baz=110,slow=33						
	comp=Z,19nm,0.4s						
PMSA	Palmer Station	20.89	231	P	P	22 12 59.7	+0.7
BELA	Belgrano 2	21.40	186	P	P	22 13 05.0	+0.5
MG02	Cerro Sombrero	26.22	259	P	P	22 13 50.8	-1.0
MG03	Isla Dawson	26.41	257	P	P	22 13 54.1	+0.7
TRQA	Tornquist	31.51	290	P	P	22 14 38.8	-0.2
PLTB	Pedras Altas	32.59	308	P	P	22 14 49.2	+0.6
PLTB				IAmb	IAmb	22 14 50.3	
	comp=Z,8.3nm,0.8s						
AY01	Puyuhuapi	32.79	271	P	P	22 14 48.5	-1.6
QSPA	South Pole Qui	33.34	180	P	P	22 14 56.3	+1.4
	comp=Z,3.4nm,0.7s,baz=214,slow=3.9,SNR=10						
QSPA				PcP	PcP	22 17 36.9	+0.6
	comp=Z,2.2nm,0.6s,baz=137,slow=6.7,SNR=2.4						
QSPA				LR	LR	22 27 45.8	
	comp=Z,51nm,21.1s,baz=174,slow=35						
	comp=Z,3.4nm,0.7s						
QSPA	South Pole Qui	33.34	180	P	P	22 14 55.5	+0.5
QSPA				IAmb	IAmb	22 15 07.8	
	comp=Z,22nm,1.4s						
PLCA	Paso Flores	34.12	278	P	P	22 15 02.0	+0.1
	comp=Z,3.1nm,1.1s,baz=133,slow=4.3,SNR=4.1						
PLCA				LR	LR	22 27 50.0	
	comp=Z,113nm,21.8s,baz=138,slow=34						
	comp=Z,3.1nm,1.1s						
PLCA	Paso Flores	34.12	278	P	P	22 15 01.7	-0.2
PLCA				IAmb	IAmb	22 15 58.0	
	comp=Z,26nm,2.0s						
MAW	Mawson	38.25	142	LR	LR	22 29 46.6	
	comp=Z,46nm,18.8s,baz=228,slow=34						
CPUP	Villa Florida	38.91	307	P	P	22 15 41.8	-0.9
	comp=Z,7.6nm,0.9s,baz=148,slow=10,SNR=15						
CPUP				LR	LR	22 32 40.6	
	comp=Z,31nm,18.9s,baz=188,slow=38						
	comp=Z,7.6nm,0.9s						
CPUP	Villa Florida	38.91	307	P	P	22 15 41.9	-0.9
SUR	Sutherland	38.98	70	LR	LR	22 27 33.1	
	comp=Z,235nm,20.4s,baz=208,slow=30						
SUR	Sutherland	38.98	70	P	P	22 15 42.9	-0.6
AQDB	Aquidauana	43.42	313	P	P	22 16 19.3	-0.5
BOSA	Boshof	44.28	71	P	P	22 16 24.6	-2.3
	comp=Z,2.3nm,0.8s,baz=220,slow=8.7,SNR=4.6						
BOSA				LR	LR	22 30 59.4	
	comp=Z,139nm,19.2s,baz=208,slow=31						
	comp=Z,2.3nm,0.8s						
BOSA	Boshof	44.28	71	P	P	22 16 25.5	-1.4
BOSA				IAmb	IAmb	22 17 55.9	
	comp=Z,29nm,1.8s						
BDFB	Brasilia	45.16	326	LR	LR	22 33 18.3	
	comp=Z,66nm,18.3s,baz=113,slow=33						
VNDA	Vanda	45.79	182	P	P	22 16 38.4	+0.2
	comp=Z,2.2nm,0.7s,baz=188,slow=8.1,SNR=3.3						
	comp=Z,2.2nm,0.7s						
VNDA	Vanda	45.79	182	P	P	22 16 38.6	+0.5
VNDA				IAmb	IAmb	22 17 23.7	
	comp=Z,42nm,2.0s						
KOOLE	Kule	46.38	62	P	P	22 16 43.7	+0.1
KOOLE				IAmb	IAmb	22 16 57.1	
	comp=Z,12nm,0.8s						
LBTB	Lobatse	47.39	69	LR	LR	22 32 30.8	
	comp=Z,105nm,21.7s,baz=203,slow=31						
LBTB	Lobatse	47.39	69	P	P	22 16 51.5	+0.1
KGCAE	Kacgae	47.48	64	P	P	22 16 52.2	+0.1
PB09	IPOC Station P	48.33	297	P	P	22 16 59.3	+0.5
TSUM	Tsumeb	48.42	56	LR	LR	22 32 24.0	
	comp=Z,37nm,21.3s,baz=148,slow=30						
TSUM	Tsumeb	48.42	56	P	P	22 16 59.3	-0.1
TSUM				IAmb	IAmb	22 17 01.8	
	comp=Z,7.3nm,0.9s						
PTLB	Pontes e Lacer	49.34	312	P	P	22 17 06.5	+0.1
PTLB				IAmb	IAmb	22 17 08.0	
	comp=Z,17nm,0.9s						
H10N1	ASCENSION HYDR	49.45	12	T	T	23 10 34.2	
	baz=187						
H10N3	ASCENSION HYDR	49.46	12	T	T	23 10 31.9	
	baz=187,slow=74,SNR=5.3						
H10N2	ASCENSION HYDR	49.47	12	T	T	23 10 34.8	
	baz=187,slow=74,SNR=3.6						
PB08	IPOC Station P	49.69	298	P	P	22 17 10.3	+0.8
PB08				IAmb	IAmb	22 17 15.0	
	comp=Z,15nm,1.2s						
KHWEE	KHWEE	49.85	66	P	P	22 17 09.7	-0.7
KHWEE				IAmb	IAmb	22 17 23.8	
	comp=Z,16nm,1.1s						
GO01	Chusmiza	50.12	299	P	P	22 17 13.3	+0.4
GO01				IAmb	IAmb	22 17 17.9	
	comp=Z,15nm,0.8s						
LPAZ	La Paz	52.53	302	P	P	22 17 31.8	+0.7
	comp=Z,8.6nm,0.6s,baz=153,slow=5.8,SNR=32						
LPAZ				LR	LR	22 40 17.4	
	comp=Z,18nm,20.4s,baz=208,slow=37						
	comp=Z,8.6nm,0.6s						
LPAZ	La Paz	52.53	302	P	P	22 17 31.9	+0.8
LPAZ				IAmb	IAmb	22 17 46.2	
	comp=Z,15nm,0.9s						
KSANE	Kasane	53.22	63	P	P	22 17 36.0	+0.3
LSZ	Lusaka	56.86	65	LR	LR	22 38 48.7	
	comp=Z,74nm,19.6s,baz=201,slow=32						
LSZ	Lusaka	56.86	65	P	P	22 18 02.5	+0.5
LSZ				IAmb	IAmb	22 18 16.1	
	comp=Z,22nm,1.6s						
DBIC	Dimbokro	65.19	21	P	P	22 18 57.5	-0.8
	comp=Z,4.8nm,0.8s,baz=219,slow=3.1,SNR=4.3						
	comp=Z,4.8nm,0.8s						
DBIC	Dimbokro	65.19	21	P	P	22 18 58.2	-0.1
ATAH	Atahualpa	65.37	297	LR	LR	22 49 23.0	
	comp=Z,24nm,18.6s,baz=61,slow=38						
BOAV	Boa Vista	66.22	319		P	22 19 05.0	0.0
BOAV				IAmb	IAmb	22 19 06.2	
	comp=Z,11nm,1.0s						
MBAR	Mbarara	70.81	59	LR	LR	22 48 36.6	
	comp=Z,60nm,18.3s,baz=209,slow=34						
OTAV	Otavalo	71.81	301	P	P	22 19 40.7	+0.4
TORD	Torodi Ar. Bea	72.89	26	P	P	22 19 46.8	+0.7
	comp=Z,12nm,0.7s,baz=202,slow=8.2,SNR=72						
	comp=Z,12nm,0.7s						
SDV	Santo Domingo	76.06	312	LR	LR	22 52 37.8	
	comp=Z,38nm,21.6s,baz=112,slow=35						
SDV	Santo Domingo	76.06	312	P	P	22 20 05.4	+0.5
SDV				IAmb	IAmb	22 20 06.6	
	comp=Z,6.2nm,0.8s						
THZ	Tophouse	80.72	192	P	P	22 20 30.6	+0.4
FURI	Furi	82.88	62	LR	LR	22 56 13.1	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,46nm,18.3s,baz=204,slow=35						
TAM	**Tamanrasset**	**83.09**	**27**	P	**P**	**22 20 44.1**	**+1.3**
STKA	**Stephens Creek**	**90.67**	**167**	P	**P**	**22 21 20.6**	**+0.8**
	comp=Z,1.1nm,0.3s,baz=165,slow=4.1,SNR=3.5						
STKA				LR	LR	23 01 03.5	
	comp=Z,31nm,18.1s,baz=203,slow=35						
	comp=Z,1.1nm,0.3s						
MD01	**Midelt array s**	**90.84**	**16**	P	**P**	**22 21 22.4**	**+2.1**
PPT	**Papeete**	**93.26**	**231**	LR	LR	22 53 14.3	
	comp=Z,58nm,21.4s,baz=153,slow=29						
ASAR	**Alice Springs**	**97.52**	**159**	P	Pdif	22 21 51.9	+0.5
	comp=Z,0.5nm,0.7s,baz=187,slow=4.1,SNR=5.2						
	comp=Z,0.5nm,0.7s						
ASAR	**Alice Springs**	**97.52**	**159**	P	**P**	**22 21 51.4**	**+0.1**
EIL	**Elat**	**99.35**	**49**	LR	LR	23 03 26.9	
	comp=Z,28nm,18.1s,baz=242,slow=33						
PDAR	**Pinedale Array**	**122.51**	**299**	PKP	**PKPdf**	**22 27 09.7**	**-2.4**
	comp=Z,0.5nm,0.7s,baz=192,slow=5.8,SNR=3.9						
PDAR	**Pinedale Array**	**122.51**	**299**		**PKPdf**	**22 27 10.9**	**-1.2**
CMAR	**Chiang Mai Arr**	**122.88**	**108**	PKP	**PKiKP**	**22 27 13.5**	**+0.1**
	comp=Z,1.5nm,0.4s,baz=236,slow=3.8,SNR=15						
CMAR	**Chiang Mai Arr**	**122.88**	**108**		**PKiKP**	**22 27 13.3**	**-0.1**
NVAR	**Mina Array Bea**	**123.58**	**290**	PKP	**PKiKP**	**22 27 14.9**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=149,slow=4.3,SNR=4.0						
FINES	**FINESS Array B**	**124.23**	**26**	PKP	**PKPdf**	**22 27 13.3**	**-1.1**
	comp=Z,2.5nm,0.7s,baz=174,slow=1.9,SNR=5.9						
FINES	**FINESS Array B**	**124.23**	**26**		**PKPdf**	**22 27 14.1**	**-0.3**
KK31	**Karatay Array**	**126.72**	**66**		**PKiKP**	**22 27 20.1**	**-0.2**
KKAR	**Karatay Array**	**126.72**	**66**		**PKiKP**	**22 27 20.2**	**-0.1**
ARCES	**ARCESS Array B**	**131.02**	**21**	PKP	**PKPdf**	**22 27 25.3**	**-1.9**
	comp=Z,1.9nm,0.7s,baz=183,slow=2.2,SNR=5.2						
BVAR	**Borovoye Array**	**133.57**	**56**	PKP	**PKPdf**	**22 27 32.1**	**-0.4**
	comp=Z,2.9nm,0.9s,baz=259,slow=1.3,SNR=11						
MKAR	**Makanchi Array**	**135.28**	**70**	PKP	**PKPdf**	**22 27 35.1**	**-0.8**
	comp=Z,0.7nm,1.0s,baz=256,slow=3.1,SNR=4.9						
MKAR	**Makanchi Array**	**135.28**	**70**		**PKPdf**	**22 27 35.3**	**-0.6**
KURBB	**Kurchatov Arra**	**135.87**	**63**	PKP	**PKPdf**	**22 27 35.0**	**-1.8**
	comp=Z,0.6nm,0.8s,baz=243,slow=2.8,SNR=7.0						
YKA	**Yellowknife Ar**	**138.17**	**316**	PKP	**PKPdf**	**22 27 39.4**	**-1.3**
	comp=Z,1.4nm,0.9s,baz=121,slow=1.2,SNR=15						
YKA				PP	**PP**	**22 30 27.6**	**-3.0**
	comp=Z,0.3nm,0.8s,baz=124,slow=6.2,SNR=4.7						
YKA	**Yellowknife Ar**	**138.17**	**316**		**PKPdf**	**22 27 40.8**	**+0.1**
ZALV	**Zalesovo Beam**	**140.96**	**63**	PKP	**PKPdf**	**22 27 43.6**	**-2.5**
	comp=Z,0.3nm,0.3s,baz=242,slow=3.2,SNR=4.0						
P33M	**Teslin, Yukon**	**144.56**	**306**		**PKPdf**	**22 27 52.5**	**+0.1**
BTO2	**Baotou**	**146.12**	**98**	*e*P	**PKPab**	**22 27 57.8**	**+0.4**
BTO2				pmax	pmax		
	comp=Z,45nm,0.8s						
BTO2				pmax	pmax		
	comp=Z,300nm,3.8s						
NRIK	**Noril'sk**	**148.41**	**39**	PKPbc	**PKPbc**	**22 28 01.4**	**-0.6**
	comp=Z,5.1nm,0.7s,baz=43,slow=0.1,SNR=13						
SONM	**Songino Array**	**148.78**	**85**	PKPbc	**PKPbc**	**22 28 03.0**	**-0.8**
	comp=Z,2.8nm,0.9s,baz=222,slow=3.2,SNR=15						
ULN	**Ulaanbaatar**	**149.16**	**86**	PKPdf	**PKPdf**	**22 28 00.2**	**-0.4**
TLY	**Talaya**	**149.41**	**77**	PKPbc	**PKPbc**	**22 28 05.1**	**0.0**
BCAR	**Beaver Creek A**	**149.60**	**308**	PKPbc	**PKiKP**	**22 28 05.9**	**-0.4**
ILAR	**Eielson Array**	**152.20**	**310**	PKPbc	**PKiKP**	**22 28 11.8**	**+0.2**
	comp=Z,4.5nm,0.8s,baz=135,slow=2.7,SNR=44						
MJAR	**Matsushiro Arr**	**156.25**	**141**	PKPab	**PKPab**	**22 28 40.3**	**+1.1**
	comp=Z,0.7nm,0.4s,baz=188,slow=4.8,SNR=4.1						

DJA 04 22:09:40.1±0.4**,7°S**±3°×**10°5E**±°**,h10**km**,M3.4**/12**, MLv3.4**/12**,Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGJI	**Cibinong**	**0.62**	**42**	P	Pb	22 09 53.2	+0.1
CGJI				S	Sg	22 10 00.7	+0.2
SBJI	**Serang**	**1.28**	**42**	P	Pn	22 10 03.0	-1.1
SBJI	**Serang**	**1.28**	**42**	P	Pg	22 10 08.5	+3.8
DBJI	**Dramaga**	**1.56**	**71**	P	Pn	22 10 08.2	+0.3
DBJI				S	Sn	22 10 27.9	-0.3
DBJI	**Dramaga**	**1.56**	**71**	P	Pg	22 10 13.8	+3.7
BLSI	**Bandar Lampung**	**1.70**	**359**	P	Pn	22 10 08.0	-1.9
KASI	**Kota Agung**	**1.73**	**334**	P	Pn	22 10 09.2	-1.0
LWLI	**Liwa**	**2.38**	**329**	P	Pn	22 10 20.1	+0.8
BBJI	**Bungbulang**	**2.39**	**99**	P	Pn	22 10 20.0	+0.6
KLSI		**2.43**	**347**	P	Pn	22 10 20.2	+0.2
KLSI		**2.43**	**347**	P	Pn	22 10 21.0	+1.0

*IDC **04** 23:19:08.0±2.0, 23°32N×142°36E, h120km±17km, mb3.7/18, mbtmp4.1/21, Error ellipse: s-maj=17.6km s-min=12.2km az=75.0*
*NEIC **04** 23:19:12.0±1.3, 23°43N±0°09×142°3E±0°1, h146km±6km, mb4.2/18, Error ellipse: s-maj=19.9km s-min=13.1km az=76.0*
*JMA **04** 23:19:12.6±0.1, 23°8N±0°9×14°3E±°, h199km, MV5.1/20, IOTO ISLANDS REGION*
ISC 04 23:19:11.2±0.5**,23°44N**±0°07×**142°3E**±0°1**,h150**km**,n63, σ1§21**/64**,mb4.1**/28**,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**3.18**	**357**	P	**Pn**	**23 20 01.1**	**+0.2**
JHH2				S	**Sn**	**23 20 38.6**	**-0.8**
CBIJ	**Chichi jima**	**3.65**	**358**	P	**Pn**	**23 20 06.5**	**-0.3**
CBIJ				*e*S	**Sn**	**23 20 48.3**	**-1.7**
JCJ	**Chichijima**	**3.65**	**358**	P	**Pn**	**23 20 05.8**	**-1.0**
	180nm,0.3s,baz=343,slow=24,SNR=101						
JCJ				S	**Sn**	**23 20 47.5**	**-2.5**
	147nm,0.3s,baz=142,slow=14,SNR=4.0						
JCJ	**Chichijima**	**3.65**	**358**		**Pn**	**23 20 06.6**	**-0.2**
JCJ				Sn	**Sn**	**23 20 49.2**	**-0.8**
BSO1	**Boso 1**	**11.24**	**354**	*e*P	**Pn**	**23 21 44.8**	**-2.1**
BSO3	**Boso 3**	**11.44**	**352**	*e*P	**Pn**	**23 21 46.6**	**-3.1**
JOD2	**Odawara 2**	**12.12**	**347**	*e*P	**Pn**	**23 21 56.6**	**-2.3**
JGF	**Kuroka**	**12.87**	**341**	Pn	**Pn**	**23 22 06.8**	**-1.9**
JRY	**Ryogami san**	**12.88**	**347**	*e*P	**Pn**	**23 22 05.7**	**-3.2**
MJAR	**Matsushiro Arr**	**13.54**	**346**	P	**Pn**	**23 22 16.9**	**-0.3**
	0.7nm,0.3s,baz=157,slow=13,SNR=1.9						
MAJO	**Matsushiro**	**13.54**	**346**	Pn	**Pn**	**23 22 16.0**	**-1.2**
KSRS	**Korea Array**	**18.66**	**322**	P	**Pn**	**23 23 19.0**	**-0.7**
	3.6nm,0.7s,baz=138,slow=11,SNR=7.7						
H11N1	**WAKE ISLAND Hy**	**23.13**	**95**	T	T	23 48 04.6	
	baz=280						
H11N2	**WAKE ISLAND Hy**	**23.13**	**94**	T	T	23 48 04.6	
	baz=280,slow=74,SNR=4.2						
H11N3	**WAKE ISLAND Hy**	**23.14**	**94**	T	T	23 48 02.9	
	baz=280,slow=74,SNR=4.1						
LZDM	**Lanzhou Array**	**35.58**	**299**	P	**P**	**23 25 54.9**	**+0.2**
	0.8nm,0.3s,baz=127,slow=6.5,SNR=4.0						
	0.8nm,0.3s						
SONM	**Songino Array**	**37.51**	**319**	P	**P**	**23 26 10.4**	**-0.2**
	0.4nm,0.4s,baz=114,slow=8.6,SNR=3.2						
	0.4nm,0.4s						
CMAR	**Chiang Mai Arr**	**40.71**	**271**	P	**P**	**23 26 37.9**	**+0.5**
	0.5nm,0.3s,baz=84,slow=8.9,SNR=1.3						
	0.5nm,0.3s						
WB0	**Warramunga Arr**	**43.63**	**191**	P	**P**	**23 26 59.4**	**-1.6**
WB0				IAmb	IAmb	23 26 59.7	
	comp=Z,7.3nm,1.2s						
WRA	**Warramunga Arr**	**43.82**	**191**	P	**P**	**23 27 01.0**	**-1.4**
	comp=Z,1.0nm,0.5s,baz=9.9,slow=8.2,SNR=20						
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**43.82**	**191**	P	**P**	**23 27 00.3**	**-2.1**
LSA	**Lhasa**	**45.90**	**289**	P	**P**	**23 27 20.4**	**+1.0**
LSA				IAmb	IAmb	23 27 21.7	
	comp=Z,3.4nm,0.6s						
ASAR	**Alice Springs**	**47.53**	**190**	P	**P**	**23 27 30.1**	**-1.4**
	comp=Z,0.2nm,0.4s,baz=18,slow=12,SNR=6.8						
	comp=Z,0.2nm,0.4s						
EVN	**Everest**	**49.88**	**288**	P	**P**	**23 27 50.6**	**+0.4**
ZAA0	**Zalesovo Array**	**52.37**	**321**	P	**P**	**23 28 08.0**	**+0.3**
ZALV	**Zalesovo Beam**	**52.37**	**321**	P	**P**	**23 28 07.3**	**-0.3**
	comp=Z,2.1nm,0.5s,baz=97,slow=8.5,SNR=11						
	comp=Z,2.1nm,0.5s						
ZALV	**Zalesovo Beam**	**52.37**	**321**	P	**P**	**23 28 07.8**	**+0.1**
MKAR	**Makanchi Array**	**52.95**	**312**	P	**P**	**23 28 13.0**	**+0.9**
	comp=Z,1.9nm,0.7s,baz=87,slow=9.9,SNR=24						
	comp=Z,1.9nm,0.7s						
MKAR	**Makanchi Array**	**52.95**	**312**	P	**P**	**23 28 12.8**	**+0.7**
MAKZ	**Makanchi**	**53.17**	**312**	P	**P**	**23 28 11.9**	**-1.7**
MAKZ				IAmb	IAmb	23 28 15.9	
	comp=Z,2.7nm,0.8s						
N15K	**Kwethluk River**	**53.93**	**31**	P	**P**	**23 28 20.6**	**+1.6**
STKA	**Stephens Creek**	**55.01**	**181**	P	**P**	**23 28 25.7**	**-1.3**
	comp=Z,1.0nm,0.4s,baz=355,slow=17,SNR=2.9						
	comp=Z,1.0nm,0.4s						
KURK	**Kurchatov**	**55.67**	**316**	P	**P**	**23 28 32.3**	**+0.6**
KURK				IAmb	IAmb	23 28 33.3	
	comp=Z,4.1nm,0.8s						
KURBB	**Kurchatov Arra**	**55.73**	**316**	P	**P**	**23 28 32.9**	**+0.8**
	comp=Z,5.3nm,0.7s,baz=94,slow=7.7,SNR=55						
	comp=Z,5.3nm,0.7s						
NRIK	**Noril'sk**	**56.10**	**340**	P	**P**	**23 28 34.8**	**+0.5**
	comp=Z,1.8nm,0.6s,baz=115,slow=10,SNR=5.5						
	comp=Z,1.8nm,0.6s						
NRIK	**Noril'sk**	**56.10**	**340**	P	**P**	**23 28 34.5**	**+0.2**
NRIK				IAmb	IAmb	23 28 35.6	
	comp=Z,2.5nm,0.8s						
J19K	**Poorman**	**56.99**	**28**	P	**P**	**23 28 42.6**	**+1.8**
J19K				IAmb	IAmb	23 29 21.7	
	comp=Z,5.7nm,1.4s						
BOOM	**Boomskoye usch**	**57.44**	**306**	P	**P**	**23 28 45.0**	**+0.5**
BOOM				IAmb	IAmb	23 28 46.8	
	comp=Z,2.8nm,1.1s						
AFI	**Afiamalu**	**58.24**	**125**	P	**P**	**23 28 49.7**	**-0.5**
	comp=Z,14nm,0.4s,baz=9.0,slow=16,SNR=1.8						
L22K	**Petersville**	**58.83**	**30**	P	**P**	**23 28 54.8**	**+1.1**
ARSB	**Arslanbob**	**59.73**	**305**	P	**P**	**23 29 00.8**	**+0.4**
ARSB				IAmb	IAmb	23 29 29.3	
	comp=Z,3.7nm,1.2s						
BVAR	**Borovoye Array**	**60.85**	**319**	P	**P**	**23 29 08.4**	**+0.9**
	comp=Z,6.9nm,0.5s,baz=86,slow=6.4,SNR=36						
	comp=Z,6.9nm,0.5s						
ILAR	**Eielson Array**	**60.86**	**28**	P	**P**	**23 29 08.0**	**+0.6**
	comp=Z,0.7nm,0.8s,baz=249,slow=5.3,SNR=8.3						
	comp=Z,0.7nm,0.8s						
BORK	**Borovoye**	**60.89**	**319**		**P**	**23 29 08.4**	**+0.6**
KK31	**Karatay Array**	**61.37**	**308**	P	**P**	**23 29 11.8**	**+0.6**
KKAR	**Karatay Array**	**61.37**	**308**	P	**P**	**23 29 12.2**	**+0.9**
GAR	**Garm**	**62.04**	**303**	P	**P**	**23 29 15.9**	**-0.1**
GAR				IAmb	IAmb	23 29 19.4	
	comp=Z,3.0nm,1.1s						
BCAR	**Beaver Creek A**	**62.99**	**30**	P	**P**	**23 29 23.7**	**+1.9**
AB31	**Akbulak array**	**67.76**	**315**	P	**P**	**23 29 52.9**	**+0.3**
ABKAR	**Akbulak array**	**67.76**	**315**	P	**P**	**23 29 52.8**	**+0.2**
YKA	**Yellowknife Ar**	**75.29**	**28**	P	**P**	**23 30 38.3**	**+0.8**
	comp=Z,0.3nm,0.4s,baz=299,slow=6.3,SNR=7.7						
	comp=Z,0.3nm,0.4s						
YKA	**Yellowknife Ar**	**75.29**	**28**	P	**P**	**23 30 38.2**	**+0.7**
ARCES	**ARCESS Array B**	**77.03**	**341**	P	**P**	**23 30 48.7**	**+1.5**
	comp=Z,5.1nm,1.0s,baz=56,slow=6.5,SNR=4.2						
	comp=Z,5.1nm,1.0s						
KBZ	**Khabaz**	**80.60**	**314**	P	**P**	**23 31 07.5**	**+0.4**
	comp=Z,1.3nm,0.8s,baz=113,slow=4.0,SNR=5.3						
	comp=Z,1.3nm,0.8s						
FINES	**FINESS Array B**	**81.28**	**334**	P	**P**	**23 31 10.2**	**-0.2**
	comp=Z,1.3nm,0.7s,baz=77,slow=10.0,SNR=10						
	comp=Z,1.3nm,0.7s						
FINES	**FINESS Array B**	**81.28**	**334**	P	**P**	**23 31 09.7**	**-0.7**
NVAR	**Mina Array Bea**	**82.68**	**51**	P	**P**	**23 31 19.4**	**+1.0**
	comp=Z,0.9nm,0.6s,baz=289,slow=4.5,SNR=4.7						
	comp=Z,0.9nm,0.6s						
AKASG	**Malin Array Be**	**85.64**	**324**	P	**P**	**23 31 34.2**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=57,slow=5.1,SNR=2.5						
	comp=Z,0.5nm,0.3s						
DUG	**Dugway, Tooele**	**85.76**	**48**	P	**P**	**23 31 35.0**	**+1.2**
DUG				IAmb	IAmb	23 31 36.4	
	comp=Z,1.8nm,0.6s						
PLCA	**Paso Flores**	**147.48**	**130**	PKPbc	**PKPbc**	**23 38 37.2**	**-0.5**
	comp=Z,1.1nm,0.6s,baz=300,slow=4.0,SNR=6.1						
PLCA	**Paso Flores**	**147.48**	**130**	PKPbc	**PKPbc**	**23 38 37.8**	**0.0**
LPAZ	**La Paz**	**150.52**	**82**	PKPbc	**PKiKP**	**23 38 47.1**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=268,slow=4.0,SNR=2.7						
LPAZ	**La Paz**	**150.52**	**82**		**PKPbc**	**23 38 45.6**	**-1.1**

IDC 04 23:28:38.3±51.0**,22°87S**×**175°09W,h0**km**,mb4.2**/3**, mbtmp4.2**/3**,Error ellipse: s-maj=960.1km s-min=180.7km az=87.0,Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.29**	**247**	P	P	23 36 09.5	+0.5
	1.0nm,0.4s,baz=63,slow=8.8,SNR=3.4						
	1.0nm,0.4s						
ASAR	**Alice Springs**	**46.66**	**258**	P	P	23 37 08.8	-0.2
	1.5nm,0.4s,baz=102,slow=7.3,SNR=21						
	1.5nm,0.4s						
WRA	**Warramunga Arr**	**46.99**	**264**	P	P	23 37 11.2	-0.5
	2.2nm,0.5s,baz=103,slow=7.9,SNR=50						
	2.2nm,0.5s						

*BGSI **04** 23:30:45.8±1.4, 31°84S×24°95E, h0km±262km, ML3.3*
PRE 04 23:30:35.6±1.0**,32°47S**×**25°15E,h5**km**,ML2.7, Presumed earthquake,South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRAF	**Camdeboo Natio**	**0.59**	**289**	*e*P	Pg	23 30 46.4	-0.6
GRAF				*e*S	Sg	23 30 54.8	+0.2
GRAF				IAML		23 31 01.7	
	comp=Z,119nm,0.6s						
GRHM	**Grahamstown, E**	**1.31**	**128**	*e*P	Pb	23 31 01.0	+0.3
GRHM				*e*S	Sn	23 31 18.5	0.0
GRHM				IAML		23 31 21.3	
	comp=Z,104nm,0.7s						
BFON	**Badsfontein, M**	**1.41**	**298**	*e*P	Pb	23 31 02.5	0.0
BFON				*e*S	Sn	23 31 21.3	+0.2
BFON				IAML		23 31 23.8	
	comp=Z,58nm,0.1s						
KROM	**Kromhout**	**1.72**	**195**	*e*P	Pb	23 31 07.2	-0.6
KROM				*e*S	Sb	23 31 29.7	0.0
KROM				IAML		23 31 31.4	
	comp=Z,2μm,0.5s						
HVD	**Gariep Dam**	**1.89**	**9**	*e*P	Pb	23 31 09.7	-0.9
HVD				*e*S	Sb	23 31 34.5	0.0
BRAK	**Brakfontein**	**2.03**	**289**	*e*P	Pn	23 31 11.3	+0.7
BRAK				*e*S	Sn	23 31 37.3	+0.9
BRAK				IAML		23 31 38.8	
	comp=Z,71nm,0.2s						
GRAN	**Grantham**	**2.52**	**273**	*e*P	Pn	23 31 18.7	+1.4
GRAN				*e*S	Sn	23 31 48.9	+0.4
GRAN				IAML		23 31 52.0	
	comp=Z,82nm,0.5s						
MERW	**Merweville**	**3.07**	**265**	*e*P	Pn	23 31 25.5	+0.7
MERW				*e*S	Sn	23 32 02.1	+0.1
MERW				IAML		23 32 11.0	
	comp=Z,34nm,0.7s						
FRAZ	**Fraserburg**	**3.22**	**279**	*e*P	Pn	23 31 27.9	+1.0
FRAZ				*e*S	Sn	23 32 05.4	-0.2
FRAZ				IAML		23 32 22.4	
	comp=Z,33nm,0.6s						
ALKP	**Alkanpan, Nort**	**3.54**	**315**	*e*P	Pn	23 31 31.5	+0.1
ALKP				*e*S	Sn	23 32 13.5	-0.1
ALKP				IAML		23 32 36.6	
	comp=Z,27nm,0.4s						
BOSA	**Boshof**	**3.85**	**1**	*e*P	Pn	23 31 37.0	+1.4
BOSA				*e*S	Sn	23 32 21.3	0.0
BOSA				IAML		23 32 37.9	
	comp=Z,24nm,0.3s						
MATJ	**Matjiesfontein**	**3.92**	**257**	*e*P	Pn	23 31 37.2	+0.6
MATJ				*e*S	Sn	23 32 23.6	+0.5
MATJ				IAML		23 32 41.2	
	comp=Z,50nm,0.5s						
CVNA	**Calvinia**	**4.68**	**281**	*e*P	Pn	23 31 48.4	+1.3
CVNA				*e*S	Sn	23 32 40.9	-0.9
CVNA				IAML		23 33 03.6	
	comp=Z,26nm,0.6s						
ELIM	**Elim**	**4.98**	**243**	*e*P	Pn	23 31 51.2	+0.1
ELIM				*e*S	Sn	23 32 48.2	-0.9
ELIM				IAML		23 33 11.8	
	comp=Z,25nm,0.3s						
CER	**Ceres**	**5.00**	**258**	*e*P	Pn	23 31 52.1	+0.7
CER				*e*S	Sn	23 32 48.7	-0.9
KEIM	**Keimoes**	**5.21**	**315**	*e*P	Pn	23 31 54.7	+0.5
KEIM				*e*S	Sn	23 32 53.3	-1.3
KEIM				IAML		23 33 25.4	
	comp=Z,16nm,0.6s						
ARMS	**Ukamas**	**6.43**	**312**	*e*P	Pn	23 32 11.5	+0.4
ARMS				*e*S	Sn	23 33 23.6	-1.4
HRAO	**HartRAO**	**6.92**	**19**	*e*P	Pn	23 32 18.5	+0.6
HRAO				*e*S	Sn	23 33 33.9	-3.2
HRAO				IAML		23 33 51.2	
	comp=Z,3.5nm,0.2s						
LBTB	**Lobatse**	**7.44**	**3**	*e*P	Pn	23 32 25.6	+0.6
LBTB				*e*S	Sn	23 33 46.8	-3.1
LBTB				IAML		23 34 31.4	
	comp=Z,5.0nm,0.5s						
KDWAN	**Kaudwane**	**9.07**	**357**	*i* P	Pn	23 32 44.9	-2.4
KDWAN				*i* S	Sn	23 34 13.5	-16
LPHEP	**Lephephe**	**9.10**	**4**	*i* P	Pn	23 32 46.3	-1.4
LPHEP				*i* S	Sn	23 34 15.8	-15
LPHEP				IAML		23 35 24.3	
	comp=N,26nm,0.5s						
KGCAE	**Kacgae**	**9.93**	**344**	*i* P	Pn	23 32 55.9	-3.3
KOOLE	**Kule**	**10.41**	**334**	*i* P	Pn	23 33 03.8	-2.0
KHWEE	**KHWEE**	**10.49**	**2**	*i* P	Pn	23 33 04.3	-2.5

IDC 04 23:44:32.3±3.7**,20°41S**×**169°51E,h0**km**,mb3.7**/2**, mbtmp3.8**/3**,ML3.9**/1**,MS3.0**/1**,Error ellipse: s-maj=147.6km s-min=33.6km az=145.0,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.30**	**239**	Pn	Pn	23 45 25.6	+0.2
	12nm,0.3s,baz=126,slow=13,SNR=549						
DZM				Sn	Sn	23 46 07.3	+1.9
	2.9nm,0.3s,baz=181,slow=22,SNR=5.1						
	36nm,0.5s						
WRA	**Warramunga Arr**	**32.98**	**265**	P	P	23 51 09.4	+0.2
	0.7nm,0.6s,baz=94,slow=8.6,SNR=14						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**33.11**	**258**	P	P	23 51 09.5	-0.8
	0.7nm,0.6s,baz=99,slow=8.2,SNR=8.0						
ASAR				LR	LR	00 03 41.6	
	comp=Z,22nm,18.5s,baz=114,slow=35						
	0.7nm,0.6s						
EKA	**Eskdalemuir Ar**	**144.69**	**353**	PKP	PKPbc	00 04 09.7	+0.2
	0.7nm,0.6s,baz=357,slow=2.7,SNR=5.6						
GERES	**GERESS Array B**	**145.63**	**331**	PKPbc	PKPdf	00 04 12.8	+0.1
	0.1nm,0.4s,baz=29,slow=6.6,SNR=2.0						

*IDC **05** 00:21:24.6±0.9, 35°31N×27°91E, h0km, mb3.8/15, mbtmp3.7/28, ML3.4/11, MS2.8/8, Error ellipse: s-maj=17.2km s-min=13.2km az=0.0*
*HLW **05** 00:21:26.2, 35°22N×27°99E, h8km±2km, Md3.6, Ml3.6*
*GII **05** 00:21:26.7±0.0, 35°075N±0°002×27°973E±0°001, h0km, Mws3.5, confirmed*
*ATH **05** 00:21:27.1, 35°20N×28°00E, h7km±2km, ML3.4/12, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*ISK **05** 00:21:29.3, 35°44N×27°79E, h15km, ML3.5/18*
*AFAD **05** 00:21:29.1, 35°26N×27°84E, h25km±4km, MW3.7*
*THE **05** 00:21:29.0, 35°N±6°×2°8E±1°0, h0km±12km, M3.2/8, MLh3.2/8*
*NAO **05** 00:22:21.2, 40°20N×21°75E, h10km, MB3.3*
ISC 05 00:21:27.5±0.6**,35°23N**±0°03×**27°95E**±0°02**,h20**km±6km**, n168,**σ**1§54**/225**,mb3.6**/13**,MS3.1**/3**,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.72**	**297**	P	**Pb**	**00 21 40.1**	**-1.3**
KARP				S	**Sb**	**00 21 49.8**	**-1.0**
KARP	**Karpathos**	**0.72**	**297**	Pg	**Pb**	**00 21 40.0**	**-1.3**
KARP				Sg	**Sb**	**00 21 47.9**	**-2.9**
KARP	**Karpathos**	**0.72**	**297**	P	**Pb**	**00 21 40.5**	**-0.9**
KARP				S	**Sb**	**00 21 52.5**	**+1.7**
ARG	**Arkhangelos**	**1.00**	**8**	P	**Pn**	**00 21 46.3**	**-0.1**
ARG				S	**Sn**	**00 22 00.5**	**+0.7**
ARG	**Arkhangelos**	**1.00**	**8**	Pg	**Pn**	**00 21 45.7**	**-0.7**
ARG				Sg	**Sb**	**00 21 57.8**	**-1.0**
ARG	**Arkhangelos**	**1.00**	**8**	P	**Pn**	**00 21 46.5**	**+0.1**
ARG				S	**Sn**	**00 22 00.2**	**+0.3**
RODB	**Rodos**	**1.24**	**10**	P	**Pb**	**00 21 51.4**	**+1.2**
RODB				S	**Sn**	**00 22 07.6**	**+1.9**
ZKR	**Zakros**	**1.42**	**266**	P	**Pb**	**00 21 54.2**	**+0.8**
ZKR	**Zakros**	**1.42**	**266**	Pn	**Pb**	**00 21 53.9**	**+0.6**
ZKR				Sn	**Sn**	**00 22 11.7**	**+1.4**
ZKR	**Zakros**	**1.42**	**266**	P	**Pn**	**00 21 53.3**	**+1.1**
ZKR				S	**Sb**	**00 22 13.1**	**+2.0**
YAZI	**Mula-Dat§a-**	**1.50**	**345**	P	**Pb**	**00 21 54.5**	**-0.3**
YAZI				S	**Sb**	**00 22 15.2**	**+1.8**
DAT	**Datca**	**1.53**	**349**	Pn	**Pn**	**00 21 53.7**	**-0.1**
DAT	**Datca**	**1.53**	**349**	P	**Pb**	**00 21 54.3**	**-0.9**
TURN	**Turunc**	**1.56**	**9**	Pn	**Pb**	**00 21 55.0**	**-0.8**
TURN	**Turunc**	**1.56**	**9**	P	**Pb**	**00 21 55.9**	**+0.1**
TURN				S	**Sb**	**00 22 14.7**	**-0.4**
IZZE	**Mula-Seydike**	**1.59**	**40**	P	**Pb**	**00 21 55.4**	**-0.9**
IZZE				S	**Sn**	**00 22 12.7**	**-1.9**
KSL	**Kastellorizon**	**1.62**	**55**	P	**Pb**	**00 21 58.0**	**+1.3**
KSL				S	**Sb**	**00 22 20.9**	**+4.2**
KSL	**Kastellorizon**	**1.62**	**55**	P	**Pb**	**00 21 55.7**	**-1.0**
AKAS	**Kas**	**1.68**	**53**	Pn	**Pb**	**00 21 58.8**	**+0.9**
AKAS	**Kas**	**1.68**	**53**	P	**Pn**	**00 21 55.7**	**-0.2**
AKAS				S	**Sb**	**00 22 19.8**	**+1.2**
FETY	**Fethiye**	**1.68**	**33**	P	**Pb**	**00 21 56.7**	**-1.1**
DALY	**Dalyan (Mula)**	**1.69**	**20**	Pn	**Pb**	**00 21 56.8**	**-1.1**
SABU	**Mula-Dalaman**	**1.79**	**27**	P	**Pb**	**00 21 57.8**	**-1.9**
SABU				S	**Sb**	**00 22 26.7**	**+4.9**
BDRM	**Kayabasi**	**1.88**	**348**	P	**Pn**	**00 21 59.2**	**+0.7**
BDRM				S	**Sn**	**00 22 21.4**	**-0.2**
BODT	**Bodrum**	**1.90**	**344**	Pn	**Pn**	**00 21 58.8**	**0.0**
NPS	**Neapolis**	**1.91**	**272**	P	**Pb**	**00 22 01.3**	**-0.4**
NPS				S	**Sb**	**00 22 25.5**	**+0.4**
CAME	**Cameli-Denizli**	**2.03**	**32**	Pn	**Pb**	**00 22 02.8**	**-1.1**
MULA	**Mugla, Merkez-**	**2.05**	**8**	P	**Pb**	**00 22 02.8**	**-1.3**
MULA				S	**Sb**	**00 22 30.9**	**+1.7**
KNIK	**Mula-Seydike**	**2.08**	**39**	P	**Pb**	**00 22 02.8**	**-2.0**
KNIK				S	**Sb**	**00 22 29.1**	**-1.1**
CAEL	**Denizli, Camel**	**2.19**	**30**	P	**Pb**	**00 22 04.8**	**-1.8**
ELL	**Elmali**	**2.20**	**46**	Pn	**Pb**	**00 22 05.6**	**-1.1**
DNZT	**Denizli-Tavas-**	**2.23**	**23**	P	**Pb**	**00 22 04.4**	**-2.7**
DNZT				S	**Sb**	**00 22 30.9**	**-3.4**
DDIM	**Aydin, Didim**	**2.30**	**346**	P	**Pn**	**00 22 05.3**	**+1.1**
THERA	**Ancient Thera,**	**2.31**	**300**	P	**Pn**	**00 22 06.4**	**+2.0**
THERA	**Ancient Thera,**	**2.31**	**300**	P	**Pn**	**00 22 06.5**	**+2.1**
THR8	**Santorini-Mono**	**2.33**	**301**	P	**Pn**	**00 22 06.6**	**+2.0**
TAVA	**DENIZLI_Tavas**	**2.37**	**19**	P	**Pn**	**00 22 06.4**	**+1.1**
TAVA				S	**Sb**	**00 22 37.6**	**-0.8**
GOLH	**Golhisar**	**2.39**	**33**	P	**Pb**	**00 22 08.3**	**-1.6**
AYDN	**Tasoluk**	**2.43**	**359**	P	**Pn**	**00 22 06.6**	**+0.5**
APMY	**Acipayam-Deniz**	**2.49**	**26**	Pn	**Pb**	**00 22 08.9**	**-2.8**
IDI	**Anoyia**	**2.50**	**272**	Pn	**Pn**	**00 22 09.8**	**+2.7**
	10nm,0.3s,baz=108,slow=13,SNR=28						
IDI				Sn	**Sn**	**00 22 40.0**	**+2.9**
	11nm,0.3s,baz=18,slow=6.4,SNR=5.3						
IDI	**Anoyia**	**2.50**	**272**	P	**Pn**	**00 22 10.0**	**+2.9**
IDI	**Anoyia**	**2.50**	**272**	Pn	**Pn**	**00 22 08.8**	**+1.7**
IDI	**Anoyia**	**2.50**	**272**	P	**Pn**	**00 22 09.2**	**+2.0**
IDI				S	**Sb**	**00 22 41.1**	**-1.1**
GCAM	**G?zelcaml?**	**2.53**	**347**	Pn	**Pn**	**00 22 07.7**	**+0.2**
GCAM	**G?zelcaml?**	**2.53**	**347**	P	**Pn**	**00 22 08.8**	**+1.3**
DNIZ	**Denizli-Tavas-**	**2.55**	**20**	P	**Pn**	**00 22 09.3**	**+1.5**
ESEN	**Aydn-Nazilli**	**2.59**	**7**	P	**Pn**	**00 22 09.8**	**+1.6**
ESEN				S	**Sn**	**00 22 39.0**	**-0.1**
KORT	**Korkueli**	**2.63**	**47**	Pn	**Pb**	**00 22 12.5**	**-1.5**
SMG	**Samos**	**2.63**	**340**	P	**Pn**	**00 22 10.0**	**+1.1**
SMG	**Samos**	**2.63**	**340**	P	**Pn**	**00 22 10.4**	**+1.5**
SMG				S	**Sb**	**00 22 43.1**	**-2.8**
NAZL	**Nazilli-Aydin**	**2.75**	**6**	Pn	**Pn**	**00 22 11.3**	**+0.8**
ANTB	**Antalya**	**2.76**	**52**	Pn	**Pb**	**00 22 14.5**	**-1.6**
INCE	**Denizli-Bozkur**	**2.80**	**27**	P	**Pn**	**00 22 12.8**	**+1.5**
SULTU	**Buldan**	**2.90**	**13**	P	**Pn**	**00 22 14.7**	**+2.1**
SULTU				S	**Sb**	**00 22 50.3**	**-3.3**
IZMR	**zmir-demi**	**2.90**	**0**	P	**Pn**	**00 22 13.3**	**+0.7**
IZMR				S	**Sn**	**00 22 48.7**	**+1.8**
DGB	**zmir**	**2.95**	**343**	P	**Pn**	**00 22 13.5**	**+0.3**
KIRA	**zmir-Kiraz**	**2.99**	**7**	P	**Pn**	**00 22 15.1**	**+1.2**
BRDR	**BURDUR-Merkez**	**3.00**	**34**	P	**Pn**	**00 22 14.7**	**+0.8**
DUVT	**Torbali**	**3.01**	**353**	P	**Pn**	**00 22 15.1**	**+0.9**
ODEM	**Odemis-Izmir**	**3.04**	**2**	Pn	**Pn**	**00 22 15.2**	**+0.6**
VAM	**Vamos**	**3.07**	**274**	P	**Pn**	**00 22 17.7**	**+2.8**
BASM	**Basmaki-Afyon**	**3.17**	**32**	Pn	**Pn**	**00 22 18.6**	**+2.2**
GVD	**Gavdhos**	**3.19**	**264**	Pn	**Pn**	**00 22 19.1**	**+2.6**
ZEYE	**Izmir, Urla-Ze**	**3.22**	**339**	P	**Pn**	**00 22 16.5**	**-0.5**
BLCB	**Balcova**	**3.23**	**347**	Pn	**Pn**	**00 22 17.8**	**+0.7**
IMMV	**Iera Moni Meta**	**3.25**	**275**	P	**Pn**	**00 22 20.2**	**+2.9**
IMMV	**Iera Moni Meta**	**3.25**	**275**	Pn	**Pn**	**00 22 19.3**	**+2.0**
IMMV	**Iera Moni Meta**	**3.25**	**275**	P	**Pn**	**00 22 19.3**	**+2.0**
MANT	**Manisa**	**3.29**	**8**	P	**Pn**	**00 22 17.0**	**-1.2**
MANT				S	Sn	00 22 47.5	-9.4
KULA	**Kula-Manisa**	**3.33**	**10**	Pn	**Pn**	**00 22 20.0**	**+1.5**
KTTT	**Salihli**	**3.46**	**2**	P	**Pn**	**00 22 20.0**	**-0.2**
BAGT	**Foa**	**3.53**	**346**	P	**Pn**	**00 22 21.9**	**+0.7**
CAMT	**Merkez**	**3.55**	**352**	P	**Pn**	**00 22 21.9**	**+0.4**
AKMS	**Akamas**	**3.60**	**92**	P	**Pn**	**00 22 22.4**	**+0.2**
AKMS				S	**Sn**	**00 23 05.8**	**+1.6**
KARB	**zmir-Karabur**	**3.64**	**341**	P	**Pn**	**00 22 23.4**	**+0.6**
GORD	**Gordes-Manisa**	**3.68**	**3**	Pn	**Pn**	**00 22 24.4**	**+1.1**
ZEDA	**zmir-Bergama**	**3.80**	**350**	P	**Pn**	**00 22 26.2**	**+1.4**
ALFC	**Alefka**	**3.81**	**90**	P	**Pn**	**00 22 25.2**	**+0.1**
ALFC				S	**Sn**	**00 23 11.3**	**+2.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NATA	Nata	3.82	95	P	Pn	00 22 26.1	+0.9
NATA				S	Sn	00 23 10.8	+1.2
KARY	Karystos	3.98	316	P	Pn	00 22 29.6	+2.3
DION	Dionisos Attik	4.30	313	P	Pn	00 22 34.0	+2.1
ATHU	Athens Univers	4.32	310	P	Pn	00 22 34.3	+2.2
SLUM	Salum	4.37	212	P	Pn	00 22 33.2	+0.4
SLUM				S	Sn	00 23 21.6	-1.5
ASGA	Asgata	4.37	94	P	Pn	00 22 33.2	+0.4
CSS	Mathiatis	4.42	92	P	Pn	00 22 34.0	+0.5
CSS	Mathiatis	4.42	92	P	Pn	00 22 33.4	-0.1
CSS				S	Sn	00 23 24.3	-0.1
VILL	Villia	4.74	310	P	Pn	00 22 40.3	+2.4
SWA2		6.33	200	P	Pn	00 23 00.1	+0.4
SWA2				S	Sn	00 24 08.4	-3.0
HNTI	Hanita	6.36	108	P	Pn	00 22 59.3	-0.9
HNTI				S	Sn	00 24 11.6	-0.6
BRTR	Keskin Array B	6.37	44	Pn	Pn	00 23 02.4	+2.0
	0.3nm,0.3s,baz=226,slow=15,SNR=8.2						
BRTR				Sn	Sn	00 24 13.8	+1.1
	0.5nm,0.3s,baz=218,slow=26,SNR=6.5						
BRTR				LR	LR	00 25 23.1	
	comp=Z,11nm,20.8s,baz=218,slow=38						
	0.9nm,0.4s						
OFRI	`Ofer	6.40	112	P	Pn	00 22 59.5	-1.2
OFRI				S	Sn	00 24 12.5	-0.8
RYAN	Fayoum	6.44	161	P	Pn	00 22 59.7	-1.4
RYAN				S	Sn	00 24 10.4	-3.6
DQRL	Deir Qamar	6.48	101	eP	Pn	00 23 04.2	+2.4
MMC7	Mount Meron ar	6.55	107	P	Pn	00 23 02.1	-0.7
MMA0B	Mount Meron ar	6.56	108	P	Pn	00 23 02.0	-1.0
MMA0B				S	Sn	00 24 16.4	-0.9
MMAI	Mount Meron Ar	6.56	108	Pn	Pn	00 23 02.1	-0.9
	4.1nm,0.3s,baz=318,slow=15,SNR=24						
MMAI				Sn	Sn	00 24 16.0	-1.3
	4.2nm,0.3s,baz=308,slow=24,SNR=2.2						
	1.5nm,0.3s						
SLTI	Sal'it	6.62	115	P	Pn	00 23 02.6	-1.1
SLTI				S	Sn	00 24 17.5	-1.0
HWQ	Hawqa	6.65	96	eP	Pn	00 23 04.5	+0.2
ZAHL	Zahle	6.69	100	eP	Pn	00 23 04.9	+0.1
GEM	Giv'at Ha'Em	6.70	105	P	Pn	00 23 03.9	-0.9
GEM				S	Sn	00 24 19.5	-1.0
NATI	Neve Ativ	6.74	105	P	Pn	00 23 04.3	-1.1
NATI				S	Sn	00 24 20.8	-0.7
RCY	Rachaya	6.75	103	eP	Pn	00 23 05.2	-0.3
SUZ	Suez	6.77	141	P	Pn	00 23 06.2	+0.4
BEIL	Beino	6.80	93	eP	Pn	00 23 06.1	-0.1
MMLI	Mount Malkishu	6.81	112	P	Pn	00 23 05.2	-1.2
MMLI				S	Sn	00 24 22.5	-0.9
AMAZ	Amatzia	6.89	120	P	Pn	00 23 06.4	-1.1
AMAZ				S	Sn	00 24 23.7	-1.6
KSHT	Keshet	6.90	107	P	Pn	00 23 06.1	-1.4
KSHT				S	Sn	00 24 24.5	-0.9
KZIT	Kziot	6.92	127	P	Pn	00 23 06.5	-1.2
KZIT				S	Sn	00 24 24.3	-1.6
HMDT	Nahal Hemdat	6.97	113	P	Pn	00 23 07.6	-0.9
HMDT				S	Sn	00 24 26.4	-0.9
YTIR	Yattir	7.13	121	P	Pn	00 23 09.9	-0.9
YTIR				S	Sn	00 24 30.0	-1.3
DSI	Dead Sea	7.21	118	P	Pn	00 23 10.3	-1.4
DSI				S	Sn	00 24 31.4	-1.6
MSBI	Mazada	7.33	120	P	Pn	00 23 12.0	-1.4
MSBI				S	Sn	00 24 34.8	-1.2
GHAJ	Ghor Haditha	7.48	119	P	Pn	00 23 14.3	-1.2
GHAJ				S	Sn	00 24 38.3	-1.5
KRMI	Paran Flat	7.65	130	P	Pn	00 23 16.6	-1.4
KRMI				S	Sn	00 24 40.6	-3.5
ZFRI	Zfri	7.66	125	P	Pn	00 23 16.4	-1.6
ZFRI				S	Sn	00 24 42.3	-1.8
PRNI	Paran	7.68	127	P	Pn	00 23 17.0	-1.2
PRNI				S	Sn	00 24 43.3	-1.3
HRFI	Mount Harif	7.91	129	P	Pn	00 23 20.0	-1.4
HRFI				S	Sn	00 24 47.9	-2.4
ASF	Jabal al Asfar	8.06	110	Pn	Pn	00 23 23.9	+0.4
	0.5nm,0.3s,baz=301,slow=22,SNR=6.3						
ASF				Sn	Sn	00 24 51.1	-2.9
	0.1nm,0.3s,baz=337,slow=6.7,SNR=1.5						
ASF				LR	LR	00 27 09.1	
	comp=Z,26nm,20.9s,baz=222,slow=42						
	1.3nm,0.3s						
EIL2	Elat	8.11	131	P	Pn	00 23 22.7	-1.4
EIL2				S	Sn	00 24 52.9	-2.2
EIL	Elat	8.11	131	Pn	Pn	00 23 23.3	-0.8
	1.3nm,0.3s,baz=300,slow=2.8,SNR=23						
EIL				Sn	Sn	00 24 50.4	-4.7
	2.6nm,0.3s,baz=345,slow=18,SNR=6.6						
	3.2nm,0.3s						
HBST	Basata	8.30	134	P	Pn	00 23 26.7	-0.1
NUB	Nuweibaa	8.39	136	P	Pn	00 23 28.5	+0.5
HKAT	Jabal Katrina	8.43	141	P	Pn	00 23 28.5	-0.2
HDHB	Dhahab	8.61	137	P	Pn	00 23 31.4	+0.4
HHRG	Al Ghardaqah	9.32	147	P	Pn	00 23 43.7	+2.9
MLR	Muntele Rosu	10.37	352	Pn	Pn	00 23 55.9	+0.8
	baz=231,slow=15,SNR=1.3						
MLR				LR	LR	00 27 33.5	
	comp=Z,26nm,21.2s,baz=224,slow=36						
	3.8nm,0.9s						
VAE	Valguarnera	11.14	286	Pn	Pn	00 24 06.1	+0.4
	7.1nm,0.9s,baz=2.4,slow=22,SNR=1.1						
VAE				Sn	Sn	00 26 08.2	-1.6
	0.5nm,0.3s,baz=191,slow=19,SNR=1.6						
KVAR	Kislovodsk Arr	14.31	48	Pn	Pn	00 24 51.1	+2.1
	baz=255,slow=19						
	0.7nm,0.6s						
KBZ	Khabaz	14.31	49	Pn	Pn	00 24 51.1	+2.1
	0.9nm,1.0s,baz=305,slow=7.3,SNR=2.4						
SOKA	Soboth	15.01	324	ePn	Pn	00 25 00.5	+2.0
	4.5nm,1.3s						
OBKA	Obir	15.13	322	Pn	Pn	00 24 59.4	-0.7
	13nm,1.9s						
KEST	Kesra	15.17	277	Pn	Pn	00 25 01.5	+0.9
	0.1nm,0.3s,baz=145,slow=19,SNR=1.4						
	3.3nm,0.9s						
RONA	Rosalia, Austr	15.19	329	ePn	Pn	00 25 01.4	+0.5
	2.7nm,1.0s						
ARSA	Arzberg	15.19	326	ePn	Pn	00 25 01.6	+0.8
	4.1nm,1.2s						
AKASG	Malin Array Be	15.49	3	Pn	Pn	00 25 04.0	-0.7
	0.7nm,0.3s,baz=189,slow=10,SNR=4.5						
AKASG				LR	LR	00 32 08.0	
	comp=Z,35nm,19.5s,baz=202,slow=42						
	0.2nm,0.3s						
KBA	Koelnbreinsper	16.13	322	ePn	Pn	00 25 14.1	+1.0
	5.4nm,0.8s						
ABTA	Abfaltersbach	16.34	319	Pn	Pn	00 25 16.5	+0.7
	1.9nm,0.6s						
VRAC	Vranov	16.36	333	Pn	Pn	00 25 16.2	+0.3
	0.2nm,0.3s,baz=70,slow=22,SNR=1.7						
VRAC				LR	LR	00 32 19.4	
	comp=Z,60nm,20.8s,baz=178,slow=40						
	0.9nm,0.4s						
STEB	Steborice	16.47	336	eP	P	00 25 32.5	+13
LESA	Schwarzleotal	16.70	322	ePn	P	00 25 21.4	-1.1
	2.6nm,0.7s						
KRLC	Kraliky	16.93	335	eP	P	00 25 27.0	+2.0
WTTA	Wattenberg	17.14	320	Pn	P	00 25 28.8	+1.3
	7.8nm,1.2s						
GERES	GERESS Array B	17.20	327	P	Pn	00 25 26.7	+0.1
	baz=165,slow=10,SNR=15						
	2.3nm,0.9s						
WATA	Walderalm	17.21	320	ePn	P	00 25 27.9	-0.4
	9.5nm,1.7s						
DPC	Dobruska-Polom	17.32	334	eP	P	00 25 30.8	+1.5
KHC	Kasperske Hory	17.46	327	eP	Pn	00 25 29.8	0.0
MOTA	Moosalm	17.47	319	Pn	P	00 25 30.5	-0.6
	5.1nm,1.2s						
FETA	Feichten	17.48	318	Pn	P	00 25 31.7	+0.5
	12nm,1.0s						
OSTC	Ostas	17.53	334	eP	P	00 25 31.9	+0.3
DAVOX	Davos/Dischmat	17.82	316	P	Pn	00 25 33.9	-0.4
	0.1nm,0.3s,baz=191,slow=17,SNR=1.5						
	0.4nm,0.4s						
OBN	Obninsk	20.76	14	P	P	00 26 05.9	-1.0
	6.7nm,0.5s,baz=171,slow=15,SNR=1.6						
	6.7nm,0.5s						
ESDC	Sonseca Array	25.64	289	P	P	00 26 55.4	-0.5
	0.9nm,0.6s,baz=79,slow=9.5,SNR=13						
	0.9nm,0.6s						
FINES	FINESS Array B	26.26	358	P	P	00 27 00.0	-1.1
	2.4nm,0.7s,baz=156,slow=12,SNR=14						
	2.4nm,0.7s						
HFS	Hagfors	26.58	344	P	P	00 27 02.6	-1.5
	1.3nm,0.4s,baz=149,slow=12,SNR=9.5						
	1.3nm,0.4s						
NB2	NORSAR Subarra	27.97	343	P	P	00 27 13.3	-3.2
	comp=Z,1.3nm,0.8s,baz=158,slow=11						
NOA	NORSAR Array B	27.97	343	P	P	00 27 14.7	-1.8
	comp=Z,0.4nm,0.6s,baz=151,slow=7.9,SNR=4.3						
NOA				LR	LR	00 40 26.8	
	comp=Z,30nm,19.8s,baz=270,slow=41						
	comp=Z,0.4nm,0.6s						
FURI	Furi	27.99	157	LR	LR	00 38 37.1	
	comp=Z,47nm,19.1s,baz=339,slow=37						
EKA	Eskdalemuir Ar	29.33	323	P	P	00 27 27.2	-1.4
	comp=Z,0.2nm,0.4s,baz=122,slow=9.0,SNR=3.7						
	comp=Z,0.2nm,0.4s						
TORD	Torodi Ar. Bea	32.32	234	P	P	00 27 56.2	+0.8
	comp=Z,1.2nm,0.7s,baz=36,slow=4.9,SNR=14						
	comp=Z,1.2nm,0.7s						
ARCES	ARCESS Array B	34.39	358	P	P	00 28 11.7	-1.2
	comp=Z,4.1nm,1.1s,baz=167,slow=7.9,SNR=3.7						
	comp=Z,4.1nm,1.1s						
KURBB	Kurchatov Arra	39.30	51	P	P	00 28 55.3	+0.4
	comp=Z,0.3nm,0.6s,baz=272,slow=8.7,SNR=4.9						
	comp=Z,0.3nm,0.6s						
MKAR	Makanchi Array	41.83	57	P	P	00 29 17.2	+1.3
	comp=Z,0.3nm,0.4s,baz=271,slow=9.3,SNR=10.0						
	comp=Z,0.3nm,0.4s						
SPITS	Spitsbergen Ar	43.34	357	P	P	00 29 27.6	-0.2
	comp=Z,7.1nm,1.0s,baz=151,slow=12,SNR=6.6						
	comp=Z,7.1nm,1.0s						
SONM	Songino Array	57.67	51	P	P	00 31 17.6	+1.0
	comp=Z,0.3nm,0.3s,baz=280,slow=7.3,SNR=5.9						
SONM				LR	LR	00 58 48.6	
	comp=Z,23nm,19.6s,baz=302,slow=39						
	comp=Z,0.3nm,0.3s						
SCHQ	Schefferville	64.60	320	P	P	00 32 02.8	-0.5
	comp=Z,1.7nm,0.6s,baz=65,slow=5.5,SNR=4.6						
	comp=Z,1.7nm,0.6s						
YKA	Yellowknife Ar	78.06	343	P	P	00 33 23.5	-0.9
	comp=Z,0.1nm,0.7s,baz=24,slow=5.1,SNR=2.6						
	comp=Z,0.1nm,0.7s						
ILAR	Eielson Array	80.25	358	P	P	00 33 36.6	+0.2
	comp=Z,0.2nm,0.9s,baz=346,slow=1.9,SNR=1.7						
	comp=Z,0.2nm,0.9s						

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*NEIC **05** 00:26:26.9±1.2, 56.°95N±0.°01×154.°70W±0.°03, h1km±8km, ML3.3/72, ML3.1(AEIC), Error ellipse: s-maj=2.6km s-min=1.0km az=133.0*

*AEIC **05** 00:26:27.0±1.7, 56.°89N±0.°03×154.°63W±0.°04, h10km±2km, Error ellipse: s-maj=3.9km s-min=3.2km az=172.0*

*IDC **05** 00:26:42.1±9.2, 57.°96N×155.°25W, h102km±93km, mb3.0/2, mbtmp3.3/3, ML2.9/1, Error ellipse: s-maj=78.5km s-min=34.0km az=174.0*

ISC 05 00:26:27.0±1.1, **56.°94N**±0.°03×**154.°66W**±0.°03, **h13**km±10km, **n60**, σ**1.s85**/66, **Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SII	Sitkinak Islan	0.47	145		Pg	00 26 35.8	-0.3
SII					Sg	00 26 42.4	0.0
OHAK	Old Harbor	0.80	69		Pg	00 26 42.0	-0.5
OHAK					Sg	00 26 53.7	+0.7
PLK4	Peulik 4	1.15	308		Pb	00 26 48.1	-0.7
PLK4					Sg	00 27 02.5	-1.7
PLK4				IAML		00 27 08.5	
	comp=E,954nm,0.5s						
CHIR	Chirikof Islan	1.24	206		Pn	00 26 49.5	-0.6
CHIR					Sb	00 27 06.5	+0.3
CHIR				IAML		00 27 09.3	
	comp=N,759nm,0.8s						
CHIR				IAML		00 27 09.8	
	comp=E,731nm,1.0s						
ACHA	Angle Creek He	1.32	345		Pn	00 26 51.0	-0.2
ACHA					Sg	00 27 09.3	-0.3
ANCK	Angle Creek	1.34	341		Pn	00 26 51.3	-0.1
PLK1	Peulik 1	1.36	310		Pb	00 26 52.1	-0.2
PLK1					Sg	00 27 11.1	+0.3
KABU	Katmai Buttres	1.37	346		Pn	00 26 52.2	+0.2
KAKN	Katmai Knife C	1.38	351		Pn	00 26 51.9	-0.1
PLBL	Peulik Blue Cr	1.40	304		Pg	00 26 53.2	-0.6
KDAK	Kodiak Island	1.41	52		Pn	00 26 52.8	+0.6
KDAK				IAML		00 27 14.4	
	comp=E,301nm,0.6s						
KDAK				IAML		00 27 14.8	
	comp=E,390nm,0.4s						
KDAK	Kodiak Island	1.41	52		Sb	00 27 11.9	+1.0
KAHG	Katmai Hook Gl	1.56	2		Pn	00 26 55.3	+0.8
KARR	Katmai Rainbow	1.56	359		Pb	00 26 55.7	-0.1
PLK5	Peulik 5	1.60	312		Pb	00 26 55.8	-0.5
R16K	Pilot Point	1.70	293		Pb	00 26 57.5	-0.6
ANNW	Aniakchak Nort	1.95	272		Pb	00 27 01.5	-0.9
ANPB	Aniakchak Plen	1.99	267		Pb	00 27 01.7	-1.3
Q19K	Cape Douglas,	2.06	15		Pb	00 27 03.5	-0.8
SYI	Shuyak Island	2.07	35		Pn	00 27 02.7	+1.3
SYI				IAML		00 27 38.6	
	comp=E,289nm,0.6s						
P17K	Kvichak River	2.45	338		Pn	00 27 07.9	+1.3
P18K	Big Mountain,	2.48	353		Pn	00 27 08.6	+1.6
P16K	Nushagak River	2.75	321		Pn	00 27 11.9	+1.2
P16K				IAML		00 27 49.8	
	comp=N,150nm,0.5s						
P19K	Oil Pt	2.82	15		Pn	00 27 14.6	+2.8
O18K	Koktuh Hills	2.94	355		Pn	00 27 14.8	+1.5
O18K				IAML		00 28 10.8	
	comp=E,62nm,0.9s						
O18K				IAML		00 28 12.8	
	comp=N,62nm,0.7s						
ILS	Iliamna Low So	3.14	15		Pn	00 27 18.4	+2.2
ILSW	Iliamna Southw	3.15	14		Pn	00 27 17.9	+1.6
ILSW				IAML		00 28 06.2	
	comp=E,78nm,0.9s						
ILSW				IAML		00 28 19.9	
	comp=N,50nm,1.0s						
CNPM	China Poot	3.16	34		Pn	00 27 18.0	+1.6
CNPM				IAML		00 28 12.4	
	comp=N,103nm,1.0s						
CNPM				IAML		00 28 12.5	
	comp=E,106nm,1.1s						
O16K	Kokwok River B	3.22	327		Pn	00 27 18.2	+1.1
BRLK	Bradley Lake	3.46	34		Pn	00 27 21.4	+0.8
BRLK				IAML		00 28 20.7	
	comp=E,67nm,1.1s						
BRLK				IAML		00 28 31.5	
	comp=N,48nm,1.1s						
CNBA	Chernabura Isl	3.50	235	Pn	Pn	00 27 22.0	+1.0
CNBA				IAML		00 28 32.3	
	comp=E,55nm,1.1s						
CNBA				IAML		00 28 35.2	
	comp=N,49nm,0.9s						
O15K	Ungalikthiuk R	3.54	311		Pn	00 27 22.8	+1.1
O15K				IAML		00 28 33.4	
	comp=E,36nm,0.7s						
SDPT	Sand Point	3.62	246	Pn	Pn	00 27 24.7	+2.0
SDPT				IAML		00 28 50.7	
	comp=E,65nm,1.0s						
NCT	North Crescent	3.74	13		Pn	00 27 27.6	+3.2
DFR	Drift River	3.80	15		Pn	00 27 27.7	+2.4
N18K	Kilae Creek	3.80	351		Pn	00 27 27.0	+1.8
N17K	Nushagak Hills	3.83	341		Pn	00 27 27.5	+1.9
N19K	Bonanza Creek	3.88	1		Pn	00 27 28.6	+2.2
N19K				IAML		00 28 32.5	
	comp=N,31nm,0.9s						
N19K				IAML		00 28 35.2	
	comp=E,46nm,0.8s						
SEW	Seward	4.18	39	Pn	Pn	00 27 30.4	-0.1
SEW				IAML		00 28 45.6	
	comp=E,34nm,0.9s						
SEW				IAML		00 28 47.3	
	comp=N,22nm,0.9s						
O14K	Tigyukauivet M	4.20	306	Pn	Pn	00 27 32.0	+1.4
O14K				IAML		00 28 53.0	
	comp=N,25nm,0.9s						
SLKM	Skilak Lake	4.26	31		Pn	00 27 32.3	+0.8
SLKM				IAML		00 28 41.4	
	comp=E,30nm,0.9s						
SLKM				IAML		00 28 42.5	
	comp=N,32nm,0.7s						
N15K	Kwethluk River	4.31	321		Pn	00 27 34.0	+1.9
N15K				IAML		00 28 56.1	
	comp=N,26nm,0.7s						
N15K				IAML		00 28 58.9	
	comp=E,26nm,1.0s						
PN7A	Pavlof North-7	4.37	253		Pn	00 27 35.0	+1.9
SPWE	Spurr West	4.48	13		Pn	00 27 37.2	+2.6
SPBG	Spurr Blockage	4.49	14		Pn	00 27 38.0	+3.3
SPNN	North Nagishla	4.55	12		Pn	00 27 38.5	+2.9
M16K	Timber Creek	4.66	333		Pn	00 27 38.9	+1.9
M16K				IAML		00 29 08.1	
	comp=N,17nm,1.2s						
M17K	Holitna River	4.70	343		Pn	00 27 39.6	+2.2
N14K	Kuskokwak Cree	4.75	312		Pn	00 27 40.1	+1.9
RC01	Rabbit Creek A	4.88	29		Pn	00 27 40.7	+0.8
RC01				IAML		00 28 55.5	
	comp=E,23nm,1.0s						
RC01				IAML		00 28 57.1	
	comp=N,22nm,0.6s						
M19K	Big River Lodg	4.98	1		Pn	00 27 43.6	+2.2
M19K				IAML		00 29 10.1	
	comp=E,12nm,1.2s						
M20K	Styx River	5.02	8		Pn	00 27 45.0	+3.1
L19K	White Mountain	5.26	359		Pn	00 27 47.6	+2.4
L19K				IAML		00 29 17.2	
	comp=E,20nm,1.2s						
L19K				IAML		00 29 28.8	
	comp=N,15nm,1.1s						
M14K	Bethel	5.38	318		Pn	00 27 48.5	+1.7
M14K				IAML		00 29 23.1	
	comp=E,15nm,1.1s						
M14K				IAML		00 29 26.4	
	comp=N,14nm,0.8s						
M13K	Dall Lake	5.71	311		Pn	00 27 53.6	+2.3
ILAR	Eielson Array	8.72	22	P	Pn	00 28 33.4	+0.8
	comp=N,0.2nm,0.3s,baz=212,slow=14,SNR=11						
ILAR				S	Sn	00 30 04.5	-6.0
	comp=N,0.3nm,0.4s,baz=220,slow=31,SNR=4.8						
	comp=N,0.4nm,0.4s						
F15K	North Star Dit	10.00	336		Pn	00 28 52.8	+2.6
D19K	Kuna River	11.70	354	Pn	Pn	00 29 17.1	+3.7
YKA	Yellowknife Ar	20.68	58	P	Pn	00 31 09.6	+1.0
	comp=N,0.3nm,0.8s,baz=277,slow=10.0,SNR=2.2						
	comp=N,0.3nm,0.8s						
PETK	Petropavlovsk-	27.13	282	P	P	00 32 11.2	+1.8
	comp=N,1.0nm,0.5s,baz=64,slow=9.9,SNR=1.7						
	comp=N,1.0nm,0.5s						

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*SNET **05** 00:39:01.9±0.7, 12.°62N×87.°79W, h67km, ML4.0, Presumed earthquake*

*CATAC **05** 00:39:01.7±0.2, 13°N±2°×8°8W±°, h29km, M4.5/43, mb5.0/1, mB5.5/2, MLv4.3/43, Mw(mB)5.0/2, Error ellipse: s-maj=4.0km s-min=1.6km az=32.9, confirmed*

ISC 05 00:39:02.1±1.3, **12.°57N**±0.°05×**87.°79W**±0.°03, **h68**km±10km, **n70**, σ**0.s67**/105, **10C-18D**, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSGN	Cosiguina Volc	0.46	29	⇑P	Pn	00 39 13.9	-0.6
CSGN				S	Sn	00 39 24.3	+0.8
CNCH	Conchagua	0.70	356	P	Pn	00 39 16.6	-0.5
CNCH				S	Sn	00 39 28.3	+0.3
CNCH	Conchagua	0.70	356	*i* P	Pn	00 39 16.6	-0.5
CRIN	San Cristobal	0.73	80	⇓P	Pn	00 39 17.8	+0.5
CRIN				S	Sn	00 39 29.8	+1.3
LCND	La Caada	0.74	352	⇑P	Pn	00 39 16.9	-0.4
LCND				S	Sn	00 39 28.7	+0.1
LCND	La Caada	0.74	352	*i* P	Pn	00 39 16.9	-0.4
PKGN	Cerro Pekin	0.80	83	⇓P	Pn	00 39 19.0	+0.9
PKGN				S	Sn	00 39 31.4	+1.7
ALEN	Leon	0.90	97	P	Pn	00 39 19.2	-0.1
ALEN				S	Sn	00 39 30.8	-1.3
HERN	Volcan Telica	0.94	88	⇓P	Pn	00 39 19.4	-0.4
HERN				S	Sn	00 39 32.9	0.0
HOYN	Al Sur del Vol	0.94	88	P	Pn	00 39 19.3	-0.5
HOYN				S	Sn	00 39 32.9	-0.1
POLN	Al Sur del Vol	0.95	85	⇓P	Pn	00 39 19.6	-0.4
POLN				S	Sn	00 39 33.1	-0.1
BLLM	Bellamira	0.97	333	*i* P	Pn	00 39 19.9	-0.3
CNRM	Centro Naciona	0.97	337	P	Pn	00 39 19.7	-0.5
CNRM				S	Sn	00 39 34.0	+0.4
RANC	El Ranchito	0.98	330	⇓P	Pn	00 39 20.3	-0.2
RANC				S	Sn	00 39 33.8	-0.3
RANC	El Ranchito	0.98	330	*i* P	Pn	00 39 20.3	-0.2
RANC				eS	Sn	00 39 34.1	0.0
PACA	Pacayal	1.03	330	⇑P	Pn	00 39 20.7	-0.4
PACA				S	Sn	00 39 35.4	+0.3
PACA	Pacayal	1.03	330	*i* P	Pn	00 39 20.7	-0.4
ILCN	San Idelfonso	1.06	90	⇓P	Pn	00 39 20.7	-0.6
ILCN				S	Sn	00 39 34.8	-0.8
CNGN	Cerro Negro	1.07	94	⇓P	Pn	00 39 21.1	-0.4
CNGN				S	Sn	00 39 36.3	+0.6
MACN	El Madrono	1.09	96	⇑P	Pn	00 39 21.4	-0.3
MACN				S	Sn	00 39 36.1	-0.3
TECA	Tecapa	1.15	323	*i* P	Pn	00 39 22.3	-0.3
LEVN	Ruinas Leon Vi	1.16	98	⇑P	Pn	00 39 22.3	-0.2
COPN	Copaltepe	1.23	108	⇓P	Pn	00 39 22.4	-1.1
AESN	El Sauce Leon	1.26	75	P	Pn	00 39 23.1	-0.8
AESN				S	Sn	00 39 39.5	-0.6
TECO	Alcaldia de Te	1.36	315	P	Pn	00 39 24.7	-0.6
TECO	Alcaldia de Te	1.36	315	eP	Pn	00 39 24.6	-0.6
TECO				eS	Sn	00 39 41.8	-0.8
AMTN	Mateare	1.37	104	P	Pn	00 39 25.5	+0.3
AMTN				S	Sn	00 39 42.2	-0.4
APYN	Apoyeque	1.45	103	P	Pn	00 39 26.1	-0.2
SCLA	Alcaldia de Sa	1.45	321	⇑P	Pn	00 39 26.2	-0.3
SCLA				S	Sn	00 39 44.4	-0.3
SCLA	Alcaldia de Sa	1.45	321	eP	Pn	00 39 26.2	-0.3
LIMN	Finca el Limon	1.47	71	⇓P	Pn	00 39 26.4	-0.3
LIMN				S	Sn	00 39 44.9	-0.3
APQ2	Apoyeque	1.48	104	P	Pn	00 39 26.8	+0.1
APQ2				S	Sn	00 39 45.9	+0.7
COEG	Centro de Oper	1.49	314	eP	Pn	00 39 26.6	-0.3
COEG				eS	Sn	00 39 45.1	-0.6
ABCN	Banco Central	1.51	107	S	Sn	00 39 45.0	-1.1
UNAN	Cigeo UNAN	1.55	107	⇑P	Pn	00 39 27.8	+0.1
UNAN				S	Sn	00 39 46.5	-0.6
TGUH	Tegucigalpa,Un	1.56	19	⇓P	Pn	00 39 28.1	+0.1
TGUH				S	Sn	00 39 47.1	-0.3
MGAN	Managua	1.56	106	P	Pn	00 39 27.7	-0.2
MGAN				S	Sn	00 39 47.0	-0.4
PAVA	Las Pavas	1.59	315	P	Pn	00 39 28.0	-0.4
PAVA				S	Sn	00 39 48.6	+0.4
PAVA	Las Pavas	1.59	315	eP	Pn	00 39 28.1	-0.4
MARCA	Marcala la Paz	1.59	351	⇑P	Pn	00 39 28.5	+0.1
MARCA				S	Sn	00 39 48.3	0.0
AERN	Aeropuerto Man	1.64	105	S	Sn	00 39 49.1	0.0
YUSH	Yuscaran	1.65	34	⇓P	Pn	00 39 29.3	+0.1
YUSH				S	Sn	00 39 48.7	-0.9
OCON	Estacion meteo	1.65	50	⇓P	Pn	00 39 29.1	-0.1
OCON				S	Sn	00 39 49.3	-0.3
MAS3	Al N del Volca	1.67	109	P	Pn	00 39 29.0	-0.4
MAS3				S	Sn	00 39 47.8	-2.1
LBRS	Las Brisas	1.68	314	eP	Pn	00 39 29.5	-0.1
P5NO	Presa 5 de nov	1.69	326	P	Pn	00 39 29.3	-0.3
P5NO				S	Sn	00 39 52.4	+1.9
MASN	Masaya	1.70	110	P	Pn	00 39 29.8	0.0
MASN				S	Sn	00 39 50.2	-0.5
SABN	Sabanita	1.70	111	P	Pn	00 39 28.4	-1.4
LOMA	Loma Larga	1.72	308	eP	Pn	00 39 30.0	-0.1
NANN	Nandasmo	1.75	111	⇑P	Pn	00 39 31.4	+1.0
NANN				S	Sn	00 39 52.8	+1.1
LALI	Alcalda de L	1.75	301	S	Sn	00 39 50.5	-1.3
UDBS	Universidad Do	1.75	311	S	Sn	00 39 52.0	+0.1
RCFN	Al S de San Ju	1.81	58	⇓P	Pn	00 39 31.5	+0.2
RCFN				S	Sn	00 39 53.9	+0.5
RCON	San Juan de Ri	1.83	60	⇓P	Pn	00 39 31.8	+0.2
RCVN	Varillal2	1.85	57	⇓P	Pn	00 39 32.1	+0.2
MATN	Matagalpa	1.85	79	⇓P	Pn	00 39 30.3	-1.5
PMON	Piamonte	1.87	307	P	Pn	00 39 32.2	+0.1
PMON	Piamonte	1.87	307	eP	Pn	00 39 32.2	+0.1
RCPN	Sur Rio San Ju	1.90	60	P	Pn	00 39 32.8	+0.2
JAYA	Jayaque - finc	1.94	304	P	Pn	00 39 32.8	-0.4
JAYA	Jayaque - finc	1.94	304	eP	Pn	00 39 32.6	-0.5
BOAB	BOACO BROADBAN	2.08	93	⇓P	Pn	00 39 34.2	-0.5
SBLS	San Blas	2.19	305	eP	Pn	00 39 37.0	+0.5
NUBE	Las Nubes	2.35	304	P	Pn	00 39 38.7	+0.1
MTO3	Montecristo	2.37	320	eP	Pn	00 39 39.0	-0.1
SARH	Santa Rosa de	2.38	337	⇑P	Pn	00 39 39.9	+0.8
FAME	Alcaldia de Sa	2.51	300	P	Pn	00 39 40.7	0.0
JTS	Las Juntas de	3.59	129	P	Pn	00 39 55.8	+0.4
DRK0	Durika	5.54	126	P	Pn	00 40 21.7	-0.6
PIRO	Carate, Puerto	6.03	133	⇓P	Pn	00 40 30.9	+2.1

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*IDC **05** 00:39:26.4±1.1, 35.°76N×141.°01E, h0km, mb3.6/9, mbtmp3.7/13, ML3.0/3, MS2.6/4, Error ellipse: s-maj=30.8km s-min=16.0km az=78.0*

*NIED **05** 00:39:30.2, 35.°81N×140.°97E, h30km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10[14]Nm;*

Mrr-2.83; Mθθ2.58; Mφφ0.26; Mrθ1.81; Mθφ-1.17; Mφr1.92; Fault plane solution: M0 3.84000×10^14 NP1: φs135.00000°,δ41.00000°,λ-44.00000°. NP2: φs261.00000°,δ63.00000°,λ-122.00000°.

*JMA **05** 00:39:30.2±0.2, 35.8N±0.5×14.1E±°, h30km±1km, MV3.5/34, NEAR CHOSHI CITY*

JMA Felt I J1 at NEAR CHOSHI CITY .

ISC 05 00:39:30.4±1.6, **35.83N**±0.04×**140.97E**±0.08, **h25**km±11km, **n33**, σ0.91/27, **mb3.6**/9, **4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCAJ	**Choshiashikaji**	**0.14**	**221**	A	A	00 39 35.6	
	comp=N,140nm,0.5s,comp=E,61nm,0.4s						
JIHU	**Itakohorinouch**	**0.39**	**292**	⇓P	**Pn**	**00 39 39.5**	**-1.0**
JIHU				⇓eS	**Sn**	**00 39 46.1**	**-0.9**
JSMT	**Sammumatsuo**	**0.46**	**247**	⇓P	**Pb**	**00 39 40.3**	**+0.3**
JSMT				⇓eS	**Sb**	**00 39 46.8**	**+0.4**
JHYU	**Hitachinakayam**	**0.60**	**329**	P	**Pb**	**00 39 42.5**	**+0.2**
JHYU				eS	**Sb**	**00 39 51.0**	**+0.5**
JCCN	**Chibachonan**	**0.74**	**234**	eP	**Pn**	**00 39 45.4**	**+0.1**
JCCN				eS	**Sn**	**00 39 56.2**	**+0.5**
JYT	**Yasato**	**0.74**	**303**	eP	**Pb**	**00 39 44.0**	**-0.7**
JYT				eS	**Sb**	**00 39 53.6**	**-0.9**
JHO	**Hitachi**	**0.85**	**338**	P	**Pn**	**00 39 45.7**	**-1.1**
JHO				eS	**Sb**	**00 39 56.9**	**-0.6**
BSO3	**Boso 3**	**1.09**	**200**	eP	**Pn**	**00 39 48.9**	**-1.0**
MJAR	**Matsushiro Arr**	**2.34**	**289**	Pn	**Pn**	**00 40 07.1**	**-0.3**
	comp=E,0.8nm,0.3s,baz=94,slow=11,SNR=11						
MJAR				LR	LR	00 40 51.0	
	comp=E,36nm,18.2s,baz=162,slow=35						
	comp=E,1.7nm,0.3s						
JHJ	**Hachijo jima 2**	**2.87**	**200**	Pn	**Pn**	**00 40 14.6**	**-0.1**
	comp=E,14nm,0.3s,baz=17,slow=21,SNR=1.1						
JHJ				Sn	**Sn**	**00 40 47.1**	**-1.3**
	comp=E,13nm,0.3s,baz=110,slow=19,SNR=1.8						
	comp=E,40nm,0.3s						
JCJ	**Chichijima**	**8.76**	**173**	Pn	**Pn**	**00 41 35.2**	**-0.4**
	comp=E,34nm,0.5s,baz=294,slow=20,SNR=1.8						
KSRS	**Korea Array**	**10.61**	**283**	LR	LR	00 45 50.5	
	comp=E,38nm,21.7s,baz=90,slow=36						
USRK	**Ussuriysk Ar.**	**10.83**	**323**	Pn	**Pn**	**00 42 05.0**	**+1.3**
	comp=E,0.2nm,0.3s,baz=129,slow=14,SNR=1.5						
	comp=E,1.2nm,0.7s						
YAK	**Yakutsk**	**27.17**	**348**	LR	LR	00 55 23.8	
	comp=E,19nm,21.5s,baz=92,slow=35						
H11N2	**WAKE ISLAND Hy**	**27.87**	**118**	T	T	01 14 19.0	
	baz=311,slow=75,SNR=12						
H11N1	**WAKE ISLAND Hy**	**27.87**	**118**	T	T	01 14 24.9	
	baz=311,slow=75,SNR=9.8						
H11N3	**WAKE ISLAND Hy**	**27.89**	**118**	T	T	01 14 18.7	
	baz=311,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy**	**28.53**	**120**	T	T	01 15 07.8	
	baz=312,slow=75,SNR=32						
H11S3	**WAKE ISLAND Hy**	**28.53**	**120**	T	T	01 15 11.9	
	baz=312,slow=75,SNR=28						
H11S2	**WAKE ISLAND Hy**	**28.55**	**120**	T	T	01 15 13.1	
	baz=312,slow=75,SNR=20						
TLY	**Talaya**	**30.87**	**313**	LR	LR	00 59 32.4	
	comp=E,20nm,18.2s,baz=100,slow=39						
ZALV	**Zalesovo Beam**	**42.47**	**313**	P	**P**	**00 47 23.7**	**+0.4**
	comp=E,0.3nm,0.3s,baz=90,slow=5.8,SNR=1.6						
	comp=E,0.3nm,0.3s						
MKAR	**Makanchi Array**	**44.47**	**303**	P	**P**	**00 47 39.5**	**+0.1**
	comp=E,0.7nm,0.8s,baz=92,slow=9.3,SNR=7.8						
	comp=E,0.7nm,0.8s						
KURBB	**Kurchatov Arra**	**46.47**	**309**	P	**P**	**00 47 54.8**	**-0.4**
	comp=E,0.3nm,0.4s,baz=82,slow=7.7,SNR=6.2						
	comp=E,0.3nm,0.4s						
ILAR	**Eielson Array**	**50.71**	**32**	P	**P**	**00 48 27.6**	**0.0**
	comp=E,0.4nm,0.9s,baz=235,slow=7.6,SNR=4.5						
	comp=E,0.4nm,0.9s						
BVAR	**Borovoye Array**	**51.12**	**313**	P	**P**	**00 48 31.2**	**+0.3**
	comp=E,0.4nm,0.7s,baz=64,slow=6.6,SNR=2.6						
	comp=E,0.4nm,0.7s						
WRA	**Warramunga Arr**	**55.82**	**188**	P	**P**	**00 49 04.2**	**-1.5**
	comp=E,0.9nm,0.8s,baz=1.9,slow=7.5,SNR=11						
	comp=E,0.9nm,0.8s						
ARTI	**Arti**	**57.14**	**319**	P	**P**	**00 49 14.0**	**-0.7**
	comp=E,1.1nm,0.5s,baz=52,slow=12,SNR=7.4						
	comp=E,1.1nm,0.5s						
ASAR	**Alice Springs**	**59.54**	**188**	P	**P**	**00 49 31.2**	**-0.6**
	comp=E,0.3nm,0.7s,baz=12,slow=7.1,SNR=2.4						
	comp=E,0.3nm,0.7s						
FINES	**FINESS Array B**	**69.72**	**332**	P	**P**	**00 50 40.1**	**+2.3**
	comp=E,1.9nm,0.9s,baz=108,slow=22,SNR=1.3						
	comp=E,1.9nm,0.9s						
H03N2	**Juan Fernandez**	**147.24**	**98**	T	T	03 43 38.7	
	baz=289,slow=76,SNR=5.4						
H03N3	**Juan Fernandez**	**147.25**	**98**	T	T	03 43 39.1	
	baz=289,slow=76,SNR=7.8						
H03N1	**Juan Fernandez**	**147.25**	**98**	T	T	03 43 39.9	
	baz=289,slow=76,SNR=8.0						

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*DNK **05** 00:59:35.1±3.0, 80.00N×0.73E, h11km±28km, ML2.3, Presumed earthquake*

*BER **05** 00:59:36.7±2.8, 80.18N×0.31E, h10km, Mw3.5, ML2.3(DNK), Confirmed Earthquake*

*FCIAR **05** 00:59:41.0, 79.85N×1.40E, h10km, station OMEGA has station magnitude of 3.20*

*KOLA **05** 00:59:43.6, 80.29N×4.89E, h0km, ML2.1, Error ellipse: s-maj=66.1km s-min=28.6km az=50.0, Greenland sea*

ISC 05 00:59:31.3±0.8, **79.86N**±0.07×**1.15E**±0.04, **h10**km, **n30**, σ2.35/44, **Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**2.21**	**110**	eP	**Pg**	**01 00 14.7**	**+1.1**
KBS				eS	**Sg**	**01 00 40.1**	**-2.0**
KBS				IAML		01 00 44.5	
	comp=Z,13nm,0.6s						
KBS	**Kingsbay**	**2.21**	**110**	i P	**Pg**	**01 00 14.8**	**+1.3**
KBS				i S	**Sg**	**01 00 40.0**	**-2.0**
KBS	**Kingsbay**	**2.21**	**110**	P	**Pg**	**01 00 14.6**	**+1.1**
KBS				S	**Sb**	**01 00 37.5**	**-1.0**
BRBB	**Barentsburg B**	**3.07**	**119**	eP	**Pg**	**01 00 29.0**	**-1.0**
BRBB				eS	**Sb**	**01 01 05.1**	**+1.9**
BRBB	**Barentsburg B**	**3.07**	**119**	P	**Pg**	**01 00 29.1**	**-0.9**
BRBB				S	**Sb**	**01 01 04.0**	**+0.8**
BRBA	**Barentsburg A**	**3.09**	**119**	eP	**Pg**	**01 00 29.5**	**-0.9**
BRBA				eS	**Sb**	**01 01 06.1**	**+2.1**
BRBA				IAML		01 01 07.1	
	comp=Z,7.9nm,0.3s						
SPA0	**Spitsbergen Ar**	**3.36**	**113**	eP	**Pb**	**01 00 30.8**	**-0.1**
SPA0				eS	**Sb**	**01 01 09.3**	**-2.4**
SPA0				IAML		01 01 13.9	
	comp=Z,6.3nm,0.4s						
SPA0	**Spitsbergen Ar**	**3.36**	**113**	eP	**Pb**	**01 00 31.3**	**+0.5**
SPA0				eS	**Sb**	**01 01 08.5**	**-3.2**
SPITS	**Spitsbergen Ar**	**3.36**	**113**	P	**Pb**	**01 00 31.3**	**+0.5**
SPITS				S	**Sb**	**01 01 09.3**	**-2.4**
HSPB	**Hornsund (broa**	**4.07**	**128**	eP	**Pb**	**01 00 42.4**	**-0.5**
HSPB				eS	**Sb**	**01 01 27.4**	**-4.6**
HSPB				IAML		01 01 30.6	
	comp=Z,4.3nm,0.5s						
HSPB	**Hornsund (broa**	**4.07**	**128**	eP	**Pb**	**01 00 42.2**	**-0.7**
HSPB				i S	**Sb**	**01 01 26.8**	**-5.2**
HSPB	**Hornsund (broa**	**4.07**	**128**	P	**Pb**	**01 00 42.4**	**-0.5**
HSPB				S	**Sb**	**01 01 28.1**	**-3.8**
DAG	**Danmarks Havn**	**5.05**	**242**	i P	Pn	01 00 51.0	+4.1
DAG				i S	**Sn**	**01 01 43.8**	**-1.4**
DAG				IAML		01 01 48.6	
	comp=Z,18nm,0.2s						
DAG	**Danmarks Havn**	**5.05**	**242**	i P	Pn	01 00 51.0	+4.1
DAG				i S	**Sn**	**01 01 43.8**	**-1.4**
DAG				IAML		01 01 48.6	
	comp=Z,18nm,0.2s						
HOPEN	**Hopen**	**5.89**	**112**	eP	Pn	01 01 05.1	+6.7
HOPEN				eS	**Sn**	**01 02 09.8**	**+3.8**
HOPEN				IAML		01 02 13.1	
	comp=Z,4.5nm,0.4s						
DBG	**Daneborg**	**7.28**	**231**	i P	Pn	01 01 22.5	+5.0
DBG				i S	**Sn**	**01 02 38.8**	**-1.3**
DBG				IAML		01 02 42.2	
	comp=Z,7.2nm,0.1s						
DBG	**Daneborg**	**7.28**	**231**	i P	Pn	01 01 22.5	+5.0
DBG				i S	**Sn**	**01 02 38.8**	**-1.3**
DBG				IAML		01 02 42.2	
	comp=Z,7.2nm,0.1s						
ZFI2	**Zemlya Franca-**	**7.70**	**61**	P	**Pn**	**01 01 27.8**	**+4.6**
ZFI2				eS	**Sn**	**01 02 47.3**	**-2.9**
OMEGA	**Omega**	**7.72**	**61**	P	**Pn**	**01 01 27.9**	**+4.4**
OMEGA				S	**Sn**	**01 02 47.6**	**-3.1**
	comp=Z,7.2nm,2.0s						
JNW	**Jan Mayen West**	**9.18**	**200**	eS	**Sn**	**01 03 28.6**	**+2.0**
NEEM	**North Greenlan**	**10.23**	**283**	i P	**Pn**	**01 01 59.5**	**+1.3**
NEEM				i S	Sn	01 03 43.5	-9.4
NEEM				IAML		01 03 53.4	
	comp=Z,4.4nm,0.3s						
NEEM	**North Greenlan**	**10.23**	**283**	i P	**Pn**	**01 01 59.5**	**+1.3**
NEEM				i S	Sn	01 03 43.5	-9.4
NEEM				IAML		01 03 53.4	
	comp=Z,4.4nm,0.3s						
SUMG	**Summit**	**11.60**	**253**	i P	**Pn**	**01 02 19.4**	**+2.5**
SUMG				i S	Sn	01 04 16.1	-10
SUMG	**Summit**	**11.60**	**253**	i P	**Pn**	**01 02 19.4**	**+2.5**
SUMG				i S	Sn	01 04 16.1	-10
KULLO	**Kullorsuaq**	**13.30**	**278**	i	**Pn**	**01 02 39.5**	**-0.2**
KULLO				i		01 04 54.8	
KULLO	**Kullorsuaq**	**13.30**	**278**	i	**Pn**	**01 02 39.5**	**-0.2**
KULLO				i		01 04 54.8	
TULEG	**Thule**	**13.83**	**293**	i	**Pn**	**01 02 44.7**	**-2.2**
TULEG				i		01 05 05.9	
TULEG	**Thule**	**13.83**	**293**	i	**Pn**	**01 02 44.7**	**-2.2**
TULEG				i		01 05 05.9	
UPNV	**Upernavik**	**14.53**	**272**	i	**Pn**	**01 02 54.8**	**-1.6**
UPNV				i		01 05 23.3	
UPNV	**Upernavik**	**14.53**	**272**	i	**Pn**	**01 02 54.8**	**-1.6**
UPNV				i		01 05 23.3	

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*IDC **05** 01:00:52.0±2.1, 57.55N×79.43E, h0km, mbtmp3.2/6, ML2.9/5, Error ellipse: s-maj=21.1km s-min=13.7km az=27.0*

*NNC **05** 01:00:52.4±3.5, 57.44N×79.14E, h0km, mb3.2, mpv2.9, Error ellipse: s-maj=32.4km s-min=17.6km az=48.0*

ISC 05 01:00:50.7±1.5, **57.6N**±0.1×**79.11E**±0.07, **h10**km, **n13**, σ1.88/23, **4C-6D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**4.88**	**136**	Pn	**Pn**	**01 02 04.7**	**+0.5**
	1.6nm,0.3s,baz=318,slow=14,SNR=15						
ZALV				Sn	**Sn**	**01 03 00.9**	**+0.2**
	1.5nm,0.3s,baz=318,slow=20,SNR=6.6						
ZALV				Lg	Lg	01 03 19.2	
	0.9nm,0.3s,baz=249,slow=32,SNR=3.8						
	3.2nm,0.3s						
BVA0	**Borovoye Array**	**6.77**	**231**	⇓Pn	**Pn**	**01 02 33.7**	**+3.6**
	0.3nm,0.6s,baz=29,slow=15,SNR=8.3						
BVA0				⇓Sn	**Sn**	**01 03 47.9**	**+0.7**
	2.6nm,0.6s,baz=29,slow=24,SNR=4.3						
BVAR	**Borovoye Array**	**6.77**	**231**	Pn	**Pn**	**01 02 33.5**	**+3.4**
	0.1nm,0.3s,baz=51,slow=11,SNR=8.0						
BVAR				Sn	**Sn**	**01 03 45.6**	**-1.6**
	0.1nm,0.3s,baz=32,slow=23,SNR=1.7						
BVAR				Lg	Lg	01 04 28.8	
	baz=48,slow=24						
	0.7nm,0.3s						
KURK	**Kurchatov**	**6.92**	**183**	⇑Pn	**Pn**	**01 02 31.1**	**-0.9**
KURK				⇑Sn	**Sn**	**01 03 50.5**	**-0.2**
	0.8nm,0.3s						
KURBB	**Kurchatov Arra**	**7.01**	**183**	Pn	**Pn**	**01 02 34.5**	**+1.1**
	0.1nm,0.3s,baz=5.0,slow=12,SNR=1.9						
KURBB				Sn	**Sn**	**01 03 52.5**	**-0.5**
	0.4nm,0.3s,baz=6.9,slow=18,SNR=13						
KURBB				Lg	Lg	01 04 32.9	
	0.2nm,0.3s,baz=3.5,slow=30,SNR=4.6						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**7.01**	**183**	⇓Pn	**Pn**	**01 02 35.1**	**+1.8**
	0.4nm,0.3s						
KURBB				⇓Sn	**Sn**	**01 03 55.0**	**+1.9**
	5.1nm,0.3s						
MK31	**Makanchi Array**	**11.01**	**168**	⇓P	**Pn**	**01 03 27.4**	**-0.7**
	0.1nm,0.2s,baz=354,slow=12,SNR=9.4						
MK31				⇑S	**Sn**	**01 05 31.1**	**-0.2**
	0.7nm,0.3s,baz=357,slow=24,SNR=10						
MKAR	**Makanchi Array**	**11.01**	**168**	Pn	**Pn**	**01 03 28.0**	**-0.2**
	0.2nm,0.3s,baz=355,slow=12,SNR=9.8						
MKAR				Sn	**Sn**	**01 05 29.4**	**-1.9**
	0.6nm,0.3s,baz=344,slow=16,SNR=10						
MKAR				Lg	Lg	01 06 37.6	
	baz=347,slow=27						
	0.4nm,0.4s						
ARTI	**Arti**	**11.36**	**273**	Pn	**Pn**	**01 03 32.3**	**-0.6**
	0.4nm,0.3s,baz=79,slow=11,SNR=5.9						
ARTI				Sn	**Sn**	**01 05 39.9**	**+0.1**
	0.4nm,0.3s,baz=156,slow=20,SNR=3.1						
AB31	**Akbulak array**	**14.12**	**242**	⇑P	**Pn**	**01 04 11.3**	**+0.8**
	0.1nm,0.2s,baz=46,slow=12,SNR=15						
AKTO	**Aktyubinsk**	**14.29**	**249**	Pn	**Pn**	**01 04 14.9**	**+2.0**
	0.3nm,0.3s,baz=78,slow=6.0,SNR=5.9						
AKTO				Sn	**Sn**	**01 06 47.3**	**-4.0**
	0.2nm,0.3s,baz=24,slow=4.3,SNR=2.4						
	0.7nm,0.4s						
AKTO	**Aktyubinsk**	**14.29**	**249**	⇓P	**Pn**	**01 04 15.8**	**+2.9**
	0.3nm,0.5s						
SONM	**Songino Array**	**19.08**	**109**	P	**P**	**01 05 12.8**	**-0.5**
	0.2nm,0.5s,baz=304,slow=10,SNR=1.8						

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*MEX **05** 01:05:02.7±0.8, 14.39N×92.67W, h81km±40km, MD4.0*

*GCG **05** 01:05:04.2±1.3, 14.43N×92.57W, h50km±17km, MD3.9, Presumed earthquake*

ISC 05 01:05:00.3±1.6, **14.18N**±0.09×**92.66W**±0.06, **h57**km±28km, **n22**, σ1.99/35, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.82**	**28**	eP	**Pn**	**01 05 17.8**	**+1.9**
THIG				eS	**Sn**	**01 05 26.8**	**-0.6**
SMCA	**Catarina**	**0.88**	**40**	i P	**Pn**	**01 05 17.4**	**+0.7**
RTAL	**Retalhuleu**	**1.00**	**70**	eP	**Pn**	**01 05 20.4**	**+2.2**
RTAL				eS	**Sn**	**01 05 33.1**	**+1.7**
PATR	**El Naranjo**	**1.02**	**24**	eP	**Pn**	**01 05 18.2**	**-0.6**
PATR				eS	**Sn**	**01 05 30.8**	**-1.6**
CHUJ	**Union Juarez**	**1.06**	**30**	eP	**Pn**	**01 05 19.1**	**-0.1**
CHUJ				eS	**Sn**	**01 05 32.1**	**-1.1**
PAVE	**Pavencul**	**1.11**	**25**	eP	**Pn**	**01 05 19.9**	**-0.1**
PAVE				eS	**Sn**	**01 05 34.5**	**0.0**
STG2	**El Palmar, Qui**	**1.27**	**78**	i P	**Pn**	**01 05 21.5**	**-0.5**
STG5	**El Palmar, Qui**	**1.29**	**80**	i P	**Pn**	**01 05 22.1**	**-0.1**
STG5				i S	**Sn**	**01 05 36.3**	**-2.3**
STG8	**El Palmar, Qui**	**1.30**	**78**	i P	**Pn**	**01 05 22.2**	**-0.3**
STG8				i S	**Sn**	**01 05 36.9**	**-2.0**
SOKI	**Kika Raxquin**	**1.38**	**62**	i P	**Pn**	**01 05 26.0**	**+2.3**
PCIG		**1.61**	**340**	eP	**Pn**	**01 05 25.9**	**-0.6**
PCIG				eS	**Sn**	**01 05 44.5**	**-1.7**
FG16	**Alotenango, Sa**	**2.09**	**87**	i P	**Pn**	**01 05 31.7**	**-1.4**
APG	**El Apazote**	**2.28**	**69**	i P	**Pn**	**01 05 39.5**	**+3.7**
CARR	**Arriaga**	**2.39**	**330**	eP	**Pn**	**01 05 37.9**	**+0.9**
CARR				eS	**Sn**	**01 06 04.8**	**-0.3**
TGIG		**2.62**	**350**	eP	**Pn**	**01 05 41.7**	**+1.4**
TGIG				eS	**Sn**	**01 06 11.1**	**+0.1**
TGIG		**2.62**	**350**	i P	**Pn**	**01 05 40.2**	**-0.1**
UXUV	**UXUV**	**3.43**	**336**	eP	**Pn**	**01 05 53.4**	**+2.0**
UXUV				eS	**Sn**	**01 06 31.5**	**+0.7**
CMIG	**Matias Romero**	**3.60**	**324**	eP	**Pn**	**01 05 54.6**	**+0.9**
CMIG				eS	**Sn**	**01 06 30.0**	**-5.0**
HUIG	**Huatulco**	**3.69**	**296**	eP	Pn	01 06 03.5	+8.6
HUIG				eS	**Sn**	**01 06 34.2**	**-2.9**
NEUV	**Arroyo Zacate**	**4.63**	**320**	eP	**Pn**	**01 06 10.9**	**+3.1**
NEUV				eS	**Sn**	**01 06 57.1**	**-3.3**
SCIG	**Sabancuy**	**4.97**	**16**	eS	**Sn**	**01 07 06.3**	**-2.2**
TXIG	**Tlaxiaco**	**5.79**	**303**	eS	**Sn**	**01 07 31.8**	**+2.6**

IDC 05 01:05:29.2±2.1, **6.18S**×**130.16E**, **h0**km, **mb3.9**/2, **mbtmp3.5**/4, **ML3.4**/2, **Error ellipse: s-maj=145.5km s-min=30.1km az=70.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.27**	**164**	Pn	Pn	01 08 52.9	+0.2
	0.2nm,0.3s,baz=347,slow=13,SNR=13						
WRA				Sn	Sn	01 11 18.1	-14
	0.2nm,0.3s,baz=343,slow=20,SNR=5.6						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**17.75**	**169**	P	Pn	01 09 37.9	-0.1
	0.1nm,0.3s,baz=341,slow=9.9,SNR=4.6						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**67.64**	**327**	P	P	01 16 28.3	+0.2
	0.2nm,0.4s,baz=113,slow=7.5,SNR=7.2						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**71.90**	**328**	P	P	01 16 53.9	-0.3
	0.5nm,0.2s,baz=122,slow=4.7,SNR=1.8						
	0.5nm,0.2s						

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*IDC **05** 01:16:19.6±2.1, 31.24S×178.08W, h0km, mb4.0/2, mbtmp4.0/3, ML3.2/1, Error ellipse: s-maj=47.7km s-min=45.8km az=59.0*

*NEIC **05** 01:16:20.7±1.1, 31.5S±0.1×177.9W±0.2, h10km±1km, mb4.6/16, Error ellipse: s-maj=28.9km s-min=19.7km az=116.0*

ISC 05 01:16:24.7±0.9, **31.6S**±0.1×**178.1W**±0.2, **h35**km, **n28**, σ0.89/29, **mb4.5**/10, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.78**	**209**	Pn	**Pn**	**01 18 15.8**	**+0.5**
	0.3nm,0.3s,baz=41,slow=19,SNR=1.6						
URZ				Sn	**Sn**	**01 19 41.9**	**-0.2**
	1.0nm,0.3s,baz=20,slow=12,SNR=6.0						
	7.0nm,0.9s						
RTZ	**Ruatahuna**	**8.13**	**209**	Pn	**Pn**	**01 18 19.5**	**-0.8**
MSWZ	**Moikau Station**	**11.21**	**207**	Pn	**Pn**	**01 19 01.8**	**-0.6**
TCW	**Tory Channel**	**11.44**	**210**	Pn	**Pn**	**01 19 05.4**	**-0.1**
DSZ	**Denniston Nort**	**13.01**	**216**	Pn	**Pn**	**01 19 27.3**	**+0.3**
ODZ	**Otahua Downs**	**16.10**	**210**	Pn	**Pn**	**01 20 07.6**	**-0.6**
OUENC	**Ouen Island, N**	**16.23**	**300**		**P**	**01 20 11.7**	**-1.1**
LHI	**Lord Howe Isla**	**19.50**	**264**	P	**P**	**01 20 48.4**	**-0.4**
CAN	**Canberra**	**27.67**	**253**	P	**P**	**01 22 09.5**	**+0.1**
CAN				IAmb	IAmb	01 22 24.6	
	comp=Z,25nm,1.3s						
HNR	**Honiara**	**30.03**	**312**	P	**P**	**01 22 31.9**	**+1.4**
ASAR	**Alice Springs**	**43.01**	**268**	P	**P**	**01 24 21.1**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=103,slow=7.5,SNR=13						
	comp=Z,0.6nm,0.4s						
ASAR	**Alice Springs**	**43.01**	**268**	P	**P**	**01 24 19.8**	**-1.2**
WR0	**Warramunga Arr**	**43.92**	**273**	P	**P**	**01 24 28.3**	**0.0**
WR0				IAmb	IAmb	01 24 39.0	
	comp=Z,13nm,1.5s						
WR8	**Warramunga Arr**	**43.96**	**273**	P	**P**	**01 24 28.7**	**0.0**
WR8				IAmb	IAmb	01 24 39.7	
	comp=Z,5.9nm,1.2s						
WB2	**Warramunga Arr**	**44.09**	**273**	P	**P**	**01 24 29.9**	**+0.2**
WB2				IAmb	IAmb	01 24 34.3	
	comp=Z,12nm,1.2s						
WRA	**Warramunga Arr**	**44.10**	**273**	P	**P**	**01 24 29.7**	**-0.1**
	comp=Z,1.6nm,0.3s,baz=112,slow=8.1,SNR=42						
	comp=Z,1.6nm,0.3s						
WRA	**Warramunga Arr**	**44.10**	**273**	P	**P**	**01 24 29.6**	**-0.1**
WB0	**Warramunga Arr**	**44.13**	**274**	P	**P**	**01 24 30.0**	**0.0**
MTN	**Manton Dam**	**50.12**	**280**	P	**P**	**01 25 17.3**	**+0.6**
KNRA	**Kununurra**	**50.75**	**275**	P	**P**	**01 25 21.4**	**0.0**
KNRA				IAmb	IAmb	01 25 37.4	
	comp=Z,15nm,1.4s						
KLU	**Klutina**	**96.32**	**15**	P	**P**	**01 29 49.6**	**+0.5**
BOZ	**Bozeman (W)**	**97.54**	**40**	P	**P**	**01 29 54.8**	**-0.4**
BOZ				IAmb	IAmb	01 29 55.9	
	comp=Z,1.4nm,0.8s						
MLY	**Manley**	**98.60**	**11**	P	**P**	**01 29 59.5**	**+0.2**
MLY				IAmb	IAmb	01 30 10.0	
	comp=Z,2.3nm,1.3s						
P33M	**Teslin, Yukon**	**98.69**	**21**	P	**P**	**01 29 57.4**	**-2.4**
P33M				IAmb	IAmb	01 30 17.2	
	comp=Z,0.7nm,0.8s						
M29M	**Somme Creek**	**98.92**	**17**	P	**P**	**01 30 00.5**	**-0.3**
FINES	**FINESS Array B**	**146.21**	**339**	PKPbc	**PKPdf**	**01 35 58.7**	**-0.8**
	comp=Z,2.9nm,1.0s,baz=30,slow=5.9,SNR=5.5						
FINES	**FINESS Array B**	**146.21**	**339**		**PKPdf**	**01 35 59.3**	**-0.2**
TORD	**Torodi Ar. Bea**	**161.68**	**179**	PKPab	**PKPab**	**01 37 10.1**	**+2.6**
	comp=Z,0.3nm,0.9s,baz=197,slow=4.4,SNR=1.7						

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*TEH **05** 01:22:23.5, 34.48N×45.44E, h10km±79km, ML2.6, Presumed earthquake*

*ISN **05** 01:22:24.0±1.1, 34.51N×45.43E, h14km±26km, ML2.7, Presumed earthquake*

ISC 05 01:22:24.2±1.0, **34.51N**±0.04×**45.47E**±0.04, **h18**km, **n11**, σ1.27/15, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLG1	**Gilan-e-Gharb**	**0.53**	**137**	Pg	**Pg**	**01 22 33.9**	**-1.1**
IDHR	**Dehrash**	**0.78**	**75**	Pg	**Pb**	**01 22 38.7**	**-0.6**
IGHG	**Ghaleghazi**	**0.92**	**101**	Pg	**Pb**	**01 22 42.0**	**+0.1**
IKRK	**Kirkuk**	**1.29**	**314**	ePg	**Pg**	**01 22 48.5**	**-0.6**
IKRK				eSg	**Sg**	**01 23 06.0**	**0.0**
IKRK				AML	AML	01 23 12.2	
	comp=E,227nm,0.4s						
IKRK				AML	AML	01 23 12.3	
	comp=N,337nm,0.4s						
KCHF	**Cheshme Sefid,**	**1.32**	**100**	Pg	**Pb**	**01 22 49.5**	**+1.0**
IBDR	**Badra**	**1.44**	**165**	ePn	**Pg**	**01 22 52.0**	**-0.1**
IBDR				eSn	**Sg**	**01 23 11.0**	**+0.1**
IBDR				AML	AML	01 23 14.4	
	comp=E,73nm,0.5s						
IBDR				AML	AML	01 23 14.6	
	comp=N,88nm,0.8s						
BHD	**Baghdad**	**1.53**	**217**	ePn	**Pb**	**01 22 52.0**	**-0.1**
BHD				eSn	**Sg**	**01 23 13.4**	**-0.3**
SNQR	**Sonqor, Kerman**	**1.81**	**78**	Pn	**Pb**	**01 22 57.7**	**+0.7**
IBZA	**Bozab**	**1.97**	**90**	Pn	**Pb**	**01 22 59.5**	**-0.2**
IALM	**Almabolaq**	**2.25**	**80**	Pn	**Pb**	**01 23 03.6**	**-0.8**
RAFI	**Al-Rafai**	**2.83**	**169**	ePn	**Pn**	**01 23 11.0**	**+2.5**
RAFI				eSn	**Sb**	**01 23 45.5**	**-2.9**

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*IDC **05** 01:27:45.3±1.8, 25.29S×178.63E, h555km±19km, mb3.2/4, mbtmp4.2/7, Error ellipse: s-maj=22.4km s-min=18.8km az=102.0*

*NEIC **05** 01:27:46.3±1.3, 25.3S±0.1×178.7E±0.2, h571km±9km, mb4.4/23, Error ellipse: s-maj=23.3km s-min=16.6km az=93.0*

ISC 05 01:27:46.7±0.7, **25.31S**±0.08×**178.6E**±0.1, **h585**km, **n66**, σ1.74/68, **mb4.1**/13, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.99**	**143**	P	**P**	**01 29 22.8**	**+4.4**
MSVF	**Nonsavu**	**7.56**	**356**	P	**P**	**01 29 40.1**	**-1.5**
	5.5nm,0.4s,baz=189,slow=11,SNR=5.0						
MKAZ	**Moumakai**	**12.13**	**193**	P	**P**	**01 30 30.7**	**+4.1**
MXZ	**Matakaoa Point**	**12.22**	**181**	P	**P**	**01 30 25.2**	**-2.3**
HAZ	**Te Kaha**	**12.43**	**183**	P	**P**	**01 30 27.1**	**-2.5**
URZ	**Urewera**	**12.98**	**185**	P	**P**	**01 30 32.5**	**-2.7**
	8.9nm,0.7s,baz=14,slow=6.3,SNR=5.8						
URZ				S	**S**	**01 32 46.7**	**-7.1**
	4.5nm,0.7s,baz=34,slow=18,SNR=1.5						
URZ	**Urewera**	**12.98**	**185**	P	**P**	**01 30 32.8**	**-2.3**
MWZ	**Matawai**	**13.02**	**184**	P	**P**	**01 30 33.4**	**-2.3**
BKZ	**Black Stump Fm**	**13.94**	**187**	P	**P**	**01 30 42.8**	**-2.2**
BKZ	**Black Stump Fm**	**13.94**	**187**	P	**P**	**01 30 42.0**	**-3.1**
BFZ	**Birch Farm**	**15.46**	**187**	P	**P**	**01 30 59.1**	**-0.4**
BFZ	**Birch Farm**	**15.46**	**187**	P	**P**	**01 30 59.4**	**-0.2**
MRZ	**Mangatainoka R**	**15.52**	**189**	P	**P**	**01 30 57.5**	**-2.6**
MRZ				IAmb	IAmb	01 31 32.4	
	comp=Z,54nm,1.5s						
MRZ	**Mangatainoka R**	**15.52**	**189**	P	**P**	**01 30 57.7**	**-2.4**
DUWZ	**D'Urville Isla**	**15.95**	**193**	P	**P**	**01 31 04.8**	**+0.7**
TCW	**Tory Channel**	**16.27**	**192**	P	**P**	**01 31 07.5**	**+0.4**
TCW	**Tory Channel**	**16.27**	**192**	P	**P**	**01 31 06.3**	**-0.8**
SNZO	**South Karori**	**16.29**	**191**	P	**P**	**01 31 07.9**	**+0.7**
QRZ	**Quartz Range**	**16.29**	**197**	P	**P**	**01 31 07.8**	**+0.5**
QRZ	**Quartz Range**	**16.29**	**197**	P	**P**	**01 31 08.4**	**+1.1**
MSWZ	**Moikau Station**	**16.31**	**189**	P	**P**	**01 31 07.7**	**+0.2**
MSWZ	**Moikau Station**	**16.31**	**189**	P	**P**	**01 31 06.0**	**-1.4**
BHW	**Baring Head**	**16.36**	**190**	P	**P**	**01 31 08.0**	**+0.2**
BHW				IAmb	IAmb	01 31 34.8	
	comp=Z,58nm,1.3s						
PLWZ	**Palliser**	**16.46**	**189**	P	**P**	**01 31 09.2**	**+0.3**
PLWZ	**Palliser**	**16.46**	**189**	P	**P**	**01 31 08.3**	**-0.5**
MRNZ	**Matariki Terra**	**16.78**	**195**	P	**P**	**01 31 12.2**	**+0.5**
MRNZ	**Matariki Terra**	**16.78**	**195**	P	**P**	**01 31 12.3**	**+0.7**
THZ	**Tophouse**	**17.09**	**195**	P	**P**	**01 31 15.5**	**+0.9**
DSZ	**Denniston Nort**	**17.34**	**197**	P	**P**	**01 31 18.8**	**+1.9**
KHZ	**Kahutara**	**17.58**	**193**	P	**P**	**01 31 19.0**	**+0.2**
LTZ	**Lake Taylor**	**18.20**	**195**	P	**P**	**01 31 24.3**	**-0.3**
GVZ	**Greta Valley S**	**18.21**	**193**	P	**P**	**01 31 23.9**	**-0.8**
OXZ	**Oxford**	**18.77**	**195**	P	**P**	**01 31 29.1**	**-0.7**
OXZ				IAmb	IAmb	01 31 29.7	
	comp=Z,16nm,0.8s						
WVZ	**Waitaha Valley**	**18.87**	**198**	P	**P**	**01 31 31.0**	**+0.3**
RPZ	**Rata Peaks**	**19.38**	**197**	P	**P**	**01 31 35.4**	**+0.1**
	comp=Z,4.0nm,0.4s,baz=5.7,slow=3.0,SNR=5.1						
RPZ	**Rata Peaks**	**19.38**	**197**	P	**P**	**01 31 36.1**	**+0.7**
FOZ	**Fox Glacier**	**19.56**	**199**	P	**P**	**01 31 37.2**	**+0.2**
LBZ	**Lake Benmore**	**20.24**	**198**	P	**P**	**01 31 42.8**	**-0.3**

LBZ IAmb IAmb 01 31 55.7
comp=Z,29nm,1.5s
WHZ Wether Hill Ro 22.26 200 P **P** **01 32 02.1 +0.9**
WHZ IAmb IAmb 01 32 07.9
comp=Z,16nm,0.9s
HNR Honiara 23.77 308 P **P** **01 32 12.1 -2.9**
CTAO Charters Tower 30.28 273 P **P** **01 33 12.8 +1.0**
CTAO IAmb IAmb 01 33 41.9
comp=Z,6.6nm,1.3s
TOO Toolangi 30.65 238 P **P** **01 33 15.8 +1.0**
TOO IAmb IAmb 01 33 43.1
comp=Z,6.9nm,1.3s
COEN Coen 35.15 282 P **P** **01 33 52.3 -0.6**
COEN IAmb IAmb 01 34 01.1
comp=Z,7.5nm,1.2s
BBOO Buckleboo 37.77 248 P **P** **01 34 14.1 -0.1**
BBOO IAmb IAmb 01 34 50.1
comp=Z,13nm,1.4s
AS31 Alice Springs 40.60 263 P **P** **01 34 36.8 -0.4**
ASAR Alice Springs 40.60 263 P **P** **01 34 37.5 +0.3**
comp=Z,1.4nm,0.4s,baz=89,slow=6.5,SNR=34
comp=Z,1.4nm,0.4s
ASAR Alice Springs 40.60 263 P **P** **01 34 37.1 0.0**
WR8 Warramunga Arr 40.95 268 P **P** **01 34 39.7 -0.2**
WR8 IAmb IAmb 01 34 41.7
comp=Z,11nm,1.5s
WB2 Warramunga Arr 41.09 268 P **P** **01 34 41.1 +0.2**
WB2 IAmb IAmb 01 35 25.6
comp=Z,21nm,1.4s
WB0 Warramunga Arr 41.10 268 P **P** **01 34 40.9 -0.1**
WB0 IAmb IAmb 01 34 55.5
comp=Z,8.6nm,1.3s
WRA Warramunga Arr 41.10 268 P **P** **01 34 40.5 -0.5**
comp=Z,1.8nm,0.6s,baz=104,slow=8.0,SNR=19
WRA ScP **ScP** **01 39 24.1 +3.1**
comp=Z,0.5nm,0.8s,baz=113,slow=3.5,SNR=2.7
comp=Z,1.8nm,0.6s
WRA Warramunga Arr 41.10 268 P **P** **01 34 40.5 -0.5**
FORT Forrest 44.67 251 P **P** **01 35 08.4 -0.3**
KNRA Kununurra 47.47 272 P **P** **01 35 30.8 +0.8**
KNRA IAmb IAmb 01 35 58.7
comp=Z,24nm,1.4s
VNDA Vanda 52.88 185 P **P** **01 36 10.1 +1.7**
QSPA South Pole Qui 64.78 180 P **P** **01 37 30.1 +1.7**
comp=Z,2.1nm,0.6s,baz=18,slow=0.6,SNR=6.5
comp=Z,2.1nm,0.6s
QSPA South Pole Qui 64.78 180 P **P** **01 37 31.0 +2.6**
JMZ Minamidaito 2 68.42 314 P **P** **01 37 51.0 -0.2**
NVAR Mina Array Bea 86.62 45 P **P** **01 39 28.4 -0.8**
comp=Z,0.4nm,0.6s,baz=253,slow=5.5,SNR=2.2
comp=Z,0.4nm,0.6s
FINES FINESS Array B 139.36 340 PKhKP PKPpre 01 46 00.6
comp=Z,4.0nm,1.0s,baz=12,slow=5.7,SNR=2.7
FINES PKP **PKiKP** **01 46 09.2 -0.8**
comp=Z,4.2nm,1.1s,baz=16,slow=5.9,SNR=3.8
NB2 NORSAR Subarra 143.26 350 PKP **PKPdf** **01 46 14.5 -0.1**
comp=Z,1.1nm,0.6s,baz=15,slow=3.2
NOA NORSAR Array B 143.26 350 PKP **PKPdf** **01 46 14.2 -0.3**
comp=Z,1.8nm,0.8s,baz=21,slow=3.8,SNR=10
HFS Hagfors 143.66 347 PKP **PKPdf** **01 46 15.4 +0.1**
comp=Z,3.7nm,0.5s,baz=67,slow=3.2,SNR=43
MMAI Mount Meron Ar 147.12 292 PKPbc **PKiKP** **01 46 27.3 +0.4**
comp=Z,0.5nm,0.4s,baz=52,slow=12,SNR=2.4
BRTR Keskin Array B 147.40 305 PKPbc **PKPab** **01 46 28.5 -1.4**
comp=Z,0.4nm,0.6s,baz=114,slow=5.7,SNR=2.8
EKA Eskdalemuir Ar 149.98 2 PKPbc **PKiKP** **01 46 32.7 +0.7**
comp=Z,0.4nm,0.4s,baz=349,slow=2.9,SNR=11

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*NOU **05** 01:42:56.3, 30.̊08S×173.̊02W, h0km, mb5.1/22, Kermadec Islands Region*
*IDC **05** 01:43:28.6±0.4, 30.̊23S×177.̊68W, h0km, mb4.6/17, mbtmp4.6/18, ML3.7/1, MS3.8/41, Error ellipse: s-maj=17.0km s-min=12.4km az=85.0*
*NEIC **05** 01:43:35.5±1.7, 30.̊26S±0.̊06×177.̊9W±0.̊1, h35km±1km, mb4.9/71, Error ellipse: s-maj=17.7km s-min=9.8km az=92.0*
*GCMT **05** 01:43:36.5±0.3, 30.̊28S±0.̊03×177.̊65W±0.̊02, h38km±1km, MW4.9/56, Moment Tensor Solution. s33,c38; s56,c70; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.46±.17; $M_{\theta\theta}$0.42±.12; $M_{\phi\phi}$-2.88±.10; $M_{r\theta}$0.34±.11; $M_{\theta\phi}$0.08±.11; $M_{\phi r}$0.92±.10; Best double couple: $M_0$2.85000×10^{16} NP1:ϕ_s169.00000°,δ36.00000°,λ75.00000°. NP2: ϕ_s7.00000°,δ55.00000°,λ101.00000°. Principal axes: T 2.6680, Plg77.0000°, Azm313.0000°; N 0.3700, Plg9.0000°, Azm181.0000°; P -3.0330, Plg9.0000°, Azm90.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 05 01:43:33.9±0.3**, 30.̊40S**±0.̊04×**177.̊73W**±0.̊06**, h35**km**, n332, σ1ˢ87**/329**, mb4.9**/64**, MS3.9**/39**, 15C-7D, Kermadec Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GLKZ Green Lake 1.15 352 P **Pn** **01 43 52.2 -1.2**
GLKZ S **Sn** **01 44 04.5 -3.4**
RAO Raoul Island 1.16 352 Pn **Pn** **01 43 52.1 -1.5**
1μm,0.3s,baz=93,slow=11,SNR=21
RAO Sn **Sn** **01 44 05.5 -2.7**
10μm,0.3s,baz=159,slow=22,SNR=17
RAO LR LR 01 44 16.5
comp=Z,3μm,19.1s,baz=248,slow=48
RAO Raoul Island 1.16 352 Pn **Pn** **01 43 52.6 -1.0**
RAO Sn **Sn** **01 44 06.0 -2.1**
RIZ Raoul Island 1.16 351 P Pn 01 43 45.2 -8.5
RIZ S Sn 01 43 58.4 -10
WMGZ Waiomatatini S 8.06 202 P **Pn** **01 45 26.0 -2.4**
PKGZ Pakihiroa 8.22 204 P **Pn** **01 45 27.5 -3.1**
HAZ Te Kaha 8.23 206 P **Pn** **01 45 28.6 -2.2**
PUZ Puketiti 8.34 202 P **Pn** **01 45 29.3 -3.0**
RUGZ Raukumara Rang 8.45 206 P **Pn** **01 45 31.5 -2.4**
RUGZ S **Sn** **01 47 07.6 -0.5**
WCZ Waipu Caves 8.64 228 P Pn 01 45 44.2 +7.8
OUZ Omahuta 8.74 234 P Pn 01 45 44.5 +6.8
MWZ Matawai 8.83 205 P **Pn** **01 45 35.7 -3.4**
MWZ S **Sn** **01 47 13.9 -3.5**
URZ Urewera 8.92 207 Pn **Pn** **01 45 36.4 -3.9**
1.3nm,0.3s,baz=51,slow=17,SNR=11
URZ Sn **Sn** **01 47 16.5 -3.1**
4.9nm,0.3s,baz=35,slow=8.6,SNR=4.8
URZ Urewera 8.92 207 P **Pn** **01 45 37.0 -3.3**
URZ S **Sn** **01 47 17.0 -2.6**
MUGZ Murupara 9.25 208 P **Pn** **01 45 41.2 -3.5**
MUGZ S **Sn** **01 47 25.1 -2.5**
RTZ Ruatahuna 9.28 207 **Pn** **01 45 41.8 -3.6**
SNGZ Shannon Statio 9.29 205 P **Pn** **01 45 43.9 -1.5**
SNGZ S **Sn** **01 47 26.6 -2.1**
RAHZ Arahi 9.51 205 P **Pn** **01 45 45.6 -2.7**
RAHZ S **Sn** **01 47 30.6 -3.4**
MTHZ Maungataniwha 9.54 206 P **Pn** **01 45 46.5 -2.3**
MTHZ S **Sn** **01 47 31.8 -3.0**
BKZ Black Stump Fm 9.95 207 P **Pn** **01 45 54.6 +0.2**
BKZ Black Stump Fm 9.95 207 P **Pn** **01 45 51.6 -2.8**
BKZ S **Sn** **01 47 39.4 -5.4**
HIZ Hauiti 10.14 215 P **Pn** **01 46 01.5 +4.5**
HIZ Hauiti 10.14 215 P **Pn** **01 46 01.5 +4.5**
NTVZ North Tongarir 10.23 210 P **Pn** **01 45 58.3 -0.1**
TMVZ Te Maari 10.23 210 P **Pn** **01 45 57.3 -1.1**
TMVZ S **Sn** **01 47 48.9 -3.0**
ETVZ East Tongariro 10.25 210 P **Pn** **01 45 58.3 -0.2**
OTVZ Oturere 10.29 210 P **Pn** **01 45 59.0 -0.2**
KAHZ Kahuranaki 10.36 204 P **Pn** **01 45 56.2 -3.8**
KAHZ S **Sn** **01 47 49.3 -5.6**
PNHZ Pukenui 10.71 206 P Pn 01 45 59.3 -5.6
PNHZ S **Sn** **01 47 56.6 -6.9**
BFZ Birch Farm 11.37 204 P **Pn** **01 46 12.5 -1.3**
BFZ Birch Farm 11.37 204 P Pn 01 46 08.9 -4.9
QRZ Quartz Range 13.07 215 P **P** **01 46 42.6 -4.2**
MSVF Nonsavu 13.18 342 Pn **Pn** **01 46 39.6 +0.8**
baz=148,slow=14
MSVF LR LR 01 50 48.4
comp=Z,875nm,21.6s,baz=171,slow=34
MSVF Nonsavu 13.18 342 **Pn** **01 46 36.9 -1.8**
MRNZ Matariki Terra 13.40 212 P **Pn** **01 46 39.4 -2.1**
THZ Tophouse 13.62 211 **Pn** **01 46 43.4 -1.3**
THZ Tophouse 13.62 211 P **Pn** **01 46 43.6 -1.0**
THZ S Sn 01 49 04.0 -11
KHZ Kahutara 13.89 208 P **Pn** **01 46 46.5 -1.7**
KHZ Kahutara 13.89 208 **Pn** **01 46 45.4 -2.8**
KHZ Kahutara 13.89 208 P **Pn** **01 46 44.2 -4.0**
GVZ Greta Valley S 14.55 208 P **Pn** **01 46 57.0 -0.3**
LTZ Lake Taylor 14.72 210 **Pn** **01 46 59.0 -0.6**
LTZ Lake Taylor 14.72 210 P **Pn** **01 46 59.2 -0.4**
OXZ Oxford 15.26 210 **Pn** **01 47 07.7 +0.9**
OXZ IAmb IAmb 01 47 11.7
comp=Z,40nm,0.6s
MQZ McQueen's Vall 15.32 207 P **Pn** **01 47 03.4 -4.1**
MHCZ Mount Hutt 15.63 210 P **Pn** **01 47 09.5 -2.1**
WVZ Waitaha Valley 15.65 213 P **Pn** **01 47 11.4 -0.3**
OUENC Ouen Island, N 15.93 296 P P 01 47 26.9 +8.1
RPZ Rata Peaks 16.00 211 Pn **Pn** **01 47 14.1 -2.2**
comp=Z,1.7nm,0.3s,baz=6.3,slow=9.9,SNR=9.7
RPZ Sn Sn 01 49 57.7 -15
comp=Z,2.0nm,0.3s,baz=4.9,slow=15,SNR=6.0
RPZ LR LR 01 53 31.8
comp=Z,431nm,20.2s,baz=12,slow=37
RPZ Rata Peaks 16.00 211 P **Pn** **01 47 15.2 -1.1**
RPZ Rata Peaks 16.00 211 **Pn** **01 47 14.9 -1.4**
RPZ Rata Peaks 16.00 211 P **Pn** **01 47 15.2 -1.1**
ARCZ Arundel 16.14 210 P **Pn** **01 47 15.3 -2.7**
DZM Mont Dzumac 16.43 297 Pn **P** **01 47 24.8 +0.4**
comp=Z,0.1nm,0.3s,baz=136,slow=3.3,SNR=3.6
DZM Mont Dzumac 16.43 297 P **P** **01 47 30.4 +6.0**
DZM Mont Dzumac 16.43 297 **Pn** **01 47 22.9 +0.9**
LBZ Lake Benmore 16.92 211 P **Pn** **01 47 27.8 -0.1**
ODZ Otahua Downs 17.24 209 P **Pn** **01 47 29.2 -2.7**
ODZ Otahua Downs 17.24 209 Pn **Pn** **01 47 32.4 +0.5**
ODZ Otahua Downs 17.24 209 P **Pn** **01 47 32.5 +0.6**
AFI Afiamalu 17.30 20 P **Pn** **01 47 26.4 -6.5**
comp=Z,14nm,0.5s,baz=225,slow=20,SNR=1.4
AFI S Sn 01 50 26.0 -18
comp=Z,13nm,0.4s,baz=239,slow=19,SNR=1.8
AFI LR LR 01 52 55.9
comp=Z,253nm,20.1s,baz=198,slow=33
JCZ Jackson Bay 17.33 214 P **Pn** **01 47 29.8 -3.3**
RAR Rarotonga 18.55 65 P **P** **01 47 45.8 -1.9**
comp=Z,2.6nm,0.3s,baz=224,slow=8.1,SNR=7.0
RAR S Sn 01 50 57.1 -18
comp=Z,6.9nm,0.5s,baz=307,slow=20,SNR=2.6
comp=Z,23nm,0.7s
RAR Rarotonga 18.55 65 P **P** **01 47 47.4 -0.4**
ARMA Armidale 26.39 262 P **P** **01 49 10.4 +3.1**
comp=Z,36nm,1.1s
ARMA S S 01 49 22.6 -256
ARMA Armidale 26.39 262 P **P** **01 49 10.7 +3.4**
ARMA Armidale 26.39 262 P **P** **01 49 08.4 +1.1**
ARMA IAmb IAmb 01 49 11.4
comp=Z,29nm,1.0s
MGCD Mangrove Creek 26.58 256 P **P** **01 49 12.2 +3.3**
comp=Z,83nm,0.8s
EIDS Eidsvold 27.97 273 P **P** **01 49 22.8 +1.5**
comp=Z,38nm,0.9s
EIDS Eidsvold 27.97 273 **P** **01 49 21.9 +0.6**
EIDS IAmb IAmb 01 49 23.8
comp=Z,24nm,0.8s
CNB Canberra Magne 28.00 251 P **P** **01 49 24.4 +2.8**
CAN Canberra 28.30 251 P **P** **01 49 26.4 +2.2**
comp=Z,57nm,0.8s
CAN Canberra 28.30 251 P **P** **01 49 26.5 +2.3**
CAN Canberra 28.30 251 **P** **01 49 26.0 +1.8**
CAN IAmb IAmb 01 49 27.5
comp=Z,41nm,0.8s
PPTF Pamatai, Papee 28.63 70 P P 01 48 19.1 -68
PPT Papeete 28.63 70 LR LR 01 57 53.9
comp=Z,155nm,20.4s,baz=254,slow=30
YNG Young 28.80 253 P **P** **01 49 31.4 +2.7**
comp=Z,43nm,0.9s
HNR Honiara 29.48 310 LR LR 02 00 26.3
comp=Z,7.3nm,18.4s,baz=238,slow=35
TOO Toolangi 31.18 247 P **P** **01 49 51.4 +1.6**
comp=Z,10nm,0.8s
TOO Toolangi 31.18 247 P **P** **01 49 51.2 +1.4**
CMSA Cobar Meteorol 31.30 258 P **P** **01 49 52.5 +1.8**
comp=Z,50nm,0.9s
CMSA Cobar Meteorol 31.30 258 P **P** **01 49 52.6 +1.8**
QLP Quilpie 33.54 267 P **P** **01 50 11.8 +1.2**
comp=Z,78nm,0.8s
QLP Quilpie 33.54 267 P **P** **01 50 11.7 +1.2**
CTA Charters Tower 34.03 279 LR LR 02 02 53.4
comp=Z,317nm,18.1s,baz=54,slow=34
CTA Charters Tower 34.03 279 P **P** **01 50 16.4 +1.6**
CTAO Charters Tower 34.03 279 P **P** **01 50 16.4 +1.6**
CTAO Charters Tower 34.03 279 P **P** **01 50 16.1 +1.3**
CTAO Charters Tower 34.03 279 P **P** **01 50 16.3 +1.5**
CTAO x x 01 50 34.5
ARPS Mount Arapiles 34.09 248 P **P** **01 50 14.3 -0.9**
comp=Z,11nm,1.0s
STKA Stephens Creek 34.71 257 P **P** **01 50 22.3 +1.8**
comp=Z,399nm,0.8s
STKA Stephens Creek 34.71 257 P **P** **01 50 22.4 +1.9**
comp=Z,60nm,0.7s,baz=96,slow=10,SNR=123
STKA LR LR 02 03 36.2
comp=Z,244nm,18.4s,baz=37,slow=35
comp=Z,60nm,0.7s
STKA Stephens Creek 34.71 257 P **P** **01 50 22.2 +1.6**
STKA Stephens Creek 34.71 257 P **P** **01 50 22.2 +1.6**
INKA Innaminka 36.25 264 P **P** **01 50 35.3 +1.4**
INKA IAmb IAmb 01 50 36.9
comp=Z,15nm,0.8s
MTSU Mount Surprise 36.52 281 P **P** **01 50 37.0 +0.7**
comp=Z,38nm,0.8s
HTT Hallett 36.73 254 P **P** **01 50 39.4 +1.4**
comp=Z,35nm,0.8s
HTT Hallett 36.73 254 P **P** **01 50 39.1 +1.2**
PMG Port Moresby 38.82 295 P **P** **01 50 56.9 +1.2**
BBOO Buckleboo 39.19 254 P **P** **01 50 58.9 +0.2**
BBOO Buckleboo 39.19 254 P **P** **01 50 59.0 +0.3**
COEN Coen 39.50 286 P **P** **01 51 02.3 +1.0**
COEN IAmb IAmb 01 51 03.6
comp=Z,21nm,1.0s
QIS Mount Isa 39.55 274 P **P** **01 51 02.3 +0.5**
AS31 Alice Springs 43.34 267 P **P** **01 51 33.0 +0.1**
ASAR Alice Springs 43.34 267 P **P** **01 51 32.5 -0.5**
comp=Z,12nm,0.8s,baz=102,slow=7.6,SNR=98
ASAR PcP **PcP** **01 53 21.5 +0.3**
comp=Z,1.2nm,0.7s,baz=107,slow=3.8,SNR=1.7
ASAR ScP **ScP** **01 57 16.0 +6.0**
comp=Z,2.0nm,0.9s,baz=113,slow=4.5,SNR=7.3
ASAR PKiKP **PKiKP** **02 00 23.0 -1.1**
comp=Z,0.3nm,0.6s,baz=82,slow=1.7,SNR=4.1
ASAR LR LR 02 09 19.2
comp=Z,317nm,18.2s,baz=108,slow=36
comp=Z,12nm,0.8s
ASAR Alice Springs 43.34 267 P **P** **01 51 32.4 -0.5**
ASAR **PcP** **01 53 21.6 +0.3**
ASAR **ScP** **01 57 13.7 +3.7**
WR8 Warramunga Arr 44.19 272 P **P** **01 51 39.2 -0.5**
WRAB Tennant Creek 44.33 272 P **P** **01 51 39.9 -0.8**
WRAB IAmb IAmb 01 51 41.8
comp=Z,38nm,0.8s
WRAB Tennant Creek 44.33 272 P **P** **01 51 40.0 -0.8**
WRAB x x 01 51 52.0
WRAB x x 01 51 54.0
WRAB x x 01 51 57.0
WRA Warramunga Arr 44.33 272 P **P** **01 51 40.1 -0.8**
comp=Z,33nm,0.5s,baz=111,slow=8.0,SNR=246
WRA ScP **ScP** **01 57 18.3 +4.2**
comp=Z,0.9nm,1.0s,baz=115,slow=3.6,SNR=3.1
WRA PKiKP **PKiKP** **02 00 23.9 -1.2**
comp=Z,0.6nm,0.7s,baz=78,slow=0.5,SNR=7.8
WRA Warramunga Arr 44.33 272 P **P** **01 51 40.1 -0.8**
WRA **ScP** **01 57 17.0 +2.9**
WB0 Warramunga Arr 44.35 272 P **P** **01 51 40.3 -0.7**
FORT Forrest 46.27 255 P **P** **01 51 55.4 -0.7**
FORT IAmb IAmb 01 52 20.6
comp=Z,7.6nm,0.6s
VNDA Vanda 48.12 186 P **P** **01 52 11.9 +2.2**
comp=Z,3.6nm,0.8s,baz=353,slow=6.0,SNR=6.0
VNDA LR LR 02 11 15.9
comp=Z,36nm,18.6s,baz=17,slow=34
comp=Z,3.6nm,0.8s
VNDA Vanda 48.12 186 P **P** **01 52 12.1 +2.2**
VNDA IAmb IAmb 01 53 16.5
comp=Z,31nm,1.8s
KNRA Kununurra 50.94 274 P **P** **01 52 31.8 -0.4**
KNRA IAmb IAmb 01 52 34.0
comp=Z,11nm,0.6s
SRPI Serui, Papua 51.99 294 P **P** **01 52 41.1 +1.1**
FITZ Fitzroy Crossi 52.59 270 LR LR 02 13 51.7
comp=Z,246nm,20.4s,baz=109,slow=35
CCD Concordia, Ant 53.02 196 P **P** **01 52 48.5 +1.1**
CCD x x 01 53 05.9
NWAO Narrogin (SRO) 54.62 249 LR LR 02 13 49.0
comp=Z,88nm,20.8s,baz=73,slow=33
CASY Casey 55.25 208 P **P** **01 53 03.4 +0.2**
CASY Casey 55.25 208 P **P** **01 53 03.1 0.0**
CASY x x 01 53 19.2
PSA00 Pilbara Seismi 56.20 263 P **P** **01 53 09.2 -1.5**
PSA00 PcP **PcP** **01 54 07.0 -1.2**
MBWA Marble Bar 56.46 264 P **P** **01 53 11.3 -1.2**
MBWA IAmb IAmb 01 54 33.5
comp=Z,10nm,1.1s
SIJI Sorong 56.55 291 LR LR 02 17 26.3
comp=Z,74nm,18.1s,baz=75,slow=36
SIJI Sorong 56.55 291 P **P** **01 53 13.2 -0.1**
comp=Z,20nm,1.0s
GUMO Guam 56.65 315 P **P** **01 53 12.5 -1.3**
MORW Morawa 56.76 253 P **P** **01 53 13.4 -1.2**
MORW IAmb IAmb 01 53 13.9
comp=Z,13nm,1.1s
RPN Rapa Nui 59.21 105 LR LR 02 12 18.9
comp=Z,104nm,21.6s,baz=332,slow=29
QSPA South Pole Qui 59.71 180 P **P** **01 53 37.2 +2.4**
comp=Z,9.1nm,0.8s,baz=36,slow=1.6,SNR=21
QSPA LR LR 02 18 09.0
comp=Z,62nm,18.3s,baz=56,slow=35
comp=Z,9.1nm,0.8s
QSPA South Pole Qui 59.71 180 **P** **01 53 37.2 +2.4**
GIRL Giralia 60.58 260 P **P** **01 53 41.2 0.0**
KAPI Kappang 63.84 280 LR LR 02 21 41.0
comp=Z,40nm,18.5s,baz=134,slow=36
JAGI Jajag, Banyuwa 66.91 274 P **P** **01 54 23.5 +0.4**
BELA Belgrano 2 69.75 172 P **P** **01 54 41.1 +1.2**
BELA IAmb IAmb 01 54 41.8
comp=Z,7.7nm,0.7s
MAW Mawson 72.39 201 P **P** **01 54 57.2 +1.3**
comp=Z,20nm,0.9s,baz=116,slow=9.9,SNR=1.8
MAW LR LR 02 25 19.0
comp=Z,101nm,20.6s,baz=114,slow=35
comp=Z,20nm,0.9s
MAW Mawson 72.39 201 P **P** **01 54 57.3 +1.3**
LEM Lembang 73.35 272 LR LR 02 28 43.9
comp=Z,115nm,18.3s,baz=218,slow=37
ELIB Princess Elisa 76.88 187 *d*P **P** **01 55 23.2 +1.0**
comp=Z,14nm,0.8s
MDSI Maura Dua 77.48 272 P **P** **01 55 24.2 -2.1**
TROLL Troll, Antarti 77.87 180 P **P** **01 55 29.0 +1.3**
SNAA Sanae 78.15 178 ⇑P **P** **01 55 30.1 +1.0**
comp=Z,112nm,1.0s
SNAA Sanae 78.15 178 P **P** **01 55 29.9 +0.7**
comp=Z,2.1nm,0.5s,baz=206,slow=4.4,SNR=4.2
SNAA LR LR 02 29 19.5
comp=Z,40nm,18.9s,baz=165,slow=35
comp=Z,2.1nm,0.5s
SNAA Sanae 78.15 178 P **P** **01 55 31.2 +2.0**
SNAA IAmb IAmb 01 58 17.4
comp=Z,29nm,1.6s
VNA3 Neumayer Olymp 78.29 176 ⇑P **P** **01 55 30.7 +0.8**
comp=Z,19nm,0.7s
MJAR Matsushiro Arr 78.38 325 P **P** **01 55 29.3 -1.5**
comp=Z,1.0nm,0.3s,baz=158,slow=4.2,SNR=2.2
MJAR LR LR 02 23 53.5
comp=Z,30nm,21.0s,baz=168,slow=31
comp=Z,1.0nm,0.3s
MJAR Matsushiro Arr 78.38 325 P **P** **01 55 30.1 -0.6**
MJAR IAmb IAmb 01 56 43.1
comp=Z,33nm,2.0s
VNA2 Neumayer--Watz 78.73 177 ⇑P **P** **01 55 33.3 +1.0**
comp=Z,14nm,0.7s,baz=167,slow=5.2
COYC Coyhaique 78.77 136 P **P** **01 55 36.6 +3.6**
COYC IAmb IAmb 01 55 51.4
comp=Z,10nm,0.7s
COYC Coyhaique 78.77 136 P **P** **01 55 35.8 +2.8**
COYC PcP **pP** **01 55 44.0 +1.4**
COYC x x 01 55 49.2
COYC x x 01 55 50.5
JNU Nakatsue 79.71 318 LR LR 02 25 07.1
comp=Z,58nm,22.0s,baz=72,slow=31
H03S2 Juan Fernandez 80.27 123 T T 03 25 14.6
baz=238,slow=74,SNR=31
H03S1 Juan Fernandez 80.28 123 T T 03 25 15.5
baz=238,slow=74,SNR=33
H03S3 Juan Fernandez 80.29 123 T T 03 25 14.7
baz=238,slow=74,SNR=39
H03N3 Juan Fernandez 80.46 123 T T 03 25 27.0
baz=244,slow=72,SNR=32
H03N2 Juan Fernandez 80.46 123 T T 03 25 27.0
baz=244,slow=72,SNR=27
H03N1 Juan Fernandez 80.48 123 T T 03 25 22.5
baz=244,slow=72,SNR=29
ADK Adak 81.93 1 P **P** **01 55 49.7 +0.2**
PLCA Paso Flores 82.34 133 P **P** **01 55 53.7 +1.4**
comp=Z,2.6nm,0.8s,baz=226,slow=7.8,SNR=5.1
PLCA LR LR 02 23 53.1
comp=Z,78nm,21.7s,baz=218,slow=29
comp=Z,2.6nm,0.8s
ASAJ Asahikawa 82.55 332 LR LR 02 29 13.1
comp=Z,84nm,18.7s,baz=42,slow=33
SHEM Shemya Is, Ala 83.08 355 LR LR 02 29 18.4
comp=Z,95nm,19.3s,baz=324,slow=33
CLES Cleveland East 83.15 5 P **P** **01 55 55.2 -0.5**
LPIG La Paz 84.34 58 LR LR 02 29 15.7
comp=Z,51nm,18.6s,baz=219,slow=33
KSRS Korea Array 84.50 319 P **P** **01 56 03.6 +0.6**
comp=Z,1.6nm,0.7s,baz=130,slow=5.1,SNR=4.1
comp=Z,1.6nm,0.7s
PETK Petropavlovsk- 85.87 345 P **P** **01 56 08.7 -0.8**
comp=Z,9.5nm,0.8s,baz=122,slow=6.5,SNR=10.0
PETK LR LR 02 31 48.9
comp=Z,52nm,18.5s,baz=165,slow=34
comp=Z,9.5nm,0.8s
PETK Petropavlovsk- 85.87 345 P **P** **01 56 09.2 -0.4**
PFO Pinyon Flats O 86.03 47 LR LR 02 27 46.0
comp=Z,32nm,20.1s,baz=238,slow=31
ISA Isabella, Lake 86.13 45 P **P** **01 56 12.9 +1.5**
ISA IAmb IAmb 01 56 14.4
comp=Z,6.1nm,0.9s
NJ2 Nanjing 86.42 310 *e*P **P** **01 56 14.8 +2.0**
NJ2 pmax pmax
comp=Z,20nm,1.1s
CMB Columbia Colle 86.60 42 **P** **01 56 15.1 +1.4**
BC3 Big Chuckawall 86.70 48 **P** **01 56 15.4 +1.1**
BC3 IAmb IAmb 01 56 32.5
comp=Z,6.9nm,1.2s
GLA Glamis 86.72 48 P **P** **01 56 16.2 +1.9**
GLA IAmb IAmb 01 56 33.0
comp=Z,7.6nm,0.9s
O02D Mt. Diablo Mer 86.75 39 P **P** **01 56 15.9 +1.6**
GSC Goldstone, Bar 86.92 46 P **P** **01 56 16.9 +1.6**
GSC IAmb IAmb 01 56 18.1
comp=Z,6.2nm,1.1s
IRM Iron Mountain 87.22 47 P **P** **01 56 17.6 +0.9**
IRM IAmb IAmb 01 56 20.2
comp=Z,11nm,1.2s
USRK Ussuriysk Ar. 87.29 326 P **P** **01 56 16.9 +0.2**
comp=Z,3.3nm,0.7s,baz=115,slow=5.5,SNR=2.5
comp=Z,3.3nm,0.7s
QSM Queen of Sheba 87.31 45 P **P** **01 56 18.2 +1.2**
GWY Greenwater Val 87.58 45 P **P** **01 56 20.1 +1.5**
MPK Martis Peak 87.67 41 P **P** **01 56 20.2 +1.2**
MPK IAmb IAmb 01 56 21.4
comp=Z,7.0nm,1.0s
PNTR Pine Nut 87.77 41 **P** **01 56 20.8 +1.3**
PNTR IAmb IAmb 01 56 22.2
comp=Z,6.9nm,0.8s
M03C McCloud 87.88 38 P **P** **01 56 21.0 +1.2**
M03C IAmb IAmb 01 56 38.3
comp=Z,11nm,1.1s
NVAR Mina Array Bea 88.08 43 P **P** **01 56 22.0 +1.0**
comp=Z,3.3nm,0.8s,baz=222,slow=8.3,SNR=30
NVAR PKKP **PKKPdf** **02 14 04.0 +2.0**
comp=Z,0.3nm,0.6s,baz=77,slow=4.4,SNR=4.3
NVAR LR LR 02 33 38.8
comp=Z,59nm,18.1s,baz=264,slow=34
comp=Z,3.3nm,0.8s
Y14A Wickenburg 88.46 49 **P** **01 56 24.1 +1.5**
TUC Tucson 88.93 51 P **P** **01 56 26.0 +1.0**
TUC Tucson 88.93 51 P **P** **01 56 25.5 +0.6**
TUC PcP **PcP** **01 56 27.7 +1.3**
TUC x x 01 56 41.1
CFA Coronel Fontan 89.05 126 P **P** **01 56 26.0 +0.3**
comp=Z,1.0nm,0.6s,baz=266,slow=7.9,SNR=4.2
comp=Z,1.0nm,0.6s
X16A Lo Mia Camp, P 89.77 49 P **P** **01 56 30.8 +1.8**
X16A IAmb IAmb 01 56 47.8
comp=Z,6.4nm,0.9s
DUN6 Lazy B Ranch 90.22 52 P **P** **01 56 32.5 +1.5**
LCMT Little Creek M 90.22 46 P **P** **01 56 32.9 +1.9**
PINE Pine Mountain 90.26 37 **P** **01 56 32.7 +1.7**
PINE IAmb IAmb 01 56 33.8
comp=Z,14nm,1.2s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
U15A	**North Rim**	**90.46**	**47**		**P**	**01 56 33.8**	**+1.5**
U15A				IAmb	IAmb	01 56 35.5	
	comp=Z,5.8nm,1.0s						
CCUT	**Cedar City**	**90.49**	**46**	P	**P**	**01 56 34.3**	**+2.0**
KNB	**Kanab**	**90.49**	**46**		**P**	**01 56 33.6**	**+1.3**
KNB				IAmb	IAmb	01 56 34.9	
	comp=Z,4.5nm,0.9s						
PKCU	**Pink Cliffs**	**91.07**	**46**	P	**P**	**01 56 36.7**	**+1.5**
KLR	**Kul'dur**	**91.15**	**330**	LR	LR	02 33 32.8	
	comp=Z,49nm,20.1s,baz=119,slow=33						
I07A	**Izee**	**91.21**	**38**		**P**	**01 56 36.8**	**+1.4**
I07A				IAmb	IAmb	01 56 37.7	
	comp=Z,7.5nm,1.1s						
MTPU	**Mount Pierson**	**91.52**	**46**		**P**	**01 56 38.1**	**+0.8**
MTPU				IAmb	IAmb	01 57 12.3	
	comp=Z,18nm,1.9s						
TXAR	**Lajitas Array**	**92.19**	**57**	P	**P**	**01 56 41.1**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=251,slow=5.0,SNR=2.5						
TXAR				LR	LR	02 35 21.0	
	comp=Z,32nm,18.2s,baz=227,slow=34						
	comp=Z,0.2nm,0.5s						
TXAR	**Lajitas Array**	**92.19**	**57**	P	**P**	**01 56 40.2**	**0.0**
G08A	**Pilot Rock**	**92.32**	**37**	P	**P**	**01 56 41.6**	**+1.2**
G08A				IAmb	IAmb	01 56 43.1	
	comp=Z,5.8nm,1.0s						
CMIG	**Matias Romero**	**92.53**	**72**	LR	LR	02 31 45.6	
	comp=Z,16nm,18.5s,baz=178,slow=31						
BBB	**Bella Bella**	**92.99**	**28**	LR	LR	02 29 35.4	
	comp=Z,43nm,19.6s,baz=189,slow=30						
NNA	**Nana**	**93.20**	**106**	LR	LR	02 30 01.0	
	comp=Z,34nm,21.9s,baz=230,slow=30						
MA2	**Magadan**	**93.35**	**345**	LR	LR	02 33 40.8	
	comp=Z,66nm,21.1s,baz=154,slow=32						
SPUT	**South Promonto**	**93.38**	**43**	P	**P**	**01 56 46.9**	**+1.3**
SPUT				IAmb	IAmb	01 56 49.2	
	comp=Z,4.3nm,1.1s						
ANMO	**Albuquerque**	**93.39**	**51**	LR	LR	02 35 59.9	
	comp=Z,30nm,18.2s,baz=229,slow=34						
HVU	**Hansel Valley**	**93.48**	**43**	P	**P**	**01 56 47.0**	**+1.0**
HVU				IAmb	IAmb	01 56 48.1	
	comp=Z,6.0nm,1.1s						
CMAR	**Chiang Mai Arr**	**93.62**	**289**	P	**P**	**01 56 48.4**	**+1.4**
	comp=Z,1.0nm,0.3s,baz=113,slow=2.7,SNR=4.2						
CMAR				LR	LR	02 40 02.6	
	comp=Z,10nm,19.9s,baz=120,slow=36						
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**93.62**	**289**	P	**P**	**01 56 44.1**	**-2.8**
HLID	**Hailey**	**93.65**	**41**		**P**	**01 56 48.3**	**+1.5**
PLID	**Pearl Lake**	**93.75**	**39**		**P**	**01 56 48.5**	**+1.3**
PLID				IAmb	IAmb	01 56 48.9	
	comp=Z,5.2nm,1.1s						
GAMB	**Gambell**	**93.98**	**3**		**P**	**01 56 48.6**	**+1.2**
GAMB				IAmb	IAmb	01 56 49.5	
	comp=Z,18nm,1.7s						
J16K	**Anvik River**	**94.36**	**8**	P	**P**	**01 56 49.5**	**+0.3**
ATAH	**Atahualpa**	**94.41**	**101**	LR	LR	02 29 41.4	
	comp=Z,40nm,21.4s,baz=249,slow=29						
NEW	**Newport**	**95.23**	**36**	LR	LR	02 37 20.4	
	comp=Z,55nm,18.2s,baz=229,slow=34						
PZH	**PanZhiHua**	**95.51**	**297**	P	**P**	**01 56 57.3**	**+1.7**
N25K	**Chitina, Valde**	**95.53**	**15**		**P**	**01 56 56.0**	**+1.2**
TNA	**Tin City**	**95.95**	**4**		**P**	**01 56 56.6**	**+0.1**
TNA				IAmb	IAmb	01 57 01.0	
	comp=Z,4.4nm,1.0s						
PDAR	**Pinedale Array**	**95.97**	**43**	P	**P**	**01 56 55.7**	**-1.8**
	comp=Z,0.8nm,0.9s,baz=172,slow=3.0,SNR=4.0						
PDAR				PKKPbc	**PKKPbc**	**02 13 46.2**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=82,slow=3.9,SNR=9.2						
PDAR				LR	LR	02 31 01.1	
	comp=Z,41nm,21.8s,baz=228,slow=30						
	comp=Z,0.8nm,0.9s						
PDAR	**Pinedale Array**	**95.97**	**43**	P	**P**	**01 56 55.9**	**-1.6**
HHC	**Hu-ho-hao-te**	**96.40**	**314**	*e*P	**P**	**01 57 00.9**	**+1.6**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,150nm,5.3s						
DLBC	**Dease Lake**	**97.03**	**23**	LR	LR	02 33 11.4	
	comp=Z,35nm,20.6s,baz=119,slow=31						
JTS	**Las Juntas de**	**97.50**	**83**	LR	LR	02 30 31.4	
	comp=Z,41nm,21.4s,baz=275,slow=29						
ILAR	**Eielson Array**	**97.87**	**13**	P	**P**	**01 57 04.4**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=218,slow=4.3,SNR=8.9						
ILAR				PKiKP	**PKiKP**	**02 01 37.6**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=266,slow=3.2,SNR=4.6						
ILAR				PKKPbc	**PKKPbc**	**02 13 36.8**	**-5.0**
	comp=Z,0.2nm,0.6s,baz=24,slow=2.3,SNR=4.3						
	comp=Z,0.5nm,0.7s						
ILAR	**Eielson Array**	**97.87**	**13**	P	**P**	**01 57 03.9**	**-1.3**
LPAZ	**La Paz**	**97.93**	**114**	LR	LR	02 32 29.0	
	comp=Z,34nm,20.6s,baz=220,slow=30						
CPUP	**Villa Florida**	**99.80**	**128**	LR	LR	02 34 34.1	
	comp=Z,42nm,21.0s,baz=240,slow=31						
YKA	**Yellowknife Ar**	**105.34**	**25**	PKiKP	**PKiKP**	**02 01 52.0**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=275,slow=2.0,SNR=9.4						
YKA				PKKPbc	**PKKPbc**	**02 13 15.1**	**-4.7**
	comp=Z,0.4nm,0.6s,baz=31,slow=3.3,SNR=8.0						
BOSA	**Boshof**	**117.35**	**203**	PKP	**PKiKP**	**02 02 16.5**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=200,slow=2.2,SNR=5.2						
BOSA	**Boshof**	**117.35**	**203**		**PKPdf**	**02 02 15.8**	**-0.5**
MKAR	**Makanchi Array**	**117.95**	**310**	PKP	**PKPdf**	**02 02 15.5**	**-1.1**
	comp=Z,2.9nm,0.5s,baz=190,slow=0.9,SNR=47						
MKAR				PKKPbc	**PKKPbc**	**02 12 37.8**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=261,slow=6.0,SNR=2.1						
MKAR	**Makanchi Array**	**117.95**	**310**		**PKPdf**	**02 02 15.7**	**-0.9**
MAKZ	**Makanchi**	**118.16**	**310**		**PKPdf**	**02 02 15.9**	**-1.1**
ZALV	**Zalesovo Beam**	**118.19**	**318**	PKP	**PKPdf**	**02 02 14.9**	**-1.8**
	comp=Z,1.9nm,0.6s,baz=182,slow=1.7,SNR=10						
ZALV	**Zalesovo Beam**	**118.19**	**318**		**PKPdf**	**02 02 15.8**	**-1.0**
WUS	**Wushi**	**118.53**	**303**		**PKPdf**	**02 02 17.2**	**-0.9**
TARG	**Taragay, Kyrgy**	**119.70**	**303**		**PKPdf**	**02 02 19.9**	**-0.7**
NRIK	**Noril'sk**	**119.73**	**336**	PKP	**PKPdf**	**02 02 17.5**	**-1.8**
	comp=Z,2.0nm,0.5s,baz=110,slow=2.5,SNR=7.5						
KSH2	**Kashi**	**120.64**	**300**	PKP	**PKPdf**	**02 02 22.4**	**+0.2**
NRN	**Naryn**	**120.93**	**303**		**PKPdf**	**02 02 23.0**	**+0.1**
KURK	**Kurchatov**	**121.22**	**314**		**PKPdf**	**02 02 21.9**	**-0.8**
BOOM	**Boomskoye usch**	**121.23**	**304**		**PKPdf**	**02 02 23.0**	**-0.2**
KURBB	**Kurchatov Arra**	**121.26**	**314**	PKP	**PKPdf**	**02 02 21.7**	**-1.0**
	comp=Z,9.5nm,0.6s,baz=107,slow=1.8,SNR=80						
AAK	**Ala-Archa**	**122.31**	**304**	PKP	**PKPdf**	**02 02 24.7**	**-0.6**
	comp=Z,4.8nm,0.6s,baz=126,slow=3.5,SNR=21						
AAK	**Ala-Archa**	**122.31**	**304**		**PKPdf**	**02 02 25.1**	**-0.2**
KBL	**Kabul**	**124.44**	**293**		**PKiKP**	**02 02 30.0**	**0.0**
GAR	**Garm**	**124.56**	**299**		**PKPdf**	**02 02 30.0**	**+0.3**
KK31	**Karatay Array**	**125.27**	**304**		**PKPdf**	**02 02 30.5**	**-0.3**
KKAR	**Karatay Array**	**125.27**	**304**		**PKPdf**	**02 02 30.3**	**-0.5**
SHAA	**Shahritus**	**125.91**	**296**		**PKiKP**	**02 02 32.9**	**+0.2**
SCHQ	**Schefferville**	**126.08**	**42**	PKP	**PKPdf**	**02 02 31.1**	**-0.8**
	comp=Z,4.9nm,0.8s,baz=268,slow=2.9,SNR=5.4						
SCHQ	**Schefferville**	**126.08**	**42**		**PKPdf**	**02 02 30.6**	**-1.3**
BVAR	**Borovoye Array**	**126.57**	**316**	PKP	**PKPdf**	**02 02 32.5**	**-0.5**
	comp=Z,14nm,0.7s,baz=132,slow=0.6,SNR=72						
BORK	**Borovoye**	**126.61**	**316**		**PKPdf**	**02 02 33.0**	**0.0**
LSZ	**Lusaka**	**128.18**	**212**	PKP	**PKPdf**	**02 02 37.6**	**+0.3**
	comp=Z,2.1nm,0.6s,baz=198,slow=0.5,SNR=6.2						
SPITS	**Spitsbergen Ar**	**131.72**	**356**	PKP	**PKPdf**	**02 02 40.8**	**-1.3**
	comp=Z,14nm,1.0s,baz=359,slow=3.8,SNR=5.9						
AB31	**Akbulak array**	**133.09**	**311**		**PKPdf**	**02 02 45.3**	**-0.1**
ARTI	**Arti**	**133.34**	**321**		**PKPdf**	**02 02 45.8**	**+0.2**
ARCES	**ARCESS Array B**	**138.64**	**348**	PKhKP	PKPpre	02 02 43.8	
	comp=Z,4.2nm,0.8s,baz=40,slow=2.1,SNR=5.4						
FINES	**FINESS Array B**	**145.22**	**340**	PKPbc	**PKPbc**	**02 03 06.0**	**-0.7**
	comp=Z,41nm,0.5s,baz=57,slow=3.7,SNR=426						
OBN	**Obninsk**	**145.30**	**325**	PKPbc	**PKPbc**	**02 03 06.9**	**-0.4**
	comp=Z,30nm,0.4s,baz=6.1,slow=3.0,SNR=14						
OBN	**Obninsk**	**145.30**	**325**	⇑P	**PKPbc**	**02 03 06.6**	**-0.6**
OBN	**Obninsk**	**145.30**	**325**		**PKPbc**	**02 03 06.5**	**-0.8**
KBZ	**Khabaz**	**145.31**	**304**	PKPbc	**PKPbc**	**02 03 07.1**	**-0.5**
	comp=Z,7.0nm,0.8s,baz=115,slow=1.4,SNR=15						
KVAR	**Kislovodsk Arr**	**145.41**	**304**	PKPbc	**PKPbc**	**02 03 08.1**	**-0.1**
	comp=Z,3.3nm,0.8s,baz=103,slow=18,SNR=3.3						
KIV	**Kislovodsk**	**145.42**	**304**	⇑P	**PKPbc**	**02 03 07.5**	**-0.6**
KHAM	**Kharkiv**	**147.89**	**317**	PKP	**PKPbc**	**02 03 15.3**	**+0.3**
NB2	**NORSAR Subarra**	**148.78**	**352**	PKP	**PKPbc**	**02 03 16.2**	**-0.8**
	comp=Z,6.7nm,0.8s,baz=13,slow=2.8						
NOA	**NORSAR Array B**	**148.78**	**352**	PKP	**PKPdf**	**02 03 12.7**	**-0.4**
	comp=Z,9.6nm,0.8s,baz=14,slow=4.3,SNR=41						
NOA				PKPbc	**PKPbc**	**02 03 16.5**	**-0.5**
	comp=Z,2.2nm,0.7s,baz=59,slow=1.5,SNR=11						
HFS	**Hagfors**	**149.29**	**349**	PKPbc	**PKPbc**	**02 03 17.6**	**-0.7**
	comp=Z,17nm,0.7s,baz=45,slow=2.7,SNR=29						
STRU	**Stroemstad**	**150.73**	**351**	*i* P	**PKPbc**	**02 03 21.2**	**-0.6**
AKASG	**Malin Array Be**	**151.44**	**323**	PKPbc	**PKPbc**	**02 03 23.1**	**-0.5**
	comp=Z,31nm,0.7s,baz=51,slow=2.8,SNR=68						
AKASG	**Malin Array Be**	**151.44**	**323**	PKPdf	**PKPdf**	**02 03 19.4**	**+1.8**
AK01	**Malin Array Si**	**151.45**	**323**	PKP	**PKPbc**	**02 03 22.7**	**-1.0**
KIEV	**Kiev**	**151.45**	**323**	⇑P	**PKPbc**	**02 03 22.2**	**-1.5**
AK23	**Malin Array Si**	**151.46**	**323**	PKP	**PKPbc**	**02 03 22.7**	**-1.0**
AK04	**Malin Array Si**	**151.46**	**323**	PKP	**PKPbc**	**02 03 22.7**	**-1.0**
AK09	**Malin Array Si**	**151.46**	**323**	PKP	**PKPbc**	**02 03 22.7**	**-1.0**
AK08	**Malin Array Si**	**151.46**	**323**	PKP	**PKPbc**	**02 03 22.7**	**-1.0**
TJOU	**Tjoern**	**151.63**	**350**	*i* P	**PKPbc**	**02 03 23.1**	**-0.8**
MMAI	**Mount Meron Ar**	**151.76**	**284**	PKPbc	**PKiKP**	**02 03 25.9**	**+0.3**
	comp=Z,6.2nm,0.6s,baz=45,slow=8.4,SNR=26						
HOMB	**Homborsund**	**151.81**	**353**	*i* P	**PKPbc**	**02 03 23.9**	**-0.3**
BORU	**Boraas**	**151.81**	**348**	*i* P	**PKPbc**	**02 03 23.7**	**-0.6**
SNART	**Snartemo**	**151.86**	**354**	*i* P	**PKPbc**	**02 03 24.0**	**-0.4**
MI28	**Mi28,Pidlybu**	**152.10**	**325**	PKP	**PKPbc**	**02 03 23.5**	**-1.7**
ONAU	**Onsala**	**152.19**	**349**	*i* P	**PKPbc**	**02 03 24.4**	**-0.8**
BLEU	**Blekinge**	**152.40**	**344**	*i* P	**PKPbc**	**02 03 24.6**	**-1.0**
DEL	**Delary**	**152.69**	**346**	*i* P	**PKPbc**	**02 03 25.9**	**-0.4**
BRTR	**Keskin Array B**	**152.81**	**299**	PKP	**PKPdf**	**02 03 19.2**	**-1.0**
	comp=Z,0.7nm,0.8s,baz=82,slow=2.7,SNR=5.0						
BRTR				PKPbc	**PKPbc**	**02 03 26.6**	**-0.8**
	comp=Z,4.6nm,0.9s,baz=136,slow=5.2,SNR=20						
BRTR	**Keskin Array B**	**152.81**	**299**		**PKPdf**	**02 03 19.6**	**-0.6**
PURM	**Purcari**	**153.24**	**315**	⇑P	**PKPbc**	**02 03 26.3**	**-1.5**
SORM	**Soroca**	**153.34**	**319**	⇑P	**PKPbc**	**02 03 27.3**	**-0.7**
HAMD	**Hammershus, De**	**153.59**	**344**	*i* P	**PKPbc**	**02 03 28.1**	**-0.3**
BSD	**Bornholm Skovb**	**153.70**	**344**	*i* P	**PKPbc**	**02 03 28.4**	**-0.1**
TLCR		**154.50**	**313**	⇑P	**PKiKP**	**02 03 31.6**	**+1.0**
EKA	**Eskdalemuir Ar**	**154.78**	**7**	PKP	**PKPdf**	**02 03 22.6**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=20,slow=9.9,SNR=2.4						
EKA				PKPbc	**PKPbc**	**02 03 30.1**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=333,slow=2.2,SNR=5.0						
EKA				PKPab	**PKPab**	**02 03 45.5**	**-0.5**
	comp=Z,1.5nm,0.6s,baz=321,slow=3.0,SNR=9.0						
CFR	**Carcaliu**	**154.93**	**313**	⇓P	**PKPbc**	**02 03 31.2**	**-0.3**
TESR	**Tescani**	**155.18**	**317**	⇓P	PKPdf	02 03 31.2	+8.0
BURAR	**Bucovina Array**	**155.38**	**321**	⇑P	PKPdf	02 03 33.3	+10
ONER	**Baraj Valea Uz**	**155.42**	**317**	⇑P	**PKPdf**	**02 03 30.9**	**+7.4**
DBIC	**Dimbokro**	**155.46**	**163**	PKP	**PKPdf**	**02 03 26.1**	**+1.6**
	comp=Z,1.8nm,0.7s,baz=280,slow=14,SNR=1.2						
DBIC				PKPab	**PKPab**	**02 03 52.1**	**+2.2**
	comp=Z,2.8nm,0.7s,baz=212,slow=5.5,SNR=3.7						
DBIC	**Dimbokro**	**155.46**	**163**		**PKPdf**	**02 03 25.1**	**+0.6**
OZUR		**155.91**	**317**	⇑P	**PKPdf**	**02 03 24.3**	**+0.1**
NEHR	**Nehoiu**	**155.95**	**315**	⇑P	PKPdf	02 03 33.4	+9.2
MLR	**Muntele Rosu**	**156.13**	**316**	PKP	**PKPdf**	**02 03 24.8**	**+0.2**
	baz=94,slow=18						
MLR				PKPab	**PKPab**	**02 03 53.6**	**+1.2**
	comp=Z,1.1nm,0.5s,baz=53,slow=20,SNR=2.3						
MLR	**Muntele Rosu**	**156.13**	**316**		**PKPdf**	**02 03 24.6**	**0.0**
DOPR	**Dopca**	**156.21**	**317**	⇓P	PKPdf	02 03 33.6	+9.1
LOZB	**Loznitsa**	**156.73**	**311**	⇓P	**PKPdf**	**02 03 27.1**	**+1.8**
OSTC	**Ostas**	**157.31**	**337**	*e*PKPAB	**PKPab**	**02 03 57.8**	**+0.7**
ELND	**Elena**	**157.40**	**310**	⇑P	**PKPdf**	**02 03 24.2**	**-2.0**
UPC	**Upice**	**157.43**	**337**	*e*PKPAB	**PKPab**	**02 03 57.7**	**+0.2**
DPC	**Dobruska-Polom**	**157.45**	**336**	*e*PKPAB	**PKPab**	**02 03 58.2**	**+0.5**
PLVB	**Pleven**	**158.00**	**312**	⇑P	**PKPab**	**02 04 00.3**	**0.0**
VRAC	**Vranov**	**158.22**	**334**	PKPab	**PKPab**	**02 04 00.9**	**-0.1**
	comp=Z,1.3nm,0.2s,baz=341,slow=4.0,SNR=3.8						
KHC	**Kasperske Hory**	**159.41**	**339**	*e*PKPAB	**PKPab**	**02 04 06.2**	**0.0**
GERES	**GERESS Array B**	**159.62**	**338**	PKP	**PKPdf**	**02 03 27.6**	**-1.2**
	comp=Z,0.7nm,0.9s,baz=354,slow=6.1,SNR=4.2						
GERES				PKPab	**PKPab**	**02 04 07.0**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=349,slow=1.4,SNR=5.0						
MORH	**Mrgy, Hungar**	**159.71**	**326**	⇓P	**PKPdf**	**02 03 27.3**	**-1.5**
WLF	**Walferdange**	**160.53**	**352**	*d*PKP	**PKPdf**	**02 03 32.2**	**+2.7**
BIOA	**Bad Ischl, Aus**	**160.64**	**336**	*e*PKP	**PKPab**	**02 04 11.9**	**+0.3**
	comp=Z,3.7nm,0.9s						
KBA	**Koelnbreinsper**	**161.27**	**336**	*i* PKP	**PKPab**	**02 04 15.3**	**+0.8**
	comp=Z,3.4nm,0.8s						
WATA	**Walderalm**	**161.63**	**340**	*e*PKP	**PKPab**	**02 04 15.7**	**-0.4**
	comp=Z,4.7nm,0.8s						
WTTA	**Wattenberg**	**161.67**	**339**	*i* PKP	**PKPab**	**02 04 16.3**	**0.0**
	comp=Z,4.4nm,0.6s						
RETA	**Reutte**	**161.72**	**341**	*e*PKP	**PKPab**	**02 04 16.3**	**-0.1**
	comp=Z,8.0nm,1.1s						
MOTA	**Moosalm**	**161.76**	**341**	*i* PKP	**PKPab**	**02 04 16.1**	**-0.5**
	comp=Z,8.6nm,1.0s						
SQTA	**Sankt Quirin**	**161.84**	**340**	*i* PKP	**PKPab**	**02 04 16.6**	**-0.3**
	comp=Z,7.4nm,1.0s,SNR=4.7						
ABTA	**Abfaltersbach**	**161.85**	**337**	*e*PKP	**PKPab**	**02 04 15.8**	**-1.2**
	comp=Z,4.3nm,0.9s						
DAVA	**Damuels**	**162.14**	**343**	*e*PKP	**PKPab**	**02 04 18.1**	**-0.2**
	comp=Z,5.9nm,0.7s,SNR=4.0						
FETA	**Feichten**	**162.16**	**341**	*e*PKP	**PKPab**	**02 04 20.6**	**+2.2**
	comp=Z,5.4nm,1.4s						
DAVOX	**Davos/Dischmat**	**162.61**	**342**	PKPab	**PKPab**	**02 04 20.3**	**-0.1**
	comp=Z,6.1nm,0.6s,baz=23,slow=2.6,SNR=16						
TORD	**Torodi Ar. Bea**	**162.82**	**178**	PKP	**PKPdf**	**02 03 33.3**	**+0.2**
	comp=Z,0.8nm,1.0s,baz=183,slow=4.5,SNR=3.2						
TORD				PKPab	**PKPab**	**02 04 22.3**	**+0.5**
	comp=Z,4.8nm,0.7s,baz=204,slow=5.7,SNR=19						
ESDC	**Sonseca Array**	**169.43**	**27**	PKP	**PKPdf**	**02 03 35.7**	**-2.0**
	comp=Z,1.2nm,1.1s,baz=297,slow=8.5,SNR=4.6						
ESDC				PKPab	**PKPab**	**02 04 49.7**	**-0.8**
	comp=Z,0.6nm,0.9s,baz=348,slow=2.6,SNR=1.5						
ESDC	**Sonseca Array**	**169.43**	**27**		**PKPdf**	**02 03 38.3**	**+0.7**

IDC 05 01:44:05.0±5.3**,15̊79S**×**75̊09W,h82**km±48km**,mb3.3**/3**, mbtmp3.6**/4**,ML3.6**/1**,MS3.1**/3**,Error ellipse: s-maj=37.7km s-min=33.4km az=59.0,Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**6.71**	**95**	P	Pn	01 45 40.6	-0.9
	0.6nm,0.3s,baz=273,slow=8.9,SNR=10						
LPAZ				S	Sn	01 46 58.6	+1.7
	1.4nm,0.6s,baz=301,slow=7.5,SNR=1.0						
LPAZ				LR	LR	01 48 32.4	
	comp=Z,107nm,19.7s,baz=277,slow=40						
	2.4nm,0.6s						
H03N1	**Juan Fernandez**	**17.91**	**190**	T	T	02 06 44.1	
	baz=12,slow=74,SNR=1531						
H03N2	**Juan Fernandez**	**17.92**	**190**	T	T	02 06 45.3	
	baz=12,slow=74,SNR=1093						
H03N3	**Juan Fernandez**	**17.93**	**190**	T	T	02 06 44.7	
	baz=12,slow=74,SNR=1215						
SDV	**Santo Domingo**	**24.91**	**11**	LR	LR	02 00 20.3	
	comp=Z,43nm,18.3s,baz=266,slow=39						
PLCA	**Paso Flores**	**25.17**	**172**	P	P	01 49 22.9	+0.1
	1.1nm,0.9s,baz=342,slow=13,SNR=3.2						
	1.1nm,0.9s						
RCBR	**Riachuelo**	**39.68**	**80**	LR	LR	02 08 46.4	
	comp=Z,35nm,20.0s,baz=324,slow=37						
TXAR	**Lajitas Array**	**52.66**	**328**	P	P	01 53 11.5	+0.2
	0.4nm,0.8s,baz=144,slow=5.7,SNR=1.7						
	0.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**81.18**	**74**	P	P	01 56 12.2	-0.2
	0.8nm,0.7s,baz=242,slow=5.0,SNR=6.2						
	0.8nm,0.7s						

*IDC **05** 01:57:23.7±0.5, 13̊17N×143̊92E, h160km±4km, mb4.0/23, mbtmp4.5/26, MS3.5/2, Error ellipse: s-maj=11.0km s-min=9.2km az=62.0*

*NEIC **05** 01:57:23.8±1.0, 13̊16N±0̊09×143̊8E±0̊1, h152km±5km, mb4.5/55, Error ellipse: s-maj=14.4km s-min=12.8km az=89.0*

ISC 05 01:57:24.2±0.5**, 13̊16N**±0̊06×**143̊84E**±0̊08**, h164**km±3km**, n125,**σ**1̊01**/140**, mb4.4**/64**, 2C, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.09**	**67**	P	**Pn**	**01 57 49.8**	**-1.1**
	1µm,0.3s,baz=192,slow=3.6,SNR=53						
GUMO				S	**Sn**	**01 58 09.2**	**-2.3**
	2µm,0.4s,baz=180,slow=20,SNR=14						
GUMO	**Guam**	**1.09**	**67**		**Pn**	**01 57 50.0**	**-0.9**
GUMO				Sn	**Sn**	**01 58 09.9**	**-1.7**
JCJ	**Chichijima**	**13.96**	**354**	P	**Pn**	**02 00 36.0**	**+1.0**
	91nm,0.8s,baz=240,slow=17,SNR=4.1						
JCJ	**Chichijima**	**13.96**	**354**	Pn	**Pn**	**02 00 35.0**	**0.0**
MANU	**Manus Island**	**15.50**	**167**		**Pn**	**02 00 53.5**	**-0.8**
MANU				IAmb	IAmb	02 00 57.9	
	comp=Z,33nm,0.8s						
SIJI	**Sorong**	**18.70**	**223**	P	**P**	**02 01 29.7**	**-0.6**
	comp=Z,2.9nm,0.3s,baz=323,slow=20,SNR=1.1						
JOW	**Kunigami**	**19.95**	**315**	P	**P**	**02 01 43.8**	**+0.2**
	comp=Z,34nm,0.5s,baz=109,slow=8.6,SNR=5.0						
JOW				LR	LR	02 08 12.4	
	comp=Z,82nm,21.2s,baz=304,slow=32						
JOW	**Kunigami**	**19.95**	**315**	P	**P**	**02 01 42.7**	**-0.9**
TGY	**Tagaytay City**	**22.28**	**275**	P	**P**	**02 02 07.7**	**-0.7**
	comp=Z,142nm,0.3s,baz=103,slow=20,SNR=3.0						
H11S3	**WAKE ISLAND Hy**	**22.60**	**73**	T	T	02 25 14.8	
	baz=259,slow=75,SNR=7.4						
H11S1	**WAKE ISLAND Hy**	**22.61**	**73**	T	T	02 25 16.9	
	baz=259,slow=75,SNR=7.7						
H11S2	**WAKE ISLAND Hy**	**22.62**	**73**	T	T	02 25 16.0	
	baz=259,slow=75,SNR=5.5						
H11N1	**WAKE ISLAND Hy**	**23.03**	**71**	T	T	02 25 47.8	
	baz=256,slow=75,SNR=18						
H11N2	**WAKE ISLAND Hy**	**23.04**	**70**	T	T	02 25 48.7	
	baz=256,slow=75,SNR=8.9						
H11N3	**WAKE ISLAND Hy**	**23.05**	**71**	T	T	02 25 49.7	
	baz=256,slow=75,SNR=14						
JNU	**Nakatsue**	**23.13**	**331**	P	**P**	**02 02 16.0**	**0.0**
	comp=Z,26nm,0.7s,baz=129,slow=3.6,SNR=13						
	comp=Z,26nm,0.7s						
MJAR	**Matsushiro Arr**	**23.83**	**349**	P	**P**	**02 02 20.9**	**-1.3**
	comp=Z,10nm,0.6s,baz=163,slow=9.3,SNR=15						
MJAR				pP	**pP**	**02 02 54.2**	**+1.2**
	comp=Z,2.3nm,0.4s,baz=130,slow=14,SNR=2.2						
MJAR				PcP	**PcP**	**02 05 59.8**	**-1.2**
	comp=Z,1.8nm,0.4s,baz=148,slow=2.7,SNR=4.9						
	comp=Z,10nm,0.6s						
MJAR	**Matsushiro Arr**	**23.83**	**349**		**P**	**02 02 22.4**	**+0.1**
MJAR					**PcP**	**02 05 59.9**	**-1.1**
MAJO	**Matsushiro**	**23.83**	**349**		**P**	**02 02 22.0**	**-0.3**
MJB9	**Matsu-Tunnel**	**23.84**	**349**		**P**	**02 02 22.8**	**+0.4**
SSLB	**Suanglung**	**24.11**	**299**		**P**	**02 02 24.4**	**-0.6**
COEN	**Coen**	**26.95**	**181**	P	**P**	**02 02 50.8**	**+0.2**
COEN				IAmb	IAmb	02 02 51.2	
	comp=Z,8.4nm,0.8s						
KSRS	**Korea Array**	**28.07**	**332**	P	**P**	**02 03 00.3**	**+0.1**
	comp=Z,2.3nm,0.6s,baz=141,slow=9.1,SNR=6.1						
	comp=Z,2.3nm,0.6s						
NJ2	**Nanjing**	**29.64**	**313**	*e*P	**P**	**02 03 15.3**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,27nm,0.9s						
DL2	**Dalian**	**32.32**	**327**	P	**P**	**02 03 38.3**	**+0.5**
DL2				pmax	pmax		
	comp=Z,32nm,0.8s						
USRK	**Ussuriysk Ar.**	**32.56**	**344**	P	**P**	**02 03 40.5**	**+0.7**
	comp=Z,2.5nm,0.5s,baz=151,slow=10,SNR=5.5						
	comp=Z,2.5nm,0.5s						
WB0	**Warramunga Arr**	**34.01**	**196**		**P**	**02 03 52.3**	**-0.3**
WR8	**Warramunga Arr**	**34.16**	**196**		**P**	**02 03 53.8**	**-0.2**
WRA	**Warramunga Arr**	**34.19**	**196**	P	**P**	**02 03 53.6**	**-0.6**
	comp=Z,17nm,0.7s,baz=18,slow=9.4,SNR=81						
WRA				PcP	**PcP**	**02 06 27.9**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=14,slow=3.6,SNR=1.1						
WRA				ScP	**ScP**	**02 09 57.1**	**-0.1**
	comp=Z,0.8nm,1.0s,baz=25,slow=3.7,SNR=3.0						
	comp=Z,17nm,0.7s						
WRA	**Warramunga Arr**	**34.19**	**196**		**P**	**02 03 52.7**	**-1.5**
WRA					**PcP**	**02 06 27.6**	**+0.2**
WRA					**ScP**	**02 09 57.6**	**+0.4**
BNX	**BinXian**	**35.34**	**340**	⇑P	**P**	**02 04 05.1**	**+1.3**
BNX				pmax	pmax		
	comp=Z,24nm,1.0s						
HNS	**HongShan**	**35.48**	**318**	⇑P	**P**	**02 04 05.4**	**+0.4**
HNS				pmax	pmax		
	comp=Z,39nm,0.8s						
LYN	**LuoYang**	**35.50**	**312**	P	**P**	**02 04 05.6**	**+0.3**
LYN				pmax	pmax		
	comp=Z,52nm,0.7s						
ENH	**Enshi**	**35.99**	**304**		**P**	**02 04 09.8**	**+0.3**
BJI2	**Beijing**	**36.16**	**323**	P	**P**	**02 04 10.9**	**0.0**
BJI2				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BJT	**Baijiatuau**	**36.16**	**323**		**P**	**02 04 11.0**	**+0.1**
BJT				IAmb	IAmb	02 04 11.5	
	comp=Z,9.0nm,0.7s						
AS31	**Alice Springs**	**37.86**	**195**		**P**	**02 04 24.9**	**-0.6**
AS31				IAmb	IAmb	02 04 26.6	
	comp=Z,4.6nm,0.5s						
ASAR	**Alice Springs**	**37.87**	**195**	P	**P**	**02 04 24.9**	**-0.5**
	comp=Z,4.7nm,0.8s,baz=18,slow=13,SNR=128						
ASAR				PcP	**PcP**	**02 06 38.7**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=28,slow=2.8,SNR=1.5						
ASAR				ScP	**ScP**	**02 10 09.8**	**-0.9**
	comp=Z,0.6nm,0.9s,baz=4.2,slow=4.5,SNR=4.1						
	comp=Z,4.7nm,0.8s						
XAN	**Xi'an**	**37.89**	**309**	P	**P**	**02 04 25.2**	**-0.4**
XAN				pP	pP	02 04 58.9	-0.8
XAN				pmax	pmax		
	comp=Z,11nm,0.7s						
XLT	**XiLinHaoTe**	**38.80**	**327**	*e*P	**P**	**02 04 33.5**	**+0.4**
XLT				pmax	pmax		
	comp=Z,14nm,0.8s						
XLT				pmax	pmax		
	comp=Z,120nm,3.9s						
HEH	**HeiHe**	**39.36**	**343**	*e*P	**P**	**02 04 37.6**	**+0.1**
HEH				pmax	pmax		
	comp=Z,19nm,0.8s						
HHC	**Hu-ho-hao-te**	**39.46**	**320**	*e*P	**P**	**02 04 38.5**	**-0.1**
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,5.1s						
CD2	**Chengdu**	**40.87**	**302**	P	**P**	**02 04 50.2**	**-0.2**
CD2				pmax	pmax		
	comp=Z,40nm,0.5s						
DZM	**Mont Dzumac**	**41.44**	**147**		**P**	**02 04 57.1**	**+2.1**
PZH	**PanZhiHua**	**41.58**	**295**	P	**P**	**02 04 56.5**	**+0.2**
PSA00	**Pilbara Seismi**	**41.79**	**215**		**P**	**02 04 57.8**	**0.0**
PSA00				IAmb	IAmb	02 05 00.8	
	comp=Z,12nm,1.5s						
LZH	**Lanzhou**	**42.52**	**310**	*e*P	**P**	**02 05 04.7**	**+0.9**
LZH				pP	pP	02 05 09.1	-29
LZH				pmax	pmax		
	comp=Z,23nm,1.5s						
LZDM	**Lanzhou Array**	**42.58**	**309**	P	**P**	**02 05 05.1**	**+0.6**
	comp=Z,1.9nm,0.3s,baz=156,slow=7.6,SNR=8.3						
	comp=Z,1.9nm,0.3s						
CMAR	**Chiang Mai Arr**	**43.44**	**283**	P	**P**	**02 05 11.8**	**+0.5**
	comp=Z,2.5nm,0.3s,baz=82,slow=5.7,SNR=8.9						
CMAR				PcP	**PcP**	**02 06 57.1**	**+0.4**
	comp=Z,1.1nm,0.3s,baz=113,slow=3.5,SNR=1.3						
	comp=Z,2.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**43.44**	**283**	P	**P**	**02 05 10.6**	**-0.7**
CMAR					**PcP**	**02 06 56.9**	**+0.2**
STKA	**Stephens Creek**	**44.83**	**183**	P	**P**	**02 05 21.4**	**-0.6**
	comp=Z,2.7nm,0.5s,baz=4.8,slow=9.6,SNR=9.2						
	comp=Z,2.7nm,0.5s						
STKA	**Stephens Creek**	**44.83**	**183**	P	**P**	**02 05 21.6**	**-0.4**
STKA				IAmb	IAmb	02 05 21.9	
	comp=Z,19nm,1.0s						
ULN	**Ulaanbaatar**	**46.17**	**326**	P	**P**	**02 05 32.9**	**+0.3**
FORT	**Forrest**	**46.24**	**199**	P	**P**	**02 05 33.2**	**+0.1**
FORT				IAmb	IAmb	02 05 34.4	
	comp=Z,7.2nm,0.8s						
BBOO	**Buckleboo**	**46.31**	**189**	P	**P**	**02 05 33.1**	**-0.4**
BBOO				IAmb	IAmb	02 05 35.1	
	comp=Z,9.4nm,0.8s						
SONM	**Songino Array**	**46.52**	**326**	P	**P**	**02 05 35.6**	**+0.4**
	comp=Z,3.7nm,0.6s,baz=146,slow=7.8,SNR=29						
SONM				ScP	**ScP**	**02 10 46.5**	**+1.3**
	comp=Z,0.2nm,0.2s,baz=116,slow=3.4,SNR=1.6						
	comp=Z,3.7nm,0.6s						
SONM	**Songino Array**	**46.52**	**326**	P	**P**	**02 05 35.9**	**+0.6**
SONM					**ScP**	**02 10 46.4**	**+1.3**
GTA2	**Gaotai**	**46.79**	**312**	P	**P**	**02 05 37.9**	**+0.4**
GTA2				sP	sP	02 06 24.7	-5.7
GTA2				pmax	pmax		
	comp=Z,12nm,1.5s						
CAN	**Canberra**	**48.46**	**174**	P	**P**	**02 05 50.5**	**+0.3**
MORW	**Morawa**	**49.84**	**212**	P	**P**	**02 06 00.4**	**-0.3**
MORW				IAmb	IAmb	02 06 23.5	
	comp=Z,22nm,1.3s						
TOO	**Toolangi**	**50.48**	**178**	P	**P**	**02 06 06.6**	**+1.1**
EVN	**Everest**	**54.94**	**295**	P	**P**	**02 06 38.6**	**-0.7**
EVN				IAmb	IAmb	02 06 39.8	
	comp=Z,7.5nm,1.4s						
WMQ	**Urumqi**	**56.72**	**314**	*e*P	**P**	**02 06 51.9**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s						
MKAR	**Makanchi Array**	**61.11**	**316**	P	**P**	**02 07 21.4**	**+0.3**
	comp=Z,5.3nm,0.6s,baz=92,slow=8.8,SNR=58						
	comp=Z,5.3nm,0.6s						
MKAR	**Makanchi Array**	**61.11**	**316**		**P**	**02 07 21.3**	**+0.2**
MAKZ	**Makanchi**	**61.32**	**316**		**P**	**02 07 22.7**	**+0.1**
MAKZ				IAmb	IAmb	02 07 23.8	
	comp=Z,8.8nm,0.8s						
ZAA0	**Zalesovo Array**	**61.40**	**325**	P	**P**	**02 07 22.1**	**-0.7**
ZAA0				IAmb	IAmb	02 07 22.8	
	comp=Z,2.4nm,0.6s						
ZALV	**Zalesovo Beam**	**61.40**	**325**	P	**P**	**02 07 22.3**	**-0.5**
	comp=Z,2.1nm,0.6s,baz=110,slow=7.2,SNR=10						
ZALV				pP	**pwP**	**02 08 01.7**	**-3.2**
	comp=Z,1.1nm,0.5s,baz=136,slow=5.7,SNR=3.1						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,2.1nm,0.6s						
ZALV	**Zalesovo Beam**	**61.40**	**325**		**P**	**02 07 22.5**	**-0.3**
KDJ	**Kajisay**	**64.01**	**311**		**P**	**02 07 40.4**	**-0.2**
KDJ				IAmb	IAmb	02 07 41.9	
	comp=Z,7.2nm,0.9s						
KURK	**Kurchatov**	**64.27**	**320**		**P**	**02 07 41.7**	**-0.2**
KURK				IAmb	IAmb	02 07 42.5	
	comp=Z,6.6nm,0.7s						
KURBB	**Kurchatov Arra**	**64.31**	**320**	P	**P**	**02 07 42.0**	**-0.1**
	comp=Z,6.3nm,0.7s,baz=103,slow=6.7,SNR=57						
KURBB				pP	**pwP**	**02 08 21.6**	**-2.8**
	comp=Z,1.9nm,0.7s,baz=103,slow=6.6,SNR=2.7						
KURBB				sP	**sP**	**02 08 40.5**	**+3.4**
	comp=Z,2.6nm,0.7s,baz=103,slow=6.1,SNR=4.0						
	comp=Z,6.3nm,0.7s						
BOOM	**Boomskoye usch**	**64.96**	**311**	P	**P**	**02 07 46.4**	**-0.3**
KSH2	**Kashi**	**65.00**	**307**	P	**P**	**02 07 47.6**	**+0.5**
KSH2				pmax	pmax		
	comp=Z,4.0nm,0.8s						
E18K	**Tukpahlearik C**	**65.08**	**21**		**P**	**02 07 48.0**	**+1.1**
G19K	**Purcell Mounta**	**65.78**	**22**	P	**P**	**02 07 52.2**	**+0.8**
AAK	**Ala-Archa**	**66.04**	**311**		**P**	**02 07 53.2**	**-0.5**
C19K	**Lookout Ridge**	**66.19**	**19**	P	**P**	**02 07 54.7**	**+0.7**
C19K				IAmb	IAmb	02 08 08.9	
	comp=Z,4.6nm,0.8s						
NRIK	**Noril'sk**	**66.22**	**341**	P	**P**	**02 07 53.1**	**-1.0**
	comp=Z,1.2nm,0.3s,baz=125,slow=7.3,SNR=3.6						
	comp=Z,1.2nm,0.3s						
NRIK	**Noril'sk**	**66.22**	**341**	P	**P**	**02 07 53.8**	**-0.2**
NRIK				IAmb	IAmb	02 07 55.5	
	comp=Z,7.3nm,1.3s						
E19K	**Redstone River**	**66.26**	**21**	P	**P**	**02 07 55.3**	**+0.9**
NIL	**Nilore**	**66.75**	**301**		**P**	**02 07 58.0**	**-0.2**
D20K	**Etivluk River**	**66.99**	**20**	P	**P**	**02 07 59.9**	**+0.9**
D20K				IAmb	IAmb	02 08 15.7	
	comp=Z,4.0nm,0.8s						
ARSB	**Arslanbob**	**67.09**	**309**		**P**	**02 08 00.7**	**+0.3**
ARSB				IAmb	IAmb	02 08 01.0	
	comp=Z,6.1nm,0.6s						
B20K	**Meade River**	**67.36**	**19**	P	**P**	**02 08 02.1**	**+0.8**
B20K				IAmb	IAmb	02 08 12.1	
	comp=Z,5.0nm,1.0s						
D22K	**Ayikyak River**	**68.38**	**20**	P	**P**	**02 08 08.7**	**+0.9**
D22K				IAmb	IAmb	02 08 13.2	
	comp=Z,5.7nm,1.1s						
E22K	**Anaktuvuk Pass**	**68.43**	**21**		**P**	**02 08 09.2**	**+1.1**
BTK	**Batken**	**68.70**	**308**	P	**P**	**02 08 10.5**	**+0.2**
BTK				IAmb	IAmb	02 08 10.7	
	comp=Z,3.5nm,0.6s						
KK31	**Karatay Array**	**68.98**	**311**		**P**	**02 08 12.2**	**+0.3**
KKAR	**Karatay Array**	**68.98**	**311**		**P**	**02 08 11.9**	**-0.1**
GAR	**Garm**	**69.09**	**307**		**P**	**02 08 12.7**	**-0.2**
E23K	**Chandalar**	**69.19**	**22**	P	**P**	**02 08 13.5**	**+0.7**
E23K				IAmb	IAmb	02 08 27.8	
	comp=Z,5.6nm,0.9s						
ILAR	**Eielson Array**	**69.38**	**25**	P	**P**	**02 08 12.6**	**-1.4**
	comp=Z,0.7nm,0.5s,baz=251,slow=6.0,SNR=28						
	comp=Z,0.7nm,0.5s						
ILAR	**Eielson Array**	**69.38**	**25**	P	**P**	**02 08 13.5**	**-0.4**
BVAR	**Borovoye Array**	**69.65**	**322**	P	**P**	**02 08 15.1**	**-0.7**
	comp=Z,6.4nm,0.4s,baz=99,slow=7.7,SNR=40						
BVAR				pP	**pwP**	**02 08 55.9**	**-2.8**
	comp=Z,1.4nm,0.7s,baz=105,slow=7.5,SNR=1.0						
BVAR				sP	**sP**	**02 09 15.3**	**+4.2**
	comp=Z,2.9nm,0.6s,baz=105,slow=7.1,SNR=4.9						
	comp=Z,6.4nm,0.4s						
BORK	**Borovoye**	**69.69**	**322**		**P**	**02 08 16.1**	**+0.1**
BORK				IAmb	IAmb	02 08 16.7	
	comp=Z,7.3nm,0.6s						
C24K	**Franklin Bluff**	**69.99**	**20**	P	**P**	**02 08 18.7**	**+1.1**
C24K				IAmb	IAmb	02 08 31.9	
	comp=Z,4.4nm,0.7s						
KBL	**Kabul**	**70.22**	**302**		**P**	**02 08 19.2**	**-0.7**
KBL				IAmb	IAmb	02 08 21.5	
	comp=Z,7.7nm,0.9s						
D25K	**Kavik River**	**70.67**	**21**		**P**	**02 08 23.0**	**+1.2**
D25K				IAmb	IAmb	02 08 32.8	
	comp=Z,7.1nm,1.2s						
SHAA	**Shahritus**	**70.84**	**305**		**P**	**02 08 23.6**	**+0.2**
SHAA				IAmb	IAmb	02 08 24.9	
	comp=Z,33nm,1.4s						
C27K	**Jago River**	**71.66**	**21**	P	**P**	**02 08 29.2**	**+1.6**
AB31	**Akbulak array**	**76.19**	**318**		**P**	**02 08 54.3**	**-0.1**
AB31				IAmb	IAmb	02 08 54.6	
	comp=Z,4.0nm,0.7s						
ABKAR	**Akbulak array**	**76.19**	**318**		**P**	**02 08 54.1**	**-0.3**
ARTI	**Arti**	**76.65**	**325**	P	**P**	**02 08 56.2**	**-0.6**
ARTI				IAmb	IAmb	02 08 56.9	
	comp=Z,9.2nm,1.2s						
YKA	**Yellowknife Ar**	**83.70**	**27**	P	**P**	**02 09 34.5**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=292,slow=5.4,SNR=13						
YKA				pP	**pP**	**02 10 13.9**	**0.0**
	comp=Z,0.3nm,0.8s,baz=291,slow=6.1,SNR=1.9						
YKA				sP	**sP**	**02 10 31.6**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=292,slow=6.6,SNR=2.8						
	comp=Z,0.3nm,0.4s						
YKA	**Yellowknife Ar**	**83.70**	**27**	P	**P**	**02 09 34.0**	**-0.4**
NVAR	**Mina Array Bea**	**87.97**	**51**	P	**P**	**02 09 57.5**	**+1.3**
	comp=Z,3.9nm,0.9s,baz=263,slow=6.1,SNR=24						
	comp=Z,3.9nm,0.9s						
KBZ	**Khabaz**	**88.76**	**315**	P	**P**	**02 10 00.9**	**+1.4**
	comp=Z,0.7nm,0.7s,baz=81,slow=13,SNR=2.2						
	comp=Z,0.7nm,0.7s						
FINES	**FINESS Array B**	**91.13**	**335**	P	**P**	**02 10 08.7**	**-1.4**
	comp=Z,1.0nm,0.5s,baz=58,slow=4.8,SNR=11						
	comp=Z,1.0nm,0.5s						
PDAR	**Pinedale Array**	**92.98**	**45**	P	**P**	**02 10 19.4**	**-0.1**
	comp=Z,0.3nm,0.8s,baz=308,slow=7.9,SNR=3.0						
	comp=Z,0.3nm,0.8s						
PDAR	**Pinedale Array**	**92.98**	**45**	P	**P**	**02 10 19.7**	**+0.2**
AKASG	**Malin Array Be**	**94.79**	**325**	P	**P**	**02 10 26.5**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=64,slow=2.2,SNR=1.4						
	comp=Z,0.3nm,0.4s						
AKASG	**Malin Array Be**	**94.79**	**325**	P	**P**	**02 10 25.6**	**-1.6**
AKASG				IAmb	IAmb	02 10 38.0	
	comp=Z,2.0nm,0.9s						
BRTR	**Keskin Array B**	**96.63**	**313**	P	**P**	**02 10 34.3**	**-1.8**
	comp=Z,0.3nm,0.4s,baz=52,slow=5.7,SNR=2.4						
	comp=Z,0.3nm,0.4s						
BRTR	**Keskin Array B**	**96.63**	**313**	P	**P**	**02 10 34.5**	**-1.6**
SFJD	**Kangerlussuaq**	**99.37**	**6**	LR	LR	02 52 52.5	
	comp=Z,43nm,19.4s,baz=326,slow=34						
TORD	**Torodi Ar. Bea**	**134.28**	**303**	PKP	**PKPdf**	**02 16 23.4**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=10,slow=1.8,SNR=7.4						
TORD	**Torodi Ar. Bea**	**134.28**	**303**		**PKPdf**	**02 16 23.0**	**-0.5**
PLCA	**Paso Flores**	**139.27**	**139**	PKP	**PKPdf**	**02 16 33.2**	**+1.1**
	comp=Z,2.2nm,0.9s,baz=293,slow=3.3,SNR=6.0						
DBIC	**Dimbokro**	**143.19**	**301**	PKhKP	PKPpre	02 16 36.1	
	comp=Z,1.2nm,0.4s,baz=36,slow=6.5,SNR=3.2						
DBIC	**Dimbokro**	**143.19**	**301**		PKPab	02 16 36.5	+0.6
LPAZ	**La Paz**	**148.94**	**100**	PKP	**PKPdf**	**02 16 50.9**	**+0.7**
	comp=Z,7.8nm,0.6s,baz=252,slow=3.2,SNR=4.9						
LPAZ				PKPbc	**PKPbc**	**02 16 55.4**	**+1.0**
	comp=Z,7.8nm,0.6s,baz=280,slow=2.2,SNR=24						
LPAZ	**La Paz**	**148.94**	**100**		**PKiKP**	**02 16 56.1**	**+0.4**
CPUP	**Villa Florida**	**156.20**	**127**	PKP	**PKPdf**	**02 17 00.2**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=254,slow=2.3,SNR=4.0						
CPUP				PKPab	**PKPab**	**02 17 28.7**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=326,slow=1.2,SNR=2.1						
CPUP	**Villa Florida**	**156.20**	**127**		**PKPdf**	**02 16 59.8**	**-0.1**

ISC 05 02:32:07.0±1.5**, 16°.03N**±0°.05×**95°.05W**±0°.03**, h34**km±3km**, n16,** σ1s.41/32**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.05**	**256**	*e*P	**Pb**	**02 32 25.8**	**-0.9**
HUIG				*e*S	**Sb**	**02 32 40.0**	**-0.3**
CMIG	**Matias Romero**	**1.07**	**8**	*e*P	**Pn**	**02 32 25.4**	**-0.2**
CMIG				*i* S	**Sb**	**02 32 38.6**	**-2.1**
UXUV	**UXUV**	**1.55**	**34**	*e*P	**Pn**	**02 32 32.1**	**0.0**
UXUV				*e*S	**Sn**	**02 32 49.9**	**-1.2**
PCIG		**1.79**	**100**	*e*P	**Pn**	**02 32 35.7**	**+0.2**
PCIG				*e*S	**Sn**	**02 32 56.8**	**-0.3**
NEUV	**Arroyo Zacate**	**1.82**	**337**	*e*P	**Pn**	**02 32 35.9**	**-0.1**
NEUV				*e*S	**Sn**	**02 32 55.0**	**-2.9**
TGIG		**1.99**	**68**	*e*P	**Pn**	**02 32 39.7**	**+1.3**
TGIG				*e*S	**Sn**	**02 33 02.5**	**+0.3**
PEIG	**Puerto Escondi**	**2.02**	**269**	*e*P	**Pn**	**02 32 38.5**	**-0.2**
PEIG				*e*S	**Sn**	**02 33 00.8**	**-1.9**
YOIG	**Yosondua**	**2.53**	**289**	*e*P	**Pn**	**02 32 48.1**	**+2.1**
YOIG				*e*S	**Sn**	**02 33 15.7**	**-0.1**
TOIG	**Toxpalan**	**2.82**	**317**	*e*P	**Pn**	**02 32 51.0**	**+1.2**
TOIG				*e*S	**Sn**	**02 33 24.5**	**+1.8**
PATR	**El Naranjo**	**2.86**	**108**	*e*P	**Pn**	**02 32 50.8**	**+0.4**
PATR				*e*S	**Sn**	**02 33 24.4**	**+0.5**
TXIG	**Tlaxiaco**	**2.88**	**295**	*e*P	**Pn**	**02 32 52.5**	**+1.8**
TXIG				*e*S	**Sn**	**02 33 23.9**	**-0.4**
PAVE	**Pavencul**	**2.89**	**106**	*e*P	**Pn**	**02 32 52.0**	**+1.1**
PAVE				*e*S	**Sn**	**02 33 24.2**	**-0.4**
PNIG	**Pinotepa**	**2.98**	**277**	*e*P	**Pn**	**02 32 51.8**	**-0.1**
PNIG				*e*S	**Sn**	**02 33 23.7**	**-2.8**
CHUJ	**Union Juarez**	**2.98**	**108**	*e*P	**Pn**	**02 32 52.7**	**+0.5**
CHUJ				*e*S	**Sn**	**02 33 26.1**	**-0.8**
HLIG	**Huajuapan de L**	**3.19**	**305**	*e*P	**Pb**	**02 33 04.9**	**+1.9**
HLIG				*e*S	**Sn**	**02 33 32.4**	**+0.5**
FTIG	**Fresnillo de T**	**3.49**	**303**	*e*P	**Pn**	**02 33 01.7**	**+2.6**
FTIG				*e*S	**Sn**	**02 33 38.4**	**-0.9**

*IDC **05** 02:38:15.2±15.0, 23°.40S×178°.71W, h306km±108km, mb2.9/3, mbtmp3.6/4, Error ellipse: s-maj=210.7km s-min=26.1km az=142.0*

ISC 05 02:38:14.4±1.5**, 23°.5S**±0°.2×**178°.7W**±0°.3**, h300**km**, n8,** σ**0s.86**/8**, mb3.1**/3**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.49**	**331**	P	**Pn**	**02 39 49.8**	**+0.1**
	4.8nm,0.6s,baz=131,slow=20,SNR=5.6						
ASAR	**Alice Springs**	**43.29**	**260**	P	**P**	**02 45 47.5**	**0.0**
	0.2nm,0.3s,baz=96,slow=7.2,SNR=8.8						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**43.63**	**265**	P	**P**	**02 45 50.0**	**-0.2**
	0.5nm,0.4s,baz=99,slow=8.0,SNR=11						
	0.5nm,0.4s						
ILAR	**Eielson Array**	**91.36**	**13**	P	**P**	**02 50 45.5**	**-0.4**
	0.3nm,1.0s,baz=212,slow=6.3,SNR=1.4						
	0.3nm,1.0s						
HFS	**Hagfors**	**142.37**	**350**	PKhKP	PKPpre	02 57 03.8	
	0.9nm,0.7s,baz=31,slow=3.4,SNR=4.2						
HFS				PKP	**PKPdf**	**02 57 09.7**	**-1.2**
	7.7nm,1.2s,baz=11,slow=2.9,SNR=4.8						
AKASG	**Malin Array Be**	**145.26**	**329**	PKPbc	**PKPbc**	**02 57 17.3**	**+0.6**
	0.4nm,0.3s,baz=44,slow=4.4,SNR=4.2						
EKA	**Eskdalemuir Ar**	**148.02**	**5**	PKPbc	**PKPdf**	**02 57 22.0**	**+1.2**
	0.2nm,0.4s,baz=356,slow=5.5,SNR=3.7						
MMAI	**Mount Meron Ar**	**148.62**	**295**	PKPbc	**PKPbc**	**02 57 26.7**	**+0.1**
	3.2nm,0.9s,baz=80,slow=3.2,SNR=2.4						

*AZER **05** 03:00:08.0, 38°.48N×44°.51E, h10km, ml3.0*
*TEH **05** 03:00:07.2, 38°.38N×44°.45E, h6km±79km, ML2.8, Presumed earthquake*
*ISK **05** 03:00:08.6, 38°.36N×44°.36E, h5km, ML2.8/14*

ISC 05 03:00:06.9±1.3**, 38°.39N**±0°.03×**44°.63E**±0°.03**, h5**km±11km**, n36,** σ**1s.91**/57**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHB	**Shabestar**	**0.79**	**97**	Pg	**Pn**	**03 00 24.1**	**-0.8**
IMRD	**Marand**	**0.91**	**68**	Pg	**Pn**	**03 00 27.1**	**+0.6**
MAKU	**Maku**	**0.97**	**3**	Pg	**Pg**	**03 00 25.6**	**+0.2**
MAKU				Sg	**Sn**	**03 00 40.2**	**-1.4**
NAX	**Nakhchivan**	**1.04**	**41**	P	**Pn**	**03 00 29.0**	**+0.7**
NAX				S	**Sn**	**03 00 45.1**	**+1.9**
ERCV	**ERCIS-VAN**	**1.19**	**303**	Pg	**Pn**	**03 00 29.7**	**-0.7**
ERCV				Sg	**Sb**	**03 00 45.0**	**-0.9**
ORD	**Ordubad**	**1.20**	**63**	P	**Pg**	**03 00 32.3**	**+2.4**
ORD				S	**Sn**	**03 00 50.9**	**+3.7**
ITBZ	**Tabriz**	**1.21**	**97**	Pg	**Pg**	**03 00 32.2**	**+2.1**
SBZ	**Shahbuz**	**1.24**	**35**	P	**Pg**	**03 00 32.5**	**+1.8**
SBZ				S	**Sn**	**03 00 51.2**	**+2.9**
IAZR	**Azarshahr**	**1.28**	**123**	Pg	**Pg**	**03 00 34.1**	**+2.7**
AKDM	**Akdamar-Van**	**1.29**	**268**	Pn	**Pn**	**03 00 28.9**	**-3.0**
AKDM				Sn	**Sb**	**03 00 46.6**	**-2.3**
HYR	**Heyderabad**	**1.34**	**7**	P	**Pg**	**03 00 33.2**	**+0.6**
HYR				S	**Sg**	**03 00 52.6**	**+2.5**
CUKT	**Cukurca**	**1.39**	**216**	Pn	**Pn**	**03 00 33.8**	**+0.6**
CUKT				Sn	**Sn**	**03 00 52.4**	**+0.4**
AGRB	**Hanur-Agry**	**1.74**	**314**	Pn	**Pn**	**03 00 38.7**	**+0.7**
AGRB				Sn	**Sb**	**03 01 01.9**	**+0.1**
GNI	**Garni**	**1.76**	**3**	Pn	**Pg**	**03 00 42.0**	**+1.3**
GNI				Sn	**Sg**	**03 01 06.9**	**+3.3**
MLAZ	**Malazgirt-MUS**	**1.79**	**296**	Pn	**Pn**	**03 00 39.2**	**+0.6**
MLAZ				Sn	**Sn**	**03 01 02.1**	**+0.2**
IHRS	**Heris**	**1.90**	**91**	Pn	**Pg**	**03 00 44.7**	**+1.4**
GURO	**Guroymak-BITLI**	**2.04**	**275**	Pn	**Pn**	**03 00 42.6**	**+0.5**
IHSH	**Hashtrud**	**2.35**	**117**	Pn	**Pb**	**03 00 50.6**	**+0.6**
GDB	**GEDABAY**	**2.49**	**20**	P	**Pb**	**03 00 51.5**	**-0.7**
GDB				S	**Sg**	**03 01 26.4**	**-0.5**
KARS	**Kars**	**2.54**	**332**	Pn	**Pb**	**03 00 51.6**	**-1.5**
AGDM	**Agdam**	**2.58**	**47**	P	**Pb**	**03 00 52.5**	**-1.3**
AGDM				S	**Sg**	**03 01 28.8**	**-1.1**
GRMI	**Germi**	**2.59**	**80**	Pn	**Pb**	**03 00 54.3**	**+0.3**
VRTB	**Varto-Mus**	**2.59**	**288**	Pn	**Pn**	**03 00 50.9**	**+1.2**
GANJ	**Ganja**	**2.61**	**30**	P	**Pb**	**03 00 53.6**	**-0.6**
GANJ				S	**Sg**	**03 01 28.5**	**-2.3**
SVAN	**Silvan-Diyarba**	**2.71**	**266**	Pn	**Pn**	**03 00 51.9**	**+0.7**
QZX	**Qazax, Azerbai**	**2.73**	**12**	P	**Pb**	**03 00 55.2**	**-1.1**
QZX				S	**Sb**	**03 01 30.4**	**+0.3**
SENK	**Senkaya-Erzuru**	**2.80**	**322**	Pn	**Pn**	**03 00 54.9**	**+2.4**
YRD	**Yardimli**	**2.88**	**78**	P	**Pb**	**03 00 58.9**	**0.0**
YRD				S	**Sg**	**03 01 37.4**	**-2.1**
LRK	**Lerik**	**2.92**	**84**	P	**Pb**	**03 00 59.4**	**-0.2**
LRK				S	**Sg**	**03 01 38.7**	**-2.2**
KARO	**Karliova-Bingo**	**2.94**	**289**	Pn	**Pn**	**03 00 55.6**	**+1.1**
GLBA	**Clilabad**	**3.06**	**73**	P	**Pb**	**03 01 01.2**	**-0.7**
GLBA				S	**Sg**	**03 01 41.3**	**-4.0**
BNGB	**Bingl**	**3.15**	**282**	Pn	**Pn**	**03 00 58.3**	**+1.0**
ASTR	**Astara**	**3.27**	**86**	P	**Pb**	**03 01 04.1**	**-1.3**
ASTR				S	**Sg**	**03 01 48.5**	**-3.6**
YEDI	**Yedisu-Bingol**	**3.35**	**290**	Pn	**Pn**	**03 01 01.4**	**+1.3**
XNQ	**Khinaliq**	**3.88**	**43**	P	**Pb**	**03 01 11.6**	**-4.4**
XNQ				S	**Sb**	**03 02 01.1**	**-2.3**
PQL	**Pirkuli**	**3.89**	**51**	P	**Pb**	**03 01 12.4**	**-3.8**
PQL				S	**Sb**	**03 02 01.9**	**-1.7**

*ISK **05** 03:31:49.9, 38°.43N×44°.42E, h5km, ML2.5/7*
*AZER **05** 03:31:50.7, 38°.55N×44°.52E, h9km, ml2.4*
*TEH **05** 03:31:51.1, 38°.44N×44°.52E, h6km±81km, ML2.5, Presumed earthquake*

ISC 05 03:31:50.1±1.3**, 38°.43N**±0°.03×**44°.49E**±0°.03**, h2**km±12km**, n22,** σ**1s.16**/32**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHB	**Shabestar**	**0.90**	**99**	Pg	**Pg**	**03 32 07.1**	**-0.3**
MAKU	**Maku**	**0.94**	**9**	Pg	**Pg**	**03 32 08.5**	**+0.4**
IMRD	**Marand**	**0.99**	**73**	Pg	**Pb**	**03 32 09.9**	**-0.2**
NAX	**Nakhchivan**	**1.08**	**46**	P	**Pb**	**03 32 11.5**	**-0.2**
NAX				S	**Sb**	**03 32 25.4**	**-0.8**
AKDM	**Akdamar-Van**	**1.19**	**266**	Pn	**Pg**	**03 32 11.8**	**-1.2**
AKDM				Sn	**Sg**	**03 32 29.7**	**+1.3**
SBZ	**Shahbuz**	**1.27**	**40**	P	**Pg**	**03 32 14.6**	**+0.1**
SBZ				S	**Sn**	**03 32 33.1**	**+0.3**
ORD	**Ordubad**	**1.28**	**67**	P	**Pn**	**03 32 15.1**	**-0.1**
ORD				S	**Sn**	**03 32 33.6**	**+0.7**
HYR	**Heyderabad**	**1.32**	**12**	P	**Pb**	**03 32 15.6**	**0.0**
HYR				S	**Sn**	**03 32 33.5**	**-0.4**
CUKT	**Cukurca**	**1.37**	**211**	Pn	**Pn**	**03 32 16.8**	**+0.4**
CUKT				Sn	**Sn**	**03 32 36.4**	**+1.1**
IAZR	**Azarshahr**	**1.40**	**122**	Pg	**Pg**	**03 32 17.5**	**+0.6**
AGRB	**Hanur-Agry**	**1.64**	**315**	Pn	**Pn**	**03 32 19.9**	**-0.2**
AGRB				Sn	**Sb**	**03 32 42.6**	**+0.3**
MLAZ	**Malazgirt-MUS**	**1.68**	**296**	Pn	**Pn**	**03 32 21.2**	**+0.5**
GNI	**Garni**	**1.73**	**6**	Pn	**Pb**	**03 32 22.5**	**-0.2**
GURO	**Guroymak-BITLI**	**1.93**	**274**	Pn	**Pn**	**03 32 24.5**	**+0.3**
IHRS	**Heris**	**2.01**	**92**	Pn	**Pb**	**03 32 27.6**	**+0.1**
VRTB	**Varto-Mus**	**2.48**	**288**	Pn	**Pn**	**03 32 32.3**	**+0.6**
GDB	**GEDABAY**	**2.49**	**23**	P	**Pn**	**03 32 33.0**	**+1.1**
GDB				S	**Sb**	**03 33 04.5**	**-2.3**
GRMI	**Germi**	**2.69**	**81**	Pn	**Pb**	**03 32 37.0**	**-2.1**
QZX	**Qazax, Azerbai**	**2.71**	**14**	P	**Pb**	**03 32 39.1**	**-0.3**
QZX				S	**Sg**	**03 33 17.9**	**+0.6**
YRD	**Yardimli**	**2.98**	**79**	P	**Pb**	**03 32 41.6**	**-2.4**
YRD				S	**Sb**	**03 33 19.9**	**-1.0**
LRK	**Lerik**	**3.03**	**85**	P	**Pb**	**03 32 42.7**	**-2.1**
ASTR	**Astara**	**3.38**	**86**	P	**Pn**	**03 32 46.5**	**+2.6**

*CATAC **05** 03:41:16.5±0.3, 15°N±3°×9°2W±°, h122km±2km, M3.2/18, MLv3.2/18, Error ellipse: s-maj=6.7km s-min=2.6km az=31.3, confirmed*
*GCG **05** 03:41:17.8±1.0, 14°.62N×91°.58W, h115km±7km, MD4.0, ML3.9, Presumed earthquake*

ISC 05 03:41:16.0±2.4**, 14°.51N**±0°.07×**91°.71W**±0°.10**, h125**km±12km**, n31,** σ**1s.17**/49**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.02**	**46**	P	**Pn**	**03 41 34.1**	**+1.2**
RTAL				S	**Sn**	**03 41 45.9**	**+0.2**
STG2	**El Palmar, Qui**	**0.33**	**102**	*i* P	**Pn**	**03 41 33.9**	**+0.1**
STG2				*i* S	**Sn**	**03 41 46.6**	**-0.6**
STG2				IAML		03 41 48.8	
	comp=E,9μm,0.3s						
STG8	**El Palmar, Qui**	**0.35**	**99**	*i* P	**Pn**	**03 41 34.0**	**0.0**
STG5	**El Palmar, Qui**	**0.37**	**106**	*e*P	**Pn**	**03 41 33.5**	**-0.3**
STG5				*i* S	**Sn**	**03 41 46.1**	**-1.3**
QUEO	**Labor Ovalle**	**0.41**	**28**	*i* P	**Pn**	**03 41 35.3**	**+1.0**
SOKI	**Kika Raxquin**	**0.43**	**44**	*i* P	**Pn**	**03 41 35.4**	**+0.9**
SMCA	**Catarina**	**0.49**	**315**	*i* P	**Pn**	**03 41 35.2**	**+0.8**
HUEH	**Huehuetenango**	**0.83**	**14**	P	**Pn**	**03 41 37.9**	**+0.7**
HUEH	**Huehuetenango**	**0.83**	**14**	*i* P	**Pn**	**03 41 37.9**	**+0.7**
HUEH				*i* S	**Sn**	**03 41 53.2**	**+0.1**
HUEH				IAML		03 41 59.9	
	comp=E,1μm,0.6s						
FG8	**Yepocapa, Chim**	**1.14**	**102**	*i* P	**Pn**	**03 41 36.9**	**-3.1**
FG16	**Alotenango, Sa**	**1.19**	**101**	*i* P	**Pn**	**03 41 37.5**	**-3.0**
PCG5	**San Vicente Pa**	**1.33**	**102**	*i* P	**Pn**	**03 41 39.8**	**-2.2**
ESSJ	**San Jos, E**	**1.51**	**129**	*i* P	**Pn**	**03 41 40.5**	**-3.3**
FAME	**Alcaldia de Sa**	**1.77**	**112**	P	**Pn**	**03 41 47.5**	**+0.5**
FAME				S	**Sn**	**03 42 11.1**	**+0.6**
CCIG	**Comitan**	**1.81**	**347**	P	**Pn**	**03 41 46.2**	**-1.3**
CCIG				S	**Sn**	**03 42 11.4**	**-0.2**
SLOZ	**Alcaldia de Sa**	**1.93**	**104**	P	**Pn**	**03 41 49.3**	**+0.5**
SLOZ				S	**Sn**	**03 42 14.8**	**+0.8**
NUBE	**Las Nubes**	**1.97**	**108**	P	**Pn**	**03 41 50.0**	**+0.5**
NUBE				S	**Sn**	**03 42 15.7**	**+0.7**
NUBE	**Las Nubes**	**1.97**	**108**	*i* P	**Pn**	**03 41 49.8**	**+0.4**
CEVE	**Cerro Verde**	**2.14**	**108**	P	**Pn**	**03 41 51.8**	**+0.2**
CEVE				S	**Sn**	**03 42 20.4**	**+1.5**
MTO3	**Montecristo**	**2.28**	**92**	P	**Pn**	**03 41 53.7**	**+0.3**
MTO3				S	**Sn**	**03 42 23.1**	**+1.1**
MTO3	**Montecristo**	**2.28**	**92**	*i* P	**Pn**	**03 41 53.5**	**+0.1**
ESQI	**Esquipulas**	**2.30**	**88**	P	**Pn**	**03 41 54.1**	**+0.6**
ESQI				S	**Sn**	**03 42 21.6**	**-0.7**
JAYA	**Jayaque - finc**	**2.35**	**111**	P	**Pn**	**03 41 55.0**	**+0.7**
JAYA				S	**Sn**	**03 42 23.9**	**+0.3**
JAYA	**Jayaque - finc**	**2.35**	**111**	*e*P	**Pn**	**03 41 54.7**	**+0.4**
PMON	**Piamonte**	**2.46**	**108**	P	**Pn**	**03 41 55.9**	**+0.3**
PMON				S	**Sn**	**03 42 27.0**	**+1.1**
IGN	**Direccin Gen**	**2.59**	**107**	P	**Pn**	**03 41 58.2**	**+1.0**
PAVA	**Las Pavas**	**2.81**	**106**	P	**Pn**	**03 41 59.7**	**-0.4**
PAVA				S	**Sn**	**03 42 33.1**	**-0.8**
SARH	**Santa Rosa de**	**2.87**	**84**	P	**Pn**	**03 42 00.7**	**-0.1**
SARH				S	**Sn**	**03 42 35.2**	**-0.2**
COEG	**Centro de Oper**	**2.89**	**107**	P	**Pn**	**03 42 01.5**	**+0.5**
COEG				S	**Sn**	**03 42 36.7**	**+0.9**
P5NO	**Presa 5 de nov**	**2.91**	**100**	P	**Pn**	**03 42 01.7**	**+0.4**
P5NO				S	**Sn**	**03 42 37.7**	**+1.5**
PETF	**Flores**	**2.98**	**36**	P	**Pn**	**03 42 02.3**	**+0.1**
PETF				S	**Sn**	**03 42 35.8**	**-2.0**

IDC 05 03:44:25.4±2.0**, 8°.51S**×**128°.07E, h0**km**, mb3.4**/1**, mbtmp3.6**/4**, ML3.5**/3**, Error ellipse: s-maj=75.7km s-min=25.1km az=80.0, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.82**	**194**	Pn	Pn	03 46 48.8	+0.9
	0.3nm,0.3s,baz=356,slow=15,SNR=1.4						
FITZ				Sn	Sn	03 48 39.5	+0.5
	0.7nm,0.3s,baz=40,slow=22,SNR=6.4						
	0.7nm,0.4s						
WRA	**Warramunga Arr**	**12.88**	**153**	Pn	Pn	03 47 30.1	+0.1
	0.3nm,0.3s,baz=327,slow=12,SNR=18						
WRA				Sn	Sn	03 49 52.5	-1.8
	0.8nm,0.3s,baz=323,slow=25,SNR=11						
	1.2nm,0.8s						
ASAR	**Alice Springs**	**16.07**	**160**	Pn	Pn	03 48 12.7	-0.3
	0.4nm,0.3s,baz=338,slow=11,SNR=23						
ASAR				Sn	Sn	03 51 12.5	+0.5
	0.2nm,0.3s,baz=339,slow=23,SNR=6.0						
	2.0nm,0.6s						
SONM	**Songino Array**	**59.29**	**343**	P	P	03 54 29.0	-0.1
	0.4nm,0.7s,baz=151,slow=3.3,SNR=2.3						
	0.4nm,0.7s						

*BJI **05** 03:59:06.9, 3°.55S×146°.25E, h10km, mB5.1/7, mb4.5/29, Ms4.6/1, Ms7 4.3/2*
*IDC **05** 03:59:08.6±0.8, 3°.30S×146°.06E, h0km, mb4.2/15, mbtmp4.2/19, ML4.1/3, MS3.7/49, Error ellipse: s-maj=28.6km s-min=14.4km az=90.0*
*NEIC **05** 03:59:09.4±1.7, 3°.31S±0°.06×146°.18E±0°.08, h10km±1km, mb4.7/26, Error ellipse: s-maj=14.7km s-min=8.1km az=119.0*
*GCMT **05** 03:59:12.4±0.3, 3°.34S±0°.02×146°.10E±0°.02, h15km±1km, MW4.8/86, Moment Tensor Solution. s22,c24; s86,c121; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.19±.08; $M_{\theta\theta}$0.01±.08; $M_{\phi\phi}$0.18±.08; $M_{r\theta}$-0.45±.26; $M_{\theta\phi}$1.95±.08; $M_{\phi r}$0.27±.25; Best double couple: $M_0$2.02800×10^{16} NP1:ϕ_s180.00000°, δ77.00000°, λ-171.00000°. NP2: ϕ_s88.00000°, δ81.00000°, λ-14.00000°. Principal axes: T 2.0520, Plg3.0000°, Azm134.0000°; N -0.0490, Plg74.0000°, Azm235.0000°; P -2.0030, Plg16.0000°, Azm43.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **05** 03:59:15.0±1.8, 3°S±10°×14°6E±1°1, h34km±11km, M4.7/19, mb4.7/19, mB5.2/8, MLv4.8/4, Mw(mB)4.6/8, MwMwp5.6/1, Mwp5.8/1*

ISC 05 03:59:11.2±0.4**, 3°.37S**±0°.05×**146°.18E**±0°.06**, h25**km**, n122,** σ**1s.66**/81**, mb4.6**/36**, MS3.8**/46**, 1C-1D, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**1.77**	**42**		**Pn**	**03 59 38.2**	**-2.1**
MANU				Sn	**Sn**	**04 00 01.9**	**-0.3**
GENI	**Genyem**	**6.05**	**277**	P	Pb	04 01 00.6	+4.6
GENI	**Genyem**	**6.05**	**277**	P	**Pn**	**04 00 38.7**	**-0.5**
	0.4nm64nm,1.2s						
PMG	**Port Moresby**	**6.08**	**171**	Pn	**Pn**	**04 00 40.0**	**+0.5**
	35nm,0.7s,baz=0.5,slow=6.3,SNR=10						
PMG				Sn	**Sn**	**04 01 51.0**	**+2.7**
	2.4nm,0.3s,baz=324,slow=19,SNR=1.1						
PMG				LR	LR	04 02 49.3	
	comp=Z,410nm,20.0s,baz=354,slow=36						
PMG	**Port Moresby**	**6.08**	**171**	P	**Pn**	**04 00 40.4**	**+0.8**
PMG	**Port Moresby**	**6.08**	**171**		**Pn**	**04 00 40.1**	**+0.5**
PMG				Sn	**Sn**	**04 01 50.2**	**+1.8**
PMG	**Port Moresby**	**6.08**	**171**	P	**Pn**	**04 00 40.2**	**+0.6**
	0.3nm743nm111nm,0.9s						
SMPI	**Sarmi**	**7.58**	**280**	P	**Pn**	**04 01 00.2**	**0.0**
	0.4nm3μm35nm,0.9s						
COEN	**Coen**	**10.93**	**196**	P	**Pn**	**04 01 48.5**	**+2.3**
COEN	**Coen**	**10.93**	**196**		**Pn**	**04 01 46.3**	**+0.1**
TATA	**Tatamba Isabel**	**14.44**	**111**	P	**P**	**04 02 42.6**	**+1.8**
MTSU	**Mount Surprise**	**14.79**	**187**	P	**P**	**04 02 41.6**	**-3.0**
HNR	**Honiara**	**14.95**	**114**	Pn	**Pn**	**04 02 42.2**	**+1.1**
	1.3nm,0.3s,baz=286,slow=6.4,SNR=4.5						
HNR				LR	LR	04 08 36.0	
	comp=Z,16nm,18.1s,baz=358,slow=38						
	7.3nm,0.6s						
HNR	**Honiara**	**14.95**	**114**	Pn	**Pn**	**04 02 40.6**	**-0.5**
SIJI	**Sorong**	**15.10**	**279**	Pn	**Pn**	**04 02 42.4**	**-0.8**
	0.8nm,0.3s,baz=130,slow=11,SNR=3.9						
SIJI				LR	LR	04 08 55.3	
	comp=Z,213nm,18.2s,baz=159,slow=39						
	2.3nm,0.3s						
NGOA	**Tingoa Renbel**	**15.98**	**121**	P	**P**	**04 03 02.5**	**+4.6**
CTA	**Charters Tower**	**16.62**	**180**	Pn	**P**	**04 03 05.4**	**+0.4**
	0.3nm,0.3s,baz=345,slow=13,SNR=8.0						
CTA				LR	LR	04 09 42.4	
	comp=Z,395nm,18.0s,baz=5.5,slow=38						
	13nm,1.1s						
CTA	**Charters Tower**	**16.62**	**180**	P	**P**	**04 03 06.7**	**+1.7**
CTAO	**Charters Tower**	**16.62**	**180**	P	**P**	**04 03 07.5**	**+2.5**
CTAO	**Charters Tower**	**16.62**	**180**	Pn	**Pn**	**04 03 02.8**	**+0.1**
GUMO	**Guam**	**16.90**	**356**	LR	LR	04 09 26.6	
	comp=Z,206nm,18.4s,baz=142,slow=37						
MTN	**Manton Dam**	**17.61**	**237**		**Pn**	**04 03 13.2**	**-1.9**

KRAI	Karang Ratu	17.75	270	P	P	04 03 16.8	-0.7
	4µm25nm,0.9s						
WB0	Warramunga Arr	19.95	214		P	04 03 41.0	-0.6
WR8	Warramunga Arr	20.04	214	P	P	04 03 41.9	-0.8
WRAB	Tennant Creek	20.11	214	P	Pn	04 03 43.2	-2.0
WRA	Warramunga Arr	20.12	214	P	Pn	04 03 43.3	-2.1
	0.6nm,0.4s,baz=33,slow=12,SNR=5.4						
WRA	Warramunga Arr	20.12	214	P	Pn	04 03 43.4	-2.0
KNRA	Kununurra	21.06	233		P	04 03 52.6	-1.0
EIDS	Eidsvold	22.38	168		P	04 04 08.6	+0.8
EIDS				IAmb	IAmb	04 04 16.2	
	comp=Z,22nm,1.1s						
SOEI	Soe	22.66	253		P	04 04 10.4	-0.6
SOEI	Soe	22.66	253	P	P	04 04 09.3	-1.7
DAV	Davao City (W)	23.02	297	LR	LR	04 12 21.7	
	comp=Z,49nm,19.7s,baz=86,slow=35						
BATI	Baumata	23.35	252	LR	LR	04 15 22.3	
	comp=Z,179nm,19.2s,baz=80,slow=42						
BATI	Baumata	23.35	252	P	P	04 04 17.3	-0.7
AS31	Alice Springs	23.41	209		P	04 04 17.6	-0.9
ASAR	Alice Springs	23.41	209	P	P	04 04 18.1	-0.4
	comp=Z,26nm,0.9s,baz=41,slow=8.8,SNR=204						
ASAR				LR	LR	04 14 55.8	
	comp=Z,293nm,18.9s,baz=31,slow=40						
	comp=Z,26nm,0.9s						
ASAR	Alice Springs	23.41	209		P	04 04 17.6	-0.9
GTOI	Gorontalo	23.49	279	P	P	04 04 16.0	-3.4
	comp=Z,689nmcomp=Z,38nm,0.9s						
LUWI	Luwuk	23.50	275	P	P	04 04 19.4	0.0
LUWI				IAmb	IAmb	04 04 47.9	
	comp=Z,54nm,1.0s						
SANVU	Saraoutou	23.93	121	P	P	04 04 21.7	-1.9
SANVU				IAmb	IAmb	04 04 25.5	
	comp=Z,21nm,0.9s						
INKA	Innaminka	24.79	192		P	04 04 31.1	-0.1
FITZ	Fitzroy Crossi	24.88	232	LR	LR	04 14 56.2	
	comp=Z,483nm,18.5s,baz=55,slow=38						
TOLI2	Tolitoli	25.77	280	P	P	04 04 39.1	-1.3
TOLI2				IAmb	IAmb	04 04 56.0	
	comp=Z,11nm,0.9s						
TTSI	Tana Toraja	26.32	270	P	P	04 04 46.9	+1.6
	comp=Z,15nm,0.8s						
KAPI	Kappang	26.40	266	LR	LR	04 16 45.0	
	comp=Z,66nm,21.9s,baz=90,slow=40						
KAPI	Kappang	26.40	266	P	P	04 04 45.5	-0.6
KAPI				IAmb	IAmb	04 04 52.3	
	comp=Z,35nm,1.3s						
DZM	Mont Dzumac	27.07	135	*e*S	S	04 09 21.0	-7.9
	comp=Z,166nm,26.6s						
DZM				*e*LR	LR	04 11 35.0	
	comp=Z,674nm,28.1s						
DZM	Mont Dzumac	27.07	135	P	P	04 04 51.0	-1.1
DZM				IAmb	IAmb	04 04 56.3	
	comp=Z,21nm,1.2s						
STKA	Stephens Creek	28.68	188	P	P	04 05 09.4	+3.0
	comp=Z,11nm,0.8s,baz=348,slow=9.6,SNR=21						
STKA				LR	LR	04 17 51.8	
	comp=Z,204nm,19.2s,baz=8.7,slow=39						
	comp=Z,11nm,0.8s						
STKA	Stephens Creek	28.68	188		P	04 05 07.3	+1.0
TGY	Tagaytay City	30.46	305	LR	LR	04 15 42.4	
	comp=Z,71nm,19.3s,baz=37,slow=33						
JCJ	Chichijima	30.53	353	LR	LR	04 16 18.8	
	comp=Z,53nm,20.8s,baz=161,slow=34						
PSA00	Pilbara Seismi	31.34	233	P	P	04 05 28.8	-1.2
PSA00				IAmb	IAmb	04 05 40.6	
	comp=Z,13nm,1.1s						
PSA00	Pilbara Seismi	31.34	233	P	P	04 05 28.3	-1.7
PSA00				IAmb	IAmb	04 05 40.6	
	comp=Z,6.1nm,1.0s						
FORT	Forrest	32.19	210	P	P	04 05 36.5	-0.8
FORT				IAmb	IAmb	04 05 46.5	
	comp=Z,10nm,1.1s						
JOW	Kunigami	34.65	331	LR	LR	04 17 01.5	
	comp=Z,255nm,21.2s,baz=141,slow=31						
JNU	Nakatsue	39.07	339	LR	LR	04 21 16.9	
	comp=Z,70nm,20.7s,baz=164,slow=34						
NWAO	Narrogin (SRO)	39.98	219	LR	LR	04 24 29.3	
	comp=Z,336nm,18.5s,baz=90,slow=38						
MJAR	Matsushiro Arr	40.39	350	LR	LR	04 19 56.3	
	comp=Z,61nm,20.7s,baz=146,slow=31						
NJ2	Nanjing	43.75	326	*e*P	P	04 07 15.1	+0.3
NJ2				pmax	pmax		
	comp=Z,42nm,1.4s						
KSRS	Korea Array	44.02	339	P	P	04 07 17.2	+0.4
	comp=Z,3.4nm,0.8s,baz=160,slow=10,SNR=7.3						
KSRS				LR	LR	04 22 37.4	
	comp=Z,90nm,21.6s,baz=155,slow=32						
	comp=Z,3.4nm,0.8s						
URZ	Urewera	44.76	145	LR	LR	04 23 22.5	
	comp=Z,153nm,19.6s,baz=314,slow=32						
RPZ	Rata Peaks	45.82	155	LR	LR	04 25 46.9	
	comp=Z,130nm,21.6s,baz=62,slow=35						
ASAJ	Asahikawa	47.38	356	LR	LR	04 26 49.9	
	comp=Z,24nm,19.7s,baz=118,slow=35						
TIA	Tai'an	47.82	328	P	P	04 07 51.6	+4.7
TIA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
USRK	Ussuriysk Ar.	49.04	347	P	P	04 07 57.2	+1.1
	comp=Z,3.1nm,0.7s,baz=152,slow=5.8,SNR=5.1						
	comp=Z,3.1nm,0.7s						
HNS	HongShan	50.00	327	⇓P	P	04 08 07.1	+3.6
HNS				pmax	pmax		
	comp=Z,12nm,0.9s						
HNS				L	L		
	comp=Z,220nm,21.0s						
KMI2	Kunming	50.77	306	P	P	04 08 11.5	+1.6
KMI2				pmax	pmax		
	comp=Z,10.0nm,1.3s						
XAN	Xi'an	51.15	320	P	P	04 08 13.9	+1.5
XAN				pmax	pmax		
	comp=Z,7.0nm,1.7s						
CMAR	Chiang Mai Arr	51.31	297	P	P	04 08 15.0	+1.1
	comp=Z,0.7nm,0.3s,baz=114,slow=6.2,SNR=8.7						
	comp=Z,0.7nm,0.3s						
CMAR	Chiang Mai Arr	51.31	297	P	P	04 08 13.3	-0.5
BNX	BinXian	51.66	343	⇑P	P	04 08 16.0	+0.1
BNX				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PZH	PanZhiHua	52.20	307	P	P	04 08 22.0	+1.5
KLR	Kul'dur	53.86	348	P	P	04 08 32.8	+0.6
	comp=Z,1.4nm,0.7s,baz=119,slow=3.6,SNR=4.5						
KLR				LR	LR	04 30 15.5	
	comp=Z,45nm,19.2s,baz=220,slow=35						
	comp=Z,1.4nm,0.7s						
HHC	Hu-ho-hao-te	54.18	328	*e*P	P	04 08 36.2	+1.4
HHC				S	S	04 16 14.1	+3.6
HHC				sS	sS	04 16 21.6	-0.7
HHC				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,94nm,5.9s						
RAR	Rarotonga	55.40	113	LR	LR	04 29 52.6	
	comp=Z,34nm,19.7s,baz=132,slow=33						
PETK	Petropavlovsk-	57.10	8	P	P	04 08 55.4	0.0
	comp=Z,2.7nm,1.0s,baz=138,slow=9.1,SNR=4.1						
PETK				LR	LR	04 29 36.7	
	comp=Z,28nm,21.9s,baz=192,slow=32						
	comp=Z,2.7nm,1.0s						
PETK	Petropavlovsk-	57.10	8	P	P	04 08 55.2	-0.2
GTA2	Gaotai	60.29	320	*e*P	P	04 09 18.2	+0.2
GTA2				sP	pP	04 09 24.7	-0.5
GTA2				pmax	pmax		
	comp=Z,3.0nm,1.4s						
SHEM	Shemya Is, Ala	60.65	19	LR	LR	04 31 14.5	
	comp=Z,68nm,21.0s,baz=323,slow=32						
ULN	Ulaanbaatar	61.42	331	P	P	04 09 24.1	-1.5
ULN				IAmb	IAmb	04 09 34.2	
	comp=Z,7.4nm,1.1s						
SONM	Songino Array	61.72	331	P	P	04 09 28.3	+0.7
	comp=Z,1.0nm,0.7s,baz=142,slow=6.1,SNR=5.3						
SONM				LR	LR	04 35 30.5	
	comp=Z,123nm,19.6s,baz=80,slow=35						
	comp=Z,1.0nm,0.7s						
SONM	Songino Array	61.72	331	P	P	04 09 27.4	-0.2
MA2	Magadan	62.86	3	LR	LR	04 34 27.3	
	comp=Z,14nm,21.7s,baz=155,slow=34						
PPT	Papeete	64.45	108	LR	LR	04 33 59.7	
	comp=Z,36nm,20.6s,baz=262,slow=32						
PPT2	Papeete2	64.45	108	*e*LR	LR	04 28 54.0	
	comp=Z,108nm,38.8s						
PPT2				*e*LR	LR	04 29 00.8	
	comp=Z,50nm,22.2s						
EVN	Everest	64.98	303	P	P	04 09 49.6	-0.6
EVN				IAmb	IAmb	04 10 01.4	
	comp=Z,3.7nm,0.7s						
TBI	Tubuai	65.17	114	*e*LR	LR	04 29 13.1	
	comp=Z,2µm,41.0s						
TLY	Talaya	65.65	332	LR	LR	04 38 40.1	
	comp=Z,64nm,19.8s,baz=122,slow=36						
YAK	Yakutsk	66.43	352	LR	LR	04 37 56.3	
	comp=Z,28nm,21.8s,baz=181,slow=35						
TAOE	Nuku Hiva Isla	73.37	98	*e*LR	LR	04 33 07.7	
	comp=Z,68nm,25.0s						
VNDA	Vanda	74.57	177	LR	LR	04 41 36.7	
	comp=Z,74nm,18.3s,baz=347,slow=34						
MKAR	Makanchi Array	74.96	320	P	P	04 10 49.9	-0.5
	comp=Z,1.7nm,1.0s,baz=101,slow=6.3,SNR=9.5						
MKAR				LR	LR	04 41 59.9	
	comp=Z,43nm,21.3s,baz=83,slow=34						
	comp=Z,1.7nm,1.0s						
MKAR	Makanchi Array	74.96	320	P	P	04 10 50.5	+0.1
MAKZ	Makanchi	75.16	320	P	P	04 10 52.4	+0.9
MAKZ				IAmb	IAmb	04 10 58.6	
	comp=Z,6.1nm,1.1s						
ZALV	Zalesovo Beam	76.36	328	P	P	04 10 59.7	+1.5
	comp=Z,2.1nm,0.7s,baz=126,slow=7.5,SNR=7.7						
ZALV				LR	LR	04 43 04.7	
	comp=Z,78nm,21.6s,baz=117,slow=35						
	comp=Z,2.1nm,0.7s						
ZALV	Zalesovo Beam	76.36	328	P	P	04 10 57.4	-0.8
KDAK	Kodiak Island	77.99	29	LR	LR	04 37 54.4	
	comp=Z,82nm,21.2s,baz=255,slow=30						
KURK	Kurchatov	78.62	323	P	P	04 11 11.5	+0.5
KURK				IAmb	IAmb	04 11 17.5	
	comp=Z,6.7nm,1.1s						
KURBB	Kurchatov Arra	78.65	323	P	P	04 11 11.1	+0.1
	comp=Z,1.4nm,1.0s,baz=106,slow=5.2,SNR=6.9						
KURBB				LR	LR	04 47 43.2	
	comp=Z,35nm,18.4s,baz=176,slow=37						
	comp=Z,1.4nm,1.0s						
AAK	Ala-Archa	78.92	314	LR	LR	04 45 34.3	
	comp=Z,63nm,21.9s,baz=68,slow=35						
NRIK	Noril'sk	82.53	342	P	P	04 11 32.1	+0.6
	comp=Z,4.5nm,0.8s,baz=126,slow=5.5,SNR=9.6						
NRIK				LR	LR	04 50 05.5	
	comp=Z,21nm,18.6s,baz=124,slow=37						
	comp=Z,4.5nm,0.8s						
NRIK	Noril'sk	82.53	342	P	P	04 11 31.9	+0.4
NRIK				IAmb	IAmb	04 11 38.4	
	comp=Z,7.8nm,0.8s						
ILAR	Eielson Array	83.40	23	P	P	04 11 37.2	+1.1
	comp=Z,0.8nm,0.9s,baz=244,slow=4.8,SNR=6.1						
ILAR				LR	LR	04 42 53.9	
	comp=Z,45nm,20.3s,baz=280,slow=32						
	comp=Z,0.8nm,0.9s						
ILAR	Eielson Array	83.40	23	P	P	04 11 36.7	+0.5
BVAR	Borovoye Array	84.17	324	P	P	04 11 41.2	+0.9
	comp=Z,1.6nm,0.7s,baz=123,slow=5.5,SNR=6.4						
	comp=Z,1.6nm,0.7s						
MAW	Mawson	84.35	202	LR	LR	04 45 45.5	
	comp=Z,34nm,20.5s,baz=67,slow=33						
QSPA	South Pole Qui	86.58	180	LR	LR	04 48 54.7	
	comp=Z,63nm,19.8s,baz=24,slow=34						
DLBC	Dease Lake	89.59	32	LR	LR	04 43 38.9	
	comp=Z,44nm,20.0s,baz=295,slow=30						
BBB	Bella Bella	90.00	38	LR	LR	04 46 01.9	
	comp=Z,55nm,20.4s,baz=152,slow=31						
ARTI	Arti	91.55	326	LR	LR	04 52 51.2	
	comp=Z,47nm,21.8s,baz=78,slow=35						
YBH	Yreka Blue Hor	93.05	49	LR	LR	04 47 34.5	
	comp=Z,6.7nm,18.7s,baz=288,slow=31						
KIRV	Kirov	96.39	328	LR	LR	04 56 38.6	
	comp=Z,163nm,20.4s,baz=77,slow=36						
NVAR	Mina Array Bea	96.41	52	LR	LR	04 47 10.7	
	comp=Z,86nm,21.1s,baz=271,slow=30						
NEW	Newport	96.97	42	LR	LR	04 51 09.4	
	comp=Z,31nm,18.4s,baz=316,slow=32						
YKA	Yellowknife Ar	97.23	28	P	Pdif	04 12 44.7	+2.9
	comp=Z,0.1nm,0.7s,baz=276,slow=4.7,SNR=1.3						
YKA				LR	LR	04 51 45.8	
	comp=Z,44nm,21.0s,baz=296,slow=32						
	comp=Z,0.1nm,0.7s						
YKA	Yellowknife Ar	97.23	28	P	Pdif	04 12 40.9	-0.8
PFO	Pinyon Flats O	97.99	57	LR	LR	04 48 54.9	
	comp=Z,59nm,20.4s,baz=264,slow=30						
ELK	Elko	98.69	49	LR	LR	04 50 45.1	
	comp=Z,37nm,19.8s,baz=226,slow=31						
TORD	Torodi Ar. Bea	143.58	288	PKP	PKPdf	04 18 43.9	-1.1
	comp=Z,0.6nm,0.7s,baz=125,slow=2.6,SNR=4.1						
TORD	Torodi Ar. Bea	143.58	288		PKPdf	04 18 44.5	-0.4

DJA 05 04:10:07.2±0.6,**2°N**±4°×**12°5E**±°,**h211**km±7km,**M3.8**/9, **mb3.7**/2,**MLv3.8**/9,**Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTOI	Gorontalo	2.28	234	P	Pn	04 10 49.8	+0.3
LUWI	Luwuk	3.67	215	P	Pn	04 11 04.6	-0.8
SANI	Sanana	4.18	164	P	Pn	04 11 09.6	-2.1
APSI	Ampana	4.31	228	P	Pn	04 11 13.2	-0.1

*NEIC **05** 04:10:42.7±1.3, 17°98N±0°03×66°857W±0°008, h10km±1km, ML2.5/33, Md3.1/5(RSPR), Error ellipse: s-maj=5.1km s-min=2.4km az=182.0*
*OSPL **05** 04:10:42.4±0.3, 17°91N×66°89W, h15km±17km, ML1.9, Presumed earthquake*
*SDD **05** 04:10:42.6±1.3, 18°04N×66°87W, h17km±25km, MD3.1, ML2.5, MW2.6, Presumed earthquake*
ISC 05 04:10:42.0±0.9,**17°96N**±0°05×**66°87W**±0°02,**h16**km±5km, **n27**,σ**0s61**/48,**2C-3D,Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.02	325		Pg	04 10 44.9	+0.1
GBPR					Sg	04 10 46.9	+0.1
MLPR	Magueyes Islan	0.17	273		Pg	04 10 46.1	-0.1
MLPR				Sg	Sg	04 10 48.9	-0.2
MLPR				IAML		04 10 49.7	
	855nm,0.1s						
MLPR				IAML		04 10 50.3	
	734nm,0.2s						
CRPR	Cabo Rojo, PR	0.23	281		Pg	04 10 47.2	0.0
CRPR					Sg	04 10 50.5	-0.3
CRPR	Cabo Rojo, PR	0.23	281	IAML		04 10 50.7	
	1µm,0.3s						
CRPR				IAML		04 10 50.9	
	797nm,0.2s						
CRPR	Cabo Rojo, PR	0.23	281	⇓*e*Pg	Pg	04 10 47.2	0.0
CRPR				⇓*e*Sg	Sg	04 10 50.5	-0.3
CRPR				IAML		04 10 50.7	
	comp=N,934nm,0.2s						
CRPR	Cabo Rojo, PR	0.23	281	*i* P	Pg	04 10 47.2	0.0
CRPR				*e*S	Sg	04 10 50.5	-0.3
CRPR				IAML		04 10 50.7	
	comp=Z,822nm,0.2s						
OBIP	Obispado Ponce	0.26	72		Pb	04 10 48.1	-0.2
OBIP	Obispado Ponce	0.26	72		Sb	04 10 52.2	-0.5
OBIP				IAML		04 10 52.8	
	comp=N,129nm,0.2s						
OBIP	Obispado Ponce	0.26	72	*i* P	Pb	04 10 48.1	-0.2
OBIP				*e*S	Sb	04 10 52.4	-0.2
OBIP				IAML		04 10 52.6	
	comp=Z,172nm,0.2s						
LSP	Las Mesas	0.30	316		Pg	04 10 48.4	+0.1
LSP					Sb	04 10 53.3	-0.3
CELP	Cerrillos	0.30	68		Pb	04 10 48.7	-0.2
CELP				Sg	Sb	04 10 53.2	-0.4
CELP				IAML		04 10 53.8	
	comp=Z,440nm,0.3s						
CELP				IAML		04 10 54.1	
	comp=Z,453nm,0.2s						
UUPR	Utuado, UPR, P	0.32	26		Pg	04 10 48.8	0.0
UUPR				Sg	Sg	04 10 53.2	-0.2
PRSN	Puerto Rico Se	0.36	314		Pg	04 10 49.3	-0.2
PRSN				Sg	Sg	04 10 54.5	-0.2
AOPR	Arecibo Observ	0.40	16		Pg	04 10 50.0	-0.1
AOPR				Sg	Sg	04 10 55.5	-0.1
AOPR				IAML		04 10 58.4	
	comp=Z,585nm,0.3s						
AGPR	Aguadilla, PR	0.55	335		Pg	04 10 52.5	-0.4
AGPR				Sg	Sg	04 10 59.6	-0.7
ECPR	Experimental S	0.60	54		Pg	04 10 53.6	-0.2
ECPR				Sg	Sg	04 11 01.8	0.0
ECPR				IAML		04 11 02.4	
	comp=Z,611nm,0.2s						
ECPR				IAML		04 11 03.3	
	comp=Z,492nm,0.2s						
SJG	San Juan	0.70	78		Pg	04 10 55.3	-0.4
SJG				Sg	Sg	04 11 04.7	-0.3
SJG	San Juan	0.70	78	⇑*e*Pg	Pg	04 10 55.3	-0.4
SJG				⇑*e*Sg	Sg	04 11 03.9	-1.1
SJG	San Juan	0.70	78	*i* P	Pg	04 10 55.3	-0.4
SJG				*e*S	Sg	04 11 05.0	0.0
SJG				IAML		04 11 05.7	
	comp=Z,43nm,0.2s						
IDE	Isla Desecheo	0.71	306		Pg	04 10 55.5	-0.4
IDE					Sg	04 11 05.4	-0.1
PDPR	Patillas Dam,	0.81	86	Pg	Pg	04 10 57.3	-0.5
PDPR				Sg	Sg	04 11 08.2	-0.2
HUMP	Col San Antoni	0.99	79		Pg	04 11 00.2	-0.9
HUMP					Sg	04 11 13.3	-0.8
CUPR	Culebra, Puert	1.55	77	Pn	Pn	04 11 10.0	+1.1
CUPR				Sn	Sb	04 11 30.1	+0.5
HIDR	Higuey Centro	1.86	290	*e*Pg	Pn	04 11 13.5	+0.3
HIDR				*e*Sg	Sn	04 11 38.5	+2.0
HIDR				IAML		04 11 43.5	
	comp=N,41nm,1.9s						
DR12	Loma Pena Alta	2.52	289	Pn	Pn	04 11 23.8	+1.4
HATOM	Hato Mayor del	2.52	289	*e*Pg	Pb	04 11 25.7	-1.2
HATOM				⇓*e*Sg	Sb	04 11 56.4	-1.3
HATOM				IAML		04 12 27.3	
	comp=N,23nm,2.0s						
SDD	Santo Domingo	2.94	280	Pn	Pn	04 11 28.1	+0.1

*AFAD **05** 04:12:45.7, 38°39N×44°39E, h7km±4km, ML2.5*
*AZER **05** 04:12:46.1, 38°48N×44°61E, h5km, ml2.5*
*ISK **05** 04:12:46.1, 38°39N×44°35E, h5km, ML2.6/6*
*TEH **05** 04:12:46.3, 38°45N×44°55E, h6km±133km, ML2.5, Presumed earthquake*
ISC 05 04:12:45.2±1.1,**38°42N**±0°02×**44°50E**±0°02,**h6**km±10km, **n32**,σ**1s13**/52,**Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.46	301	P	Pg	04 12 54.2	0.0
OZAP				S	Sg	04 13 01.5	+1.1
OZAP				IAML		04 13 09.0	
	comp=N,391nm,0.8s						
YOVA	Hakkari_Yksek	0.85	191	P	Pg	04 13 01.8	+0.3
YOVA				S	Sg	04 13 13.4	+0.9
YOVA				IAML		04 13 19.0	
	comp=E,159nm,0.6s						
YOVA				IAML		04 13 20.0	
	comp=N,117nm,0.6s						
TVAN	Van	0.86	278	P	Pg	04 13 01.1	-0.8
ISHB	Shabestar	0.89	98	Pg	Pb	04 13 01.9	-1.3
VMUR	Van-Muradiye	0.92	308	P	Pg	04 13 02.5	-0.5
VMUR				S	Sg	04 13 15.7	+0.8
VMUR				IAML		04 13 21.0	
	comp=N,117nm,0.3s						
VMUR				IAML		04 13 21.0	
	comp=E,136nm,0.3s						
MAKU	Maku	0.94	9	Pg	Pb	04 13 03.4	-0.7
IMRD	Marand	0.99	72	Pg	Pn	04 13 04.8	-1.0
HAKT	HAKKARI	1.06	216	P	Pg	04 13 05.0	-0.6
HAKT				IAML		04 13 23.0	
	comp=N,98nm,0.3s						
HAKT				IAML		04 13 25.0	
	comp=E,180nm,0.4s						
NAX	Nakhchivan	1.08	46	P	Pn	04 13 06.8	-0.2
NAX				S	Sn	04 13 23.1	+0.8
GEVA	Gevas	1.14	265	P	Pb	04 13 05.5	-1.8
GEVA				S	Sb	04 13 20.5	-2.0
AKDM	Akdamar-Van	1.20	266	Pn	Pn	04 13 07.2	-1.4
AKDM				Sn	Sb	04 13 24.0	-0.2
ORD	Ordubad	1.28	66	P	Pg	04 13 10.3	+0.6
ORD				S	Sn	04 13 28.8	+1.7
SBZ	Shahbuz	1.28	40	P	Pg	04 13 10.4	+0.7
SBZ				S	Sn	04 13 28.9	+1.7
DYDN	Diyadin	1.29	331	P	Pn	04 13 09.3	-0.6
DYDN				S	Sb	04 13 24.1	-2.7
DYDN				IAML		04 13 33.0	
	comp=E,114nm,0.5s						
DYDN				IAML		04 13 34.0	
	comp=N,80nm,0.4s						
ITBZ	Tabriz	1.31	98	Pg	Pg	04 13 09.7	-0.7
HYR	Heyderabad	1.33	12	P	Pg	04 13 12.1	+1.4
HYR				S	Sn	04 13 31.3	+3.0
CUKT	Cukurca	1.37	211	Pn	Pb	04 13 11.9	+0.6
CUKT				Sn	Sg	04 13 30.5	+1.4
CUKT	Cukurca	1.37	211	P	Pn	04 13 11.1	+0.2
CUKT				S	Sn	04 13 28.9	-0.5
CUKT				IAML		04 13 33.0	
	comp=N,175nm,0.8s						
CUKT				IAML		04 13 36.0	
	comp=E,116nm,0.5s						
IAZR	Azarshahr	1.38	122	Pg	Pg	04 13 12.5	+0.7
ADCV	BITLIS_Adilcev	1.44	286	P	Pn	04 13 11.7	-0.3
IGDI	IGDIR	1.48	347	P	Pg	04 13 14.5	+0.8
IGDI				S	Sg	04 13 34.3	+1.4
IGDI				IAML		04 13 38.0	
	comp=E,49nm,0.9s						
PERV	Siirt/Pervari-	1.61	254	P	Pn	04 13 15.1	+0.8
PERV				S	Sg	04 13 39.0	+1.9
PERV				IAML		04 13 48.0	
	comp=N,96nm,0.5s						
PERV				IAML		04 13 48.0	
	comp=E,120nm,0.5s						
AGRB	Hanur-Agry	1.65	315	Pn	Pg	04 13 16.5	-0.3
AGRB				Sn	Sg	04 13 38.7	+0.6
DORK	Agr/Tutak/Do	1.65	306	P	Pn	04 13 14.6	-0.3
DORK				S	Sg	04 13 38.5	+0.2
MLAZ	Malazgirt-MUS	1.69	296	Pn	Pb	04 13 16.8	+0.1
KOTA	Agri, Merkez-K	1.71	324	P	Pg	04 13 17.9	-0.1
KOTA				S	Sb	04 13 38.6	-0.3
GNI	Garni	1.74	6	Pn	Pg	04 13 19.2	+0.7
GURO	Guroymak-BITLI	1.94	275	Pn	Pn	04 13 19.9	+1.1
IHRS	Heris	2.00	92	Pn	Pg	04 13 23.0	-0.6
GDB	GEDABAY	2.50	22	P	Pb	04 13 30.2	-0.3
GDB				S	Sg	04 14 04.1	-1.3
GANJ	Ganja	2.63	32	P	Pb	04 13 32.1	-0.7
GANJ				S	Sg	04 14 08.4	-1.4
YRD	Yardimli	2.97	79	P	Pb	04 13 37.2	-1.5
YRD				S	Sb	04 14 16.1	+0.8

*MOS **05** 04:17:58.7±1.1, 55°87N×113°50E, h14km, mb3.9/7, Error ellipse: s-maj=9.3km s-min=6.2km az=72.3*
*IDC **05** 04:17:58.3±0.9, 55°99N×113°50E, h0km, mb3.7/10, mbtmp3.8/16, ML3.7/5, MS3.4/2, Error ellipse: s-maj=21.5km s-min=13.1km az=149.0*
*BYKL **05** 04:17:59.9±0.1, 55°90N×113°46E, h10km±2km*
ISC 05 04:17:58.3±0.4,**55°83N**±0°02×**113°44E**±0°02,**h10**km,**n88**, σ**2s69**/156,**mb3.8**/11,**20C-8D,East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVKR	Severomuysk	0.30	13	⇑*i*PG	Pb	04 18 04.8	-1.0
SVKR				*e*		04 18 08.5	
SVKR				pmax	pmax		
	comp=Z,8µm,0.7s						
SVKR				smax	smax		
	comp=N,45µm,0.7s						
SVKR	Severomuysk	0.30	13	⇑*i*Pg	Pb	04 18 04.8	-1.0
SVKR				Pmax		04 18 04.9	
	comp=N,8µm,0.3s						
SVKR				*e*Sg	Sg	04 18 08.6	+0.2
SVKR				Smax		04 18 09.5	
	comp=N,45µm,0.7s						
UKT	Uakit	0.35	162	⇓*i*PG	Pn	04 18 07.8	-1.8
UKT				*e*		04 18 14.1	
UKT				pmax	pmax		
	comp=Z,244nm,0.1s						
UKT				smax	smax		
	comp=E,5µm,0.3s						
UKT	Uakit	0.35	162	⇑*i*Pg	Pn	04 18 07.8	-1.8
UKT				Pmax		04 18 09.0	
	comp=E,243nm,0.1s						
UKT				*e*Sg	Sb	04 18 14.1	+1.7
UKT				Smax		04 18 14.5	
	comp=E,4µm,0.3s						
YOAB	Uoyan, Buryati	1.01	289	*e*PG	Pn	04 18 18.4	-0.2
YOAB				*e*		04 18 31.7	
YOAB				pmax	pmax		
	comp=Z,226nm,0.2s						
YOAB				smax	smax		
	comp=N,4µm,0.6s						
YOAB	Uoyan, Buryati	1.01	289	*e*Pg	Pn	04 18 18.2	-0.4
YOAB				Pmax		04 18 21.3	
	comp=N,230nm,0.4s						
YOAB				*e*Sg	Sb	04 18 30.9	-0.5

YOAB eSb **Sn** **04 18 34.8 +1.9**
YOAB max 04 18 36.9
comp=N,4μm,0.6s
KMO **Kumora** **1.26 274** *i*PG **Pg** **04 18 22.6 +0.1**
KMO *e* 04 18 39.5
KMO pmax pmax
comp=Z,736nm,0.4s
KMO smax smax
comp=E,3μm,0.5s
KMO **Kumora** **1.26 274** ⇑*i*Pg **Pg** **04 18 22.7 +0.2**
KMO *e*Pb **Pb** **04 18 24.4 +2.2**
KMO max 04 18 25.1
comp=E,875nm,0.4s
KMO eSg **Sn** **04 18 39.5 +0.4**
KMO Smax 04 18 40.6
comp=E,3μm,0.5s
NLYR **Nelyaty** **1.43 61** *i*PG **Pg** **04 18 25.1 -0.7**
NLYR *e* 04 18 43.7
NLYR pmax pmax
comp=Z,643nm,0.2s
NLYR smax smax
comp=N,3μm,0.7s
NLYR **Nelyaty** **1.43 61** ⇑*i*Pg **Pg** **04 18 25.1 -0.7**
NLYR *e* 04 18 27.0
NLYR max 04 18 28.2
comp=N,648nm,0.3s
NLYR eSg **Sg** **04 18 43.6 -0.8**
NLYR eSb **Sb** **04 18 45.7 +2.3**
NLYR max 04 18 47.3
comp=N,3μm,0.7s
YLYR **Ulyunkhan** **1.61 235** ⇑*i*PN **Pg** **04 18 29.7 +0.5**
YLYR *e* 04 18 52.1
YLYR pmax pmax
comp=Z,753nm,0.2s
YLYR smax smax
comp=E,1μm,0.3s
YLYR **Ulyunkhan** **1.61 235** ⇓*i*Pg **Pg** **04 18 29.7 +0.5**
comp=E,3μm,0.6s
YLYR ⇓*i*Pg **Pg** **04 18 29.7 +0.5**
comp=E,4μm,0.6s
YLYR ⇑*i*Pg **Pg** **04 18 29.7 +0.5**
comp=E,4μm,0.6s
YLYR Pmax 04 18 31.1
comp=E,1μm,0.2s
YLYR eSg **Sg** **04 18 52.1 +2.1**
YLYR Smax 04 18 55.1
comp=E,1μm,0.4s
BOD **Bodaibo** **2.02 9** ⇑*i*PN **Pb** **04 18 34.3 -0.8**
BOD *e* 04 18 59.3
BOD pmax pmax
comp=Z,413nm,0.9s
BOD smax smax
comp=E,1μm,0.6s
BOD **Bodaibo** **2.02 9** ⇑*i*Pg **Pb** **04 18 34.3 -0.8**
BOD *e* 04 18 36.0
BOD max 04 18 36.5
comp=E,411nm,0.6s
BOD eSg **Sb** **04 18 59.2 -1.1**
BOD Smax 04 19 00.5
comp=E,1μm,0.6s
NIZB **Nizh Angarsk** **2.20 270** *e*Pn **Pb** **04 18 37.4 -0.7**
NIZB *e*Pg **Pg** **04 18 39.5 -0.9**
NIZB Pmax 04 18 43.0
comp=E,191nm,0.4s
NIZB eSn **Sb** **04 19 03.6 -1.8**
NIZB eSg **Sg** **04 19 08.7 -0.2**
NIZB Smax 04 19 15.1
comp=E,1μm,0.7s
CRS **Chara** **2.90 66** *e*PN **Pg** **04 18 52.1 -1.6**
CRS *e* 04 19 28.7
CRS pmax pmax
comp=Z,366nm,0.6s
CRS smax smax
comp=E,767nm,0.6s
CRS **Chara** **2.90 66** *e*Pn **Pn** **04 18 46.5 +2.0**
CRS *e*Pg **Pg** **04 18 51.6 -2.1**
CRS Pmax 04 18 52.8
comp=E,378nm,0.8s
CRS eSg **Sg** **04 19 28.4 -2.8**
CRS Smax 04 19 30.6
comp=E,1μm,1.0s
SYVR **Suvo** **2.95 224** ⇑*i*PN **Pb** **04 18 48.6 -2.3**
SYVR *e* 04 18 52.9
SYVR *e* 04 19 33.8
SYVR pmax pmax
comp=Z,291nm,0.8s
SYVR smax smax
comp=E,642nm,0.6s
SYVR **Suvo** **2.95 224** ⇑*i*Pn **Pb** **04 18 48.5 -2.3**
SYVR *e*Pg **Pg** **04 18 53.5 -1.2**
SYVR *e*PgPg **PbPb** **04 18 55.8 +1.8**
SYVR max 04 18 58.7
comp=E,286nm,0.8s
SYVR eSg **Sg** **04 19 32.9 0.0**
SYVR Smax 04 19 44.2
comp=E,628nm,1.0s
CIT **Chita** **3.81 179** *e*PN **Pn** **04 18 58.9 +1.8**
CIT *e* 04 19 10.4
CIT eS **Sn** **04 19 45.0 +3.1**
CIT *e* 04 19 59.1
CIT pmax pmax
comp=Z,154nm,0.3s
CIT smax smax
comp=E,1μm,0.2s
CIT **Chita** **3.81 179** *e*Pn **Pn** **04 19 00.3 +3.2**
CIT *e*Pg **Pg** **04 19 09.8 -1.5**
CIT Pmax 04 19 13.1
comp=E,117nm,0.1s
CIT eSg **Sg** **04 20 00.6 0.0**
CIT Smax 04 20 05.0
comp=E,1μm,0.2s
TUP **Tupik** **4.00 108** ⇓*i*PN **Pn** **04 19 01.6 +2.0**
TUP *e* 04 19 12.0
TUP eS **Sn** **04 19 47.0 +0.6**
TUP *e* 04 20 04.5
TUP pmax pmax
comp=Z,139nm,0.5s
TUP smax smax
comp=N,1μm,0.5s
TUP **Tupik** **4.00 108** *e*Pn **Pn** **04 19 01.9 +2.3**
TUP *e*Pg **Pg** **04 19 12.0 -2.8**
TUP Pmax 04 19 14.1
comp=N,116nm,0.4s
TUP eSn **Sn** **04 19 48.3 +1.9**
TUP eSg **Sg** **04 20 04.0 -2.5**
TUP *e* 04 20 09.5
TUP max 04 20 11.0
comp=N,1μm,0.5s
OGRR **Ongureny** **4.03 240** ⇑*i*PN **Pn** **04 19 03.2 +3.2**
OGRR *e* 04 19 13.3
OGRR *e* 04 20 05.2
OGRR pmax pmax
comp=Z,2μm,0.6s
OGRR smax smax
comp=E,3μm,0.3s
OGRR **Ongureny** **4.03 240** ⇑*i*Pn **Pn** **04 19 03.2 +3.2**
OGRR *e* 04 19 07.8
OGRR *e*Pg **Pg** **04 19 13.0 -2.5**
OGRR Pmax 04 19 14.2
comp=E,159nm,0.6s
OGRR eSn **Sn** **04 19 49.4 +2.1**
OGRR eSg **Sg** **04 20 05.3 -2.3**
OGRR Smax 04 20 08.9
comp=E,235nm,0.6s
GORB **Goryachinsk** **4.14 229** *e*Pn **Pn** **04 19 04.8 +3.2**
GORB *e* 04 19 13.2
GORB *e*Pg **Pg** **04 19 15.4 -2.2**
GORB eSg **Sg** **04 20 10.1 -1.1**
UZR **Uzur** **4.16 235** *e*Pn **Pn** **04 19 04.6 +2.8**
UZR *e* 04 19 07.0
UZR *e* 04 19 13.8
UZR max 04 19 16.2
comp=E,93nm,0.5s
UZR eSn **Sn** **04 19 52.7 +2.3**
UZR eSg **Sg** **04 20 10.1 -1.5**
UZR Smax 04 20 15.4
comp=E,195nm,0.4s
KELR **Kotokel** **4.39 228** *e*Pn **Pn** **04 19 07.9 +2.9**
KELR *e*Pg **Pg** **04 19 19.7 -2.6**
KELR *e* 04 20 00.9
KELR eSg **Sg** **04 20 17.8 -1.4**
YKLR **Yuktali** **4.65 77** *e*Pg **Pb** **04 19 22.8 +2.9**
YKLR *e* 04 19 56.3
YKLR eSg **Sg** **04 20 22.4 -5.1**

ZRHB **Zarechye** **4.94 231** *e* **Pn** **04 19 11.3 -1.2**
ZRHB *e* 04 19 26.4
ZRHB *e*Pg **Pg** **04 19 30.1 -2.7**
ZRHB *e* 04 19 33.7
ZRHB max 04 19 35.0
comp=E,175nm,1.0s
ZRHB eSg **Sg** **04 20 34.7 -1.9**
ZRHB Smax 04 20 45.2
comp=E,661nm,0.7s
TRG **Tyrgan** **5.16 236** *e*PN **Pn** **04 19 19.0 +3.4**
TRG *e* 04 19 34.1
TRG eS **Sn** **04 20 18.3 +3.1**
TRG *e* 04 20 41.3
TRG pmax pmax
comp=Z,23nm,0.4s
TRG smax smax
comp=N,161nm,0.4s
TRG **Tyrgan** **5.16 236** *e*Pn **Pn** **04 19 18.8 +3.2**
TRG *e* 04 19 30.6
TRG *e*Pg **Pg** **04 19 34.3 -2.8**
TRG *e* 04 19 36.5
TRG max 04 19 38.4
comp=N,23nm,0.4s
TRG eSn **Sn** **04 20 16.8 +1.6**
TRG eSg **Sg** **04 20 41.4 -2.6**
TRG Smax 04 20 44.3
comp=N,159nm,0.4s
UUDB **Ulan-Yde** **5.23 223** *e*Pn **Pn** **04 19 20.1 +3.5**
UUDB *e* 04 19 28.0
UUDB *e*Pg **Pg** **04 19 34.8 -3.7**
UUDB Pmax 04 19 38.7
comp=N,66nm,0.8s
UUDB eSn **Sn** **04 20 19.0 +2.0**
UUDB eSg **Sg** **04 20 44.0 -2.2**
UUDB Smax 04 20 55.5
comp=N,446nm,1.0s
FFNB **Fofonovo** **5.46 229** *e*Pn **Pn** **04 19 22.2 +2.5**
FFNB *e*Pg **Pg** **04 19 39.0 -3.9**
FFNB eSn **Sn** **04 20 24.1 +1.5**
FFNB eSg **Sg** **04 20 51.1 -2.5**
STDB **Stepnoy Dvoret** **5.55 232** eSg **Sg** **04 20 53.4 -2.9**
HRMR **Khuramsha** **5.70 225** *e*Pn **Pn** **04 19 26.2 +3.2**
HRMR *e* 04 19 41.2
HRMR *e*Pg **Pg** **04 19 44.0 -3.4**
HRMR Pmax 04 19 47.4
comp=N,125nm,0.6s
HRMR eSn **Sn** **04 20 30.3 +1.9**
HRMR eSg **Sg** **04 20 59.1 -2.0**
HRMR Smax 04 21 12.1
comp=N,390nm,0.8s
VBR **Suhoy Ruchey** **5.97 231** *e*Pg **Pg** **04 19 48.5 -4.0**
VBR eSn **Sn** **04 20 36.0 +1.1**
VBR eSg **Sg** **04 21 07.2 -2.5**
BGT **Bolshoye Golou** **6.07 235** *e*Pn **Pn** **04 19 30.9 +2.9**
BGT *e*Pg **Pg** **04 19 50.4 -4.0**
BGT Pmax 04 19 53.3
comp=N,33nm,0.5s
BGT *e* 04 20 34.5
BGT eSg **Sg** **04 21 09.4 -3.5**
BGT Smax 04 21 20.8
comp=N,136nm,0.7s
KPC **Khapcheranga** **6.17 186** *e*PN **Pn** **04 19 31.9 +2.5**
KPC *e* 04 19 51.5
KPC *e* 04 21 12.8
KPC pmax pmax
comp=Z,10.0nm,0.7s
KPC smax smax
comp=E,293nm,1.1s
KPC **Khapcheranga** **6.17 186** *e*Pn **Pn** **04 19 31.9 +2.5**
KPC *e*Pg **Pg** **04 19 51.8 -4.5**
KPC Pmax 04 20 13.3
comp=E,17nm,0.5s
KPC eSn **Sn** **04 20 41.8 +1.8**
KPC eSg **Sg** **04 21 13.2 -2.9**
KPC Smax 04 21 20.4
comp=E,293nm,1.2s
CLNS **Chul'man** **6.45 76** *e*Pg Pb 04 19 55.0 +4.4
CLNS eSn **Sn** **04 20 45.9 -1.0**
CLNS eSg **Sg** **04 21 19.5 -5.7**
LSTR **Listvyanka** **6.45 236** *e*Pn **Pn** **04 19 36.2 +2.9**
LSTR *e*Pg Pg 04 19 56.8 -4.9
LSTR Pmax 04 19 57.9
comp=E,24nm,0.8s
LSTR *e* 04 20 30.8
LSTR *e* 04 20 37.4
LSTR eSg **Sg** **04 21 20.5 -4.7**
LSTR Smax 04 21 28.2
comp=E,188nm,1.8s
IRK **Irkutsk** **6.48 240** *e*PN Pn 04 19 41.2 +7.5
IRK *e* 04 19 57.9
IRK *e* 04 21 22.0
IRK pmax pmax
comp=Z,155nm,0.1s
IRK smax smax
comp=N,381nm,0.4s
IRK **Irkutsk** **6.48 240** eSg **Sg** **04 21 22.9 -3.3**
IRK Smax 04 21 30.6
comp=N,384nm,0.5s
IVK **Ivanovka** **6.69 237** *e*Pn **Pn** **04 19 39.7 +3.1**
IVK *e* 04 19 48.6
IVK *e*Pg Pg 04 20 00.5 -5.8
IVK Pmax 04 20 07.4
comp=N,30nm,0.5s
IVK eSn **Sn** **04 20 52.9 +0.1**
IVK eSg **Sg** **04 21 27.3 -5.6**
IVK *e* 04 21 32.1
IVK max 04 21 43.9
comp=N,262nm,1.4s
TLY **Talaya** **7.14 238** Pn **Pn** **04 19 45.6 +2.9**
comp=N,1.8nm,0.4s,baz=61,slow=10
TLY Pg **Pb** **04 20 01.8 -0.5**
baz=41,slow=20
TLY Lg Lg 04 21 38.6
baz=73,slow=10
TLY **Talaya** **7.14 238** ⇑*i*PN **Pn** **04 19 45.4 +2.7**
TLY pmax pmax
comp=Z,1.0nm,0.2s
TLY **Talaya** **7.14 238** *e*Pn **Pn** **04 19 45.3 +2.6**
TLY *e*Pg Pg 04 20 08.9 -5.9
TLY Pmax 04 20 10.3
comp=Z,16nm,0.5s
TLY *e* 04 20 12.7
TLY eSn **Sn** **04 21 04.1 +0.3**
TLY *e* 04 21 39.2
TLY eSg **Sg** **04 21 41.6 -5.5**
TLY Smax 04 21 59.2
comp=Z,76nm,1.0s
HIA **Hailar** **7.61 147** *e*Pg Pg 04 20 17.2 -6.6
HIA Pmax 04 20 30.4
comp=Z,12nm,0.6s
HIA eSn **Sn** **04 21 14.9 -0.5**
HIA eSg **Sg** **04 21 57.1 -5.2**
HIA Smax 04 22 32.3
comp=Z,133nm,1.6s
ZAK **Zakamensk** **8.19 232** *e*PN Pn 04 20 03.5 +6.4
ZAK *e* 04 20 28.4
ZAK pmax pmax
comp=Z,16nm,0.5s
ZAK **Zakamensk** **8.19 232** *e* Pn 04 20 03.4 +6.3
ZAK *e*Pg Pg 04 20 29.0 -5.9
ZAK *e* 04 20 33.6
ZAK max 04 20 35.2
comp=Z,16nm,0.6s
ZAK *e* 04 21 37.3
ZAK eSg **Sg** **04 22 14.6 -6.2**
ZAK *e* 04 22 21.8
ZAK max 04 22 23.6
comp=Z,58nm,1.2s
ZEA **Zeya** **8.25 99** *e*PN **Pn** **04 20 01.8 +3.8**
ZEA pmax pmax
comp=E,10.0nm,0.4s
ZEA pmax pmax
comp=Z,10.0nm,0.5s
ZEA MLR MLR
comp=Z,200nm,6.0s
MOY **Mondy** **8.47 246** *e*PN **Pn** **04 20 04.0 +3.0**
MOY *e* 04 20 32.3
MOY eS **Sn** **04 21 38.7 +2.1**
MOY *i* 04 22 27.1
MOY **Mondy** **8.47 246** *e*Pn **Pn** **04 20 04.1 +3.0**
MOY max 04 20 16.8
comp=Z,34nm,1.3s
MOY eSn **Sn** **04 21 36.2 -0.4**
MOY eSg **Sg** **04 22 21.7 -8.1**
MOY Smax 04 22 27.2
comp=Z,260nm,1.4s
ORL **Orlik** **8.64 253** *e*Pn **Pn** **04 20 06.3 +2.9**
ORL *e* 04 20 13.9
ORL *e*Pg Pg 04 20 36.4 -7.2
ORL Pmax 04 20 52.6
comp=Z,14nm,1.0s
ORL *e* 04 21 44.6
ORL eSg **Sg** **04 22 27.7 -7.7**
ORL *e* 04 22 34.6
ORL max 04 22 38.5
comp=Z,173nm,1.0s
ULN **Ulaanbaatar** **8.89 209** *e*Pn **Pn** **04 20 10.8 +3.9**
ULN *e*Pg Pg 04 20 41.0 -7.4
ULN Pmax 04 20 44.7
comp=Z,11nm,0.7s
ULN eSn **Sn** **04 21 48.9 +1.8**
ULN eSg **Sg** **04 22 37.1 -6.4**
ULN Smax 04 22 44.5
comp=Z,191nm,2.0s
SONM **Songino Array** **9.11 211** Pn **Pn** **04 20 13.9 +4.1**
comp=Z,0.5nm,0.3s,baz=21,slow=14,SNR=5.5
SONM Pg 04 20 46.9
comp=Z,1.0nm,0.3s,baz=11,slow=16,SNR=6.7
SONM Lg Lg 04 22 46.2
comp=Z,2.1nm,0.3s,baz=21,slow=27,SNR=6.0
comp=Z,0.8nm,0.3s
YAK **Yakutsk** **10.43 47** Lg Lg 04 23 15.2
comp=Z,3.1nm,0.3s,baz=160,slow=18,SNR=14
YAK LR LR 04 24 29.0
comp=Z,60nm,19.0s,baz=311,slow=38
YAK **Yakutsk** **10.43 47** *e*P **Pn** **04 20 25.8 -1.9**
YAK eS **Sn** **04 22 20.6 -3.8**
YAK pmax pmax
comp=Z,5.0nm,0.8s
YAK pmax pmax
comp=N,1.0nm,0.7s
YAK pmax pmax
comp=E,5.0nm,2.0s
YAK smax smax
comp=N,161nm,7.2s
YAK smax smax
comp=E,117nm,4.4s
YAK MLR MLR
comp=Z,75nm,21.0s
YAK MLR MLR
comp=N,21nm,22.0s
YAK MLR MLR
comp=E,10.0nm,12.0s
KNGR **Kungurtug, Tuv** **10.87 248** ⇑*i*P **Pn** **04 20 35.8 +1.8**
KNGR **Kungurtug, Tuv** **10.87 248** *e* 04 23 05.1
KNGR eSg 04 23 36.8
MINR **Mina** **10.99 273** *e* **Pn** **04 20 33.9 -1.5**
MINR eSn **Sn** **04 22 36.8 -1.4**
MINR eSg 04 23 40.6
KLR **Kul'dur** **12.93 113** Pn **Pn** **04 21 04.0 +2.0**
comp=E,0.7nm,0.3s,baz=310,slow=14,SNR=11
KLR Lg Lg 04 24 43.1
comp=E,0.5nm,0.3s,baz=36,slow=23,SNR=8.1
comp=E,2.9nm,0.5s
KLR **Kul'dur** **12.93 113** *e*P **Pn** **04 21 03.0 +1.0**
KLR pmax pmax
comp=Z,1.0nm,0.9s
BTO2 **Baotou** **15.27 190** *e*P **P** **04 21 36.6 -2.3**
BTO2 S **Sn** **04 24 27.2 +4.1**
BTO2 pmax pmax
comp=Z,6.0nm,0.5s
BTO2 pmax pmax
comp=Z,440nm,4.2s
BTO2 LR LR
comp=N,330nm,4.1s
BTO2 LR LR
comp=E,260nm,4.8s
BTO2 LR LR
comp=Z,180nm,5.7s
ZALV **Zalesovo Beam** **16.52 275** Pn **Pn** **04 21 49.8 -0.1**
comp=Z,0.2nm,0.3s,baz=72,slow=9.8,SNR=3.7
ZALV Lg Lg 04 26 33.8
comp=Z,0.2nm,0.3s,baz=66,slow=33,SNR=4.1
comp=Z,0.5nm,0.3s
DGZ **Jazzator, Alta** **16.83 260** ⇓*i*P **P** **04 21 55.1 -1.0**
DGZ pmax pmax
comp=Z,2.0nm,1.1s
TIXI **Tiksi** **17.18 17** P **Pn** **04 21 55.7 -2.3**
comp=Z,0.6nm,0.3s,baz=229,slow=12,SNR=7.8
TIXI S Sn 04 24 52.7 -16
comp=Z,1.6nm,0.3s,baz=293,slow=9.1,SNR=3.7
TIXI Lg Lg 04 26 53.5
comp=Z,0.2nm,0.3s,baz=11,slow=8.8,SNR=3.1
comp=Z,1.6nm,0.3s
NRIK **Noril'sk** **17.82 330** P **P** **04 22 05.9 -0.8**
comp=Z,0.2nm,0.3s,baz=119,slow=9.3,SNR=1.6
NRIK S Sn 04 25 11.6 -13
comp=Z,1.1nm,0.6s,baz=7.8,slow=23,SNR=1.3
NRIK Lg Lg 04 27 15.9
baz=92,slow=9.8
comp=Z,1.1nm,0.4s
NRIK **Noril'sk** **17.82 330** ⇓*e*P **P** **04 22 06.9 +0.1**
NRIK pmax pmax
comp=Z,1.0nm,0.3s
MA2 **Magadan** **20.11 64** *e*P Pn 04 22 34.1 +0.3
MA2 pmax pmax
comp=Z,6.0nm,1.3s
YSS **Yuzhno-Sakhali** **20.20 104** ⇑*i*P **P** **04 22 33.1 +0.2**
YSS pmax pmax
comp=Z,11nm,1.2s
SEY **Seymchan** **20.79 54** P Pn 04 22 40.1 -1.5
comp=Z,1.7nm,0.4s,baz=236,slow=21,SNR=5.0
SEY Lg Lg 04 28 45.8
comp=Z,0.2nm,0.3s,baz=277,slow=12,SNR=4.0
comp=Z,1.7nm,0.4s
SEY **Seymchan** **20.79 54** ⇑*i*P Pn 04 22 42.7 +1.1
SEY pmax pmax
comp=Z,2.0nm,0.6s
KURK **Kurchatov** **21.29 271** ⇓*i*P **P** **04 22 46.8 +2.1**
KURK pmax pmax
comp=Z,4.0nm,1.0s
MK31 **Makanchi Array** **21.30 258** ⇑*i*P **P** **04 22 47.7 +2.8**
MKAR **Makanchi Array** **21.30 258** P **P** **04 22 47.9 +3.0**
comp=Z,0.9nm,0.5s,baz=56,slow=9.4,SNR=13
comp=Z,0.9nm,0.5s
KURBB **Kurchatov Arra** **21.38 271** P **P** **04 22 48.0 +2.3**
comp=Z,1.4nm,0.6s,baz=67,slow=12,SNR=10.0
KURBB Lg Lg 04 29 08.7
baz=58,slow=25,SNR=2.3
comp=Z,1.4nm,0.6s
BVAR **Borovoye Array** **24.90 282** P **P** **04 23 21.6 +0.5**
comp=Z,0.8nm,0.5s,baz=67,slow=11,SNR=5.0
comp=Z,0.8nm,0.5s
BORK **Borovoye** **24.93 282** ⇓*i*P **P** **04 23 24.3 +3.0**
BORK pmax pmax
comp=Z,2.0nm,0.9s
PETK **Petropavlovsk-** **25.54 77** P **P** **04 23 28.1 +1.3**
comp=Z,1.7nm,0.8s,baz=274,slow=8.5,SNR=2.5
comp=Z,1.7nm,0.8s
OBN **Obninsk** **41.47 302** *e*P **P** **04 25 48.0 +3.2**
OBN *e* 04 27 20.5
OBN *e* 04 27 43.4
OBN *e*PPP PPP 04 27 50.3
OBN pmax pmax
comp=Z,3.0nm,0.9s
OBN MLR MLR
comp=Z,48nm,16.0s
FINES **FINESS Array B** **42.57 315** P **P** **04 25 54.9 +1.1**
comp=Z,4.3nm,1.1s,baz=59,slow=8.5,SNR=2.2
comp=Z,4.3nm,1.1s
ILAR **Eielson Array** **45.15 37** P **P** **04 26 14.9 +0.4**
comp=Z,0.4nm,0.8s,baz=311,slow=8.8,SNR=5.8
comp=Z,0.4nm,0.8s
HFS **Hagfors** **48.17 319** P **P** **04 26 39.5 +1.3**
comp=Z,2.0nm,1.0s,baz=60,slow=9.8,SNR=1.4
comp=Z,2.0nm,1.0s
WRA **Warramunga Arr** **77.52 160** P **P** **04 29 55.5 +1.5**
comp=Z,0.5nm,0.9s,baz=356,slow=6.2,SNR=1.5
comp=Z,0.5nm,0.9s
SADO **Sadowa** **79.22 9** LR LR 05 07 55.6
comp=Z,59nm,18.8s,baz=192,slow=38
TORD **Torodi Ar. Bea** **90.98 295** P **P** **04 31 03.2 +0.6**
comp=Z,0.3nm,0.8s,baz=39,slow=3.0,SNR=2.0
comp=Z,0.3nm,0.8s

IDC 05 04:29:34.0±9.5,15°.39S×171°.56W,h0^{km},mb3.6/3,
mbtmp3.6/3,Error ellipse: s-maj=416.8km
s-min=40.6km az=138.0,Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	51.57	257	P	P	04 38 41.9	-0.5
	0.2nm,0.6s,baz=94,slow=7.4,SNR=5.8						
	0.2nm,0.6s						
ASAR	Alice Springs	51.80	252	P	P	04 38 44.2	+0.2
	1.2nm,0.5s,baz=88,slow=8.2,SNR=21						
	1.2nm,0.5s						
ILAR	Eielson Array	82.10	10	P	P	04 41 56.0	0.0
	0.5nm,1.0s,baz=188,slow=3.6,SNR=2.7						
	0.5nm,1.0s						

*UPA **05** 04:38:24.7±2.2, 11.̊18N×85.̊55W, h10km±176km, MW4.3, Presumed earthquake*
*UCR **05** 04:38:39.4±1.1, 10.̊25N×85.̊02W, h55km±3km, MW4.3, Fault plane solution: NP1:φs168.50000°, δ46.03000°, λ26.73000°., Presumed earthquake*
*CATAC **05** 04:38:40.5±0.3, 10°N±2°×8°5W±°, h47km±4km, M4.1/13, MLv4.1/13, Error ellipse: s-maj=6.5km s-min=2.9km az=48.0, confirmed*
ISC 05 04:38:40.0±1.2**, 10.̊25N**±0.̊03×**85.̊00W**±0.̊03**, h55**km±5km**, n135, σ0.̊78**/151**, 15C-66D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JUNT	Juntas	0.05	53	⇑eP	Pn	04 38 47.7	-0.7
JUNT				eS	Sn	04 38 54.3	-0.1
JTS	Las Juntas de	0.06	50	P	Pn	04 38 47.8	-0.6
JTS				S	Sn	04 38 54.7	+0.2
JTS	Las Juntas de	0.06	50	⇑iPn	Pn	04 38 47.8	-0.6
JTS	Las Juntas de	0.06	50	⇑eP	Pn	04 38 47.7	-0.8
MTEVE	Monteverde	0.19	68	⇑eP	Pn	04 38 48.6	-0.5
CNAS	Canas	0.20	334	⇓eP	Pn	04 38 49.7	+0.8
CNAS				eS	Sn	04 38 57.3	+1.9
CHIK	Chiripa	0.21	26	eP	Pn	04 38 49.2	0.0
TILA	Tilaran	0.22	8	⇓eP	Pn	04 38 48.6	-0.5
ENAS	Puntarenas	0.32	149	⇑eP	Pn	04 38 49.0	-0.8
ENAS				eS	Sn	04 38 57.3	+0.5
CASO	Castillo	0.32	55	⇑eP	Pn	04 38 49.7	-0.2
TIMP	Tierras Morena	0.33	357	⇓eP	Pn	04 38 49.6	-0.4
TABAC	Tabacon	0.34	43	⇑eP	Pn	04 38 50.0	-0.1
ARE1	Arenal 1	0.35	53	⇑eP	Pn	04 38 50.1	0.0
VARE2	V. Arenal	0.35	53	eP	Pn	04 38 50.2	0.0
PLVR	Palo Verde	0.36	286	⇓eP	Pn	04 38 49.7	-0.6
ELVJ	El Viejo (Barb	0.37	302	⇓eP	Pn	04 38 51.0	+0.7
ROBF	Roble, Puntare	0.37	136	⇑eP	Pn	04 38 49.5	-0.9
BAGA	Bagaces	0.38	317	⇓eP	Pn	04 38 50.2	-0.2
CEDE	Laguna Cedeo	0.38	51	⇑eP	Pn	04 38 50.5	0.0
QUEB	Quebradon, Cot	0.39	16	⇓eP	Pn	04 38 50.1	-0.4
VACR	Volcan Arenal	0.39	55	eP	Pn	04 38 50.4	-0.1
FORC	Fortuna	0.39	57	⇑eP	Pn	04 38 50.5	0.0
REZ	Monterrey de S	0.41	47	eP	Pn	04 38 50.8	+0.1
JCR1	Jicaral	0.41	195	⇑eP	Pn	04 38 49.9	-0.8
PAQE	Paquera	0.43	171	⇑eP	Pn	04 38 50.1	-0.8
LAFE	Finca La Fe, P	0.45	168	eP	Pn	04 38 50.3	-0.8
TENO	El Achiote	0.45	3	⇓eP	Pn	04 38 50.4	-0.8
COLC	Colonia	0.46	334	⇓eP	Pn	04 38 50.9	-0.4
HORNC	Hornillas	0.49	339	⇓eP	Pn	04 38 51.2	-0.5
MESS	Mesas	0.52	339	⇓eP	Pn	04 38 51.6	-0.4
JUD3	Juan Diaz 3	0.54	261	⇓eP	Pn	04 38 51.3	-0.8
RAMO	San Ramon	0.55	107	⇓eP	Pn	04 38 52.0	-0.4
CLARA	Aguas Claras	0.56	342	⇓eP	Pn	04 38 52.1	-0.3
QUEU	Ciudad Quesada	0.56	83	⇓eP	Pn	04 38 52.3	-0.1
VMAR	Armenia, Volca	0.57	349	⇓eP	Pn	04 38 52.1	-0.4
SACU	Santa Cruz	0.57	271	⇓eP	Pn	04 38 52.0	-0.5
ERIA	Liberia	0.58	312	eP	Pn	04 38 52.7	+0.2
DELF	Filadelfia	0.58	290	⇓eP	Pn	04 38 52.4	-0.1
ZARE	Zarcero	0.61	96	⇓eP	Pn	04 38 53.0	0.0
GPS2	Hotel Rincn d	0.61	325	⇓eP	Pn	04 38 52.5	-0.4
VPL2	V. Platanar	0.61	85	⇓eP	Pn	04 38 53.0	-0.1
GPS3	Bodega del ICE	0.62	325	⇓eP	Pn	04 38 53.3	+0.2
VPL1	V. Platanar	0.63	89	⇓eP	Pn	04 38 52.9	-0.4
NARAN	Naranjo de Ala	0.63	104	⇓eP	Pn	04 38 53.2	-0.1
VRLE	La Escondida,	0.64	326	⇓eP	Pn	04 38 53.0	-0.4
VORI	VORI	0.66	329	⇓eP	Pn	04 38 53.2	-0.5
SARCI	Sarchi	0.67	104	⇓eP	Pn	04 38 53.6	-0.1
LAPC	Finca la Perla	0.67	321	⇓eP	Pn	04 38 53.1	-0.6
ATEO	Atenas	0.67	114	⇓eP	Pn	04 38 53.1	-0.5
ELI1	Hacienda Flor	0.67	306	P	Pn	04 38 53.8	+0.2
ELI1				S	Sn	04 39 04.4	+0.9
BUAI	Buenos Aires	0.70	333	⇓eP	Pn	04 38 53.9	-0.2
GREC	Grecia	0.70	104	eP	Pn	04 38 55.1	+1.0
PEJA	Penjamo Buenos	0.71	335	⇓eP	Pn	04 38 54.1	-0.1
VPS8	V Poas	0.75	95	⇓eP	Pn	04 38 54.9	-0.1
COVE	Coope Vega, Sa	0.75	52	P	Pn	04 38 54.2	-0.5
COVE				S	Sn	04 39 05.7	+0.3
VPS5	V. Poas	0.76	94	⇓eP	Pn	04 38 54.8	-0.3
POAS	San Pedro de P	0.77	103	⇓eP	Pn	04 38 54.9	-0.1
ARTO	Ro Cuarto	0.78	83	⇓eP	Pn	04 38 54.7	-0.4
PURI	Puriscal	0.79	120	eP	Pn	04 38 53.3	-2.0
UELA	Alajuela	0.81	106	⇓eP	Pn	04 38 55.3	-0.2
LCHIL	Los Chiles	0.83	20	⇑eP	Pn	04 38 55.2	-0.5
BELE	Belen	0.85	109	⇓eP	Pn	04 38 55.6	-0.4
BELE				eS	Sn	04 39 08.3	+0.6
SANTA	Santa Ana	0.86	111	⇓eP	Pn	04 38 55.5	-0.7
HEME	Heredia, Merce	0.89	106	⇓eP	Pn	04 38 57.4	+0.8
HDC	Heredia	0.91	106	⇓eP	Pn	04 38 56.6	-0.2
DOMI	Santo Domingo	0.94	106	eP	Pn	04 38 57.1	-0.1
ACOS	Acosta	0.94	119	⇓eP	Pn	04 38 56.7	-0.6
MEXI	Barrio Mexico	0.95	109	⇓eP	Pn	04 38 57.2	-0.2
CENT	San Jose	0.96	109	eP	Pn	04 38 58.3	+0.8
LUJA	Lujan	0.97	109	⇓eP	Pn	04 38 57.3	-0.3
LUPE	Guadalupe	0.98	108	⇓eP	Pn	04 38 57.5	-0.3
SJS	Escuela Geolog	0.98	108	⇓eP	Pn	04 38 57.6	-0.2
ECI	Escuela Centro	0.99	108	⇓eP	Pn	04 38 57.6	-0.2
SJS3	Mercedes San J	0.99	108	⇓eP	Pn	04 38 57.7	-0.1
CORON	Coronado	1.02	106	eP	Pn	04 38 58.4	+0.1
LCRUZ	La Cruz	1.03	323	⇓eP	Pn	04 38 58.0	-0.3
TRIO	Tres Rios	1.05	109	⇓eP	Pn	04 38 58.4	-0.3
CARN	Rivas	1.06	331	P	Pn	04 38 59.0	+0.3
CARN				S	Sn	04 39 11.3	-1.3
CARN	Rivas	1.06	331	⇓eP	Pn	04 38 58.6	-0.1
CARN				eS	Sn	04 39 14.1	+1.5
CVIMO	Finca Echandi	1.07	102	⇓eP	Pn	04 38 58.9	0.0
PITB	Pirrs, San	1.13	121	eP	Pn	04 38 59.5	-0.3
RAZU	San Marcos de	1.13	121	eP	Pn	04 38 59.4	-0.3
TAGO	Cartago	1.13	110	eP	Pn	04 38 59.7	-0.1
QUEP	Quepos	1.16	134	eP	Pn	04 39 00.5	+0.5
VICA	Volcano Irazu	1.17	103	⇓eP	Pn	04 39 00.4	-0.1
REPA	Paraso	1.19	110	⇓eP	Pn	04 39 00.8	+0.1
PIEC	Cerro El Cedra	1.20	121	eP	Pn	04 39 00.3	-0.6
RAFA	San Farael, Vo	1.21	104	⇓eP	Pn	04 39 01.0	0.0
PCAYA	Pacayas	1.22	106	eP	Pn	04 39 01.4	+0.3
CVTQ	Turrialba Volc	1.24	101	⇓eP	Pn	04 39 01.6	+0.2
CVTR	Volcan Turrial	1.25	100	⇓eP	Pn	04 39 01.5	0.0
VTR0	Volcan Turrial	1.25	101	⇓eP	Pn	04 39 01.6	0.0
CARI	Cariari	1.25	85	⇓eP	Pn	04 39 01.0	-0.2
CVTV	Tajo	1.26	101	⇓eP	Pn	04 39 01.8	+0.1
TRT2	Tortugero	1.28	76	P	Pn	04 39 01.0	-0.7
TRT2				S	Sn	04 39 17.9	0.0
TRT2	Tortugero	1.28	76	eP	Pn	04 39 01.2	-0.5
TRT2	Tortugero	1.28	76	eP	Pn	04 39 01.0	-0.7
VTCV	VTCV, Calle Va	1.28	102	⇓eP	Pn	04 39 02.1	+0.2
ABRB	Las Abras (San	1.29	101	⇓eP	Pn	04 39 02.2	+0.2
VERB	Verbena	1.32	103	⇓eP	Pn	04 39 02.6	+0.3
RESJ	San Isidro (Tu	1.36	99	⇓eP	Pn	04 39 03.0	+0.2
BUS1	Rivas	1.42	119	eP	Pn	04 39 03.5	-0.4
LCOCO	El Coco	1.43	96	eP	Pn	04 39 03.7	0.0
ACON	Acoyapa	1.72	354	P	Pn	04 39 07.5	-0.1
ACON				S	Sn	04 39 28.0	-0.4
SAJE	San Jernim	1.72	121	eP	Pn	04 39 07.4	-0.5
OCHAL	Ojochal	1.76	130	P	Pn	04 39 07.0	-1.1
EDPE	Pejibaye, P	1.78	127	eP	Pn	04 39 08.0	-0.4
VERH	Veragua Rainfo	1.81	100	⇓eP	Pn	04 39 08.9	0.0
LAES	El Progreso Va	1.98	104	eP	Pn	04 39 11.9	+0.7
DRK0	Durika	1.99	119	P	Pn	04 39 08.6	-2.9
DRK0				S	Sn	04 39 34.1	-1.2
DRK0	Durika	1.99	119	eP	Pn	04 39 08.7	-2.7
NANN	Nandasmo	2.01	327	P	Pn	04 39 12.2	+0.7
NANN				S	Sn	04 39 37.6	+2.1
SABN	Sabanita	2.04	326	P	Pn	04 39 12.1	0.0
FIMO	Fila Mora	2.05	127	eP	Pn	04 39 12.2	0.0
UNAN	Cigeo UNAN	2.23	326	P	Pn	04 39 14.6	0.0
UNAN				S	Sn	04 39 42.1	+1.1
TISN	Laguna Tiscapa	2.25	327	P	Pn	04 39 12.4	-2.5
BOAB	BOACO BROADBAN	2.28	343	P	Pn	04 39 14.8	-0.5
BOAB				S	Sn	04 39 41.3	-0.9
PTJ1	Puerto Jimnez	2.39	135	P	Pn	04 39 18.9	+2.2
PTJ1	Puerto Jimnez	2.39	135	eP	Pn	04 39 18.7	+2.0
PTJ1				eS	Sn	04 39 58.3	+13
PIRO	Carate, Puerto	2.46	138	P	Pn	04 39 18.7	+0.9
PIRO	Carate, Puerto	2.46	138	⇓iP	Pn	04 39 18.5	+0.7
PIRO	Carate, Puerto	2.46	138	eP	Pn	04 39 18.3	+0.5
ALCO	Alturas Coton,	2.50	121	⇓eP	Pn	04 39 17.9	-0.5
LEVN	Ruinas Leon Vi	2.66	324	S	Sn	04 39 52.5	+1.0
CDITO	Canoas	2.68	128	P	Pn	04 39 22.9	+2.2
BRU2	Volcan	2.70	122	P	Pn	04 39 20.9	-0.2
BRU2	Volcan	2.70	122	⇑iP	Pn	04 39 21.4	+0.2
BRU2				eS	Sn	04 40 05.7	+13
MATN	Matagalpa	2.81	341	P	Pn	04 39 21.7	-0.9
LNBQ3	Los Naranjos,	2.91	120	eP	Pn	04 39 23.4	-0.7
PTAR3	Potrerillos Ar	2.92	122	eP	Pn	04 39 24.8	+0.7
PTPM	Petroterminale	2.92	134	eP	Pn	04 39 24.9	+0.9
PTPM				eS	Sn	04 40 09.5	+12
DVD	David	3.10	125	eP	Pn	04 39 27.8	+1.4
LIMN	Finca el Limon	3.10	335	P	Pn	04 39 26.3	-0.2
LIMN				S	Sn	04 40 02.0	-0.4
LOCO3	Loma Colorada,	3.14	125	eP	Pn	04 39 26.6	-0.4
SCLA	Alcaldia de Sa	5.01	314	P	Pn	04 39 50.9	-1.7

CATAC 05 04:38:49.6±0.5**, 12°N**±4°×**8°7W**±°**, h31**km±3km**, M3.0**/12**, MLv3.0**/12**, Error ellipse: s-maj=9.0km s-min=3.5km az=31.1, confirmed, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALEN	Leon	0.41	45	S	Sn	04 39 07.7	+1.7
CRIN	San Cristobal	0.55	12	S	Sn	04 39 10.7	+1.2
HERN	Volcan Telica	0.55	36	P	Pn	04 39 09.9	+8.5
HERN	Volcan Telica	0.55	36	P	Pn	04 39 02.2	+0.8
HERN				S	Sn	04 39 10.9	+1.3
COPN	Copaltepe	0.56	88	P	Pn	04 39 01.5	0.0
COPN	Copaltepe	0.56	88	P	Pn	04 39 01.4	-0.1
CNGN	Cerro Negro	0.57	54	P	Sn	04 39 12.3	+2.4
CNGN	Cerro Negro	0.57	54	P	Pn	04 39 02.5	+0.9
CNGN				S	Sn	04 39 11.2	+1.3
MACN	El Madrono	0.57	58	P	Pn	04 39 02.4	+0.8
MACN	El Madrono	0.57	58	P	Pn	04 39 02.7	+1.1
MACN				S	Sn	04 39 11.7	+1.8
LEVN	Ruinas Leon Vi	0.59	66	P	Pn	04 39 02.7	+0.8
LEVN	Ruinas Leon Vi	0.59	66	P	Sn	04 39 11.7	+1.4
POLN	Al Sur del Vol	0.59	36	P	Sn	04 39 11.6	+1.0
POLN	Al Sur del Vol	0.59	36	P	Pn	04 39 02.8	+0.9
POLN				S	Sn	04 39 12.1	+1.5
ILCN	San Idelfonso	0.61	48	P	Sn	04 39 13.0	+2.0
ILCN	San Idelfonso	0.61	48	P	Pn	04 39 02.5	+0.3
ILCN				S	Sn	04 39 12.4	+1.4
APYN	Apoyeque	0.80	85	S	Sb	04 39 16.5	+0.8
ALLN	Telcor Managua	0.87	90	S	Sb	04 39 17.8	+0.1
CSGN	Cosiguina Volc	0.89	335	P	Pb	04 39 06.4	-0.3
CSGN				S	Sb	04 39 18.5	+0.1
MGAN	Managua	0.90	91	S	Sb	04 39 18.8	+0.4
SABN	Sabanita	1.00	102	P	Pn	04 39 06.7	-0.9
LIMN	Finca el Limon	1.19	41	P	Pn	04 39 10.4	+0.2
CNCH	Conchagua	1.28	330	P	Sn	04 39 28.5	+0.8
CNCH	Conchagua	1.28	330	P	Pn	04 39 11.5	-0.1
CNCH				S	Sn	04 39 27.7	0.0
LCND	La Caada	1.34	328	P	Sn	04 39 29.3	+0.4
LCND	La Caada	1.34	328	P	Pn	04 39 11.9	-0.3
BOAB	BOACO BROADBAN	1.49	79	P	Pn	04 39 14.3	0.0
RCON	San Juan de Ri	1.64	37	P	Pn	04 39 17.3	+0.9
RCPN	Sur Rio San Ju	1.71	38	P	Pn	04 39 18.4	+1.0
PACA	Pacayal	1.72	319	P	Sn	04 39 38.7	+0.2
PACA	Pacayal	1.72	319	P	Pn	04 39 17.4	-0.1
YUSH	Yuscaran	1.81	10	P	Pn	04 39 19.6	+0.9
TGUH	Tegucigalpa,Un	1.89	357	P	Pn	04 39 20.3	+0.4
TGUH				S	Sn	04 39 42.9	+0.3
LALI	Alcalda de L	2.48	302	P	Sn	04 39 48.0	-9.1

*IDC **05** 04:43:10.7±1.8, 11.̊87S×120.̊95E, h0km, mb3.7/2, mbtmp3.6/6, ML3.4/4, Error ellipse: s-maj=37.3km s-min=26.5km az=62.0*
*DJA **05** 04:43:16.1±1.0, 12°S±9°×12°1E±°, h15km±10km, M3.6/9, mb3.9/1, MLv3.4/9*
ISC 05 04:43:13.0±0.9**, 11.̊92S**±0.̊07×**120.̊91E**±0.̊07**, h35**km**, n14, σ2.̊76**/20**, South of Sumba**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	Waingapu	2.32	345	P	Pn	04 43 48.6	-0.1
WSI				S	Sn	04 44 13.0	-3.0
WBSI	Waikabubak, Su	2.71	327	P	Pn	04 43 53.4	-0.8
WBSI				S	Sn	04 44 23.5	-2.3
BATI	Baumata	3.20	58	Pn	Pn	04 44 02.7	+1.9
	16nm,0.3s,baz=281,slow=10,SNR=3.5						
BATI				Sn	Sn	04 44 39.7	+1.8
	7.4nm,0.3s,baz=24,slow=20,SNR=1.7						
	41nm,0.4s						
BATI	Baumata	3.20	58	P	Pn	04 44 03.2	+2.3
EDFI	Ende, Flores	3.25	14	P	Pn	04 43 59.6	-2.0
LBFI	Labuhan Bajo,	3.56	344	P	Pn	04 44 04.3	-1.6
DBNI	Kabupaten Domp	4.25	323	P	Pn	04 44 16.9	+1.6
DBNI				S	Sn	04 45 02.2	-1.6
PLAI	Plampang	4.35	315	P	Pn	04 44 17.7	+1.0
TWSI	Taliwang, Sumb	5.07	308	P	Pn	04 44 26.9	+0.3
FITZ	Fitzroy Crossi	7.66	144	Pn	Pn	04 45 04.2	+2.2
	0.3nm,0.3s,baz=327,slow=14,SNR=1.9						
FITZ				Sn	Sn	04 46 25.7	-2.0
	0.6nm,0.3s,baz=188,slow=15,SNR=9.2						
	0.8nm,0.3s						
WRA	Warramunga Arr	15.17	123	Pn	Pn	04 46 44.4	-0.4
	0.1nm,0.3s,baz=304,slow=13,SNR=8.3						
WRA				Sn	Sn	04 49 21.1	-11
	0.1nm,0.3s,baz=310,slow=22,SNR=4.7						
	0.3nm,0.5s						
ASAR	Alice Springs	17.00	135	P	P	04 47 09.8	0.0
	0.2nm,0.3s,baz=316,slow=13,SNR=11						
ASAR				S	Sn	04 50 08.3	-8.0
	0.4nm,0.8s,baz=318,slow=25,SNR=3.3						
	0.6nm,0.6s						
STKA	Stephens Creek	27.52	139	P	P	04 48 59.5	+3.0
	0.6nm,0.2s,baz=323,slow=15,SNR=5.5						
	0.6nm,0.2s						
MKAR	Makanchi Array	67.90	332	P	P	04 54 10.8	+2.7
	0.2nm,0.5s,baz=136,slow=5.8,SNR=2.9						
	0.2nm,0.5s						

ANF 05 04:51:44.2±0.1**, 66.̊83N**×**135.̊77W, h8**km±1km**, ML3.6**/42**, Error ellipse: s-maj=1.0km s-min=0.9km az=98.0, Northern Yukon Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
G30M	tAoh Zraii Nji	0.23	311	P	Pg	04 51 49.0	+0.2
	baz=130						
G30M				S	Sg	04 51 52.2	+0.1
	baz=130						
EPYK	Eagle Plains	0.60	220	P	Pg	04 51 55.9	+0.2
	baz=39,SNR=213						
EPYK				S	Sg	04 52 04.2	+0.7
	baz=39						
G31M	Satah River	0.60	80	P	Pg	04 51 55.8	+0.1
	baz=262						
G31M				S	Sg	04 52 04.5	+1.0
	baz=262						
F30M	Barrier River	0.79	360	P	Pg	04 51 59.2	0.0
	baz=180,SNR=1000						
F30M				S	Sg	04 52 10.1	+0.6
	baz=180						
F31M	Tsiigehtchic	1.00	51	P	Pg	04 52 03.1	-0.3
	baz=233,SNR=1000						
F31M				S	Sg	04 52 16.6	+0.2
	baz=233						
H31M	Peel River	1.18	150	P	Pg	04 52 06.6	-0.2
	baz=331,SNR=1000						
H31M				S	Sn	04 52 23.2	-0.1
	baz=331						
I30M	Mount Dempster	1.63	189	P	Pn	04 52 13.2	-0.1
	baz=8.4,SNR=648						
I30M				S	Sb	04 52 35.0	-0.4
	baz=8.4						
INK	Inuvik	1.72	29	P	Pn	04 52 14.2	-0.2
	baz=211,SNR=1000						
INK				S	Sn	04 52 36.9	+0.5
	baz=211						
E29M	Blow River	1.77	334	P	Pn	04 52 15.1	+0.1
	baz=152,SNR=366						
E29M				Sb	Sg	04 52 40.4	-0.5
	baz=152						
F28M	Old Crow	1.78	298	P	Pn	04 52 14.6	-0.7
	baz=114,SNR=453						
F28M				S	Sb	04 52 38.8	-0.7
	baz=114						
I29M	Ogilvie Camp,	1.80	216	P	Pn	04 52 15.8	+0.2
	baz=34						
I29M				Sb	Sg	04 52 41.2	-0.8
	baz=34						
I28M	Miner Creek	2.19	233	P	Pn	04 52 20.1	-0.8
	baz=49,SNR=288						
I28M				S	Sn	04 52 49.0	+0.8
	baz=49						
J30M	Hart River	2.28	186	P	Pn	04 52 22.1	0.0
	baz=5.6,SNR=71						
J30M				S	Sn	04 52 51.3	+0.9
	baz=5.6						
H27K	Steamboat Moun	2.38	258	P	Pn	04 52 23.3	-0.2
	baz=73						
H27K				S	Sn	04 52 53.3	+0.4
	baz=73						
J29N	Klondike Camp	2.59	204	P	Pn	04 52 26.4	0.0
	baz=22						
E27K	Coleen River	2.62	304	P	Pn	04 52 26.4	-0.4
	baz=119						
E27K				Sb	Sb	04 53 04.7	+1.1
	baz=119						
I27K	Kandik River	2.67	245	P	Pn	04 52 27.1	-0.4
	baz=60,SNR=65						
I27K				S	Sn	04 53 00.9	+0.9
	baz=60						
D28M	Stokes Point	2.75	337	P	Pn	04 52 29.1	+0.7
	baz=155						
D28M				Sb	Sb	04 53 09.0	+1.8
	baz=155						
K29M	Barlow Dome	3.09	195	P	Pn	04 52 33.9	+0.6
	baz=13,SNR=57						
D27M	Malcolm River	3.11	324	P	Pn	04 52 33.8	+0.2
	baz=139						
DAWY	Dawson	3.16	210	P	Pn	04 52 34.3	+0.1
	baz=27,SNR=82						
DAWY				Sb	Sb	04 53 21.0	+1.8
	baz=27						
G26K	Porcupine Rive	3.16	276	P	Pn	04 52 33.8	-0.4
	baz=88,SNR=22						
G26K				Sb	Sb	04 53 21.1	+1.9
	baz=88						
F26K	Sheenjek River	3.37	289	P	Pn	04 52 36.7	-0.4
	baz=101						
F26K				Sb	Sb	04 53 27.0	+1.9
	baz=101						
I26K	Coal Creek Min	3.38	246	P	Pn	04 52 36.4	-0.7
	baz=60						
I26K				S	Sn	04 53 16.6	-0.7
	baz=60						
L29M	L29M	3.87	196	P	Pn	04 52 43.6	-0.4
	baz=14						
F25K	Christian Rive	3.92	286	P	Pn	04 52 44.4	-0.2
	baz=97,SNR=25						
E25K	Arctic Village	3.99	293	P	Pn	04 52 45.0	-0.6
	baz=104,SNR=15						
C27K	Jago River	4.08	317	P	Pn	04 52 47.2	+0.4
	baz=130						
PRP	Porcupine Dome	4.17	256	P	Pn	04 52 47.5	-0.7
	baz=67						
M30M	Minto, Yukon	4.29	186	P	Pn	04 52 50.2	+0.5
	baz=5.4,SNR=92						
SCRK	Sand Creek	4.47	234	P	Pn	04 52 51.6	-0.7
	baz=46,SNR=8.2						
J25K	Salcha River,	4.54	245	P	Pn	04 52 52.8	-0.5
	baz=56						
M29M	Somme Creek	4.55	196	P	Pn	04 52 53.7	+0.3
	baz=14,SNR=32						
L27K	Beaver Creek,	4.58	217	P	Pn	04 52 53.6	-0.1
	baz=32						
C26K	Camden Bay	4.59	317	P	Pn	04 52 54.1	+0.4
	baz=128						
G24K	Hadweenzic Riv	4.64	274	P	Pn	04 52 54.2	-0.3
	baz=83						
M31M	Drury Creek, Y	4.68	172	P	Pn	04 52 55.3	+0.2
	baz=353						
D25K	Kavik River	4.70	307	P	Pn	04 52 55.9	+0.6
	baz=117						
RIDG	Independent Ri	4.91	235	Pg	Pg	04 53 16.0	-2.1
	baz=47						
BVCY	Beaver Creek	4.94	209	P	Pn	04 52 58.8	+0.1
	baz=24,SNR=8.5						
E24K	Your Creek	5.05	290	P	Pn	04 53 00.1	-0.1
	baz=98						
C36M	Paulatuk	5.06	55	P	Pn	04 52 59.0	-1.2
	baz=246,SNR=63						
M27K	Edge Creek, AK	5.20	213	P	Pn	04 53 01.6	-0.8
	baz=28,SNR=29						
N30M	Aishikik Lake	5.42	187	P	Pn	04 53 06.0	+0.7
	baz=5.5						
YUK3	Moose Creek	5.47	204	P	Pn	04 53 05.8	-0.3
	baz=20,SNR=28						
TOLK	Toolik Lake Re	5.55	295	P	Pn	04 53 07.8	+0.8
	baz=103						
C24K	Franklin Bluff	5.61	307	P	Pn	04 53 08.4	+0.7
	baz=115						
G23K	Bananza Creek	5.64	275	P	Pn	04 53 08.2	-0.1
	baz=82						
YUK4	Talbot Arm	5.65	194	P	Pn	04 53 08.0	-0.5
	baz=11						
PAX	Paxson	5.66	231	P	Pn	04 53 08.9	+0.3
	baz=42						
COLD	Coldfoot	5.67	281	P	Pn	04 53 09.0	+0.4
	baz=87						
TGTN	Hyland Airport	6.25	145	P	Pn	04 53 17.4	+0.8
	baz=332						
C23K	Itkillik River	6.26	305	P	Pn	04 53 17.6	+0.9
	baz=112						
E22K	Anaktuvuk Pass	6.30	289	P	Pn	04 53 17.9	+0.6
	baz=94						
WRGLY	Wrigley	6.34	119	P	Pn	04 53 17.3	-0.5
	baz=310,SNR=16						
H22K	Ishtalitna Cre	6.34	269	P	Pn	04 53 18.1	+0.2
	baz=74						
A36M	Sachs Harbour	6.36	31	P	Pn	04 53 18.2	+0.1
	baz=221						
WAT1	Susitna Watana	6.76	240	P	Pn	04 53 23.9	+0.3
	baz=48						
F21K	Alatna River	6.94	281	P	Pn	04 53 26.5	+0.5
	baz=85						
TRF	Thorofare Moun	6.99	248	P	Pn	04 53 27.0	+0.1
	baz=55						
G21K	Allakaket	7.05	276	P	Pn	04 53 27.4	-0.1
	baz=79						
B22K	Teshekpuk Lake	7.34	307	P	Pn	04 53 31.8	+0.3
	baz=110						
C21K	Knifeblade Rid	7.50	297	P	Pn	04 53 34.7	+1.0
	baz=99						
F20K	Avaraart Lake	7.83	281	P	Pn	04 53 38.5	+0.3
	baz=82						
H20K	Anotleneega Mo	7.85	269	P	Pn	04 53 38.8	+0.3
	baz=72						
A22K	Sinclair Lake	8.06	310	P	Pn	04 53 41.8	+0.4
	baz=112						
B20K	Meade River	8.48	302	P	Pn	04 53 47.4	+0.4
	baz=102						

*IDC **05** 04:56:24.2±4.3, 35.̊89N×99.̊61E, h0km, mb3.2/3, mbtmp3.1/5, ML3.4/2, MS2.9/1, Error ellipse: s-maj=91.3km s-min=17.5km az=16.0*
ISC 05 04:56:20.0±1.6**, 35.̊08N**±0.̊10×**99.̊30E**±0.̊08**, h10**km**, n9, σ1.̊86**/12**, mb3.2**/3**, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZDM	Lanzhou Array	3.69	75	Pn	Pn	04 57 18.9	+1.5
	baz=268,slow=13						
LZDM				Pg	Pb	04 57 24.0	-1.6
	baz=267,slow=18						
LZDM				Lg	Lg	04 58 11.1	
	baz=273,slow=26						
	2.0nm,0.3s						
LZH	Lanzhou	3.84	74	Pg	Pb	04 57 29.7	+1.7
LZH				Sg	Sb	04 58 15.3	+0.7
LZH				smax	smax		
	comp=N,260nm,1.7s						
LZH				smax	smax		
	comp=E,510nm,1.9s						
GTA2	Gaotai	4.41	5	Pn	Pn	04 57 28.4	+1.2
GTA2				Pg	Pb	04 57 40.3	+2.6
GTA2				Sn	Sn	04 58 17.3	-1.4
GTA2				Sg	Sg	04 58 39.7	-2.0
GTA2				smax	smax		

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=N,32nm,0.7s						
GTA2				smax	smax		
	comp=E,43nm,0.9s						
SONM	**Songino Array**	**13.80**	**20**	Sn	Sn	05 01 59.2	-10
	comp=E,0.3nm,0.3s,baz=195,slow=23,SNR=10						
SONM				Lg	Lg	05 03 20.9	
	comp=E,0.1nm,0.3s,baz=191,slow=30,SNR=0.9						
MKAR	**Makanchi Array**	**17.33**	**318**	Pn	**Pn**	**05 00 19.9**	**-2.1**
	comp=E,0.1nm,0.3s,baz=130,slow=15,SNR=5.1						
	comp=E,0.1nm,0.4s						
AAK	**Ala-Archa**	**20.69**	**299**	LR	LR	05 10 15.1	
	comp=E,32nm,18.5s,baz=40,slow=40						
ZALV	**Zalesovo Beam**	**21.42**	**336**	P	**P**	**05 01 06.6**	**-1.4**
	comp=E,0.6nm,0.5s,baz=142,slow=10,SNR=2.6						
	comp=E,0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**21.64**	**322**	P	**P**	**05 01 11.7**	**+1.4**
	comp=E,0.2nm,0.3s,baz=128,slow=11,SNR=2.1						
	comp=E,0.2nm,0.3s						
ILAR	**Eielson Array**	**67.97**	**25**	P	**P**	**05 07 18.4**	**-0.5**
	comp=E,0.4nm,0.8s,baz=294,slow=6.8,SNR=4.7						
	comp=E,0.4nm,0.8s						

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*IDC **05** 05:01:30.4±2.7, 4°.83S×129°.91E, h212km±39km, mb3.2/2, mbtmp3.7/6, Error ellipse: s-maj=78.0km s-min=12.9km az=83.0*
*DJA **05** 05:01:31.0±0.5, 5°S±4°×13°0E±°, h208km±5km, M3.9/12, MLv3.9/12*
ISC 05 05:01:29.6±0.9**, 4°.92S**±0°.07×**129°.78E**±0°.07**, h200km, n13,** σ**2s.73**/17**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.41**	**18**	P	**Pn**	**05 01 58.3**	**+1.9**
BNDI				S	**Sn**	**05 02 21.6**	**+4.4**
NLAI	**Namlea**	**3.15**	**302**	P	**Pn**	**05 02 22.5**	**+1.5**
FAKI	**Fak Fak**	**3.17**	**51**	P	**Pn**	**05 02 23.1**	**+1.9**
FAKI				S	**Sn**	**05 02 58.6**	**-3.0**
KMPI	**Kaimana, Papua**	**4.11**	**72**	P	**Pn**	**05 02 34.6**	**+1.9**
SIJI	**Sorong**	**4.29**	**20**	P	**Pn**	**05 02 35.5**	**+0.6**
	27nm,0.2s,baz=137,slow=23,SNR=7.9						
SIJI				S	**Sn**	**05 03 25.4**	**-1.1**
	44nm,0.2s,baz=100,slow=23,SNR=7.8						
SIJI	**Sorong**	**4.29**	**20**	P	**Pn**	**05 02 35.6**	**+0.6**
SWI	**Sorong**	**4.29**	**20**	P	**Pn**	**05 02 35.7**	**+0.7**
SANI	**Sanana**	**4.74**	**307**	P	**Pn**	**05 02 39.7**	**-0.9**
FITZ	**Fitzroy Crossi**	**13.71**	**197**	P	**Pn**	**05 04 37.0**	**+1.1**
	1.4nm,0.5s,baz=32,slow=13,SNR=2.4						
WRA	**Warramunga Arr**	**15.58**	**164**	P	**P**	**05 04 59.5**	**+0.6**
	0.3nm,0.5s,baz=347,slow=12,SNR=6.3						
WRA				S	S	05 07 41.8	-10
	0.5nm,0.4s,baz=332,slow=24,SNR=9.0						
ASAR	**Alice Springs**	**19.06**	**168**	P	**P**	**05 05 37.6**	**+0.6**
	0.8nm,0.5s,baz=348,slow=11,SNR=15						
ASAR				S	**S**	**05 08 55.0**	**-7.6**
	0.1nm,0.4s,baz=342,slow=26,SNR=1.2						
MKAR	**Makanchi Array**	**66.38**	**326**	P	**P**	**05 11 56.5**	**-0.5**
	0.5nm,0.5s,baz=125,slow=6.9,SNR=9.3						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**70.63**	**328**	P	**P**	**05 12 23.0**	**-0.2**
	0.5nm,0.6s,baz=135,slow=5.4,SNR=3.0						
	0.5nm,0.6s						

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*IDC **05** 05:12:21.0±3.4, 32°.67S×178°.28W, h0km, mb3.8/2, mbtmp3.8/3, ML3.6/1, Error ellipse: s-maj=75.2km s-min=37.8km az=113.0*
*NEIC **05** 05:12:24.8±0.8, 32°.66S±0°.06×178°.7W±0°.2, h10km±1km, mb4.2/8, Error ellipse: s-maj=30.8km s-min=3.2km az=109.0*
ISC 05 05:12:27.3±1.1**, 32°.6S**±0°.1×**178°.7W**±0°.2**, h33km, n17,** σ**0s.69**/18**, mb4.0**/6**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.41**	**11**	Pn	**Pn**	**05 13 18.5**	**+0.3**
URZ	**Urewera**	**6.60**	**210**	Pn	**Pn**	**05 14 01.8**	**-0.2**
	1.1nm,0.3s,baz=278,slow=4.3,SNR=6.1						
URZ				Sn	**Sn**	**05 15 17.0**	**+1.0**
	2.1nm,0.3s,baz=317,slow=22,SNR=10						
	8.6nm,0.7s						
RTZ	**Ruatahuna**	**6.96**	**209**	Pn	**Pn**	**05 14 06.7**	**-0.3**
BKZ	**Black Stump Fm**	**7.62**	**210**	Pn	**Pn**	**05 14 15.2**	**-0.9**
ARMA	**Armidale**	**25.38**	**267**	P	**P**	**05 17 50.9**	**-0.7**
ARMA				IAmb	IAmb	05 17 53.0	
	comp=Z,9.0nm,1.1s						
ASAR	**Alice Springs**	**42.47**	**270**	P	**P**	**05 20 20.8**	**+1.4**
	comp=Z,0.8nm,0.6s,baz=110,slow=8.0,SNR=12						
	comp=Z,0.8nm,0.6s						
ASAR	**Alice Springs**	**42.47**	**270**	P	**P**	**05 20 19.5**	**+0.1**
WR8	**Warramunga Arr**	**43.52**	**275**	P	**P**	**05 20 28.1**	**+0.2**
WRA	**Warramunga Arr**	**43.66**	**275**	P	**P**	**05 20 30.1**	**+1.1**
	comp=Z,0.6nm,0.4s,baz=115,slow=8.1,SNR=14						
	comp=Z,0.6nm,0.4s						
WRA	**Warramunga Arr**	**43.66**	**275**	P	**P**	**05 20 29.1**	**+0.1**
WB0	**Warramunga Arr**	**43.69**	**275**	P	**P**	**05 20 29.1**	**-0.2**
WB0				IAmb	IAmb	05 20 43.7	
	comp=Z,1.7nm,0.7s						
FORT	**Forrest**	**44.97**	**257**	P	**P**	**05 20 39.2**	**-0.2**
FORT				IAmb	IAmb	05 20 49.5	
	comp=Z,3.8nm,0.9s						
MTN	**Manton Dam**	**49.80**	**281**	P	**P**	**05 21 16.6**	**-0.6**
CASY	**Casey**	**52.92**	**209**	P	**P**	**05 21 40.6**	**+0.7**
BELA	**Belgrano 2**	**67.68**	**172**	P	**P**	**05 23 20.0**	**-0.6**
BELA				IAmb	IAmb	05 23 24.0	
	comp=Z,1.9nm,1.1s						
FINES	**FINESS Array B**	**147.00**	**338**	PKPbc	**PKPdf**	**05 32 04.3**	**+0.6**
	comp=Z,9.7nm,1.3s,baz=54,slow=3.7,SNR=1.8						
FINES	**FINESS Array B**	**147.00**	**338**		**PKPdf**	**05 32 03.8**	**+0.1**

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*DMN **05** 05:16:05.2±0.2, 28°.80N×87°.44E, h10km, Ml4.3/11, Error ellipse: s-maj=3.1km s-min=1.9km az=34.0*
*IDC **05** 05:16:07.8±2.3, 28°.58N×87°.33E, h0km, mb3.4/4, mbtmp3.3/5, ML2.9/1, MS3.3/1, Error ellipse: s-maj=89.3km s-min=24.3km az=70.0*
ISC 05 05:16:08.2±3.1**, 28°.65N**±0°.07×**87°.41E**±0°.06**, h1km**±21km**, n17,** σ**0s.97**/27**, mb3.5**/4**, Xizang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIRN	**Jiri**	**1.46**	**228**	Pg	**Pn**	**05 16 34.7**	**-1.2**
	baz=224,slow=0.0						
JIRN				Sg	**Sg**	**05 16 55.5**	**+0.5**
	1μm,0.4s,baz=224,slow=0.0						
GUN	**Gumba**	**1.53**	**242**	Pg	**Pn**	**05 16 35.9**	**-1.1**
	baz=237,slow=0.0						
GUN				Sg	**Sb**	**05 16 57.1**	**-0.6**
	2μm,0.6s,baz=237,slow=0.0						
ODAN	**Odare**	**1.78**	**180**	Pg	**Pb**	**05 16 41.3**	**-0.4**
	baz=181,slow=0.0						
ODAN				Sg	**Sg**	**05 17 06.2**	**+0.8**
	1μm,0.8s,baz=181,slow=0.0						
RAMN	**Ramite**	**1.83**	**203**	Pg	**Pb**	**05 16 42.2**	**-0.5**
	baz=202,slow=0.0						
RAMN				Sg	**Sg**	**05 17 08.3**	**+1.1**
	836nm,0.5s,baz=202,slow=0.0						
KKN	**Kakani**	**2.06**	**246**	Pg	**Pb**	**05 16 45.5**	**-1.0**
	baz=243,slow=0.0						
KKN				Sg	**Sb**	**05 17 13.4**	**+0.7**
	2μm,1.3s,baz=243,slow=0.0						
PKI	**Pulchoki**	**2.06**	**239**	Pg	**Pb**	**05 16 46.1**	**-0.5**
	baz=236,slow=0.0						
PKI				Sg	**Sg**	**05 17 13.9**	**-0.6**
	702nm,0.7s,baz=236,slow=0.0						
PKIN	**Phulchoki**	**2.07**	**240**	Pg	**Pb**	**05 16 46.3**	**-0.4**
	baz=236,slow=0.0						
PKIN				Sg	**Sb**	**05 17 13.2**	**+0.1**
	921nm,0.5s,baz=236,slow=0.0						
DMN	**Daman**	**2.28**	**244**	Pg	**Pb**	**05 16 49.8**	**-0.5**
	baz=240,slow=0.0						
DMN				Sg	**Sb**	**05 17 19.9**	**+0.8**
	860nm,0.7s,baz=240,slow=0.0						
GKN	**Gorkha**	**2.52**	**256**	Pg	**Pb**	**05 16 53.6**	**-0.8**
	baz=253,slow=0.0						
GKN				Sg	**Sb**	**05 17 27.1**	**+1.1**
	417nm,0.5s,baz=253,slow=0.0						
DANN	**Dangsing**	**3.22**	**266**	Pg	**Pb**	**05 17 05.6**	**-0.8**
	baz=263,slow=0.0						
DANN				Sg	**Sb**	**05 17 47.7**	**+1.4**
	142nm,0.5s,baz=263,slow=0.0						
KOLN	**Koldanda**	**3.47**	**256**	Pg	**Pb**	**05 17 10.6**	**0.0**
	baz=254,slow=0.0						
KOLN				Sg	**Sb**	**05 17 56.1**	**+2.8**
	236nm,0.7s,baz=254,slow=0.0						
MKAR	**Makanchi Array**	**18.55**	**349**	P	**Pn**	**05 20 26.6**	**+0.1**
	baz=167,slow=12,SNR=2.2						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**22.95**	**345**	P	**P**	**05 21 14.1**	**+0.3**
	0.8nm,0.8s,baz=165,slow=10,SNR=5.2						
	0.8nm,0.8s						
SONM	**Songino Array**	**24.16**	**32**	P	**P**	**05 21 26.6**	**+0.7**
	0.7nm,0.8s,baz=225,slow=9.2,SNR=2.4						
	0.7nm,0.8s						
ASAJ	**Asahikawa**	**46.19**	**55**	LR	LR	05 46 27.3	
	comp=Z,35nm,18.2s,baz=310,slow=39						
WRA	**Warramunga Arr**	**66.24**	**131**	P	**P**	**05 26 57.9**	**-0.2**
	0.3nm,0.5s,baz=324,slow=6.3,SNR=5.0						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**68.63**	**134**	P	**P**	**05 27 13.2**	**0.0**
	0.3nm,0.4s,baz=313,slow=6.2,SNR=4.7						
	0.3nm,0.4s						

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*SJA **05** 05:22:03.8±0.6, 24°.13S×66°.84W, h220km±5km, ML3.5, MW3.5*
*GUC **05** 05:22:04.3±0.7, 24°.27S×66°.90W, h224km±6km, ML3.3*
ISC 05 05:22:03.8±1.8**, 24°.12S**±0°.03×**66°.90W**±0°.05**, h222km**±13km**, n36,** σ**1s.28**/61**, 9C-3D, Salta Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SALTA		**0.52**	**101**⇓	*e*P	**Pn**	**05 22 33.8**	**-0.4**
SALTA		**0.52**	**101**	*e*P	**Pn**	**05 22 33.8**	**-0.4**
SLA	**San Lorenzo**	**1.41**	**115**⇓	*e*P	**Pn**	**05 22 39.0**	**+0.1**
SLA				*e*S	**S**	**05 23 04.6**	**-1.6**
SLA	**San Lorenzo**	**1.41**	**115**	*e*P	**Pn**	**05 22 39.0**	**+0.1**
HJA	**Humahuaca**	**1.64**	**57**	*e*P	**Pn**	**05 22 41.4**	**+0.3**
AF01	**San Pedro de A**	**1.65**	**315**⇑	*e*P	**Pn**	**05 22 42.5**	**+1.3**
AF01				*e*S	**S**	**05 23 11.8**	**+1.7**
AF01				IAML		05 23 22.9	
	comp=E,83nm,0.6s						
AF01	**San Pedro de A**	**1.65**	**315**	*e*P	**Pn**	**05 22 41.3**	**+0.2**
AF01				*e*S	**S**	**05 23 12.2**	**+2.1**
FSA	**Cafayete**	**2.15**	**157**	*e*P	**Pn**	**05 22 45.9**	**+0.2**
YJA	**Yavi**	**2.32**	**34**	*e*P	**Pn**	**05 22 48.5**	**+0.8**
GO02	**Mina Guanaco**	**2.66**	**246**⇑	*e*P	**Pn**	**05 22 52.1**	**+1.0**
GO02				*e*S	**S**	**05 23 27.5**	**-0.4**
GO02	**Mina Guanaco**	**2.66**	**246**	*e*P	**Pn**	**05 22 52.1**	**+1.0**
GO02				*e*S	**S**	**05 23 27.9**	**0.0**
GO02				IAML		05 23 28.6	
	comp=Z,186nm,0.1s						
PB06	**IPOC Station P**	**2.83**	**299**⇑	*e*P	**Pn**	**05 22 54.1**	**+1.2**
PB06				*e*S	**S**	**05 23 29.8**	**-1.3**
PB06	**IPOC Station P**	**2.83**	**299**	*e*P	**Pn**	**05 22 53.9**	**+1.0**
PB06				*e*S	**S**	**05 23 30.8**	**-0.3**
PB06				IAML		05 23 32.5	
	comp=Z,114nm,0.1s						
AHML	**Horco Molle**	**3.01**	**152**	*e*P	**Pn**	**05 22 56.2**	**+1.5**
PB09	**IPOC Station P**	**3.16**	**317**⇑	*e*P	**Pn**	**05 22 58.2**	**+1.6**
PB09				*e*S	**S**	**05 23 37.8**	**-0.2**
PB09	**IPOC Station P**	**3.16**	**317**	*e*P	**Pn**	**05 22 57.9**	**+1.2**
PB09				*e*S	**S**	**05 23 38.6**	**+0.6**
PB09				IAML		05 23 41.1	
	comp=Z,50nm,0.1s						
PB14	**IPOC Station P**	**3.23**	**260**⇑	*e*P	**Pn**	**05 22 58.3**	**+0.7**
PB14				*e*S	**S**	**05 23 37.4**	**-2.2**
PB14				IAML		05 23 40.4	
	comp=E,37nm,0.2s						
PB14	**IPOC Station P**	**3.23**	**260**	*e*P	**Pn**	**05 22 58.3**	**+0.7**
PB14				IAML		05 23 42.2	
	comp=Z,28nm,0.2s						
PB03	**IPOC Station P**	**3.34**	**308**⇑	*e*P	**Pn**	**05 22 59.6**	**+0.9**
PB03				*e*S	**S**	**05 23 39.7**	**-2.0**
PB03	**IPOC Station P**	**3.34**	**308**	*e*P	**Pn**	**05 22 59.7**	**+1.0**
PB03				IAML		05 23 44.0	
	comp=Z,102nm,0.1s						
AC02	**Maricunga**	**3.37**	**216**	*e*P	**Pn**	**05 23 00.7**	**+1.4**
AC02				*e*S	**S**	**05 23 44.6**	**+1.7**
AC02				IAML		05 23 47.7	
	comp=N,19nm,0.2s						
AC02	**Maricunga**	**3.37**	**216**	*e*P	**Pn**	**05 23 00.2**	**+0.8**
AC02				*e*S	**S**	**05 23 42.2**	**-0.6**
PB07	**IPOC Station P**	**3.64**	**310**⇑	*e*P	**Pn**	**05 23 03.1**	**+0.9**
PB07				*e*S	**S**	**05 23 45.5**	**-2.6**
PB07	**IPOC Station P**	**3.64**	**310**	*e*P	**Pn**	**05 23 03.2**	**+0.9**
PB07				IAML		05 23 54.2	
	comp=Z,50nm,0.2s						
PB01	**IPOC Station P**	**3.88**	**322**⇓	*e*P	**Pn**	**05 23 05.9**	**+0.8**
PB01				*e*S	**S**	**05 23 51.2**	**-2.1**
PB01	**IPOC Station P**	**3.88**	**322**	*e*P	**Pn**	**05 23 05.3**	**+0.2**
PB01				*e*S	**S**	**05 23 53.5**	**+0.2**
PB01				IAML		05 23 53.9	
	comp=Z,47nm,0.2s						
AC01	**Pan de Azucar**	**3.91**	**238**⇑	*e*P	**Pn**	**05 23 05.4**	**+0.1**
AC01				*e*S	**S**	**05 23 51.1**	**-2.6**
AC01	**Pan de Azucar**	**3.91**	**238**	*e*P	**Pn**	**05 23 05.3**	**+0.1**
AC01				*e*S	**S**	**05 23 51.5**	**-2.2**
AC01				IAML		05 23 52.3	
	comp=Z,28nm,0.3s						
PB02	**IPOC Station P**	**3.93**	**315**⇑	*e*P	**Pn**	**05 23 06.2**	**+0.5**
PB02				*e*S	**S**	**05 23 51.6**	**-2.6**
PB02	**IPOC Station P**	**3.93**	**315**	*e*P	**Pn**	**05 23 06.5**	**+0.8**
PB02				*e*S	**S**	**05 23 52.3**	**-1.9**
PB02				IAML		05 23 53.9	
	comp=Z,84nm,0.2s						
TINO	**Tinogasta**	**3.97**	**189**	*e*P	**Pn**	**05 23 08.0**	**+1.9**
PB08	**IPOC Station P**	**4.48**	**332**	*e*P	**Pn**	**05 23 14.0**	**+1.3**
PB08				*e*S	**S**	**05 24 06.9**	**0.0**
PB08				IAML		05 24 08.8	
	comp=Z,23nm,0.3s						
GO03	**Copiapo**	**4.58**	**220**	*e*P	**Pn**	**05 23 14.1**	**+0.6**
GO03				*e*S	**S**	**05 24 06.9**	**-1.7**
GO03				IAML		05 24 09.4	
	comp=Z,23nm,0.3s						
GO01	**Chusmiza**	**4.92**	**334**	*e*P	**Pn**	**05 23 19.5**	**+1.3**
GO01				*e*S	**S**	**05 24 17.5**	**+0.6**
GO01				IAML		05 24 19.4	
	comp=Z,25nm,0.7s						
PB11	**IPOC Station P**	**5.04**	**329**	*e*P	**Pn**	**05 23 19.4**	**0.0**
PB11				*e*S	**S**	**05 24 17.5**	**-1.6**
PB11				IAML		05 24 24.8	
	comp=Z,27nm,0.2s						
ACLC	**CERRO LA CRUZ**	**5.28**	**180**	*e*P	**Pn**	**05 23 23.2**	**+0.8**
ACLC				*e*S	**S**	**05 24 24.6**	**-0.1**

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*IDC **05** 05:23:34.8±0.8, 27°.87N×101°.25E, h0km, mb3.7/12, mbtmp3.7/12, MS3.1/6, Error ellipse: s-maj=29.0km s-min=14.6km az=70.0*
ISC 05 05:23:36.3±1.0**, 27°.9N**±0°.2×**101°.2E**±0°.2**, h10km, n17,** σ**0s.77**/12**, mb3.7**/11**, MS3.1**/5**, Sichuan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LZDM	**Lanzhou Array**	**8.35**	**14**	Pg	Pb	05 26 06.6	+5.5
	baz=188,slow=20						
CMAR	**Chiang Mai Arr**	**9.58**	**193**	Pg	Pn	05 26 30.8	+36
	0.7nm,0.3s,baz=12,slow=12,SNR=4.4						
CMAR				Lg	Lg	05 28 40.4	
	0.1nm,0.3s,baz=10,slow=28,SNR=5.5						
CMAR				LR	LR	05 30 07.3	
	comp=Z,58nm,19.2s,baz=295,slow=41						
SONM	**Songino Array**	**20.35**	**10**	P	**P**	**05 28 12.7**	**-0.3**
	0.9nm,0.7s,baz=195,slow=11,SNR=3.9						
	0.9nm,0.7s						
MKAR	**Makanchi Array**	**24.07**	**327**	P	**P**	**05 28 52.1**	**+0.3**
	1.8nm,0.7s,baz=129,slow=9.7,SNR=13						
	1.8nm,0.7s						
KSRS	**Korea Array**	**24.35**	**60**	P	**P**	**05 28 54.6**	**+0.2**
	0.5nm,0.3s,baz=263,slow=11,SNR=2.3						
KSRS				LR	LR	05 38 55.5	
	comp=Z,33nm,20.2s,baz=255,slow=38						
	0.5nm,0.3s						
AAK	**Ala-Archa**	**26.22**	**311**	LR	LR	05 41 02.0	
	comp=Z,64nm,18.2s,baz=174,slow=40						
KURBB	**Kurchatov Arra**	**28.54**	**329**	P	**P**	**05 29 32.1**	**+0.1**
	0.7nm,0.7s,baz=142,slow=9.0,SNR=4.7						
	0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**28.73**	**340**	LR	LR	05 41 46.3	
	comp=Z,51nm,20.4s,baz=46,slow=38						
KLR	**Kul'dur**	**31.68**	**39**	LR	LR	05 43 14.4	
	comp=Z,22nm,19.7s,baz=262,slow=37						
BVAR	**Borovoye Array**	**33.95**	**326**	P	**P**	**05 30 20.2**	**+0.5**
	0.3nm,0.3s,baz=106,slow=9.1,SNR=2.6						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**57.30**	**142**	P	**P**	**05 33 24.5**	**0.0**
	2.0nm,0.7s,baz=330,slow=7.7,SNR=22						
	2.0nm,0.7s						
ASAR	**Alice Springs**	**60.13**	**145**	P	**P**	**05 33 44.5**	**+0.3**
	0.9nm,0.5s,baz=326,slow=6.8,SNR=15						
	0.9nm,0.5s						
HFS	**Hagfors**	**65.09**	**327**	P	**P**	**05 34 17.7**	**+0.8**
	1.4nm,0.7s,baz=85,slow=3.5,SNR=2.0						
	1.4nm,0.7s						
NOA	**NORSAR Array B**	**66.06**	**328**	P	**P**	**05 34 21.4**	**-1.8**
	0.4nm,0.7s,baz=75,slow=6.7,SNR=3.2						
NOA				LR	LR	06 05 03.9	
	comp=Z,17nm,19.6s,baz=270,slow=38						
	0.4nm,0.7s						
STKA	**Stephens Creek**	**70.74**	**144**	P	**P**	**05 34 52.4**	**-0.3**
	1.1nm,0.5s,baz=312,slow=20,SNR=3.2						
	1.1nm,0.5s						
ILAR	**Eielson Array**	**73.83**	**24**	P	**P**	**05 35 10.5**	**-0.3**
	0.3nm,0.9s,baz=310,slow=9.5,SNR=5.0						
	0.3nm,0.9s						
YKA	**Yellowknife Ar**	**85.51**	**16**	P	**P**	**05 36 14.9**	**+0.7**
	0.1nm,0.7s,baz=321,slow=6.4,SNR=1.7						
	0.1nm,0.7s						

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*IDC **05** 05:33:57.9±2.8, 32°.75S×178°.17W, h0km, mb4.0/2, mbtmp3.9/3, ML3.8/1, Error ellipse: s-maj=68.1km s-min=35.3km az=120.0*
*NEIC **05** 05:33:58.0±1.1, 32°.8S±0°.2×177°.83W±0°.05, h10km±2km, mb4.1/11, Error ellipse: s-maj=31.0km s-min=7.5km az=177.0*
ISC 05 05:34:00.9±1.6**, 32°.8S**±0°.1×**177°.9W**±0°.2**, h34km, n17,** σ**0s.89**/18**, mb4.0**/9**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.80**	**216**	Pn	**Pn**	**05 35 37.2**	**-1.0**
	1.7nm,0.3s,baz=232,slow=4.4,SNR=9.0						
URZ				Sn	**Sn**	**05 36 55.0**	**+0.7**
	2.5nm,0.3s,baz=174,slow=23,SNR=12						
	5.9nm,0.7s						
BKZ	**Black Stump Fm**	**7.81**	**214**	Pn	**Pn**	**05 35 52.1**	**0.0**
TOO	**Toolangi**	**30.18**	**251**	P	**P**	**05 40 07.3**	**-0.7**
TOO				IAmb	IAmb	05 40 21.5	
	comp=Z,2.9nm,1.1s						
CTAO	**Charters Tower**	**34.35**	**283**	P	**P**	**05 40 43.9**	**-0.8**
CTAO				IAmb	IAmb	05 40 46.9	
	comp=Z,3.2nm,0.7s						
INKA	**Innaminka**	**35.92**	**267**	P	**P**	**05 41 00.7**	**+2.6**
INKA				IAmb	IAmb	05 41 01.3	
	comp=Z,1.2nm,0.7s						
BBOO	**Buckleboo**	**38.47**	**257**	P	**P**	**05 41 20.4**	**+0.7**
BBOO				IAmb	IAmb	05 41 28.1	
	comp=Z,5.3nm,1.0s						
AS31	**Alice Springs**	**43.13**	**269**	P	**P**	**05 41 58.0**	**-0.3**
ASAR	**Alice Springs**	**43.13**	**269**	P	**P**	**05 41 58.7**	**+0.4**
	comp=Z,1.2nm,0.6s,baz=110,slow=7.5,SNR=15						
	comp=Z,1.2nm,0.6s						
WR8	**Warramunga Arr**	**44.20**	**275**	P	**P**	**05 42 06.7**	**-0.2**
WR8				IAmb	IAmb	05 42 23.1	
	comp=Z,2.2nm,0.8s						
WRAB	**Tennant Creek**	**44.34**	**275**	P	**P**	**05 42 07.9**	**-0.1**
WRAB				IAmb	IAmb	05 42 20.8	
	comp=Z,2.2nm,0.8s						
WRA	**Warramunga Arr**	**44.34**	**275**	P	**P**	**05 42 07.8**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=114,slow=8.1,SNR=23						
	comp=Z,0.8nm,0.3s						
WRA	**Warramunga Arr**	**44.34**	**275**	P	**P**	**05 42 07.0**	**-1.0**
WB0	**Warramunga Arr**	**44.37**	**275**	P	**P**	**05 42 08.3**	**0.0**
WB0				IAmb	IAmb	05 42 32.0	
	comp=Z,4.2nm,1.1s						
FORT	**Forrest**	**45.57**	**257**	P	**P**	**05 42 18.2**	**+0.5**
MTN	**Manton Dam**	**50.50**	**281**	P	**P**	**05 42 55.9**	**0.0**
LON	**Longmire**	**93.92**	**35**	P	**P**	**05 47 15.3**	**+0.5**
FINES	**FINESS Array B**	**147.43**	**339**	PKPbc	**PKPab**	**05 53 41.7**	**-0.7**
	comp=Z,1.2nm,0.4s,baz=46,slow=4.0,SNR=12						

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*ASRS **05** 05:58:49.0±1.4, 54°.75N×83°.80E, h0km, M2.4(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 05 05:58:52.8±1.6**, 54°.65N×83°.77E, h0km, mbtmp2.8**/3**, ML2.2**/3**, Error ellipse: s-maj=14.5km s-min=9.3km az=4.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.93**	**138**	I	I	06 04 30.0	
	0.2nm,0.7s,baz=318,slow=337,SNR=20						
ZALV	**Zalesovo Beam**	**0.93**	**138**	Pg	Pg	05 59 10.0	-0.6
	1.6nm,0.3s,baz=320,slow=15,SNR=14						
ZALV				Lg	Lg	05 59 23.8	
	6.1nm,0.3s,baz=318,slow=28,SNR=26						
KURBB	**Kurchatov Arra**	**5.14**	**221**	Pn	Pn	06 00 11.7	+0.7
	baz=40,slow=14,SNR=4.2						
KURBB				Pg	Pb	06 00 23.8	+0.3
	0.1nm,0.3s,baz=38,slow=15,SNR=7.6						
KURBB				Sn	Sn	06 01 09.1	-1.8
	baz=43,slow=26,SNR=1.7						
KURBB				Lg	Lg	06 01 35.8	
	0.1nm,0.3s,baz=39,slow=32,SNR=6.0						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**7.92**	**187**	Pn	Pn	06 00 49.5	+0.3
	0.1nm,0.3s,baz=11,slow=12,SNR=3.7						
MKAR				Lg	Lg	06 03 02.3	
	0.1nm,0.3s,baz=5.7,slow=31,SNR=5.7						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**8.09**	**264**	Pn	Pn	06 00 49.4	-2.0
	baz=72,slow=14,SNR=4.3						
	1.0nm,0.6s						

IDC 05 05:59:13.1±3.2**, 32°.77S×178°.19W, h0km, mb3.7**/2**, mbtmp3.7**/3**, ML3.7**/1**, MS2.9**/2**, Error ellipse: s-maj=73.3km s-min=36.8km az=116.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.52**	**4**	LR	LR	06 00 39.6	
	comp=Z,66nm,21.2s,baz=158,slow=25						
URZ	**Urewera**	**6.68**	**214**	Pn	Pn	06 00 52.5	+0.1
	1.5nm,0.3s,baz=294,slow=1.8,SNR=9.7						
URZ				Sn	Sn	06 02 08.6	-0.7
	1.9nm,0.3s,baz=191,slow=22,SNR=6.6						
	2.7nm,0.3s						
DZM	**Mont Dzumac**	**17.29**	**304**	LR	LR	06 08 56.3	
	comp=Z,110nm,18.2s,baz=184,slow=34						
ASAR	**Alice Springs**	**42.88**	**270**	P	P	06 07 13.8	+0.3
	0.6nm,0.6s,baz=111,slow=7.9,SNR=6.6						
	0.6nm,0.6s						
WRA	**Warramunga Arr**	**44.08**	**275**	P	P	06 07 22.8	-0.3
	0.6nm,0.4s,baz=115,slow=8.1,SNR=16						
	0.6nm,0.4s						
FINES	**FINESS Array B**	**147.30**	**339**	PKPbc	PKPbc	06 18 56.9	-0.9
	0.5nm,0.4s,baz=30,slow=4.6,SNR=4.4						

IDC 05 06:05:56.9±6.4**, 5°.90S×147°.57E, h168km**±39km**, mb3.5**/3**, mbtmp4.0**/5**, MS4.0**/1**, Error ellipse: s-maj=64.4km s-min=57.4km az=69.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.51**	**187**	P	Pn	06 06 51.7	+0.3
	30nm,0.3s,baz=332,slow=6.1,SNR=11						
PMG				S	Sn	06 07 34.2	+0.2
	37nm,0.5s,baz=4.0,slow=9.4,SNR=4.1						
WRA	**Warramunga Arr**	**18.98**	**221**	P	P	06 10 06.2	+0.4
	3.0nm,0.4s,baz=51,slow=12,SNR=48						
ASAR	**Alice Springs**	**22.03**	**215**	P	P	06 10 38.6	+0.4
	2.5nm,0.3s,baz=48,slow=8.7,SNR=108						
	2.5nm,0.3s						
FITZ	**Fitzroy Crossi**	**24.61**	**239**	P	P	06 11 01.1	-0.8
	0.9nm,0.4s,baz=74,slow=14,SNR=2.0						
	0.9nm,0.4s						
STKA	**Stephens Creek**	**26.45**	**191**	P	P	06 11 18.1	-0.2
	0.6nm,0.3s,baz=8.5,slow=8.6,SNR=1.2						
	0.6nm,0.3s						
AFI	**Afiamalu**	**40.77**	**104**	LR	LR	06 28 39.8	
	comp=Z,167nm,18.4s,baz=13,slow=33						

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*SOME **05** 06:10:52.3, 43°.63N×86°.62E, h10km*
*NNC **05** 06:10:54.9±4.7, 43°.83N×86°.51E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=33.9km s-min=15.6km az=123.0*
ISC 05 06:10:49.9±3.0**, 43°.58N**±0°.10×**86°.7E**±0°.1**, h10km, n14,** σ**1s.75**/20**, 4C-6D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZSN	**Zaisan**	**4.09**	**342**	Pg	**Pg**	**06 12 06.4**	**-1.7**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	6.4nm,0.3s						
ZSN				Lg	Lg	06 13 00.1	
	23nm,0.6s						
ZSN	Zaisan	4.09	342	eP	Pg	06 12 06.4	-1.7
	6.4nm,0.3s						
ZSN				eS	Sg	06 13 00.1	-1.0
	23nm,0.6s						
MK31	Makanchi Array	4.50	317	⇓Pn	Pn	06 12 00.8	+2.7
	0.3nm,0.2s,baz=130,slow=14,SNR=47						
MK31				⇓Pg	Pg	06 12 16.9	+0.9
	1.4nm,0.5s,baz=130,slow=17,SNR=4.2						
MK31				⇑Sn	Sn	06 12 50.9	+0.5
	3.5nm,0.5s,baz=108,slow=24,SNR=3.5						
MK31				⇑Lg	Lg	06 13 11.2	
	9.2nm,0.6s,baz=128,slow=25,SNR=8.6						
DJR	Jarkent	5.07	281	Pg	Pg	06 12 25.8	-1.2
	5.1nm,0.7s						
DJR				Lg	Lg	06 13 33.2	
	3.8nm,0.7s						
DJR	Jarkent	5.07	281	eP	Pg	06 12 25.9	-1.2
	5.1nm,0.7s						
DJR				eS	Sg	06 13 33.2	+0.5
	3.8nm,0.7s						
PDGK	Podgornoye	5.28	270	⇑Sn	Sn	06 13 09.5	-0.5
	2.4nm,0.5s						
PDGK				⇓Lg	Lg	06 13 41.5	
	21nm,1.1s						
SHLS	Shalkode	5.32	268	Pg	Pb	06 12 23.4	+0.4
	5.1nm,0.9s						
SHLS				Lg	Lg	06 13 29.2	
	19nm,1.3s						
SHLS	Shalkode	5.32	268	eP	Pb	06 12 23.4	+0.4
	5.1nm,0.9s						
SHLS				eS	Sb	06 13 29.2	+2.2
	19nm,1.3s						
KAPS	Kapalarasan	5.56	290	Pg	Pg	06 12 34.4	-1.8
	1.3nm,0.2s						
KAPS				Lg	Lg	06 13 47.4	
	5.8nm,0.2s						
UZB	Uzynbulak	5.64	268	Pg	Pg	06 12 35.4	-2.5
	1.7nm,0.1s						
UZB				Lg	Lg	06 13 49.5	
	4.1nm,0.6s						
UZB	Uzynbulak	5.64	268	eP	Pg	06 12 35.4	-2.5
	1.7nm,0.1s						
UZB				eS	Sg	06 13 49.5	-1.5
	4.1nm,0.6s						
SATY	Saty	6.10	268	Pg	Pg	06 12 45.7	-1.0
	0.9nm,0.2s						
SATY				Lg	Lg	06 14 07.1	
	4.3nm,1.0s						
KURBB	Kurchatov Arra	8.99	324	⇓Sn	Sn	06 14 39.5	-1.5
	5.8nm,0.7s						
KURBB				⇑Lg	Lg	06 15 32.5	
	12nm,0.8s						
KURK	Kurchatov	9.03	325	⇓Sn	Sn	06 14 39.1	-2.6
	1.0nm,0.6s						
KURK				⇓Lg	Lg	06 15 33.2	
	2.8nm,0.8s						

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*AFAD **05** 06:12:27.5, 38.°49N×44.°51E, h6km±4km, ML2.4*
*AZER **05** 06:12:28.9, 38.°52N×44.°64E, h4km, ml2.6*
*ISK **05** 06:12:28.6, 38.°43N×44.°35E, h5km, ML2.5/5*
*TEH **05** 06:12:29.5, 38.°56N×44.°60E, h10km±990km, ML2.7, Presumed earthquake*
ISC 05 06:12:28.5±1.1**, 38.°48N**±0.°02×**44.°52E**±0.°02**, h5**km±10km**, n26,** σ**1.^{s}25**/43**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.45	294	P	Pg	06 12 36.7	-0.5
OZAP				S	Sg	06 12 43.4	+0.3
OZAP				IAML		06 12 46.0	
	comp=N,461nm,0.7s						
TVAN	Van	0.87	273	P	Pg	06 12 42.7	-2.5
TVAN				S	Sg	06 12 57.2	+0.6
TVAN				IAML		06 13 06.0	
	comp=N,129nm,0.5s						
TVAN				IAML		06 13 06.0	
	comp=E,127nm,0.4s						
MAKU	Maku	0.88	8	Pg	Pg	06 12 44.7	-0.8
ISHB	Shabestar	0.89	103	Pg	Pg	06 12 45.0	-0.5
VMUR	Van-Muradiye	0.90	305	P	Pg	06 12 45.0	-0.7
VMUR				S	Sb	06 13 00.3	+1.2
VMUR				IAML		06 13 01.0	
	comp=E,127nm,0.5s						
VMUR				IAML		06 13 01.0	
	comp=N,112nm,0.4s						
YOVA	Hakkari_Yksek	0.91	191	P	Pg	06 12 45.8	-0.1
YOVA				S	Sg	06 13 01.5	+3.7
YOVA				IAML		06 13 04.0	
	comp=E,137nm,0.7s						
YOVA				IAML		06 13 05.0	
	comp=N,126nm,0.4s						
IMRD	Marand	0.96	76	Pg	Pb	06 12 46.7	-1.0
NAX	Nakhchivan	1.03	48	P	Pn	06 12 48.8	-1.0
NAX				S	Sn	06 13 05.0	+0.3
HAKT	HAKKARI	1.12	215	P	Pb	06 12 49.0	-1.6
HAKT				S	Sb	06 13 06.2	+0.6
HAKT				IAML		06 13 08.0	
	comp=E,116nm,0.3s						
HAKT				IAML		06 13 09.0	
	comp=N,117nm,0.4s						
GEVA	Gevas	1.16	262	P	Pn	06 12 48.1	-3.5
GEVA				S	Sb	06 13 06.5	-0.1
GEVA				IAML		06 13 10.0	
	comp=E,96nm,0.4s						
GEVA				IAML		06 13 10.0	
	comp=N,54nm,0.3s						
AKDM	Akdamar-Van	1.22	263	Pn	Pn	06 12 49.9	-2.5
AKDM				Sn	Sb	06 13 06.7	-1.6
SBZ	Shahbuz	1.22	41	P	Pn	06 12 52.2	-0.2
SBZ				S	Sn	06 13 10.2	+0.8
ORD	Ordubad	1.24	68	P	Pn	06 12 52.8	+0.2
ORD				S	Sn	06 13 10.8	+1.1
DYDN	Diyadin	1.24	329	P	Pb	06 12 51.3	-1.3
DYDN				S	Sn	06 13 09.8	-0.3
DYDN				IAML		06 13 14.0	
	comp=N,106nm,0.6s						
DYDN				IAML		06 13 16.0	
	comp=E,55nm,0.4s						
HYR	Heyderabad	1.26	12	P	Pg	06 12 54.5	+1.8
HYR				S	Sn	06 13 13.0	+2.6
ITBZ	Tabriz	1.30	100	Pg	Pn	06 12 52.7	-0.9
IAZR	Azarshahr	1.41	124	Pg	Pg	06 12 56.3	+0.8
CUKT	Cukurca	1.43	211	Pn	Pn	06 12 55.0	-0.2
CUKT				Sn	Sn	06 13 14.1	-0.4
AGRB	Hanur-Agry	1.61	313	Pn	Pn	06 12 58.4	+0.5
AGRB				Sn	Sg	06 13 20.9	+0.5
DORK	Agr/Tutak/Do	1.63	304	P	Pn	06 12 57.6	-0.5
DORK				S	Sn	06 13 19.7	+0.2
DORK				IAML		06 13 27.0	
	comp=N,24nm,0.5s						
DORK				IAML		06 13 33.0	
	comp=E,24nm,0.8s						
PERV	Siirt/Pervari-	1.65	252	P	Pn	06 12 59.6	+1.3
PERV				S	Sn	06 13 22.0	+2.1
PERV				IAML		06 13 30.0	
	comp=N,77nm,0.5s						
PERV				IAML		06 13 31.0	
	comp=E,98nm,0.5s						
KOTA	Agri, Merkez-K	1.67	323	P	Pb	06 12 59.5	-0.4
KOTA				S	Sg	06 13 23.0	+0.9
KOTA				IAML		06 13 29.0	
	comp=E,14nm,0.5s						
GNI	Garni	1.68	6	Pn	Pg	06 13 01.1	+0.5
GURO	Guroymak-BITLI	1.95	273	Pn	Pn	06 13 02.7	+0.2
GDB	GEDABAY	2.43	23	P	Pb	06 13 12.8	-0.1
GDB				S	Sg	06 13 46.5	-0.2
YRD	Yardimli	2.94	80	P	Pb	06 13 19.0	-2.6
YRD				S	Sb	06 13 57.5	-0.5

IDC 05 06:21:15.6±2.2**, 5.°32S**×**129.°05E, h0**km**, mb3.6**/1**, mbtmp3.3**/3**, ML2.9**/2**, MS2.9**/2**, Error ellipse: s-maj=145.0km s-min=30.6km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	Baumata	7.21	227	LR	LR	06 26 16.4	
	comp=Z,81nm,20.3s,baz=258,slow=42						
FITZ	Fitzroy Crossi	13.13	194	LR	LR	06 30 17.9	
	comp=Z,54nm,18.5s,baz=116,slow=41						
WRA	Warramunga Arr	15.42	161	Pn	Pn	06 24 53.7	-1.0
	baz=339,slow=14,SNR=1.7						
	0.3nm,0.9s						
ASAR	Alice Springs	18.83	166	P	Pn	06 25 37.6	0.0
	0.1nm,0.3s,baz=351,slow=12,SNR=6.2						
	0.5nm,0.7s						
MKAR	Makanchi Array	66.31	327	P	P	06 32 06.0	0.0
	0.3nm,0.4s,baz=119,slow=6.3,SNR=6.3						
	0.3nm,0.4s						

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*SOF **05** 06:26:01.8, 41.°44N±0.°01×22.°64E±0.°01, h17km±2km, MD3.1/6*
*SKO **05** 06:26:01.4, 41.°43N×22.°62E, h15km, ML2.6*
*BEO **05** 06:26:01.2±0.5, 41.°39N×22.°55E, h1km±3km, ML2.6/4*
*ATH **05** 06:26:01.2, 41.°46N×22.°61E, h6km±2km, ML2.7/6, Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*THE **05** 06:26:02.2, 41°N±1°×2°3E±°, h3km±1km, M2.6/16, MLh2.6/16*
ISC 05 06:26:01.8±0.9**, 41.°43N**±0.°02×**22.°63E**±0.°02**, h11**km±7km**, n54,** σ**0.^{s}44**/92**, 1C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.12	202	⇑iPg	Pg	06 26 04.8	+0.1
VAY				eLg	Lg	06 26 07.0	
	comp=E,4μm,0.3s						
VAY				i Sg	Sg	06 26 07.0	+0.2
VAY				eLg	Lg	06 26 07.0	
	comp=N,12μm,0.2s						
KNT	Kendrikon	0.34	143	P	Pg	06 26 08.6	0.0
KNT				S	Sg	06 26 13.2	+0.2
KNT	Kendrikon	0.34	143	P	Pg	06 26 08.4	-0.1
KNT				S	Sg	06 26 13.4	+0.4
GRG	Griva	0.51	200	P	Pg	06 26 11.4	-0.2
GRG				S	Sg	06 26 18.7	+0.4
GRG	Griva	0.51	200	P	Pg	06 26 11.5	-0.2
GRG				S	Sg	06 26 18.1	-0.2
KKB	Krupnik	0.56	42	P	Pg	06 26 12.6	0.0
KKB				S	Sg	06 26 19.9	-0.1
KKB	Krupnik	0.56	42	i Pg	Pg	06 26 12.6	0.0
KKB				Sg	Sg	06 26 19.9	-0.1
SRS	Serrai	0.79	113	P	Pg	06 26 16.7	-0.4
SRS				S	Sg	06 26 27.0	-0.4
SRS	Serrai	0.79	113	ePg	Pg	06 26 16.7	-0.4
SRS				eSg	Sg	06 26 27.0	-0.4
SRS	Serrai	0.79	113	P	Pg	06 26 16.6	-0.4
SRS				S	Sg	06 26 27.2	-0.2
SOH	Sokhos	0.82	138	P	Pg	06 26 17.2	-0.4
SOH				S	Sg	06 26 28.3	0.0
SOH	Sokhos	0.82	138	P	Pg	06 26 17.4	-0.2
SOH				S	Sb	06 26 28.9	-0.3
THE	Thessaloniki	0.84	162	P	Pg	06 26 17.6	-0.3
THE				S	Sg	06 26 28.6	-0.3
THE	Thessaloniki	0.84	162	P	Pg	06 26 17.6	-0.3
THE				S	Sg	06 26 28.4	-0.5
MMB	Musomishta	0.85	82	P	Pg	06 26 17.9	-0.2
MMB				S	Sg	06 26 29.4	+0.1
MMB	Musomishta	0.85	82	i Pg	Pg	06 26 18.1	-0.1
MMB				Sg	Sg	06 26 29.3	0.0
HORT	Hortiatis	0.91	157	P	Pg	06 26 18.9	-0.4
HORT				S	Sb	06 26 31.7	-0.1
HORT	Hortiatis	0.91	157	P	Pg	06 26 19.2	-0.1
HORT				S	Sb	06 26 31.6	-0.1
NVR	Nevrokopi	0.93	95	P	Pg	06 26 19.4	-0.4
NVR				S	Sg	06 26 31.8	0.0
SKO	Skopje	1.04	302	i Pg	Pg	06 26 21.6	-0.2
BOSS	Bosilegrad	1.07	354	ePg	Pb	06 26 21.9	-0.5
BOSS				eSg	Sg	06 26 35.7	-0.6
PLG	Polygyros	1.23	149	P	Pn	06 26 24.4	-0.5
PLG				S	Sg	06 26 41.2	0.0
PLG	Polygyros	1.23	149	P	Pn	06 26 24.4	-0.5
VTS	Vitosha	1.27	21	P	Pn	06 26 25.0	-0.6
VTS				S	Sb	06 26 41.6	-0.6
VTS	Vitosha	1.27	21	i Pg	Pb	06 26 25.9	+0.1
VTS				Sg	Sb	06 26 42.2	0.0
VTS	Vitosha	1.27	21	ePg	Pn	06 26 25.8	+0.1
VTS				eSg	Sb	06 26 41.7	-0.5
KZN	Kozani	1.30	210	P	Pb	06 26 26.3	0.0
KZN	Kozani	1.30	210	P	Pb	06 26 26.2	0.0
LIT	Litokhoron	1.33	185	P	Pn	06 26 26.4	0.0
LIT				S	Sg	06 26 44.9	+0.2
LIT	Litokhoron	1.33	185	P	Pn	06 26 26.2	-0.2
LIT				S	Sg	06 26 44.5	-0.2
OHR	Ohrid	1.42	258	i Pg	Pb	06 26 28.3	+0.1
OHR				i Sg	Sg	06 26 47.8	+0.5
OHR				eLg	Lg	06 26 48.5	
	comp=N,26nm,0.3s						
OHR				eLg	Lg	06 26 49.2	
	comp=E,34nm,0.5s						
KAVA	Kavala	1.49	106	P	Pb	06 26 29.1	-0.4
KAVA				S	Sb	06 26 48.8	+0.4
OUR	Ouranopolis	1.50	136	P	Pn	06 26 29.2	+0.5
OUR				S	Sb	06 26 48.7	-0.1
OUR	Ouranopolis	1.50	136	P	Pn	06 26 29.1	+0.5
BARS	Barje	1.51	337	ePg	Pn	06 26 29.0	+0.2
BARS				eSg	Sg	06 26 50.0	-0.4
NEST	Nestorio	1.57	230	P	Pb	06 26 30.4	-0.6
NEST	Nestorio	1.57	230	P	Pn	06 26 30.2	+0.5
PGB	Panagyurishte	1.58	46	i P	Pg	06 26 31.9	-0.2
PGB				S	Sg	06 26 53.8	+1.2
RZN	Rozhen	1.60	80	P	Pb	06 26 31.7	+0.1
RZN				S	Sg	06 26 52.9	-0.5
RZN	Rozhen	1.60	80	ePg	Pg	06 26 32.7	+0.1
RZN				Sg	Sg	06 26 54.5	+1.1
PHP	Peshkopia	1.66	279	P	Pb	06 26 32.2	-0.2
PLD	Plovdiv	1.74	65	ePn	Pb	06 26 33.2	-0.5
PLD				eSn	Sb	06 26 56.3	+0.7
ZAPS	Zavoj	1.84	0	ePn	Pb	06 26 35.1	-0.4
ZAPS				eSn	Sg	06 27 00.0	-1.0
MPEP	Malo Peshtene	2.09	23	i P	Pb	06 26 39.5	-0.3
MPEP				S	Sg	06 27 09.7	+0.7
SELS	Selova	2.11	328	ePn	Pn	06 26 37.2	+0.1
BLKB	Belogradchik	2.19	1	ePn	Pn	06 26 39.0	+0.8
BLKB				eSn	Sn	06 27 06.4	+1.0
BLKB				eSg	Sg	06 27 10.9	-1.3
ZAGS	Zajecar	2.40	353	ePg	Pb	06 26 45.9	+0.9
GOCS	Kraljevo Serbi	2.49	329	ePn	Pn	06 26 42.8	+0.4
IVAS	Ivanjica	2.82	320	ePn	Pn	06 26 46.9	0.0
GRUS	Gruza	2.83	331	ePn	Pn	06 26 47.1	+0.1
TRUS	Trudelj	3.23	330	ePn	Pn	06 26 52.5	0.0
DIVS	Divibare	3.30	325	ePn	Pn	06 26 53.9	+0.4
MDVR	Moldovita	3.42	349	ePn	Pn	06 26 54.6	-0.5
TEKS	Tekeris	3.86	325	ePn	Pn	06 27 00.8	-0.3

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*ISK **05** 06:34:03.1, 38.°32N×44.°62E, h2km, ML2.6/6*
*AZER **05** 06:34:06.0, 38.°46N×44.°58E, h5km, ml2.7*
*AFAD **05** 06:34:06.1, 38.°47N×44.°51E, h7km±5km, ML2.4*
*TEH **05** 06:34:06.3, 38.°47N×44.°53E, h10km±471km, ML2.7, Presumed earthquake*
ISC 05 06:34:06.4±1.1**, 38.°44N**±0.°03×**44.°52E**±0.°02**, h7**km±10km**, n29,** σ**1.^{s}36**/48**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.47	298	P	Pg	06 34 14.7	-0.9
OZAP				S	Sg	06 34 22.9	+1.2
OZAP				IAML		06 34 26.0	
	comp=N,566nm,0.5s						
YOVA	Hakkari_Yksek	0.87	192	P	Pg	06 34 23.9	+0.8
YOVA				S	Sb	06 34 37.2	+1.3
YOVA				IAML		06 34 43.0	
	comp=E,117nm,0.4s						
YOVA				IAML		06 34 44.0	
	comp=N,87nm,0.6s						
ISHB	Shabestar	0.88	100	Pg	Pb	06 34 22.9	-1.2
TVAN	Van	0.88	276	P	Pg	06 34 21.0	-2.4
TVAN				S	Sg	06 34 35.2	+0.4
TVAN				IAML		06 34 46.0	
	comp=N,231nm,0.6s						
TVAN				IAML		06 34 50.0	
	comp=E,205nm,1.2s						
VANB	Van	0.90	280	Pg	Pg	06 34 22.7	-1.1
VANB				Sg	Sg	06 34 36.9	+1.4
MAKU	Maku	0.92	8	Pg	Pb	06 34 23.6	-1.3
VMUR	Van-Muradiye	0.93	307	P	Pg	06 34 23.4	-0.8
VMUR				S	Sb	06 34 37.4	-0.1
VMUR				IAML		06 34 40.0	
	comp=N,93nm,0.4s						
VMUR				IAML		06 34 41.0	
	comp=E,102nm,0.8s						
IMRD	Marand	0.97	73	Pg	Pn	06 34 25.4	-1.2
NAX	Nakhchivan	1.06	46	P	Pn	06 34 27.0	-0.8
NAX				S	Sn	06 34 43.3	+0.5
HAKT	HAKKARI	1.09	216	P	Pg	06 34 26.5	-0.8
HAKT				S	Sb	06 34 43.4	+1.1
HAKT				IAML		06 34 46.0	
	comp=N,83nm,0.5s						
HAKT				IAML		06 34 47.0	
	comp=E,82nm,0.5s						
GEVA	Gevas	1.16	264	P	Pg	06 34 26.5	-2.1
GEVA				S	Sg	06 34 44.5	+0.8
GEVA				IAML		06 34 48.0	
	comp=E,86nm,0.4s						
GEVA				IAML		06 34 49.0	
	comp=N,103nm,0.3s						
AKDM	Akdamar-Van	1.22	265	Pn	Pg	06 34 28.3	-1.5
AKDM				Sn	Sn	06 34 47.3	+0.4
SBZ	Shahbuz	1.25	40	P	Pn	06 34 30.3	-0.2
SBZ				S	Sn	06 34 47.8	+0.1
ORD	Ordubad	1.25	67	P	Pn	06 34 30.6	+0.1
ORD				S	Sn	06 34 48.9	+1.2
DYDN	Diyadin	1.28	330	P	Pb	06 34 30.7	-0.4
DYDN				S	Sn	06 34 49.1	+0.6
DYDN				IAML		06 34 54.0	
	comp=E,64nm,0.9s						
DYDN				IAML		06 34 55.0	
	comp=N,110nm,0.6s						
ITBZ	Tabriz	1.29	99	Pg	Pn	06 34 31.2	+0.1
HYR	Heyderabad	1.30	11	P	Pg	06 34 32.5	+1.0
HYR				S	Sn	06 34 50.0	+1.0
IAZR	Azarshahr	1.38	123	Pg	Pg	06 34 33.6	+0.7
CUKT	Cukurca	1.39	212	Pn	Pn	06 34 29.5	-2.9
ADCV	BITLIS_Adilcev	1.46	285	P	Pn	06 34 33.8	+0.4
ADCV				S	Sg	06 34 54.6	+1.4
ADCV				IAML		06 34 57.0	
	comp=E,35nm,0.5s						
ADCV				IAML		06 34 58.0	
	comp=N,54nm,0.7s						
PERV	Siirt/Pervari-	1.64	253	P	Pg	06 34 39.3	+1.5
PERV				S	Sg	06 35 03.3	+4.3
PERV				IAML		06 35 06.0	
	comp=N,145nm,0.5s						
PERV				IAML		06 35 07.0	
	comp=E,144nm,0.6s						
AGRB	Hanur-Agry	1.65	314	Pn	Pn	06 34 35.9	-0.1
DORK	Agr/Tutak/Do	1.66	305	P	Pb	06 34 36.8	-0.6
DORK				S	Sg	06 35 00.6	+1.0
DORK				IAML		06 35 08.0	
	comp=E,37nm,0.8s						
DORK				IAML		06 35 11.0	
	comp=N,47nm,0.9s						
KOTA	Agri, Merkez-K	1.70	323	P	Pb	06 34 37.9	-0.3
KOTA				S	Sg	06 35 02.8	+1.6
KOTA				IAML		06 35 07.0	
	comp=E,11nm,0.8s						
KOTA				IAML		06 35 08.0	
	comp=N,14nm,0.9s						
GNI	Garni	1.72	6	Pn	Pn	06 34 36.5	-0.4
GURO	Guroymak-BITLI	1.96	274	Pn	Pn	06 34 39.6	-0.6
GDB	GEDABAY	2.47	22	P	Pb	06 34 50.4	-0.8
GDB				S	Sg	06 35 25.4	-0.5
YRD	Yardimli	2.95	80	P	Pb	06 34 57.8	-1.7
YRD				S	Sb	06 35 36.5	+0.7
ASTR	Astara	3.35	87	P	Pb	06 35 03.3	-2.9

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*NNC **05** 06:37:57.4±5.4, 37.°16N×70.°95E, h144km±107km, mb2.7, mpv3.5, Error ellipse: s-maj=54.4km s-min=46.2km az=165.0*
ISC 05 06:37:53.7±3.7**, 36.°9N**±0.°2×**70.°9E**±0.°2**, h88**km**, n9,** σ**0.^{s}94**/11**, 3C, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
UCH	Uchtor	5.97	27	P	Pn	06 39 20.4	+0.5
	SNR=8.4						
EKS2	Erkin-Say	6.13	20	P	Pn	06 39 22.8	+1.1
	SNR=17						
KK31	Karatay Array	6.16	357	P	Pn	06 39 23.8	+1.7
	1.2nm,0.2s,baz=174,slow=12,SNR=26						
KK31				⇑S	Sn	06 40 30.4	-0.7
	1.3nm,0.2s,baz=184,slow=22,SNR=5.0						
AAK	Ala-Archa	6.33	25	P	Pn	06 39 25.2	+0.7
	SNR=15						
AAK	Ala-Archa	6.33	25	⇑P	Pn	06 39 25.1	+0.6
	1.9nm,0.4s						
AAK				⇑S	Sn	06 40 35.3	-0.1
	2.9nm,0.6s						
CHMS	Chumysh	6.73	25	P	Pn	06 39 30.7	+0.7
	SNR=6.9						
USP	Ospenovka	6.89	22	P	Pn	06 39 32.1	0.0
	SNR=5.2						
TKM2	Tokmak 2	6.97	30	P	Pn	06 39 33.7	+0.3
	SNR=6.8						
AB31	Akbulak array	14.66	331	P	Pn	06 41 15.5	-0.9
	0.3nm,0.3s,baz=137,slow=13,SNR=25						

IDC 05 06:45:29.3±11.0**, 32.°25S**×**137.°73E, h0**km**, mbtmp2.9**/2**, ML2.5**/2**, Error ellipse: s-maj=157.5km s-min=22.8km az=18.0, Near coast of South Australia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	3.30	85	Pg	Pb	06 46 29.6	+0.8
	0.2nm,0.3s,baz=268,slow=13,SNR=3.7						
STKA				Lg	Lg	06 47 14.2	
	0.7nm,0.3s,baz=330,slow=16,SNR=6.0						
ASAR	Alice Springs	9.19	337	Pn	Pn	06 47 44.1	+0.9
	0.1nm,0.3s,baz=166,slow=13,SNR=5.2						
	0.5nm,1.0s						
WRA	Warramunga Arr	12.63	345	Pn	Pn	06 48 29.1	-1.1
	baz=166,slow=11,SNR=1.6						
	0.2nm,0.6s						

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*IDC **05** 06:46:31.9±2.7, 5.°16N×125.°81E, h0km, mb3.2/3, mbtmp3.2/3, MS2.5/1, Error ellipse: s-maj=237.0km s-min=30.1km az=65.0*
ISC 05 06:46:36.8±1.3**, 5.°2N**±0.°1×**126.°4E**±0.°2**, h35**km**, n6,** σ**1.^{s}90**/7**, mb3.0**/3**, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.08	324	eP	Pn	06 46 54.4	-1.1
DDMP				eS	Sn	06 47 12.1	+2.8
BIPH	Bislig	2.94	0	eP	Pn	06 47 21.8	+0.8
BIPH				eS	Sn	06 47 54.4	-0.7
GUMO	Guam	20.05	64	LR	LR	06 58 17.8	
	comp=Z,14nm,22.0s,baz=91,slow=34						
WRA	Warramunga Arr	26.22	163	P	P	06 52 09.9	+1.3
	0.2nm,0.5s,baz=341,slow=10,SNR=4.7						
	0.2nm,0.5s						
ASAR	Alice Springs	29.65	166	P	P	06 52 39.7	+0.4
	0.1nm,0.4s,baz=346,slow=9.3,SNR=1.1						
	0.1nm,0.4s						
MKAR	Makanchi Array	56.12	325	P	P	06 56 11.3	-1.6
	0.1nm,0.3s,baz=126,slow=8.1,SNR=2.0						
	0.1nm,0.3s						

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*VAO **05** 06:57:37.8±0.5, 28.°47S×67.°79W, h108km±4km, mb5.5, Presumed earthquake*
*GFZ **05** 06:57:41.9, 28.°41S×67.°52W, h115km, MW5.4, Moment Tensor Solution. s59 Moment tensor: M_{rr}-1.79; $M_{\theta\theta}$0.17; $M_{\phi\phi}$1.62; $M_{r\theta}$0.28; $M_{\theta\phi}$-0.31; $M_{\phi r}$-0.17; Fault plane solution: NP1:ϕ_s175.00000°, δ41.00000°, λ-79.00000°. NP2:ϕ_s341.00000°, δ48.00000°, λ-99.00000°. Principal axes: T 1.7000, Plg3.0000°, Azm78.0000°; N 0.1300, Plg7.0000°, Azm347.0000°; P -1.8300, Plg82.0000°, Azm195.0000°;*
*NEIC **05** 06:57:41.4±2.1, 28.°42S±0.°04×67.°50W±0.°07, h106km±3km, mb5.3/593, Mww5.5/60, Mwr5.4(GUC) Error ellipse: s-maj=9.4km s-min=5.9km az=112.0*
*NEIC **05** 06:57:41, 28.°41S×67.°49W, h110km*
*NEIC **05** 06:57:41, 28.°41S×67.°60W, h110km, Moment Tensor Solution. Duration: 2.^{s}8 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.92; $M_{\theta\theta}$0.10; $M_{\phi\phi}$1.82; $M_{r\theta}$0.12; $M_{\theta\phi}$-0.46; $M_{\phi r}$-0.27; Fault plane solution: $M_0$1.95000×10^{17} NP1: ϕ_s167.40000°, δ40.75000°, λ-87.64000°. NP2: ϕ_s344.28000°, δ49.29000°, λ-92.04000°. Principal axes: T 1.9575, Plg4.0000°, Azm76.0000°; N -0.0145,*

Plg2.0000°, Azm346.0000°; P -1.9430, Plg85.0000°, Azm236.0000°;

*MOS **05** 06:57:41.1±0.9,28.°31S×67.°50W,h116km,mb5.3/20 Error ellipse: s-maj=10.4km s-min=6.5km az=94.3*

*SJA **05** 06:57:41.3±0.7,28.°37S×67.°57W,h150km±3km,ML5.5, MW5.3*

*IDC **05** 06:57:44.0±0.3,28.°32S×67.°48W,h134km±2km,mb4.9/18, mbtmp5.2/23,MS4.2/27,Error ellipse: s-maj=13.3km s-min=9.2km az=73.0*

*GUC **05** 06:57:44.6±0.6,28.°44S×67.°88W,h128km±4km,ML5.3*

*GCMT **05** 06:57:45.0±0.1,28.°36S±0.°01×67.°57W±0.°01,h145km, MW5.5/143,Moment Tensor Solution. s139,c243; s143,c264; Duration: 1.s3 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.96±.02; $M_{\theta\theta}$0.11±.02; $M_{\phi\phi}$1.84±.02; $M_{r\theta}$-0.05±.02; $M_{\theta\phi}$-0.34±.02; $M_{\phi r}$-0.48±.02; Best double couple: $M_0$1.99100×10^{17} NP1:ϕ_s165.00000°,δ38.00000°, λ-96.00000°. NP2:ϕ_s353.00000°,δ52.00000°, λ-85.00000°. Principal axes: T 1.9590, Plg7.0000°, Azm80.0000°; N 0.0560, Plg4.0000°, Azm170.0000°; P -2.0230, Plg82.0000°, Azm289.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 06:57:43.2±0.2**,28.°35S**±0.°02×**67.°61W**±0.°03**,h135**km±2km**, h135**km**:pP-P,n865,**σ**1.s58**/727**,mb5.3**/322**,39C-29D,La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TINO	**Tinogasta**	**0.29**	**7**	eP	**Pn**	**06 58 02.5**	**+0.4**
TINO				eS	**Sn**	**06 58 17.9**	**+1.6**
VCA	**Vinchina**	**0.65**	**234**	⇓iP	**Pn**	**06 58 04.0**	**+0.1**
VCA				eS	**Sn**	**06 58 18.4**	**-1.3**
VCA	**Vinchina**	**0.65**	**234**	eP	**Pn**	**06 58 04.0**	**+0.1**
AANI	**Anillaco**	**0.75**	**128**	eP	**Pn**	**06 58 04.7**	**+0.2**
AANI				eS	**Sn**	**06 58 21.9**	**+1.1**
AANI				IAML		06 58 32.8	
	comp=Z,186µm,1.0s						
ACLC	**CERRO LA CRUZ**	**1.21**	**152**	eP	**Pn**	**06 58 08.8**	**0.0**
ACLC				eS	**Sn**	**06 58 27.9**	**-0.4**
ACLC				IAML		06 58 30.0	
	comp=Z,16µm,0.8s						
AC02	**Maricunga**	**2.03**	**318**		**Pn**	**06 58 19.5**	**+1.3**
AC02				Sn	**Sn**	**06 58 46.6**	**+1.6**
AC02	**Maricunga**	**2.03**	**318**	⇑iP	**Pn**	**06 58 19.5**	**+1.3**
AC02				i S	**Sn**	**06 58 46.8**	**+1.7**
AC02				IAML		06 58 58.8	
	comp=E,6µm,0.2s						
AC02	**Maricunga**	**2.03**	**318**	eP	**Pn**	**06 58 18.8**	**+0.6**
AC02				eS	**Sn**	**06 58 50.8**	**+5.8**
ACDV	**Cuesta del Vie**	**2.24**	**216**	eP	**Pn**	**06 58 20.6**	**+0.1**
ACDV				eS	**Sn**	**06 58 49.8**	**+0.6**
ACDV				IAML		06 58 50.5	
	comp=Z,23µm,0.7s						
AVFE	**Valle Fertil**	**2.30**	**177**	eP	**Pn**	**06 58 20.7**	**-0.5**
AVFE				eS	**Sn**	**06 58 49.1**	**-1.3**
AVFE				IAML		06 58 52.0	
	comp=Z,12µm,0.5s						
AC05	**El Transito**	**2.40**	**258**		**Pn**	**06 58 22.9**	**+0.5**
AC05	**El Transito**	**2.40**	**258**	⇑iP	**Pn**	**06 58 22.7**	**+0.3**
AC05				eS	**Sn**	**06 58 52.2**	**-0.3**
AC05	**El Transito**	**2.40**	**258**	eP	**Pn**	**06 58 22.6**	**+0.3**
AC05				eS	**Sn**	**06 58 53.2**	**+0.7**
AC05				IAML		06 58 55.9	
	comp=Z,10µm,0.5s						
AROD	**Rodeo**	**2.44**	**222**	eP	**Pn**	**06 58 23.4**	**+0.3**
GO03	**Copiapo**	**2.44**	**287**		**Pn**	**06 58 22.9**	**-0.1**
GO03	**Copiapo**	**2.44**	**287**	⇑iP	**Pn**	**06 58 22.8**	**-0.1**
GO03				eS	**Sn**	**06 58 51.4**	**-2.1**
GO03				IAML		06 58 55.0	
	comp=E,31µm,0.7s						
GO03	**Copiapo**	**2.44**	**287**	eP	**Pn**	**06 58 22.8**	**-0.2**
GO03				eS	**Sn**	**06 58 53.6**	**+0.2**
GO03				IAML		06 58 56.1	
	comp=Z,8µm,0.5s						
AHML	**Horco Molle**	**2.55**	**53**	⇑iP	Pn	06 58 17.0	-7.3
AHML	**Horco Molle**	**2.55**	**53**	eP	Pn	06 58 17.0	-7.3
AHML				eS	**Sn**	**06 58 49.2**	**-6.7**
AHML				IAML		06 58 51.9	
	comp=Z,8µm,0.9s						
ACCO	**Cerro Coronel**	**2.57**	**209**	eP	**Pn**	**06 58 24.6**	**-0.1**
ACCO				eS	**Sn**	**06 58 56.9**	**+0.2**
AC06	**Mina Casimiro**	**2.63**	**292**		**Pn**	**06 58 24.6**	**-0.6**
AC06	**Mina Casimiro**	**2.63**	**292**	⇑iP	**Pn**	**06 58 24.6**	**-0.6**
AC06				i S	**Sn**	**06 58 55.1**	**-2.4**
AC06				IAML		06 58 59.8	
	comp=N,6µm,0.4s						
FSA	**Cafayete**	**2.66**	**33**	eP	**Pn**	**06 58 27.6**	**+1.8**
FSA				eS	**Sn**	**06 59 02.0**	**+3.4**
CO01	**Juntas del Tor**	**2.71**	**233**		**Pn**	**06 58 27.1**	**+0.6**
CO01	**Juntas del Tor**	**2.71**	**233**	⇑iP	**Pn**	**06 58 27.2**	**+0.6**
CO01	**Juntas del Tor**	**2.71**	**233**	eP	**Pn**	**06 58 26.5**	**0.0**
CO01				eS	**Sn**	**06 59 01.8**	**+1.9**
CO01				IAML		06 59 02.5	
	comp=Z,9µm,1.3s						
LCO	**Las Campanas**	**2.80**	**256**		**Pn**	**06 58 27.3**	**-0.3**
LCO	**Las Campanas**	**2.80**	**256**	P	**Pn**	**06 58 27.3**	**-0.3**
LCO	**Las Campanas**	**2.80**	**256**	eP	**Pn**	**06 58 26.5**	**-1.1**
LCO				eS	**Sn**	**06 59 01.0**	**-0.8**
LCO	**Las Campanas**	**2.80**	**256**	eP	**Pn**	**06 58 27.0**	**-0.6**
LCO				eS	**Sn**	**06 59 01.7**	**-0.1**
LCO				IAML		06 59 02.7	
	comp=Z,38µm,0.3s						
ACHE	**Chepes**	**2.92**	**164**	eP	**Pn**	**06 58 29.2**	**+0.1**
AC04	**Llanos de Chal**	**3.06**	**272**		**Pn**	**06 58 29.6**	**-1.2**
AC04	**Llanos de Chal**	**3.06**	**272**	⇑iP	**Pn**	**06 58 29.6**	**-1.2**
AC04				eS	**Sn**	**06 59 03.9**	**-3.6**
AC04				IAML		06 59 07.0	
	comp=E,11µm,0.4s						
AC04	**Llanos de Chal**	**3.06**	**272**	eP	**Pn**	**06 58 29.5**	**-1.2**
AC04				eS	**Sn**	**06 59 05.5**	**-2.0**
AC04				IAML		06 59 17.6	
	comp=Z,5µm,0.6s						
RTLL	**Cerro Villicun**	**3.06**	**194**	eP	**Pn**	**06 58 30.4**	**-0.4**
RTLL				eS	**Sn**	**06 59 06.1**	**-1.5**
RTLL				IAML		06 59 08.4	
	comp=Z,7µm,0.7s						
SJA	**San Juan**	**3.27**	**194**	eP	**Pn**	**06 58 33.6**	**+0.1**
SJA				eS	**Sn**	**06 59 12.6**	**+0.1**
SJA				IAML		06 59 15.3	
	comp=Z,5µm,0.3s						
CFA	**Coronel Fontan**	**3.29**	**189**	P	**Pn**	**06 58 33.5**	**-0.3**
	comp=Z,366nm,0.3s,baz=34,slow=17,SNR=4544						
CFA				S	**Sn**	**06 59 10.3**	**-2.5**
	comp=Z,4µm,0.3s,baz=31,slow=16,SNR=25						
CFA	**Coronel Fontan**	**3.29**	**189**	eP	**Pn**	**06 58 33.0**	**-0.7**
CFA				eS	**Sn**	**06 59 10.6**	**-2.3**
CFA				IAML		06 59 11.8	
	comp=Z,8µm,0.3s						
ZON	**Zonda**	**3.32**	**196**		**Pn**	**06 58 33.8**	**-0.3**
ZON	**Zonda**	**3.32**	**196**	P	**Pn**	**06 58 33.8**	**-0.3**
ZON	**Zonda**	**3.32**	**196**	eP	**Pn**	**06 58 33.6**	**-0.5**
ZON				eS	**Sn**	**06 59 12.0**	**-1.5**
ZON				IAML		06 59 18.0	
	comp=Z,6µm,0.8s						
GO04	**Tololo Observa**	**3.33**	**236**		**Pn**	**06 58 33.8**	**-0.6**
GO04	**Tololo Observa**	**3.33**	**236**	⇑iP	**Pn**	**06 58 33.4**	**-1.0**
GO04				eS	**Sn**	**06 59 09.5**	**-4.5**
GO04	**Tololo Observa**	**3.33**	**236**	eP	**Pn**	**06 58 33.5**	**-0.9**
GO04				eS	**Sn**	**06 59 14.7**	**+0.6**
GO04				IAML		06 59 21.7	
	comp=Z,23µm,0.8s						
AC01	**Pan de Azucar**	**3.45**	**309**		**Pn**	**06 58 35.3**	**-0.6**
AC01	**Pan de Azucar**	**3.45**	**309**	⇑iP	**Pn**	**06 58 35.3**	**-0.6**
AC01				i S	**Sn**	**06 59 11.2**	**-5.4**
AC01				IAML		06 59 22.0	
	comp=N,7µm,0.5s						
AC01	**Pan de Azucar**	**3.45**	**309**	eP	**Pn**	**06 58 35.3**	**-0.6**
AC01				eS	**Sn**	**06 59 13.9**	**-2.7**
AC01				IAML		06 59 20.8	
	comp=Z,6µm,0.5s						
CO05	**La Serena**	**3.54**	**243**		**Pn**	**06 58 35.0**	**-2.0**
CO05	**La Serena**	**3.54**	**243**	eP	**Pn**	**06 58 34.7**	**-2.3**
CO05				i S	**Sn**	**06 59 12.6**	**-6.0**
GO02	**Mina Guanaco**	**3.64**	**330**		**Pn**	**06 58 39.7**	**+1.1**
GO02	**Mina Guanaco**	**3.64**	**330**	⇑iP	**Pn**	**06 58 39.1**	**+0.5**
GO02				eS	**Sn**	**06 59 19.0**	**-2.4**
CO03	**El Pedregal**	**3.65**	**227**		**Pn**	**06 58 38.0**	**-0.6**
CO03	**El Pedregal**	**3.65**	**227**	⇑iP	**Pn**	**06 58 37.4**	**-1.2**
CO03	**El Pedregal**	**3.65**	**227**	eS	**Sn**	**06 59 21.3**	**-0.2**
CO03				IAML		06 59 23.3	
	comp=Z,7µm,0.2s						
RTLS	**Leoncito**	**3.73**	**203**	eS	**Sn**	**06 59 23.2**	**-0.5**
RTLS				IAML		06 59 36.9	
	comp=Z,12µm,0.9s						
TCA	**Tanti**	**3.96**	**139**	⇑iP	**Pn**	**06 58 41.7**	**-1.0**
SLA	**San Lorenzo**	**4.08**	**28**	⇑iP	**Pn**	**06 58 46.0**	**+1.8**
CO02	**Combarbal**	**4.10**	**225**		**Pn**	**06 58 42.9**	**-1.6**
CO02	**Combarbal**	**4.10**	**225**	⇑iP	**Pn**	**06 58 42.5**	**-2.0**
SALTA		**4.26**	**16**	⇑iP	**Pn**	**06 58 49.3**	**+2.2**
PB14	**IPOC Station P**	**4.48**	**325**		**Pn**	**06 58 49.9**	**+0.2**
PB14	**IPOC Station P**	**4.48**	**325**	eP	**Pn**	**06 58 49.3**	**-0.4**
PB14				eS	**Sn**	**06 59 40.0**	**-1.3**
PB14	**IPOC Station P**	**4.48**	**325**	eS	**Sn**	**06 59 38.7**	**-2.6**
PB14				IAML		06 59 45.6	
	comp=Z,6µm,1.1s						
CO04	**Los Peladeros**	**4.70**	**218**		**Pn**	**06 58 50.5**	**-2.1**
VA03	**San Esteban**	**5.08**	**209**		**Pn**	**06 58 56.1**	**-1.3**
VA03	**San Esteban**	**5.08**	**209**	eP	**Pn**	**06 58 56.0**	**-1.5**
VA03	**San Esteban**	**5.08**	**209**	eS	**Sn**	**06 59 55.6**	**+0.3**
VA03				IAML		07 00 32.9	
	comp=Z,6µm,1.1s						
VA06	**Catapilco**	**5.27**	**216**		**Pn**	**06 58 56.6**	**-3.2**
VA06	**Catapilco**	**5.27**	**216**	eP	**Pn**	**06 58 56.7**	**-3.2**
AF01	**San Pedro de A**	**5.40**	**354**		**Pn**	**06 59 03.8**	**+1.7**
ROCH	**El Roble**	**5.46**	**212**	eP	**Pn**	**06 58 59.8**	**-2.9**
PEL	**Peldehue**	**5.46**	**208**		**Pn**	**06 59 00.4**	**-2.2**
PEL	**Peldehue**	**5.46**	**208**	P	**Pn**	**06 59 00.4**	**-2.2**
PEL	**Peldehue**	**5.46**	**208**	eP	**Pn**	**06 59 00.1**	**-2.4**
MT08	**Bocatoma Ro**	**5.48**	**202**		**Pn**	**06 59 02.3**	**-0.7**
MT08	**Bocatoma Ro**	**5.48**	**202**	eP	**Pn**	**06 59 02.1**	**-0.9**
MT04	**Ro Olivares**	**5.49**	**203**	eP	**Pn**	**06 59 02.5**	**-0.6**
MT10	**Hacienda Santa**	**5.51**	**206**	eP	**Pn**	**06 59 01.8**	**-1.6**
MT14	**Cerro Cal¡n**	**5.62**	**206**	eP	**Pn**	**06 59 03.0**	**-1.8**
MT16	**CCHEN**	**5.65**	**206**		**Pn**	**06 59 03.4**	**-1.6**
MT16	**CCHEN**	**5.65**	**206**	eP	**Pn**	**06 59 03.3**	**-1.8**
MT03	**Universidad Ad**	**5.70**	**205**		**Pn**	**06 59 03.8**	**-2.0**
MT05	**Renca**	**5.70**	**207**		**Pn**	**06 59 03.4**	**-2.4**
MT05	**Renca**	**5.70**	**207**	eP	**Pn**	**06 59 03.3**	**-2.4**
MT02	**Curacav**	**5.76**	**211**		**Pn**	**06 59 02.9**	**-3.6**
MT02	**Curacav**	**5.76**	**211**	eP	**Pn**	**06 59 02.8**	**-3.7**
VA01	**Torpederas**	**5.81**	**216**		**Pn**	**06 59 03.1**	**-4.1**
VA01	**Torpederas**	**5.81**	**216**	eP	**Pn**	**06 59 02.9**	**-4.3**
MT13	**San Alfonso**	**5.85**	**202**		**Pn**	**06 59 06.5**	**-1.3**
PB06	**IPOC Station P**	**5.89**	**342**		**Pn**	**06 59 08.2**	**-0.3**
MT09	**Talagante**	**6.14**	**207**		**Pn**	**06 59 08.2**	**-3.5**
BO04	**La Punta**	**6.18**	**204**		**Pn**	**06 59 09.7**	**-2.5**
MT01	**Popeta**	**6.32**	**209**		**Pn**	**06 59 09.9**	**-4.1**
PB03	**IPOC Station P**	**6.57**	**342**		**Pn**	**06 59 16.0**	**-1.6**
PB09	**IPOC Station P**	**6.69**	**347**		**Pn**	**06 59 19.1**	**-0.2**
BO01	**Tunca**	**6.72**	**205**		**Pn**	**06 59 15.0**	**-4.3**
PB07	**IPOC Station P**	**6.91**	**342**		**Pn**	**06 59 20.4**	**-1.8**
BO02	**Sierra Bellavi**	**6.97**	**202**		**Pn**	**06 59 20.2**	**-2.6**
PB02	**IPOC Station P**	**7.30**	**343**		**Pn**	**06 59 25.7**	**-1.7**
GO05	**Hualane**	**7.59**	**208**		**Pn**	**06 59 26.5**	**-4.6**
PATCX	**Punta Patache**	**7.85**	**342**		**Pn**	**06 59 31.7**	**-3.0**
BI02	**San Fabin de**	**8.85**	**200**		**Pn**	**06 59 43.9**	**-4.1**
PSAL	**Palomas, Salto**	**9.11**	**110**	eP	**Pn**	**06 59 47.6**	**-3.9**
CPUP	**Villa Florida**	**9.36**	**80**	P	**Pn**	**06 59 52.5**	**-2.3**
	comp=Z,73nm,0.6s,baz=261,slow=13,SNR=119						
CPUP	**Villa Florida**	**9.36**	**80**		**Pn**	**06 59 51.8**	**-3.0**
CPUP	**Villa Florida**	**9.36**	**80**	P	**Pn**	**06 59 51.8**	**-3.0**
PB12	**IPOC Station P**	**10.01**	**345**		**Pn**	**07 00 00.4**	**-3.3**
PB16	**IPOC Station P**	**10.12**	**350**		**Pn**	**07 00 04.7**	**-1.0**
TRQA	**Tornquist**	**10.76**	**156**		**Pn**	**07 00 12.1**	**-1.5**
TRQA	**Tornquist**	**10.76**	**156**	P	**Pn**	**07 00 12.1**	**-1.5**
H03N1	**Juan Fernandez**	**10.95**	**240**	P	**Pn**	**07 00 13.0**	**-2.9**
	baz=114,slow=18,SNR=238						
H03N1				S	Sn	07 02 05.8	-11
H03N2	**Juan Fernandez**	**10.97**	**240**	P	**Pn**	**07 00 13.3**	**-2.8**
	baz=114,slow=18,SNR=185						
H03N2				S	Sn	07 02 05.9	-11
	SNR=4.5						
H03N3	**Juan Fernandez**	**10.97**	**240**	P	**Pn**	**07 00 13.2**	**-2.9**
	baz=114,slow=18,SNR=192						
H03N3				S	Sn	07 02 05.9	-11
VA04	**Juan Fernndez**	**10.98**	**239**		**Pn**	**07 00 12.8**	**-3.6**
H03S3	**Juan Fernandez**	**11.12**	**238**	P	**Pn**	**07 00 14.5**	**-3.5**
	baz=36,slow=18,SNR=18						
H03S3				S	Sn	07 02 10.1	-10
H03S1	**Juan Fernandez**	**11.12**	**238**	P	**Pn**	**07 00 14.3**	**-3.7**
	baz=36,slow=18,SNR=15						
H03S1				S	Sn	07 02 09.7	-11
H03S2	**Juan Fernandez**	**11.13**	**238**	P	**Pn**	**07 00 14.4**	**-3.9**
	baz=36,slow=18,SNR=17						
H03S2				S	Sn	07 02 10.0	-11
MURT	**Porto Murtinho**	**11.25**	**56**	eP	**Pn**	**07 00 18.7**	**-1.3**
LPAZ	**La Paz**	**12.02**	**358**	P	**Pn**	**07 00 29.9**	**-0.8**
	comp=Z,7.9nm,0.3s,baz=125,slow=3.5,SNR=55						
LPAZ				LR	LR	07 05 52.7	
	comp=Z,3µm,20.9s,baz=158,slow=41						
LPAZ	**La Paz**	**12.02**	**358**		**Pn**	**07 00 30.0**	**-0.8**
LPAZ	**La Paz**	**12.02**	**358**	P	**Pn**	**07 00 29.7**	**-1.1**
	comp=Z,3µmcomp=Z,689nmcomp=Z,57nm,0.9s						
LPAZ	**La Paz**	**12.02**	**358**	eP	**Pn**	**07 00 27.1**	**-3.6**
LR04	**Corral**	**12.46**	**201**		Pn	07 00 29.5	-6.3
CPSB	**Cacapava Do Su**	**12.52**	**103**	eP	**Pn**	**07 00 33.5**	**-3.2**
PLCA	**Paso Flores**	**12.59**	**190**	P	**Pn**	**07 00 34.8**	**-2.7**
	comp=Z,22nm,1.2s,baz=13,slow=11,SNR=28						
PLCA				LR	LR	07 06 00.0	
	comp=Z,1µm,18.4s,baz=1.0,slow=39						
PLCA	**Paso Flores**	**12.59**	**190**		**Pn**	**07 00 34.1**	**-3.4**
PLCA	**Paso Flores**	**12.59**	**190**	P	**Pn**	**07 00 34.1**	**-3.4**
PLCA	**Paso Flores**	**12.59**	**190**	eP	Pn	07 00 32.2	-5.3
AMBA	**Amambai (Brazi**	**12.59**	**67**	eP	**Pn**	**07 00 36.7**	**-1.0**
PLTB	**Pedras Altas**	**12.60**	**109**		**Pn**	**07 00 34.4**	**-3.3**
PLTB	**Pedras Altas**	**12.60**	**109**	eP	**Pn**	**07 00 33.8**	**-3.9**
BDQN	**Bodoquena, MS**	**12.63**	**54**	eP	**Pn**	**07 00 36.1**	**-2.1**
AQDB	**Aquidauana**	**13.38**	**57**		**Pn**	**07 00 46.1**	**-1.7**
AQDB	**Aquidauana**	**13.38**	**57**	eP	**Pn**	**07 00 44.9**	**-2.9**
SIV	**San Ignacio**	**13.70**	**28**	P	**Pn**	**07 00 50.1**	**-2.0**
	comp=Z,53nm,0.7s,baz=205,slow=13						
SIV				LR	LR	07 06 58.6	
	comp=Z,1µm,19.6s,baz=238,slow=41						
ITAB	**Concordia**	**13.74**	**89**		**Pn**	**07 00 50.3**	**-2.2**
ITAB	**Concordia**	**13.74**	**89**	eP	**Pn**	**07 00 50.1**	**-2.3**
PTGB	**Pitanga**	**14.37**	**79**	eP	**Pn**	**07 00 58.7**	**-1.8**
TRCB	**Terra Rica**	**14.60**	**71**	eP	**Pn**	**07 01 01.8**	**-1.6**
CNLB	**Canela**	**14.72**	**98**	eP	**Pn**	**07 01 02.3**	**-2.6**
PTLB	**Pontes e Lacer**	**15.04**	**33**		**Pn**	**07 01 07.4**	**-1.6**
PTLB	**Pontes e Lacer**	**15.04**	**33**	eP	**Pn**	**07 01 06.8**	**-2.1**
LL02	**Futaleuf**	**15.20**	**192**		**Pn**	**07 01 08.5**	**-2.1**
LDASE	**Londrina, Braz**	**15.64**	**75**	eP	**Pn**	**07 01 13.9**	**-2.4**
PP1B	**Ponte de Pedra**	**15.86**	**50**	eP	**Pn**	**07 01 17.6**	**-1.4**
PP1B				eS	**S**	**07 04 21.1**	**+3.2**
MAJ01	**Sao Joao Batis**	**16.47**	**91**	eP	**Pn**	**07 01 23.9**	**-2.6**
C2SB	**Chapadao do Su**	**16.55**	**58**	eP	**Pn**	**07 01 26.5**	**-1.0**
SALV	**Santo Antonio**	**16.58**	**44**	eP	**Pn**	**07 01 25.7**	**-2.2**
VILB	**Vilhena**	**16.81**	**26**	P	**P**	**07 01 28.8**	**-1.7**
VILB	**Vilhena**	**16.81**	**26**	eP	**P**	**07 01 28.1**	**-2.4**
FRTB	**Fartura**	**16.98**	**77**	eP	**P**	**07 01 29.7**	**-2.8**
COYC	**Coyhaique**	**17.55**	**190**	P	**P**	**07 01 37.3**	**-1.1**
ITRB	**Iturama**	**17.94**	**65**	eP	**P**	**07 01 41.8**	**-1.2**
NNA	**Nana**	**18.43**	**330**	P	**P**	**07 01 48.9**	**+0.6**
	comp=Z,7.5nm,0.5s,baz=170,slow=11,SNR=8.3						
NNA	**Nana**	**18.43**	**330**	P	**P**	**07 01 49.1**	**+0.7**
NNA	**Nana**	**18.43**	**330**	⇓iP	**Pn**	**07 01 50.7**	**+0.6**
NNA				pmax	pmax		
	comp=Z,41nm,1.4s						
NNA	**Nana**	**18.43**	**330**	P	**Pn**	**07 01 50.1**	**0.0**
	comp=Z,1µmcomp=Z,34nm,0.8s						
PET01	**Itanhaem-SP**	**18.66**	**82**	eP	**P**	**07 01 49.9**	**-0.9**
SPB	**Sao Paulo**	**18.74**	**80**	P	**P**	**07 01 50.2**	**-1.4**
SPB	**Sao Paulo**	**18.74**	**80**	eP	**P**	**07 01 51.0**	**-0.6**
BB19B	**Bebedouro**	**18.78**	**72**	eP	**P**	**07 01 51.1**	**-1.0**
RCLB	**Rio Claro- Sao**	**19.07**	**76**	eP	**P**	**07 01 53.9**	**-1.4**
ARAG	**Araguaiana, MT**	**19.28**	**53**	eP	**P**	**07 01 55.1**	**-2.5**
VAO	**Valinhos**	**19.34**	**79**	P	**P**	**07 01 57.4**	**-0.9**
VAO	**Valinhos**	**19.34**	**79**	eP	**P**	**07 01 57.2**	**-1.1**
PDRB	**Porto dos Gac**	**19.52**	**34**	eP	**P**	**07 01 58.1**	**-2.0**
PARB	**Paraibuna**	**20.40**	**81**	eP	**P**	**07 02 08.3**	**-1.4**
GO08	**Villa O'Higgin**	**20.45**	**189**	P	**P**	**07 02 11.3**	**+1.5**
IPMB	**Ipameri, GO**	**20.57**	**64**	eP	**P**	**07 02 09.8**	**-1.8**
CLDB	**Colider**	**20.61**	**35**	eP	**P**	**07 02 09.6**	**-2.4**
BSCB	**Bom Sucesso**	**21.98**	**76**	eP	**P**	**07 02 23.9**	**-2.6**
BDFB	**Brasilia**	**22.09**	**59**	P	**P**	**07 02 25.7**	**-2.1**
	comp=Z,29nm,0.3s,baz=221,slow=9.5,SNR=63						
BDFB				LR	LR	07 12 01.8	
	comp=Z,1µm,20.6s,baz=263,slow=39						
	comp=Z,29nm,0.3s						
BDFB	**Brasilia**	**22.09**	**59**	P	**P**	**07 02 25.9**	**-1.9**
BDFB	**Brasilia**	**22.09**	**59**	P	**P**	**07 02 25.9**	**-1.9**
SNDB	**Serra Nova Dou**	**22.31**	**46**	eP	**P**	**07 02 26.8**	**-3.1**
ATAH	**Atahualpa**	**23.44**	**332**	P	**P**	**07 02 41.5**	**+0.6**
	comp=Z,7.2nm,0.6s,baz=179,slow=14,SNR=7.9						
ATAH				PcP	**PcP**	**07 06 24.9**	**+1.5**
	comp=Z,9.8nm,0.9s,baz=144,slow=3.1,SNR=3.9						
	comp=Z,7.2nm,0.6s						
MG05	**Puerto Natales**	**23.59**	**188**	P	**P**	**07 02 41.4**	**-0.1**
DUB01	**Friburgo-RJ**	**23.64**	**80**	eP	**P**	**07 02 41.7**	**-0.6**
DIAM	**Diamantina, MG**	**24.11**	**71**	eP	**P**	**07 02 46.1**	**-0.6**
NPGB	**Novo Progresso**	**24.15**	**31**	eP	**P**	**07 02 44.4**	**-2.6**
CAM01	**Campos-RJ**	**24.35**	**80**	eP	**P**	**07 02 47.9**	**-0.8**
EFI	**East Falkland**	**24.37**	**166**	P	**P**	**07 02 48.3**	**-0.3**
EFI	**East Falkland**	**24.37**	**166**	d iP	**P**	**07 02 48.1**	**-0.5**
EFI				pmax	pmax		
	comp=Z,142nm,1.1s						
TEFE	**Tefe**	**24.87**	**7**	eP	**P**	**07 02 51.1**	**-2.3**
JANB	**Januaria**	**25.30**	**63**	eP	**P**	**07 02 55.7**	**-1.8**
MG03	**Isla Dawson**	**25.56**	**184**	P	**P**	**07 02 59.2**	**-0.1**
MG03				IAmb	IAmb	07 03 00.4	
	comp=Z,123nm,0.8s						
ALF01	**Guarapari-ES**	**25.61**	**78**	eP	**P**	**07 02 59.4**	**-0.7**
MACA	**Manacapuru-AM**	**25.91**	**16**		**P**	**07 03 03.1**	**+0.3**
MACA	**Manacapuru-AM**	**25.91**	**16**	eP	**P**	**07 03 01.9**	**-0.9**
SJMB	**Sao Joao De Ma**	**26.01**	**74**	eP	**P**	**07 03 02.7**	**-1.1**
ITTB	**Itaituba**	**26.39**	**27**	eP	**P**	**07 03 05.7**	**-1.4**
RIB01	**Linhares ES**	**26.42**	**76**	eP	**P**	**07 03 06.3**	**-1.2**
SDBA	**SAO DESIDERIO**	**26.47**	**58**	eP	**P**	**07 03 06.3**	**-1.6**
MG01	**Puerto William**	**26.56**	**180**	IAmb	IAmb	07 03 09.4	
	comp=Z,228nm,1.8s						
MCRA	**Macar, Loja**	**26.59**	**332**	P	**P**	**07 03 09.7**	**+0.7**
	comp=Z,24nm,1.1s						
SMTB	**Santa Maria do**	**27.04**	**48**	eP	**P**	**07 03 11.4**	**-1.6**
SGC2	**Sao Gabriel da**	**28.05**	**1**	P	**P**	**07 03 21.2**	**-0.7**
	comp=Z,1µmcomp=Z,1µmcomp=Z,90nm,1.1s						
GUA01	**Guaratinga, BA**	**28.16**	**71**	eP	**P**	**07 03 21.7**	**-1.3**
CMC01	**Camacan, BA**	**29.01**	**69**	eP	**P**	**07 03 27.8**	**-2.7**
PTLC	**Puerto Leguiza**	**29.19**	**345**	P	**P**	**07 03 29.9**	**-2.2**
NBIT	**Itapeh - BA**	**29.30**	**69**	eP	**P**	**07 03 31.8**	**-1.3**
SLOR	**San Lorenzo -**	**29.38**	**337**	P	**P**	**07 03 35.0**	**+0.7**
CASC	**Dorado de Casc**	**29.82**	**340**	P	**P**	**07 03 40.5**	**+2.7**
	comp=Z,2µmcomp=Z,98nm,1.1s						
BONI	**La Bonita**	**30.18**	**340**	P	**P**	**07 03 43.3**	**+2.2**
	comp=Z,23nm,1.0s						
OTAV	**Otavalo**	**30.27**	**338**	P	**P**	**07 03 42.5**	**+0.4**
OTAV	**Otavalo**	**30.27**	**338**	P	**P**	**07 03 42.5**	**+0.4**
OTAV				pmax	pmax		
	comp=Z,11nm,0.9s						
OTAV	**Otavalo**	**30.27**	**338**	P	**P**	**07 03 44.3**	**+2.2**
	comp=Z,12nm,1.1s						
OTAV	**Otavalo**	**30.27**	**338**	eP	**P**	**07 03 40.2**	**-1.9**
PAC1	**Pacto, Paraso**	**30.41**	**337**	P	**P**	**07 03 45.3**	**+2.3**
	comp=Z,693nmcomp=Z,48nm,0.5s						
FLOC	**Florencia**	**30.75**	**344**	P	**P**	**07 03 47.6**	**+1.7**
	comp=Z,1µmcomp=Z,25nm,0.6s						
GCUF	**Volcan Galeras**	**30.86**	**341**	P	**P**	**07 03 50.5**	**+3.1**
MACC	**Macarena, Meta**	**30.91**	**348**	P	**P**	**07 03 46.8**	**-0.5**
	comp=Z,322nmcomp=Z,12nm,0.9s						
GARC	**Garzon, Huila**	**31.30**	**345**	P	**P**	**07 03 53.5**	**+2.6**
	comp=Z,919nmcomp=Z,38nm,1.1s						
BOAV	**Boa Vista**	**31.32**	**14**	P	**P**	**07 03 51.3**	**+0.5**
BOAV	**Boa Vista**	**31.32**	**14**	P	**P**	**07 03 51.3**	**+0.5**
BOAV	**Boa Vista**	**31.32**	**14**	eP	**P**	**07 03 50.2**	**-0.7**
BBAC	**Balboa, Cauca**	**31.59**	**341**	P	**P**	**07 03 55.6**	**+2.1**
	comp=Z,947nmcomp=Z,51nm,1.1s						
POPC	**Popayan, Colom**	**31.93**	**343**	P	**P**	**07 03 58.6**	**+2.1**
	comp=Z,862nmcomp=Z,50nm,1.1s						
URMC	**La Uribe, Meta**	**32.09**	**347**	P	**P**	**07 03 58.3**	**+0.6**
	comp=Z,451nmcomp=Z,18nm,0.8s						
JAMC	**Jamundi, Valle**	**32.57**	**343**	P	**P**	**07 04 03.3**	**+1.2**
	comp=Z,675nmcomp=Z,20nm,1.0s						
PRAC	**Prado**	**32.64**	**346**	P	**P**	**07 04 02.9**	**+0.4**
	comp=Z,15nm,0.9s						
GR1C	**Gorgona, Isla**	**32.79**	**340**	P	**P**	**07 04 05.6**	**+1.9**
YOTC	**Yotoco, Valle**	**33.23**	**344**	P	**P**	**07 04 08.2**	**+0.5**
	comp=Z,578nmcomp=Z,36nm,0.8s						
ROSC	**El Rosal**	**33.63**	**348**	P	**P**	**07 04 11.8**	**+0.4**
	comp=Z,11nm,0.5s,baz=152,slow=13,SNR=5.3						
	comp=Z,11nm,0.5s						
ROSC	**El Rosal**	**33.63**	**348**	P	**P**	**07 04 11.1**	**-0.3**
	comp=Z,17nm,0.7s						
PLMC	**San Jos del P**	**34.10**	**344**	P	**P**	**07 04 16.2**	**+1.0**
	comp=Z,751nmcomp=Z,57nm,0.9s						
GUY2C	**Guyana, Caldas**	**34.21**	**346**	P	**P**	**07 04 17.6**	**+1.1**
	comp=Z,628nmcomp=Z,25nm,1.0s						
SPBC	**San Pablo de B**	**34.38**	**349**	P	**P**	**07 04 17.1**	**-0.4**
	comp=Z,26nm,0.8s						
HOPE	**Hope Point**	**34.40**	**148**	P	**P**	**07 04 16.4**	**-0.8**
HOPE	**Hope Point**	**34.40**	**148**	P	**P**	**07 04 16.4**	**-0.8**
HOPE				pmax	pmax		
	comp=Z,324nm,1.8s						
NBPS	**Pedro II - PI**	**34.44**	**51**	eP	**P**	**07 04 16.4**	**-1.8**
RUSC	**La Rusia**	**34.45**	**350**	P	**P**	**07 04 18.9**	**+0.3**
	comp=Z,1µmcomp=Z,83nm,1.0s						
CBOC	**Ciudad Bolivar**	**34.97**	**345**	P	**P**	**07 04 23.4**	**+0.7**
	comp=Z,984nmcomp=Z,91nm,1.0s						
BARC	**Barichara**	**35.15**	**350**	P	**P**	**07 04 23.2**	**-1.2**
	comp=Z,30nm,0.9s						
PTBC	**PUERTO BERRIO,**	**35.31**	**348**	P	**P**	**07 04 23.7**	**-1.8**
BRJC	**Barrancabermej**	**35.61**	**349**	P	**P**	**07 04 26.2**	**-1.9**
PAMC	**Pamplona, Colo**	**35.82**	**351**	P	**P**	**07 04 29.4**	**-1.0**
	comp=Z,517nmcomp=Z,27nm,0.5s						
DBBC	**Dabeiba**	**36.13**	**345**	P	**P**	**07 04 34.0**	**+1.4**
MPGF	**Montagnes des**	**36.26**	**26**	P	**P**	**07 04 32.1**	**-1.5**
MPGF				x	x	07 05 00.5	
MPGF				pP	**pP**	**07 05 02.7**	**-0.9**
MPGF				PcP	**PcP**	**07 06 57.2**	**+1.4**
PMSA	**Palmer Station**	**36.51**	**177**		**P**	**07 04 35.1**	**+0.1**
PMSA	**Palmer Station**	**36.51**	**177**	eP	**P**	**07 04 31.7**	**-3.3**
NBPA	**Parau_RN**	**36.61**	**58**	eP	**P**	**07 04 34.8**	**-1.8**
UREC	**San Jos de Ur**	**36.70**	**347**	P	**P**	**07 04 35.8**	**-1.5**
	comp=Z,552nmcomp=Z,37nm,1.0s						
OCAC	**Ocana**	**36.79**	**351**	P	**P**	**07 04 35.5**	**-2.7**
RPN	**Rapa Nui**	**36.82**	**262**	LR	LR	07 15 53.6	
	comp=Z,826nm,22.0s,baz=358,slow=30						
APAC	**Apartado, Choc**	**37.07**	**345**	P	**P**	**07 04 42.2**	**+1.8**
	comp=Z,28nm,1.1s						
SDV	**Santo Domingo**	**37.13**	**355**	LR	LR	07 20 51.7	
	comp=Z,414nm,21.5s,baz=179,slow=37						
SDV	**Santo Domingo**	**37.13**	**355**	P	**P**	**07 04 40.4**	**-0.8**
SDV				IAmb	IAmb	07 05 13.5	
	comp=Z,59nm,1.1s						
SDV	**Santo Domingo**	**37.13**	**355**	P	**P**	**07 04 40.3**	**-0.8**
	comp=Z,697nmcomp=Z,56nm,1.0s						
SDV	**Santo Domingo**	**37.13**	**355**	eP	**P**	**07 04 40.1**	**-1.1**
RCBR	**Riachuelo**	**37.47**	**59**	LR	LR	07 22 47.0	
	comp=Z,171nm,18.2s,baz=234,slow=40						
RCBR	**Riachuelo**	**37.47**	**59**	P	**P**	**07 04 43.1**	**-0.8**
RCBR				IAmb	IAmb	07 04 46.8	
	comp=Z,41nm,0.9s						
RCBR	**Riachuelo**	**37.47**	**59**	P	**P**	**07 04 43.2**	**-0.8**
RCBR				pmax	pmax		
	comp=Z,41nm,1.0s						
RCBR	**Riachuelo**	**37.47**	**59**	eP	**P**	**07 04 42.4**	**-1.5**
NBPV	**Pedro Velho**	**37.56**	**61**	eP	**P**	**07 04 43.6**	**-1.1**
ARGC	**Ariguani, Magd**	**38.52**	**349**	P	**P**	**07 04 52.0**	**-0.6**
	comp=Z,78nm,0.9s						
SJCC	**San Jacinto, C**	**38.72**	**348**	P	**P**	**07 04 54.1**	**-0.3**
	comp=Z,1µmcomp=Z,87nm,1.1s						
BCIP	**Isla Barro Col**	**39.13**	**341**	P	**P**	**07 04 58.9**	**+1.2**
	comp=Z,46nm,1.3s						
PIRO	**Carate, Puerto**	**39.58**	**335**	P	**P**	**07 05 02.3**	**+0.9**
BRU2	**Volcan**	**39.70**	**336**	P	**P**	**07 05 03.6**	**+1.0**
BRU2				IAmb	IAmb	07 05 39.0	
	comp=Z,98nm,1.5s						
URIC	**Uribia, Colomb**	**40.04**	**353**	P	**P**	**07 05 01.1**	**-4.1**
HDC	**Heredia**	**41.34**	**335**	eP	**P**	**07 05 14.1**	**-1.9**
JTS	**Las Juntas de**	**41.92**	**334**	P	**P**	**07 05 22.5**	**+1.8**
JTS	**Las Juntas de**	**41.92**	**334**	d iP	**P**	**07 05 23.1**	**+2.5**
JTS				pmax	pmax		
	comp=Z,30nm,1.3s						
JTS	**Las Juntas de**	**41.92**	**334**	P	**P**	**07 05 22.5**	**+1.8**
	comp=Z,775nmcomp=Z,31nm,1.1s						
JUD3	**Juan Diaz 3**	**42.04**	**333**	P	**P**	**07 05 23.9**	**+2.3**
MPOM	**Morne Pois Mar**	**43.04**	**10**	P	**P**	**07 05 29.5**	**-0.1**
BIM	**Bigot**	**43.08**	**9**	P	**P**	**07 05 29.4**	**-0.6**
CXM	**Morne La Croix**	**43.36**	**9**	IAmb	IAmb	07 05 40.1	
	comp=Z,184nm,0.8s						
BOAB	**BOACO BROADBAN**	**44.17**	**334**	IAmb	IAmb	07 05 48.0	
	comp=Z,34nm,0.8s						
CRPR	**Cabo Rojo, PR**	**46.09**	**1**	IAmb	IAmb	07 05 54.7	
	comp=Z,106nm,1.3s						
OBIP	**Obispado Ponce**	**46.13**	**1**	IAmb	IAmb	07 05 54.7	
	comp=Z,54nm,1.4s						
SJG	**San Juan**	**46.21**	**2**	P	**P**	**07 05 54.1**	**-0.6**
SJG				IAmb	IAmb	07 05 55.3	
	comp=Z,74nm,1.4s						

SJG **San Juan** **46.21** **2** P **P** **07 05 54.1 -0.6**
SJG pmax pmax
comp=Z,74nm,1.4s
TGUH Tegucigalpa,Un **46.26 333** P **P** **07 05 55.8 +0.5**
comp=Z,1µmcomp=Z,132nm,1.0s
SMRT St. Maarten **46.34** **6** IAmb IAmb 07 05 56.0
comp=Z,88nm,1.1s
ECPR Experimental S **46.41** **2** P **P** **07 05 55.1 -1.2**
ECPR IAmb IAmb 07 05 56.5
comp=Z,97nm,1.3s
AOPR Arecibo Observ **46.43** **1** IAmb IAmb 07 06 09.8
comp=Z,26nm,0.6s
SDDR Presa de Saban **47.19 355** P **P** **07 06 03.8 +1.4**
MTO3 Montecristo **47.43 331** IAmb IAmb 07 06 07.1
comp=Z,73nm,1.0s
GTBY Guantanamo Bay **48.54 351** P **P** **07 06 12.4 -0.3**
comp=Z,66nm,1.3s
CCIG Comitan **50.32 329** IAmb IAmb 07 06 28.7
comp=Z,64nm,1.3s
BELA Belgrano 2 **51.83 172** P **P** **07 06 37.7 +0.9**
BELA IAmb IAmb 07 06 38.4
comp=Z,46nm,0.8s
TEIG Tepich **52.26 335** P **P** **07 06 41.5 +0.7**
TEIG Tepich **52.26 335** P **P** **07 06 40.5 -0.2**
TEIG Tepich **52.26 335** P **P** **07 06 41.1 +0.4**
TEIG pP **pP** **07 07 13.3 +0.2**
CMIG Matias Romero **52.32 326** LR LR 07 27 11.7
comp=Z,51nm,18.7s,baz=179,slow=34
CAMR Camarioca **52.81 344** P **P** **07 06 46.1 +1.4**
SOR Soroa **52.97 342** P **P** **07 06 46.6 +0.7**
SOR Soroa **52.97 342** P **P** **07 06 46.6 +0.7**
SOR pmax pmax
comp=Z,62nm,0.9s
VNA3 Neumayer Olymp **53.25 160** ⇓P **P** **07 06 48.0 +0.5**
comp=Z,106nm,0.7s
VNA1 Neumayer--Stat **53.47 159** ⇓P **P** **07 06 49.6 +0.6**
comp=Z,47nm,0.7s
VNA2 Neumayer--Watz **53.84 159** ⇓P **P** **07 06 52.2 +0.5**
comp=Z,93nm,0.6s,baz=280,slow=7.5
TLIG Tlapa **54.60 323** IAmb IAmb 07 07 01.0
comp=Z,33nm,0.7s
SNAA Sanae **55.46 160** ⇓P **P** **07 07 03.9 +0.4**
comp=Z,1µm,0.6s
SNAA Sanae **55.46 160** P **P** **07 07 03.8 +0.4**
comp=Z,55nm,0.6s,baz=281,slow=6.6,SNR=101
SNAA pP **pP** **07 07 36.4 +0.5**
comp=Z,15nm,0.7s,baz=283,slow=6.1,SNR=2.4
comp=Z,55nm,0.6s
SNAA Sanae **55.46 160** P **P** **07 07 03.6 +0.1**
TROLL Troll, Antarti **57.17 160** P **P** **07 07 16.3 +0.6**
656A Williston **59.15 345** P **P** **07 07 30.5 +0.9**
NVL N'lazarevskaya **60.05 158** *e*P **P** **07 07 37.9 +2.5**
NVL *e* 07 08 20.4
NVL *e* 07 09 46.3
NVL *e*S **S** **07 15 41.7 +4.4**
NVL *e*SS **SS** **07 19 41.3 +5.7**
NVL pmax pmax
comp=Z,30nm,1.2s
ZAIG Zacatecas **60.99 323** IAmb IAmb 07 07 46.6
comp=Z,25nm,0.9s
QSPA South Pole Qui **61.87 180** P **P** **07 07 48.8 +0.8**
comp=Z,115nm,0.7s,baz=154,slow=2.6,SNR=318
comp=Z,115nm,0.7s
QSPA South Pole Qui **61.87 180** P **P** **07 07 49.1 +1.2**
QSPA South Pole Qui **61.87 180** P **P** **07 07 48.8 +0.8**
QSPA sP **sP** **07 08 37.5 +1.4**
RGRS Roger Stewart **62.09 348** P **P** **07 07 50.7 +1.2**
RGRS IAmb IAmb 07 09 17.4
comp=Z,318nm,1.5s
JSC Jenkinsville **63.62 347** IAmb IAmb 07 08 01.4
comp=Z,67nm,1.2s
ELIB Princess Elisa **63.62 160** *d*P **P** **07 07 59.7 +0.2**
comp=Z,46nm,0.8s
LRAL Lakeview Retre **63.77 342** IAmb IAmb 07 08 01.2
comp=Z,38nm,1.2s
Y52A Lilburn **63.81 345** IAmb IAmb 07 08 02.1
comp=Z,59nm,1.1s
BIRD Birdtown, Kers **63.83 348** IAmb IAmb 07 08 03.0
comp=Z,87nm,1.3s
HKT Hockley **63.94 333** P **P** **07 08 03.0 +1.2**
HKT IAmb IAmb 07 08 03.8
comp=Z,38nm,1.3s
HKT Hockley **63.94 333** ⇓*i*P **P** **07 08 03.1 +1.3**
HKT *i* *PP **PcP** **07 08 36.3 +0.1**
HKT pmax pmax
comp=Z,17nm,1.0s
EF02 Christine **64.06 330** IAmb IAmb 07 08 39.3
comp=Z,122nm,1.0s
Z47A Carrollton **64.22 341** IAmb IAmb 07 08 04.9
comp=Z,72nm,1.2s
W57A Gilead **64.24 349** IAmb IAmb 07 08 05.0
comp=Z,44nm,0.7s
PAULI Pauline **64.25 347** IAmb IAmb 07 08 05.6
comp=Z,62nm,1.2s
KMSC Kings Mountain **64.47 348** IAmb IAmb 07 08 07.0
comp=Z,37nm,0.9s
BG3 Lake Jocassee **64.65 346** IAmb IAmb 07 08 07.5
comp=Z,31nm,0.7s
V58A Windy Hill, Pi **64.72 350** IAmb IAmb 07 08 08.5
comp=Z,73nm,1.2s
NATX Nacogdoches **65.09 335** IAmb IAmb 07 08 11.4
comp=Z,58nm,0.8s
V53A Saluda **65.27 346** P **P** **07 08 11.1 +0.6**
V53A IAmb IAmb 07 08 11.9
comp=Z,68nm,1.1s
TKL Tuckaleechee C **65.47 346** LR LR 07 39 44.9
comp=Z,124nm,18.2s,baz=158,slow=38
DRIO Del Rio **65.55 329** P **P** **07 08 13.7 +1.3**
DRIO IAmb IAmb 07 08 48.1
comp=Z,33nm,1.2s
SWET Sewanee **65.55 344** P **P** **07 08 12.9 +0.6**
T59A Double "B" Far **65.65 351** IAmb IAmb 07 08 14.8
comp=Z,35nm,1.0s
OXF Oxford **65.84 340** P **P** **07 08 14.3 +0.3**
OXF Oxford **65.84 340** P **P** **07 08 14.3 +0.3**
OXF pmax pmax
comp=Z,109nm,1.1s
U54A Nelsons Funny **65.90 347** P **P** **07 08 15.3 +0.8**
JCT Junction City **66.08 330** P **P** **07 08 17.3 +1.5**
JCT IAmb IAmb 07 08 52.1
comp=Z,36nm,0.7s
JCT Junction City **66.08 330** P **P** **07 08 17.3 +1.5**
JCT pmax pmax
comp=Z,36nm,0.7s
TZTN Tazewell **66.27 346** P **P** **07 08 17.2 +0.4**
TZTN IAmb IAmb 07 08 18.0
comp=Z,55nm,1.3s
BLA Blacksburg **66.32 349** IAmb IAmb 07 08 18.8
comp=Z,24nm,0.8s
WHTX Lake Whitney, **66.39 333** IAmb IAmb 07 08 53.3
comp=Z,42nm,1.0s
BRDY Brady **66.42 331** IAmb IAmb 07 08 19.3
comp=Z,33nm,0.7s
CLTN Cedars of Leba **66.48 344** IAmb IAmb 07 08 19.3
comp=Z,38nm,0.8s
Z38A Mt. Pleasant **66.55 335** IAmb IAmb 07 08 20.5
comp=Z,33nm,0.9s
S57A Dark Hollow, R **66.62 350** IAmb IAmb 07 08 21.2
comp=Z,60nm,1.1s
R58B Mineral **66.67 351** IAmb IAmb 07 08 21.8
comp=Z,54nm,1.1s
SAND Sanderson **66.70 328** IAmb IAmb 07 08 56.2
comp=Z,47nm,0.9s
U49A Red Boiling Sp **66.75 344** IAmb IAmb 07 08 20.3
comp=Z,32nm,0.7s
CBN Corbin Frederi **66.84 352** IAmb IAmb 07 08 22.7
comp=Z,84nm,1.4s
WVT Waverly **66.91 342** P **P** **07 08 20.8 -0.1**
WVT Waverly **66.91 342** P **P** **07 08 20.8 -0.1**
WVT pmax pmax
comp=Z,138nm,0.7s
WVT Waverly **66.91 342** P **P** **07 08 20.7 -0.1**
WVT pP **pP** **07 08 54.1 -0.2**
TXAR Lajitas Array **66.93 326** P **P** **07 08 22.5 +1.2**
comp=Z,5.4nm,0.7s,baz=146,slow=8.0,SNR=61
TXAR pP **pP** **07 08 56.4 +1.4**
comp=Z,7.4nm,0.9s,baz=139,slow=8.2,SNR=5.5
TXAR PKP2bc **P'P'bc** **07 36 43.5 -6.8**
comp=Z,0.5nm,0.9s,baz=199,slow=2.3,SNR=3.5
comp=Z,5.4nm,0.7s
UALR University of **67.00 338** IAmb IAmb 07 08 23.1
comp=Z,34nm,0.9s
S54A Dingess, Beckl **67.05 348** IAmb IAmb 07 08 23.3
comp=Z,51nm,1.1s
OZNA Ozona **67.05 329** IAmb IAmb 07 08 23.5
comp=Z,36nm,0.7s

R55A Marlinton **67.31 349** IAmb IAmb 07 08 26.1
comp=Z,61nm,1.0s
S51A Beattyville **67.33 346** IAmb IAmb 07 08 24.7
comp=Z,57nm,1.2s
WHAR Wooly Hollow **67.45 338** P **P** **07 08 25.4 +1.1**
WHAR IAmb IAmb 07 08 25.5
comp=Z,33nm,0.9s
PLPT Palo Pinto **67.46 332** IAmb IAmb 07 09 00.1
comp=Z,46nm,1.1s
ABTX Abilene, Hawle **67.85 331** IAmb IAmb 07 08 29.0
comp=Z,70nm,1.2s
SGCY Sterling City **67.89 330** IAmb IAmb 07 09 04.2
comp=Z,32nm,1.0s
Q56A Snyder Ridge, **67.91 350** IAmb IAmb 07 08 29.9
comp=Z,51nm,1.0s
FCAR Ozark Folk Cen **67.95 339** IAmb IAmb 07 08 28.9
comp=Z,80nm,1.3s
TPB05 Hovey Rd **68.07 327** IAmb IAmb 07 09 04.8
comp=Z,24nm,0.9s
Q54A Coxs Mills **68.12 349** IAmb IAmb 07 08 29.8
comp=Z,36nm,1.1s
TMB01 Midkiff **68.12 329** IAmb IAmb 07 08 30.1
comp=Z,18nm,1.0s
MNHN Monahans **68.16 328** IAmb IAmb 07 08 30.7
comp=Z,36nm,0.8s
229A Bryant Ranch, **68.24 329** IAmb IAmb 07 09 05.1
comp=Z,28nm,1.5s
R49A Shelbyville **68.30 345** IAmb IAmb 07 08 30.4
comp=Z,35nm,1.1s
TPB01 Permian Basin **68.31 327** IAmb IAmb 07 08 32.0
comp=Z,24nm,0.8s
WTFS Witchita Falls **68.35 333** IAmb IAmb 07 09 05.6
comp=Z,44nm,0.9s
Q52A Bidwell **68.35 348** IAmb IAmb 07 08 30.7
comp=Z,29nm,0.8s
MVL Millersville **68.49 353** IAmb IAmb 07 08 34.3
comp=Z,56nm,1.1s
WCI Wyandotte Cave **68.50 344** P **P** **07 08 30.5 -0.3**
WCI IAmb IAmb 07 08 31.5
comp=Z,58nm,1.1s
WCI Wyandotte Cave **68.50 344** P **P** **07 08 30.5 -0.3**
WCI pmax pmax
comp=Z,58nm,1.1s
MCWV Mont Chateau **68.61 350** IAmb IAmb 07 08 33.7
comp=Z,66nm,1.1s
Q51A Peebles **68.62 347** IAmb IAmb 07 08 32.8
comp=Z,49nm,1.1s
TPB06 Permian Basin **68.63 328** IAmb IAmb 07 08 33.6
comp=Z,22nm,0.7s
APMT Aspermont **68.66 331** IAmb IAmb 07 09 07.8
comp=Z,53nm,1.1s
P53A Whipple **68.70 349** IAmb IAmb 07 08 33.9
comp=Z,77nm,1.1s
PECS Pecos **68.70 327** IAmb IAmb 07 08 34.3
comp=Z,56nm,1.5s
ODSA Odessa **68.71 329** IAmb IAmb 07 08 34.2
comp=Z,96nm,1.2s
SN07 Snyder 07 **68.79 330** IAmb IAmb 07 08 34.5
comp=Z,67nm,1.4s
129A Stewart Farms, **68.83 329** IAmb IAmb 07 08 35.5
comp=Z,34nm,1.1s
HHAR Hobbs **68.90 337** IAmb IAmb 07 08 35.3
comp=Z,89nm,1.4s
P51A Williamsport **69.00 347** IAmb IAmb 07 08 35.0
comp=Z,78nm,1.2s
128A Castleberry Fa **69.10 329** IAmb IAmb 07 08 36.1
comp=Z,19nm,0.8s
RLO Rose Lookout **69.17 337** IAmb IAmb 07 08 36.3
comp=Z,47nm,0.6s
U38A Gravette **69.20 337** IAmb IAmb 07 08 36.3
comp=Z,30nm,0.7s
TUL3 Leonard **69.22 336** IAmb IAmb 07 08 37.0
comp=Z,57nm,0.8s
SSPA Stanning Stone **69.30 352** P **P** **07 08 36.9 +1.3**
WMOK Wichita Mounta **69.33 333** P **P** **07 08 36.8 +0.8**
WMOK Wichita Mounta **69.33 333** P **P** **07 08 36.8 +0.8**
WMOK pmax pmax
comp=Z,18nm,0.9s
N58A Sunbury **69.36 353** IAmb IAmb 07 09 11.6
comp=Z,60nm,1.0s
O52A Adamsville **69.39 348** IAmb IAmb 07 08 37.6
comp=Z,45nm,0.9s
OLIL Olney **69.43 343** IAmb IAmb 07 08 36.6
comp=Z,37nm,0.8s
BLO Bloomington **69.46 344** IAmb IAmb 07 08 37.0
comp=Z,45nm,0.6s
CCM Cathedral Cave **69.67 340** P **P** **07 08 39.1 +1.1**
CCM Cathedral Cave **69.67 340** P **P** **07 08 39.1 +1.1**
CCM pmax pmax
comp=Z,191nm,1.2s
SYO Syowa Base **69.71 158** ⇓*i*P **P** **07 08 38.2 +0.3**
DBIC Dimbokro **69.73 70** P **P** **07 08 39.8 +0.9**
comp=Z,57nm,0.7s,baz=250,slow=6.0,SNR=47
DBIC LR LR 07 36 34.0
comp=Z,228nm,21.9s,baz=266,slow=34
comp=Z,57nm,0.7s
DBIC Dimbokro **69.73 70** P **P** **07 08 39.9 +0.9**
DBIC IAmb IAmb 07 08 40.7
comp=Z,66nm,0.8s
DBIC Dimbokro **69.73 70** P **P** **07 08 39.9 +0.9**
DBIC pmax pmax
comp=Z,66nm,0.9s
DBIC Dimbokro **69.73 70** P **P** **07 08 39.4 +0.5**
DBIC PcP **PcP** **07 09 00.1 -0.8**
DBIC x x 07 09 08.4
DBIC pP **pP** **07 09 13.0 +0.8**
DBIC sP **sP** **07 09 28.2 +1.3**
QUOK Quay **69.79 335** IAmb IAmb 07 08 40.6
comp=Z,82nm,1.1s
PAMR Moraine State **69.91 350** IAmb IAmb 07 09 14.8
comp=Z,50nm,1.0s
O49A Covington **69.94 346** IAmb IAmb 07 08 40.8
comp=Z,50nm,1.0s
P46A Rosedale **70.04 344** IAmb IAmb 07 08 40.9
comp=Z,78nm,1.0s
OK051 E0350 and S346 **70.13 335** IAmb IAmb 07 08 42.9
comp=Z,102nm,1.2s
O48B Farmland **70.18 346** IAmb IAmb 07 08 42.1
comp=Z,50nm,0.8s
SMWD Samnorwood **70.24 332** IAmb IAmb 07 08 43.7
comp=Z,30nm,0.8s
VNDA Vanda **70.34 190** P **P** **07 08 43.3 +1.6**
comp=Z,23nm,0.8s,baz=134,slow=5.2,SNR=26
comp=Z,23nm,0.8s
VNDA Vanda **70.34 190** P **P** **07 08 41.3 -0.4**
MSTX Muleshoe **70.36 329** IAmb IAmb 07 08 44.3
comp=Z,61nm,1.0s
T35A Sooner Cattle **70.38 336** IAmb IAmb 07 08 44.4
comp=Z,56nm,1.1s
PAOC Oil Creek Stat **70.41 350** IAmb IAmb 07 08 44.2
comp=Z,86nm,1.2s
BLOK Blackwell **70.50 335** IAmb IAmb 07 08 45.2
comp=Z,58nm,0.9s
TAOE Nuku Hiva Isla **70.52 270** *e*P **P** **07 08 43.7 -0.2**
TAOE comp=Z,85nm,25.0s *e*PP **PP** **07 11 19.0 -2.8**
TAOE comp=Z,68nm,32.1s *e*S **S** **07 17 43.9 -2.9**
TAOE comp=Z,359nm,25.1s *e*SS **SS** **07 22 18.7 -2.0**
TAOE comp=Z,110nm,23.2s *e*LR LR 07 30 19.5
comp=Z,609nm,28.9s
HSIG **70.52 320** IAmb IAmb 07 08 46.4
comp=Z,37nm,1.0s
L59A Walton **70.53 354** IAmb IAmb 07 08 45.8
comp=Z,56nm,0.9s
CROK Carrier **70.56 334** IAmb IAmb 07 08 44.8
comp=Z,45nm,0.8s
HRV Adam Dziewonsk **70.60 357** P **P** **07 08 44.9 +1.4**
HRV IAmb IAmb 07 08 46.0
comp=Z,47nm,1.1s
HRV Adam Dziewonsk **70.60 357** P **P** **07 08 44.9 +1.4**
HRV pmax pmax
comp=Z,47nm,1.1s
BINY Binghamton **70.62 353** IAmb IAmb 07 08 46.1
comp=Z,44nm,1.2s
AMTX Amarillo **70.66 331** IAmb IAmb 07 08 45.6
comp=Z,44nm,1.2s
M52A Chesterland **70.70 349** IAmb IAmb 07 08 45.7
comp=Z,66nm,1.1s
L56A Greenwood **70.74 352** IAmb IAmb 07 08 46.1
comp=Z,40nm,0.7s
M50A Fremont **70.86 348** IAmb IAmb 07 08 46.4
comp=Z,56nm,1.0s
TRY Troy **70.95 355** IAmb IAmb 07 08 48.5
comp=Z,88nm,1.2s

MMNY Mt. Morris Dam **71.36 352** IAmb IAmb 07 08 50.1
comp=Z,77nm,1.2s
319A Douglas **71.44 323** IAmb IAmb 07 08 52.3
comp=Z,71nm,1.1s
J61A Chester **71.49 356** IAmb IAmb 07 08 52.8
comp=Z,45nm,1.2s
121A Cookes Peak, D **71.58 325** IAmb IAmb 07 08 53.3
comp=Z,48nm,1.1s
J59A Piesco **71.74 355** IAmb IAmb 07 09 25.9
comp=Z,46nm,1.0s
P38A Dawn **71.81 339** IAmb IAmb 07 08 51.9
comp=Z,40nm,0.5s
HNH Hanover **71.83 356** IAmb IAmb 07 08 53.8
comp=Z,52nm,1.1s
M44A Midewin, Midew **71.92 344** IAmb IAmb 07 08 52.5
comp=Z,78nm,1.2s
N41A Harden Midland **72.02 342** IAmb IAmb 07 08 53.2
comp=Z,69nm,0.9s
I63A Otisfield **72.10 358** IAmb IAmb 07 08 55.4
comp=Z,105nm,1.3s
KSU1 Kansas State U **72.36 337** IAmb IAmb 07 08 55.2
comp=Z,35nm,0.8s
PECO Prince Edward **72.45 353** IAmb IAmb 07 08 56.5
comp=Z,67nm,1.1s
TBI Tubuai **72.49 253** *e*S **S** **07 18 10.1 +1.1**
TBI comp=Z,2µm,28.0s *e*LQ LQ 07 28 19.4
TBI comp=Z,1µm,31.0s *e*LR LR 07 31 26.8
comp=Z,2µm,34.2s
L44A Lake County Fo **72.64 344** IAmb IAmb 07 08 56.9
comp=Z,70nm,0.9s
N38A Joes South For **72.79 340** IAmb IAmb 07 08 57.5
comp=Z,38nm,0.8s
ANMO Albuquerque **72.87 327** P **P** **07 08 59.6 +2.0**
ANMO Albuquerque **72.87 327** IAmb IAmb 07 08 60.0
comp=Z,71nm,0.9s
ANMO Albuquerque **72.87 327***d* *i*P **P** **07 08 59.2 +1.6**
ANMO *i* *PP **pP** **07 09 32.6 +0.7**
ANMO pmax pmax
comp=Z,20nm,1.1s
L42A Oliver, Polo **72.91 343** IAmb IAmb 07 09 32.2
comp=Z,65nm,1.4s
TUC Tucson **72.97 323** P **P** **07 08 59.7 +1.6**
TUC Tucson **72.97 323** P **P** **07 08 59.7 +1.6**
TUC pmax pmax
comp=Z,26nm,1.3s
TUC Tucson **72.97 323** P **P** **07 08 59.5 +1.4**
TUC PcP **PcP** **07 09 14.3 0.0**
TUC x x 07 09 25.4
J47A Sunmer **72.97 347** IAmb IAmb 07 08 58.2
comp=Z,38nm,0.7s
FRNY Flat Rock **73.04 356** IAmb IAmb 07 08 59.8
comp=Z,29nm,0.7s
ACRG Accra **73.08** **74** IAmb IAmb 07 09 02.0
comp=Z,37nm,0.8s
G62A West of Eustis **73.27 358** IAmb IAmb 07 09 01.6
comp=Z,37nm,0.8s
WBO Williamsburg **73.33 354** IAmb IAmb 07 09 01.7
comp=Z,38nm,0.7s
SADO Sadowa **73.53 351** LR LR 07 44 09.0
comp=Z,90nm,19.4s,baz=330,slow=38
MNTQ Montreal, Queb **73.70 356** IAmb IAmb 07 09 04.1
comp=Z,45nm,0.7s
T25A Trinidad **73.74 330** IAmb IAmb 07 09 05.1
comp=Z,35nm,0.8s
214A Organ Pipe Nat **73.80 321** IAmb IAmb 07 09 06.3
comp=Z,62nm,1.1s
SCIA State Center **73.80 340** IAmb IAmb 07 09 05.5
comp=Z,58nm,0.9s
F64A Sherman **73.86 359** IAmb IAmb 07 09 05.0
comp=Z,41nm,0.6s
JFWS Jewell Farm **73.91 343** IAmb IAmb 07 09 05.0
comp=Z,96nm,1.4s
SUR Sutherland **74.19 118** LR LR 07 38 41.8
comp=Z,216nm,19.0s,baz=252,slow=33
SUR Sutherland **74.19 118** P **P** **07 09 07.0 +1.4**
SUR IAmb IAmb 07 09 07.9
comp=Z,39nm,0.8s
GLMI Grayling **74.46 348** IAmb IAmb 07 09 41.3
comp=Z,69nm,1.1s
TRQ Mont Tremblant **74.49 355** IAmb IAmb 07 09 08.2
comp=Z,71nm,1.2s
I42A Draeger Farm, **74.50 344** IAmb IAmb 07 09 07.6
comp=Z,33nm,0.7s
W18A Petrified Fore **74.61 325** IAmb IAmb 07 09 10.9
comp=Z,74nm,1.2s
E62A Clayton Lake **74.64 359** IAmb IAmb 07 09 09.6
comp=Z,49nm,0.7s
SDCO Great Sand Dun **74.73 330** P **P** **07 09 10.4 +1.9**
H43A Windswept, Lux **74.78 345** IAmb IAmb 07 09 09.6
comp=Z,76nm,1.2s
I40A Norwalk **74.92 343** IAmb IAmb 07 09 10.4
comp=Z,74nm,1.4s
X16A Lo Mia Camp, P **74.94 324** IAmb IAmb 07 09 13.0
comp=Z,40nm,1.0s
PPT2 Papeete2 **74.97 258** *e*P **P** **07 09 11.9 +1.8**
PPT2 comp=Z,57nm,25.2s *e*PP **PP** **07 11 56.9 -2.7**
PPT2 comp=Z,70nm,29.8s *e*S **S** **07 18 34.5 -2.7**
PPT2 comp=Z,355nm,26.8s *e*SS **SS** **07 23 30.6 +2.2**
PPT2 comp=Z,314nm,28.0s *e*LQ LQ 07 29 14.9
PPT2 comp=Z,437nm,26.0s *e*LR LR 07 32 22.0
PPT2 comp=Z,372nm,24.8s *e*LR LR 07 32 28.0
comp=Z,294nm,26.2s
PPT Papeete **74.98 258** pP pP 07 09 46.9 +2.6
comp=Z,47nm,0.9s,baz=101,slow=16,SNR=6.5
BATG Bathurst New B **75.29** **1** P **P** **07 09 12.8 +1.7**
BATG IAmb IAmb 07 09 13.7
comp=Z,67nm,1.2s
Y14A Wickenburg **75.41 322** IAmb IAmb 07 09 15.2
comp=Z,43nm,1.2s
Q24A Divide **75.58 331** IAmb IAmb 07 09 16.2
comp=Z,83nm,1.0s
LMQ La Malbaie **75.59 358** IAmb IAmb 07 09 15.0
comp=Z,48nm,1.1s
MVCO Mesa Verde **75.67 327** IAmb IAmb 07 09 16.9
comp=Z,40nm,1.0s
WUAZ Wupatki **75.76 324** IAmb IAmb 07 09 17.7
comp=Z,51nm,1.0s
E46A Sault Ste Mari **75.89 348** IAmb IAmb 07 09 15.8
comp=Z,88nm,1.2s
OGNE Ogallala **75.98 334** IAmb IAmb 07 09 17.9
comp=Z,66nm,0.9s
LDAQ Lac Daran **76.03 357** IAmb IAmb 07 09 17.0
comp=Z,34nm,0.8s
F42A Maple Grove Fa **76.08 345** IAmb IAmb 07 09 16.6
comp=Z,77nm,1.5s
BLYC Blythe **76.09 321** IAmb IAmb 07 09 19.3
comp=Z,49nm,1.1s
PV01 Paradox Valley **76.45 328** IAmb IAmb 07 09 21.5
comp=Z,52nm,1.2s
ECSD EROS Data Cent **76.51 339** IAmb IAmb 07 09 19.9
comp=Z,69nm,1.1s
BC3 Big Chuckawall **76.54 321** IAmb IAmb 07 09 21.6
comp=Z,43nm,1.0s
CCD Concordia, Ant **76.56 183** P **P** **07 09 19.2 +0.7**
CCD x x 07 09 41.6
CCD x x 07 09 51.8
PV15 Paradox Valley **76.57 328** IAmb IAmb 07 09 22.3
comp=Z,64nm,1.2s
PV02 Paradox Valley **76.58 328** IAmb IAmb 07 09 22.1
comp=Z,96nm,1.2s
PV13 Radium Mtn., P **76.58 328** IAmb IAmb 07 09 23.0
comp=Z,64nm,1.0s
VLDQ Val d'Or **76.62 353** IAmb IAmb 07 09 20.6
comp=Z,46nm,1.2s
PV05 Paradox Valley **76.65 327** IAmb IAmb 07 09 22.1
comp=Z,48nm,1.0s
PV18 Skein Mesa, Pa **76.70 328** IAmb IAmb 07 09 22.4
comp=Z,76nm,1.0s
PV12 Saucer Basin, **76.70 328** IAmb IAmb 07 09 26.3
comp=Z,72nm,1.2s
PV11 David Mesa, Pa **76.72 328** IAmb IAmb 07 09 23.8
comp=Z,48nm,1.2s
SPMN Marine on St. **76.74 342** IAmb IAmb 07 09 20.6
comp=Z,30nm,0.8s
PV19 Morning Glory **76.78 328** IAmb IAmb 07 09 22.9
comp=Z,76nm,1.2s
PV20 West Nyswonger **76.80 328** IAmb IAmb 07 09 22.9
comp=Z,58nm,1.1s
PV14 Lion Creek, Pa **76.85 328** IAmb IAmb 07 09 23.3
comp=Z,49nm,1.2s

PV10 Paradox Valley 76.86 328 lAmb lAmb 07 09 22.9
comp=Z,78nm,1.0s
PV22 Blue Mesa, Par 76.87 328 lAmb lAmb 07 09 23.6
comp=Z,55nm,1.2s
PV23 Carpenter Ridg 76.91 328 lAmb lAmb 07 09 24.8
comp=Z,61nm,1.1s
U15A North Rim 76.93 324 lAmb lAmb 07 09 24.6
comp=Z,49nm,1.0s
TSUM Tsumeb 77.04 105 LR LR 07 40 41.0
comp=Z,246nm,19.3s,baz=335,slow=34
TSUM Tsumeb 77.04 105 P **P** **07 09 23.1 +1.1**
TSUM lAmb lAmb 07 09 24.4
comp=Z,63nm,0.8s
TSUM Tsumeb 77.04 105 P **P** **07 09 22.9 +0.9**
TSUM x x 07 09 45.1
PFO Pinyon Flats O 77.08 320 P **P** **07 09 23.6 +1.9**
PFO Pinyon Flats O 77.08 320*d* *i* P **P** **07 09 23.2 +1.5**
PFO *i* *PP **pP** **07 09 57.0 +0.8**
PFO pmax pmax
comp=Z,42nm,1.0s
DNR Dunn Ranch,Anz 77.14 320 lAmb lAmb 07 09 25.5
comp=Z,72nm,1.0s
HMU Henry Mountain 77.33 326 lAmb lAmb 07 09 26.0
comp=Z,46nm,1.0s
MAW Mawson 77.46 163 P **P** **07 09 24.0 +0.8**
comp=Z,42nm,0.8s,baz=236,slow=6.5,SNR=7.2
MAW LR LR 07 47 08.2
comp=Z,99nm,18.0s,baz=218,slow=38
comp=Z,42nm,0.8s
MAW Mawson 77.46 163 P **P** **07 09 23.7 +0.5**
MAW Mawson 77.46 163 P **P** **07 09 23.7 +0.5**
MAW pmax pmax
comp=Z,12nm,1.1s
ICQ Pointe Anglais 77.52 0 P **P** **07 09 24.6 +1.0**
KOOLE Kule 77.61 109 *i* P **P** **07 09 25.5 +0.4**
E38A The Farm, Brul 77.69 343 lAmb lAmb 07 09 26.1
comp=Z,43nm,1.1s
V12A Nelson 77.75 322 lAmb lAmb 07 09 28.1
comp=Z,43nm,1.0s
DRLN Deer Lake 77.78 7 P **P** **07 09 26.5 +1.5**
DRLN lAmb lAmb 07 09 26.8
comp=Z,48nm,0.6s
GRHM Grahamstown, E 78.07 121 P **P** **07 09 28.3 +0.9**
SRU San Rafael Swe 78.15 327 lAmb lAmb 07 09 30.2
comp=Z,70nm,1.0s
SZCU Shurtz Canyon 78.24 325 lAmb lAmb 07 09 31.6
comp=Z,45nm,1.2s
Q16A Castle Valley 78.31 327 lAmb lAmb 07 09 31.7
comp=Z,56nm,1.1s
CCUT Cedar City 78.34 324 lAmb lAmb 07 09 32.5
comp=Z,70nm,1.0s
P18A Preston Nutter 78.43 328 lAmb lAmb 07 09 32.4
comp=Z,78nm,1.0s
PASC Pasadena Art C 78.47 319 lAmb lAmb 07 09 32.2
comp=Z,44nm,1.1s
P17A Butcher Ranch, 78.54 327 lAmb lAmb 07 09 32.5
comp=Z,74nm,1.0s
TORD Torodi Ar. Bea 78.66 68 P **P** **07 09 31.3 +0.6**
comp=Z,44nm,0.7s,baz=248,slow=6.8,SNR=225
TORD pP **pP** **07 10 03.8 -0.8**
comp=Z,26nm,0.8s,baz=242,slow=7.7,SNR=3.3
TORD S **S** **07 19 12.5 -4.5**
comp=Z,3.5nm,1.2s,baz=231,slow=14,SNR=6.5
TORD LR LR 07 41 55.7
comp=Z,305nm,21.0s,baz=282,slow=34
comp=Z,44nm,0.7s
EYMN Ely 78.93 344 lAmb lAmb 07 09 32.9
comp=Z,51nm,1.2s
CCCA Chr Cany lake 78.98 321 lAmb lAmb 07 09 34.6
comp=Z,43nm,0.8s
TBO Thunder Bay 79.10 345 lAmb lAmb 07 09 33.9
comp=Z,39nm,1.0s
PRN Pahroc Range 79.11 323 lAmb lAmb 07 09 36.3
comp=Z,63nm,1.0s
GRTLG Ghanzi 79.17 108 *i* P **P** **07 09 33.9 +0.3**
K22A Casper 79.22 332 lAmb lAmb 07 09 36.2
comp=Z,72nm,1.1s
BOSA Boshof 79.26 117 P **P** **07 09 34.6 +0.6**
comp=Z,61nm,0.8s,baz=246,slow=4.5,SNR=101
BOSA pP **pP** **07 10 08.2 +0.1**
comp=Z,25nm,1.0s,baz=235,slow=5.5,SNR=4.0
BOSA LR LR 07 42 34.9
comp=Z,176nm,18.3s,baz=217,slow=34
comp=Z,61nm,0.8s
BOSA Boshof 79.26 117 P **P** **07 09 34.9 +0.8**
BOSA lAmb lAmb 07 09 35.5
comp=Z,62nm,0.8s
BOSA Boshof 79.26 117 P **P** **07 09 34.9 +0.8**
BOSA pmax pmax
comp=Z,62nm,0.8s
BOSA Boshof 79.26 117 P **P** **07 09 34.4 +0.4**
BOSA PcP **PcP** **07 09 40.5 -1.4**
BOSA x x 07 10 04.9
BOSA pP **pP** **07 10 08.6 +0.4**
KGCAE Kacgae 79.33 110 *i* P **P** **07 09 34.7 +0.1**
PSUT Pine Spring 79.34 325 lAmb lAmb 07 09 37.2
comp=Z,42nm,0.9s
BSUT Blindstream Ca 79.39 328 lAmb lAmb 07 09 37.6
comp=Z,84nm,1.0s
MPU Maple Canyon 79.39 327 lAmb lAmb 07 09 37.1
comp=Z,42nm,1.0s
ISA Isabella, Lake 79.70 320 P **P** **07 09 38.1 +2.1**
ISA Isabella, Lake 79.70 320 P **P** **07 09 38.1 +2.1**
ISA pmax pmax
comp=Z,27nm,1.0s
VES Vestal, Richgr 80.18 320 lAmb lAmb 07 09 41.1
comp=Z,65nm,0.9s
AGMN Agassiz Nation 80.40 341 lAmb lAmb 07 09 41.1
comp=Z,52nm,1.1s
TIN Timemaha, Big 80.57 321 lAmb lAmb 07 09 43.7
comp=Z,79nm,1.0s
PD31 Pinedale Array 80.61 330 lAmb lAmb 07 09 43.8
comp=Z,29nm,0.8s
PDAR Pinedale Array 80.61 330 P **P** **07 09 41.9 +0.9**
comp=Z,20nm,0.5s,baz=128,slow=8.1,SNR=161
PDAR pP **pP** **07 10 16.6 +0.9**
comp=Z,6.1nm,0.7s,baz=144,slow=8.6,SNR=2.8
PDAR PKKPbc **PKKPbc** **07 28 20.0 -2.3**
comp=Z,0.8nm,0.6s,baz=184,slow=1.7,SNR=6.1
comp=Z,20nm,0.5s
PDAR Pinedale Array 80.61 330 P **P** **07 09 42.1 +1.2**
SPUT South Promonto 80.78 327 lAmb lAmb 07 09 44.3
comp=Z,64nm,0.9s
KDWAN Kaudwane 81.12 112 *i* P **P** **07 09 44.6 +0.5**
LBTB Lobatse 81.14 114 LR LR 07 41 50.1
comp=Z,154nm,19.3s,baz=234,slow=33
LBTB Lobatse 81.14 114 P **P** **07 09 45.1 +1.0**
LBTB Lobatse 81.14 114 P **P** **07 09 45.2 +1.0**
LBTB pmax pmax
comp=Z,67nm,0.8s
LBTB Lobatse 81.14 114 P **P** **07 09 44.6 +0.4**
LBTB PcP **PcP** **07 09 50.0 -0.1**
LBTB pP **pP** **07 10 18.9 +0.5**
LBTB x x 07 10 22.6
HVU Hansel Valley 81.31 328 lAmb lAmb 07 09 46.6
comp=Z,49nm,0.9s
NVAR Mina Array Bea 81.60 322 P **P** **07 09 47.5 +1.3**
comp=Z,14nm,0.9s,baz=157,slow=6.2,SNR=66
NVAR pP **pP** **07 10 22.1 +1.0**
comp=Z,4.1nm,0.9s,baz=175,slow=5.3,SNR=2.4
NVAR PKKPbc **PKKPbc** **07 28 18.3 -1.3**
comp=Z,1.4nm,0.8s,baz=337,slow=2.1,SNR=5.7
comp=Z,14nm,0.9s
LOHW Long Hollow 81.75 330 lAmb lAmb 07 09 48.8
comp=Z,29nm,0.8s
BBGB Big Mountain B 81.81 319 lAmb lAmb 07 09 55.3
comp=Z,48nm,0.9s
RAR Rarotonga 82.02 250 LR LR 07 37 53.5
comp=Z,117nm,20.4s,baz=119,slow=29
LPHEP Lephephe 82.11 112 *i* P **P** **07 09 49.1 -0.2**
FLWY Flagg Ranch 82.17 330 lAmb lAmb 07 09 51.4
comp=Z,50nm,0.7s
ULM Lac du Bonnet 82.18 342 P **P** **07 09 49.0 +0.3**
ULM pP **pP** **07 10 22.8 -0.6**
comp=Z,31nm,1.0s,baz=161,slow=3.9,SNR=5.5
ULM PKKPbc **PKKPbc** **07 28 16.4 -2.3**
comp=Z,5.9nm,0.9s,baz=311,slow=0.2,SNR=9.7
ULM LR LR 07 49 03.2
comp=Z,90nm,21.6s,baz=184,slow=38
comp=Z,20nm,0.6s
ULM Lac du Bonnet 82.18 342 lAmb lAmb 07 10 24.4
comp=Z,55nm,1.1s
RLMT Red Lodge 82.38 332 lAmb lAmb 07 09 52.1
comp=Z,30nm,0.7s
KHWEE KHWEE 82.42 111 *i* P **P** **07 09 51.5 +0.5**
LAO LASA Array 82.45 334 lAmb lAmb 07 09 52.3
comp=Z,58nm,1.1s
YMP Mirror Lake Pl 82.45 331 lAmb lAmb 07 10 08.2
comp=Z,52nm,1.0s
YFT Old Faithful 82.52 330 lAmb lAmb 07 09 57.1
comp=Z,33nm,0.9s
YNE Yellowstone No 82.60 331 lAmb lAmb 07 09 55.3
comp=Z,55nm,1.1s
PNTR Pine Nut 82.78 322 lAmb lAmb 07 09 55.2
comp=Z,52nm,0.8s
SCHQ Schefferville 82.84 0 P **P** **07 09 52.2 +0.1**
comp=Z,19nm,0.8s,baz=182,slow=5.1,SNR=30
SCHQ pP **pP** **07 10 26.1 -0.4**
comp=Z,11nm,0.9s,baz=129,slow=3.5,SNR=3.1
comp=Z,19nm,0.8s
SCHQ Schefferville 82.84 0 lAmb lAmb 07 09 53.1
comp=Z,6nm,1.1s
YHB Horse Butte 82.91 330 lAmb lAmb 07 09 55.8
comp=Z,41nm,1.0s
DRV Dumont d'Urvil 82.98 191 P **P** **07 09 52.9 +0.1**
DRV PcP **PcP** **07 09 57.5 +0.3**
DRV pP **pP** **07 10 27.5 0.0**
YHL Hebgen Lake 82.98 330 lAmb lAmb 07 09 55.9
comp=Z,26nm,0.7s
PAHR Pah Rah Range 83.10 322 lAmb lAmb 07 09 56.8
comp=Z,48nm,1.0s
MPK Martis Peak 83.16 322 lAmb lAmb 07 09 57.5
comp=Z,91nm,1.4s
AFDM Forest Hills D 83.43 321 lAmb lAmb 07 09 57.6
comp=Z,48nm,1.6s
HLID Hailey 83.45 328 lAmb lAmb 07 09 58.5
comp=Z,59nm,1.1s
SOOWA Sowa 83.69 110 *i* P **P** **07 09 58.3 +0.8**
CVS Carmenet Viney 83.85 320 lAmb lAmb 07 09 59.9
comp=Z,40nm,1.0s
DLMT Dillon 84.01 330 lAmb lAmb 07 10 01.1
comp=Z,54nm,1.2s
MFID Camas Ranch 84.01 327 lAmb lAmb 07 10 35.8
comp=Z,44nm,1.5s
SUTB Sutter Butte 84.08 321 lAmb lAmb 07 10 01.0
comp=Z,55nm,1.5s
KSANE Kasane 84.09 107 *i* P **P** **07 10 00.2 +0.7**
KSANE Kasane 84.09 107 lAmb lAmb 07 10 02.0
comp=Z,60nm,0.9s
ORV Oroville 84.15 321 lAmb lAmb 07 10 01.8
comp=Z,45nm,1.2s
BROLN Tlhalogang 84.36 111 *i* P **P** **07 10 00.1 -0.8**
HATC Hat Creek Radi 85.01 322 lAmb lAmb 07 10 05.6
comp=Z,60nm,1.1s
MDT Midelt 85.29 49 LR LR 07 46 48.6
comp=Z,78nm,20.3s,baz=227,slow=35
PFVI Vila Bisbo 85.34 43 *eP* **P** **07 10 06.9 +1.8**
MORF Marmelete 85.56 43 *eP* **P** **07 10 07.7 +1.4**
MORF lAmb lAmb 07 10 09.2
comp=Z,21nm,0.7s
MORF Marmelete 85.56 43 *eP* **P** **07 10 08.1 +1.8**
MORF *i* lAmb lAmb 07 10 09.3
comp=Z,44nm,1.2s
MORF Marmelete 85.56 43 *eP* **P** **07 10 07.7 +1.4**
CASY Casey 85.66 179 P **P** **07 10 07.0 +0.7**
CASY Casey 85.66 179 P **P** **07 10 07.3 +0.9**
CASY x x 07 10 31.2
CASY x x 07 10 34.0
CASY sP **sP** **07 10 56.9 +1.2**
PTEO Sao Teotonio 85.68 43 *eP* **P** **07 10 07.6 +0.8**
PTEO *i* lAmb lAmb 07 10 09.4
comp=Z,82nm,1.2s
M03C McCloud 85.69 322 lAmb lAmb 07 10 07.9
comp=Z,26nm,0.7s
MSO Missoula 85.73 330 lAmb lAmb 07 10 45.5
comp=Z,56nm,1.8s
KMRM Mail Ridge 85.84 320 lAmb lAmb 07 10 10.1
comp=Z,34nm,0.9s
KHBM Hayfork Bally 85.87 321 lAmb lAmb 07 10 09.8
comp=Z,24nm,1.0s
PBDV Barranco-do-Ve 85.96 44 *eP* **P** **07 10 09.8 +1.6**
PBDV *i* lAmb lAmb 07 10 11.4
comp=Z,70nm,1.0s
KUQ Kuujjuaa 86.13 360 lAmb lAmb 07 10 09.4
comp=Z,20nm,0.8s
PCVE Castro Verde 86.15 43 *eP* **P** **07 10 10.9 +1.8**
PCVE *i* lAmb lAmb 07 10 11.6
comp=Z,51nm,1.0s
M02C Callahan 86.17 322 lAmb lAmb 07 10 10.6
comp=Z,41nm,1.6s
MESJ Messejana 86.17 43 *eP* **P** **07 10 10.6 +1.4**
MESJ lAmb lAmb 07 10 12.7
comp=Z,91nm,1.4s
MESJ Messejana 86.17 43 lAmb lAmb 07 10 13.1
comp=Z,64nm,1.2s
MESJ Messejana 86.17 43 *eP* **P** **07 10 10.8 +1.6**
MESJ *i* lAmb lAmb 07 10 13.3
comp=Z,50nm,1.1s
MESJ Messejana 86.17 43 *eP* **P** **07 10 10.6 +1.4**
PVAQ Vaqueiros 86.19 44 P **P** **07 10 10.2 +0.9**
PVAQ lAmb lAmb 07 10 13.3
comp=Z,29nm,0.9s
PVAQ Vaqueiros 86.19 44 *eP* **P** **07 10 11.1 +1.7**
PVAQ *i* lAmb lAmb 07 10 11.8
comp=Z,45nm,1.3s
KMPM Mount Pierce 86.20 320 lAmb lAmb 07 10 11.7
comp=Z,43nm,1.0s
KHMM Horse Mountain 86.30 321 lAmb lAmb 07 10 12.7
comp=Z,32nm,1.1s
I07A Izee 86.31 325 lAmb lAmb 07 10 12.4
comp=Z,32nm,1.0s
L04D Klamath Falls 86.44 323 lAmb lAmb 07 10 11.7
comp=Z,27nm,0.8s
PBEJ Beja 86.50 43 *eP* **P** **07 10 12.0 +1.2**
PBEJ *i* lAmb lAmb 07 10 13.7
comp=Z,40nm,1.2s
PBEJ *etx* tx 07 10 46.1
MOE Montemor 86.54 42 *eP* **P** **07 10 12.4 +1.4**
MOE *i* lAmb lAmb 07 10 13.8
comp=Z,44nm,1.2s
F10A Beach Ranch, E 86.58 328 lAmb lAmb 07 10 14.1
comp=Z,23nm,0.8s
J05D Fort Rock, OR 86.62 324 lAmb lAmb 07 10 14.0
comp=Z,49nm,1.0s
EVO Evora 86.74 43 *eP* **P** **07 10 13.4 +1.5**
TAM Tamanrasset 86.90 62 P **P** **07 10 13.7 +0.4**
TAM lAmb lAmb 07 10 18.1
comp=Z,28nm,0.7s
TAM Tamanrasset 86.90 62 P **P** **07 10 13.7 +0.4**
TAM pmax pmax
comp=Z,28nm,0.7s
PARRA Arraiolos 86.91 42 *eP* **P** **07 10 13.8 +1.1**
PARRA *i* lAmb lAmb 07 10 18.8
comp=Z,37nm,1.5s
PSBE So Bento 86.92 42 *eP* **P** **07 10 13.9 +1.1**
PMTG Montargil 86.97 42 *eP* **P** **07 10 14.5 +1.5**
PMTG *i* lAmb lAmb 07 10 19.2
comp=Z,48nm,1.3s
L02F Cave Junction 87.06 322 lAmb lAmb 07 10 15.4
comp=Z,26nm,0.8s
PBAR Barrancos 87.10 43 *eP* **P** **07 10 14.9 +1.2**
PBAR *i* lAmb lAmb 07 10 19.5
comp=Z,30nm,1.4s
BBOR Butler Butte 87.10 323 lAmb lAmb 07 10 15.1
comp=Z,26nm,1.0s
PESTR Estremoz 87.21 43 *eP* **P** **07 10 16.2 +2.0**
PESTR *i* lAmb lAmb 07 10 17.6
comp=Z,34nm,1.4s
I04A Tendick Farm, 87.59 324 lAmb lAmb 07 10 17.7
comp=Z,39nm,1.1s
G06A Carlson Farm, 87.69 326 lAmb lAmb 07 10 54.3
comp=Z,66nm,1.6s
F07A Phinny Hill Vi 87.81 326 lAmb lAmb 07 10 19.9
comp=Z,54nm,1.8s
FFC Flin Flon 87.87 341 P **P** **07 10 17.7 +0.8**
FFC lAmb lAmb 07 10 18.5
comp=Z,23nm,1.0s
FFC Flin Flon 87.87 341 P **P** **07 10 17.7 +0.8**
FFC pmax pmax
comp=Z,23nm,1.0s
FFC Flin Flon 87.87 341 P **P** **07 10 16.9 0.0**
FFC pP **pP** **07 10 52.1 0.0**
PCBR Castelo Branco 87.91 42 *eP* **P** **07 10 18.4 +1.0**
PCBR *i* lAmb lAmb 07 10 21.5
comp=Z,40nm,1.9s
J01E Myrtle Point 87.96 322 lAmb lAmb 07 10 20.4
comp=Z,38nm,1.0s
HAWA Hanford 87.98 327 lAmb lAmb 07 10 55.0
comp=Z,45nm,1.4s
I03D Drain, OR 88.02 323 lAmb lAmb 07 10 20.3
comp=Z,53nm,1.2s
H04A Detroit Lake 88.09 324 lAmb lAmb 07 10 20.1
comp=Z,34nm,0.9s
NEW Newport 88.23 329 lAmb lAmb 07 10 54.4
comp=Z,35nm,1.6s
HOOD Mount Hood Mea 88.26 325 lAmb lAmb 07 10 23.2
comp=Z,34nm,1.1s
C09A Chrisman Ranch 88.41 329 lAmb lAmb 07 10 21.7
comp=Z,34nm,1.0s
MXC Moxie City 88.48 327 lAmb lAmb 07 10 21.9
comp=Z,33nm,1.4s
COR Corvallis 88.60 324 P **P** **07 10 22.2 +1.6**
COR Corvallis 88.60 324 P **P** **07 10 22.2 +1.6**
COR pmax pmax
comp=Z,147nm,1.3s
EPH Ephrata 88.70 328 lAmb lAmb 07 10 57.5
comp=Z,43nm,1.7s
MVO Moncorvo 89.02 41 *eP* **P** **07 10 24.0 +1.2**
D05A Enumclaw 89.74 326 lAmb lAmb 07 10 27.6
comp=Z,30nm,0.8s
ESDC Sonseca Array 89.91 44 P **P** **07 10 27.8 +0.8**
comp=Z,5.7nm,1.0s,baz=240,slow=4.3,SNR=18
ESDC pP **pP** **07 11 01.6 -0.4**
comp=Z,1.7nm,0.8s,baz=236,slow=3.9,SNR=2.0
ESDC LR LR 07 50 37.5
comp=Z,240nm,18.5s,baz=229,slow=35
comp=Z,5.7nm,1.0s
GNW Green Mountain 90.41 326 lAmb lAmb 07 10 30.5
comp=Z,14nm,0.7s
WHZ Wether Hill Ro 90.58 215 P **P** **07 10 31.5 +1.4**
B04A Port Angeles 91.08 326 lAmb lAmb 07 10 34.8
comp=Z,24nm,1.0s
LLLB Lillooet 92.08 329 lAmb lAmb 07 10 37.9
comp=Z,16nm,1.1s
RAO Raoul Island 92.16 235 LR LR 07 44 42.3
comp=Z,60nm,21.7s,baz=110,slow=30
AFI Afiamalu 95.55 251 LR LR 07 43 60.0
comp=Z,110nm,20.4s,baz=30,slow=29
KEST Kesra 96.47 53 LR LR 07 56 46.3
comp=Z,384nm,18.8s,baz=234,slow=37
MBAR Mbarara 97.06 94 LR LR 07 54 13.8
comp=Z,85nm,18.1s,baz=252,slow=35
YKAW1 Yellowknife Wh 97.96 340 lAmb lAmb 07 11 04.8
comp=Z,15nm,0.9s
YKA Yellowknife Ar 98.01 340 P Pdif 07 11 03.7 +0.3
comp=Z,7.1nm,0.8s,baz=143,slow=3.8,SNR=137
YKA pP pP 07 11 38.3 -0.5
comp=Z,3.7nm,1.0s,baz=142,slow=3.8,SNR=4.6
YKA PKKPbc **PKKPbc** **07 27 36.1 -2.6**
comp=Z,0.5nm,0.8s,baz=325,slow=4.3,SNR=9.2
comp=Z,7.1nm,0.8s
BORG Borgarnes 99.52 18 LR LR 07 50 41.3
comp=Z,74nm,21.8s,baz=228,slow=32
EKA Eskdalemuir Ar 99.81 32 P **Pdif** **07 11 10.8 -0.9**
comp=Z,0.6nm,0.4s,baz=235,slow=2.9,SNR=6.3
EKA LR LR 07 54 11.9
comp=Z,85nm,20.6s,baz=232,slow=34
comp=Z,0.6nm,0.4s
DAVOX Davos/Dischmat 102.23 43 P **Pdif** **07 11 21.3 -1.6**
comp=Z,2.5nm,0.6s,baz=242,slow=13,SNR=4.3
GERES GERESS Array B 105.47 43 PKiKP **PKiKP** **07 15 50.1 +0.1**
comp=Z,0.7nm,0.6s,baz=241,slow=7.5,SNR=5.8
CLL Collm 106.11 40 *eP* **Pdif** **07 11 42.0 +2.2**
CLL Collm 106.11 40 *eP*dif **Pdif** **07 11 42.0 +2.2**
CLL *eP*KiKP **PKiKP** **07 15 53.0 +2.0**
CLL *ex* x 07 15 58.0
CLL *ex* x 07 24 09.0
CLL *ex* x 07 24 32.0
CLL *e*PS PS 07 25 06.0 -20
CLL *ex* x 07 26 08.0
CLL *e*SS SS 07 30 38.0 -18
CLL *e*SSS SSS 07 35 00.0
CLL AMS AMS 08 00 00.0
comp=Z,100nm,18.7s
DZM Mont Dzumac 107.67 232 *e*LR LR 07 47 25.1
comp=Z,222nm,28.7s
HFS Hagfors 110.02 32 PKiKP **PKiKP** **07 15 56.6 -1.4**
comp=Z,1.4nm,0.6s,baz=225,slow=1.6,SNR=3.6
MARR Marisel-Cluj 110.50 47 ⇓P **PKiKP** **07 15 59.0 -0.5**
ILAR Eielson Array 110.89 333 Pdiff **Pdif** **07 11 58.1 -2.7**
comp=Z,0.2nm,0.7s,baz=113,slow=5.3,SNR=1.4
ILAR PKiKP **PKiKP** **07 15 59.8 +0.3**
comp=Z,1.6nm,1.0s,baz=178,slow=1.1,SNR=8.9
ILAR PKKPbc **PKKPbc** **07 26 56.5 -3.2**
comp=Z,0.9nm,0.8s,baz=279,slow=3.7,SNR=7.4
ARR Arges 111.06 49 ⇑P **PKiKP** **07 16 00.0 -0.5**
VOIR 111.36 49 ⇑P **PKiKP** **07 16 00.9 -0.2**
VOIR 111.36 49 ⇑PKiKP **PKiKP** **07 16 00.9 -0.2**
MLR Muntele Rosu 111.97 49 PKiKP **PKiKP** **07 16 02.8 +0.4**
comp=Z,6.1nm,1.0s,baz=250,slow=2.3,SNR=5.0
MLR Muntele Rosu 111.97 49 ⇑P **PKiKP** **07 16 02.6 +0.2**
MLR Muntele Rosu 111.97 49 ⇑PKiKP **PKiKP** **07 16 02.6 +0.2**
BURAR Bucovina Array 112.16 47 ⇑P **PKiKP** **07 16 02.0 -0.6**
BURAR Bucovina Array 112.16 47 ⇑PKiKP **PKiKP** **07 16 02.0 -0.6**
PLOR Plostina 112.56 49 ⇑P **PKiKP** **07 16 03.2 -0.1**
PLOR Plostina 112.56 49 ⇑PKiKP **PKiKP** **07 16 03.2 -0.1**
VRI Vrincioaia 112.61 49 ⇑P **PKiKP** **07 16 02.8 -0.6**
VRI Vrincioaia 112.61 49 ⇑PKiKP **PKiKP** **07 16 02.8 -0.6**
TIRR Tirgusor 113.32 51 ⇑P **PKiKP** **07 16 05.3 +0.5**
TIRR Tirgusor 113.32 51 ⇑PKiKP **PKiKP** **07 16 05.3 +0.5**
CFR Carcaliu 113.35 50 ⇓P **PKiKP** **07 16 04.8 0.0**
CFR Carcaliu 113.35 50 ⇓PKiKP **PKiKP** **07 16 04.8 0.0**
TPGR Topolog 113.45 50 ⇑P **PKiKP** **07 16 04.1 -1.0**
STKA Stephens Creek 113.97 207 PKP **PKiKP** **07 16 06.2 -0.5**
comp=Z,3.1nm,0.8s,baz=155,slow=5.0,SNR=5.6
STKA Stephens Creek 113.97 207 ⇓PKiKP **PKiKP** **07 16 07.2 +0.6**
KIEV Kiev 115.53 44 ⇑P **PKPdf** **07 16 08.2 -0.6**
KIEV Kiev 115.53 44 **PKPdf** **07 16 08.8 0.0**
KIEV Kiev 115.53 44 ⇑PKiKP **PKPdf** **07 16 08.2 -0.6**
AKASG Malin Array Be 115.55 44 PKP **PKPdf** **07 16 08.4 -0.4**
comp=Z,6.7nm,0.7s,baz=264,slow=2.7,SNR=19
AKBB Malin Array Si 115.55 44 **PKiKP** **07 16 08.9 +0.1**
AKBB Malin Array Si 115.55 44 PKiKP **PKiKP** **07 16 08.9 +0.1**
MNK Minsk 115.65 40 *i* PKP **PKiKP** **07 16 09.5 +0.6**
comp=E,21nm,1.2s
MNK *i* PKP **PKiKP** **07 16 09.5 +0.6**
comp=N,16nm,0.6s
MNK *i* PKP **PKiKP** **07 16 09.5 +0.6**
comp=Z,29nm,0.8s,baz=256
MNK *i* pPKP **pPKiKP** **07 16 44.8 -0.6**
MNK *i* sPKP 07 16 58.2
MNK *i* PP **PP** **07 17 13.8 -0.1**
MNK *i* PPP PPP 07 19 40.0
MNK *i* SKS **SKSdf** **07 23 08.4 +0.2**
MNK *i* SS **SS** **07 32 54.4 -9.0**
MNK *i* SSS SSS 07 37 13.9
MNK *i* LR LR 08 00 39.4
MNK *i* LRM MLR 08 05 28.0
comp=E,576nm,21.4s
MNK *i* LRM MLR 08 05 41.0
comp=N,537nm,24.7s
MNK *i* LRM MLR 08 05 44.0
comp=Z,75nm,15.2s
MNK Minsk 115.65 40 *i* PKiKP **PKiKP** **07 16 09.5 +0.6**
MNK *i* 07 16 44.8
MNK *i* 07 17 13.8
MNK *i* PPP PPP 07 19 40.0
MNK *i* 07 23 08.4
MNK pmax pmax
comp=N,16nm,0.6s
MNK pmax pmax
comp=E,21nm,1.2s
MNK pmax pmax
comp=Z,29nm,0.8s
MNK MLR MLR
comp=E,576nm,21.0s
MNK MLR MLR
comp=N,537nm,25.0s
MNK MLR MLR
comp=Z,75nm,15.0s
BRTR Keskin Array B 115.67 57 PKP **PKiKP** **07 16 10.2 +0.5**
comp=Z,4.8nm,0.8s,baz=191,slow=3.8,SNR=22
BRTR Keskin Array B 115.67 57 PKiKP **PKiKP** **07 16 10.4 +0.7**
BRTR Keskin Array B 115.67 57 PKiKP **PKiKP** **07 16 10.4 +0.7**
BR131 Keskin Array S 115.68 57⇑*i*PKiKP **PKiKP** **07 16 10.4 +0.7**
VSU Vasula 115.91 36*c* *i*PKiKP **PKPdf** **07 16 09.2 -0.1**
VSU pmax pmax
comp=Z,18nm,1.3s
FINES FINESS Array B 116.20 32 PKP **PKiKP** **07 16 10.1 +0.3**
comp=Z,4.2nm,1.0s,baz=251,slow=1.7,SNR=7.9
FINES PKKPbc **PKKPbc** **07 26 41.5 0.0**
comp=Z,2.0nm,0.7s,baz=64,slow=4.4,SNR=9.1
SPITS Spitsbergen Ar 116.31 13 PKP **PKiKP** **07 16 09.7 0.0**
comp=Z,9.0nm,1.0s,baz=280,slow=1.7,SNR=5.1
E18K Tukpahlearik C 116.97 334 **PKiKP** **07 16 12.1 +1.0**
ARCES ARCESS Array B 117.33 23 PKP **PKPdf** **07 16 11.4 -0.3**
comp=Z,1.4nm,0.5s,baz=252,slow=3.0,SNR=14

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ARCES				PKKPbc	PKKPab	07 26 37.4	-0.1
	comp=Z,6.4nm,1.0s,baz=57,slow=4.5,SNR=4.9						
RAYN	Ar Rayn	120.33	78		PKiKP	07 16 20.1	+1.0
RAYN	Ar Rayn	120.33	78	⇓PKIKP	PKPdf	07 16 18.5	-0.5
OBN	Obninsk	120.71	40	PKP	PKiKP	07 16 18.7	0.0
	comp=Z,20nm,0.4s,baz=212,slow=6.7,SNR=5.3						
OBN	Obninsk	120.71	40⇓	*i*PKIKP	PKiKP	07 16 18.8	+0.1
OBN				*e*		07 17 46.2	
OBN				*e*PPP	PPP	07 20 22.9	
OBN				pmax	pmax		
	comp=Z,24nm,1.0s						
CTAO	Charters Tower	121.78	218		PKiKP	07 16 22.3	+0.2
CTAO	Charters Tower	121.78	218	PKIKP	PKiKP	07 16 22.3	+0.2
VSR	Storozhevoye	121.82	45	*e*PKIKP	PKPdf	07 16 20.6	-0.3
VSR				pmax	pmax		
	comp=Z,20nm,1.1s						
LPSR	Galich'ya Gora	121.83	43	*e*PKIKP	PKPdf	07 16 20.7	-0.1
LPSR				pmax	pmax		
	comp=Z,40nm,0.8s						
VORR	Voronezh	121.90	45	*e*PKIKP	PKPdf	07 16 20.8	-0.2
VORR				pmax	pmax		
	comp=Z,70nm,0.5s						
KLMR	Klimovskoe	122.61	34	*e*PKIKP	PKPdf	07 16 21.6	-0.5
KLMR				pmax	pmax		
	comp=Z,53nm,1.2s						
SHA1	Shidzhatmaz	123.14	54*c*	*i*PKIKP	PKiKP	07 16 24.9	+0.7
KIV	Kislovodsk	123.20	54		PKiKP	07 16 24.6	+0.5
KIV	Kislovodsk	123.20	54	*i* PKIKP	PKiKP	07 16 24.4	+0.2
KIV				pmax	pmax		
	comp=Z,32nm,1.0s						
KBZ	Khabaz	123.31	54	PKP	PKiKP	07 16 24.9	+0.7
	comp=Z,23nm,0.9s,baz=232,slow=1.4,SNR=37						
KBZ				pPKP	pPKPdf	07 17 00.8	+0.5
	comp=Z,6.5nm,0.9s,baz=296,slow=2.5,SNR=2.0						
KBZ	Khabaz	123.31	54*d*	*i*PKIKP	PKiKP	07 16 24.5	+0.3
GOF	Gofitskoye	123.61	53*c*	*e*PKIKP	PKiKP	07 16 25.7	+0.9
GNI	Garni	124.08	59	PKP	PKiKP	07 16 26.5	+0.3
	comp=Z,8.2nm,0.5s,baz=298,slow=1.3,SNR=6.8						
GNI				pPKP	pPKPdf	07 17 02.2	0.0
	comp=Z,4.8nm,0.5s,baz=256,slow=18,SNR=1.5						
GNI	Garni	124.08	59		PKiKP	07 16 27.4	+1.3
GNI	Garni	124.08	59*c*	*i*PKIKP	PKiKP	07 16 27.4	+1.3
GNI				pmax	pmax		
	comp=Z,13nm,0.8s						
ASAR	Alice Springs	124.28	204	PKP	PKPdf	07 16 26.2	-0.5
	comp=Z,25nm,0.8s,baz=148,slow=2.1,SNR=182						
ASAR				pPKP	pPKPdf	07 17 02.4	-1.1
	comp=Z,5.0nm,0.7s,baz=145,slow=2.1,SNR=3.6						
ASAR				PKKPbc	PKKPbc	07 26 11.4	+0.5
	comp=Z,1.4nm,0.8s,baz=344,slow=3.9,SNR=10						
ASAR				PKKP	PKKPdf	07 26 48.5	-1.3
	comp=Z,0.4nm,0.5s,baz=352,slow=1.8,SNR=6.1						
ASAR				SKKPbc	SKKPbc	07 29 49.0	+3.1
	comp=Z,1.1nm,0.9s,baz=337,slow=5.1,SNR=4.1						
ASAR	Alice Springs	124.28	204		PKPdf	07 16 26.1	-0.6
AKT	Akhty	126.52	58	*i* PKIKP	PKiKP	07 16 31.3	+0.4
AKT				*e*		07 18 28.1	
AKT				*e*PPP	PPP	07 21 10.3	
AKT				pmax	pmax		
	comp=Z,24nm,1.0s						
BELG	Belogornoye	127.12	44	PKP	PKiKP	07 16 31.3	-0.2
	comp=Z,37nm,0.8s,baz=358,slow=0.8,SNR=20						
BELG				pPKP	pPKPdf	07 17 06.5	-0.9
	comp=Z,25nm,0.8s,baz=215,slow=2.5,SNR=3.0						
WRA	Warramunga Arr	127.51	206	PKP	PKPdf	07 16 32.8	-0.1
	comp=Z,43nm,0.8s,baz=169,slow=1.8,SNR=170						
WRA				pPKP	pPKPdf	07 17 09.1	-0.6
	comp=Z,8.1nm,0.6s,baz=165,slow=1.7,SNR=4.3						
WRA				SKKPbc	SKKPbc	07 29 29.1	-5.9
	comp=Z,1.0nm,0.8s,baz=340,slow=5.7,SNR=5.1						
WRAB	Tennant Creek	127.52	206*d*	*i*PKIKP	PKPdf	07 16 32.7	-0.2
KIRV	Kirov	127.75	36	PKP	PKiKP	07 16 32.8	+0.2
	comp=Z,9.0nm,0.4s,baz=93,slow=1.1,SNR=8.7						
KIRV				pPKP	pPKPdf	07 17 07.8	-0.6
	comp=Z,13nm,0.7s,baz=225,slow=6.4,SNR=2.0						
BILL	Bilibino	129.28	337*d*	*i*PKIKP	PKiKP	07 16 35.7	+0.3
PMG	Port Moresby	129.62	227		PKiKP	07 16 38.7	+0.9
PMG	Port Moresby	129.62	227	PKIKP	PKiKP	07 16 38.7	+0.9
PSA00	Pilbara Seismi	129.85	189		PKPdf	07 16 37.1	-0.2
PSA00	Pilbara Seismi	129.85	189		PKPdf	07 16 37.4	+0.1
MBWA	Marble Bar	130.27	189		PKPdf	07 16 37.9	-0.3
ARTI	Arti	132.90	38	PKP	PKiKP	07 16 42.8	-0.3
	comp=Z,9.8nm,0.8s,baz=210,slow=1.4,SNR=9.3						
ARTI				pPKP	pPKPdf	07 17 16.8	-1.5
	comp=Z,7.8nm,0.8s,baz=269,slow=2.5,SNR=3.4						
ARTI	Arti	132.90	38		PKiKP	07 16 43.1	0.0
ARTI	Arti	132.90	38	*i* PKIKP	PKiKP	07 16 43.1	0.0
ARTI						07 19 08.4	
ARTI				SS	SS	07 36 38.3	-1.8
KNRA	Kununurra	133.45	202		PKiKP	07 16 44.9	-0.6
AKTO	Aktyubinsk	133.75	46	PKP	PKiKP	07 16 44.4	-0.6
	comp=Z,6.2nm,0.7s,baz=96,slow=0.8,SNR=18						
AKTO				pPKP	pPKPdf	07 17 19.8	-0.4
	comp=Z,3.4nm,0.7s,baz=310,slow=0.3,SNR=3.5						
ABKAR	Akbulak array	135.14	47		PKPpre	07 16 34.5	
TIXI	Tiksi	135.71	353⇑	*i*PKIKP	PKPdf	07 16 47.2	+0.5
NRIK	Noril'sk	136.51	13	PKP	PKiKP	07 16 49.4	-0.6
	comp=Z,6.2nm,0.9s,baz=34,slow=3.3,SNR=8.1						
NRIK				pPKP	pPKPdf	07 17 23.9	-0.8
	comp=Z,2.4nm,0.6s,baz=299,slow=1.3,SNR=2.5						
NRIK	Noril'sk	136.51	13		PKiKP	07 16 49.8	-0.2
SEY	Seymchan	136.80	335	*i* PKIKP	PKPdf	07 16 49.5	+0.5
SEY				pmax	pmax		
	comp=Z,29nm,1.0s						
PETK	Petropavlovsk-	138.65	320	PKhKP	PKPpre	07 16 42.4	
	comp=Z,6.2nm,0.9s,baz=71,slow=9.6,SNR=5.1						
PETK				PKP	PKiKP	07 16 54.2	-0.6
	comp=Z,15nm,0.8s,baz=89,slow=5.0,SNR=15						
MA2	Magadan	139.32	331⇑	*i*PKIKP	PKiKP	07 16 55.2	-0.8
BORK	Borovoye	140.50	39		PKPpre	07 16 50.9	
BORK	Borovoye	140.50	39⇓	*i*PKIKP	PKPdf	07 16 56.9	+0.9
BVAR	Borovoye Array	140.54	40	PKhKP	PKPpre	07 16 50.0	
	comp=Z,2.0nm,0.4s,baz=325,slow=2.0,SNR=12						
BVAR				PKP	PKiKP	07 16 57.8	-0.9
	comp=Z,5.7nm,0.5s,baz=270,slow=1.5,SNR=19						
BVAR				pPKP	pPKPdf	07 17 33.5	+0.9
	comp=Z,4.8nm,0.7s,baz=318,slow=4.2,SNR=2.9						
KBL	Kabul	142.72	69		PKPdf	07 16 58.4	-2.5
KBL	Kabul	142.72	69	PKIKP	PKPdf	07 16 58.4	-2.5
CHM	Chimkent	142.81	56	*e*PKIKP	PKPdf	07 17 01.3	+0.8
CHM	Chimkent	142.81	56	*e*PKP	PKPdf	07 17 01.4	+0.8
BRLS	Borolday	142.87	55	*e*PKIKP	PKPdf	07 17 01.2	+0.5
BRLS	Borolday	142.87	55	*e*PKP	PKPdf	07 17 01.2	+0.5
BRZS	Berezniki	142.98	43	*e*PKIKP	PKPdf	07 17 01.7	+1.1
BRZS	Berezniki	142.98	43	*e*PKP	PKPdf	07 17 01.8	+1.1
IUG	Iuzhnay	143.14	57	*e*PKIKP	PKPdf	07 17 02.4	+1.2
IUG	Iuzhnay	143.14	57	*e*PKP	PKPdf	07 17 02.5	+1.2
KKAR	Karatay Array	143.35	55		PKPpre	07 16 58.5	
KKAR	Karatay Array	143.35	55	PKHKP	PKPpre	07 16 58.5	
PALK	Pallekele	143.46	119		PKPdf	07 17 01.6	-1.0
PALK	Pallekele	143.46	119	PKIKP	PKPdf	07 17 01.6	-1.0
BBJI	Bungbulang	144.10	172	PKP	PKPdf	07 17 03.8	0.0
YAK	Yakutsk	144.43	346		PKPdf	07 17 02.3	-0.4
YAK	Yakutsk	144.43	346	*e*PKIKP	PKPbc	07 17 01.8	+0.3
YAK				*e*		07 17 33.6	
YAK				*e*		07 20 19.3	
YAK				pmax	pmax		
	comp=Z,304nm,0.9s						
YAK				pmax	pmax		
	comp=N,56nm,1.8s						
YAK				pmax	pmax		
	comp=E,27nm,1.8s						
YAK				pmax	pmax		
	comp=Z,288nm,5.2s						
YAK				pmax	pmax		
	comp=N,114nm,3.4s						
YAK				pmax	pmax		
	comp=E,122nm,3.8s						
BTLS	Baital	145.41	51	*e*PKIKP	PKPab	07 17 06.5	+0.9
EKS2	Erkin-Say	145.79	55	P	PKPab	07 17 07.5	+0.2
	SNR=91						
KAPI	Kappang	146.08	193		PKPbc	07 17 08.3	+0.2
KAPI	Kappang	146.08	193	PKIKP	PKPbc	07 17 08.3	+0.2
KURBB	Kurchatov Arra	146.13	40	PKPbc	PKPab	07 17 07.8	-0.3
	comp=E,100nm,0.8s,baz=299,slow=3.4,SNR=310						
KURBB				pPKPbc	pPKPbc	07 17 43.4	0.0
	comp=E,20nm,0.8s,baz=303,slow=3.9,SNR=3.1						
KURK	Kurchatov	146.14	39		PKPbc	07 17 07.5	+0.2
KURK	Kurchatov	146.14	39*d*	*i*PKP2	PKPbc	07 17 07.4	+0.2
USP	Ospenovka	146.17	54	P	PKPab	07 17 08.2	-0.4
	SNR=27						
NIL	Nilore	146.18	71		PKPbc	07 17 07.7	-0.3
NIL	Nilore	146.18	71	PKP2	PKPbc	07 17 07.7	-0.3
SGDS	Sogindy	146.22	53	*e*PKP	PKPbc	07 17 07.5	-0.3
AAK	Ala-Archa	146.31	55		PKPbc	07 17 08.6	+0.3
AAK	Ala-Archa	146.31	55	P	PKPbc	07 17 08.7	+0.5
	SNR=95						
AAK	Ala-Archa	146.31	55	PKP2	PKPbc	07 17 08.6	+0.3
UCH	Uchtor	146.41	56	P	PKPbc	07 17 09.3	+0.3
	SNR=121						
CHMS	Chumysh	146.41	54	P	PKPbc	07 17 08.6	+0.3
	SNR=25						
KBK	Karagaybulak	146.63	55	P	PKPbc	07 17 09.3	+0.1
	SNR=42						
TKM2	Tokmak 2	147.03	54	P	PKPbc	07 17 09.5	-0.9
	SNR=43						
HYB	Hyderabad	147.08	102	*e*PKPbc	PKPbc	07 17 11.4	+0.4
HYB				*e*PKPab	PKPab	07 17 12.8	-0.1
HYB				*e*PP	PP	07 20 36.9	-0.2
SEM	Semipalatinsk	147.20	39	*e*PKIKP	PKPdf	07 17 09.0	+0.9
SEM	Semipalatinsk	147.20	39	*e*PKP	PKPdf	07 17 09.1	+0.9
KUU	Kurty	147.30	52	*e*PKIKP	PKPdf	07 17 09.2	+0.9
KUU	Kurty	147.30	52	*e*PKP	PKPdf	07 17 09.2	+0.9
ZALV	Zalesovo Beam	147.44	31	PKPbc	PKiKP	07 17 12.1	-0.8
	comp=E,180nm,0.7s,baz=287,slow=1.5,SNR=131						
ZALV				pPKPbc	pPKPbc	07 17 46.6	-0.4
	comp=E,102nm,0.9s,baz=302,slow=4.0,SNR=6.1						
ZALV	Zalesovo Beam	147.44	31		PKPdf	07 17 09.1	+1.0
ULHL	Ulahol	147.66	55	P	PKPbc	07 17 11.1	-1.0
	SNR=67						
KSH2	Kashi	147.74	61	PKPbc	PKPbc	07 17 11.1	-1.2
KSH2				sPKP	sPKPdf	07 17 48.7	-11
AAA	Alma-Ata	147.89	53	*e*PKIKP	PKPdf	07 17 10.2	+0.9
AAA	Alma-Ata	147.89	53	*e*PKP	PKPdf	07 17 10.3	+0.9
TNSS	Tian-Shan	147.96	53	*e*PKIKP	PKPdf	07 17 10.5	+0.6
TNSS	Tian-Shan	147.96	53	*e*PKP	PKPdf	07 17 10.5	+0.6
TYV	Tymovskoe	147.98	323	*e*PKP2	PKiKP	07 17 13.5	-0.6
TYV				pmax	pmax		
	comp=Z,600nm,4.2s						
TYV				pmax	pmax		
	comp=Z,72nm,1.0s						
MDOK	Medeo	148.00	53	*e*PKIKP	PKPdf	07 17 10.5	+0.9
MDOK				*e*		07 17 45.4	
MDOK	Medeo	148.00	53	*e*PKP	PKPdf	07 17 10.5	+0.9
MDOK				*e*pPKP	pPKPdf	07 17 45.5	-0.6
TDK	Taldyqorghan	148.36	49	*e*PKIKP	PKPdf	07 17 11.1	+1.2
TDK	Taldyqorghan	148.36	49	*e*PKP	PKPdf	07 17 11.2	+1.2
SATY	Saty	148.98	53	*e*PKIKP	PKPdf	07 17 11.8	+0.7
SATY				*e*		07 17 46.7	
SATY	Saty	148.98	53	*e*PKP	PKPdf	07 17 11.9	+0.7
SATY				*e*pPKP	pPKPdf	07 17 46.8	-0.9
UZB	Uzynbulak	149.39	52	*e*PKHKP	PKPpre	07 17 12.5	
UZB	Uzynbulak	149.39	52	*e*PKP	PKPdf	07 17 12.6	+0.7
SHLS	Shalkode	149.69	52	*e*PKIKP	PKPdf	07 17 13.2	+0.9
SHLS	Shalkode	149.69	52	*e*PKP	PKPdf	07 17 13.2	+0.9
YSS	Yuzhno-Sakhali	149.90	316		PKiKP	07 17 18.0	-0.1
YSS	Yuzhno-Sakhali	149.90	316	*e*PKHKP	PKPpre	07 17 13.9	
YSS				pmax	pmax		
	comp=Z,60nm,0.7s						
MAKZ	Makanchi	149.93	44		PKPdf	07 17 13.3	+0.9
MAKZ	Makanchi	149.93	44	PKHKP	PKPpre	07 17 13.3	
MK31	Makanchi Array	150.13	44	PKPbc	PKiKP	07 17 19.2	+0.5
MK31				PKPab	PKPab	07 17 26.1	+1.7
MKAR	Makanchi Array	150.13	44	PKPbc	PKiKP	07 17 18.9	+0.1
	comp=Z,4.2nm,0.9s,baz=295,slow=1.4,SNR=26						
MKAR				pPKPbc	pPKPbc	07 17 54.1	0.0
	comp=Z,72nm,0.9s,baz=308,slow=2.1,SNR=5.4						
MKAR	Makanchi Array	150.13	44		PKiKP	07 17 19.1	+0.4
MKAR				PKPab	PKPab	07 17 26.1	+1.8
BOD	Bodaibo	150.52	358	*e*PKIKP	PKPdf	07 17 13.1	+0.2
BOD				pmax	pmax		
	comp=Z,57nm,1.0s						
GRNR	Gornyy	151.18	328⇓	*i*PKIKP	PKPdf	07 17 15.5	+1.3
GRNR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ZSN	Zaisan	151.33	41	*e*PKIKP	PKPdf	07 17 15.3	+0.7
ZSN	Zaisan	151.33	41	*e*PKP	PKPdf	07 17 15.3	+0.7
TOLI2	Tolitoli	151.75	198		PKPbc	07 17 22.5	-0.2
ZEA	Zeya	152.39	341	*e*PKIKP	PKPdf	07 17 16.4	+0.5
ZEA				*e*		07 17 59.1	
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
WMQ	Urumqi	154.90	45	*e*PKPbc	PKPdf	07 17 20.6	+0.7
MOY	Mondy	155.19	17	*e*PKIKP	PKPdf	07 17 21.1	+1.0
MOY				pmax	pmax		
	comp=Z,43nm,2.6s						
HEH	HeiHe	155.32	337	*e*PKP	PKPdf	07 17 20.0	-0.2
MJAR	Matsushiro Arr	156.78	297	PKP	PKPdf	07 17 23.2	+0.6
	comp=Z,2.2nm,0.6s,baz=62,slow=1.9,SNR=2.5						
MJAR				PKPab	PKPab	07 17 53.5	+0.6
	comp=Z,15nm,0.9s,baz=131,slow=2.4,SNR=11						
MJAR				pPKPab	pPKPab	07 18 28.6	-0.2
	comp=Z,10nm,1.0s,baz=109,slow=1.3,SNR=4.3						
MJAR	Matsushiro Arr	156.78	297	PKPab	PKPab	07 17 54.0	+1.1
MAJO	Matsushiro	156.78	297		PKPab	07 17 54.1	+1.2
MAJO	Matsushiro	156.78	297	PKP2	PKPab	07 17 54.1	+1.2
ZAK	Zakamensk	156.93	15	*e*PKIKP	PKPdf	07 17 18.9	-3.5
ZAK				pmax	pmax		
	comp=Z,14nm,2.3s						
EVN	Everest	157.45	85		PKPdf	07 17 24.2	-0.2
USRK	Ussuriysk Ar.	157.73	320	PKP	PKPdf	07 17 24.2	+0.8
	comp=Z,6.2nm,0.9s,baz=11,slow=1.0,SNR=4.7						
MDJ	Mudanjiang	158.75	324	PKP	PKPdf	07 17 26.0	+1.3
BNX	BinXian	158.97	330	⇓PKP	PKPdf	07 17 24.2	-0.7
SONM	Songino Array	160.00	12	PKP	PKPdf	07 17 27.3	+1.1
	comp=Z,14nm,1.0s,baz=280,slow=0.5,SNR=35						
SONM				pPKP	pPKPdf	07 18 02.0	-1.0
	comp=Z,1.9nm,0.8s,baz=352,slow=0.7,SNR=1.6						
SONM				PKPab	PKPab	07 18 07.6	+1.2
	comp=Z,6.9nm,0.7s,baz=325,slow=2.3,SNR=7.0						
SONM				pPKPab	pPKPab	07 18 42.3	+0.6
	comp=Z,6.3nm,0.8s,baz=326,slow=4.4,SNR=4.4						
ULN	Ulaanbaatar	160.08	11		PKPdf	07 17 27.4	+1.0
ULN	Ulaanbaatar	160.08	11	PKIKP	PKPdf	07 17 27.4	+1.0
GOMU	GeErMu	163.22	58	PKP	PKPdf	07 17 31.8	+1.5
KSRS	Korea Array	164.13	309	PKP	PKPdf	07 17 31.5	+1.0
	comp=Z,7.2nm,0.9s,baz=97,slow=0.9,SNR=20						
KSRS				PKPab	PKPab	07 18 26.4	+1.6
	comp=Z,6.0nm,0.9s,baz=59,slow=4.3,SNR=8.2						
KSRS				pPKPab	pPKPab	07 19 00.5	-0.1
	comp=Z,5.0nm,0.9s,baz=66,slow=4.6,SNR=5.2						
KSAR	Wonju Array Be	164.16	309		PKPdf	07 17 31.1	+0.5
KSAR	Wonju Array Be	164.16	309	PKIKP	PKPdf	07 17 31.1	+0.5
XLT	XiLinHaoTe	164.20	350	*e*PKP	PKPdf	07 17 31.0	+0.5
XLT				PKPab	PKPab	07 18 26.2	+1.3
CMAR	Chiang Mai Arr	164.22	126	PKP	PKPdf	07 17 32.1	+0.9
	comp=Z,5.4nm,0.9s,baz=255,slow=2.7,SNR=29						
CMAR				pPKP	pPKPdf	07 18 06.8	-1.1
	comp=Z,1.3nm,0.3s,baz=262,slow=2.7,SNR=2.0						
CMAR				PKPab	PKPab	07 18 25.9	+0.2
	comp=Z,1.7nm,0.5s,baz=252,slow=4.7,SNR=5.2						
CMAR				pPKPab	pPKPab	07 19 00.7	-0.1
	comp=Z,1.3nm,0.3s,baz=228,slow=3.9,SNR=2.1						
CMAR	Chiang Mai Arr	164.22	126		PKPdf	07 17 32.3	+1.1
CHTO	Chiang Mai	164.45	125	PKPdf	PKPdf	07 17 31.7	+0.3
CHTO	Chiang Mai	164.45	125	PKIKP	PKPdf	07 17 31.7	+0.3
GTA2	Gaotai	164.74	40	PKP	PKPdf	07 17 32.5	+1.3
GTA2				PKPab	PKPab	07 18 29.2	+1.6
GTA2				L	L		
	comp=Z,120nm,17.1s						
GTA2				L	L		
	comp=Z,230nm,17.1s						
GTA2				L	L		
	comp=Z,220nm,17.8s						
DL2	Dalian	166.97	326	PKP	PKPdf	07 17 33.4	+0.6
DL2				PP	PP	07 22 25.8	+0.7
DL2				PPMZ			
	comp=Z,430nm,4.8s						
BTO2	Baotou	167.47	9	*e*PKP	PKPdf	07 17 34.9	+1.6
BTO2				PKPab	PKPab	07 18 39.7	+0.3
BTO2				PP	PP	07 22 29.4	+2.1
BTO2				SS	SS	07 43 06.1	+3.9
BTO2				PPMZ			
	comp=Z,810nm,5.2s						
BTO2				L	L		
	comp=Z,490nm,12.9s						
BTO2				L	L		
	comp=Z,380nm,7.3s						
BTO2				L	L		
	comp=Z,420nm,13.7s						
HHC	Hu-ho-hao-te	167.51	3⇓	*i*PKP	PKPdf	07 17 34.7	+1.4
BJI2	Beijing	167.95	346	PKP	PKPdf	07 17 34.2	+0.7
LZH	Lanzhou	169.43	41	*e*PKP	PKPdf	07 17 36.7	+1.9
LZH				L	L		
	comp=Z,220nm,20.6s						
LZH				L	L		
	comp=Z,180nm,21.5s						
LZH				L	L		
	comp=Z,290nm,20.6s						
LZDM	Lanzhou Array	169.43	42	PKP	PKPdf	07 17 36.5	+1.4
	comp=Z,1.2nm,0.3s,baz=294,slow=1.5,SNR=6.8						
LZDM				PKPab	PKPab	07 18 50.4	+1.7
	comp=Z,1.1nm,0.3s,baz=303,slow=8.1,SNR=3.9						
PZH	PanZhiHua	170.36	99	PKP	PKPdf	07 17 35.6	0.0
PZH				PKPab	PKPab	07 18 53.5	+0.6
HNS	HongShan	170.77	348	⇓PKP	PKPdf	07 17 36.5	+1.2
HNS				PKPab	PKPab	07 18 54.8	+0.9
TIA	Tai'an	171.20	334	PKP	PKPdf	07 17 36.4	+0.8
TIA				PP	PP	07 22 45.1	-1.1
TIA				PPMZ			
	comp=Z,310nm,6.3s						
CD2	Chengdu	172.06	69	PKP	PKPdf	07 17 37.8	+1.6
NJ2	Nanjing	173.30	305	⇑PKP	PKPdf	07 17 37.8	+1.2
XAN	Xi'an	173.60	27	PKP	PKPdf	07 17 37.8	+1.0
LYN	LuoYang	173.82	359	PKP	PKPdf	07 17 38.2	+1.5
LYN				PP	PP	07 22 58.3	-0.4
LYN				PPMZ			
	comp=Z,500nm,5.7s						
GYA	Guiyang	174.57	109	⇓PKP	PKPdf	07 17 37.8	+0.4
GYA				PP	PP	07 23 06.8	+2.4
GYA				PPMZ			
	comp=Z,140nm,6.0s						
GYA				L	L		
	comp=Z,170nm,5.5s						
GYA				L	L		
	comp=Z,57nm,8.6s						
ENH	Enshi	176.82	52		PKPdf	07 17 37.8	0.0
WHN	Wuhan	177.23	322	PKP	PKPdf	07 17 39.0	+1.3
WHN				PP	PP	07 23 16.1	+0.4
CNSH	ChangSha	179.50	251	PKP	PKPdf	07 17 38.8	+0.8

*IDC **05** 06:59:51.7±0.7, 25°.73N×96°.81E, h0km, mb4.0/14, mbtmp4.0/16, ML4.2/2, MS3.6/6, Error ellipse: s-maj=28.6km s-min=13.6km az=60.0*

*BJI **05** 06:59:53.5, 25°.95N×96°.76E, h12km, mB4.7/7, mb4.4/32, ML4.0/8, Ms4.1/21, Ms7 3.8/19*

*NEIC **05** 06:59:54.5±1.5, 25°.84N±0°.08×96°.78E±0°.03, h10km±1km, mb4.5/27, Error ellipse: s-maj=14.1km s-min=3.4km az=190.0*

ISC 05 06:59:55.2±0.4**, 25°.79N**±0°.05×**96°.84E**±0°.03**, h16km, n88, σ1s.73**/97**, mb4.3**/29**, MS3.5**/6**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNCH	TengChong	1.70	116	Pg	Pn	07 00 23.5	-1.0
TNCH				Sg	Sn	07 00 45.0	-1.0
TNCH				SMN			
	7μm,1.0s						
TNCH				SME			
	4μm,0.7s						
MOKO	MOKOCHONG	2.15	285	*e*P	Pb	07 00 32.4	-1.5
MOKO				*e*S	Sg	07 01 02.1	-2.4
MOKO				IAML		07 01 07.8	
	comp=N,2μm,0.9s						
MOKO				IAML		07 01 10.8	
	comp=E,2μm,0.9s						
KOHI	KOHIMA	2.46	269	*e*P	Pn	07 00 36.2	+1.3
KOHI				*e*S	Sb	07 01 10.2	+0.9
KOHI				IAML		07 01 18.5	
	comp=N,976nm,1.1s						
KOHI				IAML		07 01 23.6	
	comp=E,942nm,0.9s						
JORH	JORHAT	2.51	293	*e*S	Sb	07 01 10.2	-0.3
PASG	PASIGHAT	2.63	330	*e*P	Pn	07 00 38.0	+0.9
MORE	Moreh	2.77	237		Pn	07 00 37.4	-1.6
IMP	Imphal	2.78	251	*e*P	Pn	07 00 40.9	+1.6
IMP				*e*S	Sb	07 01 17.3	-1.3
IMP				IAML		07 01 25.7	
	comp=E,769nm,1.0s						
IMP				IAML		07 01 34.3	
	comp=N,662nm,1.0s						
ITAN	ITANAGAR	3.10	296	*e*P	Pn	07 00 44.6	+1.0
ITAN				*e*S	Sn	07 01 20.7	+0.4
ITAN				IAML		07 01 45.5	
	comp=N,668nm,1.0s						
ITAN				IAML		07 01 47.3	
	comp=E,411nm,0.7s						
ZIRO	ZIRO	3.18	304	*e*P	Pn	07 00 45.1	+0.2
ZIRO				*e*S	Sn	07 01 23.4	+0.8
ZIRO				IAML		07 01 32.5	
	comp=E,3μm,0.6s						
ZIRO				IAML		07 01 33.2	
	comp=N,2μm,0.4s						
TEZP	TEZPUR	3.72	284	*e*P	Pn	07 00 51.4	-0.6
TEZP				*e*S	Sn	07 01 35.3	-0.2
PZH	PanZhiHua	4.47	80	Pn	Pn	07 01 06.1	+3.6
PZH				Sg	Sg	07 02 14.1	-4.6
PZH				SMN			
	comp=N,110nm,0.9s						
PZH				SME			
	comp=N,120nm,1.0s						
SHL	Shillong	4.47	268		Pn	07 01 00.6	-2.0
SHL	Shillong	4.47	268	*e*P	Pn	07 01 00.4	-2.2
SHL				*e*S	Sn	07 01 52.6	-1.8
SHL				IAML		07 02 21.4	
	comp=N,589nm,0.8s						
GUWA	GUWAHATI	4.65	276	*e*P	Pn	07 01 03.9	-0.9
GUWA				*e*x	x	07 01 55.5	
GUWA				IAML		07 01 59.0	
	comp=N,547nm,0.7s						
GUWA				IAML		07 02 08.9	
	comp=E,633nm,0.4s						
TAWA	Tawang	4.79	293	*e*P	Pn	07 01 09.2	+2.1
TAWA				*e*S	Sn	07 02 00.9	-1.7
TAWA				IAML		07 02 07.0	
	comp=E,283nm,0.4s						
TAWA				IAML		07 02 08.4	
	comp=N,322nm,0.8s						
SAIH	SAIHA	4.81	228	*e*P	Pn	07 01 07.2	0.0
KMI2	Kunming	5.38	96	Pg	Pg	07 01 40.3	+1.9
KMI2				Sg	Sg	07 02 41.6	-6.5
KMI2				smax	smax		
	comp=N,92nm,0.9s						
KMI2				smax	smax		
	comp=E,86nm,1.0s						
KMI2				LR	LR		
	comp=N,570nm,7.2s						
KMI2				LR	LR		
	comp=E,530nm,7.8s						
KMI2				LR	LR		
	comp=Z,670nm,8.8s						
LSA	Lhasa	6.37	309	Pn	Pn	07 01 26.9	-2.0
LSA				L	L		
	comp=Z,490nm,9.0s						
LSA				L	L		
	comp=Z,390nm,7.9s						
LSA				L	L		
	comp=Z,290nm,7.9s						
CHTO	Chiang Mai	7.21	164		Pn	07 01 40.4	+0.3
GTK	Tadong	7.53	283	*e*S	Sn	07 03 08.2	-1.5
CM31	Chiang Mai Arr	7.55	165	Pn	Pn	07 01 45.1	+0.3
CMAR	Chiang Mai Arr	7.55	165	Pn	Pn	07 01 42.7	-2.1
	comp=Z,0.8nm,0.3s,baz=342,slow=13,SNR=17						
CMAR				Lg	Lg	07 03 49.8	
	comp=Z,0.5nm,0.3s,baz=345,slow=29,SNR=5.9						
	comp=Z,2.0nm,0.3s						
CMAR	Chiang Mai Arr	7.55	165	Pn	Pn	07 01 45.4	+0.6
EVN	Everest	9.20	286		Pn	07 02 07.8	-0.2
GOMU	GeErMu	10.52	351	P	Pn	07 02 25.8	+0.1
GOMU				pP		07 02 28.6	
GOMU				sP		07 02 32.8	
GOMU				S	Sn	07 04 25.1	+1.7
GOMU				pmax	pmax		
	comp=Z,7.0nm,0.5s						
GOMU				L	L		
	comp=Z,270nm,8.9s						
GOMU				L	L		
	comp=Z,160nm,8.5s						
GOMU				L	L		
	comp=Z,300nm,8.6s						
LZDM	Lanzhou Array	11.72	29	Pn	Pn	07 02 40.7	-1.4
	baz=207,slow=15						
	comp=Z,1.1nm,0.3s						
ENH	Enshi	12.03	65		Pn	07 02 45.4	-0.7
XAN	Xi'an	13.31	49	P	Pn	07 03 01.4	-2.2
XAN				S	Sn	07 05 32.0	+0.6
XAN				pmax	pmax		
	comp=Z,12nm,0.7s						
XAN				L	L		
	comp=Z,1μm,16.5s						
XAN				L	L		

	comp=Z,470nm,16.5s						
XAN				L	L		
	comp=Z,590nm,13.9s						
QIZ	Qiongzhong	13.78	117	P	Pn	07 03 10.4	+0.4
QIZ				S	Sn	07 05 46.9	+4.1
QIZ				L	L		
	comp=Z,370nm,9.3s						
QIZ				L	L		
	comp=Z,320nm,7.7s						
QIZ				L	L		
	comp=Z,260nm,8.4s						
GTA2	Gaotai	13.88	9	*e*P	Pn	07 03 09.6	-1.8
GTA2				sP	P	07 03 20.9	+1.3
GTA2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA2				L	L		
	comp=Z,630nm,9.8s						
GTA2				L	L		
	comp=Z,310nm,8.6s						
GTA2				L	L		
	comp=Z,550nm,10.5s						
CNSH	ChangSha	14.55	77	P	Pn	07 03 20.1	-0.4
LYN	LuoYang	16.08	53	P	Pn	07 03 38.3	-2.4
LYN				pmax	pmax		
	comp=Z,30nm,0.8s						
LYN				L	L		
	comp=Z,410nm,9.9s						
LYN				L	L		
	comp=Z,820nm,12.6s						
HYB	Hyderabad	18.92	247	*e*P	Pn	07 04 22.3	+6.1
HHC	Hu-ho-hao-te	19.37	36	*e*P	Pn	07 04 22.3	+0.7
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,170nm,5.1s						
HHC				L	L		
	comp=Z,250nm,11.6s						
HHC				L	L		
	comp=Z,470nm,16.5s						
HHC				L	L		
	comp=Z,320nm,11.0s						
WMQ	Urumqi	19.47	340	*e*P	Pn	07 04 24.0	+1.4
WMQ				pmax	pmax		
	comp=Z,22nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,150nm,4.5s						
TIA	Tai'an	20.22	54	P	P	07 04 29.4	-0.2
TIA				pmax	pmax		
	comp=Z,16nm,0.8s						
WUS	Wushi	21.20	321		P	07 04 39.2	-1.1
WUS				IAmb	IAmb	07 04 46.1	
	comp=Z,42nm,1.4s						
NIL	Nilore	21.90	297		P	07 04 46.3	-1.4
NIL				IAmb	IAmb	07 04 51.1	
	comp=Z,14nm,0.9s						
KSH2	Kashi	22.28	312	P	P	07 04 51.8	-0.1
KSH2				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TARG	Taragay, Kyrgy	22.35	320		P	07 04 50.8	-2.1
TARG				IAmb	IAmb	07 05 07.4	
	comp=Z,14nm,0.7s						
KDJ	Kajisay	22.97	320		P	07 04 57.2	-2.0
KDJ				IAmb	IAmb	07 05 14.7	
	comp=Z,9.0nm,0.9s						
NRN	Naryn	23.25	317	P	P	07 05 02.7	+0.4
SONM	Songino Array	23.26	16	P	P	07 05 01.5	-0.6
	comp=Z,1.0nm,0.6s,baz=203,slow=10,SNR=6.4						
	comp=Z,1.0nm,0.6s						
ULN	Ulaanbaatar	23.46	17	P	P	07 05 02.2	-1.9
BOOM	Boomskoye usch	23.91	319		P	07 05 08.6	0.0
MKAR	Makanchi Array	23.94	335	P	P	07 05 08.6	0.0
	comp=Z,7.3nm,0.7s,baz=139,slow=9.6,SNR=63						
	comp=Z,7.3nm,0.7s						
MKAR	Makanchi Array	23.94	335		P	07 05 07.7	-0.9
MAKZ	Makanchi	24.07	334		P	07 05 09.7	-0.2
MAKZ				IAmb	IAmb	07 05 18.5	
	comp=Z,7.8nm,0.9s						
AAK	Ala-Archa	24.86	318	P	P	07 05 16.0	-1.2
DRK	Karamyk	25.02	309	P	P	07 05 18.2	-0.6
DRK				IAmb	IAmb	07 05 25.4	
	comp=Z,9.7nm,0.6s						
KBL	Kabul	25.50	297		P	07 05 22.2	-1.0
KBL				IAmb	IAmb	07 05 38.6	
	comp=Z,14nm,0.9s						
GAR	Garm	25.87	307	P	P	07 05 25.9	-0.5
BTK	Batken	25.95	310		P	07 05 26.4	-0.7
TLY	Talaya	26.37	10	LR	LR	07 16 49.4	
	comp=Z,66nm,20.0s,baz=182,slow=38						
JOW	Kunigami	28.17	81	P	P	07 05 49.5	+2.5
KURBB	Kurchatov Arra	28.51	335	P	P	07 05 50.0	+0.3
	comp=Z,2.0nm,0.7s,baz=149,slow=9.9,SNR=8.3						
KURBB				LR	LR	07 18 06.8	
	comp=Z,139nm,19.0s,baz=167,slow=38						
	comp=Z,2.0nm,0.7s						
KS19	Wonju Array Si	28.75	58	P	P	07 05 51.8	-0.3
KSRS	Korea Array	28.78	59	LR	LR	07 17 52.8	
	comp=Z,96nm,19.6s,baz=35,slow=38						
MYLDM	Lahad Datu	29.16	131	P	P	07 05 55.1	-0.8
ZALV	Zalesovo Beam	29.51	346	LR	LR	07 18 08.1	
	comp=Z,191nm,18.0s,baz=76,slow=37						
JNU	Nakatsue	30.43	68	LR	LR	07 18 30.5	
	comp=Z,86nm,19.4s,baz=308,slow=37						
BVAR	Borovoye Array	33.65	331	P	P	07 06 34.5	-0.6
	comp=Z,1.2nm,0.7s,baz=143,slow=8.7,SNR=6.2						
	comp=Z,1.2nm,0.7s						
BORK	Borovoye	33.70	331		P	07 06 35.3	-0.1
BORK				IAmb	IAmb	07 06 39.9	
	comp=Z,2.8nm,0.6s						
BBJI	Bungbulang	34.69	161	P	P	07 06 46.2	+1.7
BBJI				IAmb	IAmb	07 06 57.9	
	comp=Z,10nm,0.9s						
MJAR	Matsushiro Arr	36.74	63	P	P	07 07 01.6	-0.4
	comp=Z,2.0nm,0.6s,baz=266,slow=7.6,SNR=4.3						
	comp=Z,2.0nm,0.6s						
AB31	Akbulak array	36.94	319		P	07 07 02.7	-0.7
AB31				IAmb	IAmb	07 07 09.2	
	comp=Z,3.3nm,0.7s						
ABKAR	Akbulak array	36.94	319		P	07 07 02.5	-0.9
ARTI	Arti	41.21	328	P	P	07 07 39.3	+0.2
GENI	Genyem	50.53	117	PKP	PKiKP	07 16 59.1	+3.2
AKASG	Malin Array Be	56.47	315	P	P	07 09 34.5	-1.8
	comp=Z,0.6nm,0.5s,baz=77,slow=6.8,SNR=4.4						
	comp=Z,0.6nm,0.5s						
WRA	Warramunga Arr	58.26	138	P	P	07 09 47.8	-1.5
	comp=Z,0.9nm,0.9s,baz=325,slow=7.4,SNR=8.4						
	comp=Z,0.9nm,0.9s						
WRA	Warramunga Arr	58.26	138	P	P	07 09 51.0	+1.7
FINES	FINESS Array B	58.52	328	P	P	07 09 50.0	-0.6
	comp=Z,2.4nm,1.0s,baz=104,slow=8.0,SNR=3.7						
	comp=Z,2.4nm,1.0s						
FINES	FINESS Array B	58.52	328	P	P	07 09 50.2	-0.3
MLR	Muntele Rosu	58.99	309	P	P	07 09 54.1	-0.2
	comp=Z,1.9nm,0.7s,baz=161,slow=6.4,SNR=3.8						
	comp=Z,1.9nm,0.7s						
BURAR	Bucovina Array	59.27	312	P	P	07 09 55.1	-1.0
ARCES	ARCESS Array B	59.56	337	P	P	07 09 57.8	+0.1
	comp=Z,3.2nm,0.9s,baz=82,slow=5.7,SNR=2.0						
	comp=Z,3.2nm,0.9s						
ARCES	ARCESS Array B	59.56	337	P	P	07 09 57.3	-0.4
ASAR	Alice Springs	60.87	141	P	P	07 10 06.5	-0.8
	comp=Z,1.0nm,0.8s,baz=327,slow=7.0,SNR=12						
	comp=Z,1.0nm,0.8s						
HFS	Hagfors	64.63	327	P	P	07 10 30.5	-1.4
	comp=Z,1.2nm,0.6s,baz=91,slow=8.6,SNR=2.1						
	comp=Z,1.2nm,0.6s						
NOA	NORSAR Array B	65.70	328	P	P	07 10 36.3	-2.5
	comp=Z,0.6nm,0.7s,baz=133,slow=23,SNR=4.9						
	comp=Z,0.6nm,0.7s						
GERES	GERESS Array B	66.67	314	P	P	07 10 45.1	-0.3
	comp=Z,0.9nm,0.8s,baz=57,slow=4.9,SNR=3.5						
	comp=Z,0.9nm,0.8s						
M16K	Timber Creek	74.32	29	P	P	07 11 32.9	+1.2
M16K				IAmb	IAmb	07 11 42.0	
	comp=Z,10nm,1.3s						
C27K	Jago River	75.52	18	P	P	07 11 41.1	+2.6
C27K				IAmb	IAmb	07 12 07.1	
	comp=Z,7.2nm,1.5s						
MLY	Manley	75.77	24	P	P	07 11 39.9	-0.2
MLY				IAmb	IAmb	07 12 06.3	
	comp=Z,5.7nm,1.4s						
BMAR	Burnt Mountain	76.55	20	P	P	07 11 44.0	-0.5
E29M	Blow River	77.93	18	P	P	07 11 52.7	+0.6
E29M				IAmb	IAmb	07 11 55.8	
	comp=Z,4.9nm,1.2s						
MSVF	Nonsavu	89.99	110	LR	LR	07 52 52.9	
	comp=Z,40nm,18.0s,baz=126,slow=35						

*IDC **05** 07:08:03.3±2.1, 6°.96N×71°.77W, h0km, mb3.4/2, mbtmp3.4/3, ML1.8/1, MS3.2/1, Error ellipse: s-maj=48.9km s-min=30.3km az=101.0*

*FUNV **05** 07:08:05.7, 6°.42N×71°.59W, h9km, MW3.6, Presumed earthquake*

*RSNC **05** 07:08:06.7±0.0, 6°N±1°×7°2W±°, h23km±3km, M3.2, mb3.9, ML2.8, MLv3.7*

ISC 05 07:08:01.1±1.3**, 6°.41N**±0°.03×**71°.50W**±0°.03**, h6**km±9km**, n43, σ2s19**/76**, 1C, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAMC	Pamplona, Colo	1.51	308	P	Pg	07 08 31.3	+1.3
PAMC				S	Sg	07 08 50.1	+0.5
RUSC	La Rusia	1.65	252	P	Pg	07 08 33.5	+0.7
RUSC				S	Sg	07 08 54.3	0.0
RUSC	La Rusia	1.65	252	*e*P	Pg	07 08 33.5	+0.7
RUSC				*e*S	Sb	07 08 54.2	+0.6
CAPV	Capacho	1.66	331	⇑*i*P	Pg	07 08 33.5	+0.6
CAPV				*e*S	Sg	07 08 55.0	+0.6
BARC	Barichara	1.68	276	P	Pg	07 08 33.7	+0.4
BARC				S	Sg	07 08 54.5	-0.6
SOCV	Socops	1.97	19	*e*P	Pg	07 08 39.2	+0.3
SOCV				*e*S	Sg	07 09 03.5	-1.0
BRJC	Barrancabermej	2.30	284	P	Pb	07 08 42.4	-0.5
BRJC				S	Sb	07 09 09.7	-1.9
OCAC	Ocana	2.56	315	P	Pb	07 08 45.8	-1.7
OCAC				S	Sb	07 09 16.9	-2.5
SDV	Santo Domingo	2.61	19	P	Pb	07 08 46.8	-1.6
SDV				S	Sn	07 09 17.5	+1.4
SDV	Santo Domingo	2.61	19	*e*P	Pb	07 08 47.2	-1.2
SDV				*e*S	Sb	07 09 18.4	-2.4
SPBC	San Pablo de B	2.66	254	P	Pb	07 08 47.9	-1.4
SPBC				S	Sn	07 09 19.1	+1.8
CHIC	Chingaza	2.84	232	P	Pn	07 08 49.8	+2.5
CHIC				S	Sn	07 09 22.7	+0.7
PTBC	PUERTO BERRIO,	2.94	273	P	Pn	07 08 49.1	+0.7
PTBC				S	Sn	07 09 21.5	-2.5
VILC	Villavicencio,	3.16	224	P	Pn	07 08 55.0	+3.5
VILC				S	Sb	07 09 34.2	-2.3
CVER	Cruz Verde, Cu	3.17	234	P	Pb	07 08 55.9	-2.3
CVER				S	Sn	07 09 30.5	+0.1
ROSC	El Rosal	3.21	241	Pn	Pb	07 08 57.1	-1.6
	1.9nm,0.3s,baz=99,slow=18,SNR=2.2						
ROSC				Sn	Sb	07 09 36.1	-2.1
	9.2nm,0.3s,baz=57,slow=22,SNR=4.7						
	5.3nm,0.3s						
ROSC	El Rosal	3.21	241	P	Pb	07 08 56.1	-2.6
ROSC				S	Sb	07 09 34.9	-3.3
MCQV	Machiques	3.76	344	*e*P	Pn	07 09 02.1	+2.4
MCQV				*e*S	Sn	07 09 44.1	-0.1
GUY2C	Guyana, Caldas	4.02	253	P	Pn	07 09 06.3	+2.7
GUY2C				S	Sn	07 09 52.8	+1.5
TEPV	Terepaima	4.21	33	*e*P	Pn	07 09 09.8	+3.9
TEPV				*e*S	Sn	07 09 56.8	+1.3
UREC	San Jos de Ur	4.22	289	P	Pn	07 09 08.4	+2.4
UREC				S	Sn	07 09 58.0	+2.4
URMC	La Uribe, Meta	4.25	223	P	Pn	07 09 09.6	+3.1
URMC				S	Sn	07 09 56.3	-0.2
PRAC	Prado	4.30	232	P	Pn	07 09 10.1	+2.9
PRAC				S	Sn	07 09 57.6	-0.2
ARGC	Ariguani, Magd	4.37	322	P	Pn	07 09 10.5	+2.4
ARGC				S	Sn	07 10 01.2	+1.8
CBOC	Ciudad Bolivar	4.52	263	P	Pn	07 09 14.2	+4.0
CBOC				S	Sn	07 10 05.6	+2.4
MAPV	Macapo	4.54	41	*e*P	Pn	07 09 13.9	+3.5
MAPV				*e*S	Sn	07 10 04.0	+0.3
DBBC	Dabeiba	4.71	278	P	Pn	07 09 16.5	+3.6
DBBC				S	Sn	07 10 08.5	+0.5
CRJC	Cerrejon, Guaj	4.78	344	P	Pn	07 09 15.0	+1.2
CRJC				S	Sn	07 10 09.1	-0.5
MACC	Macarena, Meta	4.84	209	P	Pn	07 09 13.3	-1.2
MACC				S	Sn	07 10 09.3	-1.6
PLMC	San Jos del P	4.99	253	P	Pn	07 09 19.8	+3.2
PLMC				S	Sn	07 10 18.2	+3.6
SJCC	San Jacinto, C	5.03	314	P	Pn	07 09 19.5	+2.4
SJCC				S	Sn	07 10 16.9	+1.3
SJCC	San Jacinto, C	5.03	314	*e*P	Pn	07 09 19.2	+2.0
SJCC				*e*S	Sn	07 10 12.4	-3.2
CACV	CAICARA DEL OR	5.06	77	*e*P	Pb	07 09 27.6	-2.4
CACV				*e*S	Sb	07 10 29.5	-1.6
BENV	Beln	5.23	47	*e*P	Pn	07 09 23.5	+3.5
APAC	Apartado, Choc	5.25	287	P	Pn	07 09 22.3	+2.1
	0.1nm13nm,1.0s						
APAC				S	Sn	07 10 22.4	+1.3
	0.1nm13nm,1.0s						
URIC	Uribia, Colomb	5.28	355	P	Pn	07 09 20.9	+0.3
URIC				S	Sn	07 10 18.5	-3.3
JACV	Jacura	5.35	29	*e*P	Pn	07 09 25.0	+3.5
TURV	Turiamo	5.41	42	*e*P	Pn	07 09 25.7	+3.4
TACV	Tcata	5.78	50	*e*P	Pn	07 09 30.3	+2.9
FUNV	FUNVISIS	6.15	49	*e*P	Pn	07 09 35.7	+3.0
JTS	Las Juntas de	13.85	287	LR	LR	07 17 34.5	
	comp=Z,105nm,19.9s,baz=210,slow=42						
LPAZ	La Paz	22.80	172	P	P	07 13 14.7	+9.3
	1.4nm,0.6s,baz=353,slow=8.4,SNR=2.3						
	1.4nm,0.6s						
YKA	Yellowknife Ar	64.21	339	P	P	07 18 35.5	-1.0
	0.2nm,0.8s,baz=124,slow=7.0,SNR=2.3						
	0.2nm,0.8s						

*IDC **05** 07:13:04.7±3.3, 18°.60S×173°.79W, h71km±28km, mb3.6/5, mbtmp3.9/7, MS3.2/1, Error ellipse: s-maj=35.7km s-min=16.4km az=120.0*

*NEIC **05** 07:13:07.6±1.5, 18°.37S±0°.09×173°.85W±0°.09, h92km±8km, mb4.3/12, Error ellipse: s-maj=15.5km s-min=8.4km az=134.0*

ISC 05 07:13:07.1±0.6**, 18°.33S**±0°.07×**173°.78W**±0°.07**, h100**km**, n24, σ1s82**/26**, mb4.2**/9**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	3.73	102		Pn	07 14 03.5	+0.9
AFI	Afiamalu	4.79	24	P	Pn	07 14 18.0	+0.9
	20nm,0.4s,baz=31,slow=3.7,SNR=5.6						
AFI				S	Sn	07 15 06.2	-5.3
	27nm,0.3s,baz=43,slow=21,SNR=2.3						
MSVF	Nonsavu	7.80	273	P	Pn	07 14 57.0	-0.9
	7.8nm,0.8s,baz=104,slow=15,SNR=9.7						
MSVF				LR	LR	07 17 13.9	
	comp=Z,178nm,20.8s,baz=181,slow=32						
MSVF	Nonsavu	7.80	273		Pn	07 15 01.0	+3.1
RAO	Raoul Island	11.52	198	Pn	Pn	07 15 47.9	-0.4
RAR	Rarotonga	13.49	105	Pn	Pn	07 16 14.7	+0.2
SANVU	Saraoutou	18.42	276	P	P	07 17 13.2	-1.5
SANVU				IAmb	IAmb	07 17 37.0	
	comp=Z,14nm,0.9s						
OUENC	Ouen Island, N	18.62	254	P	Pn	07 17 17.7	-0.5
OUENC				IAmb	IAmb	07 18 01.3	
	comp=Z,15nm,0.9s						
URZ	Urewera	21.40	200	P	P	07 17 43.3	-3.4
	comp=Z,3.7nm,0.7s,baz=36,slow=3.6,SNR=3.0						
URZ				S	S	07 21 36.2	-2.2
	comp=Z,13nm,1.0s,baz=142,slow=23,SNR=2.2						
	comp=Z,3.7nm,0.7s						
TOZ	Tahuroa Road	21.49	204	P	P	07 17 47.7	0.0
TOZ				IAmb	IAmb	07 18 23.8	
	comp=Z,19nm,1.2s						
BKZ	Black Stump Fm	22.42	200	P	P	07 17 57.0	-0.6
CTAO	Charters Tower	37.72	261	P	P	07 20 13.3	-0.1
CTAO				IAmb	IAmb	07 20 15.7	
	comp=Z,2.4nm,0.8s						
WR8	Warramunga Arr	48.73	259	P	P	07 21 40.9	-1.1
WR8				IAmb	IAmb	07 21 54.5	
	comp=Z,5.0nm,1.1s						
WRA	Warramunga Arr	48.88	259	P	P	07 21 42.3	-0.9
	comp=Z,0.9nm,0.3s,baz=98,slow=6.2,SNR=24						
	comp=Z,0.9nm,0.3s						
WRA	Warramunga Arr	48.88	259		P	07 21 42.1	-1.0
AS31	Alice Springs	48.91	254	P	P	07 21 43.7	+0.3
AS31				IAmb	IAmb	07 21 47.3	
	comp=Z,1.4nm,0.5s						
ASAR	Alice Springs	48.92	254	P	P	07 21 42.8	-0.6
	comp=Z,4.3nm,0.8s,baz=89,slow=8.4,SNR=26						
	comp=Z,4.3nm,0.8s						
KNRA	Kununurra	54.82	263	P	P	07 22 26.9	-0.4
FAKI	Fak Fak	54.98	280	P	P	07 22 30.5	+2.0
PEA0B	Petropavlovsk-	75.29	343	P	P	07 24 39.0	0.0
K15K	Wolf Creek Mou	80.93	6	P	P	07 25 10.6	+0.7
PDAR	Pinedale Array	84.68	42	P	P	07 25 31.7	+1.6
	comp=Z,0.3nm,0.8s,baz=235,slow=6.3,SNR=2.3						
	comp=Z,0.3nm,0.8s						
ILAR	Eielson Array	85.37	11	P	P	07 25 35.1	+2.4
	comp=Z,0.4nm,0.9s,baz=207,slow=5.0,SNR=1.8						
	comp=Z,0.4nm,0.9s						
BRTR	Keskin Array B	148.13	318	PKPbc	PKPab	07 32 44.7	-0.1
	comp=Z,0.3nm,0.4s,baz=79,slow=1.4,SNR=2.2						

*AFAD **05** 07:13:14.2, 37°.24N×28°.18E, h7km±3km, ML1.4*

ISK 05 07:13:13.6, 37°.25N×28°.27E, h0km±1km**, ML1.9**/9**, Suspected Mining explosion., Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MULA	Mugla, Merkez-	0.04	83	P	Pg	07 13 16.1	+1.7
MULA				S	Sg	07 13 18.6	+3.6
YER	Yerkesik	0.12	174	Pg	Pg	07 13 16.7	+0.9
YER				Sg	Sg	07 13 19.2	+1.9
MLSB	Milas	0.39	277	Pg	Pg	07 13 21.6	+0.5
MLSB				Sg	Sg	07 13 27.9	+1.6
TURN	Turunc	0.47	182	Pg	Pg	07 13 23.2	+0.5
TURN				Sg	Sb	07 13 30.6	-1.8
TURN	Turunc	0.47	182	P	Pg	07 13 22.4	-0.3
TURN				S	Sg	07 13 30.4	+1.6
TURN				IAML		07 13 37.0	
	comp=N,34nm,0.7s						
TURN				IAML		07 13 37.0	
	comp=E,54nm,1.0s						
AYDN	Tasoluk	0.51	323	P	Pg	07 13 23.6	+0.1
AYDN				S	Sg	07 13 31.3	+1.2
AYDN				IAML		07 13 33.0	
	comp=N,53nm,0.4s						
AYDN				IAML		07 13 33.0	
	comp=E,57nm,0.4s						
DALY	Dalyan (Mula)	0.53	144	Pg	Pg	07 13 24.6	+0.8
DALY				Sg	Sb	07 13 32.4	-1.6
ESEN	Aydn-Nazilli	0.55	7	P	Pb	07 13 25.5	-0.6
ESEN				S	Sb	07 13 34.0	-0.6
ESEN				IAML		07 13 37.0	
	comp=E,24nm,0.5s						
ESEN				IAML		07 13 40.0	
	comp=N,18nm,0.7s						
TAVA	DENIZLI_Tavas	0.56	67	P	Pb	07 13 26.7	+0.3
TAVA				S	Sb	07 13 35.0	+0.1
TAVA				IAML		07 13 40.0	
	comp=E,20nm,1.2s						
TAVA				IAML		07 13 50.0	
	comp=N,37nm,2.8s						
DNZT	Denizli-Tavas-	0.60	87	P	Pb	07 13 27.1	0.0
DNZT				S	Sb	07 13 36.7	+0.5
DNZT				IAML		07 13 50.0	
	comp=N,18nm,1.9s						
SABU	Mula-Dalaman	0.70	127	P	Pb	07 13 28.9	+0.2
SABU				S	Sb	07 13 40.5	+1.5
SABU				IAML		07 13 48.0	
	comp=E,23nm,1.2s						
NAZL	Nazilli-Aydin	0.71	2	Pg	Pg	07 13 27.9	+0.6
DAT	Datca	0.76	227	Pg	Pg	07 13 28.9	+0.8
BODT	Bodrum	0.79	256	Pg	Pg	07 13 29.2	+0.5
APMY	Acipayam-Deniz	0.85	75	Pg	Pg	07 13 30.6	+0.6
GCAM	G?zelcaml?	0.94	299	Pg	Pg	07 13 32.1	+0.5

*ISK **05** 07:13:52.8, 38°.99N×27°.90E, h17km, ML1.9/17*

AFAD 05 07:13:53.4, 38°.96N×27°.90E, h7km±2km**, ML1.5, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	0.11	219	P	Pg	07 13 56.3	+0.5
AKHS				IAML		07 13 58.0	
	comp=E,340nm,0.2s						
AKHS				S	Sg	07 13 58.7	+1.2
GORD	Gordes-Manisa	0.22	104	Pg	Pg	07 13 58.7	+0.9
GORD				Sg	Sg	07 14 02.3	+1.5
GOMA	Golmarmara-Man	0.26	177	Pg	Pg	07 13 59.1	+0.7
GOMA				Sg	Sb	07 14 04.1	-0.8
KTTT	Salihli	0.31	151	P	Pg	07 14 00.3	+0.8
KTTT				S	Sg	07 14 04.9	+1.2
KTTT				IAML		07 14 06.0	
	comp=N,46nm,0.4s						
SOMA	Soma-Manisa	0.34	304	Pg	Pg	07 13 59.9	-0.3
SOMA				Sg	Sg	07 14 05.4	+0.7
CAMT	Merkez	0.51	245	P	Pg	07 14 03.9	+0.7
CAMT				S	Sb	07 14 11.9	-0.4
CAMT				IAML		07 14 12.0	
	comp=E,65nm,0.3s						
CAMT				IAML		07 14 14.0	
	comp=N,93nm,0.3s						
ZEDA	zmir-Bergama	0.64	271	P	Pg	07 14 06.2	+0.4
ZEDA				S	Sg	07 14 15.1	+0.9
ZEDA				IAML		07 14 16.0	
	comp=N,47nm,0.7s						
ZEDA				IAML		07 14 16.0	
	comp=E,28nm,0.2s						
BALB	Balikesir	0.68	359	Pg	Pg	07 14 05.9	-0.5
BALB				Sg	Sb	07 14 16.3	-0.8
MANT	Manisa	0.70	132	P	Pg	07 14 06.9	+0.1
MANT				S	Sb	07 14 17.0	-0.9
MANT				IAML		07 14 19.0	
	comp=N,23nm,0.5s						
MANT				IAML		07 14 21.0	
	comp=E,22nm,0.5s						
ODEM	Odemis-Izmir	0.70	169	Pg	Pg	07 14 07.3	+0.4
KULA	Kula-Manisa	0.74	127	Pg	Pg	07 14 08.1	+0.4
IZMD	zmir-Dikili-	0.76	272	P	Pb	07 14 08.8	-0.2
IZMD				S	Sg	07 14 18.7	+0.8
IZMD				IAML		07 14 25.0	
	comp=N,21nm,1.6s						
IZMD				IAML		07 14 28.0	
	comp=E,22nm,1.5s						
BKES	Balkesir-Mer	0.77	2	P	Pg	07 14 08.0	-0.2
BKES				S	Sb	07 14 19.5	-0.3
BKES				IAML		07 14 23.0	
	comp=E,15nm,0.1s						
DURS	Dursunbey	0.78	35	P	Pg	07 14 08.2	-0.1
DURS				S	Sn	07 14 22.4	-0.5
DURS				IAML		07 14 23.0	
	comp=N,32nm,0.1s						
DURS				IAML		07 14 23.0	
	comp=E,32nm,0.5s						
BALY	Balya	0.81	344	P	Pg	07 14 08.9	0.0
BALY				IAML		07 14 20.0	
	comp=E,35nm,0.2s						
BALY				S	Sb	07 14 20.3	-0.6
BALY				IAML		07 14 21.0	
	comp=N,36nm,0.3s						
IZMR	zmir-demi	0.83	177	P	Pg	07 14 09.5	+0.2
IZMR				S	Sg	07 14 20.6	+0.7
IZMR				IAML		07 14 23.0	
	comp=N,18nm,0.8s						
IZMR				IAML		07 14 23.0	
	comp=E,47nm,0.4s						
BUHA	Balikesir, Bur	0.84	310	P	Pg	07 14 09.2	-0.3
BUHA				S	Sg	07 14 20.1	-0.3
BUHA				IAML		07 14 21.0	
	comp=N,12nm,0.3s						
BUHA				IAML		07 14 21.0	
	comp=E,24nm,1.1s						
DST	Dursunbey	0.85	41	Pg	Pg	07 14 09.7	0.0
SIMA	Simav-Kutahya	0.85	82	Pg	Pg	07 14 09.9	+0.2
KIRA	zmir-Kiraz	0.86	153	P	Pb	07 14 10.7	0.0
KIRA				S	Sb	07 14 22.3	-0.2
KIRA				IAML		07 14 23.0	
	comp=N,20nm,0.4s						
KIRA				IAML		07 14 25.0	
	comp=E,20nm,0.2s						
BLCB	Balcova	0.89	230	Pg	Pg	07 14 10.5	+0.1
USAK	Uak-Merkez	0.91	106	P	Pg	07 14 10.6	-0.2
USAK				S	Sg	07 14 22.5	0.0
SUSR	Susurluk-Balik	1.01	8	Pg	Pg	07 14 12.3	-0.5
NAZL	Nazilli-Aydin	1.04	163	Pg	Pg	07 14 13.4	0.0
GONE	Gonen-Balikesi	1.09	351	Pg	Pg	07 14 13.7	-0.7
GEDZ	Gediz	1.18	86	Pn	Pg	07 14 15.1	-0.9
TVSB	Tavsanli	1.30	68	Pn	Pn	07 14 16.8	-1.4
KCTX	Karacabey (Bur	1.35	15	Pn	Pn	07 14 16.6	-2.1
EDC	Edincik	1.38	359	Pn	Pn	07 14 17.4	-1.7
KRBG	Karabiga-Canak	1.50	342	Pn	Pn	07 14 19.4	-1.4

*IDC **05** 07:23:20.6±2.6, 30°.14N×114°.30W, h0km, mbtmp3.0/5, ML3.2/5, Error ellipse: s-maj=39.8km s-min=12.9km az=30.0*

*ECX **05** 07:23:24.6±0.3, 30°.19N×114°.05W, h11km±5km, ML3.9*
*MEX **05** 07:23:25.0±0.8, 30°.12N×114°.13W, h10km, MD4.3*
ISC 05 07:23:23.1±1.2**, 30°.09N**±0°.05×**114°.20W**±0°.05**, h18**km±9km**, n22,** σ1°.45/30**, 6C-5D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFX	San Felipe	1.10	330	⇑eP	Pb	07 23 43.6	-0.1
SFX				eS	Sg	07 23 58.0	-0.9
SFX				IAML		07 24 10.6	
	comp=E,2μm,0.6s						
SFX				⇑e		07 24 10.6	
SFX	San Felipe	1.10	330	eP	Pb	07 23 43.5	-0.1
SFX				eS	Sn	07 23 59.3	+0.8
BAHB	Baha de los	1.27	154	⇑eP	Pg	07 23 47.2	-0.4
BAHB	Baha de los	1.27	154	eP	Pg	07 23 47.2	-0.4
BAHB				eS	Sb	07 24 01.9	-0.5
PLIB	Puerto Liberta	1.32	97	eP	Pn	07 23 45.2	-1.4
PPXB	Puerto Peasco	1.34	21	⇓eP	Pn	07 23 45.7	-1.2
SPIG	San Pedro Mart	1.45	312	⇑eP	Pb	07 23 50.2	+0.4
SPIG				eS	Sg	07 24 10.1	-0.1
SPIG				IAML		07 24 23.3	
	comp=N,609nm,0.5s						
SPIG	San Pedro Mart	1.45	312	eP	Pb	07 23 50.1	+0.2
SPIG				iS	Sb	07 24 09.1	+0.9
SQX	San Quintin	1.53	289	⇑eP	Pg	07 23 52.4	-0.2
SQX				eS	Sg	07 24 13.6	+1.1
SQX				IAML		07 24 17.7	
	comp=E,1μm,0.4s						
SQX				IAML		07 24 18.2	
	comp=N,2μm,0.4s						
SQX				⇓e		07 24 18.2	
PIX	Pinacate	1.60	23	⇓eP	Pn	07 23 49.7	-0.9
LAPR	La Primavera	1.68	75	eP	Pn	07 23 50.6	-1.1
LAPR				eS	Sn	07 24 10.9	-1.8
LAPR				⇑e		07 24 38.8	
LAPR				IAML		07 24 38.8	
	comp=E,2μm,0.9s						
LAPR				⇓e		07 24 41.2	
LAPR				IAML		07 24 41.2	
	comp=N,2μm,0.8s						
VTX	Valle De La Tr	1.89	314	⇓e	Pg	07 24 42.0	+43
NE74	Guerrero Negro	2.08	175	eP	Pb	07 24 00.6	+0.3
MBIG	Mexicali	2.47	340	eP	Pg	07 24 16.4	+6.0
HSIG		3.02	110	eP	Pn	07 24 09.2	-1.0
HSIG				eS	Sb	07 24 54.5	+1.4
CBX	Cerro Bola	3.06	317	eP	Pn	07 24 12.5	+1.7
CBX				eS	Sb	07 24 55.1	+0.7
TJIG	Tijuana	3.16	318	eP	Pn	07 24 11.9	0.0
TJIG				eS	Sn	07 24 45.6	-3.6
PFO	Pinyon Flats O	4.01	332	Pn	Pn	07 24 21.6	-2.1
	comp=N,0.2nm,0.3s,baz=319,slow=14,SNR=7.4						
PFO				Lg	Lg	07 25 21.0	
	comp=N,1.0nm,0.3s,baz=249,slow=7.8,SNR=3.8						
	comp=N,1.7nm,0.8s						
ANMO	Albuquerque	8.14	51	Pn	Pn	07 25 21.2	+0.6
	comp=N,0.5nm,0.3s,baz=233,slow=14,SNR=9.8						
ANMO				Lg	Lg	07 27 41.0	
	comp=N,0.1nm,0.3s,baz=231,slow=7.7,SNR=1.8						
	comp=N,1.5nm,0.5s						
NVAR	Mina Array Bea	8.99	339	Pn	Pn	07 25 31.6	-0.7
	baz=159,slow=13,SNR=1.6						
	comp=N,0.2nm,0.5s						
TXAR	Lajitas Array	9.19	92	Pn	Pn	07 25 37.2	+2.2
	comp=N,0.2nm,0.3s,baz=263,slow=13,SNR=12						
TXAR				Lg	Lg	07 28 08.6	
	comp=N,0.1nm,0.3s,baz=252,slow=33,SNR=4.3						
	comp=N,0.9nm,0.5s						
PDAR	Pinedale Array	13.19	15	Pn	Pn	07 26 33.2	+3.4
	baz=189,slow=13,SNR=5.1						
	comp=N,0.2nm,0.7s						

IDC 05 07:26:39.3±9.3**, 19°.48N**×**147°.97E, h0**km**, mb3.7**/3**, mbtmp3.7**/3**, Error ellipse: s-maj=326.6km s-min=34.9km az=79.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	41.39	200	P	P	07 34 27.5	0.0
	3.2nm,0.6s,baz=22,slow=9.1,SNR=42						
	3.2nm,0.6s						
ASAR	Alice Springs	45.02	198	P	P	07 34 56.6	-0.3
	0.6nm,0.8s,baz=16,slow=7.3,SNR=8.4						
	0.6nm,0.8s						
MKAR	Makanchi Array	59.48	313	P	P	07 36 44.2	-0.1
	0.1nm,0.6s,baz=85,slow=6.0,SNR=1.6						
	0.1nm,0.6s						

*MEX **05** 07:33:11.3±0.9, 30°.35N×113°.88W, h11km±31km, MD3.8*
*ECX **05** 07:33:12.6±0.3, 30°.13N×114°.02W, h12km±5km, ML2.8*
ISC 05 07:33:11.6±1.3**, 30°.16N**±0°.05×**114°.01W**±0°.04**, h33**km±4km**, n9,** σ1°.00/17**, 3C, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFX	San Felipe	1.14	321	eP	Pb	07 33 32.4	-0.3
SFX				eS	Sb	07 33 48.1	+0.9
SFX				IAML		07 33 50.3	
	comp=E,163nm,0.6s						
SFX	San Felipe	1.14	321	eP	Pn	07 33 29.1	-2.0
SFX				eS	Sn	07 33 44.8	-0.8
PLIB	Puerto Liberta	1.17	102	eP	Pb	07 33 32.8	-0.5
PLIB				IAML		07 34 08.1	
	comp=E,163nm,1.1s						
PPXB	Puerto Peasco	1.22	15	eP	Pb	07 33 34.0	-0.1
PPXB				eS	Sb	07 33 50.7	+1.2
BAHB	Baha de los	1.27	162	eP	Pb	07 33 34.7	-0.4
BAHB				eS	Sn	07 33 49.2	+0.2
LAPR	La Primavera	1.50	77	eP	Pb	07 33 38.2	-0.7
LAPR				eS	Sb	07 33 58.4	+0.8
SPIG	San Pedro Mart	1.53	306	eP	Pn	07 33 38.3	+1.3
SPIG				eS	Sb	07 33 59.2	+0.3
SPIG	San Pedro Mart	1.53	306	eP	Pn	07 33 37.6	+0.6
SPIG				eS	Sn	07 33 56.4	+0.4
SQX	San Quintin	1.66	285	⇑eP	Pn	07 33 39.5	+1.1
SQX				eS	Sb	07 34 01.4	-0.9
SQX				⇑e		07 34 07.1	
SQX				IAML		07 34 07.1	
	comp=N,240nm,0.6s						
SQX				⇑e		07 34 09.4	
SQX				IAML		07 34 09.4	
	comp=E,135nm,0.5s						

IDC 05 07:48:58.3±8.6**, 3°.30S**×**144°.34E, h0**km**, mb3.1**/2**, mbtmp3.1**/3**, ML3.2**/1**, MS3.7**/1**, Error ellipse: s-maj=297.1km s-min=34.2km az=95.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.20	210	P	P	07 53 24.1	0.0
	0.1nm,0.3s,baz=42,slow=11,SNR=9.0						
	0.6nm,0.8s						
ASAR	Alice Springs	22.62	206	P	P	07 54 01.1	+0.1
	0.3nm,0.6s,baz=32,slow=11,SNR=7.8						
	0.3nm,0.6s						
LEM	Lembang	36.73	263	LR	LR	08 12 27.4	
	comp=Z,108nm,21.2s,baz=153,slow=38						
MKAR	Makanchi Array	73.74	321	P	P	08 00 34.4	0.0
	0.2nm,0.7s,baz=121,slow=5.4,SNR=1.3						
	0.2nm,0.7s						

IDC 05 08:02:05.0±3.6**, 57°.15S**×**27°.02W, h0**km**, mb4.1**/2**, mbtmp4.1**/2**, Error ellipse: s-maj=124.7km s-min=51.2km az=174.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H04S2	CROZET ISLANDS	47.02	113	T	T	09 01 42.0	
	baz=235,slow=75,SNR=75						
H04S3	CROZET ISLANDS	47.03	113	T	T	09 01 42.0	
	baz=235,slow=75,SNR=58						
H04S1	CROZET ISLANDS	47.04	113	T	T	09 01 41.7	
	baz=235,slow=75,SNR=62						
LPAZ	La Paz	51.09	306	P	P	08 11 09.8	-0.1
	1.4nm,0.5s,baz=153,slow=2.3,SNR=11						
	1.4nm,0.5s						
TORD	Torodi Ar. Bea	73.97	29	P	P	08 13 42.0	0.0
	0.8nm,0.5s,baz=202,slow=7.2,SNR=4.4						
	0.8nm,0.5s						
H08S1	Diego Carcia H	88.76	102	T	T	09 53 11.2	
	baz=221,slow=75,SNR=8.9						
H08S2	Diego Garcia H	88.77	102	T	T	09 53 12.9	
	baz=221,slow=75,SNR=12						
H08S3	Diego Garcia H	88.78	102	T	T	09 53 13.8	
	baz=221,slow=75,SNR=9.9						
ILAR	Eielson Array	150.91	310	PKPbc	PKPbc	08 21 57.6	-0.3
	0.7nm,0.8s,baz=131,slow=3.7,SNR=9.1						

*IDC **05** 08:19:17.0±1.6, 32°.66N×85°.39E, h0km, mb3.3/5, mbtmp3.5/9, ML3.2/3, MS3.4/1, Error ellipse: s-maj=49.9km s-min=19.0km az=67.0*
ISC 05 08:19:21.8±1.5**, 32°.7N**±0°.1×**85°.4E**±0°.2**, h35**km**, n9,** σ**0°.99**/9**, mb3.4**/5**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	14.25	351	Pn	Pn	08 22 40.1	-0.9
	baz=168,slow=12,SNR=8.0						
	0.5nm,0.8s						
LZDM	Lanzhou Array	15.42	73	Pn	Pn	08 22 56.7	-0.3
	baz=253,slow=15						
	0.8nm,0.3s						
KURBB	Kurchatov Arra	18.59	346	P	P	08 23 35.6	-0.1
	baz=159,slow=10,SNR=10						
KURBB				LR	LR	08 31 33.2	
	comp=Z,104nm,18.8s,baz=173,slow=40						
	1.2nm,0.8s						
CMAR	Chiang Mai Arr	18.69	136	P	P	08 23 35.8	-1.4
	2.4nm,0.7s,baz=316,slow=11,SNR=16						
ZALV	Zalesovo Beam	21.21	359	P	P	08 24 04.5	+0.2
	0.6nm,0.5s,baz=188,slow=9.7,SNR=6.3						
	0.6nm,0.5s						
SONM	Songino Array	21.88	40	P	P	08 24 12.8	+1.1
	1.5nm,1.0s,baz=231,slow=10,SNR=6.9						
	1.5nm,1.0s						
BVAR	Borovoye Array	22.99	336	P	P	08 24 23.9	+0.6
	0.3nm,0.5s,baz=146,slow=11,SNR=2.2						
	0.3nm,0.5s						
WRA	Warramunga Arr	70.20	131	P	P	08 30 31.8	+0.5
	0.2nm,0.4s,baz=326,slow=6.5,SNR=8.7						
	0.2nm,0.4s						
ASAR	Alice Springs	72.69	134	P	P	08 30 47.4	+1.1
	0.3nm,0.8s,baz=314,slow=5.2,SNR=2.2						
	0.3nm,0.8s						

*BJI **05** 08:22:30.3, 38°.92N×71°.40E, h10km, mB5.0/8, mb4.3/23, ML4.3/4, Ms3.9/9, Ms7 3.7/8*
*IDC **05** 08:22:32.5±0.6, 38°.72N×71°.91E, h0km, mb4.3/23, mbtmp4.3/30, ML3.9/7, MS3.5/21, Error ellipse: s-maj=11.3km s-min=9.5km az=139.0*
*MOS **05** 08:22:34.6±1.2, 38°.81N×71°.74E, h13km, mb4.7/37, Error ellipse: s-maj=5.0km s-min=3.5km az=85.6*
*NEIC **05** 08:22:35.5±1.3, 38°.83N±0°.03×71°.78E±0°.07, h10km±1km, mb4.6/35, Error ellipse: s-maj=9.1km s-min=5.6km az=99.0*
*SOME **05** 08:22:36.4, 38°.75N×71°.75E, h5km*
*NNC **05** 08:22:37.0±2.8, 38°.53N×71°.72E, h126km±40km, mb4.1, mpv4.5, Error ellipse: s-maj=25.9km s-min=12.7km az=10.0*
*BGR **05** 08:22:37.6, 40°.02N×73°.47E, h33km, mb4.6*
ISC 05 08:22:35.2±0.4**, 38°.84N**±0°.03×**71°.84E**±0°.03**, h10**km**, n388,** σ**2°.00**/418**, mb4.5**/100**, MS3.5**/24**, 39C-17D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	0.65	357		Pg	08 22 46.2	-1.5
DRK				Sg	Sg	08 22 56.9	+0.6
GAR	Garm	1.20	278	Pn	Pb	08 22 56.1	-1.9
GAR				Sn	Sb	08 23 13.5	-0.2
BTK	Batken	1.45	327		Pn	08 23 01.4	-0.2
BTK	Batken	1.45	327	PG	Pn	08 23 01.4	-0.2
CHGR	Chuyangaron	2.10	266		Pn	08 23 11.4	+0.9
CHGR	Chuyangaron	2.10	266	iPN	Pn	08 23 12.0	+1.5
CHGR				iS	Sb	08 23 39.0	-0.7
ARSB	Arslanbob	2.64	19		Pn	08 23 20.7	+2.8
ARSB	Arslanbob	2.64	19	PN	Pn	08 23 20.7	+2.8
KSH2	Kashi	2.92	83	Pn	Pn	08 23 25.1	+3.2
KSH2				Sn	Sn	08 23 57.5	+0.4
KSH2				SMN			
	830nm,0.7s						
KSH2				SME			
	860nm,0.8s						
SHAA	Shahritus	3.19	248		Pn	08 23 26.2	+0.7
IUG	Iuzhnay	3.58	338	ePN	Pn	08 23 34.7	+3.8
IUG				eS	Sn	08 24 16.5	+3.2
IUG	Iuzhnay	3.58	338	eP	Pn	08 23 34.7	+3.8
IUG				eS	Sn	08 24 16.6	+3.2
IUG	Iuzhnay	3.58	338	eP	Pn	08 23 34.9	+4.0
	614nm,1.2s						
IUG				eS	Sb	08 24 23.1	+0.8
	957nm,0.9s						
CHM	Chimkent	3.87	335	ePN	Pn	08 23 38.5	+3.7
CHM	Chimkent	3.87	335	eP	Pn	08 23 38.5	+3.7
CHM	Chimkent	3.87	335	eP	Pn	08 23 39.1	+4.2
	136nm,0.2s						
CHM				eS	Sb	08 24 30.4	-0.1
	464nm,1.3s						
UCH	Uchtor	3.96	30	P	Pn	08 23 39.7	+3.4
	SNR=73						
MRKS	Merke	4.05	15	eP	Pn	08 23 40.5	+3.2
	203nm,1.1s						
MRKS				eS	Sb	08 24 32.8	-2.8
	358nm,1.1s						
DZA	Taraz	4.07	355	ePN	Pn	08 23 41.2	+3.7
DZA				eS	Sn	08 24 28.3	+3.1
DZA	Taraz	4.07	355	eP	Pn	08 23 41.2	+3.7
DZA				eS	Sn	08 24 28.4	+3.1
EKS2	Erkin-Say	4.10	20	P	Pn	08 23 42.1	+4.1
	SNR=124						
NRN	Naryn	4.11	50		Pn	08 23 39.3	+0.9
NRN	Naryn	4.11	50	PN	Pn	08 23 39.3	+0.9
AAK	Ala-Archa	4.30	27	Pn	Pn	08 23 45.0	+4.1
	20nm,0.3s,baz=212,slow=8.9,SNR=100						
AAK				Sn	Sn	08 24 37.3	+6.2
	11nm,0.3s,baz=331,slow=19,SNR=7.7						
AAK				Lg	Lg	08 24 49.1	
	23nm,0.3s,baz=128,slow=8.3,SNR=4.5						
	69nm,0.5s						
AAK	Ala-Archa	4.30	27		Pn	08 23 44.0	+3.2
AAK	Ala-Archa	4.30	27	P	Pn	08 23 44.9	+4.0
	SNR=123						
AAK	Ala-Archa	4.30	27	⇑P	Pn	08 23 45.7	+4.9
	37nm,0.6s						
AAK				⇓S	Sn	08 24 37.2	+6.2
	114nm,0.7s						
AAK	Ala-Archa	4.30	27	PN	Pn	08 23 44.8	+4.0
AAK				S	Sn	08 24 37.0	+5.9
KK31	Karatay Array	4.38	347		Pn	08 23 45.0	+3.2
KK31	Karatay Array	4.38	347	⇓P	Pn	08 23 45.4	+3.6
	130nm,0.4s,baz=169,slow=11,SNR=1047						
KK31				⇑S	Sn	08 24 39.5	+6.6
	87nm,0.5s,baz=162,slow=23,SNR=3.1						
KK31	Karatay Array	4.38	347	ePN	Pn	08 23 45.3	+3.6
KK31				S	Sn	08 24 39.5	+6.6
KKAR	Karatay Array	4.38	347		Pn	08 23 44.3	+2.5
KKAR	Karatay Array	4.38	347	PN	Pn	08 23 44.3	+2.5
BRLS	Borolday	4.46	341	ePN	Pn	08 23 43.1	+0.3
BRLS	Borolday	4.46	341	eP	Pn	08 23 43.2	+0.3
BRLS	Borolday	4.46	341	eP	Pn	08 23 43.3	+0.5
	76nm,0.6s						
BRLS				eS	Sn	08 24 38.0	+3.3
	131nm,0.7s						
KBK	Karagaybulak	4.49	31	P	Pb	08 23 51.4	-2.8
	SNR=20						
FRU1	Bishkek	4.50	27		Pn	08 23 47.3	+3.8
FRU1	Bishkek	4.50	27	PN	Pn	08 23 47.3	+3.8
CHMS	Chumysh	4.71	27	P	Pn	08 23 50.2	+3.9
	SNR=66						
ULHL	Ulahol	4.78	43	P	Pn	08 23 50.4	+2.9
	SNR=23						
BOOM	Boomskoye usch	4.80	39		Pn	08 23 51.5	+3.8
BOOM	Boomskoye usch	4.80	39	PN	Pn	08 23 51.5	+3.8
KBL	Kabul	4.84	208		Pn	08 23 50.6	+2.3
KBL	Kabul	4.84	208	PN	Pn	08 23 50.6	+2.3
USP	Ospenovka	4.86	24	P	Pn	08 23 52.2	+3.7
	SNR=86						
TKM2	Tokmak 2	4.98	34	P	Pn	08 23 57.0	+6.9
	SNR=44						
SGDS	Sogindy	5.07	24	eP	Pn	08 23 54.6	+3.3
	7.4nm,0.9s						
SGDS				eS	Sn	08 24 53.0	+3.0
KDJ	Kajisay	5.24	49		Pn	08 23 57.8	+4.1
KDJ	Kajisay	5.24	49	PN	Pn	08 23 57.8	+4.1
NIL	Nilore	5.30	167		Pn	08 23 56.7	+2.3
NIL	Nilore	5.30	167	PN	Pn	08 23 56.7	+2.3
TARG	Taragay, Kyrgy	5.40	56		Pn	08 23 58.9	+2.7
TARG	Taragay, Kyrgy	5.40	56	PN	Pn	08 23 58.9	+2.7
TNSS	Tian-Shan	5.71	41	ePN	Pn	08 24 03.7	+3.3
TNSS	Tian-Shan	5.71	41	eP	Pn	08 24 03.7	+3.3
AAA	Alma-Ata	5.82	40	ePN	Pn	08 24 05.2	+3.7
AAA	Alma-Ata	5.82	40	eP	Pn	08 24 05.3	+3.7
MDOK	Medeo	5.85	41	ePN	Pn	08 24 05.7	+3.6
MDOK	Medeo	5.85	41	eP	Pn	08 24 05.7	+3.6
WUS	Wushi	6.14	65		Pn	08 24 09.5	+3.4
PRZ	Przheval'sk	6.18	52		Pn	08 24 10.2	+3.6
PRZ	Przheval'sk	6.18	52	PN	Pn	08 24 10.2	+3.6
BTLS	Baital	6.42	14	ePN	Pn	08 24 13.0	+3.3
BTLS	Baital	6.42	14	eP	Pn	08 24 13.0	+3.3
SATY	Saty	6.52	48	ePN	Pn	08 24 15.0	+3.7
SATY				eS	Sn	08 25 29.4	+3.6
SATY				pmax	pmax		
	comp=Z,13nm,0.9s						
SATY	Saty	6.52	48	eP	Pn	08 24 15.1	+3.7
	comp=Z,13nm,0.9s						
SATY				eS	Sn	08 25 29.4	+3.6
SATY				eLQ	LQ	08 26 06.7	
UZB	Uzynbulak	6.93	49	ePN	Pn	08 24 20.5	+3.5
UZB	Uzynbulak	6.93	49	eP	Pn	08 24 20.5	+3.5
SHLS	Shalkode	7.20	51	eP	Pn	08 24 28.0	+7.4
SHLS	Shalkode	7.20	51	eP	Pn	08 24 28.0	+7.4
PDGK	Podgornoye	7.32	50	⇓P	Pn	08 24 23.6	+1.4
	comp=Z,5.3nm,0.6s						
PDGK				⇑S	Sn	08 25 51.5	+6.1
	comp=Z,22nm,0.8s						
PDGK	Podgornoye	7.32	50	P	Pn	08 24 23.6	+1.4
TDK	Taldyqorghan	7.87	36	eP	Pn	08 24 33.2	+3.6
TDK	Taldyqorghan	7.87	36	eP	Pn	08 24 33.3	+3.6
HRA	Herat	8.90	243		Pn	08 24 44.8	+0.8
MAKZ	Makanchi	10.90	40		Pn	08 25 14.9	+3.7
MAKZ	Makanchi	10.90	40	P	Pn	08 25 14.9	+3.7
MK31	Makanchi Array	11.05	41	P	Pn	08 25 15.1	+1.8
	comp=Z,24nm,1.1s,baz=220,slow=11,SNR=74						
MK31	Makanchi Array	11.05	41	iP	Pn	08 25 15.0	+1.8
MKAR	Makanchi Array	11.05	41	Pn	Pn	08 25 15.0	+1.8
	comp=Z,0.2nm,0.3s,baz=220,slow=13,SNR=35						
MKAR				Lg	Lg	08 28 22.8	
	comp=Z,0.2nm,0.3s,baz=227,slow=24,SNR=3.7						
	comp=Z,6.7nm,0.9s						
MKAR	Makanchi Array	11.05	41		Pn	08 25 14.9	+1.7
KURBB	Kurchatov Arra	12.70	20	Pn	Pn	08 25 34.0	-1.8
	comp=Z,0.2nm,0.3s,baz=212,slow=13,SNR=12						
KURBB				Sn	Sn	08 27 54.1	-3.0
	baz=205,slow=28,SNR=2.8						
KURBB				Lg	Lg	08 29 14.0	
	comp=Z,0.1nm,0.3s,baz=216,slow=27,SNR=6.4						
	comp=Z,1.1nm,0.7s						
KURK	Kurchatov	12.81	20		Pn	08 25 36.5	-0.8
KURK	Kurchatov	12.81	20	⇑iP	Pn	08 25 37.0	-0.2
KURK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
ZSN	Zaisan	12.82	44	eP	Pn	08 25 41.4	+4.0
ZSN	Zaisan	12.82	44	eP	Pn	08 25 41.5	+4.0
WMQ	Urumqi	12.91	62	eP	Pn	08 25 42.7	+3.9
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
AB31	Akbulak array	13.46	325		Pn	08 25 43.7	-2.4
AB31	Akbulak array	13.46	325	P	Pn	08 25 44.2	-1.9
	comp=Z,7.6nm,0.6s,baz=139,slow=12,SNR=86						
AB31	Akbulak array	13.46	325	eP	Pn	08 25 44.2	-1.9
ABKAR	Akbulak array	13.46	325		Pn	08 25 44.0	-2.1
BVA0	Borovoye Array	14.23	356	⇑P	Pn	08 25 57.0	+0.3
	comp=Z,8.8nm,0.5s,baz=293,slow=91,SNR=69						
BVA0	Borovoye Array	14.23	356	P	Pn	08 25 56.9	+0.3
BVAR	Borovoye Array	14.23	356	Pn	Pn	08 25 55.8	-0.9
	comp=Z,0.2nm,0.3s,baz=165,slow=11,SNR=18						
BVAR				Sn	Sn	08 28 27.0	-7.4
	comp=Z,0.1nm,0.3s,baz=166,slow=24,SNR=6.6						
BVAR				Lg	Lg	08 30 02.7	
	baz=173,slow=24,SNR=2.0						
BVAR				LR	LR	08 31 49.0	
	comp=Z,196nm,19.5s,baz=177,slow=39						
	comp=Z,7.6nm,0.6s						
BORK	Borovoye	14.25	356		Pn	08 25 57.0	+0.1
BORK	Borovoye	14.25	356	c iP	Pn	08 25 57.1	+0.1
BORK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AKTO	Aktyubinsk	15.18	324	Pn	Pn	08 26 08.2	-1.3
	comp=Z,2.0nm,0.3s,baz=121,slow=11,SNR=16						
AKTO				Sn	Sn	08 28 51.1	-6.4
	comp=Z,0.8nm,0.3s,baz=174,slow=18,SNR=4.9						
AKTO				LR	LR	08 32 46.5	
	comp=Z,88nm,20.3s,baz=350,slow=40						
	comp=Z,7.4nm,0.5s						
AKTO	Aktyubinsk	15.18	324	⇑P	Pn	08 26 07.5	-2.0
	comp=Z,42nm,0.6s						
DGZ	Jazzator, Alta	15.55	41	⇓iP	Pn	08 26 14.4	-0.1
DGZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZAA0	Zalesovo Array	17.52	26		Pn	08 26 38.4	-1.0
ZALV	Zalesovo Beam	17.52	26	P	Pn	08 26 38.5	-0.9
	comp=Z,1.2nm,0.3s,baz=220,slow=11,SNR=40						
ZALV				S	Sn	08 29 55.3	+0.8
	comp=Z,2.0nm,0.8s,baz=211,slow=16,SNR=2.1						
	comp=Z,15nm,0.5s						
ZALV	Zalesovo Beam	17.52	26		Pn	08 26 38.7	-0.7
ZALV	Zalesovo Beam	17.52	26	iP	Pn	08 26 38.5	-0.9
ZALV				pmax	pmax		
	comp=Z,16nm,0.5s						
AKT	Akhty	18.60	286	eP	P	08 26 53.1	+0.4
AKT				eS	Sn	08 30 21.9	+1.0
AKT				pmax	pmax		
	comp=Z,11nm,0.5s						
AKT				smax	smax		
	comp=N,9.0nm,0.4s						
AKT				smax	smax		
	comp=E,9.0nm,0.3s						
MAK	Makhachkala	18.83	290	eP	P	08 26 51.7	-3.3
MAK				eS	Sn	08 30 18.3	-7.8
MAK				pmax	pmax		
	comp=Z,21nm,0.3s						
MAK				MLR	MLR		
	comp=Z,148nm,16.0s						
SEKA	Sheki	19.00	285	P	Pn	08 26 57.9	+0.2
SVE	Sverdlovsk	19.46	341	eP	P	08 27 02.6	+0.8
ARTI	Arti	19.70	337	P	P	08 27 03.3	-1.1
	comp=Z,1.8nm,0.3s,baz=148,slow=7.1,SNR=11						
ARTI				LR	LR	08 35 22.1	
	comp=Z,74nm,18.3s,baz=80,slow=39						
	comp=Z,6.3nm,0.5s						
ARTI	Arti	19.70	337		P	08 27 04.1	-0.4
ARTI				IAmb	IAmb	08 27 25.4	
	comp=Z,17nm,0.6s						
ARTI	Arti	19.70	337	c iP	P	08 27 05.2	+0.8
ARTI				S	S	08 30 44.5	-1.9
ARTI				pmax	pmax		
	comp=Z,13nm,0.8s						
GNI	Garni	20.93	282	P	P	08 27 18.2	+0.1
	comp=Z,6.0nm,0.5s,baz=358,slow=5.7,SNR=7.1						
	comp=Z,6.0nm,0.5s						
GNI	Garni	20.93	282		P	08 27 18.4	+0.3
GNI				IAmb	IAmb	08 27 26.8	
	comp=Z,38nm,1.1s						
GNI	Garni	20.93	282	c eP	Pn	08 27 21.0	+0.4
GNI				pmax	pmax		
	comp=Z,21nm,0.8s						
GNI	Garni	20.93	282	P	P	08 27 19.3	+1.2
	comp=Z,34nm,1.2s						
SHL	Shillong	21.45	122		P	08 27 21.0	-2.8
SHL	Shillong	21.45	122	P	P	08 27 21.0	-2.8
SHL				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BELG	Belogornoye	21.56	317	P	P	08 27 23.8	-0.7
	comp=Z,88nm,0.9s,baz=130,slow=16,SNR=44						
	comp=Z,88nm,0.9s						
BELG	Belogornoye	21.56	317	d iP	P	08 27 23.9	-0.7
BELG				pmax	pmax		
	comp=Z,11nm,0.8s						
KNGR	Kungurtug, Tuv	21.59	49	eP	P	08 27 25.0	-0.1
KNGR				pmax	pmax		
	comp=Z,35nm,1.0s						
GTA2	Gaotai	21.63	79	eP	P	08 27 26.0	+0.3
GTA2				pP	pP	08 27 29.1	-0.8
GTA2				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GTA2				L	L		
	comp=Z,120nm,16.8s						

GTA2 L L
comp=Z,220nm,14.9s
GTA2 L L
comp=Z,210nm,16.5s
KBZ Khabaz 22.23 292 P **P 08 27 30.7 -1.2**
comp=Z,6.6nm,0.8s,baz=119,slow=8.3,SNR=17
KBZ Sn Sn 08 31 44.0 -3.9
comp=Z,0.1nm,0.3s,baz=127,slow=22,SNR=2.0
comp=Z,6.6nm,0.8s
NEUR Neytrino 22.36 291⇑*i*P **P 08 27 34.8 +1.3**
NEUR pmax pmax
comp=Z,5.0nm,1.1s
KIV Kislovodsk 22.40 293 *e*P **P 08 27 33.1 -0.7**
KIV *e*S **S 08 31 37.4 -2.4**
KIV pmax pmax
comp=Z,13nm,1.0s
KIV MLR MLR
comp=Z,37nm,14.0s
SHA1 Shidzhatmaz 22.41 292*c i*P **P 08 27 33.2 -0.8**
LABN Labinsk 23.84 294 *e*P **P 08 27 51.6 +3.2**
LABN *e**PP **sP 08 27 56.3 +1.7**
LABN *e*S **S 08 32 08.4 +4.2**
LABN pmax pmax
comp=Z,22nm,0.5s
MOY Mondy 24.02 48 *e*P **P 08 27 51.2 +1.0**
MOY pmax pmax
comp=Z,17nm,2.2s
ERBR Yeremizino-Bor 24.09 297 *e*P **P 08 27 51.8 +1.0**
ERBR *e**PP **sP 08 27 57.7 +0.7**
ERBR *e*S **S 08 32 09.1 +0.9**
ERBR pmax pmax
comp=Z,15nm,0.5s
VRH Novokhopyorsk 24.43 310 *e*P **P 08 27 53.6 -0.2**
VRH pmax pmax
comp=Z,20nm,0.6s
KIRV Kirov 24.47 331*c i*P **P 08 27 54.5 +0.4**
KIRV *i* *PP **pP 08 27 59.6 +1.2**
SOC Sochi 24.54 291 *e*P **P 08 27 57.9 +3.0**
SOC *e* 08 28 25.4
SOC *e*PPP PPP 08 28 35.9
SOC *e*S **S 08 32 15.2 -0.2**
SOC *e*SS **SnSn 08 33 05.9 +6.1**
SOC pmax pmax
comp=Z,8.0nm,0.9s
SOC MLR MLR
comp=Z,95nm,19.0s
ZAK Zakamensk 25.00 52 *e*P **P 08 27 58.7 -0.4**
ZAK pmax pmax
comp=Z,8.0nm,1.4s
LZH Lanzhou 25.49 86 *e*P **P 08 28 03.2 -0.5**
LZH pP pP 08 28 07.6 -0.6
LZH pmax pmax
comp=Z,17nm,1.0s
LZH L L
comp=Z,220nm,20.6s
LZH L L
comp=Z,180nm,21.5s
LZH L L
comp=Z,290nm,20.6s
TLY Talaya 25.59 49 P 08 28 03.0 -1.3
TLY Talaya 25.59 49⇓*i*P **P 08 28 05.6 +1.3**
TLY *i* *PP **sP 08 28 12.1 +1.6**
TLY pmax pmax
comp=Z,3.0nm,0.7s
VORD Divnogorie 25.82 309 *e*P **P 08 28 05.5 -0.9**
VORD pmax pmax
comp=Z,10.0nm,0.7s
VSR Storozhevoye 25.97 309 *e*P **P 08 28 07.3 -0.5**
VSR pmax pmax
comp=Z,20nm,0.7s
ARPR Arapgir-MALATY 25.97 281 P 08 28 08.2 +0.1
ARPR IAmb IAmb 08 28 11.4
comp=Z,11nm,0.8s
ANN Anapa 26.19 294 *e*P **P 08 28 11.6 +1.8**
ANN *e**PP **sP 08 28 17.5 +1.4**
ANN *e*S **S 08 32 43.8 +2.1**
ANN pmax pmax
comp=Z,27nm,0.9s
SONM Songino Array 26.51 59 P **P 08 28 12.1 -0.8**
comp=Z,0.5nm,0.5s,baz=277,slow=13,SNR=6.1
SONM LR LR 08 39 45.6
comp=Z,301nm,21.2s,baz=299,slow=39
comp=Z,0.5nm,0.5s
LPSR Galich'ya Gora 26.51 312 *e*P **P 08 28 11.6 -1.0**
LPSR pmax pmax
comp=Z,10.0nm,0.7s
ULN Ulaanbaatar 26.95 59⇓*i*P **P 08 28 17.7 +0.8**
ULN pmax pmax
comp=Z,3.0nm,0.8s
RAYN Ar Rayn 27.09 243 P 08 28 18.0 -0.1
RAYN IAmb IAmb 08 28 20.8
comp=Z,10nm,0.8s
RAYN Ar Rayn 27.09 243 P **P 08 28 18.0 -0.1**
RAYN pmax pmax
comp=Z,11nm,0.9s
PZH PanZhiHua 27.89 107 P **P 08 28 27.1 +1.7**
OBN Obninsk 28.66 316 *e*P **P 08 28 32.5 +0.7**
OBN *e* 08 29 21.6
OBN *e* 08 31 40.8
OBN pmax pmax
comp=Z,7.0nm,0.8s
OBN MLR MLR
comp=Z,49nm,16.0s
ASF Jabal al Asfar 29.09 268 LR LR 08 43 07.7
comp=Z,72nm,19.1s,baz=27,slow=42
BR131 Keskin Array S 29.44 284 P 08 28 39.5 +0.4
BR131 Keskin Array S 29.44 284⇑*i*P **P 08 28 40.0 +0.9**
BRTR Keskin Array B 29.44 284 P **P 08 28 39.5 +0.4**
comp=Z,2.8nm,0.7s,baz=91,slow=7.4,SNR=13
comp=Z,2.8nm,0.7s
BRTR Keskin Array B 29.44 284 P 08 28 39.2 +0.1
BRTR Keskin Array B 29.44 284 *i* P **P 08 28 39.7 +0.6**
BRTR pmax pmax
comp=Z,3.0nm,0.7s
BR104 Keskin Array S 29.44 284 P **P 08 28 40.0 +0.9**
comp=Z,3.1nm,1.0s
BR106 Keskin Array S 29.45 284 P **P 08 28 39.6 +0.4**
comp=Z,40nmcomp=Z,4.3nm,0.8s
BR105 Keskin Array S 29.45 284 P **P 08 28 39.7 +0.4**
comp=Z,59nmcomp=Z,6.8nm,0.8s
KLMR Klimovskoe 29.81 328 *e*P **P 08 28 41.8 -0.2**
KLMR *e* 08 29 38.8
KLMR pmax pmax
comp=Z,9.0nm,1.2s
XAN Xi'an 30.08 88 *e*P **P 08 28 45.9 +1.2**
HHC Hu-ho-hao-te 30.39 73 *e*P **P 08 28 49.0 +1.5**
HHC pmax pmax
comp=Z,5.0nm,0.7s
HHC pmax pmax
comp=Z,92nm,4.2s
CMAR Chiang Mai Arr 31.08 123 P **P 08 28 51.5 -2.1**
comp=Z,0.6nm,0.3s,baz=313,slow=8.8,SNR=5.1
comp=Z,0.6nm,0.3s
NRIK Noril'sk 31.71 11 P **P 08 28 58.5 -0.1**
comp=Z,6.3nm,0.6s,baz=195,slow=6.7,SNR=16
comp=Z,6.3nm,0.6s
NRIK Noril'sk 31.71 11 **P 08 28 58.8 +0.1**
NRIK IAmb IAmb 08 29 00.1
comp=Z,7.6nm,0.8s
NRIK Noril'sk 31.71 11*d i*P **P 08 28 59.1 +0.4**
NRIK *i* *PP **pP 08 29 04.4 +1.3**
NRIK pmax pmax
comp=Z,9.0nm,1.0s
AK09 Malin Array Si 32.01 306 P **P 08 29 01.7 +0.2**
AK10 Malin Array Si 32.03 306 P **P 08 29 01.5 -0.2**
AK08 Malin Array Si 32.03 306 P **P 08 29 00.9 -0.8**
AK07 Malin Array Si 32.06 306 P **P 08 29 01.8 -0.1**
AKASG Malin Array Be 32.06 306 P **P 08 29 01.3 -0.6**
comp=Z,0.4nm,0.3s,baz=79,slow=7.3,SNR=10
comp=Z,0.4nm,0.3s
AKASG Malin Array Be 32.06 306 *i* P **P 08 29 02.0 +0.1**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKBB Malin Array Si 32.06 306 **P 08 29 01.5 -0.5**
AKBB IAmb IAmb 08 29 02.5
comp=Z,6.6nm,0.8s
AKBB Malin Array Si 32.06 306⇑*i*P **P 08 29 02.0 +0.1**
AKBB pmax pmax
comp=Z,7.0nm,0.9s
AKBB Malin Array Si 32.06 306 P **P 08 29 01.7 -0.2**
AK03 Malin Array Si 32.06 306 P **P 08 29 01.1 -0.9**
AK01 Malin Array Si 32.07 306 P **P 08 29 00.9 -1.1**
AK05 Malin Array Si 32.07 306 P **P 08 29 01.7 -0.3**
AK06 Malin Array Si 32.07 306 P **P 08 29 01.7 -0.3**
AK02 Malin Array Si 32.07 306 P **P 08 29 01.3 -0.7**

KIEV Kiev 32.07 306⇓P **P 08 29 01.8 -0.3**
KIEV Kiev 32.07 306 **P 08 29 01.8 -0.3**
KIEV IAmb IAmb 08 29 02.5
comp=Z,5.8nm,0.8s
KIEV Kiev 32.07 306⇓P **P 08 29 01.8 -0.3**
KIEV Kiev 32.07 306 P **P 08 29 01.4 -0.6**
comp=Z,28nm,0.9s
AK11 Malin Array Si 32.09 306 P **P 08 29 01.7 -0.5**
AK04 Malin Array Si 32.10 306 P **P 08 29 01.6 -0.7**
AK12 Malin Array Si 32.10 306 P **P 08 29 01.9 -0.4**
AK14 Malin Array Si 32.13 306 P **P 08 29 02.0 -0.5**
AK16 Malin Array Si 32.13 306 P **P 08 29 02.3 -0.3**
AK13 Malin Array Si 32.16 306 P **P 08 29 01.3 -1.5**
AK18 Malin Array Si 32.16 306 P **P 08 29 01.3 -1.5**
AK17 Malin Array Si 32.16 306 P **P 08 29 02.5 -0.4**
AK19 Malin Array Si 32.20 306 P **P 08 29 02.4 -0.7**
AK20 Malin Array Si 32.20 306 P **P 08 29 02.4 -0.8**
PALK Pallekele 32.43 163 LR LR 08 42 15.9
comp=Z,90nm,18.7s,baz=359,slow=37
SORM Soroca 32.51 301⇑P **P 08 29 05.3 -0.6**
SORM Soroca 32.51 301⇑P **P 08 29 05.3 -0.6**
SORM Soroca 32.51 301 P **P 08 29 04.6 -1.3**
comp=Z,7.4nm,0.8s
TPGR Topolog 32.60 295⇑P **P 08 29 07.6 +0.9**
CFR Carcaliu 32.77 295⇓P **P 08 29 08.7 +0.5**
CFR Carcaliu 32.77 295⇓P **P 08 29 08.7 +0.5**
LUBAR Lubar, Ukraine 32.95 304 P **P 08 29 09.8 +0.1**
MNK Minsk 33.36 313 *i* P **P 08 29 13.9 +0.6**
comp=E,9.0nm,0.6s
MNK *i* P **P 08 29 13.9 +0.6**
comp=N,9.0nm,0.6s,baz=100
MNK *i* P **P 08 29 13.9 +0.6**
comp=Z,18nm,0.6s
MNK *i* PP **PP 08 30 24.9 -3.7**
MNK *i* PPP PPP 08 30 35.0
MNK *i* S **S 08 34 34.5 +0.5**
MNK *i* SS **SnSn 08 36 37.2 +2.6**
MNK *i* SSS SSS 08 36 56.8
MNK *i* LQ LQ 08 39 13.3
MNK *i* LR LR 08 41 15.1
MNK *i* LRM MLR 08 45 54.0
comp=Z,55nm,13.6s
MNK *i* LRM MLR 08 46 03.7
comp=N,251nm,21.1s
MNK *i* LRM MLR 08 46 05.9
comp=E,227nm,22.8s
MNK Minsk 33.36 313 *i* P **P 08 29 13.8 +0.6**
MNK *i* 08 30 24.9
MNK *i* S **S 08 34 34.4 +0.5**
MNK *i* SS **SnSn 08 36 37.1 +2.6**
MNK *i* SSS SSS 08 36 56.8
MNK pmax pmax
comp=Z,18nm,0.6s
MNK pmax pmax
comp=E,9.0nm,0.6s
MNK pmax pmax
comp=N,9.0nm,0.6s
MNK MLR MLR
comp=Z,55nm,14.0s
MNK MLR MLR
comp=N,251nm,21.0s
MNK MLR MLR
comp=E,227nm,23.0s
VRI Vrincioaia 33.70 297⇑P **P 08 29 17.9 +1.5**
VRI Vrincioaia 33.70 297⇑P **P 08 29 17.9 +1.5**
TESR Tescani 33.72 298⇑P **P 08 29 17.3 +0.8**
TESR Tescani 33.72 298 P **P 08 29 17.2 +0.7**
comp=E,11nm,1.0s
PLOR Plostina 33.76 297⇑P **P 08 29 18.5 +1.5**
PLOR Plostina 33.76 297⇑P **P 08 29 18.5 +1.5**
KMPD K-Podol'skiy 33.77 302 P **P 08 29 14.4 -0.5**
KMPD P **P 08 29 16.4 -0.5**
HORU Horodok 33.79 303 P **P 08 29 17.2 0.0**
NACGM Naroch 34.06 313 *e*P **P 08 29 20.2 +0.9**
comp=Z,31nm,0.9s,baz=99
COVR Voineasa-Covas 34.07 297⇑P **P 08 29 21.0 +1.4**
RNPP5 Staryi Chortor 34.20 306 P **P 08 29 20.9 +0.3**
JOF Joensuu 34.21 328 *e*P **P 08 29 20.6 0.0**
RNPP9 Sopachiv 34.21 307 P **P 08 29 21.0 +0.3**
RNPP8 Varash 34.23 307 P **P 08 29 21.2 +0.3**
MLR Muntele Rosu 34.28 296⇑P **P 08 29 23.5 +1.9**
MLR Muntele Rosu 34.28 296 **P 08 29 22.4 +0.8**
MLR Muntele Rosu 34.28 296⇑P **P 08 29 23.5 +1.9**
MLR Muntele Rosu 34.28 296 P **P 08 29 22.6 +1.0**
comp=Z,8.5nm,0.7s
DOPR Dopca 34.63 297⇑P **P 08 29 25.7 +1.2**
BURAR Bucovina Array 34.63 300⇑P **P 08 29 25.6 +1.0**
BURAR Bucovina Array 34.63 300 P **P 08 29 24.3 -0.2**
BURAR Bucovina Array 34.63 300⇑P **P 08 29 25.6 +1.0**
BUR08 Bucovina Ar. S 34.64 300 P **P 08 29 25.0 +0.3**
ELND Elena 34.66 292⇑P **P 08 29 25.5 +0.8**
KSV Kosov 34.70 301 P **P 08 29 24.5 -0.6**
VOIR 34.91 296⇑P **P 08 29 28.0 +1.0**
VOIR 34.91 296⇑P **P 08 29 28.0 +1.0**
VOIR 34.91 296 P **P 08 29 27.1 +0.1**
comp=Z,3.8nm,0.5s
STNU Starunia 35.07 302 P **P 08 29 28.7 +0.5**
ARR Arges 35.21 296⇓P **P 08 29 30.8 +1.2**
ARBE Arbavere 35.43 321 *e*P **P 08 29 31.4 +0.3**
MORS Morshin 35.46 303 P **P 08 29 31.9 +0.4**
PABE Paberze 35.74 314 P **P 08 29 33.8 -0.1**
PABE Paberze 35.74 314 *e*P **P 08 29 33.9 +0.1**
SHIU Shidnytsya 35.80 303 P **P 08 29 35.1 +0.6**
FIA1 FINESS Array S 35.95 324 P **P 08 29 36.0 +0.4**
FINES FINESS Array B 35.95 324 P **P 08 29 35.8 +0.2**
comp=Z,9.9nm,0.7s,baz=117,slow=9.2,SNR=29
comp=Z,9.9nm,0.7s
FINES FINESS Array B 35.95 324 P **P 08 29 35.3 -0.2**
FINES FINESS Array B 35.95 324 *i* P **P 08 29 35.9 +0.3**
FINES pmax pmax
comp=Z,10.0nm,0.7s
MARR Marisel-Cluj 36.13 299⇑P **P 08 29 38.7 +1.2**
KWP Kalwaria Pacla 36.22 304 P **P 08 29 38.1 0.0**
comp=Z,18nm,0.6s
BERU Beregovo 36.32 301 P **P 08 29 39.8 +0.9**
SUF Sumiainen 36.32 326 *e*P **P 08 29 38.8 0.0**
MTSE Matsula 36.36 319 *e*P **P 08 29 38.9 -0.1**
HOLU Holmets 36.48 302 P **P 08 29 40.9 +0.6**
GZR Gura Zlata 36.51 297⇓P **P 08 29 41.2 +0.5**
GZR Gura Zlata 36.51 297⇓P **P 08 29 41.2 +0.5**
KEF Keuruu 36.72 325 *e*P **P 08 29 42.1 0.0**
STHS Stebnicka Huta 37.18 303 *e*P **P 08 29 45.9 -0.4**
NIE Niedzica 37.80 303 *e*P **P 08 29 53.1 +1.6**
NIE Niedzica 37.80 303 P **P 08 29 52.2 +0.7**
comp=Z,8.7nm,1.5s
VAF Ylistaro 37.94 326 *e*P **P 08 29 52.2 -0.2**
OJC Ojcow 38.07 305 *e*P **P 08 29 53.9 +0.1**
OJC Ojcow 38.07 305 **P 08 29 53.6 -0.2**
OJC Ojcow 38.07 305 P **P 08 29 53.6 -0.2**
OJC Ojcow 38.07 305 P **P 08 29 54.3 +0.5**
comp=Z,28nm,0.8s
LANS Liptovska Anna 38.36 303 *e*P **P 08 30 00.0 +3.7**
LANS Liptovska Anna 38.36 303 *e*P **P 08 30 00.0 +3.7**
VADS Vadso 38.38 338 *e*P **P 08 29 56.3 +0.2**
NJ2 Nanjing 38.56 85 *e*P **P 08 29 57.8 -0.3**
NJ2 pmax pmax
comp=Z,30nm,1.0s
MORH Mrgy, Hungar 39.26 299⇓P **P 08 30 04.3 +0.6**
ARA0 ARCESS Array S 39.26 336 *e*P **P 08 30 03.7 +0.2**
ARCES ARCESS Array B 39.26 336 P **P 08 30 03.7 +0.2**
comp=Z,5.3nm,0.6s,baz=110,slow=8.6,SNR=33
ARCES LR LR 08 47 09.6
comp=Z,103nm,18.2s,baz=168,slow=38
comp=Z,5.3nm,0.6s
STEB Steborice 39.39 304 *e*P **P 08 30 05.6 +0.7**
MORC Moravsky Berou 39.56 304⇑P **P 08 30 07.1 +0.9**
MORC Moravsky Berou 39.56 304 **P 08 30 06.4 +0.1**
MORC Moravsky Berou 39.56 304 P **P 08 30 06.4 +0.1**
MORC pmax pmax
comp=Z,6.0nm,0.8s
MORC Moravsky Berou 39.56 304 *e*P **P 08 30 06.7 +0.4**
KTK1 Kautokeino 39.77 335 *e*P **P 08 30 07.5 -0.3**
KRLC Kraliky 40.02 305 *e*P **P 08 30 10.9 +0.8**
KRLC Kraliky 40.02 305 *e*P **P 08 30 10.9 +0.8**
VRAC Vranov 40.22 304 *e*P **P 08 30 12.6 +0.8**
KSP Ksiaz 40.26 306 P **P 08 30 12.7 +0.6**
comp=Z,12nm,0.8s
DPC Dobruska-Polom 40.29 305 *e*P **P 08 30 13.5 +1.1**
DPC Dobruska-Polom 40.29 305 *e*P **P 08 30 13.5 +1.1**
DPC Dobruska-Polom 40.29 305 P **P 08 30 12.9 +0.6**
comp=Z,13nm,0.9s
KRUC Moravsky 40.38 303 *e*P **P 08 30 13.9 +0.8**
BLEU Blekinge 40.38 314 *i* P **P 08 30 12.3 -0.6**

CHVC Chvalec 40.43 306 *e*P **P 08 30 14.6 +1.1**
CHVC Chvalec 40.43 306 *e*P **P 08 30 14.6 +1.1**
RONA Rosalia, Austr 40.62 301 *i* P **P 08 30 15.2 0.0**
comp=Z,2.7nm,0.6s
CONA Conrad Observa 40.88 302 *i* pP **P 08 30 18.1 +0.7**
comp=Z,9.6nm,1.0s
BSD Bornholm Skovb 40.88 313 *i* P **P 08 30 17.8 +0.7**
BSD IAmb IAmb 08 30 18.1
comp=Z,1.1nm,0.8s
JETT Jettan, Norway 40.90 335 *e*P **P 08 30 17.9 +0.7**
ARSA Arzberg 41.21 301 *e*P **P 08 30 20.1 +0.1**
comp=Z,5.2nm,1.0s
DEL Delary 41.46 315 *i* P **P 08 30 21.7 -0.1**
SOKA Soboth 41.64 300 *i* pP **P 08 30 24.3 +0.7**
comp=Z,2.5nm,0.4s
HFS Hagfors 41.67 320 P **P 08 30 23.6 +0.1**
comp=Z,26nm,0.5s,baz=98,slow=11,SNR=179
YAK Yakutsk 41.69 37 LR LR 08 47 41.0
comp=Z,32nm,20.6s,baz=268,slow=36
YAK Yakutsk 41.69 37⇓*i*P **P 08 30 25.8 +2.1**
YAK pmax pmax
comp=Z,15nm,0.9s
LUNU Lund 41.71 313 *i* P **P 08 30 24.2 +0.3**
ZVC Zvikov 41.76 304 *e*P **P 08 30 25.4 +1.0**
BJUU Bjuv 41.94 314 *i* P **P 08 30 25.7 -0.1**
MOA Molln 41.95 302 *i* pP **P 08 30 26.9 +0.9**
comp=Z,12nm,1.5s
OBKA Obir 42.00 300 *e*P **P 08 30 25.7 -0.8**
comp=Z,5.2nm,0.9s
FAUS Fauske 42.06 331 *e*P **P 08 30 26.8 +0.2**
BORU Boraas 42.06 316 *i* P **P 08 30 26.7 0.0**
FABU Falkenberg 42.09 316 *i* P **P 08 30 27.0 0.0**
FURI Furi 42.10 234 LR LR 08 50 38.5
comp=Z,64nm,18.1s,baz=139,slow=40
MOR8 Moi Rana 42.13 329 *e*P **P 08 30 26.7 -0.5**
GERES GERESS Array B 42.16 303 P **P 08 30 28.2 +0.3**
comp=Z,1.5nm,0.6s,baz=66,slow=10,SNR=9.6
comp=Z,1.5nm,0.6s
KHC Kasperske Hory 42.20 304 **P 08 30 28.3 +0.2**
KHC IAmb IAmb 08 30 29.8
comp=Z,8.2nm,0.7s
KHC Kasperske Hory 42.20 304*ce*P **P 08 30 29.2 +1.1**
KHC pmax pmax
comp=Z,7.0nm,0.6s
KHC Kasperske Hory 42.20 304 *e*P **P 08 30 29.0 +0.8**
KHC Kasperske Hory 42.20 304 P **P 08 30 28.9 +0.8**
comp=Z,15nm,0.8s
STEI Steigen 42.21 332 *e*P **P 08 30 27.9 +0.1**
CLL Collm 42.28 307 **P 08 30 28.6 -0.1**
CLL IAmb IAmb 08 30 29.7
comp=Z,9.8nm,0.6s
CLL Collm 42.28 307 *i* P **P 08 30 28.9 +0.3**
CLL *i* 08 30 31.1
CLL *i* 08 30 36.7
CLL pmax pmax
comp=Z,9.0nm,0.6s
CLL Collm 42.28 307 *i* P **P 08 30 28.9 +0.3**
comp=Z,9.0nm,0.6s
CLL *i* x x 08 30 31.1
comp=Z,8.0nm,0.7s
CLL *i* x x 08 30 36.7
comp=Z,6.0nm,1.0s
CLL Collm 42.28 307 P **P 08 30 29.2 +0.6**
comp=Z,15nm,0.7s
BIOA Bad Ischl, Aus 42.40 302 *i* pP **P 08 30 30.2 +0.5**
comp=Z,1.6nm,0.4s
MYKA Terra Mystica 42.59 300 *e*pP **P 08 30 32.0 +0.6**
comp=Z,6.5nm,1.0s
LEIR Leirfjorden 42.65 329 *e*P **P 08 30 31.6 +0.2**
VAGH Vaagaholmen 42.70 330 *e*P **P 08 30 32.6 +0.8**
NC405 NORSAR Array S 42.70 322 **P 08 30 31.3 -0.6**
KBA Koelnbreinsper 42.70 301 *e*P **P 08 30 32.6 +0.2**
comp=Z,3.0nm,0.6s
KONS Konsvik 42.72 330 *e*P **P 08 30 32.0 +0.1**
STOK Stokkvaagen 42.73 329 *e*P **P 08 30 32.1 +0.1**
NC602 NORSAR Array S 42.77 321 *e*P **P 08 30 32.1 -0.4**
LOF Lofoten 42.88 332 *e*P **P 08 30 32.8 -0.4**
NC303 NORSAR Array S 42.88 322 **P 08 30 33.2 -0.2**
NB201 NORSAR Array S 42.91 322 P **P 08 30 33.1 -0.5**
NB201 IAmb IAmb 08 30 34.0
comp=Z,21nm,1.4s
STRU Stroemstad 42.91 319 *i* P **P 08 30 33.2 -0.4**
NB2 NORSAR Subarra 42.94 321 P **P 08 30 33.1 -0.9**
comp=Z,6.7nm,0.6s,baz=93,slow=8.6
NB2 NORSAR Subarra 42.94 321 P **P 08 30 33.1 -0.9**
NOA NORSAR Array B 42.94 321 P **P 08 30 33.4 -0.6**
comp=Z,6.8nm,0.6s,baz=92,slow=7.8,SNR=31
NOA LR LR 08 47 59.7
comp=Z,17nm,18.5s,baz=65,slow=36
comp=Z,6.8nm,0.6s
LESA Schwarzleotal 43.09 301 *i* pP **P 08 30 35.8 +0.5**
comp=Z,6.3nm,1.1s
NBO00 NORSAR Array S 43.16 321 P **P 08 30 34.9 -0.8**
NBO00 IAmb IAmb 08 30 50.5
comp=Z,17nm,1.1s
NC204 NORSAR Array S 43.17 322 **P 08 30 35.3 -0.6**
BJO1 Bjornoya 43.25 342 *e*P **P 08 30 36.6 +0.4**
KLR Kul'dur 43.26 56 LR LR 08 50 35.5
comp=Z,45nm,19.8s,baz=264,slow=39
ABTA Abfaltersbach 43.33 300 *e*P **P 08 30 37.4 +0.1**
comp=Z,3.1nm,0.6s
TIXI Tiksi 43.37 23⇑*i*P **P 08 30 36.8 -0.4**
TIXI pmax pmax
comp=Z,4.0nm,0.6s
GRF Grafenberg Arr 43.63 305 *e*P **P 08 30 41.0 +1.3**
comp=Z,9.6nm,0.8s,baz=87,slow=6.7
KONO Kongsberg 43.72 319 P **P 08 30 39.7 -0.5**
KONO IAmb IAmb 08 30 40.7
comp=Z,8.7nm,0.7s
KONO Kongsberg 43.72 319 *e*P **P 08 30 40.2 +0.1**
KONO Kongsberg 43.72 319*ce*P **P 08 30 41.0 +0.8**
KONO pmax pmax
comp=Z,6.0nm,0.6s
WTTA Wattenberg 43.81 301 *e*P **P 08 30 39.7 -1.7**
comp=Z,7.0nm,1.1s
SSRD Sdr. Stenderup 43.88 313 *i* P **P 08 30 42.6 +1.1**
SSRD IAmb IAmb 08 30 43.0
comp=Z,44nm,0.7s
DOMB Dombas 44.01 323 *e*P **P 08 30 42.5 -0.1**
SQTA Sankt Quirin 44.10 301 *e*P **P 08 30 43.4 -0.2**
comp=Z,2.5nm,0.6s
MOTA Moosalm 44.15 302 *e*P **P 08 30 43.5 -0.5**
comp=Z,4.3nm,0.6s
MOL Molde 44.73 324 *e*P **P 08 30 48.7 +0.4**
FUORN Ofenpass-Fuorn 44.87 301 P **P 08 30 49.7 -0.2**
DAVA Damuels 44.97 302 *i* P **P 08 30 50.5 -0.1**
comp=Z,6.9nm,0.6s
SNART Snartemo 45.00 318 *i* P **P 08 30 50.9 +0.5**
SPA0 Spitsbergen Ar 45.38 346 *e*P **P 08 30 54.2 +1.0**
SPITS Spitsbergen Ar 45.38 346 P **P 08 30 53.8 +0.5**
comp=Z,4.3nm,0.6s,baz=65,slow=16,SNR=9.3
comp=Z,4.3nm,0.6s
KBS Kingsbay 46.49 347 *e*P **P 08 31 02.6 +0.6**
KBS Kingsbay 46.49 347 *i* P **P 08 31 03.0 +1.0**
JOW Kunigami 48.23 87 LR LR 08 52 30.6
comp=Z,54nm,19.5s,baz=326,slow=37
KEST Kesra 48.96 287 P **P 08 31 21.8 0.0**
comp=Z,3.8nm,0.8s,baz=76,slow=7.3,SNR=2.4
comp=Z,3.8nm,0.8s
EKA Eskdalemuir Ar 51.09 315 P **P 08 31 37.0 -0.6**
comp=Z,4.2nm,0.7s,baz=89,slow=7.9,SNR=17
comp=Z,4.2nm,0.7s
EKA Eskdalemuir Ar 51.09 315 P **P 08 31 37.0 -0.6**
MJAR Matsushiro Arr 51.51 70 P **P 08 31 40.1 -1.0**
comp=Z,1.8nm,0.7s,baz=316,slow=14,SNR=1.8
comp=Z,1.8nm,0.7s
ASAJ Asahikawa 51.79 60 LR LR 08 55 02.7
comp=Z,96nm,18.3s,baz=206,slow=38
SEY Seymchan 52.12 35⇑*e*P **P 08 31 47.5 +2.3**
SEY pmax pmax
comp=Z,21nm,4.6s
MA2 Magadan 52.13 39⇑*i*P **P 08 31 43.3 -2.0**
MA2 pmax pmax
comp=Z,5.0nm,1.5s
DAG Danmarks Havn 52.69 343 *i* P **P 08 31 49.3 +0.2**
DAG IAmb IAmb 08 31 50.8
comp=Z,5.8nm,0.7s
MBAR Mbarara 54.41 234 LR LR 08 57 42.3
comp=Z,84nm,19.1s,baz=27,slow=39
BILL Bilibino 56.22 27⇑*i*P **P 08 32 14.7 -0.3**
BILL pmax pmax
comp=Z,7.0nm,1.5s
ESDC Sonseca Array 56.98 297 P **P 08 32 20.4 -0.5**
comp=Z,1.7nm,0.8s,baz=56,slow=6.4,SNR=7.4
comp=Z,1.7nm,0.8s
PETK Petropavlovsk- 57.84 45 LR LR 08 58 17.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,61nm,19.1s,baz=306,slow=37						
NEEM	North Greenlan	58.90	348	i P	P	08 32 34.4	+0.3
NEEM				IAmb	IAmb	08 32 36.6	
	comp=Z,4.6nm,1.0s						
SUMG	Summit	59.08	341		P	08 32 35.5	0.0
SUMG	Summit	59.08	341	P	P	08 32 35.5	0.0
SUMG				pmax	pmax		
	comp=Z,12nm,1.0s						
SUMG	Summit	59.08	341	i P	P	08 32 36.3	+0.8
SUMG				IAmb	IAmb	08 32 38.8	
	comp=Z,11nm,1.0s						
C19K	Lookout Ridge	65.91	18		P	08 33 21.2	+0.4
C19K				IAmb	IAmb	08 33 27.1	
	comp=Z,6.7nm,1.2s						
TORD	Torodi Ar. Bea	66.45	268	P	P	08 33 22.9	-2.1
	comp=Z,1.2nm,0.8s,baz=42,slow=2.4,SNR=7.0						
	comp=Z,1.2nm,0.8s						
D19K	Kuna River	66.72	18	P	P	08 33 25.4	-0.6
D19K				IAmb	IAmb	08 33 30.4	
	comp=Z,5.9nm,0.9s						
F15K	North Star Dit	67.03	22		P	08 33 28.0	0.0
F15K				IAmb	IAmb	08 33 31.2	
	comp=Z,3.5nm,0.8s						
F17K	Baldwin Pennin	67.46	20		P	08 33 30.7	+0.1
F17K				IAmb	IAmb	08 33 35.2	
	comp=Z,4.9nm,0.8s						
E24K	Your Creek	69.19	15	P	P	08 33 41.3	-0.3
E24K				IAmb	IAmb	08 33 41.9	
	comp=Z,2.3nm,0.7s						
F25K	Christian Rive	70.17	14	P	P	08 33 47.7	+0.1
F25K				IAmb	IAmb	08 33 51.4	
	comp=Z,2.7nm,0.9s						
ILAR	Eielson Array	72.36	16	P	P	08 33 59.8	-1.1
	comp=Z,1.8nm,0.9s,baz=325,slow=5.0,SNR=15						
ILAR				LR	LR	09 09 40.1	
	comp=Z,37nm,18.4s,baz=143,slow=39						
	comp=Z,1.8nm,0.9s						
KDAK	Kodiak Island	76.79	23	LR	LR	09 14 30.6	
	comp=Z,66nm,18.4s,baz=61,slow=41						
TSUM	Tsumeb	76.88	232	LR	LR	09 11 15.9	
	comp=Z,52nm,18.0s,baz=332,slow=38						
YKA	Yellowknife Ar	78.88	3	P	P	08 34 36.7	-1.5
	comp=Z,1.5nm,0.9s,baz=347,slow=6.1,SNR=22						
YKA				LR	LR	09 13 26.4	
	comp=Z,21nm,18.1s,baz=324,slow=39						
	comp=Z,1.5nm,0.9s						
YKA	Yellowknife Ar	78.88	3	i P	P	08 34 37.7	-0.5
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BOSA	Boshof	79.95	220	LR	LR	09 10 40.1	
	comp=Z,23nm,20.1s,baz=32,slow=36						
SCHQ	Schefferville	80.21	337	P	P	08 34 44.9	-0.7
	comp=Z,4.4nm,0.7s,baz=35,slow=5.7,SNR=12						
	comp=Z,4.4nm,0.7s						
DLBC	Dease Lake	81.38	11	LR	LR	09 15 32.7	
	comp=Z,22nm,18.1s,baz=66,slow=39						
WRA	Warramunga Arr	82.67	123	P	P	08 34 56.5	-2.6
	comp=Z,1.3nm,0.9s,baz=323,slow=4.8,SNR=18						
	comp=Z,1.3nm,0.9s						
ASAR	Alice Springs	85.06	126	P	P	08 35 11.5	+0.2
	comp=Z,0.8nm,1.0s,baz=313,slow=4.2,SNR=6.8						
	comp=Z,0.8nm,1.0s						
EDM	Edmonton	88.21	3		P	08 35 26.6	+0.3
EDM	Edmonton	88.21	3	P	P	08 35 26.6	+0.3
EDM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PLCA	Paso Flores	151.18	254	PKPbc	PKPbc	08 42 28.0	-0.5
	comp=Z,1.2nm,0.6s,baz=15,slow=2.7,SNR=12						
PLCA	Paso Flores	151.18	254	PKIKP	PKPbc	08 42 28.0	-0.5

AFAD 05 08:33:03.2, 39°.04N×27°.87E, h7km±2km, ML1.3, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	0.17	196	P	Pg	08 33 06.9	+0.3
AKHS				S	Sg	08 33 10.3	+1.4
KTTT	Salihli	0.39	154	P	Pg	08 33 11.2	+0.4
KTTT				S	Sg	08 33 17.2	+1.3
KTTT				IAML		08 33 19.0	
	comp=N,32nm,0.5s						
CAMT	Merkez	0.52	237	P	Pb	08 33 14.3	-0.5
CAMT				S	Sb	08 33 21.8	-0.7
CAMT				IAML		08 33 24.0	
	comp=E,50nm,0.5s						
CAMT				IAML		08 33 27.0	
	comp=N,40nm,0.6s						
DEMI	Demirci	0.66	89	P	Pn	08 33 18.9	-0.1
DEMI				S	Sn	08 33 30.0	+0.4
BKES	Balkesir-Mer	0.69	4	P	Pg	08 33 16.5	0.0
BKES				S	Sg	08 33 26.5	+0.9
BKES				IAML		08 33 33.0	
	comp=E,15nm,0.2s						
BALY	Balya	0.73	345	P	Pg	08 33 17.1	-0.1
BALY				S	Sg	08 33 27.4	+0.8
BALY				IAML		08 33 28.0	
	comp=E,25nm,0.4s						
BALY				IAML		08 33 31.0	
	comp=N,27nm,0.4s						
DURS	Dursunbey	0.73	40	P	Pg	08 33 17.1	-0.2
DURS				S	Sb	08 33 29.1	+0.5
DURS				IAML		08 33 32.0	
	comp=N,9.6nm,0.3s						
DURS				IAML		08 33 32.0	
	comp=E,13nm,0.1s						
MANT	Manisa	0.77	135	P	Pg	08 33 18.1	+0.2
MANT				S	Sb	08 33 29.8	+0.1
MANT				IAML		08 33 32.0	
	comp=E,11nm,0.2s						
MANT				IAML		08 33 33.0	
	comp=N,12nm,0.3s						
BUHA	Balikesir, Bur	0.77	307	P	Pb	08 33 18.9	0.0
BUHA				S	Sb	08 33 29.8	+0.2
BUHA				IAML		08 33 35.0	
	comp=E,11nm,0.7s						
BUHA				IAML		08 33 37.0	
	comp=N,12nm,0.4s						
KIRA	zmir-Kiraz	0.94	154	P	Pb	08 33 21.8	0.0
KIRA				S	Sb	08 33 34.8	+0.3
KIRA				IAML		08 33 37.0	
	comp=N,17nm,0.2s						
KIRA				IAML		08 33 37.0	
	comp=E,16nm,0.2s						
USAK	Uak-Merkez	0.95	110	P	Pg	08 33 21.6	+0.1
USAK				IAML		08 33 35.0	
	comp=N,11nm,0.7s						
USAK				S	Sb	08 33 35.1	+0.2

ISK 05 08:33:40.1, 37°.71N×26°.88E, h24km±1km, ML1.7/4, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GCAM	G?zelcaml?	0.28	91	Pg	Pb	08 33 47.1	+0.4
GCAM				Sg	Sb	08 33 52.3	+1.1
GMLD	Gumuldur	0.37	4	Pg	Pb	08 33 48.8	+0.7
GMLD				Sg	Sb	08 33 54.7	+1.1
BLCB	Balcova	0.69	10	Pg	Pn	08 33 54.3	-0.1
BLCB				Sg	Sn	08 34 04.6	+0.3
BODT	Bodrum	0.73	152	Pg	Pn	08 33 55.1	+0.2
BODT				Sg	Sn	08 34 05.7	+0.4

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*IDC **05** 08:35:51.7±2.1, 17°.14S×179°.33W, h557km±17km, mb2.8/5, mbtmp3.7/6, Error ellipse: s-maj=88.3km s-min=22.0km az=148.0*

ISC 05 08:35:51.1±1.5, 17°.1S±0°.6×179°.3W±0°.4, h550km, n7, σ0s.64/9, mb3.1/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.59	255	P	P	08 37 04.9	+1.1
	23nm,0.6s,baz=90,slow=11,SNR=23						
STKA	Stephens Creek	38.27	240	P	P	08 42 24.6	-0.2
	0.7nm,0.4s,baz=95,slow=7.6,SNR=3.8						
	0.7nm,0.4s						
WRA	Warramunga Arr	43.93	259	P	P	08 43 09.6	-0.2
	0.3nm,0.5s,baz=94,slow=7.8,SNR=21						
WRA				PcP	PcP	08 44 43.1	-0.7
	0.3nm,0.7s,baz=95,slow=3.0,SNR=2.6						
	0.3nm,0.5s						
ASAR	Alice Springs	44.18	253	P	P	08 43 11.7	-0.1
	4.7nm,0.7s,baz=88,slow=8.1,SNR=97						
ASAR				PcP	PcP	08 44 44.0	-0.5
	0.3nm,0.5s,baz=104,slow=4.0,SNR=5.7						
	4.7nm,0.7s						
ILAR	Eielson Array	85.30	13	P	P	08 47 29.8	+0.1
	0.3nm,0.9s,baz=213,slow=4.5,SNR=4.1						
	0.3nm,0.9s						
TXAR	Lajitas Array	86.30	58	P	P	08 47 35.6	+0.1
	0.2nm,0.8s,baz=235,slow=5.0,SNR=2.5						
	0.2nm,0.8s						
GERES	GERESS Array B	146.60	344	PKPbc	PKPbc	08 54 30.7	-0.6
	0.3nm,0.3s,baz=23,slow=1.8,SNR=1.6						

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*ISK **05** 08:36:50.8, 38°.61N×44°.65E, h7km, ML2.5/4*
*AFAD **05** 08:36:53.3, 38°.44N×44°.56E, h7km±2km, ML2.0*
*TEH **05** 08:36:56.3, 38°.51N×44°.59E, h6km±250km, ML2.5, Presumed earthquake*
*AZER **05** 08:36:58.6, 38°.56N×44°.90E, h5km, ml2.2*

ISC 05 08:36:54.5±1.2, 38°.45N±0°.03×44°.49E±0°.03, h12km±10km, n20, σ1s.34/31, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.44	299	P	Pg	08 37 03.1	-0.2
OZAP				S	Sb	08 37 10.9	-0.2
OZAP				IAML		08 37 14.0	
	comp=N,162nm,0.5s						
TVAN	Van	0.85	276	P	Pg	08 37 10.3	-0.8
TVAN				S	Sb	08 37 23.8	+0.9
TVAN				IAML		08 37 40.0	
	comp=N,60nm,0.4s						
TVAN				IAML		08 37 41.0	
	comp=E,98nm,1.0s						
YOVA	Hakkari_Yksek	0.87	190	P	Pn	08 37 11.8	-1.0
YOVA				S	Sb	08 37 23.1	-0.3
YOVA				IAML		08 37 34.0	
	comp=E,36nm,0.4s						
YOVA				IAML		08 37 37.0	
	comp=N,33nm,0.5s						
VMUR	Van-Muradiye	0.90	307	P	Pg	08 37 11.5	-0.4
VMUR				S	Sn	08 37 27.6	+1.5
VMUR				IAML		08 37 31.0	
	comp=N,71nm,0.3s						
VMUR				IAML		08 37 35.0	
	comp=E,34nm,1.0s						
ISHB	Shabestar	0.90	100	Pg	Pn	08 37 11.4	-1.8
MAKU	Maku	0.92	10	Pg	Pb	08 37 12.2	-0.3
IMRD	Marand	0.99	74	Pg	Pn	08 37 13.8	-0.6
NAX	Nakhchivan	1.07	47	P	Pn	08 37 15.5	+0.1
NAX				S	Sn	08 37 29.7	-0.6
HAKT	HAKKARI	1.08	215	P	Pb	08 37 15.1	-0.1
HAKT				S	Sn	08 37 32.9	+2.2
HAKT				IAML		08 37 42.0	
	comp=N,70nm,0.5s						
HAKT				IAML		08 37 42.0	
	comp=E,54nm,0.5s						
GEVA	Gevas	1.13	264	P	Pg	08 37 15.0	-1.3
GEVA				S	Sn	08 37 33.0	+1.1
GEVA				IAML		08 37 47.0	
	comp=E,35nm,0.6s						
GEVA				IAML		08 37 49.0	
	comp=N,40nm,0.4s						
AKDM	Akdamar-Van	1.19	265	Pn	Pg	08 37 16.5	-1.0
AKDM				Sn	Sn	08 37 35.3	+2.0
SBZ	Shahbuz	1.26	41	P	Pn	08 37 18.9	+0.8
SBZ				S	Sn	08 37 35.9	+0.9
ORD	Ordubad	1.27	67	P	Pn	08 37 18.7	+0.5
ORD				S	Sb	08 37 33.0	-1.8
CUKT	Cukurca	1.39	210	Pn	Pg	08 37 20.2	-1.0
IAZR	Azarshahr	1.41	123	Pg	Pg	08 37 22.7	+1.1
AGRB	Hanur-Agry	1.62	314	Pn	Pn	08 37 20.5	-2.6
DORK	Agr/Tutak/Do	1.63	306	P	Pb	08 37 23.9	-0.7
DORK				S	Sg	08 37 50.3	+3.3
DORK				IAML		08 38 00.0	
	comp=E,9.8nm,0.5s						
DORK				IAML		08 38 04.0	
	comp=N,14nm,0.6s						
KOTA	Agri, Merkez-K	1.68	324	P	Pb	08 37 24.8	-0.7
KOTA				S	Sg	08 37 49.4	+0.8
GNI	Garni	1.71	7	Pn	Pn	08 37 19.3	-5.0
IHRS	Heris	2.01	93	Pn	Pg	08 37 32.4	-0.8

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*IDC **05** 09:01:15.7±1.0, 8°.68S×157°.90E, h0km, mb3.7/7, mbtmp3.8/8, ML3.9/1, MS3.0/4, Error ellipse: s-maj=30.6km s-min=19.9km az=136.0*

ISC 05 09:01:20.5±0.8, 8°.8S±0°.1×157°.97E±0°.09, h35km, n11, σ1s.19/10, mb3.5/7, MS2.9/3, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	2.04	107	Pn	Pn	09 01 52.6	+0.2
	0.6nm,0.3s,baz=310,slow=21,SNR=9.4						
HNR				Sn	Sn	09 02 15.8	-0.9
	3.3nm,0.3s,baz=210,slow=12,SNR=7.1						
HNR				LR	LR	09 02 41.9	
	comp=Z,22nm,18.5s,baz=14,slow=40						
CTA	Charters Tower	15.92	224	Pn	Pn	09 05 00.5	-1.5
	0.3nm,0.3s,baz=42,slow=12,SNR=2.7						
CTA				LR	LR	09 10 29.4	
	comp=Z,56nm,20.3s,baz=38,slow=35						
	2.0nm,0.7s						
WRA	Warramunga Arr	25.37	242	P	P	09 06 45.9	+1.2
	1.4nm,0.7s,baz=70,slow=9.8,SNR=16						
	1.4nm,0.7s						
GUMO	Guam	25.80	330	LR	LR	09 16 01.9	
	comp=Z,26nm,20.3s,baz=119,slow=35						
ASAR	Alice Springs	27.34	234	P	P	09 07 03.0	+0.5
	0.7nm,0.8s,baz=66,slow=9.6,SNR=9.3						
ASAR				LR	LR	09 16 27.9	
	comp=Z,34nm,20.5s,baz=64,slow=33						
	0.7nm,0.8s						
STKA	Stephens Creek	27.51	211	P	P	09 07 04.5	+0.6
	2.3nm,0.8s,baz=44,slow=13,SNR=5.9						
	2.3nm,0.8s						
DAV	Davao City (W)	35.94	295	LR	LR	09 23 15.2	
	comp=Z,22nm,18.3s,baz=94,slow=37						
PETK	Petropavlovsk-	61.70	360	P	P	09 11 33.9	-1.1
	2.7nm,1.0s,baz=185,slow=6.7,SNR=1.9						
	2.7nm,1.0s						
SONM	Songino Array	72.48	326	P	P	09 12 43.1	-0.7
	0.2nm,0.4s,baz=137,slow=4.7,SNR=1.6						
	0.2nm,0.4s						
ILAR	Eielson Array	84.02	21	P	P	09 13 47.1	+0.1
	0.2nm,0.6s,baz=260,slow=5.5,SNR=4.8						
	0.2nm,0.6s						
NVAR	Mina Array Bea	90.55	51	P	P	09 14 21.3	+1.7
	0.1nm,0.4s,baz=243,slow=4.5,SNR=2.0						
	0.1nm,0.4s						

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*ASRS **05** 09:05:08.0±1.2, 53°.67N×86°.86E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 05 09:05:09.7±2.9, 53°.63N×87°.09E, h0km, mbtmp2.6/2, ML2.4/2, Error ellipse: s-maj=28.3km s-min=17.1km az=70.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.39	284	I	I	09 15 30.0	
	baz=104,slow=325,SNR=5.0						
ZALV	Zalesovo Beam	1.39	284	Pg	Pg	09 05 34.3	-1.9
	1.3nm,0.3s,baz=104,slow=12,SNR=12						
ZALV				Lg	Lg	09 05 54.2	
	1.1nm,0.3s,baz=103,slow=30,SNR=5.8						
KURBB	Kurchatov Arra	6.08	244	Pn	Pn	09 06 41.2	+0.6
	0.1nm,0.3s,baz=58,slow=13,SNR=5.4						
	0.2nm,0.3s						
MKAR	Makanchi Array	7.51	206	Pn	Pn	09 07 02.1	+1.7
	0.1nm,0.3s,baz=24,slow=13,SNR=2.6						
	0.1nm,0.3s						

IDC 05 09:05:17.3±5.7, 19°.84N×147°.86E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=225.9km s-min=33.8km az=79.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	41.70	199	P	P	09 13 08.0	-0.1
	0.3nm,0.5s,baz=23,slow=9.0,SNR=5.7						
	0.3nm,0.5s						
ASAR	Alice Springs	45.33	198	P	P	09 13 36.9	-0.4
	0.2nm,0.7s,baz=14,slow=7.1,SNR=2.0						
	0.2nm,0.7s						
STKA	Stephens Creek	51.77	187	P	P	09 14 26.9	+0.1
	1.2nm,0.9s,baz=0.0,slow=12,SNR=1.6						
	1.2nm,0.9s						
KURBB	Kurchatov Arra	61.85	317	P	P	09 15 38.2	0.0
	0.1nm,0.3s,baz=76,slow=4.9,SNR=2.4						
	0.1nm,0.3s						

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*NEIC **05** 09:09:28.4±2.7, 20°.67S±0°.06×174°.55W±0°.07, h35km±1km, mb4.9/50, Error ellipse: s-maj=13.1km s-min=7.3km az=44.0*
*NOU **05** 09:09:30.8, 20°.81S×174°.10W, h82km, mb4.9/30, Tonga Islands*
*IDC **05** 09:09:35.6±2.8, 20°.83S×174°.95W, h91km±23km, mb4.2/13, mbtmp4.5/15, MS3.7/27, Error ellipse: s-maj=21.8km s-min=14.7km az=146.0*

ISC 05 09:09:29.7±0.3, 20°.78S±0°.06×174°.47W±0°.05, h50km, n232, σ1s.76/206, mb4.8/40, MS3.7/25, 19C-11D, Tonga Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NIUE	Niue	4.59	69	P	Pn	09 10 35.0	-1.7
NIUE	Niue	4.59	69	S	Sn	09 11 22.1	-6.7
NIUE	Niue	4.59	69		Pn	09 10 35.1	-1.7
NIUE				Sn	Sn	09 11 21.4	-7.4
NIUE	Niue	4.59	69	P	Pn	09 10 35.0	-1.7
NIUE				S	Sn	09 11 21.5	-7.3
LKBA	Tubou, Lakemba	4.82	301	P	Pn	09 10 44.1	+4.3
TAVE	Taveuni	6.55	307	P	Pn	09 11 09.1	+5.5
DGTI	Dogotuki	7.08	308	P	Pn	09 11 15.7	+4.9
MSVF	Nonsavu	7.69	292	P	Pn	09 11 25.0	+5.7
	126nm,0.7s,baz=124,slow=11,SNR=56						
MSVF				LR	LR	09 14 03.6	
	comp=Z,1μm,21.4s,baz=114,slow=37						
MSVF	Nonsavu	7.69	292	P	Pn	09 11 25.2	+5.9
RAO	Raoul Island	9.00	200	S	Sn	09 13 12.5	-4.5
	192nm,0.4s,baz=81,slow=22,SNR=1.5						
GLKZ	Green Lake	9.01	200	P	Pn	09 11 37.4	+0.2
GLKZ				S	Sn	09 13 11.2	-6.0
RAR	Rarotonga	13.73	94	P	Pn	09 12 42.0	+0.2
	41nm,1.0s,baz=282,slow=6.6,SNR=14						
RAR				S	Sn	09 14 59.3	-13
	11nm,0.5s,baz=69,slow=19,SNR=2.5						
RAR				LR	LR	09 16 41.8	
	comp=Z,379nm,20.9s,baz=266,slow=30						
RAR	Rarotonga	13.73	94	Pn	Pn	09 12 41.4	-0.4
RAR	Rarotonga	13.73	94	P	Pn	09 12 40.7	-1.1
RAR				S	Sn	09 14 56.0	-17
MARNC	Mare, Loyalty	16.35	264	Pn	Pn	09 13 14.4	-1.5
YATNC	Mamie plateau,	17.41	262	P	P	09 13 31.2	+1.3
OUENC	Ouen Island, N	17.46	261	P	P	09 13 32.5	+2.0
OUENC	Ouen Island, N	17.46	261	Pn	Pn	09 13 27.4	-2.4
OUZ	Omahuta	17.81	214	P	P	09 13 34.0	-0.2
ONTNC	Ouen Toro	17.82	262	P	P	09 13 36.8	+2.4
DZM	Mont Dzumac	17.82	262	P	P	09 13 33.9	-0.6
	23nm,0.7s,baz=70,slow=21,SNR=19						
DZM				LR	LR	09 19 02.4	
	comp=Z,488nm,21.6s,baz=48,slow=33						
HAZ	Te Kaha	18.20	200	P	P	09 13 38.4	-0.1
SANVU	Saraoutou	18.21	284	P	Pn	09 13 41.6	+2.6
SANVU	Saraoutou	18.21	284	P	P	09 13 35.8	-2.9
SANVU				IAmb	IAmb	09 13 46.3	
	comp=Z,119nm,1.2s						
PKGZ	Pakihiroa	18.21	199	P	P	09 13 38.2	-0.5
PUZ	Puketiti	18.35	199	P	Pn	09 13 42.2	+1.7
PUZ				S	Sn	09 16 46.3	-18
WIAZ	Waiheke Island	18.35	207	P	Pn	09 13 41.0	+0.4
RUGZ	Raukumara Rang	18.43	200	P	Pn	09 13 41.8	+0.2
TWGZ	Tauwhareparae	18.53	199	P	Pn	09 13 44.0	+1.2
MKAZ	Moumakai	18.61	207	P	Pn	09 13 45.2	+1.6
MWZ	Matawai	18.81	200	P	Pn	09 13 46.8	+0.5
URZ	Urewera	18.88	201	P	P	09 13 46.1	+0.2
	comp=Z,15nm,0.6s,baz=339,slow=1.6,SNR=18						
URZ				S	Sn	09 16 60.0	-18
	comp=Z,4.2nm,0.5s,baz=252,slow=3.6,SNR=1.3						
URZ	Urewera	18.88	201	P	P	09 13 45.8	-0.1
URZ	Urewera	18.88	201	P	P	09 13 44.7	-1.2
MUGZ	Murupara	19.19	201	P	P	09 13 47.6	-1.8
RTZ	Ruatahuna	19.25	201	P	P	09 13 49.3	-0.8
RTZ	Ruatahuna	19.25	201	P	P	09 13 48.8	-1.3
SNGZ	Shannon Statio	19.28	200	P	Pn	09 13 52.8	+1.0
RAHZ	Arahi	19.49	200	P	P	09 13 53.3	+0.7
NMHZ	Naumai	19.74	200	P	Pn	09 13 56.6	-0.7
BKZ	Black Stump Fm	19.91	201	P	P	09 13 55.8	-1.4
HIZ	Hauiti	19.93	205	P	P	09 13 57.5	0.0
HIZ				IAmb	IAmb	09 14 03.6	
	comp=Z,91nm,1.2s						
TMVZ	Te Maari	20.14	203	P	P	09 14 00.6	+0.8
KWHZ	Kaweka Forest	20.16	201	P	P	09 13 59.4	-0.6
OTVZ	Oturere	20.19	203	P	P	09 13 59.7	-0.8
SNVZ	South Ngauruho	20.22	203	P	P	09 13 59.9	-0.9
KAHZ	Kahuranaki	20.35	199	P	P	09 14 03.0	+1.0
PLWZ	Palliser	22.48	200	P	P	09 14 23.3	-1.6
TCW	Tory Channel	22.50	203	P	P	09 14 22.4	-2.6
QRZ	Quartz Range	22.84	206	P	P	09 14 29.3	+0.6
QRZ	Quartz Range	22.84	206	P	P	09 14 28.8	+0.2
THZ	Tophouse	23.49	204		P	09 14 32.7	-2.3
THZ				IAmb	IAmb	09 14 39.9	
	comp=Z,21nm,0.7s						
PPT	Papeete	23.72	87	P	P	09 14 40.1	+2.7
	comp=Z,52nm,1.0s,baz=336,slow=5.2,SNR=5.5						
PPT				LR	LR	09 21 17.4	
	comp=Z,200nm,20.8s,baz=286,slow=29						
KHZ	Kahutara	23.82	202	P	P	09 14 36.8	-1.2
OXZ	Oxford	25.16	204	P	P	09 14 49.5	-0.8
OXZ				IAmb	IAmb	09 14 55.9	
	comp=Z,30nm,0.6s						
RPZ	Rata Peaks	25.86	205	LR	LR	09 25 18.9	
	comp=Z,172nm,21.1s,baz=302,slow=37						
JCZ	Jackson Bay	27.09	207	P	P	09 15 08.2	+0.4
HNR	Honiara	27.11	291	LR	LR	09 24 15.5	
	comp=Z,6.5nm,20.2s,baz=223,slow=33						
TATA	Tatamba Isabel	27.73	293	P	P	09 15 16.7	+3.0
ARMA	Armidale	31.95	246	P	P	09 15 50.5	-0.6
EIDS	Eidsvold	31.97	255	P	P	09 15 50.5	-0.7
CTA	Charters Tower	36.75	264	LR	LR	09 30 46.9	
	comp=Z,132nm,18.1s,baz=50,slow=35						
CTA	Charters Tower	36.75	264	P	P	09 16 32.1	-0.6
CTAO	Charters Tower	36.75	264	P	P	09 16 32.1	-0.6
CTAO	Charters Tower	36.75	264		P	09 16 31.3	-1.4
CTAO				IAmb	IAmb	09 16 38.6	
	comp=Z,12nm,0.9s						
CTAO	Charters Tower	36.75	264	P	P	09 16 31.2	-1.4
CMSA	Cobar Meteorol	37.15	245	P	P	09 16 35.8	-0.1
QLP	Quilpie	38.14	253	P	P	09 16 43.9	-0.5
TOO	Toolangi	38.43	235	P	P	09 16 44.8	-1.9
TOO				IAmb	IAmb	09 18 08.3	
	comp=Z,33nm,1.8s						
PMG	Port Moresby	38.64	281	LR	LR	09 31 25.6	
	comp=Z,89nm,20.4s,baz=136,slow=34						
PMG	Port Moresby	38.64	281	P	P	09 16 50.5	+1.9
PMG	Port Moresby	38.64	281	P	P	09 16 50.1	+1.4
PMG	Port Moresby	38.64	281	P	P	09 16 50.0	+1.4
	comp=Z,29nm,0.9s						
MTSU	Mount Surprise	38.88	267	P	P	09 16 49.5	-1.2
STKA	Stephens Creek	40.66	245	P	P	09 17 03.2	-2.1
	comp=Z,4.1nm,0.6s,baz=83,slow=9.7,SNR=13						
STKA				LR	LR	09 32 55.8	
	comp=Z,129nm,18.6s,baz=31,slow=35						
	comp=Z,4.1nm,0.6s						
STKA	Stephens Creek	40.66	245	P	P	09 17 03.6	-1.6
STKA				IAmb	IAmb	09 17 19.1	
	comp=Z,16nm,0.8s						
COEN	Coen	40.90	273	P	P	09 17 07.5	0.0
COEN	Coen	40.90	273	P	P	09 17 06.2	-1.3
INKA	Innaminka	41.24	251	P	P	09 17 09.4	-0.7
AS31	Alice Springs	47.67	256		P	09 17 59.3	-2.3
ASAR	Alice Springs	47.67	256	P	P	09 17 59.5	-2.2
	comp=Z,8.7nm,0.8s,baz=89,slow=9.0,SNR=44						
ASAR				PcP	PcP	09 19 28.8	-1.8
	comp=Z,1.6nm,0.5s,baz=99,slow=4.2,SNR=6.1						
ASAR				ScP	ScP	09 23 14.0	-6.7
	comp=Z,0.5nm,1.0s,baz=96,slow=3.6,SNR=2.3						
ASAR				S	S	09 24 39.4	-15
	comp=Z,0.2nm,0.8s,baz=96,slow=17,SNR=2.1						
ASAR				LR	LR	09 37 40.7	
	comp=Z,61nm,18.3s,baz=108,slow=36						
	comp=Z,8.7nm,0.8s						
ASAR	Alice Springs	47.67	256		P	09 17 59.6	-2.0
WR8	Warramunga Arr	47.69	262	P	P	09 17 59.6	-2.1
WRAB	Tennant Creek	47.83	262	P	P	09 18 01.0	-1.8
WRAB	Tennant Creek	47.83	262	P	P	09 18 00.6	-2.2
WRAB				PcP	PcP	09 19 29.5	-1.6
WRA	Warramunga Arr	47.84	262	P	P	09 18 00.2	-2.7
	comp=Z,6.1nm,0.7s,baz=96,slow=5.2,SNR=64						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA				PcP	PcP	09 19 30.2	-0.9
	comp=Z,2.2nm,0.8s,baz=96,slow=3.2,SNR=3.6						
WRA				ScP	ScP	09 23 16.5	-5.0
	comp=Z,0.3nm,0.8s,baz=97,slow=4.0,SNR=1.4						
WRA				S	S	09 24 41.9	-15
	comp=Z,0.3nm,0.9s,baz=100,slow=15,SNR=1.7						
	comp=Z,6.1nm,0.7s						
WRA	Warramunga Arr	47.84	262	P	P	09 18 00.7	-2.2
FORT	Forrest	52.22	247		P	09 18 34.2	-1.8
FORT				IAmb	IAmb	09 18 38.6	
	comp=Z,8.9nm,0.8s						
GUMO	Guam	52.57	307	LR	LR	09 36 33.0	
	comp=Z,22nm,19.5s,baz=107,slow=31						
KNRA	Kununurra	53.94	265		P	09 18 47.2	-1.6
KNRA				IAmb	IAmb	09 18 50.0	
	comp=Z,10nm,0.7s						
DRV	Dumont d'Urvil	54.22	201	P	P	09 18 51.7	+1.7
SIJI	Sorong	56.52	283	LR	LR	09 43 31.4	
	comp=Z,60nm,19.4s,baz=85,slow=36						
VNDA	Vanda	57.95	186	LR	LR	09 42 48.8	
	comp=Z,31nm,18.9s,baz=343,slow=34						
VNDA	Vanda	57.95	186	P	P	09 19 17.9	+1.4
SOEI	Soe	59.81	271	P	P	09 19 31.2	+0.6
SOEI	Soe	59.81	271	P	P	09 19 29.4	-1.2
BATI	Baumata	60.24	270	LR	LR	09 46 26.9	
	comp=Z,86nm,18.2s,baz=148,slow=37						
PSA00	Pilbara Seismi	60.82	256	P	P	09 19 35.2	-2.1
PSA00				IAmb	IAmb	09 19 38.9	
	comp=Z,6.5nm,0.8s						
KLBR	Kellerberrin	60.93	245	P	P	09 19 37.1	-0.8
MBWA	Marble Bar	61.02	257	P	P	09 19 36.1	-2.5
MBWA				IAmb	IAmb	09 19 39.1	
	comp=Z,5.6nm,0.8s						
CCD	Concordia, Ant	63.03	195	P	P	09 19 54.9	+3.2
MNI	Manado	63.32	283	P	P	09 19 59.2	+5.1
CASY	Casey	65.13	206	P	P	09 20 06.2	+1.1
QSPA	South Pole Qui	69.29	180	P	P	09 20 34.6	+2.9
QSPA				IAmb	IAmb	09 20 50.5	
	comp=Z,19nm,1.4s						
QSPA	South Pole Qui	69.29	180	P	P	09 20 34.6	+2.9
MJAR	Matsushiro Arr	72.44	322	P	P	09 20 51.5	+0.5
	comp=Z,2.8nm,0.7s,baz=158,slow=6.4,SNR=5.7						
	comp=Z,2.8nm,0.7s						
MJAR	Matsushiro Arr	72.44	322	IAmb	IAmb	09 22 34.2	
	comp=Z,30nm,1.9s						
H06S1	SOCORRO T	73.56	62	T	T	10 41 38.4	
	SNR=4.1						
ASAJ	Asahikawa	75.60	330	LR	LR	09 47 15.4	
	comp=Z,86nm,21.7s,baz=172,slow=30						
BORC	Borrego Spring	77.16	47	P	P	09 21 16.9	-1.4
BORC				IAmb	IAmb	09 21 22.5	
	comp=Z,11nm,1.2s						
PFO	Pinyon Flats O	77.33	47		P	09 21 18.0	-1.4
PETK	Petropavlovsk-	77.44	343	P	P	09 21 20.3	+0.9
	comp=Z,4.7nm,0.8s,baz=118,slow=8.0,SNR=5.7						
PETK				LR	LR	09 52 20.5	
	comp=Z,23nm,19.5s,baz=167,slow=33						
	comp=Z,4.7nm,0.8s						
YBH	Yreka Blue Hor	78.48	37	LR	LR	09 47 07.3	
	comp=Z,6.3nm,20.5s,baz=244,slow=29						
GWY	Greenwater Val	78.69	44		P	09 21 25.8	-1.2
BELA	Belgrano 2	78.84	172	P	P	09 21 28.3	+1.3
NVAR	Mina Array Bea	78.99	42	P	P	09 21 31.2	+2.5
	comp=Z,3.8nm,0.8s,baz=223,slow=7.9,SNR=28						
	comp=Z,3.8nm,0.8s						
KDAK	Kodiak Island	80.37	12	LR	LR	09 52 50.5	
	comp=Z,39nm,19.3s,baz=180,slow=32						
CCUT	Cedar City	81.64	45		P	09 21 42.0	-1.0
KNB	Kanab	81.70	45		P	09 21 47.0	+3.7
ELK	Elko	82.27	41	P	P	09 21 44.7	-1.5
ELK				IAmb	IAmb	09 21 50.3	
	comp=Z,18nm,2.0s						
NJ2	Nanjing	82.63	308	eP	P	09 21 47.7	-0.2
NJ2				pmax	pmax		
	comp=Z,25nm,1.0s						
TCRU	Three Creeks R	82.83	44	P	P	09 21 47.3	-1.9
TCRU				IAmb	IAmb	09 21 54.2	
	comp=Z,8.2nm,0.5s						
H03S2	Juan Fernandez	83.09	123	T	T	10 53 58.6	
	baz=248,slow=75,SNR=323						
H03S1	Juan Fernandez	83.11	123	T	T	10 53 57.4	
	baz=248,slow=75,SNR=367						
H03S3	Juan Fernandez	83.11	123	T	T	10 53 56.9	
	baz=248,slow=75,SNR=571						
H03N2	Juan Fernandez	83.22	123	T	T	10 54 05.9	
	baz=249,slow=71,SNR=219						
H03N3	Juan Fernandez	83.22	123	T	T	10 53 58.6	
	baz=249,slow=71,SNR=204						
H03N1	Juan Fernandez	83.24	123	T	T	10 53 56.1	
	baz=249,slow=71,SNR=108						
D08A	Wollman Farm,	84.00	35	P	P	09 21 55.0	+0.4
D08A				IAmb	IAmb	09 21 58.6	
	comp=Z,10nm,1.1s						
GAMB	Gambell	84.30	1	P	P	09 21 55.3	-0.5
GAMB				IAmb	IAmb	09 21 59.1	
	comp=Z,9.3nm,1.2s						
HVU	Hansel Valley	84.39	41	P	P	09 21 57.0	0.0
HVU				IAmb	IAmb	09 22 00.3	
	comp=Z,6.4nm,0.9s						
TX31	Lajitas Ar. Si	84.44	56	P	P	09 21 57.1	-0.3
TX31				IAmb	IAmb	09 22 02.1	
	comp=Z,12nm,1.3s						
TXAR	Lajitas Array	84.44	56	P	P	09 22 00.7	+3.2
	comp=Z,2.8nm,0.9s,baz=210,slow=7.2,SNR=24						
TXAR				LR	LR	09 55 40.6	
	comp=Z,38nm,19.6s,baz=248,slow=33						
	comp=Z,2.8nm,0.9s						
CN2	Changchun	84.57	321	P	P	09 21 59.4	+1.8
CN2				pP	pP	09 22 09.8	-2.2
BNX	BinXian	84.59	323	⇓P	P	09 21 58.9	+1.2
BNX				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PV19	Morning Glory	84.97	46	P	P	09 21 59.0	-1.0
ANMO	Albuquerque	85.02	50	P	P	09 22 03.7	+3.3
PV03	Paradox Valley	85.03	46	P	P	09 22 00.3	0.0
PV03				IAmb	IAmb	09 22 05.2	
	comp=Z,30nm,1.9s						
J18K	Innoko River	85.11	8	IAmb	IAmb	09 22 03.0	
	comp=Z,14nm,1.2s						
NEW	Newport	85.70	34	LR	LR	09 53 02.7	
	comp=Z,67nm,18.6s,baz=222,slow=30						
RDMU	Red Mountain	85.76	44	P	P	09 22 03.6	-0.3
RDMU				IAmb	IAmb	09 22 16.9	
	comp=Z,17nm,1.8s						
CMIG	Matias Romero	86.63	70	LR	LR	09 51 13.6	
	comp=Z,44nm,21.2s,baz=190,slow=29						
PLCA	Paso Flores	86.66	132	P	P	09 22 11.2	+2.8
	comp=Z,2.7nm,0.8s,baz=246,slow=6.4,SNR=12						
PLCA				LR	LR	09 51 47.8	
	comp=Z,44nm,21.5s,baz=206,slow=29						
	comp=Z,2.7nm,0.8s						
PLCA	Paso Flores	86.66	132	P	P	09 22 11.2	+2.8
ELIB	Princess Elisa	86.71	185	dP	P	09 22 09.9	+1.8
	comp=Z,6.9nm,0.8s						
LOHW	Long Hollow	86.73	41	P	P	09 22 08.8	+0.1
LOHW				IAmb	IAmb	09 22 11.8	
	comp=Z,9.3nm,1.6s						
PDAR	Pinedale Array	86.93	42	P	P	09 22 11.8	+2.1
	comp=Z,2.0nm,1.0s,baz=204,slow=4.0,SNR=11						
	comp=Z,2.0nm,1.0s						
SNAA	Sanae	87.61	177	P	P	09 22 13.9	+1.5
	comp=Z,1.9nm,0.6s,baz=276,slow=4.3,SNR=3.6						
	comp=Z,1.9nm,0.6s						
SNAA	Sanae	87.61	177	IAmb	IAmb	09 22 15.8	
	comp=Z,13nm,1.4s						
ILAR	Eielson Array	87.89	11	P	P	09 22 14.3	+0.9
	comp=Z,1.4nm,0.8s,baz=214,slow=6.0,SNR=20						
ILAR				LR	LR	09 56 29.3	
	comp=Z,31nm,19.5s,baz=154,slow=32						
	comp=Z,1.4nm,0.8s						
ABTX	Abilene, Hawle	89.00	55	P	P	09 22 19.2	-0.3
ABTX				IAmb	IAmb	09 22 24.0	
	comp=Z,13nm,1.3s						
EDM	Edmonton	90.57	32	P	P	09 22 24.7	-1.6
HHC	Hu-ho-hao-te	91.94	313	eP	P	09 22 34.5	+1.4
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,160nm,4.5s						
OK052	Battle Ridge R	92.53	52	P	P	09 22 34.2	-1.6
NNA	Nana	92.79	104	LR	LR	09 53 45.5	
	comp=Z,26nm,19.6s,baz=244,slow=28						
ATAH	Atahualpa	93.14	99	LR	LR	09 54 39.4	
	comp=Z,43nm,20.5s,baz=240,slow=29						
JTS	Las Juntas de	93.14	80	LR	LR	09 54 12.4	
	comp=Z,19nm,20.2s,baz=255,slow=29						
CMAR	Chiang Mai Arr	93.33	288	P	P	09 22 37.7	-2.2
	comp=Z,1.4nm,0.3s,baz=106,slow=6.6,SNR=1.1						
	comp=Z,1.4nm,0.3s						
PZH	PanZhiHua	93.78	297	P	P	09 22 43.2	+1.3
YKA	Yellowknife Ar	95.41	24	P	P	09 22 50.5	+2.2
	comp=Z,1.5nm,0.8s,baz=247,slow=4.6,SNR=24						
	comp=Z,1.5nm,0.8s						
ULM	Lac du Bonnet	98.72	40	LR	LR	09 59 45.2	
	comp=Z,78nm,20.9s,baz=194,slow=30						
LPAZ	La Paz	98.89	111	LR	LR	09 58 01.3	
	comp=Z,64nm,21.9s,baz=237,slow=29						
ZALV	Zalesovo Beam	112.79	321	PKiKP	PKiKP	09 28 00.8	+0.2
	comp=Z,0.5nm,0.3s,baz=90,slow=2.0,SNR=1.5						
MKAR	Makanchi Array	113.80	313	PKiKP	PKiKP	09 28 02.2	-0.7
	comp=Z,0.5nm,0.6s,baz=97,slow=2.3,SNR=4.1						
KURK	Kurchatov	116.44	317		PKiKP	09 28 07.8	+0.1
KURBB	Kurchatov Arra	116.50	317	PKP	PKiKP	09 28 07.8	-0.1
	comp=Z,1.1nm,0.8s,baz=76,slow=1.6,SNR=6.9						
BVAR	Borovoye Array	121.42	320	PKP	PKiKP	09 28 18.1	+0.6
	comp=Z,1.3nm,0.5s,baz=74,slow=2.2,SNR=5.7						
ARTI	Arti	127.40	326	PKP	PKiKP	09 28 29.4	+0.2
	comp=Z,2.1nm,0.6s,baz=332,slow=1.8,SNR=3.9						
AKTO	Aktyubinsk	129.46	319	PKP	PKiKP	09 28 34.0	+0.5
	comp=Z,0.8nm,0.5s,baz=61,slow=1.1,SNR=2.1						
ARCES	ARCESS Array B	129.75	351	PKP	PKPdf	09 28 32.1	-0.7
	comp=Z,4.0nm,0.9s,baz=33,slow=2.5,SNR=5.0						
BELG	Belogornoye	134.77	325	PKhKP	PKPpre	09 28 38.5	
	comp=Z,14nm,0.7s,baz=331,slow=3.5,SNR=4.4						
FINES	FINESS Array B	136.91	346	PKP	PKPdf	09 28 45.1	-1.4
	comp=Z,1.0nm,0.7s,baz=20,slow=2.0,SNR=4.9						
HFS	Hagfors	140.26	354	PKP	PKPdf	09 28 51.2	-1.4
	comp=Z,0.4nm,0.4s,baz=18,slow=3.6,SNR=1.2						
AKASG	Malin Array Be	144.79	334	PKP	PKPdf	09 29 00.4	-0.5
	comp=Z,4.3nm,0.6s,baz=42,slow=4.4,SNR=17						
AKBB	Malin Array Si	144.79	334		PKPdf	09 29 00.3	-0.7
KIEV	Kiev	144.81	334	⇓P	PKPab	09 28 48.7	-11
KIEV	Kiev	144.81	334		PKPbc	09 28 59.9	-0.1
EKA	Eskdalemuir Ar	144.88	9	PKP	PKPdf	09 29 01.0	0.0
	comp=Z,4.3nm,0.8s,baz=335,slow=3.7,SNR=11						
MARD	Mardin	145.30	306		PKPdf	09 29 03.9	+1.4
RNPP9	Sopachiv	145.53	337	PKP	PKPab	09 29 02.3	-0.3
RNPP8	Varash	145.60	337	PKP	PKPab	09 29 02.8	-0.1
RNPP5	Staryi Chortor	145.68	337	PKP	PKPab	09 29 03.4	+0.2
LODK	Lodwar	146.23	243		PKPab	09 29 07.1	+0.6
BNN	Bunyan	148.33	311		PKiKP	09 29 12.5	0.0
BURAR	Bucovina Array	148.85	334	⇑P	PKPab	09 29 14.7	-1.2
BURAR	Bucovina Array	148.85	334		PKiKP	09 29 13.7	+0.4
CLL	Collm	148.97	351	ePKPdf	PKPdf	09 29 09.0	+1.1
CLL				ePKPbc	PKPbc	09 29 12.0	0.0
	comp=Z,8.0nm,0.9s						
CLL				i PKPab	PKPab	09 29 16.0	-0.1
	comp=Z,13nm,1.4s						
TLCR		149.01	327	⇓P	PKPdf	09 29 02.9	-5.2
OSTC	Ostas	149.11	347	⇑ePKP	PKPab	09 29 15.1	-1.6
DPC	Dobruska-Polom	149.28	346	⇑ePKP	PKiKP	09 29 15.2	+1.2
STEB	Steborice	149.33	344	⇑ePKP	PKiKP	09 29 14.6	+0.5
STEB				ex	x	09 29 32.0	
ONER	Baraj Valea Uz	149.33	331	⇓P	PKPdf	09 29 08.9	+0.2
CFR	Carcaliu	149.35	328	⇓P	PKPdf	09 29 03.4	-5.3
TPGR	Topolog	149.44	327	⇑P	PKPdf	09 29 08.7	-0.2
BRTR	Keskin Array B	149.44	314	PKPbc	PKPbc	09 29 13.8	+0.1
	comp=Z,2.2nm,0.6s,baz=82,slow=2.0,SNR=12						
BRTR	Keskin Array B	149.44	314	PKPdf	PKPdf	09 29 09.3	0.0
VRI	Vrincioaia	149.53	330	⇑P	PKPdf	09 29 09.1	+0.1
KIRS	Kirsehir-Merke	149.54	313	⇓P	PKiKP	09 29 14.7	-0.3
LANS	Liptovska Anna	149.58	342	ePKP	PKPab	09 29 16.7	-2.0
PLOR	Plostina	149.58	330	⇑P	PKPdf	09 29 09.5	+0.3
TURR	Turia	149.72	331	⇓P	PKPbc	09 29 14.1	0.0
PRU	Pruhonice	149.99	348	⇑ePKP	PKiKP	09 29 17.0	+1.6
MLR	Muntele Rosu	150.18	330	PKPbc	PKiKP	09 29 15.9	-0.3
	comp=Z,5.9nm,0.9s,baz=105,slow=2.9,SNR=5.8						
MLR	Muntele Rosu	150.18	330	⇑P	PKPbc	09 29 15.4	+0.1
MEM	Membach	150.23	359	dPKP	PKPbc	09 29 12.5	-2.6
MARR	Marisel-Cluj	150.46	335	⇑P	PKiKP	09 29 18.1	+1.4
DRGR		150.52	336	⇑P	PKPbc	09 29 15.9	-0.1
BMRD	Maredsous	150.53	1	dPKP	PKiKP	09 29 17.3	+0.8
ZVC	Zvikov	150.58	348	⇑ePKP	PKiKP	09 29 17.9	+1.2
VOIR		150.63	331	⇑P	PKiKP	09 29 16.9	-0.1
DOU	Dourbes	150.74	1	dPKP	PKiKP	09 29 17.9	+1.0
MMAI	Mount Meron Ar	150.81	301	PKPbc	PKiKP	09 29 17.9	+0.1
	comp=Z,3.3nm,0.6s,baz=114,slow=2.8,SNR=6.1						
ARR	Arges	150.87	332	⇑P	PKiKP	09 29 18.5	+1.0
MODS	Modra-Piesok	150.89	344	ePKP	PKiKP	09 29 18.9	+1.5
KHC	Kasperske Hory	150.99	349	⇑ePKP	PKiKP	09 29 19.1	+1.5
KHC				epPKP	pPKPbc	09 29 32.9	+1.1
CKRC	Cesky Krumlov	151.15	348	⇑ePKP	PKiKP	09 29 19.5	+1.6
CKRC				ex	x	09 29 32.7	
GERES	GERESS Array B	151.24	349	PKPbc	PKiKP	09 29 18.2	0.0
	comp=Z,0.8nm,0.6s,baz=11,slow=1.4,SNR=8.6						
GZR	Gura Zlata	151.64	334	⇑P	PKiKP	09 29 20.3	+1.2
CONA	Conrad Observa	151.66	345	i PKiKP	PKiKP	09 29 20.5	+1.5
	comp=Z,6.8nm,1.4s						
RONA	Rosalia, Austr	151.77	345	i PKiKP	PKiKP	09 29 20.3	+1.1
	comp=Z,3.7nm,0.6s						
BZS	Buzias	151.92	336	⇑P	PKiKP	09 29 20.8	+1.2
MORH	Mrgy, Hungar	152.45	340	⇑P	PKPbc	09 29 18.5	-1.9
LESA	Schwarzleotal	152.79	349	ePKiKP	PKiKP	09 29 22.5	+1.1
	comp=Z,2.2nm,0.7s						
SOKA	Soboth	153.03	345	epPKP	PKiKP	09 29 23.3	+1.4
	comp=Z,1.5nm,0.5s						
WTTA	Wattenberg	153.12	351	i pPKP	PKiKP	09 29 23.4	+1.2
	comp=Z,5.6nm,0.6s						
OBKA	Obir	153.30	346	ePKP	PKPbc	09 29 21.7	-0.7
	comp=Z,6.3nm,1.6s						
DAVA	Damuels	153.32	353	ePKiKP	PKiKP	09 29 23.3	+0.7
	comp=Z,4.9nm,0.8s						
MYKA	Terra Mystica	153.38	347	ePKP	PKPbc	09 29 21.9	-0.7
	comp=Z,2.5nm,0.8s						
ABTA	Abfaltersbach	153.48	349	ePKiKP	PKiKP	09 29 23.4	+0.6
	comp=Z,5.7nm,0.8s						
FETA	Feichten	153.48	352	ePKiKP	PKiKP	09 29 23.0	0.0
	comp=Z,6.4nm,1.6s						
DAVOX	Davos/Dischmat	153.82	353	PKPbc	PKiKP	09 29 25.1	+1.4
	comp=Z,2.5nm,0.5s,baz=53,slow=0.7,SNR=5.7						
DAVOX				PKPab	pPKPbc	09 29 38.1	-0.3
	comp=Z,1.8nm,0.6s,baz=18,slow=4.2,SNR=3.2						
TORD	Torodi Ar. Bea	171.57	154	PKP	PKPdf	09 29 32.6	-1.0
	comp=Z,0.8nm,0.8s,baz=254,slow=3.3,SNR=4.5						
TORD				PKPab	PKPab	09 30 56.9	+2.1
	comp=Z,1.4nm,0.9s,baz=210,slow=5.0,SNR=5.3						

*HEL **05** 09:19:34.7±0.3, 61.°15N×29.°86E, h0km, ML2.0, Suspected explosion*

*IDC **05** 09:19:37.4±2.2, 61.°35N×29.°53E, h0km, mbtmp3.2/3, ML2.5/3, Error ellipse: s-maj=19.7km s-min=10.5km az=150.0*

ISC 05 09:19:33.1±1.1**, 61.°24N**±0.°04×**29.°77E**±0.°05**, h0km, n22, σ1.°89**/38**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RUF	Ruokolahti	0.44	296	PG	Pb	09 19 44.4	+0.7
RUF				SG	Sb	09 19 50.4	-0.4
RUF				smax	smax	09 19 51.3	
	comp=Z,28nm,0.2s						
VJF	Virojoki	1.29	238	PG	Pg	09 19 57.1	-0.6
	baz=60						
VJF				smax	smax	09 20 13.6	
	comp=Z,11nm,0.2s						
VJF				SN	Sn	09 20 18.4	+2.2
FIA0	FINESS Array S	1.79	278	PG	Pg	09 20 07.3	-0.1
	baz=96						
FIA0				smax	smax	09 20 29.6	
	comp=Z,10nm,0.2s						
FIA0				SG	Sg	09 20 31.3	+0.8
FINES	FINESS Array B	1.79	278	Pg	Pg	09 20 07.7	+0.3
	comp=Z,2.5nm,0.3s,baz=93,slow=18,SNR=78						
FINES				Lg	Lg	09 20 30.0	
	comp=Z,6.5nm,0.3s,baz=90,slow=30,SNR=26						
JOF	Joensuu	1.84	23	PG	Pg	09 20 08.6	+0.3
	baz=200						
JOF				SN	Sg	09 20 32.7	+0.6
PVF	Pernaja	2.03	252	PB	Pb	09 20 10.2	-0.6
	baz=72						
PVF				smax	smax	09 20 35.6	
	comp=Z,24nm,0.2s						
PVF				SG	Sg	09 20 39.3	+1.0
SUF	Sumiainen	2.27	313	PG	Pg	09 20 16.8	+0.3
	baz=129						
SUF				smax	smax	09 20 44.4	
	comp=Z,4.8nm,0.2s						
SUF				SG	Sg	09 20 47.7	+1.9
NIF	Nilsia	2.35	338	PG	Pb	09 20 17.6	+1.3
	baz=155						
NIF				smax	smax	09 20 46.7	
	comp=Z,7.8nm,0.2s						
NIF				SG	Sg	09 20 49.0	+0.6
KEF	Keuruu	2.51	294	PB	Pb	09 20 19.0	0.0
KEF				smax	smax	09 20 51.1	
	comp=Z,5.4nm,0.2s						
KEF				SG	Sb	09 20 51.8	+1.3
ARBE	Arbavere	2.61	228	PB	Pb	09 20 19.9	-0.7
NUR	Nurmijarvi	2.61	256	PB	Pb	09 20 20.9	+0.3
NUR				smax	smax	09 20 52.2	
	comp=Z,3.7nm,0.2s						
NUR				SG	Sg	09 20 55.8	-1.0
HEL1	Helsinki	2.62	248	smax	smax	09 20 52.4	
	comp=Z,18nm,0.2s						
HEL1				SG	Sg	09 20 56.5	-0.8
MEF	Metsahovi	2.83	251	PB	Pb	09 20 24.2	-0.2
MEF				smax	smax	09 20 58.4	
	comp=Z,5.2nm,0.2s						
MEF				SG	Sg	09 21 01.9	-1.9
RMF	Romuvaara	3.00	1	PB	Pb	09 20 27.2	0.0
RMF				smax	smax	09 21 05.1	
	comp=Z,3.1nm,0.2s						
RMF				SG	Sb	09 21 05.9	+1.5
VAF	Ylistaro	3.79	302	PN	Pb	09 20 37.4	-3.4
	baz=119						
VAF				SG	Sg	09 21 35.0	+0.2
RAF	Rauma	3.89	270	PN	Pn	09 20 36.1	+2.1
	baz=89						
RAF				SN	Sn	09 21 22.8	+2.5
OUF	Merijarvi	3.90	326	SG	Sb	09 21 33.8	+3.5
OUL	Oulu	4.25	337	SG	Sg	09 21 46.5	-2.8
MSF	Maaselka	4.71	356	PN	Pn	09 20 48.4	+3.1
MSF				SG	Sg	09 22 00.6	-3.5
HFS	Hagfors	7.97	269	Pn	Pn	09 21 31.2	+1.3
	comp=Z,0.2nm,0.3s,baz=76,slow=13,SNR=4.3						
HFS				Sn	Sn	09 22 56.2	-4.4
	comp=Z,0.3nm,0.3s,baz=71,slow=24,SNR=5.0						
HFS				Lg	Lg	09 23 40.0	
	comp=Z,0.4nm,0.3s,baz=68,slow=31,SNR=4.1						
	comp=Z,1.2nm,0.5s						
ARCES	ARCESS Array B	8.52	350	Pn	Pn	09 21 37.0	-0.5
	comp=Z,0.1nm,0.3s,baz=168,slow=14,SNR=1.6						
ARCES				Sn	Sn	09 23 10.5	-3.8
	comp=Z,0.1nm,0.3s,baz=168,slow=23,SNR=1.3						
ARCES				Lg	Lg	09 23 50.1	
	comp=Z,0.3nm,0.3s,baz=168,slow=32,SNR=5.9						
	comp=Z,1.1nm,0.7s						
NOA	NORSAR Array B	8.97	277	Pn	Pn	09 21 43.3	-0.5
	baz=79,slow=14,SNR=4.3						
NOA				Lg	Lg	09 24 09.4	
	baz=79,slow=19,SNR=3.3						
	comp=Z,0.4nm,0.6s						

IDC 05 09:23:28.0±3.2**, 14.°55S×66.°58E, h0km, mb3.6**/4**, mbtmp3.6**/4**, MS3.5**/10**, Error ellipse: s-maj=126.9km s-min=32.4km az=51.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	8.97	41	T	T	09 35 06.9	
	baz=221,slow=75,SNR=103						
H08S2	Diego Garcia H	8.99	41	T	T	09 35 07.9	
	baz=221,slow=75,SNR=369						
H08S3	Diego Garcia H	8.99	41	T	T	09 35 08.4	
	baz=221,slow=75,SNR=98						
PALK	Pallekele	25.81	34	LR	LR	09 37 17.0	
	comp=Z,110nm,19.0s,baz=218,slow=32						
H04N2	CROZET ISLANDS	33.88	199	T	T	10 05 45.6	
	baz=27,slow=75,SNR=38						
H04N1	CROZET ISLANDS	33.88	199	T	T	10 05 46.6	
	baz=27,slow=75,SNR=27						
H04N3	CROZET ISLANDS	33.89	199	T	T	10 05 45.3	
	baz=27,slow=75,SNR=46						
LSZ	Lusaka	37.08	264	LR	LR	09 44 03.0	
	comp=Z,117nm,20.2s,baz=136,slow=33						
MBAR	Mbarara	38.05	288	LR	LR	09 44 28.1	
	comp=Z,57nm,19.2s,baz=106,slow=33						
LBTB	Lobatse	39.81	248	LR	LR	09 45 17.6	
	comp=Z,46nm,18.4s,baz=93,slow=33						
BOSA	Boshof	40.68	243	LR	LR	09 44 31.7	
	comp=Z,57nm,18.1s,baz=30,slow=31						
BRDH	Bariadhala	44.40	34	LR	LR	09 48 39.9	
	comp=Z,68nm,19.7s,baz=182,slow=34						
SUR	Sutherland	45.20	239	LR	LR	09 47 41.0	
	comp=Z,30nm,18.2s,baz=110,slow=32						
CMAR	Chiang Mai Arr	45.75	45	LR	LR	09 50 06.2	
	comp=Z,24nm,18.3s,baz=225,slow=35						
TSUM	Tsumeb	47.00	257	LR	LR	09 50 40.8	
	comp=Z,69nm,18.3s,baz=154,slow=35						
MKAR	Makanchi Array	62.67	12	P	P	09 33 54.3	-0.1
	0.2nm,0.6s,baz=202,slow=7.2,SNR=2.2						
	0.2nm,0.6s						
ASAR	Alice Springs	63.77	109	P	P	09 34 02.6	+0.3
	0.5nm,0.7s,baz=271,slow=6.2,SNR=5.5						
	0.5nm,0.7s						
WRA	Warramunga Arr	64.57	105	P	P	09 34 07.3	-0.3
	1.0nm,1.0s,baz=266,slow=5.7,SNR=4.7						
	1.0nm,1.0s						
AKTO	Aktyubinsk	65.14	354	P	P	09 34 10.8	+0.2
	1.1nm,0.9s,baz=165,slow=8.7,SNR=2.3						
	1.1nm,0.9s						
KURBB	Kurchatov Arra	65.73	8	LR	LR	10 00 50.9	
	comp=Z,35nm,20.3s,baz=170,slow=34						
PDAR	Pinedale Array	151.69	354	PKPbc	PKPbc	09 43 24.7	-0.3
	0.5nm,0.8s,baz=72,slow=3.7,SNR=4.8						

*NEIC **05** 09:32:34.8±2.6, 34.°94N±0.°06×28.°14E±0.°05, h10km±1km, mb4.4/27, Error ellipse: s-maj=11.0km s-min=7.0km az=185.0*

*HLW **05** 09:32:38.5, 34.°95N×28.°14E, h66km±7km, Ml4.4*

*ISK **05** 09:32:38.4, 35.°05N×28.°03E, h23km, ML3.8/31*

*ATH **05** 09:32:39.1, 34.°97N×28.°08E, h30km±3km, ML3.9/11, Latitude uncertainty: 4 km; Longitude uncertainty: 1 km*

*IDC **05** 09:32:39.7±1.4, 35.°03N×28.°03E, h47km±14km, mb3.8/14, mbtmp3.9/24, ML3.7/9, MS3.1/7, Error ellipse: s-maj=19.3km s-min=10.9km az=178.0*

*NIC **05** 09:32:40.0, 35.°13N×28.°19E, h41km±14km, Ml3.7/14*

*GII **05** 09:32:40.3±0.0, 34.°866N±0.°001×28.°255E±0.°001, h0km, Mws3.9, confirmed*

*AFAD **05** 09:32:40.4, 35.°27N×28.°16E, h16km±1km, MW3.9*

*THE **05** 09:32:42.2, 35°N±9°×2°8E±°, h60km±15km, M3.6/12, MLh3.6/12*

*NAO **05** 09:33:13.1, 39.°70N×29.°79E, h33km, MB3.5*

ISC 05 09:32:37.5±1.3**, 34.°95N**±0.°03×**28.°10E**±0.°03**, h29**km±10km**, n217, σ1.°67**/271**, mb4.2**/26**, MS3.0**/4**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.98	308		Pn	09 32 56.5	+1.2
KARP	Karpathos	0.98	308	P	Pn	09 32 56.6	+1.2
KARP				S	Sn	09 33 07.5	-0.7
KARP	Karpathos	0.98	308	Pg	Pn	09 32 55.9	+0.6
KARP				Sg	Sn	09 33 08.3	+0.1
KARP	Karpathos	0.98	308	P	Pn	09 32 56.5	+1.2
KARP				S	Sb	09 33 10.0	+1.6
KARP				AML	AML	09 33 14.2	
	14nm,0.7s						
KARP				AML	AML	09 33 18.6	
	8.4nm,0.9s						
KARP	Karpathos	0.98	308	P	Pn	09 32 56.5	+1.2
KARP				S	Sn	09 33 09.8	+1.7
ARG	Arkhangelos	1.27	1	Pn	Pb	09 33 01.3	+0.6
ARG	Arkhangelos	1.27	1	P	Pn	09 33 01.0	+1.7
ARG				S	Sn	09 33 16.0	+0.7
ARG	Arkhangelos	1.27	1	Pn	Pn	09 32 59.9	+0.7
ARG				Sn	Sn	09 33 15.2	-0.1
ARG	Arkhangelos	1.27	1	P	Pn	09 32 59.2	-0.1
ARG				AML	AML	09 33 35.4	
	4.1nm,0.6s						
ARG				AML	AML	09 33 39.1	
	4.8nm,0.7s						
ARG	Arkhangelos	1.27	1	P	Pn	09 33 00.7	+1.4
ZKR	Zakros	1.56	277	P	Pn	09 33 04.7	+1.5
ZKR	Zakros	1.56	277	Pn	Pn	09 33 04.3	+1.1
ZKR				Sn	Sn	09 33 23.4	+1.0
ZKR	Zakros	1.56	277	P	Pn	09 33 04.6	+1.4
ZKR				S	Sn	09 33 25.3	+2.9
ZKR				AML	AML	09 33 40.5	
	2.9nm,0.6s						
ZKR				AML	AML	09 33 56.9	
	1.2nm,0.7s						
ZKR	Zakros	1.56	277	P	Pn	09 33 04.5	+1.4

SIT2	Siteia	1.66	280	P	Pn	09 33 06.5	+2.0
IZZE	Mula-Seydike	1.75	31	P	Pn	09 33 08.0	+2.2
IZZE				S	Sn	09 33 28.1	+1.0
AKAS	Kas	1.78	43		Pn	09 33 08.3	+2.0
AKAS	Kas	1.78	43	Pn	Pn	09 33 08.2	+1.9
AKAS	Kas	1.78	43	P	Pn	09 33 08.5	+2.2
AKAS				S	Sn	09 33 29.4	+1.3
DAT	Datca	1.83	347	Pn	Pn	09 33 07.7	+0.6
TURN	Turunc	1.83	4	Pn	Pn	09 33 07.9	+1.0
TURN	Turunc	1.83	4	P	Pn	09 33 08.9	+1.9
TURN				S	Sn	09 33 29.8	+0.6
DATC	Datca-Mugla	1.84	349	Pn	Pn	09 33 07.9	+0.7
DALY	Dalyan (Mula)	1.92	13	Pn	Pn	09 33 09.4	+1.2
SABU	Mula-Dalaman	2.00	20	P	Pn	09 33 10.7	+1.3
SABU				S	Sn	09 33 32.7	-0.8
NPS	Neapolis	2.06	280	P	Pn	09 33 12.4	+2.2
NPS				S	Sn	09 33 35.4	+0.4
NPS	Neapolis	2.06	280	P	Pn	09 33 12.2	+2.0
YER	Yerkesik	2.19	4	P	Pn	09 33 14.0	+2.0
YER	Yerkesik	2.19	4	Pn	Pn	09 33 13.1	+1.1
BODT	Bodrum	2.21	343	P	Pn	09 33 13.5	+1.3
BODT	Bodrum	2.21	343	Pn	Pn	09 33 13.1	+0.9
CAME	Cameli-Denizli	2.22	26	Pn	Pn	09 33 13.9	+1.4
KNIK	Mula-Seydike	2.24	32	P	Pn	09 33 14.4	+1.6
KNIK				S	Sn	09 33 41.7	+2.2
AKUM	Antalya-Kumluc	2.29	52	P	Pn	09 33 15.3	+2.1
AKUM				S	Sn	09 33 41.8	+1.4
ELL	Elmali	2.32	39		Pn	09 33 16.6	+2.7
ELL	Elmali	2.32	39	Pn	Pn	09 33 15.8	+1.9
ELL	Elmali	2.32	39	P	Pb	09 33 17.5	-1.2
ELL				S	Sb	09 33 44.8	-2.2
MLSB	Milas	2.36	354	Pn	Pn	09 33 15.4	+1.1
CAEL	Denizli, Camel	2.39	24	P	Pn	09 33 17.5	+2.8
CAEL				S	Sn	09 33 45.7	+2.6
IACM	Heraklion	2.51	279	P	Pn	09 33 18.5	+2.2
THERA	Ancient Thera,	2.57	304	P	Pn	09 33 18.0	+0.9
THERA	Ancient Thera,	2.57	304	P	Pn	09 33 17.6	+0.5
GOLH	Golhisar	2.57	27	P	Pn	09 33 20.5	+3.2
GOLH				S	Sn	09 33 50.1	+2.4
TAVA	DENIZLI_Tavas	2.60	14	P	Pn	09 33 19.8	+2.1
TAVA				S	Sn	09 33 48.3	0.0
SNT5	Nea Kammeni, S	2.64	304	P	Pn	09 33 18.8	+0.8
IDI	Anoyia	2.65	278	P	Pn	09 33 20.3	+2.0
	95nm,0.5s,baz=113,slow=3.1,SNR=118						
IDI				S	Sn	09 33 50.1	+0.5
	76nm,0.3s,baz=18,slow=23,SNR=6.2						
IDI	Anoyia	2.65	278		Pn	09 33 20.1	+1.7
IDI	Anoyia	2.65	278	P	Pn	09 33 20.2	+1.8
IDI	Anoyia	2.65	278	Pn	Pn	09 33 19.9	+1.5
IDI	Anoyia	2.65	278	P	Pn	09 33 19.9	+1.5
APMY	Acipayam-Deniz	2.70	21	Pn	Pn	09 33 20.8	+1.8
KORT	Korkueli	2.75	41	Pn	Pn	09 33 21.9	+2.2
KORT	Korkueli	2.75	41	P	Pn	09 33 23.0	+3.4
KORT				S	Sb	09 33 56.0	-3.2
GCAM	G?zelcaml?	2.84	346	Pn	Pn	09 33 21.7	+0.9
ANTB	Antalya	2.84	46	Pn	Pn	09 33 23.6	+2.7
SMG	Samos	2.94	340	P	Pn	09 33 22.9	+0.6
SMG	Samos	2.94	340	P	Pn	09 33 22.7	+0.5
OSC1	CSNet OBS 1	3.00	118	P	Pn	09 33 26.0	+2.9
OSC1				S	Sn	09 34 02.0	+3.9
OSC1				AML	AML	09 34 06.2	
	0.4nm,0.3s						
OSC1				AML	AML	09 34 08.0	
	0.4nm,0.3s						
NAZL	Nazilli-Aydin	3.02	3	Pn	Pn	09 33 24.8	+1.5
BUCA	Burdur, Bucak-	3.10	39	P	Pn	09 33 28.7	+4.2
BUCA				S	Sn	09 34 02.6	+2.0
BCK	Bucak	3.22	38	Pn	Pn	09 33 28.6	+2.5
VAM	Vamos	3.23	279	P	Pn	09 33 27.2	+1.0
GVD	Gavdhos	3.30	269	P	Pn	09 33 28.7	+1.5
GVD	Gavdhos	3.30	269	Pn	Pn	09 33 28.7	+1.5
GVD	Gavdhos	3.30	269	P	Pn	09 33 28.6	+1.5
ODEM	Odemis-Izmir	3.32	360	Pn	Pn	09 33 29.1	+1.5
CHAN	Chania	3.37	281	P	Pn	09 33 29.9	+1.8
IMMV	Iera Moni Meta	3.41	280	P	Pn	09 33 30.1	+1.4
IMMV	Iera Moni Meta	3.41	280	Pn	Pn	09 33 30.7	+2.0
IMMV	Iera Moni Meta	3.41	280	P	Pn	09 33 30.2	+1.4
ISP	Isparta	3.47	34	Pn	Pn	09 33 31.9	+2.3
ISP	Isparta	3.47	34	P	Pn	09 33 32.2	+2.5
ISP				S	Sn	09 34 12.6	+2.7
AKMS	Akamas	3.48	88	P	Pn	09 33 31.0	+1.4
AKMS				S	Sn	09 34 10.7	+0.9
AKMS				AML	AML	09 34 15.9	
	0.9nm,0.3s						
AKMS				AML	AML	09 34 16.9	
	0.6nm,0.4s						
AKMS	Akamas	3.48	88	P	Pn	09 33 31.5	+1.8
BLCB	Balcova	3.54	346	Pn	Pn	09 33 31.7	+1.3
MANT	Manisa	3.56	6		Pn	09 33 31.9	+1.0
ALAN	Alanya-ANTALYA	3.58	62	Pn	Pn	09 33 34.3	+3.3
KULA	Kula-Manisa	3.59	7	Pn	Pn	09 33 32.3	+1.1
GAZI	Gazipasa	3.67	68	Pn	Pn	09 33 35.8	+3.5
NATA	Nata	3.68	91	P	Pn	09 33 34.6	+2.2
NATA				S	Sn	09 34 16.9	+2.1
NATA				AML	AML	09 34 21.6	
	1.9nm,0.3s						
NATA				AML	AML	09 34 24.7	
	1.4nm,0.4s						
NATA	Nata	3.68	91	P	Pn	09 33 34.8	+2.4
KNDR	Palaiochora Ch	3.68	276	Pn	Pn	09 33 34.7	+2.3
KNDR	Palaiochora Ch	3.68	276	P	Pn	09 33 33.1	+0.7
ALFC	Alefka	3.70	85	P	Pn	09 33 34.1	+1.4
ALFC				S	Sn	09 34 16.7	+1.5
ALFC				AML	AML	09 34 17.9	
	1.0nm,0.2s						
ALFC				AML	AML	09 34 18.2	
	0.7nm,0.3s						
ALFC	Alefka	3.70	85	P	Pn	09 33 33.9	+1.2
SEYD	Seydisehir-KON	3.89	50	Pn	Pn	09 33 38.5	+3.0
TROD	Troodos	3.91	89	P	Pn	09 33 37.5	+1.7
TROD				S	Sn	09 34 22.2	+1.3
TROD				AML	AML	09 34 30.2	
	0.6nm,0.3s						
TROD				AML	AML	09 34 32.8	
	0.3nm,0.8s						
APOL	The Sanctuary	3.93	93	P	Pn	09 33 37.8	+2.0
APOL				S	Sn	09 34 22.0	+1.0
APOL				AML	AML	09 34 25.6	
	0.8nm,0.3s						
APOL				AML	AML	09 34 28.5	
	0.6nm,0.4s						
OSC2	CSNet OBS 4	3.93	117	P	Pn	09 33 38.5	+2.7
OSC2				S	Sn	09 34 25.3	+4.3
OSC2				AML	AML	09 34 35.7	
	0.7nm,0.5s						
OSC2				AML	AML	09 34 42.8	
	0.4nm,0.5s						
GORD	Gordes-Manisa	3.96	1	Pn	Pn	09 33 38.2	+1.9
XYLS	Xyliatos	4.06	88	P	Pn	09 33 39.7	+1.9
XYLS				S	Sn	09 34 25.8	+1.4
XYLS				AML	AML	09 34 29.4	
	0.5nm,0.3s						
XYLS				AML	AML	09 34 30.3	
	0.7nm,0.3s						
SHUT	Suhut-Afyon	4.10	28	Pn	Pn	09 33 40.8	+2.5
SDAG	Sultandagi-AFY	4.16	32	Pn	Pn	09 33 41.7	+2.6
SIMA	Simav-Kutahya	4.19	9	Pn	Pn	09 33 40.6	+1.1
SLUM	Salum	4.21	216	P	Pn	09 33 41.3	+1.6
ASGA	Asgata	4.24	91	P	Pn	09 33 41.9	+1.8
ASGA				S	Sn	09 34 30.0	+1.5
ASGA				AML	AML	09 34 34.5	
	1.5nm,0.4s						
ASGA				AML	AML	09 34 37.2	
	0.9nm,0.3s						
CSS	Mathiatis	4.29	88		Pn	09 33 42.8	+2.0
CSS	Mathiatis	4.29	88	P	Pn	09 33 42.9	+2.0
CSS				S	Sn	09 34 31.3	+1.2
CSS				AML	AML	09 34 37.9	
	0.3nm,0.4s						
CSS				AML	AML	09 34 41.2	
	0.4nm,0.4s						
CSS	Mathiatis	4.29	88	P	Pn	09 33 43.0	+2.1
CSS	Mathiatis	4.29	88	P	Pn	09 33 41.8	+0.9
CSS				S	Sn	09 34 29.4	-0.6
KTHA	Kythira Island	4.31	289	P	Pn	09 33 41.3	+0.3
MVOU	Mavrovouni	4.54	88	P	Pn	09 33 46.9	+2.6
MVOU				S	Sn	09 34 37.5	+1.5
MVOU				AML	AML	09 34 47.8	
	0.2nm,0.3s						
MVOU				AML	AML	09 34 49.1	
	0.4nm,0.6s						
ITM	Ithomi	5.47	296		Pn	09 33 58.6	+1.6
KOT	Kottamia	5.91	147	P	Pn	09 34 04.0	+0.8
HHAG	Hagoal	6.02	145	P	Pn	09 34 05.6	+1.0
SWA2		6.11	202	P	Pn	09 34 07.2	+1.4
RYAN	Fayoum	6.13	162	P	Pn	09 34 07.2	+1.1
HNTI	Hanita	6.16	106	P	Pn	09 34 06.8	+0.3
HNTI				S	Sn	09 35 15.0	-1.0
OFRI	`Ofer	6.18	110	P	Pn	09 34 07.2	+0.4
OFRI				S	Sn	09 35 15.3	-1.3
MMC7	Mount Meron ar	6.35	106	P	Pn	09 34 10.0	+0.7
MMA0B	Mount Meron ar	6.36	106	P	Pn	09 34 10.1	+0.7
MMA0B				S	Sn	09 35 20.1	-1.0
MMAI	Mount Meron Ar	6.36	106	P	Pn	09 34 10.1	+0.7
	6.0nm,0.3s,baz=318,slow=12,SNR=9.2						
MMAI				S	Sn	09 35 20.6	-0.5
	3.9nm,0.2s,baz=300,slow=20,SNR=2.6						
	1.9nm,0.3s						
BR131	Keskin Array S	6.50	41		Pn	09 34 12.8	+1.5
BRTR	Keskin Array B	6.50	41	P	Pn	09 34 13.7	+2.4
	0.4nm,0.3s,baz=206,slow=14,SNR=5.8						
BRTR				S	Sn	09 35 21.2	-3.2
	1.6nm,0.3s,baz=226,slow=23,SNR=10						
BRTR				LR	LR	09 36 54.6	
	comp=Z,54nm,20.4s,baz=216,slow=39						
	0.7nm,0.3s						
GEM	Giv'at Ha'Em	6.51	103	P	Pn	09 34 11.7	+0.4
GEM				S	Sn	09 35 23.4	-1.2
NATI	Neve Ativ	6.55	103	P	Pn	09 34 12.1	+0.3
NATI				S	Sn	09 35 25.1	-0.5
SALP	Salfit	6.58	114	P	Pn	09 34 12.6	+0.3
SALP				S	Sn	09 35 25.4	-1.0
MMLI	Mount Malkishu	6.59	110	P	Pn	09 34 12.8	+0.3
MMLI				S	Sn	09 35 25.6	-1.1
AMAZ	Amatzia	6.65	119	P	Pn	09 34 13.8	+0.6
AMAZ				S	Sn	09 35 26.7	-1.3
KZIT	Kziot	6.65	126	P	Pn	09 34 13.6	+0.4
KZIT				S	Sn	09 35 26.3	-1.8
KSHT	Keshet	6.70	105	P	Pn	09 34 14.6	+0.7
KSHT				S	Sn	09 35 28.4	-0.9
HMDT	Nahal Hemdat	6.75	111	P	Pn	09 34 14.9	+0.2
HMDT				S	Sn	09 35 29.3	-1.2
ZAF	Zafarana	6.79	145	P	Pn	09 34 16.2	+1.1
ZAF				S	Sn	09 35 27.9	-3.6
ZNM	Zenema	6.87	143	P	Pn	09 34 17.5	+1.2
YTIR	Yattir	6.88	119	P	Pn	09 34 16.9	+0.5
YTIR				S	Sn	09 35 32.9	-1.0
BALJ	Balqa	6.91	112	Pn	Pn	09 34 19.1	+2.3
DSI	Dead Sea	6.96	117	P	Pn	09 34 18.1	+0.6
DSI				S	Sn	09 35 34.6	-1.2
MSBI	Mazada	7.08	119	P	Pn	09 34 19.5	+0.4
MSBI				S	Sn	09 35 37.1	-1.5
RMNI	Mount Ramon	7.09	126	P	Pn	09 34 19.9	+0.5
RMNI				S	Sn	09 35 37.9	-1.1
GHAJ	Ghor Haditha	7.24	118		Pn	09 34 24.5	+3.2
GHAJ	Ghor Haditha	7.24	118	P	Pn	09 34 21.7	+0.4
GHAJ				S	Sn	09 35 41.1	-1.4
IDAN	Idan	7.29	122	P	Pn	09 34 22.6	+0.6
IDAN				S	Sn	09 35 42.4	-1.4
BNN	Bunyan	7.33	56		Pn	09 34 22.5	-0.1
KRMI	Paran Flat	7.38	129	P	Pn	09 34 23.9	+0.6
KRMI				S	Sn	09 35 44.1	-1.9
PRNI	Paran	7.41	126	P	Pn	09 34 24.2	+0.6
PRNI				S	Sn	09 35 45.1	-1.6
HRDS	Abu Rudays	7.62	143	P	Pn	09 34 28.1	+1.5
TAMRE	El Minia	7.63	161	P	Pn	09 34 27.9	+1.2
HRFI	Mount Harif	7.63	128	P	Pn	09 34 27.3	+0.5
HRFI				S	Sn	09 35 50.9	-1.4
GRB	Gharib	7.76	148	P	Pn	09 34 29.7	+1.2
HFRF	Wahat Farafira	7.78	179	P	Pn	09 34 29.6	+0.9
EIL2	Elat	7.83	130	P	Pn	09 34 29.9	+0.5
EIL	Elat	7.83	130	P	Pn	09 34 30.4	+1.0
	3.0nm,0.3s,baz=325,slow=2.6,SNR=43						
EIL				S	Sn	09 35 51.4	-5.6
	46nm,0.5s,baz=134,slow=5.2,SNR=10						
	8.9nm,0.2s						
ASF	Jabal al Asfar	7.84	108	P	Pn	09 34 29.6	-0.1
	4.1nm,0.6s,baz=117,slow=14,SNR=5.5						
ASF				S	Sn	09 35 56.2	-1.4
	2.5nm,0.3s,baz=202,slow=3.9,SNR=3.1						
ASF				LR	LR	09 38 52.6	
	comp=Z,38nm,20.2s,baz=224,slow=47						
HBST	Basata	8.02	134	P	Pn	09 34 33.5	+1.6
ASUT		8.09	158	P	Pn	09 34 34.1	+1.1
HDHB	Dhahab	8.32	136	P	Pn	09 34 37.3	+1.2
TIP	Timpagrande	10.00	298		Pn	09 34 57.4	-1.8
MLR	Muntele Rosu	10.66	352	LR	LR	09 40 16.3	
	comp=Z,147nm,19.2s,baz=188,slow=43						
CUC	Castrocucco	10.98	301		Pn	09 35 11.9	-0.7
ACER	Acerenza	11.24	305	Pn	Pn	09 35 13.8	-2.3
BRNS	Bernies	12.23	153	P	Pn	09 35 32.3	+2.6
NRCA	Norcia	14.07	308	Pn	Pn	09 35 53.2	-1.6
KBZ	Khabaz	14.41	48	P	Pn	09 36 02.0	+2.7
	0.1nm,0.3s,baz=199,slow=3.6,SNR=4.4						
	0.5nm,0.6s						
VISS	Visnje	14.80	321	*i* Pn	Pn	09 36 02.2	-2.5
CEY	Cerknica	14.97	320	*i* Pn	Pn	09 36 06.5	-0.5
SOKA	Soboth	15.31	324	*i* Pn	Pn	09 36 10.8	-0.7
	1.7nm,0.4s						
KEST	Kesra	15.33	278	P	Pn	09 36 12.2	+0.3
	1.1nm,0.3s,baz=149,slow=4.0,SNR=9.3						
	3.3nm,0.9s						
KEST	Kesra	15.33	278	IAmb	IAmb	09 36 35.7	
	comp=Z,20nm,1.1s						
RONA	Rosalia, Austr	15.50	329	*e*Pn	Pn	09 36 15.5	+1.6
	comp=Z,10nm,1.5s						
CASP	Castiglione de	15.53	305	Pn	Pn	09 36 14.0	-0.3
AKASG	Malin Array Be	15.77	3	P	Pn	09 36 17.9	+0.6
	comp=Z,0.8nm,0.3s,baz=196,slow=11,SNR=4.1						
	comp=Z,0.4nm,0.4s						
MYKA	Terra Mystica	15.97	321	*e*Pn	Pn	09 36 19.0	-1.1
	comp=Z,3.6nm,0.8s						
TEOL	Teolo	16.28	315	Pn	Pn	09 36 22.8	-1.1
KBA	Koelnbreinsper	16.43	322	*i* Pn	Pn	09 36 25.5	-0.5
	comp=Z,4.6nm,0.6s						
VRAC	Vranov	16.67	333	P	Pn	09 36 29.2	+0.3
	comp=Z,0.1nm,0.3s,baz=70,slow=18,SNR=1.0						
	comp=Z,0.8nm,0.3s						
BIOA	Bad Ischl, Aus	16.70	324	*e*Pn	Pn	09 36 30.9	+1.6
	comp=Z,3.7nm,0.6s						
MORC	Moravsky Berou	16.72	336		Pn	09 36 31.4	+1.8
MORC				IAmb	IAmb	09 36 32.1	
	comp=Z,11nm,0.5s						
LESA	Schwarzleotal	17.00	322	*e*Pn	Pn	09 36 32.9	-0.1
	comp=Z,3.7nm,0.7s						
WTTA	Wattenberg	17.43	320	*e*Pn	Pn	09 36 40.6	+2.0
	comp=Z,2.2nm,0.5s						
GERES	GERESS Array B	17.50	327	P	Pn	09 36 38.7	-0.6
	baz=145,slow=14,SNR=5.7						
	comp=Z,0.9nm,0.5s						
SQTA	Sankt Quirin	17.63	319	*i* Pn	Pn	09 36 41.1	+0.1
	comp=Z,3.4nm,0.5s						
MOTA	Moosalm	17.77	319	*i* Pn	Pn	09 36 42.9	+0.3
	comp=Z,4.1nm,0.6s						
KHC	Kasperske Hory	17.77	327	*e*P	Pn	09 36 39.5	-3.0
FETA	Feichten	17.77	318	*i* Pn	Pn	09 36 43.9	+1.2
	comp=Z,4.4nm,0.7s						
DAVOX	Davos/Dischmat	18.11	316	P	Pn	09 36 47.1	+0.2
	comp=Z,0.7nm,0.3s,baz=155,slow=16,SNR=5.1						
	comp=Z,2.9nm,0.5s						
TUE	Stuetta	18.24	315	P	Pn	09 36 48.2	-0.4
SENIN	Lac Senin/Sane	19.41	312	P	P	09 37 00.5	-1.0
CLL	Collm	19.66	331	*e*P	P	09 37 04.0	+0.2
BSD	Bornholm Skovb	22.14	340	*i* P	P	09 37 27.2	-3.4
BSD				IAmb	IAmb	09 37 29.0	
	comp=Z,4.4nm,0.4s						
CEST	Esterri de Car	22.22	298	P	P	09 37 32.1	+0.4
CEST				IAmb	IAmb	09 38 02.0	
	comp=Z,17nm,1.1s						
HAMD	Hammershus, De	22.32	340	*i* P	P	09 37 29.9	-2.6
HAMD				IAmb	IAmb	09 37 30.7	
	comp=Z,2.5nm,0.5s						
BLEU	Blekinge	22.95	342	*i* P	P	09 37 35.1	-4.1
COP	Copenhagen	23.38	337	*i* P	P	09 37 40.9	-2.6
DEL	Delary	23.62	340	*i* P	P	09 37 44.2	-1.5
ESBB	Sonseca Array	25.86	290	P	P	09 38 06.3	-0.2
ESBB				IAmb	IAmb	09 38 08.1	
	comp=Z,9.5nm,0.9s						
ESDC	Sonseca Array	25.86	290	P	P	09 38 06.3	-0.3
	comp=Z,5.0nm,0.7s,baz=82,slow=9.7,SNR=39						
	comp=Z,5.0nm,0.7s						
ESDC	Sonseca Array	25.86	290	IAmb	IAmb	09 38 07.6	
	comp=Z,4.1nm,1.4s						
PAB	San Pablo	26.15	290	P	P	09 38 09.2	0.0
PAB				IAmb	IAmb	09 38 11.6	
	comp=Z,22nm,1.4s						
FINES	FINESS Array B	26.55	358	P	P	09 38 11.7	-0.7
	comp=Z,1.2nm,0.5s,baz=158,slow=11,SNR=10.0						
FINES				LR	LR	09 49 43.7	
	comp=Z,52nm,20.8s,baz=192,slow=39						
	comp=Z,1.2nm,0.5s						
HFS	Hagfors	26.89	344	P	P	09 38 14.6	-1.0
	comp=Z,3.0nm,0.5s,baz=146,slow=11,SNR=17						
HFS				LR	LR	09 50 51.8	
	comp=Z,42nm,20.1s,baz=224,slow=41						
	comp=Z,3.0nm,0.5s						
NC405	NORSAR Array S	28.22	343	P	P	09 38 26.1	-1.4
NC405				IAmb	IAmb	09 38 33.0	
	comp=Z,18nm,1.4s						
NB2	NORSAR Subarra	28.27	343	P	P	09 38 26.2	-1.9
	comp=Z,0.7nm,0.4s,baz=143,slow=10						
NOA	NORSAR Array B	28.27	343	P	P	09 38 26.1	-1.9
	comp=Z,0.9nm,0.6s,baz=313,slow=3.7,SNR=5.8						
NOA				LR	LR	09 50 34.4	
	comp=Z,39nm,18.3s,baz=335,slow=38						
	comp=Z,0.9nm,0.6s						
EKA	Eskdalemuir Ar	29.63	323	P	P	09 38 38.7	-1.4
	comp=Z,0.6nm,0.4s,baz=123,slow=11,SNR=11						
	comp=Z,0.6nm,0.4s						
TORD	Torodi Ar. Bea	32.26	234	P	P	09 39 04.2	+0.6
	comp=Z,1.4nm,0.6s,baz=24,slow=6.3,SNR=7.9						
	comp=Z,1.4nm,0.6s						
TORD	Torodi Ar. Bea	32.26	234	IAmb	IAmb	09 39 07.0	
	comp=Z,560nm,0.8s						
ARCES	ARCESS Array B	34.67	358	P	P	09 39 22.4	-1.7
	comp=Z,0.6nm,0.3s,baz=168,slow=7.4,SNR=13						
	comp=Z,0.6nm,0.3s						
MKAR	Makanchi Array	41.88	57	P	P	09 40 27.0	+2.0
	comp=Z,0.4nm,0.5s,baz=273,slow=7.3,SNR=8.1						
	comp=Z,0.4nm,0.5s						
SPB2	Spitsbergen Ar	43.63	357	P	P	09 40 38.8	0.0
SPITS	Spitsbergen Ar	43.63	357	P	P	09 40 38.7	-0.1
	comp=Z,1.3nm,0.3s,baz=151,slow=12,SNR=24						
	comp=Z,1.3nm,0.3s						
NRIK	Noril'sk	47.06	25	P	P	09 41 06.8	+0.8
	comp=Z,1.4nm,0.7s,baz=192,slow=12,SNR=3.7						
	comp=Z,1.4nm,0.7s						
NRIK	Noril'sk	47.06	25	IAmb	IAmb	09 41 09.3	
	comp=Z,2.0nm,0.9s						
POIN	Pond Inlet	61.57	341	P	P	09 42 51.3	-0.2
POIN				IAmb	IAmb	09 43 32.9	
	comp=Z,2.2nm,1.2s						
ILON	Igloolik, Nuna	64.28	338	P	P	09 43 09.1	-0.5
ILON				IAmb	IAmb	09 43 11.0	
	comp=Z,1.8nm,1.0s						
KUQ	Kuujjuuaa	64.29	324	P	P	09 43 09.5	-0.3
SCHQ	Schefferville	64.90	320	P	P	09 43 13.4	-0.5
	comp=Z,4.1nm,0.4s,baz=72,slow=4.8,SNR=39						
SCHQ				LR	LR	10 10 24.1	
	comp=Z,37nm,18.9s,baz=260,slow=35						
	comp=Z,4.1nm,0.4s						
SCHQ	Schefferville	64.90	320	IAmb	IAmb	09 43 14.3	
	comp=Z,3.8nm,0.6s						
BLKN	Baker Lake	71.79	338	P	P	09 43 55.9	-0.9
C36M	Paulatuk	74.02	350	P	P	09 44 10.0	+0.1
C36M				IAmb	IAmb	09 44 40.3	
	comp=Z,6.1nm,1.2s						
E29M	Blow River	76.45	355	P	P	09 44 24.6	+0.7
E29M				IAmb	IAmb	09 44 38.3	
	comp=Z,2.4nm,1.1s						
F30M	Barrier River	77.03	354	P	P	09 44 27.9	+0.6
F30M				IAmb	IAmb	09 44 45.8	
	comp=Z,2.5nm,0.9s						
G31M	Satah River	77.56	353	P	P	09 44 30.1	-0.1
G31M				IAmb	IAmb	09 44 38.3	
	comp=Z,8.6nm,1.4s						
BMAR	Burnt Mountain	77.79	357	P	P	09 44 31.8	+0.2
YKA	Yellowknife Ar	78.37	343	P	P	09 44 33.6	-1.1
	comp=Z,0.2nm,0.6s,baz=46,slow=12,SNR=5.4						
	comp=Z,0.2nm,0.6s						
H31M	Peel River	78.65	353	P	P	09 44 36.0	-0.4
H31M				IAmb	IAmb	09 45 04.8	
	comp=Z,3.0nm,1.2s						
ILAR	Eielson Array	80.53	358	P	P	09 44 46.6	+0.1
	comp=Z,0.4nm,0.7s,baz=337,slow=3.5,SNR=7.3						
	comp=Z,0.4nm,0.7s						
ULM	Lac du Bonnet	81.81	327	P	P	09 44 53.1	-0.5
	comp=Z,1.5nm,0.6s,baz=10,slow=5.0,SNR=3.7						
	comp=Z,1.5nm,0.6s						

*IDC **05** 09:44:21.3±1.8, 24°.26S×66°.79W, h165^{km}±18^{km}, mb3.2/1, mbtmp3.9/6, Error ellipse: s-maj=36.8km s-min=15.3km az=108.0*

*SJA **05** 09:44:22.2±0.6, 24°.15S×67°.13W, h199^{km}±4^{km}, ML3.8, MW3.6*

*GUC **05** 09:44:23.7±0.7, 24°.15S×67°.16W, h188^{km}±5^{km}, ML3.8*

*NEIC **05** 09:44:23.2±1.2, 24°.17S±0°.06×67°.1W±0°.1, h187^{km}±9^{km}, mb4.0/2, ML3.8(GUC), Error ellipse: s-maj=16.9km s-min=8.6km az=104.0*

ISC 05 09:44:22.7±0.7**, 24°.16S**±0°.04×**67°.15W**±0°.03**, h193**^{km}±7^{km}**, n74,** σ1§**43**/107**, 5C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALTA		0.74	95	*e*P	Pn	09 44 51.0	+0.1
SALTA				*e*S	Sn	09 45 12.2	-0.3
SALTA		0.74	95	*e*P	Pn	09 44 50.9	+0.1
SALTA				*e*P		09 44 51.0	
SALTA				*e*S	Sn	09 45 12.6	+0.1
AF01	San Pedro de A	1.53	322		Pn	09 44 56.6	+0.1
AF01	San Pedro de A	1.53	322	*e*P	Pn	09 44 57.9	+1.4
AF01				*e*S	Sn	09 45 25.3	+2.7
AF01	San Pedro de A	1.53	322	*e*P	Pn	09 44 57.2	+0.7
AF01				*e*S	Sn	09 45 26.6	+3.9
SLA	San Lorenzo	1.60	111⇓	*e*P	Pn	09 44 57.4	+0.4
SLA				*e*S	Sn	09 45 23.1	-0.4
SLA	San Lorenzo	1.60	111	*e*P	Pn	09 44 57.5	+0.5
SLA				*e*S	Sn	09 45 23.7	+0.2
HJA	Humahuaca	1.86	60	*e*P	Pn	09 45 00.2	+0.5
FSA	Cafayete	2.21	152	*e*P	Pn	09 45 03.8	+0.6
GO02	Mina Guanaco	2.43	245		Pn	09 45 06.8	+1.1
GO02	Mina Guanaco	2.43	245	*e*P	Pn	09 45 06.8	+1.1
GO02				*i* S	Sn	09 45 39.6	+0.3
GO02				IAML		09 45 40.4	
	comp=N,600nm,0.3s						
GO02	Mina Guanaco	2.43	245	*e*P	Pn	09 45 06.2	+0.4
GO02				*e*S	Sn	09 45 40.2	+0.9
GO02				IAML		09 45 43.5	
	comp=Z,332nm,0.5s						
YJA	Yavi	2.49	38	*e*P	Pn	09 45 06.9	+0.3
YJA				*e*S	Sn	09 45 40.3	-0.3
YJA	Yavi	2.49	38	*e*P	Pn	09 45 02.3	-4.3
PB06	IPOC Station P	2.65	303		Pn	09 45 09.0	+0.9
PB06	IPOC Station P	2.65	303⇑	*e*P	Pn	09 45 09.2	+1.0
PB06				*e*S	Sn	09 45 42.7	-0.9
PB06	IPOC Station P	2.65	303	*e*P	Pn	09 45 09.2	+1.0
PB06				*e*S	Sn	09 45 43.2	-0.3
PB06				IAML		09 45 46.2	
	comp=Z,252nm,0.1s						
PB14	IPOC Station P	3.00	260		Pn	09 45 12.8	+0.4
PB14	IPOC Station P	3.00	260	*e*P	Pn	09 45 12.9	+0.6
PB14				*e*S	Sn	09 45 49.4	-1.6
PB14				IAML		09 45 52.6	
	comp=E,99nm,0.6s						
PB14	IPOC Station P	3.00	260	*e*P	Pn	09 45 12.9	+0.6
PB14				*e*S	Sn	09 45 50.1	-0.9
PB14				IAML		09 45 56.2	
	comp=Z,93nm,0.7s						
PB09	IPOC Station P	3.04	320		Pn	09 45 13.7	+0.9
PB09	IPOC Station P	3.04	320⇑	*e*P	Pn	09 45 14.0	+1.2
PB09				*e*S	Sn	09 45 51.9	+0.1
PB09				IAML		09 45 54.6	
	comp=N,113nm,0.2s						
PB09	IPOC Station P	3.04	320	*e*P	Pn	09 45 14.0	+1.2
PB09				*e*S	Sn	09 45 52.4	+0.6
PB09				IAML		09 45 54.7	
	comp=Z,107nm,0.4s						
AHML	Horco Molle	3.08	148⇑	*e*P	Pn	09 45 05.3	-7.7
AHML	Horco Molle	3.08	148	*e*P	Pn	09 45 00.8	-12
AHML				*e*S	Sn	09 45 49.8	-2.7
PB03	IPOC Station P	3.19	311		Pn	09 45 15.1	+0.6
AC02	Maricunga	3.21	213		Pn	09 45 15.7	+0.7
AC02	Maricunga	3.21	213⇓	*e*P	Pn	09 45 16.2	+1.2
AC02				*e*S	Sn	09 45 57.0	+1.2
AC02	Maricunga	3.21	213	*e*P	Pn	09 45 16.1	+1.1
AC02				*e*S	Sn	09 45 42.0	-14
AC02				IAML		09 45 42.2	
	comp=Z,410nm,2.6s						
PB07	IPOC Station P	3.50	313		Pn	09 45 18.6	+0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PB07	IPOC Station P	3.50	313⇑	eP	Pn	09 45 18.6	+0.3
PB07				i S	Sn	09 45 59.4	-2.2
PB07	IPOC Station P	3.50	313	eP	Pn	09 45 18.6	+0.3
PB07				eS	Sn	09 46 00.0	-1.7
PB07				IAML		09 46 01.3	
	comp=Z,163nm,0.3s						
AC01	Pan de Azucar	3.70	237		Pn	09 45 20.4	-0.1
AC01	Pan de Azucar	3.70	237	eP	Pn	09 45 20.1	-0.4
AC01	Pan de Azucar	3.70	237	eP	Pn	09 45 10.8	-10
AC01				eS	Sn	09 46 04.8	-1.0
AC01				IAML		09 46 05.2	
	comp=Z,57nm,0.3s						
PB01	IPOC Station P	3.78	325		Pn	09 45 21.7	0.0
PB01	IPOC Station P	3.78	325	eP	Pn	09 45 21.5	-0.2
PB01				eS	Sn	09 46 05.7	-2.2
PB01	IPOC Station P	3.78	325	eP	Pn	09 45 21.8	0.0
PB01				eS	Sn	09 46 06.6	-1.3
PB01				IAML		09 46 08.3	
	comp=Z,83nm,0.2s						
PB02	IPOC Station P	3.80	318		Pn	09 45 22.1	+0.2
PB02	IPOC Station P	3.80	318	eP	Pn	09 45 21.8	-0.1
PB02				eS	Sn	09 46 05.9	-2.4
PB02	IPOC Station P	3.80	318	eP	Pn	09 45 21.9	0.0
PB02				eS	Sn	09 46 06.4	-1.8
PB02				IAML		09 46 13.2	
	comp=Z,168nm,0.2s						
TINO	Tinogasta	3.90	185	eP	Pn	09 45 24.8	+1.7
AC06	Mina Casimiro	4.30	222		Pn	09 45 27.7	-0.4
AC06	Mina Casimiro	4.30	222	eP	Pn	09 45 27.6	-0.4
AC06				eS	Sn	09 46 17.6	-1.8
PATCX	Punta Patache	4.33	320		Pn	09 45 28.2	-0.3
PATCX	Punta Patache	4.33	320	eP	Pn	09 45 28.5	-0.1
PATCX				i S	Sn	09 46 17.8	-2.5
PX03	IPOC Station P	4.39	328	eP	Pn	09 45 30.6	+1.3
PX03				eS	Sn	09 46 18.6	-3.0
GO03	Copiapo	4.40	218⇑	eP	Pn	09 45 29.0	-0.4
GO03				eS	Sn	09 46 19.9	-2.0
GO03	Copiapo	4.40	218	eP	Pn	09 45 29.1	-0.3
GO03				eS	Sn	09 46 20.3	-1.5
GO03				IAML		09 46 23.2	
	comp=Z,95nm,0.5s						
PB08	IPOC Station P	4.41	335		Pn	09 45 30.5	+0.6
PB08	IPOC Station P	4.41	335	eP	Pn	09 45 30.4	+0.5
PB08				i S	Sn	09 46 21.3	-1.3
PB08	IPOC Station P	4.41	335	eP	Pn	09 45 30.9	+1.0
PB08				eS	Sn	09 46 21.6	-1.0
PB08				IAML		09 46 23.8	
	comp=Z,49nm,0.4s						
VCA	Vinchina	4.65	191	eP	Pn	09 45 35.2	+2.6
VCA				eS	Sn	09 46 37.1	+9.4
GO01	Chusmiza	4.86	337		Pn	09 45 35.9	+0.2
GO01	Chusmiza	4.86	337	eP	Pn	09 45 36.1	+0.4
GO01				eS	Sn	09 46 33.4	+0.4
GO01				IAML		09 46 41.1	
	comp=Z,24nm,1.3s						
PB11	IPOC Station P	4.96	332	eP	Pn	09 45 35.5	-1.1
PB11				eS	Sn	09 46 31.1	-3.8
PB11				IAML		09 46 33.7	
	comp=Z,54nm,0.2s						
ACLC	CERRO LA CRUZ	5.25	178	eP	Pn	09 45 41.0	+0.7
ACLC				eS	Sn	09 46 42.0	+0.5
AC04	Llanos de Chal	5.35	220	eP	Pn	09 45 40.1	-1.3
AC04				eS	Sn	09 46 29.9	-14
AC04				IAML		09 46 49.9	
	comp=Z,36nm,0.8s						
AC05	El Transito	5.43	210		Pn	09 45 42.1	-0.5
LCO	Las Campanas	5.78	213		Pn	09 45 46.2	-1.1
PB16	IPOC Station P	6.20	339		Pn	09 45 53.4	+0.3
CFA	Coronel Fontan	7.48	187	P	Pn	09 46 08.3	-0.8
	comp=Z,1.2nm,0.2s,baz=64,slow=15,SNR=20						
CFA				S	Sn	09 47 28.8	-4.8
	comp=Z,1.9nm,0.3s,baz=129,slow=20,SNR=8.6						
LPAZ	La Paz	7.89	353	P	Pn	09 46 15.8	+0.7
	comp=Z,5.5nm,0.4s,baz=151,slow=7.0,SNR=45						
LPAZ				S	Sn	09 47 41.5	-2.9
	comp=Z,1.0nm,0.5s,baz=1.2,slow=22,SNR=2.1						
SIV	San Ignacio	9.93	36	P	Pn	09 46 38.2	-3.1
	comp=Z,1.5nm,0.3s,baz=218,slow=10.0						
SIV				S	Sn	09 48 22.5	-10
	baz=273,slow=19						
TRCB	Terra Rica	13.39	87	Pn	Pn	09 47 25.7	+0.2
TRQA	Tornquist	14.54	164		Pn	09 47 40.4	+0.9
PLCA	Paso Flores	16.77	189	P	P	09 48 06.7	+1.2
	comp=Z,1.6nm,1.1s,baz=91,slow=18,SNR=1.8						
PLCA	Paso Flores	16.77	189	P	P	09 48 05.5	0.0
PLCA				IAmb	IAmb	09 48 35.8	
	comp=Z,7.4nm,1.4s						
BDFB	Brasilia	19.87	68	P	P	09 48 37.3	-2.2
	comp=Z,6.5nm,0.6s,baz=241,slow=10,SNR=10						
BDFB	Brasilia	19.87	68	P	P	09 48 39.7	+0.3
BDFB				IAmb	IAmb	09 48 40.7	
	comp=Z,6.0nm,0.8s						
TORD	Torodi Ar. Bea	76.76	69	P	P	09 55 53.5	+0.2
	comp=Z,0.4nm,0.6s,baz=244,slow=6.4,SNR=2.8						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	128.25	205	PKP	PKPdf	10 03 07.4	+0.6
	comp=Z,0.2nm,0.7s,baz=169,slow=1.6,SNR=1.8						
WRA	Warramunga Arr	131.42	207	PKP	PKiKP	10 03 14.9	+1.1
	comp=Z,0.1nm,0.3s,baz=154,slow=2.1,SNR=4.7						
MKAR	Makanchi Array	146.74	40	PKPbc	PKPbc	10 03 43.1	+1.3
	comp=Z,0.4nm,0.6s,baz=302,slow=2.3,SNR=5.4						

IDC 05 09:52:03.3±3.5**,30°.36S×177°.78W,h0km,mb3.5**/2**, mbtmp3.5**/2**,Error ellipse: s-maj=74.4km s-min=24.7km az=109.0,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.11	354	Pn	Pn	09 52 27.5	+1.4
	116nm,0.3s,baz=88,slow=23,SNR=2.5						
RAO				Sn	Sb	09 52 41.0	+0.7
	310nm,0.3s,baz=107,slow=19,SNR=7.0						
URZ	Urewera	8.94	207	Sn	Sn	09 55 52.3	-2.8
	0.6nm,0.3s,baz=189,slow=21,SNR=5.6						
ASAR	Alice Springs	43.30	267	P	P	10 00 07.2	+0.1
	0.2nm,0.6s,baz=105,slow=8.0,SNR=5.5						
	0.2nm,0.6s						
WRA	Warramunga Arr	44.28	272	P	P	10 00 14.8	-0.3
	0.5nm,0.4s,baz=111,slow=8.1,SNR=12						
	0.5nm,0.4s						
FINES	FINESS Array B	145.17	340	PKPbc	PKPbc	10 11 40.2	-1.4
	3.3nm,1.0s,baz=51,slow=1.7,SNR=4.2						

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*BJI **05** 10:04:59.6,3°.73S×145°.83E,h10km,mB5.4/45,mb4.8/72, Ms5.0/69,Ms7 4.9/67*

*IDC **05** 10:05:03.9±0.6,3°.54S×145°.19E,h0km,mb4.5/20, mbtmp4.4/23,ML3.6/3,MS4.7/60,Error ellipse: s-maj=23.1km s-min=12.3km az=84.0*

*MOS **05** 10:05:04.7±0.9,3°.54S×145°.22E,h15km,mb5.0/28,Error ellipse: s-maj=10.7km s-min=6.1km az=112.5*

*NEIC **05** 10:05:05.8±2.7,3°.43S±0°.06×145°.37E±0°.07,h10km±1km, mb5.2/97,Mww5.3/20,Error ellipse: s-maj=11.9km s-min=10.1km az=256.0*

*NEIC **05** 10:05:05.9,3°.44S×145°.36E,h14km*

*NEIC **05** 10:05:05.9,3°.04S×145°.36E,h14km,Moment Tensor Solution. Duration: 2s.3 Moment tensor: Scale 10^17Nm; Mrr-0.11; Mθθ-0.00; Mφφ0.11; Mrθ0.65; Mθφ0.94; Mφr-0.00; Fault plane solution: M0 1.15000×10^17 NP1: φs359.45000°,δ55.08000°,λ-175.06000°. NP2: φs266.62000°,δ85.95000°,λ-35.02000°. Principal axes: T 1.1687, Plg21.0000°, Azm318.0000°; N -0.0346, Plg55.0000°, Azm81.0000°; P -1.1341, Plg27.0000°, Azm217.0000°;*

*GFZ **05** 10:05:07.0,3°.55S×145°.12E,h24km,MW5.4,Moment Tensor Solution. s54 Moment tensor: Mrr-0.04; Mθθ-0.07; Mφφ0.11; Mrθ-0.01; Mθφ1.39; Mφr-0.29; Fault plane solution: NP1:φs178.00000°,δ89.00000°, λ168.00000°. Principal axes: T 1.4500, Plg8.0000°, Azm132.0000°; N -0.0400, Plg78.0000°, Azm357.0000°; P -1.4000, Plg8.0000°, Azm223.0000°;*

*GCMT **05** 10:05:06.9±0.1,3°.36S±0°.01×145°.25E±0°.01,h12km, MW5.3/151,Moment Tensor Solution. s101,c160; s151,c273; Duration: 1s.1 Moment tensor: Scale 10^17 Nm; Mrr0.04±.01; Mθθ-0.10±.01; Mφφ0.06±.01; Mrθ-0.00±.03; Mθφ1.03±.01; Mφr0.21±.03; Best double couple: M0 1.05500×10^17 NP1:φs88.00000°,δ78.00000°, λ1.00000°. NP2:φs358.00000°,δ89.00000°,λ168.00000°. Principal axes: T 1.0390, Plg9.0000°, Azm312.0000°; N 0.0320, Plg78.0000°, Azm173.0000°; P -1.0710, Plg8.0000°, Azm43.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **05** 10:05:12.7±0.6,4°S±4°×14°5E±°,h45km±4km,M5.0/65, mB5.6/47,mb5.0/65,MLv5.2/5,Mw(mB)5.1/47, MwMwp4.9/14,Mwp5.2/14*

ISC 05 10:05:05.7±0.3**,3°.48S**±0°.04**×145°.35E**±0°.04**,h10km,n533, σ1s.32**/496**,mb5.0**/132**,MS4.8**/83**,10C-9D,Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	2.47	55		Pn	10 05 44.0	-2.1
JAY	Jayapura	4.73	282	P	Pn	10 06 14.5	-2.7
GENI	Genyem	5.24	279	P	Pn	10 06 23.4	-0.8
	2.0nm7μm6μm447nm,1.1s						
PMG	Port Moresby	6.16	163	Pn	Pn	10 06 36.5	-0.3
	9.7nm,0.5s,baz=311,slow=8.4,SNR=8.1						
PMG				Sn	Sn	10 07 46.9	-0.5
	7.3nm,0.3s,baz=204,slow=16,SNR=4.0						
PMG				LR	LR	10 09 16.7	
	comp=Z,18μm,18.2s,baz=336,slow=41						
PMG	Port Moresby	6.16	163		Pn	10 06 38.5	+1.7
PMG	Port Moresby	6.16	163	P	Pn	10 06 38.5	+1.7
PMG						10 07 46.9	
PMG	Port Moresby	6.16	163	P	Pn	10 06 38.5	+1.7
	0.9nm7μm2μm100nm,1.1s						
BAKI	Biak	9.51	284	P	Pn	10 07 28.3	+5.5
	103nm,0.8s						
COEN	Coen	10.63	191	P	Pn	10 07 44.0	+5.8
COEN	Coen	10.63	191		Pn	10 07 38.5	+0.3
FAKI	Fak Fak	13.09	272	Pn	Pn	10 08 12.7	+0.9
FAKI	Fak Fak	13.09	272	P	Pn	10 08 16.3	+4.5
	2μm38nm,1.3s						
SIJI	Sorong	14.30	280	Pn	Pn	10 08 24.6	-3.9
	0.4nm,0.3s,baz=81,slow=10,SNR=9.7						
SIJI				LR	LR	10 14 07.5	
	comp=Z,2μm,18.1s,baz=98,slow=38						
	7.9nm,0.7s						
SIJI	Sorong	14.30	280	P	Pn	10 08 28.9	+0.4
	1μm2μm48nm,1.6s						
SWI	Sorong	14.31	280	P	Pn	10 08 28.7	+0.1
	72nm,1.0s						
HNR	Honiara	15.66	113	Pn	Pn	10 08 47.4	+0.7
	0.2nm,0.3s,baz=198,slow=4.9,SNR=7.9						
HNR				LR	LR	10 13 51.9	
	comp=Z,171nm,21.3s,baz=4.0,slow=34						
HNR	Honiara	15.66	113	Pn	Pn	10 08 46.2	-0.5
HNR	Honiara	15.66	113	P	Pn	10 08 46.2	-0.5
HNR				pmax	pmax		
	comp=Z,71nm,1.0s						
KDU	Kakadu	15.68	234	P	Pn	10 08 45.0	-1.9
	comp=Z,12nm,1.1s						
MSAI	Masohi	16.39	270	P	P	10 09 02.2	+3.3
	comp=Z,107nm,1.2s						
PATS	Pohnpei	16.51	52	P	P	10 09 00.3	+0.1
	comp=Z,222nm,1.4s						
CTA	Charters Tower	16.54	177	Pn	Pn	10 08 56.8	-1.1
	comp=Z,0.1nm,0.3s,baz=347,slow=12,SNR=1.3						
CTA				LR	LR	10 15 22.7	
	comp=Z,2μm,20.5s,baz=356,slow=38						
	comp=Z,0.8nm,0.5s						
CTAO	Charters Tower	16.54	177		P	10 09 01.9	+1.5
CTAO	Charters Tower	16.54	177	P	P	10 09 02.0	+1.5
CTAO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MTN	Manton Dam	16.86	236	P	Pn	10 09 03.1	+1.1
	comp=Z,29nm,0.9s,comp=Z,0.0nm						
MTN	Manton Dam	16.86	236		Pn	10 09 00.4	-1.5
KRAI	Karang Ratu	16.92	270	P	P	10 09 05.3	+0.5
	comp=Z,38nm,1.1s						
QIS	Mount Isa	17.88	198	P	Pn	10 09 14.9	+0.3
	comp=Z,24nm,1.5s,comp=Z,0.0nm						
NLAI	Namlea	18.21	270	P	Pn	10 09 18.6	-0.3
	comp=Z,3μmcomp=Z,86nm,1.8s						
SANI	Sanana	19.39	274	P	P	10 09 30.2	-1.8
	comp=Z,1μmcomp=Z,2μmcomp=Z,47nm,1.2s						
WB0	Warramunga Arr	19.40	213	P	P	10 09 30.4	-1.7
WB0				IAmb	IAmb	10 09 40.5	
	comp=Z,149nm,1.5s						
WB9	Warramunga Arr	19.43	213	P	P	10 09 31.3	-1.1
	comp=Z,73nm,0.9s						
WR0	Warramunga Arr	19.48	212	P	P	10 09 31.5	-1.5
	comp=Z,96nm,0.8s						
WR0	Warramunga Arr	19.48	212	P	P	10 09 31.1	-1.9
WR0				IAmb	IAmb	10 09 35.2	
	comp=Z,72nm,0.8s						
WR8	Warramunga Arr	19.50	212	P	P	10 09 31.0	-2.1
WRAB	Tennant Creek	19.56	212	P	P	10 09 31.6	-2.2
WRAB				IAmb	IAmb	10 09 36.6	
	comp=Z,90nm,1.0s						
WRAB	Tennant Creek	19.56	212⇓	iP	P	10 09 32.0	-1.9
WRAB				pmax	pmax		
	comp=Z,53nm,0.9s						
WB2	Warramunga Arr	19.57	212	P	P	10 09 32.4	-1.5
	comp=Z,126nm,0.9s						
WB2	Warramunga Arr	19.57	212	P	P	10 09 31.9	-2.0
WB2				IAmb	IAmb	10 09 37.3	
	comp=Z,114nm,0.9s						
WR1	Warramunga Arr	19.57	212	P	P	10 09 31.9	-2.1
	comp=Z,154nm,1.0s						
WRA	Warramunga Arr	19.57	212	P	P	10 09 31.6	-2.4
	comp=Z,56nm,0.9s,baz=31,slow=11,SNR=78						
WRA				S	S	10 13 04.8	-10
	comp=Z,2.7nm,0.8s,baz=31,slow=17,SNR=4.7						
KNRA	Kununurra	20.33	232	P	P	10 09 39.4	-2.8
	comp=Z,91nm,1.5s,comp=Z,0.0nm						
KNRA	Kununurra	20.33	232		P	10 09 39.6	-2.6
KNRA				IAmb	IAmb	10 09 47.4	
	comp=Z,99nm,1.1s						
MNI	Manado	21.07	283	P	P	10 09 52.6	+2.3
SOEI	Soe	21.84	252		P	10 09 58.4	-0.3
SOEI	Soe	21.84	252	P	P	10 09 58.7	0.0
DAV	Davao City (W)	22.34	298	LR	LR	10 18 27.9	
	comp=Z,1μm,18.4s,baz=106,slow=36						
EIDS	Eidsvold	22.46	166	P	P	10 10 10.1	+5.0
BATI	Baumata	22.53	252	LR	LR	10 21 11.9	
	comp=Z,1μm,19.0s,baz=96,slow=43						
BATI	Baumata	22.53	252	P	P	10 10 05.8	-0.2
LUWI	Luwuk	22.68	276	P	P	10 10 06.6	-1.0
LUWI	Luwuk	22.68	276	P	P	10 10 09.2	+1.6
	comp=Z,167nm,1.2s						
GTOI	Gorontalo	22.69	280	P	P	10 10 07.7	0.0
	comp=Z,3μmcomp=Z,98nm,0.9s						
AS31	Alice Springs	22.91	208		P	10 10 08.3	-1.7
ASAR	Alice Springs	22.92	208	P	P	10 10 07.5	-2.6
	comp=Z,5.4nm,0.7s,baz=37,slow=7.2,SNR=67						
ASAR				S	S	10 14 13.9	-6.3
	comp=Z,0.9nm,0.9s,baz=30,slow=20,SNR=1.5						
ASAR				LR	LR	10 20 12.8	
	comp=Z,6μm,19.0s,baz=34,slow=40						
	comp=Z,5.4nm,0.7s						
ASAR	Alice Springs	22.92	208	P	P	10 10 07.9	-2.1
ASAR	Alice Springs	22.92	208	P	P	10 10 07.9	-2.1
QLP	Quilpie	23.00	183	P	P	10 10 14.1	+3.3
	comp=Z,105nm,1.3s						
MRSI	Marisa	23.72	279	P	P	10 10 17.7	-0.5
	comp=Z,1μmcomp=Z,78nm,1.2s						
APSI	Ampana	23.81	276	P	P	10 10 19.4	+0.3
	comp=Z,3μmcomp=Z,195nm,1.4s						
EDFI	Ende, Flores	24.09	256	P	P	10 10 20.1	-1.7
	comp=Z,51nm,1.1s						
FITZ	Fitzroy Crossi	24.16	232	LR	LR	10 21 16.4	
	comp=Z,3μm,18.3s,baz=54,slow=40						
INKA	Innaminka	24.53	190	P	P	10 10 26.6	+1.0
TOLI2	Tolitoli	24.97	280	P	P	10 10 26.7	-3.0
TTSI	Tana Toraja	25.49	270	P	P	10 10 37.3	+2.9
	comp=Z,2μmcomp=Z,93nm,1.7s						
SPSI	Sidrap Palu	25.53	268	P	P	10 10 36.5	+1.7
	comp=Z,1μmcomp=Z,73nm,1.3s						
KAPI	Kappang	25.57	266	LR	LR	10 21 15.5	
	comp=Z,852nm,21.5s,baz=85,slow=38						
KAPI	Kappang	25.57	266	P	P	10 10 35.9	+0.7
KAPI				IAmb	IAmb	10 10 44.6	
	comp=Z,45nm,1.1s						
KAPI	Kappang	25.57	266	P	P	10 10 35.9	+0.7
KAPI				pmax	pmax		
	comp=Z,45nm,1.2s						
KAPI	Kappang	25.57	266	P	P	10 10 44.0	+8.9
PCI	Palu	25.61	275	P	P	10 10 43.4	+7.8
MPSI	Mapaga	25.71	278	P	P	10 10 35.3	-1.2
	comp=Z,799nmcomp=Z,39nm,1.4s						
MMSI	Mamuju	26.41	271	P	P	10 10 45.7	+2.9
	comp=Z,953nmcomp=Z,54nm,1.5s						
WBSI	Waikabubak, Su	26.49	255	P	P	10 10 56.4	+13
WRKA	Warakurna	27.00	216	P	P	10 10 47.0	-1.1
	comp=Z,44nm,0.9s						
DZM	Mont Dzumac	27.58	134	LR	LR	10 20 45.7	
	comp=Z,2μm,19.5s,baz=285,slow=34						
PLAI	Plampang	27.91	258	P	P	10 10 55.1	-1.2
	comp=Z,46nm,1.1s						
MYLDM	Lahad Datu	28.16	288	P	P	10 10 58.6	0.0
MYLDM	Lahad Datu	28.16	288	P	P	10 11 03.9	+5.4
	comp=Z,1μmcomp=Z,50nm,1.5s						
STKA	Stephens Creek	28.47	187	P	P	10 10 59.8	-1.3
	comp=Z,49nm,2.4s						
STKA	Stephens Creek	28.47	187	P	P	10 11 00.8	-0.3
	comp=Z,5.0nm,0.8s,baz=21,slow=12,SNR=7.8						
STKA				LR	LR	10 23 14.5	
	comp=Z,2μm,18.3s,baz=3.7,slow=38						
	comp=Z,5.0nm,0.8s						
STKA	Stephens Creek	28.47	187	P	P	10 11 03.0	+1.9
STKA				IAmb	IAmb	10 11 59.9	
	comp=Z,64nm,1.3s						
STKA	Stephens Creek	28.47	187	P	P	10 11 03.0	+1.9
STKA				pmax	pmax		
	comp=Z,64nm,1.3s						
TGY	Tagaytay City	29.85	306	LR	LR	10 23 22.1	
	comp=Z,1μm,19.2s,baz=105,slow=37						
HTT	Hallett	30.40	191	P	P	10 11 22.1	+3.8
BBOO	Buckleboo	30.45	196	P	P	10 11 17.6	-1.0
	comp=Z,26nm,2.1s						
BBOO	Buckleboo	30.45	196	P	P	10 11 18.9	+0.3
BBOO				IAmb	IAmb	10 11 23.8	
	comp=Z,26nm,1.1s						
MBWA	Marble Bar	30.49	233	P	P	10 11 19.2	+0.1
	comp=Z,15nm,1.3s						
MBWA	Marble Bar	30.49	233	P	P	10 11 19.0	-0.1
JCJ	Chichijima	30.55	354	LR	LR	10 22 58.6	
	comp=Z,594nm,18.9s,baz=153,slow=35						
PSAC2	Pilbara Seismi	30.57	232	P	P	10 11 20.3	+0.5
	comp=Z,20nm,1.0s						
PSA00	Pilbara Seismi	30.61	232	P	P	10 11 20.5	+0.3
	comp=Z,20nm,1.3s						
PSA00	Pilbara Seismi	30.61	232	P	P	10 11 20.0	-0.3
PSAB3	Pilbara Seismi	30.62	232	P	P	10 11 20.3	0.0
	comp=Z,19nm,1.6s						
PSAC1	Pilbara Seismi	30.62	232	P	P	10 11 20.9	+0.6
	comp=Z,20nm,1.3s						
FORT	Forrest	31.68	209	P	P	10 11 30.3	+0.8
FORT	Forrest	31.68	209	P	P	10 11 28.6	-1.0
FORT				IAmb	IAmb	10 11 31.9	
	comp=Z,20nm,0.7s						
SBUM	Sibu	33.63	280	P	P	10 11 46.1	-0.7
SBUM				IAmb	IAmb	10 11 53.4	
	comp=Z,32nm,1.6s						
SBUM	Sibu	33.63	280	P	P	10 11 49.3	+2.5
JOW	Kunigami	34.35	332	LR	LR	10 22 54.5	
	comp=Z,3μm,20.9s,baz=132,slow=31						
MEEK	Meekatharra	34.43	225	P	P	10 11 53.7	+0.1
	comp=Z,29nm,0.8s						
MSVF	Nonsavu	35.04	116	LR	LR	10 26 33.4	
	comp=Z,754nm,18.3s,baz=329,slow=37						
TPI	Tanjungpandan	37.64	270	P	P	10 12 22.7	+1.4
	comp=Z,699nmcomp=Z,33nm,1.2s						
MORW	Morawa	37.71	224	P	P	10 12 22.1	+0.4
	comp=Z,37nm,1.6s						
LEM	Lembang	37.71	263	LR	LR	10 30 07.6	
	comp=Z,448nm,19.9s,baz=59,slow=40						
KLBR	Kellerberrin	38.15	220	P	P	10 12 26.5	+1.0
	comp=Z,34nm,1.0s						
BLDU	Ballidu	38.20	222	P	P	10 12 24.7	-1.2
	comp=Z,26nm,1.5s						
JNU	Nakatsue	38.89	340	LR	LR	10 25 54.5	
	comp=Z,1μm,20.5s,baz=150,slow=32						
NWAO	Narrogin (SRO)	39.37	219	LR	LR	10 30 06.6	
	comp=Z,6μm,19.1s,baz=42,slow=38						
MJAR	Matsushiro Arr	40.37	351	P	P	10 12 43.5	-0.3
	comp=Z,3.0nm,0.8s,baz=158,slow=5.1,SNR=5.6						
	comp=Z,3.0nm,0.8s						
KLSI		40.53	267	P	P	10 12 49.1	+3.6
KASI	Kota Agung	40.77	266	P	P	10 12 47.9	+0.4
	comp=Z,48nm,1.1s						
MDSI	Maura Dua	41.08	267	P	P	10 12 48.9	-1.1
	comp=Z,1μmcomp=Z,66nm,1.2s						
SSE	Sheshan	41.38	328	P	P	10 12 53.4	+1.2
SSE				S	S	10 19 10.0	+2.9
SSE				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SSE				pmax	pmax		
	comp=Z,110nm,4.9s						
SSE				L	L		
	comp=Z,700nm,20.5s						
SSE				L	L		
	comp=Z,520nm,20.2s						
QIZ	Qiongzhong	41.48	304	P	P	10 12 52.7	-0.5
QIZ				S	S	10 19 09.3	+0.4
QIZ				pmax	pmax		
	comp=Z,510nm,3.5s						
QIZ				L	L		
	comp=Z,650nm,18.6s						
QIZ				L	L		
	comp=Z,820nm,19.9s						
QIZ				L	L		
	comp=Z,2μm,28.2s						
MYKOM	Kota Tinggi	41.80	277	P	P	10 12 56.7	+0.7
MYKOM				IAmb	IAmb	10 13 01.0	
	comp=Z,45nm,1.5s						
NJ2	Nanjing	43.38	327	eP	P	10 13 08.8	+0.3
NJ2				pmax	pmax		
	comp=Z,53nm,1.5s						
AFI	Afiamalu	43.56	106	LR	LR	10 29 30.8	
	comp=Z,690nm,19.9s,baz=312,slow=34						
KSRS	Korea Array	43.83	340	P	P	10 13 11.6	-0.4
	comp=Z,5.1nm,0.9s,baz=159,slow=8.7,SNR=13						
KSRS				LR	LR	10 28 55.4	
	comp=Z,1μm,20.3s,baz=155,slow=33						
	comp=Z,5.1nm,0.9s						
CNSH	ChangSha	44.31	317	P	P	10 13 16.0	0.0
CNSH				S	S	10 19 51.2	+0.9
CNSH				L	L		
	comp=Z,860nm,19.2s						
CNSH				L	L		
	comp=Z,1μm,20.0s						
CNSH				L	L		
	comp=Z,2μm,23.2s						
GULI	GuiLin	44.37	312	P	P	10 13 17.7	+1.1
GULI				S	S	10 19 58.0	+6.7
GULI				pmax	pmax		
	comp=Z,29nm,1.4s						
GULI				pmax	pmax		
	comp=Z,410nm,4.3s						
GULI				L	L		
	comp=Z,730nm,20.6s						
GULI				L	L		
	comp=Z,470nm,21.7s						
GULI				L	L		
	comp=Z,950nm,20.9s						
WHN	Wuhan	44.95	321	P	P	10 13 21.7	+0.6
WHN				S	S	10 19 55.6	-3.9
WHN				pmax	pmax		
	comp=Z,42nm,1.0s						
WHN				pmax	pmax		
	comp=Z,2μm,4.2s						
WHN				L	L		
	comp=Z,980nm,11.5s						
WHN				L	L		
	comp=Z,1μm,13.5s						
WHN				L	L		
	comp=Z,2μm,15.8s						
URZ	Urewera	45.15	144	LR	LR	10 30 41.7	
	comp=Z,788nm,19.2s,baz=314,slow=34						
KULM	Kulim	45.49	281	P	P	10 13 25.2	-0.5
KULM				IAmb	IAmb	10 13 31.2	
	comp=Z,54nm,1.6s						
RPZ	Rata Peaks	46.08	154	LR	LR	10 30 23.1	
	comp=Z,2μm,21.9s,baz=33,slow=33						
RPSI	Rantau Prapat	46.80	277	P	P	10 13 35.2	-0.8
PSI	Prapat	46.81	277	P	P	10 13 35.2	-1.1
PSI				pmax	pmax		
	comp=Z,89nm,1.4s						
JKA	Kamikawa-asahi	47.44	357	P	P	10 13 41.8	+1.3
ASAJ	Asahikawa	47.44	357	P	P	10 13 41.8	+1.3
	comp=Z,10nm,0.8s,baz=213,slow=22,SNR=3.1						
	comp=Z,10nm,0.8s						
TIA	Tai'an	47.48	329	P	P	10 13 39.8	-1.2
TIA				S	S	10 20 32.2	-3.5
TIA				pmax	pmax		
	comp=Z,15nm,1.2s						
TIA				pmax	pmax		
	comp=Z,310nm,5.7s						

TIA L L
comp=Z,1μm,19.7s
TIA L L
comp=Z,1μm,14.6s
TIA L L
comp=Z,2μm,19.9s
DL2 Dalian 47.52 335 P **P** **10 13 43.0 +1.8**
DL2 S **S** **10 20 39.9 +3.8**
DL2 pmax pmax
comp=Z,31nm,1.2s
DL2 pmax pmax
comp=Z,310nm,4.8s
DL2 L L
comp=Z,1μm,19.8s
DL2 L L
comp=Z,880nm,19.3s
DL2 L L
comp=Z,2μm,19.6s
GYA Guiyang 47.79 311 ⇑P **P** **10 13 45.5 +1.8**
GYA S **S** **10 20 39.6 -1.1**
GYA pmax pmax
comp=Z,8.0nm,1.0s
GYA pmax pmax
comp=Z,170nm,3.6s
GYA L L
comp=Z,320nm,19.7s
GYA L L
comp=Z,270nm,13.8s
GYA L L
comp=Z,320nm,21.3s
LYN LuoYang 48.86 323 *e*P **P** **10 13 51.7 +0.1**
LYN S **S** **10 20 56.0 +0.7**
LYN SS **SS** **10 24 24.7 -1.5**
LYN pmax pmax
comp=Z,270nm,8.0s
LYN L L
comp=Z,3μm,18.4s
LYN L L
comp=Z,1μm,19.6s
LYN L L
comp=Z,3μm,19.7s
USRK Ussuriysk Ar. 48.95 347 P **P** **10 13 51.7 -0.5**
comp=Z,7.4nm,0.8s,baz=169,slow=8.2,SNR=8.4
comp=Z,7.4nm,0.8s
HNS HongShan 49.64 328 ⇑P **P** **10 13 56.8 -0.8**
HNS S **S** **10 21 08.0 +1.8**
HNS pmax pmax
comp=Z,24nm,0.9s
HNS L L
comp=Z,1μm,19.9s
HNS L L
comp=Z,510nm,20.2s
HNS L L
comp=Z,2μm,19.4s
KMI2 Kunming 50.17 307 P **P** **10 14 03.4 +1.3**
KMI2 S **S** **10 21 12.2 -2.3**
KMI2 pmax pmax
comp=Z,28nm,1.1s
KMI2 pmax pmax
comp=Z,320nm,4.8s
KMI2 L L
comp=Z,630nm,23.2s
KMI2 L L
comp=Z,460nm,19.5s
KMI2 L L
comp=Z,990nm,24.5s
YSS Yuzhno-Sakhali 50.27 358 *e*P **P** **10 14 06.1 +4.0**
YSS pmax pmax
comp=Z,10.0nm,1.0s
CN2 Changchun 50.35 341 P **P** **10 14 04.0 +1.1**
CN2 S **S** **10 21 15.2 -0.7**
CN2 SS **SS** **10 24 46.4 -3.5**
CN2 L L
comp=Z,770nm,17.0s
CN2 L L
comp=Z,340nm,17.0s
CMAR Chiang Mai Arr 50.62 297 P **P** **10 14 05.2 -0.2**
comp=Z,6.4nm,1.0s,baz=113,slow=5.8,SNR=30
CMAR LR LR 10 33 07.1
comp=Z,335nm,21.7s,baz=110,slow=33
comp=Z,6.4nm,1.0s
CMAR Chiang Mai Arr 50.62 297 *i* P **P** **10 14 05.9 +0.5**
CMAR pmax pmax
comp=Z,6.0nm,1.0s
XAN Xi'an 50.70 320 P **P** **10 14 04.9 -0.9**
XAN S **S** **10 21 17.4 -3.8**
XAN pmax pmax
comp=Z,24nm,1.4s
XAN L L
comp=Z,780nm,16.5s
XAN L L
comp=Z,680nm,16.5s
XAN L L
comp=Z,910nm,17.9s
CHTO Chiang Mai 50.75 298 P **P** **10 14 06.2 -0.2**
CHTO IAmb IAmb 10 15 13.0
comp=Z,29nm,1.4s
CHTO Chiang Mai 50.75 298 P **P** **10 14 06.2 -0.2**
CHTO pmax pmax
comp=Z,29nm,1.4s
BNX BinXian 51.53 344 ⇓P **P** **10 14 11.4 -0.3**
BNX pmax pmax
comp=Z,18nm,1.2s
PZH PanZhiHua 51.61 308 P **P** **10 14 12.1 -0.7**
PZH PP **PP** **10 16 11.6 +1.2**
PZH S **S** **10 21 34.7 +0.5**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,240nm,5.7s
PZH L L
comp=Z,380nm,16.3s
PZH L L
comp=Z,440nm,18.4s
PZH L L
comp=Z,510nm,20.2s
CD2 Chengdu 52.35 314 P **P** **10 14 18.2 0.0**
CD2 S **S** **10 21 46.6 +2.6**
CD2 pmax pmax
comp=Z,60nm,1.0s
CD2 pmax pmax
comp=Z,660nm,4.8s
CD2 L L
comp=Z,760nm,16.5s
CD2 L L
comp=Z,710nm,14.0s
CD2 L L
comp=Z,780nm,15.9s
TNCH TengChong 53.54 305 P **P** **10 14 26.8 -0.5**
TNCH sP pwP 10 14 35.0 +2.4
TNCH S **S** **10 21 54.2 -6.6**
TNCH pmax pmax
comp=Z,57nm,0.8s
TNCH pmax pmax
comp=Z,380nm,4.0s
TNCH L L
comp=Z,260nm,8.4s
TNCH L L
comp=Z,410nm,12.1s
TNCH L L
comp=Z,890nm,26.0s
KLR Kul'dur 53.81 349 P **P** **10 14 28.5 0.0**
comp=Z,7.1nm,0.9s,baz=168,slow=6.8,SNR=9.3
KLR LR LR 10 35 49.6
comp=Z,462nm,19.4s,baz=167,slow=34
comp=Z,7.1nm,0.9s
KLR Kul'dur 53.81 349 ⇑*i*P **P** **10 14 29.2 +0.7**
KLR pmax pmax
comp=Z,9.0nm,0.9s
HHC Hu-ho-hao-te 53.83 329 *e*P **P** **10 14 28.2 -0.8**
HHC S **S** **10 22 02.0 -2.1**
HHC sS sS 10 22 11.8 +3.5
HHC pmax pmax
comp=Z,12nm,1.0s
HHC pmax pmax
comp=Z,87nm,3.9s
HHC L L
comp=Z,570nm,21.8s
HHC L L
comp=Z,740nm,20.8s
HHC L L
comp=Z,1μm,20.8s
TYV Tymovskoe 54.18 358 *e*P **P** **10 14 33.8 +2.6**
TYV pmax pmax
comp=Z,7.0nm,1.2s
TYV pmax pmax
comp=Z,100nm,4.6s

BTO2 Baotou 54.65 327 *e*P **P** **10 14 34.8 -0.2**
BTO2 pP **pwP** **10 14 40.0 -0.3**
BTO2 S **S** **10 22 15.2 0.0**
BTO2 pmax pmax
comp=Z,20nm,0.8s
BTO2 pmax pmax
comp=Z,500nm,4.8s
BTO2 L L
comp=Z,2μm,15.2s
BTO2 L L
comp=Z,2μm,17.2s
BTO2 L L
comp=Z,2μm,17.5s
LZH Lanzhou 55.23 319 *e*P **P** **10 14 39.8 +0.4**
LZH sP pwP 10 14 46.1 +1.4
LZH S **S** **10 22 25.2 +2.0**
LZH SS **SS** **10 26 05.3 -2.4**
LZH pmax pmax
comp=Z,36nm,1.6s
LZH pmax pmax
comp=Z,360nm,4.3s
LZH L L
comp=Z,710nm,17.1s
LZH L L
comp=Z,690nm,18.4s
LZH L L
comp=Z,1μm,16.8s
LZDM Lanzhou Array 55.25 319 P **P** **10 14 40.0 +0.3**
comp=Z,1.7nm,0.4s,baz=115,slow=10.0,SNR=11
LZDM LR LR 10 38 09.2
comp=Z,320nm,18.6s,baz=105,slow=36
comp=Z,1.7nm,0.4s
HEH HeiHe 55.70 346 *e*P **P** **10 14 41.4 -0.8**
HEH pP **pwP** **10 14 46.7 -1.0**
HEH S **S** **10 22 28.3 -0.4**
HEH pmax pmax
comp=Z,13nm,1.3s
HEH pmax pmax
comp=Z,230nm,4.6s
HEH L L
comp=Z,500nm,14.8s
HEH L L
comp=Z,370nm,14.4s
HEH L L
comp=Z,550nm,16.5s
RAR Rarotonga 56.12 113 LR LR 10 36 22.3
comp=Z,173nm,21.9s,baz=284,slow=33
PETK Petropavlovsk- 57.33 9 P **P** **10 14 55.9 +2.1**
comp=Z,5.3nm,0.8s,baz=152,slow=6.7,SNR=6.9
PETK LR LR 10 35 35.5
comp=Z,353nm,21.3s,baz=188,slow=32
comp=Z,5.3nm,0.8s
PETK Petropavlovsk- 57.33 9 **P** **10 14 53.5 -0.3**
BRDH Bariadhala 58.49 299 LR LR 10 38 35.6
comp=Z,288nm,21.4s,baz=107,slow=34
ZEA Zeya 58.99 348 *e*P **P** **10 15 06.3 +0.9**
ZEA pmax pmax
comp=N,20nm,1.4s
ZEA pmax pmax
comp=Z,20nm,1.2s
GTA2 Gaotai 59.84 320 P **P** **10 15 11.9 +0.2**
GTA2 S **S** **10 23 22.3 -1.3**
GTA2 pmax pmax
comp=Z,11nm,1.3s
GTA2 pmax pmax
comp=Z,260nm,6.3s
GTA2 L L
comp=Z,540nm,18.4s
GTA2 L L
comp=Z,320nm,19.0s
GTA2 L L
comp=Z,470nm,18.7s
SHEM Shemya Is, Ala 61.03 20 LR LR 10 37 46.4
comp=Z,724nm,19.8s,baz=213,slow=32
ULN Ulaanbaatar 61.12 332 P **P** **10 15 20.2 -0.1**
ULN IAmb IAmb 10 15 26.8
comp=Z,47nm,2.0s
ULN Ulaanbaatar 61.12 332 ⇑*i*P **P** **10 15 20.6 +0.3**
ULN pmax pmax
comp=Z,7.0nm,1.0s
SONM Songino Array 61.41 331 P **P** **10 15 22.1 -0.2**
comp=Z,6.1nm,1.1s,baz=151,slow=5.5,SNR=16
SONM LR LR 10 41 21.0
comp=Z,868nm,19.5s,baz=145,slow=36
comp=Z,6.1nm,1.1s
SONM Songino Array 61.41 331 P **P** **10 15 21.5 -0.8**
SONM Songino Array 61.41 331 P **P** **10 15 21.5 -0.8**
SONM pmax pmax
comp=Z,7.0nm,1.1s
LSA Lhasa 61.42 307 P **P** **10 15 20.3 -2.8**
LSA pmax pmax
comp=Z,9.0nm,1.1s
GOMU GeErMu 61.46 315 P **P** **10 15 22.6 -0.5**
GOMU pP pP 10 15 25.7 0.0
GOMU sP pwP 10 15 29.7 +1.2
GOMU S **S** **10 23 44.9 0.0**
GOMU pmax pmax
comp=Z,6.0nm,0.9s
GOMU L L
comp=Z,440nm,14.3s
GOMU L L
comp=Z,700nm,14.8s
GOMU L L
comp=Z,830nm,14.9s
MA2 Magadan 63.01 3 LR LR 10 40 26.4
comp=Z,155nm,20.8s,baz=188,slow=34
MA2 Magadan 63.01 3 P **P** **10 15 33.6 +1.0**
MA2 Magadan 63.01 3 ⇑*i*P **P** **10 15 33.8 +1.2**
MA2 pmax pmax
comp=Z,7.0nm,1.0s
MA2 Magadan 63.01 3 P **P** **10 15 31.9 -0.7**
comp=Z,12nm,1.0s
EVN Everest 64.35 303 IAmb IAmb 10 16 07.3
comp=Z,21nm,1.1s
ZAK Zakamensk 64.65 332 *e*P **P** **10 15 42.8 -0.9**
ZAK pmax pmax
comp=Z,12nm,1.2s
PPT Papeete 65.21 108 LR LR 10 42 02.5
comp=Z,171nm,18.9s,baz=288,slow=34
PPT2 Papeete2 65.21 108 *e*P **P** **10 15 44.3 -3.7**
comp=Z,42nm,24.0s
PPT2 *e*S **S** **10 24 29.1 -2.7**
comp=Z,329nm,41.0s
PPT2 *e*SS **SS** **10 28 43.7 -0.9**
comp=Z,68nm,24.0s
PPT2 *e*LQ LQ 10 32 20.9
comp=Z,502nm,28.8s
PPT2 *e*LR LR 10 35 16.4
comp=Z,774nm,31.8s
TLY Talaya 65.36 333 LR LR 10 42 16.7
comp=Z,1μm,21.6s,baz=124,slow=34
TLY Talaya 65.36 333 *ce*P **P** **10 15 49.4 +1.1**
TLY pmax pmax
comp=Z,9.0nm,1.3s
PALK Pallekele 65.39 280 LR LR 10 45 20.5
comp=Z,141nm,20.9s,baz=102,slow=37
TBI Tubuai 65.88 114 *e*P **P** **10 15 55.8 +3.7**
comp=Z,719nm,37.8s
TBI *e*S **S** **10 24 36.6 -3.1**
comp=Z,1μm,37.0s
TBI *e*SS **SS** **10 28 57.3 +2.6**
comp=Z,802nm,28.2s
TBI *e*LQ LQ 10 32 55.4
comp=Z,5μm,33.8s
TBI *e*LR LR 10 35 33.1
comp=Z,1μm,36.8s
TBI *e*LR LR 10 35 42.7
comp=Z,6μm,38.8s
YAK Yakutsk 66.42 352 LR LR 10 42 05.4
comp=Z,460nm,21.6s,baz=154,slow=33
YAK Yakutsk 66.42 352 *e*P **P** **10 15 55.0 +0.2**
YAK *e* 10 16 23.9
YAK *e* 10 18 19.5
YAK *e*PPP PPP 10 19 55.1
YAK *e*S **S** **10 24 46.8 +2.0**
YAK *e* 10 25 52.7
YAK *e*SS **SS** **10 29 03.3 +1.6**
YAK pmax pmax
comp=Z,20nm,1.3s
YAK pmax pmax
comp=N,8.0nm,1.0s
YAK pmax pmax
comp=E,6.0nm,1.2s
YAK pmax pmax
comp=Z,249nm,5.1s
YAK pmax pmax
comp=E,144nm,5.8s

YAK pmax pmax
comp=N,99nm,5.6s
YAK smax smax
comp=N,403nm,6.0s
YAK smax smax
comp=E,273nm,5.5s
SEY Seymchan 66.44 4 LR LR 10 43 14.5
comp=E,187nm,20.4s,baz=166,slow=34
SEY Seymchan 66.44 4 ⇑*i*P **P** **10 15 56.8 +1.9**
SEY pmax pmax
comp=Z,14nm,1.4s
MOY Mondy 66.58 332 *e*P **P** **10 15 56.2 0.0**
MOY pmax pmax
comp=Z,19nm,1.7s
KNGR Kungurtug, Tuv 67.63 329 ⇓*i*P **P** **10 16 03.5 +0.6**
KNGR pmax pmax
comp=Z,7.0nm,1.1s
NIKH Nikolski High 68.11 28 P **P** **10 16 06.2 +0.6**
baz=230
HYB Hyderabad 69.05 290 *e*P **P** **10 16 12.2 -0.1**
HYB *e*PP **PP** **10 18 44.5 -0.5**
HYB *e*S **S** **10 25 17.8 -0.2**
UNV Unalaska Valle 69.75 28 P **P** **10 16 16.7 +0.8**
baz=232
WMQ Urumqi 69.81 319 *e*P **P** **10 16 16.6 0.0**
WMQ pP pwP 10 16 21.9 -0.1
WMQ pmax pmax
comp=Z,13nm,0.9s
WMQ L L
comp=Z,410nm,20.3s
WMQ L L
comp=Z,360nm,21.3s
SPIA Saint Paul Isl 70.25 24 P **P** **10 16 19.4 +0.5**
baz=228
DGZ Jazzator, Alta 72.63 325 ⇓*i*P **P** **10 16 33.6 -0.1**
DGZ pmax pmax
comp=Z,10.0nm,1.1s
BILL Bilibino 72.85 8 ⇑*i*P **P** **10 16 37.0 +2.6**
BILL pmax pmax
comp=Z,10.0nm,1.3s
ZSN Zaisan 73.17 322 *e*P **P** **10 16 37.4 +0.7**
ZSN Zaisan 73.17 322 *e*P **P** **10 16 37.4 +0.7**
CHNA Chernabura Isl 73.64 30 P **P** **10 16 40.1 +0.8**
baz=239
M11K Mekoryuk 73.95 23 P **P** **10 16 41.2 +0.3**
baz=231
TAOE Nuku Hiva Isla 74.17 98 *e*P **P** 10 16 31.8 -12
comp=Z,36nm,24.9s
TAOE *e*S **S** **10 26 15.0 -2.5**
comp=Z,126nm,26.3s
TAOE *e*SS **SS** **10 31 01.0 -2.0**
comp=Z,107nm,30.1s
TAOE *e*LR LR 10 39 25.9
comp=Z,623nm,25.4s
GAMB Gambell 74.30 18 P **P** **10 16 44.0 +1.0**
baz=225
MK31 Makanchi Array 74.51 321 ⇑*i*P **P** **10 16 44.0 -0.7**
MKAR Makanchi Array 74.51 321 P **P** **10 16 44.2 -0.5**
comp=Z,2.1nm,0.7s,baz=106,slow=6.9,SNR=15
MKAR LR LR 10 47 59.1
comp=Z,360nm,21.2s,baz=88,slow=35
comp=Z,2.1nm,0.7s
MKAR Makanchi Array 74.51 321 P **P** **10 16 43.5 -1.1**
VNDA Vanda 74.52 176 LR LR 10 48 32.2
comp=Z,568nm,18.2s,baz=348,slow=35
MAKZ Makanchi 74.72 320 P **P** **10 16 45.0 -0.9**
MAKZ IAmb IAmb 10 16 52.8
comp=Z,42nm,1.8s
MAKZ Makanchi 74.72 320 P **P** **10 16 45.0 -0.9**
MAKZ pmax pmax
comp=Z,42nm,1.8s
SHLS Shalkode 75.08 316 *e*P **P** **10 16 46.4 -1.7**
SHLS Shalkode 75.08 316 *e*P **P** **10 16 46.5 -1.7**
M13K Dall Lake 75.08 24 P **P** **10 16 48.2 +0.6**
baz=234
O14K Tigyukauivet M 75.28 25 P **P** **10 16 49.3 +0.6**
baz=236
UZB Uzynbulak 75.38 316 *e*P **P** **10 16 49.7 -0.2**
UZB Uzynbulak 75.38 316 *e*P **P** **10 16 49.8 -0.2**
N14K Kuskokwak Cree 75.48 25 P **P** **10 16 51.0 +1.1**
baz=235
K13K Kusilvak Mount 75.50 22 P **P** **10 16 51.2 +1.3**
baz=232,SNR=11
KPKS Kokpek 75.72 316 *e*P **P** **10 16 51.9 +0.1**
KPKS Kokpek 75.72 316 *e*P **P** **10 16 52.0 +0.1**
TIXI Tiksi 75.76 355 LR LR 10 50 19.3
comp=Z,307nm,20.0s,baz=183,slow=36
TIXI Tiksi 75.76 355 P **P** **10 16 49.9 -1.3**
TIXI Tiksi 75.76 355 ⇓*i*P **P** **10 16 51.6 +0.4**
TIXI pmax pmax
comp=Z,9.0nm,1.1s
SATY Saty 75.78 316 *e*P **P** **10 16 52.2 0.0**
SATY Saty 75.78 316 *e*P **P** **10 16 52.2 0.0**
M14K Bethel 75.84 24 P **P** **10 16 52.6 +0.7**
baz=235
O15K Ungalikthiuk R 75.85 26 P **P** **10 16 52.7 +0.6**
baz=237
L14K Kuka Creek 75.90 23 IAmb IAmb 10 16 59.2
comp=Z,34nm,1.1s
L14K Kuka Creek 75.90 23 P **P** **10 16 52.5 +0.3**
baz=234
ZALV Zalesovo Beam 76.01 328 P **P** **10 16 51.9 -1.2**
comp=Z,1.2nm,0.4s,baz=116,slow=6.8,SNR=6.7
ZALV LR LR 10 49 27.1
comp=Z,1μm,20.6s,baz=125,slow=35
comp=Z,1.2nm,0.4s
ZALV Zalesovo Beam 76.01 328 *i* P **P** **10 16 54.7 +1.6**
ZALV pmax pmax
comp=Z,1.0nm,0.4s
R16K Pilot Point 76.02 28 P **P** **10 16 53.3 +0.3**
baz=240
CHIR Chirikof Islan 76.11 30 P **P** **10 16 54.0 +0.4**
baz=242
N15K Kwethluk River 76.28 25 P **P** **10 16 54.7 +0.3**
baz=237,SNR=5.1
M15K Kasigluk River 76.32 24 P **P** **10 16 55.5 +0.8**
baz=236
KDJ Kajisay 76.36 315 P **P** **10 16 55.2 -0.4**
KDJ Kajisay 76.36 315 P **P** **10 16 55.2 -0.4**
KDJ pmax pmax
comp=Z,12nm,1.1s
J14K Nanvaranak Lak 76.41 22 P **P** **10 16 55.6 +0.5**
baz=233
TDK Taldyqorghan 76.41 318 *e*P **P** **10 16 55.9 +0.3**
TDK pmax pmax
comp=Z,7.0nm,0.7s
TDK Taldyqorghan 76.41 318 *e*P **P** **10 16 55.9 +0.3**
comp=Z,6.8nm,0.7s
L15K Ungalak Mounta 76.56 23 P **P** **10 16 56.4 +0.4**
baz=235
P16K Nushagak River 76.58 26 P **P** **10 16 56.8 +0.6**
baz=239
R17L Mt. Peulik Vol 76.62 28 P **P** **10 16 57.0 +0.5**
baz=241
KSH2 Kashi 76.68 311 P **P** **10 16 57.6 +0.2**
KSH2 pmax pmax
comp=Z,10.0nm,1.2s
KSH2 L L
comp=Z,290nm,17.2s
KSH2 L L
comp=Z,340nm,20.6s
KSH2 L L
comp=Z,410nm,18.2s
TNA Tin City 76.71 18 P **P** **10 16 57.7 +1.0**
baz=226
MDOK Medeo 76.76 316 *e*P **P** **10 16 57.7 0.0**
MDOK Medeo 76.76 316 *e*P **P** **10 16 57.8 0.0**
TNSS Tian-Shan 76.79 316 *e*P **P** **10 16 58.0 -0.2**
TNSS Tian-Shan 76.79 316 *e*P **P** **10 16 58.1 -0.2**
O16K Kokwok River B 76.83 26 IAmb IAmb 10 17 04.2
comp=Z,27nm,1.1s
O16K Kokwok River B 76.83 26 P **P** **10 16 58.4 +0.9**
baz=239
ANM Nome 76.89 20 IAmb IAmb 10 17 04.7
comp=Z,19nm,1.2s
ANM Nome 76.89 20 P **P** **10 16 58.6 +0.8**
baz=231
K15K Wolf Creek Mou 76.90 23 P **P** **10 16 58.7 +0.8**
baz=235,SNR=5.1
N16K Nishlik Lake 77.00 25 P **P** **10 16 59.3 +0.7**
baz=238
Q16K King Salmon 77.00 27 P **P** **10 16 59.0 +0.5**
baz=240
NIL Nilore 77.13 305 **P** **10 16 59.6 -0.3**
NIL IAmb IAmb 10 17 23.0
comp=Z,21nm,0.8s

NIL	Nilore	77.13	305	P	P	10 16 59.6	-0.3
NIL				pmax	pmax		
	comp=Z,21nm,0.9s						
SEM	Semipalatinsk	77.13	323	eP	P	10 16 59.9	+0.1
SEM	Semipalatinsk	77.13	323	eP	P	10 16 59.9	+0.1
Q17K	Contact Creek	77.15	28	P	P	10 16 59.4	-0.1
	baz=241						
F14K	Arctic Creek	77.16	19	P	P	10 17 00.1	+0.8
	baz=230						
SII	Sitkinak Islan	77.16	30	P	P	10 17 00.0	+0.5
	baz=243						
M16K	Timber Creek	77.21	24	P	P	10 17 00.1	+0.4
	baz=238						
BOOM	Boomskoye usch	77.34	315	IAmb	IAmb	10 17 28.6	
	comp=Z,16nm,1.3s						
P17K	Kvichak River	77.35	27	P	P	10 17 01.0	+0.5
	baz=240						
L16K	Owhat River	77.38	24	P	P	10 17 01.1	+0.5
	baz=237						
ACHA	Angle Creek He	77.38	28	IAmb	IAmb	10 17 08.2	
	comp=Z,37nm,1.2s						
G15K	Niukluk	77.60	20	P	P	10 17 01.9	+0.1
	baz=232						
N17K	Nushagak Hills	77.70	25	P	P	10 17 02.3	-0.1
	baz=240						
J16K	Anvik River	77.81	22	P	P	10 17 02.9	-0.2
	baz=236						
F15K	North Star Dit	77.84	19	P	P	10 17 04.3	+1.1
	baz=232,SNR=13						
OHAK	Old Harbor	77.90	29	P	P	10 17 04.0	+0.5
	baz=244						
P18K	Big Mountain,	77.99	27	P	P	10 17 04.3	+0.2
	baz=242						
H16K	Elim	78.00	20	P	P	10 17 04.5	+0.5
	baz=234						
M17K	Holitna River	78.04	24	P	P	10 17 04.4	0.0
	baz=239						
L17K	Donlin	78.07	24	P	P	10 17 04.3	-0.2
	baz=238						
I17K	Unalakleet	78.12	21	IAmb	IAmb	10 17 11.5	
	comp=Z,20nm,1.1s						
I17K	Unalakleet	78.12	21	P	P	10 17 04.7	0.0
	baz=236						
KURK	Kurchatov	78.21	323	P	P	10 17 04.7	-0.8
KURK	Kurchatov	78.21	323	⇓iP	P	10 17 05.2	-0.3
KURK				pmax	pmax		
	comp=Z,11nm,1.3s						
KURBB	Kurchatov Arra	78.23	323	P	P	10 17 04.6	-1.0
	comp=Z,2.9nm,0.9s,baz=108,slow=5.4,SNR=10						
KURBB				LR	LR	10 52 41.6	
	comp=Z,366nm,18.4s,baz=150,slow=36						
	comp=Z,2.9nm,0.9s						
N18K	Kilae Creek	78.33	25	P	P	10 17 06.2	+0.2
	baz=241						
K17K	Iditarod	78.38	23	P	P	10 17 06.8	+0.6
	baz=238,SNR=6.0						
AAK	Ala-Archa	78.41	315	LR	LR	10 51 51.2	
	comp=Z,528nm,20.5s,baz=102,slow=36						
AAK	Ala-Archa	78.41	315	P	P	10 17 05.4	-1.6
AAK	Ala-Archa	78.41	315	⇓iP	P	10 17 06.3	-0.7
AAK				pmax	pmax		
	comp=Z,10.0nm,1.4s						
G16K	Koyuk River	78.41	20	P	P	10 17 06.7	+0.5
	baz=234,SNR=13						
KDAK	Kodiak Island	78.49	29	LR	LR	10 46 47.8	
	comp=Z,409nm,20.5s,baz=243,slow=32						
KDAK	Kodiak Island	78.49	29	P	P	10 17 07.2	+0.3
	baz=244						
Q19K	Cape Douglas,	78.50	28	P	P	10 17 07.1	+0.2
	baz=243						
SGDS	Sogindy	78.53	315	eP	P	10 17 07.8	+0.2
M18K	Stony River	78.75	25	P	P	10 17 08.9	+0.6
	baz=241						
L18K	Granite Mounta	78.76	24	P	P	10 17 08.8	+0.5
	baz=240						
O19K	Port Alsworth	78.78	26	P	P	10 17 09.6	+1.2
	baz=242						
Q20K	Shuyak Island	78.94	28	P	P	10 17 10.0	+0.7
	baz=244						
H17K	Granite Mounta	78.99	21	IAmb	IAmb	10 17 16.6	
	comp=Z,22nm,1.1s						
H17K	Granite Mounta	78.99	21	P	P	10 17 10.5	+1.0
	baz=236,SNR=15						
N19K	Bonanza Creek	79.00	26	P	P	10 17 10.2	+0.4
	baz=242						
P19K	Oil Pt	79.02	27	P	P	10 17 09.5	-0.3
	baz=243						
G17K	Kiwalik Mounta	79.05	20	P	P	10 17 10.3	+0.4
	baz=235,SNR=15						
C16K	Lisburne Hills	79.26	17	P	P	10 17 11.8	+0.9
	baz=230						
J18K	Innoko River	79.39	23	P	P	10 17 12.3	+0.6
	baz=239						
F17K	Baldwin Pennin	79.40	19	P	P	10 17 12.2	+0.6
	baz=235						
L19K	White Mountain	79.49	24	P	P	10 17 12.8	+0.4
	baz=241,SNR=12						
M19K	Big River Lodg	79.55	25	IAmb	IAmb	10 17 19.8	
	comp=Z,23nm,1.1s						
M19K	Big River Lodg	79.55	25	P	P	10 17 13.7	+1.0
	baz=242						
D17K	Noatak River	79.57	18	P	P	10 17 13.4	+0.8
	baz=233,SNR=10						
E17K	Hotham Inlet	79.58	18	P	P	10 17 13.7	+1.0
	baz=234,SNR=16						
H18K	Honhosa River	79.66	21	P	P	10 17 14.0	+0.8
	baz=238,SNR=5.7						
HOM	Homer	79.74	27	P	P	10 17 14.0	+0.3
	baz=245						
G18K	Tagagawik	79.96	20	P	P	10 17 15.4	+0.6
	baz=237,SNR=6.0						
GCSA	Galena City Sc	79.98	22	P	P	10 17 15.8	+0.9
	baz=239,SNR=6.4						
C17K	DeLong Mountai	80.01	17	P	P	10 17 16.0	+1.0
	baz=232,SNR=12						
F18K	Selawik	80.01	19	P	P	10 17 16.2	+1.2
	baz=236						
M20K	Styx River	80.07	25	P	P	10 17 16.3	+0.8
	baz=243						
J19K	Poorman	80.08	23	IAmb	IAmb	10 17 22.4	
	comp=Z,33nm,1.3s						
J19K	Poorman	80.08	23	P	P	10 17 16.6	+1.1
	baz=240,SNR=5.6						
N20K	Mount Spurr	80.16	26	P	P	10 17 16.7	+0.7
	baz=244						
E18K	Tukpahlearik C	80.17	18	P	P	10 17 16.9	+1.0
	baz=235,SNR=14						
BRSE	Bradley Lake S	80.19	27	P	P	10 17 17.1	+0.9
	baz=246						
K20K	Telida	80.37	23	P	P	10 17 17.8	+0.8
	baz=242						
BTK	Batken	80.46	311	IAmb	IAmb	10 17 46.2	
	comp=Z,54nm,1.8s						
GAR	Garm	80.61	310	IAmb	IAmb	10 17 37.2	
	comp=Z,24nm,1.1s						
G19K	Purcell Mounta	80.64	20	IAmb	IAmb	10 17 25.3	
	comp=Z,24nm,1.1s						
G19K	Purcell Mounta	80.64	20	P	P	10 17 19.4	+0.9
	baz=239						
C18K	Utukok River	80.70	17	P	P	10 17 19.6	+0.8
	baz=234						
DZA	Taraz	80.72	314	eP	P	10 17 19.7	+0.3
DZA				pmax	pmax		
	comp=Z,5.0nm,0.5s						
DZA	Taraz	80.72	314	eP	P	10 17 19.7	+0.3
	comp=Z,5.2nm,0.5s						
F19K	Shaleruckik Mo	80.77	20	P	P	10 17 20.0	+1.0
	baz=238						
SKT	Skwentna	80.79	25	P	P	10 17 20.0	+0.6
	baz=244						
PPLA	Purkeypile	80.92	24	P	P	10 17 20.5	+0.3
	baz=244						
SEW	Seward	80.93	27	P	P	10 17 20.8	+0.8
	baz=247						
H20K	Anotleneega Mo	81.09	21	P	P	10 17 21.4	+0.5
	baz=241						
RC01	Rabbit Creek A	81.20	26	P	P	10 17 22.4	+0.8
	baz=246,SNR=5.0						
E19K	Redstone River	81.28	19	IAmb	IAmb	10 17 28.6	
	comp=Z,31nm,1.0s						
E19K	Redstone River	81.28	19	P	P	10 17 22.4	+0.6
	baz=238						
M22K	Willow	81.30	26	P	P	10 17 22.8	+0.8
	baz=246						
CHUM	Lake Minchumin	81.31	23	P	P	10 17 22.8	+0.8
	baz=244						
L22K	Petersville	81.35	25	IAmb	IAmb	10 17 27.4	
	comp=Z,23nm,1.0s						
KKAR	Karatay Array	81.36	314	P	P	10 17 22.0	-0.8
KKAR	Karatay Array	81.36	314	P	P	10 17 22.0	-0.8
CHGR	Chuyangaron	81.42	310	IAmb	IAmb	10 17 30.9	
	comp=Z,21nm,1.0s						
CHGR	Chuyangaron	81.42	310	⇓iP	P	10 17 23.0	-0.3
CHGR				pmax	pmax		
	comp=Z,16nm,1.2s						
C19K	Lookout Ridge	81.44	17	IAmb	IAmb	10 17 29.6	
	comp=Z,30nm,1.1s						
C19K	Lookout Ridge	81.44	17	P	P	10 17 23.5	+0.8
	baz=236						
IUG	Iuzhnay	81.49	313	eP	P	10 17 23.9	+0.3
IUG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
IUG	Iuzhnay	81.49	313	eP	P	10 17 23.9	+0.3
	comp=Z,9.5nm,1.1s						
CUT	Chulitna	81.51	25	P	P	10 17 23.7	+0.6
	baz=246						
D19K	Kuna River	81.55	18	IAmb	IAmb	10 17 29.7	
	comp=Z,23nm,1.1s						
D19K	Kuna River	81.55	18	P	P	10 17 24.0	+0.7
	baz=237,SNR=10						
F20K	Avaraart Lake	81.57	20	P	P	10 17 23.6	+0.3
	baz=240						
A19K	Wainwright	81.65	16	P	P	10 17 24.2	+0.6
	baz=234,SNR=12						
PMR	Palmer	81.67	26	P	P	10 17 24.6	+0.6
	baz=247						
IMAR	Indian Mountai	81.74	21	P	P	10 17 25.8	+1.5
BRLS	Borolday	81.83	314	eP	P	10 17 25.5	+0.2
BRLS	Borolday	81.83	314	eP	P	10 17 25.5	+0.2
CHM	Chimkent	81.84	313	eP	P	10 17 25.4	0.0
CHM	Chimkent	81.84	313	eP	P	10 17 25.4	0.0
P23K	Montague Islan	81.84	28	P	P	10 17 25.0	0.0
	baz=248						
KNK	Knik Glacier	81.90	26	P	P	10 17 24.9	-0.4
	baz=247						
H21K	Melozitna Rive	81.93	22	P	P	10 17 25.7	+0.4
	baz=243						
BPAW	Bear Paw Mtn.	81.93	23	P	P	10 17 25.4	0.0
	baz=245						
TRF	Thorofare Moun	81.94	24	P	P	10 17 25.4	-0.2
	baz=245						
E20K	Nigu River	82.03	19	P	P	10 17 26.8	+1.0
	baz=239,SNR=7.0						
G21K	Allakaket	82.08	21	P	P	10 17 26.7	+0.7
	baz=242,SNR=5.2						
D20K	Etivluk River	82.13	18	IAmb	IAmb	10 17 32.8	
	comp=Z,19nm,1.0s						
D20K	Etivluk River	82.13	18	P	P	10 17 26.9	+0.6
	baz=239						
Q23K	Middleton Isla	82.14	29	P	P	10 17 26.5	+0.1
	baz=250						
GLI	Glacier Island	82.31	27	P	P	10 17 27.6	+0.2
	baz=249						
M23K	Glacier View	82.37	26	P	P	10 17 28.1	+0.4
	baz=248						
NRIK	Noril'sk	82.39	342	P	P	10 17 26.9	-0.6
	comp=Z,15nm,1.1s,baz=118,slow=6.5,SNR=12						
NRIK				LR	LR	10 55 19.4	
	comp=Z,587nm,18.2s,baz=119,slow=37						
	comp=Z,15nm,1.1s						
NRIK	Noril'sk	82.39	342	IAmb	IAmb	10 17 33.0	
	comp=Z,22nm,0.9s						
WAT1	Susitna Watana	82.41	25	P	P	10 17 28.5	+0.5
	baz=247						
F21K	Alatna River	82.42	20	P	P	10 17 28.8	+1.0
	baz=242						
MLY	Manley	82.43	23	P	P	10 17 28.9	+0.9
	baz=245,SNR=14						
RND	Reindeer	82.51	24	P	P	10 17 27.8	-0.7
RND	Reindeer	82.51	24	P	P	10 17 27.8	-0.7
RND				pmax	pmax		
	comp=Z,32nm,1.0s						
SCM	Sheep Creek Mo	82.56	26	P	P	10 17 29.6	+0.8
	baz=248						
H22K	Ishtalitna Cre	82.56	22	P	P	10 17 29.5	+0.8
	baz=244						
MCK	McKinley	82.61	24	P	P	10 17 29.3	+0.3
	baz=247,SNR=6.9						
B20K	Meade River	82.65	17	P	P	10 17 29.6	+0.6
	baz=238						
WAT6	Susitna Watana	82.66	25	P	P	10 17 29.8	+0.4
	baz=248						
EYAK	Cordova Ski Ar	82.81	28	P	P	10 17 30.9	+0.9
	baz=250						
NEA2	Nenana	82.90	23	IAmb	IAmb	10 17 35.7	
	comp=Z,20nm,1.1s						
NEA2	Nenana	82.90	23	P	P	10 17 31.3	+0.9
	baz=246,SNR=7.3						
C21K	Knifeblade Rid	82.93	18	P	P	10 17 31.1	+0.7
	baz=240						
DHY	Denali Highway	83.00	25	IAmb	IAmb	10 17 37.1	
	comp=Z,24nm,1.0s						
DHY	Denali Highway	83.00	25	P	P	10 17 31.5	+0.4
	baz=248,SNR=6.0						
I23K	Minto, Yukon-K	83.01	23	P	P	10 17 31.4	+0.5
	baz=246						
KLU	Klutina	83.06	27	P	P	10 17 31.9	+0.6
	baz=250						
M24K	Tolsona, Glenn	83.16	26	P	P	10 17 32.6	+0.7
	baz=249						
B21K	Ikpikpuk River	83.21	18	P	P	10 17 32.9	+1.1
	baz=241						
KAIM	Kayak Island	83.23	29	P	P	10 17 32.9	+0.8
	baz=251						
E22K	Anaktuvuk Pass	83.41	20	P	P	10 17 33.8	+0.8
	baz=243						
G23K	Bananza Creek	83.41	21	P	P	10 17 34.0	+0.9
	baz=245						
CCB	Clear Creek Bu	83.42	23	P	P	10 17 31.8	-1.3
D22K	Ayikyak River	83.46	19	IAmb	IAmb	10 17 39.8	
	comp=Z,15nm,1.1s						
D22K	Ayikyak River	83.46	19	P	P	10 17 33.9	+0.6
	baz=242						
BMRM	Bremner River	83.48	27	P	P	10 17 33.8	+0.2
	baz=251						
COLA	College	83.49	23	P	P	10 17 35.5	+2.1
COLA	College	83.49	23	P	P	10 17 35.5	+2.1
COLA	College	83.49	23	P	P	10 17 34.1	+0.7
	baz=248						
COLD	Coldfoot	83.56	21	P	P	10 17 34.5	+0.7
	baz=245,SNR=5.5						
HDA	Harding Lake	83.67	24	IAmb	IAmb	10 18 22.6	
	comp=Z,26nm,1.5s						
HDA	Harding Lake	83.67	24	P	P	10 17 35.0	+0.6
	baz=248						
N25K	Chitina, Valde	83.69	27	P	P	10 17 35.2	+0.5
	baz=251						
HARP	HAARP	83.71	26	P	P	10 17 35.5	+0.9
	baz=250						
POKR	Poker Plat Res	83.75	23	P	P	10 17 35.9	+1.1
	baz=248						
BVAR	Borovoye Array	83.77	324	P	P	10 17 34.5	-0.6
	comp=Z,5.2nm,0.8s,baz=101,slow=6.2,SNR=16						
BVAR				LR	LR	10 56 15.7	
	comp=Z,365nm,18.6s,baz=97,slow=37						
	comp=Z,5.2nm,0.8s						
PAX	Paxson	83.77	25	P	P	10 17 35.0	0.0
	baz=250						
BORK	Borovoye	83.82	324	P	P	10 17 34.3	-1.0
BORK				IAmb	IAmb	10 17 41.0	
	comp=Z,9.9nm,0.8s						
BORK	Borovoye	83.82	324	⇑iP	P	10 17 34.8	-0.6
BORK				pmax	pmax		
	comp=Z,15nm,1.4s						
IL31		83.83	24	P	P	10 17 33.7	-1.4
IL31				IAmb	IAmb	10 17 39.7	
	comp=Z,24nm,1.1s						
ILAR	Eielson Array	83.83	24	P	P	10 17 33.8	-1.4
	comp=Z,2.9nm,0.8s,baz=254,slow=4.7,SNR=26						
ILAR				LR	LR	10 53 24.6	
	comp=Z,336nm,19.1s,baz=252,slow=35						
	comp=Z,2.9nm,0.8s						
ILAR	Eielson Array	83.83	24	P	P	10 17 34.2	-1.0
H24K	Noodor Dome	83.85	22	P	P	10 17 36.0	+0.6
	baz=247						
MAW	Mawson	83.93	202	LR	LR	10 51 20.0	
	comp=Z,365nm,21.5s,baz=76,slow=33						
K24K	Donnelly Dome	83.93	25	P	P	10 17 36.4	+0.6
	baz=250						
CRQE	Cirque	84.11	28	P	P	10 17 37.2	+0.3
	baz=252						
E23K	Chandalar	84.12	20	P	P	10 17 37.5	+0.8
	baz=246						
D23K	Nanushuk River	84.15	19	P	P	10 17 37.5	+0.7
	baz=244						
RIDG	Independent Ri	84.30	25	P	P	10 17 38.1	+0.5
	baz=250,SNR=6.7						
G24K	Hadweenzic Riv	84.33	22	P	P	10 17 38.0	+0.2
	baz=248						
MCARA	McCarthy VSAT	84.34	27	P	P	10 17 38.6	+0.7
	baz=252						
TOLK	Toolik Lake Re	84.38	20	P	P	10 17 38.8	+0.9
	baz=246						
J25K	Salcha River,	84.39	24	P	P	10 17 38.5	+0.4
	baz=250						
MESA	MESA	84.48	29	P	P	10 17 39.5	+0.7
	baz=253						
E24K	Your Creek	84.51	20	P	P	10 17 39.7	+1.0
	baz=247						
C23K	Itkillik River	84.55	18	P	P	10 17 39.8	+1.1
	baz=244						
DOT	Dot Lake	84.60	25	IAmb	IAmb	10 17 45.1	
	comp=Z,24nm,1.0s						
PRP	Porcupine Dome	84.64	23	P	P	10 17 40.2	+0.7
	baz=250						
M26K	Nabesna, AK	84.67	26	P	P	10 17 40.6	+1.0
	baz=252						
L26K	Log Cabin Wild	84.70	26	P	P	10 17 40.5	+0.8
	baz=252						
SCRK	Sand Creek	84.74	25	P	P	10 17 40.9	+0.9
	baz=251						
CTG	Chitna Glacier	85.00	28	P	P	10 17 42.1	+0.8
	baz=254						
M27K	Edge Creek, AK	85.15	27	P	P	10 17 43.0	+0.9
	baz=253						
PINM	Pinnacle	85.28	29	P	P	10 17 43.1	+0.4
	baz=255						
F25K	Christian Rive	85.33	21	P	P	10 17 43.2	+0.4
	baz=249						
L27K	Beaver Creek,	85.38	26	P	P	10 17 44.1	+1.0
	baz=253						
BCAR	Beaver Creek A	85.40	26		P	10 17 44.6	+1.4
O28M	Mount Upton	85.48	28	P	P	10 17 44.7	+0.7
	baz=255						
I26K	Coal Creek Min	85.50	24	P	P	10 17 44.5	+0.9
	baz=252						
E25K	Arctic Village	85.54	21	P	P	10 17 44.7	+0.9
	baz=249						
BVCY	Beaver Creek	85.62	27	P	P	10 17 45.1	+0.8
	baz=254						
YUK3	Moose Creek	85.63	27	P	P	10 17 45.1	+0.5
	baz=254						
D25K	Kavik River	85.70	19	IAmb	IAmb	10 17 51.0	
	comp=Z,12nm,1.1s						
D25K	Kavik River	85.70	19	P	P	10 17 45.7	+1.1
	baz=248						
G26K	Porcupine Rive	85.79	22	P	P	10 17 45.9	+0.9
	baz=251						
YUK8	Steele Glacier	85.82	28	P	P	10 17 46.2	+0.6
	baz=255						
F26K	Sheenjek River	85.90	21	P	P	10 17 46.2	+0.6
	baz=251						
O29M	Mount Kennedy	86.14	29	P	P	10 17 47.9	+0.8
	baz=256						
I27K	Kandik River	86.21	23	P	P	10 17 48.2	+1.0
	baz=253						
YUK4	Talbot Arm	86.36	28	P	P	10 17 48.8	+0.6
	baz=256						
YUK6	Outpost Mounta	86.39	28	P	P	10 17 48.6	+0.1
	baz=256						
C26K	Camden Bay	86.40	19	P	P	10 17 49.0	+1.1
	baz=250						
H27K	Steamboat Moun	86.42	23	P	P	10 17 49.1	+0.9
	baz=253						
QSPA	South Pole Qui	86.47	180	P	P	10 17 48.7	+0.1
	comp=Z,5.4nm,0.9s,baz=308,slow=2.2,SNR=11						
QSPA				LR	LR	10 56 30.4	
	comp=Z,569nm,20.7s,baz=10.0,slow=36						
	comp=Z,5.4nm,0.9s						
QSPA	South Pole Qui	86.47	180	P	P	10 17 49.2	+0.6
QSPA				IAmb	IAmb	10 17 54.4	
	comp=Z,9.7nm,0.9s						
C27K	Jago River	86.69	19	IAmb	IAmb	10 17 56.3	
	comp=Z,12nm,1.1s						
C27K	Jago River	86.69	19	P	P	10 17 50.4	+1.0
	baz=251						
DAWY	Dawson	86.70	25	IAmb	IAmb	10 17 56.2	
	comp=Z,26nm,1.1s						
DAWY	Dawson	86.70	25	P	P	10 17 50.5	+0.9
	baz=255						
M29M	Somme Creek	86.71	27	IAmb	IAmb	10 17 55.8	
	comp=Z,21nm,1.2s						
M29M	Somme Creek	86.71	27	P	P	10 17 50.5	+0.8
	baz=256						
HYT	Haines Junctio	86.78	29	P	P	10 17 50.9	+0.7
	baz=257						
S31K	Pelican	86.80	32	P	P	10 17 51.0	+0.9
	baz=258						
I28M	Miner Creek	86.84	24	IAmb	IAmb	10 18 54.7	
	comp=Z,46nm,1.9s						
I28M	Miner Creek	86.84	24	P	P	10 17 50.7	+0.4
	baz=255						
P30M	Million Dollar	86.88	29	P	P	10 17 51.7	+1.1
	baz=258						
E27K	Coleen River	86.97	21	P	P	10 17 51.8	+0.9
	baz=253						
L29M	L29M	87.01	26	P	P	10 17 51.9	+0.7
	baz=256						
SIT	Sitka	87.10	33	P	P	10 17 52.3	+0.6
	baz=259						
N30M	Aishikik Lake	87.11	28	P	P	10 17 51.8	+0.1
	baz=258						
R31K	City Hall, Gus	87.15	31	P	P	10 17 51.8	0.0
	baz=259						
F28M	Old Crow	87.44	22	P	P	10 17 53.8	+0.7
	baz=255						
O30N	Mendenhall	87.44	29	P	P	10 17 53.7	+0.5
	baz=258						
K29M	Barlow Dome	87.45	26	P	P	10 17 53.8	+0.4
	baz=257						
I29M	Ogilvie Camp,	87.47	24	P	P	10 17 54.0	+0.7
	baz=256						
M30M	Minto, Yukon	87.49	27	P	P	10 17 53.5	0.0
	baz=258						
D27M	Malcolm River	87.50	20	P	P	10 17 54.3	+0.9
	baz=254						
SKAG	Skagway	87.56	30	P	P	10 17 54.4	+0.7
	baz=259						
S32K	Killisnoo	87.58	32	P	P	10 17 54.5	+0.6
	baz=260						
N31M	Braeburn, Yuko	87.73	28	P	P	10 17 54.8	+0.1
	baz=259						
R32K	Eaglecrest	87.75	31	P	P	10 17 55.1	+0.4
	baz=260						
WHY	Whitehorse	88.00	29	P	P	10 17 56.0	-0.1
	baz=260						
J30M	Hart River	88.12	25	P	P	10 17 57.5	+0.9
	baz=258						
U33K	Whale Pass	88.14	34	P	P	10 17 57.0	+0.4
	baz=261						
I30M	Mount Dempster	88.23	24	P	P	10 17 57.6	+0.5
	baz=258						
D28M	Stokes Point	88.28	20	P	P	10 17 58.2	+1.1
	baz=256						
EPYK	Eagle Plains	88.34	23	P	P	10 17 58.1	+0.6
	baz=258						
E29M	Blow River	88.35	21	P	P	10 17 58.0	+0.6
	baz=256						
P32M	Atlin	88.39	30	P	P	10 17 58.5	+0.6
	baz=260						
M31M	Drury Creek, Y	88.52	28	P	P	10 17 59.3	+0.9
	baz=260						
WRAK	Wrangell Islan	88.62	33	P	P	10 17 59.4	+0.6
	baz=262						
G30M	tAoh Zraii Nji	88.66	23	P	P	10 17 59.5	+0.5
	baz=258						
V35K	Ketchikan	88.87	35	P	P	10 18 00.5	+0.4
	baz=262						
P33M	Teslin, Yukon	88.94	30	P	P	10 18 00.9	+0.5
	baz=261						
F30M	Barrier River	88.96	22	P	P	10 18 00.4	+0.1
	baz=258						
Q32M	Nakina River	89.03	31	P	P	10 18 01.0	-0.1
	baz=262						
H31M	Peel River	89.18	24	P	P	10 18 02.5	+1.1
	baz=260						
G31M	Satah River	89.41	23	P	P	10 18 03.5	+1.2
	baz=260						
S34M	Telegraph Cree	89.47	32	P	P	10 18 03.8	+0.9
	baz=263						
ABKAR	Akbulak array	89.60	319	P	P	10 18 01.7	-2.0
F31M	Tsiigehtchic	89.70	22	P	P	10 18 03.9	+0.1
	baz=260						
R33M	Jennings River	89.75	31	P	P	10 18 04.1	-0.2

baz=263
INK **Inuvik** 89.92 22 LR LR 10 56 52.5
comp=Z,537nm,19.4s,baz=250,slow=34
INK **Inuvik** 89.92 22 P P 10 18 04.9 +0.1
baz=261
DLBC **Dease Lake** 90.12 32 LR LR 10 53 02.6
comp=Z,387nm,19.3s,baz=276,slow=32
DLBC **Dease Lake** 90.12 32 P P 10 18 06.4 +0.4
baz=264
BBB **Bella Bella** 90.60 38 LR LR 10 52 49.6
comp=Z,471nm,19.6s,baz=263,slow=32
WTLY **Watson Lake, Y** 90.92 30 P P 10 18 09.9 +0.2
baz=265
AKTO **Aktyubinsk** 90.95 320 LR LR 11 00 45.4
comp=Z,335nm,18.6s,baz=81,slow=37
ARTI **Arti** 91.18 326 LR LR 11 00 55.3
comp=Z,391nm,18.9s,baz=89,slow=37
A36M **Sachs Harbour** 93.10 18 P P 10 18 20.5 +1.1
baz=268
KOTAN **Kotaneelee Air** 93.29 30 P P 10 18 20.9 +0.3
baz=269
C36M **Paulatuk** 93.44 21 P P 10 18 21.7 +0.7
baz=269
YBH **Yreka Blue Hor** 93.74 49 LR LR 10 52 06.7
comp=Z,72nm,21.7s,baz=306,slow=30
KIRV **Kirov** 96.05 328 LR LR 11 01 37.8
comp=Z,1μm,21.6s,baz=87,slow=35
ELIB **Princess Elisa** 96.18 195 *d*P P 10 18 35.5 +1.7
comp=Z,3.6nm,1.5s
NVAR **Mina Array Bea** 97.12 52 P Pdif 10 18 40.6 +1.6
comp=Z,0.3nm,0.6s,baz=282,slow=5.9,SNR=2.9
NVAR LR LR 10 54 30.2
comp=Z,804nm,21.1s,baz=267,slow=30
comp=Z,0.3nm,0.6s
BELG **Belogorno**ye **97.46 322** LR LR 11 03 55.7
comp=Z,340nm,19.5s,baz=101,slow=36
NEW **Newport** 97.60 42 LR LR 10 55 51.7
comp=Z,395nm,20.1s,baz=282,slow=31
YKA **Yellowknife Ar** 97.71 27 P P 10 18 40.6 -0.1
comp=Z,0.3nm,0.8s,baz=280,slow=5.4,SNR=11
YKA PKKPbc **PKKPbc** 10 35 16.4 -2.4
comp=Z,0.2nm,0.6s,baz=94,slow=2.3,SNR=4.5
YKA LR LR 10 58 39.7
comp=Z,314nm,21.0s,baz=290,slow=33
comp=Z,0.3nm,0.8s
MAK **Makhachkala** 98.10 313 *e*P P 10 18 37.8 -5.0
MAK *e* 10 22 36.9
MAK *e*PPP PPP 10 24 46.2
MAK *e* 10 29 12.5
MAK *e*SS SS 10 36 46.4 -6.2
MAK pmax pmax
comp=Z,42nm,0.6s
MAK MLR MLR
comp=Z,330nm,16.0s
PFO **Pinyon Flats O** 98.74 57 LR LR 10 55 23.2
comp=Z,262nm,20.9s,baz=278,slow=30
ELK **Elko** 99.39 49 LR LR 10 55 37.3
comp=Z,348nm,21.6s,baz=268,slow=30
NVL **N'lazarevskaya** 99.84 194 *e*P **Pdif** 10 18 49.7 -0.4
NVL *e* 10 22 54.2
NVL *e*PPP PPP 10 25 00.9
NVL *e*S **SKSac** 10 29 28.4 -0.2
NVL *e*SS **SS** 10 37 17.0 +1.9
NVL *e*SSS SSS 10 41 06.3
NVL pmax pmax
comp=Z,6.0nm,0.8s
NVL MLR MLR
comp=Z,906nm,19.0s
KIV **Kislovodsk** 101.52 314 *e*P **Pdif** 10 18 57.1 -1.1
KIV pmax pmax
comp=Z,5.0nm,1.0s
TXAR **Lajitas Array** 109.97 60 PKKP 10 34 52.8
comp=Z,0.1nm,0.6s,baz=254,slow=9.0,SNR=3.4
PLCA **Paso Flores** 125.12 147 PKP **PKPdf** 10 24 06.4 -0.6
comp=Z,1.3nm,0.9s,baz=236,slow=3.5,SNR=5.4
LPAZ **La Paz** 141.52 122 PKP **PKPdf** 10 24 39.5 +0.5
comp=Z,1.0nm,0.7s,baz=234,slow=4.9,SNR=4.3
TORD **Torodi Ar. Bea** 142.82 287 PKP **PKPdf** 10 24 39.3 -1.3
comp=Z,1.0nm,0.7s,baz=114,slow=5.6,SNR=4.0
AQDB **Aquidauana** 148.49 140 **PKiKP** 10 24 55.3 0.0
PTLB **Pontes e Lacer** 149.33 128 **PKPbc** 10 24 56.5 +0.6
VILB **Vilhena** 149.83 123 **PKiKP** 10 24 59.7 +1.4
DBIC **Dimbokro** 150.15 277 PKPbc **PKiKP** 10 24 58.7 -0.2
comp=Z,5.9nm,1.0s,baz=116,slow=9.3,SNR=2.8

*NEIC **05** 10:12:30.7±0.9, 39.80N±0.02×98.37W±0.02, h5km±2km, mb_Lg2.6/55, Error ellipse: s-maj=3.4km s-min=3.0km az=64.0*
*IDC **05** 10:12:30.4±1.6, 39.81N×98.65W, h0km, mbtmp3.1/3, ML3.5/2, Error ellipse: s-maj=22.7km s-min=12.1km az=103.0*
ISC 05 10:12:30.3±1.0, 39.79N±0.04×98.42W±0.05, h10km, n47, σ1s08/39, Kansas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
R32A	**Long Quarter,**	**1.38**	**190**		**Pn**	**10 12 55.6**	**0.0**
R32A					**Sb**	**10 13 14.3**	**+0.3**
CBKS	**Cedar Bluff**	**1.41**	**227**		**Pn**	**10 12 56.5**	**+0.4**
CBKS					**Sg**	**10 13 15.4**	**-0.3**
KSU1	**Kansas State U**	**1.56**	**115**		**Pn**	**10 12 57.9**	**-0.2**
KSU1					**Sn**	**10 13 18.4**	**0.0**
BGNE	**Belgrade**	**1.63**	**7**		**Pn**	**10 12 59.7**	**+0.5**
BGNE					**Sb**	**10 13 22.2**	**+1.0**
N35A	**Tabor**	**2.38**	**62**	Pn	**Pn**	**10 13 09.2**	**-0.2**
L34A	**Svendsen Farm,** comp=Z,35nm,0.7s	**2.67**	**35**	IAmb_Lg		10 13 57.1	
KAN01	**Argonia South**	**2.68**	**169**	Pn	**Pn**	**10 13 13.6**	**0.0**
KAN01	comp=Z,18nm,0.8s			IAmb_Lg		10 13 56.6	
OGNE	**Ogallala**	**2.99**	**294**	Pn	**Pn**	**10 13 18.8**	**+0.9**
OGNE	comp=Z,33nm,0.8s			IAmb_Lg		10 14 07.3	
K30B	**Basset**	**3.02**	**343**	Pn	**Pn**	**10 13 18.9**	**+0.7**
K30B	comp=Z,15nm,0.7s			IAmb_Lg		10 14 06.5	
BLOK	**Blackwell**	**3.17**	**162**	Pn	**Pn**	**10 13 19.6**	**-0.6**
T35A	**Sooner Cattle**	**3.23**	**152**	Pn	**Pn**	**10 13 21.8**	**+0.6**
OK038	**West end E0370**	**3.31**	**185**	Pn	**Pn**	**10 13 22.8**	**+0.5**
KSCO	**Kaye Shedlock'**	**3.35**	**258**	Pn	**Pn**	**10 13 24.4**	**+1.6**
OK051	**E0350 and S346**	**3.51**	**159**	Pn	**Pn**	**10 13 24.8**	**0.0**
OK048	**Pawnee Station**	**3.56**	**160**	Pn	**Pn**	**10 13 26.6**	**+1.0**
P38A	**Dawn**	**3.77**	**91**	Pn	**Pn**	**10 13 27.8**	**-0.7**
P38A	comp=Z,17nm,0.8s			IAmb_Lg		10 14 33.4	
ELIS	**Ellis County** comp=Z,14nm,0.7s	**3.80**	**192**	IAmb_Lg		10 14 37.0	
QUOK	**Quay**	**3.85**	**159**	Pn	**Pn**	**10 13 30.9**	**+1.2**
N38A	**Joes South For** comp=Z,16nm,0.8s	**4.09**	**74**	IAmb_Lg		10 14 40.6	
ECSD	**EROS Data Cent**	**4.17**	**18**	Pn	**Pn**	**10 13 35.5**	**+1.6**
ECSD	comp=Z,22nm,0.9s			IAmb_Lg		10 14 42.1	
TUL3	**Leonard**	**4.39**	**151**	Pn	**Pn**	**10 13 37.5**	**+0.4**
SCIA	**State Center** comp=Z,19nm,0.8s	**4.48**	**60**	IAmb_Lg		10 14 50.9	
S39A	**Bolivar**	**4.50**	**116**	Pn	**Pn**	**10 13 39.0**	**+0.4**
S39A	comp=Z,8.7nm,0.8s			IAmb_Lg		10 14 57.0	
RLO	**Rose Lookout** comp=Z,10nm,0.7s	**4.50**	**142**	Pn	**Pn**	**10 13 39.6**	**+1.0**
RLO				IAmb_Lg		10 14 51.8	
W35A	**Tecumseh** comp=Z,7.5nm,0.7s	**4.79**	**165**	IAmb_Lg		10 15 13.6	
SMWD	**Samnorwood**	**4.89**	**198**	Pn	**Pn**	**10 13 43.2**	**-0.8**
SMWD	comp=Z,12nm,0.7s			IAmb_Lg		10 15 12.0	
P40A	**Paris**	**4.92**	**91**	Pn	**Pn**	**10 13 43.4**	**-1.0**
HHAR	**Hobbs**	**4.97**	**133**	Pn	**Pn**	**10 13 43.6**	**-1.5**
R40A	**Maddies Statio** comp=Z,15nm,0.8s	**5.02**	**105**	IAmb_Lg		10 15 08.2	
WMOK	**Wichita Mounta**	**5.05**	**183**	Pn	**Pn**	**10 13 47.0**	**+0.9**
X34A	**Smith Ranch, M**	**5.20**	**175**	Pn	**Pn**	**10 13 49.0**	**+0.8**
X34A	comp=Z,8.6nm,0.9s			IAmb_Lg		10 15 31.0	
PH02	**Texas Public H** comp=Z,22nm,0.9s	**5.21**	**214**	IAmb_Lg		10 15 25.1	
Q24A	**Divide**	**5.28**	**263**	Pn	**Pn**	**10 13 48.8**	**-0.8**
Q24A	comp=Z,13nm,0.9s			IAmb_Lg		10 15 26.2	
AMTX	**Amarillo**	**5.54**	**209**	Pn	**Pn**	**10 13 54.7**	**+1.8**
AMTX	comp=Z,13nm,0.7s			IAmb_Lg		10 15 37.8	
ISCO	**Idaho Springs**	**5.54**	**272**	Pn	**Pn**	**10 13 53.4**	**+0.2**
CCM	**Cathedral Cave** comp=Z,13nm,0.7s	**5.86**	**105**	lAmb_Lg		10 15 39.9	
FCAR	**Ozark Folk Cen**	**6.32**	**126**	Pn	**Pn**	**10 14 05.3**	**+1.8**
T42A	**Van Buren**	**6.38**	**113**	Pn	**Pn**	**10 14 05.3**	**+1.0**
T42A	comp=Z,7.2nm,0.8s			lAmb_Lg		10 15 58.3	
DKNS	**Dickens** comp=Z,6.0nm,0.7s	**6.43**	**199**	lAmb_Lg		10 16 12.7	
MIAR	**Mount Ida**	**6.50**	**142**	Pn	**Pn**	**10 14 06.7**	**+0.6**
LCAR	**Lake Charles** comp=Z,9.4nm,1.2s	**6.83**	**121**	lAmb_Lg		10 16 11.4	
SPMN	**Marine on St.**	**6.83**	**36**	Pn	**Pn**	**10 14 08.8**	**-1.8**
ANMO	**Albuquerque** comp=Z,0.4nm,0.3s,baz=54,slow=15,SNR=10.0	**8.02**	**235**	Pg	Pb	10 14 54.9	+5.5
ANMO	comp=Z,0.3nm,0.3s,baz=143,slow=21,SNR=4.2			Lg	Lg	10 16 38.4	
PDAR	**Pinedale Array** baz=105,slow=14,SNR=2.0	**8.90**	**293**	Pn	**Pn**	**10 14 40.0**	**+0.9**
PDAR	comp=Z,0.1nm,0.3s,baz=111,slow=13,SNR=2.3			Pg	Pg	10 15 03.4	-17
PDAR	comp=Z,0.2nm,0.3s,baz=110,slow=33,SNR=4.9 comp=Z,0.3nm,0.8s			Lg	Lg	10 17 01.8	
ULM	**Lac du Bonnet** comp=Z,0.6nm,0.4s,baz=190,slow=12,SNR=1.4	**10.62**	**9**	Pn	**Pn**	**10 15 00.1**	**-2.3**
ULM	comp=Z,0.2nm,0.3s,baz=276,slow=18,SNR=3.1			Lg	Lg	10 17 56.3	
TXAR	**Lajitas Array** comp=Z,0.1nm,0.3s,baz=33,slow=10,SNR=9.2	**11.29**	**204**	Pn	**Pn**	**10 15 09.3**	**-2.4**
TXAR	comp=Z,0.1nm,0.3s,baz=18,slow=16,SNR=3.7			Pg		10 15 54.9	
TXAR	baz=21,slow=28,SNR=1.8 comp=Z,0.3nm,0.4s			Lg	Lg	10 18 16.9	
TKL	**Tuckaleechee C** comp=Z,0.2nm,0.3s,baz=26,slow=6.3,SNR=4.3	**12.30**	**105**	Lg	Lg	10 18 46.5	

*IDC **05** 10:22:43.2±1.4, 3.32S×145.58E, h0km, mb3.6/4, mbtmp3.7/6, ML3.7/1, Error ellipse: s-maj=55.4km s-min=23.3km az=100.0*
ISC 05 10:22:46.7±1.1, 3.45S±0.1×145.56E±0.3, h23km, n6, σ0s30/6, mb3.6/4, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby** 2.6nm,0.4s,baz=155,slow=23,SNR=1.8	**6.19**	**166**	Pn	**Pn**	**10 24 16.8**	**-0.1**
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=40,slow=12,SNR=30 3.5nm,0.8s	**19.81**	**213**	P	**P**	**10 27 15.8**	**-0.1**
ASAR	**Alice Springs** 1.3nm,0.9s,baz=32,slow=12,SNR=15 1.3nm,0.9s	**23.14**	**208**	P	**P**	**10 27 51.9**	**+0.3**
MKAR	**Makanchi Array** 0.2nm,0.7s,baz=105,slow=6.5,SNR=1.3 0.2nm,0.7s	**74.60**	**320**	P	**P**	**10 34 24.3**	**+0.1**
ILAR	**Eielson Array** 0.7nm,0.9s,baz=251,slow=4.5,SNR=7.1 0.7nm,0.9s	**83.63**	**23**	P	**P**	**10 35 13.2**	**+0.1**
BVAR	**Borovoye Array** 0.9nm,0.8s,baz=98,slow=6.4,SNR=5.0 0.9nm,0.8s	**83.84**	**324**	P	**P**	**10 35 14.1**	**-0.3**

*MOS **05** 10:37:35.9±0.9, 47.33N×153.09E, h110km, mb4.5/1, Error ellipse: s-maj=18.0km s-min=10.1km az=46.4*
*SKHL **05** 10:37:36.0±0.7, 47.20N×153.30E, h115km±3km, mb5.0/5, msh5.8/5*
*IDC **05** 10:37:39.0±2.3, 47.42N×152.88E, h120km±21km, mb3.3/10, mbtmp3.7/14, Error ellipse: s-maj=23.0km s-min=12.9km az=140.0*
*JMA **05** 10:37:42.0±1.0, 46°N±7'×15°3'E±', h108km, MV4.2/13, KURILE ISLANDS REGION*
ISC 05 10:37:36.0±0.7, 47.23N±0.08×153.14E±0.08, h100km, n56, σ2s40/62, mb3.5/9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.98**	**28**	*e*PN	**Pn**	**10 38 35.2**	**+0.4**
SKR				*e*S	**Sn**	**10 39 17.4**	**-3.0**
SKR	comp=Z,184nm,0.7s			pmax	pmax		
SKR	comp=E,99nm,0.3s			smax	smax		
SKR	comp=N,158nm,0.5s			smax	smax		
SKR	comp=Z,400nm,12.0s			MLR	MLR		
SKR	**Severo-Kuril's**	**3.98**	**28**	*e*P	**Pn**	**10 38 35.1**	**+0.3**
SKR				AMB	AMB	10 38 37.7	
SKR	comp=Z,100nm,0.4s			*e*S	**Sn**	**10 39 17.9**	**-2.5**
SKR				A	A	10 39 19.5	
SKR	comp=E,180nm,0.3s			A	A	10 39 19.5	
SKR	comp=Z,150nm,0.3s						
KUR	**Kuril'sk**	**4.17**	**243**	*e*PN	**Pn**	**10 38 39.8**	**+2.4**
KUR				*e*S	**Sn**	**10 39 27.9**	**+2.9**
KUR	comp=Z,175nm,0.5s			pmax	pmax		
KUR	comp=N,52nm,0.4s			pmax	pmax		
KUR	comp=E,34nm,0.5s			smax	smax		
KUR	comp=E,78nm,0.2s			smax	smax		
KUR	comp=N,53nm,0.4s			smax	smax		
KUR	**Kuril'sk**	**4.17**	**243**	*e*P	**Pn**	**10 38 39.8**	**+2.4**
KUR				AMB	AMB	10 38 40.9	
KUR	comp=N,150nm,0.5s			*e*S	**Sn**	**10 39 27.7**	**+2.7**
KUR				A	A	10 39 30.8	
KUR	comp=N,90nm,0.3s			A	A	10 39 30.8	
KUR	comp=N,100nm,0.3s						
PAU	**Pauzhetka**	**4.88**	**28**	*e*P	**Pn**	**10 38 46.7**	**-0.2**
PAU				AMB	AMB	10 38 47.4	
PAU	comp=N,20nm,0.3s			*e*S	**Sn**	**10 39 39.2**	**-2.9**
PAU				A	A	10 39 40.7	
PAU	comp=N,230nm,0.3s			A	A	10 39 40.7	
PAU	comp=N,100nm,0.3s						
SHO	**Shikotan**	**5.56**	**235**	*e*P	Pn	10 39 06.2	+10
SHO				AMB	AMB	10 39 08.1	
SHO	comp=N,50nm,0.4s			*e*S	**Sn**	**10 40 05.3**	**+6.6**
SHO				A	A	10 40 10.5	
SHO	comp=N,100nm,0.4s			A	A	10 40 10.5	
SHO	comp=N,100nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**6.02**	**241**	*e*PN	**Pn**	**10 39 03.9**	**+1.4**
YUK				S	**Sn**	**10 40 06.2**	**-3.7**
YUK	comp=Z,411nm,0.2s			pmax	pmax		
YUK	comp=N,162nm,0.3s			pmax	pmax		
YUK	comp=E,88nm,0.2s			pmax	pmax		
YUK	**Yuzh-Kuril'sk**	**6.02**	**241**	*e*P	**Pn**	**10 39 03.9**	**+1.4**
YUK				AMB	AMB	10 39 04.4	
YUK	comp=E,100nm,0.5s			*e*S	**Sn**	**10 40 10.6**	**+0.7**
YUK				A	A	10 40 23.4	
YUK	comp=E,140nm,0.3s			A	A	10 40 23.4	
YUK	comp=E,160nm,0.3s						
RUSJ	**Misakicho**	**6.35**	**243**	*e*PN	**Pn**	**10 39 08.9**	**+1.9**
RUSJ				S	**Sn**	**10 40 15.1**	**-2.9**
NEM2	**Nemuro 2**	**6.49**	**236**	P	**Pn**	**10 39 08.1**	**-0.8**
NEM2				*e*S	**Sn**	**10 40 14.0**	**-7.4**
NMR	**Nemuro--Hokkai**	**6.49**	**236**	*e*PN	**Pn**	**10 39 08.0**	**-0.9**
NMR	**Nemuro--Hokkai**	**6.49**	**236**	*e*P	**Pn**	**10 39 08.3**	**-0.6**
JRA	**Rausu**	**6.51**	**243**	P	**Pn**	**10 39 10.7**	**+1.5**
PETK	**Petropavlovsk-** comp=E,2.5nm,0.6s,baz=176,slow=11,SNR=17	**6.58**	**25**	P	**Pn**	**10 39 09.8**	**-0.2**
PETK				S	**Sn**	**10 40 26.3**	**+2.9**
comp=E,0.8nm,0.5s,baz=199,slow=20,SNR=0.9							
PET	**Petropavlovsk**	**6.80**	**29**	*e*P	**Pn**	**10 39 13.3**	**+0.3**
PET				*e*S	**Sn**	**10 40 24.6**	**-4.2**
JNK	**Nakash**	**6.95**	**241**	P	**Pn**	**10 39 16.4**	**+1.2**
YSS	**Yuzhno-Sakhali**	**7.09**	**272**	*e*PN	**Pn**	**10 39 19.8**	**+2.7**
YSS				*e*S	**Sn**	**10 40 34.3**	**-1.8**
YSS	comp=Z,20nm,0.7s			pmax	pmax		
YSS	comp=N,10.0nm,0.5s			smax	smax		
YSS	comp=E,20μm,0.4s			smax	smax		
YSS	**Yuzhno-Sakhali**	**7.09**	**272**	*e*P	**Pn**	**10 39 20.0**	**+2.9**
AKK	**Akkeshi**	**7.22**	**237**	*e*P	**Pn**	**10 39 18.2**	**-0.6**
JTKR	**Atkashiri--Toko**	**7.25**	**247**	*e*P	**Pn**	**10 39 21.0**	**+1.8**
JAK	**Akkeshi**	**7.32**	**238**	*e*P	**Pn**	**10 39 20.1**	**0.0**
JAR	**Ashorobuto**	**7.69**	**243**	P	**Pn**	**10 39 26.3**	**+1.1**
JAR				*e*S	**Sn**	**10 40 50.1**	**-0.5**
TYV	**Tymovskoe**	**7.79**	**302**	*e*P	**Pn**	**10 39 28.3**	**+1.8**
JOB	**Onbets**	**7.88**	**240**	P	**Pn**	**10 39 28.2**	**+0.5**
JOB				*e*S	**Sn**	**10 40 50.6**	**-4.6**
JKA	**Kamikawa-asahi**	**8.01**	**251**	*e*P	**Pn**	**10 39 31.6**	**+2.1**
ASAJ	**Asahikawa** comp=E,17nm,0.8s,baz=88,slow=16,SNR=17	**8.01**	**251**	P	**Pn**	**10 39 31.6**	**+2.0**
JKK2	**Kamakawa 2**	**8.03**	**249**	*e*P	**Pn**	**10 39 32.2**	**+2.4**
JCH	**Churui**	**8.33**	**240**	P	**Pn**	**10 39 33.0**	**-0.9**
JCH				S	**Sn**	**10 41 00.5**	**-5.6**
JAB	**Ashibetsu**	**8.54**	**248**	*e*P	**Pn**	**10 39 39.1**	**+2.4**
JNBK	**Urakawa-nobuka**	**8.89**	**240**	P	**Pn**	**10 39 39.7**	**-1.8**
NKL	**Nikolayevsk**	**9.94**	**311**	*e*P	**Pn**	**10 39 57.5**	**+1.8**
KLR	**Kul'dur** comp=E,0.9nm,0.9s,baz=79,slow=3.4,SNR=4.2	**14.39**	**286**	P	**Pn**	**10 40 54.4**	**-0.3**
USRK	**Ussuriysk Ar.** comp=E,2.1nm,0.5s,baz=67,slow=13,SNR=8.2	**15.07**	**266**	P	**Pn**	**10 41 03.5**	**0.0**
MJAR	**Matsushiro Arr** comp=E,2.9nm,0.6s,baz=28,slow=13,SNR=5.8	**15.38**	**231**	P	**Pn**	**10 41 06.2**	**-1.3**
KSRS	**Korea Array** comp=E,2.8nm,0.7s,baz=58,slow=9.5,SNR=9.4 comp=E,2.8nm,0.7s	**20.96**	**251**	P	**P**	**10 42 12.1**	**+1.2**
H11N2	**WAKE ISLAND Hy** baz=340,slow=76,SNR=178	**29.64**	**153**	T	T	11 15 13.9	
H11N1	**WAKE ISLAND Hy** baz=340,slow=76,SNR=170	**29.65**	**153**	T	T	11 15 13.4	
H11N3	**WAKE ISLAND Hy** baz=340,slow=76,SNR=163	**30.73**	**154**	T	T	11 15 13.4	
H11S1	**WAKE ISLAND Hy** baz=341,slow=76,SNR=202	**30.73**	**154**	T	T	11 16 43.4	
H11S2	**WAKE ISLAND Hy** baz=341,slow=76,SNR=289	**30.74**	**154**	T	T	11 16 42.2	
MKAR	**Makanchi Array** comp=E,0.2nm,0.5s,baz=57,slow=7.8,SNR=2.5 comp=E,0.2nm,0.5s	**46.74**	**297**	P	**P**	**10 45 52.9**	**-1.9**
KURK	**Kurchatov**	**47.12**	**303**	P	**P**	**10 45 57.7**	**0.0**
KURK	**Kurchatov**	**47.12**	**303**	*e*P	**P**	**10 45 57.7**	**0.0**
KURBB	**Kurchatov Arra** comp=E,0.7nm,0.6s,baz=68,slow=8.3,SNR=5.3 comp=E,0.7nm,0.6s	**47.21**	**303**	P	**P**	**10 45 57.7**	**-0.7**
YKA	**Yellowknife Ar** comp=E,0.2nm,0.6s,baz=301,slow=8.7,SNR=2.6 comp=E,0.2nm,0.6s	**50.53**	**37**	P	**P**	**10 46 24.2**	**+0.6**
NVAR	**Mina Array Bea** comp=E,0.2nm,0.4s,baz=297,slow=8.0,SNR=3.8 comp=E,0.2nm,0.4s	**62.20**	**63**	P	**P**	**10 47 47.9**	**+0.8**
FINES	**FINESS Array B** comp=E,1.3nm,0.8s,baz=19,slow=6.5,SNR=4.6 comp=E,1.3nm,0.8s	**63.62**	**335**	P	**P**	**10 47 54.8**	**-1.0**
HFS	**Hagfors** comp=E,1.4nm,0.8s,baz=86,slow=7.4,SNR=1.6 comp=E,1.4nm,0.8s	**68.02**	**339**	P	**P**	**10 48 22.6**	**-1.4**
WRA	**Warramunga Arr** comp=E,0.2nm,0.8s,baz=11,slow=6.5,SNR=2.2 comp=E,0.2nm,0.8s	**68.97**	**199**	P	**P**	**10 48 31.3**	**+1.0**
ASAR	**Alice Springs** comp=E,0.5nm,0.7s,baz=14,slow=5.6,SNR=10 comp=E,0.5nm,0.7s	**72.67**	**198**	P	**P**	**10 48 54.1**	**+1.4**
TXAR	**Lajitas Array** comp=E,1.2nm,0.6s,baz=298,slow=4.2,SNR=13 comp=E,1.2nm,0.6s	**77.24**	**61**	P	**P**	**10 49 20.9**	**+1.6**
TXAR	**Lajitas Array**	**77.24**	**61**	P	**P**	**10 49 21.0**	**+1.6**
H03N2	**Juan Fernandez** baz=306,slow=76	**138.74**	**90**	T	T	13 31 46.2	
H03N1	**Juan Fernandez** baz=306,slow=76,SNR=6.2	**138.75**	**90**	T	T	13 31 47.4	
H03N3	**Juan Fernandez** baz=306	**138.75**	**90**	T	T	13 31 49.9	

HEL 05 11:00:17.0±0.4, 67.83N×20.05E, h0km, ML1.3, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LANU	**Lannavaara**	**0.77**	**72**	SG	Sg	11 00 40.1	-1.5
KIF	**Kilpisjarvi**	**1.22**	**13**	PG	Pg	11 00 39.6	-0.6
KIF	comp=Z,3.2nm,0.2s			smax	smax	11 00 54.9	
KIF				SN	Sn	11 00 58.3	0.0
HEF	**Hetta** baz=248	**1.47**	**65**	PG	Pn	11 00 43.6	-1.1
HEF	comp=Z,1.7nm,0.2s			smax	smax	11 01 01.3	
HEF				SG	Sg	11 01 03.8	-0.4
ERTU	**Ertsjaerv**	**1.53**	**146**	PN	Pn	11 00 45.2	-0.3
ERTU				SN	Sn	11 01 06.4	+0.4
KLF	**Kolari**	**1.62**	**110**	PN	Pn	11 00 46.3	-0.4
KLF	comp=Z,1.4nm,0.2s			smax	smax	11 01 05.5	
KLF				SN	Sn	11 01 08.0	-0.2
KTK1	**Kautokeino**	**1.67**	**43**	PG	Pn	11 00 47.4	-0.1
KTK1				SN	Sg	11 01 10.9	+0.2
TOF	**Tornio**	**2.43**	**134**	PG	Pb	11 00 59.8	-1.7
TOF	comp=Z,1.9nm,0.2s			smax	smax	11 01 28.8	
RNF	**Rovaniemi**	**2.62**	**115**	PB	Pn	11 01 02.1	+1.6
ARA0	**ARCESS Array S**	**2.63**	**47**	PB	Pn	11 01 02.3	+1.6
ARA0				SG	Sb	11 01 36.8	-0.9
KEV	**Kevo**	**3.18**	**49**	SN	Sn	11 01 43.7	-3.1

*HEL **05** 11:00:25.0±0.2, 64.78N×30.81E, h0km, ML2.2, Explosion*
*IDC **05** 11:00:27.4±1.7, 64.76N×30.48E, h0km, mbtmp3.4/5, ML2.5/5, Error ellipse: s-maj=25.4km s-min=7.6km az=103.0*
*KOLA **05** 11:00:28.6, 64.95N×30.84E, h0km, ML2.5, Error ellipse: s-maj=11.3km s-min=8.2km az=150.0, Karelia*
ISC 05 11:00:24.1±0.8, 64.81N±0.02×30.55E±0.04, h0km, n45, σ1s70/70, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RMF	**Romuvaara** baz=30	**0.65**	**205**	PG	**Pg**	**11 00 37.7**	**+1.2**
RMF	comp=Z,48nm,0.2s			smax	smax	11 00 46.5	
KU1	**Kurvinen**	**0.87**	**332**	PG	**Pb**	**11 00 42.1**	**0.0**
KU6	**Riekki** baz=163	**1.25**	**348**	PG	**Pg**	**11 00 48.5**	**+0.4**
KU6	comp=Z,22nm,0.2s			smax	smax	11 01 04.4	
KU6				SG	**Sb**	**11 01 05.6**	**+0.3**
MSF	**Maaselka** baz=147	**1.28**	**331**	PG	**Pn**	**11 00 49.5**	**+0.3**
MSF				SG	**Sn**	**11 01 06.6**	**-0.5**
KU2	**Taivalkoski**	**1.33**	**314**	PG	**Pn**	**11 00 50.6**	**+0.7**
OLKF	**Oulanka, Finla**	**1.59**	**343**	PN	Pg	11 01 16.6	+22
OLKF	**Oulanka, Finla**	**1.59**	**343**	PG	**Pg**	**11 00 54.8**	**+0.2**
OLKF	comp=Z,19nm,0.2s			smax	smax	11 01 14.5	
OLKF				SN	**Sg**	**11 01 16.6**	**+1.4**
NIF	**Nilsia**	**1.86**	**221**	PG	**Pb**	**11 00 59.3**	**+0.3**
NIF	comp=Z,19nm,0.2s			smax	smax	11 01 22.0	
NIF				SG	**Sg**	**11 01 24.3**	**+0.4**
JOF	**Joensuu** baz=356	**1.93**	**170**	PG	**Pn**	**11 00 58.1**	**0.0**
JOF				SG	**Sn**	**11 01 24.7**	**+1.7**
RANF	**Ranua** baz=128	**1.99**	**309**	PG	**Pb**	**11 01 01.6**	**+0.5**
RANF				SG	**Sg**	**11 01 27.8**	**-0.1**
OUL	**Oulu** baz=92	**2.00**	**280**	PB	**Pb**	**11 01 02.0**	**+0.7**
OUL				SB	**Sg**	**11 01 28.5**	**+0.2**
KVDA	**Kovda**	**2.12**	**26**	P	Pn	**11 01 01.9**	**+1.1**
KVDA				S	**Sn**	**11 01 25.8**	**-1.9**
OBF4	**Vikkela, Lumij** baz=90	**2.33**	**273**	PB	**Pb**	**11 01 07.3**	**+0.3**
OBF4	comp=Z,17nm,0.2s			smax	smax	11 01 37.3	
OBF4				SG	**Sg**	**11 01 39.2**	**+0.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OUF	Merijarvi	2.55	263	PN	Pb	11 01 09.5	-1.1
	baz=83						
OUF				smax	smax	11 01 43.3	
	comp=Z,20nm,0.2s						
OUF				SB	Sg	11 01 44.5	-1.4
RNF	Rovaniemi	2.61	316	PN	Pb	11 01 10.6	-1.0
	baz=128						
RNF				SB	Sg	11 01 45.8	-1.9
OBF0	Syolatti, Pyha	2.73	266	PN	Pb	11 01 13.9	+0.1
OBF0	Syolatti, Pyha	2.73	266	PB	Pb	11 01 13.9	+0.1
OBF0				smax	smax	11 01 48.7	
	comp=Z,12nm,0.2s						
OBF0				SG	Sg	11 01 51.8	0.0
SUF	Sumiainen	2.87	225	PB	Pb	11 01 14.3	-1.8
SUF				smax	smax	11 01 51.3	
	comp=Z,5.9nm,0.2s						
TOF	Tornio	2.90	299	PB	Pb	11 01 16.9	+0.3
TOF				smax	smax	11 01 53.4	
	comp=Z,5.2nm,0.2s						
TOF				SB	Sb	11 01 53.4	+0.9
VRF	Varrio	2.98	353	SN	Sb	11 01 55.5	+0.6
VRF	Varrio	2.98	353	PB	Pn	11 01 14.6	+2.1
VRF				smax	smax	11 01 53.6	
	comp=Z,8.3nm,0.2s						
VRF				SG	Sb	11 01 55.5	+0.6
VRF	Varrio	2.98	353	PN	Pn	11 01 14.6	+2.1
APA0	Apatity Array	2.98	18	P	Pn	11 01 14.1	+1.6
APA0				S	Sn	11 01 50.2	+1.3
APA	Apatity	3.01	21	P	Pn	11 01 14.4	+1.5
APA				S	Sn	11 01 48.5	-1.0
OBF8	Ulkokalla	3.10	264	PN	Pn	11 01 16.9	+2.6
	baz=80						
RUF	Ruokolahti	3.47	193	PN	Pn	11 01 21.2	+1.9
LVZ	Lovozero	3.52	26	S	Sn	11 02 01.4	-0.8
KLF	Kolari	3.63	315	SG	Sg	11 02 19.8	-0.7
KEF	Keuruu	3.67	226	PN	Pn	11 01 25.1	+3.0
KEF				SG	Sg	11 02 21.8	-0.2
RAJF	Raja-Jooseppi	3.79	347	PN	Pn	11 01 25.4	+1.8
RAJF				SG	Sg	11 02 25.3	-0.4
ERTU	Ertsjaerv	3.88	301	SG	Sg	11 02 29.4	+0.9
VAF	Ylistaro	3.90	247	PN	Pn	11 01 28.2	+3.0
VAF				SG	Sg	11 02 27.8	-1.6
FIA0	FINESS Array S	3.94	213	PN	Pn	11 01 27.5	+1.8
FINES	FINESS Array B	3.94	213	Pn	Pn	11 01 28.0	+2.3
	comp=Z,0.3nm,0.3s,baz=31,slow=15,SNR=24						
FINES				Pg	Pb	11 01 35.3	+1.0
	comp=Z,0.6nm,0.3s,baz=28,slow=15,SNR=12						
FINES				Sn	Sn	11 02 14.4	+1.8
	comp=Z,0.5nm,0.3s,baz=34,slow=24,SNR=5.5						
FINES				Lg	Lg	11 02 26.4	
	comp=Z,1.1nm,0.3s,baz=31,slow=28,SNR=7.7						
	comp=Z,0.8nm,0.3s						
BURU	Burvik	3.95	271	PN	Pn	11 01 27.8	+2.0
UMAU	Umeaa	4.39	262	SN	Sn	11 02 24.6	+0.9
VJF	Virojoki	4.50	199	SG	Sg	11 02 45.2	-3.3
HEF	Hetta	4.54	326	SG	Sg	11 02 45.9	-3.9
TERR	Teriberka	4.76	20	P	Pn	11 01 37.8	+0.9
TERR				S	Sn	11 02 30.3	-2.5
ARCES	ARCESS Array B	5.14	340	Pn	Pn	11 01 43.9	+1.7
	comp=Z,0.8nm,0.3s,baz=155,slow=12,SNR=59						
ARCES				Sn	Sn	11 02 40.0	-2.1
	comp=Z,0.3nm,0.3s,baz=154,slow=26,SNR=5.2						
ARCES				Lg	Lg	11 03 03.9	
	comp=Z,1.3nm,0.3s,baz=151,slow=33,SNR=18						
	comp=Z,1.8nm,0.2s						
ARCES	ARCESS Array B	5.14	340	P	Pn	11 01 43.9	+1.7
ARCES				S	Sn	11 02 40.1	-2.0
VADS	Vadso	5.36	356	P	Pn	11 01 46.4	+1.2
VADS				S	Sn	11 02 45.6	-1.9
HFS	Hagfors	9.09	247	Pn	Pn	11 02 35.9	-0.4
	comp=Z,0.2nm,0.3s,baz=59,slow=13,SNR=9.5						
HFS				Sn	Sn	11 04 12.8	-6.4
	comp=Z,0.1nm,0.3s,baz=55,slow=24,SNR=1.8						
HFS				Lg	Lg	11 05 05.8	
	comp=Z,0.4nm,0.3s,baz=61,slow=31,SNR=5.5						
	comp=Z,0.6nm,0.2s						
NOA	NORSAR Array B	9.57	256	Pn	Pn	11 02 42.5	-0.5
	baz=56,slow=14,SNR=4.5						
NOA				Lg	Lg	11 05 19.6	
	baz=54,slow=23,SNR=1.5						
	comp=Z,0.1nm,0.3s						
SPITS	Spitsbergen Ar	14.09	348	Pn	Pn	11 03 42.7	-1.9
	baz=157,slow=16						
	comp=Z,11nm,1.1s						

*KRNET **05** 11:04:28.6±0.1, 43°.19N×78°.04E, h19km, mb2.6*
*NNC **05** 11:04:28.1±0.5, 43°.22N×78°.05E, h0km, mb1.9, mpv2.9, Error ellipse: s-maj=4.4km s-min=2.8km az=6.0*
*SOME **05** 11:04:28.6, 43°.20N×78°.05E, h10km*
ISC 05 11:04:28.7±0.8, **43°.21N**±0°.02×**77°.98E**±0°.02, **h10**km, **n30**, σ**1s.92**/59, **9C-5D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KURS	Kuram	0.31	26	P	Pg	11 04 35.0	0.0
	22nm,0.1s						
KURS				S	Sg	11 04 39.7	+0.5
	136nm,0.3s						
SATY	Saty	0.35	116	P	Pg	11 04 34.9	-0.7
	43nm,0.1s						
SATY				S	Sg	11 04 39.7	-0.6
	409nm,0.1s						
KPKS	Kokpek	0.57	63	P	Pg	11 04 38.5	-1.3
	0.4nm,0.2s						
KPKS				S	Sg	11 04 45.5	-1.9
	67nm,0.2s						
KPKS	Kokpek	0.57	63	eP	Pg	11 04 38.5	-1.3
	0.4nm,0.2s						
KPKS				eS	Sg	11 04 45.5	-1.9
	67nm,0.2s						
UZB	Uzynbulak	0.76	94	P	Pg	11 04 41.5	-1.9
	3.6nm,0.0s						
UZB				S	Sg	11 04 50.8	-2.6
	27nm,0.1s						
UZB	Uzynbulak	0.76	94	eP	Pg	11 04 41.5	-1.9
	3.6nm,0.0s						
UZB				eS	Sg	11 04 50.8	-2.6
	27nm,0.1s						
BLB	Baldybastay	0.96	22	P	Pg	11 04 45.9	-1.2
	18nm,0.1s						
BLB				S	Sg	11 04 58.6	-1.1
	87nm,0.2s						
ARXS	Arharly	1.01	354	P	Pg	11 04 47.2	-0.9
	2.7nm,0.1s						
ARXS				S	Sg	11 05 01.1	-0.2
	32nm,0.1s						
ARXS	Arharly	1.01	354	eP	Pg	11 04 47.2	-0.9
	2.7nm,0.1s						
ARXS				eS	Sg	11 05 00.9	-0.3
	32nm,0.1s						
IZV	Izvestkoviy	1.02	261	eP	Pg	11 04 47.3	-1.0
	2.2nm,0.1s						
IZV				eS	Sg	11 05 00.8	-0.6
	10nm,0.3s						
KTBS	Karatobe	1.07	298	P	Pb	11 04 49.3	-0.1
	5.5nm,0.2s						
KTBS				S	Sn	11 05 04.1	-0.7
	0.2nm,0.1s						
KTBS	Karatobe	1.07	298	eP	Pb	11 04 49.3	-0.1
	5.5nm,0.2s						
KTBS				eS	Sn	11 05 04.1	-0.7
	0.2nm,0.1s						
SHLS	Shalkode	1.08	92	P	Pn	11 04 54.0	+3.9
	2.3nm,0.1s						
SHLS				S	Sn	11 05 12.3	+7.1
	12nm,0.2s						
SHLS	Shalkode	1.08	92	eP	Pn	11 04 54.0	+3.9
	2.3nm,0.1s						
SHLS				eS	Sn	11 05 12.3	+7.1
	12nm,0.2s						
PDGK	Podgornoye	1.11	83	⇑P	Pg	11 04 47.7	-2.3
	0.7nm,0.3s						
PDGK				⇓S	Sg	11 05 00.4	-4.0
	3.4nm,0.5s						
MTBS	Maitube	1.14	267	P	Pn	11 04 51.1	+0.3
	3.8nm,0.1s						
MTBS				S	Sn	11 05 07.3	+0.8
	19nm,0.2s						
MTBS	Maitube	1.14	267	eP	Pn	11 04 51.1	+0.3
	3.8nm,0.1s						
MTBS				eS	Sn	11 05 07.3	+0.8
	19nm,0.2s						
KDJ	Kajisay	1.23	209	⇑iP	Pg	11 04 51.7	-0.6
KDJ				⇑iS	Sn	11 05 07.8	-1.1
KNOS	Konyrlen	1.44	37	P	Pn	11 04 54.3	-0.7
	1.9nm,0.1s						
KNOS				S	Sn	11 05 12.9	-1.2
	11nm,0.2s						
TARG	Taragay, Kyrgy	1.48	185	⇓iP	Pb	11 04 55.7	-0.9
TARG				⇓iS	Sb	11 05 14.9	-0.8
KST	Kastek	1.49	264	eP	Pg	11 04 56.6	-0.6
	1.4nm,0.2s						
KST				eS	Sg	11 05 17.1	+0.6
	5.7nm,0.2s						
ULHL	Ulahol	1.60	234	⇑iP	Pg	11 04 58.6	-0.9
ULHL				⇑iS	Sg	11 05 19.7	-0.6
DGS	Degeres	1.61	272	P	Pb	11 04 58.6	0.0
	1.7nm,0.1s						
DGS				S	Sg	11 05 20.5	-0.1
	19nm,0.3s						
DGS	Degeres	1.61	272	eP	Pb	11 04 58.6	0.0
	1.7nm,0.1s						
DGS				eS	Sg	11 05 20.5	-0.1
	19nm,0.3s						
BOOM	Boomskoye usch	1.66	245	⇑iP	Pg	11 04 59.7	-0.9
BOOM				⇑iS	Sg	11 05 21.8	-0.4
KRBS	Karabastau	1.75	287	P	Pg	11 05 01.4	-0.8
	1.0nm,0.1s						
KRBS				S	Sg	11 05 25.1	+0.2
	29nm,0.2s						
KRBS	Karabastau	1.75	287	eP	Pg	11 05 01.4	-0.8
KRBS				eS	Sg	11 05 25.1	+0.2
KRBS	Karabastau	1.75	287	eP	Pg	11 05 01.4	-0.8
	1.0nm,0.1s						
KRBS				eS	Sg	11 05 25.1	+0.2
	29nm,0.2s						
TKM2	Tokmak 2	1.77	261	⇑iP	Pg	11 05 01.6	-1.1
TKM2				⇑iS	Sg	11 05 25.2	-0.4
AAK	Ala-Archa	2.62	259	⇓Pg	Pb	11 05 14.9	-1.0
	0.3nm,0.6s						
AAK				⇓Lg	Lg	11 05 51.4	
	0.8nm,0.6s						

*IDC **05** 11:19:23.2±1.9, 5°.70N×125°.97E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=170.8km s-min=23.6km az=66.0*
*MAN **05** 11:19:27.0, 6°.02N×126°.82E, h3km, MS3.1*
ISC 05 11:19:32.1±1.3, **6°.0N**±0°.1×**127°.0E**±0°.2, **h83**km, **n7**, σ**1s.69**/10, **mb3.3**/4, **Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BIPH	Bislig	2.29	344	iP	Pn	11 20 05.7	-2.2
BIPH				iS	Sn	11 20 34.6	-0.7
TSSP	Tandag City	3.15	346	eP	Pn	11 20 20.9	+1.3
TSSP				eS	Sn	11 20 59.2	+3.0
CGP	Cagayan de Oro	3.35	318	eP	Pn	11 20 23.2	+0.9
CGP				eS	Sn	11 21 00.7	-0.4
WRA	Warramunga Arr	26.75	164	P	P	11 25 05.3	+1.2
	0.4nm,0.7s,baz=343,slow=10,SNR=5.9						
	0.4nm,0.7s						
ASAR	Alice Springs	30.22	167	P	P	11 25 35.3	+0.2
	0.1nm,0.3s,baz=340,slow=7.1,SNR=9.6						
	0.1nm,0.3s						
MKAR	Makanchi Array	55.88	324	P	P	11 29 00.3	-1.0
	0.3nm,0.5s,baz=126,slow=7.3,SNR=3.1						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	60.01	327	P	P	11 29 29.1	-0.9
	0.3nm,0.7s,baz=123,slow=6.8,SNR=2.5						
	0.3nm,0.7s						

*SSNC **05** 11:43:01.5±1.3, 19°.39N×78°.43W, h9km±12km, ML3.4, Presumed earthquake*
*JSN **05** 11:43:03.3±0.8, 19°.42N×78°.19W, h15km±170km, MD4.2, Presumed earthquake*
ISC 05 11:42:59.1±2.7, **19°.35N**±0°.05×**78°.42W**±0°.04, **h16**km±18km, **n17**, σ**1s.81**/31, **1C, Cuba region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBCY	The Bluff, Cay	1.32	287	eP	Pn	11 43 22.6	-0.4
CBCY				eS	Sn	11 43 34.1	-6.2
CBCY				iS	Sb	11 43 38.3	-2.1
CBCY				IAML		11 43 46.0	
	comp=Z,580nm,1.0s						
MTDJ	Mount Denham	1.40	143	⇑iP	Pn	11 43 25.9	+1.8
MTDJ	Mount Denham	1.40	143	iP	Pn	11 43 25.5	+1.4
MTDJ				iS	Sn	11 43 42.8	+0.5
MTDJ				IAML		11 43 48.8	
	comp=Z,460nm,1.0s						
LMGC	Las Mercedes	1.51	62	iP	Pn	11 43 25.7	+0.1
LMGC				iS	Sn	11 43 42.6	-2.3
LMGC				IAML		11 43 46.3	
	comp=Z,250nm,1.0s						
LCCY	Blossom Villag	1.60	282	eP	Pn	11 43 27.5	+0.6
LCCY				iS	Sn	11 43 45.8	-1.4
LCCY				IAML		11 44 01.1	
	comp=Z,74μm,1.0s						
CCCC	Cccc	1.94	18	iP	Pn	11 43 34.4	+2.9
CCCC				iS	Sg	11 44 00.9	-0.7
CCCC				IAML		11 44 11.1	
	comp=Z,82nm,1.0s						
STH	Stony Hill	1.98	129	iP	Pn	11 43 33.4	+1.3
CHIV	Chivirico	1.99	71	iP	Pn	11 43 32.2	0.0
CHIV				IAML		11 43 32.4	
	comp=Z,97nm,1.0s						
CHIV				iS	Sn	11 43 54.0	-2.8
MARVS	Santiago de Cu	2.46	74	iP	Pn	11 43 38.7	+0.1
MARVS				iS	Sn	11 44 05.8	-2.6
MARVS				IAML		11 44 06.9	
	comp=Z,160nm,1.0s						
RCC	Rio Carpintero	2.64	76	iP	Pn	11 43 41.5	+0.3
RCC				iS	Sn	11 44 10.6	-2.4
RCC				IAML		11 44 11.7	
	comp=Z,85nm,1.0s						
HLGC	Holguin	2.69	55	iP	Pn	11 43 44.7	+2.8
HLGC				iS	Sn	11 44 16.5	+2.2
HLGC				IAML		11 44 19.5	
	comp=Z,70nm,1.0s						
PINC	Pinares de May	2.72	65	iP	Pn	11 43 43.5	+1.3
PINC				iS	Sn	11 44 14.4	-0.4
MGV	Manicaragua	3.11	332	eP	Pn	11 43 49.4	+1.8
MGV				iS	Sn	11 44 24.9	+0.4
MGV				IAML		11 44 32.3	
	comp=Z,40nm,1.0s						
GTBY	Guantanamo Bay	3.17	79	eP	Pn	11 43 49.7	+1.3
GTBY				iS	Sn	11 44 24.8	-1.1
GTBY				IAML		11 44 52.4	
	comp=Z,99nm,1.0s						
NMDO	Nuevo Mundo	3.45	69	eP	Pn	11 43 52.2	0.0
NMDO				iS	Sn	11 44 34.2	+1.4
NMDO				IAML		11 44 40.3	
	comp=Z,39nm,1.0s						
QMBU	Quimbuelo	3.50	75	eP	Pn	11 43 54.0	+1.0
QMBU				iS	Sn	11 44 32.4	-1.7
QMBU				IAML		11 44 34.7	
	comp=Z,61nm,1.0s						
MASC	Masc	4.03	78	iP	Pn	11 44 01.2	+0.9
MASC				iS	Sn	11 44 50.6	+3.5
MASC				IAML		11 44 52.2	
	comp=Z,75nm,1.0s						

*IDC **05** 11:47:54.8±1.5, 22°.89N×94°.98E, h0km, mb3.7/5, mbtmp3.6/6, ML3.1/1, MS3.6/1, Error ellipse: s-maj=90.7km s-min=17.1km az=60.0*
ISC 05 11:47:54.2±2.3, **22°.4N**±0°.5×**94°.0E**±0°.6, **h10**km, **n7**, σ**0s.87**/7, **mb3.6**/5, **Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	6.08	129	Pn	Pn	11 49 23.2	-0.9
	0.1nm,0.3s,baz=318,slow=13,SNR=1.4						
CMAR				Pg	Pb	11 49 41.0	+0.8
	0.2nm,0.3s,baz=314,slow=15,SNR=4.6						
CMAR				Lg	Lg	11 50 49.8	
	0.2nm,0.3s,baz=318,slow=31,SNR=4.2						
	0.3nm,0.2s						
MKAR	Makanchi Array	26.14	342	P	P	11 53 29.5	+1.0
	1.7nm,0.7s,baz=144,slow=10,SNR=21						
	1.7nm,0.7s						
KURBB	Kurchatov Arra	30.68	341	P	P	11 54 08.7	-0.2
	0.8nm,0.6s,baz=160,slow=7.3,SNR=5.3						
	0.8nm,0.6s						
ZALV	Zalesovo Beam	32.29	350	P	P	11 54 22.8	-0.2
	0.3nm,0.3s,baz=166,slow=7.9,SNR=2.7						
	0.3nm,0.3s						
JCJ	Chichijima	43.84	74	LR	LR	12 15 17.6	
	comp=Z,68nm,19.4s,baz=231,slow=38						
WRA	Warramunga Arr	57.65	134	P	P	11 57 44.4	-0.5
	0.3nm,0.5s,baz=321,slow=7.4,SNR=11						
	0.3nm,0.5s						
ASAR	Alice Springs	60.02	137	P	P	11 58 01.8	+0.4
	0.3nm,0.5s,baz=328,slow=7.6,SNR=6.5						
	0.3nm,0.5s						

*IDC **05** 11:50:53.3±3.6, 11°.01N×126°.49E, h0km, mb3.3/4, mbtmp3.3/4, MS3.4/1, Error ellipse: s-maj=298.0km s-min=24.3km az=66.0*
*MAN **05** 11:50:55.0, 10°.92N×125°.52E, h11km, MS3.1*
ISC 05 11:50:56.6±1.2, **10°.77N**±0°.08×**125°.49E**±0°.08, **h10**km, **n11**, σ**1s.41**/14, **mb3.3**/4, **Leyte**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.98	180	eP	Pb	11 51 14.9	-0.7
SCPH				eS	Sb	11 51 30.0	+1.5
TSSP	Tandag City	1.85	158	eP	Pb	11 51 30.9	+0.4
TSSP				eS	Sn	11 51 50.2	-1.6
TBP	Tagbilaran	1.92	236	eP	Pb	11 51 31.6	-0.2
CGP	Cagayan de Oro	2.42	199	eP	Pg	11 51 52.8	+10
CGP				eS	Sb	11 52 11.3	+1.0
BIPH	Bislig	2.71	161	iP	Pn	11 51 42.0	+1.9
BIPH				eS	Sb	11 52 18.0	-0.4
RCP	Roxas	2.80	287	eP	Pn	11 51 42.0	+0.5
RCP				eS	Sb	11 52 21.1	0.0
WRA	Warramunga Arr	31.73	164	P	P	11 57 18.1	-2.9
	0.2nm,0.7s,baz=346,slow=8.7,SNR=1.1						
	0.2nm,0.7s						
BRDH	Bariadhala	34.42	294	LR	LR	12 13 36.3	
	comp=Z,58nm,19.1s,baz=182,slow=39						
ASAR	Alice Springs	35.20	167	P	P	11 57 50.1	-1.0
	0.3nm,0.8s,baz=348,slow=6.8,SNR=5.8						
	0.3nm,0.8s						
MKAR	Makanchi Array	51.17	323	P	P	12 00 01.2	+1.2
	0.3nm,0.6s,baz=123,slow=6.3,SNR=4.7						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	55.23	325	P	P	12 00 30.7	+0.9
	0.2nm,0.4s,baz=123,slow=8.2,SNR=1.8						
	0.2nm,0.4s						

*TAP **05** 12:05:30.2, 21°.33N×121°.84E, h171km, ML4.2, C*
ISC 05 12:05:32.5±3.3, **21°.4N**±0°.1×**121°.81E**±0°.09, **h161**km±13km, **n120**, σ**0s.68**/217, **Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LYUB	Lan-yu	0.60	339	iP	Pn	12 05 54.6	-0.9
LYUB				S	Sn	12 06 12.9	-0.4
LAY	Lan-yu	0.64	338	P	Pn	12 05 54.8	-1.1
LAY				S	Sn	12 06 13.2	-0.6
TSEB	Hengchuen, Pin	0.96	298	iP	Pn	12 05 58.0	0.0
TSEB				iS	Sn	12 06 18.8	+1.2
TWKBT	Hengchun	1.05	298	iP	Pn	12 05 58.7	-0.1
TWKBT				iS	Sn	12 06 19.2	+0.3
TWK1	Hengchun	1.06	298	iP	Pn	12 05 58.8	0.0
TWK1				iS	Sn	12 06 19.2	+0.2
SMST	Manzhou Townsh	1.08	303	iP	Pn	12 05 58.8	-0.2
SMST				S	Sn	12 06 19.4	+0.2
SNW	Nanwan	1.12	298	eP	Pn	12 05 59.8	+0.5
HEN	Hengchun	1.15	300	eP	Pn	12 05 59.9	+0.4
HEN				eS	Sn	12 06 20.5	+0.2
SLIU	Shizi	1.22	309	P	Pn	12 05 59.9	-0.2
SLIU				eS	Sn	12 06 21.7	+0.2
TAWH	Dawu Township	1.24	316	P	Pn	12 05 59.7	-0.6
TAWH				eS	Sn	12 06 21.4	-0.5
TAW	Tawu	1.25	317	eP	Pn	12 05 59.8	-0.6
TAW				eS	Sn	12 06 21.5	-0.4
LDUT	Ludao	1.27	345	eP	Pn	12 06 00.6	-0.1
LDUT				eS	Sn	12 06 22.9	+0.5
EAST	Anshuo	1.30	316	P	Pn	12 06 00.5	-0.5
EAST				S	Sn	12 06 22.5	-0.4
ECL	Taimali	1.40	325	P	Pn	12 06 00.8	-1.1
ECL				S	Sn	12 06 23.4	-1.2
SCZT	Fangliau	1.45	310	iP	Pn	12 06 02.0	-0.3
SCZT				S	Sn	12 06 25.4	+0.1
TTN	Taitung	1.45	335	iP	Pn	12 06 02.4	+0.1
TTN				S	Sn	12 06 26.8	+1.5
TWGBT	Beinan	1.53	334	P	Pn	12 06 02.3	-0.9
TWGBT	Beinan	1.53	334	P	Pn	12 06 02.3	-0.9
TWGBT				S	Sn	12 06 26.5	-0.4
TWG	Pinlang	1.54	334	P	Pn	12 06 02.3	-1.0
TWG				eS	Sn	12 06 26.3	-0.7
SSPT	Xinbi	1.55	312	P	Pn	12 06 03.8	+0.4
SSPT				eS	Sn	12 06 28.6	+1.4
LONT	Longtian	1.59	337	eP	Pn	12 06 03.3	-0.5
LONT				eS	Sn	12 06 27.8	-0.2
MASBT	Mashibuluo	1.60	317	iP	Pn	12 06 03.8	-0.1
MASBT				S	Sn	12 06 27.7	-0.4
WLCH	Liuqiu	1.61	304	eP	Pn	12 06 05.4	+1.4
WLCH				eS	Sn	12 06 30.2	+1.9
TWP	Hsiaoliuchiu	1.62	304	eP	Pn	12 06 05.3	+1.2
TWP				eS	Sn	12 06 31.6	+3.1
TSMG	Majia	1.66	319	eP	Pn	12 06 04.4	-0.1
TSMG				eS	Sn	12 06 29.5	+0.2
SSD	Sandimen	1.70	320	iP	Pn	12 06 04.7	-0.2
SSD				S	Sn	12 06 29.4	-0.7
CHKT	Chengkung	1.70	346	eP	Pn	12 06 04.9	-0.1
CHKT				eS	Sn	12 06 31.0	+0.8
ECS	Chishang	1.74	342	eP	Pn	12 06 05.1	-0.3
ECS				eS	Sn	12 06 31.8	+0.9
SGLT	Jiouru	1.77	316	eP	Pn	12 06 07.0	+1.3
CHKH	Chenggong	1.79	348	eS	Sn	12 06 32.3	+0.6
FULB	Fuli	1.81	345	iP	Pn	12 06 06.4	+0.1
FULB				iS	Sn	12 06 33.8	+1.5
WSSB	Gushan	1.87	310	eP	Pn	12 06 07.7	+0.8
WSSB				eS	Sn	12 06 32.9	-0.5
SLGT	Liugui	1.89	325	eP	Pn	12 06 07.3	+0.2
SLGT				eS	Sn	12 06 33.7	0.0
TWM1	Shoushan	1.89	317	eP	Pn	12 06 08.3	+1.2
SCST	Cishan	1.89	320	eP	Pn	12 06 07.6	+0.5
SCST				eS	Sn	12 06 35.4	+1.7
ELDTW	Lidau	1.89	337	eP	Pn	12 06 07.0	-0.2
ELDTW				eS	Sn	12 06 34.3	+0.3
SNJT	Kaohsiung City	1.89	314	eP	Pn	12 06 07.6	+0.5
TWF1	Yuli	1.96	346	eP	Pn	12 06 07.6	-0.3
TWF1				eS	Sn	12 06 35.5	+0.2
STYH	Taoyuan	1.97	331	iP	Pn	12 06 08.1	+0.1
STYH				S	Sn	12 06 36.0	+0.6
STYT	Tauyuan	1.97	330	P	Pn	12 06 07.8	-0.2
STYT				eS	Sn	12 06 35.5	-0.1
SGST	Jiashian	1.99	325	eP	Pn	12 06 07.4	-0.9
SGST				eS	Sn	12 06 35.9	0.0
YULB	Yu-li	2.00	346	P	Pn	12 06 07.7	-0.6
YULB	Yu-li	2.00	346	S	Sn	12 06 35.3	-0.7
YULB	Yu-li	2.00	346	P	Pn	12 06 07.8	-0.6
YULB				S	Sn	12 06 36.1	+0.1
HGSD	Ruisui	2.07	350	eP	Pn	12 06 08.8	-0.3
HGSD				eS	Sn	12 06 40.0	+2.5
EHYH	Wanrong	2.09	348	eP	Pn	12 06 09.1	-0.2
EHYH				eS	Sn	12 06 37.7	-0.1
CHN1	Nanshi	2.10	326	P	Pn	12 06 09.4	-0.1
CHN1				eS	Sn	12 06 38.2	0.0
EHY	Hungye	2.10	348	eP	Pn	12 06 09.0	-0.5
EHY				eS	Sn	12 06 37.8	-0.4
CHN3	Shinhua	2.11	321	eP	Pn	12 06 10.8	+1.3
WTP	Ta-pu	2.11	328	P	Pn	12 06 09.3	-0.3
WTP				eS	Sn	12 06 38.3	-0.1
TPUB	Ta-pu	2.15	330	P	Pn	12 06 09.6	-0.5
TPUB	Ta-pu	2.15	330	S	Sn	12 06 38.5	-0.6
TPUB	Ta-pu	2.15	330	iP	Pn	12 06 09.7	-0.3
TPUB				S	Sn	12 06 38.5	-0.6
TAI	Tainan	2.15	316	eP	Pn	12 06 10.3	+0.2
TAI				eS	Sn	12 06 39.8	+0.7
YUS	Yu-Shan	2.19	339	eP	Pn	12 06 11.0	+0.1
YUS				eS	Sn	12 06 41.7	+1.0
TWK	Hsinying	2.19	326	P	Pn	12 06 10.3	-0.3
TWK				eS	Sn	12 06 40.1	+0.1
SSHA	Shanhua	2.20	320	eP	Pn	12 06 11.3	+0.8
SSHA				eS	Sn	12 06 41.4	+1.3
CHN4	Tsaushan	2.21	330	eP	Pn	12 06 10.6	-0.2
CHN4				eS	Sn	12 06 40.3	0.0
ALS	Alishan	2.26	336	eP	Pn	12 06 11.5	-0.1
ALS				eS	Sn	12 06 42.1	+0.2
WCKO	Fanlu	2.28	331	P	Pn	12 06 11.4	-0.2
WCKO				S	Sn	12 06 41.6	-0.2
SCLT	Jiali	2.29	319	eP	Pn	12 06 11.8	+0.3

SCLT				eS	Sn	12 06 42.6	+0.8
WARBT	Fenglin Townsh	2.30	350	i P	Pn	12 06 11.2	-0.6
WARBT				S	Sn	12 06 41.7	-0.5
TSCK	Chigu Township	2.33	317	i P	Pn	12 06 12.2	+0.1
TSCK				i S	Sn	12 06 43.0	+0.2
SHUL	Shoufeng	2.35	354	eP	Pn	12 06 12.7	+0.4
SHUL				eS	Sn	12 06 44.0	+0.8
ICHU	Yijhu	2.38	324	P	Pn	12 06 12.6	-0.1
VWDT	VWDT	2.38	345	eP	Pn	12 06 13.5	+0.8
VWDT				eS	Sn	12 06 44.9	+0.9
ESL	Shilin	2.39	352	eP	Pn	12 06 12.8	0.0
ESL				eS	Sn	12 06 44.2	+0.1
CHN5	Tsauling	2.39	334	i P	Pn	12 06 12.5	-0.4
CHN5				i S	Sn	12 06 43.9	-0.3
CHN8	Yiju	2.41	322	eP	Pn	12 06 12.9	-0.1
CHN8				eS	Sn	12 06 45.0	+0.5
WHYT	Xinyi Township	2.41	339	eP	Pn	12 06 13.1	-0.1
WHYT				S	Sn	12 06 44.9	+0.2
CHY	Chiayi	2.42	328	eP	Pn	12 06 12.9	-0.3
CHY				eS	Sn	12 06 44.2	-0.4
SSLB	Suanglung	2.47	341	P	Pn	12 06 13.4	-0.4
SSLB	Suanglung	2.47	341	S	Sn	12 06 45.7	-0.1
SSLB	Suanglung	2.47	341	i P	Pn	12 06 13.5	-0.4
SSLB				S	Sn	12 06 45.8	-0.1
WGK	Gukeng	2.52	333	eP	Pn	12 06 14.2	-0.1
WGK				eS	Sn	12 06 46.7	-0.1
WDLH	Douliu	2.53	332	eP	Pn	12 06 14.1	-0.4
WDLH				eS	Sn	12 06 46.9	-0.1
ETM	Tongmen	2.53	353	eP	Pn	12 06 14.8	+0.2
ETM				eS	Sn	12 06 46.9	-0.2
WSL	Shuilin Townsh	2.54	325	P	Pn	12 06 14.1	-0.5
WSL				S	Sn	12 06 46.9	-0.3
OWD	Renai	2.57	347	P	Pn	12 06 15.5	+0.4
OWD				S	Sn	12 06 49.3	+1.1
SMLT	Sun Moon Lake	2.57	341	eP	Pn	12 06 14.8	-0.3
SMLT				eS	Sn	12 06 48.6	+0.3
WJS	Zhushan	2.57	337	eP	Pn	12 06 15.2	+0.1
WJS				eS	Sn	12 06 48.3	+0.3
LXIB	Xiulin Townshi	2.59	352	eP	Pn	12 06 15.1	-0.4
LXIB				eS	Sn	12 06 48.8	+0.1
WTK	Tuku	2.59	330	eS	Sn	12 06 48.6	+0.1
TYC	Yuchr	2.61	340	eP	Pn	12 06 15.4	-0.1
TYC				eS	Sn	12 06 49.1	+0.4
WUSB	Renai	2.62	346	eP	Pn	12 06 16.1	+0.3
WUSB				S	Sn	12 06 50.3	+1.0
WSF	Szhu	2.63	326	eP	Pn	12 06 15.3	-0.4
WSF				eS	Sn	12 06 49.3	-0.1
WNT	Mingjian	2.64	337	eP	Pn	12 06 15.9	0.0
WNT				eS	Sn	12 06 49.7	+0.2
WNT1	Nantou City	2.67	337	eP	Pn	12 06 16.1	-0.1
WNT1				eS	Sn	12 06 50.2	+0.1
WPL	Puli Township	2.68	343	eP	Pn	12 06 16.2	-0.1
WPL				eS	Sn	12 06 50.9	+0.5
WDGT	Dungji	2.69	313	eP	Pn	12 06 15.7	-0.7
WDGT				eS	Sn	12 06 50.0	-0.6
DPDB	Guoxing	2.71	343	eP	Pn	12 06 16.5	-0.2
DPDB				eS	Sn	12 06 50.6	-0.4
NACB	Ninganchiao	2.73	356	P	Pn	12 06 17.3	+0.4
NACB	Ninganchiao	2.73	356	eP	Pn	12 06 16.6	-0.3
NACB				eS	Sn	12 06 51.5	+0.1
WCS	Beigang Elemen	2.73	342	eP	Pn	12 06 17.3	+0.3
WCS				eS	Sn	12 06 51.7	+0.1
WHF	Hehuan Shan	2.74	349	eP	Pn	12 06 18.3	+0.8
WHF				eS	Sn	12 06 52.6	+0.2
ETLH	Xiulin Townshi	2.77	354	eP	Pn	12 06 17.8	+0.3
RLNB	Erlin	2.78	331	eP	Pn	12 06 17.8	+0.2
RLNB				eS	Sn	12 06 52.3	-0.3
WRL	Guolierlin Hig	2.79	332	eP	Pn	12 06 17.0	-0.7
WRL				S	Sn	12 06 52.0	-0.7
WWF	Wufeng	2.79	339	eP	Pn	12 06 17.6	-0.1
WWF				eS	Sn	12 06 53.1	+0.3
VCHM	Qimei	2.82	309	eP	Pn	12 06 17.6	-0.5
VCHM				eS	Sn	12 06 53.2	-0.2
FUSS	Fushou	2.84	349	i P	Pn	12 06 19.6	+1.0
FUSS				eS	Sn	12 06 55.7	+1.3
WCH1	Changhua City	2.87	336	eS	Sn	12 06 55.5	+1.0
WCHH	Zhanghua	2.87	336	eP	Pn	12 06 18.6	-0.1
WCHH				eS	Sn	12 06 55.1	+0.6
TCU	Taichung	2.89	339	eP	Pn	12 06 18.9	0.0
TCU				eS	Sn	12 06 55.7	+0.7
PHUB	P'eng-hu	2.92	315	eP	Pn	12 06 18.6	-0.7
PHUB				eS	Sn	12 06 54.8	-0.9
WHP	Taichung City	2.94	344	i P	Pn	12 06 19.8	+0.2
WHP				S	Sn	12 06 57.4	+1.2
PNG	Penghu	2.97	316	eP	Pn	12 06 19.4	-0.6
PNG				eS	Sn	12 06 55.6	-1.1
ENA	Nanau	2.97	359	eP	Pn	12 06 18.6	-1.3
NNSB	Datong	3.00	352	eP	Pn	12 06 20.5	+0.1
NNSB				eS	Sn	12 06 58.6	+1.0
NNSH	Datong	3.00	352	eP	Pn	12 06 21.0	+0.6
TWQ1	Liyutan	3.05	342	eP	Pn	12 06 21.4	+0.5
TWQ1				eS	Sn	12 06 59.3	+0.7
LATG	Datong	3.09	355	eP	Pn	12 06 22.1	+0.6
LATG				eS	Sn	12 06 58.7	-1.0
ENTT	Nioudou	3.19	356	eP	Pn	12 06 23.3	+0.6
YHNB	Yeheng	3.24	353	P	Pn	12 06 24.2	+0.8
YHNB	Yeheng	3.24	353	eP	Pn	12 06 24.2	+0.8
YHNB				eS	Sn	12 07 03.3	+0.4
NFF	Wufeng Townshi	3.24	349	eP	Pn	12 06 24.4	+1.0
NFF				eS	Sn	12 07 02.8	-0.2
NSK	Sanguang	3.25	353	eP	Pn	12 06 24.1	+0.7
NSK				eS	Sn	12 07 03.9	+0.7
VWUC	VWUC	4.15	329	P	Pn	12 06 34.5	-0.5
VWUC				eS	Sn	12 07 22.2	-1.5
PTMZ	Houxiangcun	4.36	326	eP	Pn	12 06 37.0	-0.6
PTMZ				eS	Sn	12 07 27.2	-1.2
KNMB	Chin-men Tao	4.36	314	eP	Pn	12 06 37.2	-0.5

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*IDC **05** 12:18:54.4±1.7, 40°.72N×51°.58E, h0km, mb3.7/6, mbtmp3.8/13, ML3.7/7, Error ellipse: s-maj=33.4km s-min=10.3km az=164.0*

*MOS **05** 12:18:56.3±1.7, 40°.80N×51°.84E, h12km, mb3.6/1, Error ellipse: s-maj=10.5km s-min=6.3km az=30.6*

*AZER **05** 12:19:01.7, 40°.58N×51°.64E, h62km, ml3.8*

*TEH **05** 12:19:01.6, 40°.59N×51°.71E, h80km, ML3.9, Presumed earthquake*

ISC 05 12:18:59.3±1.0, **40°.77N**±0°.04×**51°.85E**±0°.05, **h50**km±13km, **n88**, σ**2.34**/129, **mb3.6**/5, **3C-6D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GALA	Gala	1.34	255	Sn	Sn	12 19 37.2	-1.2
NDR	Nardaran	1.43	263	Pn	Pn	12 19 27.4	+4.5
NDR				Sn	Sn	12 19 43.5	+3.0
GOBA	Gobu	1.66	258	Sn	Sn	12 19 48.1	+2.1
ATGJ	Altiaghaj	2.21	273	Pn	Pn	12 19 35.9	+2.2
ATGJ	Altiaghaj	2.21	273	Pn	Pn	12 19 36.0	+2.2
ATGJ				Sn	Sn	12 20 01.8	+1.8
GBS	Qobustan	2.23	265	Pn	Pn	12 19 37.2	+3.4
GBS				Sn	Sn	12 20 04.1	+3.9
SIZA	Siyzn	2.26	279	Pn	Pn	12 19 37.5	+3.2
SIZA	Siyzn	2.26	279	Pn	Pn	12 19 37.5	+3.2
SIZA				Sn	Sn	12 20 03.4	+2.4
QUBA	Quba, Azerbaij	2.61	284	Pn	Pn	12 19 41.2	+2.2
QUBA				Sn	Sn	12 20 12.6	+3.0
IML	Ismayilli	2.79	272	Pn	Pn	12 19 43.3	+1.8
IML				Sn	Sn	12 20 15.0	+1.1
QSAR	Qusar	2.81	287	Pn	Pn	12 19 43.6	+1.7
QSAR				Sn	Sn	12 20 16.2	+1.6
KDMR	Kurdemir	2.82	263	Sn	Sn	12 20 16.1	+1.5
XNQ	Khinaliq	2.84	279	Pn	Pn	12 19 43.8	+1.4
XNQ				Sn	Sn	12 20 15.9	+0.4
DRN	Derbent	2.94	297	i PN	Pn	12 19 44.9	+1.4
DRN				eS	Sn	12 20 18.2	+0.7
DRN				pmax	pmax		
	comp=Z,59nm,1.1s						
QBL	Gabala	3.05	275	Pn	Pn	12 19 46.2	+1.1
QBL				Sn	Sn	12 20 20.0	-0.4
GLBA	Clilabad	3.06	241	Pn	Pn	12 19 46.7	+1.5
GLBA	Clilabad	3.06	241	Pn	Pn	12 19 46.8	+1.5
GLBA				Sn	Sn	12 20 20.3	-0.3
LKRN	Lenkeran, Azer	3.14	230	PN	Pn	12 19 47.4	+1.2
LKRN	Lenkeran, Azer	3.14	230	Pn	Pn	12 19 47.5	+1.2
LKRN				Sn	Sn	12 20 21.2	-1.2
AKT	Akhty	3.20	284	ePN	Pn	12 19 48.1	+0.9
AKT				e		12 19 54.7	
AKT				eS	Sn	12 20 23.7	-0.4
AKT				eS		12 20 34.3	
AKT				e		12 20 38.6	
AKT				pmax	pmax		
	comp=Z,23nm,0.5s						
AKT				smax	smax		
	comp=E,114nm,0.3s						
AKT				smax	smax		
	comp=N,116nm,0.4s						
AKT				smax	smax		
	comp=N,93nm,0.5s						
ZRD	Zardab	3.22	263	Pn	Pn	12 19 49.0	+1.8
ZRD				Sn	Sn	12 20 25.6	+1.3
ASTR	Astara	3.23	228	Pn	Pn	12 19 48.5	+1.0
ASTR				Sn	Sn	12 20 23.2	-1.5
GAS1	Astara - Iran	3.33	225	Pn	Pn	12 19 49.4	+0.6
YRD	Yardimli	3.34	238	Pn	Pn	12 19 49.9	+0.7
YRD				Sn	Sn	12 20 25.6	-2.1
LRK	Lerik	3.44	233	Pn	Pn	12 19 51.2	+0.7
LRK				Sn	Sn	12 20 28.2	-2.0
BLQ	Beylaqan	3.45	254	Sn	Sn	12 20 28.4	-1.8
SEKA	Sheki	3.55	279	Pn	Pn	12 19 53.0	+1.0
SEKA				Sn	Sn	12 20 33.2	+0.5
BRDA	Brd	3.60	264	Pn	Pn	12 19 53.6	+1.1
BRDA				Sn	Sn	12 20 35.5	+1.7
MNGR	Mingechevir, A	3.62	272	Pn	Pn	12 19 54.4	+1.5
MNGR				Sn	Sn	12 20 35.2	+0.8
GRMI	Germi	3.62	239	Pn	Pn	12 19 53.8	+0.7
AGDM	Agdam	3.68	261	Pn	Pn	12 19 54.3	+0.6
AGDM				Sn	Sn	12 20 34.9	-0.9
QRD	Qoradiz	3.71	251	Pn	Pn	12 19 56.0	+1.8
QRD				Sn	Sn	12 20 34.8	-1.8
MAK	Makhachkala	3.92	305	⇑i PN	Pn	12 19 58.5	+1.6
MAK				eS	Sn	12 20 43.9	+2.3
MAK				pmax	pmax		
	comp=Z,102nm,0.2s						
MAK				smax	smax		
	comp=N,181nm,0.5s						
MAK				smax	smax		
	comp=N,214nm,0.4s						
MAK				MLR	MLR		
	comp=Z,29nm,6.0s						
ZKTA	Zakatala	4.04	284	Pn	Pn	12 20 00.2	+1.6
ZKTA				Sn	Sn	12 20 45.6	+0.9
ARKR	Arakani	4.08	298	i PN	Pn	12 20 01.7	+2.5
VSHL	Vashlovani	4.15	278	P	Pn	12 20 01.5	+1.3
VSHL				S	Sn	12 20 47.5	0.0
GANJ	Ganja	4.21	270	Pn	Pn	12 20 01.4	+0.4
GANJ				Sn	Sn	12 20 45.5	-3.3
KRNR	Karanay	4.23	301	i PN	Pn	12 20 03.7	+2.3
UNCR	Uncukul	4.26	299	i PN	Pn	12 20 02.4	+0.8
LGD	Lagodekhi	4.36	286	P	Pn	12 20 05.6	+2.5
LGD				S	Sn	12 20 51.7	-0.9
LGD	Lagodekhi	4.36	286	PN	Pn	12 20 05.5	+2.5
LGD				S	Sn	12 20 51.7	-0.9
ISRB	Sarab	4.38	229	Pn	Pn	12 20 05.2	+1.7
IHRS	Heris	4.45	238	Pn	Pn	12 20 06.0	+1.5
MRVT	Maraveh tapeh	4.52	132	Pn	Pn	12 20 08.7	+3.4
IGLO	Ghaloghah	4.53	159	Pn	Pn	12 20 08.0	+2.4
IGZV	Ghazvin	4.56	197	Pn	Pn	12 20 06.9	+0.9
BTLR	Botlikh	4.62	296	⇓i PN	Pn	12 20 09.1	+2.4
BTLR				i S	Sn	12 21 02.0	+2.9
BTLR				pmax	pmax		
	comp=Z,26nm,0.7s						
GDB	GEDABAY	4.63	271	Pn	Pn	12 20 06.9	0.0
GDB				Sn	Sn	12 20 55.6	-3.9
IALA	Alasht	4.74	171	Pn	Pn	12 20 10.3	+1.8
DVE	Vedeno	4.80	299	⇑ePN	Pn	12 20 11.6	+2.4
DVE				i S	Sn	12 21 12.3	+8.7
DVE				pmax	pmax		
	comp=Z,17nm,0.6s						
ORD	Ordubad	4.87	250	Pn	Pn	12 20 11.9	+1.8
ORD				Sn	Sn	12 21 03.1	-2.1
QZX	Qazax, Azerbai	4.92	276	Pn	Pn	12 20 10.9	+0.2
QZX				Sn	Sn	12 21 03.0	-3.4
IHSH	Hashtrud	4.97	227	Pn	Pn	12 20 12.7	+1.0
SBZ	Shahbuz	5.02	256	Pn	Pn	12 20 14.3	+2.1
SBZ				Sn	Sn	12 21 08.9	-0.1
NAX	Nakhchivan	5.14	254	Sn	Sn	12 21 11.3	-0.5
IMRD	Marand	5.17	249	Pn	Pn	12 20 16.0	+1.8
SHTL	Shatili	5.36	293	P	Pn	12 20 17.1	+0.3
SHTL	Shatili	5.36	293	PN	Pn	12 20 17.1	+0.3
ISHB	Shabestar	5.42	245	Pn	Pn	12 20 19.3	+1.5
CHRG	Chargali	5.43	289	P	Pn	12 20 15.1	-2.7
CHRG				S	Sn	12 21 16.7	-2.3
GNI	Garni	5.46	266	Pn	Pn	12 20 18.4	+0.2
	comp=Z,1.3nm,0.3s,baz=318,slow=11,SNR=2.1						
GNI				Sn	Sn	12 21 17.0	-2.8
	comp=Z,1.2nm,0.3s,baz=63,slow=19,SNR=2.1						
	comp=Z,5.1nm,0.4s						
GNI	Garni	5.46	266	eP	Pn	12 20 17.6	-0.7
GNI				i S	Sn	12 21 15.1	-4.7
GNI				pmax	pmax		
	comp=Z,13nm,1.5s						
TRLG	Trialeti	5.90	280	P	Pn	12 20 23.5	-0.8
TRLG				S	Sn	12 21 24.6	-6.1
TRLG	Trialeti	5.90	280	P	Pn	12 20 23.5	-0.8
TRLG				S	Sn	12 21 24.6	-6.1
ISFR	Sfrayin	6.06	126	Pn	Pn	12 20 30.4	+3.8
NCK	Nalchik	6.72	297	⇓i P	Pn	12 20 38.8	+3.4
PYA1	Pyatigorsk	7.27	300	⇓i P	Pn	12 20 44.5	+1.6
KBZ	Khabaz	7.28	297	Pn	Pn	12 20 41.6	-1.3
	comp=Z,0.3nm,0.3s,baz=98,slow=5.4,SNR=6.6						
KBZ				Sn	Sn	12 21 56.4	-7.7
	comp=Z,0.8nm,0.3s,baz=242,slow=3.6,SNR=5.1						
	comp=Z,0.9nm,0.4s						
KBZ	Khabaz	7.28	297	i P	Pn	12 20 42.1	-0.8
SHA1	Shidzhatmaz	7.44	297	⇓i P	Pn	12 20 45.0	-0.5
AB31	Akbulak array	10.23	31	P	Pn	12 21 22.4	-1.1
	comp=Z,0.4nm,0.4s,baz=221,slow=14,SNR=29						
AB31				⇑S	Sn	12 23 11.1	-5.5
	comp=Z,2.5nm,0.3s,baz=229,slow=23,SNR=16						
AKTO	Aktyubinsk	10.59	22	Pn	Pn	12 21 27.3	-0.9
	comp=Z,1.6nm,0.3s,baz=202,slow=11,SNR=9.8						
AKTO				Sn	Sn	12 23 18.1	-7.1
	comp=Z,3.5nm,0.3s,baz=5.0,slow=15,SNR=14						
	comp=Z,5.4nm,0.4s						
AKTO	Aktyubinsk	10.59	22	⇓P	Pn	12 21 26.6	-1.6
	comp=Z,2.1nm,0.4s						
AKTO				⇓S	Sn	12 23 17.8	-7.4
	comp=Z,7.8nm,0.6s						
BELG	Belogornoye	11.99	347	Sn	Sn	12 23 47.4	-12
	comp=Z,1.6nm,0.3s,baz=196,slow=23,SNR=8.5						
BRTR	Keskin Array B	13.96	272	Pn	Pn	12 22 15.2	+0.8
	comp=Z,0.3nm,0.3s,baz=88,slow=9.6,SNR=6.5						
	comp=Z,0.3nm,0.4s						
ARTI	Arti	16.21	13	Pn	Pn	12 22 40.7	-2.7
	comp=Z,0.8nm,0.3s,baz=246,slow=4.7,SNR=4.7						
ARTI				Sn	Sn	12 25 30.4	-12
	comp=Z,0.5nm,0.3s,baz=77,slow=15,SNR=3.0						
AAK	Ala-Archa	17.00	76	P	P	12 22 58.1	+3.1
	comp=Z,0.3nm,0.3s,baz=275,slow=8.1,SNR=5.3						
	comp=Z,1.7nm,0.6s						
BVAR	Borovoye Array	17.56	40	P	Pn	12 23 01.3	+0.9
	comp=Z,0.1nm,0.3s,baz=236,slow=16,SNR=11						
BVAR				Sn	Sn	12 25 59.8	-15
	comp=Z,0.1nm,0.3s,baz=230,slow=24,SNR=7.2						
	comp=Z,2.2nm,0.5s						
OBN	Obninsk	17.57	330	eP	P	12 23 05.4	+4.5
OBN				pmax	pmax		
	comp=Z,8.0nm,0.3s						
OBN				MLR	MLR		
	comp=Z,65nm,16.0s						
AKASG	Malin Array Be	18.59	310	P	P	12 23 10.8	-1.4
	comp=Z,2.0nm,0.3s,baz=117,slow=12,SNR=6.3						
	comp=Z,0.6nm,0.3s						
AKASG	Malin Array Be	18.59	310	eP	P	12 23 13.6	+1.4
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KURBB	Kurchatov Arra	20.98	53	P	Pn	12 23 41.0	-0.2
	comp=Z,2.5nm,0.7s,baz=256,slow=11,SNR=11						
KURBB				S	S	12 27 28.8	0.0
	comp=Z,0.5nm,0.8s,baz=259,slow=21,SNR=3.7						
	comp=Z,2.5nm,0.7s						
KURK	Kurchatov	21.06	53	P	P	12 23 41.0	+2.0
MKAR	Makanchi Array	22.70	64	P	P	12 23 59.4	+2.7
	comp=Z,0.7nm,0.5s,baz=260,slow=9.6,SNR=12						
MKAR				S	S	12 28 04.3	+3.0
	comp=Z,0.1nm,0.5s,baz=263,slow=21,SNR=1.2						
	comp=Z,0.7nm,0.5s						
ZALV	Zalesovo Beam	25.66	48	P	P	12 24 26.8	+2.6
	comp=Z,1.2nm,0.4s,baz=264,slow=12,SNR=8.9						
	comp=Z,1.2nm,0.4s						
FINES	FINESS Array B	25.96	331	P	P	12 24 27.8	+1.0
	comp=Z,3.3nm,1.1s,baz=123,slow=14,SNR=4.5						
	comp=Z,3.3nm,1.1s						
HFS	Hagfors	30.45	322	P	P	12 25 05.8	-1.1
	comp=Z,0.8nm,0.6s,baz=115,slow=12,SNR=1.3						
	comp=Z,0.8nm,0.6s						
EKA	Eskdalemuir Ar	38.50	311	P	P	12 26 16.5	+0.1
	comp=Z,0.3nm,0.3s,baz=97,slow=9.0,SNR=5.7						
	comp=Z,0.3nm,0.3s						

IDC 05 12:28:17.9±4.5, **6°.60S**×**146°.99E**, **h0**km, **mb3.0**/2, **mbtmp3.2**/3, **ML3.1**/1, **Error ellipse: s-maj=158.8km s-min=36.7km az=108.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.07	222	P	Pn	12 32 28.8	-1.9
	0.1nm,0.3s,baz=44,slow=11,SNR=5.9						
	0.8nm,0.8s						
ASAR	Alice Springs	21.12	215	P	P	12 33 04.9	+0.4
	0.2nm,0.6s,baz=38,slow=12,SNR=4.3						
	0.2nm,0.6s						
KURBB	Kurchatov Arra	81.70	323	P	P	12 40 39.1	+0.9
	0.1nm,0.4s,baz=106,slow=6.7,SNR=1.8						
	0.1nm,0.4s						
TORD	Torodi Ar. Bea	145.22	283	PKPbc	PKPbc	12 47 57.0	-1.3
	0.1nm,0.3s,baz=65,slow=4.1,SNR=1.2						

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*NEIC **05** 12:39:04.2±0.4, 17°.97N±0°.04×66°.829W±0°.009, h17km±1km, ML3.4/35, Md3.1/5(RSPR), Error ellipse: s-maj=5.9km s-min=1.2km az=181.0*

*OSPL **05** 12:39:04.8±0.3, 17°.91N×66°.82W, h12km±3km, ML2.7, Presumed earthquake*

*SDD **05** 12:39:05.5±2.2, 17°.99N×66°.79W, h0km±28km, MD3.0, ML3.2, MW2.9, Presumed earthquake*

ISC 05 12:39:04.6±1.0, **17°.95N**±0°.06×**66°.81W**±0°.02, **h16**km±5km, **n31**, σ**0.99**/43, **8C, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.07	289		Pg	12 39 07.3	-0.4
GBPR					Sg	12 39 09.2	-0.4
OBIP	Obispado Ponce	0.21	65		Pg	12 39 09.5	0.0
OBIP					Sg	12 39 13.1	+0.2
OBIP	Obispado Ponce	0.21	65	IAML		12 39 14.0	
	comp=N,881nm,0.3s						
OBIP	Obispado Ponce	0.21	65	i P	Pg	12 39 09.6	0.0
OBIP				eS	Sg	12 39 13.1	+0.2
OBIP				IAML		12 39 13.6	
	comp=Z,782nm,0.3s						
MLPR	Magueyes Islan	0.22	274		Pg	12 39 09.2	-0.5
MLPR				IAML		12 39 13.2	
	comp=Z,5µm,0.2s						
MLPR				IAML		12 39 14.0	
	comp=Z,3µm,0.2s						
CELP	Cerrillos	0.25	61		Pg	12 39 10.1	0.0
CELP				IAML		12 39 14.8	
	comp=Z,6µm,0.2s						
CELP				IAML		12 39 14.8	
	comp=Z,3µm,0.4s						
CRPR	Cabo Rojo, PR	0.29	281		Pg	12 39 10.2	-0.5
CRPR					Sg	12 39 14.5	-0.6
CRPR	Cabo Rojo, PR	0.29	281	IAML		12 39 14.8	
	comp=Z,3µm,0.2s						
CRPR				IAML		12 39 15.0	
	comp=Z,5µm,0.2s						
CRPR	Cabo Rojo, PR	0.29	281	⇑i P	Pg	12 39 10.3	-0.5
CRPR				⇑i S	Sg	12 39 14.0	-1.0
CRPR				IAML		12 39 17.0	
	comp=N,3µm,0.2s						
CRPR	Cabo Rojo, PR	0.29	281	i P	Pg	12 39 10.3	-0.5
CRPR				eS	Sg	12 39 14.5	-0.6
CRPR				IAML		12 39 15.0	
	comp=Z,3µm,0.2s						
UUPR	Utuado, UPR, P	0.31	16		Pg	12 39 10.7	-0.5
LSP	Las Mesas	0.34	310		Pg	12 39 11.2	-0.6
LSP					Sb	12 39 17.0	-0.7
AOPR	Arecibo Observ	0.40	8		Pg	12 39 12.2	-0.5
AOPR				IAML		12 39 17.7	
	comp=Z,5µm,0.3s						
PRSN	Puerto Rico Se	0.41	310		Pg	12 39 12.2	-0.8
PRSN				IAML		12 39 20.6	
	comp=Z,6µm,0.2s						
ECPR	Experimental S	0.56	49		Pg	12 39 15.4	-0.3
ECPR				IAML		12 39 24.2	
	comp=Z,3µm,0.2s						
ECPR				IAML		12 39 25.4	
	comp=Z,2µm,0.2s						
EMPR	Esperanza - Ma	0.59	27		Pg	12 39 15.9	-0.3
EMPR					Sg	12 39 24.4	+0.4
AGPR	Aguadilla, PR	0.59	331		Pg	12 39 15.3	-0.9
SJG	San Juan	0.65	76		Pg	12 39 16.9	-0.5
SJG	San Juan	0.65	76	IAML		12 39 27.6	
	comp=Z,968nm,0.2s						
SJG	San Juan	0.65	76	⇑i P	Pg	12 39 16.9	-0.5
SJG				⇑i S	Sg	12 39 24.3	-1.7
SJG	San Juan	0.65	76	i P	Pg	12 39 16.8	-0.5
SJG				eS	Sg	12 39 25.7	-0.3
SJG				IAML		12 39 27.7	
	comp=Z,391nm,0.1s						
PDPR	Patillas Dam,	0.75	85		Pg	12 39 18.7	-0.6
IDE	Isla Desecheo	0.77	304		Pg	12 39 18.3	-1.2
IDE					Sg	12 39 28.7	-0.9
HUMP	Col San Antoni	0.93	78		Pg	12 39 21.1	-1.6
HUMP					Sg	12 39 33.0	-2.0
HUMP	Col San Antoni	0.93	78		Pg	12 39 21.6	-1.1
HUMP				IAML		12 39 39.5	
	comp=Z,380nm,0.2s						
HUMP				IAML		12 39 40.2	
	comp=Z,320nm,0.2s						
CUPR	Culebra, Puert	1.50	76		Pn	12 39 31.8	+0.9
HIDR	Higuey Centro	1.92	290	i P	Pn	12 39 37.2	+0.5
HIDR				⇑i S	Sn	12 39 59.3	-1.3
HIDR				IAML		12 40 05.0	
	comp=N,167nm,0.3s						
DR12	Loma Pena Alta	2.58	289		Pn	12 39 46.5	+0.7
HATOM	Hato Mayor del	2.58	289	⇑i P	Pn	12 39 47.3	+1.5
HATOM				⇑i S	Sn	12 40 18.1	+1.2
HATOM				IAML		12 40 27.4	
	comp=N,42nm,0.3s						
DR08	Loma La Naviza	3.21	289	⇑i P	Pn	12 39 56.2	+1.7
DR08				IAML		12 40 26.2	
	comp=N,234nm,0.2s						
DR08				i S	Sn	12 40 33.0	+0.4
SDDR	Presa de Saban	4.37	284	Pn	Pn	12 40 13.2	+2.8

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*IDC **05** 12:43:15.4±1.9, 5°.65N×126°.72E, h0km, mb3.4/4, mbtmp3.4/4, MS2.7/1, Error ellipse: s-maj=160.7km s-min=22.0km az=66.0*

*MAN **05** 12:43:15.0, 5°.15N×126°.58E, h5km, MS3.6*

ISC 05 12:43:22.1±1.2, **5°.15N**±0°.09×**126°.3E**±0°.1, **h35**km, **n10**, σ**3.38**/12, **mb3.3**/4, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.10	329	eP	Pn	12 43 39.6	-1.5
DDMP				eS	Sn	12 43 56.7	+1.6
GSPH	General Santos	1.61	305	i P	Pn	12 43 37.5	-11
GSPH				i S	Sn	12 44 05.7	-2.2
DMPH	Davao City--Mi	2.07	338	i P	Pn	12 43 54.0	-0.4
DMPH				i S	Sn	12 44 25.2	+6.3
BIPH	Bislig	3.02	2	eP	Pn	12 44 08.5	+1.0
BIPH				eS	Sn	12 44 38.3	-4.1
CGP	Cagayan de Oro	3.64	335	eP	Pn	12 44 20.1	+4.1
CGP				eS	Sn	12 45 08.6	+11
SIJI	Sorong	7.79	140	LR	LR	12 47 47.9	
	comp=Z,44nm,18.2s,baz=126,slow=34						
WRA	Warramunga Arr	26.17	163	P	P	12 48 54.8	+1.3
	0.3nm,0.6s,baz=344,slow=10.0,SNR=7.7						
	0.3nm,0.6s						
ASAR	Alice Springs	29.59	166	P	P	12 49 25.8	+1.7
	0.1nm,0.5s,baz=341,slow=6.8,SNR=4.3						
	0.1nm,0.5s						
MKAR	Makanchi Array	56.14	325	P	P	12 52 55.8	-2.5
	0.3nm,0.4s,baz=117,slow=8.1,SNR=7.4						
	0.3nm,0.4s						
KURBB	Kurchatov Arra	60.31	327	P	P	12 53 24.5	-2.8
	0.6nm,0.6s,baz=128,slow=6.3,SNR=8.0						
	0.6nm,0.6s						

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*AEIC **05** 12:43:32.6±1.5, 55°.80N±0°.09×149°.3W±0°.1, h7km±8km, Error ellipse: s-maj=13.6km s-min=10.1km az=162.0*

NEIC 05 12:43:28.4±1.6, **55°.80N**±0°.06×**149°.4W**±0°.1, **h10**km±8km,

ML3.5/42, ML3.4(AEIC), Error ellipse: s-maj=9.0km s-min=7.7km az=53.0, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHAK	Old Harbor	2.59	305		Pn	12 44 10.4	+0.1
OHAK					Sn	12 44 40.1	-1.6
OHAK	Old Harbor	2.59	305	IAML		12 44 40.6	
	comp=N,95nm,0.6s						
KDAK	Kodiak Island	2.65	320		Pn	12 44 11.3	+0.1
KDAK	Kodiak Island	2.65	320		Sn	12 44 41.0	-2.3
SII	Sitkinak Islan	2.79	288		Sn	12 44 45.2	-1.5
SII	Sitkinak Islan	2.79	288	Pn	Pn	12 44 13.3	+0.3
SII				IAML		12 44 46.9	
	comp=N,237nm,0.9s						
SII				IAML		12 44 47.5	
	comp=E,239nm,0.6s						
SYI	Shuyak Island	3.26	331		Pn	12 44 19.4	0.0
SYI					Sn	12 44 57.0	-1.2
SYI	Shuyak Island	3.26	331	IAML		12 44 58.7	
	comp=E,64nm,1.1s						
CHIR	Chirikof Islan	3.52	273		Pn	12 44 23.2	+0.1
CHIR					Pb	12 44 23.5	-7.2
CHIR					Sn	12 45 02.0	-2.6
CHIR	Chirikof Islan	3.52	273	IAML		12 46 33.5	
	comp=N,143nm,1.3s						
CNPM	China Poot	3.87	346		Pn	12 44 27.1	-0.8
CNPM					Sn	12 45 10.9	-2.3
CNPM	China Poot	3.87	346	IAML		12 45 12.2	
	comp=N,39nm,1.4s						
CNPM				IAML		12 45 13.8	
	comp=E,32nm,1.1s						
Q19K	Cape Douglas,	3.89	325		Pn	12 44 28.8	+0.6
Q19K					Pb	12 44 29.3	-7.8
Q19K	Cape Douglas,	3.89	325	IAML		12 45 00.8	
	comp=N,118nm,1.3s						
KAHG	Katmai Hook Gl	3.90	316		Pn	12 44 29.5	+1.2
KAWH	Katmai	3.93	313		Pn	12 44 29.8	+1.1
KAWH					Sn	12 45 13.6	-1.2
KAKN	Katmai Knife C	3.98	311		Pn	12 44 30.5	+1.0
BRSE	Bradley Lake S	4.02	350		Pn	12 44 28.8	-1.1
BRSE					Sn	12 45 13.8	-3.2
ACHA	Angle Creek He	4.05	309	Pn	Pn	12 44 31.7	+1.4
HOM	Homer	4.05	344	Pn	Pn	12 44 30.1	-0.3
BRLK	Bradley Lake	4.05	349	Pn	Pn	12 44 29.4	-1.0
BRLK				IAML		12 45 24.2	
	comp=N,31nm,1.4s						
BRLK				IAML		12 45 57.6	
	comp=E,38nm,1.4s						
ANCK	Angle Creek	4.11	308		Pn	12 44 32.2	+0.9
AUI	Augustine Isla	4.16	330		Pn	12 44 32.2	+0.4
AUJK	Augustine Jueg	4.17	330		Pn	12 44 32.2	+0.3
PLK4	Peulik 4	4.26	298		Pn	12 44 34.4	+1.1
PLK4	Peulik 4	4.26	298	IAML		12 45 26.4	
	comp=E,72nm,0.8s						
PLK4				IAML		12 45 27.0	
	comp=N,62nm,0.3s						
SEW	Seward	4.32	360	Pn	Pn	12 44 33.1	-0.9
SEW				IAML		12 45 19.8	
	comp=E,23nm,1.1s						
CNTC	Contact Creek	4.32	308		Pn	12 44 35.1	+0.9
P23K	Montague Islan	4.34	13	Pn	Pn	12 44 33.6	-0.7
P19K	Oil Pt	4.38	333	Pn	Pn	12 44 34.8	0.0
P19K				IAML		12 45 26.5	
	comp=N,40nm,1.2s						
P19K				IAML		12 45 34.2	
	comp=E,46nm,0.9s						
PLK1	Peulik 1	4.45	300		Pn	12 44 36.4	+0.7
ILS	Iliamna Low So	4.61	336		Pn	12 44 37.5	-0.6
ILSW	Iliamna Southw	4.65	336		Pn	12 44 38.1	-0.6
ILSW	Iliamna Southw	4.65	336	IAML		12 45 33.5	
	comp=N,17nm,0.3s						
SLKM	Skilak Lake	4.74	355	IAML		12 45 31.9	
	comp=E,56nm,0.3s						
P18K	Big Mountain,	4.78	321		Pn	12 44 40.2	-0.2
HIN	Hinchinbrook I	4.86	17	Pn	Pn	12 44 41.3	-0.1
KAIM	Kayak Island	4.91	31	Pn	Pn	12 44 42.5	+0.4
KAIM				IAML		12 45 50.9	
	comp=E,56nm,1.1s						
RDT	Redoubt	5.04	343		Pn	12 44 43.0	-1.0
DFR	Drift River	5.11	341		Pn	12 44 44.2	-0.8
O19K	Port Alsworth	5.13	331		Pn	12 44 44.5	-0.6
O19K	Port Alsworth	5.13	331	IAML		12 45 43.0	
	comp=E,48nm,0.5s						
O19K				IAML		12 45 47.5	
	comp=N,29nm,0.6s						
RC01	Rabbit Creek A	5.31	358		Pn	12 44 46.5	-1.1
RC01	Rabbit Creek A	5.31	358	IAML		12 45 46.2	
	comp=N,22nm,1.2s						
RC01				IAML		12 45 48.1	
	comp=E,24nm,0.6s						
SPU	Mount Spurr	5.57	347		Pn	12 44 50.2	-1.1
SPCR	Spurr Chakacha	5.61	346		Pn	12 44 50.8	-1.1
SPCR					Pb	12 44 51.4	-15
CKL	Chakachamna La	5.63	345		Pn	12 44 51.2	-0.9
KNK	Knik Glacier	5.65	5	Pn	Pn	12 44 52.3	0.0
P16K	Nushagak River	5.67	308		Pn	12 44 53.7	+1.2
SPCG	Spurr Capps Gl	5.68	347		Pn	12 44 52.5	-0.3
N19K	Bonanza Creek	5.70	334	Pn	Pn	12 44 52.5	-0.5
SPWE	Spurr West	5.73	344		Pn	12 44 52.9	-0.6
SPWE					Pb	12 44 53.5	-15
PMR	Palmer	5.81	1	Pn	Pn	12 44 54.9	+0.5
SPNN	North Nagishla	5.84	344		Pn	12 44 55.2	+0.1
STLK	Strandline Lak	5.86	348		Pn	12 44 54.6	-0.5
MESA	MESA	5.91	39	Pn	Pn	12 44 56.2	+0.2
CNBA	Chernabura Isl	5.91	265		Pn	12 44 55.6	-0.3
CRQM	Cirque	5.96	31	Pn	Pn	12 44 56.5	-0.2
KLU	Klutina	5.99	16		Pn	12 44 56.8	-0.2
O16K	Kokwok River B	6.02	313		Pn	12 44 58.0	+0.6
TGL	Tana Glacier	6.05	32	Pn	Pn	12 44 58.2	+0.3
M23K	Glacier View	6.07	7		Pn	12 44 57.8	-0.3
SCM	Sheep Creek Mo	6.14	9	Pn	Pn	12 44 59.4	+0.2
RKAV	Rock Avalanche	6.21	40		Pn	12 44 59.9	-0.2
VRDI	Verde Repeater	6.26	27	Pn	Pn	12 45 00.8	-0.1
SKT	Skwentna	6.30	351		Pn	12 45 00.2	-1.0
SDPT	Sand Point	6.31	270	Pn	Pn	12 45 00.6	-0.7
KIAG	Kiagna River	6.33	33		Pn	12 45 01.1	-0.6
N25K	Chitina, Valde	6.33	21		Pn	12 45 01.6	-0.2
GLB	Gilahina Butte	6.36	25	Pn	Pn	12 45 02.0	-0.1
GRNC	Granite Creek	6.37	36		Pn	12 45 01.7	-0.7
M20K	Styx River	6.40	344	Pn	Pn	12 45 01.6	-1.0
BALM	Baldy	6.42	32		Pn	12 45 02.3	-0.6
PTPK	Patty Peak	6.50	31		Pn	12 45 03.9	-0.3
O15K	Ungalikthiuk R	6.56	305		Pn	12 45 05.8	+0.9
BARN	Barnard Glacie	6.65	34		Pn	12 45 05.5	-0.7
CTGM	Chitina Glacie	6.69	36		Pn	12 45 06.0	-0.7
LOGN	Logan Glacier	6.70	38		Pn	12 45 06.1	-0.7
N16K	Nishlik Lake	6.82	317		Pn	12 45 09.2	+0.7
WAT6	Susitna Watana	6.85	6		Pn	12 45 08.5	-0.4
O28M	Mount Upton	6.95	40		Pn	12 45 09.7	-0.6
M17K	Holitna River	7.01	326		Pn	12 45 11.2	+0.2
PS1A	Pavlof South-1	7.01	272		Pn	12 45 11.6	+0.6
WAT7	Susitna Watana	7.06	2		Pn	12 45 11.8	+0.1
WAT1	Susitna Watana	7.06	3		Pn	12 45 11.7	0.0
PS4A	Pavlof South-4	7.09	271		Pn	12 45 12.6	+0.6
HAG	Hague Volcano	7.12	271		Pn	12 45 12.9	+0.5
DOL	Dolgoi Island	7.12	270		Pn	12 45 12.9	+0.4
PN7A	Pavlof North-7	7.15	272		Pn	12 45 13.8	+0.8
N15K	Kwethluk River	7.18	312		Pn	12 45 14.9	+1.6
M16K	Timber Creek	7.25	320		Pn	12 45 14.8	+0.6
PPLA	Purkeypile	7.26	350	Pn	Pn	12 45 16.1	+1.6
O29M	Mount Kennedy	7.29	47		Pn	12 45 15.0	0.0
DTNA	Dutton South F	7.34	270		Pn	12 45 16.1	+0.5
DT1	Dutton Round H	7.37	270		Pn	12 45 16.2	+0.4
DHY	Denali Highway	7.37	7		Pn	12 45 16.1	+0.1
S31K	Pelican	7.53	68		Pn	12 45 14.8	-3.2
RND	Reindeer	7.63	2	Pn	Pn	12 45 19.7	+0.1
HYT	Haines Junctio	8.03	46	Pn	Pn	12 45 25.5	+0.5
FALS	False Pass	8.06	269		Pn	12 45 25.7	+0.4
ISNN	Isanotski Nort	8.27	269		Pn	12 45 28.9	+0.6
RIDG	Independent Ri	8.28	14	Pn	Pn	12 45 28.6	+0.2
S32K	Killisnoo	8.34	72		Pn	12 45 26.1	-3.0
BPAW	Bear Paw Mtn.	8.36	355		Pn	12 45 28.4	-1.1
CCB	Clear Creek Bu	8.91	4	Pn	Pn	12 45 37.9	+1.0
IL31		9.08	7		Pn	12 45 39.3	0.0
H21K	Melozitna Rive	10.03	352		Pn	12 45 52.9	+0.6

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*IDC **05** 12:50:34.7±2.3, 5.°67N×126.°56E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=206.3km s-min=24.1km az=66.0*

*MAN **05** 12:50:35.0, 5.°28N×126.°59E, h1km, MS3.6*

ISC 05 12:50:43.0±1.2, 5.°41N±0.°09×126.°4E±0.°1, h66km, n9, σ3.s28/13, mb3.2/4, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.00	314	*i* P	Pn	12 50 57.7	-3.6
DDMP				*i* S	Sn	12 51 14.8	-0.2
GSPH	General Santos	1.63	295	*i* P	Pn	12 51 06.0	-3.7
GSPH				*i* S	Sn	12 51 32.5	+2.6
DMPH	Davao City--Mi	1.90	331	*i* P	Pn	12 51 13.7	+0.3
DMPH				*i* S	Sn	12 51 38.3	+2.0
BIPH	Bislig	2.76	358	*e*P	Pn	12 51 24.0	-0.9
BIPH				*i* S	Sn	12 51 53.4	-3.8
CGP	Cagayan de Oro	3.49	330	*e*P	Pn	12 51 42.1	+7.3
CGP				*e*S	Sn	12 52 21.8	+6.8
WRA	Warramunga Arr	26.36	163	P	P	12 56 14.2	+1.0
	0.2nm,0.5s,baz=343,slow=9.9,SNR=5.1						
	0.2nm,0.5s						
ASAR	Alice Springs	29.80	166	P	P	12 56 46.2	+2.3
	0.1nm,0.5s,baz=345,slow=9.2,SNR=1.2						
	0.1nm,0.5s						
MKAR	Makanchi Array	56.02	325	P	P	13 00 14.2	-0.8
	0.3nm,0.6s,baz=115,slow=7.9,SNR=5.2						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	60.18	327	P	P	13 00 43.1	-0.8
	0.6nm,0.2s,baz=126,slow=6.4,SNR=1.9						
	0.6nm,0.2s						

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*IDC **05** 13:09:21.8±7.8, 16.°91S×174.°06W, h174km±53km, mb3.2/4, mbtmp3.7/5, Error ellipse: s-maj=139.7km s-min=26.7km az=143.0*

ISC 05 13:09:16.7±1.1, 16.°9S±0.°2×173.°8W±0.°2, h124km, n19, σ1.s35/19, mb3.3/4, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	7.87	263	P	Pn	13 11 10.0	+1.6
	8.0nm,0.8s,baz=73,slow=15,SNR=4.2						
RUGZ	Raukumara Rang	22.30	198	P	P	13 14 03.8	-0.2
TWGZ	Tauwhareparae	22.40	197	P	P	13 14 04.1	-0.9
CNGZ	Carnagh Statio	22.63	197	P	P	13 14 06.5	-0.6
MWZ	Matawai	22.68	198	P	P	13 14 07.6	-0.2
TKGZ	Te Karaka	22.69	197	P	P	13 14 07.6	-0.1
URZ	Urewera	22.74	199	P	P	13 14 08.9	+0.7
RIGZ	Rimuhau	22.96	197	P	P	13 14 10.5	+0.1
MUGZ	Murupara	23.04	199	P	P	13 14 13.2	+2.1
RTZ	Ruatahuna	23.11	199	P	P	13 14 13.7	+1.9
SNGZ	Shannon Statio	23.15	198	P	P	13 14 14.0	+1.9
KNZ	Kokohu	23.28	197	P	P	13 14 13.8	+0.5
MHGZ	Mahia Peninsul	23.34	197	P	P	13 14 15.0	+1.1
BKZ	Black Stump Fm	23.76	199	P	P	13 14 18.5	+0.7
WRA	Warramunga Arr	49.18	258	P	P	13 17 50.1	-2.4
	0.2nm,0.6s,baz=98,slow=6.7,SNR=6.9						
	0.2nm,0.6s						
ASAR	Alice Springs	49.33	253	P	P	13 17 51.5	-2.1
	1.8nm,0.6s,baz=88,slow=8.4,SNR=50						
	1.8nm,0.6s						
PDAR	Pinedale Array	83.61	42	P	P	13 21 32.1	+0.5
	0.2nm,0.7s,baz=227,slow=4.6,SNR=1.8						
	0.2nm,0.7s						
ILAR	Eielson Array	83.98	11	P	P	13 21 32.1	-0.5
	0.4nm,0.6s,baz=195,slow=5.9,SNR=8.7						
	0.4nm,0.6s						
BRTR	Keskin Array B	147.08	319	PKPbc	PKPdf	13 28 44.0	+0.8
	0.8nm,0.7s,baz=46,slow=4.2,SNR=5.3						

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*NOU **05** 13:11:43.1, 29.°71S×175.°76W, h4km, ML5.6/116, Kermadec Islands Region*

*IDC **05** 13:11:44.1±0.3, 29.°67S×176.°19W, h0km, mb5.2/19, mbtmp5.1/23, ML4.9/4, MS4.7/51, Error ellipse: s-maj=13.5km s-min=13.4km az=56.0*

*NEIC **05** 13:11:45.8±2.7, 29.°73S±0.°08×176.°21W±0.°09, h10km±1km, mb5.6/445, Mww5.4/45, Error ellipse: s-maj=13.9km s-min=12.3km az=59.0*

*MOS **05** 13:11:46.6±1.1, 29.°69S×176.°38W, h19km, mb5.8/28, MS4.9/4, Error ellipse: s-maj=11.7km s-min=8.3km az=132.4*

*NEIC **05** 13:11:46.1, 29.°46S×175.°43W, h18km, Moment Tensor Solution. Duration: 2.s6 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.21; $M_{\theta\theta}$-0.09; $M_{\phi\phi}$1.30; $M_{r\theta}$0.19; $M_{\theta\phi}$0.44; $M_{\phi r}$-0.73; Fault plane solution: $M_0$1.53000×10^{17} NP1: ϕ_s213.46000°, δ34.31000°, λ-61.59000°. NP2: ϕ_s0.25000°, δ60.28000°, λ-107.99000°. Principal axes: T 1.5823, Plg14.0000°, Azm103.0000°; N -0.1090, Plg16.0000°, Azm9.0000°; P -1.4733, Plg69.0000°, Azm232.0000°;*

*GFZ **05** 13:11:46.7, 29.°65S×176.°38W, h20km, MW5.4, Moment Tensor Solution. s6 Moment tensor: M_{rr}-1.53; $M_{\theta\theta}$0.35; $M_{\phi\phi}$1.18; $M_{r\theta}$0.04; $M_{\theta\phi}$0.30; $M_{\phi r}$0.21; Fault plane solution: NP1: ϕ_s197.00000°, δ49.00000°, λ-91.00000°. NP2: ϕ_s18.00000°, δ40.00000°, λ-88.00000°.*

*NEIC **05** 13:11:46.1, 29.°76S×176.°24W, h18km*

*GCMT **05** 13:11:49.8±0.1, 29.°45S±0.°01×175.°92W, h13km, MW5.3/147, Moment Tensor Solution. s113,c191; s147,c257; Duration: 1.s1 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.16±.02; $M_{\theta\theta}$0.01±.01; $M_{\phi\phi}$1.15±.01; $M_{r\theta}$0.01±.03; $M_{\theta\phi}$0.30±.01; $M_{\phi r}$-0.29±.03; Best double couple: $M_0$1.22800×10^{17} NP1: ϕ_s198.00000°, δ38.00000°, λ-84.00000°. NP2: ϕ_s10.00000°, δ52.00000°, λ-95.00000°. Principal axes: T 1.2590, Plg7.0000°, Azm104.0000°; N -0.0640, Plg4.0000°, Azm13.0000°; P -1.1980, Plg82.0000°, Azm254.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 13:11:48.0±0.4, 29.°77S±0.°04×176.°22W±0.°04, h22km±2km, h23km:pP-P, n1143, σ1.s59/968, mb5.6/316, MS4.9/67, 47C-63D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.56	289	Pn	Pn	13 12 11.9	-2.5
	1μm,0.3s,baz=106,slow=1.7,SNR=93						
RAO				Sn	Sn	13 12 30.2	-3.8
	8μm,0.3s,baz=81,slow=16,SNR=23						
RAO	Raoul Island	1.56	289	P	Pb	13 12 15.7	-0.5
RAO	Raoul Island	1.56	289		Pb	13 12 15.9	-0.3
RAO	Raoul Island	1.56	289	P	Pb	13 12 15.8	-0.5
RAO				S	Sb	13 12 36.2	+0.6
MXZ	Matakaoa Point	9.01	209	Pn	Pn	13 13 55.4	-1.3
MXZ	Matakaoa Point	9.01	209	P	Pn	13 13 55.2	-1.5
MXZ				S	Sn	13 15 38.1	+0.7
WMGZ	Waiomatatini S	9.19	208	P	Pn	13 13 58.0	-1.1
WMGZ				S	Sn	13 15 44.1	+2.4
PKGZ	Pakihiroa	9.36	209	P	Pn	13 14 00.1	-1.5
HAZ	Te Kaha	9.40	210	P	Pn	13 14 00.5	-1.5
PUZ	Puketiti	9.47	207	P	Pn	13 14 00.7	-2.3
WCZ	Waipu Caves	10.04	230	P	Pn	13 14 15.3	+4.5
OPRZ	Ohinepanea	10.05	215	P	Pn	13 14 10.5	-0.4
WIAZ	Waiheke Island	10.07	224	P	Pn	13 14 14.5	+3.3
URZ	Urewera	10.12	211	Pn	Pn	13 14 10.4	-1.4
	3.4nm,0.3s,baz=266,slow=4.1,SNR=30						
URZ				Sn	Sn	13 16 01.6	-2.9
	22nm,0.3s,baz=44,slow=9.0,SNR=3.7						
	42nm,0.5s						
URZ	Urewera	10.12	211	P	Pn	13 14 11.0	-0.8
OUZ	Omahuta	10.17	235	P	Pn	13 14 16.1	+3.5
OUZ	Omahuta	10.17	235	P	Pn	13 14 18.9	+6.3
RAGZ	Rawiri	10.18	209	P	Pn	13 14 11.2	-1.5
MKAZ	Moumakai	10.26	222	P	Pn	13 14 17.3	+3.4
RTZ	Ruatahuna	10.46	211		Pn	13 14 14.9	-1.8
TOZ	Tahuroa Road	10.51	219		Pn	13 14 16.7	-0.5
TOZ	Tahuroa Road	10.51	219	P	Pn	13 14 18.3	+1.0
BKZ	Black Stump Fm	11.13	211	P	Pn	13 14 27.2	+1.4
BKZ	Black Stump Fm	11.13	211		Pn	13 14 23.2	-2.6
HIZ	Hauiti	11.43	218	P	Pn	13 14 31.3	+1.5
HIZ	Hauiti	11.43	218	S	Sn	13 16 44.6	+7.8
HIZ	Hauiti	11.43	218	P	Pn	13 14 32.1	+2.3
NGZ	Ngauruhoe	11.55	214	P	Pn	13 14 31.8	+0.2
PXZ	Pawanui	11.70	207	P	Pn	13 14 30.9	-2.7
LKBA	Tubou, Lakemba	11.72	348	P	Pn	13 14 32.4	-1.5
VRZ	Vera Road	11.93	216	P	Pn	13 14 38.0	+1.3
NIUE	Niue	12.08	30	P	Pn	13 14 29.4	-9.4
	comp=Z,226nm,1.6s						
NIUE	Niue	12.08	30	P	Pn	13 14 28.3	-11
NIUE				S	Sn	13 16 25.9	-27
TSZ	Takapari Road	12.10	210	P	Pn	13 14 36.6	-2.5
WAZ	Wanganui	12.30	214	P	Pn	13 14 40.1	-1.6
BFZ	Birch Farm	12.50	207	P	Pn	13 14 44.8	+0.3
BFZ	Birch Farm	12.50	207		Pn	13 14 41.3	-3.2
BFZ	Birch Farm	12.50	207	P	Pn	13 14 39.4	-5.1
MRZ	Mangatainoka R	12.76	209		Pn	13 14 45.5	-2.5
MRZ	Mangatainoka R	12.76	209	P	Pn	13 14 43.2	-4.8
MSVF	Nonsavu	13.07	335	Pn	Pn	13 14 49.1	-3.3
	comp=Z,1.0nm,0.3s,baz=138,slow=14,SNR=10						
MSVF				LR	LR	13 19 33.9	
	comp=Z,5μm,18.1s,baz=158,slow=36						
	comp=Z,26nm,0.9s						
MSVF	Nonsavu	13.07	335	P	Pn	13 14 52.0	-0.5
MSVF	Nonsavu	13.07	335		Pn	13 14 49.8	-2.7
MSVF	Nonsavu	13.07	335	⇓*i*P	Pn	13 14 51.9	-0.5
TAVE	Taveuni	13.43	345	P	Pn	13 14 56.4	-0.8
MSWZ	Moikau Station	13.53	208		Pn	13 14 55.8	-2.7
PLWZ	Palliser	13.65	208		Pn	13 14 58.1	-2.2
SNZO	South Karori	13.67	210	P	Pn	13 14 58.8	-1.6
SNZO	South Karori	13.67	210	Pn	Pn	13 14 58.3	-2.1
TCW	Tory Channel	13.78	212		Pn	13 15 00.1	-1.8
NFK	Norfolk Island	13.83	269	P	P	13 15 09.2	-1.7
	comp=Z,606nm,1.2s						
DGTI	Dogotuki	13.91	344	P	Pn	13 15 00.1	-3.7
CTZ	Chatham Island	13.95	181	P	Pn	13 15 03.4	-0.8
CTZ	Chatham Island	13.95	181		Pn	13 15 04.5	+0.4
CTZ	Chatham Island	13.95	181	P	Pn	13 15 04.1	0.0
TUWZ	Tuamarina	14.11	212		Pn	13 15 02.1	-4.3
NNZ	Nelson	14.21	214	P	Pn	13 15 02.7	-5.0
CMWZ	Cape Campbell	14.24	210	P	P	13 15 12.0	-3.4
QRZ	Quartz Range	14.34	217	P	Pn	13 15 08.9	-0.7
MRNZ	Matariki Terra	14.65	215	Pn	Pn	13 15 12.5	-1.3
THZ	Tophouse	14.86	213		Pn	13 15 14.9	-1.7
THZ	Tophouse	14.86	213	P	Pn	13 15 13.5	-3.1
KHZ	Kahutara	15.08	210	P	Pn	13 15 18.5	-1.0
KHZ	Kahutara	15.08	210		Pn	13 15 16.5	-3.0
KHZ	Kahutara	15.08	210	P	Pn	13 15 14.7	-4.9
DSZ	Denniston Nort	15.39	216	P	Pn	13 15 20.6	-3.1
GVZ	Greta Valley S	15.74	210	P	Pn	13 15 23.3	-5.0
LTZ	Lake Taylor	15.94	212		Pn	13 15 29.2	-1.7
LTZ	Lake Taylor	15.94	212	P	Pn	13 15 27.3	-3.6
AMCZ	Amberley	16.08	211	Pn	Pn	13 15 31.4	-1.2
INZ	Inchbonnie	16.29	214	P	Pn	13 15 32.4	-2.8
AFI	Afiamalu	16.31	16	Pn	Pn	13 15 27.4	-8.2
AFI				Sn	Sn	13 18 09.9	-26
AFI				LR	LR	13 24 56.7	
	comp=Z,352nm,19.1s,slow=49						
MARNC	Mare, Loyalty	16.41	297	P	P	13 15 41.4	+1.8
MARNC	Mare, Loyalty	16.41	297		Pn	13 15 37.2	+0.3
MARNC				IAmb	IAmb	13 15 42.7	
	comp=Z,760nm,1.4s						
OXZ	Oxford	16.47	212	P	Pn	13 15 33.8	-3.8
MQZ	McQueen's Vall	16.50	210	Pn	Pn	13 15 36.0	-2.0
MQZ	McQueen's Vall	16.50	210	P	Pn	13 15 33.1	-4.8
WVZ	Waitaha Valley	16.90	215	P	Pn	13 15 39.8	-3.2
YATNC	Mamie plateau,	17.01	293	P	P	13 15 47.3	+1.1
RAR	Rarotonga	17.11	64	P	Pn	13 15 36.4	-9.3
	comp=Z,23nm,0.3s,baz=229,slow=11,SNR=11						
RAR				S	Sn	13 18 26.8	-28
	comp=Z,98nm,1.1s,baz=50,slow=17,SNR=5.0						
RAR				LR	LR	13 21 44.0	
	comp=Z,3μm,18.5s,baz=246,slow=35						
RAR	Rarotonga	17.11	64	P	Pn	13 15 36.2	-9.5
RAR	Rarotonga	17.11	64	P	Pn	13 15 37.1	-8.6
RAR				IAmb	IAmb	13 15 50.1	
	comp=Z,883nm,1.9s						
RAR	Rarotonga	17.11	64	P	Pn	13 15 37.1	-8.6
RAR				pmax	pmax		
	comp=Z,883nm,2.0s						
RPZ	Rata Peaks	17.23	213	P	Pn	13 15 45.8	-1.3
	comp=Z,4.2nm,0.3s,baz=181,slow=0.6,SNR=24						
RPZ				S	Sn	13 18 43.5	-15
	comp=Z,80nm,0.8s,baz=185,slow=24,SNR=7.2						
	comp=Z,43nm,0.7s						
RPZ	Rata Peaks	17.23	213	P	Pn	13 15 47.1	0.0
RPZ	Rata Peaks	17.23	213	P	Pn	13 15 44.9	-2.2
RPZ	Rata Peaks	17.23	213	P	Pn	13 15 43.1	-4.0
ONTNC	Ouen Toro	17.24	291	P	P	13 15 50.1	+1.4
ONTNC	Ouen Toro	17.24	291	P	P	13 15 48.1	-0.6
DZM	Mont Dzumac	17.36	292	P	Pn	13 15 48.9	-0.1
	comp=Z,1.0nm,0.3s,baz=122,slow=16,SNR=23						
DZM				LR	LR	13 22 03.3	
	comp=Z,6μm,18.3s,baz=114,slow=36						
	comp=Z,25nm,0.8s						
DZM	Mont Dzumac	17.36	292	P	P	13 15 52.5	+2.3
FOZ	Fox Glacier	17.69	215	P	Pn	13 15 50.1	-2.7
FOZ	Fox Glacier	17.69	215	P	Pn	13 15 50.4	-2.4
TMZ	Timaru	17.76	211	P	Pn	13 15 48.7	-5.1
LBZ	Lake Benmore	18.14	213	P	Pn	13 15 57.8	-0.7
RTV	Rentapao	18.40	307	P	Pn	13 16 02.6	+0.9
ODZ	Otahua Downs	18.44	211	P	Pn	13 16 02.7	+0.7
ODZ	Otahua Downs	18.44	211	P	P	13 16 00.5	-1.3
JCZ	Jackson Bay	18.60	216	P	P	13 16 03.6	-0.1
JCZ	Jackson Bay	18.60	216	P	P	13 16 01.9	-1.8
DVP	Devils Point	18.61	307	P	Pn	13 16 04.2	-0.1
WKZ	Wanaka	19.03	214	P	P	13 16 07.0	-1.4
HHSZ	Highcliff Hill	19.12	209	P	Pn	13 16 12.2	+1.9
EAZ	Earnscleugh	19.19	212	P	Pn	13 16 11.3	+0.2
MSZ	Milford Sound	19.46	216	P	P	13 16 12.4	-0.6
TUZ	Tuapeka	19.59	211	P	Pn	13 16 16.5	+0.6
MLZ	Mavora Lakes	19.86	214	P	P	13 16 17.4	0.0
MLZ	Mavora Lakes	19.86	214	P	P	13 16 18.2	+0.8
SYZ	Scrubby Hill	20.26	210	P	Pn	13 16 24.3	+0.5
SYZ	Scrubby Hill	20.26	210	P	Pn	13 16 26.0	+2.2
WHZ	Wether Hill Ro	20.32	213	P	P	13 16 23.4	+0.9
DCZ	Deep Cove	20.41	215	P	P	13 16 24.2	+0.9
SANVU	Saraoutou	20.87	309	P	Pn	13 16 31.7	+0.6
APZ	The Paps	21.00	211	P	P	13 16 32.5	+2.7
LHI	Lord Howe Isla	21.33	259	P	P	13 16 36.6	+3.2
	comp=Z,312nm,2.1s						
LHI	Lord Howe Isla	21.33	259	P	P	13 16 34.5	+1.1
LHI				IAmb	IAmb	13 16 38.7	
	comp=Z,432nm,1.2s						
GC1S	Gold Coast 1 S	26.50	266	P	P	13 17 26.9	+3.1
PPTF	Pamatai, Papee	27.18	70	P	P	13 17 25.5	-4.6
PPTF	Pamatai, Papee	27.18	70	P	P	13 17 34.1	+4.0
PPTF				IAmb	IAmb	13 17 46.9	
	comp=Z,259nm,1.4s						
PPT	Papeete	27.18	69	P	P	13 17 27.8	-2.3
	comp=Z,14nm,0.8s,baz=277,slow=7.9,SNR=7.2						
PPT				LR	LR	13 26 16.5	
	comp=Z,2μm,18.4s,baz=247,slow=32						
	comp=Z,14nm,0.8s						
AUBSH	Beerwah State	27.25	269	P	P	13 17 32.8	+2.2
ARMA	Armidale	27.78	261	P	P	13 17 38.1	+2.7
	comp=Z,53nm,1.1s						
ARMA	Armidale	27.78	261	P	P	13 17 37.4	+2.0
ARMA	Armidale	27.78	261	P	P	13 17 36.4	+1.0
TW1H	Toowoomba 1 Ha	27.95	267	P	P	13 17 39.7	+2.7
HURO	Huro Makira	28.02	309	P	P	13 17 35.5	-2.0
AUPHS	Peel High Scho	28.33	259	P	P	13 17 43.2	+2.9
NGOA	Tingoa Renbel	28.55	304	P	P	13 17 41.4	-0.8
EIDS	Eidsvold	29.26	271	P	P	13 17 49.5	+1.0
	comp=Z,118nm,1.4s						
EIDS	Eidsvold	29.26	271	P	P	13 17 49.5	+1.0
EIDS	Eidsvold	29.26	271	P	P	13 17 48.8	+0.3
EIDS				IAmb	IAmb	13 17 51.0	
	comp=Z,89nm,1.0s						
CNB	Canberra Magne	29.44	250	P	P	13 17 52.0	+1.9
AUDAR	Daramalan Coll	29.62	250	P	P	13 17 54.0	+2.3
AUMHS	Melrose High S	29.66	250	P	P	13 17 54.8	+2.7
CAN	Canberra	29.74	250	P	P	13 17 55.6	+2.9
	comp=Z,53nm,1.9s						
HNR	Honiara	30.10	307	P	P	13 17 54.0	-2.0
HNR	Honiara	30.10	307	P	P	13 17 53.8	-2.2
HNR				IAmb	IAmb	13 18 09.6	
	comp=Z,165nm,1.0s						
HNR	Honiara	30.10	307	P	P	13 17 53.8	-2.2
HNR				pmax	pmax		
	comp=Z,165nm,1.0s						
AUDCS	Dubbo College	30.15	256	P	P	13 17 58.4	+2.0
YNG	Young	30.24	252	P	P	13 18 01.0	+3.9
	comp=Z,35nm,1.7s						
AUNRC	North Rockhamp	30.35	274	P	P	13 17 59.3	+1.2
SAVO	Savo Central	30.39	308	P	P	13 17 59.8	+1.2
TATA	Tatamba Isabel	30.94	309	P	P	13 18 01.5	-2.0
GLAD	Gladstone	31.04	239	P	P	13 18 07.7	+3.6
AULRC	Lightning Ridg	31.05	262	P	P	13 18 06.5	+2.2
CORO	Coronation Par	31.76	238	P	P	13 18 13.7	+3.3
MOO	Moorlands	31.91	237	P	P	13 18 08.4	-3.4
	comp=Z,106nm,2.4s						
MOO	Moorlands	31.91	237	P	P	13 18 14.6	+2.8
TOO	Toolangi	32.63	246	P	P	13 18 20.8	+2.6
	comp=Z,19nm,1.9s						
TOO	Toolangi	32.63	246	P	P	13 18 17.6	-0.6
TOO	Toolangi	32.63	246	P	P	13 18 17.6	-0.6

TOO pmax pmax
comp=Z,23nm,1.3s
CMSA Cobar Meteorol 32.71 257 P **P** **13 18 20.7 +1.9**
comp=Z,144nm,1.2s
CMSA Cobar Meteorol 32.71 257 P **P** **13 18 20.1 +1.2**
BRAT Ballarat 33.87 246 P **P** **13 18 30.7 +1.8**
AUMTC Mt Clear Colle 33.91 246 P **P** **13 18 31.5 +2.2**
AUAYR Ayr State High 34.44 279 P **P** **13 18 34.6 +0.5**
QLP Quilpie 34.89 265 P **P** **13 18 39.3 +1.4**
comp=Z,94nm,1.8s
QLP Quilpie 34.89 265 P **P** **13 18 38.2 +0.3**
CTA Charters Tower 35.23 277 P **P** **13 18 41.2 +0.3**
comp=Z,3.3nm,0.7s
CTA Charters Tower 35.23 277 LR LR 13 32 09.7
comp=Z,3μm,18.3s,baz=122,slow=35
CTA Charters Tower 35.23 277 P **P** **13 18 41.5 +0.6**
CTAO Charters Tower 35.23 277 P **P** **13 18 41.5 +0.6**
CTAO Charters Tower 35.23 277 P **P** **13 18 41.1 +0.2**
CTAO IAmb IAmb 13 18 43.9
comp=Z,60nm,0.7s
CTAO Charters Tower 35.23 277 P **P** **13 18 41.1 +0.2**
CTAO pmax pmax
comp=Z,60nm,0.7s
ARPS Mount Arapiles 35.54 247 P **P** **13 18 45.4 +2.1**
STKA Stephens Creek 36.12 256 P **P** **13 18 49.7 +1.2**
comp=Z,771nm,1.2s
STKA Stephens Creek 36.12 256 P **P** **13 18 49.4 +0.9**
comp=Z,92nm,0.7s,baz=96,slow=10.0,SNR=122
STKA LR LR 13 33 20.1
comp=Z,3μm,18.0s,baz=95,slow=36
comp=Z,92nm,0.7s
STKA Stephens Creek 36.12 256 P **P** **13 18 49.7 +1.2**
STKA Stephens Creek 36.12 256*c i* P **P** **13 18 48.8 +0.3**
AUMBR Murray Bridge 37.69 250 P **P** **13 19 02.8 +1.1**
MTSU Mount Surprise 37.70 279 P **P** **13 19 02.3 +0.3**
comp=Z,62nm,0.8s
MTSU Mount Surprise 37.70 279 P **P** **13 19 02.6 +0.5**
HTT Hallett 38.16 253 P **P** **13 19 06.6 +0.8**
comp=Z,203nm,1.1s
HTT Hallett 38.16 253 P **P** **13 19 06.8 +1.0**
comp=Z,82nm,1.1s
HTT Hallett 38.16 253 P **P** **13 19 07.3 +1.5**
AUMAR Marden Senior 38.24 250 P **P** **13 19 08.1 +1.7**
PMG Port Moresby 39.75 293 LR LR 13 34 14.8
comp=Z,1μm,18.2s,baz=132,slow=34
PMG Port Moresby 39.75 293 P **P** **13 19 20.4 +1.2**
PMG Port Moresby 39.75 293 ⇑P **P** **13 19 18.1 -1.1**
PMG Port Moresby 39.75 293 ⇑*i* P **P** **13 19 17.8 -1.4**
PMG pmax pmax
comp=Z,22nm,1.4s
PMG Port Moresby 39.75 293 P **P** **13 19 16.0 -3.2**
COEN Coen 40.60 284 P **P** **13 19 26.0 -0.2**
comp=Z,73nm,1.0s
COEN Coen 40.60 284 P **P** **13 19 25.8 -0.5**
COEN Coen 40.60 284 P **P** **13 19 24.6 -1.6**
BBOO Buckleboo 40.62 253 P **P** **13 19 26.3 0.0**
comp=Z,170nm,1.2s
BBOO Buckleboo 40.62 253 P **P** **13 19 26.4 0.0**
BBOO Buckleboo 40.62 253 IAmb IAmb 13 19 27.7
comp=Z,114nm,0.9s
QIS Mount Isa 40.81 272 P **P** **13 19 27.4 -0.6**
comp=Z,28nm,1.1s
QIS Mount Isa 40.81 272 P **P** **13 19 27.5 -0.6**
ASAR Alice Springs 44.69 265 P **P** **13 19 58.4 -1.1**
comp=Z,14nm,0.6s,baz=106,slow=7.6,SNR=95
ASAR PcP **PcP** **13 21 42.0 +0.2**
comp=Z,3.8nm,0.6s,baz=115,slow=4.2,SNR=6.0
ASAR ScP **ScP** **13 25 34.2 +1.4**
comp=Z,1.2nm,0.7s,baz=123,slow=4.5,SNR=3.3
ASAR S **S** **13 26 29.4 -5.6**
comp=Z,1.6nm,1.1s,baz=105,slow=14,SNR=4.7
ASAR LR LR 13 38 50.1
comp=Z,4μm,18.0s,baz=109,slow=36
ASAR P4KPbc 13 57 51.4
comp=Z,0.2nm,0.8s,baz=129,slow=4.9,SNR=4.3
comp=Z,14nm,0.6s
ASAR Alice Springs 44.69 265 P **P** **13 19 58.5 -1.0**
WR8 Warramunga Arr 45.48 271 IAmb IAmb 13 20 07.5
comp=Z,65nm,0.8s
WRAB Tennant Creek 45.62 271 P **P** **13 20 05.8 -1.0**
WRAB Tennant Creek 45.62 271 P **P** **13 20 05.9 -1.0**
WRAB IAmb IAmb 13 20 08.5
comp=Z,74nm,0.9s
WRAB Tennant Creek 45.62 271*d i* P **P** **13 20 05.5 -1.4**
WRAB pmax pmax
comp=Z,95nm,0.9s
WRA Warramunga Arr 45.62 271 P **P** **13 20 05.5 -1.4**
comp=Z,69nm,0.8s,baz=110,slow=7.9,SNR=342
WRA PcP **PcP** **13 21 45.2 +0.1**
comp=Z,9.8nm,0.9s,baz=116,slow=3.5,SNR=5.5
WRA ScP **ScP** **13 25 38.4 +1.8**
comp=Z,1.6nm,1.0s,baz=102,slow=4.6,SNR=3.3
WRA S **S** **13 26 42.2 -6.3**
comp=Z,3.9nm,1.1s,baz=107,slow=15,SNR=5.2
WRA P4KPbc 13 57 55.5
comp=Z,1.0nm,0.9s,baz=111,slow=5.0,SNR=4.5
comp=Z,69nm,0.8s
WRA Warramunga Arr 45.62 271 P **P** **13 20 05.8 -1.1**
WB0 Warramunga Arr 45.64 271 IAmb IAmb 13 20 08.7
comp=Z,90nm,0.9s
FORT Forrest 47.70 254 P **P** **13 20 22.6 -0.5**
comp=Z,41nm,0.9s
FORT Forrest 47.70 254 P **P** **13 20 21.8 -1.2**
FORT IAmb IAmb 13 20 24.2
comp=Z,38nm,0.9s
VNDA Vanda 48.88 186 P **P** **13 20 30.6 -1.0**
comp=Z,16nm,1.0s,baz=1.8,slow=6.2,SNR=8.8
VNDA LR LR 13 38 11.2
comp=Z,276nm,20.3s,baz=26,slow=32
JAY Jayapura 49.00 295 LR LR 13 39 48.7
comp=Z,560nm,20.3s,baz=118,slow=34
WRKA Warakurna 49.09 261 P **P** **13 20 32.5 -1.4**
comp=Z,17nm,1.2s,comp=Z,0.0nm
GENI Genyem 49.37 295 P **P** **13 20 35.6 -0.5**
GENI Genyem 49.37 295 P **P** **13 20 35.3 -0.8**
comp=Z,49nm,0.9s
KDU Kakadu 50.34 278 P **P** **13 20 43.4 0.0**
comp=Z,9.5nm,1.8s
DRS Darwin Rock St 51.81 278 P **P** **13 20 53.4 -1.1**
AUDHS Darwin High Sc 51.87 278 P **P** **13 20 53.3 -1.6**
KNRA Kununurra 52.20 273 P **P** **13 20 56.7 -0.7**
comp=Z,51nm,1.1s
KMBL Kambalda 52.68 252 P **P** **13 20 60.0 -0.9**
comp=Z,31nm,0.9s
BAKI Biak 53.45 293 P **P** **13 21 07.7 +1.1**
comp=Z,2μmcomp=Z,81nm,1.3s
FITZ Fitzroy Crossi 53.91 269 LR LR 13 44 20.5
comp=Z,1μm,18.1s,baz=114,slow=36
AUALB St Joseph's Co 54.99 246 P **P** **13 21 19.0 +1.4**
AUKUL Kulin High Sch 55.39 249 P **P** **13 21 20.7 +0.1**
FAKI Fak Fak 55.58 289 P **P** **13 21 23.5 +1.4**
FAKI Fak Fak 55.58 289 P **P** **13 21 20.5 -1.6**
FAKI IAmb IAmb 13 21 23.6
comp=Z,186nm,1.9s
FAKI Fak Fak 55.58 289 P **P** **13 21 21.4 -0.7**
comp=Z,1μmcomp=Z,47nm,1.9s
RKGY Rocky Gully 55.82 246 P **P** **13 21 24.6 +1.0**
comp=Z,87nm,1.1s
KLBR Kellerberrin 56.01 250 P **P** **13 21 24.8 -0.3**
comp=Z,181nm,1.0s
KLBR Kellerberrin 56.01 250 P **P** **13 21 24.3 -0.8**
NWAO Narrogin (SRO) 56.06 248 P **P** **13 21 26.4 +1.0**
comp=Z,49nm,1.5s
NWAO Narrogin (SRO) 56.06 248 LR LR 13 44 30.2
comp=Z,645nm,19.4s,baz=85,slow=35
NWAO Narrogin (SRO) 56.06 248 P **P** **13 21 26.4 +1.0**
NWAO Narrogin (SRO) 56.06 248 P **P** **13 21 24.1 -1.3**
NWAO IAmb IAmb 13 21 27.3
comp=Z,98nm,1.4s
NWAO Narrogin (SRO) 56.06 248 P **P** **13 21 24.1 -1.3**
NWAO pmax pmax
comp=Z,98nm,1.5s
CASY Casey 56.42 208 P **P** **13 21 28.4 +1.0**
MEEK Meekatharra 56.83 256 P **P** **13 21 31.1 +0.1**
comp=Z,43nm,1.6s
MEEK Meekatharra 56.83 256 P **P** **13 21 30.5 -0.5**
AUHAR St Anne's Scho 57.10 248 P **P** **13 21 34.2 +1.5**
GUMO Guam 57.14 313 LR LR 13 46 26.2
comp=Z,555nm,18.0s,baz=136,slow=36
BLDU Ballidu 57.16 251 P **P** **13 21 32.8 -0.4**
comp=Z,58nm,1.1s
BLDU Ballidu 57.16 251 P **P** **13 21 32.8 -0.4**
MUN Mundaring 57.16 249 P **P** **13 21 33.2 0.0**
PSAC2 Pilbara Seismi 57.53 262 P **P** **13 21 35.1 -0.9**
comp=Z,22nm,1.0s
SIJI Sorong 57.55 290 LR LR 13 46 51.9
comp=Z,385nm,18.5s,baz=144,slow=37
SIJI Sorong 57.55 290 P **P** **13 21 34.9 -1.3**
comp=Z,1μmcomp=Z,51nm,1.8s
PSAB3 Pilbara Seismi 57.56 262 P **P** **13 21 34.8 -1.4**
comp=Z,33nm,1.1s
SWI Sorong 57.56 290 P **P** **13 21 34.9 -1.3**
comp=Z,1μmcomp=Z,78nm,1.8s
PSA00 Pilbara Seismi 57.57 262 P **P** **13 21 34.6 -1.7**
comp=Z,29nm,1.2s
PSA00 Pilbara Seismi 57.57 262 P **P** **13 21 36.1 -0.2**
PSA00 Pilbara Seismi 57.57 262 P **P** **13 21 34.4 -1.9**
PSA00 Pilbara Seismi 57.57 262 P **P** **13 21 35.0 -1.3**
PSA00 IAmb IAmb 13 22 31.3
comp=Z,21nm,0.9s
PSAC1 Pilbara Seismi 57.62 262 P **P** **13 21 35.7 -0.9**
comp=Z,42nm,1.1s
MBWA Marble Bar 57.83 263 P **P** **13 21 36.8 -1.3**
comp=Z,48nm,1.1s
MBWA Marble Bar 57.83 263 P **P** **13 21 36.6 -1.5**
MBWA Marble Bar 57.83 263 P **P** **13 21 36.9 -1.2**
RPN Rapa Nui 58.12 105 LR LR 13 41 07.7
comp=Z,543nm,20.6s,baz=292,slow=30
MORW Morawa 58.19 252 P **P** **13 21 40.0 -0.5**
MORW Morawa 58.19 252 IAmb IAmb 13 21 41.5
comp=Z,118nm,1.6s
KRAI Karang Ratu 58.56 286 P **P** **13 21 42.5 -0.8**
comp=Z,2μmcomp=Z,39nm,1.3s
SOEI Soe 58.80 277 P **P** **13 21 45.7 +0.6**
SOEI Soe 58.80 277 P **P** **13 21 43.6 -1.4**
SOEI Soe 58.80 277 P **P** **13 21 45.5 +0.4**
comp=Z,1μmcomp=Z,71nm,1.7s
BATI Baumata 59.11 276 LR LR 13 47 48.7
comp=Z,2μm,18.9s,baz=130,slow=37
BATI Baumata 59.11 276 P **P** **13 21 48.1 +1.0**
comp=Z,885nmcomp=Z,48nm,1.1s
NLAI Namlea 59.69 285 P **P** **13 21 49.9 -1.2**
comp=Z,1μmcomp=Z,56nm,0.9s
QSPA South Pole Qui 60.34 180 P **P** **13 21 56.7 +1.7**
comp=Z,77nm,1.0s,baz=47,slow=2.5,SNR=115
QSPA LR LR 13 45 32.5
comp=Z,1μm,18.6s,baz=44,slow=34
comp=Z,77nm,1.0s
QSPA South Pole Qui 60.34 180 P **P** **13 21 57.1 +2.1**
SANI Sanana 61.27 285 P **P** **13 21 59.6 -2.2**
SANI Sanana 61.27 285 P **P** **13 21 59.4 -2.4**
comp=Z,1μmcomp=Z,67nm,1.1s
EDFI Ende, Flores 61.51 276 P **P** **13 22 03.3 -0.3**
WSI Waingapu 62.28 275 P **P** **13 22 06.4 -2.2**
comp=Z,4μmcomp=Z,179nm,1.4s
LBFI Labuan Bajo, 63.20 276 P **P** **13 22 13.1 -1.7**
LUWI Luwuk 64.51 284 P **P** **13 22 23.8 +0.4**
LUWI Luwuk 64.51 284 P **P** **13 22 21.9 -1.6**
LUWI Luwuk 64.51 284 P **P** **13 22 22.1 -1.3**
PLAI Plampang 64.86 274 P **P** **13 22 25.5 -0.2**
PLAI Plampang 64.86 274 P **P** **13 22 23.9 -1.8**
comp=Z,1μmcomp=Z,73nm,0.8s
KAPI Kappang 65.02 279 LR LR 13 51 33.9
comp=Z,518nm,18.7s,baz=138,slow=37
APSI Ampana 65.53 284 P **P** **13 22 28.8 -1.3**
comp=Z,44nm,1.3s
TWSI Taliwang, Sumb 65.68 274 P **P** **13 22 28.9 -2.1**
comp=Z,1μmcomp=Z,46nm,1.0s
TTSI Tana Toraja 65.97 281 P **P** **13 22 32.5 -0.4**
comp=Z,652nmcomp=Z,32nm,1.0s
MRSI Marisa 66.03 285 P **P** **13 22 30.4 -2.9**
comp=Z,644nmcomp=Z,38nm,0.7s
DAV Davao City (W) 66.77 293 LR LR 13 52 50.1
comp=Z,278nm,18.0s,baz=122,slow=37
MMSI Mamuju 66.93 281 P **P** **13 22 37.5 -1.6**
comp=Z,15nmcomp=Z,55nm,0.9s
KHKI Kahang-Kahang 66.96 273 P **P** **13 22 37.3 -2.0**
comp=Z,65nm,1.0s
PCI Palu 67.07 283 P **P** **13 22 41.1 +1.2**
comp=Z,114nm,1.3s
TOLI2 Tolitoli 67.34 285 P **P** **13 22 42.1 +0.4**
TOLI2 Tolitoli 67.34 285 P **P** **13 22 39.6 -2.1**
TOLI2 IAmb IAmb 13 23 11.0
comp=Z,26nm,0.8s
MPSI Mapaga 67.67 284 P **P** **13 22 41.4 -2.3**
JAGI Jajag, Banyuwa 68.18 273 P **P** **13 22 45.2 -1.8**
KMMI Kalianget 69.02 274 P **P** **13 22 49.6 -2.6**
comp=Z,85nm,1.1s
JCJ Chichijima 69.15 321 LR LR 13 48 03.4
comp=Z,259nm,19.3s,baz=148,slow=32
BBKI Banjar Baru 70.03 278 P **P** **13 22 57.7 -0.7**
comp=Z,58nm,0.7s
BELA Belgrano 2 70.20 172 P **P** **13 22 59.8 +1.3**
SNJI Sawahan-Nganju 70.58 272 P **P** **13 23 00.2 -1.9**
comp=Z,59nm,0.9s
SJI Sawahan 70.60 272 P **P** **13 23 00.4 -1.7**
comp=Z,44nm,0.8s
PCJI Pacitan 70.89 271 P **P** **13 23 02.0 -1.7**
CTJI Waduk Cacaban 73.19 271 P **P** **13 23 15.6 -1.9**
comp=Z,90nm,1.1s
KPJI Karang Pucung 73.26 271 P **P** **13 23 14.8 -3.1**
comp=Z,50nm,1.4s
MAW Mawson 73.44 200 P **P** **13 23 19.6 +1.6**
comp=Z,40nm,1.0s,baz=110,slow=7.8,SNR=4.8
MAW LR LR 13 57 31.9
comp=Z,404nm,19.0s,baz=114,slow=37
comp=Z,40nm,1.0s
MAW Mawson 73.44 200 P **P** **13 23 18.7 +0.7**
MAW Mawson 73.44 200 P **P** **13 23 18.7 +0.7**
MAW pmax pmax
comp=Z,32nm,1.6s
KKM Kota Kinabalu 73.84 287 P **P** **13 23 20.5 -0.9**
comp=Z,1μmcomp=Z,57nm,1.2s
BBJI Bungbulang 74.31 270 P **P** **13 23 23.6 -0.6**
BBJI Bungbulang 74.31 270 P **P** **13 23 23.0 -1.2**
BBJI Bungbulang 74.31 270 P **P** **13 23 21.9 -2.3**
LEM Lembang 74.64 271 LR LR 13 59 36.8
comp=Z,394nm,18.1s,baz=156,slow=38
JHJ Hachijo jima 2 75.15 323 LR LR 13 55 39.1
comp=Z,130nm,19.5s,baz=6.5,slow=35
SBUM Sibu 75.30 282 P **P** **13 23 29.4 -0.4**
SBUM Sibu 75.30 282 P **P** **13 23 28.6 -1.2**
SBUM Sibu 75.30 282 P **P** **13 23 28.6 -1.2**
DBJI Dramaga 75.53 271 P **P** **13 23 30.6 -0.5**
comp=Z,117nm,0.9s
CGJI Cibinong 76.42 270 P **P** **13 23 34.2 -2.0**
comp=Z,1μmcomp=Z,56nm,0.8s
TPI Tanjungpandan 76.59 275 P **P** **13 23 35.5 -1.7**
comp=Z,856nmcomp=Z,52nm,1.2s
JOW Kunigami 77.39 311 P **P** **13 23 41.6 +0.3**
ELIB Princess Elisa 77.65 186 *d* P **P** **13 23 44.8 +2.5**
comp=Z,42nm,0.9s
KASI Kota Agung 77.98 270 P **P** **13 23 42.7 -2.3**
comp=Z,72nm,1.0s
KLI Kotabumi 77.99 271 P **P** **13 23 43.3 -1.7**
SYO Syowa Base 78.07 192 ⇓*i* PcP **PcP** **13 23 59.2 +5.1**
KLSI 78.18 271 P **P** **13 23 45.1 -1.0**
INU Inuyama 78.32 323 P **P** **13 23 46.1 -0.2**
TROLL Troll, Antarti 78.50 180 ⇓P **P** **13 23 49.3 +2.3**
TROLL ⇑pP **sP** **13 23 52.8 -0.4**
LWLI Liwa 78.61 271 P **P** **13 23 46.3 -2.3**
MJAR Matsushiro Arr 78.62 324 P **P** **13 23 46.9 -1.1**
comp=Z,14nm,0.8s,baz=158,slow=5.7,SNR=16
comp=Z,14nm,0.8s
MJAR Matsushiro Arr 78.62 324 P **P** **13 23 47.1 -0.8**
MAJO Matsushiro 78.62 324 P **P** **13 23 47.2 -0.7**
MAJO Matsushiro 78.62 324 P **P** **13 23 46.8 -1.1**
MAJO Matsushiro 78.62 324 ⇑*i* P **P** **13 23 47.4 -0.5**
MAJO pmax pmax
comp=Z,122nm,3.2s
SNAA Sanae 78.74 178 ⇓P **P** **13 23 50.2 +1.9**
comp=Z,684nm,1.0s
SNAA Sanae 78.74 178 P **P** **13 23 48.3 0.0**
comp=Z,36nm,1.0s,baz=194,slow=5.8,SNR=29
SNAA LR LR 13 55 57.3
comp=Z,607nm,19.3s,baz=216,slow=34
comp=Z,36nm,1.0s
SNAA Sanae 78.74 178 P **P** **13 23 50.0 +1.7**
SNAA IAmb IAmb 13 23 55.3
comp=Z,127nm,1.3s
SNAA Sanae 78.74 178*d i* P **P** **13 23 49.9 +1.7**
SNAA pmax pmax
comp=Z,113nm,1.3s
MDSI Maura Dua 78.76 271 P **P** **13 23 48.1 -1.2**
comp=Z,1μmcomp=Z,83nm,0.8s
MDSI pP **pP** **13 23 50.7 -2.9**
comp=Z,1μmcomp=Z,83nm,0.8s
VNA3 Neumayer Olymp 78.83 176 ⇓P **P** **13 23 50.2 +1.5**
comp=Z,71nm,0.8s
JSU Suzuyama 79.24 316 P **P** **13 23 51.6 +0.1**
VNA2 Neumayer--Watz 79.28 176 ⇓P **P** **13 23 53.1 +1.9**
comp=Z,52nm,0.8s,baz=164,slow=4.8
VNA2 ⇑pP **sP** **13 23 57.1 -0.1**
comp=Z,47nm,0.8s,baz=176,slow=5.3
YOJ Yonaguni jima 79.42 306 P **P** **13 23 52.7 +0.1**
VNA1 Neumayer--Stat 79.50 176 ⇑P **P** **13 23 54.6 +2.3**
comp=Z,74nm,1.0s
H03S2 Juan Fernandez 79.52 123 T T 14 53 18.7
baz=238,slow=74,SNR=10
H03S1 Juan Fernandez 79.53 123 T T 14 53 19.8
baz=238,slow=74,SNR=11
H03S3 Juan Fernandez 79.54 123 T T 14 53 20.4
baz=238,slow=74,SNR=10
NVL N'lazarevskaya 79.59 183 *e* P **P** **13 23 49.1 -3.7**
NVL *e* 13 23 58.4
NVL *e* S **S** **13 33 51.3 -1.7**
NVL *e* SS **SS** **13 39 00.0 0.0**
NVL *e* SSS SSS 13 42 25.7
NVL pmax pmax
comp=Z,89nm,1.7s
NVL MLR MLR
comp=Z,797nm,23.0s
H03N3 Juan Fernandez 79.71 123 T T 14 53 20.2
baz=241,slow=72,SNR=7.6
H03N2 Juan Fernandez 79.71 123 T T 14 53 21.1
baz=241,slow=72,SNR=6.9
H03N1 Juan Fernandez 79.72 123 T T 14 53 19.9
baz=241,slow=72,SNR=6.9
JNU Nakatsue 80.12 317 LR LR 13 59 37.5
comp=Z,160nm,18.5s,baz=124,slow=36
NACB Ninganchiao 80.25 305 P **P** **13 23 56.9 -0.2**
NACB Ninganchiao 80.25 305 IAmb IAmb 13 23 58.1
comp=Z,112nm,1.1s
DSRI Dabo 80.39 275 P **P** **13 23 56.6 -1.5**
comp=Z,33nm,1.6s
TPUB Ta-pu 80.40 304 P **P** **13 23 56.8 -1.1**
TPUB Ta-pu 80.40 304 IAmb IAmb 13 23 57.7
comp=Z,82nm,0.9s
SSLB Suanglung 80.46 304 P **P** **13 23 57.1 -1.2**
SSLB Suanglung 80.46 304 IAmb IAmb 13 23 58.6
comp=Z,74nm,0.8s
KSI Kapahiang 80.55 271 P **P** **13 23 57.8 -1.3**
comp=Z,91nm,1.3s
YHNB Yeheng 80.71 305 P **P** **13 23 59.8 +0.1**
MASI Maura Aman, Be 81.10 271 P **P** **13 23 59.5 -2.5**
TPRI Tanjung Pinang 81.13 276 P **P** **13 24 01.2 -0.9**
PLCA Paso Flores 81.80 132 P **P** **13 24 04.5 -0.8**
comp=Z,3.9nm,0.8s,baz=215,slow=6.6,SNR=10
PLCA LR LR 13 53 25.3
comp=Z,352nm,18.1s,baz=254,slow=31
comp=Z,3.9nm,0.8s
MYKOM Kota Tinggi 82.14 277 P **P** **13 24 08.5 +1.0**
MYKOM Kota Tinggi 82.14 277 P **P** **13 24 07.2 -0.2**
MYKOM IAmb IAmb 13 24 09.3
comp=Z,79nm,1.3s
MYKOM Kota Tinggi 82.14 277 P **P** **13 24 06.3 -1.2**
comp=Z,972nmcomp=Z,56nm,1.6s
EFI East Falkland 82.47 146*d i* P **P** **13 24 09.5 +1.0**
EFI pmax pmax
comp=Z,67nm,1.1s
SHEM Shemya Is, Ala 82.58 354 LR LR 13 55 27.3
comp=Z,462nm,19.4s,baz=150,slow=32
JKA Kamikawa-asahi 82.60 331 IAmb IAmb 13 24 24.4
comp=Z,74nm,1.3s
NIKH Nikolski High 82.64 4 P **P** **13 24 08.1 -0.9**
baz=186
QZH2 Quanzhou 82.87 304 P **P** **13 24 11.7 +0.8**
QZH2 pmax pmax
comp=Z,210nm,1.1s
QZH2 pmax pmax
comp=Z,810nm,6.3s
LPIG La Paz 82.89 57 LR LR 13 55 09.2
comp=Z,2μm,18.1s,baz=214,slow=32
SLBS Sierra La Lagu 82.91 58 P **P** **13 24 12.2 +0.8**
SLBS IAmb IAmb 13 24 17.1
comp=Z,130nm,1.7s
BI02 San Fabin de 83.49 129 P **P** **13 24 14.5 +0.2**
VTX Valle De La Tr 83.64 48 IAmb IAmb 13 24 20.2
comp=Z,50nm,1.3s
CBX Cerro Bola 83.67 47 IAmb IAmb 13 24 16.8
comp=Z,116nm,1.9s
UNV Unalaska Valle 83.69 6 P **P** **13 24 13.3 -1.1**
UNV Unalaska Valle 83.69 6 IAmb IAmb 13 24 28.1
comp=Z,65nm,0.9s
UNV Unalaska Valle 83.69 6 P **P** **13 24 13.4 -1.0**
baz=188
PKD Bear Valley Ra 83.73 42 IAmb IAmb 13 24 30.1
comp=Z,34nm,1.1s
PDSI Padang 83.74 273 P **P** **13 24 13.9 -1.9**
comp=Z,51nm,1.4s
SAO San Andreas Ge 83.78 41 IAmb IAmb 13 24 20.4
comp=Z,40nm,1.3s
BBGB Big Mountain B 83.88 42 IAmb IAmb 13 24 22.4
comp=Z,83nm,1.3s
BAR Barrett 83.91 47 IAmb IAmb 13 24 21.6
comp=Z,72nm,1.6s
ESJX Sierra Juarez 83.93 48 IAmb IAmb 13 24 31.5
comp=Z,44nm,1.2s
DPP Dos Picos Cty 83.94 47 IAmb IAmb 13 24 30.8
comp=Z,31nm,1.0s
SFX San Felipe 84.02 49 IAmb IAmb 13 24 21.1
comp=Z,53nm,1.6s
MWC Mount Wilson 84.06 45 IAmb IAmb 13 24 18.6
comp=Z,83nm,1.6s
ELS Elsinore Mount 84.07 46 IAmb IAmb 13 24 18.0
comp=Z,30nm,1.1s
YUH Yuha Desert 84.36 47 IAmb IAmb 13 24 24.1
comp=Z,56nm,1.5s
BORC Borrego Spring 84.45 47 IAmb IAmb 13 24 23.7
comp=Z,63nm,1.4s
GDXM Geysers 84.46 39 IAmb IAmb 13 24 21.1
comp=Z,68nm,1.5s
TJN Taejon 84.46 318 P **P** **13 24 18.6 -0.2**
PFO Pinyon Flats O 84.65 46 LR LR 13 57 20.9
comp=Z,826nm,18.4s,baz=237,slow=32
PFO Pinyon Flats O 84.65 46 P **P** **13 24 19.5 -0.5**
PFO Pinyon Flats O 84.65 46*d i* P **P** **13 24 20.3 +0.3**
PFO pmax pmax
comp=Z,99nm,1.9s
PMD Palm Desert 84.72 46 IAmb IAmb 13 24 25.9
comp=Z,71nm,1.6s
BO02 Sierra Bellavi 84.83 127 IAmb IAmb 13 24 26.3
comp=Z,41nm,1.2s
YSS Yuzhno-Sakhali 84.86 333 P **P** **13 24 19.9 -0.7**
YSS Yuzhno-Sakhali 84.86 333 P **P** **13 24 20.7 +0.1**
YSS IAmb IAmb 13 24 36.1
comp=Z,49nm,0.8s
YSS Yuzhno-Sakhali 84.86 333 *e* P **P** **13 24 21.1 +0.5**
YSS *e* S **S** **13 34 49.2 +1.8**
YSS pmax pmax
comp=Z,300nm,4.1s
YSS pmax pmax
comp=Z,60nm,1.0s
YSS MLR MLR
comp=N,300nm,16.0s
YSS MLR MLR
comp=Z,500nm,16.0s
YSS MLR MLR
comp=E,500nm,18.0s
KSRS Korea Array 84.88 319 P **P** **13 24 21.1 +0.2**
comp=E,12nm,0.8s,baz=138,slow=5.3,SNR=22
KSRS LR LR 14 01 20.4
comp=E,265nm,18.0s,baz=145,slow=35
comp=E,12nm,0.8s
KSAR Wonju Array Be 84.89 319 P **P** **13 24 20.3 -0.7**
KSAR Wonju Array Be 84.89 319 P **P** **13 24 20.3 -0.7**
KS19 Wonju Array Si 84.94 319 IAmb IAmb 13 24 25.7
comp=Z,31nm,1.0s
FALS False Pass 85.00 7 P **P** **13 24 20.5 -0.5**
baz=191
MT01 Popeta 85.00 126 IAmb IAmb 13 24 26.8
comp=Z,39nm,1.1s
LRMC Laurel Mtn Rad 85.13 44 IAmb IAmb 13 24 28.2
comp=Z,110nm,1.7s
PIX Pinacate 85.27 50 IAmb IAmb 13 24 28.4
comp=Z,83nm,1.5s
PET Petropavlovsk 85.30 345 *e* P **P** **13 24 25.3 +2.7**
PET *e* 13 27 40.7
PET *e* S **S** **13 34 51.5 0.0**
PET *e* PS **PnS** **13 35 55.6 +6.1**
PET *e* PPS PPS 13 36 20.7
PET *e* SS **SS** **13 40 27.7 +0.6**
PET pmax pmax
comp=Z,200nm,11.2s
PET MLR MLR
comp=Z,400nm,16.0s
PET MLR MLR
comp=Z,600nm,14.0s
PET Petropavlovsk 85.30 345 P **P** **13 24 20.7 -1.9**

	comp=Z,40nm,1.7s						
SUTB	Sutter Butte	85.32	39	IAmb	IAmb	13 24 24.4	
	comp=Z,101nm,1.4s						
MNSI	Mandailing Nat	85.35	274	P	P	13 24 22.6	-1.3
	comp=Z,43nm,0.4s						
HSIG		85.40	53	IAmb	IAmb	13 24 28.2	
	comp=Z,53nm,1.2s						
KHMM	Horse Mountain	85.44	37	IAmb	IAmb	13 24 39.6	
	comp=Z,42nm,1.1s						
CHNA	Chernabura Isl	85.46	10	P	P	13 24 22.9	-0.5
	baz=194						
KHBM	Hayfork Bally	85.56	38	IAmb	IAmb	13 24 39.5	
	comp=Z,50nm,1.1s						
AFDM	Forest Hills D	85.57	40	IAmb	IAmb	13 24 25.8	
	comp=Z,49nm,1.3s						
PETK	Petropavlovsk-	85.60	345	P	P	13 24 23.4	-0.8
	comp=Z,11nm,0.8s,baz=123,slow=7.2,SNR=20						
PETK				LR	LR	13 58 13.5	
	comp=Z,392nm,19.4s,baz=154,slow=33						
	comp=Z,11nm,0.8s						
PETK	Petropavlovsk-	85.60	345	P	P	13 24 22.8	-1.4
MDPB	Devils Postpil	85.75	42	IAmb	IAmb	13 24 27.4	
	comp=Z,118nm,1.9s						
PEL	Peldehue	85.79	126	IAmb	IAmb	13 24 27.6	
	comp=Z,27nm,0.8s						
113A	Mohawk Valley,	85.83	49	IAmb	IAmb	13 24 31.6	
	comp=Z,65nm,1.4s						
SDPT	Sand Point	85.84	9	P	P	13 24 25.0	-0.2
	baz=194						
IPM	Ipoh	85.93	277	P	P	13 24 27.4	+0.6
IPM	Ipoh	85.93	277	IAmb	IAmb	13 24 28.3	
	comp=Z,50nm,0.9s						
IPM	Ipoh	85.93	277	P	P	13 24 26.0	-0.8
	comp=Z,1µmcomp=Z,81nm,1.6s						
QIZ	Qiongzhong	86.13	294	P	P	13 24 26.6	-1.0
QIZ				S	S	13 35 05.4	+4.2
QIZ				pmax	pmax		
	comp=Z,570nm,5.5s						
QIZ				L	L		
	comp=Z,250nm,14.2s						
QIZ				L	L		
	comp=Z,250nm,10.3s						
QIZ				L	L		
	comp=Z,270nm,9.8s						
P08K	Saint George I	86.21	4	P	P	13 24 27.2	+0.2
	baz=186						
DSP	Deep Springs	86.22	43	P	P	13 24 27.3	-0.3
SHOC	Shoshone, Teco	86.26	45	IAmb	IAmb	13 24 33.6	
	comp=Z,96nm,1.3s						
L02F	Cave Junction	86.42	36	IAmb	IAmb	13 24 43.8	
	comp=Z,59nm,1.2s						
PNTR	Pine Nut	86.44	41	IAmb	IAmb	13 24 43.7	
	comp=Z,59nm,1.0s						
LHV	Little Huntoon	86.50	42	IAmb	IAmb	13 24 34.7	
	comp=Z,101nm,1.5s						
YBH	Yreka Blue Hor	86.59	37	LR	LR	13 58 19.7	
	comp=Z,58nm,18.6s,baz=252,slow=32						
YBH	Yreka Blue Hor	86.59	37	IAmb	IAmb	13 24 31.4	
	comp=Z,108nm,1.8s						
WCT	Wildcat Mounta	86.64	44	IAmb	IAmb	13 24 31.8	
	comp=Z,50nm,1.6s						
KULM	Kulim	86.65	278	P	P	13 24 31.3	+1.0
KULM	Kulim	86.65	278	P	P	13 24 30.0	-0.3
	comp=Z,1µmcomp=Z,81nm,1.4s						
NVAR	Mina Array Bea	86.73	42	P	P	13 24 30.2	-0.2
	comp=Z,12nm,0.8s,baz=222,slow=8.2,SNR=98						
NVAR				PKKPbc	PKKPbc	13 42 25.7	-0.4
	comp=Z,0.6nm,0.8s,baz=90,slow=4.4,SNR=4.0						
NVAR				LR	LR	13 57 24.6	
	comp=Z,2µm,19.2s,baz=230,slow=32						
	comp=Z,12nm,0.8s						
SPIA	Saint Paul Isl	86.75	3	P	P	13 24 30.1	+0.4
	baz=185						
VLA	Vladivostok	86.76	325 ⇑	*i*P	P	13 24 30.3	+0.2
VLA				pmax	pmax		
	comp=Z,93nm,1.6s						
K02D	Willamette Mer	86.79	36	IAmb	IAmb	13 24 36.3	
	comp=Z,73nm,1.5s						
PSI	Prapat	86.91	275	P	P	13 24 30.9	-0.8
PSI	Prapat	86.91	275	P	P	13 24 30.0	-1.7
	comp=Z,1µmcomp=Z,97nm,1.5s						
PSTR	Posyet	86.97	324 ⇑	*e*P	P	13 24 30.7	-0.4
PAHR	Pah Rah Range	86.98	40	IAmb	IAmb	13 24 36.0	
	comp=Z,65nm,1.4s						
NJ2	Nanjing	87.02	310 ⇓	P	P	13 24 32.8	+1.2
NJ2				sP	sP	13 24 37.7	+0.1
NJ2				pmax	pmax		
	comp=Z,130nm,1.6s						
NJ2				pmax	pmax		
	comp=Z,1µm,3.8s						
V12A	Nelson	87.03	46	IAmb	IAmb	13 24 37.1	
	comp=Z,100nm,1.7s						
CO03	El Pedregal	87.04	124	P	P	13 24 32.4	+0.3
CHIR	Chirikof Islan	87.05	11	P	P	13 24 31.2	0.0
	baz=198						
Y14A	Wickenburg	87.06	48	IAmb	IAmb	13 24 33.9	
	comp=Z,48nm,1.1s						
L04D	Klamath Falls	87.15	37	IAmb	IAmb	13 24 36.8	
	comp=Z,56nm,1.2s						
W13A	Hualapai Mount	87.23	47	IAmb	IAmb	13 24 34.3	
	comp=Z,30nm,1.1s						
GSI	Gunungsitoli	87.34	273	P	P	13 24 35.4	+1.7
GSI	Gunungsitoli	87.34	273	P	P	13 24 33.7	0.0
GSI	Gunungsitoli	87.34	273	P	P	13 24 33.9	+0.2
SHPR	Sheep Range	87.34	45	IAmb	IAmb	13 24 35.7	
	comp=Z,86nm,2.0s						
USRK	Ussuriysk Ar.	87.50	326	P	P	13 24 33.8	+0.2
	comp=Z,15nm,0.8s,baz=153,slow=2.7,SNR=13						
	comp=Z,15nm,0.8s						
TUC	Tucson	87.52	50	P	P	13 24 34.9	+0.7
TUC	Tucson	87.52	50	P	P	13 24 34.9	+0.7
TUC				pmax	pmax		
	comp=Z,211nm,2.0s						
UBPT	Khong Chiam	87.67	289	P	P	13 24 37.1	+2.0
S11A	Rachel	87.72	44	IAmb	IAmb	13 25 11.0	
	comp=Z,73nm,1.3s						
HPIG		87.95	57	IAmb	IAmb	13 24 37.1	
	comp=Z,20nm,0.9s						
ZAIG	Zacatecas	87.95	62	IAmb	IAmb	13 24 42.0	
	comp=Z,26nm,1.2s						
319A	Douglas	87.97	52	IAmb	IAmb	13 24 41.7	
	comp=Z,41nm,1.1s						
PRN	Pahroc Range	87.99	44	IAmb	IAmb	13 24 52.4	
	comp=Z,38nm,0.9s						
SII	Sitkinak Islan	88.00	12	P	P	13 24 36.0	+0.3
	baz=199						
TYV	Tymovskoe	88.11	335	*e*P	P	13 24 36.6	+0.2
TYV				*e*S	S	13 35 20.8	+2.0
TYV				pmax	pmax		
	comp=Z,20nm,1.5s						
TYV				pmax	pmax		
	comp=Z,500nm,5.2s						
TYV				smax	smax		
	comp=N,700nm,9.4s						
I04A	Tendick Farm,	88.22	36	IAmb	IAmb	13 24 51.4	
	comp=Z,42nm,1.2s						
KCSI	Kotacane, Aceh	88.26	275	P	P	13 24 36.9	-1.2
	comp=Z,434nmcomp=Z,31nm,1.5s						
TLIG	Tlapa	88.33	69	IAmb	IAmb	13 24 44.1	
	comp=Z,72nm,1.5s						
CFA	Coronel Fontan	88.36	126	P	P	13 24 38.5	+0.1
	comp=Z,0.9nm,0.4s,baz=261,slow=2.8,SNR=7.9						
CFA				LR	LR	13 57 49.1	
	comp=Z,133nm,19.0s,baz=7.0,slow=31						
	comp=Z,0.9nm,0.4s						
X16A	Lo Mia Camp, P	88.38	48	IAmb	IAmb	13 24 40.1	
	comp=Z,34nm,1.0s						
J05D	Fort Rock, OR	88.46	37	IAmb	IAmb	13 24 44.0	
	comp=Z,48nm,1.2s						
R17L	Mt. Peulik Vol	88.65	11	P	P	13 24 39.1	+0.3
	baz=197,SNR=7.0						
WIFE	Three Sisters-	88.71	36	IAmb	IAmb	13 24 54.4	
	comp=Z,38nm,1.0s						
TRQA	Tornquist	88.77	134	P	P	13 24 40.4	+0.2
TRQA				IAmb	IAmb	13 24 42.6	
	comp=Z,46nm,1.6s						
TRQA	Tornquist	88.77	134	P	P	13 24 40.4	+0.2
TRQA				pmax	pmax		
	comp=Z,46nm,1.6s						
OHAK	Old Harbor	88.79	12	P	P	13 24 39.4	0.0
	baz=200						
LCMT	Little Creek M	88.85	45	IAmb	IAmb	13 24 56.2	
	comp=Z,25nm,0.9s						
CNSH	ChangSha	88.87	303	P	P	13 24 41.6	+1.1
CNSH				S	S	13 35 25.2	-1.9
CNSH				pmax	pmax		
	comp=Z,42nm,1.5s						

MDJ	Mudanjiang	88.99	325	P	P	13 24 41.2	+0.5
MDJ	Mudanjiang	88.99	325	IAmb	IAmb	13 24 42.1	
	comp=Z,32nm,1.1s						
MDJ	Mudanjiang	88.99	325	P	P	13 24 41.3	+0.5
MDJ				S	S	13 35 33.4	+5.9
MDJ				sS	ScS	13 35 39.9	+7.3
MDJ				pmax	pmax		
	comp=Z,33nm,1.4s						
MDJ				L	L		
	comp=Z,250nm,5.5s						
MDJ				L	L		
	comp=Z,510nm,4.8s						
MDJ				L	L		
	comp=Z,590nm,5.0s						
U15A	North Rim	89.08	46	IAmb	IAmb	13 24 57.3	
	comp=Z,48nm,0.9s						
WUAZ	Wupatki	89.09	48	IAmb	IAmb	13 24 57.6	
	comp=Z,50nm,1.1s						
KNB	Kanab	89.11	46	IAmb	IAmb	13 24 57.7	
	comp=Z,44nm,0.9s						
CCUT	Cedar City	89.11	45	IAmb	IAmb	13 24 43.5	
	comp=Z,30nm,1.1s						
GULI	GuiLin	89.15	300	P	P	13 24 43.9	+1.9
GULI				pmax	pmax		
	comp=Z,46nm,1.0s						
GULI				pmax	pmax		
	comp=Z,510nm,5.4s						
WHN	Wuhan	89.21	306	P	P	13 24 43.1	+1.0
WHN				pmax	pmax		
	comp=Z,450nm,1.6s						
SZCU	Shurtz Canyon	89.31	45	IAmb	IAmb	13 24 48.2	
	comp=Z,50nm,1.3s						
Q17K	Contact Creek	89.33	11	P	P	13 24 41.8	-0.4
	baz=198						
X18A	Snowflake	89.42	49	IAmb	IAmb	13 24 44.9	
	comp=Z,28nm,1.0s						
PSUT	Pine Spring	89.44	44	IAmb	IAmb	13 24 45.3	
	comp=Z,78nm,1.9s						
KDAK	Kodiak Island	89.45	12	LR	LR	14 02 07.4	
	comp=Z,466nm,18.6s,baz=204,slow=34						
KDAK	Kodiak Island	89.45	12 ⇓	*e*P	P	13 24 41.9	-0.6
KDAK				pmax	pmax		
	comp=Z,199nm,1.6s						
KDAK	Kodiak Island	89.45	12	P	P	13 24 42.7	+0.2
	baz=200						
DL2	Dalian	89.54	316	P	P	13 24 44.4	+1.0
DL2				*e*S	S	13 35 38.2	+5.3
DL2				pmax	pmax		
	comp=Z,62nm,1.2s						
DL2				pmax	pmax		
	comp=Z,680nm,5.9s						
DL2				L	L		
	comp=Z,370nm,18.2s						
DL2				L	L		
	comp=Z,610nm,18.7s						
DL2				L	L		
	comp=Z,500nm,20.9s						
O14K	Tigyukauivet M	89.55	8	IAmb	IAmb	13 24 59.7	
	comp=Z,52nm,1.1s						
O14K	Tigyukauivet M	89.55	8	P	P	13 24 43.2	+0.3
	baz=193,SNR=12						
Q16K	King Salmon	89.61	10	P	P	13 24 43.1	-0.1
	baz=197						
O15K	Ungalikthiuk R	89.65	8	IAmb	IAmb	13 24 57.6	
	comp=Z,39nm,1.1s						
O15K	Ungalikthiuk R	89.65	8	P	P	13 24 42.9	-0.5
	baz=194						
121A	Cookes Peak, D	89.68	52	IAmb	IAmb	13 24 50.7	
	comp=Z,71nm,1.6s						
HOOD	Mount Hood Mea	89.68	35	IAmb	IAmb	13 24 46.6	
	comp=Z,45nm,1.1s						
P16K	Nushagak River	89.75	9	P	P	13 24 43.5	-0.4
	baz=196,SNR=6.6						
I07A	Izee	89.92	37	IAmb	IAmb	13 24 47.0	
	comp=Z,110nm,1.7s						
ELK	Elko	90.04	42	IAmb	IAmb	13 24 51.3	
	comp=Z,62nm,1.8s						
NLWA	Neilton Lookou	90.09	33	IAmb	IAmb	13 24 47.9	
	comp=Z,85nm,1.3s						
P17K	Kvichak River	90.14	10	P	P	13 24 45.6	-0.1
	baz=197,SNR=8.2						
MTPU	Mount Pierson	90.15	45	IAmb	IAmb	13 25 02.7	
	comp=Z,33nm,0.9s						
N14K	Kuskokwak Cree	90.16	7	P	P	13 24 46.5	+0.8
	baz=193,SNR=33						
M11K	Mekoryuk	90.20	5	P	P	13 24 47.0	+1.0
	baz=189						
Q20K	Shuyak Island	90.26	12	P	P	13 24 46.5	+0.2
	baz=201						
O16K	Kokwok River B	90.28	9	IAmb	IAmb	13 24 59.8	
	comp=Z,30nm,1.0s						
O16K	Kokwok River B	90.28	9	P	P	13 24 45.6	-0.8
	baz=196,SNR=7.2						
SNY	Shenyang	90.30	320 ⇓	P	P	13 24 47.1	+0.2
SNY				pmax	pmax		
	comp=Z,33nm,1.1s						
Q19K	Cape Douglas,	90.34	11	P	P	13 24 46.4	-0.4
	baz=200						
GRNR	Gornyy	90.43	332 ⇓	*i*P	P	13 24 48.1	+0.8
GRNR				pmax	pmax		
	comp=Z,50nm,1.2s						
GRNR				MLR	MLR		
	comp=E,350nm,16.0s						
GRNR				MLR	MLR		
	comp=N,300nm,15.0s						
GRNR				MLR	MLR		
	comp=Z,340nm,16.0s						
M13K	Dall Lake	90.47	6	IAmb	IAmb	13 25 05.8	
	comp=Z,64nm,1.1s						
M13K	Dall Lake	90.47	6	P	P	13 24 47.7	+0.5
	baz=191,SNR=8.6						
P18K	Big Mountain,	90.52	11	P	P	13 24 47.0	-0.5
	baz=198,SNR=9.4						
CN2	Changchun	90.58	322	P	P	13 24 48.2	0.0
CN2				sS	sS	13 35 51.5	+1.9
CN2				pmax	pmax		
	comp=Z,50nm,1.6s						
N15K	Kwethluk River	90.58	8	P	P	13 24 48.3	+0.5
	baz=194						
O17K	Koliganek Bris	90.60	10	P	P	13 24 48.6	+0.8
	baz=197						
TIA	Tai'an	90.68	312	P	P	13 24 49.6	+0.7
TIA				pmax	pmax		
	comp=Z,40nm,1.4s						
TIA				pmax	pmax		
	comp=Z,570nm,8.4s						
TX31	Lajitas Ar. Si	90.75	56	IAmb	IAmb	13 24 55.3	
	comp=Z,73nm,1.5s						
TXAR	Lajitas Array	90.75	56	P	P	13 24 49.4	-0.1
	comp=Z,8.5nm,0.9s,baz=210,slow=7.4,SNR=67						
TXAR				PKKPbc	PKKPbc	13 42 16.6	+1.2
	comp=Z,0.3nm,0.7s,baz=104,slow=4.0,SNR=3.6						
TXAR				LR	LR	14 00 23.7	
	comp=Z,798nm,18.0s,baz=232,slow=32						
	comp=Z,8.5nm,0.9s						
TXAR	Lajitas Array	90.75	56	P	P	13 24 48.9	-0.6
BNX	BinXian	90.88	324 ⇑	P	P	13 24 49.4	-0.1
BNX				pmax	pmax		
	comp=Z,22nm,1.2s						
M14K	Bethel	90.94	7	IAmb	IAmb	13 24 53.1	
	comp=Z,38nm,1.1s						
M14K	Bethel	90.94	7	P	P	13 24 49.6	+0.3
	baz=192						
O18K	Koktuh Hills	90.96	10	P	P	13 24 49.5	-0.1
	baz=198						
HMU	Henry Mountain	90.98	46	IAmb	IAmb	13 24 56.0	
	comp=Z,34nm,1.2s						
M15K	Kasigluk River	91.03	8	P	P	13 24 49.9	+0.1
	baz=194						
N16K	Nishlik Lake	91.05	9	P	P	13 24 50.4	+0.5
	baz=195						
Y22A	Socorro	91.06	51	IAmb	IAmb	13 25 06.4	
	comp=Z,26nm,0.9s						
CMIG	Matias Romero	91.09	71	LR	LR	13 57 34.0	
	comp=Z,357nm,19.5s,baz=206,slow=30						
P19K	Oil Pt	91.09	11	P	P	13 24 50.0	-0.3
	baz=200						
PGC	Sidney	91.19	32	IAmb	IAmb	13 25 05.8	
	comp=Z,42nm,1.0s						
KLR	Kul'dur	91.28	329	LR	LR	14 06 01.7	
	comp=Z,469nm,18.1s,baz=135,slow=36						
KLR	Kul'dur	91.28	329 *d*	*i*P	P	13 24 51.7	+0.4
KLR				pmax	pmax		
	comp=Z,25nm,1.5s						
N17K	Nushagak Hills	91.31	9	P	P	13 24 51.0	-0.1
	baz=196						
Q16A	Castle Valley	91.31	45	IAmb	IAmb	13 24 57.5	
	comp=Z,85nm,1.9s						

ALPN	Alpine	91.35	56	IAmb	IAmb	13 25 06.7	
	comp=Z,27nm,1.0s						
HOM	Homer	91.38	12	P	P	13 24 50.6	-0.9
	baz=201						
O19K	Port Alsworth	91.42	11	P	P	13 24 51.0	-0.6
	baz=199						
L14K	Kuka Creek	91.45	6	IAmb	IAmb	13 25 07.0	
	comp=Z,39nm,0.9s						
L14K	Kuka Creek	91.45	6	P	P	13 24 52.1	+0.4
	baz=192						
MFID	Camas Ranch	91.45	39	P	P	13 24 51.9	-0.5
MFID				IAmb	IAmb	13 24 53.8	
	comp=Z,39nm,1.1s						
HAWA	Hanford	91.49	35	P	P	13 24 52.5	+0.2
YPT	Yellepit	91.54	36	IAmb	IAmb	13 24 54.9	
	comp=Z,43nm,1.3s						
M16K	Timber Creek	91.55	8	P	P	13 24 52.8	+0.5
	baz=195,SNR=11						
TPB01	Permian Basin	91.57	55	IAmb	IAmb	13 24 57.6	
	comp=Z,23nm,1.1s						
BMO	Blue Mountains	91.60	38	P	P	13 24 52.3	-0.7
BMO	Blue Mountains	91.60	38	P	P	13 24 52.3	-0.7
BMO				pmax	pmax		
	comp=Z,124nm,2.0s						
BRSE	Bradley Lake S	91.63	13	P	P	13 24 53.1	+0.4
	baz=202,SNR=7.4						
N18K	Kilae Creek	91.64	10	P	P	13 24 52.5	-0.2
	baz=198						
LNOR	Lincton Mounta	91.77	36	IAmb	IAmb	13 24 58.0	
	comp=Z,96nm,1.9s						
BBB	Bella Bella	91.82	27	LR	LR	14 00 33.5	
	comp=Z,621nm,18.4s,baz=222,slow=32						
SRU	San Rafael Swe	91.83	45	IAmb	IAmb	13 24 55.8	
	comp=Z,34nm,1.0s						
K13K	Kusilvak Mount	91.85	5	P	P	13 24 53.9	+0.3
	baz=190,SNR=9.8						
TPB05	Hovey Rd	91.88	55	IAmb	IAmb	13 24 55.6	
	comp=Z,20nm,0.9s						
L15K	Ungalak Mounta	91.90	7	P	P	13 24 53.7	-0.1
	baz=193						
P17A	Butcher Ranch,	91.92	45	IAmb	IAmb	13 24 56.5	
	comp=Z,38nm,1.3s						
ANMO	Albuquerque	91.98	50	LR	LR	13 59 57.2	
	comp=Z,715nm,18.7s,baz=236,slow=32						
ANMO	Albuquerque	91.98	50	P	P	13 24 55.2	0.0
ANMO	Albuquerque	91.98	50 ⇓	*i*P	P	13 24 55.2	0.0
ANMO				pmax	pmax		
	comp=Z,23nm,1.0s						
N19K	Bonanza Creek	91.99	10	IAmb	IAmb	13 25 08.6	
	comp=Z,47nm,1.2s						
N19K	Bonanza Creek	91.99	10	P	P	13 24 54.0	-0.5
	baz=199						
SPUT	South Promonto	92.03	43	IAmb	IAmb	13 25 09.8	
	comp=Z,32nm,1.1s						
PV05	Paradox Valley	92.10	47	IAmb	IAmb	13 24 57.4	
	comp=Z,28nm,0.9s						
NNA	Nana	92.11	105	LR	LR	13 57 35.6	
	comp=Z,292nm,20.6s,baz=236,slow=30						
M17K	Holitna River	92.12	9	P	P	13 24 55.6	+0.7
	baz=196						
EPH	Ephrata	92.12	35	IAmb	IAmb	13 24 56.7	
	comp=Z,115nm,1.7s						
L16K	Owhat River	92.16	8	IAmb	IAmb	13 25 10.4	
	comp=Z,26nm,0.9s						
L16K	Owhat River	92.16	8	P	P	13 24 55.3	+0.3
	baz=194						
SEW	Seward	92.21	13	P	P	13 24 56.4	+1.1
	baz=203						
Q23K	Middleton Isla	92.25	15	P	P	13 24 55.8	+0.4
	baz=206						
PV19	Morning Glory	92.31	47	IAmb	IAmb	13 24 57.9	
	comp=Z,42nm,1.1s						
PV10	Paradox Valley	92.31	46	IAmb	IAmb	13 24 57.0	
	comp=Z,29nm,1.0s						
PV18	Skein Mesa, Pa	92.32	47	IAmb	IAmb	13 25 11.9	
	comp=Z,31nm,1.0s						
PV14	Lion Creek, Pa	92.32	46	IAmb	IAmb	13 25 01.9	
	comp=Z,49nm,1.6s						
HLID	Hailey	92.33	40	IAmb	IAmb	13 25 11.9	
	comp=Z,25nm,0.9s						
PV20	West Nyswonger	92.34	47	IAmb	IAmb	13 24 58.0	
	comp=Z,34nm,1.1s						
PV11	David Mesa, Pa	92.37	47	IAmb	IAmb	13 25 02.1	
	comp=Z,48nm,1.6s						
PV23	Carpenter Ridg	92.38	46	IAmb	IAmb	13 25 12.0	
	comp=Z,27nm,1.0s						
PV02	Paradox Valley	92.40	47	IAmb	IAmb	13 25 11.8	
	comp=Z,34nm,0.9s						
PV12	Saucer Basin,	92.43	47	IAmb	IAmb	13 25 11.7	
	comp=Z,42nm,0.9s						
M18K	Stony River	92.43	10	P	P	13 24 56.3	0.0
	baz=198						
PV21	Cone Mtn., Par	92.46	46	IAmb	IAmb	13 24 58.1	
	comp=Z,19nm,1.0s						
PV01	Paradox Valley	92.47	47	IAmb	IAmb	13 25 12.1	
	comp=Z,18nm,0.8s						
K15K	Wolf Creek Mou	92.50	7	P	P	13 24 57.1	+0.5
	baz=193						
CAPN	Captain Cook N	92.51	12	P	P	13 24 57.3	+0.6
	baz=202						
O22K	Cooper Landing	92.51	13	P	P	13 24 57.1	+0.4
	baz=203						
TCUT	Toone Canyon	92.52	43	IAmb	IAmb	13 25 04.5	
	comp=Z,29nm,1.0s						
P23K	Montague Islan	92.53	14	P	P	13 24 56.8	0.0
	baz=205						
GYA	Guiyang	92.58	299 ⇑	P	P	13 24 59.7	+1.6
GYA				S	S	13 36 01.8	+0.3
GYA				pmax	pmax		
	comp=Z,30nm,1.4s						
GYA				pmax	pmax		
	comp=Z,140nm,3.1s						
GYA				L	L		
	comp=Z,120nm,5.2s						
GYA				L	L		
	comp=Z,190nm,4.6s						
GYA				L	L		
	comp=Z,43nm,5.6s						
PV07	Paradox Valley	92.60	47	IAmb	IAmb	13 25 12.8	
	comp=Z,15nm,0.8s						
PV15	Paradox Valley	92.65	47	IAmb	IAmb	13 25 13.3	
	comp=Z,17nm,0.8s						
L17K	Donlin	92.71	8	P	P	13 24 57.5	-0.2
	baz=196,SNR=11						
N20K	Mount Spurr	92.73	11	P	P	13 24 57.1	-0.7
	baz=201						
SPCR	Spurr Chakacha	92.73	11	P	P	13 24 56.9	-0.9
	baz=201						
HWUT	Hardware Ranch	92.73	43	IAmb	IAmb	13 25 10.5	
	comp=Z,32nm,1.6s						
SPU	Mount Spurr	92.74	11	IAmb	IAmb	13 24 58.0	
	comp=Z,48nm,1.5s						
J14K	Nanvaranak Lak	92.75	6	P	P	13 24 57.9	+0.1
J14K	Nanvaranak Lak	92.75	6	P	P	13 24 57.8	+0.1
	baz=191,SNR=6.4						
LYN	LuoYang	92.80	308	P	P	13 24 59.9	+1.2
LYN				sP	sP	13 25 04.9	+0.2
LYN				SKS	SKSac	13 35 35.6	+4.4
LYN				S	ScS	13 36 09.6	+4.8
LYN				pmax	pmax		
	comp=Z,55nm,0.9s						
LYN				pmax	pmax		
	comp=Z,490nm,8.4s						
LYN				L	L		
	comp=Z,510nm,15.1s						
LYN				L	L		
	comp=Z,460nm,15.3s						
LYN				L	L		
	comp=Z,860nm,16.9s						
HNS	HongShan	92.94	312 ⇓	P	P	13 25 00.3	+1.0
HNS				S	S	13 36 12.7	+8.8
HNS				pmax	pmax		
	comp=Z,20nm,1.4s						
HNS				L	L		
	comp=Z,420nm,17.4s						
HNS				L	L		
	comp=Z,320nm,18.6s						
HNS				L	L		
	comp=Z,460nm,18.8s						
V35K	Ketchikan	92.96	24	P	P	13 24 59.5	+0.6
	baz=218						
L18K	Granite Mounta	93.00	9	IAmb	IAmb	13 25 14.2	
	comp=Z,25nm,0.9s						
L18K	Granite Mounta	93.00	9	P	P	13 24 59.3	+0.3
	baz=197,SNR=12						
DRIO	Del Rio	93.03	58	IAmb	IAmb	13 25 14.4	
	comp=Z,18nm,0.9s						
M19K	Big River Lodg	93.04	10	P	P	13 24 58.7	-0.5

baz=199
RC01 Rabbit Creek A 93.07 13 P P 13 24 59.3 0.0
baz=203,SNR=6.7
STLK Strandline Lak 93.07 11 IAmb IAmb 13 24 59.4
comp=Z,50nm,1.8s
U33K Whale Pass 93.07 23 P P 13 24 59.9 +0.6
baz=216
MA2 Magadan 93.10 344 P P 13 24 58.2 -1.2
MA2 Magadan 93.10 344 *de*P P 13 24 58.6 -0.9
MA2 pmax pmax
comp=Z,27nm,2.0s
MA2 Magadan 93.10 344 P P 13 24 58.3 -1.2
comp=Z,11nm,0.9s
KAIM Kayak Island 93.13 15 P P 13 24 60.0 +0.4
baz=207
M20K Styx River 93.21 11 IAmb IAmb 13 25 45.9
comp=Z,60nm,1.9s
SUA Susitna One 93.23 12 P P 13 24 59.9 -0.2
baz=202
L19K White Mountain 93.23 10 IAmb IAmb 13 25 01.4
comp=Z,56nm,1.3s
L19K White Mountain 93.23 10 P P 13 25 00.2 +0.2
baz=198
HBVL Hebbronville 93.23 61 IAmb IAmb 13 25 16.8
comp=Z,41nm,1.0s
ATAH Atahualpa 93.24 100 LR LR 13 57 35.9
comp=Z,476nm,22.0s,baz=224,slow=30
K17K Iditarod 93.27 8 IAmb IAmb 13 25 14.8
comp=Z,24nm,1.1s
K17K Iditarod 93.27 8 P P 13 25 00.6 +0.4
baz=196,SNR=5.2
GAMB Gambell 93.29 2 P P 13 24 59.6 -0.5
GAMB Gambell 93.29 2 P P 13 25 00.6 +0.4
baz=184
833A Chaparral WMA, 93.35 59 IAmb IAmb 13 25 06.4
comp=Z,38nm,1.4s
EYAK Cordova Ski Ar 93.39 15 P P 13 25 01.2 +0.4
baz=206
GLI Glacier Island 93.40 14 P P 13 25 00.5 -0.4
baz=205
128A Castleberry Fa 93.41 54 IAmb IAmb 13 25 05.7
comp=Z,8.5nm,0.8s
229A Bryant Ranch, 93.53 55 IAmb IAmb 13 25 02.4
comp=Z,12nm,0.8s
BJI2 Beijing 93.56 315 P P 13 25 03.0 +0.9
BJI2 S S 13 36 10.6 +1.4
BJI2 sS sS 13 36 16.6 +0.1
BJI2 pmax pmax
comp=Z,7.0nm,0.9s
J16K Anvik River 93.56 7 IAmb IAmb 13 25 16.8
comp=Z,35nm,1.0s
J16K Anvik River 93.56 7 P P 13 25 01.7 +0.2
baz=194
SKT Skwentna 93.57 11 P P 13 25 00.5 -1.2
baz=201
S31K Pelican 93.60 20 P P 13 25 02.6 +0.9
baz=214
KNK Knik Glacier 93.61 13 P P 13 25 01.9 0.0
baz=204
M22K Willow 93.61 12 P P 13 25 01.8 +0.1
baz=202
PMR Palmer 93.65 13 IAmb IAmb 13 25 16.1
comp=Z,20nm,0.8s
PMR Palmer 93.65 13 P P 13 25 02.3 +0.4
baz=203
AHID Auburn Hatcher 93.72 42 IAmb IAmb 13 25 04.4
comp=Z,31nm,1.1s
APG El Apazote 93.72 75 LR LR 14 00 07.7
comp=Z,25nm,19.2s,baz=270,slow=31
GHO Glory Hole Cre 93.85 13 IAmb IAmb 13 25 17.7
comp=Z,36nm,0.8s
PB11 IPOC Station P 93.87 115 P P 13 25 05.5 +1.1
MSTX Muleshoe 93.95 53 IAmb IAmb 13 25 18.5
comp=Z,25nm,0.8s
NEW Newport 93.96 35 LR LR 14 03 23.3
comp=Z,1µm,18.3s,baz=220,slow=33
NEW Newport 93.96 35 IAmb IAmb 13 25 04.7
comp=Z,52nm,1.9s
U35K Hyder 93.98 24 P P 13 25 04.0 +0.4
baz=219
HEH HeiHe 93.99 328 *e*P P 13 25 03.1 -0.7
HEH pP pwP 13 25 17.3 -2.8
HEH S S 13 36 18.8 +6.3
HEH pmax pmax
comp=Z,12nm,1.6s
HEH pmax pmax
comp=Z,250nm,7.7s
HEH L L
comp=Z,500nm,16.3s
HEH L L
comp=Z,280nm,15.1s
HEH L L
comp=Z,570nm,19.3s
BMRM Bremner River 94.01 15 P P 13 25 04.2 +0.4
baz=207
HNDO Hondo 94.07 58 IAmb IAmb 13 25 09.1
comp=Z,32nm,1.5s
M23K Glacier View 94.10 13 P P 13 25 04.5 +0.5
baz=205
I17K Unalakleet 94.14 7 IAmb IAmb 13 25 18.8
comp=Z,25nm,1.1s
I17K Unalakleet 94.14 7 P P 13 25 04.1 0.0
baz=194
CRQE Cirque 94.17 16 P P 13 25 04.5 0.0
baz=208
CUT Chulitna 94.19 12 P P 13 25 04.0 -0.4
baz=202
JCT Junction City 94.19 57 IAmb IAmb 13 25 05.7
comp=Z,27nm,1.2s
J18K Innoko River 94.20 9 IAmb IAmb 13 25 19.4
comp=Z,28nm,0.9s
J18K Innoko River 94.20 9 P P 13 25 04.4 0.0
baz=197,SNR=16
KLU Klutina 94.20 14 P P 13 25 04.6 0.0
baz=206
L22K Petersville 94.21 12 IAmb IAmb 13 25 18.1
comp=Z,28nm,1.1s
SCM Sheep Creek Mo 94.22 13 IAmb IAmb 13 25 19.1
comp=Z,38nm,0.8s
SCM Sheep Creek Mo 94.22 13 P P 13 25 04.4 -0.2
baz=205
GO01 Chusmiza 94.28 115 P P 13 25 08.1 +1.5
PINM Pinnacle 94.29 17 P P 13 25 05.1 0.0
baz=211
PPLA Purkeypile 94.32 11 P P 13 25 04.7 -0.5
baz=201
SNOW Snow King Moun 94.34 42 IAmb IAmb 13 25 21.0
comp=Z,35nm,0.9s
ANM Nome 94.40 5 P P 13 25 05.4 +0.1
baz=190
K20K Telida 94.46 10 IAmb IAmb 13 25 06.4
comp=Z,29nm,1.3s
K20K Telida 94.46 10 P P 13 25 05.7 0.0
baz=199
DLMT Dillon 94.47 39 IAmb IAmb 13 25 07.8
comp=Z,47nm,1.3s
LOHW Long Hollow 94.52 42 IAmb IAmb 13 25 11.8
comp=Z,56nm,1.6s
MOOW Moose Ponds 94.52 41 IAmb IAmb 13 25 08.2
comp=Z,33nm,1.6s
N25K Chitina, Valde 94.59 15 P P 13 25 06.2 -0.2
baz=207
PDAR Pinedale Array 94.62 43 P P 13 25 06.3 -0.9
comp=Z,4.1nm,0.9s,baz=211,slow=3.4,SNR=27
PDAR PKKPbc PKKPbc 13 42 06.0 -0.2
comp=Z,1.7nm,0.8s,baz=74,slow=3.5,SNR=12
PDAR LR LR 14 02 28.5
comp=Z,747nm,18.9s,baz=230,slow=32
comp=Z,4.1nm,0.9s
PDAR Pinedale Array 94.62 43 P P 13 25 05.4 -1.8
CMAR Chiang Mai Arr 94.65 288 P P 13 25 09.3 +1.7
comp=Z,5.7nm,0.8s,baz=145,slow=3.1,SNR=46
CMAR PP PP 13 28 53.9 -2.4
comp=Z,1.4nm,0.9s,baz=132,slow=5.9,SNR=4.8
CMAR LR LR 14 07 39.0
comp=Z,95nm,20.1s,baz=160,slow=35
comp=Z,5.7nm,0.8s
CMAR Chiang Mai Arr 94.65 288 P P 13 25 08.7 +1.0
CMAR Chiang Mai Arr 94.65 288 *i* P P 13 25 09.6 +2.0
CMAR pmax pmax
comp=Z,7.0nm,0.9s
M24K Tolsona, Glenn 94.70 14 P P 13 25 06.6 -0.3
baz=206
H16K Elim 94.73 6 P P 13 25 06.8 0.0
baz=192,SNR=14
MCARA McCarthy VSAT 94.74 15 P P 13 25 06.9 -0.1
baz=208
FLWY Flagg Ranch 94.75 41 IAmb IAmb 13 25 09.5
comp=Z,38nm,1.0s
CTG Chitna Glacier 94.77 16 P P 13 25 06.7 -0.6
baz=210
YPP Pitchstone Pla 94.81 41 IAmb IAmb 13 25 11.0
comp=Z,58nm,2.0s
WAT6 Susitna Watana 94.82 13 P P 13 25 07.2 -0.3
baz=205
CHTO Chiang Mai 94.83 289 P P 13 25 09.6 +1.2
CHTO Chiang Mai 94.83 289 P P 13 25 09.3 +0.9
CHTO Chiang Mai 94.83 289 P P 13 25 09.3 +0.9
CHTO pmax pmax
comp=Z,99nm,2.0s
CHTO Chiang Mai 94.83 289 P P 13 25 08.1 -0.3
J19K Poorman 94.85 9 IAmb IAmb 13 25 08.7
comp=Z,30nm,1.5s
J19K Poorman 94.85 9 P P 13 25 07.5 +0.1
baz=198
O28M Mount Upton 94.89 17 P P 13 25 07.8 -0.3
baz=211
WAT1 Susitna Watana 94.89 12 P P 13 25 07.4 -0.3
baz=204
G15K Niukluk 94.92 5 P P 13 25 07.5 -0.2
baz=191
KMI2 Kunming 94.93 296 P P 13 25 10.7 +1.7
KMI2 sP pwP 13 25 24.8 -0.6
KMI2 S S 13 36 28.0 +5.6
KMI2 pmax pmax
comp=Z,22nm,2.0s
KMI2 pmax pmax
comp=Z,240nm,4.9s
KMI2 L L
comp=Z,140nm,17.5s
KMI2 L L
comp=Z,310nm,20.5s
KMI2 L L
comp=Z,310nm,17.5s
XAN Xi'an 94.97 306 P P 13 25 09.8 +1.0
XAN S S 13 36 26.1 +4.1
XAN pmax pmax
comp=Z,26nm,1.4s
XAN L L
comp=Z,270nm,19.9s
XAN L L
comp=Z,410nm,16.5s
XAN L L
comp=Z,470nm,19.2s
H17A Grant Village 95.01 41 IAmb IAmb 13 25 15.2
comp=Z,25nm,1.2s
SKAG Skagway 95.11 20 P P 13 25 08.6 -0.1
baz=215
KTH Kantishna Hill 95.14 11 IAmb IAmb 13 25 22.6
comp=Z,20nm,1.0s
YNR Norris Junctio 95.15 41 IAmb IAmb 13 25 13.7
comp=Z,83nm,2.0s
BOZ Bozeman (W) 95.15 40 IAmb IAmb 13 25 10.9
comp=Z,33nm,1.1s
TRF Thorofare Moun 95.16 11 IAmb IAmb 13 25 24.3
comp=Z,16nm,0.8s
TRF Thorofare Moun 95.16 11 P P 13 25 08.3 -0.7
baz=202,SNR=7.9
S34M Telegraph Cree 95.17 22 P P 13 25 08.7 -0.3
baz=218
CHUM Lake Minchumin 95.23 10 P P 13 25 09.1 -0.1
baz=201
TNA Tin City 95.23 3 P P 13 25 08.9 -0.2
baz=187
F14K Arctic Creek 95.24 4 P P 13 25 09.0 -0.1
baz=189
H17K Granite Mounta 95.25 7 P P 13 25 08.7 -0.5
baz=194,SNR=7.7
DHY Denali Highway 95.34 13 P P 13 25 09.6 -0.2
baz=205
GCSA Galena City Sc 95.41 8 P P 13 25 10.0 +0.1
baz=197
YUK8 Steele Glacier 95.44 17 P P 13 25 10.0 -0.6
baz=211
G16K Koyuk River 95.46 6 IAmb IAmb 13 25 11.4
comp=Z,36nm,1.7s
G16K Koyuk River 95.46 6 P P 13 25 09.9 -0.3
baz=192,SNR=8.6
YMP Mirror Lake Pl 95.46 41 IAmb IAmb 13 25 28.6
comp=Z,32nm,1.4s
YUK6 Outpost Mounta 95.51 18 P P 13 25 10.1 -0.7
baz=212
F15K North Star Dit 95.58 5 P P 13 25 10.6 -0.2
baz=190
PAX Paxson 95.62 14 P P 13 25 10.7 -0.4
baz=206
H18K Honhosa River 95.62 7 P P 13 25 10.4 -0.6
baz=196,SNR=5.3
Q32M Nakina River 95.63 21 P P 13 25 11.3 -0.1
baz=217
HYT Haines Junctio 95.64 18 P P 13 25 10.5 -0.7
baz=213
BPAW Bear Paw Mtn. 95.64 11 P P 13 25 10.4 -0.7
baz=202
M26K Nabesna, AK 95.64 15 P P 13 25 10.7 -0.5
baz=209
MCK McKinley 95.65 12 IAmb IAmb 13 25 28.0
comp=Z,40nm,1.1s
MCK McKinley 95.65 12 P P 13 25 10.6 -0.5
baz=204,SNR=9.5
YUK3 Moose Creek 95.69 16 P P 13 25 11.4 -0.1
baz=211
P32M Atlin 95.69 20 P P 13 25 11.3 -0.1
baz=216
YNE Yellowstone No 95.70 41 IAmb IAmb 13 25 27.6
comp=Z,29nm,1.0s
G17K Kiwalik Mounta 95.72 6 P P 13 25 11.3 -0.1
baz=194
SEY Seymchan 95.72 346 ⇓ *i* P P 13 25 10.6 -0.8
SEY pmax pmax
comp=Z,15nm,1.1s
M27K Edge Creek, AK 95.86 15 P P 13 25 13.2 +0.9
baz=210,SNR=6.0
XLT XiLinHaoTe 95.90 318 *e*P P 13 25 13.9 +1.1
XLT pP pP 13 25 17.7 +0.5
XLT sS sS 13 36 39.3 +2.3
XLT pmax pmax
comp=Z,9.0nm,1.4s
XLT pmax pmax
comp=Z,250nm,3.9s
DLBC Dease Lake 95.94 22 LR LR 14 01 08.4
comp=Z,272nm,20.3s,baz=186,slow=31
O30N Mendenhall 95.97 19 P P 13 25 13.0 +0.3
baz=214
L26K Log Cabin Wild 96.12 14 P P 13 25 13.4 +0.1
baz=208
JTS Las Juntas de 96.12 82 LR LR 14 00 06.6
comp=Z,543nm,18.9s,baz=260,slow=30
BVCY Beaver Creek 96.15 16 P P 13 25 13.4 0.0
baz=210
WHY Whitehorse 96.22 19 P P 13 25 14.1 +0.2
baz=215
K24K Donnelly Dome 96.31 13 P P 13 25 14.5 +0.4
baz=206,SNR=5.7
G18K Tagagawik 96.31 7 P P 13 25 13.6 -0.5
baz=195,SNR=7.2
K22A Casper 96.36 44 IAmb IAmb 13 25 29.5
comp=Z,14nm,0.8s
H20K Anotleneega Mo 96.38 9 P P 13 25 14.3 -0.1
baz=199
R33M Jennings River 96.39 21 P P 13 25 14.2 -0.5
baz=218
PZH PanZhiHua 96.39 297 P P 13 25 17.2 +1.7
PZH pmax pmax
comp=Z,10.0nm,1.0s
RIDG Independent Ri 96.44 13 P P 13 25 15.1 +0.3
baz=207
ZEA Zeya 96.46 330 *e*P P 13 25 12.8 -2.2
ZEA *e* 13 29 07.6
ZEA *e*S S 13 36 31.1 -2.7
ZEA pmax pmax
comp=Z,10.0nm,0.9s
ZEA pmax pmax
comp=N,200nm,4.9s
ZEA pmax pmax
comp=Z,200nm,5.6s
ZEA smax smax
comp=E,200nm,7.6s
P33M Teslin, Yukon 96.46 20 P P 13 25 15.1 +0.1
baz=217
L27K Beaver Creek, 96.49 15 IAmb IAmb 13 25 31.3
comp=Z,29nm,1.6s
L27K Beaver Creek, 96.49 15 P P 13 25 14.5 -0.5
baz=210
DOT Dot Lake 96.52 14 IAmb IAmb 13 25 29.7
comp=Z,14nm,0.9s
MLY Manley 96.55 11 P P 13 25 15.1 -0.1
baz=202
F17K Baldwin Pennin 96.58 6 P P 13 25 15.1 -0.1
baz=193
HDA Harding Lake 96.63 12 IAmb IAmb 13 25 30.2
comp=Z,28nm,0.9s
HDA Harding Lake 96.63 12 P P 13 25 14.9 -0.6
baz=205,SNR=14
N31M Braeburn, Yuko 96.65 18 P P 13 25 15.1 -0.7
baz=215
CCB Clear Creek Bu 96.69 12 IAmb IAmb 13 25 29.8
comp=Z,20nm,1.0s
G19K Purcell Mounta 96.73 8 IAmb IAmb 13 25 30.8
comp=Z,18nm,1.1s
G19K Purcell Mounta 96.73 8 P P 13 25 15.9 -0.1
baz=197
H21K Melozitna Rive 96.82 10 IAmb IAmb 13 29 10.9
comp=Z,21nm,1.6s
H21K Melozitna Rive 96.82 10 P P 13 25 16.1 -0.3
baz=200
SCRK Sand Creek 96.83 14 P P 13 25 16.4 -0.2
baz=208
I23K Minto, Yukon-K 96.88 11 P P 13 25 16.2 -0.5
baz=203
F18K Selawik 96.89 7 P P 13 25 16.3 -0.3
baz=194
COLA College 96.89 12 P P 13 25 15.7 -1.0
COLA College 96.89 12 P P 13 25 15.5 -1.2
COLA College 96.89 12 *d* iP P 13 25 15.7 -1.0
COLA pmax pmax
comp=Z,22nm,0.9s
COLA College 96.89 12 P P 13 25 16.1 -0.5
baz=205
HHC Hu-ho-hao-te 96.91 313 *e*P P 13 25 19.8 +2.3
HHC S S 13 36 38.7 +0.1
HHC sS sS 13 36 48.2 +2.3
HHC pmax pmax
comp=Z,6.0nm,0.7s
HHC pmax pmax
comp=Z,150nm,4.7s
HHC L L
comp=Z,240nm,17.1s
HHC L L
comp=Z,210nm,18.0s
HHC L L
comp=Z,280nm,18.0s
IL31 96.97 12 IAmb IAmb 13 25 31.2
comp=Z,17nm,1.0s
ILAR Eielson Array 96.97 12 P P 13 25 16.1 -0.9
comp=Z,6.3nm,0.8s,baz=218,slow=5.8,SNR=44
ILAR PP PP 13 29 12.9 -0.4
comp=Z,0.6nm,0.9s,baz=199,slow=10,SNR=1.7
ILAR LR LR 14 04 22.5
comp=Z,232nm,19.4s,baz=173,slow=33
comp=Z,6.3nm,0.8s
ILAR Eielson Array 96.97 12 P P 13 25 15.3 -1.7
LPAZ La Paz 96.99 113 P P 13 25 20.2 +1.1
comp=Z,4.0nm,0.8s,baz=33,slow=1.3,SNR=8.7
LPAZ LR LR 14 02 14.8
comp=Z,252nm,18.9s,baz=236,slow=31
comp=Z,4.0nm,0.8s
IMAR Indian Mountai 97.00 9 P P 13 25 16.3 -0.8
CD2 Chengdu 97.06 301 P Pdif 13 25 20.7 +2.2
CD2 S S 13 36 47.0 +6.8
CD2 pmax pmax
comp=Z,30nm,1.0s
CD2 pmax pmax
comp=Z,450nm,6.4s
CD2 L L
comp=Z,450nm,11.4s
CD2 L L
comp=Z,360nm,12.1s
CD2 L L
comp=Z,250nm,15.2s
J25K Salcha River, 97.12 13 P P 13 25 17.5 -0.3
J25K IAmb IAmb 13 25 32.4
comp=Z,18nm,0.8s
J25K Salcha River, 97.12 13 P P 13 25 17.2 -0.6
baz=207,SNR=9.3
N32M Quiet Lake 97.14 20 P P 13 25 17.5 -0.5
baz=217
E17K Hotham Inlet 97.16 6 P P 13 25 17.6 -0.2
baz=193
POKR Poker Plat Res 97.19 12 P P 13 25 17.1 -0.9
baz=205
H22K Ishtalitna Cre 97.25 10 IAmb IAmb 13 25 33.7
comp=Z,12nm,1.0s
H22K Ishtalitna Cre 97.25 10 P P 13 25 17.9 -0.4
baz=202,SNR=5.8
M30M Minto, Yukon 97.29 17 P P 13 25 18.1 -0.6
baz=214
F19K Shaleruckik Mo 97.31 7 IAmb IAmb 13 25 19.3
comp=Z,18nm,1.1s
F19K Shaleruckik Mo 97.31 7 P P 13 25 18.3 -0.2
baz=196
L29M L29M 97.40 16 P P 13 25 19.1 0.0
baz=213
G21K Allakaket 97.53 9 IAmb IAmb 13 25 20.8
comp=Z,30nm,1.6s
G21K Allakaket 97.53 9 P P 13 25 19.5 -0.1
baz=200
E18K Tukpahlearik C 97.60 6 IAmb IAmb 13 25 34.8
comp=Z,13nm,0.9s
E18K Tukpahlearik C 97.60 6 P P 13 25 19.7 -0.1
baz=194
M31M Drury Creek, Y 97.62 18 P Pdif 13 25 20.2 0.0
baz=216
WTLY Watson Lake, Y 97.64 22 P Pdif 13 25 20.5 +0.3
baz=220
D17K Noatak River 97.67 5 P P 13 25 20.0 -0.1
baz=192
F20K Avaraart Lake 97.76 8 P P 13 25 20.4 -0.2
baz=198
H24K Noodor Dome 97.77 11 P P 13 25 20.7 0.0
baz=205
PRP Porcupine Dome 97.90 12 IAmb IAmb 13 25 36.0
comp=Z,20nm,1.0s
PRP Porcupine Dome 97.90 12 P P 13 25 21.1 -0.3
baz=207
DAWY Dawson 97.91 15 P P 13 25 21.4 0.0
baz=212
BTO2 Baotou 97.93 313 *e*P Pdif 13 25 24.0 +1.8
BTO2 S S 13 36 50.6 +3.2
BTO2 pmax pmax
comp=Z,11nm,0.5s
BTO2 pmax pmax
comp=Z,270nm,4.1s
BTO2 L L
comp=Z,300nm,5.2s
BTO2 L L
comp=Z,420nm,4.9s
BTO2 L L
comp=Z,300nm,12.3s
E19K Redstone River 97.97 7 IAmb IAmb 13 25 36.5
comp=Z,17nm,1.1s
E19K Redstone River 97.97 7 P P 13 25 21.6 0.0
baz=197
RDOG Red Dog Mine 98.03 5 P P 13 25 21.8 0.0
baz=192
C16K Lisburne Hills 98.08 4 IAmb IAmb 13 25 36.0
comp=Z,17nm,1.4s
C16K Lisburne Hills 98.08 4 Pdiff P 13 25 21.8 -0.1
baz=190
K29M Barlow Dome 98.17 16 Pdiff P 13 25 22.7 0.0
baz=213
I26K Coal Creek Min 98.17 13 Pdiff Pdif 13 25 22.6 +0.1
baz=209
TNCH TengChong 98.20 294 ⇓ P Pdif 13 25 24.4 +0.5
TNCH sP sP 13 25 29.0 -0.7
TNCH PP PP 13 29 27.0 +3.2
TNCH S S 13 36 47.0 -3.5
TNCH sS pS 13 36 56.8 +0.7
TNCH pmax pmax
comp=Z,22nm,1.7s
TNCH pmax pmax
comp=Z,200nm,3.5s
TNCH L L
comp=Z,170nm,11.1s
TNCH L L
comp=Z,170nm,12.1s
TNCH L L
comp=Z,240nm,19.9s
F21K Alatna River 98.20 9 IAmb IAmb 13 25 23.6
comp=Z,22nm,1.8s
F21K Alatna River 98.20 9 Pdiff P 13 25 22.3 -0.3
baz=200
G23K Bananza Creek 98.22 10 IAmb IAmb 13 28 24.9
comp=Z,33nm,2.0s

G23K Bananza Creek 98.22 10 Pdiff P 13 25 22.7 0.0
baz=203
MAYO Mayo, Yukon 98.36 17 Pdiff Pdif 13 25 23.6 +0.2
baz=215
BILL Bilibino 98.38 353*d* *i*P P 13 25 22.8 -0.5
BILL pmax pmax
comp=Z,19nm,2.0s
C17K DeLong Mountai 98.42 5 Pdiff Pdif 13 25 24.2 +0.7
baz=192
J29N Klondike Camp 98.51 16 Pdiff Pdif 13 25 24.7 +0.6
baz=213
G24K Hadweenzic Riv 98.62 11 Pdiff Pdif 13 25 25.0 +0.6
baz=205
COLD Coldfoot 98.67 10 Pdiff Pdif 13 25 25.1 +0.5
baz=203
RSSD Black Hills 98.69 44 P P 13 25 25.1 -0.5
RSSD IAmb IAmb 13 25 26.4
comp=Z,24nm,0.9s
RSSD Black Hills 98.69 44 P P 13 25 25.1 -0.5
RSSD pmax pmax
comp=Z,24nm,1.0s
I27K Kandik River 98.75 14 Pdiff Pdif 13 25 25.6 +0.5
baz=210
C18K Utukok River 98.75 6 Pdiff Pdif 13 25 25.2 +0.2
baz=193
E20K Nigu River 98.86 7 Pdiff Pdif 13 25 25.8 +0.2
baz=198
D19K Kuna River 98.88 7 Pdiff Pdif 13 25 26.1 +0.5
baz=196
I28M Miner Creek 98.97 14 Pdiff Pdif 13 25 26.4 +0.2
baz=211
EDM Edmonton 98.99 33 IAmb IAmb 13 25 30.8
comp=Z,21nm,1.2s
J30M Hart River 99.07 16 Pdiff **Pdif** 13 25 27.1 +0.4
baz=214
CPUP Villa Florida 99.16 127 LR LR 14 04 54.4
comp=Z,430nm,18.9s,baz=252,slow=32
KOTAN Kotaneelee Air 99.25 24 Pdiff **Pdif** 13 25 27.9 +0.6
baz=224
D20K Etivluk River 99.25 7 IAmb IAmb 13 26 02.2
comp=Z,21nm,1.6s
D20K Etivluk River 99.25 7 Pdiff **Pdif** 13 25 28.0 +0.7
baz=197
I29M Ogilvie Camp, 99.26 15 Pdiff **Pdif** 13 25 27.9 +0.5
baz=213
E22K Anaktuvuk Pass 99.29 9 IAmb IAmb 13 25 29.6
comp=Z,18nm,1.4s
E22K Anaktuvuk Pass 99.29 9 Pdiff **Pdif** 13 25 27.5 0.0
baz=201
E21K Killik River 99.30 8 Pdiff **Pdif** 13 25 27.8 +0.3
baz=200
H27K Steamboat Moun 99.31 14 Pdiff **Pdif** 13 25 27.9 +0.3
baz=210
C19K Lookout Ridge 99.33 6 IAmb IAmb 13 25 29.2
comp=Z,42nm,1.9s
C19K Lookout Ridge 99.33 6 Pdiff **Pdif** 13 25 27.8 +0.1
baz=195
G26K Porcupine Rive 99.50 12 Pdiff **Pdif** 13 25 28.9 +0.5
baz=208
E23K Chandalar 99.53 10 Pdiff **Pdif** 13 25 29.2 +0.6
baz=203
LZH Lanzhou 99.59 306 *e*P **Pdif** 13 25 32.6 +2.9
LZH sP pwP 13 25 40.9 -5.2
LZH S **S** 13 37 09.0 +7.3
LZH pmax pmax
comp=Z,10.0nm,1.5s
LZH pmax pmax
comp=Z,260nm,4.3s
LZH L L
comp=Z,270nm,15.2s
LZH L L
comp=Z,440nm,16.5s
LZH L L
comp=Z,440nm,16.5s
I30M Mount Dempster 99.59 16 Pdiff **Pdif** 13 25 29.2 +0.2
baz=214
E24K Your Creek 99.72 10 Pdiff **Pdif** 13 25 29.8 +0.4
baz=204
F25K Christian Rive 99.74 11 Pdiff **Pdif** 13 25 29.9 +0.4
baz=207
D22K Ayikyak River 99.87 8 Pdiff **Pdif** 13 25 30.5 +0.5
baz=201
C21K Knifeblade Rid 99.88 8 Pdiff **Pdif** 13 25 30.2 +0.2
baz=199
TOLK Toolik Lake Re 100.07 10 Pdiff **Pdif** 13 25 31.4 +0.5
baz=203
F26K Sheenjek River 100.10 12 Pdiff **Pdif** 13 25 32.1 +1.0
baz=208
D23K Nanushuk River 100.22 9 Pdiff **Pdif** 13 25 32.2 +0.6
baz=202
E25K Arctic Village 100.23 11 Pdiff **Pdif** 13 25 32.4 +0.7
baz=207
A19K Wainwright 100.28 5 Pdiff **Pdif** 13 25 32.8 +1.0
baz=193
B21K Ikpikpuk River 100.34 8 Pdiff **Pdif** 13 25 32.5 +0.5
baz=199
B20K Meade River 100.44 7 Pdiff **Pdif** 13 25 32.9 +0.4
baz=197
EPYK Eagle Plains 100.46 15 Pdiff **Pdif** 13 25 33.3 +0.6
baz=214
H31M Peel River 100.56 16 Pdiff **Pdif** 13 25 33.3 +0.1
baz=216
D24K Happy Valley 100.65 10 Pdiff **Pdif** 13 25 33.6 +0.1
baz=204
F28M Old Crow 100.84 13 Pdiff **Pdif** 13 25 34.8 +0.4
baz=212
E27K Coleen River 101.00 12 Pdiff **Pdif** 13 25 35.6 +0.5
baz=210
C23K Itkillik River 101.03 9 Pdiff **Pdif** 13 25 35.6 +0.5
baz=202
G30M tAoh Zraii Nji 101.08 15 Pdiff **Pdif** 13 25 35.9 +0.4
baz=215
B22K Teshekpuk Lake 101.16 8 Pdiff **Pdif** 13 25 36.1 +0.5
baz=200
D25K Kavik River 101.18 10 Pdiff **Pdif** 13 25 36.0 +0.2
baz=206
G31M Satah River 101.48 16 Pdiff **Pdif** 13 25 37.2 +0.1
baz=216
WRGLY Wrigley 101.66 22 Pdiff **Pdif** 13 25 38.7 +0.7
baz=225
F30M Barrier River 101.70 15 Pdiff **Pdif** 13 25 38.8 +0.7
baz=215
C27K Jago River 101.88 11 Pdiff **Pdif** 13 25 39.5 +0.6
baz=208
E29M Blow River 101.89 14 Pdiff **Pdif** 13 25 39.5 +0.5
baz=213
C26K Camden Bay 101.94 11 Pdiff **Pdif** 13 25 39.9 +0.7
baz=208
F31M Tsiigehtchic 102.02 15 Pdiff **Pdif** 13 25 40.2 +0.7
baz=217
D27M Malcolm River 102.03 12 Pdiff **Pdif** 13 25 40.2 +0.5
baz=211
D28M Stokes Point 102.52 13 Pdiff **Pdif** 13 25 42.4 +0.7
baz=213
INK Inuvik 102.77 15 Pdiff **Pdif** 13 25 43.4 +0.6
baz=217
SONM Songino Array 103.71 317 Pdiff **Pdif** 13 25 48.9 +1.2
comp=Z,0.7nm,0.4s,baz=145,slow=5.6,SNR=6.0
SONM PKiKP **PP** 13 30 04.7 -0.3
comp=Z,2.1nm,1.1s,baz=140,slow=7.2,SNR=4.3
SONM PKKP **PKKPdf** 13 41 52.9 +3.2
comp=Z,0.2nm,0.5s,baz=316,slow=6.2,SNR=3.6
YKA Yellowknife Ar 104.22 25 Pdiff **Pdif** 13 25 49.4 0.0
comp=Z,0.9nm,1.0s,baz=246,slow=4.7,SNR=6.8
YKA PKiKP **PKiKP** 13 30 05.0 -1.0
comp=Z,0.2nm,0.7s,baz=281,slow=2.7,SNR=3.7
YKA PKKPbc **PKKPbc** 13 41 37.1 -2.0
comp=Z,1.3nm,0.8s,baz=26,slow=3.1,SNR=18
C36M Paulatuk 105.81 17 Pdiff **PKiKP** 13 30 08.6 -0.2
baz=226
A36M Sachs Harbour 107.40 15 Pdiff **PKiKP** 13 30 11.4 -0.3
baz=225
WMQ Urumqi 114.05 308 *e*PKP **PKiKP** 13 30 25.5 +0.3
WMQ L L
comp=Z,150nm,17.5s
DGZ Jazzator, Alta 115.98 314 ⇓*i*PKIKP **PKPdf** 13 30 27.0 -1.9
ZSN Zaisan 117.01 311 *e*PKIKP **PKPdf** 13 30 30.3 -0.5
ZSN Zaisan 117.01 311 *e*PKP **PKPdf** 13 30 30.3 -0.5
BOSA Boshof 118.43 201 PKP **PKPdf** 13 30 33.9 -0.5
comp=Z,2.4nm,0.8s,baz=2.7,slow=4.6,SNR=3.4
BOSA PKKPbc **PKKPbc** 13 40 52.0 +0.5
comp=Z,3.3nm,0.9s,baz=1.6,slow=13,SNR=3.0
MK31 Makanchi Array 118.55 310*d* *i*PKIKP **PKPdf** 13 30 32.9 -0.8
MKAR Makanchi Array 118.55 310 PKP **PKPdf** 13 30 33.2 -0.5
comp=Z,5.4nm,0.8s,baz=64,slow=2.8,SNR=41
MKAR PKKPbc **PKKPbc** 13 40 51.2 +0.1
comp=Z,0.7nm,0.7s,baz=297,slow=3.4,SNR=6.8
ZALV Zalesovo Beam 118.58 318 PKP **PKPdf** 13 30 32.8 -0.7
comp=Z,3.5nm,0.8s,baz=172,slow=1.2,SNR=18
ZALV Zalesovo Beam 118.58 318 **PKPdf** 13 30 32.4 -1.1
SHLS Shalkode 119.60 305 *e*PKIKP **PKPdf** 13 30 34.9 -1.1
SHLS Shalkode 119.60 305 *e*PKP **PKPdf** 13 30 34.9 -1.1
NRIK Noril'sk 119.69 336 PKhKP PKPpre 13 30 23.0
comp=Z,4.1nm,1.0s,baz=35,slow=2.0,SNR=3.6
NRIK PKP **PKPdf** 13 30 34.3 -0.9
comp=Z,3.9nm,0.8s,baz=187,slow=1.2,SNR=5.8
NRIK Noril'sk 119.69 336 ⇓PKIKP **PKPdf** 13 30 34.6 -0.6
UZB Uzynbulak 119.91 305 *e*PKIKP **PKPdf** 13 30 36.1 -0.6
UZB Uzynbulak 119.91 305 *e*PKP **PKPdf** 13 30 36.1 -0.6
SATY Saty 120.33 305 *e*PKIKP **PKPdf** 13 30 36.9 -0.5
SATY *e* 13 32 02.6
SATY Saty 120.33 305 *e*PKP **PKPdf** 13 30 36.9 -0.5
SATY *e*PP **PP** 13 32 02.7 -1.4
POIN Pond Inlet 120.58 20 **PKPdf** 13 30 35.7 -1.1
TDK Taldyqorghan 120.77 307 *e*PKIKP **PKPdf** 13 30 37.6 -0.4
TDK Taldyqorghan 120.77 307 *e*PKP **PKPdf** 13 30 37.7 -0.4
MDOK Medeo 121.32 305 *e*PKIKP **PKPdf** 13 30 38.7 -0.6
MDOK *e* 13 32 09.4
MDOK Medeo 121.32 305 *e*PKP **PKPdf** 13 30 38.8 -0.6
MDOK *e*PP **PP** 13 32 09.4 -1.5
TNSS Tian-Shan 121.36 305 *e*PKIKP **PKPdf** 13 30 38.8 -0.9
TNSS Tian-Shan 121.36 305 *e*PKP **PKPdf** 13 30 38.9 -0.9
AAA Alma-Ata 121.43 305 *e*PKIKP **PKPdf** 13 30 39.0 -0.5
AAA Alma-Ata 121.43 305 *e*PKP **PKPdf** 13 30 39.0 -0.5
KSH2 Kashi 121.46 300 PKP **PKPdf** 13 30 39.8 0.0
KURK Kurchatov 121.72 314 **PKPdf** 13 30 38.7 -0.9
KURK Kurchatov 121.72 314*d* *i*PKIKP **PKPdf** 13 30 38.7 -0.9
KURBB Kurchatov Arra 121.77 314 PKP **PKPdf** 13 30 39.0 -0.7
comp=Z,7.9nm,0.8s,baz=107,slow=2.0,SNR=71
KURBB PP PP 13 32 05.5 -7.9
comp=Z,7.0nm,1.3s,baz=100,slow=7.5,SNR=5.3
KURBB PKKPbc **PKKPbc** 13 40 38.7 -0.5
comp=Z,0.5nm,0.8s,baz=280,slow=4.4,SNR=5.4
KUU Kurty 121.98 306 *e*PKIKP **PKPdf** 13 30 40.0 -0.4
KUU Kurty 121.98 306 *e*PKP **PKPdf** 13 30 40.0 -0.4
TULEG Thule 122.76 15 **PKPdf** 13 30 39.1 -1.8
TULEG Thule 122.76 15 *i* P **PKPdf** 13 30 39.4 -0.6
AAK Ala-Archa 123.04 304*d* *i*PKIKP **PKPdf** 13 30 42.3 -0.4
SCHQ Schefferville 124.74 42 PKP **PKPdf** 13 30 44.8 -0.6
comp=Z,3.2nm,0.8s,baz=4.0,slow=5.2,SNR=4.2
SCHQ PP **PP** 13 32 33.6 +0.2
comp=Z,7.7nm,1.0s,baz=240,slow=1.7,SNR=3.6
DZA Taraz 125.38 304 *e*PKIKP **PKPdf** 13 30 46.5 -0.5
DZA Taraz 125.38 304 *e*PKP **PKPdf** 13 30 46.5 -0.5
BRZS Berezniki 125.40 312 *e*PKIKP **PKPdf** 13 30 46.5 -0.3
BRZS Berezniki 125.40 312 *e*PKP **PKPdf** 13 30 46.5 -0.3
KKAR Karatay Array 126.00 304 **PKPdf** 13 30 47.8 -0.4
KKAR Karatay Array 126.00 304 PKIKP **PKPdf** 13 30 47.8 -0.4
IUG luzhnay 126.20 302 *e*PKIKP **PKPdf** 13 30 48.0 -0.7
IUG luzhnay 126.20 302 *e*PKP **PKPdf** 13 30 48.1 -0.7
CHGR Chuyangaron 126.22 298*c* *i*PKIKP **PKiKP** 13 30 49.7 +0.4
NEEM North Greenlan 126.26 13 *i* P **PKPdf** 13 30 47.4 -0.7
BRLS Borolday 126.48 304 *e*PKIKP **PKPdf** 13 30 48.8 -0.3
BRLS *e* 13 32 44.7
BRLS Borolday 126.48 304 *e*PKP **PKPdf** 13 30 48.8 -0.3
BRLS *e*PP **PP** 13 32 44.8 -0.7
CHM Chimkent 126.54 303 *e*PKIKP **PKPdf** 13 30 48.7 -0.5
CHM Chimkent 126.54 303 *e*PKP **PKPdf** 13 30 48.8 -0.5
UPNV Upernavik 126.97 19 *i* P **PKPdf** 13 30 49.1 0.0
BVAR Borovoye Array 127.02 316 PKP **PKPdf** 13 30 49.8 0.0
comp=Z,8.7nm,0.8s,baz=90,slow=3.0,SNR=31
BORK Borovoye 127.07 316 **PKPdf** 13 30 49.3 -0.6
BORK Borovoye 127.07 316*d* *i*PKIKP **PKPdf** 13 30 49.2 -0.6
NUUG Nuugaatsiaq 128.25 20 *i* P **PKPdf** 13 30 51.4 -0.2
ILULI Ilulissat 129.79 22 *i* P **PKPdf** 13 30 54.6 +0.1
KBS Kingsbay 130.62 358 *e*PKPdf **PKPdf** 13 30 52.2 -3.7
SFJD Kangerlussuaq 130.78 25 *i* P **PKPdf** 13 30 56.2 -0.3
SPITS Spitsbergen Ar 131.17 357 PKP **PKPdf** 13 30 56.4 -0.6
comp=Z,11nm,0.9s,baz=308,slow=2.7,SNR=6.3
SUMG Summit 131.68 16 **PKiKP** 13 30 59.2 -0.4
SUMG Summit 131.68 16 PKIKP **PKiKP** 13 30 59.2 -0.4
SUMG Summit 131.68 16 *i* P **PKPdf** 13 30 58.8 +0.2
DAG Danmarks Havn 131.74 7 *i* P **PKPdf** 13 30 56.7 -1.4
ABKAR Akbulak array 133.66 311 **PKPdf** 13 31 02.5 +0.1
ARTI Arti 133.68 321 *i* PKIKP **PKPdf** 13 31 01.6 -0.7
ARTI 13 33 29.6
ARTI SS SS 13 51 08.9 -7.6
KMBO Kilima Mbogo 135.68 232 PKP **PKPdf** 13 31 07.0 -0.7
KMBO Kilima Mbogo 135.68 232 PKIKP **PKPdf** 13 31 07.0 -0.7
H10S3 ASCENSION HYDR 137.61 152 T T 16 06 03.6
baz=204,slow=74,SNR=22
H10S2 ASCENSION HYDR 137.61 152 T T 16 06 04.8
baz=16,slow=74,SNR=19
KIRV Kirov 137.66 326*d* *i*PKIKP **PKPdf** 13 31 09.7 +0.1
APA Apatity 138.26 343 ⇓*i*PKIKP **PKPdf** 13 31 10.2 -0.3
APA pmax pmax
comp=Z,8.0nm,1.1s
ARA0 ARCESS Array S 138.28 349 *e*PKPdf **PKPdf** 13 31 10.7 +0.1
ARCES ARCESS Array B 138.28 349 PKhKP PKPpre 13 31 00.1
comp=Z,3.9nm,0.8s,baz=208,slow=2.1,SNR=3.7
ARCES PKP **PKPdf** 13 31 09.3 -1.2
comp=Z,7.1nm,0.8s,baz=81,slow=3.8,SNR=6.5
H10N3 ASCENSION HYDR 138.68 152 T T 16 07 28.3
baz=203,slow=75,SNR=14
H10N1 ASCENSION HYDR 138.69 152 T T 16 07 29.4
baz=203,slow=75,SNR=19
H10N2 ASCENSION HYDR 138.70 152 T T 16 07 31.1
baz=203,slow=75,SNR=13
MBAR Mbarara 140.34 225⇑ *e*PKIKP **PKPdf** 13 31 14.8 -1.4
BELG Belogornoye 140.77 318 *ce*PKIKP **PKPdf** 13 31 14.4 -1.0
KLMR Klimovskoe 140.91 333 *e*PKIKP **PKPdf** 13 31 13.3 -2.2
STEI Steigen 141.20 353 *e*PKPdf **PKPdf** 13 31 15.8 0.0
AKT Akhty 142.78 300 *e*PKIKP **PKPdf** 13 31 15.8 -3.8
AKT *e* 13 34 24.3
AKT pmax pmax
comp=Z,32nm,1.2s
MAK Makhachkala 142.81 303 *e*PKHKP PKPpre 13 31 13.8
MAK *e* 13 34 24.3
MAK *e* 13 38 20.6
MAK *e*SS SS 13 52 59.4 -6.1
MAK *e*SSS SSS 13 58 17.9
MAK pmax pmax
comp=Z,149nm,1.4s
VRH Novokhopyorsk 144.62 318 *e*PKIKP **PKPab** 13 31 20.6 -0.4
VRH pmax pmax
comp=Z,20nm,0.6s
MOS Moscow 144.66 327 *i* PKIKP **PKPab** 13 31 19.9 -1.1
MOS pmax pmax
comp=Z,142nm,1.6s
NSS Namsos 144.84 354 *e*PKPbc **PKPab** 13 31 20.5 -0.8
PUL Pulkovo 145.05 337⇑ *i*PKIKP **PKPbc** 13 31 21.1 -1.1
FIA1 FINESS Array S 145.06 341 **PKPbc** 13 31 21.2 -1.0
FINES FINESS Array B 145.06 341 PKP **PKPbc** 13 31 21.4 -0.9
comp=Z,42nm,0.8s,baz=54,slow=4.9,SNR=85
GNI Garni 145.13 298*d* *i*PKIKP **PKPdf** 13 31 24.2 +0.3
OBN Obninsk 145.51 327 ⇓P **PKPbc** 13 31 23.9 0.0
OBN Obninsk 145.51 327 **PKPdf** 13 31 23.4 -0.4
OBN Obninsk 145.51 327*d* *i*PKIKP **PKPdf** 13 31 23.2 -0.5
OBN *e* 13 34 45.2
OBN *e*PPP PPP 13 37 55.2
OBN *e* 13 38 30.9
OBN *e*SS SS 13 53 37.6 +2.5
OBN *e*SSS SSS 13 59 03.7
OBN pmax pmax
comp=Z,141nm,0.8s
NCK Nalchik 145.57 304⇑ *i*PKIKP **PKPab** 13 31 25.4 +0.6
LPSR Galich'ya Gora 145.59 322 *e*PKIKP **PKPdf** 13 31 23.9 -0.1
LPSR pmax pmax
comp=Z,304nm,1.7s
GOF Gofitskoye 145.65 307 *ce*PKIKP **PKPab** 13 31 25.3 +0.3
VORR Voronezh 145.86 320 *e*PKP2 **PKPdf** 13 31 24.0 -0.5
VORR pmax pmax
comp=Z,250nm,0.7s
KBZ Khabaz 146.02 305 PKPbc **PKPbc** 13 31 25.9 +0.1
comp=Z,13nm,0.8s,baz=72,slow=2.4,SNR=34
KBZ Khabaz 146.02 305*d* *i*PKP2 **PKPdf** 13 31 24.8 -0.2
VSR Storozhevoye 146.08 319 *i* PKP2 **PKPbc** 13 31 25.4 -0.4
VSR pmax pmax
comp=Z,180nm,0.8s
VORD Divnogorie 146.12 319 *e*PKP2 **PKPdf** 13 31 24.5 -0.4
VORD pmax pmax
comp=Z,130nm,0.8s
KIV Kislovodsk 146.13 306 ⇑P **PKPdf** 13 31 25.0 -0.3
KIV Kislovodsk 146.13 306 *e*PKHKP PKPpre 13 31 22.1
KIV *i* 13 31 26.7
KIV *e* 13 34 45.4
KIV *e*SS SS 13 53 41.4 -2.2
KIV pmax pmax
comp=Z,46nm,1.1s
SHA1 Shidzhatmaz 146.19 305*c* *i*PKP2 **PKPdf** 13 31 26.0 +0.4
NEUR Neytrino 146.25 304*d* *i*PKP2 **PKPbc** 13 31 26.7 -0.1
MOL Molde 147.10 357 *e*PKPbc **PKPbc** 13 31 27.7 -0.6
ERBR Yeremizino-Bor 147.23 309 *i* PKP2 **PKPbc** 13 31 30.2 +0.9
ERBR pmax pmax
comp=Z,186nm,1.2s
VSU Vasula 147.25 338*d* *i*PKP2 **PKPdf** 13 31 27.5 +0.9
LABN Labinsk 147.35 307 *i* PKP2 **PKiKP** 13 31 31.9 0.0
LABN pmax pmax
comp=Z,66nm,0.9s
AKN Aaknes 147.51 357 *e*PKPbc **PKPbc** 13 31 29.4 -0.2
DOMB Dombas 147.53 355 *e*PKPbc **PKPbc** 13 31 29.0 -0.6
VSLR Vesyoloye 148.12 305⇓ *e*PKIKP **PKPdf** 13 31 29.6 +1.1
SOC Sochi 148.31 306 *i* PKIKP **PKPdf** 13 31 29.5 +0.7
SOC *e*PPP PPP 13 38 28.1
SOC *e*SS SS 13 54 41.7 +34
SOC pmax pmax
comp=Z,20nm,0.8s
NB2 NORSAR Subarra 148.33 353 PKP **PKPbc** 13 31 31.1 -0.7
comp=Z,259nm,2.0s,baz=9.8,slow=2.9
NB2 NORSAR Subarra 148.33 353 PKPab **PKPbc** 13 31 31.1 -0.7
NOA NORSAR Array B 148.33 353 PKPbc **PKPbc** 13 31 30.9 -0.9
comp=Z,20nm,0.8s,baz=13,slow=4.4,SNR=56
KOPT Kop Dagi 148.39 299 **PKPab** 13 31 35.8 -0.4
MARD Mardin 148.41 294 **PKiKP** 13 31 33.9 -0.6
HYA Hoyanger 148.56 358 *e*PKPbc **PKPbc** 13 31 32.4 +0.1
NC602 NORSAR Array S 148.60 353 *e* **PKPbc** 13 31 31.8 -0.7
SUE Sulen 148.70 359 *e*PKPbc **PKPbc** 13 31 32.7 +0.1
HFS Hagfors 148.90 350 PKP **PKPdf** 13 31 28.6 -0.7
comp=Z,33nm,0.8s,baz=116,slow=5.1,SNR=9.6
HFS PKPbc **PKPbc** 13 31 32.4 -0.9
comp=Z,33nm,0.8s,baz=37,slow=0.7,SNR=47
SKAR Skarslia 148.94 356 *e*PKPbc **PKPbc** 13 31 33.4 0.0
ASK Askoy 149.27 359 *e*PKPbc **PKPbc** 13 31 34.0 -0.1
BER Bergen 149.36 358 *e*PKPbc **PKPbc** 13 31 34.7 +0.4
LRW Lerwick 149.45 5 *e*P **PKPbc** 13 31 34.5 -0.1
OSL Oslo 149.47 353 *e*PKPbc **PKPbc** 13 31 34.7 +0.1
ANN Anapa 149.56 309 *i* PKP2 **PKPbc** 13 31 35.8 +0.4
ANN pmax pmax
comp=Z,31nm,0.8s
MNK Minsk 149.78 332 *i* PKiKP **PKPbc** 13 31 36.0 +0.4
comp=E,33nm,0.8s
MNK *i* PKiKP **PKPbc** 13 31 36.0 +0.4
comp=N,36nm,1.1s
MNK *i* PKiKP **PKPbc** 13 31 36.0 +0.4
comp=Z,79nm,0.8s,baz=44
MNK *i* PP **PP** 13 35 10.3 +1.1
MNK *i* PPP PPP 13 38 31.4
MNK *i* SKS **SKSdf** 13 38 37.4 +0.1
MNK *i* SKKS **SKKSdf** 13 47 24.0 -8.4
MNK *i* SS SS 13 54 00.9 -22
MNK *i* SSS SSS 14 00 17.7
MNK *i* LQ LQ 14 30 55.8
MNK *i* LR LR 14 35 37.5
MNK *i* LRM MLR 14 42 25.6
comp=E,205nm,16.1s
MNK *i* LRM MLR 14 42 35.1
comp=N,125nm,18.7s
MNK *i* LRM MLR 14 42 35.1
comp=Z,257nm,18.7s
MNK Minsk 149.78 332 *i* PKP2 **PKPbc** 13 31 36.0 +0.4
MNK *i* 13 35 10.2
MNK *i* PPP PPP 13 38 31.4
MNK *i* 13 38 37.3
MNK pmax pmax
comp=Z,79nm,0.8s
MNK pmax pmax
comp=E,33nm,0.8s
MNK pmax pmax
comp=N,36nm,1.1s
ODD1 Odda 149.79 357 *e*PKPbc **PKPbc** 13 31 35.6 0.0
KONO Kongsberg 149.86 354 **PKPbc** 13 31 35.3 -0.3
KONO Kongsberg 149.86 354 *e*PKPbc **PKPbc** 13 31 35.3 -0.3
KONO Kongsberg 149.86 354 PKP2 **PKPbc** 13 31 35.3 -0.3
ARPR Arapgir-MALATY 150.16 297 **PKPdf** 13 31 34.7 +2.5
BLS5 Blasjo 150.29 357 *e*PKPbc **PKPbc** 13 31 36.9 +0.1
STRU Stroemstad 150.30 352 *i* P **PKPbc** 13 31 36.4 -0.3
KMY Karmoy 150.54 358 *e*PKPbc **PKPbc** 13 31 37.3 +0.1
BIGH Upper Bighouse 150.79 8 *e*P **PKPbc** 13 31 38.0 +0.1
LINV Loch Inver, As 150.95 10 *e*P **PKPbc** 13 31 38.2 0.0
TJOU Tjoern 151.22 351 *i* P **PKPbc** 13 31 38.6 -0.3
HOMB Homborsund 151.31 355 *e*PKPbc **PKPbc** 13 31 39.3 +0.2
HOMB Homborsund 151.31 355 *i* P **PKPbc** 13 31 39.3 +0.2
SNART Snartemo 151.34 356 *e*PKPbc **PKPbc** 13 31 39.1 0.0
SNART Snartemo 151.34 356 *i* P **PKPbc** 13 31 39.2 0.0
BORU Boraas 151.44 350 *i* P **PKPbc** 13 31 38.8 -0.6
KPL Plockton 151.66 11 *e*P **PKPbc** 13 31 39.9 0.0
AKASG Malin Array Be 151.70 325 PKPbc **PKPbc** 13 31 39.8 -0.5
comp=N,0.4nm,0.4s,baz=42,slow=0.9,SNR=7.0
AKASG Malin Array Be 151.70 325 **PKPbc** 13 31 40.0 -0.2
AKASG Malin Array Be 151.70 325 PKIKP **PKPbc** 13 31 40.0 -0.2
AKBB Malin Array Si 151.70 325*d* *i*PKIKP **PKPbc** 13 31 39.7 -0.6
KIEV Kiev 151.71 325 ⇓P **PKPbc** 13 31 40.3 0.0
KIEV Kiev 151.71 325 **PKPbc** 13 31 39.9 -0.4
KIEV Kiev 151.71 325 PKIKP **PKPbc** 13 31 39.9 -0.4
SIM Simferopol' 151.72 311 *e*PKIKP **PKiKP** 13 31 41.5 +0.6
SIM pmax pmax
comp=Z,52nm,1.0s
MCD Coleburn Disti 151.76 8 *e*P **PKPbc** 13 31 39.4 -0.8
ONAU Onsala 151.80 351 *i* P **PKPbc** 13 31 39.9 -0.3
SUW Suwalki 151.98 335 *e*PKP **PKPdf** 13 31 34.4 +0.2
FABU Falkenberg 152.06 350 *i* P **PKPbc** 13 31 40.4 -0.5
OVD Ostervraa, Den 152.09 353 *i* P **PKPbc** 13 31 40.7 -0.2
BLEU Blekinge 152.14 346 *i* P **PKPbc** 13 31 40.1 -0.9
DEL Delary 152.37 348 *i* P **PKPbc** 13 31 41.5 -0.1
GOET G??ttrup 152.47 354 *i* P **PKiKP** 13 31 42.1 0.0
DRUM Mains of Drumt 152.51 7 *e*P **PKPbc** 13 31 41.6 -0.2
INVG Invergeldie, C 152.78 10 *e*P **PKPbc** 13 31 42.3 -0.2
BZK Bozkurt 152.79 305 ⇓P **PKiKP** 13 31 43.7 +0.5
MMAI Mount Meron Ar 152.86 285 PKPbc **PKiKP** 13 31 45.2 +1.4
comp=Z,18nm,0.8s,baz=40,slow=6.7,SNR=24
BJUU Bjuv 152.90 349 *i* P **PKPbc** 13 31 42.4 -0.3
LUNU Lund 153.24 348 *i* P **PKPbc** 13 31 43.4 -0.1
HAMD Hammershus, De 153.32 346 *i* P **PKPbc** 13 31 43.6 -0.1
BSD Bornholm Skovb 153.44 346 *i* P **PKPbc** 13 31 43.6 -0.3
KIRS Kirsehir-Merke 153.55 299 ⇓P **PKiKP** 13 31 45.0 0.0
CIDE Kastamonu/Cide 153.57 305 ⇑P **PKPbc** 13 31 44.7 0.0
BR131 Keskin Array S 153.63 300⇓ *e*PKIKP **PKPdf** 13 31 37.1 -0.3
BRTR Keskin Array B 153.63 300 PKP **PKPdf** 13 31 35.9 -1.5
comp=Z,0.4nm,0.4s,baz=100,slow=2.9,SNR=5.8
BRTR PKPbc **PKPbc** 13 31 45.1 -0.1
comp=Z,4.9nm,1.0s,baz=116,slow=3.4,SNR=21
BRTR PP **PP** 13 35 27.2 -5.2
comp=Z,2.2nm,1.0s,baz=83,slow=2.2,SNR=5.4
SORM Soroca 153.69 321 ⇓P **PKPbc** 13 31 44.5 -0.2
EKA Eskdalemuir Ar 153.97 9 PKP **PKPdf** 13 31 36.9 -0.2
comp=Z,1.1nm,0.8s,baz=333,slow=1.6,SNR=3.7
EKA PKPbc **sPKPdf** 13 31 44.0 +0.5
comp=Z,2.8nm,0.7s,baz=339,slow=3.3,SNR=9.6
EKA PKPab **PKPab** 13 31 57.6 -0.8
comp=Z,5.5nm,0.8s,baz=335,slow=3.8,SNR=12
NEWG New Galloway 154.02 11 *e*P **PKPbc** 13 31 44.7 -0.6
GAL1 Galloway 154.18 11 *e*P **PKPbc** 13 31 45.2 -0.4
BEL Belsk 154.59 335 *e*PKP **PKiKP** 13 31 47.6 +1.0
EDMD Edmundbyers 154.61 8 *e*P **PKPbc** 13 31 46.0 -0.6
JURR Jurilovca 155.17 314 ⇑P **PKPab** 13 32 03.2 -0.8
TPGR Topolog 155.41 315 ⇓P **PKPab** 13 32 04.6 -0.4
CFR Carcaliu 155.43 315 ⇑P PKPdf 13 31 49.0 +10
KWP Kalwaria Pacla 155.51 329 *e*PKP **PKPdf** 13 31 39.7 +0.2
TESR Tescani 155.58 320 ⇑P **PKPab** 13 32 05.6 -0.1
TIRR Tirgusor 155.61 314 ⇑P **PKPab** 13 32 06.2 +0.4
TIRR Tirgusor 155.61 314 ⇑PKP2 **PKPab** 13 32 06.2 +0.4
DBIC Dimbokro 155.63 159 PKPab **PKPab** 13 32 05.3 -1.2
comp=Z,10nm,1.1s,baz=206,slow=3.2,SNR=3.7
BURAR Bucovina Array 155.69 323 ⇑P **PKPab** 13 31 58.5 -7.7
ODBI Odobesti 155.76 318 ⇑P **PKPab** 13 32 07.7 +1.2
ONER Baraj Valea Uz 155.82 319 ⇑P **PKPab** 13 32 07.3 +0.6
VRI Vrincioaia 155.90 318 ⇑P **PKPab** 13 32 07.4 +0.3
VRI Vrincioaia 155.90 318 ⇑PKP2 **PKPab** 13 32 07.4 +0.3
PLOR Plostina 155.95 318 ⇓P **PKPab** 13 32 08.0 +0.6
PLOR Plostina 155.95 318 ⇓PKP2 **PKPab** 13 32 08.0 +0.6
TURR Turia 156.20 319 ⇑P **PKPab** 13 32 09.4 +1.0
OJC Ojcow 156.26 334 *e*PKP PKPdf 13 31 27.1 -13
OZUR 156.31 320 ⇓P **PKPab** 13 32 08.8 -0.1
NEHR Nehoiu 156.39 318 ⇑P **PKPab** 13 32 09.5 +0.3
MLR Muntele Rosu 156.56 318 ⇓P **PKPab** 13 32 10.0 -0.1
MLR Muntele Rosu 156.56 318 ⇓PKP2 **PKPab** 13 32 10.0 -0.1
DOPR Dopca 156.60 320 ⇑P **PKPab** 13 32 11.0 +0.8
NIE Niedzica 156.70 332 *e*PKP **PKPdf** 13 31 39.9 -1.2
KSP Ksiaz 156.95 339 *e*PKP **PKPdf** 13 31 41.7 +0.4
VOIR 157.11 319 ⇑P **PKPab** 13 32 12.5 +0.1
VOIR 157.11 319 ⇑PKP2 **PKPab** 13 32 12.5 +0.1
MESR Meseseni 157.15 325 ⇓P **PKPab** 13 32 16.8 +4.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SGRR	Singureni	157.24	315	⇑P	PKPab	13 32 21.4	+8.5
LANS	Liptovska Anna	157.25	333	ePKP2	PKPab	13 32 13.1	+0.3
LANS	Liptovska Anna	157.25	333	ePKP	PKPab	13 32 13.0	+0.3
DPC	Dobruska-Polom	157.37	339	ePKP2	PKPab	13 32 13.7	+0.4
DPC	Dobruska-Polom	157.37	339	ePKPAB	PKPab	13 32 13.7	+0.4
MARR	Marisel-Cluj	157.38	324	⇑P	PKPab	13 32 09.4	-4.2
ARR	Arges	157.39	319	⇑P	PKPab	13 32 14.6	+1.0
CLL	Collm	157.40	345	⇑ePKIKP	PKPdf	13 31 42.0	+0.2
CLL				pmax	pmax		
	comp=Z,42nm,2.2s						
CLL				pmax	pmax		
	comp=Z,37nm,1.2s						
CLL	Collm	157.40	345	ePKPdf	PKPdf	13 31 42.0	+0.2
	comp=Z,42nm,2.2s						
CLL				ePKPdif	sPKPdf	13 31 56.0	+7.8
CLL				⇑iPKPab	PKPab	13 32 12.6	-0.7
	comp=Z,37nm,1.2s						
CLL				i pPKPab	sPKPab	13 32 26.0	+6.5
	comp=Z,24nm,1.0s						
CLL				ePP	PP	13 35 54.0	+2.2
CLL				AMS	AMS	15 57 00.0	
	comp=Z,600nm,21.3s						
CLL				AMS	AMS	15 57 00.0	
	comp=Z,600nm,21.3s						
TNR	Turnu Rosu	157.42	320	⇑P	PKPab	13 32 14.1	+0.5
TNR	Turnu Rosu	157.42	320	⇑PKP2	PKPab	13 32 14.1	+0.5
MORC	Moravsky Berou	157.46	336	⇑P	PKPab	13 32 09.9	-3.7
MORC	Moravsky Berou	157.46	336	⇑PKP2	PKPab	13 32 09.9	-3.7
MORC	Moravsky Berou	157.46	336	ePKP	PKPdf	13 31 41.9	-0.1
MORC				e		13 32 13.5	
DRGR		157.52	324	⇓P	PKPab	13 32 13.9	-0.2
DRGR		157.52	324	⇓PKP2	PKPab	13 32 13.9	-0.2
BAND	Balkesir-Ban	157.53	305	⇓P	PKPab	13 32 09.1	-5.2
LOT	Lotru	157.82	320	⇑P	PKPab	13 32 14.9	-0.6
ELND	Elena	157.96	313	⇓P	PKPab	13 32 16.9	+0.8
PSZ	Piszkesteto	158.03	330	⇑P	PKPab	13 32 16.5	+0.3
PSZ	Piszkesteto	158.03	330	⇑PKP2	PKPab	13 32 16.5	+0.3
JAVC	Velka Javorina	158.18	335	ePKP	PKPdf	13 31 43.2	+0.2
JAVC				e		13 32 17.5	
VRAC	Vranov	158.18	337	⇓P	PKPab	13 32 15.8	-0.9
VRAC	Vranov	158.18	337	⇓PKP2	PKPab	13 32 15.8	-0.9
VRAC	Vranov	158.18	337	ePKP	PKPdf	13 31 42.2	-0.7
VRAC				e		13 32 17.0	
PVL	Pavlikeni	158.31	314	i P	PKPab	13 32 18.3	+0.8
GZR	Gura Zlata	158.40	321	⇓P	PKPdf	13 31 42.6	-0.8
KRUC	Moravsky	158.46	337	ePKP	PKPdf	13 31 42.9	-0.3
KRUC				e		13 32 17.8	
PLVB	Pleven	158.51	315	⇓P	PKPab	13 32 20.4	+1.9
MODS	Modra-Piesok	158.72	335	ePKP2	PKPab	13 32 19.2	0.0
MODS	Modra-Piesok	158.72	335	ePKP	PKPab	13 32 19.2	0.0
ZVC	Zvikov	158.82	341	ePKPAB	PKPab	13 32 18.5	-1.0
MPEP	Malo Peshtene	159.07	316	eP	PKPab	13 32 21.3	+0.5
KHC	Kasperske Hory	159.27	342	ePKP2	PKPab	13 32 20.1	-1.4
KHC	Kasperske Hory	159.27	342	ePKPAB	PKPab	13 32 20.1	-1.4
KHC				ex	x	13 32 35.0	
BCLA	Clavier	159.34	357	dPKP	PKPab	13 32 20.9	-0.7
MDVR	Moldovita	159.37	322	⇓P	PKPab	13 32 21.9	-0.3
BGES	Gesves	159.38	358	dPKP	PKPab	13 32 21.5	-0.4
GERES	GERESS Array B	159.49	341	PKP	PKPdf	13 31 44.2	-0.3
	comp=Z,0.6nm,0.4s,baz=84,slow=2.2,SNR=6.3						
GERES				PKPab	PKPab	13 32 22.0	-0.6
	comp=Z,2.6nm,0.8s,baz=46,slow=5.8,SNR=8.3						
CONA	Conrad Observa	159.61	336	i PKP	PKPab	13 32 23.4	+0.3
	comp=Z,30nm,1.6s,SNR=7.1						
BLSH	Balsha	159.63	315	eP	PKPab	13 32 24.4	+1.0
RONA	Rosalia, Austr	159.65	335	i PKP	PKPab	13 32 23.3	+0.1
	comp=Z,32nm,1.5s,SNR=6.4						
PLNA	Plana	159.74	314	i P	PKPab	13 32 25.2	+1.2
VTS	Vitosha	159.78	315	i P	PKPab	13 32 25.2	+1.0
MMB	Musomishta	160.01	311	i P	PKPab	13 32 25.4	+0.3
WLF	Walferdange	160.04	355	dPKP	PKPab	13 32 24.3	-0.5
MOA	Molln	160.21	339	ePKP	PKPab	13 32 25.9	+0.3
	comp=Z,11nm,1.0s						
KKB	Krupnik	160.26	313	i P	PKPab	13 32 26.8	+0.7
ARSA	Arzberg	160.31	336	i PKP	PKPab	13 32 26.0	-0.1
	comp=Z,6.2nm,0.8s						
BIOA	Bad Ischl, Aus	160.55	340	ePKP	PKPab	13 32 27.4	+0.3
	comp=Z,34nm,1.3s,SNR=9.0						
SOKA	Soboth	160.97	336	ePKP	PKPab	13 32 28.8	-0.3
	comp=Z,26nm,1.5s,SNR=7.1						
PERS	Pernice	160.98	335	i PKPab	PKPab	13 32 28.6	-0.5
LESA	Schwarzleotal	161.07	341	ePKP	PKPab	13 32 29.6	+0.1
	comp=Z,38nm,1.5s,SNR=7.2						
KBA	Koelnbreinsper	161.19	339	ePKP	PKPab	13 32 29.9	-0.2
	comp=Z,21nm,1.9s						
OBKA	Obir	161.29	336	ePKP	PKPab	13 32 30.0	-0.5
	comp=Z,6.3nm,1.0s						
WATA	Walderalm	161.44	343	ePKP	PKPab	13 32 31.4	+0.2
	comp=Z,40nm,1.6s						
MYKA	Terra Mystica	161.49	338	PKP	PKPab	13 32 30.5	-0.8
	comp=Z,1.7nm,0.4s						
WTTA	Wattenberg	161.50	343	ePKP	PKPab	13 32 31.4	-0.1
	comp=Z,29nm,1.6s						
RETA	Reutte	161.50	345	ePKP	PKPab	13 32 31.4	+0.1
	comp=Z,21nm,1.2s						
MOTA	Moosalm	161.55	344	ePKP	PKPab	13 32 31.3	-0.4
	comp=Z,27nm,1.4s						
ABTA	Abfaltersbach	161.73	341	ePKP	PKPab	13 32 30.7	-1.7
	comp=Z,14nm,1.2s						
GBAS	Gorenja Brezov	161.82	336	i PKPab	PKPab	13 32 31.8	-1.0
ROBS	Robic	161.87	338	i PKPab	PKPab	13 32 31.4	-1.5
DAVA	Damuels	161.88	347	i PKP	PKPab	13 32 32.6	-0.5
	comp=Z,15nm,1.0s						
BOJS	Bojanci	161.88	333	ePKPdf	PKPdf	13 31 46.7	-0.5
CEY	Cerknica	162.00	335	i PKPab	PKPab	13 32 32.8	-0.7
CEY	Cerknica	162.00	335	ePKPdf	PKPdf	13 31 46.7	-0.6
PDG	Podgorica	162.26	320	⇑P	PKPab	13 32 34.6	-0.1
TORD	Torodi Ar. Bea	163.35	173	PKP	PKPdf	13 31 48.5	-1.1
	comp=Z,2.1nm,0.8s,baz=238,slow=1.9,SNR=12						
TORD				PKPab	PKPab	13 32 40.8	+0.8
	comp=Z,33nm,0.9s,baz=200,slow=6.1,SNR=42						
TORD				PP	PP	13 36 27.1	+3.4
	comp=Z,2.7nm,1.1s,baz=194,slow=5.5,SNR=3.6						
TORD				PKKP		13 39 57.0	
	comp=Z,1.0nm,1.1s,baz=335,slow=1.8,SNR=4.4						
TORD				SKKPbc		13 41 40.6	
	comp=Z,2.2nm,1.2s,baz=268,slow=1.8,SNR=4.1						
ESDC	Sonseca Array	168.25	31	PKP	PKPdf	13 31 53.2	+0.4
	comp=Z,2.7nm,1.2s,baz=23,slow=0.5,SNR=5.6						
ESDC				PKPab	PKPab	13 33 00.3	-0.9
	comp=Z,5.4nm,1.0s,baz=306,slow=4.1,SNR=12						
ESDC				PP	PP	13 36 51.5	+1.7
	comp=Z,2.4nm,1.1s,baz=327,slow=7.3,SNR=4.5						
ESDC				SKKPbc		13 41 24.2	
	comp=Z,1.9nm,1.1s,baz=108,slow=3.3,SNR=5.0						

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*VAO **05** 13:25:58.1±1.4, 23°.06S×66°.88W, h212km, mb4.0, Presumed earthquake*
*SJA **05** 13:26:07.4±1.1, 22°.82S×66°.00W, h284km±5km, ML4.4, MW4.0*
*NEIC **05** 13:26:08.7±2.4, 22°.93S±0°.08×66°.0W±0°.1, h260km±9km, mb4.2/6, Mwr4.4(GUC), Error ellipse: s-maj=15.2km s-min=11.9km az=100.0*
*IDC **05** 13:26:10.1±2.0, 22°.73S×65°.88W, h259km±18km, mb3.4/6, mbtmp4.0/10, Error ellipse: s-maj=21.1km s-min=17.1km az=48.0*
*GUC **05** 13:26:10.5±0.6, 22°.95S×66°.16W, h260km±8km, ML4.2*
ISC 05 13:26:08.9±0.6**, 22°.84S**±0°.05×**66°.08W**±0°.05**, h264**km±6km**, n112, σ1s.12**/128**, mb3.5**/6**, 8C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
HJA	Humahuaca	0.71	121	i P	Pn	13 26 45.5	+1.0
HJA				eS	S	13 27 13.8	+1.2
YJA	Yavi	0.84	38	eP	Pn	13 26 46.5	+1.3
YJA				i S	S	13 27 13.5	-0.2
YJA	Yavi	0.84	38	i P	Pn	13 26 46.3	+1.1
YJA				eS	S	13 27 13.8	+0.1
SALTA		1.40	190	eP	Pn	13 26 49.2	+0.9
SALTA		1.40	190	i P	Pn	13 26 49.4	+1.1
SALTA				eS	S	13 27 20.3	+0.8
AF01	San Pedro de A	1.94	266		Pn	13 26 52.5	+0.2
AF01	San Pedro de A	1.94	266	eP	Pn	13 26 54.0	+1.7
AF01				IAML		13 27 37.4	
	comp=E,640nm,1.1s						
SLA	San Lorenzo	1.94	164	⇓eP	Pn	13 26 52.6	+0.4
SLA	San Lorenzo	1.94	164	i P	Pn	13 26 52.7	+0.5
SLA				eS	S	13 27 26.7	+0.3
PB09	IPOC Station P	3.11	289		Pn	13 27 05.3	+1.7
PB09	IPOC Station P	3.11	289	⇑iP	Pn	13 27 05.4	+1.8
PB09				IAML		13 27 48.2	
	comp=N,266nm,0.5s						
PB09	IPOC Station P	3.11	289	i P	Pn	13 27 04.7	+1.1
PB09				eS	S	13 27 46.7	-0.3
PB09				IAML		13 27 48.6	
	comp=Z,416nm,0.6s						
PB06	IPOC Station P	3.23	272		Pn	13 27 05.7	+0.9
PB06	IPOC Station P	3.23	272	⇑eP	Pn	13 27 05.7	+0.9
PB06	IPOC Station P	3.23	272	i P	Pn	13 27 05.4	+0.6
PB06				eS	S	13 27 48.9	-0.3
PB06				IAML		13 27 53.6	
	comp=Z,395nm,0.2s						
FSA	Cafayete	3.26	178	i P	Pn	13 27 05.2	+0.1
PB03	IPOC Station P	3.49	282		Pn	13 27 08.4	+0.7
PB03	IPOC Station P	3.49	282	eP	Pn	13 27 08.8	+1.1
PB03	IPOC Station P	3.49	282	i P	Pn	13 27 08.0	+0.2
PB03				eS	S	13 27 53.3	-1.2
PB01	IPOC Station P	3.64	299		Pn	13 27 10.3	+1.0
PB01	IPOC Station P	3.64	299	⇑eP	Pn	13 27 10.4	+1.1
PB01				eS	S	13 27 56.8	-0.6
PB01	IPOC Station P	3.64	299	i P	Pn	13 27 09.8	+0.5
PB01				eS	S	13 27 55.7	-1.7
PB01				IAML		13 27 59.8	
	comp=Z,466nm,0.2s						
PB07	IPOC Station P	3.70	287		Pn	13 27 11.0	+0.9
PB07	IPOC Station P	3.70	287	i P	Pn	13 27 10.4	+0.3
PB07				eS	S	13 27 57.1	-1.6
PB07				IAML		13 28 00.9	
	comp=Z,475nm,0.4s						
PB02	IPOC Station P	3.85	292		Pn	13 27 12.2	+0.4
PB02	IPOC Station P	3.85	292	⇑eP	Pn	13 27 12.6	+0.8
PB02	IPOC Station P	3.85	292	i P	Pn	13 27 11.9	+0.2
PB02				eS	S	13 28 00.2	-1.5
PB08	IPOC Station P	3.93	313		Pn	13 27 14.8	+1.9
PB08	IPOC Station P	3.93	313	⇑eP	Pn	13 27 15.0	+2.1
PB08				eS	S	13 28 04.8	+1.0
PB08	IPOC Station P	3.93	313	i P	Pn	13 27 14.3	+1.4
PB08				eS	S	13 28 01.9	-1.9
PB08				IAML		13 28 07.2	
	comp=Z,165nm,0.9s						
GO02	Mina Guanaco	3.96	234		Pn	13 27 13.4	+0.4
GO02	Mina Guanaco	3.96	234	eP	Pn	13 27 13.6	+0.6
GO02				i S	S	13 28 02.5	-1.7
GO02	Mina Guanaco	3.96	234	i P	Pn	13 27 13.5	+0.4
PATCX	Punta Patache	4.29	297		Pn	13 27 17.4	+0.6
PATCX	Punta Patache	4.29	297	eP	Pn	13 27 17.5	+0.7
GO01	Chusmiza	4.29	317		Pn	13 27 18.7	+1.5
GO01	Chusmiza	4.29	317	eP	Pn	13 27 18.9	+1.7
GO01	Chusmiza	4.29	317	i P	Pn	13 27 18.3	+1.0
GO01				IAML		13 28 17.3	
	comp=Z,171nm,0.1s						
PB14	IPOC Station P	4.34	245		Pn	13 27 17.7	+0.1
PB14	IPOC Station P	4.34	245	⇑eP	Pn	13 27 17.7	+0.1
PB14	IPOC Station P	4.34	245	i P	Pn	13 27 17.7	+0.1
PB14				IAML		13 28 15.4	
	comp=Z,204nm,0.4s						
HMBC	Humberstone	4.37	305		Pn	13 27 17.5	-0.3
HMBC	Humberstone	4.37	305	eP	Pn	13 27 17.8	0.0
PB11	IPOC Station P	4.53	312		Pn	13 27 20.1	+0.3
PB11	IPOC Station P	4.53	312	⇑eP	Pn	13 27 20.2	+0.5
PB11	IPOC Station P	4.53	312	i P	Pn	13 27 19.5	-0.2
AC02	Maricunga	4.85	214		Pn	13 27 23.9	+0.2
AC02	Maricunga	4.85	214	eP	Pn	13 27 23.9	+0.2
AC01	Pan de Azucar	5.27	230		Pn	13 27 27.2	-1.2
AC01	Pan de Azucar	5.27	230	⇑eP	Pn	13 27 27.4	-0.9
TINO	Tinogasta	5.37	194	i P	Pn	13 27 29.5	-0.2
PB16	IPOC Station P	5.52	324		Pn	13 27 33.8	+1.8
PB12	IPOC Station P	5.79	316		Pn	13 27 34.2	-0.7
PB18	Visviri	6.12	328		Pn	13 27 36.9	-2.6
LPAZ	La Paz	6.80	343	P	Pn	13 27 49.3	+1.4
	comp=Z,5.9nm,0.3s,baz=118,slow=5.2,SNR=11						
LPAZ				S	S	13 29 05.2	-2.2
	comp=Z,4.5nm,0.8s,baz=279,slow=17,SNR=1.4						
LPAZ	La Paz	6.80	343		Pn	13 27 46.6	-1.4
AC04	Llanos de Chal	6.99	219		Pn	13 27 47.8	-1.7
AC05	El Transito	7.07	211		Pn	13 27 49.2	-1.4
LCO	Las Campanas	7.42	213		Pn	13 27 53.7	-1.5
MURT	Porto Murtinho	7.93	83	eP	Pn	13 27 58.8	-2.6
CO01	Juntas del Tor	7.97	206		Pn	13 28 02.3	+0.3
SIV	San Ignacio	8.29	36	P	Pn	13 28 05.5	-0.5
	comp=Z,12nm,0.6s,baz=274,slow=7.6						
BDQN	Bodoquena, MS	9.00	76	eP	Pn	13 28 13.9	-0.9
CO02	Combarbal	9.41	207	Pn	Pn	13 28 18.1	-1.9
PTLB	Pontes e Lacer	9.85	43		Pn	13 28 24.9	-0.6
PTLB	Pontes e Lacer	9.85	43	eP	Pn	13 28 25.2	-0.4
AQDB	Aquidauana	9.93	78	eP	Pn	13 28 27.1	+0.5
CO04	Los Peladeros	10.14	204	Pn	Pn	13 28 27.6	-1.7
AMBA	Amambai (Brazi	10.22	93	eP	Pn	13 28 30.8	+0.6
VA03	San Esteban	10.65	201	Pn	Pn	13 28 35.0	-0.4
MT02	Curacav	11.30	202	Pn	Pn	13 28 42.5	-0.9
PP1B	Ponte de Pedra	11.73	66	eP	Pn	13 28 47.9	-1.1
MT01	Popeta	11.89	201	P	P	13 28 54.0	+0.7
SALV	Santo Antonio	11.98	57	eP	Pn	13 28 51.7	-0.3
BO02	Sierra Bellavi	12.60	198	Pn	Pn	13 28 57.1	-2.5
PTGB	Pitanga	12.96	101	eP	P	13 29 04.4	-1.1
C2SB	Chapadao do Su	13.03	74	eP	P	13 29 06.2	0.0
ITRB	Iturama	14.98	81	eP	Pn	13 29 28.5	0.0
FRTB	Fartura	15.21	95	eP	Pn	13 29 30.8	-0.3
ARAG	Araguaiana, MT	15.22	65	eP	Pn	13 29 31.3	0.0
MAJ01	Sao Joao Batis	16.11	110	eP	Pn	13 29 39.9	-1.8
RCLB	Rio Claro- Sao	17.13	92	eP	Pn	13 29 52.1	-1.7
PET01	Itanhaem-SP	17.30	98	eP	P	13 29 53.4	+0.3
GO06	Curarrehue	17.31	194	P	P	13 29 51.3	-1.9
GO06				IAmb	IAmb	13 30 10.3	
	comp=Z,5.6nm,1.1s						
IPMB	Ipameri, GO	17.43	77	eP	P	13 29 55.1	+0.5
VAO	Valinhos	17.61	94	P	P	13 29 54.2	-2.4
VAO	Valinhos	17.61	94	eP	P	13 29 56.4	-0.2
SNDB	Serra Nova Dou	17.75	55	eP	P	13 29 58.2	+0.1
PLCA	Paso Flores	18.23	191	P	Pn	13 30 05.9	-0.6
	comp=Z,0.8nm,0.5s,baz=22,slow=11,SNR=7.3						
PLCA	Paso Flores	18.23	191	P	P	13 30 02.9	-0.3
BDFB	Brasilia	18.49	70	P	P	13 30 06.4	+0.2
	comp=Z,4.6nm,0.6s,baz=229,slow=16,SNR=7.3						
BDFB	Brasilia	18.49	70	P	P	13 30 06.2	0.0
BDFB				IAmb	IAmb	13 30 09.6	
	comp=Z,9.7nm,1.0s						
NPGB	Novo Progresso	18.79	35	eP	P	13 30 09.5	+0.2
ITTB	Itaituba	20.91	30	eP	P	13 30 30.6	-1.1
DIAM	Diamantina, MG	21.45	82	eP	P	13 30 36.9	-0.2
JANB	Januaria	21.98	73	eP	P	13 30 41.4	-0.3
SMTB	Santa Maria do	22.53	55	eP	P	13 30 46.6	-0.2
SDBA	SAO DESIDERIO	22.66	66	eP	P	13 30 47.6	-0.4
NBPS	Pedro II - PI	30.06	56	eP	P	13 31 53.2	-0.9
TXAR	Lajitas Array	63.25	323	P	P	13 36 11.4	+1.6
	comp=Z,0.3nm,0.5s,baz=147,slow=7.7,SNR=5.3						
	comp=Z,0.3nm,0.5s						
S39A	Bolivar	65.44	336	P	P	13 36 23.6	-0.1
S39A				IAmb	IAmb	13 36 25.8	
	comp=Z,4.2nm,0.7s						
TORD	Torodi Ar. Bea	75.36	69	P	P	13 37 23.7	-0.3
	comp=Z,1.8nm,0.4s,baz=266,slow=4.5,SNR=35						
	comp=Z,1.8nm,0.4s						
PDAR	Pinedale Array	76.60	329	P	P	13 37 33.0	+2.3
	comp=Z,0.3nm,0.6s,baz=133,slow=7.6,SNR=4.2						
	comp=Z,0.3nm,0.6s						
PDAR	Pinedale Array	76.60	329	P	P	13 37 31.1	+0.4
ULM	Lac du Bonnet	77.41	341	P	P	13 37 36.0	+1.3
	comp=Z,2.3nm,0.4s,baz=140,slow=4.9,SNR=8.1						
	comp=Z,2.3nm,0.4s						
ULM	Lac du Bonnet	77.41	341	P	P	13 37 35.3	+0.7
ULM				IAmb	IAmb	13 37 40.3	
	comp=Z,6.3nm,1.1s						
NVAR	Mina Array Bea	78.18	321	P	P	13 37 41.9	+2.4
	comp=Z,0.2nm,0.5s,baz=151,slow=4.1,SNR=1.9						
	comp=Z,0.2nm,0.5s						
YKA	Yellowknife Ar	93.34	340	P	P	13 38 55.2	+1.8
	comp=Z,0.4nm,0.6s,baz=130,slow=3.6,SNR=9.3						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	129.86	204	PKP	PKiKP	13 44 49.0	+0.5
	comp=Z,0.5nm,0.7s,baz=142,slow=1.8,SNR=5.9						
WRA	Warramunga Arr	133.04	207	PKP	PKiKP	13 44 55.2	+0.2
	comp=Z,0.4nm,0.5s,baz=164,slow=1.8,SNR=11						
ZALV	Zalesovo Beam	141.98	28	PKP	PKiKP	13 45 11.0	-1.0
	comp=Z,0.5nm,0.5s,baz=291,slow=2.4,SNR=1.9						
MKAR	Makanchi Array	145.09	39	PKP	PKPab	13 45 16.5	+1.3
	comp=Z,2.6nm,0.9s,baz=346,slow=2.5,SNR=18						

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*TIR **05** 13:26:38.8, 42°.09N×20°.65E, h4km±1km, Ml2.6/3*
*SKO **05** 13:26:39.2, 42°.07N×20°.50E, h7km, ML2.8*
*PDG **05** 13:26:40.1±0.2, 42°.05N×20°.54E, h1km, MD2.9/1, ML2.8/13, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0*
*BEO **05** 13:26:41.1±0.5, 42°.08N×20°.60E, h4km±2km, ML2.5/19*
ISC 05 13:26:40.2±1.1**, 42°.07N**±0°.02×**20°.58E**±0°.02**, h3**km±10km**, n45, σ0s.92**/80**, 12C-7D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
PHP	Peshkopia	0.40	195	Pg	Pg	13 26 47.1	-0.8
PHP				S	Sg	13 26 53.7	+0.5
PHP				AML	AML	13 26 54.0	
	4.6nm,0.2s						
SKO	Skopje	0.65	99	i Pg	Pg	13 26 52.9	+0.3
SKO				i Sg	Sb	13 27 03.6	+0.1
PVY	Plav	0.70	319	⇓iPg	Pg	13 26 52.9	-0.6
PVY				i Sg	Sg	13 27 03.6	+1.0
SDA	Shkodra	0.81	269	P	Pg	13 26 55.7	0.0
SDA				Sg	Sb	13 27 08.6	+0.5
SDA				AML	AML	13 27 11.2	
	0.9nm,0.5s						
TIR	Tirane	0.90	217	P	Pg	13 26 57.5	0.0
TIR				S	Sb	13 27 11.4	+0.6
TIR				AML	AML	13 27 13.3	
	0.4nm,0.2s						
IVA	Berane	0.95	328	⇑iPg	Pg	13 26 57.8	-0.5
IVA				i Sg	Sb	13 27 12.7	+0.4
OHR	Ohrid	0.97	170	⇓iPg	Pg	13 26 58.3	-0.6
OHR				i Sg	Sb	13 27 13.3	+0.3
OHR				eLg	Lg	13 27 13.6	
	comp=N,175nm,0.5s						
OHR				eLg	Lg	13 27 13.9	
	comp=E,121nm,0.4s						
ULC	Ulcinj	1.00	264	⇑iPg	Pg	13 26 57.8	-1.6
ULC				i Sg	Sb	13 27 13.4	-0.4
DRME	Dracevica, Mon	1.05	277	⇑iPg	Pg	13 26 59.1	-1.1
DRME				i Sg	Sg	13 27 14.4	+0.6
PDG	Podgorica	1.05	290	⇑P	Pg	13 26 59.0	-1.2
PDG				⇑S	Sb	13 27 15.5	+0.5
PDG	Podgorica	1.05	290	P	Pg	13 26 58.7	-1.5
PDG				Sg	Sb	13 27 15.9	+0.8
PDG	Podgorica	1.05	290	ePg	Pg	13 26 58.7	-1.5
PDG				eSg	Sb	13 27 14.8	-0.2
PDG	Podgorica	1.05	290	⇓iPg	Pg	13 26 59.1	-1.2
PDG				i Sg	Sb	13 27 15.1	+0.1
KOME	Kolasin	1.11	315	⇑iPg	Pg	13 27 00.4	-1.0
KOME				i Sg	Sn	13 27 17.7	-0.8
BARS	Barje	1.18	50	ePg	Pb	13 27 03.0	-0.1
BARS				eSg	Sb	13 27 18.7	-0.1
SELS	Selova	1.21	19	ePg	Pn	13 27 03.7	-0.3
SELS				eSg	Sn	13 27 20.3	-0.7
SJES	Sjenica	1.27	339	ePg	Pg	13 27 03.9	-0.6
SJES				eSg	Sn	13 27 22.2	-0.3
BUM	Brajici-Budva	1.28	281	⇑iPg	Pg	13 27 03.6	-1.0
BUM				i Sg	Sn	13 27 22.7	+0.1
CEME	Cevo	1.32	292	⇑iPg	Pn	13 27 03.5	-2.1
CEME				i Sg	Sn	13 27 24.6	+0.9
NKME	Niksic	1.39	300	⇓iPg	Pn	13 27 05.3	-1.2
NKME				i Sg	Sn	13 27 27.1	+1.7
KBN	Korca	1.46	174	P	Pb	13 27 07.6	-0.4
KBN				Sn	Sg	13 27 27.7	+0.8
BOSS	Bosilegrad	1.47	73	ePg	Pb	13 27 07.6	-0.5
BOSS				eSg	Sg	13 27 27.2	-0.2
GOCS	Kraljevo Serbi	1.50	8	ePg	Pn	13 27 07.7	-0.4
GOCS				eSg	Sg	13 27 28.5	0.0
PLE	Pljevlja	1.53	325	⇑iPg	Pn	13 27 08.3	-0.2
PLE				i Sg	Sg	13 27 31.0	+1.6
IVAS	Ivanjica	1.54	348	ePn	Pn	13 27 08.2	-0.3
IVAS				eSn	Sg	13 27 29.9	+0.4
HCY	Herceg Novi	1.59	284	⇓iPg	Pn	13 27 09.0	-0.3
HCY				i Sg	Sg	13 27 33.6	+2.2
VAY	Valandovo	1.67	116	i Pg	Pb	13 27 11.1	-0.3
VAY				i Sg	Sg	13 27 33.3	-0.4
VAY				eLg	Lg	13 27 34.5	
	comp=N,50nm,0.8s						
VAY				eLg	Lg	13 27 35.1	
	comp=E,44nm,0.7s						
UPM	Unac-Piva	1.68	313	⇑iPn	Pb	13 27 11.4	-0.4
UPM				i Sn	Sg	13 27 36.6	+2.6
BRY	Bratogost	1.72	299	⇓iPn	Pn	13 27 11.3	+0.1
BRY				i Sn	Sg	13 27 37.5	+2.0
TREB	Trebinje	1.77	292	ePn	Pb	13 27 13.1	-0.2
TREB				eSn	Sg	13 27 37.5	+0.3
RUDO	Rudo	1.78	330	ePn	Pb	13 27 12.7	-0.8
GRUS	Gruza	1.82	3	ePn	Pn	13 27 11.9	-0.4
ZAPS	Zavoj	1.93	51	eSn	Sn	13 27 37.9	-0.8
BBLS	Lazi&#263i	1.99	335	ePn	Pn	13 27 15.0	+0.2
BBLS				eSn	Sn	13 27 41.1	+0.9
VTS	Vitosha	2.04	74	eSn	Sn	13 27 42.1	+0.5
DIVS	Divibare	2.07	348	ePn	Pn	13 27 15.4	-0.5
DIVS				eSn	Sb	13 27 43.2	-1.4
ZAGS	Zajecar	2.12	34	ePn	Pn	13 27 16.5	0.0
TRUS	Trudelj	2.15	357	ePn	Pn	13 27 17.3	+0.4
BORS2	Bor- Borsko je	2.27	27	ePn	Pn	13 27 19.9	+1.3
BORS2				eSn	Sn	13 27 47.1	0.0
STON	Ston	2.28	291	ePn	Pn	13 27 20.2	+1.6
STON				eSn	Sb	13 27 49.4	-1.0
KUBS	Kucevo	2.47	18	ePn	Pn	13 27 22.4	+1.1
TEKS	Tekeris	2.59	343	ePn	Pn	13 27 23.1	+0.1
MDVR	Moldovita	2.83	17	⇑P	Pb	13 27 30.7	-0.6
MDVR				⇑S	Sg	13 28 12.8	+1.8
VRSS	Vrsac	3.10	10	ePn	Pn	13 27 30.3	+0.4
BZS	Buzias	3.62	12	⇓P	Pg	13 27 49.7	+0.1

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*IDC **05** 13:27:23.2±1.2, 3°.35S×146°.31E, h0km, mb3.9/8, mbtmp3.9/9, ML1.9/1, Error ellipse: s-maj=43.8km s-min=18.7km az=96.0*
ISC 05 13:27:26.0±0.9**, 3°.47S**±0°.08×**146°.4E**±0°.2**, h20**km**, n10, σ1s.97**/11**, mb3.9**/7**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
PMG	Port Moresby	5.95	173	Pn	Pn	13 28 54.7	+1.7
	1.7nm,0.3s,baz=349,slow=8.1,SNR=5.6						
PMG				Sn	Sn	13 29 56.0	-4.6
	0.4nm,0.3s,baz=278,slow=17,SNR=1.3						
	6.2nm,0.6s						
CTA	Charters Tower	16.52	181	Pn	P	13 31 21.0	+1.7
	0.2nm,0.3s,baz=339,slow=8.0,SNR=4.6						
WRA	Warramunga Arr	20.18	215	P	P	13 31 59.5	0.0
	11nm,0.9s,baz=38,slow=12,SNR=46						
	11nm,0.9s						
ASAR	Alice Springs	23.45	210	P	P	13 32 34.7	+0.4
	5.4nm,0.8s,baz=44,slow=7.6,SNR=53						
	5.4nm,0.8s						
STKA	Stephens Creek	28.62	189	P	P	13 33 22.8	+1.5
	2.2nm,1.0s,baz=8.1,slow=6.4,SNR=3.1						
	2.2nm,1.0s						
CMAR	Chiang Mai Arr	51.58	297	P	P	13 36 30.4	-0.9
	0.8nm,0.3s,baz=126,slow=6.5,SNR=5.0						
	0.8nm,0.3s						
PETK	Petropavlovsk-	57.16	8	P	P	13 37 11.4	+0.1
	1.2nm,0.8s,baz=178,slow=6.6,SNR=4.3						
	1.2nm,0.8s						
SONM	Songino Array	61.93	331	P	P	13 37 44.4	-0.1
	0.2nm,0.4s,baz=156,slow=7.1,SNR=1.9						
	0.2nm,0.4s						
MKAR	Makanchi Array	75.19	320	P	P	13 39 06.7	-0.6
	0.7nm,0.9s,baz=116,slow=5.6,SNR=4.6						
	0.7nm,0.9s						
ILAR	Eielson Array	83.39	23	P	P	13 39 51.0	-0.6
	0.3nm,0.9s,baz=259,slow=5.3,SNR=1.2						
	0.3nm,0.9s						

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*STR **05** 13:29:54.7±1.1, 43°N±7°×°±°, h0km, MLv2.7/24, LOCSAT earthModelID alpes_taup-2.11 preliminary*
*ROM **05** 13:29:57.6±0.6, 42°.94N±0°.03×6°.63E±0°.06, h0km, ML2.4/6, Error ellipse: s-maj=4.9km s-min=2.2km az=247.0*
ISC 05 13:29:53.1±1.4**, 42°.77N**±0°.06×**6°.27E**±0°.04**, h0**km**, n45, σ0s.45**/50**, Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
LEPF	PUYLOUBIER	0.86	332	Pg	Pg	13 30 10.1	+0.5
ARTF	Artigues	0.88	338	Pg	Pg	13 30 10.1	+0.1
TRIGF	Trigance	0.98	6	Pg	Pg	13 30 11.8	-0.1
ARBF	Arbois	0.99	317	Pg	Pn	13 30 14.6	+0.3
EILF	Villa Eilenroc	1.00	39	P	Pb	13 30 13.8	+0.5
CALF	Calern	1.09	26	Pg	Pb	13 30 14.6	-0.4
CALF				Sn	Sb	13 30 30.1	+0.3
SALSA	La sagne	1.15	15	Pg	Pg	13 30 15.2	0.0
BLAF	les Blancs	1.19	352	Pg	Pg	13 30 15.5	-0.4
BLAF				Sn	Sb	13 30 32.7	+0.1
BSTF	la Bastide-des	1.20	338	Pg	Pg	13 30 14.6	-1.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MVIF	**Mont Vial**	**1.30**	**30**	Pg	**Pn**	**13 30 18.7**	**0.0**
MVIF				Sn	**Sb**	**13 30 35.7**	**-0.1**
MVIF	**Mont Vial**	**1.30**	**30**	P	**Pn**	**13 30 19.4**	**+0.7**
RUSF	**Rustrel**	**1.30**	**334**	Pg	**Pb**	**13 30 18.3**	**-0.1**
RUSF				Sg	**Sg**	**13 30 35.0**	**+0.1**
ESCA	**l'Escarene**	**1.33**	**37**	Pg	**Pb**	**13 30 19.1**	**+0.1**
ESCA				Sg	**Sg**	**13 30 35.7**	**-0.3**
ESCA	**l'Escarene**	**1.33**	**37**	P	**Pb**	**13 30 19.8**	**+0.8**
OGDI	**Digne**	**1.34**	**1**	Pg	**Pg**	**13 30 18.7**	**0.0**
OGDI	**Digne**	**1.34**	**1**	P	**Pn**	**13 30 19.0**	**-0.1**
BURY	**Giardini Botan**	**1.38**	**43**	P	**Pg**	**13 30 19.6**	**0.0**
ENAUX	**Enaux**	**1.39**	**15**	Pg	**Pg**	**13 30 19.5**	**-0.3**
ENAUX				Sn	**Sg**	**13 30 37.8**	**+0.1**
SAUF	**chteau de Sau**	**1.44**	**324**	Pg	**Pn**	**13 30 20.1**	**-0.3**
SPIF	**crte de Spivo**	**1.47**	**28**	Pg	**Pg**	**13 30 21.1**	**-0.1**
ISO	**Isola**	**1.52**	**22**	Pg	**Pn**	**13 30 21.8**	**+0.1**
ISO	**Isola**	**1.52**	**22**	P	**Pg**	**13 30 22.3**	**0.0**
SAOF	**Saorge**	**1.54**	**37**	Pg	**Pn**	**13 30 21.7**	**-0.1**
SAOF	**Saorge**	**1.54**	**37**	P	**Pg**	**13 30 22.7**	**+0.1**
SAOF	**Saorge**	**1.54**	**37**	P	**Pb**	**13 30 22.1**	**-0.3**
SAOF				AML	AML		
	comp=E,68µm,0.7s						
SAOF				AML	AML		
	comp=N,51µm,0.4s						
IMI	**Imperia**	**1.65**	**46**	P	**Pn**	**13 30 23.1**	**-0.2**
STV	**Sant Anna di V**	**1.67**	**27**	P	**Pb**	**13 30 24.2**	**-0.5**
STV				AML	AML		
	comp=N,81µm,0.6s						
STV				AML	AML		
	comp=E,69µm,0.3s						
STV				AML	AML		
	comp=N,66µm,0.3s						
STV				AML	AML		
	comp=N,81µm,1.4s						
STV				AML	AML		
	comp=E,69µm,0.3s						
PIAF	**les Granges de**	**1.67**	**36**	Pg	**Pb**	**13 30 24.2**	**-0.5**
ENR	**Entracque**	**1.68**	**30**	Pg	**Pb**	**13 30 24.8**	**-0.2**
ENR	**Entracque**	**1.68**	**30**	P	**Pg**	**13 30 25.3**	**0.0**
ENR				AML	AML		
	comp=E,124µm,1.1s						
ENR				AML	AML		
	comp=E,120µm,0.3s						
ENR				AML	AML		
	comp=N,82µm,0.4s						
ENR				AML	AML		
	comp=N,106µm,0.3s						
ENR				AML	AML		
	comp=E,124µm,0.9s						
JAUF	**Jausiers**	**1.70**	**12**	Pg	**Pn**	**13 30 24.3**	**+0.2**
OGAG	**Argentiere**	**1.70**	**7**	Pn	Pg	13 30 30.8	+5.2
SURF	**Saint Ours**	**1.76**	**13**	Pn	**Pn**	**13 30 25.5**	**+0.6**
CREF	**Crivoux**	**1.80**	**8**	Pn	**Pn**	**13 30 25.7**	**+0.2**
PZZ	**Stroppo**	**1.84**	**19**	Pn	**Pn**	**13 30 26.3**	**+0.2**
PZZ	**Stroppo**	**1.84**	**19**	P	**Pb**	**13 30 27.7**	**0.0**
PZZ				AML	AML		
	comp=N,244µm,1.2s						
PZZ				AML	AML		
	comp=E,161µm,0.3s						
PZZ				AML	AML		
	comp=N,237µm,0.3s						
PZZ				AML	AML		
	comp=E,174µm,1.1s						
GBOS	**Grotte di Boss**	**1.86**	**37**	Pn	**Pb**	**13 30 27.3**	**-0.8**
GBOS	**Grotte di Boss**	**1.86**	**37**	P	**Pb**	**13 30 27.3**	**-0.8**
GBOS				AML	AML		
	comp=N,30µm,0.6s						
RORO	**Rocca Rossa**	**1.88**	**44**	P	**Pn**	**13 30 26.7**	**+0.3**
PGF	**Pioggiola**	**2.03**	**95**	P	**Pb**	**13 30 30.5**	**-0.4**
CANO	**Canova, Maglio**	**2.03**	**44**	P	**Pn**	**13 30 29.1**	**+0.5**
CANO				AML	AML		
	comp=E,113µm,0.7s						
CANO				AML	AML		
	comp=N,50µm,0.3s						
ORIF	**Oris-en-Rattie**	**2.17**	**353**	P	**Pg**	**13 30 34.1**	**-0.5**
BHB	**Bricherasio**	**2.19**	**19**	Pn	**Pn**	**13 30 31.6**	**+0.8**
SMPL	**Sampolo**	**2.33**	**106**	P	**Pb**	**13 30 35.8**	**-0.3**
LEUC	**Leucamp**	**3.34**	**308**	Pn	**Pn**	**13 30 47.6**	**+1.0**

*IDC **05** 13:30:55.5±1.6, 53°.99S×1°.70W, h0km, mb4.2/4, mbtmp4.3/5, ML4.5/1, MS4.0/8, Error ellipse: s-maj=53.2km s-min=26.2km az=77.0*

*NEIC **05** 13:30:56.6±1.7, 54°.2S±0°.1×1°.7W±0°.2, h10km±1km, mb4.7/21, Error ellipse: s-maj=27.0km s-min=11.7km az=137.0*

ISC 05 13:30:56.6±0.7**, 54°.10S**±0°.09×**1°.9W**±0°.1**, h10km, n45, σ1ˢ.18**/32**, mb4.6**/14**, MS4.0**/7**, Bouvet Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**16.85**	**187**	P	**P**	**13 34 54.4**	**+0.1**
	comp=Z,9.2nm,0.3s						
VNA2	**Neumayer--Watz**	**17.06**	**186**	P	**Pn**	**13 34 54.9**	**0.0**
	comp=Z,5.8nm,0.3s,baz=11,slow=13						
VNA3	**Neumayer Olymp**	**17.54**	**188**	P	**P**	**13 35 02.4**	**+0.5**
	comp=Z,5.7nm,0.3s						
SNAA	**Sanae**	**17.64**	**181**	P	**P**	**13 35 04.6**	**+1.5**
	comp=Z,105nm,0.4s						
SNAA	**Sanae**	**17.64**	**181**	P	**P**	**13 35 04.1**	**+1.0**
	comp=Z,1.6nm,0.3s,baz=4.4,slow=15,SNR=14						
SNAA				LR	LR	13 40 21.5	
	comp=Z,236nm,18.5s,baz=30,slow=32						
	comp=Z,4.7nm,0.4s						
SNAA	**Sanae**	**17.64**	**181**		**Pn**	**13 34 59.0**	**-3.1**
TROLL	**Troll, Antarti**	**18.07**	**176**	P	**P**	**13 35 09.7**	**+1.7**
BELA	**Belgrano 2**	**26.54**	**195**	P	**P**	**13 36 33.7**	**-0.3**
SUR	**Sutherland**	**27.05**	**46**	LR	LR	13 44 46.8	
	comp=Z,338nm,19.6s,baz=224,slow=31						
BOSA	**Boshof**	**32.23**	**49**	LR	LR	13 48 16.4	
	comp=Z,182nm,18.5s,baz=218,slow=32						
H04S2	**CROZET ISLANDS**	**34.23**	**100**	T	T	14 14 10.2	
	baz=237,slow=76,SNR=19						
H04S3	**CROZET ISLANDS**	**34.23**	**100**	T	T	14 14 09.8	
	baz=237,slow=76,SNR=16						
H04S1	**CROZET ISLANDS**	**34.24**	**100**	T	T	14 14 08.6	
	baz=237,slow=76,SNR=18						
LBTB	**Lobatse**	**35.51**	**46**	LR	LR	13 50 07.3	
	comp=Z,252nm,18.7s,baz=209,slow=33						
QSPA	**South Pole Qui**	**36.14**	**180**	P	**P**	**13 38 00.1**	**+1.5**
	comp=Z,3.0nm,0.8s,baz=233,slow=4.9,SNR=7.4						
	comp=Z,3.0nm,0.8s						
QSPA	**South Pole Qui**	**36.14**	**180**	P	**P**	**13 37 58.9**	**+0.2**
TSUM	**Tsumeb**	**37.90**	**31**	LR	LR	13 50 50.5	
	comp=Z,134nm,19.6s,baz=156,slow=32						
TSUM	**Tsumeb**	**37.90**	**31**		**P**	**13 38 14.1**	**+0.2**
TSUM				IAmb	IAmb	13 38 17.1	
	comp=Z,13nm,1.0s						
GO10	**Punta Arenas**	**39.54**	**242**	P	**P**	**13 38 26.9**	**-0.4**
GO10				IAmb	IAmb	13 38 43.2	
	comp=Z,38nm,1.0s						
PLTB	**Pedras Altas**	**42.78**	**280**	P	**P**	**13 38 55.0**	**+0.8**
PLTB				IAmb	IAmb	13 39 06.7	
	comp=Z,9.1nm,1.3s						
GO08	**Villa O'Higgin**	**42.89**	**247**	P	**P**	**13 38 55.1**	**+0.3**
GO08				IAmb	IAmb	13 39 09.4	
	comp=Z,20nm,1.5s						
LSZ	**Lusaka**	**45.28**	**43**	LR	LR	13 55 50.9	
	comp=Z,353nm,19.9s,baz=161,slow=33						
AY01	**Puyuhuapi**	**45.37**	**252**	P	**P**	**13 39 15.2**	**+0.5**
AY01				IAmb	IAmb	13 39 21.8	
	comp=Z,7.6nm,0.8s						
H10S2	**ASCENSION HYDR**	**46.18**	**342**	T	T	14 28 45.0	
	baz=169,slow=74,SNR=12						
H10S3	**ASCENSION HYDR**	**46.19**	**342**	T	T	14 28 45.7	
	baz=51,slow=74,SNR=9.7						
VNDA	**Vanda**	**48.25**	**175**	LR	LR	13 58 55.1	
	comp=Z,252nm,19.1s,baz=154,slow=35						
CPUP	**Villa Florida**	**49.00**	**282**	P	**P**	**13 39 44.3**	**+1.0**
	comp=Z,2.0nm,0.8s,baz=143,slow=9.0,SNR=4.5						
	comp=Z,2.0nm,0.8s						
CPUP	**Villa Florida**	**49.00**	**282**	P	**P**	**13 39 43.4**	**+0.1**
CPUP				IAmb	IAmb	13 39 56.0	
	comp=Z,9.2nm,1.4s						
BI02	**San Fabin de**	**49.69**	**261**	P	**P**	**13 39 48.7**	**+0.1**
BI02				IAmb	IAmb	13 40 30.8	
	comp=Z,4.5nm,1.1s						
VA06	**Catapilco**	**52.59**	**265**	P	**P**	**13 40 11.5**	**+1.3**
VA06				IAmb	IAmb	13 40 20.6	
	comp=Z,30nm,1.3s						
CO04	**Los Peladeros**	**52.77**	**265**	P	**P**	**13 40 09.9**	**-2.1**
CO02	**Combarbal**	**53.40**	**266**	P	**P**	**13 40 17.2**	**+0.8**
AC06	**Mina Casimiro**	**55.85**	**270**	P	**P**	**13 40 32.5**	**-1.7**
AC06				IAmb	IAmb	13 40 55.8	
	comp=Z,16nm,1.4s						
VA04	**Juan Fernndez**	**56.20**	**258**	P	**P**	**13 40 35.0**	**-1.4**
PTLB	**Pontes e Lacer**	**58.61**	**288**	P	**P**	**13 40 53.5**	**-0.1**
PTLB				IAmb	IAmb	13 41 02.9	
	comp=Z,5.3nm,1.4s						
SIV	**San Ignacio**	**59.26**	**286**	LR	LR	14 04 47.6	
	comp=Z,324nm,20.7s,baz=280,slow=34						
PB09	**IPOC Station P**	**59.42**	**275**	P	**P**	**13 41 01.6**	**+2.1**
PB01	**IPOC Station P**	**60.15**	**275**	P	**P**	**13 41 04.8**	**+0.4**
PB01				IAmb	IAmb	13 41 09.4	
	comp=Z,20nm,1.5s						
DBIC	**Dimbokro**	**60.60**	**357**	P	**P**	**13 41 07.6**	**+0.3**
	comp=Z,4.2nm,0.8s,baz=178,slow=7.3,SNR=3.2						
	comp=Z,4.2nm,0.8s						
PB08	**IPOC Station P**	**60.65**	**276**	pP	pP	13 41 10.7	+0.1
PATCX	**Punta Patache**	**60.71**	**275**	P	**P**	**13 41 07.5**	**-0.7**
LPAZ	**La Paz**	**63.08**	**280**	P	**P**	**13 41 26.0**	**+1.2**
	comp=Z,1.8nm,0.8s,baz=142,slow=6.6,SNR=5.1						
	comp=Z,1.8nm,0.8s						
LPAZ	**La Paz**	**63.08**	**280**	P	**P**	**13 41 24.9**	**+0.1**
LODK	**Lodwar**	**65.15**	**42**	P	**P**	**13 41 37.2**	**-0.5**
YKA	**Yellowknife Ar**	**145.24**	**311**	PKPbc	**PKPbc**	**13 50 31.7**	**-1.0**
	comp=Z,0.8nm,0.8s,baz=98,slow=2.7,SNR=13						

WBNET 05 13:31:31.1, 50°.26N×12°.38E, h14km, Ml0.0, 1C-2D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NKC	**Novy Kostel**	**0.05**	**125**	S	Sg	13 31 35.7	0.0
POCW	**Potky**	**0.07**	**26**	S	Sg	13 31 36.0	0.0
STCW	**Studenec**	**0.09**	**92**	⇑P	Pg	13 31 34.1	-0.1
STCW				S	Sg	13 31 36.1	-0.2
KOCW	**Kopaniny**	**0.10**	**272**	⇓P	Pg	13 31 34.2	-0.1
KOCW				S	Sg	13 31 36.3	-0.2
KRCW	**Kraslice**	**0.12**	**54**	⇓P	Pg	13 31 34.4	-0.2
KRCW				S	Sg	13 31 36.7	-0.2

VIE 05 13:31:33.5±0.9**, 46°.91N×9°.19E, h0km, mb1.6**/1**, ml1.6**/1**, Error ellipse: s-maj=11.2km s-min=2.1km az=154.0 25 km SW of Sargans Suspected Mining explosion., Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAVA	**Damuels**	**0.60**	**51**	*e*Pg	Pg	13 31 43.8	-1.2
	0.7nm,0.1s						
DAVA				*e*Sg	Sg	13 31 54.1	+1.3
	6.9nm,0.2s						

IDC 05 13:40:27.6±1.8**, 1°.33N×126°.17E, h0km, mb3.3**/4**, mbtmp3.3**/4**, Error ellipse: s-maj=186.3km s-min=22.6km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.61**	**160**	P	P	13 45 29.2	-1.0
	0.6nm,0.6s,baz=338,slow=11,SNR=11						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**25.96**	**164**	P	P	13 46 03.0	+0.9
	0.1nm,0.4s,baz=350,slow=10,SNR=4.2						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**59.21**	**326**	P	P	13 50 31.2	+0.5
	0.4nm,0.7s,baz=112,slow=8.2,SNR=4.6						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**63.46**	**328**	P	P	13 50 58.8	-0.5
	0.3nm,0.6s,baz=130,slow=6.8,SNR=4.1						
	0.3nm,0.6s						

IDC 05 13:42:01.4±999.0**, 47°.35N×46°.82E, h0km, Error ellipse: s-maj=4042.0km s-min=166.6km az=63.0, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**8.00**	**63**	I	I	14 26 50.0	
	0.2nm,0.5s,baz=253,slow=326,SNR=2.8						
I46RU	**ZALESOVO INFRA**	**24.75**	**60**	I	I	16 14 25.3	
	baz=263,slow=325,SNR=1.3						
I34MN	**SONGINO INFRAS**	**39.32**	**67**	I	I	17 43 00.0	
	baz=295,slow=329,SNR=0.6						

KRSC 05 13:46:31.5±1.9**, 49°.15N×156°.70E, h38km**±29km**, Ml3.9, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.58**	**346**	*e*P	Pn	13 46 57.5	+0.6
SKR				*e*S	Sn	13 47 16.7	+0.6
PAU	**Pauzhetka**	**2.32**	**2**	*e*P	Pn	13 47 09.4	+2.3
PAU				*e*S	Sn	13 47 37.4	+3.0
KDTR	**Khodutka, Kamc**	**2.80**	**18**	*e*P	Pn	13 47 17.6	+3.9
KDTR				*e*S	Sn	13 47 51.2	+5.0
MIPR	**Malaya Ipel'ka**	**3.13**	**1**	*e*P	Pn	13 47 20.0	+1.8
ASAK	**Asacha**	**3.33**	**13**	*e*P	Pn	13 47 25.2	+4.2
MTVR	**Mutnovka**	**3.47**	**15**	*e*P	Pn	13 47 27.3	+4.3
MTVR				*e*S	Sn	13 48 08.2	+5.3
RUS	**Russkaya**	**3.48**	**19**	*e*P	Pn	13 47 26.7	+3.7
RUS				*e*S	Sn	13 48 07.8	+4.9
GRL	**Gorelyy**	**3.52**	**14**	*e*P	Pn	13 47 27.9	+4.3
KRMR	**Karymshinskiy**	**3.79**	**13**	*e*P	Pn	13 47 32.4	+5.1
DALK	**Dalny**	**4.10**	**18**	*e*P	Pn	13 47 35.6	+4.1
UGLR	**Uglovaya**	**4.28**	**17**	*e*P	Pn	13 47 38.9	+4.8
AVH	**Avacha**	**4.32**	**16**	*e*P	Pn	13 47 40.0	+5.4
KOK	**Koryaka**	**4.32**	**16**	*e*P	Pn	13 47 39.8	+5.1
SMAR	**Somma**	**4.33**	**17**	*e*P	Pn	13 47 39.1	+4.3
SDLR	**Sedlovina**	**4.36**	**18**	*e*P	Pn	13 47 39.3	+4.1
KRX	**Arik**	**4.39**	**15**	*e*P	Pn	13 47 40.3	+4.7
SPN	**Mys Shipunski**	**4.47**	**27**	*e*P	Pn	13 47 41.4	+4.8
MKZ	**Mys Kozlova**	**6.25**	**28**	*e*P	Pn	13 48 04.3	+3.4

*OSPL **05** 13:47:07.7±0.4, 18°.35N×70°.67W, h13km±999km, ML1.8, Presumed earthquake*

*SDD **05** 13:47:08.6±0.7, 18°.35N×70°.74W, h31km±6km, MD2.8, ML1.8, MW3.1, Presumed earthquake*

ISC 05 13:47:07.7±1.1**, 18°.35N**±0°.04×**70°.73W**±0°.03**, h2km**±12km**, n10, σ1ˢ.70**/18**, 1C-4D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BANI	**BANI**	**0.35**	**84**	*e*Pg	**Pb**	**13 47 16.2**	**-0.5**
BANI				*e*Sg	**Sn**	**13 47 22.7**	**+3.6**
BANI				IAML		13 47 22.8	
	comp=E,156nm,0.1s						
BANI				IAML		13 47 23.5	
	comp=N,365nm,0.8s						
ABDR	**Alto Bandera**	**0.47**	**12**	⇓*e*Pg	**Pb**	**13 47 17.7**	**-1.2**
ABDR				⇓*e*Sg	**Sb**	**13 47 25.3**	**-1.0**
ABDR				IAML		13 47 25.7	
	comp=E,2.2nm,0.2s						
ABDR				IAML		13 48 00.1	
	comp=N,0.3nm,0.3s						
LONE3	**El Aguacate, B**	**0.74**	**290**	*i* P	**Pg**	**13 47 21.6**	**-0.3**
LONE3				*e*S	**Sg**	**13 47 32.3**	**+0.8**
LONE3				IAML		13 47 33.1	
	comp=Z,28nm,0.7s						
SDDR	**Presa de Saban**	**0.82**	**320**	*e*Pg	**Pg**	**13 47 22.8**	**-0.7**
SDDR				*e*Sg	**Sg**	**13 47 34.0**	**-0.2**
SDDR				IAML		13 47 37.3	
	comp=E,14nm,0.3s						
SDDR				IAML		13 47 41.5	
	comp=N,33nm,2.4s						
SDDR	**Presa de Saban**	**0.82**	**320**	*i* P	**Pg**	**13 47 22.8**	**-0.7**
SDDR				*e*S	**Sg**	**13 47 34.0**	**-0.2**
SDDR				IAML		13 47 38.6	
	comp=Z,12nm,0.8s						
LOVI	**El Cajuil, Ovi**	**0.82**	**228**	*i* P	**Pg**	**13 47 23.0**	**-0.5**
LOVI				*e*S	**Sg**	**13 47 34.0**	**-0.2**
LOVI				IAML		13 47 36.9	
	comp=Z,35nm,0.7s						
DR08	**Loma La Naviza**	**0.90**	**48**	*e*Pg	**Pg**	**13 47 24.4**	**-0.6**
DR08				*e*Sg	**Sb**	**13 47 36.2**	**-2.4**
DR08				IAML		13 47 38.1	
	comp=E,522nm,0.1s						
DR08				IAML		13 47 38.8	
	comp=N,558nm,0.2s						
LOBH	**Bahia de las A**	**1.00**	**241**	*i* P	**Pb**	**13 47 26.1**	**-1.6**
LOBH				IAML		13 47 45.2	
	comp=Z,70nm,2.2s						
REDR	**Restauracion**	**1.03**	**322**	⇑*e*Pg	**Pn**	**13 47 30.5**	**+1.4**
REDR				⇓*e*Sg	**Sn**	**13 47 47.0**	**+3.0**
REDR				IAML		13 47 47.4	
	comp=E,37nm,0.2s						
REDR				IAML		13 47 47.5	
	comp=N,71nm,0.2s						
HATOM	**Hato Mayor del**	**1.35**	**71**	⇓*e*Pg	**Pb**	**13 47 31.8**	**-1.8**
HATOM				IAML		13 47 51.2	
	comp=E,12nm,1.6s						
HATOM				IAML		13 48 31.4	
	comp=N,20nm,3.0s						

*IDC **05** 13:48:45.5±2.2, 24°.93S×179°.70E, h506km±23km, mb3.0/6, mbtmp4.0/9, Error ellipse: s-maj=30.2km s-min=18.4km az=141.0*

ISC 05 13:48:45.5±0.8**, 24°.95S**±0°.10×**179°.7E**±0°.1**, h507km, n11, σ0ˢ.56**/12**, mb3.5**/6**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.34**	**348**	P	**P**	**13 50 35.1**	**-0.5**
	9.3nm,0.6s,baz=126,slow=22,SNR=15						
DZM	**Mont Dzumac**	**12.49**	**281**	P	**P**	**13 51 29.7**	**+0.3**
	7.3nm,1.0s,baz=98,slow=16,SNR=2.4						
URZ	**Urewera**	**13.45**	**189**	P	**P**	**13 51 39.0**	**-0.1**
	7.5nm,0.9s,baz=253,slow=3.8,SNR=9.2						
URZ				S	**S**	**13 54 01.8**	**-0.5**
	7.9nm,0.7s,baz=219,slow=22,SNR=7.4						
STKA	**Stephens Creek**	**34.08**	**250**	P	**P**	**13 54 47.5**	**+0.2**
	1.0nm,0.5s,baz=67,slow=12,SNR=3.1						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**41.60**	**262**	P	**P**	**13 55 49.5**	**+0.6**
	0.7nm,0.8s,baz=88,slow=9.6,SNR=6.5						
ASAR				PcP	**PcP**	**13 57 33.8**	**-0.5**
	0.2nm,0.5s,baz=106,slow=2.2,SNR=2.5						
	0.7nm,0.8s						
WRA	**Warramunga Arr**	**42.07**	**267**	P	**P**	**13 55 52.5**	**-0.1**
	1.2nm,0.6s,baz=99,slow=6.7,SNR=27						
	1.2nm,0.6s						
PETK	**Petropavlovsk-**	**80.05**	**347**	P	**P**	**14 00 01.0**	**-0.7**
	1.2nm,0.8s,baz=146,slow=6.5,SNR=1.7						
	1.2nm,0.8s						
NVAR	**Mina Array Bea**	**85.70**	**44**	P	**P**	**14 00 30.8**	**+0.1**
	0.4nm,0.6s,baz=222,slow=8.6,SNR=5.2						
	0.4nm,0.6s						
TXAR	**Lajitas Array**	**91.22**	**58**	P	**P**	**14 00 57.6**	**+1.0**
	0.5nm,0.8s,baz=207,slow=6.0,SNR=5.8						
	0.5nm,0.8s						
HFS	**Hagfors**	**143.52**	**348**	PKP	PKPab	14 07 20.0	+0.1
	3.7nm,0.4s,baz=62,slow=3.5,SNR=35						
EKA	**Eskdalemuir Ar**	**149.58**	**3**	PKPbc	**PKPbc**	**14 07 36.8**	**-0.2**
	0.3nm,0.4s,baz=358,slow=2.4,SNR=2.4						

*IDC **05** 14:00:26.8±1.3, 18°.57S×177°.85W, h552km±14km, mb3.4/8, mbtmp4.3/11, Error ellipse: s-maj=29.2km s-min=13.5km az=143.0*

*NEIC **05** 14:00:27.2±2.2, 18°.4S±0°.2×177°.8W±0°.1, h577km±8km, mb4.2/25, Error ellipse: s-maj=23.1km s-min=15.8km az=160.0*

*NOU **05** 14:00:27.8, 18°.65S×177°.89W, h557km, mb4.2/16, Fiji Islands Region*

ISC 05 14:00:27.3±0.7**, 18°.6S**±0°.1×**178°.0W**±0°.1**, h557km, n60, σ1ˢ.20**/61**, mb4.2**/19**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAVE	**Taveuni**	**2.58**	**315**	P	**P**	**14 01 42.0**	**+1.4**
DGTI	**Dogotuki**	**3.11**	**316**	P	**P**	**14 01 44.4**	**+0.7**
MSVF	**Nonsavu**	**3.83**	**282**	P	**P**	**14 01 50.6**	**+2.1**
	6.6nm,0.6s,baz=97,slow=17,SNR=7.9						
MSVF	**Nonsavu**	**3.83**	**282**	P	**P**	**14 01 51.0**	**+2.4**
MSVF	**Nonsavu**	**3.83**	**282**	P	**P**	**14 01 50.0**	**+1.5**
AFI	**Afiamalu**	**7.57**	**53**	P	P	14 02 18.1	-3.1
	27nm,0.5s						
NIUE	**Niue**	**7.68**	**95**	P	P	14 02 19.8	-2.3
DVP	**Devils Point**	**13.14**	**271**	P	**P**	**14 03 20.0**	**+2.3**
MARNC	**Mare, Loyalty**	**13.43**	**255**	P	**P**	**14 03 20.5**	**-0.1**
MARNC	**Mare, Loyalty**	**13.43**	**255**	P	**P**	**14 03 20.5**	**-0.1**
OUENC	**Ouen Island, N**	**14.70**	**252**	P	**P**	**14 03 34.2**	**+0.6**
DZM	**Mont Dzumac**	**14.99**	**254**	P	**P**	**14 03 36.9**	**+0.2**
	9.0nm,0.7s,baz=251,slow=21,SNR=11						
DZM	**Mont Dzumac**	**14.99**	**254**	P	**P**	**14 03 37.2**	**+0.5**
DZM	**Mont Dzumac**	**14.99**	**254**	P	**P**	**14 03 35.9**	**-0.7**
DZM				IAmb	IAmb	14 03 41.0	
	comp=Z,8.5nm,0.7s						
URZ	**Urewera**	**20.08**	**191**	P	**P**	**14 04 22.6**	**-1.0**
	comp=Z,14nm,1.0s,baz=5.5,slow=11,SNR=3.3						
	comp=Z,14nm,1.0s						
QRZ	**Quartz Range**	**23.63**	**198**	P	**P**	**14 04 55.4**	**0.0**
THZ	**Tophouse**	**24.39**	**197**	P	**P**	**14 05 01.9**	**-0.2**
THZ				IAmb	IAmb	14 05 15.2	
	comp=Z,5.7nm,0.9s						
KHZ	**Kahutara**	**24.84**	**195**	P	**P**	**14 05 05.0**	**-1.0**
LTZ	**Lake Taylor**	**25.51**	**197**	P	**P**	**14 05 10.5**	**-1.5**
JCZ	**Jackson Bay**	**27.75**	**201**	P	**P**	**14 05 31.9**	**+0.2**
EIDS	**Eidsvold**	**29.40**	**251**	P	**P**	**14 05 47.6**	**+1.3**
EIDS	**Eidsvold**	**29.40**	**251**	P	**P**	**14 05 46.0**	**-0.3**
WHZ	**Wether Hill Ro**	**29.63**	**200**	P	**P**	**14 05 48.8**	**+0.9**
WHZ				IAmb	IAmb	14 05 55.5	
	comp=Z,8.6nm,0.9s						
ARMA	**Armidale**	**29.94**	**241**	P	**P**	**14 05 52.8**	**+1.8**
ARMA	**Armidale**	**29.94**	**241**	P	**P**	**14 05 52.4**	**+1.4**
ARMA				IAmb	IAmb	14 05 52.8	
	comp=Z,4.4nm,0.8s						
CNB	**Canberra Magne**	**33.33**	**233**	P	**P**	**14 06 21.6**	**+1.8**
CAN	**Canberra**	**33.61**	**234**	P	**P**	**14 06 22.6**	**+0.5**
CTA	**Charters Tower**	**33.71**	**261**	P	**P**	**14 06 23.9**	**+0.8**
CTAO	**Charters Tower**	**33.71**	**261**	P	**P**	**14 06 23.9**	**+0.8**
CTAO	**Charters Tower**	**33.71**	**261**		**P**	**14 06 23.4**	**+0.3**
CMSA	**Cobar Meteorol**	**35.16**	**241**	P	**P**	**14 06 36.3**	**+1.3**
QLP	**Quilpie**	**35.66**	**250**	P	**P**	**14 06 39.7**	**+0.4**
TOO	**Toolangi**	**37.05**	**232**	P	**P**	**14 06 51.9**	**+1.3**
TOO				IAmb	IAmb	14 06 52.9	
	comp=Z,4.0nm,0.7s						
COEN	**Coen**	**37.49**	**271**	P	**P**	**14 06 55.7**	**+1.3**
COEN	**Coen**	**37.49**	**271**	P	**P**	**14 06 54.1**	**-0.3**
COEN				IAmb	IAmb	14 06 56.2	
	comp=Z,9.1nm,0.8s						
STKA	**Stephens Creek**	**38.65**	**242**	P	**P**	**14 07 05.2**	**+1.5**
	comp=Z,11nm,0.7s,baz=87,slow=10,SNR=20						
	comp=Z,11nm,0.7s						
STKA	**Stephens Creek**	**38.65**	**242**		**P**	**14 07 04.2**	**+0.6**
INKA	**Innaminka**	**38.85**	**249**		**P**	**14 07 05.3**	**0.0**
INKA				IAmb	IAmb	14 07 07.9	
	comp=Z,4.3nm,0.8s						
BBOO	**Buckleboo**	**43.42**	**242**	P	**P**	**14 07 42.2**	**+0.7**
WR0	**Warramunga Arr**	**44.70**	**260**	P	**P**	**14 07 51.4**	**-0.1**
WR8	**Warramunga Arr**	**44.73**	**260**		**P**	**14 07 51.4**	**-0.3**
WB0	**Warramunga Arr**	**44.85**	**260**	P	**P**	**14 07 52.5**	**-0.2**
WB0				IAmb	IAmb	14 07 53.4	
	comp=Z,7.7nm,0.6s						
WB2	**Warramunga Arr**	**44.87**	**260**	P	**P**	**14 07 51.2**	**-1.7**
WB2				IAmb	IAmb	14 07 53.3	
	comp=Z,9.5nm,1.0s						
WRA	**Warramunga Arr**	**44.89**	**260**	P	**P**	**14 07 53.2**	**+0.3**
	comp=Z,4.1nm,0.5s,baz=98,slow=6.8,SNR=154						
WRA				PcP	**PcP**	**14 09 22.8**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=90,slow=4.1,SNR=2.2						
	comp=Z,4.1nm,0.5s						
WRA	**Warramunga Arr**	**44.89**	**260**		**P**	**14 07 51.2**	**-1.8**
AS31	**Alice Springs**	**44.98**	**255**		**P**	**14 07 53.9**	**+0.3**
AS31				IAmb	IAmb	14 07 55.3	
	comp=Z,6.7nm,0.6s						
ASAR	**Alice Springs**	**44.98**	**255**	P	**P**	**14 07 54.2**	**+0.5**
	comp=Z,19nm,0.6s,baz=88,slow=8.9,SNR=383						
ASAR				PcP	**PcP**	**14 09 23.1**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=102,slow=4.1,SNR=4.7						
ASAR				ScP	**ScP**	**14 12 24.2**	**+1.6**
	comp=Z,0.3nm,0.8s,baz=103,slow=4.1,SNR=2.4						
ASAR				S	**S**	**14 13 48.7**	**-3.3**
	comp=Z,0.8nm,0.8s,baz=90,slow=16,SNR=7.7						
	comp=Z,19nm,0.6s						
ASAR	**Alice Springs**	**44.98**	**255**		**P**	**14 07 53.5**	**-0.1**
MTN	**Manton Dam**	**49.16**	**269**	P	**P**	**14 08 25.0**	**-0.1**
MTN				IAmb	IAmb	14 08 25.6	
	comp=Z,4.2nm,0.7s						
FORT	**Forrest**	**50.07**	**245**	P	**P**	**14 08 31.6**	**0.0**
FORT				IAmb	IAmb	14 08 32.8	
	comp=Z,5.9nm,0.9s						
KNRA	**Kununurra**	**50.80**	**265**	P	**P**	**14 08 37.0**	**-0.1**
KNRA				IAmb	IAmb	14 08 38.1	
	comp=Z,5.3nm,0.7s						
PSA00	**Pilbara Seismi**	**58.11**	**256**	P	**P**	**14 09 27.3**	**-1.0**
MBWA	**Marble Bar**	**58.28**	**256**	P	**P**	**14 09 27.6**	**-1.9**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
UGM	Wanagama	70.00	268	P	P	14 10 40.9	-3.1
QSPA	South Pole Qui	71.49	180	P	P	14 10 52.7	+0.8
PETK	Petropavlovsk-	74.41	345	P	P	14 11 08.3	-0.2
	comp=Z,1.3nm,0.7s,baz=104,slow=7.5,SNR=6.4						
	comp=Z,1.3nm,0.7s						
PETK	Petropavlovsk-	74.41	345	P	P	14 11 04.2	-4.2
NVAR	Mina Array Bea	79.64	44	P	P	14 11 37.9	+0.3
	comp=Z,0.5nm,0.7s,baz=223,slow=9.3,SNR=5.4						
	comp=Z,0.5nm,0.7s						
TXAR	Lajitas Array	86.03	57	P	P	14 12 09.6	-0.1
	comp=Z,0.5nm,0.8s,baz=226,slow=6.7,SNR=7.4						
	comp=Z,0.5nm,0.8s						
ILAR	Eielson Array	86.44	13	P	P	14 12 09.6	-1.1
	comp=Z,0.2nm,0.4s,baz=219,slow=5.0,SNR=7.3						
	comp=Z,0.2nm,0.4s						

*STR **05** 14:04:36.4±1.3, 43°N±8°×°±°, h0^{km}, MLv2.5/15, LOCSAT earthModelID alpes_taup-2.11 preliminary*

*ROM **05** 14:04:37.1±1.1, 42°.81N±0°.07×6°.44E±0°.06, h0^{km}, ML2.4/14, Error ellipse: s-maj=8.1km s-min=4.4km az=11.0*

ISC 05 14:04:36.6±2.2**, 42°.9N**±0°.1×**6°.23E**±0°.04**, h0**^{km}**, n47, σ0^{s}48**/49**, Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEPF	PUYLOUBIER	0.76	329	Pg	Pb	14 04 52.3	-0.3
ARTF	Artigues	0.78	336	Pg	Pb	14 04 52.5	-0.5
TRIGF	Trigance	0.88	8	Pg	Pb	14 04 54.2	-0.6
TRIGF				Sg	Sb	14 05 06.7	-0.5
ARBF	Arbois	0.90	313	Pg	Pn	14 04 57.0	+0.4
EILF	Villa Eilenroc	0.94	44	Pn	Pn	14 04 56.7	-0.4
EILF	Villa Eilenroc	0.94	44	P	Pn	14 04 57.1	+0.1
CALF	Calern	1.01	30	Pg	Pb	14 04 57.0	-0.1
CALF				Sg	Sb	14 05 10.9	-0.1
SALSA	La sagne	1.06	18	Pg	Pb	14 04 57.5	-0.4
BLAF	les Blancs	1.09	353	Pg	Pb	14 04 58.0	-0.3
BSTF	la Bastide-des	1.09	337	Pg	Pg	14 04 56.6	-1.0
RUSF	Rustrel	1.20	333	Pg	Pn	14 05 00.5	-0.1
MVIF	Mont Vial	1.22	33	Pg	Pn	14 05 01.2	+0.1
MVIF				Sn	Sb	14 05 17.9	+0.9
MVIF	Mont Vial	1.22	33	P	Pn	14 05 01.9	+0.9
OGDI	Digne	1.24	2	Pg	Pn	14 05 00.9	-0.2
ESCA	l'Escarene	1.27	41	Pg	Pn	14 05 01.7	+0.1
ESCA	l'Escarene	1.27	41	P	Pn	14 05 02.3	+0.7
ENAUX	Enaux	1.30	18	Pg	Pn	14 05 02.1	0.0
BURY	Giardini Botan	1.33	46	P	Pg	14 05 02.0	-0.1
BURY	Giardini Botan	1.33	46	P	Pg	14 05 01.9	-0.1
SAUF	chteau de Sau	1.34	323	Pg	Pb	14 05 03.5	+0.9
SPIF	crte de Spivo	1.39	31	Pg	Pb	14 05 03.5	+0.1
ISO	Isola	1.44	24	Pg	Pb	14 05 04.2	0.0
ISO	Isola	1.44	24	P	Pb	14 05 04.8	+0.5
SAOF	Saorge	1.47	40	P	Pg	14 05 05.1	+0.4
SAOF	Saorge	1.47	40	P	Pb	14 05 04.5	-0.3
SAOF				AML	AML		
	comp=E,76μm,0.9s						
SAOF				AML	AML		
	comp=N,83μm,0.4s						
SAOF				AML	AML		
	comp=E,76μm,0.9s						
SAOF				AML	AML		
	comp=N,83μm,0.4s						
SAOF				AML	AML		
	comp=E,76μm,0.9s						
SAOF				AML	AML		
	comp=N,83μm,0.4s						
SAOF				AML	AML		
	comp=N,83μm,1.6s						
STV	Sant Anna di V	1.58	30	P	Pb	14 05 06.7	-0.1
STV	Sant Anna di V	1.58	30	P	Pb	14 05 06.6	-0.1
STV				AML	AML		
	comp=E,91μm,0.3s						
STV				AML	AML		
	comp=N,83μm,0.8s						
STV				AML	AML		
	comp=E,91μm,0.3s						
STV				AML	AML		
	comp=N,83μm,0.4s						
IMI	Imperia	1.59	49	P	Pn	14 05 05.7	-0.4
IMI	Imperia	1.59	49	P	Pn	14 05 05.6	-0.5
OGAG	Argentiere	1.60	8	Pg	Pg	14 05 13.4	+6.3
PIAF	les Granges de	1.60	39	Pn	Pb	14 05 06.7	-0.3
ENR	Entracque	1.60	32	P	Pg	14 05 07.6	+0.3
ENR	Entracque	1.60	32	P	Pb	14 05 07.2	0.0
SURF	Saint Ours	1.66	14	Pn	Pb	14 05 08.0	-0.1
SURF	Saint Ours	1.66	14	P	Pg	14 05 08.8	+0.4
CREF	Crivoux	1.70	9	Pg	Pg	14 05 09.6	+0.5
PZZ	Stroppo	1.75	21	P	Pg	14 05 10.4	+0.2
PZZ	Stroppo	1.75	21	P	Pb	14 05 09.8	+0.1
PZZ				AML	AML		
	comp=E,148μm,0.5s						
PZZ				AML	AML		
	comp=N,205μm,0.4s						
PZZ				AML	AML		
	comp=E,148μm,0.5s						
PZZ				AML	AML		
	comp=N,205μm,0.4s						
PZZ				AML	AML		
	comp=E,148μm,1.5s						
GBOS	Grotte di Boss	1.80	40	P	Pb	14 05 09.8	-0.6
GBOS	Grotte di Boss	1.80	40	P	Pb	14 05 09.9	-0.6
GBOS				AML	AML		
	comp=E,36μm,0.4s						
GBOS				AML	AML		
	comp=N,40μm,1.9s						
GBOS				AML	AML		
	comp=E,36μm,1.6s						
GBOS				AML	AML		
	comp=N,40μm,0.1s						
RORO	Rocca Rossa	1.82	46	P	Pn	14 05 09.0	-0.1
RORO	Rocca Rossa	1.82	46	P	Pn	14 05 09.0	-0.1
RORO				AML	AML		
	comp=E,465μm,5.2s						
RORO				AML	AML		
	comp=N,49μm,0.1s						
RORO				AML	AML		
	comp=E,465μm,0.8s						
CANO	Canova, Maglio	1.98	47	P	Pn	14 05 11.6	+0.3
ORIF	Oris-en-Rattie	2.06	353	P	Pb	14 05 14.9	0.0
ORIF				AML	AML		
	comp=E,44μm,2.9s						
ORIF				AML	AML		
	comp=N,47μm,3.6s						
ORIF				AML	AML		
	comp=N,47μm,1.6s						
ORIF				AML	AML		
	comp=E,44μm,1.1s						
QLNO	Quiliano	2.11	46	P	Pb	14 05 14.7	-1.0
QLNO				AML	AML		
	comp=N,77μm,1.6s						
QLNO				AML	AML		
	comp=E,63μm,1.8s						
QLNO				AML	AML		
	comp=N,77μm,0.4s						
PCP	Piancastagn	2.36	44	P	Pn	14 05 17.8	+1.1
RSP	Reno Superiore	2.39	18	P	Pb	14 05 19.8	-0.8

*IDC **05** 14:07:32.7±20.0, 34°.70S×179°.03E, h0^{km}, mb3.4/3, mbtmp3.4/4, ML2.7/1, MS3.5/1, Error ellipse: s-maj=373.5km s-min=47.6km az=79.0*

*WEL **05** 14:07:55.2±1.1, 36°S±15°×17°8E±1°9, h168^{km}±15^{km}, ML2.8/8, MLv2.7/10, Error ellipse: s-maj=29.8km s-min=10.3km az=125.0, confirmed*

ISC 05 14:07:55.0±1.6**, 36°.4S**±0°.2×**178°.5E**±0°.2**, h179**^{km}±14^{km}**, n27, σ1^{s}10**/40**, mb3.1**/3**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.18	185	P	Pn	14 08 24.9	+0.9
MXZ				S	Sn	14 08 45.4	-1.2
WMGZ	Waiomatatini S	1.43	181	P	Pn	14 08 26.7	+0.5
WMGZ				S	Sn	14 08 49.9	-0.6
HAZ	Te Kaha	1.47	201	P	Pn	14 08 26.0	-0.6
HAZ				S	Sn	14 08 52.8	+1.7
PKGZ	Pakihiroa	1.51	191	P	Pn	14 08 27.2	+0.2
PKGZ				S	Sn	14 08 51.6	-0.3
PUZ	Puketiti	1.69	185	P	Pn	14 08 29.1	+0.3
PUZ				S	Sn	14 08 54.7	-0.4
RUGZ	Raukumara Rang	1.69	201	P	Pn	14 08 26.6	-2.4
RUGZ				S	Sn	14 08 53.7	-1.6
TWGZ	Tauwhareparae	1.83	192	P	Pn	14 08 30.4	+0.2
TWGZ				S	Sn	14 08 57.8	+0.1
MWZ	Matawai	2.08	200	P	Pn	14 08 33.4	+0.5
MWZ				S	Sn	14 09 02.9	+0.5
TKGZ	Te Karaka	2.10	193	P	Pn	14 08 33.1	0.0
TKGZ				S	Sn	14 09 03.5	+0.6
URZ	Urewera	2.15	209	Pn	Pn	14 08 33.4	-0.3
	0.6nm,0.3s,baz=354,slow=15,SNR=17						
URZ				Sn	Sn	14 09 04.3	+0.6
	2.7nm,0.3s,baz=275,slow=24,SNR=15						
	7.4nm,0.8s						
URZ	Urewera	2.15	209	P	Pn	14 08 33.4	-0.3
RAGZ	Rawiri	2.26	201	P	Pn	14 08 35.1	+0.2
RIGZ	Rimuhau	2.38	193	S	Sn	14 09 09.4	+0.9
MUGZ	Murupara	2.48	212	P	Pn	14 08 38.3	+0.9
SNGZ	Shannon Statio	2.55	200	P	Pn	14 08 37.5	-0.7
SNGZ				S	Sn	14 09 13.0	+1.1
RAHZ	Arahi	2.75	203	P	Pn	14 08 39.3	-1.3
RAHZ				S	Sn	14 09 16.6	+0.4
NMHZ	Naumai	3.00	205	P	Pn	14 08 45.3	+1.6
BKZ	Black Stump Fm	3.18	209	P	Pn	14 08 46.2	+0.3
BKZ				S	Sn	14 09 25.1	-0.4
ETVZ	East Tongariro	3.50	218	P	Pn	14 08 46.6	-3.2
OTVZ	Oturere	3.54	218	P	Pn	14 08 50.1	-0.3
PNHZ	Pukenui	3.94	206	P	Pn	14 08 54.3	-1.0
PNHZ				S	Sn	14 09 42.3	-0.3
LREZ	Lake Rotokare	4.43	225	P	Pn	14 09 03.4	+1.8
TIWZ	Tintock	4.82	204	P	Pn	14 09 05.9	-0.7
RPZ	Rata Peaks	9.26	215	LR	LR	14 14 50.6	
	comp=Z,209nm,18.3s,baz=42,slow=40						
STKA	Stephens Creek	30.71	268	P	P	14 13 54.0	+0.9
	0.9nm,0.7s,baz=96,slow=18,SNR=1.0						
	0.9nm,0.7s						
ASAR	Alice Springs	40.27	276	P	P	14 15 15.2	+0.5
	0.6nm,1.2s,baz=128,slow=8.5,SNR=1.5						
	0.6nm,1.2s						
WRA	Warramunga Arr	41.81	281	P	P	14 15 25.6	-1.7
	0.2nm,0.7s,baz=119,slow=8.5,SNR=1.9						
	0.2nm,0.7s						

IDC 05 14:22:22.4±2.4**, 1°.42N**×**128°.71E, h0**^{km}**, mb3.0**/3**, mbtmp3.0**/3**, Error ellipse: s-maj=153.1km s-min=28.7km az=68.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.94	166	P	P	14 27 16.9	-0.8
	0.2nm,0.4s,baz=346,slow=11,SNR=7.0						
	0.2nm,0.4s						
ASAR	Alice Springs	25.44	169	P	P	14 27 52.9	+0.7
	0.3nm,0.8s,baz=348,slow=11,SNR=7.0						
	0.3nm,0.8s						
MKAR	Makanchi Array	60.57	325	P	P	14 32 34.7	-0.2
	0.1nm,0.4s,baz=118,slow=5.2,SNR=1.3						
	0.1nm,0.4s						

*IDC **05** 14:31:10.6±2.4, 4°.43S×153°.24E, h0^{km}, mb3.9/4, mbtmp3.9/5, ML2.0/1, Error ellipse: s-maj=90.2km s-min=21.8km az=118.0*

*NEIC **05** 14:31:10.7±1.2, 4°.2S±0°.1×153°.64E±0°.07, h27^{km}±11^{km}, mb4.1/15, Error ellipse: s-maj=16.7km s-min=9.8km az=195.0*

ISC 05 14:31:17.1±1.1**, 4°.41S**±0°.08×**153°.2E**±0°.1**, h55**^{km}**, n27, σ1^{s}34**/27**, mb4.0**/12**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.01	283		Pn	14 31 33.5	-1.6
RABL				Sn	Sn	14 31 46.1	-2.3
MANU	Manus Island	6.23	292	Pn	Pn	14 32 48.1	+1.5
PMG	Port Moresby	7.74	230	Pn	Pn	14 33 06.9	-0.4
	1.3nm,0.3s,baz=54,slow=9.5,SNR=7.6						
PMG				Sn	Sn	14 34 37.1	+3.5
	1.7nm,0.3s,baz=192,slow=20,SNR=3.3						
	4.0nm,0.4s						
PMG	Port Moresby	7.74	230	Pn	Pn	14 33 08.3	+1.0
HNR	Honiara	8.39	127	Pn	Pn	14 33 06.1	-10
PATS	Pohnpei	12.31	25	Pn	Pn	14 33 57.4	-12
MTN	Manton Dam	23.30	248	P	P	14 36 20.1	-0.4
MTN				IAmb	IAmb	14 36 43.7	
	comp=Z,4.3nm,0.8s						
WB0	Warramunga Arr	23.81	229	P	P	14 36 25.8	+0.5
WB0				IAmb	IAmb	14 36 28.5	
	comp=Z,3.2nm,0.8s						
WR0	Warramunga Arr	23.82	228	P	P	14 36 25.8	+0.5
WR0				IAmb	IAmb	14 36 28.4	
	comp=Z,5.2nm,0.7s						
WR8	Warramunga Arr	23.85	228	P	P	14 36 26.5	+1.0
WR8				IAmb	IAmb	14 36 28.6	
	comp=Z,3.6nm,0.6s						
WRAB	Tennant Creek	23.95	228	P	P	14 36 27.0	+0.6
WRAB				IAmb	IAmb	14 36 29.4	
	comp=Z,3.6nm,0.6s						
WB2	Warramunga Arr	23.95	228	P	P	14 36 26.7	+0.3
WRA	Warramunga Arr	23.96	228	P	P	14 36 27.3	+0.8
	comp=Z,2.7nm,0.4s,baz=53,slow=9.7,SNR=58						
	comp=Z,2.7nm,0.4s						
WRA	Warramunga Arr	23.96	228	P	P	14 36 26.8	+0.2
INKA	Innaminka	26.04	206	P	P	14 36 45.8	+0.5
KNRA	Kununurra	26.45	243	P	P	14 36 49.8	+0.6
KNRA				IAmb	IAmb	14 36 53.1	
	comp=Z,5.0nm,0.6s						
AS31	Alice Springs	26.67	222	P	P	14 36 51.2	0.0
ASAR	Alice Springs	26.67	222	P	P	14 36 51.8	+0.6
	comp=Z,0.5nm,0.4s,baz=55,slow=9.0,SNR=44						
	comp=Z,0.5nm,0.4s						
ASAR	Alice Springs	26.67	222	P	P	14 36 51.0	-0.1
CAN	Canberra	31.00	187	P	P	14 37 27.5	-2.0
BBOO	Buckleboo	32.46	207	P	P	14 37 41.7	-0.6
TOO	Toolangi	33.74	191	P	P	14 37 50.7	-2.8
TOO				IAmb	IAmb	14 38 05.9	
	comp=Z,1.6nm,0.9s						
FORT	Forrest	35.31	219	P	P	14 38 06.5	-0.6
FORT				IAmb	IAmb	14 38 07.5	
	comp=Z,4.6nm,1.0s						
MBWA	Marble Bar	36.46	240	P	P	14 38 16.8	-0.4
PETK	Petropavlovsk-	57.44	3	P	P	14 41 01.5	+1.4
	comp=Z,2.1nm,1.0s,baz=154,slow=6.4,SNR=4.6						
	comp=Z,2.1nm,1.0s						
SONM	Songino Array	66.18	328	P	P	14 42 00.5	+1.3
	comp=Z,0.3nm,0.5s,baz=124,slow=5.2,SNR=2.7						
	comp=Z,0.3nm,0.5s						
TORD	Torodi Ar. Bea	150.51	289	PKPbc	PKiKP	14 51 04.8	+0.2
	comp=Z,1.1nm,1.1s,baz=80,slow=3.5,SNR=3.6						

IDC 05 14:35:43.4±8.2**, 30°.15S**×**177°.43W, h0**^{km}**, mb3.1**/2**, mbtmp3.1**/2**, Error ellipse: s-maj=346.8km s-min=62.0km az=154.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.62	266	P	P	14 43 49.9	+0.1
	0.1nm,0.4s,baz=105,slow=7.4,SNR=7.5						
	0.1nm,0.4s						
WRA	Warramunga Arr	44.58	272	P	P	14 43 56.8	-0.8
	0.1nm,0.5s,baz=112,slow=6.6,SNR=2.2						
	0.1nm,0.5s						
FINES	FINESS Array B	145.08	340	PKPbc	PKPbc	14 55 20.9	-0.5
	1.2nm,0.8s,baz=31,slow=2.2,SNR=3.9						

*PRE **05** 14:37:33.6±1.1, 25°.95S×29°.27E, h0^{km}, ML1.8, Suspected explosion*

*IDC **05** 14:37:40.7±6.5, 26°.08S×28°.70E, h0^{km}, mbtmp2.6/1, ML2.1/1, Error ellipse: s-maj=47.9km s-min=25.9km az=69.0*

ISC 05 14:37:33.8±1.0**, 25°.93S**±0°.06×**29°.27E**±0°.04**, h0**^{km}**, n10, σ1^{s}10**/15**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRLN	Carolina, Mapu	0.68	95	*e*P	Pg	14 37 46.8	-0.1
CRLN				*e*S	Sg	14 37 55.8	+0.1
CRLN				IAML		14 38 04.8	
	comp=Z,34nm,0.9s						
HRAO	HartRAO	1.43	271	*e*P	Pn	14 38 00.6	-0.6
HRAO				*e*S	Sg	14 38 20.4	+0.7
HRAO				IAML		14 38 21.1	
	comp=Z,16nm,0.4s						
PRYS	Parys	1.98	240	*e*P	Pn	14 38 08.7	0.0
PRYS				*e*S	Sn	14 38 34.6	+0.2
PRYS				IAML		14 38 35.9	
	comp=Z,19nm,0.5s						
LEPH	Lephalale, Lim	2.46	327	*e*P	Pn	14 38 15.6	+0.3
LEPH				*e*S	Sn	14 38 47.3	+1.2
LEPH				IAML		14 38 51.0	
	comp=Z,7.0nm,0.3s						
LBTB	Lobatse	3.44	285	Pg	Pb	14 38 34.0	-1.8
	comp=Z,0.5nm,0.3s,baz=112,slow=19,SNR=16						
LBTB				Lg	Lg	14 39 17.0	
	comp=Z,1.8nm,0.3s,baz=205,slow=20,SNR=16						
LBTB	Lobatse	3.44	285	*e*P	Pn	14 38 29.9	+1.1
LBTB				*e*S	Sn	14 39 11.3	+0.8
LBTB				IAML		14 39 20.9	
	comp=Z,4.8nm,0.4s						
BOSA	Boshof	4.46	232	Pn	Pn	14 38 45.1	+2.2
	comp=Z,0.1nm,0.3s,baz=42,slow=12,SNR=1.3						
BOSA				Pg	Pb	14 38 52.1	-1.1
	comp=Z,0.2nm,0.3s,baz=46,slow=16,SNR=1.3						
BOSA				Lg	Lg	14 39 46.6	
	comp=Z,1.2nm,0.3s,baz=152,slow=20,SNR=13						
	comp=Z,1.8nm,1.0s						
BOSA	Boshof	4.46	232	*e*P	Pn	14 38 43.9	+1.0
BOSA				*e*S	Sn	14 39 35.2	-0.4
BOSA				IAML		14 39 50.5	
	comp=Z,2.9nm,0.4s						
I47ZA	BOSHOF INFRASO	4.48	232	I	I	15 02 50.0	
	baz=52,slow=313,SNR=3.3						
I35NA	TSUMEB INFRASO	12.71	299	I	I	15 53 50.0	
	baz=128,slow=318,SNR=3.0						

*IDC **05** 14:48:12.1±0.7, 3°.46S×145°.26E, h0^{km}, mb4.4/18, mbtmp4.4/22, ML3.8/4, MS4.5/53, Error ellipse: s-maj=25.2km s-min=13.2km az=86.0*

*NEIC **05** 14:48:13.7±2.4, 3°.35S±0°.08×145°.25E±0°.09, h10^{km}±1^{km}, mb5.0/107, Mww5.1/18, Error ellipse: s-maj=16.8km s-min=12.0km az=119.0*

*NEIC **05** 14:48:13.8, 3°.28S×145°.25E, h14^{km}, Moment Tensor Solution. Duration: 1^{s}7 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.48; $M_{\theta\theta}$0.35; $M_{\phi\phi}$1.13; $M_{r\theta}$1.17; $M_{\theta\phi}$5.68; $M_{\phi r}$-0.57; Fault plane solution: $M_0$5.97000×10^{16} NP1: ϕ_s359.29000°, δ75.44000°, λ-169.18000°. NP2: ϕ_s266.54000°, δ79.53000°, λ-14.81000°. Principal axes: T 6.4465, Plg3.0000°, Azm313.0000°; N -1.0953, Plg72.0000°, Azm52.0000°; P -5.3512, Plg18.0000°, Azm222.0000°;*

*NEIC **05** 14:48:13.8, 3°.38S×145°.25E, h14^{km}*

*DJA **05** 14:48:15.2±1.2, 3°S±4°×14°5E±°, h24^{km}±8^{km}, M4.9/61, mB5.4/45, mb4.8/61, MLv5.1/5, Mw(mB)4.8/45, MwMwp4.8/6, Mwp5.1/6*

*GCMT **05** 14:48:16.8±0.1, 3°.37S±0°.01×145°.18E±0°.01, h12^{km}, MW5.2/142, Moment Tensor Solution. s72,c106; s142,c241; Duration: 1^{s}0 Moment tensor: Scale 10^{16} Nm; M_{rr}0.43±.10; $M_{\theta\theta}$-0.74±.10; $M_{\phi\phi}$0.30±.11; $M_{r\theta}$0.81±.26; $M_{\theta\phi}$7.26±.08; $M_{\phi r}$2.03±.26; Best double couple: $M_0$7.60800×10^{16} NP1:ϕ_s89.00000°, δ75.00000°, λ7.00000°. NP2:ϕ_s357.00000°, δ83.00000°, λ164.00000°. Principal axes: T 7.6400, Plg16.0000°, Azm312.0000°; N -0.0630, Plg73.0000°, Azm153.0000°; P -7.5770, Plg6.0000°, Azm44.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 14:48:15.3±0.4**, 3°.48S**±0°.05×**145°.28E**±0°.05**, h23**^{km}**, n205, σ1^{s}93**/140**, mb4.9**/101**, MS4.6**/64**, 1C-2D, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	2.53	56		Pn	14 48 53.5	-1.5
JAY	Jayapura	4.66	282	LR	LR	14 51 04.7	
	comp=Z,12μm,18.2s,baz=66,slow=37						
JAY	Jayapura	4.66	282	P	Pn	14 49 26.5	+2.1
GENI	Genyem	5.18	280	P	Pn	14 49 30.1	-1.3
	1.0nm5μm4μm183nm,1.3s						
PMG	Port Moresby	6.18	162	Pn	Pn	14 49 46.4	+1.2
	21nm,0.5s,baz=357,slow=7.2,SNR=28						
PMG				Sn	Sn	14 50 55.2	0.0
	3.2nm,0.3s,baz=8.8,slow=19,SNR=4.6						
PMG				LR	LR	14 52 26.0	
	comp=Z,13μm,18.4s,baz=336,slow=41						
PMG	Port Moresby	6.18	162		Pn	14 49 47.3	+2.1
PMG	Port Moresby	6.18	162	P	Pn	14 49 45.9	+0.7
	1.4nm5μm3μm155nm,1.3s						
RABL	Rabaul	6.91	96		Pn	14 49 56.0	+0.7
BAKI	Biak	9.44	284	P	Pn	14 50 31.4	+1.4
	3μm66nm,1.3s						
SIJI	Sorong	14.24	280	Pn	Pn	14 51 35.8	0.0
	0.3nm,0.3s,baz=73,slow=11,SNR=4.8						
SIJI				LR	LR	14 57 14.6	
	comp=Z,1μm,18.4s,baz=98,slow=38						
	12nm,1.0s						
SIJI	Sorong	14.24	280	P	Pn	14 51 35.7	0.0
SWI	Sorong	14.24	280	P	Pn	14 51 36.1	+0.3
	594nm20nm,1.3s						
HNR	Honiara	15.73	113	Pn	Pn	14 51 55.5	-0.1
	0.1nm,0.3s,baz=237,slow=5.3,SNR=8.0						
HNR				LR	LR	14 57 01.5	
	comp=Z,114nm,21.3s,baz=3.5,slow=34						
HNR	Honiara	15.73	113		Pn	14 51 55.2	-0.4
CTA	Charters Tower	16.54	177	Pn	Pn	14 52 06.6	+0.7
	0.2nm,0.3s,baz=354,slow=12,SNR=7.2						
CTA				LR	LR	14 58 32.0	
	comp=Z,1μm,20.3s,baz=354,slow=37						
	1.4nm,0.8s						
CTAO	Charters Tower	16.54	177	Pn	Pn	14 52 06.3	+0.3
MTN	Manton Dam	16.80	236	Pn	Pn	14 52 08.4	-0.8
KRAI	Karang Ratu	16.85	270	P	Pn	14 52 10.7	+0.7
NLAI	Namlea	18.15	270	P	Pn	14 52 26.1	+0.1
	2μm46nm,2.2s						
SANI	Sanana	19.32	274	P	P	14 52 37.3	-1.8
	1μm30nm,1.2s						
WB0	Warramunga Arr	19.36	212	P	P	14 52 39.1	-0.4
WR8	Warramunga Arr	19.46	212		P	14 52 40.4	-0.2
WR8				IAmb	IAmb	14 52 54.1	
	comp=Z,109nm,1.6s						
WRAB	Tennant Creek	19.52	212	P	P	14 52 39.1	-2.2
WRA	Warramunga Arr	19.54	212	P	Pn	14 52 41.8	-1.0
	comp=Z,0.9nm,0.3s,baz=41,slow=11,SNR=70						
	comp=Z,18nm,0.9s						
WRA	Warramunga Arr	19.54	212	P	P	14 52 41.2	-0.2
KNRA	Kununurra	20.27	232		P	14 52 48.3	-1.2
SOEI	Soe	21.77	252	P	P	14 53 03.1	-2.7
SOEI				IAmb	IAmb	14 53 21.6	
	comp=Z,59nm,0.8s						
SOEI	Soe	21.77	252	P	P	14 53 05.1	-0.7
DAV	Davao City (W)	22.28	298	LR	LR	15 01 35.1	
	comp=Z,737nm,18.4s,baz=106,slow=36						
BATI	Baumata	22.46	252	P	P	14 53 11.9	-1.3
	comp=Z,2μmcomp=Z,87nm,1.0s						
LUWI	Luwuk	22.61	276	P	P	14 53 13.7	-1.1
	comp=Z,2μmcomp=Z,73nm,1.2s						
GTOI	Gorontalo	22.63	280	P	P	14 53 17.1	+2.2
	comp=Z,2μmcomp=Z,51nm,1.0s						
AS31	Alice Springs	22.88	208	P	P	14 53 18.0	+0.5
ASAR	Alice Springs	22.88	208	P	P	14 53 17.7	+0.2
	comp=Z,10nm,0.9s,baz=37,slow=6.4,SNR=60						
ASAR				LR	LR	15 03 20.3	
	comp=Z,4μm,19.0s,baz=33,slow=40						
	comp=Z,10nm,0.9s						
MRSI	Marisa	23.65	279	P	P	14 53 24.3	-1.0
	comp=Z,1μmcomp=Z,37nm,1.1s						
APSI	Ampana	23.75	276	P	P	14 53 26.8	+0.6
	comp=Z,2μmcomp=Z,54nm,1.2s						
EDFI	Ende, Flores	24.02	256	P	P	14 53 26.2	-2.7
	comp=Z,29nm,1.2s						
FITZ	Fitzroy Crossi	24.10	232	LR	LR	15 04 25.7	
	comp=Z,1μm,21.4s,baz=53,slow=40						
INKA	Innaminka	24.51	190		P	14 53 34.7	+1.6
INKA				IAmb	IAmb	14 53 60.0	
	comp=Z,51nm,1.6s						
TOLI2	Tolitoli	24.90	280	P	P	14 53 34.2	-2.6
TOLI2				IAmb	IAmb	14 53 45.9	
	comp=Z,25nm,0.9s						
TTSI	Tana Toraja	25.42	270	P	P	14 53 42.7	+1.2
	comp=Z,1μmcomp=Z,44nm,1.2s						
KAPI	Kappang	25.50	266	LR	LR	15 06 38.5	
	comp=Z,432nm,19.5s,baz=86,slow=43						
PCI	Palu	25.55	275	P	P	14 53 43.7	+1.0
WSI	Waingapu	25.55	255	P	P	14 53 41.5	-1.2
MPSI	Mapaga	25.64	278	P	P	14 53 40.6	-3.0
	comp=Z,16nm,1.1s						
DZM	Mont Dzumac	27.63	134	LR	LR	15 03 55.2	
	comp=Z,1μm,19.4s,baz=272,slow=34						
DZM	Mont Dzumac	27.63	134	*e*P	P	14 54 02.8	+1.3

comp=Z,50nm,1.4s
DZM *e*S **S** **14 58 43.7 +1.4**
comp=Z,616nm,25.9s
DZM *e*LR LR 15 01 00.6
comp=Z,3µm,25.9s
STKA Stephens Creek 28.46 187 P **P** **14 54 08.5 -0.2**
comp=Z,4.1nm,1.0s,baz=346,slow=9.6,SNR=6.6
STKA LR LR 15 06 43.4
comp=Z,2µm,19.6s,baz=3.7,slow=39
comp=Z,4.1nm,1.0s
STKA Stephens Creek 28.46 187 P **P** **14 54 08.3 -0.3**
TGY Tagaytay City 29.79 306 LR LR 15 06 19.7
comp=Z,678nm,19.3s,baz=112,slow=36
BBOO Buckleboo 30.43 195 P **P** **14 54 26.1 0.0**
BBOO IAmb IAmb 14 54 46.4
comp=Z,37nm,1.4s
JCJ Chichijima 30.54 355 LR LR 15 06 06.3
comp=Z,403nm,19.5s,baz=178,slow=35
FORT Forrest 31.65 209 P **P** **14 54 35.8 -1.1**
FORT IAmb IAmb 14 54 48.1
comp=Z,8.9nm,0.7s
TOO Toolangi 33.93 180 P **P** **14 54 56.1 -0.8**
TOO IAmb IAmb 14 54 59.9
comp=Z,25nm,1.6s
JOW Kunigami 34.32 332 LR LR 15 06 02.2
comp=Z,2µm,20.8s,baz=147,slow=31
MSVF Nonsavu 35.10 116 LR LR 15 09 42.3
comp=Z,501nm,18.1s,baz=329,slow=37
LEM Lembang 37.64 263 LR LR 15 13 15.3
comp=Z,328nm,19.5s,baz=165,slow=40
TNG Tangerang 38.58 264 P P 14 55 25.1 -12
TNG P P 14 55 25.1 -12
JNU Nakatsue 38.87 341 LR LR 15 08 41.1
comp=Z,1µm,21.7s,baz=153,slow=32
NWAO Narrogin (SRO) 39.33 219 LR LR 15 13 14.4
comp=Z,4µm,19.0s,baz=48,slow=38
MJAR Matsushiro Arr 40.36 351 P **P** **14 55 50.4 -1.0**
comp=Z,7.1nm,1.1s,baz=175,slow=8.6,SNR=4.9
comp=Z,7.1nm,1.1s
MJAR Matsushiro Arr 40.36 351 P **P** **14 55 50.6 -0.7**
MDSI Maura Dua 41.01 267 P **P** **14 55 56.9 -0.2**
comp=Z,28nm,1.8s
QIZ Qiongzhong 41.42 304 P **P** **14 55 56.4 -4.0**
QIZ S **S** **15 02 13.2 -1.3**
QIZ SS **SS** **15 05 17.6 -1.5**
QIZ LR LR
comp=N,360nm,11.7s
QIZ LR LR
comp=E,630nm,17.2s
QIZ LR LR
comp=Z,890nm,23.1s
MASI Maura Aman, Be 42.96 269 P **P** **14 56 14.1 +0.9**
NJ2 Nanjing 43.34 327 *e*P **P** **14 56 15.3 -0.6**
NJ2 pmax pmax
comp=Z,41nm,1.8s
KSRS Korea Array 43.80 340 P **P** **14 56 18.4 -1.1**
comp=Z,1.9nm,0.8s,baz=161,slow=9.3,SNR=7.1
KSRS LR LR 15 12 03.4
comp=Z,751nm,20.2s,baz=155,slow=33
comp=Z,1.9nm,0.8s
KSAR Wonju Array Be 43.81 340 P **P** **14 56 17.0 -2.5**
PPI Padang Panjang 44.95 273 P **P** **14 56 29.2 +0.2**
comp=Z,736nmcomp=Z,36nm,1.1s
URZ Urewera 45.19 144 LR LR 15 14 01.0
comp=Z,512nm,19.1s,baz=312,slow=34
RPZ Rata Peaks 46.11 154 LR LR 15 13 54.3
comp=Z,1µm,20.9s,baz=348,slow=33
RPSI Rantau Prapat 46.73 277 P **P** **14 56 39.5 -3.6**
PSI Prapat 46.75 277 P **P** **14 56 43.8 +0.4**
comp=Z,533nmcomp=Z,16nm,1.1s
TIA Tai'an 47.44 329 P **P** **14 56 47.9 -0.4**
TIA S **S** **15 03 46.9 +5.3**
DL2 Dalian 47.49 335 P **P** **14 56 50.5 +1.9**
DL2 S **S** **15 03 47.5 +5.4**
DL2 pmax pmax
comp=Z,35nm,1.7s
DL2 pmax pmax
comp=Z,500nm,4.1s
DL2 LR LR
comp=N,960nm,18.5s
DL2 LR LR
comp=E,880nm,19.0s
DL2 LR LR
comp=Z,980nm,18.2s
GYA Guiyang 47.74 311 ⇓P **P** **14 56 52.9 +1.9**
GYA pmax pmax
comp=Z,5.0nm,1.4s
ENH Enshi 47.91 317 **P** **14 56 51.5 -0.6**
KCSI Kotacane, Aceh 47.98 278 P **P** **14 56 52.4 -0.5**
comp=Z,11nm,1.0s
LYN LuoYang 48.82 324 *e*P **P** **14 56 59.1 +0.1**
LYN S **S** **15 04 04.9 +3.8**
LYN LuoYang 48.82 324 SS SS 15 07 34.4 +2.4
LYN LR LR
comp=N,2µm,19.2s
LYN LR LR
comp=E,770nm,19.0s
LYN LR LR
comp=Z,2µm,19.8s
USRK Ussurirysk Ar. 48.94 347 P **P** **14 57 00.2 +0.5**
comp=Z,8.8nm,0.7s,baz=158,slow=8.0,SNR=8.4
comp=Z,8.8nm,0.7s
HNS HongShan 49.61 328 ⇑P **P** **14 57 05.2 +0.3**
HNS S **S** **15 04 17.3 +5.3**
HNS pmax pmax
comp=Z,21nm,0.9s
HNS LR LR
comp=N,810nm,20.8s
HNS LR LR
comp=Z,1µm,22.2s
MDJ Mudanjiang 49.90 345 P **P** **14 57 07.4 +0.4**
MDJ pmax pmax
comp=Z,11nm,1.4s
KMI2 Kunming 50.12 307 P **P** **14 57 11.5 +2.1**
KMI2 S **S** **15 04 25.7 +5.6**
KMI2 pmax pmax
comp=Z,22nm,1.1s
KMI2 LR LR
comp=N,420nm,24.9s
KMI2 LR LR
comp=E,320nm,21.7s
KMI2 LR LR
comp=Z,650nm,24.4s
CN2 Changchun 50.33 341 P **P** **14 57 11.7 +1.3**
CN2 S **S** **15 04 22.4 +0.4**
CN2 Changchun 50.33 341 SS **SS** **15 07 54.2 -1.8**
CN2 LR LR
comp=N,570nm,14.0s
CN2 LR LR
comp=E,240nm,14.0s
CN2 LR LR
comp=Z,580nm,17.0s
CMAR Chiang Mai Arr 50.56 297 P **P** **14 57 12.9 +0.3**
comp=Z,2.8nm,0.9s,baz=115,slow=5.9,SNR=24
CMAR LR LR 15 16 14.4
comp=Z,212nm,21.8s,baz=110,slow=33
comp=Z,2.8nm,0.9s
CMAR Chiang Mai Arr 50.56 297 P **P** **14 57 12.0 -0.6**
XAN Xi'an 50.66 320 P **P** **14 57 13.2 +0.1**
XAN S **S** **15 04 29.4 +2.5**
XAN Xi'an 50.66 320 SS **SS** **15 08 00.8 -0.8**
XAN pmax pmax
comp=Z,22nm,1.3s
XAN LR LR
comp=N,610nm,17.5s
XAN LR LR
comp=E,360nm,16.8s
XAN LR LR
comp=Z,590nm,17.2s
CHTO Chiang Mai 50.69 298 P **P** **14 57 10.9 -2.6**
CHTO Chiang Mai 50.69 298 P **P** **14 57 15.1 +1.6**
comp=Z,6.0nm,1.1s
BNX BinXian 51.52 344 ⇓P **P** **14 57 19.7 +0.5**
BNX pmax pmax
comp=Z,17nm,1.4s
PZH PanZhiHua 51.56 308 P **P** **14 57 20.9 +0.8**
PZH S **S** **15 04 42.3 +2.5**
PZH pmax pmax
comp=Z,10.0nm,1.2s
PZH LR LR
comp=N,240nm,16.9s
PZH LR LR
comp=E,290nm,18.8s
PZH LR LR
comp=Z,390nm,17.9s
CD2 Chengdu 52.30 314 P **P** **14 57 25.4 0.0**
CD2 S **S** **15 04 53.2 +3.5**
CD2 pmax pmax
comp=Z,30nm,1.1s
CD2 pmax pmax
comp=Z,420nm,4.7s
CD2 LR LR
comp=N,650nm,17.8s
CD2 LR LR
comp=E,660nm,14.0s
CD2 LR LR
comp=Z,640nm,17.1s
TNCH TengChong 53.49 305 P **P** **14 57 35.0 +0.5**
TNCH pP pP 14 57 37.9 -3.1
TNCH S **S** **15 05 03.5 -2.8**
TNCH sS pS 15 05 09.9 -4.3
TNCH TengChong 53.49 305 SS **SS** **15 08 39.4 -7.5**
TNCH pmax pmax
comp=Z,17nm,1.8s
TNCH pmax pmax
comp=Z,260nm,3.8s
TNCH LR LR
comp=N,300nm,17.1s
TNCH LR LR
comp=E,250nm,20.6s
TNCH LR LR
comp=Z,580nm,25.2s
KLR Kul'dur 53.80 349 P **P** **14 57 36.9 +0.9**
comp=Z,3.7nm,0.9s,baz=169,slow=4.1,SNR=5.8
KLR LR LR 15 18 57.3
comp=Z,326nm,19.4s,baz=168,slow=34
comp=Z,3.7nm,0.9s
HHC Hu-ho-hao-te 53.80 329 *e*P **P** **14 57 37.4 +1.0**
HHC S **S** **15 05 10.3 +0.4**
HHC sS sS 15 05 20.8 +0.1
HHC pmax pmax
comp=Z,10.0nm,0.7s
HHC pmax pmax
comp=Z,160nm,4.9s
HHC LR LR
comp=N,430nm,19.9s
HHC LR LR
comp=E,410nm,20.8s
HHC LR LR
comp=Z,710nm,22.7s
LZH Lanzhou 55.19 319 *e*P **P** **14 57 47.9 +1.2**
LZH pP pP 14 57 52.9 -0.3
LZH sP pwP 14 57 56.1 +0.1
LZH S **S** **15 05 36.6 +7.6**
LZH pmax pmax
comp=Z,27nm,1.6s
LZH pmax pmax
comp=Z,260nm,4.2s
LZH LR LR
comp=N,510nm,15.6s
LZH LR LR
comp=E,510nm,16.2s
LZH LR LR
comp=Z,930nm,16.5s
LZDM Lanzhou Array 55.21 319 P **P** **14 57 48.4 +1.4**
comp=Z,1.6nm,0.4s,baz=123,slow=7.3,SNR=5.6
LZDM LR LR 15 18 50.7
comp=Z,246nm,21.1s,baz=60,slow=33
comp=Z,1.6nm,0.4s
HEH HeiHe 55.69 346 *e*P **P** **14 57 49.8 +0.1**
HEH pmax pmax
comp=Z,10.0nm,1.2s
RAR Rarotonga 56.18 113 LR LR 15 19 42.3
comp=Z,117nm,20.8s,baz=288,slow=34
PETK Petropavlovsk- 57.34 9 P **P** **14 58 02.4 +0.9**
comp=Z,2.7nm,0.8s,baz=168,slow=5.7,SNR=7.1
PETK LR LR 15 18 44.5
comp=Z,253nm,21.6s,baz=188,slow=32
comp=Z,2.7nm,0.8s
BRDH Bariadhala 58.43 299 LR LR 15 21 31.6
comp=Z,183nm,21.4s,baz=162,slow=34
GTA2 Gaotai 59.80 320 *e*P **P** **14 58 20.0 +1.0**
GTA2 pP pP 14 58 24.0 -1.6
GTA2 S **S** **15 06 32.7 +3.4**
GTA2 pmax pmax
comp=Z,13nm,1.2s
GTA2 LR LR
comp=N,350nm,20.9s
GTA2 LR LR
comp=E,190nm,22.2s
GTA2 LR LR
comp=Z,440nm,20.6s
SHEM Shemya Is, Ala 61.05 20 LR LR 15 21 05.3
comp=Z,526nm,19.2s,baz=215,slow=32
ULN Ulaanbaatar 61.09 332 P **P** **14 58 28.4 +0.7**
ULN IAmb IAmb 14 58 59.8
comp=Z,31nm,1.9s
ULN Ulaanbaatar 61.09 332 P **P** **14 58 25.7 -2.0**
comp=Z,34nm,1.5s
LSA Lhasa 61.37 307 IAmb IAmb 14 58 33.3
comp=Z,10nm,1.2s
SONM Songino Array 61.38 331 P **P** **14 58 29.7 0.0**
comp=Z,2.3nm,0.8s,baz=149,slow=5.7,SNR=12
SONM LR LR 15 24 28.3
comp=Z,527nm,19.5s,baz=147,slow=36
comp=Z,2.3nm,0.8s
SONM Songino Array 61.38 331 P **P** **14 58 30.1 +0.4**
GOMU GeErMu 61.41 315 P **P** **14 58 29.2 -1.2**
GOMU pP pP 14 58 33.0 -4.0
GOMU sP sP 14 58 36.4 -3.2
GOMU S **S** **15 06 54.4 +3.8**
GOMU pmax pmax
comp=Z,5.0nm,0.7s
GOMU LR LR
comp=N,250nm,15.1s
GOMU LR LR
comp=E,490nm,15.5s
GOMU LR LR
comp=Z,920nm,15.5s
MA2 Magadan 63.01 3 LR LR 15 23 44.8
comp=Z,128nm,20.6s,baz=188,slow=34
EVN Everest 64.29 303 **P** **14 58 50.9 +0.8**
PPT2 Papeete2 65.28 108 *e*S **S** **15 07 39.1 +0.3**
comp=Z,200nm,41.2s
PPT2 *e*LQ LQ 15 15 51.0
comp=Z,440nm,25.5s
PPT2 *e*LR LR 15 18 26.6
comp=Z,496nm,31.5s
PPT2 *e*LR LR 15 18 29.1
comp=Z,330nm,33.2s
TLY Talaya 65.33 333 LR LR 15 25 35.1
comp=Z,671nm,21.4s,baz=122,slow=34
TBI Tubuai 65.94 114 *e*SS SS 15 12 07.6 +5.5
comp=Z,635nm,28.0s
TBI *e*LQ LQ 15 16 04.1
comp=Z,4µm,33.8s
TBI *e*LR LR 15 18 43.4
comp=Z,903nm,36.2s
TBI *e*LR LR 15 18 51.2
comp=Z,4µm,39.0s
YAK Yakutsk 66.42 352 LR LR 15 25 13.5
comp=Z,276nm,21.7s,baz=153,slow=34
HYB Hyderabad 68.98 290 *e*P **P** **14 59 19.9 +0.5**
WMQ Urumqi 69.77 319 *e*P **P** **14 59 24.4 +0.5**
WMQ LR LR
comp=N,390nm,21.3s
WMQ LR LR
comp=Z,200nm,21.3s
TAOE Nuku Hiva Isla 74.24 98 *e*S **S** **15 09 26.0 +1.6**
comp=Z,96nm,27.8s
TAOE *e*SS **SS** **15 14 06.0 -4.5**
comp=Z,84nm,26.4s
TAOE *e*LR LR 15 22 35.5
comp=Z,407nm,25.5s
MKAR Makanchi Array 74.47 321 P **P** **14 59 52.2 +0.3**
comp=Z,2.2nm,0.8s,baz=110,slow=7.1,SNR=21
MKAR LR LR 15 31 06.9
comp=Z,242nm,21.1s,baz=149,slow=35
comp=Z,2.2nm,0.8s
WUS Wushi 74.57 314 IAmb IAmb 15 00 56.8
comp=Z,30nm,1.8s
MAKZ Makanchi 74.68 320 **P** **14 59 52.5 -0.6**
K13K Kusilvak Mount 75.53 22 IAmb IAmb 15 00 08.4
comp=Z,14nm,1.1s
TARG Taragay, Kyrgy 75.74 314 **P** **14 59 59.6 -0.3**
TIXI Tiksi 75.75 355 LR LR 15 33 27.2
comp=Z,204nm,20.0s,baz=182,slow=36
TIXI Tiksi 75.75 355 **P** **14 59 57.0 -1.7**
L14K Kuka Creek 75.93 23 IAmb IAmb 15 00 09.9
comp=Z,16nm,1.1s
ZALV Zalesovo Beam 75.98 328 P **P** **15 00 00.1 -0.3**
comp=Z,0.7nm,0.4s,baz=119,slow=5.2,SNR=6.0
ZALV LR LR 15 32 34.8
comp=Z,868nm,20.6s,baz=142,slow=35
comp=Z,0.7nm,0.4s
ZALV Zalesovo Beam 75.98 328 P **P** **14 59 59.5 -0.9**
KSH2 Kashi 76.63 311 P **P** **15 00 05.8 +1.1**
KSH2 pmax pmax
comp=Z,7.0nm,1.1s
ANM Nome 76.91 20 **P** **15 00 05.4 -0.1**
K15K Wolf Creek Mou 76.92 23 IAmb IAmb 15 00 16.3
comp=Z,18nm,1.0s
NIL Nilore 77.07 306 **P** **15 00 06.7 -0.5**
KURK Kurchatov 78.17 323 **P** **15 00 12.4 -0.5**
KURBB Kurchatov Arra 78.20 323 P **P** **15 00 13.3 +0.3**
comp=Z,4.7nm,1.0s,baz=109,slow=5.1,SNR=10.0
KURBB LR LR 15 35 40.3
comp=Z,260nm,18.7s,baz=166,slow=36
comp=Z,4.7nm,1.0s
AAK Ala-Archa 78.36 315 LR LR 15 34 58.6
comp=Z,340nm,20.6s,baz=96,slow=36
AAK Ala-Archa 78.36 315 **P** **15 00 13.9 -0.4**
K17K Iditarod 78.41 23 IAmb IAmb 15 00 28.6
comp=Z,17nm,0.9s
G16K Koyuk River 78.44 20 IAmb IAmb 15 00 24.5
comp=Z,14nm,1.1s
KDAK Kodiak Island 78.52 29 LR LR 15 29 46.1
comp=Z,292nm,20.1s,baz=246,slow=32
H17K Granite Mounta 79.02 21 IAmb IAmb 15 00 28.0
comp=Z,12nm,1.0s
N19K Bonanza Creek 79.03 26 IAmb IAmb 15 00 31.7
comp=Z,17nm,1.0s
ARSB Arslanbob 79.11 313 IAmb IAmb 15 00 42.9
comp=Z,23nm,1.3s
F17K Baldwin Pennin 79.42 19 IAmb IAmb 15 01 08.7
comp=Z,41nm,2.0s
L19K White Mountain 79.52 24 IAmb IAmb 15 00 30.7
comp=Z,15nm,1.0s
J19K Poorman 80.10 23 IAmb IAmb 15 00 55.1
comp=Z,14nm,1.2s
K20K Telida 80.40 23 IAmb IAmb 15 01 13.3
comp=Z,23nm,1.5s
G19K Purcell Mounta 80.66 20 IAmb IAmb 15 00 30.6
comp=Z,29nm,1.6s
C18K Utukok River 80.72 17 IAmb IAmb 15 00 36.5
comp=Z,34nm,1.9s
F19K Shaleruckik Mo 80.79 20 IAmb IAmb 15 03 13.0
comp=Z,11nm,0.5s
E19K Redstone River 81.30 19 IAmb IAmb 15 00 39.9
comp=Z,11nm,0.8s
KKAR Karatay Array 81.31 314 **P** **15 00 30.1 0.0**
L22K Petersville 81.38 25 IAmb IAmb 15 00 42.6
comp=Z,10nm,0.9s
C19K Lookout Ridge 81.46 17 IAmb IAmb 15 00 41.0
comp=Z,11nm,0.8s
F20K Avaraart Lake 81.59 20 IAmb IAmb 15 00 45.4
comp=Z,8.5nm,0.9s
G21K Allakaket 82.10 21 IAmb IAmb 15 00 37.2
comp=Z,11nm,1.3s
D20K Etivluk River 82.16 18 IAmb IAmb 15 01 25.4
comp=Z,14nm,1.1s
NRIK Noril'sk 82.37 342 P **P** **15 00 35.6 +0.6**
comp=Z,8.6nm,0.9s,baz=108,slow=4.7,SNR=12
NRIK LR LR 15 38 27.4
comp=Z,386nm,18.1s,baz=124,slow=37
comp=Z,8.6nm,0.9s
MLY Manley 82.46 23 IAmb IAmb 15 00 42.4
comp=Z,26nm,1.6s
NEA2 Nenana 82.93 23 IAmb IAmb 15 00 51.3
comp=Z,12nm,1.1s
DHY Denali Highway 83.03 25 IAmb IAmb 15 00 48.4
comp=Z,11nm,0.8s
B21K Ikpikpuk River 83.24 18 IAmb IAmb 15 01 14.8
comp=Z,11nm,1.1s
WRH Wood River Hil 83.27 24 IAmb IAmb 15 00 52.9
comp=Z,12nm,1.0s
E22K Anaktuvuk Pass 83.43 20 IAmb IAmb 15 00 54.7
comp=Z,9.4nm,1.1s
G23K Bananza Creek 83.44 21 IAmb IAmb 15 01 32.0
comp=Z,12nm,1.3s
CCB Clear Creek Bu 83.45 23 **P** **15 00 40.9 +0.2**
CCB IAmb IAmb 15 00 53.7
comp=Z,12nm,1.0s
D22K Ayikyak River 83.49 19 IAmb IAmb 15 01 16.7
comp=Z,12nm,1.0s
COLD Coldfoot 83.59 21 IAmb IAmb 15 01 33.1
comp=Z,7.6nm,1.1s
BVAR Borovoye Array 83.73 324 P **P** **15 00 42.4 0.0**
comp=Z,6.4nm,0.9s,baz=104,slow=6.3,SNR=28
BVAR LR LR 15 39 23.5
comp=Z,260nm,18.7s,baz=98,slow=37
comp=Z,6.4nm,0.9s
BORK Borovoye 83.78 324 **P** **15 00 43.0 +0.3**
BORK IAmb IAmb 15 00 49.3
comp=Z,12nm,1.0s
IL31 83.86 24 IAmb IAmb 15 00 55.4
comp=Z,11nm,0.9s
ILAR Eielson Array 83.86 24 P **P** **15 00 42.8 -0.1**
comp=Z,5.3nm,0.7s,baz=253,slow=4.4,SNR=34
ILAR LR LR 15 36 53.0
comp=Z,236nm,18.4s,baz=258,slow=35
comp=Z,5.3nm,0.7s
ILAR Eielson Array 83.86 24 P **P** **15 00 41.9 -1.0**
H24K Noodor Dome 83.88 22 IAmb IAmb 15 00 57.3
comp=Z,7.7nm,1.0s
MAW Mawson 83.90 202 LR LR 15 34 27.3
comp=Z,232nm,21.4s,baz=74,slow=33
E23K Chandalar 84.14 20 IAmb IAmb 15 00 58.6
comp=Z,7.1nm,0.9s
D23K Nanushuk River 84.17 19 IAmb IAmb 15 01 20.5
comp=Z,14nm,1.1s
DOT Dot Lake 84.63 25 IAmb IAmb 15 01 00.8
comp=Z,12nm,1.0s
D24K Happy Valley 84.86 19 IAmb IAmb 15 01 03.0
comp=Z,12nm,1.1s
HRA Herat 86.20 305 IAmb IAmb 15 00 57.1
comp=Z,12nm,1.3s
QSPA South Pole Qui 86.47 180 P **P** **15 00 55.9 -0.2**
comp=Z,4.8nm,1.0s,baz=328,slow=3.0,SNR=9.4
comp=Z,4.8nm,1.0s
QSPA South Pole Qui 86.47 180 P **P** **15 00 57.9 +1.8**
QSPA IAmb IAmb 15 01 08.4
comp=Z,19nm,1.3s
C27K Jago River 86.72 19 IAmb IAmb 15 01 39.5
comp=Z,23nm,1.6s
M29M Somme Creek 86.74 27 IAmb IAmb 15 01 11.6
comp=Z,9.5nm,0.9s
I28M Miner Creek 86.87 24 IAmb IAmb 15 02 09.8
comp=Z,20nm,1.6s
L29M L29M 87.05 26 IAmb IAmb 15 01 09.0
comp=Z,12nm,0.9s
F28M old Crow 87.47 22 IAmb IAmb 15 01 16.5
comp=Z,8.0nm,0.9s
INK Inuvik 89.95 22 LR LR 15 40 21.3
comp=Z,348nm,18.9s,baz=279,slow=35
DLBC Dease Lake 90.16 32 LR LR 15 35 31.1
comp=Z,305nm,19.7s,baz=254,slow=32
BBB Bella Bella 90.64 38 LR LR 15 36 27.8
comp=Z,358nm,18.7s,baz=246,slow=32
AKTO Aktyubinsk 90.91 320 LR LR 15 43 52.9
comp=Z,220nm,18.6s,baz=63,slow=37
ARTI Arti 91.14 326 LR LR 15 44 12.5
comp=Z,271nm,18.7s,baz=100,slow=37
YBH Yreka Blue Hor 93.80 49 LR LR 15 35 26.5
comp=Z,46nm,21.4s,baz=296,slow=30
KIRV Kirov 96.01 328 LR LR 15 44 45.4
comp=Z,710nm,21.6s,baz=90,slow=35
NVAR Mina Array Bea 97.18 52 LR LR 15 37 28.8
comp=Z,548nm,21.1s,baz=270,slow=30
BELG Belogornoye 97.42 322 LR LR 15 46 53.3
comp=Z,244nm,19.7s,baz=82,slow=36
NEW Newport 97.65 42 LR LR 15 38 50.8
comp=Z,244nm,20.3s,baz=287,slow=31
YKA Yellowknife Ar 97.75 27 P Pdif 15 01 50.2 +1.9
comp=Z,0.7nm,0.8s,baz=286,slow=5.5,SNR=10
YKA LR LR 15 38 13.5
comp=Z,304nm,21.5s,baz=294,slow=31
comp=Z,0.7nm,0.8s
PFO Pinyon Flats O 98.80 57 LR LR 15 38 22.1
comp=Z,176nm,20.9s,baz=268,slow=30
LPAZ La Paz 141.58 122 PKP **PKPdf** **15 07 45.9 -0.7**
comp=Z,2.2nm,1.0s,baz=228,slow=1.4,SNR=4.9
TORD Torodi Ar. Bea 142.76 287 PKhKP PKPpre 15 07 43.2
comp=Z,0.5nm,0.8s,baz=131,slow=2.1,SNR=4.2
DBIC Dimbokro 150.09 277 PKPbc **PKiKP** **15 08 06.2 -0.1**
comp=Z,12nm,1.1s,baz=14,slow=2.9,SNR=4.1

*NOU **05** 14:49:32.0, 37°.92S×176°.27E, h212km, MLv3.5/12, North Island, New Zealand*

*WEL **05** 14:49:32.5±0.8, 38˚S±5˚×17˚6E±˚, h214km±6km, M2.7/19, MLv2.7/19, Error ellipse: s-maj=7.7km s-min=6.7km az=121.7, confirmed*

ISC 05 14:49:26.4±2.0**, 37˚.79S**±0˚.07×**176˚.44E**±0˚.07**, h254**km±11km**, n87, σ1ˢ.83**/101**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OMRZ	**Omania**	**0.32**	**190**	P	**Pn**	**14 50 00.6**	**+1.3**
URZ	**Urewera**	**0.70**	**132**	P	**Pn**	**14 50 01.3**	**+0.9**
URZ	**Urewera**	**0.70**	**132**	S	**S**	**14 50 24.0**	**-3.2**
URZ	**Urewera**	**0.70**	**132**	P	**Pn**	**14 50 01.3**	**+0.9**
URZ				S	**S**	**14 50 23.6**	**-3.6**
MUGZ	**Murupara**	**0.73**	**159**	P	**Pn**	**14 50 01.7**	**+1.2**
MUGZ				S	**S**	**14 50 26.3**	**-1.2**
TOZ	**Tahuroa Road**	**0.75**	**274**	P	**Pn**	**14 50 01.7**	**+1.1**
TLZ	**Tolley Road**	**0.89**	**233**	P	**Pn**	**14 50 03.1**	**+1.7**
RTZ	**Ruatahuna**	**0.93**	**153**	P	**Pn**	**14 50 03.1**	**+1.6**
RTZ				S	**S**	**14 50 27.8**	**-1.4**
RUGZ	**Raukumara Rang**	**0.99**	**100**	P	**Pn**	**14 50 02.7**	**+0.7**
RUGZ				S	**S**	**14 50 25.8**	**-4.0**
MWZ	**Matawai**	**1.01**	**123**	P	**Pn**	**14 50 03.4**	**+1.4**
MWZ				S	**S**	**14 50 28.4**	**-1.5**
RAGZ	**Rawiri**	**1.04**	**133**	P	**Pn**	**14 50 04.1**	**+1.9**
RAGZ				S	**S**	**14 50 28.4**	**-1.9**
HAZ	**Te Kaha**	**1.06**	**89**	P	**Pn**	**14 50 03.2**	**+1.1**
HAZ				S	**S**	**14 50 27.4**	**-2.9**
MTHZ	**Maungataniwha**	**1.10**	**164**	P	**Pn**	**14 50 04.2**	**+1.7**
MTHZ				S	**S**	**14 50 31.4**	**+0.4**
SNGZ	**Shannon Statio**	**1.22**	**145**	P	**Pn**	**14 50 05.4**	**+2.3**
SNGZ				S	**S**	**14 50 30.8**	**-1.3**
RAHZ	**Arahi**	**1.23**	**156**	P	**Pn**	**14 50 05.7**	**+2.5**
RAHZ				S	**S**	**14 50 32.5**	**+0.2**
TWGZ	**Tauwhareparae**	**1.27**	**108**	P	**Pn**	**14 50 03.4**	**-0.2**
TWGZ				S	**S**	**14 50 31.9**	**-0.9**
TKGZ	**Te Karaka**	**1.28**	**121**	S	**S**	**14 50 31.3**	**-1.4**
PKGZ	**Pakihiroa**	**1.30**	**94**	P	**Pn**	**14 50 06.0**	**+2.3**
NMHZ	**Naumai**	**1.33**	**168**	P	**Pn**	**14 50 06.7**	**+2.7**
NMHZ				S	**S**	**14 50 33.8**	**+0.2**
BKZ	**Black Stump Fm**	**1.37**	**178**	P	**Pn**	**14 50 05.8**	**+1.6**
BKZ	**Black Stump Fm**	**1.37**	**178**	P	**S**	**14 50 32.0**	**-2.1**
BKZ	**Black Stump Fm**	**1.37**	**178**	P	**Pn**	**14 50 05.8**	**+1.6**
BKZ				S	**S**	**14 50 31.8**	**-2.2**
RIGZ	**Rimuhau**	**1.38**	**132**	P	**Pn**	**14 50 06.9**	**+2.6**
RIGZ				S	**S**	**14 50 33.3**	**-0.8**
NTVZ	**North Tongarir**	**1.44**	**205**	P	**Pn**	**14 50 06.9**	**+2.1**
WIAZ	**Waiheke Island**	**1.44**	**313**	P	**Pn**	**14 50 06.5**	**+1.7**
TMVZ	**Te Maari**	**1.44**	**203**	P	**Pn**	**14 50 06.7**	**+1.9**
HIZ	**Hauiti**	**1.45**	**240**	P	**Pn**	**14 50 06.7**	**+2.1**
HIZ	**Hauiti**	**1.45**	**240**	P	**Pn**	**14 50 06.7**	**+2.1**
OTVZ	**Oturere**	**1.50**	**204**	P	**Pn**	**14 50 07.2**	**+2.0**
SNVZ	**South Ngauruho**	**1.53**	**204**	P	**Pn**	**14 50 07.5**	**+2.0**
ARHZ	**Aropaoanui**	**1.53**	**164**	P	**Pn**	**14 50 08.0**	**+2.7**
WMGZ	**Waiomatatini S**	**1.56**	**92**	P	**Pn**	**14 50 08.0**	**+2.5**
TUVZ	**Tukino**	**1.60**	**203**	P	**Pn**	**14 50 07.8**	**+1.8**
KWHZ	**Kaweka Forest**	**1.63**	**181**	P	**Pn**	**14 50 08.4**	**+2.3**
MCHZ	**McNeill Hill**	**1.66**	**173**	P	**Pn**	**14 50 09.0**	**+2.7**
MOVZ	**Moawhango**	**1.70**	**198**	P	**Pn**	**14 50 08.2**	**+1.5**
PKVZ	**Pokaka**	**1.73**	**210**	P	**Pn**	**14 50 08.6**	**+1.8**
MTVZ	**Mangateitei**	**1.77**	**205**	P	**Pn**	**14 50 09.0**	**+1.8**
KRHZ	**Kereru**	**1.85**	**182**	P	**Pn**	**14 50 09.9**	**+2.1**
VRZ	**Vera Road**	**1.88**	**224**	P	**Pn**	**14 50 10.5**	**+2.5**
KAHZ	**Kahuranaki**	**2.03**	**171**	P	**Pn**	**14 50 12.0**	**+2.6**
PNHZ	**Pukenui**	**2.13**	**185**	P	**Pn**	**14 50 12.3**	**+1.9**
PXZ	**Pawanui**	**2.26**	**172**	P	**Pn**	**14 50 13.9**	**+2.4**
WPHZ	**Waipukurau**	**2.27**	**180**	P	**Pn**	**14 50 13.9**	**+2.2**
TSZ	**Takapari Road**	**2.29**	**189**	P	**Pn**	**14 50 13.9**	**+2.0**
LREZ	**Lake Rotokare**	**2.31**	**223**	P	**Pn**	**14 50 15.0**	**+3.0**
PKE	**Pukeiti**	**2.38**	**233**	P	**Pn**	**14 50 15.7**	**+2.9**
PRHZ	**Porangahau**	**2.48**	**177**	P	**Pn**	**14 50 15.8**	**+2.1**
WCZ	**Waipu Caves**	**2.50**	**317**	P	**Pn**	**14 50 16.3**	**+2.4**
DVHZ	**Dannevirke**	**2.51**	**185**	P	**Pn**	**14 50 15.7**	**+1.7**
POWZ	**Post Office Ro**	**2.65**	**191**	P	**Pn**	**14 50 17.1**	**+1.7**
ANWZ	**Angora Road**	**2.67**	**179**	P	**Pn**	**14 50 16.2**	**+0.6**
PRWZ	**Pori Road**	**2.78**	**187**	P	**Pn**	**14 50 18.9**	**+2.1**
BFZ	**Birch Farm**	**2.89**	**183**	P	**Pn**	**14 50 19.8**	**+1.9**
BFZ	**Birch Farm**	**2.89**	**183**	P	**S**	**14 50 57.7**	**-1.1**
BFZ	**Birch Farm**	**2.89**	**183**	P	**Pn**	**14 50 19.7**	**+1.8**
MRZ	**Mangatainoka R**	**2.94**	**193**	P	**Pn**	**14 50 19.9**	**+1.4**
TIWZ	**Tintock**	**3.01**	**188**	P	**Pn**	**14 50 21.2**	**+2.0**
OGWZ	**Otaki Gorge**	**3.18**	**198**	P	**Pn**	**14 50 22.6**	**+1.6**
HOWZ	**Holdsworth Sta**	**3.19**	**193**	P	**Pn**	**14 50 22.4**	**+1.3**
KIW	**Kapiti Island**	**3.29**	**201**	P	**Pn**	**14 50 23.4**	**+1.2**
MTW	**Mount Morrison**	**3.44**	**192**	P	**Pn**	**14 50 25.0**	**+1.1**
CAW	**Cannon Point**	**3.48**	**197**	P	**Pn**	**14 50 25.7**	**+1.4**
DUWZ	**D'Urville Isla**	**3.59**	**212**	P	**Pn**	**14 50 26.4**	**+0.8**
PAWZ	**Paruwai Farm**	**3.67**	**192**	P	**Pn**	**14 50 27.7**	**+1.1**
WEL	**Wellington**	**3.72**	**200**	P	**Pn**	**14 50 28.4**	**+1.3**
MSWZ	**Moikau Station**	**3.74**	**194**	P	**Pn**	**14 50 28.2**	**+0.9**
SNZO	**South Karori**	**3.76**	**200**	P	**Pn**	**14 50 28.4**	**+0.9**
TCW	**Tory Channel**	**3.80**	**205**	P	**Pn**	**14 50 29.0**	**+1.0**
PLWZ	**Palliser**	**3.88**	**193**	P	**Pn**	**14 50 30.0**	**+1.0**
TUWZ	**Tuamarina**	**4.12**	**207**	P	**Pn**	**14 50 33.4**	**+1.7**
NNZ	**Nelson**	**4.16**	**214**	P	**Pn**	**14 50 32.2**	**+0.1**
QRZ	**Quartz Range**	**4.29**	**224**	P	**Pn**	**14 50 36.1**	**+2.4**
QRZ	**Quartz Range**	**4.29**	**224**	S	**S**	**14 51 25.0**	**-2.3**
QRZ	**Quartz Range**	**4.29**	**224**	P	**Pn**	**14 50 33.3**	**-0.4**
MRNZ	**Matariki Terra**	**4.59**	**217**	P	**Pn**	**14 50 38.5**	**+1.2**
THZ	**Tophouse**	**4.81**	**213**	P	**Pn**	**14 50 40.9**	**+0.9**
KHZ	**Kahutara**	**5.13**	**205**	P	**Pn**	**14 50 45.3**	**+1.5**
KHZ	**Kahutara**	**5.13**	**205**	S	**S**	**14 51 43.8**	**-1.7**
KHZ	**Kahutara**	**5.13**	**205**	P	**Pn**	**14 50 45.2**	**+1.5**
DSZ	**Denniston Nort**	**5.33**	**221**	P	**Pn**	**14 50 46.0**	**-0.3**
GVZ	**Greta Valley S**	**5.79**	**206**	P	**Pn**	**14 50 53.1**	**+1.2**
LTZ	**Lake Taylor**	**5.92**	**211**	P	**Pn**	**14 50 54.3**	**+0.7**
OXZ	**Oxford**	**6.47**	**210**	P	**Pn**	**14 51 00.7**	**+0.4**
MQZ	**McQueen's Vall**	**6.57**	**205**	P	**Pn**	**14 51 02.1**	**+0.4**
MHCZ	**Mount Hutt**	**6.83**	**211**	P	**Pn**	**14 51 05.6**	**+0.7**
TMZ	**Timaru**	**7.76**	**210**	P	**Pn**	**14 51 17.7**	**+1.1**

IDC 05 14:58:19.4±7.2**, 4˚.16S**×**150˚.74E, h133**km±47km**, mb3.1**/3**, mbtmp3.6**/4**, Error ellipse: s-maj=118.4km s-min=38.9km az=105.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.31**	**214**	P	Pn	14 59 51.0	+0.8
	3.8nm,0.3s,baz=303,slow=0.9,SNR=8.1						
PMG				S	Sn	15 01 01.0	-0.1
	8.4nm,0.4s,baz=346,slow=14,SNR=7.6						
WRA	**Warramunga Arr**	**22.40**	**224**	P	P	15 03 07.1	0.0
	1.4nm,0.7s,baz=50,slow=9.9,SNR=17						
	1.4nm,0.7s						
ASAR	**Alice Springs**	**25.30**	**218**	P	P	15 03 34.2	+0.4
	0.9nm,0.7s,baz=54,slow=8.9,SNR=26						
	0.9nm,0.7s						
MKAR	**Makanchi Array**	**78.50**	**319**	P	P	15 10 05.4	-0.5
	0.3nm,0.9s,baz=104,slow=3.6,SNR=1.8						
	0.3nm,0.9s						

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*IDC **05** 14:58:44.4±0.4, 48˚.76S×8˚.89W, h0km, mb4.7/15, mbtmp4.7/15, MS4.4/35, Error ellipse: s-maj=17.1km s-min=14.9km az=88.0*

*NEIC **05** 14:58:46.0±1.5, 48˚.9S±0˚.1×8˚.79W±0˚.08, h10km±1km, mb5.4/51, Mww5.1/6, Error ellipse: s-maj=21.4km s-min=3.5km az=157.0*

*MOS **05** 14:58:45.3±1.4, 48˚.72S×8˚.99W, h10km, mb5.5/17, Error ellipse: s-maj=15.1km s-min=11.4km az=76.3*

*GCMT **05** 14:58:49.0±0.2, 48˚.82S±0˚.01×8˚.70W±0˚.02, h21km, MW5.1/125, Moment Tensor Solution. s56,c71; s125,c189; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.54±.19; $M_{\theta\theta}$7.23±.17; $M_{\phi\phi}$-4.69±.14; $M_{r\theta}$-0.14±.25; $M_{\theta\phi}$0.01±.12; $M_{\phi r}$1.57±.30; Best double couple: $M_0$6.37500×10^{16} NP1:ϕ_s228.00000°, δ70.00000°, λ-160.00000°. NP2:ϕ_s131.00000°, δ71.00000°, λ-21.00000°. Principal axes: T 7.2320, Plg1.0000°, Azm180.0000°; N -1.7140, Plg62.0000°, Azm272.0000°; P -5.5180, Plg28.0000°, Azm90.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 14:58:46.2±0.3**, 48˚.76S**±0˚.06×**8˚.76W**±0˚.06**, h10**km**, n483, σ1ˢ.24**/446**, mb5.3**/56**, MS4.4**/36**, 17C-17D, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**21.96**	**180**	⇓P	**P**	**15 03 40.8**	**+1.2**
	comp=Z,38nm,1.0s						
VNA2	**Neumayer--Watz**	**22.25**	**179**	⇑P	**P**	**15 03 42.0**	**-0.8**
	comp=Z,12nm,0.8s,baz=352,slow=13						
VNA3	**Neumayer Olymp**	**22.56**	**181**	⇑P	**P**	**15 03 46.5**	**+0.4**
	comp=Z,31nm,0.8s						
SNAA	**Sanae**	**23.15**	**175**	⇓P	**P**	**15 03 52.1**	**-0.3**
	comp=Z,573nm,0.8s						
SNAA	**Sanae**	**23.15**	**175**	P	**P**	**15 03 52.0**	**-0.3**
	comp=Z,32nm,0.9s,baz=340,slow=9.1,SNR=30						
SNAA				LR	LR	15 10 38.6	
	comp=Z,986nm,20.7s,baz=10.0,slow=31						
	comp=Z,32nm,0.9s						
SNAA	**Sanae**	**23.15**	**175**		**P**	**15 03 52.0**	**-0.3**
SNAA	**Sanae**	**23.15**	**175**	c iP	**P**	**15 03 52.1**	**-0.3**
SNAA				pmax	pmax		
	comp=Z,72nm,1.1s						
TROLL	**Troll, Antarti**	**23.89**	**171**	P	**P**	**15 04 00.3**	**+0.5**
NVL	**N'lazarevskaya**	**24.12**	**163**	eP	**P**	**15 04 05.3**	**+3.6**
NVL				e		15 04 34.1	
NVL				ePPP	PPP	15 04 42.0	
NVL				e		15 07 48.1	
NVL				eS	**S**	**15 08 23.7**	**+4.7**
NVL				eSS	**SnSn**	**15 09 05.7**	**+5.7**
NVL				pmax	pmax		
	comp=Z,15nm,1.2s						
NVL				MLR	MLR		
	comp=Z,372nm,16.0s						
ELIB	**Princess Elisa**	**27.48**	**159**	dP	**P**	**15 04 32.7**	**+0.4**
	comp=Z,11nm,1.3s						
ELIB				dPP	**PnPn**	**15 05 15.4**	**-1.2**
SUR	**Sutherland**	**27.55**	**65**	LR	LR	15 12 42.6	
	comp=Z,1μm,18.3s,baz=222,slow=30						
SUR	**Sutherland**	**27.55**	**65**		**P**	**15 04 34.2**	**+0.9**
SUR				IAmb	IAmb	15 04 35.8	
	comp=Z,66nm,1.0s						
BELA	**Belgrano 2**	**30.83**	**190**	P	**P**	**15 05 00.6**	**-1.2**
EFI	**East Falkland**	**31.21**	**246**	P	**P**	**15 05 04.9**	**-0.4**
EFI	**East Falkland**	**31.21**	**246**	⇑eP	**P**	**15 05 04.9**	**-0.4**
EFI				pmax	pmax		
	comp=Z,90nm,1.2s						
BOSA	**Boshof**	**32.92**	**65**	P	**P**	**15 05 20.5**	**-0.2**
	comp=Z,24nm,0.8s,baz=223,slow=9.0,SNR=33						
BOSA				LR	LR	15 16 10.6	
	comp=Z,828nm,18.1s,baz=228,slow=32						
	comp=Z,24nm,0.8s						
PMSA	**Palmer Station**	**32.98**	**220**	LR	LR	15 15 54.8	
	comp=Z,599nm,20.8s,baz=92,slow=31						
WIN	**Windhoek**	**33.23**	**47**	P	**P**	**15 05 22.9**	**-0.6**
WIN				IAmb	IAmb	15 05 25.9	
	comp=Z,47nm,1.1s						
WIN	**Windhoek**	**33.23**	**47**	P	**P**	**15 05 23.0**	**-0.6**
WIN				pmax	pmax		
	comp=Z,47nm,1.1s						
KOOLE	**Kule**	**34.43**	**52**	i P	**P**	**15 05 33.8**	**-0.1**
KGCAE	**Kacgae**	**35.62**	**55**	i P	**P**	**15 05 44.4**	**+0.3**
KGCAE	**Kacgae**	**35.62**	**55**	P	**P**	**15 05 44.5**	**+0.3**
LBTB	**Lobatse**	**35.81**	**61**	LR	LR	15 18 07.0	
	comp=Z,542nm,20.1s,baz=219,slow=32						
LBTB	**Lobatse**	**35.81**	**61**	P	**P**	**15 05 42.3**	**-3.5**
LBTB				IAmb	IAmb	15 05 47.5	
	comp=Z,90nm,1.2s						
LBTB	**Lobatse**	**35.81**	**61**	P	**P**	**15 05 42.3**	**-3.5**
LBTB				pmax	pmax		
	comp=Z,90nm,1.3s						
GRTLG	**Ghanzi**	**36.31**	**52**	i P	**P**	**15 05 49.8**	**-0.3**
TSUM	**Tsumeb**	**36.34**	**45**	LR	LR	15 18 40.6	
	comp=Z,382nm,18.7s,baz=226,slow=33						
TSUM	**Tsumeb**	**36.34**	**45**		**P**	**15 05 49.7**	**-0.6**
KDWAN	**Kaudwane**	**36.55**	**58**	i P	**P**	**15 05 52.1**	**0.0**
LPHEP	**Lephephe**	**37.24**	**60**	i P	**P**	**15 05 57.8**	**-0.2**
CNLB	**Canela**	**37.44**	**286**	eP	**P**	**15 06 02.0**	**+2.4**
PLTB	**Pedras Altas**	**37.59**	**280**	eP	**P**	**15 06 01.1**	**+0.3**
MAJ01	**Sao Joao Batis**	**37.61**	**290**	eP	**P**	**15 06 02.1**	**+1.1**
ALF01	**Guarapari-ES**	**37.98**	**306**	eP	**P**	**15 06 06.5**	**+2.4**
KHWEE	**KHWEE**	**38.12**	**58**	i P	**P**	**15 06 05.5**	**0.0**
KHWEE	**KHWEE**	**38.12**	**58**	P	**P**	**15 06 05.3**	**-0.1**
CPSB	**Cacapava Do Su**	**38.37**	**282**	eP	**P**	**15 06 03.5**	**-3.8**
PET01	**Itanhaem-SP**	**38.82**	**295**	eP	**P**	**15 06 12.6**	**+1.4**
RIB01	**Linhares ES**	**38.87**	**308**	eP	**P**	**15 06 13.7**	**+2.1**
ABR01	**Abrolhos, BA**	**39.14**	**311**	eP	**P**	**15 06 15.9**	**+2.1**
TRQA	**Tornquist**	**39.38**	**265**		**P**	**15 06 14.3**	**-1.5**
TRQA	**Tornquist**	**39.38**	**265**	P	**P**	**15 06 14.3**	**-1.5**
TRQA				pmax	pmax		
	comp=Z,39nm,1.5s						
MAW	**Mawson**	**39.42**	**145**	P	**P**	**15 06 15.5**	**-0.2**
	comp=Z,13nm,0.9s,baz=210,slow=4.3,SNR=3.8						
	comp=Z,13nm,0.9s						
VAO	**Valinhos**	**39.61**	**297**	eP	**P**	**15 06 19.2**	**+1.3**
SOOWA	**Sowa**	**39.66**	**57**	i P	**P**	**15 06 18.1**	**-0.2**
SJMB	**Sao Joao De Ma**	**39.79**	**307**	eP	**P**	**15 06 21.4**	**+2.1**
H04S2	**CROZET ISLANDS**	**39.83**	**111**	T	T	15 49 16.1	
	baz=245,slow=76,SNR=40						
H04S3	**CROZET ISLANDS**	**39.84**	**111**	T	T	15 49 14.4	
	baz=245,slow=76,SNR=23						
H04S1	**CROZET ISLANDS**	**39.85**	**111**	T	T	15 49 15.7	
	baz=245,slow=76,SNR=35						
BROLN	**Tlhalogang**	**39.86**	**59**	i P	**P**	**15 06 19.7**	**-0.3**
BSCB	**Bom Sucesso**	**39.90**	**301**	eP	**P**	**15 06 22.1**	**+1.8**
H10S2	**ASCENSION HYDR**	**39.98**	**351**	T	T	15 48 59.9	
	baz=174,slow=74,SNR=23						
H10S3	**ASCENSION HYDR**	**39.99**	**351**	T	T	15 49 00.6	
	baz=46,slow=74,SNR=48						
PSAL	**Palomas, Salto**	**40.65**	**277**	eP	**P**	**15 06 26.3**	**0.0**
GUA01	**Guaratinga, BA**	**40.86**	**311**	eP	**P**	**15 06 29.3**	**+1.1**
FRTB	**Fartura**	**40.91**	**293**	eP	**P**	**15 06 29.7**	**+1.1**
H10N1	**ASCENSION HYDR**	**41.06**	**351**	T	T	15 50 32.2	
	baz=180						
H10N3	**ASCENSION HYDR**	**41.07**	**351**	T	T	15 50 35.0	
	baz=180						
H10N2	**ASCENSION HYDR**	**41.08**	**351**	T	T	15 50 33.9	
	baz=180						
KSANE	**Kasane**	**41.33**	**54**	i P	**P**	**15 06 31.8**	**-0.4**
KSANE	**Kasane**	**41.33**	**54**	P	**P**	**15 06 30.7**	**-1.4**
KSANE				IAmb	IAmb	15 06 34.1	
	comp=Z,47nm,0.9s						
PTGB	**Pitanga**	**41.44**	**290**	eP	**P**	**15 06 34.3**	**+1.3**
DIAM	**Diamantina, MG**	**41.46**	**305**	eP	**P**	**15 06 34.5**	**+1.3**
QSPA	**South Pole Qui**	**41.50**	**180**	P	**P**	**15 06 33.4**	**+0.2**
	comp=Z,22nm,0.9s,baz=216,slow=5.8,SNR=35						
QSPA				PcP	**PcP**	**15 08 29.8**	**-0.6**
	comp=Z,11nm,1.0s,baz=150,slow=0.5,SNR=5.9						
QSPA				LR	LR	15 22 07.0	
	comp=Z,949nm,21.2s,baz=198,slow=34						
	comp=Z,22nm,0.9s						
QSPA	**South Pole Qui**	**41.50**	**180**	P	**P**	**15 06 30.3**	**-2.9**
CMC01	**Camacan, BA**	**41.76**	**312**	eP	**P**	**15 06 37.6**	**+2.0**
NBIT	**Itapeh - BA**	**42.09**	**313**	eP	**P**	**15 06 40.3**	**+2.1**
PMNB	**Patos De Minas**	**42.80**	**301**	eP	**P**	**15 06 45.7**	**+1.6**
AY01	**Puyuhuapi**	**42.98**	**251**	P	**P**	**15 06 44.0**	**-1.2**
LL02	**Futaleuf**	**43.09**	**253**		**P**	**15 06 44.7**	**-1.5**
LL02				IAmb	IAmb	15 06 54.3	
	comp=Z,101nm,1.2s						
PLCA	**Paso Flores**	**43.53**	**256**	P	**P**	**15 06 49.0**	**-0.9**
	comp=Z,7.4nm,1.0s,baz=120,slow=5.0,SNR=12						
PLCA				LR	LR	15 23 28.2	
	comp=Z,397nm,19.4s,baz=126,slow=34						
	comp=Z,7.4nm,1.0s						
PLCA	**Paso Flores**	**43.53**	**256**	P	**P**	**15 06 48.7**	**-1.2**
PLCA	**Paso Flores**	**43.53**	**256**	P	**P**	**15 06 49.0**	**-0.9**
PLCA	**Paso Flores**	**43.53**	**256**	eP	**P**	**15 06 49.5**	**-0.4**
CPUP	**Villa Florida**	**43.64**	**283**	P	**P**	**15 06 50.3**	**-0.4**
	comp=Z,10nm,1.1s,baz=127,slow=9.1,SNR=8.6						
CPUP				LR	LR	15 21 58.8	
	comp=Z,208nm,20.2s,baz=104,slow=32						
	comp=Z,10nm,1.1s						
CPUP	**Villa Florida**	**43.64**	**283**	P	**P**	**15 06 50.4**	**-0.4**
CPUP	**Villa Florida**	**43.64**	**283**	P	**P**	**15 06 50.4**	**-0.4**
CPUP				pmax	pmax		
	comp=Z,18nm,1.2s						
CPUP	**Villa Florida**	**43.64**	**283**	eP	**P**	**15 06 50.4**	**-0.4**
ITRB	**Iturama**	**44.15**	**296**	eP	**P**	**15 06 56.2**	**+1.2**
IPMB	**Ipameri, GO**	**44.25**	**300**	eP	**P**	**15 06 55.9**	**+0.1**
JANB	**Januaria**	**44.47**	**307**	eP	**P**	**15 06 58.9**	**+1.3**
AMBA	**Amambai (Brazi**	**44.57**	**288**	eP	**P**	**15 06 59.1**	**+0.8**
LSZ	**Lusaka**	**45.03**	**55**	LR	LR	15 22 43.0	
	comp=Z,457nm,21.1s,baz=222,slow=32						
LSZ	**Lusaka**	**45.03**	**55**		**P**	**15 07 01.9**	**-0.2**
LSZ				IAmb	IAmb	15 07 04.3	
	comp=Z,111nm,1.8s						
LSZ	**Lusaka**	**45.03**	**55**	P	**P**	**15 07 01.9**	**-0.2**
LSZ				pmax	pmax		
	comp=Z,111nm,1.8s						
BDFB	**Brasilia**	**46.01**	**302**	P	**P**	**15 07 09.8**	**-0.1**
	comp=Z,20nm,1.0s,baz=118,slow=7.1,SNR=15						
BDFB				LR	LR	15 22 19.3	
	comp=Z,692nm,20.3s,baz=140,slow=31						
	comp=Z,20nm,1.0s						
AQDB	**Aquidauana**	**46.82**	**290**		**P**	**15 07 15.3**	**-0.8**
AQDB				IAmb	IAmb	15 07 19.0	
	comp=Z,24nm,1.1s						
AQDB	**Aquidauana**	**46.82**	**290**	eP	**P**	**15 07 16.9**	**+0.8**
SDBA	**SAO DESIDERIO**	**46.99**	**308**	eP	**P**	**15 07 17.6**	**0.0**
MT13	**San Alfonso**	**47.36**	**265**	P	**P**	**15 07 19.1**	**-1.3**
MT08	**Bocatoma Ro**	**47.37**	**265**		**P**	**15 07 19.4**	**-1.2**
MT08				IAmb	IAmb	15 07 24.9	
	comp=Z,39nm,1.2s						
AVFE	**Valle Fertil**	**47.42**	**270**	i P	**P**	**15 07 20.3**	**-0.5**
BO04	**La Punta**	**47.42**	**264**	P	**P**	**15 07 18.9**	**-1.9**
BO04				IAmb	IAmb	15 07 23.4	
	comp=Z,38nm,1.1s						
BDQN	**Bodoquena, MS**	**47.49**	**289**	eP	**P**	**15 07 20.9**	**-0.5**
NBPV	**Pedro Velho**	**47.81**	**323**	eP	**P**	**15 07 23.6**	**-0.2**
ACLC	**CERRO LA CRUZ**	**47.88**	**272**	i P	**P**	**15 07 23.5**	**-1.0**
PEL	**Peldehue**	**47.99**	**265**	P	**P**	**15 07 24.0**	**-1.2**
PEL	**Peldehue**	**47.99**	**265**	P	**P**	**15 07 24.0**	**-1.2**
PEL				pmax	pmax		
	comp=Z,74nm,1.2s						
ARAG	**Araguaiana, MT**	**48.14**	**298**	eP	**P**	**15 07 27.4**	**+1.1**
VA03	**San Esteban**	**48.14**	**266**	P	**P**	**15 07 26.1**	**-0.3**
AANI	**Anillaco**	**48.27**	**272**	i P	**P**	**15 07 27.4**	**-0.1**
PP1B	**Ponte de Pedra**	**48.49**	**293**	eP	**P**	**15 07 30.2**	**+1.1**
RCBR	**Riachuelo**	**48.59**	**323**	LR	LR	15 24 06.3	
	comp=Z,98nm,19.0s,baz=148,slow=31						
RCBR	**Riachuelo**	**48.59**	**323**	P	**P**	**15 07 29.8**	**-0.1**
RCBR				IAmb	IAmb	15 07 43.9	
	comp=Z,29nm,1.4s						
RCBR	**Riachuelo**	**48.59**	**323**	P	**P**	**15 07 29.8**	**-0.1**
RCBR				pmax	pmax		
	comp=Z,29nm,1.4s						
RCBR	**Riachuelo**	**48.59**	**323**	eP	**P**	**15 07 30.4**	**+0.5**
ACDV	**Cuesta del Vie**	**48.83**	**269**	i P	**P**	**15 07 32.0**	**+0.2**
NBPA	**Parau_RN**	**49.15**	**321**	eP	**P**	**15 07 33.5**	**-0.6**
VCA	**Vinchina**	**49.16**	**271**	i P	**P**	**15 07 34.4**	**0.0**
TINO	**Tinogasta**	**49.18**	**273**	i P	**P**	**15 07 34.8**	**+0.3**
CO03	**El Pedregal**	**49.44**	**267**	P	**P**	**15 07 35.7**	**-0.7**
CO03				IAmb	IAmb	15 07 39.6	
	comp=Z,43nm,1.4s						
SALV	**Santo Antonio**	**50.29**	**294**	eP	**P**	**15 07 44.7**	**+1.8**
LCO	**Las Campanas**	**50.63**	**269**	P	**P**	**15 07 44.2**	**-1.4**
LCO	**Las Campanas**	**50.63**	**269**	P	**P**	**15 07 44.3**	**-1.4**
LCO				pmax	pmax		
	comp=Z,26nm,1.1s						
SNDB	**Serra Nova Dou**	**50.83**	**301**	eP	**P**	**15 07 47.9**	**+1.0**
AC02	**Maricunga**	**51.03**	**273**	P	**P**	**15 07 48.5**	**-0.4**
AC02				IAmb	IAmb	15 07 53.2	
	comp=Z,65nm,1.8s						
SMTB	**Santa Maria do**	**51.38**	**308**	eP	**P**	**15 07 52.9**	**+1.8**
NBPS	**Pedro II - PI**	**52.24**	**317**	eP	**P**	**15 07 57.6**	**+0.1**
PTLB	**Pontes e Lacer**	**52.74**	**291**	eP	**P**	**15 08 01.9**	**+0.7**
SIV	**San Ignacio**	**53.54**	**289**	LR	LR	15 27 49.6	
	comp=Z,555nm,21.3s,baz=148,slow=33						
VNDA	**Vanda**	**53.86**	**177**	P	**P**	**15 08 08.9**	**+0.2**
	comp=Z,4.1nm,0.9s,baz=200,slow=6.8,SNR=6.4						
	comp=Z,4.1nm,0.9s						
PB06	**IPOC Station P**	**54.15**	**276**	P	**P**	**15 08 09.3**	**-2.4**
PB06				IAmb	IAmb	15 08 21.0	
	comp=Z,46nm,1.0s						
PDRB	**Porto dos Gac**	**54.27**	**296**	eP	**P**	**15 08 13.2**	**+0.8**
CLDB	**Colider**	**54.31**	**298**	eP	**P**	**15 08 13.6**	**+0.9**
PB05	**IPOC Station P**	**54.46**	**275**	P	**P**	**15 08 13.0**	**-0.9**
PB05				IAmb	IAmb	15 08 17.0	
	comp=Z,57nm,1.2s						
EDA	**Edea**	**54.86**	**23**	P	**P**	**15 08 16.8**	**+0.1**
EDA				IAmb	IAmb	15 08 18.5	
	comp=Z,47nm,1.3s						
PB01	**IPOC Station P**	**55.26**	**277**	P	**P**	**15 08 17.2**	**-2.5**
PB01				IAmb	IAmb	15 08 23.1	
	comp=Z,45nm,1.2s						
DBIC	**Dimbokro**	**55.30**	**5**	P	**P**	**15 08 19.4**	**-0.4**
	comp=Z,6.1nm,0.8s,baz=164,slow=6.6,SNR=4.1						
DBIC				LR	LR	15 25 35.8	
	comp=Z,530nm,21.6s,baz=193,slow=29						
	comp=Z,6.1nm,0.8s						
PB02	**IPOC Station P**	**55.33**	**277**	P	**P**	**15 08 18.0**	**-2.2**
PB02				IAmb	IAmb	15 08 23.7	
	comp=Z,35nm,0.9s						
PB08	**IPOC Station P**	**55.68**	**278**	P	**P**	**15 08 22.1**	**-1.0**
PB08				IAmb	IAmb	15 08 33.0	
	comp=Z,26nm,0.8s						
GO01	**Chusmiza**	**56.05**	**279**	IAmb	IAmb	15 08 29.0	
	comp=Z,43nm,1.1s						
HMBC	**Humberstone**	**56.07**	**278**	IAmb	IAmb	15 08 28.4	
	comp=Z,21nm,0.9s						
PB11	**IPOC Station P**	**56.28**	**278**	IAmb	IAmb	15 08 36.2	
	comp=Z,33nm,0.8s						
NPGB	**Novo Progresso**	**57.14**	**301**	eP	**P**	**15 08 33.9**	**+0.9**
PB16	**IPOC Station P**	**57.21**	**280**	IAmb	IAmb	15 08 46.7	
	comp=Z,30nm,1.0s						
LPAZ	**La Paz**	**57.81**	**282**	P	**P**	**15 08 36.6**	**-1.9**
	comp=Z,11nm,1.2s,baz=173,slow=5.5,SNR=10.0						
LPAZ				LR	LR	15 31 32.3	
	comp=Z,276nm,21.8s,baz=128,slow=34						
	comp=Z,11nm,1.2s						
LPAZ	**La Paz**	**57.81**	**282**	eP	**P**	**15 08 38.9**	**+0.4**
MBAR	**Mbarara**	**58.77**	**48**	LR	LR	15 31 45.9	
	comp=Z,446nm,19.5s,baz=208,slow=34						
MBAR	**Mbarara**	**58.77**	**48**	P	**P**	**15 08 44.8**	**+0.1**
MBAR				IAmb	IAmb	15 08 48.5	
	comp=Z,42nm,1.0s						
MBAR	**Mbarara**	**58.77**	**48**	d iP	**P**	**15 08 47.3**	**+2.6**
MBAR				pmax	pmax		
	comp=Z,55nm,1.1s						
ITTB	**Itaituba**	**59.54**	**302**	eP	**P**	**15 08 49.6**	**-0.2**
KMBO	**Kilima Mbogo**	**61.70**	**55**	LR	LR	15 34 44.7	
	comp=Z,736nm,18.6s,baz=280,slow=35						
KMBO	**Kilima Mbogo**	**61.70**	**55**	⇑eP	**P**	**15 09 06.8**	**+2.0**
TORD	**Torodi Ar. Bea**	**62.33**	**12**	P	**P**	**15 09 08.2**	**-0.5**
	comp=Z,7.3nm,1.1s,baz=197,slow=8.2,SNR=16						
TORD				LR	LR	15 30 18.2	
	comp=Z,275nm,21.8s,baz=163,slow=30						
	comp=Z,7.3nm,1.1s						
LODK	**Lodwar**	**64.55**	**50**		**P**	**15 09 23.2**	**-0.3**
MDP	**Montagnes des**	**65.87**	**311**	LR	LR	15 35 31.6	
	comp=Z,392nm,19.3s,baz=128,slow=34						
NNA	**Nana**	**66.65**	**279**	LR	LR	15 36 57.2	
	comp=Z,160nm,21.3s,baz=167,slow=34						
NNA	**Nana**	**66.65**	**279**	⇑eP	**P**	**15 09 39.1**	**+2.0**
NNA				pmax	pmax		
	comp=Z,79nm,1.2s						
FURI	**Furi**	**70.91**	**50**	LR	LR	15 38 52.4	
	comp=Z,541nm,20.3s,baz=202,slow=34						
ATAH	**Atahualpa**	**71.28**	**281**	LR	LR	15 40 30.4	
	comp=Z,120nm,21.7s,baz=179,slow=35						
TAM	**Tamanrasset**	**72.36**	**14**	P	**P**	**15 10 12.1**	**-0.1**
TAM	**Tamanrasset**	**72.36**	**14**	P	**P**	**15 10 12.1**	**-0.1**
TAM				pmax	pmax		
	comp=Z,25nm,0.5s						
ATD	**Arta Tunnel**	**75.29**	**53**	LR	LR	15 40 59.6	
	comp=Z,26nm,21.9s,baz=194,slow=34						
OTAV	**Otavalo**	**76.91**	**286**		**P**	**15 10 39.3**	**0.0**
OTAV				IAmb	IAmb	15 10 44.4	
	comp=Z,60nm,1.6s						
OTAV	**Otavalo**	**76.91**	**286**	P	**P**	**15 10 39.3**	**0.0**
OTAV				pmax	pmax		
	comp=Z,60nm,1.7s						
OTAV	**Otavalo**	**76.91**	**286**	eP	**P**	**15 10 39.3**	**0.0**
ROSC	**El Rosal**	**77.88**	**292**	LR	LR	15 44 56.1	
	comp=Z,164nm,18.0s,baz=197,slow=36						
H08S1	**Diego Carcia H**	**78.52**	**88**	T	T	16 37 09.0	
	baz=225,slow=76,SNR=4.0						
H08S2	**Diego Garcia H**	**78.53**	**89**	T	T	16 37 08.0	
	baz=225,slow=76,SNR=3.2						
H08S3	**Diego Garcia H**	**78.53**	**88**	T	T	16 37 09.0	
	baz=225,slow=76,SNR=3.6						
MDT	**Midelt**	**81.29**	**4**	LR	LR	15 42 45.8	
	comp=Z,565nm,18.9s,baz=226,slow=32						
MD31	**MD31**	**81.34**	**3**	P	**P**	**15 11 02.5**	**-0.1**
MD01	**Midelt array s**	**81.34**	**3**		**P**	**15 11 03.6**	**+1.0**
PBDV	**Barranco-do-Ve**	**85.63**	**1**	eP	**P**	**15 11 26.7**	**+2.2**
KEST	**Kesra**	**85.65**	**15**	P	**P**	**15 11 24.9**	**+0.3**
	comp=Z,14nm,1.0s,baz=249,slow=2.3,SNR=10						
	comp=Z,14nm,1.0s						
KEST	**Kesra**	**85.65**	**15**		**P**	**15 11 26.5**	**+1.9**
KEST				IAmb	IAmb	15 11 28.5	
	comp=Z,21nm,1.1s						
PVAQ	**Vaqueiros**	**85.79**	**1**	eP	**P**	**15 11 27.6**	**+2.4**
MUN	**Mundaring**	**85.82**	**136**	P	**P**	**15 11 25.7**	**-0.1**
	comp=Z,36nm,1.1s						
PCVE	**Castro Verde**	**86.02**	**1**	eP	**P**	**15 11 28.7**	**+2.4**
PBAR	**Barrancos**	**86.57**	**1**	eP	**P**	**15 11 31.4**	**+2.4**

RAYN Ar Rayn 86.72 48 P P 15 11 32.1 +1.9
RAYN IAmb IAmb 15 11 33.8
comp=Z,27nm,1.1s
RAYN Ar Rayn 86.72 48 P P 15 11 32.1 +1.9
RAYN pmax pmax
comp=Z,27nm,1.1s
KLBR Kellerberrin 86.85 137 P P 15 11 30.3 -0.6
comp=Z,39nm,1.0s
EVO Evora 86.92 1 eP P 15 11 34.4 +3.7
BLDU Ballidu 87.19 135 P P 15 11 32.8 +0.2
comp=Z,48nm,1.2s
PARRA Arraiolos 87.20 1 eP P 15 11 34.8 +2.7
EIL Elat 87.30 37 LR LR 15 47 27.1
comp=Z,290nm,20.7s,baz=208,slow=34
PMRV Marv??o 87.82 1 eP P 15 11 37.5 +2.4
RPZ Rata Peaks 87.91 180 LR LR 15 48 52.2
comp=Z,98nm,19.4s,baz=150,slow=34
ESDC Sonseca Array 88.16 4 P P 15 11 36.5 -0.2
comp=Z,3.2nm,0.9s,baz=179,slow=4.6,SNR=12
ESDC LR LR 15 46 52.1
comp=Z,219nm,20.0s,baz=38,slow=33
comp=Z,3.2nm,0.9s
MORW Morawa 88.18 134 P P 15 11 34.9 -2.4
comp=Z,24nm,1.1s
JTS Las Juntas de 88.72 287 d iP P 15 11 42.8 +2.8
JTS pmax pmax
comp=Z,32nm,2.1s
KMBL Kambalda 88.87 140 P P 15 11 40.5 -0.1
comp=Z,9.7nm,1.6s
KARP Karpathos 89.82 29 P P 15 11 46.1 +1.5
comp=Z,103nm,1.1s
ASF Jabal al Asfar 90.29 37 LR LR 15 51 20.6
comp=Z,229nm,18.4s,baz=201,slow=35
TIP Timpagrande 90.43 20 IAmb IAmb 15 11 50.5
comp=Z,33nm,1.2s
TIP Timpagrande 90.43 20 P P 15 11 49.1 +1.7
MMAI Mount Meron Ar 90.44 36 P P 15 11 49.1 +1.4
comp=Z,0.5nm,0.3s,baz=212,slow=7.8,SNR=5.4
MMAI LR LR 15 51 08.9
comp=Z,77nm,18.6s,baz=126,slow=35
comp=Z,0.5nm,0.3s
URZ Urewera 93.20 185 LR LR 15 50 04.9
comp=Z,136nm,19.5s,baz=144,slow=33
PALK Pallekele 95.05 85 LR LR 15 46 56.1
comp=Z,150nm,19.3s,baz=203,slow=30
STKA Stephens Creek 95.46 155 LR LR 15 53 55.1
comp=Z,72nm,18.4s,baz=203,slow=31
BRTR Keskin Array B 95.76 32 P P 15 12 13.2 +1.0
comp=Z,2.0nm,0.9s,baz=188,slow=6.0,SNR=8.1
BRTR PP PP 15 16 01.7 -2.7
comp=Z,1.9nm,1.0s,baz=204,slow=8.9,SNR=6.9
BRTR LR LR 15 53 51.7
comp=Z,102nm,21.8s,baz=144,slow=34
comp=Z,2.0nm,0.9s
BRTR Keskin Array B 95.76 32 i P P 15 12 14.1 +2.0
BRTR pmax pmax
comp=Z,2.0nm,1.0s
BR131 Keskin Array S 95.76 32⇑ iP P 15 12 13.9 +1.8
MLR Muntele Rosu 98.64 24 LR LR 15 56 59.4
comp=Z,238nm,20.2s,baz=51,slow=35
TBI Tubuai 100.09 216 eLR LR 15 45 00.9
comp=Z,934nm,29.2s
TBI eLR LR 15 45 02.6
comp=Z,655nm,30.5s
LANS Liptovska Anna 100.53 18 eP Pdif 15 12 38.7 +5.6
LANS Liptovska Anna 100.53 18 ePDIFF Pdif 15 12 38.7 +5.6
ASAR Alice Springs 100.55 146 P Pdif 15 12 33.7 -0.4
comp=Z,0.4nm,0.9s,baz=200,slow=3.8,SNR=4.2
ASAR PP PP 15 16 43.7 +3.7
comp=Z,0.9nm,1.0s,baz=190,slow=6.6,SNR=4.2
ASAR PKiKP PKiKP 15 17 00.0 -0.6
comp=Z,0.3nm,0.8s,baz=195,slow=1.9,SNR=5.3
ASAR PKKPbc PKKPbc 15 28 44.5 -2.4
comp=Z,0.2nm,0.8s,baz=40,slow=2.0,SNR=4.8
KBZ Khabaz 102.64 36 PP PP 15 16 53.9 -2.7
comp=Z,1.2nm,0.8s,baz=211,SNR=3.7
KBZ Khabaz 102.64 36⇑ eP Pdif 15 12 46.0 +3.4
KBZ pmax pmax
comp=Z,5.0nm,1.5s
MAK Makhachkala 103.85 39 eP Pdif 15 12 48.6 +0.6
MAK i 15 17 02.4
MAK e 15 23 26.3
MAK pmax pmax
comp=Z,142nm,1.4s
WRA Warramunga Arr 104.10 144 PKKPbc PKKPbc 15 28 34.9 -1.6
comp=Z,0.4nm,0.8s,baz=19,slow=2.5,SNR=5.4
AKASG Malin Array Be 104.30 24 PP PKiKP 15 17 06.7 +0.4
comp=Z,0.2nm,0.3s,baz=209,slow=7.4,SNR=6.0
PPT2 Papeete2 105.31 219 eLR LR 15 47 31.6
comp=Z,182nm,22.0s
PPT2 eLR LR 15 47 34.6
comp=Z,204nm,32.0s
TAOE Nuku Hiva Isla 108.53 231 eLR LR 15 49 06.9
comp=Z,150nm,26.5s
DZM Mont Dzumac 109.36 175 eLR LR 15 49 24.7
comp=Z,272nm,24.2s
OBN Obninsk 110.26 26 i PKiKP PKiKP 15 17 18.4 +1.3
OBN e 15 17 51.4
OBN ePPP PPP 15 20 11.4
OBN pmax pmax
comp=Z,3.0nm,0.6s
TXAR Lajitas Array 114.51 287 PKKPbc PKKPbc 15 28 03.8 +0.2
comp=Z,0.6nm,0.9s,baz=336,slow=2.7,SNR=5.2
KSH2 Kashi 114.86 59 PKP PKiKP 15 17 26.9 +0.2
CMAR Chiang Mai Arr 115.27 91 PKP PKPdf 15 17 27.6 -0.3
comp=Z,2.4nm,0.9s,baz=239,slow=3.5,SNR=13
CMAR Chiang Mai Arr 115.27 91 PKPdf 15 17 26.9 -1.0
CMAR Chiang Mai Arr 115.27 91 i PKiKP PKPdf 15 17 26.9 -1.0
AAK Ala-Archa 116.65 55⇑ iPKIKP PKPdf 15 17 29.3 -0.8
KIRV Kirov 117.12 30 ‖ iPKIKP PKiKP 15 17 31.8 +1.6
ANMO Albuquerque 120.03 290 ‖ iPKIKP PKPdf 15 17 36.0 -0.9
LVZ Lovozero 120.80 18⇑ iPKIKP PKiKP 15 17 38.3 +1.1
BORK Borovoye 121.46 44 ‖ iPKIKP PKPdf 15 17 38.6 -0.1
BVAR Borovoye Array 121.48 44 PKP PKPdf 15 17 38.3 -0.5
comp=Z,1.8nm,0.9s,baz=298,slow=3.2,SNR=6.4
BVAR PP PP 15 19 07.7 -3.8
comp=Z,2.4nm,1.0s,baz=223,slow=6.1,SNR=6.4
PZH PanZhiHua 122.71 86 PKP PKPdf 15 17 41.2 -1.0
MK31 Makanchi Array 123.58 56 c iPKIKP PKPdf 15 17 42.7 -0.4
MKAR Makanchi Array 123.58 56 PKP PKPdf 15 17 42.6 -0.5
comp=Z,1.5nm,0.9s,baz=252,slow=3.6,SNR=12
MKAR PP PP 15 19 24.1 -1.7
comp=Z,1.9nm,1.1s,baz=210,slow=4.2,SNR=5.1
KURBB Kurchatov Arra 123.92 50 PKP PKPdf 15 17 43.0 -0.5
comp=Z,1.7nm,0.2s,baz=235,slow=3.0,SNR=5.7
KURBB PP PP 15 19 25.4 -2.6
comp=Z,0.6nm,0.6s,baz=237,slow=6.8,SNR=5.8
KURK Kurchatov 124.02 50 ‖ iPKIKP PKiKP 15 17 44.8 +0.8
WMQ Urumqi 124.83 61 ePKP PKiKP 15 17 46.6 +0.7
PDAR Pinedale Array 126.77 295 PKP PKPdf 15 17 48.3 -1.3
comp=Z,1.4nm,0.7s,baz=124,slow=3.6,SNR=15
PDAR PP PP 15 19 48.0 +0.5
comp=Z,0.8nm,1.0s,baz=90,slow=3.0,SNR=3.7
TCUT Toone Canyon 126.92 293 PKiKP 15 17 50.0 -0.4
FCC Fort Churchill 127.72 319 PKPdf 15 17 47.1 -3.4
FCC Fort Churchill 127.72 319 PKiKP PKPdf 15 17 47.1 -3.4
DGZ Jazzator, Alta 128.06 55 ‖ iPKIKP PKiKP 15 17 52.5 +0.2
ZALV Zalesovo Beam 128.99 49 PKP PKPdf 15 17 52.3 -0.8
comp=Z,0.6nm,0.5s,baz=224,slow=4.1,SNR=5.1
ZALV PP PP 15 20 01.6 0.0
comp=Z,0.4nm,0.5s,baz=239,slow=4.3,SNR=3.9
GTA2 Gaotai 129.60 72 ePKP PKPdf 15 17 54.9 -0.1
NVAR Mina Array Bea 129.64 286 PKP PKPdf 15 17 54.3 -0.9
comp=Z,1.8nm,0.9s,baz=145,slow=5.4,SNR=6.9
LZH Lanzhou 130.21 78 ePKP PKiKP 15 17 57.6 +0.5
XAN Xi'an 132.30 84 PKP PKiKP 15 18 01.1 -0.1
TCU Taichung 133.55 103 PKHKP PKPpre 15 17 50.0
KNGR Kungurtug, Tuv 134.10 58⇑ ePKIKP PKPdf 15 18 02.6 -0.5
NRIK Norilʹsk 136.62 31⇑ ePKIKP PKiKP 15 18 07.9 -0.9
BTO2 Baotou 136.75 77 ePKP PKPdf 15 18 05.8 -2.6
BTO2 PPMZ
comp=Z,1μm,6.3s
NJ2 Nanjing 137.64 93 ePKP PKPdf 15 18 10.2 +0.1
HHC Hu-ho-hao-te 137.89 78 ePKP PKPdf 15 18 06.1 -4.3
SONM Songino Array 138.03 66 PKP PKPdf 15 18 09.3 -1.2
comp=Z,2.9nm,0.8s,baz=260,slow=0.9,SNR=14
SONM Songino Array 138.03 66 PKPdf PKPdf 15 18 09.6 -0.9
SONM Songino Array 138.03 66 PKiKP PKPdf 15 18 09.6 -0.9
TLY Talaya 138.05 59⇑ ePKIKP PKPdf 15 18 10.3 +0.1
YKA Yellowknife Ar 138.41 318 PKhKP PKPpre 15 17 56.5
comp=Z,0.3nm,0.8s,baz=96,slow=2.5,SNR=7.0
YKA PKP PKPdf 15 18 10.1 -0.5
comp=Z,1.9nm,0.9s,baz=81,slow=1.2,SNR=16
YKA PP PP 15 21 05.5 +4.2
comp=Z,0.2nm,0.7s,baz=124,slow=6.3,SNR=3.8
ULN Ulaanbaatar 138.44 66 ‖ iPKIKP PKiKP 15 18 13.1 -0.3

C36M Paulatuk 143.26 328 P PKPdf 15 18 19.6 +0.6
baz=90
A36M Sachs Harbour 143.55 332 PKPdf PKPab 15 18 16.0 +0.1
A36M Sachs Harbour 143.55 332 P PKPdf 15 18 19.9 +0.4
baz=86
CIT Chita 143.90 62 ePKIKP PKPdf 15 18 19.6 -1.2
CIT e 15 18 28.0
CIT pmax pmax
comp=Z,80nm,1.5s
U35K Hyder 144.39 304 P PKPdf 15 18 21.0 -0.4
baz=104
WTLY Watson Lake, Y 144.57 312 P PKPdf 15 18 20.9 -0.8
baz=99
T35M Bob Quinn 144.75 306 P PKPdf 15 18 21.4 -0.7
baz=102
DLBC Dease Lake 144.92 309 P PKPbc 15 18 21.5 -0.2
baz=100,SNR=11
V35K Ketchikan 145.13 303 P PKPdf 15 18 22.3 -0.4
baz=104
S34M Telegraph Cree 145.40 307 P PKPab 15 18 23.4 +0.1
baz=100
R33M Jennings River 145.55 310 P PKPab 15 18 23.7 -0.3
baz=98
BOD Bodaibo 145.59 53 ePKIKP PKPdf 15 18 22.6 -0.8
BOD pmax pmax
comp=Z,45nm,1.8s
WRAK Wrangell Islan 145.77 305 P PKPbc 15 18 24.0 -0.3
baz=102
INCN Inchon 146.00 92 PKPdf PKPbc 15 18 25.5 -0.2
INCN Inchon 146.00 92 PKP2 PKPbc 15 18 25.5 -0.2
U33K Whale Pass 146.13 304 P PKPbc 15 18 25.2 -0.3
baz=102
T33K Petersburg 146.17 305 P PKPbc 15 18 24.8 -0.7
baz=101
P33M Teslin, Yukon 146.58 311 P PKPbc 15 18 26.5 -0.3
baz=96,SNR=5.6
HIA Hailar 146.75 69 ‖ ePKIKP PKPdf 15 18 25.0 -0.8
INK Inuvik 146.75 326 P PKPbc 15 18 26.4 -0.5
baz=83
N32M Quiet Lake 146.79 313 P PKPbc 15 18 27.2 -0.1
baz=94
KSRS Korea Array 146.84 93 PKPbc PKPbc 15 18 28.2 +0.1
comp=Z,6.5nm,0.8s,baz=247,slow=4.3,SNR=18
F31M Tsiigehtchic 146.94 325 P PKPbc 15 18 27.6 +0.1
baz=84
P32M Atlin 146.97 310 P PKPbc 15 18 27.9 0.0
baz=96
S32K Killisnoo 147.16 306 P PKPbc 15 18 28.0 -0.3
baz=98
G31M Satah River 147.20 324 P PKPbc 15 18 28.0 -0.2
baz=84
R32K Eaglecrest 147.23 308 P PKPbc 15 18 27.9 -0.7
baz=97
H31M Peel River 147.33 322 P PKPbc 15 18 28.1 -0.6
baz=86
M31M Drury Creek, Y 147.46 315 P PKPbc 15 18 28.6 -0.5
baz=91
SIT Sitka 147.50 305 P PKPbc 15 18 28.9 -0.4
baz=99
WHY Whitehorse 147.63 312 P PKPbc 15 18 29.2 -0.5
baz=93
SKAG Skagway 147.78 310 P PKPbc 15 18 29.9 -0.1
baz=95
G30M tAoh Zraii Nji 147.96 324 P PKPbc 15 18 29.7 -0.7
baz=82
N31M Braeburn, Yuko 148.10 314 P PKPbc 15 18 30.1 -0.8
baz=91
MAYO Mayo, Yukon 148.13 318 P PKPbc 15 18 30.5 -0.4
baz=88
I30M Mount Dempster 148.23 321 P PKPbc 15 18 30.7 -0.6
baz=85
O30N Mendenhall 148.23 312 P PKPbc 15 18 31.1 -0.1
baz=92,SNR=6.6
EPYK Eagle Plains 148.24 323 P PKPbc 15 18 31.1 0.0
baz=82
J30M Hart River 148.26 319 P PKPbc 15 18 30.9 -0.4
baz=86
E29M Blow River 148.34 327 P PKPbc 15 18 30.4 -0.9
baz=78
CN2 Changchun 148.34 81 PKPbc PKPbc 15 18 31.8 -0.2
CN2 SKKS 15 28 55.9
D28M Stokes Point 148.42 329 P PKPbc 15 18 31.2 -0.2
baz=76
M30M Minto, Yukon 148.58 316 PKPbc 15 18 31.8 -0.3
M30M Minto, Yukon 148.58 316 P PKPbc 15 18 32.2 +0.1
baz=88
N30M Aishikik Lake 148.73 313 P PKPbc 15 18 32.5 -0.1
baz=90
K29M Barlow Dome 148.84 318 PKPbc 15 18 32.6 -0.3
K29M Barlow Dome 148.84 318 P PKPbc 15 18 32.4 -0.4
baz=86
HYT Haines Junctio 148.93 312 P PKPbc 15 18 33.0 -0.1
baz=91
I29M Ogilvie Camp, 149.02 321 P PKPbc 15 18 32.7 -0.4
baz=82
J29N Klondike Camp 149.09 319 P PKPbc 15 18 33.2 -0.2
baz=84
L29M L29M 149.16 317 P PKPbc 15 18 33.7 +0.1
baz=86
D27M Malcolm River 149.20 329 P PKPbc 15 18 33.8 +0.3
baz=73
F28M Old Crow 149.23 326 P PKPbc 15 18 33.4 -0.2
baz=77
M29M Somme Creek 149.36 315 P PKPbc 15 18 33.9 -0.2
baz=87
YUK4 Talbot Arm 149.48 313 P PKPbc 15 18 34.2 -0.5
baz=89
DAWY Dawson 149.64 319 P PKPbc 15 18 34.6 -0.1
baz=84
I28M Miner Creek 149.68 321 P PKPbc 15 18 34.4 -0.4
baz=81
E27K Coleen River 149.72 327 P PKPbc 15 18 34.7 0.0
baz=74
TIXI Tiksi 150.00 25 PKPbc 15 18 33.4 -1.9
TIXI Tiksi 150.00 25 ‖ ePKIKP PKPbc 15 18 33.7 -1.6
C27K Jago River 150.00 330 P PKPbc 15 18 35.1 -0.3
baz=70
YUK8 Steele Glacier 150.02 313 P PKPbc 15 18 35.3 -0.7
baz=88,SNR=5.0
H27K Steamboat Moun 150.17 323 P PKPbc 15 18 35.4 -0.5
baz=78
O28M Mount Upton 150.25 312 P PKPbc 15 18 36.3 -0.3
baz=89
C26K Camden Bay 150.28 331 P PKiKP 15 18 36.2 -0.6
baz=68
PINM Pinnacle 150.29 311 P PKPbc 15 18 35.6 -0.8
baz=90
YUK3 Moose Creek 150.33 314 P PKPbc 15 18 35.9 -0.8
baz=86
I27K Kandik River 150.34 322 P PKPbc 15 18 35.8 -0.6
baz=79
BNX BinXian 150.39 79 ⇑ PKPbc PKPbc 15 18 36.1 -0.9
BVCY Beaver Creek 150.47 316 P PKPbc 15 18 35.9 -0.9
baz=85
F26K Sheenjek River 150.79 327 P PKPbc 15 18 37.0 -0.4
baz=72
CTG Chitna Glacier 150.80 313 P PKPbc 15 18 36.8 -0.9
baz=87
BCAR Beaver Creek A 150.82 317 PKPbc 15 18 37.2 -0.4
L27K Beaver Creek, 150.84 317 P PKPbc 15 18 36.8 -0.8
baz=83,SNR=5.1
G26K Porcupine Rive 150.87 325 P PKPbc 15 18 37.1 -0.4
baz=74
M27K Edge Creek, AK 150.95 315 P PKPbc 15 18 37.1 -1.0
baz=84
D25K Kavik River 150.98 330 P PKPbc 15 18 37.3 -0.5
baz=67
BMAR Burnt Mountain 151.03 326 PKPbc 15 18 37.6 -0.3
I26K Coal Creek Min 151.03 322 P PKPbc 15 18 37.5 -0.4
baz=78
MESA MESA 151.14 311 P PKPbc 15 18 37.4 -1.2
baz=88
E25K Arctic Village 151.16 328 P PKPbc 15 18 37.6 -0.6
baz=70
F25K Christian Rive 151.36 327 P PKPbc 15 18 38.3 -0.5
baz=71
MDJ Mudanjiang 151.39 82 PKPbc PKPdf 15 18 33.2 -0.1
M26K Nabesna, AK 151.46 316 P PKPbc 15 18 38.3 -0.8
baz=83
L26K Log Cabin Wild 151.53 317 P PKPbc 15 18 38.5 -0.7
baz=82
MCARA McCarthy VSAT 151.59 314 P PKPbc 15 18 38.6 -0.7
baz=85
SCRK Sand Creek 151.65 319 P PKPbc 15 18 38.2 -1.4
baz=79
CRQE Cirque 151.67 312 P PKPbc 15 18 38.7 -1.0
baz=86

HEH HeiHe 151.80 70 ePKPbc PKPbc 15 18 39.4 -0.8
BGLC Bering Glacier 151.81 311 P PKPbc 15 18 39.3 -0.5
baz=87
D24K Happy Valley 151.85 331 P PKPbc 15 18 39.4 -0.4
baz=64
PRP Porcupine Dome 151.94 323 P PKPbc 15 18 39.5 -0.7
baz=75
RIDG Independent Ri 152.07 319 P PKPbc 15 18 39.7 -0.8
baz=79,SNR=5.4
C23K Itkillik River 152.09 333 P PKPbc 15 18 39.9 -0.3
baz=61
J25K Salcha River, 152.11 321 P PKPbc 15 18 39.9 -0.6
baz=76
E24K Your Creek 152.19 329 P PKPbc 15 18 40.4 -0.2
baz=67
VLA Vladivostok 152.28 87 ‖ iPKIKP PKPdf 15 18 35.1 +0.4
N25K Chitina, Valde 152.31 314 P PKPbc 15 18 40.5 -0.6
baz=83
TOLK Toolik Lake Re 152.32 330 P PKPbc 15 18 40.5 -0.4
baz=64
G24K Hadweenzic Riv 152.34 326 P PKPbc 15 18 40.8 -0.2
baz=70
ZEA Zeya 152.36 63 ePKIKP PKiKP 15 18 41.6 0.0
ZEA pmax pmax
comp=Z,10.0nm,1.2s
KAIM Kayak Island 152.39 311 P PKPbc 15 18 40.9 -0.3
baz=86
BMRM Bremner River 152.39 313 P PKPbc 15 18 40.6 -0.7
baz=84
HARP HAARP 152.46 316 P PKPbc 15 18 41.1 -0.2
baz=81
K24K Donnelly Dome 152.47 319 P PKiKP 15 18 41.4 -0.2
baz=78
PAX Paxson 152.50 317 P PKiKP 15 18 41.7 -0.1
baz=79
D23K Nanushuk River 152.53 331 P PKPbc 15 18 41.2 -0.1
baz=62
E23K Chandalar 152.58 329 P PKiKP 15 18 41.7 -0.1
baz=65
B22K Teshekpuk Lake 152.65 335 P PKiKP 15 18 41.7 0.0
baz=56
ILAR Eielson Array 152.70 321 PKP PKPdf 15 18 33.2 -1.5
comp=Z,0.5nm,0.9s,baz=294,slow=1.9,SNR=4.7
ILAR PKPbc PKPbc 15 18 41.0 -0.8
comp=Z,3.8nm,0.8s,baz=353,slow=1.5,SNR=37
ILAR Eielson Array 152.70 321 15 18 40.6 -1.1
H24K Noodor Dome 152.78 324 P PKPbc 15 18 41.7 -0.2
baz=71
USRK Ussuriysk Ar. 152.80 85 PKPbc PKPbc 15 18 41.8 -0.8
comp=Z,4.5nm,0.8s,baz=246,slow=7.0,SNR=4.9
HDA Harding Lake 152.82 321 P PKPbc 15 18 41.8 -0.2
baz=75,SNR=5.2
POKR Poker Plat Res 152.82 322 P PKiKP 15 18 42.1 -0.1
baz=73
KLU Klutina 152.96 314 P PKiKP 15 18 42.7 0.0
baz=82
M24K Tolsona, Glenn 152.98 316 P PKiKP 15 18 42.7 0.0
baz=80
EYAK Cordova Ski Ar 152.99 312 P PKiKP 15 18 42.6 0.0
baz=84
MAJO Matsushiro 153.03 105 ‖ ePKIKP PKPdf 15 18 38.6 +2.5
MJAR Matsushiro Arr 153.03 105 PKPbc PKPbc 15 18 43.2 -0.2
comp=Z,6.2nm,0.8s,baz=228,slow=1.8,SNR=8.4
COLA College 153.06 322 P PKiKP 15 18 43.2 +0.5
baz=73
COLD Coldfoot 153.13 328 P PKPbc 15 18 42.5 -0.2
baz=66,SNR=7.3
D22K Ayikyak River 153.21 332 P PKiKP 15 18 43.3 +0.3
baz=60
G23K Bananza Creek 153.28 326 P PKiKP 15 18 43.3 +0.1
baz=67
E22K Anaktuvuk Pass 153.29 330 P PKPbc 15 18 42.1 -0.9
baz=62
DHY Denali Highway 153.33 318 P PKPbc 15 18 43.1 -0.3
baz=77
B21K Ikpikpuk River 153.39 334 P PKPbc 15 18 42.6 -0.5
baz=56
Q23K Middleton Isla 153.40 310 P PKiKP 15 18 43.7 +0.2
baz=85
YAK Yakutsk 153.46 44 ‖ ePKIKP PKPdf 15 18 35.9 +0.1
SCM Sheep Creek Mo 153.56 315 P PKPbc 15 18 43.5 -0.3
baz=80
I23K Minto, Yukon-K 153.59 323 P PKiKP 15 18 43.8 +0.1
baz=71
WAT6 Susitna Watana 153.60 317 P PKiKP 15 18 44.4 +0.3
baz=78
GLI Glacier Island 153.61 313 P PKiKP 15 18 44.3 +0.3
baz=82
NEA2 Nenana 153.65 322 P PKiKP 15 18 44.1 +0.2
baz=72
C21K Knifeblade Rid 153.70 333 P PKiKP 15 18 43.8 -0.2
baz=57
M23K Glacier View 153.75 315 P PKiKP 15 18 44.5 +0.2
baz=79
MCK McKinley 153.84 320 P PKiKP 15 18 44.2 -0.2
baz=74
P23K Montague Islan 153.87 311 P PKiKP 15 18 44.3 -0.2
baz=83
B20K Meade River 153.88 336 P PKiKP 15 18 44.5 +0.2
baz=52
WAT1 Susitna Watana 153.91 318 P PKiKP 15 18 44.6 0.0
baz=76
H22K Ishtalitna Cre 154.10 325 P PKiKP 15 18 45.2 +0.4
baz=67
KNK Knik Glacier 154.17 314 P PKiKP 15 18 45.4 +0.3
baz=79
MLY Manley 154.18 323 P PKiKP 15 18 45.2 +0.1
baz=69
KLR Kul'dur 154.28 74⇑ ePKIKP PKPdf 15 18 36.0 -1.4
F21K Alatna River 154.28 329 P PKiKP 15 18 45.6 +0.4
baz=62
PMR Palmer 154.45 315 P PKiKP 15 18 46.0 +0.4
baz=78
D20K Etivluk River 154.50 333 P PKiKP 15 18 45.7 0.0
baz=55
TRF Thorofare Moun 154.50 320 P PKiKP 15 18 46.1 +0.2
baz=73
BPAW Bear Paw Mtn. 154.60 321 P PKiKP 15 18 45.9 0.0
baz=71
G21K Allakaket 154.62 327 P PKiKP 15 18 45.7 -0.2
baz=63
E20K Nigu River 154.63 332 P PKiKP 15 18 46.2 +0.2
baz=56
H21K Melozitna Rive 154.74 325 P PKiKP 15 18 46.8 +0.6
baz=66
RC01 Rabbit Creek A 154.84 314 P PKiKP 15 18 46.6 +0.1
baz=79
M22K Willow 154.88 316 P PKiKP 15 18 47.1 +0.6
baz=77
SEW Seward 154.88 312 P PKiKP 15 18 47.4 +0.9
baz=81
IMAR Indian Mountai 154.95 326 PKPab 15 19 02.1 -0.1
O22K Cooper Landing 154.95 313 P PKiKP 15 18 47.5 +0.8
baz=80
D19K Kuna River 155.07 334 P PKPdf 15 18 47.0 +9.0
baz=53
C19K Lookout Ridge 155.11 335 P PKPdf 15 18 47.4 +9.4
baz=50,SNR=5.1
F20K Avaraat Lake 155.13 329 P PKPdf 15 18 47.7 +10
baz=59
CHUM Lake Minchumin 155.22 321 P PKPdf 15 18 48.6 +10
baz=70
SUA Susitna One 155.23 315 P PKPdf 15 18 48.2 +10
baz=77
E19K Redstone River 155.41 331 P PKPab 15 19 04.0 -0.1
baz=56
SKT Skwentna 155.47 317 P PKPab 15 19 03.6 -0.9
baz=75
PPLA Purkeypile 155.49 319 P PKPab 15 19 03.7 -1.0
baz=72
BRSE Bradley Lake S 155.58 311 P PKPab 15 19 04.2 -0.9
baz=80
H20K Anotleneega Mo 155.59 326 P PKPab 15 19 05.0 +0.1
baz=63
C18K Utukok River 155.85 336 P PKPab 15 19 06.2 +0.1
baz=49
F19K Shaleruckik Mo 155.93 330 P PKPab 15 19 05.7 -0.6
baz=57
N20K Mount Spurr 155.98 315 P PKPab 15 19 05.4 -1.4
baz=76
SPCR Spurr Chakacha 155.98 315 P PKPab 15 19 05.6 -1.2
baz=76
HOM Homer 156.04 311 P PKPab 15 19 06.6 -0.4
baz=80
G19K Purcell Mounta 156.06 328 P PKPab 15 19 06.7 -0.3
baz=59
K20K Telida 156.14 321 P PKPab 15 19 07.0 -0.4
baz=69

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
M20K	Styx River	156.22	317	P	PKPab	15 19 07.1	-0.8
	baz=73						
E18K	Tukpahlearik C	156.48	333	P	PKPab	15 19 08.1	-0.5
	baz=52,SNR=5.8						
C17K	DeLong Mountai	156.51	336	P	PKPab	15 19 08.9	+0.2
	baz=46						
J19K	Poorman	156.53	323	P	PKPab	15 19 09.0	0.0
	baz=65						
F18K	Selawik	156.68	331	P	PKPab	15 19 09.5	0.0
	baz=54						
GCSA	Galena City Sc	156.68	325	P	PKPab	15 19 09.3	-0.3
	baz=62						
RDOG	Red Dog Mine	156.73	335	P	PKPab	15 19 09.5	-0.3
	baz=47						
G18K	Tagagawik	156.74	329	P	PKPab	15 19 09.7	-0.2
	baz=57						
M19K	Big River Lodg	156.78	317	P	PKPab	15 19 09.7	-0.4
	baz=72						
KDAK	Kodiak Island	156.82	307	P	PKPab	15 19 10.6	+0.2
	baz=83						
P19K	Oil Pt	156.84	311	P	PKPab	15 19 10.5	0.0
	baz=78						
L19K	White Mountain	156.90	318	P	PKPab	15 19 11.2	+0.6
	baz=70						
D17K	Noatak River	157.02	335	P	PKPab	15 19 11.2	+0.2
	baz=47						
H18K	Honhosa River	157.03	327	P	PKPab	15 19 11.3	+0.2
	baz=59						
E17K	Hotham Inlet	157.06	333	P	PKPab	15 19 11.5	+0.3
	baz=50						
N19K	Bonanza Creek	157.15	315	P	PKPab	15 19 11.6	-0.3
	baz=74						
Q19K	Cape Douglas,	157.19	310	P	PKPab	15 19 11.7	-0.3
	baz=79						
J18K	Innoko River	157.19	322	P	PKPab	15 19 11.7	-0.1
	baz=65						
C16K	Lisburne Hills	157.21	338	P	PKPab	15 19 12.3	+0.6
	baz=43						
O19K	Port Alsworth	157.24	313	P	PKPab	15 19 12.7	+0.6
	baz=75						
OHAK	Old Harbor	157.26	305	P	PKPab	15 19 12.7	+0.4
	baz=84						
F17K	Baldwin Pennin	157.28	331	P	PKPab	15 19 13.3	+1.2
	baz=52						
M18K	Stony River	157.56	317	P	PKPab	15 19 13.6	+0.1
	baz=71						
G17K	Kiwalik Mounta	157.65	329	P	PKPab	15 19 14.5	+0.7
	baz=55						
L18K	Granite Mounta	157.68	319	P	PKPab	15 19 14.3	+0.3
	baz=68						
H17K	Granite Mounta	157.70	327	P	PKPab	15 19 14.3	+0.3
	baz=57						
O18K	Koktuh Hills	157.76	313	P	PKPab	15 19 14.9	+0.5
	baz=75						
G16K	Koyuk River	158.28	330	P	PKPab	15 19 17.3	+0.8
	baz=53						
M17K	Holitna River	158.32	317	P	PKPab	15 19 18.1	+1.3
	baz=69						
L17K	Donlin	158.41	320	P	PKPab	15 19 17.9	+0.8
	baz=66						
Q17K	Contact Creek	158.47	309	P	PKPab	15 19 17.5	-0.2
	baz=78						
N17K	Nushagak Hills	158.51	315	P	PKPab	15 19 18.5	+0.8
	baz=71						
P17K	Kvichak River	158.54	311	P	PKPab	15 19 18.7	+1.0
	baz=75						
I17K	Unalakleet	158.55	325	P	PKPab	15 19 17.2	-0.5
	baz=58						
CHIR	Chirikof Islan	158.70	302	P	PKPab	15 19 17.3	-1.3
	baz=85						
H16K	Elim	158.70	328	P	PKPab	15 19 19.2	+0.9
	baz=54						
F15K	North Star Dit	158.82	332	P	PKPab	15 19 19.2	+0.4
	baz=48						
J16K	Anvik River	158.83	324	P	PKPab	15 19 19.8	+0.8
	baz=60						
G15K	Niukluk	159.09	330	P	PKPab	15 19 21.0	+1.0
	baz=51						
L16K	Owhat River	159.09	319	P	PKPab	15 19 20.8	+0.6
	baz=65						
M16K	Timber Creek	159.15	317	P	PKPab	15 19 20.9	+0.6
	baz=68						
O16K	Kokwok River B	159.24	313	P	PKPab	15 19 20.4	-0.4
	baz=72						
N16K	Nishlik Lake	159.26	316	P	PKPab	15 19 21.9	+0.9
	baz=69						
F14K	Arctic Creek	159.49	333	P	PKPab	15 19 22.3	+0.5
	baz=46						
K15K	Wolf Creek Mou	159.69	322	P	PKPab	15 19 22.6	-0.1
	baz=61						
ANM	Nome	159.81	330	P	PKPab	15 19 23.2	+0.1
	baz=50						
TNA	Tin City	159.90	335	P	PKPab	15 19 23.6	+0.2
	baz=43						
L15K	Ungalak Mounta	159.97	320	P	PKPab	15 19 23.9	0.0
	baz=62						
M15K	Kasigluk River	160.05	317	P	PKPab	15 19 24.6	+0.3
	baz=66						
J14K	Nanvaranak Lak	160.25	325	P	PKPab	15 19 25.3	+0.2
	baz=57						
BILL	Bilibino	160.50	6	⇑ePKIKP	PKPdf	15 18 41.6	-3.0
M14K	Bethel	160.59	318	P	PKPab	15 19 26.6	-0.1
	baz=64						
L14K	Kuka Creek	160.63	320	P	PKPab	15 19 27.4	+0.6
	baz=61						
N14K	Kuskokwak Cree	160.82	316	P	PKPab	15 19 28.5	+0.9
	baz=67						
YSS	Yuzhno-Sakhali	160.84	85	ePKP2	PKPab	15 19 28.0	-0.2
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
O14K	Tigyukauivet M	160.88	314	P	PKPab	15 19 28.9	+1.0
	baz=69						
CHNA	Chernabura Isl	161.06	300	P	PKPab	15 19 29.3	+0.4
	baz=84						
K13K	Kusilvak Mount	161.13	323	P	PKPab	15 19 30.2	+1.2
	baz=57						
M13K	Dall Lake	161.36	318	P	PKPab	15 19 31.3	+1.3
	baz=63						
GAMB	Gambell	162.32	335	P	PKPab	15 19 33.3	-0.8
	baz=40						
SEY	Seymchan	162.39	29	PKP	PKPdf	15 18 45.6	-1.1
	comp=Z,0.7nm,0.2s,baz=226,slow=5.4,SNR=5.3						
SEY				PKPab	pPKPab	15 19 35.6	-1.3
	comp=Z,1.9nm,0.7s,baz=283,slow=4.7,SNR=10						
UNV	Unalaska Valle	165.21	299	P	PKPab	15 19 43.4	-3.8
	baz=79						

IDC 05 15:15:59.9±3.2, 6°.12S×129°.74E, h302^{km}±46^{km}, mb2.5/1, mbtmp3.7/4, Error ellipse: s-maj=83.9km s-min=15.8km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.44	16	P	Pn	15 17 23.3	+0.6
	3.0nm,0.3s,baz=276,slow=23,SNR=23						
SIJI				S	S	15 18 29.0	-0.3
	3.5nm,0.4s,baz=245,slow=23,SNR=5.9						
WRA	Warramunga Arr	14.45	162	P	P	15 19 10.0	-0.9
	1.0nm,0.4s,baz=340,slow=11,SNR=28						
WRA				S	S	15 21 49.3	-0.2
	0.2nm,0.4s,baz=343,slow=20,SNR=4.7						
ASAR	Alice Springs	17.90	167	P	P	15 19 49.0	+0.5
	4.8nm,0.6s,baz=344,slow=11,SNR=140						
ASAR				S	S	15 22 58.6	+0.4
	0.2nm,0.7s,baz=340,slow=18,SNR=2.3						
MKAR	Makanchi Array	67.35	327	P	P	15 26 23.0	+0.1
	0.1nm,0.4s,baz=121,slow=7.6,SNR=1.6						
	0.1nm,0.4s						

MAN 05 15:35:21.0, 9°.95N×122°.09E, h6^{km}, MS3.5
IDC 05 15:35:54.4±2.7, 5°.87N×123°.25E, h0^{km}, mb3.2/3, mbtmp3.2/3, MS3.3/1, Error ellipse: s-maj=337.4km s-min=29.4km az=63.0
ISC 05 15:35:20.8±1.3, 9°.95N±0°.06×122°.11E±0°.08, h10^{km}, n10, σ1^{s}45/12, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAP	San Jose, Anti	0.81	349	eP	Pb	15 35 37.7	+0.7
RCP	Roxas	1.72	21	eP	Pb	15 35 52.2	-0.3
RCP				iS	Sg	15 36 15.6	-0.5
TBP	Tagbilaran	1.75	98	eP	Pb	15 35 52.7	-0.3
TBP				eS	Sg	15 36 27.0	+10
DCPH	Dipolog City	1.83	138	eP	Pn	15 35 52.9	+0.5
LLP	Lapu-Lapu	1.86	79	eP	Pb	15 35 54.6	-0.5
LLP				iS	Sb	15 36 19.6	+1.2
CGP	Cagayan de Oro	2.95	120	eP	Pn	15 36 08.2	+0.4
CGP				eS	Sb	15 36 51.4	+1.6
CTBH	Cotabato--PC H	3.44	142	iP	Pn	15 36 16.8	+2.3
LEM	Lembang	22.05	221	LR	LR	15 49 10.2	
	comp=Z,85nm,19.2s,baz=158,slow=40						
WRA	Warramunga Arr	32.05	158	P	P	15 41 45.3	-2.7
	0.3nm,0.6s,baz=335,slow=9.8,SNR=4.9						
	0.3nm,0.6s						
ASAR	Alice Springs	35.35	161	P	P	15 42 15.8	-0.8
	0.2nm,0.7s,baz=340,slow=6.6,SNR=6.3						
	0.2nm,0.7s						

SJA 05 15:39:27.9±0.5, 30°.18S×72°.69W, h20^{km}±18^{km}, ML3.2, MW3.5
GUC 05 15:39:33.7±0.7, 30°.31S×72°.20W, h33^{km}±3^{km}, ML3.5
ISC 05 15:39:31.4±2.2, 30°.28S±0°.04×72°.24W±0°.09, h8^{km}±11^{km}, n30, σ1^{s}92/43, 1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.65	127	⇓iP	Pg	15 39 45.2	+1.2
CO06				iS	Sg	15 39 53.3	+0.8
CO06				IAML		15 39 58.4	
	comp=N,3μm,0.3s						
CO05	La Serena	0.94	68	eP	Pb	15 39 50.4	+0.5
CO05				iS	Sn	15 40 02.9	-1.6
CO05				IAML		15 40 08.1	
	comp=E,4μm,0.3s						
GO04	Tololo Observa	1.25	85	eP	Pb	15 39 55.3	0.0
GO04				iS	Sn	15 40 11.4	-1.1
GO04	Tololo Observa	1.25	85	iP	Pb	15 39 55.4	+0.1
GO04				IAML		15 40 40.8	
	comp=Z,394nm,0.5s						
CO02	Combarbal	1.41	131	eP	Pn	15 39 57.8	+0.3
CO02				iS	Sb	15 40 15.5	-0.6
CO02				IAML		15 40 20.2	
	comp=N,3μm,0.3s						
CO02	Combarbal	1.41	131	iP	Pn	15 39 57.6	+0.2
CO02				IAML		15 40 44.4	
	comp=Z,252nm,0.8s						
CO03	El Pedregal	1.45	113	eP	Pn	15 39 57.9	-0.1
CO03				iS	Sn	15 40 16.4	-0.8
CO03				IAML		15 40 19.2	
	comp=N,1μm,0.4s						
CO03	El Pedregal	1.45	113	iP	Pn	15 39 58.6	+0.6
CO03				IAML		15 40 46.8	
	comp=Z,105nm,0.9s						
LCO	Las Campanas	1.84	47	eP	Pn	15 40 04.4	+0.9
LCO				iS	Sg	15 40 28.8	-1.9
CO01	Juntas del Tor	1.88	81	eP	Pb	15 40 05.6	-0.6
CO01				iS	Sg	15 40 29.5	-2.4
CO01				IAML		15 40 35.6	
	comp=N,390nm,0.3s						
CO04	Los Peladeros	2.06	149	eP	Pn	15 40 07.7	+1.1
CO04				iS	Sn	15 40 32.0	-0.6
CO04				IAML		15 40 43.3	
	comp=E,610nm,0.2s						
AC05	El Transito	2.24	50	eP	Pn	15 40 10.5	+1.6
AC05				iS	Sb	15 40 38.1	-1.9
AC05				IAML		15 40 49.7	
	comp=N,360nm,0.7s						
AC04	Llanos de Chal	2.31	26	eP	Pn	15 40 10.1	+0.4
AROD	Rodeo	2.40	88	iP	Pb	15 40 14.9	-0.1
ACDV	Cuesta del Vie	2.70	88	iP	Pb	15 40 20.0	-0.1
ACDV				eS	Sg	15 40 56.7	-1.6
ACDV				IAML		15 41 07.2	
	comp=Z,229nm,1.4s						
ACCO	Cerro Coronel	2.76	97	iP	Pb	15 40 20.5	-0.6
ACCO				eS	Sg	15 40 59.1	-1.0
VA03	San Esteban	2.86	150	eP	Pn	15 40 19.2	+1.8
VA03				iS	Sn	15 40 51.1	-1.1
VA03				IAML		15 41 08.6	
	comp=E,304nm,0.7s						
VA03	San Esteban	2.86	150	iP	Pn	15 40 19.3	+1.9
VA03				IAML		15 41 29.2	
	comp=Z,90nm,0.8s						
ROCH	El Roble	2.88	159	eP	Pn	15 40 18.6	+0.9
RTLS	Leoncito	2.94	122	iP	Pb	15 40 22.6	-1.7
RTLS				eS	Sg	15 41 02.9	-3.1
RTLS				IAML		15 41 10.6	
	comp=Z,359nm,0.8s						
AUSP	Uspallata	3.12	129	iP	Pn	15 40 25.2	+4.1
AUSP				eS	Sb	15 41 07.1	+1.6
ZON	Zonda	3.31	113	iP	Pb	15 40 29.3	-1.1
ZON				IAML		15 41 42.1	
	comp=Z,21nm,0.5s						
RTLL	Cerro Villicun	3.40	109	iP	Pn	15 40 28.3	+3.5
RTLL				IAML		15 41 47.9	
	comp=Z,66nm,0.5s						
ASAL	Salagasta	3.71	129	iP	Pn	15 40 33.9	+4.9
ASAL				IAML		15 41 47.7	
	comp=Z,0.1nm,1.0s						
ARCO	CERRO ARCO	3.81	133	iP	Pb	15 40 36.0	-2.9
ARCO				IAML		15 41 50.6	
	comp=Z,57nm,0.6s						
VCA	Vinchina	3.84	67	iP	Pn	15 40 34.1	+3.2
VCA				IAML		15 41 57.1	
	comp=Z,90nm,0.5s						
AAGR	Agrelo	4.03	135	iP	Pn	15 40 37.3	+3.7
AAGR				IAML		15 41 57.0	
	comp=Z,70nm,0.8s						
AVFE	Valle Fertil	4.15	96	iP	Pn	15 40 37.9	+2.9
AVFE				IAML		15 41 54.2	
	comp=Z,32nm,0.8s						
TINO	Tinogasta	4.64	63	iP	Pn	15 40 45.1	+3.2
ACLC	CERRO LA CRUZ	4.67	81	iP	Pn	15 40 45.2	+2.9
ACLC				IAML		15 42 07.2	
	comp=Z,26nm,1.4s						

JMA 05 15:40:45.4±0.2, 37°.4N±0°.5×14°2E±°, h39^{km}±3^{km}, MV3.0/32, E OFF FUKUSHIMA PREF
IDC 05 15:41:03.9±3.0, 38°.29N×138°.11E, h0^{km}, mb3.2/3, mbtmp3.2/3, MS3.2/1, Error ellipse: s-maj=91.2km s-min=25.5km az=63.0
ISC 05 15:40:44.7±2.3, 37°.35N±0°.09×142°.0E±0°.1, h35^{km}, n14, σ1^{s}12/21, mb3.3/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	0.86	271	P	Pn	15 41 00.3	0.0
JFK				S	Sn	15 41 10.9	-0.8
JMST	Minamisoumatoc	0.92	294	P	Pn	15 41 01.0	-0.2
JMST				S	Sn	15 41 12.4	-0.9
ONAJ	Iwakimizuishiy	0.95	255	P	Pn	15 41 01.6	-0.1
ONAJ				S	Sn	15 41 12.8	-1.2
JIKH	Ishinomakikobu	1.03	338	P	Pn	15 41 02.9	+0.2
JIKH				S	Sn	15 41 14.8	-1.1
JMM	Marumori	1.05	300	P	Pn	15 41 03.2	+0.2
JMM				S	Sn	15 41 16.1	-0.4
JIO	Ouri	1.20	337	P	Pn	15 41 05.5	+0.5
JIO				S	Sn	15 41 19.3	-0.8
JOTO	OTAMA OYAMA	1.30	280	eP	Pn	15 41 07.5	+1.1
JOTO				eS	Sn	15 41 23.4	+0.7
JOU	Okura	1.44	315	eP	Pn	15 41 09.7	+1.4
JOU				S	Sn	15 41 27.4	+1.4
JMK	Ichinoseki	1.70	340	eP	Pn	15 41 13.1	+1.2
MJAR	Matsushiro Arr	3.10	256	Pn	Pn	15 41 34.0	+2.8
	0.1nm,0.3s,baz=358,slow=13,SNR=5.7						
MJAR				Sn	Sn	15 42 05.8	-1.3
	0.1nm,0.3s,baz=359,slow=20,SNR=1.6						
SHEM	Shemya Is, Ala	27.14	45	LR	LR	15 58 42.6	
	comp=Z,46nm,19.9s,baz=345,slow=37						
MKAR	Makanchi Array	44.31	302	P	P	15 48 50.5	-0.7
	0.1nm,0.5s,baz=81,slow=8.9,SNR=2.1						
	0.1nm,0.5s						
KURBB	Kurchatov Arra	46.15	308	P	P	15 49 05.1	-0.5
	0.3nm,0.8s,baz=80,slow=7.7,SNR=2.5						
	0.3nm,0.8s						
WRA	Warramunga Arr	57.44	189	P	P	15 51 00.0	+30
	0.6nm,1.1s,baz=7.9,slow=7.8,SNR=1.7						
	0.6nm,1.1s						

SJA 05 15:52:08.7±1.7, 22°.50S×69°.12W, h115^{km}, ML3.3, MW3.5
GUC 05 15:52:10.5±0.6, 22°.45S×68°.95W, h109^{km}±2^{km}, ML3.4
ISC 05 15:52:09.4±1.6, 22°.50S±0°.04×69°.05W±0°.06, h116^{km}±10^{km}, n26, σ0^{s}79/32, 3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB06	IPOC Station P	0.53	247	eP	Pn	15 52 27.7	+0.4
PB06				iS	Sn	15 52 41.2	+0.5
PB06				IAML		15 52 42.0	
	comp=E,2μm,0.1s						
PB06	IPOC Station P	0.53	247	iP	Pn	15 52 27.1	-0.2
PB06				IAML		15 52 47.9	
	comp=Z,713nm,0.1s						
PB09	IPOC Station P	0.72	345	eP	Pn	15 52 29.1	+0.3
PB09				eS	Sn	15 52 42.6	-0.7
PB09				IAML		15 52 46.2	
	comp=E,493nm,0.4s						
PB09	IPOC Station P	0.72	345	iP	Pn	15 52 28.4	-0.4
PB09				IAML		15 52 44.4	
	comp=Z,459nm,0.1s						
PB03	IPOC Station P	0.79	304	eP	Pn	15 52 30.1	+0.7
PB03				eS	Sn	15 52 44.5	+0.2
PB03				IAML		15 52 45.1	
	comp=E,3μm,0.2s						
PB03	IPOC Station P	0.79	304	iP	Pn	15 52 29.3	0.0
PB03				IAML		15 52 45.4	
	comp=Z,2μm,0.2s						
AF01	San Pedro de A	0.92	120	⇓eP	Pn	15 52 30.1	-0.6
AF01				eS	Sn	15 52 45.5	-1.2
AF01				IAML		15 52 46.3	
	comp=N,2μm,0.2s						
PB07	IPOC Station P	1.09	314	eP	Pn	15 52 33.2	+0.9
PB07				eS	Sn	15 52 49.8	+0.3
PB07				IAML		15 52 50.5	
	comp=E,1μm,0.1s						
PB07	IPOC Station P	1.09	314	iP	Pn	15 52 32.4	+0.1
PB07				IAML		15 52 51.6	
	comp=Z,871nm,0.1s						
PB05	IPOC Station P	1.12	251	iP	Pn	15 52 33.7	+1.2
PB05				IAML		15 52 54.3	
	comp=N,295nm,0.1s						
PB05	IPOC Station P	1.12	251	iP	Pn	15 52 32.9	+0.4
PB05				IAML		15 52 55.9	
	comp=Z,191nm,0.2s						
PB02	IPOC Station P	1.41	326	⇓eP	Pn	15 52 36.5	+0.7
PB02				eS	Sn	15 52 55.7	+0.1
PB02				IAML		15 53 00.5	
	comp=E,722nm,0.2s						
PB02	IPOC Station P	1.41	326	iP	Pn	15 52 35.8	+0.1
PB02				IAML		15 52 58.2	
	comp=Z,770nm,0.2s						
PB01	IPOC Station P	1.50	344	eP	Pn	15 52 37.1	+0.3
PB01				IAML		15 52 58.7	
	comp=E,651nm,0.2s						
PB01	IPOC Station P	1.50	344	iP	Pn	15 52 36.5	-0.3
PB01				IAML		15 52 58.5	
	comp=Z,357nm,0.2s						
PATCX	Punta Patache	1.96	328	⇓eP	Pn	15 52 42.5	+0.2
HMBC	Humberstone	2.34	340	eP	Pn	15 52 46.8	-0.4
PB14	IPOC Station P	2.46	210	iP	Pn	15 52 49.1	+0.2
PB14				IAML		15 53 31.1	
	comp=Z,85nm,0.3s						
GO02	Mina Guanaco	2.70	191	iP	Pn	15 52 52.1	+0.1
GO02				IAML		15 53 27.2	
	comp=Z,277nm,0.5s						
PB11	IPOC Station P	2.78	348	iP	Pn	15 52 52.0	-0.9
PB11				IAML		15 53 28.2	
	comp=Z,56nm,0.7s						
GO01	Chusmiza	2.82	357	eP	Pn	15 52 54.1	+0.3
SALTA		3.02	125	iP	Pn	15 52 58.8	+2.5
SALTA				IAML		15 53 37.9	
	comp=Z,11nm,1.3s						
AC01	Pan de Azucar	3.90	201	iP	Pn	15 53 06.4	-1.2
AC01				IAML		15 53 52.6	
	comp=Z,38nm,0.3s						
PB16	IPOC Station P	4.16	354	iP	Pn	15 53 11.8	+0.2
PB16				IAML		15 54 07.2	
	comp=Z,9.9nm,0.3s						
AC02	Maricunga	4.32	181	iP	Pn	15 53 13.8	+0.2
AC02				IAML		15 54 08.0	
	comp=Z,20nm,0.2s						
GO03	Copiapo	5.19	192	iP	Pn	15 53 23.5	-1.4
GO03				IAML		15 54 25.1	
	comp=Z,24nm,0.3s						

IDC 05 16:05:54.9±0.9, 29°.48N×67°.59E, h0^{km}, mb3.9/20, mbtmp4.0/21, ML4.5/1, MS3.5/7, Error ellipse: s-maj=21.0km s-min=15.9km az=9.0
NEIC 05 16:05:56.5±1.4, 29°.38N±0°.08×67°.70E±0°.08, h16^{km}±2^{km}, mb4.3/53, Error ellipse: s-maj=11.6km s-min=10.4km az=179.0
ISC 05 16:05:58.5±0.4, 29°.37N±0°.05×67°.64E±0°.04, h35^{km}, n160, σ1^{s}96/174, mb4.1/37, MS3.4/6, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	5.29	13		Pn	16 07 14.9	-0.4
BHUJ	Bhuj	6.35	163	eP	Pn	16 07 33.3	+3.7
BHUJ				eS	Sn	16 08 43.5	+2.5
BHUJ				IAML		16 08 50.7	
	comp=N,335nm,0.4s						
BHUJ				IAML		16 08 51.2	
	comp=E,221nm,0.4s						
NIL	Nilore	6.42	47		Pn	16 07 29.7	-0.9
HRA	Herat	6.79	319		Pn	16 07 35.0	-0.8
AJM	Ajmer	6.85	114	eP	Pn	16 07 39.0	+2.4
AJM				eS	Sn	16 08 52.4	-0.9
AJM				IAML		16 08 59.6	
	comp=N,52nm,0.5s						
AJM				IAML		16 09 09.4	
	comp=E,62nm,0.7s						
NGCH	Negor - Chabah	7.02	237	P	Pn	16 07 40.2	+1.3
	SNR=16						
NGCH				S	Sn	16 08 50.1	-7.4
	SNR=13						
JMU	Jammu	7.05	59	eP	Pn	16 07 41.3	+2.1
JMU				eS	Sn	16 08 57.7	-0.4
JMU				IAML		16 09 09.1	
	comp=E,211nm,0.4s						
JMU				IAML		16 09 10.2	
	comp=N,219nm,0.4s						
BHK	Bhakra	7.82	73	eP	Pn	16 07 56.7	+6.9
BHK				eS	Sn	16 09 23.5	+6.4
BHK				IAML		16 09 26.6	
	comp=N,171nm,0.6s						
BHK				IAML		16 09 27.1	
	comp=E,129nm,0.3s						
KUDL	Kundal	7.87	97	eP	Pn	16 07 52.8	+2.3
KUDL				eS	Sn	16 09 15.6	-2.7
KUDL				IAML		16 09 24.1	
	comp=N,399nm,0.4s						
KUDL				IAML		16 09 25.9	
	comp=E,289nm,0.3s						
TSSA	Tissa	8.08	63	eP	Pn	16 07 53.6	+0.1
TSSA				eS	Sn	16 09 21.9	-1.8
TSSA				IAML		16 09 30.0	
	comp=N,127nm,0.8s						
TSSA				IAML		16 09 39.5	
	comp=E,129nm,0.6s						
SHAA	Shahritus	8.18	3		Pn	16 07 54.5	-0.4
SMLA	Simla	8.43	76	eP	Pn	16 07 58.8	+0.7
SMLA				eS	Sn	16 09 31.4	-0.7
SMLA				IAML		16 09 36.3	
	comp=N,308nm,0.4s						
SMLA				IAML		16 09 40.0	
	comp=E,226nm,0.7s						
JASK	Jask - Hormozg	9.34	250	P	Pn	16 08 11.9	+1.2
CHGR	Chuyangaron	9.35	7		Pn	16 08 10.0	-0.9
ALCI	Alchi Leh	9.45	57	eP	Pn	16 08 14.5	+1.9
ALCI				eS	Sn	16 09 54.6	-3.1
ALCI				IAML		16 09 58.6	
	comp=N,33nm,0.7s						
ALCI				IAML		16 10 06.0	
	comp=E,38nm,0.7s						
GUNA	GUNA	9.84	116	eS	Sn	16 10 02.8	-4.0
GUNA				IAML		16 10 26.6	
	comp=N,59nm,0.6s						
GUNA				IAML		16 10 42.1	
	comp=E,43nm,0.8s						
GAR	Garm	9.86	12		Pn	16 08 17.5	-0.4
WSAR	Wadi Sarin	10.12	235	P	Pn	16 08 21.3	-0.1
	SNR=32						
WSAR				S	Sn	16 10 06.1	-7.6
WBK	Wadi Bani Khal	10.29	231	P	Pn	16 08 24.4	+0.6
	SNR=57						
WBK				S	Sn	16 10 11.0	-7.0
BIDO	Bidbid	10.32	238	P	Pn	16 08 24.7	+0.7
BIDO				S	Sn	16 10 11.4	-7.1
JLN	Jalan Bani Buh	10.32	228	P	Pn	16 08 24.0	-0.1
	SNR=44						

JLN P Pn 16 08 24.0 -0.1
SNR=44
JLN S Sn 16 10 13.8 -4.9
SNR=13
JLN S Sn 16 10 13.8 -4.9
SNR=13
JOSI Joshimath 10.41 81 *e*P Pn 16 08 28.7 +3.2
JOSI *e*S Sn 16 10 17.9 -3.1
JOSI IAML 16 10 28.9
comp=N,79nm,1.0s
JOSI IAML 16 10 41.1
comp=E,87nm,0.6s
JHNI Jhansi 10.50 109 *e*P Pn 16 08 27.0 +0.4
JHNI *e*S Sn 16 10 18.7 -4.3
JHNI IAML 16 10 22.4
comp=E,21nm,0.2s
JHNI IAML 16 10 23.6
comp=N,33nm,0.4s
BANOM Banah 10.62 254 Pn Pn 16 08 27.9 -0.3
BANOM Banah 10.62 254 P Pn 16 08 28.8 +0.6
BANOM S Sn 16 10 19.2 -6.8
SMDO Samad 10.65 236 P Pn 16 08 30.0 +1.2
SNR=8.6
SMDO P Pn 16 08 30.0 +1.2
SNR=8.6
SMDO S Sn 16 10 19.7 -7.2
SMDO S Sn 16 10 19.7 -7.2
DRK Karamyk 10.66 18 Pn 16 08 28.1 -0.8
BHPL Bhopal 10.69 123 *e*P Pn 16 08 30.3 +1.1
BHPL *e*S Sn 16 10 26.3 -1.4
BHPL IAML 16 10 30.9
comp=N,30nm,0.7s
BHPL IAML 16 10 33.1
comp=E,23nm,0.4s
SHME Shamm 10.71 255 Pn Pn 16 08 28.9 -0.5
SHME Shamm 10.71 255 P Pn 16 08 30.4 +1.0
SHME S Sn 16 10 21.7 -6.4
LGTI Lohaghat 10.86 87 *e*P Pn 16 08 31.1 -0.6
LGTI *e*S Sn 16 10 27.3 -4.9
LGTI IAML 16 10 31.7
comp=E,36nm,0.7s
LGTI IAML 16 10 33.2
comp=N,38nm,0.7s
MDH Madha 10.86 251 P Pn 16 08 31.1 -0.4
MDH S Sn 16 10 23.6 -8.3
HOQ Hogain 10.89 240 P Pn 16 08 32.0 0.0
SNR=24
HOQ S Sn 16 10 24.9 -7.8
MASF Masafi 10.95 251 P Pn 16 08 34.9 +2.2
MASF S Sn 16 10 25.8 -8.3
MSFE Esma-Masafi 10.95 251 Pn Pn 16 08 34.2 +1.4
PTH Pithoragarh 10.96 86 *e*P Pn 16 08 35.4 +2.4
PTH *e*S Sn 16 10 30.8 -3.6
PTH IAML 16 10 38.0
comp=N,23nm,0.3s
PTH IAML 16 10 40.2
comp=E,25nm,0.6s
BTK Batken 10.98 13 Pn 16 08 32.5 -0.6
JMDO Jabal Madar 11.05 233 P Pn 16 08 37.0 +2.8
SNR=5.1
UOSS Minazif 11.09 249 Pn Pn 16 08 34.4 -0.3
SOHO SOHO 11.20 245 Pn Pn 16 08 35.7 -0.5
SOHO SOHO 11.20 245 P Pn 16 08 35.7 -0.5
ASHO Ashiyiah 11.32 248 Pn Pn 16 08 37.7 -0.2
ASHO Ashiyiah 11.32 248 P Pn 16 08 39.5 +1.6
BSY Bisya 11.46 237 P Pn 16 08 42.1 +2.3
ARQ Araqi 11.63 241 P Pn 16 08 44.5 +2.4
SNR=26
ARQ P Pn 16 08 44.5 +2.4
SNR=26
KSH2 Kashi 11.75 32 P Pn 16 08 44.7 +1.0
KSH2 S Sn 16 10 53.0 -0.7
KSH2 pmax pmax
comp=Z,34nm,0.7s
KSH2 LR LR
comp=N,600nm,12.4s
KSH2 LR LR
comp=E,360nm,9.3s
KSH2 LR LR
comp=Z,490nm,10.6s
ALNE Al Ain 11.86 246 P Pn 16 08 45.7 +0.5
ASUD Al Ashush, Dub 11.94 250 P Pn 16 08 49.2 +2.9
MHTO MHTO 12.09 229 P Pn 16 08 50.1 +1.8
ARSB Arslanbob 12.70 19 Pn 16 08 54.4 -2.3
NRN Naryn 13.83 27 Pn 16 09 08.8 -3.5
KK31 Karatay Array 13.90 9 Pn 16 09 11.6 -1.5
KKAR Karatay Array 13.90 9 Pn Pn 16 09 11.7 -1.3
UCH Uchtor 13.99 22 P Pn 16 09 13.1 -1.4
SNR=24
EKS2 Erkin-Say 14.16 19 P Pn 16 09 16.3 -0.3
SNR=12
AAK Ala-Archa 14.35 21 Pn Pn 16 09 17.7 -1.5
comp=Z,2.1nm,0.3s,baz=198,slow=6.0,SNR=39
AAK Sn Sn 16 11 51.0 -6.2
comp=Z,0.2nm,0.3s,baz=342,slow=20,SNR=3.0
AAK LR LR 16 15 54.5
comp=Z,169nm,21.4s,baz=218,slow=42
comp=Z,11nm,0.5s
AAK Ala-Archa 14.35 21 Pn 16 09 17.5 -1.7
AAK Ala-Archa 14.35 21 P Pn 16 09 18.8 -0.4
SNR=14
AAK Ala-Archa 14.35 21 Pn Pn 16 09 17.6 -1.7
KBK Karagaybulak 14.51 22 P P 16 09 25.5 -2.2
SNR=5.9
FRU1 Bishkek 14.55 21 Pn Pn 16 09 20.4 -1.5
BOOM Boomskoye usch 14.71 25 Pn 16 09 21.2 -2.9
CHMS Chumysh 14.76 21 P Pn 16 09 23.0 -1.7
SNR=8.3
TARG Taragay, Kyrgy 14.84 31 Pn 16 09 22.6 -3.5
KDJ Kajisay 14.89 29 Pn 16 09 22.9 -3.7
USP Ospenovka 14.93 20 P Pn 16 09 25.8 -1.1
SNR=7.4
TKM2 Tokmak 2 14.96 23 P Pn 16 09 26.2 -1.4
SNR=9.7
WUS Wushi 15.11 36 Pn 16 09 27.1 -2.4
WUS IAmb IAmb 16 09 32.2
comp=Z,10nm,0.7s
HYB Hyderabad 15.54 138 *i* 16 11 38.8
PRZ Przheval'sk 15.71 31 Pn Pn 16 09 36.6 -0.6
PRZ IAmb IAmb 16 09 59.3
comp=Z,10nm,0.5s
EVN Everest 16.90 90 Pn 16 09 50.8 -2.1
EVN IAmb IAmb 16 10 06.3
comp=Z,19nm,0.6s
WHFO Wadi Hawf 17.05 231 P P 16 09 57.0 +1.2
SNR=14
LSA Lhasa 20.46 83 P P 16 10 30.6 -3.0
LSA IAmb IAmb 16 10 46.6
comp=Z,17nm,1.4s
LSA Lhasa 20.46 83 P P 16 10 34.6 +1.0
LSA pmax pmax
comp=Z,6.0nm,1.0s
RAYN Ar Rayn 20.64 259 P 16 10 35.3 +0.1
MAKZ Makanchi 20.69 29 P 16 10 34.3 -1.3
MAKZ IAmb IAmb 16 10 53.6
comp=Z,12nm,1.1s
AB31 Akbulak array 20.71 346 P 16 10 35.3 -0.4
ABKAR Akbulak array 20.71 346 P 16 10 35.6 -0.1
MKAR Makanchi Array 20.81 29 P P 16 10 37.0 +0.2
comp=Z,12nm,0.3s,baz=212,slow=10.0,SNR=3.1
comp=Z,12nm,0.3s
WMQ Urumqi 21.54 43 *e*P P 16 10 47.4 +2.6
WMQ pmax pmax
comp=Z,14nm,0.7s
GNI Garni 21.61 306 P P 16 10 46.4 +0.8
GNI IAmb IAmb 16 11 08.4
comp=Z,15nm,1.1s
SHL Shillong 21.84 94 P P 16 10 47.0 -1.1
SHL IAmb IAmb 16 11 08.7
comp=Z,8.2nm,0.7s
SHL Shillong 21.84 94 P P 16 11 11.9 +24
SNR=5.1
KURBB Kurchatov Arra 22.76 18 P P 16 10 57.6 0.0
comp=Z,5.7nm,0.8s,baz=212,slow=9.5,SNR=54
comp=Z,5.7nm,0.8s
KURK Kurchatov 22.87 18 P 16 10 57.7 -1.1
KURK IAmb IAmb 16 10 59.6
comp=Z,6.7nm,0.9s
GURO Guroymak-BITLI 23.07 300 P P 16 11 01.5 +0.4
GURO IAmb IAmb 16 11 28.6
comp=Z,9.9nm,1.4s
BVAR Borovoye Array 23.72 4 P P 16 11 06.0 -1.2
comp=Z,1.4nm,0.5s,baz=182,slow=9.1,SNR=8.9
comp=Z,1.4nm,0.5s
BORK Borovoye 23.74 4 P 16 11 06.3 -1.0

GOMU GeErMu 23.80 66 P P 16 11 09.6 +1.1
GOMU pP pP 16 11 13.0 -5.4
GOMU sP sP 16 11 17.2 -5.5
GOMU pmax pmax
comp=Z,2.0nm,1.4s
PALK Pallekele 25.19 148 LR LR 16 21 10.8
comp=Z,50nm,19.8s,baz=320,slow=36
PALK Pallekele 25.19 148 P P 16 11 18.3 -2.7
PALK IAmb IAmb 16 11 25.4
comp=Z,5.5nm,1.1s
ARPR Arapgir-MALATY 26.00 300 P P 16 11 27.2 -1.0
ARPR IAmb IAmb 16 11 45.7
comp=Z,8.9nm,1.2s
ZAA0 Zalesovo Array 27.57 22 P P 16 11 40.8 -1.2
ZAA0 IAmb IAmb 16 12 08.5
comp=Z,5.3nm,0.7s
ZALV Zalesovo Beam 27.57 22 P P 16 11 42.1 +0.1
comp=Z,0.8nm,0.3s,baz=228,slow=11,SNR=7.6
comp=Z,0.8nm,0.3s
ZALV Zalesovo Beam 27.57 22 P P 16 11 40.6 -1.4
GTA2 Gaotai 28.23 60 *e*P P 16 11 51.0 +2.7
GTA2 pmax pmax
comp=Z,3.0nm,1.2s
BRTR Keskin Array B 29.69 299 P P 16 12 02.6 +1.3
comp=Z,0.3nm,0.4s,baz=106,slow=11,SNR=2.1
comp=Z,0.3nm,0.4s
BRTR Keskin Array B 29.69 299 P P 16 12 01.3 0.0
PZH PanZhiHua 30.21 87 P P 16 12 06.5 +0.5
CMAR Chiang Mai Arr 30.52 104 LR LR 16 25 54.6
comp=Z,30nm,18.1s,baz=285,slow=39
OBN Obninsk 34.01 328 LR LR 16 29 44.9
comp=Z,54nm,18.2s,baz=165,slow=42
KARP Karpathos 34.52 291 P P 16 12 43.5 -0.1
SONM Songino Array 35.00 47 P P 16 12 49.9 +2.2
comp=Z,1.2nm,0.8s,baz=260,slow=9.5,SNR=5.4
comp=Z,1.2nm,0.8s
SONM Songino Array 35.00 47 P P 16 12 47.2 -0.5
AKASG Malin Array Be 35.76 317 P P 16 12 54.6 +0.6
comp=Z,0.5nm,0.4s,baz=102,slow=7.2,SNR=7.2
comp=Z,0.5nm,0.4s
AKBB Malin Array Si 35.76 317 P P 16 12 54.0 +0.1
KIEV Kiev 35.76 317 P P 16 12 53.7 -0.3
KIEV IAmb IAmb 16 12 55.7
comp=Z,5.3nm,0.8s
ENH Enshi 36.17 78 P P 16 12 56.8 -1.0
ENH IAmb IAmb 16 13 22.9
comp=Z,7.4nm,1.2s
MLR Muntele Rosu 36.36 308 P P 16 13 00.5 +1.1
MLR IAmb IAmb 16 13 21.2
comp=Z,4.5nm,0.8s
IDI Anoyia 36.39 291 P P 16 13 00.4 +0.7
BURAR Bucovina Array 37.32 311 P P 16 13 07.4 -0.1
HHC Hu-ho-hao-te 37.36 60 *e*P P 16 13 08.1 +0.2
HHC pmax pmax
comp=Z,9.0nm,0.6s
HHC pmax pmax
comp=Z,160nm,5.1s
LIT Litokhoron 38.25 299 P P 16 13 16.0 +0.7
KECS Kecovo 40.60 311 *e*P P 16 13 38.5 +3.7
PSZ Piszkesteto 40.90 310 P P 16 13 37.9 +0.5
FIA1 FINESS Array S 42.12 332 P P 16 13 46.5 -0.5
FINES FINESS Array B 42.12 332 P P 16 13 47.4 +0.4
comp=Z,1.9nm,0.4s,baz=112,slow=7.2,SNR=25
FINES LR LR 16 34 23.9
comp=Z,68nm,19.5s,baz=237,slow=41
comp=Z,1.9nm,0.4s
FINES FINESS Array B 42.12 332 P P 16 13 46.8 -0.2
MODS Modra-Piesok 42.70 311 *e*P P 16 13 54.1 +2.1
CUC Castrocucco 43.38 298 P P 16 13 58.8 +1.2
GEC2 GERESS Array S 45.11 311 P P 16 14 12.8 +1.4
GERES GERESS Array B 45.11 311 P P 16 14 12.9 +1.5
comp=Z,1.1nm,0.7s,baz=91,slow=9.3,SNR=6.6
comp=Z,1.1nm,0.7s
ARCES ARCESS Array B 46.81 341 P P 16 14 25.4 +1.0
comp=Z,1.2nm,0.5s,baz=125,slow=7.6,SNR=15
comp=Z,1.2nm,0.5s
ARCES ARCESS Array B 46.81 341 P P 16 14 25.3 +0.9
HFS Hagfors 47.19 327 P P 16 14 28.2 +0.7
comp=Z,1.8nm,0.5s,baz=117,slow=8.5,SNR=20
comp=Z,1.8nm,0.5s
FUORN Ofenpass-Fuorn 47.32 308 P P 16 14 29.8 +0.8
FUORN IAmb IAmb 16 15 10.3
comp=Z,3.8nm,0.9s
NC602 NORSAR Array S 48.38 327 P P 16 14 36.6 0.0
NC405 NORSAR Array S 48.39 327 P P 16 14 37.1 +0.3
NB2 NORSAR Subarra 48.61 327 P P 16 14 38.7 +0.2
comp=Z,0.6nm,0.5s,baz=106,slow=7.9
NOA NORSAR Array B 48.61 327 P P 16 14 38.9 +0.4
comp=Z,0.8nm,0.5s,baz=106,slow=7.5,SNR=5.4
comp=Z,0.8nm,0.5s
NC204 NORSAR Array S 48.88 328 P P 16 14 40.4 -0.2
KS19 Wonju Array Si 50.17 64 P P 16 14 50.5 -0.2
KSAR Wonju Array Be 50.20 64 P P 16 14 50.6 -0.4
KSRS Kosa Array 50.23 64 P P 16 14 53.0 +1.9
comp=Z,3.3nm,0.7s,baz=274,slow=7.9,SNR=17
comp=Z,3.3nm,0.7s
MAHO Mahon 52.21 300 P P 16 15 07.3 +1.3
TIXI Tiksi 53.43 20 P P 16 15 15.0 +0.6
TIXI IAmb IAmb 16 15 39.6
comp=Z,5.5nm,1.4s
EKA Eskdalemuir Ar 55.63 319 P P 16 15 31.0 +0.2
comp=Z,0.5nm,0.6s,baz=86,slow=8.2,SNR=5.6
comp=Z,0.5nm,0.6s
ESDC Sonseca Array 58.47 301 P P 16 15 52.1 +1.0
comp=Z,0.7nm,0.6s,baz=76,slow=7.0,SNR=5.4
comp=Z,0.7nm,0.6s
ESDC Sonseca Array 58.47 301 IAmb IAmb 16 15 58.9
comp=Z,4.0nm,1.4s
MD01 Midelt array s 60.94 293 P P 16 16 08.4 0.0
TORD Torodi Ar. Bea 62.81 270 P P 16 16 22.1 +1.1
comp=Z,1.8nm,0.7s,baz=67,slow=3.8,SNR=12
comp=Z,1.8nm,0.7s
SUMG Summit 66.90 342 P P 16 16 47.6 +0.4
SUMG IAmb IAmb 16 17 28.2
comp=Z,1.8nm,1.1s
TSUM Tsumeb 68.27 231 LR LR 16 46 33.6
comp=Z,42nm,21.5s,baz=336,slow=36
DBIC Dimbokro 71.51 267 P P 16 17 15.9 -0.3
C16K Lisburne Hills 75.10 18 P P 16 17 36.5 0.0
SUR Sutherland 75.80 220 P P 16 17 40.6 -0.6
C18K Utukok River 75.90 17 P P 16 17 41.7 +0.5
C18K IAmb IAmb 16 18 20.7
comp=Z,5.5nm,1.4s
C19K Lookout Ridge 75.95 16 P P 16 17 43.3 +1.9
E18K Tukpahlearik C 76.96 17 P P 16 17 47.9 +0.8
E18K IAmb IAmb 16 18 01.3
comp=Z,3.6nm,0.9s
J14K Nanvaranak Lak 79.55 21 P P 16 18 03.4 +1.9
BMAR Burnt Mountain 80.50 12 P P 16 18 08.6 +2.0
WRA Warramunga Arr 80.83 119 P P 16 18 10.7 +1.6
comp=Z,0.5nm,0.9s,baz=322,slow=4.8,SNR=5.7
comp=Z,0.5nm,0.9s
L18K Granite Mounta 82.04 19 P P 16 18 16.4 +1.5
M16K Timber Creek 82.30 21 P P 16 18 18.7 +2.6
ILAR Eielson Array 82.38 14 P P 16 18 17.9 +1.3
comp=Z,0.6nm,1.0s,baz=311,slow=4.7,SNR=6.3
comp=Z,0.6nm,1.0s
ASAR Alice Springs 82.68 122 P P 16 18 21.0 +2.2
comp=Z,0.3nm,0.6s,baz=306,slow=5.3,SNR=9.2
comp=Z,0.3nm,0.6s
ASAR Alice Springs 82.68 122 P P 16 18 18.4 -0.4
H31M Peel River 83.63 9 P P 16 18 23.9 +0.8
YKA Yellowknife Ar 88.44 1 P P 16 18 48.5 +1.7
comp=Z,0.2nm,0.4s,baz=351,slow=5.7,SNR=5.0
YKA LR LR 17 04 07.3
comp=E,115nm,20.2s,baz=9.0,slow=40
comp=Z,0.2nm,0.4s
YKA Yellowknife Ar 88.44 1 P P 16 18 47.6 +0.9

*SJA **05** 16:17:09.3±0.8, 29.°55S×72.°57W, h7km, ML3.6, MW3.5*
*GUC **05** 16:17:16.0±0.6, 29.°69S×72.°02W, h23km±5km, ML3.3*
ISC 05 16:17:08.4±1.6, **29.°65S**±0.°02×**72.°28W**±0.°06, **h1**km±11km, **n39,σ2s04/59, 3C-3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
CO05	**La Serena**	**0.94**	**107**	↓*i*	*i*	**Pn**	**16 17 29.4**	**+0.6**
CO05					*e*	**Sg**	**16 17 39.2**	**+0.5**
CO05					IAML		16 17 41.1	
	comp=E,3μm,0.4s							
CO06	**Fray Jorge**	**1.16**	**152**		*e*	**Pn**	**16 17 34.4**	**+2.5**
CO06					*i*	**Sn**	**16 17 48.1**	**-0.2**
CO06					IAML		16 17 52.4	
	comp=E,945nm,0.3s							
GO04	**Tololo Observa**	**1.38**	**113**	↓*i*	*i*	**Pg**	**16 17 37.0**	**+2.0**
GO04					*e*	**Sb**	**16 17 53.0**	**-0.6**
GO04	**Tololo Observa**	**1.38**	**113**	*i*	P	**Pg**	**16 17 37.0**	**+2.0**
LCO	**Las Campanas**	**1.52**	**66**	*e*	P	**Pg**	**16 17 39.4**	**+1.9**
LCO				*i*	S	**Sg**	**16 17 57.6**	**+0.5**
AC04	**Llanos de Chal**	**1.78**	**36**	*e*	P	**Pg**	**16 17 43.7**	**+1.1**
AC04				*e*	S	**Sg**	**16 18 11.4**	**+5.6**
AC04					IAML		16 18 17.5	
	comp=N,333nm,0.4s							
CO03	**El Pedregal**	**1.81**	**131**↑	*e*	P	**Pg**	**16 17 44.0**	**+0.8**
CO03				*e*	S	**Sb**	**16 18 05.5**	**-0.3**
CO03					IAML		16 18 09.9	
	comp=E,725nm,0.5s							
CO03	**El Pedregal**	**1.81**	**131**	*i*	P	**Pg**	**16 17 44.0**	**+0.8**
CO02	**Combarbal**	**1.90**	**145**↑	*e*	P	**Pg**	**16 17 46.0**	**+1.1**
CO02				*e*	S	**Sb**	**16 18 08.5**	**+0.2**
CO02	**Combarbal**	**1.90**	**145**	*i*	P	**Pg**	**16 17 45.9**	**+1.1**
CO01	**Juntas del Tor**	**1.92**	**100**↓	*e*	P	**Pg**	**16 17 45.8**	**+0.5**
CO01				*e*	S	**Sn**	**16 18 07.5**	**0.0**
CO01					IAML		16 18 09.8	
	comp=N,374nm,0.3s							
AC05	**El Transito**	**1.93**	**66**↑	*e*	P	**Pg**	**16 17 46.0**	**+0.6**
AC05				*e*	S	**Sg**	**16 18 09.5**	**-0.9**
AC05					IAML		16 18 13.4	
	comp=N,416nm,0.2s							
AROD	**Rodeo**	**2.49**	**103**	*e*	P	**Pg**	**16 17 55.6**	**-0.5**
CO04	**Los Peladeros**	**2.63**	**155**	*e*	P	**Pg**	**16 17 57.2**	**-1.8**
CO04				*e*	S	**Sn**	**16 18 26.1**	**+0.9**
GO03	**Copiapo**	**2.72**	**42**	*e*	P	**Pg**	**16 17 58.0**	**-2.6**
GO03				*e*	S	**Sg**	**16 18 34.8**	**-1.2**
GO03					IAML		16 18 44.6	
	comp=E,175nm,0.4s							
GO03	**Copiapo**	**2.72**	**42**	*i*	P	**Pb**	**16 17 57.9**	**-0.1**
ACDV	**Cuesta del Vie**	**2.79**	**102**	*e*	P	**Pg**	**16 18 00.9**	**-1.0**
ACDV					IAML		16 18 42.3	
	comp=Z,108nm,0.9s							
AC06	**Mina Casimiro**	**2.84**	**37**	*e*	P	**Pb**	**16 17 59.3**	**-0.6**
AC06				*e*	S	**Sg**	**16 18 40.7**	**+0.9**
AC06					IAML		16 18 50.2	
	comp=E,143nm,0.2s							
ACCO	**Cerro Coronel**	**2.93**	**109**	*e*	P	**Pg**	**16 18 02.9**	**-1.8**
ACCO				*e*	S	**Sg**	**16 18 44.4**	**+1.6**
VA06	**Catapilco**	**3.02**	**164**	*e*	P	**Pb**	**16 18 01.9**	**-1.2**
VA06				*e*	S	**Sn**	**16 18 35.1**	**+0.8**
VA06					IAML		16 19 02.7	
	comp=E,174nm,0.6s							
RTLS	**Leoncito**	**3.34**	**131**	*e*	P	**Pb**	**16 18 09.0**	**+0.3**
RTLS				*e*	S	**Sg**	**16 18 54.1**	**-1.8**
RTLS					IAML		16 18 57.0	
	comp=Z,205nm,0.5s							
VA03	**San Esteban**	**3.44**	**155**	*e*	P	**Pb**	**16 18 08.9**	**-1.3**
VA03				*e*	S	**Sb**	**16 18 48.3**	**-4.3**
VA03	**San Esteban**	**3.44**	**155**	*e*	P	**Pb**	**16 18 09.3**	**-0.9**
VA03					IAML		16 19 14.6	
	comp=Z,80nm,0.6s							
ROCH	**El Roble**	**3.48**	**162**	*e*	P	**Pb**	**16 18 08.6**	**-2.5**
ROCH				*e*	S	**Sg**	**16 19 00.5**	**0.0**
AUSP	**Uspallata**	**3.57**	**137**	*e*	P	**Pb**	**16 18 12.0**	**-0.5**
AUSP				*e*	S	**Sb**	**16 18 58.3**	**+1.8**
ZON	**Zonda**	**3.63**	**122**	*e*	S	**Sb**	**16 19 00.4**	**+2.3**
ZON					IAML		16 19 08.4	
	comp=Z,40nm,0.6s							
VCA	**Vinchina**	**3.67**	**77**	*e*	P	**Pb**	**16 18 13.8**	**-0.5**
VCA	**Vinchina**	**3.67**	**77**	*e*	P	**Pb**	**16 18 14.1**	**-0.1**
VCA				*e*	S	**Sb**	**16 19 00.4**	**+1.0**
VCA					IAML		16 19 07.5	
	comp=Z,107nm,0.3s							
RTLL	**Cerro Villicun**	**3.68**	**118**	*i*	P	**Pb**	**16 18 14.2**	**-0.2**
PEL	**Peldehue**	**3.74**	**159**	*i*	P	**Pb**	**16 18 13.3**	**-2.0**
AC02	**Maricunga**	**3.94**	**45**	*e*	P	**Pb**	**16 18 15.6**	**-3.5**
AC02				*e*	S	**Sb**	**16 19 04.9**	**-2.6**
AC02					IAML		16 19 22.9	
	comp=Z,72nm,0.5s							
ASAL	**Salagasta**	**4.16**	**136**	*e*	P	**Pb**	**16 18 21.0**	**-1.5**
ARCO	**CERRO ARCO**	**4.28**	**139**	*e*	P	**Pb**	**16 18 23.9**	**-0.7**
ARCO					IAML		16 19 34.4	
	comp=Z,51nm,0.8s							
AVFE	**Valle Fertil**	**4.29**	**105**	*e*	P	**Pb**	**16 18 20.2**	**-4.6**
AVFE					IAML		16 19 23.3	
	comp=Z,53nm,0.8s							
TINO	**Tinogasta**	**4.42**	**70**	*e*	P	**Pb**	**16 18 23.3**	**-3.6**
AAGR	**Agrelo**	**4.52**	**140**	*e*	P	**Pb**	**16 18 25.4**	**-3.2**
AAGR					IAML		16 19 41.3	
	comp=Z,52nm,1.2s							
ACLC	**CERRO LA CRUZ**	**4.64**	**89**	*e*	P	Pb	16 18 25.1	-5.8
ACLC				*e*	S	**Sb**	**16 19 22.4**	**-5.0**
ACLC					IAML		16 19 38.0	
	comp=Z,30nm,0.7s							
ACAN	**Cantantal**	**5.09**	**122**	*e*	P	**Pb**	**16 18 36.3**	**-2.1**
TCA	**Tanti**	**6.84**	**106**	*e*	P	**Pn**	**16 18 53.2**	**+3.2**

*DJA **05** 16:27:48.5±0.3, 2.°N±3.°×12.°8E±.°, h127km±4km, M4.2/20, mB4.8/7, mb4.5/8, MLv4.2/20, Mw(mB)4.1/7*
*NEIC **05** 16:27:49.0±1.7, 2.°20N±0.°08×128.°14E±0.°07, h151km±7km, mb4.2/31, Error ellipse: s-maj=12.6km s-min=9.6km az=203.0*
*IDC **05** 16:27:48.4±2.7, 2.°27N×128.°32E, h149km±27km, mb3.8/10, mbtmp4.2/11, MS3.3/1, Error ellipse: s-maj=37.8km s-min=13.3km az=78.0*
ISC 05 16:27:48.4±0.4, **2.°24N**±0.°04×**128.°18E**±0.°05, **h150**km, **n78, σ1s22/86, mb4.2/22, Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.66**	**209**		P	**Pn**	**16 28 20.2**	**+0.5**
TNTI	**Ternate**	**1.66**	**209**			**Pn**	**16 28 19.6**	**-0.1**
TNTI					Sn	**Sn**	**16 28 43.3**	**-0.4**
TNTI	**Ternate**	**1.66**	**209**		P	**Pn**	**16 28 19.6**	**-0.1**
SGSI	**Sangihe**	**3.01**	**299**		P	**Pn**	**16 28 34.7**	**-1.2**
SGSI					S	**Sn**	**16 29 10.5**	**-2.1**
MNI	**Manado**	**3.43**	**257**		P	**Pn**	**16 28 41.6**	**+0.4**
MNI					S	**Sn**	**16 29 21.4**	**-0.7**
SWI	**Sorong**	**4.36**	**135**		P	**Pn**	**16 28 53.2**	**-0.1**
SWI					S	**Sn**	**16 29 43.2**	**-0.7**
SIJI	**Sorong**	**4.37**	**135**		P	**Pn**	**16 28 53.1**	**-0.4**
	11nm,0.2s,baz=297,slow=23,SNR=32							
SIJI					S	**Sn**	**16 29 42.8**	**-1.4**
	6.4nm,0.4s,baz=26,slow=22,SNR=6.6							
SIJI	**Sorong**	**4.37**	**135**		P	**Pn**	**16 28 53.2**	**-0.3**
DDMP	**Don Marcelino,**	**4.56**	**327**	*i*	P	**Pn**	**16 28 56.4**	**+0.3**
DDMP				*i*	S	**Sn**	**16 29 48.7**	**-0.1**
SANI	**Sanana**	**4.79**	**207**		P	**Pn**	**16 28 59.4**	**+0.4**
SANI	**Sanana**	**4.79**	**207**		P	**Pn**	**16 28 58.0**	**-1.0**
GTOI	**Gorontalo**	**5.40**	**253**		P	**Pn**	**16 29 09.0**	**+1.8**
KRAI	**Karang Ratu**	**5.52**	**178**		P	**Pn**	**16 29 10.5**	**+1.7**
BIPH	**Bislig**	**6.18**	**343**	*e*	P	**Pn**	**16 29 14.6**	**-3.0**
BIPH				*e*	S		16 29 23.6	
LUWI	**Luwuk**	**6.31**	**239**		P	**Pn**	**16 29 21.2**	**+2.0**
LUWI	**Luwuk**	**6.31**	**239**			**Pn**	**16 29 18.2**	**-1.0**
LUWI					Sn	**Sn**	**16 30 28.5**	**-1.9**
LUWI	**Luwuk**	**6.31**	**239**		P	**Pn**	**16 29 20.1**	**+0.9**
	0.3nm1μm40nm,0.7s							
MRSI	**Marisa**	**6.47**	**254**		P	**Pn**	**16 29 23.0**	**+1.6**
	0.3nm1μm81nm,0.6s							
FAKI	**Fak Fak**	**6.54**	**141**		P	**Pn**	**16 29 23.1**	**+0.7**
FAKI	**Fak Fak**	**6.54**	**141**		Pn	**Pn**	**16 29 22.3**	**-0.1**
FAKI	**Fak Fak**	**6.54**	**141**		P	**Pn**	**16 29 22.9**	**+0.5**
	0.2nm51nm,1.0s							
TOLI2	**Tolitoli**	**7.47**	**262**			**Pn**	**16 29 33.7**	**-1.1**
TOLI2					Sn	**Sn**	**16 30 54.3**	**-4.1**
MPSI	**Mapaga**	**8.49**	**257**		P	**Pn**	**16 29 49.1**	**+0.8**
	7.2nm,0.7s							
MYLDM	**Lahad Datu**	**10.09**	**287**		Pn	**Pn**	**16 30 10.5**	**+0.9**
KAPI	**Kappang**	**11.08**	**229**		Pn	**Pn**	**16 30 20.5**	**-2.2**
KKM	**Kota Kinabalu**	**12.51**	**288**		P	**P**	**16 30 47.4**	**+0.2**
SOEI	**Soe**	**12.53**	**198**		P	**P**	**16 30 47.0**	**-0.4**
SOEI	**Soe**	**12.53**	**198**			**P**	**16 30 44.8**	**-2.6**
PLAI	**Plampang**	**15.11**	**223**		P	**P**	**16 31 20.0**	**+4.1**
MTN	**Manton Dam**	**15.27**	**169**			**Pn**	**16 31 16.4**	**+0.2**
MTN					IAmb	IAmb	16 31 41.3	
	comp=Z,13nm,1.3s							
KNRA	**Kununurra**	**17.81**	**178**			**P**	**16 31 45.0**	**-0.7**
KNRA					IAmb	IAmb	16 31 47.0	
	comp=Z,8.9nm,0.4s							
FITZ	**Fitzroy Crossi**	**20.36**	**187**		P	**P**	**16 32 12.8**	**-0.5**
	comp=Z,1.1nm,0.4s,baz=39,slow=13,SNR=3.7							
	comp=Z,1.1nm,0.4s							
COEN	**Coen**	**21.91**	**138**		P	**P**	**16 32 28.5**	**-1.3**
COEN					IAmb	IAmb	16 33 03.0	
	comp=Z,9.0nm,1.3s							
WB0	**Warramunga Arr**	**22.70**	**165**			**P**	**16 32 37.7**	**+0.2**
WRAB	**Tennant Creek**	**22.85**	**165**		P	**P**	**16 32 38.4**	**-0.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.86**	**165**	P	**P**	**16 32 39.0**	**+0.1**
	comp=Z,6.2nm,0.4s,baz=344,slow=10,SNR=174						
	comp=Z,6.2nm,0.4s						
WRA	**Warramunga Arr**	**22.86**	**165**	P	**P**	**16 32 37.6**	**-1.3**
WR8	**Warramunga Arr**	**22.91**	**165**		**P**	**16 32 39.5**	**0.0**
AS31	**Alice Springs**	**26.34**	**168**		**P**	**16 33 10.2**	**-0.4**
ASAR	**Alice Springs**	**26.34**	**168**	P	**P**	**16 33 10.4**	**-0.1**
	comp=Z,1.2nm,0.5s,baz=350,slow=7.5,SNR=87						
ASAR				PcP	**PcP**	**16 36 33.0**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=359,slow=2.1,SNR=18						
	comp=Z,1.2nm,0.5s						
ASAR	**Alice Springs**	**26.34**	**168**	P	**P**	**16 33 09.9**	**-0.7**
INKA	**Innaminka**	**32.17**	**159**	P	**P**	**16 34 02.0**	**0.0**
INKA				IAmb	IAmb	16 34 22.9	
	comp=Z,3.0nm,1.3s						
JHJ	**Hachijo jima 2**	**32.59**	**18**	LR	LR	16 47 05.1	
	comp=Z,49nm,19.8s,baz=58,slow=36						
FORT	**Forrest**	**32.83**	**180**	P	**P**	**16 34 07.2**	**-0.6**
FORT				IAmb	IAmb	16 34 13.1	
	comp=Z,5.7nm,1.0s						
MORW	**Morawa**	**33.23**	**200**	P	**P**	**16 34 10.4**	**-0.8**
PZH	**PanZhiHua**	**35.01**	**316**	P	**P**	**16 34 28.1**	**+1.2**
MJAR	**Matsushiro Arr**	**35.37**	**14**	P	**P**	**16 34 27.6**	**-2.1**
	comp=Z,0.7nm,0.5s,baz=191,slow=9.0,SNR=1.6						
	comp=Z,0.7nm,0.5s						
MJAR	**Matsushiro Arr**	**35.37**	**14**	IAmb	IAmb	16 34 30.4	
	comp=Z,4.8nm,1.2s						
BBOO	**Buckleboo**	**35.65**	**169**	P	**P**	**16 34 32.0**	**0.0**
STKA	**Stephens Creek**	**36.24**	**160**	P	**P**	**16 34 37.2**	**+0.2**
	comp=Z,2.3nm,0.3s,baz=332,slow=8.2,SNR=20						
	comp=Z,2.3nm,0.3s						
STKA	**Stephens Creek**	**36.24**	**160**	P	**P**	**16 34 37.3**	**+0.2**
ARMA	**Armidale**	**39.44**	**147**	P	**P**	**16 35 03.6**	**-0.5**
HHC	**Hu-ho-hao-te**	**41.27**	**341**	*e*P	**P**	**16 35 21.6**	**+2.6**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,94nm,5.6s						
TOO	**Toolangi**	**42.74**	**160**	P	**P**	**16 35 32.0**	**+1.1**
TOO				IAmb	IAmb	16 35 36.8	
	comp=Z,13nm,1.5s						
PETK	**Petropavlovsk-**	**56.28**	**21**	P	**P**	**16 37 13.3**	**+0.1**
	comp=Z,1.8nm,0.9s,baz=214,slow=7.0,SNR=2.3						
	comp=Z,1.8nm,0.9s						
MK31	**Makanchi Array**	**59.60**	**325**	P	**P**	**16 37 36.8**	**+0.3**
MK31				IAmb	IAmb	16 37 38.0	
	comp=Z,0.9nm,0.6s						
MKAR	**Makanchi Array**	**59.60**	**325**	P	**P**	**16 37 37.6**	**+1.1**
	comp=Z,1.0nm,0.4s,baz=116,slow=8.0,SNR=28						
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	**59.60**	**325**	P	**P**	**16 37 37.0**	**+0.6**
MAKZ	**Makanchi**	**59.79**	**325**	P	**P**	**16 37 37.9**	**+0.2**
MAKZ				IAmb	IAmb	16 37 39.1	
	comp=Z,1.6nm,0.5s						
KDJ	**Kajisay**	**60.41**	**318**	P	**P**	**16 37 43.7**	**+1.4**
KDJ				IAmb	IAmb	16 38 24.9	
	comp=Z,1.8nm,0.8s						
BKZ	**Black Stump Fm**	**60.51**	**138**	P	**P**	**16 37 43.2**	**+0.3**
KURBB	**Kurchatov Arra**	**63.77**	**327**	P	**P**	**16 38 04.6**	**+0.3**
	comp=Z,1.2nm,0.4s,baz=125,slow=6.4,SNR=28						
KURBB				PcP	**pP**	**16 38 39.4**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=104,slow=3.9,SNR=5.3						
	comp=Z,1.2nm,0.4s						
KURK	**Kurchatov**	**63.77**	**327**	P	**P**	**16 38 04.9**	**+0.7**
KURK				IAmb	IAmb	16 38 05.6	
	comp=Z,3.1nm,0.9s						
KURK	**Kurchatov**	**63.77**	**327**		**PcP**	**16 38 39.4**	**+0.5**
KKAR	**Karatay Array**	**65.30**	**317**	P	**P**	**16 38 13.0**	**-1.4**
TIXI	**Tiksi**	**69.31**	**0**	P	**P**	**16 38 38.8**	**-0.2**
CASY	**Casey**	**69.53**	**188**	P	**P**	**16 38 38.9**	**-1.5**
AB31	**Akbulak array**	**74.21**	**321**	P	**P**	**16 39 09.1**	**+0.4**
ABKAR	**Akbulak array**	**74.21**	**321**	P	**P**	**16 39 08.9**	**+0.1**
J16K	**Anvik River**	**79.63**	**26**	P	**P**	**16 39 39.7**	**+0.9**
J16K				IAmb	IAmb	16 40 05.6	
	comp=Z,5.0nm,1.4s						
L16K	**Owhat River**	**79.72**	**27**	P	**P**	**16 39 39.8**	**+0.5**
L16K				IAmb	IAmb	16 39 41.3	
	comp=Z,12nm,1.5s						
E18K	**Tukpahlearik C**	**80.80**	**22**	P	**P**	**16 39 46.1**	**+1.2**
C19K	**Lookout Ridge**	**81.63**	**20**	P	**P**	**16 39 50.5**	**+1.1**
C19K				IAmb	IAmb	16 39 52.3	
	comp=Z,7.4nm,1.5s						
B21K	**Ikpikpuk River**	**83.47**	**20**	P	**P**	**16 40 00.2**	**+1.4**
B21K				IAmb	IAmb	16 40 41.2	
	comp=Z,4.1nm,1.4s						
I28M	**Miner Creek**	**88.77**	**25**	P	**P**	**16 40 24.9**	**-0.1**
ARCES	**ARCESS Array B**	**92.34**	**340**	P	**P**	**16 40 41.0**	**-0.4**
	comp=Z,4.4nm,0.8s,baz=44,slow=5.6,SNR=4.3						
	comp=Z,4.4nm,0.8s						
ARCES	**ARCESS Array B**	**92.34**	**340**	P	**P**	**16 40 40.6**	**-0.8**
FINES	**FINESS Array B**	**93.82**	**332**	P	**P**	**16 40 47.4**	**-1.0**
	comp=Z,1.4nm,0.9s,baz=56,slow=3.4,SNR=3.5						
	comp=Z,1.4nm,0.9s						

IDC 05 16:28:00.4±3.9**, 31°.03N**×**140°.81E, h0**km**, mb3.3**/3**, mbtmp3.3**/4**, ML2.3**/1**, Error ellipse: s-maj=158.8km s-min=26.3km az=73.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**5.91**	**339**	Pn	Pn	16 29 28.6	-0.7
	0.1nm,0.3s,baz=160,slow=11,SNR=4.7						
	3.1nm,1.0s						
MKAR	**Makanchi Array**	**47.10**	**307**	P	P	16 36 34.2	+0.1
	0.1nm,0.4s,baz=84,slow=8.2,SNR=4.1						
	0.1nm,0.4s						
WRA	**Warramunga Arr**	**51.06**	**188**	P	P	16 37 04.5	-0.2
	0.3nm,0.3s,baz=5.6,slow=7.6,SNR=6.1						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**54.79**	**188**	P	P	16 37 32.0	-0.1
	0.1nm,0.5s,baz=2.8,slow=6.4,SNR=4.0						
	0.1nm,0.5s						

*NEIC **05** 16:29:07.2±1.0, 17°.92N±0°.03×66°.96W±0°.02, h17km±1km, ML3.5/35, Md3.2/5(RSPR), Error ellipse: s-maj=4.5km s-min=1.9km az=189.0*
*SDD **05** 16:29:08.0±0.6, 17°.93N×66°.99W, h19km±3km, MD3.5, ML3.3, MW3.5, Presumed earthquake*
*OSPL **05** 16:29:08.1±0.3, 17°.96N×66°.98W, h18km±21km, ML2.8, Presumed earthquake*
ISC 05 16:29:06.8±1.0**, 17°.90N**±0°.05×**66°.97W**±0°.02**, h18**km±3km**, n29, σ0s.48**/49**, 2C-2D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MLPR	**Magueyes Islan**	**0.10**	**313**		**Pg**	**16 29 10.7**	**+0.2**
MLPR				Sg	**Sg**	**16 29 12.5**	**-0.4**
MLPR				IAML		16 29 14.4	
	13µm,0.3s						
GBPR	**Guanica, Bosqu**	**0.11**	**49**		**Pg**	**16 29 10.9**	**+0.3**
GBPR					**Sg**	**16 29 13.0**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.17**	**308**	Pg	**Pg**	**16 29 11.7**	**+0.4**
CRPR				Sg	**Sg**	**16 29 14.2**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.17**	**308**	⇑*e*P	**Pg**	**16 29 11.8**	**+0.4**
CRPR				⇑*e*Sg	**Sg**	**16 29 14.5**	**+0.1**
CRPR				IAML		16 29 14.6	
	comp=N,29µm,0.2s						
CRPR				IAML		16 29 14.7	
	comp=E,34µm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.17**	**308**	*i* P	**Pg**	**16 29 11.8**	**+0.4**
CRPR				*e*S	**Sg**	**16 29 14.5**	**+0.1**
CRPR				IAML		16 29 15.0	
	comp=Z,12µm,0.2s						
LSP	**Las Mesas**	**0.29**	**338**		**Pb**	**16 29 13.7**	**+0.1**
LSP					**Sb**	**16 29 18.3**	**+0.2**
PRSN	**Puerto Rico Se**	**0.36**	**332**		**Pb**	**16 29 14.6**	**0.0**
PRSN				Sg	**Sb**	**16 29 19.7**	**-0.3**
PRSN				IAML		16 29 22.5	
	comp=Z,8µm,0.3s						
PRSN				IAML		16 29 22.6	
	comp=Z,7µm,0.3s						
OBIP	**Obispado Ponce**	**0.37**	**68**		**Sb**	**16 29 20.3**	**-0.1**
OBIP	**Obispado Ponce**	**0.37**	**68**		**Pb**	**16 29 14.8**	**-0.1**
OBIP				IAML		16 29 20.9	
	comp=N,504nm,0.5s						
OBIP	**Obispado Ponce**	**0.37**	**68**	*i* P	**Pb**	**16 29 15.1**	**+0.2**
OBIP				*e*S	**Sb**	**16 29 20.3**	**-0.1**
OBIP				IAML		16 29 20.6	
	comp=Z,650nm,0.4s						
CELP	**Cerrillos**	**0.41**	**65**		**Pb**	**16 29 15.6**	**+0.1**
CELP				Sg	**Sb**	**16 29 21.2**	**-0.3**
UUPR	**Utuado, UPR, P**	**0.42**	**34**		**Pg**	**16 29 15.5**	**0.0**
UUPR				Sg	**Sg**	**16 29 20.4**	**-0.9**
AOPR	**Arecibo Observ**	**0.49**	**25**		**Pb**	**16 29 16.7**	**-0.2**
AOPR				Sg	**Sg**	**16 29 22.7**	**-0.6**
AGPR	**Aguadilla, PR**	**0.58**	**346**		**Pg**	**16 29 18.5**	**+0.1**
AGPR				Sg	**Sb**	**16 29 25.8**	**-0.4**
AGPR				IAML		16 29 26.5	
	comp=Z,3µm,0.4s						
IDE	**Isla Desecheo**	**0.68**	**315**		**Pg**	**16 29 20.4**	**+0.1**
IDE					**Sg**	**16 29 29.7**	**+0.4**
EMPR	**Esperanza - Ma**	**0.71**	**36**		**Pg**	**16 29 21.1**	**+0.3**
EMPR					**Sg**	**16 29 30.9**	**+0.7**
ECPR	**Experimental S**	**0.71**	**54**		**Pb**	**16 29 20.4**	**-0.2**
ECPR				Sg	**Sg**	**16 29 30.1**	**-0.1**
ECPR				IAML		16 29 31.6	
	comp=Z,3µm,0.2s						
ECPR				IAML		16 29 32.0	
	comp=Z,2µm,0.2s						
SJG	**San Juan**	**0.81**	**75**		**Pb**	**16 29 22.3**	**+0.1**
SJG				Sg	**Sb**	**16 29 32.9**	**+0.1**
SJG	**San Juan**	**0.81**	**75**	⇓*e*Pg	**Pb**	**16 29 22.3**	**+0.1**
SJG				⇓*e*Sg	**Sg**	**16 29 33.4**	**+0.2**
SJG	**San Juan**	**0.81**	**75**	*i* P	**Pb**	**16 29 22.4**	**+0.1**
SJG				IAML		16 29 34.5	
	comp=Z,354nm,0.2s						
PDPR	**Patillas Dam,**	**0.91**	**82**		**Pb**	**16 29 24.2**	**+0.2**
HUMP	**Col San Antoni**	**1.09**	**77**		**Pb**	**16 29 27.0**	**-0.1**
HUMP					**Sb**	**16 29 40.0**	**-1.0**
HUMP	**Col San Antoni**	**1.09**	**77**		**Pb**	**16 29 26.4**	**-0.6**
HUMP				Sn	**Sb**	**16 29 41.1**	**+0.1**
HUMP				IAML		16 29 45.7	
	comp=Z,614nm,0.2s						
HUMP				IAML		16 29 46.2	
	comp=Z,694nm,0.2s						
CUPR	**Culebra, Puert**	**1.65**	**76**		**Pb**	**16 29 36.0**	**-0.7**
HIDR	**Higuey Centro**	**1.80**	**293**	*e*Pg	**Pb**	**16 29 39.0**	**-0.2**
HIDR				IAML		16 30 07.3	
	comp=N,176nm,0.2s						
HIDR				IAML		16 30 07.3	
	comp=E,116nm,0.2s						
DR12	**Loma Pena Alta**	**2.46**	**291**		**Pn**	**16 29 47.8**	**+1.8**
HATOM	**Hato Mayor del**	**2.46**	**291**	*e*Pg	**Pb**	**16 29 49.4**	**-1.0**
HATOM				*e*Sg	**Sb**	**16 30 20.4**	**-0.1**
HATOM				IAML		16 30 30.0	
	comp=E,56nm,0.3s						
HATOM				IAML		16 30 33.5	
	comp=N,68nm,0.9s						
BANI	**BANI**	**3.26**	**279**	Pn	**Pn**	**16 29 57.2**	**+0.1**
SDDR	**Presa de Saban**	**4.24**	**285**		**Pn**	**16 30 09.7**	**-0.9**

*IDC **05** 16:45:00.6±3.6, 16°.13S×173°.88W, h106km±35km, mb3.8/4, mbtmp4.2/5, MS2.3/1, Error ellipse: s-maj=181.8km s-min=24.4km az=138.0*
*NEIC **05** 16:45:01.6±1.6, 16°.01S±0°.07×173°.9W±0°.1, h112km±8km, mb4.5/26, Error ellipse: s-maj=15.8km s-min=10.7km az=87.0*
ISC 05 16:45:01.0±0.6**, 16°.02S**±0°.07×**173°.80W**±0°.08**, h115**km**, n36, σ1s.16**/38**, mb4.6**/14**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.86**	**43**	P	**Pn**	**16 45 46.7**	**+1.3**
	88nm,0.3s,baz=0.0,slow=2.0,SNR=7.2						
AFI				S	**Sn**	**16 46 17.2**	**-2.4**
	1µm,0.6s,baz=68,slow=17,SNR=19						
AFI				LR	LR	16 46 21.7	
	comp=Z,51nm,19.1s,baz=250,slow=27						
NIUE	**Niue**	**4.79**	**130**		**Pn**	**16 46 12.9**	**+1.9**
NIUE				Sn	**Sn**	**16 47 02.5**	**-2.9**
MARNC	**Mare, Loyalty**	**18.04**	**250**	P	**P**	**16 49 01.4**	**-1.9**
SANVU	**Saraoutou**	**18.30**	**269**	P	**P**	**16 49 04.5**	**-1.7**
SANVU				IAmb	IAmb	16 49 33.6	
	comp=Z,15nm,0.9s						
OUENC	**Ouen Island, N**	**19.35**	**248**	P	**P**	**16 49 18.1**	**+0.5**
OUENC				IAmb	IAmb	16 49 43.2	
	comp=Z,19nm,1.0s						
DZM	**Mont Dzumac**	**19.62**	**249**		**P**	**16 49 19.9**	**-0.7**
BKZ	**Black Stump Fm**	**24.58**	**198**	P	**P**	**16 50 09.8**	**-0.5**
BKZ				IAmb	IAmb	16 50 31.1	
	comp=Z,47nm,1.5s						
KHZ	**Kahutara**	**28.47**	**200**	P	**P**	**16 50 44.1**	**-1.0**
COEN	**Coen**	**41.56**	**267**	P	**P**	**16 52 37.3**	**-0.4**
COEN				IAmb	IAmb	16 52 55.2	
	comp=Z,18nm,1.5s						
TOO	**Toolangi**	**41.78**	**231**	P	**P**	**16 52 38.6**	**-0.7**
TOO				IAmb	IAmb	16 52 50.5	
	comp=Z,17nm,1.4s						
STKA	**Stephens Creek**	**43.40**	**240**	P	**P**	**16 52 51.1**	**-1.3**
	comp=Z,2.2nm,0.6s,baz=85,slow=14,SNR=5.1						
	comp=Z,2.2nm,0.6s						
STKA	**Stephens Creek**	**43.40**	**240**	P	**P**	**16 52 51.9**	**-0.5**
INKA	**Innaminka**	**43.54**	**246**		**P**	**16 52 53.6**	**0.0**
BBOO	**Buckleboo**	**48.17**	**240**	P	**P**	**16 53 29.9**	**0.0**
BBOO				IAmb	IAmb	16 53 31.3	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	**49.33**	**257**	P	**P**	**16 53 38.8**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=91,slow=7.5,SNR=17						
	comp=Z,1.9nm,0.7s						
WRA	**Warramunga Arr**	**49.33**	**257**	P	**P**	**16 53 38.2**	**-0.8**
AS31	**Alice Springs**	**49.56**	**252**		**P**	**16 53 40.3**	**-0.3**
ASAR	**Alice Springs**	**49.56**	**252**	P	**P**	**16 53 40.7**	**+0.1**
	comp=Z,8.0nm,0.7s,baz=91,slow=7.8,SNR=98						
	comp=Z,8.0nm,0.7s						
ASAR	**Alice Springs**	**49.56**	**252**	P	**P**	**16 53 40.3**	**-0.4**
FORT	**Forrest**	**54.80**	**243**	P	**P**	**16 54 18.7**	**-0.6**
FORT				IAmb	IAmb	16 54 42.7	
	comp=Z,7.1nm,0.9s						
SOEI	**Soe**	**60.52**	**268**	P	**P**	**16 55 01.4**	**+1.7**
SBA	**Scott Base**	**62.61**	**185**	P	**P**	**16 55 15.0**	**+2.5**
PSA00	**Pilbara Seismi**	**62.66**	**254**	P	**P**	**16 55 13.7**	**-0.2**
PSA00				IAmb	IAmb	16 55 15.0	
	comp=Z,4.7nm,0.7s						
PSA00	**Pilbara Seismi**	**62.66**	**254**	P	**P**	**16 55 13.9**	**0.0**
PSA00				IAmb	IAmb	16 55 14.9	
	comp=Z,11nm,0.6s						
VNDA	**Vanda**	**62.73**	**186**	P	**P**	**16 55 14.4**	**+1.0**
MBWA	**Marble Bar**	**62.82**	**254**	P	**P**	**16 55 14.9**	**0.0**
MBWA				IAmb	IAmb	16 55 16.0	
	comp=Z,5.3nm,0.8s						
GIRL	**Giralia**	**67.67**	**252**	P	**P**	**16 55 46.1**	**-0.1**
CASY	**Casey**	**69.69**	**205**	P	**P**	**16 55 58.0**	**+0.1**
PKD	**Bear Valley Ra**	**72.15**	**43**	P	**P**	**16 56 12.4**	**-0.9**
PKD				IAmb	IAmb	16 56 45.7	
	comp=Z,8.5nm,1.1s						
PETK	**Petropavlovsk-**	**73.10**	**343**	P	**P**	**16 56 18.6**	**+0.1**
K15K	**Wolf Creek Mou**	**78.65**	**6**	P	**P**	**16 56 50.1**	**+0.3**
J16K	**Anvik River**	**79.71**	**6**	P	**P**	**16 56 57.3**	**+1.7**
J16K				IAmb	IAmb	16 57 25.8	
	comp=Z,8.3nm,1.5s						
TRF	**Thorofare Moun**	**81.30**	**10**	P	**P**	**16 57 04.8**	**+0.5**
TRF				IAmb	IAmb	16 57 09.7	
	comp=Z,11nm,1.5s						
ILAR	**Eielson Array**	**83.12**	**11**	P	**P**	**16 57 14.3**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=208,slow=4.9,SNR=4.7						
	comp=Z,0.3nm,0.7s						
BRTR	**Keskin Array B**	**146.38**	**320**	PKPbc	**PKPbc**	**17 04 29.8**	**+0.8**
	comp=Z,1.8nm,0.8s,baz=109,slow=2.4,SNR=10.0						
BRTR	**Keskin Array B**	**146.38**	**320**		**PKPbc**	**17 04 28.9**	**-0.1**

*IDC **05** 16:49:19.0±2.7, 7°.22S×128°.55E, h0km, mb3.4/1, mbtmp3.3/3, ML3.6/2, MS3.4/1, Error ellipse: s-maj=299.2km s-min=31.5km az=66.0*
ISC 05 16:49:24.8±1.6**, 8°.2S**±0°.6×**12°7E**±°**, h35**km**, n4, σ3s.51**/4**, Timor region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.63**	**150**	Pn	**Pn**	**16 52 35.5**	**-0.4**
	0.4nm,0.3s,baz=334,slow=13,SNR=35						
WRA				Sn	Sn	16 54 55.3	-11
	0.5nm,0.3s,baz=340,slow=22,SNR=8.5						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**16.71**	**158**	P	**P**	**16 53 21.1**	**+2.7**
	0.2nm,0.3s,baz=341,slow=10,SNR=32						
ASAR				S	**Sn**	**16 56 19.0**	**-2.1**
	0.2nm,0.5s,baz=348,slow=26,SNR=3.7						
	0.3nm,0.5s						
PALK	**Pallekele**	**48.69**	**287**	LR	LR	17 20 15.7	
	comp=Z,34nm,19.0s,baz=293,slow=37						
MKAR	**Makanchi Array**	**67.67**	**328**	P	**P**	**17 00 17.8**	**-0.7**
	0.2nm,0.4s,baz=114,slow=8.2,SNR=6.6						
	0.2nm,0.4s						

DJA 05 16:49:37.7±0.2**, 6°S**±1°×**12°1E**±°**, h10**km**, M3.8**/26**, mb4.2**/4**, MLv3.6**/26**, Sulawesi**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BSSI	**Bau Bau, Buton**	**0.45**	**202**	P	Pb	16 49 47.7	-0.1
BSSI				S	Sb	16 49 56.0	+1.4
BKSI	**Bulukumba**	**0.67**	**306**	P	Pg	16 49 49.7	-0.9
BKSI				S	Sg	16 49 59.1	-0.2
KAPI	**Kappang**	**1.14**	**308**	P	Pb	16 49 57.9	-1.7
KAPI				S	Sb	16 50 13.8	-0.7
MKS	**Makassar**	**1.28**	**293**	P	Pn	16 50 00.5	-1.2
MKS				S	Sb	16 50 18.6	0.0
KKSI	**Kolaka, Sulawe**	**1.83**	**33**	P	Pn	16 50 09.3	+0.1
KKSI				S	Sn	16 50 32.6	+0.2
SPSI	**Sidrap Palu**	**1.96**	**333**	P	Pn	16 50 11.0	0.0
TTSI	**Tana Toraja**	**2.79**	**342**	P	Pn	16 50 24.5	+2.1
PMSI	**Majene**	**2.81**	**322**	P	Pb	16 50 25.4	-2.6
LBFI	**Labuhan Bajo,**	**2.85**	**196**	P	Pn	16 50 23.5	+0.3
EDFI	**Ende, Flores**	**3.18**	**161**	P	Pn	16 50 28.0	+0.1
MMRI	**Maumere**	**3.29**	**152**	P	Pn	16 50 29.6	+0.2
DBNI	**Kabupaten Domp**	**3.62**	**220**	P	Pn	16 50 33.4	-0.4
WBSI	**Waikabubak, Su**	**4.09**	**198**	P	Pn	16 50 41.1	+0.7
PLAI	**Plampang**	**4.21**	**223**	P	Pn	16 50 41.7	-0.3
TWSI	**Taliwang, Sumb**	**4.80**	**231**	P	Pn	16 50 49.6	-0.5
LUWI	**Luwuk**	**5.10**	**24**	P	Pn	16 50 53.4	-0.9
	28nm,0.5s						
SOEI	**Soe**	**5.37**	**139**	P	Pn	16 50 58.3	+0.2
	20nm,1.2s						
KHKI	**Kahang-Kahang**	**5.66**	**242**	P	Pn	16 51 01.4	-0.5
	19nm,1.3s						
SANI	**Sanana**	**6.45**	**56**	P	Pn	16 51 11.9	-0.8

*IDC **05** 16:53:24.2±0.6, 29°.76S×178°.38W, h207km±4km, mb3.7/5, mbtmp4.2/7, Error ellipse: s-maj=28.2km s-min=16.6km az=131.0*
*NEIC **05** 16:53:25.4±1.2, 29°.3S±0°.1×178°.5W±0°.2, h205km±3km, mb4.2/22, Error ellipse: s-maj=20.9km s-min=17.6km az=115.0*
ISC 05 16:53:24.9±0.6**, 29°.54S**±0°.06×**178°.6W**±0°.1**, h204**km**, n49, σ1s.54**/53**, mb4.1**/15**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.66**	**64**	P	**Pn**	**16 53 53.7**	**+0.6**
	4µm,0.3s,baz=96,slow=2.8,SNR=31						
RAO				S	**S**	**16 54 15.5**	**+0.6**
	2µm,0.3s,baz=112,slow=23,SNR=14						
RAO	**Raoul Island**	**0.66**	**64**		**Pn**	**16 53 53.7**	**+0.6**
RAO				Sn	**S**	**16 54 13.7**	**-1.2**
MXZ	**Matakaoa Point**	**8.41**	**197**	Pn	**Pn**	**16 55 21.4**	**-2.0**
MXZ				Sn	**S**	**16 56 56.9**	**-1.1**
URZ	**Urewera**	**9.40**	**201**	P	**Pn**	**16 55 33.5**	**-2.7**
	7.3nm,0.9s,baz=272,slow=5.5,SNR=9.5						
URZ				S	**S**	**16 57 18.1**	**-3.5**
	5.3nm,0.3s,baz=158,slow=21,SNR=11						
RTZ	**Ruatahuna**	**9.77**	**201**	Pn	**Pn**	**16 55 38.1**	**-3.0**
MSVF	**Nonsavu**	**12.15**	**345**	P	**Pn**	**16 56 10.0**	**-1.7**
	5.7nm,0.6s,baz=230,slow=22,SNR=5.8						
OUENC	**Ouen Island, N**	**14.89**	**295**		**Pn**	**16 56 44.4**	**-1.2**
DZM	**Mont Dzumac**	**15.38**	**295**	P	**P**	**16 56 54.0**	**+2.1**
	6.8nm,0.8s,baz=125,slow=12,SNR=5.8						
DZM	**Mont Dzumac**	**15.38**	**295**	P	**Pn**	**16 56 51.4**	**-0.4**
CTAO	**Charters Tower**	**33.16**	**278**	P	**P**	**16 59 44.0**	**+1.7**
CTAO				IAmb	IAmb	17 00 21.4	
	comp=Z,8.3nm,1.4s						
STKA	**Stephens Creek**	**34.18**	**256**	P	**P**	**16 59 54.5**	**+3.6**
	comp=Z,1.7nm,0.6s,baz=73,slow=8.8,SNR=3.6						
STKA	**Stephens Creek**	**34.18**	**256**	P	**P**	**16 59 52.2**	**+1.2**
COEN	**Coen**	**38.54**	**285**	P	**P**	**17 00 27.8**	**-0.2**
COEN				IAmb	IAmb	17 00 45.9	
	comp=Z,6.4nm,1.1s						
BBOO	**Buckleboo**	**38.71**	**253**	P	**P**	**17 00 30.6**	**+1.3**
AS31	**Alice Springs**	**42.64**	**266**		**P**	**17 01 02.0**	**+0.4**
ASAR	**Alice Springs**	**42.65**	**266**	P	**P**	**17 01 02.0**	**+0.4**
	comp=Z,1.9nm,0.6s,baz=102,slow=6.1,SNR=44						
ASAR				ScP	**ScP**	**17 06 20.8**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=116,slow=3.9,SNR=6.2						
	comp=Z,1.9nm,0.6s						
ASAR	**Alice Springs**	**42.65**	**266**	P	**P**	**17 01 01.9**	**+0.4**
WR8	**Warramunga Arr**	**43.41**	**272**	P	**P**	**17 01 07.8**	**+0.1**
WR8				IAmb	IAmb	17 01 50.8	
	comp=Z,6.4nm,1.4s						
WRA	**Warramunga Arr**	**43.55**	**272**	P	**P**	**17 01 09.1**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=110,slow=7.7,SNR=42						
	comp=Z,1.4nm,0.5s						
WRA	**Warramunga Arr**	**43.55**	**272**	IAmb	IAmb	17 01 11.8	
	comp=Z,0.6nm,1.4s						
FORT	**Forrest**	**45.77**	**254**	P	**P**	**17 01 28.6**	**+2.4**
SBA	**Scott Base**	**48.86**	**184**	P	**P**	**17 01 53.0**	**+3.7**
VNDA	**Vanda**	**48.90**	**186**	P	**P**	**17 01 52.1**	**+2.5**
VNDA				IAmb	IAmb	17 02 22.2	
	comp=Z,21nm,1.5s						
KNRA	**Kununurra**	**50.13**	**274**	P	**P**	**17 02 00.7**	**+1.0**
MBWA	**Marble Bar**	**55.81**	**263**	P	**P**	**17 02 40.6**	**-0.6**
MBWA				IAmb	IAmb	17 02 41.9	
	comp=Z,5.1nm,0.8s						
MORW	**Morawa**	**56.28**	**253**	P	**P**	**17 02 44.9**	**+0.4**
MORW				IAmb	IAmb	17 03 02.4	
	comp=Z,9.3nm,1.1s						
QSPA	**South Pole Qui**	**60.57**	**180**	P	**P**	**17 03 14.6**	**+1.0**
QSPA				IAmb	IAmb	17 03 36.2	
	comp=Z,8.3nm,1.5s						
TOLI2	**Tolitoli**	**65.30**	**286**	P	**P**	**17 03 44.6**	**-0.7**
TOLI2				IAmb	IAmb	17 03 48.0	
	comp=Z,4.2nm,0.9s						
BELA	**Belgrano 2**	**70.70**	**172**	P	**P**	**17 04 19.6**	**+1.5**
BELA				IAmb	IAmb	17 05 00.5	
	comp=Z,5.7nm,1.5s						
JGF	**Kuroka**	**76.93**	**324**	P	**P**	**17 04 53.9**	**-0.8**
MJAR	**Matsushiro Arr**	**77.24**	**326**	P	**P**	**17 04 56.1**	**-0.3**
	comp=Z,2.3nm,0.8s,baz=147,slow=6.9,SNR=4.0						
	comp=Z,2.3nm,0.8s						
MJAR	**Matsushiro Arr**	**77.24**	**326**	IAmb	IAmb	17 05 34.6	
	comp=Z,6.1nm,1.4s						
TPUB	**Ta-pu**	**78.57**	**305**	P	**P**	**17 05 03.0**	**-1.0**
KULM	**Kulim**	**84.58**	**279**	P	**P**	**17 05 35.7**	**0.0**
PEA0B	**Petropavlovsk-**	**84.85**	**346**	P	**P**	**17 05 35.4**	**-0.7**
PETK	**Petropavlovsk-**	**84.85**	**346**	P	**P**	**17 05 37.0**	**+0.9**
	comp=Z,2.3nm,0.6s,baz=107,slow=7.7,SNR=19						
	comp=Z,2.3nm,0.6s						
PETK	**Petropavlovsk-**	**84.85**	**346**	P	**P**	**17 05 35.3**	**-0.8**
CMAR	**Chiang Mai Arr**	**92.63**	**290**	P	**P**	**17 06 14.0**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=109,slow=4.9,SNR=2.5						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**116.82**	**311**	PKP	**PKPdf**	**17 11 42.2**	**-2.6**
	comp=Z,0.5nm,1.0s,baz=95,slow=4.6,SNR=2.5						
KURK	**Kurchatov**	**120.08**	**314**		**PKPdf**	**17 11 49.2**	**-1.6**
KURBB	**Kurchatov Arra**	**120.12**	**314**	PKP	**PKPdf**	**17 11 49.2**	**-1.7**
	comp=Z,0.2nm,0.4s,baz=120,slow=1.7,SNR=4.4						
BVAR	**Borovoye Array**	**125.43**	**316**	PKP	**PKPdf**	**17 12 00.5**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=126,slow=2.6,SNR=4.0						
FINES	**FINESS Array B**	**144.16**	**340**	PKP	**PKPab**	**17 12 32.8**	**-1.1**
	comp=Z,2.3nm,0.5s,baz=58,slow=3.2,SNR=22						
NB2	**NORSAR Subarra**	**147.82**	**351**	PKP	**PKPbc**	**17 12 44.0**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	**147.82**	**351**	PKPbc	**PKPbc**	**17 12 44.1**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=15,slow=4.4,SNR=3.9						
HFS	**Hagfors**	**148.30**	**348**	PKPbc	**PKPbc**	**17 12 45.9**	**-0.4**
	comp=Z,2.3nm,0.8s,baz=31,slow=4.3,SNR=12						
AKASG	**Malin Array Be**	**150.30**	**323**	PKPbc	**PKPbc**	**17 12 50.0**	**-1.4**
	comp=Z,1.5nm,0.5s,baz=48,slow=3.2,SNR=5.5						
MMAI	**Mount Meron Ar**	**150.81**	**286**	PKPbc	**PKiKP**	**17 12 54.3**	**+0.3**
	comp=Z,1.7nm,0.5s,baz=49,slow=8.9,SNR=8.0						
BRTR	**Keskin Array B**	**151.73**	**300**	PKPbc	**PKPbc**	**17 12 54.9**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=136,slow=5.9,SNR=4.6						
BRTR				PKPab	**PKPab**	**17 13 05.8**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=123,slow=5.5,SNR=2.8						

*SFS **05** 17:02:36.7, 34°.37N×5°.58W, h0km, ML3.5/12, ML3.8/12, MLv3.5/12*
*MDD **05** 17:02:36.8±0.7, 34°.31N×5°.63W, h8km±5km, mb_Lg3.0/11, Error ellipse: s-maj=4.3km s-min=3.3km az=124.0*
*CNRM **05** 17:02:37.4, 34°.28N×5°.62W, h18km, ML2.7*
*INMG **05** 17:02:37.6±1.3, 34°.28N×5°.66W, h19km±7km, ML2.5, Error ellipse: s-maj=6.4km s-min=3.9km az=70.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NW Fez (Marr)*
*IGIL **05** 17:02:38.0, 34°.32N×5°.63W, h13km*
ISC 05 17:02:37.3±1.2**, 34°.35N**±0°.03×**5°.57W**±0°.03**, h21**km±3km**, n52, σ1s.15**/94**, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SICH	**Sidi Chahed**	**0.32**	**139**	P	**Pb**	**17 02 43.5**	**-0.8**
SICH				S	**Sb**	**17 02 49.5**	**+0.4**
RSA	**Sarsar**	**0.57**	**339**	P	**Pb**	**17 02 49.1**	**+0.3**
RSA				S	**Sn**	**17 02 59.3**	**+0.2**
LCRM	**LCR**	**0.89**	**138**	P	**Pn**	**17 02 53.5**	**-1.2**
LCRM				S	**Sb**	**17 03 07.8**	**+2.2**
IFR	**Ifrane**	**0.91**	**156**	Pg	**Pn**	**17 02 53.3**	**-1.7**
IFR				Sg	**Sb**	**17 03 06.2**	**0.0**
RTC	**Rabat Centre**	**1.12**	**252**	Pg	**Pn**	**17 02 57.0**	**-0.8**
RTC				Sg	**Sn**	**17 03 11.7**	**-1.0**
AKLM	**AKL**	**1.42**	**83**	P	**Pn**	**17 03 03.5**	**+1.5**
AKLM				S	**Sn**	**17 03 20.6**	**+0.5**
CEU	**Ceuta**	**1.56**	**6**	Pg	**Pn**	**17 03 05.7**	**+1.9**
MD31	**MD31**	**1.63**	**155**	P	**Pn**	**17 03 04.4**	**-0.5**
MD31				S	**Sn**	**17 03 25.4**	**+0.2**
MDT	**Midelt**	**1.73**	**152**	P	**Pn**	**17 03 05.9**	**-0.3**
MDT				S	**Sn**	**17 03 27.9**	**+0.2**
AVE	**Averroes**	**1.86**	**236**	Pn	**Pn**	**17 03 09.6**	**+1.6**
AVE				Sn	**Sn**	**17 03 33.3**	**+2.6**
EJIF	**Jimena Fronter**	**2.10**	**2**	Pn	**Pn**	**17 03 12.2**	**+1.0**
EJIF				Sn	**Sn**	**17 03 38.4**	**+1.6**
ESPR	**Espera**	**2.53**	**355**	Pn	**Pn**	**17 03 18.2**	**+1.1**
ESPR	**Espera**	**2.53**	**355**	Pn	**Pn**	**17 03 18.1**	**+1.0**
ESPR				Sn	**Sn**	**17 03 47.5**	**+0.2**
ESPR				*i* IVmb_Lg		17 03 52.4	
TISM	**Timmit**	**2.72**	**196**	P	**Pn**	**17 03 20.3**	**+0.6**
E1302	**La Puebla de C**	**2.79**	**5**	Pn	**Pn**	**17 03 22.5**	**+1.7**
E1302				Sn	**Sn**	**17 03 54.6**	**+0.8**
E1302				*i* IVmb_Lg		17 04 07.0	
PBDV	**Barranco-do-Ve**	**3.47**	**327**	Pn	**Pn**	**17 03 29.6**	**-0.5**
PBDV				Sn	**Sn**	**17 04 09.4**	**-1.1**
PBDV	**Barranco-do-Ve**	**3.47**	**327**	*e*Pn	**Pn**	**17 03 29.8**	**-0.3**
PBDV				*e*Sn	**Sn**	**17 04 09.5**	**-1.1**
PBDV				*i* IAML		17 04 11.3	
PBDV				*i* IAML		17 04 14.4	
PBDV				*i* IAML		17 04 15.1	
PVAQ	**Vaqueiros**	**3.51**	**331**	*e*Pn	**Pn**	**17 03 30.5**	**-0.2**
PVAQ				*e*Sn	**Sn**	**17 04 10.6**	**-1.0**
PVAQ				*i* IAML		17 04 12.0	
PVAQ				*i* IAML		17 04 12.2	
PVAQ				*i* IAML		17 04 12.2	
PVAQ	**Vaqueiros**	**3.51**	**331**	P	**Pn**	**17 03 30.7**	**0.0**
EMIN	**Mina Concepcio**	**3.53**	**346**	Pn	**Pn**	**17 03 30.6**	**-0.3**
EMIN				Sn	**Sn**	**17 04 10.5**	**-1.4**
EMIN	**Mina Concepcio**	**3.53**	**346**	Pn	**Pn**	**17 03 30.5**	**-0.3**
EMIN				Sn	**Sn**	**17 04 12.3**	**+0.4**
EMIN				*i* IVmb_Lg		17 04 21.1	
EGRO	**El Granado**	**3.54**	**335**	Pn	**Pn**	**17 03 30.9**	**-0.1**
EGRO				Sn	**Sn**	**17 04 11.4**	**-0.8**
EGRO	**El Granado**	**3.54**	**335**	Pn	**Pn**	**17 03 30.9**	**-0.1**
EGRO				Sn	**Sn**	**17 04 10.5**	**-1.7**
EGRO				*i* IVmb_Lg		17 04 13.5	
OUZM	**OUZ**	**3.57**	**197**	P	**Pn**	**17 03 33.9**	**+2.3**
ECAB	**El Cabril**	**3.72**	**2**	Pn	**Pn**	**17 03 34.0**	**+0.3**
ECAB				Sn	**Sn**	**17 04 15.5**	**-1.4**
ECAB	**El Cabril**	**3.72**	**2**	Pn	**Pn**	**17 03 33.9**	**+0.3**
ECAB				Sn	**Sn**	**17 04 15.4**	**-1.4**
ECAB				*i* IVmb_Lg		17 04 25.0	
PFVI	**Vila Bisbo**	**3.84**	**317**	Pn	**Pn**	**17 03 35.0**	**-0.1**
PFVI				Sn	**Sn**	**17 04 19.1**	**-0.6**
PFVI	**Vila Bisbo**	**3.84**	**317**	*e*Sn	**Sn**	**17 04 18.2**	**-1.4**
PCVE	**Castro Verde**	**3.84**	**329**	Pn	**Pn**	**17 03 35.3**	**+0.1**
PCVE				Sn	**Sn**	**17 04 18.9**	**-0.8**
PCVE	**Castro Verde**	**3.84**	**329**	*e*Pn	**Pn**	**17 03 35.6**	**+0.4**
PCVE				*e*Sn	**Sn**	**17 04 18.8**	**-0.8**
EADA	**Adamuz**	**3.90**	**12**	Pn	**Pn**	**17 03 36.9**	**+0.9**
EADA				Sn	**Sn**	**17 04 20.2**	**-0.9**
EADA	**Adamuz**	**3.90**	**12**	Pn	**Pn**	**17 03 36.8**	**+0.9**
EADA				Sn	**Sn**	**17 04 19.9**	**-1.2**
EADA				*i* IVmb_Lg		17 04 34.2	
EQES	**Quesada**	**4.00**	**30**	Pn	**Pn**	**17 03 38.5**	**+1.1**
EQES				Sn	**Sn**	**17 04 21.7**	**-2.1**
EQES				*i* IVmb_Lg		17 04 30.5	
PBAR	**Barrancos**	**4.00**	**343**	Pn	**Pn**	**17 03 37.4**	**+0.1**
PBAR				Sn	**Sn**	**17 04 21.7**	**-1.9**
PBAR	**Barrancos**	**4.00**	**343**	*e*Pn	**Pn**	**17 03 37.5**	**+0.1**
PBAR				*e*Sn	**Sn**	**17 04 22.3**	**-1.3**
PBAR				*i* IAML		17 04 23.7	
PBAR				*i* IAML		17 04 23.9	
PBAR				*i* IAML		17 04 27.9	
PTEO	**Sao Teotonio**	**4.09**	**322**	*e*Pn	**Pn**	**17 03 38.8**	**+0.2**
PTEO				*e*Sn	**Sn**	**17 04 24.6**	**-1.2**
PTEO				*i* IAML		17 04 26.4	
PTEO				*i* IAML		17 04 27.3	
PTEO				*i* IAML		17 04 27.8	
MESJ	**Messejana**	**4.09**	**329**	*e*P	**Pn**	**17 03 38.5**	**-0.1**
MESJ	**Messejana**	**4.09**	**329**	*e*Pn	**Pn**	**17 03 38.5**	**-0.1**
MESJ				*e*Sn	**Sn**	**17 04 25.3**	**-0.5**
MESJ				*i* IAML		17 04 26.1	
MESJ				*i* IAML		17 04 27.4	
MESJ				*i* IAML		17 04 28.0	
PBEJ	**Beja**	**4.11**	**334**	*e*Sn	**Sn**	**17 04 25.4**	**-1.1**
PBEJ				*i* IAML		17 04 28.7	
PBEJ				*i* IAML		17 04 29.9	
PBEJ				*i* IAML		17 04 32.8	
EVO	**Evora**	**4.62**	**335**	*e*Pn	**Pn**	**17 03 45.8**	**0.0**
EVO				*e*Sn	**Sn**	**17 04 37.7**	**-1.1**
EVO				*i* IAML		17 04 37.9	
EVO				*i* IAML		17 04 39.5	
EVO				*i* IAML		17 04 40.4	
PSIM	**Granatula de C**	**4.70**	**18**	Pn	**Pn**	**17 03 47.5**	**+0.5**
PSIM				Sn	**Sn**	**17 04 39.8**	**-1.1**
MOE	**Montemor**	**4.73**	**333**	*e*Pn	**Pn**	**17 03 47.6**	**+0.2**
MOE				*e*Sn	**Sn**	**17 04 40.8**	**-0.8**
MOE				*i* IAML		17 04 41.7	
MOE				*i* IAML		17 04 42.9	
MOE				*i* IAML		17 04 43.3	
PARRA	**Arraiolos**	**4.88**	**337**	*e*Pn	**Pn**	**17 03 49.5**	**0.0**
PARRA				*e*Sn	**Sn**	**17 04 43.9**	**-1.4**
PARRA				*i* IAML		17 04 45.1	
PARRA				*i* IAML		17 04 45.2	
PARRA				*i* IAML		17 04 47.2	
PMTG	**Montargil**	**5.17**	**336**	*e*Pn	**Pn**	**17 03 53.4**	**0.0**
PMTG				*e*Sn	**Sn**	**17 04 50.6**	**-1.8**
PMTG				*i* IAML		17 04 53.8	
PMTG				*i* IAML		17 04 54.6	
PMTG				*i* IAML		17 05 10.0	
PMRV	**Marv??o**	**5.28**	**344**	*e*Pn	**Pn**	**17 03 56.1**	**+1.2**
PMRV				*e*Sn	**Sn**	**17 04 54.0**	**-1.1**
PAB	**San Pablo**	**5.28**	**10**	Pn	**Pn**	**17 03 55.8**	**+0.8**
PAB				Sn	**Sn**	**17 04 51.9**	**-3.4**
PAB				*i* IVmb_Lg		17 04 57.8	
PMAFR	**Mafra**	**5.48**	**328**	Pn	**Pn**	**17 03 58.3**	**+0.6**
PMAFR				Sn	**Sn**	**17 04 59.1**	**-1.0**
PSARD	**Sardoal**	**5.64**	**339**	*e*Pn	**Pn**	**17 04 00.6**	**+0.7**
PSARD				*e*Sn	**Sn**	**17 05 02.3**	**-1.7**
PSARD				*i* IAML		17 05 02.9	
PSARD				*i* IAML		17 05 03.8	
PSARD				*i* IAML		17 05 04.1	
PCBR	**Castelo Branco**	**5.69**	**345**	*e*Pn	**Pn**	**17 04 02.0**	**+1.4**
EPLA	**Plasencia**	**5.72**	**356**	Pn	**Pn**	**17 04 01.7**	**+0.6**
EPLA				*i* IVmb_Lg		17 04 55.0	
EPLA				Sn	**Sn**	**17 05 03.6**	**-2.5**
EBEN2	**Beniarda presa**	**6.12**	**44**	Pn	**Pn**	**17 04 06.2**	**-0.3**
EBEN2				*i* IVmb_Lg		17 04 44.5	
EBEN2				Sn	**Sn**	**17 05 14.0**	**-1.9**
MVO	**Moncorvo**	**6.90**	**351**	*e*Pn	**Pn**	**17 04 18.4**	**+1.1**

*IDC **05** 17:25:30.0±3.0, 42.°95N×105.°14W, h0km, mbtmp3.0/2, ML2.8/2, Error ellipse: s-maj=58.0km s-min=10.5km az=158.0*
*NEIC **05** 17:25:33.0±1.2, 43.°58N±0.°04×105.°36W±0.°06, h0km±1km, ML2.8/40, Error ellipse: s-maj=9.0km s-min=4.9km az=319.0*
ISC 05 17:25:30.0±1.0**, 43.°37N**±0.°06×**105.°20W**±0.°05**, h0**km**, n21,** σ**1.°66**/17**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.13**	**48**		**Pn**	**17 25 54.6**	**+1.3**
K22A	**Casper**	**1.21**	**234**		**Pn**	**17 25 57.4**	**+3.1**
K22A				IAML		17 26 22.9	
	111nm,0.3s						
HAYD	**Hayden**	**3.24**	**209**		**Pb**	**17 26 28.1**	**-0.3**
HAYD				IAML		17 27 33.0	
	comp=N,20nm,0.9s						
HAYD				IAML		17 27 42.2	
	comp=E,17nm,1.4s						
BW06	**Boulder Array**	**3.25**	**261**		**Pn**	**17 26 24.5**	**+2.1**
PD31	**Pinedale Array**	**3.25**	**261**		**Pb**	**17 26 27.2**	**-1.5**
PDAR	**Pinedale Array**	**3.25**	**261**	Pn	**Pb**	**17 26 26.9**	**-1.7**
	comp=E,1.1nm,0.3s,baz=75,slow=17,SNR=32						
PDAR				Pg	**Pg**	**17 26 30.7**	**-1.5**
	comp=E,1.5nm,0.3s,baz=60,slow=17,SNR=20						
PDAR				Lg	Lg	17 27 12.4	
	comp=E,4.8nm,0.3s,baz=71,slow=33,SNR=8.1						
	comp=E,0.5nm,0.4s						
OGNE	**Ogallala**	**3.38**	**135**		**Pb**	**17 26 29.5**	**-1.3**
LAO	**LASA Array**	**3.40**	**348**		**Pn**	**17 26 23.7**	**-0.6**
RLMT	**Red Lodge**	**3.40**	**302**		**Pn**	**17 26 24.0**	**-0.6**
RLMT				IAML		17 27 19.0	
	comp=E,26nm,0.4s						
RLMT				IAML		17 27 40.9	
	comp=E,22nm,2.6s						
ISCO	**Idaho Springs**	**3.58**	**185**	Pn	**Pg**	**17 26 37.5**	**-1.2**
ISCO				IAML		17 27 24.1	
	comp=E,9.6nm,5.0s						
ISCO				IAML		17 28 33.9	
	comp=E,11nm,3.4s						
YNE	**Yellowstone No**	**3.82**	**297**	Pn	**Pn**	**17 26 32.2**	**+1.9**
YNE				IAML		17 27 33.3	
	comp=E,22nm,0.4s						
YNE				IAML		17 27 39.0	
	comp=N,24nm,0.7s						
LOHW	**Long Hollow**	**3.94**	**275**		**Pg**	**17 26 47.7**	**+2.2**
LOHW				IAML		17 27 43.9	
	comp=N,13nm,2.8s						
LOHW				IAML		17 28 01.0	
	comp=N,11nm,3.9s						
H17A	**Grant Village**	**4.02**	**287**		Pg	17 26 52.2	+5.2
H17A				IAML		17 27 54.2	
	comp=N,14nm,1.5s						
H17A				IAML		17 28 02.1	
	comp=E,13nm,4.3s						
MOOW	**Moose Ponds**	**4.04**	**277**		**Pg**	**17 26 48.0**	**+0.4**
FLWY	**Flagg Ranch**	**4.05**	**282**		**Pg**	**17 26 47.4**	**-0.1**
YPP	**Pitchstone Pla**	**4.15**	**284**		**Pg**	**17 26 49.1**	**-0.4**
YPP				IAML		17 28 23.8	
	comp=E,12nm,4.8s						
YPP				IAML		17 29 00.9	
	comp=N,14nm,4.6s						
FXWY	**Fox Creek**	**4.24**	**276**	IAML		17 27 20.5	
	comp=N,7.7nm,4.0s						
FXWY				IAML		17 28 47.3	
	comp=N,9.6nm,5.0s						
RDMU	**Red Mountain**	**4.29**	**231**	IAML		17 28 00.4	
	comp=E,14nm,1.0s						
RDMU				IAML		17 28 31.5	
	comp=N,11nm,3.3s						
AHID	**Auburn Hatcher**	**4.36**	**264**	IAML		17 28 07.6	
	comp=N,12nm,2.5s						
I10CA	**LAC DU BONNET**	**9.29**	**39**	I	I	18 23 30.0	
	baz=220,slow=242,SNR=2.0						
ULM	**Lac du Bonnet**	**9.39**	**40**	Pn	**Pn**	**17 27 48.0**	**+1.5**
	comp=N,0.2nm,0.3s,baz=221,slow=11,SNR=1.5						
ULM				Lg	Lg	17 30 27.4	
	comp=N,0.1nm,0.3s,baz=145,slow=11,SNR=1.6						
	comp=N,0.8nm,0.4s						

*IDC **05** 17:54:49.0±7.8, 34.°69N×140.°67E, h0km, mb3.4/2, mbtmp3.4/3, ML2.8/1, Error ellipse: s-maj=126.9km s-min=101.3km az=87.0*
*JMA **05** 17:55:04.5±0.2, 35.°7N±0.°4×140.°1E±0.°7, h65km±1km, MV2.7/38, CENTRAL CHIBA PREF*
ISC 05 17:55:05.0±1.1**, 35.°63N**±0.°05×**140.°04E**±0.°06**, h68**km±10km**, n13,** σ**0.°75**/21**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCCN	**Chibachonan**	**0.29**	**148**	P	**Pn**	**17 55 16.0**	**+0.1**
JCCN				*e*S	**Sn**	**17 55 24.9**	**+1.0**
JSMT	**Sammumatsuo**	**0.33**	**88**	*i* P	**Pn**	**17 55 15.7**	**-0.5**
JSMT				*e*S	**Sn**	**17 55 24.7**	**+0.4**
JOD2	**Odawara 2**	**0.86**	**245**	*i* P	**Pn**	**17 55 21.6**	**-0.1**
JOD2				*e*S	**Sn**	**17 55 33.7**	**-0.4**
BSO3	**Boso 3**	**0.91**	**155**	P	**Pn**	**17 55 21.4**	**-0.7**
BSO3				*e*S	**Sn**	**17 55 35.1**	**+0.4**
JAG	**Ashikaga**	**0.92**	**329**	*i* P	**Pn**	**17 55 21.9**	**-0.6**
JAG				*e*S	**Sn**	**17 55 33.9**	**-1.5**
JRY	**Ryogami san**	**1.00**	**293**	*i* P	**Pn**	**17 55 24.0**	**+0.5**
JIM2	**Oshima 3**	**1.04**	**209**	*e*P	**Pn**	**17 55 23.1**	**-0.9**
JIM2				*e*S	**Sn**	**17 55 36.8**	**-1.2**
JYN	**Shimob**	**1.23**	**264**	P	**Pn**	**17 55 26.6**	**+0.2**
JYN				*e*S	**Sn**	**17 55 42.7**	**+0.3**
JKT	**Katashina**	**1.30**	**331**	*e*P	**Pn**	**17 55 26.5**	**-0.9**
JIZS	**Izushimoda**	**1.32**	**227**	P	**Pn**	**17 55 27.3**	**-0.2**
JIZS				*e*S	**Sn**	**17 55 44.1**	**-0.3**
MJAR	**Matsushiro Arr**	**1.74**	**302**	Pn	**Pn**	**17 55 33.7**	**+0.5**
	1.5nm,0.3s,baz=132,slow=15,SNR=61						
	25nm,0.6s						
SONM	**Songino Array**	**27.69**	**307**	P	**P**	**18 00 47.7**	**+1.0**
	0.2nm,0.4s,baz=112,slow=8.7,SNR=2.2						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**43.94**	**303**	P	**P**	**18 03 05.0**	**-0.1**
	0.3nm,0.6s,baz=81,slow=8.5,SNR=4.3						
	0.3nm,0.6s						

*IDC **05** 18:01:18.9±0.9, 67.°04N×21.°56E, h0km, mbtmp3.1/5, ML1.7/4, Error ellipse: s-maj=17.0km s-min=8.1km az=100.0*
*HEL **05** 18:01:18.7±0.2, 67.°05N×20.°93E, h0km, ML2.0, Explosion*
*UPP **05** 18:01:18.1±0.1, 67.°06N×20.°97E, h0km, ML2.3, Suspected explosion*
ISC 05 18:01:17.6±0.8**, 67.°06N**±0.°03×**20.°95E**±0.°03**, h0**km**, n39,** σ**1.°28**/54**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.16**	**293**	P	**Pg**	**18 01 21.6**	**+0.9**
DUNU				S	**Sg**	**18 01 24.2**	**+1.4**
MASU	**Masugnsbyn**	**0.57**	**45**	P	**Pg**	**18 01 28.9**	**+0.4**
MASU				S	**Sg**	**18 01 36.4**	**+0.5**
ERTU	**Ertsjaerv**	**0.71**	**135**	P	**Pg**	**18 01 31.2**	**+0.1**
ERTU				S	**Sg**	**18 01 41.1**	**+0.8**
HARU	**Harads**	**0.90**	**179**	P	**Pg**	**18 01 34.9**	**0.0**
KUA	**Kurravaara**	**0.93**	**346**	P	**Pg**	**18 01 35.3**	**-0.1**
RATU	**Laukkuluspa**	**0.93**	**326**	P	**Pg**	**18 01 35.4**	**0.0**
SALU	**Saltoluokta**	**1.00**	**290**	*e*P	**Pg**	**18 01 37.4**	**+0.5**
SALU	**Saltoluokta**	**1.00**	**290**	P	**Pg**	**18 01 37.0**	**+0.1**
LANU	**Lannavaara**	**1.07**	**22**	P	**Pg**	**18 01 37.8**	**-0.3**
LANU	**Lannavaara**	**1.07**	**22**	*e*P	**Pg**	**18 01 37.6**	**-0.5**
LANU				*e*S	**Sb**	**18 01 53.0**	**-0.5**
NIKU	**Nikkaluokta**	**1.10**	**319**	P	**Pg**	**18 01 38.5**	**-0.1**
KLF	**Kolari**	**1.19**	**80**	*e*P	**Pg**	**18 01 40.0**	**-0.4**
KLF				*e*S	**Sg**	**18 01 55.6**	**-0.2**
KALU	**Kalix**	**1.54**	**140**	P	**Pn**	**18 01 46.3**	**-0.1**
SJUU	**Sjulsmark**	**1.58**	**170**	P	**Pn**	**18 01 47.1**	**+0.2**
TOF	**Tornio**	**1.67**	**125**	*e*P	**Pn**	**18 01 48.3**	**+0.3**
TOF				*e*S	**Sn**	**18 02 10.3**	**+0.2**
HEF	**Hetta**	**1.70**	**36**	*e*P	**Pb**	**18 01 49.7**	**-0.1**
HEF	**Hetta**	**1.70**	**36**	*e*P	**Pn**	**18 01 48.9**	**+0.3**
HEF				*e*S	**Sn**	**18 02 11.2**	**+0.2**
HEF				smax	smax	18 02 19.5	
	comp=Z,13nm,0.2s						
KIF	**Kilpisjarvi**	**1.95**	**358**	*e*P	**Pb**	**18 01 53.7**	**-0.4**
KIF				*e*S	**Sg**	**18 02 20.9**	**+0.5**
RNF	**Rovaniemi**	**2.05**	**100**	*e*P	**Pn**	**18 01 54.7**	**+1.3**
RNF				*e*S	**Sb**	**18 02 22.8**	**+1.1**
RNF				smax	smax	18 02 27.2	
	comp=Z,16nm,0.2s						
KTK1	**Kautokeino**	**2.14**	**23**	*e*PB	**Pb**	**18 01 56.6**	**-0.6**
KTK1				*e*S	**Sb**	**18 02 23.8**	**-0.5**
SGF	**Sodankyl**	**2.20**	**77**	*e*P	**Pn**	**18 01 57.1**	**+1.8**
RANF	**Ranua**	**2.56**	**111**	*e*P	**Pn**	**18 02 01.2**	**+0.9**
OBF4	**Vikkela, Lumij**	**2.83**	**141**	*e*P	**Pn**	**18 02 04.9**	**+1.0**
OBF4				smax	smax	18 02 50.6	
	comp=Z,2.8nm,0.2s						
OUL	**Oulu**	**2.83**	**132**	*e*P	**Pn**	**18 02 05.6**	**+1.6**
OBF0	**Syolatti, Pyha**	**2.91**	**151**	*e*P	**Pn**	**18 02 06.3**	**+1.2**
ARA0	**ARCESS Array S**	**3.01**	**32**	*e*P	**Pn**	**18 02 07.8**	**+1.3**
ARA0				*e*S	**Sn**	**18 02 45.6**	**+2.5**
ARCES	**ARCESS Array B**	**3.01**	**32**	Pn	**Pn**	**18 02 06.5**	**0.0**
	comp=Z,0.2nm,0.3s,baz=216,slow=14,SNR=25						
ARCES				Sn	**Sn**	**18 02 41.2**	**-2.0**
	comp=Z,0.5nm,0.3s,baz=216,slow=24,SNR=8.3						
	comp=Z,1.3nm,0.2s						
RAJF	**Raja-Jooseppi**	**3.14**	**60**	*e*P	**Pn**	**18 02 10.4**	**+2.2**
KU2	**Taivalkoski**	**3.23**	**111**	*e*P	**Pn**	**18 02 09.8**	**+0.3**
VRF	**Varrio**	**3.41**	**74**	*e*P	**Pn**	**18 02 12.7**	**+0.6**
OLKF	**Oulanka, Finla**	**3.44**	**99**	*e*P	**Pn**	**18 02 13.4**	**+1.0**
MSF	**Maaselka**	**3.44**	**106**	*e*P	**Pn**	**18 02 13.4**	**+0.9**
KEV	**Kevo**	**3.51**	**37**	*e*P	**Pn**	**18 02 14.3**	**+1.0**
KEV				*e*S	**Sn**	**18 02 56.4**	**+0.8**
KU6	**Riekki**	**3.72**	**102**	*e*P	**Pn**	**18 02 17.5**	**+1.2**
VAF	**Ylistaro**	**4.10**	**169**	*e*P	**Pn**	**18 02 22.9**	**+1.5**
FINES	**FINESS Array B**	**6.06**	**156**	Pn	**Pn**	**18 02 49.4**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=347,slow=13,SNR=6.2						
FINES				Sn	**Sn**	**18 03 57.5**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=342,slow=22,SNR=7.1						
FINES				Lg	Lg	18 04 23.3	
	comp=Z,0.1nm,0.3s,baz=343,slow=28,SNR=1.3						
	comp=Z,0.8nm,0.7s						
NOA	**NORSAR Array B**	**7.39**	**220**	Pn	**Pn**	**18 03 09.2**	**+2.5**
	baz=25,slow=6.1,SNR=1.0						
	comp=Z,0.2nm,0.6s						
HFS	**Hagfors**	**7.66**	**208**	Pn	**Pn**	**18 03 09.8**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=36,slow=13,SNR=7.2						
HFS				Sn	**Sn**	**18 04 32.0**	**-5.8**
	comp=Z,0.1nm,0.3s,baz=28,slow=28,SNR=7.2						
	comp=Z,2.0nm,0.8s						
SPITS	**Spitsbergen Ar**	**11.26**	**355**	Pn	**Pn**	**18 03 59.7**	**+0.3**
	comp=Z,2.9nm,0.8s,baz=146,slow=16,SNR=1.0						

*BGSI **05** 18:02:14.0±1.5, 27.°13S×26.°71E, h40km±44km, ML2.8*
PRE 05 18:02:10.0±0.8**, 26.°95S×26.°82E, h2**km**, ML2.7, Presumed earthquake, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HRAO	**HartRAO**	**1.31**	**37**	*e*P	Pb	18 02 35.3	0.0
HRAO				*e*S	Sb	18 02 52.7	+0.1
HRAO				IAML		18 02 56.4	
	comp=Z,148nm,0.3s						
BOSA	**Boshof**	**2.16**	**219**	*e*P	Pn	18 02 47.9	+0.7
BOSA				*e*S	Sn	18 03 15.6	+0.9
BOSA				IAML		18 03 29.4	
	comp=Z,46nm,0.4s						
LBTB	**Lobatse**	**2.22**	**330**	*e*P	Pn	18 02 48.7	+0.8
LBTB				*e*S	Sn	18 03 16.9	+1.0
LBTB				IAML		18 03 19.2	
	comp=Z,187nm,0.5s						
LEPH	**Lephalale, Lim**	**3.20**	**16**	*e*P	Pn	18 03 02.7	+1.3
LEPH				*e*S	Sn	18 03 40.1	-0.1
LEPH				IAML		18 03 52.6	
	comp=Z,39nm,0.3s						
LPHEP	**Lephephe**	**3.67**	**346**	*i* P	Pn	18 03 08.9	+1.0
LPHEP				*i* S	Sn	18 03 50.1	-1.8
LPHEP				IAML		18 04 07.7	
	comp=N,36nm,0.3s						
HVD	**Gariep Dam**	**3.83**	**197**	*e*P	Pn	18 03 11.4	+1.3
HVD				*e*S	Sn	18 03 54.9	-0.8
KDWAN	**Kaudwane**	**4.05**	**331**	*i* P	Pn	18 03 13.9	+0.7
KDWAN				*i* S	Sn	18 03 58.9	-2.4
KDWAN				IAML		18 04 20.2	
	comp=N,118nm,0.4s						
ALKP	**Alkanpan, Nort**	**5.01**	**232**	*e*P	Pn	18 03 27.3	+0.9
ALKP				*e*S	Sn	18 04 23.4	-1.6
ALKP				IAML		18 04 47.1	
	comp=Z,28nm,0.2s						
KEIM	**Keimoes**	**5.47**	**250**	*e*P	Pn	18 03 34.3	+1.7
KEIM				*e*S	Sn	18 04 34.4	-1.8
KEIM				IAML		18 05 08.2	
	comp=Z,19nm,0.4s						
BFON	**Badsfontein, M**	**5.55**	**209**	*e*P	Pn	18 03 34.9	+1.0
BFON				*e*S	Sn	18 04 37.1	-1.3
BFON				IAML		18 05 15.0	
	comp=Z,11nm,0.4s						
GRAF	**Camdeboo Natio**	**5.69**	**200**	*e*P	Pn	18 03 37.0	+1.4
GRAF				*e*S	Sn	18 04 39.5	-2.0
GRAF				IAML		18 05 18.2	
	comp=Z,13nm,0.8s						
BROLN	**Tlhalogang**	**5.84**	**5**	*i* P	Pn	18 03 38.2	+0.4
BROLN				*i* S	Sn	18 04 42.1	-3.3
BROLN				IAML		18 05 12.9	
	comp=N,8.7nm,0.4s						
KGCAE	**Kacgae**	**5.84**	**313**	*i* P	Pn	18 03 37.9	+0.1
KGCAE				*i* S	Sn	18 04 38.2	-7.3
KGCAE				IAML		18 05 17.3	
	comp=N,39nm,0.4s						
BRAK	**Brakfontein**	**5.91**	**214**	*e*P	Pn	18 03 39.6	+1.0
BRAK				*e*S	Sn	18 04 45.2	-1.9
BRAK				IAML		18 05 29.8	
	comp=Z,13nm,0.4s						
GRHM	**Grahamstown, E**	**6.32**	**183**	*e*P	Pn	18 03 46.1	+1.8
GRHM				*e*S	Sn	18 04 54.3	-2.8
GRHM				IAML		18 05 26.9	
	comp=Z,4.1nm,0.4s						
SOOWA	**Sowa**	**6.38**	**355**	*i* P	Pn	18 03 46.6	+1.4
ARMS	**Ukamas**	**6.38**	**259**	*e*P	Pn	18 03 46.7	+1.6
ARMS				*e*S	Sn	18 04 55.8	-2.9
GRAN	**Grantham**	**6.70**	**216**	*e*P	Pn	18 03 50.9	+1.4
GRAN				*e*S	Sn	18 05 03.2	-3.3
GRAN				IAML		18 05 48.9	
	comp=Z,8.7nm,0.3s						
FRAZ	**Fraserburg**	**6.85**	**222**	*e*P	Pn	18 03 52.8	+1.1
FRAZ				*e*S	Sn	18 05 07.4	-2.9
FRAZ				IAML		18 05 38.0	
	comp=Z,3.4nm,0.3s						
KROM	**Kromhout**	**7.42**	**194**	*e*P	Pn	18 04 00.4	+1.1
KROM				*e*S	Sn	18 05 21.0	-3.1
KROM				IAML		18 05 24.8	
	comp=Z,23nm,0.3s						
CVNA	**Calvinia**	**7.65**	**232**	*e*P	Pn	18 04 04.4	+1.8
CVNA				*e*S	Sn	18 05 26.5	-3.4
CVNA				IAML		18 06 24.8	
	comp=Z,12nm,0.5s						
AUSN	**Aus**	**9.44**	**269**	*e*P	Pn	18 04 28.2	+1.0
AUSN				*e*S	Sn	18 06 09.4	-4.6

*VAO **05** 18:05:59.4±1.7, 23.°79S×69.°98W, h40km±8km, mb4.9, Presumed earthquake*
*SJA **05** 18:06:05.4±0.6, 23.°81S×69.°39W, h97km±5km, ML4.7, MW4.5*
*IDC **05** 18:06:08.1±0.5, 23.°79S×69.°37W, h77km±3km, mb4.1/11, mbtmp4.4/16, MS3.3/17, Error ellipse: s-maj=17.7km s-min=13.0km az=63.0*
*GUC **05** 18:06:08.3±0.8, 23.°85S×69.°78W, h68km±4km, ML4.9*
*NEIC **05** 18:06:08.5, 23.°79S×69.°59W, h75km*
*NEIC **05** 18:06:08.6±1.8, 23.°79S±0.°03×69.°59W±0.°06, h76km±1km, mb4.7/143, Mwr4.6/35, Mwr4.6(GUC), Error ellipse: s-maj=7.9km s-min=4.7km az=95.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-2.64; $M_{\theta\theta}$1.77; $M_{\phi\phi}$0.88; $M_{r\theta}$-1.15; $M_{\theta\phi}$-1.70; $M_{\phi r}$-9.50; Fault plane solution: $M_0$9.99000×10^{15} NP1:ϕ_s2.89000°, δ84.89000°, λ-80.07000°. NP2:ϕ_s119.87000°, δ11.16000°, λ-152.58000°. Principal axes: T 8.8264, Plg39.0000°, Azm84.0000°; N 2.0264, Plg10.0000°, Azm182.0000°; P -10.8528, Plg49.0000°, Azm284.0000°;*
ISC 05 18:06:07.3±0.4**, 23.°81S**±0.°03×**69.°43W**±0.°04**, h80**km±3km**, h80**km**:pP-P, n265,** σ**1.°95**/227**, mb4.7**/73**, 11C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB06	**IPOC Station P**	**1.11**	**353**		**Pn**	**18 06 28.2**	**+0.4**
PB06				Sn	**Sn**	**18 06 43.5**	**+0.4**
PB06	**IPOC Station P**	**1.11**	**353**	⇑*i*P	**Pn**	**18 06 28.9**	**+1.1**
PB06				*e*S	**Sn**	**18 06 44.4**	**+1.3**
PB06				IAML		18 06 45.0	
	comp=E,33μm,0.3s						
PB06	**IPOC Station P**	**1.11**	**353**	*e*P	**Pn**	**18 06 28.9**	**+1.1**
PB06				*e*S	**Sn**	**18 06 44.5**	**+1.3**
PB06				IAML		18 06 45.2	
	comp=Z,18μm,0.2s						
PB14	**IPOC Station P**	**1.20**	**227**		**Pn**	**18 06 29.3**	**+0.3**
PB14				Sn	**Sn**	**18 06 44.6**	**-0.8**
PB14	**IPOC Station P**	**1.20**	**227**	⇑*i*P	**Pn**	**18 06 29.4**	**+0.3**
PB14				*e*S	**Sn**	**18 06 46.0**	**+0.6**
PB14	**IPOC Station P**	**1.20**	**227**	*e*P	**Pn**	**18 06 28.8**	**-0.3**
PB14				IAML		18 06 47.8	
	comp=Z,8μm,0.2s						
GO02	**Mina Guanaco**	**1.35**	**186**		**Pn**	**18 06 32.5**	**+1.6**
GO02				Sn	**Sn**	**18 06 50.7**	**+1.9**
GO02	**Mina Guanaco**	**1.35**	**186**	⇑*i*P	**Pn**	**18 06 32.6**	**+1.6**
GO02	**Mina Guanaco**	**1.35**	**186**	*e*P	**Pn**	**18 06 32.5**	**+1.6**
GO02				*e*S	**Sn**	**18 06 50.4**	**+1.6**

GO02 IAML 18 06 53.0
comp=Z,12µm,0.6s
AF01 San Pedro de A 1.44 54 Pn 18 06 35.4 +3.4
AF01 Sn **Sn 18 06 55.7 +5.1**
AF01 San Pedro de A 1.44 54 *eP* **Pn 18 06 35.6 +3.5**
AF01 *eS* **Sn 18 06 56.2 +5.6**
AF01 IAML 18 06 57.3
comp=E,39µm,0.3s
AF01 San Pedro de A 1.44 54 *eP* **Pn 18 06 30.6 -1.4**
AF01 IAML 18 07 00.7
comp=Z,20µm,0.7s
PB03 IPOC Station P 1.78 350 Pn 18 06 36.7 +0.3
PB03 Sn **Sn 18 06 55.1 -3.4**
PB03 IPOC Station P 1.78 350⇑ *iP* **Pn 18 06 37.2 +0.7**
PB03 *eS* **Sn 18 06 56.3 -2.3**
PB03 IAML 18 06 60.0
comp=N,12µm,0.8s
PB03 IPOC Station P 1.78 350 *eP* **Pn 18 06 36.4 0.0**
PB03 IAML 18 07 03.8
comp=Z,7µm,0.5s
PB09 IPOC Station P 2.02 5 Pn 18 06 40.8 +1.3
PB09 Sn **Sn 18 07 05.9 +1.8**
PB09 IPOC Station P 2.02 5 *iP* **Pn 18 06 41.4 +1.8**
PB09 *eS* **Sn 18 07 07.9 +3.8**
PB09 IAML 18 07 10.8
comp=N,6µm,0.6s
PB09 IPOC Station P 2.02 5 *eP* **Pn 18 06 35.8 -3.8**
PB09 *eS* **Sn 18 07 09.2 +5.2**
PB09 IAML 18 07 16.1
comp=Z,3µm,0.4s
PB07 IPOC Station P 2.12 348 Pn 18 06 41.0 +0.1
PB07 Sn **Sn 18 07 00.8 -5.7**
PB07 IPOC Station P 2.12 348 *eP* **Pn 18 06 41.2 +0.2**
PB07 *eS* **Sn 18 07 01.8 -4.8**
PB07 IAML 18 07 11.4
comp=Z,5µm,0.3s
PB02 IPOC Station P 2.52 350 Pn 18 06 46.1 -0.1
PB02 IPOC Station P 2.52 350⇑ *iP* **Pn 18 06 46.4 +0.2**
PB02 *eS* **Sn 18 07 16.2 +0.1**
PB02 IAML 18 07 21.7
comp=E,9µm,0.7s
PB02 IPOC Station P 2.52 350 *eP* **Pn 18 06 46.4 +0.2**
PB02 *eS* **Sn 18 07 17.7 +1.6**
PB02 IAML 18 07 21.9
comp=Z,6µm,0.3s
AC01 Pan de Azucar 2.56 204 Pn 18 06 46.2 -0.4
AC01 Pan de Azucar 2.56 204 *eP* **Pn 18 06 46.4 -0.2**
AC01 Pan de Azucar 2.56 204 *eP* **Pn 18 06 46.3 -0.3**
AC01 *eS* Sn 18 07 33.6 +17
AC01 IAML 18 07 37.1
comp=Z,1µm,1.1s
PB01 IPOC Station P 2.76 359 Pn 18 06 49.8 +0.3
PB01 IPOC Station P 2.76 359⇑ *iP* **Pn 18 06 50.1 +0.6**
PB01 *eS* **Sn 18 07 14.0 -7.9**
PB01 IPOC Station P 2.76 359 *eP* **Pn 18 06 50.0 +0.6**
PB01 *eS* Sn 18 07 35.0 +13
PB01 IAML 18 07 41.5
comp=Z,3µm,0.5s
SALTA 2.86 99⇑ *eP* Pn 18 06 56.1 +5.0
SALTA 2.86 99 *eP* **Pn 18 06 50.6 -0.6**
SALTA *eS* **Sn 18 07 16.6 -8.2**
SALTA IAML 18 07 24.2
comp=Z,1µm,1.0s
AC02 Maricunga 3.02 175 Pn 18 06 55.9 +2.5
AC02 Maricunga 3.02 175⇑ *iP* **Pn 18 06 56.5 +3.1**
AC02 Maricunga 3.02 175 *eP* **Pn 18 06 51.0 -2.4**
AC02 *eS* **Sn 18 07 29.0 +0.2**
AC02 IAML 18 07 55.1
comp=Z,1µm,0.7s
PATCX Punta Patache 3.05 347 Pn 18 06 52.2 -1.2
HMBC Humberstone 3.54 353 Pn 18 06 59.2 -0.9
HMBC Humberstone 3.54 353 *eP* **Pn 18 06 59.2 -0.9**
HMBC Humberstone 3.54 353 *eP* **Pn 18 06 59.3 -0.8**
HMBC *eS* Sn 18 07 30.2 -11
HMBC IAML 18 07 57.8
comp=Z,1µm,0.4s
TA02 Huaiquique 3.58 349 *eP* **Pn 18 06 59.5 -1.1**
TA02 Huaiquique 3.58 349 *eP* **Pn 18 06 59.8 -0.8**
TA02 *eS* **Sn 18 07 48.1 +6.4**
TA02 IAML 18 07 60.0
comp=Z,1µm,1.6s
AC06 Mina Casimiro 3.63 193 Pn 18 07 00.5 -0.6
AC06 Mina Casimiro 3.63 193 *eP* **Pn 18 07 00.6 -0.6**
PB08 IPOC Station P 3.66 4 Pn 18 07 02.2 +0.2
SLA San Lorenzo 3.70 105⇑ *eP* Pn 18 07 07.2 +4.9
SLA San Lorenzo 3.70 105 *eP* **Pn 18 07 02.5 +0.3**
SLA *eS* Sn 18 07 34.0 -11
GO03 Copiapo 3.83 191 Pn 18 07 03.6 -0.4
GO03 Copiapo 3.83 191 *eP* **Pn 18 07 03.6 -0.4**
GO03 Copiapo 3.83 191 *eP* **Pn 18 07 03.8 -0.2**
GO03 *eS* **Sn 18 07 44.1 -3.8**
GO03 IAML 18 08 10.7
comp=Z,1µm,0.5s
FSA Cafayete 3.88 127 *eP* **Pn 18 07 04.2 -0.5**
YJA Yavi 3.96 66 *eP* Pn 18 07 10.8 +4.8
PB11 IPOC Station P 4.04 357 Pn 18 07 05.5 -1.3
PB11 IPOC Station P 4.04 357⇑ *eP* **Pn 18 07 05.6 -1.3**
PB11 IPOC Station P 4.04 357 *eP* **Pn 18 07 06.0 -0.9**
PB11 IAML 18 08 29.3
comp=Z,2µm,1.0s
GO01 Chusmiza 4.13 3 Pn 18 07 08.0 -0.4
AC04 Llanos de Chal 4.62 198 Pn 18 07 11.8 -2.8
AC04 Llanos de Chal 4.62 198 *eP* **Pn 18 07 12.3 -2.2**
AC04 *eS* **Sn 18 08 11.2 +4.3**
AC04 IAML 18 08 28.0
comp=Z,747nm,1.1s
VCA Vinchina 5.03 168 *eP* **Pn 18 07 23.6 +3.3**
VCA *eS* Sn 18 08 27.5 +10
VCA IAML 18 08 32.8
comp=Z,377nm,1.0s
AC05 El Transito 5.06 188 Pn 18 07 20.2 -0.6
AC05 El Transito 5.06 188 *eP* **Pn 18 07 20.5 -0.2**
AC05 *eS* Sn 18 08 26.8 +8.9
AC05 IAML 18 08 54.2
comp=Z,595nm,0.6s
PB12 IPOC Station P 5.24 351 Pn 18 07 20.7 -2.5
PB12 IPOC Station P 5.24 351 *eP* **Pn 18 07 21.1 -2.1**
PB12 *eS* **Sn 18 08 20.1 -2.2**
PB12 IAML 18 08 58.9
comp=Z,352nm,0.5s
LCO Las Campanas 5.30 192 Pn 18 07 22.1 -2.0
LCO Las Campanas 5.30 192 *eP* **Pn 18 07 22.2 -2.0**
LCO IAML 18 09 02.7
comp=Z,812nm,1.0s
PB16 IPOC Station P 5.45 359 Pn 18 07 25.8 -0.7
AP01 Chacalluta 5.48 351 Pn **Pn 18 07 24.0 -2.4**
CO01 Juntas del Tor 6.17 185 Pn 18 07 36.1 +0.1
PB18 Visviri 6.19 360 Pn 18 07 35.2 -1.4
CO05 La Serena 6.29 194 Pn **Pn 18 07 35.1 -2.3**
GO04 Tololo Observa 6.45 191 Pn **Pn 18 07 36.5 -3.3**
CO03 El Pedregal 7.09 189 Pn 18 07 46.1 -2.3
CO06 Fray Jorge 7.11 196 Pn **Pn 18 07 44.8 -3.8**
CO02 Combarbal 7.49 190 Pn 18 07 50.9 -3.0
LPAZ La Paz 7.59 10 P **Pn 18 07 57.6 +1.9**
comp=Z,17nm,0.3s,baz=210,slow=6.0,SNR=53
CFA Coronel Fontan 7.83 173 P **Pn 18 07 58.4 -0.2**
comp=Z,21nm,0.6s,baz=345,slow=10.0,SNR=52
CFA S **Sn 18 09 23.2 -2.4**
comp=Z,17nm,0.5s,baz=130,slow=12,SNR=4.0
CO04 Los Peladeros 8.31 189 Pn 18 08 02.4 -2.8
VA06 Catapilco 8.87 190 Pn **Pn 18 08 09.7 -2.9**
VA03 San Esteban 8.97 186 Pn 18 08 11.4 -2.7
MT08 Bocatoma Ro 9.61 183 Pn 18 08 19.6 -3.3
MT01 Popeta 10.14 189 Pn 18 08 23.7 -6.2
BO01 Tunca 10.64 187 Pn 18 08 30.3 -6.5
BO02 Sierra Bellavi 11.00 186 Pn 18 08 38.6 -3.2
SlV San Ignacio 11.06 47 LR LR 18 12 56.2
comp=Z,206nm,18.9s,baz=271,slow=37
CPUP Villa Florida 11.25 105 P **Pn 18 08 44.8 -0.3**
comp=Z,5.8nm,0.9s,baz=292,slow=14,SNR=6.3
CPUP LR LR 18 13 33.7
comp=Z,327nm,19.8s,baz=256,slow=40
CPUP Villa Florida 11.25 105 Pn 18 08 44.3 -0.8
BDQN Bodoquena, MS 12.22 77 *eP* **Pn 18 08 57.8 -0.5**
PSAL Palomas, Salto 12.75 127 *eP* **Pn 18 09 03.2 -2.2**
PTLB Pontes e Lacer 12.77 51 Pn 18 09 03.5 -2.3
PTLB Pontes e Lacer 12.77 51 *eP* **Pn 18 09 03.2 -2.6**
AQDB Aquidauana 13.15 78 Pn 18 09 10.0 -0.8
AQDB Aquidauana 13.15 78 *eP* **Pn 18 09 11.4 +0.6**
AMBA Amambai (Brazi 13.29 89 *eP* **Pn 18 09 12.9 +0.1**
VILB Vilhena 13.90 41 Pn 18 09 18.4 -2.4
VILB Vilhena 13.90 41 *eP* **Pn 18 09 18.7 -2.1**

PP1B Ponte de Pedra 14.95 68 *eP* **Pn 18 09 33.5 -0.8**
SALV Santo Antonio 15.12 61 *eP* **Pn 18 09 36.7 +0.2**
TRCB Terra Rica 15.47 90 P **Pn 18 09 41.5 +0.5**
TRQA Tornquist 15.56 158 Pn 18 09 39.7 -2.3
CPSB Cacapava Do Su 15.67 118 *eP* **Pn 18 09 42.9 -0.5**
GO06 Curarrehue 15.82 186 P **Pn 18 09 42.3 -3.0**
PTGB Pitanga 15.87 97 *eP* **P 18 09 48.0 -0.1**
ITAB Concordia 15.98 106 P **Pn 18 09 46.9 -0.5**
ITAB Concordia 15.98 106 *eP* **Pn 18 09 47.9 +0.5**
PLTB Pedras Altas 16.08 123 Pn 18 09 46.8 -1.8
PLTB Pedras Altas 16.08 123 *eP* **Pn 18 09 47.3 -1.2**
C2SB Chapadao do Su 16.25 75 *eP* **P 18 09 51.9 -0.5**
LDASE Londrina, Braz 16.79 92 *eP* **P 18 09 58.0 -0.5**
PLCA Paso Flores 16.90 183 P **Pn 18 09 58.2 -0.5**
comp=Z,2.3nm,0.6s,baz=2.6,slow=13,SNR=14
PLCA LR LR 18 16 17.1
comp=Z,62nm,20.9s,baz=7.0,slow=36
PDRB Porto dos Gac 17.12 47 *eP* **Pn 18 09 59.7 -1.8**
ITRB Iturama 18.18 81 *eP* **Pn 18 10 14.8 +0.4**
ATAH Atahualpa 18.68 331 P **Pn 18 10 20.9 0.0**
comp=Z,6.8nm,0.7s,baz=172,slow=8.9,SNR=6.5
BB19B Bebedouro 19.51 86 *eP* **P 18 10 28.4 +0.1**
SPB Sao Paulo 20.15 94 P Pn 18 10 36.4 -1.2
RCLB Rio Claro- Sao 20.19 90 *eP* Pn 18 10 37.2 -1.0
PET01 Itanhaem-SP 20.24 96 *eP* Pn 18 10 37.6 -1.2
VAO Valinhos 20.63 92 P **P 18 10 38.9 -1.5**
VAO Valinhos 20.63 92 *eP* **P 18 10 40.8 +0.3**
IPMB Ipameri, GO 20.65 78 *eP* **P 18 10 41.0 +0.4**
NPGB Novo Progresso 21.46 41 *eP* **P 18 10 47.8 -1.5**
BDFB Brasilia 21.72 72 P **P 18 10 51.3 -0.8**
comp=Z,15nm,0.8s,baz=239,slow=11,SNR=18
BDFB LR LR 18 20 10.8
comp=Z,35nm,21.4s,baz=168,slow=39
comp=Z,15nm,0.8s
BDFB Brasilia 21.72 72 P **P 18 10 52.6 +0.4**
BDFB IAmb IAmb 18 10 54.3
comp=Z,27nm,1.0s
PMNB Patos De Minas 22.06 81 *eP* **P 18 10 56.5 +0.7**
BSCB Bom Sucesso 22.96 88 *eP* **P 18 11 04.4 -0.9**
ITTB Itaituba 23.42 36 *eP* **P 18 11 06.7 -2.8**
DIAM Diamantina, MG 24.64 82 *eP* **P 18 11 19.4 -1.3**
JANB Januaria 25.21 74 *eP* **P 18 11 25.1 -0.6**
SMTB Santa Maria do 25.64 58 *eP* **P 18 11 30.2 +0.6**
SDBA SAO DESIDERIO 25.88 68 *eP* **P 18 11 32.1 +0.3**
BOAV Boa Vista 27.46 20 P **P 18 11 47.1 +1.2**
BOAV Boa Vista 27.46 20 *eP* **P 18 11 43.9 -2.0**
GUA01 Guaratinga, BA 28.68 81 *eP* **P 18 11 57.5 +0.6**
ROSC El Rosal 28.88 350 LR LR 18 24 08.4
comp=Z,132nm,21.0s,baz=255,slow=37
SDV Santo Domingo 32.52 358 LR LR 18 26 07.7
comp=Z,49nm,19.4s,baz=282,slow=37
MDP Montagnes des 33.08 32 LR LR 18 27 09.6
comp=Z,26nm,19.2s,baz=180,slow=38
NBPS Pedro II - PI 33.18 59 *eP* **P 18 12 36.2 -0.3**
RCBR Riachuelo 36.86 66 P 18 13 09.6 +1.4
RCBR Riachuelo 36.86 66 *eP* **P 18 13 08.1 -0.2**
NBPV Pedro Velho 37.07 68 *eP* **P 18 13 10.4 +0.4**
JTS Las Juntas de 37.14 334 LR LR 18 26 31.4
comp=Z,29nm,18.1s,baz=232,slow=33
HOPE Hope Point 39.11 150 P **P 18 13 26.7 +0.1**
SJG San Juan 41.79 5 LR LR 18 33 34.4
comp=Z,44nm,20.1s,baz=92,slow=39
ZAIG Zacatecas 56.40 323 P 18 15 43.8 +2.9
ZAIG IAmb IAmb 18 15 44.2
comp=Z,8.9nm,0.8s
VNA3 Neumayer Olymp 58.06 161⇑ P **P 18 15 52.9 +1.2**
comp=Z,4.2nm,0.6s
VNA2 Neumayer--Watz 58.65 160⇓ P **P 18 15 57.5 +1.7**
comp=Z,1.4nm,0.4s,baz=290,slow=6.5
833A Chaparral WMA, 59.33 329 P **P 18 16 01.9 +0.9**
SNAA Sanae 60.27 160 P **P 18 16 08.3 +1.3**
comp=Z,2.1nm,0.6s,baz=288,slow=11,SNR=2.4
comp=Z,2.1nm,0.6s
SNAA Sanae 60.27 160 P **P 18 16 08.1 +1.1**
SNAA IAmb IAmb 18 16 29.6
comp=Z,5.3nm,0.9s
BRDY Brady 61.67 331 IAmb IAmb 18 16 18.7
comp=Z,7.7nm,0.9s
TROLL Troll, Antarti 61.98 160 P **P 18 16 20.5 +1.8**
WVT Waverly 62.10 343 P **P 18 16 19.4 -0.3**
TXAR Lajitas Array 62.26 326 P **P 18 16 22.4 +1.4**
comp=Z,1.3nm,0.6s,baz=152,slow=8.6,SNR=16
comp=Z,1.3nm,0.6s
TXAR Lajitas Array 62.26 326 P **P 18 16 22.2 +1.1**
TX31 Lajitas Ar. Si 62.26 326 P 18 16 22.4 +1.4
OZNA Ozona 62.33 329 P **P 18 16 22.4 +1.0**
MIAR Mount Ida 62.40 338 P **P 18 16 21.4 -0.3**
MIAR IAmb IAmb 18 16 23.6
comp=Z,7.4nm,0.8s
Z35A Perchaven, San 62.71 334 P **P 18 16 24.0 +0.2**
ALPN Alpine 63.09 327 P 18 16 27.2 +0.7
ABTX Abilene, Hawle 63.10 332 P **P 18 16 27.4 +0.9**
TMB01 Midkiff 63.40 329 IAmb IAmb 18 16 30.6
comp=Z,5.6nm,0.7s
TPB01 Permian Basin 63.62 327 IAmb IAmb 18 16 32.8
comp=Z,12nm,0.9s
VHRN Van Horn 64.10 326 IAmb IAmb 18 16 35.7
comp=Z,9.4nm,0.8s
MGMO Mountain Grove 64.35 340 IAmb IAmb 18 16 36.1
comp=Z,8.8nm,0.9s
128A Castleberry Fa 64.38 329 IAmb IAmb 18 16 36.9
comp=Z,10nm,0.6s
R40A Maddies Statio 65.39 340 IAmb IAmb 18 16 43.3
comp=Z,12nm,0.9s
QSPA South Pole Qui 66.39 180 P **P 18 16 49.8 +2.2**
comp=Z,2.1nm,0.6s,baz=167,slow=1.1,SNR=6.5
QSPA pP **pP 18 17 09.0 +0.2**
comp=Z,3.1nm,0.7s,baz=191,slow=5.8,SNR=4.9
comp=Z,2.1nm,0.6s
QSPA South Pole Qui 66.39 180 P **P 18 16 49.6 +2.0**
QSPA **pP 18 17 08.5 -0.3**
121A Cookes Peak, D 66.93 325 IAmb IAmb 18 16 54.6
comp=Z,5.6nm,0.8s
ANMO Albuquerque 68.18 328 P 18 16 60.0 +0.6
ANMO IAmb IAmb 18 17 02.4
comp=Z,6.7nm,0.8s
TUC Tucson 68.37 323 P 18 17 00.6 +0.2
TUC IAmb IAmb 18 17 03.8
comp=Z,12nm,1.1s
T25A Trinidad 69.00 331 IAmb IAmb 18 17 07.5
comp=Z,13nm,1.3s
F64A Sherman 69.35 1 P **P 18 17 04.4 -1.7**
DBIC Dimbokro 69.86 73 P **P 18 17 11.2 +1.2**
comp=Z,7.7nm,0.9s,baz=241,slow=4.5,SNR=3.6
DBIC pP **PcP 18 17 32.2 +0.2**
comp=Z,12nm,0.8s,baz=255,slow=5.7,SNR=5.0
DBIC LR LR 18 48 03.6
comp=Z,14nm,19.0s,baz=345,slow=36
comp=Z,7.7nm,0.9s
DBIC Dimbokro 69.86 73 P **P 18 17 10.5 +0.5**
DBIC **PcP 18 17 31.8 -0.2**
SDCO Great Sand Dun 69.99 330 IAmb IAmb 18 17 43.7
comp=Z,13nm,1.1s
X16A La Mia Pamp, P 70.32 324 IAmb IAmb 18 17 16.3
comp=Z,9.8nm,1.1s
Q24A Divide 70.84 331 IAmb IAmb 18 17 18.7
comp=Z,14nm,1.1s
MVCO Mesa Verde 70.98 328 IAmb IAmb 18 17 19.8
comp=Z,10.0nm,0.9s
WUAZ Wupatki 71.12 325 IAmb IAmb 18 17 21.1
comp=Z,14nm,1.0s
ECSD EROS Data Cent 71.70 340 IAmb IAmb 18 17 52.0
comp=Z,6.6nm,0.9s
PV15 Paradox Valley 71.86 329 IAmb IAmb 18 17 25.6
comp=Z,12nm,1.0s
PV13 Radium Mtn., P 71.88 328 IAmb IAmb 18 17 25.1
comp=Z,9.5nm,1.1s
PV18 Skein Mesa, Pa 71.99 328 IAmb IAmb 18 17 55.1
comp=Z,15nm,1.2s
PV10 Paradox Valley 72.16 328 IAmb IAmb 18 17 26.7
comp=Z,9.8nm,1.0s
PV22 Blue Mesa, Par 72.16 329 IAmb IAmb 18 17 26.9
comp=Z,14nm,1.3s
U15A North Rim 72.30 325 IAmb IAmb 18 17 28.5
comp=Z,12nm,1.2s
HMU Henry Mountain 72.65 327 IAmb IAmb 18 17 59.7
comp=Z,16nm,1.4s
DANC Danby, Needles 72.67 322 IAmb IAmb 18 17 30.2
comp=Z,12nm,0.9s
O20A White River Ci 73.18 330 IAmb IAmb 18 17 32.8
comp=Z,14nm,0.9s
P18A Preston Nutter 73.72 328 IAmb IAmb 18 17 35.9
comp=Z,8.2nm,0.8s
P17A Butcher Ranch, 73.84 328 IAmb IAmb 18 17 36.6
comp=Z,9.4nm,0.9s

RDMU Red Mountain 74.14 329 IAmb IAmb 18 18 08.3
comp=Z,7.5nm,1.0s
K22A Casper 74.46 332 IAmb IAmb 18 18 11.8
comp=Z,11nm,1.1s
QSM Queen of Sheba 74.47 322 IAmb IAmb 18 17 40.1
comp=Z,9.1nm,1.2s
PRN Pahroc Range 74.50 324 IAmb IAmb 18 17 41.3
comp=Z,8.2nm,1.0s
GWY Greenwater Val 74.51 322 IAmb IAmb 18 17 40.7
comp=Z,7.2nm,0.9s
RSSD Black Hills 74.67 335 P 18 17 39.2 +1.0
RSSD IAmb IAmb 18 17 41.0
comp=Z,6.1nm,0.7s
BSUT Blindstream Ca 74.68 329 IAmb IAmb 18 17 41.5
comp=Z,5.5nm,0.7s
PSUT Pine Spring 74.70 325 IAmb IAmb 18 17 42.0
comp=Z,7.3nm,0.9s
TPNV Topopah Spring 74.82 323 IAmb IAmb 18 17 43.1
comp=Z,8.8nm,0.8s
WCT Wildcat Mounta 74.92 322 IAmb IAmb 18 17 43.6
comp=Z,9.8nm,1.0s
TCUT Toone Canyon 75.44 329 IAmb IAmb 18 17 46.8
comp=Z,6.2nm,0.8s
PDAR Pinedale Array 75.87 331 P **P 18 17 46.3 +1.1**
comp=Z,0.7nm,0.5s,baz=140,slow=7.1,SNR=13
comp=Z,0.7nm,0.5s
PDAR Pinedale Array 75.87 331 P **P 18 17 45.1 -0.1**
HWUT Hardware Ranch 75.89 329 IAmb IAmb 18 17 48.7
comp=Z,7.8nm,0.6s
SPUT South Promonto 76.09 328 IAmb IAmb 18 17 49.3
comp=Z,7.0nm,0.8s
HVU Hansel Valley 76.60 328 IAmb IAmb 18 17 52.0
comp=Z,6.3nm,0.9s
LOHW Long Hollow 77.01 331 P **P 18 17 52.8 +1.2**
LOHW IAmb IAmb 18 18 24.2
comp=Z,16nm,1.4s
NVAR Mina Array Bea 77.02 323 P **P 18 17 53.7 +1.9**
comp=Z,2.3nm,0.7s,baz=164,slow=6.5,SNR=10
comp=Z,2.3nm,0.7s
FXWY Fox Creek 77.22 330 IAmb IAmb 18 18 26.4
comp=Z,11nm,1.4s
ULM Lac du Bonnet 77.37 343 P **P 18 17 53.2 0.0**
comp=Z,3.5nm,0.6s,baz=156,slow=6.1,SNR=8.7
comp=Z,3.5nm,0.6s
FLWY Flagg Ranch 77.42 331 IAmb IAmb 18 17 57.3
comp=Z,13nm,0.8s
RLMT Red Lodge 77.62 332 IAmb IAmb 18 18 27.7
comp=Z,18nm,1.4s
SUR Sutherland 77.84 120 LR LR 18 52 18.1
comp=Z,9.3nm,18.4s,baz=232,slow=36
YMR Madison River 78.00 331 IAmb IAmb 18 18 00.9
comp=Z,10nm,0.8s
YHB Horse Butte 78.17 331 IAmb IAmb 18 18 01.6
comp=Z,9.3nm,0.9s
YHL Hebgen Lake 78.24 331 IAmb IAmb 18 18 31.9
comp=Z,21nm,1.4s
PAHR Pah Rah Range 78.51 323 IAmb IAmb 18 18 03.5
comp=Z,14nm,0.9s
TORD Torodi Ar. Bea 78.59 70 P **P 18 18 01.9 +1.1**
comp=Z,7.2nm,0.7s,baz=243,slow=7.4,SNR=39
TORD pP **pP 18 18 22.7 0.0**
comp=Z,13nm,0.9s,baz=243,slow=7.7,SNR=6.5
comp=Z,7.2nm,0.7s
TORD Torodi Ar. Bea 78.59 70 P **P 18 18 00.6 -0.1**
TORD **pP 18 18 22.1 -0.6**
TORD IAmb IAmb 18 18 24.8
comp=Z,8.3nm,0.9s
HLID Hailey 78.74 328 IAmb IAmb 18 18 04.7
comp=Z,11nm,0.9s
DLMT Dillon 79.27 331 IAmb IAmb 18 18 37.4
comp=Z,14nm,1.1s
MFID Camas Ranch 79.32 328 IAmb IAmb 18 18 37.9
comp=Z,11nm,1.1s
ORV Oroville 79.59 322 IAmb IAmb 18 18 09.0
comp=Z,13nm,1.1s
TSUM Tsumeb 79.84 107 LR LR 18 50 23.2
comp=Z,19nm,18.7s,baz=170,slow=33
PLID Pearl Lake 80.64 329 IAmb IAmb 18 18 14.3
comp=Z,12nm,0.8s
BMO Blue Mountains 81.10 328 IAmb IAmb 18 18 46.9
comp=Z,17nm,1.4s
F10A Beach Ranch, E 81.87 329 IAmb IAmb 18 18 52.9
comp=Z,12nm,1.3s
MAW Mawson 82.26 163 LR LR 18 57 54.7
comp=Z,27nm,18.1s,baz=238,slow=38
BOSA Boshof 82.79 118 P **P 18 18 24.1 +0.9**
comp=Z,3.4nm,0.7s,baz=226,slow=2.9,SNR=7.7
BOSA LR LR 18 53 02.5
comp=Z,21nm,20.9s,baz=186,slow=34
comp=Z,3.4nm,0.7s
BOSA Boshof 82.79 118 P **P 18 18 24.0 +0.7**
BOSA IAmb IAmb 18 18 25.5
comp=Z,6.8nm,0.9s
C09A Chrisman Ranch 83.69 329 IAmb IAmb 18 18 29.7
comp=Z,8.4nm,0.8s
LBTB Lobatse 84.49 115 LR LR 18 55 05.1
comp=Z,21nm,18.9s,baz=198,slow=35
EDM Edmonton 85.65 335 IAmb IAmb 18 18 38.0
comp=Z,15nm,1.2s
LSZ Lusaka 90.69 107 LR LR 18 56 25.3
comp=Z,32nm,18.4s,baz=169,slow=33
YKA Yellowknife Ar 93.20 341 P **P 18 19 12.5 +0.3**
comp=Z,2.0nm,0.8s,baz=143,slow=3.7,SNR=4.1
YKA pP **pP 18 19 35.0 +0.6**
comp=Z,1.8nm,0.8s,baz=144,slow=3.8,SNR=5.8
YKA sP **sP 18 19 42.8 -0.2**
comp=Z,2.5nm,0.9s,baz=142,slow=3.9,SNR=5.6
comp=Z,2.0nm,0.8s
MBAR Mbarara 99.06 95 LR LR 19 02 37.6
comp=Z,19nm,19.4s,baz=224,slow=34
ASAR Alice Springs 127.65 207 PKP **PKiKP 18 25 05.0 +0.4**
comp=Z,1.1nm,0.8s,baz=132,slow=1.6,SNR=16
ASAR pPKP **pPKPdf 18 25 26.9 -0.2**
comp=Z,0.8nm,0.9s,baz=126,slow=1.8,SNR=5.9
ASAR Alice Springs 127.65 207 PKPdf 18 25 04.2 +0.2
H11S2 WAKE ISLAND Hyl 27.65 276 T T 20 45 03.4
baz=107,slow=75,SNR=64
H11S1 WAKE ISLAND Hyl 27.66 276 T T 20 45 02.8
baz=107,slow=75,SNR=56
H11S3 WAKE ISLAND Hyl 27.67 276 T T 20 45 04.1
baz=107,slow=75,SNR=57
H11N3 WAKE ISLAND Hyl 27.80 277 T T 20 45 15.3
baz=104,SNR=18
H11N2 WAKE ISLAND Hyl 27.81 277 T T 20 45 10.5
baz=104,SNR=12
H11N1 WAKE ISLAND Hyl 27.81 277 T T 20 45 18.0
baz=104,SNR=8.1
WRA Warrarnunga Arr 130.72 210 PKP **PKiKP 18 25 11.3 +0.5**
comp=Z,0.6nm,0.4s,baz=153,slow=1.8,SNR=20
WRA pPKP **pPKPdf 18 25 33.1 +0.1**
comp=Z,0.6nm,0.7s,baz=157,slow=1.8,SNR=3.9
TIXI Tiksi 131.01 352 PKP **PKPdf 18 25 09.3 +0.5**
comp=Z,0.2nm,0.3s,baz=101,slow=3.8,SNR=5.6
TIXI Tiksi 131.01 352 PKPdf 18 25 07.5 -1.3
SEY Seymchan 132.01 336 PKP **PKiKP 18 25 13.2 +1.3**
comp=Z,0.6nm,0.6s,baz=64,slow=5.7,SNR=5.8
BVAR Borovoye Array 137.96 36 PKP **PKiKP 18 25 24.9 +0.5**
comp=Z,0.6nm,0.8s,baz=321,slow=1.8,SNR=3.1
BVAR pPKP **pPKPdf 18 25 46.3 +0.7**
comp=Z,0.6nm,0.7s,baz=256,slow=3.8,SNR=3.9
BVAR SKP **SKPbc 18 28 51.3 +2.0**
comp=Z,0.8nm,0.9s,baz=318,slow=5.8,SNR=3.5
KURK Kurchatov 143.51 34 PKPdf 18 25 32.2 -0.2
KURBB Kurchatov Arra 143.52 35 PKP **PKPdf 18 25 31.4 -1.0**
comp=Z,0.7nm,0.9s,baz=296,slow=2.7,SNR=6.8
KURBB pPKP **pPKPdf 18 25 53.8 -1.9**
comp=Z,1.4nm,0.9s,baz=304,slow=3.4,SNR=8.5
ZAA0 Zalesovo Array 144.24 26 PKPdf **PKPdf 18 25 33.5 -0.1**
ZALV Zalesovo Beam 144.24 26 PKP **PKPdf 18 25 33.8 +0.2**
comp=Z,3.5nm,0.8s,baz=299,slow=3.3,SNR=16
ZALV pPKP **pPKPdf 18 25 57.0 +0.2**
comp=Z,5.4nm,0.9s,baz=298,slow=3.2,SNR=5.8
ZALV SKPbc **SKiKP 18 29 08.0 +1.6**
comp=Z,0.8nm,0.7s,baz=289,slow=4.4,SNR=3.7
ZALV Zalesovo Beam 144.24 26 PKPdf 18 25 33.3 -0.3
ZALV **pPKPdf 18 25 55.1 -1.7**
AAK Ala-Archa 144.81 49 PKPab 18 25 34.1 -0.2
MKAR Makanchi Array 147.77 38 PKPbc **PKPbc 18 25 42.4 -0.5**
comp=Z,2.3nm,0.9s,baz=316,slow=2.8,SNR=15
MKAR pPKPbc **pPKPdf 18 26 03.5 +0.4**
comp=Z,4.3nm,0.9s,baz=303,slow=3.1,SNR=8.8
MKAR Makanchi Array 147.77 38 PKPdf 18 25 40.9 +1.0
KLR Kul'dur 149.66 332 PKPbc **PKPbc 18 25 47.8 +0.3**
comp=Z,0.6nm,0.2s,baz=53,slow=2.2,SNR=3.6
HEH HeiHe 150.52 338 *eP* **PKiKP 18 25 50.3 0.0**
HEH pmax pmax
comp=Z,4.0nm,0.9s
MJAR Matsushiro Arr 153.05 304 PKPab **PKPab 18 26 07.4 -0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,3.2nm,0.9s,baz=83,slow=2.7,SNR=4.1						
KSRS	Korea Array	159.85	316	PKPab	PKPab	18 26 37.6	+1.0
	comp=Z,2.4nm,0.9s,baz=53,slow=6.0,SNR=6.2						
KSAR	Wonju Array Be	159.88	316	PKPdf	PKPdf	18 25 57.2	0.0
HHC	Hu-ho-hao-te	162.99	357	eP	PKPdf	18 25 56.2	-4.3
LZH	Lanzhou	166.46	24	eP	PKPdf	18 26 06.9	+3.1
LZH				pP	pPKPdf	18 26 14.8	-12
LZH				pmax	pmax		
	comp=Z,22nm,1.5s						
NJ2	Nanjing	169.00	320	eP	PKPdf	18 26 01.5	-3.9
NJ2				pmax	pmax		
	comp=Z,30nm,1.0s						
PZH	PanZhiHua	171.57	70	PKP	PKPdf	18 26 03.3	-3.9

*JMA **05** 18:10:07.3±0.2, 43.°2N±0.°6×145.°6E±0.°8, h53km±1km, MV2.9/35, OFF NEMURO PENINSULA*
*SKHL **05** 18:10:08.1±0.7, 43.°20N×145.°60E, h44km±2km, mb4.0/2*
ISC 05 18:10:07.6±1.9**, 43.°19N**±0.°08×**145.°59E**±0.°06**, h50**km±11km**,**
n13, σ**0.s49**/21**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NMR	Nemuro--Hokkai	0.21	30	iP	Pn	18 10 16.1	+0.1
NMR				eS	Sn	18 10 21.8	-0.2
NEM2	Nemuro 2	0.21	33	eP	Pn	18 10 16.0	0.0
NEM2				eS	Sn	18 10 21.9	-0.1
JKHN	Kushirohamanak	0.33	252	P	Pn	18 10 17.4	+0.4
JKHN				eS	Sn	18 10 24.2	+0.6
AKK	Akkeshi	0.57	253	eP	Pn	18 10 19.5	-0.2
JAK	Akkeshi	0.68	254	P	Pn	18 10 20.9	-0.2
JAK				eS	Sn	18 10 30.4	-0.4
JNSB	Nemuroshibetsu	0.72	324	iP	Pn	18 10 21.7	0.0
JNSB				eS	Sn	18 10 32.0	+0.2
JNK	Nakash	0.75	302	P	Pn	18 10 21.7	-0.3
JNK				eS	Sn	18 10 31.5	-0.9
JRA	Rausu	0.82	336	P	Pn	18 10 23.1	+0.2
JRA				eS	Sn	18 10 34.3	+0.1
YUK	Yuzh-Kuril'sk	0.87	13	eP	Pn	18 10 23.4	-0.2
YUK				AMB	AMB	18 10 24.3	
	90nm,0.3s						
YUK				eS	Sn	18 10 34.6	-0.7
YUK				A	A	18 10 36.0	
	190nm,0.3s						
YUK				A	A	18 10 36.0	
	420nm,0.3s						
SHO	Shikotan	1.13	53	eP	Pn	18 10 26.5	-0.6
SHO				AMB	AMB	18 10 28.2	
	60nm,0.3s						
SHO				eS	Sn	18 10 50.0	+8.4
SHO				A	A	18 10 52.1	
	190nm,0.3s						
SHO				A	A	18 10 52.1	
	230nm,0.3s						
JAR	Ashorobuto	1.33	275	P	Pn	18 10 29.9	+0.1
JTKR	Abashiri--Toko	1.45	303	eP	Pn	18 10 32.0	+0.6
KUR	Kuril'sk	2.62	38	eP	Pn	18 10 48.5	+1.1

*IDC **05** 18:26:54.3±1.1, 42.°46N×126.°72W, h0km, mb4.0/13, mbtmp4.0/17, ML3.5/4, MS3.6/29, Error ellipse: s-maj=25.4km s-min=11.4km az=28.0*
*NEIC **05** 18:26:55.4±1.9, 42.°51N±0.°06×126.°41W±0.°08, h10km±1km, mb4.3/20, ML3.3/90, Error ellipse: s-maj=12.1km s-min=8.2km az=226.0*
ISC 05 18:26:55.9±0.7**, 42.°45N**±0.°06×**126.°50W**±0.°10**, h12**km**,**
n104, σ**1.s45**/64**, mb4.2**/20**, MS3.6**/24**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBO	Bosley Butte	1.70	97		Pn	18 27 26.2	+0.7
KBO				IAML		18 28 01.1	
	comp=N,306nm,1.6s						
KBO				IAML		18 28 05.6	
	comp=E,280nm,1.8s						
J01E	Myrtle Point	2.02	69		Pn	18 27 30.1	+0.4
J01E				IAML		18 27 57.4	
	comp=E,238nm,0.3s						
J01E				IAML		18 27 59.8	
	comp=N,238nm,0.6s						
K02D	Willamette Mer	2.11	82		Pn	18 27 31.5	+0.4
L02F	Cave Junction	2.20	98	Pn	Pn	18 27 29.1	-3.1
KRPM	Rodgers	2.26	124		Pn	18 27 34.4	+1.3
KRPM				IAML		18 28 46.1	
	comp=N,112nm,3.5s						
KRPM				IAML		18 28 55.8	
	comp=E,126nm,4.3s						
JCC	Jacoby Creek,	2.47	131	Pn	Pn	18 27 37.4	+1.5
I02E	Swisshome, OR	2.55	49		Pn	18 27 36.8	-0.2
I02E				IAML		18 28 09.0	
	comp=N,110nm,0.7s						
I02E				IAML		18 28 15.9	
	comp=E,134nm,0.8s						
KHMM	Horse Mountain	2.61	126	Pn	Pn	18 27 35.6	-2.3
I03D	Drain, OR	2.62	61		Pn	18 27 37.9	-0.1
I03D				IAML		18 28 14.2	
	comp=N,90nm,0.7s						
I03D				IAML		18 28 24.9	
	comp=E,91nm,0.9s						
BBOR	Butler Butte	2.85	80	Pn	Pn	18 27 42.1	+0.7
BBOR				IAML		18 28 02.4	
	comp=N,89nm,1.0s						
BBOR				IAML		18 28 30.0	
	comp=E,115nm,1.0s						
YBH	Yreka Blue Hor	2.91	103	Pn	Pn	18 27 44.6	+2.5
	comp=E,0.1nm,0.3s,baz=294,slow=8.2,SNR=57						
YBH				LR	LR	18 28 49.2	
	comp=E,23nm,21.7s,baz=264,slow=37						
YBH	Yreka Blue Hor	2.91	103	Pn	Pn	18 27 41.0	-1.2
YBH				IAML		18 29 26.7	
	comp=N,55nm,4.6s						
M02C	Callahan	2.92	110		Pn	18 27 43.8	+1.6
KHBM	Hayfork Bally	3.04	125		Pn	18 27 46.0	+1.9
KMRM	Mail Ridge	3.06	136		Pn	18 27 43.6	-0.6
KMRM				IAML		18 29 34.5	
	comp=N,53nm,4.7s						
BUCK	Buck Mountain	3.10	55		Pn	18 27 45.0	+0.3
BUCK				IAML		18 28 25.7	
	comp=N,130nm,0.8s						
L04D	Klamath Falls	3.12	93	Pn	Pn	18 27 46.1	+1.1
L04D				IAML		18 28 31.2	
	comp=N,74nm,1.5s						
L04D				IAML		18 29 21.8	
	comp=E,87nm,1.9s						
COR	Corvallis	3.16	46		Pn	18 27 45.9	+0.5
COR				IAML		18 28 27.7	
	comp=E,121nm,1.8s						
COR				IAML		18 28 34.0	
	comp=E,130nm,0.8s						
N02D	Trinity Center	3.20	116		Pn	18 27 48.0	+1.9
I04A	Tendick Farm,	3.28	64	Pn	Pn	18 27 47.5	+0.3
I04A				IAML		18 28 37.9	
	comp=E,120nm,1.1s						
I04A				IAML		18 28 45.7	
	comp=N,79nm,1.7s						
J04A	Umpqua Nationa	3.32	75	Pn	Pn	18 27 47.9	0.0
H04D	Lebanon	3.43	52		Pn	18 27 49.7	+0.5
M03C	McCloud	3.48	108	IAML		18 28 57.1	
	comp=N,68nm,4.6s						
WIFE	Three Sisters-	3.78	63	IAML		18 28 52.0	
	comp=E,91nm,1.0s						
H04A	Detroit Lake	3.85	53	IAML		18 28 23.3	
	comp=N,60nm,0.6s						
H04A				IAML		18 28 52.9	
	comp=E,57nm,0.7s						
J05D	Fort Rock, OR	3.96	76	IAML		18 29 03.3	
	comp=N,40nm,1.3s						
J05D				IAML		18 29 31.3	
	comp=E,45nm,1.8s						
O03E	Paynes Creek	4.14	120	IAML		18 30 14.2	
	comp=N,26nm,3.8s						
O03E				IAML		18 30 46.1	
	comp=E,38nm,3.2s						
K05A	Summer Lake	4.15	84	IAML		18 29 46.5	
	comp=E,52nm,3.3s						
I05D	Terrebonne, OR	4.21	62	IAML		18 28 32.0	
	comp=N,59nm,1.0s						
PINE	Pine Mountain	4.29	70	IAML		18 28 56.1	
	comp=E,36nm,4.2s						
PINE				IAML		18 29 31.6	
	comp=N,34nm,3.9s						
HOOD	Mount Hood Mea	4.53	49	IAML		18 28 40.2	
	comp=N,50nm,0.8s						
G06A	Carlson Farm,	5.07	55	IAML		18 29 50.1	
	comp=N,26nm,4.0s						
G06A				IAML		18 30 55.5	
	comp=E,27nm,4.1s						
I07A	Izee	5.36	70	IAML		18 30 10.1	
	comp=N,14nm,3.5s						
I07A				IAML		18 30 54.9	
	comp=E,23nm,4.6s						
LON	Longmire	5.45	36	IAML		18 29 23.6	
	comp=N,17nm,1.2s						
LON				IAML		18 30 00.1	
	comp=E,23nm,5.0s						
ELK	Elko	8.61	98	Pn	Pn	18 29 06.5	+6.0
	comp=E,0.1nm,0.3s,baz=284,slow=15,SNR=2.3						
	comp=E,4.9nm,1.2s						
ELK	Elko	8.61	98		Pn	18 29 03.1	+2.6
NEW	Newport	8.79	45	Pn	Pn	18 29 05.7	+2.9
	comp=E,0.1nm,0.3s,baz=264,slow=13,SNR=4.7						
NEW				LR	LR	18 32 29.5	
	comp=E,322nm,21.4s,baz=247,slow=38						
	comp=E,3.4nm,0.9s						
NEW	Newport	8.79	45		Pn	18 29 04.1	+1.4
HLID	Hailey	8.93	79	Pn	Pn	18 29 04.3	-0.5
BBB	Bella Bella	9.80	354	LR	LR	18 32 25.4	
	comp=E,192nm,19.4s,baz=171,slow=34						
PFO	Pinyon Flats O	11.85	135	LR	LR	18 34 34.9	
	comp=E,422nm,18.4s,baz=351,slow=38						
PDAR	Pinedale Array	12.49	83	Pn	Pn	18 30 00.4	+6.8
	baz=274,slow=7.0,SNR=11						
	comp=E,2.0nm,1.0s						
DLBC	Dease Lake	16.16	353	LR	LR	18 36 04.0	
	comp=E,228nm,18.4s,baz=114,slow=34						
ANMO	Albuquerque	17.33	109	P	Pn	18 30 57.8	0.0
	comp=E,0.8nm,0.3s,baz=106,slow=18,SNR=13						
ANMO				LR	LR	18 38 21.4	
	comp=E,331nm,18.2s,baz=296,slow=39						
	comp=E,2.8nm,0.5s						
YKA	Yellowknife Ar	21.27	15	P	P	18 31 43.2	+1.4
	comp=E,5.3nm,0.9s,baz=210,slow=11,SNR=41						
	comp=E,5.3nm,0.9s						
YKA	Yellowknife Ar	21.27	15	P	P	18 31 42.2	+0.5
R32A	Long Quarter,	21.49	91	P	P	18 31 43.8	-0.6
R32A				IAmb	IAmb	18 31 50.2	
	comp=Z,21nm,0.9s						
ECSD	EROS Data Cent	21.81	76	P	P	18 31 49.3	+1.5
F33A	5 Mile Ranch,	21.88	71	P	P	18 31 51.2	+2.8
DKNS	Dickens	21.90	105	P	P	18 31 48.5	-0.4
ALPN	Alpine	21.92	116	P	P	18 31 46.3	-2.9
N25K	Chitina, Valde	22.03	337	P	P	18 31 50.0	-0.1
AGMN	Agassiz Nation	22.21	64	P	P	18 31 50.0	-2.0
AGMN				IAmb	IAmb	18 32 02.3	
	comp=Z,23nm,1.0s						
ULM	Lac du Bonnet	22.41	59	P	P	18 31 54.6	+0.5
	comp=Z,6.9nm,1.1s,baz=250,slow=7.5,SNR=8.4						
ULM				LR	LR	18 40 56.0	
	comp=Z,91nm,20.9s,baz=191,slow=37						
	comp=Z,6.9nm,1.1s						
ULM	Lac du Bonnet	22.41	59		P	18 31 52.2	-1.9
ULM				IAmb	IAmb	18 32 03.1	
	comp=Z,8.1nm,0.9s						
KDAK	Kodiak Island	22.49	322	LR	LR	18 38 27.4	
	comp=Z,385nm,18.6s,baz=126,slow=31						
TXAR	Lajitas Array	22.58	118	P	P	18 31 58.5	+2.3
	comp=Z,1.4nm,1.1s,baz=301,slow=6.3,SNR=14						
	comp=Z,1.4nm,1.1s						
TXAR	Lajitas Array	22.58	118		P	18 31 54.3	-1.9
LPIG	La Paz	22.69	139	LR	LR	18 40 17.1	
	comp=Z,207nm,19.3s,baz=266,slow=35						
ILAR	Eielson Array	25.18	339	P	P	18 32 21.1	+0.3
	comp=Z,2.8nm,1.1s,baz=156,slow=8.1,SNR=12						
ILAR				LR	LR	18 40 29.2	
	comp=Z,136nm,21.2s,baz=144,slow=32						
	comp=Z,2.8nm,1.1s						
ILAR	Eielson Array	25.18	339	P	P	18 32 20.7	-0.2
H27K	Steamboat Moun	25.24	346	P	P	18 32 21.8	+0.4
H27K				IAmb	IAmb	18 32 27.5	
	comp=Z,5.1nm,1.1s						
WRH	Wood River Hil	25.27	338	P	P	18 32 22.6	+1.0
WRH				IAmb	IAmb	18 32 29.4	
	comp=Z,10.0nm,1.2s						
RES	Resolute Bay	35.33	14	LR	LR	18 49 20.6	
	comp=Z,40nm,21.6s,baz=21,slow=38						
CMIG	Matias Romero	36.95	123	LR	LR	18 49 44.5	
	comp=Z,83nm,18.9s,baz=353,slow=37						
SFJD	Kangerlussuaq	46.42	32	LR	LR	18 55 49.5	
	comp=Z,30nm,19.2s,baz=218,slow=37						
JTS	Las Juntas de	48.36	119	LR	LR	18 56 57.6	
	comp=Z,34nm,18.8s,baz=240,slow=37						
MA2	Magadan	51.20	320	LR	LR	18 56 43.7	
	comp=Z,96nm,18.3s,baz=82,slow=35						
TIXI	Tiksi	54.64	338	P	P	18 36 22.8	-1.1
	comp=Z,1.2nm,0.3s,baz=96,slow=11,SNR=4.1						
TIXI				LR	LR	18 59 43.3	
	comp=Z,51nm,18.7s,baz=92,slow=36						
	comp=Z,1.2nm,0.3s						
TIXI	Tiksi	54.64	338	IAmb	IAmb	18 36 28.4	
	comp=Z,2.0nm,1.0s						
BORG	Borgarnes	58.37	29	LR	LR	19 01 31.3	
	comp=Z,48nm,19.6s,baz=337,slow=36						
YAK	Yakutsk	59.35	328	LR	LR	19 00 21.2	
	comp=Z,67nm,19.1s,baz=90,slow=34						
ROSC	El Rosal	59.43	114	LR	LR	19 05 21.0	
	comp=Z,27nm,20.0s,baz=207,slow=39						
H11N3	WAKE ISLAND Hy	59.83	270	T	T	19 41 28.9	
	baz=51,slow=75,SNR=150						
H11N2	WAKE ISLAND Hy	59.83	270	T	T	19 41 29.0	
	baz=51,slow=75,SNR=128						
H11N1	WAKE ISLAND Hy	59.85	270	T	T	19 41 30.2	
	baz=51,slow=75,SNR=146						
H11S1	WAKE ISLAND Hy	60.73	269	T	T	19 42 37.9	
	baz=50,slow=75,SNR=53						
H11S2	WAKE ISLAND Hy	60.74	269	T	T	19 42 38.7	
	baz=50,slow=75,SNR=38						
H11S3	WAKE ISLAND Hy	60.75	269	T	T	19 42 39.4	
	baz=50,slow=75,SNR=28						
KLR	Kul'dur	65.85	315	LR	LR	19 04 16.9	
	comp=Z,22nm,20.1s,baz=49,slow=34						
ARCES	ARCESS Array B	66.44	10	LR	LR	19 06 33.9	
	comp=Z,35nm,19.8s,baz=314,slow=36						
HFS	Hagfors	72.68	20	P	P	18 38 24.7	+1.5
	comp=Z,3.6nm,0.9s,baz=259,slow=12,SNR=4.2						
	comp=Z,3.6nm,0.9s						
FINES	FINESS Array B	74.09	13	P	P	18 38 35.6	+4.2
	comp=Z,3.3nm,0.9s,baz=9.9,slow=6.0,SNR=3.9						
FINES	FINESS Array B	74.09	13	P	P	18 38 33.1	+1.7
MDP	Montagnes des	74.67	97	LR	LR	19 15 54.5	
	comp=Z,24nm,18.8s,baz=177,slow=39						
TLY	Talaya	76.65	331	LR	LR	19 11 54.3	
	comp=Z,56nm,19.8s,baz=26,slow=35						
SONM	Songino Array	78.69	327	P	P	18 38 58.0	+0.1
	comp=Z,0.2nm,0.3s,baz=47,slow=2.6,SNR=5.3						
SONM				LR	LR	19 12 47.3	
	comp=Z,97nm,21.3s,baz=26,slow=35						
	comp=Z,0.2nm,0.3s						
SONM	Songino Array	78.69	327	P	P	18 38 58.3	+0.4
SONM				IAmb	IAmb	18 38 59.4	
	comp=Z,2.8nm,1.3s						
LPAZ	La Paz	79.32	124	P	P	18 39 02.1	-0.2
	comp=Z,0.6nm,0.4s,baz=315,slow=2.9,SNR=1.6						
	comp=Z,0.6nm,0.4s						
LPAZ	La Paz	79.32	124	P	P	18 39 01.4	-0.8
ZAA0	Zalesovo Array	80.29	342	P	P	18 39 05.5	-0.8
ZAA0				IAmb	IAmb	18 39 15.6	
	comp=Z,3.1nm,1.2s						
ZALV	Zalesovo Beam	80.29	342	P	P	18 39 07.0	+0.7
	comp=Z,0.4nm,0.4s,baz=39,slow=9.6,SNR=5.0						
ZALV				LR	LR	19 17 26.6	
	comp=Z,23nm,19.9s,baz=30,slow=38						
	comp=Z,0.4nm,0.4s						
ZALV	Zalesovo Beam	80.29	342	P	P	18 39 05.5	-0.8
SUW	Suwalki	80.45	18	P	P	18 39 05.7	-1.5
ARTI	Arti	81.44	357	LR	LR	19 17 07.8	
	comp=Z,23nm,19.9s,baz=356,slow=37						
BVAR	Borovoye Array	83.79	350	P	P	18 39 25.2	+0.5
	comp=Z,3.1nm,1.1s,baz=58,slow=3.7,SNR=10.0						
BVAR				LR	LR	19 21 09.0	
	comp=Z,30nm,18.2s,baz=23,slow=39						
	comp=Z,3.1nm,1.1s						
KURK	Kurchatov	84.66	344		P	18 39 29.1	-0.1
KURBB	Kurchatov Arra	84.76	344	P	P	18 39 29.9	+0.2
	comp=Z,2.4nm,1.1s,baz=18,slow=4.6,SNR=10						
	comp=Z,2.4nm,1.1s						
AKASG	Malin Array Be	84.84	15	P	P	18 39 30.3	+0.2
	comp=Z,0.2nm,0.2s,baz=346,slow=4.6,SNR=4.6						
AKASG				LR	LR	19 16 03.9	
	comp=Z,30nm,19.0s,baz=354,slow=35						
	comp=Z,0.2nm,0.2s						
MKAR	Makanchi Array	87.53	341	P	P	18 39 43.1	-0.4
	comp=Z,0.6nm,1.0s,baz=41,slow=4.6,SNR=3.7						
MKAR				LR	LR	19 21 23.0	
	comp=Z,38nm,18.2s,baz=324,slow=37						
	comp=Z,0.6nm,1.0s						
MAKZ	Makanchi	87.60	341	P	P	18 39 43.6	-0.3
MAKZ				IAmb	IAmb	18 39 44.7	
	comp=Z,4.4nm,1.4s						
AB31	Akbulak array	88.50	356	P	P	18 39 47.6	-0.4
ABKAR	Akbulak array	88.50	356	P	P	18 39 47.3	-0.7
AAK	Ala-Archa	93.21	345	LR	LR	19 25 13.4	
	comp=Z,32nm,18.3s,baz=44,slow=38						

*IDC **05** 18:30:48.4±5.2, 42.°44N×126.°60W, h0km, mb3.0/2, mbtmp3.1/3, ML3.8/1, MS2.8/1, Error ellipse: s-maj=74.4km s-min=31.7km az=56.0*
*NEIC **05** 18:30:51.2±1.5, 42.°53N±0.°06×126.°4W±0.°2, h10km±2km, ML3.0/74, ML2.6/5(SEA), Error ellipse: s-maj=19.4km s-min=10.0km az=273.0*
*SEA **05** 18:31:01.4±1.1, 42.°61N±0.°06×125.°9W±0.°1, h9km±2km, Error ellipse: s-maj=15.5km s-min=10.8km az=272.0*
ISC 05 18:30:50.5±2.1**, 42.°54N**±0.°06×**126.°5W**±0.°2**, h12**km**, n47,**
σ**0.s89**/37**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBO	Bosley Butte	1.73	100		Pn	18 31 19.3	-1.1
KBO	Bosley Butte	1.73	100	IAML		18 31 59.1	
	comp=E,140nm,3.2s						
J01E	Myrtle Point	2.00	71		Pn	18 31 23.2	-0.8
J01E	Myrtle Point	2.00	71	IAML		18 32 03.0	
	comp=E,93nm,2.7s						
K02D	Willamette Mer	2.11	85		Pn	18 31 24.9	-0.7
L02F	Cave Junction	2.22	100		Pn	18 31 26.4	-0.8
KRPM	Rodgers	2.32	126	Pn	Pn	18 31 27.3	-1.2
KRPM				IAML		18 32 00.8	
	comp=E,101nm,3.7s						
KRPM				IAML		18 32 04.7	
	comp=N,103nm,4.5s						
I02E	Swisshome, OR	2.50	50	Pn	Pn	18 31 29.4	-1.4
I02E				IAML		18 32 07.8	
	comp=N,76nm,1.9s						
I02E				IAML		18 32 33.0	
	comp=E,82nm,3.5s						
JCC	Jacoby Creek,	2.54	132	Pn	Pn	18 31 31.2	-0.2
I03D	Drain, OR	2.59	62		Pn	18 31 31.5	-0.6
I03D	Drain, OR	2.59	62	IAML		18 32 07.9	
	comp=E,61nm,3.9s						
HSO	Harness Mounta	2.69	67		Pn	18 31 33.4	-0.3
HSO					Sn	18 31 54.7	-12
BBOR	Butler Butte	2.84	82		Pn	18 31 36.5	+0.7
BBOR				IAML		18 32 04.7	
	comp=E,39nm,1.6s						
BBOR				IAML		18 32 18.9	
	comp=N,39nm,2.2s						
YBH	Yreka Blue Hor	2.94	105	Pn	Pn	18 31 37.3	+0.2
	comp=N,0.1nm,0.3s,baz=342,slow=10,SNR=32						
M02C	Callahan	2.96	112	Pn	Pn	18 31 37.2	-0.2
BUCK	Buck Mountain	3.06	56	Pn	Pn	18 31 38.5	-0.2
BUCK				IAML		18 32 08.1	
	comp=E,65nm,4.8s						
BUCK				IAML		18 32 35.4	
	comp=N,60nm,4.8s						
COR	Corvallis	3.10	48	Pn	Pn	18 31 38.6	-0.6
COR				IAML		18 32 11.8	
	comp=N,51nm,3.5s						
COR				IAML		18 32 18.6	
	comp=N,59nm,2.3s						
KHBM	Hayfork Bally	3.10	126	Pn	Pn	18 31 39.5	+0.1
L04D	Klamath Falls	3.13	95	Pn	Pn	18 31 40.0	+0.2
L04D				IAML		18 32 27.2	
	comp=E,55nm,2.9s						
L04D				IAML		18 32 48.1	
	comp=N,46nm,4.2s						
KMRM	Mail Ridge	3.13	137	Pn	Pn	18 31 39.3	-0.4
KMRM				IAML		18 33 21.5	
	comp=E,62nm,4.1s						
I04A	Tendick Farm,	3.25	66		Pn	18 31 41.2	-0.1
I04A				IAML		18 32 09.4	
	comp=E,38nm,1.8s						
I04A				IAML		18 32 19.8	
	comp=N,40nm,4.8s						
N02D	Trinity Center	3.25	118	Pn	Pn	18 31 41.7	+0.4
N02D				IAML		18 32 06.1	
	comp=N,28nm,4.6s						
J04A	Umpqua Nationa	3.31	76		Pn	18 31 43.8	+1.5
H04D	Lebanon	3.38	53		Pn	18 31 43.9	+0.8
H04D				IAML		18 32 14.4	
	comp=E,55nm,2.4s						
K04D	Chiloquin, OR	3.51	87	Pn	Pn	18 31 43.1	-1.9
O02D	Mt. Diablo Mer	3.67	129	Pn	Pn	18 31 46.9	-0.2
O02D				IAML		18 32 10.2	
	comp=E,19nm,4.7s						
O02D				IAML		18 32 13.1	
	comp=N,19nm,4.5s						
WIFE	Three Sisters-	3.75	65		Pn	18 31 48.5	+0.2
H04A	Detroit Lake	3.80	54		Pn	18 31 49.3	+0.4
H04A				IAML		18 32 21.1	
	comp=E,38nm,0.6s						
H04A				IAML		18 32 22.2	
	comp=N,27nm,0.7s						
J05D	Fort Rock, OR	3.95	77		Pn	18 31 51.3	+0.3
J05D				IAML		18 33 00.1	
	comp=E,31nm,4.5s						
G04A	Mulino	3.95	46		Pn	18 31 51.2	+0.4
K05A	Summer Lake	4.15	86	Pn	Pn	18 31 53.1	-0.7
PINE	Pine Mountain	4.26	71		Pn	18 31 54.8	-0.6
PINE				IAML		18 34 00.7	
	comp=E,28nm,4.5s						
HOOD	Mount Hood Mea	4.48	50		Pn	18 31 58.7	+0.5
G06A	Carlson Farm,	5.03	56	Pn	Pn	18 32 06.2	+0.5
G06A				IAML		18 35 00.5	
	comp=E,15nm,4.8s						
I07A	Izee	5.34	71	Pn	Pn	18 32 11.3	+1.3
I07A				IAML		18 33 49.2	
	comp=E,13nm,4.0s						
I07A				IAML		18 34 00.7	
	comp=N,12nm,4.2s						
LON	Longmire	5.38	37		Pn	18 32 11.5	+0.9
LON				IAML		18 34 42.5	
	comp=E,12nm,3.9s						
E07A	Sunnyside	6.22	48		Pn	18 32 20.6	-1.5
EPH	Ephrata	6.87	43	Pn	Pn	18 32 28.7	-2.3
PDAR	Pinedale Array	12.49	83	Pn	Pn	18 33 53.6	+5.4
	comp=E,0.1nm,0.3s,baz=291,slow=9.2,SNR=2.7						
PDAR				LR	LR	18 39 03.0	
	comp=E,50nm,20.7s,baz=266,slow=39						
	comp=E,0.4nm,0.8s						
YKA	Yellowknife Ar	21.19	15	P	P	18 35 36.1	+0.6
	comp=E,0.6nm,1.0s,baz=209,slow=10,SNR=3.6						
	comp=E,0.6nm,1.0s						
TXAR	Lajitas Array	22.62	118	P	P	18 35 51.6	+0.3
	comp=E,0.9nm,1.0s,baz=312,slow=10,SNR=4.9						
	comp=E,0.9nm,1.0s						
H11N3	WAKE ISLAND Hy	59.82	270	T	T	19 45 21.0	
	baz=51,slow=75,SNR=90						
H11N2	WAKE ISLAND Hy	59.82	270	T	T	19 45 19.2	
	baz=51,slow=75,SNR=66						
H11N1	WAKE ISLAND Hy	59.84	270	T	T	19 45 21.8	
	baz=51,slow=75,SNR=82						
H11S1	WAKE ISLAND Hy	60.73	269	T	T	19 46 27.6	
	baz=50,slow=75,SNR=30						
H11S2	WAKE ISLAND Hy	60.74	269	T	T	19 46 31.1	
	baz=50,slow=75,SNR=20						
H11S3	WAKE ISLAND Hy	60.75	269	T	T	19 46 35.7	
	baz=50,slow=75,SNR=18						

IDC 05 18:31:11.6±2.4**, 0.°24S**×**134.°87E, h0**km**, mb3.1**/2**,**
mbtmp3.1/4**, ML3.2**/2**, Error ellipse: s-maj=56.6km**
s-min=29.3km az=70.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIJI	Sorong	3.66	260	Pn	Pn	18 32 09.5	0.0
	1.6nm,0.3s,baz=198,slow=21,SNR=23						
SIJI				Sn	Sn	18 32 48.7	-4.6
	2.0nm,0.3s,baz=307,slow=24,SNR=4.3						
	3.9nm,0.3s						
WRA	Warramunga Arr	19.59	181	P	P	18 35 40.4	-1.0
	0.1nm,0.3s,baz=0.4,slow=12,SNR=7.4						
	0.2nm,0.4s						
ASAR	Alice Springs	23.30	182	P	P	18 36 22.1	+0.7
	0.4nm,0.6s,baz=7.7,slow=11,SNR=8.1						
	0.4nm,0.6s						
MKAR	Makanchi Array	65.51	323	P	P	18 41 56.8	-0.1

0.1nm,0.6s,baz=106,slow=8.8,SNR=1.6
0.1nm,0.6s

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*IDC **05** 19:05:01.5±3.8,47°.38N×93°.21W,h0km,mbtmp2.8/2, ML0.3/1,Error ellipse: s-maj=77.4km s-min=28.9km az=60.0*
*NEIC **05** 19:05:02.1±1.6,47°.63N±0°.03×92°.79W±0°.04,h0km±2km, mb_Lg2.8/11,Error ellipse: s-maj=4.8km s-min=4.2km az=33.0*
ISC 05 19:04:59.6±0.9,**47°.68N**±0°.05×**92°.77W**±0°.04,**h0km,n14,** σ**1.29**/13,**Minnesota**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EYMN	**Ely**	**0.90**	**72**	Pg	**Pb**	**19 05 17.8**	**-0.2**
EYMN				Sg	**Sn**	**19 05 32.9**	**-0.2**
E38A	**The Farm, Brul**	**1.36**	**142**		**Pg**	**19 05 24.9**	**-0.6**
EPLO	**Experimental L**	**2.09**	**343**		**Pg**	**19 05 38.8**	**-0.9**
AGMN	**Agassiz Nation**	**2.17**	**288**		**Pb**	**19 05 39.0**	**-0.6**
AGMN					**Sg**	**19 06 07.9**	**-1.3**
AGMN				IAmb_Lg		19 06 10.7	
	comp=Z,49nm,0.9s						
TBO	**Thunder Bay**	**2.45**	**65**		**Pb**	**19 05 43.7**	**-0.7**
TBO				IAmb_Lg		19 06 22.0	
	comp=Z,26nm,0.7s						
SPMN	**Marine on St.**	**2.46**	**181**		**Pn**	**19 05 41.5**	**+0.6**
SPMN				IAmb_Lg		19 06 18.8	
	comp=Z,28nm,0.9s						
G40A	**Rib Lake**	**2.99**	**143**		**Pn**	**19 05 49.5**	**+1.3**
F33A	**5 Mile Ranch,**	**3.04**	**234**		**Pn**	**19 05 50.9**	**+1.9**
F33A				IAmb_Lg		19 06 40.2	
	comp=Z,29nm,0.8s						
ULM	**Lac du Bonnet**	**3.29**	**323**	Pn	**Pn**	**19 05 54.8**	**+2.5**
	baz=158,slow=16,SNR=1.2						
ULM				Pg	**Pg**	**19 06 01.6**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=148,slow=16,SNR=6.9						
ULM				Lg	Lg	19 06 44.8	
	comp=Z,2.0nm,0.3s,baz=246,slow=21,SNR=4.7						
	comp=Z,0.6nm,0.5s						
I10CA	**LAC DU BONNET**	**3.31**	**321**	I	I	19 28 30.0	
	baz=145,slow=330,SNR=2.8						
I37A	**Lemond, Waseca**	**3.69**	**187**	IAmb_Lg		19 06 55.9	
	comp=Z,24nm,0.7s						
F42A	**Maple Grove Fa**	**3.72**	**119**	IAmb_Lg		19 07 02.7	
	comp=Z,16nm,0.8s						
L40A	**Anamosa**	**5.72**	**168**	IAmb_Lg		19 07 58.2	
	comp=Z,29nm,1.1s						
YKA	**Yellowknife Ar**	**19.25**	**328**	P	**Pn**	**19 09 26.4**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=140,slow=12,SNR=6.6						

IDC 05 19:08:56.3±5.8,**30°.22S**×**177°.90W,h0km,mb3.8**/3, **mbtmp3.8**/3,**Error ellipse: s-maj=213.9km s-min=57.6km az=150.0,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**34.60**	**257**	P	P	19 15 47.4	+0.3
	1.6nm,0.7s,baz=98,slow=14,SNR=3.4						
	1.6nm,0.7s						
ASAR	**Alice Springs**	**43.20**	**267**	P	P	19 16 59.1	-0.3
	0.3nm,0.4s,baz=103,slow=7.4,SNR=15						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**44.17**	**272**	P	P	19 17 06.9	-0.3
	1.0nm,0.5s,baz=111,slow=8.1,SNR=18						
	1.0nm,0.5s						
FINES	**FINESS Array B**	**145.00**	**340**	PKPbc	PKPbc	19 28 33.4	-0.7
	0.7nm,0.5s,baz=51,slow=6.4,SNR=1.2						

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*AZER **05** 19:25:39.4,41°.28N×46°.83E,h8km,ml2.6*
*MOS **05** 19:25:40.6,41°.28N×46°.96E,h9km,MPVA3.3*
*NORS **05** 19:25:40.2,41°.30N×47°.19E,h19km,MPVA3.2*
*DRS **05** 19:25:41.1,41°.32N×46°.92E,h15km*
ISC 05 19:25:40.6±1.0,**41°.25N**±0°.02×**46°.84E**±0°.02,**h9km**±9km, **n44,**σ**1.54**/85,**Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SEKA	**Sheki**	**0.28**	**97**	Pg	**Pg**	**19 25 46.0**	**-0.2**
SEKA				Sg	**Sb**	**19 25 50.9**	**-1.7**
ZKTA	**Zakatala**	**0.42**	**338**	P	**Pb**	**19 25 49.6**	**-0.7**
ZKTA				S	**Sb**	**19 25 57.4**	**+0.5**
MNGR	**Mingechevir, A**	**0.51**	**158**	P	**Pn**	**19 25 53.0**	**-1.1**
MNGR				S	**Sn**	**19 26 02.9**	**0.0**
GANJ	**Ganja**	**0.71**	**213**	P	**Pn**	**19 25 56.1**	**-0.8**
GANJ				S	**Sn**	**19 26 07.5**	**-0.6**
AKT	**Akhty**	**0.71**	**71**	*e*Pg	**Pb**	**19 25 53.7**	**-1.6**
AKT				*e*Sg	**Sg**	**19 26 03.2**	**-0.5**
QBL	**Gabala**	**0.81**	**111**	P	**Pb**	**19 25 56.8**	**-0.2**
QBL				S	**Sn**	**19 26 09.5**	**-1.0**
KMKR	**Kumukh**	**0.91**	**13**	*e*Pg	**Pn**	**19 25 58.1**	**-1.7**
KMKR				*e*Sg	**Sn**	**19 26 11.0**	**-2.1**
TLTR	**Tlyarata**	**0.93**	**337**	*e*Pg	**Pn**	**19 25 58.8**	**-1.3**
TLTR				*e*Sg	**Sn**	**19 26 13.1**	**-0.5**
GDB	**GEDABAY**	**0.97**	**238**	P	**Pn**	**19 26 00.2**	**-0.4**
GDB				S	**Sn**	**19 26 14.4**	**-0.2**
XNQ	**Khinaliq**	**0.99**	**94**	P	**Pb**	**19 25 59.2**	**-0.8**
XNQ				S	**Sb**	**19 26 12.5**	**-0.8**
BRDA	**Brd**	**1.01**	**165**	P	**Pn**	**19 26 01.9**	**+0.9**
BRDA				S	**Sn**	**19 26 18.5**	**+3.1**
KSMR	**Kasumkent**	**1.04**	**69**	*e*Pg	**Pn**	**19 26 00.3**	**-1.1**
KSMR				*e*Sg	**Sn**	**19 26 14.2**	**-1.9**
URKR	**Urkarakh**	**1.10**	**33**	*e*Pg	**Pn**	**19 26 01.7**	**-0.6**
URKR				*e*Sg	**Sn**	**19 26 16.7**	**-1.0**
QSAR	**Qusar**	**1.11**	**75**	P	**Pn**	**19 26 02.0**	**-0.4**
QSAR				S	**Sn**	**19 26 19.3**	**+1.4**
IML	**Ismayilli**	**1.11**	**113**	P	**Pn**	**19 26 02.7**	**+0.2**
IML				S	**Sn**	**19 26 18.1**	**+0.1**
QZX	**Qazax, Azerbai**	**1.12**	**261**	P	**Pn**	**19 26 03.1**	**+0.6**
QZX				S	**Sn**	**19 26 19.7**	**+1.6**
GNBR	**Gunib**	**1.15**	**5**	*e*Pg	**Pn**	**19 26 03.9**	**+1.0**
GNBR				*e*Sg	**Sn**	**19 26 20.4**	**+1.5**
AGDM	**Agdam**	**1.16**	**170**	P	**Pn**	**19 26 03.8**	**+0.8**
AGDM				S	**Sn**	**19 26 22.4**	**+3.5**
ZRD	**Zardab**	**1.16**	**146**	P	**Pn**	**19 26 04.1**	**+1.0**
ZRD				S	**Sn**	**19 26 22.5**	**+3.5**
QUBA	**Quba, Azerbaij**	**1.25**	**84**	S	**Sn**	**19 26 24.1**	**+2.7**
XNZR	**Khunzakh**	**1.30**	**356**	*e*Pg	**Pg**	**19 26 06.1**	**+0.6**
XNZR				*e*Sg	**Sn**	**19 26 24.0**	**+1.3**
KDMR	**Kurdemir**	**1.34**	**130**	Pn	**Pg**	**19 26 06.6**	**+0.3**
KDMR				Sn	**Sg**	**19 26 26.8**	**+3.1**
SGKR	**Sergokala**	**1.36**	**27**	*e*Pg	**Pg**	**19 26 07.8**	**+1.1**
SGKR				*e*Sg	**Sn**	**19 26 26.7**	**+2.6**
ARKR	**Arakani**	**1.36**	**5**	*e*Pg	**Pg**	**19 26 06.8**	**+0.1**
ARKR				*e*Sg	**Sn**	**19 26 26.6**	**+2.4**
DRN	**Derbent**	**1.37**	**55**	*e*Pg	**Pg**	**19 26 06.1**	**-0.7**
DRN				*e*Sg	**Sg**	**19 26 24.3**	**-0.3**
PQL	**Pirkuli**	**1.41**	**108**	Pn	**Pg**	**19 26 07.0**	**-0.6**
PQL				Sn	**Sg**	**19 26 27.2**	**+1.4**
UNCR	**Uncukul**	**1.47**	**359**	*e*Pg	**Pg**	**19 26 09.9**	**+1.2**
UNCR				*e*Sg	**Sg**	**19 26 31.2**	**+3.4**
BTLR	**Botlikh**	**1.49**	**342**	*e*Pg	**Pg**	**19 26 09.9**	**+0.7**
BTLR				*e*Sg	**Sg**	**19 26 32.0**	**+3.5**
SIZA	**Siyzn**	**1.57**	**96**	Pn	**Pg**	**19 26 09.5**	**-1.1**
KRNR	**Karanay**	**1.58**	**2**	*e*Pg	**Pg**	**19 26 11.7**	**+0.8**
KRNR				*e*Sg	**Sg**	**19 26 34.0**	**+2.5**
BLQ	**Beylaqan**	**1.62**	**160**	Pn	**Pg**	**19 26 10.7**	**-1.0**
BLQ				Sn	**Sg**	**19 26 33.9**	**+1.3**
ATGJ	**Altiaghaj**	**1.64**	**103**	Pn	**Pg**	**19 26 10.8**	**-1.2**
ATGJ				Sn	**Sg**	**19 26 34.7**	**+1.5**
GBS	**Qobustan**	**1.75**	**113**	Pn	**Pb**	**19 26 12.0**	**-0.9**
GBS				Sn	**Sg**	**19 26 36.6**	**-0.2**
DBC	**Dubki**	**1.77**	**360**	*e*Pg	**Pg**	**19 26 14.3**	**-0.3**
DBC				*e*Sg	**Sg**	**19 26 38.7**	**+1.1**
DVE	**Vedeno**	**1.79**	**343**	*e*Pg	**Pg**	**19 26 14.1**	**-0.8**
DVE				*e*Sg	**Sg**	**19 26 39.2**	**+1.1**
QRD	**Qoradiz**	**1.82**	**168**	Pn	**Pb**	**19 26 13.6**	**-0.5**
QRD				Sn	**Sg**	**19 26 38.1**	**-1.0**
SBZ	**Shahbuz**	**2.09**	**208**	Pn	**Pg**	**19 26 20.3**	**-0.4**
SBZ				Sg	**Sg**	**19 26 49.0**	**+1.3**
GUDG	**Gudauri**	**2.14**	**305**	*e*Pg	**Pg**	**19 26 20.5**	**-1.1**
GUDG				*e*Sg	**Sg**	**19 26 50.7**	**+1.3**
GLBA	**Clilabad**	**2.33**	**149**	Pn	**Pb**	**19 26 21.8**	**-1.0**
GLBA				Sn	**Sb**	**19 26 51.5**	**-0.1**
ORD	**Ordubad**	**2.40**	**196**	Pn	**Pb**	**19 26 22.3**	**-1.7**
ORD				Sn	**Sb**	**19 26 53.4**	**-0.4**
LACR	**Lac**	**2.46**	**311**	*e*Pn	**Pg**	**19 26 25.4**	**-2.4**
LACR				*e*Sn	**Sg**	**19 26 58.3**	**-1.4**
YRD	**Yardimli**	**2.56**	**155**	Pn	**Pn**	**19 26 24.0**	**+1.5**
YRD				Sn	**Sn**	**19 26 55.3**	**+1.4**
LRK	**Lerik**	**2.84**	**156**	Pn	**Pn**	**19 26 28.0**	**+1.6**
LRK				Sn	**Sn**	**19 27 03.2**	**+2.4**
ASTR	**Astara**	**3.08**	**150**	Sn	**Sb**	**19 27 09.8**	**-3.3**

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*NIC **05** 19:48:04.8,34°.82N×32°.89E,h51km±1km,Ml2.4/9*
*GII **05** 19:48:04.3±0.0,34°.716N±0°.001×32°.856E±0°.001,h0km, Mws2.5,confirmed*
*ISK **05** 19:48:05.0,34°.93N×32°.81E,h22km,ML2.3/20*
*AFAD **05** 19:48:06.2,35°.11N×32°.85E,h25km±2km,ML2.1*
*GRAL **05** 19:48:08.2±0.2,34°.58N×33°.09E,h33km±999km,MD3.4*
ISC 05 19:48:05.3±1.4,**34°.75N**±0°.02×**32°.91E**±0°.03,**h36km**±1km, **n70,**σ**1.21**/112,**2C-4D,Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APOL	**The Sanctuary**	**0.09**	**203**	P	**Pn**	**19 48 12.9**	**+1.6**
APOL				S	**Sn**	**19 48 19.2**	**+3.7**
APOL				AML	AML	19 48 20.0	
	1.4nm,0.2s						
APOL				AML	AML	19 48 22.6	
	1.3nm,0.2s						
TROD	**Troodos**	**0.20**	**351**	⇓*i*P	**Pn**	**19 48 13.6**	**-0.1**
TROD				S	Sn	19 48 19.6	-1.1
TROD				AML	AML	19 48 21.5	
	1.0nm,0.4s						
TROD				AML	AML	19 48 23.2	
	0.5nm,0.2s						
NATA	**Nata**	**0.28**	**275**	⇓*i*P	**Pn**	**19 48 14.1**	**+0.8**
NATA				S	**Sn**	**19 48 21.0**	**+1.4**
NATA				AML	AML	19 48 23.6	
	4.7nm,0.3s						
NATA				AML	AML	19 48 24.0	
	4.9nm,0.3s						
ASGA	**Asgata**	**0.28**	**83**	⇑*i*P	**Pn**	**19 48 14.0**	**+0.8**
ASGA				S	**Sn**	**19 48 21.3**	**+1.7**
ASGA				AML	AML	19 48 21.7	
	1.3nm,0.2s						
ASGA				AML	AML	19 48 22.4	
	0.5nm,0.2s						
XYLS	**Xyliatos**	**0.29**	**24**	⇓*i*P	**Pn**	**19 48 13.6**	**+0.2**
XYLS				S	**Sn**	**19 48 20.1**	**+0.4**
XYLS				AML	AML	19 48 20.7	
	1.6nm,0.2s						
XYLS				AML	AML	19 48 20.8	
	2.2nm,0.2s						
CSS	**Mathiatis**	**0.41**	**59**	Pg	**Pn**	**19 48 14.6**	**0.0**
CSS				Sg	**Sn**	**19 48 22.1**	**+0.9**
CSS	**Mathiatis**	**0.41**	**59**	⇑*i*P	**Pn**	**19 48 14.9**	**+0.4**
CSS				S	**Sn**	**19 48 22.8**	**+1.6**
CSS				AML	AML	19 48 25.8	
	0.2nm,0.4s						
CSS				AML	AML	19 48 26.6	
	0.2nm,0.2s						
CSS	**Mathiatis**	**0.41**	**59**	P	**Pn**	**19 48 15.2**	**+0.7**
CSS	**Mathiatis**	**0.41**	**59**	P	**Pn**	**19 48 14.0**	**-0.5**
CSS				S	**Sn**	**19 48 20.9**	**-0.3**
ALFC	**Alefka**	**0.47**	**328**	P	**Pn**	**19 48 15.0**	**-0.6**
ALFC				S	**Sn**	**19 48 23.3**	**+0.5**
ALFC				AML	AML	19 48 24.4	
	1.5nm,0.2s						
ALFC				AML	AML	19 48 24.5	
	1.2nm,0.2s						
AKMS	**Akamas**	**0.54**	**300**	⇓*e*P	**Pn**	**19 48 16.0**	**-0.5**
AKMS				S	**Sn**	**19 48 25.1**	**+0.8**
AKMS				AML	AML	19 48 26.4	
	0.8nm,0.1s						
AKMS				AML	AML	19 48 28.3	
	0.8nm,0.2s						
ATHAL	**Athalassa**	**0.56**	**46**	P	**Pn**	**19 48 17.2**	**+0.3**
ATHAL				S	**Sn**	**19 48 27.8**	**+3.0**
MVOU	**Mavrovouni**	**0.65**	**66**	P	**Pn**	**19 48 18.3**	**+0.2**
MVOU				S	**Sn**	**19 48 29.2**	**+2.0**
MVOU				AML	AML	19 48 31.8	
	0.3nm,0.2s						
MVOU				AML	AML	19 48 31.9	
	0.3nm,0.2s						
LFK	**Lefkose**	**0.74**	**44**	Pg	**Pn**	**19 48 19.4**	**+0.2**
LFK	**Lefkose**	**0.74**	**44**	P	**Pn**	**19 48 20.1**	**+0.9**
LFK				S	**Sn**	**19 48 30.9**	**+1.7**
LFK				IAML		19 48 32.0	
	comp=N,152nm,0.5s						
LFK				IAML		19 48 33.0	
	comp=E,99nm,0.4s						
PARAL	**Paralimni**	**0.96**	**75**	P	**Pn**	**19 48 23.3**	**+1.0**
EREN	**Erenkoy**	**1.29**	**53**	Pn	**Pn**	**19 48 28.1**	**+1.3**
EREN				Sn	**Sn**	**19 48 44.7**	**+1.8**
EREN	**Erenkoy**	**1.29**	**53**	P	**Pn**	**19 48 27.6**	**+0.8**
EREN				S	**Sn**	**19 48 44.8**	**+1.9**
EREN				IAML		19 48 47.0	
	comp=E,54nm,1.0s						
EREN				IAML		19 48 48.0	
	comp=N,67nm,1.4s						
TEKE	**Tekeli-Mersin**	**1.40**	**7**	Pn	**Pn**	**19 48 27.6**	**-0.7**
TEKE				Sn	**Sn**	**19 48 44.2**	**-1.3**
YORU	**Yoruktepe-Mers**	**1.46**	**16**	Pn	**Pn**	**19 48 28.6**	**-0.5**
AKK1	**Akkuyu-Mersin**	**1.48**	**20**	Pn	**Pn**	**19 48 29.3**	**-0.1**
BECE	**Buyukeceli-Mer**	**1.50**	**21**	Pn	**Pn**	**19 48 29.1**	**-0.6**
BECE				Sn	**Sn**	**19 48 46.9**	**-1.1**
GULN	**MERSIN_Gulnar**	**1.52**	**20**	P	**Pn**	**19 48 29.7**	**-0.2**
GULN				S	**Sn**	**19 48 46.6**	**-1.9**
GULN				IAML		19 48 48.0	
	comp=E,27nm,0.4s						
TISA	**Tisan-Mersin**	**1.54**	**24**	Pn	**Pn**	**19 48 30.1**	**-0.1**
GAZI	**Gazipasa**	**1.56**	**342**	Pn	**Pn**	**19 48 29.6**	**-0.8**
GAZI	**Gazipasa**	**1.56**	**342**	P	**Pn**	**19 48 29.6**	**-0.8**
GAZI				IAML		19 48 38.0	
	comp=N,41nm,1.4s						
GAZI				S	**Sn**	**19 48 45.9**	**-3.5**
GAZI				IAML		19 49 07.0	
	comp=E,40nm,2.4s						
YESI	**Yesilovacik-Me**	**1.56**	**22**	Pn	**Pn**	**19 48 30.5**	**0.0**
KARG	**Kargicak-Mersi**	**1.59**	**24**	Pn	**Pn**	**19 48 30.9**	**0.0**
IKL	**Isikli**	**1.61**	**23**	Pn	**Pn**	**19 48 30.9**	**-0.3**
IKL	**Isikli**	**1.61**	**23**	P	**Pn**	**19 48 30.5**	**-0.7**
IKL				S	**Sn**	**19 48 48.7**	**-2.1**
IKL				IAML		19 48 50.0	
	comp=E,39nm,0.4s						
IKL				IAML		19 48 52.0	
	comp=N,31nm,0.6s						
TEVE	**Tevekalti-Mers**	**1.74**	**14**	Pn	**Pn**	**19 48 32.7**	**-0.3**
KEBE	**Keben-Mersin**	**1.81**	**21**	Pn	**Pn**	**19 48 34.1**	**0.0**
SLFK	**Silifke-Mersin**	**1.84**	**27**	Pn	**Pn**	**19 48 34.6**	**+0.2**
KIZK	**Mersin**	**2.00**	**30**	Pn	**Pn**	**19 48 37.0**	**+0.5**
KIZK	**Mersin**	**2.00**	**30**	P	**Pn**	**19 48 37.2**	**+0.7**
KEPZ	**Antalya-Kepez**	**2.39**	**334**	P	**Pn**	**19 48 41.7**	**-0.3**
BHL	**Bhannes**	**2.43**	**110**	*e*P	**Pn**	**19 48 42.2**	**-0.3**
KRMN	**Karaman**	**2.43**	**7**	Pn	**Pn**	**19 48 42.4**	**-0.2**
DQRL	**Deir Qamar**	**2.44**	**115**	*e*P	**Pn**	**19 48 42.3**	**-0.5**
DQRL				*e*S	**Sn**	**19 49 07.4**	**-4.0**
KKBE	**Karaman, Kazim**	**2.46**	**1**	P	**Pn**	**19 48 44.3**	**+1.3**
HNTI	**Hanita**	**2.52**	**131**	P	**Pn**	**19 48 43.4**	**-0.3**
HNTI				S	**Sn**	**19 49 13.7**	**+0.5**
HWQ	**Hawqa**	**2.56**	**100**	*e*P	**Pn**	**19 48 44.3**	**-0.1**
HWQ				*e*S	**Sn**	**19 49 11.0**	**-3.3**
ZAHL	**Zahle**	**2.62**	**109**	*e*P	**Pn**	**19 48 45.0**	**-0.3**
MMA0B	**Mount Meron ar**	**2.71**	**129**	P	**Pn**	**19 48 46.1**	**-0.2**
MMA0B				S	**Sn**	**19 49 18.5**	**+0.6**
BEIL	**Beino**	**2.71**	**94**	*e*P	**Pn**	**19 48 46.3**	**-0.1**
BEIL				*e*S	**Sn**	**19 49 15.0**	**-3.0**
RCY	**Rachaya**	**2.73**	**116**	*e*P	**Pn**	**19 48 46.3**	**-0.5**
RCY				*e*S	**Sn**	**19 49 14.5**	**-4.2**
OFRI	**`Ofer**	**2.74**	**140**	P	**Pn**	**19 48 46.5**	**-0.3**
OFRI				S	**Sn**	**19 49 18.5**	**-0.3**
GEM	**Giv'at Ha'Em**	**2.76**	**123**	P	**Pn**	**19 48 46.8**	**-0.3**
GEM				S	**Sn**	**19 49 19.6**	**+0.5**
BLGI	**Bet Lehem HaGe**	**2.77**	**136**	P	**Pn**	**19 48 46.8**	**-0.4**
BLGI				S	**Sn**	**19 49 19.7**	**+0.3**
NATI	**Neve Ativ**	**2.78**	**122**	P	**Pn**	**19 48 47.3**	**0.0**
NATI				S	**Sn**	**19 49 20.0**	**+0.3**
KERG	**Konya-Eregli**	**2.83**	**20**	P	**Pn**	**19 48 50.1**	**+1.9**
SEDI	**Konya, Seydise**	**2.85**	**341**	P	**Pn**	**19 48 50.5**	**+2.2**
YAYL	**Yayladag**	**2.91**	**63**	P	**Pn**	**19 48 49.3**	**+0.1**
KSHT	**Keshet**	**2.99**	**125**	P	**Pn**	**19 48 50.2**	**-0.1**
KSHT				S	**Sn**	**19 49 25.6**	**+0.6**
MMLI	**Mount Malkishu**	**3.12**	**137**	P	**Pn**	**19 48 51.6**	**-0.4**
MMLI				S	**Sn**	**19 49 28.3**	**+0.3**
TAHT	**Tahtakopru-Hat**	**3.13**	**58**	Pn	**Pn**	**19 48 53.9**	**+1.9**
TAHT	**Tahtakopru-Hat**	**3.13**	**58**	P	**Pn**	**19 48 52.4**	**+0.3**
HMDT	**Nahal Hemdat**	**3.32**	**138**	P	**Pn**	**19 48 55.0**	**+0.4**
HMDT				S	**Sn**	**19 49 33.3**	**+0.4**
CMRD	**Camardi-Nigde**	**3.36**	**30**	Pn	**Pn**	**19 48 56.2**	**+0.9**
KOZT	**Kozan**	**3.61**	**40**	Pn	**Pn**	**19 48 59.4**	**+0.7**
AMAZ	**Amatzia**	**3.63**	**152**	P	**Pn**	**19 48 58.6**	**-0.4**
AMAZ				S	**Sn**	**19 49 40.6**	**+0.1**
DSI	**Dead Sea**	**3.79**	**146**	P	**Pn**	**19 49 00.7**	**-0.6**
DSI				S	**Sn**	**19 49 44.6**	**0.0**
YTIR	**Yattir**	**3.86**	**151**	P	**Pn**	**19 49 02.0**	**-0.2**
YTIR				S	**Sn**	**19 49 46.9**	**+0.6**
MSBI	**Mazada**	**4.00**	**148**	P	**Pn**	**19 49 03.5**	**-0.5**
MSBI				S	**Sn**	**19 49 50.3**	**+0.6**
KZIT	**Kziot**	**4.04**	**161**	P	**Pn**	**19 49 04.1**	**-0.5**
KZIT				S	**Sn**	**19 49 50.4**	**-0.3**
RMNI	**Mount Ramon**	**4.43**	**159**	P	**Pn**	**19 49 09.7**	**-0.4**
RMNI				S	**Sn**	**19 50 00.2**	**-0.2**
PRNI	**Paran**	**4.73**	**157**	P	**Pn**	**19 49 14.0**	**-0.2**
PRNI				S	**Sn**	**19 50 08.0**	**+0.1**
KRMI	**Paran Flat**	**4.87**	**161**	P	**Pn**	**19 49 15.7**	**-0.4**
KRMI				S	**Sn**	**19 50 11.2**	**0.0**
HRFI	**Mount Harif**	**5.04**	**158**	P	**Pn**	**19 49 18.0**	**-0.4**
HRFI				S	**Sn**	**19 50 15.0**	**-0.3**
EIL2	**Elat**	**5.35**	**161**	P	**Pn**	**19 49 22.2**	**-0.5**
EIL2				S	**Sn**	**19 50 22.9**	**-0.2**

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*IDC **05** 19:59:17.5±0.7,27°.79N×66°.09E,h0km,mb4.2/25, mbtmp4.2/26,ML3.9/1,MS3.9/48,Error ellipse: s-maj=17.3km s-min=12.9km az=16.0*
*MOS **05** 19:59:19.2±1.5,27°.87N×66°.23E,h19km,mb4.8/39,Error ellipse: s-maj=6.1km s-min=3.8km az=85.0*
*NEIC **05** 19:59:21.5±1.8,27°.77N±0°.09×66°.08E±0°.08,h28km±5km, mb4.6/82,Error ellipse: s-maj=13.8km s-min=10.2km az=157.0*
*BJI **05** 19:59:23.1,28°.20N×66°.75E,h10km,mB5.0/9,mb4.5/35, Ms4.5/19,Ms7 4.1/19*
ISC 05 19:59:18.8±0.6,**27°.76N**±0°.04×**66°.15E**±0°.03,**h12km**±3km, **h12km:pP-P,n391,**σ**2.43**/402,**mb4.6**/114,**MS4.0**/56, **31C-33D,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NGCH	**Negor - Chabah**	**5.09**	**243**	P	**Pn**	**20 00 35.8**	**+0.9**
	SNR=8.8						
NGCH				S	**Sn**	**20 01 26.7**	**-7.0**
BHUJ	**Bhuj**	**5.49**	**144**	*e*P	**Pn**	**20 00 42.1**	**+1.6**
BHUJ				*e*S	**Sn**	**20 01 46.6**	**+3.0**
BHUJ				IAML		20 01 53.8	
	comp=E,282nm,0.7s						
BHUJ				IAML		20 02 07.0	
	comp=N,323nm,0.9s						
KBL	**Kabul**	**7.20**	**19**		**Pn**	**20 01 04.1**	**0.0**
KBL	**Kabul**	**7.20**	**19**	P	**Pn**	**20 01 04.1**	**0.0**
HRA	**Herat**	**7.41**	**334**		**Pn**	**20 01 07.0**	**+0.1**
UDPR	**Udaipur**	**7.49**	**113**	*e*P	**Pn**	**20 01 10.2**	**+2.2**
UDPR				*e*S	**Sn**	**20 02 32.8**	**-0.2**
UDPR				IAML		20 02 39.5	
	comp=E,55nm,0.6s						
UDPR				IAML		20 02 44.8	
	comp=N,59nm,0.6s						
JASK	**Jask - Hormozg**	**7.64**	**258**	P	**Pn**	**20 01 11.1**	**+1.1**
	SNR=9.3						
AJM	**Ajmer**	**7.67**	**98**	*e*P	**Pn**	**20 01 11.4**	**+0.9**
AJM				*e*S	**Sn**	**20 02 34.0**	**-3.4**
AJM				IAML		20 02 44.9	
	comp=N,74nm,1.0s						
AJM				IAML		20 02 45.1	
	comp=E,112nm,1.0s						
WSAR	**Wadi Sarin**	**8.15**	**238**	P	**Pn**	**20 01 16.4**	**-0.6**
WSAR				S	**Sn**	**20 02 41.9**	**-7.3**
JLN	**Jalan Bani Buh**	**8.28**	**229**	P	**Pn**	**20 01 18.6**	**-0.3**
	SNR=50						
JLN				S	**Sn**	**20 02 45.5**	**-6.9**
WBK	**Wadi Bani Khal**	**8.28**	**233**	P	**Pn**	**20 01 19.0**	**+0.1**
	SNR=27						
WBK				P	**Pn**	**20 01 19.0**	**+0.1**
	SNR=27						
WBK				S	Sn	20 02 44.2	-8.2
WBK				S	Sn	20 02 44.2	-8.2
BIDO	**Bidbid**	**8.38**	**242**	P	**Pn**	**20 01 20.5**	**+0.3**
BIDO				S	**Sn**	**20 02 48.4**	**-6.4**
NIL	**Nilore**	**8.47**	**44**		**Pn**	**20 01 21.1**	**-0.3**
NIL	**Nilore**	**8.47**	**44**	P	**Pn**	**20 01 21.1**	**-0.3**
SMDO	**Samad**	**8.69**	**239**	P	**Pn**	**20 01 24.1**	**-0.5**
	SNR=38						
SMDO				S	**Sn**	**20 02 55.5**	**-7.1**
BANOM	**Banah**	**8.99**	**261**	*i* P	**Pn**	**20 01 28.9**	**+0.3**
	SNR=38						
HOQ	**Hoqain**	**8.99**	**244**	P	**Pn**	**20 01 28.8**	**+0.2**
	SNR=35						
HOQ				P	**Pn**	**20 01 28.8**	**+0.2**
	SNR=35						
JMDO	**Jabal Madar**	**9.06**	**235**	P	**Pn**	**20 01 30.1**	**+0.6**
	SNR=100						
JMDO				S	**Sn**	**20 03 04.7**	**-6.8**
SHME	**Shamm**	**9.10**	**261**	*i* P	**Pn**	**20 01 30.9**	**+0.9**
	SNR=11						
SHME	**Shamm**	**9.10**	**261**	P	**Pn**	**20 01 31.9**	**+1.8**
	SNR=11						
SHME				P	**Pn**	**20 01 31.9**	**+1.8**
	SNR=11						
KUDL	**Kundal**	**9.15**	**85**	*e*P	**Pn**	**20 01 30.2**	**-0.4**
KUDL				*e*S	**Sn**	**20 03 07.7**	**-6.0**
KUDL				IAML		20 03 15.8	
	comp=N,91nm,0.7s						
KUDL				IAML		20 03 18.7	
	comp=E,64nm,0.9s						
MDH	**Madha**	**9.16**	**257**	*i* P	**Pn**	**20 01 30.4**	**-0.5**
	SNR=13						
MDH	**Madha**	**9.16**	**257**	P	**Pn**	**20 01 32.0**	**+1.1**
	SNR=5.7						
MDH				P	**Pn**	**20 01 32.0**	**+1.1**
	SNR=5.7						
MDH				S	Sn	20 03 05.5	-8.4
MDH				S	Sn	20 03 05.5	-8.4
MASF	**Masafi**	**9.26**	**257**	P	**Pn**	**20 01 32.5**	**+0.2**
MASF				P	**Pn**	**20 01 32.5**	**+0.2**
MASF				S	Sn	20 03 07.1	-9.4
MASF				S	Sn	20 03 07.1	-9.4
MSFE	**Esma-Masafi**	**9.26**	**257**	P	**Pn**	**20 01 32.1**	**-0.2**
UOSS	**Minazif**	**9.35**	**255**		**Pn**	**20 01 32.1**	**-1.4**
UOSS	**Minazif**	**9.35**	**255**	*i* P	**Pn**	**20 01 32.3**	**-1.2**
	SNR=6.8						
UOSS	**Minazif**	**9.35**	**255**	P	**Pn**	**20 01 32.6**	**-1.0**
UOSS				P	**Pn**	**20 01 32.6**	**-1.0**
UOSS				S	Sn	20 03 09.5	-9.2
UOSS				S	Sn	20 03 09.5	-9.2
SOHO	**SOHO**	**9.38**	**250**	*i* P	**Pn**	**20 01 33.0**	**-0.9**
	SNR=19						
SOHO	**SOHO**	**9.38**	**250**	P	**Pn**	**20 01 33.1**	**-0.8**
SOHO				P	**Pn**	**20 01 33.1**	**-0.8**
SOHO				S	**Sn**	**20 03 11.9**	**-7.4**
SOHO				S	**Sn**	**20 03 11.9**	**-7.4**
HATD	**Hatta, Dubai**	**9.46**	**254**	*i* P	**Pn**	**20 01 34.4**	**-0.5**
	SNR=6.2						
HATD	**Hatta, Dubai**	**9.46**	**254**	P	**Pn**	**20 01 34.8**	**-0.1**
HATD				P	**Pn**	**20 01 34.8**	**-0.1**
HATD				S	Sn	20 03 12.6	-8.7
HATD				S	Sn	20 03 12.6	-8.7
TLWR	**Talawar**	**9.48**	**61**	*e*P	**Pn**	**20 01 35.5**	**+0.2**
TLWR				*e*S	**Sn**	**20 03 15.9**	**-5.9**
TLWR				IAML		20 03 30.9	
	comp=N,145nm,0.7s						
BSY	**Bisya**	**9.52**	**240**	P	**Pn**	**20 01 37.6**	**+1.8**
	SNR=44						
BSY				P	**Pn**	**20 01 37.6**	**+1.8**
	SNR=44						
BSY				S	**Sn**	**20 03 16.4**	**-6.5**
BSY				S	**Sn**	**20 03 16.4**	**-6.5**
ASHO	**Ashiyiah**	**9.57**	**254**	*i* P	**Pn**	**20 01 36.5**	**0.0**
	SNR=24						
ASHO	**Ashiyiah**	**9.57**	**254**	P	**Pn**	**20 01 37.0**	**+0.5**
	SNR=24						
ASHO				P	**Pn**	**20 01 37.0**	**+0.5**
	SNR=24						
BHK	**Bhakra**	**9.61**	**65**	IAML		20 03 23.3	
	comp=N,416nm,0.8s						
BHK				IAML		20 03 23.9	
	comp=E,325nm,0.8s						
SRNI	**Srinagar**	**9.72**	**48**	*e*P	**Pn**	**20 01 39.5**	**+0.8**
SRNI				IAML		20 03 43.8	
	comp=N,526nm,0.7s						
SRNI				IAML		20 04 01.3	
	comp=E,864nm,0.7s						
ARQ	**Araqi**	**9.75**	**245**	P	**Pn**	**20 01 40.7**	**+1.8**
	SNR=39						

ARQ S Sn 20 03 22.1 -6.3
NPLP NPLP New Delhi 9.76 82 *e*P Pn **20 01 38.2 -0.9**
NPLP eS Sn **20 03 23.5 -5.2**
LDR Lodi Road 9.80 83 *e*S Sn **20 03 24.7 -4.8**
NDI New Delhi 9.80 82 *e*P Pn **20 01 38.7 -0.9**
NDI eS Sn **20 03 24.7 -5.0**
NDI IAML 20 03 34.8
comp=E,52nm,0.7s
NDI IAML 20 03 35.9
comp=N,39nm,0.6s
NAZ Nazwa, Dubai 9.80 256 *i* P Pn **20 01 42.1 +2.4**
SNR=9.5
NAZ Nazwa, Dubai 9.80 256 P Pn **20 01 41.3 +1.6**
NAZ P Pn **20 01 41.3 +1.6**
NAZ S Sn **20 03 23.9 -5.9**
NAZ S Sn **20 03 23.9 -5.9**
SHAA Shahritus 9.91 9 P Pn **20 01 42.8 +1.5**
TSSA Tissa 10.01 57 *e*P Pn **20 01 42.3 -0.4**
TSSA eS Sn **20 03 27.5 -7.6**
TSSA IAML 20 03 44.5
comp=E,278nm,0.9s
TSSA IAML 20 03 58.6
comp=N,283nm,0.5s
MHTO MHTO 10.05 230 P Pn **20 01 45.4 +2.2**
MHTO P Pn **20 01 45.4 +2.2**
ALNE Al Ain 10.06 251 *i* P Pn **20 01 45.0 +1.7**
SNR=50
ALNE Al Ain 10.06 251 P Pn **20 01 44.5 +1.2**
SNR=14
ALNE P Pn **20 01 44.5 +1.2**
SNR=14
ALNE S Sn **20 03 30.2 -6.0**
ALNE S Sn **20 03 30.2 -6.0**
SMLA Simla 10.17 68 *e*P Pn **20 01 44.6 0.0**
SMLA eS Sn **20 03 34.7 -3.9**
SMLA IAML 20 03 40.5
comp=N,316nm,0.5s
SMLA IAML 20 03 44.2
comp=E,380nm,0.7s
ASUD Al Ashush, Dub 10.21 255 *i* P Pn **20 01 45.1 -0.1**
SNR=6.5
ASUD Al Ashush, Dub 10.21 255 P Pn **20 01 45.8 +0.6**
SNR=6.6
ASUD P Pn **20 01 45.8 +0.6**
SNR=6.6
DDI Dehra Dun 10.72 73 *e*S Sn **20 03 46.7 -5.7**
BHPL Bhopal 11.13 111 *e*P Pn **20 01 58.3 +0.4**
BHPL IAmb IAmb 20 02 09.1
comp=Z,68nm,1.3s
BHPL eS Sn **20 04 00.5 -1.9**
UMZA Um Al Zommool 11.14 246 P Pn **20 01 59.2 +1.2**
CHGR Chuyangaron 11.15 12 Pn **20 01 57.5 -0.8**
CHGR Chuyangaron 11.15 12 *ce*P Pn **20 01 57.3 -0.9**
JHNI Jhansi 11.38 99 *e*P Pn **20 02 02.4 +1.0**
ALCI Alchi Leh 11.44 53 *e*P Pn **20 02 02.1 -0.3**
ALCI IAmb IAmb 20 02 05.5
comp=Z,101nm,0.5s
ALCI eS Sn **20 04 03.1 -7.2**
GAR Garm 11.73 16 Pn **20 02 04.0 -2.2**
JOSI Joshimath 12.04 73 *e*P Pn **20 02 08.6 -1.9**
JOSI IAmb IAmb 20 02 16.5
comp=Z,103nm,1.1s
JOSI eS Sn **20 04 17.6 -7.4**
JOSI IAML 20 04 34.3
comp=N,206nm,0.6s
JOSI IAML 20 04 35.9
comp=E,173nm,0.7s
AKL Akola 12.14 123 *e*P Pn **20 02 12.5 +0.7**
LGTI Lohaghat 12.36 79 *e*P Pn **20 02 12.8 -2.0**
LGTI IAmb IAmb 20 02 25.7
comp=Z,17nm,0.7s
LGTI eS Sn **20 04 24.0 -8.6**
LGTI IAML 20 04 28.9
comp=E,51nm,0.5s
LGTI IAML 20 04 31.3
comp=N,53nm,0.5s
MZR Muzera 12.40 250 *i* P Pn **20 02 15.4 +0.2**
SNR=5.6
MZR Muzera 12.40 250 P Pn **20 02 15.4 +0.2**
MZR P Pn **20 02 15.4 +0.2**
PTH Pithoragarh 12.47 78 *e*P Pn **20 02 14.6 -1.8**
PTH eS Sn 20 04 26.0 -9.4
PTH IAML 20 04 52.5
comp=E,42nm,1.3s
PTH IAML 20 04 56.6
comp=N,51nm,1.1s
DRK Karamyk 12.60 20 Pn **20 02 18.6 +0.5**
DRK Karamyk 12.60 20 P Pn **20 02 18.6 +0.5**
BTK Batken 12.86 16 Pn **20 02 20.8 -0.7**
BTK Batken 12.86 16 P Pn **20 02 20.8 -0.7**
KSH2 Kashi 13.80 32 P Pn **20 02 33.8 -0.6**
KSH2 pmax pmax
comp=N,37nm,0.7s
KSH2 L L
comp=N,2µm,14.1s
KSH2 L L
comp=N,2µm,13.7s
KSH2 L L
comp=N,2µm,13.7s
DOK Doka 14.31 233 P Pn **20 02 42.5 +1.1**
DMTO DMTO 14.37 228 P Pn **20 02 43.8 +1.6**
ARSB Arslanbob 14.65 21 Pn Pn **20 02 43.0 -3.0**
ARSB Arslanbob 14.65 21 P Pn **20 02 43.0 -3.0**
IUG Iuzhnay 14.70 11 *e*P Pn **20 02 48.0 +1.3**
RBK Rabkut 15.02 230 P Pn **20 02 51.4 +0.4**
WHFO Wadi Hawf 15.03 232 P Pn **20 02 52.1 +0.9**
WHFO P Pn **20 02 52.1 +0.9**
HYB Hyderabad 15.38 129 *e*P P **20 03 01.8 +1.2**
KK31 Karatay Array 15.71 12 Pn **20 02 58.4 -1.6**
KK31 Karatay Array 15.71 12 *i* P P **20 03 02.2 -1.8**
KKAR Karatay Array 15.71 12 Pn Pn **20 02 57.6 -2.4**
KKAR Karatay Array 15.71 12 P Pn **20 02 57.6 -2.4**
NRN Naryn 15.85 28 Pn Pn **20 02 58.1 -4.0**
NRN Naryn 15.85 28 P Pn **20 02 58.1 -4.0**
NRN pmax pmax
comp=Z,19nm,1.0s
UCH Uchtor 15.96 23 P Pn **20 03 00.9 -2.7**
SNR=29
EKS2 Erkin-Say 16.11 21 P Pn **20 03 02.4 -2.8**
SNR=16
AAK Ala-Archa 16.32 22 Pn Pn **20 03 06.4 -1.5**
comp=Z,0.5nm,0.3s,baz=211,slow=7.3,SNR=19
AAK Sn Sn **20 06 01.8 -7.3**
comp=Z,0.1nm,0.3s,baz=0.0,slow=20,SNR=2.1
AAK LR LR 20 10 24.2
comp=Z,455nm,20.8s,baz=222,slow=41
comp=Z,3.5nm,0.6s
AAK Ala-Archa 16.32 22 Pn **20 03 04.7 -3.3**
AAK Ala-Archa 16.32 22 P Pn **20 03 06.1 -1.8**
SNR=7.1
AAK Ala-Archa 16.32 22 *i* P Pn **20 03 06.0 -2.0**
SNR=15
AAK Ala-Archa 16.32 22 P Pn **20 03 04.7 -3.3**
AAK 20 06 01.8
AAK pmax pmax
comp=Z,11nm,0.9s
KBK Karagaybulak 16.49 23 P Pn **20 03 08.5 -1.7**
SNR=6.0
FRU1 Bishkek 16.52 22 Pn **20 03 08.7 -1.7**
FRU1 Bishkek 16.52 22 P Pn **20 03 08.7 -1.7**
FRU1 pmax pmax
comp=Z,13nm,0.7s
BOOM Boomskoye usch 16.71 26 Pn **20 03 11.5 -1.5**
BOOM Boomskoye usch 16.71 26 P Pn **20 03 11.5 -1.5**
BOOM pmax pmax
comp=Z,29nm,1.1s
CHMS Chumysh 16.73 22 P Pn **20 03 10.8 -2.3**
SNR=7.3
TARG Taragay, Kyrgy 16.88 31 Pn **20 03 13.2 -2.2**
TARG Taragay, Kyrgy 16.88 31 P Pn **20 03 13.2 -2.2**
TARG pmax pmax
comp=Z,19nm,1.0s
USP Ospenovka 16.88 21 P Pn **20 03 12.8 -2.2**
SNR=12
KDJ Kajisay 16.93 29 Pn Pn **20 03 12.2 -3.4**
KDJ Kajisay 16.93 29 P Pn **20 03 12.3 -3.4**
KDJ pmax pmax
comp=Z,20nm,1.0s
TKM2 Tokmak 2 16.96 24 P Pn **20 03 13.4 -2.7**
SNR=14
WUS Wushi 17.17 35 Pn **20 03 16.0 -2.8**
WUS IAmb IAmb 20 03 26.7
comp=Z,40nm,1.0s
GAYA Gaya 17.36 95 *e*P P **20 03 22.7 +0.3**

PRZ Przheval'sk 17.75 31 Pn **20 03 25.8 -0.2**
PRZ IAmb IAmb 20 03 29.9
comp=Z,60nm,1.3s
PRZ Przheval'sk 17.75 31 P Pn **20 03 25.8 -0.2**
PRZ pmax pmax
comp=Z,60nm,1.3s
RAGD RAYAGADA 17.98 114 *e*P P **20 03 32.4 +3.1**
BOK Bokaro 18.20 98 IAML 20 07 14.0
comp=N,30nm,1.2s
BOK IAML 20 07 34.0
comp=E,24nm,0.7s
EVN Everest 18.27 85 P Pn **20 03 29.3 -3.6**
UZB Uzynbulak 18.55 31 *e*P Pn **20 03 36.7 +0.9**
SHLS Shalkode 18.76 32 *e*P Pn **20 03 41.7 +3.4**
ARXS Arharly 18.91 27 *e*P Pn **20 03 40.1 +0.1**
PDGK Podgornoye 18.91 31 P P **20 03 37.8 -1.7**
RAYN Ar Rayn 19.09 262 P **20 03 40.9 -0.6**
RAYN Ar Rayn 19.09 262 *i* P P **20 03 41.4 -0.1**
SNR=14
RAYN Ar Rayn 19.09 262 ⇓P P **20 03 41.7 +0.2**
RAYN Ar Rayn 19.09 262 P P **20 03 41.7 +0.2**
GTK Tadong 19.91 86 *e*P P **20 03 51.4 +0.8**
GTK IAmb IAmb 20 04 06.4
comp=Z,16nm,0.6s
AKT Akhty 20.37 317 *e*P P **20 03 55.5 +0.1**
AKT *e*PPP PPP 20 04 19.7
AKT *e*S Sn 20 07 46.0 -0.9
AKT pmax pmax
comp=Z,51nm,1.2s
DHUB DHUBRI 21.33 89 *e*P P **20 04 07.7 +1.9**
DHUB IAmb IAmb 20 04 19.8
comp=Z,19nm,1.1s
MAK Makhachkala 21.41 320 *c i*P P **20 04 03.8 -2.7**
MAK *e*S S **20 07 59.6 -4.3**
MAK pmax pmax
comp=Z,182nm,1.4s
MAK MLR MLR
comp=Z,235nm,12.0s
GNI Garni 21.57 310 P P **20 04 08.6 +0.1**
comp=Z,3.6nm,0.6s,baz=28,slow=15,SNR=2.3
comp=Z,3.6nm,0.6s
GNI Garni 21.57 310⇑ *e*P P **20 04 09.0 +0.5**
GNI Garni 21.57 310 P P **20 04 13.1 +4.6**
comp=Z,46nm,0.9s
GEVA Gevas 21.98 304 P **20 04 11.7 -1.2**
GEVA IAmb IAmb 20 04 26.3
comp=Z,26nm,1.2s
AB31 Akbulak array 21.99 349 P **20 04 12.4 -0.3**
AB31 IAmb IAmb 20 04 28.6
comp=Z,21nm,0.9s
AB31 Akbulak array 21.99 349 *e*P P **20 04 13.1 +0.4**
ABKAR Akbulak array 21.99 349 P **20 04 12.9 +0.2**
LSA Lhasa 22.00 79 P P **20 04 15.0 +1.5**
LSA Lhasa 22.00 79 *i* P P **20 04 15.7 +2.3**
SNR=44
LSA Lhasa 22.00 79 P P **20 04 15.0 +1.5**
LSA pmax pmax
comp=Z,32nm,0.9s
LSA Lhasa 22.00 79 P P **20 04 12.4 -1.1**
LSA S S **20 08 06.3 -10**
LSA pmax pmax
comp=Z,23nm,1.0s
LSA L L
comp=Z,640nm,17.9s
LSA L L
comp=Z,260nm,19.2s
LSA L L
comp=Z,120nm,12.4s
MAKZ Makanchi 22.72 29 P **20 04 20.0 -0.6**
MAKZ Makanchi 22.72 29 ⇓P P **20 04 20.8 +0.2**
TAWA Tawang 22.76 84 *e*P P **20 04 23.4 +1.8**
TAWA IAmb IAmb 20 04 46.4
comp=Z,28nm,1.1s
GURO Guroymak-BITLI 22.82 304 P **20 04 21.1 -0.7**
GURO IAmb IAmb 20 04 33.5
comp=Z,26nm,1.1s
MK31 Makanchi Array 22.85 29 *de*P P **20 04 21.1 -0.8**
MKAR Makanchi Array 22.85 29 P P **20 04 20.9 -1.0**
comp=Z,9.6nm,0.9s,baz=211,slow=11,SNR=37
MKAR LR LR 20 15 06.2
comp=Z,746nm,21.4s,baz=218,slow=42
comp=Z,9.6nm,0.9s
MKAR Makanchi Array 22.85 29 P **20 04 18.8 -3.1**
MKAR Makanchi Array 22.85 29 *i* P P **20 04 21.5 -0.4**
MKAR pmax pmax
comp=Z,10.0nm,0.9s
KARS Kars 22.92 310 IAmb IAmb 20 04 29.2
comp=Z,20nm,1.2s
SHL Shillong 23.09 90 P **20 04 24.7 -0.1**
SHL IAmb IAmb 20 04 36.9
comp=Z,26nm,1.1s
SHL Shillong 23.09 90 P P **20 04 24.7 -0.1**
SHL pmax pmax
comp=Z,26nm,1.1s
MARD Mardin 23.36 300 P **20 04 24.2 -3.1**
MARD IAmb IAmb 20 04 33.2
comp=Z,13nm,0.8s
AKTO Aktyubinsk 23.48 347 LR LR 20 14 55.5
comp=Z,308nm,18.2s,baz=174,slow=40
AKTO Aktyubinsk 23.48 347 P P **20 04 29.3 +1.0**
BRDH Bariadhala 23.59 97 LR LR 20 13 57.0
comp=Z,175nm,18.4s,baz=0.5,slow=37
WMQ Urumqi 23.61 42 *e*P P **20 04 31.7 +2.0**
WMQ PP PnPn **20 05 03.0 +6.4**
WMQ pmax pmax
comp=Z,37nm,0.9s
WMQ L L
comp=Z,970nm,16.3s
WMQ L L
comp=Z,720nm,17.1s
WMQ L L
comp=Z,210nm,18.5s
TEZP TEZPUR 23.72 87 *e*P P **20 04 33.5 +2.7**
TEZP IAmb IAmb 20 04 46.7
comp=Z,11nm,0.9s
NCK Nalchik 24.03 317 *d i*P P **20 04 35.9 +2.2**
NCK pmax pmax
comp=Z,32nm,1.4s
NEUR Neytrino 24.45 315⇑ *i*P P **20 04 40.6 +2.8**
NEUR pmax pmax
comp=Z,12nm,1.5s
KOPT Kop Dagi 24.46 307 P P **20 04 34.9 -3.2**
ZIRO ZIRO 24.52 84 *e*P P **20 04 40.6 +2.1**
ZIRO IAmb IAmb 20 05 11.7
comp=Z,17nm,1.0s
KBZ Khabaz 24.58 317 P P **20 04 39.4 +0.7**
comp=Z,3.8nm,0.8s,baz=126,slow=7.4,SNR=11
comp=Z,3.8nm,0.8s
KBZ Khabaz 24.58 317⇑ *e*P P **20 04 40.1 +1.4**
KBZ pmax pmax
comp=Z,5.0nm,0.9s
PALK Pallekele 24.60 143 LR LR 20 14 47.8
comp=Z,148nm,18.0s,baz=325,slow=38
KURBB Kurchatov Arra 24.70 19 P P **20 04 40.4 +0.8**
comp=Z,9.5nm,0.7s,baz=212,slow=8.7,SNR=66
KURBB LR LR 20 15 40.3
comp=Z,396nm,20.0s,baz=173,slow=40
comp=Z,9.5nm,0.7s
SHA1 Shidzhatmaz 24.73 316⇓ *e*P P **20 04 42.8 +2.4**
KURK Kurchatov 24.81 19 P P **20 04 41.2 +0.6**
KURK IAmb IAmb 20 04 42.7
comp=Z,11nm,0.8s
KURK Kurchatov 24.81 19 *ce*P P **20 04 41.5 +0.9**
KURK pmax pmax
comp=Z,12nm,0.8s
KIV Kislovodsk 24.83 317⇑P P **20 04 42.5 +1.4**
KIV Kislovodsk 24.83 317 P **20 04 40.1 -1.0**
KIV Kislovodsk 24.83 317 *e*P P **20 04 42.8 +1.7**
KIV *e*S S **20 09 06.7 +3.0**
KIV pmax pmax
comp=Z,19nm,1.0s
KIV Kislovodsk 24.83 317 P P **20 04 42.7 +1.7**
comp=Z,18nm,1.1s
SAIH SAIHA 24.83 96 *e*P P **20 04 43.5 +2.2**
SAIH IAmb IAmb 20 05 11.1
comp=Z,15nm,1.0s
KOHI KOHIMA 25.03 88 *e*P P **20 04 43.9 +0.8**
KOHI IAmb IAmb 20 04 47.5
comp=Z,25nm,1.0s
IMP Imphal 25.07 90 *e*P P **20 04 45.3 +2.0**
MOKO MOKOCHONG 25.28 87 *e*P P **20 04 47.1 +1.7**
MOKO IAmb IAmb 20 04 48.9
comp=Z,28nm,1.1s
BVA0 Borovoye Array 25.43 6 P P **20 04 45.5 -0.8**
BVAR Borovoye Array 25.43 6 P P **20 04 47.0 +0.7**
comp=Z,4.2nm,0.5s,baz=169,slow=8.3,SNR=24
BVAR LR LR 20 16 50.0
comp=Z,269nm,19.8s,baz=193,slow=41
comp=Z,4.2nm,0.5s
BORK Borovoye 25.45 6 P **20 04 47.4 +0.9**
BORK IAmb IAmb 20 04 55.5
comp=Z,9.3nm,0.8s
BORK Borovoye 25.45 6⇓ *e*P P **20 04 47.5 +1.1**
BORK pmax pmax
comp=Z,12nm,0.9s
MORE Moreh 25.52 91 IAmb IAmb 20 05 12.3
comp=Z,16nm,0.9s
ASF Jabal al Asfar 25.68 287 LR LR 20 18 18.8
comp=Z,333nm,18.5s,baz=87,slow=44
VSLR Vesyoloye 26.24 314⇓ *i*P P **20 04 54.5 +0.7**
VSLR pmax pmax
comp=Z,17nm,1.1s
LABN Labinsk 26.39 316 *e*P P **20 04 56.0 +0.9**
LABN *e**PP sP **20 04 59.5 -1.1**
LABN *e*S S **20 09 29.8 +1.6**
LABN pmax pmax
comp=Z,12nm,0.6s
SOC Sochi 26.50 314 *e*P P **20 04 57.8 +1.7**
SOC *e* 20 05 36.6
SOC *e*S S **20 09 32.9 +2.9**
SOC pmax pmax
comp=Z,7.0nm,0.6s
SOC MLR MLR
comp=Z,76nm,18.0s
MMAI Mount Meron Ar 26.98 289 LR LR 20 16 56.1
comp=Z,165nm,21.1s,baz=90,slow=39
ERBR Yeremizino-Bor 27.10 318 *e*P P **20 05 02.3 +0.8**
ERBR *e**PP sP **20 05 05.8 -1.2**
ERBR *e*S S **20 09 41.1 +1.7**
ERBR pmax pmax
comp=Z,11nm,0.6s
ATD Arta Tunnel 27.17 238 LR LR 20 17 16.5
comp=Z,4.2nm,19.1s,baz=9.5,slow=40
DGZ Jazzator, Alta 27.31 31⇑ *e*P P **20 05 04.4 +0.9**
DGZ pmax pmax
comp=Z,20nm,1.7s
EIL Elat 27.39 281 LR LR 20 19 14.2
comp=Z,518nm,18.4s,baz=92,slow=44
BELG Belogornoye 28.23 336⇑ *i*P P **20 05 13.5 +2.0**
BELG pmax pmax
comp=Z,4.0nm,1.2s
ANN Anapa 28.52 314 *e*P P **20 05 16.2 +2.1**
ANN *e**PP sP **20 05 19.1 -0.6**
ANN *e*S S **20 10 05.4 +3.7**
ANN pmax pmax
comp=Z,21nm,1.1s
ARTI Arti 29.14 351 LR LR 20 18 09.4
comp=Z,232nm,20.4s,baz=166,slow=39
ARTI Arti 29.14 351 *c i*P P **20 05 21.0 +1.4**
ARTI 20 06 14.2
ARTI 20 08 25.9
ARTI S S **20 10 15.7 +4.4**
ARTI SS SnSn **20 11 40.3 +4.6**
ARTI pmax pmax
comp=Z,4.0nm,1.1s
BR131 Keskin Array S 29.39 302⇓ *e*P P **20 05 25.1 +2.9**
BRTR Keskin Array B 29.39 302 P P **20 05 24.1 +1.8**
comp=Z,0.3nm,0.5s,baz=149,slow=4.2,SNR=2.7
comp=Z,0.3nm,0.5s
ZAA0 Zalesovo Array 29.54 23 IAmb IAmb 20 06 03.9
comp=Z,8.9nm,1.0s
ZALV Zalesovo Beam 29.54 23 P P **20 05 23.8 +0.7**
comp=Z,4.5nm,0.7s,baz=225,slow=9.7,SNR=26
ZALV LR LR 20 18 25.7
comp=Z,407nm,18.4s,baz=225,slow=39
comp=Z,4.5nm,0.7s
ZALV Zalesovo Beam 29.54 23 P **20 05 23.0 -0.1**
ZALV Zalesovo Beam 29.54 23 *i* P P **20 05 23.7 +0.6**
ZALV pmax pmax
comp=Z,5.0nm,0.7s
GTA2 Gaotai 30.16 58 *e*P P **20 05 30.8 +1.8**
GTA2 pP sP 20 05 34.1 -0.5
GTA2 pmax pmax
comp=Z,6.0nm,1.2s
GTA2 L L
comp=Z,220nm,17.5s
GTA2 L L
comp=Z,280nm,17.1s
GTA2 L L
comp=Z,330nm,15.5s
CHTO Chiang Mai 31.33 99 P **20 05 39.7 +0.4**
CHTO IAmb IAmb 20 05 46.9
comp=Z,9.9nm,1.4s
CHTO Chiang Mai 31.33 99 P P **20 05 39.7 +0.4**
CHTO pmax pmax
comp=Z,10.0nm,1.4s
CHTO Chiang Mai 31.33 99 P P **20 05 40.6 +1.3**
comp=Z,6.4nm,1.3s
CMAR Chiang Mai Arr 31.47 100 P P **20 05 42.3 +1.8**
comp=Z,1.0nm,0.9s,baz=294,slow=9.1,SNR=8.7
comp=Z,1.0nm,0.9s
CMAR Chiang Mai Arr 31.47 100 P P **20 05 42.1 +1.6**
FURI Furi 32.00 239 LR LR 20 19 05.5
comp=Z,111nm,19.9s,baz=53,slow=37
KNGR Kungurtug, Tuv 32.94 38⇑ *i*P P **20 05 54.9 +1.6**
KNGR pmax pmax
comp=Z,17nm,0.9s
KIRV Kirov 32.95 344 LR LR 20 20 37.6
comp=Z,176nm,18.4s,baz=150,slow=39
KIRV Kirov 32.95 344⇓ *e*P P **20 05 56.4 +3.4**
MOS Moscow 34.67 332 *e*P P **20 06 12.0 +3.9**
MOS *e* 20 07 30.7
OBN Obninsk 34.72 330⇓ *e*P P **20 06 11.0 +2.5**
OBN *e* 20 07 24.7
OBN *e* 20 08 44.5
OBN pmax pmax
comp=Z,5.0nm,0.9s
OBN MLR MLR
comp=Z,167nm,16.0s
ICOR Ion Corvin 34.72 308⇑P P **20 06 09.7 +1.1**
BAL3X Bal3x, Balta 34.75 315 P P **20 06 12.3 +3.4**
CFR Carcaliu 34.78 310⇓P P **20 06 08.4 -0.8**
CFR Carcaliu 34.78 310⇓P P **20 06 08.4 -0.8**
EZN Ezine 34.95 301 P P **20 06 14.3 +3.6**
comp=Z,10nm,2.0s
MOY Mondy 35.36 38 *e*P P **20 06 16.2 +1.9**
SORM Soroca 35.60 315⇓P P **20 06 16.4 +0.2**
SORM Soroca 35.60 315⇓P P **20 06 16.4 +0.2**
ISR Istrita 35.85 310 P P **20 06 21.6 +3.1**
comp=Z,9.4nm,0.9s
ISR pP **sP 20 06 25.4 +1.3**
comp=Z,9.4nm,0.9s
VRI Vrincioaia 35.93 311⇑P P **20 06 18.3 -0.8**
VRI Vrincioaia 35.93 311⇑P P **20 06 18.3 -0.8**
VRI Vrincioaia 35.93 311 P P **20 06 21.6 +2.5**
comp=Z,6.6nm,1.6s
PLOR Plostina 35.98 311⇑P P **20 06 19.0 -0.5**
PLOR Plostina 35.98 311⇑P P **20 06 19.0 -0.5**
AK09 Malin Array Si 36.02 319 P P **20 06 21.7 +1.9**
AK10 Malin Array Si 36.03 319 P P **20 06 21.7 +1.8**
AK07 Malin Array Si 36.04 319 P P **20 06 21.8 +1.9**
ZAK Zakamensk 36.07 41 *e*P P **20 06 18.7 -1.7**
ZAK pmax pmax
comp=Z,5.0nm,2.0s
AK02 Malin Array Si 36.09 319 P P **20 06 22.6 +2.3**
AKASG Malin Array Be 36.09 320 P P **20 06 19.5 -0.9**
comp=Z,1.4nm,0.5s,baz=115,slow=7.1,SNR=8.2
comp=Z,1.4nm,0.5s
AKASG Malin Array Be 36.09 320 IAmb IAmb 20 06 27.5
comp=Z,3.2nm,1.2s
AKASG *i* P P **20 06 22.7 +2.3**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKBB Malin Array Si 36.09 320 P P **20 06 19.6 -0.8**
AKBB Malin Array Si 36.09 320 *de*P P **20 06 24.0 +3.6**
AKBB pmax pmax
comp=Z,13nm,1.3s
AK01 Malin Array Si 36.09 320 P P **20 06 22.3 +1.9**
NEHR Nehoiu 36.10 310⇓P P **20 06 21.8 +1.2**
KIEV Kiev 36.10 320⇓P P **20 06 20.5 0.0**
KIEV Kiev 36.10 320 P P **20 06 18.7 -1.8**
KIEV IAmb IAmb 20 06 24.6
comp=Z,12nm,1.2s
KIEV Kiev 36.10 320 P P **20 06 18.7 -1.8**
KIEV pmax pmax
comp=Z,12nm,1.2s
AK03 Malin Array Si 36.11 320 P P **20 06 22.5 +2.0**
TESR Tescani 36.17 312⇑P P **20 06 21.8 +0.7**
TESR Tescani 36.17 312 P P **20 06 22.8 +1.7**
comp=Z,7.8nm,1.0s

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
COVR	**Voineasa-Covas**	**36.27**	**311**	⇓P	**P**	**20 06 22.8**	**+0.8**
ONER	**Baraj Valea Uz**	**36.28**	**312**	⇓P	**P**	**20 06 23.4**	**+1.3**
MLR	**Muntele Rosu**	**36.35**	**310**	⇑P	**P**	**20 06 23.4**	**+0.5**
MLR	**Muntele Rosu**	**36.35**	**310**	⇑P	**P**	**20 06 23.4**	**+0.5**
MLR	**Muntele Rosu**	**36.35**	**310**	P	**P**	**20 06 25.6**	**+2.7**
	comp=Z,14nm,1.6s						
TURR	**Turia**	**36.46**	**311**	⇑P	**P**	**20 06 24.3**	**+0.6**
LUBAR	**Lubar, Ukraine**	**36.63**	**318**	P	**P**	**20 06 25.7**	**+0.7**
PRAR	**RASCA**	**36.70**	**313**	⇓P	**P**	**20 06 26.2**	**+0.5**
TLY	**Talaya**	**36.84**	**39**	LR	LR	20 23 57.3	
	comp=Z,204nm,19.5s,baz=239,slow=40						
TLY	**Talaya**	**36.84**	**39**		**P**	**20 06 28.9**	**+2.1**
TLY	**Talaya**	**36.84**	**39**	*ce*P	**P**	**20 06 28.4**	**+1.6**
TLY				pmax	pmax		
	comp=Z,5.0nm,0.9s						
DOPR	**Dopca**	**36.85**	**311**	⇓P	**P**	**20 06 28.0**	**+1.0**
VOIR		**36.95**	**310**	⇑P	**P**	**20 06 29.0**	**+1.1**
VOIR		**36.95**	**310**	⇑P	**P**	**20 06 29.0**	**+1.1**
VOIR		**36.95**	**310**	P	**P**	**20 06 30.6**	**+2.7**
	comp=Z,4.8nm,0.7s						
SONM	**Songino Array**	**37.05**	**46**	P	**P**	**20 06 30.3**	**+1.5**
	comp=Z,4.5nm,0.9s,baz=253,slow=7.9,SNR=32						
SONM				LR	LR	20 24 35.1	
	comp=Z,280nm,21.8s,baz=232,slow=41						
	comp=Z,4.5nm,0.9s						
SONM	**Songino Array**	**37.05**	**46**	P	**P**	**20 06 29.9**	**+1.1**
SONM	**Songino Array**	**37.05**	**46**	P	**P**	**20 06 29.9**	**+1.1**
SONM				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MI28	**Mi28,Pidlybu**	**37.09**	**319**	P	**P**	**20 06 31.2**	**+2.3**
ARR	**Arges**	**37.22**	**309**	⇓P	**P**	**20 06 31.3**	**+1.2**
BURAR	**Bucovina Array**	**37.43**	**313**	⇓P	**P**	**20 06 32.3**	**+0.3**
BURAR	**Bucovina Array**	**37.43**	**313**		**P**	**20 06 32.0**	**+0.1**
BURAR				IAmb	IAmb	20 06 36.9	
	comp=Z,5.8nm,0.8s						
BURAR	**Bucovina Array**	**37.43**	**313**	⇓P	**P**	**20 06 32.3**	**+0.3**
ULN	**Ulaanbaatar**	**37.48**	**46**		**P**	**20 06 32.2**	**-0.2**
ULN	**Ulaanbaatar**	**37.48**	**46**	⇑*i*P	**P**	**20 06 33.6**	**+1.1**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ULN	**Ulaanbaatar**	**37.48**	**46**	P	**P**	**20 06 33.9**	**+1.4**
	comp=Z,25nm,0.9s						
LOT	**Lotru**	**37.83**	**309**	⇓P	**P**	**20 06 35.3**	**-0.1**
RNPP9	**Sopachiv**	**38.30**	**319**	P	**P**	**20 06 42.6**	**+3.4**
MNK	**Minsk**	**38.54**	**325**	*i* P	**P**	**20 06 41.3**	**+0.2**
	comp=E,9.0nm,0.8s						
MNK				*i* P	**P**	**20 06 41.3**	**+0.2**
	comp=N,8.0nm,0.7s						
MNK				*i* P	**P**	**20 06 41.3**	**+0.2**
	comp=Z,20nm,0.7s,baz=118						
MNK				*i* PP	**PP**	**20 08 10.2**	**+1.0**
MNK				*i* PPP	PPP	20 08 32.1	
MNK				*i* S	**S**	**20 12 38.0**	**+1.3**
MNK				*i* SS	**SnSn**	**20 15 17.8**	**-5.7**
MNK				*i* SSS	SSS	20 16 03.8	
MNK				*i* LQ	LQ	20 18 39.2	
MNK				*i* LR	LR	20 22 39.3	
MNK				*i* LRM	MLR	20 24 17.2	
	comp=E,308nm,18.8s						
MNK				*i* LRM	MLR	20 27 18.4	
	comp=N,121nm,14.0s						
MNK				*i* LRM	MLR	20 27 21.8	
	comp=Z,98nm,14.8s						
MNK	**Minsk**	**38.54**	**325**	*i* P	**P**	**20 06 41.3**	**+0.2**
MNK				*i*		20 08 10.2	
MNK				*i* PPP	PPP	20 08 32.1	
MNK				*i* S	**S**	**20 12 37.9**	**+1.3**
MNK				*i* SS	**SnSn**	**20 15 17.8**	**-5.7**
MNK				pmax	pmax		
	comp=Z,20nm,0.7s						
MNK				pmax	pmax		
	comp=N,8.0nm,0.7s						
MNK				pmax	pmax		
	comp=E,9.0nm,0.8s						
MNK				MLR	MLR		
	comp=E,308nm,19.0s						
MARR	**Marisel-Cluj**	**38.55**	**311**	⇑P	**P**	**20 06 41.0**	**-0.5**
BRIU	**Brid**	**39.05**	**314**	P	**P**	**20 06 47.5**	**+2.1**
MDVR	**Moldovita**	**39.12**	**308**	⇓P	**P**	**20 06 47.1**	**+1.0**
NACGM	**Naroch**	**39.29**	**325**	*e*P	P	20 06 54.4	+7.0
	comp=Z,6.0nm,0.8s,baz=117						
BZS	**Buzias**	**39.34**	**309**	⇑P	**P**	**20 06 47.3**	**-0.6**
BZS	**Buzias**	**39.34**	**309**	⇑P	**P**	**20 06 47.3**	**-0.6**
HOLU	**Holmets**	**39.51**	**314**	P	**P**	**20 06 51.3**	**+2.0**
KMBO	**Kilima Mbogo**	**39.95**	**229**	LR	LR	20 24 28.3	
	comp=Z,147nm,18.4s,baz=242,slow=38						
STHS	**Stebnicka Huta**	**40.47**	**315**	*e*P	**P**	**20 06 59.0**	**+1.7**
STHS	**Stebnicka Huta**	**40.47**	**315**	*e*P	**P**	**20 06 59.0**	**+1.7**
SUW	**Suwalki**	**40.83**	**322**	P	**P**	**20 06 59.8**	**-0.3**
SUW	**Suwalki**	**40.83**	**322**	P	**P**	**20 06 59.8**	**-0.3**
VSU	**Vasula**	**41.06**	**329**	⇓*e*P	**P**	**20 07 03.2**	**+1.2**
VSU				pmax	pmax		
	comp=Z,88nm,3.6s						
MORH	**Mrgy, Hungar**	**41.49**	**309**	⇑P	**P**	**20 07 05.3**	**-0.4**
MORH	**Mrgy, Hungar**	**41.49**	**309**	P	**P**	**20 07 07.9**	**+2.2**
	comp=Z,4.9nm,1.6s						
LANS	**Liptovska Anna**	**41.53**	**314**	*e*P	**P**	**20 07 06.7**	**+0.6**
LANS	**Liptovska Anna**	**41.53**	**314**	*e*P	**P**	**20 07 06.7**	**+0.6**
BJT	**Baijiatuau**	**42.77**	**60**	P	**P**	**20 07 16.8**	**+0.5**
BJT				IAmb	IAmb	20 07 19.1	
	comp=Z,6.6nm,0.8s						
BJT	**Baijiatuau**	**42.77**	**60**	P	**P**	**20 07 16.8**	**+0.5**
BJT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
XLT	**XiLinHaoTe**	**42.90**	**54**	*e*P	**P**	**20 07 19.2**	**+1.8**
XLT				pmax	pmax		
	comp=Z,12nm,0.9s						
FINES	**FINESS Array B**	**42.93**	**333**	P	**P**	**20 07 17.7**	**+0.4**
	comp=Z,4.0nm,0.6s,baz=120,slow=8.7,SNR=15						
FINES				LR	LR	20 27 41.8	
	comp=Z,110nm,18.4s,baz=112,slow=40						
	comp=Z,4.0nm,0.6s						
FINES	**FINESS Array B**	**42.93**	**333**	P	**P**	**20 07 16.5**	**-0.7**
FINES	**FINESS Array B**	**42.93**	**333**	*i* P	**P**	**20 07 18.2**	**+1.0**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CUC	**Castrocucco**	**43.02**	**300**	P	**P**	**20 07 18.1**	**-0.2**
TIA	**Tai'an**	**43.63**	**66**	P	**P**	**20 07 22.9**	**-0.4**
TIA				pmax	pmax		
	comp=Z,11nm,1.2s						
SOKA	**Soboth**	**44.03**	**310**	*i* pP	pP	20 07 32.3	+1.8
	comp=Z,1.2nm,0.7s						
VAE	**Valguarnera**	**44.17**	**296**	LR	LR	20 28 28.3	
	comp=Z,40nm,18.4s,baz=120,slow=40						
GEC2	**GERESS Array S**	**45.20**	**312**	P	**P**	**20 07 34.0**	**-1.8**
GEC2				IAmb	IAmb	20 07 53.1	
	comp=Z,7.4nm,1.4s						
GERES	**GERESS Array B**	**45.20**	**312**	P	**P**	**20 07 35.7**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=101,slow=6.9,SNR=5.2						
	comp=Z,0.7nm,0.6s						
KBA	**Koelnbreinsper**	**45.22**	**310**	*i* P	**P**	**20 07 37.9**	**+1.8**
	comp=Z,1.3nm,0.4s						
LESA	**Schwarzleotal**	**45.71**	**310**	*e*P	**P**	**20 07 41.0**	**+1.2**
	comp=Z,3.4nm,0.5s						
ABTA	**Abfaltersbach**	**45.76**	**309**	*e*pP	**P**	**20 07 44.4**	**+4.1**
	comp=Z,1.7nm,0.5s						
MOTA	**Moosalm**	**46.77**	**310**	*e*pP	**P**	**20 07 52.4**	**+4.2**
	comp=Z,1.6nm,0.5s						
FETA	**Feichten**	**47.00**	**310**	*e*pP	**P**	**20 07 53.6**	**+3.5**
	comp=Z,1.6nm,0.6s						
DAVA	**Damuels**	**47.60**	**310**	*e*pP	**P**	**20 07 57.4**	**+2.7**
	comp=Z,4.7nm,0.5s						
HFS	**Hagfors**	**47.83**	**328**	P	**P**	**20 07 56.1**	**0.0**
	comp=Z,2.4nm,0.6s,baz=124,slow=9.2,SNR=12						
HFS				LR	LR	20 31 19.3	
	comp=Z,167nm,18.5s,baz=92,slow=40						
	comp=Z,2.4nm,0.6s						
ARCES	**ARCESS Array B**	**47.92**	**342**	P	**P**	**20 07 57.1**	**+0.5**
	comp=Z,1.9nm,0.6s,baz=124,slow=7.9,SNR=6.8						
ARCES				LR	LR	20 28 51.6	
	comp=Z,148nm,19.4s,baz=127,slow=37						
	comp=Z,1.9nm,0.6s						
ARCES	**ARCESS Array B**	**47.92**	**342**	P	**P**	**20 07 56.4**	**-0.3**
ARCES	**ARCESS Array B**	**47.92**	**342**	P	**P**	**20 07 56.4**	**-0.3**
ARCES				pmax	pmax		
	comp=Z,28nm,1.5s						
TUE	**Stuetta**	**47.92**	**309**	P	**P**	**20 07 57.3**	**0.0**
TUE				IAmb	IAmb	20 08 12.8	
	comp=Z,6.4nm,0.8s						
KEST	**Kesra**	**48.39**	**294**	LR	LR	20 32 07.0	
	comp=Z,103nm,19.0s,baz=39,slow=41						
NB2	**NORSAR Subarra**	**49.27**	**328**	P	**P**	**20 08 08.2**	**+1.0**
	comp=Z,1.0nm,0.6s,baz=107,slow=7.9						
NOA	**NORSAR Array B**	**49.27**	**328**	P	**P**	**20 08 07.2**	**0.0**
	comp=Z,1.1nm,0.6s,baz=108,slow=7.4,SNR=9.3						
	comp=Z,1.1nm,0.6s						
BNX	**BinXian**	**51.01**	**52**	⇓P	**P**	**20 08 21.9**	**+1.3**
BNX				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HEH	**HeiHe**	**51.04**	**46**	*e*P	**P**	**20 08 21.4**	**+0.6**
ZEA	**Zeya**	**51.16**	**42**	*e*P	**P**	**20 08 24.2**	**+2.6**
ZEA				MLR	MLR		
	comp=Z,200nm,21.0s						
KSRS	**Korea Array**	**52.11**	**63**	P	**P**	**20 08 29.5**	**+0.5**
	comp=Z,4.1nm,0.8s,baz=274,slow=7.6,SNR=18						
KSRS				LR	LR	20 32 53.5	
	comp=Z,143nm,19.0s,baz=260,slow=39						
	comp=Z,4.1nm,0.8s						
YAK	**Yakutsk**	**53.50**	**32**	LR	LR	20 33 37.0	
	comp=Z,260nm,20.0s,baz=261,slow=38						
YAK	**Yakutsk**	**53.50**	**32**		**P**	**20 08 38.2**	**-0.7**
YAK	**Yakutsk**	**53.50**	**32**	*e*P	**P**	**20 08 38.5**	**-0.3**
YAK				*e**PP	**sP**	**20 08 43.4**	**-1.1**
YAK				*e*		20 09 43.6	
YAK				*e*		20 10 40.7	
YAK				*e*PPP	PPP	20 11 44.2	
YAK				*e*S	**S**	**20 16 11.0**	**-0.2**
YAK				*e*		20 18 24.3	
YAK				*e*SS	**SS**	**20 19 52.4**	**+1.4**
YAK				*e*SSS	SSS	20 21 34.3	
YAK				pmax	pmax		
	comp=Z,16nm,1.2s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.6s						
YAK				pmax	pmax		
	comp=E,8.0nm,2.1s						
YAK				pmax	pmax		
	comp=Z,233nm,6.3s						
YAK				pmax	pmax		
	comp=N,196nm,7.6s						
YAK				pmax	pmax		
	comp=E,231nm,5.9s						
YAK				smax	smax		
	comp=N,230nm,6.3s						
YAK				smax	smax		
	comp=E,136nm,7.8s						
KLR	**Kul'dur**	**53.85**	**48**	P	**P**	**20 08 42.4**	**+0.7**
	comp=E,6.2nm,0.7s,baz=278,slow=9.1,SNR=18						
KLR				LR	LR	20 34 34.7	
	comp=E,189nm,19.3s,baz=270,slow=39						
	comp=E,6.2nm,0.7s						
KLR	**Kul'dur**	**53.85**	**48**	*d i*P	**P**	**20 08 42.5**	**+0.9**
KLR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
JOW	**Kunigami**	**54.67**	**75**	LR	LR	20 36 37.4	
	comp=Z,96nm,18.1s,baz=256,slow=41						
SPITS	**Spitsbergen Ar**	**55.16**	**349**	LR	LR	20 34 55.4	
	comp=Z,53nm,21.0s,baz=147,slow=39						
TIXI	**Tiksi**	**55.38**	**20**	LR	LR	20 34 10.2	
	comp=Z,103nm,18.4s,baz=260,slow=38						
TIXI	**Tiksi**	**55.38**	**20**	P	**P**	**20 08 52.1**	**-0.2**
TIXI				IAmb	IAmb	20 09 04.6	
	comp=Z,4.2nm,0.9s						
TIXI	**Tiksi**	**55.38**	**20**	⇑*e*P	**P**	**20 08 52.2**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
EKA	**Eskdalemuir Ar**	**56.01**	**320**	P	**P**	**20 08 56.0**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=105,slow=7.4,SNR=6.1						
EKA				LR	LR	20 39 31.4	
	comp=Z,153nm,18.2s,baz=135,slow=43						
	comp=Z,0.3nm,0.4s						
EKA	**Eskdalemuir Ar**	**56.01**	**320**	P	**P**	**20 08 56.0**	**-1.1**
LSZ	**Lusaka**	**56.43**	**225**	LR	LR	20 33 17.5	
	comp=Z,59nm,19.3s,baz=26,slow=36						
ESDC	**Sonseca Array**	**58.18**	**301**	P	**P**	**20 09 12.7**	**-0.2**
	comp=Z,3.2nm,1.0s,baz=72,slow=6.9,SNR=9.0						
	comp=Z,3.2nm,1.0s						
ESDC	**Sonseca Array**	**58.18**	**301**	P	**P**	**20 09 11.7**	**-1.2**
ESDC				IAmb	IAmb	20 09 17.5	
	comp=Z,10.0nm,1.4s						
MDT	**Midelt**	**60.28**	**294**	LR	LR	20 41 12.4	
	comp=Z,113nm,18.6s,baz=50,slow=42						
MJAR	**Matsushiro Arr**	**60.36**	**62**	LR	LR	20 37 14.4	
	comp=Z,92nm,18.1s,baz=293,slow=38						
KAPI	**Kappang**	**61.07**	**114**	LR	LR	20 39 01.4	
	comp=Z,46nm,18.4s,baz=284,slow=39						
TORD	**Torodi Ar. Bea**	**61.52**	**270**	P	**P**	**20 09 36.0**	**-0.1**
	comp=Z,2.3nm,0.8s,baz=67,slow=4.7,SNR=10						
	comp=Z,2.3nm,0.8s						
ASAJ	**Asahikawa**	**61.90**	**53**	LR	LR	20 39 52.5	
	comp=Z,157nm,20.3s,baz=326,slow=39						
JHJ	**Hachijo jima 2**	**62.51**	**65**	LR	LR	20 41 35.2	
	comp=Z,110nm,18.1s,baz=327,slow=41						
MA2	**Magadan**	**63.82**	**34**	LR	LR	20 39 34.6	
	comp=Z,187nm,18.0s,baz=273,slow=38						
MA2	**Magadan**	**63.82**	**34**	⇓*e*P	**P**	**20 09 51.5**	**+0.7**
MA2				pmax	pmax		
	comp=Z,8.0nm,1.6s						
SEY	**Seymchan**	**63.98**	**31**	⇑*e*P	**P**	**20 09 52.7**	**+0.9**
SEY				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BORG	**Borgarnes**	**64.20**	**332**	LR	LR	20 39 54.2	
	comp=Z,152nm,18.6s,baz=83,slow=38						
TSUM	**Tsumeb**	**66.25**	**231**	LR	LR	20 39 24.1	
	comp=Z,81nm,20.5s,baz=64,slow=36						
BATI	**Baumata**	**67.23**	**116**	LR	LR	20 44 30.7	
	comp=Z,98nm,18.8s,baz=296,slow=40						
BILL	**Bilibino**	**68.24**	**23**	⇑*e*P	**P**	**20 10 22.1**	**+3.1**
BILL				pmax	pmax		
	comp=Z,8.0nm,1.6s						
BOSA	**Boshof**	**68.39**	**218**	P	**P**	**20 10 21.7**	**+1.0**
	comp=Z,1.6nm,0.7s,baz=1.1,slow=13,SNR=3.5						
	comp=Z,1.6nm,0.7s						
BOSA	**Boshof**	**68.39**	**218**	P	**P**	**20 10 20.0**	**-0.7**
BOSA	**Boshof**	**68.39**	**218**	P	**P**	**20 10 20.0**	**-0.7**
BOSA				pmax	pmax		
	comp=Z,25nm,1.5s						
PETK	**Petropavlovsk-**	**69.19**	**40**	LR	LR	20 42 50.5	
	comp=Z,188nm,19.1s,baz=289,slow=38						
PET	**Petropavlovsk**	**69.76**	**40**	⇓*e*P	**P**	**20 10 27.9**	**-0.8**
PET				pmax	pmax		
	comp=Z,34nm,1.4s						
DBIC	**Dimbokro**	**70.13**	**267**	LR	LR	20 46 00.4	
	comp=Z,74nm,18.1s,baz=92,slow=40						
KNRA	**Kununurra**	**74.44**	**117**		**P**	**20 10 56.2**	**-1.0**
KNRA				IAmb	IAmb	20 11 02.6	
	comp=Z,9.6nm,1.2s						
RES	**Resolute Bay**	**77.06**	**355**	LR	LR	20 47 47.1	
	comp=Z,29nm,19.0s,baz=5.5,slow=38						
SHEM	**Shemya Is, Ala**	**78.36**	**36**	LR	LR	20 48 43.7	
	comp=Z,121nm,18.5s,baz=94,slow=38						
E18K	**Tukpahlearik C**	**78.88**	**17**	IAmb	IAmb	20 11 26.3	
	comp=Z,5.6nm,0.8s						
F15K	**North Star Dit**	**79.04**	**19**	IAmb	IAmb	20 11 27.5	
	comp=Z,6.2nm,0.9s						
E19K	**Redstone River**	**79.68**	**16**	IAmb	IAmb	20 11 30.7	
	comp=Z,3.3nm,0.7s						
A36M	**Sachs Harbour**	**80.21**	**4**	IAmb	IAmb	20 11 37.7	
	comp=Z,5.8nm,0.8s						
F21K	**Alatna River**	**80.73**	**15**	IAmb	IAmb	20 11 37.5	
	comp=Z,3.9nm,0.9s						
G19K	**Purcell Mounta**	**80.75**	**16**	IAmb	IAmb	20 11 36.7	
	comp=Z,6.1nm,0.8s						
H17K	**Granite Mounta**	**80.95**	**18**		**P**	**20 11 33.5**	**+0.6**
H17K				IAmb	IAmb	20 11 37.5	
	comp=Z,4.4nm,0.9s						
E24K	**Your Creek**	**81.05**	**12**	IAmb	IAmb	20 11 38.5	
	comp=Z,6.2nm,1.1s						
WB0	**Warramunga Arr**	**81.16**	**118**	IAmb	IAmb	20 11 39.7	
	comp=Z,5.8nm,0.9s						
WRA	**Warramunga Arr**	**81.22**	**118**	P	**P**	**20 11 35.7**	**+0.7**
	comp=Z,7.0nm,1.0s,baz=312,slow=4.5,SNR=20						
	comp=Z,7.0nm,1.0s						
WRA	**Warramunga Arr**	**81.22**	**118**		**P**	**20 11 35.4**	**+0.4**
WRA	**Warramunga Arr**	**81.22**	**118**	*i* P	**P**	**20 11 34.2**	**-0.8**
WRA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WRAB	**Tennant Creek**	**81.22**	**118**	P	**P**	**20 11 34.5**	**-0.6**
WRAB	**Tennant Creek**	**81.22**	**118**	⇓*i*P	**P**	**20 11 36.4**	**+1.4**
WRAB				pmax	pmax		
	comp=Z,11nm,0.9s						
G21K	**Allakaket**	**81.31**	**15**	IAmb	IAmb	20 11 38.9	
	comp=Z,5.0nm,1.1s						
WR8	**Warramunga Arr**	**81.35**	**118**	IAmb	IAmb	20 11 40.6	
	comp=Z,8.0nm,1.1s						
COLD	**Coldfoot**	**81.43**	**13**		**P**	**20 11 36.5**	**+1.1**
COLD				IAmb	IAmb	20 11 40.7	
	comp=Z,7.9nm,1.0s						
J14K	**Nanvaranak Lak**	**81.52**	**21**	P	**P**	**20 11 36.4**	**+0.5**
J14K				IAmb	IAmb	20 11 40.5	
	comp=Z,11nm,1.5s						
E25K	**Arctic Village**	**81.55**	**11**	P	**P**	**20 11 36.7**	**+0.6**
E25K				IAmb	IAmb	20 11 50.4	
	comp=Z,8.7nm,1.4s						
G23K	**Bananza Creek**	**81.91**	**14**	IAmb	IAmb	20 11 43.4	
	comp=Z,4.2nm,0.8s						
FRB	**Frobisher Bay**	**82.08**	**341**	LR	LR	20 49 14.2	
	comp=Z,60nm,18.0s,baz=310,slow=36						
H21K	**Melozitna Rive**	**82.18**	**15**	IAmb	IAmb	20 11 44.9	
	comp=Z,8.8nm,1.1s						
G24K	**Hadweenzic Riv**	**82.44**	**13**	IAmb	IAmb	20 11 46.5	
	comp=Z,5.4nm,0.9s						
E29M	**Blow River**	**82.50**	**9**	IAmb	IAmb	20 11 44.9	
	comp=Z,7.7nm,1.4s						
AS31	**Alice Springs**	**82.95**	**121**		**P**	**20 11 43.4**	**-0.7**
ASAR	**Alice Springs**	**82.95**	**121**	P	**P**	**20 11 44.6**	**+0.5**
	comp=Z,4.1nm,0.8s,baz=306,slow=5.1,SNR=54						
	comp=Z,4.1nm,0.8s						
ASAR	**Alice Springs**	**82.95**	**121**		**P**	**20 11 43.4**	**-0.6**
COLA	**College**	**83.95**	**14**	⇓*e*P	**P**	**20 11 45.2**	**-3.3**
COLA				pmax	pmax		
	comp=Z,39nm,3.0s						
ILAR	**Eielson Array**	**84.25**	**14**	P	**P**	**20 11 50.0**	**0.0**
	comp=Z,0.8nm,0.9s,baz=321,slow=4.0,SNR=7.2						
ILAR				LR	LR	20 54 54.7	
	comp=Z,113nm,18.3s,baz=282,slow=40						
	comp=Z,0.8nm,0.9s						
ILAR	**Eielson Array**	**84.25**	**14**	P	**P**	**20 11 50.8**	**+0.7**
ILAR	**Eielson Array**	**84.25**	**14**	P	**P**	**20 11 50.8**	**+0.7**
M16K	**Timber Creek**	**84.25**	**20**	P	**P**	**20 11 51.2**	**+1.0**
G31M	**Satah River**	**84.35**	**8**	P	**P**	**20 11 52.0**	**+1.4**
M29M	**Somme Creek**	**87.97**	**11**	IAmb	IAmb	20 12 36.9	
	comp=Z,3.9nm,0.9s						
SCHQ	**Schefferville**	**88.38**	**335**	LR	LR	20 52 47.3	
	comp=Z,41nm,20.0s,baz=22,slow=36						
KDAK	**Kodiak Island**	**88.80**	**20**	LR	LR	20 57 55.1	
	comp=Z,107nm,19.0s,baz=333,slow=40						
YKA	**Yellowknife Ar**	**90.06**	**0**	P	**P**	**20 12 19.6**	**+1.3**
	comp=Z,0.4nm,0.8s,baz=346,slow=5.8,SNR=6.3						
YKA				LR	LR	20 58 05.1	
	comp=Z,66nm,18.5s,baz=328,slow=39						
	comp=Z,0.4nm,0.8s						
YKA	**Yellowknife Ar**	**90.06**	**0**	P	**P**	**20 12 16.5**	**-1.8**
YKA	**Yellowknife Ar**	**90.06**	**0**	*i* P	**P**	**20 12 20.6**	**+2.3**

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*NEIC **05** 20:28:35.9±0.7, 41°.2S±0°.1×80°.6E±0°.2, h10km±1km, mb4.4/8, Error ellipse: s-maj=27.3km s-min=15.1km az=111.0*

*IDC **05** 20:28:38.6±20.0, 40°.45S×81°.32E, h0km, mb3.9/3, mbtmp3.9/3, MS3.5/6, Error ellipse: s-maj=475.6km s-min=47.4km az=46.0*

ISC 05 20:28:35.2±0.9**, 41°.1S**±0°.1×**80°.5E**±0°.2**, h10km, n24, σ0.59s**/14**, mb4.2**/6**, MS3.4**/6**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AIS	**Amsterdam Isla**	**3.99**	**324**	Pn	**Pn**	**20 29 36.1**	**-0.3**
H04N2	**CROZET ISLANDS**	**21.36**	**247**	T	T	20 55 30.1	
	baz=86,slow=75,SNR=880						
H04N3	**CROZET ISLANDS**	**21.38**	**247**	T	T	20 55 27.7	
	baz=86,slow=75,SNR=778						
H04N1	**CROZET ISLANDS**	**21.38**	**247**	T	T	20 55 30.0	
	baz=86,slow=75,SNR=727						
MAW	**Mawson**	**28.30**	**194**	LR	LR	20 43 20.2	
	comp=Z,70nm,18.9s,baz=19,slow=30						
BOSA	**Boshof**	**46.34**	**267**	LR	LR	20 53 10.8	
	comp=Z,54nm,18.3s,baz=185,slow=31						
ASAR	**Alice Springs**	**47.55**	**86**	P	**P**	**20 37 10.9**	**0.0**
	1.5nm,0.9s,baz=230,slow=7.3,SNR=12						
	1.5nm,0.9s						
ASAR	**Alice Springs**	**47.55**	**86**	P	**P**	**20 37 10.6**	**-0.3**
AS31	**Alice Springs**	**47.55**	**86**	P	**P**	**20 37 10.8**	**-0.2**
SUR	**Sutherland**	**47.84**	**260**	LR	LR	20 54 02.8	
	comp=Z,27nm,18.7s,baz=338,slow=31						
LBTB	**Lobatse**	**47.99**	**272**	LR	LR	20 53 14.5	
	comp=Z,41nm,19.7s,baz=162,slow=30						
QSPA	**South Pole Qui**	**49.10**	**180**	LR	LR	20 56 25.8	
	comp=Z,118nm,18.5s,baz=333,slow=34						
QSPA	**South Pole Qui**	**49.10**	**180**	P	**P**	**20 37 22.4**	**-0.1**
WRA	**Warramunga Arr**	**50.05**	**82**	P	**P**	**20 37 30.1**	**-0.1**
	2.1nm,0.8s,baz=232,slow=7.7,SNR=13						
	2.1nm,0.8s						
WRA	**Warramunga Arr**	**50.05**	**82**	IAmb	IAmb	20 37 33.1	
	comp=Z,0.2nm,1.2s						
WR8	**Warramunga Arr**	**50.17**	**82**	P	**P**	**20 37 30.5**	**-0.5**
WB0	**Warramunga Arr**	**50.20**	**82**	P	**P**	**20 37 31.0**	**-0.3**
WB0				IAmb	IAmb	20 37 32.2	
	comp=Z,3.3nm,0.8s						
LSZ	**Lusaka**	**51.90**	**284**	LR	LR	20 55 24.3	
	comp=Z,38nm,20.6s,baz=142,slow=31						
BELA	**Belgrano 2**	**55.14**	**193**	P	**P**	**20 38 07.4**	**+0.3**
BELA				IAmb	IAmb	20 38 37.7	
	comp=Z,3.8nm,1.2s						
CM31	**Chiang Mai Arr**	**61.63**	**20**	P	**P**	**20 38 54.4**	**+1.4**
CM31				IAmb	IAmb	20 39 29.8	
	comp=Z,3.1nm,1.1s						
CMAR	**Chiang Mai Arr**	**61.63**	**20**	P	**P**	**20 38 52.8**	**-0.3**
	comp=Z,1.1nm,0.9s,baz=201,slow=6.6,SNR=8.9						
	comp=Z,1.1nm,0.9s						
CMAR	**Chiang Mai Arr**	**61.63**	**20**	P	**P**	**20 38 54.0**	**+1.0**
E28M	**Babbage River**	**145.19**	**24**		**PKPab**	**20 48 11.2**	**-0.3**
I28M	**Miner Creek**	**146.60**	**30**	PKPdf	**PKPbc**	**20 48 15.7**	**-0.3**

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*WEL **05** 20:39:33.7±0.8, 33°S±6°×17°8W±1°7, h12km, M4.9/13, mB5.2/7, ML5.0/14, MLv5.2/13, Mw(mB)4.5/7, Error ellipse: s-maj=22.6km s-min=3.3km az=107.2, confirmed*

*IDC **05** 20:39:34.3±0.8, 32°.60S×178°.14W, h0km, mb4.5/7, mbtmp4.5/10, ML5.3/2, MS3.9/16, Error ellipse: s-maj=26.1km s-min=23.9km az=112.0*

*NEIC **05** 20:39:36.3±1.8, 32°.61S±0°.08×178°.2W±0°.1, h10km±1km, mb4.7/18, Error ellipse: s-maj=19.5km s-min=11.7km az=114.0*

ISC 05 20:39:36.2±0.7**, 32°.64S**±0°.06×**178°.0W**±0°.1**, h20km, n107, σ1.67s**/109**, mb4.7**/14**, MS4.0**/15**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.37**	**1**	P	**Pn**	**20 40 26.0**	**-1.7**
GLKZ				S	**Sn**	**20 41 03.5**	**-3.5**
RAO	**Raoul Island**	**3.38**	**1**	Pn	**Pn**	**20 40 26.3**	**-1.5**
RAO	**Raoul Island**	**3.38**	**1**	S	**Sn**	**20 41 05.7**	**-1.5**
MXZ	**Matakaoa Point**	**5.76**	**211**	Pn	**Pn**	**20 40 60.0**	**-0.6**
MXZ	**Matakaoa Point**	**5.76**	**211**	P	**Pn**	**20 41 00.7**	**+0.1**
MXZ				S	**Sn**	**20 42 04.9**	**-1.2**
WMGZ	**Waiomatatini S**	**5.94**	**209**	P	**Pn**	**20 41 02.0**	**-0.9**
WMGZ				S	**Sn**	**20 42 09.4**	**-1.0**
PKGZ	**Pakihiroa**	**6.12**	**210**	P	**Pn**	**20 41 04.4**	**-1.1**
PKGZ				S	**Sn**	**20 42 14.3**	**-0.6**
HAZ	**Te Kaha**	**6.16**	**213**	P	**Pn**	**20 41 06.4**	**+0.4**
HAZ				S	**Sn**	**20 42 17.2**	**+1.4**
PUZ	**Puketiti**	**6.22**	**208**	P	**Pn**	**20 41 08.1**	**+1.3**
PUZ				S	**Sn**	**20 42 15.1**	**-2.2**
RUGZ	**Raukumara Rang**	**6.38**	**212**	P	**Pn**	**20 41 07.8**	**-1.3**
RUGZ				S	**Sn**	**20 42 20.0**	**-1.4**
TWGZ	**Tauwhareparae**	**6.42**	**210**	P	**Pn**	**20 41 08.4**	**-1.2**
TWGZ				S	**Sn**	**20 42 21.4**	**-1.0**
CNGZ	**Carnagh Statio**	**6.60**	**207**	P	**Pn**	**20 41 10.3**	**-1.7**
CNGZ				S	**Sn**	**20 42 25.5**	**-1.1**
TKGZ	**Te Karaka**	**6.70**	**209**	P	**Pn**	**20 41 14.9**	**+1.5**
TKGZ				S	**Sn**	**20 42 27.8**	**-1.3**
MWZ	**Matawai**	**6.75**	**211**	P	**Pn**	**20 41 12.7**	**-1.4**
MWZ				S	**Sn**	**20 42 28.3**	**-2.1**
URZ	**Urewera**	**6.88**	**214**	Pn	**Pn**	**20 41 13.9**	**-1.9**
	8.7nm,0.3s,baz=7.5,slow=3.9,SNR=36						
URZ				Sn	**Sn**	**20 42 30.3**	**-3.2**
	21nm,0.3s,baz=125,slow=3.6,SNR=15						
	26nm,0.3s						
URZ	**Urewera**	**6.88**	**214**	P	**Pn**	**20 41 14.6**	**-1.3**
RAGZ	**Rawiri**	**6.93**	**211**	P	**Pn**	**20 41 14.9**	**-1.7**
RAGZ				S	**Sn**	**20 42 33.4**	**-1.5**
RIGZ	**Rimuhau**	**6.96**	**208**	P	**Pn**	**20 41 16.4**	**-0.6**
RIGZ				S	**Sn**	**20 42 33.5**	**-2.1**
WCZ	**Waipu Caves**	**7.13**	**240**	P	**Pn**	**20 41 20.1**	**+0.7**
SNGZ	**Shannon Statio**	**7.20**	**210**	P	**Pn**	**20 41 21.7**	**+1.3**
SNGZ				S	**Sn**	**20 42 41.3**	**-0.2**
MUGZ	**Murupara**	**7.21**	**215**	P	**Pn**	**20 41 19.0**	**-1.4**
MUGZ				S	**Sn**	**20 42 40.1**	**-1.7**
RTZ	**Ruatahuna**	**7.22**	**213**		**Pn**	**20 41 20.6**	**0.0**
RTZ				Sn	**Sn**	**20 42 39.2**	**-3.0**
RTZ	**Ruatahuna**	**7.22**	**213**	P	**Pn**	**20 41 20.7**	**0.0**
MHGZ	**Mahia Peninsul**	**7.29**	**206**	P	**Pn**	**20 41 19.5**	**-2.1**
MHGZ				S	**Sn**	**20 42 39.9**	**-3.9**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TOZ	Tahuroa Road	7.35	224	Pn	Pn	20 41 21.9	-0.4
OUZ	Omahuta	7.43	247	P	Pn	20 41 27.8	+4.3
MTHZ	Maungataniwha	7.48	213	P	Pn	20 41 23.1	-1.1
MTHZ				S	Sn	20 42 47.5	-0.9
NMHZ	Naumai	7.70	212	P	Pn	20 41 27.2	0.0
NMHZ				S	Sn	20 42 52.3	-1.4
ARHZ	Aropaoanui	7.75	210	P	Pn	20 41 27.2	-0.6
BKZ	Black Stump Fm	7.89	213	Pn	Pn	20 41 29.6	-0.2
MCHZ	McNeill Hill	8.03	211	P	Pn	20 41 30.4	-1.3
KWHZ	Kaweka Forest	8.13	212	P	Pn	20 41 33.2	+0.1
TMVZ	Te Maari	8.23	217	P	Pn	20 41 35.1	+0.5
KAHZ	Kahuranaki	8.25	209	P	Pn	20 41 31.4	-3.3
OTVZ	Oturere	8.29	216	P	Pn	20 41 34.9	-0.5
KRHZ	Kereru	8.34	211	P	Pn	20 41 34.4	-1.5
MOVZ	Moawhango	8.43	215	P	Pn	20 41 36.4	-0.9
PKVZ	Pokaka	8.54	217	P	Pn	20 41 39.4	+0.6
PNHZ	Pukenui	8.63	211	P	Pn	20 41 37.1	-2.9
BFZ	Birch Farm	9.26	208	P	Pn	20 41 46.2	-2.3
NMEZ	Namu Road	9.42	222	P	Pn	20 42 00.3	+10
KIW	Kapiti Island	9.98	213	P	Pn	20 41 54.3	-4.0
MSWZ	Moikau Station	10.28	210	P	Pn	20 41 58.6	-3.9
THZ	Tophouse	11.63	216	P	Pn	20 42 20.6	-0.5
KHZ	Kahutara	11.84	212	P	Pn	20 42 27.1	+3.4
LTZ	Lake Taylor	12.71	214	P	Pn	20 42 33.3	-2.4
OXZ	Oxford	13.23	213	P	Pn	20 42 38.9	-4.0
WVZ	Waitaha Valley	13.68	217	P	Pn	20 42 47.4	-1.6
TMZ	Timaru	14.52	213	P	Pn	20 42 56.3	-4.2
MSVF	Nonsavu	15.26	346	Pn	Pn	20 43 08.4	-2.2
	1.3nm,0.3s,baz=158,slow=18,SNR=4.3						
MSVF				LR	LR	20 47 23.2	
	comp=Z,190nm,19.2s,baz=160,slow=31						
	3.8nm,0.4s						
MSVF	Nonsavu	15.26	346		Pn	20 43 10.0	-0.6
MSVF				IAmb	IAmb	20 43 11.5	
	comp=Z,32nm,1.2s						
DZM	Mont Dzumac	17.34	303	P	P	20 43 37.3	-1.2
	comp=Z,6.0nm,0.8s,baz=152,slow=16,SNR=1.9						
DZM	Mont Dzumac	17.34	303	eP	P	20 43 43.9	+5.4
	comp=Z,90nm,1.2s						
DZM				eLR	LR	20 47 42.0	
	comp=Z,638nm,22.2s						
DZM	Mont Dzumac	17.34	303	IAmb	IAmb	20 43 45.8	
	comp=Z,30nm,1.0s						
RAR	Rarotonga	19.82	59	LR	LR	20 52 12.7	
	comp=Z,226nm,18.3s,baz=243,slow=38						
TBI	Tubuai	26.79	77	eLR	LR	20 51 14.8	
	comp=Z,538nm,22.2s						
TBI				eLR	LR	20 51 26.2	
	comp=Z,917nm,31.2s						
EIDS	Eidsvold	27.92	277	P	P	20 45 26.1	+1.0
EIDS				IAmb	IAmb	20 45 40.4	
	comp=Z,12nm,0.9s						
PPT2	Papeete2	29.67	67	eLR	LR	20 52 52.7	
	comp=Z,105nm,20.8s						
PPT2				eLR	LR	20 53 03.9	
	comp=Z,122nm,22.8s						
PPT	Papeete	29.68	67	LR	LR	20 57 33.7	
	comp=Z,157nm,18.5s,baz=192,slow=36						
HNR	Honiara	30.79	314	LR	LR	20 57 26.1	
	comp=Z,9.5nm,18.0s,baz=272,slow=35						
STKA	Stephens Creek	34.03	260	P	P	20 46 19.9	+1.1
	comp=Z,2.9nm,0.8s,baz=103,slow=13,SNR=4.8						
STKA				LR	LR	20 59 52.6	
	comp=Z,374nm,18.0s,baz=34,slow=36						
	comp=Z,2.9nm,0.8s						
CTA	Charters Tower	34.21	282	LR	LR	20 59 14.9	
	comp=Z,175nm,18.6s,baz=136,slow=35						
CTAO	Charters Tower	34.21	282		P	20 46 20.3	-0.3
INKA	Innaminka	35.82	267		P	20 46 36.0	+1.6
INKA				IAmb	IAmb	20 46 38.1	
	comp=Z,8.6nm,0.8s						
COEN	Coen	39.92	289		P	20 47 10.9	+1.7
COEN				IAmb	IAmb	20 47 11.8	
	comp=Z,8.4nm,0.8s						
TAOE	Nuku Hiva Isla	42.24	64	eLR	LR	20 58 41.6	
	comp=Z,93nm,23.3s						
AS31	Alice Springs	43.03	269		P	20 47 34.9	+0.2
ASAR	Alice Springs	43.03	269	P	P	20 47 35.0	+0.4
	comp=Z,12nm,0.8s,baz=108,slow=7.6,SNR=97						
ASAR				LR	LR	21 05 07.6	
	comp=Z,65nm,18.9s,baz=127,slow=36						
	comp=Z,12nm,0.8s						
ASAR	Alice Springs	43.03	269		P	20 47 34.8	+0.2
WR8	Warramunga Arr	44.08	275		P	20 47 42.8	-0.2
WR8				IAmb	IAmb	20 47 44.3	
	comp=Z,15nm,0.8s						
WRAB	Tennant Creek	44.21	274	P	P	20 47 43.9	-0.3
WRAB				IAmb	IAmb	20 47 45.2	
	comp=Z,14nm,0.8s						
WRA	Warramunga Arr	44.22	274	P	P	20 47 44.5	+0.2
	comp=Z,12nm,0.6s,baz=114,slow=8.0,SNR=106						
	comp=Z,12nm,0.6s						
WRA	Warramunga Arr	44.22	274		P	20 47 43.0	-1.2
WB0	Warramunga Arr	44.25	275		P	20 47 43.9	-0.6
WB0				IAmb	IAmb	20 47 45.6	
	comp=Z,21nm,0.9s						
FORT	Forrest	45.50	257	P	P	20 47 53.9	-0.4
MTN	Manton Dam	50.35	281		P	20 48 31.3	-0.8
KNRA	Kununurra	50.90	276	P	P	20 48 36.3	+0.2
FITZ	Fitzroy Crossi	52.38	272	P	P	20 48 46.6	-0.6
	comp=Z,7.1nm,0.9s,baz=155,slow=8.5,SNR=10						
	comp=Z,7.1nm,0.9s						
CASY	Casey	53.17	209	P	P	20 48 54.1	+1.8
CASY				IAmb	IAmb	20 49 36.2	
	comp=Z,16nm,1.1s						
SIJI	Sorong	57.17	293	LR	LR	21 13 23.2	
	comp=Z,79nm,20.6s,baz=116,slow=36						
QSPA	South Pole Qui	57.48	180	P	P	20 49 25.7	+2.1
	comp=Z,1.0nm,0.4s,baz=60,slow=1.5,SNR=5.2						
QSPA				LR	LR	21 12 41.5	
	comp=Z,98nm,18.0s,baz=12,slow=34						
	comp=Z,1.0nm,0.4s						
QSPA	South Pole Qui	57.48	180	P	P	20 49 25.5	+1.8
BATI	Baumata	57.95	279	LR	LR	21 14 44.8	
	comp=Z,173nm,18.3s,baz=158,slow=36						
KAPI	Kappang	64.02	281	LR	LR	21 18 35.9	
	comp=Z,152nm,18.2s,baz=114,slow=37						
LEM	Lembang	73.20	273	LR	LR	21 25 26.9	
	comp=Z,67nm,18.1s,baz=249,slow=38						
KSRS	Korea Array	86.04	320	P	P	20 52 16.8	+1.6
	comp=Z,1.2nm,0.7s,baz=143,slow=5.6,SNR=5.6						
KSRS				LR	LR	21 28 36.0	
	comp=Z,27nm,19.4s,baz=105,slow=34						
	comp=Z,1.2nm,0.7s						
PETK	Petropavlovsk-	87.97	346	P	P	20 52 25.2	+1.0
	comp=Z,4.9nm,0.9s,baz=93,slow=4.0,SNR=6.7						
	comp=Z,4.9nm,0.9s						
KDAK	Kodiak Island	92.58	13	LR	LR	21 28 04.7	
	comp=Z,56nm,19.9s,baz=183,slow=31						
KLR	Kul'dur	92.96	330	LR	LR	21 29 47.1	
	comp=Z,47nm,19.7s,baz=140,slow=32						
MA2	Magadan	95.44	345	LR	LR	21 35 36.7	
	comp=Z,44nm,18.0s,baz=129,slow=35						
CPUP	Villa Florida	98.60	129	LR	LR	21 28 05.5	
	comp=Z,66nm,21.3s,baz=86,slow=30						
MKAR	Makanchi Array	119.19	309	PKP	PKiKP	20 58 24.1	+0.6
	comp=Z,0.8nm,0.8s,baz=88,slow=2.5,SNR=8.8						
KURK	Kurchatov	122.57	313		PKiKP	20 58 30.4	+0.4
KURBB	Kurchatov Arra	122.61	313	PKP	PKiKP	20 58 31.1	+1.1
	comp=Z,1.7nm,0.7s,baz=112,slow=1.8,SNR=19						
BVAR	Borovoye Array	127.98	315	PKP	PKiKP	20 58 42.0	+1.4
	comp=Z,1.2nm,0.7s,baz=70,slow=1.7,SNR=7.9						
KBZ	Khabaz	146.30	301	PKPbc	PKPab	20 59 14.4	-1.6
	comp=Z,3.9nm,0.8s,baz=189,slow=3.8,SNR=10						
FINES	FINESS Array B	147.23	339	PKPbc	PKPab	20 59 18.1	-1.0
	comp=Z,15nm,0.9s,baz=49,slow=3.0,SNR=32						
FINES	FINESS Array B	147.23	339		PKiKP	20 59 18.2	-1.4
NB2	NORSAR Subarra	150.95	351	PKP	PKiKP	20 59 28.3	+0.9
	comp=Z,2.4nm,0.8s,baz=20,slow=4.4						
NOA	NORSAR Array B	150.95	351	PKPbc	PKiKP	20 59 27.6	+0.3
	comp=Z,0.2nm,0.5s,baz=17,slow=2.6,SNR=2.0						
HFS	Hagfors	151.43	348	PKPbc	PKiKP	20 59 28.3	0.0
	comp=Z,2.3nm,0.7s,baz=93,slow=5.9,SNR=8.4						
MMAI	Mount Meron Ar	151.98	280	PKPbc	PKiKP	20 59 32.4	+1.9
	comp=Z,13nm,1.0s,baz=62,slow=7.7,SNR=12						
AKASG	Malin Array Be	153.04	320	PKPbc	PKiKP	20 59 31.9	0.0
	comp=Z,0.9nm,0.5s,baz=58,slow=2.7,SNR=6.4						
BRTR	Keskin Array B	153.59	295	PKPbc	PKiKP	20 59 34.9	+1.3
	comp=Z,2.2nm,0.9s,baz=134,slow=3.6,SNR=11						
BRTR				PKPab	pPKPab	20 59 47.4	-3.5
	comp=Z,2.1nm,0.8s,baz=149,slow=2.2,SNR=7.5						
BRTR	Keskin Array B	153.59	295		PKiKP	20 59 34.3	+0.7
CLL	Collm	159.67	340	ePKPab	PKPab	21 00 12.0	+0.4
	comp=Z,6.0nm,1.0s						
TORD	Torodi Ar. Bea	160.60	179	PKPab	PKPab	21 00 17.4	+0.9
	comp=Z,1.6nm,0.9s,baz=213,slow=5.9,SNR=4.6						

IDC 05 21:01:34.1±2.9, 2°.94S×67°.29E, h0km, mb3.6/6, mbtmp3.6/6, MS3.6/8, Error ellipse: s-maj=80.7km s-min=29.4km az=69.0

ISC 05 21:01:35.5±2.5, 2°.9S±0°.3×67°.3E±0°.4, h10km, n14, σ1s14/7, mb3.8/6, MS3.9/7, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PALK	Pallekele	16.82	53	LR	LR	21 10 15.2	
	comp=Z,142nm,20.0s,baz=220,slow=31						
BRDH	Bariadhala	34.86	42	LR	LR	21 23 56.3	
	comp=Z,48nm,18.4s,baz=214,slow=38						
CMAR	Chiang Mai Arr	37.76	55	P	P	21 08 51.4	-0.6
	0.3nm,0.3s,baz=242,slow=11,SNR=6.3						
CMAR				LR	LR	21 22 38.4	
	comp=Z,24nm,19.1s,baz=255,slow=34						
	0.3nm,0.3s						
LBTB	Lobatse	45.70	237	LR	LR	21 26 10.9	
	comp=Z,148nm,20.2s,baz=282,slow=32						
AAK	Ala-Archa	45.84	7	LR	LR	21 29 05.4	
	comp=Z,29nm,19.2s,baz=217,slow=36						
BOSA	Boshof	47.40	233	LR	LR	21 26 58.7	
	comp=Z,158nm,18.2s,baz=292,slow=32						
MKAR	Makanchi Array	51.27	13	P	P	21 10 38.2	-1.4
	0.5nm,0.8s,baz=187,slow=7.3,SNR=5.5						
	0.5nm,0.8s						
ZALV	Zalesovo Beam	58.55	12	P	P	21 11 32.9	+0.8
	0.7nm,0.7s,baz=226,slow=8.0,SNR=4.0						
	0.7nm,0.7s						
SONM	Songino Array	61.04	29	P	P	21 11 50.9	+1.3
	0.9nm,0.8s,baz=222,slow=6.8,SNR=6.5						
	0.9nm,0.8s						
ASAR	Alice Springs	67.46	114	P	P	21 12 32.0	-0.1
	0.3nm,0.6s,baz=279,slow=6.4,SNR=4.6						
	0.3nm,0.6s						
WRA	Warramunga Arr	67.47	110	P	P	21 12 32.5	+0.4
	0.6nm,0.6s,baz=285,slow=5.9,SNR=11						
	0.6nm,0.6s						
DAVOX	Davos/Dischmat	70.55	322	LR	LR	21 43 54.1	
	comp=Z,66nm,18.1s,baz=242,slow=36						
QSPA	South Pole Qui	87.06	180	LR	LR	21 46 55.0	
	comp=Z,47nm,19.8s,baz=180,slow=31						
NVAR	Mina Array Bea	144.32	7	PKP	PKPdf	21 21 11.9	-0.7
	0.5nm,0.5s,baz=323,slow=5.5,SNR=3.6						

GCMT 05 21:05:52.0±0.4, 15°.33S±0°.06×13°.39W±0°.03, h22km±1km, MW4.8/72, Moment Tensor Solution. s20,c22; s72,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.96±.17; $M_{\theta\theta}$0.55±.10; $M_{\phi\phi}$1.41±.10; $M_{r\theta}$0.34±.21; $M_{\theta\phi}$-0.17±.06; $M_{\phi r}$-0.21±.15; **Best double couple:** $M_0$1.73900×10^{16} **NP1:**ϕ_s175.00000°, δ41.00000°, λ-80.00000°. **NP2:**ϕ_s342.00000°, δ50.00000°, λ-99.00000°. **Principal axes:** T 1.4620, Plg5.0000°, Azm78.0000°; N 0.5550, Plg7.0000°, Azm348.0000°; P -2.0150, Plg82.0000°, Azm203.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southern Mid-Atlantic Ridge**

ISK 05 21:06:25.9, 38°.24N×38°.82E, h5km, ML3.7/11
AFAD 05 21:06:26.9, 38°.28N×38°.81E, h5km±1km, MW3.6

ISC 05 21:06:27.1±0.9, 38°.27N±0°.02×38°.83E±0°.02, h9km±8km, n55, σ0s92/64, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MDYL	Doganyol-Malat	0.17	75	Pg	Pg	21 06 30.6	-0.2
MDYL				Sg	Sg	21 06 33.9	+0.5
ESGZ	Sivrice-Elazig	0.24	49	Pg	Pg	21 06 31.9	-0.3
ESGZ				Sg	Sg	21 06 35.9	+0.3
ELZG	Elazig	0.26	28	P	Pg	21 06 32.5	0.0
ELZG				S	Sg	21 06 35.8	-0.3
ELZG				IAML		21 06 39.0	
	comp=E,8µm,0.3s						
ELZG				IAML		21 06 40.0	
	comp=N,6µm,0.7s						
MAYA	Malatya/Merkez	0.32	280	P	Pg	21 06 33.5	-0.1
MAYA				IAML		21 06 38.0	
	comp=E,4µm,0.3s						
MAYA				S	Sg	21 06 38.3	+0.4
MAYA				IAML		21 06 40.0	
	comp=N,5µm,0.3s						
NARI	Adyaman-Kaht	0.39	188	P	Pb	21 06 35.0	-1.2
SVRC	Sivrice-ELAZID	0.39	74	Pg	Pg	21 06 34.3	-0.6
SVRC				Sg	Sb	21 06 41.6	-0.9
ESIJ	Sivrice-Elazig	0.42	64	Pg	Pb	21 06 35.9	-0.9
ESIJ				Sg	Sb	21 06 42.9	-0.4
KAHTU	Kahta	0.49	201	P	Pb	21 06 37.0	-1.0
ELZ	Elazig	0.52	35	P	Pg	21 06 37.1	-0.1
ELZ				S	Sg	21 06 44.2	+0.2
ELZ				IAML		21 06 45.0	
	comp=N,2µm,0.5s						
ELZ				IAML		21 06 47.0	
	comp=E,2µm,0.8s						
AZEY	Adyaman-Merk	0.65	225	P	Pb	21 06 40.0	-0.6
MDNT	Maden	0.68	79	P	Pb	21 06 40.4	-0.8
MDNT				S	Sg	21 06 48.8	-0.5
MDNT				IAML		21 06 55.0	
	comp=E,1µm,0.6s						
MDNT				IAML		21 06 57.0	
	comp=N,1µm,0.7s						
HANM	anlurfa/Hi	0.69	177	P	Pb	21 06 40.7	-0.6
AKCD	Akcadag	0.71	272	P	Pb	21 06 40.8	-1.0
MCKZ	Bingol	0.86	8	P	Pg	21 06 43.0	-0.7
KOVA	Elazig, Kovanc	0.89	60	P	Pb	21 06 44.4	-0.3
ATAB	Bozova	0.90	208	P	Pb	21 06 44.5	-0.5
ARPR	Arapgir-MALATY	0.91	335	Pg	Pb	21 06 44.8	-0.4
ARPR				Sg	Sn	21 06 59.2	-0.3
HEKM	Malatya_Hekimh	0.91	312	P	Pb	21 06 44.4	-0.9
TNCL	Tunceli-Merkez	1.01	33	P	Pg	21 06 45.6	-1.0
AKCA	Adyaman/G¶l	1.02	243	P	Pb	21 06 46.7	-0.3
DIYA	Diyarbakir	1.08	108	P	Pn	21 06 51.1	+2.6
DYBB	Diyarbakir	1.08	107	Pg	Pb	21 06 47.9	-0.1
DYBB				Sg	Sn	21 07 03.7	+0.1
SANL	SANLIURFA_Merk	1.10	173	P	Pn	21 06 49.0	+0.3
ILIC	ilic-Erzincan	1.20	350	Pn	Pb	21 06 49.9	-0.2
MDIV		1.22	330	P	Pn	21 06 51.6	+1.2
MIMR	Divri	1.22	330	P	Pn	21 06 59.2	+8.8
MAYK		1.29	68	P	Pb	21 06 51.8	+0.2
ELBS	KAHRAMANMARAS	1.33	273	P	Pb	21 06 52.0	-0.4
GZT	Gaziantep	1.35	228	P	Pb	21 06 53.6	+0.9
SURC	SANLIURFA_SURC	1.40	187	P	Pg	21 06 53.4	-0.6
ERZN	Erzincan	1.49	28	Pn	Pg	21 06 55.5	-0.2
NZIP	Nizip/Gaziante	1.53	217	P	Pg	21 06 55.5	-1.0
KHMN	Narli-Kahraman	1.59	237	P	Pb	21 06 56.2	-0.4
EUZM	Uzumlu	1.59	25	P	Pb	21 06 56.4	-0.3
BNGB	Bingl	1.62	63	Pn	Pb	21 06 57.3	+0.1
KAHM	Kahramanmaras,	1.64	243	P	Pb	21 06 57.0	-0.5
GAZ	Gaziantep	1.69	230	Pn	Pb	21 06 57.4	-0.9
KMRS	Kahramanmaras	1.71	244	Pn	Pb	21 06 57.5	-1.1
YEDI	Yedisu-Bingol	1.78	48	Pn	Pb	21 06 59.6	-0.4
MBOZ		1.79	356	P	Pb	21 07 00.3	+0.1
MARD	Mardin	1.81	121	P	Pb	21 07 00.3	-0.3
SLHN	Bingol, Solhan	1.85	68	P	Pg	21 07 01.6	-1.0
KELT	Kelkit	1.91	10	P	Pb	21 07 01.9	-0.3
SUSE	Susehri	2.00	346	P	Pg	21 07 04.6	-0.9
KARO	Karliova-Bingo	2.02	58	Pn	Pb	21 07 02.8	-1.4
ALUC	Giresun/Alucra	2.07	359	P	Pb	21 07 04.7	-0.3
VRTB	Varto-Mus	2.24	66	Pn	Pn	21 07 05.6	+1.1
BAYT	Aydıntepe-Bayb	2.35	25	Pn	Pb	21 07 07.9	-1.9
GURO	Guroymak-BITLI	2.53	83	Pn	Pn	21 07 09.7	+1.2
BEIL	Beino	4.29	211	eP	Pn	21 07 33.4	+0.9
HWQ	Hawqa	4.61	211	eP	Pn	21 07 38.3	+1.2
ZAHL	Zahle	5.00	209	eP	Pn	21 07 44.1	+1.6
BHL	Bhannes	5.06	212	eP	Pn	21 07 45.0	+1.9
DQRL	Deir Qamar	5.26	211	eP	Pn	21 07 48.4	+2.4
RCY	Rachaya	5.34	208	eP	Pn	21 07 48.6	+1.4

IDC 05 21:18:13.1±5.0, 13°.57N×91°.02W, h58km±32km, mb3.4/3, mbtmp3.6/5, ML3.9/2, MS3.3/6, Error ellipse: s-maj=46.8km s-min=25.8km az=154.0
CATAC 05 21:18:15.8, 14°N±2°×9°1W±°, h48km±7km, M4.2/7, MLv4.2/7, confirmed
GCG 05 21:18:15.2±2.0, 13°.94N×91°.28W, h49km±21km, MD4.4, ML4.5, Presumed earthquake
SNET 05 21:18:16.5±1.2, 13°.91N×91°.11W, h15km±6km, ML3.8, Presumed earthquake
NEIC 05 21:18:16.4±1.4, 13°.92N±0°.07×91°.29W±0°.06, h44km±16km, mb4.0/5, Error ellipse: s-maj=11.8km s-min=6.1km az=210.0

ISC 05 21:18:15.0±1.1, 13°.82N±0°.06×91°.29W±0°.04, h53km±10km, n74, σ1s51/97, mb3.8/4, MS3.5/5, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STG5	El Palmar, Qui	0.58	354	iP	Pn	21 18 31.0	+3.4
STG2	El Palmar, Qui	0.62	352	iP	Pn	21 18 31.4	+3.4
STG8	El Palmar, Qui	0.63	354	iP	Pn	21 18 31.5	+3.2
RTAL	Retalhuleu	0.81	331		Pn	21 18 29.8	-0.4
RTAL				Sn	Sn	21 18 40.2	-1.2
RTAL	Retalhuleu	0.81	331	P	Pn	21 18 29.9	-0.4
RTAL				S	Sn	21 18 40.8	-0.6
ESSJ	San Jos, E	0.81	108	iP	Pn	21 18 26.9	-3.3
ESSJ				IAML		21 18 38.1	
	comp=N,50µm,0.9s						
FG8	Yepocapa, Chim	0.83	58	iP	Pn	21 18 28.1	-2.6
FG8				iS	Sn	21 18 37.9	-4.2
FG16	Alotenango, Sa	0.88	59	iP	Pn	21 18 29.0	-2.4
FG16				iS	Sn	21 18 39.3	-4.1
PCG5	San Vicente Pa	0.97	66	iP	Pn	21 18 30.2	-2.3
PCG5				iS	Sn	21 18 41.5	-4.0
PCG5				IAML		21 18 43.0	
	comp=N,35µm,0.6s						
SOKI	Kika Raxquin	1.00	354	iP	Pn	21 18 32.7	-0.6
SOKI				iS	Sn	21 18 43.9	-2.7
SOKI				IAML		21 18 50.0	
	comp=E,6µm,0.6s						
GCG4	OSOP	1.06	44	iS	Sn	21 18 47.8	+0.2
GCG4				IAML		21 18 57.0	
	comp=E,8µm,0.5s						
QUEO	Labor Ovalle	1.07	348	iS	Sn	21 18 47.4	-0.7
FAME	Alcaldia de Sa	1.24	89	P	Pn	21 18 35.9	-0.1
SMCA	Catarina	1.28	324	iP	Pn	21 18 35.8	-0.8
SMCA				iS	Sn	21 18 49.8	-3.0
APG	El Apazote	1.42	34	P	Pn	21 18 39.0	+0.2
	comp=E,12nm,0.3s,baz=202,slow=14,SNR=130						
APG				S	Sn	21 18 57.2	+0.7
	comp=E,96nm,0.6s,baz=101,slow=13,SNR=6.2						
APG	El Apazote	1.42	34	iP	Pn	21 18 38.9	+0.2
APG				iS	Sn	21 18 57.3	+0.8
THIG		1.44	319	iS	Sn	21 18 54.7	-1.8
NUBE	Las Nubes	1.47	87	P	Pn	21 18 39.5	+0.3
NUBE				S	Sn	21 18 57.0	-0.4
NUBE	Las Nubes	1.47	87	iP	Pn	21 18 39.5	+0.3
NUBE				iS	Sn	21 18 56.8	-0.6
NUBE	Las Nubes	1.47	87	eP	Pn	21 18 39.6	+0.3
NUBE				IAML		21 19 00.2	
	comp=Z,2µm,0.5s						
SLOZ	Alcaldia de Sa	1.48	82	P	Pn	21 18 40.1	+0.8
SLOZ				S	Sn	21 18 58.8	+1.4
SLOZ	Alcaldia de Sa	1.48	82	eP	Pn	21 18 40.0	+0.8
HUEH	Huehuetenango	1.50	352		Pn	21 18 40.0	+0.2
HUEH				Sn	Sn	21 18 57.5	-0.9
HUEH	Huehuetenango	1.50	352	P	Pn	21 18 39.9	+0.1
HUEH				S	Sn	21 18 58.3	-0.1
HUEH	Huehuetenango	1.50	352	iS	Sn	21 18 59.3	+0.8
RBDL	Robledal	1.58	79	eP	Pn	21 18 41.6	+0.8
RBDL				eS	Sn	21 19 01.8	+1.6
RBDL				IAML		21 19 05.4	
	comp=Z,1µm,0.4s						
CEVE	Cerro Verde	1.62	89	P	Pn	21 18 42.2	+0.9
CEVE	Cerro Verde	1.62	89	eP	Pn	21 18 42.3	+0.9
CEVE				eS	Sn	21 19 02.3	+1.0
SBLS	San Blas	1.62	89	eP	Pn	21 18 42.2	+0.9
SBLS				eS	Sn	21 19 02.4	+1.2
SNJE	San Jose	1.63	88	eP	Pn	21 18 42.5	+1.0
SNJE				eS	Sn	21 19 03.1	+1.5
UNIC	Universidad Ca	1.70	84	P	Pn	21 18 43.0	+0.7
UNIC				S	Sn	21 19 04.2	+1.3
JAYA	Jayaque - finc	1.79	95	P	Pn	21 18 44.2	+0.5
JAYA	Jayaque - finc	1.79	95	iP	Pn	21 18 44.0	+0.3
JAYA				iS	Sn	21 19 04.8	-0.6
JAYA				IAML		21 19 07.3	
	comp=N,13µm,0.3s						
JAYA	Jayaque - finc	1.79	95	eP	Pn	21 18 44.1	+0.5
JAYA				eS	Sn	21 19 06.2	+0.8
CEDA	San Andres	1.84	90	P	Pn	21 18 45.1	+0.9
CEDA				S	Sn	21 19 07.8	+1.4
PMON	Piamonte	1.92	93	P	Pn	21 18 46.3	+1.0
PMON	Piamonte	1.92	93	eP	Pn	21 18 47.0	+1.7
PMON				eS	Sn	21 19 10.0	+1.5
BOQS	Boqueron	1.95	92	eP	Pn	21 18 47.1	+1.2
MTO3	Montecristo	1.96	73		Pn	21 18 45.9	0.0
MTO3				Sn	Sn	21 19 10.1	+0.6
MTO3	Montecristo	1.96	73	P	Pn	21 18 46.0	0.0
MTO3				S	Sn	21 19 10.3	+0.8
MTO3	Montecristo	1.96	73	iP	Pn	21 18 45.9	0.0
MTO3	Montecristo	1.96	73	eP	Pn	21 18 46.0	0.0
PIC2	El Picacho	1.98	92	eP	Pn	21 18 47.1	+0.9
ESQI	Esquipulas	2.03	68		Pn	21 18 47.1	+0.3
ESQI				Sn	Sn	21 19 12.8	+1.8
ESQI	Esquipulas	2.03	68	P	Pn	21 18 47.0	+0.1
LOMA	Loma Larga	2.06	95	eP	Pn	21 18 49.1	+1.8
LFRS	El Faro	2.17	95	eP	Pn	21 18 50.2	+1.4
PAVA	Las Pavas	2.29	92	P	Pn	21 18 51.5	+1.1
CCIG	Comitan	2.58	342		Pn	21 18 54.0	-0.5
PETF	Flores	3.37	24	Pn	Pn	21 19 05.1	0.0
TGUH	Tegucigalpa,Un	3.91	86	Pn	Pn	21 19 13.4	+0.8
CRIN	San Cristobal	4.27	105		Pn	21 19 19.8	+2.2
HERN	Volcan Telica	4.50	105	Pn	Pn	21 19 20.7	-0.1
CNGN	Cerro Negro	4.66	106		Pn	21 19 23.8	+1.0
CMIG	Matias Romero	4.75	314	P	Pn	21 19 25.3	+1.2
	comp=N,2.5nm,0.3s,baz=149,slow=10,SNR=27						
CMIG				S	Sn	21 20 17.3	-0.7
	comp=N,13nm,0.3s,baz=145,slow=17,SNR=3.6						
CMIG				LR	LR	21 21 29.6	
	comp=N,142nm,20.3s,baz=174,slow=38						
	comp=N,6.3nm,0.2s						
BOAB	BOACO BROADBAN	5.64	103		Pn	21 19 37.8	+1.5
SIUN	Universidad Ur	6.33	90		Pn	21 19 46.8	+1.0
JUD3	Juan Diaz 3	6.69	122		Pn	21 19 52.8	+1.9
TEIG	Tepich	6.99	24		Pn	21 19 54.5	-0.3
BRU2	Volcan	9.80	120	Pn	Pn	21 20 34.5	+1.0
TXAR	Lajitas Array	19.23	325	P	Pn	21 22 37.8	+1.4
	comp=N,0.1nm,0.3s,baz=139,slow=10,SNR=6.4						
	comp=N,0.9nm,0.8s						
TXAR	Lajitas Array	19.23	325	P	P	21 22 33.7	-1.3
MNHN	Monahans	20.38	331	P	P	21 22 46.7	-0.7
MNHN				IAmb	IAmb	21 22 49.8	
	comp=Z,7.3nm,0.7s						
APMT	Aspermont	21.02	339	P	P	21 22 53.8	-0.5
APMT				IAmb	IAmb	21 23 17.4	
	comp=Z,5.9nm,0.9s						
MNTX	Cornudas Mount	22.00	326	P	P	21 23 05.4	+0.6
TKL	Tuckaleechee C	22.77	16	LR	LR	21 32 53.6	
	comp=Z,28nm,19.5s,baz=217,slow=38						
PFO	Pinyon Flats O	30.18	315	LR	LR	21 37 34.5	
	comp=Z,90nm,18.3s,baz=147,slow=38						
NVAR	Mina Array Bea	34.25	321	P	P	21 24 58.7	+2.5
	comp=Z,2.0nm,0.8s,baz=134,slow=8.3,SNR=9.3						
	comp=Z,2.0nm,0.8s						
ULM	Lac du Bonnet	36.52	355	LR	LR	21 40 50.4	
	comp=Z,68nm,18.8s,baz=194,slow=37						
MDP	Montagnes des	39.04	99	LR	LR	21 44 54.3	
	comp=Z,62nm,18.0s,baz=187,slow=41						
YKA	Yellowknife Ar	51.36	346	P	P	21 27 12.6	-1.3
	comp=Z,0.5nm,0.7s,baz=155,slow=6.9,SNR=6.3						
YKA				PcP	PcP	21 28 27.1	-0.9
	comp=Z,0.1nm,0.4s,baz=148,slow=3.2,SNR=4.0						
	comp=Z,0.5nm,0.7s						
SFJD	Kangerlussuaq	59.48	17	LR	LR	21 57 13.1	
	comp=Z,47nm,18.5s,baz=262,slow=39						
ILAR	Eielson Array	63.28	337	P	P	21 28 36.6	-1.3
	comp=Z,0.4nm,0.8s,baz=138,slow=2.9,SNR=5.3						
	comp=Z,0.4nm,0.8s						
CMAR	Chiang Mai Arr	146.38	342	PKPbc	PKPdf	21 37 48.4	-1.3
	comp=Z,1.7nm,0.6s,baz=333,slow=3.2,SNR=11						

SOME 05 21:26:18.9, 47°.32N×81°.17E, h15km
NNC 05 21:26:19.7±0.7, 47°.28N×81°.22E, h0km, mb3.8, mpv3.6, Error ellipse: s-maj=5.7km s-min=4.1km az=141.0
IDC 05 21:26:19.4±0.6, 47°.26N×81°.33E, h0km, mb3.6/3, mbtmp3.5/7, ML2.8/4, Error ellipse: s-maj=10.9km s-min=5.7km az=48.0
MOS 05 21:26:20.3±1.1, 47°.25N×81°.17E, h14km, mb4.0/3, Error ellipse: s-maj=10.6km s-min=7.5km az=82.4

*ASRS **05** 21:26:23.3±0.3, 47°N±2°×8°2E±°, h8km, MLh4.1/9, Error ellipse: s-maj=4.0km s-min=3.5km az=109.8, confirmed*

ISC 05 21:26:22.0±0.5, 47°.32N±0°.02×81°.39E±0°.03, h13km, n94, σ2.48/141, mb3.7/4, 9C-12D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAKZ	Makanchi	0.65	142	PG	Pg	21 26 32.5	-2.1
MAKZ						21 26 41.3	
MAKZ	Makanchi	0.65	142	⇓Pg	Pg	21 26 32.6	-2.1
MAKZ				Sg	Sg	21 26 41.4	-1.9
MK31	Makanchi Array	0.81	130	⇓P	Pg	21 26 35.5	-2.2
	13nm,0.2s,baz=309,slow=17						
MK31				⇓S	Sg	21 26 46.7	-1.6
	201nm,0.3s,baz=307,slow=28						
MK31	Makanchi Array	0.81	130	d iPG	Pg	21 26 35.5	-2.2
MKAR	Makanchi Array	0.81	130	Pg	Pg	21 26 35.4	-2.3
	42nm,0.3s,baz=306,slow=17,SNR=3018						
MKAR				Lg	Lg	21 26 46.7	
	212nm,0.3s,baz=308,slow=29,SNR=80						
ZSN	Zaisan	2.37	86	Pg	Pb	21 27 04.3	-0.2
	16nm,0.5s						
ZSN				Lg	Lg	21 27 35.6	
	87nm,0.4s						
ZSN	Zaisan	2.37	86	eP	Pb	21 27 04.2	-0.2
	16nm,0.5s						
ZSN				eS	Sg	21 27 35.6	-2.4
	87nm,0.4s						
KAPS	Kapalarasan	2.48	215	Pg	Pn	21 27 03.0	+1.0
	12nm,0.1s						
KAPS				Lg	Lg	21 27 33.4	
	358nm,0.3s						
TDK	Taldyqorghan	3.11	223	Pg	Pb	21 27 15.4	-1.7
	32nm,0.5s						
TDK				Lg	Lg	21 27 54.5	
	137nm,0.5s						
TDK	Taldyqorghan	3.11	223	eP	Pb	21 27 15.4	-1.7
	32nm,0.5s						
TDK				eS	Sb	21 27 54.5	-0.4
	137nm,0.5s						
SEM	Semipalatinsk	3.18	347	Pg	Pb	21 27 17.2	-1.3
	19nm,0.3s						
SEM				Lg	Lg	21 27 57.8	
	49nm,0.5s						
SEM	Semipalatinsk	3.18	347	eP	Pb	21 27 17.2	-1.3
	19nm,0.3s						
SEM				eS	Sb	21 27 57.8	+0.6
	49nm,0.5s						
DJR	Jarkent	3.19	201	Pg	Pb	21 27 17.3	-1.2
	14nm,0.7s						
DJR				Lg	Lg	21 27 57.2	
	24nm,0.5s						
DJR	Jarkent	3.19	201	eP	Pb	21 27 17.3	-1.2
	14nm,0.7s						
DJR				eS	Sb	21 27 57.2	-0.1
	24nm,0.5s						
KNOS	Konyrlen	3.34	208	Pg	Pb	21 27 19.4	-1.7
	10nm,0.2s						
KNOS				Lg	Lg	21 28 01.4	
	53nm,0.3s						
KURBB	Kurchatov Arra	3.80	331	Pn	Pn	21 27 19.2	-1.0
	0.5nm,0.3s,baz=153,slow=12,SNR=39						
KURBB				Pg	Pb	21 27 27.1	-1.8
	2.0nm,0.3s,baz=152,slow=20,SNR=26						
KURBB				Sn	Sn	21 28 03.6	-1.2
	1.5nm,0.3s,baz=155,slow=18,SNR=6.8						
KURBB				Lg	Lg	21 28 18.4	
	3.9nm,0.3s,baz=159,slow=36,SNR=6.4						
	1.2nm,0.3s						
BLB	Baldybastay	3.81	213	Pg	Pb	21 27 28.3	-0.9
	55nm,0.4s						
BLB				Lg	Lg	21 28 16.6	
	122nm,0.7s						
KURK	Kurchatov	3.85	333	⇑Pg	Pb	21 27 29.6	-0.2
	1.6nm,0.2s						
KURK				⇓Lg	Lg	21 28 22.4	
	12nm,0.3s						
KURK	Kurchatov	3.85	333	PN	Pn	21 27 20.0	-0.9
KURK						21 27 29.9	
KURK				S	Sn	21 28 06.2	+0.2
KURK						21 28 21.4	
KURK	Kurchatov	3.85	333	Pn	Pn	21 27 20.1	-0.9
KURK				Pg	Pb	21 27 30.0	+0.2
KURK				S	Sn	21 28 06.2	+0.2
KURK				Sg	Sg	21 28 21.5	-4.2
KTMS	Ketmen	3.94	191	Pg	Pb	21 27 30.5	-0.9
	3.6nm,0.4s						
KTMS				Lg	Lg	21 28 20.3	
	12nm,0.4s						
KTMS	Ketmen	3.94	191	eP	Pb	21 27 30.5	-0.9
	3.6nm,0.4s						
KTMS				eS	Sb	21 28 20.3	+1.3
	12nm,0.4s						
ARXS	Arharly	3.98	220	Pg	Pb	21 27 30.2	-1.8
	16nm,0.6s						
ARXS				Lg	Lg	21 28 20.3	
	62nm,0.6s						
ARXS	Arharly	3.98	220	eP	Pb	21 27 30.2	-1.8
	16nm,0.6s						
ARXS				eS	Sb	21 28 20.3	+0.2
	62nm,0.6s						
PDGK	Podgornoye	4.21	199	⇓Pn	Pn	21 27 25.8	-0.1
	0.7nm,0.2s						
PDGK				⇑Pg	Pb	21 27 37.0	+1.1
	13nm,0.6s						
PDGK				⇑Lg	Lg	21 28 29.2	
	61nm,0.7s						
PDGK	Podgornoye	4.21	199	PN	Pn	21 27 25.8	-0.1
UKR	Ust'-Kan	4.25	30	PN	Pn	21 27 29.9	+3.5
UKR						21 27 39.5	
UKR						21 28 37.0	
UKR	Ust'-Kan	4.25	30	Pn	Pn	21 27 29.1	+2.7
UKR				Pg	Pg	21 27 43.7	+0.4
UKR				S	Sn	21 28 16.1	+0.2
UKR				Sg	Sg	21 28 37.0	-1.3
KPKS	Kokpek	4.30	207	Pg	Pb	21 27 37.4	0.0
	0.3nm,0.6s						
KPKS				Lg	Lg	21 28 32.0	
	102nm,0.6s						
KPKS	Kokpek	4.30	207	eP	Pb	21 27 37.4	0.0
	0.3nm,0.6s						
KPKS				eS	Sb	21 28 32.0	+2.8
	102nm,0.6s						
SHLS	Shalkode	4.38	199	Pg	Pb	21 27 37.4	-1.4
	23nm,0.7s						
SHLS				Lg	Lg	21 28 32.0	
	46nm,0.7s						
SHLS	Shalkode	4.38	199	eP	Pb	21 27 37.4	-1.4
	23nm,0.7s						
SHLS				eS	Sb	21 28 32.0	+0.5
	46nm,0.7s						
KURS	Kuram	4.45	212	Pg	Pb	21 27 40.6	+0.6
	5.4nm,0.5s						
KURS				Lg	Lg	21 28 37.8	
	20nm,0.8s						
UZB	Uzynbulak	4.50	203	Pg	Pb	21 27 40.2	-0.6
	7.4nm,0.4s						
UZB				Lg	Lg	21 28 36.9	
	29nm,0.4s						
UZB	Uzynbulak	4.50	203	eP	Pb	21 27 40.2	-0.6
	7.4nm,0.4s						
UZB				eS	Sb	21 28 36.9	+1.9
	29nm,0.4s						
DGZ	Jazzator, Alta	4.67	57	⇓ePN	Pn	21 27 34.8	+2.5
DGZ	Jazzator, Alta	4.67	57	Pn	Pn	21 27 36.0	+3.7
DGZ				Pg	Pg	21 27 51.5	+0.1
DGZ				Sg	Sg	21 28 49.8	-2.1
SATY	Saty	4.75	207	Pg	Pb	21 27 46.0	+0.8
	3.5nm,0.2s						
SATY				Lg	Lg	21 28 46.7	
	74nm,0.4s						
KTBS	Karatobe	4.89	224	Pg	Pb	21 27 47.6	+0.1
	5.2nm,0.4s						
KTBS				Lg	Lg	21 28 49.7	
	19nm,0.9s						
KTBS	Karatobe	4.89	224	eP	Pb	21 27 47.6	+0.1
	5.2nm,0.4s						
KTBS				eS	Sb	21 28 49.7	+3.4
	19nm,0.9s						
KUU	Kurty	4.93	228	Pg	Pb	21 27 42.6	-5.5
	2.5nm,0.9s						
KUU				Lg	Lg	21 28 41.0	
	34nm,0.6s						
KUU	Kurty	4.93	228	eP	Pb	21 27 42.6	-5.5
	2.5nm,0.9s						
KUU				eS	Sb	21 28 41.0	-6.3
	34nm,0.6s						
CHBI	Chibit, Altay	5.03	51	PN	Pn	21 27 40.8	+3.7
CHBI						21 28 59.7	
CHBI	Chibit, Altay	5.03	51	Pn	Pn	21 27 40.9	+3.7
CHBI				Pg	Pg	21 27 57.8	-0.5
CHBI				Sg	Sg	21 28 59.7	-3.6
KOTS	Kotyrbulak	5.08	218	Pg	Pb	21 27 51.8	+1.0
	5.2nm,0.7s						
KOTS				Lg	Lg	21 28 56.9	
	36nm,0.7s						
KOTS	Kotyrbulak	5.08	218	eP	Pb	21 27 51.8	+1.0
	5.2nm,0.7s						
KOTS				eS	Sb	21 28 56.9	+5.2
	36nm,0.7s						
AKAR	Aktash	5.09	52	PN	Pn	21 27 42.3	+4.2
AKAR						21 29 02.1	
AKAR	Aktash	5.09	52	Pn	Pn	21 27 42.4	+4.2
AKAR				Pg	Pg	21 28 00.2	+0.7
AKAR				Sg	Sg	21 29 02.2	-3.3
KNDC	Almaty	5.15	219	⇑Pg	Pb	21 27 54.1	+2.1
	6.3nm,0.3s						
KNDC				⇓Lg	Lg	21 29 00.4	
	24nm,0.4s						
MDOK	Medeo	5.16	218	Pg	Pb	21 27 52.3	+0.1
	5.3nm,0.4s						
MDOK				Lg	Lg	21 28 57.6	
	19nm,0.9s						
TNSS	Tian-Shan	5.31	218	Pg	Pb	21 27 56.1	+1.3
	1.1nm,0.6s						
TNSS				Lg	Lg	21 29 04.0	
	2.5nm,0.5s						
TNSS	Tian-Shan	5.31	218	eP	Pb	21 27 56.1	+1.3
	1.1nm,0.6s						
TNSS				eS	Sb	21 29 04.0	+5.4
	2.5nm,0.5s						
CUR	Chagan-Uzun	5.38	56	PN	Pn	21 27 45.6	+3.6
CUR				S	Sn	21 28 49.5	+5.6
CUR						21 29 11.0	
CUR	Chagan-Uzun	5.38	56	Pn	Pn	21 27 45.6	+3.6
CUR				S	Sn	21 28 49.6	+5.6
CUR				Sg	Sg	21 29 11.0	-3.7
KRBS	Karabastau	5.41	230	Pg	Pb	21 27 56.0	-0.3
	2.5nm,0.5s						
KRBS				Lg	Lg	21 29 04.0	
	22nm,0.6s						
KRBS	Karabastau	5.41	230	eP	Pb	21 27 56.0	-0.3
	2.5nm,0.5s						
KRBS				eS	Sb	21 29 04.0	+2.9
	22nm,0.6s						
ULGR	Ulagan, Altay	5.45	50	PN	Pn	21 27 45.7	+2.8
ULGR				S	Sn	21 28 49.4	+4.0
ULGR	Ulagan, Altay	5.45	50	Pn	Pn	21 27 45.8	+2.8
ULGR				Pg	Pg	21 28 03.6	-2.6
ULGR				S	Sn	21 28 49.5	+4.0
ULGR				Sg	Sg	21 29 12.0	-4.7
IZV	Izvestkoviy	5.45	220	Pg	Pb	21 27 58.0	+0.8
	8.8nm,0.7s						
IZV				Lg	Lg	21 29 07.4	
	13nm,0.8s						
IZV	Izvestkoviy	5.45	220	eP	Pb	21 27 58.0	+0.8
	8.8nm,0.7s						
IZV				eS	Sb	21 29 07.4	+4.9
	13nm,0.8s						
MTBS	Maitube	5.46	222	Pg	Pb	21 27 58.0	+0.8
	4.0nm,0.6s						
MTBS				Lg	Lg	21 29 07.3	
	22nm,0.6s						
MTBS	Maitube	5.46	222	eP	Pb	21 27 58.0	+0.8
	4.0nm,0.6s						
MTBS				eS	Sb	21 29 07.3	+4.7
	22nm,0.6s						
GALT	Gorno-Altaysk,	5.51	31	Sg	Sg	21 29 15.0	-3.6
BTLS	Baital	5.58	249	Pg	Pb	21 27 58.7	-0.5
	2.6nm,0.5s						
BTLS				Lg	Lg	21 29 08.9	
	15nm,0.9s						
BTLS	Baital	5.58	249	eP	Pb	21 27 58.7	-0.5
	2.6nm,0.5s						
BTLS				eS	Sb	21 29 08.9	+2.8
	15nm,0.9s						
DGS	Degeres	5.69	226	Pg	Pb	21 28 02.4	+1.3
	7.3nm,0.6s						
DGS				Lg	Lg	21 29 15.2	
	23nm,0.7s						
DGS	Degeres	5.69	226	eP	Pb	21 28 02.4	+1.3
	7.3nm,0.6s						
DGS				eS	Sb	21 29 15.2	+6.1
	23nm,0.7s						
KST	Kastek	5.74	224	Pg	Pb	21 28 02.7	+0.7
	3.4nm,0.9s						
KST				Lg	Lg	21 29 15.9	
	24nm,0.9s						
KST	Kastek	5.74	224	eP	Pb	21 28 02.7	+0.7
	3.4nm,0.9s						
KST				eS	Sb	21 29 15.8	+5.1
	24nm,0.9s						
ARTR	Artybash	5.90	38	Pn	Pn	21 27 51.5	+2.5
ARTR				Sg	Sg	21 29 25.7	-5.4
YALR	Yailyu, Altay	6.02	40	Pn	Pn	21 27 53.8	+3.2
YALR				Pg	Pg	21 28 16.8	-0.3
YALR				Sg	Sg	21 29 28.4	-6.6
SGDS	Sogindy	6.13	233	Pg	Pb	21 28 09.2	+0.6
	3.3nm,0.4s						
SGDS				Lg	Lg	21 29 26.5	
	14nm,0.9s						
WUS	Wushi	6.31	195	Pn	Pn	21 27 59.2	+4.3
WUS				Sg	Sg	21 29 45.1	+0.5
BRZS	Berezniki	6.36	298	Pg	Pb	21 28 13.4	+1.1
	0.6nm,0.5s						
BRZS				Lg	Lg	21 29 34.8	
	20nm,0.6s						
BRZS	Berezniki	6.36	298	eP	Pb	21 28 13.4	+1.1
	0.6nm,0.5s						
BRZS				eS	Sb	21 29 34.8	+6.5
	20nm,0.6s						
AAK	Ala-Archa	6.77	229	Pn	Pn	21 27 60.0	-1.1
	0.7nm,0.3s,baz=85,slow=9.4,SNR=7.6						
AAK				Lg	Lg	21 29 46.5	
	1.2nm,0.3s,baz=348,slow=21,SNR=9.1						
	0.9nm,0.3s						
AAK	Ala-Archa	6.77	229	⇑Pn	Pn	21 27 55.6	-5.5
	1.0nm,0.6s						
AAK				⇓Lg	Lg	21 29 49.6	
	5.7nm,0.6s						
AAK	Ala-Archa	6.77	229	⇑iPN	Pn	21 28 00.1	-1.0
ZALV	Zalesovo Beam	6.99	17	Pn	Pn	21 28 03.9	0.0
	0.5nm,0.3s,baz=206,slow=13,SNR=14						
ZALV				Sn	Sn	21 29 23.1	0.0
	1.7nm,0.3s,baz=214,slow=26,SNR=5.2						
ZALV				Lg	Lg	21 29 59.7	
	1.7nm,0.3s,baz=195,slow=21,SNR=15						
	1.4nm,0.3s						
ZALV	Zalesovo Beam	6.99	17	ePN	Pn	21 28 04.7	+0.8
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KK31	Karatay Array	8.76	245	Pn	Pn	21 28 26.6	-1.6
	comp=Z,0.4nm,0.3s,baz=60,slow=12,SNR=15						
KK31				⇑Sn	Sn	21 30 02.6	-4.2
	comp=Z,0.9nm,0.4s						
KK31				⇑Lg	Lg	21 30 53.7	
	comp=Z,4.1nm,0.5s,baz=48,slow=26,SNR=4.8						
KK31	Karatay Array	8.76	245	P	Pn	21 28 26.6	-1.6
KK31				S	Sn	21 30 02.6	-4.2
BVA0	Borovoye Array	9.07	313	Pn	Pn	21 28 32.1	-0.4
	comp=Z,0.2nm,0.3s,baz=121,slow=13,SNR=9.1						
BVA0				Sn	Sn	21 30 16.4	+1.9
	comp=Z,2.2nm,0.6s,baz=119,slow=24,SNR=5.1						
BVA0				⇑Lg	Lg	21 31 04.8	
	comp=Z,1.6nm,0.6s,baz=107,slow=27,SNR=4.1						
BVA0	Borovoye Array	9.07	313	P	Pn	21 28 32.1	-0.4
BVA0				S	Sn	21 30 16.4	+1.9
BVAR	Borovoye Array	9.07	313	Pn	Pn	21 28 31.9	-0.6
	comp=Z,0.1nm,0.3s,baz=108,slow=14,SNR=11						
BVAR				Sn	Sn	21 30 11.8	-2.7
	comp=Z,0.2nm,0.3s,baz=109,slow=17,SNR=6.6						
	comp=Z,0.9nm,0.3s						
BORK	Borovoye	9.12	313	⇓eP	Pn	21 28 33.1	-0.1
CHGR	Chuyangaron	12.44	230	⇓eP	Pn	21 29 20.3	+1.5
AB31	Akbulak array	14.40	286	⇓P	Pn	21 29 45.1	-0.3
	comp=Z,0.2nm,0.4s,baz=82,slow=6.8,SNR=4.2						
OBN	Obninsk	28.70	303	eP	P	21 32 18.8	+0.3
OBN				e		21 33 09.7	
OBN				ePPP	PPP	21 33 19.8	
OBN				e		21 35 27.9	
OBN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ILAR	Eielson Array	62.09	21	P	P	21 36 43.8	+1.9
	comp=Z,0.3nm,0.7s,baz=323,slow=4.8,SNR=4.7						
	comp=Z,0.3nm,0.7s						
ILAR	Eielson Array	62.09	21	eP	P	21 36 43.2	+1.3
WRA	Warramunga Arr	82.12	131	P	P	21 38 39.8	-2.4
	comp=Z,0.4nm,0.7s,baz=336,slow=5.0,SNR=8.0						
	comp=Z,0.4nm,0.7s						
WRA	Warramunga Arr	82.12	131	eP	P	21 38 38.7	-3.5
ASAR	Alice Springs	85.00	133	P	P	21 38 54.7	-2.3
	comp=Z,0.3nm,0.4s,baz=326,slow=5.2,SNR=6.6						
	comp=Z,0.3nm,0.4s						

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*NNC **05** 21:41:25.6±9.7, 37°.06N×80°.08E, h0km, mb3.5, mpv3.4, Error ellipse: s-maj=77.9km s-min=66.7km az=28.0*

*IDC **05** 21:41:26.5±2.3, 37°.44N×78°.98E, h0km, mb3.5/2, mbtmp3.4/3, ML3.1/1, MS3.5/2, Error ellipse: s-maj=63.2km s-min=27.4km az=137.0*

ISC 05 21:41:28.3±1.9, 37°.2N±0°.1×79°.2E±0°.2, h17km, n8, σ4.25/9, 5C-1D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	Podgornoye	6.11	2	⇑Pn	Pn	21 43 01.5	+3.6
	3.2nm,0.5s						
PDGK				⇓Sn	Sn	21 44 14.4	+7.0
	18nm,0.5s						
AAK	Ala-Archa	6.51	328	⇑Pg	Pg	21 43 30.5	-2.3
	0.7nm,0.7s						
AAK				⇑Lg	Lg	21 45 06.2	
	24nm,1.0s						
MK31	Makanchi Array	9.85	13	⇑Pn	Pn	21 43 48.0	-1.0
	0.1nm,0.2s,baz=191,slow=14,SNR=68						
MK31				⇑Sn	Sn	21 45 38.2	-0.9
	0.7nm,0.5s,baz=188,slow=27,SNR=5.2						
MKAR	Makanchi Array	9.85	13	Pn	Pn	21 43 49.2	+0.2
	0.2nm,0.3s,baz=193,slow=13,SNR=11						
MKAR				Sn	Sn	21 45 32.8	-6.3
	0.5nm,0.3s,baz=191,slow=22,SNR=6.4						
	0.5nm,0.6s						
SONM	Songino Array	22.57	53	P	P	21 46 28.5	+0.7
	0.2nm,0.5s,baz=256,slow=12,SNR=3.5						
	0.2nm,0.5s						
MLR	Muntele Rosu	40.17	299	LR	LR	22 10 26.0	
	comp=Z,43nm,18.2s,baz=352,slow=44						
JHJ	Hachijo jima 2	48.97	76	LR	LR	22 10 33.6	
	comp=Z,93nm,21.6s,baz=58,slow=36						
TORD	Torodi Ar. Bea	72.27	273	P	P	21 52 52.9	-0.2
	0.8nm,0.5s,baz=45,slow=4.7,SNR=8.1						
	0.8nm,0.5s						

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*IDC **05** 22:00:54.2±4.6, 2°.61S×102°.04E, h0km, mb3.3/3, mbtmp3.3/3, MS3.4/1, Error ellipse: s-maj=179.7km s-min=30.4km az=54.0*

*DJA **05** 22:01:12.9±0.3, 3°S±4°×10°2E±°, h171km±3km, M3.5/18, mB6.4/1, mb4.0/1, MLv3.2/18, Mw(mB)6.1/1*

ISC 05 22:01:12.7±0.9, 2°.48S±0°.09×102°.30E±0°.09, h150km, n13, σ1.68/16, mb3.0/3, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASI	Maura Aman, Be	0.66	185	P	Pn	22 01 37.0	+2.0
MASI				S	Sn	22 01 55.5	+3.4
KRJI	Kerinci	0.92	295	P	Pn	22 01 39.5	+2.5
KSI	Kapahiang	1.20	166	P	Pn	22 01 40.9	+1.5
UBSI	University, Be	1.27	181	P	Pn	22 01 40.6	+0.6
UBSI				S	Sn	22 02 02.2	+1.3
MNAI	Manna	1.98	161	P	Pn	22 01 48.0	+0.4
MNAI				S	Sn	22 02 14.7	+0.2
PPSI	Pulau Pagai	2.30	263	P	Pn	22 01 52.2	+0.7
PPSI				S	Sn	22 02 20.1	-1.2
PDSI	Padang	2.41	310	P	Pn	22 01 54.1	+1.3
KASI	Kota Agung	3.73	144	P	Pn	22 02 08.3	-1.2
GSI	Gunungsitoli	6.04	308	P	Pn	22 02 39.4	-0.6
TGY	Tagaytay City	24.76	48	LR	LR	22 17 17.8	
	comp=Z,96nm,20.9s,baz=132,slow=39						
WRA	Warramunga Arr	35.77	121	P	P	22 07 56.5	-1.2
	0.1nm,0.4s,baz=297,slow=11,SNR=5.9						
	0.1nm,0.4s						
SONM	Songino Array	50.24	4	P	P	22 09 54.1	+0.4
	0.5nm,0.6s,baz=193,slow=6.2,SNR=4.7						
	0.5nm,0.6s						
MKAR	Makanchi Array	52.14	343	P	P	22 10 05.9	-1.8
	0.1nm,0.3s,baz=157,slow=8.7,SNR=5.7						
	0.1nm,0.3s						

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*IPEC **05** 22:06:57.3±0.2, 51°.51N×16°.22E, h1km, ML2.3/6, Error ellipse: s-maj=2.9km s-min=1.5km az=73.0*

*DNK **05** 22:06:59.0±1.6, 51°.63N×16°.43E, h25km±65km, ML2.6, Presumed earthquake*

*VIE **05** 22:07:00.3±1.0, 51°.29N×15°.99E, h0km, mb2.5/4, ml2.5/7, Error ellipse: s-maj=6.0km s-min=4.9km az=150.0 74 km WNW of Wroclaw Suspected Mining induced.*

*PRU **05** 22:07:00.7, 51°.38N×16°.11E, h0km*

ISC 05 22:06:55.6±0.8, 51°.58N±0°.03×16°.12E±0°.03, h0km, n37, σ1.31/69, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.75	172	ePg	Pg	22 07 10.4	+0.5
KSP				eSg	Sg	22 07 19.2	-0.3
CHVC	Chvalec	1.00	182	ePG	Pg	22 07 15.0	+0.4
CHVC				eSG	Sg	22 07 26.9	-0.6
OSTC	Ostas	1.03	177	ePG	Pg	22 07 15.6	+0.3
OSTC				eSG	Sg	22 07 27.3	-1.3
	comp=Z,20nm,0.2s						
UPC	Upice	1.08	184	ePG	Pb	22 07 16.9	-0.2
UPC				eSG	Sg	22 07 29.5	-0.7
DPC	Dobruska-Polom	1.24	174	ePG	Pg	22 07 19.3	0.0
DPC				eSG	Sg	22 07 34.0	-1.4
	comp=Z,26nm,0.5s						
PIVO	Bartosovice	1.42	169	ePg	Pn	22 07 22.6	-0.1
	baz=351						
PIVO				eSg	Sg	22 07 39.4	-1.8
	39nm,0.2s,baz=351						
PVCC	Panska Ves	1.44	223	ePG	Pb	22 07 23.9	+0.7
PVCC				eSG	Sb	22 07 42.1	0.0
	comp=Z,82nm,0.2s						
KRLC	Kraliky	1.56	164	ePG	Pb	22 07 25.2	-0.2
KRLC				eSG	Sn	22 07 44.4	-1.3
	comp=Z,28nm,0.3s						
RYBC	Ceska Rybna	1.78	181	eSg	Sn	22 07 50.8	0.0
	32nm,0.1s,baz=3.2						
PRU	Pruhonice	1.88	213	ePG	Pg	22 07 31.4	-0.3
PRU				eSG	Sb	22 07 55.0	+0.1
STEB	Steborice	1.96	147	ePG	Pb	22 07 32.5	+0.5
STEB				eSG	Sb	22 07 57.0	+0.1
	comp=Z,74nm,0.8s						
CLL	Collm	1.97	263	ePn	Pn	22 07 31.0	+0.8
CLL				ePg	Pg	22 07 34.0	+0.7
CLL				eSg	Sg	22 08 00.0	+1.2
	comp=Z,13nm,0.6s						
MORC	Moravsky Berou	2.02	153	ePn	Pn	22 07 31.1	+0.2
	baz=335						
MORC				eSg	Sn	22 07 57.8	+0.9
	comp=Z,15nm,0.3s,baz=335						
OKC	Ostrava-Krasne	2.17	143	ePG	Pg	22 07 37.7	+0.6
OKC				eSG	Sb	22 08 03.5	+0.4
	comp=Z,18nm,0.6s						
VRAC	Vranov	2.30	172	ePn	Pn	22 07 35.2	+0.5
	baz=354						
VRAC				eSg	Sb	22 08 06.8	0.0
	comp=Z,18nm,0.5s,baz=354						
MAUC	Maruska	2.47	153	ePG	Pb	22 07 41.8	+0.9
MAUC				eSG	Sg	22 08 14.2	-0.7
ZVC	Zvikov	2.47	211	ePG	Pb	22 07 41.0	+0.1
ZVC				eSG	Sb	22 08 13.1	+1.2
KRUC	Moravsky	2.53	176	ePn	Pn	22 07 38.3	+0.4
	baz=357						
KRUC				eSg	Sb	22 08 14.0	+0.6
	comp=Z,11nm,0.5s,baz=357						
KRUC	Moravsky	2.53	176	ePN	Pn	22 07 38.4	+0.5
KRUC				eSG	Sb	22 08 14.1	+0.6
NKC	Novy Kostel	2.69	241	ePG	Pg	22 07 47.8	+0.7
NKC				eSG	Sg	22 08 22.2	+0.3
	comp=Z,23nm,0.3s						
OJC	Ojcow	2.70	119	ePg	Pg	22 07 48.1	+0.8
OJC				eSg	Sg	22 08 22.9	+0.6
KHC	Kasperske Hory	2.94	215	ePN	Pn	22 07 44.0	+0.4
KHC				ePG	Pb	22 07 50.0	+1.1
KHC				eSN	Sn	22 08 19.0	-0.7
KHC				eSG	Sg	22 08 28.0	-2.1
LANS	Liptovska Anna	3.24	137	eSG	Sg	22 08 38.7	-1.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MODS	**Modra-Piesok**	**3.30**	**166**	*e*SG	**Sg**	**22 08 40.2**	**-1.2**
BSD	**Bornholm Skovb**	**3.61**	**349**	*i* P	**Pn**	**22 07 53.9**	**+1.1**
BSD				*i* S	**Sn**	**22 08 33.0**	**-3.0**
BSD				IAML		22 09 28.0	
	comp=Z,6.6nm,0.9s						
CONA	**Conrad Observa**	**3.66**	**183**	*e*Pn	**Pn**	**22 07 55.1**	**+1.6**
	comp=Z,0.8nm,0.3s						
CONA				*e*Sg	**Sg**	**22 08 51.4**	**-1.8**
	comp=Z,5.8nm,0.3s						
HAMD	**Hammershus, De**	**3.78**	**348**	*i* P	**Pn**	**22 07 56.7**	**+1.6**
HAMD				*i* S	**Sn**	**22 08 39.0**	**-1.2**
HAMD				IAML		22 09 11.0	
	comp=Z,8.9nm,1.1s						
RONA	**Rosalia, Austr**	**3.89**	**178**	*e*Sg	**Sg**	**22 08 59.2**	**-1.2**
	comp=Z,8.4nm,0.5s						
MOA	**Molln**	**3.92**	**199**	*i* Pn	**Pn**	**22 07 58.3**	**+1.3**
	comp=Z,0.5nm,0.2s						
MOA				*e*Sg	**Sg**	**22 08 59.7**	**-1.9**
	comp=Z,4.3nm,0.4s						
BIOA	**Bad Ischl, Aus**	**4.21**	**203**	*e*Sg	**Sg**	**22 09 09.3**	**-1.6**
	comp=Z,4.9nm,0.3s						
ARSA	**Arzberg**	**4.35**	**185**	*e*Sg	**Sg**	**22 09 13.6**	**-1.7**
	comp=Z,6.7nm,0.6s						
LUNU	**Lund**	**4.36**	**340**	*i* P	**Pn**	**22 08 04.3**	**+1.3**
LUNU				*e*S	**Sn**	**22 08 52.9**	**-1.6**
BLEU	**Blekinge**	**4.74**	**358**	*i* P	**Pn**	**22 08 10.1**	**+2.0**
BLEU				*e*S	**Sn**	**22 08 59.5**	**-4.2**
BJUU	**Bjuv**	**4.86**	**339**	*i* P	**Pn**	**22 08 10.7**	**+0.8**
BJUU				*i* S	**Sn**	**22 09 05.1**	**-1.7**
SOKA	**Soboth**	**4.96**	**189**	Sg	**Sg**	**22 09 36.9**	**+2.0**
	comp=Z,1.6nm,0.5s						
DEL	**Delary**	**5.08**	**346**	*i* P	**Pn**	**22 08 14.0**	**+1.2**
DEL				*e*S	**Sn**	**22 09 09.1**	**-3.0**
ABTA	**Abfaltersbach**	**5.39**	**207**	Sg	**Sg**	**22 09 45.7**	**-2.8**
	comp=Z,3.7nm,0.6s						

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*IDC **05** 22:21:21.6±1.2, 10°.96N×75°.95W, h0km, mb3.9/2, mbtmp4.2/5, ML2.8/2, MS3.5/15, Error ellipse: s-maj=35.1km s-min=27.5km az=57.0*
*CATAC **05** 22:21:23.8±0.4, 11°N±3°×7°6W±°, h47km±25km, M4.5/6, mb4.9/6, mB5.2/4, MLv4.3/6, Mw(mB)4.6/4, Error ellipse: s-maj=7.0km s-min=4.2km az=179.9, confirmed*
*RSNC **05** 22:21:24.3±0.0, 11°N±3°×7°6W±°, h30km±8km, M3.8, mB5.4, mb5.0, ML3.4, MLv4.3, Mw(mB)4.9*
ISC 05 22:21:23.3±2.3**, 10°.78N**±0°.04×**76°.01W**±0°.04**, h29**km±19km**, n69,** σ1.78s/86**, MS3.4**/13**, North of Panama**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SJCC	**San Jacinto, C**	**1.20**	**137**	P	**Pn**	**22 21 44.2**	**0.0**
SJCC				S	**Sn**	**22 21 59.5**	**-0.2**
SJCC	**San Jacinto, C**	**1.20**	**137**	P	**Pn**	**22 21 44.2**	**0.0**
SJCC				S	**Sn**	**22 21 59.3**	**-0.3**
SMRC	**Santa Marta, M**	**1.79**	**78**	P	**Pn**	**22 21 51.7**	**-0.6**
SMRC				S	**Sn**	**22 22 13.3**	**-0.9**
LCBC	**Los crdobas,**	**1.95**	**190**	P	**Pn**	**22 21 54.3**	**-0.1**
LCBC				S	**Sn**	**22 22 19.1**	**+1.2**
ARGC	**Ariguani, Magd**	**1.96**	**118**	P	**Pn**	**22 21 55.7**	**+1.0**
ARGC				S	**Sb**	**22 22 21.5**	**-1.1**
CAP2	**Capurgana**	**2.50**	**212**	P	**Pn**	**22 22 04.6**	**+2.5**
CAP2				S	**Sn**	**22 22 33.1**	**+1.4**
CAPC	**Capurgana**	**2.51**	**212**	P	**Pn**	**22 22 02.5**	**+0.3**
CAPC				S	**Sn**	**22 22 33.7**	**+1.8**
APAC	**Apartado, Choc**	**2.92**	**191**	P	**Pn**	**22 22 07.4**	**-0.4**
APAC				S	**Sn**	**22 22 41.3**	**-0.7**
UREC	**San Jos de Ur**	**3.05**	**171**	P	**Pn**	**22 22 08.9**	**-0.7**
UREC				S	**Sn**	**22 22 43.7**	**-1.5**
CRJC	**Cerrejon, Guaj**	**3.08**	**85**	P	**Pn**	**22 22 08.1**	**-2.0**
CRJC				S	**Sn**	**22 22 43.6**	**-2.5**
DBBC	**Dabeiba**	**3.75**	**183**	P	**Pn**	**22 22 17.3**	**-2.0**
DBBC				S	**Sn**	**22 22 58.7**	**-3.8**
PTAC	**Punta Ardita,**	**4.03**	**206**	P	**Pn**	**22 22 24.3**	**+1.2**
PTAC				S	**Sn**	**22 23 10.6**	**+1.3**
URIC	**Uribia, Colomb**	**4.05**	**77**	P	**Pn**	**22 22 21.7**	**-1.6**
URIC				S	**Sn**	**22 23 08.5**	**-1.3**
URI	**Uribia**	**4.05**	**77**	P	**Pn**	**22 22 21.8**	**-1.6**
URI				S	**Sn**	**22 23 08.7**	**-1.1**
BCIP	**Isla Barro Col**	**4.10**	**247**	P	**Pn**	**22 22 26.1**	**+2.0**
BCIP				S	**Sn**	**22 23 10.1**	**-0.9**
BCIP	**Isla Barro Col**	**4.10**	**247**	P	**Pn**	**22 22 24.5**	**+0.5**
BCIP				S	**Sn**	**22 23 07.3**	**-3.7**
BRJC	**Barrancabermej**	**4.40**	**149**	P	**Pn**	**22 22 29.6**	**+1.4**
BRJC				S	**Sn**	**22 23 18.8**	**+0.3**
PTBC	**PUERTO BERRIO,**	**4.49**	**160**	P	**Pn**	**22 22 30.3**	**+0.9**
PTBC				S	**Sn**	**22 23 17.4**	**-3.3**
HELC	**Santa Helena**	**4.59**	**174**	P	**Pn**	**22 22 30.7**	**-0.5**
HELC				S	**Sn**	**22 23 21.3**	**-2.4**
HELC	**Santa Helena**	**4.59**	**174**	P	**Pn**	**22 22 30.5**	**-0.6**
HELC				S	**Sn**	**22 23 17.4**	**-6.3**
PAMC	**Pamplona, Colo**	**4.73**	**136**	P	**Pn**	**22 22 34.2**	**+1.0**
PAMC				P	Pb	22 22 34.4	-12
PAMC				P		22 22 37.1	
CBOC	**Ciudad Bolivar**	**4.89**	**180**	P	**Pn**	**22 22 36.2**	**+1.1**
CBOC				S	**Sn**	**22 23 28.8**	**-2.0**
NORC	**Norcasia**	**5.31**	**168**	P	**Pn**	**22 22 40.8**	**+0.1**
NORC				S	**Sn**	**22 23 39.3**	**-1.7**
SPBC	**San Pablo de B**	**5.45**	**159**	P	**Pn**	**22 22 42.6**	**-0.1**
SPBC				S	**Sn**	**22 23 40.7**	**-3.8**
GUY2C	**Guyana, Caldas**	**5.56**	**173**	P	**Pn**	**22 22 46.0**	**+1.4**
SDV	**Santo Domingo**	**5.62**	**109**	Pn	**Pn**	**22 22 45.3**	**+0.1**
	5.6nm,0.3s,baz=289,slow=8.0,SNR=100						
SDV				Sn	**Sn**	**22 23 47.7**	**-1.3**
	39nm,0.3s,baz=220,slow=19,SNR=9.4						
	75nm,0.7s						
SDV	**Santo Domingo**	**5.62**	**109**	P	**Pn**	**22 22 45.3**	**+0.1**
SDV				S	**Sn**	**22 23 46.5**	**-2.5**
RUSC	**La Rusia**	**5.66**	**149**	P	**Pn**	**22 22 45.6**	**-0.3**
RUSC				S	**Sn**	**22 23 50.6**	**+0.4**
RUSC	**La Rusia**	**5.66**	**149**	P	**Pn**	**22 22 47.0**	**+1.1**
RUSC				S	**Sn**	**22 23 51.2**	**+1.0**
PRVC	**Isla de Provid**	**5.83**	**297**	P	**Pn**	**22 22 46.2**	**-1.7**
PRVC				S	**Sn**	**22 23 49.0**	**-4.9**
PLMC	**San Jos del P**	**5.85**	**183**	P	**Pn**	**22 22 49.6**	**+1.4**
ROSC	**El Rosal**	**6.14**	**164**	Pn	**Pn**	**22 22 55.0**	**+2.6**
	2.6nm,0.3s,baz=263,slow=17,SNR=1.8						
ROSC				Sn	**Sn**	**22 24 03.6**	**+1.7**
	11nm,0.3s,baz=190,slow=21,SNR=4.7						
	7.5nm,0.4s						
PRAC	**Prado**	**7.11**	**171**	P	**Pn**	**22 23 05.8**	**+0.3**
PRAC	**Prado**	**7.11**	**171**	P	**Pn**	**22 23 06.8**	**+1.3**
CDITO	**Canoas**	**7.11**	**253**	P	**Pn**	**22 23 06.7**	**+1.2**
DRK0	**Durika**	**7.28**	**259**	P	**Pn**	**22 23 05.4**	**-2.6**
MTDJ	**Mount Denham**	**7.54**	**349**	P	**Pn**	**22 23 12.1**	**+0.6**
MTDJ				S	**Sn**	**22 24 31.4**	**-4.8**
MTDJ	**Mount Denham**	**7.54**	**349**	*e*P	**Pn**	**22 23 12.5**	**+1.0**
JTS	**Las Juntas de**	**8.81**	**268**	Pn	**Pn**	**22 23 29.1**	**+0.3**
	10nm,0.3s,baz=74,slow=18,SNR=8.5						
JTS				Sn	**Sn**	**22 25 05.6**	**-1.5**
	0.9nm,0.3s,baz=162,slow=20,SNR=2.3						
GTBY	**Guantanamo Bay**	**9.13**	**5**	P	**Pn**	**22 23 33.5**	**+0.3**
GTBY	**Guantanamo Bay**	**9.13**	**5**	*e*P	**Pn**	**22 23 33.0**	**-0.1**
CHIV	**Chivirico**	**9.15**	**358**	*e*P	**Pn**	**22 23 32.5**	**-0.9**
RCC	**Rio Carpintero**	**9.16**	**2**	*e*P	**Pn**	**22 23 33.3**	**-0.3**
MARVS	**Santiago de Cu**	**9.16**	**1**	*e*P	**Pn**	**22 23 34.2**	**+0.6**
LMGC	**Las Mercedes**	**9.28**	**354**	*e*P	**Pn**	**22 23 34.8**	**-0.4**
QMBU	**Quimbuelo**	**9.43**	**7**	*e*P	**Pn**	**22 23 37.1**	**-0.2**
MASC	**Masc**	**9.49**	**10**	*e*P	**Pn**	**22 23 38.0**	**-0.2**
YAR	**Yar**	**9.54**	**358**	*e*P	**Pn**	**22 23 39.1**	**+0.3**
PINC	**Pinares de May**	**9.65**	**1**	*e*P	**Pn**	**22 23 40.0**	**-0.3**
NMDO	**Nuevo Mundo**	**9.77**	**6**	*e*P	**Pn**	**22 23 42.9**	**+0.9**
CCCC	**Cccc**	**10.49**	**351**	*e*P	**Pn**	**22 23 53.2**	**+1.3**
ATAH	**Atahualpa**	**17.96**	**188**	LR	LR	22 34 37.5	
	comp=Z,215nm,21.3s,baz=20,slow=44						
CMIG	**Matias Romero**	**19.35**	**291**	LR	LR	22 34 39.5	
	comp=Z,74nm,18.3s,baz=122,slow=41						
NNA	**Nana**	**22.64**	**182**	LR	LR	22 37 55.8	
	comp=Z,145nm,19.3s,baz=346,slow=44						
MDP	**Montagnes des**	**23.81**	**102**	LR	LR	22 36 55.9	
	comp=Z,66nm,20.1s,baz=268,slow=39						
TKL	**Tuckaleechee C**	**25.75**	**345**	LR	LR	22 36 19.9	
	comp=Z,45nm,21.1s,baz=174,slow=35						
LPAZ	**La Paz**	**28.00**	**164**	LR	LR	22 40 18.5	
	comp=Z,147nm,18.4s,baz=332,slow=40						
SADO	**Sadowa**	**33.97**	**356**	LR	LR	22 44 10.7	
	comp=Z,39nm,18.6s,baz=130,slow=40						
CPUP	**Villa Florida**	**41.12**	**154**	LR	LR	22 47 51.2	
	comp=Z,84nm,18.7s,baz=317,slow=38						
ULM	**Lac du Bonnet**	**42.63**	**341**	LR	LR	22 47 44.5	
	comp=Z,54nm,18.2s,baz=180,slow=37						
SCHQ	**Schefferville**	**44.53**	**8**	P	**P**	**22 29 34.0**	**+1.7**
	3.9nm,1.0s,baz=183,slow=12,SNR=2.8						
SCHQ				LR	LR	22 46 10.8	
	comp=Z,48nm,21.0s,baz=202,slow=34						
	3.9nm,1.0s						
FRB	**Frobisher Bay**	**53.15**	**4**	LR	LR	22 53 48.0	
	comp=Z,31nm,18.3s,baz=90,slow=37						
YKA	**Yellowknife Ar**	**58.59**	**340**	P	**P**	**22 31 17.9**	**+0.6**
	0.3nm,0.6s,baz=135,slow=6.2,SNR=5.9						
	0.3nm,0.6s						
SFJD	**Kangerlussuaq**	**58.68**	**11**	LR	LR	22 54 14.8	
	comp=Z,25nm,21.7s,baz=178,slow=34						
BORG	**Borgarnes**	**65.70**	**23**	LR	LR	22 56 15.3	
	comp=Z,27nm,21.6s,baz=237,slow=32						
INK	**Inuvik**	**68.36**	**340**	LR	LR	23 02 29.5	
	comp=Z,93nm,18.5s,baz=296,slow=36						
SPITS	**Spitsbergen Ar**	**80.01**	**12**	LR	LR	23 10 29.5	
	comp=Z,27nm,18.7s,baz=269,slow=37						
ASAR	**Alice Springs**	**148.77**	**242**	PKPbc	**PKPab**	**22 41 13.2**	**+0.5**
	0.6nm,0.8s,baz=113,slow=3.1,SNR=4.4						
WRA	**Warramunga Arr**	**149.40**	**249**	PKPbc	**PKPab**	**22 41 14.4**	**-0.9**
	0.2nm,0.6s,baz=96,slow=2.6,SNR=1.8						

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*NEIC **05** 22:22:04.0±2.9, 20°.8S±0°.1×178°.8W±0°.1, h594km±5km, mb4.0/5, Error ellipse: s-maj=20.5km s-min=17.7km az=161.0*
*IDC **05** 22:22:04.0±1.8, 20°.96S×178°.85W, h600km±19km, mb3.3/8, mbtmp4.2/10, Error ellipse: s-maj=24.3km s-min=18.2km az=111.0*
*NOU **05** 22:22:04.9, 20°.80S×178°.68W, h600km, MLv4.2/4, Fiji Islands Region*
ISC 05 22:22:05.1±0.6**, 20°.9S**±0°.1×**178°.9W**±0°.1**, h619**km**, n43,** σ1.52s/40**, mb3.8**/9**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**2.61**	**2**	P	**P**	**22 23 21.7**	**-2.2**
MSVF	**Nonsavu**	**4.23**	**317**	P	**P**	**22 23 32.4**	**-1.3**
	71nm,0.6s,baz=148,slow=10,SNR=45						
MSVF	**Nonsavu**	**4.23**	**317**	P	**P**	**22 23 32.8**	**-0.9**
TAVE	**Taveuni**	**4.23**	**347**	P	**P**	**22 23 32.4**	**-1.3**
DGTI	**Dogotuki**	**4.71**	**344**	P	**P**	**22 23 35.5**	**-1.6**
MARNC	**Mare, Loyalty**	**12.20**	**265**	P	**P**	**22 24 45.0**	**-0.8**
FUNA	**Funafuti**	**12.39**	**351**	P	**P**	**22 24 44.9**	**-2.9**
URZ	**Urewera**	**17.68**	**190**	P	**P**	**22 25 33.9**	**-2.8**
	3.7nm,0.3s,baz=225,slow=2.8,SNR=9.1						
RAR	**Rarotonga**	**17.87**	**95**	P	**P**	**22 25 37.3**	**-1.4**
THZ	**Tophouse**	**21.96**	**197**	P	**P**	**22 26 14.7**	**-0.6**
ASAR	**Alice Springs**	**43.61**	**257**	P	**P**	**22 29 17.3**	**+0.5**
	0.7nm,0.5s,baz=97,slow=7.4,SNR=5.1						
	0.7nm,0.5s						
WB0	**Warramunga Arr**	**43.69**	**263**	P	**P**	**22 29 17.5**	**+0.1**
WB0				IAmb	IAmb	22 29 30.2	
	comp=Z,7.7nm,1.3s						
WRA	**Warramunga Arr**	**43.71**	**263**	P	**P**	**22 29 17.9**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=96,slow=7.9,SNR=7.5						
	comp=Z,0.5nm,0.3s						
WRA	**Warramunga Arr**	**43.71**	**263**	P	**P**	**22 29 17.7**	**+0.1**
QSPA	**South Pole Qui**	**69.21**	**180**	P	**P**	**22 32 12.1**	**+0.9**
	comp=Z,3.1nm,0.7s,baz=346,slow=1.9,SNR=6.6						
	comp=Z,3.1nm,0.7s						
QSPA	**South Pole Qui**	**69.21**	**180**	P	**P**	**22 32 12.6**	**+1.4**
QSPA				IAmb	IAmb	22 32 13.2	
	comp=Z,7.4nm,1.1s						
PETK	**Petropavlovsk-**	**76.40**	**346**	P	**P**	**22 32 53.0**	**+1.0**
	comp=Z,3.6nm,0.7s,baz=120,slow=9.2,SNR=4.8						
	comp=Z,3.6nm,0.7s						
TXAR	**Lajitas Array**	**87.96**	**58**	P	**P**	**22 33 53.1**	**+2.1**
	comp=Z,0.3nm,0.8s,baz=191,slow=6.0,SNR=3.9						
	comp=Z,0.3nm,0.8s						
TXAR	**Lajitas Array**	**87.96**	**58**	P	**P**	**22 33 52.7**	**+1.7**
ILAR	**Eielson Array**	**88.85**	**13**	P	**P**	**22 33 54.1**	**0.0**
	comp=Z,0.6nm,0.4s,baz=216,slow=5.2,SNR=11						
	comp=Z,0.6nm,0.4s						
ILAR	**Eielson Array**	**88.85**	**13**	P	**P**	**22 33 54.3**	**+0.1**
CMAR	**Chiang Mai Arr**	**89.43**	**290**	P	**P**	**22 33 59.9**	**+2.0**
	comp=Z,1.5nm,0.3s,baz=125,slow=5.0,SNR=4.9						
	comp=Z,1.5nm,0.3s						
PD31	**Pinedale Array**	**89.80**	**44**	P	**P**	**22 34 00.1**	**+0.7**
PD31				IAmb	IAmb	22 34 29.4	
	comp=Z,1.5nm,1.1s						
PDAR	**Pinedale Array**	**89.80**	**44**	P	**P**	**22 34 00.3**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=223,slow=3.9,SNR=6.2						
	comp=Z,0.5nm,0.6s						
PDAR	**Pinedale Array**	**89.80**	**44**	P	**P**	**22 34 00.4**	**+1.0**
BVAR	**Borovoye Array**	**118.80**	**320**	PKP	**PKPdf**	**22 39 43.7**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=116,slow=2.0,SNR=6.7						
FINES	**FINESS Array B**	**135.87**	**343**	PKP	**PKPdf**	**22 40 14.9**	**-1.3**
	comp=Z,2.4nm,0.9s,baz=183,slow=3.2,SNR=5.2						
HFS	**Hagfors**	**139.75**	**350**	PKhKP	PKPpre	22 40 16.5	
	comp=Z,0.7nm,0.3s,baz=70,slow=4.9,SNR=14						
BORU	**Boraas**	**142.28**	**350**	*i* P	**PKPdf**	**22 40 24.9**	**-3.1**
ONAU	**Onsala**	**142.65**	**350**	*i* P	**PKPdf**	**22 40 26.2**	**-2.3**
AKASG	**Malin Array Be**	**142.90**	**330**	PKP	**PKPdf**	**22 40 27.5**	**-1.8**
	comp=Z,2.9nm,0.3s,baz=45,slow=4.2,SNR=22						
AKBB	**Malin Array Si**	**142.90**	**330**		**PKPdf**	**22 40 27.6**	**-1.6**
KIEV	**Kiev**	**142.92**	**330**	PKPpre	PKPpre	22 40 27.4	
BLEU	**Blekinge**	**142.94**	**346**	*i* P	**PKPdf**	**22 40 26.8**	**-2.3**
DEL	**Delary**	**143.19**	**348**	*i* P	PKPab	22 40 28.4	+0.6
BSD	**Bornholm Skovb**	**144.24**	**346**	*i* P	**PKPab**	**22 40 32.6**	**+0.7**
EKA	**Eskdalemuir Ar**	**145.43**	**4**	PKPbc	**PKPbc**	**22 40 35.3**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=355,slow=2.6,SNR=4.3						
BRTR	**Keskin Array B**	**146.44**	**311**	PKPbc	**PKPbc**	**22 40 39.2**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=117,slow=4.5,SNR=5.4						
BRTR	**Keskin Array B**	**146.44**	**311**		**PKPbc**	**22 40 39.1**	**+0.6**
BUR08	**Bucovina Ar. S**	**146.93**	**330**		**PKPbc**	**22 40 40.9**	**+1.4**
BURAR	**Bucovina Array**	**146.94**	**330**	PKPbc	**PKPbc**	**22 40 41.0**	**+1.5**
MMAI	**Mount Meron Ar**	**147.25**	**299**	PKPbc	**PKPbc**	**22 40 42.1**	**+1.4**
	comp=Z,0.5nm,0.5s,baz=52,slow=9.6,SNR=5.9						
GERES	**GERESS Array B**	**150.30**	**343**	PKPbc	**PKPbc**	**22 40 48.5**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=69,slow=5.7,SNR=2.7						

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*DJA **05** 22:24:14.5±0.3, 4°S±3°×13°0E±°, h155km±3km, M4.2/18, mB5.3/2, mb4.4/3, MLv4.1/18, Mw(mB)4.7/2*
*IDC **05** 22:24:16.0±2.4, 4°.38S×130°.30E, h172km±31km, mb2.9/1, mbtmp3.8/5, Error ellipse: s-maj=71.9km s-min=14.8km az=77.0*
ISC 05 22:24:12.8±0.8**, 4°.51S**±0°.06×**129°.84E**±0°.05**, h158**km±8km**, n17,** σ2.87s/26**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.07**	**99**	P	**Pn**	**22 24 36.0**	**+2.2**
BNDI				S	**Sn**	**22 24 51.5**	**+1.7**
MSAI	**Masohi**	**1.47**	**322**	P	**Pn**	**22 24 44.6**	**+1.9**
MSAI				S	**Sn**	**22 25 02.5**	**-3.1**
AAI	**Ambon**	**1.83**	**296**	P	**Pn**	**22 24 47.0**	**+0.5**
AAI				S	**Sn**	**22 25 10.3**	**-2.1**
KRAI	**Karang Ratu**	**1.86**	**309**	P	**Pn**	**22 24 48.1**	**+1.2**
FAKI	**Fak Fak**	**2.88**	**57**	P	**Pn**	**22 25 00.3**	**+1.3**
FAKI				S	**Sn**	**22 25 33.4**	**-1.4**
NLAI	**Namlea**	**3.01**	**295**	P	**Pn**	**22 25 02.7**	**+2.1**
NLAI				S	**Sn**	**22 25 37.8**	**+0.2**
SIJI	**Sorong**	**3.89**	**22**	P	**Pn**	**22 25 11.7**	**-0.2**
	48nm,0.4s,baz=42,slow=20,SNR=75						
SIJI				S	**Sn**	**22 25 52.8**	**-5.1**
	70nm,0.5s,baz=305,slow=23,SNR=41						
SIJI	**Sorong**	**3.89**	**22**	P	**Pn**	**22 25 11.8**	**-0.1**
SWI	**Sorong**	**3.89**	**21**	P	**Pn**	**22 25 12.0**	**+0.1**
KMPI	**Kaimana, Papua**	**3.95**	**78**	P	**Pn**	**22 25 13.8**	**+1.2**
SANI	**Sanana**	**4.55**	**302**	P	**Pn**	**22 25 20.0**	**-0.5**
RKPI	**Ransiki, Papua**	**5.26**	**56**	P	**Pn**	**22 25 30.2**	**+0.4**
	24μm157nm,0.6s						
MWPI	**Manokwari, Pap**	**5.50**	**50**	P	**Pn**	**22 25 35.7**	**+2.7**
	62nm,0.8s						
FITZ	**Fitzroy Crossi**	**14.11**	**197**	P	**P**	**22 27 30.6**	**+1.8**
	0.9nm,0.4s,baz=11,slow=13,SNR=2.4						
FITZ				S	**Sn**	**22 29 56.5**	**-6.1**
	0.6nm,0.3s,baz=37,slow=20,SNR=1.5						
WRA	**Warramunga Arr**	**15.95**	**164**	P	**P**	**22 27 49.9**	**+0.7**
	0.4nm,0.3s,baz=350,slow=12,SNR=16						
WRA				S	**S**	**22 30 38.8**	**-7.5**
	0.4nm,0.4s,baz=340,slow=22,SNR=5.6						
ASAR	**Alice Springs**	**19.44**	**169**	P	**Pn**	**22 28 31.9**	**+1.6**
	7.3nm,0.5s,baz=350,slow=11,SNR=119						
ASAR				S	**S**	**22 32 00.9**	**+2.1**
	0.8nm,0.6s,baz=347,slow=19,SNR=8.8						
MKAR	**Makanchi Array**	**66.07**	**326**	P	**P**	**22 34 45.4**	**+2.5**
	0.3nm,0.9s,baz=108,slow=9.3,SNR=5.1						
	0.3nm,0.9s						

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*RSNC **05** 23:01:05.5±0.0, 7°N±1°×7°3W±°, h143km±2km, M2.9, ML2.6*
*FUNV **05** 23:01:07.4, 6°.94N×73°.14W, h15km, MW3.6, Presumed earthquake*
ISC 05 23:01:03.9±1.3**, 6°.87N**±0°.03×**73°.11W**±0°.04**, h148**km±8km**, n31,** σ1.33s/61**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.29**	**194**	P	**Pn**	**23 01 24.8**	**+0.3**
BARC				S	**Sn**	**23 01 39.8**	**-0.4**
PAMC	**Pamplona, Colo**	**0.62**	**42**	P	**Pn**	**23 01 27.7**	**+1.4**
PAMC				S	**Sn**	**23 01 44.8**	**+1.5**
BRJC	**Barrancabermej**	**0.63**	**279**	P	**Pn**	**23 01 26.5**	**+0.7**
BRJC				S	**Sn**	**23 01 43.4**	**+1.0**
RUSC	**La Rusia**	**0.97**	**178**	P	**Pn**	**23 01 28.9**	**0.0**
RUSC				S	**Sn**	**23 01 47.3**	**-0.6**
CAPV	**Capacho**	**1.27**	**39**	*e*P	**Pn**	**23 01 32.0**	**+0.8**
CAPV				*e*S	**Sn**	**23 01 46.7**	**-5.4**
PTBC	**PUERTO BERRIO,**	**1.37**	**256**	P	**Pn**	**23 01 31.5**	**-0.5**
PTBC				S	**Sn**	**23 01 52.3**	**-1.2**
SPBC	**San Pablo de B**	**1.54**	**218**	P	**Pn**	**23 01 33.7**	**-0.2**
SPBC				S	**Sn**	**23 01 56.1**	**-0.7**
NORC	**Norcasia**	**2.18**	**233**	P	**Pn**	**23 01 41.1**	**0.0**
NORC				S	**Sn**	**23 02 08.7**	**-0.9**
CHIC	**Chingaza**	**2.31**	**195**	P	**Pn**	**23 01 43.2**	**+0.1**
CHIC				S	**Sn**	**23 02 12.6**	**-0.6**
ROSC	**El Rosal**	**2.35**	**211**	P	**Pn**	**23 01 44.6**	**+1.1**
ROSC				S	**Sn**	**23 02 15.6**	**+1.7**
HELC	**Santa Helena**	**2.49**	**254**	P	**Pn**	**23 01 46.4**	**+1.2**
HELC				S	**Sn**	**23 02 15.9**	**-1.1**
HELC	**Santa Helena**	**2.49**	**254**	*e*P	**Pn**	**23 01 47.4**	**+2.2**
HELC				*e*S	**Sn**	**23 02 16.2**	**-0.7**
CVER	**Cruz Verde, Cu**	**2.52**	**202**	P	**Pn**	**23 01 46.8**	**+1.1**
UREC	**San Jos de Ur**	**2.55**	**290**	P	**Pn**	**23 01 44.9**	**-0.7**
UREC				S	**Sn**	**23 02 16.8**	**-1.0**
SOCV	**Socops**	**2.64**	**58**	*e*P	**Pn**	**23 01 47.6**	**+0.9**
SOCV				*e*S	**Sn**	**23 02 19.1**	**-0.7**
GUY2C	**Guyana, Caldas**	**2.77**	**234**	P	**Pn**	**23 01 50.0**	**+1.2**
GUY2C				S	**Sn**	**23 02 23.0**	**-0.4**
VILC	**Villavicencio,**	**2.80**	**192**	P	**Pn**	**23 01 49.7**	**+0.8**
VILC				S	**Sn**	**23 02 22.4**	**-1.2**
CBOC	**Ciudad Bolivar**	**3.05**	**251**	P	**Pn**	**23 01 53.5**	**+1.5**
CBOC				S	**Sn**	**23 02 29.2**	**0.0**
DBBC	**Dabeiba**	**3.08**	**273**	P	**Pn**	**23 01 52.9**	**+0.6**
DBBC				S	**Sn**	**23 02 29.2**	**-0.4**
SDV	**Santo Domingo**	**3.17**	**51**	P	**Pn**	**23 01 54.5**	**+0.9**
SDV				S	**Sn**	**23 02 31.6**	**-0.3**
SDV	**Santo Domingo**	**3.17**	**51**	*e*P	**Pn**	**23 01 54.8**	**+1.2**
SDV				*e*S	**Sn**	**23 02 31.6**	**-0.3**
ARGC	**Ariguani, Magd**	**3.17**	**339**	P	**Pn**	**23 01 56.2**	**+2.8**
ARGC				S	**Sn**	**23 02 34.7**	**+3.0**
APAC	**Apartado, Choc**	**3.58**	**287**	P	**Pn**	**23 01 59.1**	**+0.4**
APAC				S	**Sn**	**23 02 40.8**	**-0.4**
PRAC	**Prado**	**3.60**	**209**	P	**Pn**	**23 01 59.0**	**0.0**
PRAC				S	**Sn**	**23 02 41.4**	**-0.3**
ORTC	**Ortega, Tolima**	**3.63**	**216**	P	**Pn**	**23 01 59.8**	**+0.4**
ORTC				S	**Sn**	**23 02 41.8**	**-0.6**
SJCC	**San Jacinto, C**	**3.63**	**326**	P	**Pn**	**23 01 58.9**	**-0.5**
SJCC				S	**Sn**	**23 02 40.6**	**-1.9**
SJCC	**San Jacinto, C**	**3.63**	**326**	*e*P	**Pn**	**23 02 00.1**	**+0.7**
SJCC				*e*S	**Sn**	**23 02 41.0**	**-1.5**
PLMC	**San Jos del P**	**3.71**	**238**	P	**Pn**	**23 02 00.6**	**+0.2**
PLMC				S	**Sn**	**23 02 43.0**	**-1.2**
URMC	**La Uribe, Meta**	**3.82**	**199**	P	**Pn**	**23 02 02.1**	**+0.3**
URMC				S	**Sn**	**23 02 45.7**	**-1.1**
CRJC	**Cerrejon, Guaj**	**4.13**	**3**	P	**Pn**	**23 02 05.5**	**-0.4**
CRJC				S	**Sn**	**23 02 52.4**	**-1.7**
SMRC	**Santa Marta, M**	**4.40**	**346**	P	**Pn**	**23 02 11.0**	**+1.6**
SMRC				S	**Sn**	**23 02 58.3**	**-2.1**

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*SNET **05** 23:20:45.9±6.3, 14°.11N×91°.99W, h10km, ML3.8, Presumed earthquake*
*CATAC **05** 23:20:47.5±0.7, 14°N±3°×9°2W±°, h29km±4km, M3.8/11, MLv3.8/11, Error ellipse: s-maj=8.3km s-min=3.7km az=33.2, confirmed*
*GCG **05** 23:20:49.2±1.6, 14°.16N×91°.86W, h49km±26km, MD4.1, ML4.0, Presumed earthquake*
ISC 05 23:20:48.8±2.2**, 14°.1N**±0°.1×**91°.9W**±0°.1**, h46**km±21km**, n24,** σ1.84s/35**, Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.51**	**24**	P	**Pn**	**23 20 60.0**	**-0.1**
RTAL				S	**Sn**	**23 21 08.4**	**+0.3**
RTAL	**Retalhuleu**	**0.51**	**24**	*e*P	**Pn**	**23 21 00.0**	**-0.1**
RTAL				*e*S	**Sn**	**23 21 08.9**	**+0.8**
STG2	**El Palmar, Qui**	**0.64**	**53**	*i* P	**Pn**	**23 21 01.9**	**0.0**
STG2				IAML		23 21 16.9	
	comp=N,6μm,0.2s						
STG5	**El Palmar, Qui**	**0.64**	**57**	*i* P	**Pn**	**23 21 01.8**	**0.0**
STG8	**El Palmar, Qui**	**0.67**	**54**	*i* P	**Pn**	**23 21 02.5**	**+0.2**
STG8				IAML		23 21 15.9	
	comp=E,5μm,0.2s						
SMCA	**Catarina**	**0.82**	**348**	*i* P	**Pn**	**23 21 02.5**	**-1.6**
QUEO	**Labor Ovalle**	**0.90**	**25**	*i* P	**Pn**	**23 21 05.2**	**-0.2**
QUEO				*i* S	**Sn**	**23 21 17.8**	**+0.3**
QUEO				IAML		23 21 19.3	
	comp=E,4μm,0.1s						
SOKI	**Kika Raxquin**	**0.91**	**32**	*i* P	**Pn**	**23 21 05.3**	**-0.3**
HUEH	**Huehuetenango**	**1.32**	**17**	P	**Pn**	**23 21 11.6**	**+0.5**
HUEH				S	**Sn**	**23 21 29.5**	**+1.9**
FG8	**Yepocapa, Chim**	**1.32**	**81**	*i* P	**Pn**	**23 21 06.9**	**-4.1**
FG16	**Alotenango, Sa**	**1.37**	**81**	*i* P	**Pn**	**23 21 08.0**	**-3.7**
FG16				IAML		23 21 30.4	
	comp=N,8μm,0.2s						
PCG5	**San Vicente Pa**	**1.49**	**84**	*i* P	**Pn**	**23 21 10.7**	**-2.7**
PCG5				*i* S	**Sn**	**23 21 25.8**	**-6.0**
PCG5				IAML		23 21 35.0	
	comp=N,2μm,0.3s						
APG	**El Apazote**	**1.69**	**56**	*i* P	**Pn**	**23 21 17.5**	**+1.4**
FAME	**Alcaldia de Sa**	**1.85**	**96**	P	**Pn**	**23 21 18.8**	**+0.7**
NUBE	**Las Nubes**	**2.07**	**94**	P	**Pn**	**23 21 22.3**	**+1.1**
NUBE	**Las Nubes**	**2.07**	**94**	*i* P	**Pn**	**23 21 21.7**	**+0.4**
NUBE				*i* S	**Sn**	**23 21 45.6**	**-0.4**
NUBE	**Las Nubes**	**2.07**	**94**	*e*P	**Pn**	**23 21 22.9**	**+1.6**
NUBE				*e*S	**Sn**	**23 21 46.1**	**+0.2**
SBLS	**San Blas**	**2.23**	**95**	*e*P	**Pn**	**23 21 25.0**	**+1.5**
SBLS				*e*S	**Sn**	**23 21 51.9**	**+1.9**
SNJE	**San Jose**	**2.24**	**94**	*e*P	**Pn**	**23 21 25.1**	**+1.4**
JAYA	**Jayaque - finc**	**2.42**	**99**	P	**Pn**	**23 21 26.6**	**+0.5**
JAYA	**Jayaque - finc**	**2.42**	**99**	*i* P	**Pn**	**23 21 26.5**	**+0.5**
JAYA				*i* S	**Sn**	**23 21 54.8**	**+0.2**
JAYA				IAML		23 22 01.8	
	comp=N,1μm,0.3s						
JAYA	**Jayaque - finc**	**2.42**	**99**	*e*P	**Pn**	**23 21 27.2**	**+1.1**
JAYA				*e*S	**Sn**	**23 21 55.2**	**+0.6**
PMON	**Piamonte**	**2.54**	**97**	P	**Pn**	**23 21 29.2**	**+1.5**
PMON				S	**Sn**	**23 21 59.4**	**+1.9**
TGIG		**2.95**	**337**	*i* P	**Pn**	**23 21 32.5**	**-0.9**

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*PGC **05** 23:22:28.9±3.8, 50°.99N×130°.29W, h10km, MLSn3.6/27, Mw4.0, 198km west of Port Hardy, Bc Vancouver Island, Canada Region*
*NEIC **05** 23:22:28.0±2.3, 51°.23N±0°.08×130°.1W±0°.1, h10km±2km, mb3.8/12, Mwr4.0(OTT), Error ellipse: s-maj=16.9km s-min=8.1km az=218.0*
*NEIC **05** 23:22:28.9, 50°.99N×130°.29W, h7km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.94; $M_{\theta\theta}$0.06; $M_{\phi\phi}$0.93; $M_{r\theta}$0.42; $M_{\theta\phi}$0.56; $M_{\phi r}$-0.64; Fault plane solution: $M_0$1.30000×10^{15} NP1:ϕ_s232.00000°, δ42.00000°, λ-45.00000°. NP2:ϕ_s359.00000°, δ62.00000°, λ-122.00000°. Principal axes: T 1.2678, Plg11.0000°, Azm111.0000°; N 0.1227, Plg28.0000°, Azm15.0000°; P -1.3906, Plg60.0000°, Azm221.0000°;*
*IDC **05** 23:22:31.0±2.2, 51°.09N×129°.80W, h0km, mb3.1/1, mbtmp3.4/5, ML3.6/3, MS3.2/12 Error ellipse: s-maj=29.6km s-min=20.0km az=43.0*
ISC 05 23:22:28.5±2.8**, 51°.04N**±0°.06×**130°.24W**±0°.06**, h15**km±18km**, n101,** σ1.32s/97**, MS3.1**/5**, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HG4B	**Hotspring**	**1.39**	**335**	Pn	**Pn**	**23 22 49.0**	**-4.2**
JEDB	**Jedway, Haida**	**1.39**	**335**	P	**Pn**	**23 22 52.8**	**-0.5**
HOLB	**Holberg**	**1.39**	**106**	Pn	**Pn**	**23 22 52.3**	**-1.1**
HOLB	**Holberg**	**1.39**	**106**	P	**Pn**	**23 22 52.2**	**-1.1**
HOLB				S	**Sb**	**23 23 10.4**	**-1.4**
BBB	**Bella Bella**	**1.75**	**48**	Pn	**Pn**	**23 22 57.6**	**-0.6**

	11nm,0.3s,baz=219,slow=5.0,SNR=36						
BBB				Sn	Sg	23 23 25.9	+1.1
	101nm,0.3s,baz=133,slow=19,SNR=7.5						
BBB	Bella Bella	1.75	48	Pn	Pn	23 22 56.5	-1.7
BBB	Bella Bella	1.75	48	Pn	Pn	23 22 57.4	-0.8
BAIB	Barry Inlet	1.80	329	Pn	Pn	23 22 58.7	-0.3
BPEB	Brooks Peninsu	1.81	119	Pn	Pn	23 22 57.4	-1.7
BPEB				Sn	Sn	23 23 20.4	-1.3
PHC	Port Hardy	1.81	100	Pn	Pn	23 22 58.3	-0.7
PHC				Sn	Sn	23 23 20.4	-1.2
PACB	Port Alice, BC	1.85	108	Pn	Pn	23 22 58.8	-0.8
PACB				Sn	Sn	23 23 21.1	-1.5
FHBB	Fair Harbour	2.22	115	Pn	Pn	23 23 03.3	-1.4
FHBB				Sn	Sn	23 23 30.0	-1.8
MOBC	Moresby Island	2.36	334	Pn	Pn	23 23 03.7	-3.0
MOBC	Moresby Island	2.36	334	Pn	Pn	23 23 05.7	-1.0
MOBC				Sn	Sn	23 23 35.1	-0.2
GRIB	Gribbell Islan	2.40	16	Pn	Pn	23 23 06.4	-0.8
BNAB	Bonilla	2.47	354	Pn	Pn	23 23 08.5	+0.4
WOSB	Woss	2.50	109	Pn	Pn	23 23 08.1	-0.5
WOSB				Sn	Sn	23 23 37.5	-1.3
TAHB	Tahsis	2.55	115	Pn	Pn	23 23 08.2	-1.1
DIB	Dawson Inlet,	2.56	328		Pn	23 23 07.9	-1.6
DIB	Dawson Inlet,	2.56	328	Pn	Pn	23 23 10.2	+0.8
NCSB	Newcastle Ridg	2.73	102	Pn	Pn	23 23 11.7	-0.1
NTKA	Nootka	2.74	121	Sn	Sn	23 23 43.0	-1.6
GRNB	Grenville Isla	2.81	3	Pn	Pn	23 23 12.2	-0.7
GDR	Gold River	2.97	114	Pn	Pn	23 23 14.4	-0.6
PCLB	Port Clements	3.02	333	Pn	Pn	23 23 16.3	+0.5
CBB	Campbell River	3.27	106	Pn	Pn	23 23 19.2	+0.1
CBB	Campbell River	3.27	106	Pn	Pn	23 23 18.7	-0.4
RUBB	Prince Rupert	3.29	360	Pn	Pn	23 23 17.0	-2.4
RUBB	Prince Rupert	3.29	360	Pn	Pn	23 23 20.1	+0.8
RUBB				Sn	Sn	23 23 57.0	-1.1
MYRA	Myra Falls	3.34	115	Pn	Pn	23 23 19.9	-0.3
MYRA				Sn	Sn	23 23 58.2	-1.4
B927	Port Alberni	3.94	116	Pn	Pn	23 23 28.2	-0.1
TXDB	Texada	3.95	108	Pn	Pn	23 23 28.3	-0.2
MGRB	Mount Grey	4.12	118	Pn	Pn	23 23 30.5	-0.4
SHB	Sechelt	4.33	107	Pn	Pn	23 23 33.9	+0.1
V35K	Ketchikan	4.37	350	Pn	Pn	23 23 32.0	-2.2
PTRF	Port Renfrew	4.53	121	Pn	Pn	23 23 37.1	+0.7
CLRS	Cowichan Lake	4.53	117	Pn	Pn	23 23 36.7	+0.3
CLRS	Cowichan Lake	4.53	117	Pn	Pn	23 23 36.5	+0.1
WPB	Watts Point	4.71	104	Pn	Pn	23 23 38.5	-0.4
WSLR	Whistler	4.75	98	Pn	Pn	23 23 39.7	+0.1
CRAG	Craig	4.76	340	Pn	Pn	23 23 38.0	-1.5
C03A	Quillayute Air	4.82	128	Pn	Pn	23 23 40.5	0.0
SYMB	Survey Mountai	4.85	118	Pn	Pn	23 23 41.1	+0.1
FSJB	Fort St James	4.97	44	Pn	Pn	23 23 43.4	+0.8
PGC	Sidney	5.00	116	Pn	Pn	23 23 42.2	-0.7
SNB	Saturna Island	5.10	114	Pn	Pn	23 23 45.1	+0.8
LLLB	Lillooet	5.31	91	Pn	Pn	23 23 45.1	-2.2
LLLB	Lillooet	5.31	91	Pn	Pn	23 23 47.5	+0.3
OSD	Olympics--Snow	5.35	125	Pn	Pn	23 23 47.9	0.0
U33K	Whale Pass	5.36	342	Pn	Pn	23 23 46.1	-1.7
A04D	Lummi Island	5.39	113	Pn	Pn	23 23 47.9	-0.4
NLWA	Neilton Lookou	5.55	129	Pn	Pn	23 23 51.6	+1.2
VDEB	Vedder Mountai	5.63	108	Sn	Sn	23 24 54.7	-1.3
HDW	Hoodsport	5.79	123	Pn	Pn	23 23 54.4	+0.5
JCW	Jim Creek	6.11	115	Pn	Pn	23 23 59.2	+1.0
RADR	Rader Ridge	6.29	135	Pn	Pn	23 24 01.2	+0.6
S34M	Telegraph Cree	6.90	356	Pn	Pn	23 24 07.3	-1.6
FMW	Mount Fremont	6.98	123	Pn	Pn	23 24 11.2	+0.9
LON	Longmire	7.02	124	Pn	Pn	23 24 11.9	+1.2
LON	Longmire	7.02	124	Pn	Pn	23 24 11.5	+0.8
NBC8	Simpson Ranch	7.22	37	Pn	Pn	23 24 14.7	+1.3
LTY	Liberty	7.33	117	Pn	Pn	23 24 16.9	+2.0
DLBC	Dease Lake	7.41	1	Pn	Pn	23 24 21.1	+5.1
	0.7nm,0.3s,baz=176,slow=16,SNR=5.3						
DLBC				LR	LR	23 27 18.0	
	comp=Z,231nm,19.8s,baz=328,slow=39						
	1.3nm,0.5s						
EPH	Ephrata	7.89	114	Pn	Pn	23 24 23.3	+0.7
H04A	Detroit Lake	8.35	137	Pn	Pn	23 24 29.9	+1.0
NEW	Newport	8.95	103	LR	LR	23 28 03.5	
	comp=Z,136nm,20.7s,baz=289,slow=38						
F10A	Beach Ranch, E	10.01	115	Pn	Pn	23 24 52.5	+0.8
YBH	Yreka Blue Hor	10.66	148	LR	LR	23 28 35.9	
	comp=Z,6.7nm,18.3s,baz=320,slow=35						
PLID	Pearl Lake	11.23	117	Pn	Pn	23 25 09.7	+1.2
HLID	Hailey	13.07	119		Pn	23 25 34.7	+1.0
YKA	Yellowknife Ar	14.27	31	Pn	Pn	23 25 47.9	-1.8
	0.1nm,0.3s,baz=230,slow=12,SNR=6.8						
	0.5nm,0.8s						
YKA	Yellowknife Ar	14.27	31	Pn	Pn	23 25 47.8	-1.9
YKAW3	Yellowknife Wh	14.32	30	Pn	Pn	23 25 47.6	-2.8
KDAK	Kodiak Island	14.61	306	LR	LR	23 29 55.4	
	comp=Z,180nm,21.6s,baz=110,slow=30						
ELK	Elko	14.64	129	LR	LR	23 31 47.6	
	comp=Z,77nm,20.7s,baz=328,slow=38						
MOOW	Moose Ponds	15.05	111	P	P	23 26 04.5	-1.5
NVAR	Mina Array Bea	15.17	142	LR	LR	23 31 43.8	
	comp=Z,84nm,20.8s,baz=280,slow=37						
LOHW	Long Hollow	15.22	112	P	Pn	23 26 04.8	+1.9
LOHW				IAmb	IAmb	23 26 13.0	
	comp=Z,5.0nm,1.2s						
DUG	Dugway, Tooele	16.27	125	P	Pn	23 26 16.6	+0.1
ILAR	Eielson Array	16.27	334	Pn	P	23 26 21.9	+2.8
	comp=Z,1.2nm,0.9s,baz=142,slow=11,SNR=10						
ILAR				LR	LR	23 31 35.7	
	comp=Z,104nm,20.0s,baz=83,slow=33						
BW06	Boulder Array	16.34	112	P	Pn	23 26 18.0	+0.6
PD31	Pinedale Array	16.34	112	P	Pn	23 26 18.0	+0.6
PDAR	Pinedale Array	16.34	112	Pn	P	23 26 21.6	+1.3
	comp=Z,0.1nm,0.3s,baz=310,slow=13,SNR=12						
PDAR				LR	LR	23 32 27.3	
	comp=Z,33nm,19.6s,baz=322,slow=37						
	comp=Z,2.0nm,0.8s						
PDAR	Pinedale Array	16.34	112	P	Pn	23 26 17.7	+0.4
L19K	White Mountain	17.42	319	P	P	23 26 32.0	+0.1
L19K				IAmb	IAmb	23 26 39.5	
	comp=Z,7.3nm,1.0s						
K20K	Telida	17.71	323	P	Pn	23 26 33.9	-0.4
I21K	Tanana	18.09	330	P	Pn	23 26 38.2	-0.6
I21K				IAmb	IAmb	23 26 52.9	
	comp=Z,7.9nm,1.1s						
J19K	Poorman	18.64	324	P	P	23 26 44.8	-0.4
J19K				IAmb	IAmb	23 26 52.5	
	comp=Z,8.2nm,1.1s						
J18K	Innoko River	18.79	322	P	P	23 26 46.8	-0.2
J18K				IAmb	IAmb	23 26 51.1	
	comp=Z,8.5nm,1.2s						
F20K	Avaraart Lake	20.46	331	P	P	23 27 05.2	+0.1
E19K	Redstone River	21.18	331	P	P	23 27 12.6	-0.3
X16A	Lo Mia Camp, P	21.50	133	P	P	23 27 16.2	-0.6
X16A				IAmb	IAmb	23 27 25.8	
	comp=Z,4.5nm,1.0s						
ULM	Lac du Bonnet	21.69	79	LR	LR	23 36 04.7	
	comp=Z,77nm,20.9s,baz=204,slow=38						
TKL	Tuckaleechee C	36.47	97	LR	LR	23 45 23.0	
	comp=Z,77nm,18.2s,baz=344,slow=38						
SFJD	Kangerlussuaq	40.72	36	LR	LR	23 47 57.8	
	comp=Z,58nm,19.2s,baz=333,slow=38						
PETK	Petropavlovsk-	42.61	302	LR	LR	23 47 10.9	
	comp=Z,22nm,19.3s,baz=168,slow=35						
MA2	Magadan	43.20	313	LR	LR	23 47 03.4	
	comp=Z,24nm,18.3s,baz=75,slow=34						
H11N2	WAKE ISLAND Hy	57.89	262	T	T	00 34 51.9	
	baz=41,SNR=65						
H11N3	WAKE ISLAND Hy	57.90	262	T	T	00 34 51.9	
	baz=41,slow=74,SNR=70						
H11N1	WAKE ISLAND Hy	57.91	262	T	T	00 34 55.3	
	baz=41,slow=74,SNR=50						
MKAR	Makanchi Array	78.59	338	P	P	23 34 33.6	+4.5
	comp=Z,0.1nm,0.7s,baz=5.7,slow=5.8,SNR=1.5						
	comp=Z,0.1nm,0.7s						

*NEIC **05** 23:53:19.3±1.4, 18°.48S±0°.04×168°.9E±0°.2, h114km±18km, mb4.6/9, Error ellipse: s-maj=25.1km s-min=6.3km az=93.0*

*IDC **05** 23:53:20.0±4.5, 18°.56S×168°.90E, h121km±43km, mb3.9/7, mbtmp4.3/8, Error ellipse: s-maj=55.1km s-min=31.9km az=145.0*

*NOU **05** 23:53:22.8, 18°.48S×168°.69E, h102km, MLv4.3/13, Vanuatu Islands*

ISC 05 23:53:21.9±1.0, **18°.49S**±0°.05×**168°.8E**±0°.1, **h150**km, **n31**, σ**2.34**/35, **mb4.4**/12, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	0.78	333	P	Pn	23 53 41.7	-3.3
DVP	Devils Point	0.96	322	P	Pn	23 53 43.3	-3.1
INH	Isangel	1.14	157	P	Pn	23 53 46.6	-1.3
MARNC	Mare, Loyalty	3.06	194	P	Pn	23 54 07.9	-2.1
MARNC	Mare, Loyalty	3.06	194		Pn	23 54 07.2	-2.8
MARNC				Sn	Sn	23 54 41.9	-5.4
SANVU	Saraoutou	3.39	333	P	Pn	23 54 11.8	-2.5
SANVU	Saraoutou	3.39	333		Pn	23 54 11.5	-2.8
YATNC	Mamie plateau,	3.98	206	P	Pn	23 54 21.1	-0.8
DZM	Mont Dzumac	4.19	211	P	Pn	23 54 24.0	-0.8
	31nm,0.4s,baz=54,slow=14,SNR=87						
DZM				S	Sn	23 55 09.9	-3.8
	98nm,0.5s,baz=132,slow=23,SNR=18						
DZM	Mont Dzumac	4.19	211	P	Pn	23 54 24.2	-0.6
DZM	Mont Dzumac	4.19	211		Pn	23 54 23.3	-1.5
DZM					Sn	23 55 10.7	-3.0
ONTNC	Ouen Toro	4.39	210		Pn	23 54 24.4	-2.8
ONTNC				Sn	Sn	23 55 15.4	-2.8
NGOA	Tingoa Renbel	10.90	308	P	Pn	23 55 55.5	+1.7
SAVO	Savo Central	12.74	316	P	P	23 56 20.6	-2.5
TATA	Tatamba Isabel	13.32	318	P	P	23 56 25.7	-3.8
CTA	Charters Tower	21.34	262	P	P	23 57 59.2	+1.8
	4.1nm,0.7s,baz=90,slow=11,SNR=5.7						
	4.1nm,0.7s						
STKA	Stephens Creek	27.90	236	P	P	23 59 00.4	+2.5
	6.8nm,0.6s,baz=66,slow=8.6,SNR=24						
	6.8nm,0.6s						
STKA	Stephens Creek	27.90	236	P	P	23 59 00.5	+2.6
WRA	Warramunga Arr	32.54	262	P	P	23 59 38.8	-0.2
	1.4nm,0.6s,baz=80,slow=6.1,SNR=18						
WRA				PcP	PcP	00 02 22.3	+0.1
	0.4nm,0.7s,baz=94,slow=4.6,SNR=2.2						
	1.4nm,0.6s						
WRA	Warramunga Arr	32.54	262	P	P	23 59 39.1	+0.2
BBOO	Buckleboo	32.63	238	P	P	23 59 41.4	+1.8
BBOO				IAmb	IAmb	23 59 42.2	
	comp=Z,12nm,0.7s						
AS31	Alice Springs	32.91	255	P	P	23 59 43.2	+1.0
ASAR	Alice Springs	32.91	255	P	P	23 59 43.2	+1.0
	comp=Z,12nm,0.4s,baz=83,slow=8.7,SNR=197						
	comp=Z,12nm,0.4s						
KNRA	Kununurra	38.32	268	P	P	00 00 29.2	+0.9
KNRA				IAmb	IAmb	00 00 29.6	
	comp=Z,7.6nm,0.6s						
FORT	Forrest	38.80	244	P	P	00 00 32.6	+0.4
FORT				IAmb	IAmb	00 00 51.5	
	comp=Z,9.0nm,1.1s						
FAKI	Fak Fak	38.98	289	P	P	00 00 34.6	+0.7
FAKI				IAmb	IAmb	00 00 35.6	
	comp=Z,8.2nm,0.8s						
PSA00	Pilbara Seismi	45.95	258	P	P	00 01 31.1	+1.0
MBWA	Marble Bar	46.10	258	P	P	00 01 32.7	+1.4
MBWA				IAmb	IAmb	00 01 33.9	
	comp=Z,9.0nm,1.1s						
CMAR	Chiang Mai Arr	77.82	294	P	P	00 05 06.5	+3.3
	comp=Z,0.9nm,0.3s,baz=116,slow=5.4,SNR=7.2						
	comp=Z,0.9nm,0.3s						
SONM	Songino Array	86.38	323	P	P	00 05 49.4	+2.1
	comp=Z,1.2nm,0.9s,baz=141,slow=5.6,SNR=5.4						
	comp=Z,1.2nm,0.9s						
ILAR	Eielson Array	89.64	17	P	P	00 06 03.0	+0.8
	comp=Z,0.5nm,0.9s,baz=216,slow=6.1,SNR=4.1						
	comp=Z,0.5nm,0.9s						

*IDC **06** 00:02:54.4±1.4, 5°.81S×146°.36E, h0km, mb3.7/5, mbtmp3.7/8, ML3.5/2, MS3.0/3, Error ellipse: s-maj=44.4km s-min=21.5km az=94.0*

ISC 06 00:03:01.0±1.0, **5°.94S**±0°.09×**146°.4E**±0°.2, **h52**km, **n9**, σ**0.32**/9, **mb4.0**/5, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.54	167	Pn	Pn	00 03 53.2	-0.3
	18nm,0.4s,baz=347,slow=14,SNR=8.5						
PMG				Sn	Sn	00 04 34.5	+0.4
	9.0nm,0.3s,baz=353,slow=21,SNR=1.6						
CTA	Charters Tower	14.07	180	Pn	Pn	00 06 17.8	+0.1
	0.2nm,0.3s,baz=0.0,slow=15,SNR=1.7						
CTA				LR	LR	00 11 56.0	
	comp=Z,77nm,18.2s,baz=39,slow=38						
	0.7nm,0.3s						
SIJI	Sorong	15.89	288	LR	LR	00 13 32.5	
	comp=Z,52nm,18.4s,baz=94,slow=40						
WRA	Warramunga Arr	18.18	219	P	P	00 07 09.4	-0.2
	0.1nm,0.3s,baz=42,slow=11,SNR=7.6						
	1.0nm,0.8s						
ASAR	Alice Springs	21.32	213	P	P	00 07 43.5	-0.3
	0.3nm,0.3s,baz=37,slow=12,SNR=21						
	0.3nm,0.3s						
KSRS	Korea Array	46.47	340	P	P	00 11 23.0	0.0
	0.8nm,0.3s,baz=154,slow=9.5,SNR=2.6						
	0.8nm,0.3s						
CMAR	Chiang Mai Arr	52.66	298	P	P	00 12 10.6	0.0
	1.2nm,0.3s,baz=104,slow=7.1,SNR=1.7						
CMAR				LR	LR	00 36 51.2	
	comp=Z,9.9nm,18.1s,baz=200,slow=39						
	1.2nm,0.3s						
MKAR	Makanchi Array	77.05	321	P	P	00 14 49.1	+0.4
	0.1nm,0.5s,baz=101,slow=6.0,SNR=2.1						
	0.1nm,0.5s						
ILAR	Eielson Array	85.67	23	P	P	00 15 33.8	-0.2
	0.9nm,0.8s,baz=246,slow=5.5,SNR=7.7						
	0.9nm,0.8s						

*NEIC **06** 00:25:01.9±2.4, 21°.58N±0°.08×143°.2E±0°.1, h283km±6km, mb4.2/21, Error ellipse: s-maj=18.3km s-min=11.9km az=77.0*

*IDC **06** 00:25:02.3±1.7, 21°.62N×143°.17E, h292km±15km, mb3.4/23, mbtmp4.1/26, Error ellipse: s-maj=15.7km s-min=10.8km az=79.0*

ISC 06 00:25:04.4±0.6, **21°.73N**±0°.07×**143°.1E**±0°.1, **h311**km, **n63**, σ**1.22**/69, **mb3.8**/29, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	5.41	351	P	Pn	00 26 25.8	-1.3
	115nm,0.4s,baz=257,slow=6.5,SNR=14						
JCJ				S	S	00 27 31.7	-1.9
	112nm,0.3s,baz=134,slow=23,SNR=6.9						
JCJ	Chichijima	5.41	351		Pn	00 26 26.2	-0.8
JCJ				Sn	S	00 27 31.7	-1.9
JHJ2	Mitsune	11.71	346	Pn	Pn	00 27 42.5	-0.6
JMN	Monobe	14.47	328	Pn	Pn	00 28 17.2	+1.0
INU	Inuyama	14.58	340		P	00 28 17.6	+1.4
JGF	Kuroka	14.71	341	P	P	00 28 18.5	+0.8
MJAR	Matsushiro Arr	15.37	345	P	P	00 28 25.6	+0.7
	4.6nm,0.5s,baz=169,slow=10,SNR=14						
MJAR	Matsushiro Arr	15.37	345	P	P	00 28 25.1	+0.3
MJAR				IAmb	IAmb	00 28 39.5	
	comp=Z,5.2nm,1.1s						
MAJO	Matsushiro	15.37	345	P	P	00 28 24.3	-0.6
MJB9	Matsu-Tunnel	15.37	345	P	P	00 28 24.9	0.0
MJB9				IAmb	IAmb	00 28 36.0	
	comp=Z,22nm,1.1s						
JNU	Nakatsue	15.69	319	P	P	00 28 30.1	+1.6
	comp=Z,2.5nm,0.3s,baz=117,slow=6.8,SNR=2.3						
NACB	Ninganchiao	19.96	281	P	P	00 29 14.7	+0.3
KSRS	Korea Array	20.45	323	P	P	00 29 20.5	+1.4
	comp=Z,2.2nm,0.5s,baz=146,slow=8.1,SNR=9.0						
KSRS				S	S	00 32 42.6	-5.8
	comp=Z,0.4nm,0.3s,baz=307,slow=22,SNR=1.4						
	comp=Z,2.2nm,0.5s						
SSLB	Suanglung	20.54	280	P	P	00 29 19.0	-1.2
SSLB				IAmb	IAmb	00 29 35.5	
	comp=Z,17nm,1.0s						
USRK	Ussuriysk Ar.	24.23	340	P	P	00 29 54.1	+0.5
	comp=Z,1.4nm,0.6s,baz=159,slow=12,SNR=2.1						
	comp=Z,1.4nm,0.6s						
LZDM	Lanzhou Array	37.06	301	P	P	00 31 47.1	+1.1
	comp=Z,2.9nm,0.4s,baz=126,slow=10.0,SNR=8.6						
	comp=Z,2.9nm,0.4s						
SONM	Songino Array	39.27	320	P	P	00 32 05.0	+1.1
	comp=Z,0.6nm,0.3s,baz=128,slow=7.2,SNR=8.6						
	comp=Z,0.6nm,0.3s						
SONM	Songino Array	39.27	320	P	P	00 32 04.7	+0.9
KNRA	Kununurra	39.75	202	P	P	00 32 06.1	-1.8
KNRA				IAmb	IAmb	00 32 06.3	
	comp=Z,5.1nm,1.0s						
CMAR	Chiang Mai Arr	41.51	274	P	P	00 32 23.1	+0.8
	comp=Z,1.8nm,0.3s,baz=82,slow=6.2,SNR=9.1						
	comp=Z,1.8nm,0.3s						
WB0	Warramunga Arr	42.12	192	P	P	00 32 25.2	-1.8
WB0				IAmb	IAmb	00 32 26.2	
	comp=Z,3.4nm,0.5s						
WR8	Warramunga Arr	42.28	192	P	P	00 32 26.3	-2.0
WRA	Warramunga Arr	42.30	192	P	P	00 32 26.7	-1.8
	comp=Z,3.0nm,0.5s,baz=17,slow=8.7,SNR=56						
	comp=Z,3.0nm,0.5s						
KULM	Kulim	44.21	255	P	P	00 32 44.4	+0.6
ASAR	Alice Springs	46.01	192	P	P	00 32 55.9	-1.8
	comp=Z,0.7nm,0.4s,baz=17,slow=12,SNR=23						
	comp=Z,0.7nm,0.4s						
EVN	Everest	51.09	289		P	00 33 37.3	+0.4
EVN				IAmb	IAmb	00 33 38.7	
	comp=Z,7.9nm,0.5s						
ZALV	Zalesovo Beam	54.15	322	P	P	00 33 58.3	+0.3
	comp=Z,1.0nm,0.5s,baz=103,slow=8.5,SNR=7.0						
ZALV				PcP	PcP	00 34 57.8	-0.5
	comp=Z,2.3nm,0.4s,baz=124,slow=4.1,SNR=13						
	comp=Z,1.0nm,0.5s						
ZALV	Zalesovo Beam	54.15	322	P	P	00 33 57.7	-0.3
L14K	Kuka Creek	54.22	29	P	P	00 33 59.1	+0.8
L14K				IAmb	IAmb	00 34 00.8	
	comp=Z,5.9nm,1.2s						
M14K	Bethel	54.34	30	P	P	00 34 00.7	+1.5
M14K				IAmb	IAmb	00 34 01.3	
	comp=Z,18nm,1.4s						
MKAR	Makanchi Array	54.63	313	P	P	00 34 02.1	+0.5
	comp=Z,1.0nm,0.5s,baz=94,slow=8.3,SNR=20						
MKAR				PcP	PcP	00 35 00.4	+0.1
	comp=Z,0.8nm,0.4s,baz=74,slow=4.2,SNR=8.2						
	comp=Z,1.0nm,0.5s						
O15K	Ungalikthiuk R	54.84	32	P	P	00 34 04.3	+1.4
O15K				IAmb	IAmb	00 34 12.0	
	comp=Z,6.0nm,1.4s						
KURK	Kurchatov	57.41	317	P	P	00 34 21.0	0.0
KURBB	Kurchatov Arra	57.46	317	P	P	00 34 21.6	+0.2
	comp=Z,2.9nm,0.5s,baz=94,slow=7.6,SNR=53						
KURBB				PcP	PcP	00 35 11.0	-0.2
	comp=Z,0.4nm,0.4s,baz=86,slow=4.6,SNR=1.0						
	comp=Z,2.9nm,0.5s						
NRIK	Noril'sk	57.94	340	P	P	00 34 25.6	+1.2
	comp=Z,0.8nm,0.3s,baz=122,slow=8.3,SNR=3.6						
	comp=Z,0.8nm,0.3s						
ILAR	Eielson Array	62.04	27	P	P	00 34 52.1	-0.1
	comp=Z,0.5nm,0.8s,baz=261,slow=4.8,SNR=5.9						
	comp=Z,0.5nm,0.8s						
ILAR	Eielson Array	62.04	27	P	P	00 34 53.6	+1.5
BVAR	Borovoye Array	62.60	319	P	P	00 34 56.7	+0.6
	comp=Z,6.3nm,0.3s,baz=97,slow=7.9,SNR=84						
	comp=Z,6.3nm,0.3s						
BORK	Borovoye	62.65	320	P	P	00 34 56.9	+0.5
F25K	Christian Rive	62.96	24	P	P	00 34 59.7	+1.4
AB31	Akbulak array	69.48	316		P	00 35 39.9	+0.3
AB31				IAmb	IAmb	00 35 40.5	
	comp=Z,4.1nm,0.6s						
ABKAR	Akbulak array	69.48	316		P	00 35 39.9	+0.3
YKAW3	Yellowknife Wh	76.43	28	P	P	00 36 20.5	+0.6
YKA	Yellowknife Ar	76.46	28	P	P	00 36 20.7	+0.7
	comp=Z,0.3nm,0.6s,baz=297,slow=6.2,SNR=5.8						
	comp=Z,0.3nm,0.6s						
YKA	Yellowknife Ar	76.46	28	P	P	00 36 19.3	-0.7
ARCES	ARCESS Array B	78.87	341	P	P	00 36 34.2	+1.0
	comp=Z,1.5nm,0.5s,baz=56,slow=5.6,SNR=4.8						
	comp=Z,1.5nm,0.5s						
ARCES	ARCESS Array B	78.87	341	P	P	00 36 33.6	+0.5
ARCES				IAmb	IAmb	00 36 52.6	
	comp=Z,10nm,1.2s						
KBZ	Khabaz	82.30	314	P	P	00 36 51.9	+0.2
	comp=Z,2.0nm,0.7s,baz=110,slow=5.5,SNR=8.6						
	comp=Z,2.0nm,0.7s						
FIA1	FINESS Array S	83.12	334	P	P	00 36 54.6	-0.9
FINES	FINESS Array B	83.12	334	P	P	00 36 55.0	-0.6
	comp=Z,2.3nm,0.5s,baz=61,slow=4.6,SNR=25						
	comp=Z,2.3nm,0.5s						
FINES	FINESS Array B	83.12	334	P	P	00 36 55.1	-0.5
NVAR	Mina Array Bea	83.17	51	P	P	00 36 57.9	+1.2
	comp=Z,0.6nm,0.6s,baz=310,slow=5.7,SNR=2.3						
	comp=Z,0.6nm,0.6s						
PDAR	Pinedale Array	87.42	45	P	P	00 37 17.4	0.0
	comp=Z,0.1nm,0.4s,baz=285,slow=5.3,SNR=1.2						
	comp=Z,0.1nm,0.4s						
PDAR	Pinedale Array	87.42	45	P	P	00 37 16.8	-0.6
AKASG	Malin Array Be	87.44	324	P	P	00 37 16.2	-0.8
	comp=Z,0.2nm,0.2s,baz=56,slow=5.1,SNR=2.1						
	comp=Z,0.2nm,0.2s						
HFS	Hagfors	88.67	337	P	P	00 37 21.2	-1.4
	comp=Z,0.7nm,0.4s,baz=85,slow=3.7,SNR=9.9						
	comp=Z,0.7nm,0.4s						
NOA	NORSAR Array B	88.89	339	P	P	00 37 22.8	-0.9
	comp=Z,0.3nm,0.7s,baz=39,slow=4.5,SNR=1.7						
	comp=Z,0.3nm,0.7s						
BRTR	Keskin Array B	90.27	313	P	P	00 37 29.6	-1.1
	comp=Z,0.5nm,0.7s,baz=60,slow=3.0,SNR=3.8						
	comp=Z,0.5nm,0.7s						
TORD	Torodi Ar. Bea	128.67	309	PKP	PKPdf	00 43 35.7	0.0
	comp=Z,0.2nm,0.4s,baz=45,slow=3.8,SNR=2.3						
PLCA	Paso Flores	145.83	131	PKPbc	PKPbc	00 44 07.2	-0.4
	comp=Z,3.3nm,0.6s,baz=254,slow=3.5,SNR=23						
LPAZ	La Paz	150.00	85	PKPbc	PKiKP	00 44 20.6	0.0
	comp=Z,2.5nm,0.5s,baz=326,slow=1.7,SNR=12						
SHEL	Horse Pasture	150.01	276	PKPbc	PKiKP	00 44 20.6	+0.7
AC02	Maricunga	150.22	106	PKPbc	PKPbc	00 44 19.2	-0.8

*SNET **06** 00:30:27.2±1.3, 14°.04N×91°.09W, h94km, ML3.8, Presumed earthquake*

*CATAC **06** 00:30:27.2±0.8, 14°N±4°×9°1W±°, h26km±7km, M3.9/13, MLv3.9/13, Error ellipse: s-maj=10.1km s-min=3.2km az=30.4, confirmed*

*GCG **06** 00:30:28.1±1.2, 14°.13N×91°.02W, h86km±5km, MD4.1, ML4.3, MW3.5, Presumed earthquake*

ISC 06 00:30:28.9±1.6, **14°.09N**±0°.07×**90°.99W**±0°.04, **h89**km±10km, **n35**, σ**1.68**/58, **Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FG8	Yepocapa, Chim	0.45	68	*i* P	Pn	00 30 41.5	-1.8
FG8				*i* S	Sn	00 30 51.9	-2.2
STG5	El Palmar, Qui	0.47	313	*i* P	Pn	00 30 45.3	+1.9
STG5				*i* S	Sn	00 30 58.0	+3.8
STG8	El Palmar, Qui	0.50	316	*i* P	Pn	00 30 46.1	+2.3
STG8				IAML		00 31 02.4	
	comp=E,10μm,0.2s						
FG16	Alotenango, Sa	0.50	68	*i* P	Pn	00 30 42.2	-1.6
FG16				*i* S	Sn	00 30 53.5	-1.4
FG16				IAML		00 30 55.0	
	comp=N,57μm,0.2s						
STG2	El Palmar, Qui	0.51	313	*i* P	Pn	00 30 46.1	+2.3
STG2				*i* S	Sn	00 30 59.3	+4.5
PCG5	San Vicente Pa	0.61	78	*i* P	Pn	00 30 42.4	-2.2
PCG5				*i* S	Sn	00 30 54.0	-2.4
PCG5				IAML		00 31 00.3	
	comp=N,8μm,0.2s						
GCG4	OSOP	0.67	42	*i* P	Pn	00 30 44.7	-0.5
ESSJ	San Jos, E	0.71	137	*i* P	Pn	00 30 41.9	-3.5
RTAL	Retalhuleu	0.81	303	P	Pn	00 30 45.2	-1.2
RTAL	Retalhuleu	0.81	303	*e*P	Pn	00 30 45.4	-1.0
RTAL				*e*S	Sn	00 30 58.8	-0.7
SOKI	Kika Raxquin	0.83	332	*i* P	Pn	00 30 46.4	-0.7
SOKI				*i* S	Sn	00 31 00.4	-0.2
FAME	Alcaldia de Sa	0.98	104	P	Pn	00 30 47.7	-0.6
APG	El Apazote	1.05	29	*i* P	Pn	00 30 48.8	-0.5
APG				*i* S	Sn	00 31 04.4	-0.2
SLOZ	Alcaldia de Sa	1.18	93	P	Pn	00 30 50.1	-0.6
SLOZ				S	Sn	00 31 09.8	+2.8
NUBE	Las Nubes	1.19	99	P	Pn	00 30 50.4	-0.5
NUBE				S	Sn	00 31 09.4	+1.9
NUBE	Las Nubes	1.19	99	*i* P	Pn	00 30 50.5	-0.5
NUBE				*i* S	Sn	00 31 08.1	+0.6
NUBE				IAML		00 31 11.8	
	comp=N,897nm,0.4s						
NUBE	Las Nubes	1.19	99	*e*P	Pn	00 30 50.5	-0.5
NUBE				*e*S	Sn	00 31 08.5	+1.0
SMCA	Catarina	1.30	306	*i* P	Pn	00 30 50.8	-1.2
SMCA				*i* S	Sn	00 31 07.8	-1.8
SMCA				IAML		00 31 10.1	
	comp=E,2μm,0.3s						
SBLS	San Blas	1.35	100	*e*P	Pn	00 30 52.6	-0.4
SBLS				*e*S	Sn	00 31 14.4	+3.2
CEVE	Cerro Verde	1.35	101	P	Pn	00 30 52.7	-0.3
CEVE				S	Sn	00 31 12.2	+1.0
CEVE	Cerro Verde	1.35	101	*e*P	Pn	00 30 52.8	-0.2
CEVE				*e*S	Sn	00 31 15.1	+3.9
THIG		1.48	304	*i* P	Pn	00 30 53.8	-0.5
THIG				*i* S	Sn	00 31 12.1	-1.4
JAYA	Jayaque - finc	1.56	106	P	Pn	00 30 55.0	-0.5
JAYA	Jayaque - finc	1.56	106	*i* P	Pn	00 30 54.9	-0.5
JAYA				*i* S	Sn	00 31 14.5	-1.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAYA				IAML		00 31 19.6	
	comp=N,3µm,0.3s						
JAYA	Jayaque - finc	1.56	106	eP	Pn	00 30 55.0	-0.5
JAYA				eS	Sn	00 31 16.3	+0.6
MTO3	Montecristo	1.61	79	P	Pn	00 30 55.2	-1.0
MTO3	Montecristo	1.61	79	iP	Pn	00 30 55.4	-0.9
ZAFR2	Estanzuela, Za	1.67	73	iP	Pn	00 30 55.9	-0.9
PMON	Piamonte	1.67	103	P	Pn	00 30 56.5	-0.4
PMON				S	Sn	00 31 19.3	+1.1
BOQS	Boqueron	1.70	102	eP	Pn	00 30 57.2	-0.1
LALI	Alcalda de L	1.73	110	P	Pn	00 30 57.3	-0.3
LALI				S	Sn	00 31 20.0	+0.6
UEES	Universidad Ev	1.74	102	P	Pn	00 30 57.4	-0.4
UEES				S	Sn	00 31 21.6	+1.9
PAVA	Las Pavas	2.03	100	P	Pn	00 31 01.4	-0.2
PAVA				S	Sn	00 31 28.5	+1.9
P5NO	Presa 5 de nov	2.17	92	P	Pn	00 31 02.3	-1.0
SARH	Santa Rosa de	2.27	72	iP	Pn	00 31 04.8	+0.1

IDC 06 00:44:21.1±2.2, 19°.03S×173°.53W, h0^{km}, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=134.0km s-min=30.1km az=152.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	48.96	255	P	P	00 53 09.4	-0.2
	1.7nm,0.8s,baz=97,slow=7.9,SNR=20						
ASAR				PcP	PcP	00 54 34.3	+0.3
	0.7nm,1.0s,baz=99,slow=3.3,SNR=2.0						
	1.7nm,0.8s						
WRA	Warramunga Arr	48.99	260	P	P	00 53 09.4	-0.5
	0.5nm,0.7s,baz=97,slow=7.4,SNR=8.7						
	0.5nm,0.7s						
TXAR	Lajitas Array	82.73	56	P	P	00 56 46.8	-0.5
	0.3nm,0.8s,baz=297,slow=3.2,SNR=2.9						
	0.3nm,0.8s						
ILAR	Eielson Array	86.01	11	P	P	00 57 02.8	-0.2
	0.2nm,0.6s,baz=209,slow=4.9,SNR=1.8						
	0.2nm,0.6s						
BRTR	Keskin Array B	148.81	317	PKPbc	PKPbc	01 04 11.6	+0.5
	0.4nm,0.7s,baz=46,slow=4.2,SNR=2.6						

IDC 06 01:07:49.3±2.5, 15°.27S×174°.74W, h0^{km}, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=104.0km s-min=28.1km az=142.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	48.61	257	P	P	01 16 35.0	-0.2
	0.2nm,0.4s,baz=90,slow=7.0,SNR=5.0						
	0.2nm,0.4s						
ASAR	Alice Springs	48.92	252	P	P	01 16 37.5	-0.1
	0.9nm,0.4s,baz=87,slow=8.0,SNR=16						
	0.9nm,0.4s						
PETK	Petropavlovsk-	72.12	343	P	P	01 19 15.6	+0.1
	1.0nm,0.4s,baz=160,slow=5.7,SNR=1.8						
	1.0nm,0.4s						
ILAR	Eielson Array	82.58	12	P	P	01 20 13.8	0.0
	0.1nm,0.3s,baz=207,slow=5.6,SNR=6.5						
	0.1nm,0.3s						
PDAR	Pinedale Array	83.04	42	P	P	01 20 17.1	+0.1
	0.3nm,0.5s,baz=247,slow=5.1,SNR=4.1						
	0.3nm,0.5s						

*ASRS **06** 01:11:15.0±1.8, 51°.71N×82°.55E, h0^{km}, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
*IDC **06** 01:11:21.1±1.6, 51°.58N×82°.57E, h0^{km}, mbtmp2.2/3, ML1.8/3, Error ellipse: s-maj=17.1km s-min=14.7km az=94.0*
*NNC **06** 01:11:24.8±1.9, 51°.36N×82°.27E, h0^{km}, mb2.5, mpv2.1, Error ellipse: s-maj=18.5km s-min=7.0km az=24.0, Suspected Mining explosion.*
ISC 06 01:11:19.4±1.1, 51°.71N±0°.07×82°.65E±0°.08, h0^{km}, n8, σ1^s.09/9, 3C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	2.60	30	I	I	01 26 50.0	
	0.1nm,0.7s,baz=209,slow=343,SNR=37						
ZALV	Zalesovo Beam	2.60	30	Pn	Pb	01 12 05.8	-1.0
	1.2nm,0.3s,baz=216,slow=15,SNR=23						
ZALV				Sn	Sb	01 12 39.9	+0.7
	0.9nm,0.3s,baz=207,slow=25,SNR=9.1						
	3.0nm,0.3s						
KURK	Kurchatov	2.72	250	⇓Pg	Pb	01 12 08.4	-0.6
	0.3nm,0.9s						
KURK				⇑Lg	Lg	01 12 41.0	
	2.5nm,0.7s						
KURBB	Kurchatov Arra	2.81	249	Pn	Pn	01 12 06.7	+1.0
	baz=70,slow=17,SNR=1.7						
KURBB				Lg	Lg	01 12 44.8	
	0.1nm,0.3s,baz=70,slow=33,SNR=8.1						
	0.1nm,0.3s						
KURBB	Kurchatov Arra	2.81	249	⇓Pg	Pb	01 12 09.4	-1.1
	0.5nm,0.5s						
KURBB				⇑Lg	Lg	01 12 44.6	
	10nm,1.1s						
MAKZ	Makanchi	4.93	185	⇓Pn	Pn	01 12 35.2	+0.5
	0.2nm,0.4s						
MAKZ				⇓Lg	Lg	01 13 48.3	
	1.6nm,0.9s						
MK31	Makanchi Array	4.93	183	⇑Pn	Pn	01 12 35.7	+1.0
	0.4nm,0.5s,baz=9.9,slow=12,SNR=10						
MK31				⇓Lg	Lg	01 13 49.1	
	1.1nm,0.6s,baz=12,slow=27,SNR=8.3						
MKAR	Makanchi Array	4.93	183	Pn	Pn	01 12 35.8	+1.1
	0.2nm,0.3s,baz=7.9,slow=12,SNR=9.5						
MKAR				Sn	Sn	01 13 31.6	-0.8
	0.1nm,0.3s,baz=7.9,slow=18,SNR=1.5						
MKAR				Lg	Lg	01 13 51.9	
	0.3nm,0.3s,baz=8.8,slow=29,SNR=16						
	0.3nm,0.4s						

IDC 06 01:13:38.9±2.5, 46°.73S×109°.79E, h0^{km}, mb3.7/2, mbtmp3.7/2, Error ellipse: s-maj=172.0km s-min=51.9km az=127.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	30.07	48	P	P	01 19 49.8	-0.1
	0.4nm,0.5s,baz=208,slow=8.5,SNR=6.3						
	0.4nm,0.5s						
WRA	Warramunga Arr	33.41	45	P	P	01 20 19.3	+0.1
	0.8nm,0.8s,baz=212,slow=10,SNR=3.9						
	0.8nm,0.8s						
TXAR	Lajitas Array	148.75	112	PKPbc	PKPbc	01 33 27.8	-0.4
	0.5nm,0.8s,baz=246,slow=1.5,SNR=4.3						
YKA	Yellowknife Ar	150.58	41	PKPbc	PKPbc	01 33 30.5	-1.0
	0.7nm,1.1s,baz=296,slow=3.0,SNR=6.4						
YKA				PKPab	PKPab	01 33 38.4	+0.1
	0.1nm,0.3s,baz=290,slow=2.9,SNR=4.4						

*NAO **06** 01:13:54.9±0.8, 71°.31N×4°.43W, h10^{km}, ML3.6*
*IDC **06** 01:13:57.8±1.3, 71°.42N×2°.85W, h0^{km}, mb3.2/7, mbtmp3.4/13, ML2.8/5, MS3.1/13, Error ellipse: s-maj=25.8km s-min=19.9km az=75.0*
*BER **06** 01:13:57.1±4.0, 71°.45N×4°.26W, h10^{km}, Mw3.7, ML3.6(NAO), Confirmed Earthquake*
*DNK **06** 01:14:02.6±5.0, 72°.04N×5°.20W, h0^{km}±76^{km}, ML1.4, Presumed earthquake*
ISC 06 01:13:55.7±0.7, 71°.63N±0°.08×4°.27W±0°.07, h10^{km}, n68, σ2^s.40/61, mb3.2/6, MS3.1/9, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBG	Daneborg	5.39	307	Pn	Pn	01 15 17.1	+1.1
DBG				Sn	Sn	01 16 14.6	-3.3
DBG	Daneborg	5.39	307	iP	Pn	01 15 17.0	+1.1
DBG				iS	Sn	01 16 13.3	-4.6
DBG				IAML		01 16 15.3	
	comp=Z,1.5nm,0.3s						
DBG	Daneborg	5.39	307	iP	Pn	01 15 17.0	+1.1
DBG				iS	Sn	01 16 13.3	-4.6
DBG				IAML		01 16 15.3	
	comp=Z,1.5nm,0.3s						
SCO	Scoresbysund	5.87	267	iP	Pn	01 15 25.0	+2.5
SCO	Scoresbysund	5.87	267	iP	Pn	01 15 25.0	+2.5
DAG	Danmarks Havn	6.46	329	iP	Pn	01 15 29.5	-1.2
DAG				iS	Sn	01 16 36.2	-8.1
DAG				IAML		01 16 43.2	
	comp=E,1.9nm,0.2s						
DAG	Danmarks Havn	6.46	329	iP	Pn	01 15 29.5	-1.2
DAG				iS	Sn	01 16 36.2	-8.1
DAG				IAML		01 16 43.2	
	comp=E,1.9nm,0.2s						
LOF	Lofoten	7.06	111	Pn	Pn	01 15 35.8	-3.1
LOF	Lofoten	7.06	111	eP	Pn	01 15 36.8	-2.0
LOF				eS	Sn	01 16 47.8	-11
LOF				IAML		01 16 50.5	
	comp=Z,6.0nm,0.8s						
BEAR	Bear Island, N	7.35	56	Pn	Pn	01 15 44.0	+1.2
	baz=256,slow=18						
HSPB	Hornsund (broa	7.56	36	Pn	Pn	01 15 46.5	+0.9
HSPB	Hornsund (broa	7.56	36	eP	Pn	01 15 46.4	+0.7
STEI	Steigen	7.69	109	Pn	Pn	01 15 45.0	-2.5
STEI	Steigen	7.69	109	eP	Pn	01 15 45.0	-2.5
STEI				eS	Sn	01 17 03.0	-11
STEI				IAML		01 17 15.3	
	comp=Z,2.2nm,0.8s						
VAGH	Vaagaholmen	7.93	120	eP	Pn	01 15 48.1	-2.6
TRO	Tromso	7.94	93	Pn	Pn	01 15 47.6	-3.4
TRO	Tromso	7.94	93	eP	Pn	01 15 47.9	-3.0
BRBA	Barentsburg A	8.01	28	eP	Pn	01 15 53.5	+1.7
BRBA				IAML		01 15 53.8	
	comp=Z,8.2nm,0.6s						
BRBB	Barentsburg B	8.04	28	Pn	Pn	01 15 55.3	+3.1
BRBB	Barentsburg B	8.04	28	eP	Pn	01 15 54.8	+2.6
FAUS	Fauske	8.05	112	Pn	Pn	01 15 49.6	-2.8
FAUS	Fauske	8.05	112	eP	Pn	01 15 49.3	-3.1
FAUS				eS	Sn	01 17 12.1	-11
FAUS				IAML		01 17 14.8	
	comp=Z,1.7nm,0.8s						
STOK	Stokkvaagen	8.15	122	Pn	Pn	01 15 50.8	-3.0
STOK	Stokkvaagen	8.15	122	eP	Pn	01 15 51.0	-2.8
STOK				eS	Sn	01 17 12.0	-14
STOK				IAML		01 17 35.6	
	comp=Z,3.4nm,0.8s						
LEIR	Leirfjorden	8.34	123	Pn	Pn	01 15 54.0	-2.4
LEIR	Leirfjorden	8.34	123	eP	Pn	01 15 53.9	-2.6
LEIR				eS	Sn	01 17 17.0	-14
LEIR				IAML		01 17 18.8	
	comp=Z,2.2nm,0.7s						
KBS	Kingsbay	8.36	22	Pn	Pn	01 15 58.5	+1.9
KBS	Kingsbay	8.36	22	eP	Pn	01 15 58.6	+1.9
KBS				eS	Sn	01 17 26.9	-3.9
KBS				IAML		01 17 43.8	
	comp=Z,1.4nm,0.6s						
KBS	Kingsbay	8.36	22	iP	Pn	01 15 57.7	+1.0
KBS				iS	Sn	01 17 26.7	-4.2
SPA0	Spitsbergen Ar	8.43	30	Pn	Pn	01 15 59.8	+2.3
	baz=224,slow=16						
SPA0	Spitsbergen Ar	8.43	30	Pn	Pn	01 15 59.8	+2.3
SPITS	Spitsbergen Ar	8.43	30	Pn	Pn	01 15 59.5	+2.0
	comp=Z,8.7nm,0.7s,baz=220,slow=16,SNR=90						
JETT	Jettan, Norway	8.44	92	Pn	Pn	01 15 55.3	-2.6
JETT	Jettan, Norway	8.44	92	eP	Pn	01 15 55.0	-2.8
JETT				Pn	Pn	01 15 55.3	-2.6
JETT				eS	Sn	01 17 21.9	-11
JETT				IAML		01 17 23.2	
	comp=Z,2.6nm,0.6s						
KIF	Kilpisjarvi	8.82	95	Pn	Pn	01 16 00.7	-2.3
KIF	Kilpisjarvi	8.82	95	eP	Pn	01 16 00.6	-2.4
KIF				eS	Sn	01 17 30.3	-12
SALU	Saltoluokta	9.01	107	eP	Pn	01 16 03.7	-2.0
SALU				eS	Sn	01 17 36.3	-11
HOPEN	Hopen	9.31	45	Pn	Pn	01 16 11.2	+1.5
HOPEN	Hopen	9.31	45	eP	Pn	01 16 10.6	+1.0
NSS	Namsos	9.33	132	eP	Pn	01 16 07.2	-2.7
NSS				eS	Sn	01 17 41.9	-13
NSS				IAML		01 17 47.9	
	comp=Z,1.5nm,0.6s						
KTK1	Kautokeino	9.59	93	Pn	Pn	01 16 11.8	-1.7
KTK1	Kautokeino	9.59	93	eP	Pn	01 16 11.6	-1.9
HEF	Hetta	10.03	95	eP	Pn	01 16 17.3	-2.2
ARCES	ARCESS Array B	10.07	88	Pn	Pn	01 16 16.4	-3.7
	comp=Z,0.1nm,0.3s,baz=289,slow=11,SNR=7.2						
	comp=Z,0.9nm,0.6s						
ARA0	ARCESS Array S	10.07	88	Pn	Pn	01 16 17.9	-2.1
	baz=293,slow=12						
ARA0	ARCESS Array S	10.07	88	Pn	Pn	01 16 17.9	-2.1
NOR	Nord	10.38	350	iP	Pn	01 16 26.1	+1.8
NOR				iS	Sn	01 18 03.2	-17
NOR				IAML		01 18 20.0	
	comp=E,0.8nm,0.3s						
KEV	Kevo	10.45	85	eP	Pn	01 16 22.6	-2.6
NOA	NORSAR Array B	12.26	142	Pn	Pn	01 16 47.0	-3.1
	baz=336,slow=13,SNR=1.6						
NOA				LR	LR	01 21 25.7	
	comp=E,95nm,20.1s,baz=335,slow=38						
	comp=E,0.3nm,0.6s						
HFS	Hagfors	13.59	139	Pn	Pn	01 17 06.0	-2.1
	comp=E,0.2nm,0.3s,baz=340,slow=12,SNR=7.7						
HFS				LR	LR	01 22 16.1	
	comp=E,142nm,18.4s,baz=308,slow=38						
	comp=E,1.2nm,0.6s						
HFS	Hagfors	13.59	139	P	Pn	01 17 06.1	-2.1
	baz=325,slow=12						
HFS	Hagfors	13.59	139	P	Pn	01 17 06.1	-2.1
FINES	FINESS Array B	15.59	115	Pn	Pn	01 17 31.8	-3.4
	comp=E,0.1nm,0.3s,baz=322,slow=12,SNR=3.9						
FINES				LR	LR	01 22 28.9	
	comp=E,68nm,20.8s,baz=14,slow=34						
	comp=E,2.2nm,1.0s						
EKA	Eskdalemuir Ar	16.37	178	Pn	Pn	01 17 45.5	+0.3
	baz=357,slow=13						
	comp=E,0.6nm,0.6s						
SFJD	Kangerlussuaq	16.64	277	LR	LR	01 23 45.3	
	comp=E,47nm,18.1s,baz=44,slow=34						
GERES	GERESS Array B	24.33	150	P	P	01 19 14.4	+1.2
	comp=E,0.2nm,0.3s,baz=22,slow=11,SNR=4.6						
GERES				LR	LR	01 27 09.3	
	comp=E,58nm,18.8s,baz=313,slow=33						
	comp=E,0.2nm,0.3s						
VRAC	Vranov	24.36	146	LR	LR	01 27 24.6	
	comp=E,63nm,18.2s,baz=330,slow=34						
AKASG	Malin Array Be	25.83	126	P	P	01 19 25.2	-1.5
	comp=E,0.2nm,0.2s,baz=338,slow=9.8,SNR=4.7						
AKASG				LR	LR	01 29 03.7	
	comp=E,61nm,18.1s,baz=353,slow=36						
	comp=E,0.2nm,0.2s						
NRIK	Noril'sk	27.98	49	LR	LR	01 31 20.1	
	comp=E,21nm,19.6s,baz=73,slow=38						
MLR	Muntele Rosu	29.91	135	LR	LR	01 32 19.1	
	comp=E,90nm,19.2s,baz=342,slow=37						
ESDC	Sonseca Array	32.03	180	LR	LR	01 31 21.7	
	comp=E,20nm,20.1s,baz=340,slow=33						
BRTR	Keskin Array B	37.19	128	P	P	01 21 06.7	0.0
	comp=E,0.5nm,0.8s,baz=348,slow=8.1,SNR=1.9						
BRTR				LR	LR	01 37 29.3	
	comp=E,17nm,19.4s,baz=333,slow=38						
	comp=E,0.5nm,0.8s						
YKA	Yellowknife Ar	37.92	315	P	P	01 21 19.3	+6.8
	comp=E,0.2nm,0.7s,baz=26,slow=7.7,SNR=2.7						
	comp=E,0.2nm,0.7s						
KURBB	Kurchatov Arra	40.85	75	P	P	01 21 37.3	+0.3
	comp=E,0.2nm,0.7s,baz=345,slow=6.8,SNR=2.3						
	comp=E,0.2nm,0.7s						
ASF	Jabal al Asfar	45.17	128	LR	LR	01 42 03.9	
	comp=E,21nm,19.0s,baz=203,slow=38						
MKAR	Makanchi Array	45.40	74	P	P	01 22 15.5	+1.6
	comp=E,0.3nm,0.9s,baz=318,slow=8.4,SNR=3.8						
	comp=E,0.3nm,0.9s						
KDAK	Kodiak Island	48.98	338	LR	LR	01 46 09.4	
	comp=E,31nm,18.2s,baz=68,slow=39						
TORD	Torodi Ar. Bea	58.57	173	P	P	01 23 53.8	+1.6
	comp=E,0.5nm,0.9s,baz=340,slow=5.5,SNR=2.7						
	comp=E,0.5nm,0.9s						

*TEH **06** 01:21:13.1, 38°.43N×44°.42E, h6^{km}±163^{km}, ML2.5, Presumed earthquake*
*AZER **06** 01:21:13.7, 38°.37N×44°.49E, h36^{km}, ml2.5*
*ISK **06** 01:21:14.2, 38°.44N×44°.40E, h4^{km}, ML2.3/5*
*AFAD **06** 01:21:14.3, 38°.41N×44°.33E, h3^{km}±2^{km}, ML2.4*
ISC 06 01:21:13.8±1.3, 38°.44N±0°.03×44°.45E±0°.02, h0^{km}±11^{km}, n44, σ0^s.80/64, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.42	302	P	Pg	01 21 21.9	0.0
OZAP				S	Sg	01 21 27.8	+0.4
OZAP				IAML		01 21 35.0	
	comp=N,498nm,0.7s						
TVAN	Van	0.83	277	P	Pg	01 21 28.7	-0.9
TVAN				S	Sg	01 21 39.5	-0.7
YOVA	Hakkari_Yksek	0.86	189	P	Pg	01 21 30.5	+0.3
VMUR	Van-Muradiye	0.88	309	P	Pg	01 21 30.0	-0.7
VMUR				S	Sg	01 21 42.6	+0.5
VMUR				IAML		01 21 47.0	
	comp=E,80nm,0.7s						
ISHB	Shabestar	0.93	99	Pg	Pg	01 21 30.7	-0.8
MAKU	Maku	0.93	11	Pg	Pg	01 21 30.6	-1.0
IMRD	Marand	1.02	74	Pg	Pg	01 21 33.4	+0.1
HAKT	HAKKARI	1.06	214	P	Pg	01 21 34.0	0.0
HAKT	HAKKARI	1.06	214	P	Pg	01 21 33.7	-0.4
HAKT				S	Sn	01 21 51.4	-0.2
NAX	Nakhchivan	1.10	48	P	Pg	01 21 34.9	+0.1
NAX				S	Sn	01 21 52.2	-0.1
GEVA	Gevas	1.10	264	P	Pg	01 21 32.9	-2.0
SBZ	Shahbuz	1.28	42	P	Pn	01 21 38.1	-1.0
SBZ				S	Sn	01 21 57.1	0.0
ORD	Ordubad	1.30	68	P	Pn	01 21 38.2	-1.0
ORD				S	Sn	01 21 57.3	-0.1
HYR	Heyderabad	1.31	14	P	Pn	01 21 39.3	-0.2
HYR				S	Sn	01 21 57.8	+0.1
ITBZ	Tabriz	1.35	98	Pg	Pn	01 21 38.2	-1.8
CUKT	Cukurca	1.36	210	Pn	Pg	01 21 40.4	+0.5
CUKT				Sn	Sn	01 21 59.4	+0.4
CUKT	Cukurca	1.36	210	P	Pg	01 21 41.9	+2.0
ADCV	BITLIS_Adilcev	1.40	286	P	Pn	01 21 40.1	-0.7
IAZR	Azarshahr	1.43	122	Pg	Pn	01 21 40.6	-0.5
IGDI	IGDIR	1.46	349	P	Pb	01 21 41.8	0.0
IGDI	IGDIR	1.46	349	P	Pb	01 21 41.8	0.0
IGDI				S	Sg	01 22 03.5	+2.9
PERV	Siirt/Pervari-	1.58	252	P	Pg	01 21 44.8	+0.6
AGRB	Hanur-Agry	1.61	315	Pn	Pn	01 21 43.1	-0.5
AGRB				Sn	Sg	01 22 05.3	-0.1
DORK	Agr/Tutak/Do	1.61	306	P	Pb	01 21 44.0	-0.5
MLAZ	Malazgirt-MUS	1.64	296	Pn	Pb	01 21 44.2	-0.8
KOTA	Agri, Merkez-K	1.67	325	P	Pb	01 21 45.0	-0.6
GNI	Garni	1.72	7	Pn	Pb	01 21 45.9	-0.5
GNI	Garni	1.72	7	Pg	Pn	01 21 45.7	+0.6
BLIS	Bitlis-Merkez	1.84	270	P	Pg	01 21 49.2	+0.2
SIRN	Sırnak	1.87	240	P	Pg	01 21 49.6	+0.1
GURO	Guroymak-BITLI	1.90	274	Pn	Pn	01 21 47.9	+0.3
IHRS	Heris	2.04	93	Pn	Pn	01 21 50.8	+1.3
SRTM	Siirt_Merkez	2.04	258	P	Pb	01 21 51.8	+0.1
MUSM	Mu-Merkez	2.32	278	P	Pb	01 21 56.1	-0.4
EAK	Akyaka	2.34	344	P	Pg	01 21 58.2	-0.3
QRD	Qoradiz	2.46	65	P	Pn	01 21 55.0	-0.1
QRD				S	Sn	01 22 25.5	-0.3
GDB	GEDABAY	2.49	23	P	Pn	01 21 56.3	+0.6
GDB				S	Sn	01 22 27.6	+0.8
GANJ	Ganja	2.63	33	P	Pn	01 21 57.8	+0.2
GANJ				S	Sn	01 22 31.4	+1.2
AGDM	Agdam	2.65	50	P	Pn	01 21 58.1	+0.4
AGDM				S	Sn	01 22 31.1	+0.5
QZX	Qazax, Azerbai	2.71	15	P	Pn	01 21 58.8	+0.2
QZX				S	Sn	01 22 33.4	+1.3
BLQ	Beylaqan	2.74	61	P	Pn	01 21 58.9	0.0
BLQ				S	Sn	01 22 32.9	+0.2
YRD	Yardimli	3.00	80	P	Pn	01 22 02.9	+0.1
YRD				S	Sn	01 22 39.9	+0.4
LRK	Lerik	3.06	85	P	Pn	01 22 02.6	-0.9
LRK				S	Sn	01 22 40.4	-0.4
ASTR	Astara	3.41	87	P	Pn	01 22 07.5	-0.6
ASTR				S	Sn	01 22 48.7	-0.4

*GCG **06** 01:25:31.1±0.9, 13°.30N×90°.43W, h0^{km}±9^{km}, MD4.0, Presumed earthquake*
*CATAC **06** 01:25:37.2±0.3, 13°N±2°×9°0W±°, h10^{km}, M3.4/23, MLv3.4/23, Error ellipse: s-maj=5.3km s-min=3.6km az=22.2, confirmed*
*SNET **06** 01:25:43.6±9.5, 13°.55N×90°.00W, h15^{km}, ML3.1, Presumed earthquake*
ISC 06 01:25:36.3±1.8, 13°.33N±0°.06×90°.15W±0°.05, h5^{km}±11^{km}, n40, σ1^s.20/55, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAME	Alcaldia de Sa	0.52	14	P	Pg	01 25 46.9	+0.5
FAME				S	Sb	01 25 57.9	+1.9
NUBE	Las Nubes	0.67	32	P	Pg	01 25 49.7	+0.4
NUBE				S	Sn	01 26 02.4	-1.3
NUBE	Las Nubes	0.67	32	iP	Pg	01 25 49.5	+0.2
NUBE	Las Nubes	0.67	32	eP	Pg	01 25 49.6	+0.4
NUBE				eS	Sn	01 26 04.0	+0.4
CEVE	Cerro Verde	0.71	46	P	Pg	01 25 50.6	+0.6
CEVE				S	Sb	01 26 02.7	+1.2
CEVE	Cerro Verde	0.71	46	eP	Pg	01 25 50.7	+0.8
CEVE				eS	Sn	01 26 06.6	+1.9
SBLS	San Blas	0.72	45	eP	Pg	01 25 50.6	+0.5
SBLS				eS	Sn	01 26 06.3	+1.4
JAYA	Jayaque - finc	0.75	65	P	Pg	01 25 50.6	-0.1
JAYA				S	Sb	01 26 03.4	+0.8
JAYA	Jayaque - finc	0.75	65	iP	Pg	01 25 50.6	-0.1
JAYA				iS	Sn	01 26 05.9	+0.3
JAYA	Jayaque - finc	0.75	65	eP	Pg	01 25 50.6	-0.1
JAYA				eS	Sn	01 26 06.7	+1.1
SLOZ	Alcaldia de Sa	0.78	27	P	Pg	01 25 51.4	+0.2
LALI	Alcalda de L	0.82	79	P	Pg	01 25 52.6	+0.6
CEDA	San Andres	0.87	57	P	Pg	01 25 53.0	0.0
UNIC	Universidad Ca	0.87	42	P	Pg	01 25 53.2	+0.2
PMON	Piamonte	0.89	65	P	Pg	01 25 53.1	-0.4
PMON	Piamonte	0.89	65	eP	Pg	01 25 53.0	-0.4
PCG5	San Vicente Pa	0.91	346	iP	Pg	01 25 52.3	-1.5
PCG5				iS	Sb	01 26 08.7	+1.5
UEES	Universidad Ev	0.96	66	P	Pg	01 25 54.5	-0.3
FG8	Yepocapa, Chim	1.01	336	iP	Pg	01 25 54.4	-1.2
LFRS	El Faro	1.09	74	eP	Pg	01 25 55.7	-1.6
PAVA	Las Pavas	1.23	72	P	Pb	01 25 58.7	-1.5
COEG	Centro de Oper	1.26	77	P	Pn	01 25 59.0	-1.8
COEG				S	Sn	01 26 17.6	-0.6
MTO3	Montecristo	1.31	36	P	Pn	01 25 59.9	-1.5
MTO3	Montecristo	1.31	36	iP	Pn	01 25 59.2	-2.3
MTO3	Montecristo	1.31	36	eP	Pn	01 25 59.7	-1.8
TECO	Alcaldia de Te	1.34	81	P	Pn	01 26 00.1	-1.7
LLGN	La Laguna	1.43	55	P	Pn	01 26 01.5	-1.6
ESQI	Esquipulas	1.45	32	P	Pn	01 26 02.1	-1.3
ESQI				S	Sg	01 26 24.1	+1.1
ZAFR2	Estanzuela, Za	1.46	32	iP	Pb	01 26 04.7	+0.7
APG	El Apazote	1.69	349	iP	Pn	01 26 03.3	-3.5
PACA	Pacayal	1.78	85	P	Pn	01 26 07.4	-0.5
PACA				S	Sn	01 26 30.2	-0.8
RANC	El Ranchito	1.81	87	P	Pn	01 26 08.3	0.0
RANC				S	Sb	01 26 31.6	-1.6
RTAL	Retalhuleu	1.92	308	P	Pn	01 26 11.5	+1.8
CNRM	Centro Naciona	1.93	86	P	Pn	01 26 10.2	+0.4
LCND	La Caada	2.19	90	P	Pn	01 26 14.0	+0.5
MARCA	Marcala la Paz	2.21	68	P	Pn	01 26 14.0	+0.2
CSGN	Cosiguina Volc	2.54	98	P	Pn	01 26 19.1	+0.8
CSGN				S	Sn	01 26 50.2	+0.3
TGUH	Tegucigalpa,Un	2.88	75	P	Pn	01 26 23.3	+0.2
CRIN	San Cristobal	3.08	101	P	Pn	01 26 26.7	+0.9
YUSH	Yuscaran	3.27	79	P	Pn	01 26 27.3	-1.1

RSNC 06 01:32:47.1±0.0, 4°N±1°×7°6W±°, h160^{km}±2^{km}, M2.8, mb3.9, ML2.5, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIZA	Niza - Manizal	0.59	12	P	Pn	01 33 10.0	-0.4
NIZA				S	Sn	01 33 27.5	-0.8
ORTC	Ortega, Tolima	0.66	149	P	Pn	01 33 10.1	-0.4
ORTC				S	Sn	01 33 28.2	-0.3
GUY2C	Guyana, Caldas	0.77	17	P	Pn	01 33 11.4	-0.3
GUY2C				S	Sn	01 33 29.8	-0.8
PLMC	San Jos del P	0.81	301	P	Pn	01 33 11.3	-0.2
PLMC				S	Sn	01 33 30.2	0.0
YOTC	Yotoco, Valle	0.90	237	P	Pn	01 33 11.2	-1.0
YOTC				S	Sn	01 33 29.7	-1.7
PRAC	Prado	1.03	137	P	Pn	01 33 12.6	-0.6
PRAC				S	Sn	01 33 32.2	-1.0
NORC	Norcasia	1.29	34	P	Pn	01 33 14.6	-0.9
NORC				S	Sn	01 33 37.4	+0.1
ROSC	El Rosal	1.31	74	P	Pn	01 33 16.0	0.0
CBOC	Ciudad Bolivar	1.44	343	P	Pn	01 33 16.5	-0.5
CBOC				S	Sn	01 33 38.7	-1.4
CVER	Cruz Verde, Cu	1.51	88	P	Pn	01 33 18.5	+0.4
CVER				S	Sn	01 33 42.8	+1.0
JAMC	Jamundi, Valle	1.66	221	P	Pn	01 33 18.4	-0.9
JAMC				S	Sn	01 33 42.9	-1.2
HELC	Santa Helena	1.70	2	P	Pn	01 33 19.1	-0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HELC				S	Sn	01 33 43.8	-1.5
URMC	**La Uribe, Meta**	**1.72**	**135**	P	Pn	01 33 19.1	-0.8
URMC				S	Sn	01 33 43.0	-2.1
PIZC	**Pizarro, Choco**	**1.83**	**285**	P	Pn	01 33 21.9	+1.0
PIZC				S	Sn	01 33 47.6	+0.7
CHIC	**Chingaza**	**1.86**	**85**	P	Pn	01 33 21.5	-0.2
CHIC				S	Sn	01 33 47.8	-0.4
SPBC	**San Pablo de B**	**1.91**	**52**	P	Pn	01 33 21.0	-0.9
SPBC				S	Sn	01 33 48.0	-0.7
VILC	**Villavicencio,**	**1.93**	**101**	P	Pn	01 33 22.5	+0.4
VILC				S	Sn	01 33 49.9	+0.8
POPC	**Popayan, Colom**	**2.21**	**209**	P	Pn	01 33 25.0	-0.6
POPC				S	Sn	01 33 54.2	-1.0
PTBC	**PUERTO BERRIO,**	**2.34**	**29**	P	Pn	01 33 25.3	-1.5
PTBC				S	Sn	01 33 54.6	-2.9
DBBC	**Dabeiba**	**2.59**	**346**	P	Pn	01 33 29.7	-0.3
DBBC				S	Sn	01 34 03.4	+0.2
RUSC	**La Rusia**	**2.86**	**61**	P	Pn	01 33 33.0	-0.7
RUSC				S	Sn	01 34 08.6	-1.0
BBAC	**Balboa, Cauca**	**2.95**	**214**	P	Pn	01 33 33.8	-0.7
BBAC				S	Sn	01 34 10.2	-1.0
GR1C	**Gorgona, Isla**	**2.96**	**240**	P	Pn	01 33 33.3	-1.1
BRJC	**Barrancabermej**	**3.08**	**36**	P	Pn	01 33 34.3	-1.6
BRJC				S	Sn	01 34 10.6	-3.3
BARC	**Barichara**	**3.19**	**49**	P	Pn	01 33 36.8	-0.6
BARC				S	Sn	01 34 14.2	-2.3
CRUC	**La Cruz**	**3.20**	**205**	P	Pn	01 33 36.8	-0.9
CRUC				S	Sn	01 34 16.7	-0.3
UREC	**San Jos de Ur**	**3.25**	**1**	P	Pn	01 33 36.9	-1.2
UREC				S	Sn	01 34 15.7	-2.0
PTAC	**Punta Ardita,**	**3.45**	**320**	P	Pn	01 33 39.5	-1.1
PTAC				S	Sn	01 34 20.1	-2.0
APAC	**Apartado, Choc**	**3.54**	**344**	P	Pn	01 33 43.0	+1.3
APAC				S	Sn	01 34 25.9	+1.7
PAMC	**Pamplona, Colo**	**4.04**	**45**	P	Pn	01 33 48.7	+0.1
PAMC				S	Sn	01 34 33.5	-3.0
OCAC	**Ocana**	**4.36**	**31**	P	Pn	01 33 51.2	-1.3
OCAC				S	Sn	01 34 40.5	-3.0
LCBC	**Los crdobas,**	**4.42**	**350**	P	Pn	01 33 52.5	-0.6
LCBC				S	Sn	01 34 43.6	-1.0
SJCC	**San Jacinto, C**	**5.40**	**4**	P	Pn	01 34 04.7	-1.3
	18nm,2.0s						
SJCC				S	Sn	01 35 04.3	-3.5
	18nm,2.0s						
BCIP	**Isla Barro Col**	**6.28**	**318**	P	Pn	01 34 17.0	-0.7
	34nm,1.7s						
BCIP				S	Sn	01 35 28.0	-0.7
	34nm,1.7s						
SDV	**Santo Domingo**	**6.59**	**48**	P	Pn	01 34 20.0	-1.9
	5.2nm,0.4s						
SDV				S	Sn	01 35 29.6	-6.7
	5.2nm,0.4s						
CRJC	**Cerrejon, Guaj**	**7.03**	**22**	P	Pn	01 34 25.2	-2.5
	11nm,0.9s						
CRJC				S	Sn	01 35 39.9	-6.9
	11nm,0.9s						
URIC	**Uribia, Colomb**	**8.01**	**26**	P	Pn	01 34 37.3	-3.3
URIC				S	Sn	01 36 01.2	-8.9

*IDC **06** 01:42:14.6±0.9, 34°.98N×97°.91W, h0km, mb3.2/1, mbtmp3.5/8, ML3.5/7, MS2.9/1, Error ellipse: s-maj=13.3km s-min=9.5km az=145.0*
*NEIC **06** 01:42:14.1±0.7, 34°.98N±0°.01×97°.71W±0°.02, h10km±2km, mb4.0/2, mb_Lg3.6/142, ML3.7/50, ML3.4/23, Mwr3.6/34, Error ellipse: s-maj=3.0km s-min=2.9km az=235.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.05; $M_{\theta\theta}$2.76; $M_{\phi\phi}$-2.71; $M_{r\theta}$0.71; $M_{\theta\phi}$0.04; $M_{\phi r}$-0.83; Fault plane solution: $M_0$2.95000×10^{14} NP1:ϕ_s44.92000°, δ68.24000°, λ-178.03000°. NP2:ϕ_s314.19000°, δ88.17000°, λ-21.77000°. Principal axes: T 2.9355, Plg14.0000°, Azm2.0000°; N 0.0236, Plg68.0000°, Azm130.0000°; P -2.9591, Plg17.0000°, Azm267.0000°;*
*NEIC **06** 01:42:14, 34°.97N×97°.71W, h10km*
*NEIC **06** 01:42:14.2±0.6, 34°.97N±0°.01×97°.71W±0°.02, h10km±7km, Error ellipse: s-maj=2.5km s-min=1.6km az=52.0*
ISC 06 01:42:14.0±1.1, **34°.97N**±0°.03×**97°.69W**±0°.03, **h10**km±9km, **n121**, σ1**s**.**40**/68, **Oklahoma**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
W34A	**Bridge Creek,**	**0.27**	**345**		**Pg**	**01 42 19.9**	**+0.5**
X34A	**Smith Ranch, M**	**0.39**	**198**		**Pg**	**01 42 22.1**	**+0.5**
X34A				Sg	**Sg**	**01 42 25.8**	**-1.0**
X34A				IAML		01 42 28.8	
	comp=E,7µm,0.4s						
OKCSW	**OKLAHOMA CITY**	**0.48**	**25**		**Pb**	**01 42 23.8**	**-0.8**
OKCSW					**Sb**	**01 42 30.6**	**-1.2**
OKCSW				IAML		01 42 37.9	
	comp=E,4µm,0.7s						
OKCFA	**Oklahoma City**	**0.48**	**24**		**Pb**	**01 42 23.8**	**-0.8**
OKCFA					**Sg**	**01 42 30.2**	**+0.4**
OK004	**Okla Sci Mus**	**0.58**	**18**		**Pb**	**01 42 25.5**	**-0.7**
OK004					**Sb**	**01 42 34.0**	**-0.6**
BCOK	**Bluff Creek, N**	**0.69**	**5**		**Pb**	**01 42 27.5**	**-0.6**
BCOK					**Sb**	**01 42 37.4**	**-0.3**
W35A	**Tecumseh**	**0.69**	**75**		**Pg**	**01 42 27.5**	**+0.2**
W35A				IAML		01 42 47.8	
	comp=E,2µm,0.3s						
W35A				IAML		01 42 47.8	
	comp=N,2µm,0.3s						
ADOK	**Arcadia Dam**	**0.73**	**21**		**Pb**	**01 42 28.4**	**-0.4**
OK029	**Liberty Lake**	**0.84**	**13**		**Pb**	**01 42 30.2**	**-0.6**
OK029					**Sb**	**01 42 42.0**	**-0.3**
OK029				IAML		01 42 46.1	
	comp=N,2µm,0.6s						
WMOK	**Wichita Mounta**	**0.93**	**256**		**Pg**	**01 42 30.4**	**-1.4**
CSTR	**Hydro, Custer**	**1.06**	**310**		**Pb**	**01 42 34.1**	**-0.3**
LOOK	**Love County**	**1.06**	**157**		**Pg**	**01 42 34.1**	**-0.4**
WTFS	**Witchita Falls**	**1.36**	**208**		**Pg**	**01 42 38.6**	**-1.6**
QUOK	**Quay**	**1.44**	**34**		**Pn**	**01 42 40.4**	**+0.2**
CROK	**Carrier**	**1.55**	**351**		**Pb**	**01 42 42.3**	**-0.5**
OK048	**Pawnee Station**	**1.56**	**23**		**Pn**	**01 42 42.5**	**+0.6**
Z35A	**Perchaven, San**	**1.68**	**167**		**Pn**	**01 42 43.5**	**0.0**
Z35A				IAmb_Lg		01 43 09.8	
	comp=Z,227nm,0.9s						
OK038	**West end E0370**	**1.73**	**331**		**Pb**	**01 42 45.4**	**-0.5**
TUL3	**Leonard**	**1.81**	**58**		**Pn**	**01 42 46.6**	**+1.3**
BLOK	**Blackwell**	**1.82**	**12**	IAmb_Lg		01 43 16.9	
	comp=Z,299nm,0.8s						
FW06	**Azle**	**2.00**	**177**		**Pn**	**01 42 49.0**	**+1.1**
KAN13	**South Haven SW**	**2.04**	**5**		**Pb**	**01 42 50.0**	**-1.3**
SMWD	**Samnorwood**	**2.10**	**274**		**Pn**	**01 42 50.1**	**+0.8**
SMWD				IAmb_Lg		01 43 23.9	
	comp=Z,405nm,1.0s						
FW05	**UT at Dallas**	**2.13**	**158**		**Pn**	**01 42 51.8**	**+2.2**
T35A	**Sooner Cattle**	**2.16**	**26**		**Pn**	**01 42 51.3**	**+1.2**
KAN01	**Argonia South**	**2.18**	**359**		**Pn**	**01 42 51.4**	**+1.1**
KAN01				IAmb_Lg		01 43 27.0	
	comp=Z,406nm,0.9s						
PLPT	**Palo Pinto**	**2.22**	**194**		**Pn**	**01 42 52.2**	**+1.3**
KAN08	**Anthony NE Sta**	**2.26**	**354**		**Pb**	**01 42 53.8**	**-1.2**
RLO	**Rose Lookout**	**2.48**	**61**		**Pn**	**01 42 55.6**	**+1.1**
DRZT	**Darrouzett**	**2.58**	**305**		**Pn**	**01 42 57.6**	**+1.7**
APMT	**Aspermont**	**2.60**	**232**		**Pn**	**01 42 57.7**	**+1.5**
FW13	**Cleburne**	**2.62**	**175**		**Pn**	**01 42 58.3**	**+1.8**
Z38A	**Mt. Pleasant**	**2.82**	**127**		**Pn**	**01 43 00.3**	**+1.2**
Z38A				IAmb_Lg		01 43 47.7	
	comp=Z,340nm,0.7s						
ABTX	**Abilene, Hawle**	**2.85**	**215**		**Pn**	**01 43 00.5**	**+0.9**
ABTX				IAmb_Lg		01 43 47.1	
	comp=Z,249nm,0.9s						
DKNS	**Dickens**	**2.98**	**245**		**Pn**	**01 43 03.5**	**+2.1**
DKNS				IAmb_Lg		01 43 47.4	
	comp=Z,237nm,0.9s						
WHTX	**Lake Whitney,**	**2.98**	**176**		**Pn**	**01 43 02.5**	**+1.2**
U38A	**Gravette**	**3.06**	**60**		**Pn**	**01 43 03.7**	**+1.2**
SN07	**Snyder 07**	**3.25**	**236**		**Pn**	**01 43 06.5**	**+1.2**
SN07				IAmb_Lg		01 44 01.5	
	comp=Z,198nm,0.8s						
AMTX	**Amarillo**	**3.28**	**270**		**Pn**	**01 43 06.8**	**+1.2**
AMTX				IAmb_Lg		01 44 05.4	
	comp=Z,127nm,0.8s						
HHAR	**Hobbs**	**3.32**	**66**		**Pn**	**01 43 07.4**	**+1.3**
HHAR				IAmb_Lg		01 44 01.6	
	comp=Z,150nm,0.7s						
237A	**Washetta, Mont**	**3.35**	**152**		**Pn**	**01 43 08.1**	**+1.6**
237A				IAmb_Lg		01 44 05.6	
	comp=Z,133nm,0.8s						
MIAR	**Mount Ida**	**3.41**	**96**		**Pn**	**01 43 09.6**	**+2.2**
PH02	**Texas Public H**	**3.51**	**278**	IAmb_Lg		01 44 06.7	
	comp=Z,53nm,0.8s						
R32A	**Long Quarter,**	**3.54**	**347**		**Pn**	**01 43 10.5**	**+1.4**
POST	**Post**	**3.69**	**240**	IAmb_Lg		01 44 16.9	
	comp=Z,183nm,1.1s						
BRDY	**Brady**	**3.84**	**197**	IAmb_Lg		01 44 16.0	
	comp=Z,228nm,0.8s						
WLAR	**White Oak Lake**	**4.00**	**107**		**Pn**	**01 43 16.7**	**+1.3**
WLAR				IAmb_Lg		01 44 30.9	
	comp=Z,127nm,0.7s						
X40A	**Basin Creek Fa**	**4.03**	**96**		**Pn**	**01 43 17.4**	**+1.7**
X40A				IAmb_Lg		01 44 30.7	
	comp=Z,129nm,0.8s						
NATX	**Nacogdoches**	**4.08**	**141**	IAmb_Lg		01 44 34.2	
	comp=Z,173nm,0.9s						
CBKS	**Cedar Bluff**	**4.17**	**337**	IAmb_Lg		01 44 36.8	
	comp=Z,161nm,0.9s						
435B	**Jarrell**	**4.18**	**179**	IAmb_Lg		01 44 30.0	
	comp=Z,192nm,0.7s						
129A	**Stewart Farms,**	**4.19**	**237**	IAmb_Lg		01 44 31.2	
	comp=Z,54nm,0.9s						
SGCY	**Sterling City**	**4.19**	**224**	IAmb_Lg		01 44 35.8	
	comp=Z,250nm,1.1s						
KSU1	**Kansas State U**	**4.21**	**12**		**Pn**	**01 43 19.3**	**+1.0**
KSU1	**Kansas State U**	**4.21**	**12**	IAmb_Lg		01 44 38.6	
	comp=Z,198nm,0.8s						
MSTX	**Muleshoe**	**4.32**	**258**	IAmb_Lg		01 44 38.5	
	comp=Z,92nm,0.9s						
RTBA	**Rita Blanca**	**4.36**	**291**		**Pn**	**01 43 21.0**	**+0.5**
UALR	**University of**	**4.40**	**91**	IAmb_Lg		01 44 40.1	
	comp=Z,230nm,0.8s						
Z41A	**Richland Creek**	**4.40**	**112**	IAmb_Lg		01 44 44.6	
	comp=Z,135nm,0.8s						
WHAR	**Wooly Hollow**	**4.44**	**84**	IAmb_Lg		01 44 45.7	
	comp=Z,180nm,0.8s						
S39A	**Bolivar**	**4.45**	**51**	IAmb_Lg		01 44 37.3	
	comp=Z,148nm,0.7s						
229A	**Bryant Ranch,**	**4.57**	**230**	IAmb_Lg		01 44 44.8	
	comp=Z,73nm,0.7s						
128A	**Castleberry Fa**	**4.63**	**241**	IAmb_Lg		01 44 40.9	
	comp=Z,43nm,0.7s						
FCAR	**Ozark Folk Cen**	**4.63**	**77**	IAmb_Lg		01 44 48.6	
	comp=Z,91nm,0.7s						
MGMO	**Mountain Grove**	**4.90**	**62**	IAmb_Lg		01 44 54.4	
	comp=Z,187nm,0.7s						
TMB01	**Midkiff**	**4.94**	**229**	IAmb_Lg		01 45 04.0	
	comp=Z,68nm,1.1s						
ODSA	**Odessa**	**4.96**	**236**	IAmb_Lg		01 45 02.5	
	comp=Z,92nm,0.9s						
OZNA	**Ozona**	**4.97**	**217**	IAmb_Lg		01 44 59.0	
	comp=Z,106nm,0.9s						
CCAR	**Cane Creek**	**5.00**	**100**	IAmb_Lg		01 45 01.6	
	comp=Z,84nm,0.9s						
MLDN	**Muldoon**	**5.20**	**174**	IAmb_Lg		01 45 13.6	
	comp=Z,73nm,0.7s						
LCAR	**Lake Charles**	**5.44**	**77**	IAmb_Lg		01 45 09.1	
	comp=Z,82nm,1.0s						
R40A	**Maddies Statio**	**5.47**	**51**	IAmb_Lg		01 45 20.3	
	comp=Z,114nm,0.7s						
HNDO	**Hondo**	**5.59**	**194**	IAmb_Lg		01 45 25.9	
	comp=Z,93nm,0.8s						
KSCO	**Kaye Shedlock'**	**5.64**	**317**		**Pn**	**01 43 39.1**	**+1.0**
KSCO				IAmb_Lg		01 45 29.4	
	comp=Z,135nm,0.8s						
TPB06	**Permian Basin**	**5.69**	**236**	IAmb_Lg		01 45 21.0	
	comp=Z,95nm,0.9s						
143A	**Socs Landing,**	**5.70**	**112**	IAmb_Lg		01 45 22.6	
	comp=Z,70nm,0.7s						
P38A	**Dawn**	**5.70**	**34**	IAmb_Lg		01 45 19.2	
	comp=Z,168nm,0.8s						
T42A	**Van Buren**	**5.73**	**67**	IAmb_Lg		01 45 20.4	
	comp=Z,165nm,0.8s						
EF04	**Eagle Ford 04**	**5.75**	**181**	IAmb_Lg		01 45 28.6	
	comp=Z,122nm,1.0s						
T25A	**Trinidad**	**5.86**	**294**	IAmb_Lg		01 45 33.3	
	comp=Z,97nm,0.8s						
CCM	**Cathedral Cave**	**6.03**	**57**		**Pn**	**01 43 44.0**	**+0.7**
DRIO	**Del Rio**	**6.07**	**205**	IAmb_Lg		01 45 43.5	
	comp=Z,125nm,1.1s						
735A	**Kenedy**	**6.10**	**181**	IAmb_Lg		01 45 35.1	
	comp=Z,65nm,0.8s						
EF02	**Christine**	**6.22**	**187**	IAmb_Lg		01 45 42.1	
	comp=Z,147nm,0.9s						
TPB05	**Hovey Rd**	**6.23**	**231**	IAmb_Lg		01 45 37.4	
	comp=Z,126nm,0.9s						
SAND	**Sanderson**	**6.25**	**218**	IAmb_Lg		01 45 43.2	
	comp=Z,159nm,1.2s						
PECS	**Pecos**	**6.30**	**237**	IAmb_Lg		01 45 37.6	
	comp=Z,76nm,0.8s						
MET	**Memphis--Engin**	**6.36**	**86**	IAmb_Lg		01 45 45.7	
	comp=Z,108nm,0.8s						
BGNE	**Belgrade**	**6.43**	**357**	IAmb_Lg		01 45 54.1	
	comp=Z,99nm,0.8s						
TPB01	**Permian Basin**	**6.51**	**234**	IAmb_Lg		01 45 45.5	
	comp=Z,70nm,0.8s						
LNXT	**Lenox**	**6.78**	**78**	IAmb_Lg		01 46 07.7	
	comp=Z,126nm,0.7s						
833A	**Chaparral WMA,**	**6.79**	**193**	IAmb_Lg		01 46 08.4	
	comp=Z,51nm,0.7s						
ALPN	**Alpine**	**6.79**	**229**	IAmb_Lg		01 45 54.2	
	comp=Z,69nm,0.9s						
Y45A	**Yeager Farm, C**	**6.82**	**97**	IAmb_Lg		01 45 59.9	
	comp=Z,72nm,0.9s						
OXF	**Oxford**	**6.83**	**92**	IAmb_Lg		01 45 59.1	
	comp=Z,52nm,0.7s						
CGM3	**Cape Girardeau**	**6.90**	**68**	IAmb_Lg		01 45 59.5	
	comp=Z,112nm,0.8s						
Q24A	**Divide**	**7.18**	**306**	IAmb_Lg		01 46 15.6	
	comp=Z,127nm,1.1s						
ANMO	**Albuquerque**	**7.20**	**272**	Pn	**Pn**	**01 43 59.2**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=80,slow=7.6,SNR=3.7						
ANMO				Pg	**Pb**	**01 44 22.5**	**+3.3**
	comp=Z,0.6nm,0.3s,baz=91,slow=17,SNR=12						
ANMO				Lg	Lg	01 45 58.7	
	comp=Z,3.7nm,0.3s,baz=14,slow=12,SNR=6.7						
	comp=Z,0.9nm,0.8s						
ANMO	**Albuquerque**	**7.20**	**272**	IAmb_Lg		01 46 14.2	
	comp=Z,23nm,0.8s						
ANMO	**Albuquerque**	**7.20**	**272**	IAmb_Lg		01 46 14.2	
	comp=Z,22nm,0.8s						
ANMO				IAmb_Lg		01 46 14.2	
	comp=Z,22nm,0.8s						
MNTX	**Cornudas Mount**	**7.22**	**245**	IAmb_Lg		01 46 08.8	
	comp=Z,53nm,0.8s						
VHRN	**Van Horn**	**7.42**	**238**	IAmb_Lg		01 46 29.9	
	comp=Z,62nm,0.7s						
TXAR	**Lajitas Array**	**7.57**	**224**	Pn	**Pn**	**01 44 03.1**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=44,slow=13,SNR=14						
TXAR				Sn	**Sn**	**01 45 27.2**	**-3.2**
	comp=Z,2.2nm,0.3s,baz=102,slow=29,SNR=4.1						
TXAR				Lg	Lg	01 46 07.4	
	comp=Z,2.8nm,0.3s,baz=46,slow=27,SNR=5.4						
	comp=Z,0.4nm,0.5s						
K30B	**Basset**	**7.83**	**350**	IAmb_Lg		01 46 29.9	
	comp=Z,115nm,0.8s						
ISCO	**Idaho Springs**	**7.94**	**310**		**Pn**	**01 44 10.2**	**+0.4**
ISCO				IAmb_Lg		01 46 35.7	
	comp=Z,47nm,0.8s						
EPT	**El Paso**	**8.04**	**249**	IAmb_Lg		01 46 46.3	
	comp=Z,47nm,0.9s						
ECSD	**EROS Data Cent**	**8.79**	**5**		**Pn**	**01 44 20.1**	**-1.0**
ECSD	**EROS Data Cent**	**8.79**	**5**	IAmb_Lg		01 46 56.9	
	comp=Z,58nm,1.0s						
HAYD	**Hayden**	**9.38**	**309**	IAmb_Lg		01 47 19.4	
	comp=Z,34nm,0.9s						
SUSD	**Miller**	**9.51**	**355**	IAmb_Lg		01 47 35.6	
	comp=Z,37nm,0.7s						
I37A	**Lemond, Waseca**	**9.62**	**19**	IAmb_Lg		01 47 29.9	
	comp=Z,84nm,1.0s						
RSSD	**Black Hills**	**10.36**	**334**		**Pn**	**01 44 43.4**	**+0.4**
TKL	**Tuckaleechee C**	**11.39**	**83**	Pn	**Pn**	**01 44 58.6**	**+1.7**
	comp=Z,0.6nm,0.3s,baz=232,slow=9.2,SNR=7.2						
TKL				Lg	Lg	01 48 12.7	
	comp=Z,1.3nm,0.3s,baz=176,slow=23,SNR=7.1						
TKL				LR	LR	01 49 35.6	
	comp=Z,50nm,18.6s,baz=84,slow=38						
	comp=Z,2.8nm,0.5s						
PDAR	**Pinedale Array**	**12.08**	**314**	Pn	**Pn**	**01 45 06.3**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=127,slow=14,SNR=14						
PDAR				Lg	Lg	01 48 27.9	
	comp=Z,0.3nm,0.3s,baz=129,slow=24,SNR=4.8						
	comp=Z,0.7nm,0.4s						
PDAR	**Pinedale Array**	**12.08**	**314**	Pn	**Pn**	**01 45 06.1**	**-0.4**
ULM	**Lac du Bonnet**	**15.32**	**4**	Pn	**Pn**	**01 45 46.2**	**-4.1**
	comp=Z,0.4nm,0.3s,baz=179,slow=13,SNR=1.9						
ULM				Lg	Lg	01 50 11.1	
	comp=Z,0.3nm,0.3s,baz=255,slow=15,SNR=3.2						
	comp=Z,0.9nm,0.4s						
ULM	**Lac du Bonnet**	**15.32**	**4**	IAmb	IAmb	01 46 01.6	
	comp=Z,3.4nm,0.8s						
NVAR	**Mina Array Bea**	**16.89**	**288**	Pn	**P**	**01 46 12.3**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=73,slow=12,SNR=2.9						
	comp=Z,0.4nm,0.5s						
SADO	**Sadowa**	**17.24**	**50**	P	**P**	**01 46 19.1**	**+2.7**
	comp=Z,0.2nm,0.3s,baz=262,slow=15,SNR=1.9						
SADO				Lg	Lg	01 51 11.1	
	comp=Z,0.3nm,0.3s,baz=169,slow=22,SNR=4.7						
	comp=Z,1.6nm,0.6s						
SADO	**Sadowa**	**17.24**	**50**	IAmb	IAmb	01 46 51.4	
	comp=Z,29nm,1.5s						
ILAR	**Eielson Array**	**41.80**	**331**	P	**P**	**01 50 05.7**	**+2.2**
	comp=Z,0.3nm,0.9s,baz=106,slow=9.5,SNR=2.3						
	comp=Z,0.3nm,0.9s						

IDC 06 01:47:16.4±9.7, **8°.32S**×**152°.28E**, **h0**km, **mb3.4**/3, **mbtmp3.5**/3, **MS3.0**/2, **Error ellipse: s-maj=276.6km s-min=36.9km az=112.0, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**13.07**	**206**	LR	LR	01 54 38.3	
	comp=Z,32nm,18.8s,baz=52,slow=34						
WRA	**Warramunga Arr**	**20.86**	**234**	P	P	01 52 00.8	+0.6
	1.6nm,0.9s,baz=62,slow=10,SNR=7.7						
	1.6nm,0.9s						
ASAR	**Alice Springs**	**23.30**	**227**	P	P	01 52 25.6	-0.5
	0.6nm,0.8s,baz=56,slow=9.8,SNR=6.1						
	0.6nm,0.8s						
STKA	**Stephens Creek**	**25.46**	**202**	LR	LR	02 01 46.6	
	comp=Z,66nm,18.1s,baz=25,slow=34						
SONM	**Songino Array**	**69.03**	**329**	P	P	01 58 24.2	+0.1
	0.3nm,0.4s,baz=112,slow=6.4,SNR=2.8						
	0.3nm,0.4s						

*NNC **06** 01:54:08.2±0.7, 43°.23N×78°.06E, h7km±6km, mb2.6, mpv2.4, Error ellipse: s-maj=7.2km s-min=4.3km az=162.0*
*SOME **06** 01:54:08.9, 43°.22N×78°.07E, h15km*
*KRNET **06** 01:54:09.7±0.1, 43°.14N×78°.07E, h22km, mb2.6*
ISC 06 01:54:08.5±1.0, **43°.21N**±0°.02×**78°.09E**±0°.02, **h23**km±9km, **n34**, σ1**s**.**10**/67, **6C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SATY	**Saty**	**0.27**	**123**	P	**Pb**	**01 54 15.1**	**0.0**
	13nm,0.1s						
SATY				S	**Sb**	**01 54 19.9**	**+0.4**
	171nm,0.1s						
KURS	**Kuram**	**0.29**	**11**	P	**Pb**	**01 54 15.1**	**-0.1**
	7.4nm,0.1s						
KURS				S	**Sb**	**01 54 19.9**	**+0.1**
	60nm,0.3s						
KPKS	**Kokpek**	**0.50**	**59**	P	**Pb**	**01 54 19.1**	**+0.4**
	0.4nm,0.1s						
KPKS				S	**Sb**	**01 54 26.4**	**+0.7**
	30nm,0.2s						
KPKS	**Kokpek**	**0.50**	**59**	*e*P	**Pb**	**01 54 19.1**	**+0.4**
	0.4nm,0.1s						
KPKS				*e*S	**Sb**	**01 54 26.4**	**+0.7**
	30nm,0.2s						
ANVS	**Anan'yevo**	**0.53**	**217**	⇑*e*P	**Pb**	**01 54 19.0**	**-0.2**
ANVS				⇑*e*S	**Sb**	**01 54 25.6**	**-0.9**
UZB	**Uzynbulak**	**0.68**	**95**	P	**Pb**	**01 54 21.7**	**-0.2**
	1.1nm,0.1s						
UZB				S	**Sb**	**01 54 31.0**	**+0.1**
	9.0nm,0.1s						
UZB	**Uzynbulak**	**0.68**	**95**	*e*P	**Pb**	**01 54 21.6**	**-0.2**
	1.1nm,0.1s						
UZB				*e*S	**Sb**	**01 54 31.0**	**+0.1**
	9.0nm,0.1s						
KOTS	**Kotyrbulak**	**0.72**	**272**	P	**Pb**	**01 54 22.1**	**-0.3**
	2.1nm,0.1s						
KOTS				S	**Sb**	**01 54 32.4**	**+0.5**
	18nm,0.2s						
KOTS	**Kotyrbulak**	**0.72**	**272**	*e*P	**Pb**	**01 54 22.1**	**-0.3**
	2.1nm,0.1s						
KOTS				*e*S	**Sb**	**01 54 32.4**	**+0.5**
	18nm,0.2s						
PRZ	**Przheval'sk**	**0.76**	**163**	⇓*e*P	**Pb**	**01 54 22.9**	**-0.2**
PRZ				⇓*e*S	**Sb**	**01 54 32.3**	**-0.8**
MDOK	**Medeo**	**0.77**	**267**	Pg	**Pb**	**01 54 23.5**	**+0.2**
	1.2nm,0.1s						
MDOK				Lg	Lg	01 54 34.0	
	4.3nm,0.1s						
TNSS	**Tian-Shan**	**0.86**	**259**	P	**Pb**	**01 54 24.9**	**0.0**
	0.2nm,0.1s						
TNSS				S	**Sb**	**01 54 36.5**	**+0.4**
	0.7nm,0.1s						
TNSS	**Tian-Shan**	**0.86**	**259**	*e*P	**Pb**	**01 54 24.9**	**0.0**
	0.2nm,0.1s						
TNSS				*e*S	**Sb**	**01 54 36.5**	**+0.4**
	0.7nm,0.1s						
BLB	**Baldybastay**	**0.93**	**17**	P	**Pb**	**01 54 26.1**	**0.0**
	0.3nm,0.1s						
BLB				S	**Sn**	**01 54 38.8**	**-0.3**
	35nm,0.3s						
ARXS	**Arharly**	**1.02**	**349**	P	**Pb**	**01 54 27.4**	**-0.2**
	0.3nm,0.1s						
ARXS				S	**Sn**	**01 54 41.2**	**-0.1**
	18nm,0.1s						
ARXS	**Arharly**	**1.02**	**349**	*e*P	**Pb**	**01 54 27.4**	**-0.2**
	1.5nm,0.2s						
ARXS				*e*S	**Sn**	**01 54 41.2**	**-0.1**
	18nm,0.1s						
IZV	**Izvestkoviy**	**1.10**	**262**	P	**Pn**	**01 54 28.8**	**+0.1**
	1.0nm,0.2s						
IZV				S	**Sn**	**01 54 43.0**	**-0.2**
	4.4nm,0.1s						
IZV	**Izvestkoviy**	**1.10**	**262**	*e*P	**Pn**	**01 54 28.8**	**+0.1**
	1.0nm,0.2s						
IZV				*e*S	**Sn**	**01 54 43.0**	**-0.2**
	4.4nm,0.1s						
KTBS	**Karatobe**	**1.15**	**297**	P	**Pb**	**01 54 29.3**	**-0.3**
	1.3nm,0.1s						
KTBS				S	**Sn**	**01 54 44.1**	**-0.1**
	0.3nm,0.3s						
KTBS	**Karatobe**	**1.15**	**297**	*e*P	**Pb**	**01 54 29.3**	**-0.3**
	1.3nm,0.1s						
KTBS				*e*S	**Sn**	**01 54 44.1**	**-0.1**
	0.3nm,0.3s						
MTBS	**Maitube**	**1.22**	**267**	P	**Pb**	**01 54 31.7**	**+0.8**
	1.1nm,0.1s						
MTBS				S	**Sn**	**01 54 48.5**	**+2.5**
	6.8nm,0.2s						
MTBS	**Maitube**	**1.22**	**267**	*e*P	**Pb**	**01 54 31.7**	**+0.8**
	1.7nm,0.2s						
MTBS				*e*S	**Sn**	**01 54 48.5**	**+2.5**
	6.8nm,0.2s						
KDJ	**Kajisay**	**1.27**	**212**	⇓*e*P	**Pb**	**01 54 31.9**	**+0.1**
KDJ				⇓*e*S	**Sn**	**01 54 48.1**	**+0.7**
KNOS	**Konyrlen**	**1.40**	**34**	P	**Pb**	**01 54 34.6**	**+0.7**
	0.9nm,0.1s						
KNOS				S	**Sb**	**01 54 53.1**	**+1.8**
	4.5nm,0.2s						
KUU	**Kurty**	**1.45**	**299**	P	**Pn**	**01 54 30.6**	**-2.7**
KUU				S	**Sn**	**01 54 46.2**	**-5.4**
KUU	**Kurty**	**1.45**	**299**	*e*P	**Pb**	**01 54 34.2**	**-0.5**
	0.9nm,0.1s						
KUU				*e*S	**Sb**	**01 54 52.5**	**-0.2**
	1.5nm,0.1s						
TARG	**Taragay, Kyrgy**	**1.49**	**188**	⇑*e*P	**Pb**	**01 54 35.9**	**+0.2**
TARG				⇑*e*S	**Sb**	**01 54 54.9**	**+0.5**
KST	**Kastek**	**1.57**	**265**	P	**Pb**	**01 54 37.4**	**+0.6**
	0.9nm,0.2s						
KST				S	**Sb**	**01 54 58.0**	**+1.6**
	3.2nm,0.2s						
KST	**Kastek**	**1.57**	**265**	*e*P	**Pb**	**01 54 37.4**	**+0.6**
	0.9nm,0.2s						
KST				*e*S	**Sb**	**01 54 58.0**	**+1.6**
	3.2nm,0.2s						
DJR	**Jarkent**	**1.67**	**47**	P	**Pb**	**01 54 39.0**	**+0.5**
	1.2nm,0.9s						
DJR				S	**Sb**	**01 55 00.7**	**+1.6**
	2.7nm,0.3s						
DJR	**Jarkent**	**1.67**	**47**	*e*P	**Pb**	**01 54 39.0**	**+0.5**
	1.2nm,0.9s						
DJR				*e*S	**Sb**	**01 55 00.7**	**+1.6**
	2.7nm,0.3s						
KRBS	**Karabastau**	**1.83**	**286**	P	**Pb**	**01 54 41.5**	**+0.3**
	0.5nm,0.4s						
KRBS				S	**Sb**	**01 55 05.0**	**+1.3**
	9.3nm,0.3s						
KRBS	**Karabastau**	**1.83**	**286**	*e*P	**Pb**	**01 54 41.5**	**+0.3**
	0.5nm,0.4s						
KRBS				*e*S	**Sb**	**01 55 05.0**	**+1.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	9.3nm,0.3s						
TKM2	**Tokmak 2**	**1.85**	**262**	⇑eP	**Pb**	**01 54 42.2**	**+0.5**
TKM2				⇑eS	**Sb**	**01 55 05.9**	**+1.3**

*UPA **06** 02:38:50.4±2.7, 7.°03N×72.°89W, h10km±59km, MD4.8, MW4.6, Presumed earthquake*
*CATAC **06** 02:38:55.5±0.5, 7°N±2°×7°3W±°, h155km±5km, M4.7/12, mb4.8/2, mB5.0/2, MLv4.7/12, Mw(mB)4.3/2, Error ellipse: s-maj=9.5km s-min=4.9km az=95.5, confirmed*
*IDC **06** 02:38:55.7±0.5, 6.°80N×72.°96W, h162km±5km, mb3.5/15, mbtmp4.0/18, Error ellipse: s-maj=10.9km s-min=7.0km az=127.0*
*NEIC **06** 02:38:56.6±2.8, 6.°78N±0.°07×72.°93W±0.°07, h161km±5km, mb4.6/31, Error ellipse: s-maj=11.8km s-min=8.5km az=130.0*
*VAO **06** 02:38:56.7±0.6, 6.°57N×72.°83W, h125km±5km, mb4.3, Presumed earthquake*
*FUNV **06** 02:38:59.5, 7.°03N×73.°23W, h20km, MW4.2, Presumed earthquake*
ISC 06 02:38:55.3±0.5**, 6.°87N**±0.°03×**73.°09W**±0.°03**, h157**km±4km**, n169,** σ1.s**72**/221**, mb4.6**/33**, 2C-6D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.29**	**199**	P	**Pn**	**02 39 16.9**	**-0.1**
BARC				S	**Sn**	**02 39 32.4**	**-1.1**
PAMC	**Pamplona, Colo**	**0.60**	**39**	P	**Pn**	**02 39 19.8**	**+1.2**
PAMC				S	**Sn**	**02 39 36.8**	**+0.5**
BRJC	**Barrancabermej**	**0.66**	**279**	P	**Pn**	**02 39 18.5**	**+0.2**
BRJC				S	**Sn**	**02 39 35.6**	**-0.2**
RUSC	**La Rusia**	**0.97**	**180**	P	**Pn**	**02 39 20.7**	**-0.4**
RUSC				S	**Sn**	**02 39 39.6**	**-1.2**
RUSC	**La Rusia**	**0.97**	**180**	P	**Pn**	**02 39 20.7**	**-0.4**
RUSC				S	**Sn**	**02 39 39.4**	**-1.4**
RUSC	**La Rusia**	**0.97**	**180**	eP	**Pn**	**02 39 19.8**	**-1.3**
RUSC				eS	**Sn**	**02 39 35.3**	**-5.5**
CAPV	**Capacho**	**1.25**	**38**	eP	**Pn**	**02 39 21.8**	**-1.4**
CAPV				eS	**Sn**	**02 39 37.9**	**-6.8**
OCAC	**Ocana**	**1.38**	**350**	P	**Pn**	**02 39 25.0**	**+0.7**
OCAC				S	**Sn**	**02 39 47.0**	**+0.3**
PTBC	**PUERTO BERRIO,**	**1.40**	**256**	P	**Pn**	**02 39 23.2**	**-1.2**
PTBC				S	**Sn**	**02 39 44.8**	**-1.9**
SPBC	**San Pablo de B**	**1.56**	**219**	P	**Pn**	**02 39 25.6**	**-0.5**
SPBC				S	**Sn**	**02 39 48.1**	**-1.6**
NORC	**Norcasia**	**2.20**	**234**	P	**Pn**	**02 39 32.5**	**-0.7**
NORC				S	**Sn**	**02 40 00.8**	**-1.6**
CHIC	**Chingaza**	**2.32**	**196**	P	**Pn**	**02 39 34.7**	**-0.3**
CHIC				S	**Sn**	**02 40 04.3**	**-1.3**
ROSC	**El Rosal**	**2.36**	**211**	P	**Pn**	**02 39 36.8**	**+1.3**
	1µm,0.3s,baz=299,slow=15,SNR=480						
ROSC				S	**Sn**	**02 40 07.3**	**+0.8**
	2µm,0.3s,baz=49,slow=19,SNR=9.5						
ROSC	**El Rosal**	**2.36**	**211**		**Pn**	**02 39 37.1**	**+1.6**
ROSC	**El Rosal**	**2.36**	**211**	P	**Pn**	**02 39 36.5**	**+1.0**
ROSC				S	**Sn**	**02 40 06.8**	**+0.3**
HELC	**Santa Helena**	**2.52**	**255**	P	**Pn**	**02 39 37.8**	**+0.4**
HELC				S	**Sn**	**02 40 07.4**	**-2.3**
HELC	**Santa Helena**	**2.52**	**255**	P	**Pn**	**02 39 36.6**	**-0.7**
HELC				S	**Sn**	**02 40 07.9**	**-1.8**
HELC	**Santa Helena**	**2.52**	**255**	eP	**Pn**	**02 39 38.5**	**+1.2**
HELC	**Santa Helena**	**2.52**	**255**	⇓iP	**Pn**	**02 39 36.8**	**-0.5**
HELC				iS	**Sn**	**02 40 08.9**	**-0.9**
CVER	**Cruz Verde, Cu**	**2.53**	**203**	P	**Pn**	**02 39 38.3**	**+0.7**
CVER				S	**Sn**	**02 40 09.7**	**-0.6**
MEDEC	**Medelln, Ant**	**2.56**	**257**	P	**Pn**	**02 39 37.2**	**-0.4**
MEDEC				S	**Sn**	**02 40 10.0**	**-0.3**
UREC	**San Jos de Ur**	**2.58**	**290**	P	**Pn**	**02 39 36.2**	**-1.5**
UREC				S	**Sn**	**02 40 08.8**	**-1.7**
UREC	**San Jos de Ur**	**2.58**	**290**	⇑iP	**Pn**	**02 39 36.3**	**-1.4**
UREC				eS	**Sn**	**02 40 08.0**	**-2.6**
SOCV	**Socops**	**2.62**	**57**	eP	**Pn**	**02 39 40.2**	**+2.0**
SOCV				eS	**Sn**	**02 40 11.2**	**-0.3**
GUY2C	**Guyana, Caldas**	**2.79**	**234**	P	**Pn**	**02 39 40.7**	**-0.1**
GUY2C				S	**Sn**	**02 40 14.4**	**-1.6**
VILC	**Villavicencio,**	**2.81**	**192**	P	**Pn**	**02 39 40.2**	**-0.5**
VILC				S	**Sn**	**02 40 14.6**	**-1.2**
NIZA	**Niza - Manizal**	**2.98**	**233**	P	**Pn**	**02 39 43.9**	**+1.0**
NIZA				S	**Sn**	**02 40 20.3**	**+0.5**
CBOC	**Ciudad Bolivar**	**3.07**	**251**	P	**Pn**	**02 39 44.1**	**+0.1**
CBOC				S	**Sn**	**02 40 20.9**	**-0.9**
DBBC	**Dabeiba**	**3.10**	**273**	P	**Pn**	**02 39 44.1**	**-0.2**
DBBC				S	**Sn**	**02 40 19.9**	**-2.4**
SDV	**Santo Domingo**	**3.15**	**50**	P	**Pn**	**02 39 46.5**	**+1.5**
	127nm,0.3s,baz=199,slow=4.2,SNR=422						
SDV				S	**Sn**	**02 40 22.8**	**-0.8**
	321nm,0.5s,baz=240,slow=23,SNR=37						
SDV	**Santo Domingo**	**3.15**	**50**		**Pn**	**02 39 46.8**	**+1.8**
SDV	**Santo Domingo**	**3.15**	**50**	P	**Pn**	**02 39 46.4**	**+1.4**
SDV				S	**Sn**	**02 40 23.5**	**0.0**
SDV	**Santo Domingo**	**3.15**	**50**	eP	**Pn**	**02 39 46.0**	**+1.0**
SDV				eS	**Sn**	**02 40 23.1**	**-0.4**
SDV	**Santo Domingo**	**3.15**	**50**	eP	**Pn**	**02 39 47.3**	**+2.3**
SDV				eS	**Sn**	**02 40 23.1**	**-0.4**
ARGC	**Ariguani, Magd**	**3.18**	**339**	P	**Pn**	**02 39 47.0**	**+1.8**
ARGC				S	**Sn**	**02 40 25.0**	**+0.9**
MCQV	**Machiques**	**3.21**	**10**	eP	**Pn**	**02 39 46.6**	**+1.1**
MCQV				eS	**Sn**	**02 40 21.1**	**-3.5**
PRAC	**Prado**	**3.61**	**210**	P	**Pn**	**02 39 50.6**	**-0.1**
PRAC				S	**Sn**	**02 40 32.2**	**-1.7**
PRAC	**Prado**	**3.61**	**210**	P	**Pn**	**02 39 49.7**	**-1.1**
PRAC				S	**Sn**	**02 40 32.3**	**-1.6**
APAC	**Apartado, Choc**	**3.61**	**287**	P	**Pn**	**02 39 50.7**	**0.0**
APAC				S	**Sn**	**02 40 33.5**	**-0.3**
ORTC	**Ortega, Tolima**	**3.64**	**216**	P	**Pn**	**02 39 50.6**	**-0.6**
ORTC				S	**Sn**	**02 40 34.2**	**-0.4**
SJCC	**San Jacinto, C**	**3.65**	**326**	P	**Pn**	**02 39 50.5**	**-0.8**
SJCC				S	**Sn**	**02 40 31.2**	**-3.6**
SJCC	**San Jacinto, C**	**3.65**	**326**	P	**Pn**	**02 39 50.4**	**-0.9**
SJCC	**San Jacinto, C**	**3.65**	**326**	eP	**Pn**	**02 39 50.7**	**-0.5**
SJCC				eS	**Sn**	**02 40 29.0**	**-5.8**
SJCC	**San Jacinto, C**	**3.65**	**326**	⇑iP	**Pn**	**02 39 50.5**	**-0.8**
SJCC				eS	**Sn**	**02 40 29.6**	**-5.2**
PLMC	**San Jos del P**	**3.73**	**239**	P	**Pn**	**02 39 52.4**	**+0.1**
PLMC				S	**Sn**	**02 40 35.9**	**-0.8**
LCBC	**Los crdobas,**	**3.80**	**301**	P	**Pn**	**02 39 52.5**	**-0.7**
URMC	**La Uribe, Meta**	**3.82**	**200**	P	**Pn**	**02 39 53.3**	**-0.2**
CRJC	**Cerrejon, Guaj**	**4.13**	**3**	P	**Pn**	**02 39 57.3**	**-0.2**
YOTC	**Yotoco, Valle**	**4.33**	**229**	P	**Pn**	**02 39 59.4**	**-0.8**
SOLC	**Bahia Solano**	**4.34**	**262**	P	**Pn**	**02 40 00.1**	**-0.1**
SMRC	**Santa Marta, M**	**4.41**	**345**	P	**Pn**	**02 40 01.5**	**+0.4**
CAP2	**Capurgana**	**4.59**	**293**	P	**Pn**	**02 40 01.8**	**-1.6**
CAP2	**Capurgana**	**4.59**	**293**	eP	**Pn**	**02 40 01.9**	**-1.6**
CAP2				eS	**Sn**	**02 40 54.6**	**-2.0**
PIZC	**Pizarro, Choco**	**4.65**	**246**	P	**Pn**	**02 40 05.0**	**+0.7**
PTAC	**Punta Ardita,**	**4.70**	**274**	P	**Pn**	**02 40 03.5**	**-1.3**
PTAC	**Punta Ardita,**	**4.70**	**274**	⇓iP	**Pn**	**02 40 03.7**	**-1.1**
PTAC				eS	**Sn**	**02 40 59.9**	**+0.8**
MACC	**Macarena, Meta**	**4.75**	**189**	P	**Pn**	**02 40 03.7**	**-2.0**
URI	**Uribia**	**4.92**	**13**	P	**Pn**	**02 40 07.3**	**-0.5**
URI				S	**Sn**	**02 41 01.4**	**-3.0**
URIC	**Uribia, Colomb**	**4.92**	**13**	P	**Pn**	**02 40 06.9**	**-0.9**
JAMC	**Jamundi, Valle**	**5.09**	**225**	P	**Pn**	**02 40 09.7**	**-0.6**
	2µm69nm,0.5s						
UPD2	**Meteti**	**5.16**	**289**	⇓iP	**Pn**	**02 40 09.6**	**-1.4**
UPD2				eS	**Sn**	**02 41 07.3**	**-2.8**
GARC	**Garzon, Huila**	**5.23**	**207**	P	**Pn**	**02 40 10.9**	**-1.3**
TOTI	**Torti**	**5.56**	**292**	⇓eP	**Pn**	**02 40 14.7**	**-1.6**
TOTI				eS	**Sn**	**02 41 16.1**	**-3.6**
POPC	**Popayan, Colom**	**5.59**	**220**	P	**Pn**	**02 40 16.2**	**-0.7**
	919nm74nm,0.7s						
FLOC	**Florencia**	**5.84**	**206**	P	**Pn**	**02 40 18.7**	**-1.3**
FLOC				S	**Sn**	**02 41 19.4**	**-7.0**
FLOC	**Florencia**	**5.84**	**206**	P	**Pn**	**02 40 19.0**	**-1.0**
	2µm135nm,1.0s						
CNTA3	**Canitas, Panam**	**6.20**	**292**	eP	**Pn**	**02 40 23.2**	**-1.5**
BENV	**Beln**	**6.24**	**60**	eP	**Pn**	**02 40 29.8**	**+4.5**
BENV				eS	**Sn**	**02 41 35.2**	**-0.6**
GR1C	**Gorgona, Isla**	**6.35**	**233**	P	**Pn**	**02 40 24.9**	**-1.9**
BBAC	**Balboa, Cauca**	**6.36**	**221**	P	**Pn**	**02 40 26.5**	**-0.5**
	1µm54nm,0.5s						
CHPO	**Chepo, Panama**	**6.39**	**291**	eP	**Pn**	**02 40 25.5**	**-1.8**
CRUC	**La Cruz**	**6.53**	**216**	P	**Pn**	**02 40 30.8**	**+1.4**
	568nm,0.9s						
UPA	**Univ. de Panam**	**6.72**	**289**	eP	Pn	02 40 12.1	-20
CHOR3	**La Chorrera**	**6.92**	**287**	eP	**Pn**	**02 40 32.7**	**-1.5**
GAMB1	**Gamboa**	**6.93**	**289**	eP	**Pn**	**02 40 32.9**	**-1.5**
FRIJ	**El Hiral**	**6.98**	**290**	eP	**Pn**	**02 40 33.4**	**-1.7**
ZANG	**Zanguenga, Cho**	**7.03**	**288**	eP	**Pn**	**02 40 33.5**	**-2.3**
BCIP	**Isla Barro Col**	**7.06**	**289**		**Pn**	**02 40 34.4**	**-1.8**
BCIP	**Isla Barro Col**	**7.06**	**289**	P	**Pn**	**02 40 34.0**	**-2.2**
BCIP	**Isla Barro Col**	**7.06**	**289**	eP	**Pn**	**02 40 33.3**	**-2.9**
AZU	**Azuero**	**7.19**	**278**	⇓eP	**Pn**	**02 40 37.1**	**-0.7**
TOSI3	**Tonosi**	**7.32**	**275**	eP	**Pn**	**02 40 39.1**	**-0.5**
CHIT3	**Chitre**	**7.35**	**279**	eP	**Pn**	**02 40 39.3**	**-0.8**
CACAO	**El Cacao, Vera**	**7.73**	**274**	⇓eP	**Pn**	**02 40 42.6**	**-2.5**
GMAL	**Guarumal, Vera**	**8.13**	**277**	eP	**Pn**	**02 40 47.0**	**-3.4**
OTAV	**Otavalo**	**8.49**	**219**		**Pn**	**02 40 55.2**	**-0.5**
OTAV	**Otavalo**	**8.49**	**219**	eP	**Pn**	**02 40 55.6**	**0.0**
BRU2	**Volcan**	**9.71**	**282**		**Pn**	**02 41 12.7**	**+1.2**
BRU2	**Volcan**	**9.71**	**282**	eP	**Pn**	**02 41 12.1**	**+0.6**
MTDJ	**Mount Denham**	**12.09**	**339**	Pn	**P**	**02 41 46.4**	**-2.4**
JTS	**Las Juntas de**	**12.21**	**287**	P	**Pn**	**02 41 46.3**	**+2.0**
	8.3nm,0.8s,baz=193,slow=1.6,SNR=8.3						
JTS	**Las Juntas de**	**12.21**	**287**		**P**	**02 41 47.6**	**-2.6**
CELP	**Cerrillos**	**12.82**	**29**	Pn	**Pn**	**02 41 50.9**	**-1.1**
SJG	**San Juan**	**13.06**	**31**	P	**Pn**	**02 41 54.6**	**-0.4**
	9.6nm,0.4s,baz=209,slow=12,SNR=12						
SJG	**San Juan**	**13.06**	**31**	Pn	**Pn**	**02 41 54.9**	**-0.1**
BOAV	**Boa Vista**	**13.29**	**109**		**Pn**	**02 41 56.0**	**-2.0**
BOAV	**Boa Vista**	**13.29**	**109**	eP	**Pn**	**02 41 54.5**	**-3.5**
TEFE	**Tefe**	**13.32**	**140**	eP	**Pn**	**02 41 56.0**	**-2.4**
MACA	**Manacapuru-AM**	**15.89**	**128**	eP	**Pn**	**02 42 29.2**	**-1.3**
APG	**El Apazote**	**18.87**	**297**	P	**P**	**02 43 04.3**	**+0.5**
	0.5nm,0.7s,baz=126,slow=18,SNR=4.3						
MDP	**Montagnes des**	**20.41**	**94**	P	**P**	**02 43 20.0**	**-0.2**
	11nm,1.0s,baz=235,slow=4.8,SNR=3.5						
	11nm,1.0s						
ITTB	**Itaituba**	**20.61**	**122**	eP	**P**	**02 43 23.1**	**+0.7**
NPGB	**Novo Progresso**	**22.45**	**128**	eP	**P**	**02 43 41.3**	**-0.2**
VILB	**Vilhena**	**23.49**	**147**		**P**	**02 43 51.3**	**+0.2**
VILB				IAmb	IAmb	02 43 53.1	
	comp=Z,11nm,0.6s						
VILB	**Vilhena**	**23.49**	**147**	eP	**P**	**02 43 51.1**	**0.0**
LPAZ	**La Paz**	**23.53**	**168**	P	**P**	**02 43 51.2**	**-0.8**
	comp=Z,1.3nm,0.7s,baz=3.0,slow=7.4,SNR=4.1						
LPAZ				pP	**pP**	**02 44 23.2**	**+0.7**
	comp=Z,2.1nm,0.6s,baz=350,slow=10,SNR=3.8						
	comp=Z,1.3nm,0.7s						
LPAZ	**La Paz**	**23.53**	**168**	P	**P**	**02 43 51.7**	**-0.3**
LPAZ	**La Paz**	**23.53**	**168**	eP	**P**	**02 43 52.0**	**0.0**
PDRB	**Porto dos Gac**	**24.53**	**138**	eP	**P**	**02 43 59.8**	**-0.8**
PB16	**IPOC Station P**	**25.29**	**172**	P	**P**	**02 44 05.6**	**-2.4**
PTLB	**Pontes e Lacer**	**26.13**	**148**	eP	**P**	**02 44 16.6**	**+1.7**
HODGE	**Hodges**	**28.52**	**344**	P	**P**	**02 44 38.5**	**+2.4**
Y49A	**Blount Mountai**	**29.55**	**337**	P	**P**	**02 44 47.9**	**+2.6**
Y49A				IAmb	IAmb	02 45 02.3	
	comp=Z,27nm,1.5s						
T59A	**Double "B" Far**	**30.24**	**353**	P	**P**	**02 44 53.5**	**+2.3**
ARAG	**Araguaiana, MT**	**30.78**	**137**	eP	**P**	**02 44 55.3**	**-0.9**
V48A	**Smith Brothers**	**31.38**	**338**	P	**P**	**02 45 03.8**	**+2.6**
V48A				IAmb	IAmb	02 45 09.7	
	comp=Z,3.8nm,0.6s						
WVT	**Waverly**	**32.10**	**337**	P	**P**	**02 45 09.0**	**+1.5**
WVT				IAmb	IAmb	02 45 09.8	
	comp=Z,17nm,1.4s						
WHAR	**Wooly Hollow**	**33.34**	**331**	P	**P**	**02 45 20.1**	**+1.7**
WHAR				IAmb	IAmb	02 45 56.3	
	comp=Z,21nm,1.5s						
BDFB	**Brasilia**	**33.42**	**132**	P	**P**	**02 45 19.1**	**-0.4**
	comp=Z,2.3nm,0.6s,baz=260,slow=11,SNR=5.9						
	comp=Z,2.3nm,0.6s						
BDFB	**Brasilia**	**33.42**	**132**	IAmb	IAmb	02 45 31.6	
	comp=Z,11nm,1.5s						
FCAR	**Ozark Folk Cen**	**33.74**	**332**	P	**P**	**02 45 22.6**	**+0.7**
FCAR				IAmb	IAmb	02 45 26.2	
	comp=Z,8.7nm,1.1s						
O52A	**Adamsville**	**34.02**	**348**	P	**P**	**02 45 26.7**	**+2.5**
O52A				IAmb	IAmb	02 45 42.3	
	comp=Z,20nm,1.3s						
T42A	**Van Buren**	**34.22**	**334**	P	**P**	**02 45 26.9**	**+1.0**
KSPA	**Keystone Colle**	**34.62**	**356**	P	**P**	**02 45 31.6**	**+2.2**
KSPA				IAmb	IAmb	02 45 53.6	
	comp=Z,23nm,1.4s						
FVM	**French Village**	**34.74**	**336**	P	**P**	**02 45 31.4**	**+1.0**
FVM				IAmb	IAmb	02 45 33.2	
	comp=Z,22nm,1.3s						
P46A	**Rosedale**	**34.99**	**341**	P	**P**	**02 45 34.7**	**+2.2**
CCM	**Cathedral Cave**	**35.14**	**335**		**P**	**02 45 35.5**	**+1.6**
CCM				IAmb	IAmb	02 45 36.2	
	comp=Z,9.5nm,0.7s						
SFIN	**Lafayette**	**35.65**	**341**	P	**P**	**02 45 40.2**	**+2.1**
TXAR	**Lajitas Array**	**36.45**	**312**	P	**P**	**02 45 46.8**	**+1.5**
	comp=Z,0.2nm,0.5s,baz=124,slow=9.8,SNR=6.7						
TXAR				pP	**pP**	**02 46 21.1**	**+2.0**
	comp=Z,0.1nm,0.4s,baz=116,slow=6.8,SNR=2.5						
TXAR				PcP	**PcP**	**02 48 07.5**	**+1.4**
	comp=Z,0.4nm,0.5s,baz=101,slow=3.2,SNR=5.1						
	comp=Z,0.2nm,0.5s						
J57A	**Williamstown**	**36.48**	**356**	P	**P**	**02 45 46.9**	**+1.7**
J57A				IAmb	IAmb	02 45 54.8	
	comp=Z,14nm,1.2s						
I63A	**Otisfield**	**37.10**	**3**	P	**P**	**02 45 52.8**	**+2.4**
EMMW	**East Machias**	**38.01**	**7**	P	**P**	**02 46 00.4**	**+2.4**
G62A	**West of Eustis**	**38.27**	**3**	P	**P**	**02 46 02.8**	**+2.6**
G62A				IAmb	IAmb	02 46 43.1	
	comp=Z,21nm,1.4s						
ULM	**Lac du Bonnet**	**47.25**	**340**	P	**P**	**02 47 12.8**	**+0.3**
	comp=Z,6.0nm,0.5s,baz=143,slow=6.7,SNR=13						
	comp=Z,6.0nm,0.5s						
ULM	**Lac du Bonnet**	**47.25**	**340**	IAmb	IAmb	02 47 14.2	
	comp=Z,6.5nm,0.7s						
PLCA	**Paso Flores**	**47.42**	**177**	P	**P**	**02 47 12.2**	**-1.8**
	comp=Z,0.6nm,0.7s,baz=337,slow=12,SNR=1.4						
	comp=Z,0.6nm,0.7s						
PDAR	**Pinedale Array**	**48.06**	**324**	P	**P**	**02 47 19.9**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=122,slow=9.1,SNR=9.1						
PDAR				PcP	**PcP**	**02 48 44.5**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=124,slow=3.7,SNR=2.2						
	comp=Z,0.6nm,0.5s						
SCHQ	**Schefferville**	**48.09**	**5**	P	**P**	**02 47 20.3**	**+1.4**
	comp=Z,8.8nm,0.6s,baz=192,slow=7.3,SNR=30						
	comp=Z,8.8nm,0.6s						
SCHQ	**Schefferville**	**48.09**	**5**	IAmb	IAmb	02 47 21.7	
	comp=Z,9.4nm,0.7s						
BGU	**Big Grassy Mou**	**49.13**	**320**	P	**P**	**02 47 28.8**	**+1.5**
NVAR	**Mina Array Bea**	**51.47**	**315**	P	**P**	**02 47 45.5**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=103,slow=7.4,SNR=2.5						
NVAR				PcP	**PcP**	**02 48 58.4**	**+1.3**
	comp=Z,0.2nm,0.4s,baz=114,slow=3.0,SNR=2.3						
	comp=Z,0.3nm,0.6s						
FCC	**Fort Churchill**	**54.23**	**347**	P	**P**	**02 48 05.3**	**+0.8**
BLKN	**Baker Lake**	**59.64**	**349**	P	**P**	**02 48 43.1**	**+0.6**
BLKN				IAmb	IAmb	02 48 43.6	
	comp=Z,5.5nm,0.7s						
YKA	**Yellowknife Ar**	**63.23**	**340**	P	**P**	**02 49 07.0**	**+0.4**
	comp=Z,2.7nm,0.7s,baz=93,slow=12,SNR=64						
	comp=Z,2.7nm,0.7s						
UPNV	**Upernavik**	**66.65**	**5**	iP	**P**	**02 49 28.8**	**+0.2**
UPNV				IAmb	IAmb	02 49 29.8	
	comp=Z,10nm,1.0s						
DBIC	**Dimbokro**	**67.70**	**86**	P	**P**	**02 49 35.0**	**-1.3**
	comp=Z,4.7nm,0.9s,baz=3.5,slow=1.6,SNR=2.1						
	comp=Z,4.7nm,0.9s						
SUMG	**Summit**	**68.93**	**11**	P	**P**	**02 49 44.5**	**+1.2**
SUMG	**Summit**	**68.93**	**11**	iP	**P**	**02 49 44.6**	**+1.2**
SUMG				IAmb	IAmb	02 49 45.3	
	comp=Z,11nm,0.6s						
TULEG	**Thule**	**69.67**	**1**	iP	**P**	**02 49 48.8**	**+1.6**
TULEG				IAmb	IAmb	02 49 49.6	
	comp=Z,16nm,1.7s						
SCO	**Scoresbysund**	**71.26**	**16**	iP	**P**	**02 49 59.7**	**+2.7**
SCO				IAmb	IAmb	02 50 00.6	
	comp=Z,22nm,1.0s						
NEEM	**North Greenlan**	**71.50**	**5**	iP	**P**	**02 50 00.1**	**+1.3**
NEEM				IAmb	IAmb	02 50 01.3	
	comp=Z,7.8nm,0.6s						
TORD	**Torodi Ar. Bea**	**73.69**	**78**	P	**P**	**02 50 11.1**	**-1.4**
	comp=Z,0.3nm,0.5s,baz=276,slow=8.0,SNR=4.7						
	comp=Z,0.3nm,0.5s						
E29M	**Blow River**	**74.52**	**340**	P	**P**	**02 50 17.4**	**+1.2**
E29M				IAmb	IAmb	02 50 18.9	
	comp=Z,8.4nm,1.3s						
ILAR	**Eielson Array**	**76.93**	**335**	P	**P**	**02 50 30.4**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=107,slow=4.0,SNR=7.9						
ILAR				pP	**pP**	**02 51 11.5**	**+2.8**
	comp=Z,0.3nm,0.7s,baz=92,slow=5.6,SNR=1.8						
	comp=Z,0.7nm,0.7s						
PPT	**Papeete**	**79.30**	**251**	P	**P**	**02 50 45.1**	**+1.1**
	comp=Z,10.0nm,0.6s,baz=71,slow=17,SNR=2.1						
NOA	**NORSAR Array B**	**81.27**	**29**	P	**P**	**02 50 53.3**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=267,slow=5.4,SNR=1.9						
	comp=Z,0.3nm,0.5s						
GERES	**GERESS Array B**	**82.76**	**42**	P	**P**	**02 51 01.1**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=276,slow=8.8,SNR=1.7						
	comp=Z,0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**116.61**	**14**	PKP	**PKPdf**	**02 57 20.5**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=264,slow=2.6,SNR=1.9						
KURK	**Kurchatov**	**117.65**	**20**		**PKiKP**	**02 57 23.3**	**+0.5**
KURBB	**Kurchatov Arra**	**117.70**	**20**	PKP	**PKiKP**	**02 57 23.3**	**+0.4**
	comp=Z,0.2nm,0.2s,baz=300,slow=1.8,SNR=1.8						
MKAR	**Makanchi Array**	**122.26**	**20**	PKP	**PKPdf**	**02 57 31.4**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=292,slow=2.8,SNR=8.6						
SONM	**Songino Array**	**125.53**	**0**	PKP	**PKiKP**	**02 57 38.4**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=282,slow=2.3,SNR=1.8						
WMQ	**Urumqi**	**126.63**	**17**	ePKP	**PKPdf**	**02 57 40.1**	**-0.2**
WMQ				sPKP		02 58 56.8	
HHC	**Hu-ho-hao-te**	**132.32**	**355**	eP	**PKPdf**	**02 57 51.8**	**+0.5**
NJ2	**Nanjing**	**139.65**	**344**	eP	**PKPdf**	**02 58 04.0**	**-1.0**
NJ2				pmax	pmax		
	comp=Z,30nm,0.5s						
PZH	**PanZhiHua**	**146.45**	**8**	PKPbc	**PKPdf**	**02 58 15.8**	**-1.5**
ASAR	**Alice Springs**	**149.17**	**234**	PKP	**PKPdf**	**02 58 21.4**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=111,slow=3.1,SNR=5.3						
ASAR				PKPbc	**PKPbc**	**02 58 25.4**	**-0.7**
	comp=Z,1.3nm,0.5s,baz=117,slow=3.5,SNR=20						
WRA	**Warramunga Arr**	**150.39**	**241**	PKP	**PKPdf**	**02 58 23.4**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=110,slow=2.3,SNR=1.6						
WRA				PKPbc	**PKPbc**	**02 58 28.7**	**-0.4**
	comp=Z,1.5nm,0.5s,baz=110,slow=2.5,SNR=40						
CMAR	**Chiang Mai Arr**	**153.63**	**17**	PKPbc	**PKPbc**	**02 58 34.3**	**-2.2**
	comp=Z,3.0nm,0.3s,baz=357,slow=1.9,SNR=6.4						

*VAO **06** 02:44:41.5±0.5, 11.°12N×62.°06W, h10km, mb4.9, Presumed earthquake*
*NEIC **06** 02:44:50.9, 10.°98N×62.°35W, h100km*
*NEIC **06** 02:44:50.9, 10.°68N×61.°85W, h100km, Moment Tensor Solution. Duration: 1.s2 Moment tensor: Scale 10[16]Nm; Mrr1.05; Mθθ0.01; Mφφ-1.07; Mrθ0.07; Mθφ-0.92; Mφr0.38; Fault plane solution: M0 1.46000×10[16] NP1: φs222.74000°, δ38.71000°, λ108.84000°. NP2: φs19.12000°, δ53.71000°, λ75.49000°. Principal axes: T 1.1278, Plg76.0000°, Azm242.0000°; N 0.5171, Plg12.0000°, Azm28.0000°; P -1.6449, Plg8.0000°, Azm119.0000°;*
*IDC **06** 02:44:50.7±0.6, 11.°10N×62.°44W, h102km±5km, mb4.1/28, mbtmp4.5/31, MS3.3/31 Error ellipse: s-maj=9.4km s-min=6.8km az=118.0*
*CATAC **06** 02:44:50.8±0.4, 11°N±5°×6°2W±°, h80km±12km, M5.1/6, mb5.2/6, mB5.2/6, MLv5.5/3, Mw(mB)4.6/6, Error ellipse: s-maj=12.1km s-min=6.7km az=147.6, confirmed*
*TRN **06** 02:44:51.1, 10.°95N×62.°20W, h88km, MD5.1, North of the Paria peninsula. Felt very widely in Trindad MMI IV,V and VI.*
*FUNV **06** 02:44:51.9, 10.°92N×62.°21W, h73km, MW4.8, Presumed earthquake*
*NEIC **06** 02:44:51.1±2.2, 10.°96N±0.°06×62.°33W±0.°07, h99km±5km, mb4.9/336, Mww4.7/10, Error ellipse: s-maj=10.2km s-min=8.8km az=124.0*
*GCMT **06** 02:44:53.1±0.4, 10.°83N±0.°03×62.°28W±0.°03, h111km±6km, MW4.7/72, Moment Tensor Solution. s14,c17; s72,c90; Duration: 0 Moment tensor: Scale 10[16]Nm; Mrr0.54±.09; Mθθ-1.09±.10; Mφφ0.55±.12; Mrθ0.16±.06; Mθφ-0.55±.19; Mφr1.24±.06; Best double couple: M0 1.63000×10[16] NP1: φs287.00000°, δ43.00000°, λ159.00000°. NP2: φs32.00000°, δ76.00000°, λ49.00000°. Principal axes: T 1.8100, Plg43.0000°, Azm262.0000°; N -0.3640, Plg40.0000°, Azm44.0000°; P -1.4500, Plg20.0000°, Azm152.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 06 02:44:50.0±0.4**, 10.°94N**±0.°03×**62.°33W**±0.°03**, h98**km±4km**, h98**km**:pP-P, n440,** σ1.s**77**/340**, mb4.8**/190**, 2C, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DMDM	**Guralp CMG5TDE**	**0.81**	**108**	eP	**Pn**	**02 45 07.3**	**-1.0**
DMDM				eS	**Sn**	**02 45 18.6**	**-3.3**
PSMG	**Mucurapo Girls**	**0.83**	**109**	eP	**Pn**	**02 45 07.6**	**-0.9**
PSMG				eS	**Sn**	**02 45 19.1**	**-3.4**
TRN	**Trinidad (W)**	**0.96**	**108**	eP	**Pn**	**02 45 08.6**	**-1.3**
TRN				eS	**Sn**	**02 45 20.5**	**-4.3**
TRN	**Trinidad (W)**	**0.96**	**108**	eP	**Pn**	**02 45 08.8**	**-1.1**
TRN				eS	**Sn**	**02 45 21.1**	**-3.7**
TPP	**Pointe-a-Pierr**	**1.07**	**126**	⇑iP	**Pn**	**02 45 12.5**	**+1.4**
GRFF	**Grenada Fort F**	**1.24**	**28**	eP	**Pn**	**02 45 12.7**	**-0.5**
GRFF				eS	**Sn**	**02 45 29.0**	**-1.6**
GRGR	**Grenville**	**1.36**	**29**		**Pn**	**02 45 14.0**	**-0.5**
GRGR	**Grenville**	**1.36**	**29**	P	**Pn**	**02 45 13.9**	**-0.5**
GRGR				S	**Sn**	**02 45 30.8**	**-2.1**
GRGR	**Grenville**	**1.36**	**29**	eP	**Pn**	**02 45 14.2**	**-0.3**
GRGR				eS	**Sn**	**02 45 31.0**	**-1.9**
GRGR	**Grenville**	**1.36**	**29**	eP	**Pn**	**02 45 14.1**	**-0.3**
GRGR				eS	**Sn**	**02 45 31.7**	**-1.2**
GRW	**Mount Saint Ca**	**1.38**	**29**	eP	**Pn**	**02 45 15.8**	**+1.0**
GRW				eS	**Sn**	**02 45 33.1**	**-0.3**
GRSS	**Sisters**	**1.52**	**28**	eP	**Pn**	**02 45 16.6**	**+0.2**
GRSS				eS	**Sn**	**02 45 35.4**	**-1.1**
GCMP	**Grenada, Carri**	**1.77**	**30**	eP	**Pn**	**02 45 19.4**	**-0.3**
GCMP				eS	**Sn**	**02 45 40.3**	**-1.8**
GCMP	**Grenada, Carri**	**1.77**	**30**	eP	**Pn**	**02 45 19.3**	**-0.3**
GCMP				eS	**Sn**	**02 45 40.5**	**-1.6**
PCRV	**Puerto La Cruz**	**2.39**	**252**	eP	**Pn**	**02 45 30.1**	**+2.4**
PCRV				eS	**Sn**	**02 45 56.1**	**-0.5**
PCRV	**Puerto La Cruz**	**2.39**	**252**	eP	**Pn**	**02 45 30.5**	**+2.8**
PCRV				eS	**Sn**	**02 45 59.9**	**+3.3**
SVB	**Belmont**	**2.54**	**24**	eS	**Sn**	**02 45 57.6**	**-2.6**
SVB	**Belmont**	**2.54**	**24**	eP	**Pn**	**02 45 29.6**	**-0.1**
SVB				eS	**Sn**	**02 45 59.4**	**-0.7**
MCLT	**Moule a Chique**	**3.07**	**26**	eP	**Pn**	**02 45 36.6**	**-0.1**
MCLT				eS	**Sn**	**02 46 09.9**	**-2.7**
SLAC	**Saint Lucia, A**	**3.25**	**25**	eP	**Pn**	**02 45 39.6**	**+0.4**
SLAC				eS	**Sn**	**02 46 15.3**	**-1.8**
SLCP	**Castries, St.**	**3.32**	**23**	eP	**Pn**	**02 45 40.2**	**+0.2**
SLCP				eS	**Sn**	**02 46 17.8**	**-0.8**
SLBI	**Saint Lucia, B**	**3.34**	**23**	eP	**Pn**	**02 45 39.8**	**-0.5**
SLBI				eS	**Sn**	**02 46 15.5**	**-3.5**
BBGH	**Gun Hill**	**3.48**	**51**		**Pn**	**02 45 43.0**	**+0.7**
BBGH	**Gun Hill**	**3.48**	**51**	P	**Pn**	**02 45 41.7**	**-0.6**
BBGH				S	**Sn**	**02 46 21.7**	**-0.9**
BBGH	**Gun Hill**	**3.48**	**51**	eP	**Pn**	**02 45 42.6**	**+0.3**
BBGH				eS	**Sn**	**02 46 17.9**	**-4.8**
BBGH	**Gun Hill**	**3.48**	**51**	eP	**Pn**	**02 45 43.3**	**+1.0**
BBGH				eS	**Sn**	**02 46 20.1**	**-2.6**
H05S1	**Guadeloupe/Mar**	**3.76**	**23**	P	**Pn**	**02 45 47.2**	**+1.3**
H05S1				S	**Sn**	**02 46 28.3**	**-0.8**
	SNR=1537						
BIM	**Bigot**	**3.76**	**19**		**Pn**	**02 45 45.9**	**-0.1**
BIM	**Bigot**	**3.76**	**19**	eP	**Pn**	**02 45 46.0**	**-0.1**
BIM				eS	**Sn**	**02 46 26.2**	**-3.1**
BIM	**Bigot**	**3.76**	**19**	eP	**Pn**	**02 45 45.9**	**-0.1**
BIM				eS	**Sn**	**02 46 26.3**	**-3.0**
MPOM	**Morne Pois Mar**	**3.77**	**22**		**Pn**	**02 45 46.2**	**+0.2**
CXM	**Morne La Croix**	**4.01**	**16**		**Pn**	**02 45 49.5**	**0.0**
SVN	**Savane Anatole**	**4.04**	**16**		**Pn**	**02 45 49.9**	**+0.2**
SVN	**Savane Anatole**	**4.04**	**16**	eP	**Pn**	**02 45 49.6**	**-0.1**
SVN				eS	**Sn**	**02 46 34.3**	**-1.8**
FUNV	**FUNVISIS**	**4.42**	**264**	eP	**Pn**	**02 45 57.1**	**+2.0**
FUNV				eS	**Sn**	**02 46 46.1**	**+0.6**
DLPL	**La Plaine**	**4.49**	**14**	eP	**Pn**	**02 45 55.8**	**0.0**
DLPL				eS	**Sn**	**02 46 43.5**	**-3.5**
DSLB	**Salisbury**	**4.55**	**11**	eP	**Pn**	**02 45 56.7**	**0.0**
DSLB				eS	**Sn**	**02 46 46.0**	**-2.6**
TACV	**Tcata**	**4.68**	**261**	eP	**Pn**	**02 46 00.3**	**+1.7**
TACV				eS	**Sn**	**02 46 51.0**	**-0.8**
DWS	**Wesley**	**4.70**	**12**	eP	**Pn**	**02 45 59.5**	**+0.8**
DWS				eS	**Sn**	**02 46 50.4**	**-1.7**
TDBA	**Terre de Bas,**	**4.92**	**8**		**Pn**	**02 46 02.2**	**+0.5**
TBG	**Guadaloupe-3**	**4.92**	**8**	eP	**Pn**	**02 46 02.1**	**+0.4**
MAGL	**Barre de l'ile**	**5.08**	**11**		**Pn**	**02 46 05.1**	**+1.2**
MMLZ	**Guadeloupe Bro**	**5.11**	**7**	eP	**Pn**	**02 46 05.1**	**+0.9**
MMLZ				eS	**Sn**	**02 46 59.0**	**-3.0**
CBE	**Ff, Capester**	**5.14**	**8**		**Pn**	**02 46 05.8**	**+1.1**
CBE	**Ff, Capester**	**5.14**	**8**	P	**Pn**	**02 46 05.4**	**+0.7**
CBE				S	**Sn**	**02 46 59.0**	**-3.8**
ATGZ	**Broadband at L**	**5.16**	**7**	eP	**Pn**	**02 46 07.1**	**+2.3**
ATGZ				x	x	02 46 07.1	
BENV	**Beln**	**5.27**	**260**	eP	**Pn**	**02 46 08.7**	**+2.2**
BENV				eS	**Sn**	**02 47 04.2**	**-1.8**
DHSZ	**Broadband at M**	**5.33**	**6**	eP	**Pn**	**02 46 08.2**	**+1.0**

GDHS Morne Mazeau, 5.33 6 Pn 02 46 08.0 +0.7
CACV CAICARA DEL OR 5.34 231 eP Pn 02 46 02.5 -4.9
CACV eS Sn 02 46 56.2 -11
TURV Turiamo 5.43 265 eP Pn 02 46 10.3 +1.7
TURV eS **Sn 02 47 08.0 -2.0**
DSDZ La Diserade, G 5.48 13 eP Pn 02 46 10.1 +0.8
GDSD La Dsirade Is 5.48 13 Pn 02 46 09.9 +0.6
H05N1 Guadeloupe/Mar 5.48 13 P Pn 02 46 09.6 +0.2
H05N1 S **Sn 02 47 04.3 -6.8**
SNR=298
ABD La Joyeuse, An 5.56 8 Pn 02 46 11.4 +1.1
SKI Saint Kitts 6.36 357 eP Pn 02 46 23.6 +2.3
JACV Jacura 6.38 272 eP Pn 02 46 23.1 +1.6
JACV eS **Sn 02 47 31.0 -2.0**
SEUS St. Eustatius 6.54 355 Pn 02 46 25.5 +1.8
SEUS St. Eustatius 6.54 355 eP Pn 02 46 26.4 +2.7
SABA Saba 6.70 353 Pn 02 46 27.9 +2.0
ANWB Willy Bob 6.71 4 Pn 02 46 27.2 +1.2
ANWB Willy Bob 6.71 4 eP Pn 02 46 28.1 +2.2
ANWB eS **Sn 02 47 38.6 -2.2**
TEPV Terepaima 6.82 262 eP Pn 02 46 28.5 +1.0
TEPV eS **Sn 02 47 40.8 -2.9**
SMRT St. Maarten 7.10 354 Pn 02 46 33.1 +1.8
SMRT St. Maarten 7.10 354 eP Pn 02 46 32.8 +1.5
CUPR Culebra, Puert 7.86 339 Pn 02 46 42.6 +1.0
SJG San Juan 8.03 333 P Pn 02 46 43.6 -0.3
19nm,0.3s,baz=140,slow=17,SNR=13
SJG S **Sn 02 48 06.7 -6.3**
38nm,0.4s,baz=356,slow=23,SNR=2.4
SJG LR LR 02 50 17.9
comp=Z,101nm,18.2s,baz=128,slow=42
SJG San Juan 8.03 333 Pn 02 46 44.1 +0.2
SJG San Juan 8.03 333 eP Pn 02 46 44.4 +0.5
SDV Santo Domingo 8.43 257 P Pn 02 46 49.1 -0.5
56nm,0.4s,baz=133,slow=6.1,SNR=23
SDV S **Sn 02 48 20.3 -2.9**
67nm,0.5s,baz=58,slow=21,SNR=8.3
SDV LR LR 02 50 59.6
comp=Z,58nm,19.3s,baz=74,slow=44
SDV Santo Domingo 8.43 257 Pn 02 46 49.3 -0.3
SDV Santo Domingo 8.43 257 P Pn 02 46 49.1 -0.5
2µm112nm,0.7s
SDV Santo Domingo 8.43 257 eP Pn 02 46 49.2 -0.5
SDV Santo Domingo 8.43 257 eS Sn 02 48 17.4 -5.8
BOAV Boa Vista 8.68 168 eP Pn 02 46 49.5 -3.4
SOCV Socops 8.81 253 eP Pn 02 46 54.7 +0.1
URI Uribia 9.50 275 P Pn 02 47 04.1 +0.1
URI S **Sn 02 48 45.1 -4.0**
URIC Uribia, Colomb 9.50 275 P Pn 02 47 04.3 +0.3
1µm69nm,1.0s
URIC Uribia, Colomb 9.50 275 eP Pn 02 47 05.0 +0.9
MCQV Machiques 10.07 266 eP Pn 02 47 12.5 +0.7
CAPV Capacho 10.31 254 eP Pn 02 47 14.7 -0.6
CAPV eS Sn 02 49 00.3 -8.8
DR12 Loma Pena Alta 10.35 320 Pn 02 47 18.6 +2.9
CRJC Cerrejon, Guaj 10.36 271 P Pn 02 47 15.7 -0.1
2µm290nm,0.9s
BANI BANI 10.73 315 Pn 02 47 24.3 +3.5
PAMC Pamplona, Colo 10.84 252 P Pn 02 47 21.4 -1.3
1µm86nm,0.5s
OCAC Ocana 11.16 257 P Pn 02 47 26.1 -0.7
3µm233nm,0.6s
MDP Montagnes des 11.21 120 P Pn 02 47 20.8 -6.5
30nm,0.3s,baz=307,slow=16,SNR=91
MDP S Sn 02 49 16.6 -14
615nm,0.5s,baz=42,slow=19,SNR=25
MDP LR LR 02 53 05.6
comp=Z,126nm,19.5s,baz=316,slow=44
BARC Barichara 11.56 249 P Pn 02 47 32.4 +0.2
1µm117nm,1.0s
SC01 Santiago de lo 11.69 317 Pn 02 47 39.2 +5.5
RUSC La Rusia 11.76 246 P Pn 02 47 33.6 -1.5
RUSC La Rusia 11.76 246 P Pn 02 47 33.7 -1.3
2µm113nm,0.9s
RUSC La Rusia 11.76 246 eP Pn 02 47 33.5 -1.5
ARGC Ariguani, Magd 11.77 266 P Pn 02 47 36.8 +2.0
55nm,0.7s
SDDR Presa de Saban 11.77 314 Pn 02 47 38.1 +3.3
SDDR Presa de Saban 11.77 314 P Pn 02 47 39.5 +4.7
119nm,0.8s
SDDR Presa de Saban 11.77 314 eP Pn 02 47 38.4 +3.6
SGC2 Sao Gabriel da 11.95 203 P Pn 02 47 36.8 -0.4
SJCC San Jacinto, C 12.68 266 P Pn 02 47 48.1 +1.2
78nm,1.0s
SPBC San Pablo de B 12.75 247 P Pn 02 47 46.5 -1.4
710nm81nm,0.7s
PTBC PUERTO BERRIO, 12.76 251 P Pn 02 47 47.1 -0.8
24nm,0.4s
CHIC Chingaza 12.91 242 P Pn 02 47 49.6 -0.8
785nm46nm,0.5s
VILC Villavicencio, 13.14 240 P Pn 02 47 54.7 +1.6
4µm473nm,0.6s
CVER Cruz Verde, Cu 13.26 242 P Pn 02 47 55.9 +0.9
2µm90nm,0.6s
ROSC El Rosal 13.33 244 P Pn 02 47 57.2 +1.4
24nm,0.4s,baz=119,slow=12,SNR=10.0
ROSC S **Sn 02 50 23.0 +0.3**
11nm,0.4s,baz=90,slow=20,SNR=1.0
ROSC LR LR 02 53 54.9
comp=Z,224nm,19.4s,baz=76,slow=41
ROSC El Rosal 13.33 244 Pn 02 47 57.6 +1.8
UREC San Jos de Ur 13.40 257 P Pn 02 47 57.6 +1.2
17nm,0.9s
NORC Norcasia 13.51 248 P Pn 02 47 57.7 -0.1
925nm58nm,0.4s
HELC Santa Helena 13.87 251 P Pn 02 48 07.1 +4.2
HELC Santa Helena 13.87 251 P Pn 02 48 04.7 +1.8
1µm65nm,0.5s
LCBC Los crdobas, 13.98 263 P Pn 02 48 07.2 +3.3
161nm,0.5s
GUY2C Guyana, Caldas 14.09 247 P Pn 02 48 06.5 +0.7
1µm111nm,0.6s
MACA Manacapuru-AM 14.11 173 Pn 02 48 04.0 -1.5
MACA Manacapuru-AM 14.11 173 eP Pn 02 48 03.2 -2.4
URMC La Uribe, Meta 14.18 238 P Pn 02 48 07.4 +0.8
932nm108nm,0.8s
DBBC Dabeiba 14.25 255 P Pn 02 48 09.2 +1.7
PRAC Prado 14.37 241 P Pn 02 48 10.4 +1.4
PRAC S **Sn 02 50 42.4 -5.0**
PRAC Prado 14.37 241 P Pn 02 48 10.1 +1.2
2µm134nm,0.8s
APAC Apartado, Choc 14.38 259 P Pn 02 48 12.4 +3.4
42nm,1.0s
MACC Macarena, Meta 14.39 233 P Pn 02 48 10.4 +1.2
5µm700nm,0.7s
CBOC Ciudad Bolivar 14.44 251 P Pn 02 48 12.1 +2.1
586nm56nm,1.0s
TEFE Tefe 14.54 189 eP Pn 02 48 09.8 -1.3
ORTC Ortega, Tolima 14.58 242 P Pn 02 48 13.2 +1.5
633nm61nm,0.9s
CAPC Capurgana 14.98 263 P Pn 02 48 19.7 +3.0
4µm100nm,1.5s
PLMC San Jos del P 15.06 248 P Pn 02 48 20.4 +2.6
707nm57nm,0.6s
NMDO Nuevo Mundo 15.47 310 P 02 48 24.6 -0.6
YOTC Yotoco, Valle 15.51 245 P Pn 02 48 24.5 +0.9
24nm,0.6s
GARC Garzon, Huila 15.69 237 P P 02 48 29.4 +1.4
2µm214nm,0.8s
JAMC Jamundi, Valle 16.16 243 P P 02 48 35.4 +2.2
625nm29nm,0.6s
FLOC Florencia 16.17 236 P P 02 48 36.0 +3.0
1µm120nm,0.8s
POPC Popayan, Colom 16.50 241 P Pn 02 48 38.3 +2.3
483nm39nm,1.0s
ITTB Itaituba 16.57 156 eP Pn 02 48 32.5 -4.1
BBAC Balboa, Cauca 17.25 240 P P 02 48 46.3 +1.1
BCIP Isla Barro Col 17.33 266 P Pn 02 48 50.1 +4.3
BCIP Isla Barro Col 17.33 266 P P 02 48 47.0 +1.2
GR1C Gorgona, Isla 17.57 244 P P 02 48 48.7 +0.2
NPGB Novo Progresso 19.17 158 eP P 02 49 06.3 +0.2
OTAV Otavalo 19.23 237 P 02 49 09.0 +1.8
OTAV Otavalo 19.23 237 eP P 02 49 09.3 +2.2
SLOR San Lorenzo - 19.82 235 P 02 49 16.9 +3.4
SLOR IAmb IAmb 02 49 20.6
comp=Z,48nm,0.8s
BRU2 Volcan 20.17 266 IAmb IAmb 02 49 25.3
comp=Z,125nm,1.4s
PIRO Carate, Puerto 20.86 265 IAmb IAmb 02 49 32.2
comp=Z,57nm,0.7s
JTS Las Juntas de 22.24 270 P P 02 49 39.4 +0.4
comp=Z,9.1nm,0.5s,baz=102,slow=6.7,SNR=8.2
JTS LR LR 02 59 00.9
comp=Z,34nm,21.7s,baz=82,slow=38
comp=Z,9.1nm,0.5s

JTS Las Juntas de 22.24 270 P P 02 49 40.0 +1.0
CLDB Colider 22.63 163 eP P 02 49 43.6 +0.6
BOAB BOACO BROADBAND 22.90 276 P P 02 49 46.7 +1.0
SOR Soroa 22.99 303 P P 02 49 48.2 +1.6
SOR IAmb IAmb 02 49 49.0
comp=Z,53nm,0.8s
PDRB Porto dos Gac 23.09 166 eP P 02 49 49.1 +1.6
VILB Vilhena 23.84 175 P P 02 49 56.3 +2.0
VILB IAmb IAmb 02 49 58.7
comp=Z,40nm,0.8s
VILB Vilhena 23.84 175 eP P 02 49 56.9 +2.6
HERN Volcan Telica 24.04 276 P P 02 49 58.2 +2.0
ATAH Atahualpa 24.04 222 P P 02 49 59.1 +2.4
comp=Z,90nm,0.8s,baz=38,slow=3.7,SNR=61
ATAH LR LR 03 00 53.0
comp=Z,94nm,20.9s,baz=31,slow=40
SMTB Santa Maria do 24.54 143 eP P 02 50 01.2 +0.5
SNDB Serra Nova Dou 25.27 154 eP P 02 50 08.8 +1.5
NBPS Pedro II - PI 25.78 125 eP P 02 50 12.7 +0.6
PTLB Pontes e Lacer 26.41 173 P P 02 50 18.4 +0.7
PTLB Pontes e Lacer 26.41 173 eP P 02 50 19.3 +1.7
MTO3 Montecristo 26.58 280 IAmb IAmb 02 50 22.1
comp=Z,35nm,1.0s
SIV San Ignacio 26.79 177 LR LR 03 01 33.8
comp=Z,85nm,20.5s,baz=317,slow=37
NNA Nana 26.96 213 P P 02 50 24.5 +1.9
comp=Z,36nm,0.8s,baz=14,slow=8.2,SNR=16
comp=Z,36nm,0.8s
NNA Nana 26.96 213 P P 02 50 24.5 +1.9
NNA IAmb IAmb 02 50 25.3
comp=Z,42nm,0.8s
PETF Flores 27.36 286 IAmb IAmb 02 50 28.5
comp=Z,32nm,0.7s
SALV Santo Antonio 27.47 166 eP P 02 50 28.6 +1.4
LPAZ La Paz 27.66 192 P P 02 50 31.5 +2.0
comp=Z,6.3nm,0.8s,baz=12,slow=6.9,SNR=14
LPAZ LR LR 03 01 38.5
comp=Z,54nm,19.6s,baz=25,slow=36
comp=Z,6.3nm,0.8s
LPAZ La Paz 27.66 192 eP P 02 50 31.4 +2.0
APG El Apazote 27.70 281 P P 02 50 29.9 +0.4
comp=Z,1.2nm,0.8s,baz=134,slow=9.7,SNR=11
comp=Z,1.2nm,0.8s
Y57A Sumter 28.29 327 IAmb IAmb 02 50 35.7
comp=Z,28nm,0.6s
ARAG Araguaiana, MT 28.45 158 eP P 02 50 37.8 +1.9
SDBA SAO DESIDERIO 28.95 143 eP P 02 50 40.7 +0.3
PP1B Ponte de Pedra 29.30 165 eP P 02 50 46.3 +2.8
152A Waverly Hall 29.86 320 IAmb IAmb 02 50 51.7
comp=Z,20nm,1.0s
BDFB Brasilia 29.98 152 P P 02 50 51.2 +1.6
comp=Z,5.7nm,0.6s,baz=327,slow=12,SNR=12
BDFB LR LR 03 04 53.0
comp=Z,55nm,18.4s,baz=315,slow=40
comp=Z,5.7nm,0.6s
BDFB Brasilia 29.98 152 P P 02 50 51.3 +1.8
U54A Nelsons Funny 30.96 329 IAmb IAmb 02 51 02.3
comp=Z,20nm,0.9s
PB11 IPOC Station P 31.35 193 IAmb IAmb 02 51 08.0
comp=Z,14nm,0.7s
TKL Tuckaleechee C 31.36 325 LR LR 03 03 40.7
comp=Z,22nm,18.8s,baz=140,slow=36
JANB Januaria 31.40 145 eP P 02 51 02.7 +0.6
AQDB Aquidauana 31.90 168 eP P 02 51 08.8 +2.5
IPMB Ipameri, GO 31.95 154 eP P 02 51 08.3 +1.5
CMIG Matias Romero 32.14 285 LR LR 03 05 34.5
comp=Z,22nm,18.5s,baz=133,slow=39
Z47A Carrollton 32.38 317 IAmb IAmb 02 51 12.3
comp=Z,20nm,0.9s
PB01 IPOC Station P 32.55 192 P P 02 51 12.2 +0.1
PB01 IAmb IAmb 02 51 13.9
comp=Z,12nm,0.9s
MURT Porto Murtinho 32.73 172 eP P 02 51 15.2 +1.7
PB07 IPOC Station P 33.30 193 IAmb IAmb 02 51 19.6
comp=Z,15nm,0.5s
R50A Paris 33.59 328 IAmb IAmb 02 51 23.4
comp=Z,12nm,0.7s
Q51A Peebles 33.66 330 P P 02 51 22.7 +1.2
Q51A IAmb IAmb 02 51 23.7
comp=Z,9.9nm,0.6s
P51A Williamsport 33.87 331 IAmb IAmb 02 51 25.0
comp=Z,16nm,0.7s
T47A Sharon Grove 34.21 323 P P 02 51 27.0 +0.7
T47A IAmb IAmb 02 51 45.4
comp=Z,10nm,0.9s
NBIT Itapeh - BA 34.29 138 eP P 02 51 28.2 +1.0
AMBA Amambai (Brazi 34.42 168 eP P 02 51 30.2 +2.0
CMC01 Camacan, BA 34.55 139 eP P 02 51 30.1 +0.7
GUA01 Guaratinga, BA 35.28 140 eP P 02 51 36.6 +0.9
Z41A Richland Creek 35.69 313 IAmb IAmb 02 51 40.4
comp=Z,15nm,0.7s
CGM3 Cape Girardeau 35.95 321 IAmb IAmb 02 51 42.0
comp=Z,11nm,0.6s
RCLB Rio Claro- Sao 36.19 156 eP P 02 51 45.5 +2.0
FRTB Fartura 36.30 160 eP P 02 51 45.9 +1.6
HKT Hockley 36.44 306 P P 02 51 45.6 +0.1
Q44A Meyer Farm, Va 36.62 324 P P 02 51 47.5 +0.6
FCAR Ozark Folk Cen 36.66 317 IAmb IAmb 02 51 48.6
comp=Z,14nm,0.8s
Z38A Mt. Pleasant 37.27 312 P P 02 51 53.0 +0.5
SPB Sao Paulo 37.29 157 eP P 02 51 53.4 +0.7
CPUP Villa Florida 37.37 173 P P 02 51 53.6 +0.3
comp=Z,5.1nm,0.9s,baz=359,slow=9.2,SNR=13
CPUP PcP **PcP 02 54 11.3 +0.8**
comp=Z,3.8nm,0.8s,baz=358,slow=4.3,SNR=6.6
CPUP LR LR 03 07 37.3
comp=Z,58nm,21.7s,baz=62,slow=36
comp=Z,5.1nm,0.9s
CPUP Villa Florida 37.37 173 eP P 02 51 54.0 +0.7
CCM Cathedral Cave 37.40 321 P P 02 51 52.9 -0.6
CCM IAmb IAmb 02 51 54.8
comp=Z,8.4nm,0.7s
HHAR Hobbs 38.10 317 IAmb IAmb 02 52 00.5
comp=Z,12nm,1.0s
TUL3 Leonard 39.17 315 IAmb IAmb 02 52 08.6
comp=Z,22nm,1.0s
W35A Tecumseh 39.56 313 IAmb IAmb 02 52 11.4
comp=Z,28nm,1.2s
DEOK Depew 39.63 314 IAmb IAmb 02 52 12.3
comp=Z,20nm,1.1s
OK052 Battle Ridge R 39.92 314 IAmb IAmb 02 52 15.2
comp=Z,21nm,1.2s
JFWS Jewell Farm 40.05 328 IAmb IAmb 02 52 16.9
comp=Z,16nm,0.6s
I42A Braeger Farm, 40.07 330 IAmb IAmb 02 52 21.9
comp=Z,40nm,1.3s
WTFS Witchita Falls 40.09 310 IAmb IAmb 02 52 16.3
comp=Z,14nm,1.0s
DRIO Del Rio 40.12 303 IAmb IAmb 02 52 17.5
comp=Z,19nm,1.0s
T35A Sooner Cattle 40.19 316 IAmb IAmb 02 52 17.8
comp=Z,18nm,0.9s
OK048 Pawnee Station 40.23 315 IAmb IAmb 02 52 17.4
comp=Z,20nm,1.2s
OK029 Liberty Lake 40.28 314 IAmb IAmb 02 52 17.8
comp=Z,11nm,0.9s
SAND Sanderson 41.53 303 IAmb IAmb 02 52 29.0
comp=Z,18nm,1.0s
ELIS Ellis County 41.81 313 IAmb IAmb 02 52 30.7
comp=Z,25nm,0.8s
DKNS Dickens 41.91 309 IAmb IAmb 02 52 32.4
comp=Z,20nm,0.8s
229A Bryant Ranch, 41.96 306 IAmb IAmb 02 52 32.5
comp=Z,14nm,0.8s
SMWD Samnorwood 41.99 311 IAmb IAmb 02 52 31.5
comp=Z,13nm,0.8s
CPSB Cacapava Do Su 41.99 168 eP P 02 52 31.7 +0.1
TMB01 Midkiff 42.07 306 IAmb IAmb 02 52 33.0
comp=Z,8.1nm,0.9s
129A Stewart Farms, 42.24 307 IAmb IAmb 02 52 34.5
comp=Z,28nm,0.8s
I37A Lemond, Waseca 42.48 327 IAmb IAmb 02 52 35.9
comp=Z,19nm,0.7s
TXAR Lajitas Array 42.62 302 P P 02 52 37.2 +0.2
comp=Z,8.5nm,0.7s,baz=121,slow=8.0,SNR=45
TXAR PcP **PcP 02 54 27.1 -0.4**
comp=Z,6.5nm,0.7s,baz=116,slow=5.3,SNR=17
TXAR ScP **ScP 02 58 06.5 -3.2**
comp=Z,0.9nm,1.1s,baz=116,slow=5.5,SNR=3.8
comp=Z,8.5nm,0.7s
TXAR Lajitas Array 42.62 302 P P 02 52 37.4 +0.3
TX31 Lajitas Ar. Si 42.62 302 IAmb IAmb 02 52 40.2
comp=Z,10nm,0.8s
TPB05 Hovey Rd 42.82 304 IAmb IAmb 02 52 40.2
comp=Z,16nm,0.9s
ALPN Alpine 42.91 303 IAmb IAmb 02 52 40.7

comp=Z,14nm,0.8s
AMTX Amarillo 42.97 310 IAmb IAmb 02 52 42.6
comp=Z,24nm,1.3s
TPB06 Permian Basin 42.97 305 IAmb IAmb 02 52 40.4
comp=Z,16nm,0.9s
TPB01 Permian Basin 43.20 304 IAmb IAmb 02 52 43.5
comp=Z,14nm,0.7s
CBKS Cedar Bluff 43.35 316 IAmb IAmb 02 52 43.1
comp=Z,10nm,0.6s
PH02 Texas Public H 43.38 311 IAmb IAmb 02 52 43.9
comp=Z,33nm,1.0s
PECS Pecos 43.41 304 IAmb IAmb 02 52 44.3
comp=Z,18nm,0.8s
HPIG 43.72 298 IAmb IAmb 02 52 47.6
comp=Z,15nm,0.6s
SCHQ Schefferville 43.92 356 P P 02 52 47.0 0.0
comp=Z,5.2nm,0.5s,baz=187,slow=6.7,SNR=25
SCHQ LR LR 03 10 56.2
comp=Z,26nm,18.2s,baz=180,slow=36
comp=Z,5.2nm,0.5s
ECSD EROS Data Cent 44.10 324 IAmb IAmb 02 52 49.5
comp=Z,8.4nm,0.7s
VHRN Van Horn 44.14 303 IAmb IAmb 02 52 50.7
comp=Z,12nm,0.8s
MNTX Cornudas Mount 44.74 304 IAmb IAmb 02 52 54.9
comp=Z,12nm,0.9s
T25A Trinidad 45.90 312 IAmb IAmb 02 53 04.0
comp=Z,21nm,1.4s
ANMO Albuquerque 46.63 308 LR LR 03 15 41.3
comp=Z,24nm,18.1s,baz=118,slow=40
ANMO Albuquerque 46.63 308 P P 02 53 09.7 +0.7
ANMO IAmb IAmb 02 53 10.5
comp=Z,22nm,1.2s
Y22A Socorro 46.70 307 IAmb IAmb 02 53 10.9
comp=Z,15nm,1.1s
121A Cookes Peak, D 46.93 305 IAmb IAmb 02 53 13.8
comp=Z,15nm,0.8s
319A Douglas 47.84 303 IAmb IAmb 02 53 20.5
comp=Z,17nm,1.0s
ULM Lac du Bonnet 47.93 331 P P 02 53 16.0 -2.4
comp=Z,4.9nm,0.4s,baz=125,slow=8.4,SNR=17
ULM PcP **PcP 02 54 43.4 -2.0**
comp=Z,5.2nm,0.5s,baz=125,slow=3.6,SNR=7.0
ULM LR LR 03 14 46.6
comp=Z,26nm,18.7s,baz=138,slow=38
comp=Z,4.9nm,0.4s
ULM Lac du Bonnet 47.93 331 IAmb IAmb 02 53 17.6
comp=Z,17nm,1.3s
E28A Huff 48.10 325 P P 02 53 19.5 -0.5
MVCO Mesa Verde 48.96 310 IAmb IAmb 02 53 28.9
comp=Z,6.3nm,0.5s
X18A Snowflake 49.23 306 IAmb IAmb 02 53 31.4
comp=Z,21nm,1.4s
TUC Tucson 49.32 303 P P 02 53 30.8 +1.2
PV07 Paradox Valley 49.50 312 IAmb IAmb 02 53 31.9
comp=Z,13nm,1.0s
PV13 Radium Mtn., P 49.53 311 IAmb IAmb 02 53 32.5
comp=Z,18nm,0.9s
PV22 Blue Mesa, Par 49.64 312 IAmb IAmb 02 53 33.0
comp=Z,14nm,1.3s
PV16 Nysenger Mesa 49.65 311 IAmb IAmb 02 53 32.6
comp=Z,10nm,0.5s
PV04 Paradox Valley 49.67 312 IAmb IAmb 02 53 33.3
comp=Z,16nm,1.2s
PV17 East Wray Mesa 49.67 311 IAmb IAmb 02 53 32.7
comp=Z,8.0nm,0.6s
K22A Casper 49.70 318 IAmb IAmb 02 53 33.1
comp=Z,7.6nm,0.8s
PV05 Paradox Valley 49.71 311 IAmb IAmb 02 53 34.0
comp=Z,13nm,0.6s
PV10 Paradox Valley 49.77 311 IAmb IAmb 02 53 33.7
comp=Z,14nm,1.1s
O20A White River Ci 49.84 314 IAmb IAmb 02 53 43.1
comp=Z,9.8nm,1.2s
WUAZ Wupatki 50.63 307 IAmb IAmb 02 54 08.3
comp=Z,14nm,0.9s
HMU Henry Mountain 50.88 310 IAmb IAmb 02 53 42.5
comp=Z,6.1nm,0.7s
RDMU Red Mountain 50.94 314 IAmb IAmb 02 53 42.7
comp=Z,18nm,1.3s
GO06 Curarrehue 50.98 189 P P 02 53 41.8 -0.1
GO06 IAmb IAmb 02 53 48.4
comp=Z,8.6nm,1.1s
SRU San Rafael Swe 51.11 312 IAmb IAmb 02 53 43.8
comp=Z,16nm,1.0s
H10N3 ASCENSION HYDR 51.13 109 T T 03 49 04.0
baz=292,slow=75,SNR=11
H10N2 ASCENSION HYDR 51.13 109 T T 03 49 12.2
baz=292,slow=75,SNR=9.7
H10N1 ASCENSION HYDR 51.15 109 T T 03 48 45.4
baz=292,slow=75,SNR=11
H10S3 ASCENSION HYDR 51.38 111 T T 03 49 26.6
baz=285,slow=75,SNR=31
LAO LASA Array 51.39 322 P P 02 53 44.7 -0.2
LAO IAmb IAmb 02 53 45.5
comp=Z,9.2nm,0.8s
H10S2 ASCENSION HYDR 51.40 111 T T 03 49 07.0
baz=295,slow=75,SNR=30
NRS Narsarsuaq 51.65 10 i P P 02 53 47.6 +1.2
NRS IAmb IAmb 02 53 48.5
comp=Z,34nm,0.8s
LR05 Currie 51.70 189 P P 02 53 48.0 +0.9
LR05 IAmb IAmb 02 53 50.5
comp=Z,10nm,0.6s
BW06 Boulder Array 51.78 317 IAmb IAmb 02 53 47.9
comp=Z,25nm,1.3s
PD31 Pinedale Array 51.78 317 IAmb IAmb 02 53 47.9
comp=Z,25nm,1.3s
PDAR Pinedale Array 51.78 317 P P 02 53 46.9 -1.2
comp=Z,7.5nm,0.5s,baz=113,slow=9.5,SNR=113
PDAR PcP **PcP 02 54 58.8 -1.2**
comp=Z,2.7nm,0.5s,baz=110,slow=3.7,SNR=7.3
PDAR ScP **ScP 02 58 43.6 -4.4**
comp=Z,1.0nm,0.9s,baz=122,slow=5.9,SNR=5.3
PDAR LR LR 03 16 49.7
comp=Z,27nm,18.2s,baz=96,slow=37
comp=Z,7.5nm,0.5s
PDAR Pinedale Array 51.78 317 P P 02 53 47.1 -0.9
PLCA Paso Flores 51.97 188 P P 02 53 49.8 +0.6
comp=Z,3.6nm,0.5s,baz=3.4,slow=8.1,SNR=44
PLCA PcP **PcP 02 55 01.7 +1.3**
comp=Z,4.5nm,0.6s,baz=3.0,slow=5.3,SNR=8.6
PLCA LR LR 03 17 50.1
comp=Z,60nm,20.2s,baz=226,slow=38
comp=Z,3.6nm,0.5s
PLCA Paso Flores 51.97 188 P P 02 53 50.1 +0.8
PLCA IAmb IAmb 02 53 51.3
comp=Z,14nm,1.4s
MTPU Mount Pierson 52.00 310 IAmb IAmb 02 53 51.2
comp=Z,14nm,1.3s
KNB Kanab 52.18 309 IAmb IAmb 02 53 53.2
comp=Z,9.9nm,1.0s
CTU Camp Tracy 52.53 313 IAmb IAmb 02 53 54.7
comp=Z,11nm,0.7s
RLMT Red Lodge 52.56 319 IAmb IAmb 02 53 54.3
comp=Z,11nm,1.0s
HWUT Hardware Ranch 52.72 314 IAmb IAmb 02 53 55.5
comp=Z,12nm,0.9s
CCUT Cedar City 52.74 309 IAmb IAmb 02 54 14.3
comp=Z,3.3nm,0.4s
LOHW Long Hollow 52.81 317 IAmb IAmb 02 53 55.9
comp=Z,10nm,1.1s
AHID Auburn Hatcher 52.82 316 IAmb IAmb 02 53 56.2
comp=Z,13nm,0.7s
SNOW Snow King Moun 52.85 317 IAmb IAmb 02 53 57.7
comp=Z,8.5nm,0.7s
FRB Frobisher Bay 52.91 357 LR LR 03 16 10.3
comp=Z,32nm,20.0s,baz=128,slow=36
YNE Yellowstone No 52.98 319 IAmb IAmb 02 53 58.2
comp=Z,6.0nm,0.8s
FLWY Flagg Ranch 53.06 318 IAmb IAmb 02 54 00.6
comp=Z,14nm,1.4s
DUG Dugway, Tooele 53.13 312 IAmb IAmb 02 53 58.7
comp=Z,9.7nm,0.7s
SPUT South Promonto 53.24 314 IAmb IAmb 02 53 58.8
comp=Z,16nm,1.4s
PSUT Pine Spring 53.40 310 IAmb IAmb 02 54 01.6
comp=Z,16nm,1.1s
FCC Fort Churchill 53.40 340 P P 02 53 57.9 -1.6
V12A Nelson 53.42 306 IAmb IAmb 02 54 01.7
comp=Z,9.7nm,1.2s
YMR Madison River 53.47 318 IAmb IAmb 02 54 01.5
comp=Z,5.9nm,0.7s
BGU Big Grassy Mou 53.53 313 IAmb IAmb 02 54 01.3
comp=Z,22nm,1.1s
HVU Hansel Valley 53.63 314 IAmb IAmb 02 54 02.4
comp=Z,8.2nm,0.7s
BOZ Bozeman (W) 54.27 319 IAmb IAmb 02 54 06.9

comp=Z,17nm,1.4s
DLMT Dillon 54.80 318 IAmb IAmb 02 54 10.8
comp=Z,21nm,1.4s
TPNV Topopah Spring 54.81 308 IAmb IAmb 02 54 12.0
comp=Z,9.6nm,1.1s
ELK Elko 55.06 312 LR LR 03 19 25.5
comp=Z,35nm,20.2s,baz=89,slow=38
WCT Wildcat Mounta 55.07 307 IAmb IAmb 02 54 14.3
comp=Z,10nm,1.3s
FURC Furnace Creek, 55.18 307 IAmb IAmb 02 54 14.4
comp=Z,12nm,1.2s
PCVE Castro Verde 55.27 52 *e*P **P 02 54 13.2 -0.2**
PCVE *i* IAmb IAmb 02 54 14.0
comp=Z,52nm,1.9s
HLID Hailey 55.37 316 P **P 02 54 14.0 -0.3**
HLID IAmb IAmb 02 54 15.8
comp=Z,7.9nm,0.8s
CCCA Chr Cany lake 55.37 306 IAmb IAmb 02 54 18.4
comp=Z,10nm,0.9s
LRMC Laurel Mtn Rad 55.62 306 IAmb IAmb 02 54 17.1
comp=Z,10nm,1.3s
PTO Porto 55.78 47 *e*P **P 02 54 13.9 -3.1**
PESTR Estremoz 55.91 50 *e*P P 02 54 11.5 -6.6
DSP Deep Springs 56.25 308 IAmb IAmb 02 54 22.7
comp=Z,16nm,1.3s
PGAV Gavieira, Arco 56.26 47 *e*P **P 02 54 18.9 -1.6**
PGAV *i* IAmb IAmb 02 54 20.2
comp=Z,100nm,1.6s
MFID Camas Ranch 56.30 315 IAmb IAmb 02 54 21.6
comp=Z,4.6nm,0.6s
NVAR Mina Array Bea 56.74 309 P **P 02 54 23.9 -0.3**
comp=Z,1.3nm,0.5s,baz=104,slow=7.2,SNR=18
NVAR PcP **PcP 02 55 18.4 -0.7**
comp=Z,1.9nm,0.8s,baz=113,slow=4.9,SNR=5.4
comp=Z,1.3nm,0.5s
DBIC Dimbokro 56.89 89 P **P 02 54 25.2 -0.1**
comp=Z,1.5nm,0.4s,baz=300,slow=8.9,SNR=5.9
comp=Z,1.5nm,0.4s
DBIC Dimbokro 56.89 89 IAmb IAmb 02 55 01.1
comp=Z,22nm,1.4s
PLID Pearl Lake 56.95 317 IAmb IAmb 02 54 25.2
comp=Z,9.0nm,1.1s
ANGG Ammassalik, Gr 57.18 12 *i* P **P 02 54 26.0 -0.4**
ANGG IAmb IAmb 02 54 26.9
comp=Z,11nm,0.5s
BMO Blue Mountains 57.76 316 IAmb IAmb 02 54 31.3
comp=Z,12nm,1.3s
BLKN Baker Lake 58.27 344 IAmb IAmb 02 54 33.0
comp=Z,21nm,1.5s
ILULI Ilulissat 58.66 5 P **P 02 54 36.5 -0.2**
ILULI Ilulissat 58.66 5 *i* P **P 02 54 36.9 +0.1**
ILULI IAmb IAmb 02 54 37.6
comp=Z,18nm,0.8s
LNOR Lincton Mounta 58.73 317 IAmb IAmb 02 54 37.6
comp=Z,5.6nm,0.8s
NEW Newport 58.76 320 LR LR 03 19 20.7
comp=Z,14nm,18.7s,baz=83,slow=35
NEW Newport 58.76 320 P 02 54 36.7 -1.2
NEW IAmb IAmb 02 54 38.0
comp=Z,10.0nm,0.8s
ESDC Sonseca Array 58.84 50 P **P 02 54 39.9 +1.2**
comp=Z,2.0nm,0.8s,baz=249,slow=5.3,SNR=10
comp=Z,2.0nm,0.8s
C09A Chrisman Ranch 59.33 320 IAmb IAmb 02 54 41.8
comp=Z,7.6nm,0.8s
SAQQ Saqqaq 59.38 4 *i* P **P 02 54 41.3 -0.4**
SAQQ IAmb IAmb 02 54 42.4
comp=Z,9.8nm,0.7s
ILON Igloolik, Nuna 59.70 352 IAmb IAmb 02 54 43.4
comp=Z,5.3nm,0.6s
HAWA Hanford 59.71 318 IAmb IAmb 02 54 44.5
comp=Z,20nm,1.4s
WAH2 Wahluke Slope 59.84 318 IAmb IAmb 02 54 45.5
comp=Z,20nm,1.2s
PINE Pine Mountain 59.97 314 IAmb IAmb 02 54 48.8
comp=Z,6.0nm,0.7s
J05D Fort Rock, OR 60.05 314 P **P 02 54 46.9 -0.1**
B08A Colville Reser 60.18 320 IAmb IAmb 02 54 47.2
comp=Z,17nm,1.3s
MXC Moxie City 60.27 318 IAmb IAmb 02 54 49.5
comp=Z,7.2nm,0.8s
L04D Klamath Falls 60.57 312 P 02 54 49.8 -0.7
N02D Trinity Center 60.61 311 P **P 02 54 48.9 -1.8**
WIFE Three Sisters- 60.65 315 P **P 02 54 50.9 -0.2**
WIFE IAmb IAmb 02 54 52.5
comp=Z,13nm,1.0s
J04A Umpqua Nationa 60.66 314 P **P 02 54 51.0 -0.2**
BORG Borgarnes 60.77 19 LR LR 03 17 49.2
comp=Z,13nm,20.1s,baz=213,slow=33
KHBM Hayfork Bally 60.93 310 P **P 02 54 51.7 -1.4**
KHBM IAmb IAmb 02 54 53.2
comp=Z,4.5nm,0.5s
BBOR Butler Butte 60.99 313 IAmb IAmb 02 55 31.9
comp=Z,13nm,1.3s
POIN Pond Inlet 62.42 355 IAmb IAmb 02 55 01.7
comp=Z,6.6nm,0.6s
TORD Torodi Ar. Bea 62.51 81 P **P 02 55 03.7 -0.2**
comp=Z,1.4nm,0.4s,baz=289,slow=6.3,SNR=31
comp=Z,1.4nm,0.4s
SUMG Summit 63.23 8 P **P 02 55 08.2 0.0**
SUMG Summit 63.23 8 *i* P **P 02 55 08.0 -0.1**
SUMG IAmb IAmb 02 55 09.2
comp=Z,29nm,0.9s
YKA Yellowknife Ar 63.51 336 P **P 02 55 07.3 -2.3**
comp=Z,0.8nm,0.7s,baz=87,slow=12,SNR=26
comp=Z,0.8nm,0.7s
EKA Eskdalemuir Ar 63.75 33 P **P 02 55 11.1 -0.3**
comp=Z,0.4nm,0.4s,baz=289,slow=5.2,SNR=14
comp=Z,0.4nm,0.4s
TAM Tamanrasset 65.53 70 P **P 02 55 25.7 +1.9**
TULEG Thule 65.67 358 *i* P **P 02 55 22.1 -1.4**
TULEG IAmb IAmb 02 55 23.0
comp=Z,7.9nm,0.8s
RES Resolute Bay 66.31 351 LR LR 03 22 15.9
comp=Z,25nm,21.7s,baz=15,slow=34
BBB Bella Bella 66.63 322 LR LR 03 24 13.1
comp=Z,24nm,18.3s,baz=104,slow=36
NEEM North Greenlan 66.75 3 *i* P **P 02 55 30.0 -0.7**
NEEM IAmb IAmb 02 55 30.8
comp=Z,13nm,0.8s
DBG Daneborg 67.68 11 *i* P **P 02 55 36.9 +0.7**
DBG IAmb IAmb 02 55 37.6
comp=Z,21nm,0.7s
KEST Kesra 68.85 56 P **P 02 55 45.6 +1.1**
comp=Z,2.0nm,0.8s,baz=217,slow=5.1,SNR=4.9
comp=Z,2.0nm,0.8s
KEST Kesra 68.85 56 IAmb IAmb 02 56 28.0
comp=Z,14nm,1.2s
DAVA Damuels 69.98 44 *e*P **P 02 55 52.2 +0.9**
comp=Z,1.7nm,0.3s
FETA Feichten 70.53 44 *e*P **P 02 55 55.6 +0.9**
comp=Z,3.3nm,0.7s
RETA Reutte 70.59 43 *i* P **P 02 55 55.5 +0.6**
comp=Z,1.5nm,0.6s
MOTA Moosalm 70.81 44 *e*P **P 02 55 56.6 +0.3**
comp=Z,2.3nm,0.4s
SQTA Sankt Quirin 70.87 44 *e*P **P 02 55 57.1 +0.4**
comp=Z,1.7nm,0.3s
LESA Schwarzleotal 71.88 44 *e*P **P 02 56 03.1 +0.4**
comp=Z,4.4nm,0.5s
KBA Koelnbreinsper 72.32 44 *e*P **P 02 56 06.0 +0.6**
comp=Z,1.3nm,0.5s
NBO00 NORSAR Array S 72.32 29 IAmb IAmb 02 56 07.0
comp=Z,14nm,0.9s
NB2 NORSAR Subarra 72.53 29 P **P 02 56 07.6 +1.4**
comp=Z,2.9nm,0.6s,baz=262,slow=6.5
NOA NORSAR Array B 72.53 29 P **P 02 56 07.3 +1.0**
comp=Z,5.2nm,0.8s,baz=265,slow=6.1,SNR=32
comp=Z,5.2nm,0.8s
NC303 NORSAR Array S 72.64 29 P **P 02 56 08.2 +1.4**
NC602 NORSAR Array S 72.64 30 IAmb IAmb 02 56 09.1
comp=Z,12nm,0.8s
GERES GERESS Array B 72.65 42 P **P 02 56 07.2 -0.1**
comp=Z,1.4nm,0.7s,baz=270,slow=5.3,SNR=9.5
GERES pP **pP 02 56 33.4 +1.1**
comp=Z,2.5nm,0.9s,baz=260,slow=3.8,SNR=5.7
comp=Z,1.4nm,0.7s
NC405 NORSAR Array S 72.79 29 IAmb IAmb 02 56 09.8
comp=Z,14nm,0.8s
G31M Satah River 72.94 337 P **P 02 56 06.8 -1.6**
INK Inuvik 72.97 338 P **P 02 56 06.7 -1.9**
NOR Nord 73.29 6 *i* P **P 02 56 09.3 -1.0**
NOR IAmb IAmb 02 56 10.4
comp=Z,5.2nm,0.9s
SOKA Soboth 73.46 44 *e*P **P 02 56 12.2 +0.1**
comp=Z,1.7nm,0.7s
HFS Hagfors 73.62 30 P **P 02 56 13.4 +0.8**
comp=Z,7.1nm,0.5s,baz=238,slow=2.8,SNR=65
comp=Z,7.1nm,0.5s
MODS Modra-Piesok 75.01 43 *e*P **P 02 56 22.1 +1.2**
MORH Mrgy, Hungar 75.95 45 P **P 02 56 26.9 +0.6**
comp=Z,5.5nm,1.3s
SPITS Spitsbergen Ar 77.04 12 P **P 02 56 32.3 +0.4**
comp=Z,7.5nm,0.6s,baz=232,slow=1.6,SNR=33
comp=Z,7.5nm,0.6s
ILAR Eielson Array 77.86 334 P **P 02 56 35.1 -1.5**
comp=Z,1.4nm,0.7s,baz=93,slow=4.6,SNR=22
ILAR LR LR 03 34 40.3
comp=Z,25nm,18.2s,baz=280,slow=38
comp=Z,1.4nm,0.7s
ARCES ARCESS Array B 79.07 21 P **P 02 56 43.4 +0.2**
comp=Z,7.7nm,0.7s,baz=271,slow=6.3,SNR=14
ARCES pP **pP 02 57 08.7 +0.1**
comp=Z,2.7nm,0.8s,baz=263,slow=4.5,SNR=2.8
ARCES LR LR 03 27 05.9
comp=Z,18nm,19.3s,baz=338,slow=32
comp=Z,7.7nm,0.7s
ARCES ARCESS Array B 79.07 21 IAmb IAmb 02 56 44.2
comp=Z,11nm,0.8s
TRF Thorofare Moun 79.38 333 IAmb IAmb 02 56 45.4
comp=Z,13nm,1.0s
FINES FINESS Array B 79.72 29 P **P 02 56 47.4 +0.5**
comp=Z,8.6nm,0.6s,baz=256,slow=3.9,SNR=55
comp=Z,8.6nm,0.6s
BUR08 Bucovina Ar. S 80.36 43 P **P 02 56 52.7 +1.9**
BURAR Bucovina Array 80.37 43 P **P 02 56 52.5 +1.7**
KDAK Kodiak Island 80.97 327 LR LR 03 33 15.5
comp=Z,32nm,19.0s,baz=82,slow=36
M19K Big River Lodg 81.41 331 IAmb IAmb 02 56 56.4
comp=Z,17nm,1.2s
O19K Port Alsworth 81.58 330 IAmb IAmb 02 56 56.9
comp=Z,14nm,1.0s
L19K White Mountain 81.59 332 IAmb IAmb 02 56 57.6
comp=Z,21nm,1.5s
MI28 Mi28,Pidlybu 81.60 40 P **P 02 56 57.0 -0.2**
LUBAR Lubar, Ukraine 81.78 41 P **P 02 56 57.9 -0.2**
O18K Koktuh Hills 82.07 329 P **P 02 56 59.2 -0.3**
O18K IAmb IAmb 02 56 59.8
comp=Z,11nm,0.8s
N18K Kilae Creek 82.29 330 IAmb IAmb 02 57 00.7
comp=Z,19nm,1.0s
SORM Soroca 82.40 43 P **P 02 57 01.0 -0.4**
comp=Z,6.5nm,0.7s
SORM pP **pP 02 57 26.4 -0.5**
comp=Z,6.5nm,0.7s
AK16 Malin Array Si 82.54 40 P **P 02 57 02.4 +0.3**
AK01 Malin Array Si 82.61 40 P **P 02 57 02.9 +0.5**
AKASG Malin Array Be 82.61 40 P **P 02 57 03.2 +0.8**
comp=Z,0.3nm,0.3s,baz=285,slow=3.6,SNR=2.9
comp=Z,0.3nm,0.3s
AK10 Malin Array Si 82.64 40 P **P 02 57 02.8 +0.2**
G18K Tagagawik 82.67 336 IAmb IAmb 02 57 03.6
comp=Z,14nm,1.1s
K17K Iditarod 83.09 333 IAmb IAmb 02 57 06.1
comp=Z,24nm,0.9s
E18K Tukpahlearik C 83.14 337 P 02 57 04.5 -0.4
F17K Baldwin Pennin 83.60 336 IAmb IAmb 02 57 07.6
comp=Z,9.4nm,0.8s
M16K Timber Creek 83.71 331 IAmb IAmb 02 57 09.4
comp=Z,14nm,0.8s
L16K Owhat River 83.82 332 P 02 57 09.2 +0.8
L16K IAmb IAmb 02 57 10.1
comp=Z,10nm,0.9s
G16K Koyuk River 84.28 336 IAmb IAmb 02 57 11.7
comp=Z,9.8nm,0.9s
N15K Kwethluk River 84.43 330 IAmb IAmb 02 57 12.8
comp=Z,12nm,0.9s
K13K Kusilvak Mount 86.15 332 IAmb IAmb 02 57 21.4
comp=Z,12nm,1.1s
OBN Obninsk 86.15 35 P **P 02 57 20.8 +0.6**
OBN Obninsk 86.15 35 P **P 02 57 20.5 +0.3**
comp=Z,32nm,0.8s
TNA Tin City 86.46 336 IAmb IAmb 02 57 22.5
comp=Z,10nm,0.8s
BR106 Keskin Array S 87.62 50 P **P 02 57 27.4 -0.5**
comp=Z,28nmcomp=Z,3.3nm,0.8s
BR105 Keskin Array S 87.62 50 P **P 02 57 28.3 +0.4**
comp=Z,3.7nm,0.8s
BRTR Keskin Array B 87.64 50 P **P 02 57 28.5 +0.5**
comp=Z,2.1nm,0.7s,baz=267,slow=4.5,SNR=14
BRTR pP **pP 02 57 54.2 +0.5**
comp=Z,2.1nm,0.7s,baz=270,slow=5.0,SNR=5.8
comp=Z,2.1nm,0.7s
BR104 Keskin Array S 87.64 50 P **P 02 57 27.8 -0.2**
GAMB Gambell 88.61 335 IAmb IAmb 02 57 33.0
comp=Z,10nm,1.1s
SUR Sutherland 90.08 123 LR LR 03 35 51.9
comp=Z,16nm,18.2s,baz=275,slow=34
PPT Papeete 90.66 252 LR LR 03 34 19.7
comp=Z,37nm,19.3s,baz=136,slow=33
SNAA Sanae 91.22 164 LR LR 03 42 27.6
comp=Z,24nm,18.6s,baz=202,slow=38
LBTB Lobatse 92.70 115 LR LR 03 38 48.1
comp=Z,16nm,18.5s,baz=216,slow=35
BOSA Boshof 93.07 118 P **P 02 57 55.4 +1.9**
comp=Z,1.4nm,0.8s,baz=5.8,slow=1.9,SNR=3.6
comp=Z,1.4nm,0.8s
BOSA Boshof 93.07 118 IAmb IAmb 02 58 20.9
comp=Z,8.1nm,1.2s
GURO Guroymak-BITLI 94.24 50 IAmb IAmb 02 58 28.1
comp=Z,4.2nm,0.9s
KMBO Kilima Mbogo 99.62 89 LR LR 03 41 04.6
comp=Z,20nm,19.7s,baz=64,slow=34
MKAR Makanchi Array 114.40 26 PKKPbc PKKPbc 03 13 56.8 -3.0
comp=Z,0.2nm,0.5s,baz=108,slow=6.9,SNR=4.0
WMQ Urumqi 119.05 24 PKP **PKiKP 03 03 29.0 +1.2**
WMQ PP **PP 03 04 53.6 +6.0**
SONM Songino Array 120.63 9 PKP **PKPdf 03 03 29.3 -1.5**
comp=Z,0.6nm,0.5s,baz=9.9,slow=1.3,SNR=7.0
SONM PKKPbc **PKKPbc 03 13 35.1 -2.7**
comp=Z,0.8nm,0.5s,baz=152,slow=3.0,SNR=6.8
CN2 Changchun 125.06 353 ⇑P **PKPdf 03 03 38.6 -0.6**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
HHC Hu-ho-hao-te 128.16 6 *e*P **PKPdf 03 03 44.7 -0.7**
MJAR Matsushiro Arr 128.96 339 PKP **PKPdf 03 03 44.1 -2.8**
comp=Z,2.3nm,0.7s,baz=62,slow=1.4,SNR=5.7
KSRS Korea Array 130.91 349 PKP **PKPdf 03 03 48.5 -2.0**
comp=Z,1.3nm,0.7s,baz=11,slow=1.9,SNR=5.6
NJ2 Nanjing 137.23 359 *e*P **PKPdf 03 04 01.7 -0.8**
NJ2 pmax pmax
comp=Z,30nm,0.6s
PZH PanZhiHua 139.69 22 PKP **PKPdf 03 04 07.6 +0.2**
CMAR Chiang Mai Arr 145.43 32 PKPbc **PKPbc 03 04 16.9 -0.8**
comp=Z,4.8nm,0.6s,baz=321,slow=3.2,SNR=32
STKA Stephens Creek 149.63 223 PKPbc **PKPdf 03 04 24.0 -0.2**
comp=Z,6.2nm,0.8s,baz=333,slow=3.1,SNR=8.8
ASAR Alice Springs 160.02 229 PKP **PKPdf 03 04 37.6 -1.0**
comp=Z,1.1nm,0.7s,baz=105,slow=1.3,SNR=12
ASAR PKPab **sPKPdf 03 05 16.1 +0.3**
comp=Z,0.5nm,0.6s,baz=128,slow=3.7,SNR=5.5
WRA Warramunga Arr 161.62 239 PKP **PKPdf 03 04 39.0 -1.4**
comp=Z,4.8nm,0.9s,baz=99,slow=0.8,SNR=27
WRA PKPab **PKPab 03 05 24.0 -1.8**
comp=Z,4.2nm,0.8s,baz=114,slow=4.3,SNR=19
WRA Warramunga Arr 161.62 239 PKPdf 03 04 39.5 -0.9

IDC 06 03:18:29.2±1.8**, 3°.99S**×**136°.43E, h0**km**, mb3.1**/1**, mbtmp3.3**/4**, ML3.5**/3**, MS3.3**/1**, Error ellipse: s-maj=43.3km s-min=29.3km az=101.0, Irian Jaya**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res ISC
JAY Jayapura 4.51 71 Pn Pn 03 19 39.5 +0.6
2.0nm,0.3s,baz=226,slow=12,SNR=8.3
JAY Sn Sn 03 20 24.1 -8.1
0.4nm,0.3s,baz=326,slow=11,SNR=1.3
15nm,0.6s
WRA Warramunga Arr 15.99 187 Pn Pn 03 22 17.2 +1.5
0.3nm,0.3s,baz=11,slow=12,SNR=9.3
WRA Sn Sn 03 25 14.4 +0.5
baz=12,slow=21,SNR=2.2
0.3nm,0.3s
ASAR Alice Springs 19.72 187 P P 03 23 00.1 -0.5
0.1nm,0.3s,baz=12,slow=12,SNR=7.1
0.4nm,0.6s
NWAO Narrogin (SRO) 33.93 210 LR LR 03 39 34.2
comp=Z,50nm,19.1s,baz=290,slow=37
MKAR Makanchi Array 69.43 324 P P 03 29 39.1 -0.2
0.1nm,0.3s,baz=112,slow=6.4,SNR=1.6
0.1nm,0.3s

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*NEIC **06** 03:31:39.5±1.8, 23°.7S±0°.1×179°.8W±0°.1, h528km±9km, mb4.2/19, Error ellipse: s-maj=21.9km s-min=13.9km az=167.0*
*IDC **06** 03:31:43.3±15.0, 23°.90S×179°.94W, h572km±159km, mb3.3/5, mbtmp4.3/5, Error ellipse: s-maj=96.4km s-min=29.2km az=53.0*
ISC 06 03:31:39.4±0.9**, 23°.6S**±0°.1×**179°.8W**±0°.2**, h532**km**, n36, σ0.s66**/34**, mb4.2**/15**, South of Fiji Islands**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res ISC
MSVF Nonsavu 6.12 341 P **P 03 33 18.3 -0.2**
QRZ Quartz Range 18.38 199 P **P 03 35 21.1 -0.3**
WHZ Wether Hill Ro 24.39 201 P **P 03 36 15.7 +0.2**
ARMA Armidale 26.28 249 P **P 03 36 33.8 +1.2**
ARMA IAmb IAmb 03 36 39.5
comp=Z,15nm,1.2s
EIDS Eidsvold 26.51 260 P **P 03 36 34.8 +0.3**
EIDS IAmb IAmb 03 37 18.3
comp=Z,14nm,1.5s
CTAO Charters Tower 31.62 270 P **P 03 37 19.8 +0.8**
TOO Toolangi 32.76 237 P **P 03 37 29.5 +1.0**
TOO IAmb IAmb 03 37 51.0
comp=Z,12nm,1.4s
STKA Stephens Creek 34.99 248 P **P 03 37 46.6 -0.7**
comp=Z,1.3nm,0.8s,baz=103,slow=14,SNR=1.8
comp=Z,1.3nm,0.8s
INKA Innaminka 35.67 255 P **P 03 37 53.8 +0.9**
BBOO Buckleboo 39.71 247 P **P 03 38 25.3 -0.7**
BBOO IAmb IAmb 03 39 08.7
comp=Z,11nm,1.4s
AS31 Alice Springs 42.23 260 P **P 03 38 45.9 -0.2**
AS31 IAmb IAmb 03 38 47.0
comp=Z,1.8nm,0.4s
ASAR Alice Springs 42.24 260 P **P 03 38 45.7 -0.5**
comp=Z,2.9nm,0.6s,baz=100,slow=7.3,SNR=27
comp=Z,2.9nm,0.6s
ASAR Alice Springs 42.24 260 P **P 03 38 45.8 -0.3**
WR8 Warramunga Arr 42.43 266 P **P 03 38 47.1 -0.6**
WRA Warramunga Arr 42.58 266 P **P 03 38 48.1 -0.8**
comp=Z,3.7nm,0.5s,baz=103,slow=7.9,SNR=122
comp=Z,3.7nm,0.5s
WRA Warramunga Arr 42.58 266 P **P 03 38 48.1 -0.8**
FORT Forrest 46.57 249 P **P 03 39 18.7 -0.7**
FORT IAmb IAmb 03 39 59.5
comp=Z,6.5nm,0.9s
KNRA Kununurra 48.84 269 P **P 03 39 36.6 0.0**
KNRA IAmb IAmb 03 39 56.9
comp=Z,12nm,1.3s
FITZ Fitzroy Crossi 51.00 265 P **P 03 39 52.5 0.0**
comp=Z,1.8nm,0.5s,baz=128,slow=8.0,SNR=8.6
comp=Z,1.8nm,0.5s
MBWA Marble Bar 55.58 260 P **P 03 40 24.7 -0.2**
MBWA IAmb IAmb 03 40 51.2
comp=Z,9.8nm,1.4s
MORW Morawa 57.13 250 P **P 03 40 35.0 -0.6**
MORW IAmb IAmb 03 41 06.2
comp=Z,14nm,1.2s
GIRL Giralia 60.14 257 P **P 03 40 55.1 -0.8**
CASY Casey 60.48 206 P **P 03 40 56.7 -0.7**
CASY IAmb IAmb 03 41 33.7
comp=Z,19nm,1.3s
QSPA South Pole Qui 66.53 180 P **P 03 41 36.7 +0.4**
comp=Z,2.8nm,0.8s,baz=14,slow=3.0,SNR=6.2
comp=Z,2.8nm,0.8s
QSPA South Pole Qui 66.53 180 P **P 03 41 37.4 +1.1**
QSPA IAmb IAmb 03 41 40.8
comp=Z,5.9nm,1.4s
BELA Belgrano 2 76.76 173 P **P 03 42 35.5 -0.1**
BVAR Borovoye Array 120.28 319 PKP **PKPdf 03 49 29.3 -0.5**
comp=Z,0.3nm,0.3s,baz=80,slow=4.7,SNR=2.7
HFS Hagfors 142.24 349 PKhKP PKPpre 03 50 07.1
comp=Z,1.9nm,0.3s,baz=41,slow=3.3,SNR=34
PABE Paberze 143.55 337 PKPdf PKPbc 03 50 12.4 +0.5
ARPR Arapgir-MALATY 144.19 305 PKPab 03 50 16.5 +1.5
AKASG Malin Array Be 144.76 328 PKPbc **PKPdf 03 50 15.1 -0.3**
comp=Z,1.6nm,0.5s,baz=45,slow=3.9,SNR=7.1
BRTR Keskin Array B 147.48 308 PKPbc **PKPbc 03 50 24.1 +0.1**
comp=Z,1.0nm,0.6s,baz=142,slow=4.2,SNR=4.3
BRTR Keskin Array B 147.48 308 PKPbc 03 50 23.9 -0.1
MMAI Mount Meron Ar 147.69 295 PKPbc **PKiKP 03 50 25.9 -0.3**
comp=Z,1.9nm,0.5s,baz=63,slow=3.9,SNR=5.1
EKA Eskdalemuir Ar 148.16 4 PKPbc **PKPbc 03 50 24.5 -0.5**
comp=Z,0.2nm,0.3s,baz=355,slow=2.8,SNR=9.3
BURAR Bucovina Array 148.76 326 PKPbc **PKiKP 03 50 28.5 +0.6**

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*NOU **06** 03:32:35.2, 40°.36S×173°.45E, h190km, MLv3.6/16, Cook Strait, New Zealand*
*WEL **06** 03:32:37.0±0.8, 40°S±3°×17°3E±°, h178km±5km, M3.3/39, MLv3.3/39, Error ellipse: s-maj=7.2km s-min=4.0km az=107.3, confirmed*
ISC 06 03:32:32.7±1.6**, 40°.32S**±0°.04×**173°.36E**±0°.05**, h212**km±9km**, n125, σ1.s34**/135**, Cook Strait**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res ISC
DUWZ D'Urville Isla 0.64 139 P **Pn 03 33 03.2 +1.4**
DUWZ S **S 03 33 22.7 -1.8**
TKNZ Takaka Hill 0.78 203 P **Pn 03 33 03.7 +1.3**
TKNZ S **S 03 33 23.7 -2.0**
QRZ Quartz Range 0.81 231 P **Pn 03 33 03.9 +1.3**
QRZ Quartz Range 0.81 231 S **S 03 33 24.7 -1.2**
QRZ Quartz Range 0.81 231 P **Pn 03 33 04.0 +1.3**
QRZ S **S 03 33 24.2 -1.7**
NNZ Nelson 0.90 179 P **Pn 03 33 04.4 +1.4**
NNZ S **S 03 33 25.2 -1.6**
NBEZ Newall Road No 1.12 20 P **Pn 03 33 05.9 +1.3**
NBEZ S **S 03 33 29.0 -0.2**
TCW Tory Channel 1.13 142 P **Pn 03 33 06.3 +1.8**
TCW S **S 03 33 27.5 -1.8**
KHEZ Kahui Hut 1.14 26 P **Pn 03 33 04.7 -0.1**
KHEZ Kahui Hut 1.14 26 P **S 03 33 30.1 +0.5**
KHEZ Kahui Hut 1.14 26 P **Pn 03 33 06.2 +1.4**
KHEZ S **S 03 33 28.7 -0.9**
PREZ Palmer Road 1.15 32 P **Pn 03 33 06.2 +1.3**
LREZ Lake Rotokare 1.17 43 P **Pn 03 33 06.6 +1.6**
MRNZ Matariki Terra 1.17 203 P **Pn 03 33 06.3 +1.4**
MRNZ S **S 03 33 28.5 -1.4**
KIW Kapiti Island 1.29 115 P **Pn 03 33 07.3 +1.5**
KIW S **S 03 33 28.5 -2.9**
DREZ Durham Road 1.30 30 P **Pn 03 33 07.1 +1.2**
DREZ S **S 03 33 31.0 -0.5**
WAZ Wanganui 1.37 66 P **Pn 03 33 08.4 +1.9**
SNZO South Karori 1.42 135 P **Pn 03 33 07.8 +1.1**
SNZO South Karori 1.42 135 S **S 03 33 31.4 -1.7**
WEL Wellington 1.44 133 P **Pn 03 33 08.5 +1.6**
BSWZ Blackbirch Sta 1.45 165 P **Pn 03 33 08.7 +1.7**
OGWZ Otaki Gorge 1.46 110 P **Pn 03 33 08.9 +1.7**
THZ Tophouse 1.48 193 P **Pn 03 33 09.0 +1.6**
OHWZ Ohakea 1.50 86 P **Pn 03 33 09.4 +1.9**
CAW Cannon Point 1.52 122 P **Pn 03 33 09.2 +1.6**
CMWZ Cape Campbell 1.57 156 P **Pn 03 33 10.2 +2.2**
BHW Baring Head 1.58 134 P **Pn 03 33 09.4 +1.3**
VRZ Vera Road 1.61 42 P **Pn 03 33 09.4 +0.9**
MRZ Mangatainoka R 1.72 102 P **Pn 03 33 10.9 +1.5**
HOWZ Holdsworth Sta 1.74 110 P **Pn 03 33 11.0 +1.5**
MSWZ Moikau Station 1.80 128 P **Pn 03 33 11.5 +1.3**
MTW Mount Morrison 1.83 118 P **Pn 03 33 11.9 +1.5**
POWZ Post Office Ro 1.84 93 P **Pn 03 33 12.0 +1.4**
PKVZ Pokaka 1.84 57 P **Pn 03 33 11.7 +1.1**
DSZ Denniston Nort 1.85 219 P **Pn 03 33 12.3 +1.6**
MTVZ Mangateitei 1.87 61 P **Pn 03 33 12.1 +1.1**
PAWZ Paruwai Farm 1.89 125 P **Pn 03 33 12.5 +1.4**
PLWZ Palliser 1.90 132 P **Pn 03 33 12.4 +1.3**
TRVZ Turoa 1.97 60 P **Pn 03 33 13.0 +0.9**
TIWZ Tintock 1.98 104 P **Pn 03 33 13.6 +1.7**
WNVZ Wahianoa 1.98 61 P **Pn 03 33 13.2 +1.0**
FWVZ Far West T-bar 1.99 58 P **Pn 03 33 13.5 +1.1**
PRWZ Pori Road 2.00 98 P **Pn 03 33 14.0 +1.9**
TSZ Takapari Road 2.01 83 P **Pn 03 33 13.5 +1.2**
COVZ Chateau Observ 2.02 57 P **Pn 03 33 13.4 +1.0**
TWVZ Taurewa 2.03 53 P **Pn 03 33 13.3 +0.7**
MOVZ Moawhango 2.05 64 P **Pn 03 33 13.4 +0.7**
TUVZ Tukino 2.05 60 P **Pn 03 33 14.1 +1.2**
TRWZ Traveller 2.07 122 P **Pn 03 33 14.4 +1.7**
NGZ Ngauruhoe 2.07 57 P **Pn 03 33 13.9 +0.9**
TMWZ Te Maipa 2.08 113 P **Pn 03 33 14.4 +1.5**
SNVZ South Ngauruho 2.09 58 P **Pn 03 33 14.3 +1.0**
WTVZ West Tongariro 2.10 56 P **Pn 03 33 14.1 +0.9**
KHZ Kahutara 2.10 176 P **Pn 03 33 14.3 +1.3**
KHZ Kahutara 2.10 176 P **S 03 33 42.9 -1.4**
KHZ Kahutara 2.10 176 P **Pn 03 33 14.4 +1.3**

OTVZ	**Oturere**	**2.12**	**58**	P	**Pn**	**03 33 14.6**	**+1.1**
KRVZ	**Karewarewa**	**2.14**	**56**	P	**Pn**	**03 33 14.7**	**+0.9**
HIZ	**Hauiti**	**2.14**	**33**	P	**Pn**	**03 33 14.4**	**+0.8**
HIZ	**Hauiti**	**2.14**	**33**	P	**S**	**03 33 44.8**	**-0.3**
HIZ	**Hauiti**	**2.14**	**33**	P	**Pn**	**03 33 14.5**	**+0.8**
DVHZ	**Dannevirke**	**2.14**	**90**	P	**Pn**	**03 33 14.9**	**+1.3**
NTVZ	**North Tongarir**	**2.16**	**56**	P	**Pn**	**03 33 14.9**	**+1.0**
ETVZ	**East Tongariro**	**2.16**	**58**	P	**Pn**	**03 33 15.1**	**+1.1**
TMVZ	**Te Maari**	**2.17**	**57**	P	**Pn**	**03 33 15.3**	**+1.3**
PNHZ	**Pukenui**	**2.21**	**80**	P	**Pn**	**03 33 15.5**	**+1.2**
BFZ	**Birch Farm**	**2.23**	**100**	P	**Pn**	**03 33 16.1**	**+1.7**
BFZ	**Birch Farm**	**2.23**	**100**	P	**S**	**03 33 44.8**	**-1.8**
BFZ	**Birch Farm**	**2.23**	**100**	P	**Pn**	**03 33 16.1**	**+1.7**
CPWZ	**Castlepoint**	**2.24**	**106**	P	**Pn**	**03 33 16.9**	**+2.3**
KATZ	**Kakaramea**	**2.24**	**54**	P	**Pn**	**03 33 16.0**	**+1.2**
RITZ	**Rihia Road**	**2.35**	**56**	P	**Pn**	**03 33 17.2**	**+1.4**
RATZ	**Rangitukua**	**2.36**	**53**	P	**Pn**	**03 33 17.5**	**+1.6**
WPHZ	**Waipukurau**	**2.37**	**85**	P	**Pn**	**03 33 17.4**	**+1.5**
ANWZ	**Angora Road**	**2.38**	**94**	P	**Pn**	**03 33 17.8**	**+1.7**
KRHZ	**Kereru**	**2.41**	**75**	P	**Pn**	**03 33 17.4**	**+1.0**
WATZ	**Wairara**	**2.44**	**49**	P	**Pn**	**03 33 18.0**	**+1.3**
PRHZ	**Porangahau**	**2.50**	**90**	P	**Pn**	**03 33 19.0**	**+1.7**
KWHZ	**Kaweka Forest**	**2.52**	**70**	P	**Pn**	**03 33 19.3**	**+1.6**
LTZ	**Lake Taylor**	**2.59**	**198**	P	**Pn**	**03 33 20.0**	**+1.6**
TLZ	**Tolley Road**	**2.60**	**41**	P	**Pn**	**03 33 19.2**	**+0.6**
BKZ	**Black Stump Fm**	**2.67**	**65**	P	**Pn**	**03 33 20.2**	**+0.9**
BKZ	**Black Stump Fm**	**2.67**	**65**	P	**Pn**	**03 33 20.1**	**+0.7**
PXZ	**Pawanui**	**2.69**	**85**	P	**Pn**	**03 33 21.0**	**+1.5**
MCHZ	**McNeill Hill**	**2.71**	**72**	P	**Pn**	**03 33 21.3**	**+1.6**
KAHZ	**Kahuranaki**	**2.75**	**80**	P	**Pn**	**03 33 21.7**	**+1.6**
MRHZ	**Matea Rd**	**2.79**	**59**	P	**Pn**	**03 33 21.0**	**+0.3**
INZ	**Inchbonnie**	**2.80**	**210**	P	**Pn**	**03 33 22.0**	**+1.4**
NMHZ	**Naumai**	**2.92**	**66**	P	**Pn**	**03 33 24.0**	**+1.8**
ARHZ	**Aropaoanui**	**2.99**	**71**	P	**Pn**	**03 33 24.4**	**+1.5**
MTHZ	**Maungataniwha**	**3.06**	**63**	P	**Pn**	**03 33 24.5**	**+0.8**
OXZ	**Oxford**	**3.16**	**198**	P	**Pn**	**03 33 25.8**	**+1.0**
RAHZ	**Arahi**	**3.20**	**65**	P	**Pn**	**03 33 26.4**	**+1.1**
MUGZ	**Murupara**	**3.22**	**56**	P	**Pn**	**03 33 25.8**	**+0.3**
WHHZ	**Waihua**	**3.23**	**69**	P	**Pn**	**03 33 27.7**	**+2.0**
RTZ	**Ruatahuna**	**3.27**	**60**	P	**Pn**	**03 33 26.5**	**+0.2**
WVZ	**Waitaha Valley**	**3.38**	**215**	P	**Pn**	**03 33 28.6**	**+1.2**
OKCZ	**Okains Bay**	**3.41**	**184**	P	**Pn**	**03 33 28.5**	**+0.7**
MQZ	**McQueen's Vall**	**3.43**	**189**	P	**Pn**	**03 33 28.3**	**+0.4**
SNGZ	**Shannon Statio**	**3.44**	**65**	P	**Pn**	**03 33 29.4**	**+1.3**
MHCZ	**Mount Hutt**	**3.48**	**202**	P	**Pn**	**03 33 29.5**	**+0.9**
RACZ	**Rakaia**	**3.53**	**195**	P	**Pn**	**03 33 30.1**	**+1.0**
URZ	**Urewera**	**3.56**	**56**	P	**Pn**	**03 33 29.9**	**+0.3**
URZ	**Urewera**	**3.56**	**56**	P	**Pn**	**03 33 29.7**	**+0.1**
KNZ	**Kokohu**	**3.57**	**70**	P	**Pn**	**03 33 30.6**	**+0.9**
MHGZ	**Mahia Peninsul**	**3.69**	**73**	P	**Pn**	**03 33 32.7**	**+1.5**
GCSZ	**Gaunt Creek Bo**	**3.76**	**216**	P	**Pn**	**03 33 33.3**	**+1.4**
PRGZ	**Paritu Road**	**3.76**	**70**	P	**Pn**	**03 33 33.0**	**+1.0**
RIGZ	**Rimuhau**	**3.76**	**66**	P	**Pn**	**03 33 33.1**	**+1.0**
MWZ	**Matawai**	**3.79**	**60**	P	**Pn**	**03 33 32.6**	**+0.2**
WACZ	**Wakanui South**	**3.79**	**197**	P	**Pn**	**03 33 33.7**	**+1.4**
TKGZ	**Te Karaka**	**3.95**	**63**	P	**Pn**	**03 33 35.0**	**+0.7**
ARCZ	**Arundel**	**3.97**	**203**	P	**Pn**	**03 33 35.7**	**+1.2**
RUGZ	**Raukumara Rang**	**4.09**	**56**	P	**Pn**	**03 33 35.7**	**-0.5**
FOZ	**Fox Glacier**	**4.16**	**218**	P	**Pn**	**03 33 37.5**	**+0.7**
TWGZ	**Tauwhareparae**	**4.17**	**61**	P	**Pn**	**03 33 37.8**	**+0.6**
HAZ	**Te Kaha**	**4.29**	**55**	P	**Pn**	**03 33 38.1**	**-0.4**
PKGZ	**Pakihiroa**	**4.41**	**58**	P	**Pn**	**03 33 40.3**	**+0.3**
PUZ	**Puketiti**	**4.41**	**61**	P	**Pn**	**03 33 40.1**	**0.0**
TMZ	**Timaru**	**4.42**	**202**	P	**Pn**	**03 33 41.4**	**+1.4**
WMGZ	**Waiomatatini S**	**4.66**	**59**	P	**Pn**	**03 33 43.0**	**-0.1**
JCZ	**Jackson Bay**	**5.06**	**221**	P	**Pn**	**03 33 49.7**	**+1.5**
JCZ	**Jackson Bay**	**5.06**	**221**	P	**Pn**	**03 33 49.2**	**+1.0**
ODZ	**Otahua Downs**	**5.13**	**202**	P	**Pn**	**03 33 50.6**	**+1.7**
ODZ	**Otahua Downs**	**5.13**	**202**	P	**Pn**	**03 33 50.6**	**+1.7**

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*IDC **06** 03:34:43.4±0.6, 32°.41N×105°.15E, h0km, mb4.0/25, mbtmp4.0/29, ML4.5/3, MS3.3/20, Error ellipse: s-maj=18.2km s-min=10.8km az=55.0*

*NEIC **06** 03:34:45.5±1.6, 32°.44N±0°.08×105°.24E±0°.10, h10km±1km, mb4.4/31, Error ellipse: s-maj=16.0km s-min=10.4km az=231.0*

*BJI **06** 03:34:46.5, 32°.63N×105°.37E, h17km, mb4.3/11, ML4.4/21, Ms4.0/18, Ms7 3.8/15*

ISC 06 03:34:45.4±0.4**, 32°.52N**±0°.03×**105°.24E**±0°.04**, h10**km**, n87, σ1s.96**/88**, mb4.2**/39**, MS3.3**/14**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.04**	**219**	Pn	**Pb**	**03 35 22.1**	**-0.5**
CD2				Pg	**Pg**	**03 35 25.0**	**+0.5**
CD2				Sg	**Sg**	**03 35 54.5**	**+3.5**
CD2				SMN			
	11μm,0.8s						
CD2				SME			
	7μm,0.6s						
LZDM	**Lanzhou Array**	**3.66**	**340**	Pn	**Pn**	**03 35 44.1**	**+1.7**
	baz=161,slow=14						
LZDM				Lg	Lg	03 36 39.7	
	baz=146,slow=27						
LZDM				LR	LR	03 37 25.0	
	comp=Z,344nm,19.4s,baz=155,slow=43						
	87nm,0.3s						
LZH	**Lanzhou**	**3.74**	**342**	Pn	**Pn**	**03 35 45.4**	**+2.0**
LZH				Pg	**Pg**	**03 35 55.3**	**-1.8**
LZH				Sg	**Sb**	**03 36 41.8**	**+4.6**
LZH				SMN			
	2μm,0.6s						
LZH				SME			
	4μm,0.8s						
LZH				L	L		
	comp=N,2μm,4.5s						
LZH				L	L		
	comp=E,5μm,4.3s						
LZH				L	L		
	comp=Z,1μm,4.5s						
ENH	**Enshi**	**4.27**	**121**		**Pn**	**03 35 50.7**	**+0.3**
LYN	**LuoYang**	**6.37**	**69**	Pn	**Pn**	**03 36 21.4**	**+2.1**
LYN				Pg	**Pb**	**03 36 39.0**	**+2.7**
LYN				Sn	**Sn**	**03 37 25.1**	**-7.0**
LYN				Sg	**Sb**	**03 37 59.6**	**+7.1**
LYN				SMN			
	600nm,0.8s						
LYN				SME			
	470nm,1.0s						
LYN				L	L		
	comp=N,7μm,22.3s						
LYN				L	L		
	comp=Z,8μm,24.4s						
PZH	**PanZhiHua**	**6.72**	**208**	Pn	**Pn**	**03 36 26.3**	**+2.0**
PZH				Sg	**Sg**	**03 38 24.9**	**+3.7**
PZH				SMN			
	80nm,0.7s						
PZH				SME			
	110nm,0.9s						
CNSH	**ChangSha**	**7.93**	**121**	P	**Pn**	**03 36 41.4**	**+0.7**
CNSH				S	**Sn**	**03 38 04.7**	**-5.7**
CNSH				SMN			
	130nm,1.1s						
CNSH				SME			
	110nm,1.1s						
GTA2	**Gaotai**	**8.25**	**329**	P	**Pn**	**03 36 45.7**	**+0.5**
GTA2				pmax	pmax		
	comp=Z,16nm,0.8s						
GTA2				L	L		
	comp=N,460nm,11.0s						
GTA2				L	L		
	comp=E,590nm,11.0s						
GTA2				L	L		
	comp=Z,720nm,10.3s						
BJI2	**Beijing**	**11.56**	**47**	P	**Pn**	**03 37 29.2**	**-1.3**
BJI2				S	**Sn**	**03 39 37.3**	**-2.4**
BJI2				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BJI2				L	L		
	comp=N,110nm,12.0s						
BJI2				L	L		
	comp=E,120nm,10.4s						
BJI2				L	L		
	comp=Z,140nm,12.5s						
QIZ	**Qiongzhong**	**14.05**	**162**	P	**Pn**	**03 38 04.0**	**-0.6**
QIZ				S	**Sn**	**03 40 43.9**	**+3.2**
QIZ				L	L		
	comp=N,440nm,13.1s						
QIZ				L	L		
	comp=E,200nm,11.8s						
QIZ				L	L		
	comp=Z,510nm,11.2s						
CMAR	**Chiang Mai Arr**	**15.10**	**204**	Pn	**Pn**	**03 38 15.8**	**-3.2**
	1.1nm,0.3s,baz=29,slow=11,SNR=15						
CMAR				LR	LR	03 45 01.1	
	comp=Z,63nm,18.6s,baz=10.0,slow=41						
	1.2nm,0.3s						
SONM	**Songino Array**	**15.33**	**3**	Pn	**Pn**	**03 38 19.0**	**-2.8**
	0.2nm,0.3s,baz=186,slow=15,SNR=5.1						
SONM				Lg	Lg	03 42 41.1	
	0.2nm,0.3s,baz=188,slow=20,SNR=3.6						
SONM				LR	LR	03 44 47.3	
	comp=Z,170nm,19.2s,baz=170,slow=39						
SONM	**Songino Array**	**15.33**	**3**		**Pn**	**03 38 20.3**	**-1.5**
ULN	**Ulaanbaatar**	**15.39**	**5**		**Pn**	**03 38 20.1**	**-2.6**
BRDH	**Bariadhala**	**15.52**	**234**	LR	LR	03 46 00.8	
	comp=Z,100nm,18.7s,baz=174,slow=44						
EVN	**Everest**	**16.55**	**259**		**Pn**	**03 38 37.3**	**-1.0**
WMQ	**Urumqi**	**17.78**	**314**	*e*P	**P**	**03 38 57.5**	**+3.7**
WMQ				S	**Sn**	**03 42 10.7**	**-0.6**
WMQ				pmax	pmax		
	comp=Z,13nm,0.9s						
WMQ				L	L		
	comp=N,330nm,19.7s						
TLY	**Talaya**	**19.19**	**357**	P	**P**	**03 39 09.1**	**-0.1**
	0.9nm,0.3s,baz=175,slow=12						
TLY				LR	LR	03 45 52.7	
	comp=Z,30nm,18.7s,baz=169,slow=35						
TLY	**Talaya**	**19.19**	**357**	P	**P**	**03 39 09.3**	**+0.1**
KSRS	**Korea Array**	**19.21**	**69**	P	**P**	**03 39 08.5**	**-1.0**
	0.3nm,0.3s,baz=251,slow=11,SNR=6.7						
KSRS				LR	LR	03 46 21.7	
	comp=Z,63nm,18.6s,baz=270,slow=36						
	1.8nm,0.6s						
JOW	**Kunigami**	**20.79**	**100**	P	Pn	03 39 27.9	-1.2
	4.6nm,0.5s,baz=241,slow=14,SNR=3.8						
	4.6nm,0.5s						
JOW	**Kunigami**	**20.79**	**100**	P	**P**	**03 39 27.2**	**+0.5**
JOW				IAmb	IAmb	03 39 59.6	
	comp=Z,37nm,1.2s						
JNU	**Nakatsue**	**21.54**	**81**	LR	LR	03 48 03.6	
	comp=Z,59nm,18.2s,baz=303,slow=37						
MKAR	**Makanchi Array**	**22.59**	**316**	P	**P**	**03 39 46.5**	**+0.4**
	comp=Z,2.2nm,0.7s,baz=120,slow=13,SNR=20						
MKAR				LR	LR	03 49 23.3	
	comp=Z,42nm,20.2s,baz=122,slow=39						
	comp=Z,2.2nm,0.7s						
MAKZ	**Makanchi**	**22.79**	**316**	P	**P**	**03 39 48.8**	**+0.7**
TGY	**Tagaytay City**	**23.27**	**138**	P	**P**	**03 39 52.9**	**-0.4**
	comp=Z,346nm,0.3s,baz=40,slow=16,SNR=4.2						
TARG	**Taragay, Kyrgy**	**23.65**	**301**	P	**P**	**03 39 57.6**	**+0.3**
TARG				IAmb	IAmb	03 40 23.8	
	comp=Z,6.3nm,0.9s						
HEH	**HeiHe**	**24.16**	**36**	*e*P	**P**	**03 40 04.7**	**+3.1**
HEH				pmax	pmax		
	comp=Z,19nm,0.9s						
NRN	**Naryn**	**24.90**	**299**	P	**P**	**03 40 09.5**	**+0.7**
NRN				IAmb	IAmb	03 40 16.7	
	comp=Z,4.7nm,0.6s						
KLR	**Kul'dur**	**25.89**	**42**	P	**P**	**03 40 18.5**	**+1.1**
	comp=Z,3.5nm,0.7s,baz=262,slow=8.7,SNR=15						
KLR				LR	LR	03 52 16.1	
	comp=Z,34nm,20.1s,baz=321,slow=40						
	comp=Z,3.5nm,0.7s						
ZAA0	**Zalesovo Array**	**25.90**	**332**	P	**P**	**03 40 17.2**	**-0.2**
ZAA0				IAmb	IAmb	03 40 25.3	
	comp=Z,3.2nm,0.8s						
ZALV	**Zalesovo Beam**	**25.90**	**332**	P	**P**	**03 40 17.5**	**+0.1**
	comp=Z,1.3nm,0.5s,baz=134,slow=9.6,SNR=7.6						
	comp=Z,1.3nm,0.5s						
ZALV	**Zalesovo Beam**	**25.90**	**332**	P	**P**	**03 40 17.2**	**-0.2**
AAK	**Ala-Archa**	**26.25**	**301**	LR	LR	03 51 26.1	
	comp=Z,75nm,19.1s,baz=86,slow=38						
KURBB	**Kurchatov Arra**	**26.73**	**320**	P	**P**	**03 40 25.5**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=132,slow=9.1,SNR=6.9						
KURBB				PcP	**PcP**	**03 43 46.9**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=117,slow=2.3,SNR=3.0						
	comp=Z,1.0nm,0.8s						
KURK	**Kurchatov**	**26.73**	**321**	P	**P**	**03 40 25.2**	**+0.3**
KURK				IAmb	IAmb	03 40 33.7	
	comp=Z,3.2nm,0.7s						
JKA	**Kamikawa-asahi**	**31.26**	**57**	P	**P**	**03 41 05.4**	**+0.1**
BVAR	**Borovoye Array**	**32.31**	**320**	P	**P**	**03 41 14.9**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=128,slow=9.3,SNR=4.4						
	comp=Z,0.3nm,0.4s						
YAK	**Yakutsk**	**33.45**	**21**	LR	LR	03 55 51.8	
	comp=Z,48nm,18.4s,baz=252,slow=38						
PALK	**Pallekele**	**33.93**	**228**	LR	LR	03 56 50.1	
	comp=Z,20nm,19.4s,baz=40,slow=39						
AB31	**Akbulak array**	**37.48**	**310**	P	**P**	**03 41 58.7**	**-0.3**
NRIK	**Noril'sk**	**38.20**	**350**	P	**P**	**03 42 05.7**	**+0.8**
	comp=Z,1.7nm,0.4s,baz=148,slow=7.9,SNR=4.9						
NRIK				LR	LR	03 58 50.5	
	comp=Z,60nm,18.3s,baz=156,slow=38						
	comp=Z,1.7nm,0.4s						
NRIK	**Noril'sk**	**38.20**	**350**	P	**P**	**03 42 05.8**	**+0.8**
NRIK				IAmb	IAmb	03 42 11.6	
	comp=Z,3.3nm,0.8s						
AKTO	**Aktyubinsk**	**38.90**	**312**	LR	LR	03 59 24.8	
	comp=Z,35nm,18.3s,baz=3.0,slow=38						
BBJI	**Bungbulang**	**39.82**	**176**	P	**P**	**03 42 16.8**	**-2.2**
BBJI				IAmb	IAmb	03 42 29.6	
	comp=Z,10.0nm,1.0s						
ARTI	**Arti**	**40.01**	**321**	LR	LR	03 58 00.2	
	comp=Z,55nm,18.6s,baz=216,slow=35						
MA2	**Magadan**	**40.38**	**34**	LR	LR	04 00 11.3	
	comp=Z,47nm,18.7s,baz=312,slow=38						
TIXI	**Tiksi**	**41.18**	**11**	P	**P**	**03 42 31.6**	**+2.0**
	comp=Z,3.3nm,0.3s,baz=186,slow=2.4,SNR=8.0						
	comp=Z,3.3nm,0.3s						
TIXI	**Tiksi**	**41.18**	**11**	P	**P**	**03 42 31.7**	**+2.0**
TIXI				IAmb	IAmb	03 42 32.7	
	comp=Z,4.8nm,0.8s						
SEY	**Seymchan**	**42.39**	**30**	P	**P**	**03 42 40.6**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=202,slow=6.8,SNR=4.5						
	comp=Z,0.7nm,0.3s						
KBZ	**Khabaz**	**49.25**	**302**	P	**P**	**03 43 32.3**	**-1.7**
	comp=Z,1.7nm,0.9s,baz=128,slow=12,SNR=2.7						
KBZ				LR	LR	04 07 14.1	
	comp=Z,59nm,19.2s,baz=142,slow=40						
	comp=Z,1.7nm,0.9s						
KNRA	**Kununurra**	**52.95**	**151**	P	**P**	**03 44 01.1**	**-0.9**
KNRA				IAmb	IAmb	03 44 06.3	
	comp=Z,4.8nm,0.7s						
FITZ	**Fitzroy Crossi**	**53.98**	**156**	P	**P**	**03 44 08.2**	**-1.5**
	comp=Z,1.6nm,0.5s,baz=18,slow=7.2,SNR=3.8						
	comp=Z,1.6nm,0.5s						
ARCES	**ARCESS Array B**	**56.38**	**335**	P	**P**	**03 44 25.5**	**-0.9**
	comp=Z,2.5nm,0.8s,baz=60,slow=5.3,SNR=5.4						
	comp=Z,2.5nm,0.8s						
ARCES	**ARCESS Array B**	**56.38**	**335**	P	**P**	**03 44 24.5**	**-1.9**
ARCES				IAmb	IAmb	03 44 25.9	
	comp=Z,11nm,1.2s						
BRTR	**Keskin Array B**	**56.89**	**299**	P	**P**	**03 44 30.5**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=105,slow=7.2,SNR=4.4						
	comp=Z,0.5nm,0.5s						
BRTR	**Keskin Array B**	**56.89**	**299**	P	**P**	**03 44 30.7**	**0.0**
FIA1	**FINESS Array S**	**56.94**	**326**	P	**P**	**03 44 31.1**	**+0.6**
FINES	**FINESS Array B**	**56.94**	**326**	P	**P**	**03 44 30.7**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=87,slow=6.5,SNR=12						
	comp=Z,1.7nm,0.8s						
FINES	**FINESS Array B**	**56.94**	**326**	P	**P**	**03 44 30.9**	**+0.4**
AKASG	**Malin Array Be**	**57.13**	**313**	P	**P**	**03 44 31.4**	**-0.7**
	comp=Z,1.0nm,0.5s,baz=68,slow=7.8,SNR=4.8						
	comp=Z,1.0nm,0.5s						
MMAI	**Mount Meron Ar**	**57.67**	**291**	P	**P**	**03 44 36.9**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=34,slow=13,SNR=1.4						
	comp=Z,0.2nm,0.3s						
SPITS	**Spitsbergen Ar**	**58.20**	**346**	P	**P**	**03 44 37.7**	**-1.5**
	comp=Z,6.3nm,1.0s,baz=73,slow=5.0,SNR=1.9						
	comp=Z,6.3nm,1.0s						
COEN	**Coen**	**58.76**	**136**	P	**P**	**03 44 42.6**	**-1.1**
COEN				IAmb	IAmb	03 45 18.1	
	comp=Z,9.5nm,1.4s						
WRA	**Warramunga Arr**	**59.13**	**148**	P	**P**	**03 44 45.4**	**-1.0**
	comp=Z,2.8nm,0.5s,baz=340,slow=7.4,SNR=9.5						
	comp=Z,2.8nm,0.5s						
WRA	**Warramunga Arr**	**59.13**	**148**	P	**P**	**03 44 45.1**	**-1.2**
WR8	**Warramunga Arr**	**59.21**	**148**	P	**P**	**03 44 46.1**	**-0.8**
BURAR	**Bucovina Array**	**60.46**	**310**	P	**P**	**03 44 54.9**	**-0.5**
BURAR				IAmb	IAmb	03 45 05.4	
	comp=Z,1.2nm,1.0s						
BUR08	**Bucovina Ar. S**	**60.47**	**310**	P	**P**	**03 44 55.6**	**+0.2**
BUR08				IAmb	IAmb	03 44 56.7	
	comp=Z,4.9nm,1.4s						
MLR	**Muntele Rosu**	**60.62**	**308**	LR	LR	04 13 50.2	
	comp=Z,63nm,18.7s,baz=48,slow=39						
G16K	**Koyuk River**	**61.90**	**28**	P	**P**	**03 45 04.8**	**+0.1**
G16K				IAmb	IAmb	03 45 24.1	
	comp=Z,1.7nm,0.9s						
ASAR	**Alice Springs**	**62.21**	**150**	P	**P**	**03 45 06.6**	**-0.7**
	comp=Z,2.1nm,0.6s,baz=334,slow=6.3,SNR=15						
	comp=Z,2.1nm,0.6s						
ASAR	**Alice Springs**	**62.21**	**150**	P	**P**	**03 45 06.3**	**-1.1**
B20K	**Meade River**	**62.36**	**23**	IAmb	IAmb	03 45 14.0	
	comp=Z,5.2nm,0.6s						
D20K	**Etivluk River**	**62.98**	**24**	P	**P**	**03 45 11.5**	**-0.4**
D20K				IAmb	IAmb	03 45 22.1	
	comp=Z,4.7nm,1.0s						
HFS	**Hagfors**	**63.14**	**326**	P	**P**	**03 45 12.8**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=84,slow=5.9,SNR=8.2						
	comp=Z,0.9nm,0.5s						
NC405	**NORSAR Array S**	**63.74**	**327**	P	**P**	**03 45 16.9**	**-0.2**
NB2	**NORSAR Subarra**	**63.99**	**327**	P	**P**	**03 45 19.1**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=70,slow=6.9						
NOA	**NORSAR Array B**	**63.99**	**327**	P	**P**	**03 45 17.4**	**-1.3**
	comp=Z,1.1nm,0.7s,baz=70,slow=5.2,SNR=6.2						
NOA				LR	LR	04 15 04.5	
	comp=Z,27nm,19.2s,baz=280,slow=38						
	comp=Z,1.1nm,0.7s						
PPLA	**Purkeypile**	**66.96**	**29**	P	**P**	**03 45 39.8**	**+1.8**
GERES	**GERESS Array B**	**67.25**	**314**	P	**P**	**03 45 39.9**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=88,slow=6.7,SNR=3.7						
	comp=Z,0.5nm,0.7s						
BMAR	**Burnt Mountain**	**67.60**	**23**	P	**P**	**03 45 41.5**	**-0.4**
ILAR	**Eielson Array**	**68.15**	**26**	P	**P**	**03 45 45.0**	**-0.4**
	comp=Z,0.2nm,0.7s,baz=312,slow=6.1,SNR=4.1						
	comp=Z,0.2nm,0.7s						
INK	**Inuvik**	**70.50**	**20**	P	**P**	**03 46 01.3**	**+1.5**
INK				IAmb	IAmb	03 46 29.5	
	comp=Z,4.3nm,1.4s						
EKA	**Eskdalemuir Ar**	**73.34**	**326**	P	**P**	**03 46 17.1**	**0.0**
	comp=Z,1.1nm,0.9s,baz=46,slow=6.3,SNR=1.8						
	comp=Z,1.1nm,0.9s						
MBAR	**Mbarara**	**77.28**	**261**	LR	LR	04 21 00.9	
	comp=Z,31nm,18.1s,baz=272,slow=36						
YKA	**Yellowknife Ar**	**80.06**	**18**	P	**P**	**03 46 54.8**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=328,slow=5.5,SNR=6.3						
	comp=Z,0.1nm,0.4s						

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*DJA **06** 03:38:50.6±0.4, 2°N±2°×12°7E±°, h116km±4km, M3.6/15, MLv3.6/15*

*IDC **06** 03:38:51.7±5.2, 1°.58N×127°.08E, h126km±56km, mb3.5/7, mbtmp3.8/9, Error ellipse: s-maj=77.1km s-min=15.6km az=74.0*

*MAN **06** 03:38:52.0, 1°.87N×126°.91E, h66km, MS3.7*

ISC 06 03:38:50.0±0.8**, 1°.78N**±0°.05×**127°.17E**±0°.05**, h100**km**, n18, σ2s.18**/23**, mb3.8**/7**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**0.62**	**85**	P	**Pn**	**03 39 09.2**	**+2.5**
GAMI				S	**Sn**	**03 39 23.3**	**+4.0**
TNTI	**Ternate**	**1.02**	**169**	P	**Pn**	**03 39 13.4**	**+2.8**
TNTI				S	**Sn**	**03 39 29.5**	**+3.4**
MNI	**Manado**	**2.35**	**262**	P	**Pn**	**03 39 28.4**	**+1.3**
MNI				S	**Sn**	**03 39 58.0**	**+2.4**
LBMI	**Labuha**	**2.42**	**172**	P	**Pn**	**03 39 28.9**	**+0.8**
SGSI	**Sangihe**	**2.50**	**319**	P	**Pn**	**03 39 30.6**	**+1.5**
SGSI				S	**Sn**	**03 40 01.8**	**+2.6**
SANI	**Sanana**	**3.98**	**197**	P	**Pn**	**03 39 49.0**	**+0.1**
GTOI	**Gorontalo**	**4.31**	**255**	P	**Pn**	**03 39 56.5**	**+3.2**
DDMP	**Don Marcelino,**	**4.54**	**341**	*e*P	**Pn**	**03 39 57.4**	**+1.0**
DDMP				*e*S	**Sn**	**03 40 47.0**	**-1.1**
SIJI	**Sorong**	**4.87**	**123**	P	**Pn**	**03 40 02.7**	**+1.7**
	8.5nm,0.5s,baz=9.0,slow=19,SNR=4.1						
SIJI	**Sorong**	**4.87**	**123**	P	**Pn**	**03 40 01.8**	**+0.8**
FITZ	**Fitzroy Crossi**	**19.81**	**184**	P	**P**	**03 43 10.4**	**-2.3**
	1.5nm,0.4s,baz=27,slow=6.0,SNR=3.9						
WRA	**Warramunga Arr**	**22.70**	**162**	P	**P**	**03 43 41.0**	**-2.5**
	2.1nm,0.4s,baz=340,slow=10,SNR=11						
	2.1nm,0.4s						
ASAR	**Alice Springs**	**26.13**	**166**	P	**P**	**03 44 12.4**	**-2.5**
	0.4nm,0.3s,baz=346,slow=7.6,SNR=9.8						
	0.4nm,0.3s						
STKA	**Stephens Creek**	**36.16**	**159**	P	**P**	**03 45 41.0**	**-1.8**
	1.5nm,0.4s,baz=340,slow=7.3,SNR=7.8						
	1.5nm,0.4s						
SONM	**Songino Array**	**49.27**	**342**	P	**P**	**03 47 28.8**	**+0.1**
	0.3nm,0.5s,baz=157,slow=5.6,SNR=2.2						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**59.40**	**326**	P	**P**	**03 48 42.0**	**0.0**
	0.7nm,0.4s,baz=113,slow=7.5,SNR=14						
	0.7nm,0.4s						
ZALV	**Zalesovo Beam**	**62.52**	**333**	P	**P**	**03 49 02.8**	**-0.1**
	0.4nm,0.5s,baz=114,slow=7.0,SNR=1.8						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**63.61**	**328**	P	**P**	**03 49 09.7**	**-0.5**
	1.2nm,0.6s,baz=129,slow=6.2,SNR=10						
	1.2nm,0.6s						

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*IDC **06** 04:04:52.8±3.5, 3°.20S×101°.33E, h0km, mb3.7/6, mbtmp3.7/6, Error ellipse: s-maj=154.1km s-min=21.5km az=54.0*

*DJA **06** 04:05:11.1±0.3, 3°S±2°×10°2E±°, h85km±3km, M3.5/21, MLv3.5/21*

ISC 06 04:05:08.7±0.9**, 2°.93S**±0°.07×**101°.93E**±0°.07**, h117**km±7km**, n20, σ1s.22**/23**, mb3.7**/6**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASI	**Maura Aman, Be**	**0.38**	**124**	P	**Pn**	**04 05 25.8**	**+0.1**
MASI				S	**Sn**	**04 05 38.0**	**-0.6**
UBSI	**University, Be**	**0.90**	**157**	P	**Pn**	**04 05 29.9**	**+0.4**
KRJI	**Kerinci**	**0.95**	**331**	P	**Pn**	**04 05 30.3**	**+0.2**
KSI	**Kapahiang**	**0.98**	**137**	P	**Pn**	**04 05 31.1**	**+0.7**
KSI				S	**Sn**	**04 05 46.4**	**-0.4**
MNAI	**Manna**	**1.76**	**144**	P	**Pn**	**04 05 40.7**	**+1.6**
MNAI				S	**Sn**	**04 06 03.5**	**+1.3**
PPSI	**Pulau Pagai**	**1.92**	**275**	P	**Pn**	**04 05 42.6**	**+1.6**
PPSI				S	**Sn**	**04 06 04.6**	**-1.1**
EGSI	**Enggano, Bengk**	**2.44**	**172**	P	**Pn**	**04 05 47.8**	**+0.2**
PDSI	**Padang**	**2.48**	**324**	P	**Pn**	**04 05 49.3**	**+1.1**
PDSI				S	**Sn**	**04 06 19.2**	**+0.7**
MDSI	**Maura Dua**	**2.73**	**125**	P	**Pn**	**04 05 52.6**	**+1.2**
PPI	**Padang Panjang**	**2.89**	**328**	P	**Pn**	**04 05 54.2**	**+0.7**
PPI				S	**Sn**	**04 06 29.1**	**+1.1**
SISI	**Saibi**	**3.25**	**299**	P	**Pn**	**04 05 59.0**	**+0.8**
H08S2	**Diego Garcia H**	**29.67**	**260**	T	T	04 40 56.2	
	baz=87						
H08S3	**Diego Garcia H**	**29.68**	**260**	T	T	04 40 58.1	
	baz=87						
H08S1	**Diego Carcia H**	**29.69**	**260**	T	T	04 40 58.7	
	baz=87						
WRA	**Warramunga Arr**	**35.87**	**121**	P	**P**	**04 11 55.9**	**-1.7**
	0.3nm,0.9s,baz=302,slow=7.6,SNR=2.7						
	0.3nm,0.9s						
ASAR	**Alice Springs**	**37.16**	**126**	P	**P**	**04 12 09.8**	**+1.2**
	0.3nm,0.3s,baz=299,slow=7.9,SNR=7.6						
	0.3nm,0.3s						
SONM	**Songino Array**	**50.70**	**4**	P	**P**	**04 13 57.3**	**+0.9**
	1.2nm,0.6s,baz=191,slow=9.5,SNR=8.0						
	1.2nm,0.6s						
MKAR	**Makanchi Array**	**52.45**	**343**	P	**P**	**04 14 08.7**	**-0.7**
	0.9nm,0.6s,baz=148,slow=8.1,SNR=13						
	0.9nm,0.6s						
KURBB	**Kurchatov Arra**	**56.99**	**342**	P	**P**	**04 14 39.5**	**-2.4**
	0.2nm,0.4s,baz=158,slow=7.1,SNR=2.5						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**58.45**	**348**	P	**P**	**04 14 50.6**	**-1.4**
	1.0nm,0.4s,baz=176,slow=5.5,SNR=5.4						
	1.0nm,0.4s						

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*IDC **06** 04:21:07.2±4.8, 35°.97N×69°.32E, h115km±44km, mb3.5/13, mbtmp3.8/18, MS2.9/1, Error ellipse: s-maj=29.7km s-min=14.9km az=27.0*

ISC 06 04:21:06.9±0.7**, 36°.06N**±0°.06×**69°.13E**±0°.07**, h100**km**, n34, σ2s.61**/44**, mb3.7**/11**, 3C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMU	**Jammu**	**5.73**	**123**	*e*P	**Pn**	**04 22 32.9**	**+3.3**
JMU				*e*S	**Sn**	**04 23 38.2**	**+4.1**
JMU				IAML		04 23 42.4	
	comp=E,105nm,0.8s						
JMU				IAML		04 23 49.4	
	comp=N,123nm,0.6s						
TSSA	**Tissa**	**6.63**	**117**	*e*P	**Pn**	**04 22 45.9**	**+4.0**
TSSA				*e*S	**Sn**	**04 23 57.5**	**+1.3**
TSSA				IAML		04 24 01.5	
	comp=E,148nm,0.2s						

TSSA IAML 04 24 01.8
comp=N,157nm,0.4s
ALCI Alchi Leh 6.85 103 *e*P Pn 04 22 47.4 +2.3
ALCI *e*S **Sn 04 24 01.1 -0.7**
ALCI IAML 04 24 04.4
comp=E,124nm,0.3s
ALCI IAML 04 24 07.4
comp=N,106nm,0.3s
KK31 Karatay Array 7.12 8 ⇑P **Pn 04 22 51.3 +2.9**
comp=N,0.7nm,0.3s,baz=191,slow=13,SNR=11
KK31 ⇓S **Sn 04 24 04.8 -2.8**
comp=N,2.8nm,0.3s,baz=192,slow=21,SNR=8.6
UCH Uchtor 7.45 33 P **Pn 04 22 55.2 +1.9**
SNR=20
EKS2 Erkin-Say 7.51 27 P **Pn 04 22 57.9 +4.0**
SNR=5.6
BHK Bhakra 7.62 126 *e*P **Pn 04 22 59.7 +4.5**
BHK *e*S **Sn 04 24 25.1 +5.1**
BHK IAML 04 24 26.0
comp=E,136nm,0.3s
BHK IAML 04 24 26.6
comp=N,122nm,0.2s
AAK Ala-Archa 7.78 31 P **Pn 04 22 58.7 +1.3**
comp=N,4.3nm,0.3s,baz=162,slow=6.3,SNR=20
AAK S **Sn 04 24 21.8 -2.0**
comp=N,8.0nm,0.5s,baz=153,slow=20,SNR=11
AAK Ala-Archa 7.78 31 P **Pn 04 22 59.5 +2.1**
SNR=7.6
AAK Ala-Archa 7.78 31 ⇑P **Pn 04 22 59.6 +2.2**
comp=N,2.4nm,0.6s
AAK ⇑S **Sn 04 24 21.0 -2.9**
comp=N,9.8nm,0.8s
KBK Karagaybulak 7.98 33 P **Pn 04 23 02.8 +2.6**
SNR=7.7
CHMS Chumysh 8.18 30 P **Pn 04 23 04.6 +1.7**
SNR=5.0
SMLA Simla 8.31 124 *e*P **Pn 04 23 08.3 +3.6**
SMLA *e*S **Sn 04 24 34.7 -2.1**
SMLA IAML 04 24 39.5
comp=N,54nm,0.5s
SMLA IAML 04 24 40.2
comp=E,56nm,0.4s
TKM2 Tokmak 2 8.48 34 P **Pn 04 23 08.4 +1.3**
SNR=11
HNLY HANLEY 8.77 109 *e*P **Pn 04 23 13.9 +2.6**
HNLY *e*S **Sn 04 24 44.7 -4.0**
HNLY IAML 04 24 54.1
comp=N,8.2nm,0.8s
HNLY IAML 04 24 56.0
comp=E,7.8nm,1.0s
KUDL Kundal 10.06 140 *e*P **Pn 04 23 30.4 +2.0**
KUDL *e*S **Sn 04 25 13.4 -5.9**
MKAR Makanchi Array 14.56 38 P **Pn 04 24 27.1 -0.8**
comp=E,2.0nm,0.8s,baz=223,slow=14,SNR=11
KURBB Kurchatov Arra 16.07 22 P **Pn 04 24 45.0 -1.8**
comp=E,0.7nm,0.7s,baz=211,slow=11,SNR=4.6
AKTO Aktyubinsk 16.47 334 P **Pn 04 24 53.0 +1.2**
comp=E,0.9nm,0.3s,baz=176,slow=11,SNR=4.3
BVAR Borovoye Array 16.99 3 P **Pn 04 24 58.9 +0.7**
comp=E,0.5nm,0.3s,baz=179,slow=8.1,SNR=5.6
ZALV Zalesovo Beam 20.97 27 P **P 04 25 41.1 -0.6**
comp=E,1.5nm,0.5s,baz=210,slow=11,SNR=6.7
comp=E,1.5nm,0.5s
ARTI Arti 21.60 344 P **P 04 25 50.1 +1.6**
comp=E,2.8nm,0.8s,baz=142,slow=9.4,SNR=3.3
comp=E,2.8nm,0.8s
BRTR Keskin Array B 28.13 288 P **P 04 26 50.9 +1.3**
comp=E,0.2nm,0.3s,baz=60,slow=8.7,SNR=2.0
BRTR LR LR 04 41 13.3
comp=E,23nm,18.2s,baz=348,slow=43
comp=E,0.2nm,0.3s
SONM Songino Array 29.83 55 P **P 04 27 04.1 -0.5**
comp=E,0.4nm,0.4s,baz=242,slow=8.0,SNR=2.0
comp=E,0.4nm,0.4s
CMAR Chiang Mai Arr 31.60 116 P **P 04 27 17.9 -2.4**
comp=E,1.9nm,0.3s,baz=307,slow=5.2,SNR=4.7
comp=E,1.9nm,0.3s
FINES FINESS Array B 37.02 327 P **P 04 28 06.6 +0.1**
comp=E,2.0nm,1.1s,baz=141,slow=12,SNR=3.6
comp=E,2.0nm,1.1s
ARCES ARCESS Array B 40.99 338 P **P 04 28 39.4 -0.1**
comp=E,2.4nm,0.8s,baz=110,slow=7.9,SNR=4.0
comp=E,2.4nm,0.8s
HFS Hagfors 42.49 322 P **P 04 28 51.9 +0.1**
comp=E,1.4nm,0.4s,baz=100,slow=12,SNR=19
comp=E,1.4nm,0.4s
NB2 NORSAR Subarra 43.83 323 P **P 04 29 02.1 -0.6**
comp=Z,0.4nm,0.4s,baz=98,slow=7.9
NOA NORSAR Array B 43.83 323 P **P 04 29 02.3 -0.4**
comp=Z,0.7nm,0.5s,baz=98,slow=7.2,SNR=6.6
comp=Z,0.7nm,0.5s
EKA Eskdalemuir Ar 51.55 316 P **P 04 30 01.8 -0.6**
comp=Z,1.1nm,0.9s,baz=69,slow=6.2,SNR=1.6
comp=Z,1.1nm,0.9s
TORD Torodi Ar. Bea 64.19 268 P **P 04 31 30.4 -0.9**
comp=Z,0.4nm,0.4s,baz=52,slow=6.7,SNR=8.8
comp=Z,0.4nm,0.4s
WRA Warramunga Arr 83.05 121 P **P 04 33 18.7 -2.9**
comp=Z,0.5nm,0.9s,baz=314,slow=6.0,SNR=2.2
comp=Z,0.5nm,0.9s
ASAR Alice Springs 85.25 124 P **P 04 33 30.1 -2.5**
comp=Z,0.4nm,0.5s,baz=315,slow=5.3,SNR=5.5
comp=Z,0.4nm,0.5s

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*NEIC **06** 04:28:59.5±1.0, 41°.49N±0°.01×112°.32W±0°.06, h5km±2km, ML3.1/132, ML3.0/17(UUSS), Error ellipse: s-maj=7.7km s-min=3.0km az=282.0*
*UUSS **06** 04:28:59.7±0.8, 41°.48N±0°.01×112°.30W±0°.06, h6km±6km, Error ellipse: s-maj=6.6km s-min=1.6km az=101.0*
*IDC **06** 04:28:59.3±0.8, 41°.64N×112°.38W, h0km, mb2.5/1, mbtmp3.0/4, ML3.7/3, Error ellipse: s-maj=32.1km s-min=5.6km az=152.0*
ISC 06 04:28:59.9±0.9**, 41°.49N**±0°.02×**112°.32W**±0°.02**, h9**km±7km**, n87, σ0°.86**/72**, Utah**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
EPU East Promontor 0.12 215 Pg 04 29 02.8 +0.2
LTU Little Mountai 0.12 28 Pg 04 29 02.5 -0.2
LTU Little Mountai 0.12 28 Sg 04 29 04.7 0.0
SPUT South Promonto 0.20 209 Pg 04 29 04.1 0.0
SPUT Sg **Sg 04 29 06.8 -0.1**
SPUT IAML 04 29 07.8
comp=N,6μm,0.2s
SPUT IAML 04 29 08.0
comp=E,3μm,0.3s
BCUT Brigham City 0.26 84 Pg 04 29 04.9 -0.2
BCUT **Sg 04 29 08.8 +0.2**
WVUT Wellsville 0.30 66 Pg 04 29 05.8 -0.1
HVU Hansel Valley 0.45 311 Pg 04 29 08.6 0.0
HVU Sg **Sg 04 29 15.3 +0.7**
HVU IAML 04 29 19.7
comp=E,1μm,0.4s
HVU IAML 04 29 20.1
comp=N,1μm,0.4s
NAIU Northern Antel 0.48 172 Pg 04 29 08.9 -0.3
NAIU Northern Antel 0.48 172 Sg 04 29 15.3 -0.1
HDU Hyde Park 0.52 53 Pg 04 29 09.8 -0.3
MLI Malad Range 0.56 15 Pg 04 29 10.6 -0.2
HWUT Hardware Ranch 0.58 78 Pg 04 29 10.7 -0.4
FPU Francis Peak 0.59 141 Pg 04 29 11.1 -0.2
MCU Monte Cristo P 0.61 92 Pg 04 29 11.5 -0.3
SNUT Stansbury Nort 0.62 193 Pg 04 29 11.6 -0.2
SAIU Southern Antel 0.64 170 Pg 04 29 11.8 -0.5
NPI North Pocatell 0.68 347 Pg 04 29 13.0 +0.1
BEI Bear River Ran 0.75 32 Pg 04 29 14.0 -0.3
HRU Hogsback Ridge 0.77 155 Pg 04 29 14.6 -0.2
BGU Big Grassy Mou 0.78 224 Pg 04 29 14.8 0.0
TCUT Toone Canyon 0.78 118 Pg 04 29 14.7 -0.2
TCUT Toone Canyon 0.78 118 Pg 04 29 14.7 -0.2
TCUT IAML 04 29 33.7
comp=E,1μm,0.3s
TCUT IAML 04 29 37.0
comp=N,1μm,0.4s
EOCU Emergency Oper 0.78 155 Pg 04 29 14.9 0.0
RBU Red Butte Cany 0.81 151 Pg 04 29 14.9 -0.5
NOQ North Oquirrh 0.85 170 Pg 04 29 16.0 -0.2
N16A Rees Ranch, Co 0.90 132 Pg 04 29 17.1 0.0
CTU Camp Tracy 0.90 151 Pg 04 29 16.9 -0.4
CTU IAML 04 29 31.3
comp=E,778nm,0.3s
CTU IAML 04 29 33.2
comp=N,361nm,0.3s
MHD Mile High Driv 0.91 154 Pg 04 29 17.0 -0.5
BMUT Black Mountain 0.94 60 Pg 04 29 17.6 -0.4
GMU Granite Mounta 1.00 155 Pg 04 29 18.6 -0.6
CWU Camp Williams 1.05 171 Pg 04 29 20.0 -0.1
WTU Western Traver 1.07 165 Pg 04 29 20.2 -0.2
KLJ Keetly 1.10 141 Pg 04 29 20.6 -0.5
HTU Hoyt Peak 1.16 134 Pg 04 29 21.7 -0.5
LHUT Little Humpy P 1.16 120 Pb 04 29 22.3 -0.1
DCU Deer Creek Res 1.23 150 Pg 04 29 23.1 -0.4
DUG Dugway, Tooele 1.34 196 Pn 04 29 24.4 -0.6
BSUT Blindstream Ca 1.52 128 Pb 04 29 28.1 -0.3
BSUT IAML 04 29 50.1
comp=E,156nm,0.7s
BSUT IAML 04 29 51.1
comp=N,133nm,0.4s
NLU North Lily Min 1.54 173 Pn 04 29 27.5 -0.3
MPU Maple Canyon 1.56 160 Pn 04 29 28.0 0.0
AHID Auburn Hatcher 1.57 35 Pn 04 29 28.3 +0.2
AHID IAML 04 29 51.1
comp=N,534nm,0.5s
AHID IAML 04 29 59.0
comp=N,199nm,0.6s
FSU Fish Springs 1.94 205 Pn 04 29 33.4 +0.2
FLU Fool Peak 2.11 177 Pn 04 29 35.5 -0.1
RDMU Red Mountain 2.27 113 Pn 04 29 39.3 +1.4
RDMU IAML 04 30 54.4
comp=E,124nm,0.5s
RDMU IAML 04 30 57.0
comp=N,115nm,0.5s
SNOW Snow King Moun 2.29 30 Pb 04 29 40.2 -1.4
SNOW IAML 04 30 57.9
comp=N,86nm,0.5s
SNOW IAML 04 31 01.7
comp=N,86nm,0.8s
ELK Elko 2.33 252 Pn **Pn 04 29 39.3 +0.7**
comp=N,11nm,0.3s,baz=61,slow=12,SNR=49
ELK Lg Lg 04 30 11.7
comp=N,9.3nm,0.3s,baz=66,slow=8.6,SNR=4.2
comp=N,23nm,0.3s
ELK Elko 2.33 252 Pn 04 29 39.0 +0.4
ELK IAML 04 30 55.9
comp=N,84nm,0.4s
P17A Butcher Ranch, 2.35 149 Pn 04 29 39.0 +0.2
FXWY Fox Creek 2.35 24 Pn 04 29 39.8 +0.8
BW06 Boulder Array 2.42 57 Pn 04 29 41.3 +1.4
BW06 IAML 04 30 58.7
comp=N,210nm,0.7s
BW06 IAML 04 31 05.0
comp=N,133nm,0.7s
PD31 Pinedale Array 2.42 57 Pn 04 29 41.1 +1.2
PDAR Pinedale Array 2.42 57 Pn **Pn 04 29 41.4 +1.5**
comp=N,4.1nm,0.3s,baz=254,slow=15,SNR=103
PDAR Lg Lg 04 30 13.6
comp=N,59nm,0.3s,baz=257,slow=32,SNR=18
comp=N,17nm,0.3s
P18A Preston Nutter 2.44 139 IAML 04 30 55.5
comp=N,58nm,0.6s
P18A IAML 04 31 04.2
comp=E,57nm,0.6s
LOHW Long Hollow 2.47 30 Pn 04 29 41.4 +0.8
LOHW IAML 04 30 59.3
comp=E,48nm,0.6s
HLID Hailey 2.59 324 Pn 04 29 43.8 +1.6
HLID IAML 04 30 27.7
comp=E,60nm,0.4s
HLID IAML 04 30 28.1
comp=E,59nm,0.3s
Q16A Castle Valley 2.71 161 Pn 04 29 44.3 +0.4
SRU San Rafael Swe 2.74 149 Pn 04 29 45.7 +1.4
SRU IAML 04 31 08.9
comp=N,35nm,0.7s
SRU IAML 04 31 12.7
comp=E,46nm,0.6s
TCRU Three Creeks R 2.88 182 Pn 04 29 46.6 +0.4
TCRU IAML 04 30 37.6
comp=E,31nm,1.2s
TCRU IAML 04 31 21.2
comp=N,32nm,0.9s
PSUT Pine Spring 3.18 202 Pn 04 29 51.3 +1.1
PSUT IAML 04 31 29.2
comp=E,24nm,1.1s
PSUT IAML 04 31 33.1
comp=N,25nm,0.8s
MFID Camas Ranch 3.23 308 Pb 04 29 55.7 -1.8
MFID IAML 04 30 44.7
comp=N,99nm,0.9s
MFID IAML 04 31 27.8
comp=N,76nm,0.7s
MCMT McKenzie Canyo 3.36 354 Pb 04 29 58.3 -1.5
O20A White River Ci 3.38 112 Pn 04 29 55.3 +2.3
O20A IAML 04 31 31.8
comp=N,78nm,0.6s
O20A IAML 04 31 32.3
comp=N,91nm,0.5s
YHL Hebgen Lake 3.46 14 IAML 04 31 34.0
comp=E,19nm,0.9s
HMU Henry Mountain 3.75 161 IAML 04 31 42.8
comp=N,42nm,0.7s
HMU IAML 04 31 53.1
comp=E,48nm,0.9s
PV23 Carpenter Ridg 3.96 139 Pn 04 30 02.6 +1.5
PV22 Blue Mesa, Par 4.01 136 Pn 04 30 01.2 -0.5
PV22 IAML 04 31 49.8
comp=N,53nm,0.6s
PV22 IAML 04 31 50.9
comp=E,56nm,0.8s
PV14 Lion Creek, Pa 4.01 140 IAML 04 31 21.3
comp=E,50nm,0.7s
PV14 IAML 04 31 52.2
comp=N,53nm,0.5s
PKCU Pink Cliffs 4.04 180 IAML 04 32 06.5
comp=N,23nm,3.9s
PKCU IAML 04 32 16.4
comp=E,26nm,4.0s
PV04 Paradox Valley 4.05 139 IAML 04 31 57.4
comp=E,50nm,0.6s
PV20 West Nyswonger 4.06 140 Pn 04 30 04.0 +1.6
PV19 Morning Glory 4.08 140 IAML 04 32 02.4
comp=N,52nm,0.5s
PV17 East Wray Mesa 4.12 140 IAML 04 31 57.0
comp=E,27nm,1.0s
PV17 IAML 04 32 01.4
comp=N,32nm,0.9s
BOZ Bozeman (W) 4.14 7 IAML 04 31 27.9
comp=N,12nm,4.8s
PV07 Paradox Valley 4.15 136 IAML 04 31 54.1
comp=N,47nm,0.7s
PV07 IAML 04 31 55.5
comp=E,38nm,0.6s
PV18 Skein Mesa, Pa 4.17 140 IAML 04 31 58.2
comp=N,56nm,0.7s
PV03 Paradox Valley 4.19 139 IAML 04 31 15.9
comp=E,33nm,1.1s
PV03 IAML 04 32 04.5
comp=N,28nm,1.1s
PV05 Paradox Valley 4.21 143 IAML 04 31 55.8
comp=N,49nm,0.6s
RLMT Red Lodge 4.26 30 IAML 04 31 08.1
comp=N,16nm,4.7s
RLMT IAML 04 32 52.9
comp=N,16nm,4.7s
PV13 Radium Mtn., P 4.28 140 IAML 04 31 58.3
comp=N,32nm,0.6s
PV01 Paradox Valley 4.42 138 IAML 04 31 27.6
comp=E,26nm,1.3s
PV01 IAML 04 32 08.8
comp=N,22nm,0.6s
K22A Casper 4.47 73 Pn 04 30 10.2 +2.2
PLID Pearl Lake 4.49 324 Pb 04 30 13.9 -5.1
PLID IAML 04 31 28.0
comp=N,11nm,1.4s
PLID IAML 04 32 18.8
comp=N,10nm,3.9s
MVCO Mesa Verde 5.20 144 IAML 04 32 29.9
comp=N,25nm,0.8s
MVCO IAML 04 32 31.3
comp=N,23nm,1.2s
NVAR Mina Array Bea 5.52 238 Pn **Pn 04 30 25.2 +2.7**
comp=N,0.7nm,0.3s,baz=59,slow=27,SNR=12
NVAR Pg **Pb 04 30 37.3 +0.7**
comp=N,0.5nm,0.3s,baz=50,slow=13,SNR=13
NVAR Sn **Sn 04 31 25.6 -0.6**
comp=N,1.9nm,0.3s,baz=50,slow=18,SNR=6.8
NVAR Lg Lg 04 31 49.3
comp=N,2.0nm,0.3s,baz=54,slow=34,SNR=3.0
comp=N,0.8nm,0.5s
NEW Newport 7.58 335 Lg Lg 04 32 52.8
comp=N,0.1nm,0.3s,baz=85,slow=22,SNR=1.8
ANMO Albuquerque 7.99 143 Pg Pg 04 31 27.2 -5.7
comp=N,0.1nm,0.3s,baz=320,slow=16,SNR=1.6
ANMO Lg Lg 04 33 07.4
comp=N,0.1nm,0.3s,baz=235,slow=16,SNR=2.0
YKA Yellowknife Ar 21.08 357 P **P 04 33 44.2 -0.1**
comp=N,0.1nm,0.4s,baz=180,slow=10,SNR=4.1
comp=N,0.1nm,0.4s

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*IDC **06** 04:46:30.6±0.8, 51°.57N×16°.00E, h0km, mbtmp3.2/8, ML2.4/7, Error ellipse: s-maj=12.3km s-min=6.9km az=103.0*
*IPEC **06** 04:46:30.1±0.2, 51°.59N×16°.19E, h1km, ML2.7/6, Error ellipse: s-maj=2.9km s-min=1.4km az=73.0*
*DNK **06** 04:46:30.5±1.4, 51°.43N×16°.06E, h44km±14km, ML2.9, Presumed earthquake*
*VIE **06** 04:46:31.9±0.7, 51°.44N×16°.10E, h0km, mb2.8/5, ml2.9/8, Error ellipse: s-maj=6.3km s-min=4.0km az=56.0 74 km WNW of Wroclaw Suspected Mining induced.*
*PRU **06** 04:46:32.5, 51°.52N×16°.07E, h0km*
ISC 06 04:46:28.4±0.7**, 51°.67N**±0°.03×**16°.07E**±0°.02**, h0**km**, n48, σ1°.13**/91**, Poland**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
KSP Ksiaz 0.83 170 *e*Pg **Pg 04 46 44.9 +0.5**
KSP *e*Sg **Sg 04 46 54.9 -0.3**
CHVC Chvalec 1.08 180 *e*PG **Pb 04 46 49.9 0.0**
CHVC *e*SG **Sg 04 47 03.1 +0.1**
comp=Z,43nm,0.4s
OSTC Ostas 1.11 175 *e*PG **Pb 04 46 50.5 0.0**
OSTC *e*SG **Sg 04 47 03.9 -0.2**
UPC Upice 1.16 182 *e*PG **Pg 04 46 51.0 +0.4**
UPC *e*SG **Sg 04 47 05.6 0.0**
DPC Dobruska-Polom 1.33 173 *e*PG **Pg 04 46 53.7 -0.1**
DPC *e*SG **Sg 04 47 10.1 -0.9**
PVCC Panska Ves 1.48 220 *e*PG **Pb 04 46 57.7 +0.9**
PVCC *e*SG **Sn 04 47 16.8 +0.5**
comp=Z,188nm,0.2s
PIVO Bartosovice 1.51 168 *e*Pg **Pn 04 46 56.6 -0.2**
baz=351
PIVO *e*Sg **Sg 04 47 14.5 -2.4**
74nm,0.5s,baz=351
KRLC Kraliky 1.66 164 *e*PG **Pn 04 46 58.9 +0.2**
KRLC *e*SG **Sn 04 47 19.8 -0.9**
comp=Z,48nm,0.6s
RYBC Ceska Rybna 1.86 180 *e*Pn **Pn 04 47 01.8 +0.3**
baz=2.4
RYBC *e*Sg **Sn 04 47 25.8 +0.1**
57nm,0.5s,baz=2.4
PRU Pruhonice 1.94 211 *e*PG **Pb 04 47 04.9 +0.3**
PRU *e*SG **Sb 04 47 29.1 -0.2**
comp=Z,25nm,0.4s
CLL Collm 1.95 261 *i* Pn **Pn 04 47 03.4 +0.7**
CLL *i* Pg **Pg 04 47 06.6 +0.9**
CLL *i* x x 04 47 10.5
CLL *e*Sg **Sg 04 47 32.0 +1.0**
comp=Z,26nm,0.6s
HSKC Hora Svate Kat 1.97 238 *e*PG **Pb 04 47 06.2 +1.1**
STEB Steborice 2.04 147 *e*PN **Pn 04 47 04.0 0.0**
STEB *e*PG **Pb 04 47 06.9 +0.5**
STEB *e*SG **Sg 04 47 33.2 -0.8**
comp=Z,95nm,0.9s
MORC Moravsky Berou 2.11 153 *e*Pn **Pn 04 47 04.9 -0.1**
baz=335
MORC *e*Sg **Sn 04 47 32.8 +0.9**
comp=Z,37nm,0.6s,baz=335
OKC Ostrava-Krasne 2.26 143 *e*PG **Pg 04 47 11.1 -0.5**
OKC *e*SG **Sg 04 47 40.8 -0.1**
comp=Z,35nm,0.5s
VRAC Vranov 2.38 172 Pn **Pn 04 47 09.1 +0.4**
comp=Z,2.7nm,0.3s,baz=344,slow=15,SNR=13
VRAC Pg **Pg 04 47 13.8 -0.2**
comp=Z,2.6nm,0.3s,baz=352,slow=17,SNR=9.4
VRAC Sn **Sn 04 47 38.8 +0.2**
comp=Z,1.8nm,0.3s,baz=90,slow=20,SNR=2.3
VRAC Lg Lg 04 47 42.6
comp=Z,3.1nm,0.3s,baz=58,slow=19,SNR=7.0
comp=Z,5.1nm,0.3s
VRAC Vranov 2.38 172 *e*Pn **Pn 04 47 09.0 +0.3**
baz=354
VRAC *e*Sg **Sb 04 47 42.2 +0.1**
comp=Z,32nm,0.8s,baz=354
TREC Trest 2.40 189 *e*SG **Sb 04 47 44.0 +1.3**
KRUC Moravsky 2.61 175 *e*Pn **Pn 04 47 12.0 +0.1**
baz=357
KRUC *e*Sg **Sb 04 47 49.2 +0.4**
comp=Z,27nm,0.9s,baz=357
NKC Novy Kostel 2.70 239 *e*SG **Sg 04 47 54.9 -0.2**
comp=Z,56nm,0.4s
OJC Ojcow 2.77 120 *e*Pb **Pg 04 47 21.3 -0.1**
OJC *e*Pg **Pb 04 47 22.8 +4.1**
OJC *e*Sg **Sg 04 47 57.6 +0.3**
KHC Kasperske Hory 3.00 213 *e*PN **Pn 04 47 17.8 +0.6**
KHC *e*PG **Pb 04 47 23.8 +1.2**
KHC *e*SG **Sg 04 48 03.4 -1.2**
comp=Z,15nm,0.5s
CKRC Cesky Krumlov 3.06 202 *e*PN **Pn 04 47 19.4 +1.3**
CKRC *e*PG **Pb 04 47 24.8 +1.0**
CKRC *e*SG **Sg 04 48 05.6 -1.2**
comp=Z,15nm,0.5s
GERES GERESS Array B 3.21 209 Pn **Pn 04 47 21.4 +1.3**
comp=Z,0.1nm,0.3s,baz=29,slow=13,SNR=18
GERES Pg **Pb 04 47 27.2 +1.0**
comp=Z,0.4nm,0.3s,baz=32,slow=16,SNR=21
GERES Sn **Sn 04 47 56.9 -2.1**
comp=Z,0.2nm,0.3s,baz=23,slow=14,SNR=4.7
GERES Lg Lg 04 48 08.4
comp=Z,0.6nm,0.3s,baz=31,slow=27,SNR=13
comp=Z,2.0nm,0.3s
LANS Liptovska Anna 3.33 138 *e*PN **Pn 04 47 20.5 -1.2**
LANS *e*PG **Pg 04 47 30.9 -1.2**
LANS *e*SG **Sg 04 48 15.5 +0.3**
MODS Modra-Piesok 3.39 166 *e*PN **Pn 04 47 23.9 +1.4**
MODS *e*PG **Pg 04 47 32.3 -1.0**
MODS *e*SG **Sg 04 48 18.5 +1.4**
NIE Niedzica 3.51 128 *e*Pg **Pg 04 47 35.6 -0.1**
NIE *e*Sg **Sg 04 48 19.9 -1.3**
BSD Bornholm Skovb 3.52 349 *i* P **Pn 04 47 26.1 +1.7**
BSD *i* S **Sn 04 48 07.7 +1.0**
BSD IAML 04 48 28.2
comp=Z,11nm,0.8s
WINA Alland / Wiene 3.56 180 *i* Pn **Pn 04 47 26.0 +1.1**
comp=Z,2.2nm,0.4s
WINA *e*Sg **Sg 04 48 21.8 -0.9**
comp=Z,6.8nm,0.4s
HAMD Hammershus, De 3.69 348 *i* P **Pn 04 47 28.4 +1.7**
HAMD *i* S **Sn 04 48 09.8 -1.1**
HAMD IAML 04 48 46.7
comp=Z,14nm,0.9s
CONA Conrad Observa 3.74 182 *i* Pn **Pn 04 47 28.5 +1.0**
comp=Z,1.4nm,0.3s
CONA Sg **Sg 04 48 28.3 -0.3**
comp=Z,4.7nm,0.4s
RONA Rosalia, Austr 3.97 178 *e*Sg **Sg 04 48 35.1 -0.9**
comp=Z,1.6nm,0.3s
MOA Molln 3.99 198 *e*Pn **Pn 04 47 31.7 +0.8**
comp=Z,7.3nm,0.3s
STHS Stebnicka Huta 4.00 122 *e*PG **Pg 04 47 45.1 +0.2**
STHS *e*SG **Sg 04 48 38.2 +1.5**
LUNU Lund 4.27 340 *i* S **Sn 04 48 25.4 +0.4**
BIOA Bad Ischl, Aus 4.28 203 *e*Pn **Pn 04 47 36.4 +1.6**
comp=Z,2.9nm,0.3s
BIOA *e*Sg **Sg 04 48 45.5 -0.3**
comp=Z,5.7nm,0.3s
ARSA Arzberg 4.43 185 *e*Pn **Pn 04 47 38.2 +1.3**
comp=Z,1.0nm,0.4s
ARSA *e*Sg **Sg 04 48 52.9 +2.1**
comp=Z,6.8nm,0.4s
BLEU Blekinge 4.65 358 *i* P **Pn 04 47 41.9 +2.1**
BLEU *i* S **Sn 04 48 33.7 -0.8**
BJUU Bjuv 4.77 339 *i* P **Pn 04 47 43.1 +1.7**
BJUU *i* S **Sn 04 48 35.4 -2.0**
KBA Koelnbreinsper 4.92 202 *e*Pn **Pn 04 47 45.1 +1.3**
comp=Z,3.5nm,0.4s
DEL Delary 4.99 346 *i* P **Pn 04 47 45.8 +1.3**
DEL *i* S **Sn 04 48 40.5 -2.2**
DAVOX Davos/Dischmat 6.35 222 Pn **Pn 04 48 04.0 +0.6**
comp=Z,0.1nm,0.3s,baz=339,slow=17,SNR=1.9
DAVOX Lg Lg 04 49 46.5
comp=Z,0.2nm,0.3s,baz=10,slow=22,SNR=2.1
comp=Z,1.3nm,0.6s
AKASG Malin Array Be 8.32 91 Pn **Pn 04 48 29.9 -0.4**
comp=Z,0.3nm,0.3s,baz=280,slow=12,SNR=2.1
AKASG Lg Lg 04 50 56.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,0.5nm,0.3s,baz=286,slow=24,SNR=1.4						
HFS	Hagfors	8.59	352	Pn	Pn	04 48 35.3	+1.4
	comp=Z,0.1nm,0.3s,baz=172,slow=13,SNR=2.5						
	comp=Z,0.6nm,0.7s						
NOA	NORSAR Array B	9.77	346	Pn	Pn	04 48 49.8	-0.3
	baz=161,slow=11,SNR=1.5						
	comp=Z,0.2nm,0.7s						
FINES	FINESS Array B	11.23	25	Pn	Pn	04 49 08.3	-1.7
	comp=Z,0.1nm,0.3s,baz=201,slow=19,SNR=3.8						
	comp=Z,2.9nm,0.9s						
EKA	Eskdalemuir Ar	12.02	295	Pn	Pn	04 49 18.9	-1.9
	baz=103,slow=13						
ARCES	ARCESS Array B	18.48	10	Pn	P	04 50 44.7	-0.8
	comp=Z,0.1nm,0.3s,baz=198,slow=10,SNR=1.7						
	comp=Z,2.2nm,0.9s						

OSPL ***06*** *05:05:33.5±1.7, 18.°38N×70.°59W, h0km±9km, ML2.7, Presumed earthquake*
SDD ***06*** *05:05:34.9±2.1, 18.°28N×70.°63W, h31km±16km, MD3.1, ML3.1, MW3.5, Presumed earthquake*
ISC 06 05:05:33.8±1.0**, 18.°30N**±0.°04×**70.°62W**±0.°02**, h32**km±9km**, n32,** σ**1s30**/52**, 21C-16D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BANI	BANI	0.26	70	⇑ePg	Pb	05 05 41.2	+0.2
BANI				⇓eSg	Sn	05 05 47.2	+0.6
BANI				IAML		05 05 47.9	
	comp=N,13μm,0.2s						
BAN1	Bani Escuela	0.27	95	⇓ePg	Pb	05 05 40.9	-0.2
BAN1				IAML		05 05 50.2	
	comp=N,2μm,0.2s						
PODR	Polo	0.65	258	⇓ePg	Pb	05 05 46.4	-0.5
PODR				⇑eSg	Sb	05 05 56.3	+0.6
PODR				IAML		05 05 58.0	
	comp=N,625nm,0.2s						
SD01	Santo Domingo	0.68	76	⇑ePg	Pb	05 05 46.5	-0.8
SDD	Santo Domingo	0.69	77	⇑ePg	Pb	05 05 46.7	-0.6
SDD				⇑eSg	Sb	05 05 55.4	-1.2
SDD				IAML		05 06 03.5	
	comp=N,182nm,1.8s						
NEDR	Neiba UASD	0.78	283	⇑ePg	Pb	05 05 48.0	-1.0
NEDR				⇑eSg	Sb	05 05 59.5	+0.2
NEDR				IAML		05 06 00.9	
	comp=N,292nm,0.2s						
LODU1	El Espartillar	0.82	274	i P	Pn	05 05 48.8	-0.3
LODU1				IAML		05 06 03.7	
	comp=Z,372nm,0.3s						
LONE3	El Aguacate, B	0.85	291	i P	Pn	05 05 48.6	-1.2
LONE3				eS	Sb	05 06 00.4	-1.1
LONE3				IAML		05 06 01.6	
	comp=Z,294nm,0.5s						
DR08	Loma La Naviza	0.86	41	⇓ePg	Pn	05 05 48.5	-1.4
DR08				IAML		05 06 01.6	
	comp=N,8μm,0.1s						
LOVI	El Cajuil, Ovi	0.87	235	i P	Pn	05 05 49.6	-0.3
LOVI				eS	Sb	05 06 02.5	+0.7
LOVI				IAML		05 06 02.7	
	comp=Z,93nm,0.4s						
SDDR	Presa de Saban	0.93	317	⇑ePg	Pn	05 05 49.5	-1.2
SDDR				⇓eSg	Sb	05 06 01.4	-2.1
SDDR				IAML		05 06 02.5	
	comp=N,813nm,0.5s						
SDDR	Presa de Saban	0.93	317	i P	Pn	05 05 49.4	-1.3
SDDR				eS	Sb	05 06 00.9	-2.6
SDDR				IAML		05 06 03.3	
	comp=Z,412nm,0.4s						
SFDR	San Fco. de Ma	1.04	20	⇑ePg	Pn	05 05 51.3	-0.9
SFDR				⇓eSg	Sn	05 06 04.6	-1.1
SFDR				IAML		05 06 05.7	
	comp=N,298nm,0.1s						
LOBH	Bahia de las A	1.07	246	i P	Pn	05 05 53.2	+0.7
LOBH				eS	Sb	05 06 09.4	+2.1
LOBH				IAML		05 06 14.4	
	comp=Z,74nm,0.4s						
SC01	Santiago de lo	1.12	355	⇑ePg	Pn	05 05 53.2	-0.2
SC01				IAML		05 06 11.9	
	comp=N,396nm,0.3s						
REDR	Restauracion	1.13	319	⇑ePg	Pb	05 05 57.2	+2.3
REDR				⇓eSg	Sb	05 06 14.4	+5.1
REDR				IAML		05 06 16.0	
	comp=N,668nm,0.1s						
JIDR	Jimani	1.19	279	⇓ePg	Pn	05 05 54.4	+0.2
JIDR				⇑eSg	Sn	05 06 07.4	-1.9
JIDR				IAML		05 06 15.1	
	comp=N,221nm,0.5s						
NAG1	Nagua	1.26	34	⇑ePg	Pn	05 05 54.9	-0.4
HATOM	Hato Mayor del	1.27	67	⇑ePg	Pn	05 05 55.2	-0.2
HATOM				⇓eSg	Sn	05 06 10.7	-0.6
HATOM				IAML		05 06 12.9	
	comp=N,275nm,0.2s						
NADR	Nagua	1.27	34	⇑ePg	Pn	05 05 54.9	-0.5
NADR				IAML		05 06 24.3	
	comp=N,432nm,0.2s						
MADR	Mao Valverde	1.34	340	ePg	Pn	05 05 55.9	-0.5
MADR				⇑eSg	Sn	05 06 12.8	-0.2
MADR				IAML		05 06 18.3	
	comp=N,366nm,0.4s						
SODR	Sosua Marina B	1.44	1	⇓ePg	Pn	05 05 58.9	+1.2
SODR				⇓eSg	Sn	05 06 15.1	-0.5
SODR				IAML		05 06 22.5	
	comp=N,309nm,0.8s						
CADR	Cabrera	1.50	25	⇓ePg	Pn	05 05 58.8	+0.2
CADR				⇓eSg	Sn	05 06 17.1	0.0
CADR				IAML		05 06 22.4	
	comp=N,698nm,0.7s						
LODA1	ITESIL, Dajabo	1.61	320	i P	Pn	05 06 00.3	+0.3
LODA1				eS	Sn	05 06 19.5	-0.2
LUDR	Luperon	1.61	349	⇓ePg	Pn	05 06 01.6	+1.5
LOPP1	Punta Rusia, P	1.64	340	i P	Pn	05 06 01.3	+0.9
LOPP1				eS	Sn	05 06 22.1	+1.7
LOPP1				IAML		05 06 28.1	
	comp=Z,96nm,0.3s						
SMDR	Samana, DR	1.67	54	⇑ePg	Pn	05 06 00.9	0.0
SMDR				IAML		05 06 39.7	
	comp=N,93nm,1.0s						
HGY1	Higuey	1.82	81	ePg	Pn	05 06 04.4	+1.3
HGY1				IAML		05 06 34.9	
	comp=N,80nm,0.7s						
HIDR	Higuey Centro	1.82	81	⇑ePg	Pn	05 06 04.3	+1.3
HIDR				⇑eSg	Sn	05 06 25.6	+0.5
HIDR				IAML		05 06 28.8	
	comp=N,228nm,0.3s						
MCDR	Montecristi	1.86	328	⇓ePg	Pn	05 06 04.1	+0.6
MCDR				⇓eSg	Sn	05 06 24.8	-1.2
MCDR				IAML		05 06 34.0	
	comp=N,84nm,0.3s						
MASC	Masc	3.89	299	⇑ePg	Pn	05 06 31.9	+0.5
MASC				IAML		05 08 14.3	
	comp=N,29nm,1.7s						
QMBU	Quimbuelo	4.39	296	⇑ePg	Pn	05 06 37.5	-0.8
QMBU				IAML		05 07 56.9	
	comp=N,15nm,1.8s						

IDC ***06*** *05:18:14.7±1.2, 16.°59S×69.°74W, h203km±9km, mb2.9/5, mbtmp3.6/8, Error ellipse: s-maj=26.0km s-min=17.3km az=26.0*
GUC ***06*** *05:18:16.8±0.7, 16.°54S×69.°99W, h222km±4km, ML4.1*
ISC 06 05:18:14.6±0.7**, 16.°36S**±0.°06×**69.°81W**±0.°07**, h200**km**, n19,** σ**1s64**/23**, mb3.1**/3**, 1C-3D, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB18	Visviri	1.26	166	eP	Pn	05 18 50.2	+3.2
LPAZ	La Paz	1.61	88	P	Pn	05 18 51.9	+1.8
	99nm,0.4s,baz=290,slow=6.3,SNR=842						
LPAZ				LR	LR	05 19 13.2	
	comp=Z,29nm,19.7s,baz=224,slow=37						
LPAZ				S	Sn	05 19 17.3	0.0
	38nm,0.5s,baz=154,slow=15,SNR=10						
PB16	IPOC Station P	1.99	172	⇓eP	Pn	05 18 56.5	+2.9
PB16				eS	Sn	05 19 27.1	+3.1
AP01	Chacalluta	2.06	194	eP	Pn	05 18 55.1	+1.4
AP01				eS	Sn	05 19 23.9	-0.5
AP01				IAML		05 19 25.6	
	comp=E,789nm,0.2s						
PB12	IPOC Station P	2.30	192	⇓iP	Pn	05 18 57.3	+1.0
PB12				i S	Sn	05 19 27.7	-1.3
PB12				IAML		05 19 28.9	
	comp=E,322nm,0.2s						
GO01	Chusmiza	3.34	170	eP	Pn	05 19 10.7	+1.9
GO01				i S	Sn	05 19 51.5	+0.2
PB11	IPOC Station P	3.39	178	⇓eP	Pn	05 19 10.1	+1.1
PB08	IPOC Station P	3.81	171	eP	Pn	05 19 16.3	+1.8
TA02	Huaiquique	3.90	184	eP	Pn	05 19 15.6	+0.4
PX03	IPOC Station P	4.03	178	eP	Pn	05 19 17.1	+0.3
PATCX	Punta Patache	4.45	184	⇑eP	Pn	05 19 22.8	+0.7
NNA	Nana	8.09	302	P	Pn	05 20 10.2	+1.1
	comp=E,8.2nm,0.3s,baz=126,slow=9.7,SNR=9.1						
NNA				S	Sn	05 21 37.4	-2.9
	comp=E,4.6nm,0.3s,baz=198,slow=18,SNR=1.3						
SIV	San Ignacio	8.40	89	P	Pn	05 20 12.0	-1.2
	comp=E,1.3nm,0.4s,baz=274,slow=12						
CPUP	Villa Florida	15.27	133	P	P	05 21 38.5	-2.0
	comp=E,0.8nm,0.6s,baz=0.3,slow=11,SNR=3.2						
BDFB	Brasilia	20.96	91	P	P	05 22 41.3	-1.2
	comp=E,1.6nm,0.4s,baz=279,slow=11,SNR=4.6						
	comp=E,1.6nm,0.4s						
PLCA	Paso Flores	24.30	181	P	P	05 23 11.2	-2.5
	comp=E,0.5nm,0.8s,baz=354,slow=6.1,SNR=3.8						
	comp=E,0.5nm,0.8s						
TXAR	Lajitas Array	55.97	324	P	P	05 27 34.3	+1.9
	comp=E,0.1nm,0.4s,baz=152,slow=7.5,SNR=1.4						
	comp=E,0.1nm,0.4s						
TORD	Torodi Ar. Bea	76.50	72	P	P	05 29 42.8	-0.3
	comp=E,0.9nm,0.8s,baz=247,slow=6.2,SNR=4.9						
	comp=E,0.9nm,0.8s						
YKA	Yellowknife Ar	86.08	341	P	P	05 30 33.3	+0.9
	comp=E,0.2nm,0.7s,baz=138,slow=3.9,SNR=2.2						
	comp=E,0.2nm,0.7s						

GCG ***06*** *05:18:53.7±1.3, 13.°52N×92.°16W, h0km±191km, MD4.0, Presumed earthquake*
MEX ***06*** *05:18:53.2±1.4, 13.°40N×92.°41W, h12km±999km, MD4.0*
CATAC ***06*** *05:18:55.5±0.9, 14°N±4°×9°2W±°, h9km±6km, M3.7/10, mb4.3/1, mB4.2/1, MLv3.4/10, Mw(mB)3.3/1, Error ellipse: s-maj=10.4km s-min=6.2km az=59.0, confirmed*
ISC 06 05:18:52.5±2.5**, 13.°53N**±0.°09×**92.°36W**±0.°07**, h13**km±13km**, n28,** σ**1s54**/38**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RTAL	Retalhuleu	1.18	33	P	Pg	05 19 15.2	-0.1
RTAL				S	Sb	05 19 29.7	-0.4
STG5	El Palmar, Qui	1.31	49	i P	Pg	05 19 17.1	-0.7
CHUJ	Union Juarez	1.57	9	eP	Pn	05 19 19.8	-0.6
CHUJ				eS	Sn	05 19 40.0	-0.8
PATR	El Naranjo	1.58	5	eP	Pn	05 19 19.8	-0.7
PATR				eS	Sn	05 19 39.6	-1.3
PAVE	Pavencul	1.66	6	eP	Pn	05 19 21.1	-0.5
PAVE				eS	Sn	05 19 41.8	-1.1
FAME	Alcaldia de Sa	2.30	82	P	Pn	05 19 30.2	0.0
FAME				S	Sn	05 19 58.0	-0.5
PCIG		2.31	339	eP	Pn	05 19 30.0	-0.3
APG	El Apazote	2.35	51	i P	Pn	05 19 33.1	+2.0
NUBE	Las Nubes	2.54	81	P	Pn	05 19 34.0	+0.4
NUBE				S	Sn	05 20 04.5	+0.1
NUBE	Las Nubes	2.54	81	i P	Pn	05 19 33.6	0.0
SLOZ	Alcaldia de Sa	2.56	79	S	Sn	05 20 05.4	+0.7
CCIG	Comitan	2.75	5	eP	Pn	05 19 39.9	+3.4
CCIG				eS	Sb	05 20 15.4	+0.2
CCIG	Comitan	2.75	5	P	Pn	05 19 40.0	+3.5
CCIG				S	Sb	05 20 14.2	-1.1
CCIG	Comitan	2.75	5	i P	Pn	05 19 39.7	+3.3
JAYA	Jayaque - finc	2.84	87	P	Pn	05 19 38.0	+0.3
JAYA				S	Sn	05 20 10.2	-1.6
JAYA	Jayaque - finc	2.84	87	i P	Pn	05 19 37.7	0.0
MTO3	Montecristo	3.04	73	P	Pn	05 19 41.2	+0.7
TGIG		3.31	347	eP	Pn	05 19 45.4	+1.3
TGIG				eS	Sn	05 20 22.8	-0.6
PACA	Pacayal	3.93	90	P	Pn	05 19 54.7	+2.0
UXUV	UXUV	4.14	336	eP	Pn	05 19 57.3	+1.8
UXUV				eS	Sn	05 20 44.9	+1.1
HUIG	Huatulco	4.25	302	eP	Pn	05 19 54.3	-2.8
HUIG				eS	Sn	05 20 36.8	-10
CMIG	Matias Romero	4.29	326	eP	Pn	05 19 57.9	+0.3
CMIG				eS	Sn	05 20 44.9	-2.7
LCND	La Caada	4.36	92	P	Pn	05 19 59.3	+0.8
PEIG	Puerto Escondi	5.24	299	eP	Pn	05 20 09.3	-1.3
PEIG				eS	Sn	05 21 07.1	-3.8
YUSH	Yuscaran	5.38	85	P	Pn	05 20 13.8	+1.2
MACN	El Madrono	5.64	100	P	Pn	05 20 17.1	+0.9
COPN	Copaltepe	5.79	103	P	Pn	05 20 20.6	+2.4
TOIG	Toxpalan	6.41	316	eP	Pn	05 20 28.8	+2.0

IDC ***06*** *05:37:22.4±2.9, 25.°57S×137.°97E, h0km, mbtmp2.5/3, ML2.4/3, Error ellipse: s-maj=38.4km s-min=21.2km az=48.0*
AUST ***06*** *05:37:24.4±0.3, 26°S±3°×13°8E±°, h10km, ML2.7/7, Error ellipse: s-maj=6.5km s-min=5.4km az=84.1*
ISC 06 05:37:23.5±1.1**, 25.°63S**±0.°06×**137.°98E**±0.°07**, h10**km**, n12,** σ**1s82**/20**, Northern Territory**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OOD	Oodnadatta	2.98	223	P	Pn	05 38 12.1	+1.2
OOD				S	Sn	05 38 48.5	+1.8
INKA	Innaminka	3.25	131	P	Pn	05 38 15.6	+1.0
INKA				S	Sn	05 38 55.3	+2.0
ASAR	Alice Springs	4.19	297	Pn	Pn	05 38 28.7	+1.1
	0.2nm,0.3s,baz=114,slow=16,SNR=5.3						
ASAR				Pg	Pb	05 38 38.5	+1.1
	0.2nm,0.3s,baz=112,slow=16,SNR=5.0						
ASAR				Sn	Sn	05 39 16.1	-0.7
	0.3nm,0.3s,baz=124,slow=22,SNR=4.7						
ASAR				Lg	Lg	05 39 32.7	
	0.5nm,0.3s,baz=106,slow=28,SNR=8.4						
	0.2nm,0.4s						
LCRK	Leigh Creek	4.81	178	P	Pn	05 38 36.9	+0.8
LCRK				S	Sn	05 39 31.1	-0.7
QIS	Mount Isa	5.26	17	P	Pn	05 38 44.5	+2.2
	comp=Z,10nm,2.4s,comp=Z,0.0nm						
MULG	Mulgathing	5.79	216	P	Pn	05 38 49.6	0.0
MULG				S	Sn	05 39 55.8	-0.3
WR9	Warramunga Arr	6.49	330	P	Pn	05 38 58.9	-0.3
WB2	Warramunga Arr	6.57	329	P	Pn	05 39 01.8	+1.4
WRA	Warramunga Arr	6.58	329	Pn	Pn	05 39 00.6	+0.2
	baz=147,slow=12,SNR=1.9						
WRA				Sn	Sn	05 40 12.6	-3.0
	comp=Z,0.1nm,0.3s,baz=151,slow=23,SNR=2.0						
WRA				Lg	Lg	05 40 47.7	
	comp=Z,0.2nm,0.3s,baz=149,slow=28,SNR=3.2						
	comp=Z,0.1nm,0.4s						
STKA	Stephens Creek	6.99	154	Pn	Pn	05 39 05.8	-0.2
	comp=Z,0.1nm,0.3s,baz=349,slow=19,SNR=1.3						
STKA				Sn	Sn	05 40 20.8	-4.8
	comp=Z,0.1nm,0.3s,baz=52,slow=15,SNR=1.1						
	comp=Z,1.3nm,0.8s						
WRKA	Warakurna	8.78	272	P	Pn	05 39 31.5	+0.8
	comp=Z,2.6nm,2.9s,comp=Z,0.0nm						
FORT	Forrest	10.15	237	P	Pn	05 39 47.4	-1.9
	comp=Z,6.9nm,0.9s,comp=Z,0.0nm						

VAO ***06*** *05:50:26.1±0.7, 21.°31S×70.°11W, h10km, mb4.9, Presumed earthquake*
SJA ***06*** *05:50:32.1±0.6, 21.°32S×69.°92W, h62km±4km, ML4.7, MW4.6*
NEIC ***06*** *05:50:34.4±1.1, 21.°31S±0.°02×69.°89W±0.°02, h48km±3km, mb4.7/19, Mwr4.5/48, Mwr4.7(GUC), Error ellipse: s-maj=3.2km s-min=2.6km az=182.0, Moment Tensor Solution. Moment tensor: Scale 10^15Nm; Mrr3.87; Mθθ1.96; Mφφ-5.83; Mrθ0.40; Mθφ0.71; Mφr-3.34; Fault plane solution: M0 6.18000×10^15 NP1:φs173.16000°, δ62.30000°, λ88.01000°. NP2:φs357.44000°, δ27.77000°, λ93.79000°. Principal axes: T 4.9207, Plg73.0000°, Azm78.0000°; N 2.0210, Plg2.0000°, Azm174.0000°; P -6.9417, Plg17.0000°, Azm265.0000°;*
IDC ***06*** *05:50:34.2±0.4, 21.°30S×69.°83W, h59km±3km, mb4.0/13, mbtmp4.3/20, MS3.5/24 Error ellipse: s-maj=16.9km s-min=11.5km az=71.0*
GUC ***06*** *05:50:34.5±0.8, 21.°30S×69.°88W, h53km±3km, ML4.6*
NEIC ***06*** *05:50:34.4, 21.°31S×69.°89W, h49km*
ISC 06 05:50:33.6±0.4**, 21.°32S**±0.°02×**69.°89W**±0.°04**, h56**km±3km**:pP-P, n171,** σ**1s53**/188**, mb4.5**/20**, MS3.6**/21**, 8C-7D, Northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB02	IPOC Station P	0.01	270		Pn	05 50 42.2	+0.2
PB02				Sn	Sn	05 50 48.4	+0.1
PB02	IPOC Station P	0.01	270	⇑iP	Pn	05 50 42.3	+0.2
PB02				eS	Sn	05 50 48.4	+0.1
PB02				IAML		05 50 49.1	
	comp=E,226μm,0.2s						
PB02	IPOC Station P	0.01	270	eP	Pn	05 50 42.1	-0.1
PB02				IAML		05 50 52.6	
	comp=Z,83μm,0.3s						
PB07	IPOC Station P	0.41	180		Pn	05 50 45.0	+0.5
PB07				Sn	Sn	05 50 52.6	+0.3
PB07	IPOC Station P	0.41	180	⇓iP	Pn	05 50 44.7	+0.2
PB07				eS	Sn	05 50 52.7	+0.4
PB07				IAML		05 50 53.1	
	comp=E,57μm,0.4s						
PB07	IPOC Station P	0.41	180	eP	Pn	05 50 44.5	0.0
PB07				eS	Pn	05 50 44.5	0.0
PB07				IAML		05 50 53.5	
	comp=Z,28μm,0.2s						
PB01	IPOC Station P	0.46	54		Pn	05 50 44.9	-0.1
PB01				Sn	Sn	05 50 52.8	-0.4
PB01	IPOC Station P	0.46	54	⇓iP	Pn	05 50 44.9	-0.1
PB01				eS	Sn	05 50 52.9	-0.3
PB01				IAML		05 50 53.9	
	comp=E,61μm,0.1s						
PB01	IPOC Station P	0.46	54	eP	Pn	05 50 44.8	-0.1
PB01				eS	Sn	05 50 53.4	+0.2
PB01				IAML		05 50 53.7	
	comp=Z,27μm,0.2s						
PATCX	Punta Patache	0.56	333		Pn	05 50 45.8	-0.2
PATCX				Sn	Sn	05 50 54.7	-0.2
PATCX	Punta Patache	0.56	333	⇑eP	Pn	05 50 45.7	-0.2
PATCX				eS	Sn	05 50 55.0	+0.1
PATCX				IAML		05 50 55.9	
	comp=E,63μm,0.2s						
PATCX	Punta Patache	0.56	333	eP	Pn	05 50 45.0	-1.0
PATCX				IAML		05 50 56.1	
	comp=Z,27μm,0.7s						
PB03	IPOC Station P	0.74	170		Pn	05 50 48.9	+0.7
PB03				Sn	Sn	05 50 59.2	+0.3
PB03	IPOC Station P	0.74	170	⇑iP	Pn	05 50 48.7	+0.4
PB03				IAML		05 51 00.2	
	comp=E,18μm,0.4s						
PB03	IPOC Station P	0.74	170	eP	Pn	05 50 48.0	-0.3
PB03				IAML		05 51 03.1	
	comp=Z,19μm,0.5s						
PB09	IPOC Station P	0.77	128		Pn	05 50 49.4	+0.7
PB09				Sn	Sn	05 51 00.2	+0.6
PB09	IPOC Station P	0.77	128	⇓eP	Pn	05 50 49.3	+0.7
PB09				eS	Sn	05 51 00.5	+0.9
PB09				IAML		05 51 01.3	
	comp=N,30μm,0.4s						
PB09	IPOC Station P	0.77	128	eP	Pn	05 50 48.6	0.0
PB09				IAML		05 51 01.1	
	comp=Z,23μm,0.6s						
PX03	IPOC Station P	0.94	15	eP	Pn	05 50 50.5	-0.4
PX03				eS	Sn	05 51 03.4	-0.1
PX03				IAML		05 51 05.3	
	comp=N,37μm,0.2s						
TA02	Huaiquique	1.07	348	⇑eP	Pn	05 50 52.4	0.0
TA02				eS	Sn	05 51 05.6	-0.7
TA02				IAML		05 51 09.2	
	comp=N,59μm,0.1s						
TA02	Huaiquique	1.07	348	eP	Pn	05 50 52.0	-0.4
TA02				eS	Sn	05 51 07.0	+0.7
TA02				IAML		05 51 09.4	
	comp=Z,33μm,0.1s						
PB08	IPOC Station P	1.36	30		Pn	05 50 57.3	+0.7
PB08				Sn	Sn	05 51 14.4	+0.5
PB08	IPOC Station P	1.36	30	⇓eP	Pn	05 50 57.1	+0.5
PB08				eS	Sn	05 51 15.1	+1.3
PB08				IAML		05 51 18.6	
	comp=E,13μm,0.2s						
PB08	IPOC Station P	1.36	30	eP	Pn	05 50 57.0	+0.4
PB08				eS	Sn	05 51 16.1	+2.3
PB08				IAML		05 51 20.7	
	comp=Z,5μm,0.3s						
PB06	IPOC Station P	1.41	168		Pn	05 50 58.0	+0.8
PB06				Sn	Sn	05 51 16.0	+1.2
PB06	IPOC Station P	1.41	168	⇑eP	Pn	05 50 58.1	+1.0
PB06				eS	Sn	05 51 16.6	+1.8
PB06				IAML		05 51 18.5	
	comp=E,7μm,0.2s						
PB06				IAML		05 51 21.9	
	comp=N,6μm,0.3s						
PB06	IPOC Station P	1.41	168	eP	Pn	05 50 57.1	0.0
PB06				IAML		05 51 20.9	
	comp=Z,6μm,0.2s						
PB11	IPOC Station P	1.57	8		Pn	05 50 59.9	+0.7
PB11				Sn	Sn	05 51 19.3	+0.8
PB11	IPOC Station P	1.57	8	⇑eP	Pn	05 50 59.6	+0.4
PB11				eS	Sn	05 51 18.8	+0.2
PB11				IAML		05 51 23.7	
	comp=E,11μm,0.1s						
PB11	IPOC Station P	1.57	8	eP	Pn	05 50 59.6	+0.4
PB11				eS	Sn	05 51 21.6	+3.0
PB11				IAML		05 51 24.6	
	comp=Z,5μm,0.3s						
GO01	Chusmiza	1.77	22		Pn	05 51 03.4	+1.1
GO01	Chusmiza	1.77	22	⇓eP	Pn	05 51 03.2	+0.9
GO01				eS	Sn	05 51 24.2	+0.3
GO01				IAML		05 51 28.0	
	comp=N,28μm,0.1s						
GO01	Chusmiza	1.77	22	eP	Pn	05 51 02.5	+0.3
GO01				IAML		05 51 26.9	
	comp=Z,9μm,0.6s						
AF01	San Pedro de A	2.27	136		Pn	05 51 12.1	+3.2
AF01	San Pedro de A	2.27	136	eP	Pn	05 51 12.2	+3.2
AF01				eS	Sn	05 51 37.9	+2.0
AF01				IAML		05 51 56.3	
	comp=E,15μm,0.3s						
AF01	San Pedro de A	2.27	136	eP	Pn	05 51 08.0	-0.9
AF01				IAML		05 52 00.2	
	comp=Z,9μm,0.9s						
PB12	IPOC Station P	2.72	351		Pn	05 51 14.4	-0.6
PB12	IPOC Station P	2.72	351	⇑eP	Pn	05 51 14.8	-0.2
PB12	IPOC Station P	2.72	351	eP	Pn	05 51 14.8	-0.2
PB12				eS	Sn	05 51 50.7	+4.0
PB12				IAML		05 51 59.7	
	comp=Z,2μm,0.6s						
AP01	Chacalluta	2.96	352		Pn	05 51 18.5	+0.3
AP01	Chacalluta	2.96	352	eP	Pn	05 51 17.2	-0.9
AP01	Chacalluta	2.96	352	eP	Pn	05 51 04.6	-14
AP01				eS	Sn	05 52 02.9	+10
AP01				IAML		05 52 12.2	
	comp=Z,3μm,0.7s						
PB16	IPOC Station P	2.99	7		Pn	05 51 22.0	+2.9
PB16	IPOC Station P	2.99	7	⇑eP	Pn	05 51 20.3	+1.2
PB16	IPOC Station P	2.99	7	eP	Pn	05 51 14.7	-4.3
PB16				eS	Sn	05 51 57.2	+3.2
PB16				IAML		05 52 11.2	
	comp=Z,1μm,0.8s						
PB14	IPOC Station P	3.33	188		Pn	05 51 22.2	-1.2
PB14	IPOC Station P	3.33	188	⇓eP	Pn	05 51 22.6	-0.9
PB14	IPOC Station P	3.33	188	eP	Pn	05 51 22.5	-0.9
PB14				eS	Sn	05 52 03.3	+1.5
PB14				IAML		05 52 20.5	
	comp=Z,2μm,0.5s						
PB18	Visviri	3.73	6		Pn	05 51 32.1	+3.0
PB18	Visviri	3.73	6	eP	Pn	05 51 32.4	+3.3
YJA	Yavi	4.15	103	eP	Pn	05 51 39.8	+4.9
AC01	Pan de Azucar	4.85	188		Pn	05 51 41.6	-2.4
AC01	Pan de Azucar	4.85	188	eP	Pn	05 51 42.3	-1.8
AC01				eS	Sn	05 52 46.2	+7.3
AC01				IAML		05 52 59.2	
	comp=Z,737nm,0.6s						
SLA	San Lorenzo	5.27	131	eP	Pn	05 51 54.7	+4.8
LPAZ	La Paz	5.27	19	P	Pn	05 51 52.3	+1.9
	comp=Z,62nm,0.8s,baz=187,slow=7.1,SNR=111						
LPAZ				LR	LR	05 53 58.9	
	comp=Z,382nm,21.4s,baz=214,slow=39						
AC02	Maricunga	5.54	173		Pn	05 51 54.4	+0.6
AC06	Mina Casimiro	6.03	184		Pn	05 51 58.2	-2.0
AC05	El Transito	7.49	183		Pn	05 52 17.9	-2.4
SIV	San Ignacio	9.89	59	P	Pn	05 52 52.7	-0.5
	comp=Z,51nm,0.7s,baz=274,slow=10.0						
CFA	Coronel Fontan	10.35	172	P	Pn	05 52 58.0	-1.3
	comp=Z,1.0nm,0.3s,baz=46,slow=23,SNR=14						
CFA				S	Sn	05 54 47.3	-6.6
	comp=Z,5.2nm,0.7s,baz=52,slow=19,SNR=1.4						
NNA	Nana	11.42	323	P	Pn	05 53 15.2	+1.1
	comp=Z,3.4nm,0.3s,baz=172,slow=14,SNR=1.7						
NNA				S	Sn	05 55 16.2	-4.1
	comp=Z,5.3nm,0.3s,baz=221,slow=16,SNR=2.0						
MURT	Porto Murtinho	11.44	94	eP	Pn	05 53 12.3	-1.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PTLB	**Pontes e Lacer**	**11.75**	**62**	Pn	**Pn**	**05 53 17.0**	**-1.6**
PTLB	**Pontes e Lacer**	**11.75**	**62**	*e*P	**Pn**	**05 53 17.3**	**-1.3**
BDQN	**Bodoquena, MS**	**12.31**	**88**	*e*P	**Pn**	**05 53 24.7**	**-1.5**
VILB	**Vilhena**	**12.44**	**50**		**Pn**	**05 53 27.6**	**-0.4**
VILB	**Vilhena**	**12.44**	**50**	*e*P	**Pn**	**05 53 26.4**	**-1.6**
CPUP	**Villa Florida**	**12.53**	**116**	P	**Pn**	**05 53 29.1**	**+0.1**
	comp=Z,4.8nm,0.7s,baz=307,slow=13,SNR=13						
CPUP				LR	LR	05 59 21.0	
	comp=Z,219nm,21.9s,baz=294,slow=42						
AQDB	**Aquidauana**	**13.29**	**89**		**Pn**	**05 53 38.6**	**-0.9**
AQDB	**Aquidauana**	**13.29**	**89**	*e*P	**Pn**	**05 53 38.4**	**-1.1**
AMBA	**Amambai (Brazi**	**13.90**	**99**	*e*P	**Pn**	**05 53 46.8**	**-1.0**
H03N1	**Juan Fernandez**	**14.48**	**212**	T	T	06 08 13.5	
	baz=36,slow=72,SNR=627						
SALV	**Santo Antonio**	**14.49**	**71**	*e*P	**Pn**	**05 53 54.1**	**-1.5**
H03N2	**Juan Fernandez**	**14.49**	**212**	T	T	06 08 30.2	
	baz=36,slow=72,SNR=660						
H03N3	**Juan Fernandez**	**14.50**	**212**	T	T	06 08 29.0	
	baz=36,slow=72,SNR=620						
PP1B	**Ponte de Pedra**	**14.63**	**78**	*e*P	**Pn**	**05 53 55.8**	**-1.6**
PSAL	**Palomas, Salto**	**14.69**	**134**	*e*P	**Pn**	**05 53 56.3**	**-1.8**
BI02	**San Fabin de**	**15.34**	**184**		**Pn**	**05 54 06.1**	**-0.4**
PDRB	**Porto dos Gac**	**15.88**	**55**	*e*P	**Pn**	**05 54 09.7**	**-3.8**
TRCB	**Terra Rica**	**16.06**	**98**		**P**	**05 54 16.5**	**-1.8**
TRCB	**Terra Rica**	**16.06**	**98**	*e*P	**Pn**	**05 54 14.8**	**-1.1**
C2SB	**Chapadao do Su**	**16.22**	**84**	*e*P	**P**	**05 54 18.2**	**-1.9**
ATAH	**Atahualpa**	**16.32**	**329**	P	**Pn**	**05 54 21.3**	**+1.7**
	comp=Z,2.4nm,0.9s,baz=153,slow=11,SNR=1.6						
PTGB	**Pitanga**	**16.75**	**105**	*e*P	**P**	**05 54 25.4**	**-0.7**
CLDB	**Colider**	**17.05**	**55**	*e*P	**Pn**	**05 54 26.2**	**-2.0**
ITAB	**Concordia**	**17.22**	**113**	P	**P**	**05 54 30.8**	**-0.3**
ITAB				IAmb	IAmb	05 54 46.9	
	comp=Z,52nm,1.3s						
ITAB	**Concordia**	**17.22**	**113**	*e*P	**Pn**	**05 54 27.5**	**-2.7**
CPSB	**Cacapava Do Su**	**17.33**	**125**	*e*P	**Pn**	**05 54 29.1**	**-2.5**
LDASE	**Londrina, Braz**	**17.48**	**100**	*e*P	**Pn**	**05 54 32.7**	**-1.0**
ARAG	**Araguaiana, MT**	**18.02**	**75**	*e*P	**Pn**	**05 54 40.0**	**-0.2**
TRQA	**Tornquist**	**18.02**	**159**		**Pn**	**05 54 40.3**	**+0.2**
GO06	**Curarrehue**	**18.26**	**184**		**P**	**05 54 42.0**	**-0.6**
TEFE	**Tefe**	**18.43**	**17**	*e*P	**P**	**05 54 42.1**	**-2.3**
FRTB	**Fartura**	**18.91**	**100**	*e*P	**P**	**05 54 48.7**	**-1.1**
PLCA	**Paso Flores**	**19.36**	**182**	P	**Pn**	**05 54 56.2**	**0.0**
	comp=Z,4.7nm,1.0s,baz=358,slow=9.4,SNR=12						
PLCA				LR	LR	06 02 07.5	
	comp=Z,170nm,22.0s,baz=358,slow=36						
BB19B	**Bebedouro**	**19.92**	**93**	*e*P	**P**	**05 55 00.1**	**-0.7**
MAJ01	**Sao Joao Batis**	**19.95**	**112**	*e*P	**Pn**	**05 55 01.3**	**-1.8**
NPGB	**Novo Progresso**	**19.97**	**47**	*e*P	**P**	**05 55 00.1**	**-1.2**
SNDB	**Serra Nova Dou**	**20.07**	**65**	*e*P	**P**	**05 55 00.0**	**-2.4**
MACA	**Manacapuru-AM**	**20.15**	**28**		**P**	**05 55 02.6**	**-0.7**
MACA				IAmb	IAmb	05 55 03.8	
	comp=Z,54nm,0.7s						
MACA	**Manacapuru-AM**	**20.15**	**28**	*e*P	**P**	**05 55 01.6**	**-1.6**
IPMB	**Ipameri, GO**	**20.68**	**85**	*e*P	**P**	**05 55 08.5**	**-0.6**
RCLB	**Rio Claro- Sao**	**20.78**	**97**	*e*P	**P**	**05 55 09.3**	**-0.8**
PET01	**Itanhaem-SP**	**21.05**	**102**	*e*P	**P**	**05 55 13.5**	**+0.5**
VAO	**Valinhos**	**21.29**	**99**	P	**P**	**05 55 14.0**	**-1.7**
VAO				IAmb	IAmb	05 55 18.3	
	comp=Z,28nm,0.8s						
VAO	**Valinhos**	**21.29**	**99**	*e*P	**P**	**05 55 16.1**	**+0.4**
BDFB	**Brasilia**	**21.49**	**78**	P	**P**	**05 55 17.6**	**-0.2**
	comp=Z,8.1nm,0.8s,baz=258,slow=14,SNR=13						
BDFB				LR	LR	06 04 38.3	
	comp=Z,139nm,21.6s,baz=257,slow=39						
	comp=Z,8.1nm,0.8s						
ITTB	**Itaituba**	**21.75**	**41**	*e*P	**P**	**05 55 17.8**	**-2.6**
SMTB	**Santa Maria do**	**24.79**	**63**	*e*P	**P**	**05 55 50.6**	**+0.2**
JANB	**Januaria**	**25.06**	**80**	*e*P	**P**	**05 55 52.2**	**-0.7**
BOAV	**Boa Vista**	**25.29**	**22**		**P**	**05 55 54.5**	**-0.4**
BOAV				IAmb	IAmb	05 55 57.2	
	comp=Z,25nm,0.8s						
BOAV	**Boa Vista**	**25.29**	**22**	*e*P	**P**	**05 55 54.4**	**-0.5**
SDBA	**SAO DESIDERIO**	**25.47**	**74**	*e*P	**P**	**05 55 55.4**	**-1.2**
ROSC	**El Rosal**	**26.36**	**350**	P	**P**	**05 56 04.8**	**-0.2**
	comp=Z,5.9nm,0.6s,baz=109,slow=23,SNR=1.7						
ROSC				LR	LR	06 07 49.0	
	comp=Z,195nm,19.5s,baz=181,slow=39						
	comp=Z,5.9nm,0.6s						
GO08	**Villa O'Higgin**	**27.17**	**184**	P	**P**	**05 56 13.0**	**+1.4**
GO08				IAmb	IAmb	05 56 39.9	
	comp=Z,14nm,1.1s						
NBIT	**Itapeh - BA**	**29.60**	**83**	*e*P	**P**	**05 56 32.9**	**-0.7**
SDV	**Santo Domingo**	**30.03**	**359**	LR	LR	06 09 35.8	
	comp=Z,72nm,19.4s,baz=194,slow=38						
MDP	**Montagnes des**	**31.23**	**35**	LR	LR	06 10 09.5	
	comp=Z,440nm,19.3s,baz=204,slow=38						
NBPS	**Pedro II - PI**	**32.33**	**63**	*e*P	**P**	**05 56 56.7**	**-1.1**
MG03	**Isla Dawson**	**32.48**	**181**	P	**P**	**05 56 59.3**	**+0.8**
RCBR	**Riachuelo**	**36.33**	**70**	LR	LR	06 13 37.2	
	comp=Z,49nm,19.4s,baz=244,slow=38						
CELP	**Cerrillos**	**39.28**	**5**	P	**P**	**05 57 55.5**	**-1.5**
CELP				IAmb	IAmb	05 57 57.3	
	comp=Z,24nm,0.9s						
SJG	**San Juan**	**39.36**	**6**	LR	LR	06 15 54.7	
	comp=Z,68nm,19.7s,baz=114,slow=39						
PMSA	**Palmer Station**	**43.61**	**176**	LR	LR	06 16 52.9	
	comp=Z,89nm,19.7s,baz=164,slow=36						
TKL	**Tuckaleechee C**	**58.17**	**347**	LR	LR	06 28 55.9	
	comp=Z,19nm,18.8s,baz=111,slow=40						
TXAR	**Lajitas Array**	**59.97**	**326**	P	**P**	**06 00 34.9**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=150,slow=8.2,SNR=5.5						
	comp=Z,0.3nm,0.6s						
Q56A	**Snyder Ridge,**	**60.67**	**352**		**P**	**06 00 39.7**	**+0.8**
VHRN	**Van Horn**	**61.81**	**326**		**P**	**06 00 47.7**	**+0.7**
VHRN				IAmb	IAmb	06 01 03.5	
	comp=Z,7.0nm,1.2s						
SNAA	**Sanae**	**62.75**	**161**	P	**P**	**06 00 53.3**	**+0.8**
	comp=Z,2.4nm,0.6s,baz=331,slow=4.7,SNR=4.5						
SNAA				pP	**pP**	**06 01 08.5**	**+0.2**
	comp=Z,5.1nm,0.7s,baz=273,slow=7.5,SNR=4.8						
	comp=Z,2.4nm,0.6s						
L59A	**Walton**	**63.37**	**356**		**P**	**06 00 57.8**	**+0.8**
SADO	**Sadowa**	**66.31**	**353**	LR	LR	06 31 02.0	
	comp=Z,18nm,21.6s,baz=230,slow=37						
QSPA	**South Pole Qui**	**68.87**	**180**	P	**P**	**06 01 33.1**	**+1.0**
	comp=Z,2.7nm,0.5s,baz=154,slow=1.2,SNR=16						
QSPA				pP	**pP**	**06 01 49.0**	**+0.9**
	comp=Z,5.6nm,0.6s,baz=142,slow=2.7,SNR=9.9						
	comp=Z,2.7nm,0.5s						
QSPA	**South Pole Qui**	**68.87**	**180**	P	**P**	**06 01 33.6**	**+1.5**
QSPA				IAmb	IAmb	06 01 49.9	
	comp=Z,22nm,1.4s						
DBIC	**Dimbokro**	**69.56**	**74**	P	**P**	**06 01 36.3**	**-0.8**
	comp=Z,7.0nm,0.8s,baz=267,slow=7.1,SNR=4.1						
DBIC				pP	**pP**	**06 01 54.1**	**+1.1**
	comp=Z,12nm,0.9s,baz=271,slow=4.8,SNR=4.0						
DBIC				LR	LR	06 30 56.0	
	comp=Z,40nm,19.7s,baz=275,slow=35						
	comp=Z,7.0nm,0.8s						
SRU	**San Rafael Swe**	**71.13**	**328**	P	**P**	**06 01 48.3**	**+1.9**
CCUT	**Cedar City**	**71.43**	**325**		**P**	**06 01 50.7**	**+2.4**
CCUT				IAmb	IAmb	06 01 51.8	
	comp=Z,5.8nm,1.0s						
PDAR	**Pinedale Array**	**73.50**	**331**	P	**P**	**06 02 00.8**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=124,slow=5.7,SNR=4.9						
PDAR				pP	**PcP**	**06 02 16.6**	**+0.3**
	comp=Z,0.9nm,1.0s,baz=141,slow=5.2,SNR=2.9						
PDAR				LR	LR	06 37 51.6	
	comp=Z,6.7nm,20.6s,baz=138,slow=39						
	comp=Z,0.3nm,0.6s						
HWUT	**Hardware Ranch**	**73.55**	**329**		**P**	**06 02 01.8**	**+1.0**
HWUT				IAmb	IAmb	06 02 29.5	
	comp=Z,5.6nm,1.0s						
NVAR	**Mina Array Bea**	**74.79**	**322**	P	**P**	**06 02 09.3**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=145,slow=7.4,SNR=5.2						
NVAR				pP	**pP**	**06 02 25.4**	**+1.4**
	comp=Z,1.3nm,0.7s,baz=148,slow=7.3,SNR=6.5						
	comp=Z,0.6nm,0.6s						
ULM	**Lac du Bonnet**	**74.88**	**343**	P	**P**	**06 02 07.5**	**-0.5**
	comp=Z,3.0nm,0.9s,baz=158,slow=5.2,SNR=4.6						
ULM				LR	LR	06 40 30.2	
	comp=Z,24nm,19.6s,baz=182,slow=40						
	comp=Z,3.0nm,0.9s						
SCHQ	**Schefferville**	**75.89**	**2**	P	**P**	**06 02 13.4**	**-0.3**
	comp=Z,2.4nm,0.8s,baz=177,slow=4.9,SNR=7.2						
	comp=Z,2.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**78.16**	**71**	P	**P**	**06 02 26.8**	**-0.6**
	comp=Z,7.1nm,0.7s,baz=244,slow=7.7,SNR=40						
TORD				pP	**pP**	**06 02 45.6**	**+2.2**
	comp=Z,3.3nm,0.5s,baz=247,slow=6.7,SNR=5.4						
	comp=Z,7.1nm,0.7s						
SUR	**Sutherland**	**79.45**	**121**	LR	LR	06 34 37.4	
	comp=Z,26nm,18.3s,baz=218,slow=33						
TSUM	**Tsumeb**	**80.96**	**107**	LR	LR	06 35 07.6	
	comp=Z,30nm,20.6s,baz=206,slow=33						
TSUM	**Tsumeb**	**80.96**	**107**		**P**	**06 02 43.2**	**+0.4**
TSUM				IAmb	IAmb	06 02 44.3	
	comp=Z,6.1nm,0.8s						
MDT	**Midelt**	**82.33**	**51**	LR	LR	06 38 56.4	
	comp=Z,33nm,19.5s,baz=262,slow=35						
BOSA	**Boshof**	**84.33**	**118**	P	**P**	**06 02 59.6**	**-0.6**
	comp=Z,3.5nm,0.8s,baz=223,slow=3.9,SNR=6.2						
BOSA				LR	LR	06 37 13.5	
	comp=Z,46nm,19.4s,baz=215,slow=33						
	comp=Z,3.5nm,0.8s						
LBTB	**Lobatse**	**85.92**	**115**	LR	LR	06 38 03.4	
	comp=Z,24nm,21.5s,baz=218,slow=33						
ESDC	**Sonseca Array**	**86.35**	**45**	LR	LR	06 41 21.3	
	comp=Z,15nm,18.7s,baz=212,slow=35						
YKA	**Yellowknife Ar**	**90.72**	**341**	P	**P**	**06 03 30.2**	**+0.4**
	comp=Z,1.4nm,0.9s,baz=138,slow=3.7,SNR=20						
YKA				pP	**pP**	**06 03 46.6**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=138,slow=3.8,SNR=7.9						
	comp=Z,1.4nm,0.9s						
LSZ	**Lusaka**	**91.82**	**107**	LR	LR	06 42 36.1	
	comp=Z,35nm,19.9s,baz=176,slow=34						
DAVOX	**Davos/Dischmat**	**98.55**	**43**	LR	LR	06 48 15.1	
	comp=Z,25nm,18.6s,baz=253,slow=35						
MBAR	**Mbarara**	**99.68**	**94**	LR	LR	06 46 17.0	
	comp=Z,22nm,21.8s,baz=254,slow=34						
H11S2	**WAKE ISLAND Hy**	**126.95**	**278**	T	T	08 28 59.9	
	baz=103,slow=75						
H11S1	**WAKE ISLAND Hy**	**126.96**	**278**	T	T	08 28 55.0	
	baz=103,slow=75						
H11S3	**WAKE ISLAND Hy**	**126.97**	**278**	T	T	08 28 54.4	
	baz=103,slow=75						
H11N3	**WAKE ISLAND Hy**	**127.03**	**279**	T	T	08 29 30.1	
	baz=103,slow=75						
H11N2	**WAKE ISLAND Hy**	**127.05**	**279**	T	T	08 29 31.3	
	baz=103,slow=75						
H11N1	**WAKE ISLAND Hy**	**127.05**	**279**	T	T	08 29 31.4	
	baz=103,slow=75						
ASAR	**Alice Springs**	**129.64**	**209**	PKP	**PKPdf**	**06 09 37.0**	**0.0**
	comp=Z,0.5nm,0.7s,baz=123,slow=2.3,SNR=4.5						
ASAR				pPKP	**pPKPdf**	**06 09 53.5**	**-0.5**
	comp=Z,1.4nm,1.0s,baz=149,slow=2.1,SNR=8.4						
WRA	**Warramunga Arr**	**132.64**	**212**	PKP	**PKPdf**	**06 09 43.0**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=159,slow=1.8,SNR=11						
WRA				pPKP	**pPKPdf**	**06 09 58.6**	**-1.2**
	comp=Z,0.9nm,0.6s,baz=160,slow=1.7,SNR=6.7						
KURBB	**Kurchatov Arra**	**141.68**	**33**	PKhKP	PKPpre	06 09 55.0	
	comp=Z,0.7nm,0.9s,baz=296,slow=2.8,SNR=5.6						
ZALV	**Zalesovo Beam**	**142.17**	**24**	PKP	**PKPdf**	**06 09 59.5**	**+0.2**
	comp=Z,2.7nm,0.5s,baz=272,slow=3.0,SNR=17						
ZALV				pPKP	**pPKPdf**	**06 10 16.5**	**+0.2**
	comp=Z,3.9nm,0.6s,baz=283,slow=2.0,SNR=8.0						
KSH2	**Kashi**	**145.53**	**51**	PKPbc	**PKPab**	**06 10 07.1**	**+0.8**
KSH2				pPKP	pPKPab	06 10 23.8	+0.8
KSH2				sPKP	sPKPab	06 10 29.9	+0.7
MKAR	**Makanchi Array**	**146.02**	**35**	PKPbc	**PKPbc**	**06 10 07.0**	**-0.1**
	comp=Z,6.3nm,0.7s,baz=324,slow=3.9,SNR=63						
MKAR				pPKPbc	**pPKPdf**	**06 10 23.4**	**+0.1**
	comp=Z,4.2nm,0.7s,baz=344,slow=2.8,SNR=7.9						
WMQ	**Urumqi**	**150.84**	**35**	*e*PKPbc	**PKPdf**	**06 10 15.1**	**+0.9**
WMQ				PKPab	**pPKPdf**	**06 10 30.6**	**-0.7**
BNX	**BinXian**	**151.82**	**334**	⇓P	**PKPdf**	**06 10 15.0**	**-0.6**
BNX				pmax	pmax		
	comp=Z,6.0nm,1.6s						
SONM	**Songino Array**	**153.38**	**6**	PKPbc	**PKiKP**	**06 10 26.0**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=323,slow=0.9,SNR=6.2						
SONM				pPKPbc	**sPKPdf**	**06 10 42.6**	**+1.3**
	comp=Z,2.0nm,0.7s,baz=318,slow=1.9,SNR=6.2						
HHC	**Hu-ho-hao-te**	**160.49**	**357**	*e*P	**PKPdf**	**06 10 29.2**	**+2.0**
NJ2	**Nanjing**	**166.77**	**326**	*e*P	**PKPdf**	**06 10 34.2**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,25nm,0.5s						
PZH	**PanZhiHua**	**170.77**	**54**	PKP	**PKPdf**	**06 10 35.8**	**-0.3**

*JMA **06** 05:51:15.4±0.2, 24°.2N±1°.0×122°.2E±0°.4, h49km±3km, MV2.9/14, TAIWAN REGION*

*TAP **06** 05:51:15.9, 24°.27N×122°.18E, h51km, ML3.8, B*

ISC 06 05:51:16.0±1.2**, 24°.26N**±0°.02×**122°.21E**±0°.02**, h46**km±8km**,**
n155, σ1**§06**/262**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EAHA	**Aohua**	**0.43**	**280**	*i* P	**Pn**	**05 51 26.3**	**0.0**
EAHA				S	**Sn**	**05 51 34.5**	**+1.0**
EWUT	**Wuta**	**0.44**	**296**	*i* P	**Pn**	**05 51 26.3**	**0.0**
EWUT				*i* S	**Sn**	**05 51 33.8**	**+0.2**
ENA	**Nanau**	**0.46**	**292**	*i* P	**Pn**	**05 51 27.2**	**+0.6**
ENA				S	**Sn**	**05 51 35.0**	**+0.9**
ESAO	**Su ao**	**0.46**	**314**	*i* P	**Pn**	**05 51 26.9**	**+0.3**
ESAO				S	**Sn**	**05 51 34.3**	**+0.2**
TWC	**Suao**	**0.48**	**317**	P	**Pn**	**05 51 26.9**	**+0.1**
TWC				*i* S	**Sn**	**05 51 34.1**	**-0.4**
ETL	**Fush Village**	**0.54**	**260**	*i* P	**Pn**	**05 51 27.4**	**-0.2**
ETL				*e*S	**Sn**	**05 51 34.7**	**-1.3**
NACB	**Ninganchiao**	**0.57**	**262**	P	**Pn**	**05 51 27.5**	**-0.4**
NACB	**Ninganchiao**	**0.57**	**262**	S	**Sn**	**05 51 36.2**	**-0.2**
NACB	**Ninganchiao**	**0.57**	**262**	*i* P	**Pn**	**05 51 27.5**	**-0.4**
NACB				S	**Sn**	**05 51 36.3**	**-0.1**
NDS	**Dongshan**	**0.59**	**310**	*i* P	**Pn**	**05 51 28.5**	**+0.4**
NDS				*i* S	**Sn**	**05 51 37.3**	**+0.5**
TWD	**Chiawan**	**0.59**	**253**	*i* P	**Pn**	**05 51 27.8**	**-0.3**
TWD				*i* S	**Sn**	**05 51 36.8**	**0.0**
HWA	**Hwalien**	**0.62**	**243**	P	**Pn**	**05 51 28.6**	**0.0**
HWA				*e*S	**Sn**	**05 51 38.1**	**+0.6**
EGS		**0.64**	**337**	P	**Pn**	**05 51 29.1**	**+0.3**
EGS				S	**Sn**	**05 51 38.4**	**+0.3**
ILA	**Ilan**	**0.66**	**321**	*e*P	**Pn**	**05 51 29.8**	**+0.7**
ILA				*e*S	**Sn**	**05 51 40.0**	**+1.4**
ETLH	**Xiulin Townshi**	**0.67**	**266**	*i* P	**Pn**	**05 51 29.0**	**-0.3**
ETLH				S	**Sn**	**05 51 38.9**	**+0.1**
TWE	**Neicheng**	**0.68**	**313**	*i* P	**Pn**	**05 51 29.7**	**+0.4**
TWE				S	**Sn**	**05 51 39.2**	**+0.3**
TEYL	**Yanliau Villag**	**0.68**	**236**	*i* P	**Pn**	**05 51 29.1**	**-0.2**
TEYL				*e*S	**Sn**	**05 51 39.1**	**+0.2**
LATG	**Datong**	**0.68**	**294**	*i* P	**Pn**	**05 51 29.4**	**-0.1**
LATG				*e*S	**Sn**	**05 51 38.7**	**-0.5**
NTC	**Toucheng**	**0.69**	**330**	*e*P	**Pn**	**05 51 29.9**	**+0.4**
NTC				*e*S	**Sn**	**05 51 39.2**	**0.0**
ENTT	**Nioudou**	**0.70**	**303**	*i* P	**Pn**	**05 51 29.9**	**+0.3**
ENTT				S	**Sn**	**05 51 40.0**	**+0.6**
JYNG	**Yonagunijimaku**	**0.70**	**74**	*e*P	**Pn**	**05 51 30.0**	**+0.4**
JYNG				*e*S	**Sn**	**05 51 40.4**	**+0.9**
ETM	**Tongmen**	**0.71**	**246**	*e*P	**Pn**	**05 51 29.4**	**-0.4**
ETM				S	**Sn**	**05 51 39.6**	**-0.2**
NDT	**Datong Townshi**	**0.72**	**299**	*i* P	**Pn**	**05 51 30.2**	**+0.3**
NDT				*i* S	**Sn**	**05 51 40.7**	**+0.7**
SHUL	**Shoufeng**	**0.75**	**232**	*i* P	**Pn**	**05 51 30.2**	**-0.1**
SHUL				S	**Sn**	**05 51 41.2**	**+0.6**
FUSB	**Fushanzhiwuyua**	**0.76**	**312**	*i* P	**Pn**	**05 51 30.8**	**+0.3**
FUSB				S	**Sn**	**05 51 41.8**	**+0.8**
YOJ	**Yonaguni jima**	**0.76**	**74**	P	**Pn**	**05 51 30.9**	**+0.5**
YOJ	**Yonaguni jima**	**0.76**	**74**	S	**Sn**	**05 51 41.6**	**+0.7**
YOJ	**Yonaguni jima**	**0.76**	**74**	*i* P	**Pn**	**05 51 30.7**	**+0.3**
YOJ				*e*S	**Sn**	**05 51 41.7**	**+0.8**
YOJ	**Yonaguni jima**	**0.76**	**74**	*e*P	**Pn**	**05 51 31.0**	**+0.6**
YOJ				*e*S	**Sn**	**05 51 41.1**	**+0.3**
LXIB	**Xiulin Townshi**	**0.76**	**252**	*i* P	**Pn**	**05 51 30.2**	**-0.4**
LXIB				*i* S	**Sn**	**05 51 40.8**	**-0.4**
NNSB	**Datong**	**0.77**	**283**	*i* P	**Pn**	**05 51 30.6**	**-0.1**
NNSB				S	**Sn**	**05 51 41.1**	**-0.3**
TWB1	**Santiao Chiao**	**0.78**	**345**	P	**Pn**	**05 51 30.4**	**-0.2**
TWB1				*e*S	**Sn**	**05 51 40.4**	**-0.8**
NNS	**Nan Shan**	**0.78**	**284**	*i* P	**Pn**	**05 51 30.7**	**-0.1**
TIPB	**Shuangxi**	**0.79**	**334**	*i* P	**Pn**	**05 51 31.1**	**+0.1**
TIPB				S	**Sn**	**05 51 41.7**	**-0.1**
TEGC	**Jichi Village**	**0.82**	**229**	P	**Pn**	**05 51 31.3**	**+0.1**
TEGC				S	**Sn**	**05 51 42.9**	**+0.7**
NWLT	**Wulai**	**0.83**	**309**	*i* P	**Pn**	**05 51 31.8**	**+0.4**
NWLT				S	**Sn**	**05 51 42.9**	**+0.3**
ESL	**Shilin**	**0.83**	**238**	*i* P	**Pn**	**05 51 30.9**	**-0.5**
ESL				*i* S	**Sn**	**05 51 42.1**	**-0.5**
YHNB	**Yeheng**	**0.86**	**299**	P	**Pn**	**05 51 31.9**	**0.0**
YHNB	**Yeheng**	**0.86**	**299**	S	**Sn**	**05 51 43.8**	**+0.3**
YHNB	**Yeheng**	**0.86**	**299**	*i* P	**Pn**	**05 51 32.1**	**+0.2**
YHNB				*e*S	**Sn**	**05 51 43.3**	**-0.2**
WHF	**Hehuan Shan**	**0.87**	**263**	*i* P	**Pn**	**05 51 31.9**	**-0.3**
WHF				*e*S	**Sn**	**05 51 43.0**	**-1.1**
FUSS	**Fushou**	**0.88**	**270**	P	**Pn**	**05 51 32.5**	**+0.2**
FUSS				*e*S	**Sn**	**05 51 44.2**	**0.0**
NSK	**Sanguang**	**0.88**	**299**	*i* P	**Pn**	**05 51 32.2**	**+0.1**
NSK				*e*S	**Sn**	**05 51 43.7**	**-0.2**
SXI1	**Grass Mountain**	**0.89**	**340**	*i* P	**Pn**	**05 51 32.1**	**-0.1**
SXI1				*e*S	**Sn**	**05 51 43.3**	**-0.8**
NWF	**Wu-fen Shan**	**0.90**	**335**	P	**Pn**	**05 51 32.5**	**+0.1**
NWF				S	**Sn**	**05 51 44.1**	**-0.3**
WFSB	**Wu-fen Shan**	**0.90**	**335**	P	**Pn**	**05 51 32.5**	**+0.1**
WFSB				S	**Sn**	**05 51 44.1**	**-0.2**
TWA	**Mucha**	**0.92**	**322**	P	**Pn**	**05 51 33.6**	**+1.0**
TWA				S	**Sn**	**05 51 45.2**	**+0.5**
WARBT	**Fenglin Townsh**	**0.92**	**235**	*i* P	**Pn**	**05 51 32.0**	**-0.6**
WARBT				*e*S	**Sn**	**05 51 43.7**	**-1.1**
NHDH	**Xindian Distri**	**0.94**	**319**	*e*S	**Sn**	**05 51 46.1**	**+0.9**
TWT	**Tachien**	**0.94**	**270**	P	**Pn**	**05 51 33.8**	**+0.7**
TWT				*e*S	**Sn**	**05 51 46.0**	**+0.5**
TDCB	**Techi**	**0.96**	**270**	P	**Pn**	**05 51 33.7**	**+0.4**
TDCB				S	**Sn**	**05 51 45.9**	**0.0**
TATO	**Taipei**	**0.97**	**318**	P	**Pn**	**05 51 34.0**	**+0.7**
TATO	**Taipei**	**0.97**	**318**	S	**Sn**	**05 51 46.9**	**+0.9**
NHY	**Taipei**	**0.97**	**323**	*e*P	**Pn**	**05 51 33.3**	**0.0**
NHY				*e*S	**Sn**	**05 51 45.4**	**-0.6**
TNOU	**National Taiwa**	**0.97**	**336**	P	**Pn**	**05 51 33.0**	**-0.3**
TNOU				*e*S	**Sn**	**05 51 45.0**	**-1.1**
OWD	**Renai**	**0.99**	**253**	*i* P	**Pn**	**05 51 33.4**	**-0.3**
OWD				S	**Sn**	**05 51 45.9**	**-0.8**
TAP	**Taipei**	**1.01**	**321**	*e*P	**Pn**	**05 51 34.6**	**+0.8**
WUSB	**Renai**	**1.03**	**256**	*i* P	**Pn**	**05 51 34.3**	**+0.1**
WUSB				*e*S	**Sn**	**05 51 46.8**	**-0.8**
HGSD	**Ruisui**	**1.04**	**224**	P	**Pn**	**05 51 33.9**	**-0.4**
HGSD				*e*S	**Sn**	**05 51 47.7**	**-0.1**
YM01	**YM01**	**1.06**	**327**	*i* P	**Pn**	**05 51 34.7**	**+0.2**
YM01				S	**Sn**	**05 51 47.8**	**-0.4**
NFF	**Wufeng Townshi**	**1.06**	**291**	P	**Pn**	**05 51 35.1**	**+0.5**
NFF				*e*S	**Sn**	**05 51 49.5**	**+1.2**
KSHI	**Guanxi Townshi**	**1.07**	**299**	P	**Pn**	**05 51 35.6**	**+0.9**
KSHI				*e*S	**Sn**	**05 51 49.6**	**+1.1**
YM08	**YM08**	**1.09**	**329**	*i* P	**Pn**	**05 51 35.1**	**+0.3**
YM08				S	**Sn**	**05 51 47.5**	**-1.3**
ZUZH	**Zhuzihu**	**1.09**	**326**	P	**Pn**	**05 51 34.9**	**0.0**
ZUZH				S	**Sn**	**05 51 48.2**	**-0.6**
EHYH	**Wanrong**	**1.09**	**226**	P	**Pn**	**05 51 34.5**	**-0.5**
EHYH				*e*S	**Sn**	**05 51 47.8**	**-1.2**
VWDT	**VWDT**	**1.10**	**243**	*i* P	**Pn**	**05 51 35.1**	**+0.2**
VWDT				S	**Sn**	**05 51 48.2**	**-0.8**
EHY	**Hungye**	**1.10**	**228**	P	**Pn**	**05 51 34.4**	**-0.6**
EHY				*e*S	**Sn**	**05 51 47.8**	**-1.4**
TWS1	**Kuangyinshan**	**1.11**	**320**	*i* P	**Pn**	**05 51 35.6**	**+0.4**
TWS1				S	**Sn**	**05 51 50.1**	**+0.9**
ANP	**Anpu**	**1.12**	**326**	*e*P	**Pn**	**05 51 35.7**	**+0.3**
ANP				*e*S	**Sn**	**05 51 49.3**	**-0.4**
NTST	**Danshui**	**1.14**	**323**	*e*S	**Sn**	**05 51 50.6**	**+0.6**
WHP	**Taichung City**	**1.15**	**271**	*i* P	**Pn**	**05 51 36.8**	**+0.9**
WHP				S	**Sn**	**05 51 51.0**	**+0.5**
LIOB	**Emei**	**1.16**	**290**	*i* P	**Pn**	**05 51 36.7**	**+0.9**
LIOB				S	**Sn**	**05 51 51.4**	**+0.9**
TWY	**Chenhua**	**1.16**	**332**	*e*P	**Pn**	**05 51 35.3**	**-0.5**
TWY				*e*S	**Sn**	**05 51 50.9**	**+0.4**
NSTT	**Nanjuang**	**1.16**	**289**	P	**Pn**	**05 51 36.8**	**+0.9**
NSTT				S	**Sn**	**05 51 51.9**	**+1.3**
ECBN	**Changbin**	**1.16**	**217**	P	**Pn**	**05 51 35.7**	**-0.2**
ECBN				S	**Sn**	**05 51 49.8**	**-0.8**
NCUH	**Zhongli**	**1.17**	**308**	P	**Pn**	**05 51 36.4**	**+0.4**
YULB	**Yu-li**	**1.20**	**224**	P	**Pn**	**05 51 35.8**	**-0.6**
YULB	**Yu-li**	**1.20**	**224**	S	**Sn**	**05 51 50.7**	**-0.8**
YULB	**Yu-li**	**1.20**	**224**	P	**Pn**	**05 51 35.5**	**-0.9**
YULB				S	**Sn**	**05 51 50.0**	**-1.5**
WCS	**Beigang Elemen**	**1.20**	**261**	*e*P	**Pn**	**05 51 37.0**	**+0.7**
WCS				*e*S	**Sn**	**05 51 52.4**	**+0.8**
TWF1	**Yuli**	**1.23**	**223**	P	**Pn**	**05 51 36.1**	**-0.7**
TWF1				*e*S	**Sn**	**05 51 50.9**	**-1.3**
SBCB	**Hsinchu**	**1.24**	**296**	P	**Pn**	**05 51 37.9**	**+1.0**
SBCB				*e*S	**Sn**	**05 51 53.8**	**+1.3**
SSLB	**Suanglung**	**1.24**	**248**	P	**Pn**	**05 51 36.8**	**-0.1**
SSLB	**Suanglung**	**1.24**	**248**	S	**Sn**	**05 51 52.6**	**+0.1**
SSLB	**Suanglung**	**1.24**	**248**	*i* P	**Pn**	**05 51 37.0**	**0.0**
SSLB				*e*S	**Sn**	**05 51 52.0**	**-0.6**
SMLT	**Sun Moon Lake**	**1.25**	**253**	*i* P	**Pn**	**05 51 37.6**	**+0.4**
SMLT				S	**Sn**	**05 51 53.2**	**+0.3**
HSN	**Hsinchu**	**1.25**	**296**	*e*S	**Sn**	**05 51 53.0**	**+0.2**
TYC	**Yuchr**	**1.28**	**254**	P	**Pn**	**05 51 38.1**	**+0.6**
TYC				*e*S	**Sn**	**05 51 53.6**	**0.0**
CHKH	**Chenggong**	**1.29**	**215**	*e*S	**Sn**	**05 51 52.1**	**-1.8**
TWQ1	**Liyutan**	**1.31**	**274**	P	**Pn**	**05 51 38.9**	**+1.0**
TWQ1				*e*S	**Sn**	**05 51 55.9**	**+1.5**
NMLH	**Miaoli**	**1.32**	**283**	*i* P	**Pn**	**05 51 38.8**	**+0.7**
NMLH				S	**Sn**	**05 51 55.6**	**+1.0**
FULB	**Fuli**	**1.34**	**219**	P	**Pn**	**05 51 38.1**	**-0.3**
FULB				S	**Sn**	**05 51 54.6**	**-0.5**
WHYT	**Xinyi Township**	**1.36**	**246**	*e*P	**Pn**	**05 51 39.5**	**+0.9**
WHYT				*e*S	**Sn**	**05 51 56.2**	**+0.7**
PCYT	**Pengchaiyu**	**1.37**	**355**	*e*P	**Pn**	**05 51 38.8**	**0.0**
PCYT				*e*S	**Sn**	**05 51 54.9**	**-0.9**
YUS	**Yu-Shan**	**1.38**	**237**	*i* P	**Pn**	**05 51 39.7**	**+0.4**
YUS				S	**Sn**	**05 51 56.0**	**-0.6**
CHKT	**Chengkung**	**1.39**	**214**	*e*S	**Sn**	**05 51 53.7**	**-2.4**
IRIF	**Iriomote-Funau**	**1.39**	**86**	P	**Pn**	**05 51 39.2**	**+0.2**
IRIF				*e*S	**Sn**	**05 51 56.3**	**+0.1**
TCU	**Taichung**	**1.40**	**266**	P	**Pn**	**05 51 40.2**	**+1.0**
TCU				S	**Sn**	**05 51 58.3**	**+1.8**
WJS	**Zhushan**	**1.42**	**253**	*i* S	**Sn**	**05 51 59.1**	**+2.1**
WDJ	**Dajia District**	**1.43**	**274**	S	**Sn**	**05 51 58.7**	**+1.4**
WNT	**Mingjian**	**1.44**	**255**	*i* P	**Pn**	**05 51 41.3**	**+1.6**
WNT				*i* S	**Sn**	**05 51 59.8**	**+2.3**
ECS	**Chishang**	**1.47**	**218**	*e*P	**Pn**	**05 51 40.0**	**-0.1**
ECS				*e*S	**Sn**	**05 51 57.4**	**-0.7**
HATJ	**Hateruma jima**	**1.47**	**97**	*e*P	**Pn**	**05 51 41.0**	**+1.0**
HATJ				*e*S	**Sn**	**05 51 59.4**	**+1.2**
ALS	**Alishan**	**1.48**	**240**	P	**Pn**	**05 51 41.5**	**+1.0**
ALS				S	**Sn**	**05 51 58.8**	**-0.1**
WCHH	**Zhanghua**	**1.52**	**264**	*e*P	**Pn**	**05 51 41.6**	**+0.9**
WCHH				S	**Sn**	**05 52 01.0**	**+1.7**
ELDTW	**Lidau**	**1.52**	**226**	S	**Sn**	**05 51 58.7**	**-0.9**
CHN5	**Tsauling**	**1.55**	**245**	P	**Pn**	**05 51 42.3**	**+1.1**
CHN5				*e*S	**Sn**	**05 52 01.7**	**+1.6**
WGK	**Gukeng**	**1.61**	**250**	*e*P	**Pn**	**05 51 42.0**	**+0.1**
WGK				*e*S	**Sn**	**05 52 04.1**	**+2.6**
WDLH	**Douliu**	**1.63**	**250**	P	**Pn**	**05 51 43.4**	**+1.1**
WDLH				*e*S	**Sn**	**05 52 04.3**	**+2.3**
JKRS	**Kuro-shima**	**1.64**	**90**	P	**Pn**	**05 51 43.3**	**+0.8**
JKRS				*e*S	**Sn**	**05 52 02.9**	**+0.5**
WCKO	**Fanlu**	**1.68**	**241**	P	**Pn**	**05 51 44.8**	**+1.9**
WCKO				*e*S	**Sn**	**05 52 05.8**	**+2.5**
STYH	**Taoyuan**	**1.70**	**231**	*i* P	**Pn**	**05 51 44.1**	**+0.9**
STYH				S	**Sn**	**05 52 04.4**	**+0.7**
WRL	**Guolierlin Hig**	**1.71**	**258**	*e*P	**Pn**	**05 51 44.2**	**+0.9**
WRL				*e*S	**Sn**	**05 52 04.8**	**+0.7**
LDUT	**Ludao**	**1.71**	**203**	*e*S	**Sn**	**05 52 02.0**	**-2.1**
RLNB	**Erlin**	**1.73**	**258**	*e*S	**Sn**	**05 52 06.1**	**+1.6**
TPUB	**Ta-pu**	**1.73**	**237**	P	**Pn**	**05 51 44.1**	**+0.4**
TPUB				*e*S	**Sn**	**05 52 05.5**	**+0.9**
CHN4	**Tsaushan**	**1.73**	**239**	*i* P	**Pn**	**05 51 45.5**	**+1.8**
CHN4				S	**Sn**	**05 52 07.2**	**+2.6**
CHN2	**Minshiung**	**1.74**	**246**	*e*S	**Sn**	**05 52 07.6**	**+2.8**
WTK	**Tuku**	**1.76**	**252**	*e*S	**Sn**	**05 52 08.1**	**+2.9**
TWGBT	**Beinan**	**1.77**	**216**	*e*S	**Sn**	**05 52 03.8**	**-1.7**
JIJ	**Ishigaki jima**	**1.77**	**86**	P	**Pn**	**05 51 44.4**	**+0.2**
JIJ				*e*S	**Sn**	**05 52 04.6**	**-0.8**
TWG	**Pinlang**	**1.77**	**216**	*e*S	**Sn**	**05 52 04.1**	**-1.4**
WTP	**Ta-pu**	**1.77**	**236**	*e*P	**Pn**	**05 51 45.9**	**+1.6**
WTP				*e*S	**Sn**	**05 52 07.1**	**+1.4**
TTN	**Taitung**	**1.78**	**213**	*e*S	**Sn**	**05 52 05.8**	**0.0**
CHY	**Chiayi**	**1.80**	**246**	*e*S	**Sn**	**05 52 08.7**	**+2.5**
TWK	**Hsinying**	**1.86**	**238**	P	**Pn**	**05 51 46.9**	**+1.4**
TWK				*e*S	**Sn**	**05 52 09.7**	**+2.0**
CHN1	**Nanshi**	**1.87**	**236**	*e*P	**Pn**	**05 51 47.8**	**+2.1**
CHN1				*e*S	**Sn**	**05 52 10.2**	**+2.1**
SGST	**Jiashian**	**1.89**	**232**	*e*P	**Pn**	**05 51 47.9**	**+2.0**
SGST				*e*S	**Sn**	**05 52 09.8**	**+1.3**
SLGT	**Liugui**	**1.91**	**229**	*e*S	**Sn**	**05 52 10.6**	**+1.7**
WSF	**Szhu**	**1.92**	**252**	*e*S	**Sn**	**05 52 11.1**	**+1.9**
JISG	**Ishigakijimahi**	**1.94**	**80**	*e*S	**Sn**	**05 52 09.3**	**-0.5**
WSL	**Shuilin Townsh**	**1.95**	**248**	*e*P	**Pn**	**05 51 48.2**	**+1.5**
WSL				*e*S	**Sn**	**05 52 12.1**	**+2.1**
ICHU	**Yijhu**	**1.98**	**244**	*e*S	**Sn**	**05 52 13.2**	**+2.6**
CHN8	**Yiju**	**2.04**	**244**	*e*S	**Sn**	**05 52 13.6**	**+1.4**
SSD	**Sandimen**	**2.09**	**224**	*e*P	**Pn**	**05 51 50.2**	**+1.7**
SSD				*e*S	**Sn**	**05 52 14.9**	**+1.6**
SCLT	**Jiali**	**2.14**	**240**	*e*S	**Sn**	**05 52 16.5**	**+1.9**
MASBT	**Mashibuluo**	**2.18**	**222**	*e*P	**Pn**	**05 51 50.8**	**+0.9**
MASBT				*e*S	**Sn**	**05 52 16.7**	**+1.0**
TSCK	**Chigu Township**	**2.24**	**241**	*e*S	**Sn**	**05 52 18.3**	**+1.4**
EAST	**Anshuo**	**2.24**	**214**	P	**Pn**	**05 51 49.7**	**-1.1**
EAST				*e*S	**Sn**	**05 52 16.2**	**-1.0**
SCZT	**Fangliau**	**2.38**	**218**	*e*S	**Sn**	**05 52 23.0**	**+2.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNG	Penghu	2.52	255	eP	Pn	05 51 54.3	-0.2
PNG				eS	Sn	05 52 23.0	-1.0
PHUB	P'eng-hu	2.52	254	P	Pn	05 51 54.3	-0.2
PHUB				eS	Sn	05 52 21.9	-2.2
WDGT	Dungji	2.54	248	S	Sn	05 52 23.9	-0.4
SMST	Manzhou Townsh	2.56	210	eS	Sn	05 52 23.3	-1.6
VWUC	VWUC	2.62	287	eP	Pn	05 51 55.0	-0.8
VWUC				eS	Sn	05 52 23.7	-2.7
TWKBT	Hengchun	2.64	209	eS	Sn	05 52 26.4	-0.4
VCHM	Qimei	2.75	248	eP	Pn	05 51 59.1	+1.5
VCHM				eS	Sn	05 52 30.5	+0.8
MATB	Ma-tsu	2.79	313	eP	Pn	05 51 57.3	-0.8
PTMZ	Houxiangcun	2.92	286	eP	Pn	05 51 59.3	-0.6
LYJJ	Jianjiangzhen	3.18	316	eP	Pn	05 52 02.8	-0.7
XPSS	Dashiqiu	3.23	326	eP	Pn	05 52 03.8	-0.4
MHZQ	Yeshan	3.42	303	eP	Pn	05 52 05.9	-0.9
KNMB	Chin-men Tao	3.49	274	eP	Pn	05 52 07.6	-0.2
ZPLA	Ao Xicun	4.09	266	eP	Pn	05 52 15.4	-0.5
ZPLA				eS	Sn	05 52 59.8	-2.7
SXFK	Yanhouchang	4.65	298	eP	Pn	05 52 23.3	-0.5
SXFK				eS	Sn	05 53 12.9	-3.5

*SJA **06** 06:22:35.3±0.8, 22°.71S×70°.44W, h40km±999km, ML3.4, MW3.5*

*GUC **06** 06:22:37.7±0.8, 22°.65S×70°.36W, h55km±4km, ML3.3*

ISC 06 06:22:35.1±1.6**, 22°.69S**±0°.04×**70°.53W**±0°.08**, h21**km±5km**, n23,** σ0s70/33**, 5C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB06	IPOC Station P	0.89	91	⇓iP	Pb	06 22 52.2	+0.3
PB06				⇓eS	Sb	06 23 02.7	-0.6
PB06	IPOC Station P	0.89	91	eP	Pb	06 22 51.9	0.0
PB06				eS	Sb	06 23 02.8	-0.6
PB03	IPOC Station P	0.96	49	⇓iP	Pb	06 22 54.1	+0.9
PB03				eS	Sb	06 23 05.8	+0.3
PB03				IAML		06 23 06.8	
	comp=E,2µm,0.1s						
PB03	IPOC Station P	0.96	49	eP	Pb	06 22 53.4	+0.2
PB03				eS	Sb	06 23 06.2	+0.6
PB03				IAML		06 23 08.8	
	comp=Z,1µm,0.1s						
PB07	IPOC Station P	1.13	32	⇑iP	Pn	06 22 56.5	+0.6
PB07				eS	Sb	06 23 10.2	-0.2
PB07				IAML		06 23 13.1	
	comp=E,785nm,0.3s						
PB07	IPOC Station P	1.13	32	eP	Pn	06 22 55.8	-0.1
PB07				eS	Sb	06 23 10.3	-0.1
PB07				IAML		06 23 12.5	
	comp=Z,824nm,0.4s						
PB02	IPOC Station P	1.49	23	⇑iP	Pn	06 23 01.4	+0.6
PB02				eS	Sn	06 23 18.8	-0.7
PB02				IAML		06 23 20.0	
	comp=E,889nm,0.2s						
PB02	IPOC Station P	1.49	23	eP	Pn	06 23 00.8	+0.1
PB02				IAML		06 23 21.2	
	comp=Z,794nm,0.2s						
PB09	IPOC Station P	1.49	54	⇑iP	Pn	06 23 01.2	+0.3
PB09				eS	Sn	06 23 18.2	-1.5
PB09				IAML		06 23 19.7	
	comp=E,572nm,0.2s						
PB09	IPOC Station P	1.49	54	eP	Pn	06 23 00.6	-0.2
PB09				eS	Sn	06 23 19.1	-0.6
PB09				IAML		06 23 19.6	
	comp=Z,418nm,0.2s						
PATCX	Punta Patache	1.89	11	⇑iP	Pn	06 23 06.8	+0.5
PATCX	Punta Patache	1.89	11	eP	Pn	06 23 06.3	0.0
PB01	IPOC Station P	1.91	31	⇑iP	Pn	06 23 07.1	+0.6
PB01				eS	Sn	06 23 28.8	-1.1
PB01				IAML		06 23 29.3	
	comp=E,1µm,0.2s						
PB01	IPOC Station P	1.91	31	eP	Pn	06 23 06.4	0.0
PB14	IPOC Station P	1.93	177	eP	Pn	06 23 07.9	+0.9
PB14	IPOC Station P	1.93	177	eP	Pn	06 23 07.2	+0.2
AF01	San Pedro de A	2.19	97	eP	Pn	06 23 12.2	+1.7
PX03	IPOC Station P	2.42	20	eP	Pn	06 23 13.6	0.0
TA02	Huaiquique	2.44	9	eP	Pn	06 23 14.8	+1.1
TA02				IAML		06 23 43.6	
	comp=N,407nm,0.1s						
PB08	IPOC Station P	2.84	27	eP	Pn	06 23 20.4	+0.8
GO01	Chusmiza	3.26	23	eP	Pn	06 23 26.1	+0.7
AC01	Pan de Azucar	3.44	181	eP	Pn	06 23 27.3	-0.3
PB12	IPOC Station P	4.06	3	eP	Pn	06 23 36.4	+0.2

IDC 06 06:38:14.2±7.3**, 53°.42N**×**90°.71E, h0**km**, mbtmp2.6**/3**, ML2.3**/3**, Error ellipse: s-maj=80.5km s-min=29.9km az=45.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZALV	Zalesovo Beam	3.54	281	Pn	Pn	06 39 11.7	+1.3
	0.4nm,0.3s,baz=95,slow=15,SNR=4.4						
ZALV				Lg	Lg	06 40 05.8	
	0.3nm,0.3s,baz=104,slow=27,SNR=2.8						
	0.6nm,0.3s						
KURBB	Kurchatov Arra	8.02	254	Pn	Pn	06 40 11.8	-0.1
	baz=65,slow=14,SNR=2.9						
	0.2nm,0.3s						
MKAR	Makanchi Array	8.56	223	Pn	Pn	06 40 19.9	+0.6
	0.1nm,0.3s,baz=22,slow=11,SNR=4.4						
	0.1nm,0.3s						
I34MN	SONGINO INFRAS	11.44	113	I	I	07 42 40.0	
	baz=311,slow=327,SNR=0.8						

ASRS 06 06:39:13.0±2.5**, 53°.76N**×**91°.00E, h0**km**, M2.3**(MOS)**, The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia**

*IDC **06** 06:42:16.3±2.1, 7°.25S×129°.09E, h163km±25km, mb3.0/2, mbtmp4.0/7, Error ellipse: s-maj=35.2km s-min=20.2km az=94.0*

*DJA **06** 06:42:18.4±0.4, 7°S±5°×12°9E±°, h145km±19km, M4.4/15, mB5.3/4, mb4.2/9, MLv4.4/15, Mw(mB)4.8/4*

ISC 06 06:42:15.2±0.8**, 7°.32S**±0°.06×**129°.04E**±0°.06**, h150**km**, n15,** σ3s68/22**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.33	107	P	Pn	06 42 59.8	+5.6
SAUI				S	Sn	06 43 32.9	+8.6
SOEI	Soe	5.31	243	P	Pn	06 43 36.4	+3.6
	0.5nm37nm,0.7s						
SOEI				S	Sn	06 44 37.1	+3.7
	0.5nm37nm,0.7s						
FAKI	Fak Fak	5.41	36	P	Pn	06 43 34.1	0.0
	0.2nm11nm,0.7s						
BATI	Baumata	6.04	241	P	Pn	06 43 45.5	+3.0
	49nm,0.4s,baz=78,slow=4.0,SNR=5.9						
BATI				S	Sn	06 44 49.5	-1.3
	55nm,0.3s,baz=36,slow=23,SNR=9.1						
BATI	Baumata	6.04	241	P	Pn	06 43 44.5	+2.0
	0.4nm51nm,0.5s						
SIJI	Sorong	6.78	19	P	Pn	06 43 52.5	+0.2
	12nm,0.2s,baz=131,slow=20,SNR=6.5						
SIJI				S	Sn	06 45 01.8	-6.7
	10.0nm,0.2s,baz=249,slow=23,SNR=7.2						
SIJI	Sorong	6.78	19	P	Pn	06 43 52.5	+0.2
	0.1nm868nm18nm,0.8s						
SWI	Sorong	6.78	19	P	Pn	06 43 51.9	-0.5
	0.2nm38nm,1.2s						
EDFI	Ende, Flores	7.42	258	P	Pn	06 44 03.5	+2.5
	0.0nm4.6nm,0.8s						
EDFI				S	Sn	06 45 25.4	+1.4
	0.0nm4.6nm,0.8s						
RKPI	Ransiki, Papua	7.71	42	P	Pn	06 44 05.8	+1.0
FITZ	Fitzroy Crossi	11.21	197	P	Pn	06 44 52.0	+0.8
	7.4nm,0.5s,baz=21,slow=11,SNR=31						
FITZ				S	Sn	06 46 50.0	-5.3
	3.8nm,0.4s,baz=180,slow=20,SNR=3.1						
WRA	Warramunga Arr	13.56	158	P	Pn	06 45 21.7	+0.1
	0.4nm,0.3s,baz=334,slow=13,SNR=14						
WRA				S	Sn	06 47 47.4	-4.3
	3.0nm,0.4s,baz=340,slow=22,SNR=14						
ASAR	Alice Springs	16.91	165	P	Pn	06 46 05.4	+2.3
	3.7nm,0.7s,baz=336,slow=10,SNR=45						
ASAR				S	S	06 49 05.3	-5.9
	0.3nm,0.5s,baz=335,slow=19,SNR=5.0						
MKAR	Makanchi Array	67.98	327	P	P	06 52 57.5	-0.5
	0.1nm,0.3s,baz=111,slow=8.0,SNR=4.9						
	0.1nm,0.3s						
KURBB	Kurchatov Arra	72.29	329	P	P	06 53 23.6	-0.6
	0.3nm,0.6s,baz=144,slow=4.5,SNR=2.3						
	0.3nm,0.6s						

*NEIC **06** 06:54:14.2±2.2, 7°.45S±0°.07×127°.59E±0°.09, h168km±9km, mb4.4/17, Error ellipse: s-maj=13.5km s-min=10.5km az=81.0*

*IDC **06** 06:54:14.8±1.4, 7°.63S×127°.40E, h172km±14km, mb3.6/10, mbtmp4.4/16, MS2.6/1, Error ellipse: s-maj=14.8km s-min=11.4km az=58.0*

ISC 06 06:54:13.7±0.5**, 7°.63S**±0°.06×**127°.51E**±0°.07**, h162**km**, n39,** σ1s81/43**, mb4.2**/16**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SOEI	Soe	3.83	236		Pn	06 55 15.4	+3.1
BATI	Baumata	4.58	236	P	Pn	06 55 23.0	+1.1
	133nm,0.4s,baz=253,slow=3.0,SNR=18						
BATI				S	Sn	06 56 14.3	-0.7
	241nm,0.5s,baz=243,slow=18,SNR=14						
BATI				LR	LR	06 57 03.4	
	comp=Z,74nm,19.1s,baz=182,slow=38						
MTN	Manton Dam	6.29	146		Pn	06 55 45.5	+1.1
FAKI	Fak Fak	6.65	46	Pn	Pn	06 55 47.7	-1.4
SIJI	Sorong	7.69	29	P	Pn	06 56 04.6	+1.6
	12nm,0.3s,baz=215,slow=22,SNR=12						
KNRA	Kununurra	8.09	171	Pn	Pn	06 56 08.3	0.0
FITZ	Fitzroy Crossi	10.56	190	P	Pn	06 56 41.2	+0.2
	4.7nm,0.3s,baz=14,slow=12,SNR=31						
FITZ				S	Sn	06 58 31.9	-6.2
	18nm,0.3s,baz=68,slow=21,SNR=10.0						
WB0	Warramunga Arr	13.79	152	Pn	Pn	06 57 22.3	-0.4
WRA	Warramunga Arr	13.92	152	P	Pn	06 57 23.9	-0.3
	20nm,0.5s,baz=329,slow=11,SNR=48						
WRA				S	Sn	06 59 48.9	-10
	17nm,0.8s,baz=330,slow=21,SNR=8.0						
MBWA	Marble Bar	15.41	208	P	P	06 57 45.0	+1.3
PSA00	Pilbara Seismi	15.71	207	P	Pn	06 57 46.2	-0.1
COEN	Coen	16.62	114	P	Pn	06 57 58.3	+0.7
COEN				IAmb	IAmb	06 57 60.0	
	comp=Z,21nm,0.7s						
AS31	Alice Springs	17.09	160	P	P	06 58 03.1	+0.8
AS31				IAmb	IAmb	06 58 07.1	
	comp=Z,14nm,0.7s						
ASAR	Alice Springs	17.09	160	P	Pn	06 58 04.2	+1.1
	comp=Z,20nm,0.4s,baz=337,slow=12,SNR=384						
ASAR				S	S	07 01 07.9	-4.4
	comp=Z,3.5nm,0.5s,baz=329,slow=16,SNR=8.4						
ASAR				ScP	ScP	07 05 55.6	-2.6
	comp=Z,1.5nm,0.7s,baz=353,slow=2.1,SNR=4.4						
SBUM	Sibu	18.24	303	P	Pn	06 58 15.3	-1.5
PMG	Port Moresby	19.52	97	P	P	06 58 29.8	+1.0
	comp=Z,7.2nm,0.3s,baz=257,slow=5.1,SNR=4.8						
CTA	Charters Tower	21.98	126	P	P	06 58 56.1	+1.2
	comp=Z,7.8nm,1.0s,baz=298,slow=9.0,SNR=9.1						
	comp=Z,7.8nm,1.0s						
CTAO	Charters Tower	21.98	126	P	P	06 58 56.0	+1.0
CTAO				IAmb	IAmb	06 58 57.4	
	comp=Z,11nm,1.1s						
FORT	Forrest	23.04	179	P	P	06 59 05.3	+0.6
FORT				IAmb	IAmb	06 59 07.5	
	comp=Z,13nm,0.8s						
MORW	Morawa	23.91	205	P	P	06 59 14.0	+1.3
MORW				IAmb	IAmb	06 59 15.4	
	comp=Z,7.8nm,0.7s						
NWAO	Narrogin (SRO)	26.92	199	P	P	06 59 40.0	+0.2
	comp=Z,9.6nm,0.9s,baz=28,slow=9.4,SNR=2.2						
	comp=Z,9.6nm,0.9s						
STKA	Stephens Creek	27.47	153	P	P	06 59 45.6	+0.9
	comp=Z,3.6nm,0.4s,baz=331,slow=9.9,SNR=13						
	comp=Z,3.6nm,0.4s						
CAN	Canberra	33.89	147	P	P	07 00 43.4	+2.2
CMAR	Chiang Mai Arr	38.29	313	P	P	07 01 18.5	-0.2
	comp=Z,1.1nm,0.3s,baz=142,slow=7.0,SNR=6.7						
	comp=Z,1.1nm,0.3s						
MAJO	Matsushiro	45.07	12	P	P	07 02 10.3	-3.3
MAJO				IAmb	IAmb	07 02 21.2	
	comp=Z,19nm,1.2s						
MJB9	Matsu-Tunnel	45.07	12	P	P	07 02 10.6	-3.0
MJB9				IAmb	IAmb	07 02 22.2	
	comp=Z,18nm,1.2s						
QRZ	Quartz Range	51.86	137	P	P	07 03 06.8	+1.3
EVN	Everest	52.89	314	P	P	07 03 13.2	-0.8
EVN				IAmb	IAmb	07 03 14.6	
	comp=Z,7.2nm,1.4s						
SONM	Songino Array	58.29	343	P	P	07 03 52.5	+1.0
	comp=Z,0.3nm,0.5s,baz=168,slow=6.2,SNR=2.8						
	comp=Z,0.3nm,0.5s						
MKAR	Makanchi Array	67.42	328	P	P	07 04 51.4	-0.4
	comp=Z,1.0nm,0.7s,baz=131,slow=7.7,SNR=10.0						
	comp=Z,1.0nm,0.7s						
BOOM	Boomskoye usch	68.47	321	P	P	07 04 57.7	-1.0
ARSB	Arslanbob	69.72	319	P	P	07 05 04.8	-1.6
ARSB				IAmb	IAmb	07 05 07.5	
	comp=Z,10nm,1.3s						
ZALV	Zalesovo Beam	71.07	335	P	P	07 05 13.1	-0.9
	comp=Z,0.8nm,0.4s,baz=107,slow=4.9,SNR=4.7						
	comp=Z,0.8nm,0.4s						
KURBB	Kurchatov Arra	71.77	330	P	P	07 05 17.7	-0.6
	comp=Z,0.9nm,0.7s,baz=134,slow=5.0,SNR=14						
	comp=Z,0.9nm,0.7s						
CRZF	Crozet Islands	74.62	224	P	P	07 05 37.3	+2.2
BVAR	Borovoye Array	77.29	329	P	P	07 05 50.1	0.0
	comp=Z,0.4nm,0.4s,baz=162,slow=6.1,SNR=3.4						
	comp=Z,0.4nm,0.4s						
QSPA	South Pole Qui	82.35	180	P	P	07 06 17.5	+0.3
	comp=Z,0.6nm,0.4s,baz=318,slow=12,SNR=2.4						
	comp=Z,0.6nm,0.4s						
QSPA	South Pole Qui	82.35	180	P	P	07 06 17.6	+0.3
LPAZ	La Paz	151.64	147	PKPbc	PKPbc	07 13 50.5	-0.2
	comp=Z,0.6nm,0.4s,baz=172,slow=3.7,SNR=4.7						

DJA 06 06:54:33.3±0.8**, 9°S**±4°×**12°0E**±°**, h70**km±11km**, M3.4**/7**, MLv3.4**/7**, Sumba region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WSI	Waingapu	0.62	192	P	Pn	06 54 48.1	+0.8
WSI				S	Sn	06 55 00.5	+2.8
WSI	Waingapu	0.62	192	P	Pn	06 54 48.0	+0.7
LBFI	Labuhan Bajo,	0.79	317	P	Pn	06 54 50.2	+1.0
LBFI	Labuhan Bajo,	0.79	317	P	Pn	06 54 49.7	+0.5
BASI	Baing, Sumba	1.16	173	P	Pn	06 54 53.9	0.0
BASI				S	Sn	06 55 10.0	+0.8
BASI	Baing, Sumba	1.16	173	P	Pn	06 54 53.1	-0.8
BASI				S	Sn	06 55 10.1	+0.9
WBSI	Waikabubak, Su	1.18	241	P	Pn	06 54 54.5	+0.4
WBSI				S	Sn	06 55 10.0	+0.4
WBSI	Waikabubak, Su	1.18	241	P	Pn	06 54 53.6	-0.5
EDFI	Ende, Flores	1.28	76	P	Pn	06 54 55.4	-0.1
EDFI				S	Sn	06 55 12.7	+0.5
EDFI	Ende, Flores	1.28	76	P	Pn	06 54 55.0	-0.5
MMRI	Maumere	1.83	77	P	Pn	06 54 56.5	-6.3
DBNI	Kabupaten Domp	2.17	285	P	Pn	06 55 06.9	-0.3
PLAI	Plampang	2.63	275	P	Pn	06 55 14.1	+0.6
BATI	Baumata	3.39	110	P	Pn	06 55 25.5	+1.7
BATI	Baumata	3.39	110	P	Pn	06 55 25.2	+1.4
TWSI	Taliwang, Sumb	3.52	275	P	Pn	06 55 27.4	+1.8

*IDC **06** 06:59:42.1±1.7, 31°.21N×129°.45E, h0km, mb3.5/4, mbtmp3.4/5, ML2.8/1, MS3.1/4, Error ellipse: s-maj=80.5km s-min=19.0km az=74.0*

*NIED **06** 06:59:42.9, 31°.12N×129°.27E, h18km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^14Nm; Mrr-2.36; Mθθ0.53; Mφφ1.83; Mrθ-1.86; Mθφ2.50; Mφr-0.76; Fault plane solution: M0 3.78000×10^14 NP1: φs189.00000°, δ37.00000°, λ-135.00000°. NP2: φs61.00000°, δ65.00000°, λ-62.00000°.*

*JMA **06** 06:59:42.9±0.1, 31°.1N±0°.2×129°.3E±0°.5, h18km±1km, MV3.9/38, SW OFF KYUSHU*

JMA Felt I J1 at SW OFF KYUSHU .

ISC 06 06:59:42.6±2.0**, 31°.15N**±0°.05×**129°.36E**±0°.06**, h6**km±14km**, n16,** σ0s96/19**, mb3.5**/4**, MS3.3**/3**, Kyushu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JKC	Kuchinoerabu	0.99	134	eP	Pg	07 00 01.8	+0.2
JKC				eS	Sb	07 00 15.7	+0.3
JSU	Suzuyama	1.00	69	eP	Pn	07 00 02.7	-0.4
JSU				eS	Sn	07 00 16.9	-0.6
JYAK	Yakushimahirau	1.34	132	eP	Pn	07 00 06.7	-1.1
JYAK				eS	Sb	07 00 24.4	-1.2
JNN	Nakanoshima	1.38	161	eP	Pn	07 00 07.5	-0.8
JZO	Okuchi	1.44	47	eP	Pb	07 00 09.6	-0.2
JTN	Tanegashima 3	1.48	109	P	Pn	07 00 09.6	0.0
JTN				eS	Sb	07 00 29.6	+0.2
JMTN	Minamitane	1.52	119	eP	Pn	07 00 10.3	+0.1
JMTN				eS	Sn	07 00 29.8	-0.6
JFU	Fukue jima 2	1.59	341	eP	Pn	07 00 10.3	-0.9
JFU				eS	Sn	07 00 30.5	-1.5
KSRS	Korea Array	6.40	350	Pn	Pn	07 01 17.4	+0.1
	0.2nm,0.3s,baz=171,slow=13,SNR=5.1						
KSRS				Lg	Lg	07 03 02.7	
	0.4nm,0.3s,baz=168,slow=31,SNR=6.6						
KSRS				LR	LR	07 03 33.9	
	comp=Z,31nm,19.0s,baz=195,slow=36						
	0.7nm,0.5s						
SONM	Songino Array	24.18	320	P	P	07 05 00.7	+0.9
	0.9nm,1.1s,baz=141,slow=9.3,SNR=1.5						
	0.9nm,1.1s						
SIJI	Sorong	31.90	176	LR	LR	07 16 57.8	
	comp=Z,18nm,19.9s,baz=120,slow=32						
BVAR	Borovoye Array	47.38	315	P	P	07 08 17.8	+0.5
	0.8nm,0.5s,baz=100,slow=8.1,SNR=5.8						
	0.8nm,0.5s						
WRA	Warramunga Arr	51.03	174	P	P	07 08 44.5	-1.0
	0.4nm,0.6s,baz=349,slow=7.6,SNR=3.0						
	0.4nm,0.6s						
ARTI	Arti	54.32	320	LR	LR	07 35 10.8	
	comp=Z,27nm,21.0s,baz=328,slow=39						
ASAR	Alice Springs	54.68	175	P	P	07 09 14.7	+2.2
	0.2nm,0.4s,baz=6.7,slow=14,SNR=4.9						
	0.2nm,0.4s						
MSVF	Nonsavu	67.44	129	LR	LR	07 33 49.4	
	comp=Z,59nm,21.3s,baz=65,slow=30						

*IDC **06** 07:24:06.8±1.0, 9°.79S×75°.36W, h0km, mb3.8/5, mbtmp3.8/11, ML3.1/5, MS2.8/3, Error ellipse: s-maj=27.9km s-min=16.4km az=60.0*

ISC 06 07:24:12.1±0.7**, 9°.83S**±0°.06×**75°.44W**±0°.10**, h41**km**, n12,** σ0s84/13**, mb3.6**/4**, Central Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NNA	Nana	2.55	213	Pn	Pn	07 24 50.4	-0.5
	30nm,0.3s,baz=23,slow=18,SNR=69						
NNA				Sn	Sn	07 25 21.1	+0.3
	23nm,0.3s,baz=149,slow=22,SNR=5.8						
	236nm,0.6s						
ATAH	Atahualpa	3.96	312	Pn	Pn	07 25 11.3	+0.6
	4.2nm,0.3s,baz=37,slow=4.5,SNR=34						
ATAH				Sn	Sn	07 25 55.0	-1.2
	2.7nm,0.3s,baz=114,slow=14,SNR=3.9						
ATAH				Lg	Lg	07 26 07.6	
	6.6nm,0.3s,baz=10,slow=20,SNR=5.1						
ATAH				LR	LR	07 26 26.4	
	comp=Z,58nm,19.1s,baz=130,slow=35						
	14nm,0.5s						
LPAZ	La Paz	9.59	133	Pn	Pn	07 26 28.1	0.0
	baz=293,slow=12,SNR=2.2						
LPAZ				Lg	Lg	07 29 08.4	
	0.1nm,0.3s,baz=166,slow=7.1,SNR=1.9						
	0.4nm,0.5s						
ROSC	El Rosal	14.62	4	Pn	Pn	07 27 36.9	+0.2
	0.8nm,0.3s,baz=237,slow=18,SNR=1.7						
ROSC				Lg	Lg	07 31 52.0	
	2.2nm,0.3s,baz=164,slow=23,SNR=2.1						
	5.1nm,0.4s						
SIV	San Ignacio	15.28	115	Pn	Pn	07 27 45.1	0.0
	0.9nm,1.0s,baz=274,slow=15						
SIV				LR	LR	07 34 31.0	
	comp=Z,25nm,21.6s,baz=289,slow=41						
SDV	Santo Domingo	19.20	15	P	P	07 28 30.9	-2.0
	0.2nm,0.3s,baz=240,slow=16,SNR=1.8						
	1.6nm,0.7s						
CPUP	Villa Florida	23.73	136	P	P	07 29 20.6	0.0
	2.1nm,0.7s,baz=295,slow=8.6,SNR=6.1						
	2.1nm,0.7s						
TXAR	Lajitas Array	47.50	326	P	P	07 32 44.2	+0.7
	0.4nm,0.9s,baz=135,slow=4.4,SNR=3.4						
	0.4nm,0.9s						
ULM	Lac du Bonnet	62.43	345	P	P	07 34 30.6	-0.2
	2.1nm,0.7s,baz=145,slow=5.9,SNR=3.2						
	2.1nm,0.7s						
DBIC	Dimbokro	72.19	80	LR	LR	08 06 08.2	
	comp=Z,20nm,18.0s,baz=184,slow=35						
YKA	Yellowknife Ar	78.20	343	P	P	07 36 07.4	+0.4
	0.4nm,0.9s,baz=125,slow=3.9,SNR=6.8						
	0.4nm,0.9s						
TORD	Torodi Ar. Bea	79.90	75	P	P	07 36 17.9	+0.5
	2.3nm,1.0s,baz=263,slow=7.2,SNR=5.9						
	2.3nm,1.0s						

*MOS **06** 07:29:13.6, 41°.58N×46°.57E, h8km, MPVA3.5*

*AZER **06** 07:29:13.9, 41°.53N×46°.51E, h13km, ml2.3*

*NORS **06** 07:29:14.2, 41°.58N×46°.54E, h9km, MPVA3.3*

*DRS **06** 07:29:14.0, 41°.52N×46°.51E, h24km*

ISC 06 07:29:14.5±0.9**, 41°.56N**±0°.02×**46°.52E**±0°.02**, h12**km±6km**, n30,** σ1s11/60**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZKTA	Zakatala	0.11	44	Pg	Pg	07 29 17.3	-0.2
ZKTA				Sg	Sg	07 29 19.6	-0.1
TLTR	Tlyarata	0.56	347	ePg	Pb	07 29 25.5	-0.9
TLTR				eSg	Sb	07 29 33.7	-0.7
SEKA	Sheki	0.62	124	Pg	Pg	07 29 26.2	-0.4
SEKA				Sg	Sn	07 29 37.1	-2.0
KMKR	Kumukh	0.71	37	i Pg	Pb	07 29 28.6	-0.4
KMKR				eSg	Sn	07 29 39.1	-2.6
GNBR	Gunib	0.89	22	i Pg	Pn	07 29 32.0	-0.9
GNBR				eSg	Sn	07 29 45.1	-0.8
AKT	Akhty	0.91	95	ePg	Pg	07 29 31.3	-0.8
AKT				eSg	Sb	07 29 43.8	-0.7
GANJ	Ganja	0.93	189	P	Pb	07 29 32.3	-0.2
GANJ				S	Sn	07 29 45.7	-0.9
XNZR	Khunzakh	0.99	8	ePg	Pn	07 29 34.3	-0.1
XNZR				eSg	Sn	07 29 48.4	-0.1
QZX	Qazax, Azerbai	1.00	240	P	Pn	07 29 34.1	-0.3
QZX				S	Sn	07 29 49.1	+0.6
GDB	GEDABAY	1.02	215	P	Pb	07 29 33.7	-0.5
GDB				S	Sg	07 29 48.0	+0.6
URKR	Urkarakh	1.03	54	ePg	Pn	07 29 35.0	+0.1
URKR				eSg	Sn	07 29 49.1	-0.2
ARKR	Arakani	1.10	18	i Pg	Pn	07 29 36.0	+0.2
ARKR				eSg	Sn	07 29 51.8	+0.8
BTLR	Botlikh	1.13	349	ePg	Pg	07 29 36.6	+0.5
BTLR				eSg	Sn	07 29 53.0	+1.4
QBL	Gabala	1.17	121	P	Pg	07 29 36.6	-0.3
QBL				S	Sn	07 29 53.7	+1.1
UNCR	Uncukul	1.17	10	i Pg	Pg	07 29 37.3	+0.3
UNCR				eSg	Sn	07 29 53.9	+1.2
KSMR	Kasumkent	1.21	87	ePg	Pg	07 29 37.7	0.0
KSMR				eSg	Sn	07 29 54.4	+0.8
SGKR	Sergokala	1.23	43	ePg	Pg	07 29 38.6	+0.4
SGKR				eSg	Sg	07 29 55.7	+1.4
XNQ	Khinaliq	1.28	107	P	Pb	07 29 38.1	-0.6
XNQ				S	Sg	07 29 58.4	+2.6
KRNR	Karanay	1.30	13	i Pg	Pg	07 29 39.5	0.0
KRNR				eSg	Sg	07 29 57.8	+1.4
QSAR	Qusar	1.31	91	P	Pg	07 29 39.2	-0.4
QSAR				S	Sg	07 29 55.9	-0.7
DVE	Vedeno	1.43	348	ePg	Pg	07 29 41.7	-0.2
DVE				eSg	Sg	07 30 01.5	+1.1
DRN	Derbent	1.43	70	ePg	Pg	07 29 41.6	-0.4
DRN				eSg	Sg	07 30 01.1	+0.6
DBC	Dubki	1.48	9	ePg	Pg	07 29 43.0	+0.1
DBC				eSg	Sg	07 30 03.8	+1.7
QUBA	Quba, Azerbaij	1.50	97	Pn	Pg	07 29 42.7	-0.5
QUBA				Sn	Sg	07 30 06.3	+3.7
AGDM	Agdam	1.52	163	Pn	Pn	07 29 41.4	-0.1
AGDM				Sn	Sg	07 30 04.4	+1.1
GUDG	Gudauri	1.77	301	ePg	Pg	07 29 47.9	-0.6
GUDG				eSg	Sg	07 30 13.1	+1.6
SIZA	Siyzn	1.85	104	Pn	Pb	07 29 48.0	-0.4
SIZA				Sn	Sg	07 30 14.3	+0.2
ATGJ	Altiaghaj	1.95	110	Pn	Pb	07 29 48.1	-1.9
ATGJ				Sg	Sg	07 30 18.7	+1.4
LACR	Lac	2.08	308	ePg	Pg	07 29 53.7	-0.8
LACR				eSg	Sg	07 30 21.9	+0.5
YRD	Yardimli	2.95	153	Pn	Pn	07 30 02.6	+1.2
YRD				Sn	Sn	07 30 38.5	+1.7

*IDC **06** 07:29:49.1±1.5, 10°.41S×118°.27E, h0km, mb3.7/4, mbtmp3.7/8, ML3.8/4, Error ellipse: s-maj=51.3km s-min=22.2km az=50.0*

ISC 06 07:29:55.3±1.1, **10°.37S**±0°.09×**118°.7E**±0°.1, **h51**km, **n8**, σ**2^{s}26**/11, **mb3.7**/4, **South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	4.92	89	Pn	Pn	07 31 07.9	+1.2
	3.9nm,0.3s,baz=245,slow=19,SNR=1.5						
BATI				Sn	Sn	07 32 02.2	-0.1
	baz=257,slow=18						
	13nm,0.3s						
KAPI	Kappang	5.43	11	Pn	Pn	07 31 14.7	+1.0
	4.0nm,0.3s,baz=188,slow=4.4,SNR=17						
KAPI				Sn	Sn	07 32 11.4	-3.4
	5.2nm,0.3s,baz=42,slow=23,SNR=7.3						
	20nm,0.5s						
FITZ	Fitzroy Crossi	10.23	139	Pn	Pn	07 32 19.9	+0.5
	0.5nm,0.3s,baz=309,slow=16,SNR=7.3						
FITZ				Sn	Sn	07 34 08.2	-4.5
	0.5nm,0.3s,baz=4.8,slow=23,SNR=7.1						
	1.1nm,0.3s						
ASAR	Alice Springs	19.65	134	P	Pn	07 34 23.9	+2.1
	0.1nm,0.3s,baz=301,slow=10,SNR=8.3						
	0.4nm,0.8s						
SONM	Songino Array	58.96	350	P	P	07 39 50.1	+0.5
	0.4nm,0.5s,baz=172,slow=6.9,SNR=3.6						
	0.4nm,0.5s						
MKAR	Makanchi Array	65.52	333	P	P	07 40 34.2	+0.8
	0.3nm,0.5s,baz=144,slow=7.6,SNR=5.0						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	70.05	334	P	P	07 41 01.5	-0.2
	0.2nm,0.5s,baz=141,slow=4.9,SNR=1.5						
	0.2nm,0.5s						
ZALV	Zalesovo Beam	70.20	340	P	P	07 41 02.2	-0.4
	0.7nm,0.4s,baz=160,slow=4.6,SNR=4.3						
	0.7nm,0.4s						

*IDC **06** 07:29:57.0±1.5, 4°.46S×139°.82E, h0km, mb3.6/1, mbtmp3.8/5, ML3.6/4, MS2.9/8, Error ellipse: s-maj=45.4km s-min=18.4km az=100.0*

*DJA **06** 07:29:57.6±0.5, 5°S±3°×14°0E±°, h10km, M4.7/9, mb4.9/3, MLv4.5/9*

ISC 06 07:29:59.6±0.9, **4°.61S**±0°.05×**140°.2E**±0°.2, **h27**km, **n15**, σ**1^{s}96**/13, **MS2.7**/4, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	2.00	358	P	Pn	07 30 32.3	+0.6
JAY	Jayapura	2.13	13	Pn	Pn	07 30 32.8	-0.7
	15nm,0.3s,baz=182,slow=8.7,SNR=17						
JAY				Sn	Sb	07 31 02.2	-1.4
	36nm,0.3s,baz=24,slow=20,SNR=6.2						
JAY				LR	LR	07 31 31.9	
	comp=Z,315nm,18.1s,baz=358,slow=45						
	53nm,0.4s						
JAY	Jayapura	2.13	13	P	Pn	07 30 32.4	-1.1
JAY				S	Sn	07 31 00.3	+1.1
SMPI	Sarmi	3.01	330	P	Pn	07 30 46.5	+0.9
MMPI	Merauke	3.83	178	P	Pn	07 30 57.4	+0.6
SIJI	Sorong	9.70	292	LR	LR	07 36 16.9	
	comp=Z,61nm,21.5s,baz=262,slow=41						
WRA	Warramunga Arr	16.29	200	Pn	Pn	07 33 45.6	-0.9
	0.4nm,0.3s,baz=16,slow=13,SNR=20						
WRA				Sn	Sn	07 36 41.7	-4.8
	0.3nm,0.3s,baz=16,slow=22,SNR=4.5						
WRA				Lg	Lg	07 38 32.4	
	0.1nm,0.3s,baz=19,slow=27,SNR=1.8						
	1.6nm,0.7s						
CTA	Charters Tower	16.46	160	Pn	P	07 33 54.0	+2.6
	0.1nm,0.3s,baz=333,slow=13,SNR=9.9						
CTA				Lg	Lg	07 38 46.0	
	0.1nm,0.3s,baz=70,slow=20,SNR=3.7						
	3.9nm,0.9s						
GUMO	Guam	18.66	14	LR	LR	07 42 16.3	
	comp=Z,32nm,18.7s,baz=54,slow=40						
ASAR	Alice Springs	19.91	197	P	Pn	07 34 31.6	+0.6
	0.1nm,0.3s,baz=19,slow=9.4,SNR=9.1						
ASAR				S	S	07 38 12.5	+0.5
	1.2nm,1.0s,baz=16,slow=26,SNR=3.4						
ASAR				Lg	Lg	07 40 23.8	
	0.1nm,0.3s,baz=18,slow=30,SNR=1.8						
ASAR				LR	LR	07 42 16.9	
	comp=Z,51nm,20.7s,baz=9.5,slow=37						
	3.3nm,0.6s						
KAPI	Kappang	20.41	268	LR	LR	07 42 15.2	
	comp=Z,28nm,19.4s,baz=84,slow=37						
STKA	Stephens Creek	27.16	177	LR	LR	07 47 50.8	
	comp=Z,41nm,20.9s,baz=26,slow=39						
KSRS	Korea Array	43.39	346	LR	LR	07 56 49.5	
	comp=Z,7.1nm,19.2s,baz=330,slow=37						
MA2	Magadan	64.53	6	LR	LR	08 05 59.0	
	comp=Z,6.3nm,21.8s,baz=310,slow=34						
MKAR	Makanchi Array	72.21	322	P	P	07 41 22.3	0.0
	0.3nm,0.6s,baz=123,slow=5.3,SNR=3.6						
	0.3nm,0.6s						

KRSC 06 07:30:04.1±1.4, **55°.39N**×**166°.07E**, **h31**km±11km, **Ml3.6**, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	0.20	197	eP	Pn	07 30 11.0	+0.1
BKI				eS	Sn	07 30 16.0	+0.9
KBTR	Krutoberegovo	2.01	295	eP	Pn	07 30 37.2	+1.4
KBTR				eS	Sb	07 31 02.3	-2.2
MKZ	Mys Kozlova	2.64	253	eP	Pb	07 30 48.0	-2.6
SPN	Mys Shipunski	4.23	240	eP	Pn	07 31 08.7	+2.4
SPN				eS	Sn	07 31 57.8	+3.3
SDLR	Sedlovina	4.71	246	eP	Pn	07 31 17.5	+4.5
SDLR				eS	Sn	07 32 12.6	+6.0
SMAR	Somma	4.76	246	eP	Pn	07 31 18.1	+4.2
KRER	Koryakskii	4.77	247	eP	Pn	07 31 18.8	+4.9
KRER				eS	Sn	07 32 14.2	+6.0
UGLR	Uglovaya	4.78	246	eP	Pn	07 31 18.9	+4.9
AVH	Avacha	4.79	247	eP	Pn	07 31 19.1	+4.9
AVH				eS	Sn	07 32 14.4	+5.8
KRX	Arik	4.79	248	eP	Pn	07 31 19.0	+4.8
KRX				eS	Sn	07 32 14.0	+5.3
KOK	Koryaka	4.83	247	eP	Pn	07 31 19.6	+4.8
KRMR	Karymshinskiy	5.33	244	eP	Pn	07 31 26.5	+5.0
KRMR				eS	Sn	07 32 26.8	+5.1
MTVR	Mutnovka	5.50	241	eP	Pn	07 31 28.6	+4.7
MTVR				eS	Sn	07 32 29.6	+3.6
GRL	Gorelyy	5.51	242	eP	Pn	07 31 28.9	+4.8
GRL				eS	Sn	07 32 31.5	+5.2
ASAK	Asacha	5.70	241	eP	Pn	07 31 31.8	+5.3
ASAK				eS	Sn	07 32 36.4	+5.6

*SJA **06** 07:38:41.6±0.7, 23°.92S×66°.65W, h235km±7km, ML3.6, MW3.4*

*GUC **06** 07:38:42.8±0.6, 23°.92S×66°.71W, h230km±10km, ML3.8*

ISC 06 07:38:40.3±1.3, **23°.96S**±0°.06×**66°.60W**±0°.06, **h250**km, **n26**, σ**1^{s}87**/31, **Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.25	127	eP	Pn	07 39 17.6	+0.5
SLA	San Lorenzo	1.25	127	eP	Pn	07 39 17.6	+0.5
SLA				eS	S	07 39 44.4	-1.6
HJA	Humahuaca	1.33	56	eP	Pn	07 39 17.6	-0.3
AF01	San Pedro de A	1.76	304	eP	Pn	07 39 21.5	+0.4
AF01	San Pedro de A	1.76	304	eP	Pn	07 39 21.4	+0.3
AF01				eS	S	07 40 00.0	+6.9
YJA	Yavi	2.04	30	eP	Pn	07 39 24.6	+0.9
YJA	Yavi	2.04	30	eP	Pn	07 39 24.6	+0.9
FSA	Cafayete	2.21	165	eP	Pn	07 39 25.9	+1.0
FSA				eS	S	07 39 58.0	-2.2
PB06	IPOC Station P	3.00	294	eP	Pn	07 39 33.5	+0.5
PB06				IAML		07 40 13.5	
	comp=E,180nm,0.3s						
PB06	IPOC Station P	3.00	294	eP	Pn	07 39 33.5	+0.5
PB06				eS	S	07 40 11.2	-3.4
PB06				IAML		07 40 13.0	
	comp=Z,87nm,0.3s						
PB09	IPOC Station P	3.25	311	eP	Pn	07 39 36.7	+0.9
PB09				IAML		07 40 21.5	
	comp=E,63nm,0.2s						
PB09	IPOC Station P	3.25	311	eP	Pn	07 39 36.8	+1.0
PB03	IPOC Station P	3.47	303	eP	Pn	07 39 38.6	+0.3
PB03	IPOC Station P	3.47	303	eP	Pn	07 39 38.7	+0.4
PB03				eS	S	07 40 20.0	-4.1
PB03				IAML		07 40 23.9	
	comp=Z,99nm,0.1s						
PB14	IPOC Station P	3.53	258	eP	Pn	07 39 39.6	+0.6
PB14	IPOC Station P	3.53	258	eP	Pn	07 39 39.0	0.0
AC02	Maricunga	3.66	218	eP	Pn	07 39 42.7	+2.0
AC02	Maricunga	3.66	218	eP	Pn	07 39 42.2	+1.5
PB07	IPOC Station P	3.76	306	eP	Pn	07 39 41.8	+0.2
PB07	IPOC Station P	3.76	306	eP	Pn	07 39 41.3	-0.3
PB01	IPOC Station P	3.94	317	eP	Pn	07 39 44.0	+0.4
PB01	IPOC Station P	3.94	317	eP	Pn	07 39 43.7	0.0
PB02	IPOC Station P	4.02	310	eP	Pn	07 39 44.7	+0.1
AC01	Pan de Azucar	4.23	238	eP	Pn	07 39 47.1	+0.3
PB08	IPOC Station P	4.48	328	eP	Pn	07 39 51.5	+1.2
PATCX	Punta Patache	4.53	313	eP	Pn	07 39 51.1	+0.5

*ASRS **06** 08:06:07.3±0.2, 50°.6N±1°.0×8°7E±°, h10km, MLh3.5/14, Error ellipse: s-maj=3.0km s-min=2.1km az=86.8, confirmed*

*NNC **06** 08:06:09.1±2.2, 50°.73N×87°.48E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=18.2km s-min=9.4km az=94.0*

ISC 06 08:06:08.8±0.8, **50°.60N**±0°.02×**87°.54E**±0°.03, **h10**km, **n22**, σ**1^{s}68**/40, **8C-9D**, **Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULGR	Ulagan, Altay	0.27	85	Pg	Pb	08 06 15.7	-0.2
ULGR				Sg	Sb	08 06 20.5	-0.1
AKAR	Aktash	0.28	169	Pg	Pg	08 06 13.8	-0.8
AKAR				Sg	Sg	08 06 17.5	-1.0
CHBI	Chibit, Altay	0.29	184	⇓Pg	Pg	08 06 13.5	-1.2
CHBI				Sg	Sg	08 06 16.6	-1.9
CUR	Chagan-Uzun	0.72	133	⇑Pg	Pb	08 06 22.7	-0.9
CUR				Sg	Sb	08 06 33.2	-0.4
DGZ	Jazzator, Alta	0.90	184	⇓Pg	Pg	08 06 24.6	-1.6
DGZ				Sg	Sg	08 06 35.5	-2.4
YALR	Yailyu, Altay	1.17	2	Pg	Pn	08 06 31.7	+0.4
YALR				Sg	Sn	08 06 47.1	-0.3
ARTR	Artybash	1.21	352	Pg	Pg	08 06 32.5	+0.4
ARTR				Sg	Sn	08 06 48.7	+0.4
TEL	Teeli	1.74	75	Pg	Pb	08 06 39.6	-1.3
TEL				Sg	Sg	08 07 06.1	+1.3
UKR	Ust'-Kan	1.79	282	Pg	Pg	08 06 41.1	-1.9
UKR				Sg	Sg	08 07 05.4	-0.8
ELT	Eltsovka	2.79	344	Pg	Pb	08 06 57.4	-1.2
ELT				Sg	Sg	08 07 36.6	-1.6
KALT2	Kaltan 2	2.81	357	Pg	Pg	08 07 02.9	+0.3
KALT2				Sg	Sg	08 07 40.4	+1.4
KIYZ	Kiyzas, Kuzbas	2.97	3	Pg	Pg	08 07 03.2	-2.5
KIYZ				Sg	Sg	08 07 42.5	-1.5
DJO	Djoy, Khakassi	3.17	45	Pg	Pg	08 07 08.8	-0.6
DJO				Sg	Sg	08 07 50.7	+0.2
VEH	Verkhnyaya Baz	3.17	32	Pg	Pg	08 07 07.8	-1.6
VEH				Sg	Sg	08 07 49.8	-0.7
LUZB	Luzhba, Kemero	3.18	15	Pg	Pg	08 07 14.3	+4.6
LUZB				Sg	Sg	08 07 49.1	-1.7
CERR	Cheremushki	3.30	45	Pg	Pg	08 07 11.2	-0.9
CERR				Sg	Sg	08 07 54.3	-0.5
ZAA0	Zalesovo Array	3.75	335	⇓Pg	Pb	08 07 13.1	-1.9
	1.8nm,0.5s						
ZAA0				⇑Lg	Lg	08 08 03.0	
	18nm,0.5s						
ARDR	Aradan	4.18	59	Pg	Pg	08 07 28.7	0.0
ARDR				Sg	Sg	08 08 23.1	+0.3
MK31	Makanchi Array	5.15	224	⇑Pn	Pn	08 07 30.1	+4.1
	2.6nm,0.5s,baz=45,slow=13,SNR=53						
MK31				⇑Sn	Sn	08 08 29.4	+3.9
	3.0nm,0.4s,baz=41,slow=22,SNR=5.3						
MK31				⇓Lg	Lg	08 08 55.0	
	10nm,0.7s,baz=42,slow=29,SNR=4.4						
MAKZ	Makanchi	5.29	226	⇓Pn	Pn	08 07 31.7	+3.9
	3.0nm,0.5s						
MAKZ				⇑Sn	Sn	08 08 32.1	+3.3
	7.2nm,0.6s						
MAKZ				⇑Lg	Lg	08 08 57.5	
	18nm,0.9s						
KURK	Kurchatov	5.67	275	⇓Pn	Pn	08 07 34.6	+1.6
	0.9nm,0.6s						
KURK				⇑Sn	Sn	08 08 42.2	+4.0
	1.8nm,0.7s						
KURK				⇓Lg	Lg	08 09 05.9	
	4.1nm,0.6s						
KURBB	Kurchatov Arra	5.73	274	⇑Pn	Pn	08 07 35.6	+1.6
	4.2nm,0.5s						
KURBB				⇓Sn	Sn	08 08 42.3	+2.6
	9.6nm,0.7s						
KURBB				⇓Lg	Lg	08 09 08.2	
	31nm,1.1s						

*ASRS **06** 08:30:07.0±1.3, 53°.76N×91°.10E, h0km, M3.2(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

NNC 06 08:30:17.5±3.2, **53°.83N**×**89°.93E**, **h0**km, **mb3.6**, **mpv3.3**, **7C-5D**, **Error ellipse: s-maj=24.9km s-min=23.2km az=173.0**, **Suspected Mining explosion.**, **Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	Kurchatov	7.60	250	⇑Pn	Pn	08 32 10.5	+1.0
	0.7nm,0.8s						
KURK				⇑Sn	Sn	08 33 35.7	-0.5
	5.9nm,1.2s						
KURK				⇑Lg	Lg	08 34 22.2	
	16nm,1.1s						
KURBB	Kurchatov Arra	7.70	250	⇑Pn	Pn	08 32 12.0	+1.3
	1.9nm,0.6s						
KURBB				⇓Sn	Sn	08 33 39.5	+1.0
	13nm,0.7s						
KURBB				⇑Lg	Lg	08 34 22.8	
	40nm,1.1s						
MK31	Makanchi Array	8.57	218	⇓Pn	Pn	08 32 20.5	-2.2
	0.4nm,0.5s,baz=34,slow=13,SNR=2.9						
MK31				⇑Sn	Sn	08 34 00.9	+1.0
	4.3nm,0.9s,baz=36,slow=25,SNR=2.8						
MK31				⇓Lg	Lg	08 34 47.6	
	14nm,1.1s,baz=26,slow=14,SNR=4.3						
MAKZ	Makanchi	8.67	219	⇑Pn	Pn	08 32 23.9	-0.2
	1.3nm,0.7s						
MAKZ				⇓Sn	Sn	08 34 05.9	+3.4
	3.5nm,1.0s						
MAKZ				⇓Lg	Lg	08 34 54.7	
	16nm,1.4s						

*IDC **06** 08:32:06.0±0.9, 19°.98S×66°.24E, h0km, mb4.2/9, mbtmp4.2/9, MS3.9/46, Error ellipse: s-maj=33.3km s-min=21.7km az=55.0*

*GCMT **06** 08:32:11.0±0.3, 19°.97S±0°.04×66°.15E±0°.02, h17km±1km, MW4.8/81, Moment Tensor Solution. s17,c18; s81,c105; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.10±.15; $M_{\theta\theta}$0.62±.10; $M_{\phi\phi}$1.48±.10; $M_{r\theta}$-0.01±.29; $M_{\theta\phi}$-0.97±.07; $M_{\phi r}$-0.08±.24; Best double couple: $M_0$2.10600×10^{16} NP1:ϕ_s146.00000°, δ44.00000°, λ-92.00000°. NP2: ϕ_s328.00000°, δ46.00000°, λ-88.00000°. Principal axes: T 2.1100, Plg1.0000°, Azm57.0000°; N -0.0030, Plg1.0000°, Azm147.0000°; P -2.1020, Plg88.0000°, Azm294.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 06 08:32:08.6±0.9, **20°.1S**±0°.2×**66°.6E**±0°.2, **h10**km, **n66**, σ**2^{s}76**/21, **mb4.3**/14, **MS3.9**/46, **Mauritius-Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	13.64	26	T	T	08 49 18.8	
	baz=205,slow=76						
H08S2	Diego Garcia H	13.64	26	T	T	08 49 19.3	
	baz=205,slow=76						
H08S3	Diego Garcia H	13.66	26	T	T	08 49 20.3	
	baz=205,slow=76						
H04N2	CROZET ISLANDS	28.69	202	T	T	09 08 11.5	
	baz=30,slow=75,SNR=28						
H04N1	CROZET ISLANDS	28.69	202	T	T	09 08 14.1	
	baz=30,slow=75,SNR=25						
H04N3	CROZET ISLANDS	28.71	202	T	T	09 08 09.5	
	baz=30,slow=75,SNR=21						
PALK	Pallekele	30.55	28	LR	LR	08 47 54.4	
	comp=Z,272nm,19.4s,baz=209,slow=31						
KMBO	Kilima Mbogo	34.34	300	LR	LR	08 50 23.6	
	comp=Z,157nm,19.9s,baz=101,slow=32						
LSZ	Lusaka	36.85	271	LR	LR	08 52 22.2	
	comp=Z,272nm,21.0s,baz=143,slow=33						
LBTB	Lobatse	38.07	255	LR	LR	08 53 34.2	
	comp=Z,222nm,18.2s,baz=88,slow=34						
BOSA	Boshof	38.45	249	LR	LR	08 52 44.3	
	comp=Z,172nm,19.4s,baz=41,slow=32						
FURI	Furi	39.82	314	LR	LR	08 54 13.0	
	comp=Z,166nm,19.7s,baz=155,slow=34						
MBAR	Mbarara	40.08	295	LR	LR	08 53 42.3	
	comp=Z,122nm,19.9s,baz=113,slow=33						
LEM	Lembang	41.89	77	LR	LR	08 53 35.7	
	comp=Z,169nm,21.8s,baz=210,slow=31						
SUR	Sutherland	42.55	244	LR	LR	08 54 39.3	
	comp=Z,323nm,18.4s,baz=98,slow=32						
TSUM	Tsumeb	46.03	262	LR	LR	08 58 03.6	
	comp=Z,332nm,18.9s,baz=154,slow=34						
NWAO	Narrogin (SRO)	46.67	117	LR	LR	08 56 17.8	
	comp=Z,174nm,21.5s,baz=165,slow=31						
MAW	Mawson	47.54	182	LR	LR	08 55 40.9	
	comp=Z,140nm,21.6s,baz=18,slow=30						
BRDH	Bariadhala	49.05	31	LR	LR	08 59 26.6	
	comp=Z,165nm,20.8s,baz=218,slow=33						
CMAR	Chiang Mai Arr	49.75	42	P	P	08 41 02.7	+1.2
	1.5nm,0.3s,baz=224,slow=7.6,SNR=7.0						
CMAR				LR	LR	08 59 23.0	
	comp=Z,200nm,20.2s,baz=225,slow=33						
	1.5nm,0.3s						
KAPI	Kappang	53.77	81	LR	LR	09 01 54.5	
	comp=Z,65nm,20.7s,baz=246,slow=33						
FITZ	Fitzroy Crossi	55.58	99	LR	LR	09 06 02.1	
	comp=Z,72nm,18.0s,baz=237,slow=36						
BATI	Baumata	55.73	89	LR	LR	09 01 19.5	
	comp=Z,102nm,21.2s,baz=244,slow=31						
EIL	Elat	58.13	327	LR	LR	09 02 56.3	
	comp=Z,80nm,22.0s,baz=245,slow=32						
ASF	Jabal al Asfar	59.26	331	LR	LR	09 04 54.1	
	comp=Z,66nm,19.6s,baz=195,slow=33						
ASAR	Alice Springs	62.04	107	P	P	08 42 30.8	+1.0
	1.7nm,0.8s,baz=269,slow=6.0,SNR=19						
ASAR				LR	LR	09 06 16.5	
	comp=Z,236nm,19.4s,baz=286,slow=33						
	1.7nm,0.8s						
AAK	Ala-Archa	62.85	7	LR	LR	09 07 14.8	
	comp=Z,81nm,19.8s,baz=192,slow=34						
WRA	Warramunga Arr	63.21	103	P	P	08 42 38.8	+1.2
	2.8nm,1.1s,baz=260,slow=5.7,SNR=10						
	2.8nm,1.1s						
GNI	Garni	63.32	341	LR	LR	09 08 16.0	
	comp=Z,38nm,19.7s,baz=158,slow=34						
GNI	Garni	63.32	341	P	P	08 42 38.8	+0.9
	8.7nm,0.6s						
DAV	Davao City (W)	63.97	71	LR	LR	09 09 24.7	
	comp=Z,47nm,18.7s,baz=172,slow=35						
SNAA	Sanae	64.62	199	LR	LR	09 07 50.6	
	comp=Z,94nm,18.1s,baz=352,slow=33						
SIJI	Sorong	65.97	82	LR	LR	09 09 29.2	
	comp=Z,36nm,21.9s,baz=130,slow=34						
BR104	Keskin Array S	66.99	333	P	P	08 43 04.1	+2.3
	2.3nm,1.0s						
BRTR	Keskin Array B	67.01	333	P	P	08 43 00.2	-1.7
	0.6nm,0.6s,baz=140,slow=9.7,SNR=5.8						
BRTR				LR	LR	09 10 54.0	
	comp=Z,31nm,19.0s,baz=116,slow=35						
	0.6nm,0.6s						
BR105	Keskin Array S	67.01	333	P	P	08 43 05.9	+4.0
	2.6nm,0.8s						
BR106	Keskin Array S	67.02	333	P	P	08 43 05.7	+3.7
	2.8nm,0.8s						
KBZ	Khabaz	67.14	342	LR	LR	09 11 60.0	
	comp=Z,23nm,19.4s,baz=196,slow=36						
STKA	Stephens Creek	67.26	117	LR	LR	09 08 05.7	
	comp=Z,122nm,21.5s,baz=210,slow=32						
MKAR	Makanchi Array	68.08	12	P	P	08 43 06.9	-1.5
	1.6nm,1.0s,baz=216,slow=6.0,SNR=7.5						
MKAR				LR	LR	09 11 21.6	
	comp=Z,73nm,21.1s,baz=116,slow=35						
	1.6nm,1.0s						
QSPA	South Pole Qui	70.00	180	P	P	08 43 20.8	+0.5
	2.3nm,0.9s,baz=252,slow=1.5,SNR=4.4						
QSPA				LR	LR	09 09 18.8	
	comp=Z,59nm,22.0s,baz=270,slow=32						
	2.3nm,0.9s						
EZN	Ezine	70.48	328	P	P	08 43 27.4	+4.1
	9.3nm,1.2s						
KURBB	Kurchatov Arra	71.20	8	P	P	08 43 25.8	-1.7
	4.1nm,0.2s,baz=202,slow=6.6,SNR=1.8						
KURBB				LR	LR	09 11 48.5	
	comp=Z,92nm,21.1s,baz=180,slow=34						
	4.1nm,0.2s						
VNDA	Vanda	71.65	167	LR	LR	09 11 09.4	
	comp=Z,70nm,19.7s,baz=256,slow=33						
BVAR	Borovoye Array	72.90	2	LR	LR	09 14 33.4	
	comp=Z,56nm,20.5s,baz=190,slow=35						
CTA	Charters Tower	74.02	106	LR	LR	09 14 11.3	
	comp=Z,112nm,18.5s,baz=239,slow=34						
MLR	Muntele Rosu	75.01	332	LR	LR	09 14 34.2	
	comp=Z,24nm,21.5s,baz=176,slow=34						
MLR	Muntele Rosu	75.01	332	P	P	08 43 54.7	+4.3
DBIC	Dimbokro	75.08	283	LR	LR	09 14 59.8	
	comp=Z,118nm,18.8s,baz=166,slow=34						
JOW	Kunigami	75.82	54	LR	LR	09 14 56.6	
	comp=Z,52nm,20.7s,baz=291,slow=34						
SONM	Songino Array	76.47	26	P	P	08 43 58.0	-0.7
	1.2nm,0.8s,baz=242,slow=6.4,SNR=5.0						
	1.2nm,0.8s						
KMPD	K-Podol'skiy	77.18	334	P	P	08 44 05.0	+2.5
KSV	Kosov	77.58	333	P	P	08 44 08.5	+3.8
KEST	Kesra	77.59	316	LR	LR	09 19 18.6	
	comp=Z,61nm,18.2s,baz=355,slow=37						
AKASG	Malin Array Be	77.81	337	P	P	08 44 02.7	-3.2
	0.4nm,0.4s,baz=140,slow=4.7,SNR=5.8						
	0.4nm,0.4s						
JNU	Nakatsue	81.00	50	LR	LR	09 19 36.7	
	comp=Z,108nm,19.4s,baz=220,slow=35						
KSRS	Korea Array	81.26	45	LR	LR	09 21 38.8	
	comp=Z,75nm,18.1s,baz=240,slow=36						
MDT	Midelt	85.95	307	LR	LR	09 25 35.6	
	comp=Z,46nm,18.2s,baz=58,slow=38						
PMSA	Palmer Station	87.34	199	LR	LR	09 15 25.5	
	comp=Z,96nm,20.7s,baz=153,slow=30						
JHJ	Hachijo jima 2	87.58	54	LR	LR	09 17 55.1	
	comp=Z,49nm,20.9s,baz=64,slow=31						
NRIK	Noril'sk	90.46	7	LR	LR	09 24 35.5	
	comp=Z,56nm,20.4s,baz=179,slow=35						
ASAJ	Asahikawa	94.21	44	LR	LR	09 29 08.2	
	comp=Z,43nm,18.1s,baz=140,slow=36						
RCBR	Riachuelo	99.66	260	LR	LR	09 24 57.2	
	comp=Z,33nm,19.1s,baz=76,slow=32						
YKA	Yellowknife Ar	137.64	1	PKP	PKPdf	08 51 28.9	-3.6
	0.2nm,0.9s,baz=2.1,slow=2.7,SNR=1.9						
ULM	Lac du Bonnet	146.86	339	PKPbc	PKPdf	08 51 46.9	-2.3
	3.0nm,0.7s,baz=359,slow=2.8,SNR=4.4						
TXAR	Lajitas Array	167.25	318	PKP	PKPdf	08 52 15.0	-0.6
	0.3nm,0.8s,baz=348,slow=1.2,SNR=4.1						
TXAR				PKPab	PKPab	08 53 18.3	-1.8
	0.6nm,1.0s,baz=26,slow=3.3,SNR=3.9						

*ASRS **06** 08:43:18.0±1.0, 54°.13N×87°.15E, h0km, M2.6(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 06 08:43:16.3±3.5, **54°.15N**×**87°.54E**, **h0**km, **mbtmp2.8**/2, **ML2.4**/2, **Error ellipse: s-maj=31.2km s-min=20.3km az=51.0**, **Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.62	264	I	I	08 55 50.0	
	baz=84,slow=341,SNR=1.3						
ZALV	Zalesovo Beam	1.62	264	Pn	Pn	08 43 45.2	-0.9
	2.2nm,0.3s,baz=81,slow=17,SNR=20						
ZALV				Lg	Lg	08 44 07.3	
	1.8nm,0.3s,baz=80,slow=28,SNR=4.8						
KURBB	Kurchatov Arra	6.55	241	Pn	Pn	08 44 54.6	+0.8
	0.1nm,0.3s,baz=55,slow=13,SNR=2.0						
	0.5nm,0.3s						
MKAR	Makanchi Array	8.09	207	Pn	Pn	08 45 16.4	+1.5
	0.1nm,0.3s,baz=30,slow=15,SNR=2.1						
	0.1nm,0.4s						

IDC 06 09:00:16.4±2.3, **54°.60N**×**83°.78E**, **h0**km, **mbtmp2.7**/2, **ML2.4**/2, **Error ellipse: s-maj=17.9km s-min=10.2km az=168.0**, **Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.89	137	I	I	09 05 50.0	
	baz=318,slow=332,SNR=2.4						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ZALV	**Zalesovo Beam**	**0.89**	**137**	Pg	Pg	09 00 33.1	-0.4
	1.5nm,0.3s,baz=319,slow=14,SNR=18						
ZALV				Lg	Lg	09 00 47.5	
	5.7nm,0.3s,baz=314,slow=30,SNR=17						
KURBB	**Kurchatov Arra**	**5.11**	**221**	Pn	Pn	09 01 34.6	+0.4
	0.1nm,0.3s,baz=41,slow=13,SNR=2.1						
KURBB				Sn	Sn	09 02 34.9	+1.2
	0.1nm,0.3s,baz=356,slow=25,SNR=1.7						
KURBB				Lg	Lg	09 02 58.3	
	0.1nm,0.3s,baz=40,slow=31,SNR=5.6						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**7.88**	**188**	Pn	Pn	09 02 11.3	-0.8
	0.1nm,0.3s,baz=11,slow=12,SNR=4.2						
MKAR				Sn	Sn	09 03 39.1	-2.8
	baz=12,slow=33,SNR=1.6						
MKAR				Lg	Lg	09 04 25.8	
	baz=12,slow=28,SNR=1.7						
	0.2nm,0.4s						

ASRS 06 09:00:54.0±2.5**, 55°.78N×85°.86E, h0**km**, M2.5**(MOS)**, The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022., Southwestern Siberia**

*ASRS **06** 09:04:59.0±2.1, 54°.70N×83°.73E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 06 09:05:01.6±1.6**, 54°.61N×83°.77E, h0**km**, mbtmp3.0**/3**, ML2.6**/3**, Error ellipse: s-maj=13.6km s-min=9.8km az=2.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.90**	**136**	I	I	09 10 20.0	
	baz=318,slow=326,SNR=1.7						
ZALV	**Zalesovo Beam**	**0.90**	**136**	Pg	Pg	09 05 18.7	-0.2
	1.4nm,0.3s,baz=316,slow=15,SNR=12						
ZALV				Lg	Lg	09 05 31.4	
	9.4nm,0.3s,baz=314,slow=29,SNR=50						
KURBB	**Kurchatov Arra**	**5.11**	**221**	Pn	Pn	09 06 20.1	+0.8
	0.2nm,0.3s,baz=43,slow=13,SNR=1.7						
KURBB				Lg	Lg	09 07 44.5	
	0.2nm,0.3s,baz=59,slow=34,SNR=2.2						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**7.88**	**187**	Pn	Pn	09 06 57.8	+0.4
	0.1nm,0.3s,baz=5.8,slow=13,SNR=6.7						
MKAR				Sn	Sn	09 08 26.1	-1.0
	0.1nm,0.3s,baz=14,slow=7.4,SNR=1.6						
MKAR				Lg	Lg	09 09 11.0	
	baz=12,slow=31,SNR=1.9						
	0.3nm,0.4s						
BVAR	**Borovoye Array**	**8.08**	**264**	Pn	Pn	09 06 58.4	-1.6
	0.1nm,0.3s,baz=66,slow=14,SNR=3.6						
	0.7nm,0.4s						

*MOS **06** 09:06:59.8, 42°.29N×46°.05E, h20km, MPVA3.8*
*NORS **06** 09:07:00.7, 42°.28N×46°.01E, h9km, MPVA3.8*
*DRS **06** 09:07:01.9, 42°.32N×46°.04E, h3km*
*AZER **06** 09:07:01.2, 42°.11N×45°.98E, h5km, ml2.0*

ISC 06 09:07:01.5±1.0**, 42°.30N**±0°.02×**46°.03E**±0°.02**, h12**km±8km**, n26, σ0**s**.87**/51**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLTR	**Tlyarata**	**0.31**	**128**	*i* Pg	**Pg**	**09 07 07.8**	**-0.1**
TLTR				*e*Sg	**Sg**	**09 07 12.5**	**+0.3**
BTLR	**Botlikh**	**0.39**	**21**	*i* Pg	**Pg**	**09 07 09.1**	**-0.3**
BTLR				*e*Sg	**Sg**	**09 07 14.7**	**0.0**
XNZR	**Khunzakh**	**0.56**	**64**	*i* Pg	**Pb**	**09 07 12.9**	**-0.4**
XNZR				*e*Sg	**Sb**	**09 07 21.6**	**+0.3**
DVE	**Vedeno**	**0.66**	**6**	*e*Pg	**Pg**	**09 07 14.2**	**-0.3**
DVE				*e*Sg	**Sb**	**09 07 24.1**	**-0.1**
GNBR	**Gunib**	**0.70**	**82**	*e*Pg	**Pb**	**09 07 15.1**	**-0.6**
GNBR				*e*Sg	**Sb**	**09 07 25.1**	**-0.2**
UNCR	**Uncukul**	**0.70**	**53**	*e*Pg	**Pg**	**09 07 15.1**	**-0.1**
UNCR				*e*Sg	**Sb**	**09 07 24.9**	**-0.5**
ARKR	**Arakani**	**0.78**	**67**	*e*Pg	**Pb**	**09 07 16.8**	**-0.2**
ARKR				*e*Sg	**Sb**	**09 07 27.9**	**+0.4**
ZKTA	**Zakatala**	**0.79**	**146**	P	**Pb**	**09 07 17.0**	**-0.3**
ZKTA				S	**Sb**	**09 07 27.6**	**-0.3**
KMKR	**Kumukh**	**0.81**	**101**	*i* Pg	**Pg**	**09 07 17.0**	**-0.3**
KMKR				*e*Sg	**Sb**	**09 07 28.0**	**-0.6**
KRNR	**Karanay**	**0.84**	**51**	*i* Pg	**Pg**	**09 07 17.5**	**-0.2**
KRNR				*e*Sg	**Sb**	**09 07 29.3**	**0.0**
GROC	**Groznyy**	**0.92**	**349**	*e*Pg	**Pb**	**09 07 19.5**	**+0.1**
GROC				*e*Sg	**Sn**	**09 07 33.9**	**+0.5**
DBC	**Dubki**	**0.93**	**39**	*i* Pg	**Pb**	**09 07 19.6**	**0.0**
DBC				*e*Sg	**Sb**	**09 07 32.9**	**+0.9**
BUJR	**Buynaksk**	**0.96**	**56**	*e*Pg	**Pb**	**09 07 19.7**	**-0.3**
BUJR				*e*Sg	**Sb**	**09 07 33.1**	**+0.4**
URKR	**Urkarakh**	**1.20**	**96**	*e*Pg	**Pb**	**09 07 23.8**	**-0.4**
URKR				*e*Sg	**Sn**	**09 07 40.1**	**-0.4**
SGKR	**Sergokala**	**1.22**	**82**	*e*Pg	**Pn**	**09 07 24.3**	**-0.1**
SGKR				*e*Sg	**Sn**	**09 07 41.0**	**+0.2**
QZX	**Qazax, Azerbai**	**1.33**	**202**	P	**Pb**	**09 07 26.2**	**-0.2**
QZX				S	**Sg**	**09 07 44.9**	**+0.5**
LACR	**Lac**	**1.39**	**293**	*e*Pg	**Pn**	**09 07 25.3**	**-1.4**
LACR				*e*Sg	**Sg**	**09 07 46.2**	**+0.1**
SEKA	**Sheki**	**1.40**	**141**	P	**Pg**	**09 07 28.8**	**+0.5**
SEKA				S	**Sg**	**09 07 50.9**	**+4.5**
AKT	**Akhty**	**1.51**	**122**	*e*Pg	**Pn**	**09 07 28.5**	**+0.1**
AKT				*e*Sg	**Sg**	**09 07 49.0**	**-1.2**
GDB	**GEDABAY**	**1.59**	**188**	P	**Pn**	**09 07 30.1**	**+0.5**
GDB				S	**Sg**	**09 07 52.3**	**-0.4**
KORR	**Kora**	**1.65**	**299**	*e*Pg	**Pb**	**09 07 31.4**	**-0.4**
KORR				*e*Sg	**Sb**	**09 07 53.7**	**+1.1**
GANJ	**Ganja**	**1.67**	**172**	P	**Pb**	**09 07 31.9**	**-0.2**
GANJ				S	**Sg**	**09 07 55.3**	**+0.2**
LSNR	**Lesken**	**1.90**	**302**	*e*Pg	**Pn**	**09 07 34.3**	**+0.6**
LSNR				*e*Sg	**Sb**	**09 07 59.1**	**-0.5**
DIGR	**Digorskoe uzhe**	**1.91**	**289**	*e*Pg	**Pn**	**09 07 34.9**	**+0.9**
DIGR				*e*Sg	**Sb**	**09 07 59.8**	**-0.3**
XNQ	**Khinaliq**	**1.94**	**125**	P	**Pg**	**09 07 38.3**	**-0.4**
AGDM	**Agdam**	**2.33**	**159**	P	**Pb**	**09 07 41.5**	**-2.0**
AGDM				S	**Sb**	**09 08 12.3**	**0.0**

*KRSC **06** 09:14:50.4±1.9, 48°.31N×156°.35E, h34km±33km, Ml4.8*
*MOS **06** 09:14:51.0±1.0, 48°.40N×155°.14E, h44km, mb4.3/17, Error ellipse: s-maj=9.5km s-min=3.5km az=76.6*
*SKHL **06** 09:14:52.4±0.2, 48°.30N×155°.40E, h60km±5km, mb5.1/3*
*IDC **06** 09:14:54.0±2.2, 48°.51N×154°.83E, h58km±19km, mb3.7/23, mbtmp4.1/30, ML4.2/7, MS3.6/35, Error ellipse: s-maj=16.2km s-min=10.6km az=136.0*
*NEIC **06** 09:14:54.2±1.3, 48°.54N±0°.09×154°.8E±0°.1, h53km±6km, mb4.4/58, Error ellipse: s-maj=14.5km s-min=9.7km az=138.0*

ISC 06 09:14:52.3±0.4**, 48°.35N**±0°.06×**155°.20E**±0°.05**, h43**km**, n430, σ1**s**.31**/433**, mb4.3**/64**, MS3.7**/33**, 6C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.41**	**14**	*e*PN	**Pn**	**09 15 28.7**	**-0.4**
SKR				*e*S	**Sn**	**09 15 55.0**	**-2.3**
SKR				pmax	pmax		
	comp=Z,100nm,0.4s						
SKR				smax	smax		
	comp=N,2μm,0.5s						
SKR				smax	smax		
	comp=E,3μm,0.7s						
SKR				MLR	MLR		
	comp=Z,2μm,13.0s						
SKR	**Severo-Kuril's**	**2.41**	**14**	*e*P	**Pn**	**09 15 29.3**	**+0.2**
SKR				*e*S	**Sn**	**09 15 55.6**	**-1.7**
SKR	**Severo-Kuril's**	**2.41**	**14**	*e*P	**Pn**	**09 15 28.7**	**-0.4**
SKR				AMB	AMB	09 15 31.4	
	comp=Z,370nm,0.3s						
SKR				*e*S	**Sn**	**09 15 55.8**	**-1.5**
SKR				A	A	09 16 03.9	
	comp=Z,2μm,0.6s						
SKR				A	A	09 16 03.9	
	comp=Z,1μm,0.6s						
PAU	**Pauzhetka**	**3.29**	**18**	PN	**Pn**	**09 15 41.7**	**+0.6**
PAU				S	**Sn**	**09 16 19.0**	**+0.1**
PAU	**Pauzhetka**	**3.29**	**18**	*e*P	**Pn**	**09 15 41.8**	**+0.6**
PAU				*e*S	**Sn**	**09 16 19.1**	**+0.1**
PAU	**Pauzhetka**	**3.29**	**18**	*e*P	**Pn**	**09 15 41.5**	**+0.3**
PAU				AMB	AMB	09 15 47.6	
	comp=Z,270nm,0.6s						
PAU				*e*S	**Sn**	**09 16 18.5**	**-0.5**
PAU				A	A	09 16 23.2	
	comp=Z,1μm,0.6s						
PAU				A	A	09 16 23.2	
	comp=Z,1μm,0.6s						
KDTR	**Khodutka, Kamc**	**3.92**	**27**	PN	**Pn**	**09 15 48.8**	**-1.1**
KDTR				S	**Sn**	**09 16 34.5**	**-0.1**
KDTR	**Khodutka, Kamc**	**3.92**	**27**	*e*P	**Pn**	**09 15 48.8**	**-1.1**
KDTR				*e*S	**Sn**	**09 16 34.6**	**-0.1**
KDTR	**Khodutka, Kamc**	**3.92**	**27**	*e*P	**Pn**	**09 15 48.8**	**-1.1**
MIPR	**Malaya Ipel'ka**	**4.05**	**14**	PN	**Pn**	**09 15 51.8**	**+0.1**
MIPR				S	**Sn**	**09 16 39.3**	**+1.4**
MIPR	**Malaya Ipel'ka**	**4.05**	**14**	*e*P	**Pn**	**09 15 51.8**	**+0.1**
MIPR				*e*S	**Sn**	**09 16 39.3**	**+1.4**
ASAK	**Asacha**	**4.39**	**22**	PN	**Pn**	**09 15 56.9**	**+0.5**
ASAK				S	**Sn**	**09 16 45.4**	**-0.8**
ASAK	**Asacha**	**4.39**	**22**	*e*P	**Pn**	**09 15 57.0**	**+0.5**
ASAK				*e*S	**Sn**	**09 16 45.5**	**-0.8**
MTVR	**Mutnovka**	**4.55**	**24**	PN	**Pn**	**09 15 58.6**	**-0.1**
MTVR				S	**Sn**	**09 16 49.2**	**-1.1**
MTVR	**Mutnovka**	**4.55**	**24**	*e*P	**Pn**	**09 15 58.7**	**-0.1**
MTVR				*e*S	**Sn**	**09 16 49.3**	**-1.1**
GRL	**Gorelyy**	**4.58**	**22**	PN	**Pn**	**09 15 59.5**	**+0.4**
GRL				S	**Sn**	**09 16 50.0**	**-1.2**
GRL	**Gorelyy**	**4.58**	**22**	*e*P	**Pn**	**09 15 59.6**	**+0.4**
GRL				*e*S	**Sn**	**09 16 50.0**	**-1.2**
RUS	**Russkaya**	**4.60**	**26**	PN	**Pn**	**09 15 58.5**	**-0.7**
RUS	**Russkaya**	**4.60**	**26**	*e*P	**Pn**	**09 15 58.6**	**-0.7**
RUS	**Russkaya**	**4.60**	**26**	*e*P	**Pn**	**09 15 58.5**	**-0.7**
APC	**Apacha**	**4.74**	**14**	PN	**Pn**	**09 16 03.4**	**+2.2**
APC	**Apacha**	**4.74**	**14**	*e*P	**Pn**	**09 16 03.4**	**+2.2**
KRMR	**Karymshinskiy**	**4.85**	**21**	PN	**Pn**	**09 16 04.3**	**+1.6**
KRMR				S	**Sn**	**09 16 58.0**	**+0.5**
KRMR	**Karymshinskiy**	**4.85**	**21**	*e*P	**Pn**	**09 16 04.3**	**+1.6**
KRMR				*e*S	**Sn**	**09 16 58.0**	**+0.5**
KRMR	**Karymshinskiy**	**4.85**	**21**	*e*P	**Pn**	**09 16 04.3**	**+1.6**
PEA0B	**Petropavlovsk-**	**5.02**	**17**		**Pn**	**09 16 06.1**	**+1.1**
PEA0B	**Petropavlovsk-**	**5.02**	**17**	PN	**Pn**	**09 16 06.1**	**+1.1**
PETK	**Petropavlovsk-**	**5.02**	**17**	P	**Pn**	**09 16 06.3**	**+1.3**
	comp=Z,11nm,0.3s,baz=166,slow=13,SNR=82						
PETK				S	**Sn**	**09 17 03.5**	**+1.8**
	comp=Z,13nm,0.5s,baz=131,slow=18,SNR=1.3						
PETK				LR	LR	09 18 19.3	
	comp=Z,850nm,18.9s,baz=180,slow=42						
	comp=Z,79nm,0.7s						
PETK	**Petropavlovsk-**	**5.02**	**17**		**Pn**	**09 16 06.1**	**+1.1**
PET	**Petropavlovsk**	**5.16**	**24**		**Pn**	**09 16 07.0**	**0.0**
PET	**Petropavlovsk**	**5.16**	**24**	PN	**Pn**	**09 16 06.9**	**0.0**
PET	**Petropavlovsk**	**5.16**	**24**	*e*P	**Pn**	**09 16 07.0**	**0.0**
PET				*e*S	**Sn**	**09 17 03.9**	**-1.3**
PET	**Petropavlovsk**	**5.16**	**24**	*e*P	**Pn**	**09 16 07.4**	**+0.4**
PET				AMB	AMB	09 16 15.2	
	comp=Z,80nm,0.4s						
PET				*e*S	**Sn**	**09 17 02.5**	**-2.7**
PET				A	A	09 17 15.0	
	comp=Z,160nm,0.4s						
PET				A	A	09 17 15.0	
	comp=Z,210nm,0.4s						
DALK	**Dalny**	**5.20**	**24**	PN	**Pn**	**09 16 07.2**	**-0.2**
DALK	**Dalny**	**5.20**	**24**	*e*P	**Pn**	**09 16 07.3**	**-0.2**
DALK				*e*S	**Sn**	**09 17 04.1**	**-1.9**
UGLR	**Uglovaya**	**5.38**	**24**	PN	**Pn**	**09 16 10.2**	**+0.2**
UGLR	**Uglovaya**	**5.38**	**24**	*e*P	**Pn**	**09 16 10.2**	**+0.2**
KOK	**Koryaka**	**5.40**	**22**	PN	**Pn**	**09 16 11.2**	**+0.9**
KOK	**Koryaka**	**5.40**	**22**	*e*P	**Pn**	**09 16 11.3**	**+0.9**
KOK				*e*S	**Sn**	**09 17 10.2**	**-1.0**
KOK	**Koryaka**	**5.40**	**22**	*e*P	**Pn**	**09 16 11.2**	**+0.9**
AVH	**Avacha**	**5.40**	**23**	PN	**Pn**	**09 16 11.4**	**+1.1**
AVH	**Avacha**	**5.40**	**23**	*e*P	**Pn**	**09 16 11.5**	**+1.1**
AVH				*e*S	**Sn**	**09 17 09.9**	**-1.4**
SMAR	**Somma**	**5.42**	**24**	PN	**Pn**	**09 16 11.1**	**+0.5**
SMAR	**Somma**	**5.42**	**24**	*e*P	**Pn**	**09 16 11.2**	**+0.5**
SMAR				*e*S	**Sn**	**09 17 10.9**	**-0.9**
KRER	**Koryakskii**	**5.44**	**23**	PN	**Pn**	**09 16 11.1**	**+0.1**
KRER	**Koryakskii**	**5.44**	**23**	*e*P	**Pn**	**09 16 11.2**	**+0.1**
KRER				*e*S	**Sn**	**09 17 11.0**	**-1.3**
SDLR	**Sedlovina**	**5.45**	**24**	PN	**Pn**	**09 16 10.4**	**-0.7**
SDLR	**Sedlovina**	**5.45**	**24**	*e*P	**Pn**	**09 16 10.4**	**-0.7**
SDLR				*e*S	**Sn**	**09 17 09.7**	**-2.8**
KRX	**Arik**	**5.46**	**22**	PN	**Pn**	**09 16 12.6**	**+1.4**
KRX	**Arik**	**5.46**	**22**	*e*P	**Pn**	**09 16 12.6**	**+1.4**
NLC	**Nalytchevo**	**5.49**	**27**	PN	**Pn**	**09 16 09.6**	**-1.8**
NLC	**Nalytchevo**	**5.49**	**27**	*e*P	**Pn**	**09 16 09.7**	**-1.8**
NLC				*e*S	**Sn**	**09 17 09.0**	**-4.2**
NLC	**Nalytchevo**	**5.49**	**27**	*e*P	**Pn**	**09 16 09.6**	**-1.8**
GNL	**Ganaly**	**5.62**	**17**	PN	**Pn**	**09 16 14.4**	**+1.1**
GNL	**Ganaly**	**5.62**	**17**	*e*P	**Pn**	**09 16 14.4**	**+1.1**
SPN	**Mys Shipunski**	**5.65**	**31**	PN	**Pn**	**09 16 12.5**	**-1.1**
SPN	**Mys Shipunski**	**5.65**	**31**	*e*P	**Pn**	**09 16 12.5**	**-1.1**
SPN	**Mys Shipunski**	**5.65**	**31**	*e*P	**Pn**	**09 16 12.5**	**-1.1**
KUR	**Kuril'sk**	**5.92**	**241**	*e*P	**Pn**	**09 16 20.2**	**+2.8**
KII	**Karymskiy**	**6.28**	**24**	PN	**Pn**	**09 16 21.7**	**-0.7**
KII	**Karymskiy**	**6.28**	**24**	*e*P	**Pn**	**09 16 21.7**	**-0.7**
KII				*e*S	**Sn**	**09 17 31.3**	**-1.5**
MKZ	**Mys Kozlova**	**7.43**	**31**	PN	**Pn**	**09 16 35.9**	**-2.0**
MKZ	**Mys Kozlova**	**7.43**	**31**	*e*P	**Pn**	**09 16 36.0**	**-2.0**
MKZ				*e*S	**Sn**	**09 17 55.0**	**-5.8**
MKZ	**Mys Kozlova**	**7.43**	**31**	*e*P	**Pn**	**09 16 35.9**	**-2.0**
ESO	**Esso**	**7.88**	**15**	PN	**Pn**	**09 16 45.9**	**+1.7**
ESO	**Esso**	**7.88**	**15**	*e*P	**Pn**	**09 16 46.0**	**+1.7**
KOZ	**Kozyrevsk**	**8.23**	**19**	PN	**Pn**	**09 16 50.9**	**+1.9**
KOZ	**Kozyrevsk**	**8.23**	**19**	*e*P	**Pn**	**09 16 51.0**	**+1.9**
SRDR	**Sredinnyy**	**8.44**	**17**	PN	**Pn**	**09 16 52.9**	**+1.0**
SRDR	**Sredinnyy**	**8.44**	**17**	*e*P	**Pn**	**09 16 52.9**	**+1.0**
YSS	**Yuzhno-Sakhali**	**8.52**	**265**	*e*PN	**Pn**	**09 16 56.2**	**+3.2**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS				MLR	MLR		
	comp=N,200nm,13.0s						
YSS				MLR	MLR		
	comp=Z,300nm,13.0s						
YSS	**Yuzhno-Sakhali**	**8.52**	**265**	*e*P	**Pn**	**09 16 56.6**	**+3.6**
YSS				*e*S	**Sn**	**09 18 28.8**	**+1.0**
TYV	**Tymovskoe**	**8.53**	**292**	*e*PN	**Pn**	**09 16 55.9**	**+2.8**
TYV				*e*S	**Sn**	**09 18 30.7**	**+2.8**
TYV				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TYV				pmax	pmax		
	comp=Z,300nm,4.3s						
TYV				smax	smax		
	comp=N,5.0nm,0.8s						
TYV	**Tymovskoe**	**8.53**	**292**	*e*P	**Pn**	**09 16 56.2**	**+3.1**
TYV				*e*S	**Sn**	**09 18 31.9**	**+4.0**
KBTR	**Krutoberegovo**	**9.14**	**28**	PN	**Pn**	**09 16 59.3**	**-2.2**
KBTR	**Krutoberegovo**	**9.14**	**28**	*e*P	**Pn**	**09 16 59.3**	**-2.2**
KBTR				*e*S	**Sn**	**09 18 36.9**	**-6.0**
OKH	**Okha**	**9.32**	**308**	*e*P	**Pn**	**09 17 07.7**	**+3.7**
BKI	**Bering**	**9.56**	**40**	PN	**Pn**	**09 17 05.0**	**-2.2**
BKI	**Bering**	**9.56**	**40**	*e*P	**Pn**	**09 17 05.1**	**-2.2**
BKI				*e*S	Sn	09 18 43.4	-10
JKA	**Kamikawa-asahi**	**9.71**	**249**		**Pn**	**09 17 10.1**	**+0.8**
JKA	**Kamikawa-asahi**	**9.71**	**249**	*e*P	**Pn**	**09 17 10.1**	**+0.8**
ASAJ	**Asahikawa**	**9.71**	**249**	P	**Pn**	**09 17 08.6**	**-0.7**
	comp=N,0.7nm,0.3s,baz=76,slow=17,SNR=9.2						
	comp=N,9.9nm,0.7s						
ASAJ	**Asahikawa**	**9.71**	**249**	PN	**Pn**	**09 17 10.1**	**+0.8**
NKL	**Nikolayevsk**	**10.37**	**303**	*e*P	**Pn**	**09 17 19.9**	**+1.6**
PALN	**Palana**	**11.12**	**13**	PN	**Pn**	**09 17 30.7**	**+2.3**
PALN	**Palana**	**11.12**	**13**	*e*P	**Pn**	**09 17 30.8**	**+2.3**
MA2	**Magadan**	**11.54**	**349**	P	**Pn**	**09 17 32.0**	**-2.2**
	comp=N,0.9nm,0.3s,baz=162,slow=8.4,SNR=21						
MA2				LR	LR	09 22 35.3	
	comp=N,249nm,18.1s,baz=160,slow=41						
	comp=N,8.5nm,0.6s						
MA2	**Magadan**	**11.54**	**349**		**Pn**	**09 17 32.9**	**-1.4**
MA2	**Magadan**	**11.54**	**349**	*ce*PN	**Pn**	**09 17 34.0**	**-0.2**
MA2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MA2	**Magadan**	**11.54**	**349**	*e*P	**Pn**	**09 17 34.0**	**-0.2**
SHEM	**Shemya Is, Ala**	**12.78**	**63**	LR	LR	09 23 53.5	
	comp=Z,21nm,19.0s,baz=282,slow=42						
SEY	**Seymchan**	**14.70**	**355**	P	**Pn**	**09 18 15.3**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=162,slow=11,SNR=20						
	comp=Z,0.8nm,0.4s						
SEY	**Seymchan**	**14.70**	**355**	*ce*P	**Pn**	**09 18 17.2**	**+0.1**
SEY				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SEY	**Seymchan**	**14.70**	**355**	*e*P	**Pn**	**09 18 17.2**	**+0.1**
KLR	**Kul'dur**	**15.47**	**282**	P	**Pn**	**09 18 24.8**	**-2.6**
	comp=Z,0.2nm,0.3s,baz=80,slow=12,SNR=9.2						
KLR				LR	LR	09 24 57.8	
	comp=Z,209nm,19.1s,baz=176,slow=40						
	comp=Z,0.3nm,0.2s						
KLR	**Kul'dur**	**15.47**	**282**	*ce*P	**Pn**	**09 18 27.7**	**+0.3**
KLR				pmax	pmax		
	comp=Z,3.0nm,1.7s						
KLR	**Kul'dur**	**15.47**	**282**	*e*P	**Pn**	**09 18 27.7**	**+0.3**
AMKA	**Amchitka**	**15.81**	**70**	Pn	**P**	**09 18 35.1**	**+0.2**
JYT	**Yasato**	**16.40**	**228**	Pn	**Pn**	**09 18 39.2**	**0.0**
USRK	**Ussuriysk Ar.**	**16.56**	**264**	P	**Pn**	**09 18 39.1**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=54,slow=11,SNR=1.4						
	comp=Z,2.9nm,0.7s						
VLA	**Vladivostok**	**17.07**	**261**	*i* P	**Pn**	**09 18 47.7**	**+0.1**
VLA				pmax	pmax		
	comp=Z,24nm,0.6s						
MAJO	**Matsushiro**	**17.18**	**233**	Pn	**Pn**	**09 18 48.2**	**-0.9**
MAJO	**Matsushiro**	**17.18**	**233**	P	**Pn**	**09 18 48.2**	**-0.9**
MAJO				pmax	pmax		
	comp=Z,12nm,1.1s						
MJAR	**Matsushiro Arr**	**17.18**	**233**	P	**Pn**	**09 18 43.8**	**-5.3**
	comp=Z,2.5nm,0.9s,baz=18,slow=12,SNR=5.0						
MJAR	**Matsushiro Arr**	**17.18**	**233**		**Pn**	**09 18 49.0**	**-0.1**
MJAR	**Matsushiro Arr**	**17.18**	**233**	P	**Pn**	**09 18 49.0**	**-0.1**
MJAR				pmax	pmax		
	comp=Z,5.0nm,1.4s						
MJB9	**Matsu-Tunnel**	**17.18**	**233**		**Pn**	**09 18 49.1**	**0.0**
HEH	**HeiHe**	**18.18**	**286**	*e*P	**Pn**	**09 19 03.2**	**+1.9**
HEH				pmax	pmax		
	comp=Z,14nm,1.1s						
ADK	**Adak**	**18.32**	**68**	P	**Pn**	**09 19 05.1**	**+2.2**
ADK	**Adak**	**18.32**	**68**	P	**Pn**	**09 19 05.1**	**+2.2**
ADK				pmax	pmax		
	comp=Z,86nm,1.2s						
YAK	**Yakutsk**	**19.81**	**323**	P	**P**	**09 19 16.3**	**-2.5**
	comp=Z,4.0nm,0.3s,baz=123,slow=17,SNR=5.7						
	comp=Z,23nm,0.5s						
YAK	**Yakutsk**	**19.81**	**323**	P	**P**	**09 19 16.5**	**-2.3**
YAK				IAmb	IAmb	09 19 20.8	
	comp=Z,27nm,0.8s						
YAK	**Yakutsk**	**19.81**	**323**	*e*P	**P**	**09 19 18.7**	**-0.1**
YAK				*e*S	**S**	**09 22 58.3**	**-1.1**
YAK				pmax	pmax		
	comp=Z,33nm,1.0s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.2s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.3s						
YAK				smax	smax		
	comp=E,55nm,3.4s						
YAK				smax	smax		
	comp=N,30nm,2.8s						
BILL	**Bilibino**	**20.52**	**12**		**P**	**09 19 25.4**	**-1.2**
BILL	**Bilibino**	**20.52**	**12**	*ce*P	**P**	**09 19 26.2**	**-0.3**
BILL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BILL	**Bilibino**	**20.52**	**12**	*e*P	**P**	**09 19 26.3**	**-0.3**
KSRS	**Korea Array**	**22.64**	**251**	P	**P**	**09 19 48.7**	**-0.8**
	comp=Z,4.0nm,0.9s,baz=53,slow=9.5,SNR=12						
	comp=Z,4.0nm,0.9s						
KS19	**Wonju Array Si**	**22.65**	**252**	P	**P**	**09 19 46.2**	**-3.4**
KS19				IAmb	IAmb	09 19 54.0	
	comp=Z,15nm,1.1s						
KSAR	**Wonju Array Be**	**22.67**	**251**	P	**P**	**09 19 46.3**	**-3.5**
KSAR	**Wonju Array Be**	**22.67**	**251**	P	**P**	**09 19 46.3**	**-3.5**
NIKH	**Nikolski High**	**23.08**	**65**	P	**P**	**09 19 57.0**	**+3.1**
NIKH	**Nikolski High**	**23.08**	**65**	P	**P**	**09 19 56.6**	**+2.7**
	baz=274						
GAMB	**Gambell**	**23.69**	**37**		**P**	**09 20 00.7**	**+1.1**
GAMB				IAmb	IAmb	09 20 02.4	
	comp=Z,10.0nm,0.9s						
GAMB	**Gambell**	**23.69**	**37**	P	**P**	**09 20 00.4**	**+0.7**
	baz=246,SNR=6.6						
JNU	**Nakatsue**	**23.76**	**239**	LR	LR	09 28 22.5	
	comp=Z,63nm,21.1s,baz=46,slow=34						
JSU	**Suzuyama**	**25.20**	**237**	P	**P**	**09 20 12.7**	**-1.1**
JSU				IAmb	IAmb	09 20 34.8	
	comp=Z,11nm,1.0s						
TNA	**Tin City**	**25.91**	**35**		**P**	**09 20 22.0**	**+2.2**
TNA				IAmb	IAmb	09 20 24.9	
	comp=Z,9.7nm,0.8s						
TNA	**Tin City**	**25.91**	**35**	P	**P**	**09 20 20.9**	**+1.1**
	baz=247,SNR=6.6						
FALS	**False Pass**	**26.20**	**60**	P	**P**	**09 20 24.5**	**+1.9**
	baz=274						
TIXI	**Tiksi**	**26.36**	**342**	P	**P**	**09 20 20.8**	**-3.1**
	comp=Z,1.4nm,0.4s,baz=147,slow=6.8,SNR=4.7						
	comp=Z,1.4nm,0.4s						
TIXI	**Tiksi**	**26.36**	**342**	P	**P**	**09 20 22.7**	**-1.2**
TIXI	**Tiksi**	**26.36**	**342**	*i* P	**P**	**09 20 24.2**	**+0.4**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TIXI	**Tiksi**	**26.36**	**342**	*e*P	**P**	**09 20 24.3**	**+0.4**
F14K	**Arctic Creek**	**26.49**	**36**	P	**P**	**09 20 26.0**	**+0.8**
	baz=249						
M13K	**Dall Lake**	**26.50**	**47**	P	**P**	**09 20 26.7**	**+1.4**
	baz=262						
ANM	**Nome**	**26.55**	**38**		**P**	**09 20 26.9**	**+1.1**
ANM				IAmb	IAmb	09 20 30.7	
	comp=Z,6.6nm,1.0s						
ANM	**Nome**	**26.55**	**38**	P	**P**	**09 20 26.9**	**+1.1**
ANM				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ANM	**Nome**	**26.55**	**38**	P	**P**	**09 20 26.8**	**+1.1**
	baz=252						
J14K	**Nanvaranak Lak**	**26.84**	**42**	P	**P**	**09 20 28.6**	**+0.3**
J14K	**Nanvaranak Lak**	**26.84**	**42**	P	**P**	**09 20 29.4**	**+1.1**
	baz=258						
L14K	**Kuka Creek**	**26.96**	**45**	P	**P**	**09 20 31.3**	**+1.9**
	baz=261						
F15K	**North Star Dit**	**27.22**	**36**	P	**P**	**09 20 32.6**	**+0.8**
	baz=251						
M14K	**Bethel**	**27.23**	**47**	P	**P**	**09 20 33.1**	**+1.4**
	baz=263						
G15K	**Niukluk**	**27.23**	**37**	P	**P**	**09 20 32.5**	**+0.7**
	baz=253						
N14K	**Kuskokwak Cree**	**27.27**	**49**	P	**P**	**09 20 32.7**	**+0.5**
	baz=265						
L15K	**Ungalak Mounta**	**27.58**	**45**	P	**P**	**09 20 34.9**	**-0.1**
	baz=262						
K15K	**Wolf Creek Mou**	**27.66**	**44**	P	**P**	**09 20 36.0**	**+0.3**
	baz=260						
M15K	**Kasigluk River**	**27.84**	**47**	P	**P**	**09 20 37.8**	**+0.5**
	baz=264						
H16K	**Elim**	**27.87**	**39**	P	**P**	**09 20 37.7**	**+0.2**
	baz=255						
C16K	**Lisburne Hills**	**27.96**	**30**	P	**P**	**09 20 37.8**	**-0.5**
	baz=245						
G16K	**Koyuk River**	**28.03**	**37**	P	**P**	**09 20 39.1**	**+0.2**
	baz=254						
N15K	**Kwethluk River**	**28.08**	**48**	P	**P**	**09 20 40.3**	**+0.8**
	baz=266						
O15K	**Ungalikthiuk R**	**28.16**	**50**	P	**P**	**09 20 40.9**	**+0.7**
	baz=268						
J16K	**Anvik River**	**28.27**	**42**	P	**P**	**09 20 41.6**	**+0.5**
	baz=260						
I17K	**Unalakleet**	**28.35**	**40**	P	**P**	**09 20 41.3**	**-0.5**
	baz=258						
D17K	**Noatak River**	**28.52**	**32**	P	**P**	**09 20 43.2**	**0.0**
	baz=249						
L16K	**Owhat River**	**28.54**	**45**	P	**P**	**09 20 43.9**	**+0.4**
	baz=264						
RDOG	**Red Dog Mine**	**28.71**	**31**	P	**P**	**09 20 44.7**	**-0.3**
	baz=248						
M16K	**Timber Creek**	**28.71**	**47**	P	**P**	**09 20 45.8**	**+0.7**
	baz=265						
G17K	**Kiwalik Mounta**	**28.75**	**37**	P	**P**	**09 20 45.6**	**+0.2**
	baz=256						
E17K	**Hotham Inlet**	**28.76**	**34**	P	**P**	**09 20 45.4**	**0.0**
	baz=252						
N16K	**Nishlik Lake**	**28.76**	**48**	P	**P**	**09 20 46.3**	**+0.7**
	baz=267						
F17K	**Baldwin Pennin**	**28.77**	**35**	P	**P**	**09 20 45.7**	**+0.2**
	baz=253						
C17K	**DeLong Mountai**	**28.78**	**31**	P	**P**	**09 20 45.7**	**+0.1**
	baz=248						
O16K	**Kokwok River B**	**29.06**	**50**	P	**P**	**09 20 48.7**	**+0.6**
	baz=269						
P16K	**Nushagak River**	**29.10**	**51**	P	**P**	**09 20 49.9**	**+1.4**
	baz=270						
F18K	**Selawik**	**29.43**	**35**	P	**P**	**09 20 52.0**	**+0.6**
	baz=255						
C18K	**Utukok River**	**29.52**	**31**	P	**P**	**09 20 53.3**	**+1.1**
C18K	**Utukok River**	**29.52**	**31**	P	**P**	**09 20 53.1**	**+0.8**
	baz=250						
G18K	**Tagagawik**	**29.64**	**37**	P	**P**	**09 20 53.7**	**+0.4**
	baz=257						
Q16K	**King Salmon**	**29.79**	**52**	P	**P**	**09 20 56.2**	**+1.6**
	baz=272						
L18K	**Granite Mounta**	**29.90**	**44**	P	**P**	**09 20 56.6**	**+1.0**
	baz=265						
R17L	**Mt. Peulik Vol**	**29.99**	**54**	P	**P**	**09 20 57.7**	**+1.2**

J18K **Innoko River** 30.02 42 P P 09 20 56.9 +0.2
baz=263
H11N2 **WAKE ISLAND Hy** 30.08 158 T T 09 52 42.9
baz=345,slow=76,SNR=80
H11N1 **WAKE ISLAND Hy** 30.10 158 T T 09 52 40.8
baz=345,slow=76,SNR=122
H11N3 **WAKE ISLAND Hy** 30.10 158 T T 09 52 52.7
baz=345,slow=76,SNR=66
A19K **Wainwright** 30.15 28 P P 09 20 58.4 +0.7
baz=247
Q17K **Contact Creek** 30.21 52 P P 09 20 59.9 +1.4
baz=273
F19K **Shaleruckik Mo** 30.21 35 P P 09 20 58.6 +0.4
baz=256
C19K **Lookout Ridge** 30.23 30 P P 09 20 59.9 +1.4
C19K IAmb IAmb 09 21 00.8
comp=Z,5.7nm,1.2s
C19K **Lookout Ridge** 30.23 30 P P 09 20 58.9 +0.4
baz=251
M18K **Stony River** 30.26 46 P P 09 20 59.9 +1.2
baz=268
G19K **Purcell Mounta** 30.32 37 P P 09 21 00.0 +0.7
G19K **Purcell Mounta** 30.32 37 P P 09 21 00.3 +1.0
baz=258
D19K **Kuna River** 30.54 32 P P 09 21 02.5 +1.3
D19K IAmb IAmb 09 21 16.2
comp=Z,8.2nm,1.3s
D19K **Kuna River** 30.54 32 P P 09 21 02.0 +0.8
baz=253
CHIR **Chirikof Islan** 30.55 57 P P 09 21 02.3 +0.9
baz=277
E19K **Redstone River** 30.57 34 P P 09 21 02.2 +0.7
baz=256
J19K **Poorman** 30.57 41 P P 09 21 01.9 +0.4
baz=263
Q18K **Katmai Hardscr** 30.66 52 P P 09 21 03.2 +0.8
baz=273
L19K **White Mountain** 30.76 45 P P 09 21 04.2 +1.1
baz=267
N19K **Bonanza Creek** 30.89 47 P P 09 21 05.6 +1.2
baz=270
O19K **Port Alsworth** 30.97 48 P P 09 21 06.0 +1.0
baz=271
F20K **Avaraart Lake** 31.05 35 P P 09 21 06.4 +0.8
baz=258
H20K **Anotleneega Mo** 31.10 38 P P 09 21 06.7 +0.6
baz=262
D20K **Etivluk River** 31.13 32 P P 09 21 06.8 +0.4
baz=255,SNR=5.2
E20K **Nigu River** 31.16 33 P P 09 21 07.4 +0.7
baz=256
H11S1 **WAKE ISLAND Hy** 31.20 159 T T 09 54 05.6
baz=345,slow=76,SNR=1345
H11S3 **WAKE ISLAND Hy** 31.21 159 T T 09 54 04.5
baz=345,slow=76,SNR=1803
H11S2 **WAKE ISLAND Hy** 31.22 159 T T 09 54 06.9
baz=345,slow=76,SNR=1212
B20K **Meade River** 31.33 29 P P 09 21 09.0 +0.9
baz=252
HHC **Hu-ho-hao-te** 31.61 273 *e*P P 09 21 11.2 +0.2
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,41nm,4.3s
HHC LR LR
comp=N,110nm,12.2s
HHC LR LR
comp=E,130nm,12.2s
HHC LR LR
comp=Z,94nm,12.1s
IMAR **Indian Mountai** 31.63 37 P P 09 21 12.2 +1.3
G21K **Allakaket** 31.81 36 P P 09 21 12.8 +0.4
baz=261
C21K **Knifeblade Rid** 31.89 31 P P 09 21 13.7 +0.7
baz=256
H21K **Melozitna Rive** 31.98 38 P P 09 21 14.6 +0.8
baz=264,SNR=5.1
B21K **Ikpikpuk River** 32.06 30 P P 09 21 14.9 +0.3
baz=255
SONM **Songino Array** 32.16 288 LR LR 09 35 23.6
comp=Z,129nm,19.2s,baz=22,slow=39
CAPN **Captain Cook N** 32.52 47 P P 09 21 20.2 +1.6
baz=273
D22K **Ayikyak River** 32.56 32 P P 09 21 19.5 +0.5
baz=258
H22K **Ishtalitna Cre** 32.59 38 P P 09 21 20.3 +1.1
baz=264
B22K **Teshekpuk Lake** 32.65 29 P P 09 21 20.1 +0.5
baz=256
E22K **Anaktuvuk Pass** 32.73 34 P 09 21 22.0 +1.6
E22K IAmb IAmb 09 21 23.5
comp=Z,6.3nm,0.9s
E22K **Anaktuvuk Pass** 32.73 34 P P 09 21 21.0 +0.5
baz=261,SNR=8.0
TLY **Talaya** 32.73 296 LR LR 09 35 51.0
comp=Z,122nm,18.8s,baz=70,slow=39
RC01 **Rabbit Creek A** 33.20 47 P P 09 21 25.2 +0.7
baz=273
COLD **Coldfoot** 33.21 35 P 09 21 25.5 +0.9
COLD IAmb IAmb 09 21 27.2
comp=Z,5.2nm,0.9s
COLD **Coldfoot** 33.21 35 P P 09 21 25.1 +0.5
baz=264,SNR=7.1
G23K **Bananza Creek** 33.22 36 P P 09 21 25.2 +0.5
baz=265
O22K **Cooper Landing** 33.24 48 P P 09 21 26.1 +1.2
baz=274,SNR=6.2
D23K **Nanushuk River** 33.28 32 P P 09 21 25.4 +0.2
baz=260
SEW **Seward** 33.40 48 P P 09 21 27.1 +0.8
baz=275
C23K **Itkillik River** 33.47 31 P P 09 21 27.8 +1.0
C23K IAmb IAmb 09 21 41.3
comp=Z,12nm,1.4s
C23K **Itkillik River** 33.47 31 P P 09 21 27.4 +0.6
baz=259
MCK **McKinley** 33.51 42 P P 09 21 28.0 +0.7
baz=270
E23K **Chandalar** 33.53 34 P P 09 21 27.6 +0.1
baz=263
TOLK **Toolik Lake Re** 33.63 33 P P 09 21 28.9 +0.6
baz=262
WAT1 **Susitna Watana** 33.69 43 P P 09 21 29.6 +0.7
baz=272
KNK **Knik Glacier** 33.80 46 P P 09 21 30.6 +0.8
baz=274
SML **Sawmill** 33.83 45 P P 09 21 31.3 +1.1
baz=274
E24K **Your Creek** 33.96 34 P P 09 21 31.7 +0.6
baz=264,SNR=6.9
COLA **College** 34.00 40 P P 09 21 32.5 +1.1
baz=269
H24K **Noodor Dome** 34.02 38 P P 09 21 32.4 +0.7
baz=268
C24K **Franklin Bluff** 34.10 31 P P 09 21 33.2 +0.9
baz=261
POKR **Poker Plat Res** 34.18 39 P P 09 21 34.1 +1.0
baz=269
DHY **Denali Highway** 34.22 43 P P 09 21 34.7 +1.1
baz=272
G24K **Hadweenzic Riv** 34.23 37 P P 09 21 34.4 +0.9
baz=267,SNR=6.8
HDA **Harding Lake** 34.38 41 P P 09 21 35.7 +0.9
baz=271
IL31 34.41 40 P P 09 21 35.9 +0.9
IL31 IAmb IAmb 09 21 51.7
comp=Z,5.1nm,1.4s
ILAR **Eielson Array** 34.41 40 P P 09 21 34.5 -0.6
comp=Z,1.2nm,0.8s,baz=263,slow=9.3,SNR=16
comp=Z,1.2nm,0.8s
ILAR **Eielson Array** 34.41 40 P P 09 21 36.0 +1.0
M24K **Tolsona, Glenn** 34.83 45 P P 09 21 38.8 0.0
baz=275
D25K **Kavik River** 34.86 32 P P 09 21 39.2 +0.2
baz=264
K24K **Donnelly Dome** 34.91 42 P P 09 21 39.9 +0.5
baz=273
PRP **Porcupine Dome** 34.98 39 P P 09 21 39.9 -0.3
baz=271
F25K **Christian Rive** 34.99 35 P P 09 21 40.0 -0.1
baz=268
KLU **Klutina** 35.00 46 P P 09 21 40.5 +0.2
baz=276
E25K **Arctic Village** 35.05 34 P P 09 21 40.3 -0.3
baz=267
J25K **Salcha River,** 35.06 40 P P 09 21 41.2 +0.5
baz=272

PAX **Paxson** 35.09 43 P P 09 21 41.7 +0.6
baz=274
EYAK **Cordova Ski Ar** 35.19 47 P P 09 21 42.1 +0.3
baz=277
RIDG **Independent Ri** 35.33 42 P P 09 21 43.8 +0.8
baz=274
BMAR **Burnt Mountain** 35.39 35 P P 09 21 45.5 +2.0
C26K **Camden Bay** 35.43 31 P P 09 21 44.1 +0.3
baz=265
G26K **Porcupine Rive** 35.69 36 P P 09 21 45.7 -0.4
baz=270
BMRM **Bremner River** 35.70 47 P P 09 21 46.8 +0.6
baz=278
SCRK **Sand Creek** 35.70 41 P P 09 21 46.3 +0.1
baz=274
GUMO **Guam** 35.71 197 LR LR 09 35 08.6
comp=Z,21nm,21.1s,baz=36,slow=34
C27K **Jago River** 35.83 32 P P 09 21 47.1 -0.1
baz=266
I26K **Coal Creek Min** 35.98 39 P P 09 21 49.3 +0.7
baz=273
L26K **Log Cabin Wild** 36.06 43 P P 09 21 50.2 +0.9
baz=276
M26K **Nabesna, AK** 36.28 44 P P 09 21 52.3 +1.0
baz=277
MCARA **McCarthy VSAT** 36.40 46 P P 09 21 52.8 +0.7
baz=278
CRQE **Cirque** 36.46 47 P P 09 21 53.3 +0.5
baz=279
E27K **Coleen River** 36.54 34 P P 09 21 53.6 +0.3
baz=270
I27K **Kandik River** 36.61 38 P P 09 21 54.2 +0.3
baz=274
H27K **Steamboat Moun** 36.61 37 P P 09 21 54.2 +0.2
baz=273
KNGR **Kungurtug, Tuv** 36.74 296 *i* P P 09 21 56.2 +0.9
KNGR pmax pmax
comp=Z,3.0nm,1.3s
L27K **Beaver Creek,** 36.74 43 P P 09 21 55.3 +0.2
baz=277
D27M **Malcolm River** 36.78 32 P P 09 21 55.3 -0.1
baz=270
M27K **Edge Creek, AK** 36.80 44 P P 09 21 55.9 +0.1
baz=278
MESA **MESA** 37.11 47 P P 09 21 58.9 +0.4
baz=281
F28M **Old Crow** 37.20 35 P P 09 21 59.0 0.0
baz=273
CTG **Chitna Glacier** 37.27 46 P P 09 22 00.8 +1.1
baz=280
I28M **Miner Creek** 37.32 39 P P 09 22 00.0 0.0
baz=276
YUK3 **Moose Creek** 37.55 45 P P 09 22 02.3 +0.1
baz=280
D28M **Stokes Point** 37.57 32 P P 09 22 01.9 -0.1
baz=272
DAWY **Dawson** 37.70 41 P P 09 22 03.6 +0.4
baz=278
O28M **Mount Upton** 37.86 46 P P 09 22 05.8 +0.9
baz=281
E29M **Blow River** 37.91 34 P P 09 22 05.5 +0.6
baz=274
PINM **Pinnacle** 37.96 47 P P 09 22 06.7 +1.2
baz=282
YUK8 **Steele Glacier** 37.97 45 P P 09 22 06.1 +0.3
baz=281
I29M **Ogilvie Camp,** 38.01 39 P P 09 22 05.5 -0.2
baz=277
NRIK **Noril'sk** 38.13 328 LR LR 09 38 35.0
comp=Z,46nm,19.2s,baz=110,slow=38
NRIK **Noril'sk** 38.13 328 *i* P P 09 22 07.3 +0.6
NRIK pmax pmax
comp=Z,1.0nm,1.0s
J29N **Klondike Camp** 38.16 40 P P 09 22 07.2 +0.1
baz=278
M29M **Somme Creek** 38.36 43 P P 09 22 08.7 -0.3
baz=281
L29M **L29M** 38.40 42 P P 09 22 08.9 -0.2
baz=280
EPYK **Eagle Plains** 38.54 37 P P 09 22 09.7 -0.5
baz=277
K29M **Barlow Dome** 38.55 41 P P 09 22 09.5 -1.0
baz=280
YUK6 **Outpost Mounta** 38.70 46 P P 09 22 11.4 -0.5
baz=283
F30M **Barrier River** 38.76 35 P P 09 22 11.7 -0.3
baz=276
I30M **Mount Dempster** 38.83 39 P P 09 22 12.2 -0.6
baz=279
J30M **Hart River** 38.95 40 P P 09 22 13.6 -0.2
baz=280
INK **Inuvik** 39.53 34 P P 09 22 19.4 +1.0
INK IAmb IAmb 09 22 39.1
comp=Z,3.6nm,1.1s
INK **Inuvik** 39.53 34 P P 09 22 19.4 +1.0
INK pmax pmax
comp=Z,4.0nm,1.1s
INK **Inuvik** 39.53 34 P P 09 22 17.8 -0.6
baz=278
F31M **Tsiigehtchic** 39.56 35 P P 09 22 18.7 0.0
baz=278
H31M **Peel River** 39.57 38 P P 09 22 18.8 -0.1
baz=280
N31M **Braeburn, Yuko** 39.80 44 P P 09 22 21.0 +0.1
baz=284
S31K **Pelican** 40.51 50 P P 09 22 27.4 +0.8
baz=288
SKAG **Skagway** 40.53 47 P P 09 22 27.1 +0.3
baz=286
R31K **City Hall, Gus** 40.62 49 P P 09 22 28.2 +0.6
baz=287
FARO **Faro, Yukon** 40.74 43 P P 09 22 30.5 +1.9
FARO IAmb IAmb 09 23 02.0
comp=Z,4.9nm,1.1s
FARO **Faro, Yukon** 40.74 43 P P 09 22 28.9 +0.3
baz=285
N32M **Quiet Lake** 41.14 44 P P 09 22 32.2 +0.3
baz=286
R32K **Eaglecrest** 41.28 49 P P 09 22 33.1 +0.1
baz=288
A36M **Sachs Harbour** 41.78 27 P 09 22 38.3 +1.4
A36M IAmb IAmb 09 22 40.7
comp=Z,7.0nm,0.8s
A36M **Sachs Harbour** 41.78 27 P P 09 22 36.6 -0.3
baz=280,SNR=6.0
R33M **Jennings River** 42.68 46 P P 09 22 44.0 -0.6
baz=290
C36M **Paulatuk** 42.72 31 P P 09 22 44.2 -0.3
baz=284
ZALV **Zalesovo Beam** 42.84 305 LR LR 09 40 54.7
comp=Z,58nm,21.0s,baz=70,slow=37
CRAG **Craig** 42.96 52 P P 09 22 47.4 +0.7
baz=292
WRAK **Wrangell Islan** 43.01 51 P P 09 22 47.1 0.0
baz=292
DGZ **Jazzator, Alta** 43.07 298 *i* P P 09 22 47.5 -0.4
DGZ pmax pmax
comp=Z,3.0nm,1.4s
S34M **Telegraph Cree** 43.10 49 P P 09 22 47.8 0.0
baz=291
DLBC **Deasy Lake** 43.46 48 P P 09 22 50.3 -0.6
baz=291
WTLY **Watson Lake, Y** 43.47 45 P P 09 22 50.3 -0.5
baz=290
V35K **Ketchikan** 43.81 52 P P 09 22 53.3 -0.2
baz=293
T35M **Bob Quinn** 43.88 50 P P 09 22 53.8 -0.4
baz=292
U35K **Hyder** 44.41 51 P P 09 22 58.0 -0.3
baz=294
WRGLY **Wrigley** 44.78 39 P P 09 23 01.1 -0.1
baz=291
WMQ **Urumqi** 45.67 291 *e*P P 09 23 09.4 +0.7
WMQ pP pP 09 23 20.2 -0.4
WMQ pmax pmax
comp=Z,11nm,0.9s
PZH **PanZhiHua** 46.64 262 P P 09 23 16.2 -0.3
MK31 **Makanchi Array** 47.47 297 *ce*P P 09 23 22.3 -0.3
MKAR **Makanchi Array** 47.47 297 P P 09 23 20.5 -2.1
comp=Z,1.4nm,0.7s,baz=64,slow=6.9,SNR=12
MKAR LR LR 09 44 32.8
comp=Z,84nm,19.0s,baz=98,slow=38
comp=Z,1.4nm,0.7s
MKAR **Makanchi Array** 47.47 297 P 09 23 20.6 -2.0
KURK **Kurchatov** 47.66 303 P P 09 23 22.2 -1.8
KURK **Kurchatov** 47.66 303 *i* P P 09 23 24.8 +0.8
KURK pmax pmax
comp=Z,2.0nm,0.9s

KURK **Kurchatov** 47.66 303 *e*P P 09 23 24.8 +0.8
KURBB **Kurchatov Arra** 47.76 303 P P 09 23 22.8 -1.9
comp=Z,1.3nm,0.7s,baz=67,slow=8.3,SNR=7.2
KURBB LR LR 09 44 15.7
comp=Z,75nm,19.8s,baz=176,slow=37
comp=Z,1.3nm,0.7s
YKAW3 **Yellowknife Wh** 48.76 38 P P 09 23 33.5 +1.2
YKAW3 IAmb IAmb 09 23 43.6
comp=Z,4.6nm,1.1s
YKA **Yellowknife Ar** 48.79 38 P P 09 23 32.3 -0.2
comp=Z,1.0nm,0.8s,baz=301,slow=8.5,SNR=13
comp=Z,1.0nm,0.8s
YKA **Yellowknife Ar** 48.79 38 P P 09 23 32.8 +0.2
RES **Resolute Bay** 48.86 19 LR LR 09 46 23.9
comp=Z,58nm,19.6s,baz=13,slow=39
BVAR **Borovoye Array** 50.94 309 P P 09 23 46.6 -2.4
comp=Z,1.5nm,0.6s,baz=51,slow=7.1,SNR=7.2
BVAR LR LR 09 47 14.6
comp=Z,96nm,18.2s,baz=49,slow=38
comp=Z,1.5nm,0.6s
BORK **Borovoye** 50.96 309 *i* P P 09 23 49.5 +0.3
BORK pmax pmax
comp=Z,1.0nm,0.9s
SPITS **Spitsbergen Ar** 51.28 350 P P 09 23 49.4 -1.9
comp=Z,3.8nm,0.9s,baz=1.3,slow=6.3,SNR=1.2
comp=Z,3.8nm,0.9s
TULEG **Thule** 52.27 12 P P 09 23 58.4 -0.2
SIJI **Sorong** 53.25 210 LR LR 09 43 09.2
comp=Z,23nm,21.7s,baz=276,slow=32
POIN **Pond Inlet** 53.75 17 P P 09 24 09.7 +0.2
POIN IAmb IAmb 09 24 19.8
comp=Z,4.2nm,1.1s
CMAR **Chiang Mai Arr** 54.12 257 P P 09 24 10.7 -2.3
comp=Z,0.9nm,0.3s,baz=33,slow=6.9,SNR=6.7
CMAR LR LR 09 48 20.4
comp=Z,42nm,19.1s,baz=170,slow=37
comp=Z,0.9nm,0.3s
CMAR **Chiang Mai Arr** 54.12 257 P P 09 24 12.1 -0.9
CMAR **Chiang Mai Arr** 54.12 257 *i* P P 09 24 12.8 -0.2
CMAR pmax pmax
comp=Z,1.0nm,0.3s
AAK **Ala-Archa** 54.39 296 LR LR 09 48 39.4
comp=Z,65nm,18.9s,baz=48,slow=37
BLKN **Baker Lake** 54.76 30 P P 09 24 17.7 +0.7
BLKN IAmb IAmb 09 24 19.1
comp=Z,5.1nm,0.8s
ARTI **Arti** 54.89 318 LR LR 09 51 51.3
comp=Z,30nm,18.5s,baz=46,slow=41
ARTI **Arti** 54.89 318 *i* P P 09 24 19.1 +1.0
ARTI pmax pmax
comp=Z,2.0nm,1.0s
ILON **Igloolik, Nuna** 55.39 21 P P 09 24 22.1 +0.7
ILON IAmb IAmb 09 24 23.7
comp=Z,3.4nm,0.9s
EVN **Everest** 55.61 275 P P 09 24 22.1 -2.4
EVN IAmb IAmb 09 24 24.8
comp=Z,2.0nm,0.8s
ARCES **ARCESS Array B** 56.80 341 LR LR 09 52 09.2
comp=Z,96nm,20.4s,baz=54,slow=40
PLID **Pearl Lake** 57.60 57 P P 09 24 39.7 +1.8
PLID IAmb IAmb 09 24 40.6
comp=Z,4.1nm,0.9s
ABKAR **Akbulak array** 58.48 310 P P 09 24 43.7 0.0
AKTO **Aktyubinsk** 58.71 312 LR LR 09 50 22.2
comp=Z,51nm,18.9s,baz=86,slow=36
SUMG **Summit** 58.99 5 P P 09 24 47.3 0.0
SUMG **Summit** 58.99 5 P P 09 24 47.3 0.0
SUMG pmax pmax
comp=Z,12nm,1.2s
FCC **Fort Churchill** 59.14 35 P P 09 24 49.2 +1.1
FCC IAmb IAmb 09 25 01.7
comp=Z,3.4nm,1.1s
FCC **Fort Churchill** 59.14 35 P P 09 24 49.2 +1.1
FCC pmax pmax
comp=Z,3.0nm,1.1s
NVAR **Mina Array Bea** 60.45 64 P P 09 24 57.5 -0.2
comp=Z,0.6nm,0.9s,baz=264,slow=5.5,SNR=3.5
comp=Z,0.6nm,0.9s
PDAR **Pinedale Array** 62.66 56 P P 09 25 13.5 +0.9
comp=Z,1.7nm,1.0s,baz=341,slow=2.3,SNR=10
comp=Z,1.7nm,1.0s
PDAR **Pinedale Array** 62.66 56 P P 09 25 13.7 +1.1
FRB **Frobisher Bay** 63.06 20 LR LR 09 54 43.2
comp=Z,57nm,19.4s,baz=320,slow=38
FINES **FINESS Array B** 63.18 335 P P 09 25 13.1 -2.2
comp=Z,1.7nm,0.8s,baz=38,slow=7.2,SNR=5.6
FINES LR LR 09 55 21.5
comp=Z,92nm,18.3s,baz=44,slow=39
comp=Z,1.7nm,0.8s
FINES **FINESS Array B** 63.18 335 P P 09 25 14.1 -1.3
FINES **FINESS Array B** 63.18 335 *i* P P 09 25 14.3 -1.1
FINES pmax pmax
comp=Z,2.0nm,0.8s
SFJD **Kangerlussuaq** 63.31 11 LR LR 09 55 35.4
comp=Z,48nm,18.4s,baz=6.0,slow=39
SFJD **Kangerlussuaq** 63.31 11 P P 09 25 16.3 +0.1
SFJD **Kangerlussuaq** 63.31 11 P P 09 25 16.3 +0.1
SFJD pmax pmax
comp=Z,8.0nm,0.9s
CCUT **Cedar City** 63.97 62 P P 09 25 23.1 +1.8
CCUT IAmb IAmb 09 25 36.2
comp=Z,2.9nm,1.1s
RDMU **Red Mountain** 64.13 57 P P 09 25 24.4 +2.2
RDMU IAmb IAmb 09 25 24.8
comp=Z,6.0nm,0.9s
RSSD **Black Hills** 64.71 51 P P 09 25 27.5 +1.5
RSSD **Black Hills** 64.71 51 P P 09 25 27.5 +1.5
RSSD pmax pmax
comp=Z,7.0nm,1.0s
OBN **Obninsk** 64.78 326 *i* P P 09 25 26.8 +0.9
OBN pmax pmax
comp=Z,5.0nm,0.8s
PV19 **Morning Glory** 66.00 59 P P 09 25 35.9 +1.5
PV19 IAmb IAmb 09 25 48.1
comp=Z,7.6nm,1.1s
NOA **NORSAR Array B** 67.15 342 P P 09 25 40.0 -1.2
comp=Z,0.5nm,0.7s,baz=27,slow=8.5,SNR=2.1
NOA LR LR 09 59 08.4
comp=Z,49nm,18.1s,baz=35,slow=40
comp=Z,0.5nm,0.7s
NOA **NORSAR Array B** 67.15 342 P P 09 25 40.0 -1.2
HFS **Hagfors** 67.44 340 P P 09 25 41.7 -1.2
comp=Z,0.5nm,0.3s,baz=343,slow=4.5,SNR=2.3
HFS LR LR 09 58 43.0
comp=Z,56nm,18.2s,baz=44,slow=39
comp=Z,0.5nm,0.3s
KNRA **Kununurra** 67.96 208 P P 09 25 47.2 +0.6
KNRA IAmb IAmb 09 25 47.3
comp=Z,5.9nm,1.1s
CTA **Charters Tower** 68.60 189 LR LR 09 52 18.4
comp=Z,24nm,21.9s,baz=34,slow=33
ANMO **Albuquerque** 69.80 60 *ce*P P 09 26 00.4 +2.1
ANMO pmax pmax
comp=Z,4.0nm,1.7s
WB0 **Warramunga Arr** 70.32 201 P P 09 26 00.6 -0.7
WB0 IAmb IAmb 09 26 05.2
comp=Z,7.0nm,1.4s
WRA **Warramunga Arr** 70.50 201 P P 09 26 02.1 -0.3
comp=Z,3.5nm,0.9s,baz=18,slow=6.6,SNR=13
comp=Z,3.5nm,0.9s
WRA **Warramunga Arr** 70.50 201 P P 09 26 00.3 -2.1
AKASG **Malin Array Be** 70.98 327 P P 09 26 02.6 -2.5
comp=Z,0.5nm,0.5s,baz=30,slow=6.2,SNR=1.9
AKASG LR LR 09 59 48.4
comp=Z,60nm,18.4s,baz=5.0,slow=38
comp=Z,0.5nm,0.5s
SCHQ **Schefferville** 71.27 24 P P 09 26 07.4 +0.6
comp=Z,3.5nm,1.0s,baz=306,slow=4.8,SNR=9.8
comp=Z,4.3nm,1.0s
SCHQ **Schefferville** 71.27 24 P P 09 26 07.7 +1.0
GNI **Garni** 72.56 311 LR LR 10 03 21.4
comp=Z,35nm,18.4s,baz=31,slow=40
AS31 **Alice Springs** 74.19 200 P P 09 26 24.2 -0.1
ASAR **Alice Springs** 74.19 200 P P 09 26 24.8 +0.4
comp=Z,2.0nm,1.0s,baz=10,slow=6.0,SNR=14
comp=Z,2.0nm,1.0s
ASAR **Alice Springs** 74.19 200 P P 09 26 25.0 +0.6
ASAR **Alice Springs** 74.19 200 P P 09 26 25.0 +0.6
STHS **Stebnicka Huta** 74.82 331 *eP* P 09 26 27.6 -0.2
STHS **Stebnicka Huta** 74.82 331 *eP* P 09 26 27.6 -0.2
BURAR **Bucovina Array** 75.01 328 P P 09 26 28.7 -0.4
EKA **Eskdalemuir Ar** 75.10 347 P P 09 26 27.8 -1.4
comp=Z,1.4nm,0.6s,baz=18,slow=5.4,SNR=9.6
comp=Z,1.4nm,0.6s
EKB **Eskdalemuir** 75.10 347 P P 09 26 29.5 +0.2
ESK **Eskdalemuir** 75.12 347 P P 09 26 29.4 0.0
ESK **Eskdalemuir** 75.12 347 P P 09 26 29.4 0.0

ESK				pmax	pmax		
	comp=Z,27nm,1.5s						
TX31	**Lajitas Ar. Si**	**75.48**	**62**	P	**P**	**09 26 33.5**	**+1.5**
TX31				IAmb	IAmb	09 26 34.1	
	comp=Z,3.7nm,0.9s						
TXAR	**Lajitas Array**	**75.48**	**62**	P	**P**	**09 26 33.3**	**+1.2**
	comp=Z,1.9nm,0.7s,baz=296,slow=4.1,SNR=28						
	comp=Z,1.9nm,0.7s						
TXAR	**Lajitas Array**	**75.48**	**62**	P	**P**	**09 26 33.5**	**+1.4**
TXAR	**Lajitas Array**	**75.48**	**62**	P	**P**	**09 26 33.5**	**+1.4**
LANS	**Liptovska Anna**	**75.62**	**332**	*e*P	**P**	**09 26 33.6**	**+1.1**
LANS	**Liptovska Anna**	**75.62**	**332**	*e*P	**P**	**09 26 33.6**	**+1.1**
TRQ	**Mont Tremblant**	**76.29**	**33**	P	**P**	**09 26 37.0**	**+0.7**
TRQ				IAmb	IAmb	09 26 37.2	
	comp=Z,8.4nm,1.1s						
VRAC	**Vranov**	**76.36**	**334**	LR	LR	10 03 01.4	
	comp=Z,78nm,19.9s,baz=11,slow=38						
MLR	**Muntele Rosu**	**76.55**	**326**	LR	LR	10 05 57.5	
	comp=Z,50nm,18.0s,baz=33,slow=40						
FCAR	**Ozark Folk Cen**	**76.93**	**50**	P	**P**	**09 26 40.7**	**+0.6**
GERES	**GERESS Array B**	**77.61**	**335**	P	**P**	**09 26 43.3**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=24,slow=7.5,SNR=2.8						
GERES				LR	LR	10 04 12.4	
	comp=Z,84nm,18.1s,baz=8.5,slow=38						
	comp=Z,0.6nm,0.5s						
BRTR	**Keskin Array B**	**78.17**	**318**	P	**P**	**09 26 46.6**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=64,slow=3.4,SNR=2.8						
	comp=Z,0.5nm,0.5s						
BRTR	**Keskin Array B**	**78.17**	**318**	P	**P**	**09 26 45.2**	**-2.0**
DAVOX	**Davos/Dischmat**	**80.55**	**337**	LR	LR	10 06 42.4	
	comp=Z,46nm,18.1s,baz=66,slow=39						
STKA	**Stephens Creek**	**80.79**	**192**	P	**P**	**09 27 02.3**	**+1.3**
	comp=Z,0.6nm,0.3s,baz=247,slow=4.6,SNR=2.0						
STKA				LR	LR	10 01 03.5	
	comp=Z,22nm,21.6s,baz=24,slow=34						
	comp=Z,0.6nm,0.3s						
STKA	**Stephens Creek**	**80.79**	**192**	P	**P**	**09 27 02.2**	**+1.2**
STKA				IAmb	IAmb	09 27 03.1	
	comp=Z,3.4nm,0.8s						
ASF	**Jabal al Asfar**	**82.73**	**311**	LR	LR	10 07 07.4	
	comp=Z,33nm,21.1s,baz=27,slow=38						
MURB	**Monte Urbino**	**83.03**	**334**	P	**P**	**09 27 11.5**	**-1.4**
NRCA	**Norcia**	**83.25**	**333**	P	**P**	**09 27 12.8**	**-1.3**
RAYN	**Ar Rayn**	**84.88**	**300**	P	**P**	**09 27 21.9**	**-0.8**
RAYN	**Ar Rayn**	**84.88**	**300**	P	**P**	**09 27 21.9**	**-0.8**
RAYN				pmax	pmax		
	comp=Z,1.0nm,0.8s						
EIL	**Elat**	**85.73**	**311**	LR	LR	10 09 10.8	
	comp=Z,49nm,19.2s,baz=7.5,slow=38						
ESDC	**Sonseca Array**	**90.42**	**344**	LR	LR	10 13 34.9	
	comp=Z,58nm,18.3s,baz=285,slow=39						
MBAR	**Mbarara**	**112.66**	**297**	*i* PKIKP	**PKiKP**	**09 33 26.1**	**+1.6**
H03N2	**Juan Fernandez**	**137.34**	**90**	T	T	12 07 07.0	
	baz=310,slow=77,SNR=59						
H03N1	**Juan Fernandez**	**137.36**	**90**	T	T	12 07 09.9	
	baz=310,slow=77,SNR=78						
H03N3	**Juan Fernandez**	**137.36**	**90**	T	T	12 07 11.3	
	baz=310,slow=77,SNR=72						
CPUP	**Villa Florida**	**146.44**	**61**	PKPbc	**PKPdf**	**09 34 27.6**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=278,slow=7.1,SNR=1.6						
CPUP	**Villa Florida**	**146.44**	**61**	PKPbc	**PKPbc**	**09 34 29.4**	**+0.9**
PLCA	**Paso Flores**	**146.93**	**94**	PKPbc	**PKPbc**	**09 34 30.2**	**+0.6**
	comp=Z,2.1nm,1.0s,baz=331,slow=3.1,SNR=4.6						
PLCA	**Paso Flores**	**146.93**	**94**	PKPbc	**PKPbc**	**09 34 31.0**	**+1.4**

*ATH **06** 09:36:37.8, 39°.03N×21°.92E, h16km, ML1.6/5, Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

THE 06 09:36:38.3±, **39°.0N**±0°.7×**21°.9E**±0°.5, **h14**km±1km, **M2.1**/8, **MLh2.1**/8, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVR	**Evrytania**	**0.13**	**220**	P	Pg	09 36 42.1	+0.1
EVR				S	Sg	09 36 44.8	+0.4
EVR	**Evrytania**	**0.13**	**220**	P	Pg	09 36 41.9	-0.1
EVR				S	Sg	09 36 44.8	+0.4
MAKR	**Makrakomi, Fth**	**0.17**	**90**	P	Pg	09 36 42.5	0.0
MAKR				S	Sg	09 36 45.8	+0.5
MAKR	**Makrakomi, Fth**	**0.17**	**90**	P	Pg	09 36 42.6	+0.1
MAKR				S	Sg	09 36 45.2	-0.1
AGG	**Agios Georgios**	**0.33**	**88**	P	Pg	09 36 44.9	-0.2
AGG				S	Sg	09 36 50.3	+0.6
AGG	**Agios Georgios**	**0.33**	**88**	P	Pg	09 36 44.8	-0.3
AGG				S	Sg	09 36 49.7	+0.1
ANX	**Ano Chora**	**0.42**	**179**	P	Pg	09 36 46.9	+0.1
ANX				S	Sb	09 36 53.4	-0.4
ANX	**Ano Chora**	**0.42**	**179**	P	Pg	09 36 46.9	+0.1
ANX				S	Sg	09 36 53.1	+0.6
PVO	**Paravola**	**0.50**	**217**	P	Pg	09 36 47.8	-0.4
PVO				S	Sb	09 36 57.0	+1.0
PVO	**Paravola**	**0.50**	**217**	P	Pg	09 36 48.5	+0.3
AMPL	**Ampelaki**	**0.55**	**261**	P	Pb	09 36 50.7	+0.9
AMPL	**Ampelaki**	**0.55**	**261**	P	Pg	09 36 49.1	-0.2
THL	**Klokotos Trika**	**0.56**	**8**	P	Pg	09 36 49.2	-0.1
THL				S	Sb	09 36 57.8	+0.1
THL	**Klokotos Trika**	**0.56**	**8**	P	Pg	09 36 48.7	-0.6
EFP	**Efpalio**	**0.59**	**181**	P	Pg	09 36 50.1	+0.3
EFP				S	Sg	09 36 56.2	-1.4
TETR	**Tetrakomo, Epi**	**0.60**	**304**	P	Pg	09 36 49.8	-0.3
TETR				S	Sb	09 36 59.0	0.0
TETR	**Tetrakomo, Epi**	**0.60**	**304**	P	Pg	09 36 49.8	-0.3
TRIZ	**Trizonia**	**0.66**	**169**	P	Pg	09 36 51.1	-0.1

*ATH **06** 09:36:46.3, 38°.90N×23°.14E, h12km, ML3.0/21, Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

THE 06 09:36:47.0, **38°.9N**±0°.7×**23°.2E**±0°.7, **h0**km±2km, **M2.9**/26, **MLh2.9**/26, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIDA	**Aidipsos**	**0.09**	**261**	P	Pg	09 36 49.1	+0.4
AIDA				S	Sg	09 36 50.9	+1.1
ATAL	**Atalanti**	**0.21**	**212**	P	Pg	09 36 51.3	+0.3
ATAL				S	Sg	09 36 54.5	+0.9
ATAL	**Atalanti**	**0.21**	**212**	P	Pg	09 36 51.2	+0.3
ATAL				S	Sg	09 36 54.5	+0.9
LKR	**Lokris**	**0.25**	**210**	P	Pg	09 36 52.0	+0.2
LKR				S	Sg	09 36 56.4	+1.4
LKR	**Lokris**	**0.25**	**210**	P	Pg	09 36 52.0	+0.2
LKR				S	Sg	09 36 56.0	+1.0
AXAR	**Agios Charalam**	**0.41**	**256**	P	Pg	09 36 54.5	-0.3
AXAR				S	Sg	09 37 00.2	+0.2
AXAR	**Agios Charalam**	**0.41**	**256**	P	Pg	09 36 54.4	-0.3
AXAR				S	Sg	09 37 00.9	+1.0
AXAR	**Agios Charalam**	**0.41**	**256**	P	Pg	09 36 54.5	-0.3
AXAR				S	Sg	09 37 00.3	+0.3
NEO	**Neokhori**	**0.44**	**6**	P	Pg	09 36 55.3	-0.1
NEO				S	Sg	09 37 02.7	+1.5
NEO	**Neokhori**	**0.44**	**6**	P	Pg	09 36 55.1	-0.3
NEO				S	Sg	09 37 01.1	-0.1
VOL2	**Volos**	**0.52**	**342**	P	Pg	09 36 56.5	-0.5
VOL2				S	Sg	09 37 03.5	-0.4
AOS2	**Alonissos-2**	**0.60**	**62**	P	Pg	09 36 58.1	-0.4
AOS2				S	Sg	09 37 06.4	+0.1
AOS	**Alonnisos**	**0.64**	**61**	P	Pg	09 36 58.5	-0.7
AOS				S	Sg	09 37 07.3	-0.1
DLFA	**Delphi**	**0.65**	**233**	P	Pg	09 36 58.4	-1.1
VIL2	**Platees**	**0.66**	**173**	P	Pg	09 36 59.8	+0.2
VIL2				S	Sb	09 37 11.4	+0.2
AGG	**Agios Georgios**	**0.67**	**284**	P	Pg	09 36 58.6	-1.2
AGG				S	Sg	09 37 09.4	+1.1
VILL	**Villia**	**0.71**	**170**	P	Pg	09 37 00.2	-0.4
VILL				S	Sb	09 37 12.6	-0.1
STFN	**Stefani**	**0.75**	**156**	P	Pg	09 37 01.3	-0.2
STFN				S	Sb	09 37 14.9	+1.1
STFN	**Stefani**	**0.75**	**156**	P	Pg	09 37 01.2	-0.2
STFN				S	Sb	09 37 12.7	-1.1
KYMI	**Kymi, Euboea I**	**0.77**	**107**	P	Pb	09 37 03.2	-0.1
KYMI	**Kymi, Euboea I**	**0.77**	**107**	P	Pg	09 37 01.4	-0.4
KYMI				S	Sg	09 37 12.8	+1.0
MAKR	**Makrakomi, Fth**	**0.82**	**281**	P	Pg	09 37 03.0	+0.3
MAGU	**Magoula**	**0.83**	**161**	P	Pg	09 37 02.8	-0.1
MAGU				S	Sb	09 37 16.4	+0.2
MAGU	**Magoula**	**0.83**	**161**	P	Pg	09 37 02.5	-0.5
MAGU				S	Sb	09 37 15.3	-0.8
LTK	**Loutraki**	**0.86**	**190**	P	Pg	09 37 02.8	-0.6
LTK				S	Sg	09 37 08.9	-5.6
LTK	**Loutraki**	**0.86**	**190**	P	Pg	09 37 02.4	-1.0
LTK				S	Sg	09 37 15.5	+1.0
KALE	**Kalithea**	**0.93**	**240**	P	Pg	09 37 01.7	-3.1
PTL	**Penteli**	**0.99**	**146**	P	Pb	09 37 07.2	+0.2
PTL	**Penteli**	**0.99**	**146**	P	Pg	09 37 06.1	+0.2
PTL				S	Sb	09 37 19.6	-0.9
ATH	**Athens Observa**	**0.99**	**154**	P	Pb	09 37 07.4	+0.4
ATH				S	Sb	09 37 21.6	+0.9
ATH	**Athens Observa**	**0.99**	**154**	P	Pg	09 37 06.2	+0.1
ATH				S	Sb	09 37 19.9	-0.8
DION	**Dionisos Attik**	**0.99**	**142**	P	Pb	09 37 07.2	+0.1
DION	**Dionisos Attik**	**0.99**	**142**	P	Pg	09 37 06.3	+0.2
DION				S	Sb	09 37 20.3	-0.5
NOAC	**Athens-Thissio**	**0.99**	**154**	P	Pb	09 37 06.7	-0.4
ANX	**Ano Chora**	**1.01**	**255**	P	Pg	09 37 06.5	+0.2
ANX	**Ano Chora**	**1.01**	**255**	P	Pg	09 37 05.5	-0.8
ANX				S	Sg	09 37 19.5	+0.1
ATHU	**Athens Univers**	**1.02**	**151**	P	Pg	09 37 07.0	+0.4
ATHU	**Athens Univers**	**1.02**	**151**	P	Pg	09 37 06.2	-0.5
AGEO	**AgiosGiorgios,**	**1.05**	**235**	P	Pg	09 37 07.2	+0.1
MG00	**Magoula, Dorid**	**1.05**	**245**	P	Pg	09 37 07.2	0.0
EVR	**Evrytania**	**1.06**	**273**	P	Pb	09 37 07.8	-0.4
SKY	**Skiros Island**	**1.08**	**89**	P	Pg	09 37 08.0	+0.2
AIOA	**Agios Ioannis,**	**1.10**	**232**	P	Pg	09 37 07.3	-0.7
ZIRI	**Ziria, Aigiali**	**1.10**	**240**	P	Pg	09 37 08.0	-0.2
TYRN	**Tyrnavos**	**1.11**	**320**	P	Pg	09 37 08.0	-0.3
THL	**Klokotos Trika**	**1.13**	**308**	P	Pg	09 37 08.1	-0.6
VLY	**Voula,Athens**	**1.13**	**154**	P	Pg	09 37 08.7	+0.1
VLY	**Voula,Athens**	**1.13**	**154**	P	Pg	09 37 08.6	-0.1
VLY				S	Sg	09 37 23.0	-0.2
GUR	**Goura**	**1.13**	**215**	P	Pg	09 37 09.0	+0.4
GUR	**Goura**	**1.13**	**215**	P	Pg	09 37 07.4	-1.3
GUR				S	Sg	09 37 23.8	+0.5
PAIG	**Paliouri**	**1.13**	**21**	P	Pg	09 37 08.7	+0.1
KLV	**Kalavryta, Ach**	**1.14**	**224**	P	Pb	09 37 09.6	0.0
KLV	**Kalavryta, Ach**	**1.14**	**224**	P	Pg	09 37 08.1	-0.8
KLV				S	Sg	09 37 23.5	-0.2
MET5	**Makryloggos,Me**	**1.25**	**173**	P	Pg	09 37 10.4	-0.6
MET2	**Kameni Chora,**	**1.26**	**174**	P	Pg	09 37 10.4	-0.7
MET6	**Megalochori,Me**	**1.28**	**173**	P	Pg	09 37 10.5	-1.1
KARY	**Karystos**	**1.30**	**129**	P	Pg	09 37 10.6	-1.3
PLG	**Polygyros**	**1.52**	**8**	P	Pn	09 37 12.2	-3.3
OUR	**Ouranopolis**	**1.60**	**23**	P	Pn	09 37 13.9	-2.6
HORT	**Hortiatis**	**1.73**	**358**	P	Pn	09 37 15.3	-3.1
LIA	**Limnos Island**	**1.88**	**56**	P	Pn	09 37 18.4	-1.9

ASRS 06 09:44:35.0±2.2, **54°.97N**×**88°.38E**, **h0**km, **M2.5**(MOS), **The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.**, **Southwestern Siberia**

IDC 06 09:45:10.1±3.0, **53°.79N**×**87°.36E**, **h0**km, **mbtmp2.9**/2, **ML2.5**/2, **Error ellipse: s-maj=26.4km s-min=15.7km az=63.0**, **Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.51**	**277**	I	I	09 56 20.0	
	baz=96,slow=329,SNR=2.7						
ZALV	**Zalesovo Beam**	**1.51**	**277**	Pg	Pn	09 45 36.2	-2.2
	0.8nm,0.3s,baz=97,slow=17,SNR=16						
ZALV				Lg	Lg	09 45 58.4	
	1.3nm,0.3s,baz=98,slow=30,SNR=5.5						
KURBB	**Kurchatov Arra**	**6.29**	**243**	Pn	Pn	09 46 44.8	+0.8
	0.1nm,0.3s,baz=58,slow=14,SNR=2.8						
KURBB				Lg	Lg	09 48 31.1	
	baz=61,slow=37,SNR=1.5						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**7.72**	**207**	Pn	Pn	09 47 05.2	+1.5
	0.1nm,0.3s,baz=21,slow=12,SNR=6.2						
MKAR				Sn	Sn	09 48 31.4	-0.4
	baz=22,slow=27,SNR=1.3						
	0.1nm,0.3s						

*RSNC **06** 09:47:33.5±0.0, 7°N±1°×7°3W±°, h146km±1km, M2.1, ML1.8, MLv2.4*

*FUNV **06** 09:47:37.1, 7°.00N×73°.47W, h5km, MW3.0, Presumed earthquake*

ISC 06 09:47:32.2±1.5, **6°.85N**±0°.03×**73°.23W**±0°.05, **h154**km±9km, **n21**, σ**1s.10**/41, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.26**	**169**	P	**Pn**	**09 47 53.2**	**-0.2**
BARC				S	**Sn**	**09 48 08.5**	**-1.0**
BRJC	**Barrancabermej**	**0.52**	**284**	P	**Pn**	**09 47 54.9**	**+0.9**
BRJC				S	**Sn**	**09 48 11.7**	**+1.0**
PAMC	**Pamplona, Colo**	**0.72**	**47**	P	**Pn**	**09 47 56.1**	**+0.3**
PAMC				S	**Sn**	**09 48 13.2**	**-0.6**
RUSC	**La Rusia**	**0.96**	**171**	P	**Pn**	**09 47 57.1**	**-0.5**
RUSC				S	**Sn**	**09 48 15.4**	**-1.5**
RUSC	**La Rusia**	**0.96**	**171**	*e*P	**Pn**	**09 47 57.5**	**-0.1**
RUSC				*e*S	**Sn**	**09 48 14.8**	**-2.1**
PTBC	**PUERTO BERRIO,**	**1.25**	**256**	P	**Pn**	**09 47 59.7**	**+0.1**
PTBC				S	**Sn**	**09 48 20.9**	**+0.4**
CAPV	**Capacho**	**1.36**	**42**	*e*P	**Pn**	**09 48 03.4**	**+2.6**
CAPV				*e*S	**Sn**	**09 48 23.1**	**+0.3**
OCAC	**Ocana**	**1.39**	**356**	P	**Pn**	**09 48 01.7**	**+0.7**
OCAC				S	**Sn**	**09 48 23.4**	**+0.2**
SPBC	**San Pablo de B**	**1.45**	**215**	P	**Pn**	**09 48 02.1**	**+0.5**
SPBC				S	**Sn**	**09 48 24.1**	**-0.1**
CHIC	**Chingaza**	**2.26**	**193**	P	**Pn**	**09 48 10.9**	**-0.1**
CHIC				S	**Sn**	**09 48 40.7**	**-0.2**
ROSC	**El Rosal**	**2.27**	**209**	P	**Pn**	**09 48 13.0**	**+1.9**
ROSC				S	**Sn**	**09 48 40.0**	**-1.0**
UREC	**San Jos de Ur**	**2.45**	**292**	P	**Pn**	**09 48 12.8**	**-0.1**
UREC				S	**Sn**	**09 48 43.5**	**-0.8**
GUY2C	**Guyana, Caldas**	**2.66**	**233**	P	**Pn**	**09 48 16.6**	**+0.6**
GUY2C				S	**Sn**	**09 48 50.1**	**+0.4**
CBOC	**Ciudad Bolivar**	**2.93**	**251**	P	**Pn**	**09 48 20.0**	**+1.0**
CBOC				S	**Sn**	**09 48 54.9**	**-0.2**
DBBC	**Dabeiba**	**2.96**	**273**	P	**Pn**	**09 48 21.1**	**+1.8**
DBBC				S	**Sn**	**09 48 55.5**	**-0.2**
PRAC	**Prado**	**3.52**	**208**	P	**Pn**	**09 48 26.7**	**+0.3**
PRAC				S	**Sn**	**09 49 08.4**	**-0.1**
SJCC	**San Jacinto, C**	**3.59**	**328**	P	**Pn**	**09 48 27.0**	**-0.3**
SJCC				S	**Sn**	**09 49 07.2**	**-2.9**
PLMC	**San Jos del P**	**3.59**	**238**	P	**Pn**	**09 48 27.4**	**0.0**
PLMC				S	**Sn**	**09 49 11.6**	**+1.4**
URMC	**La Uribe, Meta**	**3.75**	**198**	P	**Pn**	**09 48 30.2**	**+0.8**
URMC				S	**Sn**	**09 49 13.7**	**-0.3**
CRJC	**Cerrejon, Guaj**	**4.16**	**5**	P	**Pn**	**09 48 33.5**	**-1.2**
CRJC				S	**Sn**	**09 49 24.9**	**+1.4**
SOLC	**Bahia Solano**	**4.20**	**262**	P	**Pn**	**09 48 33.8**	**-1.3**

*IDC **06** 09:58:14.1±1.3, 7°.05N×126°.30E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=26.1km s-min=11.6km az=9.0*

*MAN **06** 09:58:17.0, 6°.57N×125°.20E, h6km, MS3.5*

ISC 06 09:58:16.8±0.9, **6°.57N**±0°.04×**125°.17E**±0°.05, **h10**km, **n12**, σ**1s.25**/18, **mb3.5**/4, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**0.44**	**350**	*e*P	**Pg**	**09 58 25.8**	**+0.3**
KCP				*i* S	**Sb**	**09 58 32.9**	**-0.7**
DMPH	**Davao City--Mi**	**0.61**	**33**	*e*P	**Pg**	**09 58 28.0**	**-0.7**
DMPH				*i* S	**Sg**	**09 58 37.1**	**+0.4**
DAV	**Davao City (W)**	**0.64**	**39**	Pg	**Pg**	**09 58 29.3**	**0.0**
	98nm,0.3s,baz=67,slow=15,SNR=11						
DAV				Lg	Lg	09 58 37.1	
	395nm,0.3s,baz=266,slow=19,SNR=6.5						
DAV				LR	LR	09 58 57.4	
	comp=Z,727nm,19.8s,baz=152,slow=60						
DAV	**Davao City (W)**	**0.64**	**39**	P	**Pb**	**09 58 30.0**	**-0.1**
DDMP	**Don Marcelino,**	**0.71**	**131**	*i* P	**Pg**	**09 58 30.4**	**-0.2**
DDMP				*i* S	**Sb**	**09 58 41.5**	**+0.3**
CTBH	**Cotabato--PC H**	**1.12**	**305**	*i* P	**Pb**	**09 58 37.7**	**-0.7**
CTBH				*i* S	**Sn**	**09 58 57.8**	**+3.7**
CGP	**Cagayan de Oro**	**1.93**	**346**	*e*P	**Pn**	**09 58 47.0**	**-2.7**
CGP				*e*S	**Sb**	**09 59 16.8**	**+0.5**
BIPH	**Bislig**	**1.99**	**36**	*e*P	**Pn**	**09 58 50.8**	**+0.2**
BIPH				*e*S	**Sb**	**09 59 18.2**	**+0.2**
WRA	**Warramunga Arr**	**27.85**	**161**	P	**P**	**10 04 06.5**	**-0.3**
	0.8nm,1.1s,baz=335,slow=11,SNR=1.9						
	0.8nm,1.1s						
ASAR	**Alice Springs**	**31.24**	**164**	P	**P**	**10 04 36.9**	**0.0**
	0.2nm,0.6s,baz=340,slow=7.1,SNR=6.1						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**54.35**	**325**	P	**P**	**10 07 44.4**	**+0.6**
	0.4nm,0.7s,baz=115,slow=7.2,SNR=4.9						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**58.52**	**327**	P	**P**	**10 08 13.1**	**-0.3**
	0.6nm,0.7s,baz=123,slow=6.5,SNR=9.1						
	0.6nm,0.7s						

*IDC **06** 10:09:35.5±1.7, 63°.32N×151°.60W, h139km±14km, mb3.4/8, mbtmp3.7/13, Error ellipse: s-maj=19.5km s-min=14.7km az=85.0*

*NEIC **06** 10:09:37.3±0.8, 63°.23N±0°.04×151°.37W±0°.08, h155km±2km, mb4.1/29, ML3.6/244, ML3.4(AEIC), Error ellipse: s-maj=5.8km s-min=4.6km az=51.0*

*AEIC **06** 10:09:37.5±0.7, 63°.23N±0°.03×151°.37W±0°.08, h154km±3km, Error ellipse: s-maj=5.8km s-min=4.4km az=55.0*

ISC 06 10:09:37.2±0.6, **63°.24N**±0°.04×**151°.41W**±0°.04, **h156**km±5km, **n331**, σ**0s.95**/337, **mb4.0**/19, **Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTH	**Kantishna Hill**	**0.38**	**35**		**Pn**	**10 09 59.3**	**+0.5**
KTH					**Sn**	**10 10 15.1**	**-0.3**
KTH				IAML		10 10 15.8	
	comp=E,604nm,0.9s						
KTH				IAML		10 10 16.7	
	comp=N,405nm,1.1s						
PPLA	**Purkeypile**	**0.50**	**226**		**Pn**	**10 09 59.8**	**+0.4**
PPLA					**Sn**	**10 10 16.5**	**+0.1**
PPLA				IAML		10 10 17.1	
	comp=N,838nm,0.8s						
PPLA				IAML		10 10 17.1	
	comp=E,2µm,0.7s						
TRF	**Thorofare Moun**	**0.55**	**67**		**Pn**	**10 10 00.0**	**+0.4**
TRF				IAML		10 10 20.9	
	comp=N,539nm,0.3s						
CHUM	**Lake Minchumin**	**0.76**	**328**		**Pn**	**10 10 01.2**	**+0.5**
CHUM					**Sn**	**10 10 18.7**	**-0.1**
L22K	**Petersville**	**0.77**	**158**		**Pn**	**10 10 01.2**	**+0.3**
L22K					**Sn**	**10 10 18.3**	**-0.7**
BPAW	**Bear Paw Mtn.**	**0.88**	**12**		**Pn**	**10 10 01.8**	**+0.2**
BPAW					**Sn**	**10 10 19.9**	**-0.6**
BPAW				IAML		10 10 20.6	
	comp=E,431nm,0.8s						
BPAW				IAML		10 10 20.6	
	comp=N,487nm,0.8s						
CUT	**Chulitna**	**0.99**	**148**		**Pn**	**10 10 02.8**	**+0.3**
CUT					**Sn**	**10 10 21.6**	**-0.1**
RND	**Reindeer**	**1.17**	**81**		**Pn**	**10 10 04.3**	**+0.2**
RND					**Sn**	**10 10 24.1**	**-0.5**
RND				IAML		10 10 24.9	
	comp=E,281nm,0.6s						
RND				IAML		10 10 25.3	
	comp=N,366nm,0.6s						
K20K	**Telida**	**1.21**	**277**		**Pn**	**10 10 04.8**	**+0.4**
K20K					**Sn**	**10 10 24.6**	**-0.6**
K20K				IAML		10 10 25.1	
	comp=E,403nm,0.4s						
K20K				IAML		10 10 25.1	
	comp=N,312nm,0.7s						
MCK	**McKinley**	**1.22**	**65**		**Pn**	**10 10 04.8**	**+0.4**
MCK					**Sn**	**10 10 24.9**	**-0.4**
MCK				IAML		10 10 25.4	
	comp=E,258nm,0.5s						
MCK				IAML		10 10 27.4	
	comp=N,260nm,0.4s						
WAT7	**Susitna Watana**	**1.24**	**108**		**Pn**	**10 10 04.5**	**-0.2**
WAT7					**Sn**	**10 10 25.1**	**-0.7**
SKT	**Skwentna**	**1.27**	**183**		**Pn**	**10 10 05.0**	**+0.1**
SKT					**Sn**	**10 10 25.6**	**-0.6**
WAT1	**Susitna Watana**	**1.36**	**106**		**Pn**	**10 10 05.8**	**-0.1**
WAT1					**Sn**	**10 10 27.0**	**-0.9**
M20K	**Styx River**	**1.58**	**211**		**Pn**	**10 10 07.9**	**-0.2**
M20K				IAML		10 10 31.8	
	comp=E,238nm,0.5s						
M22K	**Willow**	**1.61**	**158**		**Pn**	**10 10 08.3**	**0.0**
M22K					**Sn**	**10 10 31.9**	**-0.2**
NEA2	**Nenana**	**1.71**	**36**		**Pn**	**10 10 09.2**	**-0.1**
NEA2					**Sn**	**10 10 32.9**	**-1.3**
NEA2				IAML		10 10 33.8	
	comp=E,481nm,0.9s						
STLK	**Strandline Lak**	**1.76**	**187**		**Pn**	**10 10 09.8**	**-0.2**
STLK				IAML		10 10 35.7	
	comp=N,688nm,0.5s						
STLK				IAML		10 10 37.4	
	comp=E,795nm,0.5s						
WAT6	**Susitna Watana**	**1.80**	**110**		**Pn**	**10 10 10.1**	**-0.5**
MLY	**Manley**	**1.82**	**9**		**Pn**	**10 10 10.7**	**+0.1**
MLY					**Sn**	**10 10 35.4**	**-1.2**
MLY				IAML		10 10 36.1	
	comp=E,162nm,0.7s						
DHY	**Denali Highway**	**1.84**	**93**		**Pn**	**10 10 10.9**	**0.0**
DHY				IAML		10 10 38.6	
	comp=N,194nm,0.3s						
DHY				IAML		10 10 41.5	
	comp=E,184nm,0.3s						
GHO	**Glory Hole Cre**	**1.87**	**141**		**Pn**	**10 10 11.2**	**0.0**
L19K	**White Mountain**	**1.91**	**238**		**Pn**	**10 10 11.6**	**-0.1**
WRH	**Wood River Hil**	**1.92**	**48**		**Pn**	**10 10 11.6**	**-0.1**
WRH					**Sn**	**10 10 36.9**	**-1.5**
WRH				IAML		10 10 37.9	
	comp=N,227nm,0.8s						
PMR	**Palmer**	**1.96**	**146**	P	**Sn**	**10 10 39.3**	**+0.2**
PMR	**Palmer**	**1.96**	**146**	P	**Pn**	**10 10 10.9**	**-1.3**
PMR	**Palmer**	**1.96**	**146**		**Pn**	**10 10 11.7**	**-0.5**
PMR				IAML		10 10 40.4	
	comp=N,654nm,0.3s						
I21K	**Tanana**	**1.96**	**353**		**Pn**	**10 10 12.5**	**+0.3**
I21K					**Sn**	**10 10 38.7**	**-0.5**
I21K				IAML		10 10 39.5	
	comp=E,256nm,0.8s						
I21K				IAML		10 10 40.0	
	comp=N,154nm,0.7s						
SPNN	**North Nagishla**	**1.97**	**198**		**Pn**	**10 10 12.6**	**0.0**
SPCG	**Spurr Capps Gl**	**1.98**	**189**		**Pn**	**10 10 12.3**	**-0.2**
SML	**Sawmill**	**2.02**	**134**		**Pn**	**10 10 12.7**	**-0.4**
SML					**Sn**	**10 10 39.7**	**-0.9**
J19K	**Poorman**	**2.03**	**294**		**Pn**	**10 10 13.1**	**+0.2**
SPBG	**Spurr Blockage**	**2.04**	**193**		**Pn**	**10 10 13.5**	**+0.3**
SPWE	**Spurr West**	**2.04**	**196**		**Pn**	**10 10 13.5**	**+0.2**
SPCN	**Chakachatna No**	**2.05**	**191**		**Pn**	**10 10 13.5**	**+0.2**
SPCR	**Spurr Chakacha**	**2.08**	**191**		**Pn**	**10 10 13.5**	**-0.2**
SPCR	**Spurr Chakacha**	**2.08**	**191**		**Pn**	**10 10 13.5**	**-0.2**
SPU	**Mount Spurr**	**2.09**	**189**		**Pn**	**10 10 13.4**	**-0.4**
CKL	**Chakachamna La**	**2.10**	**192**		**Pn**	**10 10 13.9**	**0.0**
I23K	**Minto, Yukon-K**	**2.12**	**24**		**Pn**	**10 10 14.4**	**+0.5**
I23K					**Sn**	**10 10 41.6**	**-0.7**
I23K				IAML		10 10 42.0	
	comp=E,628nm,1.2s						
CCB	**Clear Creek Bu**	**2.13**	**47**		**Pn**	**10 10 13.9**	**-0.1**
CCB					**Sn**	**10 10 41.1**	**-1.4**
CCB				IAML		10 10 42.1	
	comp=E,158nm,0.8s						
CCB				IAML		10 10 42.3	
	comp=N,206nm,0.8s						
MDM	**Murphy Dome**	**2.22**	**38**		**Pn**	**10 10 15.2**	**0.0**
MDM					**Sn**	**10 10 43.0**	**-1.6**
M23K	**Glacier View**	**2.24**	**129**		**Pn**	**10 10 14.8**	**-0.7**
COLA	**College**	**2.27**	**42**	S	**Sn**	**10 10 45.1**	**-0.4**
COLA	**College**	**2.27**	**42**	P	**Pn**	**10 10 15.6**	**-0.1**
COLA	**College**	**2.27**	**42**		**Pn**	**10 10 15.6**	**-0.1**
COLA	**College**	**2.27**	**42**	IAML		10 10 46.4	
	comp=N,383nm,0.7s						
COLA				IAML		10 10 48.4	
	comp=N,276nm,0.6s						
KNK	**Knik Glacier**	**2.29**	**142**		**Pn**	**10 10 15.6**	**-0.5**
RC01	**Rabbit Creek A**	**2.30**	**159**		**Pn**	**10 10 15.7**	**-0.5**
HDA	**Harding Lake**	**2.30**	**57**		**Pn**	**10 10 15.8**	**-0.4**
HDA				IAML		10 10 45.4	
	comp=N,185nm,1.2s						
HDA				IAML		10 10 47.8	
	comp=E,147nm,0.6s						
SCM	**Sheep Creek Mo**	**2.36**	**125**		**Pn**	**10 10 16.4**	**-0.6**
J18K	**Innoko River**	**2.40**	**278**		**Pn**	**10 10 17.8**	**+0.4**
CAPN	**Captain Cook N**	**2.48**	**177**		**Pn**	**10 10 20.2**	**+1.9**
H21K	**Melozitna Rive**	**2.50**	**347**		**Pn**	**10 10 18.9**	**+0.3**
H21K				IAML		10 10 51.3	
	comp=N,228nm,0.7s						
IL31		**2.52**	**50**		**Pn**	**10 10 18.3**	**-0.4**
ILAR	**Eielson Array**	**2.52**	**50**	P	**Pn**	**10 10 18.3**	**-0.4**
	comp=N,17nm,0.4s,baz=229,slow=12,SNR=453						
ILAR				S	**Sn**	**10 10 48.5**	**-2.4**
	comp=N,11nm,0.4s,baz=290,slow=39,SNR=5.2						
K24K	**Donnelly Dome**	**2.58**	**75**		**Pn**	**10 10 19.6**	**0.0**
K24K				IAML		10 10 55.8	

K24K IAML 10 10 59.0
comp=N,333nm,0.5s
comp=E,375nm,0.4s
L18K Granite Mounta 2.64 250 Pn 10 10 20.6 +0.4
L18K IAML 10 10 54.0
comp=N,106nm,1.3s
L18K IAML 10 10 54.7
comp=E,121nm,1.2s
H22K Ishtalitna Cre 2.67 0 Pn 10 10 21.0 +0.4
H22K IAML 10 10 54.9
comp=N,134nm,1.0s
M24K Tolsona, Glenn 2.67 113 Pn 10 10 20.9 +0.3
M18K Stony River 2.71 232 Pn 10 10 20.7 -0.3
PAX Paxson 2.71 93 Pn 10 10 21.1 -0.1
PAX IAML 10 11 01.8
comp=N,157nm,0.9s
PAX IAML 10 11 03.6
comp=E,129nm,0.6s
RDT Redoubt 2.72 190 Pn 10 10 21.1 -0.2
H20K Anotleneega Mo 2.72 328 Pn 10 10 21.4 +0.1
DFR Drift River 2.73 193 Pn 10 10 21.3 -0.1
SLKM Skilak Lake 2.80 168 Pn 10 10 22.0 -0.3
N19K Bonanza Creek 2.83 212 Pn 10 10 22.6 -0.2
N19K Bonanza Creek 2.83 212 IAML 10 10 58.6
comp=N,89nm,1.2s
GCSA Galena City Sc 2.85 305 Pn 10 10 23.2 +0.5
RDSO Redoubt South 2.87 193 Pn 10 10 23.2 -0.1
O22K Cooper Landing 2.88 163 Pn 10 10 23.1 -0.2
RED Redoubt Volcan 2.90 193 Pn 10 10 23.7 0.0
RED IAML 10 11 00.6
comp=E,88nm,1.6s
IMAR Indian Mountai 2.93 341 Pn 10 10 24.0 +0.1
IM01 Indian Mountai 2.94 341 Pn 10 10 24.0 0.0
RIDG Independent Ri 2.99 77 Pn 10 10 24.3 -0.3
RIDG IAML 10 11 03.7
comp=N,166nm,0.7s
RIDG IAML 10 11 04.3
comp=E,244nm,0.6s
HARP HAARP 2.99 104 Pn 10 10 24.6 0.0
J25K Salcha River, 3.00 60 Pn 10 10 24.2 -0.5
J25K IAML 10 11 01.3
comp=N,218nm,0.3s
J25K IAML 10 11 02.2
comp=E,261nm,0.5s
H24K Noodor Dome 3.02 29 Pn 10 10 25.2 +0.2
H24K Noodor Dome 3.02 29 IAML 10 11 01.7
comp=N,98nm,0.9s
H24K IAML 10 11 02.9
comp=E,103nm,1.3s
KLU Klutina 3.10 122 Pn 10 10 25.4 -0.7
GLI Glacier Island 3.12 137 Pn 10 10 26.0 -0.2
K17K Iditarod 3.19 264 Pn 10 10 27.5 +0.4
K17K Iditarod 3.19 264 IAML 10 11 07.2
comp=E,98nm,1.6s
K17K IAML 10 11 22.7
comp=N,79nm,1.6s
SEW Seward 3.28 163 Pn 10 10 27.7 -0.5
SEW IAML 10 11 06.8
comp=N,233nm,0.4s
SEW IAML 10 11 08.0
comp=E,251nm,0.7s
DOT Dot Lake 3.33 80 Pn 10 10 28.0 -0.8
DOT IAML 10 11 07.5
comp=N,124nm,0.7s
DOT IAML 10 11 07.8
comp=E,103nm,0.7s
N18K Kilae Creek 3.33 222 Pn 10 10 28.8 -0.2
O19K Port Alsworth 3.35 206 Pn 10 10 28.9 -0.3
O19K IAML 10 11 42.8
comp=E,126nm,0.5s
O19K IAML 10 11 57.2
comp=N,88nm,0.5s
L17K Donlin 3.36 254 Pn 10 10 29.6 +0.3
M17K Holitna River 3.37 239 Pn 10 10 29.0 -0.3
M17K Holitna River 3.37 239 IAML 10 11 27.7
comp=E,88nm,0.8s
M17K IAML 10 11 33.7
comp=N,60nm,0.8s
ILSW Iliamna Southw 3.37 195 Pn 10 10 29.3 -0.3
DIV Divide 3.38 126 Pn 10 10 28.7 -1.0
ILS Iliamna Low So 3.39 194 Pn 10 10 29.9 +0.1
SCRK Sand Creek 3.40 74 Pn 10 10 29.2 -0.7
SCRK IAML 10 11 12.5
comp=E,103nm,0.4s
SCRK IAML 10 11 12.8
comp=N,107nm,1.0s
G21K Allakaket 3.41 346 Pn 10 10 30.5 +0.6
G21K Allakaket 3.41 346 IAML 10 11 12.2
comp=N,73nm,0.9s
PRP Porcupine Dome 3.43 46 Pn 10 10 29.6 -0.6
PRP IAML 10 11 11.6
comp=E,67nm,1.1s
PRP IAML 10 11 11.9
comp=N,83nm,0.7s
BRLK Bradley Lake 3.50 176 Pn 10 10 31.2 +0.1
BRLK IAML 10 11 12.3
comp=E,124nm,0.3s
BRLK IAML 10 11 12.4
comp=N,131nm,0.4s
WACK Wrangell Chich 3.50 108 Pn 10 10 31.2 -0.2
MENT Mentasta 3.51 92 P Pn 10 10 31.1 -0.1
MENT Mentasta 3.51 92 Pn 10 10 30.9 -0.3
MENT IAML 10 11 20.9
comp=N,136nm,0.8s
MENT IAML 10 11 28.4
comp=E,117nm,0.3s
BRSE Bradley Lake S 3.52 175 Pn 10 10 31.0 -0.5
G23K Bananza Creek 3.54 9 Pn 10 10 31.9 +0.4
G23K Bananza Creek 3.54 9 IAML 10 11 14.4
comp=E,51nm,1.2s
WAZA Wrangell Mount 3.55 106 Pn 10 10 31.9 0.0
N25K Chitina, Valde 3.56 114 Pn 10 10 31.9 -0.1
N25K IAML 10 11 16.3
comp=N,199nm,0.7s
N25K IAML 10 11 16.7
comp=E,162nm,0.5s
HOM Homer 3.60 182 Pn 10 10 32.1 -0.2
L26K Log Cabin Wild 3.67 90 Pn 10 10 32.8 -0.4
L26K IAML 10 11 27.7
comp=E,92nm,0.5s
L26K IAML 10 11 28.2
comp=N,122nm,0.4s
HIN Hinchinbrook I 3.68 139 Pn Pn 10 10 33.3 -0.1
P19K Oil Pt 3.71 194 Pn 10 10 33.9 +0.1
P19K IAML 10 11 20.4
comp=E,96nm,1.0s
P19K IAML 10 12 07.5
comp=N,79nm,1.2s
CNPM China Poot 3.73 179 Pn 10 10 33.5 -0.5
CNPM IAML 10 11 17.1
comp=E,166nm,0.4s
CNPM IAML 10 11 17.1
comp=N,139nm,0.3s
P23K Montague Islan 3.77 148 Pn 10 10 33.9 -0.7
EYAK Cordova Ski Ar 3.80 133 S Sn 10 11 20.6 +0.8
EYAK Cordova Ski Ar 3.80 133 P Pn 10 10 35.0 +0.1
EYAK Cordova Ski Ar 3.80 133 Pn 10 10 35.1 +0.1
G19K Purcell Mounta 3.80 323 Pn 10 10 34.5 -0.4
O18K Koktuh Hills 3.85 210 Pn 10 10 35.5 -0.2
G24K Hadweenzic Riv 3.86 24 Pn 10 10 35.6 0.0
G24K Hadweenzic Riv 3.86 24 IAML 10 11 22.2
comp=E,61nm,0.8s
G24K IAML 10 11 22.9
comp=N,83nm,1.1s
N17K Nushagak Hills 3.86 228 Pn 10 10 35.4 -0.3
BMRM Bremner River 3.92 122 Pn 10 10 35.9 -0.8
M26K Nabesna, AK 3.95 99 Pn 10 10 36.6 -0.3
M26K IAML 10 11 42.2
comp=N,42nm,0.5s
M26K IAML 10 11 45.2
comp=E,53nm,0.5s
GLB Gilahina Butte 3.98 114 Pn 10 10 37.1 -0.1
AUF Augustine Flow 3.99 195 Pn 10 10 37.0 -0.4
AU22 Augustine Moun 4.00 194 Pn 10 10 36.9 -0.5
AUW Augustine West 4.01 195 Pn 10 10 37.6 -0.1
AUI Augustine Isla 4.04 195 Pn 10 10 37.8 -0.2
COLD Coldfoot 4.04 7 Pn 10 10 38.2 +0.3
L16K Owhat River 4.05 251 Pn 10 10 38.4 +0.3
F21K Alatna River 4.09 349 Pn 10 10 39.6 +0.9
H17K Granite Mounta 4.10 298 Pn 10 10 39.5 +0.7
G18K Tagagawik 4.11 314 Pn 10 10 39.6 +0.7
I26K Coal Creek Min 4.15 56 Pn 10 10 38.1 -1.4
I26K IAML 10 11 29.1
comp=N,66nm,1.1s
I26K IAML 10 11 34.7
comp=E,64nm,1.0s
J16K Anvik River 4.16 275 Pn 10 10 39.8 +0.3
J16K Anvik River 4.16 275 IAML 10 11 28.9
comp=E,39nm,1.1s
M16K Timber Creek 4.18 241 Pn 10 10 39.9 -0.1
M16K Timber Creek 4.18 241 IAML 10 11 29.6
comp=N,32nm,4.2s
I17K Unalakleet 4.20 283 Pn 10 10 40.9 +0.8
VRDI Verde Repeater 4.23 115 Pn 10 10 40.6 -0.2
VRDI IAML 10 11 28.6
comp=N,74nm,0.8s
VRDI IAML 10 11 30.0
comp=E,74nm,0.8s
F20K Avaraart Lake 4.24 336 Pn 10 10 41.1 +0.6
F20K IAML 10 11 30.1
comp=N,27nm,1.0s
FYU Fort Yukon 4.25 35 Pn 10 10 40.4 -0.3
FYU IAML 10 11 29.8
comp=N,50nm,3.7s
FYU IAML 10 12 21.1
comp=E,70nm,4.3s
P18K Big Mountain, 4.28 207 Pn 10 10 41.0 -0.2
P18K IAML 10 11 58.3
comp=N,31nm,4.2s
P18K IAML 10 12 41.4
comp=E,30nm,3.7s
RAGM Ragged Mountai 4.29 129 Pn 10 10 41.3 0.0
MCARA McCarthy VSAT 4.33 112 Pn 10 10 42.2 +0.4
MCARA IAML 10 11 36.2
comp=E,106nm,0.5s
MCARA IAML 10 11 40.4
comp=N,131nm,0.6s
BC01 Beaver Creek A 4.35 88 Pn 10 10 41.2 -0.9
L27K Beaver Creek, 4.35 88 Pn 10 10 41.2 -0.9
BCAR Beaver Creek A 4.37 88 Pn 10 10 41.5 -0.9
O17K Koliganek Bris 4.42 221 Pn 10 10 42.5 -0.4
Q19K Cape Douglas, 4.46 195 Pn 10 10 43.0 -0.6
Q19K IAML 10 12 17.2
comp=N,108nm,1.1s
M27K Edge Creek, AK 4.46 97 Pn 10 10 44.1 +0.4
M27K Edge Creek, AK 4.46 97 IAML 10 11 28.1
comp=E,26nm,3.3s
M27K IAML 10 11 59.5
comp=N,37nm,1.5s
F19K Shaleruckik Mo 4.50 326 Pn 10 10 44.2 +0.2
MID Middleton Isla 4.54 145 Pn Pn 10 10 44.5 0.0
G17K Kiwalik Mounta 4.61 304 Pn 10 10 45.8 +0.4
CRQM Cirque 4.62 119 Pn 10 10 45.9 0.0
BERG Berg Lake 4.64 125 Pn 10 10 45.7 -0.1
SYI Shuyak Island 4.67 186 Pn Pn 10 10 45.1 -1.2
SYI IAML 10 11 42.6
comp=N,100nm,3.7s
SYI IAML 10 12 24.7
comp=E,77nm,3.5s
KAIM Kayak Island 4.71 132 Pn 10 10 46.1 -0.7
P17K Kvichak River 4.73 213 Pn 10 10 47.3 +0.2
P17K Kvichak River 4.73 213 IAML 10 11 33.6
comp=E,91nm,2.7s
P17K IAML 10 12 44.2
comp=N,95nm,1.3s
K15K Wolf Creek Mou 4.75 263 Pn 10 10 47.9 +0.6
K15K Wolf Creek Mou 4.75 263 IAML 10 11 41.5
comp=N,20nm,4.0s
TGL Tana Glacier 4.75 118 Pn 10 10 47.0 -0.4
TGL IAML 10 12 01.6
comp=E,89nm,0.6s
TGL IAML 10 12 12.5
comp=N,90nm,0.7s
SUCK Suckling Hills 4.83 128 Pn Pn 10 10 48.3 -0.1
I27K Kandik River 4.86 56 Pn 10 10 47.5 -1.2
I27K IAML 10 12 05.2
comp=N,28nm,0.7s
I27K IAML 10 12 13.5
comp=E,26nm,1.5s
F18K Selawik 4.87 318 Pn 10 10 49.2 +0.5
O16K Kokwok River B 4.87 224 Pn 10 10 48.4 -0.4
O16K Kokwok River B 4.87 224 IAML 10 12 23.7
comp=N,19nm,3.2s
O16K IAML 10 13 08.5
comp=E,20nm,3.9s
E19K Redstone River 4.89 333 Pn 10 10 49.7 +0.7
E23K Chandalar 4.90 8 Pn 10 10 50.0 +0.7
E22K Anaktuvuk Pass 4.92 358 Pn 10 10 50.4 +0.9
G26K Porcupine Rive 4.92 37 Pn 10 10 48.5 -1.0
G26K Porcupine Rive 4.92 37 IAML 10 11 46.5
comp=N,40nm,1.3s
G26K IAML 10 12 18.2
comp=E,30nm,1.3s
KAHC Katmai Hardscr 4.93 202 Pn 10 10 49.4 -0.4
L15K Ungalak Mounta 4.93 256 Pn 10 10 50.0 +0.3
F25K Christian Rive 4.99 26 Pn 10 10 50.5 0.0
F25K Christian Rive 4.99 26 IAML 10 11 49.3
comp=N,22nm,1.8s
E24K Your Creek 5.00 13 Pn 10 10 51.2 +0.6
BARN Barnard Glacie 5.07 111 Pn 10 10 51.9 +0.2
BARN IAML 10 11 50.1
comp=N,40nm,2.7s
BARN IAML 10 12 10.4
comp=E,37nm,3.5s
BMAR Burnt Mountain 5.08 31 Pn 10 10 51.4 -0.3
N15K Kwethluk River 5.15 237 IAML 10 12 48.5
comp=N,24nm,4.1s
N15K IAML 10 13 46.1
comp=E,27nm,3.3s
H27K Steamboat Moun 5.19 50 Pn 10 10 51.5 -1.6
H27K IAML 10 11 50.7
comp=N,32nm,1.1s
H27K IAML 10 11 53.2
comp=E,24nm,1.1s
GRNC Granite Creek 5.20 115 Pn 10 10 53.2 -0.3
GRNC IAML 10 11 59.4
comp=E,42nm,3.6s
GRNC IAML 10 12 17.6
comp=N,39nm,1.2s
G16K Koyuk River 5.23 299 Pn Pn 10 10 54.0 +0.4
CTGM Chitina Glacie 5.25 111 Pn 10 10 54.3 +0.3
CTGM IAML 10 11 59.4
comp=N,40nm,3.9s
CTGM IAML 10 12 21.5
comp=E,23nm,3.4s
F17K Baldwin Pennin 5.29 312 Pn 10 10 55.3 +1.0
F17K IAML 10 12 38.5
comp=E,18nm,4.6s
F17K IAML 10 13 00.0
comp=N,14nm,4.0s
P16K Nushagak River 5.29 220 Pn 10 10 54.5 +0.1
E21K Killik River 5.33 350 Pn 10 10 55.8 +0.8
F26K Sheenjek River 5.40 31 Pn 10 10 55.2 -0.6
F26K Sheenjek River 5.40 31 IAML 10 12 47.9
comp=E,14nm,4.8s
ACHA Angle Creek He 5.40 203 Pn Pn 10 10 56.0 +0.1
E20K Nigu River 5.41 341 Pn 10 10 57.1 +1.1
DAWY Dawson 5.42 76 Pn 10 10 55.4 -0.7
MESA MESA 5.45 120 Pn Pn 10 10 56.0 -0.7
CNTC Contact Creek 5.45 206 Pn 10 10 56.4 -0.3
I28M Miner Creek 5.45 61 Pn 10 10 55.3 -1.3
E25K Arctic Village 5.46 24 Pn 10 10 56.8 +0.2
LOGN Logan Glacier 5.46 112 Pn 10 10 56.8 -0.1
TOLK Toolik Lake Re 5.48 7 Pn 10 10 58.0 +1.1
KDAK Kodiak Island 5.51 187 P Pn 10 10 54.4 -2.9
comp=E,32nm,0.2s,baz=41,slow=4.0,SNR=873
KDAK S **Sn 10 11 54.4 -5.5**
comp=E,8.1nm,0.3s,baz=264,slow=23,SNR=1.6
KDAK Kodiak Island 5.51 187 Pn 10 10 55.3 -2.0
J14K Nanvaranak Lak 5.56 270 Pn 10 10 58.3 +0.4
M14K Bethel 5.56 248 Pn 10 10 58.1 +0.2
L14K Kuka Creek 5.59 255 Pn 10 10 59.3 +0.9
RKAV Rock Avalanche 5.61 117 Pn 10 10 58.9 0.0
D22K Ayikyak River 5.69 355 Pn 10 11 00.5 +0.8
O15K Ungalikthiuk R 5.76 229 Pn 10 11 00.9 +0.3
D23K Nanushuk River 5.76 3 Pn 10 11 02.0 +1.5
G15K Niukluk 5.81 293 Pn 10 11 01.7 +0.5
O28M Mount Upton 5.83 110 Pn 10 11 01.7 -0.2
N14K Kuskokwak Cree 5.93 241 Pn 10 11 03.1 +0.3
J29N Klondike Camp 5.96 72 Pn 10 11 02.4 -0.9
M29M Somme Creek 5.98 92 Pn 10 11 03.3 -0.4
L29M L29M 6.01 85 Pn 10 11 03.4 -0.7
PLK1 Peulik 1 6.03 208 Pn 10 11 04.6 +0.4
I29M Ogilvie Camp, 6.08 64 Pn 10 11 04.2 -0.8
C21K Knifeblade Rid 6.10 349 Pn 10 11 05.6 +0.5
OHAK Old Harbor 6.11 190 P Pn 10 11 01.7 -3.6
OHAK Old Harbor 6.11 190 Pn 10 11 02.8 -2.5
PLK4 Peulik 4 6.13 206 Pn 10 11 05.6 -0.1
PLBL Peulik Blue Cr 6.17 208 Pn 10 11 06.7 +0.6
PCA Pinnacle 6.17 116 Pn 10 11 06.4 +0.2
O14K Tigyukauivet M 6.21 234 Pn 10 11 06.7 +0.1
F15K North Star Dit 6.24 299 Pn Pn 10 11 07.5 +0.6
K29M Barlow Dome 6.24 78 Pn Pn 10 11 06.4 -0.7
K13K Kusilvak Mount 6.26 264 Pn Pn 10 11 07.0 -0.2
ANM Nome 6.30 288 Pn Pn 10 11 07.5 -0.3
M13K Dall Lake 6.33 249 Pn 10 11 09.3 +1.2
E27K Coleen River 6.40 35 Pn 10 11 08.1 -1.0
D25K Kavik River 6.43 16 Pn 10 11 10.2 +0.6
R16K Pilot Point 6.46 211 Pn 10 11 10.6 +0.7
F28M Old Crow 6.51 43 Pn 10 11 09.2 -1.3
BCPM Bancas Point 6.51 115 Pn 10 11 10.6 0.0
B21K Ikpikpuk River 6.54 350 Pn 10 11 10.4 -0.4
YUK6 Outpost Mounta 6.54 105 Pn 10 11 10.8 -0.5
C24K Franklin Bluff 6.60 8 Pn 10 11 12.3 +0.7
C23K Itkillik River 6.63 2 Pn 10 11 12.0 -0.2
YUK5 Granite Creek 6.68 102 Pn 10 11 12.5 -0.6
M30M Minto, Yukon 6.71 89 Pn 10 11 12.9 -0.4
C18K Utukok River 6.74 328 Pn 10 11 13.8 +0.2
C19K Lookout Ridge 6.75 334 Pn 10 11 13.6 -0.2
O29M Mount Kennedy 6.76 110 Pn Pn 10 11 13.6 -0.5
J30M Hart River 6.78 72 Pn Pn 10 11 14.3 -0.1
YUK7 Dusty Glacier 6.83 107 Pn 10 11 14.8 -0.2
SII Sitkinak Islan 6.84 193 P Pn 10 11 12.1 -3.0
SII Sitkinak Islan 6.84 193 Pn 10 11 12.2 -3.0
I30M Mount Dempster 6.85 66 Pn 10 11 14.2 -1.0
N30M Aishikik Lake 6.90 99 Pn Pn 10 11 15.7 -0.2
HYT Haines Junctio 6.97 104 Pn 10 11 15.3 -1.5
MAYO Mayo, Yukon 6.97 80 Pn Pn 10 11 16.6 -0.1
EPYK Eagle Plains 7.01 57 Pn Pn 10 11 15.8 -1.4
C27K Jago River 7.11 22 Pn Pn 10 11 17.8 -0.7
C17K DeLong Mountai 7.12 323 Pn 10 11 18.9 +0.2
B20K Meade River 7.17 344 Pn 10 11 18.5 -0.7
B22K Teshekpuk Lake 7.18 355 Pn 10 11 18.5 -0.8
C26K Camden Bay 7.18 18 Pn 10 11 19.9 +0.4
D27M Malcolm River 7.35 30 Pn 10 11 21.4 -0.3
G30M tAoh Zraii Nji 7.42 53 Pn 10 11 20.7 -1.9
N31M Braeburn, Yuko 7.48 97 Pn 10 11 20.7 -2.8
TNA Tin City 7.52 295 Pn 10 11 24.5 +0.6
P30M Million Dollar 7.54 108 Pn 10 11 24.2 -0.2
M11K Mekoryuk 7.56 254 Pn Pn 10 11 24.8 +0.2
E29M Blow River 7.57 41 Pn 10 11 23.9 -0.6
O30N Mendenhall 7.62 102 Pn Pn 10 11 23.4 -2.0
CHIR Chirikof Islan 7.74 198 P Pn 10 11 23.4 -3.6
CHIR Chirikof Islan 7.74 198 Pn 10 11 23.4 -3.6
H31M Peel River 7.79 63 Pn 10 11 24.9 -2.7
F30M Barrier River 7.84 49 Pn 10 11 26.6 -1.6
M31M Drury Creek, Y 7.89 90 Pn Pn 10 11 29.2 +0.3
A19K Wainwright 7.96 336 Pn 10 11 29.6 -0.2
G31M Satah River 8.11 55 Pn 10 11 29.4 -2.4
WHY Whitehorse 8.20 101 Pn Pn 10 11 34.1 +0.9
FARO Faro, Yukon 8.35 89 Pn Pn 10 11 35.4 +0.3
A21K Barrow 8.36 348 Pn 10 11 33.8 -1.3
F31M Tsiigehtchic 8.49 53 Pn Pn 10 11 34.8 -2.0
SKAG Skagway 8.60 109 P Pn 10 11 39.1 +0.8
SKAG Skagway 8.60 109 Pn Pn 10 11 36.8 -1.5
INK Inuvik 8.91 47 P Pn 10 11 40.7 -1.7
comp=E,3.6nm,0.6s,baz=244,slow=15,SNR=18
INK S **Sn 10 13 18.5 -2.7**
comp=E,2.5nm,0.9s,baz=289,slow=1.9,SNR=3.1
INK Inuvik 8.91 47 Pn Pn 10 11 40.6 -1.8
GAMB Gambell 9.08 282 Pn Pn 10 11 45.2 +0.5
S31K Pelican 9.13 118 Pn Pn 10 11 45.2 -0.3
P32M Atlin 9.22 105 Pn Pn 10 11 47.5 +0.8
BESE Bessie Mountai 9.30 113 Pn Pn 10 11 47.6 -0.1
P33M Teslin, Yukon 9.32 101 Pn Pn 10 11 48.6 +0.6
R32K Eaglecrest 9.63 113 Pn Pn 10 11 51.1 -1.0
JIS Juneau Island 9.69 113 P Pn 10 11 53.1 +0.4
SIT Sitka 10.11 120 P Pn 10 12 00.3 +1.9
SIT Sitka 10.11 120 Pn Pn 10 11 58.9 +0.5
S32K Killisnoo 10.13 117 Pn Pn 10 11 59.5 +1.0
S34M Telegraph Cree 11.28 109 Pn Pn 10 12 14.8 +1.1
DLBC Dease Lake 11.46 105 P Pn 10 12 15.5 -0.6
comp=E,1.0nm,0.6s,baz=320,slow=18,SNR=1.4
WRAK Wrangell Islan 11.74 117 Pn Pn 10 12 21.0 +1.3
T35M Bob Quinn 12.23 111 Pn Pn 10 12 28.5 +2.4
YKAW3 Yellowknife Wh 16.64 76 P P 10 13 20.4 -0.3
YKA Yellowknife Ar 16.66 76 P P 10 13 19.5 -1.4
comp=E,2.2nm,0.4s,baz=283,slow=14,SNR=12
YKA Yellowknife Ar 16.66 76 P P 10 13 20.0 -0.9
YKAW1 Yellowknife Wh 16.72 76 P P 10 13 21.4 -0.1
ADK Adak 17.55 241 P P 10 13 31.0 +0.3
KIWB Kanaga Island 17.76 242 P P 10 13 31.1 -2.0
BILL Bilibino 17.81 304 P P 10 13 33.1 -0.3
EDM Edmonton 22.06 99 P P 10 14 18.9 -0.3
EDM IAmb IAmb 10 14 21.6
comp=Z,7.7nm,0.9s
RES Resolute Bay 22.18 36 P P 10 14 19.8 -0.3
RES IAmb IAmb 10 14 36.5
comp=Z,6.4nm,1.4s
BLKN Baker Lake 23.86 62 P P 10 14 36.1 +0.5
LYMT Lyon Mountain 27.09 108 P P 10 15 04.5 -0.7
ILON Igloolik, Nuna 27.16 47 P P 10 15 05.3 0.0
ILON IAmb IAmb 10 15 13.5
comp=Z,3.9nm,1.2s
FCC Fort Churchill 27.33 73 P P 10 15 07.7 +0.8
RLMT Red Lodge 29.84 107 P P 10 15 32.3 +2.7
RLMT IAmb IAmb 10 15 32.9
comp=Z,1.1nm,0.5s
PDAR Pinedale Array 31.62 110 P P 10 15 45.6 +0.4
comp=Z,0.5nm,0.7s,baz=319,slow=4.1,SNR=5.5
comp=Z,0.5nm,0.7s
PDAR Pinedale Array 31.62 110 P P 10 15 46.2 +1.0
NVAR Mina Array Bea 31.81 126 P P 10 15 48.8 +1.8
comp=Z,0.2nm,0.5s,baz=297,slow=5.7,SNR=2.4
comp=Z,0.2nm,0.5s
RSSD Black Hills 32.92 103 P P 10 15 58.3 +1.7
RSSD IAmb IAmb 10 16 23.0
comp=Z,5.3nm,1.4s
QSM Queen of Sheba 34.53 126 P P 10 16 10.2 -0.1
ECSD EROS Data Cent 36.54 96 P P 10 16 28.3 +0.9
ECSD IAmb IAmb 10 16 37.8
comp=Z,3.5nm,1.4s
SUMG Summit 37.15 27 P P 10 16 33.1 +0.5
KUQ Kuujjuuaa 38.28 58 P P 10 16 41.6 -0.2
KUQ IAmb IAmb 10 16 47.0
comp=Z,6.9nm,1.3s
SPITS Spitsbergen Ar 38.62 4 P P 10 16 43.6 -0.9
comp=Z,1.5nm,0.3s,baz=14,slow=6.5,SNR=46
comp=Z,1.5nm,0.3s
SPB2 Spitsbergen Ar 38.63 4 P P 10 16 44.6 +0.2
SCHQ Schefferville 41.23 61 P P 10 17 06.9 +0.7
SCHQ IAmb IAmb 10 17 24.0
comp=Z,7.5nm,1.2s
TXAR Lajitas Array 45.54 115 P P 10 17 42.7 +1.6
comp=Z,0.3nm,0.5s,baz=321,slow=6.8,SNR=6.7
comp=Z,0.3nm,0.5s
E62A Clayton Lake 46.36 71 P P 10 17 46.3 -0.9
E62A IAmb IAmb 10 18 06.0
comp=Z,23nm,1.5s
BATG Bathurst New B 47.31 67 P P 10 17 54.7 +0.2
KSRS Korea Array 53.25 281 P P 10 18 39.5 +0.3
comp=Z,0.6nm,0.5s,baz=33,slow=7.2,SNR=4.1
comp=Z,0.6nm,0.5s
HFS Hagfors 56.43 9 P P 10 19 01.0 -0.7
comp=Z,0.3nm,0.3s,baz=31,slow=3.4,SNR=1.0
comp=Z,0.3nm,0.3s
EKA Eskdalemuir Ar 59.21 20 P P 10 19 20.3 -0.9
comp=Z,0.6nm,0.5s,baz=331,slow=5.7,SNR=4.6
comp=Z,0.6nm,0.5s
AKASG Malin Array Be 66.40 360 P P 10 20 08.4 -0.4
comp=Z,1.2nm,0.4s,baz=3.6,slow=6.5,SNR=5.2
comp=Z,1.2nm,0.4s
AKASG Malin Array Be 66.40 360 P P 10 20 09.0 +0.2
AKASG IAmb IAmb 10 20 36.9
comp=Z,2.0nm,1.0s
ENH Enshi 67.34 292 P P 10 20 15.5 +0.4
ENH IAmb IAmb 10 20 34.2
comp=Z,7.8nm,1.3s
BUR08 Bucovina Ar. S 69.43 2 P P 10 20 28.5 +0.6
BUR08 IAmb IAmb 10 20 53.5
comp=Z,6.2nm,1.4s
BURAR Bucovina Array 69.46 2 P P 10 20 28.6 +0.6
TEOL Teolo 70.91 13 P P 10 20 37.2 +0.4
RAFF Raffo Rosso 79.23 12 P P 10 21 24.6 0.0
GRHM Grahamstown, E 149.98 4 PKPbc PKiKP 10 29 08.9 -0.3

*OSPL **06** 10:26:21.8±0.7, 18°20N×71°41W, h31km±4km, ML1.7, Presumed earthquake*
*SDD **06** 10:26:23.3±2.5, 18°15N×71°38W, h20km±7km, MD2.9,*

ML1.9, MW3.3, Presumed earthquake

ISC 06 10:26:22.4±1.0**, 18.17N**±0.03×**71.34W**±0.03**, h19**km±2km**, n16, σ1.24**/30**, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PODR	**Polo**	**0.06**	**93**	*i* P	**Pg**	**10 26 26.5**	**+0.3**
PODR				*i* S	**Sg**	**10 26 30.5**	**+1.7**
PODR				IAML		10 26 31.9	
	comp=N,234nm,0.2s						
PODR	**Polo**	**0.06**	**93**	*i* P	**Pg**	**10 26 26.5**	**+0.3**
PODR				*e*S	**Sg**	**10 26 30.5**	**+1.7**
LODU1	**El Espartillar**	**0.22**	**325**	*i* P	**Pb**	**10 26 27.1**	**-0.4**
LODU1				*e*S	**Sb**	**10 26 31.5**	**+0.7**
LODU1				IAML		10 26 32.2	
	comp=Z,113nm,0.3s						
NEDR	**Neiba UASD**	**0.32**	**347**	*i* P	**Pg**	**10 26 28.9**	**-0.5**
NEDR				*i* S	**Sb**	**10 26 35.9**	**+1.4**
NEDR				IAML		10 26 43.7	
	comp=N,57nm,0.3s						
LOVI	**El Cajuil, Ovi**	**0.37**	**184**	*i* P	**Pg**	**10 26 29.8**	**-0.5**
LOVI				*e*S	**Sb**	**10 26 36.6**	**+0.7**
LOVI				IAML		10 26 37.5	
	comp=Z,85nm,1.5s						
LOBH	**Bahia de las A**	**0.42**	**223**	*i* P	**Pg**	**10 26 29.8**	**-1.3**
LOBH				*e*S	**Sg**	**10 26 36.4**	**-0.6**
LOBH				IAML		10 26 37.8	
	comp=Z,48nm,0.8s						
LONE3	**El Aguacate, B**	**0.45**	**345**	*i* P	**Pg**	**10 26 30.6**	**-1.1**
LONE3				*e*S	**Sg**	**10 26 36.5**	**-1.4**
LONE3				IAML		10 26 37.2	
	comp=Z,22nm,1.5s						
JIDR	**Jimani**	**0.58**	**303**	*i* P	**Pb**	**10 26 34.5**	**+0.5**
JIDR				*i* S	**Sb**	**10 26 40.7**	**-1.1**
JIDR				IAML		10 26 56.6	
	comp=N,30nm,3.1s						
SDDR	**Presa de Saban**	**0.81**	**3**	*i* P	**Pb**	**10 26 37.9**	**0.0**
SDDR				*i* S	**Sb**	**10 26 49.2**	**+0.7**
SDDR				IAML		10 27 30.3	
	comp=N,15nm,2.7s						
ABDR	**Alto Bandera**	**0.93**	**47**	*i* P	**Pb**	**10 26 38.9**	**-1.2**
ABDR				*i* S	**Sb**	**10 26 51.8**	**-0.5**
ABDR				IAML		10 27 04.7	
	comp=N,0.3nm,0.3s						
BANI	**BANI**	**0.96**	**76**	*i* P	**Pn**	**10 26 41.3**	**+0.3**
BANI				*i* S	**Sg**	**10 26 53.8**	**-0.1**
BANI				IAML		10 27 31.8	
	comp=N,35nm,0.9s						
REDR	**Restauracion**	**0.99**	**357**	*i* P	**Pn**	**10 26 41.9**	**+0.5**
REDR				IAML		10 26 57.2	
	comp=N,16nm,3.0s						
REDR				*i* S	**Sn**	**10 26 57.8**	**+3.0**
DR08	**Loma La Naviza**	**1.48**	**58**	*i* P	**Pn**	**10 26 48.2**	**+0.1**
DR08				*i* S	**Sn**	**10 27 07.0**	**+0.1**
DR08				IAML		10 27 39.5	
	comp=N,235nm,0.2s						
SFDR	**San Fco. de Ma**	**1.52**	**43**	*i* P	**Pn**	**10 26 46.3**	**-2.3**
SFDR				IAML		10 27 07.1	
	comp=N,112nm,0.3s						
NADR	**Nagua**	**1.83**	**50**	*i* P	**Pn**	**10 26 53.1**	**+0.2**
NADR				IAML		10 27 22.6	
	comp=N,111nm,2.3s						
HATOM	**Hato Mayor del**	**1.96**	**71**	*i* P	**Pn**	**10 26 55.9**	**+1.2**
HATOM				*i* S	**Sn**	**10 27 16.6**	**-2.1**
HATOM				IAML		10 27 51.6	
	comp=N,21nm,2.6s						

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*IDC **06** 10:28:39.6±0.3, 31.46S×58.47E, h0km, mb5.2/39, mbtmp5.1/40, ML5.5/1, MS5.4/75, Error ellipse: s-maj=14.2km s-min=11.4km az=69.0*

*BGR **06** 10:28:39.5, 30.76S×62.03E, h10km, mb5.3*

*MOS **06** 10:28:40.0±0.9, 31.41S×58.36E, h10km, mb5.8/89, MS5.5/40, Error ellipse: s-maj=9.2km s-min=4.7km az=94.3*

*NEIC **06** 10:28:42.0±1.2, 31.37S±0.06×58.32E±0.06, h10km±1km, mb5.8/185, Ms_20 5.8/584, Mwb6.0/90, Mww6.0/40, Error ellipse: s-maj=13.1km s-min=4.5km az=220.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.05; $M_{\theta\theta}$0.12; $M_{\phi\phi}$-0.08; $M_{r\theta}$0.11; $M_{\theta\phi}$1.08; $M_{\phi r}$0.28; Fault plane solution: $M_0$1.12000×10^{18} NP1:ϕ_s2.25000°, δ86.47000°, λ165.80000°. NP2:ϕ_s93.15000°, δ75.83000°, λ3.64000°. Principal axes: T 1.1662, Plg13.0000°, Azm317.0000°; N -0.0883, Plg75.0000°, Azm169.0000°; P -1.0779, Plg7.0000°, Azm49.0000°;*

*NEIC **06** 10:28:42, 31.37S×58.33E, h10km*

*NEIC **06** 10:28:42.2, 31.36S×58.33E, h12km*

*NEIC **06** 10:28:42.2, 31.56S×58.09E, h12km, Moment Tensor Solution. Duration: 5.1 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.13; $M_{\theta\theta}$0.16; $M_{\phi\phi}$-0.03; $M_{r\theta}$-0.21; $M_{\theta\phi}$1.16; $M_{\phi r}$-0.08; Fault plane solution: $M_0$1.19000×10^{18} NP1: ϕ_s182.04000°, δ80.26000°, λ177.39000°. NP2: ϕ_s272.48000°, δ87.43000°, λ9.75000°. Principal axes: T 1.2587, Plg9.0000°, Azm138.0000°; N -0.1582, Plg80.0000°, Azm287.0000°; P -1.1006, Plg5.0000°, Azm47.0000°;*

*ISC-PP **06** 10:28:42, 31.37S×58.32E, h25km, Mwppsm6.1, Moment Tensor Solution. s27 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.08±.09; $M_{\theta\theta}$0.54±.15; $M_{\phi\phi}$0.50±.16; $M_{r\theta}$-0.02±.10; $M_{\theta\phi}$0.24±.14; $M_{\phi r}$0.41±.16; Fault plane solution: $M_0$2.02000×10^{18} NP1:ϕ_s74.60000°, δ44.70000°, λ314.70000°. NP2:ϕ_s200.20000°, δ60.00000°, λ-124.80000°.*

*BJI **06** 10:28:42.1, 30.86S×58.48E, h12km, mB5.7/52, mb5.3/79, Ms5.9/89, Ms7 5.7/86*

*GFZ **06** 10:28:42.5, 31.35S×58.36E, h11km, MW6.0, Moment Tensor Solution. s89 Moment tensor: M_{rr}-0.20; $M_{\theta\theta}$0.09; $M_{\phi\phi}$0.11; $M_{r\theta}$0.12; $M_{\theta\phi}$1.18; $M_{\phi r}$0.16; Fault plane solution: NP1:ϕ_s359.00000°, δ85.00000°, λ173.00000°. NP2:ϕ_s89.00000°, δ83.00000°, λ4.00000°. Principal axes: T 1.3000, Plg7.0000°, Azm314.0000°; N -0.2200, Plg82.0000°, Azm146.0000°; P -1.0800, Plg1.0000°, Azm44.0000°;*

*IPGP **06** 10:28:42.0, 31.35S×58.33E, h6km, Mw6.1, Fault plane solution: NP1:ϕ_s270.00000°, δ79.00000°, λ-23.00000°. NP2:ϕ_s5.00000°, δ67.00000°, λ-168.00000°.*

*PTWC **06** 10:28:42, 31.30S×58.30E, h10km, Mwp6.0/14*

*GCMT **06** 10:28:44.0±0.1, 31.41S×58.34E, h12km, MW6.0/166, Moment Tensor Solution. s150,c330; s166,c573; Duration: 2.4 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.28±.01; $M_{\theta\theta}$0.23±.01; $M_{\phi\phi}$0.04±.01; $M_{r\theta}$0.14±.02; $M_{\theta\phi}$1.23±.01; $M_{\phi r}$0.19±.02; Best double couple: $M_0$1.25100×10^{18} NP1:ϕ_s93.00000°, δ82.00000°, λ3.00000°. NP2:ϕ_s2.00000°, δ87.00000°, λ172.00000°. Principal axes: T 1.4030, Plg8.0000°, Azm317.0000°; N -0.3050, Plg82.0000°, Azm158.0000°; P -1.0980, Plg3.0000°, Azm48.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 06 10:28:41.9±0.5**, 31.35S**±0.03×**58.41E**±0.04**, h10**km±2km**, h10km:pP-P, n1563, σ1.40**/1411**, mb5.7**/322**, MS5.7**/430**, 63C-30D, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**10.42**	**346**		**Pn**	**10 31 08.1**	**-3.5**
RER	**Riviere de l'E**	**10.42**	**346**	P	**Pn**	**10 31 08.2**	**-3.5**
FOMA	**Nahampoana Res**	**11.91**	**299**		**Pn**	**10 31 29.2**	**-2.6**
FOMA	**Nahampoana Res**	**11.91**	**299**	P	**Pn**	**10 31 29.0**	**-2.9**
FOMA	**Nahampoana Res**	**11.91**	**299**	P	**Pn**	**10 31 30.7**	**-1.2**
ROCAM	**Rodrigues Isla**	**12.38**	**22**		**Pn**	**10 31 37.0**	**-1.3**
ROCAM	**Rodrigues Isla**	**12.38**	**22**	P	**Pn**	**10 31 38.8**	**+0.5**
VOI	**Vohitsoka**	**14.00**	**309**		**Pn**	**10 31 58.3**	**-2.3**
VOI	**Vohitsoka**	**14.00**	**309**	P	**Pn**	**10 31 59.4**	**-1.2**
	SNR=31						
VOI	**Vohitsoka**	**14.00**	**309**	P	**Pn**	**10 31 58.7**	**-1.9**
H04N2	**CROZET ISLANDS**	**15.66**	**197**	T	T	10 48 26.9	
	baz=23,slow=75,SNR=2004						
H04N1	**CROZET ISLANDS**	**15.66**	**197**	T	T	10 48 28.0	
	baz=23,slow=75,SNR=2393						
H04N3	**CROZET ISLANDS**	**15.68**	**197**	T	T	10 48 30.4	
	baz=23,slow=75,SNR=2789						
CRZF	**Crozet Islands**	**15.89**	**197**	Pn	**Pn**	**10 32 26.6**	**+0.9**
ABPO	**Ambohimpanom**	**15.89**	**318**		**Pn**	**10 32 24.7**	**-1.3**
ABPO	**Ambohimpanom**	**15.89**	**318**	P	**Pn**	**10 32 24.7**	**-1.3**
ABPO				pmax	pmax		
	comp=Z,215nm,0.7s						
ABPO	**Ambohimpanom**	**15.89**	**318**	P	**Pn**	**10 32 24.3**	**-1.7**
ABPO	**Ambohimpanom**	**15.89**	**318**	P	**Pn**	**10 32 27.2**	**+1.1**
OPO	**Ambohidratompo**	**16.27**	**319**	Pn	**Pn**	**10 32 30.1**	**-0.8**
	comp=Z,1.6nm,0.3s,baz=125,slow=11,SNR=40						
OPO				Sn	**Sn**	**10 35 25.2**	**-6.5**
	comp=Z,3.6nm,0.3s,baz=27,slow=23,SNR=7.5						
OPO				LR	LR	10 37 17.3	
	comp=Z,27µm,21.6s,baz=14,slow=32						
	comp=Z,85nm,0.7s						
AIS	**Amsterdam Isla**	**17.03**	**117**	P	**Pn**	**10 32 41.1**	**+0.9**
AIS	**Amsterdam Isla**	**17.03**	**117**	P	**P**	**10 32 41.4**	**-0.6**
SBV	**Sambava**	**19.44**	**334**	P	**P**	**10 33 08.7**	**0.0**
	SNR=10						
PAF	**Port-aux-Franc**	**20.06**	**157**		**P**	**10 33 14.7**	**-0.6**
PAF	**Port-aux-Franc**	**20.06**	**157**	P	**P**	**10 33 14.7**	**-0.6**
PAF				pmax	pmax		
	comp=Z,3µm,1.4s						
H08S1	**Diego Carcia H**	**26.99**	**32**	T	T	11 02 36.6	
	baz=206,slow=76,SNR=3869						
H08S2	**Diego Garcia H**	**27.00**	**32**	T	T	11 02 37.1	
	baz=206,slow=76,SNR=3735						
H08S3	**Diego Garcia H**	**27.01**	**32**	T	T	11 02 37.6	
	baz=206,slow=76,SNR=5195						
GRHM	**Grahamstown, E**	**27.09**	**257**	P	**P**	**10 34 23.9**	**-1.0**
GRHM				IAmb	IAmb	10 34 27.0	
	comp=Z,250nm,1.4s						
DGAR	**Diego Garcia**	**27.19**	**32**	IAMs_20	IAMs_20	10 42 01.8	
	comp=Z,30µm,20.0s						
DGAR	**Diego Garcia**	**27.19**	**32**	*ce*P	**P**	**10 34 24.3**	**-1.6**
DGAR				pmax	pmax		
	comp=Z,174nm,1.1s						
DGAR				MLR	MLR		
	comp=Z,10µm,16.0s						
DGAR	**Diego Garcia**	**27.19**	**32**	P	**P**	**10 34 26.1**	**+0.2**
DGAR				P	**P**	**10 34 26.1**	**+0.2**
BOSA	**Boshof**	**28.79**	**267**	P	**P**	**10 34 38.6**	**-1.7**
	comp=Z,11nm,1.0s,baz=118,slow=9.3,SNR=8.9						
BOSA				LR	LR	10 44 38.4	
	comp=Z,7µm,18.4s,baz=108,slow=33						
	comp=Z,11nm,1.0s						
BOSA	**Boshof**	**28.79**	**267**		**P**	**10 34 39.0**	**-1.3**
BOSA	**Boshof**	**28.79**	**267**	P	**P**	**10 34 39.4**	**-0.9**
BOSA	**Boshof**	**28.79**	**267**	P	**P**	**10 34 38.2**	**-2.1**
MREMI	**Moremi**	**28.87**	**280**	P	**P**	**10 34 39.8**	**-1.2**
LBTB	**Lobatse**	**29.53**	**274**	LR	LR	10 44 36.5	
	comp=Z,12µm,20.9s,baz=110,slow=32						
LBTB	**Lobatse**	**29.53**	**274**		**P**	**10 34 45.1**	**-1.8**
LBTB	**Lobatse**	**29.53**	**274**	P	**P**	**10 34 45.1**	**-1.8**
LBTB				pmax	pmax		
	comp=Z,105nm,1.5s						
LBTB	**Lobatse**	**29.53**	**274**	P	**P**	**10 34 45.5**	**-1.4**
LBTB	**Lobatse**	**29.53**	**274**	P	**P**	**10 34 45.3**	**-1.6**
BROLN	**Tlhalogang**	**29.60**	**283**	*i* P	**P**	**10 34 45.0**	**-2.6**
BROLN	**Tlhalogang**	**29.60**	**283**	P	**P**	**10 34 46.3**	**-1.2**
LPHEP	**Lephephe**	**29.90**	**277**	*i* P	**P**	**10 34 48.2**	**-2.0**
SOOWA	**Sowa**	**30.77**	**283**	*i* P	**P**	**10 34 56.5**	**-1.3**
SOOWA	**Sowa**	**30.77**	**283**	P	**P**	**10 34 57.3**	**-0.6**
KHWEE	**KHWEE**	**30.82**	**280**	*i* P	**P**	**10 34 56.4**	**-1.9**
KHWEE	**KHWEE**	**30.82**	**280**	P	**P**	**10 34 57.0**	**-1.3**
KHWEE				IAmb	IAmb	10 34 59.2	
	comp=Z,153nm,0.8s						
KHWEE	**KHWEE**	**30.82**	**280**	P	**P**	**10 34 57.4**	**-0.9**
KDWAN	**Kaudwane**	**30.91**	**276**	*i* P	**P**	**10 34 57.8**	**-1.3**
KDWAN	**Kaudwane**	**30.91**	**276**	P	**P**	**10 34 58.2**	**-1.0**
SUR	**Sutherland**	**31.84**	**258**	LR	LR	10 45 29.8	
	comp=Z,19µm,20.7s,baz=108,slow=32						
SUR	**Sutherland**	**31.84**	**258**	P	**P**	**10 35 06.1**	**-1.3**
SUR				IAmb	IAmb	10 35 09.5	
	comp=Z,274nm,1.8s						
SUR	**Sutherland**	**31.84**	**258**	IAMs_20	IAMs_20	10 45 11.8	
	comp=Z,21µm,20.0s						
SUR	**Sutherland**	**31.84**	**258**	P	**P**	**10 35 06.5**	**-0.9**
SUR				S	**S**	**10 40 18.6**	**+0.4**
SUR	**Sutherland**	**31.84**	**258**	P	**P**	**10 35 08.4**	**+1.0**
LSZ	**Lusaka**	**31.89**	**293**	LR	LR	10 46 48.6	
	comp=Z,27µm,19.8s,baz=130,slow=34						
LSZ	**Lusaka**	**31.89**	**293**		**P**	**10 35 06.9**	**-0.9**
LSZ	**Lusaka**	**31.89**	**293**	IAMs_20	IAMs_20	10 46 27.2	
	comp=Z,27µm,20.0s						
LSZ	**Lusaka**	**31.89**	**293**	P	**P**	**10 35 06.9**	**-0.9**
LSZ				pmax	pmax		
	comp=Z,61nm,1.0s						
LSZ				MLR	MLR		
	comp=Z,28µm,20.0s						
LSZ	**Lusaka**	**31.89**	**293**	P	**P**	**10 35 07.7**	**-0.1**
LSZ				P	**P**	**10 35 07.7**	**-0.1**
LSZ				P	**P**	**10 35 07.7**	**-0.1**
LSZ				S	**S**	**10 40 19.4**	**+0.4**
LSZ				S	**S**	**10 40 19.4**	**+0.4**
LSZ				S	**S**	**10 40 19.4**	**+0.4**
LSZ	**Lusaka**	**31.89**	**293**	P	**P**	**10 35 07.6**	**-0.2**
LSZ	**Lusaka**	**31.89**	**293**	P	**P**	**10 35 07.7**	**-0.1**
KSANE	**Kasane**	**32.97**	**286**	*i* P	**P**	**10 35 16.2**	**-1.1**
KSANE	**Kasane**	**32.97**	**286**	P	**P**	**10 35 16.4**	**-0.8**
KSANE				IAmb	IAmb	10 35 30.4	
	comp=Z,141nm,1.0s						
KSANE	**Kasane**	**32.97**	**286**	P	**P**	**10 35 16.9**	**-0.3**
KGCAE	**Kacgae**	**33.20**	**276**	*i* P	**P**	**10 35 17.7**	**-1.6**
KGCAE	**Kacgae**	**33.20**	**276**	P	**P**	**10 35 17.9**	**-1.4**
KGCAE				IAmb	IAmb	10 35 20.5	
	comp=Z,100nm,0.8s						
KGCAE	**Kacgae**	**33.20**	**276**	P	**P**	**10 35 18.3**	**-1.0**
KAAM	**Kaadhehdhoo**	**34.56**	**26**	P	**P**	**10 35 31.6**	**+0.7**
KAAM				IAmb	IAmb	10 35 43.8	
	comp=Z,110nm,0.8s						
KAAM	**Kaadhehdhoo**	**34.56**	**26**	P	**P**	**10 35 32.5**	**+1.6**
	SNR=6.5						
KAAM	**Kaadhehdhoo**	**34.56**	**26**	P	**P**	**10 35 32.5**	**+1.6**
KAAM	**Kaadhehdhoo**	**34.56**	**26**	P	**P**	**10 35 32.0**	**+1.1**
	comp=Z,4µmcomp=Z,176nm,1.5s						
GRTLG	**Ghanzi**	**34.64**	**278**	*i* P	**P**	**10 35 30.7**	**-1.1**
GRTLG	**Ghanzi**	**34.64**	**278**	P	**P**	**10 35 30.5**	**-1.3**
KIBK	**Kibwezi**	**34.67**	**322**	P	**P**	**10 35 32.3**	**+0.3**
KIBK	**Kibwezi**	**34.67**	**322**	P	**P**	**10 35 32.2**	**+0.2**
KIBK	**Kibwezi**	**34.67**	**322**	P	**P**	**10 35 32.9**	**+0.9**
	SNR=34						
KIBK	**Kibwezi**	**34.67**	**322**	P	**P**	**10 35 32.9**	**+0.9**
KOOLE	**Kule**	**34.86**	**274**	*i* P	**P**	**10 35 32.3**	**-1.4**
KOOLE	**Kule**	**34.86**	**274**	P	**P**	**10 35 32.3**	**-1.4**
KOOLE				IAmb	IAmb	10 35 34.7	
	comp=Z,93nm,0.8s						
KOOLE	**Kule**	**34.86**	**274**	P	**P**	**10 35 33.0**	**-0.8**
KMBO	**Kilima Mbogo**	**36.11**	**322**	P	**P**	**10 35 44.1**	**-0.4**
	baz=160,slow=10						
KMBO				LR	LR	10 49 52.1	
	comp=Z,12µm,18.0s,baz=143,slow=35						
MAW	**Mawson**	**36.39**	**177**	P	**P**	**10 35 44.3**	**-1.8**
	comp=Z,56nm,1.1s,baz=342,slow=9.2,SNR=1.9						
MAW				LR	LR	10 47 01.2	
	comp=Z,4µm,21.6s,baz=352,slow=30						
	comp=Z,56nm,1.1s						
MAW	**Mawson**	**36.39**	**177**	P	**P**	**10 35 45.3**	**-0.8**
MAW	**Mawson**	**36.39**	**177**	P	**P**	**10 35 45.3**	**-0.8**
MAW				pmax	pmax		
	comp=Z,27nm,1.3s						
WIN	**Windhoek**	**37.67**	**273**	P	**P**	**10 35 56.8**	**-1.0**
WIN	**Windhoek**	**37.67**	**273**	P	**P**	**10 35 56.8**	**-1.0**
WIN				pmax	pmax		
	comp=Z,52nm,1.2s						
TSUM	**Tsumeb**	**38.64**	**278**	LR	LR	10 50 43.7	
	comp=Z,24µm,18.6s,baz=120,slow=34						
TSUM	**Tsumeb**	**38.64**	**278**	P	**P**	**10 36 05.3**	**-0.7**
TSUM	**Tsumeb**	**38.64**	**278**	IAMs_20	IAMs_20	10 50 23.8	
	comp=Z,23µm,20.0s						
TSUM	**Tsumeb**	**38.64**	**278**	P	**P**	**10 36 05.6**	**-0.3**
TSUM	**Tsumeb**	**38.64**	**278**	P	**P**	**10 36 05.7**	**-0.3**
SYO	**Syowa Base**	**39.22**	**191**	⇑*e*P	**P**	**10 36 08.6**	**-1.4**
SYO	**Syowa Base**	**39.22**	**191**	⇑*i*P	P	10 36 16.4	+6.4
MBAR	**Mbarara**	**40.26**	**314**	LR	LR	10 51 29.4	
	comp=Z,26µm,21.0s,baz=138,slow=34						
MBAR	**Mbarara**	**40.26**	**314**	P	**P**	**10 36 18.7**	**-0.8**
MBAR	**Mbarara**	**40.26**	**314**	IAMs_20	IAMs_20	10 51 28.3	
	comp=Z,25µm,20.0s						
MBAR	**Mbarara**	**40.26**	**314**	*c i*P	**P**	**10 36 19.1**	**-0.4**
MBAR				pmax	pmax		
	comp=Z,26nm,1.3s						
MBAR				MLR	MLR		
	comp=Z,27µm,22.0s						
MBAR	**Mbarara**	**40.26**	**314**	S	**S**	**10 42 31.9**	**+4.8**
MBAR	**Mbarara**	**40.26**	**314**	P	**P**	**10 36 20.6**	**+1.1**
MBAR	**Mbarara**	**40.26**	**314**	P	**P**	**10 36 21.0**	**+1.5**
HMDM	**Hanimaadhoo**	**40.45**	**23**	P	**P**	**10 36 20.4**	**-0.4**
HMDM				IAmb	IAmb	10 36 48.0	
	comp=Z,417nm,1.7s						
HMDM				IAMs_20	IAMs_20	10 49 00.5	
	comp=Z,14µm,20.0s						
HMDM	**Hanimaadhoo**	**40.45**	**23**	P	**P**	**10 36 21.4**	**+0.6**
	SNR=10						
HMDM	**Hanimaadhoo**	**40.45**	**23**	P	**P**	**10 36 21.6**	**+0.8**
HMDM	**Hanimaadhoo**	**40.45**	**23**	P	**P**	**10 36 21.2**	**+0.4**
	comp=Z,3µmcomp=Z,123nm,1.6s						
LODK	**Lodwar**	**40.96**	**323**	P	**P**	**10 36 26.3**	**+1.2**
LODK				IAMs_20	IAMs_20	10 50 12.9	
	comp=Z,11µm,22.0s						
LODK	**Lodwar**	**40.96**	**323**	P	**P**	**10 36 26.9**	**+1.8**
	SNR=57						
LODK	**Lodwar**	**40.96**	**323**	P	**P**	**10 36 26.7**	**+1.6**
HALK	**Hakmana**	**42.88**	**34**	P	**P**	**10 36 41.5**	**+0.8**
TRD	**Trivandrum**	**43.43**	**27**	*e*P	**P**	**10 36 46.0**	**+0.8**
TRD				IAMs_20	IAMs_20	10 50 29.7	
	comp=Z,11µm,19.9s						
PALK	**Pallekele**	**43.92**	**33**	LR	LR	10 50 45.5	
	comp=Z,5µm,20.1s,baz=203,slow=30						
PALK	**Pallekele**	**43.92**	**33**	P	**P**	**10 36 48.6**	**-0.7**
PALK				IAmb	IAmb	10 36 58.9	
	comp=Z,195nm,2.0s						
PALK	**Pallekele**	**43.92**	**33**	*i* P	**P**	**10 36 49.9**	**+0.6**
	SNR=18						
PALK	**Pallekele**	**43.92**	**33**	*i* P	**P**	**10 36 49.0**	**-0.2**
PALK				pmax	pmax		
	comp=Z,16nm,1.0s						
PALK				MLR	MLR		
	comp=Z,6µm,17.0s						
PALK	**Pallekele**	**43.92**	**33**	P	**P**	**10 36 49.0**	**-0.2**
PALK				P	**P**	**10 36 49.0**	**-0.2**
PALK				P	**P**	**10 36 49.0**	**-0.2**
PALK				S	**S**	**10 43 22.3**	**+1.3**
PALK				S	**S**	**10 43 22.3**	**+1.3**
PALK				S	**S**	**10 43 22.3**	**+1.3**
PALK	**Pallekele**	**43.92**	**33**	P	**P**	**10 36 50.1**	**+0.9**
PALK	**Pallekele**	**43.92**	**33**	P	**P**	**10 36 49.5**	**+0.3**
FURI	**Furi**	**44.25**	**331**	LR	LR	10 52 06.5	
	comp=Z,6µm,21.9s,baz=157,slow=32						
ELIB	**Princess Elisa**	**44.75**	**195**	*d*P	**P**	**10 36 53.9**	**-1.4**
	comp=Z,42nm,1.1s						
MALK	**Mahakanadarawa**	**44.84**	**32**	P	**P**	**10 36 56.6**	**+0.1**
MALK	**Mahakanadarawa**	**44.84**	**32**	P	**P**	**10 36 57.2**	**+0.7**
ATD	**Arta Tunnel**	**45.17**	**338**	LR	LR	10 52 22.4	
	comp=Z,738nm,21.8s,baz=152,slow=31						
ATD	**Arta Tunnel**	**45.17**	**338**	P	**P**	**10 36 58.6**	**-0.6**
ATD				IAMs_20	IAMs_20	10 52 10.5	
	comp=Z,14µm,21.0s						
ATD	**Arta Tunnel**	**45.17**	**338**	P	**P**	**10 37 00.1**	**+0.9**
	SNR=19						
ATD				S	**S**	**10 43 39.1**	**0.0**
ATD	**Arta Tunnel**	**45.17**	**338**	P	**P**	**10 37 00.2**	**+1.0**
KOD	**Kodaikanal**	**45.20**	**27**	*e*P	**P**	**10 37 00.6**	**+0.9**
KOD				IAmb	IAmb	10 37 16.2	
	comp=Z,98nm,1.4s						
KOD				IAMs_20	IAMs_20	10 51 26.2	
	comp=Z,9µm,18.9s						
CASY	**Casey**	**46.69**	**154**	P	**P**	**10 37 10.5**	**-0.1**
CASY				IAmb	IAmb	10 37 21.8	
	comp=Z,115nm,1.4s						
CASY	**Casey**	**46.69**	**154**	IAMs_20	IAMs_20	10 53 25.2	
	comp=Z,10µm,20.0s						
SALM	**Salem**	**46.77**	**27**	*e*P	**P**	**10 37 13.7**	**+1.9**
NVL	**N'lazarevskaya**	**46.90**	**199**	*e*P	**P**	**10 37 12.3**	**+0.2**
NVL				*e*		10 38 43.3	
NVL				*e*		10 39 01.6	
NVL				*e*PPP	PPP	10 39 43.7	
NVL				*e*SSS	SSS	10 48 29.1	
NVL				pmax	pmax		
	comp=Z,11nm,0.9s						
NVL				MLR	MLR		
	comp=Z,953nm,17.0s						
SISI	**Saibi**	**48.66**	**60**	P	**P**	**10 37 27.9**	**+1.4**
	comp=Z,2µmcomp=Z,122nm,2.0s						
MUN	**Mundaring**	**48.68**	**107**	P	**P**	**10 37 26.2**	**-0.4**
	comp=Z,44nm,1.6s						
RBK	**Rabkut**	**48.74**	**355**	P	**P**	**10 37 26.9**	**0.0**
	SNR=7.9						
RBK				P	**P**	**10 37 26.9**	**0.0**
	SNR=7.9						
RBK				P	**P**	**10 37 26.9**	**0.0**
	SNR=7.9						
RBK				S	**S**	**10 44 29.8**	**0.0**
RBK				S	**S**	**10 44 29.8**	**0.0**
RBK				S	**S**	**10 44 29.8**	**0.0**
GOA	**Goa**	**48.87**	**20**	*e*P	**P**	**10 37 27.9**	**0.0**
MDRS	**Chennai**	**48.88**	**29**	*e*P	**P**	**10 37 27.5**	**-0.6**
MDRS				IAMs_20	IAMs_20	10 53 50.7	
	comp=Z,4µm,19.0s						
DMTO	**DMTO**	**48.89**	**356**	P	**P**	**10 37 27.8**	**-0.3**
	SNR=11						
DMTO				P	**P**	**10 37 27.8**	**-0.3**
	SNR=11						
DMTO				S	**S**	**10 44 31.9**	**-0.1**
DMTO				S	**S**	**10 44 31.9**	**-0.1**
SHAO	**Shalim**	**49.16**	**356**	*i* P	**P**	**10 37 29.3**	**-0.8**
	SNR=14						
SHAO	**Shalim**	**49.16**	**356**	P	**P**	**10 37 30.5**	**+0.3**
	SNR=20						
SHAO				P	**P**	**10 37 30.5**	**+0.3**
	SNR=20						
SHAO				P	**P**	**10 37 30.5**	**+0.3**
	SNR=20						
WHFO	**Wadi Hawf**	**49.18**	**354**	P	**P**	**10 37 29.9**	**-0.5**
	SNR=12						
WHFO				P	**P**	**10 37 29.9**	**-0.5**
	SNR=12						
WHFO				P	**P**	**10 37 29.9**	**-0.5**
	SNR=12						
NWAO	**Narrogin (SRO)**	**49.27**	**108**	LR	LR	10 53 50.5	
	comp=Z,8µm,19.8s,baz=263,slow=31						
NWAO	**Narrogin (SRO)**	**49.27**	**108**	IAMs_20	IAMs_20	10 53 37.7	
	comp=Z,8µm,20.0s						
GSI	**Gunungsitoli**	**49.35**	**56**	P	**P**	**10 37 33.9**	**+2.1**
GSI	**Gunungsitoli**	**49.35**	**56**	P	**P**	**10 37 32.7**	**+0.9**
GSI				IAmb	IAmb	10 37 58.5	
	comp=Z,201nm,1.4s						
GSI				IAMs_20	IAMs_20	10 52 54.6	
	comp=Z,8µm,21.0s						
GSI	**Gunungsitoli**	**49.35**	**56**	P	**P**	**10 37 33.2**	**+1.4**
	comp=Z,3µmcomp=Z,105nm,1.2s						
MORW	**Morawa**	**49.37**	**103**	P	**P**	**10 37 31.4**	**-0.4**
	comp=Z,42nm,2.2s						
MORW	**Morawa**	**49.37**	**103**	P	**P**	**10 37 31.9**	**+0.1**
BLDU	**Ballidu**	**49.47**	**105**	P	**P**	**10 37 32.7**	**+0.1**
	comp=Z,45nm,1.6s						
DOK	**Doka**	**49.85**	**355**	P	**P**	**10 37 35.4**	**0.0**
	SNR=39						
DOK				P	**P**	**10 37 35.4**	**0.0**
	SNR=39						
DOK				P	**P**	**10 37 35.4**	**0.0**
	SNR=39						
MASI	**Maura Aman, Be**	**49.87**	**65**	P	**P**	**10 37 37.4**	**+1.5**
	comp=Z,5µmcomp=Z,195nm,1.4s						
PDSI	**Padang**	**49.95**	**61**	P	**P**	**10 37 38.0**	**+1.6**
	comp=Z,8µmcomp=Z,119nm,1.1s						
GIRL	**Giralia**	**50.05**	**94**	P	**P**	**10 37 37.0**	**-0.1**
	comp=Z,77nm,1.3s						
GIRL	**Giralia**	**50.05**	**94**	P	**P**	**10 37 36.9**	**-0.2**
GIRL				IAmb	IAmb	10 37 44.2	
	comp=Z,138nm,1.4s						
KLBR	**Kellerberrin**	**50.05**	**107**	P	**P**	**10 37 35.8**	**-1.2**
	comp=Z,48nm,0.9s						
AUKUL	**Kulin High Sch**	**50.08**	**108**	P	**P**	**10 37 39.1**	**+1.9**
TROLL	**Troll, Antarti**	**50.12**	**200**	P	**P**	**10 37 34.7**	**-2.4**
KASI	**Kota Agung**	**50.20**	**69**	P	**P**	**10 37 39.4**	**+1.2**
	comp=Z,2µmcomp=Z,112nm,1.2s						
PPI	**Padang Panjang**	**50.21**	**61**	P	**P**	**10 37 39.9**	**+1.6**
	comp=Z,2µmcomp=Z,104nm,1.3s						
MNSI	**Mandailing Nat**	**50.44**	**59**	P	**P**	**10 37 41.6**	**+1.5**
	comp=Z,6µmcomp=Z,93nm,1.4s						
CGJI	**Cibinong**	**50.52**	**71**	P	**P**	**10 37 42.3**	**+1.6**
	comp=Z,2µmcomp=Z,105nm,1.9s						
MDSI	**Maura Dua**	**50.56**	**68**	P	**P**	**10 37 41.8**	**+0.8**
	comp=Z,1µmcomp=Z,47nm,1.1s						
MLSI	**Meulaboh, Aceh**	**50.64**	**53**	P	**P**	**10 37 43.1**	**+1.5**
	comp=Z,3µmcomp=Z,133nm,1.4s						
KAD	**Karad**	**50.69**	**20**	*e*P	**P**	**10 37 42.2**	**+0.4**
KAD				IAmb	IAmb	10 37 49.3	
	comp=Z,188nm,1.4s						
KLSI		**50.88**	**68**	P	**P**	**10 37 45.0**	**+1.6**
DQM	**DQM**	**50.99**	**359**	P	**P**	**10 37 44.0**	**0.0**
	SNR=18						
DQM				P	**P**	**10 37 44.0**	**0.0**
	SNR=18						

KCSI Kotacane, Aceh 51.05 54 P P 10 37 46.1 +1.4
comp=Z,1µmcomp=Z,96nm,1.2s
CMBY CAMPBELL BAY 51.06 48 eP P 10 37 45.8 +1.1
CMBY IAMs_20 IAMs_20 10 54 01.2
comp=Z,19µm,21.5s
SBJI Serang 51.16 71 P P 10 37 47.2 +1.7
comp=Z,193nm,1.7s
BKNI Bangkinang 51.20 60 P P 10 37 46.0 +0.2
BKNI Bangkinang 51.20 60 P P 10 37 48.1 +2.2
BKNI Bangkinang 51.20 60 P P 10 37 46.3 +0.4
BKNI IAMs_20 IAMs_20 10 54 32.8
comp=Z,7µm,20.0s
BKNI Bangkinang 51.20 60 P P 10 37 47.4 +1.5
DBJI Dramaga 51.41 72 P P 10 37 49.0 +1.6
SNAA Sanae 51.59 201 ⇑P P 10 37 46.9 -1.2
comp=Z,2µm,1.1s
SNAA Sanae 51.59 201 P P 10 37 46.8 -1.3
comp=Z,19nm,0.9s,baz=77,slow=5.0,SNR=17
SNAA LR LR 10 55 33.7
comp=Z,6µm,20.5s,baz=68,slow=31
comp=Z,19nm,0.9s
SNAA Sanae 51.59 201 P P 10 37 46.4 -1.7
SNAA IAmb IAmb 10 37 55.6
comp=Z,81nm,0.9s
SNAA Sanae 51.59 201 ceP P 10 37 47.1 -1.0
SNAA pmax pmax
comp=Z,47nm,1.3s
SNAA MLR MLR
comp=Z,989nm,17.0s
BBJI Bungbulang 51.63 73 P P 10 37 49.7 +0.5
BBJI Bungbulang 51.63 73 P P 10 37 48.8 -0.4
BBJI Bungbulang 51.63 73 P P 10 37 49.4 +0.2
comp=Z,61nm,1.2s
LHMI Lhok Sumawe 51.71 52 P P 10 37 49.7 +0.1
LHMI IAMs_20 IAMs_20 10 54 45.2
comp=Z,8µm,20.0s
LHMI Lhok Sumawe 51.71 52 P P 10 37 51.1 +1.5
POO Poona 51.76 19 eP P 10 37 50.2 +0.3
POO IAMs_20 IAMs_20 10 54 19.5
comp=Z,6µm,20.1s
LEM Lembang 51.96 73 LR LR 10 55 09.9
comp=Z,3µm,20.3s,baz=224,slow=31
MHTO MHTO 52.03 359 P P 10 37 51.2 -0.6
SNR=21
MHTO P P 10 37 51.2 -0.6
SNR=21
MHTO S S 10 45 16.7 +1.2
MHTO S S 10 45 16.7 +1.2
VJD Vijayawada 52.16 27 IAmb IAmb 10 38 10.7
comp=Z,81nm,0.5s
HYB Hyderabad 52.20 25 eP P 10 37 53.3 +0.1
HYB ePP PP 10 39 55.2 +3.3
HYB eS S 10 45 19.5 +1.4
MEEK Meekatharra 52.31 101 P P 10 37 52.8 -1.3
comp=Z,116nm,1.1s
MEEK Meekatharra 52.31 101 P P 10 37 53.1 -1.0
KPJI Karang Pucung 52.76 74 P P 10 37 59.0 +1.6
comp=Z,1µmcomp=Z,68nm,1.4s
VNA2 Neumayer--Watz 52.83 202 ⇑P P 10 37 55.6 -1.7
comp=Z,12nm,0.7s,baz=94,slow=5.8
CTJI Waduk Cacaban 53.14 74 P P 10 38 01.9 +1.6
comp=Z,138nm,1.4s
JLN Jalan Bani Buh 53.20 1 P P 10 37 58.4 -2.1
SNR=5.4
JLN P P 10 37 58.4 -2.1
SNR=5.4
DSRI Dabo 53.36 64 P P 10 38 02.6 +0.7
comp=Z,2µmcomp=Z,99nm,1.2s
KMBL Kambalda 53.49 108 P P 10 38 01.7 -1.0
comp=Z,22nm,2.4s
VNA3 Neumayer Olymp 53.62 202 ⇑P P 10 38 01.8 -1.3
comp=Z,8.1nm,0.8s
BSY Bisya 53.80 359 P P 10 38 04.8 -0.1
SNR=20
BSY P P 10 38 04.8 -0.1
SNR=20
UMZA Um Al Zommool 53.84 356 P P 10 38 04.6 -0.5
UMZA P P 10 38 04.6 -0.5
UMZA P P 10 38 04.6 -0.5
UMZA S S 10 45 39.6 -0.5
UMZA S S 10 45 39.6 -0.5
UMZA S S 10 45 39.6 -0.5
PBA Port Blair 53.97 43 eP P 10 38 06.5 +0.2
SMDO Samad 54.10 360 P P 10 38 06.7 -0.4
SNR=17
SMDO P P 10 38 06.7 -0.4
SNR=17
PCJI Pacitan 54.14 77 P P 10 38 09.2 +1.6
comp=Z,2µmcomp=Z,169nm,1.1s
MZR Muzera 54.25 354 i P P 10 38 08.1 -0.1
SNR=18
MZR Muzera 54.25 354 P P 10 38 08.3 +0.2
SNR=16
MZR P P 10 38 08.3 +0.2
SNR=16
MYKOM Kota Tinggi 54.27 61 P P 10 38 08.6 0.0
MYKOM Kota Tinggi 54.27 61 P P 10 38 08.5 0.0
MYKOM Kota Tinggi 54.27 61 P P 10 38 08.6 0.0
WSAR Wadi Sarin 54.28 0 LR LR 10 56 35.4
comp=Z,16nm,19.9s,baz=208,slow=31
WSAR Wadi Sarin 54.28 0 P P 10 38 10.3 +1.9
WSAR S S 10 45 47.6 +1.5
KULM Kulim 54.31 56 P P 10 38 09.2 +0.4
KULM Kulim 54.31 56 P P 10 38 09.3 +0.4
KULM IAmb IAmb 10 38 21.7
comp=Z,108nm,1.4s
KULM Kulim 54.31 56 P P 10 38 09.2 +0.4
comp=Z,1µmcomp=Z,59nm,1.4s
VIS Vishakhapatnam 54.34 30 eP P 10 38 09.8 +0.9
TPI Tanjungpandan 54.36 69 P P 10 38 10.2 +1.0
comp=Z,2µmcomp=Z,1µmcomp=Z,85nm,1.5s
ARQ Araqi 54.40 358 P P 10 38 09.2 -0.1
SNR=13
ARQ P P 10 38 09.2 -0.1
SNR=13
BIDO Bidbid 54.56 360 P P 10 38 11.5 +1.2
SNR=16
BIDO P P 10 38 11.5 +1.2
SNR=16
HOQ Hoqain 54.63 359 P P 10 38 10.6 -0.3
SNR=13
HOQ P P 10 38 10.6 -0.3
SNR=13
HOQ P P 10 38 10.6 -0.3
SNR=13
AKL Akola 54.74 21 eP P 10 38 11.9 +0.1
AKL IAmb IAmb 10 38 22.5
comp=Z,139nm,1.0s
AKL IAMs_20 IAMs_20 10 56 02.7
comp=Z,7µm,20.8s
NGJI Ngawi 54.83 76 P P 10 38 14.2 +1.6
comp=Z,3µmcomp=Z,157nm,1.2s
SNJI Sawahan-Nganju 54.85 76 P P 10 38 14.4 +1.4
comp=Z,140nm,1.4s
SJI Sawahan 54.88 76 P P 10 38 14.3 +1.2
comp=Z,3µmcomp=Z,165nm,2.1s
MZWR Madinat Zayed 54.97 355 P P 10 38 13.2 -0.1
MZWR P P 10 38 13.2 -0.1
MZWR S S 10 45 57.2 +1.9
MZWR S S 10 45 57.2 +1.9
ALNE Al Ain 55.15 357 i P P 10 38 14.4 -0.2
SNR=9.8
ALNE Al Ain 55.15 357 P P 10 38 14.6 -0.1
SNR=18
ALNE P P 10 38 14.6 -0.1
SNR=18
ALNE S S 10 45 58.5 +0.7
ALNE S S 10 45 58.5 +0.7
SOHO SOHO 55.20 358 i P P 10 38 14.3 -0.6
SNR=32
PSAC1 Pilbara Seismi 55.23 96 P P 10 38 14.3 -1.2
comp=Z,79nm,1.5s
PSA00 Pilbara Seismi 55.25 96 P P 10 38 14.4 -1.2
comp=Z,65nm,1.6s
PSA00 Pilbara Seismi 55.25 96 P P 10 38 15.1 -0.6
PSA00 IAmb IAmb 10 38 26.3
comp=Z,157nm,1.6s
PSA00 Pilbara Seismi 55.25 96 P P 10 38 14.9 -0.8
PSA00 IAmb IAmb 10 38 26.4
comp=Z,112nm,1.4s
PSAB3 Pilbara Seismi 55.25 96 P P 10 38 14.5 -1.2
comp=Z,80nm,1.4s
DGPR DIGLIPUR 55.30 42 IAMs_20 IAMs_20 10 57 17.1
comp=Z,9µm,19.1s
PSAC2 Pilbara Seismi 55.30 96 P P 10 38 14.7 -1.3
comp=Z,64nm,1.3s

MBWA Marble Bar 55.32 95 P P 10 38 14.5 -1.6
comp=Z,62nm,1.3s
MBWA Marble Bar 55.32 95 P P 10 38 15.9 -0.2
MBWA Marble Bar 55.32 95 P P 10 38 14.9 -1.2
MBWA IAmb IAmb 10 38 26.9
comp=Z,190nm,1.6s
MBWA Marble Bar 55.32 95 P P 10 38 14.2 -1.9
MBWA P P 10 38 14.2 -1.9
MBWA S S 10 46 00.5 0.0
MBWA S S 10 46 00.5 0.0
BHUJ Bhuj 55.35 13 eP P 10 38 10.2 -5.9
SLWR Sila 55.48 353 P P 10 38 16.1 -0.8
SLWR P P 10 38 16.1 -0.8
SLWR P P 10 38 16.1 -0.8
SLWR S S 10 46 02.5 +0.4
SLWR S S 10 46 02.5 +0.4
SLWR S S 10 46 02.5 +0.4
AJN Ajban 55.69 356 P P 10 38 18.8 +0.3
AJN P P 10 38 18.8 +0.3
AJN S S 10 46 06.9 +2.0
AJN S S 10 46 06.9 +2.0
RAGD RAYAGADA 55.76 29 eP P 10 38 19.5 +0.4
RAGD IAmb IAmb 10 38 39.2
comp=Z,52nm,1.1s
ASHO Ashiyiah 55.76 357 i P P 10 38 18.6 -0.5
SNR=22
ASHO Ashiyiah 55.76 357 P P 10 38 18.9 -0.2
SNR=23
ASHO P P 10 38 18.9 -0.2
SNR=23
FAQ Al Faqa, Dubai 55.84 357 i P P 10 38 19.1 -0.5
SNR=9.9
FAQ Al Faqa, Dubai 55.84 357 P P 10 38 19.5 -0.1
SNR=9.7
FAQ P P 10 38 19.5 -0.1
SNR=9.7
NGP Nagpur 55.85 23 eP P 10 38 19.5 -0.2
NGP IAmb IAmb 10 38 27.0
comp=Z,160nm,1.6s
HATD Hatta, Dubai 55.90 358 i P P 10 38 19.7 -0.3
SNR=12
HATD Hatta, Dubai 55.90 358 P P 10 38 19.9 -0.2
SNR=32
HATD P P 10 38 19.9 -0.2
SNR=32
RAYN Ar Rayn 55.94 346 P P 10 38 20.7 +0.3
RAYN Ar Rayn 55.94 346 IAMs_20 IAMs_20 10 58 13.1
comp=Z,8µm,21.0s
RAYN Ar Rayn 55.94 346 i P P 10 38 20.7 +0.3
SNR=34
RAYN Ar Rayn 55.94 346 P P 10 38 20.7 +0.3
RAYN pmax pmax
comp=Z,377nm,2.0s
RAYN Ar Rayn 55.94 346 P P 10 38 20.1 -0.3
RAYN S S 10 46 10.0 +1.5
UOSS Minazif 56.01 358 P P 10 38 19.9 -1.0
UOSS Minazif 56.01 358 IAMs_20 IAMs_20 10 57 12.5
comp=Z,9µm,21.0s
UOSS Minazif 56.01 358 i P P 10 38 19.4 -1.4
SNR=19
NAZ Nazwa, Dubai 56.08 357 i P P 10 38 21.1 -0.2
SNR=11
NAZ Nazwa, Dubai 56.08 357 P P 10 38 21.0 -0.3
SNR=14
NAZ P P 10 38 21.0 -0.3
SNR=14
TRNA Turayna 56.19 352 P P 10 38 21.9 -0.2
TRNA S S 10 46 12.3 +0.7
SMRA Abu-Samra 56.24 352 P P 10 38 22.6 +0.1
SNR=19
SMRA S S 10 46 12.7 +0.4
MDH Madha 56.36 358 i P P 10 38 21.9 -1.5
SNR=18
MDH Madha 56.36 358 P P 10 38 22.1 -1.3
SNR=18
MDH P P 10 38 22.1 -1.3
SNR=18
MDH P P 10 38 22.1 -1.3
SNR=18
BLJI Banyuglugur 56.40 78 P P 10 38 25.5 +1.6
comp=Z,3µmcomp=Z,107nm,1.0s
MSFE Esma-Masafi 56.43 358 i P P 10 38 23.1 -0.8
SNR=17
MASF Masafi 56.44 358 P P 10 38 23.5 -0.4
SNR=31
MASF P P 10 38 23.5 -0.4
SNR=31
MASF S S 10 46 15.2 +0.2
MASF S S 10 46 15.2 +0.2
JAGI Jajag, Banyuwa 56.48 79 P P 10 38 24.9 +0.4
JAGI Jajag, Banyuwa 56.48 79 P P 10 38 24.5 -0.1
JAGI Jajag, Banyuwa 56.48 79 P P 10 38 24.0 -0.5
comp=Z,2µmcomp=Z,199nm,1.1s
NRDN NARMADA NAGAR 56.69 21 eP P 10 38 24.9 -0.8
NRDN IAmb IAmb 10 38 31.9
comp=Z,80nm,0.7s
JASK Jask - Hormozg 56.89 359 P P 10 38 27.9 +0.7
SNR=14
ABJI Asem Bagus 56.91 78 P P 10 38 37.7 +10
BANOM Banah 56.98 358 i P P 10 38 26.3 -1.5
SNR=12
BHPL Bhopal 57.25 21 eP P 10 38 29.7 -0.1
BHPL IAmb IAmb 10 38 40.4
comp=Z,104nm,0.9s
BHPL IAMs_20 IAMs_20 10 58 26.0
comp=Z,2µm,19.6s
UDPR Udaipur 57.51 17 eP P 10 38 31.2 -0.3
BWNR Bhubaneshwar 57.66 31 eP P 10 38 32.8 +0.2
BWNR IAmb IAmb 10 39 02.3
comp=Z,56nm,1.1s
EDA Edea 57.69 298 P P 10 38 31.6 -1.4
BLSP Bilaspur 57.82 26 eP P 10 38 33.5 -0.2
BLSP IAmb IAmb 10 38 44.6
comp=Z,111nm,1.1s
BLSP IAMs_20 IAMs_20 10 58 00.9
comp=Z,7µm,20.8s
JHSG JHARSUGUGA 58.14 28 IAMs_20 IAMs_20 10 58 14.6
comp=Z,2µm,19.7s
GUNA GUNA 58.55 20 eP P 10 38 38.4 -0.5
GUNA IAmb IAmb 10 38 49.4
comp=Z,110nm,0.7s
GUNA IAMs_20 IAMs_20 10 57 20.9
comp=Z,5µm,22.4s
TWSI Taliwang, Sumb 58.64 81 P P 10 38 42.0 +2.2
comp=Z,1µmcomp=Z,122nm,1.0s
FORT Forrest 58.69 109 P P 10 38 39.3 -0.6
comp=Z,41nm,1.3s,comp=Z,0.0nm
FORT Forrest 58.69 109 P P 10 38 39.6 -0.3
QSPA South Pole Qui 58.82 180 P P 10 38 39.0 -1.5
comp=Z,76nm,1.0s,baz=264,slow=3.4,SNR=65
QSPA LR LR 11 00 46.0
comp=Z,3µm,20.7s,baz=281,slow=33
comp=Z,76nm,1.0s
QSPA South Pole Qui 58.82 180 P P 10 38 38.8 -1.7
PLAI Plampang 59.35 81 P P 10 38 45.0 +0.3
PLAI Plampang 59.35 81 P P 10 38 45.2 +0.5
comp=Z,2µmcomp=Z,160nm,1.0s
AJM Ajmer 59.50 17 eP P 10 38 45.3 -0.1
AJM IAmb IAmb 10 38 52.6
comp=Z,192nm,1.6s
AJM IAMs_20 IAMs_20 10 58 15.5
comp=Z,2µm,26.9s
JHNI Jhansi 59.69 21 eP P 10 38 46.5 -0.3
JHNI IAMs_20 IAMs_20 10 58 15.6
comp=Z,2µm,21.2s
BBKI Banjar Baru 59.78 74 P P 10 38 51.6 +3.9
comp=Z,97nm,2.1s
KNTI KHUNTI 59.91 29⇑eP P 10 38 49.8 +1.4
DBNI Kabupaten Domp 59.97 81 P P 10 38 50.2 +1.2
comp=Z,1µmcomp=Z,87nm,1.8s
SHEL Horse Pasture 59.98 269 P P 10 38 48.0 -1.1
SHEL Horse Pasture 59.98 269 P P 10 38 48.0 -1.1
SHEL pmax pmax
comp=Z,367nm,1.7s
SHEL MLR MLR
comp=Z,4µm,18.0s
BELA Belgrano 2 60.24 194 P P 10 38 48.2 -1.7
BELA IAmb IAmb 10 38 57.5
comp=Z,91nm,1.2s
WBSI Waikabubak, Su 60.30 83 P P 10 38 52.8 +1.5
comp=Z,2µmcomp=Z,114nm,1.5s
ALBI Allahabad 60.62 24 eP P 10 38 52.7 -0.3
ALBI IAmb IAmb 10 39 03.5
comp=Z,65nm,0.8s
ALBI IAMs_20 IAMs_20 10 54 19.4
comp=Z,3µm,22.3s

BKNR BIKANER 60.71 15 IAMs_20 IAMs_20 10 57 28.0
comp=Z,1µm,22.2s
BOK Bokaro 60.81 29 eP P 10 38 54.5 +0.1
BOK IAmb IAmb 10 39 09.8
comp=Z,52nm,1.0s
BOK IAMs_20 IAMs_20 10 57 55.7
comp=Z,5µm,20.4s
WRKA Warakurna 61.00 103 P P 10 38 55.2 -0.8
comp=Z,72nm,1.2s
VAR Varanasi 61.01 26 eP P 10 38 54.7 -1.0
SBUM Sibu 61.13 67 P P 10 38 56.6 -0.3
SBUM Sibu 61.13 67 P P 10 38 56.5 -0.4
SBUM IAmb IAmb 10 39 06.5
comp=Z,104nm,2.0s
SBUM Sibu 61.13 67 P P 10 38 57.0 +0.1
LBFI Labuhan Bajo, 61.32 82 P P 10 38 59.8 +1.6
GAYA Gaya 61.45 28⇑eP P 10 38 58.8 +0.1
KUDL Kundal 61.62 18 eP P 10 38 59.1 -0.6
KUDL IAmb IAmb 10 39 10.0
comp=Z,22nm,0.9s
KUDL IAMs_20 IAMs_20 10 57 49.2
comp=Z,1µm,18.9s
LKN LUCKNOW 61.64 23 eP P 10 38 59.6 -0.4
FITZ Fitzroy Crossi 61.65 95 LR LR 11 03 11.3
comp=Z,2µm,18.2s,baz=259,slow=34
JMUI Jamui 61.96 29⇑eP P 10 39 01.6 -0.5
LDR Lodi Road 62.23 19⇑eP P 10 39 03.9 +0.1
BHGR Bahadurgarh 62.26 18⇑eP P 10 39 03.3 -0.8
NPLP NPLP New Delhi 62.27 19⇑eP P 10 39 02.3 -1.9
NDI New Delhi 62.33 19 eP P 10 39 04.5 -0.1
NDI IAMs_20 IAMs_20 10 57 13.0
comp=Z,1µm,21.2s
NRLA Narela 62.39 19⇑eP P 10 39 05.6 +0.6
RTK Rohtak 62.44 18 eP P 10 39 03.9 -1.3
BRDH Bariadhala 62.45 35 LR LR 11 01 58.8
comp=Z,7µm,21.2s,baz=214,slow=32
VNDA Vanda 62.48 166 P P 10 39 03.0 -2.1
comp=Z,18nm,1.1s,baz=247,slow=7.4,SNR=5.3
VNDA LR LR 11 04 10.9
comp=Z,2µm,21.8s,baz=248,slow=34
comp=Z,18nm,1.1s
VNDA Vanda 62.48 166 P P 10 39 06.2 +1.1
VNDA Vanda 62.48 166 P P 10 39 06.2 +1.1
VNDA pmax pmax
comp=Z,183nm,1.4s
GKPR Gorakhpur 62.51 25 eP P 10 39 05.5 -0.3
ASOR Ausora 62.55 19‖eP P 10 39 02.2 -3.9
EDFI Ende, Flores 62.71 83 P P 10 39 08.3 +0.7
comp=Z,2µmcomp=Z,93nm,1.6s
MERT Meerut 62.74 19 eP P 10 39 07.8 +0.4
SHBG Sahibganj 62.82 30 eP P 10 39 08.3 +0.4
BELO BELONIA 62.84 34 eP P 10 39 08.9 +0.9
SAIH SAIHA 62.96 36 eP P 10 39 09.2 +0.1
SAIH IAmb IAmb 10 39 35.9
comp=Z,384nm,1.8s
CM31 Chiang Mai Arr 62.98 44 P P 10 39 09.2 +0.1
CM31 IAmb IAmb 10 39 10.1
comp=Z,83nm,0.9s
CM31 Chiang Mai Arr 62.98 44 P P 10 39 09.2 +0.1
SNR=42
CM31 P P 10 39 09.2 +0.1
SNR=42
CM31 P P 10 39 09.2 +0.1
SNR=42
CMAR Chiang Mai Arr 62.98 44 P P 10 39 08.9 -0.1
comp=Z,55nm,0.9s,baz=230,slow=7.2,SNR=238
CMAR LR LR 11 02 50.5
comp=Z,4µm,19.1s,baz=225,slow=32
CMAR PKPPKP P'P'df 11 08 12.0 +6.6
comp=Z,0.5nm,0.5s,baz=334,slow=2.6,SNR=4.5
comp=Z,55nm,0.9s
CMAR Chiang Mai Arr 62.98 44 P P 10 39 08.8 -0.3
CMAR Chiang Mai Arr 62.98 44 P P 10 39 09.0 -0.1
KAPI Kappang 63.02 79 LR LR 11 00 49.0
comp=Z,2µm,21.8s,baz=228,slow=31
KAPI Kappang 63.02 79 P P 10 39 10.6 +1.0
KAPI Kappang 63.02 79 P P 10 39 09.2 -0.4
KAPI IAmb IAmb 10 39 36.5
comp=Z,90nm,1.2s
KAPI Kappang 63.02 79 di P P 10 39 10.3 +0.7
KAPI pmax pmax
comp=Z,51nm,1.3s
KAPI MLR MLR
comp=Z,935nm,18.0s
STMR SITAMARHI 63.21 27 eP P 10 39 11.0 +0.6
TKRD Thakurdwara 63.23 20 eP P 10 39 12.1 +1.6
MMRI Maumere 63.23 84 P P 10 39 11.0 0.0
MMRI Maumere 63.23 84 P P 10 39 10.9 -0.1
MMRI Maumere 63.23 84 P P 10 39 10.9 -0.1
comp=Z,4µmcomp=Z,137nm,1.2s
CHTO Chiang Mai 63.26 44 P P 10 39 10.5 -0.4
CHTO Chiang Mai 63.26 44 P P 10 39 10.6 -0.4
CHTO IAmb IAmb 10 39 14.0
comp=Z,87nm,1.4s
CHTO IAMs_20 IAMs_20 11 02 38.0
comp=Z,5µm,20.0s
CHTO Chiang Mai 63.26 44 P P 10 39 10.6 -0.4
CHTO pmax pmax
comp=Z,87nm,1.4s
CHTO Chiang Mai 63.26 44 S S 10 47 44.1 +1.1
CHTO Chiang Mai 63.26 44 P P 10 39 10.4 -0.4
comp=Z,967nmcomp=Z,47nm,1.5s
AGT Agartala 63.28 34 eP P 10 39 10.8 -0.2
VLK Valmikinagar 63.32 25 eP P 10 39 11.0 -0.2
SBA Scott Base 63.33 167 IAMs_20 IAMs_20 11 04 18.2
comp=Z,6µm,19.0s
KKR Kurukshetra 63.43 18⇑eP P 10 39 11.0 -0.9
MMSI Mamuju 63.58 76 P P 10 39 13.3 0.0
PTH Pithoragarh 64.04 21 eP P 10 39 15.0 -1.1
PTH IAmb IAmb 10 39 31.9
comp=Z,168nm,1.3s
DDI Dehra Dun 64.11 19 eP P 10 39 16.2 -0.2
DDI IAmb IAmb 10 39 26.3
comp=Z,180nm,1.3s
TTSI Tana Toraja 64.14 77 P P 10 39 17.6 +0.6
comp=Z,2µmcomp=Z,96nm,1.4s
CGRH CHANDIGARH 64.16 18⇑eP P 10 39 17.7 +1.0
BBOO Buckleboo 64.32 114 P P 10 39 17.0 -1.0
comp=Z,69nm,2.2s,comp=Z,0.0nm
BBOO Buckleboo 64.32 114 P P 10 39 17.3 -0.7
BBOO Buckleboo 64.32 114 P P 10 39 17.4 -0.6
BBOO IAmb IAmb 10 39 26.6
comp=Z,73nm,1.1s
SOEI Soe 64.40 86 P P 10 39 18.4 -0.4
SOEI Soe 64.40 86 P P 10 39 20.3 +1.5
SOEI Soe 64.40 86 P P 10 39 18.5 -0.3
SOEI Soe 64.40 86 P P 10 39 19.6 +0.8
comp=Z,2µmcomp=Z,141nm,1.1s
DHUB DHUBRI 64.54 31 eP P 10 39 17.6 -1.6
DHUB IAmb IAmb 10 39 48.0
comp=Z,82nm,1.4s
SMLA Simla 64.63 18 eP P 10 39 18.9 -0.8
SMLA IAmb IAmb 10 39 34.0
comp=Z,140nm,1.4s
EIL Elat 64.65 337 LR LR 11 03 53.4
comp=Z,5µm,20.5s,baz=170,slow=33
BHK Bhakra 64.68 17 eP P 10 39 19.6 -0.5
BHK IAmb IAmb 10 39 30.3
comp=Z,72nm,0.9s
JOSI Joshimath 64.76 20 eP P 10 39 19.7 -1.1
SILR SILCHAR 64.79 35 eP P 10 39 22.0 +1.1
EVN Everest 64.89 28 P P 10 39 22.0 -0.3
EVN IAmb IAmb 10 39 37.9
comp=Z,82nm,1.1s
SHL Shillong 65.01 33 P P 10 39 22.4 -0.2
SHL Shillong 65.01 33 P P 10 39 22.4 -0.2
SHL pmax pmax
comp=Z,224nm,1.3s
SHL Shillong 65.01 33 P P 10 39 22.6 0.0
SNR=105
SHL Shillong 65.01 33 eP P 10 39 21.9 -0.7
SHL IAmb IAmb 10 39 41.9
comp=Z,222nm,1.5s
GTK Tadong 65.06 30 eP P 10 39 22.3 -0.5
GTK IAmb IAmb 10 39 38.2
comp=Z,136nm,1.4s
TLWR Talawar 65.11 16⇑eP P 10 39 21.9 -1.0
KLP Kalpa 65.30 19 eP P 10 39 24.0 -0.5
KLP IAmb IAmb 10 39 41.9
comp=Z,198nm,1.3s
IMP Imphal 65.39 36 eP P 10 39 24.4 -0.5
IMP IAmb IAmb 10 39 53.1
comp=Z,142nm,1.4s
KNRA Kununurra 65.41 94 P P 10 39 24.3 -0.9
comp=Z,70nm,1.4s

KNRA Kununurra 65.41 94 P **P** 10 39 24.4 -0.9
KNRA IAmb IAmb 10 39 27.5
comp=Z,101nm,1.3s
GUWA GUWAHATI 65.46 33 *e*P **P** **10 39 23.9 -1.3**
GUWA IAmb IAmb 10 39 58.5
comp=Z,92nm,1.6s
HRA Herat 65.48 3 P **P** **10 39 25.2 -0.2**
AUMAR Marden Senior 65.54 117 P **P** **10 39 25.4 -0.4**
JMU Jammu 65.64 15 *e*P **P** **10 39 24.9 -1.4**
AUMBR Murray Bridge 65.94 118 P **P** **10 39 30.1 +1.7**
GHAJ Ghor Haditha 65.97 339 P **P** **10 39 26.8 -1.6**
GHAJ IAmb IAmb 10 39 45.0
comp=Z,58nm,1.1s
GHAJ IAMs_20 IAMs_20 11 07 21.8
comp=Z,6µm,18.0s
TSSA Tissa 66.00 16 *e*P **P** **10 39 27.4 -1.4**
NIL Nilore 66.15 14 P **P** **10 39 29.4 -0.2**
NIL IAmb IAmb 10 39 52.6
comp=Z,67nm,1.2s
NIL Nilore 66.15 14 P **P** **10 39 29.4 -0.2**
NIL pmax pmax
comp=Z,67nm,1.3s
AUJCS Jamestown Cent 66.16 115 P **P** **10 39 32.1 +2.2**
KOHI KOHIMA 66.21 35 *e*P **P** **10 39 30.2 -0.1**
KOHI IAmb IAmb 10 39 50.1
comp=Z,221nm,1.3s
ASAR Alice Springs 66.23 104 P **P** **10 39 29.1 -1.4**
comp=Z,45nm,1.1s,baz=240,slow=6.2,SNR=172
ASAR LR LR 11 04 23.6
comp=Z,3µm,21.3s,baz=256,slow=32
ASAR PKPPKP **P'P'df** **11 08 05.8 -2.5**
comp=Z,3.3nm,1.1s,baz=64,slow=3.0,SNR=12
comp=Z,45nm,1.1s
ASAR Alice Springs 66.23 104 P **P** **10 39 29.2 -1.3**
AS31 Alice Springs 66.23 104 P **P** **10 39 29.5 -1.0**
KBL Kabul 66.30 10 P **P** **10 39 31.1 +0.3**
KBL IAmb IAmb 10 39 44.2
comp=Z,44nm,0.8s
KBL Kabul 66.30 10 P **P** **10 39 31.1 +0.3**
KBL pmax pmax
comp=Z,44nm,0.8s
KBL Kabul 66.30 10 P **P** **10 39 31.8 +1.0**
SNR=52
KBL P **P** **10 39 31.8 +1.0**
SNR=52
KBL S **S** **10 48 21.8 +1.4**
KBL S **S** **10 48 21.8 +1.4**
HTT Hallett 66.31 116 P **P** **10 39 29.8 -1.1**
comp=Z,28nm,1.1s
HTT Hallett 66.31 116 P **P** **10 39 30.1 -0.8**
TEZP TEZPUR 66.33 34 *e*P **P** **10 39 29.4 -1.5**
TEZP IAmb IAmb 10 39 59.3
comp=Z,92nm,1.4s
ASF Jabal al Asfar 66.38 340 LR LR 11 06 15.1
comp=Z,4µm,18.1s,baz=160,slow=34
KKM Kota Kinabalu 66.47 67 P **P** **10 39 34.1 +1.9**
KKM Kota Kinabalu 66.47 67 P **P** **10 39 32.2 0.0**
comp=Z,37nm,1.5s
BALJ Balqa 66.67 339 P **P** **10 39 32.3 -0.6**
BALJ IAmb IAmb 10 39 38.8
comp=Z,128nm,1.5s
HNLY HANLEY 66.68 19 *i* Pg **P** **10 39 33.0 -0.6**
HNLY IAmb IAmb 10 39 40.4
comp=Z,209nm,1.7s
TAWA Tawang 66.73 32 *e*P **P** **10 39 33.2 -0.7**
TAWA IAmb IAmb 10 39 53.1
comp=Z,36nm,1.0s
APSI Ampana 66.84 76 P **P** **10 39 34.4 0.0**
comp=Z,2µmcomp=Z,161nm,1.3s
ACRG Accra 66.87 292 P **P** **10 39 33.1 -1.5**
MOKO MOKOCHONG 66.91 35 *e*P **P** **10 39 34.3 -0.5**
ITAN ITANAGAR 67.22 34 *e*P **P** **10 39 35.9 -0.6**
ARPS Mount Arapiles 67.22 120 P **P** **10 39 35.0 -1.6**
comp=Z,44nm,2.0s
TOLI2 Tolitoli 67.25 74 P **P** **10 39 37.6 +0.5**
ALCI Alchi Leh 67.57 17 *e*P **P** **10 39 38.6 -0.4**
ALCI IAmb IAmb 10 39 60.0
comp=Z,71nm,1.0s
ZIRO ZIRO 67.60 34 *e*P **P** **10 39 37.8 -1.3**
MMAI Mount Meron Ar 67.61 339 P **P** **10 39 39.3 +0.4**
comp=Z,15nm,0.6s,baz=123,slow=7.1,SNR=14
MMAI LR LR 11 05 44.6
comp=Z,3µm,19.9s,baz=158,slow=33
comp=Z,15nm,0.6s
LUWI Luwuk 67.70 77 P **P** **10 39 39.1 -0.7**
LUWI Luwuk 67.70 77 P **P** **10 39 40.6 +0.7**
LUWI Luwuk 67.70 77 P **P** **10 39 40.0 +0.1**
LUWI Luwuk 67.70 77 P **P** **10 39 40.7 +0.8**
comp=Z,118nm,1.1s
MYLDM Lahad Datu 67.76 69 P **P** **10 39 40.9 +0.7**
MYLDM Lahad Datu 67.76 69 P **P** **10 39 40.5 +0.2**
MYLDM IAmb IAmb 10 39 53.6
comp=Z,80nm,1.1s
MYLDM Lahad Datu 67.76 69 P **P** **10 39 41.0 +0.7**
comp=Z,2µmcomp=Z,69nm,1.4s
TNCH TengChong 67.92 39 ⇓ *i* P **P** **10 39 41.0 -0.2**
TNCH pP pwP 10 39 46.4 -2.2
TNCH sP sP 10 39 47.8 +4.2
TNCH PP **PP** **10 42 14.3 +2.9**
TNCH S **S** **10 48 41.4 +1.1**
TNCH sS sS 10 48 46.9 +3.8
TNCH pmax pmax
comp=Z,61nm,0.9s
TNCH L L
comp=Z,2µm,19.0s
TNCH L L
comp=Z,1µm,20.1s
TNCH L L
comp=Z,5µm,36.3s
WRA Warramunga Arr 68.21 101 P **P** **10 39 41.8 -1.3**
comp=Z,68nm,1.1s,baz=233,slow=6.5,SNR=84
WRA PKPPKP **P'P'df** **11 08 00.8 -3.6**
comp=Z,5.0nm,1.1s,baz=63,slow=3.5,SNR=9.5
comp=Z,68nm,1.1s
WRAB Tennant Creek 68.22 101 P **P** **10 39 42.4 -0.7**
WRAB Tennant Creek 68.22 101 P **P** **10 39 42.5 -0.7**
WRAB Tennant Creek 68.22 101 IAMs_20 IAMs_20 11 05 39.9
comp=Z,7µm,19.0s
WRAB Tennant Creek 68.22 101 *ce*P **P** **10 39 42.5 -0.7**
WRAB pmax pmax
comp=Z,269nm,1.7s
WRAB MLR MLR
comp=Z,7µm,18.0s
LSA Lhasa 68.22 30 P **P** **10 39 44.0 +0.6**
LSA IAmb IAmb 10 39 55.0
comp=Z,44nm,0.9s
LSA IAMs_20 IAMs_20 11 05 27.2
comp=Z,5µm,19.0s
LSA Lhasa 68.22 30 *i* P **P** **10 39 43.8 +0.5**
SNR=22
LSA Lhasa 68.22 30 P **P** **10 39 44.0 +0.6**
LSA pmax pmax
comp=Z,44nm,0.9s
LSA Lhasa 68.22 30 P **P** **10 39 40.4 -3.0**
LSA S S 10 48 33.5 -11
LSA pmax pmax
comp=Z,27nm,1.1s
LSA L L
comp=Z,3µm,19.1s
LSA L L
comp=Z,1µm,15.1s
LSA L L
comp=Z,5µm,18.0s
WB0 Warramunga Arr 68.33 101 P **P** **10 39 42.6 -1.3**
WR8 Warramunga Arr 68.34 101 P **P** **10 39 42.6 -1.3**
AUMTC Mt Clear Colle 68.39 122 P **P** **10 39 46.0 +2.1**
BRAT Ballarat 68.45 122 P **P** **10 39 44.5 +0.2**
AUDHS Darwin High Sc 68.70 92 P **P** **10 39 47.1 +0.9**
PASG PASIGHAT 68.76 35 *e*P **P** **10 39 45.2 -1.0**
DRS Darwin Rock St 68.77 92 P **P** **10 39 47.2 +0.6**
MTN Manton Dam 68.77 92 P **P** **10 39 47.0 +0.4**
comp=Z,42nm,1.6s
MTN Manton Dam 68.77 92 P **P** **10 39 47.0 +0.4**
MTN IAmb IAmb 10 39 49.0
comp=Z,86nm,1.4s
STKA Stephens Creek 69.00 115 P **P** **10 39 46.5 -1.3**
comp=Z,292nm,1.5s
STKA Stephens Creek 69.00 115 P **P** **10 39 46.9 -1.0**
comp=Z,25nm,1.0s,baz=272,slow=5.6,SNR=27
STKA LR LR 11 04 50.2
comp=Z,6µm,19.6s,baz=244,slow=32
comp=Z,25nm,1.0s
STKA Stephens Creek 69.00 115 P **P** **10 39 47.1 -0.8**
STKA Stephens Creek 69.00 115 P **P** **10 39 47.0 -0.8**
STKA Stephens Creek 69.00 115 *i* P **P** **10 39 47.0 -0.8**

SHAA Shahritus 69.15 8 P **P** **10 39 48.7 +0.2**
SHAA IAmb IAmb 10 40 34.9
comp=Z,529nm,1.9s
SANI Sanana 69.85 80 P **P** **10 39 51.5 -1.8**
KDU Kakadu 69.99 93 P **P** **10 39 54.2 0.0**
comp=Z,16nm,1.5s
CSS Mathiatis 70.05 338 P **P** **10 39 54.0 -0.1**
CSS IAmb IAmb 10 40 18.1
comp=Z,85nm,1.0s
CSS IAMs_20 IAMs_20 11 09 12.9
comp=Z,4µm,19.0s
CSS Mathiatis 70.05 338 P **P** **10 39 54.3 +0.3**
comp=Z,1µmcomp=Z,91nm,0.9s
CSS pP **pwP** **10 39 59.4 -2.2**
comp=Z,1µmcomp=Z,91nm,0.9s
INKA Innaminka 70.07 111 P **P** **10 39 54.1 -0.5**
INKA IAmb IAmb 10 40 08.4
comp=Z,60nm,1.2s
TORD Torodi Ar. Bea 70.10 300 P **P** **10 39 54.1 -0.7**
comp=Z,23nm,1.1s,baz=160,slow=3.9,SNR=35
TORD PP **PP** **10 42 23.4 -6.7**
comp=Z,6.6nm,0.8s,baz=144,slow=8.4,SNR=4.1
TORD PKPPKP **P'P'df** **11 07 56.7 +0.8**
comp=Z,2.0nm,1.2s,baz=337,slow=3.4,SNR=5.7
TORD LR LR 11 10 38.8
comp=Z,21µm,19.1s,baz=130,slow=36
comp=Z,23nm,1.1s
TORD Torodi Ar. Bea 70.10 300 P **P** **10 39 53.5 -1.2**
QIZ Qiongzhong 70.32 52 IAMs_20 IAMs_20 11 07 38.3
comp=Z,5µm,19.0s
QIZ Qiongzhong 70.32 52 P **P** **10 39 54.7 -1.3**
QIZ S **S** **10 49 10.7 +2.2**
QIZ SS **SS** **10 53 34.6 -4.9**
QIZ pmax pmax
comp=Z,670nm,8.2s
QIZ L L
comp=Z,4µm,17.5s
QIZ L L
comp=Z,3µm,18.0s
QIZ L L
comp=Z,5µm,17.7s
CHGR Chuyangaron 70.36 9 P **P** **10 39 56.0 0.0**
CHGR Chuyangaron 70.36 9 *i* P **P** **10 39 56.0 0.0**
CHGR pmax pmax
comp=Z,405nm,1.5s
CHGR MLR MLR
comp=Z,10µm,20.0s
KMI2 Kunming 70.38 42 ⇓ P **P** **10 39 55.9 -0.6**
KMI2 PP **PP** **10 42 33.4 +0.7**
KMI2 S **S** **10 49 07.5 -1.9**
KMI2 pmax pmax
comp=Z,29nm,1.1s
KMI2 L L
comp=Z,3µm,15.8s
KMI2 L L
comp=Z,5µm,17.6s
KMI2 L L
comp=Z,4µm,24.8s
PZH PanZhiHua 70.86 41 P **P** **10 39 58.4 -0.9**
PZH S **S** **10 49 12.0 -2.8**
PZH pmax pmax
comp=Z,50nm,1.1s
PZH pmax pmax
comp=Z,360nm,4.1s
PZH L L
comp=Z,1µm,21.2s
PZH L L
comp=Z,2µm,21.8s
PZH L L
comp=Z,2µm,22.0s
GAR Garm 70.86 10 P **P** **10 39 58.6 -0.4**
GAR IAmb IAmb 10 40 06.2
comp=Z,145nm,1.5s
GAZ Gaziantep 70.99 342 P **P** **10 39 60.0 +0.2**
DBIC Dimbokro 71.18 290 P **P** **10 40 00.9 -0.5**
comp=Z,26nm,1.0s,baz=150,slow=8.0,SNR=7.8
DBIC LR LR 11 08 15.4
comp=Z,11µm,21.6s,baz=154,slow=33
comp=Z,26nm,1.0s
DBIC Dimbokro 71.18 290 P **P** **10 40 00.8 -0.6**
DBIC IAmb IAmb 10 40 14.4
comp=Z,75nm,1.1s
DBIC Dimbokro 71.18 290 P **P** **10 40 00.8 -0.6**
DBIC pmax pmax
comp=Z,75nm,1.1s
SAUI Saumlaki 71.29 88 P **P** **10 40 04.4 +2.2**
SAUI Saumlaki 71.29 88 P **P** **10 40 05.5 +3.4**
DRK Karamyk 71.56 11 P **P** **10 40 03.9 +0.4**
DRK IAmb IAmb 10 40 10.9
comp=Z,159nm,1.4s
DRK Karamyk 71.56 11 P **P** **10 40 03.9 +0.4**
DRK pmax pmax
comp=Z,159nm,1.4s
KSH2 Kashi 71.93 14 P **P** **10 40 05.4 -0.1**
KSH2 S **S** **10 49 25.2 -1.5**
KSH2 SS **SS** **10 54 02.2 -1.8**
KSH2 pmax pmax
comp=Z,81nm,1.6s
KSH2 pmax pmax
comp=Z,310nm,3.1s
KSH2 L L
comp=Z,2µm,23.4s
KSH2 L L
comp=Z,4µm,17.2s
KSH2 L L
comp=Z,4µm,23.7s
BTK Batken 71.97 10 IAmb IAmb 10 40 14.1
comp=Z,170nm,1.6s
GNI Garni 72.26 349 LR LR 11 08 44.9
comp=Z,5µm,21.8s,baz=172,slow=33
GNI Garni 72.26 349 IAMs_20 IAMs_20 11 08 53.6
comp=Z,4µm,20.0s
GNI Garni 72.26 349 *ce*P **P** **10 40 06.3 -1.2**
GNI pmax pmax
comp=Z,203nm,0.8s
GNI MLR MLR
comp=Z,3µm,17.0s
GNI Garni 72.26 349 S **S** **10 49 36.4 +6.0**
CMSA Cobar Meteorol 72.30 116 P **P** **10 40 07.5 -0.5**
comp=Z,85nm,1.7s
CMSA Cobar Meteorol 72.30 116 P **P** **10 40 07.5 -0.5**
AUSMG Snowy Mountain 72.33 122 P **P** **10 40 09.7 +1.5**
QIS Mount Isa 72.34 104 P **P** **10 40 07.2 -1.2**
comp=Z,88nm,1.5s,comp=Z,0.0nm
QIS Mount Isa 72.34 104 P **P** **10 40 07.4 -1.0**
AKAS Kas 72.45 336 P **P** **10 40 07.3 -1.3**
ARPR Arapgir-MALATY 72.53 344 P **P** **10 40 09.1 0.0**
ARPR IAmb IAmb 10 40 29.7
comp=Z,130nm,1.2s
ARPR IAMs_20 IAMs_20 11 07 29.6
comp=Z,5µm,22.0s
TNTI Ternate 72.53 78 P **P** **10 40 08.5 -1.0**
KARP Karpathos 72.73 334 P **P** **10 40 09.4 -0.8**
KARP Karpathos 72.73 334 P **P** **10 40 10.1 -0.1**
KARP Karpathos 72.73 334 P **P** **10 40 10.5 +0.3**
comp=Z,3µmcomp=Z,279nm,1.1s
ELL Elmali 72.81 336 P **P** **10 40 11.2 +0.4**
ELL IAmb IAmb 10 40 22.4
comp=Z,201nm,1.9s
ELL Elmali 72.81 336 P **P** **10 40 11.2 +0.4**
ELL pmax pmax
comp=Z,201nm,1.9s
BNN Bunyan 72.93 342 P **P** **10 40 11.3 -0.2**
BNN IAmb IAmb 10 40 30.2
comp=Z,61nm,1.1s
ARG Arkhangelos 72.96 335 P **P** **10 40 11.9 +0.3**
ARG IAmb IAmb 10 40 25.9
comp=Z,90nm,0.9s
ARG Arkhangelos 72.96 335 P **P** **10 40 11.2 -0.3**
ARG Arkhangelos 72.96 335 P **P** **10 40 11.9 +0.3**
ARG pmax pmax
comp=Z,90nm,0.9s
FETY Fethiye 73.00 336 P **P** **10 40 12.2 +0.4**
NPS Neapolis 73.08 332 P **P** **10 40 12.5 +0.2**
CAN Canberra 73.10 121 IAMs_20 IAMs_20 11 05 47.3
comp=Z,5µm,20.0s
YNG Young 73.11 120 P **P** **10 40 12.9 +0.1**
comp=Z,54nm,2.0s,comp=Z,0.0nm
AKT Akhty 73.13 352 *e*P **P** **10 40 12.6 0.0**
AKT *e*S **S** **10 49 41.0 +0.7**
AKT pmax pmax
comp=Z,141nm,1.2s
AUMHS Melrose High S 73.15 121 P **P** **10 40 13.6 +0.6**
QLP Quilpie 73.37 111 P **P** **10 40 13.6 -0.8**
comp=Z,142nm,1.7s
QLP Quilpie 73.37 111 P **P** **10 40 13.7 -0.8**

IDI Anoyia 73.39 332 LR LR 11 10 34.8
comp=Z,3µm,22.0s,baz=157,slow=34
IDI Anoyia 73.39 332 P **P** **10 40 14.0 -0.2**
IDI IAmb IAmb 10 40 26.2
comp=Z,73nm,1.0s
IDI Anoyia 73.39 332 P **P** **10 40 17.2 +3.0**
ARSB Arslanbob 73.55 11 IAmb IAmb 10 40 23.1
comp=Z,196nm,1.5s
GYA Guiyang 73.66 44 ⇑ P **P** **10 40 17.8 +1.7**
GYA S **S** **10 49 47.0 0.0**
GYA pmax pmax
comp=Z,20nm,1.3s
GYA pmax pmax
comp=Z,220nm,6.2s
GYA L L
comp=Z,2µm,16.7s
GYA L L
comp=Z,2µm,21.0s
GYA L L
comp=Z,2µm,21.3s
YER Yerkesik 73.73 335 P **P** **10 40 16.3 +0.2**
KIRS Kirsehir-Merke 73.73 340 ⇓ P **P** **10 40 16.1 -0.1**
IUG luzhnay 73.91 9 *e*P **P** **10 40 17.8 +0.6**
IUG *e*S **S** **10 49 50.5 +1.5**
IUG pmax pmax
comp=Z,48nm,0.9s
IUG luzhnay 73.91 9 *e*P **P** **10 40 17.9 +0.7**
comp=Z,48nm,0.9s
IUG *e*S **S** **10 49 50.5 +1.5**
IMMV Iera Moni Meta 73.91 331 P **P** **10 40 16.8 -0.4**
TAM Tamanrasset 73.92 310 P **P** **10 40 17.0 -0.7**
TAM IAMs_20 IAMs_20 11 12 45.5
comp=Z,9µm,20.0s
TAM Tamanrasset 73.92 310 P **P** **10 40 17.0 -0.7**
TAM pmax pmax
comp=Z,30nm,1.0s
TAM MLR MLR
comp=Z,9µm,20.0s
BODT Bodrum 74.02 335 P **P** **10 40 19.7 +1.9**
CHM Chimkent 74.02 9 *e*P **P** **10 40 18.6 +0.9**
CHM pmax pmax
comp=Z,40nm,0.7s
CHM Chimkent 74.02 9 *e*P **P** **10 40 18.6 +0.9**
comp=Z,40nm,0.7s
CHM LR LR 11 13 41.9
THERA Ancient Thera, 74.10 333 P **P** **10 40 17.1 -1.1**
THR9 Santorini-Faro 74.14 333 P **P** **10 40 17.5 -0.9**
SNT5 Nea Kammeni, S 74.16 333 P **P** **10 40 17.7 -0.9**
THR3 Thira Island, 74.17 333 P **P** **10 40 17.7 -0.9**
NRN Naryn 74.22 14 IAmb IAmb 10 40 27.0
comp=Z,209nm,1.9s
AUDCS Dubbo College 74.22 118 P **P** **10 40 20.6 +1.3**
PMSA Palmer Station 74.28 202 LR LR 11 06 28.8
comp=Z,2µm,21.9s,baz=146,slow=31
BR105 Keskin Array S 74.36 340 P **P** **10 40 19.5 -0.4**
comp=Z,292nmcomp=Z,35nm,1.0s
BR131 Keskin Array S 74.36 340 P **P** **10 40 19.4 -0.5**
BR131 Keskin Array S 74.36 340 P **P** **10 40 19.4 -0.5**
BR131 pmax pmax
comp=Z,44nm,1.0s
BR131 Keskin Array S 74.36 340 P **P** **10 40 19.5 -0.3**
SNR=18
BRTR Keskin Array B 74.36 340 P **P** **10 40 19.3 -0.5**
comp=Z,19nm,0.7s,baz=168,slow=8.2,SNR=57
BRTR LR LR 11 09 59.1
comp=Z,2µm,21.3s,baz=148,slow=33
comp=Z,19nm,0.7s
BRTR Keskin Array B 74.36 340 P **P** **10 40 19.1 -0.8**
BR106 Keskin Array S 74.37 340 P **P** **10 40 19.4 -0.5**
comp=Z,256nmcomp=Z,29nm,0.8s
DAV Davao City (W) 74.56 72 LR LR 11 09 35.5
comp=Z,1µm,20.3s,baz=242,slow=33
MAK Makhachkala 74.62 352 *d i* P **P** **10 40 18.2 -2.9**
MAK *e*S **S** **10 49 53.2 -3.5**
MAK pmax pmax
comp=Z,195nm,0.8s
MAK MLR MLR
comp=Z,3µm,17.0s
UCH Uchtor 74.70 12 P **P** **10 40 22.9 +0.8**
SNR=14
WUS Wushi 74.70 16 P **P** **10 40 22.2 +0.3**
WUS IAmb IAmb 10 40 30.7
comp=Z,131nm,1.4s
DZA Taraz 74.82 10 *e*P **P** **10 40 23.2 +0.8**
DZA pmax pmax
comp=Z,43nm,1.1s
DZA Taraz 74.82 10 *e*P **P** **10 40 23.2 +0.8**
comp=Z,43nm,1.1s
MANT Manisa 74.84 336 P **P** **10 40 22.6 -0.3**
MANT IAmb IAmb 10 40 34.3
comp=Z,118nm,1.2s
TARG Taragay, Kyrgy 74.88 15 P **P** **10 40 23.4 +0.2**
TARG Taragay, Kyrgy 74.88 15 P **P** **10 40 23.4 +0.2**
TARG pmax pmax
comp=Z,84nm,1.5s
KK31 Karatay Array 74.92 9 P **P** **10 40 23.5 +0.7**
KK31 IAmb IAmb 10 40 31.1
comp=Z,167nm,1.4s
KK31 Karatay Array 74.92 9 P **P** **10 40 23.5 +0.7**
KK31 pmax pmax
comp=Z,167nm,1.4s
KKAR Karatay Array 74.92 9 P **P** **10 40 23.4 +0.5**
KKAR Karatay Array 74.92 9 P **P** **10 40 23.4 +0.5**
SWI Sorong 74.93 82 P **P** **10 40 25.9 +2.2**
SIJI Sorong 74.93 82 LR LR 11 08 41.0
comp=Z,400nm,21.7s,baz=238,slow=32
SIJI Sorong 74.93 82 P **P** **10 40 25.3 +1.6**
comp=Z,82nm,0.9s
KTHA Kythira Island 74.97 331 P **P** **10 40 24.3 +1.0**
EKS2 Erkin-Say 74.99 12 P **P** **10 40 24.7 +1.3**
SNR=24
AULRC Lightning Ridg 75.01 115 P **P** **10 40 25.1 +1.2**
GULI GuiLin 75.09 48 P **P** **10 40 25.1 +0.9**
GULI S **S** **10 50 03.8 +1.1**
GULI pmax pmax
comp=Z,33nm,1.2s
GULI L L
comp=Z,4µm,21.4s
GULI L L
comp=Z,2µm,22.7s
GULI L L
comp=Z,5µm,23.9s
AAK Ala-Archa 75.09 12 P **P** **10 40 24.3 +0.2**
comp=Z,47nm,1.1s,baz=196,slow=4.7,SNR=33
AAK LR LR 11 11 18.7
comp=Z,3µm,20.2s,baz=205,slow=34
comp=Z,47nm,1.1s
AAK Ala-Archa 75.09 12 P **P** **10 40 24.7 +0.6**
AAK IAmb IAmb 10 40 32.6
comp=Z,151nm,1.4s
AAK Ala-Archa 75.09 12 P **P** **10 40 25.3 +1.2**
SNR=31
AAK Ala-Archa 75.09 12 *i* P **P** **10 40 25.2 +1.0**
SNR=36
AAK Ala-Archa 75.09 12 *de*P **P** **10 40 25.1 +1.0**
AAK pmax pmax
comp=Z,53nm,1.1s
AAK MLR MLR
comp=Z,3µm,20.0s
KDJ Kajisay 75.13 14 P **P** **10 40 25.2 +0.8**
KDJ IAmb IAmb 10 40 38.4
comp=Z,105nm,1.0s
KDJ Kajisay 75.13 14 P **P** **10 40 25.2 +0.8**
KDJ pmax pmax
comp=Z,105nm,1.0s
KBK Karagaybulak 75.19 13 P **P** **10 40 25.7 +1.0**
SNR=18
BOOM Boomskoye usch 75.22 13 P **P** **10 40 24.0 -0.8**
BOOM IAmb IAmb 10 40 33.0
comp=Z,131nm,1.4s
BOOM Boomskoye usch 75.22 13 P **P** **10 40 24.0 -0.8**
BOOM pmax pmax
comp=Z,131nm,1.4s
BLCB Balcova 75.29 335 P **P** **10 40 25.0 -0.1**
GOMU GeErMu 75.37 30 P **P** **10 40 25.8 -0.3**
GOMU pP sP 10 40 29.9 +1.4
GOMU sP pwP 10 40 33.9 +0.5
GOMU pmax pmax
comp=Z,12nm,1.3s
GOMU L L
comp=Z,3µm,18.6s
GOMU L L
comp=Z,2µm,18.9s
GOMU L L
comp=Z,4µm,19.1s
CD2 Chengdu 75.39 39 P **P** **10 40 25.0 -0.9**

CD2 S **S** **10 50 01.5 -4.5**
CD2 SS **SS** **10 54 56.6 -0.3**
CD2 pmax pmax
comp=Z,70nm,0.9s
CD2 pmax pmax
comp=Z,700nm,9.3s
CD2 L L
comp=Z,3µm,21.6s
CD2 L L
comp=Z,2µm,20.3s
CD2 L L
comp=Z,3µm,20.3s
HKPS Hong Kong Po S 75.46 52 IAMs_20 IAMs_20 11 07 58.5
comp=Z,4µm,22.0s
BORA Eskisehir 75.47 338 P **P** **10 40 25.8 -0.4**
CHMS Chumysh 75.49 12 P **P** **10 40 26.7 +0.5**
SNR=10
ILGA Ilgaz 75.57 341 P **P** **10 40 27.0 0.0**
TKM2 Tokmak 2 75.57 13 P **P** **10 40 27.1 +0.2**
SNR=15
NEUR Neytrino 75.63 348 *i* P **P** **10 40 27.4 +0.2**
NEUR pmax pmax
comp=Z,36nm,1.2s
NEUR MLR MLR
comp=Z,3µm,21.0s
USP Ospenovka 75.70 12 P **P** **10 40 28.1 +0.7**
SNR=35
PRZ Przheval'sk 75.73 15 P **P** **10 40 28.4 +0.6**
PRZ Przheval'sk 75.73 15 P **P** **10 40 28.4 +0.6**
PRZ pmax pmax
comp=Z,591nm,1.6s
MDUB Mudurnu 75.77 339 P **P** **10 40 28.1 +0.2**
MDUB IAmb IAmb 10 40 43.6
comp=Z,101nm,1.0s
SGDS Sogindy 75.91 12 *e*P **P** **10 40 29.5 +0.9**
TNSS Tian-Shan 75.95 14 *e*P **P** **10 40 29.7 +0.4**
TNSS Tian-Shan 75.95 14 *e*P **P** **10 40 29.7 +0.4**
KARY Karystos 75.95 333 P **P** **10 40 28.3 -0.6**
KBZ Khabaz 76.05 348 P **P** **10 40 29.9 +0.6**
comp=Z,12nm,0.9s,baz=3.5,slow=2.2,SNR=15
KBZ LR LR 11 11 21.7
comp=Z,3µm,21.2s,baz=161,slow=34
comp=Z,12nm,0.9s
KBZ Khabaz 76.05 348 *ce*P **P** **10 40 29.5 +0.2**
KBZ pmax pmax
comp=Z,30nm,1.1s
KBZ MLR MLR
comp=Z,2µm,17.0s
VLY Voula,Athens 76.05 332 P **P** **10 40 28.0 -1.5**
GZH2 Guangzhou 76.07 51 P **P** **10 40 30.2 +0.3**
GZH2 PP **PP** **10 43 21.0 0.0**
GZH2 S **S** **10 50 15.6 +2.0**
GZH2 pmax pmax
comp=Z,53nm,1.4s
GZH2 L L
comp=Z,3µm,20.4s
GZH2 L L
comp=Z,3µm,21.0s
GZH2 L L
comp=Z,7µm,22.9s
PYL PYLOS 76.07 330 P **P** **10 40 28.5 -1.1**
MDOK Medeo 76.09 14 *e*P **P** **10 40 30.5 +0.7**
MDOK *e*S **S** **10 50 14.9 +1.5**
MDOK Medeo 76.09 14 *e*P **P** **10 40 30.5 +0.7**
MDOK *e*S **S** **10 50 15.0 +1.5**
MDOK LR LR 11 14 56.4
SHA1 Shidzhatmaz 76.10 348 *ce*P **P** **10 40 30.0 +0.1**
BALB Balikesir 76.11 336 P **P** **10 40 29.4 -0.3**
BALB IAmb IAmb 10 40 45.9
comp=Z,95nm,1.1s
AAA Alma-Ata 76.11 14 *e*P **P** **10 40 30.6 +0.8**
AAA pmax pmax
comp=Z,65nm,1.0s
AAA Alma-Ata 76.11 14 *e*P **P** **10 40 30.6 +0.8**
comp=Z,65nm,1.0s
AAA LR LR 11 14 53.9
ATHU Athens Univers 76.15 332 P **P** **10 40 29.1 -0.9**
ATH Athens Observa 76.19 332 P **P** **10 40 29.8 -0.4**
DION Dionisos Attik 76.19 333 P **P** **10 40 29.4 -0.9**
PTL Penteli 76.19 333 P **P** **10 40 30.0 -0.4**
VLX Vlachokerasia 76.21 331 P **P** **10 40 30.1 -0.5**
ITM Ithomi 76.23 331 P **P** **10 40 30.3 -0.3**
SATY Saty 76.28 15*c i*P **P** **10 40 31.6 +0.8**
SATY *e*S **S** **10 50 16.9 +1.5**
SATY pmax pmax
comp=Z,58nm,1.4s
SATY Saty 76.28 15⇧ *i*P **P** **10 40 31.7 +0.8**
comp=Z,58nm,1.4s
SATY *e*S **S** **10 50 17.0 +1.5**
KVAR Kislovodsk Arr 76.31 348 LR LR 11 12 55.6
comp=Z,2µm,20.8s,baz=95,slow=35
KIV Kislovodsk 76.31 348 P **P** **10 40 30.6 -0.3**
KIV IAmb IAmb 10 40 40.6
comp=Z,75nm,0.9s
KIV Kislovodsk 76.31 348 *i* P **P** **10 40 31.3 +0.5**
SNR=15
KIV Kislovodsk 76.31 348 *e*P **P** **10 40 30.9 0.0**
KIV *e* 10 43 22.4
KIV *e*S **S** **10 50 15.3 -0.3**
KIV *e*SS **SS** **10 55 07.1 -3.4**
KIV pmax pmax
comp=Z,50nm,1.0s
KIV pmax pmax
comp=Z,108nm,4.2s
KIV Kislovodsk 76.31 348 P **P** **10 40 31.4 +0.5**
comp=Z,1µmcomp=Z,73nm,0.9s
PRK Paraskevi 76.33 335 P **P** **10 40 30.9 -0.1**
VSLR Vesyoloye 76.33 346*c i*P **P** **10 40 30.8 -0.1**
VSLR pmax pmax
comp=Z,90nm,1.0s
VSLR MLR MLR
comp=Z,1µm,16.0s
SIGR SIGRI 76.45 335 P **P** **10 40 33.5 +1.9**
AUPHS Peel High Scho 76.45 118 P **P** **10 40 32.6 +0.4**
UZB Uzunbulak 76.50 15*c i*P **P** **10 40 32.8 +0.7**
UZB *e*S **S** **10 50 19.4 +1.4**
UZB pmax pmax
comp=Z,58nm,1.1s
UZB Uzunbulak 76.50 15⇧ *i*P **P** **10 40 32.9 +0.7**
comp=Z,58nm,1.1s
UZB *e*S **S** **10 50 19.4 +1.4**
SOC Sochi 76.51 346 *e*P **P** **10 40 31.6 -0.3**
SOC *e*PPP PPP 10 45 16.9
SOC *e*S **S** **10 50 14.4 -3.2**
SOC *e*SS **SS** **10 55 19.2 +5.9**
SOC pmax pmax
comp=Z,40nm,0.9s
SOC MLR MLR
comp=Z,2µm,18.0s
VILL Villia 76.51 332 P **P** **10 40 31.2 -1.0**
LTK Loutraki 76.53 332 P **P** **10 40 30.8 -1.4**
KYMI Kymi, Euboea I 76.61 333 P **P** **10 40 31.3 -1.3**
SHLS Shalkode 76.61 16 *e*P **P** **10 40 34.1 +1.4**
SHLS pmax pmax
comp=Z,48nm,0.9s
SHLS Shalkode 76.61 16 *e*P **P** **10 40 34.1 +1.4**
comp=Z,48nm,0.9s
AMT Artemida-Makis 76.63 331 P **P** **10 40 29.7 -3.1**
BAND Balkesir-Ban 76.67 337⇑ P **P** **10 40 32.4 -0.5**
GUR Goura 76.71 331 P **P** **10 40 32.7 -0.6**
KPKS Kokpek 76.73 15 *e*P **P** **10 40 34.0 +0.7**
KPKS Kokpek 76.73 15 *e*P **P** **10 40 34.0 +0.7**
PDGK Podgornoye 76.78 16 P **P** **10 40 32.7 -1.0**
KLV Kalavryta, Ach 76.88 331 P **P** **10 40 33.8 -0.4**
DRO Drossia 76.98 331 P **P** **10 40 34.9 +0.1**
ATAL Atalanti 77.08 332 P **P** **10 40 33.8 -1.5**
RLS Riolos of Patr 77.17 331 P **P** **10 40 36.0 +0.1**
SERG Sergoula 77.23 331 P **P** **10 40 35.8 -0.3**
AXAR Agios Charalam 77.29 332 P **P** **10 40 36.2 -0.3**
LIA Limnos Island 77.30 334 P **P** **10 40 37.9 +1.4**
EFP Efpalio 77.31 331 P **P** **10 40 36.0 -0.6**
GOF Gofitskoye 77.32 349*ce*P **P** **10 40 40.5 +4.0**
LABN Labinsk 77.33 347 *e*P **P** **10 40 37.0 +0.5**
LABN *e**PP **PcP** **10 40 47.9 +0.9**
LABN *e*S **S** **10 50 29.2 +2.7**
LABN pmax pmax
comp=Z,54nm,0.6s
AXS Araxos 77.33 331 P **P** **10 40 34.9 -1.8**
ARMA Armidale 77.33 118 P **P** **10 40 37.0 -0.3**
comp=Z,63nm,1.3s
ARMA Armidale 77.33 118 P **P** **10 40 37.4 +0.1**
ARMA Armidale 77.33 118 P **P** **10 40 37.4 +0.1**
ARMA IAmb IAmb 10 40 45.9
comp=Z,87nm,1.2s

MTSU Mount Surprise 77.40 104 P **P** **10 40 36.8 -0.9**
comp=Z,29nm,1.1s
MTSU Mount Surprise 77.40 104 P **P** **10 40 37.6 -0.1**
ANX Ano Chora 77.44 331 P **P** **10 40 35.8 -1.6**
AGG Agios Georgios 77.64 332 P **P** **10 40 37.1 -1.4**
SMTH Samothraki Isl 77.67 335 P **P** **10 40 36.2 -2.4**
ENEZ Enez 77.68 335 P **P** **10 40 38.1 -0.5**
MAKR Makrakomi, Fth 77.71 332 P **P** **10 40 38.2 -0.6**
EVR Evrytania 77.76 332 P **P** **10 40 39.0 -0.3**
ALN Alexandroupoli 77.86 335 P **P** **10 40 39.5 -0.1**
ALN Alexandroupoli 77.86 335 P **P** **10 40 37.4 -2.2**
ALN Alexandroupoli 77.86 335 P **P** **10 40 39.5 -0.1**
ALN pmax pmax
comp=Z,16nm,0.8s
AMPL Ampelaki 78.01 331 P **P** **10 40 39.4 -1.1**
CTA Charters Tower 78.05 106 LR LR 11 11 30.0
comp=Z,6µm,20.1s,baz=238,slow=33
CTA Charters Tower 78.05 106 P **P** **10 40 40.7 -0.7**
CTAO Charters Tower 78.05 106 P **P** **10 40 40.7 -0.7**
CTAO Charters Tower 78.05 106 P **P** **10 40 40.9 -0.4**
CTAO IAmb IAmb 10 40 54.2
comp=Z,74nm,1.1s
CTAO Charters Tower 78.05 106 IAMs_20 IAMs_20 11 11 08.7
comp=Z,6µm,21.0s
CTAO Charters Tower 78.05 106 P **P** **10 40 40.9 -0.4**
THAS Thassos island 78.09 334 P **P** **10 40 40.5 -0.4**
OUR Ouranopolis 78.13 334 P **P** **10 40 41.9 +0.8**
LKD2 Lefkada island 78.13 331 P **P** **10 40 40.7 -0.5**
TDK Taldyqorghan 78.14 14 *e*P **P** **10 40 42.0 +1.0**
TDK pmax pmax
comp=Z,130nm,1.5s
TDK MLR MLR
comp=Z,1µm,15.0s
TDK Taldyqorghan 78.14 14 *e*P **P** **10 40 42.1 +1.0**
comp=Z,130nm,1.5s
TDK LR LR 11 16 10.9
comp=Z,1µm,15.3s
ENH Enshi 78.15 43 P **P** **10 40 40.6 -0.9**
ENH Enshi 78.15 43 P **P** **10 40 40.8 -0.7**
ENH IAmb IAmb 10 40 49.3
comp=Z,112nm,1.2s
ANN Anapa 78.16 345 *e*P **P** **10 40 40.7 -0.4**
ANN *e**PP **sP** **10 40 45.0 +1.5**
ANN *e*S **S** **10 50 36.2 +0.8**
ANN pmax pmax
comp=Z,36nm,0.7s
THL Klokotos Trika 78.23 332 P **P** **10 40 41.0 -0.7**
RDO Rodhopi 78.27 335 P **P** **10 40 41.8 0.0**
RDO IAmb IAmb 10 40 52.8
comp=Z,76nm,1.3s
RDO Rodhopi 78.27 335 P **P** **10 40 41.2 -0.6**
TETR Tetrakomo, Epi 78.34 331 P **P** **10 40 42.9 +0.5**
ERBR Yeremizino-Bor 78.41 347 *e*P **P** **10 40 41.5 -1.0**
ERBR *e**PP **PcP** **10 40 56.7 +5.0**
ERBR *e*S **S** **10 50 37.3 -0.8**
ERBR pmax pmax
comp=Z,92nm,0.8s
COEN Coen 78.47 99 P **P** **10 40 45.7 +2.0**
comp=Z,31nm,2.0s
COEN Coen 78.47 99 P **P** **10 40 45.3 +1.6**
PRMD Pramanda 78.57 331 P **P** **10 40 44.1 +0.4**
HORT Hortiatis 78.69 333 P **P** **10 40 43.5 -0.8**
CNSH ChangSha 78.75 47 P **P** **10 40 44.4 -0.4**
CNSH S **S** **10 50 40.6 -1.9**
CNSH pmax pmax
comp=Z,24nm,2.1s
CNSH L L
comp=Z,2µm,22.4s
CNSH L L
comp=Z,2µm,23.1s
CNSH L L
comp=Z,4µm,20.3s
KDZ Kurdzhali 78.76 335 P **P** **10 40 42.1 -2.5**
KDZ Kurdzhali 78.76 335 P **P** **10 40 44.8 +0.2**
THE Thessaloniki 78.77 333 P **P** **10 40 43.5 -1.1**
KPRO Kipourio 78.83 332 P **P** **10 40 44.8 -0.2**
KZN Kozani 78.96 332 P **P** **10 40 44.5 -1.3**
TW1H Toowoomba 1 Ha 78.99 115 P **P** **10 40 46.8 +0.3**
NVR Nevrokopi 79.06 334 P **P** **10 40 44.5 -1.8**
SIM Simferopol' 79.09 343 *e*P **P** **10 40 45.2 -1.1**
SIM *e*S **S** **10 50 41.3 -4.2**
SIM pmax pmax
comp=Z,84nm,0.8s
SIM smax smax
comp=N,579nm,16.5s
SIM MLR MLR
comp=Z,408nm,17.2s
JMB Yambol 79.11 337 P **P** **10 40 44.9 -1.5**
JMB Yambol 79.11 337 P **P** **10 40 48.9 +2.5**
AUAYR Ayr State High 79.25 106 P **P** **10 40 49.7 +1.8**
KNT Kendrikon 79.26 333 P **P** **10 40 45.7 -1.6**
KEK Kerkira 79.27 331 P **P** **10 40 45.7 -1.7**
MMB Musomishta 79.27 334 P **P** **10 40 46.4 -1.0**
MMB Musomista 79.27 334 P **P** **10 40 49.7 +2.3**
GRG Griva 79.27 333 P **P** **10 40 46.4 -1.0**
PYZ Puysegur Point 79.29 138 IAMs_20 IAMs_20 11 07 13.8
comp=Z,6µm,21.0s
LZDM Lanzhou Array 79.29 36 P **P** **10 40 47.0 -1.0**
comp=Z,1.4nm,0.3s,baz=202,slow=7.2,SNR=11
LZDM LR LR 11 14 00.8
comp=Z,2µm,20.6s,baz=165,slow=34
comp=Z,1.4nm,0.3s
EIDS Eidsvold 79.37 113 P **P** **10 40 48.0 -0.5**
comp=Z,60nm,1.4s
EIDS Eidsvold 79.37 113 P **P** **10 40 47.5 -1.0**
EIDS Eidsvold 79.37 113 P **P** **10 40 47.8 -0.7**
EIDS IAmb IAmb 10 40 57.2
comp=Z,97nm,1.3s
PRD Provadia 79.41 337 P **P** **10 40 50.2 +2.1**
WMQ Urumqi 79.46 21 *e*P **P** **10 40 49.0 +0.6**
WMQ pP pwP 10 40 55.4 -0.4
WMQ S **S** **10 50 49.3 -0.3**
WMQ SS **SS** **10 55 52.8 -5.1**
WMQ pmax pmax
comp=Z,19nm,0.7s
WMQ L L
comp=Z,4µm,21.9s
WMQ L L
comp=Z,2µm,20.5s
LZH Lanzhou 79.47 36 P **P** **10 40 49.1 +0.3**
LZH pP *s*P 10 40 53.1 +1.9
LZH S **S** **10 50 47.6 -2.7**
LZH pmax pmax
comp=Z,57nm,1.3s
LZH pmax pmax
comp=Z,480nm,4.5s
LZH L L
comp=Z,3µm,18.7s
LZH L L
comp=Z,2µm,21.0s
LZH L L
comp=Z,3µm,20.1s
VAY Valandovo 79.52 333 *i* P **P** **10 40 48.3 -0.4**
PSN Preselentsi 79.60 338 P **P** **10 40 52.0 +2.9**
RAFF Raffo Rosso 79.68 326 P **P** **10 40 49.2 -0.5**
RAFF IAmb IAmb 10 41 04.4
comp=Z,115nm,1.2s
ELND Elena 79.72 336⇑ P **P** **10 40 49.9 +0.2**
KKB Krupnik 79.75 334 P **P** **10 40 52.5 +2.5**
CEL Celeste 79.79 327 IAMs_20 IAMs_20 11 15 40.5
comp=Z,5µm,21.0s
VAE Valguarnera 79.86 326 LR LR 11 15 39.5
comp=Z,5µm,21.1s,baz=129,slow=35
LOZB Loznitsa 79.87 337⇑ P **P** **10 40 50.0 -0.6**
GC1S Gold Coast 1 S 79.87 117 P **P** **10 40 52.3 +1.1**
AUNRC North Rockhamp 79.93 111 P **P** **10 40 50.9 -0.6**
DCZ Deep Cove 79.96 137 IAMs_20 IAMs_20 11 07 24.5
comp=Z,4µm,21.0s
SZH Strazhitsa 79.98 337 P **P** **10 40 50.6 -0.6**
SZH Strazhitsa 79.98 337 P **P** **10 40 53.2 +2.0**
OHR Ohrid 80.03 332 *i* P **P** **10 40 48.8 -2.9**
AUBSH Beerwah State 80.09 115 P **P** **10 40 52.2 -0.2**
WHZ Wether Hill Ro 80.17 138 P **P** **10 40 52.2 -0.4**
WHZ IAMs_20 IAMs_20 11 07 39.1
comp=Z,6µm,21.0s
GD1S Gladstone Soft 80.19 112 P **P** **10 40 54.6 +1.6**
AB31 Akbulak array 80.25 1 P **P** **10 40 52.5 +0.1**
AB31 IAmb IAmb 10 41 04.0
comp=Z,92nm,1.1s
AB31 Akbulak array 80.25 1 *i* P **P** **10 40 52.1 -0.4**
ABKAR Akbulak array 80.25 1 P **P** **10 40 52.4 -0.1**
TIRR Tirgusor 80.25 339⇑ P **P** **10 40 51.9 -0.7**
TIRR Tirgusor 80.25 339 P **P** **10 40 51.6 -1.0**
TIRR Tirgusor 80.25 339 P **P** **10 40 51.6 -1.0**

TIRR pmax pmax
comp=Z,63nm,1.1s
TIRR MLR MLR
comp=Z,2µm,19.0s
TIRR Tirgusor 80.25 339 P **P** **10 40 52.5 -0.1**
comp=Z,1µmcomp=Z,56nm,1.2s
GTA2 Gaotai 80.26 31 P **P** **10 40 53.0 0.0**
GTA2 sP PcP 10 40 59.6 -0.5
GTA2 S **S** **10 50 54.5 -3.9**
GTA2 pmax pmax
comp=Z,38nm,1.1s
GTA2 pmax pmax
comp=Z,650nm,8.3s
GTA2 L L
comp=Z,2µm,18.2s
GTA2 L L
comp=Z,3µm,18.5s
GTA2 L L
comp=Z,3µm,18.2s
QZH2 Quanzhou 80.27 53 *e*P **P** **10 40 54.7 +1.5**
QZH2 S **S** **10 51 01.8 +3.0**
QZH2 L L
comp=Z,2µm,20.3s
QZH2 L L
comp=Z,2µm,17.5s
QZH2 L L
comp=Z,4µm,21.0s
EFI East Falkland 80.35 214 P **P** **10 40 52.8 -0.6**
EFI East Falkland 80.35 214*ce*P **P** **10 40 52.7 -0.6**
EFI pmax pmax
comp=Z,135nm,2.5s
VTS Vitosha 80.39 334 P **P** **10 40 52.4 -1.2**
VTS Vitosha 80.39 334 P **P** **10 40 56.3 +2.7**
MLZ Mavora Lakes 80.58 138 IAMs_20 IAMs_20 11 08 03.7
comp=Z,8µm,22.0s
XAN Xi'an 80.60 41⇓ P **P** **10 40 54.1 -0.7**
XAN pP sP 10 40 58.6 +1.4
XAN sP PcP 10 41 01.4 -0.2
XAN S **S** **10 50 58.8 -3.2**
XAN pmax pmax
comp=Z,40nm,1.1s
XAN L L
comp=Z,1µm,19.9s
XAN L L
comp=Z,4µm,19.2s
XAN L L
comp=Z,3µm,20.6s
TPGR Topolog 80.61 339⇑ P **P** **10 40 53.5 -1.1**
TPUB Ta-pu 80.62 56 P **P** **10 40 56.3 +1.2**
MAKZ Makanchi 80.65 16 P **P** **10 40 54.8 0.0**
MAKZ IAmb IAmb 10 41 05.9
comp=Z,110nm,1.4s
MAKZ Makanchi 80.65 16 P **P** **10 40 54.8 0.0**
MAKZ pmax pmax
comp=Z,110nm,1.5s
MK31 Makanchi Array 80.71 16*de*P **P** **10 40 54.8 -0.3**
MKAR Makanchi Array 80.71 16 P **P** **10 40 54.9 -0.2**
comp=Z,14nm,0.8s,baz=202,slow=5.5,SNR=51
MKAR PKKPbc **PKKPbc** **10 59 36.4 -0.3**
comp=Z,0.3nm,0.7s,baz=5.0,slow=2.8,SNR=3.7
MKAR PKPPKP **P'P'df** **11 07 39.7 +7.2**
comp=Z,0.6nm,1.0s,baz=318,slow=1.6,SNR=5.7
MKAR LR LR 11 11 06.2
comp=Z,870nm,22.0s,baz=196,slow=32
comp=Z,14nm,0.8s
MKAR Makanchi Array 80.71 16 P **P** **10 40 54.8 -0.3**
MPEP Malo Peshtene 80.84 335 P **P** **10 40 55.5 -0.3**
CFR Carcaliu 80.99 339⇑ P **P** **10 40 56.2 -0.4**
CFR Carcaliu 80.99 339 P **P** **10 40 56.1 -0.4**
KEST Kesra 81.08 322 P **P** **10 40 57.6 +0.3**
comp=Z,13nm,0.8s,baz=268,slow=3.7,SNR=8.1
KEST LR LR 11 17 29.9
comp=Z,7µm,20.9s,baz=130,slow=36
comp=Z,13nm,0.8s
KEST Kesra 81.08 322 P **P** **10 40 56.6 -0.8**
KEST IAmb IAmb 10 41 10.6
comp=Z,194nm,1.8s
KEST Kesra 81.08 322 P **P** **10 40 54.9 -2.5**
SNR=8.0
CNGR Negrine 81.13 320 P **P** **10 41 00.0 +2.4**
YULB Yu-li 81.15 56 P **P** **10 40 59.1 +1.1**
SSLB Suanglung 81.16 55 P **P** **10 40 58.6 +0.6**
SSLB Suanglung 81.16 55 P **P** **10 40 58.5 +0.5**
SSLB IAmb IAmb 10 40 02.0
comp=Z,167nm,1.3s
SSLB IAMs_20 IAMs_20 11 14 14.4
comp=Z,3µm,20.0s
WHN Wuhan 81.28 46 P **P** **10 40 58.1 -0.3**
WHN S **S** **10 51 07.5 -1.6**
WHN SS **SS** **10 56 16.2 -9.2**
WHN pmax pmax
comp=Z,350nm,1.7s
WHN L L
comp=Z,9µm,22.9s
WHN L L
comp=Z,6µm,17.0s
WHN L L
comp=Z,14µm,21.1s
AKTO Aktyubinsk 81.42 360 P **P** **10 40 58.5 -0.3**
comp=Z,12nm,0.7s,baz=200,slow=2.8,SNR=31
AKTO LR LR 11 16 30.6
comp=Z,1µm,18.9s,baz=172,slow=35
comp=Z,12nm,0.7s
ISR Istrita 81.44 338⇑ P **P** **10 40 59.5 +0.5**
ISR Istrita 81.44 338 P **P** **10 40 59.5 +0.5**
JCZ Jackson Bay 81.72 137 P **P** **10 41 01.4 +0.5**
CBBAR Babar 81.81 320 P **P** **10 41 03.0 +1.7**
NACB Ninganchiao 81.85 55 P **P** **10 41 02.7 +1.1**
NACB Ninganchiao 81.85 55 IAmb IAmb 10 41 23.2
comp=Z,55nm,1.0s
BRZS Berezniki 81.95 9 *e*P **P** **10 41 02.5 +0.9**
BRZS Berezniki 81.95 9 *e*P **P** **10 41 02.5 +0.9**
MLR Muntele Rosu 81.96 338 LR LR 11 16 44.0
comp=Z,1µm,19.6s,baz=156,slow=35
MLR Muntele Rosu 81.96 338⇑ P **P** **10 41 01.7 -0.2**
MLR Muntele Rosu 81.96 338 P **P** **10 41 01.4 -0.5**
MLR IAmb IAmb 10 41 09.8
comp=Z,99nm,1.1s
MLR Muntele Rosu 81.96 338 P **P** **10 41 01.4 -0.5**
MLR pmax pmax
comp=Z,99nm,1.1s
MLR MLR MLR
comp=Z,3µm,20.0s
MLR Muntele Rosu 81.96 338 P **P** **10 41 01.3 -0.6**
comp=Z,1µmcomp=Z,103nm,1.4s
MLR pP **PcP** **10 41 06.5 -0.9**
comp=Z,1µmcomp=Z,103nm,1.4s
ZSN Zaisan 81.97 18*c i*P **P** **10 41 02.7 +1.0**
ZSN *e*S **S** **10 51 17.5 +1.9**
ZSN Zaisan 81.97 18⇑ *i*P **P** **10 41 02.8 +1.0**
ZSN *e*S **S** **10 51 17.5 +1.9**
GHRR 82.00 339⇓ P **P** **10 41 02.6 +0.7**
CRHA Rehia 82.02 320 P **P** **10 41 03.3 +0.9**
VRI Vrincioaia 82.04 338⇑ P **P** **10 41 01.9 -0.3**
VRI Vrincioaia 82.04 338 P **P** **10 41 01.8 -0.3**
VRI Vrincioaia 82.04 338 P **P** **10 41 01.7 -0.5**
comp=Z,1µmcomp=Z,109nm,0.9s
PLOR Plostina 82.06 338⇑ P **P** **10 41 01.9 -0.4**
PLOR Plostina 82.06 338 P **P** **10 41 01.8 -0.4**
JAY Jayapura 82.12 88 LR LR 11 15 27.1
comp=Z,1µm,20.0s,baz=222,slow=34
COVR Voineasa-Covas 82.19 338⇓ P **P** **10 41 02.3 -0.6**
ODZ Otahua Downs 82.21 139 IAMs_20 IAMs_20 11 10 09.9
comp=Z,5µm,19.0s
VOIR 82.21 337⇑ P **P** **10 41 02.2 -0.9**
VOIR 82.21 337 P **P** **10 41 02.2 -0.9**
VOIR 82.21 337 P **P** **10 41 02.2 -0.9**
comp=Z,880nmcomp=Z,72nm,1.0s
ARR Arges 82.29 337⇑ P **P** **10 41 03.0 -0.5**
LBZ Lake Benmore 82.34 138 P **P** **10 41 04.2 +0.1**
LBZ IAMs_20 IAMs_20 11 09 10.4
comp=Z,7µm,20.0s
MG01 Puerto William 82.40 208 IAMs_20 IAMs_20 11 09 22.0
comp=Z,3µm,22.0s
OZUR 82.55 338⇑ P **P** **10 41 03.7 -1.1**
DOPR Dopca 82.56 337⇓ P **P** **10 41 04.3 -0.6**
ONER Baraj Valea Uz 82.57 338⇑ P **P** **10 41 04.1 -0.8**
FOZ Fox Glacier 82.64 137 P **P** **10 41 05.2 -0.3**
HERR Herculane 82.64 335⇑ P **P** **10 41 04.7 -0.6**
LOT Lotru 82.66 336⇑ P **P** **10 41 04.7 -0.8**
CKTS El Kantara 82.70 319 P **P** **10 41 07.0 +1.1**
MDVR Moldovita 82.81 335⇑ P **P** **10 41 05.9 -0.4**
CTEI Djebel Teioual 82.91 320 P **P** **10 41 08.1 +1.0**
GZR Gura Zlata 82.95 336⇓ P **P** **10 41 07.0 0.0**
GZR Gura Zlata 82.95 336 P **P** **10 41 07.0 0.0**

LYN **LuoYang** 82.98 42 P **P** 10 41 08.0 +0.7
LYN S **S** 10 51 27.5 +1.1
LYN SS **SS** 10 56 43.3 -7.3
LYN pmax pmax
comp=Z,52nm,1.4s
LYN pmax pmax
comp=Z,700nm,3.7s
LYN L L
comp=Z,7µm,22.3s
LYN L L
comp=Z,3µm,22.0s
LYN L L
comp=Z,8µm,24.4s
CASM Ain Smara 83.01 320 P **P** 10 41 08.6 +1.1
CJSR Ain Djasser 83.02 320 P **P** 10 41 08.3 +0.7
COAT Oued Athmania 83.11 320 P **P** 10 41 09.2 +1.2
RPZ Rata Peaks 83.25 138 P **P** 10 41 06.9 -1.9
comp=Z,9.7nm,0.7s,baz=8.7,slow=0.2,SNR=3.0
RPZ LR LR 11 09 50.8
comp=Z,11µm,21.9s,baz=149,slow=30
comp=Z,9.7nm,0.7s
VRH Novokhopyorsk 83.50 350 *e*P **P** 10 41 09.8 +0.3
VRH pmax pmax
comp=Z,60nm,0.7s
KURBB Kurchatov Arra 83.53 13 P **P** 10 41 10.0 +0.3
comp=Z,49nm,1.1s,baz=209,slow=5.8,SNR=75
KURBB PKKPbc **PKKPbc** 10 59 32.3 +2.1
comp=Z,0.2nm,0.4s,baz=5.6,slow=1.9,SNR=4.4
KURBB LR LR 11 15 37.3
comp=Z,1µm,19.7s,baz=185,slow=34
comp=Z,49nm,1.1s
KURBB Kurchatov Arra 83.53 13 P **P** 10 41 08.9 -0.8
BZS Buzias 83.56 335 ⇑P **P** 10 41 09.8 -0.2
BZS Buzias 83.56 335 P **P** 10 41 09.8 -0.2
SORM Soroca 83.59 340 ⇑P **P** 10 41 09.4 -0.7
SORM Soroca 83.59 340 P **P** 10 41 09.3 -0.7
KURK Kurchatov 83.64 13 P **P** 10 41 10.7 +0.4
KURK Kurchatov 83.64 13 *de*P **P** 10 41 10.5 +0.2
KURK pmax pmax
comp=Z,78nm,1.2s
KURK MLR MLR
comp=Z,1µm,17.0s
KURK Kurchatov 83.64 13 P **P** 10 41 10.4 +0.1
KURK S **S** 10 51 32.6 +0.2
VORD Divnogorie 83.68 348 *e*P **P** 10 41 11.9 +1.5
VORD pmax pmax
comp=Z,40nm,0.9s
INTR Introdacqua 83.71 328 IAmb IAmb 10 41 20.4
comp=Z,86nm,1.3s
ADCK Dar Chioukh 83.75 317 P **P** 10 41 14.1 +2.6
CJR Cluj-Napoca 83.82 337 ⇓P **P** 10 41 11.7 +0.4
CJR Cluj-Napoca 83.82 337 P **P** 10 41 11.7 +0.4
VSL Villasalto 83.91 324 IAMs_20 IAMs_20 11 18 52.4
comp=Z,4µm,20.0s
BELG Belogornoye 83.92 353 P **P** 10 41 11.1 -0.5
comp=Z,92nm,0.8s,baz=207,slow=0.5,SNR=25
BELG LR LR 11 20 43.8
comp=Z,2µm,18.4s,baz=142,slow=37
comp=Z,92nm,0.8s
BELG Belogornoye 83.92 353 *c i*P **P** 10 41 11.4 -0.2
BELG pmax pmax
comp=Z,17nm,0.9s
BELG MLR MLR
comp=Z,314nm,18.0s
VSR Storozhevoye 83.94 348 *e*P **P** 10 41 13.2 +1.4
VSR pmax pmax
comp=Z,70nm,1.4s
MARR Marisel-Cluj 83.95 336 ⇓P **P** 10 41 11.9 -0.2
OXZ Oxford 84.05 138 IAMs_20 IAMs_20 11 10 12.7
comp=Z,7µm,21.0s
INZ Inchbonnie 84.07 137 IAMs_20 IAMs_20 11 10 42.4
comp=Z,5µm,20.0s
BURAR Bucovina Array 84.08 338 ⇓P **P** 10 41 13.3 +0.5
BURAR Bucovina Array 84.08 338 P **P** 10 41 12.3 -0.4
BURAR Bucovina Array 84.08 338 P **P** 10 41 13.2 +0.5
BUR08 Bucovina Ar. S 84.11 338 IAmb IAmb 10 41 29.0
comp=Z,59nm,1.3s
PMG Port Moresby 84.12 97 LR LR 11 15 37.3
comp=Z,5µm,19.8s,baz=228,slow=34
PMG Port Moresby 84.12 97 P **P** 10 41 15.1 +1.3
PMG Port Moresby 84.12 97 P **P** 10 41 15.0 +1.3
PMG Port Moresby 84.12 97 P **P** 10 41 14.8 +1.1
PMG Port Moresby 84.12 97 IAMs_20 IAMs_20 11 15 26.1
comp=Z,5µm,19.0s
PMG Port Moresby 84.12 97 P **P** 10 41 14.8 +1.1
PMG pmax pmax
comp=Z,152nm,1.5s
PMG Port Moresby 84.12 97 P **P** 10 41 15.6 +1.9
comp=Z,1µmcomp=Z,69nm,1.5s
MQZ McQueen's Vall 84.17 138 IAMs_20 IAMs_20 11 12 57.7
comp=Z,4µm,18.0s
DRGR 84.19 336 ⇑P **P** 10 41 12.8 -0.5
DRGR 84.19 336 P **P** 10 41 12.8 -0.5
VORR Voronezh 84.37 348 *e*P **P** 10 41 12.8 -1.2
VORR pmax pmax
comp=Z,65nm,0.4s
BLY Banja Luka 84.53 332 ⇑P **P** 10 41 14.4 -0.5
BVA0 Borovoye Array 84.66 7 *i*P **P** 10 41 15.6 +0.1
BVAR Borovoye Array 84.66 7 P **P** 10 41 16.0 +0.5
comp=Z,40nm,0.9s,baz=160,slow=4.7,SNR=95
BVAR LR LR 11 18 42.4
comp=Z,1µm,18.1s,baz=198,slow=35
comp=Z,40nm,0.9s
BORK Borovoye 84.68 7 P **P** 10 41 16.3 +0.8
BORK IAmb IAmb 10 41 26.7
comp=Z,88nm,1.1s
BORK Borovoye 84.68 7 *ce*P **P** 10 41 16.1 +0.6
BORK pmax pmax
comp=Z,120nm,1.7s
BORK MLR MLR
comp=Z,2µm,17.0s
DGZ Jazzator, Alta 84.72 18 *di*P **P** 10 41 16.9 +0.9
DGZ pmax pmax
comp=Z,175nm,1.4s
DGZ MLR MLR
comp=Z,1µm,17.0s
GVZ Greta Valley S 84.84 138 IAMs_20 IAMs_20 11 10 24.6
comp=Z,6µm,22.0s
DSZ Denniston Nort 84.89 136 IAMs_20 IAMs_20 11 10 53.9
comp=Z,3µm,19.0s
NJ2 Nanjing 85.12 48 ⇓P **P** 10 41 17.5 -0.8
NJ2 pP **PcP** 10 41 22.1 +0.6
NJ2 S **S** 10 51 52.8 +4.7
NJ2 pmax pmax
comp=Z,48nm,0.9s
NJ2 pmax pmax
comp=Z,2µm,6.6s
NJ2 L L
comp=Z,5µm,21.8s
NJ2 L L
comp=Z,4µm,18.9s
NJ2 L L
comp=Z,12µm,23.7s
MORH Mrgy, Hungar 85.17 334 ⇓P **P** 10 41 18.0 -0.2
MORH Mrgy, Hungar 85.17 334 P **P** 10 41 19.1 +0.9
comp=Z,15nm,2.1s
TIY Taiyuan 85.22 40 P **P** 10 41 20.4 +1.6
TIY PP **PP** 10 44 32.7 -4.1
TIY S **SKSac** 10 51 42.0 -1.7
TIY pmax pmax
comp=Z,38nm,1.9s
TIY pmax pmax
comp=Z,740nm,10.8s
TIY L L
comp=Z,1µm,19.4s
TIY L L
comp=Z,1µm,18.0s
TIY L L
comp=Z,2µm,16.7s
LPSR Galich'ya Gora 85.31 348 *e*P **P** 10 41 17.8 -0.9
LPSR *e*S **SKSac** 10 51 42.3 -1.0
LPSR pmax pmax
comp=Z,68nm,1.0s
LPSR pmax pmax
comp=Z,400nm,3.0s
LPSR smax smax
comp=N,900nm,9.4s
KHZ Kahutara 85.48 138 IAMs_20 IAMs_20 11 11 08.5
comp=Z,6µm,21.0s
THZ Tophouse 85.52 137 IAMs_20 IAMs_20 11 11 22.7
comp=Z,7µm,21.0s
KIEV Kiev 85.67 342 ⇓P **P** 10 41 19.6 -0.9
KIEV Kiev 85.67 342 P **P** 10 41 19.7 -0.9
KIEV Kiev 85.67 342 *i* P **P** 10 41 19.5 -0.9
SNR=15
KIEV Kiev 85.67 342 P **P** 10 41 19.7 -0.9
KIEV pmax pmax
comp=Z,36nm,0.9s
KIEV MLR MLR
comp=Z,2µm,21.0s
KIEV Kiev 85.67 342 P **P** 10 41 19.5 -1.0
comp=Z,3µmcomp=Z,189nm,1.0s
AKASG Malin Array Be 85.67 342 P **P** 10 41 19.7 -0.8
comp=Z,4.6nm,0.5s,baz=170,slow=4.4,SNR=23
AKASG LR LR 11 17 08.9
comp=Z,1µm,21.9s,baz=161,slow=34
comp=Z,4.6nm,0.5s
AKASG Malin Array Be 85.67 342 P **P** 10 41 20.1 -0.4
AKASG IAmb IAmb 10 41 30.2
comp=Z,81nm,1.8s
AKASG Malin Array Be 85.67 342 P **P** 10 41 20.1 -0.4
AKASG pmax pmax
comp=Z,81nm,1.8s
AKBB Malin Array Si 85.67 342 IAmb IAmb 10 41 36.1
comp=Z,39nm,0.8s
AKBB Malin Array Si 85.67 342 *ce*P **P** 10 41 19.7 -0.8
AKBB pmax pmax
comp=Z,34nm,0.9s
AKBB MLR MLR
comp=Z,2µm,20.0s
QRZ Quartz Range 85.88 136 IAMs_20 IAMs_20 11 10 16.4
comp=Z,3µm,21.0s
SSE Sheshan 86.00 50 P **P** 10 41 22.9 +0.2
SSE S **S** 10 51 59.3 +2.5
SSE pmax pmax
comp=Z,28nm,1.3s
SSE pmax pmax
comp=Z,180nm,3.7s
SSE L L
comp=Z,660nm,20.6s
SSE L L
comp=Z,670nm,21.0s
BTO2 Baotou 86.08 37 *e*P **P** 10 41 22.9 -0.1
BTO2 pP **PcP** 10 41 27.7 +2.1
BTO2 sP **pwP** 10 41 29.9 -0.5
BTO2 SKS **SKSac** 10 51 46.3 -2.8
BTO2 sS **ScS** 10 52 08.1 +1.7
BTO2 pmax pmax
comp=Z,33nm,1.2s
BTO2 pmax pmax
comp=Z,1µm,5.3s
BTO2 L L
comp=Z,5µm,22.6s
BTO2 L L
comp=Z,3µm,17.9s
BTO2 L L
comp=Z,4µm,20.4s
NNZ Nelson 86.14 137 IAMs_20 IAMs_20 11 11 54.1
comp=Z,5µm,20.0s
PSZ Piszkesteto 86.14 335 ⇑P **P** 10 41 22.6 -0.5
PSZ Piszkesteto 86.14 335 P **P** 10 41 22.1 -1.0
PSZ Piszkesteto 86.14 335 P **P** 10 41 22.1 -1.0
PSZ pmax pmax
comp=Z,29nm,1.2s
PSZ MLR MLR
comp=Z,1µm,20.0s
HNS HongShan 86.27 42 ⇓P **P** 10 41 23.8 0.0
HNS SKS **SKSac** 10 51 49.7 -0.4
HNS S **S** 10 52 01.8 +2.7
HNS SS **SS** 10 57 38.5 -0.7
HNS pmax pmax
comp=Z,43nm,1.1s
HNS L L
comp=Z,3µm,22.2s
HNS L L
comp=Z,3µm,22.2s
HNS L L
comp=Z,4µm,23.5s
MPLH Magyarpolny 86.39 333 P **P** 10 41 24.0 -0.2
comp=Z,2µmcomp=Z,139nm,1.5s
KECS Kecovo 86.41 336 *e*P **P** 10 41 25.6 +1.3
KECS Kecovo 86.41 336 *e*P **P** 10 41 25.6 +1.3
SRO Srobarova 86.63 334 *e*P **P** 10 41 27.9 +2.5
SRO pmax pmax
comp=Z,140nm,2.1s
SRO Srobarova 86.63 334 *e*P **P** 10 41 27.9 +2.5
KWP Kalwaria Pacla 86.65 338 *e*P **P** 10 41 22.8 -2.7
SNZO South Karori 86.85 137 IAMs_20 IAMs_20 11 12 14.9
comp=Z,4µm,21.0s
MAHO Mahon 86.86 321 IAMs_20 IAMs_20 11 20 31.4
comp=Z,5µm,20.0s
TIA Tai'an 86.86 44 P **P** 10 41 26.3 -0.5
TIA SKS **SKSac** 10 51 50.9 -2.9
TIA S **S** 10 52 05.5 +0.6
TIA SS **SS** 10 57 47.1 -0.7
TIA pmax pmax
comp=Z,51nm,1.2s
TIA L L
comp=Z,2µm,18.6s
TIA L L
comp=Z,930nm,17.2s
TIA L L
comp=Z,3µm,18.6s
STHS Stebnicka Huta 86.95 337 *e*P **P** 10 41 30.1 +3.2
STHS pmax pmax
comp=Z,12nm,1.3s
STHS Stebnicka Huta 86.95 337 *e*P **P** 10 41 30.1 +3.2
SOKA Soboth 86.97 332 *e*P **P** 10 41 28.4 +1.2
comp=Z,17nm,1.1s
HHC Hu-ho-hao-te 87.02 37 *e*P **P** 10 41 27.9 +0.3
HHC pP pwP 10 41 33.4 -1.6
HHC PP **PP** 10 44 46.1 -5.3
HHC SKS **SKSac** 10 51 51.4 -3.5
HHC S **S** 10 52 06.0 -0.6
HHC sS sS 10 52 11.9 +2.4
HHC SS **SS** 10 57 49.6 -0.7
HHC pmax pmax
comp=Z,21nm,0.9s
HHC pmax pmax
comp=Z,290nm,3.7s
HHC L L
comp=Z,1µm,17.5s
HHC L L
comp=Z,2µm,17.9s
HHC L L
comp=Z,1µm,17.5s
OBKA Obir 87.04 331 *e*P **P** 10 41 28.7 +1.1
comp=Z,56nm,1.7s
ARSA Arzberg 87.24 332 P **P** 10 41 27.8 -0.6
ARSA Arzberg 87.24 332 *e*P **P** 10 41 29.0 +0.6
comp=Z,16nm,1.5s
MDT Midelt 87.27 311 LR LR 11 21 15.0
comp=Z,11µm,19.8s,baz=152,slow=36
NIE Niedzica 87.27 336 *e*P **P** 10 41 28.5 0.0
NIE Niedzica 87.27 336 P **P** 10 41 28.3 -0.2
comp=Z,17nm,1.6s
RONA Rosalia, Austr 87.31 333 *e*P **P** 10 41 29.4 +0.7
comp=Z,16nm,0.9s
RIB01 Linhares ES 87.33 249 *e*P **P** 10 41 32.5 +2.9
LANS Liptovska Anna 87.34 336 *e*P **P** 10 41 29.6 +0.8
LANS pmax pmax
comp=Z,10.0nm,0.9s
LANS Liptovska Anna 87.34 336 *e*P **P** 10 41 29.6 +0.8
ARTI Arti 87.39 360 P **P** 10 41 28.4 -0.4
comp=Z,38nm,1.0s,baz=186,slow=3.5,SNR=31
comp=Z,38nm,1.0s
ARTI Arti 87.39 360 P **P** 10 41 28.8 -0.1
ARTI Arti 87.39 360 *ci*P **P** 10 41 30.6 +1.8
ARTI 10 44 49.8
ARTI PPP PPP 10 46 46.2
ARTI S **SKSac** 10 51 58.0 +1.9
ARTI SS **SS** 10 57 57.9 +3.1
ARTI SSS SSS 11 01 27.1
ARTI pmax pmax
comp=Z,113nm,1.4s
ARTI MLR MLR
comp=Z,2µm,21.0s
MD31 MD31 87.40 311 P **P** 10 41 28.7 -0.9
MD01 Midelt array s 87.40 311 P **P** 10 41 28.8 -0.9
MODS Modra-Piesok 87.48 334 *e*P **P** 10 41 29.1 -0.4
MODS pmax pmax
comp=Z,144nm,1.6s
MODS Modra-Piesok 87.48 334 *e*P **P** 10 41 29.1 -0.4
MYKA Terra Mystica 87.51 331 *e*PcP **PcP** 10 41 32.2 +0.5
comp=Z,11nm,1.0s
SMOL Smolenice 87.55 334 *e*P **P** 10 41 33.0 +3.2
CONA Conrad Observa 87.66 333 *e*P **P** 10 41 29.9 -0.6
comp=Z,34nm,1.2s,SNR=9.3
WINA Alland / Wiene 87.72 333 *e*P **P** 10 41 30.1 -0.6
comp=Z,22nm,0.9s
JAVC Velka Javorina 87.74 334 *e*P **P** 10 41 30.6 -0.2
MRZ Mangatainoka R 87.78 137 IAmb IAmb 10 41 39.9
comp=Z,88nm,1.2s
MRZ IAMs_20 IAMs_20 11 15 25.4
comp=Z,5µm,18.0s
TIO Tiouine 87.81 308 P **P** 10 41 29.7 -2.0
SVE Sverdlovsk 87.85 1 *e*P **P** 10 41 32.5 +1.5
SVE *e*S **SKSac** 10 51 59.1 +0.3
SVE pmax pmax
comp=Z,114nm,1.5s
SVE MLR MLR
comp=Z,3µm,21.0s
BSFB Barra de Sao F 87.95 249 *e*P **P** 10 41 34.5 +1.9
ZAA0 Zalesovo Array 87.97 15 P **P** 10 41 30.6 -1.1
ZAA0 IAmb IAmb 10 41 41.9
comp=Z,49nm,1.2s
ZALV Zalesovo Beam 87.97 15 P **P** 10 41 30.2 -1.5
comp=Z,19nm,0.9s,baz=204,slow=3.3,SNR=49
ZALV LR LR 11 17 57.5
comp=Z,854nm,20.9s,baz=215,slow=34
comp=Z,19nm,0.9s
ZALV Zalesovo Beam 87.97 15 *i* P **P** 10 41 30.5 -1.2
ZALV pmax pmax
comp=Z,19nm,0.9s
KBA Koelnbreinsper 87.99 331 *e*P **P** 10 41 32.9 +0.7
comp=Z,26nm,1.4s
IFR Ifrane 88.05 312 P **P** 10 41 33.1 +0.3
SALO Salr 88.06 329 P **P** 10 41 32.3 -0.1
ABTA Abfaltersbach 88.07 330 *e*P **P** 10 41 33.8 +1.3
comp=Z,32nm,1.7s
MAUC Maruska 88.10 335 *e*P **P** 10 41 32.1 -0.4
MAUC *e*SKS **S** 10 52 16.4 0.0
OJC Ojcow 88.12 336 *e*P **P** 10 41 32.2 -0.3
OJC Ojcow 88.12 336 P **P** 10 41 32.2 -0.3
OJC Ojcow 88.12 336 P **P** 10 41 32.2 -0.3
OJC Ojcow 88.12 336 P **P** 10 41 32.0 -0.5
comp=Z,1µmcomp=Z,53nm,1.6s
OBN Obninsk 88.13 348 P **P** 10 41 31.9 -0.5
comp=Z,29nm,0.5s,baz=97,slow=0.5,SNR=12
OBN LR LR 11 20 55.4
comp=Z,1µm,20.7s,baz=166,slow=36
comp=Z,29nm,0.5s
OBN Obninsk 88.13 348 *d*P **P** 10 41 32.9 +0.5
OBN Obninsk 88.13 348 *di*P **P** 10 41 33.1 +0.7
OBN *i* S **SKSac** 10 51 54.5 -6.1
OBN pmax pmax
comp=Z,104nm,1.2s
OBN MLR MLR
comp=Z,2µm,20.0s
BFZ Birch Farm 88.15 138 IAMs_20 IAMs_20 11 16 10.2
comp=Z,4µm,19.0s
CART Cartagena 88.20 317 IAMs_20 IAMs_20 11 19 53.9
comp=Z,5µm,21.0s
MOA Molln 88.23 332 *i* P **P** 10 41 32.9 -0.2
comp=Z,22nm,0.9s,SNR=7.8
JOW Kunigami 88.24 57 LR LR 11 15 54.7
comp=Z,1µm,21.5s,baz=239,slow=32
SJMB Sao Joao De Ma 88.29 249 *e*P **P** 10 41 35.7 +1.5
GUA01 Guaratinga, BA 88.30 252 *e*P **P** 10 41 36.3 +2.0
BIOA Bad Ischl, Aus 88.36 332 *i* P **P** 10 41 33.2 -0.6
comp=Z,16nm,0.9s,SNR=6.5
OKC Ostrava-Krasne 88.38 335 AMS AMS 11 18 00.0
comp=Z,2µm,25.2s
KRUC Moravsky 88.38 334 *e*P **P** 10 41 32.4 -1.4
EMUR La Murta 88.51 317 P **P** 10 41 33.6 -1.2
VRAC Vranov 88.51 334 *e*P **P** 10 41 32.9 -1.5
LESA Schwarzleotal 88.54 331 *i* P **P** 10 41 34.1 -0.6
comp=Z,30nm,0.7s,SNR=10.0
MOS Moscow 88.54 348 *e*P **P** 10 41 35.0 +0.7
MOS *e* 10 45 05.9
MOS *e*S **SKSac** 10 52 01.0 -2.0
MOS pmax pmax
comp=Z,220nm,1.4s
MOS pmax pmax
comp=Z,300nm,1.6s
MORC Moravsky Berou 88.55 335 ⇑P **P** 10 41 34.6 0.0
MORC Moravsky Berou 88.55 335 IAmb IAmb 10 41 45.5
comp=Z,63nm,1.4s
MORC Moravsky Berou 88.55 335 P **P** 10 41 34.6 0.0
MORC Moravsky Berou 88.55 335 *e*P **P** 10 41 33.0 -1.6
STEB Steborice 88.60 335 *e*P **P** 10 41 34.1 -0.7
KNGR Kungurtug, Tuv 88.62 24 *i* P **P** 10 41 35.3 +0.3
KNGR pmax pmax
comp=Z,34nm,1.4s
KNGR MLR MLR
comp=Z,440nm,15.0s
CMC01 Camacan, BA 88.72 253 *e*P **P** 10 41 39.5 +3.2
HIZ Hauiti 88.73 135 IAMs_20 IAMs_20 11 11 39.9
comp=Z,3µm,22.0s
WTTA Wattenberg 88.85 330 *i* P **P** 10 41 36.0 -0.3
comp=Z,36nm,0.6s,SNR=8.5
EBER Berja 88.86 315 P **P** 10 41 37.8 +1.2
NBIT Itapeh - BA 88.87 253 *e*P **P** 10 41 39.5 +2.5
BJT Baijiatuao 88.91 41 IAMs_20 IAMs_20 11 17 29.4
comp=Z,3µm,22.0s
BJI2 Beijing 88.91 41 P **P** 10 41 36.6 +0.1
BJI2 pP **sP** 10 41 41.2 +2.3
BJI2 sP **pwP** 10 41 43.7 -0.2
BJI2 SKS **SKSac** 10 52 02.7 -3.4
BJI2 pmax pmax
comp=Z,110nm,11.9s
BJI2 L L
comp=Z,1µm,19.6s
BJI2 L L
comp=Z,630nm,17.5s
BJI2 L L
comp=Z,2µm,22.7s
WATA Walderalm 88.93 330 *e*P **P** 10 41 36.1 -0.5
comp=Z,12nm,0.6s
FUORN Ofenpass-Fuorn 88.94 329 IAmb IAmb 10 41 48.2
comp=Z,93nm,1.4s
CKRC Cesky Krumlov 88.99 333 *e*SKS **SKSac** 10 52 03.3 -2.9
CKRC AMS AMS 11 17 40.0
comp=Z,3µm,29.4s
SQTA Sankt Quirin 89.00 330 *i* P **P** 10 41 36.6 -0.2
comp=Z,12nm,0.7s,SNR=9.5
FETA Feichten 89.05 330 *i* P **P** 10 41 37.0 -0.1
comp=Z,12nm,0.9s,SNR=9.9
KRLC Kraliky 89.07 335 AMS AMS 11 15 40.0
comp=Z,2µm,23.8s
MOTA Moosalm 89.14 330 *i* P **P** 10 41 37.2 -0.4
comp=Z,41nm,1.0s,SNR=9.6
BEL Belsk 89.17 338 *e*P **P** 10 41 37.0 -0.3
DAVOX Davos/Dischmat 89.24 329 LR LR 11 23 32.9
comp=Z,2µm,20.6s,baz=147,slow=37
TUE Stuetta 89.24 329 IAmb IAmb 10 41 49.1
comp=Z,142nm,1.7s
TUE IAMs_20 IAMs_20 11 27 21.5
comp=Z,3µm,19.0s
TUE Stuetta 89.24 329 P **P** 10 41 37.8 -0.3
comp=Z,172nm,1.3s
GEC2 GERESS Array S 89.25 332 P **P** 10 41 37.0 -1.0
GEC2 IAmb IAmb 10 41 48.5
comp=Z,65nm,1.7s
GERES GERESS Array B 89.25 332 P **P** 10 41 37.5 -0.6
comp=Z,4.8nm,0.8s,baz=134,slow=5.8,SNR=9.1
GERES LR LR 11 23 12.0
comp=Z,574nm,18.8s,baz=167,slow=37
comp=Z,4.8nm,0.8s
BKZ Black Stump Fm 89.28 137 P **P** 10 41 40.5 +1.9
R9F13 Warsaw-Wawer 89.38 338 *e*P **P** 10 41 42.8 +4.4
EQTA Presa de Quent 89.39 315 P **P** 10 41 41.9 +3.0
RETA Reutte 89.40 330 *e*P **P** 10 41 40.1 +1.4
comp=Z,25nm,0.7s
BNI Bardonecchia 89.40 326 P **P** 10 41 38.1 -0.7
BNI Bardonecchia 89.40 326 P **P** 10 41 38.1 -0.7
BNI pmax pmax
comp=Z,40nm,1.1s
EJON La Jonquera 89.41 322 P **P** 10 41 40.2 +1.4
MNK Minsk 89.46 343 *i* P **P** 10 41 39.6 +0.9
comp=E,22nm,0.7s
MNK *i* P **P** 10 41 39.6 +0.9
comp=N,19nm,0.8s
MNK *i* P **P** 10 41 39.6 +0.9
comp=Z,50nm,0.9s,baz=154
MNK *i* PP **PP** 10 45 10.3 -0.1
MNK *i* PPP PPP 10 47 06.8
MNK *i* S **SKSac** 10 52 09.2 +0.6
MNK *i* PS **PS** 10 53 35.8 +0.5
MNK *i* SS **SS** 10 58 26.2 +1.0
MNK *i* SSS SSS 11 02 01.6
MNK *i* LQ LQ 11 14 37.3
MNK *i* LR LR 11 22 30.3
MNK *i* LRM MLR 11 23 56.4
comp=Z,2µm,17.9s
MNK *i* LRM MLR 11 23 57.7
comp=N,726nm,17.3s

MNK *i* LRM MLR 11 24 04.0
comp=E,1µm,17.9s
MNK Minsk 89.46 343 *i* P **P** **10 41 39.5 +0.9**
MNK *i* 10 45 10.3
MNK *i* PPP PPP 10 47 06.8
MNK *i* S **SKSac** **10 52 09.2 +0.6**
MNK *i* PS **PS** **10 53 35.8 +0.5**
MNK *i* SS **SS** **10 58 26.1 +1.0**
MNK *i* SSS SSS 11 02 01.6
MNK pmax pmax
comp=Z,50nm,0.9s
MNK pmax pmax
comp=N,19nm,0.8s
MNK pmax pmax
comp=E,22nm,0.7s
MNK MLR MLR
comp=Z,2µm,18.0s
MNK MLR MLR
comp=N,726nm,17.0s
MNK MLR MLR
comp=E,1µm,18.0s
DPC Dobruska-Polom 89.47 335 *e*P **P** **10 41 40.1 +1.2**
DPC *e* 10 52 07.7
DPC MLR MLR
comp=Z,2µm,22.2s
DPC Dobruska-Polom 89.47 335 *e*P **P** **10 41 40.1 +1.2**
DPC *e*SKS **SKSac** **10 52 07.7 -1.3**
DPC AMS AMS 11 16 50.0
comp=Z,2µm,22.2s
DPC Dobruska-Polom 89.47 335 P **P** **10 41 38.8 -0.1**
comp=Z,28nm,1.4s
KHC Kasperske Hory 89.53 332 IAmb IAmb 10 42 01.6
comp=Z,91nm,2.0s
KHC Kasperske Hory 89.53 332 *ce*P **P** **10 41 39.0 -0.2**
KHC pmax pmax
comp=Z,40nm,2.5s
KHC Kasperske Hory 89.53 332 *e*P **P** **10 41 37.9 -1.3**
KHC *ex* x 10 41 46.0
KHC *e*SKS **SKSac** **10 52 14.2 +4.8**
KHC AMS AMS 11 18 10.0
comp=Z,3µm,30.6s
ECHE Chera 89.53 318 P **P** **10 41 43.5 +4.0**
ZVC Zvikov 89.53 333 *e*P **P** **10 41 39.9 +0.7**
ZVC *ex* x 10 41 47.2
ZVC *e*SKS **SKSac** **10 52 10.4 +1.1**
ZVC AMS AMS 11 17 50.0
comp=Z,3µm,23.2s
DAVA Damuels 89.62 329 *i* P **P** **10 41 39.6 -0.2**
comp=Z,21nm,0.6s,SNR=7.4
TOZ Tahuroa Road 89.63 135 IAMs_20 IAMs_20 11 14 34.6
comp=Z,5µm,19.0s
CNLB Canela 89.68 236 *e*P **P** **10 41 43.5 +2.8**
OSTC Ostas 89.68 335 *e*P **P** **10 41 41.4 +1.5**
OSTC *e* 10 41 48.2
OSTC *e* 10 52 19.7
OSTC MLR MLR
comp=Z,2µm,24.4s
OSTC Ostas 89.68 335 *e*P **P** **10 41 41.4 +1.5**
OSTC *ex* x 10 41 48.2
OSTC *e*SKS S 10 52 19.7 -11
OSTC AMS AMS 11 16 00.0
comp=Z,2µm,24.4s
EMAL Malaga-Limoner 89.70 314 P **P** **10 41 42.1 +1.8**
UPC Upice 89.71 334 *e*SKS **SKSac** **10 52 10.2 -0.1**
ECEU Ceuta 89.73 313 P **P** **10 41 40.5 +0.1**
EGOR Sierra Gorda, 89.73 315 P **P** **10 41 44.9 +4.3**
SONM Songino Array 89.81 30 P **P** **10 41 40.0 -0.7**
comp=Z,14nm,1.1s,baz=217,slow=4.8,SNR=35
SONM LR LR 11 19 35.5
comp=Z,5µm,20.4s,baz=221,slow=34
comp=Z,14nm,1.1s
SONM Songino Array 89.81 30 P **P** **10 41 40.1 -0.6**
SONM Songino Array 89.81 30 P **P** **10 41 40.1 -0.6**
SONM pmax pmax
comp=Z,18nm,1.0s
PRU Pruhonice 89.84 333 *e*SKS **SKSac** **10 52 13.6 +2.6**
PRU AMS AMS 11 18 00.0
comp=Z,3µm,27.8s
NBPV Pedro Velho 89.85 263 *e*P **P** **10 41 45.4 +3.8**
BSCB Bom Sucesso 89.88 245 *e*P **P** **10 41 43.1 +1.4**
KSP Ksiaz 89.88 335 *e*P **P** **10 41 40.9 +0.2**
KSP Ksiaz 89.88 335 P **P** **10 41 40.8 0.0**
comp=Z,30nm,1.1s
KIRV Kirov 89.91 355 P **P** **10 41 40.8 +0.2**
comp=Z,11nm,0.5s,baz=185,slow=8.0,SNR=12
KIRV LR LR 11 23 50.5
comp=Z,2µm,18.2s,baz=180,slow=37
comp=Z,11nm,0.5s
KIRV Kirov 89.91 355 *ce*P **P** **10 41 42.0 +1.4**
PLTB Pedras Altas 90.11 232 P **P** **10 41 41.1 -1.5**
PLTB IAmb IAmb 10 41 57.6
comp=Z,62nm,1.3s
PLTB Pedras Altas 90.11 232 *e*P **P** **10 41 44.0 +1.3**
ULN Ulaanbaatar 90.12 30 P **P** **10 41 41.6 -0.6**
ULN Ulaanbaatar 90.12 30 IAMs_20 IAMs_20 11 19 43.9
comp=Z,3µm,21.0s
ULN Ulaanbaatar 90.12 30 *ce*P **P** **10 41 41.4 -0.8**
ULN pmax pmax
comp=Z,24nm,1.0s
ULN MLR MLR
comp=Z,2µm,18.0s
ULN Ulaanbaatar 90.12 30 P **P** **10 41 41.2 -1.0**
URZ Urewera 90.24 136 LR LR 11 14 41.5
comp=Z,7µm,20.8s,baz=216,slow=31
PVCC Panska Ves 90.27 334 AMS AMS 11 18 50.0
comp=Z,2µm,23.1s
SUW Suwalki 90.31 340 *e*P **P** **10 41 43.1 +0.5**
SUW Suwalki 90.31 340 P **P** **10 41 42.5 -0.2**
SUW IAMs_20 IAMs_20 11 22 28.0
comp=Z,3µm,22.0s
SUW Suwalki 90.31 340 P **P** **10 41 42.5 -0.2**
SUW MLR MLR
comp=Z,3µm,22.0s
CEST Esterri de Car 90.37 322 P **P** **10 41 42.5 -0.9**
VAO Valinhos 90.45 243 P **P** **10 41 43.7 -0.7**
VAO IAmb IAmb 10 41 54.9
comp=Z,65nm,1.3s
VAO Valinhos 90.45 243 *e*P **P** **10 41 47.4 +3.0**
SPB Sao Paulo 90.47 242 IAMs_20 IAMs_20 11 12 48.2
comp=Z,5µm,21.0s
DIAM Diamantina, MG 90.49 248 *e*P **P** **10 41 47.4 +2.7**
ZAK Zakamensk 90.54 27 *e*P **P** **10 41 41.8 -2.2**
ZAK pmax pmax
comp=Z,21nm,2.0s
SSB Saint Sauveur 90.60 325 IAMs_20 IAMs_20 11 22 54.5
comp=Z,3µm,21.0s
RCBR Riachuelo 90.67 263 LR LR 11 14 14.6
comp=Z,1µm,21.9s,baz=118,slow=30
RCBR Riachuelo 90.67 263 P **P** **10 41 42.9 -2.6**
RCBR IAmb IAmb 10 41 52.4
comp=Z,81nm,1.5s
RCBR Riachuelo 90.67 263 IAMs_20 IAMs_20 11 18 59.0
comp=Z,3µm,19.0s
RCBR Riachuelo 90.67 263 P **P** **10 41 42.9 -2.6**
RCBR pmax pmax
comp=Z,81nm,1.5s
RCBR Riachuelo 90.67 263 *e*P **P** **10 41 48.8 +3.3**
MOY Mondy 90.73 25 *e*P **P** **10 41 44.3 -0.5**
MOY pmax pmax
comp=Z,32nm,1.9s
HSKC Hora Svate Kat 90.76 333 *e*P **P** **10 41 47.6 +2.7**
HSKC *e*SKS **SKSac** **10 52 19.4 +3.0**
HSKC AMS AMS 11 18 10.0
comp=Z,3µm,29.2s
CPSB Cacapava Do Su 90.83 233 *e*P **P** **10 41 47.6 +1.7**
NKC Novy Kostel 90.85 333 AMS AMS 11 20 10.0
comp=Z,4µm,28.7s
GRA1 Grafenberg Arr 90.92 332 P **P** **10 41 44.2 -1.5**
GRF Grafenberg Arr 90.92 332 P **P** **10 41 44.2 -1.5**
GRF pmax pmax
comp=Z,105nm,1.4s
GRF Grafenberg Arr 90.92 332 *e*P **P** **10 41 46.3 +0.7**
comp=Z,15nm,1.0s,baz=134,slow=5.7
SACV Santiago Islan 91.03 287 IAMs_20 IAMs_20 11 24 37.6
comp=Z,3µm,18.0s
STU Stuttgart 91.06 330 P **P** **10 41 44.9 -1.4**
STU IAmb IAmb 10 41 59.6
comp=Z,39nm,1.1s
STU IAMs_20 IAMs_20 11 22 55.7
comp=Z,3µm,22.0s
STU Stuttgart 91.06 330 P **P** **10 41 44.9 -1.4**
STU pmax pmax
comp=Z,39nm,1.1s
STU MLR MLR
comp=Z,3µm,22.0s

BFO Black Forest 91.10 329 P **P** **10 41 46.3 -0.3**
BFO IAmb IAmb 10 41 57.9
comp=Z,64nm,1.4s
BFO Black Forest 91.10 329 P **P** **10 41 46.3 -0.3**
BFO pmax pmax
comp=Z,64nm,1.4s
BFO MLR MLR
comp=Z,2µm,22.0s
COYC Coyhaique 91.25 212 IAmb IAmb 10 41 55.4
comp=Z,47nm,1.2s
COYC Coyhaique 91.25 212 IAMs_20 IAMs_20 11 14 45.0
comp=Z,3µm,21.0s
ESBB Sonseca Array 91.32 317 P **P** **10 41 47.6 -0.2**
ESBB IAmb IAmb 10 42 00.2
comp=Z,59nm,1.2s
ESDC Sonseca Array 91.32 317 P **P** **10 41 48.0 +0.2**
comp=Z,12nm,0.9s,baz=125,slow=2.9,SNR=25
ESDC LR LR 11 23 02.8
comp=Z,4µm,21.4s,baz=144,slow=36
comp=Z,12nm,0.9s
ESDC Sonseca Array 91.32 317 P **P** **10 41 47.6 -0.2**
ESDC IAmb IAmb 10 41 59.5
comp=Z,49nm,1.2s
DL2 Dalian 91.32 44 P P 10 41 36.9 -11
TRQA Tornquist 91.37 223 P **P** **10 41 47.4 -0.9**
TRQA IAmb IAmb 10 41 55.6
comp=Z,42nm,1.1s
TRQA IAMs_20 IAMs_20 11 14 11.8
comp=Z,5µm,20.0s
TRQA Tornquist 91.37 223 P **P** **10 41 47.4 -0.9**
TRQA pmax pmax
comp=Z,42nm,1.1s
PABE Paberze 91.39 341 IAmb IAmb 10 41 55.0
comp=Z,38nm,1.1s
PAB San Pablo 91.46 317 P **P** **10 41 48.4 -0.1**
PAB IAmb IAmb 10 42 00.8
comp=Z,43nm,1.0s
PAB San Pablo 91.46 317 IAMs_20 IAMs_20 11 25 12.3
comp=Z,4µm,18.0s
PAB San Pablo 91.46 317 P **P** **10 41 48.4 -0.1**
PAB pmax pmax
comp=Z,43nm,1.0s
PAB MLR MLR
comp=Z,4µm,18.0s
CLL Collm 91.49 333 P **P** **10 41 48.1 -0.1**
CLL Collm 91.49 333 P **P** **10 41 48.1 -0.1**
CLL pmax pmax
comp=Z,43nm,1.6s
CLL Collm 91.49 333 *e*P **P** **10 41 48.0 -0.2**
comp=Z,132nm,2.4s
CLL *i* x x 10 41 51.4
comp=Z,132nm,2.4s
CLL *e*PP **PP** **10 45 24.0 -2.6**
CLL *e*PPP PPP 10 47 24.0
CLL *e*SKSac **SKSac** **10 52 20.0 -0.4**
CLL *e*S **S** **10 52 48.0 +0.4**
CLL *e*PS **PnS** **10 54 00.0 +1.3**
CLL *e*PPS PPS 10 54 31.0
CLL *e*SS **SS** **10 58 54.0 -0.5**
CLL *e*SSS SSS 11 02 36.0
CLL *e*SSSS 11 05 48.0
XLT XiLinHaoTe 91.54 38 *e*P **P** **10 41 47.8 -1.0**
XLT pP sP 10 41 51.9 +0.7
XLT sP pwP 10 41 55.4 -0.8
XLT SKS **SKSac** **10 52 22.4 +1.0**
XLT S **S** **10 52 45.5 -3.2**
XLT pmax pmax
comp=Z,10.0nm,1.1s
XLT pmax pmax
comp=Z,190nm,5.6s
XLT L L
comp=Z,170nm,19.8s
XLT L L
comp=Z,2µm,17.0s
XLT L L
comp=Z,2µm,20.6s
TLY Talaya 91.72 26 LR LR 11 20 41.4
comp=Z,2µm,21.2s,baz=221,slow=34
TLY Talaya 91.72 26 P **P** **10 41 49.3 0.0**
TLY Talaya 91.72 26 *i* P **P** **10 41 49.7 +0.4**
TLY MLR MLR
comp=Z,1µm,18.0s
NBPA Parau_RN 91.74 262 *e*P **P** **10 41 53.3 +2.9**
PVAQ Vaqueiros 92.14 313 *e*S S 10 52 37.1 -17
PVAQ *i* IAMs_20 IAMs_20 11 26 40.6
comp=Z,4µm,20.0s
FRTB Fartura 92.22 241 *e*P **P** **10 41 57.0 +4.5**
AY01 Puyuhuapi 92.38 213 IAMs_20 IAMs_20 11 15 49.1
comp=Z,3µm,20.0s
PMNB Patos De Minas 92.55 247 *e*P **P** **10 41 58.2 +4.0**
JANB Januaria 92.77 251 *e*P **P** **10 41 58.2 +3.0**
ONTNC Ouen Toro 92.87 118 P **P** **10 41 56.3 +0.8**
DZM Mont Dzumac 93.00 118 P **P** **10 41 54.5 -1.7**
comp=Z,5.0nm,0.8s,baz=162,slow=8.5,SNR=3.4
DZM LR LR 11 16 36.7
comp=Z,4µm,20.3s,baz=249,slow=31
comp=Z,5.0nm,0.8s
DZM Mont Dzumac 93.00 118 *e*P **P** **10 41 56.2 0.0**
comp=Z,71nm,1.4s
DZM *e*PP **PP** **10 45 32.8 -5.8**
comp=Z,206nm,25.9s
DZM *e*S S 10 52 42.5 -20
comp=Z,158nm,33.0s
DZM *e*SS SS 10 59 05.1 -11
comp=Z,4µm,26.4s
DZM *e*LR LR 11 12 23.6
WLF Walferdange 93.05 329 IAMs_20 IAMs_20 11 30 18.4
comp=Z,3µm,18.0s
PMRV Marv??o 93.20 315 *e*S **S** **10 53 12.3 +8.7**
PMRV *e*LQ LQ 11 11 54.0
PMRV *e*LR LR 11 14 18.4
PMRV *i* IAMs_20 IAMs_20 11 23 48.0
comp=Z,6µm,20.0s
PSAL Palomas, Salto 93.21 231 *e*P **P** **10 41 59.0 +2.1**
VSU Vasula 93.31 344 *ce*P **P** **10 41 58.0 +1.6**
VSU pmax pmax
comp=Z,47nm,1.7s
INCN Inchon 93.51 48 IAMs_20 IAMs_20 11 22 48.2
comp=Z,4µm,19.0s
CLF Chambon-Foret 93.66 326 IAMs_20 IAMs_20 11 25 01.5
comp=Z,3µm,20.0s
JNU Nakatsue 93.74 53 LR LR 11 21 41.6
comp=Z,2µm,19.9s,baz=250,slow=34
MEM Membach 93.81 330 *d*P **P** **10 42 00.2 +1.2**
comp=Z,11nm,1.2s
MTE Manteigas 93.90 316 IAMs_20 IAMs_20 11 24 20.8
comp=Z,7µm,21.0s
MTE Manteigas 93.90 316 *e*LR LR 11 15 54.6
MTE *i* IAMs_20 IAMs_20 11 24 50.6
comp=Z,5µm,20.0s
BCLA Clavier 93.97 329 *d*P **P** **10 42 01.0 +1.3**
GUMO Guam 93.98 77 LR LR 11 19 01.7
comp=Z,306nm,21.5s,baz=235,slow=32
MVO Moncorvo 94.07 316 *e*S S 10 53 26.7 +15
MVO *e*LQ LQ 11 15 35.4
MVO *e*LR LR 11 19 50.4
MVO *i* IAMs_20 IAMs_20 11 23 55.4
comp=Z,5µm,22.0s
BMRD Maredsous 94.13 329 *d*P **P** **10 41 59.9 -0.5**
BMRD *dx* x 10 42 09.7
PLCA Paso Flores 94.15 216 P **P** **10 41 60.0 -1.2**
comp=Z,1.4nm,0.9s,baz=132,slow=2.5,SNR=4.7
PLCA PKP2ab 11 05 47.1
comp=Z,0.8nm,0.8s,baz=88,slow=4.9,SNR=3.0
PLCA LR LR 11 19 25.6
comp=Z,1µm,18.9s,baz=132,slow=32
comp=Z,1.4nm,0.9s
PLCA Paso Flores 94.15 216 P **P** **10 41 60.0 -1.2**
PLCA Paso Flores 94.15 216 P **P** **10 42 00.0 -1.2**
PLCA Paso Flores 94.15 216 *e*P **P** **10 42 03.7 +2.5**
IPMB Ipameri, GO 94.25 246 *e*P **P** **10 42 05.2 +3.2**
KSAR Wonju Array Be 94.28 48 P **P** **10 42 00.6 -0.9**
KSAR Wonju Array Be 94.28 48 P **P** **10 42 00.6 -0.9**
KSRS Korea Array 94.31 48 P **P** **10 42 00.4 -1.2**
comp=Z,9.6nm,1.1s,baz=236,slow=4.6,SNR=20
KSRS PKKPbc **PKKPdf** **10 59 02.6 +0.2**
comp=Z,1.5nm,1.0s,baz=64,slow=2.9,SNR=5.2
KSRS LR LR 11 22 52.6
comp=Z,2µm,20.4s,baz=240,slow=34
comp=Z,9.6nm,1.1s
SNY Shenyang 94.32 43 P **P** **10 42 00.7 -0.8**
SNY SS SS 10 59 35.4 -0.2
SNY pmax pmax
comp=Z,10.0nm,1.3s
SNY pmax pmax
comp=Z,180nm,6.0s
SNY L L
comp=Z,810nm,21.8s
SNY L L
comp=Z,1µm,20.7s
SNY L L
comp=Z,2µm,24.4s
SDBA SAO DESIDERIO 94.70 253 *e*P **P** **10 42 06.4 +2.3**
HNR Honiara 94.85 104 LR LR 11 21 09.0
comp=Z,194nm,19.3s,baz=324,slow=33
HNR Honiara 94.85 104 IAMs_20 IAMs_20 11 20 57.1
comp=Z,3µm,20.0s
LR05 Currie 95.26 216 P **P** **10 42 05.1 -1.1**
PGAV Gavieira, Arco 95.29 317 *e*LR LR 11 20 14.5
PGAV *i* IAMs_20 IAMs_20 11 24 54.1
comp=Z,5µm,22.0s
BDFB Brasilia 95.42 248 P **P** **10 42 07.5 0.0**
comp=Z,1.4nm,0.4s,baz=63,slow=5.6,SNR=4.3
BDFB LR LR 11 19 23.1
comp=Z,3µm,18.0s,baz=123,slow=32
comp=Z,1.4nm,0.4s
BDFB Brasilia 95.42 248 P **P** **10 42 05.6 -1.8**
BDFB IAmb IAmb 10 42 21.2
comp=Z,50nm,1.8s
BDFB Brasilia 95.42 248 P **P** **10 42 05.6 -1.8**
BDFB pmax pmax
comp=Z,50nm,1.8s
CPUP Villa Florida 96.03 234 P **P** **10 42 08.8 -1.2**
comp=Z,1.2nm,0.7s,baz=111,slow=5.2,SNR=2.9
CPUP LR LR 11 18 42.3
comp=Z,2µm,19.6s,baz=132,slow=31
comp=Z,1.2nm,0.7s
CPUP Villa Florida 96.03 234 *e*P **P** **10 42 14.1 +4.2**
FINES FINESS Array B 96.12 345 P **P** **10 42 09.2 -0.1**
comp=Z,1.4nm,0.7s,baz=163,slow=7.2,SNR=3.8
comp=Z,1.4nm,0.7s
ADZR Andozero 96.28 351 *e*P **P** **10 42 09.5 -0.4**
ADZR pmax pmax
comp=Z,29nm,1.1s
CN2 Changchun 96.62 42 *e*P **P** **10 42 13.9 +1.9**
CN2 *es*P pwP 10 42 20.0 +0.5
CN2 *e*S **S** **10 53 32.3 -0.8**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,300nm,4.0s
CN2 L L
comp=Z,600nm,17.0s
CN2 L L
comp=Z,600nm,17.0s
CN2 L L
comp=Z,400nm,18.0s
HIA Hailar 97.02 35 IAMs_20 IAMs_20 11 24 49.8
comp=Z,3µm,20.0s
SANVU Saraoutou 97.40 113 IAMs_20 IAMs_20 11 22 09.9
comp=Z,3µm,20.0s
HFS Hagfors 98.27 339 P Pdif 10 42 19.3 +0.2
comp=Z,4.5nm,1.1s,baz=160,slow=4.6,SNR=2.7
comp=Z,4.5nm,1.1s
ARAG Araguaiana, MT 98.37 246 *e*P Pdif 10 42 25.1 +4.4
BO02 Sierra Bellavi 98.68 220 IAMs_20 IAMs_20 11 19 37.2
comp=Z,2µm,20.0s
JCJ Chichijima 98.73 64 LR LR 11 20 44.3
comp=Z,458nm,21.8s,baz=278,slow=32
SMTB Santa Maria do 98.85 254 *e*P Pdif 10 42 26.6 +3.7
BNX BinXian 98.90 41 ⇓P **P** **10 42 21.8 -0.4**
BNX S **S** **10 53 52.6 +0.1**
BNX SS **SS** **11 00 39.6 -0.6**
BNX pmax pmax
comp=Z,5.0nm,1.3s
BNX pmax pmax
comp=Z,170nm,5.1s
BNX L L
comp=Z,2µm,18.0s
BNX L L
comp=Z,1µm,20.5s
BNX L L
comp=Z,2µm,19.2s
MURT Porto Murtinho 99.16 238 *e*P **Pdif** **10 42 26.4 +2.2**
MT13 San Alfonso 99.18 221 IAMs_20 IAMs_20 11 20 08.4
comp=Z,2µm,20.0s
MT08 Bocatoma Ro 99.24 222 IAMs_20 IAMs_20 11 20 28.7
comp=Z,4µm,20.0s
RAO Raoul Island 99.37 133 LR LR 11 20 10.5
comp=Z,3µm,19.4s,baz=205,slow=31
MDJ Mudanjiang 99.51 43 IAMs_20 IAMs_20 11 27 42.0
comp=Z,2µm,19.0s
CFA Coronel Fontan 99.54 224 LR LR 11 18 45.5
comp=Z,996nm,21.7s,baz=166,slow=30
MT16 CCHEN 99.54 221 IAMs_20 IAMs_20 11 20 20.1
comp=Z,3µm,20.0s
NOA NORSAR Array B 99.75 339 P **Pdif** **10 42 24.6 -1.1**
comp=Z,1.0nm,1.0s,baz=141,slow=6.4,SNR=2.1
NOA LR LR 11 28 20.9
comp=Z,862nm,19.1s,baz=150,slow=36
comp=Z,1.0nm,1.0s
PEL Peldehue 99.84 221 IAMs_20 IAMs_20 11 20 58.9
comp=Z,3µm,20.0s
APA Apatity 100.40 351 ⇓*e*P **Pdif** **10 42 29.6 +1.3**
APA *e*S **Sdif** **10 54 02.0 -2.0**
APA *e*PS **PS** **10 55 32.4 -2.6**
APA *e*SS **SS** **11 00 54.0 -6.2**
APA pmax pmax
comp=Z,7.0nm,1.4s
VA06 Catapilco 100.62 221 IAMs_20 IAMs_20 11 22 01.6
comp=Z,3µm,19.0s
MJAR Matsushiro Arr 100.65 54 P **Pdif** **10 42 28.8 -1.5**
comp=Z,4.8nm,1.1s,baz=222,slow=4.6,SNR=7.7
MJAR PKKPbc **PKKPdf** **10 58 49.9 -0.9**
comp=Z,2.3nm,0.9s,baz=48,slow=1.9,SNR=5.5
MJAR Matsushiro Arr 100.65 54 **Pdif** **10 42 29.5 -0.8**
MJAR Matsushiro Arr 100.65 54 *i* P **Pdif** **10 42 29.5 -0.8**
USRK Ussuriysk Ar. 100.70 45 P **Pdif** **10 42 29.0 -1.2**
comp=Z,1.9nm,0.7s,baz=274,slow=3.0,SNR=5.9
CO04 Los Peladeros 100.82 222 IAMs_20 IAMs_20 11 20 17.9
comp=Z,3µm,20.0s
ESK Eskdalemuir 101.08 329 IAMs_20 IAMs_20 11 32 37.9
comp=Z,3µm,19.0s
DSB Dublin 101.23 326 IAMs_20 IAMs_20 11 20 31.7
comp=Z,2µm,20.0s
CO02 Combarbal 101.45 222 IAMs_20 IAMs_20 11 20 27.7
comp=Z,5µm,21.0s
CO03 El Pedregal 101.54 223 IAMs_20 IAMs_20 11 19 35.1
comp=Z,4µm,22.0s
HEH HeiHe 101.54 38 P **Pdif** **10 42 35.7 +1.8**
HEH L L
comp=Z,2µm,20.8s
HEH L L
comp=Z,2µm,21.4s
HEH L L
comp=Z,3µm,19.8s
PATS Pohnpei 101.97 89 Pdif **Pdif** **10 42 36.4 -0.3**
CO06 Fray Jorge 102.21 222 IAMs_20 IAMs_20 11 21 12.4
comp=Z,5µm,21.0s
CO05 La Serena 102.54 223 IAMs_20 IAMs_20 11 20 16.5
comp=Z,3µm,22.0s
NRIK Noril'sk 102.64 10 *i* P **Pdif** **10 42 38.8 +0.5**
NRIK pmax pmax
comp=Z,3.0nm,1.1s
NRIK MLR MLR
comp=Z,2µm,17.0s
KEV Kevo 103.36 349 IAMs_20 IAMs_20 11 29 19.3
comp=Z,2µm,21.0s
AC02 Maricunga 103.50 227 IAMs_20 IAMs_20 11 20 09.1
comp=Z,2µm,22.0s
AF01 San Pedro de A 105.63 230 IAMs_20 IAMs_20 11 24 18.9
comp=Z,3µm,20.0s
PB14 IPOC Station P 105.88 227 IAMs_20 IAMs_20 11 24 13.2
comp=Z,2µm,20.0s
PATCX Punta Patache 108.42 230 IAMs_20 IAMs_20 11 29 33.9
comp=Z,2µm,18.0s
LPAZ La Paz 110.18 235 *e*P **Pdif** **10 43 14.6 +0.7**
TIXI Tiksi 113.60 19 *i* PKIKP **PKiKP** **10 47 20.3 +0.8**
TIXI MLR MLR
comp=Z,2µm,20.0s
MA2 Magadan 117.61 35 *i* PKIKP **PKiKP** **10 47 28.1 +0.5**
MA2 pmax pmax
comp=Z,9.0nm,1.1s
MA2 MLR MLR
comp=Z,1µm,19.0s
SEY Seymchan 119.17 32 *i* PKIKP **PKiKP** **10 47 31.0 +0.5**
SEY pmax pmax
comp=Z,15nm,1.8s
SEY MLR MLR
comp=Z,2µm,18.0s
NNA Nana 119.19 232 IAMs_20 IAMs_20 11 32 29.4
comp=Z,2µm,20.0s
TBI Tubuai 119.42 150 *e*PP PP 10 48 35.0 -17

comp=Z,593nm,29.5s
TBI eS SKSdf 10 54 46.7 +2.0
comp=Z,2µm,30.8s
TBI eSS SKKSdf 11 05 22.4 -2.4
comp=Z,6µm,30.0s
TBI eLQ LQ 11 18 29.5
comp=Z,4µm,39.5s
TBI eLR LR 11 23 57.2
comp=Z,4µm,33.2s
TBI eLR LR 11 24 10.9
comp=Z,20µm,34.8s
PEA0B Petropavlovsk- 119.75 43 *i* PKIKP **PKiKP 10 47 32.2 +0.2**
PETK Petropavlovsk- 119.75 43 PKP **PKPdf 10 47 29.7 -2.2**
comp=Z,1.6nm,0.6s,baz=149,slow=0.9,SNR=6.0
PET Petropavlovsk 120.30 44 *i* PKIKP **PKiKP 10 47 34.9 +1.9**
PET pmax pmax
comp=Z,17nm,1.1s
ANGG Ammassalik, Gr 120.56 331 IAMs_20 IAMs_20 11 40 44.6
comp=Z,3µm,20.0s
SUMG Summit 121.63 339 **PKiKP 10 47 36.8 +1.2**
SUMG Summit 121.63 339 PKIKP **PKiKP 10 47 36.8 +1.2**
SVN Savane Anatole 122.69 268 IAMs_20 IAMs_20 11 37 44.8
comp=Z,2µm,20.0s
GDSD La Dsirade Is 123.28 270 IAMs_20 IAMs_20 11 33 35.5
comp=Z,2µm,20.0s
MAGL Barre de l'ile 123.30 269 IAMs_20 IAMs_20 11 36 53.1
comp=Z,2µm,21.0s
CBE Ft. Capester 123.64 269 IAMs_20 IAMs_20 11 37 02.9
comp=Z,2µm,20.0s
ABD La Joyeuse, An 123.72 270 IAMs_20 IAMs_20 11 37 12.0
comp=Z,2µm,20.0s
GDHS Morne Mazeau, 123.86 269 IAMs_20 IAMs_20 11 37 18.1
comp=Z,2µm,20.0s
PPT2 Papeete2 124.41 147 *e*S **SKSac 10 54 45.9 +0.2**
comp=Z,705nm,26.5s
PPT2 eSS **SS 11 06 17.4 -1.3**
comp=Z,5µm,29.0s
PPT2 eLQ LQ 11 20 57.2
comp=Z,1µm,28.0s
PPT2 eLR LR 11 26 20.5
comp=Z,3µm,36.8s
PPT2 eLR LR 11 26 30.2
comp=Z,3µm,24.8s
BILL Bilibino 125.33 26 **PKiKP 10 47 43.5 +0.9**
BILL IAMs_20 IAMs_20 11 46 09.4
comp=Z,2µm,20.0s
BILL Bilibino 125.33 26 *i* PKIKP **PKiKP 10 47 42.9 +0.4**
BILL pmax pmax
comp=Z,9.0nm,1.2s
BILL MLR MLR
comp=Z,2µm,23.0s
SEUS St. Eustatius 125.45 270 IAMs_20 IAMs_20 11 36 27.9
comp=Z,2µm,20.0s
SABA Saba 125.73 270 IAMs_20 IAMs_20 11 35 38.3
comp=Z,3µm,21.0s
ILULI Ilulissat 125.84 335 IAMs_20 IAMs_20 11 43 13.3
comp=Z,3µm,19.0s
SFJD Kangerlussuaq 125.85 333 PKP **PKPdf 10 47 42.9 -0.2**
comp=Z,7.3nm,0.9s,baz=131,slow=2.3,SNR=4.1
SFJD Kangerlussuaq 125.85 333 **PKiKP 10 47 46.1 +2.6**
SFJD IAMs_20 IAMs_20 11 35 48.5
comp=Z,3µm,19.0s
SFJD Kangerlussuaq 125.85 333 PKIKP **PKiKP 10 47 46.1 +2.6**
SDV Santo Domingo 127.73 256 IAMs_20 IAMs_20 11 35 45.8
comp=Z,4µm,21.0s
SJG San Juan 128.43 269 IAMs_20 IAMs_20 11 37 23.9
comp=Z,3µm,20.0s
ROSC El Rosal 128.45 249 PKP **PKPdf 10 47 48.7 -1.6**
comp=Z,8.8nm,0.4s,baz=113,slow=12,SNR=6.2
OTAV Otavalo 128.79 241 IAMs_20 IAMs_20 11 37 34.6
comp=Z,2µm,21.0s
OTAV Otavalo 128.79 241 *e*P **PKiKP 10 47 52.3 +0.6**
BBSR BB Station 132.17 287 IAMs_20 IAMs_20 11 38 03.1
comp=Z,2µm,21.0s
SDDR Presa de Saban 133.20 267 IAMs_20 IAMs_20 11 42 31.2
comp=Z,2µm,21.0s
FRB Frobisher Bay 133.82 330 PKP **PKPdf 10 47 56.2 -2.2**
comp=Z,3.8nm,0.9s,baz=63,slow=8.0,SNR=4.0
GRTK Grand Turk 134.10 270 IAMs_20 IAMs_20 11 47 48.3
comp=Z,2µm,19.0s
RES Resolute Bay 134.60 350 **PKiKP 10 48 01.4 +0.4**
RES Resolute Bay 134.60 350 PKIKP **PKiKP 10 48 01.4 +0.4**
GAMB Gambell 135.03 29 IAMs_20 IAMs_20 11 46 57.2
comp=Z,2µm,22.0s
GAMB Gambell 135.03 29 P **PKPdf 10 48 00.7 +0.1**
baz=292
SCHQ Schefferville 135.06 318 PKP **PKPdf 10 47 59.7 -1.3**
comp=Z,7.3nm,1.0s,baz=90,slow=4.2,SNR=4.7
SCHQ Schefferville 135.06 318 **PKiKP 10 48 04.1 +1.6**
C16K Lisburne Hills 135.28 21 IAMs_20 IAMs_20 11 48 01.0
comp=Z,2µm,22.0s
C16K Lisburne Hills 135.28 21 P **PKPdf 10 48 01.4 +0.4**
baz=303
A19K Wainwright 135.37 18 P **PKPdf 10 48 00.7 -0.4**
baz=309
BCIP Isla Barro Col 135.41 249 IAMs_20 IAMs_20 11 43 48.9
comp=Z,2µm,19.0s
TNA Tin City 135.77 26 P **PKPdf 10 48 01.3 -0.6**
baz=298
C17K DeLong Mountai 135.83 21 P **PKPdf 10 48 01.1 -0.9**
baz=306
RDOG Red Dog Mine 136.16 21 IAMs_20 IAMs_20 11 48 37.2
comp=Z,1µm,20.0s
RDOG Red Dog Mine 136.16 21 P **PKPdf 10 48 01.3 -1.4**
baz=306
TAOE Nuku Hiva Isla 136.25 153 *e*P PKPdf 10 47 45.1 -20
comp=Z,26nm,23.4s
TAOE *e*PP **PP 10 50 38.8 -4.7**
comp=Z,240nm,27.1s
TAOE eS SKSdf 10 54 47.8 -28
comp=Z,682nm,26.2s
TAOE eSS SS 11 08 30.5 -13
comp=Z,2µm,40.9s
TAOE eLQ LQ 11 25 03.5
comp=Z,2µm,32.2s
TAOE eLR LR 11 31 39.6
comp=Z,2µm,27.8s
D17K Noatak River 136.31 21 P **PKPdf 10 48 02.0 -1.0**
baz=305
C18K Utukok River 136.31 20 IAMs_20 IAMs_20 11 51 28.1
comp=Z,2µm,21.0s
C18K Utukok River 136.31 20 P **PKPdf 10 48 02.6 -0.4**
baz=308
F14K Arctic Creek 136.39 25 P **PKPdf 10 48 02.8 -0.3**
baz=299
C19K Lookout Ridge 136.48 19 IAMs_20 IAMs_20 11 51 40.4
comp=Z,2µm,21.0s
C19K Lookout Ridge 136.48 19 P **PKPdf 10 48 03.3 0.0**
baz=310
B20K Meade River 136.50 17 IAMs_20 IAMs_20 11 50 50.1
comp=Z,1µm,20.0s
B20K Meade River 136.50 17 P **PKPdf 10 48 02.4 -0.8**
baz=314
GTBY Guantanamo Bay 136.86 266 IAMs_20 IAMs_20 11 53 08.3
comp=Z,2µm,19.0s
F15K North Star Dit 136.88 24 P **PKPdf 10 48 04.0 0.0**
baz=301
E17K Hotham Inlet 137.06 22 P **PKPdf 10 48 03.9 -0.4**
baz=306
B22K Teshekpuk Lake 137.15 15 P **PKPdf 10 48 03.6 -0.8**
baz=319
ANM Nome 137.19 26 IAMs_20 IAMs_20 11 53 06.0
comp=Z,1µm,19.0s
ANM Nome 137.19 26 P **PKPdf 10 48 04.3 -0.4**
baz=300
E18K Tukpahlearik C 137.24 21 IAMs_20 IAMs_20 11 50 41.8
comp=Z,2µm,20.0s
E18K Tukpahlearik C 137.24 21 P **PKPdf 10 48 04.2 -0.5**
baz=308
D19K Kuna River 137.28 19 IAMs_20 IAMs_20 11 52 02.8
comp=Z,2µm,20.0s
D19K Kuna River 137.28 19 P **PKPdf 10 48 04.6 -0.2**
baz=312
B21K Ikpikpuk River 137.40 16 P **PKPdf 10 48 03.8 -1.1**
baz=317
G15K Niukluk 137.47 25 P **PKPdf 10 48 05.1 0.0**
baz=301
D20K Etivluk River 137.54 18 IAMs_20 IAMs_20 11 55 43.5
comp=Z,2µm,19.0s
D20K Etivluk River 137.54 18 P **PKPdf 10 48 05.5 +0.2**
baz=314
F17K Baldwin Pennin 137.62 22 P **PKPdf 10 48 05.5 +0.1**
baz=306
C21K Knifeblade Rid 137.70 17 P **PKPdf 10 48 05.7 +0.2**
baz=316
G16K Koyuk River 137.85 24 P **PKPdf 10 48 05.7 -0.1**
baz=304
SPIA Saint Paul Isl 137.90 38 P **PKPdf 10 48 05.3 -0.9**
baz=287
E20K Nigu River 137.97 18 P **PKPdf 10 48 06.3 +0.2**
baz=314
F18K Selawik 138.04 22 P **PKPdf 10 48 06.3 +0.1**
baz=308
C23K Itkillik River 138.16 15 IAMs_20 IAMs_20 11 53 25.6
comp=Z,2µm,22.0s
C23K Itkillik River 138.16 15 P **PKPdf 10 48 06.4 +0.1**
baz=322
MTDJ Mount Denham 138.19 262 IAMs_20 IAMs_20 11 43 52.3
comp=Z,3µm,21.0s
E19K Redstone River 138.22 20 IAMs_20 IAMs_20 11 51 08.6
comp=Z,1µm,21.0s
E19K Redstone River 138.22 20 P **PKPdf 10 48 06.7 +0.2**
baz=312
M65A Busby, Falmout 138.31 299 IAMs_20 IAMs_20 11 47 44.4
comp=Z,3µm,20.0s
M65A Busby, Falmout 138.31 299 P **PKPdf 10 48 06.6 -0.8**
baz=93
H16K Elim 138.31 25 P **PKPdf 10 48 06.6 -0.1**
baz=303
I63A Otisfield 138.32 303 IAMs_20 IAMs_20 11 48 10.5
comp=Z,3µm,20.0s
G17K Kiwalik Mounta 138.38 23 P **PKPdf 10 48 07.2 +0.4**
baz=306
D22K Ayikyak River 138.42 16 IAMs_20 IAMs_20 11 57 56.5
comp=Z,2µm,19.0s
D22K Ayikyak River 138.42 16 P **PKPdf 10 48 07.4 +0.5**
baz=318
L64A Middleborough 138.47 299 IAMs_20 IAMs_20 11 45 51.6
comp=Z,3µm,20.0s
F19K Shaleruckik Mo 138.47 21 P **PKiKP 10 48 08.3 -0.7**
baz=310
C24K Franklin Bluff 138.65 14 IAMs_20 IAMs_20 11 52 20.6
comp=Z,2µm,21.0s
C24K Franklin Bluff 138.65 14 P **PKPdf 10 48 07.8 +0.6**
baz=324
K13K Kusilvak Mount 138.74 29 IAMs_20 IAMs_20 11 49 12.2
comp=Z,2µm,22.0s
K13K Kusilvak Mount 138.74 29 P **PKiKP 10 48 09.3 -0.5**
baz=298
M11K Mekoryuk 138.75 32 IAMs_20 IAMs_20 11 50 50.6
comp=Z,1µm,20.0s
M11K Mekoryuk 138.75 32 P **PKPdf 10 48 08.5 +0.9**
baz=294
G18K Tagagawik 138.80 22 IAMs_20 IAMs_20 11 50 36.0
comp=Z,2µm,22.0s
G18K Tagagawik 138.80 22 P **PKPdf 10 48 08.2 +0.6**
baz=309
J14K Nanvaranak Lak 138.80 28 IAMs_20 IAMs_20 11 52 54.7
comp=Z,1µm,20.0s
J14K Nanvaranak Lak 138.80 28 P **PKPdf 10 48 07.9 +0.2**
baz=300
D23K Nanushuk River 138.82 15 IAMs_20 IAMs_20 11 57 13.1
comp=Z,2µm,19.0s
D23K Nanushuk River 138.82 15 P **PKPdf 10 48 08.3 +0.8**
baz=321
I62A Tamworth 138.86 302 IAMs_20 IAMs_20 11 46 10.0
comp=Z,3µm,21.0s
F20K Avaraart Lake 138.93 20 IAMs_20 IAMs_20 11 52 12.4
comp=Z,2µm,21.0s
F20K Avaraart Lake 138.93 20 P **PKPdf 10 48 07.6 -0.1**
baz=313
H17K Granite Mounta 138.96 24 P **PKPdf 10 48 08.6 +0.7**
baz=306
G19K Purcell Mounta 139.13 21 P **PKPdf 10 48 09.2 +1.0**
baz=311
E22K Anaktuvuk Pass 139.19 17 **PKiKP 10 48 10.8 +0.3**
E22K IAMs_20 IAMs_20 11 53 00.0
comp=Z,2µm,21.0s
E22K Anaktuvuk Pass 139.19 17 P **PKPdf 10 48 08.8 +0.5**
baz=319
C26K Camden Bay 139.22 12 P **PKPdf 10 48 08.9 +0.7**
baz=329
A36M Sachs Harbour 139.25 2 IAMs_20 IAMs_20 12 01 06.8
comp=Z,1µm,20.0s
A36M Sachs Harbour 139.25 2 P **PKPdf 10 48 09.0 +0.8**
baz=355
I17K Unalakleet 139.29 25 P **PKPdf 10 48 09.2 +0.7**
baz=304
HDC Heredia 139.30 247 IAMs_20 IAMs_20 11 49 14.7
comp=Z,2µm,18.0s
TOLK Toolik Lake Re 139.33 15 P **PKPdf 10 48 08.8 +0.2**
baz=322
M63A Gales Ferry 139.35 299 IAMs_20 IAMs_20 11 55 22.0
comp=Z,3µm,18.0s
F21K Alatna River 139.43 18 IAMs_20 IAMs_20 11 51 05.7
comp=Z,1µm,21.0s
F21K Alatna River 139.43 18 P **PKPdf 10 48 09.3 +0.6**
baz=316
D25K Kiwalik River 139.45 13 P **PKPdf 10 48 09.3 +0.6**
baz=327
K62A Royalston 139.52 300 IAMs_20 IAMs_20 11 47 15.4
comp=Z,3µm,20.0s
J16K Anvik River 139.66 26 **PKPdf 10 48 10.2 +1.0**
J16K IAMs_20 IAMs_20 11 52 16.3
comp=Z,2µm,20.0s
J16K Anvik River 139.66 26 P **PKPdf 10 48 10.2 +1.0**
baz=304
C27K Jago River 139.68 12 P **PKPdf 10 48 09.9 +0.7**
baz=330
NIKH Nikolski High 139.76 43 P **PKPdf 10 48 10.4 +0.6**
baz=284
E23K Chandalar 139.78 16 IAMs_20 IAMs_20 11 53 29.5
comp=Z,2µm,20.0s
E23K Chandalar 139.78 16 P **PKPdf 10 48 09.6 +0.1**
baz=322
K15K Wolf Creek Mou 139.84 28 P **PKPdf 10 48 09.5 -0.1**
baz=302
L61B Northampton 139.84 300 IAMs_20 IAMs_20 11 48 53.1
comp=Z,3µm,19.0s
L14K Kuka Creek 139.85 29 P **PKPdf 10 48 10.1 +0.5**
baz=299
VT1 Waterbury 139.88 303 IAMs_20 IAMs_20 11 46 55.7
comp=Z,3µm,20.0s
G21K Allakaket 139.94 19 IAMs_20 IAMs_20 11 52 32.9
comp=Z,1µm,21.0s
G21K Allakaket 139.94 19 P **PKPdf 10 48 10.2 +0.6**
baz=316
M13K Dall Lake 140.01 31 P **PKPdf 10 48 10.4 +0.5**
baz=298
E24K Your Creek 140.03 15 IAMs_20 IAMs_20 12 04 36.0
comp=Z,2µm,21.0s
E24K Your Creek 140.03 15 P **PKPdf 10 48 10.1 +0.3**
baz=323
GCSA Galena City Sc 140.10 23 P **PKPdf 10 48 10.9 +0.9**
baz=310
L15K Kingalak Mounta 140.18 29 P **PKPdf 10 48 10.5 +0.3**
baz=301
H20K Anotleneega Mo 140.25 21 P **PKPdf 10 48 11.0 +0.7**
baz=313
COLD Coldfoot 140.28 17 IAMs_20 IAMs_20 11 50 13.9
comp=Z,2µm,22.0s
COLD Coldfoot 140.28 17 P **PKPdf 10 48 10.6 +0.3**
baz=320
WSPT Westport, CT 140.31 298 IAMs_20 IAMs_20 11 43 27.4
comp=Z,3µm,22.0s
N62A Canusett State 140.41 298 IAMs_20 IAMs_20 11 43 05.0
comp=Z,3µm,22.0s
M14K Bethel 140.45 30 P **PKPdf 10 48 11.3 +0.6**
baz=300
D27M Malcolm River 140.48 11 P **PKPdf 10 48 10.7 0.0**
baz=334
E25K Arctic Village 140.62 14 IAMs_20 IAMs_20 11 56 52.5
comp=Z,2µm,22.0s
E25K Arctic Village 140.62 14 P **PKPdf 10 48 11.4 +0.5**
baz=327
G23K Bananza Creek 140.73 17 IAMs_20 IAMs_20 11 54 15.7
comp=Z,1µm,21.0s
G23K Bananza Creek 140.73 17 P **PKPdf 10 48 11.9 +0.7**
baz=320
D28M Stokes Point 140.74 10 P **PKPdf 10 48 12.0 +1.1**
baz=337
PAL Palisades 140.74 298 IAMs_20 IAMs_20 11 43 14.9
comp=Z,3µm,22.0s
H21K Melozitna Rive 140.75 20 IAMs_20 IAMs_20 11 50 34.4
comp=Z,1µm,22.0s
H21K Melozitna Rive 140.75 20 P **PKPdf 10 48 11.6 +0.4**
baz=316
UNV Unalaska Valle 140.90 42 P **PKPdf 10 48 11.6 -0.2**
baz=287
J18K Innoko River 140.97 24 IAMs_20 IAMs_20 11 50 28.8
comp=Z,2µm,22.0s
J18K Innoko River 140.97 24 P **PKPdf 10 48 12.1 +0.4**
baz=309
L16K Owhat River 140.97 28 IAMs_20 IAMs_20 11 51 01.0
comp=Z,2µm,21.0s
L16K Owhat River 140.97 28 P **PKPdf 10 48 12.4 +0.8**
baz=304
N14K Kuskokwak Cree 140.97 31 IAMs_20 IAMs_20 11 50 50.4
comp=Z,2µm,20.0s
N14K Kuskokwak Cree 140.97 31 P **PKPdf 10 48 12.7 +1.0**
baz=299
H22K Ishtalitna Cre 140.98 19 P **PKPdf 10 48 11.9 +0.3**
baz=318
J19K Poorman 141.01 23 P **PKPdf 10 48 12.9 +1.3**
baz=311
M15K Kasigluk River 141.02 30 P **PKPdf 10 48 12.8 +1.0**
baz=301
F25K Christian Rive 141.04 14 IAMs_20 IAMs_20 11 51 16.9
comp=Z,2µm,22.0s
F25K Christian Rive 141.04 14 P **PKPdf 10 48 12.6 +0.9**
baz=326
J59A Piesco 141.17 302 IAMs_20 IAMs_20 11 52 43.0
comp=Z,3µm,19.0s
L17K Donlin 141.19 27 P **PKPdf 10 48 12.0 0.0**
baz=305
F26K Sheenjek River 141.27 14 IAMs_20 IAMs_20 11 58 09.7
comp=Z,2µm,19.0s
F26K Sheenjek River 141.27 14 P **PKPdf 10 48 12.7 +0.6**
baz=328
E27K Coleen River 141.32 12 P **PKPdf 10 48 13.1 +0.9**
baz=332
I21K Tanana 141.33 20 P **PKPdf 10 48 13.0 +0.8**
baz=316
G24K Hadweenzic Riv 141.37 16 P **PKPdf 10 48 13.3 +1.1**
baz=323
O14K Tigyukauivet M 141.49 32 IAMs_20 IAMs_20 11 52 33.1
comp=Z,2µm,19.0s
N15K Kwethluk River 141.54 30 P **PKPdf 10 48 13.2 +0.5**
baz=301
M16K Timber Creek 141.56 28 P **PKPdf 10 48 13.2 +0.4**
baz=304
L59A Walton 141.60 300 IAMs_20 IAMs_20 11 47 56.5
comp=Z,3µm,21.0s
E29M Blow River 141.72 10 IAMs_20 IAMs_20 12 05 27.4
comp=Z,1µm,19.0s
E29M Blow River 141.72 10 P **PKPdf 10 48 12.5 -0.3**
baz=337
L18K Granite Mounta 141.75 26 IAMs_20 IAMs_20 11 51 45.4
comp=Z,1µm,22.0s
L18K Granite Mounta 141.75 26 P **PKPdf 10 48 13.2 +0.1**
baz=308
MLY Manley 141.80 20 P **PKPdf 10 48 13.5 +0.4**
baz=318
C36M Paulatuk 141.93 1 IAMs_20 IAMs_20 11 59 36.5
comp=Z,2µm,22.0s
C36M Paulatuk 141.93 1 P **PKPdf 10 48 13.1 0.0**
baz=357
N16K Nishlik Lake 141.94 29 P **PKPdf 10 48 14.1 +0.6**
baz=303
K20K Telida 141.95 23 IAMs_20 IAMs_20 11 50 39.4
comp=Z,2µm,22.0s
K20K Telida 141.95 23 P **PKPdf 10 48 14.1 +0.7**
baz=312
M17K Holitna River 141.95 27 P **PKPdf 10 48 13.3 -0.2**
baz=306
H24K Noodor Dome 141.96 17 IAMs_20 IAMs_20 11 54 51.1
comp=Z,2µm,21.0s
H24K Noodor Dome 141.96 17 P **PKPdf 10 48 13.8 +0.4**
baz=322
G26K Porcupine Rive 141.98 14 IAMs_20 IAMs_20 11 57 53.8
comp=Z,1µm,22.0s
G26K Porcupine Rive 141.98 14 P **PKPdf 10 48 12.4 -0.9**
baz=328
I23K Minto, Yukon-K 142.10 19 IAMs_20 IAMs_20 11 54 20.1
comp=Z,1µm,21.0s
I23K Minto, Yukon-K 142.10 19 P **PKPdf 10 48 13.2 -0.4**
baz=320
O15K Ungalikthiuk R 142.17 31 IAMs_20 IAMs_20 11 51 01.0
comp=Z,2µm,22.0s
J57A Williamstown 142.26 302 IAMs_20 IAMs_20 11 53 33.9
comp=Z,3µm,19.0s
BPAW Bear Paw Mtn. 142.41 21 IAMs_20 IAMs_20 11 55 16.5
comp=Z,2µm,21.0s
L19K White Mountain 142.45 25 IAMs_20 IAMs_20 11 52 19.8
comp=Z,1µm,21.0s
N17K Nushagak Hills 142.56 28 IAMs_20 IAMs_20 11 52 22.0
comp=Z,2µm,22.0s
NEA2 Nenana 142.61 19 IAMs_20 IAMs_20 11 54 15.4
comp=Z,1µm,22.0s
COLA College 142.72 18 **PKPdf 10 48 12.4 -2.2**
COLA College 142.72 18 PKIKP **PKPdf 10 48 12.4 -2.2**
PRP Porcupine Dome 142.79 16 IAMs_20 IAMs_20 12 02 36.2
comp=Z,2µm,22.0s
KTH Kantishna Hill 142.83 21 IAMs_20 IAMs_20 11 56 26.6
comp=Z,1µm,22.0s
PPLA Purkeypile 142.89 23 IAMs_20 IAMs_20 11 52 24.3
comp=Z,2µm,22.0s
WRH Wood River Hil 142.97 19 IAMs_20 IAMs_20 11 55 42.0
comp=Z,1µm,21.0s
P16K Nushagak River 143.05 31 IAMs_20 IAMs_20 11 53 28.3
comp=Z,1µm,20.0s
ILAR Eielson Array 143.06 18 PKP PKPbc 10 48 12.2 0.0
comp=Z,4.0nm,1.0s,baz=309,slow=2.4,SNR=16
ILAR Eielson Array 143.06 18 PKPpre 10 48 11.4
H27K Steamboat Moun 143.06 13 IAMs_20 IAMs_20 11 59 45.0
comp=Z,1µm,20.0s
TRF Thorofare Moun 143.10 21 IAMs_20 IAMs_20 11 53 13.7
comp=Z,1µm,21.0s
TRF Thorofare Moun 143.10 21 P PKPbc 10 48 13.8 +1.3
baz=317
F31M Tsiigehtchic 143.16 8 IAMs_20 IAMs_20 12 03 13.2
comp=Z,2µm,20.0s
F31M Tsiigehtchic 143.16 8 P PKPbc 10 48 13.6 +1.3
baz=343
M57A Sunshine Farm, 143.17 298 IAMs_20 IAMs_20 11 57 27.2
comp=Z,3µm,19.0s
M20K Styx River 143.26 24 IAMs_20 IAMs_20 11 54 52.2
comp=Z,1µm,20.0s
M20K Styx River 143.26 24 P **PKPdf 10 48 14.4 -1.5**
baz=312
G30M tAoh Zrail Nji 143.28 10 IAMs_20 IAMs_20 12 02 48.4
comp=Z,2µm,21.0s
G30M tAoh Zrail Nji 143.28 10 P PKPbc 10 48 14.1 +1.4
baz=339
CBN Corbin Frederi 143.31 293 IAMs_20 IAMs_20 11 47 40.2
comp=Z,3µm,21.0s
HDA Harding Lake 143.33 18 IAMs_20 IAMs_20 12 05 53.5
comp=Z,1µm,20.0s
L56A Greenwood 143.47 300 IAMs_20 IAMs_20 11 54 24.0
comp=Z,2µm,19.0s
I26K Coal Creek Min 143.52 15 IAMs_20 IAMs_20 11 59 05.5
comp=Z,1µm,21.0s
I27K Kandik River 143.59 14 P PKPbc 10 48 14.9 +1.2
baz=331
G31M Satah River 143.59 8 P **PKPdf 10 48 15.2 -0.9**
baz=342
L22K Petersville 143.62 22 IAMs_20 IAMs_20 11 55 19.5
comp=Z,1µm,22.0s
P17K Kvichak River 143.63 30 P PKPbc 10 48 15.1 +1.2
baz=305
R58B Mineral 143.70 293 IAMs_20 IAMs_20 11 49 29.4
comp=Z,3µm,21.0s
SKT Skwentna 143.75 23 IAMs_20 IAMs_20 11 52 51.0
comp=Z,2µm,21.0s
SKT Skwentna 143.75 23 P PKPbc 10 48 14.7 +0.5
baz=314
O18K Koktuh Hills 143.75 28 IAMs_20 IAMs_20 11 54 54.6
comp=Z,1µm,20.0s
O18K Koktuh Hills 143.75 28 P PKPbc 10 48 15.3 +1.0
baz=307
SSPA Standing Stone 143.76 297 PKPbc 10 48 15.3 +0.4
EPYK Eagle Plains 143.77 10 IAMs_20 IAMs_20 12 03 45.6
comp=Z,2µm,22.0s
EPYK Eagle Plains 143.77 10 P PKPbc 10 48 15.2 +1.1
baz=338
Q16K King Salmon 143.83 31 P **PKPdf 10 48 15.8 -0.9**
baz=304
P57A Homestead Farm 143.85 295 IAMs_20 IAMs_20 11 51 34.4
comp=Z,2µm,20.0s
CUT Chulitna 143.87 22 IAMs_20 IAMs_20 11 55 36.1
comp=Z,1µm,22.0s
O19K Port Alsworth 143.90 27 IAMs_20 IAMs_20 11 54 27.4
comp=Z,1µm,20.0s
O19K Port Alsworth 143.90 27 P **PKPdf 10 48 16.2 -0.7**
baz=308
061Z Ochoppi 144.01 272 IAMs_20 IAMs_20 11 52 07.9
comp=Z,3µm,20.0s
P18K Big Mountain, 144.02 29 IAMs_20 IAMs_20 11 55 35.8
comp=Z,1µm,20.0s
P18K Big Mountain, 144.02 29 P PKPbc 10 48 15.9 +0.8
baz=306
SPCR Spurr Chakacha 144.04 25 P PKPbc 10 48 16.0 +0.8
baz=312
N20K Mount Spurr 144.04 25 P **PKPab 10 48 14.6 -0.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=312						
I28M	Miner Creek	144.06	13	IAMs_20	IAMs_20	12 03 00.4	
	comp=Z,1µm,20.0s						
I28M	Miner Creek	144.06	13	P	PKPbc	10 48 15.7	+0.6
	baz=333						
WAT1	Susitna Watana	144.09	21	P	PKPbc	10 48 16.0	+0.7
	baz=319						
K24K	Donnelly Dome	144.12	18	IAMs_20	IAMs_20	11 55 44.5	
	comp=Z,2µm,20.0s						
K24K	Donnelly Dome	144.12	18	P	PKPbc	10 48 15.7	+0.4
	baz=323						
TGUH	Tegucigalpa,Un	144.16	249	IAMs_20	IAMs_20	12 00 37.8	
	comp=Z,1µm,20.0s						
DHY	Denali Highway	144.25	20	IAMs_20	IAMs_20	11 56 27.1	
	comp=Z,1µm,20.0s						
DHY	Denali Highway	144.25	20	P	PKPbc	10 48 16.3	+0.4
	baz=321,SNR=25						
CHNA	Chernabura Isl	144.32	38	P	PKPbc	10 48 16.6	+0.5
	baz=296						
M22K	Willow	144.38	23	IAMs_20	IAMs_20	11 54 01.7	
	comp=Z,1µm,20.0s						
M22K	Willow	144.38	23	P	**PKPdf**	**10 48 17.2**	**-0.5**
	baz=316						
SADO	Sadowa	144.39	304	PKP	**PKPab**	**10 48 16.0**	**-0.4**
	comp=Z,14nm,0.8s,baz=142,slow=3.4,SNR=7.3						
Q17K	Contact Creek	144.40	31	P	PKPbc	10 48 17.2	+0.7
	baz=304						
RIDG	Independent Ri	144.42	18	IAMs_20	IAMs_20	11 55 28.2	
	comp=Z,1µm,21.0s						
RIDG	Independent Ri	144.42	18	P	**PKPdf**	**10 48 17.4**	**-0.4**
	baz=325,SNR=11						
I29M	Ogilvie Camp,	144.44	12	IAMs_20	IAMs_20	12 04 40.4	
	comp=Z,2µm,20.0s						
I29M	Ogilvie Camp,	144.44	12	P	PKPbc	10 48 16.4	+0.1
	baz=335,SNR=52						
SCRK	Sand Creek	144.44	17	IAMs_20	IAMs_20	11 58 01.8	
	comp=Z,1µm,21.0s						
SCRK	Sand Creek	144.44	17	P	**PKPdf**	**10 48 17.8**	**-0.2**
	baz=326,SNR=45						
WAT6	Susitna Watana	144.53	21	P	PKPbc	10 48 17.1	+0.3
	baz=320,SNR=32						
R17L	Mt. Peulik Vol	144.53	32	P	PKPbc	10 48 17.0	+0.3
	baz=303						
Q18K	Katmai Hardscr	144.55	30	P	PKPbc	10 48 17.2	+0.3
	baz=306						
H31M	Peel River	144.64	9	IAMs_20	IAMs_20	12 03 15.7	
	comp=Z,2µm,21.0s						
H31M	Peel River	144.64	9	P	**PKPab**	**10 48 16.4**	**-0.3**
	baz=341,SNR=37						
P19K	Oil Pt	144.67	27	P	PKPbc	10 48 17.5	+0.3
	baz=309						
CAPN	Captain Cook N	144.72	25	P	PKPbc	10 48 17.6	+0.4
	baz=313						
Q56A	Snyder Ridge,	144.76	294	IAMs_20	IAMs_20	11 46 20.4	
	comp=Z,3µm,22.0s						
PMR	Palmer	144.83	23	P	**PKPab**	**10 48 17.3**	**-0.1**
	baz=317,SNR=22						
PAX	Paxson	144.88	19	IAMs_20	IAMs_20	11 55 54.4	
	comp=Z,1µm,20.0s						
PAX	Paxson	144.88	19	P	PKPbc	10 48 18.1	+0.3
	baz=323,SNR=84						
I30M	Mount Dempster	144.89	11	IAMs_20	IAMs_20	12 04 46.3	
	comp=Z,2µm,20.0s						
I30M	Mount Dempster	144.89	11	P	**PKPab**	**10 48 17.6**	**-0.2**
	baz=338,SNR=91						
SML	Sawmill	144.93	22	IAMs_20	IAMs_20	11 55 51.0	
	comp=Z,1µm,20.0s						
SML	Sawmill	144.93	22	P	PKPbc	10 48 18.0	0.0
	baz=318,SNR=26						
Q19K	Cape Douglas,	144.95	29	IAMs_20	IAMs_20	11 58 18.4	
	comp=Z,2µm,20.0s						
Q19K	Cape Douglas,	144.95	29	P	**PKPdf**	**10 48 18.5**	**-0.3**
	baz=308						
RC01	Rabbit Creek A	144.99	24	IAMs_20	IAMs_20	11 53 14.8	
	comp=Z,1µm,20.0s						
RC01	Rabbit Creek A	144.99	24	P	PKPbc	10 48 18.0	-0.1
	baz=315,SNR=26						
M23K	Glacier View	145.13	21	P	**PKPab**	**10 48 18.6**	**0.0**
	baz=319,SNR=28						
KNK	Knik Glacier	145.18	22	IAMs_20	IAMs_20	11 54 09.7	
	comp=Z,2µm,20.0s						
KNK	Knik Glacier	145.18	22	P	**PKPab**	**10 48 18.9**	**+0.1**
	baz=318,SNR=18						
SCM	Sheep Creek Mo	145.22	21	P	**PKPdf**	**10 48 19.5**	**+0.3**
	baz=320,SNR=17						
SLKM	Skilak Lake	145.23	25	IAMs_20	IAMs_20	11 53 15.2	
	comp=Z,2µm,22.0s						
J29N	Klondike Camp	145.28	13	IAMs_20	IAMs_20	12 04 22.6	
	comp=Z,2µm,21.0s						
J29N	Klondike Camp	145.28	13	P	**PKPdf**	**10 48 19.6**	**+0.3**
	baz=335,SNR=65						
HOM	Homer	145.28	27	P	**PKPbc**	**10 48 19.1**	**0.0**
	baz=311						
M24K	Tolsona, Glenn	145.36	20	P	**PKPab**	**10 48 19.9**	**+0.4**
	baz=321,SNR=6.6						
L26K	Log Cabin Wild	145.39	17	IAMs_20	IAMs_20	12 06 01.0	
	comp=Z,2µm,21.0s						
L26K	Log Cabin Wild	145.39	17	P	**PKPab**	**10 48 20.2**	**+0.6**
	baz=326,SNR=28						
DAWY	Dawson	145.40	14	P	**PKPab**	**10 48 19.9**	**+0.3**
	baz=333,SNR=84						
HARP	HAARP	145.42	19	P	**PKPab**	**10 48 20.4**	**+0.7**
	baz=323,SNR=25						
O22K	Cooper Landing	145.42	24	IAMs_20	IAMs_20	12 02 02.4	
	comp=Z,1µm,19.0s						
O22K	Cooper Landing	145.42	24	P	**PKPab**	**10 48 19.6**	**0.0**
	baz=315,SNR=6.9						
J30M	Hart River	145.50	11	IAMs_20	IAMs_20	12 04 11.4	
	comp=Z,1µm,20.0s						
J30M	Hart River	145.50	11	P	**PKPab**	**10 48 20.5**	**+0.5**
	baz=338,SNR=104						
BRSE	Bradley Lake S	145.57	26	P	**PKPab**	**10 48 20.5**	**+0.2**
	baz=313						
Q20K	Shuyak Island	145.66	28	P	**PKPab**	**10 48 21.3**	**+0.7**
	baz=309						
L27K	Beaver Creek,	145.74	16	IAMs_20	IAMs_20	12 06 57.1	
	comp=Z,2µm,20.0s						
L27K	Beaver Creek,	145.74	16	P	**PKPab**	**10 48 21.2**	**+0.3**
	baz=328,SNR=55						
BCAR	Beaver Creek A	145.75	16		**PKPab**	**10 48 20.8**	**-0.1**
SEW	Seward	145.79	25	IAMs_20	IAMs_20	11 53 32.0	
	comp=Z,2µm,22.0s						
SEW	Seward	145.79	25	P	**PKPab**	**10 48 21.2**	**+0.2**
	baz=315,SNR=6.6						
CHIR	Chirikof Islan	145.84	34	P	**PKPab**	**10 48 21.5**	**+0.2**
	baz=302						
KLU	Klutina	145.91	21	IAMs_20	IAMs_20	11 57 51.0	
	comp=Z,2µm,22.0s						
KLU	Klutina	145.91	21	P	**PKPab**	**10 48 21.4**	**-0.2**
	baz=321,SNR=10						
K29M	Barlow Dome	145.96	13	P	**PKPbc**	**10 48 21.4**	**+0.2**
	baz=335,SNR=35						
N53A	Lisbon	145.99	298	IAMs_20	IAMs_20	11 48 57.9	
	comp=Z,3µm,22.0s						
M26K	Nabesna, AK	146.00	18	IAMs_20	IAMs_20	11 56 53.1	
	comp=Z,1µm,20.0s						
M26K	Nabesna, AK	146.00	18	P	**PKPab**	**10 48 22.0**	**+0.1**
	baz=326						
GLI	Glacier Island	146.02	22	IAMs_20	IAMs_20	11 55 28.9	
	comp=Z,2µm,22.0s						
GLI	Glacier Island	146.02	22	P	**PKPab**	**10 48 22.1**	**+0.1**
	baz=319						
Q54A	Coxs Mills	146.04	294		**PKPdf**	**10 48 21.6**	**+0.3**
Q54A				IAMs_20	IAMs_20	11 48 02.4	
	comp=Z,3µm,21.0s						
KDAK	Kodiak Island	146.10	30	P	**PKPab**	**10 48 22.4**	**+0.1**
	baz=308						
SII	Sitkinak Islan	146.12	32	P	**PKPab**	**10 48 23.0**	**+0.6**
	baz=304						
OHAK	Old Harbor	146.13	31	P	**PKPab**	**10 48 23.4**	**+1.0**
	baz=306						
N25K	Chitina, Valde	146.22	20	IAMs_20	IAMs_20	12 07 49.9	
	comp=Z,2µm,21.0s						
N25K	Chitina, Valde	146.22	20	P	**PKPab**	**10 48 23.5**	**+0.7**
	baz=323,SNR=38						
DIV	Divide	146.24	21		**PKPab**	**10 48 23.0**	**+0.1**
DIV				IAMs_20	IAMs_20	11 58 02.7	
	comp=Z,2µm,22.0s						
M27K	Edge Creek, AK	146.32	17	IAMs_20	IAMs_20	12 07 03.5	
	comp=Z,2µm,20.0s						
M27K	Edge Creek, AK	146.32	17	P	**PKPab**	**10 48 23.7**	**+0.4**
	baz=328						
M52A	Chesterland	146.34	299	IAMs_20	IAMs_20	11 49 35.0	
	comp=Z,2µm,20.0s						
MAYO	Mayo, Yukon	146.48	12	P	**PKPab**	**10 48 24.2**	**+0.5**
	baz=338,SNR=9.6						
L29M	L29M	146.51	14	IAMs_20	IAMs_20	12 03 46.3	
	comp=Z,1µm,20.0s						
L29M	L29M	146.51	14	P	**PKPab**	**10 48 24.1**	**+0.3**
	baz=334,SNR=26						
BVCY	Beaver Creek	146.53	16	P	**PKPab**	**10 48 24.5**	**+0.6**
	baz=329,SNR=21						
GLB	Gilahina Butte	146.57	19	PKPbc	**PKPab**	**10 48 23.6**	**-0.5**
GLB				IAMs_20	IAMs_20	11 55 27.3	
	comp=Z,2µm,22.0s						
P23K	Montague Islan	146.58	23	P	**PKPab**	**10 48 24.5**	**+0.4**
	baz=318						
EYAK	Cordova Ski Ar	146.70	22	IAMs_20	IAMs_20	12 08 58.9	
	comp=Z,2µm,20.0s						
EYAK	Cordova Ski Ar	146.70	22	P	**PKPab**	**10 48 25.2**	**+0.7**
	baz=320,SNR=6.6						
BMRM	Bremner River	146.72	20	IAMs_20	IAMs_20	12 07 17.4	
	comp=Z,2µm,20.0s						
BMRM	Bremner River	146.72	20	P	**PKPab**	**10 48 24.9**	**+0.2**
	baz=323,SNR=14						
MCARA	McCarthy VSAT	146.84	19	IAMs_20	IAMs_20	11 53 17.3	
	comp=Z,2µm,22.0s						
MCARA	McCarthy VSAT	146.84	19	P	**PKPab**	**10 48 25.4**	**+0.3**
	baz=325,SNR=29						
VRDI	Verde Repeater	146.85	19	IAMs_20	IAMs_20	11 55 57.6	
	comp=Z,1µm,22.0s						
M29M	Somme Creek	147.04	14	IAMs_20	IAMs_20	12 05 36.4	
	comp=Z,1µm,20.0s						
M29M	Somme Creek	147.04	14	P	**PKPab**	**10 48 25.9**	**-0.1**
	baz=333						
I49A	Point Hope	147.13	304	IAMs_20	IAMs_20	11 54 01.6	
	comp=Z,3µm,20.0s						
N51A	Ashland	147.15	298	IAMs_20	IAMs_20	11 52 26.5	
	comp=Z,3µm,20.0s						
Q52A	Bidwell	147.16	294	IAMs_20	IAMs_20	11 53 30.9	
	comp=Z,2µm,20.0s						
RAGM	Ragged Mountai	147.16	21	IAMs_20	IAMs_20	11 59 01.0	
	comp=Z,3µm,19.0s						
YUK3	Moose Creek	147.17	16	P	**PKPab**	**10 48 26.0**	**-0.7**
	baz=330,SNR=14						
M30M	Minto, Yukon	147.26	13	IAMs_20	IAMs_20	12 04 38.9	
	comp=Z,2µm,20.0s						
M30M	Minto, Yukon	147.26	13	P	**PKPab**	**10 48 26.4**	**-0.3**
	baz=336						
CRQE	Cirque	147.34	19	P	**PKPab**	**10 48 26.7**	**-0.5**
	baz=325						
Q23K	Middleton Isla	147.36	23	P	**PKPbc**	**10 48 25.9**	**+0.7**
	baz=319						
BARN	Barnard Glacie	147.48	18	IAMs_20	IAMs_20	11 56 07.1	
	comp=Z,2µm,22.0s						
KAIM	Kayak Island	147.60	21	P	**PKiKP**	**10 48 27.3**	**-0.7**
	baz=322						
M50A	Fremont	147.61	299	IAMs_20	IAMs_20	11 50 01.7	
	comp=Z,2µm,21.0s						
CTG	Chitna Glacier	147.64	18	P	**PKPbc**	**10 48 26.7**	**+0.5**
	baz=328						
CTGM	Chitina Glacie	147.64	18	IAMs_20	IAMs_20	11 58 40.5	
	comp=Z,1µm,18.0s						
YUK8	Steele Glacier	147.77	16	P	**PKPbc**	**10 48 26.9**	**+0.2**
	baz=330						
BGLC	Bering Glacier	147.79	20	P	**PKPbc**	**10 48 26.9**	**+0.5**
	baz=324						
LOGN	Logan Glacier	147.85	18	IAMs_20	IAMs_20	12 08 16.9	
	comp=Z,2µm,20.0s						
YUK4	Talbot Arm	147.98	15	P	**PKPbc**	**10 48 27.1**	**-0.1**
	baz=332						
Q51A	Peebles	148.00	295	IAMs_20	IAMs_20	11 54 15.1	
	comp=Z,2µm,20.0s						
M31M	Drury Creek, Y	148.04	11	IAMs_20	IAMs_20	12 01 56.4	
	comp=Z,2µm,21.0s						
M31M	Drury Creek, Y	148.04	11	P	**PKPbc**	**10 48 27.1**	**+0.1**
	baz=339						
WRGLY	Wrigley	148.08	2	P	**PKPbc**	**10 48 26.9**	**-0.2**
	baz=357						
O28M	Mount Upton	148.10	17	IAMs_20	IAMs_20	12 08 06.6	
	comp=Z,2µm,21.0s						
O28M	Mount Upton	148.10	17	P	**PKPbc**	**10 48 27.2**	**-0.5**
	baz=329						
MESA	MESA	148.13	19	P	**PKPbc**	**10 48 27.2**	**-0.4**
	baz=326						
TEIG	Tepich	148.14	258	PKPbc	**PKPbc**	**10 48 27.1**	**-1.5**
TEIG				IAMs_20	IAMs_20	11 53 42.8	
	comp=Z,2µm,21.0s						
FARO	Faro, Yukon	148.18	10	P	**PKPbc**	**10 48 27.9**	**+0.4**
	baz=341						
N30M	Aishikik Lake	148.21	14	IAMs_20	IAMs_20	12 05 31.2	
	comp=Z,2µm,20.0s						
N30M	Aishikik Lake	148.21	14	P	**PKPbc**	**10 48 28.1**	**+0.5**
	baz=334						
YUK6	Outpost Mounta	148.40	16	P	**PKPbc**	**10 48 28.6**	**+0.3**
	baz=332						
N31M	Braeburn, Yuko	148.45	13	IAMs_20	IAMs_20	12 05 23.5	
	comp=Z,2µm,21.0s						
N31M	Braeburn, Yuko	148.45	13	P	**PKPbc**	**10 48 28.8**	**+0.6**
	baz=336						
YKA	Yellowknife Ar	148.51	354	PKP	**PKPdf**	**10 48 24.6**	**0.0**
	comp=Z,32nm,1.0s,baz=348,slow=3.0,SNR=97						
YKA				PKPbc	**PKPbc**	**10 48 28.2**	**-0.1**
	comp=Z,31nm,1.0s,baz=6.5,slow=2.6,SNR=82						
PINM	Pinnacle	148.67	18	P	**PKPbc**	**10 48 29.0**	**+0.1**
	baz=328						
J47A	Sunmer	148.67	303	IAMs_20	IAMs_20	11 54 27.6	
	comp=Z,3µm,20.0s						
HYT	Haines Junctio	148.69	15	P	**PKPbc**	**10 48 28.5**	**-0.4**
	baz=333						
R50A	Paris	148.79	293	IAMs_20	IAMs_20	11 54 30.1	
	comp=Z,3µm,20.0s						
352A	Blakely	148.80	280	IAMs_20	IAMs_20	11 54 40.8	
	comp=Z,3µm,20.0s						
O29M	Mount Kennedy	148.91	16	IAMs_20	IAMs_20	12 05 42.9	
	comp=Z,2µm,20.0s						
O29M	Mount Kennedy	148.91	16	P	**PKPbc**	**10 48 29.2**	**-0.3**
	baz=331						
O30N	Mendenhall	149.04	14	P	**PKPbc**	**10 48 29.9**	**+0.1**
	baz=336						
N32M	Quiet Lake	149.24	11	P	**PKPbc**	**10 48 30.2**	**-0.1**
	baz=341						
O48B	Farmland	149.32	297	IAMs_20	IAMs_20	11 54 33.9	
	comp=Z,3µm,21.0s						
WHY	Whitehorse	149.39	13	P	**PKPbc**	**10 48 30.7**	**0.0**
	baz=337						
P30M	Million Dollar	149.45	15	P	**PKPbc**	**10 48 31.1**	**+0.3**
	baz=334						
R49A	Shelbyville	149.45	293	IAMs_20	IAMs_20	11 55 09.7	
	comp=Z,3µm,21.0s						
I45A	Fountain	149.53	305	IAMs_20	IAMs_20	11 51 41.0	
	comp=Z,3µm,21.0s						
P48A	Milroy	149.59	296	IAMs_20	IAMs_20	11 58 05.2	
	comp=Z,3µm,19.0s						
P33M	Teslin, Yukon	150.18	11	P	**PKPbc**	**10 48 32.4**	**-0.2**
	baz=341						
WCI	Wyandotte Cave	150.34	293		**PKPbc**	**10 48 32.1**	**-1.5**
WCI	Wyandotte Cave	150.34	293	PKIKP	**PKPbc**	**10 48 32.1**	**-1.5**
SKAG	Skagway	150.40	14	P	**PKPbc**	**10 48 32.4**	**-0.6**
	baz=336						
P32M	Atlin	150.60	13	P	**PKPbc**	**10 48 33.0**	**-0.6**
	baz=339						
SFIN	Lafayette	150.78	298	IAMs_20	IAMs_20	11 59 11.6	
	comp=Z,3µm,19.0s						
WTLY	Watson Lake, Y	150.83	7	P	**PKPbc**	**10 48 34.0**	**-0.1**
	baz=347						
P46A	Rosedale	150.95	296	IAMs_20	IAMs_20	11 50 01.1	
	comp=Z,3µm,22.0s						
KOTAN	Kotaneelee Air	151.16	3	P	**PKPbc**	**10 48 34.6**	**-0.2**
	baz=356						
R33M	Jennings River	151.25	10	IAMs_20	IAMs_20	12 03 10.1	
	comp=Z,2µm,21.0s						
R33M	Jennings River	151.25	10	P	**PKPbc**	**10 48 35.0**	**-0.2**
	baz=343						
R31K	City Hall, Gus	151.26	16	P	**PKiKP**	**10 48 35.8**	**+0.2**
	baz=334						
M44A	Midewin, Midew	151.34	300	IAMs_20	IAMs_20	12 00 50.4	
	comp=Z,2µm,18.0s						
Q32M	Nakina River	151.45	12	P	**PKPbc**	**10 48 35.9**	**+0.1**
	baz=341						
S31K	Pelican	151.55	16	P	**PKiKP**	**10 48 36.1**	**-0.1**
	baz=333						
WVT	Waverly	151.61	289		**PKPbc**	**10 48 36.0**	**-0.6**
WVT	Waverly	151.61	289	PKIKP	**PKPbc**	**10 48 36.0**	**-0.6**
R32K	Eaglecrest	151.66	14	P	**PKiKP**	**10 48 36.8**	**+0.4**
	baz=336						
DLBC	Dease Lake	152.30	10	P	**PKiKP**	**10 48 38.1**	**+0.3**
	baz=344						
S32K	Killisnoo	152.38	15	P	**PKiKP**	**10 48 38.4**	**+0.5**
	baz=336						
Q44A	Meyer Farm, Va	152.42	295	IAMs_20	IAMs_20	11 57 13.1	
	comp=Z,3µm,22.0s						
SIT	Sitka	152.58	16	P	**PKiKP**	**10 48 38.6**	**+0.3**
	baz=334						
S34M	Telegraph Cree	152.64	11	P	**PKiKP**	**10 48 39.2**	**+0.7**
	baz=342						
P43A	Skaggs, Pawnee	152.72	297	IAMs_20	IAMs_20	11 48 30.0	
	comp=Z,2µm,21.0s						
FFC	Flin Flon	152.77	335		**PKPdf**	**10 48 34.4**	**+2.9**
FFC	Flin Flon	152.77	335	PKIKP	**PKPdf**	**10 48 34.4**	**+2.9**
ULM	Lac du Bonnet	153.10	322	PKP	**PKPdf**	**10 48 31.9**	**-0.2**
	comp=Z,6.2nm,0.9s,baz=87,slow=2.1,SNR=7.5						
ULM				PKPbc	**PKPbc**	**10 48 38.2**	**-1.2**
	comp=Z,38nm,0.9s,baz=50,slow=3.1,SNR=32						
ULM	Lac du Bonnet	153.10	322		**PKPdf**	**10 48 32.5**	**+0.3**
T33K	Petersburg	153.34	14	P	**PKiKP**	**10 48 40.2**	**+0.3**
	baz=338						
N41A	Harden Midland	153.56	299	IAMs_20	IAMs_20	11 54 27.0	
	comp=Z,2µm,22.0s						
SPMN	Marine on St.	153.66	310	IAMs_20	IAMs_20	11 56 26.1	
	comp=Z,2µm,20.0s						
T35M	Bob Quinn	153.67	11	P	**PKiKP**	**10 48 41.0**	**+0.3**
	baz=343						
WRAK	Wrangell Islan	153.83	14	P	**PKPbc**	**10 48 40.7**	**-0.1**
	baz=339						
U33K	Whale Pass	153.95	15	P	**PKiKP**	**10 48 41.9**	**+0.8**
	baz=337						
CCM	Cathedral Cave	154.24	293		**PKiKP**	**10 48 42.9**	**+0.5**
U35K	Hyder	154.73	11	IAMs_20	IAMs_20	12 06 07.3	
	comp=Z,2µm,20.0s						
U35K	Hyder	154.73	11	P	**PKiKP**	**10 48 43.5**	**+0.7**
	baz=343						
V35K	Ketchikan	155.00	14	P	**PKiKP**	**10 48 44.4**	**+1.1**
	baz=340						
UNM	Universidad Na	156.53	245	IAMs_20	IAMs_20	11 52 35.9	
	comp=Z,2µm,21.0s						
N35A	Tabor	157.06	302	IAMs_20	IAMs_20	11 58 56.3	
	comp=Z,3µm,21.0s						
HKT	Hockley	157.81	273	IAMs_20	IAMs_20	12 01 14.3	
	comp=Z,2µm,21.0s						
KVTX	Kingsville	159.03	266	IAMs_20	IAMs_20	12 04 37.4	
	comp=Z,3µm,20.0s						
735A	Kenedy	159.28	269	IAMs_20	IAMs_20	12 05 55.1	
	comp=Z,2µm,19.0s						
Z35A	Perchaven, San	159.35	282	IAMs_20	IAMs_20	12 10 20.9	
	comp=Z,2µm,20.0s						
RSSD	Black Hills	161.20	318		**PKPdf**	**10 48 43.2**	**+0.3**
RSSD	Black Hills	161.20	318	PKIKP	**PKPdf**	**10 48 43.2**	**+0.3**
TXAR	Lajitas Array	164.39	267	PKP	**PKPdf**	**10 48 46.1**	**-0.2**
	comp=Z,2.6nm,0.9s,baz=126,slow=1.7,SNR=18						
TXAR				PKPab	**PKPab**	**10 49 41.6**	**+0.8**
	comp=Z,10nm,1.1s,baz=113,slow=4.4,SNR=9.9						
TXAR	Lajitas Array	164.39	267		**PKPdf**	**10 48 47.7**	**+1.4**
PDAR	Pinedale Array	165.11	323	PKP	**PKPdf**	**10 48 46.4**	**-0.3**
	comp=Z,6.1nm,1.0s,baz=132,slow=2.2,SNR=35						
PDAR				PP	**PP**	**10 53 36.5**	**+6.5**
	comp=Z,2.9nm,1.0s,baz=65,slow=3.6,SNR=4.5						
PDAR	Pinedale Array	165.11	323		**PKPdf**	**10 48 46.9**	**+0.2**
NVAR	Mina Array Bea	172.44	340	PKP	**PKPdf**	**10 48 50.8**	**-0.7**
	comp=Z,3.2nm,1.1s,baz=139,slow=0.9,SNR=14						
NVAR				PKPab	**pPKPab**	**10 50 17.4**	**-0.4**
	comp=Z,4.6nm,1.0s,baz=34,slow=2.2,SNR=3.8						
NVAR				PP	**PP**	**10 54 09.7**	**+3.1**
	comp=Z,2.4nm,1.0s,baz=344,slow=4.9,SNR=4.7						

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*DNK **06** 10:32:49.6±3.5, 79°.42N×6°.61E, h35km±67km, ML1.7, Presumed earthquake*
*NAO **06** 10:32:51.5±0.8, 78°.45N×7°.40E, h10km, ML3.3*
*BER **06** 10:32:52.0±3.9, 78°.50N×7°.08E, h15km±25km, Mw3.9, ML3.3(NAO), Confirmed Earthquake*
*KOLA **06** 10:32:52.5, 78°.38N×8°.38E, h0km, ML3.1, Error ellipse: s-maj=12.5km s-min=8.6km az=90.0, Greenland sea*
*FCIAR **06** 10:32:55.0, 78°.55N×8°.31E, h10km, station ZFI2 has station magnitude of 3.70 station OMEGA has station magnitude of 3.60*
ISC 06 10:32:50.6±1.5**, 78°.41N**±0°.05×**7°.68E**±0°.05**, h17**km±9km**, n36,** σ1ˢ95/60**, 3C, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	Kingsbay	0.99	56	Pb	**Pn**	**10 33 10.9**	**+1.3**
KBS				Sb	**Sn**	**10 33 23.2**	**+0.2**
KBS	Kingsbay	0.99	56⇑	*i*P	**Pn**	**10 33 10.8**	**+1.3**
KBS				*e*S	**Sn**	**10 33 22.7**	**-0.4**
KBS				IAML		10 33 23.5	
	comp=Z,974nm,0.2s						
KBS	Kingsbay	0.99	56⇑	*i*P	**Pn**	**10 33 10.8**	**+1.3**
KBS				*i* S	**Sg**	**10 33 21.8**	**-0.9**
KBS	Kingsbay	0.99	56	P	**Pn**	**10 33 10.3**	**+0.8**
KBS				S	**Sg**	**10 33 22.3**	**-0.4**
BRBB	Barentsburg B	1.38	100	Pb	**Pg**	**10 33 17.0**	**0.0**
BRBB				Sb	**Sg**	**10 33 33.5**	**-1.4**
BRBB	Barentsburg B	1.38	100	Pb	**Pg**	**10 33 17.0**	**0.0**
BRBB				Sb	**Sg**	**10 33 33.5**	**-1.4**
BRBB	Barentsburg B	1.38	100	P	**Pg**	**10 33 16.5**	**-0.5**
BRBB				S	**Sg**	**10 33 33.6**	**-1.4**
BRBA	Barentsburg A	1.39	102	Pb	**Pg**	**10 33 17.0**	**-0.3**
BRBA				Sb	**Sg**	**10 33 35.1**	**-0.2**
BRBA	Barentsburg A	1.39	102	Pb	**Pg**	**10 33 17.0**	**-0.3**
BRBA				Sb	**Sg**	**10 33 35.1**	**-0.2**
SPA0	Spitsbergen Ar	1.79	93	Pn	**Pb**	**10 33 23.7**	**+0.9**
	baz=275,slow=14						
SPA0				Sn	**Sb**	**10 33 45.3**	**+0.5**
	baz=284,slow=14						
SPA0	Spitsbergen Ar	1.79	93	Pn	**Pb**	**10 33 23.7**	**+0.9**
SPA0				Sn	**Sb**	**10 33 45.3**	**+0.5**
SPA0	Spitsbergen Ar	1.79	93⇑	*i*P	**Pb**	**10 33 23.6**	**+0.9**
SPA0				*i* S	**Sb**	**10 33 44.7**	**-0.1**
SPITS	Spitsbergen Ar	1.79	93	P	**Pb**	**10 33 23.2**	**+0.5**
SPITS				S	**Sb**	**10 33 44.4**	**-0.5**
HSPB	Hornsund (broa	2.20	126	Pn	**Pn**	**10 33 28.1**	**+1.9**
HSPB				Sn	**Sn**	**10 33 52.9**	**0.0**
HSPB	Hornsund (broa	2.20	126	*e*P	**Pn**	**10 33 27.9**	**+1.8**
HSPB				*e*S	**Sn**	**10 33 51.7**	**-1.1**
HSPB	Hornsund (broa	2.20	126	P	**Pn**	**10 33 27.9**	**+1.8**
HSPB				S	**Sn**	**10 33 53.0**	**+0.1**
HOPEN	Hopen	4.22	108	Pn	**Pn**	**10 33 55.8**	**+2.0**
HOPEN				Sn	**Sn**	**10 34 42.2**	**-0.4**
HOPEN	Hopen	4.22	108	*e*P	**Pn**	**10 33 55.9**	**+2.0**
HOPEN				*e*S	**Sn**	**10 34 42.1**	**-0.6**
HOPEN				IAML		10 34 44.3	
	comp=Z,48nm,0.2s						
BJO1	Bjornoya	4.74	140	Pn	**Pn**	**10 34 03.8**	**+2.8**
BJO1				Sn	**Sn**	**10 34 57.3**	**+2.0**
BJO1	Bjornoya	4.74	140	*e*P	**Pn**	**10 34 03.8**	**+2.8**
BJO1				*e*S	**Sn**	**10 34 57.4**	**+2.1**
BJO1				IAML		10 35 00.7	
	comp=Z,8.3nm,0.6s						
BEAR	Bear Island, N	4.74	140	Pn	**Pn**	**10 34 03.6**	**+2.6**
	baz=335,slow=18						
BEAR				Sn	**Sn**	**10 34 54.9**	**-0.6**
	baz=335,slow=37						
NOR	Nord	5.26	319	Pn	**Pn**	**10 34 07.6**	**-0.6**
NOR	Nord	5.26	319	Pn	**Pn**	**10 34 07.6**	**-0.6**
DAG	Danmarks Havn	5.87	267	*e*P	Pn	10 34 10.1	-6.4
DAG				*i* S	Sn	10 35 14.8	-8.5
DAG				IAML		10 35 21.0	
	comp=Z,2.9nm,0.5s						
DAG	Danmarks Havn	5.87	267	*e*P	Pn	10 34 10.1	-6.4
DAG				*i* S	Sn	10 35 14.8	-8.5
DAG				IAML		10 35 21.0	
	comp=Z,2.9nm,0.5s						
ZFI2	Zemlya Franca-	7.47	53	*e*P	**Pn**	**10 34 40.3**	**+1.9**
ZFI2				*e*S	**Sn**	**10 35 58.5**	**-4.0**
	comp=Z,19nm,1.8s						
OMEGA	Omega	7.48	53	*e*P	**Pn**	**10 34 40.4**	**+1.8**
OMEGA				*e*S	**Sn**	**10 35 59.0**	**-3.9**
	comp=Z,18nm,1.3s						
DBG	Daneborg	7.69	252	Pn	**Pn**	**10 34 40.9**	**-0.5**
DBG	Daneborg	7.69	252	*i* P	**Pn**	**10 34 39.5**	**-1.9**
DBG				*i* S	Sn	10 36 00.6	-7.3
DBG				IAML		10 36 06.6	
	comp=Z,2.5nm,0.5s						
DBG	Daneborg	7.69	252	*i* P	**Pn**	**10 34 39.5**	**-1.9**
DBG				*i* S	Sn	10 36 00.6	-7.3
DBG				IAML		10 36 06.6	
	comp=Z,2.5nm,0.5s						
VADS	Vadso	10.09	134	P	**Pn**	**10 35 17.4**	**+3.0**
VADS				S	**Sn**	**10 37 02.7**	**-4.1**
KEV	Kevo	10.10	139	*e*P	Pn	10 35 19.4	+4.9
ARA0	ARCESS Array S	10.11	142	Pn	**Pn**	**10 35 16.2**	**+1.6**
	baz=350,slow=12						
ARA0				Sn	**Sn**	**10 37 02.4**	**-5.0**
	baz=349,slow=22						
ARA0	ARCESS Array S	10.11	142	*e*P	**Pn**	**10 35 16.4**	**+1.7**
ARA0	ARCESS Array S	10.11	142	Pn	**Pn**	**10 35 16.2**	**+1.6**
ARA0				Sn	**Sn**	**10 37 02.4**	**-5.0**
ARCES	ARCESS Array B	10.11	142	P	**Pn**	**10 35 18.3**	**+3.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARCES				S	**Sn**	**10 37 05.7**	**-1.7**

*NSSP **06** 10:38:55.1, 38.°38N×44.°47E, h10km, Ms3.4*
*AZER **06** 10:38:56.9, 38.°49N×44.°36E, h10km, ml3.5*
*AFAD **06** 10:38:56.8, 38.°50N×44.°43E, h3km±4km, ML3.4*
*TEH **06** 10:38:57.9, 38.°51N×44.°37E, h8km±24km, ML3.3, Presumed earthquake*
*ISK **06** 10:38:59.7, 38.°43N×44.°26E, h7km, ML3.1/13*
ISC 06 10:38:57.7±1.1**, 38.°48N**±0.°02×**44.°40E**±0.°02**, h7**km±10km**, n70,** σ1s**79**/110**, 2D, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.37**	**300**	P	**Pb**	**10 39 04.6**	**-2.1**
OZAP				S	**Sb**	**10 39 16.6**	**+3.8**
OZAP	**Van, Ozalp-Mer**	**0.37**	**300**	Pg	**Pb**	**10 39 04.6**	**-2.1**
TVAN	**Van**	**0.78**	**274**	P	**Pb**	**10 39 12.1**	**-1.6**
TVAN				S	**Sn**	**10 39 24.9**	**-2.5**
TVAN				IAML		10 39 35.0	
	comp=E,1μm,0.5s						
TVAN	**Van**	**0.78**	**274**	Pg	**Pb**	**10 39 12.1**	**-1.6**
VMUR	**Van-Muradiye**	**0.82**	**309**	P	**Pb**	**10 39 12.9**	**-1.6**
VMUR				S	**Sn**	**10 39 28.6**	**+0.1**
VMUR	**Van-Muradiye**	**0.82**	**309**	Pg	**Pb**	**10 39 12.9**	**-1.6**
YOVA	**Hakkari_Yksek**	**0.89**	**186**	P	**Pn**	**10 39 15.6**	**-1.3**
YOVA				S	**Sn**	**10 39 32.1**	**+1.9**
YOVA	**Hakkari_Yksek**	**0.89**	**186**	Pg	**Pn**	**10 39 15.6**	**-1.3**
MAKU	**Maku**	**0.90**	**14**	Pg	**Pb**	**10 39 14.7**	**-1.1**
ISHB	**Shabestar**	**0.98**	**101**	Pg	**Pb**	**10 39 16.4**	**-0.7**
ERCV	**ERCIS-VAN**	**0.99**	**303**	Pg	**Pn**	**10 39 17.5**	**-0.7**
ERCV				Sg	**Sn**	**10 39 31.3**	**-1.3**
IMRD	**Marand**	**1.05**	**77**	Pg	**Pn**	**10 39 18.7**	**-0.3**
GEVA	**Gevas**	**1.07**	**262**	P	**Pg**	**10 39 16.7**	**-1.4**
GEVA				S	**Sn**	**10 39 33.7**	**-0.8**
NAX	**Nakhchivan**	**1.10**	**51**	P	**Pn**	**10 39 20.0**	**+0.3**
NAX				S	**Sn**	**10 39 36.2**	**+0.9**
AKDM	**Akdamar-Van**	**1.12**	**263**	Pg	**Pg**	**10 39 18.0**	**-1.3**
AKDM				Sg	**Sn**	**10 39 33.9**	**-2.0**
DYDN	**Diyadin**	**1.20**	**333**	P	**Pg**	**10 39 19.4**	**-1.3**
DYDN				S	**Sn**	**10 39 38.0**	**+0.2**
SBZ	**Shahbuz**	**1.29**	**44**	P	**Pg**	**10 39 22.8**	**+0.4**
SBZ				S	**Sn**	**10 39 43.1**	**+3.3**
HYR	**Heyderabad**	**1.29**	**16**	P	**Pg**	**10 39 22.4**	**-0.1**
HYR				S	**Sn**	**10 39 43.7**	**+3.8**
ORD	**Ordubad**	**1.33**	**70**	P	**Pg**	**10 39 23.4**	**+0.3**
ORD				S	**Sg**	**10 39 43.8**	**+3.4**
ADCV	**BITLIS_Adilcev**	**1.35**	**285**	P	**Pg**	**10 39 23.2**	**-0.5**
ADCV				S	**Sn**	**10 39 45.4**	**+3.8**
ADCV	**BITLIS_Adilcev**	**1.35**	**285**	Pg	**Pg**	**10 39 23.1**	**-0.5**
CUKT	**Cukurca**	**1.38**	**207**	Pn	**Pg**	**10 39 24.7**	**+0.6**
CUKT				Sn	**Sg**	**10 39 42.6**	**+0.6**
CUKT	**Cukurca**	**1.38**	**207**	P	**Pg**	**10 39 23.9**	**-0.2**
CUKT				S	**Sg**	**10 39 44.5**	**+2.5**
CUKT				IAML		10 39 48.0	
	comp=N,485nm,0.6s						
CUKT				IAML		10 39 51.0	
	comp=E,618nm,0.8s						
CUKT	**Cukurca**	**1.38**	**207**	Pg	**Pg**	**10 39 23.9**	**-0.2**
IGDI	**IGDIR**	**1.41**	**350**	P	**Pn**	**10 39 22.9**	**-1.1**
IGDI				S	**Sg**	**10 39 46.0**	**+3.0**
IGDI	**IGDIR**	**1.41**	**350**	Pg	**Pn**	**10 39 22.8**	**-1.1**
IGDI	**IGDIR**	**1.41**	**350**	P	**Pg**	**10 39 24.2**	**-0.6**
IGDI				S	**Sg**	**10 39 45.1**	**+2.1**
VAYK	**Vayk**	**1.46**	**33**	⇓*e*P	**Pg**	**10 39 25.4**	**-0.2**
VAYK				⇓*e*S	**Sg**	**10 39 45.2**	**+0.7**
IAZR	**Azarshahr**	**1.48**	**122**	Pg	**Pg**	**10 39 26.3**	**+0.2**
AGRB	**Hanur-Agry**	**1.55**	**315**	Pn	**Pg**	**10 39 27.6**	**+0.2**
AGRB				Sn	**Sg**	**10 39 48.4**	**+0.9**
AGRB	**Hanur-Agry**	**1.55**	**315**	Pg	**Pg**	**10 39 26.4**	**-1.0**
DORK	**Agr/Tutak/Do**	**1.56**	**306**	P	**Pn**	**10 39 24.6**	**-1.4**
DORK				S	**Sg**	**10 39 48.9**	**+1.2**
PERV	**Siirt/Pervari-**	**1.56**	**251**	P	**Pg**	**10 39 26.9**	**-0.6**
PERV				S	**Sg**	**10 39 49.9**	**+2.2**
PERV				IAML		10 39 56.0	
	comp=E,978nm,0.5s						
PERV				IAML		10 39 57.0	
	comp=N,892nm,0.7s						
MLAZ	**Malazgirt-MUS**	**1.59**	**295**	Pn	**Pg**	**10 39 28.2**	**0.0**
MLAZ				Sn	**Sg**	**10 39 48.6**	**-0.2**
KOTA	**Agri, Merkez-K**	**1.61**	**325**	P	**Pg**	**10 39 27.2**	**-1.5**
KOTA				S	**Sg**	**10 39 51.9**	**+2.3**
GNI	**Garni**	**1.69**	**9**	Pn	**Pg**	**10 39 31.5**	**+1.4**
GNI	**Garni**	**1.69**	**9**	*e*P	**Pg**	**10 39 30.0**	**-0.1**
GNI				*e*S	**Sg**	**10 39 54.5**	**+2.4**
EGVZ	**Egvard**	**1.83**	**65**	*e*P	**Pb**	**10 39 31.7**	**+0.1**
EGVZ				*e*S	**Sg**	**10 39 57.5**	**+0.9**
KAPZ	**Kaputan**	**1.86**	**7**	*e*P	**Pg**	**10 39 32.9**	**-0.4**
KAPZ				*e*S	**Sg**	**10 40 00.3**	**+2.9**
GURO	**Guroymak-BITLI**	**1.86**	**273**	Pn	**Pg**	**10 39 31.5**	**-1.8**
AMBZ	**Amberd**	**1.91**	**357**	*e*P	**Pg**	**10 39 33.3**	**-1.0**
AMBZ				*e*S	**Sg**	**10 40 00.8**	**+1.7**
AYRK	**Ayrk**	**1.96**	**33**	*e*P	**Pg**	**10 39 34.4**	**-0.9**
AYRK				*e*S	**Sg**	**10 40 03.0**	**+2.4**
MAHB	**Mahabad**	**2.00**	**148**	Pn	**Pb**	**10 39 33.7**	**-0.8**
SRTM	**Siirt_Merkez**	**2.01**	**257**	P	**Pg**	**10 39 34.7**	**-1.5**
SRTM				S	**Sg**	**10 40 04.1**	**+1.9**
SRTM				IAML		10 40 11.0	
	comp=E,336nm,1.4s						
SRTM				IAML		10 40 13.0	
	comp=N,420nm,0.8s						
SRTM	**Siirt_Merkez**	**2.01**	**257**	Pn	**Pg**	**10 39 34.7**	**-1.5**
EATA	**Eleskirt**	**2.03**	**314**	P	**Pb**	**10 39 34.4**	**-0.7**
IHRS	**Heris**	**2.08**	**94**	Pn	**Pb**	**10 39 36.1**	**+0.1**
MUSM	**Mu-Merkez**	**2.27**	**277**	P	**Pb**	**10 39 38.2**	**-1.0**
MUSM				S	**Sg**	**10 40 12.8**	**+2.0**
KARS	**Kars**	**2.38**	**335**	Pn	**Pb**	**10 39 40.1**	**-0.8**
GDB	**GEDABAY**	**2.47**	**25**	P	**Pb**	**10 39 41.3**	**-1.3**
GDB				S	**Sg**	**10 40 15.7**	**-1.5**
QRD	**Qoradiz**	**2.48**	**66**	P	**Pb**	**10 39 41.0**	**-1.6**
QRD				S	**Sb**	**10 40 14.0**	**+0.6**
LSVT	**Lusahovit**	**2.51**	**14**	*e*P	**Pb**	**10 39 42.0**	**-1.1**
LSVT				*e*S	**Sg**	**10 40 19.0**	**+0.6**
BTMN	**Batman**	**2.53**	**258**	P	**Pb**	**10 39 43.0**	**-0.6**
BTMN				S	**Sg**	**10 40 22.8**	**+3.7**
SVAN	**Silvan-Diyarba**	**2.54**	**264**	Pn	**Pb**	**10 39 40.5**	**-3.2**
SVAN	**Silvan-Diyarba**	**2.54**	**264**	Pn	**Pb**	**10 39 40.4**	**-3.2**
IHSH	**Hashtrud**	**2.55**	**116**	Pn	**Pb**	**10 39 42.4**	**-1.6**
SENK	**Senkaya-Erzuru**	**2.62**	**323**	Pn	**Pb**	**10 39 43.6**	**-1.4**
GANJ	**Ganja**	**2.63**	**34**	P	**Pb**	**10 39 42.9**	**-2.3**
GANJ				S	**Sb**	**10 40 17.3**	**-0.4**
ISRB	**Sarab**	**2.66**	**103**	Pn	**Pb**	**10 39 43.4**	**-2.4**
AGDM	**Agdam**	**2.66**	**51**	P	**Pb**	**10 39 43.3**	**-2.4**
AGDM				S	**Sg**	**10 40 20.8**	**-2.3**
QZX	**Qazax, Azerbai**	**2.68**	**16**	P	**Pg**	**10 39 47.5**	**-1.6**
QZX				S	**Sg**	**10 40 20.9**	**-3.0**
KARO	**Karliova-Bingo**	**2.74**	**289**	Pn	**Pb**	**10 39 44.3**	**-2.9**
BNGB	**Bingl**	**2.95**	**281**	Pn	**Pn**	**10 39 46.6**	**+1.4**
YRD	**Yardimli**	**3.04**	**81**	P	**Pb**	**10 39 50.0**	**-2.3**
YRD				S	**Sb**	**10 40 27.5**	**-2.1**
LRK	**Lerik**	**3.09**	**86**	P	**Pb**	**10 39 51.4**	**-1.8**
LRK				S	**Sb**	**10 40 29.9**	**-1.4**
GLBA	**Clilabad**	**3.21**	**75**	P	**Pb**	**10 39 52.1**	**-2.9**
GLBA				S	**Sb**	**10 40 33.0**	**-1.3**
DYBB	**Diyarbakir**	**3.40**	**262**	Pn	**Pn**	**10 39 53.2**	**+2.0**
ERZN	**Erzincan**	**3.81**	**288**	Pn	**Pn**	**10 39 59.4**	**+2.5**
BAYT	**Aydıntepe-Bayb**	**3.81**	**301**	Pn	**Pn**	**10 39 59.5**	**+2.5**
SVRC	**Sivrice-ELAZID**	**4.00**	**270**	Pn	**Pn**	**10 40 01.6**	**+2.0**

*IDC **06** 11:17:00.8±1.7, 24.°34N×94.°54E, h0km, mb3.7/6, mbtmp3.6/7, ML3.7/1, MS4.4/1, Error ellipse: s-maj=85.8km s-min=15.9km az=63.0*
*NDI **06** 11:17:08.5±2.8, 24.°59N×94.°77E, h23km±13km, ML3.3, MW3.2, Presumed earthquake*
ISC 06 11:17:03.0±1.5**, 24.°38N**±0.°04×**94.°74E**±0.°08**, h11**km±10km**, n17,** σ1s**57**/24**, mb3.7**/6**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**0.85**	**302**	*e*P	**Pn**	**11 17 23.7**	**+2.8**
IMP				*e*S	**Sn**	**11 17 35.8**	**+2.4**
IMP				IAML		11 17 36.6	
	comp=N,334nm,0.2s						
IMP				IAML		11 17 36.6	
	comp=E,300nm,0.5s						
KOHI	**KOHIMA**	**1.45**	**337**	*e*P	**Pg**	**11 17 31.4**	**+0.5**
KOHI				*e*S	**Sg**	**11 17 49.3**	**-0.4**
KOHI				IAML		11 17 54.8	
	comp=E,421nm,0.5s						
KOHI				IAML		11 17 54.9	
	comp=N,317nm,0.3s						
MOKO	**MOKOCHONG**	**1.94**	**354**	*e*P	**Pb**	**11 17 37.3**	**-1.2**
MOKO				*e*S	**Sn**	**11 18 00.9**	**+0.4**
MOKO				IAML		11 18 05.6	
	comp=N,314nm,0.3s						
MOKO				IAML		11 18 06.3	
	comp=E,307nm,0.3s						
SAIH	**SAIHA**	**2.48**	**221**	*e*P	**Pg**	**11 17 50.2**	**-0.4**
SAIH				*e*S	**Sg**	**11 18 21.9**	**-0.8**
SAIH				IAML		11 18 25.4	
	comp=N,63nm,0.4s						
SAIH				IAML		11 18 26.9	
	comp=E,82nm,0.5s						
TEZP	**TEZPUR**	**2.83**	**322**	*e*P	**Pn**	**11 17 49.8**	**+1.6**
TEZP				*e*S	**Sn**	**11 18 19.4**	**-2.9**
TEZP				IAML		11 18 21.6	
	comp=N,282nm,0.2s						
TEZP				IAML		11 18 22.2	
	comp=E,223nm,0.2s						
SHL	**Shillong**	**2.85**	**295**	*e*P	**Pn**	**11 17 50.0**	**+1.5**
SHL				*e*S	**Sn**	**11 18 22.3**	**-0.6**
SHL				IAML		11 18 25.2	
	comp=N,398nm,0.2s						
SHL				IAML		11 18 25.9	
	comp=E,406nm,0.2s						
ZIRO	**ZIRO**	**3.23**	**346**	*e*S	**Sn**	**11 18 31.2**	**-1.2**
GUWA	**GUWAHATI**	**3.29**	**304**	*e*P	**Pn**	**11 17 56.8**	**+2.2**
GUWA				*e*S	**Sn**	**11 18 32.5**	**-1.2**
TAWA	**Tawang**	**4.11**	**322**	*e*P	**Pn**	**11 18 07.9**	**+1.8**
TAWA				*e*S	**Sn**	**11 18 52.0**	**-2.3**
TAWA				IAML		11 18 56.1	
	comp=N,186nm,0.2s						
TAWA				IAML		11 18 56.9	
	comp=E,269nm,0.2s						
CMAR	**Chiang Mai Arr**	**7.08**	**146**	Pn	**Pn**	**11 18 47.0**	**+0.4**
	comp=E,0.4nm,0.3s,baz=322,slow=14,SNR=9.8						
CMAR				Lg	Lg	11 20 49.5	
	comp=E,0.5nm,0.3s,baz=310,slow=32,SNR=4.4						
	comp=E,0.5nm,0.3s						
MKAR	**Makanchi Array**	**24.48**	**339**	P	**P**	**11 22 22.4**	**+0.2**
	comp=E,1.7nm,0.6s,baz=147,slow=9.4,SNR=29						
	comp=E,1.7nm,0.6s						
SONM	**Songino Array**	**25.17**	**19**	P	**P**	**11 22 29.1**	**+0.6**
	comp=E,0.6nm,0.5s,baz=216,slow=7.1,SNR=3.0						
	comp=E,0.6nm,0.5s						
TLY	**Talaya**	**28.10**	**12**	LR	LR	11 33 54.2	
	comp=E,636nm,18.6s,baz=282,slow=36						
KURBB	**Kurchatov Arra**	**29.05**	**339**	P	**P**	**11 23 02.5**	**-0.7**
	comp=E,0.2nm,0.3s,baz=142,slow=10,SNR=4.1						
	comp=E,0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**30.45**	**348**	P	**P**	**11 23 14.1**	**-1.4**
	comp=E,0.6nm,0.4s,baz=169,slow=8.9,SNR=4.0						
	comp=E,0.6nm,0.4s						
WRA	**Warramunga Arr**	**58.55**	**135**	P	**P**	**11 27 00.0**	**+0.1**
	comp=E,0.6nm,0.7s,baz=323,slow=7.2,SNR=6.5						
	comp=E,0.6nm,0.7s						
ASAR	**Alice Springs**	**61.03**	**139**	P	**P**	**11 27 16.6**	**-0.3**
	comp=E,0.2nm,0.3s,baz=315,slow=6.6,SNR=7.5						
	comp=E,0.2nm,0.3s						

*LVSN **06** 11:57:50.2±5.7, 57.°64N×24.°00E, h0km±385km, ML1.9, Presumed earthquake*
HEL 06 11:57:50.3±0.5**, 60.°71N×28.°92E, h0**km**, ML1.5, Suspected explosion, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VJF	**Virojoki**	**0.69**	**256**	PG	Pg	11 58 03.3	-0.3
VJF				smax	smax	11 58 12.1	
	comp=Z,8.2nm,0.2s						
VJF				SG	Sg	11 58 12.2	-0.3
RUF	**Ruokolahti**	**0.71**	**1**	PB	Pg	11 58 04.1	+0.1
RUF				smax	smax	11 58 12.6	
	comp=Z,5.6nm,0.2s						
RUF				SG	Sg	11 58 13.2	-0.1
PVF	**Pernaja**	**1.52**	**265**	PG	Pn	11 58 17.4	-1.2
	baz=86						
PVF				smax	smax	11 58 35.9	
	comp=Z,4.2nm,0.2s						
PVF				SN	Sg	11 58 37.9	-1.0
FIA0	**FINESS Array S**	**1.56**	**299**	PG	Pn	11 58 17.9	-1.4
	baz=119						
FIA0				smax	smax	11 58 37.2	
	comp=Z,6.4nm,0.2s						
ARBE	**Arbavere**	**1.95**	**230**	*e*P	Pb	11 58 26.9	+0.3
ARBE				*e*S	Sb	11 58 52.0	+0.5
ARBE				AML	AML	11 58 54.2	
	comp=N,54nm,0.6s						
ARBE				AML	AML	11 58 54.3	
	comp=E,50nm,0.3s						
ARBE				AML	AML	11 58 56.1	
	comp=Z,36nm,0.6s						
NUR	**Nurmijarvi**	**2.12**	**266**	smax	smax	11 58 53.0	
	comp=Z,2.1nm,0.2s						
NUR				SG	Sb	11 58 56.0	-0.2
MEF	**Metsahovi**	**2.29**	**259**	*e*P	Pn	11 58 30.6	+1.3
MEF				*e*S	Sb	11 59 01.5	+0.2
MEF				AML	AML	11 59 07.6	
	comp=N,12nm,0.6s						
MEF				AML	AML	11 59 08.0	
	comp=E,11nm,0.7s						
MEF				AML	AML	11 59 11.8	
	comp=Z,6.2nm,0.6s						
MEF	**Metsahovi**	**2.29**	**259**	PG	Pb	11 58 31.1	-1.4
MEF				smax	smax	11 58 58.2	
	comp=Z,2.0nm,0.2s						
MEF				SG	Sb	11 59 01.7	+0.4
SUF	**Sumiainen**	**2.41**	**328**	*e*P	Pn	11 58 32.3	+1.4
SUF	**Sumiainen**	**2.41**	**328**	PG	Pb	11 58 33.4	-1.0
SUF				smax	smax	11 59 01.3	
	comp=Z,1.0nm,0.2s						
SUF				SG	Sb	11 59 04.5	-0.1
KEF	**Keuruu**	**2.43**	**309**	*e*P	Pb	11 58 33.4	-1.4
KEF	**Keuruu**	**2.43**	**309**	PG	Pn	11 58 32.5	+1.2
KEF				smax	smax	11 59 02.1	
	comp=Z,1.7nm,0.2s						
KEF				SG	Sb	11 59 04.8	-0.5
JOF	**Joensuu**	**2.49**	**26**	*e*P	Pb	11 58 34.6	-1.2
JOF	**Joensuu**	**2.49**	**26**	PG	Pb	11 58 35.4	-0.4
JOF				SG	Sb	11 59 05.7	-1.3
NIF	**Nilsia**	**2.74**	**350**	smax	smax	11 59 10.9	
	comp=Z,1.5nm,0.2s						
NIF				SG	Sb	11 59 13.8	-0.3
TVF	**Tvarminne**	**2.96**	**255**	smax	smax	11 59 17.1	
	comp=Z,0.5nm,0.2s						
TVF				SG	Sb	11 59 21.0	+0.6
RAF	**Rauma**	**3.51**	**278**	*e*P	Pn	11 58 45.8	-0.2
RAF				*e*S	Sn	11 59 28.4	+0.1
RAF				AML	AML	11 59 29.4	
	comp=N,5.9nm,0.7s						
RAF				AML	AML	11 59 37.6	
	comp=Z,3.1nm,0.4s						
RAF				AML	AML	12 00 00.6	
	comp=E,2.4nm,0.6s						
RAF	**Rauma**	**3.51**	**278**	SN	Sn	11 59 28.2	0.0
AAL	**Aland**	**4.45**	**267**	PN	Pn	11 58 58.0	-0.9
OUL	**Oulu**	**4.60**	**344**	SG	Sb	12 00 12.7	+5.0

IDC 06 12:05:34.5±2.3**, 7.°60S×127.°84E, h0**km**, mb3.7**/1**, mbtmp3.4**/3**, ML3.5**/2**, Error ellipse: s-maj=286.6km s-min=31.5km az=64.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.79**	**153**	Pn	Pn	12 08 50.4	-1.1
	0.3nm,0.3s,baz=330,slow=14,SNR=14						
WRA				Sn	Sn	12 11 10.6	-15
	0.7nm,0.3s,baz=334,slow=25,SNR=10						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**17.00**	**161**	P	Pn	12 09 34.9	+0.9
	0.1nm,0.3s,baz=338,slow=8.6,SNR=9.2						
ASAR				S	Sn	12 12 33.3	-10
	0.3nm,0.4s,baz=340,slow=24,SNR=6.0						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**67.57**	**328**	P	P	12 16 32.9	0.0
	0.3nm,0.4s,baz=113,slow=8.2,SNR=7.8						
	0.3nm,0.4s						

*IDC **06** 12:40:40.9±0.6, 17.°97N×68.°39W, h87km±4km, mb4.2/25, mbtmp4.6/29, MS3.7/17, Error ellipse: s-maj=9.4km s-min=6.9km az=7.0*
*NEIC **06** 12:40:41.9±1.1, 18.°00N±0.°06×68.°43W±0.°04, h84km±5km, mb4.9/527, ML4.9/49, Mww4.7/15, ML4.8/4(RSPR), Error ellipse: s-maj=9.6km s-min=5.2km az=198.0*
*CATAC **06** 12:40:41.1±0.3, 18°N±3°×6°8W±°, h76km±10km, M5.3/6, mb5.2/3, mB5.3/6, MLv5.7/6, Mw(mB)4.7/6, Error ellipse: s-maj=7.4km s-min=4.8km az=16.3, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}4.98; $M_{\theta\theta}$-5.81; $M_{\phi\phi}$0.83; $M_{r\theta}$-3.72; $M_{\theta\phi}$-1.64; $M_{\phi r}$-5.00; Fault plane solution: $M_0$8.43416×10^{15} NP1:ϕ_s101.54373°, δ29.87560°, λ138.31827°. NP2:ϕ_s229.21438°, δ70.65564°, λ66.77898°. Principal axes: T 8.6702, Plg57.9261°, Azm107.5441°; N -0.4937, Plg21.8402°, Azm237.3028°; P -8.1764, Plg22.2664°, Azm336.7478°; confirmed*
*GFZ **06** 12:40:41.6, 17.°90N×68.°51W, h84km, MW4.9, Moment Tensor Solution. s18 Moment tensor: M_{rr}0.48; $M_{\theta\theta}$-0.44; $M_{\phi\phi}$-0.04; $M_{r\theta}$-0.19; $M_{\theta\phi}$2.52; $M_{\phi r}$-0.62; Fault plane solution: NP1:ϕ_s176.00000°, δ82.00000°, λ164.00000°. NP2:ϕ_s268.00000°, δ74.00000°, λ8.00000°. Principal axes: T 2.4600, Plg16.0000°, Azm131.0000°; N 0.3300, Plg72.0000°, Azm329.0000°; P -2.8000, Plg5.0000°, Azm223.0000°;*
*NEIC **06** 12:40:42.1, 18.°47N×68.°30W, h70km, Moment Tensor Solution. Duration: 1s0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.23; $M_{\theta\theta}$-0.89; $M_{\phi\phi}$-0.34; $M_{r\theta}$-0.46; $M_{\theta\phi}$0.61; $M_{\phi r}$-0.63; Fault plane solution: $M_0$1.48000×10^{16} NP1: ϕ_s146.76000°, δ49.73000°, λ125.74000°. NP2: ϕ_s278.69000°, δ51.73000°, λ55.41000°. Principal axes: T 1.6193, Plg64.0000°, Azm125.0000°; N -0.3354, Plg26.0000°, Azm302.0000°; P -1.2839, Plg1.0000°, Azm32.0000°;*
*NEIC **06** 12:40:42.1, 17.°97N×68.°41W, h70km*
*SDD **06** 12:40:43.0±2.4, 17.°72N×68.°44W, h31km±20km, MD4.0, ML4.6, MW4.6, Presumed earthquake*
*OSPL **06** 12:40:43.4±2.7, 17.°91N×68.°37W, h85km±30km, ML5.1, Presumed earthquake*
ISC 06 12:40:41.3±0.4**, 17.°94N**±0.°04×**68.°45W**±0.°03**, h88**km±3km**, h88**km**:pP-P, n757,** σ1s**29**/597**, mb4.8**/262**, 33C-2D, Mona Passage**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HIDR	**Higuey Centro**	**0.70**	**339**	⇑*i*P	**Pn**	**12 40 58.2**	**+0.5**
HIDR				⇑*i*S	**Sn**	**12 41 09.0**	**-0.9**
HIDR				IAML		12 41 10.7	
	comp=N,92μm,0.2s						
SPM1	**San Pedro UASD**	**0.96**	**302**	IAML		12 41 16.3	
	comp=N,34μm,0.2s						
IDE	**Isla Desecheo**	**1.03**	**64**		**Pn**	**12 41 01.5**	**+0.2**
DR12	**Loma Pena Alta**	**1.22**	**314**		**Pn**	**12 41 03.8**	**+0.2**
DR12				Sn	**Sn**	**12 41 19.5**	**-0.8**
HATOM	**Hato Mayor del**	**1.22**	**314**	⇑*i*P	**Pn**	**12 41 03.8**	**+0.3**
HATOM				⇑*i*S	**Sn**	**12 41 19.8**	**-0.5**
HATOM				IAML		12 41 20.5	
	comp=N,67μm,0.3s						
PRSN	**Puerto Rico Se**	**1.27**	**77**		**Pn**	**12 41 03.9**	**-0.2**
PRSN				Sn	**Sn**	**12 41 20.1**	**-1.2**
PRSN				IAML		12 41 21.3	
	comp=N,14μm,0.4s						
PRSN				IAML		12 41 23.2	
	comp=N,21μm,0.2s						
PRSN	**Puerto Rico Se**	**1.27**	**77**	⇑*i*P	**Pn**	**12 41 04.0**	**-0.1**
PRSN				⇑*i*S	**Sn**	**12 41 20.4**	**-1.0**
PRSN				IAML		12 41 23.2	
	comp=N,12μm,0.2s						
CRPR	**Cabo Rojo, PR**	**1.28**	**87**		**Pn**	**12 41 03.9**	**-0.3**
CRPR				Sn	**Sn**	**12 41 20.5**	**-1.0**
CRPR	**Cabo Rojo, PR**	**1.28**	**87**	⇓*i*P	**Pn**	**12 41 04.1**	**-0.1**
CRPR				⇑*i*S	**Sn**	**12 41 18.8**	**-2.7**
CRPR				IAML		12 41 20.6	
	comp=N,8μm,0.6s						
CRPR	**Cabo Rojo, PR**	**1.28**	**87**	*i* P	**Pn**	**12 41 04.1**	**-0.1**
CRPR				IAML		12 41 21.0	
	comp=Z,8μm,0.9s						
LSP	**Las Mesas**	**1.32**	**79**		**Pn**	**12 41 04.6**	**-0.1**
MLPR	**Magueyes Islan**	**1.34**	**88**		**Pn**	**12 41 04.7**	**-0.2**
AGPR	**Aguadilla, PR**	**1.38**	**67**		**Pn**	**12 41 05.5**	**0.0**
SDD	**Santo Domingo**	**1.48**	**291**		**Pn**	**12 41 07.6**	**+0.9**
SDD	**Santo Domingo**	**1.48**	**291**	P	**Pn**	**12 41 07.6**	**+0.9**
SDD				S	**Sn**	**12 41 25.8**	**-0.2**
SDD	**Santo Domingo**	**1.48**	**291**	⇑*i*P	**Pn**	**12 41 07.7**	**+0.9**
SDD				⇑*i*S	**Sn**	**12 41 25.9**	**-0.2**
SDD				IAML		12 41 27.8	
	comp=N,16μm,0.5s						
SDD	**Santo Domingo**	**1.48**	**291**	*i* P	**Pn**	**12 41 07.6**	**+0.9**
SDD				*e*S	**Sn**	**12 41 26.4**	**+0.4**
SDD				IAML		12 41 27.3	
	comp=Z,12μm,0.6s						
GBPR	**Guanica, Bosqu**	**1.50**	**88**		**Pn**	**12 41 07.0**	**+0.1**
GBPR					**Sn**	**12 41 25.8**	**-0.5**
SMDR	**Samana, DR**	**1.52**	**333**		**Pn**	**12 41 08.5**	**+1.3**
SMDR					**Sn**	**12 41 28.3**	**+1.6**
SMDR	**Samana, DR**	**1.52**	**333**	⇑*i*P	**Pn**	**12 41 08.7**	**+1.5**
SMDR				⇑*i*S	**Sn**	**12 41 28.9**	**+2.2**
AOPR	**Arecibo Observ**	**1.67**	**76**		**Pn**	**12 41 08.9**	**-0.2**
AOPR				IAML		12 41 30.9	
	comp=Z,14μm,0.4s						
AOPR	**Arecibo Observ**	**1.67**	**76**	⇑*i*P	**Pn**	**12 41 08.9**	**-0.2**
AOPR				⇑*i*S	**Sn**	**12 41 29.6**	**-0.6**
AOPR				IAML		12 41 37.5	
	comp=N,12μm,0.6s						
UUPR	**Utuado, UPR, P**	**1.68**	**79**		**Pn**	**12 41 08.9**	**-0.3**
OBIP	**Obispado Ponce**	**1.76**	**86**	*i* P	**Pn**	**12 41 10.1**	**-0.2**
OBIP				*e*S	**Sn**	**12 41 31.5**	**-0.9**
OBIP				IAML		12 41 31.9	
	comp=Z,3μm,0.4s						
CELP	**Cerrillos**	**1.79**	**85**		**Pn**	**12 41 10.6**	**-0.1**
CELP				IAML		12 41 32.6	
	comp=Z,7μm,0.7s						
CELP				IAML		12 41 33.5	
	comp=Z,6μm,0.5s						
CELP	**Cerrillos**	**1.79**	**85**	⇑*i*P	**Pn**	**12 41 10.6**	**-0.1**
CELP				⇑*i*S	**Sn**	**12 41 30.1**	**-2.9**
CELP				IAML		12 41 33.2	
	comp=N,2μm,0.5s						
DR08	**Loma La Naviza**	**1.81**	**305**	⇑*i*P	**Pn**	**12 41 11.3**	**+0.4**
DR08				*i* S	**Sn**	**12 41 34.0**	**+0.4**
DR08				IAML		12 41 34.3	
	comp=N,23nm,0.4s						
BAN1	**Bani Escuela**	**1.82**	**281**	IAML		12 41 38.0	
	comp=N,21μm,0.2s						
BAN1				IAML		12 41 38.0	
	comp=N,21μm,0.2s						
BANI	**BANI**	**1.87**	**284**		**Pn**	**12 41 13.1**	**+1.2**
BANI	**BANI**	**1.87**	**284**	⇑*i*P	**Pn**	**12 41 13.0**	**+1.2**
BANI				⇑*i*S	**Sn**	**12 41 33.8**	**-1.2**
BANI				IAML		12 41 40.4	
	comp=N,36μm,0.5s						
EMPR	**Esperanza - Ma**	**1.91**	**73**		**Pn**	**12 41 12.4**	**+0.2**
EMPR					**Sn**	**12 41 35.3**	**-0.4**
NADR	**Nagua**	**1.94**	**317**	⇑*i*P	**Pn**	**12 41 15.0**	**+2.4**
NADR				⇑*i*S	**Sn**	**12 41 39.1**	**+2.6**
NADR				IAML		12 41 42.9	
	comp=N,12nm,0.7s						
LONA1	**Toro Cenizo, N**	**1.96**	**317**	*i* P	Pn	12 41 22.1	+9.1
LONA1				*e*S	Sn	12 41 48.3	+11
LONA1				IAML		12 41 50.4	
	comp=Z,29μm,0.6s						
ECPR	**Experimental S**	**2.02**	**79**		**Pn**	**12 41 13.6**	**-0.2**
ECPR				IAML		12 41 40.1	
	comp=Z,18μm,0.2s						
SJG	**San Juan**	**2.20**	**85**	P	**Pn**	**12 41 15.7**	**-0.3**
	comp=Z,248nm,0.3s,baz=285,slow=12,SNR=73						
SJG				LR	LR	12 41 24.5	
	comp=Z,87nm,19.7s,baz=274,slow=20						
SJG				S	**Sn**	**12 41 40.4**	**-2.2**
	comp=Z,1μm,0.2s,baz=316,slow=17,SNR=12						
SJG	**San Juan**	**2.20**	**85**	IAML		12 41 43.9	
	comp=Z,5μm,0.7s						
SJG	**San Juan**	**2.20**	**85**	P	**Pn**	**12 41 15.7**	**-0.3**
SJG				S	**Sn**	**12 41 40.8**	**-1.8**
SJG	**San Juan**	**2.20**	**85**	*e*P	**Pn**	**12 41 15.6**	**-0.4**
SJG	**San Juan**	**2.20**	**85**	*i* P	**Pn**	**12 41 15.8**	**-0.4**
SJG				*e*S	**Sn**	**12 41 40.6**	**-2.0**
SJG				IAML		12 41 44.3	
	comp=Z,2μm,0.3s						
CADR	**Cabrera**	**2.23**	**321**	⇑*i*P	**Pn**	**12 41 17.8**	**+1.3**
CADR				⇓*i*S	**Sn**	**12 41 46.8**	**+3.6**
CADR				IAML		12 41 47.6	
	comp=N,99μm,0.6s						

ABDR **Alto Bandera** 2.24 293 ⇑*i*P Pn 12 41 18.5 +1.5
ABDR ⇑*i*S Sn 12 41 43.6 -0.6
ABDR IAML 12 41 59.8
comp=N,0.3nm,0.8s
PDPR **Patillas Dam,** 2.31 88 Pn 12 41 17.2 -0.4
PDPR IAML 12 41 46.0
comp=N,3µm,0.6s
HUMP **Col San Antoni** 2.48 85 Sn 12 41 48.3 -1.2
HUMP **Col San Antoni** 2.48 85 Pn 12 41 19.9 0.0
HUMP IAML 12 41 53.9
comp=N,4µm,0.5s
HUMP IAML 12 41 54.7
comp=N,5µm,0.2s
SC01 **Santiago de lo** 2.62 305 Pn 12 41 22.6 +1.0
SC01 **Santiago de lo** 2.62 305 ⇑*i*P Pn 12 41 25.0 +3.3
SC01 ⇑*i*S Sn 12 41 52.7 0.0
SC01 IAML 12 41 59.5
comp=N,16µm,0.6s
SC01 **Santiago de lo** 2.62 305 *i* P Pn 12 41 24.5 +2.8
SC01 IAML 12 42 04.3
comp=Z,8µm,0.5s
PODR **Polo** 2.70 275 *i* P Pn 12 41 23.6 +0.6
PODR eS Sn 12 41 54.4 -0.6
SODR **Sosua Marina B** 2.70 312 ⇑*i*P Pn 12 41 24.7 +1.9
SODR ⇑*i*S Sn 12 41 57.2 +2.4
SODR IAML 12 42 11.2
comp=N,17µm,0.8s
LOVI **El Cajuil, Ovi** 2.78 268 *i* P Pn 12 41 25.0 +1.1
LOVI eS Sn 12 41 56.5 0.0
LOVI IAML 12 41 58.7
comp=Z,13µm,1.0s
SDDR **Presa de Saban** 2.89 292 Pn 12 41 26.3 +1.0
SDDR IAML 12 42 09.0
comp=Z,6µm,0.7s
SDDR IAML 12 42 10.9
comp=Z,5µm,0.6s
SDDR **Presa de Saban** 2.89 292 P Pn 12 41 28.0 +2.7
SDDR S Sn 12 42 00.3 +1.1
SDDR **Presa de Saban** 2.89 292 P Pn 12 41 28.5 +3.2
SDDR **Presa de Saban** 2.89 292 eP Pn 12 41 27.9 +2.6
SDDR **Presa de Saban** 2.89 292 ⇑*i*P Pn 12 41 29.4 +4.1
SDDR ⇑*i*S Sn 12 41 57.9 -1.3
SDDR IAML 12 42 10.8
comp=N,5µm,0.5s
SDDR **Presa de Saban** 2.89 292 *i* P Pn 12 41 26.6 +1.3
SDDR IAML 12 42 14.0
comp=Z,4µm,0.5s
SDDR **Presa de Saban** 2.89 292 eP Pn 12 41 27.9 +2.6
SDDR ePg 12 41 30.1
SDDR eS Sn 12 41 57.2 -2.0
SDDR IAML 12 42 08.8
comp=Z,6µm,0.6s
SDDR IAML 12 42 09.8
comp=Z,4µm,0.5s
LODU1 **El Espartillar** 2.90 279 *i* P Pn 12 41 27.0 +1.5
LODU1 eS Sn 12 42 00.9 +1.3
LODU1 IAML 12 42 03.6
comp=Z,10µm,0.4s
LONE3 **El Aguacate, B** 2.93 284 *i* P Pn 12 41 27.1 +1.0
LONE3 eS Sn 12 42 01.3 +0.8
LONE3 IAML 12 42 04.3
comp=Z,3µm,0.6s
LOBH **Bahia de las A** 3.04 269 *i* P Pn 12 41 28.6 +1.4
LOBH eS Sn 12 42 02.8 +0.1
LOBH IAML 12 42 06.2
comp=Z,11µm,0.5s
CUPR **Culebra, Puert** 3.04 83 Pn 12 41 26.4 -0.9
CUPR IAML 12 42 07.1
comp=Z,2µm,0.5s
REDR **Restauracion** 3.05 294 ⇑*i*P Pn 12 41 34.1 +6.7
REDR ⇑*i*S Sn 12 42 09.7 +6.7
REDR IAML 12 42 16.6
comp=N,5µm,0.2s
LOPP1 **Punta Rusia, P** 3.23 307 *i* P Pn 12 41 30.8 +0.9
LOPP1 IAML 12 42 23.0
comp=Z,5µm,0.8s
LODA1 **ITESIL, Dajabo** 3.47 298 *i* P Pn 12 41 34.5 +1.3
LODA1 IAML 12 42 17.0
comp=Z,3µm,0.5s
PAPH **Port-au-Prince** 3.70 280 P Pn 12 41 38.3 +2.0
PAPH S Sn 12 42 20.1 +1.2
PAPH **Port-au-Prince** 3.70 280 *i* P Pn 12 41 38.1 +1.8
PAPH IAML 12 42 28.9
comp=Z,3µm,1.0s
PAPH **Port-au-Prince** 3.70 280 eP Pn 12 41 38.1 +1.8
PAPH IVmB_BB 12 42 09.6
comp=Z,6µm,0.3s
PAPH eS Sn 12 42 18.1 -0.8
GRTK **Grand Turk** 4.36 325 Pn 12 41 44.1 -1.2
GRTK **Grand Turk** 4.36 325 P Pn 12 41 44.0 -1.3
GRTK S Sn 12 42 32.0 -2.9
GRTK **Grand Turk** 4.36 325 *i* P Pn 12 41 44.0 -1.2
GRTK eS Sn 12 42 32.0 -2.9
GRTK IAML 12 42 34.8
comp=Z,2µm,0.2s
GRTK **Grand Turk** 4.36 325 eP Pn 12 41 43.9 -1.3
GRTK eS Sn 12 42 30.4 -4.5
SABA **Saba** 4.97 93 Pn 12 41 53.8 +0.1
SABA **Saba** 4.97 93 eP Pn 12 41 53.5 -0.1
SMRT **St. Maarten** 5.12 88 Pn 12 41 54.4 -1.1
SMRT IAML 12 42 51.1
comp=N,1µm,0.3s
SMRT IAML 12 42 55.4
comp=E,1µm,0.5s
SMRT **St. Maarten** 5.12 88 eP Pn 12 41 53.9 -1.7
SMRT x x 12 42 48.7
SEUS **St. Eustatius** 5.23 94 Pn Pn 12 41 57.7 +0.6
SEUS IAML 12 43 08.2
comp=N,1µm,0.5s
SEUS IAML 12 43 08.7
comp=E,1µm,0.5s
SEUS **St. Eustatius** 5.23 94 x x 12 41 57.5
SKI **Saint Kitts** 5.48 95 eP Pn 12 42 01.3 +0.7
SKI eS Sn 12 42 59.4 -2.9
MASC **Masc** 5.90 293 eP Pn 12 42 04.1 -2.1
MASC IVmB_BB 12 42 08.5
comp=Z,736nm,0.4s
MASC eS Sn 12 43 09.0 -3.5
ANWB **Willy Bob** 6.36 91 Pn 12 42 12.5 +0.1
ANWB **Willy Bob** 6.36 91 eP Pn 12 42 11.8 -0.7
ANWB eS Sn 12 43 18.8 -4.8
QMBU **Quimbuelo** 6.42 292 eP Pn 12 42 10.6 -2.7
QMBU IVmB_BB 12 42 12.1
comp=Z,452nm,0.3s
QMBU eS Sn 12 43 21.0 -4.2
DHSZ **Broadband at M** 6.61 104 eP Pn 12 42 16.3 +0.5
DHSZ x x 12 43 24.0
GDHS **Morne Mazeau,** 6.61 104 Pn 12 42 15.9 0.0
GTBY **Guantanamo Bay** 6.61 288 Pn 12 42 14.8 -1.1
GTBY **Guantanamo Bay** 6.61 288 eP Pn 12 42 14.3 -1.5
GTBY eS Sn 12 43 26.4 -3.3
NMDO **Nuevo Mundo** 6.70 294 Pn 12 42 13.7 -3.4
NMDO **Nuevo Mundo** 6.70 294 eP Pn 12 42 13.1 -4.0
NMDO eS Sn 12 43 26.8 -5.1
MOAC **Moa** 6.72 295 eP Pn 12 42 20.8 -3.5
MOAC eS Sn 12 43 26.2 -6.2
MMLZ **Guadeloupe Bro** 6.76 105 eP Pn 12 42 18.3 +0.4
MMLZ x x 12 43 27.1
CBE **Ff, Capester** 6.81 105 Sn 12 43 28.5 -6.2
CBE **Ff, Capester** 6.81 105 Pn 12 42 19.1 +0.5
ABD **La Joyeuse, An** 6.81 101 Pn 12 42 18.8 +0.2
TBG **Guadaloupe-3** 6.84 107 eP Pn 12 42 18.8 -0.2
TDBA **Terre de Bas,** 6.85 107 Pn 12 42 19.4 +0.2
URIC **Uribia, Colomb** 7.08 209 P Pn 12 42 21.2 -1.1
comp=Z,4µmcomp=Z,114nm,0.5s
URI **Uribia** 7.08 209 P Pn 12 42 22.6 +0.2
URI S Sn 12 43 38.0 -3.3
MAGL **Barre de l'ile** 7.14 105 Pn 12 42 23.4 +0.3
RCC **Rio Carpintero** 7.15 288 eP Pn 12 42 21.5 -1.8
RCC eS Sn 12 43 37.1 -6.0
DSLB **Salisbury** 7.18 109 eP Pn 12 42 24.4 +0.7
DSLB x x 12 43 37.0
DSDZ **La Diserade, G** 7.24 102 eP Pn 12 42 25.4 +0.8
DSDZ x x 12 43 39.3
MARVS **Santiago de Cu** 7.34 287 eP Pn 12 42 23.6 -2.2
MARVS eS Sn 12 43 42.5 -5.1
PINC **Pinares de May** 7.38 291 eP Pn 12 42 23.1 -3.3
PINC eS Sn 12 43 43.0 -5.7
SVN **Savane Anatole** 7.64 113 eP Pn 12 42 29.6 -0.4
SVN x x 12 43 48.6
HLGC **Holguin** 7.76 293 eP Pn 12 42 30.2 -1.4
HLGC eS Sn 12 43 55.1 -2.7
CHIV **Chivirico** 7.80 286 Pn 12 42 31.6 -0.6
CHIV **Chivirico** 7.80 286 eP Pn 12 42 29.8 -2.4
CHIV eS Sn 12 43 54.7 -4.2
YAR **Yar** 7.86 289 eP Pn 12 42 30.3 -2.6
YAR eS Sn 12 43 56.8 -3.5
BIM **Bigot** 7.86 115 eP Pn 12 42 32.9 -0.1
BIM x x 12 43 53.0
HOJ **Hope** 7.90 272 ⇑*i*P Pn 12 42 34.4 +0.9
ILAM **Ilet Lapin Mar** 7.92 112 eP Pn 12 42 35.2 +1.3
STH **Stony Hill** 7.95 272 ⇑*i*P Pn 12 42 35.0 +0.7
CRJC **Cerrejon, Guaj** 8.10 213 P Pn 12 42 34.8 -1.6
comp=Z,3µmcomp=Z,50nm,0.6s
SLBI **Saint Lucia, B** 8.18 117 eP Pn 12 42 37.2 -0.1
SLBI x x 12 43 58.8
SVB **Belmont** 8.34 123 eP Pn 12 42 39.6 0.0
MCLT **Moule a Chique** 8.36 119 eP Pn 12 42 39.0 -0.8
LMGC **Las Mercedes** 8.36 286 eP Pn 12 42 38.3 -1.5
MTDJ **Mount Denham** 8.64 273 eP Pn 12 42 43.9 +0.2
MTDJ eS Sn 12 44 16.1 -3.5
GRSS **Sisters** 8.66 129 eP Pn 12 42 43.5 -0.4
GCMP **Grenada, Carri** 8.68 128 eP Pn 12 42 43.1 -1.0
GCMP x x 12 44 11.8
GRFF **Grenada Fort F** 8.74 131 eP Pn 12 42 45.0 +0.1
GRGR **Grenville** 8.74 130 Pn 12 42 41.0 -3.9
GRGR **Grenville** 8.74 130 eP Pn 12 42 45.0 0.0
GRGR x x 12 44 14.8
SDV **Santo Domingo** 9.24 194 P Pn 12 42 52.5 +0.5
comp=Z,68nm,0.3s,baz=36,slow=7.2,SNR=148
SDV **Santo Domingo** 9.24 194 Pn 12 42 53.2 +1.2
SDV **Santo Domingo** 9.24 194 P Pn 12 42 53.6 +1.6
comp=Z,2µmcomp=Z,188nm,0.9s
SDV **Santo Domingo** 9.24 194 eP Pn 12 42 53.3 +1.3
CCCC **Cccc** 9.36 292 eP Pn 12 42 44.9 -8.5
CCCC eS Sn 12 44 21.5 -15
ARGC **Ariguani, Magd** 9.80 216 P Pn 12 42 58.6 -0.9
comp=Z,45nm,0.4s
BBGH **Gun Hill** 9.80 118 eP Pn 12 43 03.8 +4.3
BBGH x x 12 44 47.0
TRN **Trinidad (W)** 9.96 136 eP Pn 12 43 03.6 +2.0
TRN x x 12 44 45.1
SJCC **San Jacinto, C** 10.32 220 P Pn 12 43 03.4 -3.2
OCAC **Ocana** 10.74 207 P Pn 12 43 11.7 -0.7
CBCY **The Bluff, Cay** 10.86 281 eP Pn 12 43 13.0 -0.8
LCCY **Blossom Villag** 11.15 281 eP Pn 12 43 16.5 -1.3
PAMC **Pamplona, Colo** 11.32 202 P Pn 12 43 20.1 -0.4
comp=Z,2µmcomp=Z,124nm,0.6s
BRJC **Barrancabermej** 12.06 206 P Pn 12 43 29.0 -1.1
comp=Z,4µmcomp=Z,283nm,0.5s
BARC **Barichara** 12.18 203 P Pn 12 43 31.7 -0.3
UREC **San Jos de Ur** 12.25 215 P Pn 12 43 32.5 -0.2
CAPC **Capurgana** 12.66 224 P Pn 12 43 36.0 -2.2
APAC **Apartado, Choc** 12.73 219 P Pn 12 43 38.3 -0.9
PTBC **PUERTO BERRIO,** 12.75 208 P Pn 12 43 38.8 -0.6
RUSC **La Rusia** 12.80 201 P Pn 12 43 40.7 +0.2
RUSC **La Rusia** 12.80 201 P Pn 12 43 40.1 -0.4
DBBC **Dabeiba** 13.23 216 P Pn 12 43 45.1 -0.7
SPBC **San Pablo de B** 13.39 205 P Pn 12 43 46.5 -1.4
HELC **Santa Helena** 13.56 211 P Pn 12 43 51.5 +1.0
HELC **Santa Helena** 13.56 211 P P 12 43 54.4 -2.1
BCIP **Isla Barro Col** 14.08 233 Pn 12 43 58.1 +1.2
ROSC **El Rosal** 14.22 204 P Pn 12 43 59.2 +0.1
comp=Z,26nm,0.5s,baz=44,slow=14,SNR=10
ROSC **El Rosal** 14.22 204 Pn 12 43 59.6 +0.5
SOR **Soroa** 14.48 292 Pn Pn 12 44 02.8 +0.9
BBSR **BB Station** 14.77 13 Pn Pn 12 44 06.0 +0.4
SIUN **Universidad Ur** 16.25 257 P P 12 44 26.6 +0.6
656A **Willston** 17.18 314 Pn 12 44 35.6 -0.2
BOAV **Boa Vista** 17.29 152 P P 12 44 38.9 +1.5
BOAV IAmb IAmb 12 44 40.0
comp=Z,55nm,0.9s
BOAV **Boa Vista** 17.29 152 eP P 12 44 38.9 +1.5
JTS **Las Juntas de** 17.71 247 P Pn 12 44 43.0 +0.7
comp=Z,2.9nm,0.5s,baz=97,slow=7.3,SNR=5.3
JTS **Las Juntas de** 17.71 247 P P 12 44 42.6 +0.5
456A **Hilliard** 17.73 318 P P 12 44 42.0 0.0
Y60A **Bolivia** 18.23 333 P Pn 12 44 48.7 +0.2
CSU **Charleston Sou** 18.27 327 P Pn 12 44 52.8 +3.8
NHSC **New Hope** 18.42 327 P Pn 12 44 55.4 +4.7
HERN **Volcan Telica** 18.50 256 P P 12 44 50.6 -0.2
TEIG **Tepich** 18.88 280 P P 12 44 55.1 +0.3
TEIG IAmb IAmb 12 45 26.6
comp=Z,88nm,1.4s
TIGA **Tifton** 19.20 317 P P 12 44 59.0 +0.8
TIGA IAmb IAmb 12 45 32.4
comp=Z,61nm,0.8s
BIRD **Birdtown, Kers** 19.79 330 IAmb IAmb 12 45 05.9
comp=Z,63nm,0.8s
W57A **Gilead** 19.99 331 P P 12 45 06.9 +0.2
MDP **Montagnes des** 20.04 128 P P 12 45 08.3 +0.8
comp=Z,26nm,0.8s,baz=320,slow=14,SNR=6.2
comp=Z,26nm,0.8s
V58A **Windy Hill, Pi** 20.14 334 IAmb IAmb 12 45 10.0
comp=Z,50nm,0.9s
OTAV **Otavalo** 20.15 210 P P 12 45 09.0 -0.1
OTAV IAmb IAmb 12 45 35.2
comp=Z,36nm,0.8s
OTAV **Otavalo** 20.15 210 eP P 12 45 09.7 +0.5
HODGE **Hodges** 20.39 325 IAmb IAmb 12 45 15.4
comp=Z,69nm,0.8s
PETF **Flores** 20.46 270 P P 12 45 13.1 +1.1
GOGA **Godfrey** 20.47 322 P P 12 45 12.2 +0.3
GOGA IAmb IAmb 12 45 17.1
comp=Z,50nm,0.7s
T59A **Double "B" Far** 20.59 339 P 12 45 13.9 +0.7
PAULI **Pauline** 20.61 327 IAmb IAmb 12 45 14.5
comp=Z,41nm,0.9s
KMSC **Kings Mountain** 20.61 329 P P 12 45 13.7 +0.1
KMSC IAmb IAmb 12 45 14.5
comp=Z,48nm,0.9s
152A **Waverly Hall** 20.73 318 P P 12 45 15.6 +0.8
152A IAmb IAmb 12 45 20.7
comp=Z,64nm,0.8s
V55A **Taylorsville** 21.13 330 IAmb IAmb 12 45 22.8
comp=Z,36nm,0.8s
Y52A **Lilburn** 21.14 322 IAmb IAmb 12 45 23.6
comp=Z,50nm,1.1s
APG **El Apazote** 21.31 265 P P 12 45 22.8 +1.4
comp=Z,0.5nm,0.7s,baz=119,slow=7.9,SNR=4.3
BG3 **Lake Jocassee** 21.32 326 IAmb IAmb 12 45 25.0
comp=Z,33nm,0.8s
R58B **Mineral** 21.59 339 IAmb IAmb 12 45 26.9
comp=Z,64nm,0.8s
TEFE **Tefe** 21.64 170 eP P 12 45 26.6 +2.0
S57A **Dark Hollow, R** 21.79 337 IAmb IAmb 12 45 42.2
comp=Z,32nm,0.5s
BLA **Blacksburg** 21.90 334 IAmb IAmb 12 45 30.3
comp=Z,61nm,1.1s
W52A **Murphy** 21.95 324 IAmb IAmb 12 45 30.9
comp=Z,32nm,0.9s
U54A **Nelsons Funny** 21.96 330 IAmb IAmb 12 45 47.4
comp=Z,34nm,0.7s
TKL **Tuckaleechee C** 22.28 325 LR LR 12 53 26.4
comp=Z,126nm,21.3s,baz=120,slow=34
TKL **Tuckaleechee C** 22.28 325 IAmb IAmb 12 45 49.0
comp=Z,23nm,0.6s
MACA **Manacapuru-AM** 22.32 159 P P 12 45 31.9 0.0
MACA IAmb IAmb 12 45 35.0
comp=Z,33nm,0.7s
MACA **Manacapuru-AM** 22.32 159 eP P 12 45 32.5 +0.7
LRAL **Lakeview Retre** 22.45 316 IAmb IAmb 12 45 56.1
comp=Z,52nm,1.3s
FPAL **Fort Paine** 22.53 321 IAmb IAmb 12 45 56.9
comp=Z,48nm,1.4s
CPCT **Cooper Cave** 22.54 324 IAmb IAmb 12 45 52.6
comp=Z,27nm,0.6s
Y49A **Blount Mountai** 22.58 318 P P 12 45 34.5 0.0
Y49A IAmb IAmb 12 45 57.2
comp=Z,46nm,1.1s
SDMD **Soldier's Deli** 22.60 343 IAmb IAmb 12 45 51.6
comp=Z,40nm,1.1s
W50A **Signal Mountai** 22.81 322 IAmb IAmb 12 45 39.7
comp=Z,32nm,0.8s
TZTN **Tazewell** 22.83 327 IAmb IAmb 12 45 38.5
comp=Z,102nm,1.4s
Q56A **Snyder Ridge,** 23.01 338 IAmb IAmb 12 46 16.3
comp=Z,57nm,1.3s
MVL **Millersville** 23.02 344 IAmb IAmb 12 45 41.4
comp=Z,54nm,1.0s
SWET **Sewanee** 23.19 321 IAmb IAmb 12 45 42.9
comp=Z,33nm,0.8s
Z47A **Carrollton** 23.27 315 IAmb IAmb 12 46 04.1
comp=Z,96nm,1.5s
PAGS **Pennsylvania G** 23.34 344 IAmb IAmb 12 46 08.5
comp=Z,54nm,1.1s
WSPT **Westport, CT** 23.53 351 IAmb IAmb 12 46 22.3
comp=Z,27nm,0.8s
Q54A **Coxs Mills** 23.58 335 IAmb IAmb 12 45 46.2
comp=Z,43nm,0.7s
M63A **Gales Ferry** 23.59 353 IAmb IAmb 12 45 46.2
comp=Z,30nm,0.9s
MCWV **Mont Chateau** 23.79 338 IAmb IAmb 12 45 49.1
comp=Z,28nm,0.8s
T50A **Nancy** 23.86 326 IAmb IAmb 12 45 48.0
comp=Z,45nm,0.7s
UCCT **U. Connecticut** 24.00 353 IAmb IAmb 12 45 50.5
comp=Z,67nm,1.0s
U49A **Red Boiling Sp** 24.01 324 IAmb IAmb 12 45 50.6
comp=Z,42nm,0.9s
SSPA **Standing Stone** 24.04 342 P 12 45 49.3 +1.1
SSPA IAmb IAmb 12 45 50.6
comp=Z,34nm,0.9s
V48A **Smith Brothers** 24.07 321 IAmb IAmb 12 45 51.2
comp=Z,40nm,0.9s
Q52A **Bidwell** 24.16 333 IAmb IAmb 12 45 51.3
comp=Z,51nm,0.9s
P53A **Whipple** 24.23 335 IAmb IAmb 12 46 26.3
comp=Z,58nm,1.3s
KSPA **Keystone Colle** 24.36 347 IAmb IAmb 12 45 53.1
comp=Z,64nm,1.3s
O54A **Avella** 24.45 338 IAmb IAmb 12 45 54.4
comp=Z,63nm,1.1s
M57A **Sunshine Farm,** 24.48 344 IAmb IAmb 12 45 54.9
comp=Z,45nm,0.9s
HRV **Adam Dziewonsk** 24.63 354 P P 12 45 53.9 +0.4
Q51A **Peebles** 24.69 331 IAmb IAmb 12 45 56.0
comp=Z,59nm,0.9s
O53A **New Philadelph** 24.82 336 IAmb IAmb 12 45 58.3
comp=Z,26nm,0.7s
L59A **Walton** 24.82 348 IAmb IAmb 12 45 58.1
comp=Z,42nm,0.9s
OXF **Oxford** 24.94 316 P 12 45 56.9 +0.5
OXF IAmb IAmb 12 46 19.2
comp=Z,60nm,0.9s
WVT **Waverly** 24.94 320 P 12 45 56.6 +0.1
WVT IAmb IAmb 12 45 58.9
comp=Z,45nm,0.7s
O52A **Adamsville** 24.95 335 IAmb IAmb 12 45 58.1
comp=Z,49nm,0.7s
BINY **Binghamton** 25.02 347 IAmb IAmb 12 46 00.6
comp=Z,43nm,0.9s
T47A **Sharon Grove** 25.10 323 IAmb IAmb 12 46 00.7
comp=Z,35nm,1.1s
N53A **Lisbon** 25.16 337 IAmb IAmb 12 46 02.3
comp=Z,46nm,0.9s
CMIG **Matias Romero** 25.21 272 LR LR 12 57 28.8
comp=Z,74nm,18.0s,baz=46,slow=40
L56A **Greenwood** 25.34 344 IAmb IAmb 12 46 03.7
comp=Z,34nm,0.8s
143A **Socs Landing,** 25.35 310 IAmb IAmb 12 46 03.1
comp=Z,26nm,0.7s
ITTB **Itaituba** 25.47 149 eP P 12 46 02.1 +0.8
WCI **Wyandotte Cave** 25.54 326 P P 12 46 02.2 +0.5
WCI IAmb IAmb 12 46 03.7
comp=Z,49nm,0.8s
J61A **Chester** 25.57 353 IAmb IAmb 12 46 06.0
comp=Z,26nm,0.8s
K57A **Scipio Center** 25.65 346 IAmb IAmb 12 46 04.5
comp=Z,38nm,1.0s
N51A **Ashland** 25.85 335 IAmb IAmb 12 46 05.8
comp=Z,33nm,0.6s
MMNY **Mt. Morris Dam** 25.99 344 IAmb IAmb 12 46 10.7
comp=Z,72nm,1.4s
P48A **Milroy** 26.02 329 IAmb IAmb 12 46 06.9
comp=Z,58nm,1.2s
O49A **Covington** 26.08 332 IAmb IAmb 12 46 07.9
comp=Z,31nm,0.8s
USIN **University of** 26.10 324 IAmb IAmb 12 46 31.2
comp=Z,49nm,0.9s
O48B **Farmland** 26.51 330 IAmb IAmb 12 46 11.5
comp=Z,34nm,0.7s
ATAH **Atahualpa** 26.78 202 P P 12 46 15.0 +1.4
comp=Z,6.1nm,0.9s,baz=359,slow=8.5,SNR=4.8
comp=Z,6.1nm,0.9s
SIUC **Southern Illin** 26.82 321 IAmb IAmb 12 46 38.8
comp=Z,41nm,0.9s
S44A **Carbondale** 26.83 321 IAmb IAmb 12 46 38.8
comp=Z,37nm,0.9s
WHAR **Woolly Hollow** 27.33 314 IAmb IAmb 12 46 41.1
comp=Z,44nm,1.4s
NATX **Nacogdoches** 27.39 305 IAmb IAmb 12 46 20.4
comp=Z,29nm,0.7s
FCAR **Ozark Folk Cen** 27.55 315 IAmb IAmb 12 46 21.0
comp=Z,14nm,0.6s
DELO **Deloro Mine** 27.60 346 IAmb IAmb 12 46 21.6
comp=Z,50nm,1.4s
FVM **French Village** 27.72 321 IAmb IAmb 12 46 47.5
comp=Z,25nm,1.2s
NPGB **Novo Progresso** 27.99 151 eP P 12 46 24.1 +0.1
SADO **Sadowa** 28.21 344 LR LR 12 58 15.8
comp=Z,157nm,18.9s,baz=324,slow=37
CCM **Cathedral Cave** 28.27 320 P 12 46 26.4 +0.1
CCM IAmb IAmb 12 46 27.4
comp=Z,28nm,1.1s
Z38A **Mt. Pleasant** 28.27 308 IAmb IAmb 12 46 27.8
comp=Z,28nm,0.9s
MGMO **Mountain Grove** 28.37 317 IAmb IAmb 12 46 28.4
comp=Z,18nm,0.8s
J47A **Sumner** 28.78 335 IAmb IAmb 12 46 32.2
comp=Z,33nm,0.7s
RLO **Rose Lookout** 29.68 313 IAmb IAmb 12 46 39.9
comp=Z,23nm,1.0s
P40A **Paris** 29.69 321 IAmb IAmb 12 46 39.5
comp=Z,35nm,1.3s
N41A **Harden Midland** 29.78 324 IAmb IAmb 12 46 40.2
comp=Z,25nm,1.0s
FW13 **Cleburne** 29.79 304 IAmb IAmb 12 46 41.1
comp=Z,39nm,1.2s
LOOK **Love County** 30.24 308 IAmb IAmb 12 47 05.1
comp=Z,23nm,0.8s
PLPT **Palo Pinto** 30.65 305 IAmb IAmb 12 46 48.6
comp=Z,23nm,0.8s
OK052 **Battle Ridge R** 30.85 311 IAmb IAmb 12 46 50.7
comp=Z,33nm,1.1s
QUOK **Quay** 30.86 312 IAmb IAmb 12 46 50.2
comp=Z,26nm,0.9s
OK048 **Pawnee Station** 31.15 312 IAmb IAmb 12 46 52.9
comp=Z,16nm,0.9s
N38A **Joes South For** 31.19 322 IAmb IAmb 12 46 53.3
comp=Z,23nm,0.9s
CLDB **Colider** 31.23 155 eP P 12 46 53.4 +0.6
E46A **Sault Ste Mari** 31.24 339 IAmb IAmb 12 46 53.6
comp=Z,14nm,0.8s
PDRB **Porto dos Gac** 31.56 158 eP P 12 46 55.9 +0.4
WMOK **Wichita Mounta** 31.75 308 IAmb IAmb 12 46 57.6
comp=Z,19nm,0.7s
VILB **Vilhena** 31.75 165 P 12 46 58.6 +1.2
VILB **Vilhena** 31.75 165 eP P 12 46 58.5 +1.2
APMT **Aspermont** 32.25 305 IAmb IAmb 12 47 01.9
comp=Z,16nm,0.6s
OZNA **Ozona** 32.31 300 IAmb IAmb 12 47 03.4
comp=Z,13nm,0.8s
OK038 **West end E0370** 32.46 311 IAmb IAmb 12 47 04.1
comp=Z,24nm,1.1s
SGCY **Sterling City** 32.59 302 IAmb IAmb 12 47 05.0
comp=Z,17nm,1.0s
SN07 **Snyder 07** 32.77 304 IAmb IAmb 12 47 06.7
comp=Z,12nm,0.6s
DKNS **Dickens** 32.99 305 IAmb IAmb 12 47 08.6
comp=Z,24nm,1.5s
SMWD **Samnorwood** 33.00 308 IAmb IAmb 12 47 08.5
comp=Z,38nm,1.5s
229A **Bryant Ranch,** 33.16 301 IAmb IAmb 12 47 10.5
comp=Z,17nm,0.9s
TMB01 **Midkiff** 33.30 301 IAmb IAmb 12 47 11.2
comp=Z,16nm,0.9s
SMTB **Santa Maria do** 33.67 141 eP P 12 47 14.1 0.0
128A **Castleberry Fa** 33.90 302 IAmb IAmb 12 47 16.5
comp=Z,7.5nm,0.8s
SPMN **Marine on St.** 33.95 329 IAmb IAmb 12 47 16.7
comp=Z,17nm,0.9s
AMTX **Amarillo** 34.01 306 IAmb IAmb 12 47 17.8
comp=Z,20nm,1.0s
LPAZ **La Paz** 34.01 179 P P 12 47 18.1 +0.4
comp=Z,6.1nm,0.5s,baz=357,slow=7.1,SNR=17
comp=Z,6.1nm,0.5s
LPAZ **La Paz** 34.01 179 IAmb IAmb 12 47 23.8
comp=Z,13nm,0.8s
LPAZ **La Paz** 34.01 179 eP P 12 47 17.9 +0.3
LPAZ **La Paz** 34.01 179 P P 12 47 17.9 +0.3
LPAZ pP pP 12 47 38.6 +1.9
TXAR **Lajitas Array** 34.07 296 P P 12 47 17.3 -0.3
comp=Z,2.5nm,0.6s,baz=108,slow=7.9,SNR=30
TXAR ScP ScP 12 53 29.6 -1.0

comp=Z,0.8nm,0.7s,baz=122,slow=4.7,SNR=8.0
comp=Z,2.5nm,0.6s
TPB05 Hovey Rd 34.13 299 IAmb IAmb 12 47 21.7
comp=Z,6.5nm,0.6s
SNDB Serra Nova Dou 34.21 149 *e*P **P** **12 47 19.0 +0.3**
TPB06 Permian Basin 34.23 300 IAmb IAmb 12 47 19.0
comp=Z,25nm,0.7s
ALPN Alpine 34.27 298 IAmb IAmb 12 47 19.8
comp=Z,14nm,0.6s
PH02 Texas Public H 34.40 307 IAmb IAmb 12 47 21.6
comp=Z,28nm,1.1s
PTLB Pontes e Lacer 34.42 164 **P** **12 47 20.7 +0.3**
PTLB IAmb IAmb 12 47 47.0
comp=Z,13nm,1.0s
PTLB Pontes e Lacer 34.42 164 *e*P **P** **12 47 20.5 0.0**
SIV San Ignacio 34.49 167 LR LR 13 02 32.6
comp=Z,116nm,18.3s,baz=302,slow=38
TPB01 Permian Basin 34.52 299 IAmb IAmb 12 47 22.5
comp=Z,7.2nm,0.6s
NBPS Pedro II - PI 34.67 127 *e*P **P** **12 47 23.2 +0.4**
NBMO Morrinhos-CE 35.07 124 *e*P **P** **12 47 26.1 -0.2**
VHRN Van Horn 35.49 298 IAmb IAmb 12 47 30.9
comp=Z,8.1nm,0.8s
SALV Santo Antonio 35.90 159 *e*P **P** **12 47 33.2 +0.1**
MNTX Cornudas Mount 36.03 299 IAmb IAmb 12 48 03.8
comp=Z,11nm,0.8s
SCHQ Schefferville 36.85 2 P **P** **12 47 40.9 0.0**
comp=Z,24nm,0.5s,baz=187,slow=7.7,SNR=120
comp=Z,24nm,0.5s
ARAG Araguaiana, MT 37.23 153 *e*P **P** **12 47 44.8 +0.3**
GO01 Chusmiza 37.38 181 P **P** **12 47 45.6 -0.7**
PB11 IPOC Station P 37.48 182 P **P** **12 47 46.0 -0.8**
ANMO Albuquerque 37.74 304 LR LR 13 06 55.0
comp=Z,63nm,18.4s,baz=118,slow=42
ANMO Albuquerque 37.74 304 **P** **12 47 49.3 +0.3**
ANMO Albuquerque 37.74 304 IAmb IAmb 12 47 50.2
comp=Z,11nm,1.4s
ANMO Albuquerque 37.74 304 P **P** **12 47 49.1 +0.1**
ANMO pP **pP** **12 48 10.1 +0.8**
ANMO x x 12 48 11.2
ANMO x x 12 48 23.2
PP1B Ponte de Pedra 37.75 159 *e*P **P** **12 47 49.8 +0.8**
SDBA SAO DESIDERIO 38.07 141 *e*P **P** **12 47 51.2 -0.5**
NBPA Parau_RN 38.87 124 *e*P **P** **12 47 58.8 +0.4**
BDFB Brasilia 38.97 148 P **P** **12 47 58.5 -0.9**
comp=Z,15nm,0.7s,baz=323,slow=9.4,SNR=22
comp=Z,15nm,0.7s
BDFB Brasilia 38.97 148 P **P** **12 47 59.3 0.0**
BDFB IAmb IAmb 12 48 00.5
comp=Z,18nm,0.8s
ULM Lac du Bonnet 39.00 332 P **P** **12 47 57.0 -2.0**
comp=Z,5.9nm,0.4s,baz=128,slow=9.0,SNR=17
comp=Z,5.9nm,0.4s
ULM Lac du Bonnet 39.00 332 IAmb IAmb 12 47 58.8
comp=Z,17nm,0.9s
PB02 IPOC Station P 39.04 182 IAmb IAmb 12 48 05.0
comp=Z,12nm,0.7s
319A Douglas 39.22 298 IAmb IAmb 12 48 03.0
comp=Z,10nm,0.8s
DUN6 Lazy B Ranch 39.28 300 IAmb IAmb 12 48 03.5
comp=Z,16nm,0.8s
PB07 IPOC Station P 39.44 182 **P** **12 48 02.3 -0.9**
PB09 IPOC Station P 39.49 181 IAmb IAmb 12 48 04.1
comp=Z,22nm,1.1s
RSSD Black Hills 39.65 319 P **P** **12 48 04.7 -0.1**
RCBR Riachuelo 39.87 123 P **P** **12 48 07.6 +0.8**
RCBR IAmb IAmb 12 48 08.6
comp=Z,16nm,0.8s
RCBR Riachuelo 39.87 123 *e*P **P** **12 48 07.2 +0.4**
RCBR Riachuelo 39.87 123 P **P** **12 48 07.8 +1.0**
KUQ Kuujjuuaa 40.11 0 P **P** **12 48 08.6 +0.5**
KUQ IAmb IAmb 12 48 46.0
comp=Z,12nm,1.2s
AQDB Aquidauana 40.17 161 P **P** **12 48 09.3 +0.3**
AQDB IAmb IAmb 12 48 42.8
comp=Z,13nm,0.9s
AQDB Aquidauana 40.17 161 *e*P **P** **12 48 09.6 +0.6**
PV01 Paradox Valley 40.33 308 P **P** **12 48 11.3 +0.7**
PB06 IPOC Station P 40.41 182 IAmb IAmb 12 48 11.2
comp=Z,19nm,0.8s
JANB Januaria 40.51 143 *e*P **P** **12 48 11.6 -0.5**
K22A Casper 40.58 316 IAmb IAmb 12 48 13.3
comp=Z,14nm,1.0s
PV03 Paradox Valley 40.58 308 IAmb IAmb 12 48 14.3
comp=Z,16nm,0.9s
TUC Tucson 40.65 299 **P** **12 48 13.9 +0.8**
NBPV Pedro Velho 40.71 124 *e*P **P** **12 48 13.8 +0.1**
MURT Porto Murtinho 40.76 164 *e*P **P** **12 48 13.0 -0.8**
O20A White River Ci 40.77 311 IAmb IAmb 12 48 16.8
comp=Z,17nm,0.9s
IPMB Ipameri, GO 40.87 150 *e*P **P** **12 48 14.5 -0.4**
RDMU Red Mountain 41.87 311 IAmb IAmb 12 48 24.7
comp=Z,10nm,0.8s
P18A Preston Nutter 42.05 310 IAmb IAmb 12 48 26.1
comp=Z,17nm,1.1s
SRU San Rafael Swe 42.09 309 IAmb IAmb 12 48 26.1
comp=Z,13nm,0.7s
PMNB Patos De Minas 42.21 148 *e*P **P** **12 48 25.5 -0.4**
LAO LASA Array 42.26 321 **P** **12 48 26.2 +0.1**
LAO IAmb IAmb 12 48 27.1
comp=Z,22nm,0.8s
PDAR Pinedale Array 42.66 314 P **P** **12 48 28.0 -1.6**
comp=Z,3.7nm,0.8s,baz=121,slow=10.0,SNR=31
PDAR pP **pP** **12 48 49.1 -1.2**
comp=Z,1.6nm,0.8s,baz=116,slow=10,SNR=4.1
PDAR ScP **ScP** **12 54 01.4 -1.8**
comp=Z,1.6nm,0.8s,baz=96,slow=3.1,SNR=11
PDAR LR LR 13 06 14.5
comp=Z,64nm,18.7s,baz=15,slow=36
comp=Z,3.7nm,0.8s
PDAR Pinedale Array 42.66 314 P **P** **12 48 29.7 +0.1**
AMBA Amambai (Brazi 42.69 162 *e*P **P** **12 48 29.5 -0.1**
BSUT Blindstream Ca 42.72 311 P **P** **12 48 30.7 +0.5**
BSUT IAmb IAmb 12 48 31.5
comp=Z,16nm,0.9s
PKCU Pink Cliffs 42.98 306 IAmb IAmb 12 48 34.2
comp=Z,16nm,1.3s
MPU Maple Canyon 43.18 310 IAmb IAmb 12 48 35.7
comp=Z,16nm,1.1s
NBIT Itapeh - BA 43.42 137 *e*P **P** **12 48 35.5 -0.1**
RLMT Red Lodge 43.43 318 IAmb IAmb 12 48 36.3
comp=Z,12nm,0.7s
CTU Camp Tracy 43.48 311 IAmb IAmb 12 48 37.4
comp=Z,15nm,0.9s
NLU North Lily Min 43.49 310 IAmb IAmb 12 48 37.8
comp=Z,13nm,1.1s
HWUT Hardware Ranch 43.64 312 IAmb IAmb 12 48 38.0
comp=Z,12nm,0.9s
CMC01 Camacan, BA 43.68 137 *e*P **P** **12 48 37.2 -0.5**
AHID Auburn Hatcher 43.72 314 IAmb IAmb 12 48 38.7
comp=Z,10nm,0.8s
AC01 Pan de Azucar 43.87 183 IAmb IAmb 12 48 39.3
comp=Z,15nm,0.8s
DUG Dugway, Tooele 44.10 310 IAmb IAmb 12 48 42.5
comp=Z,10nm,0.8s
SPUT South Promonto 44.17 311 IAmb IAmb 12 48 43.1
comp=Z,11nm,0.9s
PSUT Pine Spring 44.43 307 IAmb IAmb 12 48 46.2
comp=Z,24nm,0.9s
LDASE Londrina, Braz 44.43 157 *e*P **P** **12 48 43.4 -0.2**
BGU Big Grassy Mou 44.47 311 IAmb IAmb 12 48 45.2
comp=Z,18nm,0.9s
AC02 Maricunga 44.51 181 IAmb IAmb 12 49 11.7
comp=Z,14nm,1.1s
YHB Horse Butte 44.53 316 IAmb IAmb 12 48 47.4
comp=Z,16nm,1.0s
IRM Iron Mountain 44.56 301 IAmb IAmb 12 48 46.7
comp=Z,13nm,1.0s
YHL Hebgen Lake 44.56 317 IAmb IAmb 12 48 48.0
comp=Z,20nm,1.1s
V12A Nelson 44.59 303 IAmb IAmb 12 48 47.0
comp=Z,17nm,0.7s
FFC Flin Flon 44.79 333 P **P** **12 48 45.2 -0.9**
FFC Flin Flon 44.79 333 P **P** **12 48 45.1 -1.1**
FFC x x 12 48 59.9
FFC pP **pP** **12 49 06.9 -0.4**
FCC Fort Churchill 44.88 341 P **P** **12 48 46.5 -0.2**
FRTB Fartura 44.99 155 *e*P **P** **12 48 47.8 -0.2**
EGMT Eagleton 45.01 321 IAmb IAmb 12 48 49.8
comp=Z,25nm,0.9s
MTPC Mountain Pass 45.11 302 IAmb IAmb 12 48 51.0
comp=Z,12nm,0.6s
BOZ Bozeman (W) 45.14 317 IAmb IAmb 12 48 50.8
comp=Z,14nm,0.9s
PTGB Pitanga 45.30 159 *e*P **P** **12 48 49.4 -1.2**
CPUP Villa Florida 45.31 166 P **P** **12 48 49.4 -1.1**

comp=Z,11nm,0.7s,baz=349,slow=8.9,SNR=33
comp=Z,11nm,0.7s
CPUP Villa Florida 45.31 166 IAmb IAmb 12 48 50.4
comp=Z,13nm,0.8s
CPUP Villa Florida 45.31 166 *e*P **P** **12 48 49.4 -1.1**
CPUP Villa Florida 45.31 166 P **P** **12 48 49.3 -1.2**
CPUP x x 12 49 18.6
DLMT Dillon 45.68 317 IAmb IAmb 12 48 55.3
comp=Z,18nm,1.0s
S11A Rachel 45.68 305 IAmb IAmb 12 49 26.4
comp=Z,14nm,1.0s
SHOC Shoshone, Teco 45.76 303 IAmb IAmb 12 49 20.8
comp=Z,9.7nm,0.9s
GSC Goldstone, Bar 46.09 302 IAmb IAmb 12 48 58.9
comp=Z,7.7nm,0.8s
GWY Greenwater Val 46.12 303 IAmb IAmb 12 48 59.0
comp=Z,14nm,0.6s
RIB01 Linhares ES 46.15 142 *e*P **P** **12 48 56.8 -0.5**
WCT Wildcat Mounta 46.20 304 IAmb IAmb 12 48 60.0
comp=Z,13nm,0.7s
QSM Queen of Sheba 46.25 303 IAmb IAmb 12 48 59.9
comp=Z,8.1nm,0.8s
FURC Furnace Creek, 46.33 304 IAmb IAmb 12 49 02.1
comp=Z,7.9nm,0.7s
AC05 El Transito 46.53 182 **P** **12 49 00.5 +0.3**
AC05 IAmb IAmb 12 49 01.3
comp=Z,24nm,1.2s
CCCA Chr Cany lake 46.57 302 IAmb IAmb 12 49 02.5
comp=Z,15nm,0.7s
LCO Las Campanas 46.72 183 P **P** **12 49 02.0 +0.1**
LCO Las Campanas 46.72 183 P **P** **12 49 02.0 +0.1**
LCO x x 12 49 16.8
LCO x x 12 49 31.2
LRMC Laurel Mtn Rad 46.82 302 IAmb IAmb 12 49 04.3
comp=Z,7.5nm,0.7s
MFID Camas Ranch 47.20 313 IAmb IAmb 12 49 06.5
comp=Z,12nm,0.8s
CO01 Juntas del Tor 47.66 182 IAmb IAmb 12 49 11.1
comp=Z,23nm,1.2s
NVAR Mina Mirray Bea 47.81 306 P **P** **12 49 11.1 +0.8**
comp=Z,4.0nm,0.6s,baz=94,slow=6.7,SNR=41
NVAR pP **pP** **12 49 32.0 +0.6**
comp=Z,5.7nm,0.8s,baz=102,slow=6.6,SNR=6.0
NVAR ScP **ScP** **12 54 23.8 -0.7**
comp=Z,0.6nm,0.7s,baz=108,slow=4.8,SNR=4.4
NVAR LR LR 13 10 20.9
comp=Z,84nm,21.5s,baz=134,slow=37
comp=Z,4.0nm,0.6s
PLID Pearl Lake 47.84 315 IAmb IAmb 12 49 11.1
comp=Z,12nm,0.8s
LHV Little Huntoon 47.93 306 IAmb IAmb 12 49 13.1
comp=Z,12nm,0.6s
MDPB Devils Postpil 48.27 305 IAmb IAmb 12 49 16.0
comp=Z,11nm,0.7s
WVOR Wild Horse Val 48.92 311 IAmb IAmb 12 49 19.9
comp=Z,15nm,1.1s
F10A Beech Ranch, E 48.94 316 IAmb IAmb 12 49 19.3
comp=Z,9.8nm,1.1s
J08A Circle Bar Ran 49.04 312 IAmb IAmb 12 49 21.0
comp=Z,11nm,0.8s
EDM Edmonton 49.45 326 **P** **12 49 22.5 0.0**
NEW Newport 49.62 319 LR LR 13 11 56.4
comp=Z,89nm,18.0s,baz=130,slow=38
E09A Wood Farm, Sta 49.71 316 IAmb IAmb 12 49 25.2
comp=Z,18nm,1.3s
PSAL Palomas, Salto 49.84 168 *e*P **P** **12 49 24.4 -1.1**
G08A Pilot Rock 49.90 315 IAmb IAmb 12 49 27.0
comp=Z,8.7nm,1.1s
I07A Izee 49.95 313 IAmb IAmb 12 49 27.9
comp=Z,13nm,1.1s
BLKN Baker Lake 49.96 345 IAmb IAmb 12 49 25.7
comp=Z,7.7nm,0.8s
SAO San Andreas Ge 50.02 303 IAmb IAmb 12 49 56.8
comp=Z,9.9nm,1.2s
CPSB Cacapava Do Su 50.19 163 *e*P **P** **12 49 27.3 -0.9**
C09A Chrisman Ranch 50.20 318 IAmb IAmb 12 49 28.9
comp=Z,8.7nm,0.8s
MHC Mount Hamilton 50.25 304 IAmb IAmb 12 49 30.6
comp=Z,6.6nm,0.6s
E08A Dider Farm, El 50.30 316 IAmb IAmb 12 49 29.5
comp=Z,6.7nm,0.9s
SFJD Kangerlussuaq 50.38 9 LR LR 13 09 11.4
comp=Z,65nm,19.4s,baz=202,slow=34
HAWA Hanford 50.59 316 IAmb IAmb 12 49 31.9
comp=Z,8.1nm,0.8s
WAH2 Wahluke Slope 50.72 316 IAmb IAmb 12 49 33.0
comp=Z,12nm,1.2s
O03E Paynes Creek 50.81 308 IAmb IAmb 12 49 58.6
comp=Z,12nm,1.2s
EPH Ephrata 50.91 317 IAmb IAmb 12 49 34.5
comp=Z,9.7nm,1.0s
B08A Colville Reser 51.05 318 IAmb IAmb 12 49 35.5
comp=Z,16nm,0.9s
MT08 Bocatoma Ro 51.11 182 IAmb IAmb 12 50 04.9
comp=Z,14nm,1.0s
MXC Moxie City 51.15 316 IAmb IAmb 12 49 36.8
comp=Z,11nm,1.0s
LTY Liberty 51.58 317 IAmb IAmb 12 49 40.0
comp=Z,8.9nm,0.9s
BO04 La Punta 51.68 182 IAmb IAmb 12 49 40.1
comp=Z,13nm,0.8s
ILON Igloolik, Nuna 52.09 354 IAmb IAmb 12 49 42.0
comp=Z,11nm,1.3s
KMRM Mail Ridge 52.24 307 IAmb IAmb 12 49 44.4
comp=Z,9.7nm,0.9s
YKAW1 Yellowknife Wh 54.69 336 IAmb IAmb 12 50 24.1
comp=Z,17nm,1.4s
YKA Yellowknife Ar 54.74 336 P **P** **12 50 00.5 -1.0**
comp=Z,3.5nm,0.8s,baz=114,slow=6.5,SNR=59
YKA pP **pP** **12 50 22.3 -0.9**
comp=Z,4.5nm,0.9s,baz=115,slow=6.5,SNR=7.4
YKA LR LR 13 13 51.4
comp=Z,66nm,18.0s,baz=124,slow=36
comp=Z,3.5nm,0.8s
YKA Yellowknife Ar 54.74 336 P **P** **12 50 00.3 -1.1**
YKAW3 Yellowknife Wh 54.78 336 IAmb IAmb 12 50 24.8
comp=Z,25nm,1.5s
KULLO Kullorsuaq 56.99 4 *i* P **P** **12 50 17.0 -0.3**
KULLO IAmb IAmb 12 50 17.6
comp=Z,5.6nm,0.6s
GO06 Curarrehue 57.29 183 IAmb IAmb 12 50 19.9
comp=Z,7.2nm,0.7s
SUMG Summit 57.30 10 **P** **12 50 20.4 +0.4**
SUMG Summit 57.30 10 *i* P **P** **12 50 20.0 0.0**
SUMG IAmb IAmb 12 50 24.4
comp=Z,10nm,0.7s
BBB Bella Bella 57.50 321 LR LR 13 14 08.5
comp=Z,48nm,20.9s,baz=124,slow=35
KOTAN Kotaneelee Air 57.71 331 P **P** **12 50 23.3 +0.7**
baz=112,SNR=16
PLCA Paso Flores 58.40 182 P **P** **12 50 27.4 -0.3**
comp=Z,7.0nm,0.8s,baz=0.1,slow=7.3,SNR=21
comp=Z,7.0nm,0.8s
PLCA Paso Flores 58.40 182 IAmb IAmb 12 51 09.9
comp=Z,7.0nm,0.7s
PLCA Paso Flores 58.40 182 *e*P **P** **12 50 27.6 -0.1**
PLCA Paso Flores 58.40 182 P **P** **12 50 27.5 -0.3**
TULEG Thule 58.63 360 IAmb IAmb 12 50 29.4
comp=Z,7.6nm,0.7s
TULEG Thule 58.63 360 *i* P **P** **12 50 28.2 -0.5**
TULEG IAmb IAmb 12 50 29.2
comp=Z,7.3nm,0.7s
WRGLY Wrigley 58.66 334 P **P** **12 50 29.9 +0.7**
baz=114
ESDC Sonseca Array 59.26 54 P **P** **12 50 34.1 +0.2**
comp=Z,2.5nm,0.6s,baz=271,slow=7.3,SNR=20
comp=Z,2.5nm,0.6s
T35M Bob Quinn 59.84 326 P **P** **12 50 37.9 +0.4**
baz=104
WTLY Watson Lake, Y 59.94 330 IAmb IAmb 12 50 39.5
comp=Z,14nm,1.0s
WTLY Watson Lake, Y 59.94 330 P **P** **12 50 38.4 +0.3**
baz=107,SNR=5.4
DLBC Dease Lake 60.09 328 LR LR 13 17 06.9
comp=Z,74nm,18.4s,baz=348,slow=36
DLBC Dease Lake 60.09 328 P **P** **12 50 39.7 +0.4**
baz=105,SNR=5.4
NEEM North Greenlan 60.17 4 *i* P **P** **12 50 39.4 -0.3**
NEEM IAmb IAmb 12 50 40.9
comp=Z,6.3nm,0.7s
V35K Ketchikan 60.21 324 P **P** **12 50 40.5 +0.6**
baz=102
S34M Telegraph Cree 60.52 327 P **P** **12 50 42.6 +0.5**
baz=104
R33M Jennings River 60.80 329 IAmb IAmb 12 51 08.4
comp=Z,8.6nm,1.1s
R33M Jennings River 60.80 329 P **P** **12 50 44.2 0.0**
baz=105
WRAK Wrangell Islan 60.84 325 P **P** **12 50 44.6 +0.3**
baz=102
CRAG Craig 61.08 324 P **P** **12 50 45.9 0.0**
baz=100
U33K Whale Pass 61.20 325 P **P** **12 50 46.9 +0.2**
baz=101
Q32M Nakina River 61.35 328 P **P** **12 50 48.5 +0.6**
baz=103
EKA Eskdalemuir Ar 61.41 36 P **P** **12 50 47.6 -0.5**
comp=Z,1.4nm,0.6s,baz=290,slow=9.6,SNR=7.7
comp=Z,1.4nm,0.6s
P33M Teslin, Yukon 61.91 329 IAmb IAmb 12 50 53.0
comp=Z,13nm,0.9s
P33M Teslin, Yukon 61.91 329 P **P** **12 50 51.7 +0.2**
baz=103
DBG Daneborg 62.15 13 *i* P **P** **12 50 53.4 +0.6**
DBG IAmb IAmb 12 50 55.0
comp=Z,6.8nm,1.1s
AY01 Puyuhuapi 62.17 183 P **P** **12 50 53.0 -0.2**
AY01 IAmb IAmb 12 50 53.6
comp=Z,16nm,1.0s
P32M Atlin 62.21 329 P **P** **12 50 53.7 +0.2**
baz=102
S32K Killisnoo 62.24 326 P **P** **12 50 53.7 +0.1**
baz=100
N32M Quiet Lake 62.26 330 IAmb IAmb 12 50 55.5
comp=Z,13nm,0.9s
N32M Quiet Lake 62.26 330 P **P** **12 50 54.2 +0.4**
baz=104
R32K Eaglecrest 62.36 327 P **P** **12 50 54.7 +0.2**
baz=101
FARO Faro, Yukon 62.64 331 P **P** **12 50 56.4 +0.1**
baz=104
DBIC Dimbokro 62.88 92 P **P** **12 50 58.2 -0.4**
comp=Z,11nm,0.6s,baz=309,slow=5.6,SNR=16
comp=Z,11nm,0.6s
DBIC Dimbokro 62.88 92 P **P** **12 50 58.1 -0.6**
DBIC x x 12 51 28.4
DBIC PcP **PcP** **12 51 39.1 +2.9**
WHY Whitehorse 63.01 330 P **P** **12 50 59.1 +0.2**
baz=102
A36M Sachs Harbour 63.06 343 P **P** **12 50 59.5 +0.7**
baz=117
M31M Drury Creek, Y 63.11 331 IAmb IAmb 12 51 23.6
comp=Z,15nm,1.4s
M31M Drury Creek, Y 63.11 331 P **P** **12 50 59.8 +0.4**
baz=103
N31M Braeburn, Yuko 63.60 330 P **P** **12 51 03.0 +0.4**
baz=101
O30N Mendenhall 63.61 330 P **P** **12 51 02.9 +0.1**
baz=101
P30M Million Dollar 63.92 329 P **P** **12 51 05.7 +0.8**
baz=100
DAG Danmarks Havn 63.94 11 *i* P **P** **12 51 04.4 -0.2**
DAG IAmb IAmb 12 51 05.6
comp=Z,3.7nm,0.9s
H31M Peel River 63.95 335 P **P** **12 51 05.2 +0.4**
baz=105
MAYO Mayo, Yukon 64.08 333 P **P** **12 51 06.1 +0.3**
baz=102
F31M Tsiigehtchic 64.16 337 P **P** **12 51 06.4 +0.3**
baz=106
G31M Satah River 64.21 336 P **P** **12 51 06.4 -0.1**
baz=105
N30M Aishikik Lake 64.21 330 P **P** **12 51 06.6 -0.1**
baz=100
M30M Minto, Yukon 64.28 331 IAmb IAmb 12 51 31.6
comp=Z,12nm,1.3s
M30M Minto, Yukon 64.28 331 P **P** **12 51 07.4 +0.3**
baz=101,SNR=5.4
HYT Haines Junctio 64.30 329 P **P** **12 51 07.6 +0.2**
baz=99
INK Inuvik 64.32 338 IAmb IAmb 12 51 30.9
comp=Z,25nm,1.5s
INK Inuvik 64.32 338 P **P** **12 51 07.4 +0.2**
baz=107
J30M Hart River 64.48 334 P **P** **12 51 08.6 +0.2**
baz=102
I30M Mount Dempster 64.64 334 IAmb IAmb 12 51 34.2
comp=Z,17nm,1.5s
I30M Mount Dempster 64.64 334 P **P** **12 51 09.9 +0.4**
baz=102
ALE Alert 64.67 1 P **P** **12 51 08.7 -0.7**
ALE pP **pP** **12 51 31.7 +0.3**
ALE x x 12 51 39.9
YUK6 Outpost Mounta 64.74 330 P **P** **12 51 10.6 +0.2**
baz=99
O29M Mount Kennedy 64.75 329 P **P** **12 51 10.5 +0.2**
baz=98
K29M Barlow Dome 64.84 333 IAmb IAmb 12 51 36.0
comp=Z,18nm,1.2s
K29M Barlow Dome 64.84 333 P **P** **12 51 11.0 +0.2**
baz=101
YUK4 Talbot Arm 64.93 330 P **P** **12 51 11.5 -0.1**
baz=99,SNR=5.9
F30M Barrier River 64.96 337 P **P** **12 51 10.8 -0.6**
baz=104
G30M tAoh Zraii Nji 64.97 336 P **P** **12 51 11.6 +0.1**
baz=103
L29M L29M 64.98 332 P **P** **12 51 11.8 +0.2**
baz=100
M29M Somme Creek 65.02 331 P **P** **12 51 12.0 0.0**
baz=99
EPYK Eagle Plains 65.03 336 P **P** **12 51 12.0 0.0**
baz=103
J29N Klondike Camp 65.25 333 IAmb IAmb 12 51 15.4
comp=Z,11nm,1.1s
J29N Klondike Camp 65.25 333 P **P** **12 51 13.9 +0.4**
baz=100,SNR=5.3
I29M Ogilvie Camp, 65.46 334 P **P** **12 51 15.1 +0.4**
baz=101
YUK8 Steele Glacier 65.46 330 P **P** **12 51 15.1 +0.1**
baz=98
PINM Pinnacle 65.55 328 P **P** **12 51 15.7 +0.3**
baz=96
O28M Mount Upton 65.60 329 P **P** **12 51 16.1 +0.1**
baz=97
DAWY Dawson 65.69 333 P **P** **12 51 16.6 +0.4**
baz=99
YUK3 Moose Creek 65.85 330 P **P** **12 51 17.6 +0.1**
baz=97
E29M Blow River 65.91 338 P **P** **12 51 17.7 +0.2**
baz=102
BVCY Beaver Creek 66.12 331 P **P** **12 51 19.1 +0.1**
baz=97
I28M Miner Creek 66.15 334 IAmb IAmb 12 51 20.9
comp=Z,9.9nm,0.8s
I28M Miner Creek 66.15 334 P **P** **12 51 19.5 +0.3**
baz=99
CTG Chitna Glacier 66.18 329 P **P** **12 51 20.3 +0.7**
baz=96
BARN Barnard Glacie 66.35 329 IAmb IAmb 12 51 22.7
comp=Z,14nm,1.0s
D28M Stokes Point 66.41 339 P **P** **12 51 20.8 +0.2**
baz=102
F28M Old Crow 66.49 337 P **P** **12 51 21.3 0.0**
baz=100
M27K Edge Creek, AK 66.58 331 IAmb IAmb 12 51 23.6
comp=Z,7.5nm,0.8s
M27K Edge Creek, AK 66.58 331 P **P** **12 51 22.3 +0.2**
baz=96
L27K Beaver Creek, 66.64 332 P **P** **12 51 22.7 +0.4**
baz=96
I27K Kandik River 66.86 334 IAmb IAmb 12 51 24.8
comp=Z,13nm,0.8s
I27K Kandik River 66.86 334 P **P** **12 51 24.3 +0.6**
baz=98
H27K Steamboat Moun 66.91 335 P **P** **12 51 24.2 +0.2**
baz=98
CRQE Cirque 67.02 329 P **P** **12 51 25.3 +0.5**
baz=94
MCARA McCarthy VSAT 67.03 330 P **P** **12 51 25.6 +0.8**
baz=95
BGLC Bering Glacier 67.07 328 P **P** **12 51 25.8 +0.9**
baz=94
NOR Nord 67.08 7 *i* P **P** **12 51 28.5 +3.7**
NOR IAmb IAmb 12 51 32.0
comp=Z,7.4nm,1.1s
M26K Nabesna, AK 67.11 331 P **P** **12 51 25.5 +0.2**
baz=95
D27M Malcolm River 67.17 338 P **P** **12 51 25.3 -0.3**
baz=100
E27K Coleen River 67.23 337 P **P** **12 51 25.9 -0.1**
baz=99
ECH Echery 67.31 45 IAmb IAmb 12 51 27.5
comp=Z,14nm,1.0s
ECH Echery 67.31 45 P **P** **12 51 26.7 -0.1**
ECH pP **pP** **12 51 49.6 +0.8**

L26K Log Cabin Wild 67.32 332 IAmb IAmb 12 51 28.2
comp=Z,11nm,0.8s
L26K Log Cabin Wild 67.32 332 P **P** **12 51 27.3 +0.7**
baz=95,SNR=7.6
TORD Torodi Ar. Bea 67.41 83 P **P** **12 51 27.2 -0.8**
comp=Z,9.9nm,0.7s,baz=273,slow=8.0,SNR=54
comp=Z,9.9nm,0.7s
TORD Torodi Ar. Bea 67.41 83 P **P** **12 51 27.5 -0.5**
I26K Coal Creek Min 67.46 334 IAmb IAmb 12 51 28.5
comp=Z,17nm,0.8s
I26K Coal Creek Min 67.46 334 P **P** **12 51 27.8 +0.4**
baz=96
MENT Mentasta 67.48 331 IAmb IAmb 12 51 29.1
comp=Z,13nm,0.6s
ACRG Accra 67.60 91 P **P** **12 51 28.9 -0.3**
SCRK Sand Creek 67.69 333 IAmb IAmb 12 51 30.5
comp=Z,17nm,0.8s
SCRK Sand Creek 67.69 333 P **P** **12 51 29.2 +0.1**
baz=95,SNR=15
BMRM Bremner River 67.77 329 P **P** **12 51 29.7 +0.2**
baz=93
N25K Chitina, Valde 67.80 330 P **P** **12 51 29.9 +0.2**
baz=93
G26K Porcupine Rive 67.90 336 IAmb IAmb 12 51 30.7
comp=Z,7.7nm,0.8s
G26K Porcupine Rive 67.90 336 P **P** **12 51 30.2 +0.1**
baz=96
RIDG Independent Ri 68.05 332 IAmb IAmb 12 51 32.7
comp=Z,17nm,1.0s
RIDG Independent Ri 68.05 332 P **P** **12 51 31.2 -0.1**
baz=94
HARP HAARP 68.11 331 P **P** **12 51 31.6 0.0**
baz=93
F26K Sheenjek River 68.12 337 P **P** **12 51 32.0 +0.5**
baz=96
C27K Jago River 68.19 339 IAmb IAmb 12 51 33.1
comp=Z,9.1nm,0.8s
C27K Jago River 68.19 339 P **P** **12 51 31.9 0.0**
baz=97
BMAR Burnt Mountain 68.25 336 **P** **12 51 32.2 -0.2**
PAX Paxson 68.28 331 P **P** **12 51 32.8 +0.1**
baz=93
EYAK Cordova Ski Ar 68.31 329 P **P** **12 51 32.8 0.0**
baz=92
J25K Salcha River, 68.34 333 P **P** **12 51 33.0 -0.1**
baz=94
KLU Klutina 68.43 330 P **P** **12 51 33.6 -0.1**
baz=92
FYU Fort Yukon 68.43 335 IAmb IAmb 12 51 34.5
comp=Z,16nm,1.0s
PRP Porcupine Dome 68.47 334 IAmb IAmb 12 51 34.8
comp=Z,11nm,0.8s
PRP Porcupine Dome 68.47 334 P **P** **12 51 34.1 +0.1**
baz=94,SNR=10
K24K Donnelly Dome 68.47 332 P **P** **12 51 34.1 +0.2**
baz=93,SNR=5.4
M24K Tolsona, Glenn 68.57 330 P **P** **12 51 34.9 +0.4**
baz=92
C26K Camden Bay 68.64 339 P **P** **12 51 34.9 +0.2**
baz=96
F25K Christian Rive 68.68 336 IAmb IAmb 12 51 36.4
comp=Z,11nm,0.8s
F25K Christian Rive 68.68 336 P **P** **12 51 35.2 +0.1**
baz=95
E25K Arctic Village 68.69 337 P **P** **12 51 35.1 0.0**
baz=95,SNR=9.3
TAM Tamanrasset 68.87 72 IAmb IAmb 12 51 39.3
comp=Z,19nm,0.8s
TAM Tamanrasset 68.87 72 P **P** **12 51 38.4 +1.2**
ILAR Eielson Array 69.00 333 P **P** **12 51 36.5 -0.6**
comp=Z,3.0nm,0.7s,baz=103,slow=4.4,SNR=52
ILAR LR LR 13 22 42.9
comp=Z,130nm,19.1s,baz=88,slow=37
comp=Z,3.0nm,0.7s
HDA Harding Lake 69.01 333 P **P** **12 51 37.3 +0.2**
baz=92
D25K Kavik River 69.09 338 IAmb IAmb 12 51 38.2
comp=Z,11nm,0.9s
D25K Kavik River 69.09 338 P **P** **12 51 37.4 -0.2**
baz=95
SCM Sheep Creek Mo 69.11 330 P **P** **12 51 37.9 0.0**
baz=91
DHY Denali Highway 69.16 331 P **P** **12 51 38.3 0.0**
baz=91
POKR Poker Plat Res 69.25 334 P **P** **12 51 38.7 +0.1**
baz=92
M23K Glacier View 69.30 330 P **P** **12 51 39.0 +0.1**
baz=91
WAT6 Susitna Watana 69.31 331 P **P** **12 51 39.1 -0.1**
baz=91
G24K Hadweenzic Riv 69.33 335 IAmb IAmb 12 51 40.5
comp=Z,12nm,0.8s
G24K Hadweenzic Riv 69.33 335 P **P** **12 51 39.2 +0.1**
baz=93
COLA College 69.42 333 P **P** **12 51 39.5 -0.1**
COLA College 69.42 333 P **P** **12 51 39.7 +0.2**
baz=92
H24K Noodor Dome 69.46 334 P **P** **12 51 39.9 -0.1**
baz=92
NB2 NORSAR Subarra 69.48 31 P **P** **12 51 40.6 +0.4**
comp=Z,2.7nm,0.9s,baz=272,slow=6.5
NOA NORSAR Array B 69.48 31 P **P** **12 51 40.0 -0.1**
comp=Z,1.6nm,0.9s,baz=271,slow=6.3,SNR=5.7
comp=Z,1.6nm,0.9s
FUORN Ofenpass-Fuorn 69.50 46 P **P** **12 51 41.6 +0.7**
FUORN IAmb IAmb 12 52 09.2
comp=Z,17nm,1.3s
SML Sawmill 69.58 330 P **P** **12 51 40.9 +0.1**
baz=90
KNK Knik Glacier 69.65 330 P **P** **12 51 41.1 0.0**
baz=90
WAT1 Susitna Watana 69.69 331 P **P** **12 51 41.5 +0.1**
baz=90
E24K Your Creek 69.78 337 IAmb IAmb 12 51 43.2
comp=Z,8.4nm,0.8s
E24K Your Creek 69.78 337 P **P** **12 51 42.4 +0.5**
baz=92
FETA Feichten 69.79 46 *i* P **P** **12 51 42.9 +0.4**
comp=Z,5.8nm,0.6s
RND Reindeer 69.83 332 IAmb IAmb 12 52 07.0
comp=Z,18nm,1.0s
MCK McKinley 69.87 332 P **P** **12 51 42.6 +0.1**
baz=90
C24K Franklin Bluff 69.93 339 IAmb IAmb 12 51 43.5
comp=Z,14nm,0.8s
C24K Franklin Bluff 69.93 339 P **P** **12 51 42.8 +0.1**
baz=93
NEA2 Nenana 69.93 333 P **P** **12 51 43.0 +0.2**
baz=90
D24K Happy Valley 69.95 338 P **P** **12 51 42.6 -0.2**
baz=92
MOTA Moosalm 70.02 45 *i* P **P** **12 51 44.6 +0.7**
comp=Z,1.8nm,0.4s
KEST Kesra 70.02 58 P **P** **12 51 44.2 +0.2**
comp=Z,11nm,0.9s,baz=298,slow=0.9,SNR=8.0
comp=Z,11nm,0.9s
I23K Minto, Yukon-K 70.06 334 IAmb IAmb 12 51 45.3
comp=Z,9.1nm,0.7s
I23K Minto, Yukon-K 70.06 334 P **P** **12 51 43.8 +0.2**
baz=90,SNR=11
TOLK Toolik Lake Re 70.21 337 P **P** **12 51 44.7 +0.2**
baz=92
E23K Chandalar 70.21 337 P **P** **12 51 44.7 +0.1**
baz=91
RC01 Rabbit Creek A 70.27 329 P **P** **12 51 45.3 +0.4**
baz=89
G23K Bananza Creek 70.35 335 IAmb IAmb 12 51 46.7
comp=Z,8.9nm,0.8s
G23K Bananza Creek 70.35 335 P **P** **12 51 45.7 +0.4**
baz=90
WTTA Wattenberg 70.38 45 *i* P **P** **12 51 47.4 +1.3**
comp=Z,1.8nm,0.5s
COLD Coldfoot 70.42 336 P **P** **12 51 46.1 +0.4**
baz=90,SNR=7.0
M22K Willow 70.44 330 P **P** **12 51 45.5 -0.4**
baz=88
TRF Thorofare Moun 70.48 332 P **P** **12 51 46.3 0.0**
baz=89,SNR=6.1
CUT Chulitna 70.49 331 P **P** **12 51 46.3 +0.1**
baz=89
C23K Itkillik River 70.60 339 IAmb IAmb 12 51 47.7
comp=Z,9.2nm,0.8s
C23K Itkillik River 70.60 339 P **P** **12 51 46.8 +0.1**
baz=91
D23K Nanushuk River 70.61 338 P **P** **12 51 47.1 +0.2**
baz=90
HFS Hagfors 70.72 32 P **P** **12 51 47.9 +0.2**
comp=Z,1.2nm,0.5s,baz=245,slow=2.8,SNR=6.2
comp=Z,1.2nm,0.5s
BRSE Bradley Lake S 70.81 328 P **P** **12 51 48.5 +0.2**
baz=87
H22K Ishtalitna Cre 70.90 334 P **P** **12 51 48.9 +0.2**
baz=89
CLL Collm 70.91 41 *i* P **P** **12 51 48.6 -0.4**
comp=Z,4.0nm,0.7s
CLL *i* x x 12 51 52.3
comp=Z,7.0nm,0.7s
CLL *e*PP **PP** **12 54 26.0 -0.9**
E22K Anaktuvuk Pass 71.03 337 IAmb IAmb 12 51 50.0
comp=Z,13nm,1.1s
E22K Anaktuvuk Pass 71.03 337 P **P** **12 51 49.2 -0.3**
baz=89,SNR=7.4
SKT Skwentna 71.10 330 P **P** **12 51 50.2 +0.2**
baz=87
I21K Tanana 71.17 334 IAmb IAmb 12 52 14.4
comp=Z,13nm,1.2s
I21K Tanana 71.17 334 P **P** **12 51 50.4 +0.1**
baz=88
HOM Homer 71.28 328 P **P** **12 51 51.3 +0.3**
baz=86
D22K Ayikyak River 71.34 338 P **P** **12 51 51.6 +0.3**
baz=89
PPLA Purkeypile 71.36 331 P **P** **12 51 51.4 -0.3**
baz=87
CHUM Lake Minchumin 71.37 332 P **P** **12 51 51.1 -0.4**
baz=87
N20K Mount Spurr 71.46 329 P **P** **12 51 52.2 0.0**
baz=86
SPCR Spurr Chakacha 71.46 329 P **P** **12 51 52.1 -0.1**
baz=86
H21K Melozitna Rive 71.50 334 P **P** **12 51 52.2 -0.1**
baz=88
B22K Teshekpuk Lake 71.56 339 IAmb IAmb 12 51 53.4
comp=Z,13nm,1.0s
B22K Teshekpuk Lake 71.56 339 P **P** **12 51 52.6 +0.1**
baz=88
KBA Koelnbreinsper 71.56 45 *i* P **P** **12 51 53.8 +0.6**
comp=Z,1.1nm,0.3s
GERES GERESS Array B 71.60 44 P **P** **12 51 53.3 0.0**
comp=Z,0.9nm,0.7s,baz=259,slow=1.4,SNR=4.7
comp=Z,0.9nm,0.7s
F21K Alatna River 71.70 336 P **P** **12 51 53.4 -0.1**
baz=87
G21K Allakaket 71.74 335 IAmb IAmb 12 52 18.2
comp=Z,14nm,1.2s
G21K Allakaket 71.74 335 P **P** **12 51 53.9 +0.2**
baz=87
RED Redoubt Volcan 71.79 329 IAmb IAmb 12 51 55.2
comp=Z,15nm,0.9s
M20K Styx River 71.86 330 P **P** **12 51 54.2 -0.5**
baz=86
KDAK Kodiak Island 71.90 326 P **P** **12 51 54.7 -0.1**
baz=85
B21K Ikpikpuk River 72.00 338 IAmb IAmb 12 51 55.8
comp=Z,11nm,0.8s
B21K Ikpikpuk River 72.00 338 P **P** **12 51 54.9 -0.3**
baz=87
P19K Oil Pt 72.08 328 P **P** **12 51 55.7 -0.2**
baz=85
C21K Knifeblade Rid 72.08 338 P **P** **12 51 55.4 -0.3**
baz=87,SNR=6.8
MOA Molln 72.09 45 *i* P **P** **12 51 55.9 -0.3**
comp=Z,0.7nm,0.3s
K20K Telida 72.18 332 P **P** **12 51 56.2 -0.2**
baz=86
OHAK Old Harbor 72.33 325 P **P** **12 51 57.1 -0.3**
baz=84
Q19K Cape Douglas, 72.36 327 P **P** **12 51 57.7 +0.1**
baz=84
H20K Anotleneega Mo 72.37 334 P **P** **12 51 57.4 -0.1**
baz=86
M19K Big River Lodg 72.45 330 IAmb IAmb 12 52 22.3
comp=Z,8.4nm,0.8s
M19K Big River Lodg 72.45 330 P **P** **12 51 57.9 -0.1**
baz=85
O19K Port Alsworth 72.58 329 P **P** **12 51 58.7 -0.1**
baz=84
F20K Avaraart Lake 72.58 336 P **P** **12 51 58.7 0.0**
baz=85
N19K Bonanza Creek 72.60 329 P **P** **12 51 58.8 -0.2**
baz=84
L19K White Mountain 72.64 331 P **P** **12 51 58.9 -0.4**
baz=84
E20K Nigu River 72.66 337 P **P** **12 51 59.1 -0.2**
baz=85,SNR=9.9
SOKA Soboth 72.76 46 *i* P **P** **12 51 59.7 -0.6**
comp=Z,0.7nm,0.4s
D20K Etivluk River 72.78 338 P **P** **12 51 59.5 -0.4**
baz=85
J19K Poorman 72.81 333 P **P** **12 52 00.1 -0.1**
baz=84
B20K Meade River 72.85 339 IAmb IAmb 12 52 01.0
comp=Z,7.0nm,0.7s
B20K Meade River 72.85 339 P **P** **12 52 00.4 +0.1**
baz=85
SII Sitkinak Islan 72.89 325 P **P** **12 52 00.5 -0.3**
baz=83
ARSA Arzberg 73.01 45 *i* P **P** **12 52 00.9 -0.8**
comp=Z,1.6nm,0.4s
O18K Koktuh Hills 73.06 328 P **P** **12 52 01.6 -0.1**
baz=84
Q18K Katmai Hardscr 73.09 327 P **P** **12 52 01.8 -0.3**
baz=83
P18K Big Mountain, 73.12 328 P **P** **12 52 01.9 -0.2**
baz=83
E19K Redstone River 73.13 336 P **P** **12 52 01.8 -0.2**
baz=84
CONA Conrad Observa 73.14 44 *i* P **P** **12 52 02.3 -0.2**
comp=Z,0.7nm,0.3s
M18K Stony River 73.17 330 P **P** **12 52 02.2 -0.1**
baz=83
G19K Purcell Mounta 73.21 335 P **P** **12 52 02.2 -0.3**
baz=84
GCSA Galena City Sc 73.28 333 P **P** **12 52 02.6 -0.2**
baz=84
N18K Kilae Creek 73.30 329 P **P** **12 52 03.1 0.0**
baz=83
D19K Kuna River 73.35 337 IAmb IAmb 12 52 03.8
comp=Z,9.2nm,0.8s
D19K Kuna River 73.35 337 P **P** **12 52 02.9 -0.3**
baz=84
J18K Innoko River 73.36 332 P **P** **12 52 03.3 -0.1**
baz=83
F19K Shaleruckik Mo 73.41 336 P **P** **12 52 03.2 -0.4**
baz=83
L18K Granite Mounta 73.49 331 P **P** **12 52 04.0 -0.2**
baz=83
Q17K Contact Creek 73.60 327 P **P** **12 52 04.5 -0.5**
baz=82
P17K Kvichak River 73.76 328 P **P** **12 52 05.8 0.0**
baz=82
C19K Lookout Ridge 73.80 338 P **P** **12 52 05.7 -0.2**
baz=82,SNR=5.3
H18K Honhosa River 73.86 334 P **P** **12 52 06.2 -0.1**
baz=82
G18K Tagagawik 73.88 335 P **P** **12 52 06.2 -0.2**
baz=82
R17L Mt. Peulik Vol 73.94 326 P **P** **12 52 06.7 -0.2**
baz=82
N17K Nushagak Hills 73.95 329 P **P** **12 52 06.8 -0.1**
baz=82
O17K Koliganek Bris 74.01 328 P **P** **12 52 07.4 +0.2**
baz=82
MODS Modra-Piesok 74.02 44 *e*P **P** **12 52 08.5 +1.0**
A19K Wainwright 74.16 339 P **P** **12 52 08.2 +0.3**
baz=81,SNR=6.5
K17K Iditarod 74.17 331 P **P** **12 52 08.1 0.0**
K17K IAmb IAmb 12 52 32.5
comp=Z,9.4nm,0.9s
K17K Iditarod 74.17 331 P **P** **12 52 08.1 0.0**
baz=82
F18K Selawik 74.18 335 P **P** **12 52 08.0 0.0**
baz=82
E18K Tukpahlearik C 74.42 336 P **P** **12 52 09.3 -0.2**
baz=81
C18K Utukok River 74.45 338 P **P** **12 52 09.6 -0.1**
baz=81
H17K Granite Mounta 74.54 334 P **P** **12 52 10.2 0.0**
baz=81
O16K Kokwok River B 74.54 328 P **P** **12 52 10.1 -0.3**
baz=81
P16K Nushagak River 74.58 328 P **P** **12 52 10.5 0.0**
baz=81
R16K Pilot Point 74.59 326 P **P** **12 52 10.8 +0.1**
baz=81
ARCES ARCESS Array B 74.73 21 P **P** **12 52 11.1 -0.2**
comp=Z,2.6nm,0.7s,baz=308,slow=2.9,SNR=8.9
ARCES pP **pP** **12 52 34.6 +1.0**
comp=Z,4.0nm,0.7s,baz=282,slow=4.6,SNR=3.5
comp=Z,2.6nm,0.7s
N16K Nishlik Lake 74.73 329 P **P** **12 52 11.6 +0.1**
baz=81
M16K Timber Creek 74.74 330 P **P** **12 52 11.4 0.0**
baz=81
G17K Kiwalik Mounta 74.75 334 P **P** **12 52 11.7 +0.3**
baz=80
F17K Baldwin Pennin 74.83 335 P **P** **12 52 11.9 0.0**
baz=80
L16K Owhat River 74.87 330 P **P** **12 52 12.8 +0.6**
baz=80
E17K Hotham Inlet 74.95 336 P **P** **12 52 12.5 0.0**
baz=80,SNR=12
I17K Unalakleet 75.05 333 P **P** **12 52 13.5 +0.3**
baz=80
J16K Anvik River 75.11 332 P **P** **12 52 13.7 +0.2**
baz=80
C17K DeLong Mountai 75.19 338 P **P** **12 52 14.0 0.0**
baz=79
D17K Noatak River 75.31 337 P **P** **12 52 14.6 -0.1**
baz=79
N15K Kwethluk River 75.44 329 P **P** **12 52 15.3 -0.2**
baz=79
G16K Koyuk River 75.47 334 P **P** **12 52 15.7 +0.1**
baz=79
O15K Ungalikthiuk R 75.48 328 P **P** **12 52 15.6 -0.1**
baz=79
H16K Elim 75.57 334 P **P** **12 52 16.5 +0.3**
baz=79
M15K Kasigluk River 75.63 330 P **P** **12 52 16.9 +0.3**
baz=79
K15K Wolf Creek Mou 75.72 331 P **P** **12 52 17.4 +0.3**
baz=79
L15K Ungalak Mounta 75.82 331 P **P** **12 52 17.9 +0.3**
baz=79
C16K Lisburne Hills 76.02 338 P **P** **12 52 18.7 0.0**
baz=77
CHNA Chernabura Isl 76.19 323 P **P** **12 52 19.4 -0.4**
baz=78
M14K Bethel 76.23 330 P **P** **12 52 20.2 +0.3**
baz=78
G15K Niukluk 76.25 334 P **P** **12 52 20.3 +0.3**
baz=77
N14K Kuskokwak Cree 76.27 329 P **P** **12 52 20.6 +0.4**
baz=78
F15K North Star Dit 76.34 335 P **P** **12 52 20.8 +0.3**
baz=77
STHS Stebnicka Huta 76.40 42 *e*P **P** **12 52 20.9 -0.3**
L14K Kuka Creek 76.45 330 P **P** **12 52 21.7 +0.5**
baz=78
J14K Nanvaranak Lak 76.54 332 P **P** **12 52 22.0 +0.3**
baz=77
FINES FINESS Array B 76.57 30 P **P** **12 52 22.1 +0.3**
comp=Z,4.4nm,0.6s,baz=269,slow=4.0,SNR=32
comp=Z,4.4nm,0.6s
ANM Nome 76.91 334 P **P** **12 52 24.3 +0.5**
baz=76
M13K Dall Lake 76.97 330 P **P** **12 52 24.4 +0.2**
baz=77
F14K Arctic Creek 77.07 335 P **P** **12 52 25.1 +0.5**
baz=75
K13K Kusilvak Mount 77.23 331 P **P** **12 52 26.2 +0.6**
baz=76
TNA Tin City 77.69 335 P **P** **12 52 28.6 +0.6**
baz=74
EDA Edea 78.01 90 **P** **12 52 30.8 0.0**
EDA IAmb IAmb 12 52 32.2
comp=Z,10nm,0.9s
EDA Edea 78.01 90 P **P** **12 52 31.4 +0.6**
EDA PcP **PcP** **12 52 41.5 +1.3**
FALS False Pass 78.34 324 P **P** **12 52 32.3 +0.5**
baz=76
M11K Mekoryuk 78.35 330 P **P** **12 52 32.1 +0.3**
baz=74
GAMB Gambell 79.79 334 P **P** **12 52 40.4 +0.8**
baz=70
MLR Muntele Rosu 80.43 45 **P** **12 52 45.0 +1.4**
MLR IAmb IAmb 12 52 51.2
comp=Z,10.0nm,0.7s
AKASG Malin Array Be 81.06 40 P **P** **12 52 46.5 -0.2**
comp=Z,0.8nm,0.4s,baz=288,slow=4.4,SNR=2.0
comp=Z,0.8nm,0.4s
BR131 Keskin Array S 87.65 49 **P** **12 53 20.2 -0.2**
BRTR Keskin Array B 87.65 49 P **P** **12 53 19.1 -1.3**
comp=Z,1.9nm,0.8s,baz=264,slow=4.5,SNR=8.5
comp=Z,1.9nm,0.8s
BRTR Keskin Array B 87.65 49 **P** **12 53 19.7 -0.8**
TIXI Tiksi 89.86 355 LR LR 13 34 14.6
comp=Z,38nm,20.6s,baz=66,slow=36
NRIK Noril'sk 91.29 8 LR LR 13 34 43.5
comp=Z,44nm,20.0s,baz=312,slow=36
SHEM Shemya Is, Ala 91.37 327 LR LR 13 34 07.9
comp=Z,38nm,21.9s,baz=100,slow=35
TSUM Tsumeb 92.17 109 P **P** **12 53 41.1 -0.7**
TSUM IAmb IAmb 12 53 42.9
comp=Z,4.5nm,1.1s
YAK Yakutsk 99.01 351 LR LR 13 41 53.9
comp=Z,13nm,20.1s,baz=327,slow=37
HHC Hu-ho-hao-te 121.52 360 *e*P **PKPdf** **12 59 24.2 -0.9**
NJ2 Nanjing 129.81 352 *e*P **PKiKP** **12 59 44.2 +2.4**
NJ2 pmax pmax
comp=Z,25nm,0.5s
PZH PanZhiHua 134.81 12 PKP **PKiKP** **12 59 52.1 -0.2**
CMAR Chiang Mai Arr 141.77 20 PKhKP PKPpre 12 59 55.9
comp=Z,0.8nm,0.4s,baz=328,slow=2.9,SNR=2.0
CMAR PKP **PKPdf** **13 00 02.1 -1.5**
comp=Z,0.9nm,0.7s,baz=331,slow=3.9,SNR=7.3
CMAR SKPbc **SKPbc** **13 03 31.2 -2.0**
comp=Z,2.2nm,0.9s,baz=325,slow=3.5,SNR=11
STKA Stephens Creek 149.54 237 PKP **PKPdf** **13 00 15.6 -0.8**
comp=Z,4.1nm,0.7s,baz=349,slow=16,SNR=3.9
STKA PKPbc **PKPbc** **13 00 19.9 -1.1**
comp=Z,4.6nm,0.8s,baz=52,slow=3.6,SNR=6.4
STKA Stephens Creek 149.54 237 **PKPdf** **13 00 16.4 0.0**
ASAR Alice Springs 158.35 251 PKP **PKPdf** **13 00 27.9 -1.3**
comp=Z,0.8nm,0.8s,baz=129,slow=1.3,SNR=11
ASAR pPKP **pPKPdf** **13 00 52.2 -0.9**
comp=Z,0.4nm,0.6s,baz=101,slow=3.3,SNR=2.8
ASAR PKPab **sPKPdf** **13 01 02.5 +0.3**
comp=Z,1.2nm,0.8s,baz=117,slow=3.8,SNR=7.7
WRA Warramunga Arr 158.35 261 PKP **PKPdf** **13 00 27.5 -1.7**
comp=Z,1.4nm,0.8s,baz=75,slow=1.0,SNR=11

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*MAN **06** 12:58:33.0, 17.°96N×122.°34E, h14km, MS3.1*
IDC 06 12:58:30.7±3.3**, 17.°46N×121.°85E, h0km, mb3.3**/4**,**
mbtmp3.3/4**, Error ellipse: s-maj=318.2km**
s-min=23.1km az=63.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	39.14	161	P	P	13 06 00.1	-0.2
	0.4nm,0.8s,baz=341,slow=9.1,SNR=4.5						
	0.4nm,0.8s						
ASAR	Alice Springs	42.54	164	P	P	13 06 28.2	-0.1
	0.4nm,0.7s,baz=339,slow=6.3,SNR=6.0						
	0.4nm,0.7s						
H11S3	WAKE ISLAND Hy	42.58	81	T	T	13 51 25.2	
	baz=276,slow=75,SNR=49						
H11S1	WAKE ISLAND Hy	42.59	81	T	T	13 51 30.1	
	baz=276,slow=75,SNR=23						
H11S2	WAKE ISLAND Hy	42.59	81	T	T	13 51 27.1	
	baz=276,slow=75,SNR=31						
H11N1	WAKE ISLAND Hy	42.66	80	T	T	13 51 35.5	
	baz=275,slow=75,SNR=10						
H11N2	WAKE ISLAND Hy	42.66	80	T	T	13 51 35.8	
	baz=275,slow=75,SNR=10						
H11N3	WAKE ISLAND Hy	42.67	80	T	T	13 51 36.8	
	baz=275,slow=75,SNR=7.6						
MKAR	Makanchi Array	43.76	321	P	P	13 06 38.6	+0.5
	0.2nm,0.5s,baz=111,slow=9.0,SNR=3.0						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	47.76	324	P	P	13 07 08.9	-0.6
	0.4nm,0.6s,baz=120,slow=7.7,SNR=6.1						
	0.4nm,0.6s						

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*JMA **06** 13:04:44.6±0.1, 24°N±1°×122.°8E±0.°7, h46km, MV1.8/10,*
NW OFF ISHIGAKIJIMA IS
*TAP **06** 13:04:45.1, 24.°24N×122.°71E, h28km, ML2.6, C*
ISC 06 13:04:43.6±1.2**, 24.°22N**±0.°04×**122.°77E**±0.°02**, h20**km±5km**,**
n48, σ0.s63/91**, Taiwan region**

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

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
JYNG	**Yonagunijimaku**	**0.28**	**34**	*i* P	**Pn**	**13 04 52.8**	**+0.1**
JYNG				*e*S	**Sn**	**13 04 58.5**	**+0.2**
YOJ	**Yonaguni jima**	**0.33**	**42**	*i* P	**Pn**	**13 04 53.4**	**+0.2**
YOJ				*i* S	**Sn**	**13 04 59.4**	**0.0**
YOJ	**Yonaguni jima**	**0.33**	**42**	*e*P	**Pn**	**13 04 53.2**	**0.0**
YOJ				S	**Sn**	**13 04 59.1**	**-0.3**
IRIF	**Iriomote-Funau**	**0.89**	**82**	P	**Pb**	**13 05 00.6**	**+0.3**
IRIF				S	**Sb**	**13 05 12.4**	**+0.8**
TWC	**Suao**	**0.93**	**295**	*e*P	**Pn**	**13 05 01.5**	**0.0**
ENA	**Nanau**	**0.96**	**283**	*e*P	**Pn**	**13 05 01.9**	**0.0**
NDS	**Dongshan**	**1.05**	**294**	*e*P	**Pn**	**13 05 03.7**	**+0.6**
NDS				*e*S	**Sn**	**13 05 16.4**	**-0.7**
NACB	**Ninganchiao**	**1.07**	**268**	*e*P	**Pn**	**13 05 03.3**	**-0.2**
NACB				*e*S	**Sn**	**13 05 17.2**	**-0.5**
JKRS	**Kuro-shima**	**1.13**	**89**	*e*P	**Pn**	**13 05 04.8**	**+0.5**
JKRS				*e*S	**Sb**	**13 05 19.1**	**+0.3**
TIPB	**Shuangxi**	**1.14**	**311**	*e*P	**Pb**	**13 05 04.7**	**0.0**
TIPB				*e*S	**Sb**	**13 05 17.9**	**-1.2**
ENTT	**Nioudou**	**1.18**	**291**	*e*P	**Pb**	**13 05 05.6**	**+0.3**
ENTT				*e*S	**Sn**	**13 05 20.5**	**+0.2**
ETLH	**Xiulin Townshi**	**1.18**	**270**	*e*P	**Pn**	**13 05 05.1**	**+0.1**
ETLH				*e*S	**Sn**	**13 05 20.0**	**-0.4**
LATG	**Datong**	**1.18**	**286**	*e*P	**Pb**	**13 05 05.9**	**+0.6**
LATG				*e*S	**Sn**	**13 05 20.4**	**-0.1**
SHUL	**Shoufeng**	**1.18**	**249**	*e*P	**Pn**	**13 05 04.9**	**0.0**
SHUL				*e*S	**Sb**	**13 05 20.3**	**+0.1**
ETM	**Tongmen**	**1.19**	**258**	*e*P	**Pn**	**13 05 04.9**	**-0.3**
ETM				*e*S	**Sb**	**13 05 20.4**	**-0.2**
FUSB	**Fushanzhiwuyua**	**1.21**	**297**	*e*P	**Pb**	**13 05 05.6**	**-0.2**
FUSB				*e*S	**Sn**	**13 05 22.0**	**+0.8**
LXIB	**Xiulin Townshi**	**1.25**	**261**	*e*P	**Pn**	**13 05 05.8**	**-0.3**
LXIB				*e*S	**Sb**	**13 05 22.5**	**0.0**
JIJ	**Ishigaki jima**	**1.26**	**83**	*e*S	**Sn**	**13 05 21.4**	**-1.0**
NNSB	**Datong**	**1.28**	**280**	*e*P	**Pb**	**13 05 07.0**	**-0.1**
NNSB				*e*S	**Sb**	**13 05 23.4**	**+0.2**
NNSH	**Datong**	**1.28**	**280**	*e*P	**Pb**	**13 05 07.3**	**+0.2**
NNSH				*e*S	**Sb**	**13 05 23.8**	**+0.6**
NWLT	**Wulai**	**1.28**	**296**	*e*P	**Pb**	**13 05 06.8**	**-0.2**
NWLT				*e*S	**Sn**	**13 05 22.2**	**-0.8**
ESL	**Shilin**	**1.28**	**252**	*e*P	**Pn**	**13 05 06.0**	**-0.4**
ESL				*e*S	**Sn**	**13 05 22.4**	**-0.7**
YHNB	**Yeheng**	**1.35**	**290**	*e*P	**Pb**	**13 05 08.2**	**-0.1**
YHNB				*e*S	**Sb**	**13 05 25.9**	**+0.8**
WARBT	**Fenglin Townsh**	**1.36**	**249**	*i* P	**Pn**	**13 05 07.0**	**-0.4**
WARBT				S	**Sn**	**13 05 24.0**	**-0.8**
NSK	**Sanguang**	**1.36**	**290**	*e*P	**Pb**	**13 05 08.6**	**0.0**
NSK				*e*S	**Sb**	**13 05 25.3**	**-0.2**
HGSD	**Ruisui**	**1.43**	**240**	*e*P	**Pn**	**13 05 08.4**	**+0.1**
HGSD				*e*S	**Sn**	**13 05 25.6**	**-0.9**
JISG	**Ishigakijimahi**	**1.45**	**75**	*e*P	**Pn**	**13 05 08.1**	**-0.6**
JISG				*e*S	**Sn**	**13 05 25.5**	**-1.7**
OWD	**Renai**	**1.48**	**260**	*e*P	**Pn**	**13 05 09.2**	**0.0**
OWD				*e*S	**Sn**	**13 05 27.3**	**-0.7**
EHYH	**Wanrong**	**1.49**	**241**	*e*P	**Pn**	**13 05 09.4**	**+0.2**
EHYH				*e*S	**Sn**	**13 05 27.7**	**-0.3**
EHY	**Hungye**	**1.50**	**242**	*e*P	**Pn**	**13 05 09.4**	**0.0**
EHY				*e*S	**Sn**	**13 05 28.1**	**-0.3**
WUSB	**Renai**	**1.52**	**262**	*e*P	**Pn**	**13 05 10.3**	**+0.5**
WUSB				*e*S	**Sn**	**13 05 28.9**	**-0.3**
VWDT	**VWDT**	**1.56**	**253**	*e*P	**Pn**	**13 05 10.7**	**+0.6**
VWDT				*e*S	**Sn**	**13 05 29.4**	**-0.3**
YULB	**Yu-li**	**1.58**	**239**	P	**Pn**	**13 05 10.4**	**0.0**
YULB				*e*S	**Sn**	**13 05 29.5**	**-0.7**
TWF1	**Yuli**	**1.60**	**238**	*e*P	**Pn**	**13 05 10.8**	**+0.1**
TWF1				*e*S	**Sn**	**13 05 30.2**	**-0.6**
WHP	**Taichung City**	**1.67**	**273**	*e*P	**Pb**	**13 05 12.9**	**-0.7**
WHP				*e*S	**Sb**	**13 05 33.1**	**-1.1**
FULB	**Fuli**	**1.69**	**233**	*e*P	**Pn**	**13 05 11.7**	**-0.3**
FULB				*e*S	**Sn**	**13 05 33.0**	**0.0**
SSLB	**Suanglung**	**1.71**	**256**	*e*P	**Pn**	**13 05 12.8**	**+0.5**
SSLB				*e*S	**Sn**	**13 05 33.7**	**0.0**
SMLT	**Sun Moon Lake**	**1.74**	**259**	*e*P	**Pn**	**13 05 13.7**	**+1.0**
SMLT				*e*S	**Sb**	**13 05 35.2**	**-1.2**
EHD	**Haiduan**	**1.78**	**234**	*e*P	**Pn**	**13 05 13.4**	**+0.1**
EHD				*e*S	**Sn**	**13 05 34.3**	**-1.1**
WHYT	**Xinyi Township**	**1.83**	**254**	*e*P	**Pn**	**13 05 14.5**	**+0.6**
WHYT				*e*S	**Sn**	**13 05 36.6**	**+0.2**
ELDTW	**Lidau**	**1.90**	**238**	*e*P	**Pn**	**13 05 14.9**	**-0.1**
ELDTW				*e*S	**Sn**	**13 05 37.3**	**-1.1**
ALS	**Alishan**	**1.93**	**249**	*e*P	**Pn**	**13 05 16.9**	**+1.4**
ALS				*e*S	**Sn**	**13 05 40.0**	**+0.7**
CHN5	**Tsauling**	**2.01**	**253**	*e*P	**Pn**	**13 05 17.4**	**+0.9**
TWGBT	**Beinan**	**2.08**	**228**	*e*P	**Pn**	**13 05 17.8**	**+0.4**
TWGBT				*e*S	**Sn**	**13 05 42.9**	**+0.1**
TWG	**Pinlang**	**2.09**	**229**	*e*P	**Pn**	**13 05 17.8**	**+0.3**
TWG				*e*S	**Sn**	**13 05 42.6**	**-0.2**
STYH	**Taoyuan**	**2.10**	**241**	*e*P	**Pn**	**13 05 18.7**	**+1.1**
STYH				*e*S	**Sn**	**13 05 43.5**	**+0.3**
STYT	**Tauyuan**	**2.12**	**241**	*e*P	**Pn**	**13 05 18.8**	**+0.9**
TPUB	**Ta-pu**	**2.16**	**246**	*e*P	**Pn**	**13 05 19.9**	**+1.5**
TPUB				*e*S	**Sn**	**13 05 46.6**	**+1.9**

*JMA **06** 13:07:21.4±0.1, 24.°5N±0.°3×121.°9E±0.°5, h72km±1km, MV2.1/9, TAIWAN REGION*
*TAP **06** 13:07:21.9, 24.°57N×121.°85E, h68km, ML3.0, B*
ISC 06 13:07:22.5±1.3**, 24.°56N**±0.°03×**121.°88E**±0.°03**, h67**km±6km**,**
n84, σ**0.°73**/151**, Taiwan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
ESAO	**Su ao**	**0.03**	**292**	*i* P	**Pn**	**13 07 32.3**	**0.0**
ESAO				*i* S	**Sn**	**13 07 40.1**	**+0.6**
TWC	**Suao**	**0.05**	**330**	*i* P	**Pn**	**13 07 32.5**	**+0.1**
TWC				*i* S	**Sn**	**13 07 39.9**	**+0.4**
EWUT	**Wuta**	**0.15**	**218**	*i* P	**Pn**	**13 07 32.6**	**0.0**
EWUT				*e*S	**Sn**	**13 07 40.4**	**+0.5**
NDS	**Dongshan**	**0.16**	**296**	*i* P	**Pn**	**13 07 32.8**	**+0.1**
NDS				S	**Sn**	**13 07 40.6**	**+0.5**
ENA	**Nanau**	**0.18**	**223**	P	**Pn**	**13 07 32.8**	**0.0**
ENA				*e*S	**Sn**	**13 07 41.1**	**+0.9**
ILA	**Ilan**	**0.23**	**330**	*e*P	**Pn**	**13 07 33.4**	**+0.4**
ILA				*e*S	**Sn**	**13 07 42.0**	**+1.4**
TWE	**Neicheng**	**0.25**	**309**	*i* P	**Pn**	**13 07 33.1**	**+0.1**
TWE				S	**Sn**	**13 07 41.6**	**+0.8**
EAHA	**Aohua**	**0.27**	**209**	*e*P	**Pn**	**13 07 33.3**	**+0.1**
EAHA				*e*S	**Sn**	**13 07 41.8**	**+0.9**
ENTT	**Nioudou**	**0.29**	**285**	P	**Pn**	**13 07 33.3**	**-0.1**
LATG	**Datong**	**0.32**	**265**	*i* P	**Pn**	**13 07 33.6**	**-0.1**
LATG				*e*S	**Sn**	**13 07 42.4**	**+0.5**
FUSB	**Fushanzhiwuyua**	**0.33**	**307**	*i* P	**Pn**	**13 07 33.5**	**-0.2**
FUSB				S	**Sn**	**13 07 42.2**	**+0.3**
NDT	**Datong Townshi**	**0.34**	**277**	*i* P	**Pn**	**13 07 33.6**	**-0.1**
NWLT	**Wulai**	**0.40**	**302**	*i* P	**Pn**	**13 07 33.8**	**-0.5**
NWLT				S	**Sn**	**13 07 42.3**	**-0.6**
TIPB	**Shuangxi**	**0.41**	**353**	*i* P	**Pn**	**13 07 34.3**	**-0.1**
TIPB				*i* S	**Sn**	**13 07 43.0**	**+0.1**
TWB1	**Santiao Chiao**	**0.46**	**13**	P	**Pn**	**13 07 34.4**	**-0.3**
TWB1				S	**Sn**	**13 07 43.6**	**+0.1**
ETL	**Fush Village**	**0.47**	**210**	*e*P	**Pn**	**13 07 34.2**	**-0.6**
ETL				*e*S	**Sn**	**13 07 43.8**	**0.0**
NACB	**Ninganchiao**	**0.47**	**214**	P	**Pn**	**13 07 33.9**	**-0.9**
NACB	**Ninganchiao**	**0.47**	**214**	*i* P	**Pn**	**13 07 33.8**	**-1.0**
NACB				*i* S	**Sn**	**13 07 43.3**	**-0.4**
YHNB	**Yeheng**	**0.47**	**283**	P	**Pn**	**13 07 34.2**	**-0.7**
YHNB	**Yeheng**	**0.47**	**283**	*i* P	**Pn**	**13 07 34.3**	**-0.6**
YHNB				*i* S	**Sn**	**13 07 43.2**	**-0.7**
NNSB	**Datong**	**0.47**	**254**	*i* P	**Pn**	**13 07 34.8**	**-0.2**
NNSB				*i* S	**Sn**	**13 07 43.8**	**-0.2**
NNSH	**Datong**	**0.47**	**254**	*i* P	**Pn**	**13 07 34.6**	**-0.3**
NNSH				*i* S	**Sn**	**13 07 43.9**	**-0.2**
NNS	**Nan Shan**	**0.48**	**255**	*i* P	**Pn**	**13 07 34.8**	**-0.2**
NNS				*e*S	**Sn**	**13 07 44.0**	**-0.2**
NSK	**Sanguang**	**0.49**	**283**	P	**Pn**	**13 07 34.4**	**-0.7**
NSK				S	**Sn**	**13 07 43.4**	**-0.8**
TWA	**Mucha**	**0.49**	**327**	*e*P	**Pn**	**13 07 34.8**	**-0.3**
TWA				*e*S	**Sn**	**13 07 44.7**	**+0.4**
ETLH	**Xiulin Townshi**	**0.51**	**226**	P	**Pn**	**13 07 34.7**	**-0.5**
ETLH				*e*S	**Sn**	**13 07 44.2**	**-0.3**
NHDH	**Xindian Distri**	**0.51**	**321**	*e*P	**Pn**	**13 07 34.9**	**-0.3**
NHDH				*e*S	**Sn**	**13 07 44.1**	**-0.4**
NWF	**Wu-fen Shan**	**0.51**	**350**	*e*P	**Pn**	**13 07 35.5**	**+0.1**
NWF				*e*S	**Sn**	**13 07 45.1**	**+0.4**
WFSB	**Wu-fen Shan**	**0.51**	**350**	*e*P	**Pn**	**13 07 35.5**	**+0.2**
WFSB				*e*S	**Sn**	**13 07 45.0**	**+0.5**
SXI1	**Grass Mountain**	**0.53**	**360**	P	**Pn**	**13 07 35.9**	**+0.4**
SXI1				S	**Sn**	**13 07 45.5**	**+0.5**
TATO	**Taipei**	**0.54**	**319**	P	**Pn**	**13 07 35.0**	**-0.6**
TATO	**Taipei**	**0.54**	**319**	P	**Pn**	**13 07 35.0**	**-0.6**
TATO				*e*S	**Sn**	**13 07 44.7**	**-0.3**
TWD	**Chiawan**	**0.55**	**208**	*e*P	**Pn**	**13 07 34.8**	**-0.8**
TWD				*e*S	**Sn**	**13 07 44.4**	**-0.7**
TNOU	**National Taiwa**	**0.59**	**351**	*e*S	**Sn**	**13 07 46.2**	**+0.3**
HWA	**Hwalien**	**0.63**	**203**	*e*P	**Pn**	**13 07 35.7**	**-0.8**
YM01	**YM01**	**0.65**	**334**	*e*P	**Pn**	**13 07 36.4**	**-0.3**
YM01				*e*S	**Sn**	**13 07 46.8**	**-0.3**
FUSS	**Fushou**	**0.66**	**242**	P	**Pn**	**13 07 36.9**	**-0.1**
FUSS				S	**Sn**	**13 07 47.7**	**+0.1**
ZUZH	**Zhuzihu**	**0.67**	**333**	P	**Pn**	**13 07 36.4**	**-0.5**
ZUZH				S	**Sn**	**13 07 46.9**	**-0.6**
KSHI	**Guanxi Townshi**	**0.67**	**289**	*e*P	**Pn**	**13 07 36.7**	**-0.2**
KSHI				*e*S	**Sn**	**13 07 47.5**	**-0.1**
YM08	**YM08**	**0.68**	**337**	P	**Pn**	**13 07 36.5**	**-0.5**
YM08				*e*S	**Sn**	**13 07 47.1**	**-0.5**
TWS1	**Kuangyinshan**	**0.68**	**322**	*e*P	**Pn**	**13 07 36.8**	**-0.3**
TWS1				*e*S	**Sn**	**13 07 48.0**	**+0.3**
LXIB	**Xiulin Townshi**	**0.69**	**218**	*i* P	**Pn**	**13 07 36.2**	**-1.1**
LXIB				*e*S	**Sn**	**13 07 47.9**	**-0.2**
ETM	**Tongmen**	**0.69**	**211**	*e*P	**Pn**	**13 07 36.1**	**-1.1**
ETM				*e*S	**Sn**	**13 07 46.9**	**-1.0**
NFF	**Wufeng Townshi**	**0.70**	**276**	P	**Pn**	**13 07 36.6**	**-0.6**
NFF				*e*S	**Sn**	**13 07 47.5**	**-0.6**
WHF	**Hehuan Shan**	**0.70**	**233**	*i* P	**Pn**	**13 07 37.4**	**-0.3**
WHF				S	**Sn**	**13 07 48.7**	**-0.1**
ANP	**Anpu**	**0.70**	**332**	*e*P	**Pn**	**13 07 36.8**	**-0.6**
ANP				*e*S	**Sn**	**13 07 47.7**	**-0.5**
TWT	**Tachien**	**0.71**	**244**	*e*P	**Pn**	**13 07 37.8**	**+0.2**
TWT				*e*S	**Sn**	**13 07 49.0**	**+0.4**
NTST	**Danshui**	**0.71**	**327**	*e*P	**Pn**	**13 07 37.1**	**-0.3**
NTST				*e*S	**Sn**	**13 07 48.8**	**+0.4**
TDCB	**Techi**	**0.72**	**245**	*e*P	**Pn**	**13 07 37.7**	**0.0**
TDCB				*e*S	**Sn**	**13 07 48.7**	**-0.2**
NJD	**Zhudong**	**0.74**	**284**	*e*P	**Pn**	**13 07 37.3**	**-0.4**
NJD				*e*S	**Sn**	**13 07 48.6**	**-0.3**
NCUH	**Zhongli**	**0.75**	**303**	*e*P	**Pn**	**13 07 37.0**	**-0.8**
NCUH				*e*S	**Sn**	**13 07 48.7**	**-0.4**
TWY	**Chenhua**	**0.75**	**340**	*e*P	**Pn**	**13 07 37.8**	**-0.1**
TWY				*e*S	**Sn**	**13 07 49.8**	**+0.6**
LIOB	**Emei**	**0.79**	**276**	P	**Pn**	**13 07 37.8**	**-0.6**
LIOB				S	**Sn**	**13 07 49.5**	**-0.5**
NSTT	**Nanjuang**	**0.80**	**275**	*i* P	**Pn**	**13 07 37.8**	**-0.6**
NSTT				S	**Sn**	**13 07 49.4**	**-0.8**
HSN1	**Hsinchu**	**0.81**	**285**	*e*P	**Pn**	**13 07 38.1**	**-0.4**
HSN1				*e*S	**Sn**	**13 07 50.1**	**-0.3**
SHUL	**Shoufeng**	**0.82**	**201**	*e*P	**Pn**	**13 07 38.6**	**-0.1**
SHUL				*e*S	**Sn**	**13 07 51.1**	**+0.4**
SBCB	**Hsinchu**	**0.84**	**286**	*e*S	**Sn**	**13 07 50.6**	**-0.5**
ESL	**Shilin**	**0.85**	**209**	*e*P	**Pn**	**13 07 37.6**	**-1.5**
ESL				*e*S	**Sn**	**13 07 49.7**	**-1.5**
HSN	**Hsinchu**	**0.86**	**286**	*e*S	**Sn**	**13 07 50.3**	**-1.1**
OWD	**Renai**	**0.88**	**227**	P	**Pn**	**13 07 39.2**	**-0.3**
OWD				S	**Sn**	**13 07 51.8**	**-0.3**
WHP	**Taichung City**	**0.90**	**252**	*e*P	**Pn**	**13 07 39.9**	**+0.2**
WHP				*e*S	**Sn**	**13 07 52.9**	**+0.5**
WUSB	**Renai**	**0.90**	**231**	P	**Pn**	**13 07 39.6**	**-0.1**
WUSB				S	**Sn**	**13 07 52.8**	**+0.3**
WARBT	**Fenglin Townsh**	**0.95**	**208**	*e*P	**Pn**	**13 07 39.2**	**-1.1**
WARBT				*e*S	**Sn**	**13 07 51.8**	**-1.7**
JYNG	**Yonagunijimaku**	**0.98**	**96**	P	**Pn**	**13 07 40.4**	**-0.2**
NMLH	**Miaoli**	**0.99**	**269**	*e*S	**Sn**	**13 07 53.9**	**-0.4**
WPL	**Puli Township**	**1.00**	**237**	*e*P	**Pn**	**13 07 40.7**	**-0.2**
WPL				*e*S	**Sn**	**13 07 55.0**	**+0.4**
WCS	**Beigang Elemen**	**1.02**	**240**	*e*P	**Pn**	**13 07 41.3**	**+0.2**
WCS				*e*S	**Sn**	**13 07 55.3**	**+0.5**
TWQ1	**Liyutan**	**1.03**	**258**	*e*S	**Sn**	**13 07 54.6**	**-0.6**
YOJ	**Yonaguni jima**	**1.04**	**95**	*e*P	**Pn**	**13 07 40.8**	**-0.5**
YOJ				*e*S	**Sn**	**13 07 55.6**	**+0.2**
VWDT	**VWDT**	**1.05**	**220**	*e*P	**Pn**	**13 07 41.2**	**-0.4**
VWDT				*e*S	**Sn**	**13 07 55.6**	**0.0**
SMLT	**Sun Moon Lake**	**1.12**	**233**	*e*P	**Pn**	**13 07 43.3**	**+0.8**
SMLT				*e*S	**Sn**	**13 07 58.6**	**+1.2**
TYC	**Yuchr**	**1.14**	**235**	*e*P	**Pn**	**13 07 43.0**	**+0.3**
TYC				*e*S	**Sn**	**13 07 58.5**	**+0.8**
HGSD	**Ruisui**	**1.14**	**201**	*e*P	**Pn**	**13 07 42.5**	**-0.3**
HGSD				*e*S	**Sn**	**13 07 58.2**	**+0.4**
SSLB	**Suanglung**	**1.14**	**228**	*e*P	**Pn**	**13 07 42.8**	**0.0**
SSLB				*e*S	**Sn**	**13 07 58.5**	**+0.6**
EHY	**Hungye**	**1.17**	**206**	*e*P	**Pn**	**13 07 42.5**	**-0.6**
EHY				*e*S	**Sn**	**13 07 56.6**	**-1.8**
EHYH	**Wanrong**	**1.17**	**205**	*e*P	**Pn**	**13 07 42.0**	**-1.1**
WHYT	**Xinyi Township**	**1.27**	**228**	*e*P	**Pn**	**13 07 45.1**	**+0.7**
WHYT				*e*S	**Sn**	**13 08 02.4**	**+1.5**
YULB	**Yu-li**	**1.28**	**205**	*e*P	**Pn**	**13 07 43.4**	**-1.2**
ELDTW	**Lidau**	**1.58**	**210**	*e*P	**Pn**	**13 07 49.3**	**+0.7**
ELDTW				*i* S	**Sn**	**13 08 07.6**	**-0.6**
TPUB	**Ta-pu**	**1.70**	**223**	P	**Pn**	**13 07 54.4**	**+4.3**
TPUB	**Ta-pu**	**1.70**	**223**	*e*P	**Pn**	**13 07 51.4**	**+1.3**
TPUB				*e*S	**Sn**	**13 08 13.3**	**+2.4**
IRIF	**Iriomote-Funau**	**1.70**	**97**	P	**Pn**	**13 07 49.6**	**-0.5**
IRIF				S	**Sn**	**13 08 10.5**	**-0.5**
JKRS	**Kuro-shima**	**1.97**	**99**	P	**Pn**	**13 07 53.9**	**+0.2**
JISG	**Ishigakijimahi**	**2.21**	**89**	P	**Pn**	**13 07 56.8**	**-0.2**

*IDC **06** 13:16:09.2±2.6, 18.°01S×178.°84W, h564km±18km, mb3.5/5, mbtmp4.4/7, Error ellipse: s-maj=44.2km s-min=32.7km az=72.0*
*NEIC **06** 13:16:09.8±1.0, 17.°8S±0.°2×178.°92W±0.°09, h561km±10km, mb4.3/16, Error ellipse: s-maj=30.9km s-min=10.4km az=167.0*
ISC 06 13:16:08.7±1.7**, 17.°9S**±0.°2×**179.°0W**±0.°2**, h550**km**, n30,**
σ**1.°26**/26**, mb4.2**/12**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
MSVF	**Nonsavu**	**2.84**	**272**	P	**P**	**13 17 25.0**	**+2.1**
	50nm,0.7s,baz=118,slow=22,SNR=35						
DZM	**Mont Dzumac**	**14.34**	**251**	P	**P**	**13 19 11.1**	**-0.5**
	6.5nm,0.7s,baz=93,slow=9.3,SNR=5.9						
DZM	**Mont Dzumac**	**14.34**	**251**	P	**P**	**13 19 11.7**	**+0.1**
URZ	**Urewera**	**20.61**	**189**	P	**P**	**13 20 09.4**	**-0.7**
	7.0nm,0.9s,baz=295,slow=16,SNR=1.8						
	7.0nm,0.9s						
EIDS	**Eidsvold**	**28.78**	**250**	P	**P**	**13 21 23.5**	**+0.8**
EIDS				IAmb	IAmb	13 21 46.2	
	comp=Z,14nm,1.4s						
ARMA	**Armidale**	**29.50**	**239**	P	**P**	**13 21 28.4**	**-0.7**
CTAO	**Charters Tower**	**32.93**	**260**	P	**P**	**13 21 58.4**	**+0.1**
CTAO				IAmb	IAmb	13 21 59.0	
	comp=Z,4.1nm,0.7s						
PMG	**Port Moresby**	**33.92**	**280**	P	**P**	**13 22 07.3**	**+0.5**
COEN	**Coen**	**36.57**	**271**	P	**P**	**13 22 29.1**	**+0.3**
STKA	**Stephens Creek**	**38.19**	**241**	P	**P**	**13 22 42.5**	**+0.7**
	comp=Z,4.4nm,0.8s,baz=85,slow=11,SNR=6.2						
	comp=Z,4.4nm,0.8s						
STKA	**Stephens Creek**	**38.19**	**241**	P	**P**	**13 22 41.1**	**-0.7**
INKA	**Innaminka**	**38.27**	**248**	P	**P**	**13 22 42.2**	**-0.3**
BBOO	**Buckleboo**	**42.96**	**241**	P	**P**	**13 23 21.1**	**+1.3**
BBOO				IAmb	IAmb	13 23 49.7	
	comp=Z,16nm,1.2s						
WR8	**Warramunga Arr**	**43.96**	**260**	P	**P**	**13 23 27.5**	**-0.3**
WR8				IAmb	IAmb	13 23 31.4	
	comp=Z,4.6nm,0.9s						
WB0	**Warramunga Arr**	**44.08**	**260**	P	**P**	**13 23 28.3**	**-0.4**
WB0				IAmb	IAmb	13 23 28.8	
	comp=Z,6.5nm,0.9s						
WRA	**Warramunga Arr**	**44.12**	**260**	P	**P**	**13 23 28.6**	**-0.4**
	comp=Z,3.4nm,0.6s,baz=95,slow=7.5,SNR=68						
	comp=Z,3.4nm,0.6s						
WRA	**Warramunga Arr**	**44.12**	**260**	P	**P**	**13 23 28.6**	**-0.4**
AS31	**Alice Springs**	**44.29**	**254**	P	**P**	**13 23 30.5**	**+0.2**
AS31				IAmb	IAmb	13 23 31.2	
	comp=Z,8.3nm,0.6s						
ASAR	**Alice Springs**	**44.29**	**254**	P	**P**	**13 23 30.6**	**+0.2**
	comp=Z,26nm,0.6s,baz=88,slow=8.1,SNR=324						
	comp=Z,26nm,0.6s						
FORT	**Forrest**	**49.55**	**245**	P	**P**	**13 24 08.4**	**-1.3**
FORT				IAmb	IAmb	13 24 45.5	
	comp=Z,8.7nm,0.9s						
FORT				PcP	**PcP**	**13 25 16.7**	**-4.6**
KNRA	**Kununurra**	**49.96**	**264**	P	**P**	**13 24 12.9**	**-0.1**
KNRA				IAmb	IAmb	13 24 13.2	
	comp=Z,5.8nm,0.6s						
QSPA	**South Pole Qui**	**72.19**	**180**	P	**P**	**13 26 39.6**	**+1.6**
BELA	**Belgrano 2**	**82.28**	**173**	P	**P**	**13 27 32.8**	**+0.4**
CMAR	**Chiang Mai Arr**	**88.37**	**290**	P	**P**	**13 28 02.5**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=111,slow=2.9,SNR=4.1						
	comp=Z,0.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**88.37**	**290**	P	**P**	**13 28 02.0**	**-0.8**
LODK	**Lodwar**	**143.44**	**251**		PKPab	13 34 39.4	-1.0
BUR08	**Bucovina Ar. S**	**144.30**	**332**	PKPbc	PKPbc	13 34 40.3	-2.1
BURAR	**Bucovina Array**	**144.32**	**332**		PKPbc	13 34 40.3	-2.0
BRTR	**Keskin Array B**	**144.37**	**314**	PKP	PKPbc	13 34 40.2	-2.6
	comp=Z,0.8nm,0.7s,baz=99,slow=4.8,SNR=3.8						
BRTR	**Keskin Array B**	**144.37**	**314**		PKPbc	13 34 41.2	-1.7

ISK 06 13:20:39.8, 38.°40N×39.°17E, h12km±1km**, ML1.4**/2**,**
Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
ESGZ	**Sivrice-Elazig**	**0.09**	**289**	Pg	Pg	13 20 42.6	0.0
ESGZ				Sg	Sg	13 20 44.9	+0.2
SVRC	**Sivrice-ELAZID**	**0.11**	**102**	Pg	Pg	13 20 43.1	+0.1
SVRC				Sg	Sg	13 20 45.4	+0.1
ESIJ	**Sivrice-Elazig**	**0.12**	**68**	Pg	Pg	13 20 43.3	+0.2
ESIJ				Sg	Sg	13 20 45.7	+0.3

*NSSP **06** 13:22:25.4, 41.°82N×46.°30E, h10km, Ms3.1*
*MOS **06** 13:22:26.6, 41.°97N×46.°37E, h20km, MPVA4.2*
*TIF **06** 13:22:26.9, 41.°92N×46.°33E, h22km*
*AZER **06** 13:22:27.6, 41.°76N×46.°24E, h15km, ml3.2*
*DRS **06** 13:22:28.3, 42.°01N×46.°37E, h9km*
*NORS **06** 13:22:28.6, 42.°08N×46.°40E, h7km, MPVA4.2*
ISC 06 13:22:27.7±0.7**, 41.°92N**±0.°01×**46.°33E**±0.°01**, h17**km±4km**,**
n135, σ**1.°21**/248**, 1C-8D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
LGD	**Lagodekhi**	**0.11**	**217**	S	**Sg**	**13 22 35.0**	**+1.2**
LGD	**Lagodekhi**	**0.11**	**217**	PG	**Pg**	**13 22 31.2**	**-0.1**
LGD				S	**Sg**	**13 22 34.9**	**+1.2**
LGD	**Lagodekhi**	**0.11**	**217**	P	**Pg**	**13 22 31.2**	**-0.1**
TLTR	**Tlyarata**	**0.18**	**5**	*i* Pg	**Pg**	**13 22 31.8**	**-0.6**
TLTR				*e*Sg	**Sg**	**13 22 34.7**	**-0.8**
TLTR	**Tlyarata**	**0.18**	**5**	⇓*i*PG	**Pg**	**13 22 31.8**	**-0.6**
TLTR				pmax	pmax		
	comp=Z,4μm,0.2s						
ZKTA	**Zakatala**	**0.36**	**143**	P	**Pg**	**13 22 35.1**	**0.0**
ZKTA				S	**Sb**	**13 22 41.0**	**0.0**
DDFL	**Dedoflistskaro**	**0.50**	**199**	P	**Pg**	**13 22 38.0**	**+0.1**
DDFL	**Dedoflistskaro**	**0.50**	**199**	PG	**Pg**	**13 22 37.9**	**+0.1**
KMKR	**Kumukh**	**0.61**	**70**	*i* Pg	**Pg**	**13 22 39.5**	**-0.3**
KMKR				*e*Sg	**Sb**	**13 22 48.2**	**-0.3**
KMKR	**Kumukh**	**0.61**	**70**	⇓*i*PG	**Pg**	**13 22 39.5**	**-0.3**
KMKR				*e*S	**Sb**	**13 22 48.1**	**-0.3**
KMKR				pmax	pmax		
	comp=Z,578nm,0.5s						
GNBR	**Gunib**	**0.66**	**45**	*i* Pg	**Pg**	**13 22 40.4**	**-0.2**
GNBR				*e*Sg	**Sb**	**13 22 49.9**	**+0.2**
GNBR	**Gunib**	**0.66**	**45**	⇓*i*PG	**Pg**	**13 22 40.5**	**-0.2**
GNBR				*e*S	**Sb**	**13 22 50.0**	**+0.2**
XNZR	**Khunzakh**	**0.68**	**24**	*i* Pg	**Pb**	**13 22 40.9**	**-0.2**
XNZR				*e*Sg	**Sb**	**13 22 50.5**	**+0.1**
HNZR	**Khunzah**	**0.69**	**24**	⇓*i*PG	**Pg**	**13 22 41.0**	**-0.4**
HNZR				*e*S	**Sb**	**13 22 50.5**	**-0.4**
VSHL	**Vashlovani**	**0.69**	**176**	P	**Pb**	**13 22 42.2**	**+0.8**
BTLR	**Botlikh**	**0.74**	**354**	*e*Pg	**Pg**	**13 22 41.2**	**-1.1**
BTLR				*e*Sg	**Sg**	**13 22 51.4**	**-0.7**
BTLR	**Botlikh**	**0.74**	**354**	*e*PG	**Pg**	**13 22 41.2**	**-1.1**
BTLR				*e*S	**Sg**	**13 22 51.4**	**-0.7**
BTLR				pmax	pmax		
	comp=Z,227nm,0.2s						
ARKR	**Arakani**	**0.84**	**36**	*i* Pg	**Pg**	**13 22 43.5**	**-0.5**
ARKR				*e*Sg	**Sb**	**13 22 55.1**	**+0.2**
ARKR	**Arakani**	**0.84**	**36**	⇓*i*PG	**Pg**	**13 22 43.5**	**-0.5**
ARKR				*e*S	**Sb**	**13 22 55.1**	**+0.2**
ARKR				pmax	pmax		
	comp=Z,227nm,0.3s						
DGRG	**David-gareji**	**0.86**	**237**	P	**Pb**	**13 22 44.5**	**+0.2**
DGRG				S	**Sn**	**13 22 59.7**	**+2.4**
DGRG	**David-gareji**	**0.86**	**237**	PG	**Pb**	**13 22 44.4**	**+0.2**
DGRG				S	**Sn**	**13 22 59.7**	**+2.4**
UNCR	**Uncukul**	**0.86**	**23**	*i* Pg	**Pg**	**13 22 43.8**	**-0.7**
UNCR				*e*Sg	**Sb**	**13 22 55.4**	**-0.2**
UNCR	**Uncukul**	**0.86**	**23**	⇓*i*PG	**Pg**	**13 22 43.7**	**-0.7**
UNCR				*e*S	**Sb**	**13 22 55.3**	**-0.2**
UNCR				pmax	pmax		
	comp=Z,113nm,0.3s						
SEKA	**Sheki**	**0.96**	**137**	P	**Pb**	**13 22 45.4**	**-0.6**
SEKA				S	**Sn**	**13 23 00.5**	**+0.6**
KRNR	**Karanay**	**1.00**	**25**	*e*Pg	**Pb**	**13 22 46.0**	**-0.7**
KRNR				*e*Sg	**Sb**	**13 22 59.4**	**-0.2**
KRNR	**Karanay**	**1.00**	**25**	*e*PG	**Pb**	**13 22 45.9**	**-0.7**
KRNR				*e*S	**Sb**	**13 22 59.3**	**-0.2**
KRNR				pmax	pmax		
	comp=Z,68nm,0.3s						
URKR	**Urkarakh**	**1.00**	**76**	*e*Pg	**Pb**	**13 22 46.3**	**-0.3**
URKR				*e*Sg	**Sb**	**13 22 59.3**	**-0.2**
URKR	**Urkarakh**	**1.00**	**76**	*e*PG	**Pb**	**13 22 46.3**	**-0.3**
URKR				*e*S	**Sg**	**13 22 59.8**	**-0.4**
URKR				pmax	pmax		
	comp=Z,47nm,0.8s						
DVE	**Vedeno**	**1.04**	**352**	*e*Pg	**Pb**	**13 22 47.0**	**-0.4**
DVE				*e*Sg	**Sg**	**13 23 01.3**	**-0.3**
DVE	**Vedeno**	**1.04**	**352**	*i* PG	**Pb**	**13 22 47.0**	**-0.4**
DVE				pmax	pmax		
	comp=Z,112nm,0.2s						
BUJR	**Buynaksk**	**1.07**	**32**	*e*Pg	**Pb**	**13 22 47.6**	**-0.2**
BUJR				*e*Sg	**Sg**	**13 23 02.1**	**-0.3**
BUJR	**Buynaksk**	**1.07**	**32**	*e*PG	**Pb**	**13 22 47.6**	**-0.2**
BUJR				*e*S	**Sg**	**13 23 02.0**	**-0.3**
BUJR				pmax	pmax		
	comp=Z,166nm,0.4s						
SGKR	**Sergokala**	**1.12**	**61**	*e*Pg	**Pb**	**13 22 48.5**	**-0.2**
SGKR				*e*Sg	**Sg**	**13 23 03.5**	**-0.6**
SGKR	**Sergokala**	**1.12**	**61**	PG	**Pb**	**13 22 47.6**	**-1.1**
SGKR				S	**Sg**	**13 23 03.4**	**-0.6**
CHRG	**Chargali**	**1.12**	**292**	P	**Pb**	**13 22 47.3**	**-1.4**
CHRG				S	**Sb**	**13 23 02.4**	**-0.8**
QZX	**Qazax, Azerbai**	**1.13**	**220**	P	**Pb**	**13 22 47.8**	**-0.9**
QZX				S	**Sg**	**13 23 04.0**	**-0.2**
AKT	**Akhty**	**1.14**	**113**	*e*Pg	**Pb**	**13 22 48.3**	**-0.7**
AKT				*e*Sg	**Sn**	**13 23 04.8**	**+0.5**
AKT	**Akhty**	**1.14**	**113**	*e*PG	**Pb**	**13 22 47.9**	**-1.1**
AKT				*e*S	**Sb**	**13 23 02.7**	**-0.8**
AKT				pmax	pmax		
	comp=Z,38nm,0.2s						
AKT				smax	smax		
	comp=N,178nm,0.4s						
AKT				smax	smax		
	comp=N,233nm,0.4s						
AKT				smax	smax		
	comp=E,219nm,0.6s						
SHTL	**Shatili**	**1.14**	**310**	P	**Pb**	**13 22 47.5**	**-1.6**
SHTL				S	**Sb**	**13 23 02.0**	**-1.7**
SHTL	**Shatili**	**1.14**	**310**	PG	**Pb**	**13 22 47.5**	**-1.6**
SEAG	**Tbilisi Sea**	**1.15**	**263**	P	**Pn**	**13 22 48.7**	**-0.5**
SEAG				S	**Sg**	**13 23 05.2**	**+0.1**
SEAG	**Tbilisi Sea**	**1.15**	**263**	PG	**Pn**	**13 22 48.6**	**-0.5**
SEAG				S	**Sg**	**13 23 05.1**	**+0.1**
DBC	**Dubki**	**1.16**	**18**	*e*Pg	**Pb**	**13 22 48.5**	**-0.8**
DBC				*e*Sg	**Sb**	**13 23 04.2**	**+0.1**
DBC	**Dubki**	**1.16**	**18**	*e*PG	**Pb**	**13 22 48.5**	**-0.8**
DBC				*e*S	**Sb**	**13 23 04.1**	**+0.1**
DBC				pmax	pmax		
	comp=Z,84nm,0.3s						
DLMR	**Dylym**	**1.17**	**11**	*e*Pg	**Pb**	**13 22 49.5**	**0.0**
DLMR				*e*Sg	**Sg**	**13 23 05.5**	**0.0**
DLMR	**Dylym**	**1.17**	**11**	*e*PG	**Pb**	**13 22 49.4**	**0.0**
DLMR				*e*S	**Sg**	**13 23 05.5**	**0.0**
DLMR				pmax	pmax		
	comp=Z,147nm,0.2s						
BTNK	**Botanikuri**	**1.17**	**259**	PG	**Pn**	**13 22 48.7**	**-0.7**
BTNK				S	**Sn**	**13 23 05.5**	**+0.5**
TBLG	**Delisi**	**1.21**	**261**	P	**Pn**	**13 22 49.2**	**-0.6**
TBLG				S	**Sn**	**13 23 06.5**	**+0.6**
GANJ	**Ganja**	**1.28**	**180**	P	**Pn**	**13 22 49.9**	**-0.9**
GANJ				S	**Sb**	**13 23 07.3**	**-0.2**
GDB	**GEDABAY**	**1.28**	**200**	P	**Pn**	**13 22 49.6**	**-1.4**
GDB				S	**Sb**	**13 23 06.9**	**-0.7**
MNGR	**Mingechevir, A**	**1.28**	**154**	P	**Pb**	**13 22 51.5**	**+0.1**
MNGR				S	**Sg**	**13 23 10.6**	**+1.5**
LSVT	**Lusahovit**	**1.32**	**221**	*e*P	**Pn**	**13 22 50.6**	**-0.9**
LSVT				*e*S	**Sb**	**13 23 08.9**	**+0.1**
GROC	**Groznyy**	**1.34**	**343**	*e*Pg	**Pb**	**13 22 52.6**	**+0.3**
GROC				*e*Sg	**Sg**	**13 23 10.8**	**-0.1**
GROC	**Groznyy**	**1.34**	**343**	*e*PG	**Pg**	**13 22 55.0**	**+1.5**
GROC				pmax	pmax		

comp=Z,62nm,0.2s
MAK Makhachkala 1.35 40 *e*Pg **Pg** 13 22 53.9 +0.1
MAK *e*Sg **Sg** 13 23 10.6 -0.8
MAK Makhachkala 1.35 40 *e*PG **Pn** 13 22 48.7 -3.1
MAK pmax pmax
comp=Z,172nm,0.3s
KSMR Kasumkent 1.38 103 *e*Pg **Pg** 13 22 54.7 +0.4
KSMR *e*Sg **Sb** 13 23 10.7 +0.2
KSMR Kasumkent 1.38 103 PG **Pn** 13 22 52.1 -0.2
KSMR S **Sb** 13 23 10.7 +0.2
GUDG Gudauri 1.48 292 P **Pn** 13 22 54.1 +0.3
GUDG S **Sn** 13 23 13.3 +0.4
GUDG Gudauri 1.48 292 *e*Pg **Pn** 13 22 53.9 +0.1
GUDG *e*Sg **Sb** 13 23 13.6 0.0
GUDG Gudauri 1.48 292 *e*PG **Pn** 13 22 54.2 +0.4
GUDG *e*S **Sb** 13 23 13.8 +0.3
DRN Derbent 1.49 85 PG **Pn** 13 22 54.2 +0.5
DRN S **Sb** 13 23 14.4 +0.8
QBL Gabala 1.50 130 Sn **Sg** 13 23 16.3 +0.4
QSAR Qusar 1.50 105 Pg **Pg** 13 22 56.7 +0.1
QSAR Sn **Sg** 13 23 18.4 +2.3
KZRT Kazreti 1.54 250 P **Pn** 13 22 50.7 -3.9
KZRT S **Sn** 13 23 11.0 -3.3
KZRT Kazreti 1.54 250 PG **Pn** 13 22 50.6 -3.9
XNQ Khinaliq 1.55 118 Pn **Pb** 13 22 56.4 +0.3
XNQ Sn **Sg** 13 23 21.0 +3.2
KMGR Komgaron 1.57 317 *e*Pg **Pb** 13 22 56.8 +0.5
KMGR *e*Sg **Sg** 13 23 18.0 -0.3
KMGR Komgaron 1.57 317 *e*PN **Pg** 13 22 58.2 +0.3
KMGR *e*S **Sg** 13 23 20.5 +2.2
VLKR Vladikavkaz 1.66 313 *e*Pg **Pn** 13 22 56.4 +0.2
VLKR *e*Sg **Sg** 13 23 21.0 -0.2
VLKR Vladikavkaz 1.66 313 *e*PN **Pg** 13 22 59.9 +0.3
VLKR *e*S **Sg** 13 23 22.4 +1.2
TRLG Trialeti 1.71 258 P **Pn** 13 22 56.7 -0.2
TRLG S **Sn** 13 23 19.1 +0.5
TRLG Trialeti 1.71 258 PN **Pn** 13 22 56.7 -0.2
QUBA Quba, Azerbaij 1.72 109 Pn **Pg** 13 23 00.8 +0.1
QUBA Sn **Sg** 13 23 25.4 +2.5
SRTK Saratovka 1.74 241 *e*P **Pn** 13 22 56.6 -0.7
SRTK *e*S **Sn** 13 23 19.5 +0.4
LACR Lac 1.76 302 *e*Pg **Pb** 13 22 59.2 -0.4
LACR *e*Sg **Sb** 13 23 22.0 +0.6
LACR Lac 1.76 302 *e*PN **Pb** 13 22 59.2 -0.4
IML Ismayilli 1.79 128 Pn **Pg** 13 23 01.6 -0.6
IML Sn **Sg** 13 23 25.2 -0.2
AYRK Ayrk 1.85 193 *e*P **Pn** 13 22 59.5 +0.5
AYRK *e*S **Sb** 13 23 24.1 -0.1
AGDM Agdam 1.91 162 Pn **Pb** 13 23 01.0 -1.0
AGDM Sn **Sb** 13 23 26.5 +0.9
ZRD Zardab 1.94 148 Pn **Pb** 13 23 01.8 -0.7
ZRD Sn **Sg** 13 23 29.4 -0.6
BTKR Batakoyurt 1.96 318 *e*Pg **Pb** 13 23 03.1 +0.1
BTKR *e*Sg **Sg** 13 23 30.8 +0.1
BTKR Batakoyurt 1.96 318 *e*PN **Pb** 13 23 03.1 +0.1
BTKR *e*S **Sg** 13 23 30.8 +0.1
ARNR Ardon 1.97 310 *e*Pg **Pb** 13 23 02.7 -0.4
ARNR *e*Sg **Sg** 13 23 29.8 -1.2
ARNR Ardon 1.97 310 *e*PN **Pb** 13 23 02.7 -0.4
ALIG Mtskhetisjvari 2.01 276 P **Pn** 13 23 01.8 +0.9
ALIG S **Sb** 13 23 28.1 -0.4
ALIG Mtskhetisjvari 2.01 276 PN **Pn** 13 23 01.8 +0.9
KAPZ Kaputan 2.02 218 *e*P **Pn** 13 23 01.8 +0.6
KAPZ *e*S **Sb** 13 23 28.9 -0.1
KORR Kora 2.04 306 *e*Pg **Pb** 13 23 03.6 -0.7
KORR *e*Sg **Sb** 13 23 31.1 +1.7
KORR Kora 2.04 306 *e*PN **Pb** 13 23 03.6 -0.7
KORR *e*S **Sb** 13 23 31.1 +1.7
PQL Pirkuli 2.04 123 Pn **Pb** 13 23 03.6 -0.9
PQL Sn **Sg** 13 23 33.3 -0.2
SIZA Siyzn 2.11 113 Pn **Pb** 13 23 05.8 +0.3
SIZA Sn **Sg** 13 23 35.9 +0.5
GNI Garni 2.14 215 *e*S **Sn** 13 23 28.4 -0.7
GNI Garni 2.14 215 *e*Pn **Pn** 13 23 04.0 +1.2
GNI *e*Sn **Sb** 13 23 33.6 +1.1
GNI Garni 2.14 215 *i* PN **Pn** 13 23 03.5 +0.6
GNI *i* S **Sb** 13 23 34.0 +1.5
GNI pmax pmax
comp=Z,134nm,1.5s
GNI smax smax
comp=Z,83nm,1.1s
BGD Bogdanovka 2.15 253 P **Pn** 13 23 03.9 +0.9
BGD S **Sb** 13 23 32.9 0.0
BGD Bogdanovka 2.15 253 PN **Pn** 13 23 03.9 +0.9
BGD S **Sb** 13 23 32.9 0.0
AKH Akhalkalaki 2.19 257 P **Pn** 13 23 04.1 +0.6
AKH S **Sb** 13 23 33.1 -0.8
AKH Akhalkalaki 2.19 257 PN **Pn** 13 23 04.1 +0.6
AKH S **Sb** 13 23 33.0 -0.8
AMBZ Amberd 2.19 226 *e*P **Pb** 13 23 05.6 -1.4
AMBZ *e*S **Sb** 13 23 36.0 +1.9
STDR Stavd-Durt 2.21 312 *e*Pg **Pg** 13 23 08.6 -1.5
STDR *e*Sg **Sb** 13 23 35.4 +1.0
STDR Stavd-Durt 2.21 312 *e*PN **Pg** 13 23 08.6 -1.5
STDR *e*S **Sb** 13 23 35.4 +1.0
ATGJ Altiaghaj 2.23 118 Pn **Pg** 13 23 09.0 -1.5
ATGJ Sn **Sg** 13 23 38.0 -1.3
GARIG Gari 2.23 289 P **Pb** 13 23 06.0 -1.6
GARIG S **Sb** 13 23 37.2 +2.2
DIGR Digorskoe uzhe 2.26 296 *e*Pn **Pb** 13 23 06.5 -1.6
DIGR *e*Sn **Sb** 13 23 35.8 -0.1
DIGR Digorskoe uzhe 2.26 296 *e*PN **Pb** 13 23 06.5 -1.6
DIGR *e*S **Sb** 13 23 35.8 -0.1
LSNR Lesken 2.29 307 *e*PN **Pb** 13 23 08.8 +0.2
LSNR *e*S **Sb** 13 23 36.5 -0.2
VAYK Vayk 2.33 197⇓ *e*P **Pb** 13 23 07.7 -1.6
VAYK ⇓ *e*S **Sb** 13 23 37.0 -0.9
BLQ Beylaqan 2.39 157 Pn **Pb** 13 23 08.4 -1.8
BLQ Sn **Sb** 13 23 38.5 -0.9
GBS Qobustan 2.41 124 Pn **Pb** 13 23 10.7 +0.1
GBS Sn **Sb** 13 23 39.5 -0.6
HYR Heyderabad 2.47 208 Pg **Pb** 13 23 10.9 -0.8
HYR Sn **Sn** 13 23 37.4 +0.3
QRD Qoradiz 2.57 163 Pn **Pb** 13 23 09.9 +1.3
QRD Sn **Sb** 13 23 43.5 -1.2
SBZ Shahbuz 2.59 193 Pn **Pb** 13 23 12.1 -1.7
SBZ Sn **Sb** 13 23 45.8 +0.3
IGDI IGDIR 2.67 221 Pg **Pb** 13 23 13.3 -1.9
IGDI Sn **Sn** 13 23 43.9 +1.9
EGVZ Egvard 2.70 177 *e*P **Pn** 13 23 13.0 +2.6
EGVZ *e*S **Sb** 13 23 47.7 -0.9
KBTC Kuba-Taba 2.86 312 *e*Pn **Pn** 13 23 12.0 -0.6
KBTC *e*Sn **Sb** 13 23 51.6 -1.6
KBTC Kuba-Taba 2.86 312 *e*PN **Pn** 13 23 12.0 -0.6
KBTC *e*S **Sb** 13 23 51.6 -1.6
NEUR Neytrino 3.00 298 *e*PN **Pb** 13 23 20.3 -0.4
NEUR *e*S **Sb** 13 23 55.2 -1.9
ORD Ordubad 3.00 185 Pg **Pb** 13 23 18.9 -1.9
ORD Sn **Sn** 13 23 51.3 +1.0
KBZ Khabaz 3.10 307 *e*Pn **Pn** 13 23 17.9 +2.0
KBZ *e*Sn **Sn** 13 23 55.0 +2.4
KBZ Khabaz 3.10 307 *e*PN **Pn** 13 23 17.9 +2.0
KBZ *e*S **Sn** 13 23 55.0 +2.4
PYA1 Pyatigorsk 3.19 313 *e*Pn **Pn** 13 23 20.2 +3.0
PYA1 *e*Sn **Sn** 13 23 56.9 +2.0
PYA1 Pyatigorsk 3.19 313 *e*PN **Pn** 13 23 20.2 +3.0
PYA1 *e*S **Sn** 13 23 56.9 +2.0
SHA1 Shidzhatmaz 3.25 305 *e*Pn **Pn** 13 23 20.7 +2.5
SHA1 *e*Sn **Sn** 13 23 59.6 +2.9
SHA1 Shidzhatmaz 3.25 305 *e*PN **Pn** 13 23 20.7 +2.5
SHA1 *e*S **Sn** 13 23 59.6 +2.9
BEYR Belyy Ugol+ 3.32 310 *e*PN **Pn** 13 23 21.5 +2.6
BEYR *e*S **Sn** 13 24 00.2 +2.2
YRD Yardimli 3.34 154 Pn **Pn** 13 23 20.4 +1.0
YRD Sn **Sn** 13 23 59.7 +1.0
KIV Kislovodsk 3.36 308 *e*PN **Pn** 13 23 19.6 +0.1
KIV *e*S **Sn** 13 24 01.0 +1.9
LRK Lerik 3.62 154 Pn **Pn** 13 23 24.0 +0.9
LRK Sn **Sn** 13 24 06.6 +1.0
GOF Gofitskoye 3.94 324 *ce*PN **Pn** 13 23 29.0 +1.6
GOF *e*S **Sn** 13 24 18.1 +4.8
OBN Obninsk 14.68 337 *i* P **Pn** 13 25 55.5 +1.1
OBN pmax pmax
comp=Z,4.0nm,0.8s
MOS Moscow 14.95 341 *e*P **P** 13 26 02.5 -1.0
MOS pmax pmax
comp=Z,46nm,0.9s
ARTI Arti 16.44 24 *i* P **Pn** 13 26 16.8 -0.7
ARTI pmax pmax
comp=Z,2.0nm,1.0s

BORK Borovoye 19.56 47 *i* P **P** 13 26 53.1 -1.4
BORK pmax pmax
comp=Z,11nm,3.3s
KURK Kurchatov 23.81 57 *i* P **P** 13 27 38.5 -1.0

*FUNV **06** 13:46:13.4, 10.˙45N×62.˙63W, h7km, MW3.0, Presumed earthquake*
*TRN **06** 13:46:16.7, 10.˙64N×62.˙44W, h99km, MD2.7, Paria peninsula.*
ISC 06 13:46:11.8±2.3, 10.˙7N±0.˙1×62.˙72W±0.˙06, h3km±18km, n8, σ1§30/14, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DMDM	**Guralp CMG5TDE**	**1.15**	**88**	*e*P	**Pn**	**13 46 36.5**	**+1.6**
DMDM				*e*S	**Sb**	**13 46 49.7**	**-0.1**
TRN	**Trinidad (W)**	**1.30**	**91**	*e*P	**Pb**	**13 46 36.1**	**-0.8**
TRN				*e*S	**Sg**	**13 46 52.2**	**-1.3**
TRN	**Trinidad (W)**	**1.30**	**91**	*e*P	**Pg**	**13 46 37.8**	**+1.0**
TRN				*e*S	**Sg**	**13 46 52.3**	**-1.3**
GRFF	**Grenada Fort F**	**1.68**	**35**	*e*P	**Pn**	**13 46 43.1**	**+0.9**
GRFF				*e*S	**Sn**	**13 47 03.8**	**-0.4**
GRGR	**Grenville**	**1.80**	**36**	*e*P	**Pn**	**13 46 45.0**	**+1.3**
GRGR				*e*S	**Sn**	**13 47 06.9**	**-0.1**
PCRV	**Puerto La Cruz**	**1.94**	**256**	*e*P	**Pn**	**13 46 45.8**	**0.0**
PCRV				*e*S	**Sn**	**13 47 10.9**	**+0.2**
GCMP	**Grenada, Carri**	**2.21**	**35**	*e*P	**Pn**	**13 46 50.8**	**+1.4**
GCMP				*e*S	**Sn**	**13 47 15.2**	**-2.1**
CACV	**CAICARA DEL OR**	**4.87**	**231**	*e*P	Pn	13 47 19.8	-6.2
CACV				*e*S	Sn	13 48 08.4	-14

*SOME **06** 13:54:22.9, 44.˙22N×82.˙18E, h0km*
*NNC **06** 13:54:25.8±4.7, 43.˙27N×82.˙59E, h0km, mb2.8, mpv2.4, Error ellipse: s-maj=43.2km s-min=16.0km az=139.0*
ISC 06 13:54:02.3±7.7, 42.˙0N±0.˙4×83.˙6E±0.˙3, h15km, n5, σ3§19/8, 4C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**3.23**	**292**	*e*P	**Pb**	**13 55 00.4**	**+1.0**
	8.6nm,0.2s						
SHLS				*e*S	**Sn**	**13 55 27.6**	**-3.3**
	56nm,0.3s						
PDGK	**Podgornoye**	**3.27**	**295**	⇑Pn	**Pg**	**13 55 04.8**	**-0.2**
	1.2nm,0.3s						
PDGK				⇑Sn	**Sn**	**13 55 34.1**	**+2.2**
	7.0nm,0.3s						
KPKS	**Kokpek**	**3.87**	**293**	*e*P	**Pg**	**13 55 13.5**	**-3.0**
	0.2nm,0.1s						
KPKS				*e*S	**Sn**	**13 55 49.8**	**+3.2**
	9.3nm,0.2s						
MK31	**Makanchi Array**	**4.85**	**350**	⇑Pg	**Pb**	**13 55 29.6**	**+2.6**
	0.3nm,0.5s,baz=172,slow=15,SNR=8.8						
MK31				⇓Lg	Lg	13 56 14.6	
	4.3nm,0.7s,baz=174,slow=30,SNR=6.2						
MAKZ	**Makanchi**	**4.91**	**347**	⇓Pg	**Pg**	**13 55 33.4**	**-3.0**
	0.5nm,0.5s						
MAKZ				⇑Lg	Lg	13 56 18.9	
	2.1nm,0.9s						

*DSN **06** 14:19:41.9±1.6, 38.˚59N×42.˚67E, h15km, mb4.5/14, Ms3.8/5, Error ellipse: s-maj=26.4km s-min=5.5km az=97.0*
*AZER **06** 14:19:44.7, 38.˚50N×44.˚33E, h2km, ml4.8*
*NSSP **06** 14:19:44.5, 38.˚37N×44.˚40E, h10km, Ms4.5*
*TIF **06** 14:19:46.1, 38.˚49N×44.˚38E, h2km±2km*
*TEH **06** 14:19:47.6, 38.˚50N×44.˚37E, h6km±27km, ML4.4, Presumed earthquake*
*AFAD **06** 14:19:47.3, 38.˚50N×44.˚37E, h7km±7km, MW4.4*
*IDC **06** 14:19:48.3±0.7, 38.˚55N×44.˚29E, h0km, mb4.0/17, mbtmp4.0/25, ML3.3/6, MS3.7/55, Error ellipse: s-maj=12.1km s-min=9.3km az=144.0*
*THR **06** 14:19:48.5±0.0, 38.˚60N×44.˚24E, h20km±18km, ML4.5, Presumed earthquake*
*MOS **06** 14:19:48.5±1.5, 38.˚52N×44.˚38E, h11km, mb4.6/20, Error ellipse: s-maj=6.4km s-min=3.6km az=95.5*
*NEIC **06** 14:19:49.9±2.2, 38.˚55N±0.˚05×44.˚13E±0.˚06, h10km±1km, mb4.4/45, Error ellipse: s-maj=9.1km s-min=7.3km az=163.0*
*ISK **06** 14:19:50.2, 38.˚41N×44.˚38E, h19km, ML4.4/18*
*MCSM **06** 14:19:58.3±2.3, 39.˚N±12.˚×4.˚4E±1.˚9, h10km, mb4.2, mB4.0, MLv4.1, Mw(mB)3.0*
ISC 06 14:19:48.1±1.0, 38.˚49N±0.˚02×44.˚35E±0.˚02, h1km±6km, n404, σ2§02/416, mb4.3/57, MS3.7/52, 29C-13D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.33**	**301**	P	**Pg**	**14 19 54.3**	**-0.1**
OZAP	**Van, Ozalp-Mer**	**0.33**	**301**	Pg	**Pg**	**14 19 54.3**	**-0.1**
VMUR	**Van-Muradiye**	**0.78**	**309**	P	**Pg**	**14 20 02.8**	**-0.4**
VMUR				S	**Sn**	**14 20 17.2**	**-1.9**
VMUR				IAML		14 20 21.0	
	comp=N,8μm,0.9s						
VMUR				IAML		14 20 23.0	
	comp=E,10μm,1.1s						
VMUR	**Van-Muradiye**	**0.78**	**309**	Pg	**Pg**	**14 20 02.8**	**-0.4**
MAKU	**Maku**	**0.90**	**17**	Pg	**Pg**	**14 20 04.2**	**-1.2**
YOVA	**Hakkari_Yksek**	**0.91**	**183**	P	**Pg**	**14 20 05.2**	**-0.3**
YOVA				S	**Sn**	**14 20 21.7**	**-0.4**
YOVA				IAML		14 20 25.0	
	comp=E,3μm,0.6s						
YOVA				IAML		14 20 31.0	
	comp=N,3μm,0.7s						
YOVA	**Hakkari_Yksek**	**0.91**	**183**	Pg	**Pg**	**14 20 05.2**	**-0.3**
ERCV	**ERCIS-VAN**	**0.95**	**304**	Pg	**Pn**	**14 20 10.5**	**+1.7**
ERCV				Sg	**Sn**	**14 20 24.8**	**+1.7**
ISHB	**Shabestar**	**1.02**	**101**	Pg	**Pg**	**14 20 06.0**	**-1.7**
GEVA	**Gevas**	**1.03**	**260**		**Pg**	**14 20 06.0**	**-1.8**
GEVA	**Gevas**	**1.03**	**260**	P	**Pg**	**14 20 05.5**	**-2.3**
GEVA				S	**Sg**	**14 20 20.8**	**-0.4**
HAKT	**HAKKARI**	**1.06**	**209**	P	**Pg**	**14 20 07.6**	**-1.0**
HAKT				S	**Sn**	**14 20 25.3**	**-0.7**
HAKT				IAML		14 20 37.0	
	comp=E,4μm,0.8s						
HAKT				IAML		14 20 39.0	
	comp=N,4μm,1.2s						
HAKT	**HAKKARI**	**1.06**	**209**	Pg	**Pg**	**14 20 07.5**	**-1.0**
HAKT	**HAKKARI**	**1.06**	**209**	P	**Pg**	**14 20 07.5**	**-1.0**
HAKT				S	**Sn**	**14 20 25.4**	**-0.6**
IMRD	**Marand**	**1.08**	**78**	Pg	**Pg**	**14 20 08.1**	**-0.8**
NAX	**Nakhchivan**	**1.12**	**52**	P	**Pg**	**14 20 09.1**	**-0.6**
NAX				S	**Sn**	**14 20 26.0**	**-1.4**
HYR	**Heyderabad**	**1.29**	**18**	P	**Pn**	**14 20 11.6**	**-1.7**
HYR				S	**Sn**	**14 20 31.7**	**+0.4**
SBZ	**Shahbuz**	**1.30**	**46**	P	**Pn**	**14 20 12.3**	**-1.4**
SBZ				S	**Sn**	**14 20 31.1**	**-0.7**
ADCV	**BITLIS_Adilcev**	**1.31**	**284**	P	**Pn**	**14 20 12.4**	**-1.4**
ADCV				S	**Sg**	**14 20 32.9**	**+2.6**
ADCV				IAML		14 20 36.0	
	comp=E,4μm,1.3s						
ORD	**Ordubad**	**1.36**	**71**	P	**Pn**	**14 20 13.1**	**-1.3**
ORD				S	**Sg**	**14 20 33.3**	**+1.5**
CUKT	**Cukurca**	**1.38**	**205**	Pn	**Pn**	**14 20 14.2**	**-0.4**
CUKT				Sn	**Sb**	**14 20 31.7**	**-1.2**
CUKT	**Cukurca**	**1.38**	**205**	P	**Pn**	**14 20 13.9**	**-0.8**
CUKT				S	**Sg**	**14 20 36.3**	**+4.0**
CUKT				IAML		14 20 38.0	
	comp=N,5μm,0.9s						
CUKT				IAML		14 20 40.0	
	comp=E,6μm,1.3s						
CUKT	**Cukurca**	**1.38**	**205**	Pg	**Pn**	**14 20 13.8**	**-0.8**
IGDI	**IGDIR**	**1.39**	**351**	P	**Pn**	**14 20 13.2**	**-1.6**
IGDI				S	**Sg**	**14 20 35.1**	**+2.3**
IGDI				IAML		14 20 38.0	
	comp=N,6μm,0.9s						
IGDI	**IGDIR**	**1.39**	**351**	Pg	**Pn**	**14 20 13.7**	**-1.1**
IGDI	**IGDIR**	**1.39**	**351**	P	**Pn**	**14 20 13.7**	**-1.1**
IGDI				S	**Sg**	**14 20 35.7**	**+2.9**
VAYK	**Vayk**	**1.46**	**35**⇓	*e*P	**Pb**	**14 20 14.9**	**-1.4**
VAYK			⇓	*e*S	**Sg**	**14 20 34.5**	**-0.7**
AGRB	**Hanur-Agry**	**1.51**	**316**	Pn	**Pg**	**14 20 17.1**	**0.0**
AGRB				Sn	**Sg**	**14 20 38.3**	**+1.6**
DORK	**Agr/Tutak/Do**	**1.51**	**307**	P	**Pn**	**14 20 15.1**	**-1.5**
DORK				S	**Sg**	**14 20 38.3**	**+1.5**
DORK				IAML		14 20 41.0	
	comp=N,4μm,0.8s						
IAZR	**Azarshahr**	**1.52**	**122**	Pg	**Pb**	**14 20 16.3**	**-1.1**

PERV Siirt/Pervari- 1.52 250 P **Pn** 14 20 15.8 -0.9
PERV S **Sg** 14 20 41.4 +4.3
PERV IAML 14 20 45.0
comp=E,7μm,0.6s
PERV IAML 14 20 51.0
comp=N,6μm,0.8s
MLAZ Malazgirt-MUS 1.55 295 Pn **Pg** 14 20 17.9 +0.1
MLAZ Sn **Sg** 14 20 38.9 +1.0
KOTA Agri, Merkez-K 1.58 326 P **Pn** 14 20 16.2 -1.4
KOTA S **Sg** 14 20 40.2 +1.2
KOTA IAML 14 20 58.0
comp=E,2μm,1.1s
KOTA IAML 14 20 59.0
comp=N,1μm,1.1s
VNNZ Vanand 1.66 346 *e*P **Pg** 14 20 20.1 +0.1
VNNZ *e*S **Sg** 14 20 44.4 +2.9
GNI Garni 1.68 10 Pg **Pb** 14 20 18.5 -1.5
145nm,0.3s,baz=223,slow=3.5,SNR=206
GNI Lg Lg 14 20 42.2
294nm,0.3s,baz=33,slow=5.9,SNR=6.1
GNI LR LR 14 21 10.1
comp=Z,1μm,18.9s,baz=193,slow=50
GNI Garni 1.68 10 Pn **Pg** 14 20 20.5 +0.1
GNI Garni 1.68 10 *e*P **Pn** 14 20 18.3 -0.6
GNI *e*S **Sg** 14 20 43.9 +1.7
GNI Garni 1.68 10 P **Pb** 14 20 18.5 -1.5
GNI Garni 1.68 10 *i* PG **Pn** 14 20 17.8 -1.1
GNI Garni 1.68 10 P **Pb** 14 20 18.8 -1.3
GNI S **Sg** 14 20 45.3 +3.1
GNI Garni 1.68 10 Pg **Pb** 14 20 18.6 -1.5
BLIS Bitlis-Merkez 1.75 268 P **Pn** 14 20 18.9 -1.0
BLIS S **Sg** 14 20 46.0 +1.5
ARUZ Aruch 1.80 354 *e*P **Pb** 14 20 21.2 -0.8
ARUZ *e*S **Sg** 14 20 48.6 +2.6
GURO Guroymak-BITLI 1.82 273 Pn **Pn** 14 20 18.6 -2.1
GURO Guroymak-BITLI 1.82 273 Pn **Pb** 14 20 21.2 -1.1
GURO Guroymak-BITLI 1.82 273 Pn **Pg** 14 20 21.2 -1.1
KAPZ Kaputan 1.85 8 *e*P **Pb** 14 20 21.9 -0.9
KAPZ *e*S **Sg** 14 20 48.9 +1.4
EGVZ Egvard 1.86 66 *e*P **Pb** 14 20 21.4 -1.7
EGVZ *e*S **Sg** 14 20 48.8 +0.8
AMBZ Amberd 1.89 358 *e*P **Pb** 14 20 22.5 -1.2
AMBZ *e*S **Sg** 14 20 50.5 +1.5
AYRK Ayrk 1.97 34 *e*P **Pb** 14 20 23.5 -1.4
AYRK *e*S **Sg** 14 20 51.9 +0.5
MAHB Mahabad 2.03 148 Pn **Pb** 14 20 25.1 -0.9
IHRS Heris 2.12 94 Pn **Pb** 14 20 25.6 -2.0
KARS Kars 2.35 336 **Pn** 14 20 27.0 -1.0
KARS Kars 2.35 336 Pn **Pb** 14 20 29.9 -1.5
KARS Kars 2.35 336 PN **Pn** 14 20 27.0 -1.0
VRTB Varto-Mus 2.36 287 Pn **Pb** 14 20 30.2 -1.3
SRSL SARDASHT 2.44 159 *e*Pn **Pb** 14 20 31.4 -1.5
SRSL IAML 14 21 19.7
comp=Z,1μm,1.0s
GDB GEDABAY 2.48 26 P **Pb** 14 20 31.0 -2.6
GDB S **Sb** 14 21 03.1 -1.6
SVAN Silvan-Diyarba 2.50 263 Pn **Pb** 14 20 31.6 -2.3
SVAN Silvan-Diyarba 2.50 263 Pn **Pn** 14 20 31.1 +1.1
LSVT Lusahovit 2.51 15 *e*P **Pb** 14 20 31.2 -2.8
LSVT *e*S **Sg** 14 21 05.8 -2.8
QRD Qoradiz 2.51 66 P **Pn** 14 20 30.2 +0.1
QRD S **Sb** 14 21 03.2 -2.3
SRTK Saratovka 2.57 360 *e*P **Pb** 14 20 34.1 -1.0
SRTK *e*S **Sg** 14 21 11.5 +0.8
SENK Senkaya-Erzuru 2.58 324 Pn **Pb** 14 20 33.9 -1.5
IHSH Hashtrud 2.59 116 Pn **Pn** 14 20 32.4 +0.8
GANJ Ganja 2.64 35 P **Pn** 14 20 32.2 +0.3
GANJ S **Sb** 14 21 06.8 -2.3
AGDM Agdam 2.68 52 P **Pn** 14 20 32.8 +0.3
AGDM S **Sb** 14 21 08.0 -2.4
QZX Qazax, Azerbai 2.68 17 P **Pn** 14 20 33.0 +0.5
QZX S **Sb** 14 21 07.6 -2.8
ISRB Sarab 2.70 103 Pn **Pn** 14 20 33.8 +0.8
KARO Karliova-Bingo 2.70 289 Pn **Pb** 14 20 34.9 -2.5
BLQ Beylaqan 2.78 63 P **Pn** 14 20 33.7 -0.2
BLQ S **Sb** 14 21 10.6 -2.7
GRMI Germi 2.79 82 *e*Pn **Pn** 14 20 35.2 +1.1
GRMI IAML 14 21 30.8
comp=Z,690nm,1.0s
BRDA Brd 2.82 50 P **Pn** 14 20 34.8 +0.5
BRDA S **Sb** 14 21 12.4 -1.9
BGD Bogdanovka 2.83 348 P **Pb** 14 20 38.2 -1.4
BGD Bogdanovka 2.83 348 PN **Pb** 14 20 38.2 -1.4
KZRT Kazreti 2.89 1 P **Pn** 14 20 36.2 +0.8
KZRT Kazreti 2.89 1 PN **Pn** 14 20 36.2 +0.8
BNGB Bingl 2.91 281 Pn **Pb** 14 20 38.2 -2.8
AKH Akhalkalaki 2.99 348 P **Pb** 14 20 41.9 -0.4
AKH Akhalkalaki 2.99 348 PN **Pb** 14 20 41.9 -0.4
TRLG Trialeti 3.05 357 P **Pn** 14 20 38.8 +1.0
TRLG Trialeti 3.05 357 PN **Pn** 14 20 38.7 +1.0
DGRG David-gareji 3.06 15 P **Pb** 14 20 40.0 -3.4
DGRG S **Sg** 14 21 32.5 +6.1
DGRG David-gareji 3.06 15 PN **Pb** 14 20 40.0 -3.4
DGRG S **Sg** 14 21 32.5 +6.1
MARD Mardin 3.06 248 **Pn** 14 20 35.1 -2.7
YRD Yardimli 3.08 81 P **Pn** 14 20 38.2 +0.1
YRD S **Sb** 14 21 19.1 -2.8
MNGR Mingechevir, A 3.11 42 P **Pn** 14 20 38.8 +0.5
MNGR S **Sb** 14 21 19.8 -2.7
YEDI Yedisu-Bingol 3.11 289 Pn **Pb** 14 20 40.9 -3.5
LRK Lerik 3.13 86 P **Pn** 14 20 38.9 +0.1
LRK S **Sb** 14 21 20.4 -3.1
ZRD Zardab 3.14 54 P **Pn** 14 20 39.3 +0.6
ZRD S **Sb** 14 21 20.1 -3.4
VSHL Vashlovani 3.16 29 P **Pb** 14 20 41.8 -3.3
GLBA Clilabad 3.25 75 P **Pn** 14 20 40.9 +0.7
GLBA S **Sb** 14 21 23.0 -3.5
DYBB Diyarbakir 3.36 262 Pn **Pn** 14 20 43.1 +1.2
SAAT Saatly 3.45 65 P **Pn** 14 20 42.6 -0.4
SAAT S **Sb** 14 21 27.0 -5.5
LKRN Lenkeran, Azer 3.48 85 P **Pn** 14 20 42.9 -0.5
LKRN S **Sb** 14 21 28.7 -4.6
ASTR Astara 3.48 88 P **Pn** 14 20 43.7 +0.2
ASTR S **Sb** 14 21 29.1 -4.4
SEKA Sheki 3.49 38 P **Pn** 14 20 44.3 +0.6
SEKA S **Sb** 14 21 30.4 -3.3
KDMR Kurdemir 3.52 56 P **Pn** 14 20 44.7 +0.8
KDMR S **Sb** 14 21 29.7 -4.6
ZKTA Zakatala 3.59 28 P **Pn** 14 20 44.6 -0.4
ZKTA S **Sb** 14 21 32.1 -4.5
QBL Gabala 3.64 47 P **Pn** 14 20 45.4 -0.2
QBL S **Sb** 14 21 33.1 -4.8
ALIG Mtskhetisjvari 3.65 352 P **Pb** 14 20 50.1 -3.4
ALIG S **Sg** 14 21 51.3 +6.0
ALIG Mtskhetisjvari 3.65 352 PN **Pb** 14 20 50.1 -3.4
ALIG S **Sg** 14 21 51.3 +6.0
IML Ismayilli 3.75 51 P **Pn** 14 20 47.6 +0.4
IML S **Sb** 14 21 35.2 -5.9
ERZN Erzincan 3.76 288 Pn **Pn** 14 20 50.3 +2.8
BAYT Aydıntepe-Bayb 3.77 302 Pn **Pn** 14 20 49.9 +2.3
CHOM Cayeli-Rize 3.79 314 Pn Pb 14 20 51.1 -4.8
CHRG Chargali 3.86 6 P **Pn** 14 20 50.6 +1.9
ZNJK Zanjan 3.90 117 *e*Pn **Pn** 14 20 51.0 +1.6
ZNJK IAML 14 21 57.2
comp=Z,4.1nm,1.0s
ALIB &Aumlli-Bayram 3.90 67 P **Pn** 14 20 49.0 -0.2
ALIB S **Sn** 14 21 38.6 +2.9
AKT Akhty 3.96 40 *e*PN **Pn** 14 20 52.2 +2.1
AKT *e* 14 20 59.4
AKT *e*S **Sn** 14 21 34.8 -2.4
AKT *e*S **Sb** 14 21 47.3 +0.1
AKT *e* 14 21 57.7
AKT pmax pmax
comp=Z,63nm,0.6s
AKT smax smax
comp=E,158nm,0.9s
AKT smax smax
comp=N,331nm,0.8s
AKT smax smax
comp=N,213nm,0.7s
AKT MLR MLR
comp=Z,717nm,10.0s
XNQ Khinaliq 3.96 46 P **Pn** 14 20 51.1 +0.8
XNQ S **Sb** 14 21 40.9 -6.5
SVRC Sivrice-ELAZID 3.96 270 Pn **Pn** 14 20 52.6 +2.4
PQL Pirkuli 4.00 54 P **Pn** 14 20 51.1 +0.3
PQL S **Sb** 14 21 41.4 -7.0
GBS Qobustan 4.10 59 P **Pn** 14 20 51.9 -0.1
GBS S **Sn** 14 21 43.8 +3.1
IDHR Dehrash 4.13 156 Pn **Pn** 14 20 53.9 +1.4
GARIG Gari 4.16 351 P **Pn** 14 20 55.0 +2.1

SHTL Shatili 4.20 8 P **Pn** 14 20 55.1 +1.6
SHTL Shatili 4.20 8 PN **Pn** 14 20 55.1 +1.6
ATGJ Altiaghaj 4.26 55 P **Pn** 14 20 55.0 +0.7
ATGJ S **Sn** 14 21 47.0 +2.4
QSAR Qusar 4.26 44 P **Pn** 14 20 55.1 +0.9
QSAR S **Sn** 14 21 47.3 +2.7
QUBA Quba, Azerbaij 4.28 47 P **Pn** 14 20 54.7 +0.2
QUBA S **Sn** 14 21 48.6 +3.5
SIZA Siyzn 4.35 52 P **Pn** 14 20 55.0 -0.5
SIZA S **Sn** 14 21 48.7 +1.7
GIDE GILAN DEYLAMAN 4.68 108 *e*Pn **Pn** 14 21 01.8 +1.6
GIDE IAML 14 22 41.9
comp=Z,500nm,1.0s
ARPR Arapgir-MALATY 4.74 279 **Pn** 14 20 58.8 -2.1
NEUR Neytrino 4.93 346 *i* PN **Pn** 14 21 03.5 0.0
NCK Nalchik 5.03 354 *i* PN **Pn** 14 21 04.0 -0.8
MAK Makhachkala 5.07 27*d i* PN Pn 14 20 58.1 -7.1
MAK pmax pmax
comp=Z,242nm,1.1s
MAK MLR MLR
comp=Z,531nm,11.0s
KBZ Khabaz 5.34 349 Pn **Pn** 14 21 11.5 +2.5
comp=Z,3.2nm,0.7s,baz=162,slow=9.3,SNR=5.2
KBZ Khabaz 5.34 349 *i* PN **Pn** 14 21 08.6 -0.4
SHA1 Shidzhatmaz 5.39 347 *i* PN **Pn** 14 21 11.4 +1.4
KVAR Kislovodsk Arr 5.60 348 Pn **Pn** 14 21 13.8 +1.1
baz=256,slow=21
comp=Z,1.4nm,0.4s
KIV Kislovodsk 5.60 348 *e*P **Pn** 14 21 15.3 +2.6
KIV *e*S **Sn** 14 22 17.0 -0.7
KIV pmax pmax
comp=Z,18nm,1.1s
KIV MLR MLR
comp=Z,338nm,10.0s
KIV Kislovodsk 5.60 348 P Pn 14 21 05.3 -7.4
KIV S **Sn** 14 22 09.6 -8.1
KIV Kislovodsk 5.60 348 Pn Pn 14 21 17.0 +4.3
comp=Z,0.1nmcomp=Z,460nmcomp=Z,33nm,1.0s
GAZ Gaziantep 5.80 259 Pn **Pn** 14 21 14.8 -0.6
VSLR Vesyoloye 5.94 328 *i* P **Pn** 14 21 18.4 +1.1
SOC Sochi 6.17 327 *e*P **Pn** 14 21 19.6 -0.8
SOC *e* 14 22 29.3
SOC pmax pmax
comp=Z,7.0nm,0.6s
SOC MLR MLR
comp=Z,426nm,13.0s
GTMR Gotvand 7.16 146 *e*Pn **Pn** 14 21 36.7 +2.7
GTMR IAML 14 24 05.4
comp=Z,80nm,1.0s
BR104 Keskin Array S 8.41 282 Pn Pn 14 21 57.9 +6.6
comp=Z,44nmcomp=Z,4.8nm,1.1s
BR131 Keskin Array S 8.42 282 Pn **Pn** 14 21 47.8 -3.6
BR131 Keskin Array S 8.42 282 *i* P Pn 14 21 56.9 +5.5
BRTR Keskin Array B 8.42 282 Pn **Pn** 14 21 54.2 +2.8
comp=Z,0.1nm,0.3s,baz=96,slow=12,SNR=13
BRTR LR LR 14 25 07.1
comp=Z,290nm,21.2s,baz=98,slow=38
comp=Z,2.9nm,0.9s
BRTR Keskin Array B 8.42 282 **Pn** 14 21 50.9 -0.5
BRTR Keskin Array B 8.42 282 *i* P Pn 14 21 57.9 +6.5
BRTR pmax pmax
comp=Z,3.0nm,0.9s
BR105 Keskin Array S 8.43 282 Pn Pn 14 21 57.9 +6.3
comp=Z,6.2nm,1.0s
BR106 Keskin Array S 8.43 282 Pn Pn 14 21 58.0 +6.4
comp=Z,53nmcomp=Z,5.1nm,0.9s
BZK Bozkurt 8.64 297 Pn Pn 14 22 00.4 +6.2
comp=Z,78nm,1.7s
ASF Jabal al Asfar 8.76 226 Pn **Pn** 14 21 57.0 +0.9
comp=Z,0.3nm,0.3s,baz=18,slow=16,SNR=1.7
ASF Lg Lg 14 24 33.8
comp=Z,0.2nm,0.3s,baz=287,slow=23,SNR=6.9
comp=Z,1.5nm,0.5s
ASF Jabal al Asfar 8.76 226 P **Pn** 14 21 57.0 +0.9
MMAI Mount Meron Ar 9.09 236 Pn **Pn** 14 22 00.1 -0.5
comp=Z,0.7nm,0.3s,baz=52,slow=19,SNR=1.9
MMAI LR LR 14 25 48.1
comp=Z,1µm,18.2s,baz=51,slow=40
MRVT Maraveh tapeh 9.30 92 *e*Pn **Pn** 14 22 04.0 +0.6
CSS Mathiatis 9.52 252 Pn Pn 14 22 16.5 +10
comp=Z,10nm,1.2s
KBD Kabd 9.70 162 P **Pn** 14 22 09.2 +0.3
BJRD Bojnurd 10.32 90 *e*Pn **Pn** 14 22 18.0 +0.4
TABS Tabas 11.41 111 *e*Pn Pn 14 22 36.6 +4.3
EIL Elat 11.75 224 Lg Lg 14 26 08.8
comp=Z,0.3nm,0.3s,baz=262,slow=23,SNR=4.4
EIL LR LR 14 27 20.8
comp=Z,517nm,19.4s,baz=48,slow=38
KLYT Kilyos 12.08 288 Pn Pn 14 22 49.6 +8.2
comp=Z,31nm,1.2s
VRH Novokhopyorsk 12.84 353 *e*P Pn 14 23 00.5 +8.7
VRH pmax pmax
comp=Z,33nm,1.5s
VORD Divnogorie 12.97 346 *e*P **Pn** 14 22 54.8 +1.2
VORD pmax pmax
comp=Z,30nm,1.1s
VSR Storozhevoye 13.24 346 *e*P **Pn** 14 22 57.7 +0.6
VSR pmax pmax
comp=Z,10.0nm,1.0s
VORR Voronezh 13.66 346 *e*P P 14 23 06.9 -5.1
VORR pmax pmax
comp=Z,115nm,0.5s
SHRT Shahrakht 13.77 106 *e*Pn P 14 23 08.5 -4.9
KARP Karpathos 14.04 263 Pn **P** 14 23 15.6 -0.8
BELG Belogornoye 14.09 8 Pn **Pn** 14 23 07.8 -1.0
comp=Z,0.1nm,0.3s,baz=87,slow=5.6,SNR=5.1
comp=Z,13nm,0.9s
LPSR Galich'ya Gora 14.60 347 *e*P **Pn** 14 23 14.1 -1.7
LPSR pmax pmax
comp=Z,70nm,0.8s
ELND Elena 14.69 293 ⇑P P 14 23 30.2 +6.7
RAYN Ar Rayn 14.96 176 **Pn** 14 23 17.3 -3.5
RAYN Ar Rayn 14.96 176 *i* P **Pn** 14 23 17.2 -3.7
SNR=7.2
RAYN Ar Rayn 14.96 176 ⇓P **Pn** 14 23 17.5 -3.3
RAYN Ar Rayn 14.96 176 P **Pn** 14 23 16.6 -4.2
HRA Herat 14.97 100 Pn **Pn** 14 23 22.1 +1.0
VRI Vrincioaia 14.98 305 ⇓P **P** 14 23 28.9 +2.2
VRI Vrincioaia 14.98 305 ⇓P **P** 14 23 28.9 +2.2
PLOR Plostina 15.02 305 ⇓P **P** 14 23 29.9 +2.7
PLOR Plostina 15.02 305 ⇓P **P** 14 23 29.9 +2.7
SORM Soroca 15.09 315 ⇑P **P** 14 23 25.9 -1.9
SORM Soroca 15.09 315 ⇑P **P** 14 23 25.9 -1.9
TESR Tescani 15.29 307 ⇑P **P** 14 23 32.1 +1.9
JRN Qarnain Island 15.31 149 P **P** 14 23 28.0 -2.5
MLR Muntele Rosu 15.35 303 ⇑P **P** 14 23 34.6 +3.6
MLR Muntele Rosu 15.35 303 Pn **Pn** 14 23 26.2 +0.2
MLR IAmb IAmb 14 23 51.7
comp=Z,22nm,1.2s
MLR Muntele Rosu 15.35 303 P **Pn** 14 23 26.2 +0.2
MLR pmax pmax
comp=Z,22nm,1.2s
ONER Baraj Valea Uz 15.38 306 ⇑P **P** 14 23 33.4 +2.3
AKTO Aktyubinsk 15.39 35 Pn **Pn** 14 23 25.3 -1.1
comp=Z,4.3nm,0.6s,baz=220,slow=9.4,SNR=13
AB31 Akbulak array 15.53 41 **Pn** 14 23 27.4 -0.8
AB31 Akbulak array 15.53 41 P **Pn** 14 23 26.5 -1.7
ABKAR Akbulak array 15.53 41 **Pn** 14 23 27.4 -0.9
OZUR 15.67 305 ⇑P **P** 14 23 37.5 +3.0
DOPR Dopca 15.88 304 ⇑P **P** 14 23 39.6 +2.9
SHME Shamm 15.90 138 P **P** 14 23 38.5 +1.5
VOIR 15.92 302 ⇑P **P** 14 23 40.5 +3.2
VOIR 15.92 302 ⇑P **P** 14 23 40.5 +3.2
BANOM Banah 16.09 138 *i* P **P** 14 23 39.7 +0.6
SNR=9.2
BANOM Banah 16.09 138 P **P** 14 23 38.5 -0.6
ARR Arges 16.18 301 ⇑P **P** 14 23 43.7 +3.6
GHWR Ruwais 16.20 151 P **P** 14 23 39.9 -0.4
AKASG Malin Array Be 16.24 324 Pn **Pn** 14 23 36.8 -0.6
comp=Z,0.6nm,0.3s,baz=132,slow=11,SNR=9.4
AKASG LR LR 14 31 28.2
comp=Z,178nm,20.4s,baz=133,slow=43
comp=Z,9.2nm,0.9s
AKASG Malin Array Be 16.24 324 **Pn** 14 23 36.2 -1.2
AKASG Malin Array Be 16.24 324 *ce*P **P** 14 23 38.4 -2.2
AKASG pmax pmax
comp=Z,13nm,0.9s
AKBB Malin Array Si 16.24 324 **Pn** 14 23 36.9 -0.5
AKBB Malin Array Si 16.24 324 *ce*P **P** 14 23 38.4 -2.2
KIEV Kiev 16.24 324 ⇓P **Pn** 14 23 35.1 -2.3
KIEV Kiev 16.24 324 Pn **Pn** 14 23 36.5 -0.9
KIEV Kiev 16.24 324 ⇓P **Pn** 14 23 35.1 -2.3
MASF Masafi 16.46 139 P **P** 14 23 43.2 -0.1
MASF P **P** 14 23 43.2 -0.1

NAZ Nazwa, Dubai 16.53 141 P **P** 14 23 45.9 +1.9
MDH Madha 16.59 139 *i* P **P** 14 23 45.7 +1.0
SNR=5.9
MDH Madha 16.59 139 P **P** 14 23 45.3 +0.6
SNR=5.2
BURAR Bucovina Array 16.66 309 ⇑P **P** 14 23 47.2 +1.8
BURAR Bucovina Array 16.66 309 **P** 14 23 43.3 -2.1
BURAR IAmb IAmb 14 23 48.8
comp=Z,20nm,0.8s
BURAR Bucovina Array 16.66 309 ⇑P **P** 14 23 47.2 +1.8
ASUD Al Ashush, Dub 16.67 143 P **P** 14 23 45.9 +0.3
ASUD Al Ashush, Dub 16.67 143 P **P** 14 23 45.7 +0.1
BUR08 Bucovina Ar. S 16.68 309 **Pn** 14 23 41.8 -1.4
UOSS Minazif 16.84 140 P **P** 14 23 49.1 +1.7
UOSS Minazif 16.84 140 P **P** 14 23 49.8 +2.4
UOSS P **P** 14 23 49.8 +2.4
UOSS S **S** 14 27 03.0 -0.8
UOSS S **S** 14 27 03.0 -0.8
HATD Hatta, Dubai 16.90 140 *i* P **P** 14 23 50.5 +2.4
SNR=7.8
HATD Hatta, Dubai 16.90 140 P **P** 14 23 50.5 +2.4
SNR=7.6
HATD P **P** 14 23 50.5 +2.4
SNR=7.6
HATD S **S** 14 27 03.6 -1.5
HATD S **S** 14 27 03.6 -1.5
ASHO Ashiyiah 16.98 141 *i* P **P** 14 23 49.6 +0.6
SNR=10
ASHO Ashiyiah 16.98 141 P **P** 14 23 50.1 +1.0
SNR=10
ASHO S **S** 14 27 06.7 -0.2
MZR Muzera 17.30 151 *i* P **P** 14 23 52.1 -0.5
SNR=7.1
MZR Muzera 17.30 151 P **P** 14 23 51.9 -0.7
SNR=8.7
GZR Gura Zlata 17.44 300 ⇓P **P** 14 23 59.2 +5.2
GZR Gura Zlata 17.44 300 ⇓P **P** 14 23 59.2 +5.2
OBN Obninsk 17.44 345 P **Pn** 14 23 51.6 -0.9
comp=Z,24nm,0.6s,baz=182,slow=18,SNR=11
OBN LR LR 14 30 58.6
comp=Z,370nm,19.1s,baz=180,slow=39
OBN Obninsk 17.44 345 P **Pn** 14 23 51.6 -0.9
OBN Obninsk 17.44 345 *i* P **Pn** 14 23 51.0 -1.5
OBN pmax pmax
comp=Z,50nm,0.9s
OBN MLR MLR
comp=Z,358nm,16.0s
MARR Marisel-Cluj 17.61 304 ⇑P **P** 14 23 58.8 +2.9
SOHO SOHO 17.67 141 *i* P **P** 14 23 57.9 +1.2
SNR=10.0
SOHO SOHO 17.67 141 P **P** 14 23 58.3 +1.6
SOHO P **P** 14 23 58.3 +1.6
MOS Moscow 17.83 348 *e*P **Pn** 14 23 56.4 -1.0
MOS *e* 14 27 18.8
MOS pmax pmax
comp=Z,51nm,1.2s
MOS pmax pmax
comp=N,48nm,0.8s
MOS pmax pmax
comp=E,34nm,0.7s
DRGR 17.91 305 ⇑P **P** 14 24 02.0 +2.8
DRGR 17.91 305 ⇑P **P** 14 24 02.0 +2.8
ARQ Araqi 18.34 142 P **P** 14 24 06.2 +2.2
SNR=6.9
ARQ P **P** 14 24 06.2 +2.2
SNR=6.9
HOQ Hoqain 18.52 140 P **Pn** 14 24 08.4 +2.3
SHAA Shahritus 18.75 85 **Pn** 14 24 09.9 +1.0
SHAA IAmb IAmb 14 24 48.0
comp=Z,27nm,1.0s
BIDO Bidbid 19.00 138 P **Pn** 14 24 14.5 +2.6
BSY Bisya 19.17 141 P **Pn** 14 24 14.2 +0.2
SMDO Samad 19.34 139 P **Pn** 14 24 17.7 +1.6
SNR=8.7
SMDO P **Pn** 14 24 17.7 +1.6
SNR=8.7
CHGR Chuyangaron 19.39 82 **Pn** 14 24 17.0 +0.4
CHGR IAmb IAmb 14 24 38.5
comp=Z,21nm,1.0s
CHGR Chuyangaron 19.39 82 P **Pn** 14 24 17.0 +0.4
CHGR pmax pmax
comp=Z,21nm,1.0s
MNK Minsk 19.54 330 *i* P **Pn** 14 24 17.1 -1.0
comp=E,9.0nm,0.7s
MNK *i* P **Pn** 14 24 17.1 -1.0
comp=N,11nm,0.7s
MNK *i* P **Pn** 14 24 17.1 -1.0
comp=Z,7.0nm,0.6s,baz=137
MNK *i* PP **PnPn** 14 24 31.1 -0.2
MNK *i* S **Sn** 14 27 55.3 -2.6
MNK *i* SS **SnSn** 14 28 11.2 -0.7
MNK *i* LQ LQ 14 30 05.3
MNK *i* LR LR 14 31 33.5
MNK *i* LRM MLR 14 32 19.3
comp=E,113nm,11.9s
MNK *i* LRM MLR 14 32 54.4
comp=Z,98nm,14.9s
MNK *i* LRM MLR 14 33 20.4
comp=N,108nm,15.1s
MNK Minsk 19.54 330 *i* P **Pn** 14 24 17.1 -1.0
MNK *i* S **Sn** 14 27 55.2 -2.6
MNK pmax pmax
comp=Z,7.0nm,0.6s
MNK pmax pmax
comp=E,9.0nm,0.7s
MNK pmax pmax
comp=N,11nm,0.7s
MNK MLR MLR
comp=E,113nm,12.0s
MNK MLR MLR
comp=Z,98nm,15.0s
MNK MLR MLR
comp=N,108nm,15.0s
STHS Stebnicka Huta 19.82 311 *e*P **Pn** 14 24 22.9 +1.3
STHS Stebnicka Huta 19.82 311 *e*PN **Pn** 14 24 22.8 +1.2
JMDO Jabal Madar 19.93 140 P **Pn** 14 24 23.2 +0.1
PSZ Piszkesteto 20.09 306 ⇓P Pn 14 24 24.7 -0.2
PSZ Piszkesteto 20.09 306 Pn 14 24 24.6 -0.3
PSZ IAmb IAmb 14 25 02.3
comp=Z,20nm,1.4s
PSZ Piszkesteto 20.09 306 P Pn 14 24 24.7 -0.2
ARTI Arti 20.19 23 LR LR 14 34 23.5
comp=Z,141nm,19.6s,baz=210,slow=43
ARTI Arti 20.19 23 Pn 14 24 24.0 -2.0
ARTI Arti 20.19 23*c i* P Pn 14 24 24.3 -1.6
ARTI 14 24 38.1
ARTI S **S** 14 28 07.9 -3.4
ARTI pmax pmax
comp=Z,17nm,0.9s
KBL Kabul 20.22 94 **P** 14 24 24.1 -0.7
KBL IAmb IAmb 14 24 30.6
comp=Z,27nm,1.4s
KBL Kabul 20.22 94 P **P** 14 24 24.1 -0.7
KBL pmax pmax
comp=Z,27nm,1.4s
KBL Kabul 20.22 94 P Pn 14 24 28.5 +1.9
SNR=11
GAR Garm 20.24 80 Pn 14 24 25.3 -1.6
NACGM Naroch 20.27 330 *e*P **P** 14 24 23.2 -1.7
comp=Z,24nm,1.2s,baz=137
KK31 Karatay Array 20.30 69 Pn 14 24 26.3 -1.1
KK31 Karatay Array 20.30 69 P Pn 14 24 26.3 -1.1
KK31 pmax pmax
comp=Z,34nm,1.0s
KKAR Karatay Array 20.30 69 Pn 14 24 26.8 -0.5
KKAR Karatay Array 20.30 69 P Pn 14 24 26.8 -0.6
KIRV Kirov 20.37 8 LR LR 14 33 21.1
comp=Z,305nm,18.3s,baz=197,slow=40
KIRV Kirov 20.37 8 *i* P **P** 14 24 25.4 -0.6
BTK Batken 20.53 77 IAmb IAmb 14 24 54.4
comp=Z,16nm,0.9s
LANS Liptovska Anna 20.78 309 *e*P Pn 14 24 34.1 +1.1
LANS Liptovska Anna 20.78 309 *e*PN Pn 14 24 34.1 +1.1
JLN Jalan Bani Buh 20.79 137 P Pn 14 24 31.9 -1.4
JLN P Pn 14 24 31.9 -1.4
MHTO MHTO 21.03 142 P **P** 14 24 37.1 +3.7
SUW Suwalki 21.21 324 P **P** 14 24 33.2 -1.9
SUW Suwalki 21.21 324 P **P** 14 24 33.2 -1.9
SVE Sverdlovsk 21.27 25 *e*P **P** 14 24 39.3 +3.5
DOK Doka 21.56 154 P **P** 14 24 39.3 +0.2
SNR=5.8
MODS Modra-Piesok 21.90 306 *e*P P 14 24 51.0 +8.4
MODS Modra-Piesok 21.90 306 *e*PN P 14 24 51.0 +8.4
WHFO Wadi Hawf 22.09 156 P **P** 14 24 45.0 +0.2
SNR=7.2

RONA Rosalia, Austr 22.35 303 *e*P **P** 14 24 49.3 +1.8
comp=Z,10nm,1.4s
KLMR Klimovskoe 22.59 354 *e*P **P** 14 24 48.3 -1.5
KLMR pmax pmax
comp=Z,42nm,1.3s
KLMR MLR MLR
comp=Z,510nm,14.0s
WINA Alland / Wiene 22.60 304 *e*P **P** 14 24 51.9 +1.8
comp=Z,9.0nm,1.5s
VRAC Vranov 22.61 308 P **P** 14 24 48.4 -1.8
comp=Z,1.6nm,0.4s,baz=180,slow=10,SNR=2.1
VRAC LR LR 14 35 45.4
comp=Z,65nm,19.5s,baz=104,slow=42
comp=Z,1.6nm,0.4s
RBK Rabkut 22.62 155 P **P** 14 24 50.7 +0.1
SHAO Shalim 22.65 151 P **P** 14 24 51.2 +0.4
DMTO DMTO 22.68 153 P **P** 14 24 51.0 -0.1
CONA Conrad Observa 22.69 304 *e*P **P** 14 24 51.6 +0.4
comp=Z,3.3nm,0.8s
ARSA Arzberg 22.76 302 *e*P **P** 14 24 50.8 -1.1
comp=Z,18nm,2.0s
VSU Vasula 23.01 336 *ce*P **P** 14 24 53.2 -1.0
VSU pmax pmax
comp=Z,41nm,1.3s
BORK Borovoye 23.06 42 **P** 14 24 55.1 +0.2
BORK IAmb IAmb 14 25 23.4
comp=Z,13nm,1.1s
BORK Borovoye 23.06 42 P **P** 14 24 55.1 +0.2
BORK pmax pmax
comp=Z,13nm,1.1s
BVA0 Borovoye Array 23.09 43 *i* P **P** 14 24 54.4 -0.8
BVAR Borovoye Array 23.09 43 P **P** 14 24 55.0 -0.2
comp=Z,2.3nm,0.6s,baz=251,slow=10,SNR=12
comp=Z,2.3nm,0.6s
AAK Ala-Archa 23.21 70 LR LR 14 35 52.3
comp=Z,117nm,19.5s,baz=284,slow=42
AAK Ala-Archa 23.21 70 *i* P **P** 14 24 59.4 +2.7
SNR=7.8
AAK Ala-Archa 23.21 70 *ce*P **P** 14 24 55.8 -0.9
AAK pmax pmax
comp=Z,11nm,1.0s
FRU1 Bishkek 23.31 70 P **P** 14 24 58.2 +0.6
FRU1 Bishkek 23.31 70 P **P** 14 24 58.2 +0.6
FRU1 pmax pmax
comp=Z,50nm,1.3s
VAE Valguarnera 23.57 277 LR LR 14 35 20.6
comp=Z,372nm,18.2s,baz=168,slow=40
NIL Nilore 23.81 93 **P** 14 25 02.4 -0.2
NIL IAmb IAmb 14 25 13.7
comp=Z,12nm,0.9s
NIL Nilore 23.81 93 P **P** 14 25 02.4 -0.2
NIL pmax pmax
comp=Z,12nm,0.9s
NIL Nilore 23.81 93 P **P** 14 25 07.6 +5.0
NIL P **P** 14 25 07.6 +5.0
BIOA Bad Ischl, Aus 24.10 302 *e*P **P** 14 25 05.0 -0.3
comp=Z,8.3nm,1.1s
GERES GERESS Array B 24.31 305 P **P** 14 25 06.3 -1.0
comp=Z,0.4nm,0.5s,baz=103,slow=14,SNR=4.0
GERES LR LR 14 36 09.2
comp=Z,76nm,20.2s,baz=108,slow=40
comp=Z,0.4nm,0.5s
NRN Naryn 24.37 73 IAmb IAmb 14 25 41.6
comp=Z,14nm,1.0s
KHC Kasperske Hory 24.46 306 *i* P **P** 14 25 11.0 +2.5
KHC pmax pmax
comp=Z,2.0nm,1.0s
LESA Schwarzleotal 24.70 301 *e*P **P** 14 25 11.1 +0.3
comp=Z,8.1nm,1.1s
WTTA Wattenberg 25.37 301 *e*P **P** 14 25 18.9 +2.0
comp=Z,8.1nm,1.0s
CLL Collm 25.42 310 *e*P **P** 14 25 20.0 +2.9
CLL Collm 25.42 310 *e*Px Px 14 25 20.0
CLL *ex* x 14 27 50.0
WATA Walderalm 25.42 301 *e*P **P** 14 25 18.7 +1.3
comp=Z,3.0nm,0.5s
FINES FINESS Array B 25.62 340 P **P** 14 25 18.6 -0.3
comp=Z,3.0nm,0.6s,baz=145,slow=9.3,SNR=12
FINES LR LR 14 36 04.5
comp=Z,302nm,18.1s,baz=156,slow=38
comp=Z,3.0nm,0.6s
FINES FINESS Array B 25.62 340 P **P** 14 25 18.9 0.0
SQTA Sankt Quirin 25.65 301 *e*P **P** 14 25 20.9 +1.4
comp=Z,5.4nm,1.0s
TARG Taragay, Kyrgy 25.70 72 IAmb IAmb 14 25 28.0
comp=Z,9.5nm,1.0s
MOTA Moosalm 25.74 301 *e*P **P** 14 25 22.4 +2.1
comp=Z,6.7nm,0.8s
FETA Feichten 25.95 300 *e*P **P** 14 25 22.0 -0.3
comp=Z,8.5nm,1.2s
DAVOX Davos/Dischmat 26.51 299 P **P** 14 25 25.9 -1.3
comp=Z,1.7nm,0.5s,baz=128,slow=11,SNR=3.7
DAVOX LR LR 14 38 46.3
comp=Z,92nm,19.4s,baz=76,slow=43
comp=Z,1.7nm,0.5s
WUS Wushi 26.80 73 P **P** 14 25 31.3 +1.4
WUS IAmb IAmb 14 26 07.2
comp=Z,9.2nm,1.1s
PDGK Podgornoye 26.86 68 P **P** 14 25 31.8 +1.3
ATD Arta Tunnel 26.88 183 LR LR 14 36 41.3
comp=Z,4.9nm,20.3s,baz=354,slow=38
KURBB Kurchatov Arra 26.96 52 P **P** 14 25 31.4 +0.3
comp=Z,4.5nm,0.7s,baz=263,slow=9.1,SNR=33
KURBB LR LR 14 38 07.1
comp=Z,63nm,18.1s,baz=178,slow=41
comp=Z,4.5nm,0.7s
KURK Kurchatov 27.04 52 **P** 14 25 33.0 +1.3
KURK IAmb IAmb 14 25 36.7
comp=Z,5.6nm,0.9s
KURK Kurchatov 27.04 52 *ce*P **P** 14 25 31.8 0.0
KURK pmax pmax
comp=Z,8.0nm,1.0s
KURK Kurchatov 27.04 52 P **P** 14 25 32.4 +0.6
KEST Kesra 27.95 275 LR LR 14 38 37.3
comp=Z,152nm,20.5s,baz=264,slow=40
MK31 Makanchi Array 28.89 61 P **P** 14 25 49.9 +1.5
MK31 Makanchi Array 28.89 61 *ce*P **P** 14 25 49.5 +1.1
MKAR Makanchi Array 28.89 61 P **P** 14 25 50.0 +1.6
comp=Z,4.2nm,0.8s,baz=267,slow=6.8,SNR=32
MKAR LR LR 14 39 25.9
comp=Z,160nm,18.3s,baz=259,slow=41
comp=Z,4.2nm,0.8s
MKAR Makanchi Array 28.89 61 **P** 14 25 50.2 +1.8
MKAR Makanchi Array 28.89 61 *ce*P **P** 14 25 50.7 +2.3
MKAR pmax pmax
comp=Z,4.0nm,0.8s
HFS Hagfors 29.01 328 P **P** 14 25 49.6 +0.3
comp=Z,4.4nm,0.9s,baz=152,slow=13,SNR=7.0
HFS LR LR 14 38 57.2
comp=Z,152nm,19.8s,baz=122,slow=40
comp=Z,4.4nm,0.9s
FURI Furi 29.91 191 LR LR 14 37 03.9
comp=Z,183nm,19.6s,baz=8.5,slow=35
NOA NORSAR Array B 30.54 328 LR LR 14 39 44.2
comp=Z,187nm,18.5s,baz=130,slow=39
ZAA0 Zalesovo Array 31.48 47 PcP **PcP** 14 29 03.5 -0.6
ZALV Zalesovo Beam 31.48 47 P **P** 14 26 11.6 +0.4
comp=Z,1.5nm,0.5s,baz=253,slow=9.1,SNR=8.6
ZALV LR LR 14 39 48.0
comp=Z,72nm,18.7s,baz=253,slow=38
comp=Z,1.5nm,0.5s
ZALV Zalesovo Beam 31.48 47 P **P** 14 26 11.6 +0.4
ZALV PcP **PcP** 14 29 04.0 -0.2
ZALV Zalesovo Beam 31.48 47 *i* P **P** 14 26 13.5 +2.3
ZALV pmax pmax
comp=Z,2.0nm,0.6s
DGZ Jazzator, Alta 32.48 56 *i* P **P** 14 26 21.0 +0.7
ARCES ARCESS Array B 32.71 348 LR LR 14 40 10.2
comp=Z,184nm,19.6s,baz=146,slow=37
EKA Eskdalemuir Ar 35.75 314 P **P** 14 26 48.2 -0.1
comp=Z,4.7nm,0.8s,baz=102,slow=8.3,SNR=11
EKA LR LR 14 44 08.2
comp=Z,104nm,18.1s,baz=92,slow=41
comp=Z,4.7nm,0.8s
EVN Everest 36.76 94 **P** 14 26 58.7 +0.7
EVN IAmb IAmb 14 27 03.6
comp=Z,7.1nm,0.8s
ESDC Sonseca Array 37.16 287 P **P** 14 26 59.9 -0.7
comp=Z,0.9nm,0.7s,baz=71,slow=7.4,SNR=5.5
comp=Z,0.9nm,0.7s
NRIK Noril'sk 38.51 23 P **P** 14 27 12.8 +1.1
comp=Z,6.2nm,1.0s,baz=305,slow=3.2,SNR=6.7
NRIK LR LR 14 47 06.9
comp=Z,67nm,19.9s,baz=234,slow=43
comp=Z,6.2nm,1.0s
NRIK Noril'sk 38.51 23 **P** 14 27 12.6 +1.0
NRIK IAmb IAmb 14 27 16.4

	comp=Z,13nm,1.2s						
NRIK	Noril'sk	38.51	23	iP	P	14 27 12.0	+0.4
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KNGR	Kungurtug, Tuv	38.97	54	iP	P	14 27 17.0	+1.1
KNGR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LSA	Lhasa	39.38	88	P	P	14 27 19.6	-0.4
LSA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KMBO	Kilima Mbogo	39.96	191	LR	LR	14 42 50.6	
	comp=Z,139nm,21.9s,baz=219,slow=34						
GTA2	Gaotai	42.50	71	eP	P	14 27 47.3	+2.1
GTA2				pP		14 27 50.5	
GTA2				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TLY	Talaya	42.73	52	iP	P	14 27 48.6	+1.8
TLY				pmax	pmax		
	comp=Z,1.0nm,1.1s						
SONM	Songino Array	45.10	57	P	P	14 28 05.8	-0.2
	comp=Z,0.5nm,0.6s,baz=278,slow=8.8,SNR=3.8						
SONM				LR	LR	14 49 11.0	
	comp=Z,158nm,19.0s,baz=283,slow=39						
	comp=Z,0.5nm,0.6s						
SONM	Songino Array	45.10	57	P	P	14 28 05.8	-0.2
PALK	Pallekele	45.18	124	LR	LR	14 47 24.9	
	comp=Z,64nm,18.3s,baz=319,slow=37						
TORD	Torodi Ar. Bea	45.39	248	P	P	14 28 08.3	-0.2
	comp=Z,0.3nm,0.5s,baz=69,slow=5.1,SNR=2.5						
	comp=Z,0.3nm,0.5s						
TORD	Torodi Ar. Bea	45.39	248	P	P	14 28 07.9	-0.6
ULN	Ulaanbaatar	45.53	57	P	P	14 28 09.8	+0.4
ULN	Ulaanbaatar	45.53	57	ceP	P	14 28 10.4	+1.0
ULN				pmax	pmax		
	comp=Z,9.0nm,1.7s						
LZDM	Lanzhou Array	46.61	74	LR	LR	14 53 03.4	
	comp=Z,60nm,19.1s,baz=105,slow=43						
BOD	Bodaibo	47.96	43	eP	P	14 28 27.5	-0.6
BOD				pmax	pmax		
	comp=Z,11nm,1.2s						
CM31	Chiang Mai Arr	51.20	97	P	P	14 28 54.5	+1.1
CM31				IAmb	IAmb	14 29 02.4	
	comp=Z,4.3nm,0.6s						
CMAR	Chiang Mai Arr	51.20	97	P	P	14 28 53.1	-0.2
	comp=Z,2.0nm,0.6s,baz=298,slow=8.1,SNR=13						
CMAR				LR	LR	14 53 14.5	
	comp=Z,28nm,18.6s,baz=310,slow=39						
	comp=Z,2.0nm,0.6s						
CMAR	Chiang Mai Arr	51.20	97	P	P	14 28 54.2	+0.9
CMAR	Chiang Mai Arr	51.20	97	ceP	P	14 28 54.2	+0.9
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TIXI	Tiksi	52.29	23	LR	LR	14 56 03.3	
	comp=Z,60nm,18.1s,baz=298,slow=42						
TIXI	Tiksi	52.29	23	P	P	14 29 01.9	+1.2
TIXI				IAmb	IAmb	14 29 18.3	
	comp=Z,9.0nm,1.5s						
TIXI	Tiksi	52.29	23	ceP	P	14 29 02.0	+1.2
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.3s						
LSZ	Lusaka	55.59	199	LR	LR	14 52 29.6	
	comp=Z,54nm,20.5s,baz=320,slow=35						
SFJD	Kangerlussuaq	57.09	332	LR	LR	14 54 18.1	
	comp=Z,89nm,19.2s,baz=68,slow=36						
HEH	HeiHe	57.58	49	eP	P	14 29 35.7	-3.7
HEH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TSUM	Tsumeb	62.65	209	LR	LR	14 57 06.1	
	comp=Z,36nm,20.4s,baz=341,slow=36						
KS19	Wonju Array Si	63.50	62	P	P	14 30 20.4	+0.4
KSAR	Wonju Array Be	63.54	62	P	P	14 30 20.6	+0.3
KSAR	Wonju Array Be	63.54	62	P	P	14 30 20.6	+0.3
KSRS	Korea Array	63.56	62	P	P	14 30 20.4	0.0
	comp=Z,1.5nm,0.7s,baz=290,slow=6.7,SNR=8.9						
KSRS				LR	LR	15 01 38.4	
	comp=Z,36nm,18.3s,baz=285,slow=40						
	comp=Z,1.5nm,0.7s						
SEY	Seymchan	63.89	29	ceP	P	14 30 23.3	+1.1
SEY				pmax	pmax		
	comp=Z,7.0nm,0.8s						
RES	Resolute Bay	63.92	349	LR	LR	15 01 36.0	
	comp=Z,20nm,19.4s,baz=11,slow=39						
MA2	Magadan	65.12	33	LR	LR	15 03 18.6	
	comp=Z,52nm,19.8s,baz=306,slow=40						
MA2	Magadan	65.12	33	P	P	14 30 31.3	+1.0
MA2	Magadan	65.12	33	ceP	P	14 30 31.5	+1.2
MA2				pmax	pmax		
	comp=Z,8.0nm,1.3s						
FRB	Frobisher Bay	65.20	333	LR	LR	14 58 06.7	
	comp=Z,88nm,19.9s,baz=50,slow=35						
BILL	Bilibino	65.28	21	iP	P	14 30 32.2	+1.1
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
LBTB	Lobatse	65.58	199	LR	LR	15 01 17.9	
	comp=Z,48nm,20.1s,baz=15,slow=38						
JNU	Nakatsue	67.85	65	LR	LR	15 03 56.8	
	comp=Z,68nm,18.6s,baz=282,slow=39						
BOSA	Boshof	69.10	198	LR	LR	15 01 02.8	
	comp=Z,84nm,19.2s,baz=19,slow=36						
JOW	Kunigami	69.36	72	LR	LR	15 04 57.5	
	comp=Z,48nm,18.1s,baz=62,slow=39						
ASAJ	Asahikawa	69.58	50	LR	LR	15 04 49.0	
	comp=Z,56nm,18.4s,baz=351,slow=39						
MJAR	Matsushiro Arr	71.04	58	LR	LR	15 05 05.6	
	comp=Z,67nm,19.1s,baz=324,slow=38						
C18K	Utukok River	71.49	10		P	14 31 10.9	+0.8
C18K				IAmb	IAmb	14 31 13.7	
	comp=Z,4.0nm,0.9s						
C27K	Jago River	72.03	3	IAmb	IAmb	14 31 28.0	
	comp=Z,3.8nm,1.1s						
E22K	Anaktuvuk Pass	73.00	6	P	P	14 31 20.1	+0.9
E22K				IAmb	IAmb	14 31 44.7	
	comp=Z,5.1nm,1.4s						
F15K	North Star Dit	73.72	12		P	14 31 24.5	+1.2
F15K				IAmb	IAmb	14 31 27.4	
	comp=Z,4.6nm,1.2s						
SUR	Sutherland	73.84	201	LR	LR	15 05 13.0	
	comp=Z,92nm,18.0s,baz=9.0,slow=37						
LEM	Lembang	73.90	113	LR	LR	15 07 12.9	
	comp=Z,29nm,18.8s,baz=114,slow=38						
I28M	Miner Creek	76.34	2	P	P	14 31 39.0	+0.4
I28M				IAmb	IAmb	14 31 41.9	
	comp=Z,2.7nm,1.0s						
ILAR	Eielson Array	76.69	5	LR	LR	15 08 24.2	
	comp=Z,39nm,20.8s,baz=36,slow=38						
YKA	Yellowknife Ar	77.94	350	P	P	14 31 46.6	-0.8
	comp=Z,0.6nm,1.0s,baz=4.6,slow=6.6,SNR=7.8						
YKA				LR	LR	15 08 22.3	
	comp=Z,62nm,18.3s,baz=352,slow=37						
	comp=Z,0.6nm,1.0s						
YKA	Yellowknife Ar	77.94	350	P	P	14 31 47.2	-0.3
K29M	Barlow Dome	77.99	1	P	P	14 31 48.9	+0.9
K29M				IAmb	IAmb	14 32 01.7	
	comp=Z,3.8nm,1.1s						
SHEM	Shemya Is, Ala	79.23	28	LR	LR	15 12 04.9	
	comp=Z,28nm,19.5s,baz=294,slow=40						
KAPI	Kappang	81.77	103	LR	LR	15 13 60.0	
	comp=Z,17nm,18.7s,baz=294,slow=40						
KDAK	Kodiak Island	83.03	9	LR	LR	15 13 51.7	
	comp=Z,40nm,19.3s,baz=355,slow=39						
ULM	Lac du Bonnet	84.95	336	LR	LR	15 09 34.4	
	comp=Z,52nm,19.4s,baz=13,slow=35						
BATI	Baumata	88.05	105	LR	LR	15 19 28.1	
	comp=Z,30nm,19.4s,baz=272,slow=41						
BBB	Bella Bella	89.46	355	LR	LR	15 15 44.7	
	comp=Z,41nm,20.1s,baz=66,slow=38						
NEW	Newport	92.06	348	LR	LR	15 16 54.8	
	comp=Z,51nm,18.7s,baz=36,slow=37						
PDAR	Pinedale Array	95.72	341	LR	LR	15 16 09.4	
	comp=Z,22nm,18.4s,baz=34,slow=35						
YBH	Yreka Blue Hor	99.29	350	LR	LR	15 19 03.8	
	comp=Z,5.6nm,18.3s,baz=39,slow=36						

*BGSI **06** 14:28:29.8±0.3, 24°.62S×28°.10E, h544^{km}±17^{km}, ML2.3*

PRE 06 14:28:30.7±1.0**, 26°.27S×29°.17E, h0**^{km}**, ML2.4, Suspected explosion, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRLN	Carolina, Mapu	0.81	71	eP	Pg	14 28 45.8	-0.5
CRLN				eS	Sg	14 28 57.4	+0.5
CRLN				IAML		14 29 05.2	
	comp=Z,111nm,0.9s						
HRAO	HartRAO	1.39	285	eP	Pb	14 28 57.8	+0.2
HRAO				eS	Sn	14 29 16.5	0.0
HRAO				IAML		14 29 16.9	
	comp=Z,92nm,0.5s						
WDLM	Western Deep L	1.58	264	eP	Pn	14 29 00.4	+0.3
WDLM				eS	Sb	14 29 22.6	+1.2
WDLM				IAML		14 29 22.8	
	comp=Z,71nm,0.3s						
PRYS	Parys	1.75	248	eP	Pn	14 29 02.6	+0.2
PRYS				eS	Sb	14 29 26.4	0.0
PRYS				IAML		14 29 39.1	
	comp=Z,27nm,0.9s						
PILG	Pilgrimsrest,	1.92	47	eP	Pb	14 29 05.9	-0.9
PILG				eS	Sb	14 29 31.2	-0.3
PILG				IAML		14 29 32.0	
	comp=Z,85nm,0.4s						
SNKL	Senekal, Frees	2.35	212	eP	Pn	14 29 11.2	+0.4
SNKL				eS	Sn	14 29 40.5	0.0
SNKL				IAML		14 29 45.4	
	comp=Z,44nm,0.4s						
LEPH	Lephalale, Lim	2.70	332	eP	Pn	14 29 16.1	+0.5
LEPH				eS	Sn	14 29 49.5	+0.5
LEPH				IAML		14 29 54.2	
	comp=Z,32nm,0.5s						
PMBG	Pietermaritzbu	3.44	160	eP	Pn	14 29 26.7	+1.1
PMBG				eS	Sn	14 30 07.2	0.0
PMBG				IAML		14 30 22.4	
	comp=Z,13nm,0.4s						
LBTB	Lobatse	3.46	290	eP	Pn	14 29 26.7	+0.8
LBTB				eS	Sn	14 30 07.7	0.0
LBTB				IAML		14 30 19.1	
	comp=Z,48nm,0.6s						
SWZ	Schweizer	3.55	254	eP	Pn	14 29 27.3	+0.1
SWZ				eS	Sn	14 30 10.3	+0.3
SWZ				IAML		14 30 32.4	
	comp=Z,26nm,0.4s						
MUSN	Musina, Limpop	4.01	9	eP	Pn	14 29 34.9	+1.3
MUSN				eS	Sn	14 30 21.1	-0.2
MUSN				IAML		14 30 36.5	
	comp=Z,16nm,0.5s						
LPHEP	Lephephe	4.17	313	iP	Pb	14 29 42.7	-2.4
LPHEP				IAML		14 30 39.3	
	comp=N,8.8nm,0.5s						
BOSA	Boshof	4.19	235	eP	Pn	14 29 37.6	+1.6
BOSA				eS	Sn	14 30 26.0	+0.3
BOSA				IAML		14 30 53.6	
	comp=Z,8.4nm,0.6s						
KSTD	Kokstad	4.33	178	eP	Pn	14 29 39.1	+1.0
KSTD				eS	Sn	14 30 29.4	0.0
KSTD				IAML		14 30 46.7	
	comp=Z,8.4nm,0.4s						
KDWAN	Kaudwane	5.00	304	iP	Pn	14 29 49.2	+2.0
BROLN	Tlhalogang	5.41	342	iP	Pn	14 29 50.8	-2.1
BROLN				iS	Sn	14 30 50.7	-5.2
BROLN				IAML		14 31 17.6	
	comp=N,5.3nm,0.6s						
ROOI	Rooidraai Farm	7.91	217	eP	Pn	14 30 27.8	+0.8
ROOI				eS	Sn	14 31 54.1	-3.1
ROOI				IAML		14 32 39.7	
	comp=Z,2.1nm,0.6s						
FRAZ	Fraserburg	8.82	228	eP	Pn	14 30 41.5	+1.9
FRAZ				eS	Sn	14 32 15.2	-4.8
FRAZ				IAML		14 32 31.8	
	comp=Z,1.1nm,0.5s						

*MOS **06** 14:55:04.9±1.3, 42°.63N×144°.99E, h49^{km}, mb4.6/1, Error ellipse: s-maj=16.7km s-min=8.7km az=77.0*
*JMA **06** 14:55:06.8±0.1, 42°.8N±0°.4×144°.8E±0°.5, h51^{km}±1^{km}, MV3.9/40, OFF NEMURO PENINSULA*
JMA Felt I J1 at OFF NEMURO PENINSULA .
*NIED **06** 14:55:06.8, 42°.80N×144°.80E, h51^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.87; $M_{\theta\theta}$2.80; $M_{\phi\phi}$-0.93; $M_{r\theta}$0.31; $M_{\theta\phi}$-0.89; $M_{\phi r}$2.67; Fault plane solution: $M_0$3.62000×10^{14} NP1: ϕ_s251.00000°, δ53.00000°, λ-144.00000°. NP2: ϕ_s138.00000°, δ62.00000°, λ-43.00000°.*
*SKHL **06** 14:55:06.8±0.0, 42°.70N×144°.90E, h46^{km}±8^{km}, mb5.1/4*
*IDC **06** 14:55:06.1±3.4, 42°.75N×145°.02E, h38^{km}±29^{km}, mb3.2/7, mbtmp3.5/11, ML3.3/4, Error ellipse: s-maj=25.2km s-min=22.5km az=137.0*

ISC 06 14:55:06.9±0.9**, 42°.73N**±0°.06×**144°.89E**±0°.04**, h44**^{km}±7^{km}**, n43, σ1s28**/58**, mb3.3**/7**, 4C-8D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKK	Akkeshi	0.29	353	eP	Pn	14 55 15.3	-0.1
AKK				eS	Sn	14 55 21.5	+0.2
JAK	Akkeshi	0.30	332	⇓P	Pn	14 55 15.2	-0.3
JAK				⇓S	Sn	14 55 21.4	-0.1
JKHN	Kushirohamanak	0.41	29	iP	Pn	14 55 17.1	+0.5
JKHN				S	Sn	14 55 24.6	+1.2
JOB	Onbets	0.80	283	⇓iP	Pn	14 55 20.9	-0.8
JOB				⇓S	Sn	14 55 31.2	-1.2
JNK	Nakash	0.86	352	iP	Pn	14 55 21.5	-1.2
JNK				eS	Sn	14 55 32.0	-2.1
NMR	Nemuro--Hokkai	0.89	44	⇑iPN	Pn	14 55 22.4	-0.5
NMR				iS	Sn	14 55 33.8	-0.8
NMR	Nemuro--Hokkai	0.89	44	iP	Pn	14 55 22.4	-0.5
NMR				iS	Sn	14 55 33.8	-0.8
NEM2	Nemuro 2	0.89	44	iP	Pn	14 55 22.4	-0.5
NEM2				S	Sn	14 55 33.9	-0.9
JAR	Ashorobuto	1.00	305	⇓iP	Pn	14 55 23.3	-1.2
JAR				⇓S	Sn	14 55 35.4	-2.0
GLVR	Golovnino	1.11	24	⇑iPN	Pn	14 55 25.6	-0.4
GLVR				iS	Sn	14 55 39.7	-0.4
GLVR				pmax	pmax		
	comp=Z,2μm,0.2s						
GLVR				smax	smax		
	comp=N,4μm,0.2s						
GLVR				smax	smax		
	comp=E,1μm,0.2s						
GLVR	Golovnino	1.11	24	iP	Pn	14 55 25.6	-0.4
GLVR				AMB	AMB	14 55 26.3	
	comp=E,2μm,0.5s						
GLVR				iS	Sn	14 55 39.7	-0.4
GLVR				A	A	14 55 40.6	
	comp=E,4μm,0.3s						
GLVR				A	A	14 55 40.6	
	comp=E,1μm,0.3s						
JCH	Churui	1.13	265	⇓iP	Pn	14 55 25.4	-0.9
JCH				⇓eS	Sn	14 55 39.5	-1.2
JRA	Rausu	1.22	8	iP	Pn	14 55 26.7	-0.7
JRA				eS	Sn	14 55 41.4	-1.4
RUSJ	Misakicho	1.40	11	⇑iPN	Pn	14 55 29.5	-0.4
RUSJ				iS	Sn	14 55 48.0	+0.8
JTKR	Abashiri--Toko	1.43	330	iP	Pn	14 55 29.9	-0.5
JTKR				eS	Sn	14 55 46.9	-1.1
JEM	Erimo	1.47	242	eP	Pn	14 55 31.4	+0.6
YUK	Yuzh-Kuril'sk	1.48	28	c iPN	Pn	14 55 30.9	-0.2
YUK				iS	Sn	14 55 48.9	-0.4
YUK				pmax	pmax		
	comp=N,115nm,0.2s						
YUK				pmax	pmax		
	comp=Z,1μm,0.2s						
YUK				pmax	pmax		
	comp=E,270nm,0.1s						
YUK				smax	smax		
	comp=N,3μm,0.2s						
YUK				smax	smax		
	comp=E,1μm,0.2s						
YUK	Yuzh-Kuril'sk	1.48	28	iP	Pn	14 55 30.9	-0.2
YUK				AMB	AMB	14 55 31.4	
	comp=E,1μm,0.4s						
YUK				iS	Sn	14 55 48.6	-0.7
YUK				A	A	14 55 51.0	
	comp=E,2μm,0.3s						
YUK				A	A	14 55 51.0	
	comp=E,2μm,0.3s						
SHO	Shikotan	1.82	50	eP	Pn	14 55 45.5	+10
SHO				AMB	AMB	14 55 46.4	
	comp=E,190nm,0.2s						
SHO				eS	Sn	14 56 06.6	+9.1
SHO				A	A	14 56 08.3	
	comp=E,540nm,0.4s						
SHO				A	A	14 56 08.3	
	comp=E,2μm,0.4s						
JKA	Kamikawa-asahi	2.17	311	eP	Pn	14 55 40.7	+0.2
JKA				eS	Sn	14 56 08.4	+2.3
ASAJ	Asahikawa	2.17	310	Pn	Pn	14 55 40.7	+0.2
	comp=E,12nm,0.3s,baz=161,slow=8.1,SNR=140						
ASAJ				Sn	Sn	14 56 08.4	+2.2
	comp=E,12nm,0.3s,baz=273,slow=29,SNR=7.8						
	comp=E,27nm,0.2s						
KUR	Kuril'sk	3.30	40	PN	Pn	14 55 57.2	+1.2
KUR				eS	Sn	14 56 37.4	+3.5
KUR				smax	smax		
	comp=E,304nm,0.5s						
KUR				smax	smax		
	comp=N,239nm,0.5s						
KUR	Kuril'sk	3.30	40	eP	Pn	14 55 57.2	+1.2
KUR				AMB	AMB	14 55 58.1	
	comp=N,140nm,0.4s						
KUR				eS	Sn	14 56 34.4	+0.5
KUR				A	A	14 56 48.3	
	comp=N,210nm,0.3s						
KUR				A	A	14 56 48.3	
	comp=N,210nm,0.3s						
YSS	Yuzhno-Sakhali	4.49	341	ePN	Pn	14 56 15.5	+3.2
YSS				eS	Sn	14 57 04.9	+1.7
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YSS				smax	smax		
	comp=N,10.0nm,0.4s						
YSS				smax	smax		
	comp=E,10.0nm,0.8s						
YSS	Yuzhno-Sakhali	4.49	341	eP	Pn	14 56 13.9	+1.6
MJAR	Matsushiro Arr	8.04	222	Pn	Pn	14 57 00.4	-0.8
	comp=E,0.2nm,0.3s,baz=31,slow=13,SNR=24						
	comp=E,4.8nm,0.5s						
PETK	Petropavlovsk-	13.45	35	Pn	Pn	14 58 13.4	-1.6
	comp=E,0.3nm,0.3s,baz=188,slow=9.0,SNR=9.0						
	comp=E,3.2nm,0.9s						
KSRS	Korea Array	14.01	254	Pn	Pn	14 58 23.8	+1.1
	comp=E,0.1nm,0.3s,baz=63,slow=14,SNR=1.9						
	comp=E,0.2nm,0.4s						
SONM	Songino Array	27.36	294	P	P	15 00 47.5	-0.4
	comp=E,0.3nm,0.4s,baz=96,slow=10,SNR=2.5						
	comp=E,0.3nm,0.4s						
H11N2	WAKE ISLAND Hy	29.49	134	T	T	15 32 14.6	
	baz=327,slow=75,SNR=339						
H11N1	WAKE ISLAND Hy	29.50	134	T	T	15 32 18.7	
	baz=327,slow=75,SNR=268						
H11N3	WAKE ISLAND Hy	29.51	134	T	T	15 32 18.5	
	baz=327,slow=75,SNR=333						
H11S1	WAKE ISLAND Hy	30.41	136	T	T	15 33 26.1	
	baz=328,slow=76,SNR=357						
H11S3	WAKE ISLAND Hy	30.41	136	T	T	15 33 26.4	
	baz=328,slow=76,SNR=300						
H11S2	WAKE ISLAND Hy	30.42	136	T	T	15 33 27.5	
	baz=328,slow=76,SNR=264						
ILAR	Eielson Array	43.28	35	P	P	15 03 03.2	-0.6
	comp=E,0.4nm,0.6s,baz=263,slow=6.4,SNR=6.8						
	comp=E,0.4nm,0.6s						
MKAR	Makanchi Array	43.60	298	P	P	15 03 07.6	+1.0
	comp=E,0.2nm,0.7s,baz=85,slow=6.7,SNR=5.8						
	comp=E,0.2nm,0.7s						
KURK	Kurchatov	44.73	304	P	P	15 03 17.7	+2.1
KURK	Kurchatov	44.73	304	eP	P	15 03 17.7	+2.1
KURBB	Kurchatov Arra	44.82	304	P	P	15 03 17.7	+1.5
	comp=E,0.1nm,0.3s,baz=72,slow=9.0,SNR=1.4						
	comp=E,0.1nm,0.3s						
WRA	Warramunga Arr	63.11	191	P	P	15 05 30.3	+0.3
	comp=E,0.2nm,0.4s,baz=11,slow=6.9,SNR=1.9						
	comp=E,0.2nm,0.4s						
FINES	FINESS Array B	65.02	332	P	P	15 05 40.3	-1.8
	comp=E,0.9nm,0.6s,baz=17,slow=7.0,SNR=4.1						
	comp=E,0.9nm,0.6s						
TXAR	Lajitas Array	84.59	55	P	P	15 07 35.3	-0.5
	comp=E,0.3nm,0.6s,baz=335,slow=5.5,SNR=3.6						
	comp=E,0.3nm,0.6s						

*FUNV **06** 15:09:00.5, 6°.77N×73°.17W, h168^{km}, MW3.8, Presumed earthquake*
*RSNC **06** 15:09:01.1±0.0, 7°N±1°×7°3W±°, h150^{km}±1^{km}, M3.5, mB5.0, mb3.9, ML3.2, Mw(mB)4.3*

ISC 06 15:08:59.3±1.2**, 6°.84N**±0°.03×**73°.13W**±0°.03**, h159**^{km}±8^{km}**, n44, σ1s37**/83**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.25	193	P	Pn	15 09 21.5	+0.4
BARC				S	Sn	15 09 37.0	-0.8
BRJC	Barrancabermej	0.63	283	P	Pn	15 09 23.1	+0.7
BRJC				S	Sn	15 09 40.0	+0.1
PAMC	Pamplona, Colo	0.66	40	P	Pn	15 09 24.2	+1.1
PAMC				S	Sn	15 09 41.5	+0.2
RUSC	La Rusia	0.94	177	P	Pn	15 09 25.2	+0.1
RUSC				S	Sn	15 09 44.0	-0.8
RUSC	La Rusia	0.94	177	eP	Pn	15 09 25.5	+0.4
RUSC				eS	Sn	15 09 44.4	-0.4
CAPV	Capacho	1.30	38	eP	Pn	15 09 29.6	+1.7
CAPV				eS	Sn	15 09 51.6	+1.8
PTBC	PUERTO BERRIO,	1.35	258	P	Pn	15 09 27.8	-0.4
PTBC				S	Sn	15 09 48.9	-1.3
OCAC	Ocana	1.41	352	P	Pn	15 09 29.6	+0.8
OCAC				S	Sn	15 09 51.4	-0.2
SPBC	San Pablo de B	1.51	219	P	Pn	15 09 30.0	+0.2
SPBC				S	Sn	15 09 52.4	-0.7
NORC	Norcasia	2.15	234	P	Pn	15 09 37.2	+0.4
NORC				S	Sn	15 10 05.2	-0.4
CHIC	Chingaza	2.27	195	P	Pn	15 09 39.2	+0.6
CHIC				S	Sn	15 10 09.0	+0.1
ROSC	El Rosal	2.31	211	P	Pn	15 09 41.0	+1.9
ROSC				S	Sn	15 10 11.8	+2.1
HELC	Santa Helena	2.47	255	P	Pn	15 09 42.7	+1.8
HELC				S	Sn	15 10 12.4	-0.6
HELC	Santa Helena	2.47	255	eP	Pn	15 09 41.2	+0.2
HELC				eS	Sn	15 10 11.6	-1.4
CVER	Cruz Verde, Cu	2.48	202	P	Pn	15 09 42.8	+1.6
CVER				S	Sn	15 10 14.2	+0.7
UREC	San Jos de Ur	2.56	291	P	Pn	15 09 41.8	+0.2
UREC				S	Sn	15 10 13.0	-1.3
SOCV	Socops	2.67	57	eP	Pn	15 09 44.4	+1.4
SOCV				eS	Sn	15 10 16.4	-0.5
GUY2C	Guyana, Caldas	2.74	234	P	Pn	15 09 45.8	+1.4
GUY2C				S	Sn	15 10 19.0	-0.1
VILC	Villavicencio,	2.76	192	P	Pn	15 09 44.5	+0.2
VILC				S	Sn	15 10 18.9	-0.2
PTGC	Puerto Gaitan,	2.80	159	P	Pn	15 09 44.6	0.0
PTGC				S	Sn	15 10 17.6	-2.1
CBOC	Ciudad Bolivar	3.03	252	P	Pn	15 09 48.9	+1.3
CBOC				S	Sn	15 10 25.5	+0.6
DBBC	Dabeiba	3.07	274	P	Pn	15 09 48.7	+0.7
DBBC				S	Sn	15 10 24.6	-1.1
ARGC	Ariguani, Magd	3.20	340	P	Pn	15 09 51.7	+2.1
ARGC				S	Sn	15 10 30.6	+1.9
SDV	Santo Domingo	3.20	50	P	Pn	15 09 50.7	+0.9
SDV				S	Sn	15 10 29.6	+0.7
SDV	Santo Domingo	3.20	50	eP	Pn	15 09 51.3	+1.5
SDV				eS	Sn	15 10 28.2	-0.8
MCQV	Machiques	3.25	10	eP	Pn	15 09 51.0	+0.8
MCQV				eS	Sn	15 10 29.4	-0.3
PRAC	Prado	3.56	210	P	Pn	15 09 54.9	+0.6
PRAC				S	Sn	15 10 37.5	+0.5
APAC	Apartado, Choc	3.58	287	P	Pn	15 09 55.2	+0.7
APAC				S	Sn	15 10 39.1	+1.7
ORTC	Ortega, Tolima	3.59	216	P	Pn	15 09 55.7	+1.0
ORTC				S	Sn	15 10 38.6	+0.9
SJCC	San Jacinto, C	3.66	326	P	Pn	15 09 55.4	-0.1
SJCC				S	Sn	15 10 36.6	-2.6
SJCC	San Jacinto, C	3.66	326	eP	Pn	15 09 55.9	+0.4
SJCC				eS	Sn	15 10 36.9	-2.3
PLMC	San Jos del P	3.68	239	P	Pn	15 09 56.9	+1.1
PLMC				S	Sn	15 10 39.2	-0.5
URMC	La Uribe, Meta	3.78	199	P	Pn	15 09 58.1	+1.0
URMC				S	Sn	15 10 41.2	-0.8
CRJC	Cerrejon, Guaj	4.17	3	P	Pn	15 10 01.7	-0.4
CRJC				S	Sn	15 10 48.9	-2.1
SMRC	Santa Marta, M	4.43	346	P	Pn	15 10 06.6	+1.1
SMRC				S	Sn	15 10 54.7	-2.5
MACC	Macarena, Meta	4.71	189	P	Pn	15 10 08.3	-0.9
MACC				S	Sn	15 10 59.2	-4.6
URIC	Uribia, Colomb	4.96	13	P	Pn	15 10 12.7	+0.3
	33nm,1.8s						
TEPV	Terepaima	4.98	51	eP	Pn	15 10 13.4	+0.6
TEPV				eS	Sn	15 11 08.9	-1.2
GARC	Garzon, Huila	5.19	207	P	Pn	15 10 15.5	-0.2
MAPV	Macapo	5.50	57	eP	Pn	15 10 19.7	+0.2
MAPV				eS	Sn	15 11 18.5	-3.7
FLOC	Florencia	5.79	206	P	Pn	15 10 24.4	+0.9
FLOC				S	Sn	15 11 30.1	+0.7
BENV	Beln	6.29	60	eP	Pn	15 10 30.2	+0.2
BENV				eS	Sn	15 11 36.7	-4.5
TURV	Turiamo	6.34	55	eP	Pn	15 10 31.0	+0.3
CACV	CAICARA DEL OR	6.58	83	eP	Pn	15 10 40.1	+6.3

*IDC **06** 15:09:04.0±1.2, 35°.50S×105°.92W, h0km, mb3.7/3, mbtmp3.7/3, MS3.8/21, Error ellipse: s-maj=60.7km s-min=34.7km az=45.0*

ISC 06 15:09:06.4±1.5, 35°.5S±0°.4×105°.9W±0°.4, h15km, n34, σ0s.73/6, mb3.6/3, MS3.9/20, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**8.85**	**340**	LR	LR	15 13 44.5	
	comp=Z,552nm,18.1s,baz=172,slow=32						
H03N2	**Juan Fernandez**	**22.31**	**93**	T	T	15 36 49.9	
	baz=248,slow=76,SNR=3.9						
H03N3	**Juan Fernandez**	**22.32**	**93**	T	T	15 36 58.5	
	baz=248,slow=76,SNR=4.6						
H03N1	**Juan Fernandez**	**22.33**	**93**	T	T	15 36 51.9	
	baz=248,slow=76,SNR=2.6						
PLCA	**Paso Flores**	**28.18**	**111**	P	**P**	**15 14 58.6**	**+0.3**
	0.9nm,0.9s,baz=254,slow=5.2,SNR=4.5						
	0.9nm,0.9s						
NNA	**Nana**	**35.20**	**56**	LR	LR	15 26 33.8	
	comp=Z,272nm,20.0s,baz=190,slow=30						
ATAH	**Atahualpa**	**37.87**	**48**	LR	LR	15 27 41.2	
	comp=Z,209nm,22.0s,baz=229,slow=30						
PMSA	**Palmer Station**	**38.48**	**153**	LR	LR	15 28 08.3	
	comp=Z,174nm,18.9s,baz=337,slow=30						
LPAZ	**La Paz**	**38.70**	**70**	LR	LR	15 29 01.9	
	comp=Z,60nm,19.1s,baz=224,slow=31						
TBI	**Tubuai**	**39.53**	**276**	*e*LR	LR	15 27 23.5	
	360nm,22.8s						
TAOE	**Nuku Hiva Isla**	**40.98**	**302**	*e*LR	LR	15 28 23.1	
	102nm,26.1s						
CPUP	**Villa Florida**	**42.31**	**91**	LR	LR	15 31 03.2	
	comp=Z,66nm,20.8s,baz=262,slow=31						
PPT2	**Papeete2**	**42.56**	**283**	*e*LR	LR	15 28 41.7	
	64nm,25.8s						
PPT2				*e*LR	LR	15 28 46.2	
	103nm,27.0s						
RAR	**Rarotonga**	**48.94**	**272**	LR	LR	15 31 59.6	
	comp=Z,37nm,21.9s,baz=298,slow=28						
JTS	**Las Juntas de**	**49.67**	**27**	LR	LR	15 33 45.3	
	comp=Z,126nm,18.1s,baz=210,slow=30						
ROSC	**El Rosal**	**49.90**	**43**	LR	LR	15 36 48.4	
	comp=Z,112nm,18.4s,baz=296,slow=33						
CMIG	**Matias Romero**	**53.34**	**13**	LR	LR	15 34 36.0	
	comp=Z,34nm,21.9s,baz=182,slow=29						
BDFB	**Brasilia**	**55.06**	**85**	LR	LR	15 39 45.7	
	comp=Z,56nm,19.7s,baz=136,slow=33						
URZ	**Urewera**	**59.92**	**242**	LR	LR	15 39 05.1	
	comp=Z,112nm,19.4s,baz=265,slow=30						
RPZ	**Rata Peaks**	**61.97**	**235**	LR	LR	15 40 31.2	
	comp=Z,83nm,21.0s,baz=120,slow=30						
MDP	**Montagnes des**	**64.22**	**62**	LR	LR	15 44 41.2	
	comp=Z,176nm,18.2s,baz=260,slow=33						
SJG	**San Juan**	**65.30**	**42**	LR	LR	15 47 05.7	
	comp=Z,40nm,18.4s,baz=98,slow=35						
MSVF	**Nonsavu**	**68.74**	**263**	LR	LR	15 41 38.3	
	comp=Z,47nm,21.3s,baz=96,slow=28						
NVAR	**Mina Array Bea**	**74.46**	**350**	P	**P**	**15 20 44.6**	**+0.6**
	0.2nm,0.3s,baz=190,slow=9.2,SNR=5.8						
	0.2nm,0.3s						
DZM	**Mont Dzumac**	**75.69**	**253**	*e*LR	LR	15 44 24.1	
	91nm,31.4s						
PDAR	**Pinedale Array**	**77.97**	**357**	P	**P**	**15 21 03.8**	**-0.2**
	0.6nm,0.8s,baz=172,slow=4.0,SNR=5.1						
	0.6nm,0.8s						
SADO	**Sadowa**	**83.51**	**19**	LR	LR	15 56 23.3	
	comp=Z,38nm,19.6s,baz=132,slow=34						
STKA	**Stephens Creek**	**87.81**	**232**	LR	LR	15 53 39.2	
	comp=Z,70nm,21.0s,baz=204,slow=30						
CTA	**Charters Tower**	**92.15**	**244**	LR	LR	15 57 40.1	
	comp=Z,56nm,18.4s,baz=94,slow=32						
SUR	**Sutherland**	**96.00**	**137**	LR	LR	15 59 35.3	
	comp=Z,16nm,18.4s,baz=214,slow=32						
ASAR	**Alice Springs**	**98.36**	**233**	LR	LR	16 01 21.4	
	comp=Z,57nm,18.0s,baz=144,slow=32						
BRTR	**Keskin Array B**	**147.87**	**70**	PKPbc	**PKPbc**	**15 28 49.9**	**-1.1**
	0.5nm,0.8s,baz=264,slow=5.5,SNR=1.8						
CMAR	**Chiang Mai Arr**	**152.21**	**239**	PKPbc	**PKPbc**	**15 29 02.0**	**+0.1**
	1.3nm,1.1s,baz=190,slow=2.5,SNR=6.8						
SONM	**Songino Array**	**153.11**	**307**	PKPbc	**PKiKP**	**15 29 03.4**	**0.0**
	0.5nm,0.5s,baz=48,slow=2.1,SNR=3.6						

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*NEIC **06** 15:17:43.0±1.6, 60°.77N±0°.02×147°.14W±0°.05, h27km±9km, ML3.4/160, ML3.2(AEIC), Error ellipse: s-maj=3.8km s-min=2.7km az=115.0*

*AEIC **06** 15:17:43.7±1.4, 60°.74N±0°.02×147°.15W±0°.04, h17km±4km, Error ellipse: s-maj=3.3km s-min=2.6km az=54.0*

*IDC **06** 15:17:44.6±2.0, 60°.54N×147°.34W, h69km±15km, mb3.5/5, mbtmp3.6/8, Error ellipse: s-maj=34.1km s-min=10.1km az=119.0*

ISC 06 15:17:42.5±1.0, 60°.71N±0°.03×147°.22W±0°.02, h33km±4km, n138, σ1s.40/120, mb3.9/5, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLI	**Glacier Island**	**0.18**	**20**		**Sb**	**15 17 52.5**	**-0.7**
GLI	**Glacier Island**	**0.18**	**20**	Pg	**Pn**	**15 17 48.3**	**+0.1**
GLI	**Glacier Island**	**0.18**	**20**	IAML		15 17 52.9	
	comp=E,14µm,0.5s						
GLI				IAML		15 17 53.2	
	comp=N,12µm,0.7s						
HIN	**Hinchinbrook I**	**0.48**	**132**		**Sn**	**15 18 00.5**	**+0.2**
HIN	**Hinchinbrook I**	**0.48**	**132**		**Pn**	**15 17 53.3**	**+0.3**
HIN				IAML		15 18 01.9	
	comp=N,2µm,0.5s						
HIN				IAML		15 18 02.9	
	comp=E,3µm,0.6s						
P23K	**Montague Islan**	**0.72**	**187**		**Sb**	**15 18 08.6**	**+2.2**
P23K	**Montague Islan**	**0.72**	**187**		**Pb**	**15 17 57.5**	**+0.8**
P23K				IAML		15 18 11.7	
	comp=N,2µm,0.5s						
EYAK	**Cordova Ski Ar**	**0.74**	**102**		**Pn**	**15 17 56.6**	**-0.1**
EYAK				IAML		15 18 08.7	
	comp=N,1µm,0.6s						
EYAK	**Cordova Ski Ar**	**0.74**	**102**		**Sb**	**15 18 07.9**	**+1.0**
DIV	**Divide**	**0.82**	**59**		**Pn**	**15 17 56.8**	**-1.0**
DIV	**Divide**	**0.82**	**59**		**Sn**	**15 18 06.9**	**-1.9**
KNK	**Knik Glacier**	**0.93**	**320**		**Pn**	**15 17 59.2**	**0.0**
KNK				IAML		15 18 15.6	
	comp=N,827nm,0.5s						
KLU	**Klutina**	**1.00**	**38**		**Pn**	**15 17 59.7**	**-0.6**
KLU	**Klutina**	**1.00**	**38**		**Sn**	**15 18 12.1**	**-1.3**
M23K	**Glacier View**	**1.11**	**347**		**Pn**	**15 18 01.9**	**+0.1**
SCM	**Sheep Creek Mo**	**1.12**	**357**		**Pn**	**15 18 01.8**	**-0.2**
SCM				IAML		15 18 17.3	
	comp=E,913nm,0.6s						
SCM				IAML		15 18 19.1	
	comp=N,633nm,0.7s						
SCM	**Sheep Creek Mo**	**1.12**	**357**		**Sn**	**15 18 16.3**	**-0.1**
SML	**Sawmill**	**1.22**	**334**		**Sn**	**15 18 19.9**	**+1.1**
SML	**Sawmill**	**1.22**	**334**		**Pn**	**15 18 03.7**	**+0.3**
SML				IAML		15 18 23.1	
	comp=N,957nm,0.6s						
SML				IAML		15 18 23.2	
	comp=E,1µm,0.4s						
GOAT	**Goat Mountain**	**1.23**	**95**		**Pn**	**15 18 04.1**	**+0.6**
O22K	**Cooper Landing**	**1.26**	**260**		**Pb**	**15 18 05.2**	**-0.5**
SEW	**Seward**	**1.27**	**242**		**Pn**	**15 18 05.1**	**+1.2**
SEW				IAML		15 18 23.4	
	comp=N,569nm,0.3s						
SEW	**Seward**	**1.27**	**242**		**Sb**	**15 18 21.6**	**-0.1**
PMR	**Palmer**	**1.28**	**314**		**Sn**	**15 18 21.3**	**+1.3**
PMR	**Palmer**	**1.28**	**314**		**Pn**	**15 18 04.7**	**+0.7**
PMR				IAML		15 18 23.7	
	comp=E,538nm,0.5s						
RC01	**Rabbit Creek A**	**1.29**	**288**		**Sb**	**15 18 22.5**	**+0.2**
RC01	**Rabbit Creek A**	**1.29**	**288**		**Pb**	**15 18 05.6**	**-0.6**
RAGM	**Ragged Mountai**	**1.30**	**103**		**Pn**	**15 18 04.8**	**+0.4**
RAGM	**Ragged Mountai**	**1.30**	**103**		**Sb**	**15 18 25.0**	**+2.2**
BMRM	**Bremner River**	**1.30**	**78**		**Pn**	**15 18 04.8**	**+0.4**
BMRM	**Bremner River**	**1.30**	**78**		**Sn**	**15 18 21.5**	**+0.7**
GHO	**Glory Hole Cre**	**1.34**	**323**		**Pn**	**15 18 05.9**	**+0.8**
MID	**Middleton Isla**	**1.36**	**161**		**Pb**	**15 18 07.2**	**-0.2**
MID				IAML		15 18 33.3	
	comp=E,570nm,0.8s						
M24K	**Tolsona, Glenn**	**1.49**	**19**		**Pn**	**15 18 07.9**	**+0.9**
M24K				IAML		15 18 29.1	
	comp=E,536nm,0.6s						
M24K				IAML		15 18 29.6	
	comp=N,538nm,1.0s						
SLKM	**Skilak Lake**	**1.50**	**263**		**Pn**	**15 18 08.4**	**+1.4**
N25K	**Chitina, Valde**	**1.56**	**54**		**Pn**	**15 18 08.7**	**+0.8**
N25K				IAML		15 18 29.6	
	comp=N,343nm,0.7s						
N25K				IAML		15 18 30.1	
	comp=E,370nm,0.5s						
N25K	**Chitina, Valde**	**1.56**	**54**		**Sn**	**15 18 27.3**	**+0.3**
KAIM	**Kayak Island**	**1.60**	**118**		**Pn**	**15 18 08.9**	**+0.4**
KAIM	**Kayak Island**	**1.60**	**118**	IAML		15 18 43.2	
	comp=E,365nm,1.0s						
KAIM				IAML		15 18 43.8	
	comp=N,433nm,1.1s						
BERG	**Berg Lake**	**1.77**	**99**		**Pn**	**15 18 11.0**	**+0.2**
GLB	**Gilahina Butte**	**1.81**	**65**		**Pn**	**15 18 12.0**	**+0.6**
GLB				IAML		15 18 36.1	
	comp=N,519nm,0.8s						
GLB				IAML		15 18 36.5	
	comp=E,353nm,0.8s						
WACK	**Wrangell Chich**	**1.89**	**46**		**Pn**	**15 18 13.8**	**+1.1**
VRDI	**Verde Repeater**	**1.91**	**73**		**Pn**	**15 18 13.3**	**+0.4**
HARP	**HAARP**	**1.96**	**29**		**Pn**	**15 18 15.2**	**+1.8**
CRQM	**Cirque**	**2.00**	**87**		**Pn**	**15 18 14.5**	**+0.3**
CRQM				IAML		15 18 53.0	
	comp=E,370nm,0.7s						
CRQM				IAML		15 18 54.8	
	comp=N,264nm,0.7s						
BGLC	**Bering Glacier**	**2.04**	**105**		**Pn**	**15 18 15.1**	**+0.6**
BRLK	**Bradley Lake**	**2.06**	**244**		**Pn**	**15 18 16.3**	**+1.5**
BRLK				IAML		15 18 42.5	
	comp=N,212nm,0.5s						
BRLK				IAML		15 18 42.7	
	comp=E,224nm,0.4s						
MCARA	**McCarthy VSAT**	**2.15**	**70**		**Pn**	**15 18 16.7**	**+0.7**
MCARA				IAML		15 18 49.9	
	comp=E,417nm,0.4s						
TGL	**Tana Glacier**	**2.16**	**87**		**Pn**	**15 18 16.6**	**+0.4**
TGL				IAML		15 18 56.1	
	comp=E,201nm,0.8s						
CUT	**Chulitna**	**2.24**	**321**		**Pn**	**15 18 19.1**	**+1.9**
CNPM	**China Poot**	**2.34**	**241**		**Pn**	**15 18 19.1**	**+0.4**
CNPM				IAML		15 18 48.8	
	comp=N,187nm,0.5s						
BARK	**Barkley Ridge**	**2.36**	**96**		**Pn**	**15 18 19.4**	**+0.5**
DHY	**Denali Highway**	**2.37**	**358**		**Pn**	**15 18 20.9**	**+1.6**
DHY				IAML		15 18 53.2	
	comp=E,207nm,0.6s						
DHY				IAML		15 18 54.5	
	comp=N,169nm,0.7s						
STLK	**Strandline Lak**	**2.38**	**291**		**Pn**	**15 18 20.6**	**+1.5**
STLK				IAML		15 18 53.5	
	comp=N,191nm,0.5s						
STLK				IAML		15 18 54.4	
	comp=E,138nm,0.4s						
SPU	**Mount Spurr**	**2.41**	**283**		**Pn**	**15 18 20.6**	**+1.0**
SPCG	**Spurr Capps Gl**	**2.41**	**286**		**Pn**	**15 18 21.0**	**+1.3**
PAX	**Paxson**	**2.41**	**19**		**Pn**	**15 18 21.4**	**+1.7**
PAX				IAML		15 18 57.5	
	comp=E,142nm,0.7s						
SKT	**Skwentna**	**2.44**	**303**		**Pn**	**15 18 21.0**	**+1.0**
L22K	**Petersville**	**2.49**	**319**		**Pn**	**15 18 22.5**	**+1.8**
SPBG	**Spurr Blockage**	**2.57**	**285**		**Pn**	**15 18 23.0**	**+1.1**
M26K	**Nabesna, AK**	**2.64**	**48**		**Pn**	**15 18 25.2**	**+2.4**
MESA	**MESA**	**2.67**	**99**		**Pn**	**15 18 23.7**	**+0.4**
MESA				IAML		15 19 11.9	
	comp=E,117nm,1.1s						
MESA				IAML		15 19 14.8	
	comp=N,183nm,0.8s						
GRNC	**Granite Creek**	**2.69**	**87**		**Pn**	**15 18 24.1**	**+0.5**
GRNC				IAML		15 19 09.2	
	comp=N,142nm,0.7s						
BARN	**Barnard Glacie**	**2.74**	**80**		**Pn**	**15 18 24.9**	**+0.6**
SPNN	**North Nagishla**	**2.75**	**286**		**Pn**	**15 18 25.4**	**+1.1**
RED	**Redoubt Volcan**	**2.76**	**266**	IAML		15 19 06.7	
	comp=E,192nm,0.8s						
RED				IAML		15 19 11.0	
	comp=N,157nm,0.6s						
MENT	**Mentasta**	**2.78**	**35**		**Pn**	**15 18 25.9**	**+1.2**
MENT				IAML		15 19 12.7	
	comp=N,134nm,0.6s						
MENT				IAML		15 19 18.5	
	comp=E,126nm,0.5s						
RND	**Reindeer**	**2.81**	**345**		**Pn**	**15 18 27.1**	**+1.9**
RND				IAML		15 19 04.4	
	comp=N,112nm,0.6s						
RND				IAML		15 19 08.1	
	comp=E,144nm,0.8s						
CTGM	**Chitina Glacie**	**2.89**	**82**		**Pn**	**15 18 27.3**	**+1.0**
RKAV	**Rock Avalanche**	**2.94**	**96**		**Pn**	**15 18 27.6**	**+0.6**
ILS	**Iliamna Low So**	**3.01**	**258**		**Pn**	**15 18 29.0**	**+1.1**
ILSW	**Iliamna Southw**	**3.03**	**259**		**Pn**	**15 18 29.3**	**+1.0**
ILSW				IAML		15 19 21.4	
	comp=N,80nm,0.9s						
M20K	**Styx River**	**3.08**	**295**		**Pn**	**15 18 30.1**	**+1.2**
M20K	**Styx River**	**3.08**	**295**	IAML		15 19 19.4	
	comp=N,98nm,1.0s						
M20K				IAML		15 19 21.0	
	comp=E,92nm,0.9s						
MCK	**McKinley**	**3.13**	**346**		**Pn**	**15 18 31.5**	**+2.0**
MCK	**McKinley**	**3.13**	**346**	IAML		15 19 23.9	
	comp=E,91nm,0.6s						
MCK				IAML		15 19 27.7	
	comp=N,100nm,0.9s						
P19K	**Oil Pt**	**3.19**	**253**		**Pn**	**15 18 31.9**	**+1.6**
P19K	**Oil Pt**	**3.19**	**253**	IAML		15 19 26.5	
	comp=E,130nm,0.5s						
P19K				IAML		15 19 26.9	
	comp=N,113nm,0.8s						
PPLA	**Purkeypile**	**3.22**	**315**		**Pn**	**15 18 31.6**	**+0.8**
RIDG	**Independent Ri**	**3.23**	**19**	IAML		15 19 18.8	
	comp=N,104nm,0.9s						
RIDG				IAML		15 19 21.8	
	comp=E,78nm,0.7s						
YUK2	**White River**	**3.26**	**68**		**Pn**	**15 18 32.8**	**+1.3**
KTH	**Kantishna Hill**	**3.34**	**330**		**Pn**	**15 18 34.0**	**+1.6**
KTH	**Kantishna Hill**	**3.34**	**330**	IAML		15 19 29.4	
	comp=N,107nm,1.0s						
SYI	**Shuyak Island**	**3.37**	**233**		**Pn**	**15 18 34.7**	**+2.0**
YUK3	**Moose Creek**	**3.44**	**69**		**Pn**	**15 18 35.1**	**+1.2**
O28M	**Mount Upton**	**3.45**	**86**		**Pn**	**15 18 35.0**	**+0.8**
BCAR	**Beaver Creek A**	**3.49**	**45**		**Pn**	**15 18 35.0**	**+0.6**
PCA	**Pinnacle**	**3.51**	**97**		**Pn**	**15 18 35.0**	**+0.2**
N19K	**Bonanza Creek**	**3.57**	**275**		**Pn**	**15 18 36.2**	**+0.6**
N19K	**Bonanza Creek**	**3.57**	**275**		**Pb**	**15 18 41.7**	**-3.2**
N19K				IAML		15 19 34.7	
	comp=N,82nm,0.8s						
N19K				IAML		15 19 39.7	
	comp=E,35nm,0.6s						
M19K	**Big River Lodg**	**3.66**	**292**		**Pn**	**15 18 37.5**	**+0.8**
M19K	**Big River Lodg**	**3.66**	**292**	IAML		15 19 34.2	
	comp=N,52nm,0.6s						
M19K				IAML		15 19 46.6	
	comp=E,52nm,0.7s						
Q19K	**Cape Douglas,**	**3.71**	**244**		**Pn**	**15 18 39.0**	**+1.6**
HDA	**Harding Lake**	**3.71**	**2**		**Pn**	**15 18 39.7**	**+2.2**
HDA				IAML		15 19 30.2	
	comp=E,102nm,0.5s						
WRH	**Wood River Hil**	**3.79**	**354**	IAML		15 19 39.0	
	comp=N,68nm,0.9s						
L19K	**White Mountain**	**3.95**	**295**		**Pn**	**15 18 41.5**	**+0.7**
L19K	**White Mountain**	**3.95**	**295**	IAML		15 19 50.4	
	comp=E,39nm,0.7s						
L19K				IAML		15 19 51.0	
	comp=N,40nm,1.0s						
CCB	**Clear Creek Bu**	**3.96**	**356**		**Pn**	**15 18 41.8**	**+0.9**
CCB	**Clear Creek Bu**	**3.96**	**356**	IAML		15 19 36.1	
	comp=E,74nm,0.6s						
CCB				IAML		15 19 43.0	
	comp=N,50nm,1.2s						
CHUM	**Lake Minchumin**	**3.97**	**325**		**Pn**	**15 18 42.2**	**+1.2**
J25K	**Salcha River,**	**4.01**	**11**		**Pn**	**15 18 42.2**	**+0.7**
J25K	**Salcha River,**	**4.01**	**11**	IAML		15 19 44.0	
	comp=N,40nm,0.9s						
J25K				IAML		15 19 48.2	
	comp=E,37nm,1.1s						
KDAK	**Kodiak Island**	**4.03**	**225**	P	**Pn**	**15 18 42.7**	**+0.9**
	comp=E,18nm,0.4s,baz=30,slow=5.6,SNR=212						
KDAK				S	**Sn**	**15 19 25.8**	**-2.0**
	comp=E,13nm,0.4s,baz=238,slow=20,SNR=12						
KDAK	**Kodiak Island**	**4.03**	**225**		**Pn**	**15 18 43.0**	**+1.3**
KDAK				IAML		15 19 28.0	
	comp=E,39nm,0.8s						
O18K	**Koktuh Hills**	**4.07**	**261**		**Pn**	**15 18 42.4**	**0.0**
O18K				IAML		15 19 55.7	
	comp=N,33nm,0.9s						
ILAR	**Eielson Array**	**4.08**	**2**	P	**Pn**	**15 18 46.7**	**+4.2**
	comp=N,26nm,0.4s,baz=186,slow=15,SNR=220						
ILAR				S	**Sn**	**15 19 35.8**	**+6.8**
	comp=N,16nm,0.6s,baz=184,slow=20,SNR=9.7						
ILAR	**Eielson Array**	**4.08**	**2**		**Pn**	**15 18 42.7**	**+0.2**
M18K	**Stony River**	**4.25**	**284**		**Pn**	**15 18 45.1**	**+0.3**
N18K	**Kilae Creek**	**4.26**	**273**		**Pn**	**15 18 45.1**	**+0.1**
N18K	**Kilae Creek**	**4.26**	**273**	IAML		15 19 57.2	
	comp=E,30nm,0.9s						
MDM	**Murphy Dome**	**4.29**	**354**		**Pn**	**15 18 46.1**	**+0.7**
KARR	**Katmai Rainbow**	**4.40**	**243**		**Pn**	**15 18 48.3**	**+1.3**
KAWH	**Katmai**	**4.51**	**242**		**Pn**	**15 18 49.8**	**+1.4**
M29M	**Somme Creek**	**4.53**	**64**		**Pn**	**15 18 50.3**	**+1.5**
I23K	**Minto, Yukon-K**	**4.56**	**349**		**Pn**	**15 18 50.6**	**+1.6**
I23K				IAML		15 20 01.6	
	comp=N,52nm,0.7s						
KAKN	**Katmai Knife C**	**4.67**	**242**		**Pn**	**15 18 52.0**	**+1.3**
OHAK	**Old Harbor**	**4.70**	**225**		**Pn**	**15 18 51.7**	**+0.7**
L18K	**Granite Mounta**	**4.79**	**293**		**Pn**	**15 18 52.6**	**+0.4**
L18K				IAML		15 20 20.2	
	comp=E,21nm,1.1s						
L18K				IAML		15 20 22.1	
	comp=N,30nm,1.2s						
PRP	**Porcupine Dome**	**4.88**	**8**	IAML		15 20 16.2	
	comp=E,29nm,1.2s						
PRP				IAML		15 20 19.1	
	comp=N,42nm,1.0s						
N17K	**Nushagak Hills**	**4.91**	**272**		**Pn**	**15 18 54.2**	**+0.3**
N17K	**Nushagak Hills**	**4.91**	**272**	IAML		15 20 38.6	
	comp=N,18nm,1.2s						
DAWY	**Dawson**	**4.96**	**44**		**Pn**	**15 18 56.5**	**+2.0**
I26K	**Coal Creek Min**	**4.97**	**20**		**Pn**	**15 18 56.0**	**+1.3**
I26K				IAML		15 20 27.7	
	comp=E,32nm,1.0s						
I21K	**Tanana**	**4.98**	**336**	IAML		15 20 28.8	
	comp=E,23nm,0.9s						
I21K				IAML		15 20 31.5	
	comp=N,26nm,0.8s						
M17K	**Holitna River**	**5.01**	**282**		**Pn**	**15 18 55.7**	**+0.4**
M17K	**Holitna River**	**5.01**	**282**	IAML		15 20 31.4	
	comp=N,31nm,0.7s						
M17K				IAML		15 20 38.6	
	comp=E,36nm,0.9s						
J19K	**Poorman**	**5.11**	**314**	IAML		15 20 28.2	
	comp=E,28nm,1.1s						
J19K				IAML		15 20 34.8	
	comp=N,29nm,1.0s						
J18K	**Innoko River**	**5.25**	**306**	IAML		15 20 30.8	
	comp=E,19nm,0.8s						
J18K				IAML		15 20 34.3	
	comp=N,23nm,0.7s						
L17K	**Donlin**	**5.51**	**290**		**Pn**	**15 19 02.7**	**+0.6**
SII	**Sitkinak Islan**	**5.53**	**224**		**Pn**	**15 19 02.8**	**+0.4**
L16K	**Owhat River**	**6.01**	**285**		**Pn**	**15 19 09.0**	**0.0**
INK	**Inuvik**	**9.61**	**32**	P	**Pn**	**15 20 02.4**	**+4.1**
	comp=N,1.6nm,1.1s,baz=201,slow=16,SNR=3.6						
YKA	**Yellowknife Ar**	**15.52**	**69**	P	**Pn**	**15 21 19.8**	**+1.2**
	comp=N,0.1nm,0.3s,baz=281,slow=11,SNR=4.3						
FINES	**FINESS Array B**	**58.06**	**4**	P	**P**	**15 27 31.2**	**-0.4**
	comp=N,1.1nm,0.5s,baz=359,slow=9.5,SNR=7.8						
	comp=N,1.1nm,0.5s						
BVAR	**Borovoye Array**	**62.70**	**335**	P	**P**	**15 28 02.8**	**-0.7**
	comp=N,0.6nm,0.6s,baz=35,slow=5.4,SNR=4.3						
	comp=N,0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**63.08**	**329**	P	**P**	**15 28 05.5**	**-0.6**
	comp=N,0.3nm,0.4s,baz=31,slow=6.7,SNR=4.3						
	comp=N,0.3nm,0.4s						
MKAR	**Makanchi Array**	**65.58**	**325**	P	**P**	**15 28 21.9**	**-0.6**
	comp=N,0.2nm,0.6s,baz=16,slow=6.4,SNR=4.3						
	comp=N,0.2nm,0.6s						
KBZ	**Khabaz**	**75.59**	**352**	P	**P**	**15 29 21.4**	**-2.1**
	comp=N,2.0nm,0.9s,baz=0.0,slow=1.0,SNR=3.6						
	comp=N,2.0nm,0.9s						

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*IDC **06** 15:21:43.1±2.0, 7°.12S×129°.35E, h162km±22km, mb3.0/2, mbtmp4.0/7, MS3.0/1, Error ellipse: s-maj=25.4km s-min=18.5km az=113.0*

ISC 06 15:21:41.0±0.9, 7°.21S±0°.06×129°.53E±0°.10, h139km, n8, σ2s.69/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.52**	**242**	P	**Pn**	**15 23 16.5**	**+1.8**
	38nm,0.3s,baz=85,slow=5.3,SNR=26						
BATI				S	**Sn**	**15 24 26.9**	**-1.0**
	91nm,0.3s,baz=267,slow=22,SNR=14						
SIJI	**Sorong**	**6.53**	**15**	P	**Pn**	**15 23 16.8**	**+2.0**
	3.3nm,0.3s,baz=78,slow=24,SNR=30						
SIJI				S	**Sn**	**15 24 25.2**	**-3.0**
	7.0nm,0.2s,baz=192,slow=22,SNR=8.1						
FITZ	**Fitzroy Crossi**	**11.47**	**199**	P	**Pn**	**15 24 22.2**	**+1.6**
	1.1nm,0.3s,baz=22,slow=11,SNR=13						
FITZ				S	**Sn**	**15 26 24.5**	**-2.8**
	4.0nm,0.2s,baz=109,slow=13,SNR=6.3						
WRA	**Warramunga Arr**	**13.49**	**160**	P	**Pn**	**15 24 48.9**	**+1.9**
	2.6nm,0.3s,baz=347,slow=13,SNR=42						
WRA				S	**Sn**	**15 27 16.1**	**0.0**
	2.4nm,0.4s,baz=332,slow=26,SNR=6.8						
ASAR	**Alice Springs**	**16.89**	**166**	P	**Pn**	**15 25 32.4**	**+3.1**
	1.8nm,0.3s,baz=346,slow=9.6,SNR=133						
ASAR				S	**S**	**15 28 33.5**	**-4.4**
	0.7nm,0.5s,baz=356,slow=29,SNR=4.8						
JNU	**Nakatsue**	**40.13**	**2**	LR	LR	15 43 56.8	
	comp=Z,22nm,21.9s,baz=16,slow=33						
MKAR	**Makanchi Array**	**68.15**	**327**	P	**P**	**15 32 24.6**	**-1.6**
	0.2nm,0.4s,baz=125,slow=8.6,SNR=3.8						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**72.45**	**329**	P	**P**	**15 32 50.7**	**-1.5**
	0.2nm,0.5s,baz=129,slow=4.5,SNR=5.0						
	0.2nm,0.5s						

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*OSPL **06** 15:26:05.5±0.6, 18°.62N×71°.56W, h14km±4km, ML2.2, Presumed earthquake*

*SDD **06** 15:26:06.8±2.4, 18°.60N×71°.46W, h12km±18km, MD2.7, ML2.2, MW2.5, Presumed earthquake*

ISC 06 15:26:06.0±0.9, 18°.59N±0°.03×71°.40W±0°.04, h15km±6km, n12, σ0s.83/23, 1D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LONE3	**El Aguacate, B**	**0.06**	**289**	*i* P	**Pg**	**15 26 08.3**	**-0.7**
LONE3				*e*S	**Sg**	**15 26 11.0**	**0.0**
LONE3				IAML		15 26 12.1	
	comp=Z,770nm,0.4s						
NEDR	**Neiba UASD**	**0.10**	**188**	*e*Pg	**Pg**	**15 26 08.8**	**-0.5**
NEDR				*e*Sg	**Sg**	**15 26 11.9**	**+0.4**
NEDR				IAML		15 26 13.2	
	comp=N,575nm,0.4s						
LODU1	**El Espartillar**	**0.24**	**196**	*i* P	**Pg**	**15 26 10.9**	**-0.4**
LODU1				*e*S	**Sg**	**15 26 14.8**	**-0.1**
LODU1				IAML		15 26 15.8	
	comp=Z,704nm,0.6s						
SDDR	**Presa de Saban**	**0.41**	**16**	*i* P	**Pg**	**15 26 13.6**	**-0.7**
SDDR				*i* S	**Sb**	**15 26 20.4**	**-0.7**
SDDR				IAML		15 26 29.2	
	comp=N,51nm,0.6s						
SDDR	**Presa de Saban**	**0.41**	**16**	*i* P	**Pg**	**15 26 13.5**	**-0.8**
SDDR				*e*S	**Sb**	**15 26 20.1**	**-1.1**
SDDR				IAML		15 26 24.4	
	comp=Z,23nm,0.6s						
JIDR	**Jimani**	**0.43**	**257**	*e*Pg	**Pg**	**15 26 13.7**	**-1.1**
JIDR				*e*Sg	**Sg**	**15 26 20.9**	**+0.2**
JIDR				IAML		15 26 21.1	
	comp=N,346nm,0.5s						
REDR	**Restauracion**	**0.58**	**1**	*e*Pg	**Pb**	**15 26 18.9**	**+1.0**
REDR				*e*Sg	**Sn**	**15 26 29.1**	**+0.2**
REDR				IAML		15 26 29.6	
	comp=N,192nm,0.2s						
LOBH	**Bahia de las A**	**0.76**	**197**	*i* P	**Pg**	**15 26 19.3**	**-1.4**
LOBH				IAML		15 26 37.4	
	comp=Z,61nm,2.8s						
ABDR	**Alto Bandera**	**0.77**	**73**	*i* P	**Pb**	**15 26 21.8**	**+0.5**
ABDR				*i* S	**Sb**	**15 26 32.4**	**+0.6**
LOVI	**El Cajuil, Ovi**	**0.79**	**178**	⇓*i*P	**Pg**	**15 26 20.4**	**-0.9**
LOVI				*e*S	**Sg**	**15 26 31.4**	**-0.3**
LOVI				IAML		15 26 37.1	
	comp=Z,88nm,2.0s						
BANI	**BANI**	**1.01**	**101**	*e*Pg	**Pg**	**15 26 24.6**	**-1.0**
BANI				*e*Sg	**Sn**	**15 26 40.6**	**+0.8**
BANI				IAML		15 26 42.1	
	comp=N,73nm,0.3s						
HATOM	**Hato Mayor del**	**1.93**	**84**	*e*Pg	**Pn**	**15 26 39.1**	**+0.7**
HATOM				*e*Sg	**Sg**	**15 27 07.0**	**-1.1**
HATOM				IAML		15 27 12.9	
	comp=N,24nm,3.2s						

*NIED **06** 15:26:44.9, 40.°16N×142.°38E, h37km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; Mrr4.26; Mθθ-1.23; Mφφ-3.03; Mrθ0.53; Mθφ-0.58; Mφr4.05; Fault plane solution: M0 5.53000×10^{14} NP1: φs198.00000°, δ21.00000°, λ98.00000°. NP2:φs10.00000°, δ69.00000°, λ87.00000°.*

*JMA **06** 15:26:44.9±0.1, 40.°2N±0.°3×142.°4E±0.°8, h37km±1km, MV3.8/39, NE OFF IWATE PREF*

JMA Felt I J1 at NE OFF IWATE PREF .

*IDC **06** 15:26:47.5±2.3, 40.°17N×142.°40E, h66km±20km, mb3.5/10, mbtmp3.7/13, MS2.8/4, Error ellipse: s-maj=25.4km s-min=14.8km az=99.0*

ISC 06 15:26:45.5±1.3**, 40.°14N**±0.°04×**142.°31E**±0.°09**, h42**km±11km**, n35,** σ1.s21/32**, mb3.7**/10**, 12D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.40**	**240**	⇓iP	**Pn**	**15 26 55.0**	**-0.1**
JTH				⇓eS	**Sn**	**15 27 02.0**	**+0.2**
JKEN	**Kujiedanarisaw**	**0.47**	**278**	⇓iP	**Pn**	**15 26 55.6**	**-0.3**
JKEN				⇓eS	**Sn**	**15 27 02.9**	**-0.3**
JANG	**Nango**	**0.65**	**291**	⇓iP	**Pn**	**15 26 58.2**	**-0.2**
JANG				⇓eS	**Sn**	**15 27 07.4**	**-0.2**
MIYJ	**Miyakonagasawa**	**0.68**	**214**	iP	**Pn**	**15 26 58.4**	**-0.3**
MIYJ				eS	**Sn**	**15 27 08.6**	**+0.4**
JKZ	**Kuzumaki**	**0.77**	**259**	⇓iP	**Pn**	**15 27 00.5**	**+0.5**
JOM	**Ohasama**	**1.03**	**230**	⇓iP	**Pn**	**15 27 04.3**	**+0.8**
JARK	**Aomorirokkasho**	**1.13**	**321**	⇓P	**Pn**	**15 27 04.8**	**0.0**
JARK				⇓eS	**Sn**	**15 27 19.6**	**+0.4**
JTM	**Tenmabayashi**	**1.15**	**305**	⇓P	**Pn**	**15 27 05.6**	**+0.4**
OFUJ	**Ofunato**	**1.17**	**205**	eP	**Pn**	**15 27 05.6**	**+0.2**
JAH	**Hinai**	**1.29**	**273**	⇓iP	**Pn**	**15 27 08.1**	**+1.1**
JMK	**Ichinoseki**	**1.46**	**216**	eP	**Pn**	**15 27 10.2**	**+0.9**
JMK				eS	**Sn**	**15 27 29.0**	**+1.8**
JRG	**Rokugo**	**1.49**	**241**	eP	**Pn**	**15 27 11.3**	**+1.5**
ASAJ	**Asahikawa**	**3.98**	**3**	P	**Pn**	**15 27 44.5**	**+0.5**
	4.1nm,0.3s,baz=228,slow=8.9,SNR=21						
ASAJ				S	**Sn**	**15 28 31.1**	**+1.8**
	21nm,0.7s,baz=106,slow=30,SNR=2.5						
MJAR	**Matsushiro Arr**	**4.83**	**223**	P	**Pn**	**15 27 58.5**	**+2.8**
	5.9nm,0.6s,baz=31,slow=14,SNR=28						
MJAR				S	Sn	15 29 00.8	+10
	1.6nm,0.7s,baz=35,slow=26,SNR=1.5						
USRK	**Ussuriysk Ar.**	**8.67**	**301**	P	**Pn**	**15 28 52.2**	**+3.8**
	2.0nm,0.5s,baz=119,slow=15,SNR=4.0						
KSRS	**Korea Array**	**11.55**	**261**	LR	LR	15 33 34.4	
	comp=Z,35nm,20.4s,baz=70,slow=35						
KLR	**Kul'dur**	**11.78**	**324**	LR	LR	15 34 33.7	
	comp=Z,14nm,18.7s,baz=110,slow=40						
MA2	**Magadan**	**20.17**	**13**	LR	LR	15 38 48.9	
	comp=Z,22nm,18.2s,baz=308,slow=36						
SONM	**Songino Array**	**26.77**	**299**	P	**P**	**15 32 22.2**	**+0.8**
	0.5nm,0.4s,baz=101,slow=7.9,SNR=2.3						
	0.5nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**29.29**	**127**	T	T	16 03 25.8	
	baz=318,slow=75,SNR=190						
H11N1	**WAKE ISLAND Hy**	**29.30**	**127**	T	T	16 03 27.7	
	baz=318,slow=75,SNR=165						
H11N3	**WAKE ISLAND Hy**	**29.30**	**127**	T	T	16 03 28.3	
	baz=318,slow=75,SNR=145						
H11S1	**WAKE ISLAND Hy**	**30.10**	**129**	T	T	16 04 35.4	
	baz=321,slow=76,SNR=35						
H11S3	**WAKE ISLAND Hy**	**30.10**	**129**	T	T	16 04 41.7	
	baz=321,slow=76,SNR=21						
H11S2	**WAKE ISLAND Hy**	**30.12**	**129**	T	T	16 04 26.8	
	baz=321,slow=76,SNR=27						
ZALV	**Zalesovo Beam**	**40.41**	**310**	P	**P**	**15 34 19.2**	**-0.1**
	0.4nm,0.3s,baz=73,slow=5.1,SNR=3.8						
	0.4nm,0.3s						
NRIK	**Noril'sk**	**40.77**	**334**	LR	LR	15 52 10.9	
	comp=Z,44nm,19.0s,baz=56,slow=37						
MKAR	**Makanchi Array**	**43.14**	**299**	P	**P**	**15 34 41.6**	**-0.2**
	0.7nm,0.7s,baz=81,slow=10,SNR=8.3						
	0.7nm,0.7s						
KURBB	**Kurchatov Arra**	**44.71**	**306**	P	**P**	**15 34 53.8**	**-0.4**
	2.2nm,0.6s,baz=82,slow=8.5,SNR=12						
	2.2nm,0.6s						
ILAR	**Eielson Array**	**46.51**	**34**	P	**P**	**15 35 08.2**	**-0.1**
	0.2nm,0.6s,baz=274,slow=10,SNR=5.0						
	0.2nm,0.6s						
BVAR	**Borovoye Array**	**49.05**	**311**	P	**P**	**15 35 27.1**	**-1.0**
	0.9nm,0.4s,baz=74,slow=8.5,SNR=9.5						
	0.9nm,0.4s						
WRA	**Warramunga Arr**	**60.23**	**189**	P	**P**	**15 36 48.4**	**-1.0**
	0.4nm,0.6s,baz=5.9,slow=6.7,SNR=2.0						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**63.96**	**189**	P	**P**	**15 37 13.9**	**-0.4**
	0.3nm,0.8s,baz=3.5,slow=6.4,SNR=5.9						
	0.3nm,0.8s						
FINES	**FINESS Array B**	**66.40**	**332**	P	**P**	**15 37 28.4**	**-1.4**
	1.9nm,1.0s,baz=76,slow=8.0,SNR=4.7						
	1.9nm,1.0s						
HFS	**Hagfors**	**71.55**	**336**	P	**P**	**15 38 01.3**	**-0.5**
	2.1nm,1.0s,baz=348,slow=6.4,SNR=4.5						
	2.1nm,1.0s						

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*IDC **06** 15:28:15.2±3.2, 30.°60S×179.°51W, h394km±34km, mb2.9/3, mbtmp4.0/5, Error ellipse: s-maj=32.8km s-min=31.7km az=85.0*

*WEL **06** 15:28:24.3±1.1, 31°S±13°×17°9W±2°3, h419km±27km, M4.3/7, mB4.5/7, ML4.5/8, MLv4.9/6, Mw(mB)3.7/7, Error ellipse: s-maj=31.6km s-min=13.9km az=108.3, confirmed*

*NOU **06** 15:28:57.0, 34.°35S×179.°87E, h407km, mb3.9/7, South of Kermadec Islands*

ISC 06 15:28:19.9±1.7**, 31.°0S**±0.°1×**179.°1W**±0.°2**, h400**km**, n45,** σ1.s**25**/54**, mb3.3**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**6.86**	**198**	P	**P**	**15 30 04.9**	**+2.4**
MXZ	**Matakaoa Point**	**6.86**	**198**	P	**P**	**15 30 04.4**	**+1.9**
MXZ				S	**S**	**15 31 25.1**	**-0.1**
WMGZ	**Waiomatatini S**	**7.08**	**196**	P	**P**	**15 30 07.3**	**+2.5**
WMGZ				S	**S**	**15 31 29.8**	**+0.2**
HAZ	**Te Kaha**	**7.19**	**200**	P	**Pn**	**15 30 06.2**	**+0.7**
HAZ				S	**S**	**15 31 31.9**	**0.0**
PKGZ	**Pakihiroa**	**7.21**	**198**	P	**Pn**	**15 30 06.3**	**+0.6**
PKGZ				S	**S**	**15 31 31.3**	**-1.1**
WCZ	**Waipu Caves**	**7.35**	**227**	P	**Pn**	**15 30 08.1**	**+0.7**
PUZ	**Puketiti**	**7.36**	**197**	P	**Pn**	**15 30 07.9**	**+0.4**
PUZ				S	**S**	**15 31 34.1**	**-1.3**
RUGZ	**Raukumara Rang**	**7.41**	**200**	P	**P**	**15 30 09.6**	**+0.9**
RUGZ				S	**S**	**15 31 35.6**	**-1.2**
TWGZ	**Tauwhareparae**	**7.53**	**198**	P	**P**	**15 30 11.2**	**+1.2**
TWGZ				S	**S**	**15 31 36.4**	**-2.6**
MWZ	**Matawai**	**7.80**	**200**	P	**Pn**	**15 30 12.1**	**-0.4**
MWZ				S	**S**	**15 31 43.4**	**-1.3**
TKGZ	**Te Karaka**	**7.81**	**198**	P	**P**	**15 30 14.0**	**+1.1**
TKGZ				S	**S**	**15 31 43.6**	**-1.2**
URZ	**Urewera**	**7.86**	**202**	P	**Pn**	**15 30 12.1**	**-1.1**
	16nm,0.3s,baz=249,slow=2.6,SNR=58						
URZ				S	**S**	**15 31 46.0**	**+0.2**
	49nm,0.6s,baz=71,slow=23,SNR=18						
URZ	**Urewera**	**7.86**	**202**	P	**Pn**	**15 30 12.8**	**-0.3**
URZ	**Urewera**	**7.86**	**202**	P	**Pn**	**15 30 13.4**	**+0.3**
URZ				S	**S**	**15 31 44.0**	**-1.9**
RAGZ	**Rawiri**	**7.98**	**200**	P	**P**	**15 30 16.0**	**+1.0**
RAGZ				S	**S**	**15 31 49.1**	**+0.5**
TOZ	**Tahuroa Road**	**8.04**	**212**	P	**P**	**15 30 17.3**	**+1.7**
RIGZ	**Rimuhau**	**8.08**	**198**	P	**P**	**15 30 17.5**	**+1.4**
RIGZ				S	**S**	**15 31 51.0**	**+0.4**
MUGZ	**Murupara**	**8.17**	**204**	P	**Pn**	**15 30 17.7**	**+1.0**
MUGZ				S	**S**	**15 31 50.8**	**-1.7**
RTZ	**Ruatahuna**	**8.23**	**202**	P	**Pn**	**15 30 18.3**	**+0.8**
KNZ	**Kokohu**	**8.40**	**198**	P	**P**	**15 30 20.9**	**+1.3**
TLZ	**Tolley Road**	**8.52**	**210**	P	**P**	**15 30 22.4**	**+1.4**
BKZ	**Black Stump Fm**	**8.88**	**203**	P	**Pn**	**15 30 24.4**	**-0.5**
BKZ	**Black Stump Fm**	**8.88**	**203**	P	**Pn**	**15 30 24.3**	**-0.7**
HIZ	**Hauiti**	**8.97**	**212**	P	**P**	**15 30 28.1**	**+2.2**
HIZ	**Hauiti**	**8.97**	**212**	P	**P**	**15 30 28.9**	**+3.0**
NGZ	**Ngauruhoe**	**9.21**	**207**	P	**P**	**15 30 29.7**	**+0.9**
VRZ	**Vera Road**	**9.52**	**210**	P	**Pn**	**15 30 33.2**	**+1.0**
PWZ	**Pawanui**	**9.56**	**199**	P	**Pn**	**15 30 34.1**	**+1.4**
PXZ	**Pawanui**	**9.56**	**199**	P	**P**	**15 30 32.9**	**+0.4**
WAZ	**Wanganui**	**9.95**	**207**	P	**P**	**15 30 36.6**	**-0.2**
BFZ	**Birch Farm**	**10.34**	**200**	P	**P**	**15 30 40.8**	**-0.3**
BFZ	**Birch Farm**	**10.34**	**200**	P	**P**	**15 30 42.3**	**+1.2**
MRZ	**Mangatainoka R**	**10.54**	**203**	P	**P**	**15 30 43.1**	**-0.1**
SNZO	**South Karori**	**11.41**	**204**	P	**P**	**15 30 52.5**	**-0.4**
NNZ	**Nelson**	**11.84**	**209**	P	**P**	**15 30 56.4**	**-1.3**
QRZ	**Quartz Range**	**11.89**	**212**	P	**P**	**15 30 57.7**	**-0.6**
KHZ	**Kahutara**	**12.80**	**205**	P	**P**	**15 31 07.9**	**-0.3**
MSVF	**Nonsavu**	**13.49**	**348**	P	P	15 31 05.9	-10
	3.1nm,0.5s,baz=252,slow=23,SNR=7.0						
CTA	**Charters Tower**	**32.99**	**281**	P	P	15 34 12.0	-7.6
	1.0nm,0.5s,baz=89,slow=14,SNR=2.9						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**42.15**	**268**	P	P	15 35 28.1	-7.3
	0.3nm,0.6s,baz=105,slow=6.9,SNR=6.9						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**43.20**	**273**	P	P	15 35 36.0	-7.7
	0.8nm,0.5s,baz=111,slow=7.8,SNR=5.2						
	0.8nm,0.5s						
FINES	**FINESS Array B**	**145.41**	**339**	PKP	PKPdf	15 47 05.0	-5.1
	3.9nm,0.7s,baz=48,slow=3.8,SNR=20						
NB2	**NORSAR Subarra**	**149.22**	**350**	PKP	**PKPdf**	**15 47 16.0**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=18,slow=2.6						
NOA	**NORSAR Array B**	**149.22**	**350**	PKPbc	**PKPdf**	**15 47 15.7**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=15,slow=4.2,SNR=4.3						
HFS	**Hagfors**	**149.67**	**347**	PKPbc	**PKPdf**	**15 47 16.0**	**-1.2**
	comp=Z,0.5nm,0.5s,baz=90,slow=4.4,SNR=4.4						

IDC 06 15:36:30.6±1.6**, 1.°66N**×**126.°01E, h0**km**, mb3.5**/4**, mbtmp3.5**/4**, MS3.2**/1**, Error ellipse: s-maj=166.8km s-min=21.1km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.98**	**160**	P	P	15 41 37.0	-0.1
	0.5nm,0.4s,baz=337,slow=11,SNR=6.1						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**26.32**	**164**	P	P	15 42 08.4	0.0
	0.2nm,0.4s,baz=348,slow=7.7,SNR=16						
	0.2nm,0.4s						
PETK	**Petropavlovsk-**	**57.60**	**22**	LR	LR	16 09 56.7	
	comp=Z,21nm,20.7s,baz=104,slow=35						
MKAR	**Makanchi Array**	**58.85**	**326**	P	P	15 46 31.8	+0.6
	0.4nm,0.6s,baz=125,slow=8.2,SNR=6.2						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**63.09**	**328**	P	P	15 46 59.4	-0.5
	0.5nm,0.5s,baz=126,slow=6.8,SNR=7.0						
	0.5nm,0.5s						

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*GII **06** 15:44:19.3±0.0, 34.°644N±0.°001×33.°662E±0.°001, h0km, Mws2.2, confirmed*

*ISK **06** 15:44:19.1, 35.°30N×32.°92E, h20km, ML1.6/5*

NIC 06 15:44:20.0, 35.°17N×**33.°68E, h44**km±1km**, Ml1.4**/6**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFK	**Lefkose**	**0.16**	**311**	Pg	Pn	15 44 29.3	+1.8
LFK				Sg	Sn	15 44 37.7	+4.9
MVOU	**Mavrovouni**	**0.16**	**194**	P	Pn	15 44 27.3	-0.1
MVOU				S	Sn	15 44 33.6	+0.9
MVOU				AML	AML	15 44 34.4	
	0.2nm,0.3s						
MVOU				AML	AML	15 44 34.6	
	0.1nm,0.4s						
CSS	**Mathiatis**	**0.36**	**234**	Pg	Pn	15 44 29.3	+0.1
CSS				Sg	Sn	15 44 36.8	+1.1
CSS	**Mathiatis**	**0.36**	**234**	P	Pn	15 44 29.1	-0.1
CSS				S	Sn	15 44 36.3	+0.6
CSS				AML	AML	15 44 37.1	
	0.1nm,0.3s						
CSS				AML	AML	15 44 37.2	
	0.1nm,0.3s						
CSS	**Mathiatis**	**0.36**	**234**	P	Pn	15 44 28.5	-0.7
CSS				S	Sn	15 44 35.4	-0.3
ASGA	**Asgata**	**0.53**	**223**	P	Pn	15 44 31.3	+0.1
ASGA				S	Sn	15 44 40.2	+1.0
ASGA				AML	AML	15 44 40.5	
	0.1nm,0.3s						
ASGA				AML	AML	15 44 42.5	
	0.1nm,0.5s						
XYLS	**Xyliatos**	**0.54**	**253**	P	Pn	15 44 31.5	0.0
XYLS				S	Sn	15 44 40.4	+0.7
XYLS				AML	AML	15 44 44.7	
	0.1nm,0.4s						
XYLS				AML	AML	15 44 44.8	
	0.1nm,0.4s						
TROD	**Troodos**	**0.70**	**252**	P	Pn	15 44 34.2	+0.4
TROD				S	Sn	15 44 43.9	+0.1
TROD				AML	AML	15 44 48.4	
TROD				AML	AML	15 44 55.9	
ALFC	**Alefka**	**0.89**	**269**	P	Pn	15 44 36.3	+0.3
ALFC				S	Sn	15 44 48.8	+0.9
ALFC				AML	AML	15 44 51.1	
ALFC				AML	AML	15 44 52.4	
	0.1nm,0.4s						
IKL	**Isikli**	**1.06**	**0**	Pn	Pn	15 44 40.2	+1.8
IKL				Sn	Sn	15 44 55.6	+3.5
KEBE	**Keben-Mersin**	**1.27**	**1**	Pn	Pn	15 44 43.0	+1.6
HDMB	**Hadim**	**2.03**	**332**	Pn	Pn	15 44 48.6	-3.3
HNTI	**Hanita**	**2.43**	**149**	P	Pn	15 44 54.3	-2.9
HNTI				S	Sn	15 45 20.1	-5.5
GEM	**Giv'at Ha'Em**	**2.56**	**139**	P	Pn	15 44 56.8	-2.2
GEM				S	Sn	15 45 24.9	-3.9
NATI	**Neve Ativ**	**2.56**	**138**	P	Pn	15 44 57.0	-1.9
NATI				S	Sn	15 45 26.0	-2.8
MMC7	**Mount Meron ar**	**2.57**	**146**	P	Pn	15 44 56.8	-2.5
MMA0B	**Mount Meron ar**	**2.58**	**146**	P	Pn	15 44 56.8	-2.6
MMA0B				S	Sn	15 45 24.9	-4.7
OFRI	**`Ofer**	**2.77**	**157**	P	Pn	15 44 58.4	-3.4
OFRI				S	Sn	15 45 27.8	-6.2
MMLI	**Mount Malkishu**	**3.09**	**152**	P	Pn	15 45 03.2	-3.1
MMLI				S	Sn	15 45 36.4	-5.6
DSI	**Dead Sea**	**3.87**	**158**	P	Pn	15 45 13.0	-3.9
DSI				S	Sn	15 45 54.1	-7.0

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*AEIC **06** 15:51:46.4±1.6, 52.°08N±0.°09×176.°14W±0.°05, h5km±6km, Error ellipse: s-maj=13.0km s-min=4.1km az=175.0*

*IDC **06** 15:51:46.1±0.8, 52.°20N×176.°19W, h0km, mb3.9/13, mbtmp3.9/17, ML4.3/4, MS2.8/2, Error ellipse: s-maj=24.0km s-min=14.8km az=1.0*

*NEIC **06** 15:51:47.2±2.1, 52.°0N±0.°1×176.°08W±0.°06, h10km±1km, mb4.0/39, ML3.5/8, ML3.5(AEIC), Error ellipse: s-maj=18.2km s-min=6.1km az=357.0*

ISC 06 15:51:47.0±0.7**, 52.°09N**±0.°05×**176.°14W**±0.°03**, h9**km±4km**, n96,** σ**0.s97**/83**, mb4.0**/26**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSSP	**Great Sitkin S**	**0.02**	**267**		**Pg**	**15 51 48.7**	**0.0**
GSSP					**Sg**	**15 51 49.5**	**-0.3**
GSTD	**Great Sitkin T**	**0.04**	**188**		**Pg**	**15 51 48.3**	**-0.6**
GSTD					**Sg**	**15 51 49.3**	**-0.9**
GSTR	**Great Sitkin T**	**0.05**	**90**		**Pg**	**15 51 48.6**	**-0.3**
GSMY	**Great Sitkin M**	**0.07**	**136**		**Pg**	**15 51 48.9**	**-0.2**
GSMY	**Great Sitkin M**	**0.07**	**136**		**Sg**	**15 51 50.1**	**-0.6**
GSCK	**Great Sitkin C**	**0.08**	**191**		**Pg**	**15 51 49.1**	**-0.2**
GSCK					**Sg**	**15 51 50.7**	**-0.2**
GSIG	**Igitkin Island**	**0.17**	**129**		**Pg**	**15 51 50.6**	**0.0**
GSIG					**Sg**	**15 51 53.1**	**0.0**
ETKA	**Kagalaska Isla**	**0.29**	**216**		**Pn**	**15 51 57.4**	**0.0**
ADAG	**Mount Adagdak**	**0.31**	**249**		**Pb**	**15 51 54.4**	**-0.4**
ADK	**Adak**	**0.40**	**238**		**Pb**	**15 51 55.3**	**-0.9**
ADK				Sg	**Sb**	**15 52 01.2**	**-1.3**
ADK				IAML		15 52 01.9	
	4µm,0.2s						
ADK				IAML		15 52 05.3	
	6µm,0.3s						
KIRH	**Kanaga Island**	**0.62**	**252**		**Pb**	**15 51 59.7**	**-0.4**
KIRH					**Sb**	**15 52 08.8**	**-0.1**
KINC	**Kanaga Island**	**0.63**	**256**		**Pb**	**15 51 59.7**	**-0.5**
KIWB	**Kanaga Island**	**0.67**	**249**		**Pb**	**15 52 00.6**	**-0.3**
KIWB				IAML		15 52 11.1	
	comp=N,2µm,0.4s						
KIWB				IAML		15 52 11.2	
	comp=E,3µm,0.4s						
KIWB	**Kanaga Island**	**0.67**	**249**		**Sb**	**15 52 10.3**	**-0.1**
KIKV	**Kanaga Island**	**0.68**	**252**		**Pb**	**15 52 00.5**	**-0.4**
KICM	**Kanaga Island**	**0.68**	**255**		**Pb**	**15 52 00.6**	**-0.4**
KIMD	**Kanaga Island**	**0.76**	**244**		**Pb**	**15 52 01.7**	**-0.6**
TAPA	**Tanaga Point A**	**1.07**	**256**		**Pb**	**15 52 07.2**	**-0.6**
TAFL	**Tanaga Flats**	**1.14**	**253**		**Pb**	**15 52 08.4**	**-0.5**
TAFP	**Tanaga Falls P**	**1.16**	**261**		**Pg**	**15 52 08.3**	**-1.0**
KOWE	**Korovin West**	**1.19**	**76**		**Pg**	**15 52 08.6**	**-1.3**
TASE	**Tanaga Southea**	**1.20**	**258**		**Pg**	**15 52 09.3**	**-0.9**
KOKL	**Mount Kliuchef**	**1.21**	**78**		**Pg**	**15 52 09.0**	**-1.3**
KONW	**Korovin Northw**	**1.22**	**75**		**Pg**	**15 52 09.0**	**-1.5**
TANO	**Tanaga North**	**1.24**	**263**		**Pg**	**15 52 09.7**	**-1.1**
KOKV	**Korovin Volcan**	**1.24**	**77**		**Pg**	**15 52 09.6**	**-1.3**
TACS	**Tanaga Cape Sa**	**1.26**	**260**		**Pg**	**15 52 10.1**	**-1.1**
KOFP	**Korovin Flat P**	**1.27**	**81**		**Pg**	**15 52 10.1**	**-1.3**
KONE	**Korovin Northe**	**1.28**	**76**		**Pg**	**15 52 09.9**	**-1.6**
KOSE	**Korovin Southe**	**1.31**	**78**		**Pn**	**15 52 10.8**	**-0.7**
GAEA	**Gareloi East**	**1.65**	**260**		**Pn**	**15 52 16.4**	**+0.2**
GANE	**Gareloi Northe**	**1.66**	**261**		**Pn**	**15 52 16.0**	**-0.3**
GAKI	**Gareloi-Kavalg**	**1.75**	**253**		**Pn**	**15 52 16.7**	**-0.8**
AMKA	**Amchitka**	**2.92**	**258**		**Pn**	**15 52 32.8**	**-0.9**
KDAK	**Kodiak Island**	**14.64**	**58**	Pn	**Pn**	**15 55 14.1**	**-0.1**
	comp=E,0.7nm,0.3s,baz=219,slow=1.3,SNR=15						
	comp=E,6.2nm,1.0s						
H17K	**Granite Mounta**	**15.34**	**27**	IAmb	IAmb	15 55 39.0	
	comp=Z,5.0nm,1.0s						
STLK	**Strandline Lak**	**16.21**	**45**	Pn	**Pn**	**15 55 35.0**	**+0.2**
L22K	**Petersville**	**17.10**	**43**	P	**P**	**15 55 51.5**	**+3.7**
BILL	**Bilibino**	**18.12**	**339**		**P**	**15 56 01.4**	**+2.4**
MCK	**McKinley**	**18.39**	**40**		**P**	**15 56 02.3**	**+0.3**
MCK				IAmb	IAmb	15 56 07.2	
	comp=Z,6.6nm,0.7s						
DHY	**Denali Highway**	**18.75**	**43**	P	**Pn**	**15 56 06.5**	**0.0**
DHY				IAmb	IAmb	15 56 09.1	
	comp=Z,5.8nm,0.7s						
D20K	**Etivluk River**	**19.09**	**22**	P	**Pn**	**15 56 12.4**	**+1.9**
CCB	**Clear Creek Bu**	**19.24**	**38**		**P**	**15 56 11.7**	**+0.4**
IL31		**19.65**	**39**	P	**P**	**15 56 14.8**	**-0.9**
ILAR	**Eielson Array**	**19.65**	**39**	P	**P**	**15 56 14.0**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=242,slow=10,SNR=22						
	comp=Z,1.0nm,0.6s						
ILAR	**Eielson Array**	**19.65**	**39**	P	**P**	**15 56 15.1**	**-0.6**
SEY	**Seymchan**	**19.86**	**315**	P	**P**	**15 56 18.4**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=112,slow=11,SNR=15						
	comp=Z,3.5nm,0.7s						
MA2	**Magadan**	**19.86**	**305**	P	**P**	**15 56 17.5**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=87,slow=12,SNR=18						
	comp=Z,6.1nm,0.7s						
MA2	**Magadan**	**19.86**	**305**		**P**	**15 56 18.8**	**+0.7**
MA2				IAmb	IAmb	15 56 22.6	
	comp=Z,5.9nm,0.7s						
J25K	**Salcha River,**	**20.17**	**40**	P	**P**	**15 56 21.2**	**-0.3**
J25K				IAmb	IAmb	15 56 25.5	
	comp=Z,4.7nm,0.6s						
DOT	**Dot Lake**	**20.35**	**43**	P	**P**	**15 56 23.5**	**+0.1**
G24K	**Hadweenzic Riv**	**20.38**	**33**		**P**	**15 56 24.0**	**+0.3**
G24K				IAmb	IAmb	15 56 32.0	
	comp=Z,11nm,1.1s						
D23K	**Nanushuk River**	**20.77**	**26**	P	**P**	**15 56 29.0**	**+1.1**
D23K				IAmb	IAmb	15 56 34.8	
	comp=Z,13nm,1.4s						
I26K	**Coal Creek Min**	**21.31**	**39**	IAmb	IAmb	15 57 15.6	
	comp=Z,12nm,1.5s						
D24K	**Happy Valley**	**21.40**	**27**	IAmb	IAmb	15 56 40.7	
	comp=Z,7.4nm,1.0s						
E25K	**Arctic Village**	**21.76**	**31**		**P**	**15 56 39.0**	**+0.4**
E25K				IAmb	IAmb	15 56 44.2	
	comp=Z,5.4nm,0.9s						
G26K	**Porcupine Rive**	**21.77**	**35**	P	**P**	**15 56 39.6**	**+0.9**
G26K				IAmb	IAmb	15 56 42.7	
	comp=Z,7.3nm,0.9s						
I27K	**Kandik River**	**22.02**	**39**	IAmb	IAmb	15 56 47.1	
	comp=Z,6.5nm,1.0s						
D25K	**Kavik River**	**22.19**	**28**	IAmb	IAmb	15 56 48.5	
	comp=Z,4.1nm,0.7s						
DAWY	**Dawson**	**22.45**	**44**	P	**P**	**15 56 47.4**	**+1.4**
DAWY				IAmb	IAmb	15 56 51.3	
	comp=Z,3.6nm,0.8s						
E27K	**Coleen River**	**23.09**	**33**	IAmb	IAmb	15 56 57.8	
	comp=Z,6.2nm,1.3s						
K29M	**Barlow Dome**	**23.20**	**45**	IAmb	IAmb	15 56 56.6	
	comp=Z,3.5nm,0.8s						
I29M	**Ogilvie Camp,**	**23.25**	**41**		**P**	**15 56 53.9**	**-0.4**
I29M				IAmb	IAmb	15 57 08.3	
	comp=Z,3.0nm,0.7s						
F28M	**Old Crow**	**23.43**	**35**		**P**	**15 56 55.9**	**-0.3**
F28M				IAmb	IAmb	15 57 00.2	
	comp=Z,5.3nm,0.9s						
D27M	**Malcolm River**	**23.78**	**31**	IAmb	IAmb	15 57 05.0	
	comp=Z,3.3nm,1.1s						
EPYK	**Eagle Plains**	**24.17**	**39**	P	**P**	**15 57 01.2**	**-2.0**
F31M	**Tsiigehtchic**	**25.59**	**37**		**P**	**15 57 16.1**	**+0.1**
YAK	**Yakutsk**	**30.20**	**311**	LR	LR	16 10 17.2	
	comp=Z,24nm,19.2s,baz=86,slow=37						
TIXI	**Tiksi**	**30.84**	**330**	LR	LR	16 10 55.5	
	comp=Z,15nm,20.8s,baz=96,slow=37						
B04A	**Port Angeles**	**33.40**	**76**	P	**P**	**15 58 24.7**	**-0.9**
YKA	**Yellowknife Ar**	**33.53**	**48**	P	**P**	**15 58 26.5**	**-0.1**
	comp=Z,0.4nm,0.9s,baz=289,slow=9.2,SNR=5.1						
	comp=Z,0.4nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**34.92**	**209**	T	T	16 35 12.8	
	baz=18,slow=76,SNR=17						
H11N3	**WAKE ISLAND Hy**	**34.92**	**209**	T	T	16 35 20.4	
	baz=18,slow=76,SNR=37						
H11N1	**WAKE ISLAND Hy**	**34.94**	**209**	T	T	16 35 22.7	
	baz=18,slow=76,SNR=19						
H11S1	**WAKE ISLAND Hy**	**36.13**	**208**	T	T	16 36 51.1	
	baz=22,slow=74,SNR=12						
H11S2	**WAKE ISLAND Hy**	**36.15**	**208**	T	T	16 36 54.8	
	baz=22,slow=74,SNR=2.9						
H11S3	**WAKE ISLAND Hy**	**36.15**	**208**	T	T	16 36 40.9	
	baz=22						
KSRS	**Korea Array**	**41.28**	**272**	P	**P**	**15 59 32.7**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=40,slow=8.3,SNR=1.7						
	comp=Z,0.5nm,0.7s						
NVAR	**Mina Array Bea**	**41.83**	**85**	P	**P**	**15 59 38.5**	**+1.2**
	comp=Z,1.4nm,0.8s,baz=284,slow=8.2,SNR=6.8						
	comp=Z,1.4nm,0.8s						
BW06	**Boulder Array**	**44.52**	**75**	P	**P**	**15 59 58.7**	**-0.3**
BW06				IAmb	IAmb	16 00 02.4	
	comp=Z,2.2nm,0.8s						
PD31	**Pinedale Array**	**44.52**	**75**	P	**P**	**15 59 59.3**	**+0.3**
PD31				IAmb	IAmb	15 59 59.7	
	comp=Z,1.2nm,0.7s						
PDAR	**Pinedale Array**	**44.52**	**75**	P	**P**	**15 59 59.5**	**+0.5**
	comp=Z,2.2nm,0.7s,baz=311,slow=3.8,SNR=22						
	comp=Z,2.2nm,0.7s						
PDAR	**Pinedale Array**	**44.52**	**75**	P	**P**	**15 59 59.0**	**0.0**
NRIK	**Noril'sk**	**44.62**	**330**	P	**P**	**16 00 00.1**	**+0.9**
	comp=Z,1.3nm,0.6s,baz=80,slow=5.6,SNR=4.5						
	comp=Z,1.3nm,0.6s						
GSC	**Goldstone, Bar**	**44.75**	**88**	P	**P**	**16 00 00.9**	**+0.1**
SPITS	**Spitsbergen Ar**	**49.77**	**357**	P	**P**	**16 00 39.6**	**+0.4**
	comp=Z,4.6nm,0.8s,baz=30,slow=7.1,SNR=9.7						
	comp=Z,4.6nm,0.8s						
TXAR	**Lajitas Array**	**56.92**	**84**	P	**P**	**16 01 33.2**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=301,slow=5.4,SNR=8.4						
	comp=Z,0.7nm,0.5s						
KURBB	**Kurchatov Arra**	**59.82**	**315**	P	**P**	**16 01 53.0**	**+0.7**
	comp=Z,0.5nm,0.2s,baz=42,slow=6.7,SNR=1.6						
	comp=Z,0.5nm,0.2s						
MKAR	**Makanchi Array**	**60.87**	**310**	P	**P**	**16 01 58.0**	**-1.6**
	comp=Z,0.2nm,0.6s,baz=35,slow=5.3,SNR=2.1						
	comp=Z,0.2nm,0.6s						
BVAR	**Borovoye Array**	**61.40**	**321**	P	**P**	**16 02 03.0**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=46,slow=6.4,SNR=7.9						
	comp=Z,1.1nm,0.6s						
HFS	**Hagfors**	**67.85**	**355**	P	**P**	**16 02 43.0**	**-2.0**
	comp=Z,0.9nm,0.6s,baz=321,slow=3.7,SNR=4.0						
	comp=Z,0.9nm,0.6s						
WRA	**Warramunga Arr**	**83.69**	**226**	P	**P**	**16 04 16.2**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=26,slow=5.2,SNR=2.4						
	comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**87.15**	**225**	P	**P**	**16 04 34.2**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=24,slow=5.1,SNR=12						
	comp=Z,0.6nm,0.7s						
H03N2	**Juan Fernandez**	**119.76**	**107**	T	T	18 21 44.1	
	baz=317,slow=77,SNR=3.4						
H03N1	**Juan Fernandez**	**119.77**	**107**	T	T	18 21 53.4	
	baz=317,slow=77,SNR=4.5						
H03N3	**Juan Fernandez**	**119.78**	**107**	T	T	18 21 52.8	
	baz=317,slow=77,SNR=4.0						

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*ECX **06** 15:52:40.7±0.6, 32.°21N×115.°25W, h7km±2km, MD2.3, ML2.5*

*MEX **06** 15:52:42.3±0.4, 32.°28N×115.°04W, h29km±8km, MD3.7*

ISC 06 15:52:41.5±0.8**, 32.°17N**±0.°03×**115.°23W**±0.°03**, h14**km±5km**, n15,** σ**0.s55**/26**, 7C-2D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RHX	**Rio Hardy**	**0.06**	**229**	⇑iP	**Pg**	**15 52 44.4**	**+0.2**
RHX				eS	**Sg**	**15 52 46.1**	**+0.1**
RHX				e		15 52 46.3	
RHX				IAML		15 52 46.3	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=E,3µm,0.2s						
AGSX	**Ej. Aguas Cali**	**0.11**	**33**	⇓*i*P	**Pg**	**15 52 44.6**	**-0.1**
AGSX				*e*S	**Sg**	**15 52 46.8**	**-0.1**
GUVIX	**Guadalupe Vict**	**0.18**	**46**	*e*P	**Pb**	**15 52 46.7**	**+0.1**
GUVIX				*e*S	**Sb**	**15 52 50.2**	**+0.1**
MBIG	**Mexicali**	**0.23**	**7**	*e*P	**Pb**	**15 52 47.4**	**-0.1**
MBIG				*e*S	**Sb**	**15 52 51.8**	**+0.3**
CPBX	**Cerro Prieto**	**0.25**	**346**	*e*P	**Pb**	**15 52 47.5**	**-0.3**
CPBX				*e*S	**Sb**	**15 52 51.8**	**-0.3**
CPBX				⇑*e*		15 52 53.9	
CPBX				IAML		15 52 53.9	
	comp=E,3µm,0.2s						
CPBX				IAML		15 52 55.4	
	comp=N,3µm,0.2s						
ALAMX	**Rancho Alamar**	**0.44**	**248**	*e*P	**Pb**	**15 52 51.0**	**+0.1**
ALAMX				IAML		15 53 01.1	
	comp=E,184nm,0.2s						
ALAMX				⇑*e*		15 53 01.1	
YUCAX	**Ej. Yucat¡n**	**0.45**	**15**	*e*P	**Pb**	**15 52 51.2**	**+0.1**
YUCAX				*e*S	**Sb**	**15 52 58.6**	**+0.9**
JARAX	**Ej. Heriberto**	**0.47**	**321**	⇑*e*P	**Pg**	**15 52 51.0**	**+0.3**
ECBX	**El Chinero**	**0.71**	**168**	⇓*e*P	**Pn**	**15 52 56.4**	**-0.7**
ECBX				*e*S	**Sn**	**15 53 07.6**	**-0.2**
ECBX				⇑*e*		15 53 08.1	
ECBX				IAML		15 53 08.1	
	comp=E,174nm,0.2s						
YUH2	**Yuha Desert**	**0.75**	**309**	⇑*e*P	**Pg**	**15 52 56.1**	**0.0**
RMX	**La Rumorosa**	**0.83**	**301**	⇑*e*P	**Pg**	**15 52 56.7**	**-1.0**
SPIG	**San Pedro Mart**	**1.14**	**190**	*e*P	**Pg**	**15 53 03.5**	**0.0**
SPIG				*e*S	**Sn**	**15 53 20.5**	**+1.6**
SFX	**San Felipe**	**1.18**	**164**	*e*P	**Pb**	**15 53 02.8**	**-0.8**
SFX				*e*S	**Sg**	**15 53 20.2**	**+0.7**
CBX	**Cerro Bola**	**1.22**	**277**	*e*P	**Pb**	**15 53 04.4**	**0.0**
CBX				*e*S	**Sn**	**15 53 20.9**	**+0.3**
TJIG	**Tijuana**	**1.25**	**282**	*e*P	**Pb**	**15 53 04.7**	**-0.1**
TJIG				*e*S	**Sb**	**15 53 21.0**	**+0.3**

KRNET ***06*** *16:02:26.9±0.1, 42.°01N×79.°64E, h16km, mb2.8*
SOME ***06*** *16:02:27.7, 42.°10N×79.°62E, h5km*
NNC ***06*** *16:02:28.1±0.9, 42.°10N×79.°64E, h0km, mb2.9, mpv2.8, Error ellipse: s-maj=6.2km s-min=3.6km az=156.0*
ISC 06 16:02:27.4±2.0**, 42.°09N**±0.°06×**79.°63E**±0.°06**, h4**km±11km**, n32,** σ**0.°90**/54**, 8C, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.99**	**294**	⇑*e*P	**Pg**	**16 02 46.9**	**+0.5**
PRZ				⇑*e*S	**Sb**	**16 03 01.4**	**+0.6**
SHLS	**Shalkode**	**1.08**	**353**	P	**Pb**	**16 02 48.7**	**+0.1**
	10nm,0.1s						
SHLS				S	**Sn**	**16 03 04.3**	**-0.6**
	22nm,0.2s						
SHLS	**Shalkode**	**1.08**	**353**	*e*P	**Pb**	**16 02 48.8**	**+0.1**
	10nm,0.1s						
SHLS				*e*S	**Sn**	**16 03 04.3**	**-0.6**
	22nm,0.2s						
UZB	**Uzynbulak**	**1.15**	**337**	P	**Pg**	**16 02 49.6**	**+0.1**
	4.5nm,0.2s						
UZB				S	**Sb**	**16 03 05.5**	**+0.2**
	8.5nm,0.2s						
UZB	**Uzynbulak**	**1.15**	**337**	*e*P	**Pg**	**16 02 49.6**	**+0.1**
	4.0nm,0.1s						
UZB				*e*S	**Sb**	**16 03 05.5**	**+0.2**
	8.5nm,0.2s						
SATY	**Saty**	**1.33**	**317**	P	**Pn**	**16 02 52.7**	**-0.1**
	2.0nm,0.3s						
SATY				S	**Sn**	**16 03 10.9**	**-0.2**
	12nm,0.1s						
TARG	**Taragay, Kyrgy**	**1.41**	**256**	⇑*e*P	**Pn**	**16 02 53.5**	**-0.7**
TARG				⇑*e*S	**Sg**	**16 03 12.9**	**+0.3**
KTMS	**Ketmen**	**1.46**	**21**	P	**Pn**	**16 02 54.9**	**+0.2**
	5.5nm,0.1s						
KTMS				S	**Sn**	**16 03 14.1**	**-0.3**
	8.0nm,0.2s						
KTMS	**Ketmen**	**1.46**	**21**	*e*P	**Pn**	**16 02 54.9**	**+0.2**
	5.5nm,0.1s						
KTMS				*e*S	**Sn**	**16 03 14.1**	**-0.3**
	6.1nm,0.1s						
KPKS	**Kokpek**	**1.54**	**334**	P	**Pb**	**16 02 56.6**	**0.0**
	0.5nm,0.2s						
KPKS				S	**Sg**	**16 03 17.2**	**+0.3**
	9.4nm,0.4s						
KPKS	**Kokpek**	**1.54**	**334**	*e*P	**Pb**	**16 02 56.6**	**0.0**
	0.5nm,0.1s						
KPKS				*e*S	**Sg**	**16 03 17.2**	**+0.3**
	9.4nm,0.4s						
KURS	**Kuram**	**1.77**	**323**	P	**Pg**	**16 03 01.0**	**-0.2**
	1.3nm,0.2s						
KURS				S	**Sg**	**16 03 24.9**	**+0.9**
	3.5nm,0.3s						
KDJ	**Kajisay**	**1.82**	**272**	⇑*e*P	**Pb**	**16 03 00.9**	**-0.5**
KDJ				⇑*e*S	**Sg**	**16 03 25.7**	**-0.2**
BLB	**Baldybastay**	**2.18**	**338**	Pg	**Pb**	**16 03 08.3**	**+0.8**
	0.4nm,0.1s						
BLB				Lg	Lg	16 03 37.1	
	18nm,0.3s						
KOTS	**Kotyrbulak**	**2.18**	**303**	Pg	**Pb**	**16 03 08.4**	**+0.9**
	2.1nm,0.2s						
KOTS				Lg	Lg	16 03 37.9	
	8.4nm,0.6s						
KOTS	**Kotyrbulak**	**2.18**	**303**	*e*P	**Pb**	**16 03 08.4**	**+0.9**
	2.1nm,0.2s						
KOTS				*e*S	**Sg**	**16 03 37.9**	**+0.4**
	3.0nm,0.2s						
MDOK	**Medeo**	**2.19**	**300**	Pg	**Pb**	**16 03 08.1**	**+0.4**
	8.4nm,0.6s						
MDOK				Lg	Lg	16 03 37.1	
	18nm,0.5s						
TNSS	**Tian-Shan**	**2.20**	**296**	Pg	**Pb**	**16 03 08.2**	**+0.3**
	1.3nm,0.3s						
TNSS				Lg	Lg	16 03 37.6	
	3.2nm,0.5s						
TNSS	**Tian-Shan**	**2.20**	**296**	*e*P	**Pb**	**16 03 08.2**	**+0.3**
	0.8nm,0.1s						
TNSS				*e*S	**Sg**	**16 03 37.6**	**-0.3**
	2.9nm,0.3s						
DJR	**Jarkent**	**2.25**	**3**	Pg	**Pb**	**16 03 09.0**	**+0.4**
	1.3nm,0.1s						
DJR				Lg	Lg	16 03 38.6	
	5.9nm,0.4s						
DJR	**Jarkent**	**2.25**	**3**	*e*P	**Pb**	**16 03 09.0**	**+0.4**
	1.3nm,0.1s						
DJR				*e*S	**Sg**	**16 03 38.6**	**-1.0**
	5.9nm,0.4s						
ARXS	**Arharly**	**2.50**	**329**	Pg	**Pb**	**16 03 13.1**	**+0.2**
	1.4nm,0.4s						
ARXS				Lg	Lg	16 03 46.4	
	9.2nm,0.4s						
ARXS	**Arharly**	**2.50**	**329**	*e*P	**Pb**	**16 03 13.5**	**+0.6**
	1.4nm,0.4s						
ARXS				*e*S	**Sg**	**16 03 46.4**	**-1.3**
	9.2nm,0.4s						
MTBS	**Maitube**	**2.58**	**295**	Pg	**Pb**	**16 03 14.8**	**+0.5**
	1.2nm,0.4s						
MTBS				Lg	Lg	16 03 48.7	
	8.8nm,0.3s						
MTBS	**Maitube**	**2.58**	**295**	*e*P	**Pb**	**16 03 14.8**	**+0.5**
	0.7nm,0.2s						
MTBS				*e*S	**Sg**	**16 03 48.7**	**-1.6**
	8.8nm,0.3s						
KTBS	**Karatobe**	**2.71**	**308**	Pg	**Pb**	**16 03 17.8**	**+1.4**
	1.0nm,0.2s						
KTBS				Lg	Lg	16 03 53.6	
	0.6nm,0.6s						
KTBS	**Karatobe**	**2.71**	**308**	*e*P	**Pb**	**16 03 17.8**	**+1.4**
	1.0nm,0.2s						
KTBS				*e*S	**Sg**	**16 03 53.6**	**-0.7**
	0.1nm,0.1s						
BOOM	**Boomskoye usch**	**2.77**	**280**	⇑*e*P	**Pn**	**16 03 14.8**	**+2.1**
BOOM				⇑*i*S	**Sb**	**16 03 50.0**	**-1.8**
KST	**Kastek**	**2.87**	**291**	Pg	**Pb**	**16 03 20.2**	**+0.9**
	1.4nm,0.3s						
KST				Lg	Lg	16 03 57.7	
	5.6nm,0.4s						
KST	**Kastek**	**2.87**	**291**	*e*P	**Pb**	**16 03 20.2**	**+0.9**
	1.4nm,0.3s						
KST				*e*S	**Sg**	**16 03 57.8**	**-1.8**
	1.2nm,0.1s						
KRBS	**Karabastau**	**3.32**	**300**	Pg	**Pb**	**16 03 28.1**	**+1.2**
	0.4nm,0.2s						
KRBS				Lg	Lg	16 04 11.2	
	1.8nm,0.3s						
KRBS	**Karabastau**	**3.32**	**300**	*e*P	**Pb**	**16 03 28.1**	**+1.2**
	0.4nm,0.2s						
KRBS				*e*S	**Sg**	**16 04 11.2**	**-2.8**

1.8nm,0.3s

TEH ***06*** *16:04:15.2, 29.°57N×52.°14E, h5km, ML3.6, Presumed earthquake*
IDC ***06*** *16:04:16.9±2.5, 29.°82N×51.°93E, h0km, mb3.6/7, mbtmp3.6/8, ML3.3/1, MS2.5/1, Error ellipse: s-maj=54.8km s-min=25.0km az=162.0*
OMAN ***06*** *16:04:17.4±0.9, 29.°41N×52.°22E, h6km, mb3.3/12, ml3.4/5, Error ellipse: s-maj=8.3km s-min=5.7km az=8.0*
DSN ***06*** *16:04:20.2±1.9, 29.°26N×52.°18E, h15km, ML3.2/12, Error ellipse: s-maj=27.8km s-min=9.2km az=10.0*
ISC 06 16:04:16.4±0.6**, 29.°56N**±0.°04×**52.°17E**±0.°03**, h10**km**, n72,** σ**1.°27**/87**, mb3.4**/6**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHI	**Shiraz**	**0.31**	**74**	Pg	**Pg**	**16 04 21.7**	**-1.1**
KAZ2	**Kazeron-Fars-I**	**0.44**	**278**	Pg	**Pg**	**16 04 24.0**	**-1.1**
KAZ2				Sg	**Sg**	**16 04 31.2**	**+0.2**
QIR1	**Qir**	**1.32**	**144**	Pg	**Pg**	**16 04 42.9**	**+1.1**
DSBU	**Dashti - Bushe**	**1.43**	**214**	Pg	**Pg**	**16 04 44.1**	**+0.3**
KLNJ	**Kolanjah**	**1.53**	**341**	Pg	**Pn**	**16 04 43.9**	**-0.3**
JHRM	**Jahrom**	**1.62**	**130**	Pg	**Pb**	**16 04 46.8**	**+0.3**
KHL1	**Khalili_Fars**	**2.15**	**152**	Pn	**Pb**	**16 04 54.7**	**-0.9**
IRAM	**Ramesheh**	**2.25**	**5**	Pn	**Pn**	**16 04 55.4**	**+1.4**
IBRJ	**Brojen**	**2.47**	**342**	Pn	**Pn**	**16 04 58.4**	**+1.4**
TAFT	**Taft - Yazd**	**2.77**	**38**	Pn	**Pn**	**16 05 02.5**	**+1.5**
IMEH	**Mehriz**	**2.79**	**49**	Pn	**Pn**	**16 05 03.7**	**+2.3**
JHBN	**Jahan bin**	**2.96**	**335**	Pn	**Pn**	**16 05 04.8**	**+1.0**
DOBD	**Dorbid, Yazd**	**3.16**	**39**	Pn	**Pn**	**16 05 08.4**	**+2.1**
AMIS	**Naft Sefid**	**3.25**	**311**	Pn	**Pn**	**16 05 08.6**	**+1.1**
IZEF	**Zefreh**	**3.33**	**2**	Pn	**Pn**	**16 05 10.3**	**+1.5**
IBAF	**Bafgh**	**3.57**	**54**	Pn	**Pn**	**16 05 14.3**	**+2.3**
KHGB	**Koh Gabri**	**3.83**	**77**	Pn	**Pn**	**16 05 18.3**	**+2.7**
SHMA	**Al-Shehemyia**	**3.84**	**196**	P	**Pn**	**16 05 16.2**	**+0.7**
	SNR=34						
SHMA				S	**Sn**	**16 06 01.4**	**+0.8**
ANAR	**Anarak**	**3.86**	**20**	Pn	**Pn**	**16 05 17.5**	**+1.6**
KBD	**Kabd**	**3.92**	**266**	P	**Pn**	**16 05 17.1**	**+0.4**
JRN	**Qarnain Island**	**4.63**	**172**	P	**Pn**	**16 05 25.8**	**-0.7**
JRN				S	**Sn**	**16 06 21.1**	**+0.7**
CHMN	**Cheshme madani**	**4.68**	**85**	Pn	**Pn**	**16 05 30.3**	**+2.8**
TRNA	**Turayna**	**4.88**	**190**	P	**Pn**	**16 05 31.0**	**+1.2**
	SNR=29						
TRNA				S	**Sn**	**16 06 26.8**	**+0.5**
SMRA	**Abu-Samra**	**4.94**	**194**	P	**Pn**	**16 05 32.0**	**+1.3**
	SNR=15						
SMRA				S	**Sn**	**16 06 28.1**	**+0.3**
SHME	**Shamm**	**4.96**	**134**	P	**Pn**	**16 05 30.0**	**-1.0**
SHME	**Shamm**	**4.96**	**134**	P	**Pn**	**16 05 31.8**	**+0.9**
SHME				S	**Sn**	**16 06 29.2**	**+0.8**
BANOM	**Banah**	**5.15**	**134**	*i* P	**Pn**	**16 05 33.8**	**+0.2**
	SNR=26						
BANOM				S	**Sn**	**16 06 30.9**	**-2.2**
BANOM	**Banah**	**5.15**	**134**	P	**Pn**	**16 05 34.1**	**+0.5**
BANOM				S	**Sn**	**16 06 32.3**	**-0.8**
BDRS	**Dareh Seyedi**	**5.20**	**328**	Pn	**Pn**	**16 05 35.9**	**+1.4**
MASF	**Masafi**	**5.47**	**139**	P	**Pn**	**16 05 38.8**	**+0.8**
	SNR=8.8						
MASF				S	**Sn**	**16 06 42.1**	**+0.9**
	SNR=7.3						
MSFE	**Esma-Masafi**	**5.48**	**139**	*i* P	**Pn**	**16 05 38.8**	**+0.6**
	SNR=7.9						
NAZ	**Nazwa, Dubai**	**5.51**	**145**	P	**Pn**	**16 05 39.5**	**+0.9**
NAZ	**Nazwa, Dubai**	**5.51**	**145**	P	**Pn**	**16 05 39.4**	**+0.9**
NAZ				S	**Sn**	**16 06 42.0**	**0.0**
	SNR=5.9						
GHWR	**Ruwais**	**5.61**	**173**	P	**Pn**	**16 05 40.8**	**+1.0**
MDH	**Madha**	**5.61**	**138**	P	**Pn**	**16 05 39.8**	**-0.1**
MDH	**Madha**	**5.61**	**138**	P	**Pn**	**16 05 39.8**	**-0.1**
	SNR=6.7						
MDH				S	**Sn**	**16 06 44.8**	**+0.4**
UOSS	**Minazif**	**5.83**	**141**	P	**Pn**	**16 05 43.7**	**+0.8**
UOSS	**Minazif**	**5.83**	**141**	P	**Pn**	**16 05 44.4**	**+1.4**
UOSS				S	**Sn**	**16 06 49.5**	**-0.4**
HATD	**Hatta, Dubai**	**5.89**	**142**	P	**Pn**	**16 05 44.3**	**+0.6**
ASHO	**Ashiyiah**	**5.96**	**144**	*i* P	**Pn**	**16 05 44.5**	**-0.3**
	SNR=12						
ASHO	**Ashiyiah**	**5.96**	**144**	P	**Pn**	**16 05 46.0**	**+1.2**
	SNR=13						
ASHO				S	**Sn**	**16 06 51.5**	**-1.7**
MZWR	**Madinat Zayed**	**5.97**	**165**	P	**Pn**	**16 05 45.1**	**+0.2**
ALNE	**Al Ain**	**6.34**	**149**	P	**Pn**	**16 05 50.4**	**+0.4**
ALNE				S	**Sn**	**16 07 02.2**	**-0.4**
	SNR=5.9						
MZR	**Muzera**	**6.63**	**169**	*i* P	**Pn**	**16 05 54.7**	**+0.8**
	SNR=7.4						
MZR	**Muzera**	**6.63**	**169**	P	**Pn**	**16 05 55.0**	**+1.0**
	SNR=7.4						
SOHO	**SOHO**	**6.66**	**143**	*i* P	**Pn**	**16 05 54.2**	**-0.1**
	SNR=10						
SOHO	**SOHO**	**6.66**	**143**	P	**Pn**	**16 05 54.1**	**-0.2**
ARQ	**Araqi**	**7.32**	**147**	P	**Pn**	**16 06 03.7**	**+0.2**
	SNR=12						
ARQ				S	**Sn**	**16 07 24.6**	**-2.0**
UMZA	**Um Al Zommool**	**7.33**	**158**	P	**Pn**	**16 06 03.7**	**+0.2**
HOQ	**Hoqain**	**7.52**	**141**	P	**Pn**	**16 06 06.3**	**+0.1**
BIDO	**Bidbid**	**8.04**	**137**	P	**Pn**	**16 06 12.8**	**-0.4**
SMDO	**Samad**	**8.35**	**139**	P	**Pn**	**16 06 18.1**	**+0.5**
RAYN	**Ar Rayn**	**8.47**	**226**	*i* P	**Pn**	**16 06 18.1**	**-1.1**
	SNR=17						
RAYN	**Ar Rayn**	**8.47**	**226**	P	**Pn**	**16 06 18.3**	**-0.9**
WSAR	**Wadi Sarin**	**8.55**	**136**	P	**Pn**	**16 06 20.0**	**-0.3**
	SNR=6.6						
JMDO	**Jabal Madar**	**8.93**	**142**	P	**Pn**	**16 06 25.9**	**+0.4**
WBK	**Wadi Bani Khal**	**9.23**	**137**	P	**Pn**	**16 06 28.2**	**-1.5**
JLN	**Jalan Bani Buh**	**9.84**	**137**	P	**Pn**	**16 06 36.7**	**-1.3**
MHTO	**MHTO**	**10.02**	**147**	P	**Pn**	**16 06 39.9**	**-0.5**
MHTO				S	**Sn**	**16 08 28.1**	**-4.7**
DOK	**Doka**	**11.04**	**170**	P	**Pn**	**16 06 52.6**	**-1.7**
	SNR=7.6						
WHFO	**Wadi Hawf**	**11.68**	**172**	P	**Pn**	**16 07 01.2**	**-2.0**
	SNR=27						
DMTO	**DMTO**	**12.06**	**167**	P	**Pn**	**16 07 06.8**	**-1.5**
	SNR=7.4						
RBK	**Rabkut**	**12.14**	**171**	P	**Pn**	**16 07 09.0**	**-0.6**
GNI	**Garni**	**12.20**	**332**	LR	LR	16 12 41.2	
	comp=Z,25nm,19.7s,baz=360,slow=42						
BRTR	**Keskin Array B**	**18.28**	**309**	P	**Pn**	**16 08 29.6**	**-0.6**
	0.1nm,0.3s,baz=124,slow=13,SNR=8.4						
	1.1nm,0.8s						
BVAR	**Borovoye Array**	**27.00**	**25**	P	**P**	**16 10 00.2**	**+1.9**
	0.3nm,0.5s,baz=246,slow=6.1,SNR=2.0						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**28.89**	**36**	P	**P**	**16 10 16.6**	**+1.4**
	0.3nm,0.6s,baz=234,slow=6.9,SNR=4.2						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**29.03**	**45**	P	**P**	**16 10 17.4**	**+0.8**
	0.1nm,0.5s,baz=235,slow=5.1,SNR=2.7						
	0.1nm,0.5s						
ZALV	**Zalesovo Beam**	**33.95**	**35**	P	**P**	**16 11 01.1**	**+1.3**
	0.3nm,0.3s,baz=250,slow=8.6,SNR=2.0						
	0.3nm,0.3s						
FINES	**FINESS Array B**	**36.25**	**339**	P	**P**	**16 11 17.4**	**-2.1**
	1.4nm,0.8s,baz=142,slow=11,SNR=9.5						
	1.4nm,0.8s						
HFS	**Hagfors**	**39.98**	**331**	P	**P**	**16 11 50.1**	**-0.8**
	0.4nm,0.4s,baz=141,slow=9.0,SNR=6.4						
	0.4nm,0.4s						
TORD	**Torodi Ar. Bea**	**49.37**	**262**	P	**P**	**16 13 07.2**	**+0.8**
	0.6nm,0.7s,baz=57,slow=4.6,SNR=4.1						
	0.6nm,0.7s						

IDC 06 16:08:24.0±3.0**, 3.°14S**×**138.°57E, h0**km**, mb3.2**/2**, mbtmp3.4**/5**, ML3.5**/3**, Error ellipse: s-maj=70.6km s-min=29.8km az=80.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**7.64**	**287**	Pn	Pn	16 10 16.2	-0.4
	0.7nm,0.3s,baz=270,slow=20,SNR=1.6						
SIJI				Sn	Sn	16 11 30.1	-14
	0.4nm,0.3s,baz=142,slow=24,SNR=2.2						
	7.1nm,0.7s						
WRA	**Warramunga Arr**	**17.20**	**194**	Pn	Pn	16 12 23.7	-2.2
	0.2nm,0.3s,baz=15,slow=12,SNR=4.5						
WRA				Sn	Sn	16 15 18.4	-20
	0.1nm,0.3s,baz=13,slow=24,SNR=1.6						
	0.2nm,0.3s						
FITZ	**Fitzroy Crossi**	**19.53**	**220**	P	Pn	16 12 54.5	+0.1
	0.1nm,0.3s,baz=31,slow=12,SNR=1.4						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**20.90**	**192**	P	P	16 13 08.2	+0.1
	0.5nm,0.3s,baz=9.5,slow=12,SNR=27						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**70.04**	**323**	P	P	16 19 37.9	0.0
	0.1nm,0.6s,baz=111,slow=7.9,SNR=2.1						
	0.1nm,0.6s						

IDC 06 16:19:39.3±1.6**, 12.°17N**×**143.°03E, h0**km**, mb3.4**/3**, mbtmp3.4**/4**, ML3.7**/1**, MS2.8**/2**, Error ellipse: s-maj=81.1km s-min=21.1km az=123.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.28**	**52**	Pn	Pn	16 20 18.5	+0.3
	18nm,0.3s,baz=248,slow=19,SNR=9.8						
GUMO				Sn	Sn	16 20 48.5	+1.4
	15nm,0.3s,baz=12,slow=23,SNR=6.1						
	55nm,0.5s						
KSRS	**Korea Array**	**28.59**	**334**	LR	LR	16 35 53.7	
	comp=Z,8.3nm,20.3s,baz=30,slow=34						
BATI	**Baumata**	**29.40**	**222**	LR	LR	16 39 40.1	
	comp=Z,43nm,18.1s,baz=234,slow=41						
WRA	**Warramunga Arr**	**33.04**	**195**	P	P	16 26 16.7	+0.1
	0.6nm,0.8s,baz=19,slow=9.0,SNR=2.5						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**36.72**	**194**	P	P	16 26 48.3	-0.1
	0.2nm,0.8s,baz=17,slow=8.8,SNR=1.6						
	0.2nm,0.8s						
ILAR	**Eielson Array**	**70.61**	**25**	P	P	16 30 56.1	-0.1
	0.3nm,0.5s,baz=243,slow=6.6,SNR=7.1						
	0.3nm,0.5s						

VIE ***06*** *16:26:48.8±0.7, 43.°62N×16.°57E, h8km, mb2.9/7, ml2.8/15, ms3.8/1, Error ellipse: s-maj=7.7km s-min=6.8km az=122.0 15 km NE of Split*
PDG ***06*** *16:26:49.2±0.1, 43.°76N×16.°39E, h10km, ML3.1/11, Error ellipse: s-maj=0.1km s-min=0.2km az=0.0*
BEO ***06*** *16:26:50.1±0.3, 43.°74N×16.°30E, h0km, ML2.7/9*
ISC 06 16:26:49.3±0.7**, 43.°71N**±0.°02×**16.°34E**±0.°02**, h10**km**, n68,** σ**1.°72**/120**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIJV	**Kijevo**	**0.30**	**9**	*i* Pg	**Pg**	**16 26 54.0**	**-1.4**
KIJV				Sg	**Sg**	**16 26 57.8**	**-1.6**
MORI	**Morici**	**0.49**	**289**	*e*Pg	**Pb**	**16 26 58.5**	**-1.4**
MORI				Sg	**Sb**	**16 27 06.0**	**-1.2**
ZIRJ	**Zirje**	**0.51**	**264**	*i* Pg	**Pg**	**16 26 58.5**	**-0.7**
ZIRJ				Sg	**Sb**	**16 27 06.7**	**-1.1**
HVAR	**Hvar**	**0.54**	**172**	*e*Pg	**Pg**	**16 26 59.0**	**-0.7**
HVAR				Sg	**Sb**	**16 27 07.7**	**-0.9**
RICI	**Ricice**	**0.61**	**110**	*e*Pg	**Pg**	**16 27 00.1**	**-1.1**
RICI				Sg	**Sg**	**16 27 09.1**	**-0.1**
MAKA	**Makarska**	**0.65**	**130**	*i* Pg	**Pg**	**16 27 00.4**	**-1.4**
MAKA				Sg	**Sb**	**16 27 10.7**	**-1.0**
UDBI	**Udbina**	**0.92**	**333**	*e*Pg	**Pg**	**16 27 05.6**	**-1.4**
UDBI				Sg	**Sg**	**16 27 18.1**	**-0.9**
DUGI	**Dugi Otok**	**0.97**	**287**	*i* Pg	**Pg**	**16 27 07.2**	**-0.8**
DUGI				Sg	**Sn**	**16 27 21.7**	**-1.2**
LSTV	**Lastovo**	**1.02**	**157**	*i* Pg	**Pn**	**16 27 09.0**	**-0.6**
LSTV				Sg	**Sn**	**16 27 23.7**	**-0.3**
VIRC	**Vir**	**1.10**	**303**	*e*Pg	**Pb**	**16 27 09.0**	**-1.3**
VIRC				Sg	**Sn**	**16 27 25.6**	**-0.4**
BLY	**Banja Luka**	**1.20**	**30**	*e*Pg	**Pn**	**16 27 11.2**	**-1.0**
BLY				*e*Sg	**Sg**	**16 27 28.5**	**+0.4**
PLIT	**Plitvice**	**1.28**	**336**	*e*Pg	**Pn**	**16 27 12.1**	**-1.2**
PLIT				Sg	**Sg**	**16 27 31.0**	**+0.5**
STON	**Ston**	**1.30**	**130**	*i* Pg	**Pn**	**16 27 12.2**	**-1.2**
STON				Sg	**Sg**	**16 27 31.2**	**+0.2**
STON	**Ston**	**1.30**	**130**	*e*Pg	**Pn**	**16 27 12.0**	**-1.4**
STON				*e*Sg	**Sg**	**16 27 31.8**	**+0.8**
NVLJ	**Novalja**	**1.36**	**309**	*e*Pg	**Pn**	**16 27 13.6**	**-0.8**
NVLJ				Sg	**Sg**	**16 27 33.8**	**+0.7**
RABC	**Rab**	**1.53**	**313**	*e*Pg	**Pb**	**16 27 16.7**	**-1.0**
RABC				Sg	**Sg**	**16 27 38.9**	**+0.3**
DBRK	**Dubrovnik**	**1.68**	**128**	*e*Pn	**Pn**	**16 27 18.8**	**0.0**
DBRK				Sn	**Sg**	**16 27 43.0**	**-0.3**
TREB	**Trebinje**	**1.77**	**123**	*e*Pn	**Pb**	**16 27 21.3**	**-0.5**
TREB				*e*Sn	**Sg**	**16 27 46.3**	**+0.1**
TREB				*e*Sn	**Sb**	**16 27 46.6**	**+2.5**
BRY	**Bratogost**	**1.79**	**116**	*e*Pn	**Pb**	**16 27 22.0**	**-0.3**
BRY				*i* Sn	**Sg**	**16 27 47.6**	**+0.6**
UPM	**Unac-Piva**	**1.93**	**104**	*e*Pn	**Pb**	**16 27 23.7**	**-1.0**
UPM				*i* Sn	**Sg**	**16 27 50.6**	**-0.8**
BOJS	**Bojanci**	**1.96**	**337**	*i* Pn	**Pb**	**16 27 24.5**	**-0.6**
BOJS	**Bojanci**	**1.96**	**337**	*e*Pn	**Pb**	**16 27 24.4**	**-0.6**
RIY	**Rijeka**	**2.09**	**321**	*e*Pn	**Pb**	**16 27 26.7**	**-0.7**
RIY				*e*Sn	**Sb**	**16 27 52.5**	**-0.9**
NKME	**Niksic**	**2.13**	**115**	*e*Pn	**Pb**	**16 27 26.6**	**-1.4**
NKME				*i* Sn	**Sb**	**16 27 55.5**	**+1.1**
RUDO	**Rudo**	**2.20**	**91**	*e*Pn	**Pb**	**16 27 28.3**	**-0.9**
RUDO				*e*Sn	**Sb**	**16 27 56.7**	**+0.2**
CRES	**Cresnjevec Ost**	**2.21**	**344**	*i* Pn	**Pb**	**16 27 27.6**	**-1.7**
CEME	**Cevo**	**2.21**	**121**	*e*Pn	**Pb**	**16 27 27.7**	**-1.7**
CEME				*i* Sn	**Sb**	**16 27 57.8**	**+0.9**
BBLS	**Lazi&#263i**	**2.22**	**85**	*e*Pn	**Pb**	**16 27 28.5**	**-1.1**
BBLS				*e*Sn	**Sb**	**16 27 58.9**	**+1.7**
PLE	**Pljevlja**	**2.25**	**99**	*e*Pn	**Pn**	**16 27 28.0**	**+1.3**
PLE				*i* Sn	**Sb**	**16 27 58.0**	**0.0**
BUM	**Brajici-Budva**	**2.34**	**126**	*e*Pn	**Pb**	**16 27 29.6**	**-2.0**
BUM				*i* Sn	**Sb**	**16 28 00.9**	**+0.3**
TEKS	**Tekeris**	**2.44**	**69**	*e*Pn	**Pn**	**16 27 30.0**	**+0.7**
TEKS				*e*Sn	**Sb**	**16 28 03.3**	**-0.2**
CEY	**Cerknica**	**2.45**	**327**	*e*Pn	**Pb**	**16 27 31.1**	**-2.3**
KOME	**Kolasin**	**2.47**	**109**	*e*Pn	**Pn**	**16 27 31.1**	**+1.4**
KOME				*i* Sn	**Sb**	**16 28 03.7**	**-0.6**
SKDS	**Skadanscina**	**2.48**	**319**	*e*Pn	**Pn**	**16 27 31.1**	**+1.3**
PDG	**Podgorica**	**2.49**	**120**	*e*Pn	**Pb**	**16 27 33.2**	**-0.9**
PDG				*e*Sn	**Sb**	**16 28 05.5**	**+0.8**
PDG	**Podgorica**	**2.49**	**120**	*e*Pn	**Pb**	**16 27 31.6**	**-2.5**
PDG				*i* Sn	**Sb**	**16 28 04.3**	**-0.4**
DRME	**Dracevica, Mon**	**2.58**	**125**	*e*Pn	**Pn**	**16 27 32.6**	**+1.5**
DRME				*i* Sn	**Sb**	**16 28 06.7**	**-0.8**
DIVS	**Divibare**	**2.67**	**80**	*e*Pn	**Pb**	**16 27 35.0**	**-2.2**
DIVS				*e*Sn	**Sb**	**16 28 08.0**	**-2.0**
LJU	**Ljubljana**	**2.67**	**332**	*e*Pn	**Pn**	**16 27 33.9**	**+1.6**
SJES	**Sjenica**	**2.68**	**98**	*e*Pn	**Pb**	**16 27 35.0**	**-2.4**
SJES				*e*Sn	**Sb**	**16 28 08.4**	**-2.0**
IVA	**Berane**	**2.72**	**107**	*e*Pn	**Pn**	**16 27 34.7**	**+1.5**
IVA				*i* Sn	**Sb**	**16 28 09.6**	**-2.0**
IVAS	**Ivanjica**	**2.77**	**91**	*e*Pn	**Pn**	**16 27 34.8**	**+1.0**
IVAS				*e*Sn	**Sn**	**16 28 10.1**	**+2.8**
CRNS	**Crni Vrh**	**2.80**	**329**	*i* Pn	**Pn**	**16 27 35.9**	**+1.8**
PVY	**Plav**	**2.87**	**112**	*e*Pn	**Pn**	**16 27 36.7**	**+1.5**
PVY				*i* Sn	**Sb**	**16 28 13.2**	**-2.7**
TRUS	**Trudelj**	**2.98**	**79**	*e*Pn	**Pn**	**16 27 38.0**	**+1.4**
OBKA	**Obir**	**3.08**	**336**	*i* Pn	**Pn**	**16 27 39.9**	**+1.9**
	0.4nm,0.2s						
OBKA				*i* Sn	**Sn**	**16 28 14.8**	**-0.1**
	9.4nm,0.5s						
SOKA	**Soboth**	**3.11**	**343**	*i* Pn	**Pn**	**16 27 40.0**	**+1.5**
	1.5nm,0.3s						
SOKA				*i* Sn	**Sn**	**16 28 16.4**	**+0.6**
	0.7nm,0.2s						
GRUS	**Gruza**	**3.17**	**85**	*e*Pn	**Pn**	**16 27 40.8**	**+1.6**
GOCS	**Kraljevo Serbi**	**3.29**	**91**	*e*Pn	**Pn**	**16 27 42.9**	**+1.9**
GOCS				*e*Sn	**Sn**	**16 28 22.6**	**+2.3**
MYKA	**Terra Mystica**	**3.49**	**328**	*i* Pn	**Pn**	**16 27 46.3**	**+2.6**
	0.1nm,0.1s						
MYKA				*e*Sn	**Sb**	**16 28 30.0**	**-3.7**
	4.5nm,0.5s						
SELS	**Selova**	**3.51**	**96**	*e*Pn	**Pn**	**16 27 45.7**	**+1.7**
SELS				*e*Sn	**Sn**	**16 28 28.5**	**+2.9**
ARSA	**Arzberg**	**3.59**	**351**	*i* Pn	**Pn**	**16 27 46.2**	**+1.2**
	1.8nm,0.3s						
ARSA				*i* Sn	**Sn**	**16 28 28.6**	**+1.1**
	2.5nm,0.3s						
ARSA	**Arzberg**	**3.59**	**351**	*e*Pn	**Pn**	**16 27 45.2**	**+0.2**
RONA	**Rosalia, Austr**	**3.99**	**360**	*e*Pn	**Pn**	**16 27 51.4**	**+0.8**
	0.3nm,0.1s,SNR=4.1						
RONA				*i* Sn	**Sn**	**16 28 37.0**	**-0.4**
	3.9nm,0.3s						
ABTA	**Abfaltersbach**	**4.07**	**320**	*i* Pn	**Pn**	**16 27 53.2**	**+1.6**
	0.3nm,0.1s						
ABTA				*i* Sn	**Sn**	**16 28 41.9**	**+2.5**
	6.6nm,0.5s						
CONA	**Conrad Observa**	**4.23**	**356**	*i* Pn	**Pn**	**16 27 54.9**	**+1.0**
	0.2nm,0.2s						
CONA				*i* Sn	**Sn**	**16 28 44.6**	**+1.1**
	1.7nm,0.2s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZAGS	Zajecar	4.27	87	ePn	Pn	16 27 55.6	+1.3
MOA	Molln	4.39	341	ePn	Pn	16 27 58.3	+2.3
	2.7nm,0.3s,SNR=10						
MOA				i Sn	Sn	16 28 49.9	+2.7
	1.8nm,0.3s						
WINA	Alland / Wiene	4.40	358	i Sn	Sn	16 28 49.0	+1.5
	1.3nm,0.2s						
BIOA	Bad Ischl, Aus	4.41	336	ePn	Pn	16 27 59.1	+2.8
	1.4nm,0.4s						
BIOA				i Sn	Sn	16 28 51.5	+3.8
	4.3nm,0.4s						
LESA	Schwarzleotal	4.52	327	i Pn	Pn	16 27 59.6	+1.8
	1.8nm,0.3s,SNR=7.7						
LESA				i Sn	Sn	16 28 54.6	+4.1
	2.4nm,0.4s						
ZAPS	Zavoj	4.60	93	ePn	Pn	16 27 59.8	+0.9
MODS	Modra-Piesok	4.71	8	eSN	Sn	16 28 55.0	-0.1
WTTA	Wattenberg	4.86	319	i Pn	Pn	16 28 04.5	+1.9
	0.1nm,0.1s						
WTTA				i Sn	Sn	16 29 03.1	+4.2
	4.2nm,0.5s						
SQTA	Sankt Quirin	5.04	316	ePn	Pn	16 28 07.5	+2.5
	0.2nm,0.1s						
SQTA				i Sn	Sn	16 29 07.1	+3.8
	0.4nm,0.2s						
FETA	Feichten	5.16	312	eSn	Sn	16 29 10.0	+3.6
	1.2nm,0.4s						
MOTA	Moosalm	5.17	316	i Sn	Sn	16 29 11.2	+4.4
	2.3nm,0.4s						
RETA	Reutte	5.44	316	i Sn	Sn	16 29 16.7	+3.5
	0.5nm,0.2s						

TEH 06 16:27:45.3, 29°58N×52°14E, h5km, ML3.2, Presumed earthquake
OMAN 06 16:27:50.8±0.1, 29°36N×52°35E, h9km, mb3.0/7, ml3.2/6, Error ellipse: s-maj=1.4km s-min=1.0km az=3.0
ISC 06 16:27:48.0±1.1, 29°56N±0°05×52°25E±0°05, h10km, n39, σ1s10/55, Southern Iran

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SHI	Shiraz	0.24	70	Pg	Pg	16 27 52.4	-0.6
QIR1	Qir	1.28	147	Pg	Pg	16 28 13.6	+1.0
DSBU	Dashti - Bushe	1.47	216	Pg	Pn	16 28 15.4	+0.7
KLNJ	Kolanjah	1.55	339	Pg	Pn	16 28 14.6	-1.4
JHRM	Jahrom	1.57	132	Pg	Pb	16 28 17.5	+0.4
IRAM	Ramesheh	2.25	3	Pn	Pn	16 28 26.1	+0.7
IBRJ	Brojen	2.49	340	Pn	Pn	16 28 29.0	+0.1
TAFT	Taft - Yazd	2.72	37	Pn	Pn	16 28 33.2	+1.3
JHBN	Jahan bin	2.99	333	Pn	Pn	16 28 36.1	+0.4
ICHK	Chekchek	3.26	34	Pn	Pn	16 28 40.8	+1.4
AMIS	Naft Sefid	3.31	310	Pn	Pn	16 28 39.4	-0.4
KHGB	Koh Gabri	3.76	76	Pn	Pn	16 28 48.4	+2.2
ANAR	Anarak	3.83	19	Pn	Pn	16 28 48.6	+1.4
SHMA	Al-Shehemyia	3.86	197	P	Pn	16 28 47.7	+0.3
	SNR=11						
SHMA				S	Sn	16 29 33.5	+0.7
NGRK	Negar Kerman	3.90	88	Pn	Pn	16 28 50.5	+2.1
JRN	Qarnain Island	4.63	173	P	Pn	16 28 59.6	+1.6
TRNA	Turayna	4.89	191	P	Pn	16 29 02.7	+1.1
	SNR=6.3						
SHME	Shamm	4.91	134	P	Pn	16 29 01.2	-0.6
SHME				S	Sn	16 29 58.4	-0.3
SMRA	Abu-Samra	4.96	195	P	Pn	16 29 03.2	+0.6
SMRA				S	Sn	16 29 59.7	-0.2
BANOM	Banah	5.10	134	P	Pn	16 29 03.8	-0.6
BANOM				S	Sn	16 30 03.5	+0.1
BDRS	Dareh Seyedi	5.24	328	Pn	Pn	16 29 06.9	+0.3
MASF	Masafi	5.43	139	P	Pn	16 29 09.4	+0.4
MASF				S	Sn	16 30 11.1	-0.4
NAZ	Nazwa, Dubai	5.47	145	P	Pn	16 29 10.4	+0.8
NAZ				S	Sn	16 30 12.7	+0.1
MDH	Madha	5.56	139	P	Pn	16 29 11.1	+0.3
MDH				S	Sn	16 30 15.5	+0.7
FAQ	Al Faqa, Dubai	5.64	147	S	Sn	16 30 14.9	-1.9
UOSS	Minazif	5.79	142	P	Pn	16 29 14.7	+0.8
UOSS				S	Sn	16 30 20.5	+0.1
HATD	Hatta, Dubai	5.84	143	P	Pn	16 29 15.2	+0.5
HATD				S	Sn	16 30 21.0	-0.9
ASHO	Ashiyiah	5.92	144	P	Pn	16 29 17.0	+1.2
	SNR=5.9						
ASHO				S	Sn	16 30 22.6	-1.2
MZWR	Madinat Zayed	5.96	165	P	Pn	16 29 16.3	+0.1
JASK	Jask - Hormozg	6.19	125	P	Pn	16 29 18.6	-0.8
ALNE	Al Ain	6.31	149	P	Pn	16 29 22.1	+1.0
ALNE				S	Sn	16 30 32.4	-0.9
SOHO	SOHO	6.62	144	P	Pn	16 29 25.2	-0.1
SOHO				S	Sn	16 30 39.7	-1.2
MZR	Muzera	6.62	170	P	Pn	16 29 26.2	+0.8
ARQ	Araqi	7.28	147	P	Pn	16 29 35.1	+0.6
ARQ				S	Sn	16 30 54.9	-2.4
UMZA	Um Al Zommool	7.30	158	P	Pn	16 29 35.1	+0.4
UMZA				S	Sn	16 30 55.6	-2.0
BSY	Bisya	8.11	146	P	Pn	16 29 45.8	-0.1
BSY				S	Sn	16 31 15.7	-2.0
SMDO	Samad	8.30	140	P	Pn	16 29 47.6	-0.9
SMDO				S	Sn	16 31 20.0	-2.5
WSAR	Wadi Sarin	8.50	136	P	Pn	16 29 50.3	-0.9
WHFO	Wadi Hawf	11.67	173	P	Pn	16 30 34.9	+0.2
	SNR=11						

IDC 06 16:41:23.6±4.5, 22°45S×171°88E, h80km±34km, mb3.5/4, mbtmp3.8/6, MS3.0/4, Error ellipse: s-maj=91.8km s-min=18.5km az=164.0
ISC 06 16:41:17.8±1.7, 22°6S±0°5×172°2E±0°1, h40km, n7, σ0s86/7, mb3.8/4, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	5.34	275	P	Pn	16 42 36.3	+1.2
	11nm,0.3s,baz=116,slow=15,SNR=61						
DZM				S	Sn	16 43 34.6	-0.9
	30nm,0.5s,baz=260,slow=22,SNR=9.4						
DZM				LR	LR	16 44 32.0	
	comp=Z,132nm,19.2s,baz=26,slow=37						
MSVF	Nonsavu	7.34	50	P	Pn	16 43 10.3	+7.7
	7.5nm,0.7s,baz=204,slow=18,SNR=5.5						
MSVF				LR	LR	16 45 24.1	
	comp=Z,114nm,19.8s,baz=221,slow=32						
CTA	Charters Tower	24.27	271	LR	LR	16 54 05.9	
	comp=Z,22nm,20.3s,baz=70,slow=32						
ASAR	Alice Springs	35.15	261	P	P	16 48 07.5	-0.4
	1.2nm,0.7s,baz=94,slow=10.0,SNR=18						
ASAR				PcP	PcP	16 50 39.0	+0.2
	0.3nm,0.7s,baz=84,slow=2.8,SNR=5.3						
ASAR				LR	LR	17 02 19.7	
	comp=Z,38nm,18.2s,baz=92,slow=36						
	1.2nm,0.7s						
WRA	Warramunga Arr	35.30	267	P	P	16 48 08.7	-0.7
	0.3nm,0.4s,baz=98,slow=8.2,SNR=7.5						
	0.3nm,0.4s						
FITZ	Fitzroy Crossi	43.73	267	P	P	16 49 19.3	-0.2
	3.2nm,0.8s,baz=127,slow=10.0,SNR=6.0						
	3.2nm,0.8s						
ILAR	Eielson Array	92.64	16	P	P	16 54 24.6	-0.2
	0.3nm,1.0s,baz=232,slow=4.4,SNR=2.1						
	0.3nm,1.0s						

NEIC 06 16:50:08.5±2.4, 56°20S±0°06×27°3W±0°2, h76km±8km, mb4.6/22, Error ellipse: s-maj=16.1km s-min=5.0km az=59.0
IDC 06 16:50:12.9±7.2, 56°20S×27°53W, h94km±64km, mb4.1/7, mbtmp4.5/8, ML5.0/1, MS3.4/1, Error ellipse: s-maj=28.4km s-min=20.7km az=95.0
ISC 06 16:50:12.4±0.6, 56°23S±0°09×27°77W±0°09, h100km, n41, σ1s24/40, mb4.5/14, 2C-1D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	5.35	288	Pn	Pn	16 51 30.1	+0.3
HOPE				Sn	Sn	16 52 30.6	+0.5
VNA3	Neumayer Olymp	16.94	160	⇑P	Pn	16 54 03.2	+0.3
	comp=Z,16nm,0.4s						
VNA2	Neumayer--Watz	17.16	157	⇓P	Pn	16 54 06.5	+1.0
	comp=Z,8.5nm,0.4s,baz=316,slow=12						
SNAA	Sanae	18.72	155	⇑P	P	16 54 23.5	+0.7
	comp=Z,953nm,0.6s						
SNAA	Sanae	18.72	155	P	P	16 54 22.9	+0.1
	comp=Z,4.8nm,0.3s,baz=302,slow=11,SNR=70						
SNAA				LR	LR	17 01 38.5	
	comp=Z,108nm,18.1s,baz=211,slow=37						
	comp=Z,32nm,0.5s						
SNAA	Sanae	18.72	155	P	P	16 54 19.2	-3.5
SNAA				IAmb	IAmb	16 54 24.2	
	comp=Z,34nm,0.6s						
TROLL	Troll, Antarti	20.24	153	P	P	16 54 39.8	+0.5
BELA	Belgrano 2	21.88	184	P	P	16 54 55.3	-1.4
BELA				IAmb	IAmb	16 55 00.2	
	comp=Z,29nm,0.8s						
MG03	Isla Dawson	24.29	258	P	P	16 55 20.2	+0.1
TRQA	Tornquist	29.09	294	P	P	16 56 04.3	+0.9
PLTB	Pedras Altas	30.37	313	P	P	16 56 13.7	-1.0
QSPA	South Pole Qui	34.02	180	P	P	16 56 48.1	+1.6
	comp=Z,2.8nm,0.3s,baz=190,slow=2.4,SNR=34						
	comp=Z,2.8nm,0.3s						
QSPA	South Pole Qui	34.02	180	P	P	16 56 46.6	+0.1
QSPA				IAmb	IAmb	16 56 49.7	
	comp=Z,12nm,1.1s						
MT09	Talagante	37.06	289	P	P	16 57 10.5	-2.2
MT02	Curacav	37.53	289	P	P	16 57 15.2	-1.4
CO02	Combarbal	39.07	291	P	P	16 57 28.4	-1.2
CO01	Juntas del Tor	39.59	294	P	P	16 57 32.7	-1.4
CO01				IAmb	IAmb	16 57 43.4	
	comp=Z,11nm,1.5s						
AC05	El Transito	40.60	294	P	P	16 57 41.8	-0.5
AC05				IAmb	IAmb	16 57 48.3	
	comp=Z,7.1nm,1.0s						
PB14	IPOC Station P	44.13	298	P	P	16 58 11.1	-0.1
PB14				IAmb	IAmb	16 58 47.7	
	comp=Z,6.4nm,0.7s						
PB09	IPOC Station P	45.96	301	P	P	16 58 25.6	+0.1
PB09				IAmb	IAmb	16 59 01.9	
	comp=Z,14nm,1.4s						
BOSA	Boshof	46.33	76	P	P	16 58 27.3	-1.0
	comp=Z,0.8nm,0.4s,baz=194,slow=6.7,SNR=2.3						
	comp=Z,0.8nm,0.4s						
BOSA	Boshof	46.33	76	P	P	16 58 23.4	-4.9
BOSA				IAmb	IAmb	16 58 41.6	
	comp=Z,11nm,1.5s						
VNDA	Vanda	46.38	183	P	P	16 58 29.6	+1.7
	comp=Z,5.7nm,0.9s,baz=194,slow=5.7,SNR=2.4						
	comp=Z,5.7nm,0.9s						
VNDA	Vanda	46.38	183	P	P	16 58 26.1	-1.8
VNDA				IAmb	IAmb	16 58 32.4	
	comp=Z,6.0nm,0.9s						
PB01	IPOC Station P	46.72	301	P	P	16 58 32.7	+1.4
GO01	Chusmiza	47.76	303	P	P	16 58 42.0	+2.1
PB11	IPOC Station P	47.90	302	P	P	16 58 40.8	+0.2
PB11				IAmb	IAmb	16 58 45.8	
	comp=Z,8.0nm,1.0s						
PB16	IPOC Station P	49.06	303	P	P	16 58 49.0	-0.9
PB16				IAmb	IAmb	16 59 33.1	
	comp=Z,8.8nm,1.5s						
LBTB	Lobatse	49.37	74	P	P	16 58 47.8	-4.0
LBTB				IAmb	IAmb	16 59 16.0	
	comp=Z,6.5nm,1.2s						
LPAZ	La Paz	50.21	306	P	P	16 59 00.1	+1.4
	comp=Z,1.4nm,0.4s,baz=186,slow=6.1,SNR=7.2						
	comp=Z,1.4nm,0.4s						
LPAZ	La Paz	50.21	306	P	P	16 58 58.6	-0.2
DBIC	Dimbokro	65.46	25	P	P	17 00 45.7	+1.1
	comp=Z,7.6nm,0.9s,baz=211,slow=8.3,SNR=4.3						
	comp=Z,7.6nm,0.9s						
DBIC	Dimbokro	65.46	25	P	P	17 00 42.4	-2.1
TORD	Torodi Ar. Bea	73.37	30	P	P	17 01 34.4	+1.2
	comp=Z,4.5nm,0.5s,baz=198,slow=6.0,SNR=20						
	comp=Z,4.5nm,0.5s						
ASAR	Alice Springs	98.92	163	P	P	17 03 41.8	+0.3
	comp=Z,0.3nm,0.6s,baz=188,slow=4.1,SNR=9.0						
	comp=Z,0.3nm,0.6s						
ASAR	Alice Springs	98.92	163	P	P	17 03 40.9	-0.5
FINES	FINESS Array B	124.69	28	PKP	PKPdf	17 08 58.9	+0.2
	comp=Z,0.7nm,0.6s,baz=197,slow=4.0,SNR=7.3						
FINES	FINESS Array B	124.69	28		PKPdf	17 08 59.1	+0.4
YKA	Yellowknife Ar	136.08	318	PKP	PKPdf	17 09 20.9	+0.7
	comp=Z,0.2nm,0.4s,baz=119,slow=1.8,SNR=5.1						
ILAR	Eielson Array	149.99	312	PKPbc	PKPbc	17 09 50.5	+1.0
	comp=Z,2.9nm,0.8s,baz=129,slow=1.6,SNR=26						
SONM	Songino Array	151.06	87	PKPbc	PKPbc	17 09 53.7	+0.9
	comp=Z,0.4nm,0.4s,baz=217,slow=2.5,SNR=5.5						

IDC 06 16:59:55.8±6.7, 21°35S×179°34E, h568km±26km, mb3.2/4, mbtmp4.2/5, Error ellipse: s-maj=151.8km s-min=52.4km az=128.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.80	341	P	P	17 01 17.5	-0.2
	26nm,0.5s,baz=141,slow=14,SNR=39						
STKA	Stephens Creek	35.18	245	P	P	17 06 02.0	-1.0
	0.8nm,0.4s,baz=94,slow=17,SNR=3.0						
	0.8nm,0.4s						
ASAR	Alice Springs	41.91	258	P	P	17 06 57.4	-0.2
	4.2nm,0.7s,baz=93,slow=9.2,SNR=78						
	4.2nm,0.7s						
WRA	Warramunga Arr	42.03	264	P	P	17 06 58.4	-0.1
	1.4nm,0.3s,baz=97,slow=8.0,SNR=155						
WRA				ScP	ScP	17 11 35.7	-1.2
	0.4nm,0.7s,baz=98,slow=3.9,SNR=5.2						
	1.4nm,0.3s						
FITZ	Fitzroy Crossi	50.46	264	P	P	17 08 02.6	+0.3
	1.4nm,0.4s,baz=91,slow=11,SNR=10						
	1.4nm,0.4s						

IDC 06 17:12:16.3±2.1, 2°76N×127°31E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=119.9km s-min=25.1km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.79	184	P	P	17 16 59.7	+0.5
	1.0nm,0.6s,baz=354,slow=9.2,SNR=2.0						
	1.0nm,0.6s						
WRA	Warramunga Arr	23.59	163	P	P	17 17 28.6	-0.3
	1.1nm,0.6s,baz=342,slow=10,SNR=15						
	1.1nm,0.6s						
ASAR	Alice Springs	27.04	167	P	P	17 18 00.6	+0.1
	0.3nm,0.7s,baz=344,slow=9.2,SNR=8.7						
	0.3nm,0.7s						
MKAR	Makanchi Array	58.68	325	P	P	17 22 15.6	-0.1
	0.1nm,0.4s,baz=119,slow=7.6,SNR=4.6						
	0.1nm,0.4s						

WEL 06 17:12:36.7±0.8, 34°S±15°×17°9E±2°7, h187km±30km, M3.6/7, MLv3.6/7, Error ellipse: s-maj=39.2km s-min=8.4km az=116.6, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.53	191	P	Pn	17 13 32.4	+0.2
WMGZ	Waiomatatini S	3.77	189	P	Pn	17 13 35.6	+0.5
WMGZ				S	Sn	17 14 20.7	-0.3
HAZ	Te Kaha	3.82	197	P	Pn	17 13 36.1	+0.4
HAZ				S	Sn	17 14 23.3	+1.1
PKGZ	Pakihiroa	3.87	193	P	Pn	17 13 36.4	0.0
PKGZ				S	Sn	17 14 23.9	+0.7
PUZ	Puketiti	4.04	190	P	Pn	17 13 38.3	-0.2
PUZ				S	Sn	17 14 26.7	-0.4
RUGZ	Raukumara Rang	4.05	197	P	Pn	17 13 38.9	+0.1
RUGZ				S	Sn	17 14 28.3	+0.8
TWGZ	Tauwhareparae	4.19	193	P	Pn	17 13 40.7	+0.3
TWGZ				S	Sn	17 14 31.8	+1.3
MWZ	Matawai	4.43	197	P	Pn	17 13 43.6	0.0
MWZ				S	Sn	17 14 37.2	+1.1
TKGZ	Te Karaka	4.47	193	P	Pn	17 13 44.0	0.0
TKGZ				S	Sn	17 14 36.5	-0.3
URZ	Urewera	4.48	201	P	Pn	17 13 44.8	+0.8
URZ				S	Sn	17 14 36.1	-0.9
RIGZ	Rimuhau	4.74	193	P	Pn	17 13 47.7	+0.2
RIGZ				S	Sn	17 14 43.7	+0.5
MUGZ	Murupara	4.78	203	P	Pn	17 13 48.4	+0.4
RTZ	Ruatahuna	4.84	201	P	Pn	17 13 49.3	+0.4
RTZ				S	Sn	17 14 45.8	+0.1
SNGZ	Shannon Statio	4.90	197	P	Pn	17 13 50.5	+0.9
SNGZ				S	Sn	17 14 46.5	-0.4
KNZ	Kokohu	5.06	193	P	Pn	17 13 50.7	-0.9
KNZ				S	Sn	17 14 50.3	-0.3
RAHZ	Arahi	5.10	199	P	Pn	17 13 51.3	-0.7
RAHZ				S	Sn	17 14 51.5	+0.1
MTHZ	Maungataniwha	5.10	201	P	Pn	17 13 52.6	+0.4
MTHZ				S	Sn	17 14 52.3	+0.7
RIZ	Raoul Island	5.43	28	P	Pn	17 13 55.5	-1.0
BKZ	Black Stump Fm	5.50	202	P	Pn	17 13 57.2	0.0
BKZ				S	Sn	17 14 59.0	-1.8

IDC 06 17:19:29.9±1.8, 10°04S×152°61E, h0km, mb3.9/8, mbtmp3.9/10, ML1.3/1, MS3.3/20, Error ellipse: s-maj=51.5km s-min=22.0km az=125.0
ISC 06 17:19:35.3±1.4, 10°1S±0°1×152°5E±0°2, h35km, n27, σ1s26/10, mb3.8/7, MS3.2/18, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	5.28	278	Pn	Pn	17 20 50.8	-1.0
	0.7nm,0.3s,baz=63,slow=4.5,SNR=1.5						
	3.3nm,0.6s						
CTA	Charters Tower	11.56	210	Pn	Pn	17 22 17.2	-0.8
	1.5nm,0.5s,baz=22,slow=14,SNR=9.8						
CTA				LR	LR	17 26 42.1	
	comp=Z,202nm,18.1s,baz=34,slow=37						
JAY	Jayapura	13.92	302	LR	LR	17 28 03.4	
	comp=Z,52nm,18.5s,baz=186,slow=37						
WRA	Warramunga Arr	20.01	239	P	Pn	17 24 06.7	-0.4
	6.5nm,0.9s,baz=61,slow=10,SNR=22						
	6.5nm,0.9s						
ASAR	Alice Springs	22.23	230	P	P	17 24 30.2	+1.0
	1.9nm,0.8s,baz=62,slow=9.0,SNR=23						
ASAR				LR	LR	17 33 03.1	
	comp=Z,112nm,18.4s,baz=52,slow=36						
	1.9nm,0.8s						
STKA	Stephens Creek	23.86	203	LR	LR	17 34 31.0	
	comp=Z,106nm,18.5s,baz=25,slow=38						
GUMO	Guam	24.75	342	LR	LR	17 34 58.7	
	comp=Z,31nm,18.7s,baz=90,slow=38						
FITZ	Fitzroy Crossi	27.16	250	P	P	17 25 17.9	+2.2
	1.4nm,0.9s,baz=110,slow=15,SNR=2.2						
	1.4nm,0.9s						
BATI	Baumata	28.34	267	LR	LR	17 36 31.1	
	comp=Z,59nm,20.0s,baz=138,slow=36						
KAPI	Kappang	32.81	276	LR	LR	17 40 35.2	
	comp=Z,26nm,18.2s,baz=194,slow=38						
RPZ	Rata Peaks	37.14	157	LR	LR	17 40 01.0	
	comp=Z,107nm,19.3s,baz=161,slow=33						
JCJ	Chichijima	38.34	345	LR	LR	17 41 27.5	
	comp=Z,38nm,20.3s,baz=100,slow=34						
JOW	Kunigami	43.61	328	LR	LR	17 41 48.0	
	comp=Z,34nm,21.1s,baz=276,slow=31						
JHJ	Hachijo jima 2	44.68	345	LR	LR	17 42 38.5	
	comp=Z,23nm,20.7s,baz=74,slow=31						
MJAR	Matsushiro Arr	48.33	345	LR	LR	17 47 03.9	
	comp=Z,22nm,20.6s,baz=188,slow=34						
CMAR	Chiang Mai Arr	59.96	298	P	P	17 29 39.0	+0.3
	0.2nm,0.3s,baz=122,slow=3.8,SNR=4.9						
	0.2nm,0.3s						
KLR	Kul'dur	61.86	345	LR	LR	17 52 53.7	
	comp=Z,15nm,21.7s,baz=130,slow=32						
PETK	Petropavlovsk-	63.16	4	LR	LR	17 52 48.6	
	comp=Z,23nm,19.9s,baz=146,slow=32						
MA2	Magadan	69.50	359	LR	LR	18 01 12.3	
	comp=Z,10nm,18.9s,baz=144,slow=36						
SONM	Songino Array	70.67	329	P	P	17 30 48.7	+1.1
	0.8nm,0.8s,baz=145,slow=5.4,SNR=5.5						
	0.8nm,0.8s						
TLY	Talaya	74.53	331	LR	LR	18 01 15.1	
	comp=Z,11nm,21.8s,baz=108,slow=34						
KDAK	Kodiak Island	81.08	26	LR	LR	17 59 07.2	
	comp=Z,40nm,21.5s,baz=54,slow=29						
MKAR	Makanchi Array	84.12	319	P	P	17 32 02.6	-0.2
	0.8nm,0.9s,baz=96,slow=6.2,SNR=6.6						
MKAR				LR	LR	18 07 34.6	
	comp=Z,13nm,21.1s,baz=19,slow=34						
	0.8nm,0.9s						
ZALV	Zalesovo Beam	85.39	327	P	P	17 32 07.6	-1.4
	1.3nm,0.6s,baz=116,slow=6.8,SNR=6.8						
	1.3nm,0.6s						
ILAR	Eielson Array	87.21	22	P	P	17 32 17.3	-0.4
	1.0nm,0.9s,baz=250,slow=5.1,SNR=8.7						
	1.0nm,0.9s						
PFO	Pinyon Flats O	96.42	57	LR	LR	18 08 06.0	
	comp=Z,17nm,20.9s,baz=101,slow=30						
SNAA	Sanae	96.72	188	LR	LR	18 16 40.8	
	comp=Z,39nm,18.6s,baz=166,slow=35						

BGSI 06 17:22:05.4±1.0, 27°33S×26°61E, h37km±43km, ML2.9
PRE 06 17:22:05.3±0.9, 27°03S×26°42E, h2km, ML2.7, Presumed earthquake, South Africa

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HRAO	HartRAO	1.61	45	eP	Pn	17 22 35.0	+0.1
HRAO				eS	Sg	17 22 57.4	+0.4
HRAO				IAML		17 22 58.0	
	comp=Z,131nm,0.4s						
LBTB	Lobatse	2.14	340	eP	Pn	17 22 42.9	+0.8
LBTB				eS	Sb	17 23 10.8	-1.1
LBTB				IAML		17 23 13.1	
	comp=Z,181nm,0.5s						
LEPH	Lephalale, Lim	3.40	22	eP	Pn	17 22 59.4	0.0
LEPH				eS	Sn	17 23 40.1	-0.3
LEPH				IAML		17 23 50.5	
	comp=Z,58nm,0.5s						
HVD	Gariep Dam	3.65	193	eP	Pn	17 23 03.9	+0.9
HVD				eS	Sn	17 23 47.0	+0.2
LPHEP	Lephephe	3.69	352	i P	Pn	17 23 03.0	-0.4
LPHEP				i S	Sn	17 23 45.4	-2.1
LPHEP				IAML		17 23 59.3	
	comp=N,20nm,0.4s						
KDWAN	Kaudwane	3.97	336	i P	Pn	17 23 07.8	+0.5
KDWAN				i S	Sn	17 23 53.5	-1.0
KDWAN				IAML		17 24 12.0	
	comp=N,177nm,0.7s						
KSTD	Kokstad	4.38	145	eP	Pn	17 23 14.0	+1.0
KSTD				eS	Sn	17 24 04.6	-0.2
KSTD				IAML		17 24 22.4	
	comp=Z,17nm,0.4s						
ALKP	Alkanpan, Nort	4.68	231	eP	Pn	17 23 17.7	+0.6
ALKP				eS	Sn	17 24 10.0	-2.0
ALKP				IAML		17 24 34.5	
	comp=Z,26nm,0.4s						
KEIM	Keimoes	5.11	250	eP	Pn	17 23 24.1	+1.3
KEIM				eS	Sn	17 24 21.1	-1.4
KEIM				IAML		17 24 50.8	
	comp=Z,14nm,0.5s						
BFON	Badsfontein, M	5.31	206	eP	Pn	17 23 27.1	+1.3
BFON				eS	Sn	17 24 25.5	-2.2
BFON				IAML		17 24 56.3	
	comp=Z,19nm,0.4s						
GRAF	Camdeboo Natio	5.49	197	eP	Pn	17 23 29.4	+1.2
GRAF				eS	Sn	17 24 29.9	-2.1
GRAF				IAML		17 25 01.8	
	comp=Z,15nm,0.3s						
LKGWB	Lokgwabe	5.52	301	IAML		17 24 48.5	
	comp=N,49nm,0.1s						
BRAK	Brakfontein	5.64	212	eP	Pn	17 23 31.3	+1.0
BRAK				eS	Sn	17 24 33.6	-2.2
BRAK				IAML		17 25 03.0	
	comp=Z,12nm,0.4s						
KGCAE	Kacgae	5.65	317	i P	Pn	17 23 29.4	-1.0
MUSN	Musina, Limpop	5.67	34	eP	Pn	17 23 31.3	+0.7
MUSN				eS	Sn	17 24 34.5	-1.7
MUSN				IAML		17 24 58.0	
	comp=Z,13nm,0.4s						
BROLN	Tlhalogang	5.96	8	i P	Pn	17 23 33.2	-1.6
BROLN				i S	Sn	17 24 38.2	-5.5
BROLN				IAML		17 25 10.0	
	comp=N,12nm,0.5s						
ARMS	Ukamas	6.01	259	eP	Pn	17 23 36.7	+1.3
ARMS				eS	Sn	17 24 43.1	-1.8
GRAN	Grantham	6.42	214	eP	Pn	17 23 42.8	+1.8
GRAN				eS	Sn	17 24 52.2	-2.8
GRAN				IAML		17 25 27.3	
	comp=Z,10nm,0.4s						
FRAZ	Fraserburg	6.55	221	eP	Pn	17 23 43.7	+0.9
FRAZ				eS	Sn	17 24 56.0	-2.2
FRAZ				IAML		17 25 30.4	
	comp=Z,10nm,0.5s						
MERW	Merweville	7.05	216	eP	Pn	17 23 51.0	+1.4
MERW				eS	Sn	17 25 07.2	-3.2
MERW				IAML		17 25 50.9	
	comp=Z,6.9nm,0.4s						
KOMG	Komaggas	8.34	249	eP	Pn	17 24 09.2	+1.9
KOMG				eS	Sn	17 25 38.2	-3.8
KOMG				IAML		17 26 32.2	
	comp=Z,4.5nm,0.4s						

IDC 06 17:35:33.9±2.5**, 2°.01N×127°.28E, h0**km**, mb3.1**/3**, mbtmp3.1**/3**, Error ellipse: s-maj=194.6km s-min=28.4km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.89**	**163**	P	P	17 40 37.7	-1.7
	0.2nm,0.5s,baz=341,slow=10,SNR=5.4						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**26.32**	**166**	P	P	17 41 13.1	+1.4
	0.3nm,1.0s,baz=345,slow=11,SNR=1.5						
	0.3nm,1.0s						
MKAR	**Makanchi Array**	**59.27**	**326**	P	P	17 45 37.5	+0.1
	0.2nm,0.6s,baz=132,slow=8.3,SNR=3.5						
	0.2nm,0.6s						

*ISK **06** 18:13:06.1, 38°.40N×39°.20E, h6km, ML3.2/13*
*AFAD **06** 18:13:06.5, 38°.41N×39°.18E, h7km±1km, ML3.2*
ISC 06 18:13:06.6±0.9**, 38°.41N**±0°.03×**39°.19E**±0°.02**, h6**km±7km**, n21,** σ**0**s**.65**/31**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVRC	**Sivrice-ELAZID**	**0.10**	**110**	Pg	**Pg**	**18 13 08.5**	**-0.3**
SVRC				Sg	**Sg**	**18 13 10.1**	**-0.3**
ESGZ	**Sivrice-Elazig**	**0.10**	**280**	Pg	**Pg**	**18 13 08.9**	**0.0**
ESIJ	**Sivrice-Elazig**	**0.10**	**69**	Pg	**Pg**	**18 13 08.9**	**0.0**
ESIJ				Sg	**Sg**	**18 13 11.2**	**+0.7**
MDYL	**Doganyol-Malat**	**0.15**	**230**	Pg	**Pg**	**18 13 09.8**	**+0.1**
MDYL				Sg	**Sg**	**18 13 12.4**	**+0.6**
ELZG	**Elazig**	**0.18**	**298**	P	**Pg**	**18 13 10.3**	**+0.1**
ELZG				S	**Sg**	**18 13 13.4**	**+0.7**
ELZG				IAML		18 13 15.0	
	comp=N,8μm,0.7s						
ELZG				IAML		18 13 15.0	
	comp=E,8μm,0.4s						
CNGT	**ngs**	**0.22**	**156**	P	**Pg**	**18 13 10.9**	**0.0**
CNGT				S	**Sg**	**18 13 14.1**	**+0.4**
CNGT				IAML		18 13 15.0	
	comp=N,8μm,0.6s						
CNGT				IAML		18 13 15.0	
	comp=E,1μm,0.7s						
ELZ	**Elazig**	**0.28**	**3**	P	**Pg**	**18 13 12.1**	**+0.1**
ELZ				S	**Sg**	**18 13 15.4**	**-0.3**
ELZ				IAML		18 13 17.0	
	comp=N,7μm,0.3s						
ELZ				IAML		18 13 18.0	
	comp=E,5μm,0.3s						
MDNT	**Maden**	**0.39**	**93**	P	**Pg**	**18 13 14.5**	**+0.4**
MDNT				S	**Sg**	**18 13 20.2**	**+0.9**
MDNT				IAML		18 13 21.0	
	comp=E,2μm,0.7s						
MDNT				IAML		18 13 22.0	
	comp=N,3μm,0.3s						
KOVA	**Elazig, Kovanc**	**0.57**	**59**	P	**Pg**	**18 13 17.4**	**-0.1**
KOVA				S	**Sb**	**18 13 26.2**	**-1.3**
KOVA				IAML		18 13 32.0	
	comp=E,1μm,0.7s						
KOVA				IAML		18 13 34.0	
	comp=N,819nm,0.7s						
NARI	**Adyaman-Kaht**	**0.63**	**213**	P	**Pb**	**18 13 18.9**	**-1.1**
NARI				IAML		18 13 36.0	
	comp=N,979nm,0.9s						
KAHTU	**Kahta**	**0.76**	**217**	P	**Pb**	**18 13 21.3**	**-0.9**
KAHTU				S	**Sb**	**18 13 32.2**	**-0.7**
KAHTU				IAML		18 13 36.0	
	comp=N,759nm,0.6s						
KAHTU				IAML		18 13 36.0	
	comp=E,932nm,0.5s						
DYBB	**Diyarbakir**	**0.88**	**121**	Pg	**Pb**	**18 13 23.5**	**-0.8**
DIYA	**Diyarbakir**	**0.88**	**123**	P	**Pn**	**18 13 27.0**	**+1.4**
DIYA				S	**Sn**	**18 13 39.6**	**+0.8**
ARPR	**Arapgir-MALATY**	**0.95**	**316**	Pg	**Pb**	**18 13 25.1**	**-0.5**
ILIC	**ilic-Erzincan**	**1.15**	**335**	Pn	**Pb**	**18 13 28.7**	**-0.2**
ERZN	**Erzincan**	**1.24**	**19**	Pn	**Pg**	**18 13 30.3**	**-0.1**
BNGB	**Bingl**	**1.30**	**63**	Pn	**Pg**	**18 13 31.5**	**0.0**
YEDI	**Yedisu-Bingol**	**1.47**	**45**	Pn	**Pb**	**18 13 34.0**	**-0.5**
SVAN	**Silvan-Diyarba**	**1.60**	**99**	Pn	**Pn**	**18 13 35.4**	**-0.1**
BAYT	**Aydıntepe-Bayb**	**2.11**	**20**	Pn	**Pn**	**18 13 43.1**	**+0.5**
GURO	**Guroymak-BITLI**	**2.24**	**86**	Pn	**Pn**	**18 13 44.9**	**+0.6**

*DJA **06** 18:13:28.7±0.4, 1°N±3°×12°2E±°, h114km±4km, M3.8/22, mb3.9/1, MLv3.7/22*
*IDC **06** 18:13:32.4±10.0, 0°.31N×122°.04E, h166km±97km, mb3.1/4, mbtmp3.6/5, Error ellipse: s-maj=139.1km s-min=21.1km az=60.0*
ISC 06 18:13:27.8±0.9**, 0°.56N**±0°.07×**122°.13E**±0°.06**, h124**km±7km**, n16,** σ**1**s**.11**/20**, mb3.5**/4**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.21**	**246**	P	**Pn**	**18 13 44.8**	**-0.1**
MRSI				S	**Sn**	**18 13 56.7**	**-1.1**
GTOI	**Gorontalo**	**0.88**	**85**	P	**Pn**	**18 13 49.5**	**+0.4**
GTOI				S	**Sn**	**18 14 05.2**	**0.0**
APSI	**Ampana**	**1.54**	**198**	P	**Pn**	**18 13 56.1**	**+0.2**
LUWI	**Luwuk**	**1.72**	**158**	P	**Pn**	**18 13 59.7**	**+1.7**
LUWI				S	**Sn**	**18 14 21.8**	**+0.7**
MPSI	**Mapaga**	**2.24**	**264**	P	**Pn**	**18 14 05.4**	**+0.9**
PCI	**Palu**	**2.72**	**238**	P	**Pn**	**18 14 09.9**	**-0.6**
MNI	**Manado**	**2.85**	**72**	P	**Pn**	**18 14 12.6**	**+0.3**
TTSI	**Tana Toraja**	**4.26**	**213**	P	**Pn**	**18 14 31.7**	**+0.8**
MMSI	**Mamuju**	**4.56**	**225**	P	**Pn**	**18 14 33.3**	**-1.6**
SANI	**Sanana**	**4.65**	**124**	P	**Pn**	**18 14 34.9**	**-1.2**
SPSI	**Sidrap Palu**	**5.08**	**208**	P	**Pn**	**18 14 43.1**	**+1.3**
FITZ	**Fitzroy Crossi**	**18.86**	**170**	P	**P**	**18 17 38.1**	**-0.3**
	1.6nm,0.3s,baz=6.7,slow=11,SNR=16						
WRA	**Warramunga Arr**	**23.63**	**150**	P	**P**	**18 18 26.3**	**-1.5**
	0.8nm,0.4s,baz=328,slow=9.8,SNR=47						
	0.8nm,0.4s						
ASAR	**Alice Springs**	**26.66**	**155**	P	**P**	**18 18 54.5**	**-0.7**
	0.8nm,0.6s,baz=329,slow=9.1,SNR=18						
ASAR				PcP	**PcP**	**18 22 15.2**	**-0.9**
	0.2nm,0.4s,baz=342,slow=2.2,SNR=4.9						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**57.68**	**329**	P	**P**	**18 23 07.1**	**+1.8**
	0.2nm,0.3s,baz=122,slow=8.0,SNR=6.7						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**62.05**	**330**	P	**P**	**18 23 35.5**	**+0.5**
	0.3nm,0.7s,baz=120,slow=5.6,SNR=1.9						
	0.3nm,0.7s						

*NEIC **06** 18:28:32.8±1.5, 8°.23S±0°.03×119°.75E±0°.07, h181km±7km, mb4.4/34, Error ellipse: s-maj=9.9km s-min=3.6km az=88.0*
*IDC **06** 18:28:33.4±1.2, 8°.17S×119°.89E, h196km±10km, mb3.8/10, mbtmp4.4/16, MS2.1/1, Error ellipse: s-maj=26.1km s-min=7.7km az=57.0*
*DJA **06** 18:28:34.2±0.3, 8°S±2°×12°0E±°, h159km±4km, M4.3/34, mB4.9/5, mb4.4/13, MLv4.3/34, Mw(mB)4.2/5, MwMwp5.0/1, Mwp5.2/1*
ISC 06 18:28:32.3±0.6**, 8°.31S**±0°.04×**119°.79E**±0°.04**, h182**km±6km**, n123,** σ**1**s**.41**/138**, mb4.3**/25**, 1D, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBFI	**Labuhan Bajo,**	**0.19**	**150**	P	**Pn**	**18 28 56.5**	**0.0**
WBSI	**Waikabubak, Su**	**1.38**	**197**	P	**Pn**	**18 29 03.2**	**-0.2**
WBSI				S	**Sn**	**18 29 26.1**	**-1.4**
WSI	**Waingapu**	**1.44**	**160**	P	**Pn**	**18 29 04.0**	**+0.2**
WSI				S	**Sn**	**18 29 27.9**	**-0.5**
DBNI	**Kabupaten Domp**	**1.48**	**263**	P	**Pn**	**18 29 04.3**	**+0.1**
DBNI				S	**Sn**	**18 29 28.6**	**-0.3**
EDFI	**Ende, Flores**	**1.93**	**103**	P	**Pn**	**18 29 08.9**	**+0.1**
EDFI				S	**Sn**	**18 29 35.7**	**-1.4**
PLAI	**Plampang**	**2.06**	**255**	P	**Pn**	**18 29 11.1**	**+1.0**
PLAI	**Plampang**	**2.06**	**255**	S	**Sn**	**18 29 40.1**	**+0.6**
PLAI	**Plampang**	**2.06**	**255**	P	**Pn**	**18 29 10.4**	**+0.3**
PLAI				S	**Sn**	**18 29 39.1**	**-0.4**
BSSI	**Bau Bau, Buton**	**2.27**	**18**	P	**Pn**	**18 29 12.9**	**+0.4**
MMRI	**Maumere**	**2.44**	**98**	P	**Pn**	**18 29 15.8**	**+1.4**
MMRI	**Maumere**	**2.44**	**98**	P	**Sn**	**18 29 48.4**	**+1.2**
MMRI	**Maumere**	**2.44**	**98**		**Pn**	**18 29 15.3**	**+0.9**
MMRI				Sn	**Sn**	**18 29 48.0**	**+0.8**
MMRI	**Maumere**	**2.44**	**98**	P	**Pn**	**18 29 15.0**	**+0.6**
KAPI	**Kappang**	**3.28**	**359**	P	**Pn**	**18 29 24.9**	**+0.4**
	45nm,0.5s,baz=176,slow=12,SNR=24						
KAPI				S	**Sn**	**18 30 04.3**	**-1.0**
	31nm,0.9s,baz=175,slow=12,SNR=9.0						
KAPI				LR	LR	18 30 35.4	
	comp=Z,33nm,20.0s,baz=332,slow=39						
KAPI	**Kappang**	**3.28**	**359**	P	**Pn**	**18 29 25.4**	**+0.9**
KAPI	**Kappang**	**3.28**	**359**		**Pn**	**18 29 24.1**	**-0.4**
KAPI				Sn	**Sn**	**18 30 04.1**	**-1.2**
KAPI	**Kappang**	**3.28**	**359**	P	**Pn**	**18 29 24.8**	**+0.4**
KHKI	**Kahang-Kahang**	**4.14**	**269**	P	**Pn**	**18 29 36.3**	**+1.0**
BATI	**Baumata**	**4.26**	**117**	P	**Pn**	**18 29 37.8**	**+1.0**
	307nm,0.4s,baz=307,slow=4.0,SNR=205						
BATI				S	**Sn**	**18 30 24.6**	**-2.8**
	161nm,0.4s,baz=291,slow=8.6,SNR=4.3						
BATI	**Baumata**	**4.26**	**117**	P	**Pn**	**18 29 37.8**	**+1.0**
KKSI	**Kolaka, Sulawe**	**4.51**	**24**	P	**Pn**	**18 29 41.6**	**+1.6**
DNP	**Denpasar**	**4.55**	**265**	P	**Pn**	**18 29 42.1**	**+1.6**
IGBI	**Denpasar**	**4.62**	**263**	P	**Pn**	**18 29 42.0**	**+0.6**
SOEI	**Soe**	**4.65**	**108**	P	**Pn**	**18 29 42.8**	**+0.9**
SOEI	**Soe**	**4.65**	**108**		**Pn**	**18 29 42.8**	**+0.9**
SOEI				Sn	**Sn**	**18 30 34.7**	**-1.8**
SOEI	**Soe**	**4.65**	**108**	P	**Pn**	**18 29 44.0**	**+2.1**
RTBI	**Rangdo, Negare**	**4.80**	**268**	P	**Pn**	**18 29 43.4**	**-0.4**
TTSI	**Tana Toraja**	**5.23**	**0**	P	**Pn**	**18 29 51.0**	**+1.6**
	0.1nm28nm,0.8s						
ABJI	**Asem Bagus**	**5.53**	**275**	P	**Pn**	**18 29 55.6**	**+2.4**
	0.4nm1μm90nm,0.8s						
JAGI	**Jajag, Banyuwa**	**5.58**	**268**	P	**Pn**	**18 29 55.2**	**+1.3**
JAGI	**Jajag, Banyuwa**	**5.58**	**268**		**Pn**	**18 29 53.5**	**-0.5**
JAGI	**Jajag, Banyuwa**	**5.58**	**268**	P	**Pn**	**18 29 54.8**	**+0.9**
	0.9nm2μm76nm,0.8s						
MMSI	**Mamuju**	**5.66**	**351**	P	**Pn**	**18 29 56.8**	**+1.9**
	0.2nm7μm49nm,0.9s						
KMMI	**Kalianget**	**5.91**	**282**	P	**Pn**	**18 30 00.0**	**+1.8**
	0.3nm68nm,0.9s						
BLJI	**Banyuglugur**	**6.16**	**275**	P	**Pn**	**18 30 03.9**	**+2.4**
UGM	**Wanagama**	**9.19**	**272**	P	**Pn**	**18 30 41.4**	**+0.1**
UGM	**Wanagama**	**9.19**	**272**	Pn	**Pn**	**18 30 41.2**	**-0.1**
BNDI	**Bandanaira**	**10.73**	**70**	P	**Pn**	**18 31 04.0**	**+2.6**
FITZ	**Fitzroy Crossi**	**11.27**	**150**	P	**Pn**	**18 31 09.3**	**+1.0**
	11nm,0.4s,baz=329,slow=8.4,SNR=68						
FITZ				S	**Sn**	**18 33 09.9**	**-3.7**
	15nm,0.5s,baz=0.0,slow=20,SNR=7.7						
SAUI	**Saumlaki**	**11.40**	**89**	P	**Pn**	**18 31 10.8**	**+0.8**
SAUI	**Saumlaki**	**11.40**	**89**	Pn	**Pn**	**18 31 10.2**	**+0.2**
KNRA	**Kununurra**	**11.42**	**131**		**Pn**	**18 31 09.9**	**-0.4**
DRS	**Darwin Rock St**	**11.67**	**111**	P	**Pn**	**18 31 13.6**	**+0.1**
MTN	**Manton Dam**	**12.02**	**113**		**Pn**	**18 31 17.8**	**-0.3**
BBJI	**Bungbulang**	**12.06**	**273**	P	**Pn**	**18 31 18.1**	**-0.5**
BBJI	**Bungbulang**	**12.06**	**273**	Pn	**Pn**	**18 31 17.6**	**-1.0**
LEM	**Lembang**	**12.16**	**276**	P	**Pn**	**18 31 20.4**	**+0.4**
	18nm,0.4s,baz=53,slow=20,SNR=3.8						
MBWA	**Marble Bar**	**12.77**	**180**	P	**P**	**18 31 30.7**	**-0.9**
MBWA	**Marble Bar**	**12.77**	**180**	Pn	**Pn**	**18 31 28.1**	**+0.6**
SBUM	**Sibu**	**13.09**	**324**		**Pn**	**18 31 30.8**	**-0.8**
PSA00	**Pilbara Seismi**	**13.18**	**180**	P	**Pn**	**18 31 34.5**	**+1.8**
PSA00	**Pilbara Seismi**	**13.18**	**180**	Pn	**Pn**	**18 31 32.8**	**+0.1**
PSA00	**Pilbara Seismi**	**13.18**	**180**	Pn	**Pn**	**18 31 32.4**	**-0.4**
SIJI	**Sorong**	**13.61**	**58**	P	**Pn**	**18 31 37.1**	**-1.1**
	19nm,0.6s,baz=200,slow=12,SNR=4.7						
KKM	**Kota Kinabalu**	**14.70**	**346**	P	**P**	**18 31 53.2**	**-0.1**
KKM	**Kota Kinabalu**	**14.70**	**346**		**Pn**	**18 31 50.3**	**-1.5**
GIRL	**Giralia**	**15.22**	**200**	P	**P**	**18 31 59.6**	**+0.8**
WB0	**Warramunga Arr**	**18.15**	**130**		**P**	**18 32 31.9**	**+0.8**
WB0				IAmb	IAmb	18 32 52.4	
	comp=Z,12nm,1.1s						
WRA	**Warramunga Arr**	**18.22**	**131**	P	**Pn**	**18 32 33.1**	**-0.8**
	comp=Z,1.4nm,0.4s,baz=310,slow=12,SNR=56						
WRA				S	**S**	**18 35 46.7**	**-4.3**
	comp=Z,6.7nm,0.9s,baz=304,slow=24,SNR=8.6						
WRA				ScP	**ScP**	**18 40 12.4**	**-2.4**
	comp=Z,0.7nm,0.3s,baz=299,slow=6.6,SNR=9.8						
WRAB	**Tennant Creek**	**18.22**	**131**	P	**Pn**	**18 32 33.4**	**-0.6**
MEEK	**Meekatharra**	**18.26**	**183**	P	**Pn**	**18 32 35.4**	**+1.0**
WR8	**Warramunga Arr**	**18.35**	**131**		**Pn**	**18 32 34.5**	**-1.0**
WR8				IAmb	IAmb	18 32 41.1	
	comp=Z,12nm,0.8s						
MYKOM	**Kota Tinggi**	**18.80**	**302**	P	**P**	**18 32 38.3**	**+0.1**
MYKOM				IAmb	IAmb	18 32 44.1	
	comp=Z,14nm,0.9s						
AS31	**Alice Springs**	**20.39**	**140**		**P**	**18 32 56.9**	**+1.6**
ASAR	**Alice Springs**	**20.39**	**140**	P	**P**	**18 32 56.8**	**+1.5**
	comp=Z,3.5nm,0.6s,baz=315,slow=10.0,SNR=50						
ASAR				S	**S**	**18 36 32.8**	**-1.0**
	comp=Z,5.2nm,0.8s,baz=322,slow=22,SNR=18						
ASAR				ScP	**ScP**	**18 40 17.7**	**-2.0**
	comp=Z,0.8nm,0.5s,baz=318,slow=2.9,SNR=5.1						
	comp=Z,3.5nm,0.6s						
ASAR	**Alice Springs**	**20.39**	**140**		**P**	**18 32 57.0**	**+1.7**
MORW	**Morawa**	**20.95**	**189**	P	**P**	**18 33 03.1**	**+2.1**
MORW				IAmb	IAmb	18 33 28.7	
	comp=Z,25nm,1.4s						
QIS	**Mount Isa**	**22.69**	**125**	P	**P**	**18 33 20.4**	**+1.8**
KULM	**Kulim**	**23.39**	**305**	P	**P**	**18 33 25.0**	**+0.1**
KULM	**Kulim**	**23.39**	**305**	P	**P**	**18 33 24.3**	**-0.7**
KULM				IAmb	IAmb	18 33 27.3	
	comp=Z,10nm,0.7s						
COEN	**Coen**	**23.61**	**106**	P	**P**	**18 33 27.9**	**+1.0**
COEN	**Coen**	**23.61**	**106**		**P**	**18 33 26.9**	**-0.1**
FORT	**Forrest**	**23.65**	**162**	P	**P**	**18 33 30.1**	**+3.0**
FORT				IAmb	IAmb	18 34 01.5	
	comp=Z,12nm,0.9s						
GSI	**Gunungsitoli**	**24.12**	**292**	P	**P**	**18 33 34.6**	**+3.0**
GSI	**Gunungsitoli**	**24.12**	**292**	P	**P**	**18 33 32.0**	**+0.4**
INKA	**Innaminka**	**27.67**	**137**	P	**P**	**18 34 05.2**	**+1.9**
CTAO	**Charters Tower**	**28.14**	**117**	P	**P**	**18 34 08.8**	**+1.0**
BBOO	**Buckleboo**	**28.66**	**151**	P	**P**	**18 34 14.8**	**+2.7**
BBOO	**Buckleboo**	**28.66**	**151**	P	**P**	**18 34 13.2**	**+1.2**
QIZ	**Qiongzhong**	**28.89**	**340**	P	**P**	**18 34 14.7**	**+0.5**
QLP	**Quilpie**	**29.46**	**131**	P	**P**	**18 34 21.5**	**+2.3**
STKA	**Stephens Creek**	**31.00**	**142**	P	**P**	**18 34 34.7**	**+2.0**
	comp=Z,2.8nm,0.4s,baz=314,slow=11,SNR=7.0						
	comp=Z,2.8nm,0.4s						
STKA	**Stephens Creek**	**31.00**	**142**	P	**P**	**18 34 34.8**	**+2.0**
STKA	**Stephens Creek**	**31.00**	**142**	P	**P**	**18 34 34.7**	**+2.0**
CMSA	**Cobar Meteorol**	**33.39**	**137**	P	**P**	**18 34 56.5**	**+2.9**
CMAR	**Chiang Mai Arr**	**33.63**	**322**	P	**P**	**18 34 56.1**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=130,slow=8.1,SNR=9.3						
	comp=Z,0.7nm,0.6s						
CHTO	**Chiang Mai**	**33.90**	**323**		**P**	**18 34 58.4**	**+0.2**
PZH	**PanZhiHua**	**38.79**	**334**	P	**P**	**18 35 40.6**	**+1.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TATA	**Tatamba Isabel**	**39.58**	**93**	P	**P**	**18 35 48.2**	**+2.0**
ENH	**Enshi**	**39.62**	**346**	P	**P**	**18 35 45.9**	**-0.4**
ENH	**Enshi**	**39.62**	**346**	P	**P**	**18 35 45.5**	**-0.8**
ENH				IAmb	IAmb	18 35 50.6	
	comp=Z,7.8nm,1.3s						
SHL	**Shillong**	**43.26**	**322**		**P**	**18 36 15.4**	**-0.8**
SHL				IAmb	IAmb	18 36 16.2	
	comp=Z,9.2nm,1.0s						
LZDM	**Lanzhou Array**	**46.57**	**342**	P	**P**	**18 36 42.6**	**+0.3**
	comp=Z,1.8nm,0.3s,baz=138,slow=16,SNR=2.1						
	comp=Z,1.8nm,0.3s						
LSA	**Lhasa**	**46.78**	**325**	P	**P**	**18 36 43.6**	**-0.6**
LSA				IAmb	IAmb	18 36 45.5	
	comp=Z,7.4nm,0.6s						
LSA	**Lhasa**	**46.78**	**325**	P	**P**	**18 36 41.4**	**-2.8**
LSA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
EVN	**Everest**	**48.13**	**320**		**P**	**18 36 54.0**	**-0.9**
EVN				IAmb	IAmb	18 36 55.5	
	comp=Z,12nm,1.2s						
HHC	**Hu-ho-hao-te**	**49.50**	**352**	*e*P	**P**	**18 37 06.7**	**+2.3**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,91nm,5.1s						
GTA2	**Gaotai**	**51.06**	**340**	*e*P	**P**	**18 37 17.2**	**+1.0**
GTA2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BNX	**BinXian**	**54.24**	**7**	⇓P	**P**	**18 37 41.0**	**+1.8**
BNX				pmax	pmax		
	comp=Z,2.0nm,1.6s						
SONM	**Songino Array**	**57.15**	**349**	P	**P**	**18 37 59.2**	**-0.9**
	comp=Z,1.1nm,0.4s,baz=166,slow=6.8,SNR=6.8						
	comp=Z,1.1nm,0.4s						
SONM	**Songino Array**	**57.15**	**349**	P	**P**	**18 38 00.1**	**0.0**
LTZ	**Lake Taylor**	**57.25**	**136**	P	**P**	**18 38 01.7**	**+0.8**
KSH2	**Kashi**	**62.54**	**322**	P	**P**	**18 38 36.0**	**-1.0**
KSH2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MKAR	**Makanchi Array**	**64.21**	**332**	P	**P**	**18 38 47.0**	**-0.7**
	comp=Z,6.7nm,0.6s,baz=139,slow=7.7,SNR=100						
	comp=Z,6.7nm,0.6s						
MKAR	**Makanchi Array**	**64.21**	**332**		**P**	**18 38 47.0**	**-0.7**
MAKZ	**Makanchi**	**64.37**	**332**	P	**P**	**18 38 47.2**	**-1.5**
MAKZ				IAmb	IAmb	18 38 48.5	
	comp=Z,3.0nm,0.7s						
AAK	**Ala-Archa**	**65.37**	**325**	P	**P**	**18 38 54.0**	**-1.5**
AAK				IAmb	IAmb	18 39 10.6	
	comp=Z,9.3nm,1.5s						
ARSB	**Arslanbob**	**65.44**	**323**	P	**P**	**18 38 55.0**	**-0.9**
GAR	**Garm**	**65.73**	**319**		**P**	**18 38 56.5**	**-1.2**
KK31	**Karatay Array**	**67.97**	**323**	P	**P**	**18 39 10.5**	**-1.2**
KKAR	**Karatay Array**	**67.97**	**323**	P	**P**	**18 39 10.9**	**-0.8**
ZAA0	**Zalesovo Array**	**68.69**	**339**		**P**	**18 39 14.5**	**-1.4**
ZAA0				IAmb	IAmb	18 39 15.0	
	comp=Z,5.3nm,0.7s						
ZALV	**Zalesovo Beam**	**68.69**	**339**	P	**P**	**18 39 14.2**	**-1.6**
	comp=Z,6.1nm,0.5s,baz=142,slow=5.2,SNR=33						
	comp=Z,6.1nm,0.5s						
ZALV	**Zalesovo Beam**	**68.69**	**339**		**P**	**18 39 14.3**	**-1.5**
KURBB	**Kurchatov Arra**	**68.71**	**333**	P	**P**	**18 39 14.9**	**-1.2**
	comp=Z,2.4nm,0.7s,baz=142,slow=5.7,SNR=28						
	comp=Z,2.4nm,0.7s						
KURK	**Kurchatov**	**68.73**	**333**		**P**	**18 39 14.9**	**-1.3**
VOI	**Vohitsoka**	**71.22**	**250**	P	**P**	**18 39 33.2**	**+1.1**
BVAR	**Borovoye Array**	**74.07**	**332**	P	**P**	**18 39 46.5**	**-1.6**
	comp=Z,0.6nm,0.4s,baz=165,slow=6.0,SNR=3.6						
	comp=Z,0.6nm,0.4s						
AB31	**Akbulak array**	**77.46**	**325**	P	**P**	**18 40 05.8**	**-1.7**
ABKAR	**Akbulak array**	**77.46**	**325**	P	**P**	**18 40 05.5**	**-1.9**
GEVA	**Gevas**	**84.84**	**310**	P	**P**	**18 40 46.2**	**-0.6**
GEVA				IAmb	IAmb	18 40 47.6	
	comp=Z,7.0nm,0.9s						
GURO	**Guroymak-BITLI**	**85.68**	**310**	P	**P**	**18 40 50.8**	**-0.2**
GURO				IAmb	IAmb	18 40 51.8	
	comp=Z,5.3nm,1.0s						
BRTR	**Keskin Array B**	**92.31**	**310**	P	**P**	**18 41 20.2**	**-2.1**
	comp=Z,0.3nm,0.5s,baz=100,slow=6.0,SNR=3.1						
	comp=Z,0.3nm,0.5s						

*NEIC **06** 18:30:28.3±1.7, 47°.52N±0°.04×93°.07W±0°.04, h0km±2km, ML3.1/20, Error ellipse: s-maj=7.5km s-min=3.2km az=210.0*
*IDC **06** 18:30:29.3±3.2, 47°.39N×93°.27W, h0km, mbtmp2.7/3, ML0.9/1, Error ellipse: s-maj=31.4km s-min=14.1km az=103.0*
ISC 06 18:30:25.7±0.8**, 47°.42N**±0°.04×**93°.21W**±0°.04**, h0**km**, n23,** σ**1**s**.76**/25**, Minnesota**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EYMN	**Ely**	**1.27**	**65**		**Pg**	**18 30 49.1**	**-1.0**
EYMN	**Ely**	**1.27**	**65**	Sg	**Sg**	**18 31 05.0**	**-1.6**
EYMN				IAML		18 31 09.7	
	219nm,1.3s						
E38A	**The Farm, Brul**	**1.40**	**125**		**Pb**	**18 30 53.0**	**+0.3**
E38A				IAML		18 31 17.8	
	344nm,0.4s						
E38A				IAML		18 31 21.1	
	270nm,0.4s						
AGMN	**Agassiz Nation**	**1.99**	**297**		**Pg**	**18 31 03.9**	**+0.1**
AGMN				IAML		18 31 32.9	
	222nm,0.7s						
SPMN	**Marine on St.**	**2.21**	**172**		**Pb**	**18 31 06.8**	**+0.2**
SPMN				IAML		18 31 39.7	
	172nm,0.9s						
SPMN				IAML		18 31 46.5	
	154nm,0.4s						
EPLO	**Experimental L**	**2.28**	**352**		**Pb**	**18 31 07.3**	**-0.4**
F33A	**5 Mile Ranch,**	**2.65**	**234**		**Pb**	**18 31 13.2**	**-0.8**
TBO	**Thunder Bay**	**2.83**	**63**		**Pn**	**18 31 12.3**	**+0.1**
TBO				IAML		18 31 57.7	
	comp=N,74nm,1.3s						
TBO				IAML		18 32 07.1	
	comp=E,54nm,1.1s						
G40A	**Rib Lake**	**3.00**	**135**		**Pn**	**18 31 15.2**	**+0.7**
G40A				IAML		18 31 58.0	
	comp=E,47nm,0.3s						
G40A				IAML		18 31 59.7	
	comp=E,44nm,0.5s						
ULM	**Lac du Bonnet**	**3.33**	**329**	Pn	**Pn**	**18 31 21.7**	**+2.6**
	comp=E,0.2nm,0.3s,baz=145,slow=16,SNR=1.5						
ULM				Pg	**Pg**	**18 31 29.3**	**-0.3**
	comp=E,0.4nm,0.3s,baz=150,slow=15,SNR=9.1						
ULM				Sn	**Sn**	**18 32 01.5**	**+2.2**
	comp=E,0.4nm,0.3s,baz=135,slow=17,SNR=5.2						
ULM				Lg	Lg	18 32 11.1	
	comp=E,1.3nm,0.3s,baz=227,slow=19,SNR=6.7						
	comp=E,1.5nm,0.7s						
ULM	**Lac du Bonnet**	**3.33**	**329**		**Pn**	**18 31 21.1**	**+2.1**
I37A	**Lemond, Waseca**	**3.41**	**182**		**Pb**	**18 31 26.1**	**-0.8**
F42A	**Maple Grove Fa**	**3.88**	**114**	Pn	**Pn**	**18 31 28.4**	**+1.9**
I40A	**Norwalk**	**3.97**	**152**		**Pn**	**18 31 30.8**	**+3.0**
ECSD	**EROS Data Cent**	**4.39**	**214**		Pb	18 31 38.9	-4.8
I42A	**Draeger Farm,**	**4.64**	**138**	Pn	**Pn**	**18 31 38.4**	**+1.4**
H43A	**Windswept, Lux**	**4.81**	**126**	Pn	**Pn**	**18 31 39.6**	**+0.3**
JFWS	**Jewell Farm**	**4.97**	**154**		**Pn**	**18 31 43.6**	**+2.1**
L40A	**Anamosa**	**5.54**	**164**	Pn	**Pn**	**18 31 50.1**	**+0.8**
K43A	**Burlington**	**5.84**	**142**	Pn	**Pn**	**18 31 54.0**	**+0.4**
L42A	**Oliver, Polo**	**5.97**	**154**	Pn	**Pn**	**18 31 57.0**	**+1.7**
PDAR	**Pinedale Array**	**12.45**	**254**	Pn	**Pn**	**18 33 24.1**	**-0.1**
	comp=E,0.1nm,0.4s,baz=68,slow=6.3,SNR=1.8						
PDAR				Sn	**Sn**	**18 35 39.0**	**-4.7**
	comp=E,0.1nm,0.3s,baz=64,slow=20,SNR=7.9						
PDAR				Lg	Lg	18 36 55.5	
	baz=63,slow=30,SNR=3.3						
YKA	**Yellowknife Ar**	**19.32**	**329**	P	**Pn**	**18 34 54.2**	**+1.2**
	comp=E,0.1nm,0.5s,baz=134,slow=11,SNR=4.0						
YKA				Lg	Lg	18 40 22.4	
	baz=132,slow=31						

*AZER **06** 18:34:45.8, 38°.47N×44°.41E, h2km, ml2.5*
*AFAD **06** 18:34:47.9, 38°.48N×44°.41E, h7km±4km, ML2.2*
*ISK **06** 18:34:49.8, 38°.41N×44°.45E, h12km, ML2.8/6*
ISC 06 18:34:47.8±1.2**, 38°.47N**±0°.03×**44°.41E**±0°.02**, h2**km±10km**, n27,** σ**1**s**.59**/47**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.38**	**300**	P	**Pg**	**18 34 55.1**	**-0.1**
OZAP				S	**Sg**	**18 35 01.5**	**+1.4**
TVAN	**Van**	**0.79**	**274**	P	**Pg**	**18 35 02.5**	**-0.5**
TVAN				S	**Sb**	**18 35 14.7**	**-1.0**
TVAN				IAML		18 35 25.0	
	comp=N,254nm,0.8s						
TVAN				IAML		18 35 28.0	
	comp=E,224nm,0.7s						
VANB	**Van**	**0.81**	**279**	Pg	**Pn**	**18 35 06.0**	**-0.5**
VANB				Sg	**Sn**	**18 35 18.0**	**-1.2**
VMUR	**Van-Muradiye**	**0.84**	**308**	P	**Pg**	**18 35 03.6**	**-0.3**
VMUR				S	**Sb**	**18 35 16.8**	**-0.3**
VMUR				IAML		18 35 23.0	
	comp=E,95nm,0.9s						
VMUR				IAML		18 35 30.0	
	comp=N,95nm,0.8s						
YOVA	**Hakkari_Yksek**	**0.89**	**186**	P	**Pb**	**18 35 06.1**	**0.0**
YOVA				S	**Sn**	**18 35 21.8**	**+0.7**
YOVA				IAML		18 35 25.0	
	comp=N,74nm,0.7s						
YOVA				IAML		18 35 27.0	
	comp=E,93nm,0.5s						
HAKT	**HAKKARI**	**1.07**	**212**	P	**Pb**	**18 35 08.9**	**-0.4**
HAKT				S	**Sn**	**18 35 26.4**	**+0.7**
GEVA	**Gevas**	**1.08**	**262**	P	**Pg**	**18 35 07.2**	**-1.3**
GEVA				S	**Sb**	**18 35 23.8**	**-0.1**
NAX	**Nakhchivan**	**1.10**	**50**	P	**Pn**	**18 35 10.0**	**-0.3**
NAX				S	**Sn**	**18 35 26.0**	**-0.2**
DYDN	**Diyadin**	**1.21**	**332**	P	**Pn**	**18 35 12.4**	**+0.4**
DYDN				S	**Sn**	**18 35 27.6**	**-1.6**
SBZ	**Shahbuz**	**1.28**	**44**	P	**Pg**	**18 35 12.8**	**+0.4**
SBZ				S	**Sn**	**18 35 32.3**	**+1.5**
HYR	**Heyderabad**	**1.29**	**15**	P	**Pg**	**18 35 13.8**	**+1.2**
HYR				S	**Sn**	**18 35 35.3**	**+4.3**
ORD	**Ordubad**	**1.32**	**69**	P	**Pg**	**18 35 13.7**	**+0.6**
ORD				S	**Sn**	**18 35 34.7**	**+3.1**
CUKT	**Cukurca**	**1.38**	**208**	Pn	**Pg**	**18 35 14.9**	**+0.7**
IGDI	**IGDIR**	**1.42**	**350**	P	**Pg**	**18 35 15.5**	**+0.5**
IGDI				IAML		18 35 38.0	
	comp=E,35nm,0.9s						
IGDI				IAML		18 35 39.0	
	comp=N,37nm,0.8s						
IGDI	**IGDIR**	**1.42**	**350**	P	**Pg**	**18 35 15.3**	**+0.3**
IGDI				S	**Sg**	**18 35 37.9**	**+4.5**
AGRB	**Hanur-Agry**	**1.56**	**315**	Pn	**Pg**	**18 35 18.4**	**+0.6**
DORK	**Agr/Tutak/Do**	**1.57**	**306**	P	**Pn**	**18 35 16.1**	**-0.8**
DORK				S	**Sg**	**18 35 40.0**	**+1.8**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MLAZ	Malazgirt-MUS	1.60	295	Pn	Pg	18 35 19.4	+0.9
KOTA	Agri, Merkez-K	1.63	325	P	Pg	18 35 18.7	-0.3
KOTA				IAML		18 35 57.0	
	comp=E,14nm,0.9s						
GNI	Garni	1.69	9	Pn	Pg	18 35 20.9	+0.6
GURO	Guroymak-BITLI	1.87	273	Pn	Pb	18 35 22.8	0.0
QRD	Qoradiz	2.47	66	P	Pb	18 35 32.2	-0.9
QRD				S	Sg	18 36 06.2	-1.1
GDB	GEDABAY	2.47	24	P	Pn	18 35 30.7	+1.4
GDB				S	Sg	18 36 07.7	+0.4
GANJ	Ganja	2.62	34	P	Pb	18 35 33.0	-2.6
GANJ				S	Sb	18 36 08.2	-0.2
QZX	Qazax, Azerbai	2.69	16	P	Pb	18 35 34.0	-2.7
QZX				S	Sg	18 36 11.9	-2.2
YRD	Yardimli	3.03	80	P	Pb	18 35 39.8	-2.8
YRD				S	Sb	18 36 20.3	+0.1
LRK	Lerik	3.08	86	P	Pb	18 35 40.8	-2.8
LRK				S	Sb	18 36 21.9	+0.2

IDC 06 18:39:51.1±2.1, 6°.82S×128°.86E, h0^{km}, mb3.2/1, mbtmp3.5/5, ML3.6/4, Error ellipse: s-maj=51.7km s-min=28.4km az=80.0, Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	Baumata	6.14	236	Pn	Pn	18 41 24.4	+1.2
	6.0nm,0.3s,baz=63,slow=2.3,SNR=11						
BATI				Sn	Sn	18 42 20.3	-14
	7.6nm,0.3s,baz=93,slow=19,SNR=12						
	19nm,0.4s						
FITZ	Fitzroy Crossi	11.64	195	Pn	Pn	18 42 36.6	-1.9
	0.3nm,0.3s,baz=16,slow=15,SNR=9.6						
FITZ				Sn	Sn	18 44 27.2	-22
	0.4nm,0.3s,baz=12,slow=14,SNR=3.9						
	1.4nm,0.4s						
WRA	Warramunga Arr	14.09	158	Pn	Pn	18 43 11.5	-0.6
	0.2nm,0.3s,baz=336,slow=11,SNR=8.9						
WRA				Sn	Sn	18 45 36.0	-13
	0.4nm,0.3s,baz=330,slow=22,SNR=9.5						
	0.3nm,0.8s						
ASAR	Alice Springs	17.44	164	P	P	18 43 57.4	+0.1
	0.1nm,0.3s,baz=337,slow=11,SNR=10						
ASAR				S	Sn	18 46 55.9	-15
	0.4nm,0.6s,baz=334,slow=14,SNR=4.4						
	0.8nm,0.8s						
MKAR	Makanchi Array	67.46	327	P	P	18 50 48.7	-0.1
	0.1nm,0.5s,baz=116,slow=6.6,SNR=4.5						
	0.1nm,0.5s						

*BGSI **06** 18:39:53.8±1.3, 26°.02S×27°.99E, h306^{km}±85^{km}, ML2.4*
PRE 06 18:39:57.0±0.8, 26°.41S×27°.34E, h2^{km}, ML2.0, Presumed earthquake, South Africa

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WDLM	Western Deep L	0.07	97	eP	Pg	18 39 59.0	+0.4
WDLM				eS	Sg	18 39 59.9	+0.2
WDLM				IAML		18 40 02.6	
	comp=Z,974nm,0.1s						
PRYS	Parys	0.51	178	eP	Pg	18 40 07.6	+0.8
PRYS				eS	Sg	18 40 14.0	+0.6
PRYS				IAML		18 40 17.4	
	comp=Z,63nm,0.4s						
HRAO	HartRAO	0.61	31	eP	Pg	18 40 08.4	-0.3
HRAO				eS	Sg	18 40 16.9	+0.4
HRAO				IAML		18 40 21.6	
	comp=Z,43nm,0.1s						
SNKL	Senekal, Frees	1.89	168	eP	Pn	18 40 30.9	+0.4
SNKL				eS	Sn	18 40 55.6	+0.5
SNKL				IAML		18 40 55.9	
	comp=Z,31nm,0.2s						
SWZ	Schweizer	1.95	246	eP	Pn	18 40 32.1	+0.8
SWZ				eS	Sb	18 40 58.1	-0.1
SWZ				IAML		18 41 05.6	
	comp=Z,12nm,0.2s						
LBTB	Lobatse	2.10	311	eP	Pn	18 40 34.1	+0.8
LBTB				eS	Sn	18 41 01.1	+1.1
LBTB				IAML		18 41 07.5	
	comp=Z,28nm,0.3s						
LEPH	Lephalale, Lim	2.58	9	eP	Pn	18 40 40.3	+0.4
LEPH				eS	Sn	18 41 12.1	+0.2
LEPH				IAML		18 41 18.4	
	comp=Z,11nm,0.3s						
BOSA	Boshof	2.87	220	eP	Pn	18 40 44.8	+0.9
BOSA				eS	Sn	18 41 19.5	+0.4
BOSA				IAML		18 41 30.9	
	comp=Z,4.3nm,0.5s						
LPHEP	Lephephe	3.32	336	i P	Pn	18 40 52.2	+2.1
LPHEP				IAML		18 41 47.7	
	comp=E,13nm,0.6s						
PILG	Pilgrimsrest,	3.38	65	eP	Pn	18 40 51.9	+0.9
PILG				eS	Sn	18 41 32.1	+0.2
PILG				IAML		18 41 42.4	
	comp=Z,9.0nm,0.5s						
KDWAN	Kaudwane	3.88	321	i P	Pn	18 40 58.9	+1.2
KDWAN				i S	Sn	18 41 48.1	+4.2
KDWAN				IAML		18 42 04.0	
	comp=N,18nm,0.6s						
PMBG	Pietermaritzbu	4.17	138	eP	Pn	18 41 02.7	+1.0
PMBG				eS	Sn	18 41 49.9	-1.2
PMBG				IAML		18 42 06.6	
	comp=Z,6.5nm,0.3s						
KSTD	Kokstad	4.53	158	eP	Pn	18 41 07.7	+0.9
KSTD				eS	Sn	18 41 59.8	-0.3
KSTD				IAML		18 42 16.5	
	comp=Z,3.1nm,0.7s						
MUSN	Musina, Limpop	4.71	30	eP	Pn	18 41 10.1	+0.9
MUSN				eS	Sn	18 42 03.7	-0.7
MUSN				IAML		18 42 22.3	
	comp=Z,4.5nm,0.3s						
KHWEE	KHWEE	4.77	338	i P	Pn	18 41 07.8	-2.3
BROLN	Tlhalogang	5.29	360	i P	Pn	18 41 09.5	-7.7
ALKP	Alkanpan, Nort	5.70	231	eP	Pn	18 41 24.0	+1.1
ALKP				eS	Sn	18 42 26.6	-2.5
ALKP				IAML		18 43 08.7	
	comp=Z,2.4nm,0.2s						
UPI	Upington	5.75	249	eP	Pn	18 41 24.8	+1.4
UPI				eS	Sn	18 42 28.0	-2.0
UPI				IAML		18 43 13.9	
	comp=Z,1.9nm,0.4s						
GRAF	Camdeboo Natio	6.35	202	eP	Pn	18 41 32.3	+0.6
GRAF				eS	Sn	18 42 42.9	-2.0
GRAF				IAML		18 43 25.9	
	comp=Z,2.9nm,0.5s						
BRAK	Brakfontein	6.61	215	eP	Pn	18 41 36.6	+1.3
BRAK				eS	Sn	18 42 48.5	-2.9
BRAK				IAML		18 43 41.6	
	comp=Z,1.9nm,0.4s						
ROOI	Rooidraai Farm	6.90	208	eP	Pn	18 41 40.3	+1.1
ROOI				eS	Sn	18 42 56.0	-2.4
ROOI				IAML		18 43 03.2	
	comp=Z,1.2nm,0.6s						
GRAN	Grantham	7.40	216	eP	Pn	18 41 47.4	+1.3
GRAN				eS	Sn	18 43 07.1	-3.6
GRAN				IAML		18 43 26.4	
	comp=Z,1.4nm,0.9s						
FRAZ	Fraserburg	7.55	222	eP	Pn	18 41 50.1	+1.8
FRAZ				eS	Sn	18 43 11.6	-3.0
FRAZ				IAML		18 43 19.2	
	comp=Z,0.9nm,0.3s						
MERW	Merweville	8.03	218	eP	Pn	18 41 56.9	+2.0
MERW				eS	Sn	18 43 22.8	-3.5
MERW				IAML		18 43 41.0	
	comp=Z,1.3nm,0.5s						
SUR	Sutherland	8.23	222	eP	Pn	18 41 58.9	+1.3
SUR				eS	Sn	18 43 27.0	-4.3
SUR				IAML		18 44 20.1	
	comp=Z,1.2nm,0.5s						

*SOME **06** 19:00:52.3, 42°.63N×82°.67E, h15^{km}*
*NNC **06** 19:00:56.0±2.2, 42°.06N×82°.08E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=16.5km s-min=8.8km az=157.0*
ISC 06 19:00:49.3±2.5, 42°.59N±0°.10×82°.77E±0°.07, h3^{km}±15^{km}, n21, σ1°.60/31, 3C-6D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KTMS	Ketmen	1.97	297	P	Pb	19 01 26.1	+0.2
	17nm,0.2s						
KTMS				S	Sb	19 01 50.9	0.0
	92nm,0.3s						
KTMS	Ketmen	1.97	297	eP	Pg	19 01 26.9	-0.1
	17nm,0.2s						
KTMS				eS	Sb	19 01 51.4	+0.5
	92nm,0.3s						
SHLS	Shalkode	2.50	284	Pg	Pn	19 01 31.2	+0.3
	35nm,0.2s						
SHLS				Lg	Lg	19 01 58.3	
	92nm,0.2s						
SHLS	Shalkode	2.50	284	eP	Pn	19 01 31.2	+0.3
	35nm,0.2s						
SHLS				eS	Sn	19 01 58.3	-3.7
	94nm,0.2s						
PDGK	Podgornoye	2.52	288	⇓Pn	Pb	19 01 36.3	+1.0
	25nm,0.8s						
PDGK				⇓Sn	Sb	19 02 06.6	-0.1
	44nm,0.6s						
DJR	Jarkent	2.78	310	Pg	Pg	19 01 42.1	-0.6
	2.2nm,0.2s						
DJR				Lg	Lg	19 02 18.3	
	10nm,0.4s						
DJR	Jarkent	2.78	310	eP	Pg	19 01 42.1	-0.6
	2.5nm,0.1s						
DJR				eS	Sg	19 02 18.3	-0.4
	10nm,0.4s						
UZB	Uzynbulak	2.81	283	Pg	Pb	19 01 41.3	+1.1
	8.6nm,0.2s						
UZB				Lg	Lg	19 02 14.3	
	42nm,0.4s						
UZB	Uzynbulak	2.81	283	eP	Pb	19 01 40.8	+0.6
	8.6nm,0.2s						
UZB				eS	Sb	19 02 15.3	+0.2
	49nm,0.3s						
KNOS	Konyrlen	3.16	305	Pg	Pb	19 01 48.1	+1.9
	0.5nm,0.1s						
KNOS				Lg	Lg	19 02 28.6	
	10nm,0.2s						
SATY	Saty	3.24	280	Pg	Pb	19 01 47.9	+0.3
	3.2nm,0.3s						
SATY				Lg	Lg	19 02 26.6	
	41nm,0.2s						
BLB	Baldybastay	3.47	297	Pg	Pg	19 01 54.0	-1.9
	0.1nm,0.1s						
BLB				Lg	Lg	19 02 39.6	
	39nm,0.3s						
KURS	Kuram	3.49	287	Pg	Pb	19 01 52.5	+0.8
	5.9nm,0.4s						
KURS				Lg	Lg	19 02 36.1	
	11nm,0.5s						
KAPS	Kapalarasan	3.65	319	Pg	Pb	19 01 56.9	+2.4
	5.9nm,0.1s						
KAPS				Lg	Lg	19 02 43.9	
	20nm,0.3s						
ARXS	Arharly	3.95	296	Pg	Pb	19 02 00.7	+1.1
	2.8nm,0.5s						
ARXS				Lg	Lg	19 02 48.7	
	9.1nm,0.4s						
ARXS	Arharly	3.95	296	eP	Pb	19 02 02.1	+2.4
	2.1nm,0.2s						
ARXS				eS	Sb	19 02 51.7	+3.8
	9.1nm,0.4s						
MK31	Makanchi Array	4.22	356	Pn	Pg	19 02 08.3	-1.8
	0.5nm,0.5s,baz=185,slow=12,SNR=31						
MK31				⇓Sn	Sg	19 03 05.9	+1.0
	1.5nm,0.4s,baz=178,slow=25,SNR=4.9						
MK31				⇓Lg	Lg	19 03 26.2	
	2.5nm,0.5s,baz=190,slow=30,SNR=4.5						
MAKZ	Makanchi	4.26	353	⇓Pn	Pg	19 02 09.0	-1.9
	0.8nm,0.3s						
MAKZ				⇓Sn	Sg	19 03 04.8	-1.3
	4.0nm,0.5s						
MAKZ				⇑Lg	Lg	19 03 25.9	
	4.6nm,0.6s						
ZSN	Zaisan	5.09	16	Pg	Pg	19 02 26.0	-0.7
	0.8nm,0.1s						
ZSN				Lg	Lg	19 03 34.3	
	6.5nm,0.6s						
ZSN	Zaisan	5.09	16	eP	Pg	19 02 26.0	-0.7
	2.0nm,0.3s						
ZSN				eS	Sg	19 03 32.8	+0.2
	6.5nm,0.6s						
AAK	Ala-Archa	6.11	273	⇑Pg	Pb	19 02 38.7	+2.3
	1.2nm,0.9s						
AAK				⇑Lg	Lg	19 03 55.0	
	1.0nm,0.5s						

*NEIC **06** 19:03:13.5±1.4, 43°.66N±0°.02×105°.30W±0°.08, h0^{km}±1^{km}, ML3.5/72, Error ellipse: s-maj=10.4km s-min=3.1km az=75.0*
*IDC **06** 19:03:14.6±1.0, 44°.02N×105°.61W, h0^{km}, mbtmp3.0/6, ML3.2/6, Error ellipse: s-maj=22.1km s-min=8.0km az=147.0*
ISC 06 19:03:13.4±0.9, 43°.71N±0°.05×105°.32W±0°.05, h0^{km}, n79, σ1°.92/79, Wyoming

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	1.01	66		Pg	19 03 34.5	+1.7
K22A	Casper	1.38	220		Pg	19 03 40.2	+0.3
K22A				IAML		19 04 02.0	
	803nm,0.3s						
K22A				IAML		19 04 03.5	
	810nm,0.3s						
LAO	LASA Array	3.04	348		Pn	19 04 04.9	+2.0
LAO				IAML		19 05 03.0	
	173nm,1.4s						
LAO				IAML		19 05 14.2	
	134nm,0.9s						
RLMT	Red Lodge	3.16	298		Pn	19 04 07.0	+2.3
RLMT				IAML		19 06 13.8	
	77nm,3.4s						
BW06	Boulder Array	3.24	254		Pn	19 04 07.0	+1.2
BW06				IAML		19 04 59.1	
	70nm,1.1s						
BW06				IAML		19 05 26.5	
	81nm,1.1s						
PD31	Pinedale Array	3.24	254		Pn	19 04 07.7	+2.0
PDAR	Pinedale Array	3.24	254	Pn	Pn	19 04 07.7	+2.0
	3.3nm,0.3s,baz=65,slow=15,SNR=66						
PDAR				Lg	Lg	19 04 51.8	
	11nm,0.3s,baz=65,slow=33,SNR=6.8						
	4.9nm,0.4s						
PDAR	Pinedale Array	3.24	254		Pn	19 04 06.7	+1.0
HAYD	Hayden	3.50	205		Pn	19 04 11.8	+2.4
HAYD				IAML		19 05 46.6	
	comp=N,122nm,1.2s						
HAYD				IAML		19 05 51.0	
	comp=E,100nm,1.5s						
YNE	Yellowstone No	3.60	293		Pn	19 04 12.5	+1.7
YNE				IAML		19 05 22.5	
	comp=E,81nm,0.8s						
YNE				IAML		19 05 26.8	
	comp=N,72nm,0.9s						
YMP	Mirror Lake Pl	3.63	288	Pn	Pn	19 04 13.9	+2.8
YMP				IAML		19 05 20.0	
	comp=E,118nm,0.8s						
YMP				IAML		19 05 22.2	
	comp=N,85nm,1.2s						
OGNE	Ogallala	3.69	138		Pn	19 04 13.6	+1.9
LOHW	Long Hollow	3.84	270		Pn	19 04 17.1	+3.2
LOHW				IAML		19 05 35.0	
	comp=N,50nm,1.0s						
H17A	Grant Village	3.85	282		Pn	19 04 16.7	+2.5
H17A				IAML		19 05 20.7	
	comp=E,58nm,2.7s						
FLWY	Flagg Ranch	3.91	277		Pn	19 04 17.0	+2.1
FLWY				IAML		19 06 12.8	
	comp=E,71nm,1.9s						
ISCO	Idaho Springs	3.92	183		Pn	19 04 17.3	+2.2
ISCO				IAML		19 05 24.9	
	comp=E,44nm,1.0s						
ISCO				IAML		19 05 29.6	
	comp=E,42nm,2.4s						
MOOW	Moose Ponds	3.93	272		Pn	19 04 18.1	+2.8
SNOW	Snow King Moun	3.96	268	Pn	Pn	19 04 18.9	+3.2
SNOW				IAML		19 05 33.6	
	comp=E,85nm,1.3s						
SNOW				IAML		19 05 55.8	
	comp=E,85nm,1.6s						
YNR	Norris Junctio	3.98	286		Pn	19 04 18.5	+2.5
YNR				IAML		19 05 31.8	
	comp=E,43nm,2.4s						
YPP	Pitchstone Pla	4.00	280		Pn	19 04 18.5	+2.3
YFT	Old Faithful	4.04	282		Pn	19 04 18.8	+2.0
YFT				IAML		19 05 33.3	
	comp=E,61nm,2.2s						
YHH	Holmes Hill	4.12	287		Pn	19 04 19.6	+1.8
FXWY	Fox Creek	4.14	271		Pn	19 04 20.6	+2.4
O20A	White River Ci	4.19	212		Pn	19 04 20.1	+1.4
K30B	Basset	4.30	102		Pn	19 04 21.4	+1.3
AHID	Auburn Hatcher	4.33	259		Pn	19 04 22.6	+1.9
AHID				IAML		19 05 44.6	
	comp=E,51nm,1.0s						
E28A	Huff	4.34	47		Pn	19 04 22.8	+2.0
YHB	Horse Butte	4.35	286		Pn	19 04 24.2	+3.3
YHL	Hebgen Lake	4.36	287		Pn	19 04 22.4	+1.2
YHL				IAML		19 05 46.9	
	comp=E,57nm,1.2s						
YHL				IAML		19 05 54.3	
	comp=N,48nm,1.1s						
RDMU	Red Mountain	4.46	227		Pn	19 04 23.1	+0.7
RDMU				IAML		19 06 04.1	
	comp=N,54nm,1.2s						
RDMU				IAML		19 06 19.3	
	comp=E,52nm,1.1s						
QLMT	Earthquake Lak	4.53	286		Pn	19 04 25.3	+1.8
Q24A	Divide	4.75	178		Pn	19 04 27.9	+1.4
Q24A				IAML		19 05 49.7	
	comp=E,41nm,0.7s						
Q24A				IAML		19 05 52.9	
	comp=N,26nm,0.8s						
BOZ	Bozeman (W)	4.88	295	Pn	Pn	19 04 30.5	+2.3
BOZ				IAML		19 05 49.1	
	comp=N,25nm,2.0s						
BOZ				IAML		19 06 07.9	
	comp=N,22nm,2.0s						
HWUT	Hardware Ranch	5.07	248		Pn	19 04 32.7	+1.9
KSCO	Kaye Shedlock'	5.12	156		Pn	19 04 32.5	+1.0
BSUT	Blindstream Ca	5.14	234		Pn	19 04 34.0	+2.0
BSUT				IAML		19 06 04.4	
	comp=N,28nm,2.1s						
BSUT				IAML		19 06 20.7	
	comp=E,33nm,1.9s						
TCUT	Toone Canyon	5.20	242		Pn	19 04 35.1	+2.4
EGMT	Eagleton	5.31	326		Pn	19 04 35.6	+1.6
DLMT	Dillon	5.46	290		Pn	19 04 39.7	+3.6
P18A	Preston Nutter	5.50	224		Pn	19 04 38.5	+1.5
MCMT	McKenzie Canyo	5.52	284		Pn	19 04 39.9	+2.8
SPUT	South Promonto	5.79	248		Pn	19 04 42.8	+2.1
PV22	Blue Mesa, Par	5.80	208		Pn	19 04 42.7	+1.8
HVU	Hansel Valley	5.82	253		Pn	19 04 42.9	+1.8
PV07	Paradox Valley	5.84	207		Pn	19 04 42.6	+1.1
PV21	Cone Mtn., Par	5.84	209		Pn	19 04 43.3	+1.8
P17A	Butcher Ranch,	5.87	226		Pn	19 04 42.9	+1.1
PV15	Paradox Valley	5.88	205		Pn	19 04 43.4	+1.4
LYMT	Lyon Mountain	5.89	306		Pn	19 04 43.4	+1.2
PV23	Carpenter Ridg	5.95	209		Pn	19 04 44.8	+1.8
SDCO	Great Sand Dun	5.96	181		Pn	19 04 44.3	+1.1
PV04	Paradox Valley	5.97	208		Pn	19 04 44.5	+1.4
PV12	Saucer Basin,	6.00	207		Pn	19 04 44.3	+0.6
PV14	Lion Creek, Pa	6.03	209		Pn	19 04 44.6	+0.6
PV10	Paradox Valley	6.03	209		Pn	19 04 46.7	+2.6
PV20	West Nyswonger	6.04	208		Pn	19 04 45.4	+1.2
SRU	San Rafael Swe	6.04	222		Pn	19 04 44.5	+0.3
PV11	David Mesa, Pa	6.04	208		Pn	19 04 44.2	0.0
PV16	Nyswonger Mesa	6.04	208		Pn	19 04 44.6	+0.4
PV03	Paradox Valley	6.07	207		Pn	19 04 45.2	+0.6
PV02	Paradox Valley	6.08	206		Pn	19 04 45.8	+1.0
PV17	East Wray Mesa	6.09	208		Pn	19 04 45.6	+0.7
PV01	Paradox Valley	6.09	205		Pn	19 04 47.1	+2.1
PV18	Skein Mesa, Pa	6.10	208		Pn	19 04 46.6	+1.6
PV13	Radium Mtn., P	6.15	207		Pn	19 04 46.9	+1.2
TMUT	Trail Mountain	6.25	227		Pn	19 04 47.6	+0.5
ECSD	EROS Data Cent	6.31	87		Pn	19 04 47.9	+0.2
PV05	Paradox Valley	6.32	208		Pn	19 04 47.0	-1.0
BGU	Big Grassy Mou	6.36	247		Pn	19 04 50.2	+1.6
DUG	Dugway, Tooele	6.60	240		Pn	19 04 52.6	+0.8
HLID	Hailey	6.60	272		Pn	19 04 52.8	+0.9
T25A	Trinidad	6.61	174		Pn	19 04 53.2	+1.2
HMU	Henry Mountain	7.08	217		Pn	19 04 59.2	+0.6
RTBA	Rita Blanca	7.53	164		Pn	19 05 04.5	-0.1
ELK	Elko	7.94	251	Pn	Pn	19 05 13.9	+3.7
	comp=E,0.1nm,0.3s,baz=52,slow=19,SNR=4.3						
ELK				Lg	Lg	19 07 23.6	
	comp=E,0.1nm,0.3s,baz=37,slow=20,SNR=3.3						
	comp=E,0.6nm,0.6s						
ULM	Lac du Bonnet	9.18	41	Pn	Pn	19 05 24.9	-2.2
	comp=E,2.8nm,0.3s,baz=227,slow=12,SNR=20						
ULM				Lg	Lg	19 07 56.1	
	baz=127,slow=20						
	comp=E,1.4nm,0.3s						
NVAR	Mina Array Bea	11.13	246	Pn	Pn	19 05 57.4	+3.4
	comp=E,0.1nm,0.3s,baz=44,slow=16,SNR=1.5						
	comp=E,0.2nm,0.4s						
TXAR	Lajitas Array	14.41	174	Pn	P	19 06 44.9	-1.0
	baz=358,slow=9.3,SNR=1.2						
TXAR				Pg		19 07 46.6	
	comp=E,0.1nm,0.3s,baz=352,slow=16,SNR=4.3						
TXAR				Lg	Lg	19 10 51.3	
	baz=351,slow=32						
	comp=E,0.1nm,0.4s						
YKA	Yellowknife Ar	19.58	347	P	P	19 07 39.4	-3.3
	baz=158,slow=10,SNR=1.6						
	comp=E,0.1nm,0.4s						

*SJA **06** 19:04:02.1±1.6, 30°.30S×72°.52W, h10^{km}, ML4.3, MW3.9*
*IDC **06** 19:04:05.2±0.9, 30°.25S×72°.18W, h0^{km}, mb4.2/5, mbtmp4.0/10, ML4.0/4, MS3.0/3, Error ellipse: s-maj=24.8km s-min=20.8km az=93.0*
*GUC **06** 19:04:06.4±0.8, 30°.32S×72°.18W, h43^{km}±4^{km}, ML4.3*
*NEIC **06** 19:04:06.8±1.6, 30°.33S±0°.04×72°.21W±0°.05, h17^{km}±5^{km}, mb4.4/9, ML4.3(GUC), Error ellipse: s-maj=6.9km s-min=5.1km az=50.0*
ISC 06 19:04:04.2±1.5, 30°.29S±0°.03×72°.32W±0°.05, h8^{km}±9^{km}, n127, σ1°.59/148, mb4.3/7, 6C-5D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.70	123		Pb	19 04 18.7	0.0
CO06				Sg	Sg	19 04 24.9	-2.0
CO06	Fray Jorge	0.70	123	⇓iP	Pb	19 04 18.7	0.0
CO06				i S	Sb	19 04 27.0	-1.5
CO06				IAML		19 04 30.1	
	comp=E,22μm,0.1s						
CO05	La Serena	1.01	69		Pg	19 04 24.0	+0.5
CO05	La Serena	1.01	69	⇓iP	Pg	19 04 24.1	+0.5
CO05				i S	Sn	19 04 37.1	-1.8
CO05				IAML		19 04 41.5	
	comp=E,11μm,0.3s						
GO04	Tololo Observa	1.32	85		Pb	19 04 28.9	-0.4
GO04				Sn	Sg	19 04 46.2	-0.6
GO04	Tololo Observa	1.32	85	⇓iP	Pb	19 04 29.0	-0.4
GO04				i S	Sg	19 04 46.6	-0.1
GO04				IAML		19 04 51.7	
	comp=E,11μm,0.4s						
GO04	Tololo Observa	1.32	85	eP	Pb	19 04 29.1	-0.3
GO04				eS	Sg	19 04 50.3	+3.6
GO04				IAML		19 04 52.7	
	comp=Z,6μm,0.4s						
CO02	Combarbal	1.45	129		Pb	19 04 31.1	-0.4
CO02				Sn	Sb	19 04 48.6	-1.7
CO02	Combarbal	1.45	129	⇓iP	Pb	19 04 31.2	-0.4
CO02				i S	Sb	19 04 49.0	-1.3
CO02				IAML		19 04 54.5	
	comp=N,9μm,0.2s						
CO02	Combarbal	1.45	129	eP	Pb	19 04 31.3	-0.3
CO02				eS	Sg	19 04 53.4	+2.4
CO02				IAML		19 05 01.8	
	comp=Z,4μm,0.5s						
CO03	El Pedregal	1.51	112		Pn	19 04 31.4	-0.2
CO03				Sn	Sb	19 04 49.8	-2.0
CO03	El Pedregal	1.51	112	⇓iP	Pn	19 04 31.4	-0.2
CO03				i S	Sb	19 04 50.0	-1.8
CO03				IAML		19 04 52.8	
	comp=N,5μm,0.3s						
LCO	Las Campanas	1.90	48		Pn	19 04 37.9	+0.7
LCO	Las Campanas	1.90	48	eP	Pn	19 04 37.5	+0.4
LCO				eS	Sb	19 05 02.5	-0.8
LCO	Las Campanas	1.90	48	eP	Pn	19 04 37.8	+0.6
LCO				eS	Sg	19 05 06.8	+1.5
LCO				IAML		19 05 13.1	
	comp=Z,5μm,0.8s						
CO01	Juntas del Tor	1.95	81		Pb	19 04 38.9	-1.3
CO01	Juntas del Tor	1.95	81	⇑iP	Pb	19 04 39.1	-1.1
CO01				i S	Sb	19 05 03.6	-1.2
CO01				IAML		19 05 09.5	
	comp=N,3μm,0.5s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CO04	Los Peladeros	2.09	147		Pn	19 04 40.9	+1.2
CO04	Los Peladeros	2.09	147	⇑iP	Pn	19 04 41.0	+1.2
CO04				iS	Sn	19 05 04.6	-1.6
CO04				IAML		19 05 16.1	
	comp=N,3µm,0.7s						
AC05	El Transito	2.30	51		Pn	19 04 43.7	+1.2
AC05	El Transito	2.30	51	⇑iP	Pn	19 04 44.0	+1.5
AC05				iS	Sn	19 05 11.3	+0.3
AC05				IAML		19 05 23.5	
	comp=N,1µm,0.6s						
AC05	El Transito	2.30	51	eP	Pn	19 04 44.0	+1.5
AC05				eS	Sg	19 05 17.5	-0.5
AC05				IAML		19 05 23.9	
	comp=Z,864nm,0.8s						
AC04	Llanos de Chal	2.35	28		Pn	19 04 43.3	+0.2
AC04	Llanos de Chal	2.35	28	⇑iP	Pn	19 04 43.4	+0.4
AC04				iS	Sn	19 05 10.3	-1.8
AC04				IAML		19 05 31.5	
	comp=N,2µm,0.5s						
VA06	Catapilco	2.42	159		Pn	19 04 45.0	+0.9
VA06	Catapilco	2.42	159	eP	Pn	19 04 45.1	+0.9
VA06				iS	Sn	19 05 14.4	+0.5
VA06				IAML		19 05 29.6	
	comp=E,2µm,0.4s						
AROD	Rodeo	2.46	88	eP	Pb	19 04 48.1	-0.8
AROD				eS	Sg	19 05 22.5	-1.0
VA01	Torpederas	2.78	168		Pn	19 04 49.6	+0.5
VA01	Torpederas	2.78	168	eP	Pn	19 04 49.5	+0.5
ACCO	Cerro Coronel	2.82	97	eP	Pb	19 04 53.5	-1.6
VA03	San Esteban	2.89	149		Pn	19 04 52.3	+1.7
VA03	San Esteban	2.89	149	eP	Pn	19 04 52.7	+2.1
VA03				IAML		19 05 47.7	
	comp=N,2µm,0.6s						
VA03	San Esteban	2.89	149	eP	Pn	19 04 51.4	+0.8
VA03				eS	Sb	19 05 29.8	-1.8
VA03				IAML		19 05 44.8	
	comp=Z,827nm,0.5s						
ROCH	El Roble	2.89	158	eP	Pn	19 04 52.0	+1.2
ROCH				iS	Sn	19 05 26.2	+0.3
RTLS	Leoncito	3.00	121	eP	Pb	19 04 55.6	-2.4
RTLS				eS	Sb	19 05 34.5	-0.4
RTLS				IAML		19 05 42.1	
	comp=Z,2µm,0.8s						
MT02	Curacav	3.12	162		Pn	19 04 55.0	+1.2
MT02	Curacav	3.12	162	eP	Pn	19 04 54.8	+1.1
MT02	Curacav	3.12	162	eP	Pn	19 04 54.8	+1.1
MT02				eS	Sb	19 05 34.6	-3.6
MT02				IAML		19 05 57.0	
	comp=Z,300nm,0.5s						
PEL	Peldehue	3.16	154		Pn	19 04 55.0	+0.6
PEL	Peldehue	3.16	154	eP	Pn	19 04 55.8	+1.4
PEL				iS	Sn	19 05 31.8	-0.5
PEL				IAML		19 05 53.9	
	comp=N,442nm,0.5s						
GO03	Copiapo	3.25	35		Pn	19 04 55.7	+0.2
GO03	Copiapo	3.25	35	eP	Pn	19 04 56.2	+0.7
GO03				IAML		19 06 00.9	
	comp=N,558nm,0.6s						
MT10	Hacienda Santa	3.34	153	eP	Pn	19 04 58.5	+1.6
ZON	Zonda	3.37	113		Pb	19 05 00.4	-3.8
MT05	Renca	3.37	157		Pn	19 04 57.3	+0.1
MT05	Renca	3.37	157	eP	Pn	19 04 58.8	+1.6
MT05				IAML		19 05 54.7	
	comp=E,1µm,0.3s						
MT05	Renca	3.37	157	eP	Pn	19 04 57.9	+0.7
MT05				IAML		19 05 59.8	
	comp=Z,573nm,1.4s						
AC06	Mina Casimiro	3.39	31		Pn	19 04 57.6	+0.1
AC06	Mina Casimiro	3.39	31	eP	Pn	19 04 58.5	+1.0
AC06				IAML		19 06 03.0	
	comp=E,314nm,0.4s						
MT14	Cerro Cal¡n	3.44	154	eP	Pn	19 05 00.6	+2.4
RTLL	Cerro Villicun	3.46	108	eP	Pn	19 05 01.1	+2.7
RTLL				IAML		19 06 02.9	
	comp=Z,476nm,0.7s						
MT16	CCHEN	3.48	154		Pn	19 04 59.5	+0.8
MT16	CCHEN	3.48	154	eP	Pn	19 05 01.2	+2.5
MT16				IAML		19 06 01.2	
	comp=N,434nm,0.7s						
MT03	Universidad Ad	3.54	155		Pn	19 05 00.9	+1.3
MT03	Universidad Ad	3.54	155	eP	Pn	19 05 01.6	+2.0
MT03				IAML		19 05 59.0	
	comp=E,719nm,0.4s						
MT03	Universidad Ad	3.54	155	eP	Pn	19 05 01.1	+1.5
MT03				IAML		19 06 09.8	
	comp=Z,569nm,0.9s						
MT04	Ro Olivares	3.62	150	⇑eP	Pn	19 05 03.3	+2.5
MT04				IAML		19 06 03.5	
	comp=N,345nm,0.6s						
MT04	Ro Olivares	3.62	150	eP	Pn	19 05 03.0	+2.3
MT04				IAML		19 06 01.0	
	comp=Z,286nm,0.8s						
MT15	Las Vizcachas	3.64	155	eP	Pn	19 05 02.0	+1.1
MT09	Talagante	3.65	162		Pn	19 05 02.3	+1.2
MT09	Talagante	3.65	162	⇑eP	Pn	19 05 02.6	+1.4
MT01	Popeta	3.67	166		Pn	19 05 02.2	+0.8
MT01	Popeta	3.67	166	eP	Pn	19 05 02.4	+1.1
MT08	Bocatoma Ro	3.70	149		Pn	19 05 04.2	+2.3
MT08	Bocatoma Ro	3.70	149	eP	Pn	19 05 05.2	+3.3
CFA	Coronel Fontan	3.74	111	Pn	Pn	19 05 04.4	+2.1
	comp=Z,16nm,0.3s,baz=291,slow=15,SNR=53						
CFA				Sn	Sn	19 05 48.0	+1.4
	comp=Z,12nm,0.3s,baz=286,slow=18,SNR=3.7						
	comp=Z,28nm,0.3s						
CFA	Coronel Fontan	3.74	111	eP	Pn	19 05 05.1	+2.8
CFA				IAML		19 06 09.5	
	comp=Z,206nm,0.7s						
MT12	Pirque	3.75	157	eP	Pn	19 05 04.2	+1.8
MT13	San Alfonso	3.85	154		Pn	19 05 05.6	+1.8
MT13	San Alfonso	3.85	154	eP	Pn	19 05 06.1	+2.2
BO04	La Punta	3.96	159		Pn	19 05 06.7	+1.4
BO04	La Punta	3.96	159	eP	Pn	19 05 06.9	+1.6
LMEL	Las Melosas	3.97	154	eP	Pn	19 05 07.8	+2.2
BO01	Tunca	4.22	166		Pn	19 05 09.9	+1.1
AC01	Pan de Azucar	4.40	21		Pn	19 05 10.8	-0.5
AC02	Maricunga	4.44	40		Pn	19 05 13.4	+1.1
AC02	Maricunga	4.44	40	eP	Pn	19 05 14.0	+1.6
BO02	Sierra Bellavi	4.67	164		Pn	19 05 16.2	+1.1
GO05	Hualane	4.71	176		Pn	19 05 15.6	-0.1
ML02	Panimavida	5.51	172	Pn	Pn	19 05 25.8	-0.8
PB14	IPOC Station P	5.89	17		Pn	19 05 31.1	-1.1
BI02	San Fabin de	6.41	172		Pn	19 05 40.0	+1.0
H03N1	Juan Fernandez	6.43	239	T	T	19 12 45.1	
	baz=63,slow=72						
H03N2	Juan Fernandez	6.44	239	T	T	19 12 44.7	
	baz=63,slow=72						
H03N3	Juan Fernandez	6.44	239	T	T	19 12 44.9	
	baz=63,slow=72						
VA04	Juan Fernndez	6.46	237	Pn	Pn	19 05 41.0	+1.4
BI05	Punta Hualpn	6.48	186	Pn	Pn	19 05 40.6	+0.7
PB05	IPOC Station P	7.65	15	Pn	Pn	19 05 53.6	-2.4
PB06	IPOC Station P	7.95	19	Pn	Pn	19 05 57.5	-2.7
PB03	IPOC Station P	8.53	16	Pn	Pn	19 06 05.8	-2.4
PB07	IPOC Station P	8.81	15	Pn	Pn	19 06 09.5	-2.5
PB09	IPOC Station P	8.90	19	Pn	Pn	19 06 11.9	-1.4
GO06	Curarrehue	9.30	176	Pn	Pn	19 06 18.9	+0.3
LR05	Currie	9.92	179	Pn	Pn	19 06 28.6	+1.6
PLCA	Paso Flores	10.52	173	Pn	Pn	19 06 36.7	+1.4
	comp=Z,0.3nm,0.3s,baz=333,slow=11,SNR=8.6						
PLCA				LR	LR	19 10 51.7	
	comp=Z,92nm,19.9s,baz=74,slow=38						
	comp=Z,0.7nm,0.3s						
PLCA	Paso Flores	10.52	173	Pn	Pn	19 06 36.5	+1.2
TRQA	Tornquist	11.54	135		Pn	19 06 48.9	-0.3
PB12	IPOC Station P	11.77	9	Pn	Pn	19 06 52.1	-0.4
PB16	IPOC Station P	12.18	13	Pn	Pn	19 06 56.9	-1.6
CPUP	Villa Florida	13.78	77	Pn	Pn	19 07 22.1	+2.2
	comp=Z,0.2nm,0.3s,baz=258,slow=2.8,SNR=1.9						
CPUP				Sn	Sn	19 09 53.5	+0.4
	comp=Z,0.1nm,0.3s,baz=180,slow=20,SNR=1.1						
CPUP				LR	LR	19 12 28.4	
	comp=Z,44nm,19.4s,baz=280,slow=37						
	comp=Z,0.5nm,0.4s						
LPAZ	La Paz	14.46	16	Pn	Pn	19 07 30.0	+0.2
	comp=Z,0.2nm,0.3s,baz=192,slow=9.3,SNR=8.6						
	comp=Z,2.4nm,0.7s						
LPAZ	La Paz	14.46	16		Pn	19 07 32.8	+3.0
SIV	San Ignacio	17.57	38	P	Pn	19 08 09.1	-0.6
	comp=Z,6.9nm,0.9s,baz=276,slow=9.2						
PTLB	Pontes e Lacer	19.10	42		P	19 08 26.8	-0.7
BDFB	Brasilia	26.63	62	P	P	19 09 43.4	-0.2
	comp=Z,3.4nm,0.6s,baz=225,slow=11,SNR=4.5						
	comp=Z,3.4nm,0.6s						
BDFB	Brasilia	26.63	62	IAmb	IAmb	19 09 52.4	
	comp=Z,8.1nm,1.3s						
BOAV	Boa Vista	34.40	21	P	P	19 10 53.9	+1.8
BOAV				IAmb	IAmb	19 11 17.0	
	comp=Z,4.7nm,1.1s						
RCBR	Riachuelo	42.00	62	P	P	19 11 52.7	-3.6
RCBR				IAmb	IAmb	19 12 08.6	
	comp=Z,10.0nm,0.9s						
SNAA	Sanae	55.11	159	P	P	19 13 38.8	+2.3
	comp=Z,4.2nm,0.6s,baz=299,slow=10,SNR=6.6						
	comp=Z,4.2nm,0.6s						
SNAA	Sanae	55.11	159	P	P	19 13 35.8	-0.7
QSPA	South Pole Qui	59.93	180	P	P	19 14 13.3	+2.6
	comp=Z,1.9nm,0.9s,baz=121,slow=2.6,SNR=3.9						
	comp=Z,1.9nm,0.9s						
QSPA	South Pole Qui	59.93	180	P	P	19 14 11.2	+0.6
QSPA				IAmb	IAmb	19 14 28.5	
	comp=Z,3.4nm,1.2s						
TXAR	Lajitas Array	66.40	330	P	P	19 14 57.1	+3.2
	comp=Z,0.3nm,0.6s,baz=147,slow=5.9,SNR=2.6						
	comp=Z,0.3nm,0.6s						
TXAR	Lajitas Array	66.40	330	P	P	19 14 55.5	+1.6
BBTS	Babate	69.85	58	LR	LR	19 44 06.7	
	comp=Z,19nm,21.0s,baz=83,slow=34						
DBIC	Dimbokro	74.25	72	P	P	19 15 40.3	-1.9
SUR	Sutherland	76.85	120	P	P	19 15 56.0	-1.2
TORD	Torodi Ar. Bea	83.19	71	P	P	19 16 33.1	+1.7
	comp=Z,3.0nm,0.8s,baz=251,slow=6.9,SNR=13						
	comp=Z,3.0nm,0.8s						
TORD	Torodi Ar. Bea	83.19	71	IAmb	IAmb	19 16 34.5	
	comp=Z,3.1nm,0.8s						
WRA	Warramunga Arr	123.85	211	PKP	PKiKP	19 23 04.5	+0.7
	comp=Z,0.1nm,0.3s,baz=152,slow=1.9,SNR=1.7						
KURBB	Kurchatov Arra	150.23	39	PKPbc	PKiKP	19 23 57.3	+1.1
	comp=Z,1.2nm,0.7s,baz=309,slow=2.3,SNR=10						
ZALV	Zalesovo Beam	151.15	28	PKPbc	PKiKP	19 23 60.0	+1.9
	comp=Z,1.9nm,0.5s,baz=301,slow=3.2,SNR=16						
ZALV	Zalesovo Beam	151.15	28		PKiKP	19 23 59.7	+1.7
MKAR	Makanchi Array	154.36	43	PKPbc	PKiKP	19 24 07.7	+2.7
	comp=Z,0.3nm,0.7s,baz=310,slow=1.9,SNR=4.8						
WMQ	Urumqi	159.17	44	ePKP	PKPdf	19 24 01.7	-1.3
WMQ				LR	LR		
	comp=Z,140nm,24.3s						
HHC	Hu-ho-hao-te	169.00	344	eP	PKPdf	19 24 09.4	-2.6
HHC				LR	LR		
	comp=N,220nm,14.7s						
HHC				LR	LR		
	comp=E,130nm,14.9s						
HHC				LR	LR		
	comp=Z,220nm,14.5s						
PZH	PanZhiHua	173.55	124	PKP	PKPdf	19 24 13.8	-1.0

*IDC **06** 19:15:25.6±2.6, 26°.32N×128°.31E, h0km, mb3.5/7, mbtmp3.5/8, ML3.4/1, MS2.9/2, Error ellipse: s-maj=41.4km s-min=24.6km az=147.0*

*NEIC **06** 19:15:28.9±1.9, 26°.32N±0°.04×128°.16E±0°.04, h10km±1km, mb4.0/9, Error ellipse: s-maj=7.7km s-min=4.7km az=128.0*

*JMA **06** 19:15:31.3±0.1, 26°.5N±0°.5×128°.1E±0°.7, h19km, MV3.5/10, NEAR OKINAWAJIMA ISLAND*

JMA Felt II J1 at NEAR OKINAWAJIMA ISLAND .

ISC 06 19:15:28.5±1.5**, 26°.33N**±0°.06×**128°.14E**±0°.05**, h13**km±9km**, n49, σ1^{s}05**/52**, mb3.7**/11**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JNTH	Nagotoyohara	0.22	332	P	Pb	19 15 34.9	+0.6
JNTH				S	Sb	19 15 37.5	-0.8
JJT3	Tamagusuku3	0.37	240	P	Pn	19 15 39.5	-0.1
JOW	Kunigami	0.52	14	Pn	Pb	19 15 39.9	+0.4
	375nm,0.3s,baz=177,slow=15,SNR=385						
JOW				Sn	Sg	19 15 45.2	-0.4
	956nm,0.3s,baz=131,slow=19,SNR=35						
JOW				LR	LR	19 15 57.9	
	comp=Z,129nm,22.0s,baz=82,slow=63						
JOW	Kunigami	0.52	14	P	Pb	19 15 39.9	+0.4
JOW	Kunigami	0.52	14	Pg	Pb	19 15 39.8	+0.4
JOW				Sg	Sg	19 15 45.7	+0.1
JOW	Kunigami	0.52	14	P	Pb	19 15 39.9	+0.4
JOW				S	Sg	19 15 45.7	+0.1
JIH	Iheya	0.72	348	eP	Pb	19 15 43.1	+0.2
JIH				eS	Sg	19 15 51.4	-0.6
JYRO	Yoronjima	0.75	22	P	Pn	19 15 44.1	-0.7
JYRO				S	Sg	19 15 52.3	-0.6
JAGN	Aguni-jima	0.84	288	P	Pb	19 15 45.6	+0.6
JAGN				S	Sb	19 15 56.4	+0.1
JOKE	Okinoerabujima	1.10	20	P	Pg	19 15 50.0	+0.3
JOKE				eS	Sb	19 16 02.2	-1.5
JKE	Kume jima 2	1.21	270	eP	Pb	19 15 51.8	+0.5
JMZ	Minamidaito 2	2.82	100	Pn	Pn	19 16 14.1	+0.8
JMZ				Sn	Sn	19 16 45.6	-1.5
JMJ	Miyako jima 2	2.98	240	P	Pg	19 16 24.9	-0.7
	1µm,0.8s						
NACB	Ninganchiao	6.30	252	Pn	Pn	19 17 02.1	+1.0
YHNB	Yeheng	6.33	256	Pn	Pn	19 17 00.1	-1.5
YHNB				Sn	Sn	19 18 12.3	-1.6
YULB	Yu-li	6.87	246	Pn	Pn	19 17 08.4	-0.5
SSLB	Suanglung	6.99	250	P	Pn	19 17 13.1	+2.5
	12nm,1.8s						
SSLB	Suanglung	6.99	250		Pn	19 17 09.0	-1.6
JNU	Nakatsue	7.18	19	Pn	Pn	19 17 13.0	-0.2
	0.6nm,0.3s,baz=207,slow=14,SNR=6.5						
	0.9nm,0.4s						
TPUB	Ta-pu	7.46	248	P	Pn	19 17 19.7	+2.6
	23nm,1.6s						
TPUB	Ta-pu	7.46	248	Pn	Pn	19 17 17.2	+0.2
JMN	Monobe	8.90	33	Pn	Pn	19 17 36.8	+0.1
SONM	Songino Array	27.43	327	P	P	19 21 14.8	+0.8
	0.2nm,0.4s,baz=146,slow=10,SNR=4.0						
	0.2nm,0.4s						
LUWI	Luwuk	27.70	192	P	P	19 21 16.6	0.0
CMAR	Chiang Mai Arr	28.06	260	LR	LR	19 32 11.2	
	comp=Z,4.6nm,19.5s,baz=245,slow=36						
H11N2	WAKE ISLAND Hy	36.17	92	T	T	20 00 52.2	
	baz=290						
H11N1	WAKE ISLAND Hy	36.17	92	T	T	20 00 54.8	
	baz=290						
H11N3	WAKE ISLAND Hy	36.19	92	T	T	20 00 55.0	
	baz=290						
H11S3	WAKE ISLAND Hy	36.38	94	T	T	20 01 13.0	
	baz=290						
H11S1	WAKE ISLAND Hy	36.38	94	T	T	20 01 09.3	
	baz=290						
H11S2	WAKE ISLAND Hy	36.39	94	T	T	20 01 14.8	
	baz=290						
MK31	Makanchi Array	41.41	312	P	P	19 23 14.5	-0.1
MKAR	Makanchi Array	41.41	312	P	P	19 23 14.5	-0.1
	0.3nm,0.5s,baz=94,slow=10,SNR=9.0						
	0.3nm,0.5s						
MKAR	Makanchi Array	41.41	312	P	P	19 23 14.2	-0.4
MAKZ	Makanchi	41.62	312	P	P	19 23 16.3	0.0
ZALV	Zalesovo Beam	42.12	323	P	P	19 23 19.7	-0.6
	0.4nm,0.5s,baz=109,slow=7.8,SNR=2.2						
	0.4nm,0.5s						
ZALV	Zalesovo Beam	42.12	323	P	P	19 23 19.3	-1.0
KURK	Kurchatov	44.69	317	P	P	19 23 41.5	+0.4
KURK				IAmb	IAmb	19 23 43.5	
	comp=Z,0.7nm,0.5s						
KURBB	Kurchatov Arra	44.73	316	P	P	19 23 41.6	+0.3
	comp=Z,0.4nm,0.4s,baz=106,slow=9.2,SNR=3.1						
	comp=Z,0.4nm,0.4s						
BVAR	Borovoye Array	50.15	318	P	P	19 24 23.9	+0.4
	comp=Z,0.3nm,0.3s,baz=88,slow=9.3,SNR=2.5						
	comp=Z,0.3nm,0.3s						
C18K	Utukok River	58.72	24	P	P	19 25 26.5	+0.8
D19K	Kuna River	59.83	24	P	P	19 25 32.9	-0.4
G19K	Purcell Mounta	60.08	27	P	P	19 25 36.0	+1.0
E19K	Redstone River	60.09	25	P	P	19 25 36.6	+1.6
E19K				IAmb	IAmb	19 25 37.8	
	comp=Z,1.9nm,1.2s						
D20K	Etivluk River	60.39	24	P	P	19 25 39.0	+1.8
D20K				IAmb	IAmb	19 25 40.8	
	comp=Z,0.8nm,0.7s						
B21K	Ikpikpuk River	61.15	23	P	P	19 25 44.7	+2.5
D22K	Ayikyak River	61.83	24	P	P	19 25 48.9	+2.0
D22K				IAmb	IAmb	19 25 49.7	
	comp=Z,2.1nm,1.2s						
FINES	FINESS Array B	72.74	331	P	P	19 26 55.6	-0.5
	comp=Z,0.6nm,0.5s,baz=66,slow=4.9,SNR=5.6						
FINES				LR	LR	20 04 47.1	
	comp=Z,33nm,18.6s,baz=235,slow=41						
	comp=Z,0.6nm,0.5s						
NOA	NORSAR Array B	79.19	334	P	P	19 27 31.9	-1.1
	comp=Z,0.2nm,0.6s,baz=52,slow=5.8,SNR=1.4						
	comp=Z,0.2nm,0.6s						

TAP 06 19:18:29.2, 24°.38N×121°.39E, h6km, ML1.5, B, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NNSB	Datong	0.05	351	iP	Pg	19 18 31.2	+0.3
NNSB				iS	Sg	19 18 32.1	+0.1
NNSH	Datong	0.05	351	iP	Pg	19 18 31.2	+0.3
NNSH				iS	Sg	19 18 32.0	0.0
NNS	Nan Shan	0.06	344	iP	Pg	19 18 31.4	+0.4
NNS				iS	Sg	19 18 32.6	+0.2
FUSS	Fushou	0.19	226	P	Pg	19 18 33.9	+0.8
FUSS				iS	Sg	19 18 36.9	+1.2
ETLH	Xiulin Townshi	0.19	154	P	Pg	19 18 34.0	+1.0
ETLH				S	Sg	19 18 36.7	+1.0
LATG	Datong	0.20	38	iP	Pg	19 18 33.5	+0.2
LATG				S	Sg	19 18 36.5	+0.5
TDCB	Techi	0.25	240	P	Pg	19 18 35.0	+0.9
TDCB				S	Sg	19 18 38.4	+1.0
NDT	Datong Townshi	0.25	26	iP	Pg	19 18 34.8	+0.6
NDT				S	Sg	19 18 38.5	+1.0
WHF	Hehuan Shan	0.26	207	eP	Pg	19 18 35.1	+0.7
WHF				eS	Sg	19 18 38.6	+0.6
NACB	Ninganchiao	0.28	138	iP	Pg	19 18 35.5	+0.8
NACB				eS	Sg	19 18 39.3	+1.0
NACB	Ninganchiao	0.28	138		Sg	19 18 35.3	-3.0
YHNB	Yeheng	0.29	357	P	Pg	19 18 35.8	+0.8
YHNB				eS	Sg	19 18 39.2	+0.4
NSK	Sanguang	0.30	354	eP	Pg	19 18 36.0	+0.9
NSK				eS	Sg	19 18 39.5	+0.3
ETL	Fush Village	0.30	136	eS	Sg	19 18 40.5	+1.3
ENTT	Nioudou	0.30	31	P	Pg	19 18 35.8	+0.5
ENTT				S	Sg	19 18 39.9	+0.6
TWD	Chiawan	0.35	148	eP	Pb	19 18 37.2	-0.6
TWD				S	Sg	19 18 42.1	+1.4
NFF	Wufeng Townshi	0.35	315	P	Pb	19 18 37.8	-0.2
NFF				S	Sg	19 18 42.0	+1.1
LXIB	Xiulin Townshi	0.36	177	eP	Pg	19 18 37.0	+0.8
LXIB				S	Sg	19 18 41.8	+0.9
EWUT	Wuta	0.36	79	eP	Pg	19 18 36.3	0.0
EWUT				S	Sg	19 18 40.6	-0.4
NDS	Dongshan	0.39	49	iP	Pg	19 18 36.7	-0.1
NWLT	Wulai	0.41	14	P	Pg	19 18 37.9	+0.6
NWLT				iS	Sg	19 18 43.1	+0.4
WHP	Taichung City	0.42	256	P	Pb	19 18 38.8	-0.3
WHP				S	Sb	19 18 44.3	-1.4
FUSB	Fushanzhiwuyua	0.42	25	P	Pg	19 18 37.9	+0.5
FUSB				eS	Sg	19 18 43.5	+0.5
ETM	Tongmen	0.42	167	P	Pg	19 18 37.1	-0.3
ETM				S	Sg	19 18 43.4	+0.5
LIOB	Emei	0.43	308	eS	Sb	19 18 45.0	-1.1
WUSB	Renai	0.46	213	iP	Pg	19 18 38.7	+0.5
WUSB				iS	Sg	19 18 44.7	+0.5
OWD	Renai	0.47	205	P	Pg	19 18 38.4	+0.1
OWD				eS	Sg	19 18 44.6	+0.2
WCS	Beigang Elemen	0.54	234	eS	Sb	19 18 48.0	-1.2
WARBT	Fenglin Townsh	0.66	180	eP	Pb	19 18 43.3	+0.2
WARBT				eS	Sg	19 18 51.0	+0.6
VWDT	VWDT	0.66	200	eP	Pg	19 18 42.0	0.0
VWDT				eS	Sb	19 18 51.9	-0.7
TIPB	Shuangxi	0.71	34	P	Pg	19 18 43.3	+0.3
TIPB				S	Sg	19 18 51.9	-0.4

*NEIC **06** 19:19:36.4±1.8, 5°.41S±0°.02×147°.08E±0°.08, h180km±8km, mb4.3/23, Error ellipse: s-maj=11.9km s-min=2.7km az=82.0*

*IDC **06** 19:19:37.1±1.8, 5°.50S×147°.14E, h200km±17km, mb3.8/4, mbtmp4.3/8, Error ellipse: s-maj=25.0km s-min=15.1km az=118.0*

ISC 06 19:19:36.9±0.6**, 5°.50S**±0°.06×**147°.00E**±0°.07**, h195**km**, n44, σ1^{s}81**/49**, mb4.3**/12**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MANU	Manus Island	3.45	6	Pn	Pn	19 20 28.6	-3.2
PMG	Port Moresby	3.88	178	P	Pn	19 20 36.3	-0.8
	68nm,0.3s,baz=355,slow=13,SNR=250						
PMG				S	Sn	19 21 18.8	-5.7
	61nm,0.3s,baz=342,slow=20,SNR=12						
PMG	Port Moresby	3.88	178		Pn	19 20 36.2	-0.9
PMG				Sn	Sn	19 21 19.9	-4.5
RABL	Rabaul	5.30	76		Pn	19 20 53.4	-1.8
JAY	Jayapura	6.95	295	P	Pn	19 21 17.4	+0.9
	18nm,0.8s,baz=159,slow=6.1,SNR=7.8						
JAY				S	Sn	19 22 30.4	-5.0
	4.6nm,0.5s,baz=205,slow=19,SNR=1.1						
COEN	Coen	9.21	204		Pn	19 21 48.0	+2.0
CTA	Charters Tower	14.52	183	P	P	19 22 55.2	+0.4
	2.3nm,1.0s,baz=1.5,slow=16,SNR=3.0						
CTAO	Charters Tower	14.52	183		P	19 22 56.1	+1.2
MTN	Manton Dam	17.28	244		P	19 23 26.9	+1.6
MTN				IAmb	IAmb	19 23 28.5	
	comp=Z,16nm,0.8s						
WB0	Warramunga Arr	18.76	220	P	P	19 23 43.3	+1.9
WRAB	Tennant Creek	18.91	220	P	P	19 23 44.2	+1.2
WRA	Warramunga Arr	18.92	220	P	P	19 23 44.6	+1.5
	comp=Z,7.2nm,0.3s,baz=39,slow=11,SNR=5.1						
WRA				S	S	19 27 07.8	-0.1
	comp=Z,5.8nm,1.1s,baz=43,slow=20,SNR=8.3						
EIDS	Eidsvold	20.14	169	P	P	19 23 57.4	+1.2
EIDS				IAmb	IAmb	19 24 00.8	
	comp=Z,4.9nm,0.8s						
KNRA	Kununurra	20.57	239		P	19 24 01.5	+0.7
AS31	Alice Springs	22.03	214		P	19 24 18.1	+2.1
AS31				IAmb	IAmb	19 24 23.2	
	comp=Z,5.2nm,0.5s						
ASAR	Alice Springs	22.03	214	P	P	19 24 17.7	+1.7
	comp=Z,5.6nm,0.6s,baz=35,slow=10,SNR=120						
ASAR				S	S	19 28 03.6	-1.4
	comp=Z,4.2nm,0.8s,baz=31,slow=21,SNR=14						
	comp=Z,5.6nm,0.6s						
ASAR	Alice Springs	22.03	214	P	P	19 24 17.1	+1.1
INKA	Innaminka	22.91	194		P	19 24 25.3	+1.4
SOEI	Soe	22.92	258	P	P	19 24 26.0	+1.7
SOEI				IAmb	IAmb	19 24 52.4	
	comp=Z,15nm,1.0s						
FITZ	Fitzroy Crossi	24.34	237	P	P	19 24 38.6	+1.6
	comp=Z,15nm,0.5s,baz=59,slow=11,SNR=53						
	comp=Z,15nm,0.5s						
LUWI	Luwuk	24.59	280	P	P	19 24 38.2	-1.1
DZM	Mont Dzumac	25.00	133	P	P	19 24 42.6	-0.5
ARMA	Armidale	25.17	171	P	P	19 24 44.4	-0.1
PSA00	Pilbara Seismi	30.77	236	P	P	19 25 35.4	+1.1
PSA00				IAmb	IAmb	19 25 37.7	
	comp=Z,8.2nm,1.0s						
PSA00	Pilbara Seismi	30.77	236	P	P	19 25 35.1	+0.8
PSA00				IAmb	IAmb	19 26 00.7	
	comp=Z,6.2nm,1.4s						
BBJI	Bungbulang	39.14	265	P	P	19 26 45.5	-0.6
BBJI				IAmb	IAmb	19 27 00.0	
	comp=Z,10nm,1.1s						
RTZ	Ruatahuna	42.72	145	P	P	19 27 14.6	-0.4
BKZ	Black Stump Fm	42.82	146	P	P	19 27 16.2	+0.5
BKZ				IAmb	IAmb	19 27 55.6	
	comp=Z,22nm,1.4s						
TUWZ	Tuamarina	43.11	150	P	P	19 27 19.3	+1.5
TCW	Tory Channel	43.11	150	P	P	19 27 18.9	+1.0
MKAR	Makanchi Array	77.12	320	P	P	19 31 09.3	+0.4
G18K	Tagagawik	81.28	20	P	P	19 31 32.0	+1.0
C19K	Lookout Ridge	82.88	17	P	P	19 31 40.4	+1.2
QSPA	South Pole Qui	84.47	180	P	P	19 31 47.6	0.0
	comp=Z,0.9nm,0.4s,baz=135,slow=1.1,SNR=5.9						
	comp=Z,0.9nm,0.4s						
QSPA	South Pole Qui	84.47	180	P	P	19 31 47.1	-0.4
QSPA				IAmb	IAmb	19 32 14.3	
	comp=Z,4.3nm,1.4s						
IL31		85.02	23	P	P	19 31 49.6	-0.5
ILAR	Eielson Array	85.02	23	P	P	19 31 47.7	-2.4
	comp=Z,0.8nm,0.8s,baz=248,slow=4.7,SNR=6.7						
	comp=Z,0.8nm,0.8s						
ILAR	Eielson Array	85.02	23	P	P	19 31 49.2	-1.0
D23K	Nanushuk River	85.51	19	P	P	19 31 53.6	+1.1
D23K				IAmb	IAmb	19 32 29.1	
	comp=Z,8.0nm,1.5s						
M27K	Edge Creek, AK	86.21	26	P	P	19 31 56.6	+0.3
M27K				IAmb	IAmb	19 32 09.5	
	comp=Z,3.8nm,1.3s						
BMAR	Burnt Mountain	86.93	21	P	P	19 32 00.2	+0.7
E27K	Coleen River	88.26	21	P	P	19 32 07.5	+1.8
G31M	Satah River	90.62	23	P	P	19 32 17.3	+0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
G31M				IAmb	IAmb	19 32 33.3	
	comp=Z,5.9nm,1.4s						
TORD	Torodi Ar. Bea	144.97	285	PKPbc	PKPbc	19 38 52.1	+0.5
	comp=Z,0.3nm,0.5s,baz=78,slow=4.3,SNR=2.4						

*SJA **06** 19:21:39.5±0.7, 32°.41S×71°.77W, h38^{km}±4^{km}, ML3.3, MW3.5*
*GUC **06** 19:21:42.2±0.9, 32°.47S×71°.59W, h40^{km}±2^{km}, ML3.4*
ISC 06 19:21:41.0±1.4**, 32°.44S**±0°.02×**71°.74W**±0°.05**, h27**^{km}±14^{km}**, n64, σ1^{s}66**/92**, 1C-7D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA06	Catapilco	0.40	108⇑	iP	Pn	19 21 50.4	-0.5
VA06				eS	Sn	19 21 56.6	-0.9
VA06				IAML		19 21 57.3	
	comp=E,18µm,0.5s						
VA01	Torpederas	0.59	172	eP	Pn	19 21 54.0	+0.4
VA01				eS	Sb	19 22 02.9	+2.0
VA01				IAML		19 22 03.9	
	comp=E,4µm,0.1s						
VA01	Torpederas	0.59	172	eP	Pn	19 21 53.9	+0.3
VA01				IAML		19 22 05.2	
	comp=Z,729nm,0.1s						
CO04	Los Peladeros	0.76	59	iP	Pn	19 21 55.0	-1.2
CO04				IAML		19 22 06.7	
	comp=N,5µm,0.2s						
ROCH	El Roble	0.82	131	iP	Pn	19 21 56.2	-0.7
ROCH				eS	Sn	19 22 07.0	-1.2
ROCH				IAML		19 22 10.3	
	comp=N,2µm,0.7s						
MT02	Curacav	0.97	148	iP	Pn	19 21 58.5	-0.3
MT02				eS	Sn	19 22 10.5	-1.1
MT02	Curacav	0.97	148	eP	Pn	19 21 58.5	-0.3
MT02				eS	Sn	19 22 10.9	-0.7
MT02				IAML		19 22 12.3	
	comp=Z,448nm,0.2s						
VA03	San Esteban	1.06	108	iP	Pn	19 21 59.3	-0.9
VA03				eS	Sn	19 22 10.2	-3.8
VA03				IAML		19 22 13.5	
	comp=E,9µm,0.1s						
VA03	San Esteban	1.06	108	eP	Pn	19 21 59.2	-0.9
VA03				eS	Sn	19 22 13.0	-1.0
PEL	Peldehue	1.14	129	eP	Pn	19 22 00.3	-0.9
PEL				eS	Sn	19 22 15.2	-0.6
PEL				IAML		19 22 15.8	
	comp=N,1µm,0.4s						
PEL	Peldehue	1.14	129	eP	Pn	19 22 00.6	-0.5
PEL				eS	Sb	19 22 16.3	-0.1
PEL				IAML		19 22 17.0	
	comp=Z,729nm,0.2s						
MT05	Renca	1.27	139	eP	Pn	19 22 03.0	-0.1
MT05				IAML		19 22 22.1	
	comp=E,1µm,0.2s						
MT05	Renca	1.27	139	eP	Pn	19 22 02.9	-0.1
MT05				eS	Sn	19 22 07.9	-11
MT05				IAML		19 22 20.6	
	comp=Z,348nm,0.3s						
MT10	Hacienda Santa	1.31	130⇓	iP	Pn	19 22 03.5	-0.1
MT10				eS	Sn	19 22 19.9	-0.5
MT10				IAML		19 22 21.4	
	comp=E,2µm,0.1s						
CO02	Combarbal	1.38	27	eP	Pn	19 22 04.2	-0.4
CO02	Combarbal	1.38	27	eP	Pn	19 22 03.6	-1.0
CO02				eS	Sb	19 22 22.0	-1.5
CO02				IAML		19 22 24.0	
	comp=Z,2µm,0.2s						
MT14	Cerro Cal¡n	1.40	134	iP	Pn	19 22 04.7	-0.1
MT14				IAML		19 22 25.1	
	comp=N,750nm,0.2s						
MT16	CCHEN	1.43	134	iP	Pn	19 22 05.1	-0.1
MT03	Universidad Ad	1.48	136⇓	iP	Pn	19 22 05.9	0.0
MT03				IAML		19 22 26.5	
	comp=E,2µm,0.2s						
MT03	Universidad Ad	1.48	136	eP	Pn	19 22 06.0	0.0
MT03				eS	Sn	19 22 25.3	+0.9
MT03				IAML		19 22 28.9	
	comp=Z,647nm,0.2s						
MT09	Talagante	1.48	155⇓	iP	Pn	19 22 06.7	+0.8
MT09				IAML		19 22 26.6	
	comp=N,2µm,0.2s						
MT01	Popeta	1.48	164	iP	Pn	19 22 06.2	+0.4
MT01				IAML		19 22 30.1	
	comp=N,829nm,0.2s						
MT01	Popeta	1.48	164	eP	Pn	19 22 06.3	+0.4
MT01				eS	Sn	19 22 16.2	-8.1
MT01				IAML		19 22 28.5	
	comp=Z,250nm,0.3s						
MT15	Las Vizcachas	1.56	138	eP	Pn	19 22 07.4	+0.4
MT15				IAML		19 22 30.6	
	comp=N,952nm,0.2s						
MT12	Pirque	1.64	143	eP	Pn	19 22 08.3	+0.3
MT12				IAML		19 22 35.2	
	comp=N,831nm,0.3s						
MT04	Ro Olivares	1.66	126⇓	iP	Pn	19 22 08.4	-0.1
MT04				eS	Sn	19 22 29.1	0.0
MT04				IAML		19 22 30.6	
	comp=E,411nm,0.2s						
MT04	Ro Olivares	1.66	126	eP	Pn	19 22 08.7	+0.1
MT04				eS	Sb	19 22 30.2	-1.4
MT04				IAML		19 22 31.5	
	comp=Z,247nm,0.2s						
CO06	Fray Jorge	1.76	3	eP	Pn	19 22 08.9	-0.8
MT08	Bocatoma Ro	1.77	125	eP	Pn	19 22 10.3	+0.4
MT08	Bocatoma Ro	1.77	125	eP	Pn	19 22 09.9	-0.1
MT08				eS	Sb	19 22 33.2	-1.4
MT08				IAML		19 22 39.7	
	comp=Z,117nm,0.5s						
MT13	San Alfonso	1.79	137	eP	Pn	19 22 10.5	+0.3
MT13				IAML		19 22 44.4	
	comp=E,662nm,0.3s						
MT13	San Alfonso	1.79	137	eP	Pn	19 22 10.5	+0.3
MT13				eS	Sn	19 22 32.9	+0.8
MT13				IAML		19 22 45.4	
	comp=Z,201nm,0.6s						
BO04	La Punta	1.82	149⇓	eP	Pn	19 22 11.2	+0.7
CO03	El Pedregal	1.83	30	eP	Pn	19 22 10.6	-0.1
CO03	El Pedregal	1.83	30	eP	Pn	19 22 09.9	-0.8
CO03				eS	Sn	19 22 32.9	-0.1
CO03				IAML		19 22 35.6	
	comp=Z,312nm,0.4s						
LMEL	Las Melosas	1.91	138	iP	Pn	19 22 12.4	+0.5
LMEL				eS	Sn	19 22 36.4	+1.3
LMEL				IAML		19 22 45.9	
	comp=N,627nm,0.2s						
BO01	Tunca	2.03	164⇓	eP	Pn	19 22 13.7	+0.4
BO01	Tunca	2.03	164	eP	Pn	19 22 13.8	+0.4
BO01				eS	Sn	19 22 37.9	+0.1
BO01				IAML		19 22 51.2	
	comp=Z,104nm,0.5s						
BO03	Pichilemu	2.06	185	eP	Pn	19 22 13.6	-0.2
RTLS	Leoncito	2.17	74	eS	Sb	19 22 46.7	+0.4
RTLS				IAML		19 22 47.9	
	comp=Z,546nm,1.1s						
GO04	Tololo Observa	2.40	20	eP	Pn	19 22 18.7	+0.1
GO04				eS	Sb	19 22 51.7	-1.1
GO04				IAML		19 22 52.7	
	comp=Z,352nm,0.5s						
ARCO	CERRO ARCO	2.41	100	eP	Pb	19 22 22.3	-1.4
ARCO				IAML		19 22 57.3	
	comp=Z,94nm,0.7s						
ASAL	Salagasta	2.46	94	eP	Pn	19 22 17.5	-1.9
ASAL				eS	Sn	19 22 38.5	-10
BO02	Sierra Bellavi	2.48	161⇓	eP	Pn	19 22 20.1	+0.4
BO02	Sierra Bellavi	2.48	161	eP	Pn	19 22 20.2	+0.5
BO02				eS	Sn	19 22 50.4	+1.2
BO02				IAML		19 23 01.5	
	comp=Z,148nm,0.1s						
AAGR	Agrelo	2.54	106	eP	Pn	19 22 19.5	-1.0
AAGR				IAML		19 23 10.9	
	comp=Z,92nm,2.2s						
GO05	Hualane	2.57	183	eP	Pn	19 22 21.1	+0.2
GO05				IAML		19 23 12.1	
	comp=Z,42nm,0.4s						
ZON	Zonda	2.75	72	eP	Pn	19 22 23.0	-0.4
ZON				eS	Sn	19 22 41.5	-14
ZON				IAML		19 22 42.0	
	comp=Z,88nm,0.5s						
CO01	Juntas del Tor	2.83	30	eP	Pn	19 22 26.6	+2.0
CO01				eS	Sn	19 22 58.1	+0.1
CO01				eS		19 23 02.9	
CO01				IAML		19 23 05.4	
	comp=Z,70nm,0.8s						
SJA	San Juan	2.85	72	eP	Pn	19 22 16.0	-8.8
SJA				IAML		19 22 45.5	
	comp=Z,97nm,0.3s						
AVIZ	Vizcacheras	2.90	112	eP	Pn	19 22 26.3	+0.9
ACCO	Cerro Coronel	2.94	52	eP	Pn	19 22 22.9	-3.2
ACCO				eS	Sb	19 23 10.4	+2.0
AROD	Rodeo	2.98	41	eP	Pn	19 22 28.8	+2.0
AROD				eS	Sb	19 23 14.1	+4.4
RTLL	Cerro Villicun	2.99	69	eP	Pn	19 22 28.5	+1.8
RTLL				eS	Sn	19 22 43.4	-18
RTLL				IAML		19 23 26.1	
	comp=Z,55nm,2.1s						
CFA	Coronel Fontan	3.09	75	eP	Pn	19 22 29.7	+1.6
CFA				eS	Sb	19 23 18.5	+5.9
CFA				IAML		19 23 24.6	
	comp=Z,60nm,0.5s						
ML02	Panimavida	3.33	175	eP	Pn	19 22 13.0	-18
ML02				eS	Sn	19 23 13.2	+3.3
ML02				IAML		19 23 24.7	
	comp=Z,85nm,0.1s						
LCO	Las Campanas	3.53	15	eP	Pn	19 22 33.9	-0.4
LCO				eS	Sn	19 23 15.3	0.0
LCO				IAML		19 23 28.0	
	comp=Z,115nm,0.5s						
RFA	San Rafael	3.59	131	eP	Pn	19 22 36.3	+1.4
RFA				IAML		19 23 38.6	
	comp=Z,28nm,1.0s						
AC05	El Transito	3.81	20	eP	Pn	19 22 38.3	+0.4
AC05				eS	Sn	19 23 22.9	+1.0
AC05				IAML		19 23 46.1	
	comp=Z,48nm,0.6s						
AVFE	Valle Fertil	4.07	65	eP	Pn	19 22 43.4	+1.9
AVFE				eS	Sb	19 23 39.1	-1.5
AVFE				IAML		19 23 54.9	
	comp=Z,31nm,0.6s						
AC04	Llanos de Chal	4.26	8	eP	Pn	19 22 42.9	-1.1
AC04				IAML		19 23 53.5	
	comp=Z,27nm,0.7s						
VCA	Vinchina	4.79	41	eP	Pn	19 22 53.3	+1.9
VCA				IAML		19 24 20.4	
	comp=Z,58nm,0.7s						
GO03	Copiapo	5.00	16	eP	Pn	19 22 53.9	-0.4
GO03				IAML		19 24 23.8	
	comp=Z,32nm,0.9s						
MRA	San Martin	5.09	91	eP	Pn	19 22 59.5	+3.9
MRA				IAML		19 24 24.2	
	comp=Z,26nm,0.6s						

*AFAD **06** 19:36:00.8, 38°.46N×44°.61E, h7^{km}±4^{km}, ML2.2*
*ISK **06** 19:36:02.1, 38°.41N×44°.63E, h15^{km}, ML2.4/6*
*AZER **06** 19:36:03.2, 38°.52N×44°.65E, h2^{km}, ml2.5*
ISC 06 19:36:02.4±1.2**, 38°.36N**±0°.03×**44°.55E**±0°.03**, h5**^{km}±11^{km}**, n22, σ1^{s}49**/36**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.53	305	P	Pg	19 36 11.6	-1.0
OZAP				IAML		19 36 27.0	
	comp=N,120nm,0.9s						
YOVA	Hakkari_Yksek	0.80	195	P	Pg	19 36 18.2	+0.5
YOVA				S	Sn	19 36 32.3	-0.6
YOVA				IAML		19 36 36.0	
	comp=N,57nm,0.6s						
YOVA				IAML		19 36 38.0	
	comp=E,51nm,0.4s						
TVAN	Van	0.92	281	P	Pg	19 36 18.4	-1.6
TVAN				IAML		19 36 40.0	
	comp=N,75nm,0.4s						
TVAN				IAML		19 36 43.0	
	comp=E,69nm,0.5s						
VANB	Van	0.94	285	Pg	Pg	19 36 21.1	+0.6
HAKT	HAKKARI	1.04	220	P	Pg	19 36 21.1	-1.2
HAKT				S	Sb	19 36 38.5	+1.4
HAKT	HAKKARI	1.04	220	P	Pg	19 36 21.4	-1.0
HAKT				S	Sb	19 36 38.1	+1.1
NAX	Nakhchivan	1.10	42	P	Pn	19 36 23.7	-0.8
NAX				S	Sn	19 36 40.0	0.0
GEVA	Gevas	1.18	268	P	Pg	19 36 22.7	-2.2
GEVA				S	Sn	19 36 42.5	+0.4
AKDM	Akdamar-Van	1.24	269	Pn	Pn	19 36 23.9	-2.6
AKDM				Sn	Sn	19 36 44.0	+0.4
ORD	Ordubad	1.26	63	P	Pn	19 36 26.6	-0.1
ORD				S	Sn	19 36 45.1	+1.0
SBZ	Shahbuz	1.30	37	P	Pg	19 36 27.0	-0.3
SBZ				S	Sn	19 36 46.4	+1.3
CUKT	Cukurca	1.34	214	Pn	Pn	19 36 27.9	+0.1
CUKT	Cukurca	1.34	214	P	Pn	19 36 28.4	+0.6
CUKT				S	Sg	19 36 48.9	+3.5
CUKT				IAML		19 36 51.0	
	comp=N,45nm,0.6s						
CUKT				IAML		19 36 56.0	
	comp=E,72nm,0.6s						
HYR	Heyderabad	1.38	10	P	Pg	19 36 30.1	+1.3
HYR				S	Sn	19 36 49.6	+2.6
IGDI	IGDIR	1.55	346	P	Pg	19 36 32.1	0.0
IGDI				S	Sg	19 36 55.8	+3.5
AGRB	Hanur-Agry	1.72	315	Pn	Pn	19 36 32.2	-0.9
GNI	Garni	1.79	5	Pn	Pn	19 36 32.7	-1.4
GURO	Guroymak-BITLI	1.99	276	Pn	Pn	19 36 36.9	+0.2
QRD	Qoradiz	2.42	62	S	Sg	19 37 18.7	-1.5
GDB	GEDABAY	2.54	21	P	Pb	19 36 47.3	-1.2
GDB				S	Sb	19 37 20.1	+0.1
YRD	Yardimli	2.94	78	P	Pb	19 36 53.3	-2.1
YRD				S	Sb	19 37 32.2	+0.5
LRK	Lerik	2.99	83	P	Pb	19 36 55.3	-0.8
LRK				S	Sb	19 37 33.1	+0.2

*AFAD **06** 19:43:29.6, 38°.38N×44°.49E, h7^{km}±2^{km}, ML2.0*
*ISK **06** 19:43:31.8, 38°.23N×44°.44E, h14^{km}, ML2.5/6*
ISC 06 19:43:30.4±1.4**, 38°.32N**±0°.04×**44°.41E**±0°.07**, h7**^{km}**, n12, σ0^{s}62**/16**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.47	317	P	Pg	19 43 38.9	-0.7
OZAP				S	Sg	19 43 46.5	+0.6
OZAP				IAML		19 43 56.0	
	comp=N,209nm,1.0s						
YOVA	Hakkari_Yksek	0.73	187	P	Pb	19 43 45.5	-0.2
YOVA				IAML		19 44 01.0	
	comp=E,54nm,0.4s						
YOVA				IAML		19 44 02.0	
	comp=N,54nm,0.3s						
TVAN	Van	0.81	285	P	Pg	19 43 45.6	-0.5
TVAN				IAML		19 44 02.0	
	comp=N,93nm,0.5s						
TVAN				IAML		19 44 08.0	
	comp=E,119nm,0.6s						
VANB	Van	0.85	290	Pg	Pn	19 43 48.7	-0.1
VANB				Sg	Sn	19 44 01.2	-0.4
VMUR	Van-Muradiye	0.94	316	P	Pg	19 43 48.1	-0.4
VMUR				S	Sn	19 44 04.0	+0.1
VMUR				IAML		19 44 07.0	
	comp=N,54nm,0.8s						
VMUR				IAML		19 44 09.0	
	comp=E,48nm,0.8s						
GEVA	Gevas	1.06	270	P	Pg	19 43 49.6	-1.2
GEVA				S	Sn	19 44 07.6	+0.7
CUKT	Cukurca	1.24	211	Pn	Pg	19 43 54.5	+0.3
ADCV	BITLIS_Adilcev	1.41	291	P	Pn	19 43 56.7	+0.1
ADCV				IAML		19 44 21.0	
	comp=N,20nm,0.8s						
ADCV				IAML		19 44 23.0	
	comp=E,17nm,0.5s						
MLAZ	Malazgirt-MUS	1.67	300	Pn	Pb	19 44 02.4	+0.8
AGRB	Hanur-Agry	1.67	319	Pn	Pb	19 44 02.3	+0.7
GNI	Garni	1.85	8	Pn	Pg	19 44 05.2	-0.6
GURO	Guroymak-BITLI	1.88	278	Pn	Pb	19 44 04.8	-0.3

*AFAD **06** 19:50:32.7, 38°.39N×44°.64E, h7^{km}±1^{km}, ML2.2*
*AZER **06** 19:50:34.7, 38°.45N×44°.68E, h2^{km}, ml2.3*
*ISK **06** 19:50:34.9, 38°.31N×44°.64E, h13^{km}, ML2.5/6*
ISC 06 19:50:34.6±1.4**, 38°.35N**±0°.04×**44°.52E**±0°.02**, h6**^{km}±11^{km}**, n21, σ1^{s}48**/37**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.51	307	P	Pg	19 50 44.0	-0.6
OZAP				S	Sb	19 50 52.4	-1.7
OZAP				IAML		19 50 54.0	
	comp=N,247nm,0.5s						
TVAN	Van	0.89	282	P	Pg	19 50 51.3	-0.4
TVAN				S	Sn	19 51 05.6	-1.7
TVAN				IAML		19 51 11.0	
	comp=N,88nm,0.5s						
TVAN				IAML		19 51 22.0	
	comp=E,85nm,1.0s						
VANB	Van	0.92	286	Pg	Pn	19 50 54.3	+0.1
VANB				Sg	Sn	19 51 08.5	+0.7
VMUR	Van-Muradiye	0.97	311	P	Pg	19 50 52.7	-0.7
VMUR				S	Sb	19 51 07.3	-0.1
VMUR				IAML		19 51 11.0	
	comp=N,67nm,0.3s						
VMUR				IAML		19 51 17.0	
	comp=E,52nm,0.8s						
HAKT	HAKKARI	1.02	219	P	Pn	19 50 57.0	+1.3
HAKT				S	Sn	19 51 13.7	+3.2
NAX	Nakhchivan	1.12	43	P	Pg	19 50 56.0	-0.2
NAX				S	Sn	19 51 11.9	-1.0
GEVA	Gevas	1.15	268	P	Pb	19 50 55.8	-1.2
GEVA				S	Sn	19 51 14.5	+0.9
GEVA				IAML		19 51 24.0	
	comp=E,36nm,0.4s						
GEVA				IAML		19 51 26.0	
	comp=N,37nm,0.4s						
AKDM	Akdamar-Van	1.21	269	Pn	Pb	19 50 57.3	-0.7
ORD	Ordubad	1.29	63	P	Pb	19 50 59.5	0.0
ORD				S	Sn	19 51 17.4	+0.3
CUKT	Cukurca	1.32	213	Pn	Pn	19 50 59.9	+0.2
SBZ	Shahbuz	1.32	37	P	Pn	19 50 59.5	-0.3
SBZ				S	Sg	19 51 17.7	+0.6
HYR	Heyderabad	1.39	11	P	Pg	19 51 03.0	+1.6
HYR				S	Sg	19 51 23.0	+3.7
IGDI	IGDIR	1.55	347	P	Pb	19 51 03.6	-0.3
IGDI				S	Sg	19 51 25.3	+0.7
AGRB	Hanur-Agry	1.70	316	Pn	Pb	19 51 06.4	-0.1
MLAZ	Malazgirt-MUS	1.73	298	Pn	Pb	19 51 06.9	0.0
GNI	Garni	1.80	6	Pn	Pb	19 51 07.0	-1.2
GDB	GEDABAY	2.55	22	P	Pn	19 51 18.3	+1.5
GDB				S	Sg	19 51 54.2	-2.4
GANJ	Ganja	2.68	31	P	Pn	19 51 20.3	+1.8
GANJ				S	Sb	19 51 56.6	+0.3
QZX	Qazax, Azerbai	2.78	13	P	Pb	19 51 23.3	-1.5
QZX				S	Sb	19 51 58.5	-0.7
YRD	Yardimli	2.97	78	P	Pn	19 51 24.5	+1.9
YRD				S	Sb	19 52 02.0	-2.8
LRK	Lerik	3.02	83	P	Pb	19 51 27.6	-1.2
LRK				S	Sb	19 52 04.2	-1.8

*BJI **06** 19:52:51.0, 5°.95S×102°.28E, h30^{km}, mB5.1/16, mb5.0/73, Ms4.5/25, Ms7 4.3/26*
*IDC **06** 19:52:54.0±0.7, 5°.21S×102°.18E, h0^{km}, mb4.8/26, mbtmp4.8/28, ML4.6/2, MS3.8/44, Error ellipse: s-maj=25.4km s-min=11.2km az=44.0*
*MOS **06** 19:52:57.7±1.0, 5°.11S×102°.32E, h35^{km}, mb5.1/51, Error ellipse: s-maj=9.1km s-min=5.3km az=115.4*
*DJA **06** 19:52:58.6±0.7, 5°S±2°×10°2E±°, h20^{km}±7^{km}, M4.6/68, mB5.2/43, mb5.0/68, MLv5.1/49, Mw(mB)4.6/43, MwMwp5.0/2, Mwp5.2/2*
*NEIC **06** 19:52:59.2±1.8, 5°.22S±0°.06×102°.21E±0°.06, h35^{km}±1^{km}, mb5.0/94, Error ellipse: s-maj=10.9km s-min=9.2km az=125.0*
ISC 06 19:52:59.3±0.3**, 5°.27S**±0°.04×**102°.19E**±0°.04**, h39**^{km}±2^{km}**, h39**^{km}**:pP-P, n417, σ1^{s}38**/415**, mb4.9**/130**, MS3.9**/58**, 41C-15D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	Manna	1.18	40	P	Pn	19 53 19.6	+0.3
MNAI	Manna	1.18	40	S	Sn	19 53 34.8	+0.6
MNAI	Manna	1.18	40		Pn	19 53 18.9	-0.4
MNAI				Sn	Sn	19 53 33.2	-1.0
MNAI	Manna	1.18	40	P	Pn	19 53 19.2	-0.1
MNAI				S	Sn	19 53 35.0	+0.8
UBSI	University, Be	1.50	3	P	Pn	19 53 24.3	+0.6
KSI	Kapahiang	1.66	14	P	Pn	19 53 26.1	+0.2
LWLI	Liwa	1.88	82	P	Pn	19 53 28.7	-0.2
MASI	Maura Aman, Be	2.12	1	P	Pn	19 53 32.6	+0.4
MASI				S	Sn	19 54 00.1	+2.8
MDSI	Maura Dua	2.13	69	P	Pn	19 53 32.6	+0.3
MDSI				S	Sn	19 53 59.6	+2.1
KASI	Kota Agung	2.31	96	P	Pn	19 53 34.7	-0.1
KLSI		2.59	77	P	Pn	19 53 39.3	+0.6
KLI	Kotabumi	2.68	81	P	Pn	19 53 40.8	+0.8
BLSI	Bandar Lampung	3.04	92	P	Pn	19 53 46.1	+1.2
KRJI	Kerinci	3.24	347	P	Pn	19 53 48.1	+0.3
PPSI	Pulau Pagai	3.31	319	P	Pn	19 53 49.5	+0.9
PMBI	Palembang	3.47	48		Pn	19 53 49.3	-1.5
PMBI	Palembang	3.47	48	P	Pn	19 53 53.5	+2.7
CGJI	Cibinong	3.73	111	P	Pn	19 53 54.2	-0.1
JMBI	JAMBI	3.89	22	P	Pn	19 53 58.7	+2.1
SBJI	Serang	4.01	102	P	Pn	19 54 00.6	+2.4
PDSI	Padang	4.66	338	P	Pn	19 54 07.1	-0.1
DBJI	Dramaga	4.71	106	P	Pn	19 54 09.1	+1.3
PPI	Padang Panjang	5.11	339	P	Pn	19 54 14.0	+0.7
	2.3nm1µm2µm128nm,1.0s						
DSRI	Dabo	5.32	27	P	Pn	19 54 18.0	+1.7
	2µm161nm,0.8s						
LEM	Lembang	5.61	106	Pn	Pn	19 54 21.4	+1.1
	25nm,0.3s,baz=284,slow=11,SNR=24						
LEM				Sn	Sn	19 55 27.6	+3.9
	5.7nm,0.3s,baz=270,slow=20,SNR=3.5						
LEM				LR	LR	19 57 03.9	
	comp=Z,892nm,19.3s,baz=256,slow=44						
	85nm,0.5s						
BKNI	Bangkinang	5.68	348	Pn	Pn	19 54 19.3	-1.8
BKNI	Bangkinang	5.68	348	P	Pn	19 54 22.5	+1.3
	2.1nm2µm154nm,0.6s						
BBJI	Bungbulang	5.84	112	P	Pn	19 54 21.9	-1.6
BBJI	Bungbulang	5.84	112		Pn	19 54 22.8	-0.7
BBJI	Bungbulang	5.84	112	P	Pn	19 54 23.3	-0.2
	54nm,0.5s						
XMI	Christmas Isla	6.20	146	P	Pn	19 54 24.4	-4.0
PBSI	Pulau Batu	6.49	323	P	Pn	19 54 32.1	-0.2
	1.2nm102nm,0.9s						
MNSI	Mandailing Nat	6.57	337	P	Pn	19 54 32.8	-0.6
	0.5nm2µm54nm,0.5s						
TPRI	Tanjung Pinang	6.58	21	P	Pn	19 54 38.3	+4.8
	0.4nm1µm109nm,0.6s						
KPJI	Karang Pucung	7.00	107	P	Pn	19 54 41.3	+1.9
	0.4nm103nm,0.6s						
CTJI	Waduk Cacaban	7.16	104	P	Pn	19 54 44.7	+3.2
	0.4nm75nm,0.9s						
MYKOM	Kota Tinggi	7.21	13	P	Pn	19 54 44.4	+2.2
MYKOM	Kota Tinggi	7.21	13		Pn	19 54 42.0	-0.2
MYKOM	Kota Tinggi	7.21	13	P	Pn	19 54 45.0	+2.8
	0.3nm52nm,0.7s						
GSI	Gunungsitoli	8.00	325	P	Pn	19 54 51.8	-1.2
GSI	Gunungsitoli	8.00	325		Pn	19 54 51.7	-1.3
GSI	Gunungsitoli	8.00	325	P	Pn	19 54 52.6	-0.4
	0.6nm45nm,0.5s						
COCO	West Island	8.68	217		Pn	19 55 01.8	-0.5
COCO	West Island	8.68	217	P	Pn	19 55 01.8	-0.5
UGM	Wanagama	8.68	108	P	Pn	19 55 02.5	+0.1
UGM	Wanagama	8.68	108		Pn	19 55 02.7	+0.3
PCJI	Pacitan	9.38	109	P	Pn	19 55 13.0	+1.0
SJI	Sawahan	9.82	105	P	Pn	19 55 19.7	+1.6
	1µm45nm,0.6s						
SNJI	Sawahan-Nganju	9.82	105	P	Pn	19 55 20.7	+2.5
KULM	Kulim	10.60	352	P	Pn	19 55 28.0	-0.8
KULM	Kulim	10.60	352	Pn	Pn	19 55 28.0	-0.8
MLSI	Meulaboh, Aceh	11.10	328	P	Pn	19 55 35.9	+0.3
	115nm,1.2s						
ABJI	Asem Bagus	12.22	102	P	Pn	19 55 54.6	+3.7
	1µm89nm,0.7s						
JAGI	Jajag, Banyuwa	12.29	106	P	Pn	19 55 51.2	-0.6
JAGI	Jajag, Banyuwa	12.29	106		Pn	19 55 49.5	-2.4
JAGI	Jajag, Banyuwa	12.29	106	P	Pn	19 55 49.8	-2.0
	1µm62nm,0.8s						
SBUM	Sibu	12.62	53		Pn	19 55 55.6	-0.7
SBUM	Sibu	12.62	53	P	Pn	19 56 00.3	+4.0
RTBI	Rangdo, Negare	13.05	105	P	Pn	19 56 00.3	-1.9
	59nm,0.6s						
KHKI	Kahang-Kahang	13.67	104	P	Pn	19 56 12.6	+1.9
	19µm744nm40nm,0.8s						
BKB	Balikpapan	15.21	75		Pn	19 56 33.7	+2.3
BKB				IAmb	IAmb	19 56 39.1	
	comp=Z,57nm,0.7s						
PLAI	Plampang	15.86	104	P	Pn	19 56 36.1	-3.8
	comp=Z,703nmcomp=Z,58nm,0.6s						

DBNI Kabupaten Domp 16.32 102 P **P** **19 56 48.0 -0.3**
PMSI Majene 16.77 85 P **P** **19 56 53.1 -0.1**
comp=Z,112nm,1.0s
MMSI Mamuju 16.87 82 P **P** **19 56 54.1 -0.3**
KAPI Kappang 17.49 90 P **Pn** **19 56 59.7 -0.6**
comp=Z,1.6nm,0.3s,baz=288,slow=6.4,SNR=4.7
KAPI LR LR 20 04 18.9
comp=Z,259nm,19.8s,baz=266,slow=39
comp=Z,3.8nm,0.2s
KAPI Kappang 17.49 90 P **Pn** **19 56 59.3 -1.1**
KAPI Kappang 17.49 90 **Pn** **19 56 59.3 -1.1**
KAPI Kappang 17.49 90 P **Pn** **19 56 59.3 -1.1**
KAPI pmax pmax
comp=Z,22nm,1.3s
WBSI Waikabubak, Su 17.59 105 P **P** **19 57 04.5 +2.1**
comp=Z,56nm,0.7s
TTSI Tana Toraja 17.72 84 P **P** **19 57 05.0 +1.3**
KKM Kota Kinabalu 17.95 51 P **Pn** **19 57 06.3 +0.1**
KKM Kota Kinabalu 17.95 51 **Pn** **19 57 04.4 -1.8**
KKM Kota Kinabalu 17.95 51 P **P** **19 57 07.2 +0.8**
PCI Palu 18.14 77 P **Pn** **19 57 09.8 +1.4**
comp=Z,1µmcomp=Z,91nm,1.2s
MPSI Mapaga 18.54 73 P **Pn** **19 57 14.0 +0.8**
comp=Z,572nmcomp=Z,42nm,1.0s
MYLDM Lahad Datu 19.31 58 P **Pn** **19 57 22.8 +0.3**
MYLDM Lahad Datu 19.31 58 **P** **19 57 19.9 -1.4**
MYLDM IAmb IAmb 19 57 25.3
comp=Z,36nm,0.7s
MYLDM Lahad Datu 19.31 58 P **Pn** **19 57 24.3 +1.8**
comp=Z,57nm,0.8s
KKSI Kolaka, Sulawe 19.42 88 P **Pn** **19 57 24.2 +0.3**
TOLI2 Tolitoli 19.62 72 P **P** **19 57 25.0 +0.4**
TOLI2 Tolitoli 19.62 72 **P** **19 57 23.7 -1.0**
TOLI2 IAmb IAmb 19 57 26.0
comp=Z,43nm,0.7s
EDFI Ende, Flores 19.66 101 P **Pn** **19 57 28.9 +2.1**
APSI Ampana 19.90 78 P **Pn** **19 57 33.1 +3.6**
comp=Z,70nm,0.8s
MMRI Maumere 20.17 101 P **P** **19 57 29.0 -1.7**
MMRI Maumere 20.17 101 P **P** **19 57 28.4 -2.2**
MMRI IAmb IAmb 19 57 38.6
comp=Z,32nm,0.5s
MRSI Marisa 20.53 74 P **P** **19 57 35.0 +0.4**
UBPT Khong Chiam 20.68 9 P **P** **19 57 34.9 -1.1**
LUWI Luwuk 20.97 79 P **P** **19 57 39.7 +0.4**
LUWI Luwuk 20.97 79 **P** **19 57 37.2 -2.1**
LUWI IAmb IAmb 19 57 50.1
comp=Z,76nm,1.1s
LUWI Luwuk 20.97 79 P Pn 19 57 44.2 +2.2
comp=Z,761nmcomp=Z,77nm,0.9s
GTOI Gorontalo 21.60 75 P **P** **19 57 46.8 +0.7**
comp=Z,50nm,0.9s
BATI Baumata 21.83 104 P **P** **19 57 47.3 -1.2**
comp=Z,45nm,0.6s,baz=277,slow=8.1,SNR=22
BATI S **S** **20 01 40.4 -7.5**
comp=Z,34nm,0.6s,baz=229,slow=20,SNR=7.5
comp=Z,45nm,0.6s
BATI Baumata 21.83 104 P **P** **19 57 47.7 -0.8**
comp=Z,900nmcomp=Z,89nm,0.7s
SOEI Soe 22.33 103 P **P** **19 57 52.1 -1.9**
SOEI IAmb IAmb 19 58 15.6
comp=Z,30nm,0.8s
SOEI Soe 22.33 103 P **P** **19 57 57.7 +3.7**
MBWA Marble Bar 23.21 134 P **P** **19 58 01.7 -1.3**
PSA00 Pilbara Seismi 23.56 135 P **P** **19 58 05.6 -0.9**
PSA00 Pilbara Seismi 23.56 135 P **P** **19 58 05.3 -1.1**
PSA00 IAmb IAmb 19 58 16.5
comp=Z,5.6nm,0.9s
CM31 Chiang Mai Arr 23.80 352 P **P** **19 58 05.1 -3.6**
CM31 IAmb IAmb 19 58 11.7
comp=Z,41nm,1.1s
CMAR Chiang Mai Arr 23.80 352 P **P** **19 58 07.4 -1.3**
comp=Z,20nm,0.6s,baz=170,slow=9.7,SNR=77
CMAR PcP **PcP** **20 01 53.3 +1.6**
comp=Z,1.2nm,0.6s,baz=168,slow=2.7,SNR=6.3
CMAR LR LR 20 08 18.2
comp=Z,196nm,20.2s,baz=185,slow=39
comp=Z,20nm,0.6s
CMAR Chiang Mai Arr 23.80 352 P **P** **19 58 06.8 -1.8**
CMAR **PcP** **20 01 53.6 +2.0**
CHTO Chiang Mai 24.15 352 P **P** **19 58 11.9 0.0**
CHTO Chiang Mai 24.15 352 P **P** **19 58 10.4 -1.5**
CHTO Chiang Mai 24.15 352 P **P** **19 58 10.4 -1.5**
CHTO pmax pmax
comp=Z,20nm,0.9s
PALK Pallekele 24.80 300 LR LR 20 07 06.0
comp=Z,194nm,19.9s,baz=120,slow=34
QIZ Qiongzhong 25.30 17 P **P** **19 58 24.3 +2.0**
QIZ Qiongzhong 25.30 17 IAmb IAmb 19 58 25.2
comp=Z,76nm,1.2s
QIZ Qiongzhong 25.30 17 P **P** **19 58 23.8 +1.5**
QIZ S **S** **20 02 48.0 +2.1**
QIZ pmax pmax
comp=Z,57nm,1.1s
QIZ L L
comp=Z,340nm,14.5s
QIZ L L
comp=Z,260nm,14.5s
QIZ L L
comp=Z,430nm,13.4s
FITZ Fitzroy Crossi 26.21 121 LR LR 20 09 57.6
comp=Z,246nm,20.5s,baz=316,slow=39
DAV Davao City (W) 26.36 63 LR LR 20 09 49.4
comp=Z,158nm,19.7s,baz=220,slow=38
MORW Morawa 27.06 153 P **P** **19 58 38.3 +0.1**
KNRA Kununurra 28.06 114 P **P** **19 58 46.1 -1.2**
MTN Manton Dam 29.53 107 P **P** **19 58 59.6 -0.8**
MTN IAmb IAmb 19 59 07.0
comp=Z,28nm,1.2s
H08S2 Diego Garcia H 29.60 264 T T 20 29 53.4
baz=87,slow=76,SNR=252
H08S3 Diego Garcia H 29.61 264 T T 20 29 49.3
baz=87,slow=76,SNR=140
H08S1 Diego Carcia H 29.62 264 T T 20 29 54.0
baz=87,slow=76,SNR=74
BRDH Bariadhala 29.63 340 LR LR 20 13 34.9
comp=Z,232nm,20.3s,baz=164,slow=42
KMI2 Kunming 30.24 1 P **P** **19 59 08.2 +1.4**
KMI2 pmax pmax
comp=Z,11nm,1.1s
KMI2 L L
comp=Z,250nm,21.3s
KMI2 L L
comp=Z,170nm,16.4s
KMI2 L L
comp=Z,380nm,14.9s
TNCH TengChong 30.33 353 P **P** **19 59 07.7 +0.2**
TNCH pmax pmax
comp=Z,10.0nm,1.1s
NWAO Narrogin (SRO) 30.89 155 LR LR 20 10 08.0
comp=Z,337nm,21.8s,baz=326,slow=33
PZH PanZhiHua 31.59 359 P **P** **19 59 21.5 +2.9**
GYA Guiyang 31.84 8 ⇑P **P** **19 59 21.3 +0.5**
GYA pmax pmax
comp=Z,9.0nm,0.7s
HYB Hyderabad 32.46 314 *eP* **P** **19 59 26.0 -0.2**
TPUB Ta-pu 33.62 32 P **P** **19 59 35.0 -1.4**
YULB Yu-li 34.05 32 P **P** **19 59 40.4 +0.3**
YULB IAmb IAmb 19 59 57.4
comp=Z,16nm,1.0s
SSLB Suanglung 34.19 32 P **P** **19 59 40.8 -0.5**
SSLB IAmb IAmb 19 59 43.0
comp=Z,33nm,1.5s
WB0 Warramunga Arr 34.48 118 P **P** **19 59 43.8 0.0**
WRA Warramunga Arr 34.50 118 P **P** **19 59 44.1 +0.1**
comp=Z,6.5nm,0.9s,baz=291,slow=9.9,SNR=42
WRA PcP **PcP** **20 02 18.4 -0.3**
comp=Z,1.4nm,0.7s,baz=293,slow=2.9,SNR=4.0
WRA S **S** **20 05 12.7 +2.4**
comp=Z,0.7nm,1.1s,baz=290,slow=9.7,SNR=3.0
comp=Z,6.5nm,0.9s
WRA Warramunga Arr 34.50 118 **P** **19 59 44.6 +0.6**
WRAB Tennant Creek 34.50 118 P **P** **19 59 44.8 +0.8**
WRAB Tennant Creek 34.50 118 *ce*P **P** **19 59 43.7 -0.3**
WRAB pmax pmax
comp=Z,5.0nm,0.6s
WRAB Tennant Creek 34.50 118 P **P** **19 59 44.5 +0.5**
WRAB pP **pP** **19 59 54.5 -0.4**
WR8 Warramunga Arr 34.64 118 P **P** **19 59 45.0 -0.3**
WR8 IAmb IAmb 20 00 00.0
comp=Z,8.0nm,0.6s
YHNB Yeheng 35.13 31 P **P** **19 59 48.3 -1.2**
ASAR Alice Springs 35.59 124 P **P** **19 59 54.1 +0.7**
comp=Z,7.7nm,0.7s,baz=296,slow=8.3,SNR=59
ASAR PcP **PcP** **20 02 22.8 +0.9**
comp=Z,1.3nm,0.7s,baz=298,slow=3.6,SNR=4.2
ASAR S **S** **20 05 27.5 +0.4**
comp=Z,0.7nm,0.9s,baz=294,slow=14,SNR=3.9
ASAR LR LR 20 15 19.9
comp=Z,188nm,20.9s,baz=298,slow=38
comp=Z,7.7nm,0.7s
ASAR Alice Springs 35.59 124 P **P** **19 59 53.4 0.0**
ASAR Alice Springs 35.59 124 P **P** **19 59 53.4 0.0**
ASAR 20 02 22.8
ASAR S **S** **20 05 27.5 +0.4**
AS31 Alice Springs 35.59 124 P **P** **19 59 52.8 -0.6**
YOJ Yonaguni jima 35.84 34 P **P** **19 59 53.3 -2.1**
YOJ Yonaguni jima 35.84 34 P **P** **19 59 53.3 -2.1**
YOJ pmax pmax
comp=Z,720nm,2.0s
CD2 Chengdu 36.01 2 P **P** **19 59 56.8 0.0**
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 L L
comp=Z,680nm,16.5s
CD2 L L
comp=Z,270nm,12.7s
CD2 L L
comp=Z,670nm,19.0s
ENH Enshi 36.03 11 P **P** **19 59 55.9 -1.1**
ENH Enshi 36.03 11 P **P** **19 59 55.7 -1.3**
ENH PcP **PcP** **20 02 22.2 -0.7**
EVN Everest 36.22 337 P **P** **19 59 57.8 -1.6**
EVN IAmb IAmb 20 00 16.1
comp=Z,12nm,0.7s
LSA Lhasa 36.35 344 P **P** **19 59 58.0 -2.3**
LSA pmax pmax
comp=Z,39nm,0.8s
WHN Wuhan 37.47 17 P **P** **20 00 09.1 -0.1**
WHN pmax pmax
comp=Z,36nm,0.9s
JAY Jayapura 38.51 87 LR LR 20 19 08.0
comp=Z,56nm,19.3s,baz=216,slow=41
QIS Mount Isa 39.37 116 P **P** **20 00 24.5 -0.9**
XAN Xi'an 39.61 9 ⇑P **P** **20 00 26.5 -0.7**
XAN pP pP 20 00 34.9 -2.9
XAN sP sP 20 00 38.2 -4.0
XAN pmax pmax
comp=Z,47nm,0.8s
XAN L L
comp=Z,380nm,17.9s
XAN L L
comp=Z,240nm,15.1s
XAN L L
comp=Z,570nm,15.8s
XAN Xi'an 39.61 9 P **P** **20 00 26.5 -0.7**
XAN x x 20 00 36.3
XAN x x 20 00 38.0
NJ2 Nanjing 40.37 22 *eP* **P** **20 00 34.4 +1.0**
NJ2 pmax pmax
comp=Z,20nm,0.5s
JOW Kunigami 40.69 37 LR LR 20 17 48.9
comp=Z,70nm,19.7s,baz=299,slow=37
JOW Kunigami 40.69 37 P **P** **20 00 35.9 -0.3**
JOW IAmb IAmb 20 00 37.3
comp=Z,92nm,2.0s
LYN LuoYang 40.78 13 P **P** **20 00 37.4 +0.6**
LYN pmax pmax
comp=Z,70nm,0.6s
LYN L L
comp=Z,790nm,15.1s
LYN L L
comp=Z,190nm,12.4s
LYN L L
comp=Z,660nm,14.4s
LZDM Lanzhou Array 41.03 2 P **P** **20 00 39.8 +0.5**
comp=Z,11nm,0.7s,baz=184,slow=12,SNR=16
comp=Z,11nm,0.7s
LZH Lanzhou 41.17 2 P **P** **20 00 40.9 +0.7**
LZH pP pP 20 00 52.6 +1.8
LZH sP sP 20 00 57.0 +1.8
LZH pmax pmax
comp=Z,34nm,1.0s
LZH L L
comp=Z,370nm,13.9s
LZH L L
comp=Z,310nm,15.1s
LZH L L
comp=Z,440nm,16.8s
COEN Coen 41.26 105 P **P** **20 00 39.7 -1.4**
BBOO Buckleboo 41.79 135 P **P** **20 00 44.7 -0.6**
BBOO IAmb IAmb 20 01 50.2
comp=Z,66nm,1.9s
GOMU GeErMu 41.83 351 P **P** **20 00 45.9 0.0**
GOMU pmax pmax
comp=Z,13nm,0.8s
INKA Innaminka 42.90 126 P **P** **20 00 53.8 -0.5**
TIA Tai'an 43.57 18 P **P** **20 00 58.9 -0.7**
TIA pmax pmax
comp=Z,9.0nm,0.6s
HNS HongShan 44.03 14 ⇑P **P** **20 01 03.6 +0.4**
HNS pmax pmax
comp=Z,17nm,0.6s
HNS L L
comp=Z,340nm,16.4s
HNS L L
comp=Z,300nm,18.0s
HTT Hallett 44.15 134 P **P** **20 01 02.0 -2.4**
GTA2 Gaotai 44.59 357 P **P** **20 01 08.1 +0.2**
GTA2 pP pP 20 01 17.0 -1.6
GTA2 PcP **PP** **20 02 51.9 -0.6**
GTA2 pmax pmax
comp=Z,15nm,1.0s
GTA2 L L
comp=Z,370nm,16.5s
GTA2 L L
comp=Z,180nm,17.2s
GTA2 L L
comp=Z,460nm,18.9s
PMG Port Moresby 44.76 98 P **P** **20 01 09.0 -0.5**
PMG Port Moresby 44.76 98 P **P** **20 01 08.5 -1.0**
PMG Port Moresby 44.76 98 *ce*P **P** **20 01 08.2 -1.3**
PMG pmax pmax
comp=Z,46nm,1.3s
CTA Charters Tower 45.27 113 LR LR 20 21 35.2
comp=Z,139nm,20.3s,baz=226,slow=38
CTAO Charters Tower 45.27 113 P **P** **20 01 14.3 +0.8**
CTAO Charters Tower 45.27 113 P **P** **20 01 12.6 -0.9**
CTAO IAmb IAmb 20 01 15.3
comp=Z,13nm,0.9s
CTAO Charters Tower 45.27 113 P **P** **20 01 12.6 -0.9**
CTAO pmax pmax
comp=Z,13nm,1.0s
CTAO Charters Tower 45.27 113 P **P** **20 01 14.0 +0.5**
CTAO pP **pP** **20 01 24.9 +0.3**
STKA Stephens Creek 45.36 131 P **P** **20 01 15.4 +1.4**
comp=Z,20nm,0.6s,baz=304,slow=9.7,SNR=50
STKA LR LR 20 21 00.7
comp=Z,184nm,20.6s,baz=333,slow=37
comp=Z,20nm,0.6s
STKA Stephens Creek 45.36 131 P **P** **20 01 15.4 +1.4**
STKA Stephens Creek 45.36 131 P **P** **20 01 15.2 +1.2**
STKA Stephens Creek 45.36 131 P **P** **20 01 15.2 +1.2**
STKA pmax pmax
comp=Z,87nm,0.7s
JSU Suzuyama 45.43 35 P **P** **20 01 13.3 -1.3**
JSU IAmb IAmb 20 01 14.7
comp=Z,8.4nm,0.6s
BTO2 Baotou 46.33 8 *eP* **P** **20 01 22.0 +0.4**
BTO2 pP **pP** **20 01 32.1 -0.2**
BTO2 sP **sP** **20 01 36.1 -0.6**
BTO2 pmax pmax
comp=Z,23nm,1.1s
BTO2 pmax pmax
comp=Z,200nm,5.5s
BTO2 L L
comp=Z,960nm,17.4s
BTO2 L L
comp=Z,570nm,16.5s
BTO2 L L
comp=Z,880nm,14.7s
HHC Hu-ho-hao-te 46.70 10 *eP* **P** **20 01 25.0 +0.6**
HHC sP pwP 20 01 37.0 -0.2
HHC pmax pmax
comp=Z,15nm,0.8s
HHC pmax pmax
comp=Z,67nm,4.6s
HHC L L
comp=Z,270nm,16.7s
HHC L L
comp=Z,150nm,16.9s
HHC L L
comp=Z,220nm,16.6s
BJT Baijiatuau 46.87 15 IAmb IAmb 20 01 27.1
comp=Z,11nm,0.7s
BJI2 Beijing 46.87 15 P **P** **20 01 26.1 +0.4**
BJI2 pP **pP** **20 01 36.0 -0.4**
BJI2 pmax pmax
comp=Z,8.0nm,0.6s
JNU Nakatsue 46.88 33 LR LR 20 23 27.0
comp=Z,46nm,18.4s,baz=220,slow=39
NIL Nilore 47.42 327 P **P** **20 01 30.1 -0.1**
NIL Nilore 47.42 327 P **P** **20 01 30.1 -0.1**
NIL pmax pmax
comp=Z,30nm,0.8s
TJN Taejon 47.67 28 P **P** **20 01 32.1 +0.2**
CMSA Cobar Meteorol 48.37 128 P **P** **20 01 39.2 +1.6**
KSAR Wonju Array Be 48.78 27 P **P** **20 01 39.8 -0.7**
KSAR Wonju Array Be 48.78 27 P **P** **20 01 39.8 -0.7**
KSRS Korea Array 48.80 27 P **P** **20 01 40.3 -0.3**
comp=Z,5.2nm,0.6s,baz=224,slow=6.6,SNR=22
KSRS LR LR 20 22 40.6
comp=Z,30nm,19.7s,baz=185,slow=37
comp=Z,5.2nm,0.6s
KS19 Wonju Array Si 48.82 27 P **P** **20 01 39.9 -1.0**
KS19 IAmb IAmb 20 01 41.8
comp=Z,35nm,1.6s
JMN Monobe 49.02 35 P **P** **20 01 41.5 -1.0**
KBL Kabul 50.45 324 P **P** **20 01 51.8 -1.8**
KBL Kabul 50.45 324 P **P** **20 01 51.8 -1.8**
KBL pmax pmax
comp=Z,7.0nm,1.0s
XLT XiLinHaoTe 50.52 13 *eP* **P** **20 01 54.4 +0.6**
XLT sP pP 20 02 06.9 +1.9
XLT pmax pmax
comp=Z,17nm,1.0s
XLT pmax pmax
comp=Z,150nm,5.5s
WMQ Urumqi 50.59 346 *eP* **P** **20 01 55.9 +1.6**
WMQ pP pP 20 02 04.9 -0.5
WMQ sS sS 20 09 26.9 +2.7
WMQ pmax pmax
comp=Z,37nm,1.1s
WMQ pmax pmax
comp=Z,82nm,3.7s
WMQ L L
comp=Z,140nm,24.2s
WMQ Urumqi 50.59 346 P **P** **20 01 55.4 +1.1**
WMQ pP **pP** **20 02 06.1 +0.7**
KSH2 Kashi 50.59 333 P **P** **20 01 55.0 +0.5**
KSH2 pP pP 20 02 05.2 -0.4
KSH2 pmax pmax
comp=Z,15nm,0.8s
EIDS Eidsvold 50.86 118 P **P** **20 01 56.5 -0.1**
EIDS IAmb IAmb 20 02 21.9
comp=Z,31nm,1.8s
JHJ Hachijo jima 2 52.22 40 LR LR 20 24 33.9
comp=Z,35nm,19.2s,baz=292,slow=36
NRN Naryn 52.29 335 P **P** **20 02 05.8 -1.5**
NRN IAmb IAmb 20 02 11.4
comp=Z,14nm,1.0s
NRN Naryn 52.29 335 P **P** **20 02 05.9 -1.5**
NRN pmax pmax
comp=Z,14nm,1.0s
JGF Kuroka 52.37 36 P **P** **20 02 07.0 -0.7**
CAN Canberra 52.42 131 P **P** **20 02 09.3 +1.2**
CAN Canberra 52.42 131 P **P** **20 02 09.4 +1.2**
CAN pmax pmax
comp=Z,141nm,2.0s
DRK Karamyk 52.63 330 P **P** **20 02 09.8 -0.1**
DRK IAmb IAmb 20 02 12.8
comp=Z,12nm,0.8s
DRK Karamyk 52.63 330 P **P** **20 02 09.8 -0.1**
DRK pmax pmax
comp=Z,12nm,0.8s
GAR Garm 53.01 329 P **P** **20 02 11.4 -1.1**
GAR IAmb IAmb 20 02 24.3
comp=Z,12nm,0.7s
SONM Songino Array 53.01 4 P **P** **20 02 13.3 +1.0**
comp=Z,52nm,0.8s,baz=185,slow=8.8,SNR=429
SONM PcP **PcP** **20 03 20.9 +0.2**
comp=Z,3.8nm,0.7s,baz=184,slow=3.8,SNR=4.4
SONM LR LR 20 28 11.3
comp=Z,72nm,18.6s,baz=186,slow=40
comp=Z,52nm,0.8s
SONM Songino Array 53.01 4 P **P** **20 02 13.0 +0.7**
SONM PcP **PcP** **20 03 21.6 +1.0**
SONM Songino Array 53.01 4 P **P** **20 02 13.0 +0.7**
SONM 20 03 21.6
SONM pmax pmax
comp=Z,54nm,0.8s
ULN Ulaanbaatar 53.08 4 P **P** **20 02 13.2 +0.3**
ULN 20 02 13.4
ULN PcP **PcP** **20 03 21.1 +0.2**
ULN Ulaanbaatar 53.08 4 *ce*P **P** **20 02 13.9 +1.0**
ULN pmax pmax
comp=Z,41nm,1.0s
ULN Ulaanbaatar 53.08 4 P **P** **20 02 13.8 +1.0**
SHAA Shahritus 53.12 326 P **P** **20 02 13.0 -0.3**
SHAA IAmb IAmb 20 02 13.6
comp=Z,36nm,0.8s
CN2 Changchun 53.16 21 *eP* **P** **20 02 16.3 +2.9**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CHGR Chuyangaron 53.35 328 IAmb IAmb 20 02 15.9
comp=Z,21nm,0.9s
CHGR Chuyangaron 53.35 328 *c iP* **P** **20 02 14.3 -0.7**
CHGR pmax pmax
comp=Z,23nm,1.0s
MJAR Matsushiro Arr 53.52 36 P **P** **20 02 13.3 -2.9**
comp=Z,5.2nm,0.8s,baz=219,slow=7.2,SNR=21
MJAR LR LR 20 26 29.7
comp=Z,35nm,18.2s,baz=186,slow=38
MJAR Matsushiro Arr 53.52 36 P **P** **20 02 14.8 -1.4**
MJAR Matsushiro Arr 53.52 36 P **P** **20 02 14.8 -1.4**
MJAR pmax pmax
comp=Z,8.0nm,1.3s
BTK Batken 53.55 330 IAmb IAmb 20 02 18.6
comp=Z,24nm,1.4s
AAK Ala-Archa 53.91 335 P **P** **20 02 19.6 +0.5**
comp=Z,4.5nm,0.8s,baz=135,slow=10.0,SNR=7.6
AAK PcP **PcP** **20 03 25.7 +1.4**
comp=Z,5.3nm,0.7s,baz=135,slow=5.9,SNR=4.2
AAK LR LR 20 27 14.0
comp=Z,77nm,21.5s,baz=134,slow=38
comp=Z,4.5nm,0.8s
AAK Ala-Archa 53.91 335 IAmb IAmb 20 02 51.5
comp=Z,35nm,1.9s
AAK Ala-Archa 53.91 335 *ce*P **P** **20 02 18.6 -0.5**
AAK pmax pmax
comp=Z,4.0nm,0.6s
MK31 Makanchi Array 54.76 343 *ce*P **P** **20 02 25.6 +0.6**
MKAR Makanchi Array 54.76 343 P **P** **20 02 25.4 +0.4**
comp=Z,13nm,0.6s,baz=155,slow=8.5,SNR=84
MKAR LR LR 20 30 38.6
comp=Z,66nm,19.8s,baz=152,slow=41
comp=Z,13nm,0.6s
MKAR Makanchi Array 54.76 343 P **P** **20 02 25.1 0.0**
MKAR Makanchi Array 54.76 343 *i* P **P** **20 02 25.7 +0.7**
MKAR pmax pmax
comp=Z,13nm,0.6s
ABPO Ambohimpanom 55.22 251 P **P** **20 02 28.9 -0.1**
ABPO IAmb IAmb 20 03 49.4
comp=Z,16nm,1.1s
ABPO Ambohimpanom 55.22 251 P **P** **20 02 29.0 -0.1**
ABPO pmax pmax
comp=Z,16nm,1.2s
MDJ Mudanjiang 55.42 24 IAmb IAmb 20 02 31.0
comp=Z,8.9nm,0.8s
MDJ Mudanjiang 55.42 24 P **P** **20 02 29.9 +0.1**
MDJ pmax pmax
comp=Z,14nm,1.0s
MDJ Mudanjiang 55.42 24 P **P** **20 02 29.6 -0.2**
MDJ x x 20 02 39.7
MDJ pP **pP** **20 02 40.5 -0.4**
ZAK Zakamensk 55.44 1 *eP* **P** **20 02 29.0 -0.9**
ZAK pmax pmax
comp=Z,10.0nm,1.0s
BNX BinXian 55.54 21 ⇓P **P** **20 02 30.9 +0.3**
BNX pmax pmax
comp=Z,68nm,1.1s
KNGR Kungurtug, Tuv 55.80 356 *i* P **P** **20 02 32.3 -0.2**
KNGR pmax pmax
comp=Z,7.0nm,0.9s
KK31 Karatay Array 56.05 332 P **P** **20 02 33.8 -0.5**
KK31 Karatay Array 56.05 332 P **P** **20 02 33.8 -0.5**

KK31 pmax pmax
comp=Z,4.0nm,0.8s
KKAR Karatay Array 56.05 332 P **P** **20 02 33.7 -0.6**
KKAR Karatay Array 56.05 332 P **P** **20 02 33.7 -0.6**
USRK Ussuriysk Ar. 56.07 26 P **P** **20 02 34.3 -0.2**
comp=Z,27nm,0.7s,baz=214,slow=5.5,SNR=38
comp=Z,27nm,0.7s
DGZ Jazzator, Alta 56.23 349*c i*P **P** **20 02 36.6 +0.9**
DGZ pmax pmax
comp=Z,17nm,1.0s
HIA Hailar 56.43 14 IAmb IAmb 20 02 37.4
comp=Z,10nm,0.8s
MOY Mondy 56.73 359 *e*P **P** **20 02 39.7 +0.6**
MOY pmax pmax
comp=Z,15nm,1.7s
TLY Talaya 56.74 1 P **P** **20 02 39.7 +0.6**
comp=Z,13nm,1.0s,baz=196,slow=10
TLY LR LR 20 29 25.9
comp=Z,74nm,19.8s,baz=164,slow=39
comp=Z,13nm,1.0s
TLY Talaya 56.74 1 P **P** **20 02 39.5 +0.3**
TLY IAmb IAmb 20 02 41.4
comp=Z,12nm,0.9s
TLY Talaya 56.74 1*ce*P **P** **20 02 40.0 +0.9**
TLY pmax pmax
comp=Z,16nm,1.0s
TLY Talaya 56.74 1 P **P** **20 02 40.4 +1.3**
TLY x x 20 02 50.2
NGOA Tingoa Renbel 57.51 100 P **P** **20 02 44.8 -0.4**
CIT Chita 57.89 8 *e*P **P** **20 02 48.1 +0.8**
CIT *e* 20 03 00.3
CIT *e* 20 06 12.4
CIT pmax pmax
comp=Z,48nm,2.0s
KURBB Kurchatov Arra 59.30 343 P **P** **20 02 57.1 +0.1**
comp=Z,10nm,0.8s,baz=160,slow=6.5,SNR=68
KURBB PcP **PcP** **20 03 45.8 +1.0**
comp=Z,2.1nm,0.7s,baz=155,slow=4.1,SNR=4.3
comp=Z,10nm,0.8s
KURK Kurchatov 59.35 343 P **P** **20 02 57.3 -0.1**
KURK Kurchatov 59.35 343 PcP **PcP** **20 03 45.8 +0.8**
KURK Kurchatov 59.35 343*ce*P **P** **20 02 58.0 +0.6**
KURK pmax pmax
comp=Z,25nm,1.0s
KURK Kurchatov 59.35 343 P **P** **20 02 57.7 +0.4**
KURK PcP **PcP** **20 03 44.0 -1.0**
HEH HeiHe 59.45 19 *e*P **P** **20 02 57.5 -0.5**
HEH pP **pP** **20 03 10.6 +1.3**
HEH pmax pmax
comp=Z,52nm,0.9s
H04N2 CROZET ISLANDS 59.54 218 T T 21 07 22.3
baz=64,slow=75,SNR=194
H04N1 CROZET ISLANDS 59.56 218 T T 21 07 22.6
baz=64,slow=75,SNR=201
H04N3 CROZET ISLANDS 59.56 218 T T 21 07 18.9
baz=64,slow=75,SNR=153
H04S1 CROZET ISLANDS 59.79 218 T T 21 07 35.4
baz=62,slow=75,SNR=42
H04S3 CROZET ISLANDS 59.80 218 T T 21 07 35.0
baz=62,slow=75,SNR=93
H04S2 CROZET ISLANDS 59.80 218 T T 21 07 36.3
baz=62,slow=75,SNR=55
KLR Kul'dur 60.07 22 LR LR 20 29 27.0
comp=Z,94nm,21.8s,baz=212,slow=36
KLR Kul'dur 60.07 22*ce*P **P** **20 03 02.1 -0.3**
KLR pmax pmax
comp=Z,4.0nm,0.8s
ZAA0 Zalesovo Array 60.78 348 P **P** **20 03 06.8 -0.3**
ZALV Zalesovo Beam 60.78 348 P **P** **20 03 07.0 -0.1**
comp=Z,9.1nm,0.4s,baz=163,slow=5.6,SNR=69
ZALV LR LR 20 32 53.8
comp=Z,146nm,19.4s,baz=143,slow=40
comp=Z,9.1nm,0.4s
ZALV Zalesovo Beam 60.78 348 P **P** **20 03 06.8 -0.3**
ASAJ Asahikawa 61.13 32 LR LR 20 29 44.7
comp=Z,39nm,20.8s,baz=342,slow=36
ASAJ Asahikawa 61.13 32 P **P** **20 03 09.1 -0.6**
ASAJ pmax pmax
comp=Z,13nm,0.9s
JKA Kamikawa-asahi 61.13 32 P **P** **20 03 09.1 -0.6**
JKA IAmb IAmb 20 03 10.1
comp=Z,13nm,0.9s
RAYN Ar Rayn 62.24 300 P **P** **20 03 17.7 0.0**
RAYN Ar Rayn 62.24 300 P **P** **20 03 17.7 0.0**
RAYN pmax pmax
comp=Z,2.0nm,0.9s
ZEA Zeya 62.45 16 *e*P **P** **20 03 19.0 +0.6**
ZEA pmax pmax
comp=E,10.0nm,1.1s
ZEA pmax pmax
comp=N,10.0nm,0.6s
ZEA pmax pmax
comp=Z,20nm,0.9s
YSS Yuzhno-Sakhali 63.14 30 P **P** **20 03 22.3 -0.8**
YSS Yuzhno-Sakhali 63.14 30*ce*P **P** **20 03 23.0 -0.1**
YSS pmax pmax
comp=Z,34nm,1.0s
YSS Yuzhno-Sakhali 63.14 30 P **P** **20 03 22.5 -0.7**
YSS pP **pP** **20 03 33.0 -1.4**
YSS sP **sP** **20 03 38.4 -0.1**
BVAR Borovoye Array 63.99 339 P **P** **20 03 28.6 -0.1**
comp=Z,12nm,0.8s,baz=142,slow=7.3,SNR=27
BVAR LR LR 20 36 08.1
comp=Z,45nm,18.9s,baz=145,slow=41
comp=Z,12nm,0.8s
BORK Borovoye 64.04 339 P **P** **20 03 28.3 -0.6**
BORK IAmb IAmb 20 03 30.7
comp=Z,9.7nm,0.7s
BORK Borovoye 64.04 339*ce*P **P** **20 03 29.1 +0.2**
BORK pmax pmax
comp=Z,13nm,0.8s
DZM Mont Dzumac 64.19 112 *e*LR LR 20 22 45.9
comp=Z,102nm,24.4s
FURI Furi 64.86 282 LR LR 20 28 34.8
comp=Z,107nm,19.4s,baz=74,slow=33
AB31 Akbulak array 65.54 331 P **P** **20 03 39.0 +0.2**
ABKAR Akbulak array 65.54 331 P **P** **20 03 38.6 -0.2**
AKTO Aktyubinsk 67.26 331 P **P** **20 03 49.8 +0.1**
comp=Z,4.9nm,0.8s,baz=121,slow=5.7,SNR=14
AKTO LR LR 20 36 58.8
comp=Z,59nm,18.3s,baz=340,slow=39
comp=Z,4.9nm,0.8s
MAW Mawson 67.70 195 LR LR 20 27 54.3
comp=Z,142nm,19.9s,baz=52,slow=31
AKT Akhty 68.00 319 *e*P **P** **20 03 55.0 +0.2**
AKT pmax pmax
comp=Z,22nm,1.0s
GNI Garni 69.39 316 *i*P **P** **20 04 03.8 +0.3**
GNI pmax pmax
comp=Z,5.0nm,1.1s
YAK Yakutsk 70.37 13 LR LR 20 37 26.4
comp=Z,98nm,19.2s,baz=247,slow=38
YAK Yakutsk 70.37 13 P **P** **20 04 07.4 -1.5**
YAK Yakutsk 70.37 13*ce*P **P** **20 04 07.8 -1.0**
YAK pmax pmax
comp=Z,38nm,0.9s
YAK Yakutsk 70.37 13 P **P** **20 04 07.8 -1.0**
YAK pP **pP** **20 04 19.3 -0.9**
YAK sP **sP** **20 04 23.8 -0.6**
SVE Sverdlovsk 70.52 337 *e*P **P** **20 04 11.0 +1.1**
SVE pmax pmax
comp=Z,29nm,1.1s
GURO Guroymak-BITLI 70.62 314 P **P** **20 04 12.1 +1.0**
KARS Kars 70.74 316 P **P** **20 04 12.4 +0.6**
KARS IAmb IAmb 20 04 25.9
comp=Z,9.7nm,1.0s
KARS Kars 70.74 316 P **P** **20 04 12.4 +0.6**
KARS pmax pmax
comp=Z,10.0nm,1.0s
MARD Mardin 71.05 312 P **P** **20 04 14.4 +0.7**
MARD IAmb IAmb 20 04 16.2
comp=Z,10nm,0.7s
ARTI Arti 71.11 336 P **P** **20 04 13.6 +0.1**
comp=Z,19nm,0.7s,baz=136,slow=3.2,SNR=37
ARTI LR LR 20 40 05.9
comp=Z,24nm,18.7s,baz=152,slow=40
comp=Z,19nm,0.7s
ARTI Arti 71.11 336 P **P** **20 04 13.4 -0.1**
ARTI Arti 71.11 336*c i*P **P** **20 04 13.9 +0.5**
ARTI S **S** **20 13 30.5 +3.3**
ARTI SS **SS** **20 17 59.2 -2.2**
ARTI pmax pmax
comp=Z,23nm,0.8s
ARTI Arti 71.11 336 P **P** **20 04 14.0 +0.5**
ARTI pP **pP** **20 04 25.2 +0.3**
RPZ Rata Peaks 71.14 134 LR LR 20 34 04.0
comp=Z,95nm,20.9s,baz=82,slow=35
MBAR Mbarara 71.48 271 LR LR 20 32 33.0
comp=Z,72nm,18.6s,baz=98,slow=33
NEUR Neytrino 72.12 319 *i*P **P** **20 04 21.3 +1.2**
NEUR pmax pmax
comp=Z,2.0nm,1.0s
KBZ Khabaz 72.20 319 P **P** **20 04 21.7 +1.4**
comp=Z,7.9nm,0.8s,baz=117,slow=9.0,SNR=16
comp=Z,7.9nm,0.8s
KBZ Khabaz 72.20 319*ce*P **P** **20 04 19.5 -0.8**
KBZ pmax pmax
comp=Z,8.0nm,0.9s
ASF Jabal al Asfar 72.27 306 LR LR 20 36 58.1
comp=Z,93nm,18.6s,baz=75,slow=37
SHA1 Shidzhatmaz 72.36 319*ce*P **P** **20 04 22.4 +0.8**
KIV Kislovodsk 72.43 319 *e*P **P** **20 04 22.2 +0.3**
KIV pmax pmax
comp=Z,7.0nm,1.0s
KIV MLR MLR
comp=Z,22nm,18.0s
GOF Gofitskoye 72.69 320*ce*P **P** **20 04 21.9 -1.3**
EIL Elat 73.12 303 LR LR 20 37 11.5
comp=Z,65nm,18.5s,baz=65,slow=36
LSZ Lusaka 73.22 256 LR LR 20 32 17.6
comp=Z,55nm,18.8s,baz=136,slow=32
BELG Belogornoye 73.64 329*c i*P **P** **20 04 28.8 +0.2**
BELG pmax pmax
comp=Z,3.0nm,0.9s
PETK Petropavlovsk- 74.50 31 P **P** **20 04 32.7 -1.0**
comp=Z,5.9nm,0.8s,baz=249,slow=4.0,SNR=4.4
comp=Z,5.9nm,0.8s
BKZ Black Stump Fm 74.52 129 P **P** **20 04 35.4 +1.1**
BKZ Black Stump Fm 74.52 129 P **P** **20 04 34.1 -0.1**
BKZ IAmb IAmb 20 05 45.9
comp=Z,36nm,1.3s
PET Petropavlovsk 74.95 31 P **P** **20 04 35.5 -0.7**
MA2 Magadan 75.12 23 P **P** **20 04 36.2 -0.9**
MA2 IAmb IAmb 20 04 38.4
comp=Z,21nm,1.1s
MA2 Magadan 75.12 23*ce*P **P** **20 04 37.0 -0.2**
MA2 pmax pmax
comp=Z,25nm,1.3s
MA2 Magadan 75.12 23 P **P** **20 04 36.9 -0.2**
comp=Z,22nm,1.1s
MA2 Magadan 75.12 23 P **P** **20 04 37.3 +0.2**
MA2 sP **sP** **20 04 53.0 +0.3**
NRIK Noril'sk 75.13 355 P **P** **20 04 36.0 -1.0**
comp=Z,4.1nm,0.7s,baz=172,slow=7.1,SNR=6.5
NRIK LR LR 20 40 14.1
comp=Z,63nm,19.3s,baz=179,slow=38
comp=Z,4.1nm,0.7s
NRIK Noril'sk 75.13 355 P **P** **20 04 35.6 -1.4**
NRIK Noril'sk 75.13 355 P **P** **20 04 35.6 -1.4**
NRIK pmax pmax
comp=Z,8.0nm,1.2s
LBTB Lobatse 75.65 246 LR LR 20 31 11.5
comp=Z,112nm,21.4s,baz=98,slow=30
BOSA Boshof 76.03 242 LR LR 20 32 51.2
comp=Z,96nm,18.3s,baz=86,slow=32
VRH Novokhopyorsk 76.24 326 *e*P **P** **20 04 43.3 -0.4**
VRH pmax pmax
comp=Z,20nm,0.7s
KIRV Kirov 76.25 335*ce*P **P** **20 04 43.2 -0.3**
KIRS Kirsehir-Merke 76.74 312 ⇓P **P** **20 04 48.1 +1.1**
BR104 Keskin Array S 77.12 313 P **P** **20 04 49.6 +0.4**
comp=Z,41nmcomp=Z,4.8nm,1.0s
BRTR Keskin Array B 77.13 313 P **P** **20 04 48.7 -0.5**
comp=Z,2.8nm,0.9s,baz=128,slow=7.4,SNR=15
BRTR LR LR 20 41 32.1
comp=Z,52nm,18.4s,baz=192,slow=38
comp=Z,2.8nm,0.9s
BRTR Keskin Array B 77.13 313 *i*P **P** **20 04 50.0 +0.8**
BRTR pmax pmax
comp=Z,3.0nm,0.9s
BR131 Keskin Array S 77.13 313 P **P** **20 04 49.1 -0.1**
BR131 Keskin Array S 77.13 313 P **P** **20 04 49.1 -0.1**
BR131 pmax pmax
comp=Z,5.0nm,1.0s
BR106 Keskin Array S 77.15 313 P **P** **20 04 49.9 +0.6**
comp=Z,3.7nm,0.8s
VORD Divnogorie 77.52 325 *e*P **P** **20 04 50.4 -0.5**
VORD pmax pmax
comp=Z,8.0nm,0.9s
VSR Storozhevoye 77.69 325 *e*P **P** **20 04 52.0 +0.1**
VSR pmax pmax
comp=Z,10.0nm,0.7s
SEY Seymchan 77.85 21*ce*P **P** **20 04 53.1 +0.6**
SEY pmax pmax
comp=Z,15nm,1.2s
VORR Voronezh 77.86 325 *e*P **P** **20 04 50.3 -2.5**
VORR pmax pmax
comp=Z,20nm,0.4s
LPSR Galich'ya Gora 78.41 326 *e*P **P** **20 04 55.6 -0.2**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
VNDA Vanda 78.55 169 LR LR 20 34 49.8
comp=Z,61nm,18.9s,baz=301,slow=32
TIXI Tiksi 78.74 8 LR LR 20 44 00.8
comp=Z,263nm,18.6s,baz=222,slow=39
TIXI Tiksi 78.74 8 P **P** **20 04 55.5 -1.7**
TIXI Tiksi 78.74 8*ce*P **P** **20 04 56.3 -1.0**
TIXI pmax pmax
comp=Z,19nm,1.7s
TIXI Tiksi 78.74 8 P **P** **20 04 56.0 -1.2**
SUR Sutherland 79.93 238 LR LR 20 36 51.6
comp=Z,36nm,18.2s,baz=136,slow=33
OBN Obninsk 80.71 328 *e*P **P** **20 05 08.6 +0.3**
OBN *i* 20 05 19.0
OBN *i* 20 08 11.9
OBN pmax pmax
comp=Z,11nm,1.1s
OBN MLR MLR
comp=Z,34nm,17.0s
KLMR Klimovskoe 81.71 334 *e*P **P** **20 05 13.1 -0.4**
KLMR *e**PP **pP** **20 05 23.6 -1.7**
KLMR pmax pmax
comp=Z,26nm,1.4s
SORM Soroca 83.23 320 ⇑P **P** **20 05 22.6 +0.9**
SORM Soroca 83.23 320 ⇑P **P** **20 05 22.6 +0.9**
SORM Soroca 83.23 320 P **P** **20 05 22.4 +0.7**
AK10 Malin Array Si 83.35 322 P **P** **20 05 23.0 +0.8**
AK07 Malin Array Si 83.36 322 P **P** **20 05 23.1 +0.8**
AKASG Malin Array Be 83.39 322 P **P** **20 05 22.8 +0.3**
comp=Z,2.3nm,0.7s,baz=96,slow=4.2,SNR=7.8
comp=Z,2.3nm,0.7s
AKASG Malin Array Be 83.39 322 *i*P **P** **20 05 23.2 +0.7**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKBB Malin Array Si 83.39 322*ce*P **P** **20 05 23.3 +0.8**
AKBB pmax pmax
comp=Z,5.0nm,0.9s
ELND Elena 83.62 314 ⇑P **P** **20 05 26.0 +2.1**
VRI Vrincioaia 83.72 317 ⇓P **P** **20 05 26.9 +2.6**
VRI Vrincioaia 83.72 317 ⇓P **P** **20 05 26.9 +2.6**
PLOR Plostina 83.77 317 ⇑P **P** **20 05 26.3 +1.7**
PLOR Plostina 83.77 317 ⇑P **P** **20 05 26.3 +1.7**
NEHR Nehoiu 83.91 317 ⇑P **P** **20 05 27.8 +2.5**
TESR Tescani 83.93 318 ⇑P **P** **20 05 26.8 +1.4**
ONER Baraj Valea Uz 84.06 318 ⇓P **P** **20 05 27.6 +1.6**
COVR Voineasa-Covas 84.07 317 ⇓P **P** **20 05 27.9 +1.8**
GIRR Girov 84.14 318 ⇑P **P** **20 05 28.7 +2.3**
MLR Muntele Rosu 84.17 317 LR LR 20 50 43.3
comp=Z,23nm,18.3s,baz=106,slow=41
MLR Muntele Rosu 84.17 317 ⇑P **P** **20 05 29.2 +2.4**
MLR Muntele Rosu 84.17 317 P **P** **20 05 26.0 -0.7**
MLR IAmb IAmb 20 05 29.6
comp=Z,16nm,1.1s
MLR Muntele Rosu 84.17 317 ⇑P **P** **20 05 29.2 +2.4**
PRAR RASCA 84.42 318 ⇓P **P** **20 05 29.5 +1.7**
PLVB Pleven 84.62 314 ⇓P **P** **20 05 30.2 +1.3**
DOPR Dopca 84.66 317 ⇓P **P** **20 05 31.0 +2.0**
QSPA South Pole Qui 84.71 180 LR LR 20 41 36.4
comp=Z,72nm,18.3s,baz=318,slow=34
ARR Arges 85.04 316 ⇓P **P** **20 05 32.7 +1.6**
BURAR Bucovina Array 85.15 319 ⇓P **P** **20 05 33.9 +2.3**
BURAR Bucovina Array 85.15 319 P **P** **20 05 33.3 +1.7**
BURAR IAmb IAmb 20 05 35.2
comp=Z,7.8nm,0.8s
BURAR Bucovina Array 85.15 319 ⇓P **P** **20 05 33.9 +2.3**
BUR08 Bucovina Ar. S 85.16 319 P **P** **20 05 32.6 +0.9**
BUR08 IAmb IAmb 20 05 35.1
comp=Z,7.1nm,0.8s
NVL N'lazarevskaya 85.18 199 *e*P **P** **20 05 31.6 +0.4**
NVL *e* 20 08 46.8
NVL *e*S **SKSac** **20 15 53.2 +0.5**
NVL *e*SS **SS** **20 21 35.7 +3.6**
NVL *e*SSS SSS 20 25 06.9
NVL pmax pmax
comp=Z,7.0nm,0.8s
NVL MLR MLR
comp=Z,682nm,23.0s
MNK Minsk 85.24 326 *i*P **P** **20 05 32.5 +0.7**
comp=E,7.0nm,0.9s
MNK *i*P **P** **20 05 32.5 +0.7**
comp=N,13nm,0.8s
MNK *i*P **P** **20 05 32.5 +0.7**
comp=Z,16nm,0.9s,baz=106
MNK *i*PP **PP** **20 08 50.2 +0.4**
MNK *i*PPP PPP 20 10 43.6
MNK *i*S **SKSac** **20 15 53.9 +0.3**
MNK *i*PS PnS 20 17 16.8 +18
MNK *i*SS **SS** **20 21 36.7 +2.6**
MNK *i*SSS SSS 20 25 08.1
MNK *i*LQ LQ 20 34 07.6
MNK *i*LR LR 20 39 22.5
MNK *i*LRM MLR 20 43 20.3
comp=Z,30nm,10.7s
MNK *i*LRM MLR 20 43 23.6
comp=N,71nm,16.2s
MNK *i*LRM MLR 20 45 53.9
comp=E,104nm,16.2s
MNK Minsk 85.24 326 *i*P **P** **20 05 32.4 +0.7**
MNK *i* 20 08 50.1
MNK *i*PPP PPP 20 10 43.5
MNK *i*S **SKSac** **20 15 53.8 +0.3**
MNK *i*PS PnS 20 17 16.7 +18
MNK *i*SS **SS** **20 21 36.7 +2.6**
MNK *i*SSS SSS 20 25 08.1
MNK pmax pmax
comp=E,7.0nm,0.9s
MNK pmax pmax
comp=Z,16nm,0.9s
MNK pmax pmax
comp=N,13nm,0.8s
MNK MLR MLR
comp=Z,30nm,11.0s
MNK MLR MLR
comp=N,71nm,16.0s
MNK MLR MLR
comp=E,104nm,16.0s
BILL Bilibino 85.46 20*ce*P **P** **20 05 32.9 +0.3**
BILL pmax pmax
comp=Z,3.0nm,1.0s
BILL MLR MLR
comp=Z,31nm,15.0s
MARR Marisel-Cluj 86.34 317 ⇑P **P** **20 05 39.8 +2.2**
APA Apatity 86.91 339 *e*P **P** **20 05 43.1 +3.4**
APA pmax pmax
comp=Z,8.0nm,1.3s
APA MLR MLR
comp=Z,1µm,5.3s
VSU Vasula 86.92 329*ce*P **P** **20 05 40.1 +0.2**
VSU pmax pmax
comp=Z,12nm,1.0s
BZS Buzias 87.17 316 ⇓P **P** **20 05 43.6 +2.1**
BZS Buzias 87.17 316 ⇓P **P** **20 05 43.6 +2.1**
SUW Suwalki 87.80 325 P **P** **20 05 44.4 +0.1**
SUW Suwalki 87.80 325 P **P** **20 05 44.4 +0.1**
FINES FINESS Array B 88.01 332 P **P** **20 05 45.6 +0.5**
comp=Z,4.1nm,0.9s,baz=112,slow=6.6,SNR=8.0
comp=Z,4.1nm,0.9s
FINES FINESS Array B 88.01 332 *i*P **P** **20 05 46.5 +1.4**
FINES pmax pmax
comp=Z,4.0nm,0.9s
STHS Stebnicka Huta 88.10 320 *e*P **P** **20 05 47.5 +1.6**
STHS pmax pmax
comp=Z,8.0nm,0.7s
STHS Stebnicka Huta 88.10 320 *e*P **P** **20 05 47.5 +1.6**
LANS Liptovska Anna 89.20 319 *e*P **P** **20 05 53.8 +2.7**
LANS pmax pmax
comp=Z,2.0nm,0.9s
LANS Liptovska Anna 89.20 319 *e*P **P** **20 05 53.8 +2.7**
MORH Mrgy, Hungar 89.31 316 ⇓P **P** **20 05 53.9 +2.2**
SRO Srobarova 89.76 318 *e*P **P** **20 05 56.6 +2.9**
SRO pmax pmax
comp=Z,12nm,0.9s
SRO Srobarova 89.76 318 *e*P **P** **20 05 56.6 +2.9**
SRO Srobarova 89.76 318 *e*P **P** **20 05 56.6 +2.9**
ARCES ARCESS Array B 90.28 340 P **P** **20 05 55.1 -0.5**
comp=Z,4.0nm,0.8s,baz=101,slow=2.8,SNR=5.3
comp=Z,4.0nm,0.8s
ARCES ARCESS Array B 90.28 340 IAmb IAmb 20 05 57.3
comp=Z,66nm,1.6s
MORC Moravsky Berou 90.53 320 ⇑P **P** **20 05 59.4 +2.1**
MORC Moravsky Berou 90.53 320 ⇑P **P** **20 05 59.4 +2.1**
GERES GERESS Array B 92.94 319 P **P** **20 06 10.0 +1.4**
comp=Z,1.1nm,0.7s,baz=69,slow=8.3,SNR=4.3
comp=Z,1.1nm,0.7s
GERES GERESS Array B 92.94 319 P **P** **20 06 10.0 +1.4**
GERES GERESS Array B 92.94 319 P **P** **20 06 10.0 +1.4**
HFS Hagfors 93.78 330 P **P** **20 06 12.9 +0.9**
comp=Z,3.2nm,1.0s,baz=105,slow=4.9,SNR=3.6
comp=Z,3.2nm,1.0s
C16K Lisburne Hills 95.78 22 IAmb IAmb 20 07 43.0
comp=Z,9.1nm,1.6s
G16K Koyuk River 97.04 25 IAmb IAmb 20 06 28.1
comp=Z,4.0nm,0.8s
B21K Ikpikpuk River 99.50 20 IAmb IAmb 20 06 53.0
comp=Z,3.6nm,0.8s
YKA Yellowknife Ar 116.81 18 PKP **PKPdf** **20 11 38.5 -0.8**
comp=Z,0.8nm,1.0s,baz=317,slow=2.6,SNR=6.2
NVAR Mina Array Bea 130.64 42 PKP **PKPdf** **20 12 07.2 +0.3**
comp=Z,0.3nm,0.5s,baz=328,slow=5.2,SNR=2.4
ULM Lac du Bonnet 132.67 16 PKP **PKPdf** **20 12 08.9 -1.1**
comp=Z,3.1nm,0.8s,baz=336,slow=12,SNR=5.3
PDAR Pinedale Array 133.26 32 PKP **PKPdf** **20 12 11.6 -0.1**
comp=Z,0.3nm,0.7s,baz=313,slow=3.5,SNR=3.5
VHRN Van Horn 143.98 42 **PKPdf** **20 12 30.9 -0.6**
TXAR Lajitas Array 145.79 43 PKPbc **PKPab** **20 12 36.4 +0.8**
comp=Z,19nm,0.7s,baz=323,slow=3.8,SNR=139

SOME ***06*** *20:00:35.4, 42°17N×82°13E, h15km*
NNC ***06*** *20:00:37.6±1.5, 42°12N×81°99E, h0km, mb3.8, mpv3.4,*
Error ellipse: s-maj=11.0km s-min=7.1km az=157.0
ISC 06 20:00:33.4±3.1**, 42°4N**±0°1×**82°59E**±0°09**, h16**km±13km**,**
n26,σ1**s37**/38**, 3C-5D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen** 7.4nm,0.2s	**1.94**	**303**	P	**Pg**		**20 01 10.5**	**-0.2**
KTMS	85nm,0.3s			S	**Sg**		**20 01 35.8**	**-0.2**
KTMS	**Ketmen** 14nm,0.3s	**1.94**	**303**	*e*P	**Pg**		**20 01 10.5**	**-0.2**
KTMS	85nm,0.3s			*e*S	**Sg**		**20 01 35.8**	**-0.2**
SHLS	**Shalkode** 38nm,0.3s	**2.42**	**289**	Pg	**Pn**		**20 01 12.3**	**-0.1**
SHLS	128nm,0.5s			Lg	Lg		20 01 39.2	
SHLS	**Shalkode** 38nm,0.3s	**2.42**	**289**	*e*P	**Pn**		**20 01 12.4**	**-0.1**
SHLS	128nm,0.5s			*e*S	**Sn**		**20 01 39.1**	**-2.7**
PDGK	**Podgornoye** 22nm,0.9s	**2.46**	**293**	⇓Pn	**Pb**		**20 01 17.1**	**-0.2**
PDGK	29nm,0.7s			⇑Lg	Lg		20 01 47.7	
UZB	**Uzynbulak** 11nm,0.3s	**2.73**	**287**	Pg	**Pb**		**20 01 21.3**	**-0.6**
UZB	33nm,0.3s			Lg	Lg		20 01 54.6	
UZB	**Uzynbulak** 11nm,0.3s	**2.73**	**287**	*e*P	**Pb**		**20 01 21.4**	**-0.5**
UZB	33nm,0.3s			*e*S	**Sb**		**20 01 54.6**	**-0.5**
DJR	**Jarkent** 4.3nm,0.3s	**2.80**	**314**	Pg	**Pg**		**20 01 26.8**	**-0.3**
DJR	9.4nm,0.3s			Lg	Lg		20 02 04.0	
DJR	**Jarkent** 3.8nm,0.2s	**2.80**	**314**	*e*P	**Pg**		**20 01 26.8**	**-0.3**
DJR	9.4nm,0.3s			*e*S	**Sg**		**20 02 04.0**	**+0.5**
KPKS	**Kokpek** 0.4nm,0.2s	**3.06**	**292**	Pg	**Pb**		**20 01 28.1**	**+0.6**
KPKS	41nm,0.5s			Lg	Lg		20 02 05.8	
KPKS	**Kokpek**	**3.06**	**292**	*e*P	**Pb**		**20 01 28.1**	**+0.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	0.2nm,0.1s						
KPKS				eS	Sb	20 02 05.8	+1.2
	41nm,0.5s						
SATY	Saty	3.15	283	Pg	Pb	20 01 29.3	+0.2
	5.3nm,0.3s						
SATY				Lg	Lg	20 02 07.5	
	35nm,0.2s						
KNOS	Konyrlen	3.16	309	Pg	Pg	20 01 32.8	-1.1
	5.8nm,0.1s						
KNOS				Lg	Lg	20 02 14.0	
	16nm,0.3s						
KURS	Kuram	3.42	290	Pg	Pb	20 01 32.9	-0.7
	5.4nm,0.3s						
KURS				Lg	Lg	20 02 14.0	
	15nm,0.8s						
BLB	Baldybastay	3.44	301	Pg	Pb	20 01 34.1	0.0
	10nm,0.1s						
BLB				Lg	Lg	20 02 16.1	
	25nm,0.3s						
KOTS	Kotyrbulak	4.11	283	Pg	Pb	20 01 44.2	-1.2
	5.9nm,0.2s						
KOTS				Lg	Lg	20 02 33.7	
	13nm,0.7s						
KOTS	Kotyrbulak	4.11	283	eP	Pb	20 01 44.2	-1.2
	5.9nm,0.2s						
KOTS				eS	Sb	20 02 33.7	-1.3
	29nm,0.5s						
MDOK	Medeo	4.15	282	Pg	Pb	20 01 46.9	+0.9
	7.1nm,0.4s						
MDOK				Lg	Lg	20 02 38.0	
	15nm,0.6s						
TNSS	Tian-Shan	4.20	281	Pg	Pb	20 01 47.1	-0.1
	10nm,0.7s						
TNSS				Lg	Lg	20 02 38.0	
	8.3nm,1.1s						
TNSS	Tian-Shan	4.20	281	eP	Pb	20 01 47.1	-0.1
	10nm,0.7s						
TNSS				eS	Sb	20 02 38.1	+0.2
	8.7nm,0.9s						
MK31	Makanchi Array	4.39	357	⇑Pn	Pb	20 01 49.4	-0.7
	0.3nm,0.3s,baz=183,slow=13,SNR=35						
MK31				⇑Sn	Sb	20 02 45.6	+2.7
	4.3nm,0.7s,baz=28,slow=17,SNR=6.5						
MK31				⇓Lg	Lg	20 03 02.2	
	3.6nm,0.4s,baz=180,slow=29						
MAKZ	Makanchi	4.42	355	⇓Pn	Pb	20 01 49.6	-1.1
	0.9nm,0.5s						
MAKZ				⇓Sn	Sb	20 02 46.5	+2.7
	4.3nm,0.5s						
MAKZ				⇓Lg	Lg	20 03 02.2	
	4.3nm,0.6s						
MTBS	Maitube	4.59	281	Pg	Pb	20 01 55.0	+1.4
	3.4nm,0.2s						
MTBS				Lg	Lg	20 02 51.7	
	8.8nm,0.5s						
MTBS	Maitube	4.59	281	eP	Pb	20 01 55.0	+1.4
	3.4nm,0.2s						
MTBS				eS	Sb	20 02 51.7	+3.0
	8.8nm,0.5s						
KST	Kastek	4.92	280	Pg	Pb	20 02 00.7	+1.5
	2.4nm,0.4s						
KST				Lg	Lg	20 03 01.6	
	7.6nm,0.8s						
KST	Kastek	4.92	280	eP	Pb	20 02 00.7	+1.5
	2.4nm,0.4s						
KST				eS	Sb	20 03 01.6	+3.3
	7.0nm,0.5s						

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*SJA **06** 20:04:38.0±0.7, 23.°25S×66.°76W, h223km±6km, ML3.9, MW3.6*
*NEIC **06** 20:04:39.3±2.4, 23.°28S±0.°07×67.°0W±0.°1, h228km±15km, mb4.1/5, ML4.1(GUC), Error ellipse: s-maj=18.4km s-min=9.7km az=85.0*
*GUC **06** 20:04:39.3±0.8, 23.°23S×66.°80W, h220km±10km, ML4.1*
*IDC **06** 20:04:41.2±2.2, 23.°05S×66.°54W, h217km±24km, mb3.4/2, mbtmp3.9/6, Error ellipse: s-maj=31.6km s-min=17.9km az=109.0*
ISC 06 20:04:38.2±0.7**, 23.°28S**±0.°04×**66.°85W**±0.°04**, h229**km±7km**, n79,** σ1.s73/116**, 7C-2D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AF01	San Pedro de A	1.27	284		Pn	20 05 12.6	-0.5
AF01	San Pedro de A	1.27	284	eP	Pn	20 05 13.7	+0.6
AF01	San Pedro de A	1.27	284	eP	Pn	20 05 23.0	+10
AF01				eS	S	20 05 46.5	+6.3
YJA	Yavi	1.65	49	eP	Pn	20 05 15.6	-0.7
YJA	Yavi	1.65	49	eP	Pn	20 05 15.9	-0.4
YJA				eS	S	20 05 43.6	-2.3
SLA	San Lorenzo	1.89	140	⇓eP	Pn	20 05 18.4	+0.4
SLA				eS	S	20 05 47.6	-1.7
SLA	San Lorenzo	1.89	140	eP	Pn	20 05 18.5	+0.4
SLA				IAML		20 06 11.3	
	comp=Z,474nm,2.8s						
PB06	IPOC Station P	2.57	282		Pn	20 05 25.8	+0.8
PB06					S	20 06 00.1	-1.3
PB06	IPOC Station P	2.57	282	⇑iP	Pn	20 05 26.0	+1.0
PB06				i S	S	20 06 00.8	-0.6
PB06				IAML		20 06 02.2	
	comp=N,643nm,0.2s						
PB06	IPOC Station P	2.57	282	eP	Pn	20 05 26.0	+1.0
PB06				eS	S	20 06 01.4	0.0
PB06				IAML		20 06 03.5	
	comp=Z,274nm,0.3s						
PB09	IPOC Station P	2.66	303		Pn	20 05 27.2	+1.3
PB09				Sn	S	20 06 01.9	-1.2
PB09	IPOC Station P	2.66	303	⇑iP	Pn	20 05 27.2	+1.3
PB09				IAML		20 06 05.2	
	comp=N,154nm,0.4s						
PB09	IPOC Station P	2.66	303	eP	Pn	20 05 27.6	+1.7
PB09				eS	S	20 06 03.0	-0.1
PB09				IAML		20 06 05.5	
	comp=Z,153nm,0.4s						
FSA	Cafayete	2.93	165	eP	Pn	20 05 29.3	+0.5
FSA				eS	S	20 06 05.7	-2.9
PB03	IPOC Station P	2.95	294		Pn	20 05 29.6	+0.6
PB03				Sn	S	20 06 06.9	-1.9
PB03	IPOC Station P	2.95	294	⇑iP	Pn	20 05 29.8	+0.8
PB03				i S	S	20 06 07.0	-1.7
PB03				IAML		20 06 09.9	
	comp=E,505nm,0.1s						
PB03	IPOC Station P	2.95	294	eP	Pn	20 05 29.8	+0.8
PB03				eS	S	20 06 08.0	-0.8
PB03				IAML		20 06 11.2	
	comp=Z,364nm,0.3s						
PB05	IPOC Station P	3.12	277		Pn	20 05 31.7	+0.8
PB05				Sn	S	20 06 09.5	-2.6
PB05	IPOC Station P	3.12	277	⇑iP	Pn	20 05 31.8	+0.9
PB05	IPOC Station P	3.12	277	eP	Pn	20 05 31.8	+0.9
PB05				eS	S	20 06 11.2	-1.0
PB05				IAML		20 06 14.5	
	comp=Z,128nm,0.2s						
PB07	IPOC Station P	3.20	298		Pn	20 05 32.7	+0.7
PB07				Sn	S	20 06 11.6	-2.5
PB07	IPOC Station P	3.20	298	⇑eP	Pn	20 05 32.8	+0.7
PB07	IPOC Station P	3.20	298	eP	Pn	20 05 32.6	+0.7
PB07				eS	S	20 06 12.9	-1.2
PB07				IAML		20 06 14.5	
	comp=Z,269nm,0.4s						
PB01	IPOC Station P	3.30	312		Pn	20 05 33.6	+0.7
PB01				Sn	S	20 06 14.3	-1.7
PB01	IPOC Station P	3.30	312	⇓iP	Pn	20 05 33.5	+0.5
PB01				i S	S	20 06 15.1	-0.9
PB01	IPOC Station P	3.30	312	eP	Pn	20 05 33.7	+0.7
PB01				eS	S	20 06 15.3	-0.7
PB01				IAML		20 06 18.3	
	comp=Z,241nm,0.2s						
PB02	IPOC Station P	3.43	304		Pn	20 05 34.8	+0.3
PB02				Sn	S	20 06 15.8	-2.9
PB02	IPOC Station P	3.43	304	⇑iP	Pn	20 05 35.0	+0.5
PB02				i S	S	20 06 16.2	-2.4
PB02	IPOC Station P	3.43	304	eP	Pn	20 05 35.1	+0.7
PB02				eS	S	20 06 17.4	-1.3
PB02				IAML		20 06 22.6	
	comp=Z,277nm,0.3s						
PB14	IPOC Station P	3.52	247		Pn	20 05 36.2	+0.5
PB14				Sn	S	20 06 18.9	-1.9
PB14	IPOC Station P	3.52	247	⇑eP	Pn	20 05 36.5	+0.8
PB14	IPOC Station P	3.52	247	eP	Pn	20 05 36.7	+1.0
PB14				eS	S	20 06 20.1	-0.7
PB14				IAML		20 06 25.1	
	comp=Z,74nm,0.2s						
PB08	IPOC Station P	3.79	325		Pn	20 05 40.3	+1.3
PB08				Sn	S	20 06 25.7	-1.0
PATCX	Punta Patache	3.92	308		Pn	20 05 40.3	0.0
PATCX				Sn	S	20 06 26.9	-2.2
PATCX	Punta Patache	3.92	308	eP	Pn	20 05 40.3	0.0
PATCX	Punta Patache	3.92	308	eP	Pn	20 05 40.6	+0.3
PATCX				eS	S	20 06 27.4	-1.7
PATCX				IAML		20 06 28.9	
	comp=Z,80nm,0.2s						
AC02	Maricunga	4.10	210		Pn	20 05 43.2	+0.4
AC02				Sn	S	20 06 32.6	-1.1
AC02	Maricunga	4.10	210	eP	Pn	20 05 43.5	+0.7
AC02				eS	S	20 06 50.0	+16
AC02				IAML		20 06 58.5	
	comp=Z,260nm,0.9s						
HMBC	Humberstone	4.11	316		Pn	20 05 42.5	-0.1
HMBC				Sn	S	20 06 29.7	-3.5
HMBC	Humberstone	4.11	316	eP	Pn	20 05 42.4	-0.2
HMBC	Humberstone	4.11	316	eP	Pn	20 05 42.5	-0.1
HMBC				eS	S	20 06 31.7	-1.6
HMBC				IAML		20 06 36.2	
	comp=Z,251nm,0.4s						
GO01	Chusmiza	4.20	328		Pn	20 05 44.5	+0.4
GO01				Sn	S	20 06 34.3	-1.6
GO01	Chusmiza	4.20	328	eP	Pn	20 05 45.0	+0.9
GO01				eS	S	20 06 37.7	+1.8
GO01				IAML		20 06 39.5	
	comp=Z,65nm,0.1s						
PB11	IPOC Station P	4.37	323		Pn	20 05 45.6	-0.1
PB11				Sn	S	20 06 36.1	-2.9
PB11	IPOC Station P	4.37	323	eP	Pn	20 05 45.3	-0.5
PB11				eS	S	20 06 36.9	-2.1
PB11				IAML		20 06 38.1	
	comp=Z,114nm,0.3s						
AC01	Pan de Azucar	4.45	229		Pn	20 05 46.3	-0.3
AC01				Sn	S	20 06 37.8	-2.8
AC01	Pan de Azucar	4.45	229	eP	Pn	20 05 46.6	0.0
AC01				eS	S	20 06 38.3	-2.3
TINO	Tinogasta	4.81	188	eP	Pn	20 05 52.9	+1.8
TINO				eS	S	20 06 31.9	-17
AC06	Mina Casimiro	5.16	217	Pn	Pn	20 05 53.5	-1.8
AC06				Sn	S	20 06 52.7	-3.7
GO03	Copiapo	5.28	215		Pn	20 05 56.2	-0.7
GO03	Copiapo	5.28	215	eP	Pn	20 05 56.7	-0.2
GO03				eS	S	20 06 57.3	-2.0
GO03				IAML		20 06 59.3	
	comp=Z,41nm,0.5s						
PB16	IPOC Station P	5.51	333		Pn	20 06 01.1	+0.7
PB12	IPOC Station P	5.66	324		Pn	20 06 00.8	-1.0
PB18	Visviri	6.17	336	Pn	Pn	20 06 10.4	+1.7
AC04	Llanos de Chal	6.21	217	Pn	Pn	20 06 06.7	-1.9
AC05	El Transito	6.34	208	Pn	Pn	20 06 09.4	-0.9
LCO	Las Campanas	6.68	210		Pn	20 06 13.7	-1.1
LPAZ	La Paz	7.06	350	P	Pn	20 06 20.7	+0.7
	comp=Z,2.0nm,0.4s,baz=136,slow=4.2,SNR=8.3						
LPAZ				S	S	20 07 40.4	-0.9
	comp=Z,0.9nm,0.5s,baz=7.4,slow=16,SNR=1.6						
LPAZ	La Paz	7.06	350		Pn	20 06 21.0	+0.9
CO01	Juntas del Tor	7.28	203	Pn	Pn	20 06 22.4	0.0
GO04	Tololo Observa	7.72	206	Pn	Pn	20 06 26.3	-1.8
CO06	Fray Jorge	8.51	209	Pn	Pn	20 06 36.0	-2.0
CO02	Combarbal	8.72	204	Pn	Pn	20 06 37.9	-2.8
SIV	San Ignacio	9.06	38	P	Pn	20 06 43.1	-2.1
	comp=Z,2.2nm,0.4s,baz=274,slow=10						
PTLB	Pontes e Lacer	10.65	44	Pn	Pn	20 07 06.5	+1.0
MT03	Universidad Ad	10.68	197	Pn	Pn	20 07 06.4	+0.7
BI02	San Fabin de	13.88	195	Pn	Pn	20 07 45.5	-0.1
TRQA	Tornquist	15.31	165	P	P	20 08 00.8	-1.9
GO06	Curarrehue	16.73	192	P	P	20 08 15.5	-2.9
GO06				IAmb	IAmb	20 08 56.8	
	comp=Z,5.1nm,0.9s						
PLCA	Paso Flores	17.68	189	P	Pn	20 08 36.6	+5.5
	comp=Z,1.2nm,0.6s,baz=357,slow=10,SNR=6.0						
VAO	Valinhos	18.29	93	P	P	20 08 34.9	-0.6
BDFB	Brasilia	19.30	70	P	P	20 08 47.1	+0.7
	comp=Z,2.6nm,0.4s,baz=247,slow=9.3,SNR=5.1						
BDFB	Brasilia	19.30	70	P	P	20 08 45.5	-0.9
BDFB				IAmb	IAmb	20 08 48.9	
	comp=Z,7.8nm,1.0s						
QSPA	South Pole Qui	66.92	180	P	P	20 15 10.5	+4.6
	comp=Z,0.9nm,0.5s,baz=116,slow=2.1,SNR=7.2						
	comp=Z,0.9nm,0.5s						
TORD	Torodi Ar. Bea	76.18	69	P	P	20 16 03.3	+1.6
	comp=Z,0.5nm,0.4s,baz=262,slow=5.1,SNR=6.9						
	comp=Z,0.5nm,0.4s						
TORD	Torodi Ar. Bea	76.18	69	IAmb	IAmb	20 16 47.3	
	comp=Z,4.6nm,1.0s						
MKAR	Makanchi Array	145.88	39	PKPbc	PKiKP	20 23 53.9	+0.1
	comp=Z,1.0nm,0.7s,baz=317,slow=3.3,SNR=12						
HHC	Hu-ho-hao-te	162.43	4	eP	PKPdf	20 24 12.4	-0.4
PZH	PanZhiHua	169.16	70	PKP	PKPdf	20 24 14.2	-4.4

ROM 06 20:04:44.4±0.1**, 46.°05N**±0.°01×**11.°835E**±0.°009**, h10**km±1km**, ML1.3**/18**, 2C-3D, Error ellipse: s-maj=1.3km s-min=0.6km az=194.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTI	Castel Tesino	0.13	268	P	Pg	20 04 48.3	+0.7
CTI				S	Sg	20 04 50.3	+0.5
CTI				AML	AML		
	comp=E,302µm,0.2s						
CTI				AML	AML		
	comp=N,260µm,0.2s						
CTI				AML	AML		
	comp=E,303µm,0.2s						
CTI				AML	AML		
	comp=N,260µm,0.2s						
CGRP	Cima Grappa	0.17	188	⇓ePg	Pg	20 04 49.0	+0.6
CGRP				eSg	Sg	20 04 51.6	+0.6
CGRP	Cima Grappa	0.17	188	⇓P	Pg	20 04 49.0	+0.6
CGRP				S	Sg	20 04 51.7	+0.6
CGRP				AML	AML		
	comp=E,116µm,0.9s						
CGRP				AML	AML		
	comp=N,94µm,1.1s						
CGRP				AML	AML		
	comp=E,65µm,1.3s						
CGRP				AML	AML		
	comp=N,50µm,1.3s						
VARN	Col Varnada, M	0.20	108	⇑ePg	Pb	20 04 49.5	-0.6
VARN				eSg	Sg	20 04 52.5	+1.0
VARN	Col Varnada, M	0.20	108	⇑P	Pb	20 04 49.5	-0.6
VARN				S	Sg	20 04 52.6	+1.1
VARN				AML	AML		
	comp=E,152µm,0.2s						
VARN				AML	AML		
	comp=N,124µm,1.3s						
VARN				AML	AML		
	comp=E,153µm,0.2s						
VARN				AML	AML		
	comp=N,118µm,1.3s						
VARN				AML	AML		
	comp=E,153µm,0.2s						
VARN				AML	AML		
	comp=N,95µm,0.3s						
VARN				AML	AML		
	comp=E,152µm,0.2s						
VARN				AML	AML		
	comp=N,89µm,0.3s						
AGOR	Agordo	0.27	33	ePg	Pb	20 04 51.1	-0.4
AGOR				eSg	Sb	20 04 55.1	-1.1
AGOR	Agordo	0.27	33	P	Pb	20 04 51.3	-0.1
AGOR				S	Sb	20 04 55.0	-1.1
CEKR	Cima Ekar Asia	0.28	222	ePg	Pg	20 04 50.4	+0.4
CEKR				eSg	Sg	20 04 54.7	+0.9
ZIAN	Ziano	0.29	320	ePg	Pb	20 04 51.3	-0.6
ZIAN	Ziano	0.29	320	⇓P	Pb	20 04 51.3	-0.5
ZIAN				S	Sb	20 04 55.7	-1.1
ZIAN				AML	AML		
	comp=E,32µm,1.5s						
ZIAN				AML	AML		
	comp=N,35µm,1.5s						
ZIAN				AML	AML		
	comp=E,59µm,4.6s						
ZIAN				AML	AML		
	comp=N,44µm,11.1s						
ZIAN				AML	AML		
	comp=E,86µm,2.9s						
ZIAN				AML	AML		
	comp=N,87µm,2.1s						
CAE	Caneva	0.42	96	P	Pg	20 04 53.0	+0.3
CAE				S	Sb	20 05 00.6	+0.2
CIMO	Cimolais	0.49	58	P	Pg	20 04 54.1	0.0
CIMO				S	Sg	20 05 01.0	+0.4
CARE	Lago del Cares	0.88	296	P	Pg	20 05 00.4	-0.9
CARE				AML	AML		
	comp=E,452µm,1.4s						
CARE				AML	AML		
	comp=N,719µm,11.3s						
CARE				AML	AML		
	comp=E,40µm,4.5s						
CARE				AML	AML		
	comp=N,39µm,11.2s						

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*NEIC **06** 20:30:43.7, 14.°39N×93.°17W, h17km*
*NEIC **06** 20:30:43.2±1.9, 14.°38N±0.°06×93.°16W±0.°04, h15km±3km, mb5.1/460, Mwr4.9/13, Md5.0/188(MEX), Error ellipse: s-maj=9.1km s-min=6.0km az=189.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-2.26; $M_{\theta\theta}$2.09; $M_{\phi\phi}$0.17; $M_{r\theta}$-0.56; $M_{\theta\phi}$-1.03; $M_{\phi r}$-0.41; Fault plane solution: $M_0$2.51000×10^{16} NP1:ϕ_s98.71000°, δ51.09000°, λ-109.89000°. NP2:ϕ_s308.65000°, δ42.97000°, λ-67.14000°. Principal axes: T 2.5604, Plg4.0000°, Azm203.0000°; N -0.1111, Plg15.0000°, Azm112.0000°; P -2.4493, Plg74.0000°, Azm308.0000°;*
*GCG **06** 20:30:44.9±1.6, 14.°26N×93.°23W, h39km±12km, ML5.3, MW4.5, Presumed earthquake*
*MEX **06** 20:30:44.5±0.6, 14.°28N×93.°34W, h10km, MD5.0*
*CATAC **06** 20:30:45.5±0.5, 14.°N±3.°×9.°3W±.°, h27km±5km, M5.6/25, mb6.2/1, mB6.0/1, MLv5.3/25, Mw(mB)5.7/1, Error ellipse: s-maj=7.4km s-min=3.2km az=50.3, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}2.01; $M_{\theta\theta}$-1.49; $M_{\phi\phi}$-0.51; $M_{r\theta}$0.58; $M_{\theta\phi}$0.77; $M_{\phi r}$-0.19; Fault plane solution: $M_0$2.05697×10^{16} NP1:ϕ_s115.91379°, δ53.61418°, λ86.60784°. NP2:ϕ_s301.61976°, δ36.52183°, λ94.59086°. Principal axes: T 2.1010, Plg81.0123°, Azm10.3792°; N -0.0911, Plg2.7303°, Azm117.9276°; P -2.0099, Plg8.5564°, Azm208.3387°; confirmed*
*GCMT **06** 20:30:45.7±0.3, 14.°43N±0.°02×93.°33W±0.°02, h21km, MW5.0/96, Moment Tensor Solution. s70,c90; s96,c135; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.54±.13; $M_{\theta\theta}$-2.27±.09; $M_{\phi\phi}$-1.27±.09; $M_{r\theta}$1.16±.14; $M_{\theta\phi}$1.15±.05; $M_{\phi r}$-2.10±.15; Best double couple: $M_0$4.04200×10^{16} NP1:ϕ_s294.00000°, δ29.00000°, λ69.00000°. NP2: ϕ_s138.00000°, δ63.00000°, λ101.00000°. Principal axes: T 4.4010, Plg70.0000°, Azm72.0000°; N -0.7180, Plg10.0000°, Azm313.0000°; P -3.6830, Plg17.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **06** 20:30:46.1±3.0, 14.°50N×92.°81W, h33km±20km, mb4.4/22, mbtmp4.6/25, ML4.7/3, MS4.1/48 Error ellipse: s-maj=21.8km s-min=11.7km az=36.0*
ISC 06 20:30:43.9±0.9**, 14.°33N**±0.°04×**93.°21W**±0.°03**, h27**km±5km**, n839,** σ2.s13/798**, mb5.0**/204**, MS4.2**/48**, 6C-17D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
THIG		1.08	58		Pn	20 31 03.5	+0.3
THIG					Sn	20 31 18.1	+0.7
THIG		1.08	58	⇓eP	Pn	20 31 03.5	+0.3
THIG				eS	Sn	20 31 18.1	+0.7
THIG		1.08	58	i P	Pn	20 31 03.6	+0.4
THIG				i S	Sn	20 31 18.1	+0.7
THIG				IAML		20 31 22.0	
	comp=E,54µm,0.4s						
SMCA	Catarina	1.22	65	eP	Pn	20 31 05.5	+0.3
PATR	El Naranjo	1.23	50		Pn	20 31 05.4	-0.1
PATR					Sn	20 31 21.9	+0.6
PATR	El Naranjo	1.23	50	⇓eP	Pn	20 31 05.4	-0.1
PATR				eS	Sn	20 31 21.9	+0.6
CHUJ	Union Juarez	1.31	55	⇓eP	Pn	20 31 06.7	+0.1
CHUJ				eS	Sn	20 31 23.6	+0.2
PAVE	Pavencul	1.32	49		Pn	20 31 06.9	+0.1
PAVE					Sb	20 31 25.7	+1.0
PAVE	Pavencul	1.32	49	⇓eP	Pn	20 31 06.9	+0.1
PAVE				i S	Sb	20 31 25.7	+1.0
PCIG		1.36	360		Pn	20 31 06.6	-0.6
PCIG					Sn	20 31 23.6	-0.8
PCIG		1.36	360	⇓eP	Pn	20 31 06.6	-0.6
PCIG				eS	Sn	20 31 23.6	-0.8
RTAL	Retalhuleu	1.48	82		Pn	20 31 09.8	+0.9
RTAL				Sn	Sn	20 31 26.0	-1.3
RTAL	Retalhuleu	1.48	82	⇓eP	Pn	20 31 09.3	+0.5
RTAL				eS	Sn	20 31 29.2	+1.9
RTAL	Retalhuleu	1.48	82	⇓P	Pn	20 31 10.0	+1.2
QUEO	Labor Ovalle	1.73	72	i P	Pn	20 31 13.6	+1.1
QUEO				IAML		20 31 37.5	
	comp=N,51µm,0.6s						
STG2	El Palmar, Qui	1.78	86	i P	Pn	20 31 10.6	-2.5
STG2				eS	Sn	20 31 31.0	-3.9
STG5	El Palmar, Qui	1.81	88	i P	Pn	20 31 11.1	-2.3
STG8	El Palmar, Qui	1.81	86	i P	Pn	20 31 11.2	-2.3
SOKI	Kika Raxquin	1.82	74	eP	Pn	20 31 15.0	+1.3
SOKI				IAML		20 32 00.9	
	comp=E,18µm,1.1s						
HUEH	Huehuetenango	1.92	59		Sn	20 31 40.4	+1.9
HUEH	Huehuetenango	1.92	59		Pn	20 31 16.2	+1.2
HUEH	Huehuetenango	1.92	59	⇓eP	Pn	20 31 17.1	+2.1
HUEH				eS	Sn	20 31 40.4	+1.9
HUEH	Huehuetenango	1.92	59	⇑P	Pn	20 31 17.6	+2.6
HUEH				S	Sn	20 31 41.3	+2.8
HUEH	Huehuetenango	1.92	59	i P	Pn	20 31 17.2	+2.1
HUEH				IAML		20 31 50.6	
	comp=E,50µm,0.6s						
CCIG	Comitan	2.20	28		Pn	20 31 20.6	+1.8
CCIG					Sn	20 31 45.8	+0.6
CCIG	Comitan	2.20	28	⇓eP	Pn	20 31 21.1	+2.2
CCIG				eS	Sn	20 31 47.4	+2.1
CCIG	Comitan	2.20	28	⇓P	Pb	20 31 21.7	-1.4
CCIG				S	Sb	20 31 48.5	-1.4
CCIG	Comitan	2.20	28	i P	Pn	20 31 21.5	+2.6
CCIG				IAML		20 31 56.8	
	comp=N,21µm,0.6s						
QUIS	Sacapulas	2.26	65	i P	Pn	20 31 22.8	+3.1
QUIS				IAML		20 31 57.3	
	comp=E,14µm,0.5s						
ESSG	Sabana Grande	2.31	88	i P	Pn	20 31 21.1	+0.8
ESSG				IAML		20 31 58.2	
	comp=E,5µm,0.7s						
TGBT	Tuxtla Gutierr	2.43	3		Pn	20 31 24.1	+2.2
TGBT					Sb	20 31 53.5	-3.0
TGBT	Tuxtla Gutierr	2.43	3	eP	Pn	20 31 24.1	+2.2
TGBT				eS	Sb	20 31 53.5	-3.0
TGIG		2.43	2		Pn	20 31 24.0	+2.0
TGIG					Sn	20 31 53.3	+2.4
TGIG		2.43	2	⇓iP	Pn	20 31 24.0	+2.0
TGIG				eS	Sn	20 31 53.3	+2.4
TGIG		2.43	2	i P	Pn	20 31 23.9	+2.0
TGIG				IAML		20 31 55.1	
	comp=E,15µm,0.6s						
FG8	Yepocapa, Chim	2.57	91	eP	Pn	20 31 19.6	-4.3
GCG4	OSOP	2.61	84	i P	Pn	20 31 27.1	+2.6
APG	El Apazote	2.74	76	Pg	Pn	20 31 29.1	+2.7
	comp=E,5.8nm,0.3s,baz=194,slow=12,SNR=293						
APG				Sn	Sn	20 31 51.6	-7.1
	comp=E,6.8nm,0.3s,baz=83,slow=17,SNR=5.9						
APG				Lg	Lg	20 32 02.6	
	comp=E,12nm,0.3s,baz=61,slow=23,SNR=8.3						
APG	El Apazote	2.74	76	i P	Pn	20 31 28.8	+2.4
PCG5	San Vicente Pa	2.75	92	i P	Pn	20 31 24.2	-2.2
AVCB	Coban	2.94	67	IAML		20 32 17.7	
	comp=E,24µm,0.7s						
UXUV	UXUV	3.10	343		Pn	20 31 33.1	+2.0
UXUV					Sn	20 32 08.3	+1.0
UXUV	UXUV	3.10	343	⇓eP	Pn	20 31 33.1	+2.0
UXUV				eS	Sn	20 32 08.3	+1.0
FAME	Alcaldia de Sa	3.14	99	P	Pn	20 31 32.6	+1.0
FAME				S	Sn	20 32 10.2	+1.9
HUIG	Huatulco	3.14	297		Pn	20 31 31.3	-0.4
HUIG					Sn	20 32 06.7	-1.6
HUIG	Huatulco	3.14	297	eP	Pn	20 31 31.3	-0.4
HUIG				eS	Sn	20 32 06.7	-1.6
HUIG	Huatulco	3.14	297	i P	Pn	20 31 32.0	+0.3
CMIG	Matias Romero	3.18	330	Pn	Pn	20 31 33.2	+1.0
	comp=E,56nm,0.3s,baz=167,slow=7.9,SNR=343						
CMIG				Sn	Sn	20 32 10.9	+1.6
	comp=E,232nm,0.3s,baz=87,slow=11,SNR=7.3						

CMIG LR LR 20 33 09.0
comp=E,2µm,18.9s,baz=112,slow=44
comp=E,307nm,0.5s
CMIG Matias Romero 3.18 330 Pn 20 31 32.4 +0.2
CMIG Sn 20 32 08.8 -0.5
CMIG Matias Romero 3.18 330⇓ *eP* **Pn 20 31 32.4 +0.2**
CMIG *eS* Sn 20 32 08.8 -0.5
SLOZ Alcaldia de Sa 3.34 95 P Pn 20 31 36.7 +2.3
NUBE Las Nubes 3.36 97 ⇓P Pn 20 31 36.8 +2.0
NUBE S Sn 20 32 16.8 +2.9
NUBE Las Nubes 3.36 97 *i* P Pn 20 31 36.5 +1.7
NUBE IAML 20 32 28.0
comp=E,2µm,0.9s
CEVE Cerro Verde 3.52 98 P Pn 20 31 39.6 +2.5
CEVE S Sn 20 32 20.6 +2.6
UNIC Universidad Ca 3.57 95 P Pn 20 31 39.8 +2.2
VHSA Villahermosa 3.64 4 Pn 20 31 40.5 +2.0
VHSA Sn 20 32 17.2 -3.4
VHSA Villahermosa 3.64 4 *eP* Pn 20 31 40.5 +2.0
VHSA *eS* Sn 20 32 17.2 -3.4
JAYA Jayaque - finc 3.71 100 P Pn 20 31 41.6 +1.9
JAYA S Sn 20 32 24.4 +1.7
JAYA Jayaque - finc 3.71 100 *eP* Pn 20 31 41.3 +1.6
MTO3 Montecristo 3.73 89 P Pn 20 31 41.5 +1.5
MTO3 S Sn 20 32 26.3 +3.0
ESQI Esquipulas 3.76 86 P Pn 20 31 41.9 +1.7
PMON Piamonte 3.83 99 P Pn 20 31 43.1 +1.8
PMON S Sn 20 32 28.4 +2.9
MIHL Minatitlan 3.85 341 Pn 20 31 41.5 +0.1
MIHL Sn 20 32 21.9 -4.0
MIHL Minatitlan 3.85 341 *eP* Pn 20 31 41.5 +0.1
MIHL *eS* Sn 20 32 21.9 -4.0
TUIG Tuzandepetl 3.86 343 Pn 20 31 39.9 -1.7
TUIG Sn 20 32 23.3 -2.8
TUIG Tuzandepetl 3.86 343 *eP* Pn 20 31 39.9 -1.7
TUIG *eS* Sn 20 32 23.3 -2.8
LALI Alcalda de L 3.87 102 P Pn 20 31 43.5 +1.8
LALI S Sn 20 32 28.6 +2.3
UEES Universidad Ev 3.90 99 P Pn 20 31 45.4 +3.1
UEES S Sn 20 32 30.4 +3.2
SEMO Seminario San 3.92 99 S Sn 20 32 30.0 +2.3
UTEC Universidad Te 3.94 99 S Sn 20 32 31.3 +3.0
IGN Direccin Gen 3.97 98 S Sn 20 32 31.3 +2.4
PANCS Alcalda de 3.98 100 S Sn 20 32 31.1 +2.0
PETF Flores 4.12 51 Pn 20 31 45.7 +0.6
PETF Sn 20 32 28.4 -4.1
PETF Flores 4.12 51⇓ *eP* Pn 20 31 46.5 +1.4
PETF *eS* Sn 20 32 29.8 -2.7
PETF Flores 4.12 51 ⇑P Pn 20 31 47.5 +2.3
PETF S Sn 20 32 36.3 +3.8
PETF Flores 4.12 51 *i* P Pn 20 31 47.4 +2.3
PETF IAML 20 32 40.6
comp=E,5µm,0.7s
PEIG Puerto Escondi 4.15 294 Pn 20 31 44.9 -0.6
PEIG Sn 20 32 29.4 -3.8
PEIG Puerto Escondi 4.15 294⇑ *eP* Pn 20 31 44.9 -0.6
PEIG *eS* Sn 20 32 29.4 -3.8
NEUV Arroyo Zacate 4.18 324 Pn 20 31 45.8 -0.2
NEUV Sn 20 32 33.7 -0.3
NEUV Arroyo Zacate 4.18 324⇑ *eP* Pn 20 31 45.8 -0.2
NEUV *eS* Sn 20 32 33.7 -0.3
PAVA Las Pavas 4.19 98 P Pn 20 31 48.3 +2.1
PAVA S Sn 20 32 36.9 +2.4
COEG Centro de Oper 4.26 99 P Pn 20 31 49.7 +2.5
COEG S Sn 20 32 40.0 +3.9
OXLC Oaxaca 4.32 309 Pn 20 31 47.6 -0.6
OXLC Sn 20 32 37.5 -0.3
OXLC Oaxaca 4.32 309 *eP* Pn 20 31 47.6 -0.6
OXLC *eS* Sn 20 32 37.5 -0.3
SARH Santa Rosa de 4.33 84 *i* P Pn 20 31 50.9 +2.8
P5NO Presa 5 de nov 4.33 94 P Pn 20 31 49.8 +1.7
P5NO S Sn 20 32 40.5 +2.7
OXBJ Oaxaca 4.34 309 Pn 20 31 47.0 -1.4
OXBJ Sn 20 32 37.3 -0.9
OXBJ Oaxaca 4.34 309 *eP* Pn 20 31 47.0 -1.4
OXBJ *eS* Sn 20 32 37.3 -0.9
OXIG Oaxaca 4.35 309 Pn 20 31 51.4 +2.9
OXIG Sn 20 32 38.9 +0.4
VHO Vista Hermosa 4.35 309⇑ *eP* Pn 20 31 51.4 +2.9
VHO *eS* Sn 20 32 38.9 +0.4
TECO Alcaldia de Te 4.37 100 P Pn 20 31 51.2 +2.6
TECO S Sn 20 32 41.5 +2.7
PMUV Sontecomapan 4.57 337 Pn 20 31 51.6 +0.2
PMUV Sn 20 32 41.7 -2.1
PMUV Sontecomapan 4.57 337 *eP* Pn 20 31 51.6 +0.2
PMUV *eS* Sn 20 32 41.7 -2.1
IZABA Izabal, Puerto 4.68 72 *eP* Pn 20 31 55.4 +2.5
YOIG Yosondua 4.87 302 Pn 20 31 58.8 +3.0
YOIG Sn 20 32 48.9 -2.6
YOIG Yosondua 4.87 302⇑ *eP* Pn 20 31 58.8 +3.0
YOIG *eS* Sn 20 32 48.9 -2.6
SCIG Sabancuy 5.00 23 Pn 20 31 59.0 +1.7
SCIG Sn 20 32 54.2 +0.1
SCIG Sabancuy 5.00 23 *eP* Pn 20 31 59.0 +1.7
SCIG *eS* Sn 20 32 54.2 +0.1
SCIG Sabancuy 5.00 23 ⇓P Pn 20 31 59.0 +1.7
SCIG S Sn 20 32 57.1 +3.0
SCIG Sabancuy 5.00 23 *i* P Pn 20 31 58.9 +1.7
PNIG Pinotepa 5.17 294 Pn 20 32 00.8 +1.2
PNIG Sn 20 32 58.8 +0.5
PNIG Pinotepa 5.17 294⇓ *eP* Pn 20 32 00.8 +1.2
PNIG *eS* Sn 20 32 58.8 +0.5
TXIG Tlaxiaco 5.26 304 Pn 20 32 03.2 +2.1
TXIG Sn 20 32 58.8 -2.2
TXIG Tlaxiaco 5.26 304 *eP* Pn 20 32 03.2 +2.1
TXIG *eS* Sn 20 32 58.8 -2.2
TOIG Toxpalan 5.26 316 Pn 20 32 02.2 +1.2
TOIG Sn 20 33 01.4 +0.6
TOIG Toxpalan 5.26 316 *eP* Pn 20 32 02.2 +1.2
TOIG *eS* Sn 20 33 01.4 +0.6
HLIG Huajuapan de L 5.62 309 Pn 20 32 06.2 +0.2
HLIG Sn 20 33 08.2 -1.5
HLIG Huajuapan de L 5.62 309 *eP* Pn 20 32 06.2 +0.2
HLIG *eS* Sn 20 33 08.2 -1.5
TPIG Tehuac#an 5.69 316 Pn 20 32 08.9 +2.0
TPIG Sn 20 33 12.3 +0.9
TPIG Tehuac#an 5.69 316 *eP* Pn 20 32 08.9 +2.0
TPIG *eS* Sn 20 33 12.3 +0.9
FTIG Fresnillo de T 5.92 308 Pn 20 32 13.5 +3.6
FTIG Sn 20 33 12.5 -4.5
FTIG Fresnillo de T 5.92 308 *eP* Pn 20 32 13.5 +3.6
FTIG *eS* Sn 20 33 12.5 -4.5
MGIG Malinaltepec 5.96 300 Pn 20 32 13.2 +2.5
MGIG Sn 20 33 17.8 -0.5
MGIG Malinaltepec 5.96 300 *eP* Pn 20 32 13.2 +2.5
MGIG *eS* Sn 20 33 17.8 -0.5
TLIG Tlapa 6.07 303 Pn 20 32 12.1 0.0
TLIG Tlapa 6.07 303 *eP* Pn 20 32 14.7 +2.6
TLIG *eS* Sn 20 33 15.2 -5.5
JAUV Jalcomulco 6.07 326 Pn 20 32 11.6 -0.4
JAUV Sn 20 33 19.9 -0.8
JAUV Jalcomulco 6.07 326 *eP* Pn 20 32 11.6 -0.4
JAUV *eS* Sn 20 33 19.9 -0.8
LVIG Laguna Verde 6.17 331 Pn 20 32 12.9 -0.5
LVIG Sn 20 33 20.1 -3.1
LVIG Laguna Verde 6.17 331 *eP* Pn 20 32 12.9 -0.5
LVIG *eS* Sn 20 33 20.1 -3.1
CRIG Cruz Grande 6.19 293 Pn 20 32 14.7 +1.2
CRIG Cruz Grande 6.19 293 *eP* Pn 20 32 14.7 +1.2
HMTT Tlapaneco 6.19 305 Pn 20 32 16.9 +3.2
HMTT Sn 20 33 22.7 -1.0
HMTT Tlapaneco 6.19 305 *eP* Pn 20 32 16.9 +3.2
HMTT *eS* Sn 20 33 22.7 -1.0
CRIN San Cristobal 6.21 104 P Pn 20 32 19.2 +5.3
comp=E,10µmcomp=E,922nm,0.7s
CRIN S Sn 20 33 35.2 +11
comp=E,10µmcomp=E,922nm,0.7s
HERN Volcan Telica 6.44 105 Pn 20 32 16.9 -0.2
CNGN Cerro Negro 6.59 105 P Pn 20 32 24.7 +5.5
comp=E,38µmcomp=E,3µm,0.9s
CNGN S Sn 20 33 41.6 +8.0
comp=E,38µmcomp=E,3µm,0.9s
DAIG Los Arroyos 6.75 294 Pn 20 32 23.4 +2.0
DAIG Los Arroyos 6.75 294 *eP* Pn 20 32 23.4 +2.0
DAIG *eS* Sn 20 33 30.6 -6.8
PPAX Atlixo 6.76 313 *eP* Pn 20 32 21.2 -0.5
PPAX *eS* Sn 20 33 33.5 -4.5
PPCL Tochimilco 6.90 312 *eP* Pn 20 32 24.0 +0.4
PPCL *eS* Sn 20 33 38.5 -3.0
PBCV Popocatepetl 6.90 313 *eP* Pn 20 32 23.1 -0.6
PBCV *eS* Sn 20 33 37.5 -4.1
PPSX Xalitzintla 6.94 314 *eP* Pn 20 32 30.2 +6.1
PPSX *eS* Sn 20 33 41.3 -1.1
PPPT Popocatepetl 6.94 312 *eP* Pn 20 32 28.5 +4.1
PPPT *eS* Sn 20 33 42.6 -0.2
PPCU Popocatapetl 6.96 313 *eP* Pn 20 32 25.5 +0.8
PPCU *eS* Sn 20 33 38.1 -5.1
PBPN Popocatepetl 6.99 313 *eP* Pn 20 32 25.9 +0.9
PBPN *eS* Sn 20 33 44.3 +0.3
PBXN Popocatepetl 6.99 312 *eP* Pn 20 32 27.5 +2.5
PBXN *eP* Pn 20 32 27.9 +2.9
PBXN *eS* Sn 20 33 39.9 -4.0
PBXN *eS* Sn 20 33 43.7 -0.2
PPM Popocatepetl 7.00 313 *eP* Pn 20 32 28.0 +2.7
PPM *eS* Sn 20 33 45.5 +1.1
PPIG Popocatepetl 7.01 313 Pn 20 32 28.0 +2.7
PPIG Sn 20 33 45.5 +1.1
MEIG Mezcala 7.12 301 Pn 20 32 29.3 +2.8
MEIG Sn 20 33 47.3 +0.7
MEIG Mezcala 7.12 301 *eP* Pn 20 32 29.3 +2.8
MEIG *eS* Sn 20 33 47.3 +0.7
CXUV Coxquihui 7.16 325 Pn 20 32 27.4 +0.5
CXUV Sn 20 33 48.0 +0.6
CXUV Coxquihui 7.16 325 *eP* Pn 20 32 27.4 +0.5
CXUV *eS* Sn 20 33 48.0 +0.6
AMVM AMECAMECA 7.16 313 Pn 20 32 24.2 -3.0
AMVM AMECAMECA 7.16 313 *eP* Pn 20 32 24.2 -3.0
YAIG Yautepec 7.20 310 Pn 20 32 31.0 +3.5
YAIG Sn 20 33 50.7 +2.2
YAIG Yautepec 7.20 310 *eP* Pn 20 32 31.0 +3.5
YAIG *eS* Sn 20 33 50.7 +2.2
PLIG Platanillo 7.26 305 Pn 20 32 32.5 +4.0
PLIG Sn 20 33 52.2 +2.1
PLIG Platanillo 7.26 305 *eP* Pn 20 32 32.5 +4.0
PLIG *eS* Sn 20 33 52.2 +2.1
CAIG El Cayaco 7.31 293 Pn 20 32 31.0 +2.0
CAIG Sn 20 33 47.4 -3.8
CAIG El Cayaco 7.31 293 *eP* Pn 20 32 31.0 +2.0
CAIG *eS* Sn 20 33 47.4 -3.8
MPVM San Francisco 7.37 312 Pn 20 32 28.8 -1.2
MPVM San Francisco 7.37 312 *eP* Pn 20 32 28.8 -1.2
MPVM *eS* Sn 20 33 47.8 -5.1
MYIG Merida 7.37 26 Pn 20 32 27.4 -2.4
MYIG Sn 20 33 49.6 -3.0
MYIG Merida 7.37 26 *eP* Pn 20 32 27.4 -2.4
MYIG *eS* Sn 20 33 49.6 -3.0
THVM De Xico 7.41 313 Pn 20 32 30.2 -0.5
THVM Sn 20 33 54.8 +0.8
THVM De Xico 7.41 313 *eP* Pn 20 32 30.2 -0.5
THVM *eS* Sn 20 33 54.8 +0.8
TLVM San Miguel Top 7.48 311 Pn 20 32 32.1 +0.5
TLVM Sn 20 33 51.1 -4.7
TLVM San Miguel Top 7.48 311 *eP* Pn 20 32 32.1 +0.5
TLVM *eS* Sn 20 33 51.1 -4.7
XCVM Xochimilco 7.48 312 Pn 20 32 31.4 -0.2
XCVM Sn 20 33 51.1 -4.6
XCVM Xochimilco 7.48 312 *eP* Pn 20 32 31.4 -0.2
XCVM *eS* Sn 20 33 51.1 -4.6
MZVM 7.52 311 Pn 20 32 36.8 +5.0
MZVM Sn 20 33 59.1 +2.8
MZVM 7.52 311 *eP* Pn 20 32 36.8 +5.0
MZVM *eS* Sn 20 33 59.1 +2.8
TEIG Tepich 7.52 38 Pn 20 32 32.4 +0.6
TEIG Tepich 7.52 38 P Pn 20 32 32.2 +0.3
comp=E,8µmcomp=E,23µmcomp=E,2µm,0.7s
TEIG S Sn 20 33 50.6 -5.7
comp=E,8µmcomp=E,23µmcomp=E,2µm,0.7s
MAVM Malinalco, Edo 7.58 308 Pn 20 32 34.0 +1.2
MAVM Sn 20 33 54.0 -4.0
MAVM Malinalco, Edo 7.58 308 *eP* Pn 20 32 34.0 +1.2
MAVM *eS* Sn 20 33 54.0 -4.0
PBVM Pinon 7.58 313 Pn 20 32 35.5 +2.9
PBVM Pinon 7.58 313 *eP* Pn 20 32 35.5 +2.9
BOAB BOACO BROADBAN 7.58 103 Pn 20 32 33.1 +0.4
VTVM Tizayuca 7.58 316 Pn 20 32 33.5 +0.5
VTVM Sn 20 33 58.5 +0.2
VTVM Tizayuca 7.58 316 *eP* Pn 20 32 33.5 +0.5
VTVM *eS* Sn 20 33 58.5 +0.2
MCRU Las Cruces 7.62 311 *eP* Pn 20 32 33.5 -0.1
MCRU *eS* Sn 20 33 54.7 -4.5
AOVM Tlapan 7.64 311 Pn 20 32 35.5 +1.6
AOVM Sn 20 33 55.1 -4.8
AOVM Tlapan 7.64 311 *eP* Pn 20 32 35.5 +1.6
AOVM *eS* Sn 20 33 55.1 -4.8
INVM La Marquesa 7.70 311 Pn 20 32 33.8 -0.8
INVM Sn 20 33 57.1 -4.0
INVM La Marquesa 7.70 311 *eP* Pn 20 32 33.8 -0.8
INVM *eS* Sn 20 33 57.1 -4.0
PTVM Pico Tres Padr 7.70 314 Pn 20 32 35.5 +0.9
PTVM Sn 20 34 02.5 +1.5
PTVM Pico Tres Padr 7.70 314 *eP* Pn 20 32 35.5 +0.9
PTVM *eS* Sn 20 34 01.2 +0.2
PTVM *eS* Sn 20 34 02.5 +1.5
AZVM Cuida Lopez Ma 7.81 313 Pn 20 32 36.9 +0.7
AZVM Sn 20 33 59.2 -4.7
AZVM Cuida Lopez Ma 7.81 313 *eP* Pn 20 32 36.9 +0.7
AZVM *eS* Sn 20 33 59.2 -4.7
ZUVM ZUMPANGO 7.83 315 Pn 20 32 37.1 +0.8
ZUVM Sn 20 34 07.7 +3.4
ZUVM ZUMPANGO 7.83 315 *eP* Pn 20 32 37.1 +0.8
ZUVM *eS* Sn 20 34 07.7 +3.4
ARIG Puente Sto Nin 7.90 301 Pn 20 32 41.1 +4.0
ARIG Sn 20 34 05.8 +0.2
ARIG Puente Sto Nin 7.90 301 *eP* Pn 20 32 41.1 +4.0
ARIG *eS* Sn 20 34 05.8 +0.2
TOVM TOLUCA 7.91 309 Pn 20 32 38.4 +0.9
TOVM Sn 20 34 06.7 +0.3
TOVM TOLUCA 7.91 309 *eP* Pn 20 32 38.4 +0.9
TOVM *eS* Sn 20 34 06.7 +0.3
DHIG Demacu 8.13 318 Pn 20 32 43.7 +3.2
DEIG Demacu 8.13 318 *eP* Pn 20 32 43.7 +3.2
DEIG *eS* Sn 20 34 05.5 -6.2
SIUN Universidad Ur 8.21 93 Pn 20 32 42.0 +0.6
ATVM ATLACOMULCO 8.33 311 Pn 20 32 41.5 -1.8
ATVM ATLACOMULCO 8.33 311 *eP* Pn 20 32 41.5 -1.8
ACIG Acambay 8.49 312 Pn 20 32 46.1 +0.7
ACIG Sn 20 34 17.0 -3.5
ACIG Acambay 8.49 312 *eP* Pn 20 32 46.1 +0.7
ACIG *eS* Sn 20 34 17.0 -3.5
ZIIG Zihuatanejo 8.58 293 Pn 20 32 48.9 +2.5
ZIIG Sn 20 34 19.4 -2.9
ZIIG Zihuatanejo 8.58 293 *eP* Pn 20 32 48.9 +2.5
ZIIG *eS* Sn 20 34 19.4 -2.9
CTUV Llano Grande 8.62 326 Pn 20 32 48.8 +1.8
CTUV Sn 20 34 23.6 +0.2
CTUV Llano Grande 8.62 326 *eP* Pn 20 32 48.8 +1.8
CTUV *eS* Sn 20 34 23.6 +0.2
JTS Las Juntas de 9.01 116 Pn 20 32 55.7 +3.3
comp=E,1.9nm,0.3s,baz=353,slow=16,SNR=6.0
JTS Sn 20 34 36.8 +3.7
comp=E,1.8nm,0.3s,baz=60,slow=20,SNR=6.8
JTS Las Juntas de 9.01 116 Pn 20 32 52.4 0.0
MOIG Morelia 9.30 306 Sn 20 34 40.5 +0.1
MOIG Morelia 9.30 306 Pn 20 32 57.4 +0.9
MOIG Morelia 9.30 306 *eP* Pn 20 32 59.3 +2.8
MOIG *eS* Sn 20 34 40.5 +0.1
HDC Heredia 9.88 115 *eP* Pn 20 33 03.9 -0.5
GTIG Gomez Farias 10.36 328 Pn 20 33 12.6 +1.8
GTIG Gomez Farias 10.36 328 *eP* Pn 20 33 12.6 +1.8
GTIG *eS* Sn 20 34 58.0 -8.1
MMIG Aquila 10.49 293 Pn 20 33 14.2 +1.6
MMIG Aquila 10.49 293 *eP* Pn 20 33 14.2 +1.6
INCO Volcan de Coli 11.20 299 *eP* Pn 20 33 26.8 +4.0
INCO *eS* Sn 20 35 25.3 -2.1
SOMAC Volcano de Col 11.22 299 *eP* Pn 20 33 25.8 +2.8
SOMAC *eS* Sn 20 35 24.6 -3.3
CDAR Ciudad de Arme 11.32 295 *eP* Pn 20 33 27.9 +4.0
CDAR *eS* Sn 20 35 22.9 -6.7
PIRO Carate, Puerto 11.33 120 Pn 20 33 26.2 +2.0
CEGR Campo Tres 11.36 298 *eP* Pn 20 33 28.9 +4.1
CEGR *eS* Sn 20 35 24.2 -6.7
LNIG Linares 12.05 332 Pn 20 33 34.4 +0.5
LNIG Linares 12.05 332 *eP* Pn 20 33 34.4 +0.5
SOR Soroa 12.81 47 Pn 20 33 43.1 -1.3
833A Chaparral WMA, 15.06 339 Pn 20 34 15.1 +0.1
833A IAmb IAmb 20 34 21.5
comp=E,46nm,0.8s
HNDO Hondo 16.13 341 Pn 20 34 28.4 -0.4
061Z Ochoppi 16.27 43 Pn 20 34 28.2 -2.5
346A Big Creek Wild 17.32 11 Pn Pn 20 34 41.6 -2.2
346A IAmb IAmb 20 34 50.8
comp=E,64nm,0.7s
BRDY Brady 17.69 343 Pn 20 34 49.2 +0.7
TXAR Lajitas Array 17.79 329 P P 20 34 53.5 +3.1
comp=Z,0.6nm,0.3s,baz=150,slow=13,SNR=48
comp=Z,28nm,1.0s
TXAR Lajitas Array 17.79 329 P P 20 34 51.7 +1.4
OZNA Ozona 18.04 338 P 20 34 54.3 +1.2
OZNA IAmb IAmb 20 35 02.5
comp=Z,153nm,1.1s
ALPN Alpine 18.63 331 Pn 20 35 02.4 +2.2
LPIG La Paz 18.82 304 P Pn 20 35 07.0 +4.6
comp=Z,4.6nm,0.3s,baz=124,slow=7.3,SNR=7.8
LPIG LR LR 20 42 32.4
comp=Z,483nm,18.4s,baz=132,slow=37
comp=Z,21nm,0.3s
Z38A Mt. Pleasant 18.91 355 P 20 35 00.2 -2.4
SGCY Sterling City 18.94 339 IAmb IAmb 20 35 07.1
comp=Z,117nm,0.8s
PLPT Palo Pinto 18.98 347 P Pn 20 35 04.7 +0.6
MNHN Monahans 19.06 334 P 20 35 04.9 +0.6
MNHN IAmb IAmb 20 35 09.7
comp=Z,84nm,0.8s
TMB01 Midkiff 19.07 336 IAmb IAmb 20 35 09.3
comp=Z,56nm,0.9s
Z47A Carrollton 19.36 13 P P 20 35 07.0 -0.4
Z47A IAmb IAmb 20 35 16.1
comp=Z,81nm,0.8s
LRAL Lakeview Retre 19.46 16 P 20 35 08.2 -0.3
PECS Pecos 19.57 332 P P 20 35 09.5 -0.4
VHRN Van Horn 19.63 328 P 20 35 10.2 -0.5
ODSA Odessa 19.66 336 IAmb IAmb 20 35 15.9
comp=Z,128nm,0.9s
GUY2C Guyana, Caldas 19.76 115 P Pn 20 35 16.8 +2.6
comp=Z,679nmcomp=Z,79nm,0.7s
152A Waverly Hall 19.83 22 P P 20 35 12.7 0.0
152A IAmb IAmb 20 35 19.0
comp=Z,62nm,0.8s
129A Stewart Farms, 19.85 338 IAmb IAmb 20 35 19.4
comp=Z,81nm,1.0s
APMT Aspermont 19.92 343 Pn 20 35 15.2 -0.2
APMT IAmb IAmb 20 35 21.2
comp=Z,46nm,0.7s
WTFS Witchita Falls 19.93 347 P P 20 35 13.1 -0.6
SN07 Snyder 07 19.94 341 P P 20 35 14.8 +0.9
SN07 IAmb IAmb 20 35 19.7
comp=Z,48nm,0.8s
POPC Popayan, Colom 20.10 124 P Pn 20 35 20.3 +2.4
comp=Z,2µmcomp=Z,130nm,1.1s
POST Post 20.12 339 P 20 35 16.2 +0.3
POST IAmb IAmb 20 35 26.2
comp=Z,61nm,0.9s
CUSE Cuicocha Este 20.22 132 P P 20 35 15.9 -1.6
OTAV Otavalo 20.23 133 *eP* P 20 35 15.6 -2.1
OTAV *ep*P sP 20 35 28.0 0.0
UALR University of 20.37 2 IAmb IAmb 20 35 26.6
comp=Z,49nm,0.9s
Y49A Blount Mountai 20.39 16 P 20 35 18.4 -0.4
Y49A IAmb IAmb 20 35 33.9
comp=Z,136nm,1.8s
154A Montrose 20.40 25 P 20 35 17.9 -0.9
DKNS Dickens 20.48 341 P 20 35 20.6 +0.8
DKNS IAmb IAmb 20 35 29.8
comp=Z,45nm,0.7s
INCA Colegio Marist 20.50 133 Pn 20 35 25.3 +2.6
GDL2 Guadalupe Moun 20.50 332 P 20 35 21.4 +1.3
ORTC Ortega, Tolima 20.52 119 P Pn 20 35 24.5 +1.9
comp=Z,905nmcomp=Z,101nm,0.9s
X48A Hartselle 20.79 14 P 20 35 22.8 -0.3
X48A IAmb IAmb 20 35 32.0
comp=Z,38nm,0.8s
ROSC El Rosal 20.86 115 P Pn 20 35 28.0 +1.1
comp=Z,64nm,0.8s,baz=307,slow=17,SNR=25
WHAR Wooly Hollow 20.88 2 P P 20 35 23.8 -0.2
WHAR IAmb IAmb 20 35 33.3
comp=Z,62nm,1.2s
SLOR San Lorenzo - 20.89 135 P P 20 35 25.8 +1.0
GOGA Godfrey 20.95 23 P P 20 35 24.3 -0.6
GOGA IAmb IAmb 20 35 34.0
comp=Z,84nm,0.8s
CPRX Cap Rock 20.99 334 P 20 35 26.8 +1.4
W35A Tecumseh 20.99 352 IAmb IAmb 20 35 36.4
comp=Z,92nm,0.9s
Y52A Lilburn 21.14 22 P P 20 35 27.3 +0.4
PAMC Pamplona, Colo 21.30 107 P P 20 35 32.4 +3.2
comp=Z,429nmcomp=Z,63nm,0.9s
MSTX Muleshoe 21.38 338 IAmb IAmb 20 35 36.6
comp=Z,90nm,0.9s
FCAR Ozark Folk Cen 21.49 2 P P 20 35 30.9 +0.3
FCAR IAmb IAmb 20 35 35.2
comp=Z,52nm,0.8s
X51A Calhoun 21.51 19 P P 20 35 30.9 +0.1
X51A IAmb IAmb 20 35 39.6
comp=Z,61nm,1.1s
TUL3 Leonard 21.61 354 P 20 35 32.1 +0.2
TUL3 IAmb IAmb 20 35 49.6
comp=Z,46nm,1.0s
DEOK Depew 21.62 353 IAmb IAmb 20 35 35.7
comp=Z,44nm,0.8s
SMWD Samnorwood 21.63 344 P 20 35 32.8 +0.7
LCAR Lake Charles 21.72 5 P P 20 35 32.4 -0.7
RLO Rose Lookout 21.80 356 P P 20 35 33.5 -0.4
OK052 Battle Ridge R 21.81 352 IAmb IAmb 20 35 37.4
comp=Z,74nm,0.8s
HHAR Hobbs 21.87 358 P 20 35 34.2 -0.5
QUOK Quay 21.97 352 P P 20 35 36.0 +0.3
QUOK IAmb IAmb 20 35 38.9
comp=Z,62nm,0.7s
HSIG 21.98 315 P P 20 35 38.5 +2.5
HODGE Hodges 22.15 25 IAmb IAmb 20 35 46.0
comp=Z,82nm,1.0s
WVT Waverly 22.23 12 P P 20 35 38.5 0.0
WVT IAmb IAmb 20 35 48.3
comp=Z,44nm,0.8s
OK048 Pawnee Station 22.24 352 IAmb IAmb 20 35 41.7
comp=Z,62nm,0.8s
ELIS Ellis County 22.35 347 IAmb IAmb 20 35 43.7
comp=Z,62nm,0.9s
CPCT Cooper Cave 22.43 19 IAmb IAmb 20 35 57.6
comp=Z,28nm,0.7s
319A Douglas 22.47 322 IAmb IAmb 20 35 55.5
comp=Z,54nm,0.9s
121A Cookes Peak, D 22.47 326 P 20 35 44.1 +2.7
CROK Carrier 22.49 350 IAmb IAmb 20 35 44.1
comp=Z,65nm,0.8s
OK038 West end E0370 22.60 348 IAmb IAmb 20 35 46.9
comp=Z,28nm,0.7s
BLOK Blackwell 22.62 352 IAmb IAmb 20 35 44.8
comp=Z,38nm,0.6s
SDV Santo Domingo 22.76 101 LR LR 20 45 19.8
comp=Z,342nm,21.0s,baz=280,slow=39
SDV Santo Domingo 22.76 101 P P 20 35 43.8 -0.8
SDV IAmb IAmb 20 35 47.9
comp=Z,33nm,0.8s
SDV Santo Domingo 22.76 101 P P 20 35 46.1 +1.5
SDV Santo Domingo 22.76 101 *eP* P 20 35 42.8 -1.8
NOKA Waynoka 22.79 348 IAmb IAmb 20 35 47.7
comp=Z,62nm,0.8s
TKL Tuckaleechee C 22.86 20 LR LR 20 46 00.3
comp=Z,366nm,18.6s,baz=195,slow=40
U49A Red Boiling Sp 23.07 15 P 20 35 46.6 -0.7
U49A IAmb IAmb 20 36 07.0
comp=Z,30nm,0.8s
Y22A Socorro 23.16 330 IAmb IAmb 20 36 04.3
comp=Z,91nm,1.1s
KAN08 Anthony NE Sta 23.19 350 P P 20 35 47.9 -0.7
DUN6 Lazy B Ranch 23.21 324 P P 20 35 50.1 +1.1
V53A Saluda 23.21 22 IAmb IAmb 20 36 13.2
comp=Z,52nm,0.8s
T47A Sharon Grove 23.21 12 IAmb IAmb 20 36 11.1
comp=Z,31nm,0.6s
S39A Bolivar 23.26 360 P 20 35 48.1 -1.3
S39A IAmb IAmb 20 35 51.8
comp=Z,34nm,0.6s
KMSC Kings Mountain 23.32 25 P P 20 35 49.5 -0.4
KMSC IAmb IAmb 20 36 03.1
comp=Z,43nm,1.0s
S44A Carbondale 23.53 8 IAmb IAmb 20 36 17.9
comp=Z,54nm,0.9s
SIUC Southern Illin 23.56 8 IAmb IAmb 20 36 15.7
comp=Z,82nm,1.1s
CCM Cathedral Cave 23.69 4 P P 20 35 51.9 -1.6
CCM IAmb IAmb 20 35 55.2
comp=Z,36nm,0.9s
ANMO Albuquerque 23.75 332 LR LR 20 47 39.7
comp=Z,182nm,18.2s,baz=136,slow=43

ANMO Albuquerque 23.75 332 P P 20 35 54.9 +0.6
TZTN Tazewell 23.75 20 P P 20 35 53.2 -0.9
R40A Maddies Statio 23.88 2 IAmb IAmb 20 36 10.8
comp=Z,31nm,0.9s
TUC Tucson 24.03 321 P P 20 36 00.0 +3.1
TUC IAmb IAmb 20 36 02.1
comp=Z,43nm,0.9s
WCI Wyandotte Cave 24.58 13 P P 20 36 00.1 -1.6
WCI IAmb IAmb 20 36 27.3
comp=Z,46nm,0.8s
V58A Windy Hill, Pi 24.84 28 IAmb IAmb 20 36 26.0
comp=Z,86nm,1.5s
KSU1 Kansas State U 24.85 354 IAmb IAmb 20 36 05.7
comp=Z,39nm,0.7s
CBKS Cedar Bluff 25.06 348 IAmb IAmb 20 36 09.6
comp=Z,46nm,0.8s
P40A Paris 25.12 2 IAmb IAmb 20 36 07.2
comp=Z,37nm,0.8s
P38A Dawn 25.20 359 IAmb IAmb 20 36 15.1
comp=Z,87nm,1.6s
PIX Pinacate 25.26 316 P P 20 36 09.4 +1.5
SDCO Great Sand Dun 25.75 337 IAmb IAmb 20 36 16.8
comp=Z,49nm,1.3s
ATAH Atahualpa 25.90 144 LR LR 20 44 58.5
comp=Z,510nm,18.3s,baz=318,slow=33
KSCO Kaye Shedlock' 25.95 343 IAmb IAmb 20 36 17.7
comp=Z,68nm,1.3s
SJG San Juan 26.24 78 LR LR 20 46 36.5
comp=Z,503nm,21.4s,baz=238,slow=37
MVCO Mesa Verde 26.54 332 IAmb IAmb 20 36 31.0
comp=Z,32nm,0.8s
WUAZ Wupatki 26.67 325 P P 20 36 20.4 -0.5
ESJX Sierra Juarez 27.22 314 P P 20 36 26.1 +0.1
PV01 Paradox Valley 27.34 333 IAmb IAmb 20 36 43.3
comp=Z,31nm,1.1s
PV13 Radium Mtn., P 27.47 333 IAmb IAmb 20 36 39.3
comp=Z,24nm,1.0s
PV02 Paradox Valley 27.47 333 IAmb IAmb 20 36 39.6
comp=Z,36nm,0.9s
SCIA State Center 27.48 360 IAmb IAmb 20 36 52.1
comp=Z,25nm,0.8s
PV03 Paradox Valley 27.56 333 IAmb IAmb 20 36 39.6
comp=Z,30nm,1.0s
PV18 Skein Mesa, Pa 27.58 333 IAmb IAmb 20 36 51.5
comp=Z,39nm,0.9s
PV11 David Mesa, Pa 27.61 333 IAmb IAmb 20 36 47.3
comp=Z,38nm,0.9s
ISCO Idaho Springs 27.61 339 IAmb IAmb 20 36 33.4
comp=Z,43nm,1.8s
OGNE Ogallala 27.61 345 IAmb IAmb 20 36 32.8
comp=Z,40nm,1.0s
PV07 Paradox Valley 27.62 333 IAmb IAmb 20 36 34.1
comp=Z,27nm,1.0s
PV16 Nyswonger Mesa 27.64 333 IAmb IAmb 20 36 34.1
comp=Z,63nm,1.5s
L40A Anamosa 27.68 3 IAmb IAmb 20 36 53.8
comp=Z,27nm,0.9s
PV20 West Nyswonger 27.68 333 IAmb IAmb 20 36 49.0
comp=Z,32nm,0.8s
PV04 Paradox Valley 27.70 333 IAmb IAmb 20 36 49.3
comp=Z,33nm,0.9s
PV14 Lion Creek, Pa 27.73 333 IAmb IAmb 20 36 52.8
comp=Z,21nm,0.9s
PV22 Blue Mesa, Par 27.77 333 IAmb IAmb 20 36 37.4
comp=Z,20nm,0.7s
BC3 Big Chuckawall 27.87 318 P P 20 36 31.1 -0.5
BC3 IAmb IAmb 20 36 36.2
comp=Z,31nm,1.0s
PMD Palm Desert 28.48 317 P 20 36 38.9 +1.9
PFO Pinyon Flats O 28.51 316 LR LR 20 49 45.3
comp=Z,400nm,18.8s,baz=126,slow=40
JFWS Jewell Farm 28.59 5 IAmb IAmb 20 37 15.9
comp=Z,27nm,0.8s
V12A Nelson 28.83 322 IAmb IAmb 20 36 44.8
comp=Z,40nm,1.2s
O20A White River Ci 28.88 336 IAmb IAmb 20 36 46.9
comp=Z,93nm,2.0s
SZCU Shurtz Canyon 29.13 326 IAmb IAmb 20 36 47.9
comp=Z,20nm,1.0s
P17A Butcher Ranch, 29.41 332 IAmb IAmb 20 36 49.4
comp=Z,74nm,1.9s
ECSD EROS Data Cent 29.45 355 IAmb IAmb 20 36 48.9
comp=Z,15nm,0.8s
PRN Pahroc Range 30.09 324 P P 20 36 51.5 +0.1
K22A Casper 30.46 340 IAmb IAmb 20 36 57.9
comp=Z,16nm,0.8s
FURC Furnace Creek, 30.54 320 IAmb IAmb 20 37 00.1
comp=Z,47nm,1.7s
S11A Rachel 30.65 323 IAmb IAmb 20 37 01.7
comp=Z,48nm,1.3s
NNA Nana 30.77 147 LR LR 20 47 00.8
comp=Z,364nm,21.4s,baz=327,slow=32
SPMN Marine on St. 30.79 1 IAmb IAmb 20 37 59.2
comp=Z,14nm,0.7s
RSSD Black Hills 31.09 345 P P 20 37 00.7 +0.5
RSSD IAmb IAmb 20 37 02.9
comp=Z,14nm,0.7s
PDAR Pinedale Array 31.64 337 P P 20 37 07.0 +1.9
comp=Z,3.3nm,0.8s,baz=136,slow=8.1,SNR=30
PDAR PcP PcP 20 39 57.9 +1.0
comp=Z,0.9nm,0.6s,baz=174,slow=4.6,SNR=3.9
PDAR LR LR 20 52 14.6
comp=Z,116nm,18.1s,baz=140,slow=41
comp=Z,3.3nm,0.8s
PDAR Pinedale Array 31.64 337 P 20 37 05.2 0.0
PDAR PcP 20 39 56.8 -0.1
HVU Hansel Valley 32.18 332 IAmb IAmb 20 37 14.0
comp=Z,13nm,0.8s
AHID Auburn Hatcher 32.25 335 IAmb IAmb 20 37 30.5
comp=Z,32nm,1.4s
SADO Sadowa 32.61 19 LR LR 20 51 54.8
comp=Z,344nm,19.8s,baz=320,slow=39
NVAR Mina Array Bea 32.68 322 P P 20 37 17.7 +3.5
comp=Z,19nm,0.8s,baz=138,slow=8.8,SNR=93
NVAR PcP PcP 20 40 01.9 +2.2
comp=Z,4.1nm,0.7s,baz=130,slow=3.6,SNR=8.1
NVAR LR LR 20 52 18.2
comp=Z,1µm,18.4s,baz=132,slow=40
comp=Z,19nm,0.8s
LOHW Long Hollow 32.76 336 P P 20 37 16.0 +1.0
LOHW IAmb IAmb 20 37 20.6
comp=Z,19nm,0.7s
MOOW Moose Ponds 32.93 336 IAmb IAmb 20 37 22.0
comp=Z,12nm,0.8s
FLWY Flagg Ranch 33.20 337 IAmb IAmb 20 37 29.4
comp=Z,18nm,0.8s
TEFE Tefe 33.42 120 eP P 20 37 18.5 -2.2
RLMT Red Lodge 33.57 339 IAmb IAmb 20 37 37.0
comp=Z,45nm,1.4s
YNE Yellowstone No 33.73 338 IAmb IAmb 20 37 29.5
comp=Z,23nm,0.8s
YMR Madison River 33.80 337 IAmb IAmb 20 37 30.6
comp=Z,28nm,0.9s
YHL Hebgen Lake 34.03 337 IAmb IAmb 20 38 41.7
comp=Z,22nm,0.9s
BOAV Boa Vista 34.38 107 P P 20 37 27.7 -1.4
BOAV IAmb IAmb 20 37 30.2
comp=Z,12nm,0.8s
BOAV Boa Vista 34.38 107 eP P 20 37 27.2 -1.9
DLMT Dillon 35.01 336 IAmb IAmb 20 37 38.6
comp=Z,26nm,0.8s
EPLO Experimental L 35.24 359 P P 20 37 34.5 -1.7
EPLO IAmb IAmb 20 37 36.4
comp=Z,15nm,0.7s
WVOR Wild Horse Val 35.57 327 IAmb IAmb 20 37 43.3
comp=Z,22nm,1.0s
ULM Lac du Bonnet 35.88 357 P P 20 37 40.6 -0.9
comp=Z,13nm,0.8s,baz=171,slow=9.3,SNR=23
ULM PcP PcP 20 40 09.3 +0.9
comp=Z,5.3nm,0.8s,baz=179,slow=2.6,SNR=4.3
ULM LR LR 20 54 43.3
comp=Z,208nm,20.1s,baz=192,slow=40
comp=Z,13nm,0.8s
ULM Lac du Bonnet 35.88 357 P P 20 37 40.3 -1.3
ULM IAmb IAmb 20 37 43.2
comp=Z,13nm,0.8s
ULM PcP 20 40 08.4 0.0
O03E Paynes Creek 35.96 321 P 20 37 42.3 -0.2
PLID Pearl Lake 36.23 332 IAmb IAmb 20 37 48.4
comp=Z,19nm,0.8s
EGMT Eagleton 36.29 341 IAmb IAmb 20 37 48.5
comp=Z,43nm,1.1s
MACA Manacapuru-AM 36.63 116 eP P 20 37 46.1 -2.2
MSO Missoula 36.75 336 IAmb IAmb 20 37 52.5
comp=Z,16nm,0.9s
KMRM Mail Ridge 37.09 320 IAmb IAmb 20 37 56.6
comp=Z,35nm,1.3s

YBH Yreka Blue Hor 37.39 323 LR LR 20 55 34.7
comp=Z,55nm,18.0s,baz=130,slow=40
F10A Beach Ranch, E 37.46 332 IAmb IAmb 20 37 58.4
comp=Z,33nm,0.8s
KHMM Horse Mountain 37.48 321 IAmb IAmb 20 37 59.9
comp=Z,32nm,1.0s
G08A Pilot Rock 37.77 330 P P 20 37 58.0 +0.2
KRPM Rodgers 37.83 321 pP 20 38 03.4 -2.8
J04A Umpqua Nationa 38.00 325 IAmb IAmb 20 38 07.3
comp=Z,28nm,1.0s
H04A Detroit Lake 38.99 327 IAmb IAmb 20 38 11.5
comp=Z,37nm,1.0s
E07A Sunnyside 39.12 331 IAmb IAmb 20 39 17.4
comp=Z,43nm,1.8s
NEW Newport 39.19 335 LR LR 20 56 38.9
comp=Z,422nm,19.0s,baz=140,slow=40
LPAZ La Paz 39.24 140 P P 20 38 10.9 -0.1
LPAZ LR LR 20 52 56.0
comp=Z,1.1nm,0.5s,baz=333,slow=4.5,SNR=3.5
comp=Z,219nm,21.3s,baz=319,slow=34
comp=Z,1.1nm,0.5s
LPAZ La Paz 39.24 140 P P 20 38 11.7 +0.6
LPAZ La Paz 39.24 140 eP P 20 38 08.1 -3.0
EPH Ephrata 39.58 332 IAmb IAmb 20 38 16.3
comp=Z,11nm,0.9s
FFC Flin Flon 40.88 352 P 20 38 23.7 +0.2
MDP Montagnes des 40.96 99 LR LR 20 55 51.0
comp=Z,280nm,21.9s,baz=290,slow=37
GO01 Chisamiza 41.23 144 P P 20 38 28.8 +1.4
ITTB Itaituba 41.55 114 eP P 20 38 26.9 -2.7
EDM Edmonton 41.95 342 IAmb IAmb 20 38 34.5
comp=Z,41nm,0.8s
A04D Lummi Island 42.01 331 IAmb IAmb 20 38 36.2
comp=Z,52nm,1.0s
LLLB Lillooet 42.99 333 IAmb IAmb 20 40 18.7
comp=Z,29nm,1.1s
NPGB Novo Progresso 43.14 117 eP P 20 38 40.2 -2.4
RPN Rapa Nui 44.09 201 LR LR 20 52 56.9
comp=Z,250nm,18.9s,baz=116,slow=30
FCC Fort Churchill 44.35 359 IAmb IAmb 20 38 53.6
comp=Z,14nm,0.6s
PDRB Porto dos Gac 44.41 124 eP P 20 38 50.4 -2.4
CLDB Colider 44.76 122 eP P 20 38 53.2 -2.4
PTLB Pontes e Lacer 44.84 130 P P 20 38 55.7 -0.4
PTLB Pontes e Lacer 44.84 130 eP P 20 38 54.0 -2.1
SCHQ Schefferville 45.33 21 P P 20 38 57.6 -1.9
comp=Z,2.9nm,0.9s,baz=199,slow=6.1,SNR=2.3
SCHQ PcP PcP 20 40 39.6 +0.8
comp=Z,5.5nm,0.6s,baz=230,slow=3.9,SNR=12
SCHQ LR LR 20 59 51.3
comp=Z,489nm,18.5s,baz=220,slow=39
comp=Z,2.9nm,0.9s
SCHQ Schefferville 45.33 21 P P 20 38 58.1 -1.4
SCHQ IAmb IAmb 20 39 40.4
comp=Z,17nm,1.3s
BDQN Bodoquena, MS 49.79 133 eP P 20 39 32.0 -2.6
MURT Porto Murtinho 49.99 135 eP P 20 39 34.0 -2.1
U35K Hyder 50.19 334 P P 20 39 40.6 +3.4
baz=131
YKA Yellowknife Ar 50.44 347 P P 20 39 40.2 +1.3
comp=Z,24nm,0.8s,baz=156,slow=6.7,SNR=243
YKA PcP PcP 20 40 58.1 +1.2
comp=Z,1.2nm,0.5s,baz=154,slow=2.8,SNR=5.0
comp=Z,24nm,0.8s
YKA Yellowknife Ar 50.44 347 P P 20 39 39.6 +0.6
V35K Ketchikan 50.51 333 P P 20 39 42.8 +3.2
baz=128
ARAG Araguaiana, MT 50.65 125 eP P 20 39 39.1 -2.1
SMTB Santa Maria do 50.78 114 eP P 20 39 40.1 -2.2
KOTAN Kotaneelee Air 50.98 341 P P 20 39 45.7 +2.6
baz=140,SNR=8.0
T35M Bob Quinn 50.99 335 P P 20 39 47.0 +3.8
baz=131
CRAG Craig 51.27 332 P P 20 39 48.5 +3.1
baz=127
WRAK Wrangell Islan 51.52 333 P P 20 39 50.4 +3.3
baz=128
U33K Whale Pass 51.67 333 P P 20 39 51.2 +3.0
baz=127
DLBC Dease Lake 51.88 336 P P 20 39 53.3 +3.3
baz=132,SNR=9.7
S34M Telegraph Cree 51.96 335 P P 20 39 53.6 +3.1
baz=130
FRB Frobisher Bay 52.26 14 LR LR 21 04 09.4
comp=Z,261nm,18.1s,baz=168,slow=38
WTLY Watson Lake, Y 52.58 338 IAmb IAmb 20 39 58.8
comp=Z,21nm,0.9s
WTLY Watson Lake, Y 52.58 338 P P 20 39 57.8 +2.7
baz=134,SNR=11
R33M Jennings River 52.88 337 IAmb IAmb 20 40 02.1
comp=Z,36nm,1.6s
R33M Jennings River 52.88 337 P P 20 40 00.6 +3.2
baz=132
Q32M Nakina River 53.10 336 IAmb IAmb 20 40 10.1
comp=Z,19nm,1.0s
Q32M Nakina River 53.10 336 P P 20 40 02.3 +3.1
baz=130
S32K Killisnoo 53.13 333 P P 20 40 02.1 +3.1
baz=126
WRGLY Wrigley 53.24 343 P P 20 40 02.1 +2.3
baz=142
CPUP Villa Florida 53.40 139 P P 20 40 01.5 0.0
CPUP LR LR 21 04 08.1
comp=Z,1.6nm,0.7s,baz=346,slow=9.6,SNR=5.4
comp=Z,131nm,18.8s,baz=322,slow=38
comp=Z,1.6nm,0.7s
CPUP Villa Florida 53.40 139 P P 20 40 01.4 -0.1
TGTN Hyland Airport 53.41 340 P P 20 40 04.2 +3.0
baz=136,SNR=10
R32K Eaglecrest 53.59 334 P P 20 40 05.7 +3.2
baz=127
BDFB Brasilia 53.69 122 P P 20 40 04.3 +0.4
comp=Z,7.3nm,0.7s,baz=298,slow=8.0,SNR=11
BDFB LR LR 21 04 13.3
comp=Z,153nm,19.4s,baz=333,slow=38
comp=Z,7.3nm,0.7s
BDFB Brasilia 53.69 122 P 20 40 04.7 +0.7
BDFB IAmb IAmb 20 40 05.8
comp=Z,10nm,0.8s
P32M Atlin 54.08 336 P P 20 40 08.9 +2.8
baz=129
P33M Teslin, Yukon 54.12 337 IAmb IAmb 20 40 09.8
comp=Z,13nm,1.1s
P33M Teslin, Yukon 54.12 337 P P 20 40 09.1 +2.6
baz=130
S31K Pelican 54.13 333 P P 20 40 09.4 +3.0
baz=125
NBPS Pedro II - PI 54.59 106 eP P 20 40 08.5 -2.1
SDBA SAO DESIDERIO 54.74 117 eP P 20 40 09.1 -2.5
N32M Quiet Lake 54.84 338 IAmb IAmb 20 40 15.4
comp=Z,23nm,0.8s
N32M Quiet Lake 54.84 338 P P 20 40 14.4 +2.8
baz=130
MMPY Sheldon Lake, 55.18 340 IAmb IAmb 20 40 18.1
comp=Z,33nm,1.1s
MMPY Sheldon Lake, 55.18 340 P P 20 40 16.8 +2.8
baz=133,SNR=15
WHY Whitehorse 55.20 337 P P 20 40 16.9 +2.5
baz=128
ILON Igloolik, Nuna 55.47 5 P 20 40 16.4 +0.4
NBMO Morrinhos-CE 55.53 104 eP P 20 40 14.8 -2.5
FARO Faro, Yukon 55.64 339 P P 20 40 20.0 +2.6
baz=130
LDASE Londrina, Braz 55.69 132 eP P 20 40 15.8 -2.4
P30M Million Dollar 55.70 335 P P 20 40 20.3 +2.5
baz=126
O30N Mendenhall 55.74 336 IAmb IAmb 20 40 22.1
comp=Z,16nm,1.1s
O30N Mendenhall 55.74 336 P P 20 40 20.7 +2.6
baz=127
M31M Drury Creek, Y 55.99 338 P P 20 40 22.7 +2.8
baz=129
N31M Braeburn, Yuko 56.06 337 IAmb IAmb 20 40 24.1
comp=Z,23nm,0.9s
N31M Braeburn, Yuko 56.06 337 P P 20 40 22.9 +2.5
baz=128
HYT Haines Junctio 56.33 336 IAmb IAmb 20 40 27.7
comp=Z,40nm,1.8s
HYT Haines Junctio 56.33 336 P P 20 40 25.2 +2.7
baz=125
O29M Mount Kennedy 56.47 335 IAmb IAmb 20 40 28.0
comp=Z,29nm,1.4s
O29M Mount Kennedy 56.47 335 P P 20 40 26.5 +3.0
baz=124
N30M Aishikik Lake 56.54 336 IAmb IAmb 20 40 27.5
comp=Z,11nm,0.9s
N30M Aishikik Lake 56.54 336 P P 20 40 26.7 +2.8
baz=126
PSAL Palomas, Salto 56.65 143 eP P 20 40 22.8 -2.1
YUK6 Outpost Mounta 56.74 336 P P 20 40 28.2 +2.7
baz=124
PINM Pinnacle 57.05 334 P P 20 40 30.4 +2.9
baz=122
YUK4 Talbot Arm 57.09 336 P P 20 40 30.8 +2.9
baz=124
M30M Minto, Yukon 57.10 338 IAmb IAmb 20 40 31.4
comp=Z,33nm,1.6s
M30M Minto, Yukon 57.10 338 P P 20 40 30.1 +2.3
baz=127,SNR=8.9
O28M Mount Upton 57.39 335 P P 20 40 32.6 +2.4
baz=122
MAYO Mayo, Yukon 57.41 339 P P 20 40 32.5 +2.6
baz=128
YUK8 Steele Glacier 57.50 335 P P 20 40 33.8 +2.9
baz=123,SNR=5.3
M29M Somme Creek 57.65 337 P P 20 40 34.6 +2.9
baz=125,SNR=26
MESA MESA 57.82 334 P P 20 40 35.6 +2.5
baz=120
L29M L29M 57.91 338 IAmb IAmb 20 40 36.9
comp=Z,13nm,0.9s
L29M L29M 57.91 338 P P 20 40 35.7 +2.2
baz=126,SNR=8.4
CTG Chitna Glacier 57.97 335 P P 20 40 36.5 +2.4
baz=121
GRNC Granite Creek 58.02 334 IAmb IAmb 20 40 38.6
comp=Z,24nm,0.9s
YUK3 Moose Creek 58.05 336 P P 20 40 37.0 +2.4
baz=123
K29M Barlow Dome 58.13 339 IAmb IAmb 20 40 38.4
comp=Z,39nm,1.9s
K29M Barlow Dome 58.13 339 P P 20 40 37.1 +1.9
baz=127,SNR=8.9
J30M Hart River 58.18 340 IAmb IAmb 20 40 46.0
comp=Z,28nm,1.8s
J30M Hart River 58.18 340 P P 20 40 37.5 +2.1
baz=128
C36M Paulatuk 58.32 348 P P 20 40 38.6 +2.5
baz=144,SNR=5.7
H31M Peel River 58.33 341 IAmb IAmb 20 41 33.8
comp=Z,37nm,1.6s
H31M Peel River 58.33 341 P P 20 40 38.1 +1.8
baz=131
BVCY Beaver Creek 58.55 336 P P 20 40 40.3 +2.3
baz=123,SNR=6.2
I30M Mount Dempster 58.60 340 IAmb IAmb 20 40 40.8
comp=Z,9.0nm,0.8s
I30M Mount Dempster 58.60 340 P P 20 40 40.2 +1.8
baz=129,SNR=14
CRQE Cirque 58.60 334 P P 20 40 40.4 +2.0
baz=119
PLCA Paso Flores 58.68 160 LR LR 21 01 30.4
comp=Z,178nm,18.1s,baz=284,slow=31
J29N Klondike Camp 58.75 339 IAmb IAmb 20 40 43.0
comp=Z,17nm,1.3s
J29N Klondike Camp 58.75 339 P P 20 40 41.5 +2.2
baz=126
MCARA McCarthy VSAT 58.89 335 P P 20 40 43.2 +2.9
baz=120,SNR=7.3
M27K Edge Creek, AK 58.92 336 IAmb IAmb 20 40 58.9
comp=Z,15nm,1.2s
M27K Edge Creek, AK 58.92 336 P P 20 40 43.2 +2.5
baz=122
DAWY Dawson 58.93 338 P P 20 40 41.9 +1.3
baz=125
VRDI Verde Repeater 58.99 334 IAmb IAmb 20 40 44.6
comp=Z,15nm,1.0s
POIN Pond Inlet 59.03 5 P 20 40 41.5 +0.5
POIN IAmb IAmb 20 40 42.9
comp=Z,12nm,0.9s
G31M Satah River 59.06 342 P P 20 40 43.0 +1.6
baz=132,SNR=20
NBPA Parau_RN 59.11 106 eP P 20 40 39.4 -3.1
RAGM Ragged Mountai 59.11 333 pP 20 40 46.8 -3.2
GLB Gilahina Butte 59.24 334 IAmb IAmb 20 40 46.8
comp=Z,18nm,1.0s
F31M Tsiigehtchic 59.26 343 IAmb IAmb 20 40 45.3
comp=Z,17nm,0.8s
F31M Tsiigehtchic 59.26 343 P P 20 40 44.4 +1.7
baz=133,SNR=10
BCAR Beaver Creek A 59.27 337 P 20 40 44.7 +1.8
L27K Beaver Creek, 59.28 337 IAmb IAmb 20 40 46.5
comp=Z,17nm,1.1s
L27K Beaver Creek, 59.28 337 P P 20 40 45.3 +2.3
baz=122,SNR=10
I29M Ogilvie Camp, 59.32 340 P P 20 40 45.1 +1.8
baz=127,SNR=5.8
BMRM Bremner River 59.35 334 P P 20 40 45.8 +2.2
baz=118
M26K Nabesna, AK 59.39 336 IAmb IAmb 20 40 47.4
comp=Z,22nm,1.4s
M26K Nabesna, AK 59.39 336 P P 20 40 46.4 +2.5
baz=120,SNR=6.6
Q23K Middleton Isla 59.43 332 P P 20 40 45.9 +1.9
baz=116
EPYK Eagle Plains 59.44 341 IAmb IAmb 20 41 36.8
comp=Z,10nm,0.9s
EPYK Eagle Plains 59.44 341 P P 20 40 46.0 +1.9
baz=129
SFJD Kangerlussuaq 59.56 18 LR LR 21 08 13.0
comp=Z,534nm,18.2s,baz=217,slow=38
EYAK Cordova Ski Ar 59.66 333 P P 20 40 48.4 +2.9
baz=117
N25K Chitina, Valde 59.66 334 IAmb IAmb 20 40 49.8
comp=Z,19nm,0.8s
N25K Chitina, Valde 59.66 334 P P 20 40 48.5 +2.8
baz=118,SNR=6.5
INK Inuvik 59.79 344 LR LR 21 10 48.8
comp=Z,226nm,18.3s,baz=303,slow=40
INK Inuvik 59.79 344 P P 20 40 48.1 +1.8
baz=133,SNR=24
L26K Log Cabin Wild 59.85 336 IAmb IAmb 20 40 50.5
comp=Z,22nm,1.4s
L26K Log Cabin Wild 59.85 336 P P 20 40 49.4 +2.4
baz=120,SNR=7.2
H29M Whitestone 59.87 341 IAmb IAmb 20 40 49.4
comp=Z,14nm,0.8s
H29M Whitestone 59.87 341 P P 20 40 49.3 +2.3
baz=127
I28M Miner Creek 59.93 339 IAmb IAmb 20 41 01.6
comp=Z,35nm,1.9s
I28M Miner Creek 59.93 339 P P 20 40 49.9 +2.4
baz=125
MENT Mentasta 59.95 336 IAmb IAmb 20 40 50.5
comp=Z,7.2nm,0.8s
F30M Barrier River 59.96 343 P P 20 40 49.5 +1.9
baz=130
P23K Montague Islan 60.15 332 P P 20 40 51.5 +2.5
baz=115
KLU Klutina 60.16 334 IAmb IAmb 20 40 53.0
comp=Z,20nm,0.9s
KLU Klutina 60.16 334 P P 20 40 51.8 +2.6
baz=117,SNR=7.6
RCBR Riachuelo 60.26 105 LR LR 21 07 59.7
comp=Z,87nm,20.2s,baz=275,slow=37
RCBR Riachuelo 60.26 105 P 20 40 50.3 -0.3
RCBR Riachuelo 60.26 105 eP P 20 40 47.9 -2.7
HARP HAARP 60.27 335 P P 20 40 52.5 +2.7
baz=118,SNR=5.1
RES Resolute Bay 60.35 359 LR LR 21 09 06.2
comp=Z,151nm,20.4s,baz=196,slow=38
GLI Glacier Island 60.40 333 P P 20 40 52.3 +1.6
baz=116
DOT Dot Lake 60.45 337 IAmb IAmb 20 40 54.5
comp=Z,17nm,0.8s
M24K Tolsona, Glenn 60.55 334 P P 20 40 54.5 +2.7
baz=117
SCRK Sand Creek 60.58 337 IAmb IAmb 20 40 55.6
comp=Z,11nm,0.9s
SCRK Sand Creek 60.58 337 P P 20 40 54.4 +2.3
baz=120,SNR=7.4
I27K Kandik River 60.59 339 IAmb IAmb 20 40 55.5
comp=Z,15nm,0.9s
I27K Kandik River 60.59 339 P P 20 40 53.9 +1.9
baz=123,SNR=12
PAX Paxson 60.67 336 IAmb IAmb 20 40 55.7
comp=Z,18nm,0.8s
PAX Paxson 60.67 336 P P 20 40 54.6 +2.0
baz=118,SNR=11
A36M Sachs Harbour 60.70 349 P P 20 40 53.6 +1.1
baz=144,SNR=21
RIDG Independent Ri 60.80 336 P P 20 40 55.7 +2.2
baz=119,SNR=8.3
H27K Steamboat Moun 60.91 340 IAmb IAmb 20 40 57.4
comp=Z,15nm,0.9s

H27K Steamboat Moun 60.91 340 P P 20 40 56.3 +2.1
baz=124,SNR=13
SCM Sheep Creek Mo 60.91 334 P P 20 40 56.3 +2.1
baz=116
I26K Coal Creek Min 60.97 338 P P 20 40 56.1 +1.6
baz=122
E29M Blow River 61.07 343 P P 20 40 57.3 +2.1
baz=129
M23K Glacier View 61.07 334 P P 20 40 57.3 +2.0
baz=115
SEW Seward 61.14 332 P P 20 40 57.6 +1.9
baz=113
F28M Old Crow 61.18 341 P P 20 40 58.1 +2.2
baz=126,SNR=38
K24K Donnelly Dome 61.19 336 P P 20 40 58.3 +2.2
baz=118,SNR=8.2
KNK Knik Glacier 61.22 333 P P 20 40 58.5 +2.2
baz=114
G27K Doyon Strip 61.28 340 IAmb IAmb 20 40 59.4
comp=Z,14nm,1.1s
G27K Doyon Strip 61.28 340 P P 20 40 58.4 +1.7
baz=124,SNR=13
SML Sawmill 61.33 334 P P 20 40 59.1 +2.0
baz=115,SNR=5.5
O22K Cooper Landing 61.41 332 P P 20 40 59.4 +1.9
baz=113
WAT6 Susitna Watana 61.42 335 P P 20 40 59.6 +1.8
baz=116,SNR=14
J25K Salcha River, 61.42 337 IAmb IAmb 20 41 04.5
comp=Z,12nm,1.1s
J25K Salcha River, 61.42 337 P P 20 40 59.5 +1.8
baz=119
DHY Denali Highway 61.49 335 IAmb IAmb 20 41 00.8
comp=Z,16nm,1.3s
DHY Denali Highway 61.49 335 P P 20 40 59.8 +1.5
baz=116
PMR Palmer 61.59 333 P P 20 41 00.8 +2.1
baz=114
BRSE Bradley Lake S 61.60 331 P P 20 41 01.1 +2.3
baz=111
RC01 Rabbit Creek A 61.65 333 P P 20 41 01.2 +2.0
baz=113,SNR=6.0
E28M Babbage River 61.68 342 IAmb IAmb 20 41 01.9
comp=Z,16nm,0.8s
E28M Babbage River 61.68 342 P P 20 41 00.9 +1.7
baz=127,SNR=25
KDAK Kodiak Island 61.82 328 P P 20 41 02.5 +2.1
baz=109
WAT1 Susitna Watana 61.86 335 P P 20 41 02.4 +1.8
baz=115
D28M Stokes Point 61.89 343 P P 20 41 02.8 +2.1
baz=128
HDA Harding Lake 61.93 337 P P 20 41 02.7 +1.7
baz=117,SNR=11
PRP Porcupine Dome 61.93 338 P P 20 41 03.0 +1.8
baz=119,SNR=23
NUUG Nuugaatsiaq 61.98 13 *i* P P 20 41 01.9 +0.7
NUUG IAmb IAmb 20 41 04.2
comp=Z,12nm,0.9s
HOM Homer 61.99 331 P P 20 41 03.5 +2.0
baz=110
Q20K Shuyak Island 62.00 329 P P 20 41 03.4 +1.8
baz=109
OHAK Old Harbor 62.00 328 P P 20 41 03.6 +2.0
baz=108
E27K Coleen River 62.05 342 P P 20 41 04.0 +2.2
baz=125,SNR=26
G26K Porcupine Rive 62.06 340 IAmb IAmb 20 41 04.8
comp=Z,17nm,1.2s
G26K Porcupine Rive 62.06 340 P P 20 41 03.6 +1.7
baz=122,SNR=12
ILAR Eielson Array 62.07 337 P P 20 41 03.1 +1.1
comp=Z,11nm,0.9s,baz=143,slow=4.4,SNR=93
ILAR LR LR 21 10 17.0
comp=Z,282nm,18.6s,baz=100,slow=38
comp=Z,11nm,0.9s
ILAR Eielson Array 62.07 337 P P 20 41 03.2 +1.2
SII Sitkinak Islan 62.27 327 P P 20 41 05.6 +2.1
baz=106
CCB Clear Creek Bu 62.37 337 IAmb IAmb 20 41 08.2
comp=Z,6.4nm,0.7s
MCK McKinley 62.41 335 P P 20 41 06.2 +2.0
baz=115,SNR=15
CUT Chulitna 62.41 334 P P 20 41 06.3 +2.1
baz=113,SNR=6.0
POKR Poker Plat Res 62.44 337 P P 20 41 06.2 +1.8
baz=117
D27M Malcolm River 62.47 343 IAmb IAmb 20 41 08.8
comp=Z,13nm,0.8s
D27M Malcolm River 62.47 343 P P 20 41 06.5 +1.9
baz=126
COLA College 62.49 337 P P 20 41 06.6 +2.0
COLA College 62.49 337 P P 20 41 06.8 +2.1
baz=117
F26K Sheenjek River 62.58 340 IAmb IAmb 20 41 08.2
comp=Z,9.0nm,0.9s
F26K Sheenjek River 62.58 340 P P 20 41 07.6 +2.2
baz=122,SNR=11
BMAR Burnt Mountain 62.58 340 P 20 41 07.0 +1.6
L22K Petersville 62.67 334 IAmb IAmb 20 41 09.1
comp=Z,23nm,1.3s
Q19K Cape Douglas, 62.72 329 P P 20 41 08.2 +1.8
baz=108
SPU Mount Spurr 62.73 332 IAmb IAmb 20 41 09.5
comp=Z,15nm,0.8s
STLK Strandline Lak 62.75 333 IAmb IAmb 20 41 09.6
comp=Z,8.3nm,0.9s
SKT Skwentna 62.79 333 P P 20 41 08.9 +2.0
baz=112,SNR=9.4
N20K Mount Spurr 62.81 332 P P 20 41 08.7 +1.7
baz=111,SNR=7.5
SPCR Spurr Chakacha 62.81 332 P P 20 41 08.7 +1.7
baz=111
NEA2 Nenana 62.83 336 P P 20 41 08.7 +1.6
baz=115
TRF Thorofare Moun 62.84 335 P P 20 41 09.1 +1.8
baz=114,SNR=14
H24K Noodor Dome 62.94 338 P P 20 41 09.7 +1.9
baz=117,SNR=18
F25K Christian Rive 63.01 340 P P 20 41 10.6 +2.3
baz=120,SNR=15
I23K Minto, Yukon-K 63.18 337 P P 20 41 11.4 +2.0
baz=115,SNR=20
G24K Hadweenzic Riv 63.20 339 IAmb IAmb 20 41 12.7
comp=Z,19nm,1.1s
G24K Hadweenzic Riv 63.20 339 P P 20 41 11.4 +1.9
baz=118,SNR=11
E25K Arctic Village 63.26 341 IAmb IAmb 20 41 14.2
comp=Z,9.1nm,0.8s
E25K Arctic Village 63.26 341 P P 20 41 12.2 +2.3
baz=120,SNR=17
Q18K Katmai Hardscr 63.31 329 P P 20 41 12.1 +1.7
baz=107,SNR=5.5
BPAW Bear Paw Mtn. 63.38 335 IAmb IAmb 20 41 13.3
comp=Z,19nm,1.0s
BPAW Bear Paw Mtn. 63.38 335 P P 20 41 12.5 +1.7
baz=113
PPLA Purkeypile 63.42 334 P P 20 41 12.6 +1.5
baz=112,SNR=5.0
M20K Styx River 63.46 333 IAmb IAmb 20 41 14.1
comp=Z,14nm,0.8s
M20K Styx River 63.46 333 P P 20 41 13.3 +1.9
baz=110,SNR=10
C27K Jago River 63.49 342 P P 20 41 13.7 +2.3
baz=123
TULEG Thule 63.51 6 P 20 41 11.9 +0.5
TULEG IAmb IAmb 20 41 13.3
comp=Z,8.5nm,0.7s
TULEG Thule 63.51 6 *i* P P 20 41 12.3 +0.9
TULEG IAmb IAmb 20 41 12.6
comp=Z,9.6nm,0.8s
P18K Big Mountain, 63.64 330 P P 20 41 14.4 +1.9
baz=107
Q17K Contact Creek 63.64 328 P P 20 41 14.5 +1.9
baz=106
MLY Manley 63.66 336 P P 20 41 14.3 +1.7
baz=114,SNR=6.3
R17L Mt. Peulik Vol 63.71 328 P P 20 41 15.2 +2.2
baz=105
N19K Bonanza Creek 63.72 331 P P 20 41 14.7 +1.6
baz=108
O18K Koktuh Hills 63.76 330 IAmb IAmb 20 41 15.4
comp=Z,19nm,1.1s
O18K Koktuh Hills 63.76 330 P P 20 41 15.0 +1.6
baz=107
CHUM Lake Minchumin 63.84 335 P P 20 41 15.1 +1.4
baz=112
C26K Camden Bay 64.00 342 P P 20 41 17.3 +2.6
baz=122
PPT Papeete 64.00 242 LR LR 21 02 24.1
comp=Z,108nm,20.6s,baz=36,slow=30
M19K Big River Lodg 64.03 333 IAmb IAmb 20 41 17.5
comp=Z,13nm,0.8s
M19K Big River Lodg 64.03 333 P P 20 41 17.1 +2.0
baz=109
G23K Bananza Creek 64.11 338 IAmb IAmb 20 41 18.6
comp=Z,15nm,1.1s
G23K Bananza Creek 64.11 338 P P 20 41 17.5 +2.0
baz=115,SNR=8.7
D25K Kavik River 64.13 342 P P 20 41 17.7 +2.1
baz=120,SNR=35
Q16K King Salmon 64.14 329 P P 20 41 17.6 +1.9
baz=105,SNR=5.5
P17K Kvichak River 64.17 329 P P 20 41 17.9 +2.0
baz=106
E24K Your Creek 64.19 340 IAmb IAmb 20 41 24.5
comp=Z,7.7nm,0.8s
E24K Your Creek 64.19 340 P P 20 41 18.4 +2.3
baz=118
I21K Tanana 64.21 336 IAmb IAmb 20 41 18.3
comp=Z,13nm,1.0s
I21K Tanana 64.21 336 P P 20 41 17.7 +1.7
baz=113
H22K Ishtalitna Cre 64.26 337 IAmb IAmb 20 41 18.9
comp=Z,12nm,0.9s
H22K Ishtalitna Cre 64.26 337 P P 20 41 17.8 +1.3
baz=114,SNR=16
L19K White Mountain 64.33 333 IAmb IAmb 20 41 21.6
comp=Z,11nm,1.0s
L19K White Mountain 64.33 333 P P 20 41 18.4 +1.4
baz=108
N18K Kilae Creek 64.33 331 P P 20 41 18.7 +1.6
baz=107
K20K Telida 64.38 334 P P 20 41 18.8 +1.5
baz=110
COLD Coldfoot 64.39 339 IAmb IAmb 20 41 21.1
comp=Z,24nm,1.3s
COLD Coldfoot 64.39 339 P P 20 41 19.8 +2.5
baz=115,SNR=14
M18K Stony River 64.55 332 P P 20 41 19.7 +1.3
baz=107
E23K Chandalar 64.56 340 P P 20 41 21.1 +2.6
baz=116
O17K Koliganek Bris 64.66 330 P P 20 41 20.8 +1.7
baz=105
H21K Melozitna Rive 64.71 337 IAmb IAmb 20 41 21.6
comp=Z,10nm,1.0s
H21K Melozitna Rive 64.71 337 P P 20 41 20.6 +1.2
baz=112
D24K Happy Valley 64.81 341 IAmb IAmb 20 41 26.8
comp=Z,20nm,1.1s
D24K Happy Valley 64.81 341 P P 20 41 21.8 +1.8
baz=118
TOLK Toolik Lake Re 64.81 340 P P 20 41 22.1 +2.1
baz=117,SNR=13
CHNA Chernabura Isl 64.83 324 P P 20 41 23.1 +2.8
baz=101
P16K Nushagak River 64.90 329 P P 20 41 22.5 +1.8
baz=104
N17K Nushagak Hills 64.91 331 IAmb IAmb 20 41 23.9
comp=Z,17nm,1.1s
N17K Nushagak Hills 64.91 331 P P 20 41 22.8 +2.0
baz=106
O16K Kokwok River B 65.10 329 P P 20 41 23.6 +1.6
baz=104
L18K Granite Mounta 65.16 332 P P 20 41 23.9 +1.6
baz=107
J19K Poorman 65.25 335 P P 20 41 24.2 +1.3
baz=109
M17K Holitna River 65.26 332 P P 20 41 24.6 +1.5
baz=106
G21K Allakaket 65.30 337 IAmb IAmb 20 41 26.1
comp=Z,14nm,0.8s
G21K Allakaket 65.30 337 P P 20 41 25.1 +1.8
baz=112
D23K Nanushuk River 65.32 340 IAmb IAmb 20 41 27.2
comp=Z,24nm,1.1s
D23K Nanushuk River 65.32 340 P P 20 41 25.8 +2.5
baz=116
E22K Anaktuvuk Pass 65.34 339 P P 20 41 25.6 +2.0
baz=114,SNR=21
SDPT Sand Point 65.43 325 P P 20 41 25.7 +1.5
baz=100
H20K Anotleneega Mo 65.45 336 P P 20 41 25.8 +1.5
baz=110,SNR=8.0
J18K Innoko River 65.54 334 P P 20 41 26.1 +1.2
baz=107
F21K Alatna River 65.56 338 P P 20 41 27.2 +2.3
baz=112
N16K Nishlik Lake 65.65 330 P P 20 41 27.2 +1.6
baz=104
C23K Itkillik River 65.68 341 P P 20 41 27.8 +2.1
baz=116,SNR=27
L17K Donlin 65.86 332 P P 20 41 28.2 +1.3
baz=105
O15K Ungalikthiuk R 65.86 329 P P 20 41 27.9 +0.9
baz=102
M16K Tiner Creek 65.88 331 P P 20 41 28.8 +1.8
baz=104
D22K Ayikyak River 65.94 340 P P 20 41 29.7 +2.4
baz=114
K17K Iditarod 66.02 333 IAmb IAmb 20 41 30.1
comp=Z,11nm,0.8s
K17K Iditarod 66.02 333 P P 20 41 29.2 +1.3
baz=106
E21K Killik River 66.20 339 IAmb IAmb 20 41 32.0
comp=Z,20nm,0.9s
E21K Killik River 66.20 339 P P 20 41 31.0 +1.9
baz=112
N15K Kwethluk River 66.21 330 P P 20 41 31.1 +1.8
baz=103
SUMG Summit 66.23 16 *i* P P 20 41 32.1 +2.5
SUMG IAmb IAmb 20 41 33.5
comp=Z,4.6nm,0.6s
L16K Owhat River 66.29 332 IAmb IAmb 20 41 32.7
comp=Z,13nm,1.0s
L16K Owhat River 66.29 332 P P 20 41 31.6 +2.0
baz=104,SNR=6.5
F20K Avaraart Lake 66.31 338 P P 20 41 31.9 +2.2
baz=110
G19K Purcell Mounta 66.53 337 IAmb IAmb 20 41 33.9
comp=Z,18nm,1.1s
G19K Purcell Mounta 66.53 337 P P 20 41 32.9 +1.8
baz=108,SNR=17
NEEM North Greenlan 66.59 9 *i* P P 20 41 32.6 +0.8
NEEM IAmb IAmb 20 41 34.1
comp=Z,23nm,1.4s
M15K Kasigluk River 66.62 330 P P 20 41 33.6 +1.8
baz=102
H18K Honhosa River 66.73 335 IAmb IAmb 20 41 35.4
comp=Z,8.0nm,0.9s
H18K Honhosa River 66.73 335 P P 20 41 34.5 +2.0
baz=106
C21K Knifeblade Rid 66.74 340 P P 20 41 34.9 +2.4
baz=113
B22K Teshekpuk Lake 66.77 341 P P 20 41 34.5 +2.0
baz=114
B21K Ikpikpuk River 66.86 340 P P 20 41 35.1 +1.9
baz=112
E20K Nigu River 66.90 339 P P 20 41 35.9 +2.3
baz=110
N14K Kuskokwak Cree 66.94 329 P P 20 41 35.4 +1.6
baz=101
E19K Redstone River 67.00 338 IAmb IAmb 20 41 36.9
comp=Z,6.7nm,0.8s
E19K Redstone River 67.00 338 P P 20 41 36.1 +1.9
baz=108
F19K Shaleruckik Mo 67.00 337 IAmb IAmb 20 41 36.6
comp=Z,12nm,0.8s
F19K Shaleruckik Mo 67.00 337 P P 20 41 36.1 +2.0
baz=108
G18K Tagagawik 67.06 336 P P 20 41 36.7 +2.1
baz=106
J16K Anvik River 67.18 333 P P 20 41 37.8 +2.5
baz=104
D20K Etivluk River 67.20 339 P P 20 41 37.2 +1.8
baz=110
L15K Ungalak Mounta 67.21 331 P P 20 41 37.8 +2.3
baz=102,SNR=8.6
M14K Bethel 67.24 330 P P 20 41 37.9 +2.2
baz=101,SNR=7.8
H17K Granite Mounta 67.30 335 P P 20 41 38.3 +2.2
baz=105
I17K Unalakleet 67.36 334 P P 20 41 39.1 +2.6
baz=104
K15K Wolf Creek Mou 67.37 332 P P 20 41 38.8 +2.3
baz=102
A22K Sinclair Lake 67.50 342 P P 20 41 39.1 +1.9
baz=112,SNR=36
F18K Selawik 67.65 337 P P 20 41 40.0 +1.9
baz=106
D19K Kuna River 67.65 339 IAmb IAmb 20 41 41.2
comp=Z,18nm,1.1s
D19K Kuna River 67.65 339 P P 20 41 40.0 +1.8
baz=108
L14K Kuka Creek 67.70 331 P P 20 41 40.5 +1.9
baz=101
G17K Kiwalik Mounta 67.75 335 P P 20 41 41.0 +2.1
baz=104
B20K Meade River 67.83 341 P P 20 41 41.4 +2.1
baz=110,SNR=52
M13K Dall Lake 67.85 330 P P 20 41 41.6 +2.0
baz=100
A21K Barrow 68.12 342 P P 20 41 43.0 +1.9
baz=111,SNR=17
H16K Elim 68.20 334 P P 20 41 44.0 +2.4
baz=103
F17K Baldwin Pennin 68.23 336 P P 20 41 43.9 +2.1
baz=104
E18K Tukpahlearik C 68.23 337 IAmb IAmb 20 41 44.7
comp=Z,11nm,1.1s
E18K Tukpahlearik C 68.23 337 P P 20 41 43.7 +1.8
baz=105
C19K Lookout Ridge 68.35 339 P P 20 41 45.1 +2.4
baz=107
J14K Nanvaranak Lak 68.38 332 P P 20 41 45.4 +2.6
baz=101
G16K Koyuk River 68.42 335 P P 20 41 45.2 +2.2
baz=103
E17K Hotham Inlet 68.61 337 P P 20 41 46.2 +2.0
baz=104,SNR=10
UNV Unalaska Valle 68.70 322 P P 20 41 45.7 +0.7
K13K Kusilvak Mount 68.74 331 P P 20 41 47.1 +2.0
baz=99
C18K Utukok River 68.78 339 IAmb IAmb 20 41 48.0
comp=Z,11nm,1.0s
C18K Utukok River 68.78 339 P P 20 41 46.8 +1.4
baz=105,SNR=8.7
G15K Niukluk 69.02 335 P P 20 41 49.1 +2.2
baz=101
A19K Wainwright 69.16 340 P P 20 41 49.7 +2.1
baz=106
D17K Noatak River 69.23 337 P P 20 41 49.5 +1.5
baz=103
RDOG Red Dog Mine 69.24 338 P P 20 41 49.7 +1.5
baz=103
M11K Mekoryuk 69.25 329 P P 20 41 50.9 +2.7
baz=97
F15K North Star Dit 69.41 335 P P 20 41 51.7 +2.4
baz=101
BORG Borgarnes 69.42 26 LR LR 21 11 13.6
comp=Z,143nm,21.7s,baz=265,slow=35
C17K DeLong Mountai 69.44 338 P P 20 41 51.2 +1.8
baz=103
ANM Nome 69.51 334 P P 20 41 51.9 +2.1
baz=100
NIKH Nikolski High 70.05 321 P P 20 41 55.3 +1.9
baz=92
F14K Arctic Creek 70.06 335 P P 20 41 55.6 +2.3
baz=99
C16K Lisburne Hills 70.18 338 IAmb IAmb 20 41 57.0
comp=Z,31nm,1.6s
C16K Lisburne Hills 70.18 338 P P 20 41 56.1 +2.1
baz=101
TNA Tin City 70.73 335 P P 20 41 59.6 +2.3
baz=98
GAMB Gambell 72.16 333 P P 20 42 08.0 +2.1
baz=94
DAG Danmarks Havn 72.61 13 *i* P P 20 42 08.0 -0.4
DAG IAmb IAmb 20 42 11.9
comp=Z,6.1nm,0.6s
NOR Nord 73.95 9 *i* P P 20 42 17.5 +1.2
NOR IAmb IAmb 20 42 21.8
comp=Z,7.6nm,1.1s
RAR Rarotonga 74.26 243 LR LR 21 08 06.8
comp=Z,51nm,18.7s,baz=83,slow=30
ADK Adak 74.85 320 P P 20 42 23.3 +1.3
PMTG Montargil 77.27 53 *eP* P 20 42 34.7 -1.4
PVIS Viseu 77.29 51 *eP* P 20 42 34.6 -1.7
MTE Manteigas 77.60 51 P P 20 42 37.2 -0.9
PCVE Castro Verde 77.62 54 *eP* P 20 42 38.6 +0.5
PCBR Castelo Branco 77.73 52 *eP* P 20 42 37.3 -1.4
MVO Moncorvo 77.88 50 *eP* P 20 42 38.6 -1.0
PVAQ Vaqueiros 77.91 54 *eP* P 20 42 38.9 -0.9
MIDW Midway 78.30 296 P P 20 42 44.5 +2.5
PBAR Barrancos 78.32 53 *eP* P 20 42 40.6 -1.4
PBAR *i* IAmb IAmb 20 42 43.8
comp=Z,36nm,1.9s
EKA Eskdalemuir Ar 78.38 36 P P 20 42 40.2 -1.8
comp=Z,3.8nm,0.7s,baz=279,slow=4.9,SNR=11
EKA LR LR 21 18 12.0
comp=Z,189nm,18.0s,baz=232,slow=36
comp=Z,3.8nm,0.7s
SPITS Spitsbergen Ar 80.00 11 LR LR 21 19 31.8
comp=Z,233nm,21.0s,baz=232,slow=37
PAB San Pablo 80.16 52 P P 20 42 51.0 -1.2
PAB IAmb IAmb 20 44 50.1
comp=Z,58nm,1.8s
ESDC Sonseca Array 80.43 52 P P 20 42 51.8 -1.7
comp=Z,5.5nm,0.8s,baz=293,slow=5.9,SNR=23
ESDC LR LR 21 13 00.5
comp=Z,215nm,19.4s,baz=312,slow=32
comp=Z,5.5nm,0.8s
ESDC Sonseca Array 80.43 52 P 20 42 51.3 -2.3
ESBB Sonseca Array 80.43 51 P P 20 42 52.2 -1.4
ESBB IAmb IAmb 20 45 29.0
comp=Z,55nm,1.8s
BILL Bilibino 80.71 338 P 20 42 55.7 +1.3
BILL IAmb IAmb 20 42 57.1
comp=Z,19nm,0.8s
MD01 Midelt array s 81.09 58 P P 20 42 56.5 -0.8
MD31 MD31 81.09 58 P P 20 42 56.6 -0.7
MD31 IAmb IAmb 20 45 56.3
comp=Z,20nm,1.6s
MDT Midelt 81.22 58 LR LR 21 17 31.9
comp=Z,85nm,18.2s,baz=287,slow=35
AFI Afiamalu 82.66 254 LR LR 21 10 29.4
comp=Z,53nm,21.2s,baz=205,slow=29
NB2 NORSAR Subarra 84.41 28 P P 20 43 14.0 +0.1
comp=Z,4.2nm,0.8s,baz=291,slow=5.3
NOA NORSAR Array B 84.41 28 P P 20 43 13.9 +0.1
comp=Z,6.6nm,0.7s,baz=291,slow=5.1,SNR=15
comp=Z,2.6nm,0.7s
HFS Hagfors 85.88 29 P P 20 43 20.6 -0.5
comp=Z,4.0nm,0.7s,baz=305,slow=5.1,SNR=7.6
comp=Z,4.0nm,0.7s
ARCES ARCESS Array B 86.19 18 P P 20 43 21.8 -0.8
comp=Z,8.7nm,1.0s,baz=354,slow=3.7,SNR=6.7
ARCES LR LR 21 22 18.5
comp=Z,131nm,18.4s,baz=304,slow=36
comp=Z,8.7nm,1.0s
ARCES ARCESS Array B 86.19 18 P P 20 43 22.3 -0.3
DBIC Dimbokro 86.79 84 P P 20 43 26.4 -0.1
comp=Z,7.9nm,0.7s,baz=303,slow=5.1,SNR=14
DBIC LR LR 21 15 53.2
comp=Z,127nm,21.9s,baz=304,slow=31
comp=Z,7.9nm,0.7s
DBIC Dimbokro 86.79 84 P P 20 43 25.7 -0.9
DBIC IAmb IAmb 20 43 28.1
comp=Z,10.0nm,0.8s
SEY Seymchan 87.96 335 P P 20 43 32.8 +1.5
comp=Z,3.8nm,0.8s,baz=93,slow=5.3,SNR=18
comp=Z,3.8nm,0.8s
TUE Stuetta 88.16 42 P P 20 43 32.8 0.0
TUE IAmb IAmb 20 44 03.3
comp=Z,16nm,1.5s
DAVOX Davos/Dischmat 88.41 42 LR LR 21 17 36.9
comp=Z,141nm,21.7s,baz=288,slow=32
CLL Collm 88.76 37 *i* P P 20 43 35.6 +0.3
CLL *es*P sP 20 43 59.0 +12
CLL AMS AMS 21 23 00.0
comp=Z,200nm,19.3s
TIXI Tiksi 89.69 348 LR LR 21 28 05.9
comp=Z,122nm,21.9s,baz=57,slow=38
TIXI Tiksi 89.69 348 P 20 43 39.4 +0.2
ZCCA Zocca 89.95 44 P P 20 43 40.2 -0.8
GERES GERESS Array B 90.09 39 P P 20 43 42.0 +0.3
comp=Z,1.6nm,0.9s,baz=317,slow=8.3,SNR=2.3
GERES LR LR 21 19 42.1
comp=Z,125nm,20.7s,baz=267,slow=33
comp=Z,1.6nm,0.9s
MA2 Magadan 90.27 333 P P 20 43 42.7 +0.6
comp=Z,2.1nm,0.4s,baz=63,slow=6.4,SNR=8.6
comp=Z,2.1nm,0.4s

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MA2	Magadan	90.27	333	P	P	20 43 42.7	+0.6
MA2				IAmb	IAmb	20 43 48.6	
	comp=Z,7.4nm,0.8s						
VSL	Villasalto	90.44	49	P	P	20 43 42.0	-1.4
FIA1	FINESS Array S	90.69	25	P	P	20 43 43.4	-0.6
FINES	FINESS Array B	90.69	25	P	P	20 43 43.2	-0.8
	comp=Z,1.8nm,0.8s,baz=307,slow=2.8,SNR=7.8						
	comp=Z,1.8nm,0.8s						
TORD	Torodi Ar. Bea	91.44	76	P	P	20 43 47.5	-1.1
	comp=Z,1.1nm,0.6s,baz=273,slow=5.6,SNR=6.6						
	comp=Z,1.1nm,0.6s						
TORD	Torodi Ar. Bea	91.44	76	IAmb	IAmb	20 45 08.8	
	comp=Z,4.4nm,0.5s						
VRAC	Vranov	91.66	38	LR	LR	21 26 29.3	
	comp=Z,136nm,18.6s,baz=306,slow=37						
MODS	Modra-Piesok	92.46	39	*e*P	P	20 43 54.3	+1.7
VAE	Valguarnera	94.84	50	LR	LR	21 23 23.9	
	comp=Z,277nm,19.1s,baz=326,slow=34						
NRIK	Noril'sk	96.55	360	P	P	20 44 11.7	+0.8
	comp=Z,1.5nm,0.5s,baz=63,slow=2.3,SNR=3.0						
NRIK				LR	LR	21 31 28.5	
	comp=Z,84nm,19.7s,baz=12,slow=38						
	comp=Z,1.5nm,0.5s						
NRIK	Noril'sk	96.55	360	IAmb	IAmb	20 47 33.3	
	comp=Z,13nm,1.8s						
YAK	Yakutsk	96.77	341	LR	LR	21 33 13.5	
	comp=Z,69nm,20.4s,baz=51,slow=39						
BURAR	Bucovina Array	97.53	37	P	P	20 44 15.7	-0.2
AKASG	Malin Array Be	98.09	33	P	P	20 44 16.8	-1.4
	comp=Z,0.2nm,0.2s,baz=291,slow=3.9,SNR=2.1						
	comp=Z,0.2nm,0.2s						
URZ	Urewera	98.48	233	LR	LR	21 22 49.9	
	comp=Z,46nm,18.0s,baz=27,slow=32						
OBN	Obninsk	98.92	27	LR	LR	21 28 10.0	
	comp=Z,153nm,21.0s,baz=352,slow=35						
MLR	Muntele Rosu	99.05	38	LR	LR	21 32 35.5	
	comp=Z,84nm,18.1s,baz=308,slow=38						
BVAR	Borovoye Array	111.44	11	PKiKP	PKiKP	20 49 15.6	-0.1
	comp=Z,1.1nm,0.6s,baz=29,slow=3.3,SNR=4.5						
ZALV	Zalesovo Beam	111.97	1	PKiKP	PKiKP	20 49 17.2	+0.6
	comp=Z,0.8nm,0.6s,baz=0.0,slow=2.9,SNR=4.5						
ZALV				PP	PP	20 49 59.0	-0.2
	comp=Z,0.9nm,0.6s,baz=341,slow=7.6,SNR=6.1						
ABKAR	Akbulak array	112.38	19	Pdif	Pdif	20 45 18.2	-3.7
KURK	Kurchatov	114.84	6		PKiKP	20 49 22.7	+0.5
KURBB	Kurchatov Arra	114.92	6	PKP	PKiKP	20 49 22.7	+0.3
	comp=Z,1.3nm,0.6s,baz=349,slow=1.7,SNR=16						
KURBB				PP	PP	20 50 20.9	+0.8
	comp=Z,0.6nm,0.9s,baz=350,slow=6.9,SNR=4.7						
SONM	Songino Array	115.68	345	PKP	PKPdf	20 49 25.2	+1.1
	comp=Z,1.0nm,0.7s,baz=30,slow=0.9,SNR=7.2						
SONM				PKKPbc	PKKPbc	20 59 57.4	-0.6
	comp=Z,0.4nm,0.7s,baz=167,slow=4.0,SNR=4.2						
MKAR	Makanchi Array	119.02	4	PKP	PKPdf	20 49 30.7	+0.3
	comp=Z,1.3nm,0.7s,baz=12,slow=2.2,SNR=16						
MKAR				PP	PP	20 50 48.7	-0.1
	comp=Z,0.8nm,0.8s,baz=340,slow=1.7,SNR=4.0						
MKAR	Makanchi Array	119.02	4		PKPdf	20 49 30.2	-0.2
BOSA	Boshof	121.56	115	PKP	PKPdf	20 49 35.9	0.0
	comp=Z,6.1nm,0.7s,baz=274,slow=2.1,SNR=3.4						
BOSA	Boshof	121.56	115		PKPdf	20 49 35.4	-0.5
WMQ	Urumqi	122.12	359	*e*PKP	PKPdf	20 49 36.6	0.0
WMQ				LR	LR		
	comp=Z,150nm,24.3s						
NJ2	Nanjing	124.58	327	*e*P	PKPdf	20 49 39.4	-2.1
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
CHGR	Chuyangaron	124.76	17		PKPdf	20 49 42.1	+0.3
KSH2	Kashi	125.78	11	PKP	PKiKP	20 49 46.1	+1.9
STKA	Stephens Creek	127.20	241	PKP	PKiKP	20 49 47.7	+0.7
	comp=Z,2.7nm,0.6s,baz=121,slow=5.9,SNR=4.1						
STKA	Stephens Creek	127.20	241		PKPdf	20 49 46.7	+0.3
WRA	Warramunga Arr	134.34	256	PKP	PKPdf	20 50 01.7	+1.4
	comp=Z,2.6nm,0.7s,baz=87,slow=2.0,SNR=13						
WRA	Warramunga Arr	134.34	256		PKPdf	20 49 59.3	-1.0
ASAR	Alice Springs	134.67	251	PKP	PKPdf	20 50 02.4	+1.5
	comp=Z,1.2nm,0.7s,baz=94,slow=1.6,SNR=8.5						
ASAR	Alice Springs	134.67	251		PKPdf	20 49 59.5	-1.4
LSA	Lhasa	136.02	355	P	PKPdf	20 50 02.7	-1.2
LSA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PZH	PanZhiHua	136.88	340	PKP	PKPdf	20 50 02.1	-3.0
MORE	Moreh	140.97	349		PKPdf	20 50 08.9	-3.6
CHTO	Chiang Mai	144.95	340		PKPab	20 50 18.0	-0.7
CMAR	Chiang Mai Arr	145.28	339	PKPbc	PKPdf	20 50 21.2	+1.0
	comp=Z,14nm,0.7s,baz=338,slow=3.2,SNR=139						
CMAR	Chiang Mai Arr	145.28	339		PKPbc	20 50 18.4	-1.5
PSA00	Pilbara Seismi	147.79	252	PKPdf	PKPdf	20 50 22.3	-2.0
PSA00	Pilbara Seismi	147.79	252		PKPdf	20 50 21.7	-2.6
PSA00				PKPbc	PKPbc	20 50 26.4	-0.8
SBUM	Sibu	149.78	302		PKPdf	20 50 25.3	-2.5

MEX ***06*** *20:33:15.2±0.4, 14°.51N×93°.19W, h82km±16km, MD4.3*
GCG ***06*** *20:33:20.1±1.3, 14°.50N×92°.78W, h37km±18km, MD4.1, ML4.1, MW4.4, Presumed earthquake*
ISC 06 20:33:05.6±1.6**, 14°.20N**±0°.06×**93°.51W**±0°.03**, h19**km±4km**,**
n28, σ**2**s**.05**/37**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.40	60	*e*P	Pg	20 33 32.6	0.0
THIG				*e*S	Sn	20 33 45.8	-2.1
THIG		1.40	60	*i* P	Pg	20 33 32.3	-0.3
THIG				IAML		20 33 49.5	
	comp=E,7μm,0.4s						
PCIG		1.52	11	*e*P	Pg	20 33 34.8	-0.2
PCIG				*e*S	Sn	20 33 49.8	-1.2
PATR	El Naranjo	1.54	53	*e*P	Pb	20 33 34.3	+0.7
SMCA	Catarina	1.54	65	*i* P	Pb	20 33 34.1	+0.7
CHUJ	Union Juarez	1.62	57	*e*P	Pb	20 33 35.9	+0.8
PAVE	Pavencul	1.63	52	*e*P	Pb	20 33 35.9	+0.8
RTAL	Retalhuleu	1.79	79	*e*P	Pb	20 33 38.6	+0.9
RTAL				*e*S	Sn	20 33 58.5	+0.8
QUEO	Labor Ovalle	2.05	71	*e*P	Pb	20 33 42.4	0.0
QUEO				IAML		20 34 06.1	
	comp=N,7μm,0.6s						
STG2	El Palmar, Qui	2.08	83	*e*P	Pn	20 33 39.1	-0.5
STG5	El Palmar, Qui	2.11	84	*i* P	Pn	20 33 40.7	+0.8
STG8	El Palmar, Qui	2.11	83	*i* P	Pn	20 33 40.0	-0.1
SOKI	Kika Raxquin	2.13	73	*i* P	Pb	20 33 44.8	+1.0
CCIG	Comitan	2.46	32	*e*P	Pb	20 33 49.8	+0.5
CCIG				*e*S	Sn	20 34 13.8	-0.6
CCIG	Comitan	2.46	32	*i* P	Pb	20 33 50.7	+1.4
QUIS	Sacapulas	2.58	65	*e*P	Pb	20 33 51.6	+0.2
QUIS				IAML		20 34 25.7	
	comp=E,2μm,0.4s						
TGIG		2.59	8	*e*P	Pb	20 33 50.3	-1.2
TGIG				*e*S	Sn	20 34 17.5	0.0
TGIG		2.59	8	*e*S	Sb	20 34 21.9	-1.1
TGIG				IAML		20 34 25.0	
	comp=E,887nm,0.6s						
TGBT	Tuxtla Gutierr	2.60	9	*e*P	Pb	20 33 50.2	-1.3
TGBT				*e*S	Sn	20 34 17.7	+0.2
FG8	Yepocapa, Chim	2.86	88	*i* P	Pn	20 33 49.1	-1.2
FG16	Alotenango, Sa	2.91	88	*i* P	Pn	20 33 50.2	-0.9
HUIG	Huatulco	2.96	302	*e*P	Pg	20 34 00.8	-1.5
HUIG				*e*S	Sb	20 34 33.8	+0.4
UXUV	UXUV	3.16	349	*e*P	Pb	20 34 01.4	+0.2
CMIG	Matias Romero	3.17	335	*e*P	Pb	20 34 01.0	-0.2
CMIG				*e*S	Sb	20 34 36.0	-3.4
PEIG	Puerto Escondi	3.94	297	*e*P	Pb	20 34 14.8	+0.3
PNIG	Pinotepa	4.96	297	*e*P	Pb	20 34 28.7	-3.1
SCIG	Sabancuy	5.24	25	*e*P	Pn	20 34 26.9	+4.0
SCIG				*e*S	Sn	20 35 20.1	-2.7
FTIG	Fresnillo de T	5.77	310	*e*S	Sn	20 35 44.5	+8.4

KRSC ***06*** *20:42:53.5±1.7, 55°.44N×166°.41E, h44km±12km, Mc4.3, Ml4.6*
IDC ***06*** *20:42:53.2±0.6, 55°.47N×166°.38E, h0km, mb3.9/18, mbtmp4.0/24, ML4.2/5, MS3.3/12, Error ellipse: s-maj=16.2km s-min=11.5km az=1.0*
NEIC ***06*** *20:42:54.9±2.1, 55°.46N±0°.08×166°.40E±0°.10, h10km±1km, mb4.2/69, Error ellipse: s-maj=13.6km s-min=9.3km az=178.0*
MOS ***06*** *20:42:56.1±0.9, 55°.49N×166°.37E, h34km, mb4.4/18, Error ellipse: s-maj=6.0km s-min=5.2km az=57.5*
ISC 06 20:42:55.6±1.1**, 55°.45N**±0°.04×**166°.41E**±0°.04**, h16**km±7km**,**
n224, σ**1**s**.31**/254**, mb4.2**/57**, MS3.7**/8**, 7C-1D,**
Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	0.35	226	PN	Pg	20 43 02.7	-0.1
BKI	Bering	0.35	226	*e*P	Pg	20 43 02.7	-0.1
BKI				*e*S	Sg	20 43 07.9	+0.2
KBTR	Krutoberegovo	2.17	292	PN	Pn	20 43 28.7	-2.2
KBTR				S	Sn	20 43 54.9	-2.5
KBTR	Krutoberegovo	2.17	292	*e*P	Pn	20 43 28.8	-2.2
KBTR				*e*S	Sn	20 43 55.0	-2.5
KBG	Krutoberegovo	2.24	293	PN	Pn	20 43 30.0	-1.9
KBG				S	Sn	20 43 56.2	-3.1
KBG	Krutoberegovo	2.24	293	*e*P	Pn	20 43 30.1	-1.9
KBG				*e*S	Sn	20 43 56.2	-3.1
MKZ	Mys Kozlova	2.84	254	PN	Pn	20 43 39.7	-0.5
MKZ				S	Sn	20 44 12.6	-1.4
MKZ	Mys Kozlova	2.84	254	*e*P	Pn	20 43 39.8	-0.5
MKZ				*e*S	Sn	20 44 12.7	-1.4
SMKR	Semkarok	3.00	294	PN	Pn	20 43 42.0	-0.5
SMKR				S	Sn	20 44 18.2	+0.1
SMKR	Semkarok	3.00	294	*e*P	Pn	20 43 42.0	-0.5
SMKR				*e*S	Sn	20 44 18.3	+0.1
BDR	Baidarnaya	3.13	293	*e*S	Sn	20 44 22.3	+0.9
BZGR	Bezymyannyi-Gr	3.27	281	PN	Pn	20 43 46.6	+0.3
BZGR				S	Sn	20 44 23.8	-1.1
BZGR	Bezymyannyi-Gr	3.27	281	*e*P	Pn	20 43 46.6	+0.3
BZGR				*e*S	Sn	20 44 23.8	-1.1
KLY	Klyuchi	3.36	287	PN	Pn	20 43 45.7	-1.6
KLY				S	Sn	20 44 25.1	-1.7
KLY	Klyuchi	3.36	287	*e*P	Pn	20 43 45.7	-1.6
KLY				*e*S	Sn	20 44 25.1	-1.7
TUMD	Tumrok D	3.44	268	PN	Pn	20 43 49.3	+0.8
TUMD				S	Sn	20 44 28.0	-1.0
TUMD	Tumrok D	3.44	268	*e*P	Pn	20 43 49.4	+0.8
TUMD				*e*S	Sn	20 44 28.0	-1.0
KIRR	Kirishev	3.47	281	PN	Pn	20 43 50.7	+1.7
KIRR	Kirishev	3.47	281	*e*P	Pn	20 43 50.8	+1.7
KMNR	Kamenistaya	3.52	278	PN	Pn	20 43 50.9	+1.3
KMNR				S	Sn	20 44 29.4	-1.5
KMNR	Kamenistaya	3.52	278	*e*P	Pn	20 43 51.0	+1.3
KMNR				*e*S	Sn	20 44 29.5	-1.5
KPT	Kopyto	3.54	281	PN	Pn	20 43 50.5	+0.6
KPT	Kopyto	3.54	281	*e*P	Pn	20 43 50.6	+0.6
KOZ	Kozyrevsk	3.75	282	PN	Pn	20 43 53.6	+0.9
KOZ				S	Sn	20 44 36.9	+0.5
KOZ	Kozyrevsk	3.75	282	*e*P	Pn	20 43 53.7	+0.9
KOZ				*e*S	Sn	20 44 37.0	+0.5
SRDR	Sredinnyy	3.87	286	PN	Pn	20 43 55.6	+1.2
SRDR				S	Sn	20 44 41.4	+1.9
SRDR	Sredinnyy	3.87	286	*e*P	Pn	20 43 55.6	+1.2
SRDR				*e*S	Sn	20 44 41.5	+1.9
OSSR	Ossora	4.22	336	PN	Pn	20 43 57.8	-1.4
OSSR	Ossora	4.22	336	*e*P	Pn	20 43 57.9	-1.4
KII	Karymskiy	4.28	254	PN	Pn	20 44 00.4	+0.4
KII				S	Sn	20 44 49.5	-0.1
KII	Karymskiy	4.28	254	*e*P	Pn	20 44 00.5	+0.4
KII				*e*S	Sn	20 44 49.6	-0.1
ESO	Esso	4.39	279	PN	Pn	20 44 02.2	+0.7
ESO				S	Sn	20 44 53.4	+1.1
ESO	Esso	4.39	279	*e*P	Pn	20 44 02.3	+0.7
ESO				*e*S	Sn	20 44 53.5	+1.1
SPN	Mys Shipunski	4.42	240	PN	Pn	20 44 01.2	-0.7
SPN	Mys Shipunski	4.42	240	*e*P	Pn	20 44 01.3	-0.7
SPN				*e*S	Sn	20 44 49.3	-3.8
NLC	Nalytchevo	4.72	244	PN	Pn	20 44 06.3	+0.3
NLC	Nalytchevo	4.72	244	*e*P	Pn	20 44 06.4	+0.3
NLC				*e*S	Sn	20 44 57.4	-3.1
TIGL	Tigil	4.87	302	PN	Pn	20 44 08.6	+0.6
TIGL	Tigil	4.87	302	*e*P	Pn	20 44 08.7	+0.6
SDLR	Sedlovina	4.91	247	PN	Pn	20 44 09.3	+0.6
SDLR	Sedlovina	4.91	247	*e*P	Pn	20 44 09.4	+0.6
SDLR				*e*S	Sn	20 45 04.3	-1.0
SMAR	Somma	4.96	247	PN	Pn	20 44 10.3	+0.8
SMAR	Somma	4.96	247	*e*P	Pn	20 44 10.3	+0.8
SMAR				*e*S	Sn	20 45 05.3	-1.3
KRER	Koryakskii	4.97	248	PN	Pn	20 44 10.7	+1.1
KRER	Koryakskii	4.97	248	*e*P	Pn	20 44 10.7	+1.1
KRER				*e*S	Sn	20 45 06.5	-0.3
UGLR	Uglovaya	4.97	246	PN	Pn	20 44 10.6	+1.0
UGLR	Uglovaya	4.97	246	*e*P	Pn	20 44 10.7	+1.0
UGLR				*e*S	Sn	20 45 06.0	-0.8
AVH	Avacha	4.99	247	PN	Pn	20 44 10.7	+0.9
AVH	Avacha	4.99	247	*e*P	Pn	20 44 10.8	+0.9
AVH				*e*S	Sn	20 45 06.5	-0.8
KRX	Arik	4.99	248	PN	Pn	20 44 10.9	+1.0
KRX	Arik	4.99	248	*e*P	Pn	20 44 10.9	+1.0
KRX				*e*S	Sn	20 45 06.0	-1.4
TILK	Tilichiki	5.02	358	PN	Pn	20 44 10.1	0.0
TILK	Tilichiki	5.02	358	*e*P	Pn	20 44 10.1	0.0
TILK				*e*S	Sn	20 45 07.0	-0.6
KOK	Koryaka	5.03	248	PN	Pn	20 44 11.1	+0.7
KOK	Koryaka	5.03	248	*e*P	Pn	20 44 11.1	+0.7
KOK				*e*S	Sn	20 45 07.3	-1.0
PALN	Palana	5.06	319	PN	Pn	20 44 09.8	-0.8
PALN	Palana	5.06	319	*e*P	Pn	20 44 09.9	-0.8
DALK	Dalny	5.10	245	PN	Pn	20 44 11.5	+0.3
DALK	Dalny	5.10	245	*e*P	Pn	20 44 11.6	+0.3
DALK				*e*S	Sn	20 45 06.9	-2.9
PET	Petropavlovsk	5.16	245		Pn	20 44 10.6	-1.4
PET				Sn	Sn	20 45 08.3	-2.8
PET	Petropavlovsk	5.16	245	*ce*PN	Pn	20 44 12.3	+0.3
PET				pmax	pmax		
	comp=Z,65nm,1.7s						
PET	Petropavlovsk	5.16	245	*e*P	Pn	20 44 12.5	+0.5
PET				*e*S	Sn	20 45 08.7	-2.4
GNL	Ganaly	5.23	254	PN	Pn	20 44 14.6	+1.4
GNL	Ganaly	5.23	254	*e*P	Pn	20 44 14.6	+1.4
SHEM	Shemya Is, Ala	5.28	118	Pn	Pn	20 44 13.0	-0.7
	comp=Z,8.5nm,0.3s,baz=2.7,slow=2.6,SNR=5.4						
SHEM				Sn	Sn	20 45 14.3	+0.1
	comp=Z,3.6nm,0.3s,baz=287,slow=20,SNR=1.9						
SHEM				LR	LR	20 45 57.3	
	comp=Z,144nm,20.6s,baz=244,slow=35						
	comp=Z,41nm,0.7s						
SHEM	Shemya Is, Ala	5.28	118	Pn	Pn	20 44 12.6	-1.1
SHEM				Sn	Sn	20 45 12.2	-2.0
SMY	Shemya	5.28	118	Pn	Pn	20 44 12.8	-0.9
SMY	Shemya	5.28	118	PN	Pn	20 44 12.8	-0.9
KRMR	Karymshinskiy	5.53	245	PN	Pn	20 44 17.7	+0.6
KRMR	Karymshinskiy	5.53	245	*e*P	Pn	20 44 17.8	+0.6
KRMR				*e*S	Sn	20 45 18.6	-1.7
PEA0B	Petropavlovsk-	5.62	249		Pn	20 44 18.6	+0.3
PEA0B				Sn	Sn	20 45 22.5	0.0
PEA0B	Petropavlovsk-	5.62	249	*c i*PN	Pn	20 44 19.3	+0.9
PETK	Petropavlovsk-	5.62	249	Pn	Pn	20 44 19.0	+0.7
	comp=Z,11nm,0.3s,baz=72,slow=17,SNR=95						
PETK				Sn	Sn	20 45 23.8	+1.2
	comp=Z,8.0nm,0.3s,baz=284,slow=6.0,SNR=11						
PETK				LR	LR	20 46 42.3	
	comp=Z,150nm,20.7s,baz=41,slow=41						
	comp=Z,28nm,0.5s						
PETK	Petropavlovsk-	5.62	249		Pn	20 44 19.1	+0.7
PETK					Sn	20 45 22.3	-0.2
MTVR	Mutnovka	5.69	242	PN	Pn	20 44 19.9	+0.4
MTVR	Mutnovka	5.69	242	*e*P	Pn	20 44 19.9	+0.4
MTVR				*e*S	Sn	20 45 21.5	-3.0
GRL	Gorelyy	5.71	243	PN	Pn	20 44 20.6	+0.9
GRL	Gorelyy	5.71	243	*e*P	Pn	20 44 20.7	+0.9
GRL				*e*S	Sn	20 45 23.8	-1.1
ASAK	Asacha	5.89	242	PN	Pn	20 44 23.7	+1.5
ASAK	Asacha	5.89	242	*e*P	Pn	20 44 23.7	+1.5
ASAK				*e*S	Sn	20 45 28.3	-1.1
APC	Apacha	5.99	249	PN	Pn	20 44 25.3	+1.8
APC	Apacha	5.99	249	*e*P	Pn	20 44 25.4	+1.8
MIPR	Malaya Ipel'ka	6.53	245	PN	Pn	20 44 32.5	+1.5
MIPR	Malaya Ipel'ka	6.53	245	*e*P	Pn	20 44 32.5	+1.5
KMSK	Kamenskaya	7.04	359	PN	Pn	20 44 37.7	-0.1
KMSK	Kamenskaya	7.04	359	*e*P	Pn	20 44 37.8	-0.1
AMKA	Amchitka	8.71	113	Pn	Pn	20 45 00.8	+0.1
MA2	Magadan	9.37	303	Pn	Pn	20 45 09.5	-0.3
	comp=Z,0.4nm,0.3s,baz=124,slow=11,SNR=1.8						
MA2				LR	LR	20 48 46.7	
	comp=Z,114nm,19.6s,baz=114,slow=38						
	comp=Z,1.4nm,0.4s						
SEY	Seymchan	10.38	322	Pn	Pn	20 45 22.9	-0.6
	comp=Z,0.5nm,0.4s,baz=118,slow=22,SNR=1.6						
SEY	Seymchan	10.38	322	PN	Pn	20 45 23.0	-0.6
BILL	Bilibino	12.64	360	*ce*PN	Pn	20 45 57.6	+3.2
BILL				pmax	pmax		
	comp=Z,5.0nm,1.7s						
GAMB	Gambell	13.80	44	Pn	Pn	20 46 07.5	-2.7
UNV	Unalaska Valle	15.72	85	Pn	Pn	20 46 36.4	+0.3
LVA	Lava Point	15.90	83	Pn	Pn	20 46 38.1	-0.3
K13K	Kusilvak Mount	16.27	55	Pn	Pn	20 46 42.2	-1.0
YSS	Yuzhno-Sakhali	17.02	250	*i* P	Pn	20 46 52.0	-0.7
YSS				pmax	pmax		
	comp=Z,6.0nm,1.2s						
L14K	Kuka Creek	17.12	57	Pn	Pn	20 46 54.1	+0.3
K15K	Wolf Creek Mou	17.78	54	P	P	20 47 04.2	+1.4
C16K	Lisburne Hills	18.27	34	P	P	20 47 09.0	+0.9
O15K	Ungalikthiuk R	18.49	64	P	P	20 47 10.3	-0.3
JKA	Kamikawa-asahi	19.00	243	P	P	20 47 16.6	+0.3
JKA				IAmb	IAmb	20 47 27.4	
	comp=Z,12nm,1.0s						
ASAJ	Asahikawa	19.00	243	P	Pn	20 47 17.4	+0.3
	comp=Z,0.3nm,0.3s,baz=23,slow=11,SNR=5.0						
ASAJ				LR	LR	20 54 07.2	
	comp=Z,55nm,19.1s,baz=16,slow=36						
	comp=Z,4.2nm,1.0s						
ASAJ	Asahikawa	19.00	243	P	P	20 47 16.6	+0.3
ASAJ				pmax	pmax		
	comp=Z,12nm,1.0s						
O16K	Kokwok River B	19.35	63	P	P	20 47 20.0	0.0
M17K	Holitna River	19.64	58	P	Pn	20 47 24.9	+0.2
M17K				IAmb	IAmb	20 47 30.7	
	comp=Z,12nm,0.8s						
C18K	Utukok River	19.80	35	P	P	20 47 25.7	+0.7
YAK	Yakutsk	19.94	304	P	P	20 47 26.0	-0.5
	comp=Z,2.0nm,0.3s,baz=119,slow=2.1,SNR=13						
YAK				LR	LR	20 54 39.1	
	comp=Z,37nm,18.6s,baz=90,slow=36						
	comp=Z,18nm,0.7s						
YAK	Yakutsk	19.94	304		P	20 47 25.6	-0.8
YAK	Yakutsk	19.94	304	*e*P	P	20 47 26.2	-0.3
YAK				*e*S	S	20 51 08.9	-1.1
YAK				pmax	pmax		
	comp=Z,31nm,1.0s						
YAK				pmax	pmax		
	comp=E,14nm,1.4s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,167nm,5.6s						
YAK				pmax	pmax		
	comp=E,103nm,4.8s						
YAK				pmax	pmax		
	comp=N,106nm,5.2s						
YAK				smax	smax		
	comp=E,154nm,3.9s						
YAK				smax	smax		
	comp=N,75nm,4.0s						
J18K	Innoko River	20.12	52	P	Pn	20 47 29.9	-0.5
J18K				IAmb	IAmb	20 47 31.6	
	comp=Z,15nm,0.9s						
F19K	Shaleruckik Mo	20.36	42	P	Pn	20 47 32.9	-0.1
C19K	Lookout Ridge	20.52	35		Pn	20 47 34.9	-0.1
J19K	Poorman	20.66	50		Pn	20 47 35.9	-0.8
J19K				IAmb	IAmb	20 47 40.6	
	comp=Z,9.6nm,1.0s						
L19K	White Mountain	20.89	55	P	P	20 47 37.9	+1.0
L19K				IAmb	IAmb	20 47 40.4	
	comp=Z,12nm,1.2s						
F20K	Avaraart Lake	21.19	42	P	P	20 47 40.9	+0.9
B20K	Meade River	21.67	34		P	20 47 44.6	-0.4
IMAR	Indian Mountai	21.74	45	P	P	20 47 46.2	+0.3
KLR	Kul'dur	21.90	268	LR	LR	20 57 31.0	
	comp=Z,73nm,18.0s,baz=67,slow=40						
KLR	Kul'dur	21.90	268	*ce*P	P	20 47 47.1	-0.7
KLR				pmax	pmax		
	comp=Z,1.0nm,1.7s						
H21K	Melozitna Rive	22.07	46	P	P	20 47 49.5	0.0
H21K				IAmb	IAmb	20 47 53.7	
	comp=Z,17nm,1.4s						
F21K	Alatna River	22.08	42	P	P	20 47 51.7	+2.1
PPLA	Purkeypile	22.14	54		P	20 47 53.8	+3.5
PPLA				IAmb	IAmb	20 47 54.0	
	comp=Z,20nm,1.4s						
STLK	Strandline Lak	22.34	57	P	P	20 47 55.5	+3.1
STLK				IAmb	IAmb	20 47 56.8	
	comp=Z,18nm,1.5s						
B21K	Ikpikpuk River	22.35	35	P	P	20 47 54.9	+2.6
B21K				IAmb	IAmb	20 48 35.3	
	comp=Z,8.9nm,1.4s						
KDAK	Kodiak Island	22.44	67	P	P	20 47 53.2	-0.2
KDAK	Kodiak Island	22.44	67	P	P	20 47 53.2	-0.2
KDAK				pmax	pmax		
	comp=Z,38nm,1.4s						
H22K	Ishtalitna Cre	22.69	46	IAmb	IAmb	20 47 59.2	
	comp=Z,4.4nm,0.8s						
TIXI	Tiksi	22.69	330	P	P	20 47 56.0	0.0
TIXI	Tiksi	22.69	330	*ce*P	P	20 47 55.6	-0.4
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
E22K	Anaktuvuk Pass	22.91	40		P	20 47 59.6	+1.3
COLD	Coldfoot	23.34	42		P	20 48 04.0	+1.3
COLD				IAmb	IAmb	20 48 04.6	
	comp=Z,11nm,1.2s						
I23K	Minto, Yukon-K	23.46	48	P	P	20 48 05.3	+1.4
I23K				IAmb	IAmb	20 48 06.8	
	comp=Z,8.4nm,1.0s						
E23K	Chandalar	23.70	40		P	20 48 07.2	+0.9
E23K				IAmb	IAmb	20 48 09.3	
	comp=Z,4.0nm,0.8s						
WRH	Wood River Hil	23.98	50		P	20 48 10.3	+1.4
WRH				IAmb	IAmb	20 48 11.2	
	comp=Z,8.3nm,1.1s						
COLA	College	24.09	49	*i* P	P	20 48 10.3	+0.4
COLA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CCB	Clear Creek Bu	24.10	49		P	20 48 09.0	-1.1
E24K	Your Creek	24.12	41	IAmb	IAmb	20 48 12.8	
	comp=Z,5.7nm,0.7s						
G24K	Hadweenzic Riv	24.34	44	IAmb	IAmb	20 48 15.3	
	comp=Z,7.1nm,0.9s						
SCM	Sheep Creek Mo	24.45	56	P	P	20 48 13.4	0.0
SCM	Sheep Creek Mo	24.45	56	P	P	20 48 13.4	0.0
SCM				pmax	pmax		
	comp=Z,22nm,1.1s						
IL31		24.50	49	P	P	20 48 13.9	+0.3
ILAR	Eielson Array	24.50	49	P	P	20 48 13.6	-0.2
	comp=Z,8.5nm,0.9s,baz=256,slow=7.8,SNR=43						
	comp=Z,8.5nm,0.9s						
ILAR	Eielson Array	24.50	49	P	P	20 48 13.9	+0.2
ILAR	Eielson Array	24.50	49	*e*P	P	20 48 13.7	0.0
ILAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
M24K	Tolsona, Glenn	24.96	55	P	P	20 48 19.1	+1.2
PRP	Porcupine Dome	25.08	47		P	20 48 19.7	+0.6
PRP				IAmb	IAmb	20 48 20.7	
	comp=Z,6.6nm,0.8s						
D25K	Kavik River	25.08	38		P	20 48 19.3	+0.3
D25K				IAmb	IAmb	20 48 20.1	
	comp=Z,3.4nm,0.6s						
F25K	Christian Rive	25.13	42	IAmb	IAmb	20 48 51.5	
	comp=Z,6.4nm,1.3s						
E25K	Arctic Village	25.21	41		P	20 48 21.4	+1.2
E25K				IAmb	IAmb	20 48 22.1	
	comp=Z,2.9nm,0.7s						
BMAR	Burnt Mountain	25.53	43		P	20 48 24.2	+1.2
C27K	Jago River	26.06	38	IAmb	IAmb	20 48 29.4	
	comp=Z,4.0nm,0.9s						
L27K	Beaver Creek,	26.84	52	IAmb	IAmb	20 48 37.2	
	comp=Z,10.0nm,1.1s						
BCAR	Beaver Creek A	26.86	52	P	P	20 48 36.5	+1.3
MJB9	Matsu-Tunnel	26.93	237	P	P	20 48 39.4	+3.4
MJB9				IAmb	IAmb	20 48 46.5	
	comp=Z,5.1nm,0.8s						
MAJO	Matsushiro	26.93	237	P	P	20 48 38.3	+2.4
MAJO				IAmb	IAmb	20 48 45.6	
	comp=Z,5.4nm,0.8s						
MAJO	Matsushiro	26.93	237	P	P	20 48 38.3	+2.4
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MJAR	Matsushiro Arr	26.93	237	P	P	20 48 39.7	+3.7
	comp=Z,2.2nm,0.7s,baz=29,slow=7.7,SNR=11						
MJAR	Matsushiro Arr	26.93	237	IAmb	IAmb	20 48 55.3	
	comp=Z,5.4nm,1.4s						
MJAR	Matsushiro Arr	26.93	237	P	P	20 48 39.7	+3.7
MJAR				pmax	pmax		
	comp=Z,5.0nm,1.4s						
KSRS	Korea Array	31.51	251	P	P	20 49 17.9	+1.3
	comp=Z,1.0nm,0.8s,baz=27,slow=5.9,SNR=4.6						
KSRS				LR	LR	21 03 01.0	
	comp=Z,16nm,18.2s,baz=80,slow=38						
	comp=Z,1.0nm,0.8s						
H11N2	WAKE ISLAND Hy	35.66	179	T	T	21 27 13.4	
	baz=0.2,slow=76,SNR=497						

H11N3	WAKE ISLAND Hy	35.67	179	T	T	21 27 14.7	
	baz=0.2,slow=76,SNR=347						
H11N1	WAKE ISLAND Hy	35.68	179	T	T	21 27 14.7	
	baz=0.2,slow=76,SNR=340						
ULN	Ulaanbaatar	36.57	284		P	20 50 01.5	+0.9
ULN				IAmb	IAmb	20 50 06.7	
	comp=Z,2.2nm,0.8s						
ULN	Ulaanbaatar	36.57	284	*ce*P	P	20 50 00.7	+0.1
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONM	Songino Array	36.95	284	P	P	20 50 04.6	+0.8
	comp=Z,3.9nm,0.7s,baz=60,slow=8.6,SNR=19						
	comp=Z,3.9nm,0.7s						
SONM	Songino Array	36.95	284	P	P	20 50 04.8	+1.0
SONM				IAmb	IAmb	20 50 09.9	
	comp=Z,4.0nm,0.8s						
SONM	Songino Array	36.95	284	P	P	20 50 04.8	+1.0
SONM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
YKA	Yellowknife Ar	38.88	47	P	P	20 50 20.3	+0.6
	comp=Z,0.5nm,0.6s,baz=301,slow=8.8,SNR=8.2						
	comp=Z,0.5nm,0.6s						
YKA	Yellowknife Ar	38.88	47	*e*P	P	20 50 20.6	+0.9
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SPITS	Spitsbergen Ar	45.38	352	P	P	20 51 12.5	-0.1
	comp=Z,3.9nm,0.8s,baz=61,slow=6.8,SNR=8.2						
	comp=Z,3.9nm,0.8s						
SPB2	Spitsbergen Ar	45.38	352	P	P	20 51 12.3	-0.2
DGZ	Jazzator, Alta	45.92	297	*i* P	P	20 51 16.6	-0.7
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ENH	Enshi	47.06	262	P	P	20 51 26.6	+0.3
FCC	Fort Churchill	49.28	43	P	P	20 51 43.3	+0.3
FCC				IAmb	IAmb	20 52 15.8	
	comp=Z,3.9nm,1.2s						
FCC	Fort Churchill	49.28	43	P	P	20 51 43.3	+0.3
FCC				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KURK	Kurchatov	49.59	303	P	P	20 51 44.4	-1.0
KURK				IAmb	IAmb	20 51 46.1	
	comp=Z,3.3nm,0.8s						
KURK	Kurchatov	49.59	303	*i* P	P	20 51 44.5	-1.0
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WMQ	Urumqi	49.63	291	*e*P	P	20 51 49.9	+3.9
WMQ				pmax	pmax		
	comp=Z,13nm,1.3s						
WMQ				LR	LR		
	comp=N,330nm,24.3s						
KURBB	Kurchatov Arra	49.69	303	P	P	20 51 45.4	-0.9
	comp=N,2.0nm,0.8s,baz=53,slow=7.5,SNR=14						
	comp=N,2.0nm,0.8s						
MK31	Makanchi Array	50.42	298	P	P	20 51 50.9	-1.0
MK31	Makanchi Array	50.42	298	P	P	20 51 50.9	-1.0
MK31				pmax	pmax		
	comp=Z,2.0nm,1.4s						
MKAR	Makanchi Array	50.42	298	P	P	20 51 50.6	-1.3
	comp=Z,0.7nm,0.6s,baz=52,slow=6.5,SNR=9.1						
	comp=Z,0.7nm,0.6s						
MKAR	Makanchi Array	50.42	298	*e*P	P	20 51 50.9	-1.0
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MAKZ	Makanchi	50.56	298	P	P	20 51 52.1	-0.9
MAKZ				IAmb	IAmb	20 51 56.1	
	comp=Z,5.3nm,1.4s						
MAKZ	Makanchi	50.56	298	P	P	20 51 52.1	-0.9
MAKZ				pmax	pmax		
	comp=Z,5.0nm,1.5s						
NVAR	Mina Array Bea	51.51	76	P	P	20 52 00.9	+0.4
	comp=Z,0.5nm,0.5s,baz=302,slow=6.9,SNR=4.4						
	comp=Z,0.5nm,0.5s						
BVAR	Borovoye Array	51.77	310	P	P	20 52 01.6	-0.4
	comp=Z,1.5nm,0.7s,baz=47,slow=8.7,SNR=5.5						
	comp=Z,1.5nm,0.7s						
BORK	Borovoye	51.79	310	*ce*P	P	20 52 00.2	-1.9
BORK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PDAR	Pinedale Array	53.16	66	P	P	20 52 12.9	+0.2
	comp=Z,0.7nm,0.7s,baz=347,slow=6.1,SNR=5.4						
	comp=Z,0.7nm,0.7s						
QSM	Queen of Sheba	54.08	77	P	P	20 52 20.0	+0.8
QSM				IAmb	IAmb	20 52 22.0	
	comp=Z,2.9nm,1.3s						
ARTI	Arti	54.20	319	*d i*P	P	20 52 18.3	-1.5
ARTI				S	S	20 59 54.4	-1.5
ARTI				SS	SKiKP	21 03 33.2	+3.3
ARTI				pmax	pmax		
	comp=Z,22nm,5.2s						
PZH	PanZhiHua	54.32	266	P	P	20 52 23.0	+1.7
HMU	Henry Mountain	56.00	71	P	P	20 52 34.8	+1.4
AAK	Ala-Archa	57.28	299	P	P	20 52 42.1	-0.2
AAK				IAmb	IAmb	20 52 46.7	
	comp=Z,4.1nm,1.1s						
AAK	Ala-Archa	57.28	299	P	P	20 52 42.1	-0.2
AAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
EYMN	Ely	58.12	51	P	P	20 52 48.5	+0.5
KKAR	Karatay Array	58.89	302	P	P	20 52 52.6	-0.8
KKAR	Karatay Array	58.89	302	P	P	20 52 52.6	-0.8
ABKAR	Akbulak array	59.00	313	P	P	20 52 53.5	-0.6
FINES	FINESS Array B	59.34	339	P	P	20 52 56.3	+0.2
	comp=Z,1.0nm,0.7s,baz=29,slow=7.8,SNR=4.0						
	comp=Z,1.0nm,0.7s						
FINES	FINESS Array B	59.34	339	P	P	20 52 55.4	-0.8
GAR	Garm	62.10	299	P	P	20 53 14.1	-1.4
NOA	NORSAR Array B	62.21	347	P	P	20 53 15.5	-0.3
	comp=Z,0.8nm,0.9s,baz=16,slow=6.8,SNR=2.4						
	comp=Z,0.8nm,0.9s						
CMAR	Chiang Mai Arr	62.23	262	P	P	20 53 17.4	+0.9
	comp=Z,0.5nm,0.6s,baz=43,slow=6.2,SNR=3.3						
CMAR				LR	LR	21 23 02.1	
	comp=Z,17nm,18.0s,baz=295,slow=39						
	comp=Z,0.5nm,0.6s						
OBN	Obninsk	62.42	330	*i* P	P	20 53 15.4	-1.8
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HFS	Hagfors	62.74	345	P	P	20 53 19.8	+0.6
	comp=Z,0.6nm,0.5s,baz=356,slow=5.8,SNR=2.0						
	comp=Z,0.6nm,0.5s						
VHRN	Van Horn	64.50	72	P	P	20 53 31.5	0.0
VHRN				IAmb	IAmb	20 53 52.1	
	comp=Z,1.5nm,1.0s						
NIL	Nilore	64.72	293	P	P	20 53 31.9	-0.9
NIL	Nilore	64.72	293	P	P	20 53 31.9	-0.9
NIL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TX31	Lajitas Ar. Si	66.34	72		P	20 53 44.4	+0.9
TXAR	Lajitas Array	66.34	72	P	P	20 53 44.1	+0.7
	comp=Z,2.8nm,0.6s,baz=301,slow=4.6,SNR=28						
	comp=Z,2.8nm,0.6s						
TXAR	Lajitas Array	66.34	72	P	P	20 53 44.4	+1.0
TXAR	Lajitas Array	66.34	72	P	P	20 53 44.4	+1.0
AKASG	Malin Array Be	68.38	332	P	P	20 53 55.7	-0.1
	comp=Z,0.4nm,0.4s,baz=28,slow=6.7,SNR=3.1						
	comp=Z,0.4nm,0.4s						
KIV	Kislovodsk	70.13	320	*e*P	P	20 54 06.1	-0.8
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRTR	Keskin Array B	77.01	324	LR	LR	21 34 09.7	
	comp=Z,63nm,19.4s,baz=288,slow=40						
WRA	Warramunga Arr	79.89	210	P	P	20 55 03.0	-0.3
	comp=Z,0.6nm,0.6s,baz=27,slow=5.8,SNR=5.5						
	comp=Z,0.6nm,0.6s						
WRA	Warramunga Arr	79.89	210	IAmb	IAmb	20 55 11.5	
	comp=Z,0.3nm,1.4s						
MMAI	Mount Meron Ar	82.44	320	LR	LR	21 35 21.6	
	comp=Z,32nm,19.4s,baz=318,slow=38						
ASF	Jabal al Asfar	82.64	319	LR	LR	21 34 40.6	
	comp=Z,33nm,21.7s,baz=312,slow=38						
ASAR	Alice Springs	83.54	210	P	P	20 55 22.6	+0.1
	comp=Z,0.7nm,0.6s,baz=18,slow=6.4,SNR=9.4						
	comp=Z,0.7nm,0.6s						
EIL	Elat	85.62	319	LR	LR	21 38 42.0	
	comp=Z,52nm,19.1s,baz=243,slow=39						
QSPA	South Pole Qui	145.20	180	PKPbc	PKPbc	21 02 29.0	-1.5
	comp=Z,1.7nm,0.6s,baz=45,slow=4.3,SNR=7.0						

*IDC **06** 20:43:25.9±2.5, 7°.67S×130°.60E, h43km±28km, mb3.5/2, mbtmp3.7/7, ML3.6/5, MS3.2/4, Error ellipse: s-maj=44.4km s-min=25.4km az=92.0*

ISC 06 20:43:23.9±0.9**, 7°.70S**±0°.06×**130°.8E**±0°.1**, h35**km**, n11,** σ**2°.53**/11**, MS3.4**/3**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.80	4	P	Pn	20 45 02.4	+1.0
	1.1nm,0.3s,baz=180,slow=20,SNR=11						
SIJI				S	Sn	20 46 14.0	-3.6
	3.8nm,0.3s,baz=226,slow=23,SNR=8.7						
	14nm,0.8s						
BATI	Baumata	7.43	250	P	Pn	20 45 11.4	+1.4
	0.8nm,0.3s,baz=85,slow=11,SNR=2.1						
BATI				S	Sn	20 46 33.2	0.0
	12nm,0.7s,baz=79,slow=19,SNR=7.2						
	4.7nm,0.5s						
KAPI	Kappang	11.25	283	LR	LR	20 50 55.2	
	comp=Z,36nm,18.1s,baz=56,slow=40						
FITZ	Fitzroy Crossi	11.47	205	P	Pn	20 46 06.2	+0.9
	0.5nm,0.3s,baz=21,slow=11,SNR=20						
FITZ				S	Sn	20 48 07.5	-4.9
	3.0nm,0.4s,baz=245,slow=22,SNR=7.2						
	1.0nm,0.3s						
WRA	Warramunga Arr	12.66	164	P	Pn	20 46 23.8	+2.2
	0.3nm,0.3s,baz=341,slow=13,SNR=12						
WRA				S	Sn	20 48 39.9	-1.6
	0.8nm,0.4s,baz=342,slow=20,SNR=8.0						
	0.4nm,0.4s						
ASAR	Alice Springs	16.16	170	P	P	20 47 10.9	-0.5
	0.2nm,0.3s,baz=350,slow=14,SNR=10.0						
	0.3nm,0.4s						
STKA	Stephens Creek	26.09	159	LR	LR	21 01 23.0	
	comp=Z,33nm,18.8s,baz=207,slow=41						
PETK	Petropavlovsk-	64.75	18	LR	LR	21 19 43.4	
	comp=Z,29nm,21.9s,baz=77,slow=34						
MKAR	Makanchi Array	69.22	327	P	P	20 54 28.4	+1.2
	0.9nm,0.6s,baz=126,slow=8.2,SNR=11						
	0.9nm,0.6s						
VNDA	Vanda	71.67	173	LR	LR	21 25 17.3	
	comp=Z,52nm,18.4s,baz=86,slow=35						
KURBB	Kurchatov Arra	73.49	328	P	P	20 54 51.8	-1.1
	0.3nm,0.5s,baz=133,slow=6.8,SNR=3.0						
	0.3nm,0.5s						

*IGQ **06** 20:43:28.3±0.2, 1°S±2°×8°1W±°, h33km±3km, M4.8/19, Mjma4.6/16, ML5.1/6, MLv4.5/19, Ms(BB)4.9/13*

ISC 06 20:43:29.9±1.0**, 1°.44S**±0°.03×**80°.54W**±0°.03**, h33**km±2km**, n115,** σ**1°.49**/124**, 6C-14D, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIPI	JIPIJAPA	0.08	344	⇓P	Pb	20 43 35.4	-0.3
JIPI				S	Sb	20 43 41.2	+1.5
CSOL	CASCOL	0.24	159	⇑P	Pn	20 43 36.0	-0.5
PPLP	Puerto Lpez	0.26	247	⇓P	Pn	20 43 35.9	-1.1
PPLP	Puerto Lpez	0.26	247	⇓P	Pn	20 43 36.8	-0.2
PPLP				S	Sb	20 43 42.8	+0.5
PPLP				S		20 43 44.0	
PPLP	Puerto Lpez	0.26	247	P	Pn	20 43 36.9	-0.2
PPLP				S	Sb	20 43 43.4	+1.2
AMNT	Manta-Manabi	0.54	338	P	Pb	20 43 39.7	-1.4
AMNT				S	Sb	20 43 49.1	+0.4
ISPT	Isla de la Pla	0.57	288	⇓P	Pb	20 43 40.4	-1.2
ISPT				S	Sb	20 43 49.9	+0.3
ABH2	Ecuador-Univer	0.79	10	⇓P	Pn	20 43 43.3	-1.3
PECV	Mancha de Ca P	0.82	36	⇓P	Pn	20 43 41.2	-3.9
AGUAY	Guayaquil	0.84	136	P	Pn	20 43 42.8	-2.6
ABH3	Manabi, Bahia	0.84	8	P	Pn	20 43 44.0	-1.4
SALI	Salinas	0.87	212	⇑P	Pn	20 43 45.2	-0.5
AC07	Ecuador-Guayaq	0.90	142	⇑P	Pn	20 43 44.0	-2.2
GYE3	Ecuador-Guayaq	0.95	138	P	Pn	20 43 44.7	-2.2
ABAB	Ecuador-Univer	1.08	109	P	Pn	20 43 46.4	-2.3
AMIL	Milagro (Trans	1.17	126	P	Pn	20 43 49.4	-0.4
MORR	Playas El Morr	1.21	171	⇑P	Pn	20 43 49.4	-1.0
MILO	Milagro-Astudi	1.28	130	⇑P	Pn	20 43 49.1	-2.4
ISPG	Isla Puna-Puer	1.56	166	P	Pb	20 43 58.1	-0.1
JSCH	Cashca Tororas	1.58	100	⇓P	Pn	20 43 54.1	-1.7
COHC	Cochancay	1.64	129	⇑P	Pn	20 43 54.6	-1.7
COHC	Cochancay	1.64	129	P	Pn	20 43 54.3	-2.0
COHC				S	Sn	20 44 15.0	-1.2
CHSH	Refugio Sur-Vo	1.67	92	P	Pn	20 43 56.4	-0.8
TAMH	Tambohuasha Ch	1.76	93	⇓P	Pn	20 43 57.3	-1.1
PORT	Chimborazo Vol	1.76	91	⇓P	Pn	20 43 57.7	-0.8
ASDO	Santo Domingo	1.83	50	P	Pn	20 43 58.1	-1.0
IGUA	Igualata	1.90	91	P	Pn	20 44 00.0	-0.4
ILLI	Illinizas Sur	1.95	68	P	Pn	20 44 00.1	-1.0
ACH2	Ecuador-Machal	1.95	158	P	Pn	20 44 01.9	+1.3
PCRA	Pucara 2	2.04	150	P	Pn	20 44 00.7	-1.5
AV18	Acelerografo,	2.04	31	P	Pn	20 44 04.9	+3.1
BBIL	Ulba Tungurahu	2.05	90	P	Pn	20 44 02.9	+0.6
BV15	Puerto Quito-O	2.06	40	P	Pn	20 44 00.8	-1.4
JUI6	Juive	2.07	90	P	Pn	20 44 02.6	+0.1
BPAT	Tungurahua Vol	2.10	92	⇓P	Pn	20 44 03.3	+0.2
ARNL	Arenillas	2.14	167	P	Pn	20 44 03.8	+0.5
ACUE	Ecuador-Cuenca	2.15	133	P	Pn	20 44 04.8	+1.1
SLOR	San Lorenzo -	2.16	71	P	Pn	20 44 03.9	0.0
BRRN	Barrancas-Volc	2.16	72	P	Pn	20 44 04.7	+0.8
APR2	Miler	2.17	46	P	Pn	20 44 03.3	-0.5
PIS1	Pisayambo	2.18	80	P	Pn	20 44 04.9	+0.6
SUCR	Mariscal Sucre	2.19	69	P	Pn	20 44 04.6	+0.2
BMOR	Cotopaxi Volca	2.19	71	P	Pn	20 44 04.5	0.0
BREF	Cotopaxi Volca	2.23	70	P	Pn	20 44 05.4	+0.4
SANGA	Volcan Sangay	2.25	106	P	Pn	20 44 05.8	+0.7
BVC2	Cotopaxi Volca	2.26	70	P	Pn	20 44 05.8	+0.3
GGPT	Toaza - Volcan	2.27	58	P	Pn	20 44 04.9	-0.4
BTAM	Cotopaxi Volca	2.27	70	P	Pn	20 44 05.8	+0.2
VC1	Cotopaxi 1	2.27	70	P	Pn	20 44 05.7	+0.2
PITA	Cotopaxi Volc	2.28	67	P	Pn	20 44 06.7	+1.1
JUA2	San Juan 2	2.28	58	P	Pn	20 44 05.5	-0.1
TAMB	Tambo	2.29	71	P	Pn	20 44 06.5	+0.7
TOMA	Boca Toma-Volc	2.30	66	P	Pn	20 44 06.3	+0.5
TERV	Terraza Guagua	2.31	57	P	Pn	20 44 05.2	-0.8
GGPC	Guagua Pichinc	2.31	57	⇓P	Pn	20 44 05.1	-1.0
AV21	Acelerografo,	2.31	25	P	Pn	20 44 07.2	+1.6
YANA	Yana	2.36	56	P	Pn	20 44 05.8	-0.9
APR1	Acelerografo,	2.37	54	P	Pn	20 44 06.3	-0.4
TING	Casa Alexandra	2.38	61	P	Pn	20 44 08.0	+1.2
AATC	Ecuador-Atacam	2.38	16	P	Pn	20 44 07.0	+0.4
ATON	Ecuador-Tonsup	2.42	17	P	Pn	20 44 06.7	-0.5
PAC1	Pacto, Paraso	2.43	46	P	Pn	20 44 05.8	-1.6
PAC1	Pacto, Paraso	2.43	46	P	Pn	20 44 05.7	-1.7
PAC1				S	Sn	20 44 33.5	-2.6
ANTG	Antisana-Guama	2.46	68	P	Pn	20 44 08.7	+0.5
ANTM	Antisana-La Mi	2.48	69	P	Pn	20 44 08.9	+0.5
AMA1	Acelerografo,	2.50	19	P	Pn	20 44 08.8	+0.6
PULU	Pululahua	2.50	54	P	Pn	20 44 10.0	+1.5
PUYO	Puyo, Santa Ro	2.51	91	P	Pn	20 44 11.1	+2.6
PUEM	Granja Avicola	2.52	59	P	Pn	20 44 10.3	+1.5
ANTS	Antisana-Sarah	2.54	68	P	Pn	20 44 10.6	+1.2
ANTI	Antisana	2.57	67	P	Pn	20 44 10.5	+0.8
AES2	Ecuador-Puerto	2.57	20	P	Pn	20 44 10.5	+1.3
BOSC	San Juan Bosco	2.65	130	⇓P	Pn	20 44 12.8	+2.4
OTAV	Otavalo	2.67	51	P	Pn	20 44 10.2	-0.7
OTAV				S	Sn	20 44 41.2	-1.2
RVRD	Rio Verde	2.75	25	P	Pn	20 44 10.4	-1.2
CUSE	Cuicocha Este	2.75	51	⇓P	Pn	20 44 11.6	-0.5
CUSE	Cuicocha Este	2.75	51	P	Pn	20 44 11.8	-0.3
CUIC	Cuicocha-Domo	2.78	51	P	Pn	20 44 12.6	+0.1
COTA	Cotacachi	2.82	51	P	Pn	20 44 13.4	+0.4
IMBA	Imbabura, San	2.89	54	P	Pn	20 44 16.4	+2.4
CAYR	Refugio Cayamb	2.91	60	P	Pn	20 44 16.3	+1.8
ANGU	Angureal	2.93	60	P	Pn	20 44 17.1	+2.4
PKYU	Pakayacu	2.95	94	⇓P	Pn	20 44 16.1	+1.8
URCU	Urcuqui	2.95	51	P	Pn	20 44 16.0	+1.3
AMCR	Ecuador-Macara	2.97	169	P	Pn	20 44 15.0	+0.3
MCRA	Macar, Loja	2.97	169	P	Pn	20 44 14.9	+0.2
MCRA	Macar, Loja	2.97	169	P	Pn	20 44 13.6	-1.1
MCRA				S	Sn	20 44 48.2	-1.0
GONZ	Gonzanam	3.00	158	P	Pn	20 44 17.6	+2.1
YAHU	Yahuarcocha	3.05	54	P	Pn	20 44 18.3	+2.2
ALIT	Ecuador-Imbabu	3.11	44	P	Pn	20 44 17.6	+0.8
LITE1	Lita	3.11	44	P	Pn	20 44 16.2	-0.5
TAIS	Taisha	3.17	107	P	Pn	20 44 19.4	+1.8
SNLR	San Lorenzo-Es	3.20	32	P	Pn	20 44 17.6	-0.2
REVS	Reventador Sur	3.20	66	P	Pn	20 44 19.7	+1.6
LNGL	El Angel-Carch	3.33	49	P	Pn	20 44 21.8	+1.7
CHMA	Chilma	3.37	47	P	Pn	20 44 19.7	-0.8
CHL1	Volc¡n Chiles	3.41	49	P	Pn	20 44 22.7	+1.5
ECEN	Cerro Negro	3.41	49	P	Pn	20 44 22.2	+1.0
CHL2	Volc¡n Chiles	3.44	50	P	Pn	20 44 23.2	+1.6
TULM	Tulcn-Chalpat	3.48	52	P	Pn	20 44 25.1	+2.9
BONI	La Bonita	3.55	58	P	Pn	20 44 25.9	+3.0
BONI	La Bonita	3.55	58	P	Pn	20 44 24.2	+1.4
BONI				S	Sn	20 45 08.6	+4.8
CASC	Dorado de Casc	3.56	64	P	Pn	20 44 22.8	-0.1
CASC	Dorado de Casc	3.56	64	P	Pn	20 44 24.2	+1.3
CASC				S	Sb	20 45 11.9	-3.2
CMBC	Cumbal	3.60	49	P	Pn	20 44 25.4	+1.7
CMBC	Cumbal	3.60	49	P	Pn	20 44 28.8	+5.1
CMBC				S	Sn	20 45 10.4	+5.1
ZUMB	Zumba	3.67	158	P	Pn	20 44 26.7	+2.2
CRUC	La Cruz	4.67	50	P	Pn	20 44 41.5	+3.2
BBAC	Balboa, Cauca	4.76	44	P	Pn	20 44 38.9	-0.6
BBAC	Balboa, Cauca	4.76	44	P	Pn	20 44 38.6	-0.9
BBAC				S	Sn	20 45 33.2	-0.4
POPC	Popayan, Colom	5.53	44	P	Pn	20 44 48.9	-1.1
	2µm99nm,0.6s						
FLOC	Florencia	5.73	58	P	Pn	20 44 54.2	+1.5
PTLC	Puerto Leguiza	5.96	74	P	Pn	20 44 53.9	-1.9
GARC	Garzon, Huila	6.20	54	P	Pn	20 44 59.9	+0.6
	1µm106nm,0.6s						
MACC	Macarena, Meta	7.58	62	P	Pn	20 45 18.8	+0.8

*NEIC **06** 21:24:30.7±1.4, 20°.6S±0°.1×178°.3W±0°.1, h570km±7km, mb4.2/16, Error ellipse: s-maj=21.6km s-min=18.6km az=154.0*

*IDC **06** 21:24:32.1±1.5, 20°.47S×178°.37W, h589km±14km, mb3.3/14, mbtmp4.2/15, Error ellipse: s-maj=22.8km s-min=12.9km az=141.0*

ISC 06 21:24:31.6±0.6**, 20°.5S**±0°.1×**178°.3W**±0°.1**, h587**km**, n68,** σ**0°.72**/66**, mb4.0**/22**, 9D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.40	308	P	P	21 25 58.7	-0.4
	10nm,0.4s,baz=141,slow=12,SNR=7.2						
MSVF				S	S	21 27 11.3	+0.8
	4.0nm,0.7s,baz=143,slow=20,SNR=0.9						
RAO	Raoul Island	8.70	178	P	P	21 26 31.3	-5.8
MARNC	Mare, Loyalty	12.77	263	P	P	21 27 17.1	-1.0
DZM	Mont Dzumac	14.27	261	P	P	21 27 32.8	-0.6
CTA	Charters Tower	33.17	264	P	P	21 30 21.4	+0.2
	2.1nm,0.5s,baz=91,slow=11,SNR=9.7						
	2.1nm,0.5s						
STKA	Stephens Creek	37.49	244	P	P	21 30 57.2	+0.5
	1.7nm,0.5s,baz=96,slow=12,SNR=5.1						
	1.7nm,0.5s						
STKA	Stephens Creek	37.49	244	P	P	21 30 57.2	+0.5
INKA	Innaminka	37.89	251	P	P	21 31 00.6	+0.6
INKA				IAmb	IAmb	21 31 46.6	
	comp=Z,8.0nm,1.6s						
BBOO	Buckleboo	42.25	243	P	P	21 31 34.8	+0.1
WR8	Warramunga Arr	44.13	262	P	P	21 31 49.1	-0.4
WR8				IAmb	IAmb	21 31 50.5	
	comp=Z,5.3nm,1.1s						
AS31	Alice Springs	44.20	257	P	P	21 31 50.2	+0.2
ASAR	Alice Springs	44.20	257	P	P	21 31 50.0	0.0
	comp=Z,4.1nm,0.5s,baz=94,slow=7.6,SNR=77						
ASAR				PcP	PcP	21 33 21.8	+0.1
	comp=Z,0.9nm,0.5s,baz=94,slow=3.5,SNR=8.5						
	comp=Z,4.1nm,0.5s						
ASAR	Alice Springs	44.20	257	P	P	21 31 49.9	-0.1
ASAR					PcP	21 33 21.5	-0.1
WB0	Warramunga Arr	44.26	262	P	P	21 31 50.1	-0.3
WB0				IAmb	IAmb	21 32 26.5	
	comp=Z,24nm,1.9s						
WRA	Warramunga Arr	44.28	262	P	P	21 31 50.1	-0.5
	comp=Z,1.1nm,0.3s,baz=97,slow=7.8,SNR=72						
WRA				PcP	PcP	21 33 21.7	-0.2
	comp=Z,0.5nm,0.7s,baz=118,slow=2.7,SNR=3.6						
	comp=Z,1.1nm,0.3s						
WRA	Warramunga Arr	44.28	262	P	P	21 31 50.4	-0.2
FITZ	Fitzroy Crossi	52.71	262	P	P	21 32 53.0	0.0
	comp=Z,2.4nm,0.5s,baz=117,slow=11,SNR=5.8						
	comp=Z,2.4nm,0.5s						
SOEI	Soe	56.18	272	P	P	21 33 18.3	+0.8
SOEI				IAmb	IAmb	21 34 40.7	
	comp=Z,22nm,1.2s						
PSA00	Pilbara Seismi	57.35	257	P	P	21 33 25.0	-0.2
MBWA	Marble Bar	57.54	257	P	P	21 33 26.2	-0.3
MBWA				IAmb	IAmb	21 35 35.2	
	comp=Z,18nm,1.4s						
MORW	Morawa	59.53	248	P	P	21 33 39.6	-0.1
TOLI2	Tolitoli	63.30	282	P	P	21 34 05.5	+1.1
TOLI2				IAmb	IAmb	21 36 05.3	
	comp=Z,7.9nm,1.0s						
QSPA	South Pole Qui	69.55	180	P	P	21 34 42.8	+0.6
	comp=Z,3.5nm,0.8s,baz=313,slow=1.7,SNR=7.7						
	comp=Z,3.5nm,0.8s						
QSPA	South Pole Qui	69.55	180	P	P	21 34 42.6	+0.4
QSPA				IAmb	IAmb	21 34 43.9	
	comp=Z,3.9nm,0.9s						
MJAR	Matsushiro Arr	70.04	324	P	P	21 34 45.0	-0.5
	comp=Z,1.0nm,0.5s,baz=160,slow=5.6,SNR=5.7						
	comp=Z,1.0nm,0.5s						
MJAR	Matsushiro Arr	70.04	324	P	P	21 34 45.1	-0.4
KSRS	Korea Array	76.69	319	P	P	21 35 24.2	+1.0
	comp=Z,0.7nm,0.6s,baz=123,slow=6.4,SNR=2.5						
	comp=Z,0.7nm,0.6s						
YBH	Yreka Blue Hor	80.50	39	P	P	21 35 44.4	+0.9
	comp=Z,0.2nm,0.7s,baz=188,slow=3.5,SNR=6.0						
YBH	Yreka Blue Hor	80.50	39	IAmb	IAmb	21 38 20.7	
	comp=Z,18nm,1.6s						
NVAR	Mina Array Bea	81.26	44	P	P	21 35 48.1	+0.4
	comp=Z,1.0nm,0.6s,baz=216,slow=8.8,SNR=5.7						
	comp=Z,1.0nm,0.6s						
TUC	Tucson	83.24	52	P	P	21 35 59.6	+2.0
SEY	Seymchan	86.32	347	P	P	21 36 11.4	-0.3
	comp=Z,1.7nm,0.6s,baz=143,slow=5.0,SNR=11						
	comp=Z,1.7nm,0.6s						
ELIB	Princess Elisa	86.59	187	*d*P	P	21 36 12.7	-0.5
	comp=Z,3.3nm,0.7s						
TXAR	Lajitas Array	87.33	57	P	P	21 36 18.4	+1.0
	comp=Z,1.0nm,0.8s,baz=245,slow=5.3,SNR=4.4						
	comp=Z,1.0nm,0.8s						
ILAR	Eielson Array	88.41	13	P	P	21 36 20.4	-1.0
	comp=Z,0.9nm,0.5s,baz=216,slow=5.2,SNR=17						
	comp=Z,0.9nm,0.5s						
PDAR	Pinedale Array	89.19	43	P	P	21 36 26.1	+0.1
	comp=Z,1.0nm,0.6s,baz=218,slow=3.8,SNR=10						
	comp=Z,1.0nm,0.6s						
CMAR	Chiang Mai Arr	89.82	290	P	P	21 36 30.3	+1.3
	comp=Z,0.7nm,0.4s,baz=109,slow=1.9,SNR=9.6						
	comp=Z,0.7nm,0.4s						
MKAR	Makanchi Array	110.98	313	PKiKP	PKiKP	21 41 57.2	-1.7
	comp=Z,0.5nm,0.6s,baz=80,slow=0.6,SNR=7.9						
MKAR	Makanchi Array	110.98	313		PKiKP	21 41 57.7	-1.2
KURBB	Kurchatov Arra	113.84	317	PKiKP	PKiKP	21 42 03.4	-0.8
	comp=Z,0.5nm,0.6s,baz=95,slow=1.7,SNR=6.0						
BVAR	Borovoye Array	118.89	320	PKP	PKPdf	21 42 12.9	-1.0
	comp=Z,1.4nm,0.4s,baz=107,slow=1.5,SNR=15						
ARCES	ARCESS Array B	128.88	349	PKP	PKPdf	21 42 32.0	-0.5
	comp=Z,5.6nm,1.1s,baz=48,slow=2.1,SNR=4.9						
FINES	FINESS Array B	135.70	343	PKP	PKPdf	21 42 46.0	+0.5
	comp=Z,1.1nm,0.8s,baz=68,slow=5.1,SNR=5.6						
NOA	NORSAR Array B	138.96	353	PKP	PKiKP	21 42 53.7	-0.3
	comp=Z,0.3nm,0.8s,baz=22,slow=3.9,SNR=1.5						
HFS	Hagfors	139.51	351	PKhKP	PKPpre	21 42 43.1	
	comp=Z,1.0nm,0.4s,baz=78,slow=7.9,SNR=12						
AKASG	Malin Array Be	142.88	331	PKhKP	PKPpre	21 42 55.4	
	comp=Z,3.0nm,0.4s,baz=44,slow=4.3,SNR=20						
LODK	Lodwar	143.04	247		PKPbc	21 42 59.1	+0.4
ARPR	Arapgir-MALATY	143.50	309	PKPbc	PKPbc	21 43 00.5	+1.0
EKA	Eskdalemuir Ar	145.05	5	PKPbc	PKPdf	21 43 02.4	-0.1
	comp=Z,1.2nm,0.7s,baz=329,slow=3.1,SNR=4.1						
SORM	Soroca	145.06	328	⇓P	PKPdf	21 43 01.3	-1.5
BRTR	Keskin Array B	146.62	312	PKPbc	PKPbc	21 43 07.8	-0.7
	comp=Z,1.5nm,0.6s,baz=126,slow=2.7,SNR=9.1						
BUR08	Bucovina Ar. S	146.91	330		PKPbc	21 43 09.8	+0.7
BURAR	Bucovina Array	146.92	330	⇓P	PKPbc	21 43 09.8	+0.7
ONER	Baraj Valea Uz	147.26	328	⇓P	PKPbc	21 43 10.4	+0.5
MMAI	Mount Meron Ar	147.55	300	PKPbc	PKPbc	21 43 11.8	+0.7
	comp=Z,1.6nm,0.4s,baz=55,slow=7.2,SNR=17						
BOSR	Bodos	147.81	328	⇓P	PKPbc	21 43 11.9	+0.6
DOPR	Dopca	148.02	328	⇓P	PKPbc	21 43 12.6	+0.7
ARR	Arges	148.82	328	⇓P	PKPbc	21 43 14.5	+0.6
BZS	Buzias	150.06	331	⇓P	PKPbc	21 43 16.6	-0.1
WINA	Alland / Wiene	150.12	340	*e*PKiKP	PKPbc	21 43 17.5	+0.7
GERES	GERESS Array B	150.13	344	PKPbc	PKPbc	21 43 16.6	-0.3
	comp=Z,1.0nm,0.5s,baz=18,slow=4.8,SNR=4.1						
HERR	Herculane	150.25	329	⇓P	PKPbc	21 43 16.6	-0.6
CONA	Conrad Observa	150.34	341	*e*PKP	PKPbc	21 43 17.4	0.0
	comp=Z,2.7nm,0.6s						
LESA	Schwarzleotal	151.71	344	*e*PKP	PKPbc	21 43 20.1	-0.5
	comp=Z,1.4nm,0.5s						
WTTA	Wattenberg	152.12	345	*e*PKP	PKPbc	21 43 21.0	-0.6
	comp=Z,0.3nm,0.3s						
MOTA	Moosalm	152.16	346	*e*PKP	PKPbc	21 43 21.0	-0.7
	comp=Z,0.7nm,0.5s						
ABTA	Abfaltersbach	152.38	344	*e*PKP	PKPbc	21 43 20.7	-1.3
	comp=Z,2.1nm,0.5s						
FETA	Feichten	152.55	346	*e*PKP	PKPbc	21 43 21.9	-0.6

comp=Z,1.7nm,0.9s

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*IDC **06** 21:29:01.1±1.5, 15°.18N×146°.44E, h0km, mb3.5/5, mbtmp3.5/6, ML3.8/1, Error ellipse: s-maj=46.7km s-min=24.8km az=110.0*

ISC 06 21:29:08.8±1.4**, 15°.0N**±0°.2×**146°.3E**±0°.3**, h58**km**, n6, σ1s41**/7**, mb3.6**/5**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.97**	**224**	Pn	**Pn**	**21 29 38.6**	**-1.3**
	26nm,0.3s,baz=37,slow=15,SNR=5.2						
GUMO				Sn	**Sn**	**21 30 03.4**	**0.0**
	34nm,0.3s,baz=39,slow=23,SNR=6.5						
	45nm,0.3s						
WRA	**Warramunga Arr**	**36.67**	**199**	P	**P**	**21 36 11.6**	**+1.4**
	0.3nm,0.9s,baz=20,slow=9.1,SNR=1.5						
	0.3nm,0.9s						
MKAR	**Makanchi Array**	**61.42**	**315**	P	**P**	**21 39 20.8**	**+1.6**
	0.3nm,0.5s,baz=88,slow=6.8,SNR=7.8						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**64.42**	**319**	P	**P**	**21 39 38.4**	**-0.6**
	0.5nm,0.7s,baz=96,slow=6.9,SNR=7.2						
	0.5nm,0.7s						
ILAR	**Eielson Array**	**66.70**	**25**	P	**P**	**21 39 52.3**	**-1.1**
	0.1nm,0.4s,baz=263,slow=5.3,SNR=3.5						
	0.1nm,0.4s						
BVAR	**Borovoye Array**	**69.66**	**321**	P	**P**	**21 40 11.8**	**-0.4**
	0.7nm,0.7s,baz=100,slow=7.9,SNR=3.2						
	0.7nm,0.7s						

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*IDC **06** 21:43:07.1±1.9, 35°.29N×77°.32E, h0km, mb3.6/4, mbtmp3.5/9, ML3.1/5, Error ellipse: s-maj=39.8km s-min=24.1km az=51.0*

*NNC **06** 21:43:28.9±3.3, 36°.45N×79°.04E, h0km, mb3.7, mpv3.6, Error ellipse: s-maj=81.3km s-min=24.7km az=95.0*

ISC 06 21:43:18.4±0.7**, 35°.70N**±0°.05×**77°.62E**±0°.09**, h100**km**, n20, σ3s19**/32**, mb3.5**/4**, 4C-2D, Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALCI	**Alchi Leh**	**1.53**	**194**	*e*P	**Pn**	**21 43 46.7**	**+1.4**
ALCI				*e*S	**Sn**	**21 44 05.1**	**-0.6**
ALCI				IAML		21 44 13.5	
	comp=N,393nm,0.4s						
ALCI				IAML		21 44 14.6	
	comp=E,435nm,0.2s						
TSSA	**Tissa**	**3.11**	**203**	*e*P	**Pn**	**21 44 07.6**	**+1.9**
TSSA				*e*S	**Sn**	**21 44 39.3**	**-2.9**
TSSA				IAML		21 44 44.0	
	comp=E,272nm,0.2s						
TSSA				IAML		21 44 44.1	
	comp=N,310nm,0.3s						
JMU	**Jammu**	**3.72**	**219**	*e*P	**Pn**	**21 44 14.9**	**+1.2**
JMU				*e*S	**Sn**	**21 44 55.8**	**-0.9**
JMU				IAML		21 44 58.7	
	comp=N,192nm,0.4s						
JMU				IAML		21 44 59.4	
	comp=E,136nm,0.2s						
KLP	**Kalpa**	**4.19**	**173**	*e*S	**Sn**	**21 45 05.6**	**-3.0**
KLP				IAML		21 45 11.9	
	comp=E,241nm,0.2s						
KLP				IAML		21 45 15.8	
	comp=N,251nm,0.2s						
BHK	**Bhakra**	**4.42**	**194**	*e*P	**Pn**	**21 44 24.4**	**+1.2**
BHK				*e*S	**Sn**	**21 45 11.9**	**-1.7**
BHK				IAML		21 45 16.5	
	comp=E,227nm,0.1s						
BHK				IAML		21 45 17.0	
	comp=N,231nm,0.2s						
SMLA	**Simla**	**4.58**	**185**	*e*P	**Pn**	**21 44 26.3**	**+1.0**
SMLA				*e*S	**Sn**	**21 45 14.0**	**-3.4**
SMLA				IAML		21 45 19.2	
	comp=N,94nm,0.1s						
SMLA				IAML		21 45 20.8	
	comp=E,81nm,0.2s						
JOSI	**Joshimath**	**5.38**	**162**	*e*P	**Pn**	**21 44 39.2**	**+2.8**
JOSI				*e*S	**Sn**	**21 45 35.2**	**-2.1**
JOSI				IAML		21 45 38.9	
	comp=E,188nm,0.2s						
JOSI				IAML		21 45 39.1	
	comp=N,116nm,0.2s						
AAK	**Ala-Archa**	**7.34**	**342**	Pn	**Pn**	**21 45 05.9**	**+3.0**
	comp=N,0.2nm,0.3s,baz=151,slow=13,SNR=1.8						
AAK				Sn	**Sn**	**21 46 16.4**	**-8.2**
	comp=N,0.2nm,0.3s,baz=111,slow=19,SNR=1.6						
	comp=N,0.6nm,0.4s						
KUDL	**Kundal**	**7.60**	**188**	*e*P	**Pn**	**21 45 06.4**	**+0.1**
KUDL				*e*S	**Sn**	**21 46 23.8**	**-7.1**
KUDL				IAML		21 46 27.2	
	comp=N,16nm,0.3s						
KUDL				IAML		21 46 29.5	
	comp=E,20nm,0.4s						
PDGK	**Podgornoye**	**7.75**	**10**	⇑Pn	**Pn**	**21 45 11.4**	**+2.9**
	comp=E,2.3nm,0.6s						
PDGK				⇑Sn	**Sn**	**21 46 31.3**	**-3.4**
	comp=E,7.9nm,0.8s						
MAKZ	**Makanchi**	**11.57**	**15**	⇓Pn	**Pn**	**21 46 00.9**	**+0.7**
	comp=E,1.9nm,0.7s						
MAKZ				⇓Sn	**Sn**	**21 48 01.4**	**-5.9**
	comp=E,1.9nm,1.1s						
MK31	**Makanchi Array**	**11.62**	**16**	⇑Pn	**Pn**	**21 46 02.7**	**+1.8**
	comp=E,0.2nm,0.3s,baz=200,slow=13,SNR=24						
MK31				⇑Sn	**Sn**	**21 48 04.1**	**-4.5**
	comp=E,1.5nm,0.7s,baz=192,slow=23,SNR=4.2						
MKAR	**Makanchi Array**	**11.62**	**16**	Pn	**Pn**	**21 46 01.6**	**+0.7**
	comp=E,0.3nm,0.3s,baz=200,slow=12,SNR=19						
MKAR				Sn	**Sn**	**21 48 04.6**	**-4.0**
	comp=E,0.3nm,0.3s,baz=198,slow=22,SNR=6.6						
	comp=E,0.5nm,0.3s						
KURBB	**Kurchatov Arra**	**14.93**	**2**	Pn	**Pn**	**21 46 45.4**	**+1.5**
	baz=188,slow=12,SNR=3.8						
	comp=E,0.2nm,0.3s						
BVAR	**Borovoye Array**	**18.06**	**346**	P	**Pn**	**21 47 23.4**	**+0.8**
	comp=E,0.1nm,0.3s,baz=162,slow=11,SNR=11						
	comp=E,1.8nm,0.5s						
ZALV	**Zalesovo Beam**	**18.93**	**13**	P	**Pn**	**21 47 33.4**	**+0.5**
	comp=E,0.3nm,0.3s,baz=215,slow=10.0,SNR=5.0						
	comp=E,0.7nm,0.5s						
SONM	**Songino Array**	**24.50**	**51**	P	**P**	**21 48 31.9**	**+3.6**
	comp=E,0.3nm,0.6s,baz=253,slow=8.9,SNR=3.8						
	comp=E,0.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**25.51**	**127**	P	**P**	**21 48 37.4**	**-0.1**
	comp=E,0.2nm,0.3s,baz=312,slow=9.8,SNR=1.4						
	comp=E,0.2nm,0.3s						
FINES	**FINESS Array B**	**41.17**	**325**	P	**P**	**21 50 54.3**	**+1.8**
	comp=E,2.3nm,1.1s,baz=103,slow=8.0,SNR=7.9						
	comp=E,2.3nm,1.1s						
HFS	**Hagfors**	**47.00**	**322**	P	**P**	**21 51 40.3**	**+1.2**
	comp=E,1.4nm,0.7s,baz=83,slow=12,SNR=2.5						
	comp=E,1.4nm,0.7s						

IDC 06 21:56:37.6±2.1**, 2°.75N**×**128°.52E, h0**km**, mb3.7**/4**, mbtmp3.7**/4**, MS3.0**/2**, Error ellipse: s-maj=177.3km s-min=19.7km az=69.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	**Kappang**	**11.67**	**229**	LR	LR	22 04 22.7	
	comp=Z,29nm,18.5s,baz=227,slow=40						
WRA	**Warramunga Arr**	**23.26**	**166**	P	P	22 01 46.4	-0.6
	1.0nm,0.5s,baz=343,slow=9.9,SNR=15						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**26.77**	**169**	P	P	22 02 18.5	-0.9
	0.3nm,0.4s,baz=355,slow=8.3,SNR=9.4						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**59.38**	**325**	P	P	22 06 42.7	+0.8
	0.5nm,0.4s,baz=114,slow=8.1,SNR=15						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**63.53**	**327**	P	P	22 07 09.9	+0.1
	1.2nm,0.6s,baz=126,slow=6.1,SNR=13						
	1.2nm,0.6s						
BRTR	**Keskin Array B**	**92.02**	**310**	LR	LR	22 58 10.1	
	comp=Z,16nm,18.2s,baz=284,slow=40						

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*GCG **06** 22:00:58.7±2.2, 14°.30N×93°.19W, h24km±17km, MD4.9, ML5.0, Presumed earthquake*

*CATAC **06** 22:00:58.4±0.6, 14°N±2°×9°3W±°, h8km±3km, M5.3/19, MLv5.3/19, Error ellipse: s-maj=6.3km s-min=3.4km az=41.4, confirmed*

*MEX **06** 22:00:59.4±0.7, 14°.37N×93°.28W, h6km±11km, MD4.7*

*NEIC **06** 22:01:02.1±1.7, 14°.51N±0°.05×93°.11W±0°.04, h35km±1km, mb4.7/359, Md4.7/128(MEX), Error ellipse: s-maj=9.3km s-min=6.0km az=208.0*

*GCMT **06** 22:01:04.1±0.9, 14°.58N±0°.05×93°.22W±0°.05, h25km±1km, MW4.8/62, Moment Tensor Solution. s26,c32; s62,c75; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr1.48±.13; Mθθ-1.01±.09; Mφφ-0.47±.09; Mrθ0.58±.15; Mθφ0.48±.04; Mφr-1.36±.18; Best double couple: M0 2.00400×10^16 NP1:φs289.00000°, δ25.00000°, λ57.00000°. NP2: φs144.00000°, δ69.00000°, λ104.00000°. Principal axes: T 2.2070, Plg63.0000°, Azm78.0000°; N -0.4080, Plg13.0000°, Azm319.0000°; P -1.8000, Plg22.0000°, Azm223.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **06** 22:01:05.9±2.7, 14°.64N×92°.70W, h77km±20km, mb4.1/17, mbtmp4.4/20, MS3.7/46 Error ellipse: s-maj=30.7km s-min=12.4km az=44.0*

ISC 06 22:00:59.3±1.3**, 14°.37N**±0°.05×**93°.17W**±0°.03**, h29**km±9km**, n701, σ1s56**/739**, mb4.7**/126**, MS3.8**/43**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**1.02**	**59**		**Pn**	**22 01 17.7**	**0.0**
THIG					**Sb**	**22 01 31.4**	**-0.1**
THIG		**1.02**	**59**	*i* P	**Pn**	**22 01 17.7**	**0.0**
THIG				*e*S	**Sb**	**22 01 31.4**	**-0.1**
THIG		**1.02**	**59**	*i* P	**Pn**	**22 01 17.7**	**0.0**
THIG				*e*S	**Sb**	**22 01 30.6**	**-0.9**
SMCA	**Catarina**	**1.16**	**65**	*i* P	**Pn**	**22 01 19.7**	**0.0**
SMCA				*e*S	**Sn**	**22 01 34.5**	**-0.1**
SMCA				IAML		22 01 37.7	
	comp=E,16μm,0.2s						
PATR	**El Naranjo**	**1.17**	**51**		**Sn**	**22 01 35.6**	**+0.6**
PATR	**El Naranjo**	**1.17**	**51**	*e*P	**Pn**	**22 01 19.4**	**-0.5**
PATR				*e*S	**Sn**	**22 01 35.6**	**+0.6**
CHUJ	**Union Juarez**	**1.25**	**55**	*e*P	**Pn**	**22 01 20.9**	**-0.1**
CHUJ				*e*S	**Sn**	**22 01 37.7**	**+0.6**
PAVE	**Pavencul**	**1.26**	**50**		**Pn**	**22 01 20.9**	**-0.2**
PAVE					**Sn**	**22 01 37.9**	**+0.6**
PAVE	**Pavencul**	**1.26**	**50**	*e*P	**Pn**	**22 01 20.9**	**-0.2**
PAVE				*e*S	**Sn**	**22 01 37.9**	**+0.6**
PCIG		**1.32**	**358**		**Pn**	**22 01 20.5**	**-1.3**
PCIG					**Sn**	**22 01 35.2**	**-3.3**
PCIG		**1.32**	**358**	*e*P	**Pn**	**22 01 20.5**	**-1.3**
PCIG				*e*S	**Sn**	**22 01 35.2**	**-3.3**
RTAL	**Retalhuleu**	**1.44**	**84**		**Pn**	**22 01 23.7**	**+0.3**
RTAL				Sn	**Sn**	**22 01 41.3**	**0.0**
RTAL	**Retalhuleu**	**1.44**	**84**	*e*P	**Pn**	**22 01 23.7**	**+0.3**
RTAL				*e*S	**Sn**	**22 01 41.9**	**+0.6**
RTAL	**Retalhuleu**	**1.44**	**84**	P	**Pn**	**22 01 24.2**	**+0.8**
RTAL				S	**Sb**	**22 01 43.8**	**+0.4**
QUEO	**Labor Ovalle**	**1.68**	**73**	*i* P	**Pn**	**22 01 27.8**	**+0.8**
QUEO				*i* S	**Sn**	**22 01 48.7**	**+1.0**
QUEO				IAML		22 01 51.5	
	comp=N,61μm,0.6s						
STG2	**El Palmar, Qui**	**1.74**	**88**	*i* P	**Pn**	**22 01 24.8**	**-2.9**
STG8	**El Palmar, Qui**	**1.76**	**87**	*i* P	**Pn**	**22 01 25.4**	**-2.7**
STG8				IAML		22 01 49.7	
	comp=Z,8μm,0.1s						
STG5	**El Palmar, Qui**	**1.76**	**89**	*i* P	**Pn**	**22 01 25.3**	**-2.7**
SOKI	**Kika Raxquin**	**1.77**	**75**	*i* P	**Pn**	**22 01 29.2**	**+0.9**
SOKI				IAML		22 02 14.7	
	comp=N,16μm,0.7s						
HUEH	**Huehuetenango**	**1.86**	**60**		**Pn**	**22 01 30.8**	**+1.3**
HUEH					**Sn**	**22 01 53.6**	**+1.4**
HUEH	**Huehuetenango**	**1.86**	**60**	*e*P	**Pn**	**22 01 31.1**	**+1.6**
HUEH				*e*S	**Sn**	**22 01 54.2**	**+2.1**
HUEH	**Huehuetenango**	**1.86**	**60**	P	**Pb**	**22 01 31.8**	**-1.0**
HUEH				S	**Sb**	**22 01 55.8**	**-0.1**
HUEH	**Huehuetenango**	**1.86**	**60**	*e*P	**Pn**	**22 01 31.0**	**+1.6**
CARR	**Arriaga**	**2.00**	**339**	*e*P	**Pn**	**22 01 30.5**	**-0.6**
CARR				*e*S	**Sn**	**22 01 53.4**	**-1.7**
CCIG	**Comitan**	**2.14**	**28**		**Pn**	**22 01 35.3**	**+2.0**
CCIG					**Sn**	**22 02 00.9**	**+1.9**
CCIG	**Comitan**	**2.14**	**28**	*e*P	**Pn**	**22 01 35.4**	**+2.2**
CCIG				*e*S	**Sn**	**22 02 01.4**	**+2.4**
CCIG	**Comitan**	**2.14**	**28**	P	**Pn**	**22 01 35.9**	**+2.6**
CCIG				S	**Sn**	**22 02 02.5**	**+3.6**
CCIG	**Comitan**	**2.14**	**28**	*i* P	**Pn**	**22 01 35.6**	**+2.3**
CCIG				IAML		22 02 11.0	
	comp=N,8μm,0.4s						
QUIS	**Sacapulas**	**2.21**	**65**	*i* P	**Pb**	**22 01 36.6**	**-2.0**
QUIS				*e*S	**Sb**	**22 02 05.7**	**+0.1**
TGBT	**Tuxtla Gutierr**	**2.39**	**2**		**Pn**	**22 01 37.5**	**+1.0**
TGBT					**Sn**	**22 02 06.5**	**+1.6**
TGBT	**Tuxtla Gutierr**	**2.39**	**2**	*e*P	**Pn**	**22 01 37.5**	**+1.0**
TGBT				*e*S	**Sn**	**22 02 06.5**	**+1.6**
TGIG		**2.39**	**1**		**Pn**	**22 01 37.8**	**+1.2**
TGIG					**Sn**	**22 02 04.8**	**-0.2**
TGIG		**2.39**	**1**	*e*P	**Pn**	**22 01 37.8**	**+1.2**
TGIG				*e*S	**Sn**	**22 02 04.8**	**-0.2**
TGIG		**2.39**	**1**	*i* P	**Pn**	**22 01 37.8**	**+1.2**
TGIG				IAML		22 02 09.3	
	comp=E,6μm,0.7s						
FG8	**Yepocapa, Chim**	**2.53**	**92**	*i* P	**Pn**	**22 01 34.0**	**-4.5**
FG16	**Alotenango, Sa**	**2.58**	**92**	*i* P	**Pn**	**22 01 35.3**	**-4.0**
APG	**El Apazote**	**2.69**	**76**	P	**Pn**	**22 01 42.0**	**+1.2**
	comp=E,35nm,0.4s,baz=196,slow=13,SNR=200						
APG	**El Apazote**	**2.69**	**76**	*i* P	**Pn**	**22 01 42.9**	**+2.0**
PCG5	**San Vicente Pa**	**2.71**	**93**	*i* P	**Pn**	**22 01 37.5**	**-3.5**
PCG5				IAML		22 02 17.6	
	comp=N,16μm,0.5s						
UXUV	**UXUV**	**3.08**	**342**		**Pn**	**22 01 46.4**	**+0.5**
UXUV					**Sn**	**22 02 18.1**	**-3.7**
UXUV	**UXUV**	**3.08**	**342**	*e*P	**Pn**	**22 01 46.4**	**+0.5**
UXUV				*e*S	**Sn**	**22 02 18.1**	**-3.7**
FAME	**Alcaldia de Sa**	**3.10**	**99**	P	**Pn**	**22 01 48.4**	**+2.1**
FAME				S	**Sn**	**22 02 26.1**	**+3.6**
HUIG	**Huatulco**	**3.16**	**296**		**Pn**	**22 01 46.1**	**-1.1**
HUIG					**Sn**	**22 02 21.4**	**-2.5**
HUIG	**Huatulco**	**3.16**	**296**	*e*P	**Pn**	**22 01 46.1**	**-1.1**
HUIG				*e*S	**Sn**	**22 02 21.4**	**-2.5**
HUIG	**Huatulco**	**3.16**	**296**	*i* P	**Pn**	**22 01 46.0**	**-1.1**
CMIG	**Matias Romero**	**3.17**	**329**	P	**Pn**	**22 01 46.5**	**-0.7**
	comp=N,158nm,0.4s,baz=144,slow=13,SNR=231						
CMIG				S	**Sn**	**22 02 24.4**	**+0.4**
	comp=N,1μm,0.8s,baz=92,slow=10,SNR=7.7						
CMIG				LR	LR	22 03 23.4	
	comp=N,544nm,19.5s,baz=146,slow=43						
CMIG	**Matias Romero**	**3.17**	**329**		**Pn**	**22 01 46.4**	**-0.8**
CMIG					**Sn**	**22 02 21.3**	**-2.7**
CMIG	**Matias Romero**	**3.17**	**329**	*e*P	**Pn**	**22 01 46.4**	**-0.8**
CMIG				*e*S	**Sn**	**22 02 21.3**	**-2.7**
SLOZ	**Alcaldia de Sa**	**3.30**	**96**	P	**Pn**	**22 01 51.2**	**+2.1**
NUBE	**Las Nubes**	**3.32**	**98**	P	**Pn**	**22 01 50.7**	**+1.2**
NUBE				S	**Sn**	**22 02 32.2**	**+4.2**
NUBE	**Las Nubes**	**3.32**	**98**	*i* P	**Pn**	**22 01 50.9**	**+1.4**
CEVE	**Cerro Verde**	**3.48**	**99**	P	**Pn**	**22 01 54.0**	**+2.3**
CEVE				S	**Sn**	**22 02 36.4**	**+4.2**
VHSA	**Villahermosa**	**3.59**	**3**		**Pn**	**22 01 56.0**	**+3.0**
VHSA					**Sn**	**22 02 37.1**	**+2.5**
VHSA	**Villahermosa**	**3.59**	**3**	*e*P	**Pn**	**22 01 56.0**	**+3.0**
VHSA				*e*S	**Sn**	**22 02 37.1**	**+2.5**
JAYA	**Jayaque - finc**	**3.68**	**101**	P	**Pn**	**22 01 56.0**	**+1.6**
JAYA				S	**Sn**	**22 02 40.3**	**+3.3**
JAYA	**Jayaque - finc**	**3.68**	**101**	*i* P	**Pn**	**22 01 55.4**	**+1.0**
MTO3	**Montecristo**	**3.69**	**89**		**Pn**	**22 01 56.0**	**+1.4**
MTO3	**Montecristo**	**3.69**	**89**	P	**Pn**	**22 01 57.1**	**+2.5**
CEDA	**San Andres**	**3.71**	**98**	S	**Sn**	**22 02 42.5**	**+5.2**
ESQI	**Esquipulas**	**3.71**	**87**		**Pn**	**22 01 57.1**	**+2.3**
ESQI	**Esquipulas**	**3.71**	**87**	P	**Pn**	**22 01 56.6**	**+1.8**
PMON	**Piamonte**	**3.80**	**100**	P	**Pn**	**22 01 58.1**	**+2.1**
PMON				S	**Sn**	**22 02 44.7**	**+5.0**
TUIG	**Tuzandepetl**	**3.83**	**342**		**Pn**	**22 01 55.2**	**-1.2**
TUIG					**Sn**	**22 02 37.4**	**-3.1**
TUIG	**Tuzandepetl**	**3.83**	**342**	*e*P	**Pn**	**22 01 55.2**	**-1.2**
TUIG				*i* S	**Sn**	**22 02 37.4**	**-3.1**
LALI	**Alcalda de L**	**3.84**	**103**	P	**Pn**	**22 01 57.7**	**+1.3**
LALI				S	**Sn**	**22 02 44.7**	**+4.1**
PANCS	**Alcalda de**	**3.94**	**101**	S	**Sn**	**22 02 47.9**	**+4.6**
PETF	**Flores**	**4.06**	**51**		**Sn**	**22 02 46.9**	**+0.7**
PETF	**Flores**	**4.06**	**51**		**Pn**	**22 02 01.1**	**+1.5**
PETF	**Flores**	**4.06**	**51**	*e*P	**Pn**	**22 02 00.2**	**+0.6**
PETF				*e*S	**Sn**	**22 02 46.9**	**+0.7**
PETF	**Flores**	**4.06**	**51**	P	**Pn**	**22 02 01.7**	**+2.2**
PETF	**Flores**	**4.06**	**51**	*i* P	**Pn**	**22 02 01.5**	**+1.9**
PEIG	**Puerto Escondi**	**4.17**	**293**		**Pn**	**22 01 59.8**	**-1.2**
PEIG					**Sn**	**22 02 44.5**	**-4.2**
PEIG	**Puerto Escondi**	**4.17**	**293**	*e*P	**Pn**	**22 01 59.8**	**-1.2**
PEIG				*e*S	**Sn**	**22 02 44.5**	**-4.2**
NEUV	**Arroyo Zacate**	**4.17**	**323**		**Pn**	**22 01 59.9**	**-1.2**
NEUV					**Sn**	**22 02 48.3**	**-0.6**
NEUV	**Arroyo Zacate**	**4.17**	**323**	*e*P	**Pn**	**22 01 59.9**	**-1.2**
NEUV				*e*S	**Sn**	**22 02 48.3**	**-0.6**
OXLC	**Oaxaca**	**4.33**	**309**		**Pn**	**22 02 03.1**	**-0.3**
OXLC					**Sn**	**22 02 53.7**	**+0.7**
OXLC	**Oaxaca**	**4.33**	**309**	*e*P	**Pn**	**22 02 03.1**	**-0.3**
OXLC				*e*S	**Sn**	**22 02 53.7**	**+0.7**
OXBJ	**Oaxaca**	**4.35**	**308**		**Pn**	**22 02 02.3**	**-1.4**
OXBJ					**Sn**	**22 02 52.1**	**-1.3**
OXBJ	**Oaxaca**	**4.35**	**308**	*e*P	**Pn**	**22 02 02.3**	**-1.4**
OXBJ				*e*S	**Sn**	**22 02 52.1**	**-1.3**
OXIG	**Oaxaca**	**4.36**	**308**		**Pn**	**22 02 05.7**	**+2.0**
OXIG					**Sn**	**22 02 52.1**	**-1.6**
VHO	**Vista Hermosa**	**4.36**	**308**	*e*P	**Pn**	**22 02 05.7**	**+2.0**
VHO				*e*S	**Sn**	**22 02 52.1**	**-1.6**
PMUV	**Sontecomapan**	**4.55**	**336**		**Pn**	**22 02 05.0**	**-1.3**
PMUV					**Sn**	**22 02 58.9**	**+0.6**
PMUV	**Sontecomapan**	**4.55**	**336**	*e*P	**Pn**	**22 02 05.0**	**-1.3**
PMUV				*e*S	**Sn**	**22 02 58.9**	**+0.6**
YOIG	**Yosondua**	**4.89**	**301**		**Pn**	**22 02 12.4**	**+1.3**
YOIG					**Sn**	**22 03 04.2**	**-2.7**
YOIG	**Yosondua**	**4.89**	**301**	*e*P	**Pn**	**22 02 12.4**	**+1.3**
YOIG				*e*S	**Sn**	**22 03 04.2**	**-2.7**
SCIG	**Sabancuy**	**4.95**	**22**		**Pn**	**22 02 12.7**	**+1.1**
SCIG					**Sn**	**22 03 08.3**	**+0.4**
SCIG	**Sabancuy**	**4.95**	**22**	*e*P	**Pn**	**22 02 12.7**	**+1.1**
SCIG				*e*S	**Sn**	**22 03 08.3**	**+0.4**
SCIG	**Sabancuy**	**4.95**	**22**	*i* P	**Pn**	**22 02 13.0**	**+1.3**
PNIG	**Pinotepa**	**5.19**	**293**		**Pn**	**22 02 13.6**	**-1.4**
PNIG					**Sn**	**22 03 09.5**	**-4.4**
PNIG	**Pinotepa**	**5.19**	**293**	*e*P	**Pn**	**22 02 13.6**	**-1.4**
PNIG				*e*S	**Sn**	**22 03 09.5**	**-4.4**
TOIG	**Toxpalan**	**5.26**	**315**		**Pn**	**22 02 16.6**	**+0.4**
TOIG					**Sn**	**22 03 13.6**	**-2.3**
TOIG	**Toxpalan**	**5.26**	**315**	*e*P	**Pn**	**22 02 16.6**	**+0.4**
TOIG				*e*S	**Sn**	**22 03 13.6**	**-2.3**
TXIG	**Tlaxiaco**	**5.27**	**303**		**Pn**	**22 02 17.9**	**+1.5**
TXIG					**Sn**	**22 03 15.0**	**-1.4**
TXIG	**Tlaxiaco**	**5.27**	**303**	*e*P	**Pn**	**22 02 17.9**	**+1.5**
TXIG				*e*S	**Sn**	**22 03 15.0**	**-1.4**
HLIG	**Huajuapan de L**	**5.63**	**308**		**Pn**	**22 02 24.1**	**+2.9**
HLIG					**Sn**	**22 03 32.1**	**+7.1**
HLIG	**Huajuapan de L**	**5.63**	**308**	*e*P	**Pn**	**22 02 24.1**	**+2.9**
HLIG				*e*S	**Sn**	**22 03 32.1**	**+7.1**
TPIG	**Tehuac#an**	**5.69**	**316**		**Pn**	**22 02 20.9**	**-1.2**
TPIG					**Sn**	**22 03 23.9**	**-2.6**
TPIG	**Tehuac#an**	**5.69**	**316**	*e*P	**Pn**	**22 02 20.9**	**-1.2**
TPIG				*e*S	**Sn**	**22 03 23.9**	**-2.6**
TGUH	**Tegucigalpa,Un**	**5.73**	**92**		**Pn**	**22 02 23.1**	**+0.6**
FTIG	**Fresnillo de T**	**5.92**	**307**		**Pn**	**22 02 27.8**	**+2.5**
FTIG					**Sn**	**22 03 27.7**	**-4.6**
FTIG	**Fresnillo de T**	**5.92**	**307**	*e*P	**Pn**	**22 02 27.8**	**+2.5**
FTIG				*e*S	**Sn**	**22 03 27.7**	**-4.6**
MGIG	**Malinaltepec**	**5.98**	**299**		**Pn**	**22 02 26.1**	**0.0**
MGIG					**Sn**	**22 03 31.8**	**-1.9**
MGIG	**Malinaltepec**	**5.98**	**299**	*e*P	**Pn**	**22 02 26.1**	**0.0**
MGIG				*e*S	**Sn**	**22 03 31.8**	**-1.9**
JAUV	**Jalcomulco**	**6.06**	**325**		**Pn**	**22 02 25.4**	**-1.6**
JAUV					**Sn**	**22 03 33.3**	**-2.2**
JAUV	**Jalcomulco**	**6.06**	**325**	*e*P	**Pn**	**22 02 25.4**	**-1.6**
JAUV				*e*S	**Sn**	**22 03 33.3**	**-2.2**
TLIG	**Tlapa**	**6.08**	**302**		**Pn**	**22 02 28.8**	**+1.4**
TLIG	**Tlapa**	**6.08**	**302**	*e*P	**Pn**	**22 02 26.5**	**-0.9**
TLIG				*e*S	**Sn**	**22 03 33.9**	**-2.3**
LVIG	**Laguna Verde**	**6.16**	**330**		**Pn**	**22 02 27.0**	**-1.4**
LVIG					**Sn**	**22 03 36.7**	**-1.2**
LVIG	**Laguna Verde**	**6.16**	**330**	*e*P	**Pn**	**22 02 27.0**	**-1.4**
LVIG				*e*S	**Sn**	**22 03 36.7**	**-1.2**
CRIN	**San Cristobal**	**6.18**	**105**	Pn	**Pn**	**22 02 29.7**	**+1.0**
CRIG	**Cruz Grande**	**6.21**	**293**		**Pn**	**22 02 29.9**	**+0.8**
CRIG					**Sn**	**22 03 37.1**	**-1.9**
CRIG	**Cruz Grande**	**6.21**	**293**	*e*P	**Pn**	**22 02 29.9**	**+0.8**
CRIG				*e*S	**Sn**	**22 03 37.1**	**-1.9**
HERN	**Volcan Telica**	**6.41**	**105**		**Pn**	**22 02 33.0**	**+1.1**
CNGN	**Cerro Negro**	**6.56**	**106**		**Pn**	**22 02 35.3**	**+1.3**
DAIG	**Los Arroyos**	**6.78**	**294**		**Pn**	**22 02 36.0**	**-0.8**
DAIG					**Sn**	**22 03 51.1**	**-2.0**
DAIG	**Los Arroyos**	**6.78**	**294**	*e*P	**Pn**	**22 02 36.0**	**-0.8**
DAIG				*e*S	**Sn**	**22 03 51.1**	**-2.0**
PPCL	**Tochimilco**	**6.90**	**312**	*e*P	Pn	22 02 44.4	+5.6
PPCL				*e*S	**Sn**	**22 03 53.9**	**-2.7**
PPSX	**Xalitzintla**	**6.94**	**313**	*e*P	Pn	22 02 45.1	+5.8
PPSX				*e*S	**Sn**	**22 03 54.5**	**-3.0**
PPPT	**Popocatepetl**	**6.95**	**312**	*e*P	**Pn**	**22 02 40.6**	**+1.0**
PPPT				*e*S	**Sn**	**22 03 55.3**	**-2.7**
PBPN	**Popocatepetl**	**6.99**	**312**	*e*P	**Pn**	**22 02 38.6**	**-1.7**
PBPN				*e*S	**Sn**	**22 04 03.3**	**+4.1**
PBXN	**Popocatepetl**	**6.99**	**312**	*e*P	**Pn**	**22 02 39.4**	**-0.9**
PBXN				*e*P	**Pn**	**22 02 42.9**	**+2.7**
PBXN				*e*S	**Sn**	**22 03 53.4**	**-5.7**
PBXN				*e*S	**Sn**	**22 03 55.1**	**-4.0**
PPM	**Popocatepetl**	**7.01**	**312**	*e*P	**Pn**	**22 02 41.6**	**+1.1**
PPM				*e*S	**Sn**	**22 03 57.1**	**-2.3**
PPIG	**Popocatepetl**	**7.01**	**312**		**Pn**	**22 02 41.6**	**+1.1**
PPIG					**Sn**	**22 03 57.1**	**-2.4**
MEIG	**Mezcala**	**7.13**	**301**		**Pn**	**22 02 43.4**	**+1.6**
MEIG					**Sn**	**22 04 00.9**	**-1.1**
MEIG	**Mezcala**	**7.13**	**301**	*e*P	**Pn**	**22 02 43.4**	**+1.6**
MEIG				*e*S	**Sn**	**22 04 00.9**	**-1.1**
CXUV	**Coxquihui**	**7.15**	**324**		**Pn**	**22 02 42.0**	**+0.1**
CXUV					**Sn**	**22 04 00.6**	**-1.7**
CXUV	**Coxquihui**	**7.15**	**324**	*e*P	**Pn**	**22 02 42.0**	**+0.1**
CXUV				*e*S	**Sn**	**22 04 00.6**	**-1.7**
YAIG	**Yautepec**	**7.20**	**309**		**Pn**	**22 02 42.9**	**0.0**
YAIG					**Sn**	**22 04 02.4**	**-1.4**
YAIG	**Yautepec**	**7.20**	**309**	*e*P	**Pn**	**22 02 42.9**	**0.0**
YAIG				*e*S	**Sn**	**22 04 02.4**	**-1.4**
PLIG	**Platanillo**	**7.27**	**304**		**Pn**	**22 02 44.1**	**+0.4**
PLIG					**Sn**	**22 04 05.3**	**-0.1**
PLIG	**Platanillo**	**7.27**	**304**	*e*P	**Pn**	**22 02 44.1**	**+0.4**
PLIG				*e*S	**Sn**	**22 04 05.3**	**-0.1**
MYIG	**Merida**	**7.32**	**26**		**Pn**	**22 02 45.0**	**+0.8**
MYIG					**Sn**	**22 04 06.6**	**+0.3**
MYIG	**Merida**	**7.32**	**26**	*e*P	**Pn**	**22 02 45.0**	**+0.8**
MYIG				*e*S	**Sn**	**22 04 06.6**	**+0.3**
CAIG	**El Cayaco**	**7.33**	**292**		**Pn**	**22 02 45.5**	**+1.0**
CAIG					**Sn**	**22 04 05.8**	**-1.0**
CAIG	**El Cayaco**	**7.33**	**292**	*e*P	**Pn**	**22 02 45.5**	**+1.0**
CAIG				*e*S	**Sn**	**22 04 05.8**	**-1.0**
TEIG	**Tepich**	**7.46**	**38**		**Pn**	**22 02 46.6**	**+0.3**
BOAB	**BOACO BROADBAN**	**7.55**	**104**		**Pn**	**22 02 48.0**	**+0.6**
ARIG	**Puente Sto Nin**	**7.91**	**300**		**Pn**	**22 02 54.9**	**+2.4**
ARIG					**Sn**	**22 04 19.1**	**-1.9**
ARIG	**Puente Sto Nin**	**7.91**	**300**	*e*P	**Pn**	**22 02 54.9**	**+2.4**
ARIG				*e*S	**Sn**	**22 04 19.1**	**-1.9**
DHIG	**Demacu**	**8.13**	**317**		**Pn**	**22 02 57.0**	**+1.3**
DHIG					**Sn**	**22 04 27.2**	**+0.4**
DEIG	**Demacu**	**8.13**	**317**	*e*P	**Pn**	**22 02 57.0**	**+1.3**
DEIG				*e*S	**Sn**	**22 04 27.2**	**+0.4**
SIUN	**Universidad Ur**	**8.17**	**94**		**Pn**	**22 02 56.4**	**+0.3**
JUD3	**Juan Diaz 3**	**8.55**	**118**	Pn	**Pn**	**22 03 04.0**	**+2.7**
ZIIG	**Zihuatanejo**	**8.60**	**293**		**Pn**	**22 03 01.8**	**-0.1**
ZIIG					**Sn**	**22 04 37.8**	**-0.1**
ZIIG	**Zihuatanejo**	**8.60**	**293**	*e*P	**Pn**	**22 03 01.8**	**-0.1**
ZIIG				*e*S	**Sn**	**22 04 37.8**	**-0.1**
CTUV	**Llano Grande**	**8.61**	**326**		**Pn**	**22 03 01.3**	**-0.8**
CTUV					**Sn**	**22 04 36.9**	**-1.3**
CTUV	**Llano Grande**	**8.61**	**326**	*e*P	**Pn**	**22 03 01.3**	**-0.8**
CTUV				*e*S	**Sn**	**22 04 36.9**	**-1.3**
JTS	**Las Juntas de**	**8.99**	**116**	P	**Pn**	**22 03 10.7**	**+3.4**
	comp=N,6.8nm,0.5s,baz=327,slow=12,SNR=6.1						
JTS				S	**Sn**	**22 04 43.7**	**-4.0**
	comp=N,3.8nm,0.3s,baz=309,slow=22,SNR=0.9						
JTS	**Las Juntas de**	**8.99**	**116**		**Pn**	**22 03 09.5**	**+2.1**
MOIG	**Morelia**	**9.31**	**306**		**Pn**	**22 03 16.1**	**+4.3**
RPIG	**Rio Verde**	**9.88**	**320**		**Pn**	**22 03 18.1**	**-1.5**
RPIG					**Sn**	**22 05 09.1**	**-0.6**
RPIG	**Rio Verde**	**9.88**	**320**	*e*P	**Pn**	**22 03 18.1**	**-1.5**
RPIG				*e*S	**Sn**	**22 05 09.1**	**-0.6**
GTIG	**Gomez Farias**	**10.35**	**328**		**Pn**	**22 03 28.8**	**+3.0**
GTIG	**Gomez Farias**	**10.35**	**328**	*e*P	**Pn**	**22 03 28.8**	**+3.0**
MMIG	**Aquila**	**10.52**	**293**		**Pn**	**22 03 29.4**	**+1.3**
MMIG					**Sn**	**22 05 25.9**	**+0.9**
MMIG	**Aquila**	**10.52**	**293**	*e*P	**Pn**	**22 03 29.4**	**+1.3**
MMIG				*e*S	**Sn**	**22 05 25.9**	**+0.9**
INCO	**Volcan de Coli**	**11.22**	**299**	*e*P	**Pn**	**22 03 42.0**	**+3.8**

INCO eS Sn 22 05 42.9 0.0
SOMAC Volcano de Col 11.24 299 eP Pn 22 03 40.7 +2.3
SOMAC eS Sn 22 05 41.5 -1.9
PIRO Carate, Puerto 11.32 121 Pn 22 03 42.8 +3.6
CDAR Ciudad de Arme 11.34 295 eP Pn 22 03 43.2 +3.8
CDAR eS Sn 22 05 49.5 +4.3
CEGR Campo Tres 11.38 297 eP Pn 22 03 43.4 +3.2
CEGR eS Sn 22 05 46.2 -0.3
BRU2 Volcan 11.66 117 Pn 22 03 45.9 +1.9
LNIG Linares 12.03 331 Pn 22 03 50.3 +1.5
LNIG Linares 12.03 331 eP Pn 22 03 50.3 +1.5
ZAIG Zacatecas 12.21 315 Pn 22 03 54.2 +2.6
SOR Soroa 12.76 47 Pn 22 03 57.7 -1.1
HBVL Hebbronville 13.63 339 Pn 22 04 14.2 +3.4
833A Chaparral WMA, 15.04 338 Pn 22 04 30.5 +0.7
CAIB Caibarien 15.29 56 Pn 22 04 30.8 -2.3
CAIB IAmb IAmb 22 04 45.3
comp=Z,33nm,0.7s
MTDJ Mount Denham 15.49 74 Pn 22 04 35.2 -0.7
MTDJ IAmb IAmb 22 04 40.8
comp=Z,38nm,0.8s
HKT Hockley 15.70 351 Pn Pn 22 04 39.0 +0.6
MLDN Muldoon 15.75 347 Pn Pn 22 04 40.4 +1.2
MLDN IAmb IAmb 22 04 43.3
comp=Z,28nm,0.7s
HNDO Hondo 16.11 340 Pn 22 04 44.2 +0.4
HNVL Huntsville, TX 16.44 353 Pn Pn 22 04 47.6 -0.4
HNVL IAmb IAmb 22 04 58.1
comp=Z,32nm,0.9s
DRIO Del Rio 16.48 337 Pn 22 04 49.4 +0.9
435B Jarrell 16.83 347 Pn 22 04 53.2 +0.3
435B IAmb IAmb 22 04 57.2
comp=Z,50nm,1.0s
CHIV Chivirico 16.95 68 Pn Pn 22 04 54.3 0.0
HPIG 17.10 319 P 22 04 58.7 +0.7
JCT Junction City 17.15 340 Pn 22 04 57.1 +0.1
346A Big Creek Wild 17.27 11 Pn 22 04 58.7 +0.3
346A IAmb IAmb 22 05 22.8
comp=Z,52nm,0.7s
SAND Sanderson 17.57 333 P 22 05 03.8 +0.7
SAND IAmb IAmb 22 05 06.1
comp=Z,35nm,0.8s
BRAL Brewton 17.64 18 Pn 22 05 00.7 -2.2
BRDY Brady 17.66 343 Pn 22 05 03.7 +0.4
237A Washetta, Mont 17.71 353 P 22 05 05.0 +0.5
TX31 Lajitas Ar. Si 17.77 329 P 22 05 07.0 +1.6
TXAR Lajitas Array 17.77 329 P P 22 05 06.9 +1.6
comp=Z,10nm,1.0s,baz=145,slow=13,SNR=35
TXAR LR LR 22 12 49.8
comp=Z,142nm,18.5s,baz=126,slow=40
TXAR Lajitas Array 17.77 329 P 22 05 07.1 +1.8
656A Willston 17.87 32 Pn 22 05 04.9 -0.9
VBMS Vicksburg 17.93 7 P Pn 22 05 06.0 -0.4
VBMS IAmb IAmb 22 05 13.5
comp=Z,51nm,0.6s
WHTX Lake Whitney, 17.97 348 Pn 22 05 07.5 +0.4
OZNA Ozona 18.02 337 P 22 05 09.0 +0.9
OZNA IAmb IAmb 22 05 16.3
comp=Z,44nm,1.0s
FW13 Cleburne 18.32 348 P P 22 05 11.2 +0.1
FW13 IAmb IAmb 22 05 41.9
comp=Z,31nm,0.9s
NMDO Nuevo Mundo 18.40 68 P P 22 05 11.8 -0.4
ALPN Alpine 18.62 331 P 22 05 14.7 0.0
250A Grady 18.62 19 P P 22 05 15.1 +0.5
250A IAmb IAmb 22 05 21.5
comp=Z,29nm,0.6s
352A Blakely 18.63 23 P P 22 05 14.3 -0.3
Z41A Richland Creek 18.80 1 P P 22 05 16.8 +0.3
Z41A IAmb IAmb 22 05 48.9
comp=Z,32nm,0.9s
LPIG La Paz 18.84 303 LR LR 22 12 46.5
comp=Z,162nm,19.6s,baz=136,slow=37
Z38A Mt. Pleasant 18.87 355 P P 22 05 18.1 +0.8
SGCY Sterling City 18.92 339 P 22 05 17.8 -0.1
SGCY IAmb IAmb 22 05 21.0
comp=Z,60nm,0.8s
FW06 Azle 18.94 349 P Pn 22 05 19.4 +0.6
PLPT Palo Pinto 18.95 347 P P 22 05 17.9 -0.3
PLPT IAmb IAmb 22 05 35.8
comp=Z,25nm,0.8s
MNHN Monahans 19.04 334 P P 22 05 19.5 +0.3
MNHN IAmb IAmb 22 05 23.6
comp=Z,42nm,0.8s
ABTX Abilene, Hawle 19.10 343 P 22 05 19.9 +0.1
ABTX IAmb IAmb 22 05 34.0
comp=Z,17nm,0.6s
TIGA Tifton 19.12 26 P P 22 05 19.3 -0.8
TIGA IAmb IAmb 22 05 55.8
comp=Z,106nm,1.4s
WLAR White Oak Lake 19.23 0 P P 22 05 21.7 +0.5
WLAR IAmb IAmb 22 05 47.1
comp=Z,41nm,0.8s
Z35A Perchaven, San 19.23 350 P P 22 05 21.2 0.0
Z35A IAmb IAmb 22 05 29.1
comp=Z,52nm,0.8s
Z47A Carrollton 19.31 13 P P 22 05 22.1 +0.1
Z47A IAmb IAmb 22 05 30.4
comp=Z,35nm,0.7s
LRAL Lakeview Retre 19.41 16 P 22 05 24.0 +0.9
PECS Pecos 19.56 332 P Pn 22 05 26.7 +0.3
VHRN Van Horn 19.62 328 P 22 05 26.6 +0.9
ODSA Odessa 19.64 336 P P 22 05 27.1 +1.4
152A Waverly Hall 19.77 21 P P 22 05 27.5 +0.3
152A IAmb IAmb 22 05 32.4
comp=Z,24nm,0.9s
LOOK Love County 19.87 350 P P 22 05 27.1 -1.1
LOOK IAmb IAmb 22 05 51.4
comp=Z,44nm,0.8s
WTFS Witchita Falls 19.90 347 P 22 05 28.6 +0.1
WTFS IAmb IAmb 22 05 51.8
comp=Z,16nm,0.6s
APMT Aspermont 19.90 343 P 22 05 28.2 -0.3
APMT IAmb IAmb 22 05 35.1
comp=Z,20nm,0.7s
SN07 Snyder 07 19.91 341 P P 22 05 28.6 -0.2
SN07 IAmb IAmb 22 05 33.5
comp=Z,36nm,0.8s
X40A Basin Creek Fa 20.03 1 P P 22 05 30.8 +0.9
MIAR Mount Ida 20.09 359 P P 22 05 29.3 -1.2
MIAR IAmb IAmb 22 05 52.3
comp=Z,34nm,1.0s
POST Post 20.09 339 P 22 05 31.2 +0.4
POST IAmb IAmb 22 05 37.8
comp=Z,34nm,1.0s
CLNB Carlsbad 20.32 333 P P 22 05 34.4 +1.1
UALR University of 20.33 2 P 22 05 33.3 +0.2
UALR IAmb IAmb 22 05 41.0
comp=Z,27nm,0.9s
Y49A Blount Mountai 20.34 16 P 22 05 33.1 -0.2
Y49A IAmb IAmb 22 05 54.7
comp=Z,20nm,0.8s
154A Montrose 20.34 25 P 22 05 33.0 -0.3
DKNS Dickens 20.46 341 P 22 05 34.9 +0.2
DKNS IAmb IAmb 22 05 39.8
comp=Z,25nm,0.8s
GDL2 Guadalupe Moun 20.48 332 P 22 05 36.7 +1.7
INCA Colegio Marist 20.50 134 P Pn 22 05 42.9 +5.1
MNTX Cornudas Mount 20.55 329 P 22 05 36.9 +1.2
MNTX IAmb IAmb 22 05 41.5
comp=Z,16nm,0.8s
X34A Smith Ranch, M 20.58 349 P P 22 05 37.3 +1.4
X34A IAmb IAmb 22 05 56.9
comp=Z,28nm,0.7s
X48A Hartselle 20.74 14 P 22 05 37.8 +0.1
ROSC El Rosal 20.84 115 P P 22 05 38.1 -1.2
comp=Z,5.8nm,0.4s,baz=294,slow=17,SNR=11
comp=Z,5.8nm,0.4s
ROSC El Rosal 20.84 115 P 22 05 40.0 +0.7
ROSC IAmb IAmb 22 05 44.2
comp=Z,41nm,1.0s
WHAR Wooly Hollow 20.84 2 P 22 05 39.8 +1.0
WHAR IAmb IAmb 22 05 44.9
comp=Z,23nm,1.1s
WMOK Wichita Mounta 20.90 347 P P 22 05 39.1 -0.3
GOGA Godfrey 20.90 23 IAmb IAmb 22 05 46.9
comp=Z,46nm,1.1s
W35A Tecumseh 20.96 351 P 22 05 40.1 +0.1
W35A IAmb IAmb 22 05 43.7
comp=Z,27nm,0.7s
CPRX Cap Rock 20.97 334 P 22 05 42.1 +1.8
Y52A Lilburn 21.09 21 P P 22 05 42.4 +1.0
FPAL Fort Paine 21.21 17 P 22 05 42.8 0.0
MSTX Muleshoe 21.36 338 P 22 05 45.4 +0.9

MSTX IAmb IAmb 22 05 50.5
comp=Z,46nm,0.9s
FCAR Ozark Folk Cen 21.45 2 P P 22 05 45.3 0.0
FCAR IAmb IAmb 22 05 49.1
comp=Z,26nm,0.8s
SDDR Presa de Saban 21.45 75 P P 22 05 45.7 +0.2
SDDR IAmb IAmb 22 06 20.2
comp=Z,19nm,1.0s
TUL3 Leonard 21.57 354 P 22 05 46.5 -0.1
TUL3 IAmb IAmb 22 06 10.2
comp=Z,34nm,1.1s
DEOK Depew 21.59 353 P P 22 05 46.7 -0.1
DEOK IAmb IAmb 22 05 49.6
comp=Z,24nm,0.8s
SMWD Samnorwood 21.60 344 P 22 05 46.8 -0.2
OK029 Liberty Lake 21.68 351 P P 22 05 47.8 +0.1
OK029 IAmb IAmb 22 05 50.3
comp=Z,22nm,0.8s
LCAR Lake Charles 21.68 4 P P 22 05 47.6 -0.1
LCAR IAmb IAmb 22 06 18.4
comp=Z,16nm,0.8s
RLO Rose Lookout 21.76 356 P P 22 05 48.7 0.0
RLO IAmb IAmb 22 06 33.2
comp=Z,16nm,0.8s
OK052 Battle Ridge R 21.77 352 P P 22 05 49.3 +0.5
OK052 IAmb IAmb 22 05 50.9
comp=Z,28nm,0.7s
HHAR Hobbs 21.83 358 P 22 05 49.4 +0.1
W50A Signal Mountai 21.91 17 P P 22 05 49.7 -0.5
W50A IAmb IAmb 22 06 05.2
comp=Z,36nm,1.2s
QUOK Quay 21.94 352 P P 22 05 50.0 -0.5
QUOK IAmb IAmb 22 05 52.8
comp=Z,32nm,0.8s
SRIG Santa Rosalia 21.95 309 P P 22 05 51.5 +0.8
HSIG 21.99 314 P P 22 05 52.3 +1.2
U38A Gravette 22.00 357 P 22 05 51.0 -0.2
U38A IAmb IAmb 22 05 58.3
comp=Z,21nm,1.1s
WVT Waverly 22.19 12 P 22 05 52.8 -0.4
WVT IAmb IAmb 22 06 02.5
comp=Z,14nm,0.8s
OK048 Pawnee Station 22.21 352 P 22 05 52.8 -0.7
OK048 IAmb IAmb 22 05 55.6
comp=Z,25nm,0.8s
OK051 E0350 and S346 22.28 352 P P 22 05 54.1 -0.1
ELIS Ellis County 22.32 347 P 22 05 55.0 +0.4
CROK Carrier 22.46 350 P P 22 05 55.7 -0.4
121A Cookes Peak, D 22.46 326 P 22 05 57.7 +1.3
319A Douglas 22.46 322 P 22 05 57.3 +0.9
319A IAmb IAmb 22 06 02.5
comp=Z,21nm,0.8s
BG3 Lake Jocassee 22.51 22 P P 22 05 55.6 -1.1
BG3 IAmb IAmb 22 06 25.4
comp=Z,22nm,0.6s
T42A Van Buren 22.64 4 IAmb IAmb 22 06 24.1
comp=Z,16nm,0.8s
MGMO Mountain Grove 22.70 2 P P 22 05 58.4 -0.3
SDV Santo Domingo 22.73 101 P P 22 05 57.1 -2.2
comp=Z,15nm,0.7s,baz=308,slow=5.5,SNR=19
SDV LR LR 22 16 54.7
comp=Z,123nm,19.0s,baz=273,slow=42
comp=Z,15nm,0.7s
SDV Santo Domingo 22.73 101 P 22 05 59.0 -0.4
SDV IAmb IAmb 22 06 02.0
comp=Z,15nm,0.6s
NOKA Waynoka 22.76 348 P P 22 05 59.0 -0.3
NOKA IAmb IAmb 22 06 01.9
comp=Z,24nm,0.7s
TKL Tuckaleechee C 22.81 20 LR LR 22 16 14.1
comp=Z,138nm,18.6s,baz=188,slow=40
U49A Red Boiling Sp 23.02 15 P 22 06 01.2 -0.7
U49A IAmb IAmb 22 06 21.3
comp=Z,16nm,0.8s
CRNM Carthage 23.04 330 P P 22 06 03.6 +1.1
Y22A Socorro 23.14 330 P 22 06 04.8 +1.3
Y22A IAmb IAmb 22 06 18.2
comp=Z,24nm,0.8s
V53A Saluda 23.16 22 P P 22 06 04.2 +0.8
V53A IAmb IAmb 22 06 32.0
comp=Z,30nm,0.9s
T47A Sharon Grove 23.16 12 IAmb IAmb 22 06 30.7
comp=Z,16nm,0.7s
DUN6 Lazy B Ranch 23.20 324 P P 22 06 05.4 +1.4
S39A Bolivar 23.22 360 IAmb IAmb 22 06 05.8
comp=Z,16nm,0.6s
SBM South Baldy 23.28 329 P P 22 06 06.8 +1.8
LENM Lemitar 23.33 330 P P 22 06 02.6 -2.8
S44A Carbondale 23.48 8 P P 22 06 05.1 -1.5
S44A IAmb IAmb 22 06 19.4
comp=Z,19nm,0.8s
SIUC Southern Illin 23.51 8 P P 22 06 07.2 +0.4
SIUC IAmb IAmb 22 06 30.1
comp=Z,24nm,0.8s
RTBA Rita Blanca 23.58 340 P 22 06 08.1 +0.4
CCM Cathedral Cave 23.65 4 P P 22 06 06.7 -1.5
CCM IAmb IAmb 22 06 09.4
comp=Z,12nm,0.6s
ANMO Albuquerque 23.73 332 LR LR 22 16 27.6
comp=Z,57nm,21.3s,baz=138,slow=39
ANMO Albuquerque 23.73 332 P 22 06 09.7 +0.4
ANMO Albuquerque 23.73 332 P 22 06 09.1 -0.1
ANMO IAmb IAmb 22 06 19.8
comp=Z,7.1nm,0.9s
R40A Maddies Statio 23.84 2 P P 22 06 08.7 -1.2
TUC Tucson 24.03 321 P 22 06 13.4 +1.5
TUC IAmb IAmb 22 06 16.0
comp=Z,21nm,0.9s
SLM Saint Louis 24.30 6 P P 22 06 13.8 -0.5
R32A Long Quarter, 24.45 349 P P 22 06 15.2 -0.5
R32A IAmb IAmb 22 06 17.6
comp=Z,27nm,0.9s
WCI Wyandotte Cave 24.53 13 P P 22 06 15.6 -0.7
WCI IAmb IAmb 22 06 58.9
comp=Z,18nm,0.8s
T25A Trinidad 24.79 338 P 22 06 20.6 +1.7
T25A IAmb IAmb 22 06 24.7
comp=Z,23nm,0.7s
KSU1 Kansas State U 24.82 354 IAmb IAmb 22 07 02.4
comp=Z,20nm,0.6s
214A Organ Pipe Nat 25.07 318 P 22 06 22.1 +0.7
P40A Paris 25.08 2 P 22 06 20.1 -1.2
P40A IAmb IAmb 22 06 20.8
comp=Z,18nm,0.8s
X18A Snowflake 25.15 326 P 22 06 23.1 +0.8
P38A Dawn 25.16 359 P 22 06 22.6 +0.5
P38A IAmb IAmb 22 06 23.3
comp=Z,10nm,0.7s
PIX Pinacate 25.25 316 P 22 06 24.3 +1.3
W18A Petrified Fore 25.48 327 P P 22 06 26.7 +1.5
SDCO Great Sand Dun 25.73 337 P 22 06 28.5 +1.0
SDCO IAmb IAmb 22 06 30.8
comp=Z,19nm,1.2s
X16A Lo Mia Camp, P 25.90 324 P P 22 06 30.1 +1.0
P48A Milroy 25.90 14 P P 22 06 28.0 -0.8
P48A IAmb IAmb 22 06 56.8
comp=Z,24nm,1.1s
ATAH Atahualpa 25.91 145 LR LR 22 15 12.6
comp=Z,200nm,18.3s,baz=312,slow=33
KSCO Kaye Shedlock' 25.92 343 P P 22 06 28.8 -0.3
KSCO IAmb IAmb 22 06 33.6
comp=Z,43nm,1.4s
SJG San Juan 26.19 78 LR LR 22 16 39.8
comp=Z,195nm,21.6s,baz=250,slow=36
113A Mohawk Valley, 26.21 318 P 22 06 33.2 +1.6
N38A Joes South For 26.32 360 P P 22 06 31.8 -0.8
Y14A Wickenburg 26.50 321 P P 22 06 35.4 +1.1
MVCO Mesa Verde 26.53 332 P 22 06 36.2 +1.4
MVCO IAmb IAmb 22 06 44.8
comp=Z,11nm,0.8s
WUAZ Wupatki 26.66 325 P 22 06 36.6 +0.7
Q24A Divide 26.68 339 P P 22 06 36.2 0.0
GLA Glamis 27.08 317 P P 22 06 40.9 +1.3
M44A Midewin, Midew 27.28 8 P P 22 06 41.3 +0.1
PV13 Radium Mtn., P 27.45 333 P P 22 06 42.9 -0.2
PV13 IAmb IAmb 22 06 49.9
comp=Z,12nm,0.9s
PV15 Paradox Valley 27.45 333 P P 22 06 42.8 -0.3
PV15 IAmb IAmb 22 06 50.9
comp=Z,12nm,1.0s
PV02 Paradox Valley 27.45 333 P P 22 06 44.1 +1.0
PV02 IAmb IAmb 22 07 12.1
comp=Z,22nm,1.0s
PV05 Paradox Valley 27.51 332 P P 22 06 44.6 +1.0
PV05 IAmb IAmb 22 06 53.5
comp=Z,11nm,0.8s
PV03 Paradox Valley 27.54 333 P P 22 06 44.0 +0.1
PV03 IAmb IAmb 22 06 50.6
comp=Z,12nm,1.0s
PV18 Skein Mesa, Pa 27.56 333 P P 22 06 45.4 +1.3
PV18 IAmb IAmb 22 07 03.5
comp=Z,14nm,0.8s
OGNE Ogallala 27.58 345 P P 22 06 43.7 -0.3
OGNE IAmb IAmb 22 06 46.0
comp=Z,24nm,1.2s
ISCO Idaho Springs 27.59 339 P 22 06 44.2 -0.1
PV11 David Mesa, Pa 27.59 333 P P 22 06 44.3 0.0
PV11 IAmb IAmb 22 06 51.0
comp=Z,17nm,0.9s
PV07 Paradox Valley 27.61 333 P 22 06 44.3 -0.1
PV07 IAmb IAmb 22 06 48.0
comp=Z,13nm,0.9s
PV16 Nyswonger Mesa 27.62 333 P P 22 06 45.5 +0.9
PV16 IAmb IAmb 22 06 59.6
comp=Z,8.3nm,0.7s
PV20 West Nyswonger 27.67 333 P P 22 06 46.3 +1.3
PV20 IAmb IAmb 22 07 12.8
comp=Z,23nm,1.1s
PV22 Blue Mesa, Par 27.75 333 P 22 06 46.3 +0.6
PV22 IAmb IAmb 22 06 55.5
comp=Z,11nm,0.8s
PV23 Carpenter Ridg 27.78 333 P P 22 06 45.6 -0.5
W13A Hualapai Mount 27.82 322 P 22 06 47.1 +0.8
U15A North Rim 27.84 326 P 22 06 47.0 +0.4
BC3 Big Chuckawall 27.87 317 P 22 06 47.7 +1.0
BC3 IAmb IAmb 22 06 50.2
comp=Z,14nm,1.0s
IRM Iron Mountain 27.98 319 P P 22 06 48.3 +0.6
HMU Henry Mountain 28.18 330 P P 22 06 49.7 +0.1
PFO Pinyon Flats O 28.51 316 LR LR 22 19 58.7
comp=Z,142nm,18.5s,baz=114,slow=40
KNB Kanab 28.55 326 P 22 06 53.8 +0.9
HAYD Hayden 28.81 337 P P 22 06 55.2 0.0
V12A Nelson 28.82 321 P 22 06 56.1 +1.0
V12A IAmb IAmb 22 06 58.7
comp=Z,13nm,1.0s
MTPU Mount Pierson 28.98 328 P P 22 06 57.3 +0.5
SRU San Rafael Swe 29.00 331 P P 22 06 57.5 +0.6
MTPC Mountain Pass 29.09 320 P P 22 06 58.2 +0.6
SZCU Shurtz Canyon 29.12 326 P P 22 06 57.3 -0.7
Q16A Castle Valley 29.15 330 P P 22 06 57.8 -0.4
CCUT Cedar City 29.24 326 P 22 07 00.2 +1.2
P18A Preston Nutter 29.29 332 P P 22 07 01.0 +1.5
P17A Butcher Ranch, 29.39 332 P P 22 07 01.4 +1.2
ECSD EROS Data Cent 29.41 355 P 22 06 59.5 -0.7
ECSD IAmb IAmb 22 07 02.8
comp=Z,7.6nm,0.7s
TMUT Trail Mountain 29.47 331 P P 22 07 02.4 +1.2
SHPR Sheep Range 29.53 322 P P 22 07 02.0 +0.5
QSM Queen of Sheba 30.22 320 P P 22 07 08.3 +0.9
PSUT Pine Spring 30.22 327 P 22 07 07.6 -0.1
BSUT Blindstream Ca 30.26 333 P 22 07 09.2 +1.0
K22A Casper 30.44 340 P 22 07 09.8 +0.3
K22A IAmb IAmb 22 07 11.8
comp=Z,6.9nm,0.8s
CLC China Lake 30.59 319 P P 22 07 11.5 +0.7
WCT Wildcat Mounta 30.60 321 P P 22 07 12.7 +1.8
S11A Rachel 30.65 323 P P 22 07 13.2 +1.9
S11A IAmb IAmb 22 07 16.7
comp=Z,9.4nm,0.8s
MPMC Manual Prospec 30.67 319 P P 22 07 12.5 +0.8
TCUT Toone Canyon 31.02 333 P P 22 07 15.8 +1.1
TCUT IAmb IAmb 22 07 18.2
comp=Z,15nm,0.9s
RSSD Black Hills 31.07 345 P 22 07 15.3 +0.2
RSSD IAmb IAmb 22 07 16.9
comp=Z,6.8nm,0.8s
HWUT Hardware Ranch 31.48 333 P 22 07 19.8 +1.0
BGU Big Grassy Mou 31.61 331 P P 22 07 21.1 +1.2
BW06 Boulder Array 31.62 337 P P 22 07 20.9 +0.9
PD31 Pinedale Array 31.62 337 P P 22 07 21.1 +1.1
PDAR Pinedale Array 31.62 337 P P 22 07 20.9 +0.9
comp=Z,1.7nm,0.8s,baz=137,slow=9.6,SNR=16
PDAR PcP PcP 22 10 11.8 0.0
comp=Z,0.6nm,0.4s,baz=144,slow=5.2,SNR=6.5
PDAR LR LR 22 21 54.3
comp=Z,64nm,18.1s,baz=140,slow=40
comp=Z,1.7nm,0.8s
PDAR Pinedale Array 31.62 337 P P 22 07 20.2 +0.2
SPUT South Promonto 31.64 332 P P 22 07 20.1 0.0
DSP Deep Springs 31.79 321 P 22 07 22.2 +0.9
HVU Hansel Valley 32.16 332 P P 22 07 26.2 +1.5
HVU IAmb IAmb 22 07 27.9
comp=Z,7.9nm,0.9s
AHID Auburn Hatcher 32.23 335 P P 22 07 26.0 +0.7
AHID IAmb IAmb 22 07 29.1
comp=Z,9.6nm,1.1s
SADO Sadowa 32.56 19 LR LR 22 21 46.9
comp=Z,144nm,19.7s,baz=306,slow=39
ELK Elko 32.57 328 LR LR 22 22 23.9
comp=Z,173nm,19.2s,baz=156,slow=39
ELK Elko 32.57 328 P 22 07 29.9 +1.5
NVAR Mina Array Bea 32.67 322 P P 22 07 32.0 +2.7
comp=Z,11nm,0.8s,baz=137,slow=8.9,SNR=63
NVAR PcP PcP 22 10 16.1 +1.3
comp=Z,2.3nm,0.8s,baz=151,slow=3.1,SNR=6.9
NVAR LR LR 22 22 41.3
comp=Z,401nm,18.4s,baz=130,slow=40
comp=Z,11nm,0.8s
SNOW Snow King Moun 32.68 336 P P 22 07 30.4 +1.1
LHV Little Huntoon 32.68 321 P P 22 07 31.1 +2.1
LHV IAmb IAmb 22 07 33.5
comp=Z,7.7nm,0.9s
LOHW Long Hollow 32.74 336 P 22 07 30.6 +0.7
LOHW IAmb IAmb 22 07 34.5
comp=Z,8.0nm,0.8s
MOOW Moose Ponds 32.91 336 P 22 07 30.9 -0.4
MOOW IAmb IAmb 22 07 38.0
comp=Z,6.5nm,0.9s
PMPB Monarch Peak 32.92 316 P P 22 07 31.7 +0.4
PMPB IAmb IAmb 22 07 34.6
comp=Z,14nm,1.1s
FXWY Fox Creek 32.93 336 P P 22 07 31.6 +0.2
FLWY Flagg Ranch 33.18 337 IAmb IAmb 22 07 38.8
comp=Z,6.9nm,0.8s
RLMT Red Lodge 33.55 339 IAmb IAmb 22 07 40.2
comp=Z,4.5nm,0.7s
AGMN Agassiz Nation 33.90 357 IAmb IAmb 22 07 41.6
comp=Z,11nm,0.8s
YHL Hebgen Lake 34.01 337 IAmb IAmb 22 07 44.7
comp=Z,6.6nm,0.7s
PAHR Pah Rah Range 34.14 323 IAmb IAmb 22 07 45.6
comp=Z,9.4nm,1.2s
HLID Hailey 34.31 332 IAmb IAmb 22 07 46.4
comp=Z,5.4nm,0.8s
BOAV Boa Vista 34.36 107 P P 22 07 44.1 +0.2
BOAV IAmb IAmb 22 07 44.6
comp=Z,5.2nm,0.8s
BOZ Bozeman (W) 34.81 337 IAmb IAmb 22 07 54.1
comp=Z,14nm,1.5s
DLMT Dillon 34.99 336 IAmb IAmb 22 07 52.6
comp=Z,11nm,0.8s
EPLO Experimental L 35.20 359 IAmb IAmb 22 07 50.4
comp=Z,8.9nm,0.7s
ULM Lac du Bonnet 35.85 357 P P 22 07 54.4 -2.0
comp=Z,5.4nm,0.8s,baz=175,slow=10,SNR=11
ULM PcP PcP 22 10 24.7 +1.4
comp=Z,3.1nm,0.8s,baz=218,slow=2.7,SNR=3.5
ULM LR LR 22 24 56.5
comp=Z,96nm,19.5s,baz=192,slow=40
comp=Z,5.4nm,0.8s
ULM Lac du Bonnet 35.85 357 IAmb IAmb 22 07 56.7
comp=Z,7.0nm,0.8s
PLID Pearl Lake 36.21 332 IAmb IAmb 22 08 02.3
comp=Z,10nm,0.8s
EGMT Eagleton 36.26 341 IAmb IAmb 22 08 02.5
comp=Z,15nm,1.1s
MSO Missoula 36.73 336 IAmb IAmb 22 08 06.5
comp=Z,6.7nm,0.8s
YBH Yreka Blue Hor 37.38 323 LR LR 22 25 49.7
comp=Z,18nm,19.1s,baz=130,slow=40
H04A Detroit Lake 38.98 327 IAmb IAmb 22 08 25.8
comp=Z,13nm,0.9s
NEW Newport 39.17 335 LR LR 22 26 53.2
comp=Z,123nm,18.4s,baz=137,slow=40
LPAZ La Paz 39.24 140 LR LR 22 22 57.6
comp=Z,68nm,18.9s,baz=300,slow=34
C09A Chrisman Ranch 39.30 333 IAmb IAmb 22 08 29.2
comp=Z,9.5nm,0.9s
LTY Liberty 39.99 331 IAmb IAmb 22 08 41.6

comp=Z,11nm,1.4s
LON Longmire 40.19 329 P P 22 08 35.1 +2.0
FFC Flin Flon 40.85 352 P 22 08 38.4 0.0
MDP Montagnes des 40.93 99 LR LR 22 26 15.7
comp=Z,122nm,22.0s,baz=306,slow=37
EDM Edmonton 41.92 342 P 22 08 48.2 +1.0
EDM IAmb IAmb 22 08 48.4
comp=Z,18nm,0.8s
LLLB Lilooet 42.97 333 IAmb IAmb 22 08 58.4
comp=Z,13nm,1.3s
RPN Rapa Nui 44.14 201 LR LR 22 22 33.0
comp=Z,103nm,20.9s,baz=202,slow=29
FCC Fort Churchill 44.31 359 IAmb IAmb 22 09 07.3
comp=Z,5.9nm,0.6s
SCHQ Schefferville 45.27 21 P P 22 09 12.5 -1.7
comp=Z,3.4nm,1.0s,baz=221,slow=11,SNR=2.0
SCHQ LR LR 22 30 05.4
comp=Z,176nm,18.4s,baz=215,slow=39
comp=Z,3.4nm,1.0s
YKA Yellowknife Ar 50.41 347 P P 22 09 54.2 +0.4
comp=Z,13nm,0.8s,baz=156,slow=6.8,SNR=116
YKA PcP PcP 22 11 12.1 +0.3
comp=Z,0.6nm,0.5s,baz=158,slow=2.8,SNR=3.7
YKA LR LR 22 36 57.8
comp=Z,48nm,18.0s,baz=290,slow=43
comp=Z,13nm,0.8s
V35K Ketchikan 50.49 333 P P 22 09 55.4 +0.9
baz=128
KOTAN Kotaneelee Air 50.96 341 P P 22 09 59.1 +1.1
baz=140
CRAG Craig 51.26 332 P P 22 10 01.9 +1.6
baz=127
WRAK Wrangell Islan 51.50 333 P P 22 10 03.6 +1.5
baz=128
U33K Whale Pass 51.65 333 P P 22 10 04.2 +1.0
baz=127
DLBC Dease Lake 51.85 336 P P 22 10 06.3 +1.4
baz=132
S34M Telegraph Cree 51.94 335 P P 22 10 07.0 +1.6
baz=131
FRB Frobisher Bay 52.21 14 LR LR 22 35 40.1
comp=Z,53nm,19.5s,baz=54,slow=40
R33M Jennings River 52.86 337 P P 22 10 13.4 +1.1
baz=132
Q32M Nakina River 53.08 336 P P 22 10 15.2 +1.1
baz=130
S32K Killisnoo 53.11 333 P P 22 10 15.4 +1.4
baz=127
SIT Sitka 53.19 333 P P 22 10 15.9 +1.3
baz=126
WRGLY Wrigley 53.21 343 P P 22 10 15.6 +1.0
baz=142
TGTN Hyland Airport 53.38 340 P P 22 10 17.4 +1.3
baz=136
CPUP Villa Florida 53.40 139 LR LR 22 32 46.6
comp=Z,51nm,21.7s,baz=340,slow=36
R32K Eaglecrest 53.57 334 P P 22 10 18.2 +0.8
baz=127
BDFB Brasilia 53.68 122 P P 22 10 18.7 -0.2
comp=Z,3.6nm,0.7s,baz=311,slow=8.8,SNR=5.7
BDFB LR LR 22 35 17.0
comp=Z,59nm,18.6s,baz=310,slow=38
comp=Z,3.6nm,0.7s
BDFB Brasilia 53.68 122 IAmb IAmb 22 10 42.9
comp=Z,8.6nm,1.2s
P32M Atlin 54.05 336 P P 22 10 22.0 +0.9
baz=129
P33M Teslin, Yukon 54.10 337 P P 22 10 22.2 +0.8
baz=130
S31K Pelican 54.12 333 P P 22 10 22.3 +1.0
baz=125
SKAG Skagway 54.62 335 P P 22 10 26.1 +1.1
baz=127
N32M Quiet Lake 54.81 338 P P 22 10 27.6 +1.1
baz=130
MMPY Sheldon Lake, 55.16 340 P P 22 10 30.0 +1.1
baz=133
WHY Whitehorse 55.18 336 P P 22 10 30.1 +0.8
baz=128
ILON Igloolik, Nuna 55.43 5 P 22 10 30.6 -0.1
FARO Faro, Yukon 55.62 339 P P 22 10 33.5 +1.3
baz=131
P30M Million Dollar 55.68 335 P P 22 10 34.2 +1.4
baz=126
O30N Mendenhall 55.72 336 P P 22 10 34.5 +1.4
baz=127
M31M Drury Creek, Y 55.97 338 P P 22 10 36.2 +1.4
baz=129
N31M Braeburn, Yuko 56.04 337 P P 22 10 36.8 +1.5
baz=128
HYT Haines Junctio 56.31 336 P P 22 10 38.4 +1.1
baz=125
O29M Mount Kennedy 56.45 335 P P 22 10 39.5 +1.1
baz=124
N30M Aishikik Lake 56.52 336 P P 22 10 40.2 +1.4
baz=126
YUK6 Outpost Mounta 56.72 336 P P 22 10 41.5 +1.0
baz=124
PINM Pinnacle 57.03 334 P P 22 10 43.7 +1.2
baz=122
YUK4 Talbot Arm 57.06 336 P P 22 10 43.8 +1.0
baz=125
M30M Minto, Yukon 57.08 338 P P 22 10 44.2 +1.5
baz=127
YUK8 Steele Glacier 57.48 335 P P 22 10 47.4 +1.6
baz=123
M29M Somme Creek 57.63 337 P P 22 10 48.1 +1.5
baz=125,SNR=14
MESA MESA 57.80 334 P P 22 10 49.0 +0.9
baz=120
L29M L29M 57.89 338 IAmb IAmb 22 10 50.8
comp=Z,7.5nm,0.9s
L29M L29M 57.89 338 P P 22 10 49.4 +1.0
baz=126
CTG Chitna Glacier 57.95 335 P P 22 10 50.3 +1.3
baz=121
YUK3 Moose Creek 58.03 336 P P 22 10 50.3 +0.7
baz=123
K29M Barlow Dome 58.11 339 P P 22 10 50.7 +0.7
baz=127
J30M Hart River 58.15 340 P P 22 10 51.1 +0.7
baz=128
C36M Paulatuk 58.29 348 P P 22 10 51.8 +0.8
baz=144
H31M Peel River 58.30 341 P P 22 10 52.2 +0.9
baz=131
BVCY Beaver Creek 58.53 336 P P 22 10 54.0 +1.1
baz=123
I30M Mount Dempster 58.58 340 IAmb IAmb 22 10 56.3
comp=Z,4.5nm,0.8s
I30M Mount Dempster 58.58 340 P P 22 10 54.1 +0.9
baz=129,SNR=6.2
CRQE Cirque 58.58 334 P P 22 10 54.6 +1.2
baz=120
PLCA Paso Flores 58.70 160 LR LR 22 30 58.2
comp=Z,65nm,19.6s,baz=318,slow=30
J29N Klondike Camp 58.72 339 P P 22 10 55.2 +1.0
baz=126
KAIM Kayak Island 58.76 333 P P 22 10 55.6 +1.1
baz=118
MCARA McCarthy VSAT 58.87 335 P P 22 10 56.4 +1.2
baz=120
M27K Edge Creek, AK 58.90 336 P P 22 10 56.4 +0.8
baz=122
DAWY Dawson 58.91 338 P P 22 10 56.4 +0.8
baz=125
POIN Pond Inlet 58.99 5 P 22 10 56.1 +0.3
POIN IAmb IAmb 22 10 56.8
comp=Z,6.2nm,0.9s
G31M Satah River 59.03 342 P P 22 10 57.0 +0.8
baz=132,SNR=8.6
F31M Tsiigehtchic 59.23 343 IAmb IAmb 22 10 58.7
comp=Z,8.2nm,0.8s
F31M Tsiigehtchic 59.23 343 P P 22 10 58.3 +0.7
baz=133,SNR=7.7
BCAR Beaver Creek A 59.24 337 P 22 10 58.5 +0.6
L27K Beaver Creek, 59.26 337 IAmb IAmb 22 11 00.1
comp=Z,5.0nm,0.8s
L27K Beaver Creek, 59.26 337 P P 22 10 59.2 +1.3
baz=122
I29M Ogilvie Camp, 59.30 340 IAmb IAmb 22 10 59.6
comp=Z,5.8nm,1.0s
I29M Ogilvie Camp, 59.30 340 P P 22 10 59.1 +0.9
baz=127
BMRM Bremner River 59.33 334 P P 22 10 59.4 +0.9
baz=118
M26K Nabesna, AK 59.37 336 IAmb IAmb 22 11 01.4
comp=Z,6.9nm,1.2s
M26K Nabesna, AK 59.37 336 P P 22 11 00.4 +1.7
baz=120
EPYK Eagle Plains 59.41 341 P P 22 10 59.8 +0.9
baz=129
Q23K Middleton Isla 59.41 332 P P 22 11 00.5 +1.6
baz=116
SFJD Kangerlussuaq 59.51 18 LR LR 22 38 17.2
comp=Z,193nm,18.3s,baz=206,slow=38
N25K Chitina, Valde 59.64 334 P P 22 11 02.2 +1.6
baz=118,SNR=6.1
EYAK Cordova Ski Ar 59.64 333 P P 22 11 01.9 +1.4
baz=117
INK Inuvik 59.76 344 LR LR 22 43 06.8
comp=Z,77nm,18.1s,baz=308,slow=42
INK Inuvik 59.76 344 P P 22 11 02.1 +0.8
baz=133,SNR=13
L26K Log Cabin Wild 59.83 336 P P 22 11 03.0 +1.2
baz=120
I28M Miner Creek 59.90 339 P P 22 11 03.4 +1.0
baz=125
F30M Barrier River 59.93 343 P P 22 11 03.4 +1.0
baz=130
KLU Klutina 60.14 334 P P 22 11 05.3 +1.2
baz=117
HARP HAARP 60.25 335 P P 22 11 06.5 +1.8
baz=118
RES Resolute Bay 60.31 359 LR LR 22 39 42.4
comp=Z,75nm,19.0s,baz=46,slow=39
M24K Tolsona, Glenn 60.53 334 P P 22 11 07.9 +1.2
baz=117
SCRK Sand Creek 60.56 337 P P 22 11 08.4 +1.4
baz=120
I27K Kandik River 60.57 339 P P 22 11 08.1 +1.2
baz=124
PAX Paxson 60.65 335 P 22 11 08.0 +0.4
PAX Paxson 60.65 335 P P 22 11 08.6 +1.1
baz=118,SNR=6.2
A36M Sachs Harbour 60.66 349 P P 22 11 07.7 +0.3
baz=144,SNR=6.0
RIDG Independent Ri 60.77 336 P P 22 11 09.2 +0.9
baz=119
H27K Steamboat Moun 60.89 340 IAmb IAmb 22 11 11.4
comp=Z,7.7nm,0.9s
H27K Steamboat Moun 60.89 340 P P 22 11 10.6 +1.5
baz=124,SNR=7.5
SCM Sheep Creek Mo 60.90 334 P P 22 11 09.7 +0.5
baz=116
I26K Coal Creek Min 60.95 338 P P 22 11 10.6 +1.2
baz=122
E29M Blow River 61.04 343 IAmb IAmb 22 11 12.3
comp=Z,12nm,1.2s
E29M Blow River 61.04 343 P P 22 11 11.1 +1.1
baz=129
M23K Glacier View 61.05 334 P P 22 11 11.3 +1.1
baz=115
F28M Old Crow 61.16 341 P P 22 11 12.0 +1.2
baz=126,SNR=24
K24K Donnelly Dome 61.17 336 P P 22 11 12.2 +1.2
baz=118
KNK Knik Glacier 61.20 333 P P 22 11 12.5 +1.2
baz=114
SML Sawmill 61.31 334 P P 22 11 13.0 +1.0
baz=115
O22K Cedr Landing 61.39 332 P P 22 11 13.6 +1.1
baz=113
WAT6 Susitna Watana 61.40 335 P P 22 11 13.7 +1.0
baz=116,SNR=8.9
J25K Salcha River, 61.40 337 IAmb IAmb 22 11 14.9
comp=Z,8.4nm,1.2s
J25K Salcha River, 61.40 337 P P 22 11 13.5 +0.9
baz=119
DHY Denali Highway 61.47 335 P P 22 11 14.2 +1.0
baz=116
PMR Palmer 61.57 333 P P 22 11 15.0 +1.3
baz=114
RC01 Rabbit Creek A 61.64 333 P P 22 11 15.5 +1.4
baz=113
KDAK Kodiak Island 61.81 328 P P 22 11 16.7 +1.3
baz=109
WAT1 Susitna Watana 61.84 335 P P 22 11 16.6 +1.1
baz=115
D28M Stokes Point 61.87 343 P P 22 11 16.8 +1.2
baz=128
HDA Harding Lake 61.91 337 P P 22 11 17.0 +1.1
baz=117
PRP Porcupine Dome 61.91 338 P P 22 11 17.2 +1.1
baz=119,SNR=9.7
E27K Coleen River 62.02 342 P P 22 11 18.0 +1.3
baz=125,SNR=14
G26K Porcupine Rive 62.04 340 IAmb IAmb 22 11 18.8
comp=Z,6.1nm,1.1s
G26K Porcupine Rive 62.04 340 P P 22 11 18.0 +1.3
baz=122
ILAR Eielson Array 62.05 337 P P 22 11 17.5 +0.6
comp=Z,6.2nm,0.9s,baz=140,slow=4.4,SNR=47
ILAR LR LR 22 40 30.4
comp=Z,82nm,19.2s,baz=118,slow=38
comp=Z,6.2nm,0.9s
ILAR Eielson Array 62.05 337 P P 22 11 17.4 +0.5
CAPN Captain Cook N 62.15 332 P P 22 11 19.2 +1.6
baz=112
RND Reindeer 62.21 335 P 22 11 19.8 +1.7
CCB Clear Creek Bu 62.35 337 IAmb IAmb 22 11 21.7
comp=Z,3.2nm,0.8s
MCK McKinley 62.39 335 P 22 11 20.1 +1.0
MCK McKinley 62.39 335 P P 22 11 20.4 +1.2
baz=115,SNR=6.0
CUT Chulitna 62.39 334 P P 22 11 20.5 +1.3
baz=113
POKR Poker Plat Res 62.42 337 P P 22 11 20.3 +1.0
baz=117
D27M Malcolm River 62.45 343 P P 22 11 20.6 +1.0
baz=126
COLA College 62.47 337 P P 22 11 21.1 +1.5
baz=117
F26K Sheenjek River 62.55 340 IAmb IAmb 22 11 22.6
comp=Z,5.9nm,1.1s
F26K Sheenjek River 62.55 340 P P 22 11 21.6 +1.3
baz=122,SNR=5.5
BMAR Burnt Mountain 62.55 340 P 22 11 21.6 +1.3
SPU Mount Spurr 62.71 332 IAmb IAmb 22 11 23.4
comp=Z,7.3nm,0.8s
STLK Strandline Lak 62.73 333 IAmb IAmb 22 11 23.6
comp=Z,5.9nm,1.0s
SKT Skwentna 62.77 333 IAmb IAmb 22 11 23.9
comp=Z,9.8nm,1.0s
SKT Skwentna 62.77 333 P P 22 11 22.7 +1.0
baz=112
N20K Mount Spurr 62.79 332 P P 22 11 23.0 +1.0
baz=111
SPCR Spurr Chakacha 62.79 332 P P 22 11 23.1 +1.1
baz=111
TRF Thorofare Moun 62.82 335 P P 22 11 23.2 +1.0
baz=114,SNR=9.5
H24K Noodor Dome 62.92 338 P P 22 11 23.8 +1.0
baz=117,SNR=10
F25K Christian Rive 62.99 340 IAmb IAmb 22 11 25.4
comp=Z,5.7nm,0.8s
F25K Christian Rive 62.99 340 P P 22 11 24.6 +1.5
baz=120,SNR=7.0
I23K Minto, Yukon-K 63.16 337 P P 22 11 25.3 +1.1
baz=115,SNR=9.9
G24K Hadweenzic Riv 63.18 339 IAmb IAmb 22 11 26.7
comp=Z,9.5nm,1.0s
G24K Hadweenzic Riv 63.18 339 P P 22 11 25.4 +1.0
baz=118,SNR=5.4
E25K Arctic Village 63.23 341 IAmb IAmb 22 11 26.8
comp=Z,3.6nm,0.7s
E25K Arctic Village 63.23 341 P P 22 11 26.0 +1.2
baz=120,SNR=6.6
Q18K Katmai Hardscr 63.29 329 P P 22 11 26.6 +1.2
baz=107
BPAW Bear Paw Mtn. 63.37 335 IAmb IAmb 22 11 26.9
comp=Z,6.6nm,0.7s
BPAW Bear Paw Mtn. 63.37 335 P P 22 11 26.7 +1.0
baz=113,SNR=6.8
PPLA Purkeypile 63.40 334 P P 22 11 27.0 +1.0
baz=112
M20K Styx River 63.45 333 P P 22 11 27.2 +0.8
baz=110
C27K Jago River 63.47 342 P P 22 11 27.6 +1.4
baz=123
P18K Big Mountain, 63.62 330 P P 22 11 28.4 +1.0
baz=107
Q17K Contact Creek 63.63 328 P P 22 11 28.4 +0.8
baz=106
MLY Manley 63.64 336 P P 22 11 28.5 +0.9
baz=114
R17L Mt. Peulik Vol 63.70 328 P P 22 11 29.0 +1.0
baz=105
N19K Bonanza Creek 63.70 331 IAmb IAmb 22 11 55.7
comp=Z,6.8nm,1.0s
N19K Bonanza Creek 63.70 331 P P 22 11 28.7 +0.6
baz=108
O18K Koktuh Hills 63.75 330 P P 22 11 29.1 +0.8
baz=107
CHUM Lake Minchumin 63.82 335 P P 22 11 29.3 +0.7
baz=112
C26K Camden Bay 63.98 342 P P 22 11 31.0 +1.5
baz=122
PPT Papeete 64.06 242 LR LR 22 32 28.5
comp=Z,62nm,20.6s,baz=33,slow=29
G23K Bananza Creek 64.08 338 IAmb IAmb 22 11 32.6
comp=Z,5.7nm,0.9s
G23K Bananza Creek 64.08 338 P P 22 11 31.6 +1.2
baz=115
D25K Kavik River 64.10 342 P P 22 11 31.9 +1.5
baz=120
Q16K King Salmon 64.13 329 P P 22 11 32.0 +1.3
baz=105
P17K Kvichak River 64.16 329 P P 22 11 32.1 +1.1
baz=106
E24K Your Creek 64.17 340 P P 22 11 31.9 +1.0
baz=118
I21K Tanana 64.19 336 P P 22 11 31.6 +0.6
baz=113
H22K Ishtalitna Cre 64.24 337 IAmb IAmb 22 11 32.8
comp=Z,7.0nm,0.9s
H22K Ishtalitna Cre 64.24 337 P P 22 11 32.1 +0.7
baz=114
L19K White Mountain 64.31 333 P P 22 11 32.7 +0.7
baz=109
R16K Pilot Point 64.32 327 P P 22 11 32.7 +0.7
baz=104
N18K Kilae Creek 64.32 331 P P 22 11 32.6 +0.6
baz=107
K20K Telida 64.36 334 P P 22 11 32.8 +0.5
baz=110
COLD Coldfoot 64.37 339 P P 22 11 33.4 +1.1
baz=115
M18K Stony River 64.53 332 P P 22 11 34.0 +0.6
baz=107
E23K Chandalar 64.54 340 P P 22 11 35.0 +1.6
baz=116
O17K Koliganek Bris 64.64 330 P P 22 11 34.8 +0.7
baz=105
H21K Melozitna Rive 64.69 337 IAmb IAmb 22 11 35.5
comp=Z,3.4nm,0.8s
H21K Melozitna Rive 64.69 337 P P 22 11 34.7 +0.4
baz=112
D24K Happy Valley 64.78 341 P P 22 11 35.9 +1.0
baz=118
TOLK Toolik Lake Re 64.79 340 P P 22 11 36.1 +1.1
baz=117,SNR=6.8
N17K Nushagak Hills 64.89 331 P P 22 11 36.7 +1.0
baz=106
P16K Nushagak River 64.89 329 P P 22 11 36.7 +1.0
baz=104
O16K Kokwok River B 65.08 329 P P 22 11 38.0 +1.0
baz=104
L18K Granite Mounta 65.14 332 P P 22 11 38.2 +0.9
baz=107
J19K Poorman 65.23 335 P P 22 11 38.6 +0.8
baz=109
M17K Holitna River 65.25 331 P P 22 11 39.0 +0.9
baz=106
G21K Allakaket 65.28 337 P P 22 11 39.1 +1.0
baz=112
D23K Nanushuk River 65.29 340 P P 22 11 39.2 +1.0
baz=116,SNR=6.8
E22K Anaktuvuk Pass 65.32 339 P P 22 11 39.5 +1.1
baz=114,SNR=11
SDPT Sand Point 65.42 325 P P 22 11 40.3 +1.1
baz=100
H20K Anotleneega Mo 65.43 336 P P 22 11 40.2 +1.1
baz=110
J18K Innoko River 65.53 334 P P 22 11 41.0 +1.2
baz=107
F21K Alatna River 65.54 338 P P 22 11 41.4 +1.6
baz=112
N16K Nishlik Lake 65.63 330 P P 22 11 41.6 +1.1
baz=104
C23K Itkillik River 65.66 341 P P 22 11 41.9 +1.4
baz=116
L17K Donlin 65.84 332 P P 22 11 42.6 +0.8
baz=105
O15K Ungalikthiuk R 65.84 329 P P 22 11 42.6 +0.7
baz=103
M16K Timber Creek 65.86 331 P P 22 11 42.8 +0.9
baz=104
D22K Ayikyak River 65.91 340 P P 22 11 43.8 +1.6
baz=114,SNR=10
K17K Iditarod 66.00 333 P P 22 11 43.5 +0.6
baz=106
L16K Owhat River 66.27 332 P P 22 11 45.6 +1.0
baz=104
F20K Avaraart Lake 66.29 338 P P 22 11 46.0 +1.4
baz=112
G19K Purcell Mounta 66.51 337 IAmb IAmb 22 11 47.8
comp=Z,9.1nm,1.0s
G19K Purcell Mounta 66.51 337 P P 22 11 47.0 +0.9
baz=108,SNR=10
H18K Honhosa River 66.71 335 P P 22 11 48.3 +1.0
baz=106
C21K Knifeblade Rid 66.72 340 P P 22 11 48.7 +1.3
baz=112
B22K Teshekpuk Lake 66.74 341 P P 22 11 48.6 +1.1
baz=114,SNR=9.6
B21K Ikpikpuk River 66.84 340 P P 22 11 49.1 +1.1
baz=112
E20K Nigu River 66.88 339 P P 22 11 49.6 +1.1
baz=110
E19K Redstone River 66.98 338 P P 22 11 50.1 +1.1
baz=109
F19K Shaleruckik Mo 66.98 337 P P 22 11 50.0 +1.0
baz=108
G18K Tagagawik 67.04 336 IAmb IAmb 22 11 51.3
comp=Z,4.5nm,0.9s
G18K Tagagawik 67.04 336 P P 22 11 50.7 +1.2
baz=107
J16K Anvik River 67.16 333 IAmb IAmb 22 11 52.8
comp=Z,9.6nm,0.9s
J16K Anvik River 67.16 333 P P 22 11 51.6 +1.3
baz=104
D20K Etivluk River 67.18 339 P P 22 11 51.5 +1.2
baz=110
L15K Ungalak Mounta 67.20 331 P P 22 11 51.9 +1.4
baz=102
M14K Bethel 67.23 330 P P 22 11 52.0 +1.3
baz=101
H17K Granite Mounta 67.28 335 P P 22 11 52.3 +1.3
baz=105
I17K Unalakleet 67.35 334 P P 22 11 52.8 +1.5
baz=104
K15K Wolf Creek Mou 67.35 332 P P 22 11 53.0 +1.5
baz=102
A22K Sinclair Lake 67.48 342 P P 22 11 53.4 +1.3
baz=112
D19K Kuna River 67.63 339 P P 22 11 54.2 +1.0
baz=108
F18K Selawik 67.63 337 P P 22 11 54.2 +1.1
baz=106
L14K Kuka Creek 67.69 331 P P 22 11 54.8 +1.2
baz=101
G17K Kiwalik Mounta 67.73 335 P P 22 11 55.2 +1.4
baz=104,SNR=6.5
B20K Meade River 67.80 340 P P 22 11 55.6 +1.4
baz=110,SNR=20
M13K Dall Lake 67.84 330 P P 22 11 56.0 +1.5
baz=100
H16K Elim 68.18 334 P P 22 11 57.9 +1.3
baz=103,SNR=8.1
F17K Baldwin Pennin 68.20 336 P P 22 11 57.9 +1.1
baz=104
E18K Tukpahlearik C 68.21 337 P P 22 11 58.3 +1.5
baz=105
C19K Lookout Ridge 68.32 339 P P 22 11 58.9 +1.4
baz=107,SNR=7.7
J14K Nanvaranak Lak 68.36 332 P P 22 11 59.2 +1.5
baz=101
G16K Koyuk River 68.39 335 P 22 11 59.3 +1.3
G16K IAmb IAmb 22 11 59.9
comp=Z,3.9nm,0.8s
G16K Koyuk River 68.39 335 P P 22 11 59.3 +1.3
baz=103
E17K Hotham Inlet 68.59 337 P P 22 12 00.3 +1.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=104,SNR=19						
UNV	**Unalaska Valle**	**68.69**	**322**	P	**P**	**22 12 01.2**	**+1.2**
	baz=95						
K13K	**Kusilvak Mount**	**68.72**	**331**	P	**P**	**22 12 01.2**	**+1.2**
	baz=99						
C18K	**Utukok River**	**68.75**	**339**	P	**P**	**22 12 01.1**	**+0.8**
	baz=105						
G15K	**Niukluk**	**69.00**	**335**	P	**P**	**22 12 03.1**	**+1.3**
	baz=101						
A19K	**Wainwright**	**69.14**	**340**	P	**P**	**22 12 03.9**	**+1.4**
	baz=106						
D17K	**Noatak River**	**69.20**	**337**	P	**P**	**22 12 03.7**	**+0.8**
	baz=103						
RDOG	**Red Dog Mine**	**69.22**	**338**	P	**P**	**22 12 04.1**	**+1.0**
	baz=103						
BORG	**Borgarnes**	**69.37**	**26**	LR	LR	22 42 43.0	
	comp=Z,56nm,18.1s,baz=249,slow=36						
F15K	**North Star Dit**	**69.39**	**335**	IAmb	IAmb	22 12 06.7	
	comp=Z,7.2nm,0.8s						
F15K	**North Star Dit**	**69.39**	**335**	P	**P**	**22 12 05.7**	**+1.5**
	baz=101						
C17K	**DeLong Mountai**	**69.42**	**338**	P	**P**	**22 12 05.2**	**+0.9**
	baz=103						
ANM	**Nome**	**69.49**	**334**	P	**P**	**22 12 05.8**	**+1.0**
	baz=100						
F14K	**Arctic Creek**	**70.04**	**335**	P	**P**	**22 12 09.6**	**+1.4**
	baz=99						
NIKH	**Nikolski High**	**70.04**	**321**	P	**P**	**22 12 09.8**	**+1.4**
	baz=92						
C16K	**Lisburne Hills**	**70.16**	**338**	P	**P**	**22 12 09.8**	**+1.0**
	baz=101						
TNA	**Tin City**	**70.71**	**335**	P	**P**	**22 12 13.3**	**+1.1**
	baz=98						
GAMB	**Gambell**	**72.15**	**333**	P	**P**	**22 12 22.2**	**+1.3**
	baz=94						
EKA	**Eskdalemuir Ar**	**78.33**	**36**	P	**P**	**22 12 54.1**	**-2.5**
	comp=Z,2.2nm,0.7s,baz=280,slow=5.6,SNR=6.5						
EKA				LR	LR	22 48 17.2	
	comp=Z,79nm,18.2s,baz=226,slow=36						
	comp=Z,2.2nm,0.7s						
SPITS	**Spitsbergen Ar**	**79.95**	**11**	LR	LR	22 50 06.4	
	comp=Z,89nm,20.1s,baz=212,slow=37						
ESDC	**Sonseca Array**	**80.37**	**52**	P	**P**	**22 13 05.8**	**-2.5**
	comp=Z,2.7nm,0.8s,baz=285,slow=6.1,SNR=13						
ESDC				LR	LR	22 43 04.3	
	comp=Z,83nm,21.2s,baz=284,slow=32						
	comp=Z,2.7nm,0.8s						
ESDC	**Sonseca Array**	**80.37**	**52**	IAmb	IAmb	22 13 10.8	
	comp=Z,7.2nm,1.4s						
BILL	**Bilibino**	**80.69**	**338**	P	**P**	**22 13 09.8**	**+0.4**
BILL				IAmb	IAmb	22 13 11.6	
	comp=Z,9.3nm,0.7s						
MD01	**Midelt array s**	**81.03**	**58**		**P**	**22 13 10.4**	**-1.6**
MD31	**MD31**	**81.03**	**58**	P	**P**	**22 13 10.4**	**-1.6**
MDT	**Midelt**	**81.17**	**58**	LR	LR	22 41 39.9	
	comp=Z,42nm,21.5s,baz=296,slow=30						
NB2	**NORSAR Subarra**	**84.36**	**28**	P	**P**	**22 13 28.4**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=291,slow=5.3						
NOA	**NORSAR Array B**	**84.36**	**28**	P	**P**	**22 13 28.1**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=291,slow=5.0,SNR=7.4						
NOA				LR	LR	22 49 21.7	
	comp=Z,57nm,21.0s,baz=275,slow=34						
	comp=Z,1.1nm,0.7s						
HFS	**Hagfors**	**85.82**	**29**	P	**P**	**22 13 35.1**	**-0.8**
	comp=Z,1.9nm,0.7s,baz=253,slow=1.5,SNR=4.4						
HFS				LR	LR	22 49 53.3	
	comp=Z,65nm,21.1s,baz=256,slow=34						
	comp=Z,1.9nm,0.7s						
ARCES	**ARCESS Array B**	**86.14**	**18**	P	**P**	**22 13 37.3**	**0.0**
	comp=Z,1.4nm,0.6s,baz=284,slow=4.5,SNR=5.6						
	comp=Z,1.4nm,0.6s						
DBIC	**Dimbokro**	**86.74**	**84**	P	**P**	**22 13 40.7**	**-0.7**
	comp=Z,4.9nm,0.7s,baz=307,slow=3.5,SNR=6.2						
DBIC				LR	LR	22 46 54.3	
	comp=Z,53nm,21.5s,baz=308,slow=32						
	comp=Z,4.9nm,0.7s						
DBIC	**Dimbokro**	**86.74**	**84**	IAmb	IAmb	22 13 42.5	
	comp=Z,8.8nm,1.1s						
SEY	**Seymchan**	**87.94**	**335**	LR	LR	22 56 18.3	
	comp=Z,56nm,19.3s,baz=152,slow=38						
DAVOX	**Davos/Dischmat**	**88.35**	**42**	LR	LR	22 47 52.7	
	comp=Z,78nm,20.6s,baz=261,slow=32						
TIXI	**Tiksi**	**89.66**	**348**	LR	LR	22 58 19.3	
	comp=Z,43nm,21.8s,baz=68,slow=38						
TIXI	**Tiksi**	**89.66**	**348**		**P**	**22 13 53.7**	**-0.4**
GERES	**GERESS Array B**	**90.03**	**39**	LR	LR	22 55 06.7	
	comp=Z,42nm,18.1s,baz=270,slow=36						
FINES	**FINESS Array B**	**90.64**	**25**	P	**P**	**22 13 57.4**	**-1.5**
	comp=Z,0.9nm,0.7s,baz=256,slow=5.6,SNR=5.1						
	comp=Z,0.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**91.39**	**76**	P	**P**	**22 14 01.9**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=281,slow=5.5,SNR=4.3						
	comp=Z,0.5nm,0.6s						
VRAC	**Vranov**	**91.60**	**38**	LR	LR	22 56 24.2	
	comp=Z,52nm,18.9s,baz=315,slow=36						
MSVF	**Nonsavu**	**93.16**	**253**	LR	LR	22 47 17.4	
	comp=Z,129nm,18.3s,baz=103,slow=30						
NRIK	**Noril'sk**	**96.50**	**360**	LR	LR	23 03 02.7	
	comp=Z,37nm,18.3s,baz=6.5,slow=39						
YAK	**Yakutsk**	**96.74**	**341**	LR	LR	23 05 29.5	
	comp=Z,36nm,18.0s,baz=58,slow=40						
KURBB	**Kurchatov Arra**	**114.88**	**6**	PKP	**PKiKP**	**22 19 36.8**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=349,slow=1.8,SNR=10						
KSRS	**Korea Array**	**115.58**	**325**	PKP	**PKiKP**	**22 19 38.0**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=18,slow=2.1,SNR=2.0						
SONM	**Songino Array**	**115.65**	**346**	PKP	**PKiKP**	**22 19 37.8**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=22,slow=1.6,SNR=4.1						
MKAR	**Makanchi Array**	**118.98**	**4**	PKP	**PKPdf**	**22 19 44.5**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=342,slow=2.5,SNR=8.1						
HHC	**Hu-ho-hao-te**	**120.46**	**338**	*e*P	**PKiKP**	**22 19 49.0**	**+0.4**
BOSA	**Boshof**	**121.54**	**115**	PKP	**PKPdf**	**22 19 50.9**	**0.0**
	comp=Z,3.7nm,0.8s,baz=283,slow=1.2,SNR=5.6						
WMQ	**Urumqi**	**122.08**	**359**	*e*PKP	**PKiKP**	**22 19 52.7**	**+1.0**
WMQ				sPKP	sPKPdf	22 20 02.0	-2.1
NJ2	**Nanjing**	**124.57**	**327**	*e*P	**PKiKP**	**22 19 58.2**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
GTA2	**Gaotai**	**125.08**	**348**	*e*P	**PKiKP**	**22 19 58.5**	**+0.7**
GTA2				pP	PKPdf	22 20 01.6	+4.1
GTA2				pmax	pmax		
	comp=Z,3.0nm,0.7s						
LZH	**Lanzhou**	**127.30**	**343**	*e*PKP	**PKPdf**	**22 19 57.4**	**-4.4**
LZH				sPKP		22 20 07.7	
WRA	**Warramunga Arr**	**134.39**	**256**	PKP	**PKPdf**	**22 20 15.8**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=88,slow=2.3,SNR=24						
ASAR	**Alice Springs**	**134.72**	**251**	PKP	**PKPdf**	**22 20 16.5**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=100,slow=2.5,SNR=6.3						
PZH	**PanZhiHua**	**136.86**	**340**	PKP	**PKPdf**	**22 20 20.4**	**+0.3**
CMAR	**Chiang Mai Arr**	**145.26**	**340**	PKPbc	**PKPab**	**22 20 35.3**	**+0.4**
	comp=Z,8.0nm,0.8s,baz=339,slow=3.7,SNR=51						

*AFAD **06** 22:06:27.2, 38°.28N×44°.66E, h7^{km}±1^{km}, ML3.2*
*NSSP **06** 22:06:30.8, 38°.35N×44°.60E, h10^{km}, Ms3.1*
*ISK **06** 22:06:33.3, 38°.34N×44°.43E, h5^{km}, ML3.1/11*
*TEH **06** 22:06:33.8, 38°.49N×44°.63E, h10^{km}±69^{km}, ML2.9, Presumed earthquake*
ISC 06 22:06:29.6±1.3**, 38°.30N**±0°.04×**44°.44E**±0°.02**, h1**^{km}±11^{km}**, n36, σ1^s.46**/54**, 2D, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.51**	**316**	P	**Pb**	**22 06 40.1**	**-1.3**
OZAP				S	**Sg**	**22 06 47.2**	**+1.3**
OZAP				IAML		22 06 55.0	
	comp=N,2µm,1.0s						
TVAN	**Van**	**0.85**	**286**	P	**Pn**	**22 06 46.8**	**-2.0**
TVAN				S	**Sn**	**22 07 01.8**	**-0.3**
TVAN				IAML		22 07 05.0	
	comp=N,710nm,0.7s						
TVAN				IAML		22 07 11.0	
	comp=E,722nm,0.4s						
VANB	**Van**	**0.88**	**290**	Pg	**Pn**	**22 06 49.8**	**+0.6**
ISHB	**Shabestar**	**0.93**	**90**	Pg	**Pn**	**22 06 48.7**	**-1.3**
VMUR	**Van-Muradiye**	**0.97**	**316**	P	**Pn**	**22 06 49.0**	**-1.5**
VMUR				S	**Sn**	**22 07 04.1**	**-0.9**
VMUR				IAML		22 07 07.0	
	comp=N,468nm,0.5s						
VMUR				IAML		22 07 08.0	
	comp=E,568nm,0.9s						
IMRD	**Marand**	**1.07**	**67**	Pg	**Pn**	**22 06 51.9**	**-0.1**
MAKU	**Maku**	**1.07**	**10**	Pg	**Pg**	**22 06 49.9**	**-0.3**
MAKU				Sg	**Sg**	**22 07 03.9**	**-0.2**
GEVA	**Gevas**	**1.09**	**271**	P	**Pn**	**22 06 51.2**	**-0.9**
GEVA				IAML		22 07 09.0	
	comp=N,462nm,0.7s						
GEVA				S	**Sn**	**22 07 09.4**	**+1.4**
GEVA				IAML		22 07 13.0	
	comp=E,334nm,0.9s						
ERCV	**ERCIS-VAN**	**1.13**	**310**	Pn	**Pn**	**22 06 54.9**	**+2.2**
ERCV				Sn	**Sn**	**22 07 09.4**	**+0.5**
CUKT	**Cukurca**	**1.24**	**212**	Pn	Pn	22 06 57.3	+3.1
CUKT				Sn	**Sn**	**22 07 16.0**	**+4.4**
ITBZ	**Tabriz**	**1.34**	**92**	Pg	**Pg**	**22 06 56.3**	**+0.9**
VAYK	**Vayk**	**1.59**	**28**	⇓*e*P	**Pg**	**22 07 00.2**	**0.0**
VAYK				⇓*e*S	**Sg**	**22 07 21.4**	**+0.6**
MLAZ	**Malazgirt-MUS**	**1.70**	**300**	Pn	**Pg**	**22 07 03.9**	**+1.6**
MLAZ				Sn	**Sg**	**22 07 26.3**	**+2.0**
MAHB	**Mahabad**	**1.83**	**146**	Pn	Pg	22 07 08.7	+4.0
GNI	**Garni**	**1.86**	**7**	Pn	**Pg**	**22 07 05.6**	**+0.2**
GNI				Sn	**Sg**	**22 07 29.9**	**+0.4**
GNI	**Garni**	**1.86**	**7**	*e*P	**Pg**	**22 07 05.4**	**0.0**
GNI				*e*S	**Sg**	**22 07 30.5**	**+0.9**
EGVZ	**Egvard**	**1.89**	**60**	*e*P	**Pg**	**22 07 05.3**	**-0.5**
EGVZ				*e*S	**Sg**	**22 07 29.6**	**-0.6**
GURO	**Guroymak-BITLI**	**1.91**	**278**	Pn	**Pg**	**22 07 06.7**	**+0.5**
GURO				Sn	**Sg**	**22 07 31.6**	**+0.6**
ARUZ	**Aruch**	**2.00**	**352**	*e*P	**Pg**	**22 07 07.8**	**-0.2**
ARUZ				*e*S	**Sg**	**22 07 34.1**	**+0.1**
IHRS	**Heris**	**2.05**	**89**	Pn	**Pg**	**22 07 09.0**	**+0.1**
AMBZ	**Amberd**	**2.09**	**356**	*e*P	**Pg**	**22 07 09.5**	**-0.2**
AMBZ				*e*S	**Sg**	**22 07 38.1**	**+1.3**
AYRK	**Ayrk**	**2.10**	**30**	*e*P	**Pg**	**22 07 09.6**	**-0.2**
AYRK				*e*S	**Sg**	**22 07 37.3**	**+0.3**
VRTB	**Varto-Mus**	**2.49**	**291**	Pn	**Pb**	**22 07 15.3**	**+0.1**
VRTB				Sn	**Sb**	**22 07 45.9**	**-0.5**
KARS	**Kars**	**2.56**	**336**	Pn	**Pb**	**22 07 15.8**	**-0.5**
SVAN	**Silvan-Diyarba**	**2.56**	**268**	Pn	**Pg**	**22 07 16.7**	**-2.0**
LSVT	**Lusahovit**	**2.68**	**12**	*e*P	**Pb**	**22 07 19.0**	**+0.6**
LSVT				*e*S	**Sg**	**22 07 56.1**	**+0.4**
GRMI	**Germi**	**2.75**	**78**	Pn	**Pb**	**22 07 17.8**	**-1.9**
SRTK	**Saratovka**	**2.77**	**358**	*e*P	**Pb**	**22 07 20.5**	**+0.6**
SRTK				*e*S	**Sg**	**22 07 59.5**	**+1.0**
SENK	**Senkaya-Erzuru**	**2.78**	**325**	Pn	**Pb**	**22 07 19.3**	**-0.9**
BNGB	**Bingl**	**3.03**	**284**	Pn	**Pb**	**22 07 22.9**	**-1.5**
DGRG	**David-gareji**	**3.23**	**13**	P	**Pg**	**22 07 31.6**	**+0.1**
YEDI	**Yedisu-Bingol**	**3.25**	**292**	Pn	**Pb**	**22 07 26.1**	**-2.1**
TRLG	**Trialeti**	**3.25**	**355**	P	**Pg**	**22 07 31.5**	**-0.4**
VSHL	**Vashlovani**	**3.29**	**27**	P	**Pb**	**22 07 27.7**	**-1.2**
VSHL				S	**Sg**	**22 08 20.0**	**+4.5**
DDFL	**Dedoflistskaro**	**3.40**	**22**	P	**Pg**	**22 07 37.4**	**+2.6**
CHRG	**Chargali**	**4.04**	**5**	P	**Pg**	**22 07 44.3**	**-2.8**

*AFAD **06** 22:24:16.8, 38°.41N×44°.48E, h7^{km}±1^{km}, ML2.7*
*TEH **06** 22:24:16.6, 38°.41N×44°.27E, h10^{km}±240^{km}, ML2.7, Presumed earthquake*
*ISK **06** 22:24:21.0, 38°.59N×44°.38E, h18^{km}, ML2.9/9*
ISC 06 22:24:20.4±1.2**, 38°.54N**±0°.04×**44°.39E**±0°.03**, h19**^{km}±3^{km}**, n17, σ1^s.33**/25**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.33**	**291**	P	**Pg**	**22 24 26.0**	**-1.7**
OZAP				S	**Sg**	**22 24 32.8**	**+0.2**
OZAP				IAML		22 24 39.0	
	comp=N,2µm,1.1s						
TVAN	**Van**	**0.77**	**269**	P	**Pb**	**22 24 33.3**	**-2.0**
TVAN				S	**Sb**	**22 24 45.6**	**+0.1**
TVAN				IAML		22 24 54.0	
	comp=N,305nm,0.5s						
TVAN				IAML		22 25 01.0	
	comp=E,307nm,0.9s						
VMUR	**Van-Muradiye**	**0.78**	**305**	P	**Pb**	**22 24 34.5**	**-1.0**
VMUR				S	**Sn**	**22 24 47.7**	**-0.1**
VMUR				IAML		22 24 52.0	
	comp=N,200nm,0.8s						
VMUR				IAML		22 24 54.0	
	comp=E,224nm,0.7s						
VANB	**Van**	**0.79**	**274**	Pg	**Pg**	**22 24 36.6**	**+0.8**
VANB				Sg	**Sn**	**22 24 47.8**	**-0.1**
MAKU	**Maku**	**0.84**	**16**	Pg	**Pb**	**22 24 35.8**	**-0.8**
ERCV	**ERCIS-VAN**	**0.95**	**300**	Pg	**Pn**	**22 24 39.4**	**+0.5**
ERCV				Sg	**Sn**	**22 24 52.5**	**+0.5**
ISHB	**Shabestar**	**1.00**	**105**	Pg	**Pb**	**22 24 37.1**	**-2.1**
IMRD	**Marand**	**1.04**	**80**	Pg	**Pb**	**22 24 39.8**	**-0.2**
IMRD				Sg	**Sg**	**22 24 56.0**	**+1.5**
GEVA	**Gevas**	**1.07**	**258**	P	**Pb**	**22 24 37.6**	**-2.7**
GEVA				S	**Sb**	**22 24 54.7**	**+0.6**
GEVA				IAML		22 25 01.0	
	comp=E,125nm,0.5s						
GEVA				IAML		22 25 05.0	
	comp=N,164nm,0.5s						
ITBZ	**Tabriz**	**1.42**	**102**	Pg	**Pn**	**22 24 45.0**	**-0.3**
CUKT	**Cukurca**	**1.43**	**206**	Pn	**Pb**	**22 24 46.9**	**+0.4**
CUKT				Sn	**Sg**	**22 25 06.3**	**-0.4**
AGRB	**Hanur-Agry**	**1.50**	**314**	Pn	**Pn**	**22 24 47.3**	**+0.9**
MLAZ	**Malazgirt-MUS**	**1.56**	**293**	Pn	**Pn**	**22 24 48.2**	**+1.0**
GNI	**Garni**	**1.63**	**10**	Pn	**Pn**	**22 24 49.0**	**+0.8**
GURO	**Guroymak-BITLI**	**1.85**	**271**	Pn	**Pn**	**22 24 52.5**	**+1.3**
VRTB	**Varto-Mus**	**2.37**	**286**	Pn	**Pn**	**22 25 00.2**	**+1.8**
SVAN	**Silvan-Diyarba**	**2.54**	**262**	Pn	**Pn**	**22 25 02.9**	**+2.3**

*IDC **06** 22:24:54.0±5.7, 30°.09N×131°.57E, h0^{km}, mb3.6/5, mbtmp3.6/5, MS3.2/3, Error ellipse: s-maj=154.6km s-min=100.3km az=13.0*
*JMA **06** 22:24:54.3±0.1, 29°.2N±0°.5×131°.3E±0°.8, h62^{km}±3^{km}, MV3.0/34, NEAR AMAMI-OSHIMA ISLAND*
ISC 06 22:24:56.1±1.7**, 29°.24N**±0°.07×**131°.2E**±0°.1**, h37**^{km}±2^{km}**, n24, σ0^s.49**/25**, mb3.6**/5**, MS3.5**/3**, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JYAK	**Yakushimahirau**	**1.18**	**328**	*i* P	**Pn**	**22 25 15.5**	**-0.5**
JYAK				S	**Sn**	**22 25 31.1**	**+0.3**
JMTN	**Minamitane**	**1.19**	**346**	P	**Pn**	**22 25 15.5**	**-0.7**
JNN	**Nakanoshima**	**1.32**	**297**	P	**Pn**	**22 25 17.8**	**-0.2**
JTN	**Tanegashima 3**	**1.43**	**351**	P	**Pn**	**22 25 18.7**	**-0.8**
JKC	**Kuchinoerabu**	**1.52**	**324**	P	**Pn**	**22 25 20.3**	**-0.4**
JAM	**Amami Oshima**	**1.64**	**240**	P	**Pn**	**22 25 22.0**	**-0.4**
JAM				S	**Sn**	**22 25 42.4**	**+0.1**
JTAJ	**Takarajima**	**1.77**	**268**	*e*P	**Pn**	**22 25 23.6**	**-0.5**
JTSR	**Tashiro 2**	**1.94**	**352**	P	**Pn**	**22 25 26.0**	**-0.6**
JTSR				*e*S	**Sn**	**22 25 50.0**	**+0.2**
JAMN	**Amaminishikomi**	**2.06**	**242**	S	**Sn**	**22 25 52.9**	**+0.4**
JNAR	**Kushima--Naru**	**2.28**	**1**	P	**Pn**	**22 25 31.4**	**+0.2**
JNAR				*e*S	**Sn**	**22 25 58.2**	**+0.1**
JTK	**Tokunoshima**	**2.47**	**235**	P	**Pn**	**22 25 33.7**	**-0.1**
JTK				*e*S	**Sn**	**22 26 02.6**	**-0.1**
JTZ	**Takazaki**	**2.66**	**357**	S	**Sn**	**22 26 07.8**	**+0.5**
JSJ	**Shimokoshiki**	**2.76**	**332**	P	**Pn**	**22 25 37.2**	**-0.6**
JOKE	**Okinoerabujima**	**3.00**	**232**	*e*P	**Pn**	**22 25 40.5**	**-0.5**
JYRO	**Yoronjima**	**3.30**	**229**	*e*P	**Pn**	**22 25 44.6**	**-0.5**
JIU3	**Izumi3**	**3.32**	**354**	*e*P	**Pn**	**22 25 45.1**	**-0.4**
DAV	**Davao City (W)**	**22.68**	**195**	LR	LR	22 37 53.5	
	comp=Z,18nm,21.3s,baz=208,slow=33						
SONM	**Songino Array**	**26.69**	**321**	P	**P**	**22 30 31.0**	**-0.7**
	0.6nm,0.9s,baz=105,slow=8.2,SNR=3.6						
	0.6nm,0.9s						
MKAR	**Makanchi Array**	**41.62**	**309**	P	**P**	**22 32 41.1**	**+0.6**
	0.4nm,0.6s,baz=99,slow=8.9,SNR=6.5						
	0.4nm,0.6s						
CTA	**Charters Tower**	**51.13**	**162**	LR	LR	22 53 45.9	
	comp=Z,48nm,19.5s,baz=46,slow=33						
AKTO	**Aktyubinsk**	**57.66**	**314**	LR	LR	23 01 38.6	
	comp=Z,38nm,20.3s,baz=40,slow=38						
FINES	**FINESS Array B**	**71.56**	**331**	P	**P**	**22 36 12.7**	**-0.2**
	0.6nm,0.8s,baz=63,slow=4.7,SNR=4.3						
	0.6nm,0.8s						
BRTR	**Keskin Array B**	**77.28**	**308**	P	P	22 36 49.0	+2.2
	1.0nm,0.9s,baz=77,slow=6.4,SNR=5.2						
	1.0nm,0.9s						
NOA	**NORSAR Array B**	**77.78**	**334**	P	**P**	**22 36 49.5**	**+0.3**
	0.5nm,0.7s,baz=62,slow=7.6,SNR=1.9						
	0.5nm,0.7s						

*GCG **06** 23:31:19.1±1.7, 14°.19N×93°.24W, h20^{km}±15^{km}, MD4.0, ML3.6, Presumed earthquake*
*MEX **06** 23:31:20.8±1.2, 14°.37N×93°.40W, h16^{km}±74^{km}, MD3.9*
ISC 06 23:31:13.8±2.1**, 14°.24N**±0°.08×**93°.37W**±0°.05**, h18**^{km}±7^{km}**, n19, σ1^s.16**/34**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
THIG		**1.25**	**58**	*i* P	**Pg**	**23 31 39.6**	**+1.5**
THIG				*i* S	**Sg**	**23 31 54.4**	**0.0**
THIG				IAML		23 31 57.2	
	comp=E,869nm,0.4s						
SMCA	**Catarina**	**1.39**	**64**	*i* P	**Pg**	**23 31 42.1**	**+1.4**
PATR	**El Naranjo**	**1.40**	**51**	*e*P	**Pg**	**23 31 41.3**	**+0.4**
PATR				*e*S	**Sg**	**23 31 58.1**	**-1.0**
PCIG		**1.46**	**6**	*e*P	**Pg**	**23 31 42.1**	**+0.1**
PCIG				*e*S	**Sn**	**23 31 56.4**	**-1.6**
CHUJ	**Union Juarez**	**1.48**	**55**	*e*P	**Pg**	**23 31 42.6**	**+0.1**
CHUJ				*e*S	**Sg**	**23 32 00.2**	**-1.6**
PAVE	**Pavencul**	**1.49**	**50**	*e*P	**Pg**	**23 31 42.3**	**-0.3**
PAVE				*e*S	**Sg**	**23 32 01.1**	**-0.9**
RTAL	**Retalhuleu**	**1.64**	**80**	*e*P	**Pg**	**23 31 45.9**	**+0.5**
RTAL				*e*S	**Sb**	**23 32 04.6**	**+0.6**
STG2	**El Palmar, Qui**	**1.94**	**84**	*e*P	**Pn**	**23 31 46.7**	**+0.6**
STG2				IAML		23 32 14.2	
	comp=E,1µm,0.3s						
STG5	**El Palmar, Qui**	**1.96**	**85**	*i* P	**Pn**	**23 31 47.4**	**+1.1**
STG5				*i* S	**Sn**	**23 32 08.7**	**-1.9**
STG8	**El Palmar, Qui**	**1.96**	**84**	*i* P	**Pn**	**23 31 47.4**	**+0.9**
CARR	**Arriaga**	**2.06**	**345**	*e*P	**Pb**	**23 31 50.8**	**0.0**
CARR				*e*S	**Sn**	**23 32 12.3**	**-0.6**
CCIG	**Comitan**	**2.35**	**30**	*e*P	**Pb**	**23 31 56.1**	**+0.3**
CCIG				*e*S	**Sn**	**23 32 21.2**	**+0.9**
CCIG	**Comitan**	**2.35**	**30**	*i* P	**Pg**	**23 31 58.0**	**-1.0**
TGIG		**2.53**	**5**	*e*P	**Pb**	**23 31 59.5**	**+0.6**
TGIG				*e*S	**Sn**	**23 32 25.0**	**+0.4**
TGIG		**2.53**	**5**	*i* P	**Pb**	**23 31 59.9**	**+1.1**
TGIG				*e*		23 31 59.9	
TGIG				*i* S	**Sb**	**23 32 30.2**	**+0.5**
APG	**El Apazote**	**2.91**	**75**	*e*P	**Pb**	**23 32 04.0**	**-1.4**
APG				*i* S	**Sb**	**23 32 40.9**	**+0.2**
UXUV	**UXUV**	**3.15**	**346**	*e*P	**Pb**	**23 32 08.3**	**-1.0**
UXUV				*e*S	**Sn**	**23 32 39.7**	**-0.1**
CMIG	**Matias Romero**	**3.19**	**333**	*e*P	**Pb**	**23 32 08.9**	**-1.1**
CMIG				*e*S	**Sn**	**23 32 37.8**	**-2.9**
NEUV	**Arroyo Zacate**	**4.17**	**326**	*e*P	**Pn**	**23 32 18.8**	**+2.1**
NEUV				*e*S	**Sn**	**23 33 04.1**	**-0.9**

*DJA **06** 23:32:54.4±0.4, 9°S±3°×12°3E±°, h101^{km}±5^{km}, M3.6/12, mb4.0/2, MLv3.4/12*
*IDC **06** 23:32:55.2±1.4, 9°.14S×122°.97E, h161^{km}±14^{km}, mb3.0/1, mbtmp3.7/4, Error ellipse: s-maj=90.3km s-min=22.9km az=66.0*
ISC 06 23:32:52.3±1.2**, 8°.8S**±0°.1×**123°.40E**±0°.10**, h150**^{km}**, n15, σ2^s.87**/22**, Flores region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**1.16**	**280**	P	**Pn**	**23 33 16.4**	**-2.1**
MMRI				S	**Sn**	**23 33 33.1**	**-5.5**
SOEI	**Soe**	**1.25**	**137**	P	**Pn**	**23 33 21.0**	**+1.5**
SOEI				S	**Sn**	**23 33 42.1**	**+1.7**
BATI	**Baumata**	**1.39**	**169**	P	**Pn**	**23 33 21.8**	**+1.0**
	66nm,0.3s,baz=315,slow=10.0,SNR=17						
BATI				S	**Sn**	**23 33 45.6**	**+3.0**
	168nm,0.4s,baz=16,slow=22,SNR=6.2						
BATI	**Baumata**	**1.39**	**169**	P	**Pn**	**23 33 22.2**	**+1.4**
BATI				S	**Sn**	**23 33 44.7**	**+2.1**
EDFI	**Ende, Flores**	**1.69**	**273**	P	**Pn**	**23 33 22.5**	**-1.5**
WSI	**Waingapu**	**3.17**	**255**	P	**Pn**	**23 33 43.5**	**+1.6**
LBFI	**Labuhan Bajo,**	**3.49**	**276**	P	**Pn**	**23 33 47.1**	**+1.2**
WBSI	**Waikabubak, Su**	**4.04**	**258**	P	**Pn**	**23 33 55.0**	**+1.9**
DBNI	**Kabupaten Domp**	**5.04**	**273**	P	**Pn**	**23 34 07.2**	**+0.9**
PLAI	**Plampang**	**5.56**	**270**	P	**Pn**	**23 34 13.9**	**+0.8**
	22nm,0.7s						
TWSI	**Taliwang, Sumb**	**6.44**	**270**	P	**Pn**	**23 34 25.9**	**+1.0**
FITZ	**Fitzroy Crossi**	**9.46**	**167**	P	**Pn**	**23 35 05.7**	**+0.5**
	2.2nm,0.4s,baz=351,slow=11,SNR=9.7						
FITZ				S	**Sn**	**23 36 48.4**	**-1.8**
	5.3nm,0.3s,baz=192,slow=10,SNR=8.6						
WRA	**Warramunga Arr**	**15.29**	**137**	P	**P**	**23 36 23.3**	**+1.4**
	0.8nm,0.4s,baz=318,slow=12,SNR=11						
WRA				S	**Sn**	**23 39 05.5**	**-5.2**
	0.7nm,0.4s,baz=250,slow=22,SNR=7.1						
ASAR	**Alice Springs**	**17.85**	**147**	P	**Pn**	**23 36 52.4**	**+0.9**
	1.2nm,0.6s,baz=328,slow=12,SNR=17						
ASAR				S	**S**	**23 40 00.6**	**-7.0**
	1.1nm,0.8s,baz=318,slow=21,SNR=7.8						
MKAR	**Makanchi Array**	**66.37**	**330**	P	**P**	**23 43 27.5**	**+2.5**
	0.3nm,0.6s,baz=128,slow=7.4,SNR=6.0						
	0.3nm,0.6s						

*IDC **06** 23:38:22.9±0.7, 6°.92N×82°.46W, h0^{km}, mb4.0/13, mbtmp4.1/21, ML2.9/4, MS3.8/48, Error ellipse: s-maj=24.5km s-min=11.6km az=55.0*
*UPA **06** 23:38:23.1±2.4, 6°.87N×82°.39W, h13^{km}±13^{km}, MD4.4, ML3.8, MW4.5, Presumed earthquake*
*UCR **06** 23:38:24.7±1.4, 7°.07N×82°.36W, h10^{km}±13^{km}, MW4.8, Presumed earthquake*
*CATAC **06** 23:38:25.3±0.6, 7°N±5°×8°2W±°, h7^{km}±5^{km}, M4.8/20, mb5.1/6, mB4.9/2, MLv4.7/20, Mw(mB)4.2/2, Error ellipse: s-maj=10.7km s-min=3.1km az=12.5, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.35; $M_{\theta\theta}$0.18; $M_{\phi\phi}$-0.54; $M_{r\theta}$0.01; $M_{\theta\phi}$1.01; $M_{\phi r}$-0.00; Fault plane solution: $M_0$1.11418×10^{16} NP1:ϕ_s99.80874°, δ89.69168°, λ0.59238°. NP2:ϕ_s9.80555°, δ89.40763°, λ179.69166°. Principal axes: T 0.8967, Plg0.6369°, Azm324.8083°; N 0.3506, Plg89.3322°, Azm127.3035°; P -1.2473, Plg0.2009°, Azm234.8060°; confirmed*
*NEIC **06** 23:38:25.8±1.8, 7°.07N±0°.06×82°.41W±0°.07, h10^{km}±1^{km}, mb4.8/243 Error ellipse: s-maj=13.3km s-min=8.3km az=240.0*
*GCMT **06** 23:38:27.8±0.3, 6°.95N±0°.02×82°.37W±0°.02, h14^{km}±1^{km}, MW4.8/92, Moment Tensor Solution. s11,c11; s92,c110; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.01±.07; $M_{\theta\theta}$0.75±.07; $M_{\phi\phi}$-0.75±.09; $M_{r\theta}$0.29±.17; $M_{\theta\phi}$1.54±.07; $M_{\phi r}$0.01±.13; Best double couple: $M_0$1.73800×10^{16} NP1:ϕ_s13.00000°, δ81.00000°, λ178.00000°. NP2: ϕ_s103.00000°, δ88.00000°, λ9.00000°. Principal axes: T 1.7450, Plg8.0000°, Azm328.0000°; N -0.0140, Plg80.0000°, Azm117.0000°; P -1.7310, Plg5.0000°, Azm238.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 06 23:38:23.5±1.8**, 6°.97N**±0°.04×**82°.37W**±0°.03**, h6**^{km}±11^{km}**, n491, σ1^s.25**/507**, mb4.8**/119**, MS3.8**/44**, 8C-4D, South of Panama**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LMNES	**Limones**	**1.22**	**337**	*i* P	**Pb**	**23 38 45.2**	**-1.8**
LMNES	**Limones**	**1.22**	**337**	*e*P	**Pb**	**23 38 45.1**	**-1.8**
LIMO3	**Limones**	**1.22**	**337**	*e*P	**Pb**	**23 38 44.9**	**-2.1**
PVID3	**Puerto Vidal,**	**1.31**	**35**	*e*P	**Pn**	**23 38 46.2**	**-2.1**
PTPA	**Petro Terminal**	**1.31**	**338**	*e*P	**Pn**	**23 38 46.5**	**-1.9**
PTPM	**Petroterminale**	**1.32**	**338**	*e*P	**Pn**	**23 38 46.6**	**-1.9**
RMDIO	**Remedios, Chir**	**1.36**	**23**	*i* P	**Pn**	**23 38 47.5**	**-1.4**
GMAL	**Guarumal, Vera**	**1.38**	**55**	*e*P	**Pn**	**23 38 47.9**	**-1.3**
GMAL				*e*S	**Sb**	**23 39 05.9**	**-1.6**
GMAL	**Guarumal, Vera**	**1.38**	**55**	⇓*i*P	**Pn**	**23 38 47.5**	**-1.7**
GMAL				*e*S	**Sb**	**23 39 04.8**	**-2.7**
NANC3	**Nancito, Chiri**	**1.41**	**27**	*e*P	**Pn**	**23 38 48.4**	**-1.4**
NANC3				*e*S	**Sb**	**23 39 06.8**	**-1.7**
CHIR3	**Chiriqui UPA,**	**1.41**	**2**	*e*P	**Pn**	**23 38 48.4**	**-1.3**
CHIR3				*e*S	**Sg**	**23 39 10.1**	**+1.1**
LOCO3	**Loma Colorada,**	**1.43**	**358**	*e*P	**Pn**	**23 38 48.9**	**-1.0**
LOMA3	**Las Lomas, Chi**	**1.45**	**359**	*e*P	**Pn**	**23 38 49.1**	**-1.1**
DVD	**David**	**1.46**	**357**	*e*P	**Pn**	**23 38 49.2**	**-1.1**
DVD				*e*S	**Sb**	**23 39 08.0**	**-1.7**
PDCAN	**Manzana , Fuen**	**1.47**	**27**	*e*P	**Pn**	**23 38 49.3**	**-1.3**
BAGA3	**Bagala, Chiriq**	**1.49**	**354**	*e*P	**Pn**	**23 38 50.0**	**-0.8**
BGUAL	**Bijagual, Pana**	**1.53**	**2**	*i* P	**Pn**	**23 38 50.0**	**-1.3**
MARI3	**Mariato, Verag**	**1.53**	**64**	*e*P	**Pn**	**23 38 50.0**	**-1.3**
MARI3				*e*S	**Sn**	**23 39 10.4**	**-1.1**
CACAO	**El Cacao, Vera**	**1.55**	**76**	*e*P	**Pn**	**23 38 49.7**	**-1.8**
CACAO				*e*S	**Sn**	**23 39 08.5**	**-3.4**
RSUS3	**Rio de Jesus,**	**1.57**	**50**	*e*P	**Pn**	**23 38 50.7**	**-1.2**
RSUS3				*e*S	**Sn**	**23 39 13.2**	**+0.7**
LPPC	**Paso Canoas**	**1.62**	**343**	*e*P	**Pn**	**23 38 50.8**	**-1.7**
MESA3	**La Mesa, Verag**	**1.66**	**45**	*e*P	**Pn**	**23 38 52.3**	**-0.8**
MESA3				*e*S	**Sn**	**23 39 13.1**	**-1.7**
CDITO	**Canoas**	**1.67**	**343**	P	**Pn**	**23 38 51.6**	**-1.6**
CDITO				S	**Sn**	**23 39 12.7**	**-2.2**
JEFFS	**S de V. Baru**	**1.69**	**355**	*i* P	**Pn**	**23 38 52.5**	**-1.1**
JEFFS	**S de V. Baru**	**1.69**	**355**	*e*P	**Pn**	**23 38 52.6**	**-1.1**

PSOM3 **Paja de Sombre** 1.70 2 *eP* **Pn** 23 38 53.3 -0.4
PSOM3 *eS* **Sg** 23 39 17.5 -0.7
PIRO Carate, Puerto 1.71 326 **Pn** 23 38 51.7 -2.1
PIRO Carate, Puerto 1.71 326 P **Pn** 23 38 51.8 -2.0
PIRO S **Sn** 23 39 14.0 -2.1
PIRO Carate, Puerto 1.71 326 *eP* **Pn** 23 38 51.6 -2.2
PIRO Carate, Puerto 1.71 326 *eP* **Pn** 23 38 51.6 -2.2
PTAR3 Potrerillos Ar 1.71 356 *eP* **Pn** 23 38 53.0 -1.0
PTAR3 *eS* **Sb** 23 39 17.1 -0.2
BQSF3 Alto Boquete, 1.76 358 *eP* **Pn** 23 38 53.4 -1.3
BQSF3 *eS* **Sn** 23 39 17.0 -0.3
BQTLY Boquete Panama 1.77 357 *eP* **Pn** 23 38 53.5 -1.3
STIA3 Santiago, Vera 1.78 51 *eP* **Pn** 23 38 54.2 -0.6
STIA3 *eS* **Sn** 23 39 17.5 -0.3
PTJ1 Puerto Jimnez 1.80 329 P **Pn** 23 38 54.0 -1.1
PTJ1 S **Sn** 23 39 16.6 -1.7
PTJ1 Puerto Jimnez 1.80 329 *eP* **Pn** 23 38 53.8 -1.4
PTJ1 Puerto Jimnez 1.80 329 *eP* **Pn** 23 38 53.8 -1.4
PTJ1 *eS* **Sn** 23 39 16.7 -1.7
LNBQ3 Los Naranjos, 1.81 358 *eP* **Pn** 23 38 53.9 -1.4
LNBQ3 *eS* **Sg** 23 39 21.5 -0.1
BRU2 Volcan 1.84 350 **Pn** 23 38 54.4 -1.3
BRU2 Sn **Sn** 23 39 18.4 -0.9
BRU2 Volcan 1.84 350 P **Pn** 23 38 54.8 -1.0
BRU2 S **Sn** 23 39 17.6 -1.7
BRU2 Volcan 1.84 350 *i* P **Pn** 23 38 54.2 -1.5
BRU2 ⇓ *i* P **Pn** 23 38 54.5 -1.3
BRU2 *eS* **Sb** 23 39 20.3 -0.6
BRU2 Volcan 1.84 350 *eP* **Pn** 23 38 54.4 -1.3
EDAD Golfito 1.84 335 *eP* **Pn** 23 38 53.1 -2.6
MLIR3 Monte Lirio, C 1.86 346 *i* P **Pn** 23 38 55.4 -0.7
RSRNO Rio Sereno 1.89 345 *i* P **Pn** 23 38 55.7 -0.8
RSRNO Rio Sereno 1.89 345 *eP* **Pn** 23 38 55.9 -0.6
RBALA Bur 1.91 7 *i* P **Pn** 23 38 55.6 -1.0
RBALA *eS* **Sn** 23 39 20.5 -0.4
RBALA IAML 23 39 21.1
comp=Z,661nm,1.0s
RBALA Bur 1.91 7⇓ *eP* **Pn** 23 38 55.9 -0.6
PBNVO Pueblo Nuevo, 1.91 5 *eP* **Pn** 23 38 55.4 -1.2
KKNTU Kakint② 1.94 17 *i* P **Pn** 23 38 56.2 -0.7
KKNTU Kakint② 1.94 17 *eP* **Pn** 23 38 56.3 -0.7
CHGR2 Aguacate 1.96 7 *eP* **Pn** 23 38 57.7 +0.3
CHGR2 *eS* **Sn** 23 39 22.4 +0.1
TOSI3 Tonosi 1.97 77 *eP* Pn 23 38 54.3 -3.0
PESE3 Pese, Herrera 1.98 62 *eP* **Pn** 23 38 57.7 +0.2
PESE3 *eS* **Sn** 23 39 22.1 -0.5
SAFE3 Santa Fe, Vera 2.00 40 *eP* **Pn** 23 38 57.6 -0.2
SAFE3 *eS* **Sn** 23 39 21.1 -0.1
ALCO Alturas Coton, 2.02 347 *eP* **Pn** 23 38 56.8 -1.4
CALO3 Calobre, Verag 2.02 49 *eP* **Pn** 23 38 57.8 -0.3
CALO3 *eS* **Sn** 23 39 23.6 -0.2
CRIS3 El Cristo, Coc 2.16 54 *eP* **Pn** 23 39 00.2 +0.3
CRIS3 *eS* **Sn** 23 39 28.1 +1.0
CHIT3 Chitre 2.17 63 *eP* **Pn** 23 38 59.6 -0.6
CHIT3 *eS* **Sn** 23 39 25.2 -2.2
EDP2 Potrero Grande 2.18 339 *eP* **Pn** 23 38 59.9 -0.4
FIMO Fila Mora 2.23 334 *eP* **Pn** 23 39 00.2 -0.9
ACHO3 Achotines, Los 2.23 79 *eP* **Pn** 23 38 59.6 -1.4
ACHO3 *eS* **Sn** 23 39 26.1 -2.7
AZU Azuero 2.24 69⇓ *iP* **Pn** 23 39 00.1 -0.9
AZU *i* S **Sn** 23 39 27.8 -1.1
AZU Azuero 2.24 69⇓ *eP* **Pn** 23 38 59.9 -1.2
PANP Palmar Norte 2.25 332 *eP* **Pn** 23 38 60.0 -1.3
PCRI3 Pocri, Los San 2.34 73 *eP* **Pn** 23 39 01.6 -0.9
PCRI3 *eS* **Sn** 23 39 29.2 -1.8
BURE Buenos Aires 2.38 336 *eP* **Pn** 23 39 02.5 -0.7
PEDA3 Pedasi 2.39 77 *eP* **Pn** 23 39 01.9 -1.3
PEDA3 *eS* **Sn** 23 39 31.0 -1.9
DRK0 Durika 2.43 339 S **Sn** 23 39 32.3 -1.8
DRK0 Durika 2.43 339 *eP* **Pn** 23 39 01.0 -2.9
DRK0 *eS* **Sn** 23 39 32.0 -2.1
DRK0 Durika 2.43 339⇑ *eP* **Pn** 23 39 00.9 -3.0
CNI2 El Empalme, Bo 2.44 358 *eP* **Pn** 23 39 05.3 +1.5
CNI2 *eS* **Sb** 23 39 36.5 -1.5
OCHAL Ojochal 2.46 329 P **Pn** 23 39 03.3 -0.9
OCHAL S **Sn** 23 39 33.7 -0.8
EDPE Pejibaye, P 2.47 331 *eP* **Pn** 23 39 03.7 -0.7
PNME Penonome 2.52 53 *eP* **Pn** 23 39 05.5 +0.5
PNME *eS* **Sn** 23 39 36.9 +0.8
RGM0 Gandoca 2.61 355 Pn **Pn** 23 39 07.0 +0.8
RGM0 Gandoca 2.61 355 P **Pn** 23 39 05.3 -1.0
RGM0 Gandoca 2.61 355 *eP* **Pn** 23 39 08.6 +2.4
LAES El Progreso Va 2.85 347 *eP* **Pn** 23 39 10.0 +0.4
BUS1 Rivas 2.90 332 *eP* **Pn** 23 39 10.1 -0.5
QUEP Quepos 3.02 324 P **Pn** 23 39 10.8 -1.0
QUEP S **Sn** 23 39 47.4 -0.9
VERH Veragua Rainfo 3.04 345⇑ *eP* **Pn** 23 39 12.3 +0.1
PIEC Cerro El Cedra 3.06 329⇑ *eP* **Pn** 23 39 12.3 -0.4
RAZU San Marcos de 3.13 329 *eP* **Pn** 23 39 13.4 -0.1
ZANG Zanguenga, Cho 3.17 51 *eP* **Pn** 23 39 14.3 +0.4
LCR2 La Lucha 2 3.19 330 S **Sn** 23 39 52.0 -0.9
REPA Paraso 3.20 333⇑ *eP* **Pn** 23 39 14.3 -0.1
CHOR3 La Chorrera 3.21 53 *eP* **Pn** 23 39 15.5 +1.0
VERB Verbena 3.23 336 *eP* **Pn** 23 39 15.1 +0.3
PCAYA Pacayas 3.25 334 *eP* **Pn** 23 39 15.4 +0.1
VTCV VTCV, Calle Va 3.28 336 *eP* **Pn** 23 39 15.5 0.0
RAFA San Farael, Vo 3.29 334 Pn **Pn** 23 39 16.0 +0.1
RAFA San Farael, Vo 3.29 334 *eP* **Pn** 23 39 15.8 -0.1
ABRB Las Abras (San 3.29 336 *eP* **Pn** 23 39 15.8 -0.1
CVTV Tajo 3.30 336 *eP* **Pn** 23 39 16.3 +0.3
LCOCO El Coco 3.30 336 *eP* **Pn** 23 39 16.3 +0.6
CVTQ Turrialba Volc 3.31 336 *eP* **Pn** 23 39 16.3 +0.1
ACOS Acosta 3.32 328 *eP* **Pn** 23 39 15.5 -0.6
VTR0 Volcan Turrial 3.32 336 *eP* **Pn** 23 39 16.5 +0.1
CVTR Volcan Turrial 3.32 336 *eP* **Pn** 23 39 16.5 +0.1
BCIP Isla Barro Col 3.33 49 **Pn** 23 39 17.2 +1.1
BCIP Isla Barro Col 3.33 49 P **Pn** 23 39 16.4 +0.3
BCIP S **Sn** 23 39 57.3 +1.4
BCIP Isla Barro Col 3.33 49 P **Pn** 23 39 15.7 -0.3
BCIP S **Sn** 23 39 59.5 +3.6
BCIP Isla Barro Col 3.33 49 *eP* **Pn** 23 39 16.4 +0.3
BCIP *eP* **Pb** 23 39 17.4 -5.5
BCIP *eS* **Sn** 23 39 59.8 +3.9
BCIP *eS* **Sb** 23 40 00.5 -3.1
BCIP Isla Barro Col 3.33 49 *eP* **Pn** 23 39 15.9 -0.2
TRIO Tres Rios 3.33 331 *eP* **Pn** 23 39 15.3 -0.9
VICA Volcano Irazu 3.33 334 *eP* **Pn** 23 39 16.2 -0.2
LUJA Lujan 3.38 336 *eP* **Pn** 23 39 16.8 -0.2
COCON Coronado 3.39 332 *eP* **Pn** 23 39 17.0 +0.1
GAMB1 Gamboa 3.39 51 *eP* **Pn** 23 39 16.9 -0.1
CVIMO Finca Echandi 3.41 333 *eP* **Pn** 23 39 17.2 -0.1
FLAM Flamenco Islan 3.41 55 *eP* **Pn** 23 39 17.6 +0.4
FLAM *eS* **Sn** 23 40 00.8 +2.8
FRIJ El Hiral 3.44 49 *eP* **Pn** 23 39 17.9 +0.2
HDC Heredia 3.47 330 **Pn** 23 39 17.8 -0.3
HDC Heredia 3.47 330 *eP* **Pn** 23 39 18.3 +0.2
HDC Heredia 3.47 330 *i* P **Pn** 23 39 18.4 +0.3
HDC *eS* **Sn** 23 40 00.3 +0.7
VPS8 V Poas 3.68 330 *eP* **Pn** 23 39 21.2 0.0
TRT2 Tortugero 3.81 339 P **Pn** 23 39 23.2 +0.5
TRT2 Tortugero 3.81 339 *eP* **Pn** 23 39 23.1 +0.4
TRT2 Tortugero 3.81 339⇑ *eP* **Pn** 23 39 22.7 0.0
CHPO Chepo, Panama 3.90 56 *eP* **Pn** 23 39 23.6 -0.3
CNTA3 Canitas, Panam 4.11 57 *eP* **Pn** 23 39 30.2 +3.4
JTS Las Juntas de 4.17 322 Pn **Pn** 23 39 26.8 -0.9
comp=Z,264nm,0.6s,baz=67,slow=8.8,SNR=124
JTS LR LR 23 40 09.3
comp=Z,385nm,20.4s,baz=85,slow=26
JTS Sn **Sn** 23 40 15.8 -1.0
comp=Z,19nm,0.3s,baz=60,slow=22,SNR=5.1
JTS Las Juntas de 4.17 322 **Pn** 23 39 27.1 -0.7
JTS Las Juntas de 4.17 322 P **Pn** 23 39 26.7 -1.0
JTS S **Sn** 23 40 15.1 -1.7
JTS Las Juntas de 4.17 322 P **Pn** 23 39 26.5 -1.2
JTS Las Juntas de 4.17 322 *eP* **Pn** 23 39 27.0 -0.7
JTS *eP* **Pn** 23 39 27.8 +0.2
JTS *eS* **Sn** 23 40 16.0 -0.7
JTS Las Juntas de 4.17 322 *eP* **Pn** 23 39 26.3 -1.4
CMARA Lajas Hojancha 4.27 315 P **Pn** 23 39 28.7 -0.5
CMARA S **Sn** 23 40 18.4 -1.0
CMARA Lajas Hojancha 4.27 315 *eP* **Pn** 23 39 28.1 -1.1
CMARA Lajas Hojancha 4.27 315⇑ *eP* **Pn** 23 39 28.1 -1.1
NICO Nicoya 4.37 316⇑ *eP* **Pn** 23 39 29.8 -0.6
JUD3 Juan Diaz 3 4.46 316 Pn **Pn** 23 39 30.9 -0.8
PLVR Palo Verde 4.46 319 *eP* **Pn** 23 39 31.3 -0.6
PTAC Punta Ardita, 4.54 88 P **Pn** 23 39 31.4 -1.3
PTAC S **Sn** 23 40 19.3 -6.5
PTAC Punta Ardita, 4.54 88 *eP* **Pn** 23 39 32.1 -0.6
CUI Cuipilapa 4.58 323 *eP* **Pn** 23 39 33.0 -0.4
UPD2 Meteti 4.59 70 *eP* **Pn** 23 39 37.3 +3.7

COLC Colonia 4.61 323 *eP* **Pn** 23 39 33.7 -0.1
HORNC Hornillas 4.63 323 *eP* **Pn** 23 39 34.2 0.0
MESS Mesas 4.67 324 *eP* **Pn** 23 39 34.3 -0.3
ELI1 Hacienda Flor 4.81 319 P **Pn** 23 39 37.2 +0.6
ELI1 S **Sn** 23 40 32.5 -0.2
LAPC Finca la Perla 4.83 321 *eP* **Pn** 23 39 36.9 0.0
SOLC Bahia Solano 4.99 98 P **Pn** 23 39 42.5 +3.6
SOLC S Sn 23 40 30.4 -6.6
CARN Rivas 5.21 324 P **Pn** 23 39 42.5 +0.5
OMEN Al SSO del Vol 5.53 325 P **Pn** 23 39 46.8 +0.4
SAIC Isla e San And 5.57 7 P **Pn** 23 39 47.5 +0.6
comp=Z,108nm,0.8s
SAIC S **Sn** 23 40 50.3 -0.9
comp=Z,108nm,0.8s
CONN Concepcion 5.58 325 P **Pn** 23 39 47.8 +0.7
APAC Apartado, Choc 5.82 81 P **Pn** 23 39 51.2 +0.8
comp=Z,57nm,0.8s
APAC S **Sn** 23 40 57.0 -0.5
comp=Z,57nm,0.8s
DBBC Dabeiba 6.12 89 P **Pn** 23 39 54.5 -0.1
DBBC S **Sn** 23 41 01.1 -3.9
BOAB BOACO BROADBAN 6.33 329 **Pn** 23 39 57.0 -0.4
BOAB BOACO BROADBAN 6.33 329 P **Pn** 23 39 57.5 +0.1
PLMC San Jos del P 6.40 108 P **Pn** 23 39 57.3 -1.1
comp=Z,29nm,0.7s
PLMC S **Sn** 23 41 07.2 -4.6
comp=Z,29nm,0.7s
COPN Copaltepe 6.64 322 P **Pn** 23 40 02.3 +0.6
YOTC Yotoco, Valle 6.70 116 P **Pn** 23 40 02.4 -0.1
comp=Z,24nm,0.7s
YOTC S **Sn** 23 41 16.8 -2.5
comp=Z,24nm,0.7s
HELC Santa Helena 6.84 96 P **Pn** 23 40 07.3 +2.5
comp=Z,35nm,1.0s
HELC S **Sn** 23 41 19.1 -4.2
comp=Z,35nm,1.0s
BBAC Balboa, Cauca 7.09 134 P **Pn** 23 40 07.4 -0.7
comp=Z,2µmcomp=Z,659nmcomp=Z,48nm,0.6s
BBAC S **Sn** 23 41 25.2 -4.0
comp=Z,2µmcomp=Z,659nmcomp=Z,48nm,0.6s
SIUN Universidad Ur 7.10 341 Pn **Pn** 23 40 02.6 -5.4
HERN Volcan Telica 7.12 322 Pn **Pn** 23 40 08.4 +0.2
GUY2C Guyana, Caldas 7.18 104 P **Pn** 23 40 10.8 +1.3
comp=Z,31nm,0.8s
POPC Popayan, Colom 7.18 128 P **Pn** 23 40 09.9 +0.5
comp=Z,2µmcomp=Z,587nmcomp=Z,34nm,0.7s
POPC S Sn 23 41 25.8 -5.7
comp=Z,2µmcomp=Z,587nmcomp=Z,34nm,0.7s
CRIN San Cristobal 7.32 321 Pn **Pn** 23 40 09.2 -1.9
CRUC La Cruz 7.62 135 P **Pn** 23 40 17.4 +2.0
SJCC San Jacinto, C 7.69 67 P **Pn** 23 40 18.0 +1.9
comp=Z,34nm,1.1s
OTAV Otavalo 7.75 150 **Pn** 23 40 18.5 +1.1
OTAV Otavalo 7.75 150 P **Pn** 23 40 18.1 +0.8
comp=Z,21nm,0.7s
OTAV Otavalo 7.75 150 *eP* **Pn** 23 40 18.9 +1.6
PTBC PUERTO BERRIO, 7.88 93 P **Pn** 23 40 21.1 +2.5
comp=Z,14nm,0.6s
PTBC S **Sn** 23 41 47.6 -0.6
comp=Z,14nm,0.6s
PRAC Prado 8.13 113 P **Pn** 23 40 23.2 +1.1
PRAC S **Sn** 23 41 55.2 +0.8
ROSC El Rosal 8.29 104 Pn **Pn** 23 40 24.6 -0.1
comp=Z,1.7nm,0.3s,baz=208,slow=22,SNR=6.6
ROSC Sn **Sn** 23 41 57.0 -1.8
comp=Z,1.9nm,0.3s,baz=90,slow=23,SNR=1.4
ROSC LR LR 23 43 00.1
comp=Z,604nm,19.4s,baz=291,slow=33
comp=Z,5.2nm,0.4s
ROSC El Rosal 8.29 104 **Pn** 23 40 27.5 +2.9
TGUH Tegucigalpa,Un 8.53 326 Pn **Pn** 23 40 28.2 +0.5
SLOR San Lorenzo - 8.57 153 **Pn** 23 40 31.8 +3.2
MTO3 Montecristo 10.08 318 Pn **Pn** 23 40 48.4 -0.7
APG El Apazote 11.26 316 Pn **Pn** 23 41 04.3 -0.9
comp=Z,0.2nm,0.3s,baz=150,slow=9.9,SNR=10.0
APG LR LR 23 45 15.9
comp=Z,44nm,21.4s,baz=261,slow=37
comp=Z,2.4nm,0.8s
SDV Santo Domingo 11.78 80 Pn **Pn** 23 41 15.7 +3.3
comp=Z,0.2nm,0.3s,baz=255,slow=9.4,SNR=5.4
SDV Sn **Sn** 23 43 19.2 -5.3
comp=Z,0.8nm,0.3s,baz=354,slow=20,SNR=4.1
comp=Z,3.4nm,0.7s
SDV Santo Domingo 11.78 80 **Pn** 23 41 13.5 +1.1
SDV Santo Domingo 11.78 80 *eP* **Pn** 23 41 12.4 0.0
MTDJ Mount Denham 12.14 22 Pn **Pn** 23 41 17.2 0.0
HUEH Huehuetenango 12.20 314 Pn **Pn** 23 41 18.8 +0.7
ATAH Atahualpa 14.57 164 Pn **Pn** 23 41 51.6 +0.9
comp=Z,0.2nm,0.3s,baz=145,slow=20,SNR=6.1
ATAH LR LR 23 46 50.3
comp=Z,691nm,18.4s,baz=352,slow=35
comp=Z,2.4nm,0.7s
CMIG Matias Romero 15.82 311 Pn **Pn** 23 42 08.9 +1.9
comp=Z,8.5nm,0.7s,baz=96,slow=13,SNR=1.9
CMIG LR LR 23 47 47.3
comp=Z,417nm,20.3s,baz=135,slow=36
SJG San Juan 19.30 54 P **Pn** 23 42 51.7 +1.4
comp=Z,9.0nm,0.6s,baz=163,slow=1.1,SNR=3.9
SJG LR LR 23 50 19.9
comp=Z,196nm,20.6s,baz=243,slow=37
NNA Nana 19.62 164 P **P** 23 42 54.4 +1.5
comp=Z,4.5nm,0.4s,baz=323,slow=10,SNR=1.9
TEFE Tefe 20.54 120 *eP* **P** 23 43 01.3 -1.6
BOAV Boa Vista 22.24 101 **P** 23 43 21.8 +0.5
BOAV Boa Vista 22.24 101 *eP* **P** 23 43 20.3 -1.0
MACA Manacapuru-AM 23.88 114 *eP* **P** 23 43 37.7 -0.3
250A Grady 25.14 352 P **P** 23 43 49.6 +0.2
346A Big Creek Wild 25.18 346 P **P** 23 43 49.1 -0.6
346A IAmb IAmb 23 43 58.0
comp=Z,31nm,0.8s
HBVL Hebbronville 25.28 324 P **P** 23 43 51.3 +0.5
HBVL IAmb IAmb 23 44 08.7
comp=Z,28nm,1.0s
152A Waverly Hall 25.66 355 P **P** 23 43 53.2 -1.0
152A IAmb IAmb 23 43 58.5
comp=Z,63nm,1.8s
HKT Hockley 26.13 333 **P** 23 43 57.3 -1.0
HKT IAmb IAmb 23 44 03.4
comp=Z,19nm,1.2s
735A Kenedy 26.19 328 P **P** 23 43 59.1 +0.1
LRAL Lakeview Retre 26.29 351 **P** 23 43 59.6 -0.2
LRAL IAmb IAmb 23 44 06.3
comp=Z,30nm,1.2s
833A Chaparral WMA, 26.65 325 P **P** 23 44 03.3 +0.2
LPAZ La Paz 27.07 149 P **P** 23 44 08.2 +0.5
comp=Z,0.7nm,0.5s,baz=320,slow=5.4,SNR=4.4
LPAZ LR LR 23 56 08.3
comp=Z,344nm,18.9s,baz=314,slow=39
comp=Z,0.7nm,0.5s
LPAZ La Paz 27.07 149 *eP* **P** 23 44 07.1 -0.7
HNDO Hondo 27.51 327 **P** 23 44 11.1 +0.2
PB18 Visviri 27.53 153 P **P** 23 44 12.1 +0.3
Y45A Yeager Farm, C 27.57 347 P **P** 23 44 11.4 +0.1
435B Jarrell 27.65 331 P **P** 23 44 11.9 -0.2
435B IAmb IAmb 23 44 14.5
comp=Z,29nm,0.9s
237A Washetta, Mont 27.88 335 P **P** 23 44 14.2 +0.1
Z41A Richland Creek 27.89 341 P **P** 23 44 13.3 -0.9
Z41A IAmb IAmb 23 44 15.7
comp=Z,20nm,1.0s
PB16 IPOC Station P 28.17 153 **P** 23 44 18.0 +0.5
DRIO Del Rio 28.18 325 **P** 23 44 16.4 -0.5
DRIO IAmb IAmb 23 44 20.6
comp=Z,31nm,1.4s
WLAR White Oak Lake 28.38 341 P **P** 23 44 17.6 -1.1
WLAR IAmb IAmb 23 44 25.7
comp=Z,22nm,1.0s
CPCT Cooper Cave 28.41 356 P **P** 23 44 18.8 -0.1
JCT Junction City 28.54 327 P **P** 23 44 19.1 -1.0
JCT IAmb IAmb 23 44 22.9
comp=Z,35nm,1.6s
TKL Tuckaleechee C 28.58 358 LR LR 23 56 15.6
comp=Z,159nm,18.4s,baz=182,slow=38
WHTX Lake Whitney, 28.59 332 P **P** 23 44 20.1 -0.4
Z38A Mt. Pleasant 28.65 338 P **P** 23 44 20.6 -0.5
BRDY Brady 28.76 329 **P** 23 44 21.3 -0.7
BRDY IAmb IAmb 23 44 24.3
comp=Z,24nm,1.7s
ITTB Itaituba 28.88 112 *eP* **P** 23 44 22.4 -0.9
FW13 Cleburne 28.88 333 P **P** 23 44 22.8 -0.4
V48A Smith Brothers 28.92 353 P **P** 23 44 22.9 -0.5
V48A IAmb IAmb 23 44 26.4
comp=Z,30nm,1.3s
UALR University of 29.15 343 P **P** 23 44 24.8 -0.6
CLTN Cedars of Leba 29.21 353 P **P** 23 44 26.6 +0.7

CLTN IAmb IAmb 23 44 33.2
comp=Z,48nm,2.0s
U56A King 29.29 3 P **P** 23 44 23.9 -2.8
PB11 IPOC Station P 29.37 155 **P** 23 44 28.2 +0.5
WVT Waverly 29.45 351 **P** 23 44 27.1 -0.9
WVT IAmb IAmb 23 44 30.8
comp=Z,36nm,1.6s
SAND Sanderson 29.45 323 P **P** 23 44 29.4 +1.2
TZTN Tazewell 29.45 358 P **P** 23 44 28.5 +0.4
GO01 Chusmiza 29.48 154 P **P** 23 44 30.2 +1.1
GO01 IAmb IAmb 23 44 33.9
comp=Z,32nm,1.9s
U49A Red Boiling Sp 29.57 354 P **P** 23 44 29.4 +0.2
U49A IAmb IAmb 23 44 34.3
comp=Z,19nm,1.2s
VILB Vilhena 29.62 132 P **P** 23 44 29.9 +0.1
VILB IAmb IAmb 23 44 39.4
comp=Z,10nm,0.8s
VILB Vilhena 29.62 132 *eP* **P** 23 44 30.4 +0.6
WHAR Wooly Hollow 29.62 343 **P** 23 44 29.4 -0.2
WHAR IAmb IAmb 23 44 30.2
comp=Z,29nm,1.4s
MDP Montagnes des 29.62 92 LR LR 23 55 59.8
comp=Z,139nm,20.5s,baz=289,slow=36
Z35A Perchaven, San 29.64 334 P **P** 23 44 29.9 +0.1
PLPT Palo Pinto 29.68 332 P **P** 23 44 30.2 +0.1
PLPT IAmb IAmb 23 44 31.6
comp=Z,20nm,1.0s
HPIG 29.73 315 P **P** 23 44 31.1 +0.1
HPIG IAmb IAmb 23 45 08.3
comp=Z,6.9nm,0.4s
TXAR Lajitas Array 29.95 321 P **P** 23 44 34.2 +1.4
comp=Z,1.6nm,0.8s,baz=126,slow=6.4,SNR=11
TXAR LR LR 23 57 46.1
comp=Z,165nm,20.3s,baz=120,slow=39
comp=Z,1.6nm,0.8s
TXAR Lajitas Array 29.95 321 P **P** 23 44 32.9 +0.1
TX31 Lajitas Ar. Si 29.96 321 **P** 23 44 32.3 -0.5
LCAR Lake Charles 30.06 346 P **P** 23 44 33.0 -0.5
LCAR IAmb IAmb 23 44 34.5
comp=Z,16nm,0.9s
FCAR Ozark Folk Cen 30.14 344 P **P** 23 44 33.5 -0.6
FCAR IAmb IAmb 23 44 35.0
comp=Z,13nm,1.0s
ABTX Abilene, Hawle 30.16 330 P **P** 23 44 34.0 -0.4
LOOK Love County 30.17 335 P **P** 23 44 33.7 -0.8
T47A Sharon Grove 30.19 352 **P** 23 44 34.7 +0.1
NPGB Novo Progresso 30.34 117 *eP* **P** 23 44 36.0 -0.3
ALPN Alpine 30.66 322 **P** 23 44 39.8 +0.6
ALPN IAmb IAmb 23 44 44.7
comp=Z,20nm,1.3s
MNHN Monahans 30.84 324 **P** 23 44 40.9 +0.3
MNHN IAmb IAmb 23 44 44.8
comp=Z,16nm,1.1s
CGM3 Cape Girardeau 30.91 349 P **P** 23 44 40.5 -0.5
T42A Van Buren 30.96 346 P **P** 23 44 40.4 -1.0
T42A IAmb IAmb 23 44 42.1
comp=Z,9.9nm,0.8s
APMT Aspermont 30.96 330 **P** 23 44 40.8 -0.7
APMT IAmb IAmb 23 45 11.7
comp=Z,19nm,1.5s
X34A Smith Ranch, M 30.97 335 P **P** 23 44 41.1 -0.5
SIV San Ignacio 31.07 137 LR LR 23 58 23.7
comp=Z,324nm,18.9s,baz=306,slow=39
USIN University of 31.22 352 P **P** 23 44 42.5 -1.2
R49A Shelbyville 31.28 356 P **P** 23 44 43.7 -0.6
WCI Wyandotte Cave 31.32 354 P **P** 23 44 44.8 +0.2
MGMO Mountain Grove 31.37 345 P **P** 23 44 44.1 -1.0
POST Post 31.45 328 **P** 23 44 45.9 0.0
POST IAmb IAmb 23 44 48.0
comp=Z,11nm,1.0s
PECS Pecos 31.51 323 P **P** 23 44 46.1 -0.3
PECS IAmb IAmb 23 44 49.4
comp=Z,22nm,1.6s
DEOK Depew 31.52 338 P **P** 23 44 45.3 -1.1
DEOK IAmb IAmb 23 44 47.3
comp=Z,25nm,1.3s
DKNS Dickens 31.63 330 **P** 23 44 47.6 +0.1
DKNS IAmb IAmb 23 44 49.2
comp=Z,12nm,1.1s
FVM French Village 31.72 348 **P** 23 44 48.2 +0.1
LPIG La Paz 31.74 306 LR LR 23 54 44.5
comp=Z,128nm,21.8s,baz=159,slow=31
VHRN Van Horn 31.78 321 **P** 23 44 49.5 +0.5
CCM Cathedral Cave 31.97 347 **P** 23 44 48.9 -1.5
PTLB Pontes e Lacer 32.04 134 *eP* **P** 23 44 51.4 +0.3
OLIL Olney 32.04 352 **P** 23 44 51.6 +0.7
S39A Bolivar 32.16 344 **P** 23 44 51.9 -0.1
S39A IAmb IAmb 23 44 53.2
comp=Z,10nm,0.9s
Q44A Meyer Farm, Va 32.35 350 P **P** 23 44 53.9 +0.3
MNTX Cornudas Mount 32.66 322 **P** 23 44 57.6 +1.1
MNTX IAmb IAmb 23 45 00.2
comp=Z,18nm,1.1s
ELIS Ellis County 32.89 334 P **P** 23 44 58.4 -0.1
P43A Skaggs, Pawnee 33.15 350 P **P** 23 44 59.9 -0.8
NOKA Waynoka 33.17 335 P **P** 23 44 59.2 -1.7
P40A Paris 33.56 346 P **P** 23 45 03.6 -0.7
P40A IAmb IAmb 23 45 07.1
comp=Z,26nm,1.5s
N41A Harden Midland 34.44 349 **P** 23 45 10.8 -1.0
KSU1 Kansas State U 34.47 340 P **P** 23 45 11.7 -0.5
R32A Long Quarter, 34.62 337 **P** 23 45 13.6 0.0
R32A IAmb IAmb 23 45 15.2
comp=Z,21nm,1.0s
121A Cookes Peak, D 34.72 320 **P** 23 45 16.5 +1.9
RTBA Rita Blanca 34.73 330 **P** 23 45 13.9 -0.7
RTBA IAmb IAmb 23 45 16.0
comp=Z,12nm,0.9s
SALV Santo Antonio 34.85 131 *eP* **P** 23 45 15.6 -0.1
319A Douglas 34.95 317 **P** 23 45 17.9 +1.4
319A IAmb IAmb 23 45 21.7
comp=Z,14nm,1.0s
CRNM Carthage 35.04 323 P **P** 23 45 18.7 +1.3
N38A Joes South For 35.05 346 P **P** 23 45 16.4 -0.7
Y22A Socorro 35.17 323 **P** 23 45 19.2 +0.7
SBM South Baldy 35.32 323 P **P** 23 45 21.6 +1.5
DUN6 Lazy B Ranch 35.57 319 P **P** 23 45 23.9 +2.0
ANMO Albuquerque 35.58 325 LR LR 00 00 54.1
comp=Z,93nm,21.0s,baz=128,slow=38
ANMO Albuquerque 35.58 325 P **P** 23 45 22.9 +0.9
ANMO Albuquerque 35.58 325 **P** 23 45 23.4 +1.3
ANMO IAmb IAmb 23 45 28.0
comp=Z,3.7nm,0.8s
L40A Anamosa 35.81 349 **P** 23 45 22.4 -1.3
L40A IAmb IAmb 23 45 24.2
comp=Z,19nm,0.9s
TUC Tucson 36.53 317 **P** 23 45 31.3 +1.1
KSCO Kaye Shedlock' 36.76 333 P **P** 23 45 31.1 -0.9
KSCO IAmb IAmb 23 45 34.0
comp=Z,10nm,0.7s
BGNE Belgrade 37.05 340 P **P** 23 45 34.0 -0.3
BGNE IAmb IAmb 23 45 39.8
comp=Z,31nm,1.1s
SDCO Great Sand Dun 37.13 329 **P** 23 45 35.2 -0.2
X18A Snowflake 37.39 321 **P** 23 45 38.4 +0.9
X18A IAmb IAmb 23 45 42.9
comp=Z,34nm,1.3s
MURT Porto Murtinho 37.41 140 *eP* **P** 23 45 37.1 -0.5
W18A Petrified Fore 37.64 322 **P** 23 45 42.3 +2.6
214A Organ Pipe Nat 37.71 315 P **P** 23 45 41.3 +1.2
SADO Sadowa 37.76 4 LR LR 00 01 52.7
comp=Z,208nm,18.3s,baz=286,slow=37
Q24A Divide 37.90 331 P **P** 23 45 42.5 +0.6
PIX Pinacate 37.95 314 P **P** 23 45 41.7 -0.3
OGNE Ogallala 38.10 336 P **P** 23 45 44.1 +0.7
X16A Lo Mia Camp, P 38.26 320 P **P** 23 45 46.8 +1.9
MVCO Mesa Verde 38.35 325 **P** 23 45 47.4 +1.7
MVCO IAmb IAmb 23 45 51.5
comp=Z,34nm,1.4s
ISCO Idaho Springs 38.77 331 **P** 23 45 50.5 +1.2
113A Mohawk Valley, 38.84 316 P **P** 23 45 51.1 +1.6
113A IAmb IAmb 23 45 54.4
comp=Z,22nm,1.4s
WUAZ Wupatki 38.92 321 **P** 23 45 51.9 +1.5
WUAZ IAmb IAmb 23 45 55.7
comp=Z,24nm,1.1s
Y14A Wickenburg 39.00 318 P **P** 23 45 53.0 +2.1
PV01 Paradox Valley 39.05 326 P **P** 23 45 51.7 +0.2
PV15 Paradox Valley 39.15 327 P **P** 23 45 52.8 +0.4
SPMN Marine on St. 39.17 348 **P** 23 45 50.9 -1.2
PV02 Paradox Valley 39.20 326 P **P** 23 45 53.1 +0.4
PV02 IAmb IAmb 23 45 57.1
comp=Z,54nm,1.5s

PV13 Radium Mtn., P 39.21 326 P **P** **23 45 53.1 +0.3**
PV03 Paradox Valley 39.29 326 P **P** **23 45 54.1 +0.6**
PV03 IAmb IAmb 23 45 57.7
comp=Z,33nm,1.7s
PV05 Paradox Valley 39.30 326 P **P** **23 45 53.5 -0.1**
PV05 IAmb IAmb 23 45 59.0
comp=Z,21nm,1.4s
PV12 Saucer Basin, 39.31 326 P **P** **23 45 53.8 +0.1**
PV12 IAmb IAmb 23 45 58.8
comp=Z,42nm,1.1s
PV18 Skein Mesa, Pa 39.32 326 P **P** **23 45 54.4 +0.6**
PV18 IAmb IAmb 23 46 05.1
comp=Z,23nm,1.0s
PV11 David Mesa, Pa 39.34 326 P **P** **23 45 52.7 -1.1**
PV11 IAmb IAmb 23 45 58.8
comp=Z,55nm,1.7s
PV16 Nyswonger Mesa 39.37 326 P **P** **23 45 53.7 -0.4**
PV16 IAmb IAmb 23 45 57.6
comp=Z,31nm,1.6s
PV20 West Nyswonger 39.42 326 P **P** **23 45 54.6 +0.1**
PV20 IAmb IAmb 23 46 06.1
comp=Z,31nm,1.4s
PV04 Paradox Valley 39.42 326 P **P** **23 45 54.9 +0.3**
PV04 IAmb IAmb 23 45 59.5
comp=Z,24nm,1.4s
PV22 Blue Mesa, Par 39.46 327 **P** **23 45 55.1 +0.2**
PV22 IAmb IAmb 23 45 59.9
comp=Z,31nm,1.8s
PV14 Lion Creek, Pa 39.47 326 P **P** **23 45 54.9 -0.2**
PV14 IAmb IAmb 23 47 00.9
comp=Z,14nm,0.9s
PV10 Paradox Valley 39.48 326 P **P** **23 45 53.3 -1.9**
PV10 IAmb IAmb 23 45 59.4
comp=Z,30nm,1.3s
GLA Glamis 39.74 315 P **P** **23 45 56.9 -0.2**
GLA IAmb IAmb 23 46 03.7
comp=Z,42nm,1.6s
BLYC Blythe 39.92 316 **P** **23 45 59.1 +0.5**
AMBA Amambai (Brazi 40.01 139 *e*P **P** **23 45 59.1 -0.3**
U15A North Rim 40.07 321 **P** **23 46 01.2 +1.1**
U15A IAmb IAmb 23 46 05.7
comp=Z,37nm,1.5s
HMU Henry Mountain 40.14 324 P **P** **23 46 01.9 +1.3**
H03N2 Juan Fernandez 40.32 176 T T 00 28 50.7
baz=354,slow=76,SNR=4.2
H03N1 Juan Fernandez 40.33 176 T T 00 28 51.4
baz=354,slow=76,SNR=5.4
H03N3 Juan Fernandez 40.34 176 T T 00 28 50.1
baz=354,slow=76,SNR=4.0
BC3 Big Chuckawall 40.51 316 **P** **23 46 04.8 +1.2**
F33A 5 Mile Ranch, 40.55 345 **P** **23 46 02.0 -1.6**
IRM Iron Mountain 40.57 316 P **P** **23 46 04.7 +0.6**
PKCU Pink Cliffs 40.74 323 P **P** **23 46 06.9 +1.2**
KNB Kanab 40.77 322 **P** **23 46 06.5 +0.6**
BDFB Brasilia 40.78 124 P **P** **23 46 05.4 -0.6**
comp=Z,1.1nm,0.4s,baz=297,slow=6.1,SNR=3.8
BDFB LR LR 00 03 24.2
comp=Z,251nm,18.1s,baz=314,slow=37
comp=Z,1.1nm,0.4s
SRU San Rafael Swe 40.82 326 P **P** **23 46 06.5 +0.4**
SRU IAmb IAmb 23 46 10.3
comp=Z,37nm,1.6s
LCMT Little Creek M 41.03 321 P **P** **23 46 08.3 +0.4**
LCMT IAmb IAmb 23 46 13.3
comp=Z,22nm,1.5s
MTPU Mount Pierson 41.05 323 **P** **23 46 08.8 +0.5**
MTPU IAmb IAmb 23 46 14.2
comp=Z,32nm,1.5s
Q16A Castle Valley 41.05 325 **P** **23 46 08.9 +0.8**
Q16A IAmb IAmb 23 46 13.5
comp=Z,38nm,1.6s
CPUP Villa Florida 41.07 145 P **P** **23 46 07.0 -1.0**
comp=Z,0.9nm,0.5s,baz=359,slow=8.7,SNR=4.5
CPUP LR LR 00 04 57.7
comp=Z,167nm,18.7s,baz=339,slow=39
comp=Z,0.9nm,0.5s
PMD Palm Desert 41.15 315 **P** **23 46 09.1 +0.3**
PFO Pinyon Flats O 41.19 315 LR LR 00 03 21.4
comp=Z,120nm,18.1s,baz=109,slow=36
PFO Pinyon Flats O 41.19 315 P **P** **23 46 08.5 -0.7**
P17A Butcher Ranch, 41.20 326 P **P** **23 46 10.4 +1.2**
DPP Dos Picos Cty 41.21 314 P **P** **23 46 10.3 +1.0**
V12A Nelson 41.28 319 **P** **23 46 10.8 +0.9**
SZCU Shurtz Canyon 41.31 322 P **P** **23 46 10.8 +0.5**
TMUT Trail Mountain 41.33 325 P **P** **23 46 11.0 +0.4**
RDMU Red Mountain 41.35 328 P **P** **23 46 11.8 +1.3**
K22A Casper 41.44 333 P **P** **23 46 10.0 -1.1**
K22A IAmb IAmb 23 46 13.4
comp=Z,22nm,1.5s
CCUT Cedar City 41.45 322 **P** **23 46 11.5 +0.1**
CCUT IAmb IAmb 23 46 17.6
comp=Z,31nm,1.8s
RSSD Black Hills 41.57 336 **P** **23 46 12.6 +0.3**
TCRU Three Creeks R 41.58 324 P **P** **23 46 14.2 +1.6**
TCRU IAmb IAmb 23 46 16.5
comp=Z,22nm,1.3s
MTPC Mountain Pass 41.60 318 P **P** **23 46 13.5 +0.9**
LMQ La Malbaie 41.72 12 P **P** **23 46 14.1 +0.9**
LMQ IAmb IAmb 23 46 21.9
comp=Z,18nm,1.2s
MT08 Bocatoma Ro 41.87 164 P **P** **23 46 16.2 +1.3**
SHPR Sheep Range 41.94 319 P **P** **23 46 16.2 +0.8**
BSUT Blindstream Ca 41.95 327 P **P** **23 46 16.4 +0.7**
TBO Thunder Bay 41.96 353 **P** **23 46 14.5 -0.7**
TBO IAmb IAmb 23 46 15.9
comp=Z,22nm,1.1s
MPU Maple Canyon 42.07 326 **P** **23 46 16.4 0.0**
MPU IAmb IAmb 23 46 20.5
comp=Z,26nm,1.6s
SHOC Shoshone, Teco 42.32 318 P **P** **23 46 20.0 +1.7**
SHOC IAmb IAmb 23 46 23.2
comp=Z,12nm,0.8s
GSC Goldstone, Bar 42.34 317 P **P** **23 46 19.9 +1.2**
GSC IAmb IAmb 23 46 24.3
comp=Z,26nm,1.5s
PSUT Pine Spring 42.37 323 **P** **23 46 18.2 -0.7**
PRN Pahroc Range 42.41 320 P **P** **23 46 19.6 +0.5**
E28A Huff 42.49 341 **P** **23 46 19.2 -0.3**
E28A IAmb IAmb 23 46 20.5
comp=Z,34nm,1.1s
CTU Camp Tracy 42.60 327 P **P** **23 46 20.1 -0.6**
CTU IAmb IAmb 23 46 36.3
comp=Z,37nm,1.9s
TCUT Toone Canyon 42.71 327 P **P** **23 46 21.5 -0.2**
AGMN Agassiz Nation 42.75 347 **P** **23 46 19.4 -2.1**
GWY Greenwater Val 42.75 318 **P** **23 46 21.4 -0.6**
QSM Queen of Sheba 42.76 317 P **P** **23 46 22.3 +0.5**
QSM IAmb IAmb 23 46 27.3
comp=Z,23nm,1.6s
RPN Rapa Nui 42.79 217 LR LR 23 59 14.2
comp=Z,228nm,21.0s,baz=76,slow=29
CCCA Chr Cany lake 42.85 317 P **P** **23 46 22.8 +0.1**
CCCA IAmb IAmb 23 46 28.5
comp=Z,31nm,1.4s
DUG Dugway, Tooele 42.85 325 **P** **23 46 22.9 +0.2**
TPNV Topopah Spring 42.91 319 P **P** **23 46 23.4 +0.1**
BW06 Boulder Array 42.96 330 **P** **23 46 23.0 -0.6**
PD31 Pinedale Array 42.96 330 P **P** **23 46 22.8 -0.9**
PDAR Pinedale Array 42.96 330 P **P** **23 46 24.6 +0.9**
comp=Z,1.3nm,0.9s,baz=142,slow=7.5,SNR=12
PDAR LR LR 00 06 36.5
comp=Z,44nm,19.6s,baz=118,slow=39
comp=Z,1.3nm,0.9s
PDAR Pinedale Array 42.96 330 **P** **23 46 23.0 -0.6**
LRMC Laurel Mtn Rad 43.04 316 P **P** **23 46 25.1 +0.8**
LRMC IAmb IAmb 23 46 30.0
comp=Z,44nm,1.8s
WCT Wildcat Mounta 43.06 319 P **P** **23 46 24.8 +0.4**
HWUT Hardware Ranch 43.14 328 **P** **23 46 25.2 +0.1**
HWUT IAmb IAmb 23 46 29.6
comp=Z,20nm,1.3s
CLC China Lake 43.17 317 P **P** **23 46 24.8 -0.5**
MPMC Manual Prospec 43.23 317 P **P** **23 46 26.8 +0.9**
MDND Maddock 43.30 343 P **P** **23 46 25.5 -0.5**
SPUT South Promonto 43.41 327 P **P** **23 46 28.3 +1.0**
SPUT IAmb IAmb 23 46 31.3
comp=Z,40nm,1.7s
BGU Big Grassy Mou 43.47 326 P **P** **23 46 29.2 +1.5**
BGU IAmb IAmb 23 46 32.6
comp=Z,26nm,1.4s
EPLO Experimental L 43.62 349 **P** **23 46 27.1 -1.4**
ISA Isabella, Lake 43.68 316 P **P** **23 46 30.6 +1.1**
ISA IAmb IAmb 23 46 40.0
comp=Z,25nm,2.0s

CWC Cottonwood Cre 43.83 317 P **P** **23 46 31.5 +0.8**
HVU Hansel Valley 43.91 327 P **P** **23 46 31.6 +0.3**
HVU IAmb IAmb 23 46 37.0
comp=Z,34nm,1.9s
LOHW Long Hollow 44.10 330 **P** **23 46 32.9 +0.1**
VES Vestal, Richgr 44.20 316 P **P** **23 46 35.6 +2.1**
DSP Deep Springs 44.28 318 **P** **23 46 35.4 +1.4**
FXWY Fox Creek 44.32 330 P **P** **23 46 35.1 +0.4**
LAO LASA Array 44.56 337 **P** **23 46 36.0 -0.3**
LAO IAmb IAmb 23 46 39.0
comp=Z,22nm,1.5s
ULM Lac du Bonnet 44.59 348 P **P** **23 46 35.1 -1.2**
comp=Z,11nm,0.9s,baz=161,slow=8.3,SNR=16
comp=Z,11nm,0.9s
ULM Lac du Bonnet 44.59 348 **P** **23 46 35.3 -1.0**
ULM IAmb IAmb 23 46 36.2
comp=Z,17nm,1.0s
RLMT Red Lodge 44.60 333 P **P** **23 46 36.7 -0.1**
RLMT IAmb IAmb 23 46 40.8
comp=Z,22nm,1.7s
ELK Elko 44.61 324 **P** **23 46 37.2 +0.2**
ELK IAmb IAmb 23 46 42.3
comp=Z,12nm,1.2s
PSAL Palomas, Salto 44.65 149 *e*P **P** **23 46 37.1 +0.1**
YNE Yellowstone No 44.86 332 P **P** **23 46 39.7 +0.8**
YNE IAmb IAmb 23 46 42.4
comp=Z,17nm,1.7s
ITAB Concordia 44.87 141 P **P** **23 46 38.3 -0.6**
ITAB IAmb IAmb 23 46 39.1
comp=Z,16nm,0.9s
ITAB Concordia 44.87 141 *e*P **P** **23 46 38.6 -0.3**
NVAR Mina Array Bea 45.09 319 P **P** **23 46 42.1 +1.3**
comp=Z,0.9nm,0.5s,baz=125,slow=3.3,SNR=8.0
NVAR LR LR 00 08 12.4
comp=Z,120nm,18.1s,baz=94,slow=40
comp=Z,0.9nm,0.5s
LHV Little Huntoon 45.12 319 P **P** **23 46 41.3 +0.6**
LHV IAmb IAmb 23 46 54.1
comp=Z,13nm,1.3s
YHL Hebgen Lake 45.29 331 **P** **23 46 43.0 +0.6**
HLID Hailey 46.01 328 **P** **23 46 48.8 +0.8**
BOZ Bozeman (W) 46.06 332 P **P** **23 46 50.0 +1.7**
BOZ IAmb IAmb 23 46 52.7
comp=Z,17nm,1.4s
MCMT McKenzie Canyo 46.09 330 P **P** **23 46 50.0 +1.3**
MFID Camas Ranch 46.67 326 **P** **23 46 54.5 +1.4**
MFID IAmb IAmb 23 46 58.1
comp=Z,21nm,1.5s
WVOR Wild Horse Val 47.65 324 P **P** **23 47 02.5 +1.7**
ORV Oroville 47.79 319 **P** **23 47 02.4 +0.7**
ORV IAmb IAmb 23 47 18.6
comp=Z,7.8nm,1.1s
PLID Pearl Lake 47.88 328 **P** **23 47 02.1 -0.5**
MSO Missoula 48.05 331 P **P** **23 47 03.7 -0.1**
MSO IAmb IAmb 23 47 08.5
comp=Z,19nm,1.6s
J08A Circle Bar Ran 48.12 325 P **P** **23 47 04.5 +0.1**
J08A IAmb IAmb 23 47 08.8
comp=Z,13nm,1.4s
BMO Blue Mountains 48.42 327 **P** **23 47 06.8 +0.1**
BMO IAmb IAmb 23 47 09.9
comp=Z,22nm,1.9s
PLCA Paso Flores 48.70 168 P **P** **23 47 08.8 0.0**
comp=Z,2.2nm,0.6s,baz=333,slow=7.4,SNR=13
comp=Z,2.2nm,0.6s
F10A Beach Ranch, E 49.11 328 P **P** **23 47 10.9 -1.1**
SCHQ Schefferville 49.33 12 P **P** **23 47 12.7 -0.6**
comp=Z,6.1nm,1.1s,baz=225,slow=5.8,SNR=4.8
SCHQ LR LR 00 08 01.0
comp=Z,74nm,21.9s,baz=198,slow=36
comp=Z,6.1nm,1.1s
G08A Pilot Rock 49.60 326 P **P** **23 47 16.6 +0.8**
G08A IAmb IAmb 23 47 21.1
comp=Z,11nm,1.5s
YBH Yreka Blue Hor 49.73 321 LR LR 00 08 34.5
comp=Z,7.2nm,21.9s,baz=123,slow=36
E09A Wood Farm, Sta 49.95 328 P **P** **23 47 18.6 +0.4**
E09A IAmb IAmb 23 47 20.6
comp=Z,11nm,1.0s
FFC Flin Flon 50.16 345 P **P** **23 47 19.4 -0.2**
FFC IAmb IAmb 23 47 22.6
comp=Z,16nm,1.5s
J04A Umpqua Nationa 50.19 323 P **P** **23 47 20.7 +0.3**
NEW Newport 50.60 330 LR LR 00 10 56.1
comp=Z,146nm,21.9s,baz=132,slow=39
G05A Wanic 50.89 325 P **P** **23 47 26.7 +1.3**
FCC Fort Churchill 52.45 352 **P** **23 47 35.7 -1.0**
FCC IAmb IAmb 23 47 38.2
comp=Z,17nm,1.4s
EDM Edmonton 52.54 337 **P** **23 47 37.0 -0.6**
EDM IAmb IAmb 23 47 39.6
comp=Z,12nm,0.9s
LLLB Lillooet 54.48 330 P **P** **23 47 52.0 +0.1**
LLLB IAmb IAmb 23 47 56.4
comp=Z,26nm,1.6s
AY03 Cochrane 54.68 172 P **P** **23 47 55.4 +2.1**
FRB Frobisher Bay 57.54 7 LR LR 00 13 36.6
comp=Z,115nm,18.7s,baz=182,slow=37
BLKN Baker Lake 58.07 353 P **P** **23 48 16.5 -0.7**
BLKN IAmb IAmb 23 48 20.0
comp=Z,13nm,1.4s
BBB Bella Bella 58.56 329 LR LR 00 15 48.2
comp=Z,106nm,18.9s,baz=151,slow=38
YKAW1 Yellowknife Wh 60.17 343 P **P** **23 48 31.9 +0.1**
YKAW1 IAmb IAmb 23 48 33.1
comp=Z,7.8nm,1.1s
YKA Yellowknife Ar 60.22 343 P **P** **23 48 32.2 0.0**
comp=Z,2.4nm,0.8s,baz=143,slow=6.1,SNR=45
comp=Z,2.4nm,0.8s
YKA Yellowknife Ar 60.22 343 P **P** **23 48 31.8 -0.3**
YKAW3 Yellowknife Wh 60.27 343 P **P** **23 48 31.8 -0.8**
YKAW3 IAmb IAmb 23 48 33.9
comp=Z,9.1nm,1.0s
ILON Igloolik, Nuna 62.32 0 P **P** **23 48 45.2 -1.0**
DLBC Dease Lake 62.98 334 LR LR 00 19 28.4
comp=Z,103nm,19.2s,baz=109,slow=39
SFJD Kangerlussuaq 63.73 13 LR LR 00 16 14.1
comp=Z,62nm,21.4s,baz=203,slow=36
POIN Pond Inlet 65.72 1 P **P** **23 49 08.6 +0.1**
RES Resolute Bay 68.05 356 LR LR 00 20 21.4
comp=Z,79nm,18.2s,baz=36,slow=37
J30M Hart River 68.84 338 P **P** **23 49 29.7 +0.9**
G31M Satah River 69.37 341 P **P** **23 49 32.1 +0.4**
G31M IAmb IAmb 23 49 36.5
comp=Z,13nm,1.1s
F31M Tsiigehtchic 69.49 341 P **P** **23 49 33.4 +1.0**
INK Inuvik 69.91 342 P **P** **23 49 36.2 +1.1**
INK IAmb IAmb 23 49 39.8
comp=Z,13nm,1.2s
TULEG Thule 69.92 3 P **P** **23 49 35.0 0.0**
TULEG IAmb IAmb 23 49 37.2
comp=Z,10nm,1.2s
I29M Ogilvie Camp, 69.96 338 P **P** **23 49 36.3 +0.8**
I29M IAmb IAmb 23 49 44.0
comp=Z,17nm,1.4s
F30M Barrier River 70.24 341 P **P** **23 49 37.7 +0.5**
BCAR Beaver Creek A 70.28 335 P **P** **23 49 38.3 +0.8**
L27K Beaver Creek, 70.30 335 P **P** **23 49 38.8 +1.2**
L27K IAmb IAmb 23 49 43.0
comp=Z,6.7nm,1.1s
PPT Papeete 70.69 249 LR LR 00 12 14.5
comp=Z,79nm,21.2s,baz=14,slow=29
PPT2 Papeete2 70.69 249 *e*LR LR 00 11 07.9
comp=Z,100nm,28.0s
I27K Kandik River 71.30 338 P **P** **23 49 44.4 +0.7**
E29M Blow River 71.33 341 P **P** **23 49 43.1 -0.7**
F28M Old Crow 71.59 340 P **P** **23 49 46.6 +1.2**
F28M IAmb IAmb 23 49 48.5
comp=Z,25nm,2.0s
BORG Borgarnes 71.63 23 LR LR 00 19 24.8
comp=Z,52nm,19.1s,baz=242,slow=34
TBI Tubuai 72.08 243 *e*LR LR 00 11 49.7
comp=Z,641nm,27.0s
ILAR Eielson Array 73.02 336 P **P** **23 49 54.7 +0.8**
comp=Z,1.0nm,0.8s,baz=111,slow=4.5,SNR=9.4
ILAR LR LR 00 24 30.1
comp=Z,50nm,21.0s,baz=104,slow=38
comp=Z,1.0nm,0.8s
KDAK Kodiak Island 73.63 328 LR LR 00 24 22.5
comp=Z,58nm,18.5s,baz=105,slow=38
I23K Minto, Yukon-K 74.14 336 P **P** **23 50 01.8 +1.3**
SKT Skwentna 74.15 333 P **P** **23 50 01.2 +0.6**
D25K Kavik River 74.50 341 P **P** **23 50 02.2 -0.4**
PPLA Purkeypile 74.69 334 P **P** **23 50 04.7 +0.7**
MDT Midelt 75.98 58 LR LR 00 20 35.8
comp=Z,52nm,21.3s,baz=267,slow=33
ESDC Sonseca Array 76.67 51 P **P** **23 50 18.2 +2.5**
comp=Z,0.5nm,0.8s,baz=266,slow=5.7,SNR=6.7
ESDC LR LR 00 17 12.6
comp=Z,138nm,20.6s,baz=280,slow=30
comp=Z,0.5nm,0.8s
DBIC Dimbokro 76.88 85 LR LR 00 22 08.2
comp=Z,20nm,20.3s,baz=325,slow=34
B22K Teshekpuk Lake 77.14 341 P **P** **23 50 17.8 +0.3**
B22K IAmb IAmb 23 51 49.5
comp=Z,12nm,1.1s
EKA Eskdalemuir Ar 78.16 35 LR LR 00 25 14.8
comp=Z,54nm,18.6s,baz=229,slow=36
TORD Torodi Ar. Bea 82.69 78 P **P** **23 50 50.9 +2.1**
comp=Z,0.6nm,0.6s,baz=283,slow=5.1,SNR=4.7
comp=Z,0.6nm,0.6s
SPITS Spitsbergen Ar 85.02 12 LR LR 00 28 50.4
comp=Z,46nm,21.8s,baz=224,slow=36
NOA NORSAR Array B 85.69 29 LR LR 00 27 44.0
comp=Z,22nm,18.9s,baz=285,slow=34
DAVOX Davos/Dischmat 86.52 43 LR LR 00 21 27.0
comp=Z,45nm,21.9s,baz=260,slow=30
HFS Hagfors 87.03 30 LR LR 00 29 29.7
comp=Z,35nm,18.1s,baz=257,slow=35
GERES GERESS Array B 88.79 41 LR LR 00 24 12.4
comp=Z,70nm,20.1s,baz=264,slow=31
ARCES ARCESS Array B 89.67 20 LR LR 00 31 20.8
comp=Z,28nm,19.9s,baz=337,slow=35
VRAC Vranov 90.58 40 LR LR 00 25 19.1
comp=Z,105nm,20.5s,baz=300,slow=31
AFI Afiamalu 91.08 256 LR LR 00 22 34.6
comp=Z,27nm,18.9s,baz=13,slow=29
FINES FINESS Array B 92.59 27 LR LR 00 30 46.5
comp=Z,40nm,19.1s,baz=269,slow=34
SHEM Shemya Is, Ala 92.61 324 LR LR 00 36 20.1
comp=Z,33nm,18.2s,baz=126,slow=38
MLR Muntele Rosu 97.69 42 LR LR 00 29 56.5
comp=Z,38nm,21.0s,baz=305,slow=32
AKASG Malin Array Be 98.01 37 LR LR 00 32 38.0
comp=Z,50nm,19.2s,baz=340,slow=33
RAO Raoul Island 98.19 241 LR LR 00 29 16.4
comp=Z,31nm,18.3s,baz=348,slow=31
TIXI Tiksi 98.88 350 LR LR 00 39 14.1
comp=Z,22nm,20.6s,baz=45,slow=37
H11S2 WAKE ISLAND Hyl 07.36 292 T T 01 52 47.5
baz=77
H11S1 WAKE ISLAND Hyl 07.36 292 T T 01 52 46.3
baz=77
H11S3 WAKE ISLAND Hyl 07.38 292 T T 01 52 49.0
baz=77
SONM Songino Array 124.88 353 PKP **PKPdf** **23 57 25.1 +0.2**
comp=Z,0.4nm,0.5s,baz=359,slow=1.7,SNR=4.8
NJ2 Nanjing 136.23 334 *e*P **PKPdf** **23 57 46.2 -0.4**
NJ2 pmax pmax
comp=Z,21nm,0.5s
ASAR Alice Springs 141.44 240 PKhKP PKPpre 23 57 51.4
comp=Z,0.4nm,0.5s,baz=120,slow=3.6,SNR=7.1
WRA Warramunga Arr 142.14 246 PKP **PKPdf** **23 57 55.1 -2.6**
comp=Z,1.6nm,1.0s,baz=104,slow=2.3,SNR=7.9
PZH PanZhiHua 146.48 353 PKPbc **PKPdf** **23 58 04.7 -0.6**
CMAR Chiang Mai Arr 154.70 357 PKP **PKPdf** **23 58 18.9 +0.9**
comp=Z,1.1nm,0.4s,baz=6.4,slow=1.6,SNR=1.8

IDC 06 23:55:40.2±1.6, 64°39N×16°90W, h0km, mb3.6/3, mbtmp3.6/5, ML3.3/2, Error ellipse: s-maj=48.3km s-min=27.8km az=20.0, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EKA	**Eskdalemuir Ar**	**11.38**	**137**	Pn	Pn	23 58 23.7	-0.1
	baz=325,slow=13						
	1.6nm,0.6s						
FINES	**FINESS Array B**	**19.50**	**79**	P	P	00 00 08.7	+0.2
	0.1nm,0.3s,baz=284,slow=11,SNR=1.8						
	1.4nm,0.9s						
ESDC	**Sonseca Array**	**25.90**	**157**	P	P	00 01 13.9	+0.3
	1.7nm,1.0s,baz=348,slow=10,SNR=4.6						
	1.7nm,1.0s						
BRTR	**Keskin Array B**	**38.16**	**105**	P	P	00 03 00.7	-0.3
	0.7nm,0.8s,baz=326,slow=6.6,SNR=4.3						
	0.7nm,0.8s						
TXAR	**Lajitas Array**	**62.59**	**281**	P	P	00 06 05.9	0.0
	0.5nm,0.9s,baz=28,slow=6.8,SNR=3.5						
	0.5nm,0.9s						

IDC 06 23:59:08.9±5.8, 30°36S×178°14W, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=220.0km s-min=54.7km az=151.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**34.37**	**257**	P	P	00 05 57.9	+0.2
	0.7nm,0.3s,baz=48,slow=8.6,SNR=3.1						
	0.7nm,0.3s						
ASAR	**Alice Springs**	**42.99**	**267**	P	P	00 07 09.8	-0.4
	0.8nm,0.6s,baz=104,slow=7.4,SNR=9.3						
	0.8nm,0.6s						
WRA	**Warramunga Arr**	**43.98**	**272**	P	P	00 07 18.1	-0.1
	0.8nm,0.3s,baz=111,slow=8.1,SNR=13						
	0.8nm,0.3s						
FINES	**FINESS Array B**	**145.06**	**340**	PKPbc	PKPbc	00 18 46.1	-0.8
	1.4nm,0.9s,baz=14,slow=2.9,SNR=4.6						

*MOS **07** 00:03:30.6±0.9, 49°74N×156°66E, h55km, mb4.2/4, Error ellipse: s-maj=20.6km s-min=4.7km az=80.6*
MOS Felt (II) at Severo-Kuril'sk.
*KRSC **07** 00:03:32.7±1.5, 50°04N×157°07E, h18km±24km, Ml4.0, Felt [II] at Severo-Kurilsk.*
*IDC **07** 00:03:38.3±1.6, 51°09N×154°59E, h0km, mb3.3/6, mbtmp3.4/8, ML3.6/1, MS3.0/4, Error ellipse: s-maj=52.8km s-min=20.5km az=157.0*
ISC 07 00:03:33.3±2.0, 49°9N±0°1×156°7E±0°1, h56km±13km, n63, σ1§16/35, mb3.3/9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.82**	**335**	PN	**Pn**	**00 03 47.6**	**-1.2**
SKR				S	**Sn**	**00 03 59.7**	**-0.5**
SKR	**Severo-Kuril's**	**0.82**	**335**	*e*P	**Pn**	**00 03 47.7**	**-1.2**
SKR				*e*S	**Sn**	**00 03 59.8**	**-0.5**
PAU	**Pauzhetka**	**1.53**	**3**	PN	**Pn**	**00 03 58.6**	**+0.4**
PAU				S	**Sn**	**00 04 17.8**	**+0.8**
PAU	**Pauzhetka**	**1.53**	**3**	*e*P	**Pn**	**00 03 58.6**	**+0.4**
PAU				*e*S	**Sn**	**00 04 17.9**	**+0.8**
KDTR	**Khodutka, Kamc**	**2.07**	**25**	PN	Pn	00 04 05.4	-0.2
KDTR				S	**Sn**	**00 04 29.8**	**-0.4**
KDTR	**Khodutka, Kamc**	**2.07**	**25**	*e*P	Pn	00 04 05.5	-0.2
KDTR				*e*S	**Sn**	**00 04 29.8**	**-0.4**
MIPR	**Malaya Ipel'ka**	**2.34**	**1**	PN	**Pn**	**00 04 10.1**	**+0.8**
MIPR				S	**Sn**	**00 04 38.2**	**+1.4**
MIPR	**Malaya Ipel'ka**	**2.34**	**1**	*e*P	**Pn**	**00 04 10.1**	**+0.8**
MIPR				*e*S	**Sn**	**00 04 38.3**	**+1.4**
ASAK	**Asacha**	**2.57**	**17**	PN	Pn	00 04 13.5	+1.1
ASAK	**Asacha**	**2.57**	**17**	*e*P	Pn	00 04 13.5	+1.1
MTVR	**Mutnovka**	**2.72**	**20**	PN	Pn	00 04 15.4	+0.8
MTVR				S	**Sn**	**00 04 47.8**	**+1.5**
MTVR	**Mutnovka**	**2.72**	**20**	*e*P	Pn	00 04 15.4	+0.8
MTVR				*e*S	**Sn**	**00 04 47.9**	**+1.5**
RUS	**Russkaya**	**2.75**	**24**	PN	Pn	00 04 15.1	+0.2
RUS				S	**Sn**	**00 04 46.2**	**-0.7**
RUS	**Russkaya**	**2.75**	**24**	*e*P	Pn	00 04 15.2	+0.2
RUS				*e*S	**Sn**	**00 04 46.3**	**-0.7**
GRL	**Gorelyy**	**2.76**	**18**	PN	Pn	00 04 15.4	+0.3
GRL				S	**Sn**	**00 04 48.5**	**+1.2**
GRL	**Gorelyy**	**2.76**	**18**	*e*P	Pn	00 04 15.5	+0.3
GRL				*e*S	**Sn**	**00 04 48.6**	**+1.2**
APC	**Apacha**	**3.00**	**6**	PN	Pn	00 04 22.8	+4.5
APC	**Apacha**	**3.00**	**6**	*e*P	Pn	00 04 22.8	+4.5
KRMR	**Karymshinskiy**	**3.04**	**17**	PN	Pn	00 04 20.2	+1.5
KRMR	**Karymshinskiy**	**3.04**	**17**	*e*P	Pn	00 04 20.2	+1.5
PEA0B	**Petropavlovsk-**	**3.24**	**11**	PN	Pn	00 04 23.5	+2.0
PETK	**Petropavlovsk-**	**3.24**	**11**	Pn	Pn	00 04 23.2	+1.6
	10nm,1.0s,baz=207,slow=13,SNR=14						
PETK				Sn	**Sn**	**00 04 59.9**	**+1.1**
	1.1nm,0.3s,baz=126,slow=15,SNR=1.9						
PETK				LR	LR	00 05 50.2	
	comp=Z,49nm,20.2s,baz=104,slow=47						
PET	**Petropavlovsk**	**3.33**	**21**	*i* PN	**Pn**	**00 04 20.9**	**-1.9**
PET				pmax	pmax		
	comp=Z,30nm,0.9s						
PET	**Petropavlovsk**	**3.33**	**21**	*e*P	Pn	00 04 24.2	+1.5
PET				*e*S	**Sn**	**00 05 02.2**	**+1.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DALK	Dalny	3.36	22	PN	Pn	00 04 24.2	+1.1
DALK	Dalny	3.36	22	eP	Pn	00 04 24.3	+1.1
UGLR	Uglovaya	3.54	22	PN	Pn	00 04 27.9	+2.2
UGLR	Uglovaya	3.54	22	eP	Pn	00 04 27.9	+2.2
AVH	Avacha	3.57	20	PN	Pn	00 04 28.8	+2.7
AVH	Avacha	3.57	20	eP	Pn	00 04 28.9	+2.7
KOK	Koryaka	3.57	19	PN	Pn	00 04 28.7	+2.5
KOK	Koryaka	3.57	19	eP	Pn	00 04 28.7	+2.5
SMAR	Somma	3.58	21	PN	Pn	00 04 29.6	+3.2
SMAR	Somma	3.58	21	eP	Pn	00 04 29.6	+3.2
KRER	Koryakskii	3.61	20	PN	Pn	00 04 28.9	+2.1
KRER	Koryakskii	3.61	20	eP	Pn	00 04 29.0	+2.1
SDLR	Sedlovina	3.62	22	PN	Pn	00 04 28.2	+1.4
SDLR				S	Sn	00 05 09.7	+1.4
SDLR	Sedlovina	3.62	22	eP	Pn	00 04 28.2	+1.4
SDLR				eS	Sn	00 05 09.8	+1.4
KRX	Arik	3.64	19	PN	Pn	00 04 30.1	+2.9
KRX	Arik	3.64	19	eP	Pn	00 04 30.1	+2.9
SPN	Mys Shipunski	3.79	32	PN	Pn	00 04 30.3	+1.2
SPN				S	Sn	00 05 12.8	+0.4
SPN	Mys Shipunski	3.79	32	eP	Pn	00 04 30.3	+1.2
SPN				eS	Sn	00 05 12.9	+0.4
GNL	Ganaly	3.84	11	PN	Pn	00 04 33.2	+3.3
GNL	Ganaly	3.84	11	eP	Pn	00 04 33.3	+3.3
YSS	Yuzhno-Sakhali	9.72	257	i PN	Pn	00 05 50.7	+0.5
YSS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ASAJ	Asahikawa	11.22	244	Pn	Pn	00 06 13.3	+2.5
	comp=Z,0.5nm,0.3s,baz=28,slow=15,SNR=8.5						
	comp=Z,9.2nm,0.7s						
KLR	Kul'dur	16.16	277	LR	LR	00 12 22.0	
	comp=Z,18nm,19.2s,baz=184,slow=36						
BILL	Bilibino	18.77	11	i P	Pn	00 07 47.1	-1.3
BILL				pmax	pmax		
	comp=Z,2.0nm,0.5s						
HIA	Hailar	23.79	283	i P	P	00 08 40.2	-0.4
HIA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
ILAR	Eielson Array	32.58	42	P	P	00 10 12.2	+13
	comp=Z,0.2nm,0.7s,baz=269,slow=8.4,SNR=1.8						
	comp=Z,0.2nm,0.7s						
YKA	Yellowknife Ar	46.95	39	P	P	00 12 10.4	+12
	comp=Z,0.3nm,0.9s,baz=298,slow=8.2,SNR=3.9						
	comp=Z,0.3nm,0.9s						
KURK	Kurchatov	47.61	303	i P	P	00 12 01.9	-1.3
KURK				pmax	pmax		
	comp=Z,1.0nm,1.2s						
MKAR	Makanchi Array	47.61	296	P	P	00 12 01.5	-1.9
	comp=Z,0.1nm,0.5s,baz=47,slow=6.9,SNR=2.0						
	comp=Z,0.1nm,0.5s						
KURBB	Kurchatov Arra	47.70	303	P	P	00 12 03.1	-0.9
	comp=Z,0.1nm,0.4s,baz=67,slow=8.7,SNR=1.9						
	comp=Z,0.1nm,0.4s						
BORK	Borovoye	50.71	309	i P	P	00 12 26.0	-0.9
BORK				pmax	pmax		
	comp=Z,10.0nm,3.5s						
ARTI	Arti	54.37	317	LR	LR	00 37 15.0	
	comp=Z,49nm,18.7s,baz=228,slow=38						
ARTI	Arti	54.37	317	i P	P	00 12 54.6	+0.7
ARTI				pmax	pmax		
	comp=Z,2.0nm,1.1s						
AKTO	Aktyubinsk	58.36	312	LR	LR	00 38 27.7	
	comp=Z,58nm,19.8s,baz=259,slow=37						
PDAR	Pinedale Array	60.98	57	P	P	00 13 57.0	+16
	comp=Z,1.1nm,0.9s,baz=329,slow=2.8,SNR=7.5						
	comp=Z,1.1nm,0.9s						
OBN	Obninsk	63.99	326	eP	P	00 14 00.3	0.0
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TXAR	Lajitas Array	73.90	64	P	P	00 15 18.0	+16
	comp=Z,0.2nm,0.5s,baz=308,slow=6.2,SNR=4.3						
	comp=Z,0.2nm,0.5s						
CLL	Collm	74.49	337	eP	P	00 15 06.0	+0.7
CLL	Collm	74.49	337	eP	P	00 15 06.0	+0.7

*AZER **07** 00:06:31.7, 38.47N×44.50E, h2km, ml3.8*
*NSSP **07** 00:06:31.2, 38.33N×44.55E, h10km, Ms3.7*
*AFAD **07** 00:06:31.7, 38.38N×44.62E, h7km±2km, ML3.6*
*TIF **07** 00:06:32.7, 38.40N×44.51E, h2km±2km*
*TEH **07** 00:06:34.2, 38.49N×44.50E, h8km±32km, ML3.6, Presumed earthquake*
*ISK **07** 00:06:34.0, 38.37N×44.63E, h4km, ML3.8/15*
*IDC **07** 00:06:35.0±1.1, 38.47N×44.50E, h0km, mb3.6/8, mbtmp3.5/14, ML3.3/5, MS2.8/5, Error ellipse: s-maj=16.8km s-min=10.9km az=127.0*
ISC 07 00:06:32.0±0.7**, 38.41N**±0.02×**44.62E**±0.01**, h0**km±5km**, n95,** σ1**.99**/130**, mb3.6**/7**, 2D, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.55	297	P	Pg	00 06 43.3	+0.6
OZAP				S	Sg	00 06 51.0	+1.2
OZAP	Van, Ozalp-Mer	0.55	297	Pg	Pg	00 06 43.2	+0.6
ISHB	Shabestar	0.79	99	Pg	Pn	00 06 51.0	+0.3
IMRD	Marand	0.90	70	Pg	Pn	00 06 53.1	+1.0
MAKU	Maku	0.94	3	Pg	Pg	00 06 50.5	+0.4
TVAN	Van	0.96	277	P	Pg	00 06 50.3	-0.2
TVAN				S	Sb	00 07 04.6	-0.4
TVAN				IAML		00 07 14.0	
	comp=E,2µm,0.6s						
TVAN				IAML		00 07 19.0	
	comp=N,3µm,0.8s						
VANB	Van	0.98	281	Pg	Pn	00 06 53.4	+0.2
VANB				Sg	Sn	00 07 07.4	-0.5
VMUR	Van-Muradiye	1.00	306	P	Pg	00 06 51.0	-0.3
VMUR				S	Sb	00 07 05.9	-0.3
VMUR				IAML		00 07 08.0	
	comp=N,1µm,0.8s						
VMUR				IAML		00 07 19.0	
	comp=E,1µm,0.8s						
NAX	Nakhchivan	1.02	42	P	Pn	00 06 54.2	+0.4
NAX				S	Sn	00 07 09.7	+0.8
ORD	Ordubad	1.19	64	P	Pn	00 06 57.7	+1.6
ORD				S	Sn	00 07 15.9	+2.9
ITBZ	Tabriz	1.21	98	Pg	Pn	00 06 58.5	+2.1
SBZ	Shahbuz	1.23	36	P	Pn	00 06 57.7	+1.2
SBZ				S	Sn	00 07 16.2	+2.3
GEVA	Gevas	1.23	266	P	Pg	00 06 54.8	-0.8
GEVA				S	Sn	00 07 12.6	-1.4
GEVA				IAML		00 07 21.0	
	comp=N,1µm,0.7s						
GEVA				IAML		00 07 21.0	
	comp=E,1µm,0.4s						
GEVA	Gevas	1.23	266	Pg	Pg	00 06 54.8	-0.8
IAZR	Azarshahr	1.30	124	Pg	Pb	00 07 01.2	+3.7
HYR	Heyderabad	1.32	8	P	Pg	00 06 58.1	+0.8
HYR				S	Sn	00 07 18.5	+2.4
CUKT	Cukurca	1.41	215	Pn	Pg	00 07 00.9	+1.8
CUKT				Sn	Sg	00 07 20.3	+3.0
CUKT	Cukurca	1.41	215	Pg	Pg	00 07 01.3	+2.2
VAYK	Vayk	1.43	26	⇓eP	Pg	00 07 00.7	+1.3
VAYK				⇓eS	Sg	00 07 21.5	+3.5
IGDI	IGDIR	1.52	344	P	Pg	00 07 01.4	+0.2
IGDI				S	Sg	00 07 24.3	+3.5
ADCV	BITLIS_Adilcev	1.54	286	Pg	Pg	00 07 01.5	0.0
EGVZ	Egvard	1.71	61	eP	Pg	00 07 06.3	+1.5
EGVZ				eS	Sg	00 07 31.2	+4.3
GNI	Garni	1.74	3	Pg	Pg	00 07 07.2	+1.8
	64nm,0.3s,baz=175,slow=6.6,SNR=281						
GNI				Lg	Lg	00 07 29.2	
	67nm,0.3s,baz=123,slow=21,SNR=12						
GNI				LR	LR	00 07 48.2	
	comp=Z,104nm,18.7s,baz=170,slow=43						
GNI	Garni	1.74	3	Pn	Pg	00 07 06.6	+1.2
GNI	Garni	1.74	3	eP	Pg	00 07 06.2	+0.8
GNI				eS	Sg	00 07 30.7	+2.7
MLAZ	Malazgirt-MUS	1.77	295	Pn	Pg	00 07 06.2	+0.1
MLAZ				Sn	Sg	00 07 30.7	+1.6
MAHB	Mahabad	1.85	152	Pn	Pg	00 07 10.0	+2.4
IHRS	Heris	1.91	92	Pn	Pg	00 07 10.9	+2.4
AYRK	Ayrk	1.93	28	eP	Pg	00 07 09.3	+0.3
AYRK				eS	Sg	00 07 37.9	+3.8
AMBZ	Amberd	2.00	352	eP	Pg	00 07 10.6	+0.3
AMBZ				eS	Sg	00 07 39.3	+3.1
GURO	Guroymak-BITLI	2.04	275	Pn	Pb	00 07 09.0	-1.0
GURO	Guroymak-BITLI	2.04	275	Pn	Pb	00 07 09.0	-1.0
QRD	Qoradiz	2.35	63	P	Pg	00 07 16.6	-0.5
QRD				S	Sg	00 07 50.5	+2.8
IHSH	Hashtrud	2.37	117	Pn	Pg	00 07 17.7	+0.3
GDB	GEDABAY	2.47	20	P	Pb	00 07 16.3	-1.1
GDB				S	Sb	00 07 49.7	+1.3
ISRB	Sarab	2.47	103	Pn	Pg	00 07 17.8	-1.7
KARS	Kars	2.52	332	Pn	Pb	00 07 17.3	-0.9
LSVT	Lusahovit	2.54	10	eP	Pb	00 07 18.1	-0.5
LSVT				eS	Sg	00 07 53.2	-0.5
AGDM	Agdam	2.57	48	P	Pb	00 07 18.7	-0.3
AGDM				S	Sg	00 07 55.2	+0.6
VRTB	Varto-Mus	2.58	288	Pn	Pb	00 07 18.3	-1.0
GANJ	Ganja	2.59	30	P	Pb	00 07 18.7	-0.7
GANJ				S	Sg	00 07 55.7	+0.4
BLQ	Beylaqan	2.64	59	P	Pb	00 07 20.1	-0.1
BLQ				S	Sg	00 07 56.5	-0.2
SRTK	Saratovka	2.66	355	eP	Pg	00 07 21.9	-1.2
SRTK				eS	Sg	00 07 58.9	+1.2
SVAN	Silvan-Diyarba	2.71	266	Pn	Pb	00 07 19.2	-2.1
QZX	Qazax, Azerbai	2.71	12	P	Pb	00 07 20.6	-0.8
QZX				S	Sg	00 07 57.5	-1.6
BRDA	Brd	2.71	46	P	Pb	00 07 21.4	0.0
BRDA				S	Sg	00 07 57.9	-1.3
SENK	Senkaya-Erzuru	2.77	321	Pn	Pb	00 07 21.5	-1.1
YRD	Yardimli	2.88	79	P	Pb	00 07 23.3	-1.1
YRD				S	Sg	00 08 02.9	-1.7
LRK	Lerik	2.93	84	P	Pb	00 07 24.5	-0.7
LRK				S	Sg	00 08 05.3	-0.7
KARO	Karliova-Bingo	2.93	289	Pn	Pb	00 07 23.3	-1.9
BGD	Bogdanovka	2.96	345	P	Pg	00 07 28.9	+0.2
BGD				S	Sg	00 08 09.9	+2.8
ZRD	Zardab	3.02	51	P	Pb	00 07 25.4	-1.2
ZRD				S	Sb	00 08 03.9	-0.1
MNGR	Mingechevir, A	3.03	38	P	Pb	00 07 24.8	-2.1
MNGR				S	Sb	00 08 03.8	-0.6
GLBA	Clilabad	3.06	73	P	Pb	00 07 26.3	-1.1
GLBA				S	Sb	00 08 06.2	+0.9
DGRG	David-gareji	3.09	11	P	Pb	00 07 26.3	-1.6
DGRG				S	Sg	00 08 19.2	+7.8
AKH	Akhalkalaki	3.12	344	P	Pg	00 07 31.4	-0.4
AKH				S	Sg	00 08 13.9	+1.6
VSHL	Vashlovani	3.13	25	P	Pg	00 07 33.6	+1.5
VSHL				S	Sg	00 08 18.1	+5.4
BNGB	Bingl	3.14	282	Pn	Pb	00 07 25.9	-2.8
TRLG	Trialeti	3.15	353	P	Pb	00 07 28.1	-0.9
TRLG				S	Sg	00 08 15.4	+2.1
DDFL	Dedoflistskaro	3.24	20	P	Pg	00 07 36.0	+1.7
LKRN	Lenkeran, Azer	3.27	83	P	Pb	00 07 29.0	-2.0
LKRN				S	Sb	00 08 12.9	+1.6
ASTR	Astara	3.28	86	P	Pb	00 07 29.7	-1.3
ASTR				S	Sg	00 08 14.7	-2.6
SAAT	Saatly	3.29	63	P	Pb	00 07 29.5	-1.8
SAAT				S	Sb	00 08 12.0	+0.1
TBLG	Delisi	3.32	2	P	Pb	00 07 33.0	+1.3
TBLG				S	Sg	00 08 23.2	+4.5
YEDI	Yedisu-Bingol	3.34	289	Pn	Pb	00 07 29.3	-2.9
SEKA	Sheki	3.43	35	P	Pb	00 07 31.1	-2.6
SEKA				S	Sb	00 08 17.3	+1.4
QBL	Gabala	3.55	43	P	Pb	00 07 32.2	-3.4
QBL				S	Sb	00 08 20.0	+0.7
DYBB	Diyarbakir	3.56	264	Pn	Pb	00 07 31.3	-4.6
ZKTA	Zakatala	3.57	25	P	Pb	00 07 31.9	-4.2
ZKTA				S	Sb	00 08 19.2	-0.7
IML	Ismayilli	3.64	48	P	Pb	00 07 33.8	-3.4
IML				S	Sb	00 08 22.0	+0.1
LGD	Lagodekhi	3.64	19	P	Pg	00 07 41.8	0.0
ALIG	Mtskhetisjvari	3.77	349	P	Pg	00 07 43.2	-1.0
XNQ	Khinaliq	3.87	43	P	Pb	00 07 37.0	-4.2
XNQ				S	Sb	00 08 27.9	-0.8
PQL	Pirkuli	3.88	51	P	Pb	00 07 37.8	-3.6
PQL				S	Sb	00 08 29.0	0.0
CHRG	Chargali	3.92	3	P	Pg	00 07 49.1	+1.9
CHRG				S	Sg	00 08 42.1	+4.1
GBS	Qobustan	3.96	56	P	Pb	00 07 38.8	-4.0
GBS				S	Sb	00 08 31.0	-0.2
ERZN	Erzincan	3.99	289	Pn	Pb	00 07 38.2	-5.1
BAYT	Aydıntepe-Bayb	4.00	301	Pn	Pb	00 07 38.4	-5.0
QUBA	Quba, Azerbaij	4.19	44	P	Pb	00 07 42.1	-4.5
QUBA				S	Sb	00 08 34.8	-2.9
SIZA	Siyzn	4.24	50	P	Pb	00 07 43.2	-4.3
SIZA				S	Sb	00 08 37.8	-1.4
KBZ	Khabaz	5.47	347	Pn	Pn	00 08 00.7	+6.0
	1.6nm,1.0s,baz=159,slow=14,SNR=1.3						
BRTR	Keskin Array B	8.64	282	Pn	Pn	00 08 41.1	+2.7
	0.1nm,0.3s,baz=110,slow=8.0,SNR=3.6						
BRTR				LR	LR	00 12 20.2	
	comp=Z,73nm,18.3s,baz=104,slow=40						
	0.2nm,0.3s						
ASF	Jabal al Asfar	8.86	228	Pn	Pn	00 08 45.8	+4.4
	0.3nm,0.3s,baz=56,slow=15,SNR=2.4						
ASF				Lg	Lg	00 11 15.3	
	0.2nm,0.3s,baz=287,slow=19,SNR=1.9						
ASF				LR	LR	00 12 37.1	
	comp=Z,53nm,21.1s,baz=31,slow=41						
	1.0nm,0.4s						
MMAI	Mount Meron Ar	9.22	237	Pn	Pn	00 08 50.1	+3.7
	0.4nm,0.3s,baz=54,slow=20,SNR=1.1						
MMAI				LR	LR	00 13 01.2	
	comp=Z,58nm,21.6s,baz=27,slow=42						
	2.1nm,0.9s						
EIL	Elat	11.84	225	LR	LR	00 14 48.8	
	comp=Z,74nm,18.2s,baz=62,slow=42						
AKTO	Aktyubinsk	15.34	34	Pn	P	00 10 11.8	-2.8
	0.3nm,0.3s,baz=224,slow=12,SNR=5.1						
AKTO				LR	LR	00 17 23.7	
	comp=Z,33nm,18.8s,baz=90,slow=42						
	2.9nm,0.8s						
AKASG	Malin Array Be	16.43	323	Pn	P	00 10 25.5	-1.2
	0.2nm,0.3s,baz=132,slow=12,SNR=5.7						
	0.6nm,0.6s						
ARTI	Arti	20.19	23	P	Pn	00 11 10.2	+0.4
	2.2nm,0.5s,baz=221,slow=9.3,SNR=5.5						
	2.2nm,0.5s						
BVAR	Borovoye Array	23.01	42	P	P	00 11 39.8	+1.5
	0.4nm,0.5s,baz=242,slow=9.3,SNR=7.1						
	0.4nm,0.5s						
FINES	FINESS Array B	25.78	339	P	P	00 12 06.5	+2.3
	0.9nm,0.7s,baz=132,slow=8.5,SNR=5.0						
	0.9nm,0.7s						
KURBB	Kurchatov Arra	26.84	52	P	P	00 12 17.4	+3.4
	0.6nm,0.5s,baz=260,slow=9.0,SNR=5.8						
	0.6nm,0.5s						
MKAR	Makanchi Array	28.74	61	P	P	00 12 35.4	+4.3
	0.8nm,0.7s,baz=261,slow=8.4,SNR=8.6						
	0.8nm,0.7s						
ZALV	Zalesovo Beam	31.38	47	P	P	00 12 55.9	+1.7
	0.4nm,0.4s,baz=261,slow=9.7,SNR=2.8						
	0.4nm,0.4s						
EKA	Eskdalemuir Ar	35.96	314	P	P	00 13 36.4	+2.3
	0.6nm,0.6s,baz=94,slow=8.3,SNR=1.8						
	0.6nm,0.6s						
ESDC	Sonseca Array	37.39	288	P	P	00 13 48.7	+2.1
	0.7nm,0.8s,baz=84,slow=9.7,SNR=2.1						
	0.7nm,0.8s						

*AFAD **07** 00:31:55.8, 38.40N×44.49E, h7km±1km, ML2.2*
*AZER **07** 00:31:56.7, 38.45N×44.36E, h10km, ml2.5*
*ISK **07** 00:31:59.3, 38.46N×44.46E, h13km, ML2.5/7*
ISC 07 00:31:57.2±1.2**, 38.44N**±0.04×**44.42E**±0.02**, h7**km±11km**, n23,** σ1**.93**/38**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.40	305	P	Pg	00 32 05.4	+0.4
TVAN	Van	0.80	277	P	Pg	00 32 12.2	-0.3
TVAN				S	Sb	00 32 24.8	+0.2
TVAN				IAML		00 32 38.0	
	comp=N,117nm,0.8s						
TVAN				IAML		00 32 40.0	
	comp=E,124nm,0.6s						
VANB	Van	0.82	282	Pg	Pn	00 32 15.8	+0.5
VMUR	Van-Muradiye	0.86	310	P	Pg	00 32 13.5	-0.3
VMUR				S	Sb	00 32 26.9	+0.4
VMUR				IAML		00 32 30.0	
	comp=N,77nm,0.4s						
VMUR				IAML		00 32 33.0	
	comp=E,81nm,0.8s						
ERCV	ERCIS-VAN	1.02	305	Pg	Pn	00 32 19.8	+1.6
GEVA	Gevas	1.07	264	P	Pg	00 32 16.7	-1.1
GEVA				S	Sn	00 32 33.8	-0.3
GEVA				IAML		00 32 36.0	
	comp=N,65nm,0.4s						
GEVA				IAML		00 32 40.0	
	comp=E,56nm,0.7s						
NAX	Nakhchivan	1.12	48	P	Pn	00 32 20.0	+0.5
NAX				S	Sn	00 32 37.6	+2.4
SBZ	Shahbuz	1.31	42	P	Pg	00 32 23.0	+0.7
SBZ				S	Sn	00 32 41.5	+1.7
HYR	Heyderabad	1.33	15	P	Pg	00 32 23.0	+0.3
HYR				S	Sg	00 32 44.0	+4.2
ORD	Ordubad	1.33	68	P	Pg	00 32 24.0	+1.2
ORD				S	Sg	00 32 44.1	+4.1
CUKT	Cukurca	1.35	209	Pn	Pg	00 32 24.9	+1.9
IGDI	IGDIR	1.46	350	P	Pb	00 32 24.2	-0.5
IGDI				S	Sg	00 32 47.1	+3.1
MLAZ	Malazgirt-MUS	1.62	296	Pn	Pg	00 32 28.6	+0.3
GNI	Garni	1.73	8	Pn	Pg	00 32 29.6	-0.8
GURO	Guroymak-BITLI	1.87	274	Pn	Pg	00 32 32.6	-0.5
QRD	Qoradiz	2.49	65	P	Pb	00 32 41.6	-0.6
QRD				S	Sg	00 33 14.4	-2.7
GDB	GEDABAY	2.51	24	P	Pb	00 32 40.6	-2.1
GDB				S	Sg	00 33 14.9	-2.9
GANJ	Ganja	2.66	33	P	Pb	00 32 43.1	-2.0
GANJ				S	Sb	00 33 18.5	+0.6
SENK	Senkaya-Erzuru	2.66	324	Pn	Pb	00 32 43.2	-2.1
AGDM	Agdam	2.68	51	P	Pb	00 32 43.8	-1.6
AGDM				S	Sg	00 33 21.2	-2.0
QZX	Qazax, Azerbai	2.72	15	P	Pb	00 32 43.1	-3.2
QZX				S	Sb	00 33 19.0	-0.9
YRD	Yardimli	3.03	80	P	Pb	00 32 49.0	-2.7
YRD				S	Sb	00 33 27.2	-1.7
LRK	Lerik	3.08	85	P	Pb	00 32 50.1	-2.4
LRK				S	Sb	00 33 30.2	-0.2

*NNC **07** 00:44:57.9±4.0, 36.70N×70.75E, h0km, mb4.7, mpv4.9, Error ellipse: s-maj=32.5km s-min=26.4km az=11.0*
*IDC **07** 00:44:59.4±2.9, 36.15N×71.31E, h116km±25km, mb3.6/18, mbtmp4.1/23, Error ellipse: s-maj=16.2km s-min=12.9km az=148.0*
*NEIC **07** 00:45:01.4±1.6, 36.41N±0.05×71.14E±0.09, h115km±5km, mb4.6/25, Error ellipse: s-maj=10.5km s-min=7.9km az=99.0*
ISC 07 00:44:59.6±0.4**, 36.40N**±0.04×**71.13E**±0.04**, h100**km**, n147,** σ1**.88**/168**, mb4.2**/28**, 7C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.52	223		Pn	00 45 41.6	+2.4
KBL				Sn	Sn	00 46 12.2	+2.6
KBL	Kabul	2.52	223	S	Sn	00 46 12.1	+2.6
SHAA	Shahritus	2.67	297		Pn	00 45 42.9	+1.8
SHAA				Sn	Sn	00 46 14.9	+2.0
GAR	Garm	2.67	346		Pn	00 45 43.9	+2.8
GAR				Sn	Sn	00 46 13.9	+0.9
CHGR	Chuyangaron	2.74	326		Pn	00 45 44.2	+2.2
CHGR				Sn	Sn	00 46 14.9	+0.3
DRK	Karamyk	3.12	10		Pn	00 45 50.9	+3.7
DRK				Sn	Sn	00 46 26.9	+3.0
NIL	Nilore	3.25	147	Pn	Pn	00 45 51.5	+2.7
NIL	Nilore	3.25	147	S	Sn	00 46 26.5	-0.2
BTK	Batken	3.66	356		Pn	00 45 57.4	+3.2
BTK				Sn	Sn	00 46 33.8	-2.7
KSH2	Kashi	4.46	51	Pn	Pn	00 46 09.4	+4.3
KSH2				Sn	Sn	00 46 59.6	+3.7
KSH2				smax	smax		
	comp=N,1µm,0.7s						
KSH2				smax	smax		
	comp=E,850nm,0.8s						
JMU	Jammu	4.73	139	eP	Pn	00 46 09.1	+0.4
JMU				eS	Sn	00 47 01.0	-1.4
JMU				IAML		00 47 06.2	
	comp=N,2µm,0.3s						
JMU				IAML		00 47 06.8	
	comp=E,1µm,0.3s						
ARSB	Arslanbob	5.12	16		Pn	00 46 15.8	+1.7
ARSB				Sn	Sn	00 47 12.7	+0.6
ALCI	Alchi Leh	5.41	112	eP	Pn	00 46 18.1	-0.1
ALCI				eS	Sn	00 47 18.3	-1.2
ALCI				IAML		00 47 22.2	
	comp=E,246nm,0.3s						
ALCI				IAML		00 47 22.2	
	comp=N,190nm,0.3s						
NRN	Naryn	6.30	36		Pn	00 46 31.3	+1.1
UCH	Uchtor	6.38	23	P	Pn	00 46 33.5	+2.0
	SNR=46						
EKS2	Erkin-Say	6.58	17	P	Pn	00 46 35.9	+2.0
	SNR=49						
BHK	Bhakra	6.63	137	eP	Pn	00 46 35.4	+0.8
BHK				IAML		00 47 48.7	
	comp=E,495nm,0.2s						
BHK				IAML		00 47 49.2	
	comp=N,373nm,0.3s						
BHK				eS	Sn	00 47 49.9	+1.2
KK31	Karatay Array	6.71	356		Pn	00 46 36.9	+1.4
KK31				Sn	Sn	00 47 44.6	-5.8
KK31	Karatay Array	6.71	356	⇑P	Pn	00 46 35.3	-0.2
	comp=N,122nm,0.6s,baz=182,slow=12,SNR=1420						
KK31				⇑S	Sn	00 47 49.3	-1.1
	comp=N,51nm,0.3s,baz=174,slow=27,SNR=3.5						
KKAR	Karatay Array	6.71	356		Pn	00 46 37.0	+1.5
AAK	Ala-Archa	6.75	22	P	Pn	00 46 38.2	+2.1
	comp=N,87nm,0.4s,baz=192,slow=6.0,SNR=496						
AAK				S	Sn	00 47 50.4	-1.2
	comp=N,167nm,0.7s,baz=331,slow=17,SNR=22						
AAK	Ala-Archa	6.75	22		Pn	00 46 38.4	+2.3
AAK	Ala-Archa	6.75	22	P	Pn	00 46 38.2	+2.1
	SNR=94						
AAK	Ala-Archa	6.75	22	i Pn	Pn	00 46 37.6	+1.5
	SNR=114						
AAK	Ala-Archa	6.75	22	⇑P	Pn	00 46 38.3	+2.1
	comp=N,16nm,0.4s						
AAK				⇑S	Sn	00 47 52.5	+1.0
	comp=N,250nm,1.0s						
AAK	Ala-Archa	6.75	22	P	Pn	00 46 39.1	+2.9
AAK				S	Sn	00 47 53.2	+1.7
KBK	Karagaybulak	6.91	24	P	Pn	00 46 41.0	+2.7
	SNR=15						
FRU1	Bishkek	6.95	22		Pn	00 46 41.8	+3.1
ULHL	Ulahol	7.05	33	P	Pn	00 46 43.9	+3.5
	SNR=9.8						
CHMS	Chumysh	7.15	22	P	Pn	00 46 43.7	+2.1
	SNR=51						
SMLA	Simla	7.28	135	eP	Pn	00 46 42.4	-0.9
SMLA				eS	Sn	00 47 58.5	-5.8
SMLA				IAML		00 48 03.0	
	comp=E,337nm,0.2s						
SMLA				IAML		00 48 07.2	
	comp=N,362nm,0.2s						
USP	Ospenovka	7.33	20	P	Pn	00 46 45.9	+1.9
	SNR=22						
TKM2	Tokmak 2	7.36	27	P	Pn	00 46 46.8	+2.2
	SNR=9.2						
KDJ	Kajisay	7.40	38	Pn	Pn	00 46 46.8	+1.8
HRA	Herat	7.53	257		Pn	00 46 48.6	+1.7
PRZ	Przheval'sk	8.28	41	Pn	Pn	00 46 59.3	+2.3
JOSI	Joshimath	9.14	127	eP	Pn	00 47 08.8	0.0
JOSI				eS	Sn	00 48 42.6	-7.4
JOSI				IAML		00 48 46.5	
	comp=E,149nm,0.5s						
JOSI				IAML		00 48 49.0	
	comp=N,238nm,0.5s						
JASL	Jaisalmer	9.45	181	eS	Sn	00 48 48.5	-8.8
AJM	Ajmer	10.39	162	eP	Pn	00 47 24.1	-1.5
AJM				eS	Sn	00 49 10.4	-10
AJM				IAML		00 49 17.4	
	comp=E,701nm,0.3s						
AJM				IAML		00 49 18.4	
	comp=N,687nm,0.3s						
JHNI	Jhansi	12.66	147	eP	Pn	00 47 53.0	-3.0
JHNI				eS	Sn	00 50 02.2	-13
JHNI				IAML		00 50 09.4	
	comp=N,357nm,0.3s						
JHNI				IAML		00 50 10.0	
	comp=E,509nm,0.2s						
BHUJ	Bhuj	13.17	186	eP	Pn	00 48 01.0	-1.6
BHUJ				eS	Sn	00 50 17.5	-10
MAKZ	Makanchi	13.18	35		Pn	00 48 02.4	-0.3
MAKZ	Makanchi	13.18	35	⇑P	Pn	00 48 03.6	+0.9
	comp=E,3.9nm,0.8s						
MK31	Makanchi Array	13.31	35	⇑P	Pn	00 48 04.6	+0.1
	comp=E,0.3nm,0.2s,baz=222,slow=13,SNR=60						
MKAR	Makanchi Array	13.31	35	P	Pn	00 48 05.5	+1.1
	comp=E,2.4nm,0.7s,baz=220,slow=15,SNR=21						
MKAR	Makanchi Array	13.31	35		Pn	00 48 05.4	+0.9
BHPL	Bhopal	14.20	156	eP	Pn	00 48 13.3	-2.9
BHPL				eS	Sn	00 50 41.2	-12
WMQ	Urumqi	14.67	55	eP	Pn	00 48 24.1	+2.0
KURBB	Kurchatov Arra	15.18	18	P	Pn	00 48 28.0	-0.4
	comp=E,0.7nm,0.4s,baz=213,slow=12,SNR=10						

KURBB S Sn 00 51 21.3 +5.4
comp=E,0.5nm,0.5s,baz=212,slow=26,SNR=2.1
KURBB Kurchatov Arra 15.18 18 ⇓P Pn 00 48 29.4 +0.9
comp=E,9.1nm,0.9s
AB31 Akbulak array 15.22 331 Pn 00 48 28.3 -0.6
AB31 IAmb IAmb 00 48 30.8
comp=Z,26nm,0.5s
AB31 Akbulak array 15.22 331 ⇓P Pn 00 48 28.0 -0.9
comp=Z,17nm,0.5s,baz=142,slow=12,SNR=577
AB31 ⇑S **Sn 00 51 11.2 -5.6**
comp=Z,8.8nm,0.5s,baz=155,slow=24,SNR=10.0
ABKAR Akbulak array 15.22 331 Pn 00 48 27.9 -1.0
KURK Kurchatov 15.29 18 Pn 00 48 29.2 -0.5
KURK Kurchatov 15.29 18 P **Pn 00 48 32.7 +2.9**
SHME Shamm 16.44 235 Pn **Pn 00 48 45.2 +0.9**
SHME Shamm 16.44 235 P **Pn 00 48 45.5 +1.2**
AKL Akola 16.47 160 *e*P **Pn 00 48 44.5 -0.2**
AKL *e*S Sn 00 51 35.2 -12
BVAR Borovoye Array 16.63 358 P **Pn 00 48 47.2 +0.8**
comp=Z,9.6nm,0.5s,baz=168,slow=13,SNR=28
BVAR S **Sn 00 51 44.4 -6.5**
comp=Z,1.9nm,0.4s,baz=176,slow=20,SNR=2.4
BORK Borovoye 16.65 358 P **Pn 00 48 47.1 +0.4**
BORK IAmb IAmb 00 48 50.2
comp=Z,16nm,0.9s
MDH Madha 16.85 233 Pn **Pn 00 48 48.9 -0.4**
MDH Madha 16.85 233 P **Pn 00 48 48.7 -0.6**
MSFE Esma-Masafi 16.90 234 P **Pn 00 48 50.9 +0.9**
AKTO Aktyubinsk 16.92 330 P **Pn 00 48 51.0 +1.0**
comp=Z,41nm,0.7s,baz=144,slow=10,SNR=81
AKTO S Sn 00 51 48.4 -9.4
comp=Z,4.8nm,0.3s,baz=284,slow=16,SNR=5.3
AKTO Aktyubinsk 16.92 330 ⇓P **Pn 00 48 50.1 +0.1**
comp=Z,26nm,0.8s
AKTO ⇓S **Sn 00 51 53.6 -4.2**
comp=Z,12nm,0.8s
WSAR Wadi Sarin 17.00 223 P **Pn 00 48 52.4 +1.2**
UOSS Minazif 17.16 232 P **Pn 00 48 53.3 +0.1**
UOSS Minazif 17.16 232 Pn **Pn 00 48 54.4 +1.2**
UOSS Minazif 17.16 232 P **Pn 00 48 54.7 +1.6**
HATD Hatta, Dubai 17.29 232 Pn **P 00 48 56.3 +1.6**
HATD Hatta, Dubai 17.29 232 P **Pn 00 48 58.0 +3.2**
WBK Wadi Bani Khal 17.32 221 P **Pn 00 48 58.7 +3.5**
ASHO Ashiyiah 17.44 232 *i* P **P 00 48 57.0 +0.7**
SNR=12
ASHO Ashiyiah 17.44 232 P **P 00 48 57.1 +0.7**
SNR=8.2
SMDO Samad 17.46 224 P **P 00 48 57.6 +0.8**
JLN Jalan Bani Buh 17.48 219 P **P 00 48 57.8 +1.1**
NAZ Nazwa, Dubai 17.48 234 P **P 00 48 57.0 +0.2**
HOQ Hoqain 17.48 227 P **P 00 48 57.7 +0.9**
HOQ P **Pn 00 48 57.8 +0.8**
SOHO SOHO 17.54 230 P **Pn 00 48 59.8 +2.0**
BOK Bokaro 17.89 131 *e*P **Pn 00 49 03.6 +1.6**
BOK *e*S Sn 00 52 06.7 -15
ASUD Al Ashush, Dub 17.95 234 P **P 00 49 02.0 +0.1**
ASUD Al Ashush, Dub 17.95 234 P **P 00 49 02.0 +0.1**
JMDO Jabal Madar 17.98 223 P **Pn 00 49 04.6 +1.4**
ALNE Al Ain 18.08 231 *i* P **P 00 49 04.2 +0.8**
SNR=7.0
ALNE Al Ain 18.08 231 P **P 00 49 04.5 +1.1**
SNR=7.0
AJN Ajban 18.21 234 P **P 00 49 04.9 +0.1**
MHTO MHTO 19.18 220 P **P 00 49 16.2 +0.8**
JRN Qarnain Island 19.40 239 P **P 00 49 16.8 -1.0**
UMZA Um Al Zommool 19.43 230 P **P 00 49 18.4 +0.3**
MZWR Madinat Zayed 19.49 234 P **P 00 49 17.6 -1.2**
ZAA0 Zalesovo Array 19.96 24 P **P 00 49 23.7 +0.1**
ZAA0 IAmb IAmb 00 49 35.5
comp=Z,7.9nm,0.5s
ZALV Zalesovo Beam 19.96 24 P **P 00 49 23.7 +0.1**
comp=Z,8.0nm,0.5s,baz=215,slow=10,SNR=41
ZALV S **S 00 53 02.8 +0.3**
comp=Z,0.4nm,0.5s,baz=159,slow=38,SNR=2.8
comp=Z,8.0nm,0.5s
ZALV Zalesovo Beam 19.96 24 P **P 00 49 23.5 -0.1**
GHWR Ruwais 20.02 237 P **P 00 49 23.1 -1.4**
SHMA Al-Shehemyia 20.17 244 P **P 00 49 25.3 -0.8**
SNR=15
MZR Muzera 20.29 234 *i* P **P 00 49 26.1 -1.4**
SNR=11
MZR Muzera 20.29 234 P **P 00 49 26.6 -0.8**
SAKB Bahrain 20.41 245 P **P 00 49 27.8 -0.9**
SMRA Abu-Samra 20.95 242 P **P 00 49 33.1 -1.3**
GNI Garni 21.02 288 P **P 00 49 36.8 +1.4**
comp=Z,6.6nm,0.8s,baz=8.1,slow=5.0,SNR=6.0
comp=Z,6.6nm,0.8s
ARTI Arti 21.77 341 P **P 00 49 43.3 +0.3**
ARTI IAmb IAmb 00 49 46.5
comp=Z,29nm,1.3s
KBZ Khabaz 22.74 297 P **P 00 49 55.5 +2.4**
comp=Z,2.8nm,0.8s,baz=157,slow=9.8,SNR=4.5
comp=Z,2.8nm,0.8s
GTA2 Gaotai 22.75 74 *e*P **P 00 49 55.0 +1.5**
GTA2 pP pP 00 50 14.0 -0.6
GTA2 pmax pmax
comp=Z,2.0nm,0.7s
KIV Kislovodsk 22.93 298 P **P 00 49 57.3 +2.2**
KIV IAmb IAmb 00 50 26.3
comp=Z,15nm,0.6s
KIV Kislovodsk 22.93 298 P **P 00 49 56.5 +1.3**
DOK Doka 23.20 225 P **P 00 49 57.2 -0.6**
DMTO DMTO 23.48 222 P **P 00 50 00.5 +0.1**
WHFO Wadi Hawf 23.96 224 P **P 00 50 04.2 -0.6**
RAYN Ar Rayn 25.55 247 P **P 00 50 18.1 -1.1**
RAYN IAmb IAmb 00 50 22.9
comp=Z,4.8nm,0.6s
RAYN Ar Rayn 25.55 247 P **P 00 50 18.3 -1.0**
PZH PanZhiHua 27.82 102 P **P 00 50 41.6 +2.0**
SONM Songino Array 28.30 55 P **P 00 50 43.1 -0.7**
comp=Z,0.5nm,0.6s,baz=246,slow=9.5,SNR=3.5
comp=Z,0.5nm,0.6s
BRTR Keskin Array B 29.56 288 P **P 00 50 55.0 -0.1**
comp=Z,0.5nm,0.6s,baz=105,slow=11,SNR=4.9
comp=Z,0.5nm,0.6s
HHC Hu-ho-hao-te 31.70 69 *e*P **P 00 51 15.2 +1.4**
HHC pmax pmax
comp=Z,8.0nm,0.6s
HHC pmax pmax
comp=Z,99nm,5.5s
AKASG Malin Array Be 33.09 309 P **P 00 51 26.1 +0.5**
comp=Z,1.3nm,0.6s,baz=82,slow=7.2,SNR=6.3
comp=Z,1.3nm,0.6s
NRIK Noril'sk 34.20 10 P **P 00 51 36.1 +1.0**
comp=Z,2.9nm,0.7s,baz=182,slow=5.0,SNR=7.4
comp=Z,2.9nm,0.7s
NRIK Noril'sk 34.20 10 P **P 00 51 36.2 +1.1**
BURAR Bucovina Array 35.42 303 P **P 00 51 45.2 -0.8**
BUR08 Bucovina Ar. S 35.44 303 P **P 00 51 47.0 +0.9**
PABE Paberze 37.06 316 P **P 00 51 59.3 -0.3**
LVZ Lovozero 37.59 338 P **P 00 52 03.1 -0.9**
FIA1 FINESS Array S 37.62 326 P **P 00 52 02.5 -1.8**
FINES FINESS Array B 37.62 326 P **P 00 52 04.9 +0.6**
comp=Z,1.0nm,0.4s,baz=128,slow=8.1,SNR=16
comp=Z,1.0nm,0.4s
FINES FINESS Array B 37.62 326 P **P 00 52 04.7 +0.4**
OJC Ojcow 39.05 307 P **P 00 52 17.2 +0.8**
NJ2 Nanjing 39.38 82 *e*P **P 00 52 18.5 -1.0**
NJ2 pmax pmax
comp=Z,28nm,0.6s
ARCES ARCESS Array B 41.27 338 P **P 00 52 35.3 +0.7**
comp=Z,3.2nm,0.8s,baz=108,slow=7.9,SNR=11
comp=Z,3.2nm,0.8s
ARCES ARCESS Array B 41.27 338 P **P 00 52 34.6 0.0**
ARCES IAmb IAmb 00 53 17.8
comp=Z,15nm,1.4s
HFS Hagfors 43.21 322 P **P 00 52 50.6 +0.3**
comp=Z,1.3nm,0.4s,baz=98,slow=9.1,SNR=12
comp=Z,1.3nm,0.4s
NC405 NORSAR Array S 44.28 323 P **P 00 52 59.3 +0.3**
NC405 IAmb IAmb 00 53 27.9
comp=Z,8.0nm,1.1s
NC602 NORSAR Array S 44.33 323 P **P 00 52 59.2 -0.1**
NC602 IAmb IAmb 00 53 12.2
comp=Z,20nm,1.4s
NC303 NORSAR Array S 44.46 323 P **P 00 53 00.7 +0.2**
NC303 IAmb IAmb 00 53 20.7
comp=Z,27nm,1.5s
NB201 NORSAR Array S 44.48 323 P **P 00 53 00.8 +0.1**
NB2 NORSAR Subarra 44.52 323 P **P 00 53 00.8 -0.1**
comp=Z,1.9nm,0.8s,baz=96,slow=7.9
NOA NORSAR Array B 44.52 323 P **P 00 53 00.9 -0.1**
comp=Z,0.8nm,0.5s,baz=96,slow=7.7,SNR=9.1
comp=Z,0.8nm,0.5s
NBO00 NORSAR Array S 44.73 323 P **P 00 53 01.3 -1.3**
NBO00 IAmb IAmb 00 53 41.0
comp=Z,22nm,1.5s
NC204 NORSAR Array S 44.76 323 P **P 00 53 03.0 +0.2**
NC204 IAmb IAmb 00 53 25.5
comp=Z,19nm,1.4s
KONO Kongsberg 45.23 321 P **P 00 53 06.6 +0.1**
KONO IAmb IAmb 00 53 31.8
comp=Z,16nm,1.3s
TIXI Tiksi 45.83 22 P **P 00 53 11.2 +0.2**
SPB2 Spitsbergen Ar 47.61 347 P **P 00 53 25.5 +0.6**
SPITS Spitsbergen Ar 47.61 347 P **P 00 53 26.0 +1.1**
comp=Z,8.0nm,0.9s,baz=128,slow=11,SNR=7.8
comp=Z,8.0nm,0.9s
EKA Eskdalemuir Ar 52.43 316 P **P 00 54 02.5 +1.0**
comp=Z,1.0nm,0.9s,baz=76,slow=7.0,SNR=3.6
comp=Z,1.0nm,0.9s
TORD Torodi Ar. Bea 65.82 269 P **P 00 55 32.0 -2.5**
comp=Z,0.8nm,0.6s,baz=47,slow=7.3,SNR=6.8
comp=Z,0.8nm,0.6s
BOSA Boshof 77.74 220 P **P 00 56 42.9 -2.8**
comp=Z,3.0nm,0.8s,baz=90,slow=7.0,SNR=5.0
comp=Z,3.0nm,0.8s
YKA Yellowknife Ar 81.34 3 P **P 00 57 04.4 -0.2**
comp=Z,0.2nm,0.5s,baz=352,slow=6.0,SNR=9.7
comp=Z,0.2nm,0.5s
WRA Warramunga Arr 81.85 122 P P 00 57 04.3 -3.6
comp=Z,0.4nm,0.8s,baz=324,slow=4.7,SNR=4.9
comp=Z,0.4nm,0.8s
ASAR Alice Springs 84.11 125 P **P 00 57 16.6 -2.9**
comp=Z,0.5nm,0.7s,baz=313,slow=5.0,SNR=7.0
comp=Z,0.5nm,0.7s

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*IDC **07** 01:00:02.4±3.1, 39.°50N×77.°79E, h0km, mb3.7/1, mbtmp3.6/7, ML3.1/6, MS2.6/3, Error ellipse: s-maj=48.2km s-min=21.6km az=130.0*
*SOME **07** 01:00:08.2, 39.°92N×77.°13E, h5km*
*NNC **07** 01:00:09.3±1.2, 39.°95N×77.°04E, h0km, mb4.5, mpv4.2, Error ellipse: s-maj=8.2km s-min=6.5km az=155.0*
*KRNET **07** 01:00:10.2±0.1, 39.°95N×77.°09E, mb4.3*
ISC 07 01:00:08.7±1.6**, 39.°88N**±0.°04×**77.°10E**±0.°03**, h1**km±11km**, n89, σ2.°10**/135**, 33C-27D, Southern Xinjiang**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
KSH2 Kashi 1.39 239 Pg **Pn 01 00 36.0 +0.6**
KSH2 Sg **Sn 01 00 56.5 +2.0**
KSH2 smax smax
comp=N,2μm,0.5s
KSH2 smax smax
comp=E,1μm,0.5s
JNKS Jany-Kuch 1.62 317⇓*e*P **Pn 01 00 38.8 +0.2**
JNKS ⇓*e*S **Sn 01 00 59.6 -0.7**
NRN Naryn 1.76 332⇑*e*P **Pn 01 00 41.2 +0.6**
NRN ⇑*e*S **Sn 01 01 03.8 0.0**
KDJ Kajisay 2.25 2⇓*e*P **Pn 01 00 48.3 +1.1**
KDJ ⇓*e*S **Sn 01 01 16.1 +0.5**
ULHL Ulahol 2.45 345 P **Pb 01 00 53.3 -0.4**
SNR=77
ULHL Ulahol 2.45 345⇓*e*P **Pn 01 00 51.2 +1.2**
ULHL ⇓*e*S **Sn 01 01 21.1 +0.4**
SALK Salom-Alik 2.70 293⇑*e*P **Pn 01 00 55.0 +1.7**
SALK ⇑*e*S **Sn 01 01 27.9 +1.2**
BOOM Boomskoye usch 2.75 342⇑*e*P **Pn 01 00 55.4 +1.3**
BOOM ⇑*e*S **Sn 01 01 28.4 +0.4**
SFK Sufi-Kurgan 2.77 274⇑*e*P **Pn 01 00 56.4 +2.1**
SFK ⇑*e*S **Sn 01 01 30.3 +1.8**
PRZ Przheval'sk 2.78 20⇓*e*P **Pn 01 00 56.1 +1.6**
PRZ ⇓*e*S **Sn 01 01 29.6 +0.8**
ARLS Aral 2.89 314⇓*e*P **Pn 01 00 57.3 +1.4**
ARLS ⇓*e*S **Sn 01 01 31.8 +0.4**
ANVS Anan'yevo 2.93 8⇓*e*P **Pn 01 00 57.9 +1.3**
ANVS ⇓*e*S **Sn 01 01 32.8 +0.3**
UCH Uchtor 3.05 321 P **Pn 01 01 02.5 +4.0**
SNR=63
UCH Uchtor 3.05 321⇓*e*P **Pn 01 00 59.9 +1.4**
UCH ⇓*e*S **Sn 01 01 36.2 +0.3**
TNSS Tian-Shan 3.16 358 Pg **Pb 01 01 06.2 +0.4**
comp=E,49nm,0.8s
TNSS Lg Lg 01 01 48.4
comp=E,40nm,0.5s
TNSS Tian-Shan 3.16 358 *e*P **Pb 01 01 06.4 +0.7**
comp=E,49nm,0.8s
TNSS *e*S **Sg 01 01 48.5 -1.6**
comp=E,40nm,0.5s
IZV Izvestkoviy 3.17 354 Pg **Pb 01 01 04.9 -1.0**
comp=E,118nm,0.6s
IZV Lg Lg 01 01 46.5
comp=E,112nm,0.7s
IZV Izvestkoviy 3.17 354 *e*P **Pb 01 01 05.3 -0.7**
comp=E,118nm,0.6s
IZV *e*S **Sb 01 01 46.5 +1.3**
comp=E,112nm,0.7s
KBK Karagaybulak 3.21 330 P **Pn 01 01 04.2 +3.8**
SNR=64
KBK Karagaybulak 3.21 330⇓*e*P **Pn 01 01 01.8 +1.4**
KBK ⇓*e*S **Sn 01 01 39.5 +0.1**
TKM2 Tokmak 2 3.24 340 P **Pn 01 01 04.3 +3.5**
SNR=30
TKM2 Tokmak 2 3.24 340⇑*e*P **Pn 01 01 02.3 +1.5**
TKM2 ⇑*e*S **Sn 01 01 40.2 0.0**
KST Kastek 3.27 345 Pg **Pb 01 01 08.8 +1.1**
comp=E,83nm,0.4s
KST Lg Lg 01 01 52.6
comp=E,140nm,0.6s
KST Kastek 3.27 345 *e*P **Pb 01 01 08.9 +1.3**
comp=E,83nm,0.4s
KST *e*S **Sg 01 01 52.6 -1.2**
comp=E,140nm,0.6s
MDOK Medeo 3.28 359 Pg **Pb 01 01 09.0 +1.3**
comp=E,149nm,0.5s
MDOK Lg Lg 01 01 52.9
comp=E,181nm,0.5s
MTBS Maitube 3.29 351 Pg **Pb 01 01 08.7 +0.9**
comp=E,50nm,0.5s
MTBS Lg Lg 01 01 52.7
comp=E,103nm,0.5s
MTBS Maitube 3.29 351 *e*P **Pb 01 01 08.9 +1.1**
comp=E,50nm,0.5s
MTBS *e*S **Sg 01 01 52.8 -1.5**
comp=E,103nm,0.5s
SATY Saty 3.33 17 Pg **Pb 01 01 09.6 +1.1**
comp=E,143nm,0.6s
SATY Lg Lg 01 01 54.4
comp=E,206nm,0.7s
KNDC Almaty 3.34 358 ⇑Pg **Pb 01 01 09.8 +1.2**
comp=E,194nm,0.6s
KNDC ⇓Lg Lg 01 01 52.1
comp=E,374nm,0.6s
KOTS Kotyrbulak 3.35 0 Pg **Pb 01 01 10.3 +1.4**
comp=E,135nm,0.3s
KOTS Lg Lg 01 01 55.1
comp=E,546nm,0.9s
KOTS Kotyrbulak 3.35 0 *e*P **Pb 01 01 10.3 +1.4**
comp=E,135nm,0.3s
KOTS *e*S **Sg 01 01 55.1 -1.2**
comp=E,546nm,0.9s
OHH Osh 3.37 282⇑*i*P **Pn 01 01 04.4 +2.0**
OHH ⇑*e*S **Sn 01 01 44.0 +1.0**
AAK Ala-Archa 3.38 325 Pn **Pn 01 01 06.6 +3.9**
comp=E,8.7nm,0.3s,baz=134,slow=14,SNR=84
AAK Lg Lg 01 01 53.4
comp=E,18nm,0.3s,baz=252,slow=20,SNR=13
AAK LR LR 01 02 40.5
comp=E,119nm,20.1s,baz=54,slow=40
comp=E,52nm,0.5s
AAK Ala-Archa 3.38 325 P **Pn 01 01 06.8 +4.1**
SNR=23
AAK Ala-Archa 3.38 325 ⇑Pg **Pn 01 01 06.2 +3.4**
comp=E,28nm,0.6s
AAK ⇑Lg Lg 01 01 52.7
comp=E,52nm,0.6s
AAK Ala-Archa 3.38 325⇓*e*P **Pn 01 01 04.3 +1.6**
AAK ⇓*e*S **Sn 01 01 43.7 +0.1**
ARSB Arslanbob 3.45 296⇑*e*P **Pn 01 01 05.6 +2.0**
ARSB ⇑*e*S **Sn 01 01 45.8 +0.6**
FRU1 Bishkek 3.47 328⇓*e*P **Pn 01 01 05.7 +1.9**
FRU1 ⇓*e*S **Sn 01 01 46.0 +0.5**
UZB Uzynbulak 3.57 23 Pg **Pb 01 01 13.8 +1.1**
comp=E,54nm,0.7s
UZB Lg Lg 01 02 01.2
comp=E,88nm,0.8s
UZB Uzynbulak 3.57 23 *e*P **Pb 01 01 13.9 +1.2**
comp=E,54nm,0.7s
UZB *e*S **Sg 01 02 01.2 -2.2**
comp=E,88nm,0.8s
CHMS Chumysh 3.58 331 P **Pn 01 01 09.0 +3.6**
SNR=8.3
CHMS Chumysh 3.58 331⇑*e*P **Pn 01 01 06.8 +1.5**
CHMS ⇑*e*S **Sn 01 01 48.1 -0.2**
KURS Kuram 3.69 12 Pg **Pb 01 01 15.6 +0.9**
comp=E,70nm,1.0s
KURS Lg Lg 01 02 04.4
comp=E,86nm,0.7s
SHLS Shalkode 3.73 28 *e*P **Pg 01 01 19.9 -0.1**
comp=E,130nm,0.5s
SHLS *e*S **Sg 01 02 11.6 +3.3**
comp=E,145nm,0.4s
EKS2 Erkin-Say 3.74 319 P **Pn 01 01 12.0 +4.4**
SNR=98
EKS2 Erkin-Say 3.74 319⇓*e*P **Pn 01 01 09.2 +1.6**
EKS2 ⇓*e*S **Sn 01 01 52.2 -0.1**
KPKS Kokpek 3.77 18 Pg **Pb 01 01 17.3 +1.2**
comp=E,0.3nm,0.1s
KPKS Lg Lg 01 02 07.4
comp=E,133nm,0.6s
KPKS Kokpek 3.77 18 *e*P **Pb 01 01 17.5 +1.4**
comp=E,0.4nm,0.2s
KPKS *e*S **Sg 01 02 07.4 -2.5**
comp=E,133nm,0.6s
KTBS Karatobe 3.84 355 Pg **Pb 01 01 18.0 +0.8**
comp=E,45nm,0.5s
KTBS Lg Lg 01 02 09.2
comp=E,40nm,0.4s
KTBS Karatobe 3.84 355 *e*P **Pb 01 01 18.6 +1.3**
comp=E,38nm,0.4s
KTBS *e*S **Sg 01 02 09.2 -2.9**
comp=E,40nm,0.4s
PDGK Podgornoye 3.88 27 ⇑Pg **Pb 01 01 19.3 +1.2**
comp=E,46nm,0.5s
PDGK ⇑Lg Lg 01 02 11.1
comp=E,165nm,0.8s
USP Ospenovka 3.91 331 P **Pn 01 01 13.9 +4.1**
SNR=11
KRBS Karabastau 3.96 345 Pg **Pb 01 01 20.8 +1.5**
comp=E,80nm,0.6s
KRBS Lg Lg 01 02 13.6
comp=E,147nm,0.8s
KRBS Karabastau 3.96 345 *e*P **Pb 01 01 21.1 +1.9**
comp=E,80nm,0.6s
KRBS *e*S **Sg 01 02 13.6 -2.2**
comp=E,147nm,0.8s
MRKS Merke 4.09 316 *e*P **Pb 01 01 23.1 +1.6**
comp=E,54nm,0.4s
MRKS *e*S **Sg 01 02 16.9 -3.0**
comp=E,81nm,0.5s
KTMS Ketmen 4.32 33 Pg **Pb 01 01 25.2 -0.2**
comp=E,20nm,0.5s
KTMS Lg Lg 01 02 21.5
comp=E,39nm,0.5s
KTMS Ketmen 4.32 33 *e*P **Pb 01 01 25.5 +0.1**
comp=E,10nm,0.4s
KTMS *e*S **Sb 01 02 20.7 +2.7**
comp=E,39nm,0.5s
MNAS Manas 4.34 308⇓*e*P **Pn 01 01 17.6 +1.8**
MNAS ⇓*e*S **Sn 01 02 06.8 -0.3**
BLB Baldybastay 4.34 13 Pg **Pb 01 01 27.1 +1.4**
comp=E,4.1nm,0.5s
BLB Lg Lg 01 02 24.3
comp=E,105nm,0.3s
ARK Arkit 4.34 298⇑*e*P **Pn 01 01 17.9 +2.0**
ARK ⇑*e*S **Sn 01 02 07.1 0.0**
ARXS Arharly 4.36 7 Pg **Pb 01 01 28.1 +2.0**
comp=E,81nm,0.6s
ARXS Lg Lg 01 02 26.2
comp=E,75nm,0.6s
ARXS Arharly 4.36 7 *e*P **Pb 01 01 28.5 +2.3**
comp=E,48nm,0.7s
ARXS *e*S **Sg 01 02 26.2 -2.6**
comp=E,75nm,0.6s
TRKS Terek-Say 4.82 292⇑*e*P **Pn 01 01 23.9 +1.4**
TRKS ⇑*e*S **Sn 01 02 17.7 -1.3**
BTK Batken 4.83 274⇑*e*P **Pn 01 01 24.8 +2.3**
BTK ⇑*e*S **Sn 01 02 19.3 +0.2**
DJR Jarkent 4.88 23 Pg **Pb 01 01 37.3 +2.3**
comp=E,26nm,0.6s
DJR Lg Lg 01 02 41.3
comp=E,30nm,0.6s
DJR Jarkent 4.88 23 *e*P **Pb 01 01 37.2 +2.3**
comp=E,26nm,0.6s
DJR *e*S **Sg 01 02 41.3 -4.1**
comp=E,30nm,0.6s
TDK Taldyqorghan 5.21 10 Pg **Pb 01 01 42.2 +1.7**
comp=E,101nm,0.6s
TDK Lg Lg 01 02 50.8
comp=E,132nm,0.7s
TDK Taldyqorghan 5.21 10 *e*P **Pb 01 01 42.8 +2.3**
comp=E,101nm,0.6s
TDK *e*S **Sg 01 02 50.8 -5.2**
comp=E,132nm,0.7s
BTLS Baital 5.63 337 Pg **Pb 01 01 50.4 +2.7**
comp=E,23nm,0.5s
BTLS Lg Lg 01 03 04.2
comp=E,13nm,0.5s
BTLS Baital 5.63 337 *e*P **Pb 01 01 50.6 +3.0**
comp=E,23nm,0.5s
BTLS *e*S **Sg 01 03 04.2 -5.2**
comp=E,13nm,0.5s
KAPS Kapalarasan 5.65 16 Pg **Pb 01 01 52.8 +4.6**
comp=E,13nm,0.7s
KAPS Lg Lg 01 03 08.4
comp=E,25nm,0.4s
ALCI Alchi Leh 5.66 179 *e*P **Pn 01 01 38.0 +3.9**
ALCI *e*S **Sn 01 02 41.2 +1.3**
KK31 Karatay Array 5.90 305 Pn **Pn 01 01 37.9 +0.7**
comp=E,1.1nm,0.5s,baz=127,slow=12,SNR=21
KK31 Pg **Pb 01 01 54.9 +2.5**
comp=E,7.6nm,0.6s,baz=110,slow=17,SNR=22
KK31 ⇓Lg Lg 01 03 13.3
comp=E,5.3nm,0.4s,baz=126,slow=29,SNR=7.5
TSSA Tissa 7.07 186 *e*P **Pn 01 01 55.1 +1.7**
TSSA *e*S **Sn 01 03 12.3 -2.2**
TSSA IAML 01 03 22.8
comp=N,63nm,0.3s
TSSA IAML 01 03 24.2
comp=E,70nm,0.5s
JMU Jammu 7.32 195 *e*P **Pn 01 01 57.7 +1.1**
JMU *e*S **Sn 01 03 19.6 -0.7**
JMU IAML 01 03 26.0
comp=N,88nm,0.3s
JMU IAML 01 03 28.8
comp=E,78nm,0.3s
MK31 Makanchi Array 7.88 27 ⇑Pn **Pn 01 02 05.1 +0.8**
comp=E,0.9nm,0.5s,baz=194,slow=13,SNR=5.0
MK31 ⇑Pg Pb 01 02 32.9 +7.0
comp=E,2.0nm,0.6s,baz=206,slow=13,SNR=5.3
MK31 ⇑Sn **Sn 01 03 34.0 -0.1**
comp=E,3.0nm,0.6s
MK31 ⇑Lg Lg 01 04 16.8
comp=E,3.0nm,0.6s
MKAR Makanchi Array 7.88 27 Pn Pn 01 01 59.9 -4.4
comp=E,0.3nm,0.3s,baz=209,slow=13,SNR=5.0
MKAR Sn **Sn 01 03 32.1 -1.9**
comp=E,0.3nm,0.3s,baz=204,slow=17,SNR=3.1
MKAR Lg Lg 01 04 14.5
comp=E,0.7nm,0.3s,baz=214,slow=28,SNR=4.4
MKAR LR LR 01 04 37.1
comp=E,16nm,19.7s,baz=204,slow=34
comp=E,0.2nm,0.4s
KLP Kalpa 8.38 173 *e*P **Pn 01 02 13.9 +2.3**
KLP *e*S **Sn 01 03 45.3 -1.7**
KLP IAML 01 03 53.3
comp=N,19nm,0.4s
KLP IAML 01 03 55.2
comp=E,24nm,0.6s
BHK Bhakra 8.49 184 *e*P **Pn 01 02 14.2 +1.5**
BHK *e*S **Sn 01 03 44.5 -4.6**
BHK IAML 01 03 49.7
comp=E,75nm,0.5s
BHK IAML 01 03 53.5
comp=N,82nm,0.2s
SMLA Simla 8.73 180 *e*P **Pn 01 02 16.0 -0.1**
SMLA *e*S **Sn 01 03 49.9 -5.2**
SMLA IAML 01 03 54.7
comp=N,45nm,0.3s
SMLA IAML 01 04 02.4
comp=E,40nm,0.6s
WMQ Urumqi 8.83 60 *e*P **Pn 01 02 22.0 +4.5**
KURBB Kurchatov Arra 10.79 5 Pn **Pn 01 02 43.5 -0.6**
baz=193,slow=12,SNR=13
KURBB Lg Lg 01 05 48.8
comp=E,0.1nm,0.3s,baz=243,slow=10,SNR=3.0
comp=E,0.8nm,0.6s

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	10.79	5	⇓Lg	Lg	01 05 50.3	
	comp=E,8.9nm,0.8s						
KURK	Kurchatov	10.89	5	⇑Pn	Pn	01 02 46.2	+0.6
	comp=E,1.7nm,1.0s						
KURK				⇑Lg	Lg	01 05 49.5	
	comp=E,7.4nm,1.1s						
BVAR	Borovoye Array	13.93	343	Pn	Pn	01 03 25.4	-1.7
	comp=E,0.1nm,0.3s,baz=160,slow=8.9,SNR=7.0						
BVAR				Lg	Lg	01 07 25.9	
	baz=68,slow=42						
BVAR				LR	LR	01 08 56.3	
	comp=E,36nm,19.2s,baz=131,slow=37						
	comp=E,2.4nm,0.7s						
ZALV	Zalesovo Beam	15.02	18	Pn	Pn	01 03 37.0	-4.8
	comp=E,0.2nm,0.3s,baz=206,slow=12,SNR=6.7						
ZALV				Lg	Lg	01 08 03.7	
	comp=E,0.1nm,0.3s,baz=220,slow=20,SNR=1.6						
	comp=E,0.3nm,0.3s						
AKTO	Aktyubinsk	17.05	315	Pn	Pn	01 04 07.8	-0.4
	comp=E,0.1nm,0.3s,baz=121,slow=8.3,SNR=4.6						
	comp=E,2.0nm,0.9s						
CLL	Collm	44.91	307	eP	P	01 08 26.0	+1.3
TORD	Torodi Ar. Bea	70.53	271	P	P	01 11 22.8	-2.6
	comp=E,0.5nm,0.7s,baz=55,slow=6.5,SNR=3.5						
	comp=E,0.5nm,0.7s						

*IDC **07** 01:01:49.6±1.4,21°.43N×121°.27E,h0km,mb3.5/7, mbtmp3.6/7,MS2.9/5,Error ellipse: s-maj=51.7km s-min=21.4km az=64.0*

*TAP **07** 01:01:51.7,21°.26N×121°.21E,h48km±1km,ML4.0,D*

ISC 07 01:01:52.0±1.9**,21°.33N**±0°.06×**121°.06E**±0°.05**,h14**km±11km**,n92,**σ**1s.33**/103**,mb3.5**/6**,MS2.9**/4**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSEB	Hengchuen, Pin	0.59	345	P	Pb	01 02 04.7	+0.6
TSEB				S	Sn	01 02 16.9	+1.5
TWKBT	Hengchun	0.65	339	P	Pb	01 02 05.5	+0.3
TWKBT				S	Sn	01 02 17.7	+0.7
TWK1	Hengchun	0.66	339	P	Pb	01 02 05.5	+0.2
TWK1				S	Sn	01 02 17.7	+0.5
SMST	Manzhou Townsh	0.72	343	eP	Pb	01 02 06.4	0.0
SMST				S	Sn	01 02 19.4	+0.7
HEN	Hengchun	0.74	336	P	Pn	01 02 08.7	+0.6
HEN				S	Sn	01 02 20.4	+1.2
LYUB	Lan-yu	0.83	36	P	Pb	01 02 07.3	-1.0
LYUB				S	Sb	01 02 17.8	-1.5
LAY	Lan-yu	0.84	33	P	Pb	01 02 07.7	-0.8
LAY				S	Sg	01 02 19.2	-0.2
SLIU	Shizi	0.92	345	eP	Pb	01 02 10.3	+0.6
EAST	Anshuo	1.07	349	eP	Pn	01 02 12.3	-0.3
EAST				eS	Sb	01 02 26.1	-0.2
SCZT	Fangliau	1.12	339	eP	Pn	01 02 13.1	-0.2
SCZT				eS	Sb	01 02 27.1	-0.5
ECL	Taimali	1.27	356	eP	Pn	01 02 13.4	-1.9
ECL				eS	Sn	01 02 30.4	-1.9
MASBT	Mashibuluo	1.34	343	eP	Pn	01 02 16.5	+0.1
SSD	Sandimen	1.47	344	eP	Pn	01 02 17.7	-0.4
TWGBT	Beinan	1.48	1	P	Pb	01 02 19.9	+0.5
TWGBT	Beinan	1.48	1	S	Sn	01 02 23.9	-14
TWGBT	Beinan	1.48	1	eP	Pn	01 02 17.7	-0.6
TWG	Pinlang	1.49	0	eP	Pb	01 02 19.6	+0.1
LONT	Longtian	1.57	2	eP	Pn	01 02 20.0	+0.4
SLGT	Liugui	1.70	347	eP	Pb	01 02 24.5	+1.4
ECS	Chishang	1.77	5	eP	Pn	01 02 22.0	-0.2
CHKT	Chengkung	1.79	9	eP	Pn	01 02 20.1	-2.3
CHKT				eS	Sn	01 02 42.9	-2.1
SGST	Jiashian	1.80	346	eP	Pg	01 02 26.9	+0.2
EHD	Haiduan	1.82	4	eP	Pn	01 02 19.7	-3.2
STYH	Taoyuan	1.85	352	eP	Pb	01 02 25.0	-0.7
FULB	Fuli	1.88	7	eP	Pn	01 02 22.8	-0.9
FULB				S	Sn	01 02 46.1	-1.2
CHKH	Chenggong	1.88	9	eP	Pn	01 02 23.1	-0.7
CHKH				eS	Sn	01 02 45.2	-2.1
CHN1	Nanshi	1.92	345	eP	Pb	01 02 27.5	+0.8
WTP	Ta-pu	1.96	348	eP	Pn	01 02 25.4	+0.5
TWK	Hsinying	2.00	345	eP	Pb	01 02 27.5	-0.8
TPUB	Ta-pu	2.01	349	P	Pb	01 02 28.8	+0.5
TPUB	Ta-pu	2.01	349	eP	Pb	01 02 28.7	+0.4
TWF1	Yuli	2.03	6	eP	Pn	01 02 27.1	+1.3
YULB	Yu-li	2.07	6	P	Pb	01 02 28.3	-1.1
YULB	Yu-li	2.07	6	eP	Pn	01 02 24.5	-1.8
WCKO	Fanlu	2.15	349	eP	Pb	01 02 30.1	-0.6
EHYH	Wanrong	2.17	7	eP	Pn	01 02 27.2	-0.6
HGSD	Ruisui	2.18	9	eP	Pn	01 02 29.1	+1.2
EHY	Hungye	2.18	6	eP	Pn	01 02 27.9	0.0
ALS	Alishan	2.19	354	eP	Pn	01 02 29.9	+1.7
CHN5	Tsauling	2.29	351	eP	Pn	01 02 30.1	+0.6
WDGT	Dungji	2.32	326	eP	Pn	01 02 28.2	-1.6
WHYT	Xinyi Township	2.37	355	eP	Pb	01 02 33.1	-1.4
WARBT	Fenglin Townsh	2.40	7	eP	Pn	01 02 32.2	+1.3
VCHM	Qimei	2.41	321	eP	Pn	01 02 29.0	-2.0
VWDT	VWDT	2.42	2	eP	Pn	01 02 31.6	+0.4
SSLB	Suanglung	2.45	358	P	Pn	01 02 33.2	+1.5
SSLB	Suanglung	2.45	358	eP	Pn	01 02 33.4	+1.7
SHUL	Shoufeng	2.49	11	eP	Pn	01 02 33.5	+1.3
ESL	Shilin	2.50	8	eP	Pn	01 02 33.5	+1.2
SMLT	Sun Moon Lake	2.55	357	eP	Pn	01 02 33.7	+0.7
TYC	Yuchr	2.57	356	eP	Pn	01 02 34.2	+0.9
PHUB	P'eng-hu	2.58	328	eP	Pn	01 02 31.6	-1.7
OWD	Renai	2.62	2	eP	Pn	01 02 34.8	+0.7
PNG	Penghu	2.63	328	eP	Pn	01 02 32.8	-1.3
WUSB	Renai	2.66	1	eP	Pn	01 02 35.6	+1.1
WUSB				S	Sn	01 03 06.5	-0.1
LXIB	Xiulin Townshi	2.70	7	eP	Pn	01 02 34.8	-0.5
WHF	Hehuan Shan	2.81	4	eP	Pn	01 02 38.3	+1.3
NACB	Ninganchiao	2.88	10	P	Pn	01 02 38.7	+1.2
NACB	Ninganchiao	2.88	10	eP	Pn	01 02 38.8	+1.3
ETLH	Xiulin Townshi	2.89	8	eP	Pn	01 02 38.4	+0.6
FUSS	Fushou	2.91	3	eP	Pn	01 02 41.0	+2.8
WHP	Taichung City	2.94	358	eP	Pn	01 02 39.3	+0.8
WHP				eS	Sn	01 03 15.0	+1.4
NNSB	Datong	3.10	5	eP	Pn	01 02 42.0	+1.3
NNS	Nan Shan	3.11	5	eP	Pn	01 02 42.1	+1.3
LATG	Datong	3.22	8	eP	Pn	01 02 44.7	+2.3
NFF	Wufeng Townshi	3.29	1	eP	Pn	01 02 43.7	+0.4
LIOB	Emei	3.31	359	eP	Pn	01 02 44.8	+1.4
ENTT	Nioudou	3.33	8	eP	Pn	01 02 46.0	+2.2
YHNB	Yeheng	3.34	5	P	Pn	01 02 45.8	+1.9
YHNB	Yeheng	3.34	5	eP	Pn	01 02 44.8	+0.9
NSK	Sanguang	3.35	5	eP	Pn	01 02 46.4	+2.4
NDS	Dongshan	3.35	10	eP	Pn	01 02 46.5	+2.6
TWC	Suao	3.35	12	eP	Pn	01 02 46.5	+2.6
FUSB	Fushanzhiwuyua	3.45	8	eP	Pn	01 02 47.9	+2.5
NWLT	Wulai	3.46	7	eP	Pn	01 02 47.7	+2.1
YOJ	Yonaguni jima	3.60	30	eP	Pn	01 02 48.6	+1.2
TIPB	Shuangxi	3.70	11	eP	Pn	01 02 50.9	+2.1
SXI1	Grass Mountain	3.83	11	eP	Pn	01 02 52.9	+2.3
VWUC	VWUC	3.94	338	eP	Pn	01 02 50.5	-1.6
PTMZ	Houxiangcun	4.11	335	eP	Pn	01 02 53.0	-1.3
AXDP	Jialang	4.55	322	eP	Pn	01 02 59.7	-0.8
MATB	Ma-tsu	4.91	348	P	Pn	01 03 04.5	-0.9
JNU	Nakatsue	14.63	35	LR	LR	01 10 40.8	
	comp=Z,35nm,19.4s,baz=211,slow=37						
CMAR	Chiang Mai Arr	20.99	266	P	P	01 06 37.1	+2.0
	1.4nm,0.3s,baz=66,slow=12,SNR=9.1						
CMAR				LR	LR	01 16 13.0	
	comp=Z,34nm,19.2s,baz=65,slow=41						
	1.4nm,0.3s						
GUMO	Guam	23.96	105	LR	LR	01 17 22.8	
	comp=Z,14nm,18.2s,baz=88,slow=39						
SONM	Songino Array	28.97	339	P	P	01 07 51.2	0.0
	0.3nm,0.3s,baz=156,slow=11,SNR=2.4						
	0.3nm,0.3s						
MKAR	Makanchi Array	40.35	318	P	P	01 09 28.6	-0.6
	0.6nm,1.0s,baz=119,slow=8.4,SNR=2.9						
	0.6nm,1.0s						
YAK	Yakutsk	41.11	6	LR	LR	01 30 06.0	
	comp=Z,26nm,18.6s,baz=356,slow=41						
ZALV	Zalesovo Beam	42.60	329	P	P	01 09 47.4	-0.2
	0.8nm,0.6s,baz=119,slow=8.6,SNR=4.9						
	0.8nm,0.6s						
WRA	Warramunga Arr	43.02	162	P	P	01 09 51.0	-0.4
	0.2nm,0.5s,baz=346,slow=8.1,SNR=2.5						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	44.24	322	P	P	01 10 00.8	-0.1
	1.0nm,0.9s,baz=118,slow=7.9,SNR=4.2						
	1.0nm,0.9s						
ASAR	Alice Springs	46.44	164	P	P	01 10 19.0	+0.4
	0.2nm,0.4s,baz=348,slow=8.6,SNR=1.9						
ASAR				LR	LR	01 31 09.3	
	comp=Z,16nm,19.0s,baz=196,slow=38						
	0.2nm,0.4s						

*IDC **07** 01:14:15.2±0.9,31°.48S×178°.28W,h0km,mb4.5/4, mbtmp4.3/6,ML3.8/2,MS3.2/2,Error ellipse: s-maj=30.4km s-min=20.1km az=107.0*

*WEL **07** 01:14:18.9±1.0,32°S±8°×17°8W±1°8,h12km,M4.8/6, mB5.0/4,ML4.5/11,MLv4.9/6,Mw(mB)4.3/4,Error ellipse: s-maj=24.8km s-min=6.2km az=108.8,confirmed*

*NEIC **07** 01:14:21.4±2.3,31°.5S±0°.1×178°.3W±0°.2,h35km±2km, mb4.7/11,Error ellipse: s-maj=28.5km s-min=16.7km az=105.0*

ISC 07 01:14:23.3±0.7**,31°.63S**±0°.07×**178°.4W**±0°.1**,h61**km**,n66, σ**1s.96**/65,mb4.6**/13**,3D,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.39	10	P	Pn	01 14 57.9	-2.3
GLKZ				S	Sn	01 15 23.8	-4.6
RAO	Raoul Island	2.40	10	Pn	Pn	01 14 55.0	-5.3
	41nm,0.3s,baz=99,slow=22,SNR=1.6						
RAO				Sn	Sn	01 15 22.0	-6.6
	288nm,0.3s,baz=107,slow=20,SNR=5.7						
	108nm,0.3s						
RAO	Raoul Island	2.40	10	Sn	Sn	01 15 19.7	-8.9
WMGZ	Waiomatatini S	6.71	202	P	Pn	01 15 57.8	-1.4
WMGZ				S	Sn	01 17 11.0	-3.2
PKGZ	Pakihiroa	6.87	204	P	Pn	01 15 59.5	-1.9
PKGZ				S	Sn	01 17 15.8	-2.3
HAZ	Te Kaha	6.88	206	P	Pn	01 16 00.3	-1.1
HAZ				S	Sn	01 17 15.6	-2.6
PUZ	Puketiti	6.99	202	P	Pn	01 16 00.7	-2.4
PUZ				S	Sn	01 17 19.1	-2.0
RUGZ	Raukumara Rang	7.10	206	P	Pn	01 16 02.5	-2.1
TWGZ	Tauwhareparae	7.18	203	P	Pn	01 16 04.2	-1.4
TWGZ				S	Sn	01 17 23.6	-2.2
CNGZ	Carnagh Statio	7.38	201	P	Pn	01 16 04.5	-3.9
WCZ	Waipu Caves	7.41	233	P	Pn	01 16 15.6	+6.8
MWZ	Matawai	7.48	205	P	Pn	01 16 07.8	-2.0
MWZ				S	Sn	01 17 30.4	-2.8
URZ	Urewera	7.57	208	Pn	Pn	01 16 08.3	-2.8
	0.8nm,0.3s,baz=265,slow=4.7,SNR=18						
URZ				Sn	Sn	01 17 32.8	-2.6
	5.2nm,0.3s,baz=97,slow=22,SNR=14						
	4.9nm,0.8s						
URZ	Urewera	7.57	208	P	Pn	01 16 08.2	-2.8
URZ				S	Sn	01 17 32.8	-2.6
OUZ	Omahuta	7.59	240	P	Pn	01 16 16.7	+5.4
RIGZ	Rimuhau	7.73	203	P	Pn	01 16 11.6	-1.6
MUGZ	Murupara	7.90	209	P	Pn	01 16 12.7	-2.8
MUGZ				S	Sn	01 17 41.9	-1.5
RTZ	Ruatahuna	7.93	207	Pn	Pn	01 16 13.2	-2.8
RTZ	Ruatahuna	7.93	207	P	Pn	01 16 13.0	-3.1
SNGZ	Shannon Statio	7.94	205	P	Pn	01 16 15.7	-0.4
SNGZ				S	Sn	01 17 42.2	-2.3
RAHZ	Arahi	8.15	206	P	Pn	01 16 17.7	-1.3
RAHZ				S	Sn	01 17 47.9	-1.8
NMHZ	Naumai	8.42	206	P	Pn	01 16 20.6	-2.0
NMHZ				S	Sn	01 17 55.6	-0.6
BKZ	Black Stump Fm	8.60	208	Pn	Pn	01 16 21.3	-3.8
MRZ	Mangatainoka R	10.24	207	Pn	Pn	01 16 42.4	-5.1
DZM	Mont Dzumac	16.52	301	LR	LR	01 23 26.7	
	comp=Z,114nm,18.2s,baz=206,slow=33						
CTA	Charters Tower	33.68	281	LR	LR	01 32 20.2	
	comp=Z,24nm,21.1s,baz=184,slow=32						
CTAO	Charters Tower	33.68	281	P	P	01 21 01.1	+2.5
CTAO				IAmb	IAmb	01 21 02.2	
	comp=Z,8.1nm,0.8s						
STKA	Stephens Creek	33.88	259	P	P	01 21 00.8	+0.5
	comp=Z,0.8nm,0.3s,baz=87,slow=7.9,SNR=3.3						
	comp=Z,0.8nm,0.3s						
STKA	Stephens Creek	33.88	259	P	P	01 21 02.2	+1.8
INKA	Innaminka	35.56	266	P	P	01 21 17.4	+2.6
BBOO	Buckleboo	38.32	256	P	P	01 21 37.5	-0.7
BBOO				IAmb	IAmb	01 21 42.6	
	comp=Z,18nm,1.2s						
COEN	Coen	39.29	288	P	P	01 21 48.0	+1.5
COEN				IAmb	IAmb	01 21 49.9	
	comp=Z,10nm,1.4s						
AS31	Alice Springs	42.71	268		P	01 22 15.4	+0.8
ASAR	Alice Springs	42.72	268	P	P	01 22 15.2	+0.6
	comp=Z,3.7nm,0.3s,baz=105,slow=7.4,SNR=84						
	comp=Z,3.7nm,0.3s						
ASAR	Alice Springs	42.72	268	P	P	01 22 14.6	0.0
WR0	Warramunga Arr	43.64	274	P	P	01 22 22.6	+0.5
WR0				IAmb	IAmb	01 22 23.3	
	comp=Z,11nm,0.5s						
WR8	Warramunga Arr	43.67	274		P	01 22 22.8	+0.5
WR8				IAmb	IAmb	01 22 23.6	
	comp=Z,9.0nm,0.6s						
WRA	Warramunga Arr	43.81	274	P	P	01 22 23.9	+0.4
	comp=Z,10nm,0.4s,baz=114,slow=7.8,SNR=172						
	comp=Z,10nm,0.4s						
MTN	Manton Dam	49.85	280	P	P	01 23 10.4	-0.2
KNRA	Kununurra	50.47	276	P	P	01 23 15.5	+0.2
KNRA				IAmb	IAmb	01 23 20.1	
	comp=Z,6.5nm,0.8s						
QSPA	South Pole Qui	58.49	180	P	P	01 24 14.3	+1.4
	comp=Z,1.3nm,0.6s,baz=85,slow=1.3,SNR=9.9						
	comp=Z,1.3nm,0.6s						
QSPA	South Pole Qui	58.49	180	P	P	01 24 15.3	+2.3
QSPA				IAmb	IAmb	01 24 22.1	
	comp=Z,3.5nm,0.8s						
TROLL	Troll, Antarti	76.65	180	P	P	01 26 09.7	+2.4
VNA3	Neumayer Olymp	77.11	176	⇓P	P	01 26 11.9	+2.1
	comp=Z,0.8nm,0.3s						
VNA2	Neumayer--Watz	77.54	177	⇓P	P	01 26 16.8	+4.7
	comp=Z,3.1nm,0.6s,baz=189,slow=4.1						
VNA1	Neumayer--Stat	77.77	177	⇓P	P	01 26 15.0	+1.6
	comp=Z,0.4nm,0.3s						
H03S2	Juan Fernandez	80.08	124	T	T	02 55 17.6	
	baz=237,slow=74,SNR=9.3						
H03S1	Juan Fernandez	80.09	124	T	T	02 55 18.0	
	baz=237,slow=74,SNR=10						
H03S3	Juan Fernandez	80.09	124	T	T	02 55 15.0	
	baz=237,slow=74,SNR=13						
H03N3	Juan Fernandez	80.28	123	T	T	02 55 26.8	
	baz=241,slow=72						
H03N2	Juan Fernandez	80.28	123	T	T	02 55 25.5	
	baz=241,slow=72						
H03N1	Juan Fernandez	80.29	123	T	T	02 55 28.1	
	baz=241,slow=72						
MKAR	Makanchi Array	118.29	310	PKP	PKPdf	01 33 03.0	-0.4
	comp=Z,0.3nm,0.8s,baz=251,slow=3.8,SNR=4.6						
MKAR	Makanchi Array	118.29	310	PKPdf	PKPdf	01 33 02.7	-0.7
KURBB	Kurchatov Arra	121.68	313	PKP	PKPdf	01 33 09.4	-0.4
	comp=Z,0.3nm,0.4s,baz=114,slow=2.0,SNR=3.0						
BVAR	Borovoye Array	127.03	315	PKP	PKPdf	01 33 20.3	+0.3
	comp=Z,0.5nm,0.4s,baz=131,slow=3.8,SNR=1.7						
FINES	FINESS Array B	146.17	339	PKPbc	PKPbc	01 33 55.8	-0.2
	comp=Z,4.0nm,0.7s,baz=43,slow=4.0,SNR=25						
FINES	FINESS Array B	146.17	339		PKPdf	01 33 55.7	+0.8
NC303	NORSAR Array S	149.70	351	PKPbc	PKPbc	01 34 05.9	+0.5
NB2	NORSAR Subarra	149.90	351	PKP	PKPbc	01 34 06.1	+0.1
	comp=Z,0.4nm,0.5s,baz=15,slow=2.5						
NOA	NORSAR Array B	149.90	351	PKPbc	PKPbc	01 34 06.2	+0.2
	comp=Z,0.5nm,0.4s,baz=14,slow=4.1,SNR=4.1						
HFS	Hagfors	150.37	348	PKPbc	PKPbc	01 34 06.8	-0.3
	comp=Z,0.6nm,0.3s,baz=132,slow=4.1,SNR=12						
PABE	Paberze	151.39	333	PKPbc	PKiKP	01 34 10.3	+0.2
MMAI	Mount Meron Ar	151.47	282	PKPbc	PKiKP	01 34 12.5	+1.4
	comp=Z,1.8nm,0.6s,baz=65,slow=6.6,SNR=6.9						
BRTR	Keskin Array B	152.85	296	PKPbc	PKPbc	01 34 12.9	-0.8
	comp=Z,0.2nm,0.5s,baz=111,slow=2.2,SNR=2.0						
TORD	Torodi Ar. Bea	161.61	180	PKPab	PKPab	01 35 04.0	+1.2
	comp=Z,0.5nm,0.7s,baz=186,slow=4.6,SNR=2.7						

*IDC **07** 01:23:49.2±5.3,13°.95N×93°.48W,h0km,mb3.5/2, mbtmp3.4/5,ML3.3/3,Error ellipse: s-maj=106.9km s-min=35.3km az=16.0*

*CATAC **07** 01:23:54.7,14°N±6°×9°3W±°,h13km±9km,M4.0/6, MLv4.0/6,confirmed*

*MEX **07** 01:23:54.5±1.2,14°.22N×93°.35W,h16km,MD4.1*

*GCG **07** 01:23:55.5±1.8,14°.32N×93°.13W,h20km±21km,MD4.1, ML3.9,Presumed earthquake*

ISC 07 01:23:50.0±1.9**,14°.22N**±0°.06×**93°.23W**±0°.05**,h1**km±11km**, n32,σ**1s.41**/41,Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.16	54	eP	Pn	01 24 14.3	+0.9
THIG				eS	Sb	01 24 28.1	-0.4
THIG		1.16	54	iP	Pn	01 24 13.6	+0.2
THIG				iS	Sg	01 24 26.8	-0.6
THIG				IAML		01 24 31.3	
	comp=E,3µm,0.5s						
SMCA	Catarina	1.29	60	iP	Pn	01 24 15.6	+0.4
PATR	El Naranjo	1.32	47	eP	Pg	01 24 15.1	-0.3
CHUJ	Union Juarez	1.40	51	eP	Pn	01 24 16.5	-0.4
CHUJ				eS	Sg	01 24 34.3	-0.6
PAVE	Pavencul	1.41	46	eP	Pn	01 24 16.6	-0.5
PAVE				eS	Sn	01 24 35.8	-0.6
PCIG		1.48	1	eP	Pn	01 24 16.7	-1.2
RTAL	Retalhuleu	1.52	78	P	Pg	01 24 20.3	+1.1
RTAL				S	Sg	01 24 39.8	+0.8
QUEO	Labor Ovalle	1.79	68	iP	Pb	01 24 23.7	-0.1
QUEO				IAML		01 24 47.4	
	comp=N,2µm,0.6s						
STG2	El Palmar, Qui	1.81	83	eP	Pn	01 24 21.3	-1.3
STG2				IAML		01 24 52.0	
	comp=E,3µm,0.3s						
STG5	El Palmar, Qui	1.84	84	iP	Pn	01 24 21.8	-1.0
STG8	El Palmar, Qui	1.84	82	iP	Pn	01 24 21.6	-1.3
HUEH	Huehuetenango	2.00	57	P	Pb	01 24 27.5	+0.1
HUEH	Huehuetenango	2.00	57	IAML		01 25 06.9	
	comp=E,2µm,0.6s						
CCIG	Comitan	2.31	27	eP	Pb	01 24 31.8	-0.8
CCIG	Comitan	2.31	27	P	Pb	01 24 31.8	-0.8
CCIG				S	Sb	01 25 00.1	-1.7
CCIG	Comitan	2.31	27	iP	Pb	01 24 31.9	-0.8
CCIG				IAML		01 25 06.3	
	comp=N,505nm,0.3s						
TGIG		2.55	2	eP	Pn	01 24 33.8	+1.2
TGIG		2.55	2	iP	Pn	01 24 34.1	+1.5
FG8	Yepocapa, Chim	2.59	89	iP	Pn	01 24 30.4	-2.8
APG	El Apazote	2.79	73	Pn	Pb	01 24 39.9	-1.0
	comp=N,0.7nm,0.3s,baz=207,slow=14,SNR=18						
APG				Sn	Sb	01 25 14.7	-1.1
	comp=N,0.5nm,0.3s,baz=92,slow=14,SNR=6.2						
	comp=N,2.2nm,0.4s						
APG	El Apazote	2.79	73	iP	Pb	01 24 39.7	-1.2
HUIG	Huatulco	3.18	299	eP	Pn	01 24 41.0	-0.2
UXUV	UXUV	3.21	344	eP	Pn	01 24 42.1	+0.5
CMIG	Matias Romero	3.27	331	Pn	Pn	01 24 43.2	+0.7
	comp=N,5.8nm,0.3s,baz=157,slow=11,SNR=47						
CMIG				Sn	Sn	01 25 19.9	-2.2
	comp=N,14nm,0.3s,baz=144,slow=18,SNR=11						
	comp=N,13nm,0.3s						
CMIG	Matias Romero	3.27	331	eP	Pn	01 24 42.9	+0.4
NUBE	Las Nubes	3.37	95	P	Pn	01 24 46.5	+2.6
NUBE				S	Sn	01 25 21.9	-2.7
NUBE	Las Nubes	3.37	95	iP	Pn	01 24 46.3	+2.4
PETF	Flores	4.21	50	P	Pn	01 24 58.4	+3.0
PETF				S	Sn	01 25 47.9	+2.6
TXAR	Lajitas Array	17.88	329	P	P	01 28 02.0	+1.0
	baz=144,slow=14,SNR=6.2						
	comp=N,0.6nm,0.7s						
YKA	Yellowknife Ar	50.55	347	P	P	01 32 50.3	+0.5
	comp=N,0.7nm,0.7s,baz=157,slow=7.0,SNR=8.3						
	comp=N,0.7nm,0.7s						
ILAR	Eielson Array	62.17	337	P	P	01 34 13.4	+0.6
	comp=N,0.2nm,0.6s,baz=125,slow=7.9,SNR=4.4						
	comp=N,0.2nm,0.6s						

*ISK **07** 01:24:21.8,34°.30N×33°.49E,h17km,ML2.6/8*

*NIC **07** 01:24:23.7,34°.35N×33°.60E,h16km±1km,Ml2.0/11*

*GII **07** 01:24:24.4±0.0,34°.34N±0°.04×33°.52E±0°.01,h0km, Mws2.3,confirmed*

ISC 07 01:24:22.7±1.8**,34°.34N**±0°.03×**33°.59E**±0°.04**,h11**km±13km**, n38,σ0s.59**/68**,3C-3D,Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASGA	Asgata	0.53	328	⇑iP	Pb	01 24 34.2	+0.2
ASGA				S	Sb	01 24 42.7	+0.9
ASGA				AML	AML	01 24 43.6	
	0.2nm,0.1s						
ASGA				AML	AML	01 24 45.4	
	0.2nm,0.4s						
LAR1C	Larnaka City C	0.59	2	P	Pb	01 24 35.5	+0.5
CSS	Mathiatis	0.66	341	P	Pb	01 24 35.7	-0.6
CSS				S	Sn	01 24 47.0	-1.5
CSS				AML	AML	01 24 48.5	
	0.2nm,0.3s						
CSS				AML	AML	01 24 50.4	
	0.2nm,0.5s						
CSS	Mathiatis	0.66	341	P	Pb	01 24 36.3	+0.1
MVOU	Mavrovouni	0.68	3	P	Pb	01 24 36.2	-0.3
MVOU				S	Sb	01 24 46.7	+0.7
MVOU				AML	AML	01 24 49.8	
	0.1nm,0.3s						
MVOU				AML	AML	01 24 50.5	
	0.2nm,0.3s						
APOL	The Sanctuary	0.69	299	⇑iP	Pn	01 24 37.7	-0.7
APOL				S	Sb	01 24 46.4	+0.2
APOL				AML	AML	01 24 49.6	
	0.8nm,0.2s						
APOL				AML	AML	01 24 49.9	
	0.5nm,0.2s						
PARAL	Paralimni	0.75	29	⇓iP	Pb	01 24 38.1	+0.3
PARAL				S	Sb	01 24 48.8	+0.7
PARAL				AML	AML	01 24 54.6	
	0.2nm,0.6s						
PARAL				AML	AML	01 24 55.7	
	0.2nm,0.7s						
XYLS	Xyliatos	0.81	327	P	Pb	01 24 38.8	0.0
XYLS				S	Sb	01 24 50.4	+0.6
XYLS				AML	AML	01 24 51.5	
	0.3nm,0.1s						
XYLS				AML	AML	01 24 51.9	
	0.2nm,0.1s						
ATHAL	Athalassa	0.82	349	P	Pb	01 24 38.7	-0.3
ATHAL				S	Sn	01 24 51.9	-0.4
ATHAL				AML	AML	01 24 59.5	
	0.3nm,0.5s						
ATHAL				AML	AML	01 24 59.7	
	0.4nm,1.0s						
TROD	Troodos	0.85	316	P	Pb	01 24 39.8	+0.1
TROD				S	Sb	01 24 51.9	+0.7
TROD				AML	AML	01 24 58.7	
	0.1nm,0.3s						
TROD				AML	AML	01 24 59.8	
	0.1nm,0.3s						
LFK	Lefkose	0.94	357	Pg	Pn	01 24 41.2	-0.8
NATA	Nata	0.95	298	⇓eP	Pn	01 24 42.0	0.0
NATA				S	Sn	01 24 56.5	+0.9
NATA				AML	AML	01 25 02.7	
	0.3nm,0.3s						
NATA				AML	AML	01 25 05.2	
	0.3nm,0.6s						
ALFC	Alefka	1.16	315	⇓iP	Pn	01 24 45.1	+0.2
ALFC				S	Sn	01 25 01.3	+0.6
ALFC				AML	AML	01 25 02.8	
	0.3nm,0.3s						
ALFC				AML	AML	01 25 03.3	
	0.3nm,0.3s						
AKMS	Akamas	1.24	304	⇑iP	Pg	01 24 46.2	-0.3
AKMS				S	Sn	01 25 03.8	+1.1
AKMS				AML	AML	01 25 06.2	
	0.3nm,0.2s						
AKMS				AML	AML	01 25 08.9	
	0.2nm,0.5s						
HNTI	Hanita	1.82	133	P	Pn	01 24 54.5	+0.6
HNTI				S	Sn	01 25 16.2	-0.8
TEKE	Tekeli-Mersin	1.84	348	Pn	Pn	01 24 53.8	-0.5
TEKE				Sn	Sn	01 25 17.2	-0.4
IKL	Isikli	1.90	2	Pn	Pn	01 24 54.9	-0.2
MMA0B	Mount Meron ar	2.00	131	P	Pn	01 24 55.9	-0.6
MMA0B				S	Sn	01 25 21.4	-0.3
GEM	Giv'at Ha'Em	2.06	122	P	Pn	01 24 57.9	+0.6
GEM				S	Sn	01 25 22.4	-0.5
OFRI	`Ofer	2.07	145	P	Pn	01 24 57.2	-0.3
OFRI				S	Sn	01 25 22.8	-0.4
NATI	Neve Ativ	2.08	120	P	Pn	01 24 57.7	+0.2
NATI				S	Sn	01 25 22.8	-0.7
TEVE	Tevekalti-Mers	2.10	357	Pn	Pn	01 24 57.6	-0.3
KEBE	Keben-Mersin	2.11	3	Pn	Pn	01 24 57.9	-0.1
KEBE				Sn	Sn	01 25 24.3	0.0
GAZI	Gazipasa	2.16	332	Pn	Pn	01 24 58.0	-0.7
KIZK	Mersin	2.19	12	Pn	Pn	01 24 59.2	+0.2
KSHT	Keshet	2.29	125	P	Pn	01 25 01.3	+0.8
KSHT				S	Sn	01 25 28.2	-0.5
MMLI	Mount Malkishu	2.44	141	P	Pn	01 25 03.2	+0.8
MMLI				S	Sn	01 25 32.0	-0.3
SALP	Salfit	2.63	149	P	Pn	01 25 05.8	+0.7

SALP				S	Sn	01 25 36.4	-0.7
HMDT	Nahal Hemdat	2.63	142	P	Pn	01 25 05.7	+0.6
HMDT				S	Sn	01 25 37.2	+0.1
HDMB	Hadim	2.77	341	Pn	Pn	01 25 07.0	-0.3
UJAP	Al Uja	2.85	146	P	Pn	01 25 07.7	-0.4
UJAP				S	Sn	01 25 42.6	+0.3
AMAZ	Amatzia	3.01	158	P	Pn	01 25 10.8	+0.4
AMAZ				S	Sn	01 25 46.0	-0.5
DSI	Dead Sea	3.14	151	P	Pn	01 25 12.3	+0.2
DSI				S	Sn	01 25 48.9	-0.8
GHAJ	Ghor Haditha	3.45	151	P	Pn	01 25 17.0	+0.6
GHAJ				S	Sn	01 25 57.2	0.0
KZIT	Kziot	3.49	169	P	Pn	01 25 16.9	0.0
KZIT				S	Sn	01 25 57.4	-0.7
PRNI	Paran	4.15	163	P	Pn	01 25 26.0	0.0
PRNI				S	Sn	01 26 13.5	-1.1
KRMI	Paran Flat	4.32	167	P	Pn	01 25 28.6	+0.3
KRMI				S	Sn	01 26 17.3	-1.4
HRFI	Mount Harif	4.46	164	P	Pn	01 25 30.5	+0.2
HRFI				S	Sn	01 26 21.6	-0.6

MEX 07 01:32:55.3±0.9, 14°.19N×93°.34W, h16km±101km, MD4.2
CATAC 07 01:32:56.8±1.0, 14°N±6°×9°3W±°, h23km±10km, M3.9/9, MLv3.9/9, Error ellipse: s-maj=14.8km s-min=5.1km az=25.5, confirmed
GCG 07 01:32:58.2±1.5, 14°.35N×93°.09W, h36km±783km, MD4.1, ML4.0, MW3.6, Presumed earthquake
ISC 07 01:32:51.6±1.5, 14°.26N±0°.05×93°.27W±0°.03, h16km±10km, n46, σ2s.01/78, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.17	56	eP	Pg	01 33 14.6	+0.5
THIG				eS	Sn	01 33 28.3	-0.6
THIG		1.17	56	iP	Pg	01 33 14.5	+0.4
THIG				iS	Sn	01 33 28.2	-0.6
THIG				IAML		01 33 32.2	
	comp=E,3µm,0.4s						
SMCA	Catarina	1.30	63	iP	Pg	01 33 17.0	+0.3
PATR	El Naranjo	1.31	50	eP	Pb	01 33 16.2	+0.1
PATR				eS	Sg	01 33 32.5	-1.7
CHUJ	Union Juarez	1.40	53	eP	Pb	01 33 17.8	+0.3
CHUJ				eS	Sg	01 33 35.7	-1.1
PAVE	Pavencul	1.41	49	eP	Pb	01 33 17.7	+0.1
PAVE				eS	Sg	01 33 35.8	-1.4
PCIG		1.44	2	eP	Pn	01 33 17.3	+0.3
PCIG				eS	Sn	01 33 32.3	-3.3
RTAL	Retalhuleu	1.55	80	eP	Pn	01 33 20.0	+1.5
RTAL				eS	Sn	01 33 38.8	+0.4
RTAL	Retalhuleu	1.55	80	P	Pb	01 33 20.4	+0.5
RTAL				S	Sg	01 33 41.9	+0.3
QUEO	Labor Ovalle	1.80	70	iP	Pb	01 33 24.6	+0.2
QUEO				iS	Sn	01 33 45.2	+0.2
QUEO				IAML		01 33 48.3	
	comp=N,2µm,0.6s						
STG2	El Palmar, Qui	1.84	84	iP	Pn	01 33 22.1	-0.6
STG2				IAML		01 33 45.7	
	comp=N,3µm,0.2s						
STG5	El Palmar, Qui	1.87	85	iP	Pn	01 33 22.7	-0.3
SOKI	Kika Raxquin	1.89	73	iP	Pb	01 33 26.9	+0.9
HUEH	Huehuetenango	2.01	58	eP	Pb	01 33 28.4	+0.6
HUEH				eS	Sb	01 33 51.2	-1.5
HUEH	Huehuetenango	2.01	58	P	Pb	01 33 28.7	+0.8
HUEH	Huehuetenango	2.01	58	iP	Pb	01 33 28.7	+0.8
HUEH				IAML		01 34 07.5	
	comp=N,1µm,0.5s						
CARR	Arriaga	2.07	343	eP	Pn	01 33 27.3	+1.6
CARR				eS	Sn	01 33 51.1	-0.1
CCIG	Comitan	2.29	28	eP	Pb	01 33 32.6	0.0
CCIG				eS	Sb	01 33 58.9	-1.9
CCIG	Comitan	2.29	28	P	Pb	01 33 33.0	+0.3
CCIG	Comitan	2.29	28	iP	Pb	01 33 32.8	+0.1
CCIG				IAML		01 34 09.7	
	comp=N,460nm,0.3s						
TGIG		2.51	3	eP	Pb	01 33 34.8	-1.5
TGIG				eS	Sn	01 34 03.1	+1.0
TGIG		2.51	3	iP	Pb	01 33 34.9	-1.5
FG8	Yepocapa, Chim	2.62	90	iP	Pn	01 33 31.5	-2.0
APG	El Apazote	2.81	74	iP	Pb	01 33 39.9	-1.8
HUIG	Huatulco	3.13	299	eP	Pn	01 33 42.8	+2.5
HUIG				eS	Sn	01 34 13.0	-4.4
UXUV	UXUV	3.15	345	eP	Pn	01 33 44.0	+3.3
UXUV				eS	Sn	01 34 19.0	+1.0
FAME	Alcaldia de Sa	3.19	97	P	Pn	01 33 44.6	+3.5
CMIG	Matias Romero	3.21	331	eP	Pn	01 33 44.0	+2.5
CMIG				eS	Sn	01 34 18.3	-1.2
NUBE	Las Nubes	3.40	96	P	Pn	01 33 47.7	+3.5
NUBE	Las Nubes	3.40	96	iP	Pn	01 33 47.4	+3.2
PEIG	Puerto Escondi	4.12	295	eP	Pn	01 33 55.1	+1.1
PEIG				eS	Sn	01 34 39.1	-2.9
NEUV	Arroyo Zacate	4.21	325	eP	Pn	01 33 56.9	+1.8
NEUV				eS	Sn	01 34 42.5	-1.5
VHO	Vista Hermosa	4.35	310	eP	Pn	01 33 59.2	+1.8
VHO				eS	Sn	01 34 47.4	-0.5
YOIG	Yosondua	4.86	303	eP	Pn	01 34 08.1	+3.7
YOIG				eS	Sn	01 34 59.1	-1.4
SCIG	Sabancuy	5.09	23	eP	Pn	01 34 09.6	+2.3
SCIG				eS	Sn	01 35 06.1	+0.4
PNIG	Pinotepa	5.14	295	eP	Pn	01 34 11.3	+3.2
PNIG				eS	Sn	01 35 04.1	-3.0
TXIG	Tlaxiaco	5.25	305	eP	Pn	01 34 11.1	+1.3
TXIG				eS	Sn	01 35 11.4	+1.2
TOIG	Toxpalan	5.28	317	eP	Pn	01 34 14.6	+4.7
TOIG				eS	Sn	01 35 14.0	+3.5
HLIG	Huajuapan de L	5.62	310	eP	Pn	01 34 17.0	+2.2
HLIG				eS	Sn	01 35 19.4	+0.2
TPIG	Tehuac#an	5.70	317	eP	Pn	01 34 16.1	+0.2
TPIG				eS	Sn	01 35 22.2	+1.0
FTIG	Fresnillo de T	5.92	308	eP	Pn	01 34 21.2	+2.4
FTIG				eS	Sn	01 35 20.9	-5.4
TLIG	Tlapa	6.06	303	eP	Pn	01 34 24.3	+3.6
TLIG				eS	Sn	01 35 28.9	-1.1
JAUV	Jalcomulco	6.10	327	eP	Pn	01 34 22.8	+1.6
JAUV				eS	Sn	01 35 30.0	-0.8
CRIG	Cruz Grande	6.16	294	eP	Pn	01 34 24.6	+2.5
CRIG				eS	Sn	01 35 29.8	-2.4
PPM	Popocatepetl	7.01	314	eP	Pn	01 34 35.1	+0.9
PPM				eS	Sn	01 35 54.0	+0.1
CXUV	Coxquihui	7.18	326	eP	Pn	01 34 38.5	+2.4
CXUV				eS	Sn	01 35 57.0	-0.4

AFAD 07 01:33:29.9, 36°.94N×27°.35E, h7km±2km, ML2.3
ATH 07 01:33:30.6, 36°.92N×27°.37E, h20km±7km, ML2.4/3, Latitude uncertainty: 1 km; Longitude uncertainty: 3 km
THE 07 01:33:30.5, 37°N±8°×2°7E±1°1, h16km±15km, MLh2.5/3
ISK 07 01:33:30.0, 36°.94N×27°.41E, h4km, ML2.4/17
ISC 07 01:33:30.1±0.8, 36°.94N±0°.02×27°.40E±0°.03, h15km±5km, n40, σ0s.55/56, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BODA	Bodrum-Mula	0.10	14	Pg	Pg	01 33 32.4	-0.8
BODA				Sg	Sg	01 33 34.3	-1.0
BODT	Bodrum	0.14	329	P	Pg	01 33 34.6	+0.7
BODT				S	Sg	01 33 36.6	+0.3
BODT	Bodrum	0.14	329	Pg	Pg	01 33 34.4	+0.6
YKAV	Yalikavak-Bodr	0.21	332	Pg	Pg	01 33 34.5	-0.3
DAT	Datca	0.26	146	Pg	Pg	01 33 35.8	+0.2
DAT				Sg	Sg	01 33 39.9	+0.5
YAZI	Mula-Dat§a-	0.26	171	P	Pg	01 33 35.8	+0.1
YAZI				S	Sg	01 33 40.4	+0.9
YAZI				IAML		01 33 42.0	
	comp=E,374nm,0.4s						
DATC	Datca-Mugla	0.28	131	Pg	Pg	01 33 36.2	+0.3
DATC				Sg	Sg	01 33 40.8	+0.9
MLSB	Milas	0.46	40	Pg	Pg	01 33 39.7	+0.4
MLSB				Sg	Sb	01 33 46.9	+0.2
DDIM	Aydin, Didim	0.53	346	P	Pg	01 33 40.6	0.0
DDIM				IAML		01 33 50.0	
	comp=E,268nm,0.4s						
DDIM				IAML		01 33 51.0	
	comp=N,155nm,0.4s						
TURN	Turunc	0.70	103	Pg	Pg	01 33 43.3	-0.3
TURN				Sg	Sb	01 33 54.2	+0.8
TURN	Turunc	0.70	103	P	Pg	01 33 43.3	-0.3
TURN				S	Sn	01 33 55.0	-1.0
TURN				IAML		01 33 55.0	
	comp=N,218nm,0.6s						
TURN				IAML		01 33 55.0	
	comp=E,184nm,0.3s						
YER	Yerkesik	0.73	74	P	Pg	01 33 44.4	0.0
YER				S	Sg	01 33 54.0	0.0
YER	Yerkesik	0.73	74	Pg	Pg	01 33 44.8	+0.5
GCAM	G?zelcaml?	0.77	350	Pg	Pb	01 33 45.5	+0.3
AYDN	Tasoluk	0.81	28	P	Pb	01 33 45.4	-0.6
AYDN				S	Sb	01 33 56.1	-0.7
AYDN				IAML		01 33 59.0	
	comp=E,91nm,0.2s						
AYDN				IAML		01 34 00.0	
	comp=N,127nm,0.4s						
SMG	Samos	0.89	330	P	Pb	01 33 47.0	-0.3
SMG				S	Sg	01 34 00.1	+1.1
SMG	Samos	0.89	330	P	Pb	01 33 47.5	+0.3
SMG				S	Sb	01 33 58.8	-0.2
ARG	Arkhangelos	0.93	141	P	Pb	01 33 47.8	-0.1
ARG				S	Sb	01 34 00.1	0.0
ARG	Arkhangelos	0.93	141	Pg	Pg	01 33 48.5	+0.4
ARG	Arkhangelos	0.93	141	P	Pb	01 33 48.0	+0.1
ARG				S	Sb	01 34 00.4	+0.3
DALY	Dalyan (Mula)	1.01	97	Pg	Pb	01 33 49.7	+0.4
KRL1	Karlovasi Samo	1.02	327	P	Pb	01 33 48.7	-0.7
KRL1				S	Sb	01 34 02.9	+0.4
AYDB	Zeytinkoy-Aydi	1.08	21	Pg	Pg	01 33 51.3	+0.4
NAZL	Nazilli-Aydin	1.24	35	Pn	Pg	01 33 54.4	+0.4
KARP	Karpathos	1.40	188	P	Pn	01 33 54.7	-0.5
KARP	Karpathos	1.40	188	Pn	Pg	01 33 57.1	0.0
KARP	Karpathos	1.40	188	P	Pn	01 33 54.7	-0.5
KARP				S	Sn	01 34 12.4	-1.1
CAME	Cameli-Denizli	1.52	89	Pn	Pb	01 33 58.8	+0.7
APMY	Acipayam-Deniz	1.61	70	Pn	Pb	01 33 59.9	+0.4
THERA	Ancient Thera,	1.65	250	P	Pn	01 33 58.3	-0.3
KULA	Kula-Manisa	1.86	32	Pn	Pb	01 34 03.6	-0.3
EAG2	Marmaro, Chios	1.90	328	P	Pn	01 34 02.1	+0.2
ELL	Elmali	2.02	95	Pn	Pb	01 34 05.8	-0.8
GORD	Gordes-Manisa	2.06	17	Pn	Pb	01 34 06.6	-0.6
PRK	Paraskevi	2.47	339	P	Pn	01 34 09.7	0.0
SIGR	SIGRI	2.57	332	P	Pn	01 34 11.5	+0.2
DION	Dionisos Attik	2.98	293	P	Pn	01 34 17.2	+0.3
LIA	Limnos Island	3.43	330	P	Pn	01 34 23.6	+0.6
NEO	Neokhori	4.05	307	P	Pn	01 34 31.7	+0.1
RDO	Rodhopi	4.44	342	P	Pn	01 34 37.7	+0.8

MAN 07 01:52:18.0, 18°.01N×122°.39E, h9km, MS3.6
IDC 07 01:52:30.7±5.0, 17°.92N×122°.56E, h136km±53km, mb3.2/7, mbtmp3.7/8, MS2.6/2, Error ellipse: s-maj=38.4km s-min=15.2km az=65.0
ISC 07 01:52:31.9±1.0, 17°.9N±0°.1×122°.6E±0°.2, h150km, n15, σ0s.65/8, mb3.5/7, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOW	Kunigami	10.30	30	P	Pn	01 54 55.8	0.0
	9.8nm,0.7s,baz=228,slow=14,SNR=2.0						
CMAR	Chiang Mai Arr	22.47	275	P	P	01 57 18.7	-0.2
	1.0nm,0.3s,baz=87,slow=10,SNR=4.5						
CMAR				LR	LR	02 05 47.9	
	comp=Z,9.1nm,18.6s,baz=170,slow=36						
	1.0nm,0.3s						
SONM	Songino Array	32.64	340	P	P	01 58 48.9	-0.7
	0.2nm,0.4s,baz=161,slow=9.4,SNR=2.3						
	0.2nm,0.4s						
TLY	Talaya	36.86	340	LR	LR	02 16 48.8	
	comp=Z,14nm,19.6s,baz=80,slow=40						
WRA	Warramunga Arr	39.37	162	P	P	01 59 46.3	-0.6
	0.7nm,0.6s,baz=342,slow=9.2,SNR=7.8						
	0.7nm,0.6s						
H11S3	WAKE ISLAND Hy	41.81	82	T	T	02 45 12.0	
	baz=276,slow=75						
H11S1	WAKE ISLAND Hy	41.82	82	T	T	02 45 12.0	
	baz=276,slow=75						
H11S2	WAKE ISLAND Hy	41.83	82	T	T	02 45 12.0	
	baz=276,slow=75						
H11N1	WAKE ISLAND Hy	41.88	80	T	T	02 45 14.5	
	baz=275,slow=75						
H11N2	WAKE ISLAND Hy	41.88	80	T	T	02 45 14.8	
	baz=275,slow=75						
H11N3	WAKE ISLAND Hy	41.90	80	T	T	02 45 15.8	
	baz=275,slow=75						
ASAR	Alice Springs	42.80	165	P	P	02 00 15.3	+0.4
	0.8nm,0.6s,baz=348,slow=6.9,SNR=17						
	0.8nm,0.6s						
MKAR	Makanchi Array	43.84	320	P	P	02 00 23.5	+0.3
	0.2nm,0.4s,baz=113,slow=9.0,SNR=6.3						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	47.80	323	P	P	02 00 53.8	-0.3
	0.3nm,0.5s,baz=115,slow=8.3,SNR=5.9						
	0.3nm,0.5s						
NOA	NORSAR Array B	84.35	333	P	P	02 04 48.0	+1.0
	0.6nm,0.8s,baz=54,slow=11,SNR=3.4						
	0.6nm,0.8s						

DJA 07 01:59:46.4±0.4, 0°N±3°×12°1E±°, h87km±6km, M3.9/24, mb4.0/5, MLv3.8/24, MwMwp5.1/1, Mwp5.3/1, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPSI	Mapaga	0.87	269	P	Pn	02 00 05.5	+1.1
MRSI	Marisa	1.18	84	P	Pn	02 00 07.8	-0.2
MRSI				S	Sn	02 00 24.8	+0.6
APSI	Ampana	1.53	145	P	Pn	02 00 12.3	-0.1
PCI	Palu	1.56	217	P	Pn	02 00 13.0	+0.2
GTOI	Gorontalo	2.26	83	P	Pn	02 00 21.1	-0.8
GTOI				S	Sn	02 00 46.5	-2.6
LUWI	Luwuk	2.43	125	P	Pn	02 00 24.7	+0.4
TTSI	Tana Toraja	3.50	196	P	Pn	02 00 38.6	-0.1
MMSI	Mamuju	3.55	212	P	Pn	02 00 38.8	-0.5
SPSI	Sidrap Palu	4.40	193	P	Pn	02 00 50.6	-0.3
SANI	Sanana	5.74	115	P	Pn	02 01 09.5	+0.4
	0.1nm12nm,0.6s						
NLAI	Namlea	7.26	119	P	Pn	02 01 30.7	+0.8

SNET 07 02:03:46.1±0.6, 13°.60N×90°.86W, h29km±3km, ML2.6, Presumed earthquake
CATAC 07 02:03:46.2±1.2, 14°N±8°×9°1W±°, h17km±8km, M3.4/7, MLv3.4/7, Error ellipse: s-maj=18.4km s-min=5.1km az=24.8, confirmed
GCG 07 02:03:46.5±1.6, 13°.64N×90°.90W, h58km±19km, MD3.7, ML3.7, MW3.1, Presumed earthquake
ISC 07 02:03:48.5±2.1, 13°.6N±0°.1×90°.74W±0°.06, h61km±15km, n26, σ1s.67/33, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESSJ	San Jos, E	0.23	97	iP	Pn	02 03 57.4	-0.9
FG8	Yepocapa, Chim	0.69	15	iP	Pn	02 04 02.4	-0.5
FG16	Alotenango, Sa	0.71	18	iP	Pn	02 04 02.6	-0.6
FAME	Alcaldia de Sa	0.75	70	P	Pn	02 04 02.0	-1.5
FAME				S	Sn	02 04 13.7	-0.7
ESSG	Sabana Grande	0.79	354	iP	Pn	02 04 01.2	-2.9
NUBE	Las Nubes	0.98	71	P	Pn	02 04 05.3	-1.2
NUBE	Las Nubes	0.98	71	iP	Pn	02 04 05.4	-1.2
NUBE	Las Nubes	0.98	71	eP	Pn	02 04 05.4	-1.2
NUBE				eS	Sn	02 04 20.1	+0.3
NUBE				IAML		02 04 21.6	
	comp=Z,143nm,0.2s						
STG5	El Palmar, Qui	1.00	324	iP	Pn	02 04 08.0	+1.2
STG5				iS	Sn	02 04 23.5	+3.3
SLOZ	Alcaldia de Sa	1.02	65	P	Pn	02 04 06.4	-0.6
SLOZ	Alcaldia de Sa	1.02	65	eP	Pn	02 04 06.5	-0.5
STG2	El Palmar, Qui	1.04	324	iP	Pn	02 04 09.4	+2.0
STG2				iS	Sn	02 04 25.3	+4.0
STG2				IAML		02 04 29.2	
	comp=N,2µm,0.2s						
SBLS	San Blas	1.11	77	eP	Pn	02 04 07.6	-0.7
UNIC	Universidad Ca	1.22	71	P	Pn	02 04 09.2	-0.4
JAYA	Jayaque - finc	1.26	87	P	Pn	02 04 09.5	-0.6
JAYA	Jayaque - finc	1.26	87	iP	Pn	02 04 09.5	-0.6
JAYA				IAML		02 04 31.2	
	comp=N,2µm,0.2s						
JAYA	Jayaque - finc	1.26	87	eP	Pn	02 04 09.2	-1.0
JAYA				eS	Sn	02 04 27.5	+1.2
SOKI	Kika Raxquin	1.38	332	iP	Pn	02 04 09.7	-2.4
SOKI				iS	Sn	02 04 27.1	-2.6
PMON	Piamonte	1.39	85	P	Pn	02 04 11.5	-0.3
PMON	Piamonte	1.39	85	eP	Pn	02 04 11.6	-0.3
PMON				eS	Sn	02 04 31.3	+1.9
APG	El Apazote	1.43	11	iP	Pn	02 04 12.2	-0.3
MTO3	Montecristo	1.56	59	P	Pn	02 04 14.0	-0.3
MTO3	Montecristo	1.56	59	eP	Pn	02 04 13.8	-0.5
ESQI	Esquipulas	1.66	54	eP	Pn	02 04 15.1	-0.5
SMCA	Catarina	1.81	314	iP	Pn	02 04 14.1	-3.3
SARH	Santa Rosa de	2.25	58	iP	Pn	02 04 24.0	+0.4

IDC 07 02:15:15.1±1.6, 0°.40N×121°.95E, h0km, mb3.3/3, mbtmp3.4/3, Error ellipse: s-maj=224.6km s-min=25.4km az=61.0
DJA 07 02:15:38.7±0.5, 0°N±3°×12°2E±°, h168km±5km, M3.6/14, mB4.8/1, mb3.9/2, MLv3.4/14, Mw(mB)4.1/1
ISC 07 02:15:35.9±1.1, 0°.3N±0°.1×122°.05E±0°.09, h191km±8km, n8, σ0s.86/11, mb3.2/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	0.18	322	P	Pn	02 16 01.6	+0.5
MRSI				S	Sn	02 16 20.0	-0.6
GTOI	Gorontalo	1.00	72	P	Pn	02 16 05.2	+0.5
APSI	Ampana	1.30	198	P	Pn	02 16 07.5	+0.4
LUWI	Luwuk	1.54	152	P	Pn	02 16 10.5	+1.3
LUWI				S	Sn	02 16 34.4	-0.7
MPSI	Mapaga	2.15	270	P	Pn	02 16 16.2	+0.8
MPSI				S	Sn	02 16 45.4	-0.7
WRA	Warramunga Arr	23.47	150	P	P	02 20 27.8	-0.7
	0.3nm,0.5s,baz=326,slow=10,SNR=4.9						
	0.3nm,0.5s						
ASAR	Alice Springs	26.49	155	P	P	02 20 55.1	-0.6
	0.3nm,0.5s,baz=344,slow=13,SNR=8.0						
	0.3nm,0.5s						
MKAR	Makanchi Array	57.84	329	P	P	02 25 07.8	+0.2
	0.3nm,0.5s,baz=127,slow=8.4,SNR=6.6						
	0.3nm,0.5s						

NEIC 07 02:15:47.1±0.7, 8°.60N±0°.08×82°.38W±0°.04, h22km±15km, ML3.9/14, Error ellipse: s-maj=12.8km s-min=2.2km az=153.0
UCR 07 02:15:49.3±0.6, 8°.64N×82°.47W, h24km±2km, MW4.0, Fault plane solution: NP1:φs109.57000°, δ33.23000°, λ61.81000°., Presumed earthquake
CATAC 07 02:15:50.0±0.3, 9°N±3°×8°3W±°, h19km±2km, M3.8/8, MLv3.8/8, Error ellipse: s-maj=6.5km s-min=4.1km az=7.0, confirmed
UPA 07 02:15:50.0±1.8, 8°.65N×82°.48W, h13km±2km, ML4.1, MW4.2, Presumed earthquake
RSNC 07 02:15:52.2±1.6, 9°N±7°×8°2W±°, h22km±18km, M3.1, mb3.9, ML3.1, MLv4.0
ISC 07 02:15:49.0±0.8, 8°.68N±0°.02×82°.48W±0°.02, h28km±3km, n102, σ1s.29/152, 12C-22D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTAR3	Potrerillos Ar	0.02	314	⇑eP	Pb	02 15 53.6	-0.2
PTAR3				eS	Sb	02 15 56.1	-1.1
JEFFS	S de V. Baru	0.05	257	iP	Pb	02 15 53.7	-0.1
JEFFS	S de V. Baru	0.05	257	⇑eP	Pb	02 15 53.8	-0.1
BQSF3	Alto Boquete,	0.08	39	eP	Pb	02 15 53.8	-0.3
BQSF3				eS	Sb	02 15 55.9	-1.6
BQTLY	Boquete Panama	0.08	16	iP	Pb	02 15 53.8	-0.3
BQTLY				eS	Sb	02 15 57.0	-0.7
BQTLY	Boquete Panama	0.08	16	⇑eP	Pb	02 15 53.8	-0.3
LNBQ3	Los Naranjos,	0.12	21	eP	Pb	02 15 54.1	-0.3
LNBQ3				eS	Sb	02 15 57.3	-0.8
PSOM3	Paja de Sombre	0.16	89	eP	Pb	02 15 54.2	-0.4
PSOM3				eS	Sb	02 15 57.3	-1.2
BAGA3	Bagala, Chiriq	0.22	191	⇑eP	Pb	02 15 55.1	-0.1
BAGA3				eS	Sb	02 15 58.6	-0.8
BGUAL	Bijagual, Pana	0.23	139	iP	Pb	02 15 54.9	-0.4
BRU2	Volcan	0.23	299	Pg	Pb	02 15 55.6	+0.1
BRU2				Sg	Sb	02 16 00.4	+0.4
BRU2				IAML		02 16 02.3	
	comp=N,13µm,0.2s						
BRU2	Volcan	0.23	299	P	Pb	02 15 55.8	+0.2
BRU2				S	Sb	02 16 00.9	+0.9
BRU2	Volcan	0.23	299	⇑iP	Pb	02 15 55.7	+0.2
BRU2				iS	Sb	02 16 00.6	+0.5
BRU2				IAML		02 16 00.7	
	comp=E,31µm,0.4s						
BRU2	Volcan	0.23	299	⇑eP	Pb	02 15 55.7	+0.2
BRU2				eS	Sb	02 16 00.5	+0.4
DVD	David	0.25	172	⇑eP	Pb	02 15 55.2	-0.3
DVD				eS	Sb	02 15 59.6	-0.4
LOMA3	Las Lomas, Chi	0.27	160	⇑eP	Pb	02 15 55.5	-0.3
LOMA3				eS	Sb	02 15 59.6	-0.8
LOCO3	Loma Colorada,	0.28	166	⇑eP	Pb	02 15 55.8	-0.2
LOCO3				eS	Sb	02 16 00.0	-0.7
SCLRA	Santa Clara, W	0.33	297	iP	Pb	02 15 57.3	+0.5
SCLRA				eS	Sb	02 16 02.7	+0.5
SCLRA	Santa Clara, W	0.33	297	⇓eP	Pb	02 15 57.3	+0.5
MLIR3	Monte Lirio, C	0.35	288	⇓eP	Pn	02 15 58.0	-0.3
MLIR3				eS	Sn	02 16 05.0	+0.5
PBNVO	Pueblo Nuevo,	0.36	54	iP	Pb	02 15 56.7	-0.3
PBNVO	Pueblo Nuevo,	0.36	54	⇓eP	Pb	02 15 56.8	-0.3
LPPC	Paso Canoas	0.38	247	⇓eP	Pb	02 15 57.5	+0.1
LPPC				eS	Sb	02 16 03.9	+0.7
RBALA	Bur	0.38	59	iP	Pb	02 15 57.5	0.0
RBALA	Bur	0.38	59	⇓eP	Pb	02 15 57.4	0.0
RSRNO	Rio Sereno	0.40	290	iP	Pn	02 15 58.5	-0.4
RSRNO	Rio Sereno	0.40	290	⇓eP	Pn	02 15 58.6	-0.4
CDITO	Canoas	0.40	254	P	Pb	02 15 58.0	+0.3
CDITO				S	Sn	02 16 04.9	-0.5
LESP3	La Esperanza,	0.41	228	⇓eP	Pb	02 15 57.7	-0.1
LESP3				eS	Sb	02 16 04.2	+0.3
CHGR2	Aguacate	0.42	53	⇓eP	Pb	02 15 57.9	-0.2
CHGR2				eS	Sb	02 16 04.4	+0.1
ALCO	Alturas Coton,	0.44	308	⇓eP	Pb	02 15 58.6	+0.1
ALCO				eS	Sb	02 16 05.2	+0.3
VITO	San Vito	0.50	286	eP	Pn	02 16 00.2	-0.1
PTPA	Petro Terminal	0.61	219	⇓eP	Pb	02 16 00.9	-0.3
PTPM	Petroterminale	0.61	220	⇓eP	Pb	02 16 00.9	-0.3
PTPM				eS	Sn	02 16 11.1	+0.3
EDAD	Golfito	0.68	268	⇓eP	Pb	02 16 01.5	-0.7
LMNES	Limones	0.69	213	iP	Pb	02 16 02.0	-0.4
LMNES	Limones	0.69	213	⇓eP	Pb	02 16 02.1	-0.4
KKNTU	Kakintº	0.69	77	iP	Pb	02 16 01.6	-0.8
KKNTU				eS	Sb	02 16 10.7	-0.9
KKNTU	Kakintº	0.69	77	⇓eP	Pb	02 16 01.6	-0.8
LIMO3	Limones	0.69	213	⇓eP	Pb	02 16 02.1	-0.3
LIMO3				eS	Sn	02 16 13.4	+0.9
CNI2	El Empalme, Bo	0.74	1	eP	Pn	02 16 04.0	+0.4
CNI2				eS	Sb	02 16 08.8	-4.2
EDP2	Potrero Grande	0.76	296	⇓eP	Pn	02 16 04.3	+0.4
RMDIO	Remedios, Chir	0.79	125	iP	Pb	02 16 03.9	-0.2
PTJ1	Puerto Jimnez	0.82	260	P	Pn	02 16 04.0	-0.7
PTJ1				S	Sn	02 16 16.4	+0.6
PTJ1	Puerto Jimnez	0.82	260	⇓eP	Pn	02 16 04.3	-0.3
PTJ1	Puerto Jimnez	0.82	260	⇓eP	Pn	02 16 04.3	-0.3
ISECA	Islas Secas	0.83	147	eP	Pn	02 16 03.8	-0.9
PDCAN	Manzana , Fuen	0.87	116	eP	Pn	02 16 04.6	-0.8
PIRO	Carate, Puerto	0.89	252		Pn	02 16 04.8	-0.7
PIRO				IAML		02 16 08.2	
	comp=N,5µm,0.3s						
PIRO				Sg	Sb	02 16 16.9	-0.4
PIRO				IAML		02 16 25.7	
	comp=E,3µm,0.3s						
PIRO	Carate, Puerto	0.89	252	P	Pn	02 16 05.2	-0.4
PIRO				S	Sn	02 16 18.4	+0.9
PIRO	Carate, Puerto	0.89	252	eP	Pn	02 16 05.1	-0.4
PIRO	Carate, Puerto	0.89	252	⇓eP	Pn	02 16 05.0	-0.5
RGM0	Gandoca	0.91	352		Pn	02 16 05.5	-0.4
RGM0				Sg	Sn	02 16 21.4	+3.3
RGM0				IAML		02 16 23.3	
	comp=N,4µm,0.5s						
RGM0				IAML		02 16 26.2	
	comp=E,6µm,0.6s						
FIMO	Fila Mora	0.91	290	⇓eP	Pb	02 16 06.6	+0.3
DRK0	Durika	0.95	308	P	Pn	02 16 04.9	-1.7
DRK0				S	Sn	02 16 18.0	-1.3
DRK0	Durika	0.95	308	iP	Pn	02 16 04.7	-1.8
DRK0				eS	Sn	02 16 17.8	-1.5
DRK0	Durika	0.95	308	eP	Pn	02 16 04.5	-2.1
BURE	Buenos Aires	0.97	300	⇑eP	Pb	02 16 07.7	+0.4
PANP	Palmar Norte	1.00	286	eP	Pn	02 16 07.2	0.0
EDPE	Pejibaye, P	1.18	294	eP	Pb	02 16 10.3	-0.4
SAJE	San Jernim	1.21	303	⇑eP	Pn	02 16 10.7	+0.6
LAES	El Progreso Va	1.21	333	eP	Pb	02 16 11.8	+0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
OCHAL	Ojochal	1.22	290	P	Pn	02 16 10.7	+0.5
OCHAL				S	Sn	02 16 26.2	+0.4
MESA3	La Mesa, Verag	1.39	112	eP	Pn	02 16 13.0	+0.5
MESA3				eS	Sb	02 16 31.6	-0.1
SAFE3	Santa Fe, Vera	1.40	97	eP	Pn	02 16 13.4	+0.8
SAFE3				eS	Sb	02 16 31.5	-0.5
VERH	Veragua Rainfo	1.42	331	eP	Pb	02 16 14.5	-0.3
RSUS3	Rio de Jesus,	1.48	118	eP	Pn	02 16 14.4	+0.7
RSUS3				eS	Sb	02 16 33.7	-0.6
BUS1	Rivas	1.52	305	⇑eP	Pb	02 16 15.9	-0.9
GMAL	Guarumal, Vera	1.54	126	eP	Pn	02 16 14.7	+0.2
STIA3	Santiago, Vera	1.60	111	eP	Pb	02 16 17.1	-0.8
STIA3				eS	Sb	02 16 37.5	-0.3
CALO3	Calobre, Verag	1.66	102	eP	Pb	02 16 18.0	-1.0
CALO3				eS	Sb	02 16 39.8	+0.2
LCOCO	El Coco	1.75	323	eP	Pb	02 16 20.2	-0.3
RESJ	San Isidro (Tu	1.76	320	eP	Pb	02 16 20.7	0.0
ABRB	Las Abras (San	1.79	317	eP	Pb	02 16 21.3	0.0
MARI3	Mariato, Verag	1.80	125	eP	Pb	02 16 22.9	+1.7
RAFA	San Farael, Vo	1.82	314	Pn	Pn	02 16 19.7	+0.9
CRIS3	El Cristo, Coc	1.90	103	eP	Pb	02 16 21.8	-1.1
CRIS3				eS	Sb	02 16 46.4	+0.2
CVTG	V. Turrialba,	1.93	319	⇓eP	Pb	02 16 23.2	-0.5
HDC	Heredia	2.08	309	Pn	Pn	02 16 22.1	+0.1
HDC				IAML		02 16 56.5	
	comp=E,542nm,0.4s						
HDC				IAML		02 16 56.9	
	comp=N,719nm,0.7s						
HDC	Heredia	2.08	309	eP	Pb	02 16 26.4	+0.3
HDC				eS	Sb	02 16 52.5	+1.0
CACAO	El Cacao, Vera	2.08	129	eP	Pb	02 16 24.5	-1.6
PNME	Penonome	2.14	95	eP	Pn	02 16 18.6	-4.2
CHIT3	Chitre	2.17	109	eP	Pb	02 16 25.8	-1.8
CHIT3				eS	Sb	02 16 53.6	-0.4
TRT2	Tortugero	2.24	327	P	Pn	02 16 26.1	+1.9
TRT2				S	Sn	02 16 53.3	+2.5
TRT2	Tortugero	2.24	327	⇓eP	Pn	02 16 26.2	+2.1
AZU	Azuero	2.36	112	eP	Pb	02 16 30.1	-0.6
AZU				eS	Sb	02 16 58.0	-1.5
TOSI3	Tonosi	2.39	122	eP	Pb	02 16 34.6	+3.3
TOSI3				eS	Sb	02 17 02.0	+1.7
ZANG	Zanguenga, Cho	2.60	84	eP	Pb	02 16 32.7	-2.3
ACHO3	Achotines, Los	2.61	119	eP	Pb	02 16 36.7	+1.6
MLIR	Monte Lirio	2.66	78	eP	Pn	02 16 28.2	-1.7
BCIP	Isla Barro Col	2.66	79	P	Pn	02 16 32.0	+2.1
BCIP				S	Sn	02 17 04.2	+2.9
BCIP	Isla Barro Col	2.66	79	eP	Pn	02 16 32.1	+2.1
BCIP				eP	Pb	02 16 33.8	-2.1
BCIP				eS	Sn	02 17 04.3	+3.1
CHOR3	La Chorrera	2.70	85	eP	Pb	02 16 34.7	-1.9
GAMB1	Gamboa	2.77	81	eP	Pn	02 16 27.6	-3.9
FRIJ	El Hiral	2.78	79	eP	Pn	02 16 34.4	+2.8
JTS	Las Juntas de	2.91	303	Pn	Pn	02 16 33.8	+0.3
JTS	Las Juntas de	2.91	303	P	Pb	02 16 37.1	-3.2
JTS	Las Juntas de	2.91	303	eP	Pb	02 16 37.2	-3.0
JTS				eP	Pb	02 16 37.3	-3.0
JTS				eS	Sb	02 17 12.8	-2.7
SAIC	Isla e San And	3.91	11	P	Pn	02 16 47.6	+0.5
SAIC				S	Sn	02 17 31.9	-0.2
PRVC	Isla de Provid	4.79	13	P	Pn	02 17 01.7	+2.4
PRVC				S	Sn	02 17 53.3	-0.7
BOAB	BOACO BROADBAN	4.88	320	Pn	Pn	02 17 01.9	+1.4
BOAB				IAML		02 18 23.4	
	comp=E,52nm,0.8s						
SJCC	San Jacinto, C	7.31	80	P	Pn	02 17 35.2	+1.2
SJCC				S	Sn	02 18 57.1	+1.0

KRSC 07 02:24:30.9±1.0**, 56°.19N×163°.30E, h6**km±8km**, Ml3.5, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.27	275	eP	Pg	02 24 37.0	+0.9
KBG	Krutoberegovo	0.34	282	eP	Pg	02 24 38.2	+0.8
KBG				eS	Sg	02 24 42.9	+1.1
SMKR	Semkarok	1.09	292	eP	Pb	02 24 52.3	+0.2
SMKR				eS	Sn	02 25 07.9	-0.3
BDR	Baidarnaya	1.22	289	eS	Sn	02 25 11.7	+0.3
KLY	Klyuchi	1.48	276	eP	Pn	02 24 57.0	-1.0
KLY				eS	Sn	02 25 14.9	-2.7
BKI	Bering	1.81	122	eP	Pb	02 25 03.7	-0.5
BKI				eS	Sb	02 25 27.6	+0.5
MKZ	Mys Kozlova	1.86	209	eP	Pb	02 25 04.3	-0.9
MKZ				eS	Sb	02 25 28.5	-0.2
TUMD	Tumrok D	1.91	240	eS	Sb	02 25 30.6	+0.4
KOZ	Kozyrevsk	1.92	268	eP	Pb	02 25 06.3	0.0
SRDR	Sredinnyy	2.00	275	eP	Pb	02 25 07.7	0.0
SRDR				eS	Sb	02 25 33.2	+0.4
OSSR	Ossora	3.08	358	eP	Pn	02 25 21.9	+2.0
OSSR				eS	Sn	02 25 59.0	+2.1
KII	Karymskiy	3.08	227	eP	Pb	02 25 23.4	-2.7
SPN	Mys Shipunski	3.63	213	eP	Pn	02 25 30.7	+3.2
SPN				eS	Sn	02 26 11.5	+0.8
SMAR	Somma	3.92	224	eP	Pn	02 25 35.7	+4.0
AVH	Avacha	3.94	224	eP	Pn	02 25 35.7	+3.8
KOK	Koryaka	3.96	225	eP	Pn	02 25 36.2	+4.0
GNL	Ganaly	3.97	233	eP	Pn	02 25 34.4	+2.1
MTVR	Mutnovka	4.76	221	eP	Pn	02 25 47.8	+4.5
ASAK	Asacha	4.95	222	eP	Pn	02 25 50.1	+4.4

*IDC **07** 02:26:48.7±0.9, 17°.83N×66°.67W, h0km, mb3.8/11, mbtmp3.8/12, ML3.2/1, MS2.9/3, Error ellipse: s-maj=22.1km s-min=13.0km az=166.0*

*SDD **07** 02:26:49.8±2.5, 17°.79N×66°.89W, h12km±16km, MD3.5, ML4.1, MW4.0, Presumed earthquake*

*NEIC **07** 02:26:49.6±1.6, 17°.80N±0°.03×66°.87W±0°.02, h4km±4km, mb4.2/15, ML4.1/37, Mwr4.0/19, ML3.9/3(RSPR), Error ellipse: s-maj=3.7km s-min=2.0km az=195.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.07; $M_{\theta\theta}$-0.21; $M_{\phi\phi}$0.13; $M_{r\theta}$0.07; $M_{\theta\phi}$1.11; $M_{\phi r}$-0.32; Fault plane solution: $M_0$1.17000×10^{15} NP1: ϕ_s355.60000°, δ89.40000°, λ-163.80000°. NP2: ϕ_s265.43000°, δ73.80000°, λ-0.63000°. Principal axes: T 1.1209, Plg11.0000°, Azm129.0000°; N 0.0910, Plg74.0000°, Azm358.0000°; P -1.2118, Plg12.0000°, Azm222.0000°;*

*PTWC **07** 02:26:49, 17°.80N×66°.80W, Ml4.3/10, PUERTO RICO REGION*

*NEIC **07** 02:26:49.9, 17°.84N×66°.87W, h10km*

*OSPL **07** 02:26:50.1±0.5, 17°.78N×66°.87W, h2km±999km, ML3.5, Presumed earthquake*

ISC 07 02:26:49.2±1.2**, 17°.78N**±0°.04×**66°.86W**±0°.02**, h6**km±8km**, n88, σ1ˢ41**/100**, mb4.0**/16**, 10C-3D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.20	355		Pg	02 26 52.7	-0.5
MLPR	Magueyes Islan	0.26	318		Pg	02 26 54.3	+0.1
MLPR				Sg	Sg	02 26 57.2	-0.5
MLPR				IAML		02 26 57.5	
	26μm,0.5s						
MLPR				IAML		02 26 57.5	
	51μm,0.5s						
MLPR	Magueyes Islan	0.26	318	⇑ePg	Pg	02 26 54.4	+0.1
MLPR				⇓eSg	Sg	02 26 57.4	-0.4
MLPR				IAML		02 26 57.5	
	comp=N,17μm,0.6s						
CRPR	Cabo Rojo, PR	0.33	314		Pg	02 26 55.6	0.0
CRPR				Sg	Sg	02 27 00.2	+0.2
CRPR				IAML		02 27 01.2	
	comp=N,26μm,0.6s						
CRPR	Cabo Rojo, PR	0.33	314	P	Pg	02 26 55.7	+0.1
CRPR	Cabo Rojo, PR	0.33	314	i P	Pg	02 26 55.6	0.0
CRPR				eS	Sg	02 27 00.1	+0.2
CRPR				IAML		02 27 00.9	
	comp=Z,30μm,0.5s						
OBIP	Obispado Ponce	0.36	43		Pg	02 26 56.4	+0.3
OBIP				Sg	Sg	02 27 01.3	+0.3
OBIP	Obispado Ponce	0.36	43	P	Pg	02 26 56.2	0.0
OBIP	Obispado Ponce	0.36	43	i P	Pg	02 26 56.5	+0.3
OBIP				eS	Sg	02 27 01.2	+0.3
OBIP				IAML		02 27 01.6	
	comp=Z,6μm,0.7s						
CELP	Cerrillos	0.40	42		Pg	02 26 57.2	+0.2
CELP				Sg	Sg	02 27 02.6	+0.3
CELP	Cerrillos	0.40	42	⇓ePg	Pg	02 26 57.2	+0.2
CELP				⇑eSg	Sb	02 27 04.3	-0.9
CELP				IAML		02 27 06.9	
	comp=N,3μm,0.5s						
LSP	Las Mesas	0.45	332		Pg	02 26 57.5	-0.4
UUPR	Utuado, UPR, P	0.49	16		Pg	02 26 58.0	-0.7
UUPR				Sg	Sg	02 27 03.8	-1.4
PRSN	Puerto Rico Se	0.51	329		Pg	02 26 58.6	-0.5
PRSN	Puerto Rico Se	0.51	329	⇑ePg	Pg	02 26 58.7	-0.5
PRSN				⇑eSg	Sg	02 27 06.6	+0.7
PRSN				IAML		02 27 06.7	
	comp=N,24μm,0.3s						
AOPR	Arecibo Observ	0.58	10		Pg	02 26 59.5	-0.8
AOPR				IAML		02 27 07.7	
	comp=N,23μm,0.5s						
AOPR				IAML		02 27 09.4	
	comp=N,13μm,0.5s						
AOPR	Arecibo Observ	0.58	10	⇓ePg	Pg	02 26 59.5	-0.8
AOPR				⇑eSg	Sg	02 27 06.6	-1.2
AOPR				IAML		02 27 09.3	
	comp=N,11μm,0.5s						
ECPR	Experimental S	0.72	41		Pg	02 27 02.5	-0.5
ECPR				IAML		02 27 13.4	
	comp=N,7μm,0.3s						
ECPR				IAML		02 27 13.9	
	comp=N,7μm,0.3s						
AGPR	Aguadilla, PR	0.73	341		Pg	02 27 02.2	-0.9
AGPR				IAML		02 27 11.6	
	comp=N,8μm,0.6s						
AGPR				IAML		02 27 16.1	
	comp=N,7μm,0.7s						
AGPR	Aguadilla, PR	0.73	341	⇑ePg	Pg	02 27 02.2	-0.9
AGPR				⇑eSg	Sg	02 27 11.4	-1.3
AGPR				IAML		02 27 16.3	
	comp=N,5μm,0.3s						
SJG	San Juan	0.76	64	Pn	Pg	02 27 03.8	+0.1
	comp=N,97nm,0.3s,baz=259,slow=14,SNR=180						
SJG				Sn	Sg	02 27 13.3	-0.2
	comp=N,360nm,0.3s,baz=188,slow=23,SNR=21						
SJG	San Juan	0.76	64		Pg	02 27 03.8	+0.1
SJG	San Juan	0.76	64	P	Pg	02 27 03.8	+0.1
SJG	San Juan	0.76	64	eP	Pg	02 27 04.0	+0.3
SJG	San Juan	0.76	64	i P	Pg	02 27 03.8	+0.1
SJG				eS	Sg	02 27 14.2	+0.6
SJG				IAML		02 27 15.1	
	comp=Z,1μm,0.6s						
EMPR	Esperanza - Ma	0.77	24		Pg	02 27 03.5	-0.5
EMPR					Sg	02 27 13.6	-0.2
EMPR	Esperanza - Ma	0.77	24	P	Pg	02 27 03.4	-0.5
PDPR	Patillas Dam,	0.83	73		Pg	02 27 05.4	+0.1
IDE	Isla Desecheo	0.84	316		Pg	02 27 04.5	-0.8
HUMP	Col San Antoni	1.03	69		Pg	02 27 08.4	-0.6
HUMP	Col San Antoni	1.03	69		Sg	02 27 21.9	-0.4
HUMP	Col San Antoni	1.03	69	P	Pg	02 27 08.4	-0.6
CUPR	Culebra, Puert	1.59	70		Pn	02 27 18.1	+0.2
HIDR	Higuey Centro	1.94	295	⇑ePg	Pb	02 27 24.7	-0.2
HIDR				IAML		02 28 02.1	
	comp=N,1μm,0.4s						
DR12	Loma Pena Alta	2.60	293		Pn	02 27 32.4	+0.6
HATOM	Hato Mayor del	2.60	293	⇑ePg	Pn	02 27 33.1	+1.4
HATOM				IAML		02 28 13.5	
	comp=N,854nm,0.7s						
SMDR	Samana, DR	2.67	305	P	Pn	02 27 35.0	+2.2
DR08	Loma La Naviza	3.22	292	P	Pn	02 27 44.0	+3.6
DR08	Loma La Naviza	3.22	292	⇑ePg	Pn	02 27 43.1	+2.6
DR08				IAML		02 28 41.1	
	comp=N,5μm,0.2s						
SABA	Saba	3.45	92	P	Pn	02 27 44.0	+0.4
SMRT	St. Maarten	3.62	85		Pn	02 27 46.2	+0.4
SMRT	St. Maarten	3.62	85	P	Pn	02 27 46.4	+0.6
SKI	Saint Kitts	3.96	96	eP	Pn	02 27 51.8	+1.2
SC01	Santiago de lo	4.02	295	P	Pb	02 27 56.3	-4.1
ANWB	Willy Bob	4.84	91	eP	Pn	02 28 02.6	0.0
DHSZ	Broadband at M	5.10	106	eP	Pn	02 28 08.9	+2.7
MMLZ	Guadeloupe Bro	5.26	108	eP	Pn	02 27 58.9	-10
CBE	Ff, Capester	5.31	108	Pn	Pn	02 28 10.1	+1.0
CBE				IAML		02 29 14.0	
	comp=N,170nm,1.0s						
TBG	Guadaloupe-3	5.35	110	eP	Pn	02 28 10.6	+1.0
GRTK	Grand Turk	5.48	313		Pn	02 28 11.7	+0.3
MAGL	Barre de l'ile	5.64	108	Pn	Pn	02 28 15.7	+2.0
DSLB	Salisbury	5.71	113	eP	Pn	02 28 15.3	+0.7
DSLB				eS	Sn	02 29 16.8	-3.8
BIM	Bigot	6.44	119	Pn	Pn	02 28 24.4	-0.2
BIM	Bigot	6.44	119	eP	Pn	02 28 25.0	+0.3
BIM				eS	Sn	02 29 34.4	-4.1
MPOM	Morne Pois Mar	6.65	119	Pn	Pn	02 28 28.6	+1.0
SLBI	Saint Lucia, B	6.78	123	eP	Pn	02 28 26.1	-3.2
SDV	Santo Domingo	9.57	203	Pn	Pn	02 29 09.8	+2.0
	comp=N,2.1nm,0.3s,baz=343,slow=17,SNR=12						
SDV				Sn	Sn	02 30 50.2	-5.6
	comp=N,0.3nm,0.3s,baz=345,slow=13,SNR=1.1						
SDV				LR	LR	02 33 14.3	
	comp=N,63nm,20.0s,baz=56,slow=40						
	comp=N,5.8nm,0.4s						
SDV	Santo Domingo	9.57	203		Pn	02 29 08.5	+0.7
MTDJ	Mount Denham	10.16	274	Pn	Pn	02 29 15.0	-0.9
ROSC	El Rosal	14.78	210		Pn	02 30 23.2	+3.9
MDP	Montagnes des	18.77	130	LR	LR	02 39 01.0	
	comp=N,53nm,21.1s,baz=280,slow=39						
OTAV	Otavalo	20.83	214		P	02 31 34.2	+2.1
OTAV				IAmb	IAmb	02 31 43.5	
	comp=Z,18nm,1.3s						
TKL	Tuckaleechee C	23.29	323	LR	LR	02 40 35.1	
	comp=Z,35nm,20.8s,baz=176,slow=35						
TXAR	Lajitas Array	35.50	296	P	P	02 33 48.2	+1.1
	comp=Z,1.0nm,0.5s,baz=114,slow=9.9,SNR=9.6						
	comp=Z,1.0nm,0.5s						
PB16	IPOC Station P	35.98	184	P	P	02 33 51.9	+0.2
SCHQ	Schefferville	36.99	0	P	P	02 34 00.5	+1.2
	comp=Z,1.3nm,0.6s,baz=193,slow=8.0,SNR=3.8						
	comp=Z,1.3nm,0.6s						
SCHQ	Schefferville	36.99	0	IAmb	IAmb	02 34 27.3	
	comp=Z,5.0nm,1.0s						
GO01	Chusmiza	37.28	184	P	P	02 34 03.3	+0.6
GO01				IAmb	IAmb	02 34 05.0	
	comp=Z,10nm,1.5s						
PB11	IPOC Station P	37.40	184	P	P	02 34 01.6	-1.7
PB11				IAmb	IAmb	02 34 17.9	
	comp=Z,9.1nm,1.1s						
EPLO	Experimental L	38.47	332	P	P	02 34 11.2	-0.8
EPLO				IAmb	IAmb	02 34 22.7	
	comp=Z,7.2nm,1.3s						
SDCO	Great Sand Dun	39.20	308	P	P	02 34 17.5	-1.1
SDCO				IAmb	IAmb	02 34 50.4	
	comp=Z,6.4nm,1.4s						
PB07	IPOC Station P	39.37	184	P	P	02 34 19.9	0.0
PB07				IAmb	IAmb	02 34 27.4	
	comp=Z,3.7nm,0.7s						
ULM	Lac du Bonnet	39.86	331	P	P	02 34 23.5	0.0
	comp=Z,1.7nm,0.6s,baz=138,slow=12,SNR=3.4						
	comp=Z,1.7nm,0.6s						
ULM	Lac du Bonnet	39.86	331	IAmb	IAmb	02 34 30.6	
	comp=Z,4.6nm,1.0s						
ISCO	Idaho Springs	40.01	311	P	P	02 34 26.0	+0.7
PV19	Morning Glory	41.98	308	P	P	02 34 43.2	+1.6
PDAR	Pinedale Array	43.86	314	P	P	02 34 57.4	+0.6
	comp=Z,0.5nm,0.7s,baz=99,slow=9.6,SNR=4.6						
	comp=Z,0.5nm,0.7s						
CPUP	Villa Florida	44.81	168	P	P	02 35 03.7	-0.4
	comp=Z,1.3nm,0.8s,baz=329,slow=10.0,SNR=4.1						
	comp=Z,1.3nm,0.8s						
CPUP	Villa Florida	44.81	168	IAmb	IAmb	02 35 41.7	
	comp=Z,3.4nm,1.2s						
FCC	Fort Churchill	45.53	340	P	P	02 35 10.2	+0.8
GLA	Glamis	45.53	299	P	P	02 35 09.3	-0.6
NVAR	Mina Array Bea	49.13	306	P	P	02 35 39.2	+1.1
	comp=Z,0.3nm,0.7s,baz=95,slow=7.6,SNR=4.4						
	comp=Z,0.3nm,0.7s						
NEW	Newport	50.74	318	P	P	02 35 50.7	+0.7
YKA	Yellowknife Ar	55.51	335	P	P	02 36 25.4	+0.6
	comp=Z,0.8nm,0.6s,baz=110,slow=6.7,SNR=17						
	comp=Z,0.8nm,0.6s						
ESDC	Sonseca Array	58.13	54	P	P	02 36 44.8	+0.9
	comp=Z,1.1nm,0.8s,baz=262,slow=7.7,SNR=6.2						
	comp=Z,1.1nm,0.8s						
ILAR	Eielson Array	69.82	333	P	P	02 38 00.6	+0.2
	comp=Z,0.7nm,0.9s,baz=95,slow=4.5,SNR=8.1						
	comp=Z,0.7nm,0.9s						
FINES	FINESS Array B	75.96	30	P	P	02 38 38.1	+1.3
	comp=Z,0.9nm,0.7s,baz=308,slow=6.9,SNR=1.1						
	comp=Z,0.9nm,0.7s						
BRTR	Keskin Array B	86.60	49	P	P	02 39 34.5	+0.5
	comp=Z,0.8nm,0.9s,baz=247,slow=4.7,SNR=4.4						
	comp=Z,0.8nm,0.9s						

*NEIC **07** 02:27:46.3±2.2, 23°.3S±0°.1×179°.5W±0°.2, h462km±5km, mb4.3/13, Error ellipse: s-maj=23.3km s-min=16.0km az=131.0*

*IDC **07** 02:27:54.5±6.9, 23°.44S×179°.83W, h557km±74km, mb3.2/6, mbtmp4.1/6, Error ellipse: s-maj=68.7km s-min=35.4km az=150.0*

ISC 07 02:27:52.2±0.6**, 23°.5S**±0°.1×**179°.7W**±0°.1**, h536**km**, n33, σ0ˢ74**/31**, mb4.0**/13**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	5.97	165	P	P	02 29 21.1	-8.6
OXZ	Oxford	20.95	197	P	P	02 31 57.7	+0.4
DCZ	Deep Cove	24.41	203	P	P	02 32 28.6	+0.4
CTAO	Charters Tower	31.77	269	P	P	02 33 33.6	+0.8
CTAO				IAmb	IAmb	02 33 34.0	
	comp=Z,4.9nm,0.6s						
TOO	Toolangi	32.92	237	P	P	02 33 43.1	+0.7
STKA	Stephens Creek	35.15	248	P	P	02 34 01.3	+0.1
	comp=Z,2.6nm,0.6s,baz=86,slow=11,SNR=7.6						
	comp=Z,2.6nm,0.6s						
STKA	Stephens Creek	35.15	248	P	P	02 34 01.8	+0.7
BBOO	Buckleboo	39.88	246	P	P	02 34 39.5	-0.3
BBOO				IAmb	IAmb	02 35 03.3	
	comp=Z,23nm,1.4s						
ASAR	Alice Springs	42.39	260	P	P	02 34 59.8	-0.1
	comp=Z,2.7nm,0.8s,baz=99,slow=7.2,SNR=23						
	comp=Z,2.7nm,0.8s						
ASAR	Alice Springs	42.39	260	P	P	02 34 59.2	-0.7
WR8	Warramunga Arr	42.58	266	P	P	02 35 00.7	-0.6
WRA	Warramunga Arr	42.73	266	P	P	02 35 01.9	-0.7
	comp=Z,2.2nm,0.7s,baz=103,slow=8.3,SNR=25						
	comp=Z,2.2nm,0.7s						
WRA	Warramunga Arr	42.73	266	P	P	02 35 01.9	-0.7
FORT	Forrest	46.73	249	P	P	02 35 32.5	-0.7
FORT				IAmb	IAmb	02 35 41.1	
	comp=Z,14nm,1.1s						
QSPA	South Pole Qui	66.61	180	P	P	02 37 48.9	-0.3
QSPA				IAmb	IAmb	02 37 50.9	
	comp=Z,8.5nm,1.5s						
BELA	Belgrano 2	76.82	173	P	P	02 38 48.6	+0.2
BELA				IAmb	IAmb	02 39 17.1	
	comp=Z,8.9nm,1.5s						
PETK	Petropavlovsk-	78.75	346	P	P	02 38 59.5	+0.6
	comp=Z,6.3nm,1.1s,baz=174,slow=7.4,SNR=1.6						
	comp=Z,6.3nm,1.1s						
PETK	Petropavlovsk-	78.75	346	P	P	02 38 59.2	+0.2
N15K	Kwethluk River	84.86	10	P	P	02 39 30.5	+0.5
N15K				IAmb	IAmb	02 39 48.1	
	comp=Z,10nm,1.5s						
O18K	Koktuh Hills	85.42	12	P	P	02 39 32.1	-0.5
O18K				IAmb	IAmb	02 40 10.1	
	comp=Z,13nm,1.3s						
TXAR	Lajitas Array	89.96	58	P	P	02 39 55.8	+1.0
	comp=Z,0.4nm,0.8s,baz=224,slow=7.0,SNR=4.6						
	comp=Z,0.4nm,0.8s						
TXAR	Lajitas Array	89.96	58	P	P	02 39 55.3	+0.5
ILAR	Eielson Array	91.55	13	P	P	02 40 01.9	+0.8
	comp=Z,0.3nm,0.9s,baz=192,slow=8.0,SNR=2.3						
	comp=Z,0.3nm,0.9s						
GRGR	Grenville	120.31	89		PKPdf	02 45 43.1	-0.2
SMRT	St. Maarten	120.88	82		PKPdf	02 45 43.3	-1.1
FINES	FINESS Array B	138.13	342	PKP	PKPdf	02 46 15.8	+0.2
	comp=Z,5.9nm,1.3s,baz=29,slow=4.4,SNR=4.1						
HFS	Hagfors	142.18	349	PKhKP	PKPpre	02 46 18.3	
	comp=Z,2.1nm,0.3s,baz=63,slow=3.6,SNR=45						
AKASG	Malin Array Be	144.77	328	PKP	PKPdf	02 46 26.5	-1.3
	comp=Z,1.2nm,0.4s,baz=46,slow=4.2,SNR=7.9						
BRTR	Keskin Array B	147.55	308	PKPbc	PKPbc	02 46 35.0	-1.6
	comp=Z,0.5nm,0.6s,baz=133,slow=4.2,SNR=4.2						
MMAI	Mount Meron Ar	147.79	295	PKPbc	PKPbc	02 46 37.7	+0.4
	comp=Z,1.4nm,0.4s,baz=75,slow=6.1,SNR=12						
EKA	Eskdalemuir Ar	148.07	4	PKPbc	PKPbc	02 46 35.7	-1.4
	comp=Z,0.5nm,0.4s,baz=335,slow=2.6,SNR=6.4						
BUR08	Bucovina Ar. S	148.76	327	PKPbc	PKPbc	02 46 40.0	+0.6
BURAR	Bucovina Array	148.78	327	PKPbc	PKPbc	02 46 39.9	+0.6

*IDC **07** 02:40:40.9±0.6, 9°.21N×82°.88W, h0km, mb4.3/17, mbtmp4.4/19, ML5.0/3, MS4.3/56, Error ellipse: s-maj=22.6km s-min=11.8km az=59.0*

*UPA **07** 02:40:45.8±0.5, 9°.04N×83°.18W, h16km±2km, ML5.5, MW5.3, Presumed earthquake*

*CATAC **07** 02:40:46.1±0.2, 9°N±2°×8°3W±°, h18km±2km, M5.7/31, mb6.0/2, mB6.1/2, MLv5.6/31, Mw(mB)5.7/2, Error ellipse: s-maj=4.3km s-min=2.2km az=20.4, confirmed*

*UCR **07** 02:40:46.2±0.7, 8°.99N×83°.20W, h40km±1km, MW5.6, Fault plane solution: NP1:ϕ_s91.05000°, δ86.60000°, λ9.41000°., Presumed earthquake*

*GFZ **07** 02:40:47.9, 9°.01N×83°.16W, h41km, MW5.2, Moment Tensor Solution. s35 Moment tensor: M_{rr}-0.76; $M_{\theta\theta}$1.50; $M_{\phi\phi}$-0.74; $M_{r\theta}$-0.30; $M_{\theta\phi}$6.87; $M_{\phi r}$0.98; Fault plane solution: NP1:ϕ_s94.00000°, δ81.00000°, λ-4.00000°. NP2:ϕ_s184.00000°, δ85.00000°, λ-171.00000°. Principal axes: T 7.3600, Plg2.0000°, Azm319.0000°; N -0.6300, Plg80.0000°, Azm211.0000°; P -6.7300, Plg8.0000°, Azm49.0000°;*

*NEIC **07** 02:40:47.7±2.7, 9°.01N±0°.03×83°.17W±0°.03, h39km±6km, mb5.0/168, Mww5.2/38 Error ellipse: s-maj=5.4km s-min=4.1km az=47.0*

*NEIC **07** 02:40:48, 9°.00N×83°.16W, h40km*

*NEIC **07** 02:40:48, 9°.00N×83°.16W, h40km, Moment Tensor Solution. Duration: 2ˢ3 Moment tensor: Scale 10^{16}Nm; M_{rr}1.30; $M_{\theta\theta}$2.17; $M_{\phi\phi}$-3.46; $M_{r\theta}$-0.90; $M_{\theta\phi}$8.20; $M_{\phi r}$-2.14; Fault plane solution: $M_0$9.05000×10^{16} NP1: ϕ_s280.19000°, δ74.42000°, λ6.30000°. NP2:ϕ_s188.49000°, δ83.93000°, λ164.33000°. Principal axes: T 8.5690, Plg15.0000°, Azm143.0000°; N 0.8951, Plg73.0000°, Azm348.0000°; P -9.4641, Plg7.0000°, Azm235.0000°;*

*GCMT **07** 02:40:50.6±0.1, 9°.03N±0°.01×83°.22W±0°.01, h41km, MW5.3/134, Moment Tensor Solution. s99,c157; s134,c231; Duration: 1ˢ1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.15±.02; $M_{\theta\theta}$0.11±.01; $M_{\phi\phi}$-0.25±.02; $M_{r\theta}$-0.23±.02; $M_{\theta\phi}$0.98±.01; $M_{\phi r}$-0.24±.02; Best double couple: $M_0$1.05400×10^{17} NP1:ϕ_s277.00000°, δ74.00000°, λ13.00000°. NP2:ϕ_s183.00000°, δ77.00000°, λ164.00000°. Principal axes: T 1.0400, Plg20.0000°, Azm140.0000°; N 0.0270, Plg70.0000°, Azm326.0000°; P -1.0670, Plg2.0000°, Azm231.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 02:40:47.4±0.5**, 8°.98N**±0°.03×**83°.22W**±0°.03**, h49**km±4km**, n504, σ1ˢ60**/446**, mb4.9**/98**, MS4.3**/54**, 75C-14D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDP2	Potrero Grande	0.06	45	⇓eP	Pn	02 40 52.7	-2.3
EDP2				eS	Sn	02 40 57.8	-2.5
FIMO	Fila Mora	0.14	276	⇓eP	Pn	02 40 53.5	-1.9
BURE	Buenos Aires	0.23	329	⇑eP	Pn	02 40 53.4	-2.5
BURE				eS	Sn	02 40 58.6	-3.3
PANP	Palmar Norte	0.24	266	⇓eP	Pn	02 40 53.7	-2.2
PANP				eS	Sn	02 40 59.7	-2.3
DRK0	Durika	0.29	355	P	Pn	02 40 51.5	-5.0
DRK0	Durika	0.29	355	i P	Pn	02 40 51.5	-5.1
DRK0	Durika	0.29	355	⇑eP	Pn	02 40 51.5	-5.1
VITO	San Vito	0.29	122	i P	Pn	02 40 54.9	-1.6
VITO	San Vito	0.29	122	⇑eP	Pn	02 40 54.9	-1.6
VITO				eS	Sn	02 41 01.3	-1.6
EDAD	Golfito	0.33	171	⇑eP	Pn	02 40 54.3	-2.5
ALCO	Alturas Coton,	0.38	94	⇓eP	Pn	02 40 55.0	-2.5
RSRNO	Rio Sereno	0.39	114	i P	Pn	02 40 55.9	-1.6
RSRNO	Rio Sereno	0.39	114	⇑eP	Pn	02 40 55.8	-1.6
EDPE	Pejibaye, P	0.39	298	⇑eP	Pn	02 40 55.5	-1.9
MLIR3	Monte Lirio, C	0.43	115	eP	Pn	02 40 56.6	-1.3
OCHAL	Ojochal	0.44	286	P	Pn	02 40 55.8	-2.1
OCHAL				S	Sn	02 41 03.7	-1.7
PTJ1	Puerto Jimnez	0.45	191	P	Pn	02 40 56.2	-1.8
PTJ1				S	Sn	02 41 04.6	-0.9
PTJ1	Puerto Jimnez	0.45	191	i P	Pn	02 40 56.1	-1.8
PTJ1	Puerto Jimnez	0.45	191	⇓eP	Pn	02 40 56.3	-1.6
SCLRA	Santa Clara, W	0.45	108	i P	Pn	02 40 56.4	-1.8
SCLRA	Santa Clara, W	0.45	108	⇑eP	Pn	02 40 56.4	-1.8
SAJE	San Jernim	0.47	322	⇑eP	Pn	02 40 55.9	-2.5
CDITO	Canoas	0.53	140	P	Pn	02 40 57.1	-1.8
CDITO				S	Sn	02 41 05.9	-1.3
BRU2	Volcan	0.55	109		Pn	02 40 57.5	-1.9

BRU2				Sn	Sn	02 41 06.2	-1.7
BRU2	Volcan	0.55	109	P	Pn	02 40 57.6	-1.9
BRU2				S	Sn	02 41 06.3	-1.6
BRU2	Volcan	0.55	109	iP	Pn	02 40 57.3	-2.1
BRU2				⇑iP		02 40 57.5	
BRU2				eS	Sn	02 41 05.9	-2.1
BRU2				IAML		02 41 08.7	
	comp=E,287µm,1.7s						
BRU2	Volcan	0.55	109	⇑eP	Pn	02 40 57.5	-1.9
LPPC	Paso Canoas	0.58	140	⇑eP	Pn	02 40 57.6	-2.0
LPPC				eS	Sn	02 41 06.3	-2.0
PIRO	Carate, Puerto	0.58	192		Pn	02 40 58.2	-1.4
PIRO				Sn	Sn	02 41 07.9	-0.4
PIRO	Carate, Puerto	0.58	192	P	Pn	02 40 58.7	-0.9
PIRO				S	Sn	02 41 09.1	+0.7
PIRO	Carate, Puerto	0.58	192	eP	Pn	02 40 58.4	-1.2
PIRO	Carate, Puerto	0.58	192	⇓eP	Pn	02 40 58.2	-1.4
ZEDO	Perez Zeledon	0.59	309	⇑eP	Pn	02 40 58.9	-0.9
ZEDO				eS	Sn	02 41 08.1	-0.7
LESP3	La Esperanza,	0.71	143	eP	Pn	02 40 59.5	-1.7
JEFFS	S de V. Baru	0.74	114	iP	Pn	02 41 00.1	-1.7
JEFFS	S de V. Baru	0.74	114	⇑eP	Pn	02 41 00.1	-1.7
PTAR3	Potrerillos Ar	0.77	111	eP	Pn	02 41 00.6	-1.5
BUS1	Rivas	0.78	318	⇑eP	Pn	02 41 00.6	-2.0
BQTLY	Boquete Panama	0.78	106	iP	Pn	02 41 00.4	-1.9
BQTLY				eS	Sn	02 41 11.2	-1.9
BQTLY	Boquete Panama	0.78	106	⇑eP	Pn	02 41 00.4	-1.9
LNBQ3	Los Naranjos,	0.79	103	eP	Pn	02 41 00.5	-1.9
LAES	El Progreso Va	0.80	12	⇓eP	Pn	02 41 00.9	-1.6
BQSF3	Alto Boquete,	0.81	107	eP	Pn	02 41 01.0	-1.7
PTPM	Petroterminale	0.84	156	eP	Pn	02 41 02.1	-0.9
PTPA	Petro Terminal	0.84	156	⇑eP	Pn	02 41 01.9	-1.2
BAGA3	Bagala, Chiriq	0.85	126	eP	Pn	02 41 02.0	-1.1
RGM0	Gandoca	0.86	45		Pn	02 41 02.7	-0.6
RGM0	Gandoca	0.86	45	P	Pn	02 41 02.7	-0.6
RGM0				S	Sn	02 41 17.5	+2.7
RGM0	Gandoca	0.86	45	eP	Pn	02 41 02.9	-0.4
RGM0	Gandoca	0.86	45	⇓eP	Pn	02 41 02.7	-0.6
CNI2	El Empalme, Bo	0.86	59	eP	Pn	02 41 01.4	-1.9
DVD	David	0.93	125	eP	Pn	02 41 03.0	-1.2
PSOM3	Paja de Sombre	0.93	108	eP	Pn	02 41 02.6	-1.7
LIMO3	Limones	0.94	158	eP	Pn	02 41 03.8	-0.5
LMNES	Limones	0.94	158	iP	Pn	02 41 03.7	-0.7
LMNES	Limones	0.94	158	⇑eP	Pn	02 41 03.5	-0.8
VERH	Veragua Rainfo	0.94	2	⇓eP	Pn	02 41 02.8	-1.7
LOCO3	Loma Colorada,	0.97	125	eP	Pn	02 41 03.7	-1.1
PIEC	Cerro El Cedra	0.97	311	⇑eP	Pn	02 41 03.3	-1.7
LOMA3	Las Lomas, Chi	0.98	123	eP	Pn	02 41 03.6	-1.3
BGUAL	Bijagual, Pana	0.99	118	iP	Pn	02 41 03.5	-1.5
PBNVO	Pueblo Nuevo,	1.02	95	iP	Pn	02 41 03.5	-1.8
PBNVO				eS	Sn	02 41 16.1	-2.5
PBNVO	Pueblo Nuevo,	1.02	95	⇑eP	Pn	02 41 03.6	-1.8
QUEP	Quepos	1.04	296	P	Pn	02 41 04.4	-1.3
QUEP				S	Sn	02 41 19.4	+0.3
QUEP	Quepos	1.04	296	eP	Pn	02 41 03.7	-2.0
SVQ2	Quepos	1.04	296	eP	Pn	02 41 03.8	-1.9
RAZU	San Marcos de	1.05	311	eP	Pn	02 41 04.4	-1.6
CHIR3	Chiriqui UPA,	1.05	123	eP	Pn	02 41 04.6	-1.2
VINA	Juan Vinas	1.05	330	eP	Pn	02 41 04.6	-1.4
RBALA	Bur	1.06	95	iP	Pn	02 41 04.3	-1.7
RBALA	Bur	1.06	95	⇑eP	Pn	02 41 04.2	-1.7
CHGR2	Aguacate	1.06	92	eP	Pn	02 41 04.5	-1.5
REPA	Paraso	1.06	323	⇑eP	Pn	02 41 04.7	-1.5
VERB	Verbena	1.07	334	⇑eP	Pn	02 41 05.0	-1.3
LCR2	La Lucha 2	1.09	314	P	Pn	02 41 05.8	-0.7
LCR2				S	Sn	02 41 19.9	-0.8
LCR2	La Lucha 2	1.09	314	eP	Pn	02 41 04.6	-1.9
PCAYA	Pacayas	1.10	328	⇑eP	Pn	02 41 05.4	-1.4
TAAN	Batan	1.11	353	eP	Pn	02 41 05.5	-1.1
VTCV	VTCV, Calle Va	1.12	333	⇑eP	Pn	02 41 05.8	-1.2
TAGO	Cartago	1.13	322	⇑eP	Pn	02 41 05.7	-1.3
RESJ	San Isidro (Tu	1.13	338	⇑eP	Pn	02 41 06.0	-1.0
ABRB	Las Abras (San	1.14	334	⇑eP	Pn	02 41 06.1	-1.1
RAFA	San Farael, Vo	1.14	329		Pn	02 41 06.0	-1.3
RAFA				Sn	Sn	02 41 21.4	-0.6
RAFA	San Farael, Vo	1.14	329	⇑eP	Pn	02 41 05.9	-1.5
CVTV	Tajo	1.15	333	⇑eP	Pn	02 41 06.5	-1.0
IRES	Siquirres	1.15	346	⇑eP	Pn	02 41 06.1	-1.1
LCOCO	El Coco	1.15	343	⇑eP	Pn	02 41 06.2	-1.0
CVTQ	Turrialba Volc	1.16	332	⇑eP	Pn	02 41 06.6	-1.1
VTR0	Volcan Turrial	1.17	333	⇑eP	Pn	02 41 06.5	-1.3
CVTR	Volcan Turrial	1.17	333	⇑eP	Pn	02 41 06.6	-1.3
VICA	Volcano Irazu	1.18	328	⇑eP	Pn	02 41 06.4	-1.6
RVLA	Villa Bonita	1.18	342	⇑eP	Pn	02 41 06.7	-1.0
TRIO	Tres Rios	1.20	320	⇑eP	Pn	02 41 06.5	-1.5
CORON	Coronado	1.26	322	⇑eP	Pn	02 41 07.7	-1.1
ECI	Escuela Centro	1.26	319	⇑eP	Pn	02 41 07.7	-1.1
CVIMO	Finca Echandi	1.26	326	⇑eP	Pn	02 41 07.8	-1.2
SJS	Escuela Geolog	1.26	319	⇑eP	Pn	02 41 07.7	-1.2
LUJA	Lujan	1.27	318	⇑eP	Pn	02 41 07.7	-1.2
LUPE	Guadalupe	1.27	320	⇑eP	Pn	02 41 07.8	-1.1
CENT	San Jose	1.27	318	⇑eP	Pn	02 41 08.7	-0.3
MEXI	Barrio Mexico	1.29	318	⇑eP	Pn	02 41 08.0	-1.1
CVTG	V. Turrialba,	1.29	335	⇓eP	Pn	02 41 08.4	-0.7
PAVB	Pavas, San Jos	1.31	317	⇑eP	Pn	02 41 08.3	-1.2
DOMI	Santo Domingo	1.32	319	⇑eP	Pn	02 41 08.7	-0.9
SANTA	Santa Ana	1.35	315	⇑eP	Pn	02 41 08.5	-1.5
HDC	Heredia	1.35	319		Pn	02 41 09.1	-1.0
HDC	Heredia	1.35	319	eP	Pn	02 41 09.2	-0.8
HDC				eS	Sn	02 41 25.6	-1.3
HDC	Heredia	1.35	319	⇑iP	Pn	02 41 09.2	-0.8
HDC				eS	Sn	02 41 26.6	-0.2
HDC	Heredia	1.35	319	⇑iP	Pn	02 41 09.2	-0.8
HDC				eS	Sn	02 41 26.7	-0.2
HDC	Heredia	1.35	319	⇑eP	Pn	02 41 09.1	-1.0
PILE	Guapiles	1.35	335	⇑eP	Pn	02 41 09.2	-0.8
HEME	Heredia, Merce	1.36	318	⇑eP	Pn	02 41 10.3	+0.2
BELE	Belen	1.38	316	⇑eP	Pn	02 41 09.1	-1.3
PURI	Puriscal	1.38	309	eP	Pn	02 41 09.2	-1.3
KKNTU	Kakintº	1.40	95	iP	Pn	02 41 09.3	-1.3
KKNTU	Kakintº	1.40	95	⇑eP	Pn	02 41 09.2	-1.3
CARI	Cariari	1.47	340	⇑eP	Pn	02 41 10.8	-0.8
POAS	San Pedro de P	1.49	317	eP	Pn	02 41 11.6	-0.4
GREC	Grecia	1.53	315	eP	Pn	02 41 13.3	+0.8
RMDIO	Remedios, Chir	1.56	118	iP	Pn	02 41 11.7	-1.1
VPS8	V Poas	1.56	320	⇑eP	Pn	02 41 12.4	-0.8
VPS5	V. Poas	1.57	320	⇑eP	Pn	02 41 12.1	-1.1
SARCI	Sarchi	1.57	315	eP	Pn	02 41 12.7	-0.3
NANC3	Nancito, Chiri	1.64	116	eP	Pn	02 41 13.0	-0.9
PDCAN	Manzana , Fuen	1.65	114	iP	Pn	02 41 12.2	-1.8
PDCAN	Manzana , Fuen	1.65	114	eP	Pn	02 41 12.4	-1.6
TRT2	Tortugero	1.65	342	P	Pn	02 41 13.5	-0.5
TRT2	Tortugero	1.65	342	eP	Pn	02 41 13.1	-0.9
TRT2	Tortugero	1.65	342	⇑eP	Pn	02 41 12.7	-1.3
ZARE	Zarcero	1.67	316	eP	Pn	02 41 13.8	-0.7
ARTO	Ro Cuarto	1.68	324	⇑eP	Pn	02 41 13.4	-1.0
VPL1	V. Platanar	1.70	318	⇑eP	Pn	02 41 13.6	-1.4
VPL3	V. Platanar	1.74	322	⇑eP	Pn	02 41 14.6	-0.7
VPL2	V. Platanar	1.75	319	⇑eP	Pn	02 41 14.7	-0.8
ROBF	Roble, Puntare	1.80	304	eP	Pn	02 41 15.6	-0.5
ENAS	Puntarenas	1.88	302	eP	Pn	02 41 16.7	-0.4
PAQE	Paquera	1.89	296	eP	Pn	02 41 16.6	-0.7
VACR	Volcan Arenal	2.07	316	⇑eP	Pn	02 41 19.2	-0.6
CASO	Castillo	2.08	314	eP	Pn	02 41 19.8	-0.2
COVE	Coope Vega, Sa	2.09	326	P	Pn	02 41 20.0	-0.1
COVE				S	Sn	02 41 49.0	+4.2
ARE1	Arenal 1	2.09	315	⇑eP	Pn	02 41 19.7	-0.4
VARE2	V. Arenal	2.09	315	⇑eP	Pn	02 41 19.6	-0.5
CEDE	Laguna Cedeo	2.10	316	⇑eP	Pn	02 41 19.7	-0.6
JTS	Las Juntas de	2.15	308	Pn	Pn	02 41 20.3	-0.6
	comp=E,916nm,0.3s,baz=213,slow=4.6,SNR=923						
JTS				Sn	Sn	02 41 46.8	+0.3
	comp=E,695nm,0.3s,baz=322,slow=24,SNR=10						
JTS				LR	LR	02 42 22.3	
	comp=E,11µm,20.8s,baz=137,slow=44						
JTS	Las Juntas de	2.15	308	P	Pn	02 41 21.2	+0.3
JTS				S	Sn	02 41 47.5	+1.1
JTS	Las Juntas de	2.15	308	P	Pn	02 41 21.2	+0.3
JTS	Las Juntas de	2.15	308	⇑eP	Pn	02 41 20.5	-0.4
JTS				eS	Sn	02 41 46.9	+0.4
JTS	Las Juntas de	2.15	308	⇑iP	Pn	02 41 20.3	-0.6
JTS				eS	Sn	02 41 45.0	-1.5
JTS	Las Juntas de	2.15	308	⇑eP	Pn	02 41 19.8	-1.1
JUNT	Juntas	2.15	307	eP	Pn	02 41 20.6	-0.3
TILA	Tilaran	2.28	311	eP	Pn	02 41 22.6	-0.1
GMAL	Guarumal, Vera	2.30	121	⇑eP	Pn	02 41 21.0	-1.9
QUEB	Quebradon, Cot	2.33	315	eP	Pn	02 41 23.2	-0.1
CNAS	Canas	2.35	308	eP	Pn	02 41 25.4	+1.9
TIMP	Tierras Morena	2.39	312	eP	Pn	02 41 23.8	-0.4
CUI	Cuipilapa	2.54	311	eP	Pn	02 41 26.2	-0.1
JUD3	Juan Diaz 3	2.58	298	Pn	Pn	02 41 26.0	-0.8
HORNC	Hornillas	2.59	312	eP	Pn	02 41 27.0	0.0
MESS	Mesas	2.62	312	⇑eP	Pn	02 41 26.7	-0.7
VRLE	La Escondida,	2.78	311	⇑eP	Pn	02 41 28.9	-0.7
ELI1	Hacienda Flor	2.84	306	P	Pn	02 41 30.7	+0.5
AZU	Azuero	3.14	112	⇑eP	Pn	02 41 33.3	-1.1
ZANG	Zanguenga, Cho	3.31	90	eP	Pn	02 41 36.2	-0.6
BCIP	Isla Barro Col	3.34	86		Pn	02 41 36.8	-0.4
BCIP	Isla Barro Col	3.34	86	P	Pn	02 41 36.6	-0.6
BCIP	Isla Barro Col	3.34	86	P	Pn	02 41 36.9	-0.4
BCIP				S	Sn	02 42 14.4	-1.3
BCIP	Isla Barro Col	3.34	86	⇓eP	Pn	02 41 36.9	-0.4
BCIP				eS	Sn	02 42 13.7	-2.0
BCIP	Isla Barro Col	3.34	86	eP	Pn	02 41 36.7	-0.6
BCIP				eS	Sn	02 42 13.2	-2.6
BCIP	Isla Barro Col	3.34	86	⇓eP	Pn	02 41 35.9	-1.3
CONN	Concepcion	3.50	318	P	Pn	02 41 39.9	+0.5
MORN	Al O del Volca	3.50	317	P	Pn	02 41 43.1	+3.7
JAPN	Al SSO del Vol	3.50	317	P	Pn	02 41 40.2	+0.7
ACON	Acoyapa	3.54	327	P	Pn	02 41 39.6	-0.3
SAIC	Isla e San And	3.84	23	P	Pn	02 41 42.3	-1.7
SAIC				S	Sn	02 42 26.1	-1.8
NANN	Nandasmo	4.10	316	P	Pn	02 41 50.1	+2.4
BOAB	BOACO BROADBAN	4.21	325		Pn	02 41 48.1	-1.1
UNAN	Cigeo UNAN	4.33	316	P	Pn	02 41 51.0	+0.2
TISN	Laguna Tiscapa	4.35	317	P	Pn	02 41 52.1	+1.1
SAPS	Ciudad Sandino	4.46	316	P	Pn	02 41 54.2	+1.6
SAPS				S	Sn	02 42 48.4	+5.2
COPN	Copaltepe	4.60	314	P	Pn	02 41 55.6	+1.1
MOM2	El Cardon	4.71	317	P	Pn	02 41 57.7	+1.7
PRVC	Isla de Provid	4.74	22	P	Pn	02 41 55.0	-1.4
PRVC				S	Sn	02 42 48.2	-1.8
LEVN	Ruinas Leon Vi	4.77	316	P	Pn	02 41 58.2	+1.3
LEVN				S	Sn	02 42 52.9	+2.1
CNGA	Al SSO del Vol	4.89	316	P	Pn	02 42 00.2	+1.6
CNGA				S	Sn	02 42 56.9	+2.9
CNGN	Cerro Negro	4.89	316		Pn	02 41 59.2	+0.6
CNGN	Cerro Negro	4.89	316	P	Pn	02 42 00.0	+1.4
CNGN				S	Sn	02 42 57.9	+3.9
CNGN	Cerro Negro	4.89	316	P	Pn	02 41 59.3	+0.7
SIUN	Universidad Ur	4.95	342		Pn	02 41 58.2	-1.1
PACN	Al O del Volca	4.96	315	P	Pn	02 42 01.0	+1.6
PACN				S	Sn	02 42 57.2	+1.6
BILN	Bilwi Airport	5.04	358		Pn	02 42 00.1	-0.5
BILN	Bilwi Airport	5.04	358	P	Pn	02 41 59.8	-0.8
HERN	Volcan Telica	5.06	316		Pn	02 42 01.9	+1.0
PKGN	Cerro Pekin	5.21	315	P	Pn	02 42 04.5	+1.7
PKGN				S	Sn	02 43 05.3	+3.6
CRIN	San Cristobal	5.28	315		Pn	02 42 04.3	+0.4
PTAC	Punta Ardita,	5.66	108	P	Pn	02 42 08.1	-0.9
	comp=E,5µmcomp=E,349nm,1.5s						
TGUH	Tegucigalpa,Un	6.43	322		Pn	02 42 20.6	+0.9
TGUH	Tegucigalpa,Un	6.43	322	P	Pn	02 42 24.2	+4.5
	comp=E,11µmcomp=E,1µm,1.1s						
APAC	Apartado, Choc	6.65	99	P	Pn	02 42 24.8	+2.1
	comp=E,5µmcomp=E,7µmcomp=E,360nm,0.7s						
LCBC	Los crdobas,	6.77	90	P	Pn	02 42 27.1	+2.8
	comp=E,5µmcomp=E,376nm,0.8s						
LCBC				S	Sn	02 43 41.2	+1.1
	comp=E,5µmcomp=E,376nm,0.8s						
PIZC	Pizarro, Choco	7.05	124	P	Pn	02 42 28.3	+0.2
	comp=E,7µmcomp=E,566nm,0.9s						
DBBC	Dabeiba	7.21	105	P	Pn	02 42 33.1	+2.7
UREC	San Jos de Ur	7.70	99	P	Pn	02 42 38.5	+1.4
	comp=E,2µmcomp=E,181nm,0.6s						
CBOC	Ciudad Bolivar	7.79	113	P	Pn	02 42 38.8	+0.4
	comp=E,1µmcomp=E,132nm,0.8s						
CBOC				S	Sn	02 44 09.8	+4.5
	comp=E,1µmcomp=E,132nm,0.8s						
PLMC	San Jos del P	7.98	120	P	Pn	02 42 41.0	0.0
	comp=E,2µmcomp=E,120nm,0.8s						
SJCC	San Jacinto, C	7.98	83	P	Pn	02 42 41.8	+0.8
	comp=E,6µmcomp=E,4µmcomp=E,587nm,0.7s						
SJCC				S	Sn	02 44 05.8	-4.2
	comp=E,6µmcomp=E,4µmcomp=E,587nm,0.7s						
MTO3	Montecristo	8.08	312		Pn	02 42 43.8	+1.4
HELC	Santa Helena	8.11	109	P	Pn	02 42 44.1	+1.1
	comp=E,3µmcomp=E,1µmcomp=E,110nm,0.9s						
ESQI	Esquipulas	8.17	313		Pn	02 42 46.6	+3.0
YOTC	Yotoco, Valle	8.44	126	P	Pn	02 42 47.0	-0.3
	comp=E,5µmcomp=E,1µmcomp=E,88nm,0.8s						
GUY2C	Guyana, Caldas	8.64	115	P	Pn	02 42 52.6	+2.3
	comp=E,3µmcomp=E,2µmcomp=E,237nm,0.8s						
GUY2C				S	Sn	02 44 33.4	+6.7
	comp=E,3µmcomp=E,2µmcomp=E,237nm,0.8s						
JAMC	Jamundi, Valle	8.66	131	P	Pn	02 42 52.6	+2.1
	comp=E,5µmcomp=E,2µmcomp=E,88nm,1.3s						
ARGC	Ariguani, Magd	8.89	84	P	Pn	02 42 55.6	+2.1
	comp=E,4µmcomp=E,3µmcomp=E,215nm,0.6s						
PTBC	PUERTO BERRIO,	9.01	105	P	Pn	02 42 57.2	+2.1
	comp=E,808nmcomp=E,45nm,0.8s						
BBAC	Balboa, Cauca	9.11	139	P	Pn	02 42 57.3	+0.7
	comp=E,5µmcomp=E,5µmcomp=E,247nm,1.1s						
APG	El Apazote	9.28	311	Pn	Pn	02 43 00.5	+1.5
	comp=E,0.3nm,0.3s,baz=144,slow=10.0,SNR=23						
APG				LR	LR	02 46 52.6	
	comp=E,220nm,21.5s,baz=25,slow=40						
ORTC	Ortega, Tolima	9.38	122	P	Pn	02 43 02.4	+2.2
ROSC	El Rosal	9.74	114	Pn	Pn	02 43 08.2	+2.8
	comp=E,3.9nm,0.3s,baz=213,slow=5.2,SNR=19						
ROSC				Sn	Sn	02 45 00.1	+6.4
	comp=E,2.5nm,0.3s,baz=251,slow=21,SNR=2.3						
ROSC				LR	LR	02 47 35.5	
	comp=E,2µm,18.2s,baz=322,slow=44						
ROSC	El Rosal	9.74	114		Pn	02 43 09.4	+4.0
OTAV	Otavalo	9.89	151		Pn	02 43 09.8	+2.3
OTAV	Otavalo	9.89	151	eP	Pn	02 43 05.0	-2.6
HUEH	Huehuetenango	10.26	309		Pn	02 43 14.7	+2.4
MTDJ	Mount Denham	10.72	30		Pn	02 43 18.3	-0.3
MTDJ	Mount Denham	10.72	30	eP	Pn	02 43 17.6	-1.0
SLOR	San Lorenzo -	10.73	154		Pn	02 43 22.8	+3.8
STH	Stony Hill	10.98	34	iP	Pn	02 43 20.3	-1.7
LCCY	Blossom Villag	11.05	16	eP	Pn	02 43 23.4	+0.4
CBCY	The Bluff, Cay	11.21	17	eP	Pn	02 43 23.4	-1.7
CCIG	Comitan	11.33	311		Pn	02 43 29.2	+2.2
COHC	Cochancay	12.03	161		Pn	02 43 39.4	+3.1
SDV	Santo Domingo	12.43	89	Pn	Pn	02 43 42.1	+0.1
	comp=E,4.0nm,0.3s,baz=289,slow=8.8,SNR=35						
SDV				Sn	Sn	02 45 53.9	-5.4
	comp=E,15nm,0.3s,baz=337,slow=14,SNR=6.2						
SDV				LR	LR	02 49 22.2	
	comp=E,1µm,21.1s,baz=273,slow=43						
SDV	Santo Domingo	12.43	89	eP	Pn	02 43 42.0	-0.1
LMGC	Las Mercedes	12.55	28	eP	Pn	02 43 42.4	-1.0
CHIV	Chivirico	12.76	30	eP	Pn	02 43 45.0	-1.3
MARVS	Santiago de Cu	13.04	32	eP	Pn	02 43 49.1	-1.1
YAR	Yar	13.12	30	eP	Pn	02 43 50.1	-1.1
RCC	Rio Carpintero	13.15	33	eP	Pn	02 43 50.6	-1.0
CCCC	Cccc	13.24	23	eP	Pn	02 43 55.4	+2.6
GTBY	Guantanamo Bay	13.42	35		Pn	02 43 55.7	+0.4
GTBY	Guantanamo Bay	13.42	35	⇑iP	Pn	02 43 54.8	-0.4
GTBY	Guantanamo Bay	13.42	35	eP	Pn	02 43 54.8	-0.4
MGV	Manicaragua	13.43	13	eP	Pn	02 43 55.3	-0.1
HLGC	Holguin	13.71	29	eP	Pn	02 43 59.5	+0.2
SOR	Soroa	13.74	1		Pn	02 44 02.2	+2.5
SOR	Soroa	13.74	1	eP	Pn	02 44 01.9	+2.2
QMBU	Quimbuelo	13.80	35	eP	Pn	02 44 00.0	-0.5
CMIG	Matias Romero	13.93	307	Pn	Pn	02 44 01.2	-1.1
	comp=E,2.1nm,0.3s,baz=157,slow=7.6,SNR=28						
	comp=E,32nm,0.8s						
NMDO	Nuevo Mundo	13.99	34		Pn	02 44 02.5	-0.6
NMDO	Nuevo Mundo	13.99	34	eP	Pn	02 44 03.3	+0.2
MOAC	Moa	14.09	34	eP	Pn	02 44 06.0	+1.6
MASC	Masc	14.12	37	eP	Pn	02 44 03.2	-1.6
SDDR	Presa de Saban	15.25	48		Pn	02 44 18.8	-1.0
SDDR	Presa de Saban	15.25	48	eP	Pn	02 44 20.5	+0.7
BANI	BANI	15.60	52		Pn	02 44 21.4	-2.9
SC01	Santiago de lo	15.94	48	P	P	02 44 30.5	-1.0
SC01				IAmb	IAmb	02 44 36.1	
	comp=Z,85nm,0.7s						
DR12	Loma Pena Alta	16.59	53		Pn	02 44 34.3	-2.5
ATAH	Atahualpa	16.71	163	Pn	P	02 44 41.1	+0.6
	comp=Z,0.9nm,0.3s,baz=342,slow=12,SNR=30						
ATAH				LR	LR	02 50 28.8	
	comp=Z,2µm,21.2s,baz=333,slow=35						
TLIG	Tlapa	17.19	301	P	P	02 44 46.8	+1.3
AGPR	Aguadilla, PR	18.26	57	IAmb	IAmb	02 45 02.3	
	comp=Z,84nm,0.8s						
OBIP	Obispado Ponce	18.48	59	P	P	02 44 59.0	-0.5
CELP	Cerrillos	18.52	59	P	P	02 44 59.6	-0.3
CELP				IAmb	IAmb	02 45 02.9	
	comp=Z,92nm,1.3s						
SJG	San Juan	18.90	60	P	P	02 45 00.3	-3.9
	comp=Z,5.4nm,0.3s,baz=257,slow=8.4,SNR=15						
SJG				S	Sn	02 48 19.4	-17
	comp=Z,8.0nm,0.3s,baz=208,slow=23,SNR=5.8						
SJG				LR	LR	02 51 29.0	
	comp=Z,2µm,20.6s,baz=236,slow=35						
	comp=Z,12nm,0.6s						
SJG	San Juan	18.90	60	P	P	02 45 04.5	+0.4
SJG				IAmb	IAmb	02 45 17.8	
	comp=Z,206nm,1.6s						
NNA	Nana	21.77	163	P	P	02 45 37.0	+1.7
	comp=Z,43nm,0.9s,baz=321,slow=8.2,SNR=12						
	comp=Z,43nm,0.9s						
NNA	Nana	21.77	163	P	P	02 45 36.8	+1.5
TEFE	Tefe	22.29	123	eP	P	02 45 40.5	-0.4
ZAIG	Zacatecas	23.08	309	P	P	02 45 51.2	+1.8
BOAV	Boa Vista	23.50	105	P	P	02 45 52.8	-0.4
BOAV	Boa Vista	23.50	105	eP	P	02 45 51.6	-1.6
HKT	Hockley	23.98	332	P	P	02 45 57.4	0.0
HKT				IAmb	IAmb	02 46 14.1	
	comp=Z,74nm,1.4s						
LRAL	Lakeview Retre	24.20	352	IAmb	IAmb	02 46 16.9	
	comp=Z,43nm,1.1s						
GOGA	Godfrey	24.32	359	IAmb	IAmb	02 46 18.9	
	comp=Z,116nm,1.9s						
833A	Chaparral WMA,	24.55	324	IAmb	IAmb	02 46 35.0	
	comp=Z,50nm,1.3s						
HODGE	Hodges	25.15	2	IAmb	IAmb	02 46 26.4	
	comp=Z,30nm,0.9s						
MACA	Manacapuru-AM	25.49	117	P	P	02 46 12.7	+1.2
MACA	Manacapuru-AM	25.49	117	eP	P	02 46 12.7	+1.2
237A	Washetta, Mont	25.72	335	IAmb	IAmb	02 46 48.0	
	comp=Z,58nm,1.2s						
TKL	Tuckaleechee C	26.56	359	LR	LR	02 57 07.6	
	comp=Z,657nm,20.3s,baz=182,slow=38						
MIAR	Mount Ida	27.17	341	IAmb	IAmb	02 47 05.7	
	comp=Z,24nm,1.1s						
WHAR	Wooly Hollow	27.48	344	IAmb	IAmb	02 46 48.7	
	comp=Z,24nm,0.9s						
TXAR	Lajitas Array	27.89	319	P	P	02 46 34.6	+1.5
	comp=Z,0.6nm,0.7s,baz=139,slow=9.3,SNR=5.5						
TXAR				LR	LR	02 59 57.8	
	comp=Z,354nm,20.6s,baz=119,slow=41						
S51A	Beattyville	28.54	359	IAmb	IAmb	02 46 58.6	
	comp=Z,21nm,0.9s						
LPAZ	La Paz	29.21	149	P	P	02 46 45.5	0.0
	comp=Z,6.4nm,0.9s,baz=338,slow=7.7,SNR=18						
LPAZ				LR	LR	02 59 44.8	
	comp=Z,623nm,21.4s,baz=302,slow=39						
	comp=Z,6.4nm,0.9s						
LPAZ	La Paz	29.21	149	eP	P	02 46 46.2	+0.8
MGMO	Mountain Grove	29.23	345	P	P	02 46 44.5	-0.2
MGMO				IAmb	IAmb	02 47 03.0	
	comp=Z,38nm,1.1s						
R49A	Shelbyville	29.24	357	IAmb	IAmb	02 47 04.0	
	comp=Z,20nm,0.7s						
CCM	Cathedral Cave	29.84	347	P	P	02 46 50.3	+0.2
CCM				IAmb	IAmb	02 47 06.5	
	comp=Z,15nm,0.7s						
Q52A	Bidwell	29.87	1	P	P	02 46 52.6	+2.2
Q52A				IAmb	IAmb	02 47 09.9	
	comp=Z,40nm,0.9s						
Q51A	Peebles	29.92	360	IAmb	IAmb	02 47 10.4	
	comp=Z,36nm,0.9s						
LPIG	La Paz	29.92	303	LR	LR	02 59 48.7	
	comp=Z,304nm,19.4s,baz=109,slow=38						
S39A	Bolivar	30.01	344	IAmb	IAmb	02 47 09.5	
	comp=Z,19nm,1.1s						
PB12	IPOC Station P	30.22	155	P	P	02 46 55.3	+1.5
PB12				IAmb	IAmb	02 46 56.3	
	comp=Z,20nm,0.9s						
PB16	IPOC Station P	30.32	154	IAmb	IAmb	02 47 00.6	
	comp=Z,30nm,0.9s						
P53A	Whipple	30.43	3	P	P	02 46 56.1	+0.8
ITTB	Itaituba	30.44	115	eP	P	02 46 55.8	+0.1
MDP	Montagnes des	30.58	95	LR	LR	02 59 55.3	
	comp=Z,766nm,19.5s,baz=274,slow=38						
PB11	IPOC Station P	31.52	155	IAmb	IAmb	02 47 08.3	
	comp=Z,29nm,0.8s						
VILB	Vilhena	31.58	133	eP	P	02 47 06.0	+0.3
GO01	Chusmiza	31.64	154	IAmb	IAmb	02 47 10.5	
	comp=Z,25nm,0.8s						
NPGB	Novo Progresso	32.00	119	eP	P	02 47 08.9	-0.6
PB08	IPOC Station P	32.08	155	IAmb	IAmb	02 47 17.7	
	comp=Z,13nm,0.8s						
PB01	IPOC Station P	32.74	156	IAmb	IAmb	02 47 19.3	
	comp=Z,45nm,1.4s						
PB02	IPOC Station P	32.83	157	IAmb	IAmb	02 47 21.4	
	comp=Z,14nm,0.6s						
SIV	San Ignacio	33.11	138	LR	LR	03 02 36.8	
	comp=Z,518nm,18.7s,baz=304,slow=40						
PB07	IPOC Station P	33.20	157	IAmb	IAmb	02 47 23.4	
	comp=Z,22nm,0.9s						
PDRB	Porto dos Gac	33.35	127	eP	P	02 47 20.5	-0.8
ANMO	Albuquerque	33.48	324	LR	LR	03 05 29.8	
	comp=Z,222nm,19.0s,baz=126,slow=44						
PB03	IPOC Station P	33.54	157	P	P	02 47 24.8	+1.9
CLDB	Colider	33.66	125	eP	P	02 47 23.1	-0.9
PTLB	Pontes e Lacer	34.03	135	P	P	02 47 26.9	-0.2
PTLB	Pontes e Lacer	34.03	135	eP	P	02 47 27.0	-0.2
PB05	IPOC Station P	34.10	158	P	P	02 47 29.4	+1.6
PB05				IAmb	IAmb	02 47 31.2	
	comp=Z,47nm,1.6s						
SADO	Sadowa	35.84	5	LR	LR	03 02 27.3	
	comp=Z,750nm,20.2s,baz=200,slow=37						
X16A	Lo Mia Camp, P	36.21	319	P	P	02 47 47.7	+1.7
ECSD	EROS Data Cent	36.54	344	IAmb	IAmb	02 48 04.0	
	comp=Z,54nm,1.8s						
SALV	Santo Antonio	36.79	132	eP	P	02 47 51.1	+0.2
PV12	Saucer Basin,	37.19	326	IAmb	IAmb	02 48 28.0	
	comp=Z,24nm,1.1s						
PV18	Skein Mesa, Pa	37.20	326	IAmb	IAmb	02 48 34.5	
	comp=Z,14nm,0.7s						
SNDB	Serra Nova Dou	37.95	123	eP	P	02 48 00.3	-0.4
AC06	Mina Casimiro	38.21	161	P	P	02 48 03.9	+1.2
AC06				IAmb	IAmb	02 48 05.8	
	comp=Z,16nm,0.8s						
PP1B	Ponte de Pedra	38.49	133	eP	P	02 48 05.1	-0.1
BDQN	Bodoquena, MS	39.15	139	eP	P	02 48 10.8	0.0
PFO	Pinyon Flats O	39.20	314	LR	LR	03 05 49.5	
	comp=Z,454nm,21.0s,baz=126,slow=38						
E62A	Clayton Lake	39.30	15	P	P	02 48 12.8	+1.2
E62A				IAmb	IAmb	02 48 33.7	
	comp=Z,25nm,0.9s						
MURT	Porto Murtinho	39.48	141	eP	P	02 48 13.4	-0.1
ARAG	Araguaiana, MT	39.61	128	eP	P	02 48 13.8	-0.8
LCO	Las Campanas	39.65	163	P	P	02 48 17.1	+2.1
SMTB	Santa Maria do	39.66	116	eP	P	02 48 15.4	+0.3
D62A	Allapoint, All	39.85	15	P	P	02 48 17.3	+1.1
D62A				IAmb	IAmb	02 48 29.5	
	comp=Z,30nm,1.0s						
AQDB	Aquidauana	39.86	137	IAmb	IAmb	02 48 17.5	
	comp=Z,27nm,0.9s						
AQDB	Aquidauana	39.86	137	eP	P	02 48 16.9	+0.3
E28A	Huff	40.34	341	IAmb	IAmb	02 48 40.4	
	comp=Z,32nm,1.0s						
C2SB	Chapadao do Su	40.72	133	eP	P	02 48 24.2	+0.5
CO01	Juntas del Tor	40.73	162	P	P	02 48 26.6	+2.5
PDAR	Pinedale Array	40.81	330	P	P	02 48 23.9	-0.7
	comp=Z,0.6nm,0.7s,baz=118,slow=7.4,SNR=6.3						
PDAR				LR	LR	03 08 07.8	
	comp=Z,200nm,20.4s,baz=122,slow=40						
HWUT	Hardware Ranch	41.01	327	P	P	02 48 28.8	+2.7
MDND	Maddock	41.15	343	P	P	02 48 26.5	-0.5
CO03	El Pedregal	41.37	164	P	P	02 48 30.9	+1.9
CO03				IAmb	IAmb	02 48 32.2	
	comp=Z,34nm,1.2s						
CO02	Combarbal	41.63	164	P	P	02 48 33.3	+2.1
AMBA	Amambai (Brazi	42.06	139	eP	P	02 48 34.2	-0.5
H03N2	Juan Fernandez	42.38	175	T	T	03 33 23.8	
	baz=354,slow=76,SNR=60						
H03N1	Juan Fernandez	42.38	175	T	T	03 33 25.1	
	baz=354,slow=76,SNR=62						
H03N3	Juan Fernandez	42.39	175	T	T	03 33 23.9	
	baz=354,slow=76,SNR=48						
CO04	Los Peladeros	42.43	165	IAmb	IAmb	02 48 40.7	
	comp=Z,43nm,1.1s						
ULM	Lac du Bonnet	42.47	348	P	P	02 48 36.4	-1.2
	comp=Z,4.3nm,0.6s,baz=155,slow=8.0,SNR=8.5						
	comp=Z,4.3nm,0.6s						
BDFB	Brasilia	42.59	125	P	P	02 48 38.3	-1.0
	comp=Z,30nm,0.7s,baz=291,slow=10.0,SNR=43						
BDFB				LR	LR	03 07 04.6	
	comp=Z,650nm,18.9s,baz=307,slow=37						
BDFB	Brasilia	42.59	125	P	P	02 48 40.2	+0.9
BDFB				IAmb	IAmb	02 48 40.7	
	comp=Z,37nm,0.8s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ZON	Zonda	42.63	162	IAmb	IAmb	02 48 42.6	
	comp=Z,44nm,1.3s						
NVAR	Mina Array Bea	43.04	319	P	P	02 48 43.9	+1.1
	comp=Z,0.8nm,0.7s,baz=129,slow=6.6,SNR=6.3						
NVAR				LR	LR	03 08 21.5	
	comp=Z,425nm,20.0s,baz=102,slow=39						
	comp=Z,0.8nm,0.7s						
ITRB	Iturama	43.12	132	*e*P	P	02 48 43.3	-0.1
CPUP	Villa Florida	43.18	145	P	P	02 48 43.2	-0.5
	comp=Z,5.5nm,0.9s,baz=341,slow=11,SNR=13						
CPUP				LR	LR	03 08 24.1	
	comp=Z,253nm,20.1s,baz=303,slow=38						
	comp=Z,5.5nm,0.9s						
CPUP	Villa Florida	43.18	145	P	P	02 48 43.9	+0.2
CPUP				IAmb	IAmb	02 48 44.8	
	comp=Z,58nm,1.9s						
CPUP	Villa Florida	43.18	145	*e*P	P	02 48 43.5	-0.1
CPUP	Villa Florida	43.18	145	P	P	02 48 43.6	-0.1
CPUP				x	x	02 48 58.2	
VA03	San Esteban	43.23	164	IAmb	IAmb	02 48 47.2	
	comp=Z,38nm,0.9s						
TRCB	Terra Rica	43.52	137	*e*P	P	02 48 46.0	-0.6
SDBA	SAO DESIDERIO	43.60	119	*e*P	P	02 48 47.2	-0.2
NBPS	Pedro II - PI	43.71	106	*e*P	P	02 48 47.9	-0.4
IPMB	Ipameri, GO	43.73	128	*e*P	P	02 48 48.5	+0.1
RPN	Rapa Nui	43.92	214	LR	LR	03 02 43.0	
	comp=Z,806nm,20.4s,baz=46,slow=30						
BO04	La Punta	44.37	165	IAmb	IAmb	02 48 56.0	
	comp=Z,25nm,1.1s						
BO01	Tunca	44.64	166	IAmb	IAmb	02 48 57.9	
	comp=Z,54nm,1.6s						
NBMO	Morrinhos-CE	44.74	104	*e*P	P	02 48 57.1	+0.7
LDASE	Londrina, Braz	44.95	136	*e*P	P	02 48 57.1	-0.9
BO02	Sierra Bellavi	45.09	166	IAmb	IAmb	02 49 06.1	
	comp=Z,13nm,0.8s						
PTGB	Pitanga	45.22	138	*e*P	P	02 48 59.6	-0.6
BB19B	Bebedouro	45.31	132	*e*P	P	02 49 00.3	-0.6
JANB	Januaria	45.36	121	*e*P	P	02 49 01.2	-0.2
PMNB	Patos De Minas	45.43	127	*e*P	P	02 49 02.2	+0.2
WVOR	Wild Horse Val	45.56	323	IAmb	IAmb	02 49 32.0	
	comp=Z,16nm,1.0s						
ORV	Oroville	45.75	318	P	P	02 49 05.8	+1.7
FRTB	Fartura	45.99	135	*e*P	P	02 49 06.0	-0.3
BI02	San Fabin de	46.76	167	IAmb	IAmb	02 49 17.4	
	comp=Z,11nm,0.8s						
PSAL	Palomas, Salto	46.79	149	*e*P	P	02 49 13.9	+1.6
RCLB	Rio Claro- Sao	46.87	132	*e*P	P	02 49 13.1	-0.1
ITAB	Concordia	46.94	141	*e*P	P	02 49 13.9	+0.3
DIAM	Diamantina, MG	47.52	125	*e*P	P	02 49 18.7	+0.3
SCHQ	Schefferville	47.56	13	P	P	02 49 15.7	-2.4
	comp=Z,4.4nm,0.8s,baz=202,slow=7.3,SNR=5.4						
SCHQ				LR	LR	03 11 14.2	
	comp=Z,222nm,18.0s,baz=202,slow=39						
	comp=Z,4.4nm,0.8s						
SCHQ	Schefferville	47.56	13	IAmb	IAmb	02 49 29.7	
	comp=Z,15nm,0.8s						
VAO	Valinhos	47.63	132	*e*P	P	02 49 19.3	+0.1
SPB	Sao Paulo	47.66	133	*e*P	P	02 49 20.0	+0.7
YBH	Yreka Blue Hor	47.67	320	LR	LR	03 12 22.6	
	comp=Z,29nm,20.8s,baz=130,slow=40						
FFC	Flin Flon	48.02	345	P	P	02 49 21.3	-0.3
FFC				IAmb	IAmb	02 49 39.2	
	comp=Z,12nm,0.8s						
FFC	Flin Flon	48.02	345	P	P	02 49 21.2	-0.4
FFC				x	x	02 49 38.4	
BSCB	Bom Sucesso	48.10	129	*e*P	P	02 49 22.9	0.0
PET01	Itanhaem-SP	48.21	134	*e*P	P	02 49 23.6	+0.1
NEW	Newport	48.46	330	LR	LR	03 13 07.5	
	comp=Z,374nm,18.9s,baz=130,slow=40						
CPSB	Cacapava Do Su	48.49	145	*e*P	P	02 49 26.4	+0.8
PARB	Paraibuna	48.82	132	*e*P	P	02 49 28.4	0.0
MAJ01	Sao Joao Batis	49.04	139	*e*P	P	02 49 29.7	-0.2
RCBR	Riachuelo	49.41	106	LR	LR	03 11 41.2	
	comp=Z,272nm,18.6s,baz=302,slow=38						
PLTB	Pedras Altas	49.43	146	*e*P	P	02 49 33.5	+0.7
NBIT	Itapeh - BA	49.48	118	*e*P	P	02 49 33.5	+0.2
GO06	Curarrehue	49.53	168	IAmb	IAmb	02 49 35.8	
	comp=Z,13nm,1.1s						
CMC01	Camacan, BA	49.59	119	*e*P	P	02 49 33.5	-0.7
SJMB	Sao Joao De Ma	49.75	124	*e*P	P	02 49 35.5	+0.1
GUA01	Guaratinga, BA	49.89	120	*e*P	P	02 49 36.1	-0.4
BSFB	Barra de Sao F	50.09	124	*e*P	P	02 49 38.4	+0.3
FCC	Fort Churchill	50.37	353	IAmb	IAmb	02 49 54.9	
	comp=Z,13nm,1.1s						
EDM	Edmonton	50.39	337	IAmb	IAmb	02 49 57.4	
	comp=Z,12nm,0.8s						
DUB01	Friburgo-RJ	50.56	128	*e*P	P	02 49 42.0	+0.4
RIB01	Linhares ES	50.70	124	*e*P	P	02 49 42.8	+0.2
TRQA	Tornquist	50.82	158	P	P	02 49 43.9	+0.6
TRQA				IAmb	IAmb	02 49 45.2	
	comp=Z,32nm,1.5s						
PLCA	Paso Flores	50.82	168	P	P	02 49 44.5	+1.2
	comp=Z,19nm,0.8s,baz=336,slow=8.2,SNR=34						
	comp=Z,19nm,0.8s						
PLCA	Paso Flores	50.82	168	IAmb	IAmb	02 49 45.5	
	comp=Z,22nm,0.9s						
PLCA	Paso Flores	50.82	168	*e*P	P	02 49 44.4	+1.2
PLCA	Paso Flores	50.82	168	P	P	02 49 44.6	+1.4
CAM01	Campos-RJ	50.98	127	*e*P	P	02 49 45.3	+0.6
ALF01	Guarapari-ES	51.09	126	*e*P	P	02 49 46.0	+0.5
FRB	Frobisher Bay	55.68	8	LR	LR	03 15 19.5	
	comp=Z,695nm,18.1s,baz=197,slow=38						
BLKN	Baker Lake	55.99	353	IAmb	IAmb	02 50 37.3	
	comp=Z,17nm,1.2s						
BBB	Bella Bella	56.43	329	LR	LR	03 17 17.5	
	comp=Z,234nm,21.0s,baz=137,slow=39						
YKAW1	Yellowknife Wh	58.03	343	IAmb	IAmb	02 50 51.2	
	comp=Z,11nm,0.8s						
YKA	Yellowknife Ar	58.07	343	P	P	02 50 34.7	-0.7
	comp=Z,1.1nm,0.8s,baz=139,slow=6.2,SNR=15						
	comp=Z,1.1nm,0.8s						
YKAW3	Yellowknife Wh	58.13	343	P	P	02 50 35.7	-0.2
YKAW3				IAmb	IAmb	02 50 46.5	
	comp=Z,13nm,0.7s						
TAOE	Nuku Hiva Isla	59.40	254	*e*S	S	02 58 50.5	-1.2
	comp=Z,143nm,30.4s						
TAOE				*e*SS	SS	03 02 40.5	-7.0
	comp=Z,90nm,32.1s						
TAOE				*e*LR	LR	03 08 15.1	
	comp=Z,390nm,26.1s						
DLBC	Dease Lake	60.83	334	LR	LR	03 21 49.0	
	comp=Z,254nm,18.3s,baz=98,slow=41						
SFJD	Kangerlussuaq	61.99	14	LR	LR	03 20 03.9	
	comp=Z,250nm,19.2s,baz=220,slow=38						
GDH	Godhavn	63.21	11	*i* P	P	02 51 18.1	+7.8
POIN	Pond Inlet	63.76	2	P	P	02 51 12.9	-0.9
NUUG	Nuugaatsiaq	65.20	10	*i* P	P	02 51 23.6	+0.3
NUUG				IAmb	IAmb	02 51 34.2	
	comp=Z,7.8nm,1.0s						
RES	Resolute Bay	66.01	357	LR	LR	03 22 08.4	
	comp=Z,386nm,18.4s,baz=179,slow=38						
RES	Resolute Bay	66.01	357	IAmb	IAmb	02 51 41.4	
	comp=Z,12nm,0.9s						
INK	Inuvik	67.76	342	IAmb	IAmb	02 52 05.2	
	comp=Z,15nm,1.1s						
TULEG	Thule	67.98	4	P	P	02 51 39.6	-1.4
TULEG				IAmb	IAmb	02 51 58.7	
	comp=Z,30nm,1.6s						
TULEG	Thule	67.98	4	*i* P	P	02 51 38.4	-2.6
TULEG				IAmb	IAmb	02 51 51.5	
	comp=Z,4.3nm,0.6s						
BCAR	Beaver Creek A	68.12	335	P	P	02 51 43.4	+1.1
L27K	Beaver Creek,	68.14	335	IAmb	IAmb	02 52 02.1	
	comp=Z,23nm,1.1s						
SUMG	Summit	68.95	13	P	P	02 51 47.8	+0.1
SUMG	Summit	68.95	13	*i* P	P	02 51 47.0	-0.7
SUMG				IAmb	IAmb	02 51 59.3	
	comp=Z,22nm,0.9s						
I27K	Kandik River	69.14	338	P	P	02 51 49.5	+0.9
I27K				IAmb	IAmb	02 52 11.9	
	comp=Z,20nm,0.9s						
DOT	Dot Lake	69.30	335	IAmb	IAmb	02 52 06.3	
	comp=Z,11nm,0.7s						
F28M	Old Crow	69.44	340	IAmb	IAmb	02 52 14.6	
	comp=Z,8.6nm,0.8s						
BORG	Borgarnes	70.14	24	LR	LR	03 21 26.9	
	comp=Z,309nm,18.6s,baz=243,slow=35						
J25K	Salcha River,	70.20	336	IAmb	IAmb	02 52 14.2	
	comp=Z,33nm,1.6s						
NEEM	North Greenlan	70.47	7	*i* P	P	02 51 53.7	-3.1
NEEM				IAmb	IAmb	02 52 08.0	
	comp=Z,21nm,0.9s						
PPT	Papeete	70.64	248	LR	LR	03 17 11.3	
	comp=Z,65nm,20.1s,baz=57,slow=31						
PPT2	Papeete2	70.65	248	*e*S	S	03 01 05.5	-4.2
	comp=Z,111nm,27.0s						
PPT2				*e*SS	SS	03 05 39.5	-3.0
	comp=Z,110nm,30.2s						
PPT2				*e*LR	LR	03 13 32.0	
	comp=Z,335nm,28.2s						
PPT2				*e*LR	LR	03 13 32.4	
	comp=Z,348nm,26.2s						
HDA	Harding Lake	70.76	336	IAmb	IAmb	02 52 16.9	
	comp=Z,22nm,1.1s						
ILAR	Eielson Array	70.86	336	P	P	02 51 59.4	+0.3
	comp=Z,1.8nm,0.9s,baz=116,slow=4.4,SNR=19						
ILAR				LR	LR	03 27 38.7	
	comp=Z,260nm,18.0s,baz=92,slow=40						
	comp=Z,1.8nm,0.9s						
RND	Reindeer	71.23	334	P	P	02 52 02.6	+1.3
KDAK	Kodiak Island	71.50	328	LR	LR	03 26 30.9	
	comp=Z,177nm,20.0s,baz=102,slow=38						
TBI	Tubuai	72.26	242	*e*S	S	03 01 28.6	+0.7
	comp=Z,511nm,29.0s						
TBI				*e*LR	LR	03 14 18.0	
	comp=Z,1µm,28.5s						
BPAW	Bear Paw Mtn.	72.34	335	P	P	02 52 08.5	+0.5
D25K	Kavik River	72.34	341	IAmb	IAmb	02 52 20.0	
	comp=Z,14nm,0.9s						
E23K	Chandalar	73.00	339	IAmb	IAmb	02 52 28.7	
	comp=Z,12nm,0.9s						
E22K	Anaktuvuk Pass	73.81	339	IAmb	IAmb	02 53 22.8	
	comp=Z,27nm,1.9s						
C23K	Itkillik River	73.92	341	IAmb	IAmb	02 52 29.4	
	comp=Z,13nm,0.9s						
IMAR	Indian Mountai	73.97	336	P	P	02 52 17.8	+0.3
G21K	Allakaket	74.01	337	IAmb	IAmb	02 52 36.9	
	comp=Z,12nm,1.0s						
B22K	Teshekpuk Lake	74.98	341	IAmb	IAmb	02 52 41.2	
	comp=Z,30nm,1.2s						
G19K	Purcell Mounta	75.33	336	IAmb	IAmb	02 52 43.7	
	comp=Z,44nm,1.9s						
DAG	Danmarks Havn	75.61	12	*i* P	P	02 52 24.0	-2.8
DAG				IAmb	IAmb	02 52 37.4	
	comp=Z,6.2nm,1.0s						
MDT	Midelt	75.65	58	LR	LR	03 19 24.5	
	comp=Z,238nm,21.9s,baz=305,slow=31						
H18K	Honhosa River	75.67	335	IAmb	IAmb	02 52 46.1	
	comp=Z,43nm,1.9s						
D20K	Etivluk River	75.68	339	IAmb	IAmb	02 52 39.6	
	comp=Z,12nm,0.8s						
G18K	Tagagawik	75.92	336	IAmb	IAmb	02 52 46.3	
	comp=Z,46nm,1.9s						
ESDC	Sonseca Array	76.07	51	P	P	02 52 29.2	-1.1
	comp=Z,1.0nm,0.7s,baz=281,slow=5.2,SNR=9.6						
ESDC				LR	LR	03 18 46.1	
	comp=Z,326nm,21.9s,baz=271,slow=30						
	comp=Z,1.0nm,0.7s						
ESDC	Sonseca Array	76.07	51	P	P	02 52 30.1	-0.1
ESDC				IAmb	IAmb	02 53 02.1	
	comp=Z,21nm,1.7s						
C19K	Lookout Ridge	76.81	339	IAmb	IAmb	02 52 46.8	
	comp=Z,12nm,1.0s						
EKA	Eskdalemuir Ar	77.02	35	P	P	02 52 34.3	-0.9
	comp=Z,2.1nm,1.0s,baz=271,slow=4.6,SNR=1.7						
EKA				LR	LR	03 21 45.7	
	comp=Z,192nm,19.8s,baz=240,slow=32						
	comp=Z,2.1nm,1.0s						
G16K	Koyuk River	77.37	335	IAmb	IAmb	02 53 20.6	
	comp=Z,18nm,1.6s						
DBIC	Dimbokro	77.53	85	LR	LR	03 25 07.4	
	comp=Z,88nm,21.5s,baz=320,slow=34						
J14K	Nanvaranak Lak	77.65	332	IAmb	IAmb	02 53 08.6	
	comp=Z,13nm,1.1s						
F15K	North Star Dit	78.35	335	IAmb	IAmb	02 53 06.0	
	comp=Z,14nm,1.0s						
C16K	Lisburne Hills	78.80	338	IAmb	IAmb	02 52 57.3	
	comp=Z,15nm,0.9s						
RAR	Rarotonga	80.88	247	LR	LR	03 19 37.2	
	comp=Z,146nm,20.1s,baz=82,slow=29						
TORD	Torodi Ar. Bea	83.09	78	P	P	02 53 07.6	-1.1
	comp=Z,0.7nm,0.8s,baz=275,slow=7.2,SNR=4.2						
TORD				LR	LR	03 26 35.1	
	comp=Z,131nm,21.4s,baz=308,slow=33						
	comp=Z,0.7nm,0.8s						
SPITS	Spitsbergen Ar	83.24	12	P	P	02 53 05.5	-2.8
	comp=Z,6.4nm,0.9s,baz=282,slow=8.3,SNR=4.2						
SPITS				LR	LR	03 32 03.9	
	comp=Z,433nm,18.8s,baz=273,slow=37						
	comp=Z,6.4nm,0.9s						
NB2	NORSAR Subarra	84.36	29	P	P	02 53 14.2	-0.2
	comp=Z,4.7nm,1.1s,baz=277,slow=5.1						
NOA	NORSAR Array B	84.36	29	P	P	02 53 12.7	-1.7
	comp=Z,0.7nm,0.8s,baz=305,slow=6.3,SNR=2.1						
NOA				LR	LR	03 29 46.1	
	comp=Z,77nm,18.2s,baz=295,slow=35						
	comp=Z,0.7nm,0.8s						
DAVOX	Davos/Dischmat	85.65	43	LR	LR	03 27 20.8	
	comp=Z,194nm,19.2s,baz=269,slow=33						
HFS	Hagfors	85.72	30	P	P	02 53 19.8	-1.4
	comp=Z,0.8nm,0.6s,baz=309,slow=7.1,SNR=5.6						
HFS				LR	LR	03 29 42.7	
	comp=Z,173nm,18.9s,baz=267,slow=34						
	comp=Z,0.8nm,0.6s						
CLL	Collm	86.94	39	*e*P	P	02 53 27.0	-0.3
CLL				*e*sP	sP	02 53 48.0	+0.8
CLL				*e*SS	SS	03 09 48.0	+3.0
CLL				*e*x	x	03 18 12.0	
CLL				AMS	AMS	03 29 00.0	
	comp=Z,200nm,21.9s						
GERES	GERESS Array B	87.84	41	LR	LR	03 27 11.5	
	comp=Z,419nm,20.6s,baz=258,slow=32						
ARCES	ARCESS Array B	88.08	19	P	P	02 53 30.6	-1.9
	comp=Z,5.5nm,1.0s,baz=297,slow=5.3,SNR=6.9						
ARCES				LR	LR	03 29 42.3	
	comp=Z,137nm,21.8s,baz=297,slow=34						
	comp=Z,5.5nm,1.0s						
VRAC	Vranov	89.60	40	LR	LR	03 28 49.6	
	comp=Z,550nm,20.5s,baz=292,slow=32						
SHEM	Shemya Is, Ala	90.51	324	LR	LR	03 34 14.8	
	comp=Z,47nm,22.0s,baz=100,slow=36						
VAE	Valguarnera	90.60	52	LR	LR	03 28 05.2	
	comp=Z,426nm,21.4s,baz=189,slow=32						
AFI	Afiamalu	90.74	256	LR	LR	03 24 12.8	
	comp=Z,82nm,21.8s,baz=42,slow=29						
FINES	FINESS Array B	91.20	27	P	P	02 53 45.7	-1.5
	comp=Z,2.3nm,0.9s,baz=263,slow=5.5,SNR=3.9						
FINES				LR	LR	03 29 01.7	
	comp=Z,243nm,22.0s,baz=289,slow=32						
	comp=Z,2.3nm,0.9s						
VNA3	Neumayer Olymp	93.22	162	⇓P	P	02 53 54.9	-1.4
	comp=Z,5.8nm,0.8s						
VNA2	Neumayer--Watz	93.83	161	⇓P	P	02 53 58.3	-0.8
	comp=Z,4.1nm,0.8s,baz=295,slow=4.9						
MLR	Muntele Rosu	96.77	42	LR	LR	03 32 24.2	
	comp=Z,250nm,21.8s,baz=294,slow=32						
TIXI	Tiksi	96.78	350	LR	LR	03 41 28.9	
	comp=Z,103nm,19.3s,baz=31,slow=38						
AKASG	Malin Array Be	96.90	36	LR	LR	03 35 03.4	
	comp=Z,311nm,20.3s,baz=280,slow=34						
TROLL	Troll, Antarti	97.16	162	P	Pdif	02 54 15.5	+1.0
OBN	Obninsk	98.92	30	LR	LR	03 38 09.1	
	comp=Z,184nm,18.2s,baz=348,slow=35						
IDI	Anoyia	99.33	52	LR	LR	03 32 28.5	
	comp=Z,88nm,21.5s,baz=300,slow=31						
MA2	Magadan	99.33	335	LR	LR	03 43 35.4	
	comp=Z,79nm,21.8s,baz=42,slow=38						
PETK	Petropavlovsk-	99.55	328	LR	LR	03 39 24.8	
	comp=Z,66nm,21.9s,baz=53,slow=35						
KURK	Kurchatov	118.50	13		PKPdf	02 59 28.9	-1.0
KURBB	Kurchatov Arra	118.56	13	PKP	PKPdf	02 59 28.9	-1.1
	comp=Z,0.4nm,0.5s,baz=332,slow=2.1,SNR=4.2						
CN2	Changchun	121.38	336	*e*P	PKiKP	02 59 37.6	+1.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SONM	Songino Array	122.80	352	PKP	PKPdf	02 59 37.7	-0.7
	comp=Z,0.5nm,0.7s,baz=286,slow=1.1,SNR=4.4						
MKAR	Makanchi Array	122.99	12	PKP	PKPdf	02 59 37.6	-1.1
	comp=Z,0.3nm,0.4s,baz=291,slow=3.0,SNR=6.0						
KSRS	Korea Array	125.38	330	PKP	PKPdf	02 59 42.9	-0.6
	comp=Z,0.7nm,0.5s,baz=18,slow=2.8,SNR=1.1						
WMQ	Urumqi	126.81	8	*e*PKP	PKiKP	02 59 47.4	+0.7
WMQ				LR	LR		
	comp=Z,220nm,22.3s						
HHC	Hu-ho-hao-te	128.58	346	*e*P	PKiKP	02 59 51.1	+0.7
HHC				LR	LR		
	comp=N,130nm,18.8s						
HHC				LR	LR		
	comp=E,150nm,18.4s						
HHC				LR	LR		
	comp=Z,220nm,18.8s						
NJ2	Nanjing	134.07	334	*e*P	PKiKP	03 00 01.6	+0.1
NJ2				pmax	pmax		
	comp=Z,18nm,0.6s						
ASAR	Alice Springs	141.64	243	PKhKP	PKPpre	03 00 09.5	
	comp=Z,0.7nm,0.6s,baz=125,slow=3.6,SNR=11						
WRA	Warramunga Arr	142.12	249	PKhKP	PKPpre	03 00 10.6	
	comp=Z,1.0nm,0.7s,baz=96,slow=2.6,SNR=11						
PZH	PanZhiHua	144.41	352	PKP	PKPbc	03 00 17.7	-0.1
HYB	Hyderabad	148.18	35	*e*P	PKPdf	03 00 25.9	+0.1
HYB				*e*PKiKP	PKiKP	03 00 31.2	+0.4
CMAR	Chiang Mai Arr	152.66	356	PKP	PKPdf	03 00 33.6	+0.9
	comp=Z,2.1nm,0.3s,baz=22,slow=2.3,SNR=5.1						

RSNC 07 02:43:55.4±0.0**,7°N**±1°×**7°3W**±°**,h148**^{km}±2^{km}**,M2.5,ML2.5, MLv3.2,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.24	190	P	Pn	02 44 14.9	-1.0
BARC				S	Sn	02 44 30.3	-1.1
BRJC	Barrancabermej	0.62	283	P	Pn	02 44 16.8	-0.4
BRJC				S	Sn	02 44 33.9	+0.2
PAMC	Pamplona, Colo	0.67	41	P	Pn	02 44 17.8	-0.3
PAMC				S	Sn	02 44 35.2	-0.1
RUSC	La Rusia	0.93	177	P	Pn	02 44 18.9	-1.1
RUSC				S	Sn	02 44 38.1	-0.7
PTBC	PUERTO BERRIO,	1.34	258	P	Pn	02 44 22.0	-1.2
PTBC				S	Sn	02 44 42.9	-1.5
PTBC	PUERTO BERRIO,	1.34	258	S	Sn	02 44 42.8	-1.6
	808nm45nm,0.8s						
OCAC	Ocana	1.41	353	P	Pn	02 44 23.3	-0.8
OCAC				S	Sn	02 44 45.3	-0.7
SPBC	San Pablo de B	1.49	218	P	Pn	02 44 24.2	-0.7
SPBC				S	Sn	02 44 46.0	-1.4
NORC	Norcasia	2.13	234	P	Pn	02 44 31.2	-0.8
NORC				S	Sn	02 44 59.8	-0.4
CHIC	Chingaza	2.26	195	P	Pn	02 44 33.0	-1.0
CHIC				S	Sn	02 45 01.8	-1.8
ROSC	El Rosal	2.30	211	P	Pn	02 44 35.9	+1.5
ROSC				S	Sn	02 45 04.8	+0.5
CVER	Cruz Verde, Cu	2.48	202	P	Pn	02 44 36.8	+0.2
CVER				S	Sn	02 45 10.5	+2.2
UREC	San Jos de Ur	2.54	291	P	Pn	02 44 40.2	+3.2
GUY2C	Guyana, Caldas	2.73	234	P	Pn	02 44 39.3	-0.4
GUY2C				S	Sn	02 45 16.0	+2.1
VILC	Villavicencio,	2.76	192	P	Pn	02 44 38.7	-1.1
CBOC	Ciudad Bolivar	3.01	252	P	Pn	02 44 42.4	-0.6
CBOC				S	Sn	02 45 20.0	+0.2
DBBC	Dabeiba	3.05	274	P	Pn	02 44 43.0	-0.5
DBBC				S	Sn	02 45 18.3	-2.3
ORTC	Ortega, Tolima	3.58	216	P	Pn	02 44 49.7	-0.5
ORTC				S	Sn	02 45 32.7	0.0
URMC	La Uribe, Meta	3.77	199	P	Pn	02 44 52.3	-0.4
URMC				S	Sn	02 45 36.2	-1.0

TEH ***07*** *03:03:47.9,38.°44N×44.°45E,h10^{km}±990^{km},ML2.6, Presumed earthquake*
AZER ***07*** *03:03:48.1,38.°51N×44.°45E,h10^{km},ml2.4*
ISK ***07*** *03:03:51.9,38.°52N×44.°22E,h7^{km},ML2.3/6*
ISC 07 03:03:50.0±1.1**,38.°48N**±0.°03×**44.°50E**±0.°03**,h10**^{km}±11^{km}**, n19,**σ1**§**17/31**,Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAKU	Maku	0.88	9	Pg	Pg	03 04 06.0	-1.1
ISHB	Shabestar	0.90	102	Pg	Pg	03 04 05.8	-1.7
IMRD	Marand	0.97	76	Pg	Pb	03 04 08.1	-0.9
IMRD				Sg	Sg	03 04 22.6	+1.1
NAX	Nakhchivan	1.04	48	P	Pb	03 04 09.5	-0.7
NAX				S	Sb	03 04 24.1	+0.2
HAKT	HAKKARI	1.11	214	P	Pb	03 04 10.5	-1.0
HAKT				S	Sn	03 04 28.0	+0.6
AKDM	Akdamar-Van	1.20	263	Pg	Pb	03 04 11.4	-1.5
SBZ	Shahbuz	1.23	42	P	Pn	03 04 12.9	-0.4
SBZ				S	Sg	03 04 31.1	+1.4
ORD	Ordubad	1.25	69	P	Pn	03 04 13.3	-0.3
ORD				S	Sg	03 04 31.8	+1.4
HYR	Heyderabad	1.26	13	P	Pn	03 04 13.4	-0.4
HYR				S	Sg	03 04 31.0	+0.3
IGDI	IGDIR	1.42	347	P	Pb	03 04 15.9	-0.7
IGDI				S	Sg	03 04 37.2	+1.5
CUKT	Cukurca	1.42	210	Pn	Pg	03 04 17.9	+0.6
CUKT				Sn	Sg	03 04 36.8	+1.0
AGRB	Hanur-Agry	1.60	313	Pn	Pb	03 04 18.9	-0.9
GNI	Garni	1.67	6	Pn	Pg	03 04 22.5	+0.3
GURO	Guroymak-BITLI	1.93	273	Pn	Pn	03 04 22.9	-0.1
GDB	GEDABAY	2.44	23	P	Pn	03 04 31.4	+1.4
GDB				S	Sb	03 05 03.4	-0.7
VRTB	Varto-Mus	2.47	287	Pn	Pn	03 04 30.7	+0.3
GANJ	Ganja	2.58	33	P	Pn	03 04 32.6	+0.8
GANJ				S	Sb	03 05 08.8	+0.7
YRD	Yardimli	2.96	80	P	Pn	03 04 38.9	+1.7
YRD				S	Sb	03 05 17.9	-1.4
LRK	Lerik	3.02	86	P	Pn	03 04 40.3	+2.4
LRK				S	Sb	03 05 19.1	-1.7

IDC 07 03:15:58.5±4.4**,7.°25S**×**155.°28E,h0**^{km}**,mb3.5**/3**, mbtmp3.5**/3**,MS2.9**/2**,Error ellipse: s-maj=132.0km s-min=39.4km az=117.0,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	8.32	255	LR	LR	03 20 03.6	
	comp=Z,30nm,21.7s,baz=13,slow=29						
WRA	Warramunga Arr	23.91	236	P	P	03 21 15.0	+0.7
	1.4nm,0.9s,baz=62,slow=9.6,SNR=7.3						
	1.4nm,0.9s						
MSVF	Nonsavu	24.52	117	LR	LR	03 31 11.9	
	comp=Z,60nm,18.5s,baz=75,slow=37						
ASAR	Alice Springs	26.22	229	P	P	03 21 34.6	-0.8
	0.3nm,0.7s,baz=57,slow=9.1,SNR=4.3						
	0.3nm,0.7s						
MKAR	Makanchi Array	83.78	319	P	P	03 28 29.9	+0.1
	0.4nm,0.7s,baz=113,slow=5.8,SNR=5.6						
	0.4nm,0.7s						

BJI ***07*** *03:52:01.9,31.°59N×115.°00W,h14^{km},mB5.6/19, mb5.1/24,Ms5.6/27,Ms7 5.3/27*
NEIC ***07*** *03:52:01.9,31.°69N×114.°60W,h10^{km}*
NEIC ***07*** *03:52:01.9±2.6,31.°71N±0.°02×114.°65W±0.°04,h10^{km}±1^{km}, mb5.4/277,ML5.6/72,Ms_20 5.2/499,Mwb5.5/79, Mww5.6/136,Md5.6/107(MEX),Mwr5.5/6(PAS),Error ellipse: s-maj=5.2km s-min=3.1km az=99.0,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; Mrr-0.38; Mθθ-1.41; Mφφ1.79; Mrθ-1.05; Mθφ0.17; Mφr-1.12; Fault plane solution: M₀2.25000×10^{17} NP1: φs139.55000°,δ45.26000°,λ-171.70000°. NP2: φs43.69000°,δ84.12000°,λ-45.04000°. Principal axes: T 2.3559, Plg25.0000°, Azm100.0000°; N -0.2293, Plg45.0000°, Azm218.0000°; P -2.1266, Plg35.0000°, Azm351.0000°;*
NEIC ***07*** *03:52:02.4,31.°69N×114.°58W,h14^{km}*
ECX ***07*** *03:52:02.4±0.4,31.°67N×114.°64W,h12^{km}±2^{km},ML5.7, Fault plane solution: NP1:φs138.00000°,δ53.00000°, λ-180.00000°.*
IDC ***07*** *03:52:02.5±0.5,31.°81N×114.°48W,h0^{km},mb4.7/30, mbtmp4.6/36,ML4.4/6,MS5.1/78,Error ellipse: s-maj=11.9km s-min=6.9km az=45.0*
NEIC ***07*** *03:52:02.4,31.°79N×114.°70W,h14^{km},Moment Tensor Solution. Duration: 3§1 Moment tensor: Scale 10^{17}Nm; Mrr-0.36; Mθθ-2.25; Mφφ2.61; Mrθ-0.93; Mθφ0.42; Mφr-0.78; Fault plane solution: M₀2.77000×10^{17} NP1: φs140.62000°,δ63.11000°,λ-175.09000°. NP2: φs48.39000°,δ85.62000°,λ-26.97000°. Principal axes: T 2.8825, Plg15.0000°, Azm98.0000°; N -0.2508, Plg63.0000°, Azm220.0000°; P -2.6317, Plg22.0000°, Azm1.0000°;*
MEX ***07*** *03:52:02.4±0.9,31.°63N×114.°33W,h8^{km}±15^{km},MD5.6*
PTWC ***07*** *03:52:02,31.°70N×114.°50W,h10^{km},Mwp5.7/24*
MOS ***07*** *03:52:03.6±1.3,31.°76N×114.°50W,h17^{km},mb5.5/39, MS5.4/13,Error ellipse: s-maj=7.8km s-min=5.5km az=97.2*
PAS ***07*** *03:52:03.2±2.9,31.°69N±0.°02×114.°54W±0.°05,h10^{km}±1^{km}, Error ellipse: s-maj=6.7km s-min=3.3km az=99.0*
GFZ ***07*** *03:52:04.9,31.°71N×114.°58W,h15^{km},MW5.5,Moment*

Tensor Solution. s44 Moment tensor: M_{rr}-0.52; $M_{\theta\theta}$-2.09; $M_{\phi\phi}$2.62; $M_{r\theta}$-0.26; $M_{\theta\phi}$0.36; $M_{\phi r}$-0.60; Fault plane solution: NP1:ϕ_s138.00000°,δ76.00000°, λ178.00000°. NP2:ϕ_s229.00000°,δ88.00000°,λ13.00000°. Principal axes: T 2.7600, Plg10.0000°, Azm94.0000°; N -0.6100, Plg76.0000°, Azm237.0000°; P -2.1500, Plg8.0000°, Azm3.0000°;

GCMT **07** *03:52:07.9±0.1, 31°.79N±0°.01×114°.58W±0°.01, h14km, MW5.6/160, Moment Tensor Solution. s143,c245; s160,c335; Duration: 1s5 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.46±.03; $M_{\theta\theta}$-2.36±.03; $M_{\phi\phi}$2.82±.03; $M_{r\theta}$-1.23±.08; $M_{\theta\phi}$0.48±.02; $M_{\phi r}$-1.04±.07; Best double couple: $M_0$3.10400×10^{17} NP1:ϕ_s141.00000°,δ58.00000°, λ-174.00000°. NP2:ϕ_s48.00000°,δ85.00000°, λ-32.00000°. Principal axes: T 3.2420, Plg18.0000°, Azm99.0000°; N -0.2800, Plg57.0000°, Azm220.0000°; P -2.9650, Plg26.0000°, Azm360.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 03:52:03.0±0.5**, 31°.65N**±0°.02×**114°.56W**±0°.02**, h11**km±2km**, h11**km**:pP-P, n1143,** σ**2s20**/847**, mb5.4**/182**, MS5.2**/336**, 58C-41D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDOMX	El Doctor, EDO	0.34	333		Pb	03 52 10.4	-0.8
EDOMX					Sb	03 52 15.3	-1.4
EDOMX	El Doctor, EDO	0.34	333	⇓iP	Pb	03 52 10.4	-0.8
EDOMX				eS	Sb	03 52 15.6	-1.1
ECBX	El Chinero	0.46	247	⇑eP	Pg	03 52 12.4	+0.5
ECBX				eS	Sg	03 52 18.8	+0.9
ECBX				⇑e		03 52 20.1	
ECBX				IAML		03 52 20.1	
	comp=N,373μm,0.5s						
ECBX				e		03 52 26.7	
RITX	Riito Sonora	0.61	327		Pg	03 52 14.7	-0.3
RITX	Riito Sonora	0.61	327	⇓iP	Pg	03 52 14.7	-0.3
SFX	San Felipe	0.66	202		Pb	03 52 16.1	-0.4
SFX	San Felipe	0.66	202		Sb	03 52 25.5	-0.2
SFX	San Felipe	0.66	202	⇓iP	Pb	03 52 16.2	-0.4
SFX	San Felipe	0.66	202	⇓eP	Pg	03 52 16.0	+0.2
SFX				iS	Sb	03 52 25.5	-0.2
RHX	Rio Hardy	0.78	308	⇓eP	Pg	03 52 16.4	-1.7
GUVIX	Guadalupe Vict	0.78	326		Pg	03 52 17.1	-1.1
GUVIX					Sg	03 52 27.9	-0.4
GUVIX	Guadalupe Vict	0.78	326	⇓iP	Pg	03 52 17.1	-1.1
GUVIX				eS	Sg	03 52 27.9	-0.4
GUVIX	Guadalupe Vict	0.78	326	P	Pg	03 52 17.1	-1.1
AGSX	Ej. Aguas Cali	0.80	320	⇓eP	Pg	03 52 17.0	-1.4
AGSX				eS	Sg	03 52 28.5	-0.3
SLRCX	San Luis Rio C	0.81	351		Pg	03 52 17.8	-1.0
SLRCX					Sg	03 52 29.2	-0.1
SLRCX	San Luis Rio C	0.81	351	⇓iP	Pg	03 52 17.7	-1.0
PESCX	Ej. Pescaderos	0.85	336		Pg	03 52 18.2	-1.3
PESCX					Sg	03 52 29.5	-1.1
PESCX	Ej. Pescaderos	0.85	336	⇓iP	Pg	03 52 18.2	-1.3
PESCX				eS	Sg	03 52 30.1	-0.5
PPXB	Puerto Peasco	0.85	111	⇑iP	Pg	03 52 18.9	-0.5
PPXB				IAML		03 52 32.8	
	comp=E,254μm,0.3s						
PPXB				⇓e		03 52 32.8	
MBIG	Mexicali	0.93	325	eP	Pg	03 52 20.3	-0.6
MBIG				iS	Sg	03 52 32.9	0.0
PIX	Pinacate	0.94	95		Pg	03 52 20.3	-0.9
PIX				IAML		03 52 44.5	
	comp=N,101μm,0.8s						
PIX	Pinacate	0.94	95	⇑iP	Pg	03 52 20.3	-0.9
PIX	Pinacate	0.94	95	P	Pg	03 52 20.2	-1.0
CTLX	Tlaxcala, TLX	0.96	329	⇓eP	Pg	03 52 18.9	-2.6
CTLX				eS	Sg	03 52 31.5	-2.4
SPIG	San Pedro Mart	0.98	232		Pg	03 52 21.0	-0.9
SPIG					Sb	03 52 35.8	+0.4
SPIG	San Pedro Mart	0.98	232	⇓eP	Pg	03 52 21.1	-0.9
SPIG	San Pedro Mart	0.98	232	eP	Pg	03 52 21.0	-0.9
SPIG				eS	Sb	03 52 35.8	+0.4
SPIG	San Pedro Mart	0.98	232	P	Pg	03 52 21.1	-0.9
CPBX	Cerro Prieto	0.99	321		Pg	03 52 19.7	-2.4
CPBX	Cerro Prieto	0.99	321	⇓eP	Pg	03 52 19.7	-2.4
CPBX				eS	Sg	03 52 33.5	-1.6
CPBX				⇓e		03 52 48.3	
CPBX				IAML		03 52 48.3	
	comp=E,662μm,1.2s						
ALAMX	Rancho Alamar	1.04	290	⇓eP	Pg	03 52 20.4	-2.6
ALAMX				IAML		03 52 47.7	
	comp=N,205μm,1.5s						
ALAMX				e		03 52 47.7	
YUCAX	Ej. Yucat¡n	1.05	335	⇓eP	Pg	03 52 20.9	-2.4
YUCAX				eS	Sg	03 52 35.2	-1.8
VTX	Valle De La Tr	1.07	256		Pg	03 52 22.2	-1.4
VTX	Valle De La Tr	1.07	256	⇑iP	Pg	03 52 22.3	-1.4
EMSC	East Mesa	1.14	342		Pb	03 52 22.4	-2.4
SJX	San Joaquin	1.20	276	eP	Pb	03 52 23.5	-2.2
UABX	UABC, Campus M	1.23	323		Pn	03 52 23.4	-2.8
UABX	UABC, Campus M	1.23	323	⇓eP	Pn	03 52 23.2	-3.0
UABX				⇑e		03 52 55.3	
UABX				IAML		03 52 55.4	
	comp=E,405μm,0.9s						
UABX				⇑e		03 52 55.4	
JARAX	Ej. Heriberto	1.24	316	⇓eP	Pn	03 52 22.7	-3.6
JARAX				⇓e		03 52 54.0	
5053	Calexico	1.29	322		Pn	03 52 23.9	-3.0
5053					Sb	03 52 43.2	-0.5
COA	Coachella	1.30	339		Pn	03 52 24.3	-2.8
113A	Mohawk Valley,	1.30	31		Pn	03 52 25.2	-2.0
113A				IAML		03 52 49.4	
	comp=N,54μm,1.2s						
RUN	Ruthven	1.36	345		Pn	03 52 25.1	-2.9
DREC	Desert Rsrch C	1.37	327		Pn	03 52 25.3	-2.8
SGL	Mount Signal	1.40	316		Pn	03 52 28.3	-0.2
GLA	Glamis	1.41	351		Pn	03 52 26.1	-2.6
GLA				IAML		03 52 54.9	
	comp=N,131μm,0.5s						
GLA	Glamis	1.41	351	⇓iP	Pn	03 52 26.2	-2.6
GLA	Glamis	1.41	351	P	Pn	03 52 26.1	-2.6
GLA	Glamis	1.41	351	P	Pn	03 52 25.0	-3.8
SNR	Schaffner Ranc	1.42	329		Pn	03 52 25.8	-2.9
SV2X	San Vicente	1.47	258	⇑iP	Pn	03 52 27.5	-1.9
IMPE	Imperial	1.51	326		Pn	03 52 27.0	-3.0
214A	Organ Pipe Nat	1.52	78		Pn	03 52 28.6	-1.6
214A				IAML		03 52 57.5	
	comp=E,59μm,0.6s						
214A				IAML		03 52 59.7	
	comp=N,47μm,1.3s						
COK2	Cook Ranch 2	1.55	321		Pn	03 52 27.5	-3.1
SQX	San Quintin	1.56	227	⇓eP	Pn	03 52 29.8	-0.9
WEMD	Westmorland, C	1.63	328		Pn	03 52 28.6	-3.0
IKP	In-Ko-Pah, Jac	1.65	308	P	Pn	03 52 28.0	-4.0
CCX	Cicese	1.80	277		Pn	03 52 32.2	-1.8
CCX				IAML		03 53 12.3	
	comp=E,55μm,1.0s						
CCX				IAML		03 53 15.1	
	comp=N,91μm,1.5s						
CCX	Cicese	1.80	277	⇑eP	Pn	03 52 32.2	-1.8
PBX	Punta Banda	1.85	273	⇑eP	Pn	03 52 32.7	-2.0
CBX	Cerro Bola	1.90	291		Sn	03 53 00.0	+0.4
CBX	Cerro Bola	1.90	291		Pn	03 52 33.5	-2.0
CBX	Cerro Bola	1.90	291	⇓eP	Pn	03 52 33.6	-2.0
CBX				eS	Sn	03 53 00.0	+0.4
TJIG	Tijuana	1.96	294		Pn	03 52 33.8	-2.3
TJIG					Sn	03 53 01.8	+1.1
TJIG	Tijuana	1.96	294	eP	Pn	03 52 33.8	-2.3
TJIG				eS	Sn	03 53 01.8	+1.1
TJIG	Tijuana	1.96	294	P	Pn	03 52 33.9	-2.3
SALN	Salton City	2.02	324		Pn	03 52 33.8	-3.2
BAR	Barrett	2.06	300		Pn	03 52 35.3	-2.4
BAR				IAML		03 53 07.9	
	comp=N,64μm,0.3s						
BAR				IAML		03 53 08.6	
	comp=E,45μm,0.3s						
BAR	Barrett	2.06	300	P	Pn	03 52 35.3	-2.4
BLYC	Blythe	2.09	1		Pn	03 52 36.1	-1.9
BLYC				IAML		03 53 15.0	
	comp=E,55μm,0.9s						
BLYC				IAML		03 53 29.8	
	comp=N,31μm,0.8s						
SLH	Sleepy Hollow	2.10	317	⇓iP	Pn	03 52 35.1	-3.1
BC3	Big Chuckawall	2.13	340		Pn	03 52 36.4	-2.4
BC3				IAML		03 53 23.6	
	comp=E,46μm,2.1s						
BC3				IAML		03 53 27.5	
	comp=N,39μm,1.0s						
LAPR	La Primavera	2.24	120	⇑iP	Pn	03 52 38.1	-2.0
BORC	Borrego Spring	2.25	316		Pn	03 52 37.1	-3.2
TJX	Tijuana	2.28	293		Pn	03 52 39.2	-1.5
MATG	Mataguay Scout	2.34	312	⇓iP	Pn	03 52 39.0	-2.7
DPP	Dos Picos Cty	2.42	304		Pn	03 52 40.1	-2.5
DPP				IAML		03 53 19.7	
	comp=E,24μm,0.7s						
DPP				IAML		03 53 28.1	
	comp=N,22μm,2.1s						
CPE	Camp Elliot	2.48	300		Pn	03 52 41.2	-2.2
CPE				IAML		03 53 27.6	
	comp=N,42μm,1.7s						
CPE				IAML		03 53 30.9	
	comp=E,31μm,1.4s						
PMD	Palm Desert	2.51	323		Pn	03 52 40.6	-3.2
PFO	Pinyon Flats O	2.53	321	Pn	Pn	03 52 41.7	-2.4
	comp=E,10nm,0.3s,baz=135,slow=13,SNR=127						
PFO				Lg	Lg	03 53 18.5	
	comp=E,1μm,0.3s,baz=66,slow=23,SNR=12						
PFO				LR	LR	03 53 56.7	
	comp=E,28μm,19.0s,baz=25,slow=47						
	comp=E,72nm,0.5s						
PFO	Pinyon Flats O	2.53	321		Pn	03 52 41.0	-3.1
PFO	Pinyon Flats O	2.53	321	d iP	Pn	03 52 41.1	-3.1
PFO	Pinyon Flats O	2.53	321	P	Pn	03 52 41.1	-3.1
IRM	Iron Mountain	2.55	349		Pn	03 52 42.2	-2.1
IRM				IAML		03 53 38.2	
	comp=E,25μm,0.8s						
IRM				IAML		03 53 43.2	
	comp=N,19μm,0.8s						
IRM	Iron Mountain	2.55	349	P	Pn	03 52 42.2	-2.1
BZNA	Buzz No.'s Pla	2.56	316	P	Pn	03 52 41.9	-2.6
Y14A	Wickenburg	2.63	29		Pn	03 52 44.1	-1.4
Y14A				IAML		03 53 28.2	
	comp=N,29μm,1.4s						
Y14A				IAML		03 53 30.5	
	comp=E,31μm,0.6s						
BAHB	Baha de los	2.83	162		Pn	03 52 46.7	-1.5
BAHB	Baha de los	2.83	162	⇑eP	Pn	03 52 46.7	-1.5
DANC	Danby, Needles	3.06	347		Pn	03 52 49.6	-1.7
DANC				IAML		03 53 56.1	
	comp=N,23μm,1.6s						
DANC				IAML		03 53 58.8	
	comp=E,25μm,1.4s						
ELS	Elsinore Mount	3.13	310		Pn	03 52 49.7	-2.7
ELS				IAML		03 53 45.7	
	comp=N,11μm,1.0s						
ELS				IAML		03 53 54.2	
	comp=E,13μm,1.8s						
SVD	Seven Oaks Dam	3.25	320	P	Pn	03 52 54.2	+0.2
GMRC	Granite Mounta	3.26	344	P	Pn	03 52 52.1	-2.1
TUC	Tucson	3.28	77		Pn	03 52 52.7	-1.7
TUC	Tucson	3.28	77	P	Pn	03 52 52.7	-1.7
TUC	Tucson	3.28	77	⇑eP	Pn	03 52 52.5	-1.9
TUC				eS	Sn	03 53 24.6	-8.9
TUC	Tucson	3.28	77	P	Pn	03 52 52.8	-1.7
W13A	Hualapai Mount	3.48	9		Pn	03 52 56.0	-1.4
SCI2	San Clemente I	3.62	292	P	Pn	03 52 57.3	-1.8
CIAC	Catalina I. Ai	3.69	299	P	Pn	03 52 57.4	-2.7
ADO	Adelanto Recei	3.76	321	P	Pn	03 53 01.5	+0.4
X16A	Lo Mia Camp, P	3.81	43		Pn	03 53 01.1	-0.7
MWC	Mount Wilson	3.90	312	IAML		03 54 20.9	
	comp=E,13μm,1.1s						
MWC				IAML		03 54 21.7	
	comp=N,12μm,1.6s						
USC	University of	3.92	308	P	Pg	03 53 17.6	-0.6
PASC	Pasadena Art C	3.95	310	IAML		03 54 14.2	
	comp=E,8μm,1.8s						
PASC				IAML		03 54 16.5	
	comp=N,9μm,3.7s						
PASC	Pasadena Art C	3.95	310	P	Pn	03 53 01.0	-2.6
CHFC	Chilao Flat St	3.95	314	P	Pn	03 53 01.5	-2.3
HSIG		4.08	129		Pn	03 53 03.8	-1.6
HSIG		4.08	129	P	Pn	03 53 04.1	-1.3
GSC	Goldstone, Bar	4.09	333	IAML		03 54 42.1	
	comp=N,8μm,2.1s						
NZIG	Nacozari, Sono	4.48	105		Pn	03 53 10.0	-1.1
NZIG	Nacozari, Sono	4.48	105	⇑eP	Pn	03 53 10.0	-1.1
NZIG				eS	Sn	03 53 57.3	-6.1
319A	Douglas	4.52	92		Pn	03 53 10.9	-0.6
OSI	Osito Audit: C	4.57	311		Pn	03 53 10.0	-2.2
WUAZ	Wupatki	4.68	34		Pn	03 53 13.7	-0.1
SRIG	Santa Rosalia	4.77	154		Pn	03 53 17.0	+2.2
X18A	Snowflake	4.82	52		Pn	03 53 15.3	-0.5
GUYB	Guaymas	4.93	138	⇑eP	Pn	03 53 16.4	-0.6
GUYB				eS	Sn	03 54 06.7	-7.3
ISA	Isabella, Lake	5.16	322	IAML		03 55 07.1	
	comp=E,4μm,2.4s						
ISA				IAML		03 55 15.1	
	comp=N,2μm,2.0s						
CGIG		5.80	101	P	Pn	03 53 29.4	+0.3
NVAR	Mina Array Bea	7.42	337	Pn	Pn	03 53 51.0	-0.5
	comp=N,1.1nm,0.3s,baz=162,slow=15,SNR=35						
NVAR				Lg	Lg	03 55 54.4	
	baz=230,slow=46						
NVAR				LR	LR	03 56 42.0	
	comp=N,17μm,21.5s,baz=152,slow=38						
	comp=N,7.2nm,0.7s						
NVAR	Mina Array Bea	7.42	337		Pn	03 53 50.8	-0.7
MVCO	Mesa Verde	7.47	40		Pn	03 53 54.0	+1.8
ANMO	Albuquerque	7.54	62	Pn	Pn	03 53 53.7	+0.7
	comp=N,0.8nm,0.3s,baz=226,slow=12,SNR=17						
ANMO				Lg	Lg	03 55 56.9	
	comp=N,5.9nm,0.3s,baz=352,slow=21,SNR=11						
ANMO				LR	LR	03 56 32.3	
	comp=N,10μm,20.1s,baz=250,slow=36						
	comp=N,2.0nm,0.3s						
ANMO	Albuquerque	7.54	62		Pn	03 53 53.2	+0.1
ANMO	Albuquerque	7.54	62	iP	Pn	03 53 55.0	+1.9
ANMO				pmax	pmax		
	comp=Z,12nm,1.1s						
MNTX	Cornudas Mount	7.83	87		Pn	03 53 57.0	+0.1
MNTX	Cornudas Mount	7.83	87	eP	Pn	03 53 56.2	-0.7
VHRN	Van Horn	8.25	94		Pn	03 54 03.6	+0.8
LPIG	La Paz	8.41	152	Pn	Pn	03 54 08.4	+3.6
	comp=Z,1.4nm,0.3s,baz=147,slow=13,SNR=13						
LPIG				Lg	Lg	03 56 37.8	
	comp=Z,11nm,0.3s,baz=67,slow=4.0,SNR=2.1						
LPIG				LR	LR	03 56 58.2	
	comp=Z,6μm,20.9s,baz=344,slow=35						
	comp=Z,27nm,0.5s						
LPIG	La Paz	8.41	152		Pn	03 54 03.2	-1.6
LPIG	La Paz	8.41	152	⇑eP	Pn	03 54 03.2	-1.6
LPIG				eS	Sn	03 55 34.8	-5.0
GDL2	Guadalupe Moun	8.69	84		Pn	03 54 09.1	+0.3
SLBS	Sierra La Lagu	8.93	152		Pn	03 54 14.5	+2.5
BCIG	La Boquilla	8.95	115		Pn	03 54 08.3	-4.1
BCIG	La Boquilla	8.95	115	⇑eP	Pn	03 54 08.3	-4.1
BCIG				eS	Sn	03 55 43.7	-10
HPIG		9.08	119		Pn	03 54 13.8	-0.4
HPIG		9.08	119	eP	Pn	03 54 10.9	-3.4
HPIG				eS	Sn	03 55 50.2	-6.3
ELK	Elko	9.09	357	Lg	Lg	03 56 47.8	
	comp=Z,3.1nm,0.3s,baz=12,slow=3.4,SNR=4.7						
ELK				LR	LR	03 57 57.7	
	comp=Z,11μm,19.2s,baz=182,slow=40						
SSIG	Sanalona	9.44	134		Pn	03 54 14.3	-4.7
SSIG	Sanalona	9.44	134	eP	Pn	03 54 14.3	-4.7
SSIG				eS	Sn	03 56 00.9	-4.3
SUTB	Sutter Butte	9.58	324	Pn	Pn	03 54 20.8	-0.1
TXAR	Lajitas Array	9.68	101	Pn	Pn	03 54 22.9	+0.5
	comp=Z,22nm,0.3s,baz=278,slow=14,SNR=436						
TXAR				Lg	Lg	03 57 09.6	
	comp=Z,7.6nm,0.3s,baz=278,slow=28,SNR=9.2						
TXAR				LR	LR	03 58 49.0	
	comp=Z,15μm,18.0s,baz=276,slow=42						
ORV	Oroville	9.70	326		Pn	03 54 22.0	-0.5
ORV	Oroville	9.70	326	P	Pn	03 54 22.0	-0.5
O20A	White River Ci	9.89	29		Pn	03 54 26.3	+1.0
HWUT	Hardware Ranch	10.22	13		Pn	03 54 31.3	+1.4
PDIG	Papasquiaro	10.42	127		Pn	03 54 30.7	-1.9
PDIG	Papasquiaro	10.42	127	eP	Pn	03 54 30.7	-1.9
PDIG				eS	Sn	03 56 24.0	-5.4
SAND	Sanderson	10.83	96		Pn	03 54 39.9	+1.9
ISCO	Idaho Springs	10.90	39		Pn	03 54 42.0	+2.7
ISCO	Idaho Springs	10.90	39	P	Pn	03 54 42.0	+2.7
MAIG	Mazatlaan	11.10	137		Pn	03 54 37.4	-4.3
MAIG	Mazatlaan	11.10	137	eP	Pn	03 54 37.4	-4.3
PDAR	Pinedale Array	11.79	18	Pn	Pn	03 54 52.1	+0.8
	comp=Z,1.3nm,0.3s,baz=203,slow=14,SNR=52						
PDAR				Lg	Lg	03 58 14.9	
	comp=Z,0.6nm,0.3s,baz=177,slow=16,SNR=3.1						
PDAR				LR	LR	03 59 29.3	
	comp=Z,20μm,19.1s,baz=198,slow=38						
	comp=Z,43nm,1.1s						
PDAR	Pinedale Array	11.79	18		Pn	03 54 52.6	+1.2
MCIG	Muzquiz	11.97	105		Pn	03 54 50.7	-2.9
MCIG	Muzquiz	11.97	105	⇑eP	Pn	03 54 50.7	-2.9
MCIG				eS	Sn	03 56 59.4	-7.8
YBH	Yreka Blue Hor	11.99	329	Pn	Pn	03 54 57.5	+3.5
	comp=Z,20nm,1.1s,baz=161,slow=5.7,SNR=170						
YBH				Lg	Lg	03 58 21.4	
	baz=38,slow=10,SNR=2.2						
YBH				LR	LR	03 59 21.6	
	comp=Z,593nm,19.3s,baz=180,slow=37						
DRIO	Del Rio	12.22	97		Pn	03 54 58.0	+0.9
APMT	Aspermont	12.31	78		Pn	03 54 59.2	+0.9
SMWD	Samnorwood	12.45	70		Pn	03 55 02.4	+2.1
JCT	Junction City	12.71	91		Pn	03 55 02.2	-1.6
JCT	Junction City	12.71	91	P	Pn	03 55 02.2	-1.6
JCT	Junction City	12.71	91	eP	Pn	03 55 02.2	-1.6
ELIS	Ellis County	13.33	67		Pn	03 55 12.4	+0.1
WMOK	Wichita Mounta	13.57	73		Pn	03 55 16.0	+0.5
WMOK	Wichita Mounta	13.57	73	P	Pn	03 55 16.0	+0.5
ZAIG	Zacatecas	13.85	127		Pn	03 55 19.6	0.0
ZAIG	Zacatecas	13.85	127	⇑eP	Pn	03 55 19.2	-0.4
ZAIG				eS	Sn	03 57 46.8	-7.0
ANIG	Ahuacatlan	13.86	137		Pn	03 55 17.1	-2.5
ANIG	Ahuacatlan	13.86	137	⇑eP	Pn	03 55 17.1	-2.5
CBKS	Cedar Bluff	14.06	55		Pn	03 55 20.3	-1.9
CBKS	Cedar Bluff	14.06	55	P	Pn	03 55 20.3	-1.9
H04D	Lebanon	14.36	336	P	P	03 55 30.0	-3.3
435B	Jarrell	14.56	89		Pn	03 55 28.9	-0.1
CROK	Carrier	14.56	66		Pn	03 55 27.6	-1.5
CJM	Chamela	14.83	142	⇑eP	Pn	03 55 29.7	-3.0
LNIG	Linares	14.90	113		Pn	03 55 34.5	+0.8
LNIG	Linares	14.90	113	eP	Pn	03 55 34.5	+0.8
RSSD	Black Hills	14.95	31		Pn	03 55 34.7	+0.2
RSSD	Black Hills	14.95	31	P	Pn	03 55 34.7	+0.2
MSO	Missoula	15.16	2	P	Pn	03 55 39.6	+2.3
MSO				IAmb	IAmb	03 55 41.6	
	comp=Z,219nm,1.5s						
HAWA	Hanford	15.21	347	IAmb	IAmb	03 55 42.0	
	comp=Z,298nm,1.3s						
E08A	Dider Farm, El	15.22	348	IAmb	IAmb	03 55 42.2	
	comp=Z,356nm,1.7s						
MXC	Moxie City	15.55	345	IAmb	IAmb	03 55 46.5	
	comp=Z,311nm,1.5s						
CEGR	Campo Tres	15.55	139	⇑eP	Pn	03 55 41.1	-1.5
CEGR				eS	Sn	03 58 28.0	-7.0
WAH2	Wahluke Slope	15.57	347	IAmb	IAmb	03 55 46.9	
	comp=Z,387nm,1.5s						
SOMAC	Volcano de Col	15.58	138	⇓eP	Pn	03 55 40.5	-2.5
SOMAC				eS	Sn	03 58 28.6	-7.3
INCO	Volcan de Coli	15.59	138	⇓eP	Pn	03 55 40.5	-2.7
INCO				eS	Sn	03 58 29.1	-7.1
F04D	Rainier, OR	15.83	338	P	P	03 55 48.1	-1.5
F04D				IAmb	IAmb	03 55 49.2	
	comp=Z,291nm,1.4s						
CDAR	Ciudad de Arme	15.84	141	⇑eP	Pn	03 55 43.9	-2.1
CDAR				eS	Sn	03 58 35.4	-6.2
237A	Washetta, Mont	15.95	84	IAmb	IAmb	03 55 53.5	
	comp=Z,504nm,1.4s						
IGIG	Irapuato, Guan	16.07	129	P	Pn	03 55 50.7	+1.4
IGIG	Irapuato, Guan	16.07	129	eP	Pn	03 55 50.7	+1.4
GTIG	Gomez Farias	16.11	118	P	Pn	03 55 47.6	-2.0
GTIG	Gomez Farias	16.11	118	⇓eP	Pn	03 55 47.6	-2.0
EPH	Ephrata	16.15	348	IAmb	IAmb	03 55 55.3	
	comp=Z,411nm,1.6s						
TUL3	Leonard	16.17	70	IAmb	IAmb	03 55 56.3	
	comp=Z,340nm,1.4s						
HKT	Hockley	16.18	91		Pn	03 55 51.3	+1.0
HKT	Hockley	16.18	91	iP	Pn	03 55 51.4	+1.0
HKT				pmax	pmax		
	comp=Z,141nm,1.3s						
LTY	Liberty	16.27	345	IAmb	IAmb	03 55 55.7	
	comp=Z,400nm,1.5s						
LAO	LASA Array	16.33	21	IAmb	IAmb	03 55 55.7	
	comp=Z,494nm,1.1s						
HNVL	Huntsville, TX	16.37	88	IAmb	IAmb	03 55 58.9	
	comp=Z,418nm,1.4s						
C09A	Chrisman Ranch	16.38	351	IAmb	IAmb	03 55 58.4	
	comp=Z,351nm,1.6s						
RADR	Rader Ridge	16.38	337	IAmb	IAmb	03 55 56.3	
	comp=Z,410nm,1.7s						
D05A	Enumclaw	16.53	342	IAmb	IAmb	03 55 59.4	
	comp=Z,640nm,1.5s						
Z38A	Mt. Pleasant	16.60	79	IAmb	IAmb	03 55 59.5	
	comp=Z,637nm,1.4s						
NEW	Newport	16.71	354	Pn	P	03 55 58.9	-0.5
	comp=Z,2.1nm,0.3s,baz=171,slow=13,SNR=65						
NEW				Lg	Lg	04 00 46.4	
	baz=60,slow=20,SNR=0.9						
NEW				LR	LR	04 02 25.9	
	comp=Z,6μm,20.6s,baz=181,slow=38						
NEW	Newport	16.71	354	IAmb	IAmb	03 56 02.6	
	comp=Z,280nm,1.1s						
MMIG	Aquila	16.73	140	P	Pn	03 55 53.6	-3.9
MMIG	Aquila	16.73	140	eP	Pn	03 55 53.6	-3.9
MOIG	Morelia	16.93	132	P	P	03 56 03.9	+1.7
MOIG				IAmb	IAmb	03 56 07.8	
	comp=Z,496nm,1.8s						
MOIG	Morelia	16.93	132	⇑eP	Pn	03 56 00.2	-0.1
NATX	Nacogdoches	16.94	84	IAmb	IAmb	03 56 04.4	
	comp=Z,414nm,1.2s						
ACIG	Acambay	17.58	128	P	Pn	03 56 06.3	-2.0
ACIG	Acambay	17.58	128	⇑eP	Pn	03 56 06.3	-2.0
B04A	Port Angeles	17.74	340	IAmb	IAmb	03 56 17.4	
	comp=Z,648nm,1.4s						
MIAR	Mount Ida	17.82	75	IAmb	IAmb	03 56 14.2	
	comp=Z,456nm,1.3s						
DEIG	Demacu	17.94	125	⇑eP	Pn	03 56 10.1	-2.7
DHIG	Demacu	17.94	125	P	Pn	03 56 10.1	-2.7
C03A	Quillayute Air	17.97	338	P	Pn	03 56 10.9	-1.9
TOVM	TOLUCA	18.20	129	P	P	03 56 17.6	+1.2
TOVM	TOLUCA	18.20	129	⇑eP	P	03 56 17.6	+1.2
ZUVM	ZUMPANGO	18.23	127	P	Pn	03 56 13.4	-3.0
ZUVM	ZUMPANGO	18.23	127	eP	Pn	03 56 13.4	-3.0
AZVM	Cuida Lopez Ma	18.25	128	P	Pn	03 56 14.7	-2.1
AZVM	Cuida Lopez Ma	18.25	128	eP	Pn	03 56 14.7	-2.1
PGC	Sidney	18.27	341	IAmb	IAmb	03 56 21.3	
	comp=Z,300nm,1.2s						
441A	DeRidder	18.31	87	P	Pn	03 56 15.5	-1.5
441A				IAmb	IAmb	03 56 22.3	
	comp=Z,277nm,1.3s						
PTVM	Pico Tres Padr	18.36	127	P	P	03 56 21.0	+2.9
PTVM	Pico Tres Padr	18.36	127	⇑eP	P	03 56 21.0	+2.9
INVM	La Marquesa	18.39	128	P	P	03 56 19.3	+0.8
INVM	La Marquesa	18.39	128	eP	P	03 56 19.3	+0.8
X40A	Basin Creek Fa	18.43	75	IAmb	IAmb	03 56 20.6	
	comp=Z,321nm,1.5s						
MHVM	Bosque de Chap	18.43	128	P	P	03 56 17.7	-1.2
MHVM	Bosque de Chap	18.43	128	⇑eP	P	03 56 17.7	-1.2
AOVM	Tlapan	18.45	128	P	Pn	03 56 20.2	+0.9
AOVM	Tlapan	18.45	128	eP	Pn	03 56 20.2	+0.9
MCRU	Las Cruces	18.46	128	eP	P	03 56 18.1	-1.1
VTVM	Tizayuca	18.48	126	P	Pn	03 56 20.3	+0.9
VTVM	Tizayuca	18.48	126	eP	Pn	03 56 20.3	+0.9
ARIG	Puente Sto Nin	18.50	133	P	P	03 56 17.4	-1.9
ARIG	Puente Sto Nin	18.50	133	⇑eP	P	03 56 17.4	-1.9
ARIG				eS	Sn	03 59 38.4	-7.9
UNM	Universidad Na	18.50	128	eP	P	03 56 17.7	-1.9
MAVM	Malinalco, Edo	18.56	129	P	Pn	03 56 22.2	+1.9
MAVM	Malinalco, Edo	18.56	129	eP	Pn	03 56 22.2	+1.9
MZVM		18.57	128	P	Pn	03 56 22.8	+2.5
MZVM		18.57	128	eP	Pn	03 56 22.8	+2.5
XCVM	Xochimilco	18.60	128	P	P	03 56 20.4	-0.3
XCVM	Xochimilco	18.60	128	eP	P	03 56 20.4	-0.3
TLVM	San Miguel Top	18.60	128	P	Pn	03 56 21.6	+0.5
TLVM	San Miguel Top	18.60	128	eP	Pn	03 56 21.6	+0.5
CLRS	Cowichan Lake	18.61	340	P	P	03 56 19.0	-1.3
CLRS				IAmb	IAmb	03 56 27.2	
	comp=Z,325nm,1.2s						
THVM	De Xico	18.66	127	P	Pn	03 56 22.1	+0.5
THVM	De Xico	18.66	127	eP	Pn	03 56 22.1	+0.5
MPVM	San Francisco	18.71	128	P	Pn	03 56 22.5	+0.3
MPVM	San Francisco	18.71	128	eP	Pn	03 56 22.5	+0.3
UALR	University of	18.85	75	IAmb	IAmb	03 56 26.1	
	comp=Z,328nm,1.1s						
YAIG	Yautepec	18.91	129	P	P	03 56 23.1	-0.8
YAIG	Yautepec	18.91	129	⇑eP	P	03 56 23.1	-0.8
YAIG				eS	Sn	03 59 46.0	-10
PPIG	Popocatepetl	19.06	127	P	P	03 56 24.8	-1.2
PPM	Popocatepetl	19.06	127	eP	P	03 56 24.8	-1.2
PBPN	Popocatepetl	19.08	127	⇓eP	Pn	03 56 27.6	+0.6
PBXN	Popocatepetl	19.08	128	⇑eP	P	03 56 26.4	+0.2

PBXN eP P 03 56 26.4 +0.2
PPCU Popocatapetl 19.11 127 eP Pn 03 56 29.3 +1.9
FCAR Ozark Folk Cen 19.12 71 IAmb IAmb 03 56 29.4
comp=Z,428nm,1.7s
PPSX Xalitzintla 19.13 127⇓ eP Pn 03 56 27.1 -0.2
PPPT Popocatepetl 19.13 128⇓ eP Pn 03 56 27.7 +0.1
PBCV Popocatepetl 19.16 127⇓ eP P 03 56 26.9 -0.1
PPCL Tochimilco 19.17 128 eP Pn 03 56 28.6 +0.7
MGMO Mountain Grove 19.18 67 IAmb IAmb 03 56 33.4
comp=Z,262nm,1.1s
MEIG Mezcala 19.23 132 P P 03 56 26.7 -0.7
MEIG Mezcala 19.23 132⇓ eP P 03 56 26.7 -0.7
PPAX Atlixo 19.30 127 eP P 03 56 27.4 -1.0
CAIG El Cayaco 19.49 135 P Pn 03 56 30.7 -0.6
CAIG El Cayaco 19.49 135⇑ eP Pn 03 56 30.7 -0.6
LLLB Lillooet 19.71 346 IAmb IAmb 03 56 35.9
comp=Z,661nm,2.0s
MDND Maddock 19.79 31 IAmb IAmb 03 56 37.9
comp=Z,296nm,1.2s
F33A 5 Mile Ranch, 20.03 40 IAmb IAmb 03 56 40.9
comp=Z,247nm,1.7s
F33A IAMs_20 IAMs_20 04 04 18.4
comp=Z,15µm,18.0s
T42A Van Buren 20.09 68 IAMs_20 IAMs_20 04 04 48.6
comp=Z,12µm,21.0s
TLIG Tlapa 20.17 130 P Pn 03 56 40.8 +1.2
TLIG IAmb IAmb 03 56 53.4
comp=Z,252nm,1.4s
TLIG Tlapa 20.17 130 eP Pn 03 56 38.6 -1.0
FTIG Fresnillo de T 20.20 129 Pn 03 56 40.4 +0.3
FTIG Fresnillo de T 20.20 129 eP Pn 03 56 40.4 +0.3
MGIG Malinaltepec 20.37 131 P Pn 03 56 41.5 -0.4
MGIG Malinaltepec 20.37 131⇓ eP Pn 03 56 41.5 -0.4
TPIG Tehuac#an 20.37 126 P Pn 03 56 41.2 -0.8
TPIG Tehuac#an 20.37 126⇓ eP Pn 03 56 41.2 -0.8
VBMS Vicksburg 20.41 82 IAMs_20 IAMs_20 04 04 32.2
comp=Z,9µm,20.0s
CRIG Cruz Grande 20.42 133 P P 03 56 37.0 -3.3
CRIG Cruz Grande 20.42 133 eP P 03 56 37.0 -3.3
HLIG Huajuapan de L 20.48 128 P Pn 03 56 43.0 -0.4
HLIG Huajuapan de L 20.48 128⇑ eP Pn 03 56 43.0 -0.4
I37A Lemond, Waseca 20.71 47 IAmb IAmb 03 56 46.2
comp=Z,180nm,1.0s
FVM French Village 20.77 66 IAmb IAmb 03 56 49.6
comp=Z,212nm,1.2s
TOIG Toxpalan 20.80 126 Pn 03 56 46.8 -0.1
TOIG Toxpalan 20.80 126⇑ eP Pn 03 56 46.8 -0.1
TXIG Tlaxiaco 20.92 129 P Pn 03 56 47.9 -0.6
TXIG Tlaxiaco 20.92 129⇑ eP Pn 03 56 47.9 -0.6
SLM Saint Louis 21.04 64 IAmb IAmb 03 56 53.2
comp=Z,319nm,1.2s
N41A Harden Midland 21.11 58 IAmb IAmb 03 56 59.0
comp=Z,181nm,1.2s
OXF Oxford 21.25 76 IAmb IAmb 03 57 01.1
OXF IAMs_20 IAMs_20 04 05 37.0
comp=Z,261nm,1.4s
CGM3 Cape Girardeau 21.26 68 IAmb IAmb 03 56 55.2
comp=Z,7µm,18.0s
PNIG Pinotepa 21.31 132 P P 03 56 53.5 +3.5
PNIG Pinotepa 21.31 132⇓ eP P 03 56 53.5 +3.5
YOIG Yosondua 21.35 130 P P 03 56 53.1 +2.4
YOIG Yosondua 21.35 130 eP P 03 56 53.1 +2.4
346A Big Creek Wild 21.39 84 IAmb IAmb 03 57 03.4
comp=Z,218nm,1.5s
146A Union 21.61 81 IAMs_20 IAMs_20 04 06 18.8
comp=Z,271nm,1.4s
S44A Carbondale 21.64 67 IAmb IAmb 03 57 03.4
comp=Z,8µm,21.0s
S44A IAMs_20 IAMs_20 04 05 37.4
comp=Z,206nm,1.3s
SIUC Southern Illin 21.67 67 IAmb IAmb 03 57 03.6
comp=Z,10µm,22.0s
SPMN Marine on St. 21.69 45 IAMs_20 IAMs_20 04 04 39.2
comp=Z,223nm,1.3s
OXIG Oaxaca 21.73 128 P P 03 56 57.6 +2.8
VHO Vista Hermosa 21.73 128⇑ eP P 03 56 57.6 +2.8
P43A Skaggs, Pawnee 21.81 62 IAmb IAmb 03 57 03.9
comp=Z,8µm,18.0s
AGMN Agassiz Nation 21.86 35 IAmb IAmb 03 56 57.7
comp=Z,184nm,1.1s
NEUV Arroyo Zacate 21.93 125 P P 03 56 58.5 +1.9
NEUV Arroyo Zacate 21.93 125⇓ eP P 03 56 58.5 +1.9
Q44A Meyer Farm, Va 22.03 64 IAmb IAmb 03 57 07.9
comp=Z,176nm,1.3s
Q44A IAMs_20 IAMs_20 04 05 23.6
comp=Z,8µm,22.0s
T45A Paducah 22.03 69 IAMs_20 IAMs_20 04 06 04.0
comp=Z,12µm,18.0s
HDIL Hopedale 22.21 59 IAmb IAmb 03 57 09.9
comp=Z,286nm,1.6s
HDIL IAMs_20 IAMs_20 04 05 43.9
comp=Z,8µm,18.0s
PEIG Puerto Escondi 22.23 130 eP P 03 57 04.0 +4.1
JFWS Jewell Farm 22.30 53 IAmb IAmb 03 57 21.6
comp=Z,265nm,1.9s
L42A Oliver, Polo 22.37 56 IAmb IAmb 03 57 11.6
comp=Z,198nm,1.4s
I40A Norwalk 22.44 50 IAmb IAmb 03 57 06.7
comp=Z,192nm,1.3s
WVT Waverly 22.61 71 IAMs_20 IAMs_20 04 05 55.5
comp=Z,9µm,22.0s
OLIL Olney 22.70 65 IAmb IAmb 03 57 14.2
comp=Z,201nm,1.2s
BBB Bella Bella 22.79 338 P P 03 57 06.0 +0.5
comp=Z,98nm,1.1s,baz=149,slow=10.0,SNR=9.2
BBB LR LR 04 06 38.6
comp=Z,12µm,19.4s,baz=162,slow=39
comp=Z,98nm,1.1s
BBB Bella Bella 22.79 338 IAmb IAmb 03 57 19.2
comp=Z,106nm,1.0s
CMIG Matias Romero 23.00 124 P P 03 57 10.3 +2.3
comp=Z,39nm,1.0s,baz=317,slow=6.5,SNR=9.5
CMIG LR LR 04 05 16.4
comp=Z,6µm,21.0s,baz=278,slow=34
comp=Z,39nm,1.0s
CMIG Matias Romero 23.00 124 P P 03 57 10.0 +2.0
CMIG Matias Romero 23.00 124⇓ eP P 03 57 10.0 +2.0
HUIG Huatulco 23.08 129 eP P 03 57 15.1 +6.2
X48A Hartselle 23.21 76 IAmb IAmb 03 57 19.1
comp=Z,147nm,1.3s
X48A IAMs_20 IAMs_20 04 06 45.7
comp=Z,7µm,18.0s
ULM Lac du Bonnet 23.22 31 P P 03 57 09.2 -0.8
comp=Z,67nm,1.0s,baz=222,slow=9.5,SNR=58
ULM S S 04 01 22.1 +0.3
comp=Z,2.6nm,1.0s,baz=92,slow=12,SNR=0.9
ULM Lg Lg 04 04 09.9
baz=144,slow=17,SNR=6.6
ULM LR LR 04 06 54.1
comp=Z,6µm,18.6s,baz=222,slow=39
comp=Z,67nm,1.0s
ULM Lac du Bonnet 23.22 31 P P 03 57 08.8 -1.2
ULM IAmb IAmb 03 57 11.6
comp=Z,123nm,1.1s
T47A Sharon Grove 23.25 69 IAmb IAmb 03 57 21.0
comp=Z,231nm,1.8s
T47A IAMs_20 IAMs_20 04 06 44.1
comp=Z,9µm,18.0s
LRAL Lakeview Retre 23.31 79 IAmb IAmb 03 57 30.7
comp=Z,100nm,1.1s
LRAL IAMs_20 IAMs_20 04 06 14.4
comp=Z,6µm,18.0s
UXUV UXUV 23.37 123 P P 03 57 13.5 +1.7
UXUV UXUV 23.37 123 eP P 03 57 13.5 +1.7
V48A Smith Brothers 23.40 72 IAMs_20 IAMs_20 04 06 37.4
comp=Z,6µm,18.0s
BRAL Brewton 23.46 84 P P 03 57 13.1 +0.4
K43A Burlington 23.54 55 IAmb IAmb 03 57 23.7
comp=Z,127nm,1.1s
K43A IAMs_20 IAMs_20 04 06 17.5
comp=Z,6µm,18.0s
P46A Rosedale 23.55 63 IAMs_20 IAMs_20 04 06 34.4
comp=Z,8µm,19.0s
Y49A Blount Mountai 23.75 77 IAmb IAmb 03 57 27.5
comp=Z,117nm,1.2s
Y49A IAMs_20 IAMs_20 04 06 02.9
comp=Z,7µm,18.0s
CLTN Cedars of Leba 23.82 72 IAmb IAmb 03 57 27.6
comp=Z,151nm,1.0s
EPLO Experimental L 23.82 35 P P 03 57 15.5 -0.5
EYMN Ely 23.92 41 P P 03 57 17.0 0.0
EYMN IAmb IAmb 03 57 18.9
comp=Z,214nm,1.8s
250A Grady 24.02 82 P P 03 57 19.3 +1.3
WCI Wyandotte Cave 24.03 66 P P 03 57 19.1 +1.1
WCI Wyandotte Cave 24.03 66 IAMs_20 IAMs_20 04 07 07.9
comp=Z,9µm,18.0s
WCI Wyandotte Cave 24.03 66 P P 03 57 19.1 +1.1
WCI pmax pmax
comp=Z,321nm,1.9s
WCI MLR MLR
comp=Z,9µm,18.0s
SWET Sewanee 24.12 74 IAmb IAmb 03 57 33.7
comp=Z,120nm,1.2s
H43A Windswept, Lux 24.55 51 P P 03 57 24.5 +1.8
H43A IAMs_20 IAMs_20 04 06 43.3
comp=Z,7µm,22.0s
W50A Signal Mountai 24.63 74 IAMs_20 IAMs_20 04 07 35.4
comp=Z,7µm,18.0s
FFC Flin Flon 24.74 18 P P 03 57 24.6 +0.2
FFC Flin Flon 24.74 18 P P 03 57 24.6 +0.2
FFC pmax pmax
comp=Z,270nm,1.6s
FFC MLR MLR
comp=Z,14µm,20.0s
F42A Maple Grove Fa 24.83 48 IAmb IAmb 03 57 28.2
comp=Z,88nm,1.2s
F42A IAMs_20 IAMs_20 04 05 47.6
comp=Z,6µm,18.0s
P48A Milroy 24.88 64 IAMs_20 IAMs_20 04 07 03.1
comp=Z,8µm,18.0s
R49A Shelbyville 24.91 66 IAMs_20 IAMs_20 04 07 47.3
comp=Z,10µm,18.0s
N47A Urbana 24.94 60 IAMs_20 IAMs_20 04 07 45.5
comp=Z,6µm,19.0s
X51A Calhoun 25.01 75 IAMs_20 IAMs_20 04 07 50.7
comp=Z,6µm,18.0s
T50A Nancy 25.07 70 IAmb IAmb 03 57 44.2
comp=Z,108nm,1.7s
T50A IAMs_20 IAMs_20 04 07 20.6
comp=Z,8µm,18.0s
O48B Farmland 25.22 62 IAMs_20 IAMs_20 04 07 05.0
comp=Z,5µm,19.0s
352A Blakely 25.22 83 P P 03 57 29.7 +0.8
352A IAmb IAmb 03 57 41.0
comp=Z,140nm,1.1s
352A IAMs_20 IAMs_20 04 07 21.8
comp=Z,5µm,18.0s
152A Waverly Hall 25.25 80 IAmb IAmb 03 57 41.7
comp=Z,98nm,1.1s
152A IAMs_20 IAMs_20 04 08 22.4
comp=Z,6µm,19.0s
TBO Thunder Bay 25.47 41 P P 03 57 31.4 +0.4
TBO IAmb IAmb 03 57 53.3
comp=Z,109nm,1.1s
CCIG Comitan 25.50 122 P P 03 57 34.1 +2.4
R50A Paris 25.57 67 IAMs_20 IAMs_20 04 08 05.8
comp=Z,8µm,19.0s
Y52A Lilburn 25.70 77 IAMs_20 IAMs_20 04 08 14.8
comp=Z,7µm,19.0s
W52A Murphy 25.76 74 IAMs_20 IAMs_20 04 07 53.2
comp=Z,6µm,19.0s
TKL Tuckaleechee C 25.88 73 LR LR 04 08 08.2
comp=Z,6µm,19.9s,baz=270,slow=38
N49A Columbus Grove 26.07 61 IAMs_20 IAMs_20 04 08 22.3
comp=Z,8µm,18.0s
TZTN Tazewell 26.08 71 IAMs_20 IAMs_20 04 08 02.3
comp=Z,7µm,18.0s
S51A Beattyville 26.10 68 IAMs_20 IAMs_20 04 08 01.6
comp=Z,8µm,18.0s
J47A Sunmer 26.16 55 IAMs_20 IAMs_20 04 07 49.1
comp=Z,7µm,18.0s
GOGA Godfrey 26.23 78 IAMs_20 IAMs_20 04 08 49.9
comp=Z,8µm,20.0s
TIGA Tifton 26.36 82 IAMs_20 IAMs_20 04 09 32.6
comp=Z,7µm,18.0s
Q51A Peebles 26.42 65 IAMs_20 IAMs_20 04 08 00.8
comp=Z,9µm,18.0s
V35K Ketchikan 26.56 338 IAMs_20 IAMs_20 04 07 46.3
comp=Z,7µm,20.0s
V35K Ketchikan 26.56 338 P P 03 57 42.9 +2.2
baz=146,SNR=7.9
U35K Hyder 26.58 340 P P 03 57 43.2 +2.3
baz=149
BG3 Lake Jocassee 26.58 74 IAmb IAmb 03 58 13.5
comp=Z,84nm,1.3s
154A Montrose 26.61 80 IAMs_20 IAMs_20 04 09 13.1
comp=Z,8µm,18.0s
V53A Saluda 26.67 73 IAmb IAmb 03 58 04.4
comp=Z,132nm,1.5s
V53A IAMs_20 IAMs_20 04 08 31.0
comp=Z,8µm,18.0s
M50A Fremont 27.01 60 IAMs_20 IAMs_20 04 08 48.0
comp=Z,6µm,18.0s
CRAG Craig 27.17 337 P P 03 57 48.8 +2.5
CRAG Craig 27.17 337 P P 03 57 48.3 +2.0
baz=144,SNR=5.3
N51A Ashland 27.42 61 IAMs_20 IAMs_20 04 08 45.9
comp=Z,7µm,20.0s
U54A Nelons Funny 27.47 71 IAMs_20 IAMs_20 04 09 05.1
comp=Z,5µm,19.0s
E46A Sault Ste Mari 27.52 49 IAMs_20 IAMs_20 04 08 24.7
comp=Z,5µm,20.0s
APG El Apazote 27.55 121 LR LR 04 09 10.2
comp=Z,269nm,20.1s,baz=216,slow=37
T35M Bob Quinn 27.56 341 IAmb IAmb 03 57 53.6
comp=Z,103nm,1.4s
T35M IAMs_20 IAMs_20 04 09 30.9
comp=Z,9µm,22.0s
T35M Bob Quinn 27.56 341 P P 03 57 52.1 +2.3
baz=150,SNR=13
K50A Casco 27.60 57 IAMs_20 IAMs_20 04 07 27.4
comp=Z,5µm,20.0s
656A Willston 27.64 86 IAMs_20 IAMs_20 04 09 35.8
comp=Z,6µm,19.0s
U33K Whale Pass 27.70 337 IAMs_20 IAMs_20 04 08 19.4
comp=Z,6µm,19.0s
U33K Whale Pass 27.70 337 P P 03 57 53.0 +2.0
baz=144,SNR=5.2
WRAK Wrangell Islan 27.70 339 P P 03 57 53.1 +2.1
baz=146,SNR=7.0
I49A Point Hope 27.74 55 IAMs_20 IAMs_20 04 08 54.0
comp=Z,8µm,18.0s
456A Hilliard 27.80 83 IAMs_20 IAMs_20 04 10 03.9
comp=Z,6µm,18.0s
KMSC Kings Mountain 27.89 74 IAMs_20 IAMs_20 04 09 21.4
comp=Z,6µm,18.0s
S54A Dingess, Beckl 27.91 68 IAMs_20 IAMs_20 04 09 07.6
comp=Z,7µm,18.0s
V55A Taylorsville 27.96 72 IAMs_20 IAMs_20 04 09 21.3
comp=Z,6µm,18.0s
T33K Petersburg 28.21 338 P P 03 57 57.5 +1.9
baz=145
M52A Chesterland 28.28 60 IAMs_20 IAMs_20 04 09 11.6
comp=Z,5µm,18.0s
N53A Lisbon 28.55 62 IAMs_20 IAMs_20 04 07 49.1
comp=Z,6µm,18.0s
BLA Blacksburg 28.60 69 IAMs_20 IAMs_20 04 09 53.0
comp=Z,7µm,19.0s
S34M Telegraph Cree 28.61 341 IAMs_20 IAMs_20 04 10 13.6
comp=Z,10µm,21.0s
S34M Telegraph Cree 28.61 341 P P 03 58 01.7 +2.6
baz=150,SNR=7.5
U56A King 28.63 71 IAMs_20 IAMs_20 04 09 32.8
comp=Z,7µm,18.0s
ESQI Esquipulas 28.66 121 P P 03 58 03.0 +2.9
Y57A Sumter 28.73 76 IAMs_20 IAMs_20 04 09 47.0
comp=Z,6µm,20.0s
DLBC Dease Lake 28.78 343 LR LR 04 09 37.3
comp=Z,9µm,18.2s,baz=152,slow=37
DLBC Dease Lake 28.78 343 P P 03 58 03.2 +2.5
baz=152,SNR=45
O54A Avella 28.82 63 IAmb IAmb 03 58 44.8
comp=Z,83nm,1.4s
O54A IAMs_20 IAMs_20 04 10 11.3
comp=Z,5µm,18.0s
R55A Marlinton 28.87 67 IAmb IAmb 03 58 18.9
comp=Z,150nm,1.7s
R55A IAMs_20 IAMs_20 04 09 39.0
comp=Z,7µm,20.0s
DWPF Disney Wildern 28.88 88 IAMs_20 IAMs_20 04 11 31.9
comp=Z,4µm,18.0s
W57A Gilead 28.98 74 IAMs_20 IAMs_20 04 09 54.5
comp=Z,7µm,19.0s
NHSC New Hope 29.00 78 IAMs_20 IAMs_20 04 09 06.3
comp=Z,5µm,20.0s
KOTAN Kotaneelee Air 29.18 350 P P 03 58 05.6 +1.4
baz=163,SNR=57
MCWV Mont Chateau 29.18 64 IAMs_20 IAMs_20 04 09 37.8
comp=Z,8µm,19.0s
SIT Sitka 29.18 337 P P 03 58 06.2 +2.0
baz=142
S32K Killisnoo 29.26 338 IAMs_20 IAMs_20 04 09 04.9
comp=Z,6µm,21.0s
S32K Killisnoo 29.26 338 P P 03 58 06.9 +2.0
baz=143
Y58A Scranton 29.34 76 IAMs_20 IAMs_20 04 10 14.2
comp=Z,6µm,19.0s
X58A Rowland 29.56 75 IAMs_20 IAMs_20 04 10 12.8
comp=Z,5µm,20.0s
V58A Windy Hill, Pi 29.67 72 IAMs_20 IAMs_20 04 10 14.5
comp=Z,5µm,19.0s
S57A Dark Hollow, R 29.78 68 IAMs_20 IAMs_20 04 10 09.0
comp=Z,7µm,18.0s
Q32M Nakina River 29.82 342 P P 03 58 12.1 +1.9
baz=148
JIS Juneau Island 29.86 339 P P 03 58 13.3 +3.1
R33M Jennings River 29.86 343 IAMs_20 IAMs_20 04 09 58.7
comp=Z,5µm,18.0s
R33M Jennings River 29.86 343 P P 03 58 12.8 +2.4
baz=151
R32K Eaglecrest 29.90 339 IAMs_20 IAMs_20 04 09 15.6
comp=Z,6µm,21.0s
R32K Eaglecrest 29.90 339 P P 03 58 13.0 +2.4
baz=144,SNR=5.3
WTLY Watson Lake, Y 30.01 346 IAmb IAmb 03 58 14.7
comp=Z,66nm,1.3s
WTLY Watson Lake, Y 30.01 346 P P 03 58 12.9 +1.4
baz=155,SNR=20
060A Indiantown 30.09 90 IAMs_20 IAMs_20 04 10 41.1
comp=Z,4µm,19.0s
S31K Pelican 30.20 337 IAMs_20 IAMs_20 04 09 06.6
comp=Z,7µm,20.0s
S31K Pelican 30.20 337 P P 03 58 15.2 +2.0
baz=141
BESE Bessie Mountai 30.25 339 IAMs_20 IAMs_20 04 11 25.9
comp=Z,6µm,20.0s
W59A Clinton 30.25 73 IAMs_20 IAMs_20 04 10 32.0
comp=Z,7µm,19.0s
R31K City Hall, Gus 30.39 338 P P 03 58 16.4 +1.5
baz=142
FCC Fort Churchill 30.45 21 IAmb IAmb 03 58 17.5
comp=Z,71nm,1.2s
SADO Sadowa 30.51 54 LR LR 04 10 16.7
comp=Z,3µm,18.6s,baz=278,slow=36
TGUH Tegucigalpa,Un 30.51 119 IAMs_20 IAMs_20 04 11 38.9
comp=Z,6µm,19.0s
Y60A Bolivia 30.53 76 IAMs_20 IAMs_20 04 10 00.7
comp=Z,5µm,20.0s
P57A Homestead Farm 30.58 65 IAMs_20 IAMs_20 04 11 10.0
comp=Z,7µm,18.0s
R58B Mineral 30.63 68 IAMs_20 IAMs_20 04 10 43.6
comp=Z,8µm,18.0s
P32M Atlin 30.75 341 IAmb IAmb 03 58 21.9
comp=Z,85nm,1.2s
P32M IAMs_20 IAMs_20 04 10 15.2
comp=Z,10µm,22.0s
P32M Atlin 30.75 341 P P 03 58 20.1 +2.0
baz=147,SNR=18
SSPA Standing Stone 30.76 63 IAMs_20 IAMs_20 04 10 58.6
comp=Z,8µm,19.0s
YKAW1 Yellowknife Wh 30.84 0 IAmb IAmb 03 58 21.2
comp=Z,119nm,1.6s
YKA Yellowknife Ar 30.86 360 P P 03 58 19.6 +0.6
comp=Z,11nm,1.0s,baz=188,slow=8.2,SNR=122
YKA LR LR 04 10 32.8
comp=Z,4µm,18.2s,baz=186,slow=36
comp=Z,11nm,1.0s
YKA Yellowknife Ar 30.86 360 P P 03 58 19.4 +0.5
T59A Double "B" Far 30.89 70 IAMs_20 IAMs_20 04 11 09.7
comp=Z,7µm,20.0s
YKAW3 Yellowknife Wh 30.92 360 IAmb IAmb 03 58 23.2
comp=Z,123nm,1.7s
CBN Corbin Frederi 31.03 67 IAMs_20 IAMs_20 04 10 56.2
comp=Z,8µm,20.0s
P33M Teslin, Yukon 31.04 342 P P 03 58 22.6 +1.8
baz=149,SNR=12
SKAG Skagway 31.11 339 P P 03 58 24.0 +2.8
SKAG Skagway 31.11 339 P P 03 58 23.4 +2.2
baz=144,SNR=7.6
J55A Hilton 31.15 58 IAMs_20 IAMs_20 04 09 14.4
comp=Z,4µm,20.0s
TGTN Hyland Airport 31.20 347 P P 03 58 23.8 +1.6
baz=157
M57A Sunshine Farm, 31.40 61 IAMs_20 IAMs_20 04 10 45.4
comp=Z,4µm,18.0s
N58A Sunbury 31.67 62 IAMs_20 IAMs_20 04 11 19.5
comp=Z,6µm,20.0s
V61A Roper 31.73 72 IAMs_20 IAMs_20 04 11 37.0
comp=Z,6µm,19.0s
N32M Quiet Lake 31.91 343 P P 03 58 30.6 +2.2
baz=149
WHY Whitehorse 31.97 341 P P 03 58 31.0 +2.1
baz=146,SNR=15
K57A Scipio Center 32.02 59 IAMs_20 IAMs_20 04 12 03.4
comp=Z,5µm,18.0s
WRGLY Wrigley 32.10 352 P P 03 58 31.8 +1.9
baz=166,SNR=69
P30M Million Dollar 32.13 339 P P 03 58 32.7 +2.4
baz=142
BINY Binghamton 32.34 60 IAMs_20 IAMs_20 04 11 28.1
comp=Z,5µm,18.0s
O30N Mendenhall 32.40 340 IAMs_20 IAMs_20 04 11 09.7
comp=Z,6µm,20.0s
O30N Mendenhall 32.40 340 P P 03 58 35.1 +2.5
baz=144,SNR=13
J57A Williamstown 32.48 58 IAMs_20 IAMs_20 04 11 58.7
comp=Z,5µm,18.0s
VLDQ Val d'Or 32.50 49 IAmb IAmb 03 58 56.5
comp=Z,77nm,1.5s
O29M Mount Kennedy 32.78 338 IAMs_20 IAMs_20 04 10 39.2
comp=Z,5µm,20.0s
O29M Mount Kennedy 32.78 338 P P 03 58 37.9 +1.8
baz=140
HYT Haines Junctio 32.86 339 P P 03 58 39.4 +2.6
baz=142,SNR=9.8
BCPM Bancas Point 32.86 337 IAMs_20 IAMs_20 04 11 51.1
comp=Z,4µm,20.0s
N31M Braeburn, Yuko 32.90 341 P P 03 58 39.1 +2.1
baz=145,SNR=15
L59A Walton 33.04 60 IAMs_20 IAMs_20 04 11 56.6
comp=Z,6µm,18.0s
P61A Hammonton 33.08 65 IAMs_20 IAMs_20 04 11 49.0
comp=Z,5µm,21.0s
M31M Drury Creek, Y 33.14 343 P P 03 58 41.3 +2.2
baz=148,SNR=36
PINM Pinnacle 33.18 337 P P 03 58 41.9 +2.4
baz=138,SNR=6.5
PCA Pinnacle 33.18 337 IAMs_20 IAMs_20 04 14 16.3
comp=Z,5µm,19.0s
YUK6 Outpost Mounta 33.21 339 P P 03 58 42.5 +2.6
baz=141,SNR=14
N30M Aishikik Lake 33.24 340 P P 03 58 42.6 +2.6
baz=143,SNR=28
YUK4 Talbot Arm 33.61 339 P P 03 58 46.5 +3.0
baz=141,SNR=27
O28M Mount Upton 33.66 337 IAMs_20 IAMs_20 04 13 49.1
comp=Z,5µm,19.0s
O28M Mount Upton 33.66 337 P P 03 58 46.6 +2.7
baz=138,SNR=18
PAL Palisades 33.80 62 IAMs_20 IAMs_20 04 12 52.0
comp=Z,6µm,20.0s
MESA MESA 33.82 336 P P 03 58 48.3 +3.0
baz=135,SNR=6.5
YUK8 Steele Glacier 33.91 338 P P 03 58 49.0 +2.9
baz=139,SNR=26
LOGN Logan Glacier 33.97 337 IAMs_20 IAMs_20 04 10 47.2
comp=Z,5µm,22.0s
M30M Minto, Yukon 34.07 342 P P 03 58 49.3 +2.1
baz=145,SNR=21
TRY Troy 34.10 59 IAMs_20 IAMs_20 04 11 47.7
comp=Z,3µm,19.0s
N62A Caumsett State 34.13 63 IAMs_20 IAMs_20 04 12 53.7
comp=Z,6µm,22.0s
GRNC Granite Creek 34.15 336 IAMs_20 IAMs_20 04 14 18.1
comp=Z,6µm,18.0s
CTGM Chitina Glacie 34.18 337 IAMs_20 IAMs_20 04 11 16.9
comp=Z,5µm,22.0s
CTG Chitina Glacier 34.18 337 P P 03 58 50.7 +2.4
baz=137,SNR=15
WSPT Westport, CT 34.24 62 IAMs_20 IAMs_20 04 12 37.7
comp=Z,4µm,18.0s
BGLC Bering Glacier 34.26 335 P P 03 58 51.6 +2.8
baz=133
BARN Barnard Glacie 34.36 337 IAMs_20 IAMs_20 04 11 20.6
comp=Z,4µm,21.0s
M29M Somme Creek 34.42 341 IAmb IAmb 03 58 54.4
comp=Z,75nm,1.1s
M29M Somme Creek 34.42 341 P P 03 58 52.7 +2.3
baz=142,SNR=41
YUK3 Moose Creek 34.50 338 P P 03 58 53.6 +2.4

baz=139,SNR=18
TGL Tana Glacier 34.54 336 IAMs_20 IAMs_20 04 13 04.4
comp=Z,6µm,19.0s
KAIM Kayak Island 34.55 334 IAMs_20 IAMs_20 04 10 32.7
comp=Z,4µm,18.0s
BERG Berg Lake 34.60 335 IAMs_20 IAMs_20 04 12 10.3
comp=Z,7µm,19.0s
CRQE Cirque 34.63 336 P P **03 58 54.6 +2.4**
baz=134,SNR=11
CRQM Cirque 34.65 336 IAMs_20 IAMs_20 04 13 05.8
comp=Z,6µm,20.0s
JTS Las Juntas de 34.68 121 LR LR 04 14 28.1
comp=Z,3µm,19.6s,baz=312,slow=39
MAYO Mayo, Yukon 34.69 343 P P **03 58 54.8 +2.3**
baz=147,SNR=15
L61B Northampton 34.80 60 IAMs_20 IAMs_20 04 11 43.3
comp=Z,5µm,20.0s
L29M L29M 34.86 341 P P **03 58 56.6 +2.6**
baz=143,SNR=62
RAGM Ragged Mountai 34.95 334 IAMs_20 IAMs_20 04 12 44.3
comp=Z,3µm,18.0s
J61A Chester 34.97 58 IAMs_20 IAMs_20 04 11 31.6
comp=Z,4µm,22.0s
Q23K Middleton Isla 34.98 332 P P **03 58 57.8 +2.7**
baz=128
MCARA McCarthy VSAT 35.05 336 IAMs_20 IAMs_20 04 13 00.9
comp=Z,6µm,19.0s
MCARA McCarthy VSAT 35.05 336 P P **03 58 58.4 +2.8**
baz=135,SNR=19
VRDI Verde Repeater 35.09 336 IAMs_20 IAMs_20 04 13 20.9
comp=Z,5µm,19.0s
BVCY Beaver Creek 35.11 339 P P **03 58 58.6 +2.5**
baz=139,SNR=24
K62A Royalston 35.15 60 IAMs_20 IAMs_20 04 11 51.4
comp=Z,5µm,20.0s
HNH Hanover 35.20 58 IAMs_20 IAMs_20 04 11 40.5
comp=Z,3µm,18.0s
K29M Barlow Dome 35.30 343 P P **03 59 00.4 +2.5**
baz=145,SNR=43
BMRM Bremner River 35.32 335 IAMs_20 IAMs_20 04 13 17.0
comp=Z,4µm,18.0s
BMRM Bremner River 35.32 335 P P **03 59 00.5 +2.4**
baz=132,SNR=6.8
GLB Gilahina Butte 35.36 336 IAMs_20 IAMs_20 04 13 20.1
comp=Z,7µm,18.0s
M27K Edge Creek, AK 35.38 338 IAMs_20 IAMs_20 04 12 13.5
comp=Z,6µm,20.0s
M27K Edge Creek, AK 35.38 338 P P **03 59 01.6 +2.9**
baz=138
EYAK Cordova Ski Ar 35.46 334 P P **03 59 02.2 +3.1**
EYAK Cordova Ski Ar 35.46 334 IAMs_20 IAMs_20 04 15 33.8
comp=Z,4µm,21.0s
EYAK Cordova Ski Ar 35.46 334 P P **03 59 02.0 +2.9**
baz=130,SNR=8.0
J30M Hart River 35.62 344 IAMs_20 IAMs_20 04 12 56.9
comp=Z,4µm,20.0s
J30M Hart River 35.62 344 P P **03 59 03.4 +2.8**
baz=147,SNR=75
HRV Adam Dziewonsk 35.64 60 IAMs_20 IAMs_20 04 12 04.3
comp=Z,4µm,18.0s
HIN Hinchinbrook I 35.65 333 IAMs_20 IAMs_20 04 12 22.8
comp=Z,4µm,18.0s
N25K Chitina, Valde 35.75 336 IAMs_20 IAMs_20 04 13 50.4
comp=Z,6µm,19.0s
N25K Chitina, Valde 35.75 336 P P **03 59 04.7 +3.0**
baz=133,SNR=20
P23K Montague Islan 35.75 332 P P **03 59 04.6 +2.9**
baz=128
M26K Nabesna, AK 35.77 338 IAMs_20 IAMs_20 04 14 20.6
comp=Z,5µm,20.0s
M26K Nabesna, AK 35.77 338 P P **03 59 04.7 +2.8**
baz=136
WES Weston 35.80 60 IAMs_20 IAMs_20 04 12 49.8
comp=Z,4µm,18.0s
DIV Divide 35.85 335 IAMs_20 IAMs_20 04 12 50.1
comp=Z,4µm,18.0s
BCAR Beaver Creek A 35.88 339 P P **03 59 04.8 +2.0**
L27K Beaver Creek, 35.89 339 IAMs_20 IAMs_20 04 15 31.6
comp=Z,6µm,18.0s
L27K Beaver Creek, 35.89 339 P P **03 59 05.3 +2.4**
baz=138,SNR=21
I62A Tamworth 35.90 58 IAMs_20 IAMs_20 04 11 58.1
comp=Z,3µm,22.0s
BCX Boston College 35.91 60 IAMs_20 IAMs_20 04 12 54.7
comp=Z,4µm,19.0s
DAWY Dawson 35.97 342 P P **03 59 05.9 +2.3**
baz=142,SNR=64
J29N Klondike Camp 35.97 343 P P **03 59 06.3 +2.6**
baz=144,SNR=16
H62A Milan 36.09 56 IAMs_20 IAMs_20 04 14 17.1
comp=Z,4µm,18.0s
KLU Klutina 36.14 335 IAMs_20 IAMs_20 04 12 59.8
comp=Z,4µm,19.0s
KLU Klutina 36.14 335 P P **03 59 07.2 +2.0**
baz=131,SNR=9.6
L64A Middleborough 36.14 61 IAMs_20 IAMs_20 04 12 33.9
comp=Z,5µm,18.0s
I30M Mount Dempster 36.17 345 IAmb IAmb 03 59 08.7
comp=Z,92nm,1.1s
I30M Mount Dempster 36.17 345 P P **03 59 07.4 +2.0**
baz=148,SNR=8.3
GLI Glacier Island 36.18 334 P P **03 59 07.6 +2.2**
baz=129,SNR=9.3
H31M Peel River 36.24 346 P P **03 59 08.0 +2.1**
baz=151,SNR=48
L26K Log Cabin Wild 36.33 338 IAMs_20 IAMs_20 04 12 40.8
comp=Z,6µm,21.0s
L26K Log Cabin Wild 36.33 338 P P **03 59 09.1 +2.5**
baz=136,SNR=27
MENT Mentasta 36.39 338 P P **03 59 10.1 +2.9**
HARP HAARP 36.48 337 P P **03 59 10.8 +2.8**
baz=133,SNR=28
G62A West of Eustis 36.60 55 IAMs_20 IAMs_20 04 13 41.5
comp=Z,4µm,20.0s
M24K Tolsona, Glenn 36.64 336 IAMs_20 IAMs_20 04 11 58.9
comp=Z,4µm,21.0s
M24K Tolsona, Glenn 36.64 336 P P **03 59 12.2 +2.8**
baz=132,SNR=9.2
SEW Seward 36.64 331 P P **03 59 11.4 +2.1**
baz=125
I29M Ogilvie Camp, 36.74 344 P P **03 59 11.6 +1.5**
baz=145,SNR=83
KDAK Kodiak Island 36.79 327 P P **03 59 13.0 +2.4**
baz=119
OHAK Old Harbor 36.86 325 P P **03 59 14.6 +3.4**
OHAK Old Harbor 36.86 325 P P **03 59 13.2 +2.1**
baz=117
SCM Sheep Creek Mo 36.88 335 IAMs_20 IAMs_20 04 13 12.2
comp=Z,3µm,19.0s
SCM Sheep Creek Mo 36.88 335 P P **03 59 13.8 +2.5**
baz=130,SNR=13
O22K Cooper Landing 36.97 332 IAMs_20 IAMs_20 04 13 48.8
comp=Z,4µm,18.0s
O22K Cooper Landing 36.97 332 P P **03 59 14.1 +2.0**
baz=125
BRSE Bradley Lake S 36.98 330 P P **03 59 14.7 +2.5**
baz=123
PAX Paxson 36.98 337 IAMs_20 IAMs_20 04 14 47.0
comp=Z,5µm,19.0s
PAX Paxson 36.98 337 P P **03 59 14.5 +2.2**
baz=133,SNR=13
M23K Glacier View 36.99 334 P P **03 59 14.7 +2.4**
baz=129,SNR=8.5
DOT Dot Lake 37.01 339 IAmb IAmb 03 59 16.1
comp=Z,70nm,1.2s
DOT IAMs_20 IAMs_20 04 12 39.6
comp=Z,5µm,21.0s
SII Sitkinak Islan 37.01 324 P P **03 59 15.4 +2.9**
baz=115
KNK Knik Glacier 37.03 334 P P **03 59 15.3 +2.6**
baz=128,SNR=35
CNPM China Poot 37.07 330 IAMs_20 IAMs_20 04 12 42.4
comp=Z,4µm,18.0s
Q20K Shuyak Island 37.11 328 P P **03 59 15.6 +2.3**
baz=120
WVL Waterville 37.16 57 IAMs_20 IAMs_20 04 13 36.3
comp=Z,4µm,18.0s
SLKM Skilak Lake 37.19 331 IAMs_20 IAMs_20 04 13 45.6
comp=Z,3µm,18.0s
G31M Satah River 37.21 347 IAmb IAmb 03 59 17.3
comp=Z,130nm,1.3s
G31M Satah River 37.21 347 P P **03 59 16.0 +2.0**
baz=152,SNR=44
I28M Miner Creek 37.21 343 IAmb IAmb 03 59 17.3
comp=Z,70nm,0.9s
I28M Miner Creek 37.21 343 P P **03 59 16.0 +1.8**
baz=143,SNR=59
SCRK Sand Creek 37.22 339 IAMs_20 IAMs_20 04 16 39.3
comp=Z,6µm,20.0s
SCRK Sand Creek 37.22 339 P P **03 59 16.6 +2.2**
baz=136,SNR=50
EPYK Eagle Plains 37.23 345 IAMs_20 IAMs_20 04 14 43.3
comp=Z,5µm,18.0s
EPYK Eagle Plains 37.23 345 P P **03 59 15.8 +1.6**
baz=148,SNR=50
SML Sawmill 37.23 334 P P **03 59 16.6 +2.3**
baz=128,SNR=14
HOM Homer 37.32 330 IAMs_20 IAMs_20 04 12 49.0
comp=Z,3µm,20.0s
HOM Homer 37.32 330 P P **03 59 16.2 +1.2**
baz=122
RIDG Independent Ri 37.32 338 IAMs_20 IAMs_20 04 12 58.8
comp=Z,6µm,22.0s
RIDG Independent Ri 37.32 338 P P **03 59 17.3 +2.2**
baz=135,SNR=25
RC01 Rabbit Creek A 37.33 333 IAMs_20 IAMs_20 04 14 02.3
comp=Z,3µm,18.0s
RC01 Rabbit Creek A 37.33 333 P P **03 59 17.4 +2.2**
baz=126,SNR=15
PMR Palmer 37.40 333 P P **03 59 18.7 +3.0**
PMR Palmer 37.40 333 P P **03 59 18.1 +2.5**
baz=127,SNR=36
CHIR Chirikof Islan 37.44 322 P P **03 59 18.5 +2.3**
baz=113
PKME Peaks-Kenny Pk 37.48 56 IAMs_20 IAMs_20 04 14 06.7
comp=Z,4µm,18.0s
WAT6 Susitna Watana 37.50 335 P P **03 59 19.1 +2.3**
baz=130,SNR=50
F31M Tsiigehtchic 37.58 348 IAmb IAmb 03 59 20.4
comp=Z,144nm,1.4s
F31M Tsiigehtchic 37.58 348 P P **03 59 18.9 +1.8**
baz=153,SNR=34
G30M tAoh Zraii Nji 37.64 346 IAmb IAmb 03 59 20.7
comp=Z,124nm,1.6s
G30M tAoh Zraii Nji 37.64 346 P P **03 59 18.6 +0.9**
baz=149,SNR=26
K24K Donnelly Dome 37.66 338 IAMs_20 IAMs_20 04 13 07.8
comp=Z,5µm,22.0s
K24K Donnelly Dome 37.66 338 P P **03 59 20.3 +2.3**
baz=134,SNR=19
DHY Denali Highway 37.70 336 P P **03 59 20.3 +1.9**
baz=131,SNR=29
CAPN Captain Cook N 37.72 331 P P **03 59 19.2 +0.9**
baz=124
I27K Kandik River 37.77 342 IAmb IAmb 03 59 22.3
comp=Z,120nm,2.0s
I27K Kandik River 37.77 342 P P **03 59 20.6 +1.7**
baz=141
Q19K Cape Douglas, 37.83 328 P P **03 59 20.8 +1.3**
baz=119
D62A Allapoint, All 37.85 53 IAMs_20 IAMs_20 04 13 05.2
comp=Z,6µm,18.0s
M22K Willow 37.87 333 P P **03 59 21.8 +2.1**
baz=126
WAT1 Susitna Watana 37.95 335 P P **03 59 22.5 +2.0**
baz=129
I26K Coal Creek Min 37.96 341 P P **03 59 22.4 +2.0**
baz=138
P19K Oil Pt 38.00 329 P P **03 59 23.3 +2.4**
baz=120
J25K Salcha River, 38.10 339 IAMs_20 IAMs_20 04 17 08.1
comp=Z,5µm,18.0s
J25K Salcha River, 38.10 339 P P **03 59 24.2 +2.5**
baz=135,SNR=54
F30M Barrier River 38.10 347 P P **03 59 23.5 +1.9**
baz=150,SNR=77
C36M Paulatuk 38.13 355 IAmb IAmb 03 59 23.7
comp=Z,89nm,1.6s
C36M Paulatuk 38.13 355 P P **03 59 23.0 +1.3**
baz=137,SNR=16
F64A Sherman 38.19 55 IAMs_20 IAMs_20 04 13 43.5
comp=Z,4µm,18.0s
RED Redoubt Volcan 38.20 330 IAmb IAmb 03 59 26.0
comp=Z,127nm,1.4s
H27K Steamboat Moun 38.24 343 IAmb IAmb 03 59 26.2
comp=Z,74nm,1.2s
H27K Steamboat Moun 38.24 343 P P **03 59 24.7 +1.9**
baz=141,SNR=51
INK Inuvik 38.31 349 LR LR 04 16 52.2
comp=Z,9µm,18.9s,baz=166,slow=39
INK Inuvik 38.31 349 IAmb IAmb 03 59 26.4
comp=Z,97nm,1.2s
INK Inuvik 38.31 349 P P **03 59 25.0 +1.7**
baz=153,SNR=58
CUT Chulitna 38.32 334 P P **03 59 25.5 +2.1**
baz=127,SNR=24
Q18K Katmai Hardscr 38.33 327 P P **03 59 25.2 +1.4**
baz=117,SNR=5.0
N20K Mount Spurr 38.38 332 P P **03 59 26.0 +1.8**
baz=123,SNR=15
SPCR Spurr Chakacha 38.38 332 P P **03 59 26.0 +1.8**
baz=123,SNR=8.1
RND Reindeer 38.42 336 IAMs_20 IAMs_20 04 16 14.1
comp=Z,4µm,19.0s
HDA Harding Lake 38.45 338 IAMs_20 IAMs_20 04 15 25.7
comp=Z,5µm,18.0s
HDA Harding Lake 38.45 338 P P **03 59 26.1 +1.5**
baz=133,SNR=7.3
R17L Mt. Peulik Vol 38.54 325 P P **03 59 26.7 +1.3**
baz=114
SKT Skwentna 38.55 333 IAmb IAmb 03 59 29.0
comp=Z,116nm,1.4s
SKT IAMs_20 IAMs_20 04 14 13.5
comp=Z,3µm,18.0s
SKT Skwentna 38.55 333 P P **03 59 27.2 +1.8**
baz=125,SNR=18
Q17K Contact Creek 38.57 326 P P **03 59 27.9 +2.1**
baz=115
L22K Petersville 38.58 334 IAmb IAmb 03 59 29.5
comp=Z,163nm,1.4s
MCK McKinley 38.66 336 P P **03 59 28.6 +2.2**
baz=130,SNR=48
ILAR Eielson Array 38.68 338 P P **03 59 28.2 +1.8**
comp=Z,42nm,1.1s,baz=151,slow=6.3,SNR=225
ILAR LR LR 04 14 13.4
comp=Z,4µm,21.9s,baz=132,slow=34
comp=Z,42nm,1.1s
G65A Princeton 38.69 56 IAMs_20 IAMs_20 04 14 54.8
comp=Z,3µm,20.0s
O19K Port Alsworth 38.75 329 IAMs_20 IAMs_20 04 13 35.8
comp=Z,3µm,19.0s
O19K Port Alsworth 38.75 329 P P **03 59 28.8 +1.7**
baz=119,SNR=7.1
P18K Big Mountain, 38.77 328 P P **03 59 28.5 +1.1**
baz=117
PRP Porcupine Dome 38.79 340 P P **03 59 29.7 +2.1**
baz=136,SNR=54
WRH Wood River Hil 38.86 338 IAMs_20 IAMs_20 04 18 16.5
comp=Z,4µm,20.0s
CCB Clear Creek Bu 38.88 338 IAMs_20 IAMs_20 04 15 10.1
comp=Z,4µm,22.0s
F28M Old Crow 38.95 345 IAmb IAmb 03 59 31.8
comp=Z,66nm,1.0s
F28M Old Crow 38.95 345 P P **03 59 30.5 +1.7**
baz=144,SNR=52
TRF Thorofare Moun 38.96 335 IAMs_20 IAMs_20 04 16 19.1
comp=Z,3µm,20.0s
TRF Thorofare Moun 38.96 335 P P **03 59 30.9 +1.8**
baz=128,SNR=52
O18K Koktuh Hills 38.98 328 P P **03 59 30.7 +1.6**
baz=118,SNR=6.7
COLA College 39.05 338 P P **03 59 31.4 +1.8**
COLA College 39.05 338 IAMs_20 IAMs_20 04 14 01.6
comp=Z,4µm,22.0s
COLA College 39.05 338 *d* iP P **03 59 30.7 +1.1**
COLA pmax pmax
comp=Z,62nm,1.1s
COLA College 39.05 338 P P **03 59 31.0 +1.5**
baz=132
POKR Poker Plat Res 39.09 339 P P **03 59 32.0 +2.1**
baz=133
R16K Pilot Point 39.11 324 IAMs_20 IAMs_20 04 14 01.5
comp=Z,4µm,18.0s
R16K Pilot Point 39.11 324 P P **03 59 32.3 +2.1**
baz=113
Q16K King Salmon 39.12 326 P P **03 59 32.1 +1.9**
baz=115
M20K Styx River 39.13 332 IAmb IAmb 03 59 33.9
comp=Z,117nm,1.4s
M20K IAMs_20 IAMs_20 04 15 18.9
comp=Z,4µm,18.0s
M20K Styx River 39.13 332 P P **03 59 32.4 +2.0**
baz=123
N19K Bonanza Creek 39.13 330 IAmb IAmb 03 59 33.6
comp=Z,116nm,1.4s
N19K Bonanza Creek 39.13 330 P P **03 59 31.9 +1.5**
baz=120
E29M Blow River 39.18 347 P P **03 59 32.9 +2.2**
baz=148,SNR=93
CHNA Chernabura Isl 39.23 320 P P **03 59 33.4 +2.3**
baz=107
P17K Kvichak River 39.24 327 P P **03 59 32.5 +1.3**
baz=116
KTH Kantishna Hill 39.25 335 IAmb IAmb 03 59 34.4
comp=Z,115nm,1.2s
KTH IAMs_20 IAMs_20 04 16 29.3
comp=Z,3µm,18.0s
NEA2 Nenana 39.26 337 IAMs_20 IAMs_20 04 16 01.0
comp=Z,4µm,22.0s
NEA2 Nenana 39.26 337 P P **03 59 33.4 +2.1**
baz=130,SNR=27
PPLA Purkeypile 39.33 334 IAMs_20 IAMs_20 04 15 37.8
comp=Z,3µm,18.0s
PPLA Purkeypile 39.33 334 P P **03 59 34.5 +2.4**
baz=125,SNR=40
G26K Porcupine Rive 39.37 342 IAMs_20 IAMs_20 04 15 27.6
comp=Z,6µm,20.0s
G26K Porcupine Rive 39.37 342 P P **03 59 34.9 +2.7**
baz=139,SNR=250
BPAW Bear Paw Mtn. 39.60 336 IAMs_20 IAMs_20 04 15 02.1
comp=Z,5µm,18.0s
BPAW Bear Paw Mtn. 39.60 336 P P **03 59 35.9 +1.7**
baz=127,SNR=83
N18K Kilae Creek 39.67 329 IAmb IAmb 03 59 38.2
comp=Z,124nm,1.5s
N18K IAMs_20 IAMs_20 04 14 14.2
comp=Z,3µm,18.0s
N18K Kilae Creek 39.67 329 P P **03 59 36.4 +1.6**
baz=118,SNR=13
H24K Noodor Dome 39.71 339 IAMs_20 IAMs_20 04 16 47.7
comp=Z,5µm,18.0s
H24K Noodor Dome 39.71 339 P P **03 59 37.3 +2.1**
baz=133
I23K Minto, Yukon-K 39.72 338 IAMs_20 IAMs_20 04 15 44.1
comp=Z,4µm,19.0s
I23K Minto, Yukon-K 39.72 338 P P **03 59 37.2 +2.1**
baz=130,SNR=31
O17K Koliganek Bris 39.79 328 P P **03 59 37.6 +1.8**
baz=116
E27K Coleen River 39.80 345 IAMs_20 IAMs_20 04 18 19.5
comp=Z,4µm,19.0s
E27K Coleen River 39.80 345 P P **03 59 38.1 +2.2**
baz=143,SNR=37
SDPT Sand Point 39.87 320 P P **03 59 38.0 +1.5**
baz=107
P16K Nushagak River 39.90 326 P P **03 59 38.0 +1.3**
baz=114
BMAR Burnt Mountain 39.94 342 P P **03 59 39.5 +2.5**
CHUM Lake Minchumin 39.94 335 P P **03 59 38.7 +1.7**
baz=126
L19K White Mountain 39.98 332 IAmb IAmb 03 59 41.0
comp=Z,160nm,1.4s
L19K IAMs_20 IAMs_20 04 15 46.4
comp=Z,5µm,19.0s
L19K White Mountain 39.98 332 P P **03 59 39.5 +2.2**
baz=121
F26K Sheenjek River 40.02 343 P P **03 59 40.6 +2.8**
baz=139,SNR=122
M18K Stony River 40.03 331 P P **03 59 39.4 +1.6**
baz=119,SNR=23
MLY Manley 40.09 337 IAMs_20 IAMs_20 04 16 22.1
comp=Z,4µm,20.0s
MLY Manley 40.09 337 P P **03 59 40.4 +2.1**
baz=129,SNR=31
D28M Stokes Point 40.14 347 P P **03 59 40.8 +2.2**
baz=147,SNR=23
N17K Nushagak Hills 40.16 329 IAmb IAmb 03 59 42.7
comp=Z,130nm,1.4s
N17K Nushagak Hills 40.16 329 P P **03 59 40.8 +1.9**
baz=116,SNR=15
O16K Kokwok River B 40.17 327 IAmb IAmb 03 59 42.4
comp=Z,115nm,1.6s
O16K Kokwok River B 40.17 327 P P **03 59 40.6 +1.6**
baz=114,SNR=13
G24K Hadweenzic Riv 40.19 340 P P **03 59 41.4 +2.3**
baz=134,SNR=31
K20K Telida 40.29 334 P P **03 59 41.7 +1.7**
baz=133,SNR=66
F25K Christian Rive 40.33 342 IAMs_20 IAMs_20 04 16 34.5
comp=Z,5µm,19.0s
F25K Christian Rive 40.33 342 P P **03 59 43.2 +2.9**
baz=137,SNR=76
D27M Malcolm River 40.52 346 IAMs_20 IAMs_20 04 17 05.2
comp=Z,6µm,21.0s
D27M Malcolm River 40.52 346 P P **03 59 44.2 +2.3**
baz=144
I21K Tanana 40.60 337 IAMs_20 IAMs_20 04 16 55.9
comp=Z,4µm,19.0s
I21K Tanana 40.60 337 P P **03 59 44.5 +2.0**
baz=127
M17K Holitna River 40.67 330 IAMs_20 IAMs_20 04 15 36.7
comp=Z,3µm,18.0s
M17K Holitna River 40.67 330 P P **03 59 45.2 +2.1**
baz=117,SNR=26
E25K Arctic Village 40.70 343 P P **03 59 46.1 +2.8**
baz=138,SNR=111
SCHQ Schefferville 40.73 41 P P **03 59 44.1 +0.4**
comp=Z,21nm,1.1s,baz=278,slow=5.8,SNR=9.8
SCHQ LR LR 04 16 37.2
comp=Z,5µm,18.9s,baz=259,slow=36
comp=Z,21nm,1.1s
SCHQ Schefferville 40.73 41 P P **03 59 42.6 -1.1**
L18K Granite Mounta 40.74 331 IAmb IAmb 03 59 47.2
comp=Z,169nm,1.4s
L18K IAMs_20 IAMs_20 04 15 59.9
comp=Z,3µm,19.0s
L18K Granite Mounta 40.74 331 P P **03 59 45.6 +2.0**
baz=119
A36M Sachs Harbour 40.80 355 IAmb IAmb 03 59 47.0
comp=Z,82nm,0.8s
A36M Sachs Harbour 40.80 355 P P **03 59 45.9 +1.9**
baz=166,SNR=58
O15K Ungalikthiuk R 40.82 326 P P **03 59 45.7 +1.4**
baz=112
H22K Ishtalitna Cre 40.84 338 P P **03 59 46.4 +1.9**
H22K Ishtalitna Cre 40.84 338 P P **03 59 46.7 +2.2**
baz=129,SNR=79
N16K Nishlik Lake 40.85 328 P P **03 59 46.7 +2.1**
baz=115
G23K Bananza Creek 40.95 339 IAMs_20 IAMs_20 04 18 56.7
comp=Z,5µm,20.0s
G23K Bananza Creek 40.95 339 P P **03 59 47.5 +2.1**
baz=131,SNR=24
H21K Melozitna Rive 41.16 337 P P **03 59 49.0 +1.9**
baz=127
M16K Timber Creek 41.16 329 IAmb IAmb 03 59 51.1
comp=Z,159nm,1.4s
M16K Timber Creek 41.16 329 P P **03 59 49.4 +2.2**
baz=115,SNR=18
J19K Poorman 41.22 334 P P **03 59 49.3 +1.7**
baz=122
N15K Kwethluk River 41.33 327 IAmb IAmb 04 00 19.2
comp=Z,139nm,1.8s
N15K Kwethluk River 41.33 327 P P **03 59 50.3 +1.8**
baz=113
COLD Coldfoot 41.34 340 P P **03 59 51.1 +2.6**
COLD IAmb IAmb 03 59 52.6
comp=Z,68nm,1.2s
COLD Coldfoot 41.34 340 P P **03 59 51.1 +2.6**
baz=131,SNR=38
J18K Innoko River 41.36 333 IAMs_20 IAMs_20 04 16 08.8
comp=Z,3µm,18.0s
J18K Innoko River 41.36 333 P P **03 59 50.3 +1.5**
baz=120
L17K Donlin 41.37 331 P P **03 59 50.5 +1.7**
baz=117,SNR=24
C27K Jago River 41.41 345 P P **03 59 51.7 +2.6**
baz=141,SNR=107
E24K Your Creek 41.43 342 P P **03 59 52.3 +2.9**
baz=134,SNR=50
O14K Tigyukauivet M 41.54 326 P P **03 59 53.2 +3.0**
baz=111
K17K Iditarod 41.64 331 IAmb IAmb 03 59 53.9
comp=Z,159nm,1.4s
K17K IAMs_20 IAMs_20 04 16 48.3
comp=Z,3µm,19.0s
K17K Iditarod 41.64 331 P P **03 59 52.3 +1.3**
baz=117,SNR=33
IMAR Indian Mountai 41.67 337 P P **03 59 53.0 +1.7**
L16K Owhat River 41.68 330 IAmb IAmb 03 59 54.8
comp=Z,124nm,1.4s
L16K Owhat River 41.68 330 P P **03 59 53.5 +2.1**
baz=115
E23K Chandalar 41.73 341 IAMs_20 IAMs_20 04 15 55.9

comp=Z,5µm,20.0s
E23K Chandalar 41.73 341 P **P** **03 59 54.7 +2.8**
baz=133,SNR=74
H20K Anotleneega Mo 41.77 336 P **P** **03 59 53.9 +1.7**
baz=124,SNR=136
D25K Kavik River 41.79 344 P **P** **03 59 54.7 +2.4**
baz=138,SNR=54
M15K Kasigluk River 41.80 328 P **P** **03 59 53.8 +1.4**
baz=113,SNR=11
C26K Camden Bay 41.91 345 P **P** **03 59 55.9 +2.8**
baz=140,SNR=62
G21K Allakaket 41.91 338 P **P** **03 59 55.2 +2.0**
baz=127
N14K Kuskokwak Cree 41.98 327 IAmb IAmb 03 59 56.3
comp=Z,112nm,1.4s
N14K Kuskokwak Cree 41.98 327 P **P** **03 59 54.7 +0.9**
baz=111,SNR=8.4
PTAC Punta Ardita, 42.05 118 P **P** **03 59 57.3 +2.4**
comp=Z,12µmcomp=Z,48nm,0.5s
ILON Igloolik, Nuna 42.05 17 P **P** **03 59 54.6 +0.3**
GCSA Galena City Sc 42.08 334 P **P** **03 59 56.5 +1.9**
baz=121,SNR=17
TOLK Toolik Lake Re 42.12 342 P **P** **03 59 57.4 +2.5**
baz=133,SNR=60
D24K Happy Valley 42.28 343 P **P** **03 59 58.4 +2.3**
baz=134
F21K Alatna River 42.33 339 P **P** **03 59 58.7 +2.1**
baz=127
E22K Anaktuvuk Pass 42.40 340 P **P** **03 59 59.4 +2.2**
baz=130
M14K Bethel 42.41 328 IAmb IAmb 04 00 00.1
comp=Z,126nm,1.3s
M14K Bethel 42.41 328 P **P** **03 59 58.7 +1.4**
baz=111
APAC Apartado, Choc 42.51 116 P **P** **04 00 02.2 +3.5**
comp=Z,79nm,1.2s
L15K Ungalak Mounta 42.55 329 P **P** **03 59 59.7 +1.2**
baz=113,SNR=11
D23K Nanushuk River 42.63 342 P **P** **04 00 02.0 +2.9**
baz=132,SNR=91
C24K Franklin Bluff 42.65 343 IAMs_20 IAMs_20 04 16 25.2
comp=Z,3µm,19.0s
C24K Franklin Bluff 42.65 343 P **P** **04 00 01.0 +1.8**
baz=135,SNR=39
K15K Wolf Creek Mou 42.81 330 P **P** **04 00 02.1 +1.6**
baz=113,SNR=14
J16K Anvik River 42.83 331 IAmb IAmb 04 00 03.7
comp=Z,102nm,1.4s
J16K IAMs_20 IAMs_20 04 17 24.8
comp=Z,3µm,18.0s
J16K Anvik River 42.83 331 P **P** **04 00 02.1 +1.4**
baz=115,SNR=33
H18K Honhosa River 42.83 335 IAmb IAmb 04 00 03.7
comp=Z,103nm,1.4s
H18K Honhosa River 42.83 335 P **P** **04 00 02.1 +1.3**
baz=120,SNR=42
G19K Purcell Mounta 42.89 336 P **P** **04 00 02.4 +1.2**
baz=122,SNR=34
M13K Dall Lake 42.93 327 P **P** **04 00 02.4 +0.9**
baz=110,SNR=7.6
UNV Unalaska Valle 42.93 317 P **P** **04 00 02.9 +1.2**
baz=100
F20K Avaraart Lake 42.93 338 P **P** **04 00 03.2 +1.7**
baz=124,SNR=27
L14K Kuka Creek 42.95 328 P **P** **04 00 02.8 +1.1**
baz=111,SNR=9.5
FRB Frobisher Bay 43.02 28 LR LR 04 18 17.6
comp=Z,4µm,21.6s,baz=242,slow=37
D22K Ayikyak River 43.13 341 P **P** **04 00 05.5 +2.4**
baz=130,SNR=40
I17K Unalakleet 43.13 332 IAmb IAmb 04 00 06.4
comp=Z,87nm,1.4s
I17K IAMs_20 IAMs_20 04 18 42.7
comp=Z,3µm,22.0s
I17K Unalakleet 43.13 332 P **P** **04 00 04.4 +1.3**
baz=116
C23K Itkillik River 43.21 343 P **P** **04 00 05.5 +1.8**
baz=133,SNR=30
E21K Killik River 43.22 340 P **P** **04 00 05.5 +1.6**
baz=128,SNR=22
H17K Granite Mounta 43.30 334 IAmb IAmb 04 00 07.6
comp=Z,101nm,1.4s
H17K IAMs_20 IAMs_20 04 20 12.7
comp=Z,3µm,20.0s
H17K Granite Mounta 43.30 334 P **P** **04 00 06.0 +1.4**
baz=118,SNR=44
G18K Tagagawik 43.31 335 IAmb IAmb 04 00 53.6
comp=Z,49nm,0.5s
G18K IAMs_20 IAMs_20 04 19 59.7
comp=Z,3µm,20.0s
G18K Tagagawik 43.31 335 P **P** **04 00 05.8 +1.2**
baz=120,SNR=28
DBBC Dabeiba 43.34 116 P **P** **04 00 08.4 +2.8**
UREC San Jos de Ur 43.41 115 P **P** **04 00 07.6 +1.6**
comp=Z,1µmcomp=Z,76nm,1.2s
F19K Shaleruckik Mo 43.49 337 IAMs_20 IAMs_20 04 19 17.5
comp=Z,2µm,19.0s
F19K Shaleruckik Mo 43.49 337 P **P** **04 00 07.5 +1.5**
baz=122,SNR=102
E19K Redstone River 43.65 338 IAMs_20 IAMs_20 04 18 17.1
comp=Z,4µm,20.0s
E19K Redstone River 43.65 338 P **P** **04 00 09.2 +1.8**
baz=123,SNR=82
E20K Nigu River 43.77 339 P **P** **04 00 10.3 +1.9**
baz=125,SNR=36
G17K Kiwalik Mounta 43.84 334 P **P** **04 00 10.7 +1.8**
baz=118,SNR=88
J14K Nanvaranak Lak 43.85 330 P **P** **04 00 10.5 +1.6**
baz=112
C21K Knifeblade Rid 43.89 341 P **P** **04 00 11.7 +2.5**
baz=127,SNR=63
K13K Kusilvak Mount 44.04 329 IAmb IAmb 04 00 13.3
comp=Z,81nm,1.4s
K13K Kusilvak Mount 44.04 329 P **P** **04 00 11.6 +1.1**
baz=110,SNR=22
H16K Elim 44.06 333 P **P** **04 00 12.6 +1.9**
baz=115,SNR=102
B21K Ikpikpuk River 44.13 341 P **P** **04 00 13.1 +2.0**
baz=128,SNR=52
D20K Etivluk River 44.16 339 P **P** **04 00 12.9 +1.5**
baz=125
NIKH Nikolski High 44.20 315 P **P** **04 00 13.2 +1.3**
baz=97
CBOC Ciudad Bolivar 44.23 117 P **P** **04 00 16.1 +3.3**
comp=Z,1µmcomp=Z,94nm,1.3s
B22K Teshekpuk Lake 44.26 342 P **P** **04 00 13.9 +1.8**
baz=130
M11K Mekoryuk 44.27 326 IAMs_20 IAMs_20 04 15 32.8
comp=Z,3µm,20.0s
M11K Mekoryuk 44.27 326 P **P** **04 00 13.5 +1.2**
baz=107
G16K Koyuk River 44.43 334 IAMs_20 IAMs_20 04 20 48.8
comp=Z,2µm,19.0s
G16K Koyuk River 44.43 334 P **P** **04 00 15.6 +2.0**
baz=116,SNR=71
D19K Kuna River 44.50 339 IAmb IAmb 04 00 17.1
comp=Z,95nm,1.3s
D19K Kuna River 44.50 339 P **P** **04 00 15.7 +1.5**
baz=123
F17K Baldwin Pennin 44.50 335 IAmb IAmb 04 00 17.7
comp=Z,109nm,1.4s
F17K IAMs_20 IAMs_20 04 18 12.6
comp=Z,3µm,21.0s
F17K Baldwin Pennin 44.50 335 P **P** **04 00 15.9 +1.9**
baz=118,SNR=34
PLMC San Jos del P 44.65 119 P **P** **04 00 18.3 +2.2**
comp=Z,620nmcomp=Z,42nm,1.4s
E18K Tukpahlearik C 44.74 337 IAMs_20 IAMs_20 04 20 15.4
comp=Z,2µm,20.0s
E18K Tukpahlearik C 44.74 337 P **P** **04 00 17.6 +1.6**
baz=119
G15K Niukluk 44.91 333 P **P** **04 00 19.2 +1.8**
baz=113
E17K Hotham Inlet 45.00 336 P **P** **04 00 19.8 +1.7**
baz=118
B20K Meade River 45.07 341 P **P** **04 00 20.9 +2.3**
baz=125,SNR=83
GUY2C Guyana, Caldas 45.13 117 P **P** **04 00 23.0 +2.6**
comp=Z,1µmcomp=Z,51nm,1.1s
CELP Cerrillos 45.25 96 IAmb IAmb 04 00 25.2
comp=Z,79nm,1.5s
ANM Nome 45.27 332 IAmb IAmb 04 00 23.8
comp=Z,94nm,1.4s
ANM Nome 45.27 332 P **P** **04 00 22.0 +1.6**
baz=112,SNR=55
C19K Lookout Ridge 45.28 339 P **P** **04 00 22.2 +1.8**
baz=122,SNR=29
ECPR Experimental S 45.32 95 IAmb IAmb 04 00 23.2
comp=Z,80nm,1.3s
POIN Pond Inlet 45.32 15 P **P** **04 00 21.8 +1.2**
F15K North Star Dit 45.43 334 P **P** **04 00 23.5 +1.9**
baz=113,SNR=54
JAMC Jamundi, Valle 45.48 121 P **P** **04 00 25.8 +2.9**
comp=Z,869nmcomp=Z,60nm,1.3s
C18K Utukok River 45.54 338 IAMs_20 IAMs_20 04 19 29.2
comp=Z,5µm,20.0s
C18K Utukok River 45.54 338 P **P** **04 00 23.7 +1.2**
baz=120,SNR=78
SJG San Juan 45.59 95 LR LR 04 24 00.8
comp=Z,1µm,18.9s,baz=296,slow=42
SJG San Juan 45.59 95 P **P** **04 00 24.7 +1.2**
SJG San Juan 45.59 95 P **P** **04 00 24.7 +1.2**
SJG pmax pmax
comp=Z,109nm,1.4s
A21K Barrow 45.70 342 P **P** **04 00 25.2 +1.6**
baz=127,SNR=13
D17K Noatak River 45.71 336 P **P** **04 00 25.1 +1.3**
baz=117
RDOG Red Dog Mine 45.82 337 P **P** **04 00 25.9 +1.3**
baz=117,SNR=48
PAMC Pamplona, Colo 45.87 113 P **P** **04 00 27.9 +1.7**
comp=Z,246nmcomp=Z,21nm,0.9s
BBAC Balboa, Cauca 45.88 122 P **P** **04 00 29.1 +3.1**
comp=Z,2µmcomp=Z,1µmcomp=Z,128nm,1.3s
POPC Popayan, Colom 45.94 121 P **P** **04 00 28.6 +2.1**
comp=Z,3µmcomp=Z,234nm,1.1s
BARC Barichara 45.95 114 P **P** **04 00 28.6 +2.0**
comp=Z,905nmcomp=Z,94nm,1.1s
F14K Arctic Creek 45.99 333 P **P** **04 00 27.6 +1.7**
baz=111,SNR=68
C17K DeLong Mountai 46.10 337 P **P** **04 00 28.3 +1.5**
baz=117,SNR=50
ROSC El Rosal 46.17 117 P **P** **04 00 31.0 +2.5**
comp=Z,33nm,1.1s,baz=351,slow=4.5,SNR=30
ROSC LR LR 04 21 40.3
comp=Z,2µm,20.3s,baz=326,slow=38
comp=Z,33nm,1.1s
CMBC Cumbal 46.22 124 P **P** **04 00 33.4 +4.5**
CUSE Cuicocha Este 46.27 125 P **P** **04 00 31.1 +1.8**
comp=Z,2µmcomp=Z,53nm,1.2s
OTAV Otavalo 46.28 125 P **P** **04 00 31.7 +2.3**
OTAV Otavalo 46.28 125 P **P** **04 00 31.7 +2.3**
OTAV pmax pmax
comp=Z,83nm,1.3s
OTAV MLR MLR
comp=Z,900nm,18.0s
OTAV Otavalo 46.28 125 P **P** **04 00 32.0 +2.6**
comp=Z,845nmcomp=Z,52nm,1.4s
OTAV Otavalo 46.28 125 *e*P **P** **04 00 28.5 -0.9**
A19K Wainwright 46.30 340 P **P** **04 00 30.2 +2.0**
baz=121,SNR=42
CRUC La Cruz 46.41 123 P **P** **04 00 33.3 +3.0**
RUSC La Rusia 46.46 115 P **P** **04 00 33.5 +2.6**
comp=Z,1µmcomp=Z,116nm,1.2s
CVER Cruz Verde, Cu 46.57 117 P **P** **04 00 35.3 +3.6**
comp=Z,2µmcomp=Z,121nm,1.4s
SDV Santo Domingo 46.60 109 LR LR 04 23 27.0
comp=Z,2µm,18.6s,baz=292,slow=40
SDV Santo Domingo 46.60 109 P **P** **04 00 32.8 +1.1**
SDV Santo Domingo 46.60 109 P **P** **04 00 33.0 +1.3**
comp=Z,979nmcomp=Z,66nm,1.3s
SDV Santo Domingo 46.60 109 *e*P **P** **04 00 30.9 -0.8**
TNA Tin City 46.64 333 IAmb IAmb 04 00 33.9
comp=Z,72nm,1.3s
TNA Tin City 46.64 333 P **P** **04 00 32.3 +1.3**
baz=110,SNR=33
C16K Lisburne Hills 46.73 337 IAMs_20 IAMs_20 04 20 48.2
comp=Z,4µm,18.0s
C16K Lisburne Hills 46.73 337 P **P** **04 00 33.2 +1.5**
baz=115,SNR=58
GARC Garzon, Huila 47.04 121 P **P** **04 00 37.3 +2.1**
comp=Z,1µmcomp=Z,16nm,1.0s
TAOE Nuku Hiva Isla 47.13 216 *e*P **P** **04 00 32.8 -2.8**
comp=Z,55nm,24.0s
TAOE *e*S **S** **04 07 31.0 +2.8**
comp=Z,608nm,24.6s
TAOE *e*LQ LQ 04 11 58.7
comp=Z,2µm,22.7s
TAOE *e*LR LR 04 13 47.8
comp=Z,2µm,28.5s
GAMB Gambell 47.67 330 IAmb IAmb 04 00 41.9
comp=Z,68nm,1.5s
GAMB IAMs_20 IAMs_20 04 20 29.1
comp=Z,2µm,20.0s
GAMB Gambell 47.67 330 P **P** **04 00 40.3 +1.3**
baz=104,SNR=20
MCRA Macar, Loja 48.67 131 P **P** **04 00 49.4 +1.9**
comp=Z,728nmcomp=Z,22nm,2.1s
PTLC Puerto Leguiza 48.92 122 P P 04 00 54.2 +4.8
TULEG Thule 49.68 13 *i* P **P** **04 00 54.4 0.0**
TULEG IAmb IAmb 04 00 56.6
comp=Z,182nm,1.8s
UPNV Upernavik 50.84 19 *i* P **P** **04 01 03.5 +0.2**
UPNV IAmb IAmb 04 01 05.2
comp=Z,42nm,1.2s
SFJD Kangerlussuaq 51.14 27 LR LR 04 22 51.6
comp=Z,4µm,19.0s,baz=254,slow=36
KULLO Kullorsuaq 51.22 17 *i* P **P** **04 01 05.7 -0.4**
KULLO IAmb IAmb 04 01 07.5
comp=Z,49nm,1.1s
BIM Bigot 51.58 96 IAMs_20 IAMs_20 04 25 39.7
comp=Z,2µm,20.0s
ATAH Atahualpa 51.77 132 LR LR 04 21 39.7
comp=Z,83nm,18.8s,baz=318,slow=34
MPOM Morne Pois Mar 51.79 96 IAMs_20 IAMs_20 04 25 45.2
comp=Z,2µm,19.0s
BBGH Gun Hill 53.53 97 IAMs_20 IAMs_20 04 25 36.3
comp=Z,3µm,21.0s
NEEM North Greenlan 53.64 14 *i* P **P** **04 01 24.1 -0.3**
NEEM IAmb IAmb 04 01 25.9
comp=Z,105nm,1.1s
SHEM Shemya Is, Ala 54.52 315 LR LR 04 20 31.9
comp=Z,637nm,21.3s,baz=100,slow=31
SUMG Summit 55.97 21 P **P** **04 01 41.6 +0.2**
SUMG IAmb IAmb 04 01 43.5
comp=Z,54nm,1.2s
SUMG Summit 55.97 21 P **P** **04 01 41.6 +0.2**
SUMG pmax pmax
comp=Z,54nm,1.2s
SUMG MLR MLR
comp=Z,9µm,18.0s
SUMG Summit 55.97 21 *i* P **P** **04 01 41.0 -0.4**
SUMG IAmb IAmb 04 01 42.6
comp=Z,45nm,1.1s
NNA Nana 56.47 134 LR LR 04 22 28.2
comp=Z,1µm,20.1s,baz=332,slow=32
BILL Bilibino 57.03 334 P **P** **04 01 49.7 +1.1**
BILL IAMs_20 IAMs_20 04 30 55.1
comp=Z,3µm,18.0s
BILL Bilibino 57.03 334 *ce*P **P** **04 01 50.1 +1.5**
BILL pmax pmax
comp=Z,79nm,1.3s
BOAV Boa Vista 58.53 109 P **P** **04 02 00.0 +0.2**
BOAV Boa Vista 58.53 109 *e*P **P** **04 01 59.1 -0.8**
RPN Rapa Nui 58.66 175 LR LR 04 21 12.5
comp=Z,511nm,21.6s,baz=3.5,slow=30
TEFE Tefe 58.92 117 *e*P **P** **04 02 01.8 -0.7**
PPT Papeete 59.36 220 P **P** **04 02 09.3 +3.8**
comp=Z,9.9nm,0.7s,baz=254,slow=6.0,SNR=3.7
PPT LR LR 04 22 13.9
comp=Z,582nm,18.9s,baz=30,slow=30
comp=Z,9.9nm,0.7s
PPT2 Papeete2 59.38 219 *e*S **S** **04 10 10.0 -4.6**
comp=Z,347nm,29.5s
PPT2 *e*SS **SS** **04 14 08.9 -1.0**
comp=Z,103nm,24.8s
PPT2 *e*LQ LQ 04 17 01.5
comp=Z,2µm,25.0s
PPT2 *e*LR LR 04 19 16.9
comp=Z,765nm,30.0s
PPT2 *e*LR LR 04 19 23.5
comp=Z,1µm,28.5s
NOR Nord 60.05 10 *i* P **P** **04 02 10.5 +1.1**
NOR IAmb IAmb 04 02 11.1
comp=Z,25nm,1.5s
DAG Danmarks Havn 60.80 15 *i* P **P** **04 02 14.0 -0.6**
DAG IAmb IAmb 04 02 14.9
comp=Z,29nm,1.0s
MACA Manacapuru-AM 61.75 114 P **P** **04 02 21.1 -0.8**
MACA IAmb IAmb 04 02 23.3
comp=Z,43nm,1.1s
MACA Manacapuru-AM 61.75 114 *e*P **P** **04 02 21.4 -0.5**
BORG Borgarnes 63.19 29 LR LR 04 27 53.1
comp=Z,1µm,18.9s,baz=299,slow=34
MDP Montagnes des 63.51 101 LR LR 04 32 03.5
comp=Z,476nm,19.9s,baz=286,slow=38
PET Petropavlovsk 63.57 318 *e*P **P** **04 02 32.6 -0.9**
PET *e*S **S** **04 11 03.8 -3.2**
PET MLR MLR
comp=Z,1µm,14.0s
PET MLR MLR
comp=Z,1µm,16.0s
SEY Seymchan 63.67 329 *ce*P **P** **04 02 35.6 +1.6**
SEY pmax pmax
comp=Z,47nm,1.3s
TBI Tubuai 64.08 216 *e*S **S** **04 11 14.3 +0.4**
comp=Z,694nm,26.5s
TBI *e*SS **SS** **04 15 17.9 -5.5**
comp=Z,621nm,32.8s
TBI *e*LQ LQ 04 18 55.2
comp=Z,16µm,33.5s
TBI *e*LR LR 04 21 45.5
comp=Z,4µm,28.0s
PEA0B Petropavlovsk- 64.09 318 *ce*P **P** **04 02 38.5 +1.5**
PETK Petropavlovsk- 64.09 318 P **P** **04 02 37.8 +0.8**
comp=Z,11nm,0.9s,baz=78,slow=7.5,SNR=8.9
PETK LR LR 04 27 27.7
comp=Z,506nm,21.8s,baz=68,slow=33
comp=Z,11nm,0.9s
PETK Petropavlovsk- 64.09 318 P **P** **04 02 37.6 +0.5**
LPAZ La Paz 65.23 130 P **P** **04 02 46.4 +0.8**
comp=Z,2.5nm,0.7s,baz=318,slow=6.2,SNR=6.1
LPAZ LR LR 04 28 45.8
comp=Z,1µm,21.3s,baz=324,slow=34
comp=Z,2.5nm,0.7s
LPAZ La Paz 65.23 130 P **P** **04 02 45.1 -0.5**
LPAZ La Paz 65.23 130 P **P** **04 02 45.1 -0.5**
LPAZ pmax pmax
comp=Z,13nm,1.3s
LPAZ La Paz 65.23 130 *e*P **P** **04 02 45.9 +0.3**
PB18 Visviri 65.32 132 P **P** **04 02 46.3 +0.3**
KBS Kingsbay 65.53 10 *ce*P **P** **04 02 47.0 +1.1**
KBS pmax pmax
comp=Z,26nm,1.1s
KBS Kingsbay 65.53 10 *i* P **P** **04 02 45.4 -0.5**
MA2 Magadan 65.53 326 LR LR 04 29 31.3
comp=Z,947nm,21.6s,baz=58,slow=34
MA2 Magadan 65.53 326 P **P** **04 02 47.5 +1.2**
MA2 Magadan 65.53 326 P **P** **04 02 46.5 +0.2**
MA2 IAmb IAmb 04 02 49.0
comp=Z,43nm,1.2s
MA2 Magadan 65.53 326 *ce*P **P** **04 02 47.8 +1.5**
MA2 pmax pmax
comp=Z,60nm,1.7s
PB12 IPOC Station P 65.56 133 P **P** **04 02 46.4 -0.6**
PB12 IAmb IAmb 04 02 54.2
comp=Z,28nm,1.1s
PB16 IPOC Station P 65.86 133 P **P** **04 02 48.9 -0.7**
PB16 IAmb IAmb 04 02 58.4
comp=Z,41nm,1.4s
ITTB Itaituba 66.38 111 *e*P **P** **04 02 51.8 -0.6**
SPITS Spitsbergen Ar 66.69 10 LR LR 04 32 43.7
comp=Z,5µm,18.2s,baz=310,slow=37
SPITS Spitsbergen Ar 66.69 10 P **P** **04 02 52.3 -1.1**
SPITS pmax pmax
comp=Z,62nm,1.4s
SPB2 Spitsbergen Ar 66.69 10 P **P** **04 02 52.5 -1.0**
TIXI Tiksi 68.01 342 LR LR 04 35 26.5
comp=Z,1µm,18.9s,baz=73,slow=38
TIXI Tiksi 68.01 342 P **P** **04 03 01.1 -0.7**
TIXI Tiksi 68.01 342 IAMs_20 IAMs_20 04 33 54.4
comp=Z,1µm,20.0s
TIXI Tiksi 68.01 342 *ce*P **P** **04 03 02.1 +0.3**
TIXI pmax pmax
comp=Z,63nm,1.3s
RAR Rarotonga 68.11 226 LR LR 04 24 59.8
comp=Z,593nm,21.2s,baz=38,slow=29
NPGB Novo Progresso 68.30 113 *e*P **P** **04 03 04.6 0.0**
VILB Vilhena 68.40 122 P **P** **04 03 04.7 -0.4**
VILB Vilhena 68.40 122 *e*P **P** **04 03 04.0 -1.1**
SIV San Ignacio 69.81 125 LR LR 04 31 59.8
comp=Z,888nm,21.3s,baz=314,slow=34
PDRB Porto dos Gac 70.10 118 *e*P **P** **04 03 15.4 -0.3**
CLDB Colider 70.33 117 *e*P **P** **04 03 17.5 +0.4**
PTLB Pontes e Lacer 70.82 123 P **P** **04 03 19.5 -0.5**
PTLB Pontes e Lacer 70.82 123 *e*P **P** **04 03 21.2 +1.2**
AFI Afiamalu 71.11 240 LR LR 04 26 08.6
comp=Z,833nm,21.4s,baz=48,slow=29
YAK Yakutsk 73.39 334 P **P** **04 03 33.9 -0.9**
YAK Yakutsk 73.39 334 IAMs_20 IAMs_20 04 39 43.0
comp=Z,2µm,19.0s
YAK Yakutsk 73.39 334 *d* P **P** **04 03 35.4 +0.6**
YAK *e**PP **sP** **04 03 38.7 -0.9**
YAK *e* 04 03 51.3
YAK *e* 04 06 18.7
YAK *e*S **SKiKP** **04 13 05.0 -0.7**
YAK *e* 04 13 43.8
YAK *e*SS **SS** **04 17 48.6 +3.9**
YAK pmax pmax
comp=Z,31nm,1.0s
YAK pmax pmax
comp=N,9.0nm,1.0s
YAK pmax pmax
comp=E,23nm,1.4s
YAK pmax pmax
comp=Z,17nm,0.7s
YAK pmax pmax
comp=N,39nm,2.0s
YAK pmax pmax
comp=E,12nm,1.4s
YAK smax smax
comp=E,49nm,2.5s
YAK MLR MLR
comp=Z,1µm,22.0s
YAK MLR MLR
comp=N,863nm,15.0s
YAK MLR MLR
comp=E,1µm,15.0s
TYV Tymovskoe 73.48 320 *e*P **P** **04 03 36.6 +1.1**
TYV *e*S **S** **04 13 00.8 -4.1**
TYV pmax pmax
comp=Z,25nm,1.3s
TYV pmax pmax
comp=Z,300nm,3.6s
TYV smax smax
comp=N,300nm,4.5s
TYV smax smax
comp=E,200nm,4.5s
SALV Santo Antonio 73.62 121 *e*P **P** **04 03 37.3 +0.6**
SNDB Serra Nova Dou 74.47 115 *e*P **P** **04 03 42.9 +1.1**
ARCES ARCESS Array B 75.00 14 P **P** **04 03 44.8 +0.7**
comp=E,9.1nm,1.1s,baz=318,slow=7.3,SNR=4.6
ARCES LR LR 04 37 22.4
comp=E,3µm,21.8s,baz=330,slow=36
comp=E,9.1nm,1.1s
ARCES ARCESS Array B 75.00 14 P **P** **04 03 44.2 +0.1**
ARCES IAmb IAmb 04 06 28.3
comp=Z,93nm,1.9s
ARCES ARCESS Array B 75.00 14 P **P** **04 03 44.2 +0.1**
ARCES pmax pmax
comp=Z,93nm,1.9s
PP1B Ponte de Pedra 75.31 122 *e*P **P** **04 03 47.9 +1.3**
YSS Yuzhno-Sakhali 75.39 316 P **P** **04 03 48.6 +1.9**
YSS Yuzhno-Sakhali 75.39 316 P **P** **04 03 46.0 -0.7**
YSS Yuzhno-Sakhali 75.39 316 *e*P **P** **04 03 46.3 -0.4**
YSS *e* 04 03 56.1
YSS *e* 04 06 34.9
YSS *e*S **S** **04 13 21.7 -4.8**
YSS *e*PPS PPS 04 13 58.0
YSS pmax pmax
comp=Z,300nm,8.4s
YSS pmax pmax
comp=Z,20nm,1.2s
YSS smax smax
comp=N,300nm,6.1s
YSS smax smax
comp=E,300nm,5.9s
SMTB Santa Maria do 75.54 110 *e*P **P** **04 03 48.8 +0.8**
BDQN Bodoquena, MS 75.84 125 *e*P **P** **04 03 50.7 +1.1**
MURT Porto Murtinho 76.05 127 *e*P **P** **04 03 51.4 +0.7**
ARAG Araguaiana, MT 76.37 118 *e*P **P** **04 03 54.0 +1.3**
AQDB Aquidauana 76.59 124 P **P** **04 03 53.2 -0.7**
AQDB Aquidauana 76.59 124 *e*P **P** **04 03 54.7 +0.9**
JKA Kamikawa-asahi 76.95 314 P **P** **04 03 54.7 -0.9**
JKA IAmb IAmb 04 03 57.8
comp=Z,72nm,1.7s
ASAJ Asahikawa 76.95 314 P **P** **04 03 56.8 +1.1**
comp=Z,6.0nm,0.8s,baz=290,slow=5.7,SNR=7.0
ASAJ LR LR 04 32 25.5
comp=Z,270nm,20.9s,baz=30,slow=32

comp=Z,6.0nm,0.8s
ASAJ Asahikawa 76.95 314 P P 04 03 54.7 -1.0
ASAJ pmax pmax
comp=Z,72nm,1.7s
MT08 Bocatoma Ro 77.19 143 P P 04 03 56.6 -0.6
C2SB Chapadao do Su 77.54 121 *e*P **P 04 04 01.0 +1.8**
NB2 NORSAR Subarra 77.67 24 P P 04 04 00.7 +1.3
comp=Z,7.6nm,1.2s,baz=315,slow=5.9
NOA NORSAR Array B 77.67 24 P P 04 03 59.2 -0.3
comp=Z,2.3nm,1.0s,baz=317,slow=5.8,SNR=3.9
NOA LR LR 04 37 55.8
comp=Z,2µm,19.8s,baz=320,slow=36
comp=Z,2.3nm,1.0s
NRIK Noril'sk 78.01 352 P P 04 04 01.1 0.0
comp=Z,13nm,1.0s,baz=36,slow=3.7,SNR=20
NRIK LR LR 04 40 27.4
comp=Z,1µm,19.6s,baz=36,slow=37
comp=Z,13nm,1.0s
NRIK Noril'sk 78.01 352 P P 04 04 00.6 -0.4
NRIK IAmb IAmb 04 04 02.8
comp=Z,30nm,1.2s
NRIK Noril'sk 78.01 352 *i* P **P 04 04 01.3 +0.2**
NRIK pmax pmax
comp=Z,20nm,1.1s
NBPS Pedro II - PI 78.04 103 *e*P **P 04 04 03.3 +1.0**
LVZ Lovozero 78.11 11*ce*P **P 04 04 03.7 +2.0**
LVZ pmax pmax
comp=Z,30nm,1.2s
APA Apatity 78.19 12⇓*e*P **P 04 04 02.1 0.0**
APA pmax pmax
comp=Z,10.0nm,1.3s
APA MLR MLR
comp=Z,2µm,21.4s
AMBA Amambai (Brazi 78.70 126 *e*P **P 04 04 07.0 +1.4**
BI02 San Fabin de 79.12 146 P P 04 04 07.2 -0.5
HFS Hagfors 79.18 24 P P 04 04 07.6 -0.1
comp=Z,4.7nm,0.9s,baz=252,slow=3.0,SNR=4.4
HFS LR LR 04 38 41.8
comp=Z,2µm,19.9s,baz=318,slow=35
comp=Z,4.7nm,0.9s
BDFB Brasilia 79.22 116 P P 04 04 09.7 +1.0
comp=Z,3.9nm,1.0s,baz=322,slow=8.1,SNR=4.6
BDFB LR LR 04 44 07.2
comp=Z,737nm,19.4s,baz=308,slow=39
comp=Z,3.9nm,1.0s
BDFB Brasilia 79.22 116 P P 04 04 08.3 -0.4
BDFB IAmb IAmb 04 04 17.4
comp=Z,76nm,1.9s
BDFB Brasilia 79.22 116 P P 04 04 08.3 -0.4
BDFB pmax pmax
comp=Z,76nm,1.9s
CPUP Villa Florida 79.41 130 P P 04 04 10.0 +0.6
comp=Z,8.4nm,1.2s,baz=332,slow=6.7,SNR=8.0
CPUP LR LR 04 39 35.9
comp=Z,359nm,20.6s,baz=334,slow=36
comp=Z,8.4nm,1.2s
CPUP Villa Florida 79.41 130 P P 04 04 08.5 -0.8
CPUP Villa Florida 79.41 130 P P 04 04 08.5 -0.8
CPUP pmax pmax
comp=Z,43nm,1.6s
CPUP Villa Florida 79.41 130 *e*P **P 04 04 10.5 +1.1**
ZEA Zeya 79.59 328 *e*P **P 04 04 10.7 +0.7**
ZEA *e*S **S 04 14 11.7 0.0**
ZEA pmax pmax
comp=Z,20nm,1.4s
ZEA pmax pmax
comp=Z,100nm,5.5s
ZEA smax smax
comp=N,200nm,9.1s
ZEA smax smax
comp=E,200nm,13.9s
SDBA SAO DESIDERIO 79.74 111 *e*P **P 04 04 11.4 -0.1**
ITRB Iturama 79.94 121 *e*P **P 04 04 14.7 +2.3**
KLR Kul'dur 80.23 322 LR LR 04 38 10.6
comp=E,405nm,20.9s,baz=45,slow=34
KLR Kul'dur 80.23 322*ce*P **P 04 04 14.7 +1.1**
KLR pmax pmax
comp=Z,6.0nm,1.7s
TRCB Terra Rica 80.26 124 *e*P **P 04 04 15.5 +1.3**
IPMB Ipameri, GO 80.48 118 *e*P **P 04 04 16.6 +1.1**
MSVF Nonsavu 81.12 243 LR LR 04 34 57.6
comp=Z,839nm,18.2s,baz=39,slow=32
LDASE Londrina, Braz 81.71 124 *e*P **P 04 04 23.4 +1.6**
JANB Januaria 81.74 113 *e*P **P 04 04 22.7 +0.5**
HEH HeiHe 81.77 325 *e*P **P 04 04 21.9 +0.1**
HEH pP **pP 04 04 24.8 -0.6**
HEH S **S 04 14 36.5 +1.8**
HEH pmax pmax
comp=Z,21nm,1.4s
HEH L L
comp=Z,1µm,15.6s
HEH L L
comp=Z,1µm,13.2s
HEH L L
comp=Z,3µm,15.0s
FIA1 FINESS Array S 81.89 18 P P 04 04 22.1 0.0
FINES FINESS Array B 81.89 18 P P 04 04 22.9 +0.8
comp=Z,2.8nm,0.9s,baz=343,slow=6.0,SNR=6.1
FINES LR LR 04 40 40.1
comp=Z,2µm,18.7s,baz=330,slow=36
comp=Z,2.8nm,0.9s
FINES FINESS Array B 81.89 18 P P 04 04 22.2 0.0
FINES FINESS Array B 81.89 18 P P 04 04 22.2 0.0
PTGB Pitanga 81.89 125 *e*P **P 04 04 23.8 +0.9**
BOD Bodaibo 82.00 336 *e*P **P 04 04 22.2 -0.7**
BOD pmax pmax
comp=Z,44nm,1.5s
PLCA Paso Flores 82.72 148 P P 04 04 30.4 +3.6
comp=Z,3.5nm,1.0s,baz=357,slow=3.1,SNR=4.7
PLCA LR LR 04 34 49.6
comp=Z,797nm,18.4s,baz=328,slow=31
comp=Z,3.5nm,1.0s
PLCA Paso Flores 82.72 148 *e*P **P 04 04 27.3 +0.5**
USRK Ussuriysk Ar. 83.18 318 P P 04 04 30.9 +1.7
comp=Z,12nm,1.0s,baz=62,slow=4.5,SNR=16
comp=Z,12nm,1.0s
USRK Ussuriysk Ar. 83.18 318 P P 04 04 31.0 +1.7
RCBR Riachuelo 83.44 101 LR LR 04 43 12.8
comp=Z,305nm,20.9s,baz=301,slow=37
RCBR Riachuelo 83.44 101 IAMs_20 IAMs_20 04 43 30.0
comp=Z,1µm,21.0s
ITAB Concordia 83.47 127 *e*P **P 04 04 31.0 +0.1**
RCLB Rio Claro- Sao 83.69 121 *e*P **P 04 04 33.1 +0.9**
MJAR Matsushiro Arr 83.91 309 P P 04 04 33.8 +0.6
comp=Z,17nm,1.3s,baz=54,slow=4.1,SNR=17
MJAR LR LR 04 34 58.9
comp=Z,785nm,22.0s,baz=61,slow=31
comp=Z,17nm,1.3s
MJAR Matsushiro Arr 83.91 309 P P 04 04 32.0 -1.2
MJAR IAmb IAmb 04 04 35.9
comp=Z,43nm,1.5s
MJAR Matsushiro Arr 83.91 309 P P 04 04 32.0 -1.2
MJAR pmax pmax
comp=Z,43nm,1.5s
MAJO Matsushiro 83.91 309 P P 04 04 34.1 +0.9
MAJO Matsushiro 83.91 309 P P 04 04 31.9 -1.3
MAJO IAmb IAmb 04 04 47.3
comp=Z,42nm,1.3s
MAJO Matsushiro 83.91 309 P P 04 04 31.9 -1.3
MAJO pmax pmax
comp=Z,42nm,1.3s
ESDC Sonseca Array 84.23 47 P P 04 04 35.1 +0.2
comp=Z,1.7nm,1.1s,baz=8.8,slow=4.3,SNR=3.5
comp=Z,1.7nm,1.1s
MDJ Mudanjiang 84.26 320 IAMs_20 IAMs_20 04 44 19.6
comp=Z,988nm,18.0s
MDJ Mudanjiang 84.26 320 P P 04 04 35.5 +0.7
MDJ PP **PP 04 07 51.9 +3.1**
MDJ S **S 04 15 04.6 +4.4**
MDJ pmax pmax
comp=Z,14nm,1.3s
MDJ pmax pmax
comp=Z,420nm,10.3s
MDJ L L
comp=Z,650nm,15.1s
MDJ L L
comp=Z,740nm,15.8s
MDJ L L
comp=Z,1µm,20.6s
NBPV Pedro Velho 84.27 101 *e*P **P 04 04 35.6 +0.3**
VSU Vasula 84.58 19*ce*P **P 04 04 38.6 +2.5**
VSU pmax pmax
comp=Z,45nm,2.5s
BNX BinXian 84.72 322 ⇓P **P 04 04 37.6 +0.5**
BNX S **SKSac 04 15 01.4 0.0**
BNX pmax pmax
comp=Z,40nm,1.5s
BNX pmax pmax
comp=Z,230nm,8.1s
BNX L L
comp=Z,830nm,15.3s
BNX L L
comp=Z,830nm,13.7s
BNX L L
comp=Z,790nm,16.5s
JHJ Hachijo jima 2 84.79 306 LR LR 04 35 05.7
comp=Z,423nm,21.0s,baz=92,slow=30
RAO Raoul Island 85.39 232 LR LR 04 34 53.3
comp=Z,250nm,19.1s,baz=211,slow=30
CLL Collm 85.40 30 *e*P **P 04 04 42.0 +1.6**
CLL *e*S **S 04 15 14.0 +2.7**
CLL Collm 85.40 30 *e*P **P 04 04 42.0 +1.6**
CLL *ex* x 04 04 48.0
comp=Z,43nm,2.3s
CLL *e*PPPP 04 11 18.0
CLL *e*S **S 04 15 14.0 +2.7**
CLL *e*PS **PnS 04 16 08.0 +1.4**
CLL *e*SS **SS 04 20 45.0 +0.1**
CLL *e*SSS SSS 04 24 18.0
CLL *e*SSSS 04 27 12.0
CLL AMS AMS 04 41 00.0
KLMR Klimovskoe 85.42 12 *e*P **P 04 04 41.6 +1.3**
KLMR S **SKSac 04 15 05.9 +0.7**
KLMR pmax pmax
comp=Z,43nm,1.5s
KLMR MLR MLR
comp=Z,1µm,16.0s
PLTB Pedras Altas 85.46 132 P P 04 04 39.7 -1.2
PLTB IAmb IAmb 04 04 47.9
comp=Z,58nm,1.7s
PLTB Pedras Altas 85.46 132 *e*P **P 04 04 40.6 -0.3**
HIA Hailar 86.07 328 P P 04 04 42.0 -1.9
HIA Hailar 86.07 328 IAMs_20 IAMs_20 04 44 10.9
comp=Z,1µm,20.0s
HIA Hailar 86.07 328 P P 04 04 42.0 -1.9
HIA pmax pmax
comp=Z,22nm,1.1s
HIA MLR MLR
comp=Z,1µm,20.0s
JCJ Chichijima 86.43 300 LR LR 04 35 57.1
comp=Z,422nm,20.6s,baz=98,slow=30
CN2 Changchun 87.05 321 *e*P **P 04 04 47.7 -1.0**
CN2 *es*P sP 04 04 54.0 +0.5
CN2 *e*S **S 04 15 23.4 -4.3**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 L L
comp=Z,300nm,15.0s
CN2 L L
comp=Z,400nm,15.0s
CN2 L L
comp=Z,400nm,16.0s
DAVOX Davos/Dischmat 87.26 35 LR LR 04 42 53.6
comp=Z,2µm,18.2s,baz=304,slow=35
GERES GERESS Array B 87.53 31 LR LR 04 44 23.2
comp=Z,1µm,19.1s,baz=316,slow=36
MDT Midelt 87.91 52 LR LR 04 41 17.5
comp=Z,1µm,21.3s,baz=316,slow=34
MNK Minsk 88.29 21 *i* P **P 04 04 54.9 +0.5**
comp=E,10.0nm,1.0s,baz=329
MNK *i* P **P 04 04 54.9 +0.5**
comp=N,8.0nm,0.8s
MNK *i* P **P 04 04 54.9 +0.5**
comp=Z,5.0nm,0.9s
MNK *i* PP **PP 04 08 22.2 +1.3**
MNK *i* PPP PPP 04 10 17.7
MNK *i* S **SKSac 04 15 23.2 0.0**
MNK *i* SS **SS 04 21 31.0 +4.2**
MNK *i* SSS SSS 04 25 05.2
MNK *i* LRM MLR 04 45 05.3
comp=E,2µm,18.1s
MNK *i* LRM MLR 04 45 06.6
comp=N,2µm,17.8s
MNK *i* LRM MLR 04 45 10.4
comp=Z,4µm,18.0s
MNK Minsk 88.29 21 *i* P **P 04 04 54.9 +0.5**
MNK *i* 04 04 56.4
MNK *i* 04 08 22.1
MNK *i* PPP PPP 04 10 17.6
MNK *i* S **SKSac 04 15 23.1 0.0**
MNK *i* SS **SS 04 21 31.0 +4.2**
MNK *i* SSS SSS 04 25 05.1
MNK pmax pmax
comp=N,8.0nm,0.8s
MNK pmax pmax
comp=Z,5.0nm,0.9s
MNK pmax pmax
comp=E,10.0nm,1.0s
MNK MLR MLR
comp=E,2µm,18.0s
MNK MLR MLR
comp=N,2µm,18.0s
MNK MLR MLR
comp=Z,4µm,18.0s
VRAC Vranov 88.43 30 LR LR 04 45 51.1
comp=Z,3µm,18.0s,baz=314,slow=37
KIRV Kirov 89.11 8 LR LR 04 48 34.8
comp=Z,2µm,18.6s,baz=339,slow=38
KIRV Kirov 89.11 8*ce*P **P 04 04 59.9 +1.7**
MODS Modra-Piesok 89.43 30 *e*P **P 04 05 00.9 +0.9**
MODS Modra-Piesok 89.43 30 *e*P **P 04 05 00.9 +0.9**
LANS Liptovska Anna 89.73 28 *e*P **P 04 05 02.7 +1.3**
LANS Liptovska Anna 89.73 28 *e*P **P 04 05 02.6 +1.2**
KSRS Korea Array 89.85 315 P **P 04 05 03.8 +1.7**
comp=Z,1.8nm,0.9s,baz=74,slow=4.6,SNR=8.2
KSRS LR LR 04 39 49.8
comp=Z,217nm,22.0s,baz=55,slow=32
comp=Z,1.8nm,0.9s
KSAR Wonju Array Be 89.88 315 P P 04 05 01.7 -0.5
KSAR Wonju Array Be 89.88 315 P P 04 05 01.7 -0.5
OBN Obninsk 90.10 16 LR LR 04 47 34.6
comp=Z,3µm,19.1s,baz=354,slow=37
OBN Obninsk 90.10 16⇓*e*P **P 04 05 05.9 +3.0**
OBN *e* 04 08 36.2
OBN *i* S **SKSac 04 15 37.1 +3.4**
OBN *e*SS **SS 04 21 56.0 +3.1**
OBN pmax pmax
comp=Z,20nm,1.5s
OBN MLR MLR
comp=Z,3µm,19.0s
TLY Talaya 90.49 337 P **P 04 05 05.9 +1.0**
comp=Z,2.8nm,0.6s,baz=31,slow=5.2
TLY LR LR 04 47 15.9
comp=Z,851nm,18.2s,baz=20,slow=37
comp=Z,2.8nm,0.6s
TLY Talaya 90.49 337 P **P 04 05 04.7 -0.2**
TLY Talaya 90.49 337*ce*P **P 04 05 07.1 +2.2**
TLY pmax pmax
comp=Z,32nm,1.7s
JNU Nakatsue 90.77 310 LR LR 04 41 59.8
comp=Z,310nm,19.6s,baz=50,slow=33
HNR Honiara 91.08 260 LR LR 04 38 25.7
comp=Z,102nm,20.4s,baz=132,slow=30
MOY Mondy 91.35 339 *e*P **P 04 05 10.6 +1.6**
MOY pmax pmax
comp=Z,40nm,1.9s
ZAK Zakamensk 91.72 337 *e*P **P 04 05 11.6 +0.9**
ZAK pmax pmax
comp=Z,24nm,1.7s
XLT XiLinHaoTe 91.73 326 *e*P **P 04 05 12.2 +1.4**
XLT PP **PP 04 08 51.7 +3.0**
XLT S **S 04 16 09.9 -1.7**
XLT pmax pmax
comp=Z,20nm,1.7s
XLT pmax pmax
comp=Z,200nm,6.3s
XLT L L
comp=Z,1µm,15.3s
XLT L L
comp=Z,540nm,17.3s
GUMO Guam 91.73 287 LR LR 04 38 25.9
comp=Z,1µm,21.8s,baz=78,slow=30
AKASG Malin Array Be 91.98 22 P **P 04 05 11.2 -0.6**
comp=Z,0.1nm,0.3s,baz=308,slow=3.6,SNR=5.4
AKASG LR LR 04 47 16.9
comp=Z,2µm,19.0s,baz=326,slow=36
comp=Z,0.1nm,0.3s
AKASG Malin Array Be 91.98 22*ce*P **P 04 05 12.8 +1.1**
AKBB Malin Array Si 91.98 22*ce*P **P 04 05 13.0 +1.3**
ARTI Arti 92.10 4 P **P 04 05 12.5 +0.3**
comp=Z,1.5nm,0.7s,baz=256,slow=5.8,SNR=4.2
ARTI LR LR 04 52 43.9
comp=Z,1µm,18.3s,baz=350,slow=40
comp=Z,1.5nm,0.7s
ARTI Arti 92.10 4*d i*P **P 04 05 13.1 +0.9**
ARTI 04 08 50.5
ARTI S **SKSac 04 15 45.0 -0.2**
ARTI SP SPn 04 17 26.2 +2.2
ARTI pmax pmax
comp=Z,23nm,2.7s
VSL Villasalto 92.16 40 IAMs_20 IAMs_20 04 41 50.4
comp=Z,1µm,19.0s
ULN Ulaanbaatar 92.48 333 P **P 04 05 13.3 -1.1**
ULN IAmb IAmb 04 05 17.5
comp=Z,38nm,1.9s
ULN Ulaanbaatar 92.48 333 IAMs_20 IAMs_20 04 46 18.7
comp=Z,1µm,21.0s
ULN Ulaanbaatar 92.48 333*ce*P **P 04 05 17.0 +2.7**
ULN pmax pmax
comp=Z,13nm,1.7s
DL2 Dalian 92.50 320 P **P 04 05 11.1 -3.3**
DL2 SKS **SKSac 04 15 48.8 +0.7**
DL2 S **S 04 16 15.2 -3.3**
DL2 pmax pmax
comp=Z,17nm,1.5s
DL2 pmax pmax
comp=Z,210nm,8.2s
DL2 L L
comp=Z,810nm,14.8s
DL2 L L
comp=Z,930nm,18.0s
DZM Mont Dzumac 92.53 246 *e*SS SS 04 22 27.8 -3.7
comp=Z,1µm,42.6s
DZM *e*LQ LQ 04 31 05.6
comp=Z,1µm,36.0s
DZM *e*LR LR 04 34 55.7
comp=Z,817nm,21.9s
SONM Songino Array 92.75 334 P **P 04 05 16.2 +0.7**
comp=Z,4.3nm,1.2s,baz=66,slow=1.8,SNR=16
SONM PP **PP 04 08 52.1 -4.5**
comp=Z,0.4nm,0.5s,baz=38,slow=5.4,SNR=4.8
SONM LR LR 04 49 14.8
comp=Z,884nm,18.3s,baz=26,slow=37
comp=Z,4.3nm,1.2s
SONM Songino Array 92.75 334 P **P 04 05 16.3 +0.7**
SONM IAmb IAmb 04 05 18.9
comp=Z,29nm,1.7s
SONM Songino Array 92.75 334 P **P 04 05 16.3 +0.7**
SONM pmax pmax
comp=Z,29nm,1.7s
LPSR Galich'ya Gora 92.96 16 *e*P **P 04 05 16.2 0.0**
LPSR pmax pmax
comp=Z,6.0nm,0.3s
ZAA0 Zalesovo Array 93.11 349 IAmb IAmb 04 05 21.6
comp=Z,17nm,1.4s
ZALV Zalesovo Beam 93.11 349 P **P 04 05 17.4 +0.4**
comp=Z,2.3nm,0.8s,baz=0.0,slow=6.1,SNR=14
ZALV PP **PP 04 08 59.5 +0.5**
comp=Z,0.3nm,0.5s,baz=23,slow=7.8,SNR=3.5
ZALV LR LR 04 50 47.9
comp=Z,878nm,21.1s,baz=20,slow=38
comp=Z,2.3nm,0.8s
KNGR Kungurtug, Tuv 93.33 340 *i* P **P 04 05 20.0 +1.9**
KNGR pmax pmax
comp=Z,15nm,1.1s
VORR Voronezh 93.89 16 *e*P P 04 05 29.4 +8.9
VORR pmax pmax
comp=Z,39nm,0.4s
URZ Urewera 94.25 227 LR LR 04 39 14.7
comp=Z,544nm,21.3s,baz=46,slow=30
BJI2 Beijing 94.59 323 P **P 04 05 21.2 -2.8**
BJI2 pP **pP 04 05 26.0 -1.6**
BJI2 PP **PP 04 09 10.0 -1.1**
BJI2 SKS **SKSac 04 15 54.6 -4.9**
BJI2 S **S 04 16 29.0 -7.9**
BJI2 SS **SS 04 22 54.3 -4.1**
BJI2 pmax pmax
comp=Z,2.0nm,0.8s
BJI2 pmax pmax
comp=Z,45nm,7.6s
BJI2 L L
comp=Z,460nm,17.7s
BJI2 L L
comp=Z,340nm,14.1s
BJI2 L L
comp=Z,580nm,15.5s
BJT Baijiatuan 94.59 323 IAMs_20 IAMs_20 04 55 11.9
comp=Z,828nm,19.0s
KEST Kesra 94.79 43 LR LR 04 47 51.5
comp=Z,888nm,19.4s,baz=356,slow=35
BELG Belogornoye 94.87 11 LR LR 04 48 56.1
comp=Z,2µm,20.0s,baz=334,slow=36
MLR Muntele Rosu 95.27 27 LR LR 04 50 23.4
comp=Z,2µm,18.6s,baz=324,slow=37
BORK Borovoye 95.55 357 P **P 04 05 28.5 +0.4**
BORK Borovoye 95.55 357*ce*P **P 04 05 30.1 +2.0**
BORK pmax pmax
comp=Z,7.0nm,1.7s
BVAR Borovoye Array 95.57 357 P **P 04 05 28.4 +0.2**
comp=Z,2.4nm,0.9s,baz=9.9,slow=3.5,SNR=8.6
BVAR LR LR 04 53 29.0
comp=Z,2µm,19.7s,baz=4.7,slow=39
comp=Z,2.4nm,0.9s
HHC Hu-ho-hao-te 96.21 327 *e*P **P 04 05 29.6 -1.9**
HHC SKS **SKSac 04 16 03.6 -4.8**
HHC S **S 04 16 45.4 -5.8**
HHC sS pS 04 16 54.2 -1.6
HHC pmax pmax
comp=Z,10.0nm,0.7s
HHC pmax pmax
comp=Z,94nm,6.3s
HHC L L
comp=Z,700nm,18.8s
HHC L L
comp=Z,920nm,18.6s
HHC L L
comp=Z,790nm,18.6s
JOW Kunigami 96.51 307 LR LR 04 40 39.5
comp=Z,272nm,21.5s,baz=100,slow=30
CEL Celeste 96.52 37 IAMs_20 IAMs_20 04 51 49.8
comp=Z,1µm,18.0s
DGZ Jazzator, Alta 96.68 346 *i* P **P 04 05 35.1 +1.6**
DGZ pmax pmax
comp=Z,4.0nm,1.0s
BTO2 Baotou 97.07 328 *e*P **P 04 05 34.9 -0.6**
BTO2 pP **sP 04 05 39.7 -0.6**
BTO2 sP **pP 04 05 42.0 +2.9**
BTO2 SKS **SKSac 04 16 13.6 +0.7**
BTO2 S **S 04 16 54.5 -4.2**
BTO2 sS **pS 04 17 03.4 +0.1**
BTO2 SS **SS 04 23 30.0 -3.7**
BTO2 pmax pmax
comp=Z,12nm,0.7s
BTO2 pmax pmax
comp=Z,250nm,6.3s
BTO2 L L
comp=Z,2µm,16.6s
BTO2 L L
comp=Z,2µm,20.4s
KURK Kurchatov 97.17 352 P **P 04 05 34.5 -1.0**
KURK IAmb IAmb 04 05 59.7
comp=Z,18nm,1.6s
KURK Kurchatov 97.17 352*ce*P Pdif 04 05 36.9 +1.3
KURK pmax pmax
comp=Z,4.0nm,1.3s
KURBB Kurchatov Arra 97.27 352 P Pdif 04 05 36.4 +0.3
comp=Z,1.8nm,1.0s,baz=13,slow=4.5,SNR=9.4
KURBB PP **PP 04 09 30.3 -1.0**
comp=Z,2.3nm,1.0s,baz=4.3,slow=7.1,SNR=7.5
KURBB LR LR 04 56 27.0
comp=Z,1µm,18.2s,baz=28,slow=40
comp=Z,1.8nm,1.0s
HNS HongShan 97.32 323 ⇑P Pdif 04 05 43.6 +7.1
HNS PP **PP 04 09 36.6 +4.4**
HNS HongShan 97.32 323 S **S 04 17 06.9 +6.4**
HNS pmax pmax
comp=Z,220nm,10.9s
HNS LR LR
comp=N,590nm,15.5s
HNS LR LR
comp=E,1µm,16.0s
HNS LR LR
comp=Z,1µm,15.9s
WDD Wied Dalam 97.61 40 IAMs_20 IAMs_20 04 45 34.4
comp=Z,1µm,19.0s
AKTO Aktyubinsk 98.01 5 LR LR 04 53 58.7
comp=Z,2µm,18.2s,baz=20,slow=38

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NJ2	**Nanjing**	**98.97**	**316**	eP	Pdif	04 05 43.9	0.0
MK31	**Makanchi Array**	**100.45**	**348**	ceP	**Pdif**	**04 05 51.6**	**+1.3**
MKAR	**Makanchi Array**	**100.45**	**348**	P	**Pdif**	**04 05 50.9**	**+0.6**
	comp=Z,1.2nm,1.0s,baz=1.8,slow=3.9,SNR=5.6						
MKAR				PP	**PP**	**04 09 55.9**	**+0.2**
	comp=Z,1.6nm,1.1s,baz=19,slow=6.6,SNR=5.6						
MAKZ	**Makanchi**	**100.49**	**349**	IAMs_20	IAMs_20	04 57 58.1	
	comp=Z,1μm,19.0s						
SOC	**Sochi**	**101.51**	**19**	eP	**Pdif**	**04 05 55.1**	**0.0**
SOC				e		04 10 07.0	
SOC				eS	**SKSac**	**04 16 33.5**	**-1.1**
SOC				eSS	**SS**	**04 24 40.5**	**+5.5**
SOC				eSSS	SSS	04 28 35.7	
SOC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SOC				MLR	MLR		
	comp=Z,3μm,19.0s						
PMG	**Port Moresby**	**101.89**	**266**	IAMs_20	IAMs_20	04 46 43.6	
	comp=Z,994nm,19.0s						
KIV	**Kislovodsk**	**101.94**	**17**	eP	**Pdif**	**04 06 00.8**	**+3.7**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,569nm,20.0s						
WMQ	**Urumqi**	**102.18**	**344**	eP	**Pdif**	**04 05 59.3**	**+1.2**
WMQ				L	L		
	comp=Z,610nm,23.1s						
WMQ				L	L		
	comp=Z,980nm,21.1s						
WMQ				L	L		
	comp=Z,1μm,24.0s						
SSLB	**Suanglung**	**103.47**	**309**	IAMs_20	IAMs_20	05 02 09.0	
	comp=Z,541nm,19.0s						
MAK	**Makhachkala**	**103.95**	**13**	eP	**Pdif**	**04 06 01.7**	**-4.2**
MAK				i		04 10 20.9	
MAK				ePPP	PPP	04 12 32.8	
MAK				e		04 16 39.9	
MAK				ePS	**PS**	**04 19 32.4**	**-0.8**
MAK				eSS	SS	04 25 06.3	-2.1
MAK				pmax	pmax		
	comp=Z,527nm,1.6s						
MAK				MLR	MLR		
	comp=Z,2μm,18.0s						
TWG	**Pinlang**	**104.05**	**308**	IAMs_20	IAMs_20	05 00 24.4	
	comp=Z,783nm,18.0s						
ENH	**Enshi**	**105.57**	**321**	IAMs_20	IAMs_20	05 00 02.3	
	comp=Z,888nm,18.0s						
WUS	**Wushi**	**106.40**	**349**	IAMs_20	IAMs_20	04 57 31.6	
	comp=Z,1μm,21.0s						
CTAO	**Charters Tower**	**107.83**	**257**	IAMs_20	IAMs_20	04 47 39.7	
	comp=Z,900nm,20.0s						
HKPS	**Hong Kong Po S**	**108.94**	**313**	IAMs_20	IAMs_20	05 03 50.5	
	comp=Z,729nm,19.0s						
GHAJ	**Ghor Haditha**	**111.29**	**27**	IAMs_20	IAMs_20	05 02 41.2	
	comp=Z,537nm,19.0s						
PZH	**PanZhiHua**	**112.59**	**325**	PKP	**PKiKP**	**04 10 37.9**	**-2.2**
TNTI	**Ternate**	**113.22**	**286**	IAMs_20	IAMs_20	04 48 41.6	
	comp=Z,518nm,21.0s						
QIZ	**Qiongzhong**	**114.03**	**314**	IAMs_20	IAMs_20	05 07 45.3	
	comp=Z,666nm,18.0s						
QIZ	**Qiongzhong**	**114.03**	**314**	Pdif	**Pdif**	**04 06 50.6**	**-0.6**
QIZ				PP	**PP**	**04 11 32.9**	**-3.3**
QIZ				L	L		
	comp=Z,450nm,15.2s						
QIZ				L	L		
	comp=Z,690nm,16.7s						
LSA	**Lhasa**	**114.28**	**336**	IAMs_20	IAMs_20	05 03 18.4	
	comp=Z,682nm,19.0s						
MYLDM	**Lahad Datu**	**117.62**	**296**	IAMs_20	IAMs_20	05 01 15.4	
	comp=Z,822nm,18.0s						
WRA	**Warramunga Arr**	**117.77**	**263**	PKP	**PKPdf**	**04 10 49.5**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=64,slow=2.1,SNR=7.1						
MORE	**Moreh**	**117.95**	**330**	IAMs_20	IAMs_20	05 06 13.0	
	comp=Z,449nm,20.0s						
TOLI2	**Tolitoli**	**118.35**	**291**	IAMs_20	IAMs_20	04 51 49.1	
	comp=Z,529nm,22.0s						
KKM	**Kota Kinabalu**	**118.80**	**298**	IAMs_20	IAMs_20	04 55 26.2	
	comp=Z,732nm,22.0s						
ASAR	**Alice Springs**	**119.70**	**259**	PKP	**PKPdf**	**04 10 53.4**	**-0.2**
	comp=Z,0.7nm,0.9s,baz=74,slow=1.5,SNR=5.0						
ASAR				PKKPab	**PKKPab**	**04 21 07.8**	**+2.8**
	comp=Z,0.2nm,0.6s,baz=231,slow=3.9,SNR=4.6						
CHTO	**Chiang Mai**	**120.41**	**323**	IAMs_20	IAMs_20	05 07 02.6	
	comp=Z,583nm,20.0s						
SOEI	**Soe**	**121.53**	**278**	IAMs_20	IAMs_20	04 56 17.6	
	comp=Z,724nm,22.0s						
RAYN	**Ar Rayn**	**121.91**	**22**	IAMs_20	IAMs_20	05 05 57.2	
	comp=Z,990nm,22.0s						
MMRI	**Maumere**	**122.66**	**281**	IAMs_20	IAMs_20	04 54 20.2	
	comp=Z,553nm,21.0s						
BKB	**Balikpapan**	**122.86**	**291**	IAMs_20	IAMs_20	04 57 14.1	
	comp=Z,529nm,20.0s						
UOSS	**Minazif**	**123.03**	**10**	IAMs_20	IAMs_20	05 11 28.1	
	comp=Z,729nm,20.0s						
KULM	**Kulim**	**130.24**	**311**	IAMs_20	IAMs_20	05 18 13.3	
	comp=Z,412nm,20.0s						
MBWA	**Marble Bar**	**130.69**	**268**	IAMs_20	IAMs_20	05 01 34.8	
	comp=Z,804nm,21.0s						
NVL	**N'lazarevskaya**	**131.33**	**159**	ePKIKP	**PKPdf**	**04 11 14.7**	**+0.3**
NVL				e		04 13 33.4	
NVL				ePPP	PPP	04 16 22.9	
NVL				e		04 18 26.2	
NVL				eSS	SS	04 31 07.9	+2.7
NVL				eSSS	SSS	04 35 59.3	
NVL				pmax	pmax		
	comp=Z,13nm,1.2s						
ATD	**Arta Tunnel**	**131.91**	**30**	IAMs_20	IAMs_20	05 15 33.9	
	comp=Z,450nm,20.0s						
PMBI	**Palembang**	**133.26**	**300**	IAMs_20	IAMs_20	05 14 06.3	
	comp=Z,397nm,20.0s						
BKNI	**Bangkinang**	**133.67**	**306**	IAMs_20	IAMs_20	05 19 16.5	
	comp=Z,592nm,20.0s						
LODK	**Lodwar**	**134.89**	**45**	IAMs_20	IAMs_20	05 10 02.5	
	comp=Z,619nm,18.0s						
MBAR	**Mbarara**	**134.96**	**54**	IAMs_20	IAMs_20	05 11 29.3	
	comp=Z,768nm,21.0s						
TSUM	**Tsumeb**	**135.36**	**86**	IAMs_20	IAMs_20	05 07 41.0	
	comp=Z,748nm,22.0s						
WIN	**Windhoek**	**136.32**	**90**	IAMs_20	IAMs_20	05 06 35.6	
	comp=Z,671nm,21.0s						
PALK	**Pallekele**	**138.64**	**337**	IAMs_20	IAMs_20	05 24 00.6	
	comp=Z,683nm,19.0s						
BOSA	**Boshof**	**145.25**	**96**	PKPbc	**PKPbc**	**04 11 40.7**	**-0.3**
	comp=Z,8.2nm,1.0s,baz=285,slow=1.0,SNR=5.9						
BOSA	**Boshof**	**145.25**	**96**		**PKPdf**	**04 11 41.4**	**+0.1**

*CATAC **07** 03:52:58.7±0.6, 14°N±3°×9°3W±°, h10km±3km, M3.9/12, MLv3.9/12, Error ellipse: s-maj=7.4km s-min=3.8km az=34.3, confirmed*
*MEX **07** 03:53:00.8±0.7, 14°.47N×93°.33W, h14km±16km, MD4.3*
*GCG **07** 03:53:01.7±1.6, 14°.44N×93°.07W, h32km±50km, MD3.8, ML4.0, Presumed earthquake*
ISC 07 03:52:57.1±2.0**, 14°.46N**±0°.05×**93°.22W**±0°.03**, h11**km±14km**, n46,** σ1§**59**/78**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**1.03**	**64**	eP	**Pn**	**03 53 17.8**	**+0.4**
THIG				eS	**Sn**	**03 53 31.2**	**-0.7**
THIG		**1.03**	**64**	i P	**Pn**	**03 53 17.8**	**+0.4**
THIG				IAML		03 53 35.1	
	comp=E,3μm,0.3s						
PATR	**El Naranjo**	**1.16**	**55**	eP	**Pb**	**03 53 19.4**	**+0.1**
PATR				eS	**Sn**	**03 53 35.3**	**-0.2**
SMCA	**Catarina**	**1.18**	**70**	i P	**Pn**	**03 53 19.9**	**+0.4**
PCIG		**1.24**	**0**	eP	**Pn**	**03 53 20.4**	**0.0**
PCIG				eS	**Sb**	**03 53 34.2**	**-2.3**
PAVE	**Pavencul**	**1.25**	**54**	eP	**Pb**	**03 53 21.1**	**+0.3**
PAVE				eS	**Sb**	**03 53 35.0**	**-2.1**
CHUJ	**Union Juarez**	**1.25**	**59**	eP	**Pb**	**03 53 21.0**	**+0.2**
CHUJ				eS	**Sg**	**03 53 37.4**	**-0.1**
RTAL	**Retalhuleu**	**1.48**	**87**	eP	**Pn**	**03 53 24.6**	**+0.9**
RTAL				eS	**Sb**	**03 53 43.6**	**+0.1**
RTAL	**Retalhuleu**	**1.48**	**87**	P	**Pb**	**03 53 25.1**	**+0.5**
QUEO	**Labor Ovalle**	**1.70**	**76**	i P	**Pn**	**03 53 27.6**	**+0.5**
QUEO				i S	**Sn**	**03 53 48.8**	**-0.2**
STG2	**El Palmar, Qui**	**1.79**	**90**	i P	**Pn**	**03 53 25.2**	**-2.9**
STG2				IAML		03 53 48.7	
	comp=E,4μm,0.3s						
STG8	**El Palmar, Qui**	**1.81**	**90**	i P	**Pn**	**03 53 25.8**	**-2.7**
STG5	**El Palmar, Qui**	**1.82**	**91**	i P	**Pn**	**03 53 25.9**	**-2.5**
HUEH	**Huehuetenango**	**1.87**	**63**	eP	**Pb**	**03 53 31.0**	**-0.5**
HUEH				eS	**Sn**	**03 53 52.2**	**-0.8**
HUEH	**Huehuetenango**	**1.87**	**63**	P	**Pb**	**03 53 32.0**	**+0.5**
HUEH				S	**Sg**	**03 53 56.6**	**-0.7**
HUEH	**Huehuetenango**	**1.87**	**63**	i P	**Pb**	**03 53 31.1**	**-0.3**
CARR	**Arriaga**	**1.90**	**340**	i P	**Pn**	**03 53 30.7**	**+1.2**
CARR				eS	**Sn**	**03 53 51.9**	**-1.5**
CCIG	**Comitan**	**2.10**	**30**	eP	**Pb**	**03 53 35.6**	**+0.4**
CCIG				eS	**Sn**	**03 53 57.6**	**-0.9**
CCIG	**Comitan**	**2.10**	**30**	P	**Pb**	**03 53 35.2**	**0.0**
CCIG				S	**Sb**	**03 54 01.6**	**+0.2**
CCIG	**Comitan**	**2.10**	**30**	i P	**Pb**	**03 53 35.6**	**+0.4**
TGIG		**2.31**	**2**	eP	**Pb**	**03 53 37.7**	**-1.2**
TGIG				eS	**Sn**	**03 54 02.1**	**-1.6**
TGIG		**2.31**	**2**	i P	**Pb**	**03 53 37.6**	**-1.2**
TGIG				i S	**Sb**	**03 54 05.9**	**-1.5**
FG8	**Yepocapa, Chim**	**2.59**	**94**	i P	**Pn**	**03 53 34.9**	**-4.1**
APG	**El Apazote**	**2.72**	**78**	i P	**Pn**	**03 53 43.2**	**+2.2**
UXUV	**UXUV**	**2.98**	**343**	eP	**Pn**	**03 53 47.1**	**+2.7**
UXUV				eS	**Sn**	**03 54 19.4**	**-0.7**
CMIG	**Matias Romero**	**3.07**	**329**	eP	**Pn**	**03 53 46.5**	**+1.0**
CMIG				eS	**Sn**	**03 54 21.9**	**-0.4**
HUIG	**Huatulco**	**3.08**	**295**	eP	**Pn**	**03 53 46.8**	**+1.2**
HUIG				eS	**Sn**	**03 54 21.1**	**-1.4**
FAME	**Alcaldia de Sa**	**3.17**	**101**	P	**Pn**	**03 53 50.0**	**+3.0**
FAME				S	**Sn**	**03 54 25.2**	**+0.3**
NUBE	**Las Nubes**	**3.38**	**99**	P	**Pn**	**03 53 51.1**	**+1.0**
NUBE				S	**Sn**	**03 54 31.2**	**+0.8**
UNIC	**Universidad Ca**	**3.59**	**97**	P	**Pn**	**03 53 54.7**	**+1.8**
TUIG	**Tuzandepetl**	**3.74**	**342**	eP	**Pn**	**03 53 55.0**	**+0.2**
TUIG				eS	**Sn**	**03 54 36.7**	**-2.1**
PETF	**Flores**	**4.05**	**52**	eP	**Pn**	**03 54 01.6**	**+2.5**
PETF				eS	**Sn**	**03 54 46.6**	**0.0**
PETF	**Flores**	**4.05**	**52**	P	**Pn**	**03 54 02.4**	**+3.3**
PETF				S	**Sn**	**03 54 48.9**	**+2.3**
NEUV	**Arroyo Zacate**	**4.08**	**323**	eP	**Pn**	**03 54 00.5**	**+1.1**
NEUV				eS	**Sn**	**03 54 46.3**	**-0.9**
PEIG	**Puerto Escondi**	**4.09**	**293**	eP	**Pn**	**03 53 59.3**	**-0.3**
PEIG				eS	**Sn**	**03 54 46.0**	**-1.5**
VHO	**Vista Hermosa**	**4.26**	**308**	eP	**Pn**	**03 54 03.2**	**+1.1**
VHO				eS	**Sn**	**03 54 51.8**	**-0.3**
YOIG	**Yosondua**	**4.80**	**300**	eP	**Pn**	**03 54 11.8**	**+2.2**
YOIG				eS	**Sn**	**03 55 05.6**	**+0.2**
SCIG	**Sabancuy**	**4.89**	**23**	eP	**Pn**	**03 54 12.8**	**+2.2**
SCIG				eS	**Sn**	**03 55 07.5**	**+0.2**
PNIG	**Pinotepa**	**5.11**	**293**	eP	**Pn**	**03 54 15.2**	**+1.6**
PNIG				eS	**Sn**	**03 55 12.4**	**-0.2**
TOIG	**Toxpalan**	**5.17**	**315**	eP	**Pn**	**03 54 16.6**	**+2.1**
TOIG				eS	**Sn**	**03 55 14.3**	**0.0**
TXIG	**Tlaxiaco**	**5.18**	**303**	eP	**Pn**	**03 54 16.5**	**+1.6**
TXIG				eS	**Sn**	**03 55 15.3**	**+0.4**
HLIG	**Huajuapan de L**	**5.53**	**308**	eP	**Pn**	**03 54 20.7**	**+1.0**
HLIG				eS	**Sn**	**03 55 19.9**	**-3.5**
TPIG	**Tehuac#an**	**5.59**	**315**	eS	**Sn**	**03 55 25.0**	**+0.1**
FTIG	**Fresnillo de T**	**5.83**	**307**	eP	**Pn**	**03 54 28.0**	**+4.3**
FTIG				eS	**Sn**	**03 55 31.7**	**+1.1**
PPM	**Popocatepetl**	**6.91**	**312**	eP	**Pn**	**03 54 41.1**	**+2.2**
PPM				eS	**Sn**	**03 55 58.8**	**+1.0**
ARIG	**Puente Sto Nin**	**7.82**	**300**	eP	Pn	03 54 56.0	+5.1

*NOU **07** 04:04:55.9, 38°.29S×176°.58E, h133km, MLv3.6/11, North Island, New Zealand*
*WEL **07** 04:04:57.5±0.7, 38°S±3°×17°6E±°, h117km±7km, M3.1/54, ML2.0/10, MLv3.1/54, Error ellipse: s-maj=4.5km s-min=3.9km az=157.9, confirmed*
ISC 07 04:04:53.0±1.5**, 38°.07S**±0°.04×**176°.44E**±0°.04**, h160**km±8km**, n147,** σ1§**41**/159**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OMRZ	**Omania**	**0.07**	**236**	P	**Pn**	**04 05 14.4**	**+0.1**
MKRZ	**Makatiti**	**0.07**	**165**	P	**Pn**	**04 05 15.1**	**+0.7**
KARZ	**Kaharoa**	**0.16**	**287**	P	**Pn**	**04 05 14.4**	**0.0**
TARZ	**Mount Tarawera**	**0.17**	**164**	P	**Pn**	**04 05 14.8**	**+0.3**
HLRZ	**Highlands Stat**	**0.20**	**201**	P	**Pn**	**04 05 15.0**	**+0.5**
MARZ	**Manawahe**	**0.20**	**66**	P	**Pn**	**04 05 14.7**	**+0.2**
NGRZ	**Ngongotaha**	**0.20**	**260**	P	**Pn**	**04 05 14.8**	**+0.2**
UTU	**Utuhina**	**0.23**	**241**	P	**Pn**	**04 05 15.1**	**+0.5**
EDRZ	**Edgecumbe**	**0.24**	**100**	P	**Pn**	**04 05 14.7**	**+0.1**
OPRZ	**Ohinepanea**	**0.24**	**22**	P	**Pn**	**04 05 14.4**	**-0.3**
RRRZ	**Republican Roa**	**0.28**	**168**	P	**Pn**	**04 05 15.0**	**+0.2**
HSRZ	**Hossack Road**	**0.29**	**213**	P	**Pn**	**04 05 15.2**	**+0.5**
HRRZ	**Handcock Road**	**0.35**	**201**	P	**Pn**	**04 05 15.3**	**+0.4**
TGRZ	**Tauranga**	**0.37**	**337**	P	**Pn**	**04 05 14.9**	**-0.1**
PRRZ	**Plateau Road**	**0.43**	**185**	P	**Pn**	**04 05 15.6**	**+0.4**
KMRZ	**Kaimai**	**0.45**	**299**	P	**Pn**	**04 05 15.4**	**+0.1**
MUGZ	**Murupara**	**0.48**	**148**	P	**Pn**	**04 05 15.7**	**+0.2**
ALRZ	**Allen Road**	**0.50**	**189**	P	**Pn**	**04 05 16.2**	**+0.6**
WPRZ	**Whakapapatarin**	**0.50**	**206**	P	**Pn**	**04 05 16.1**	**+0.6**
URZ	**Urewera**	**0.56**	**110**	P	**Pn**	**04 05 15.7**	**0.0**
URZ	**Urewera**	**0.56**	**110**	S	**Sn**	**04 05 30.5**	**-2.6**
URZ	**Urewera**	**0.56**	**110**	P	**Pn**	**04 05 15.7**	**0.0**
URZ				S	**Sn**	**04 05 30.6**	**-2.6**
KUTZ	**Kaahu Road**	**0.65**	**229**	P	**Pn**	**04 05 17.0**	**+0.7**
RTZ	**Ruatahuna**	**0.69**	**143**	P	**Pn**	**04 05 17.2**	**+0.6**
WHTZ	**Whakaora**	**0.71**	**212**	P	**Pn**	**04 05 17.9**	**+1.2**
TLZ	**Tolley Road**	**0.76**	**250**	P	**Pn**	**04 05 17.8**	**+0.8**
MRHZ	**Matea Rd**	**0.77**	**182**	P	**Pn**	**04 05 17.9**	**+0.8**
TOZ	**Tahuroa Road**	**0.82**	**294**	P	**Pn**	**04 05 17.9**	**+0.5**
MTHZ	**Maungataniwha**	**0.84**	**158**	P	**Pn**	**04 05 18.6**	**+1.0**
MTHZ				S	**Sn**	**04 05 36.0**	**-0.6**
WATZ	**Wairara**	**0.85**	**221**	P	**Pn**	**04 05 18.7**	**+1.1**
RAGZ	**Rawiri**	**0.88**	**119**	P	**Pn**	**04 05 19.0**	**+1.1**
RAGZ				S	**Sn**	**04 05 36.4**	**-0.6**
MWZ	**Matawai**	**0.90**	**108**	P	**Pn**	**04 05 18.7**	**+0.8**
MWZ				S	**Sn**	**04 05 36.9**	**-0.2**
RATZ	**Rangitukua**	**0.96**	**213**	P	**Pn**	**04 05 19.7**	**+1.2**
RUGZ	**Raukumara Rang**	**0.98**	**84**	P	**Pn**	**04 05 18.4**	**-0.3**
RUGZ				S	**Sn**	**04 05 35.7**	**-2.7**
RAHZ	**Arahi**	**0.99**	**149**	P	**Pn**	**04 05 20.4**	**+1.7**
SNGZ	**Shannon Statio**	**1.00**	**136**	P	**Pn**	**04 05 20.4**	**+1.6**
RITZ	**Rihia Road**	**1.02**	**207**	P	**Pn**	**04 05 20.6**	**+1.7**
NMHZ	**Naumai**	**1.07**	**165**	P	**Pn**	**04 05 21.7**	**+2.4**
NMHZ				S	**Sn**	**04 05 42.7**	**+3.0**
KATZ	**Kakaramea**	**1.08**	**213**	P	**Pn**	**04 05 20.8**	**+1.2**
BKZ	**Black Stump Fm**	**1.10**	**178**	P	**Pn**	**04 05 20.5**	**+0.9**
BKZ	**Black Stump Fm**	**1.10**	**178**	P	**Pn**	**04 05 20.7**	**+1.1**
BKZ				S	**Sn**	**04 05 39.9**	**-0.2**
HAZ	**Te Kaha**	**1.10**	**74**	P	**Pn**	**04 05 19.8**	**+0.2**
HAZ				S	**Sn**	**04 05 38.9**	**-1.0**
TKGZ	**Te Karaka**	**1.17**	**109**	P	**Pn**	**04 05 21.9**	**+1.8**
TKGZ				S	**Sn**	**04 05 41.5**	**+0.6**
WHHZ	**Waihua**	**1.18**	**149**	P	**Pn**	**04 05 22.1**	**+1.8**
NTVZ	**North Tongarir**	**1.19**	**210**	P	**Pn**	**04 05 22.2**	**+1.7**
TMVZ	**Te Maari**	**1.20**	**209**	P	**Pn**	**04 05 22.1**	**+1.5**
KRVZ	**Karewarewa**	**1.20**	**211**	P	**Pn**	**04 05 22.3**	**+1.7**
ETVZ	**East Tongariro**	**1.21**	**208**	P	**Pn**	**04 05 22.4**	**+1.7**
RIGZ	**Rimuhau**	**1.22**	**122**	P	**Pn**	**04 05 22.4**	**+1.7**
TWGZ	**Tauwhareparae**	**1.22**	**96**	P	**Pn**	**04 05 22.3**	**+1.7**
WTVZ	**West Tongariro**	**1.24**	**212**	P	**Pn**	**04 05 22.6**	**+1.6**
OTVZ	**Oturere**	**1.25**	**209**	P	**Pn**	**04 05 22.9**	**+1.8**
ARHZ	**Aropaoanui**	**1.27**	**160**	P	**Pn**	**04 05 23.1**	**+2.0**
TWVZ	**Taurewa**	**1.27**	**218**	P	**Pn**	**04 05 22.8**	**+1.6**
SNVZ	**South Ngauruho**	**1.28**	**209**	P	**Pn**	**04 05 23.5**	**+2.1**
NGZ	**Ngauruhoe**	**1.29**	**211**	P	**Pn**	**04 05 23.3**	**+1.8**
PKGZ	**Pakihiroa**	**1.31**	**82**	P	**Pn**	**04 05 22.6**	**+1.1**
HIZ	**Hauiti**	**1.33**	**250**	P	**Pn**	**04 05 23.0**	**+1.4**
HIZ	**Hauiti**	**1.33**	**250**	P	**Pn**	**04 05 23.2**	**+1.6**
COVZ	**Chateau Observ**	**1.33**	**212**	P	**Pn**	**04 05 23.7**	**+1.9**
TUVZ	**Tukino**	**1.35**	**207**	P	**Pn**	**04 05 23.9**	**+1.9**
KWHZ	**Kaweka Forest**	**1.35**	**181**	P	**Pn**	**04 05 23.6**	**+1.7**
KWHZ				S	**Sn**	**04 05 44.6**	**+0.3**
KNZ	**Kokohu**	**1.36**	**135**	P	**Pn**	**04 05 23.4**	**+1.5**
FWVZ	**Far West T-bar**	**1.38**	**210**	P	**Pn**	**04 05 24.4**	**+2.1**
WHVZ	**Whangaehu Hut**	**1.39**	**209**	P	**Pn**	**04 05 24.7**	**+2.2**
MCHZ	**McNeill Hill**	**1.39**	**172**	P	**Pn**	**04 05 24.3**	**+2.1**
MKAZ	**Moumakai**	**1.40**	**313**	P	**Pn**	**04 05 23.3**	**+1.0**
PRGZ	**Paritu Road**	**1.42**	**128**	P	**Pn**	**04 05 24.4**	**+1.9**
PUZ	**Puketiti**	**1.43**	**91**	P	**Pn**	**04 05 23.8**	**+1.2**
PUZ				S	**Sn**	**04 05 45.0**	**-0.4**
MOVZ	**Moawhango**	**1.44**	**202**	P	**Pn**	**04 05 24.1**	**+1.2**
MOVZ				S	**Sn**	**04 05 45.2**	**-0.7**
CNGZ	**Carnagh Statio**	**1.45**	**107**	P	**Pn**	**04 05 25.1**	**+2.4**
PKVZ	**Pokaka**	**1.49**	**215**	P	**Pn**	**04 05 25.3**	**+2.0**
MTVZ	**Mangateitei**	**1.52**	**210**	P	**Pn**	**04 05 25.6**	**+2.0**
MXZ	**Matakaoa Point**	**1.56**	**72**	P	**Pn**	**04 05 25.9**	**+1.9**
KBAZ	**Karaka Road Bo**	**1.57**	**308**	P	**Pn**	**04 05 25.5**	**+1.4**
KRHZ	**Kereru**	**1.57**	**182**	P	**Pn**	**04 05 25.6**	**+1.5**
MHGZ	**Mahia Peninsul**	**1.58**	**134**	P	**Pn**	**04 05 26.2**	**+2.0**
WMGZ	**Waiomatatini S**	**1.58**	**82**	P	**Pn**	**04 05 25.6**	**+1.5**
WMGZ				S	**Sn**	**04 05 48.4**	**+0.4**
ETAZ	**East Tamaki Re**	**1.64**	**312**	P	**Pn**	**04 05 26.2**	**+1.4**
WIAZ	**Waiheke Island**	**1.65**	**320**	P	**Pn**	**04 05 26.1**	**+1.2**
CKHZ	**Cape Kidnapper**	**1.66**	**163**	P	**Pn**	**04 05 27.3**	**+2.2**
VRZ	**Vera Road**	**1.69**	**231**	P	**Pn**	**04 05 27.7**	**+2.4**
AWAZ	**Awhitu Peninsu**	**1.75**	**304**	P	**Pn**	**04 05 27.2**	**+1.2**
KAHZ	**Kahuranaki**	**1.76**	**169**	P	**Pn**	**04 05 28.0**	**+1.9**
MBAZ	**Motutapu North**	**1.79**	**316**	P	**Pn**	**04 05 27.9**	**+1.5**
HBAZ	**Herne Bay Bore**	**1.83**	**311**	P	**Pn**	**04 05 28.1**	**+1.3**
PNHZ	**Pukenui**	**1.85**	**186**	P	**Pn**	**04 05 28.2**	**+1.1**
WTAZ	**Waiatarua**	**1.87**	**307**	P	**Pn**	**04 05 28.8**	**+1.5**
ABAZ	**Army Bay**	**1.95**	**318**	P	**Pn**	**04 05 29.9**	**+1.8**
RVAZ	**Riverhead Bore**	**1.97**	**311**	P	**Pn**	**04 05 29.6**	**+1.2**
PXZ	**Pawanui**	**1.99**	**171**	P	**Pn**	**04 05 30.3**	**+1.8**
WPHZ	**Waipukurau**	**1.99**	**180**	P	**Pn**	**04 05 30.1**	**+1.5**
TSZ	**Takapari Road**	**2.02**	**191**	P	**Pn**	**04 05 31.0**	**+2.0**
WAZ	**Wanganui**	**2.03**	**214**	P	**Pn**	**04 05 31.2**	**+2.0**
DREZ	**Durham Road**	**2.08**	**237**	P	**Pn**	**04 05 32.7**	**+3.0**
PREZ	**Palmer Road**	**2.19**	**234**	P	**Pn**	**04 05 34.7**	**+3.7**
PRHZ	**Porangahau**	**2.20**	**176**	P	**Pn**	**04 05 32.5**	**+1.5**
PKE	**Pukeiti**	**2.23**	**239**	P	**Pn**	**04 05 34.1**	**+2.7**
DVHZ	**Dannevirke**	**2.24**	**185**	P	**Pn**	**04 05 32.4**	**+0.8**
KHEZ	**Kahui Hut**	**2.26**	**236**	P	**Pn**	**04 05 34.4**	**+2.6**
KHEZ	**Kahui Hut**	**2.26**	**236**	P	**Pn**	**04 05 34.8**	**+2.9**
NBEZ	**Newall Road No**	**2.35**	**238**	P	**Pn**	**04 05 35.9**	**+3.1**
POWZ	**Post Office Ro**	**2.38**	**193**	P	**Pn**	**04 05 34.2**	**+1.1**
ANWZ	**Angora Road**	**2.39**	**179**	P	**Pn**	**04 05 34.7**	**+1.5**
PRWZ	**Pori Road**	**2.51**	**188**	P	**Pn**	**04 05 36.1**	**+1.4**
BFZ	**Birch Farm**	**2.62**	**183**	P	**Pn**	**04 05 36.7**	**+0.7**
BFZ	**Birch Farm**	**2.62**	**183**	P	**Pn**	**04 05 36.9**	**+0.9**
MRZ	**Mangatainoka R**	**2.67**	**194**	P	**Pn**	**04 05 37.3**	**+0.6**
TIWZ	**Tintock**	**2.74**	**189**	P	**Pn**	**04 05 38.4**	**+0.8**
CPWZ	**Castlepoint**	**2.84**	**184**	P	**Pn**	**04 05 40.3**	**+1.5**
HOWZ	**Holdsworth Sta**	**2.92**	**194**	P	**Pn**	**04 05 40.0**	**+0.3**
OGWZ	**Otaki Gorge**	**2.92**	**199**	P	**Pn**	**04 05 40.1**	**+0.4**
KIW	**Kapiti Island**	**3.03**	**203**	P	**Pn**	**04 05 41.2**	**+0.1**
TMWZ	**Te Maipa**	**3.06**	**188**	P	**Pn**	**04 05 42.0**	**+0.4**
MTW	**Mount Morrison**	**3.17**	**193**	P	**Pn**	**04 05 42.8**	**-0.1**
CAW	**Cannon Point**	**3.22**	**199**	P	**Pn**	**04 05 43.5**	**0.0**
DUWZ	**D'Urville Isla**	**3.36**	**215**	P	**Pn**	**04 05 45.6**	**+0.3**
TRWZ	**Traveller**	**3.38**	**190**	P	**Pn**	**04 05 45.6**	**+0.1**
PAWZ	**Paruwai Farm**	**3.40**	**193**	P	**Pn**	**04 05 45.6**	**-0.2**
WEL	**Wellington**	**3.46**	**201**	P	**Pn**	**04 05 46.6**	**+0.1**
MSWZ	**Moikau Station**	**3.47**	**195**	P	**Pn**	**04 05 46.2**	**-0.4**
SNZO	**South Karori**	**3.50**	**202**	P	**Pn**	**04 05 46.7**	**-0.4**
SNZO	**South Karori**	**3.50**	**202**	S	**Sn**	**04 06 28.1**	**-1.1**
BHW	**Baring Head**	**3.55**	**199**	P	**Pn**	**04 05 47.2**	**-0.5**
TCW	**Tory Channel**	**3.56**	**207**	P	**Pn**	**04 05 47.4**	**-0.4**
PLWZ	**Palliser**	**3.62**	**194**	P	**Pn**	**04 05 48.0**	**-0.5**
OUZ	**Omahuta**	**3.65**	**320**	P	**Pn**	**04 05 51.8**	**+2.7**
TUWZ	**Tuamarina**	**3.87**	**209**	P	**Pn**	**04 05 51.7**	**-0.1**
NNZ	**Nelson**	**3.94**	**216**	P	**Pn**	**04 05 52.4**	**-0.2**
TKNZ	**Takaka Hill**	**4.00**	**221**	P	**Pn**	**04 05 53.4**	**-0.1**
QRZ	**Quartz Range**	**4.09**	**227**	P	**Pn**	**04 05 54.7**	**0.0**
QRZ	**Quartz Range**	**4.09**	**227**	P	**Pn**	**04 05 54.9**	**+0.2**
BSWZ	**Blackbirch Sta**	**4.14**	**208**	P	**Pn**	**04 05 55.5**	**+0.2**
MRNZ	**Matariki Terra**	**4.38**	**219**	P	**Pn**	**04 05 57.9**	**-0.4**
THZ	**Tophouse**	**4.58**	**215**	P	**Pn**	**04 06 00.7**	**-0.4**
KHZ	**Kahutara**	**4.88**	**206**	P	**Pn**	**04 06 04.2**	**-0.7**
KHZ	**Kahutara**	**4.88**	**206**	S	**Sn**	**04 06 58.7**	**-2.4**
KHZ	**Kahutara**	**4.88**	**206**	P	**Pn**	**04 06 04.6**	**-0.3**
DSZ	**Denniston Nort**	**5.12**	**223**	P	**Pn**	**04 06 08.0**	**-0.2**
GVZ	**Greta Valley S**	**5.54**	**207**	P	**Pn**	**04 06 12.7**	**-1.0**
LTZ	**Lake Taylor**	**5.68**	**213**	P	**Pn**	**04 06 15.4**	**-0.2**
INZ	**Inchbonnie**	**6.02**	**218**	P	**Pn**	**04 06 19.9**	**0.0**
OXZ	**Oxford**	**6.23**	**211**	P	**Pn**	**04 06 22.0**	**-0.7**
AKCZ	**Akaroa Harbour**	**6.38**	**204**	P	**Pn**	**04 06 23.9**	**-0.9**
TMZ	**Timaru**	**7.52**	**211**	P	**Pn**	**04 06 38.8**	**-1.2**
CTZ	**Chatham Island**	**7.72**	**139**	P	Pn	04 06 48.5	+5.9
ODZ	**Otahua Downs**	**8.21**	**210**	P	**Pn**	**04 06 48.4**	**-0.7**

*SJA **07** 04:05:04.1±0.6, 32°.41S×72°.01W, h20km±3km, ML3.4, MW3.6*
*GUC **07** 04:05:06.8±0.6, 32°.35S×71°.83W, h24km±19km, ML3.2*
ISC 07 04:05:04.7±1.3**, 32°.38S**±0°.02×**71°.87W**±0°.04**, h13**km±9km**, n47,** σ1§**45**/75**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	**Catapilco**	**0.52**	**110**	i P	**Pb**	**04 05 16.6**	**+0.9**
VA06				eS	**Sb**	**04 05 23.8**	**+0.7**
VA06				IAML		04 05 26.4	
	comp=N,4μm,0.1s						
VA01	**Torpederas**	**0.66**	**163**	i P	**Pg**	**04 05 19.2**	**+1.6**
VA01	**Torpederas**	**0.66**	**163**	eP	**Pg**	**04 05 18.7**	**+1.0**
VA01				eS	**Pg**	**04 05 19.3**	**+1.6**
CO04	**Los Peladeros**	**0.83**	**66**	i P	**Pb**	**04 05 21.3**	**+0.1**
CO04				eS	**Sb**	**04 05 32.2**	**-0.3**
CO04				IAML		04 05 33.4	
	comp=N,3μm,0.2s						
ROCH	**El Roble**	**0.93**	**129**	i P	**Pb**	**04 05 23.5**	**+0.5**
ROCH				eS	**Sn**	**04 05 36.0**	**-1.2**
ROCH				IAML		04 05 38.9	
	comp=N,830nm,0.6s						
MT02	**Curacav**	**1.07**	**145**	i P	**Pg**	**04 05 25.6**	**+0.3**
MT02				eS	**Sb**	**04 05 39.5**	**+0.4**
MT02	**Curacav**	**1.07**	**145**	eP	**Pg**	**04 05 25.5**	**+0.1**
MT02				eS	**Sb**	**04 05 39.1**	**0.0**
MT02				IAML		04 05 40.0	
	comp=Z,374nm,0.2s						
VA03	**San Esteban**	**1.18**	**109**	i P	**Pb**	**04 05 26.9**	**-0.1**
VA03				eS	**Sn**	**04 05 42.5**	**-0.5**
VA03	**San Esteban**	**1.18**	**109**	eP	**Pb**	**04 05 26.7**	**-0.3**
VA03				eS	**Sn**	**04 05 43.3**	**+0.3**
VA03				IAML		04 05 46.5	
	comp=Z,883nm,0.2s						
PEL	**Peldehue**	**1.25**	**127**	eP	**Pn**	**04 05 28.8**	**+0.7**
PEL				eS	**Sn**	**04 05 45.8**	**+0.9**
PEL				IAML		04 05 47.5	
	comp=Z,533nm,0.2s						
MT05	**Renca**	**1.39**	**137**	eP	**Pb**	**04 05 31.0**	**+0.5**
MT05				eS	**Sn**	**04 05 51.5**	**+3.4**
MT05				IAML		04 05 53.8	
	comp=Z,372nm,0.7s						
CO02	**Combarbal**	**1.39**	**32**	i P	**Pn**	**04 05 29.8**	**-0.2**
CO02				eS	**Sb**	**04 05 47.7**	**-0.8**
CO02	**Combarbal**	**1.39**	**32**	eP	**Pn**	**04 05 29.9**	**-0.2**
CO02				eS	**Sb**	**04 05 48.4**	**-0.1**
CO02				IAML		04 05 52.9	
	comp=Z,1μm,0.3s						
MT14	**Cerro Cal¡n**	**1.51**	**132**	i P	**Pb**	**04 05 33.0**	**+0.3**
MT14				IAML		04 06 01.6	
	comp=N,839nm,0.4s						
MT16	**CCHEN**	**1.54**	**133**	IAML		04 06 00.8	
	comp=N,306nm,0.4s						
MT01	**Popeta**	**1.56**	**161**	eP	**Pn**	**04 05 33.2**	**+1.0**
MT01				eS	**Sn**	**04 05 48.3**	**-4.1**
MT01				IAML		04 05 59.4	
	comp=Z,281nm,0.8s						
MT09	**Talagante**	**1.57**	**152**	IAML		04 06 01.6	
	comp=N,560nm,0.5s						
MT03	**Universidad Ad**	**1.59**	**134**	eP	Pn	04 05 28.9	-3.9
MT03				eP	**Pb**	**04 05 34.4**	**+0.2**
MT03				eS	**Sg**	**04 05 56.8**	**+0.8**
MT03				IAML		04 06 05.2	
	comp=Z,385nm,0.8s						
CO06	**Fray Jorge**	**1.72**	**7**	i P	**Pn**	**04 05 33.5**	**-0.9**
CO06				IAML		04 06 01.7	
	comp=N,438nm,0.5s						
MT12	**Pirque**	**1.75**	**141**	i P	**Pb**	**04 05 36.7**	**0.0**
MT04	**Ro Olivares**	**1.78**	**125**	eP	**Pb**	**04 05 37.4**	**0.0**
MT04				eS	**Sg**	**04 06 01.2**	**-0.8**
MT04				IAML		04 06 05.9	
	comp=Z,170nm,0.2s						
CO03	**El Pedregal**	**1.84**	**34**	eP	**Pn**	**04 05 37.1**	**+0.9**
CO03				eS	**Sg**	**04 06 03.4**	**-0.6**
CO03				IAML		04 06 06.3	
	comp=Z,284nm,0.3s						
MT08	**Bocatoma Ro**	**1.89**	**125**	i P	**Pb**	**04 05 39.1**	**0.0**
MT08				IAML		04 06 11.1	
	comp=E,233nm,0.4s						
MT08	**Bocatoma Ro**	**1.89**	**125**	eP	**Pn**	**04 05 34.4**	**-2.6**
MT08				eP	**Pb**	**04 05 39.2**	**0.0**
MT08				eS	**Sg**	**04 06 05.0**	**-0.5**
MT08				IAML		04 06 10.6	
	comp=Z,147nm,0.8s						
MT13	**San Alfonso**	**1.90**	**136**	IAML		04 06 08.7	
	comp=E,547nm,0.6s						
MT13	**San Alfonso**	**1.90**	**136**	eP	**Pb**	**04 05 39.0**	**-0.4**
MT13				eS	**Sg**	**04 06 04.1**	**-1.8**
MT13				IAML		04 06 10.9	
	comp=Z,188nm,0.5s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BO04	La Punta	1.92	147	iP	Pn	04 05 39.3	+2.1
BO04				eS	Sb	04 06 04.3	+0.8
BO04				IAML		04 06 10.0	
	comp=N,300nm,0.3s						
LMEL	Las Melosas	2.02	137	iP	Pb	04 05 41.1	-0.4
LMEL				IAML		04 06 13.9	
	comp=N,375nm,0.1s						
BO01	Tunca	2.11	162	eP	Pn	04 05 41.0	+1.3
BO01				eS	Sg	04 06 11.8	-0.7
BO01				IAML		04 06 16.5	
	comp=Z,156nm,0.3s						
RTLS	Leoncito	2.26	76	eP	Pb	04 05 46.0	+0.4
RTLS				eS	Sg	04 06 18.0	+0.5
RTLS				IAML		04 06 19.0	
	comp=Z,508nm,0.7s						
GO04	Tololo Observa	2.39	23	eP	Pn	04 05 45.9	+2.1
GO04				eS	Sb	04 06 18.7	+1.5
GO04				IAML		04 06 22.2	
	comp=Z,588nm,0.6s						
ARCO	CERRO ARCO	2.52	101	eP	Pb	04 05 50.8	+0.8
ARCO				eS	Sb	04 06 19.9	-1.2
ARCO				IAML		04 06 34.2	
	comp=Z,95nm,0.4s						
BO02	Sierra Bellavi	2.57	160	eP	Pn	04 05 47.7	+1.6
BO02				eS	Sn	04 06 16.4	-1.0
BO02				IAML		04 06 26.4	
	comp=Z,173nm,0.3s						
ASAL	Salagasta	2.58	95	eP	Pn	04 05 46.9	+0.7
ASAL				eS	Sg	04 06 25.4	-2.1
GO05	Hualane	2.62	181	eP	Pn	04 05 47.2	+0.4
GO05				eP	Pb	04 05 51.5	0.0
GO05				eS	Sn	04 06 18.1	-0.5
AAGR	Agrelo	2.66	106	eP	Pn	04 05 48.3	+0.9
AAGR				eS	Sg	04 06 26.3	-3.9
ZON	Zonda	2.84	74	eP	Pb	04 05 54.7	-0.7
ZON				eS	Sb	04 06 28.9	-1.2
CO01	Juntas del Tor	2.84	33	eP	Pn	04 05 52.6	+2.5
CO01				eS	Sb	04 06 28.7	-1.7
ACCO	Cerro Coronel	2.99	54	eS	Sb	04 06 33.0	-1.7
RTLL	Cerro Villicun	3.08	71	IAML		04 06 46.6	
	comp=Z,112nm,0.4s						
CFA	Coronel Fontan	3.19	77	eS	Sg	04 06 44.8	-2.2
ML02	Panimavida	3.39	174	eP	Pg	04 06 09.0	-0.7
ML02				eP	Pg	04 06 09.0	-0.7
ML02				eS	Sg	04 06 52.3	-1.4
ML02				eS	Sg	04 06 52.3	-1.4
ML02				IAML		04 06 57.7	
	comp=Z,77nm,0.6s						
LCO	Las Campanas	3.51	17	eP	Pn	04 05 59.1	-0.2
LCO				IAML		04 06 57.2	
	comp=Z,112nm,0.3s						
LCO				IAML		04 06 57.2	
	comp=Z,112nm,0.3s						
LCO				IAML		04 06 57.2	
	comp=Z,112nm,0.3s						
AC05	El Transito	3.79	22	eP	Pn	04 05 53.0	-10
AC05				IAML		04 07 03.8	
	comp=Z,54nm,0.5s						
AC05				IAML		04 07 03.8	
	comp=Z,54nm,0.5s						
AVFE	Valle Fertil	4.14	67	eP	Pn	04 06 11.5	+3.7
AVFE				IAML		04 07 12.3	
	comp=Z,51nm,0.4s						
AC04	Llanos de Chal	4.22	10	IAML		04 07 22.5	
	comp=Z,40nm,0.4s						
VCA	Vinchina	4.82	42	eP	Pn	04 06 21.1	+3.9
VCA				IAML		04 07 29.5	
	comp=Z,57nm,1.5s						

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*NDI **07** 04:05:41.1±3.1, 23°.10N×96°.41E, h158km±43km, ML4.3, MW4.1, Presumed earthquake*
*BKK **07** 04:05:42.4±0.3, 23°N±3°×9°6E±°, h10km, mB5.3/16, mb5.3/12, Mjma4.7/25, MLv4.9/6, Mw(mB)4.7/16, MwMwp3.0/3, Mwp3.8/3*
*IDC **07** 04:05:43.0±0.9, 23°.64N×96°.46E, h0km, mb3.8/15, mbtmp3.8/15, ML4.8/1, MS3.0/1, Error ellipse: s-maj=29.3km s-min=16.3km az=49.0*
*NEIC **07** 04:05:43.0±2.1, 23°.23N±0°.07×96°.11E±0°.05, h10km±1km, mb4.5/19, Error ellipse: s-maj=14.1km s-min=2.9km az=215.0*
ISC 07 04:05:45.7±0.6, **23°.17N**±0°.05×**96°.00E**±0°.05, **h32**km, **n73**, σ**1§44**/83, **mb4.0**/25, **Myanmar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MORE	Moreh	1.88	305		Pn	04 06 15.1	-0.6
SAIH	SAIHA	2.86	257	eP	Pn	04 06 31.4	+2.1
SAIH				eS	Sb	04 07 09.0	-1.8
SAIH				IAML		04 07 17.7	
	comp=E,1μm,1.1s						
SAIH				IAML		04 07 18.4	
	comp=N,1μm,0.7s						
KOHI	KOHIMA	3.07	326	eP	Pn	04 06 33.4	+1.3
KOHI				eS	Sn	04 07 10.4	+2.6
KOHI				IAML		04 07 24.4	
	comp=E,601nm,0.8s						
KOHI				IAML		04 07 30.3	
	comp=N,462nm,1.1s						
MOKO	MOKOCHONG	3.41	337	eP	Pn	04 06 37.5	+0.7
MOKO				eS	Sn	04 07 19.5	+3.2
MOKO				IAML		04 07 44.7	
	comp=N,339nm,0.9s						
MOKO				IAML		04 07 47.7	
	comp=E,443nm,0.8s						
BRDH	Bariadhala	4.05	264	Pn	Pb	04 06 51.0	-5.3
	comp=E,51nm,0.3s,baz=243,slow=21,SNR=2.1						
BRDH				Sn	Sn	04 07 35.2	+3.5
	comp=E,47nm,0.3s,baz=86,slow=23,SNR=8.3						
CMAI	Chiengmai2	4.29	138	P	Pn	04 06 47.7	-1.3
SHL	Shillong	4.45	303		Pn	04 06 50.5	-0.5
SHL	Shillong	4.45	303	eP	Pn	04 06 50.5	-0.5
SHL				eP	Pn	04 06 50.6	-0.5
SHL				eS	Sn	04 07 40.7	-1.1
SHL				eS	Sn	04 07 40.8	-1.1
SHL				IAML		04 07 43.4	
	comp=E,1μm,0.3s						
SHL				IAML		04 07 43.5	
	comp=E,2μm,0.3s						
SHL				IAML		04 07 45.0	
	comp=N,2μm,0.3s						
SHL				IAML		04 07 45.1	
	comp=N,2μm,0.5s						
ITAN	ITANAGAR	4.46	333	eP	Pn	04 06 51.5	+0.4
TEZP	TEZPUR	4.50	320	eP	Pn	04 06 50.9	-0.7
TEZP				eS	Sn	04 07 41.9	-0.9
TEZP				IAML		04 07 46.2	
	comp=E,55nm,0.2s						
TEZP				IAML		04 07 47.1	
	comp=N,75nm,0.3s						
ZIRO	ZIRO	4.75	336	eP	Pn	04 06 55.3	0.0
GUWA	GUWAHATI	4.94	308	eP	Pn	04 06 56.4	-1.3
GUWA				eS	Sn	04 07 53.3	-0.5
GUWA				IAML		04 07 56.7	
	comp=N,70nm,0.5s						
GUWA				IAML		04 07 57.4	
	comp=E,62nm,0.3s						
CHTO	Chiang Mai	5.13	147	Pn	Pn	04 06 59.9	-0.5
CHTO	Chiang Mai	5.13	147	P	Pn	04 06 59.5	-0.9
	comp=E,2.4nmcomp=E,2μmcomp=E,143nm,0.7s						
MHMT	Maesarieng	5.29	160	P	Pn	04 07 02.6	+0.1
CM15	Chiang Mai Arr	5.43	149	P	Pn	04 07 04.1	-0.4
	comp=E,1.1nmcomp=E,3μmcomp=E,252nm,0.5s						
CM31	Chiang Mai Arr	5.44	149		Pn	04 07 04.2	-0.4
CMAR	Chiang Mai Arr	5.44	149	Pn	Pn	04 07 03.9	-0.7
	comp=E,10nm,0.3s,baz=326,slow=13,SNR=77						
CMAR				Lg	Lg	04 08 34.2	
	comp=E,33nm,0.3s,baz=321,slow=29,SNR=9.2						
CMAR				LR	LR	04 09 39.7	
	comp=E,141nm,19.6s,baz=325,slow=42						
CMAR	Chiang Mai Arr	5.44	149		Pn	04 07 04.0	-0.6
CM13	Chiang Mai Arr	5.45	150	P	Pn	04 07 03.8	-1.0
	comp=E,1.5nmcomp=E,2μmcomp=E,182nm,0.6s						
CM02	Chiang Mai Arr	5.46	149	P	Pn	04 07 04.3	-0.6
	comp=E,1.2nmcomp=E,43nmcomp=E,2μmcomp=E,207nm,0.7s						
CM09	Chiang Mai Arr	5.47	149	P	Pn	04 07 04.4	-0.7
	comp=E,1.3nmcomp=E,38nmcomp=E,2μmcomp=E,282nm,0.7s						
CM01	Chiang Mai Arr	5.48	149	P	Pn	04 07 04.6	-0.5
CM05	Chiang Mai Arr	5.49	149	P	Pn	04 07 04.4	-0.9
	comp=E,0.9nmcomp=E,2μmcomp=E,183nm,0.7s						
CM04	Chiang Mai Arr	5.50	149	P	Pn	04 07 04.8	-0.7
	comp=E,1.6nmcomp=E,3μmcomp=E,289nm,0.6s						
LAMP	Lampang	5.74	143	P	Pn	04 07 07.7	-1.0
	comp=E,2.8nmcomp=E,179nm,0.8s						
TAWA	Tawang	5.78	321	eP	Pn	04 07 09.6	0.0
TAWA				eS	Sn	04 08 13.9	-0.9
TAWA				IAML		04 08 18.8	
	comp=E,204nm,1.0s						
TAWA				IAML		04 08 22.4	
	comp=N,182nm,0.6s						
DHUB	DHUBRI	6.16	299	eP	Pn	04 07 12.9	-1.5
DHUB				IAML		04 08 24.4	
	comp=N,5μm,0.3s						
DHUB				IAML		04 08 24.8	
	comp=E,4μm,0.4s						
NANT	Nan	6.18	134	P	Pn	04 07 11.3	-3.5
UTTA	Uttaradit	6.88	141	P	Pn	04 07 23.4	-1.0
BOK	Bokaro	9.30	276	eP	Pn	04 07 56.6	-1.1
BOK				eP		04 07 57.9	
BOK				eS	Sn	04 09 37.6	-3.6
BOK				eS		04 09 37.7	
BOK				IAML		04 09 41.5	
	comp=E,223nm,0.5s						
BOK				IAML		04 09 41.5	
	comp=E,221nm,0.7s						
BOK				IAML		04 09 42.5	
	comp=N,428nm,0.3s						
BOK				IAML		04 09 44.7	
	comp=N,376nm,0.7s						
EVN	Everest	9.56	302		Pn	04 08 00.3	-1.4
HYB	Hyderabad	17.33	254	eP	P	04 09 46.9	+0.4
SMLA	Simla	18.52	299	eP	Pn	04 10 00.5	+0.6
SMLA				eS	Sn	04 13 11.0	-15
SMLA				IAML		04 13 17.9	
	comp=N,94nm,0.2s						
SMLA				IAML		04 13 24.8	
	comp=E,116nm,0.5s						
PALK	Pallekele	21.59	225	P	P	04 10 33.7	+0.7
PALK				IAmb	IAmb	04 10 40.5	
	comp=Z,18nm,1.4s						
NIL	Nilore	22.52	303	P	P	04 10 43.8	+0.9
NIL				IAmb	IAmb	04 10 44.7	
	comp=Z,15nm,0.8s						
WUS	Wushi	22.84	326	P	P	04 10 45.3	-1.0
WUS				IAmb	IAmb	04 10 48.4	
	comp=Z,18nm,0.7s						
TARG	Taragay, Kyrgy	23.96	325	P	P	04 10 58.1	+0.6
BOOM	Boomskoye usch	25.48	324	P	P	04 11 11.5	+0.3
SONM	Songino Array	25.98	16	P	P	04 11 12.7	-2.8
	comp=Z,0.5nm,0.7s,baz=203,slow=6.3,SNR=5.4						
	comp=Z,0.5nm,0.7s						
SONM	Songino Array	25.98	16	P	P	04 11 15.6	+0.1
MKAR	Makanchi Array	26.03	338	P	P	04 11 15.7	-0.2
	comp=Z,3.3nm,0.7s,baz=150,slow=9.3,SNR=21						
	comp=Z,3.3nm,0.7s						
MKAR	Makanchi Array	26.03	338	P	P	04 11 15.8	-0.1
KBL	Kabul	26.11	302	P	P	04 11 16.4	-0.6
KBL				IAmb	IAmb	04 11 22.6	
	comp=Z,6.6nm,0.7s						
MAKZ	Makanchi	26.15	338	P	P	04 11 18.2	+1.2
MAKZ				IAmb	IAmb	04 11 23.5	
	comp=Z,6.6nm,1.0s						
DRK	Karamyk	26.18	314	P	P	04 11 17.6	-0.1
AAK	Ala-Archa	26.38	322	P	P	04 11 20.8	+1.6
	comp=Z,2.7nm,0.6s,baz=156,slow=5.4,SNR=7.2						
	comp=Z,2.7nm,0.6s						
AAK	Ala-Archa	26.38	322	P	P	04 11 20.4	+1.1
AAK				IAmb	IAmb	04 11 32.5	
	comp=Z,5.0nm,0.9s						
GAR	Garm	26.94	312	P	P	04 11 23.5	-0.8
KKAR	Karatay Array	28.98	319	P	P	04 11 41.8	-0.6
KURBB	Kurchatov Arra	30.60	338	P	P	04 11 55.9	-0.6
	comp=Z,0.8nm,0.4s,baz=145,slow=9.4,SNR=7.0						
	comp=Z,0.8nm,0.4s						
KURK	Kurchatov	30.64	338	P	P	04 11 56.2	-0.7
ZALV	Zalesovo Beam	31.87	347	P	P	04 12 06.8	-0.9
	comp=Z,0.3nm,0.3s,baz=166,slow=13,SNR=2.3						
	comp=Z,0.3nm,0.3s						
ZALV	Zalesovo Beam	31.87	347	P	P	04 12 08.3	+0.6
BVAR	Borovoye Array	35.60	333	P	P	04 12 39.5	-0.6
	comp=Z,0.9nm,0.6s,baz=139,slow=9.2,SNR=5.2						
	comp=Z,0.9nm,0.6s						
AB31	Akbulak array	38.46	322	P	P	04 13 03.9	-0.6
ABKAR	Akbulak array	38.46	322	P	P	04 13 03.8	-0.7
MJAR	Matsushiro Arr	38.66	60	P	P	04 13 02.7	-3.7
	comp=Z,0.4nm,0.3s,baz=273,slow=8.9,SNR=1.5						
	comp=Z,0.4nm,0.3s						
AKTO	Aktyubinsk	40.12	322	P	P	04 13 19.4	+1.0
	comp=Z,0.9nm,0.4s,baz=110,slow=5.4,SNR=2.1						
	comp=Z,0.9nm,0.4s						
ARTI	Arti	43.06	330	P	P	04 13 41.6	-0.8
ARTI				IAmb	IAmb	04 13 42.0	
	comp=Z,6.0nm,0.4s						
ARPR	Arapgir-MALATY	51.04	302	P	P	04 14 44.4	-0.7
ARPR				IAmb	IAmb	04 14 47.6	
	comp=Z,14nm,1.2s						
WB0	Warramunga Arr	56.79	136	P	P	04 15 26.4	-0.7
WB0				IAmb	IAmb	04 16 01.0	
	comp=Z,9.4nm,1.4s						
WRA	Warramunga Arr	56.88	136	P	P	04 15 30.4	+2.7
	comp=Z,0.5nm,0.8s,baz=322,slow=7.5,SNR=7.4						
	comp=Z,0.5nm,0.8s						
WR8	Warramunga Arr	56.99	136	P	P	04 15 28.1	-0.4
WR8				IAmb	IAmb	04 15 57.2	
	comp=Z,11nm,1.5s						
ASAR	Alice Springs	59.36	139	P	P	04 15 47.9	+2.8
	comp=Z,0.5nm,0.6s,baz=322,slow=6.8,SNR=7.8						
	comp=Z,0.5nm,0.6s						
FINES	FINESS Array B	60.34	329	P	P	04 15 52.2	+1.0
	comp=Z,2.3nm,1.0s,baz=72,slow=8.9,SNR=1.3						
	comp=Z,2.3nm,1.0s						
FINES	FINESS Array B	60.34	329	P	P	04 15 50.2	-1.0
HFS	Hagfors	66.40	327	P	P	04 16 31.6	+0.2
	comp=Z,1.0nm,0.8s,baz=67,slow=3.7,SNR=4.4						
	comp=Z,1.0nm,0.8s						
NOA	NORSAR Array B	67.51	328	P	P	04 16 40.1	+1.6
	comp=Z,0.6nm,0.9s,baz=69,slow=7.2,SNR=3.6						
	comp=Z,0.6nm,0.9s						
GERES	GERESS Array B	67.96	315	P	P	04 16 45.7	+4.0
	comp=Z,0.4nm,0.5s,baz=56,slow=6.1,SNR=2.1						
	comp=Z,0.4nm,0.5s						
C16K	Lisburne Hills	71.85	23	P	P	04 17 06.9	+1.9
C16K				IAmb	IAmb	04 17 35.6	
	comp=Z,5.5nm,1.4s						
C19K	Lookout Ridge	73.56	21	P	P	04 17 16.2	+0.9
ILAR	Eielson Array	79.99	23	P	P	04 17 50.5	-1.1
	comp=Z,0.1nm,0.6s,baz=304,slow=6.1,SNR=1.6						
	comp=Z,0.1nm,0.6s						

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*TAP **07** 04:15:11.9, 23°.96N×122°.72E, h67km±1km, ML2.5, D*
*JMA **07** 04:15:14.8±0.1, 24°N±2°×122°.5E±0°.5, h53km±1km, NW OFF ISHIGAKIJIMA IS*
ISC 07 04:15:11.3±1.1, **23°.85N**±0°.05×**122°.58E**±0°.02, **h11**km±10km, **n28**, σ**0§77**/47, **Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.68	29	eP	Pb	04 15 24.9	-0.3
JYNG				eS	Sg	04 15 32.4	-1.1
YOJ	Yonaguni jima	0.72	33	P	Pg	04 15 25.3	0.0
YOJ				S	Sg	04 15 35.0	+0.2
YOJ	Yonaguni jima	0.72	33	eP	Pb	04 15 25.8	-0.1
YOJ				eS	Sg	04 15 33.6	-1.2
ETL	Fush Village	0.93	289	eP	Pn	04 15 29.9	-0.5
TWD	Chiawan	0.93	284	eP	Pn	04 15 30.3	0.0
NACB	Ninganchiao	0.96	290	eP	Pn	04 15 31.6	+0.9
NACB				S	Sn	04 15 44.0	-0.4
ENA	Nanau	0.96	307	eP	Pb	04 15 29.7	-0.3
ENA				eS	Sg	04 15 44.0	+1.6
TWC	Suao	1.01	319	eP	Pn	04 15 30.9	-0.5
TWC				eS	Sb	04 15 43.7	-0.3
ETLH	Xiulin Townshi	1.07	290	eP	Pn	04 15 31.6	-0.7
ETLH				eS	Sg	04 15 46.6	+0.8
LXIB	Xiulin Townshi	1.08	279	P	Pg	04 15 32.9	+0.7
LXIB				eS	Sn	04 15 47.8	+0.1
WARBT	Fenglin Townsh	1.10	263	P	Pg	04 15 33.3	+0.8
WARBT				eS	Sn	04 15 47.4	-0.6
HATJ	Hateruma jima	1.14	79	eS	Sn	04 15 51.7	+3.0
IRIF	Iriomote-Funau	1.15	65	eP	Pg	04 15 34.0	+0.5
IRIF				eS	Sg	04 15 48.2	-0.3
LATG	Datong	1.18	305	eP	Pg	04 15 35.0	+0.9
LATG				S	Sb	04 15 49.6	+0.4
EHY	Hungye	1.21	254	eP	Pg	04 15 34.1	-0.4
EHY				eS	Sg	04 15 50.9	+0.7
ENTT	Nioudou	1.22	310	eP	Pg	04 15 35.1	+0.5
ENTT				eS	Sb	04 15 49.7	-0.4
NNSB	Datong	1.24	298	eP	Pg	04 15 34.9	-0.2
WHF	Hehuan Shan	1.24	284	eP	Pg	04 15 35.3	0.0
YULB	Yu-li	1.27	249	eP	Pg	04 15 35.5	-0.1
YULB				eS	Sg	04 15 52.2	+0.1
FUSB	Fushanzhiwuyua	1.28	315	eP	Pb	04 15 35.5	0.0
OWD	Renai	1.29	275	eP	Pg	04 15 36.7	+0.6
OWD				eS	Sg	04 15 52.8	-0.2
TIPB	Shuangxi	1.31	328	eP	Pb	04 15 36.4	+0.4
VWDT	VWDT	1.32	266	eP	Pg	04 15 36.9	+0.2
VWDT				eS	Sg	04 15 53.6	-0.3
WUSB	Renai	1.35	276	eP	Pg	04 15 37.2	-0.1
WUSB				eS	Sg	04 15 54.8	0.0
JKRS	Kuro-shima	1.36	73	eP	Pg	04 15 38.4	+1.0
JKRS				eS	Sg	04 15 55.3	+0.2
JIJ	Ishigaki jima	1.51	70	eS	Sb	04 15 57.8	-0.8
WHP	Taichung City	1.56	286	eP	Pg	04 15 40.7	-0.5
WHP				eS	Sg	04 16 00.9	-0.5
JISG	Ishigakijimahi	1.74	65	eP	Pb	04 15 41.9	-1.3

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*IDC **07** 04:33:35.0±5.2, 36°.11N×70°.71E, h178km±45km, mb3.3/6, mbtmp3.7/11, Error ellipse: s-maj=51.3km s-min=33.4km az=142.0*
ISC 07 04:33:33.8±1.7, **36°.2N**±0°.2×**70°.5E**±0°.2, **h150**km, **n13**, σ**1§73**/16, **mb3.7**/4, **2C-2D**, **Hindu Kush region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.89	0	⇑Pn	Pn	04 35 14.9	+2.5
	3.8nm,0.3s,baz=176,slow=11,SNR=140						
KK31				⇑Sn	Sn	04 36 26.7	-2.9
	4.2nm,0.5s,baz=183,slow=22,SNR=5.1						
AAK	Ala-Archa	7.13	24	P	Pn	04 35 18.2	+2.5
	5.7nm,0.3s,baz=172,slow=4.6,SNR=26						
AAK				S	Sn	04 36 35.6	0.0
	6.2nm,0.6s,baz=356,slow=23,SNR=7.0						
AAK	Ala-Archa	7.13	24	⇓Pn	Pn	04 35 17.1	+1.5
	6.9nm,0.8s						
AAK				⇓Sn	Sn	04 36 33.3	-2.2
	4.8nm,0.7s						
MKAR	Makanchi Array	13.77	36	P	Pn	04 36 42.7	+0.1
	0.4nm,0.7s,baz=221,slow=12,SNR=6.2						
KURBB	Kurchatov Arra	15.53	19	P	Pn	04 37 05.1	+0.5
	0.3nm,0.5s,baz=209,slow=10,SNR=5.8						
BVAR	Borovoye Array	16.82	360	P	P	04 37 21.6	+1.8
	0.5nm,0.4s,baz=153,slow=7.0,SNR=5.4						
AKTO	Aktyubinsk	16.84	332	P	P	04 37 22.1	+2.0
	2.5nm,0.5s,baz=148,slow=9.2,SNR=8.7						
ZALV	Zalesovo Beam	20.35	25	P	P	04 37 57.7	-0.5
	1.2nm,0.4s,baz=222,slow=9.8,SNR=6.6						
	1.2nm,0.4s						
NRIK	Noril'sk	34.49	11	P	P	04 40 06.0	-1.0
	1.7nm,0.5s,baz=197,slow=11,SNR=3.6						
	1.7nm,0.5s						
FINES	FINESS Array B	37.51	326	P	P	04 40 32.9	+0.1
	1.3nm,1.0s,baz=120,slow=11,SNR=6.2						
	1.3nm,1.0s						
HFS	Hagfors	43.05	322	P	P	04 41 18.2	-0.1
	2.9nm,1.1s,baz=98,slow=11,SNR=5.6						
	2.9nm,1.1s						
NOA	NORSAR Array B	44.38	323	P	P	04 41 28.2	-0.8
	0.3nm,0.6s,baz=83,slow=7.8,SNR=1.2						
	0.3nm,0.6s						
TORD	Torodi Ar. Bea	65.31	268	P	P	04 43 59.0	-1.0
	0.4nm,0.7s,baz=50,slow=7.0,SNR=5.7						
	0.4nm,0.7s						

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*IDC **07** 04:37:47.3±0.8, 3°.80S×139°.67E, h0km, mb4.2/12, mbtmp4.2/17, ML4.2/4, Error ellipse: s-maj=26.4km s-min=15.5km az=84.0*
*NEIC **07** 04:37:55.5±1.4, 3°.79S±0°.10×139°.4E±0°.1, h47km±8km, mb4.4/20, Error ellipse: s-maj=16.4km s-min=12.1km az=47.0*
*DJA **07** 04:37:55.6±0.2, 4°S±2°×13°9E±°, h45km±6km, M4.8/19, mb4.8/19, mB5.2/5, MLv4.9/13, Mw(mB)4.5/5, MwMwp5.2/1, Mwp5.5/1*
ISC 07 04:37:53.9±0.5, **3°.87S**±0°.05×**139°.36E**±0°.06, **h35**km, **n62**, σ**1§87**/63, **mb4.3**/19, **1D**, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WAMI	Wamena	0.65	269	P	Pn	04 38 08.2	+1.6
GENI	Genyem	1.50	32	P	Pn	04 38 20.9	+2.5
GENI				S	Sn	04 38 39.9	+3.1
JAY	Jayapura	1.90	45	P	Pn	04 38 25.5	+1.6
JAY				S	Sn	04 38 48.6	+1.9
SMPI	Sarmi	1.98	341	P	Pn	04 38 27.2	+2.2
SRPI	Serui, Papua	3.70	302	P	Pn	04 38 50.6	+2.0
SRPI				S	Sn	04 39 31.5	+0.5
BAKI	Biak	4.21	309	P	Pn	04 38 58.0	+2.4
MMPI	Merauke	4.67	168	P	Pn	04 39 04.2	+2.2
KMPI	Kaimana, Papua	5.65	272	P	Pn	04 39 18.4	+3.0
FAKI	Fak Fak	7.17	277	Pn	Pn	04 39 37.4	+1.2
FAKI	Fak Fak	7.17	277	P	Pn	04 39 37.8	+1.5
	0.2nm67nm,0.9s						
SIJI	Sorong	8.62	290	Pn	Pn	04 39 58.0	+1.7
	4.1nm,0.3s,baz=95,slow=8.7,SNR=7.0						
SIJI				Sn	Sn	04 41 29.1	-3.4
	baz=244,slow=22						
	10nm,0.3s						
SIJI	Sorong	8.62	290	P	Pn	04 39 58.6	+2.3
	18nm,0.6s						
SWI	Sorong	8.63	290	P	Pn	04 39 59.0	+2.6
	35nm,0.6s						
SAUI	Saumlaki	9.00	243	Pn	Pn	04 40 04.3	+2.8
PMG	Port Moresby	9.49	126	Pn	Pn	04 40 01.7	-6.6
	4.3nm,0.4s,baz=356,slow=8.4,SNR=2.8						
COEN	Coen	10.70	160		Pn	04 40 25.9	+1.1
AUDHS	Darwin High Sc	11.99	224	P	Pn	04 40 42.3	-0.1
MTN	Manton Dam	12.07	222		Pn	04 40 43.2	-0.3
KNRA	Kununurra	15.69	221		Pn	04 41 31.2	-1.3
KNRA				IAmb	IAmb	04 41 39.3	
	comp=Z,24nm,0.4s						
SGSI	Sangihe	15.73	298	P	P	04 41 37.4	+0.8
SOEI	Soe	16.08	248	P	Pn	04 41 36.9	-0.7
SOEI	Soe	16.08	248		Pn	04 41 38.5	+0.8
SOEI				IAmb	IAmb	04 42 02.9	
	comp=Z,52nm,0.8s						
SOEI	Soe	16.08	248	P	Pn	04 41 38.9	+1.3
	comp=Z,860nmcomp=Z,77nm,0.9s						
WB0	Warramunga Arr	16.52	197		Pn	04 41 40.7	-2.4
WR8	Warramunga Arr	16.67	196		Pn	04 41 42.3	-2.7
WR8				IAmb	IAmb	04 42 04.0	
	comp=Z,33nm,1.4s						
WRA	Warramunga Arr	16.71	197	Pn	Pn	04 41 43.4	-2.0
	comp=Z,0.6nm,0.3s,baz=18,slow=13,SNR=19						
WRA				Sn	Sn	04 44 38.6	-11
	comp=Z,1.1nm,0.3s,baz=7.5,slow=22,SNR=6.5						
	comp=Z,6.0nm,0.3s						
CTA	Charters Tower	17.46	158	P	Pn	04 41 50.5	-4.4
	comp=Z,0.3nm,0.3s,baz=331,slow=11,SNR=8.1						
	comp=Z,0.4nm,0.4s						
CTAO	Charters Tower	17.46	158		P	04 41 56.3	+0.6
TOLI2	Tolitoli	19.22	285		Pn	04 42 16.6	+0.3
FITZ	Fitzroy Crossi	19.50	223	P	P	04 42 18.4	+0.2
	comp=Z,1.2nm,0.3s,baz=46,slow=9.7,SNR=27						
FITZ				S	S	04 45 43.6	-13
	comp=Z,13nm,0.6s,baz=118,slow=7.8,SNR=7.8						
	comp=Z,7.1nm,0.5s						
AS31	Alice Springs	20.37	195	P	Pn	04 42 28.8	-1.1
AS31				IAmb	IAmb	04 43 04.9	
	comp=Z,7.7nm,0.5s						
ASAR	Alice Springs	20.37	195	P	P	04 42 28.2	+0.5
	comp=Z,17nm,0.8s,baz=22,slow=9.4,SNR=195						
ASAR				S	S	04 46 03.6	-11
	comp=Z,1.8nm,0.5s,baz=17,slow=24,SNR=4.9						
	comp=Z,17nm,0.8s						
ASAR	Alice Springs	20.37	195	P	P	04 42 28.6	+0.9
EIDS	Eidsvold	24.16	153	P	P	04 43 08.1	+1.1
EIDS				IAmb	IAmb	04 43 32.8	
	comp=Z,5.6nm,0.8s						
MBWA	Marble Bar	25.68	226	P	P	04 43 20.3	-0.5
MBWA				IAmb	IAmb	04 43 21.7	
	comp=Z,19nm,1.3s						
PSA00	Pilbara Seismi	25.86	225	P	P	04 43 29.2	+6.7
PSA00	Pilbara Seismi	25.86	225	P	P	04 43 22.6	+0.1
PSA00				IAmb	IAmb	04 43 39.0	
	comp=Z,7.3nm,1.1s						
STKA	Stephens Creek	27.93	176	P	P	04 43 41.5	+0.5
	comp=Z,0.4nm,0.3s,baz=356,slow=13,SNR=1.2						
	comp=Z,0.4nm,0.3s						
MJAR	Matsushiro Arr	40.22	359	P	P	04 45 24.6	-2.6
	comp=Z,1.0nm,0.4s,baz=172,slow=6.5,SNR=2.1						
	comp=Z,1.0nm,0.4s						
KSRS	Korea Array	42.47	346	P	P	04 45 44.3	-1.3

comp=Z,0.8nm,0.5s,baz=153,slow=9.0,SNR=4.9
comp=Z,0.8nm,0.5s
CMAR Chiang Mai Arr 45.58 300 P **P 04 46 10.8 -0.1**
comp=Z,1.3nm,0.3s,baz=115,slow=8.2,SNR=5.7
comp=Z,1.3nm,0.3s
PZH PanZhiHua 47.28 312 P **P 04 46 25.7 +1.4**
CMWZ Cape Campbell 48.91 145 P **P 04 46 37.2 +0.7**
BNX BinXian 50.53 349 ⇓P **P 04 46 48.2 -0.5**
BNX pmax pmax
comp=Z,6.0nm,0.8s
HHC Hu-ho-hao-te 51.26 333 *e*P **P 04 46 57.1 +2.6**
HHC pmax pmax
comp=Z,9.0nm,0.6s
HHC pmax pmax
comp=Z,170nm,5.0s
PETK Petropavlovsk- 58.84 13 P **P 04 47 47.8 -1.1**
comp=Z,2.1nm,0.7s,baz=158,slow=8.3,SNR=7.8
comp=Z,2.1nm,0.7s
SONM Songino Array 59.04 335 P **P 04 47 49.8 -0.8**
comp=Z,0.4nm,0.6s,baz=139,slow=7.5,SNR=2.8
comp=Z,0.4nm,0.6s
EVN Everest 59.64 306 P **P 04 47 55.6 -0.1**
EVN IAmb IAmb 04 48 26.7
comp=Z,6.6nm,1.4s
MKAR Makanchi Array 71.10 322 P **P 04 49 08.8 0.0**
comp=Z,7.1nm,0.8s,baz=110,slow=7.8,SNR=65
comp=Z,7.1nm,0.8s
MAKZ Makanchi 71.30 322 P **P 04 49 10.1 +0.1**
TARG Taragay, Kyrgy 71.87 316 P **P 04 49 14.0 0.0**
ZAA0 Zalesovo Array 73.26 330 P **P 04 49 19.9 -1.6**
ZAA0 IAmb IAmb 04 49 20.7
comp=Z,1.8nm,0.6s
ZALV Zalesovo Beam 73.26 330 P **P 04 49 20.2 -1.3**
comp=Z,1.7nm,0.5s,baz=109,slow=6.2,SNR=10
comp=Z,1.7nm,0.5s
BOOM Boomskoye usch 73.44 316 P **P 04 49 23.0 0.0**
KURK Kurchatov 75.04 325 P **P 04 49 31.7 -0.2**
KURK IAmb IAmb 04 49 32.1
comp=Z,4.3nm,0.7s
KURBB Kurchatov Arra 75.05 325 P **P 04 49 31.4 -0.6**
comp=Z,3.0nm,0.6s,baz=116,slow=4.8,SNR=33
comp=Z,3.0nm,0.6s
KKAR Karatay Array 77.41 316 P **P 04 49 45.6 -0.1**
BVAR Borovoye Array 80.63 325 P **P 04 50 02.7 -0.3**
comp=Z,8.6nm,0.5s,baz=114,slow=7.0,SNR=52
comp=Z,8.6nm,0.5s
BORK Borovoye 80.68 325 P **P 04 50 03.0 -0.2**
IMAR Indian Mountai 84.31 22 P **P 04 50 20.8 -1.1**
ILAR Eielson Array 86.62 24 P **P 04 50 30.8 -2.7**
comp=Z,0.4nm,0.6s,baz=271,slow=4.4,SNR=10
comp=Z,0.4nm,0.6s
TORD Torodi Ar. Bea 137.19 285 PKP **PKiKP 04 57 15.4 -1.0**
comp=Z,0.3nm,0.7s,baz=64,slow=0.9,SNR=1.8

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*IDC **07** 04:47:06.4±1.2, 31.°47S×71.°91W, h0km, mb4.0/1, mbtmp3.6/5, ML3.5/4, Error ellipse: s-maj=36.4km s-min=30.8km az=171.0*
*SJA **07** 04:47:09.8±0.7, 31.°52S×71.°71W, h27km±2km, ML3.8, MW3.8*
*NEIC **07** 04:47:12.1±2.0, 31.°58S±0.°04×71.°75W±0.°09, h24km±5km, mb4.3/8, ML3.9(GUC), Error ellipse: s-maj=11.2km s-min=5.2km az=95.0*
*GUC **07** 04:47:12.8±0.6, 31.°57S×71.°52W, h44km±3km, ML3.9*
ISC 07 04:47:10.5±1.1**, 31.°56S**±0.°02×**71.°48W**±0.°03**, h17**km±7km**, n108, σ1.s69**/128**, mb4.4**/3**, Near coast of central Chile**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
CO02 Combarbal 0.54 49 **Pn 04 47 25.0 +1.5**
CO02 Combarbal 0.54 49 *i* P **Pn 04 47 25.0 +1.5**
CO02 *e*S **Sn 04 47 33.4 +1.1**
CO02 Combarbal 0.54 49 *e*P **Pn 04 47 24.8 +1.2**
CO02 *e*S **Sn 04 47 33.7 +1.4**
CO04 Los Peladeros 0.64 138 **Pn 04 47 26.1 +1.0**
CO04 Los Peladeros 0.64 138 *i* P **Pn 04 47 26.1 +1.0**
CO04 *e*S **Sn 04 47 35.5 +0.4**
CO04 IAML 04 47 36.2
comp=N,16μm,0.1s
CO06 Fray Jorge 0.90 351 **Pn 04 47 29.2 +0.9**
CO06 Fray Jorge 0.90 351 *i* P **Pn 04 47 29.2 +0.9**
CO03 El Pedregal 0.99 43 **Pn 04 47 31.2 +1.5**
CO03 El Pedregal 0.99 43 *i* P **Pn 04 47 31.1 +1.5**
CO03 *e*S **Sn 04 47 45.0 +1.8**
CO03 IAML 04 47 45.6
comp=E,7μm,0.2s
CO03 El Pedregal 0.99 43 *e*P **Pn 04 47 31.2 +1.5**
CO03 *e*S **Sn 04 47 45.3 +2.1**
CO03 IAML 04 47 47.5
comp=Z,2μm,0.6s
VA06 Catapilco 1.01 171 **Pg 04 47 30.7 +0.6**
VA06 Catapilco 1.01 171 *i* P **Pg 04 47 30.7 +0.6**
VA06 *e*S **Sg 04 47 43.7 +0.4**
VA06 IAML 04 47 48.1
comp=E,6μm,0.4s
VA03 San Esteban 1.43 147 **Pb 04 47 37.5 +0.7**
VA03 San Esteban 1.43 147 *i* P **Pg 04 47 37.7 -0.5**
VA03 *e*S **Sg 04 47 56.6 -0.3**
VA03 IAML 04 47 59.9
comp=E,5μm,0.2s
VA03 San Esteban 1.43 147 *e*P **Pb 04 47 37.5 +0.7**
VA03 *e*S **Sg 04 47 56.8 -0.1**
VA03 IAML 04 48 00.5
comp=Z,2μm,0.2s
ROCH El Roble 1.46 164 *i* P **Pb 04 47 37.9 +0.5**
ROCH *e*S **Sg 04 47 57.4 -0.4**
ROCH IAML 04 48 00.3
comp=N,1μm,0.4s
VA01 Torpederas 1.46 186 **Pn 04 47 37.1 +1.0**
VA01 Torpederas 1.46 186 IAML 04 47 59.6
comp=E,8μm,0.1s
VA01 Torpederas 1.46 186 *e*P **Pn 04 47 37.2 +1.0**
VA01 *e*S **Sg 04 47 59.2 +1.4**
VA01 IAML 04 47 59.7
comp=Z,476nm,0.3s
GO04 Tololo Observa 1.50 23 **Pb 04 47 38.6 +0.5**
GO04 Tololo Observa 1.50 23 *i* P **Pb 04 47 38.5 +0.5**
GO04 *e*S **Sg 04 47 59.0 -0.2**
GO04 IAML 04 48 02.8
comp=E,6μm,0.4s
GO04 Tololo Observa 1.50 23 *e*P **Pb 04 47 38.0 0.0**
GO04 IAML 04 48 00.8
comp=Z,3μm,0.5s
CO05 La Serena 1.65 7 **Pb 04 47 40.5 +0.1**
CO05 La Serena 1.65 7 IAML 04 48 09.3
comp=E,1μm,0.2s
PEL Peldehue 1.71 157 **Pb 04 47 41.6 0.0**
PEL Peldehue 1.71 157 *e*P **Pb 04 47 41.9 +0.3**
PEL *e*S **Sg 04 48 04.8 -1.1**
PEL IAML 04 48 05.9
comp=Z,788nm,0.5s
MT02 Curacav 1.72 170 **Pn 04 47 40.9 +1.3**
MT02 Curacav 1.72 170 IAML 04 48 06.6
comp=E,884nm,0.3s
MT02 Curacav 1.72 170 *e*P **Pb 04 47 41.2 -0.4**
MT02 *e*S **Sg 04 48 05.0 -0.8**
MT02 IAML 04 48 06.5
comp=Z,671nm,0.2s
RTLS Leoncito 1.88 98 *e*P **Pg 04 47 46.0 -0.6**
RTLS IAML 04 48 16.7
comp=Z,824nm,0.5s
MT10 Hacienda Santa 1.88 155 *i* P **Pb 04 47 44.1 -0.4**
MT10 IAML 04 48 12.0
comp=N,4μm,0.7s
MT05 Renca 1.93 161 **Pb 04 47 44.6 -0.6**
MT05 Renca 1.93 161 IAML 04 48 12.4
comp=E,3μm,0.3s
MT05 Renca 1.93 161 *e*P **Pb 04 47 44.9 -0.3**
MT05 *e*S **Sg 04 48 11.9 -0.8**
MT05 IAML 04 48 15.4
comp=Z,702nm,0.3s
CO01 Juntas del Tor 1.98 37 **Pb 04 47 46.5 +0.2**
CO01 Juntas del Tor 1.98 37 *e*P **Pb 04 47 46.3 +0.1**
CO01 *e*S **Sb 04 48 11.7 +1.1**
CO01 IAML 04 48 13.2
comp=Z,692nm,0.2s
MT14 Cerro Cal¡n 2.00 157 *i* P **Pb 04 47 46.3 -0.1**
MT14 IAML 04 48 20.9
comp=E,2μm,0.7s
MT16 CCHEN 2.03 157 **Pb 04 47 46.7 -0.2**
MT03 Universidad Ad 2.09 157 **Pb 04 47 47.3 -0.8**
MT03 Universidad Ad 2.09 157 *e*P **Pb 04 47 47.5 -0.6**
MT03 *e*S **Sb 04 48 14.7 +0.9**
MT03 IAML 04 48 18.5
comp=Z,1μm,0.2s
MT04 Ro Olivares 2.16 149 IAML 04 48 21.5
comp=E,538nm,0.3s
MT04 Ro Olivares 2.16 149 *e*P **Pb 04 47 49.1 -0.1**
MT04 *e*S **Sb 04 48 17.3 +1.5**
MT04 IAML 04 48 21.7
comp=Z,349nm,0.2s
MT15 Las Vizcachas 2.19 158 *i* P **Pb 04 47 48.8 -0.9**
MT15 IAML 04 48 24.3
AROD Rodeo 2.22 52 *e*P **Pg 04 47 51.7 -1.4**
AROD *e*S **Sg 04 48 22.2 +0.3**
MT09 Talagante 2.25 170 **Pn 04 47 49.1 +2.1**
MT09 Talagante 2.25 170 IAML 04 48 20.4
comp=E,1μm,0.1s
MT08 Bocatoma Ro 2.25 147 **Pb 04 47 51.0 +0.2**
MT08 Bocatoma Ro 2.25 147 IAML 04 48 26.5
comp=N,445nm,0.3s
MT08 Bocatoma Ro 2.25 147 *e*P **Pb 04 47 51.1 +0.4**
MT08 *e*S Sn 04 48 03.1 -11
MT08 IAML 04 48 03.9
comp=Z,463nm,0.6s
ACCO Cerro Coronel 2.29 66 *e*P **Pb 04 47 52.5 +1.0**
ACCO *e*S **Sg 04 48 26.1 +1.9**
MT01 Popeta 2.30 175 **Pn 04 47 49.3 +1.6**
MT01 Popeta 2.30 175 *e*P **Pn 04 47 48.8 +1.1**
MT01 *e*S **Sn 04 48 16.0 +0.4**
MT01 IAML 04 48 26.2
comp=Z,324nm,0.2s
ZON Zonda 2.39 90 **Pb 04 47 53.5 +0.4**
ZON Zonda 2.39 90 *e*P **Pb 04 47 53.0 -0.1**
ZON *e*S **Sb 04 48 22.4 +0.1**
ZON IAML 04 48 31.5
comp=Z,287nm,0.3s
MT13 San Alfonso 2.40 155 IAML 04 48 35.8
comp=E,739nm,0.1s
MT13 San Alfonso 2.40 155 *e*P **Pb 04 47 51.7 -1.6**
MT13 *e*S **Sb 04 48 23.6 +1.0**
MT13 IAML 04 48 31.9
comp=Z,410nm,0.3s
ACDV Cuesta del Vie 2.46 56 *e*P **Pb 04 47 55.6 +1.3**
ACDV IAML 04 48 34.8
comp=Z,158nm,0.4s
ASAL Salagasta 2.47 115 *e*P **Pn 04 47 50.0 0.0**
ASAL *e*S **Sg 04 48 29.5 -0.4**
SJA San Juan 2.49 90 *e*P Pn 04 47 43.7 -6.6
ARCO CERRO ARCO 2.51 121 *e*P **Pn 04 47 50.5 -0.1**
ARCO *e*S **Sg 04 48 37.8 +6.6**
ARCO IAML 04 48 41.1
comp=Z,233nm,0.3s
RTLL Cerro Villicun 2.58 86 *e*P **Pn 04 47 51.4 -0.1**
RTLL *e*S **Sb 04 48 28.9 +1.1**
RTLL IAML 04 48 33.9
comp=Z,288nm,0.3s
LCO Las Campanas 2.63 15 **Pn 04 47 54.5 +2.1**
LCO Las Campanas 2.63 15 *e*P **Pn 04 47 54.5 +2.1**
LCO *e*S **Sn 04 48 22.2 -1.8**
LCO IAML 04 48 38.3
comp=Z,751nm,0.2s
AAGR Agrelo 2.71 125 *e*P **Pn 04 47 53.2 -0.1**
AAGR *e*S **Sg 04 48 38.9 +1.2**
CFA Coronel Fontan 2.77 92 Pn **Pb 04 47 58.2 -1.3**
comp=Z,26nm,0.3s,baz=270,slow=12,SNR=120
CFA Sn **Sg 04 48 35.9 -3.6**
comp=Z,45nm,0.3s,baz=79,slow=16,SNR=8.6
comp=Z,53nm,0.3s
CFA Coronel Fontan 2.77 92 *e*P **Pb 04 47 58.7 -0.8**
CFA IAML 04 48 49.9
comp=Z,210nm,0.6s
BO01 Tunca 2.84 173 **Pn 04 47 56.4 +1.3**
BO01 Tunca 2.84 173 *e*P **Pn 04 47 56.9 +1.8**
BO01 *e*S **Sb 04 48 32.9 -2.4**
BO01 IAML 04 48 44.4
comp=Z,133nm,0.2s
AC05 El Transito 2.91 21 **Pn 04 47 59.1 +3.0**
AC05 El Transito 2.91 21 *e*P **Pn 04 47 58.7 +2.6**
AC05 *e*S **Sn 04 48 30.8 +0.1**
AC05 IAML 04 48 47.0
comp=Z,312nm,0.8s
BO02 Sierra Bellavi 3.27 170 *e*P **Pn 04 48 03.3 +2.2**
BO02 *e*S **Sn 04 48 44.1 +4.4**
BO02 IAML 04 48 51.7
comp=Z,316nm,0.2s
AC04 Llanos de Chal 3.37 6 **Pn 04 48 03.1 +0.9**
AC04 Llanos de Chal 3.37 6 *e*P **Pn 04 48 03.4 +1.1**
AC04 *e*S **Sb 04 48 48.3 -2.0**
AC04 IAML 04 49 03.2
comp=Z,200nm,0.5s
GO05 Hualane 3.46 186 *e*P **Pn 04 48 04.1 +0.5**
GO05 *e*S **Sn 04 48 46.4 +2.3**
GO05 IAML 04 49 05.4
comp=Z,74nm,0.6s
AVFE Valle Fertil 3.57 76 *e*P **Pn 04 48 02.9 -2.2**
AVFE *e*S **Sb 04 48 52.9 -3.3**
AVFE IAML 04 49 00.6
comp=Z,199nm,0.4s
VCA Vinchina 4.00 46 *e*P **Pn 04 48 11.4 +0.3**
VCA *e*S **Sn 04 49 01.6 +4.0**
VCA IAML 04 49 16.5
comp=Z,376nm,0.6s
RFA San Rafael 4.08 143 *e*P **Pn 04 48 11.2 -1.0**
RFA IAML 04 49 27.1
comp=Z,46nm,1.2s
GO03 Copiapo 4.10 16 *e*P **Pn 04 48 14.3 +1.9**
GO03 IAML 04 49 23.5
comp=Z,138nm,0.8s
ACLC CERRO LA CRUZ 4.45 63 *e*P **Pn 04 48 21.1 +3.8**
ACLC IAML 04 49 37.3
comp=Z,38nm,0.3s
AC02 Maricunga 5.14 24 *e*P **Pn 04 48 29.6 +2.5**
AC02 *e*S **Sn 04 49 33.6 +7.4**
AC02 IAML 04 49 55.8
comp=Z,64nm,0.7s
H03N1 Juan Fernandez 6.55 251 T T 04 55 30.8
baz=80,slow=73,SNR=948
H03N3 Juan Fernandez 6.57 251 T T 04 55 29.0
baz=80,slow=73,SNR=1258
H03N2 Juan Fernandez 6.57 251 T T 04 55 31.8
baz=80,slow=73,SNR=1096
PLCA Paso Flores 9.18 176 Pn **Pn 04 49 22.4 +0.2**
comp=Z,0.1nm,0.3s,baz=329,slow=10,SNR=4.8
comp=Z,1.3nm,1.0s
CPUP Villa Florida 13.44 71 Pn **Pn 04 50 23.3 +2.9**
baz=245,slow=17,SNR=1.4
CPUP Sn **Sn 04 52 49.0 -0.4**
comp=Z,0.1nm,0.3s,baz=15,slow=19,SNR=2.2
comp=Z,0.3nm,0.3s
CPUP Villa Florida 13.44 71 **Pn 04 50 18.5 -1.9**
PB18 Visviri 14.03 8 Pn **Pn 04 50 28.7 -0.3**
PLTB Pedras Altas 15.23 95 Pn **Pn 04 50 45.0 +0.3**
PLTB IAmb IAmb 04 50 56.2
comp=Z,8.8nm,1.1s
LPAZ La Paz 15.51 12 Pn **Pn 04 50 47.1 -2.0**
baz=184,slow=13,SNR=1.6
comp=Z,0.5nm,0.5s
LPAZ La Paz 15.51 12 IAmb IAmb 04 50 55.2
comp=Z,5.3nm,1.4s
MTO3 Montecristo 48.81 337 P **P 04 55 55.5 +0.3**
BELA Belgrano 2 49.19 170 P **P 04 55 57.7 +0.6**
BELA IAmb IAmb 04 56 11.2
comp=Z,6.5nm,1.5s
VNDA Vanda 66.58 191 P **P 04 57 58.7 -0.5**
VNDA IAmb IAmb 04 58 13.5
comp=Z,6.7nm,1.4s
DRIO Del Rio 66.68 332 P **P 04 57 58.5 -1.8**
DRIO IAmb IAmb 04 58 10.2
comp=Z,1.3nm,0.8s
WVT Waverly 69.06 346 P **P 04 58 14.0 -1.1**
TORD Torodi Ar. Bea 82.94 70 P **P 04 59 33.6 -1.1**
comp=Z,0.9nm,0.8s,baz=265,slow=6.0,SNR=4.9
comp=Z,0.9nm,0.8s
WRA Warramunga Arr 123.11 209 PKP **PKPdf 05 06 04.9 -1.9**
comp=Z,0.2nm,0.3s,baz=155,slow=1.8,SNR=5.3
H11S2 WAKE ISLAND Hy 126.25 271 T T 07 25 20.1
baz=119,slow=75
H11S1 WAKE ISLAND Hy 126.26 271 T T 07 25 09.4
baz=119,slow=75
H11S3 WAKE ISLAND Hy 126.27 271 T T 07 25 09.0
baz=119,slow=75
H11N3 WAKE ISLAND Hy 126.60 272 T T 07 25 38.3
baz=116,slow=74
H11N1 WAKE ISLAND Hy 126.61 272 T T 07 25 37.1
baz=116
H11N2 WAKE ISLAND Hy 126.61 272 T T 07 25 40.3
baz=116,slow=74
BVAR Borovoye Array 145.16 41 PKPbc **PKPbc 05 06 46.0 -0.2**
comp=Z,1.4nm,0.3s,baz=310,slow=1.8,SNR=9.5
KURBB Kurchatov Arra 150.75 41 PKPbc **PKPbc 05 07 00.3 -1.1**
comp=Z,0.5nm,0.7s,baz=306,slow=4.5,SNR=4.8
ZAA0 Zalesovo Array 151.90 30 **PKPbc 05 07 02.5 -1.4**
ZAA0 PKPab **PKPab 05 07 15.0 +1.9**
ZALV Zalesovo Beam 151.90 30 PKPbc **PKPbc 05 07 03.1 -0.8**
comp=Z,2.8nm,0.4s,baz=314,slow=3.0,SNR=16
ZALV Zalesovo Beam 151.90 30 **PKPbc 05 07 02.8 -1.1**
ZALV PKPab **PKPab 05 07 15.1 +2.0**

IDC 07 04:51:31.6±647.0**, 28.°21N×76.°94W, h0**km**, Error ellipse: s-maj=473.1km s-min=146.5km az=91.0, Off east coast of United States**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
I10CA LAC DU BONNET 26.33 332 I I 07 32 49.9
baz=132,slow=340,SNR=2.4
I20EC Galapagos 31.41 206 I I 08 03 20.0
baz=18,slow=320,SNR=0.7
I56US NEWPORT INFRAS 36.84 314 I I 08 51 50.0
baz=115,slow=322,SNR=1.3
I18DK QAANAAQ INFRAS 49.48 2 I I 10 00 35.0
0.1nm,1.4s,baz=177,slow=336,SNR=2.2

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*BGR **07** 05:01:56.4, 45.°18N×148.°27E, h33km, mb5.1*
*MOS **07** 05:02:06.9±1.0, 44.°86N×148.°07E, h139km, mb4.5/33, Error ellipse: s-maj=6.4km s-min=5.4km az=98.8*
MOS Felt (II) at Krabozavodskoye, Malokuril'skoye, Yuzhno-Kuril'sk.
*BJI **07** 05:02:07.4, 44.°92N×147.°92E, h136km, mB5.1/14, mb4.8/61*
*NEIC **07** 05:02:08.4±1.4, 44.°98N±0.°08×147.°90E±0.°09, h130km±7km, mb4.7/69, Error ellipse: s-maj=12.8km s-min=8.4km az=154.0*
*IDC **07** 05:02:08.1±0.5, 44.°92N×147.°95E, h132km±4km, mb4.0/30, mbtmp4.5/39, Error ellipse: s-maj=10.9km s-min=7.4km az=162.0*
*SKHL **07** 05:02:08.2±0.8, 44.°80N×148.°10E, h139km±4km, mb5.9/6, msh6.7/4*
SKHL Felt (II) at Krabozavodskoe.
*NIED **07** 05:02:09.1, 44.°52N×148.°04E, h151km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; M_{rr}-7.31; $M_{\theta\theta}$3.75; $M_{\phi\phi}$3.57; $M_{r\theta}$-1.04; $M_{\theta\phi}$5.85; $M_{\phi r}$0.41; Fault plane solution: $M_0$8.52000×10^15 NP1: ϕ_s215.00000°, δ44.00000°, λ-106.00000°. NP2: ϕ_s56.00000°, δ48.00000°, λ-75.00000°.*
*JMA **07** 05:02:09.1±0.3, 45°N±2°×14°8E±°, h151km, MD4.7/40, MW4.7/40, SE OFF ETOROFU*
JMA Felt I J1 at SE OFF ETOROFU .
ISC 07 05:02:07.8±0.4**, 44.°84N**±0.°04×**148.°00E**±0.°04**, h134**km±3km**, h134**km**:pP-P, n562, σ1.s32**/604**, mb4.6**/100**, 29C-15D, Kuril Islands**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
KUR Kuril'sk 0.41 347 *d i*PN **Pn 05 02 26.2 -0.6**
KUR *i* S **Sn 05 02 41.0 -0.3**
KUR Kuril'sk 0.41 347 *i* P **Pn 05 02 28.1 +1.3**
KUR AMB AMB 05 02 28.9
11μm,0.4s
KUR *i* S **Sn 05 02 43.3 +2.0**
KUR A A 05 02 43.7
13μm,0.6s
KUR A A 05 02 43.7
6μm,0.6s
SHO Shikotan 1.28 221 *e*P Pn 05 02 44.8 +11
SHO AMB AMB 05 02 45.3
13μm,0.3s
SHO *e*S Sn 05 03 03.1 +10
SHO A A 05 03 04.7
16μm,0.6s
SHO A A 05 03 04.7
30μm,0.6s
YUK Yuzh-Kuril'sk 1.73 243 *d i*PN **Pn 05 02 40.1 +1.4**
YUK *i* S **Sn 05 03 03.6 +1.3**
YUK pmax pmax
comp=Z,9μm,0.3s
YUK pmax pmax
comp=N,562nm,0.2s
YUK smax smax
comp=N,7μm,0.4s
YUK smax smax
comp=E,12μm,0.4s
YUK smax smax
comp=N,8μm,1.2s
YUK smax smax
comp=E,15μm,1.5s
YUK Yuzh-Kuril'sk 1.73 243 *i* P **Pn 05 02 40.1 +1.4**
YUK AMB AMB 05 02 40.7
comp=E,9μm,0.3s
YUK *i* S **Sn 05 03 03.4 +1.1**
YUK A A 05 03 05.4
comp=E,13μm,0.5s
YUK A A 05 03 05.4
comp=E,12μm,0.5s
YUK A A 05 03 13.3
comp=E,8μm,1.4s
YUK A A 05 03 13.3
comp=E,15μm,1.4s
GLVR Golovnino 2.09 239 ⇓*i*PN **Pn 05 02 44.4 +1.3**
GLVR *i* S **Sn 05 03 11.0 +0.9**
GLVR pmax pmax
comp=Z,2μm,0.3s
GLVR pmax pmax
comp=N,71nm,0.2s
GLVR pmax pmax
comp=E,85nm,0.1s
GLVR smax smax
comp=N,13μm,0.4s
GLVR smax smax
comp=E,12μm,0.4s
GLVR Golovnino 2.09 239 *i* P **Pn 05 02 44.4 +1.3**
GLVR AMB AMB 05 02 44.8
comp=E,2μm,0.3s
GLVR *i* S **Sn 05 03 11.0 +0.9**
GLVR A A 05 03 16.9
comp=E,13μm,0.4s
GLVR A A 05 03 16.9
comp=E,12μm,0.4s
RUSJ Misakicho 2.10 251 ⇓*i*PN **Pn 05 02 44.8 +1.6**
RUSJ *i* S **Sn 05 03 15.6 +5.3**
NEM2 Nemuro 2 2.19 229 P **Pn 05 02 44.3 0.0**
NEM2 S **Sn 05 03 10.6 -1.7**
NMR Nemuro--Hokkai 2.20 229 ⇓*i*PN **Pn 05 02 44.3 -0.1**
NMR *i* S **Sn 05 03 10.6 -1.8**
NMR Nemuro--Hokkai 2.20 229 *i* P **Pn 05 02 44.4 0.0**
NMR *i* S **Sn 05 03 10.8 -1.6**
JRA Rausu 2.25 247 P **Pn 05 02 46.6 +1.6**
JRA A A 05 02 46.6
comp=N,10.0nm,2.5s,comp=E,7.0nm,3.3s
JRA *e*S **Sn 05 03 15.4 +1.9**
JNSB Nemuroshibetsu 2.40 245 P **Pn 05 02 48.6 +1.8**
JNSB A A 05 02 48.6
comp=N,21nm,3.6s,comp=E,14nm,2.6s
JNSB S **Sn 05 03 18.6 +1.8**
JNK Nakash 2.67 243 P **Pn 05 02 51.6 +1.3**
JNK *e*S **Sn 05 03 24.0 +1.0**
JKHN Kushirohamanak 2.70 230 *i* P **Pn 05 02 50.9 +0.3**
JKHN A A 05 02 50.9
comp=N,7.0nm,1.2s,comp=E,8.0nm,1.0s
JKHN S **Sn 05 03 22.1 -1.5**
AKK Akkeshi 2.92 232 *e*P **Pn 05 02 53.5 0.0**
JAK Akkeshi 3.01 233 *e*P **Pn 05 02 54.4 -0.3**
JAK A A 05 02 54.4
comp=N,9.0nm,1.2s,comp=E,9.0nm,0.9s
JAK S **Sn 05 03 29.3 -1.5**
JTKR Abashiri--Toko 3.06 255 P **Pn 05 02 56.9 +1.6**
JTKR *e*S **Sn 05 03 33.7 +1.9**
JAR Ashorobuto 3.42 245 P **Pn 05 03 01.6 +1.6**
JAR A A 05 03 01.6
comp=N,12nm,1.7s,comp=E,9.0nm,0.8s
JAR S **Sn 05 03 41.8 +1.6**
JSE Soyaes 3.85 274 P **Pn 05 03 07.6 +2.0**
JKK2 Kamakawa 2 3.89 257 P **Pn 05 03 08.2 +2.1**
JKK2 *e*S **Sn 05 03 53.8 +2.4**
JKA Kamikawa-asahi 3.93 261 **Pn 05 03 08.2 +1.5**
JKA Kamikawa-asahi 3.93 261 *e*P **Pn 05 03 08.7 +2.0**
ASAJ Asahikawa 3.93 261 P **Pn 05 03 08.7 +1.9**

ASAJ S Sn 05 03 52.5 +0.2
comp=E,212nm,0.4s,baz=76,slow=17,SNR=403

JCH Churui 4.03 238 eP Pn 05 03 08.2 +0.2
JCH S Sn 05 03 52.5 -2.2
comp=E,158nm,0.6s,baz=72,slow=3.2,SNR=7.3

YSS Yuzhno-Sakhali 4.23 302 Pn 05 03 11.4 +0.8
YSS Yuzhno-Sakhali 4.23 302 cePN Pn 05 03 12.2 +1.6
YSS pmax pmax
comp=Z,185nm,1.0s

YSS Yuzhno-Sakhali 4.23 302 eP Pn 05 03 12.2 +1.6
YSS eS Sn 05 04 00.7 +1.3
YSS A A 05 04 06.5
comp=Z,500nm,2.5s

YSS A A 05 04 06.5
comp=Z,800nm,2.5s

JWK2 Keihoku 4.35 278 P Pn 05 03 15.5 +3.3
JWK2 eS Sn 05 04 06.1 +3.9

JSS Shosan 4.41 266 P Pn 05 03 16.1 +3.1
JNBK Urakawa-nobuka 4.59 238 P Pn 05 03 14.8 -0.6
JHR Hokuryu 4.63 259 eP Pn 05 03 18.7 +2.6
JRBN Rebuntou 4.94 279 eP Pn 05 03 22.3 +2.2

JEW Eniwo 5.14 249 P Pn 05 03 24.7 +1.9
JEW eS Sn 05 04 24.1 +2.9

UGL Uglegorsk 5.87 318 ePN Pn 05 03 34.7 +2.2
UGL eS Sn 05 04 43.9 +5.3
UGL pmax pmax
comp=Z,100nm,1.4s

UGL Uglegorsk 5.87 318 eP Pn 05 03 34.7 +2.2
JAHD Aomorihigashid 6.04 236 A A 05 03 35.3
comp=N,9.0nm,0.5s,comp=E,11nm,0.8s

JOT Ohata 6.15 238 P Pn 05 03 35.2 -1.1
JOT S Sn 05 04 39.9 -5.5
JANG Nango 6.54 229 eP Pn 05 03 39.2 -2.4
JANG eS Sn 05 04 48.5 -6.4
JOSM Okushiri--Mats 6.79 249 P Pn 05 03 45.1 +0.2
JOSM eS Sn 05 04 58.9 -1.8

TYV Tymovskoe 7.02 331 ePN Pn 05 03 49.0 +1.1
TYV eS Sn 05 05 08.3 +2.1
TYV pmax pmax
comp=Z,39nm,0.9s

TYV pmax pmax
comp=Z,200nm,3.4s

TYV smax smax
comp=N,10.0nm,0.9s

TYV smax smax
comp=E,12nm,0.9s

TYV smax smax
comp=N,400nm,5.0s

TYV smax smax
comp=E,600nm,5.0s

TYV Tymovskoe 7.02 331 eP Pn 05 03 49.5 +1.6
TYV AMB AMB 05 03 50.4
comp=E,20nm,0.7s

TYV eS Sn 05 05 07.0 +0.8
TYV A A 05 05 10.0
comp=E,600nm,5.0s

TYV A A 05 05 10.0
comp=E,400nm,5.0s

JMK Ichinoseki 7.75 223 eP Pn 05 03 56.2 -1.7
JMK eS Sn 05 05 18.4 -5.7
SKR Severo-Kuril's 8.00 40 eP Pn 05 04 00.6 -0.5
TEY Ternei 8.09 275⇑ ePN Pn 05 04 04.7 +2.4
TEY pmax pmax
comp=E,20nm,1.3s

TEY pmax pmax
comp=Z,20nm,1.3s

TEY Ternei 8.09 275 eP Pn 05 04 04.7 +2.4
PAU Pauzhetka 8.87 38 eP Pn 05 04 12.0 -0.7
PAU eS Sn 05 05 47.2 -3.7
OKH Okha 9.33 341 dePN Pn 05 04 19.5 +0.6
OKH MLR MLR
comp=E,300nm,16.0s

OKH MLR MLR
comp=Z,100nm,6.0s

OKH MLR MLR
comp=N,300nm,18.0s

PEA0B Petropavlovsk- 10.44 34 Pn Pn 05 04 32.7 -1.1
PEA0B Petropavlovsk- 10.44 34 PN Pn 05 04 32.7 -1.1
PETK Petropavlovsk- 10.44 34 P Pn 05 04 32.3 -1.5
comp=N,8.3nm,0.6s,baz=210,slow=13,SNR=30

PETK Petropavlovsk- 10.44 34 Pn Pn 05 04 32.8 -1.0
PETK Petropavlovsk- 10.44 34 PN Pn 05 04 32.8 -1.0
PET Petropavlovsk 10.77 37 Pn Pn 05 04 37.3 -0.9
PET Petropavlovsk 10.77 37 i PN Pn 05 04 35.6 -2.6
PET pmax pmax
comp=Z,6.0nm,0.3s

PET Petropavlovsk 10.77 37 eP Pn 05 04 37.0 -1.2
MJB9 Matsu-Tunnel 11.12 225 Pn 05 04 44.1 +1.0
MAJO Matsushiro 11.12 225 Pn Pn 05 04 43.1 +0.1
MAJO Matsushiro 11.12 225 i PN Pn 05 04 43.9 +0.9
MJAR Matsushiro Arr 11.12 225 P Pn 05 04 41.8 -1.3
comp=Z,3.6nm,0.7s,baz=28,slow=14,SNR=13

MJAR S Sn 05 06 41.5 -4.2
comp=Z,7.5nm,1.0s,baz=28,slow=14,SNR=4.4

MJAR Matsushiro Arr 11.12 225 Pn Pn 05 04 42.5 -0.5
MJAR Matsushiro Arr 11.12 225 PN Pn 05 04 42.5 -0.5
USRK Ussuriysk Ar. 11.45 272 P Pn 05 04 47.8 +0.5
comp=Z,34nm,0.9s,baz=83,slow=13,SNR=33

KLR Kul'dur 11.92 297 P Pn 05 04 54.4 +1.0
comp=Z,14nm,1.1s,baz=103,slow=15,SNR=24

KLR Kul'dur 11.92 297 cePN Pn 05 04 54.6 +1.2
KLR pmax pmax
comp=Z,6.0nm,1.3s

KLR Kul'dur 11.92 297 eP Pn 05 04 54.7 +1.3
JGF Kuroka 12.29 225 Pn Pn 05 04 58.8 +0.5
PSTR Posyet 12.63 266 d iPN Pn 05 05 02.7 +0.1
PSTR Posyet 12.63 266 eP Pn 05 05 02.8 +0.1
INU Inuyama 12.66 225 Pn Pn 05 05 03.5 +0.5
MDJ Mudanjiang 13.09 276 Pn 05 05 08.8 +0.1
MDJ Mudanjiang 13.09 276 P Pn 05 05 09.1 +0.4
MDJ pmax pmax
comp=Z,25nm,1.0s

MDJ pmax pmax
comp=Z,420nm,11.0s

BNX BinXian 14.53 281 ⇑P Pn 05 05 26.3 -0.6
BNX pmax pmax
comp=Z,34nm,0.8s

MA2 Magadan 14.86 6 P Pn 05 05 30.2 -0.7
comp=Z,19nm,0.7s,baz=184,slow=12,SNR=34

MA2 Magadan 14.86 6 Pn 05 05 29.7 -1.2
MA2 Magadan 14.86 6 ceP Pn 05 05 30.8 -0.1
MA2 pmax pmax
comp=Z,72nm,1.7s

MA2 Magadan 14.86 6 eP Pn 05 05 30.8 -0.1
HEH HeiHe 14.90 299 eP Pn 05 05 31.3 -0.2
HEH pmax pmax
comp=Z,28nm,0.9s

ZEA Zeya 16.15 311 eP P 05 05 47.4 -0.3
ZEA pmax pmax
comp=Z,10.0nm,0.8s

ZEA Zeya 16.15 311 eP P 05 05 47.4 -0.3
CN2 Changchun 16.17 274 ⇑P Pn 05 05 46.7 -0.6
CN2 esP sP 05 06 22.7 -4.3
CN2 eS Sn 05 08 40.9 -6.1
CN2 pmax pmax
comp=Z,10.0nm,0.8s

CN2 pmax pmax
comp=Z,300nm,4.0s

KSRS Korea Array 16.80 251 P P 05 05 55.2 +0.3
comp=Z,9.4nm,0.7s,baz=58,slow=11,SNR=27

KS19 Wonju Array Si 16.81 251 P P 05 05 54.8 -0.3
KSAR Wonju Array Be 16.83 251 P 05 05 54.0 -1.3
KSAR Wonju Array Be 16.83 251 P P 05 05 54.0 -1.3
INCN Inchon 17.66 253 P P 05 06 03.9 -0.5
INCN IAmb IAmb 05 06 08.0
comp=Z,25nm,0.9s

INCN Inchon 17.66 253 P P 05 06 03.9 -0.5
INCN pmax pmax
comp=Z,25nm,0.9s

JNU Nakatsue 17.68 234 P P 05 06 04.3 -0.4
comp=Z,23nm,1.0s,baz=50,slow=14,SNR=7.3

TJN Taejon 17.77 249 P P 05 06 06.6 +1.1
TJN Taejon 17.77 249 P P 05 06 06.6 +1.1
TJN pmax pmax
comp=Z,102nm,1.0s

SEY Seymchan 18.31 6 P P 05 06 10.0 -1.2
comp=Z,16nm,0.8s,baz=191,slow=8.8,SNR=19

SEY Seymchan 18.31 6 ceP P 05 06 10.5 -0.7
SEY pmax pmax
comp=Z,37nm,1.3s

HIA Hailar 19.70 293 P P 05 06 23.6 -2.9
HIA Hailar 19.70 293 P P 05 06 23.6 -2.9
HIA pmax pmax
comp=Z,9.0nm,0.9s

YAK Yakutsk 20.26 335 P P 05 06 30.1 -2.2
comp=Z,25nm,0.5s,baz=141,slow=1.7,SNR=4.2

YAK S S 05 10 04.5 -7.4
comp=Z,20nm,0.6s,baz=162,slow=19,SNR=8.8

YAK Yakutsk 20.26 335 P P 05 06 30.4 -2.0
YAK IAmb IAmb 05 06 33.4
comp=Z,25nm,0.5s

YAK Yakutsk 20.26 335 eP P 05 06 30.7 -1.6
YAK e*PP pP 05 06 53.7 -1.7
YAK eS S 05 10 04.1 -7.8
YAK e 05 10 46.0
YAK e 05 17 51.4
YAK pmax pmax
comp=Z,30nm,0.5s

YAK pmax pmax
comp=Z,17nm,0.9s

YAK pmax pmax
comp=N,5.0nm,1.4s

YAK pmax pmax
comp=E,7.0nm,1.5s

YAK smax smax
comp=N,210nm,3.3s

YAK smax smax
comp=E,117nm,2.2s

YAK Yakutsk 20.26 335 eP P 05 06 32.6 +0.3
DL2 Dalian 20.46 262 P P 05 06 35.5 +0.7
DL2 pmax pmax
comp=E,43nm,1.0s

XLT XiLinHaoTe 22.76 279 eP P 05 06 58.2 -0.5
XLT pmax pmax
comp=E,35nm,1.0s

BJI2 Beijing 23.89 270 P P 05 07 09.6 +0.6
BJI2 pP pwP 05 07 38.0 -0.2
BJI2 sP sP 05 07 54.8 +3.2
BJI2 pmax pmax
comp=E,13nm,1.0s

BJT Baijiatuan 23.89 270 P 05 07 09.2 +0.2
BJT IAmb IAmb 05 07 11.1
comp=Z,23nm,0.9s

BJT Baijiatuan 23.89 270 P P 05 07 09.2 +0.2
BJT pmax pmax
comp=Z,23nm,0.9s

BILL Bilibino 25.15 16 P P 05 07 19.6 -0.5
BILL Bilibino 25.15 16 ceP P 05 07 20.4 +0.3
BILL pmax pmax
comp=Z,5.0nm,1.0s

BILL Bilibino 25.15 16 eP P 05 07 20.4 +0.3
NJ2 Nanjing 26.00 251 eP P 05 07 29.4 +1.3
NJ2 pmax pmax
comp=Z,25nm,0.5s

HNS HongShan 26.02 265 ⇓P P 05 07 29.9 +1.6
HNS pmax pmax
comp=Z,23nm,1.1s

HHC Hu-ho-hao-te 26.86 274 eP P 05 07 37.8 +1.8
HHC pmax pmax
comp=Z,15nm,0.8s

HHC pmax pmax
comp=Z,270nm,3.8s

BTO2 Baotou 28.10 275 eP P 05 07 52.6 +5.6
BTO2 pP pP 05 08 21.8 +6.8
BTO2 PP PP 05 08 48.0 -4.8
BTO2 pmax pmax
comp=Z,180nm,1.0s

BTO2 pmax pmax
comp=Z,680nm,10.5s

ULN Ulaanbaatar 28.19 291 ceP P 05 07 48.8 +1.0
ULN pmax pmax
comp=Z,12nm,1.0s

ULN Ulaanbaatar 28.19 291 eP P 05 07 48.8 +1.0
TIXI Tiksi 28.43 347 P P 05 07 46.9 -2.4
TIXI Tiksi 28.43 347 P P 05 07 46.9 -2.4
TIXI pmax pmax
comp=Z,3.0nm,0.9s

SPIA Saint Paul Isl 28.55 49 P P 05 07 52.0 +1.4
baz=263

SONM Songino Array 28.63 291 P P 05 07 51.8 +0.2
comp=Z,4.6nm,0.8s,baz=83,slow=8.8,SNR=18

comp=Z,4.6nm,0.8s
SONM Songino Array 28.63 291 P 05 07 51.3 -0.4
LYN LuoYang 29.00 262 P P 05 07 50.5 -4.4
LYN PP PnPn 05 08 52.3 -1.5
LYN pmax pmax
comp=Z,23nm,0.5s

NIKH Nikolski High 29.12 58 P P 05 07 56.6 +0.9
baz=272

GAMB Gambell 29.47 36 P P 05 07 59.2 +0.5
baz=250

H11N2 WAKE ISLAND Hy 29.55 142 T T 05 39 16.5
baz=333,slow=76,SNR=641

H11N1 WAKE ISLAND Hy 29.57 142 T T 05 39 08.6
baz=333,slow=76,SNR=656

H11N3 WAKE ISLAND Hy 29.57 142 T T 05 39 11.2
baz=333,slow=76,SNR=676

TLY Talaya 29.93 299 P P 05 08 01.6 -1.3
TLY Talaya 29.93 299 ceP P 05 08 04.3 +1.3
TLY pmax pmax
comp=Z,3.0nm,0.8s

TLY Talaya 29.93 299 eP P 05 08 04.3 +1.3
ZAK Zakamensk 30.29 297 eP P 05 08 04.8 -1.4
ZAK pmax pmax
comp=Z,7.0nm,1.4s

UNV Unalaska Valle 30.51 56 P P 05 08 09.2 +1.2
baz=272

H11S1 WAKE ISLAND Hy 30.55 143 T T 05 40 26.3
baz=334,slow=76,SNR=678

H11S3 WAKE ISLAND Hy 30.55 143 T T 05 40 28.8
baz=334,slow=76,SNR=602

H11S2 WAKE ISLAND Hy 30.57 143 T T 05 40 29.4
baz=334,slow=76,SNR=715

M11K Mekoryuk 31.10 44 P P 05 08 13.9 +0.8
baz=261

TNA Tin City 31.61 34 P 05 08 17.3 -0.2
TNA IAmb IAmb 05 08 19.6
comp=Z,14nm,0.8s

TNA Tin City 31.61 34 P P 05 08 18.3 +0.9
baz=251,SNR=16

XAN Xi'an 31.77 264 ⇑P P 05 08 20.2 +0.9
XAN pmax pmax
comp=Z,7.0nm,1.3s

K13K Kusilvak Mount 32.10 41 P P 05 08 21.9 +0.1
K13K IAmb IAmb 05 08 23.8
comp=Z,16nm,1.0s

K13K Kusilvak Mount 32.10 41 P P 05 08 21.9 +0.1
baz=260,SNR=8.0

F14K Arctic Creek 32.21 34 P P 05 08 23.5 +0.8
baz=253

FALS False Pass 32.28 54 P P 05 08 23.6 +0.2
baz=273

ANM Nome 32.35 36 P 05 08 23.7 -0.3
ANM IAmb IAmb 05 08 27.0
comp=Z,18nm,1.4s

ANM Nome 32.35 36 P P 05 08 23.7 -0.3
ANM pmax pmax
comp=Z,18nm,1.4s

ANM Nome 32.35 36 P P 05 08 24.9 +0.9
baz=256,SNR=10.0

M13K Dall Lake 32.51 44 P P 05 08 26.6 +1.2
baz=264,SNR=6.6

J14K Nanvaranak Lak 32.75 40 P P 05 08 28.2 +0.8
baz=260

L14K Kuka Creek 32.94 42 P P 05 08 30.5 +1.4
baz=263,SNR=9.6

F15K North Star Dit 32.95 34 P P 05 08 30.2 +1.0
baz=254

G15K Niukluk 33.01 35 P P 05 08 30.3 +0.5
baz=256,SNR=16

M14K Bethel 33.22 43 P P 05 08 32.6 +1.0
baz=265

N14K Kuskokwak Cree 33.29 45 P P 05 08 33.4 +1.2
baz=266,SNR=9.0

O14K Tigyukauivet M 33.47 46 P P 05 08 34.2 +0.5
baz=268

ENH Enshi 33.48 258 P P 05 08 33.9 -0.3
ENH IAmb IAmb 05 08 35.4
comp=Z,10nm,1.0s

C16K Lisburne Hills 33.49 29 P P 05 08 33.3 -0.5
baz=250

L15K Ungalak Mounta 33.55 42 P P 05 08 34.6 +0.2
baz=264

K15K Wolf Creek Mou 33.60 41 P P 05 08 35.8 +0.9
baz=263

H16K Elim 33.68 36 P P 05 08 35.5 -0.1
baz=259,SNR=14

G16K Koyuk River 33.80 35 P P 05 08 36.5 0.0
baz=257,SNR=11

M15K Kasigluk River 33.84 44 P P 05 08 37.9 +0.9
baz=266

SDPT Sand Point 33.94 53 P P 05 08 38.6 +0.8
baz=274

N15K Kwethluk River 34.10 45 P P 05 08 39.3 0.0
baz=267,SNR=11

D17K Noatak River 34.11 31 P P 05 08 39.3 +0.1
baz=253

J16K Anvik River 34.16 39 P P 05 08 39.7 -0.1
baz=262

O15K Ungalikthiuk R 34.20 46 P P 05 08 40.4 +0.3
O15K Ungalikthiuk R 34.20 46 P P 05 08 40.6 +0.4
baz=269

I17K Unalakleet 34.21 38 P P 05 08 40.9 +0.8
baz=261

RDOG Red Dog Mine 34.28 30 P P 05 08 40.2 -0.5
baz=253

C17K DeLong Mountai 34.31 30 P P 05 08 40.7 -0.3
baz=252,SNR=24

LZH Lanzhou 34.35 271 eP P 05 08 43.6 +1.7
LZH sP sP 05 09 29.6 +3.8
LZH pmax pmax
comp=Z,26nm,1.0s

E17K Hotham Inlet 34.41 32 P P 05 08 41.8 +0.1
baz=256

F17K Baldwin Pennin 34.47 33 P P 05 08 43.1 +0.8
baz=257,SNR=13

CHNA Chernabura Isl 34.49 54 P P 05 08 43.6 +1.0
baz=276

L16K Owhat River 34.51 42 P P 05 08 42.9 +0.2
baz=266

G17K Kiwalik Mounta 34.51 35 P P 05 08 43.3 +0.5
baz=259

LZDM Lanzhou Array 34.52 271 P P 05 08 44.9 +1.3
comp=Z,1.4nm,0.3s,baz=69,slow=13,SNR=6.9

comp=Z,1.4nm,0.3s
M16K Timber Creek 34.71 43 P P 05 08 45.0 +0.6
baz=267,SNR=8.1

H17K Granite Mounta 34.72 36 P P 05 08 45.1 +0.7
baz=261,SNR=6.9

N16K Nishlik Lake 34.78 44 P P 05 08 46.1 +1.0
baz=268

E18K Tukpahlearik C 34.95 32 P P 05 08 47.2 +0.7
baz=256

C18K Utukok River 35.06 30 P P 05 08 47.1 -0.3
baz=254,SNR=40

L17K Donlin 35.09 41 P P 05 08 48.9 +1.1
baz=266,SNR=6.0

O16K Kokwok River B 35.09 46 P P 05 08 48.3 +0.5
baz=270,SNR=6.7

K17K Iditarod 35.14 40 P P 05 08 49.3 +1.2
baz=265,SNR=8.6

P16K Nushagak River 35.15 47 P P 05 08 49.8 +1.6
baz=271,SNR=14

G18K Tagagawik 35.40 35 P P 05 08 50.6 +0.2
baz=260,SNR=28

H18K Honhosa River 35.40 36 P P 05 08 51.0 +0.6
baz=262,SNR=19

R16K Pilot Point 35.41 49 P P 05 08 51.2 +0.7
baz=273

M17K Holitna River 35.46 43 P P 05 08 52.3 +1.4
baz=268,SNR=18

N17K Nushagak Hills 35.56 44 P P 05 08 53.1 +1.3
baz=270,SNR=8.0

A19K Wainwright 35.57 27 P P 05 08 51.7 +0.1
baz=252

O17K Koliganek Bris 35.60 45 P P 05 08 53.3 +1.2
baz=271

GTA2 Gaotai 35.73 279 P P 05 08 55.2 +1.6
GTA2 pP pwP 05 09 26.7 +4.3
GTA2 pmax pmax
comp=Z,29nm,1.0s

C19K Lookout Ridge 35.74 29 P P 05 08 53.4 +0.1
baz=255,SNR=42

L18K Granite Mounta 35.85 41 P P 05 08 55.5 +1.3
baz=268,SNR=11

F19K Shaleruckik Mo 35.91 33 P P 05 08 55.2 +0.6
baz=260

J18K Innoko River 35.92 39 P P 05 08 55.8 +1.0
baz=266,SNR=10

P17K Kvichak River 35.95 46 P P 05 08 56.0 +1.0
baz=272

GCSA Galena City Sc 35.97 37 P P 05 08 55.6 +0.4
baz=264

R17L Mt. Peulik Vol 36.06 49 P P 05 08 56.7 +0.6
baz=252

G19K Purcell Mounta 36.07 34 P P 05 08 56.2 +0.1
baz=262,SNR=11

D19K Kuna River 36.12 30 P P 05 08 56.2 -0.2
baz=258,SNR=59

N18K Kilae Creek 36.20 44 P P 05 08 58.4 +1.2
baz=270

E19K Redstone River 36.23 32 P P 05 08 58.2 +0.8
baz=260,SNR=26

M18K Stony River 36.24 42 P P 05 08 58.7 +1.2
baz=269,SNR=6.4

Q17K Contact Creek 36.27 48 P P 05 08 58.8 +0.8
baz=274,SNR=5.7

J19K Poorman 36.45 38 P P 05 09 00.2 +0.9
baz=266,SNR=13

O18K Koktuh Hills 36.55 45 P P 05 09 01.9 +1.6
baz=272,SNR=5.1

P18K Big Mountain, 36.56 46 P P 05 09 01.5 +1.2
baz=273,SNR=9.4

CHIR Chirikof Islan 36.64 52 P P 05 09 01.6 +0.6
baz=277

D20K Etivluk River 36.70 30 P P 05 09 01.6 +0.2
baz=259,SNR=50

L19K White Mountain 36.71 41 P P 05 09 02.8 +1.2
baz=269,SNR=5.5

Q18K Katmai Hardscr 36.71 47 P P 05 09 02.0 +0.3
baz=274

F20K Avaraart Lake 36.74 33 P P 05 09 02.3 +0.6
baz=262

E20K Nigu River 36.77 31 P P 05 09 02.5 +0.5
baz=260

B20K Meade River 36.80 28 P P 05 09 02.3 +0.1
baz=256

N19K Bonanza Creek 36.89 44 P P 05 09 04.2 +1.0
baz=271,SNR=5.9

H20K Anotleneega Mo 36.89 36 P P 05 09 03.4 +0.3
baz=265,SNR=14

O19K Port Alsworth 36.99 45 P P 05 09 05.2 +1.3
baz=272

K20K Telida 37.10 39 P P 05 09 05.9 +1.0
baz=268,SNR=6.0

CD2 Chengdu 37.13 263 P P 05 09 06.7 +1.2
CD2 pmax pmax
comp=Z,30nm,0.6s

A21K Barrow 37.30 26 P P 05 09 05.9 -0.5
baz=255,SNR=14

Q19K Cape Douglas, 37.40 47 P P 05 09 08.0 +0.6
baz=275

C21K Knifeblade Rid 37.44 30 P P 05 09 08.2 +0.7
baz=260,SNR=34

M20K Styx River 37.52 42 P P 05 09 10.1 +1.6
baz=271

G21K Allakaket 37.55 34 P P 05 09 09.1 +0.5
baz=265

P19K Oil Pt 37.56 45 P P 05 09 09.5 +0.7
baz=274

B21K Ikpikpuk River 37.58 29 P P 05 09 09.0 +0.3
baz=260,SNR=84

E21K Killik River 37.61 31 P P 05 09 09.3 +0.2
baz=262,SNR=9.0

F21K Alatna River 37.63 33 P P 05 09 09.7 +0.4
baz=264

OHAK Old Harbor 37.76 49 P P 05 09 11.3 +1.0
baz=277

H21K Melozitna Rive 37.77 36 P P 05 09 11.4 +1.0
baz=266,SNR=11

CHUM Lake Minchumin 37.90 38 P P 05 09 12.4 +0.9
baz=269

PPLA Purkeypile 37.95 40 P P 05 09 13.6 +1.4
baz=271,SNR=8.8

N20K Mount Spurr 37.98 43 P P 05 09 13.7 +1.4
baz=273,SNR=12

SPCR Spurr Chakacha 37.98 43 P P 05 09 13.8 +1.5
baz=273,SNR=6.7

KDAK Kodiak Island 38.07 48 P P 05 09 13.3 +0.4
baz=277

Q20K Shuyak Island 38.08 47 P P 05 09 12.9 -0.1
baz=276

I21K Tanana 38.08 36 P P 05 09 13.8 +0.8
baz=268

B22K Teshekpuk Lake 38.12 28 P P 05 09 13.1 -0.1
baz=260,SNR=24

D22K Ayikyak River 38.14 30 P P 05 09 13.7 +0.2
baz=262,SNR=15

SKT Skwentna 38.28 42 P P 05 09 15.3 +0.6

baz=272
H22K **Ishtalitna Cre** 38.37 35 P P 05 09 16.2 +0.8
baz=268,SNR=13
E22K **Anaktuvuk Pass** 38.37 32 P P 05 09 15.8 +0.4
baz=264
BPAW **Bear Paw Mtn.** 38.49 38 P P 05 09 17.2 +0.7
baz=270,SNR=7.2
MLY **Manley** 38.60 37 P P 05 09 18.4 +0.9
baz=269,SNR=6.2
TRF **Thorofare Moun** 38.81 39 P P 05 09 19.4 +0.1
baz=272
BRSE **Bradley Lake S** 38.81 45 P P 05 09 19.9 +0.6
baz=276
CUT **Chulitna** 38.85 41 P P 05 09 20.0 +0.5
baz=273
D23K **Nanushuk River** 38.87 30 P P 05 09 19.8 +0.3
baz=264
COLD **Coldfoot** 38.91 33 P P 05 09 20.1 +0.2
baz=267,SNR=11
G23K **Bananza Creek** 38.95 34 P P 05 09 20.4 0.0
baz=268,SNR=14
M22K **Willow** 38.96 42 P P 05 09 20.4 +0.1
baz=274
C23K **Itkillik River** 38.99 29 P P 05 09 20.4 -0.2
baz=263,SNR=36
E23K **Chandalar** 39.18 32 P P 05 09 22.5 +0.2
baz=266
RC01 **Rabbit Creek A** 39.19 43 P P 05 09 22.9 +0.6
baz=275,SNR=9.8
I23K **Minto, Yukon-K** 39.19 36 P P 05 09 23.2 +1.0
baz=270,SNR=7.5
TOLK **Toolik Lake Re** 39.24 31 P P 05 09 22.7 0.0
baz=266,SNR=12
O22K **Cooper Landing** 39.25 44 P P 05 09 22.9 +0.1
baz=276,SNR=6.1
NEA2 **Nenana** 39.32 37 P P 05 09 23.7 +0.4
baz=271,SNR=17
MCK **McKinley** 39.40 39 P P 05 09 24.2 +0.1
baz=272,SNR=13
SEW **Seward** 39.42 44 P P 05 09 24.4 +0.2
baz=276
PMR **Palmer** 39.44 42 P P 05 09 24.9 +0.6
baz=275,SNR=7.6
D24K **Happy Valley** 39.55 30 P P 05 09 25.6 +0.4
baz=266
E24K **Your Creek** 39.61 32 P P 05 09 26.0 +0.2
baz=268,SNR=22
WAT1 **Susitna Watana** 39.62 40 P P 05 09 25.7 -0.2
baz=274
C24K **Franklin Bluff** 39.64 29 P P 05 09 26.1 +0.2
baz=265
KNK **Knik Glacier** 39.78 42 P P 05 09 27.5 +0.3
baz=276,SNR=11
SML **Sawmill** 39.80 42 P P 05 09 27.9 +0.5
baz=275,SNR=29
H24K **Noodor Dome** 39.80 35 P P 05 09 27.8 +0.4
baz=271,SNR=11
COLA **College** 39.84 37 *i* P P 05 09 27.2 -0.4
COLA pmax pmax
comp=Z,27nm,0.9s
COLA **College** 39.84 37 P P 05 09 28.3 +0.7
baz=272
G24K **Hadweenzic Riv** 39.96 34 P P 05 09 29.9 +1.2
baz=270,SNR=18
POKR **Poker Plat Res** 40.01 36 P P 05 09 29.0 0.0
baz=272
WAT6 **Susitna Watana** 40.01 40 P P 05 09 29.5 +0.2
baz=275,SNR=9.0
M23K **Glacier View** 40.09 42 P P 05 09 30.2 +0.4
baz=276,SNR=7.1
DHY **Denali Highway** 40.14 40 P P 05 09 30.0 -0.4
baz=275,SNR=17
HDA **Harding Lake** 40.24 38 P P 05 09 31.2 +0.2
baz=273,SNR=7.7
ILAR **Eielson Array** 40.25 37 P P 05 09 31.4 +0.4
comp=Z,6.3nm,0.8s,baz=276,slow=7.2,SNR=52
ILAR PcP PcP 05 11 31.2 -0.9
comp=Z,0.9nm,0.7s,baz=275,slow=3.1,SNR=4.2
comp=Z,6.3nm,0.8s
ILAR **Eielson Array** 40.25 37 P P 05 09 30.8 -0.3
SCM **Sheep Creek Mo** 40.27 42 P P 05 09 31.4 0.0
baz=276,SNR=7.3
DGZ **Jazzator, Alta** 40.41 299 *i* P P 05 09 33.9 +1.2
DGZ pmax pmax
comp=Z,3.0nm,0.9s
D25K **Kavik River** 40.43 30 P P 05 09 32.4 -0.2
baz=268,SNR=36
P23K **Montague Islan** 40.46 44 P P 05 09 32.8 0.0
baz=278
GLI **Glacier Island** 40.49 43 P P 05 09 32.4 -0.7
baz=277
F25K **Christian Rive** 40.68 33 P P 05 09 34.4 -0.2
baz=271,SNR=8.5
E25K **Arctic Village** 40.70 32 P P 05 09 34.2 -0.6
baz=270,SNR=14
GOMU **GeErMu** 40.71 277 P P 05 09 34.6 -1.0
GOMU pmax pmax
comp=Z,2.0nm,0.4s
M24K **Tolsona, Glenn** 40.78 41 P P 05 09 36.4 +0.8
M24K **Tolsona, Glenn** 40.78 41 P P 05 09 35.5 0.0
baz=277,SNR=11
PRP **Porcupine Dome** 40.79 36 P 05 09 35.6 -0.1
PRP IAmb IAmb 05 09 37.6
comp=Z,18nm,0.8s
PRP **Porcupine Dome** 40.79 36 P P 05 09 35.5 -0.1
baz=273,SNR=20
K24K **Donnelly Dome** 40.80 38 P P 05 09 35.0 -0.6
baz=275,SNR=12
ZALV **Zalesovo Beam** 40.84 306 P P 05 09 35.7 -0.3
comp=Z,1.0nm,0.7s,baz=76,slow=6.1,SNR=4.5
ZALV PcP PcP 05 11 34.7 +0.5
comp=Z,3.3nm,0.6s,baz=81,slow=3.7,SNR=12
comp=Z,1.0nm,0.7s
ZALV **Zalesovo Beam** 40.84 306 *i* P P 05 09 38.5 +2.5
J25K **Salcha River,** 40.91 37 P P 05 09 36.6 0.0
baz=274,SNR=7.6
C26K **Camden Bay** 40.96 29 P P 05 09 37.2 +0.4
baz=269,SNR=21
KLU **Klutina** 40.98 42 P P 05 09 37.9 +0.8
baz=278,SNR=15
PAX **Paxson** 41.02 40 P P 05 09 38.3 +0.8
baz=276,SNR=8.9
Q23K **Middleton Isla** 41.07 45 P P 05 09 38.2 +0.5
baz=280
PZH **PanZhiHua** 41.17 260 P P 05 09 40.1 +0.9
EYAK **Cordova Ski Ar** 41.19 43 P P 05 09 39.6 +0.8
baz=279
RIDG **Independent Ri** 41.22 38 P P 05 09 39.2 +0.2
baz=276,SNR=7.6
HARP **HAARP** 41.22 41 P P 05 09 40.1 +1.0
baz=277,SNR=13
F26K **Sheenjek River** 41.25 32 P P 05 09 40.2 +1.0
baz=272,SNR=14
C27K **Jago River** 41.38 29 P P 05 09 40.5 +0.3
baz=270,SNR=35
G26K **Porcupine Rive** 41.42 34 P P 05 09 41.6 +1.1
baz=273,SNR=19
SCRK **Sand Creek** 41.57 38 P P 05 09 42.1 0.0
baz=276,SNR=13
N25K **Chitina, Valde** 41.59 42 P P 05 09 41.8 -0.4
baz=279
BMRM **Bremner River** 41.68 43 P P 05 09 43.2 +0.3
baz=279,SNR=12
I26K **Coal Creek Min** 41.79 36 P P 05 09 44.0 +0.4
baz=276
KAIM **Kayak Island** 41.95 44 P P 05 09 45.1 +0.1
baz=281
L26K **Log Cabin Wild** 41.97 39 P P 05 09 45.9 +0.8
baz=278,SNR=19
E27K **Coleen River** 42.19 32 P P 05 09 47.5 +0.6
baz=274,SNR=10
M26K **Nabesna, AK** 42.22 40 P P 05 09 48.4 +1.1
M26K **Nabesna, AK** 42.22 40 P P 05 09 48.8 +1.5
baz=279,SNR=30
WMQ **Urumqi** 42.27 291 *e*P P 05 09 49.3 +1.4
WMQ pmax pmax
comp=Z,24nm,1.1s
D27M **Malcolm River** 42.36 30 P P 05 09 48.4 +0.2
baz=273,SNR=14
MCARA **McCarthy VSAT** 42.37 42 P P 05 09 48.9 +0.5
MCARA IAmb IAmb 05 09 51.8
comp=Z,24nm,1.0s
MCARA **McCarthy VSAT** 42.37 42 P P 05 09 49.3 +0.9
baz=280,SNR=7.5
H27K **Steamboat Moun** 42.37 35 P 05 09 49.3 +0.9
H27K **Steamboat Moun** 42.37 35 P P 05 09 48.8 +0.4
baz=276,SNR=16
I27K **Kandik River** 42.40 35 P P 05 09 49.1 +0.4
baz=277
CRQE **Cirque** 42.45 43 P P 05 09 50.3 +1.1
baz=281,SNR=10.0
BGLC **Bering Glacier** 42.47 44 P P 05 09 50.6 +1.4
baz=281
L27K **Beaver Creek,** 42.65 39 P P 05 09 52.0 +1.3
baz=279
M27K **Edge Creek, AK** 42.74 40 P P 05 09 52.8 +1.3
baz=280,SNR=19
F28M **Old Crow** 42.88 32 P P 05 09 53.3 +0.8
baz=276,SNR=11
I28M **Miner Creek** 43.12 36 P P 05 09 55.1 +0.7
baz=278,SNR=29
MESA **MESA** 43.12 43 P P 05 09 55.3 +0.6
baz=282
D28M **Stokes Point** 43.14 30 P P 05 09 55.1 +0.6
baz=275
BVCY **Beaver Creek** 43.20 40 P P 05 09 55.2 +0.1
baz=281,SNR=24
CTG **Chitna Glacier** 43.25 42 P P 05 09 56.7 +1.1
baz=282,SNR=16
YUK3 **Moose Creek** 43.51 41 P P 05 09 58.6 +0.9
baz=282,SNR=11
E29M **Blow River** 43.54 31 P P 05 09 59.0 +1.3
baz=277,SNR=22
DAWY **Dawson** 43.56 38 P P 05 09 58.5 +0.5
baz=280
I29M **Ogilvie Camp,** 43.80 36 P P 05 10 00.9 +1.0
baz=280,SNR=19
O28M **Mount Upton** 43.84 42 P P 05 10 01.5 +0.9
baz=283,SNR=5.7
YUK8 **Steele Glacier** 43.93 42 P P 05 10 01.9 +0.7
baz=283
PINM **Pinnacle** 43.96 43 P P 05 10 01.0 -0.3
baz=284
J29N **Klondike Camp** 44.00 37 P P 05 10 02.4 +0.9
baz=281
EPYK **Eagle Plains** 44.28 34 P P 05 10 04.8 +1.1
baz=280,SNR=15
M29M **Somme Creek** 44.29 40 P P 05 10 05.3 +1.4
baz=283,SNR=8.2
L29M **L29M** 44.30 39 P P 05 10 05.4 +1.6
baz=282,SNR=26
G30M **tAoh Zrail Nji** 44.37 33 P P 05 10 04.9 +0.5
baz=280,SNR=15
K29M **Barlow Dome** 44.41 38 P P 05 10 05.4 +0.5
baz=282,SNR=8.4
F30M **Barrier River** 44.44 32 P P 05 10 06.0 +1.1
baz=280,SNR=20
YUK4 **Talbot Arm** 44.45 41 P P 05 10 06.4 +1.2
baz=284
I30M **Mount Dempster** 44.63 36 P 05 10 06.7 +0.2
I30M **Mount Dempster** 44.63 36 P P 05 10 07.5 +0.9
baz=281,SNR=31
MK31 **Makanchi Array** 44.63 297 *ce*P P 05 10 07.1 +0.4
MKAR **Makanchi Array** 44.63 297 P P 05 10 06.8 +0.1
comp=Z,11nm,0.8s,baz=72,slow=8.4,SNR=78
MKAR PcP PcP 05 11 46.9 -0.1
comp=Z,0.8nm,0.5s,baz=72,slow=4.7,SNR=2.2
comp=Z,11nm,0.8s
MKAR **Makanchi Array** 44.63 297 P 05 10 06.6 -0.1
YUK6 **Outpost Mounta** 44.67 42 P P 05 10 07.4 +0.2
baz=284
O29M **Mt Kennedy** 44.73 43 P P 05 10 08.7 +1.3
baz=285
J30M **Hart River** 44.77 36 P P 05 10 08.6 +0.8
baz=282,SNR=15
MAKZ **Makanchi** 44.82 297 P 05 10 08.1 -0.1
MAKZ IAmb IAmb 05 10 09.7
comp=Z,11nm,0.8s
MAKZ **Makanchi** 44.82 297 P P 05 10 08.1 -0.1
MAKZ pmax pmax
comp=Z,11nm,0.9s
M30M **Milo, Yukon** 45.01 39 P P 05 10 11.3 +1.8
baz=284,SNR=9.8
HYT **Haines Junctio** 45.11 42 P P 05 10 12.4 +1.9
baz=285,SNR=31
G31M **Satah River** 45.14 33 P P 05 10 10.9 +0.5
baz=282,SNR=10
N30M **Aishikik Lake** 45.15 41 P P 05 10 12.0 +1.3
baz=285
INK **Inuvik** 45.16 31 P P 05 10 11.1 +0.6
baz=281,SNR=13
F31M **Tsiigehtchic** 45.24 32 P P 05 10 10.9 -0.2
baz=281,SNR=34
JOHN **Johnston Islan** 45.26 114 P P 05 10 14.1 +2.2
H31M **Peel River** 45.34 34 P 05 10 12.2 +0.1
H31M IAmb IAmb 05 10 14.2
comp=Z,18nm,0.8s
H31M **Peel River** 45.34 34 P P 05 10 13.1 +1.0
baz=282,SNR=14
KURK **Kurchatov** 45.43 303 P P 05 10 12.6 -0.3
KURK **Kurchatov** 45.43 303 *ce*P P 05 10 12.7 -0.2
KURK pmax pmax
comp=Z,8.0nm,1.7s
KURK **Kurchatov** 45.43 303 *e*P P 05 10 12.7 -0.2
KURBB **Kurchatov Arra** 45.52 303 P P 05 10 12.9 -0.7
comp=Z,2.9nm,0.6s,baz=70,slow=8.5,SNR=15
KURBB PcP PcP 05 11 49.7 -0.3
comp=Z,1.7nm,0.7s,baz=72,slow=3.8,SNR=9.3
comp=Z,2.9nm,0.6s
P30M **Million Dollar** 45.55 43 P P 05 10 15.2 +1.4
baz=286
N31M **Braeburn, Yuko** 45.75 41 P P 05 10 16.8 +1.5
baz=286,SNR=13
O30N **Mendenhall** 45.79 42 P P 05 10 17.5 +1.8
baz=286
M31M **Drury Creek, Y** 46.19 39 P P 05 10 20.1 +1.3
baz=286,SNR=14
CRAI **Chiangrai** 46.22 254 P P 05 10 18.6 -0.9
CRAI IAmb IAmb 05 10 20.3
comp=Z,12nm,1.2s
WHY **Whitehorse** 46.40 42 P P 05 10 21.5 +1.0
baz=287,SNR=7.1
SKAG **Skagway** 46.53 43 P P 05 10 22.5 +1.1
baz=288
N32M **Quiet Lake** 47.09 41 P P 05 10 26.4 +0.6
baz=288
A36M **Sachs Harbour** 47.13 25 P P 05 10 25.7 -0.1
baz=284
MYLDM **Lahad Datu** 47.17 222 P P 05 10 27.3 +0.4
MYLDM IAmb IAmb 05 10 58.2
comp=Z,31nm,1.4s
P32M **Atlin** 47.28 43 P P 05 10 28.5 +1.2
baz=289
SIT **Sitka** 47.30 46 P P 05 10 28.5 +1.1
baz=290
R32K **Eaglecrest** 47.31 45 P P 05 10 28.9 +1.4
baz=289
P33M **Teslin, Yukon** 47.51 42 P P 05 10 29.8 +0.7
baz=289,SNR=15
S32K **Kilisnoo** 47.55 46 P P 05 10 30.5 +1.2
baz=290
CHTO **Chiang Mai** 48.17 254 P P 05 10 35.2 +0.6
CHTO **Chiang Mai** 48.17 254 P P 05 10 35.2 +0.6
CHTO pmax pmax
comp=Z,6.0nm,0.8s
Q32M **Nakina River** 48.19 43 P P 05 10 35.9 +1.4
baz=290
C36M **Paulatuk** 48.23 28 P P 05 10 35.0 +0.6
baz=288,SNR=13
CMAR **Chiang Mai Arr** 48.42 253 P P 05 10 37.1 +0.6
comp=Z,1.0nm,0.4s,baz=46,slow=7.2,SNR=7.5
CMAR pP pP 05 11 07.7 +0.6
comp=Z,1.5nm,0.5s,baz=48,slow=7.9,SNR=2.1
comp=Z,1.0nm,0.4s
CMAR **Chiang Mai Arr** 48.42 253 *i* P P 05 10 38.4 +1.9
CMAR pmax pmax
comp=Z,1.0nm,0.3s
R33M **Jennings River** 48.66 42 P P 05 10 39.6 +1.5
baz=291,SNR=7.1
U33K **Whale Pass** 48.78 47 P P 05 10 40.6 +1.9
baz=292
CRAG **Craig** 49.02 48 P P 05 10 41.1 +0.5
baz=293
WRAK **Wrangell Islan** 49.06 46 P P 05 10 42.1 +1.2
baz=292
S34M **Telegraph Cree** 49.12 44 P P 05 10 42.2 +0.8
baz=292
TGTN **Hyland Airport** 49.16 39 P P 05 10 43.1 +1.4
baz=291,SNR=7.7
BVAR **Borovoye Array** 49.29 309 P P 05 10 41.4 -1.3
comp=Z,0.6nm,0.3s,baz=69,slow=8.0,SNR=7.7
BVAR PcP PcP 05 12 02.6 -0.8
comp=Z,2.9nm,0.7s,baz=66,slow=3.6,SNR=7.5
comp=Z,0.6nm,0.3s
BORK **Borovoye** 49.32 309 *ce*P P 05 10 42.5 -0.5
BORK pmax pmax
comp=Z,10.0nm,2.5s
WTLY **Watson Lake, Y** 49.43 41 P P 05 10 44.4 +0.7
baz=292,SNR=7.1
DLBC **Dease Lake** 49.47 43 P P 05 10 45.4 +1.3
baz=292
V35K **Ketchikan** 49.87 47 P P 05 10 48.3 +1.3
baz=294
T35M **Bob Quinn** 49.91 45 P P 05 10 48.8 +1.4
baz=293,SNR=5.7
WRGLY **Wrigley** 50.60 36 P P 05 10 53.3 +0.9
EVN **Everest** 50.87 272 P 05 10 56.4 +0.7
EVN IAmb IAmb 05 11 30.6
comp=Z,7.4nm,0.9s
AAK **Ala-Archa** 51.44 295 P P 05 10 60.0 +0.7
comp=Z,9.5nm,0.9s,baz=55,slow=12,SNR=14
comp=Z,9.5nm,0.9s
AAK **Ala-Archa** 51.44 295 P 05 10 59.2 0.0
AAK IAmb IAmb 05 11 01.1
comp=Z,11nm,1.0s
AAK **Ala-Archa** 51.44 295 *ce*P P P 05 11 00.4 +1.2
AAK pmax pmax
comp=Z,15nm,1.3s
AAK **Ala-Archa** 51.44 295 *e*P P P 05 11 00.5 +1.2
KOTAN **Kotaneelee Air** 51.60 40 P P P 05 11 00.4 +0.3
baz=295
KSH2 **Kashi** 52.50 291 P P P 05 11 07.6 +0.5
ARSB **Arslanbob** 53.07 294 P P P 05 11 12.0 +0.7
ARSB **Arslanbob** 53.07 294 P P P 05 11 12.0 +0.7
ARSB pmax pmax
comp=Z,34nm,0.9s
KK31 **Karatay Array** 53.75 298 P P 05 11 16.6 +0.6
KK31 **Karatay Array** 53.75 298 P P P 05 11 16.6 +0.6
KK31 pmax pmax
comp=Z,14nm,0.8s
KKAR **Karatay Array** 53.75 298 P P 05 11 16.5 +0.4
KKAR **Karatay Array** 53.75 298 P P P 05 11 16.5 +0.4
ARTI **Arti** 54.08 317 P P P 05 11 17.2 -1.0
comp=Z,3.4nm,0.5s,baz=49,slow=7.5,SNR=6.9
comp=Z,3.4nm,0.5s
ARTI **Arti** 54.08 317 P P 05 11 16.6 -1.6
ARTI IAmb IAmb 05 11 17.6
comp=Z,7.6nm,0.5s
ARTI **Arti** 54.08 317 *ce*P P P 05 11 18.1 -0.1
ARTI pmax pmax
comp=Z,4.0nm,0.8s
YKAW3 **Yellowknife Wh** 54.52 34 P 05 11 22.1 +0.8
YKAW3 IAmb IAmb 05 11 23.1
comp=Z,19nm,1.2s
YKA **Yellowknife Ar** 54.56 34 P P P 05 11 22.0 +0.4
comp=Z,5.1nm,0.7s,baz=301,slow=8.0,SNR=66
YKA PcP PcP 05 12 23.3 +0.2
comp=Z,1.2nm,0.7s,baz=306,slow=4.7,SNR=8.3
comp=Z,5.1nm,0.7s
YKA **Yellowknife Ar** 54.56 34 *i* P P P 05 11 22.2 +0.6
YKA pmax pmax
comp=Z,5.0nm,0.7s
YKAW1 **Yellowknife Wh** 54.61 34 P 05 11 22.0 0.0
BTK **Batken** 55.14 294 P P 05 11 26.0 -0.2
BTK IAmb IAmb 05 11 28.7
comp=Z,14nm,1.2s
BTK **Batken** 55.14 294 P P P 05 11 26.0 -0.2
BTK pmax pmax
comp=Z,14nm,1.2s
KAPI **Kappang** 55.71 215 P P 05 11 31.8 +1.4
KAPI IAmb IAmb 05 11 52.3
comp=Z,16nm,1.3s
KAPI **Kappang** 55.71 215 P P P 05 11 31.8 +1.4
KAPI pmax pmax
comp=Z,16nm,1.3s
GAR **Garm** 56.03 293 P 05 11 31.7 -1.0
TULEG **Thule** 56.65 10 *i* P P 05 11 34.1 -2.2
TULEG IAmb IAmb 05 11 35.7
comp=Z,8.3nm,0.8s
AB31 **Akbulak array** 56.86 309 P 05 11 37.8 -0.4
ABKAR **Akbulak array** 56.86 309 P P 05 11 37.4 -0.8
CHGR **Chuyangaron** 56.98 294 P 05 11 40.0 +0.7
CHGR **Chuyangaron** 56.98 294 *i* P P 05 11 40.6 +1.3
CHGR pmax pmax
comp=Z,19nm,1.1s
NIL **Nilore** 57.06 286 P 05 11 40.5 +0.6
NIL **Nilore** 57.06 286 P P 05 11 40.5 +0.6
NIL pmax pmax
comp=Z,23nm,1.0s
KIRV **Kirov** 57.11 322 *i* P P 05 11 41.0 +1.2
AKTO **Aktyubinsk** 57.29 311 P P 05 11 41.2 0.0
comp=Z,1.3nm,0.7s,baz=71,slow=15,SNR=3.9
comp=Z,1.3nm,0.7s
NEEM **North Greenlan** 57.41 5 *i* P P 05 11 39.6 -2.4
NEEM IAmb IAmb 05 11 41.9
comp=Z,18nm,1.3s
SHAA **Shahritus** 58.27 293 P P 05 11 48.9 +0.5
SHAA IAmb IAmb 05 12 23.8
comp=Z,9.7nm,0.8s
DAG **Danmarks Havn** 58.37 356 *i* P P 05 11 46.2 -2.1
DAG IAmb IAmb 05 11 48.4
comp=Z,1.4nm,1.0s
ARCES **ARCESS Array B** 58.44 340 PcP PcP 05 12 37.8 -0.3
comp=Z,2.8nm,0.8s,baz=50,slow=2.9,SNR=4.3
KBL **Kabul** 59.39 290 P P 05 11 56.6 +0.3
KBL IAmb IAmb 05 11 58.0
comp=Z,10nm,1.0s
KBL **Kabul** 59.39 290 P P P 05 11 56.6 +0.3
KBL pmax pmax
comp=Z,10.0nm,1.0s
F07A **Phinny Hill Vi** 60.99 53 P P 05 12 08.5 +1.7
I05D **Terrebonne, OR** 61.08 55 P P 05 12 09.0 +1.5
I05D IAmb IAmb 05 12 10.0
comp=Z,10nm,0.7s
UPNV **Upernavik** 61.48 8 *i* P P 05 12 06.5 -3.1
UPNV IAmb IAmb 05 12 09.3
comp=Z,7.4nm,0.8s
BELG **Belogornoye** 61.52 317 P P 05 12 09.4 -0.8
comp=Z,4.4nm,0.5s,baz=52,slow=19,SNR=3.0
comp=Z,4.4nm,0.5s
SUMG **Summit** 62.80 2 *i* P P 05 12 18.0 -0.9
SUMG IAmb IAmb 05 12 21.1
comp=Z,42nm,1.6s
SAATT **Saattut** 63.79 7 *i* P P 05 12 22.3 -2.7
SAATT IAmb IAmb 05 12 25.2
comp=Z,10nm,0.9s
ORV **Oroville** 63.84 59 P 05 12 26.3 +0.5
ORV IAmb IAmb 05 12 27.4
comp=Z,5.7nm,0.8s
ORV **Oroville** 63.84 59 P P 05 12 26.3 +0.5
ORV pmax pmax
comp=Z,6.0nm,0.8s
FIA1 **FINESS Array S** 64.18 333 P P 05 12 26.7 -0.9
FINES **FINESS Array B** 64.18 333 P P 05 12 26.5 -1.1
comp=Z,8.4nm,0.5s,baz=42,slow=6.3,SNR=84
FINES pP PcP 05 13 00.3 -1.1
comp=Z,1.6nm,0.5s,baz=48,slow=5.5,SNR=2.0
comp=Z,8.4nm,0.5s
FINES **FINESS Array B** 64.18 333 *i* P P 05 12 26.7 -0.9
FINES pmax pmax
comp=Z,8.0nm,0.5s
CTAO **Charters Tower** 64.63 182 P P 05 12 32.0 +1.0
CTAO IAmb IAmb 05 12 32.5
comp=Z,8.8nm,1.4s
CTAO **Charters Tower** 64.63 182 P P 05 12 32.0 +1.0
CTAO pmax pmax
comp=Z,9.0nm,1.4s
OBN **Obninsk** 64.80 324 *e*P P 05 12 32.4 +0.7
OBN pmax pmax
comp=Z,7.0nm,0.6s
OBN **Obninsk** 64.80 324 *e*P P 05 12 32.8 +1.1
WB0 **Warramunga Arr** 65.48 194 P P 05 12 37.7 +1.2
MCMT **McKenzie Canyo** 65.59 50 P 05 12 38.0 +0.6
WRA **Warramunga Arr** 65.66 194 P P 05 12 38.0 +0.3
comp=Z,1.1nm,0.5s,baz=7.6,slow=6.2,SNR=8.9
WRA pP PcP 05 13 09.2 +1.2
comp=Z,3.6nm,1.0s,baz=11,slow=6.3,SNR=8.1
comp=Z,1.1nm,0.5s
WRA **Warramunga Arr** 65.66 194 P P 05 12 37.2 -0.4
WRA **Warramunga Arr** 65.66 194 *i* P P 05 12 38.2 +0.5
WRA pmax pmax
comp=Z,1.0nm,0.5s
NVAR **Mina Array Bea** 66.49 59 P P 05 12 44.3 +1.1
comp=Z,9.2nm,0.8s,baz=310,slow=7.4,SNR=55
NVAR pP pP 05 13 14.1 -1.4
comp=Z,1.8nm,0.8s,baz=313,slow=7.1,SNR=1.7
comp=Z,9.2nm,0.8s
NVAR **Mina Array Bea** 66.49 59 P P 05 12 44.1 +0.9
SFJD **Kangerlussuaq** 67.59 8 *i* P P 05 12 46.1 -3.2
BW06 **Boulder Array** 68.74 50 P 05 12 57.6 +0.3
BW06 IAmb IAmb 05 12 59.1
comp=Z,9.2nm,0.8s

PDAR	**Pinedale Array**	**68.75**	**50**	P	**P**	**05 12 57.8**	**+0.5**
	comp=Z,6.2nm,0.7s,baz=300,slow=4.8,SNR=72						
PDAR				pP	**pP**	**05 13 31.6**	**+1.7**
	comp=Z,1.5nm,0.8s,baz=284,slow=4.2,SNR=3.0						
	comp=Z,6.2nm,0.7s						
PDAR	**Pinedale Array**	**68.75**	**50**		**P**	**05 12 57.7**	**+0.4**
NB2	**NORSAR Subarra**	**68.81**	**339**	P	**P**	**05 12 56.5**	**-0.6**
	comp=Z,3.0nm,0.7s,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**68.81**	**339**	P	**P**	**05 12 56.1**	**-1.0**
	comp=Z,4.6nm,0.7s,baz=31,slow=6.2,SNR=25						
	comp=Z,4.6nm,0.7s						
HFS	**Hagfors**	**68.92**	**337**	P	**P**	**05 12 57.3**	**-0.5**
	comp=Z,7.3nm,0.8s,baz=40,slow=5.6,SNR=13						
	comp=Z,7.3nm,0.8s						
CCCA	**Chr Cany lake**	**68.93**	**61**	P	**P**	**05 12 57.4**	**-0.9**
CCCA				IAmb	IAmb	05 13 00.6	
	comp=Z,14nm,0.8s						
ASAR	**Alice Springs**	**69.38**	**194**	P	**P**	**05 13 02.5**	**+1.5**
	comp=Z,1.4nm,0.8s,baz=13,slow=6.4,SNR=8.9						
ASAR				pP	**pP**	**05 13 33.5**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=11,slow=6.4,SNR=2.9						
ASAR				PKP2bc	**P'P'bc**	**05 41 07.8**	**+1.5**
	comp=Z,1.4nm,1.0s,baz=185,slow=3.3,SNR=7.7						
	comp=Z,1.4nm,0.8s						
ASAR	**Alice Springs**	**69.38**	**194**	P	**P**	**05 13 02.6**	**+1.6**
KIV	**Kislovodsk**	**69.49**	**312**	*e*P	**P**	**05 13 02.2**	**+0.5**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KIV	**Kislovodsk**	**69.49**	**312**	*e*P	**P**	**05 13 02.2**	**+0.5**
KBZ	**Khabaz**	**69.53**	**312**	P	**P**	**05 13 02.8**	**+1.0**
	comp=Z,7.2nm,0.9s,baz=51,slow=2.0,SNR=8.2						
	comp=Z,7.2nm,0.9s						
KBZ	**Khabaz**	**69.53**	**312**	*ce*P	**P**	**05 13 03.5**	**+1.8**
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KBZ	**Khabaz**	**69.53**	**312**	*e*P	**P**	**05 13 03.6**	**+1.8**
ULM	**Lac du Bonnet**	**70.27**	**38**	P	**P**	**05 13 06.2**	**0.0**
	comp=Z,5.9nm,0.7s,baz=319,slow=7.9,SNR=12						
	comp=Z,5.9nm,0.7s						
ULM	**Lac du Bonnet**	**70.27**	**38**	P	**P**	**05 13 06.1**	**0.0**
ULM				IAmb	IAmb	05 13 07.0	
	comp=Z,6.5nm,0.8s						
PMD	**Palm Desert**	**70.77**	**62**		**P**	**05 13 10.1**	**+0.6**
GNI	**Garni**	**70.96**	**308**	*i* P	**P**	**05 13 13.6**	**+2.8**
GNI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BORC	**Borrego Spring**	**70.99**	**62**	P	**P**	**05 13 11.2**	**+0.3**
AKASG	**Malin Array Be**	**71.06**	**324**	P	**P**	**05 13 10.6**	**-0.4**
	comp=Z,2.1nm,0.5s,baz=40,slow=6.1,SNR=10.0						
	comp=Z,2.1nm,0.5s						
AKASG	**Malin Array Be**	**71.06**	**324**	*i* P	**P**	**05 13 10.8**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKBB	**Malin Array Si**	**71.06**	**324**	P	**P**	**05 13 10.7**	**-0.2**
AKBB	**Malin Array Si**	**71.06**	**324**	*ce*P	**P**	**05 13 10.9**	**-0.1**
AKBB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KIEV	**Kiev**	**71.07**	**324**	⇑P	**P**	**05 13 10.8**	**-0.3**
KIEV	**Kiev**	**71.07**	**324**	P	**P**	**05 13 10.6**	**-0.4**
KIEV	**Kiev**	**71.07**	**324**	P	**P**	**05 13 10.6**	**-0.4**
KIEV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
IRM	**Iron Mountain**	**71.20**	**60**	P	**P**	**05 13 12.6**	**+0.4**
IRM				IAmb	IAmb	05 13 14.3	
	comp=Z,13nm,1.1s						
MVCO	**Mesa Verde**	**73.11**	**54**		**P**	**05 13 24.1**	**+0.3**
MVCO				IAmb	IAmb	05 13 25.8	
	comp=Z,9.0nm,0.8s						
SORM	**Soroca**	**73.38**	**323**	⇑P	**P**	**05 13 24.4**	**-0.4**
Q24A	**Divide**	**73.78**	**51**	P	**P**	**05 13 28.3**	**+0.5**
Q24A				IAmb	IAmb	05 13 29.7	
	comp=Z,12nm,1.1s						
BURAR	**Bucovina Array**	**75.12**	**324**	⇑P	**P**	**05 13 35.4**	**+0.4**
KSCO	**Kaye Shedlock'**	**75.13**	**50**	P	**P**	**05 13 35.1**	**-0.2**
KSCO				IAmb	IAmb	05 13 36.5	
	comp=Z,34nm,1.5s						
MARD	**Mardin**	**75.15**	**308**	P	**P**	**05 13 35.1**	**-0.4**
OJC	**Ojcow**	**75.17**	**329**	*e*P	**P**	**05 13 35.9**	**+0.7**
OJC	**Ojcow**	**75.17**	**329**	P	**P**	**05 13 34.9**	**-0.3**
OJC	**Ojcow**	**75.17**	**329**	P	**P**	**05 13 34.9**	**-0.3**
ONER	**Baraj Valea Uz**	**75.62**	**322**	⇑P	**P**	**05 13 39.0**	**+1.2**
NIE	**Niedzica**	**75.64**	**328**	*e*P	**P**	**05 13 39.0**	**+1.2**
TPGR	**Topolog**	**75.87**	**320**	⇑P	**P**	**05 13 40.0**	**+0.7**
ANMO	**Albuquerque**	**75.87**	**55**	*i* P	**P**	**05 13 39.4**	**-0.3**
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KSP	**Ksiaz**	**75.92**	**331**	*e*P	**P**	**05 13 39.8**	**+0.4**
OZUR		**76.07**	**323**	⇑P	**P**	**05 13 40.7**	**+0.3**
STEB	**Steborice**	**76.15**	**329**	*e*P	**P**	**05 13 41.1**	**+0.4**
LANS	**Liptovska Anna**	**76.17**	**328**	*e*P	**P**	**05 13 42.8**	**+1.9**
LANS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LANS	**Liptovska Anna**	**76.17**	**328**	*e*P	**P**	**05 13 42.8**	**+1.9**
OSTC	**Ostas**	**76.18**	**331**	*e*P	P	05 13 33.8	-7.1
OSTC	**Ostas**	**76.18**	**331**	*e*P	P	05 13 33.8	-7.1
MORC	**Moravsky Berou**	**76.36**	**329**	⇑P	**P**	**05 13 43.2**	**+1.2**
MORC	**Moravsky Berou**	**76.36**	**329**	*e*P	**P**	**05 13 42.9**	**+0.9**
SCHQ	**Schefferville**	**76.39**	**20**	P	**P**	**05 13 42.4**	**+0.3**
	comp=Z,2.6nm,0.7s,baz=332,slow=8.5,SNR=5.9						
	comp=Z,2.6nm,0.7s						
G40A	**Rib Lake**	**76.54**	**38**	P	**P**	**05 13 42.9**	**-0.2**
G40A				IAmb	IAmb	05 13 43.8	
	comp=Z,7.6nm,0.8s						
CLL	**Collm**	**76.63**	**333**		**P**	**05 13 42.9**	**-0.5**
CLL				IAmb	IAmb	05 13 44.2	
	comp=Z,14nm,0.8s						
CLL	**Collm**	**76.63**	**333**	P	**P**	**05 13 42.9**	**-0.5**
CLL				pmax	pmax		
	comp=Z,14nm,0.8s						
CLL	**Collm**	**76.63**	**333**	*i* P	**P**	**05 13 43.4**	**0.0**
	comp=Z,17nm,1.0s						
CLL				*e*pP	**pwP**	**05 14 17.0**	**+0.9**
CLL				*e*sP	**sP**	**05 14 30.0**	**-0.3**
BNN	**Bunyan**	**76.73**	**312**	P	**P**	**05 13 42.0**	**-2.4**
DRGR		**76.81**	**325**	⇓P	**P**	**05 13 45.4**	**+0.8**
VOIR		**76.91**	**323**	⇑P	**P**	**05 13 46.4**	**+1.2**
JAVC	**Velka Javorina**	**77.08**	**329**	*e*P	**P**	**05 13 48.1**	**+2.0**
HSKC	**Hora Svate Kat**	**77.09**	**332**	*e*P	**P**	**05 13 46.7**	**+0.7**
VRAC	**Vranov**	**77.10**	**330**	⇑P	**P**	**05 13 46.9**	**+0.8**
VRAC	**Vranov**	**77.10**	**330**	*e*P	**P**	**05 13 47.2**	**+1.1**
ARR	**Arges**	**77.14**	**323**	⇓P	**P**	**05 13 47.8**	**+1.3**
BRTR	**Keskin Array B**	**77.23**	**314**	P	**P**	**05 13 48.2**	**+1.0**
	comp=Z,1.1nm,0.7s,baz=69,slow=3.2,SNR=6.4						
	comp=Z,1.1nm,0.7s						
BRTR	**Keskin Array B**	**77.23**	**314**	P	**P**	**05 13 47.1**	**-0.1**
BRTR	**Keskin Array B**	**77.23**	**314**	P	**P**	**05 13 47.1**	**-0.1**
PRU	**Pruhonice**	**77.24**	**331**	*e*P	**P**	**05 13 46.4**	**-0.5**
PRU	**Pruhonice**	**77.24**	**331**	*e*P	**P**	**05 13 46.4**	**-0.5**
EKA	**Eskdalemuir Ar**	**77.25**	**344**	P	**P**	**05 13 47.0**	**+0.2**
	comp=Z,4.0nm,0.6s,baz=20,slow=5.5,SNR=16						
	comp=Z,4.0nm,0.6s						
KRUC	**Moravsky**	**77.37**	**330**	*e*P	**P**	**05 13 48.6**	**+1.0**
ZVC	**Zvikov**	**77.83**	**331**	*e*P	**P**	**05 13 49.9**	**-0.2**
KHC	**Kasperske Hory**	**78.30**	**331**	*ce*P	**P**	**05 13 53.3**	**+0.5**
KHC				pmax	pmax		
	comp=Z,16nm,2.5s						
KHC	**Kasperske Hory**	**78.30**	**331**	*e*P	**P**	**05 13 53.3**	**+0.5**
CKRC	**Cesky Krumlov**	**78.31**	**331**	*e*P	**P**	**05 13 53.4**	**+0.5**
CKRC	**Cesky Krumlov**	**78.31**	**331**	*e*P	**P**	**05 13 53.4**	**+0.5**
GERES	**GERESS Array B**	**78.50**	**331**	P	**P**	**05 13 54.1**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=37,slow=5.7,SNR=3.9						
	comp=Z,1.4nm,0.7s						
GRF	**Grafenberg Arr**	**78.60**	**333**	*e*P	**P**	**05 13 55.4**	**+1.0**
	comp=Z,13nm,0.8s,baz=29,slow=4.8						
BMRD	**Maredsous**	**80.00**	**337**	*d*P	**P**	**05 14 02.3**	**+0.3**
	comp=Z,7.6nm,1.0s						
RCHB	**Rochefort**	**80.00**	**337**	*d*P	**P**	**05 14 02.3**	**+0.3**
MMAI	**Mount Meron Ar**	**81.29**	**308**	P	**P**	**05 14 10.2**	**+1.0**
	comp=Z,2.4nm,0.6s,baz=46,slow=10,SNR=5.8						
	comp=Z,2.4nm,0.6s						
TXAR	**Lajitas Array**	**81.54**	**57**	P	**P**	**05 14 11.5**	**+0.8**
	comp=Z,13nm,0.6s,baz=320,slow=5.9,SNR=149						
TXAR				pP	**pP**	**05 14 45.2**	**+1.0**
	comp=Z,1.8nm,0.7s,baz=319,slow=5.0,SNR=3.5						
TKL	**Tuckaleechee C**	**87.17**	**40**	P	**P**	**05 14 39.7**	**+0.9**
TKL	**Tuckaleechee C**	**87.17**	**40**	P	**P**	**05 14 39.7**	**+0.9**
TKL				pmax	pmax		
	comp=Z,17nm,0.9s						
ESDC	**Sonseca Array**	**92.17**	**339**	P	**P**	**05 15 01.4**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=22,slow=4.9,SNR=4.4						
	comp=Z,0.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**114.69**	**323**	PKP	**PKiKP**	**05 20 31.3**	**-1.4**
	comp=Z,0.2nm,0.6s,baz=17,slow=2.0,SNR=5.1						
QSPA	**South Pole Qui**	**134.57**	**180**	PKP	**PKPdf**	**05 21 10.2**	**+1.1**
	comp=Z,4.1nm,0.9s,baz=322,slow=0.8,SNR=9.5						
H03N2	**Juan Fernandez**	**142.34**	**89**	T	T	08 00 35.6	
	baz=304,slow=77,SNR=12						
H03N3	**Juan Fernandez**	**142.36**	**89**	T	T	08 00 43.8	
	baz=304,slow=77,SNR=19						
H03N1	**Juan Fernandez**	**142.36**	**89**	T	T	08 00 36.8	
	baz=304,slow=77,SNR=14						
BDFB	**Brasilia**	**147.90**	**30**	PKPbc	**PKPdf**	**05 21 36.1**	**+1.7**
	comp=Z,6.1nm,0.8s,baz=349,slow=5.2,SNR=9.0						
TROLL	**Troll, Antarti**	**148.22**	**200**	P	**PKPbc**	**05 21 38.1**	**+1.3**
SNAA	**Sanae**	**149.68**	**198**	⇓P	**PKPbc**	**05 21 41.1**	**+0.7**
	comp=Z,182nm,1.1s						
SNAA	**Sanae**	**149.68**	**198**	PKPbc	**PKPbc**	**05 21 40.2**	**-0.2**
	comp=Z,5.7nm,0.9s,baz=117,slow=1.7,SNR=6.3						
VNA2	**Neumayer--Watz**	**151.20**	**197**	⇑P	**PKiKP**	**05 21 45.1**	**+0.7**
	comp=Z,30nm,0.6s,baz=124,slow=1.7						
VNA3	**Neumayer Olymp**	**151.38**	**195**	⇓P	**PKPbc**	**05 21 45.1**	**+0.8**
	comp=Z,17nm,0.8s						
VNA1	**Neumayer--Stat**	**151.59**	**196**	⇓P	**PKiKP**	**05 21 45.8**	**+0.7**
	comp=Z,16nm,1.0s						
PLCA	**Paso Flores**	**151.60**	**95**	PKPbc	**PKPbc**	**05 21 46.1**	**+0.2**
	comp=Z,7.6nm,0.9s,baz=295,slow=2.7,SNR=16						
CPUP	**Villa Florida**	**152.51**	**56**	PKPbc	**PKiKP**	**05 21 48.6**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=297,slow=2.3,SNR=3.0						
CPUP				PKPab	**PKPab**	**05 21 59.5**	**+0.4**
	comp=Z,2.6nm,0.9s,baz=337,slow=6.9,SNR=6.9						

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*DJA **07** 05:05:02.5±2.0, 8°N±6°×12°4E±°, h15km±18km, M4.7/11, mB5.4/4, mb4.7/10, MLv4.7/11, Mw(mB)4.8/4*
*IDC **07** 05:05:05.1±0.9, 7°.04N×123°.60E, h0km, mb3.8/7, mbtmp3.8/7, Error ellipse: s-maj=21.3km s-min=14.0km az=25.0*
*MAN **07** 05:05:10.0, 7°.18N×123°.72E, h26km, MS3.6*
ISC 07 05:05:11.0±0.8**, 7°.04N**±0°.07×**123°.56E**±0°.07**, h43**km**, n19, σ1s.46**/19**, mb3.9**/7**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCPH	**Dipolog City**	**1.55**	**352**	*i* P	**Pn**	**05 05 35.5**	**-0.6**
DAV	**Davao City (W)**	**2.00**	**89**	Pg	**Pn**	**05 05 41.6**	**-0.7**
	96nm,0.3s,baz=262,slow=7.1,SNR=4.8						
DAV				Lg	Lg	05 06 07.0	
	139nm,0.3s,baz=246,slow=20,SNR=12						
DAV				LR	LR	05 06 34.4	
	comp=Z,605nm,18.6s,baz=286,slow=46						
DAV	**Davao City (W)**	**2.00**	**89**	P	Pn	05 05 34.4	-7.9
DDMP	**Don Marcelino,**	**2.33**	**113**	*e*P	**Pn**	**05 05 46.7**	**-0.1**
DDMP				*e*S	**Sn**	**05 06 13.2**	**-1.0**
SGSI	**Sangihe**	**3.86**	**149**	P	**Pn**	**05 06 06.4**	**-1.5**
RCP	**Roxas**	**4.57**	**350**	*e*P	**Pn**	**05 06 18.9**	**+1.3**
MYLDM	**Lahad Datu**	**5.36**	**250**	P	**Pn**	**05 06 28.3**	**-0.2**
	48nm,0.9s						
MNI	**Manado**	**5.70**	**167**	P	**Pn**	**05 06 34.5**	**+1.3**
	0.9nm158nm,0.7s						
GTOI	**Gorontalo**	**6.38**	**185**	P	**Pn**	**05 06 41.7**	**-0.8**
	0.4nm1μm33nm,0.5s						
MRSI	**Marisa**	**6.71**	**194**	P	**Pn**	**05 06 49.2**	**+2.1**
	16nm,0.5s						
KKM	**Kota Kinabalu**	**7.37**	**263**	P	**Pn**	**05 06 52.6**	**-3.5**
	7.2nm,0.4s						
LUWI	**Luwuk**	**8.06**	**186**	P	**Pn**	**05 07 07.1**	**+1.5**
	60nm,0.7s						
WRA	**Warramunga Arr**	**28.83**	**159**	P	**P**	**05 11 04.5**	**-0.9**
	2.9nm,0.9s,baz=338,slow=8.9,SNR=18						
	2.9nm,0.9s						
ASAR	**Alice Springs**	**32.15**	**162**	P	**P**	**05 11 34.5**	**-0.2**
	1.5nm,0.6s,baz=341,slow=8.3,SNR=24						
	1.5nm,0.6s						
LZDM	**Lanzhou Array**	**34.05**	**331**	P	**P**	**05 11 53.1**	**+1.5**
	1.0nm,0.3s,baz=151,slow=11,SNR=1.4						
	1.0nm,0.3s						
STKA	**Stephens Creek**	**42.35**	**157**	P	**P**	**05 13 01.9**	**+0.8**
	2.2nm,0.4s,baz=340,slow=12,SNR=4.4						
	2.2nm,0.4s						
MKAR	**Makanchi Array**	**53.06**	**325**	P	**P**	**05 14 22.5**	**-1.4**
	0.2nm,0.5s,baz=116,slow=5.5,SNR=1.3						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**56.24**	**334**	P	**P**	**05 14 46.6**	**-0.1**
	0.2nm,0.3s,baz=128,slow=9.3,SNR=1.7						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**57.27**	**328**	P	**P**	**05 14 55.0**	**+0.9**
	0.2nm,0.4s,baz=126,slow=7.4,SNR=1.8						
	0.2nm,0.4s						

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*ISK **07** 05:08:39.7, 38°.94N×26°.25E, h10km, ML3.1/34*
*THE **07** 05:08:40.2, 39°.0N±0°.7×2°6E±°, h9km±1km, M2.8/7, MLh2.8/7*
*AFAD **07** 05:08:40.0, 38°.94N×26°.26E, h7km±1km, ML2.5*
*ATH **07** 05:08:40.0, 38°.97N×26°.32E, h8km±1km, ML2.7/12, Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*
ISC 07 05:08:40.2±0.9**, 38°.96N**±0°.02×**26°.26E**±0°.02**, h12**km±8km**, n81, σ0s.53**/105**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.29**	**1**	P	**Pg**	**05 08 45.9**	**-0.2**
PRK				S	**Sg**	**05 08 50.5**	**+0.5**
PRK	**Paraskevi**	**0.29**	**1**	P	**Pg**	**05 08 45.5**	**-0.6**
PRK				S	**Sg**	**05 08 49.2**	**-0.8**
KARB	**zmir-Karabur**	**0.32**	**158**	P	**Pg**	**05 08 46.5**	**-0.1**
KARB				IAML		05 08 51.0	
	comp=N,888nm,0.4s						
KARB				IAML		05 08 51.0	
	comp=E,1μm,0.2s						
KARB				S	**Sg**	**05 08 51.2**	**+0.2**
SIGR	**SIGRI**	**0.41**	**309**	P	**Pg**	**05 08 48.0**	**-0.2**
SIGR				S	**Sg**	**05 08 53.7**	**0.0**
SIGR	**SIGRI**	**0.41**	**309**	Pg	**Pg**	**05 08 48.2**	**0.0**
SIGR				Sg	**Sg**	**05 08 54.4**	**+0.8**
SIGR	**SIGRI**	**0.41**	**309**	P	**Pg**	**05 08 48.0**	**-0.2**
SIGR				S	**Sg**	**05 08 54.2**	**+0.5**
KRBN	**Karaburun**	**0.43**	**148**	Pg	**Pg**	**05 08 48.6**	**-0.1**
KRBN				Sg	**Sg**	**05 08 54.9**	**+0.5**
EAG2	**Marmaro, Chios**	**0.43**	**196**	P	**Pg**	**05 08 48.6**	**-0.2**
EAG2				S	**Sg**	**05 08 54.9**	**+0.5**
FOCM	**Foa**	**0.44**	**124**	Pg	**Pg**	**05 08 48.3**	**-0.6**
FOCM				Sg	**Sg**	**05 08 55.4**	**+0.7**
GPNR	**Gulpinar-Canak**	**0.51**	**349**	Pg	**Pg**	**05 08 50.1**	**0.0**
GPNR				Sg	**Sb**	**05 08 58.2**	**-0.1**
DKL	**Dikili**	**0.51**	**77**	Pg	**Pg**	**05 08 50.4**	**+0.2**
DKL				Sg	**Sb**	**05 08 58.2**	**-0.3**
IZMD	**zmir-Dikili-**	**0.52**	**87**	P	**Pg**	**05 08 50.2**	**-0.2**
IZMD				S	**Sg**	**05 08 57.9**	**+0.6**
IZMD				IAML		05 08 59.0	
	comp=E,157nm,0.6s						
BAGT	**Foa**	**0.55**	**123**	P	**Pg**	**05 08 50.5**	**-0.4**
BAGT				S	**Sg**	**05 08 58.7**	**+0.4**
BAGT				IAML		05 08 59.0	
	comp=N,412nm,0.6s						
BAGT				IAML		05 09 03.0	
	comp=E,341nm,0.6s						
CHOS	**Chios island**	**0.59**	**196**	P	**Pg**	**05 08 51.5**	**-0.3**
CHOS				S	**Sb**	**05 09 00.9**	**0.0**
CHOS	**Chios island**	**0.59**	**196**	P	**Pg**	**05 08 51.3**	**-0.4**
CESE	**eme**	**0.63**	**177**	Pg	**Pg**	**05 08 52.1**	**-0.3**
ZEYE	**Izmir, Urla-Ze**	**0.74**	**165**	P	**Pg**	**05 08 54.0**	**-0.6**
ZEYE				S	**Sn**	**05 09 06.8**	**-0.8**
EZNE	**Ezine-Canakkal**	**0.80**	**6**	Pg	**Pg**	**05 08 55.9**	**+0.2**
BLCB	**Balcova**	**0.84**	**133**	P	**Pg**	**05 08 56.1**	**-0.3**
BLCB	**Balcova**	**0.84**	**133**	Pg	**Pg**	**05 08 56.3**	**-0.1**
EZN	**Ezine**	**0.87**	**3**	P	**Pb**	**05 08 57.4**	**+0.2**
EZN				S	**Sb**	**05 09 09.0**	**+0.3**
EZN	**Ezine**	**0.87**	**3**	Pg	**Pb**	**05 08 57.5**	**+0.4**
SOMA	**Soma-Manisa**	**1.01**	**78**	Pg	**Pb**	**05 08 59.8**	**+0.2**
GMLD	**Gumuldur**	**1.02**	**150**	Pg	**Pb**	**05 08 59.3**	**-0.4**
EFSA	**Agios Efstrati**	**1.15**	**301**	P	**Pb**	**05 09 01.6**	**-0.3**
EFSA				S	**Sn**	**05 09 17.9**	**+0.3**
KRL1	**Karlovasi Samo**	**1.21**	**163**	P	**Pb**	**05 09 03.2**	**+0.2**
KRL1				S	**Sg**	**05 09 19.1**	**-0.2**
CANM	**Can-anakkale**	**1.22**	**30**	Pn	**Pg**	**05 09 03.4**	**-0.2**
YENI	**Yenice-Canakka**	**1.23**	**38**	Pn	**Pg**	**05 09 03.8**	**-0.1**
LIA	**Limnos Island**	**1.26**	**319**	P	**Pn**	**05 09 02.8**	**-0.8**
LIA				S	**Sb**	**05 09 19.5**	**-0.4**
LIA	**Limnos Island**	**1.26**	**319**	P	**Pn**	**05 09 03.3**	**-0.2**
LIA				S	**Sg**	**05 09 20.7**	**0.0**
GADA	**Gvkgeada**	**1.26**	**347**	P	**Pn**	**05 09 03.3**	**-0.3**
GADA				S	**Sb**	**05 09 19.2**	**-0.8**
GADA	**Gvkgeada**	**1.26**	**347**	Pn	**Pn**	**05 09 03.2**	**-0.4**
LMN1	**MIRINA LIMNOU**	**1.31**	**315**	P	**Pg**	**05 09 05.1**	**-0.2**
GOMA	**Golmarmara-Man**	**1.32**	**100**	Pn	**Pb**	**05 09 04.8**	**0.0**
SMG	**Samos**	**1.33**	**160**	P	**Pn**	**05 09 04.3**	**-0.3**
SMG				S	**Sg**	**05 09 23.0**	**+0.1**
SMG	**Samos**	**1.33**	**160**	P	**Pn**	**05 09 04.2**	**-0.3**
SMG				S	**Sg**	**05 09 23.0**	**+0.1**
KUSD	**Kusadasi-Aydin**	**1.36**	**143**	Pn	**Pn**	**05 09 05.2**	**+0.2**
BALB	**Balikesir**	**1.43**	**61**	Pn	**Pn**	**05 09 06.0**	**+0.1**
GELI	**Tayfur-Gelibol**	**1.45**	**6**	Pn	**Pb**	**05 09 06.7**	**-0.3**
LPK	**Lapseki**	**1.46**	**15**	Pn	**Pn**	**05 09 06.9**	**+0.5**
GCAM	**G?zelcaml?**	**1.47**	**148**	Pn	**Pn**	**05 09 06.8**	**+0.3**
BIGA	**Biga-Canakkale**	**1.49**	**27**	Pn	**Pn**	**05 09 07.3**	**+0.6**
GORD	**Gordes-Manisa**	**1.49**	**91**	Pn	**Pn**	**05 09 07.2**	**+0.3**
GONE	**Gonen-Balikesi**	**1.55**	**45**	Pn	**Pn**	**05 09 07.9**	**+0.4**
ODEM	**Odemis-Izmir**	**1.57**	**115**	Pn	**Pn**	**05 09 08.4**	**+0.4**
SMTH	**Samothraki Isl**	**1.61**	**340**	P	**Pn**	**05 09 08.3**	**-0.2**
SMTH	**Samothraki Isl**	**1.61**	**340**	P	**Pn**	**05 09 09.0**	**+0.6**
SMTH				S	**Sb**	**05 09 29.8**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**1.63**	**128**	Pn	**Pn**	**05 09 09.2**	**+0.4**
KRBG	**Karabiga-Canak**	**1.64**	**29**	Pn	**Pn**	**05 09 08.8**	**0.0**
KARY	**Karystos**	**1.71**	**238**	P	**Pb**	**05 09 11.1**	**-0.3**
ERIK	**Erikli-Kesan**	**1.72**	**6**	Pn	**Pn**	**05 09 10.7**	**+0.8**
KYMI	**Kymi, Euboea I**	**1.72**	**260**	P	**Pn**	**05 09 10.7**	**+0.8**
SUSR	**Susurluk-Balik**	**1.73**	**54**	Pn	**Pn**	**05 09 10.1**	**0.0**
ENEZ	**Enez**	**1.78**	**357**	Pn	**Pb**	**05 09 11.8**	**-0.9**
EDC	**Edincik**	**1.86**	**41**	Pn	**Pn**	**05 09 12.1**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.86**	**22**	Pn	**Pn**	**05 09 12.7**	**+0.7**
AOS2	**Alonissos-2**	**1.89**	**276**	P	**Pn**	**05 09 12.7**	**+0.4**
MRMT	**Marmara Adasi**	**1.94**	**32**	Pn	**Pn**	**05 09 13.7**	**+0.7**
ALN	**Alexandroupoli**	**1.94**	**355**	Pn	**Pn**	**05 09 13.7**	**+0.7**
ALN	**Alexandroupoli**	**1.94**	**355**	P	**Pn**	**05 09 12.9**	**-0.1**
GAZK	**Gazikoy-TEKIRD**	**1.96**	**24**	Pn	**Pn**	**05 09 14.2**	**+0.9**
DION	**Dionisos Attik**	**2.03**	**245**	P	**Pn**	**05 09 15.2**	**+1.0**
KCTX	**Karacabey (Bur**	**2.08**	**50**	Pn	**Pn**	**05 09 15.1**	**+0.2**
ATHU	**Athens Univers**	**2.18**	**244**	P	**Pn**	**05 09 17.4**	**+1.2**
UKOP	**Uzunkopru-Edir**	**2.19**	**7**	Pn	**Pn**	**05 09 17.3**	**+1.0**
VLY	**Voula,Athens**	**2.23**	**241**	P	**Pn**	**05 09 17.8**	**+0.8**
OUR	**Ouranopolis**	**2.23**	**309**	Pn	**Pn**	**05 09 17.1**	**+0.1**
OUR	**Ouranopolis**	**2.23**	**309**	P	**Pn**	**05 09 17.1**	**+0.1**
RDO	**Rodhopi**	**2.25**	**346**	Pn	**Pn**	**05 09 17.3**	**+0.1**
RDO	**Rodhopi**	**2.25**	**346**	P	**Pn**	**05 09 17.1**	**-0.1**
NEO	**Neokhori**	**2.39**	**279**	P	**Pn**	**05 09 19.9**	**+0.7**
KAVA	**Kavala**	**2.44**	**327**	P	**Pn**	**05 09 19.7**	**-0.1**
VIL2	**Platees**	**2.46**	**253**	P	**Pn**	**05 09 21.3**	**+1.1**
ATAL	**Atalanti**	**2.55**	**265**	P	**Pn**	**05 09 21.8**	**+0.5**
PLG	**Polygyros**	**2.59**	**304**	P	**Pn**	**05 09 23.4**	**+1.4**
MET4	**Agioi Theodoro**	**2.62**	**240**	P	**Pn**	**05 09 23.2**	**+1.0**
MET5	**Makryloggos,Me**	**2.65**	**241**	P	**Pn**	**05 09 24.0**	**+1.3**
MET2	**Kameni Chora,**	**2.67**	**241**	P	**Pn**	**05 09 24.2**	**+1.2**
LTK	**Loutraki**	**2.75**	**251**	P	**Pn**	**05 09 25.1**	**+1.0**
GUR	**Goura**	**3.24**	**253**	P	**Pn**	**05 09 31.2**	**+0.2**
VLI	**Veliai**	**3.46**	**231**	P	**Pn**	**05 09 33.6**	**-0.2**

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*UPA **07** 05:40:43.8±0.9, 8°.33N×82°.97W, h17km±3km, ML2.9, MW3.4, Presumed earthquake*
*UCR **07** 05:40:43.9±1.0, 8°.31N×82°.98W, h16km±6km, MW3.5, Presumed earthquake*
ISC 07 05:40:43.8±0.9**, 8°.34N**±0°.02×**82°.98W**±0°.02**, h16**km±7km**, n48, σ0s.77**/64**, 3C-14D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARIEL	**Armuelles**	**0.14**	**111**	⇑*e*P	**Pb**	**05 40 49.4**	**+1.4**
PTPM	**Petroterminale**	**0.17**	**142**	⇑*i*P	**Pg**	**05 40 48.0**	**-0.1**
PTPM				*i* S	**Sb**	**05 40 51.9**	**+0.4**
PTPA	**Petro Terminal**	**0.17**	**141**	*e*P	**Pg**	**05 40 47.9**	**-0.3**
PTPA				*e*S	**Sb**	**05 40 51.8**	**0.0**
LESP3	**La Esperanza,**	**0.20**	**70**	*e*P	**Pg**	**05 40 48.8**	**+0.2**
LPPC	**Paso Canoas**	**0.24**	**36**	⇓*e*P	**Pg**	**05 40 49.5**	**+0.3**
LPPC				*e*S	**Sb**	**05 40 53.9**	**+0.1**
LIMO3	**Limones**	**0.26**	**153**	*e*P	**Pb**	**05 40 49.7**	**-0.3**
LIMO3				*e*S	**Sb**	**05 40 54.0**	**-0.3**
LMNES	**Limones**	**0.26**	**153**	*i* P	**Pg**	**05 40 49.4**	**-0.2**
LMNES	**Limones**	**0.26**	**153**	⇑*e*P	**Pg**	**05 40 49.5**	**-0.1**
PIRO	**Carate, Puerto**	**0.36**	**281**	*e*P	**Pb**	**05 40 51.8**	**+0.1**
PIRO				*e*S	**Sb**	**05 40 57.3**	**+0.2**
PIRO	**Carate, Puerto**	**0.36**	**281**	*e*P	**Pg**	**05 40 51.3**	**+0.1**
EDAD	**Golfito**	**0.36**	**330**	⇓*e*P	**Pg**	**05 40 50.9**	**-0.4**
EDAD				*e*S	**Sg**	**05 40 56.7**	**+0.2**
PTJ1	**Puerto Jimnez**	**0.37**	**302**	*e*P	**Pb**	**05 40 53.1**	**+1.1**
PTJ1				*e*S	**Sn**	**05 41 02.2**	**+0.8**
MLIR3	**Monte Lirio, C**	**0.48**	**19**	⇓*i*P	**Pb**	**05 40 54.5**	**+0.6**
RSRNO	**Rio Sereno**	**0.49**	**14**	*i* P	**Pb**	**05 40 54.4**	**+0.3**
RSRNO	**Rio Sereno**	**0.49**	**14**	⇓*e*P	**Pb**	**05 40 54.4**	**+0.3**
SCLRA	**Santa Clara, W**	**0.53**	**22**	⇓*e*P	**Pb**	**05 40 55.0**	**+0.2**
DVD	**David**	**0.54**	**79**	*e*P	**Pg**	**05 40 54.4**	**0.0**
DVD				*i* S	**Sb**	**05 41 02.9**	**+0.7**
BRU2	**Volcan**	**0.54**	**32**	⇓*i*P	**Pg**	**05 40 54.8**	**+0.3**
BRU2				*i* P	**Pg**	**05 40 54.9**	**+0.3**
BRU2				*e*S	**Sb**	**05 41 03.8**	**+1.3**
BRU2	**Volcan**	**0.54**	**32**	⇓*e*P	**Pg**	**05 40 54.9**	**+0.4**
CLLRA	**Cordillera,**	**0.55**	**42**	*i* P	**Pg**	**05 40 54.9**	**+0.3**
CLLRA	**Cordillera,**	**0.55**	**42**	⇓*e*P	**Pg**	**05 40 55.0**	**+0.3**
JEFFS	**S de V. Baru**	**0.55**	**53**	*i* P	**Pg**	**05 40 55.1**	**+0.3**
JEFFS	**S de V. Baru**	**0.55**	**53**	⇓*e*P	**Pg**	**05 40 55.1**	**+0.3**
LOCO3	**Loma Colorada,**	**0.56**	**82**	*e*P	**Pg**	**05 40 54.9**	**0.0**
LOCO3				*e*S	**Sb**	**05 41 03.7**	**+0.7**
PTAR3	**Potrerillos Ar**	**0.60**	**54**	*e*P	**Pg**	**05 40 55.9**	**+0.3**
PTAR3				*e*S	**Sb**	**05 41 05.3**	**+1.2**
ALCO	**Alturas Coton,**	**0.63**	**13**	⇓*e*P	**Pg**	**05 40 56.1**	**-0.1**
CHIR3	**Chiriqui UPA,**	**0.65**	**85**	*e*P	**Pg**	**05 40 56.6**	**+0.1**
CHIR3				*e*S	**Sb**	**05 41 05.3**	**-0.1**
BGUAL	**Bijagual, Pana**	**0.66**	**75**	*i* P	**Pg**	**05 40 56.4**	**-0.5**
BQTLY	**Boquete Panama**	**0.66**	**51**	*i* P	**Pg**	**05 40 56.6**	**-0.3**
BQTLY	**Boquete Panama**	**0.66**	**51**	*e*P	**Pg**	**05 40 56.5**	**-0.3**
BQSF3	**Alto Boquete,**	**0.68**	**53**	*e*P	**Pg**	**05 40 56.9**	**-0.2**
BQSF3				*e*S	**Sb**	**05 41 06.8**	**+0.3**
LNBQ3	**Los Naranjos,**	**0.70**	**50**	*e*P	**Pg**	**05 40 57.2**	**-0.4**
EDP2	**Potrero Grande**	**0.70**	**344**	⇓*e*P	**Pg**	**05 40 57.7**	**+0.2**
PSOM3	**Paja de Sombre**	**0.74**	**62**	*e*P	**Pg**	**05 40 57.7**	**-0.5**
FIMO	**Fila Mora**	**0.75**	**331**	*e*P	**Pg**	**05 40 58.1**	**-0.4**
PBNVO	**Pueblo Nuevo,**	**0.96**	**55**	⇓*e*P	**Pb**	**05 41 00.9**	**-1.0**
DRK0	**Durika**	**0.96**	**344**	*e*P	**Pb**	**05 40 59.5**	**-2.6**
DRK0				*e*S	**Sb**	**05 41 14.7**	**+0.2**
DRK0	**Durika**	**0.96**	**344**	*e*P	**Pb**	**05 40 59.2**	**-2.9**
RBALA	**Bur**	**0.98**	**57**	*i* P	**Pb**	**05 41 01.0**	**-1.4**
RBALA	**Bur**	**0.98**	**57**	*e*P	**Pb**	**05 41 01.7**	**-0.7**
EDPE	**Pejibaye, P**	**1.00**	**325**	*e*P	**Pb**	**05 41 01.9**	**-0.9**
CHGR2	**Aguacate**	**1.02**	**54**	*e*P	**Pb**	**05 41 02.3**	**-0.8**
SAJE	**San Jernim**	**1.13**	**333**	*e*P	**Pn**	**05 41 04.3**	**-0.7**
CNI2	**El Empalme, Bo**	**1.19**	**25**	*e*P	**Pn**	**05 41 05.2**	**-0.5**
CNI2				*e*S	**Sb**	**05 41 20.8**	**-0.3**
KKNTU	**Kakintº**	**1.27**	**67**	⇓*e*P	**Pn**	**05 41 05.5**	**-1.2**
LAES	**El Progreso Va**	**1.42**	**357**	*e*P	**Pb**	**05 41 10.0**	**+0.1**
VERH	**Veragua Rainfo**	**1.59**	**353**	*e*P	**Pn**	**05 41 12.0**	**+0.7**
RESJ	**San Isidro (Tu**	**1.81**	**339**	*e*P	**Pn**	**05 41 15.6**	**+1.4**

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*BJI **07** 05:43:43.6, 17°.75S×168°.47E, h14km, mB5.5/63, mb4.8/60, Ms5.4/72, Ms7 5.1/72*
*IDC **07** 05:43:43.5±0.4, 17°.97S×167°.88E, h0km, mb4.6/22, mbtmp4.6/25, ML4.0/3, MS5.0/60, Error ellipse: s-maj=10.6km s-min=9.3km az=52.0*
*MOS **07** 05:43:44.0±1.0, 17°.86S×167°.89E, h10km, mb5.3/38, MS5.2/14, Error ellipse: s-maj=10.1km s-min=9.3km az=116.5*
*NEIC **07** 05:43:45.7, 18°.01S×167°.54E, h18km, Moment Tensor Solution. Duration: 2s.7 Moment tensor: Scale 10^{17}Nm; M_{rr}2.00; $M_{\theta\theta}$-0.19; $M_{\phi\phi}$-1.80; $M_{r\theta}$0.64; $M_{\theta\phi}$0.28; $M_{\phi r}$-1.26; Fault plane solution: $M_0$2.39000×10^{17} NP1: ϕ_s358.39000°, δ27.92000°, λ105.55000°. NP2: ϕ_s160.91000°, δ63.18000°, λ81.91000°. Principal axes: T 2.4849, Plg71.0000°, Azm53.0000°; N -0.1997, Plg7.0000°, Azm165.0000°; P -2.2852, Plg18.0000°, Azm257.0000°;*
*NEIC **07** 05:43:45.7, 17°.91S×167°.86E, h18km*
*NEIC **07** 05:43:45.6±1.4, 17°.89S±0°.05×167°.9E±0°.1, h10km±1km, mb5.2/103, Ms_20 5.3/362, Mww5.5/21, Error ellipse: s-maj=18.2km s-min=7.4km az=254.0*
*GFZ **07** 05:43:46.5, 17°.86S×167°.80E, h10km, MW5.5, Moment Tensor Solution. s85 Moment tensor: M_{rr}1.88; $M_{\theta\theta}$-0.29; $M_{\phi\phi}$-1.58; $M_{r\theta}$-0.42; $M_{\theta\phi}$0.48; $M_{\phi r}$-0.95; Fault plane solution: NP1:ϕ_s179.00000°, δ58.00000°, λ107.00000°. NP2:ϕ_s327.00000°, δ35.00000°, λ63.00000°. Principal axes: T 2.2300, Plg70.0000°, Azm128.0000°; N -0.3200, Plg14.0000°, Azm349.0000°; P -1.9100, Plg12.0000°, Azm256.0000°;*
*NOU **07** 05:43:46.9, 17°.91S×167°.81E, h10km, mb5.0/74, Vanuatu*

Islands

GCMT ***07*** *05:43:50.6±0.1, 17°.95S±0°.01×167°.63E±0°.01, h18km, MW5.6/158, Moment Tensor Solution. s139,c254; s158,c305; Duration: 1s6 Moment tensor: Scale 10^{17} Nm; M_{rr}2.35±.03; $M_{\theta\theta}$0.04±.02; $M_{\phi\phi}$-2.40±.03; $M_{r\theta}$1.00±.07; $M_{\theta\phi}$0.41±.02; $M_{\phi r}$-2.47±.08; Best double couple: $M_0$3.59200×10^{17} NP1:ϕ_s1.00000°, δ22.00000°, λ108.00000°. NP2:ϕ_s161.00000°, δ69.00000°, λ83.00000°. Principal axes: T 3.5680, Plg65.0000°, Azm59.0000°; N 0.0420, Plg7.0000°, Azm164.0000°; P -3.6150, Plg24.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 05:43:46.2±0.5**, 17°.94S**±0°.03×**167°.88E**±0°.03**, h14**km±2km**, h14**km**:pP-P, n647,** σ1s71/508**, mb5.2**/148**, MS5.2**/257**, 13C-23D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.36	54	P	Pn	05 43 55.6	-1.4
DVP	Devils Point	0.36	54	S	Sb	05 44 03.8	+3.9
RTV	Rentapao	0.54	75	P	Pn	05 43 58.6	-0.9
INH	Isangel	2.08	141	P	Pn	05 44 21.3	+0.6
SANVU	Saraoutou	2.56	345	P	Pn	05 44 26.5	-0.8
SANVU	Saraoutou	2.56	345		Pn	05 44 25.4	-1.9
MARNC	Mare, Loyalty	3.53	178	P	Pn	05 44 40.2	-0.4
MARNC	Mare, Loyalty	3.53	178		Pn	05 44 39.4	-1.2
YATNC	Mamie plateau,	4.21	193	P	Pn	05 44 52.8	+2.8
DZM	Mont Dzumac	4.33	198	Pn	Pn	05 44 50.1	-1.6
	11nm,0.3s,baz=34,slow=11,SNR=97						
DZM				Sn	Sn	05 45 38.0	-4.1
	24nm,0.3s,baz=108,slow=20,SNR=6.0						
DZM				LR	LR	05 46 25.1	
	comp=Z,14µm,18.9s,baz=68,slow=38						
	35nm,0.3s						
DZM	Mont Dzumac	4.33	198	*e*Pn	Pn	05 44 49.8	-1.9
	411nm,1.1s						
DZM				*e*Sn	Sn	05 45 36.6	-5.5
	1µm,1.2s						
DZM	Mont Dzumac	4.33	198	P	Pn	05 44 51.0	-0.8
ONTNC	Ouen Toro	4.55	197	P	Pn	05 44 54.8	+0.1
ONTNC	Ouen Toro	4.55	197		Pn	05 44 54.0	-0.6
HURO	Huro Makira	9.42	321	P	Pn	05 46 01.8	+0.2
MSVF	Nonsavu	9.69	90	Pn	Pn	05 46 08.7	+3.4
	1.0nm,0.3s,baz=260,slow=12,SNR=22						
MSVF				LR	LR	05 49 12.2	
	comp=Z,40µm,19.3s,baz=219,slow=34						
MSVF	Nonsavu	9.69	90	P	Pn	05 46 08.2	+2.8
MSVF	Nonsavu	9.69	90	Pn	Pn	05 46 13.0	+7.6
NGOA	Tingoa Renbel	9.87	309	P	Pn	05 46 07.0	-0.7
HNR	Honiara	11.44	317	Pn	Pn	05 46 27.0	-2.2
	0.3nm,0.3s,baz=90,slow=5.1,SNR=5.7						
HNR				Sn	Sn	05 48 30.8	-6.1
	0.2nm,0.3s,baz=120,slow=15,SNR=1.3						
HNR				LR	LR	05 50 37.3	
	comp=Z,406nm,18.3s,baz=232,slow=36						
	15nm,0.8s						
HNR	Honiara	11.44	317	P	Pn	05 46 29.3	+0.1
HNR	Honiara	11.44	317		Pn	05 46 26.6	-2.7
HNR	Honiara	11.44	317	P	Pn	05 46 26.6	-2.7
DGTI	Dogotuki	11.45	84	P	Pn	05 46 33.1	+3.6
TAVE	Taveuni	11.73	86	P	Pn	05 46 36.5	+3.3
SAVO	Savo Central	11.73	317	P	Pn	05 46 33.5	+0.1
TATA	Tatamba Isabel	12.32	319	P	Pn	05 46 41.8	+0.5
LKBA	Tubou, Lakemba	12.66	93	P	Pn	05 46 46.1	+0.2
AUBSH	Beerwah State	16.40	235	P	Pn	05 47 36.0	-0.1
GD1S	Gladstone Soft	16.68	247	P	Pn	05 47 39.9	+0.3
AUNRC	North Rockhamp	17.10	249	P	P	05 47 46.3	-0.4
RAO	Raoul Island	17.19	134	LR	LR	05 53 00.9	
	comp=Z,4µm,18.7s,baz=302,slow=32						
EIDS	Eidsvold	17.27	242	P	P	05 47 48.6	+0.1
	comp=Z,88nm,2.0s,comp=Z,0.0nm						
EIDS	Eidsvold	17.27	242	P	P	05 47 48.6	+0.1
EIDS	Eidsvold	17.27	242		P	05 47 47.8	-0.7
EIDS				IAmb	IAmb	05 47 49.9	
	comp=Z,400nm,1.8s						
TW1H	Toowoomba 1 Ha	17.50	234	P	P	05 47 52.5	+1.4
OUZ	Omahuta	17.95	165	P	P	05 47 58.9	+2.9
ARMA	Armidale	19.32	227	P	Pn	05 48 15.8	+3.6
ARMA	Armidale	19.32	227	P	Pn	05 48 13.0	+0.8
GRZ	Great Barrier	19.44	161	P	Pn	05 48 13.7	+0.2
AUAYR	Ayr State High	19.45	262	P	Pn	05 48 14.3	+0.5
AFI	Afiamalu	19.96	81	P	P	05 48 18.5	+0.2
	comp=Z,1.4nm,0.3s,baz=246,slow=20,SNR=4.0						
AFI				LR	LR	05 54 25.2	
	comp=Z,7µm,19.5s,baz=246,slow=32						
	comp=Z,22nm,0.9s						
AUPHS	Peel High Scho	20.23	226	P	Pn	05 48 23.0	0.0
CTA	Charters Tower	20.56	261	P	P	05 48 24.9	+0.3
	comp=Z,65nm,1.2s,baz=83,slow=14,SNR=41						
CTA				S	Sn	05 52 17.2	-1.5
	comp=Z,4.5nm,1.0s,baz=49,slow=19,SNR=1.6						
CTA				LR	LR	05 55 49.0	
	comp=Z,10µm,18.6s,baz=68,slow=35						
	comp=Z,65nm,1.2s						
CTAO	Charters Tower	20.56	261	P	P	05 48 25.1	+0.4
CTAO	Charters Tower	20.56	261		P	05 48 24.8	+0.1
CTAO	Charters Tower	20.56	261	IAMs_20	IAMs_20	05 55 07.6	
	comp=Z,10µm,20.0s						
CTAO	Charters Tower	20.56	261	P	P	05 48 24.8	+0.1
CTAO				pmax	pmax		
	comp=Z,446nm,1.9s						
CTAO				MLR	MLR		
	comp=Z,10µm,20.0s						
RABL	Rabaul	20.57	310	P	P	05 48 25.3	+0.4
RABL				IAmb	IAmb	05 48 37.6	
	comp=Z,148nm,1.0s						
TOZ	Tahuroa Road	20.82	163	P	P	05 48 28.1	+0.8
HIZ	Hauiti	21.39	165	P	P	05 48 33.4	-0.1
HIZ				IAMs_20	IAMs_20	05 55 37.8	
	comp=Z,10µm,19.0s						
HIZ	Hauiti	21.39	165	P	P	05 48 35.0	+1.6
TLZ	Tolley Road	21.39	163	P	P	05 48 33.6	0.0
AULRC	Lightning Ridg	21.48	234	P	P	05 48 35.5	+1.0
HAZ	Te Kaha	21.57	158	P	P	05 48 38.3	+2.9
URZ	Urewera	21.80	160	P	P	05 48 37.6	-0.2
	comp=Z,21nm,1.0s,baz=353,slow=8.1,SNR=12						
URZ				S	S	05 52 38.8	+0.3
	comp=Z,4.8nm,0.9s,baz=330,slow=20,SNR=1.4						
URZ				LR	LR	05 56 25.3	
	comp=Z,6µm,18.8s,baz=340,slow=35						
	comp=Z,21nm,1.0s						
URZ	Urewera	21.80	160	P	P	05 48 38.2	+0.4
PMG	Port Moresby	21.83	290	P	P	05 48 37.5	-0.8
	comp=Z,21nm,0.8s,baz=135,slow=13,SNR=9.3						
PMG				S	S	05 52 40.6	+1.1
	comp=Z,14nm,0.9s,baz=162,slow=19,SNR=1.8						
PMG				LR	LR	05 55 55.5	
	comp=Z,8µm,18.8s,baz=98,slow=34						
	comp=Z,21nm,0.8s						
PMG	Port Moresby	21.83	290	P	P	05 48 38.8	+0.4
PMG	Port Moresby	21.83	290		P	05 48 38.3	0.0
PMG				IAmb	IAmb	05 48 47.8	
	comp=Z,141nm,1.6s						
PMG	Port Moresby	21.83	290	P	P	05 48 38.3	0.0
PMG				pmax	pmax		
	comp=Z,141nm,1.6s						
PMG				MLR	MLR		
	comp=Z,8µm,19.0s						
PMG	Port Moresby	21.83	290	P	P	05 48 36.8	-1.6
	comp=Z,7µmcomp=Z,2µmcomp=Z,55nm,1.3s						
WMGZ	Waiomatatini S	21.86	157	P	P	05 48 40.6	+2.1
SYDH	Sydney Hard Ro	22.00	221	P	P	05 48 42.3	+2.3
MWZ	Matawai	22.00	159	P	P	05 48 43.6	+3.5
TWGZ	Tauwhareparae	22.02	158	P	P	05 48 42.4	+2.1
PUZ	Puketiti	22.02	158	P	P	05 48 41.5	+1.2
RTZ	Ruatahuna	22.08	161		P	05 48 41.1	+0.1
RTZ				IAmb	IAmb	05 48 55.2	
	comp=Z,136nm,1.1s						
RTZ				IAMs_20	IAMs_20	05 55 31.4	
	comp=Z,8µm,18.0s						
NGZ	Ngauruhoe	22.20	164	P	P	05 48 44.7	+2.3
MTHZ	Maungataniwha	22.26	161	P	P	05 48 44.7	+1.9
MTSU	Mount Surprise	22.41	266	P	P	05 48 44.9	+0.3
	comp=Z,107nm,0.9s						
MTSU	Mount Surprise	22.41	266	P	P	05 48 44.7	+0.1
BKZ	Black Stump Fm	22.44	162	P	P	05 48 47.4	+2.6
BKZ	Black Stump Fm	22.44	162	P	P	05 48 44.5	-0.3
BKZ				IAmb	IAmb	05 49 05.5	
	comp=Z,98nm,1.2s						
AUDCS	Dubbo College	22.45	227	P	P	05 48 46.5	+1.5
WAZ	Wanganui	22.60	166	P	P	05 48 49.8	+3.4
PNHZ	Pukenui	23.06	163	P	P	05 48 53.4	+2.1
TSZ	Takapari Road	23.13	164	P	P	05 48 52.1	+0.2
KAHZ	Kahuranaki	23.14	162	P	P	05 48 55.2	+3.1
QRZ	Quartz Range	23.16	171	P	P	05 48 51.9	-0.4
QRZ				IAmb	IAmb	05 49 09.4	
	comp=Z,82nm,1.2s						
QRZ	Quartz Range	23.16	171	P	P	05 48 53.3	+1.0
PXZ	Pawanui	23.35	162	P	P	05 48 56.8	+2.6
QLP	Quilpie	23.48	244	P	P	05 48 55.9	+0.2
	comp=Z,425nm,1.8s						
QLP	Quilpie	23.48	244	P	P	05 48 55.7	0.0
MRZ	Mangatainoka R	23.60	165		P	05 48 55.5	-1.1
MRZ				IAmb	IAmb	05 49 13.8	
	comp=Z,87nm,1.1s						
MRZ				IAMs_20	IAMs_20	05 57 08.6	
	comp=Z,8µm,19.0s						
MRZ	Mangatainoka R	23.60	165	P	P	05 48 59.0	+2.4
NNZ	Nelson	23.68	170	P	P	05 48 59.6	+2.2
MRNZ	Matariki Terra	23.76	171	P	P	05 48 59.6	+1.4
BFZ	Birch Farm	23.79	164	IAMs_20	IAMs_20	05 57 04.6	
	comp=Z,10µm,20.0s						
YNG	Young	23.84	223	P	P	05 49 00.8	+1.8
	comp=Z,57nm,1.2s						
CNB	Canberra Magne	23.88	220	P	P	05 49 02.1	+2.6
	comp=Z,137nm,1.8s,comp=Z,0.0nm						
CNB	Canberra Magne	23.88	220	P	P	05 49 01.1	+1.6
AUDAR	Daramalan Coll	23.97	220	P	P	05 49 01.8	+1.4
COEN	Coen	24.07	276	P	P	05 49 01.8	+0.3
	comp=Z,63nm,2.0s,comp=Z,0.0nm						
COEN	Coen	24.07	276	P	P	05 49 01.3	-0.1
COEN	Coen	24.07	276		P	05 49 00.4	-1.1
AUMHS	Melrose High S	24.08	220	P	P	05 49 02.7	+1.4
AUMTS	Mt Stromlo	24.11	220	P	P	05 49 03.2	+1.6
CAN	Canberra	24.11	220	P	P	05 49 03.5	+1.8
	comp=Z,88nm,2.1s,comp=Z,0.0nm						
CAN	Canberra	24.11	220	P	P	05 49 03.1	+1.5
CAN	Canberra	24.11	220		P	05 49 02.0	+0.4
CAN				IAMs_20	IAMs_20	05 56 27.1	
	comp=Z,8µm,19.0s						
CAN	Canberra	24.11	220	P	P	05 49 02.0	+0.4
CAN				pmax	pmax		
	comp=Z,277nm,1.7s						
CAN				MLR	MLR		
	comp=Z,8µm,19.0s						
THZ	Tophouse	24.14	171	P	P	05 49 02.5	+0.7
CMSA	Cobar Meteorol	24.22	232	P	P	05 49 02.9	+0.3
	comp=Z,106nm,1.1s,comp=Z,0.0nm						
CMSA	Cobar Meteorol	24.22	232	P	P	05 49 02.5	-0.1
MSWZ	Moikau Station	24.24	166		P	05 49 02.9	+0.2
KHZ	Kahutara	24.87	170	IAMs_20	IAMs_20	05 58 49.0	
	comp=Z,7µm,18.0s						
INZ	Inchbonnie	24.89	174	P	P	05 49 08.7	+0.1
LTZ	Lake Taylor	25.05	172	IAMs_20	IAMs_20	05 58 48.6	
	comp=Z,7µm,18.0s						
AUSMG	Snowy Mountain	25.07	219	P	P	05 49 13.0	+2.6
MILA	Mila	25.18	217	P	P	05 49 14.1	+2.7
	comp=Z,23nm,1.5s						
FOZ	Fox Glacier	25.57	177	IAMs_20	IAMs_20	05 59 01.6	
	comp=Z,7µm,18.0s						
RPZ	Rata Peaks	25.84	175	LR	LR	05 58 48.1	
	comp=Z,5µm,19.7s,baz=358,slow=35						
RPZ	Rata Peaks	25.84	175	IAMs_20	IAMs_20	05 59 15.8	
	comp=Z,7µm,18.0s						
INKA	Innaminka	26.79	244		P	05 49 25.1	-0.8
QIS	Mount Isa	26.81	260	P	P	05 49 26.4	+0.1
	comp=Z,20nm,1.1s,comp=Z,0.0nm						
QIS	Mount Isa	26.81	260	P	P	05 49 26.2	-0.1
WKZ	Wanaka	26.83	178	IAMs_20	IAMs_20	06 00 16.9	
	comp=Z,11µm,18.0s						
ODZ	Otahua Downs	27.13	176	IAMs_20	IAMs_20	06 00 13.9	
	comp=Z,10µm,18.0s						
STKA	Stephens Creek	27.50	235	P	P	05 49 32.9	+0.6
	comp=Z,182nm,1.1s						
STKA	Stephens Creek	27.50	235	P	P	05 49 32.2	-0.1
	comp=Z,15nm,1.0s,baz=65,slow=9.9,SNR=19						
STKA				S	S	05 54 12.8	0.0
	comp=Z,3.1nm,1.0s,baz=108,slow=20,SNR=1.9						
STKA				LR	LR	06 00 28.3	
	comp=Z,6µm,18.2s,baz=65,slow=37						
	comp=Z,15nm,1.0s						
STKA	Stephens Creek	27.50	235	P	P	05 49 32.6	+0.3
STKA	Stephens Creek	27.50	235	P	P	05 49 31.3	-1.0
STKA	Stephens Creek	27.50	235	P	P	05 49 31.3	-1.0
STKA				pmax	pmax		
	comp=Z,138nm,1.0s						
WHZ	Wether Hill Ro	27.88	180	IAMs_20	IAMs_20	06 00 49.6	
	comp=Z,6µm,18.0s						
HTT	Hallett	30.18	234	P	P	05 49 56.8	+0.5
	comp=Z,6.2nm,1.5s						
AUJCS	Jamestown Cent	30.33	234	P	P	05 49 58.9	+1.4
RAR	Rarotonga	30.62	101	LR	LR	05 59 59.3	
	comp=Z,2µm,20.9s,baz=271,slow=32						
AUMBR	Murray Bridge	30.63	230	P	P	05 50 01.6	+1.5
JAY	Jayapura	30.75	297	LR	LR	06 02 28.0	
	comp=Z,5µm,19.2s,baz=22,slow=37						
GENI	Genyem	31.16	296	P	P	05 50 05.5	+0.5
	comp=Z,50nm,1.4s						
WR8	Warramunga Arr	31.61	261		P	05 50 06.8	-2.1
WB0	Warramunga Arr	31.71	261		P	05 50 07.8	-2.1
WRAB	Tennant Creek	31.75	261	P	P	05 50 11.0	+0.8
WRAB	Tennant Creek	31.75	261	IAMs_20	IAMs_20	06 01 48.0	
	comp=Z,5µm,20.0s						
WRAB	Tennant Creek	31.75	261	*ce*P	P	05 50 08.3	-1.9
WRAB				pmax	pmax		
	comp=Z,20nm,1.7s						
WRA	Warramunga Arr	31.76	261	P	P	05 50 08.0	-2.3
	comp=Z,3.2nm,0.9s,baz=94,slow=8.1,SNR=19						
WRA				PcP	PcP	05 53 03.0	+1.3
	comp=Z,0.9nm,0.8s,baz=92,slow=2.9,SNR=1.9						
WRA				S	S	05 55 14.3	-5.8
	comp=Z,0.7nm,0.9s,baz=95,slow=18,SNR=2.0						
WRA				ScP	ScP	05 56 46.3	+1.5
	comp=Z,0.9nm,1.0s,baz=90,slow=3.0,SNR=2.7						
	comp=Z,3.2nm,0.9s						
WRA	Warramunga Arr	31.76	261	P	P	05 50 07.7	-2.6
BBOO	Buckleboo	32.19	236	P	P	05 50 14.2	+0.3
	comp=Z,39nm,1.0s						
BBOO	Buckleboo	32.19	236	P	P	05 50 14.2	+0.3
BBOO	Buckleboo	32.19	236	P	P	05 50 12.8	-1.1
BBOO				IAmb	IAmb	05 50 39.2	
	comp=Z,34nm,1.0s						
AS31	Alice Springs	32.22	254		P	05 50 12.7	-1.6
ASAR	Alice Springs	32.22	254	P	P	05 50 12.2	-2.1
	comp=Z,8.8nm,0.7s,baz=86,slow=8.3,SNR=48						
ASAR				PcP	PcP	05 53 02.0	-0.9
	comp=Z,1.5nm,0.9s,baz=90,slow=3.3,SNR=1.7						
ASAR				S	S	05 55 18.1	-9.1
	comp=Z,1.0nm,1.1s,baz=72,slow=18,SNR=2.0						
ASAR				ScP	ScP	05 56 46.3	0.0
	comp=Z,1.2nm,1.0s,baz=101,slow=5.1,SNR=3.7						
ASAR				LR	LR	06 02 42.2	
	comp=Z,10µm,20.1s,baz=86,slow=35						
	comp=Z,8.8nm,0.7s						
ASAR	Alice Springs	32.22	254	P	P	05 50 12.6	-1.7
SMPI	Sarmi	32.72	296	P	P	05 50 17.6	-1.1
	comp=Z,33nm,0.5s						
KDU	Kakadu	34.51	274	P	P	05 50 33.6	-0.7
	comp=Z,4.3nm,0.8s						
MTN	Manton Dam	35.75	273	P	P	05 50 43.2	-1.8
MTN				IAmb	IAmb	05 50 45.2	
	comp=Z,87nm,1.8s						
RKPI	Ransiki, Papua	36.89	292	P	P	05 50 58.0	+3.2
WRKA	Warakurna	37.40	252	P	P	05 50 58.3	-0.8
	comp=Z,9.4nm,1.1s						
KNRA	Kununurra	37.47	267	P	P	05 50 59.0	-0.7
	comp=Z,37nm,1.6s						
KNRA	Kununurra	37.47	267		P	05 50 57.9	-1.8
KNRA				IAmb	IAmb	05 51 17.9	
	comp=Z,57nm,1.4s						
FAKI	Fak Fak	37.98	289	IAMs_20	IAMs_20	06 06 53.2	
	comp=Z,3µm,18.0s						
FORT	Forrest	38.27	243	P	P	05 51 06.2	0.0
	comp=Z,47nm,0.7s						
FORT	Forrest	38.27	243		P	05 51 05.3	-0.9
FORT				IAmb	IAmb	05 51 15.7	
	comp=Z,26nm,0.7s						
GUMO	Guam	38.69	323	LR	LR	06 06 40.8	
	comp=Z,2µm,18.1s,baz=134,slow=36						
SIJI	Sorong	39.77	291	LR	LR	06 08 04.9	
	comp=Z,3µm,19.4s,baz=122,slow=37						
SIJI	Sorong	39.77	291	P	P	05 51 17.7	-1.3
	comp=Z,2µmcomp=Z,15nm,0.7s						
SWI	Sorong	39.77	291	P	P	05 51 17.3	-1.7
	comp=Z,27nm,1.3s						
FITZ	Fitzroy Crossi	40.10	263	LR	LR	06 07 37.9	
	comp=Z,8µm,19.2s,baz=94,slow=36						
TBI	Tubuai	40.18	105	*e*P	P	05 51 19.3	-3.0
	comp=Z,2µm,26.0s						
TBI				*e*PP	PP	05 52 50.7	-4.0
	comp=Z,801nm,31.8s						
TBI				*e*S	S	05 57 31.1	+2.2
	comp=Z,8µm,27.5s						
TBI				*e*LQ	LQ	06 00 38.8	
	comp=Z,32µm,26.5s						
TBI				*e*LR	LR	06 02 22.1	
	comp=Z,4µm,27.8s						
TBI				*e*LR	LR	06 02 25.6	
	comp=Z,14µm,26.0s						
PPT2	Papeete2	40.45	96	*e*P	P	05 51 21.9	-2.8
	comp=Z,359nm,23.8s						
PPT2				*e*PP	PP	05 52 53.4	-4.5
	comp=Z,332nm,27.2s						
PPT2				*e*S	S	05 57 33.9	+0.6
	comp=Z,2µm,24.2s						
PPT2				*e*LQ	LQ	06 00 43.9	
	comp=Z,6µm,27.2s						
PPT2				*e*LR	LR	06 02 25.4	
	comp=Z,5µm,27.8s						
PPT2				*e*LR	LR	06 02 32.8	
	comp=Z,6µm,25.8s						
PPT	Papeete	40.45	96	P	P	05 51 22.8	-1.9
	comp=Z,9.0nm,0.7s,baz=270,slow=6.1,SNR=1.7						
PPT				LR	LR	06 04 25.7	
	comp=Z,2µm,19.9s,baz=258,slow=31						
	comp=Z,9.0nm,0.7s						
KRAI	Karang Ratu	41.31	286	P	P	05 51 28.2	-3.6
SOEI	Soe	43.03	275	P	P	05 51 44.5	-1.5
	comp=Z,1µmcomp=Z,54nm,1.3s						
BATI	Baumata	43.49	274	LR	LR	06 09 41.7	
	comp=Z,3µm,20.0s,baz=146,slow=36						
BATI	Baumata	43.49	274	P	P	05 51 50.5	+1.0
	comp=Z,54nm,0.6s						
KMBL	Kambalda	43.59	243	P	P	05 51 49.5	-0.7
	comp=Z,10nm,1.1s						
SANI	Sanana	44.02	286	P	P	05 51 55.2	+1.4
SANI	Sanana	44.02	286	P	P	05 51 52.0	-1.8
	comp=Z,1µmcomp=Z,61nm,1.2s						
PSAC2	Pilbara Seismi	45.17	257	P	P	05 52 02.9	0.0
	comp=Z,25nm,1.2s						
PSAB3	Pilbara Seismi	45.21	257	P	P	05 52 03.2	0.0
	comp=Z,25nm,1.1s						
PSA00	Pilbara Seismi	45.22	257	P	P	05 52 03.0	-0.3
	comp=Z,31nm,1.2s						
PSA00	Pilbara Seismi	45.22	257	P	P	05 52 04.2	+0.9
PSA00	Pilbara Seismi	45.22	257	P	P	05 52 01.9	-1.4
PSA00				IAmb	IAmb	05 52 26.5	
	comp=Z,27nm,0.9s						
PSA00	Pilbara Seismi	45.22	257	P	P	05 52 02.8	-0.5
PSA00				IAmb	IAmb	05 52 26.5	
	comp=Z,19nm,1.1s						
PSAC1	Pilbara Seismi	45.25	257	P	P	05 52 03.2	-0.4
	comp=Z,29nm,1.1s						
MBWA	Marble Bar	45.35	258	P	P	05 52 04.4	+0.1
	comp=Z,39nm,1.2s						
MBWA	Marble Bar	45.35	258	P	P	05 52 05.4	+1.0
MBWA	Marble Bar	45.35	258	P	P	05 52 02.7	-1.7
MBWA				IAmb	IAmb	05 52 27.6	
	comp=Z,32nm,0.9s						
MBWA	Marble Bar	45.35	258	IAMs_20	IAMs_20	06 10 22.8	
	comp=Z,4µm,22.0s						
EDFI	Ende, Flores	45.76	275	P	P	05 52 05.2	-2.5
	comp=Z,558nmcomp=Z,16nm,1.1s						
MEEK	Meekatharra	46.17	250	P	P	05 52 10.5	-0.3
	comp=Z,45nm,0.7s						
MEEK	Meekatharra	46.17	250	P	P	05 52 10.3	-0.5
KLBR	Kellerberrin	47.12	243	P	P	05 52 15.2	-3.0
KLBR	Kellerberrin	47.12	243	P	P	05 52 17.3	-0.9
LUWI	Luwuk	47.37	286	P	P	05 52 19.2	-1.1
	comp=Z,90nm,1.7s						
LBFI	Labuhan Bajo,	47.54	275	P	P	05 52 20.7	-0.9
NWAO	Narrogin (SRO)	47.68	242	P	P	05 52 22.1	-0.4
	comp=Z,33nm,0.9s						
NWAO	Narrogin (SRO)	47.68	242	LR	LR	06 12 16.4	
	comp=Z,4µm,19.0s,baz=90,slow=36						
NWAO	Narrogin (SRO)	47.68	242	P	P	05 52 20.8	-1.7
NWAO				IAmb	IAmb	05 52 34.3	
	comp=Z,25nm,0.8s						
NWAO	Narrogin (SRO)	47.68	242	IAMs_20	IAMs_20	06 11 55.1	
	comp=Z,4µm,20.0s						
NWAO	Narrogin (SRO)	47.68	242	P	P	05 52 20.8	-1.7
NWAO				pmax	pmax		
	comp=Z,25nm,0.8s						
NWAO				MLR	MLR		
	comp=Z,4µm,20.0s						
WBSI	Waikabubak, Su	47.69	273	P	P	05 52 21.8	-1.1
	comp=Z,2µmcomp=Z,1µmcomp=Z,41nm,0.8s						
APSI	Ampana	48.45	285	P	P	05 52 26.4	-2.3
	comp=Z,40nm,1.0s						
MORW	Morawa	48.48	247	P	P	05 52 28.1	-0.6
	comp=Z,21nm,0.9s						
MORW	Morawa	48.48	247	P	P	05 52 28.4	-0.4
MORW	Morawa	48.48	247		P	05 52 27.8	-1.0
DAV	Davao City (W)	48.59	297	LR	LR	06 14 06.1	
	comp=Z,1µm,18.1s,baz=134,slow=38						
KAPI	Kappang	48.73	279	LR	LR	06 12 57.0	
	comp=Z,828nm,19.8s,baz=104,slow=36						
KAPI	Kappang	48.73	279	P	P	05 52 31.4	+0.6
KAPI	Kappang	48.73	279	P	P	05 52 29.5	-1.3
KAPI				IAmb	IAmb	05 52 40.8	
	comp=Z,41nm,1.2s						
KAPI	Kappang	48.73	279	*i* P	P	05 52 29.3	-1.5
KAPI				pmax	pmax		
	comp=Z,21nm,1.1s						
KAPI	Kappang	48.73	279	P	P	05 52 30.1	-0.7
	comp=Z,17nm,1.7s						
MRSI	Marisa	48.74	287	P	P	05 52 31.3	+0.4
	comp=Z,912nmcomp=Z,20nm,0.7s						
MKS	Makassar	48.93	279	P	P	05 52 31.7	-0.7
	comp=Z,39nm,1.9s						
DBNI	Kabupaten Domp	49.03	274	P	P	05 52 32.0	-1.1
	comp=Z,794nmcomp=Z,27nm,1.0s						
SPSI	Sidrap Palu	49.07	281	P	P	05 52 32.4	-1.0
	comp=Z,2µmcomp=Z,30nm,1.6s						
TTSI	Tana Toraja	49.34	282	P	P	05 52 33.9	-1.6
	comp=Z,3µmcomp=Z,33nm,1.4s						
PLAI	Plampang	49.45	274	P	P	05 52 37.5	+1.2
PLAI	Plampang	49.45	274	P	P	05 52 34.7	-1.6
	comp=Z,765nmcomp=Z,30nm,0.8s						
TOLI2	Tolitoli	50.05	287	P	P	05 52 40.7	-0.3
TOLI2	Tolitoli	50.05	287	P	P	05 52 39.4	-1.6
TOLI2				IAmb	IAmb	05 52 50.2	
	comp=Z,58nm,1.4s						
PCI	Palu	50.12	284	P	P	05 52 41.1	-0.4
TWSI	Taliwang, Sumb	50.32	273	P	P	05 52 40.7	-2.3
	comp=Z,1µmcomp=Z,62nm,1.1s						
MPSI	Mapaga	50.55	286	P	P	05 52 42.6	-2.1
	comp=Z,936nmcomp=Z,36nm,0.8s						
KLNI	Mataram	51.16	274	P	P	05 52 47.1	-2.2
	comp=Z,2µmcomp=Z,44nm,1.3s						
TAOE	Nuku Hiva Isla	51.22	87	*e*P	P	05 52 47.4	-2.4
	comp=Z,461nm,24.5s						
TAOE				*e*S	S	06 00 09.6	+1.2
	comp=Z,3µm,25.0s						
TAOE				*e*SS	SS	06 03 40.1	-3.9
	comp=Z,856nm,25.4s						
TAOE				*e*LR	LR	06 07 32.1	
	comp=Z,7µm,25.4s						
JCJ	Chichijima	51.24	330	LR	LR	06 13 28.0	
	comp=Z,1µm,19.9s,baz=131,slow=35						
MTKI	Muara Teweh, K	54.69	282	P	P	05 53 24.3	+8.9
TGY	Tagaytay City	56.19	301	LR	LR	06 17 56.9	
	comp=Z,463nm,18.3s,baz=72,slow=36						
KKM	Kota Kinabalu	56.27	290	P	P	05 53 28.0	+1.1
KKM	Kota Kinabalu	56.27	290	P	P	05 53 26.4	-0.5
	comp=Z,1µmcomp=Z,22nm,1.8s						
JHJ	Hachijo jima 2	57.43	332	LR	LR	06 18 16.3	
	comp=Z,744nm,18.9s,baz=122,slow=36						
SBUM	Sibu	58.43	284	P	P	05 53 43.3	+1.3
SBUM	Sibu	58.43	284	P	P	05 53 48.6	+6.6
JOW	Kunigami	58.80	318	LR	LR	06 19 57.5	
	comp=Z,1µm,18.1s,baz=138,slow=37						
LEM	Lembang	59.66	273	LR	LR	06 21 02.7	
	comp=Z,2µm,19.1s,baz=144,slow=38						
VNDA	Vanda	59.69	182	P	P	05 53 50.9	+1.2
	comp=Z,1.5nm,1.0s,baz=0.0,slow=5.1,SNR=1.3						
VNDA				S	S	06 01 59.2	-0.5
	comp=Z,1.9nm,0.6s,baz=355,slow=12,SNR=2.5						
VNDA				LR	LR	06 18 06.9	
	comp=Z,864nm,18.1s,baz=11,slow=35						
	comp=Z,1.5nm,1.0s						
JMN	Monobe	60.75	328	P	P	05 53 59.9	+2.2
MJAR	Matsushiro Arr	61.01	333	P	P	05 53 58.6	-0.8
	comp=Z,9.4nm,1.0s,baz=159,slow=7.9,SNR=13						
MJAR				LR	LR	06 21 27.4	

comp=Z,423nm,18.7s,baz=163,slow=37
comp=Z,9.4nm,1.0s
MJAR Matsushiro Arr 61.01 333 P **P** **05 53 58.5 -0.8**
MJAR Matsushiro Arr 61.01 333 P **P** **05 53 58.5 -0.8**
MJAR pmax pmax
comp=Z,11nm,1.2s
MAJO Matsushiro 61.01 333 P **P** **05 53 59.7 +0.4**
MAJO Matsushiro 61.01 333 P **P** **05 53 58.6 -0.7**
MAJO Matsushiro 61.01 333 *i*P **P** **05 53 58.5 -0.8**
MAJO pmax pmax
comp=Z,12nm,0.9s
MJB9 Matsu-Tunnel 61.01 333 P **P** **05 53 59.3 -0.1**
JNU Nakatsue 61.86 325 LR LR 06 17 23.7
comp=Z,582nm,21.4s,baz=126,slow=33
MDSI Maura Dua 63.62 274 P P 05 54 25.0 +7.7
QZH2 Quanzhou 64.19 310 P **P** **05 54 23.0 +2.2**
QZH2 S **S** **06 02 58.9 +0.9**
QZH2 pmax pmax
comp=Z,340nm,6.6s
QZH2 L L
comp=Z,810nm,19.2s
QZH2 L L
comp=Z,920nm,19.2s
QZH2 L L
comp=Z,920nm,20.3s
JKA Kamikawa-asahi 65.94 340 **P** **05 54 31.4 -0.4**
JKA IAmb IAmb 05 54 53.8
comp=Z,19nm,1.1s
ASAJ Asahikawa 65.94 340 LR LR 06 23 05.6
comp=Z,638nm,18.3s,baz=171,slow=36
ASAJ Asahikawa 65.94 340 P **P** **05 54 31.4 -0.4**
ASAJ pmax pmax
comp=Z,19nm,1.1s
KSRS Korea Array 66.71 326 P **P** **05 54 37.1 +0.3**
comp=Z,0.5nm,0.4s,baz=139,slow=6.7,SNR=4.7
comp=Z,0.5nm,0.4s
QIZ Qiongzhong 67.82 300 P **P** **05 54 44.4 +0.1**
QIZ PP **PP** **05 57 14.7 +0.6**
QIZ S **S** **06 03 45.6 +3.2**
QIZ pmax pmax
comp=Z,300nm,6.5s
QIZ L L
comp=Z,420nm,14.7s
QIZ L L
comp=Z,310nm,18.6s
QIZ L L
comp=Z,810nm,25.5s
NJ2 Nanjing 68.38 316 *e*P **P** **05 54 47.3 -0.2**
NJ2 pmax pmax
comp=Z,29nm,0.5s
NJ2 L L
comp=Z,2µm,18.8s
NJ2 L L
comp=Z,3µm,16.3s
NJ2 L L
comp=Z,3µm,17.7s
YSS Yuzhno-Sakhali 68.44 342 IAMs_20 IAMs_20 06 25 18.0
comp=Z,2µm,18.0s
YSS Yuzhno-Sakhali 68.44 342 *e*P **P** **05 54 46.7 -0.9**
YSS *e* 05 57 13.8
YSS *e*S **S** **06 03 42.8 -5.9**
YSS pmax pmax
comp=Z,20nm,1.1s
YSS pmax pmax
comp=Z,700nm,7.2s
YSS smax smax
comp=N,700nm,10.2s
YSS smax smax
comp=E,700nm,8.2s
YSS MLR MLR
comp=Z,2µm,18.0s
COCO West Island 68.50 264 IAMs_20 IAMs_20 06 23 52.0
comp=Z,2µm,19.0s
USRK Ussuriysk Ar. 70.00 333 P **P** **05 54 56.3 -1.0**
comp=Z,4.2nm,0.8s,baz=151,slow=3.3,SNR=9.3
comp=Z,4.2nm,0.8s
KULM Kulim 70.19 283 P **P** **05 55 00.8 +1.6**
KULM Kulim 70.19 283 P P 05 55 08.6 +9.4
CNSH ChangSha 70.19 310 P **P** **05 55 02.2 +3.3**
CNSH S S 06 04 21.1 +11
CNSH pmax pmax
comp=Z,370nm,5.4s
CNSH L L
comp=Z,590nm,17.8s
CNSH L L
comp=Z,590nm,21.5s
CNSH L L
comp=Z,690nm,17.9s
WHN Wuhan 70.52 313 P P 05 55 06.1 +5.3
WHN pmax pmax
comp=Z,750nm,8.8s
WHN L L
comp=Z,2µm,12.1s
WHN L L
comp=Z,2µm,15.8s
WHN L L
comp=Z,2µm,16.6s
GULI GuiLin 70.56 306 P P 05 55 05.8 +4.6
GULI S **S** **06 04 18.6 +3.9**
GULI pmax pmax
comp=Z,9.0nm,1.1s
GULI pmax pmax
comp=Z,330nm,5.2s
GULI L L
comp=Z,550nm,15.3s
GULI L L
comp=Z,470nm,17.2s
GULI L L
comp=Z,800nm,18.4s
SHEM Shenya Is, Ala 70.57 4 LR LR 06 22 56.9
comp=Z,1µm,19.0s,baz=190,slow=33
PET Petropavlovsk 71.11 354 *e*P P 05 54 59.0 -4.9
PET *e*S **S** **06 04 15.2 -4.7**
PET MLR MLR
comp=Z,800nm,16.0s
DL2 Dalian 71.21 323 P **P** **05 55 06.6 +1.8**
DL2 S **S** **06 04 26.5 +4.9**
DL2 pmax pmax
comp=Z,50nm,1.2s
DL2 pmax pmax
comp=Z,470nm,5.6s
DL2 L L
comp=Z,680nm,16.6s
DL2 L L
comp=Z,520nm,19.0s
DL2 L L
comp=Z,1µm,20.0s
PEA0B Petropavlovsk- 71.29 354 **P** **05 55 05.0 +0.1**
PEA0B Petropavlovsk- 71.29 354 P **P** **05 55 05.1 +0.1**
PEA0B pmax pmax
comp=Z,127nm,1.5s
PETK Petropavlovsk- 71.29 354 P **P** **05 55 05.2 +0.2**
comp=Z,14nm,0.9s,baz=162,slow=4.9,SNR=9.3
PETK LR LR 06 22 44.9
comp=Z,1µm,20.1s,baz=162,slow=33
comp=Z,14nm,0.9s
PETK Petropavlovsk- 71.29 354 **P** **05 55 04.6 -0.4**
MDJ Mudanjiang 71.37 332 P **P** **05 55 05.5 -0.2**
MDJ pP pP 05 55 08.3 -1.3
MDJ PcP **PcP** **05 55 25.0 -0.3**
MDJ S **S** **06 04 24.7 +1.4**
MDJ SS **SS** **06 08 59.7 +1.3**
MDJ pmax pmax
comp=Z,27nm,2.1s
MDJ pmax pmax
comp=Z,660nm,6.9s
MDJ L L
comp=Z,780nm,16.5s
MDJ L L
comp=Z,750nm,17.9s
MDJ L L
comp=Z,1µm,19.9s
GSI Gunungsitoli 71.71 278 IAMs_20 IAMs_20 06 27 03.3
comp=Z,2µm,21.0s
GSI Gunungsitoli 71.71 278 P P 05 55 17.0 +8.6
QSPA South Pole Qui 72.11 180 P **P** **05 55 09.9 -0.2**
comp=Z,18nm,1.0s,baz=35,slow=2.2,SNR=27
QSPA S **S** **06 04 35.7 +4.0**
comp=Z,1.1nm,1.1s,baz=12,slow=20,SNR=1.4
QSPA LR LR 06 23 45.1
comp=Z,1µm,19.3s,baz=32,slow=33
comp=Z,18nm,1.0s
QSPA South Pole Qui 72.11 180 P **P** **05 55 10.2 +0.1**
TIA Tai'an 72.12 319 P **P** **05 55 07.1 -3.3**
TIA S **S** **06 04 34.3 +2.0**
TIA SS **SS** **06 09 06.8 -3.4**
TIA pmax pmax
comp=Z,350nm,5.9s
TIA L L
comp=Z,500nm,15.7s
TIA L L
comp=Z,710nm,15.7s
TIA L L
comp=Z,1µm,12.8s
BNX BinXian 73.22 332 ⇑P **P** **05 55 16.2 -0.5**
BNX S **SKiKP** **06 04 48.2 -0.3**
BNX pmax pmax
comp=Z,11nm,0.7s
BNX pmax pmax
comp=Z,420nm,6.1s
BNX L L
comp=Z,600nm,15.7s
BNX L L
comp=Z,530nm,16.9s
BNX L L
comp=Z,810nm,19.6s
GRNR Gornyy 73.79 340 ⇑*i*P **P** **05 55 21.5 +1.6**
GRNR pmax pmax
comp=Z,10.0nm,1.2s
GRNR MLR MLR
comp=E,320nm,17.0s
GRNR MLR MLR
comp=N,390nm,16.0s
GRNR MLR MLR
comp=Z,530nm,17.0s
GYA Guiyang 74.02 305 ⇓P **P** **05 55 23.8 +1.8**
GYA pmax pmax
comp=Z,15nm,0.6s
LYN LuoYang 74.14 315 P **P** **05 55 24.9 +2.5**
LYN S **S** **06 04 59.2 +3.9**
LYN pmax pmax
comp=Z,17nm,0.6s
LYN pmax pmax
comp=Z,570nm,7.3s
LYN L L
comp=Z,2µm,16.5s
LYN L L
comp=Z,1µm,15.8s
LYN L L
comp=Z,2µm,19.6s
KLR Kul'dur 74.16 336 LR LR 06 28 20.3
comp=Z,573nm,18.5s,baz=151,slow=36
KLR Kul'dur 74.16 336 *ce*P **P** **05 55 21.7 -0.5**
KLR pmax pmax
comp=Z,8.0nm,1.7s
HNS HongShan 74.38 319 ⇓P **P** **05 55 26.9 +3.2**
HNS S **S** **06 04 56.2 -1.6**
HNS SS **SS** **06 09 46.0 +1.5**
HNS pmax pmax
comp=Z,13nm,1.0s
HNS pmax pmax
comp=Z,530nm,7.1s
HNS L L
comp=Z,600nm,15.7s
HNS L L
comp=Z,690nm,15.8s
HNS L L
comp=Z,840nm,17.8s
BJI2 Beijing 75.11 321 P **P** **05 55 28.1 +0.2**
BJI2 sP **pwP** **05 55 34.8 +0.3**
BJI2 PP **PP** **05 58 18.1 +1.7**
BJI2 S **S** **06 05 04.3 -1.6**
BJI2 SS **SS** **06 09 54.8 -0.9**
BJI2 pmax pmax
comp=Z,160nm,6.7s
BJI2 L L
comp=Z,380nm,16.4s
BJI2 L L
comp=Z,260nm,17.4s
BJI2 L L
comp=Z,570nm,18.6s
RPN Rapa Nui 75.80 114 LR LR 06 26 17.8
comp=Z,935nm,18.3s,baz=257,slow=34
TIY Taiyuan 76.01 318 P **P** **05 55 35.7 +2.5**
TIY S **S** **06 05 17.6 +1.4**
TIY pmax pmax
comp=Z,420nm,6.1s
TIY L L
comp=Z,990nm,20.2s
TIY L L
comp=Z,550nm,18.3s
TIY L L
comp=Z,840nm,14.9s
XAN Xi'an 76.28 313 ⇑P **P** **05 55 36.6 +1.8**
XAN pP pwP 05 55 42.8 +1.4
XAN S **S** **06 05 21.8 +2.5**
XAN pmax pmax
comp=Z,6.0nm,1.4s
XAN pmax pmax
comp=Z,460nm,6.9s
XAN L L
comp=Z,1µm,21.9s
XAN L L
comp=Z,600nm,23.4s
XAN L L
comp=Z,1µm,22.0s
KMI2 Kunming 76.50 302 P **P** **05 55 37.7 +1.3**
KMI2 S **S** **06 05 25.4 +3.0**
KMI2 pmax pmax
comp=Z,18nm,1.0s
KMI2 pmax pmax
comp=Z,310nm,5.4s
KMI2 L L
comp=Z,600nm,17.7s
KMI2 L L
comp=Z,650nm,20.2s
KMI2 L L
comp=Z,820nm,18.1s
HEH HeiHe 76.69 335 *e*P **P** **05 55 37.1 +0.5**
HEH pP **pwP** **05 55 41.6 -1.7**
HEH S **S** **06 05 22.2 -0.7**
HEH pmax pmax
comp=Z,12nm,1.0s
HEH pmax pmax
comp=Z,550nm,7.9s
HEH L L
comp=Z,490nm,19.0s
HEH L L
comp=Z,720nm,17.5s
HEH L L
comp=Z,1µm,16.8s
CMAR Chiang Mai Arr 76.80 295 P **P** **05 55 37.8 -0.1**
comp=Z,1.9nm,0.5s,baz=114,slow=5.8,SNR=21
CMAR S **S** **06 05 28.7 +3.3**
comp=Z,0.4nm,0.3s,baz=124,slow=18,SNR=1.0
CMAR LR LR 06 29 52.7
comp=Z,128nm,19.9s,baz=115,slow=36
comp=Z,1.9nm,0.5s
CMAR Chiang Mai Arr 76.80 295 P **P** **05 55 38.0 0.0**
CHTO Chiang Mai 76.94 295 P **P** **05 55 40.3 +1.5**
CHTO Chiang Mai 76.94 295 P **P** **05 55 39.7 +0.9**
CHTO Chiang Mai 76.94 295 P **P** **05 55 39.7 +0.9**
CHTO pmax pmax
comp=Z,13nm,0.9s
CHTO Chiang Mai 76.94 295 P **P** **05 55 40.6 +1.8**
comp=Z,546nmcomp=Z,16nm,0.9s
XLT XiLinHaoTe 77.64 324 *e*P **P** **05 55 44.0 +1.7**
XLT S **S** **06 05 36.7 +3.0**
XLT pmax pmax
comp=Z,9.0nm,0.8s
XLT pmax pmax
comp=Z,440nm,6.5s
XLT L L
comp=Z,640nm,16.8s
XLT L L
comp=Z,540nm,20.8s
PZH PanZhiHua 77.92 303 P **P** **05 55 45.8 +1.5**
PZH S **S** **06 05 35.1 -2.5**
PZH pmax pmax
comp=Z,310nm,8.3s
PZH L L
comp=Z,260nm,16.2s
PZH L L
comp=Z,440nm,18.1s
PZH L L
comp=Z,370nm,20.0s
HHC Hu-ho-hao-te 78.40 320 *e*P **P** **05 55 47.8 +1.2**
HHC sP PcP 05 55 58.5 +2.7
HHC S **S** **06 05 41.0 -1.1**
HHC SKS **SKSac** **06 05 59.1 -2.0**
HHC SS **SS** **06 10 49.2 +3.6**
HHC pmax pmax
comp=Z,5.0nm,0.9s
HHC pmax pmax
comp=Z,280nm,5.3s
HHC L L
comp=Z,460nm,17.5s
HHC L L
comp=Z,450nm,17.3s
HHC L L
comp=Z,590nm,17.3s
CD2 Chengdu 78.42 308 P **P** **05 55 47.2 +0.3**
CD2 S **S** **06 05 43.4 +0.7**
CD2 pmax pmax
comp=Z,750nm,7.0s
CD2 L L
comp=Z,2µm,19.0s
CD2 L L
comp=Z,860nm,15.9s
CD2 L L
comp=Z,970nm,18.4s
MA2 Magadan 78.49 351 LR LR 06 27 46.1
comp=Z,654nm,19.4s,baz=171,slow=34
MA2 Magadan 78.49 351 P **P** **05 55 46.6 +0.1**
MA2 Magadan 78.49 351 P **P** **05 55 46.2 -0.3**
MA2 Magadan 78.49 351 *ce*P **P** **05 55 45.5 -0.9**
MA2 pmax pmax
comp=Z,49nm,2.5s
MA2 Magadan 78.49 351 P **P** **05 55 45.6 -0.9**
comp=Z,649nmcomp=Z,19nm,1.6s
MAW Mawson 79.15 202 LR LR 06 27 56.0
comp=Z,948nm,18.3s,baz=94,slow=34
BTO2 Baotou 79.38 319 *e*P **P** **05 55 53.8 +1.8**
BTO2 pP **PcP** **05 56 00.2 +0.1**
BTO2 sP **pwP** **05 56 02.5 +3.9**
BTO2 pmax pmax
comp=Z,10.0nm,0.6s
BTO2 pmax pmax
comp=Z,850nm,6.6s
ZEA Zeya 79.46 337 *e*P **P** **05 55 53.1 +1.2**
ZEA *e*S **S** **06 05 56.2 +3.6**
ZEA pmax pmax
comp=Z,10.0nm,0.7s
ZEA pmax pmax
comp=Z,400nm,6.3s
ZEA smax smax
comp=N,100nm,14.3s
ZEA smax smax
comp=E,400nm,11.0s
TNCH TengChong 79.88 300 P **P** **05 55 56.0 +0.8**
TNCH S **S** **06 05 58.8 +0.1**
TNCH pmax pmax
comp=E,500nm,6.4s
LZH Lanzhou 80.90 312 P **P** **05 56 03.5 +3.1**
LZH sP PcP 05 56 11.0 +4.1
LZH S **S** **06 06 10.1 +1.1**
LZH SS **SS** **06 11 23.6 +0.1**
LZH pmax pmax
comp=E,18nm,1.1s
LZH pmax pmax
comp=E,540nm,6.0s
LZH L L
comp=E,340nm,18.4s
LZH L L
comp=E,740nm,17.7s
LZH L L
comp=E,890nm,18.2s
LZDM Lanzhou Array 80.94 312 P **P** **05 56 01.0 +0.2**
comp=E,0.8nm,0.3s,baz=105,slow=11,SNR=1.5
LZDM S **S** **06 06 13.6 +3.9**
comp=E,1.4nm,0.3s,baz=97,slow=23,SNR=1.7
LZDM LR LR 06 30 58.1
comp=E,434nm,19.1s,baz=110,slow=35
comp=E,0.8nm,0.3s
O14K Tigyukauivet M 80.95 15 IAMs_20 IAMs_20 06 28 03.1
comp=Z,1µm,20.0s
O15K Ungalikthiuk R 81.26 16 IAMs_20 IAMs_20 06 26 00.3
comp=Z,1µm,20.0s
N14K Kuskokwak Cree 81.43 15 IAMs_20 IAMs_20 06 28 28.9
comp=Z,1µm,20.0s
SEY Seymchan 81.52 353 LR LR 06 29 00.5
comp=Z,1µm,19.8s,baz=159,slow=33
SEY Seymchan 81.52 353 *ce*P **P** **05 56 01.2 -1.6**
SEY pmax pmax
comp=Z,55nm,1.7s
N15K Kwethluk River 82.04 16 IAMs_20 IAMs_20 06 28 37.1
comp=Z,1µm,20.0s
O16K Kokwok River B 82.08 17 IAMs_20 IAMs_20 06 26 04.1
comp=Z,1µm,20.0s
M14K Bethel 82.09 14 IAMs_20 IAMs_20 06 27 24.0
comp=Z,1µm,19.0s
KDAK Kodiak Island 82.25 20 LR LR 06 28 43.3
comp=Z,484nm,18.2s,baz=218,slow=33
L14K Kuka Creek 82.44 14 IAMs_20 IAMs_20 06 27 55.6
comp=Z,1µm,20.0s
M16K Timber Creek 83.06 16 IAMs_20 IAMs_20 06 29 18.1
comp=Z,1µm,21.0s
MORE Moreh 83.06 298 IAMs_20 IAMs_20 06 36 08.9
comp=Z,570nm,20.0s
N17K Nushagak Hills 83.11 17 IAMs_20 IAMs_20 06 27 30.4
comp=Z,1µm,20.0s
BELA Belgrano 2 83.50 175 P **P** **05 56 12.1 -1.1**
L16K Owhat River 83.53 15 IAMs_20 IAMs_20 06 29 33.9
comp=Z,1µm,19.0s
K15K Wolf Creek Mou 83.54 14 IAMs_20 IAMs_20 06 27 47.7
comp=Z,1µm,21.0s
N18K Kilae Creek 83.60 17 IAMs_20 IAMs_20 06 33 06.2
comp=Z,1µm,19.0s
O19K Port Alsworth 83.65 18 P **P** **05 56 13.7 -0.3**
O19K IAmb IAmb 05 56 16.6
comp=Z,22nm,1.1s
ILSW Iliamna Southw 83.83 19 P **P** **05 56 14.1 -0.9**
CNPM China Poot 84.06 20 P **P** **05 56 15.7 -0.4**
N19K Bonanza Creek 84.10 18 IAMs_20 IAMs_20 06 33 22.6
comp=Z,939nm,19.0s
CIT Chita 84.12 330 *e*P **P** **05 56 16.8 +0.1**
CIT *e* 05 56 24.8
CIT pmax pmax
comp=Z,96nm,2.8s
RED Redoubt Volcan 84.29 18 P **P** **05 56 16.3 -1.0**
J16K Anvik River 84.62 14 **P** **05 56 19.2 +0.4**
J16K IAmb IAmb 05 56 59.6
comp=Z,31nm,1.4s
J16K IAMs_20 IAMs_20 06 28 42.1
comp=Z,1µm,21.0s
L18K Granite Mounta 84.66 16 P **P** **05 56 19.6 +0.5**
L18K IAMs_20 IAMs_20 06 26 51.3
comp=Z,1µm,22.0s
K17K Iditarod 84.67 15 P **P** **05 56 19.4 +0.2**
ANM Nome 84.78 11 P **P** **05 56 19.4 -0.2**
ANM IAmb IAmb 05 56 59.4
comp=Z,25nm,1.5s
ANM IAMs_20 IAMs_20 06 29 13.2
comp=Z,1µm,20.0s
ANM Nome 84.78 11 P **P** **05 56 19.4 -0.2**
ANM pmax pmax
comp=Z,25nm,1.5s
ULN Ulaanbaatar 85.06 324 P **P** **05 56 22.3 +0.7**
ULN IAmb IAmb 05 56 33.5
comp=Z,18nm,1.0s
ULN Ulaanbaatar 85.06 324 *ce*P **P** **05 56 21.8 +0.2**
ULN pmax pmax
comp=Z,31nm,2.5s
ULN Ulaanbaatar 85.06 324 P **P** **05 56 23.1 +1.5**
L19K White Mountain 85.12 17 **P** **05 56 21.3 -0.2**
L19K IAmb IAmb 05 56 25.4
comp=Z,24nm,1.1s
L19K IAMs_20 IAMs_20 06 28 31.4
comp=Z,968nm,20.0s
I17K Unalakleet 85.12 13 IAMs_20 IAMs_20 06 29 30.1
comp=Z,1µm,20.0s
SLKM Skilak Lake 85.14 19 **P** **05 56 20.5 -1.1**
SLKM IAmb IAmb 05 56 25.1
comp=Z,21nm,1.1s
TNA Tin City 85.24 10 **P** **05 56 21.1 -0.7**
YAK Yakutsk 85.25 343 LR LR 06 34 21.8
comp=Z,735nm,18.5s,baz=140,slow=36
YAK Yakutsk 85.25 343 IAMs_20 IAMs_20 06 35 08.5
comp=Z,1µm,18.0s
YAK Yakutsk 85.25 343 *e*P **P** **05 56 21.5 -0.5**
YAK *e**PP **pwP** **05 56 29.7 +0.9**
YAK *e*PPP PPP 06 01 31.2
YAK *e*S **SKSac** **06 06 46.4 +0.3**
YAK *e*SS **SS** **06 12 26.5 0.0**
YAK *e*SSS SSS 06 15 57.8
YAK pmax pmax
comp=Z,65nm,1.5s
YAK pmax pmax

comp=N,18nm,1.5s
YAK pmax pmax
comp=E,8.0nm,1.4s
YAK smax smax
comp=N,181nm,4.3s
YAK smax smax
comp=E,176nm,4.7s
YAK MLR MLR
comp=Z,768nm,18.0s
YAK MLR MLR
comp=N,617nm,17.0s
YAK MLR MLR
comp=E,417nm,18.0s
O22K Cooper Landing 85.28 20 IAMs_20 IAMs_20 06 31 30.9
comp=Z,1µm,20.0s
GTA2 Gaotai 85.37 314 *e*P **P 05 56 24.7 +1.3**
GTA2 pP sP 05 56 27.6 -0.8
GTA2 S **SKSac 06 06 48.7 +0.4**
GTA2 pmax pmax
comp=Z,5.0nm,1.0s
GTA2 pmax pmax
comp=Z,420nm,7.2s
GTA2 L L
comp=Z,720nm,18.5s
GTA2 L L
comp=Z,550nm,18.2s
GTA2 L L
comp=Z,740nm,21.3s
SONM Songino Array 85.41 324 P **P 05 56 23.3 0.0**
comp=Z,3.9nm,1.1s,baz=142,slow=4.9,SNR=14
SONM LR LR 06 33 41.4
comp=Z,452nm,19.0s,baz=111,slow=35
comp=Z,3.9nm,1.1s
SONM Songino Array 85.41 324 P **P 05 56 24.8 +1.4**
SONM IAmb IAmb 05 56 35.9
comp=Z,39nm,1.6s
SONM Songino Array 85.41 324 P **P 05 56 24.8 +1.4**
SONM pmax pmax
comp=Z,39nm,1.6s
J18K Innoko River 85.70 15 **P 05 56 23.6 -0.7**
J18K IAmb IAmb 05 57 03.5
comp=Z,22nm,1.2s
BILL Bilibino 85.74 359 P **P 05 56 23.5 -0.8**
BILL Bilibino 85.74 359 *ce*P **P 05 56 24.4 +0.1**
BILL pmax pmax
comp=Z,34nm,1.1s
KCPM Cahto Peak 85.75 46 P **P 05 56 24.4 -0.8**
KCPM IAmb IAmb 05 56 28.1
comp=Z,30nm,1.1s
SYO Syowa Base 85.81 196 ⇓*e*P **P 05 56 29.6 +4.7**
KMRM Mail Ridge 85.91 46 **P 05 56 26.4 +0.4**
CVS Carmenet Viney 85.92 48 IAMs_20 IAMs_20 06 42 02.4
comp=Z,2µm,19.0s
F15K North Star Dit 85.94 11 **P 05 56 25.7 +0.3**
F15K IAmb IAmb 05 57 05.7
comp=Z,39nm,1.9s
F15K IAMs_20 IAMs_20 06 29 48.0
comp=Z,1µm,20.0s
G16K Koyuk River 86.10 12 **P 05 56 25.6 -0.6**
G16K IAmb IAmb 05 57 05.8
comp=Z,21nm,1.2s
G16K IAMs_20 IAMs_20 06 31 05.1
comp=Z,1µm,20.0s
H17K Granite Mounta 86.20 13 **P 05 56 26.2 -0.5**
H17K IAMs_20 IAMs_20 06 30 33.0
comp=Z,946nm,20.0s
PKD Bear Valley Ra 86.26 50 P **P 05 56 26.5 -1.3**
K20K Telida 86.29 16 IAMs_20 IAMs_20 06 36 20.3
comp=Z,891nm,19.0s
J19K Poorman 86.41 15 **P 05 56 28.0 +0.2**
J19K IAMs_20 IAMs_20 06 31 32.5
comp=Z,919nm,20.0s
PPLA Purkeypile 86.43 17 IAMs_20 IAMs_20 06 35 22.1
comp=Z,950nm,18.0s
O02D Mt. Diablo Mer 86.52 46 P **P 05 56 28.2 -0.8**
O02D IAmb IAmb 05 56 32.5
comp=Z,15nm,0.8s
GHO Glory Hole Cre 86.52 19 IAMs_20 IAMs_20 06 32 32.5
comp=Z,954nm,19.0s
H18K Honhosa River 86.73 14 IAMs_20 IAMs_20 06 30 18.9
comp=Z,1µm,20.0s
SML Sawmill 86.73 19 IAMs_20 IAMs_20 06 32 00.2
comp=Z,921nm,19.0s
SUTB Sutter Butte 86.79 47 P **P 05 56 29.4 -0.8**
SUTB IAmb IAmb 05 56 34.3
comp=Z,12nm,0.8s
RAGM Ragged Mountai 86.90 21 IAMs_20 IAMs_20 06 37 03.7
comp=Z,1µm,19.0s
N02D Trinity Center 86.93 45 P **P 05 56 30.9 -0.1**
M02C Callahan 87.02 45 P **P 05 56 31.7 +0.3**
M02C IAmb IAmb 05 56 32.8
comp=Z,14nm,1.1s
DIV Divide 87.06 21 IAMs_20 IAMs_20 06 30 20.9
comp=Z,909nm,19.0s
OSI Osito Audit: C 87.06 52 IAMs_20 IAMs_20 06 29 51.7
comp=Z,1µm,19.0s
ORV Oroville 87.13 47 P **P 05 56 30.7 -1.2**
ORV IAMs_20 IAMs_20 06 29 38.2
comp=Z,2µm,20.0s
ORV Oroville 87.13 47 P **P 05 56 30.7 -1.2**
ORV pmax pmax
comp=Z,8.0nm,1.1s
ELIB Princess Elisa 87.19 190 *d*P **P 05 56 33.3 +1.5**
comp=Z,9.4nm,1.4s
WELL Weller Preserv 87.19 48 IAMs_20 IAMs_20 06 28 45.0
comp=Z,1µm,20.0s
AFDM Forest Hills D 87.23 48 P **P 05 56 31.6 -0.8**
F17K Baldwin Pennin 87.24 12 **P 05 56 31.0 -0.7**
F17K IAmb IAmb 05 56 44.4
comp=Z,38nm,1.6s
F17K IAMs_20 IAMs_20 06 32 29.3
comp=Z,1µm,19.0s
BERG Berg Lake 87.25 22 IAMs_20 IAMs_20 06 33 31.0
comp=Z,1µm,19.0s
O03E Paynes Creek 87.25 46 **P 05 56 31.1 -1.4**
O03E IAmb IAmb 05 56 44.0
comp=Z,12nm,0.9s
O03E IAMs_20 IAMs_20 06 27 24.3
comp=Z,2µm,19.0s
CMB Columbia Colle 87.26 49 **P 05 56 31.4 -1.2**
CMB IAmb IAmb 05 56 35.9
comp=Z,12nm,1.0s
CMB IAMs_20 IAMs_20 06 39 31.8
comp=Z,1µm,18.0s
CMB Columbia Colle 87.26 49 P **P 05 56 31.4 -1.2**
CMB pmax pmax
comp=Z,12nm,1.0s
CMB MLR MLR
comp=Z,1µm,18.0s
YBH Yreka Blue Hor 87.27 45 LR LR 06 30 57.0
comp=Z,65nm,18.0s,baz=259,slow=32
PASC Pasadena Art C 87.29 53 IAMs_20 IAMs_20 06 26 26.8
comp=Z,1µm,20.0s
VES Vestal, Richgr 87.29 51 P **P 05 56 32.0 -0.7**
VES IAmb IAmb 05 56 44.0
comp=Z,30nm,1.4s
VES IAMs_20 IAMs_20 06 30 24.8
comp=Z,1µm,20.0s
G18K Tagagawik 87.30 13 **P 05 56 31.9 -0.2**
G18K IAmb IAmb 05 57 11.9
comp=Z,21nm,1.4s
G18K IAMs_20 IAMs_20 06 30 48.0
comp=Z,1µm,20.0s
KTH Kantishna Hill 87.30 17 IAMs_20 IAMs_20 06 35 49.2
comp=Z,931nm,19.0s
TRF Thorofare Moun 87.40 17 IAMs_20 IAMs_20 06 30 55.8
comp=Z,896nm,20.0s
MWC Mount Wilson 87.41 53 IAMs_20 IAMs_20 06 25 47.9
comp=Z,1µm,21.0s
GOMU GeErMu 87.46 309 P **P 05 56 33.5 -0.5**
GOMU pP sP 05 56 36.6 -2.5
GOMU sP pwP 05 56 40.7 -0.7
GOMU SS SS 06 13 06.2 +5.4
GOMU pmax pmax
comp=Z,2.0nm,0.5s
GOMU L L
comp=Z,490nm,19.0s
GOMU L L
comp=Z,580nm,19.6s
GOMU L L
comp=Z,940nm,19.6s
M03C McCloud 87.46 45 P **P 05 56 32.8 -0.7**
M03C IAmb IAmb 05 56 36.6
comp=Z,17nm,0.8s
CRQM Cirque 87.70 22 IAMs_20 IAMs_20 06 33 58.2
comp=Z,841nm,18.0s
TGL Tana Glacier 87.81 22 IAMs_20 IAMs_20 06 35 01.7
comp=Z,959nm,19.0s
G19K Purcell Mounta 87.86 14 IAMs_20 IAMs_20 06 30 43.6
comp=Z,2µm,20.0s
BAR Barrett 87.86 55 IAMs_20 IAMs_20 06 34 19.2
comp=Z,1µm,19.0s
MCK McKinley 88.01 18 IAMs_20 IAMs_20 06 30 34.8
comp=Z,1µm,21.0s
C16K Lisburne Hills 88.15 10 IAMs_20 IAMs_20 06 30 35.2
comp=Z,938nm,20.0s
E18K Tukpahlearik C 88.22 12 IAMs_20 IAMs_20 06 31 00.2
comp=Z,2µm,20.0s
F19K Shaleruckik Mo 88.29 13 P **P 05 56 36.6 -0.1**
F19K IAmb IAmb 05 57 16.8
comp=Z,15nm,1.4s
F19K IAMs_20 IAMs_20 06 31 38.1
comp=Z,1µm,20.0s
BORC Borrego Spring 88.29 54 P **P 05 56 36.5 -1.1**
BORC IAmb IAmb 05 56 41.0
comp=Z,13nm,0.9s
I21K Tanana 88.30 16 IAMs_20 IAMs_20 06 30 19.1
comp=Z,1µm,21.0s
RDOG Red Dog Mine 88.36 11 IAMs_20 IAMs_20 06 30 53.7
comp=Z,1µm,21.0s
CLC China Lake 88.39 52 P **P 05 56 37.8 -0.2**
CLC IAmb IAmb 05 56 40.8
comp=Z,17nm,1.1s
CLC China Lake 88.39 52 P **P 05 56 37.8 -0.2**
CLC pmax pmax
comp=Z,17nm,1.1s
PFO Pinyon Flats O 88.39 54 LR LR 06 28 32.7
comp=Z,1µm,19.9s,baz=250,slow=30
PFO Pinyon Flats O 88.39 54 P **P 05 56 38.2 0.0**
PFO Pinyon Flats O 88.39 54 P **P 05 56 38.2 0.0**
PFO pmax pmax
comp=Z,9.0nm,1.2s
TIN Tinemaha, Big 88.41 50 P **P 05 56 38.6 +0.4**
TIN Tinemaha, Big 88.41 50 P **P 05 56 38.6 +0.4**
TIN pmax pmax
comp=Z,53nm,0.3s
H21K Melozitna Rive 88.47 15 IAMs_20 IAMs_20 06 32 36.9
comp=Z,966nm,20.0s
ZAK Zakamensk 88.49 325 *e*P **P 05 56 38.4 +0.1**
ZAK pmax pmax
comp=Z,15nm,2.1s
S31K Pelican 88.53 26 IAMs_20 IAMs_20 06 33 46.1
comp=Z,983nm,19.0s
PMSA Palmer Station 88.57 160 LR LR 06 32 20.4
comp=Z,592nm,18.0s,baz=226,slow=33
GSC Goldstone, Bar 88.78 52 P **P 05 56 39.8 -0.1**
GSC IAmb IAmb 05 56 41.8
comp=Z,40nm,2.0s
GSC Goldstone, Bar 88.78 52 P **P 05 56 39.8 -0.1**
GSC pmax pmax
comp=Z,40nm,2.0s
U33K Whale Pass 88.79 29 IAMs_20 IAMs_20 06 30 57.2
comp=Z,2µm,21.0s
F20K Avaraart Lake 88.91 13 IAMs_20 IAMs_20 06 31 26.6
comp=Z,2µm,20.0s
NVAR Mina Array Bea 88.92 49 P **P 05 56 40.1 -0.6**
comp=Z,4.1nm,0.8s,baz=251,slow=6.5,SNR=18
NVAR LR LR 06 33 22.3
comp=Z,704nm,18.1s,baz=258,slow=34
comp=Z,4.1nm,0.8s
NVAR Mina Array Bea 88.92 49 P **P 05 56 40.4 -0.3**
E19K Redstone River 88.93 13 **P 05 56 40.3 +0.5**
E19K IAMs_20 IAMs_20 06 32 47.0
comp=Z,882nm,19.0s
J05D Fort Rock, OR 88.94 44 **P 05 56 40.4 -0.2**
TLY Talaya 88.96 326 LR LR 06 34 18.0
comp=Z,326nm,20.9s,baz=117,slow=34
TLY Talaya 88.96 326 *i*P **P 05 56 39.7 -0.6**
TLY pmax pmax
comp=Z,2.0nm,0.9s
I23K Minto, Yukon-K 88.97 17 IAMs_20 IAMs_20 06 38 21.2
comp=Z,838nm,19.0s
G21K Allakaket 88.99 14 IAMs_20 IAMs_20 06 33 13.6
comp=Z,1µm,21.0s
H22K Ishtalitna Cre 89.02 16 IAMs_20 IAMs_20 06 33 03.4
comp=Z,982nm,20.0s
V35K Ketchikan 89.04 30 IAMs_20 IAMs_20 06 30 36.9
comp=Z,2µm,21.0s
HDA Harding Lake 89.10 18 IAMs_20 IAMs_20 06 30 05.6
comp=Z,912nm,20.0s
BBB Bella Bella 89.10 34 LR LR 06 32 21.8
comp=Z,733nm,18.2s,baz=247,slow=33
BC3 Big Chuckawall 89.18 54 IAMs_20 IAMs_20 06 33 02.0
comp=Z,1µm,18.0s
COLA College 89.18 17 P **P 05 56 40.0 -1.0**
COLA College 89.18 17 IAMs_20 IAMs_20 06 31 30.8
comp=Z,885nm,20.0s
COLA College 89.18 17 *i*P **P 05 56 40.4 -0.6**
COLA pmax pmax
comp=Z,8.0nm,1.1s
C18K Utukok River 89.18 11 IAMs_20 IAMs_20 06 31 31.6
comp=Z,1µm,20.0s
FURC Furnace Creek, 89.19 51 P **P 05 56 41.5 -0.2**
FURC IAmb IAmb 05 56 42.7
comp=Z,19nm,1.2s
L26K Log Cabin Wild 89.21 20 IAMs_20 IAMs_20 06 31 20.9
comp=Z,910nm,20.0s
GWY Greenwater Val 89.22 52 **P 05 56 41.3 -0.8**
WRAK Wrangell Islan 89.32 29 IAMs_20 IAMs_20 06 32 01.1
comp=Z,1µm,20.0s
ILAR Eielson Array 89.38 18 P **P 05 56 39.8 -2.2**
comp=Z,2.3nm,0.7s,baz=236,slow=5.3,SNR=22
ILAR LR LR 06 36 14.2
comp=Z,636nm,18.1s,baz=229,slow=35
comp=Z,2.3nm,0.7s
SHOC Shoshone, Teco 89.41 52 IAMs_20 IAMs_20 06 27 45.9
comp=Z,1µm,21.0s
PALK Pallekele 89.54 278 LR LR 06 41 46.0
comp=Z,573nm,18.0s,baz=115,slow=39
F21K Alatna River 89.56 14 IAMs_20 IAMs_20 06 31 25.8
comp=Z,1µm,20.0s
DANC Danby, Needles 89.61 53 IAMs_20 IAMs_20 06 29 11.2
comp=Z,1µm,20.0s
IRM Iron Mountain 89.61 54 IAMs_20 IAMs_20 06 36 01.3
comp=Z,1µm,19.0s
D19K Kuna River 89.63 12 IAMs_20 IAMs_20 06 32 28.4
comp=Z,1µm,21.0s
J25K Salcha River, 89.71 18 IAMs_20 IAMs_20 06 33 11.9
comp=Z,986nm,20.0s
TROLL Troll, Antarti 89.73 185 P **P 05 56 44.4 +0.5**
C19K Lookout Ridge 89.87 11 IAMs_20 IAMs_20 06 32 15.9
comp=Z,2µm,20.0s
NVL N'lazarevskaya 89.97 188 *e*P **P 05 56 45.6 +0.8**
NVL *e* 06 00 18.7
NVL *e*PPP PPP 06 02 15.6
NVL *e*S **SKSac 06 07 14.9 -0.2**
NVL *e*SS **SS 06 13 37.8 +4.1**
NVL *e*SSS SSS 06 17 13.9
NVL pmax pmax
comp=Z,45nm,1.3s
NVL MLR MLR
comp=Z,1µm,17.0s
G23K Bananza Creek 90.00 15 IAMs_20 IAMs_20 06 30 51.4
comp=Z,959nm,22.0s
LPIG La Paz 90.02 65 LR LR 06 30 41.9
comp=Z,3µm,18.0s,baz=242,slow=31
D20K Etivluk River 90.11 12 IAMs_20 IAMs_20 06 45 04.1
comp=Z,814nm,18.0s
113A Mohawk Valley, 90.17 56 **P 05 56 46.4 -0.1**
113A IAmb IAmb 05 56 53.1
comp=Z,20nm,1.5s
D05A Enumclaw 90.18 40 P **P 05 56 44.6 -1.5**
SLBS Sierra La Lagu 90.20 65 P **P 05 56 46.9 +0.1**
WVOR Wild Horse Val 90.31 45 P **P 05 56 46.4 -0.6**
WVOR IAmb IAmb 05 57 00.7
comp=Z,22nm,1.4s
WVOR IAMs_20 IAMs_20 06 37 26.3
comp=Z,1µm,19.0s
WVOR Wild Horse Val 90.31 45 P **P 05 56 46.4 -0.6**
WVOR pmax pmax
comp=Z,22nm,1.4s
WVOR MLR MLR
comp=Z,1µm,19.0s
O30N Mendenhall 90.32 24 IAMs_20 IAMs_20 06 41 02.3
comp=Z,812nm,18.0s
PRP Porcupine Dome 90.32 18 IAMs_20 IAMs_20 06 37 51.0
comp=Z,809nm,18.0s
COLD Coldfoot 90.35 15 **P 05 56 46.5 0.0**
COLD IAMs_20 IAMs_20 06 33 46.7
comp=Z,1µm,20.0s
SNAA Sanae 90.39 183 ⇓P **P 05 56 51.4 +4.4**
comp=Z,152nm,0.7s
SNAA Sanae 90.39 183 P **P 05 56 46.0 -0.9**
comp=Z,9.2nm,1.1s,baz=180,slow=5.1,SNR=7.2
SNAA LR LR 06 36 59.3
comp=Z,731nm,18.1s,baz=189,slow=35
comp=Z,9.2nm,1.1s
SNAA Sanae 90.39 183 P **P 05 56 47.0 +0.1**
SNAA IAmb IAmb 05 57 01.3
comp=Z,26nm,1.2s
SNAA IAMs_20 IAMs_20 06 37 32.8
comp=Z,1µm,18.0s
SNAA Sanae 90.39 183 *ce*P **P 05 56 46.4 -0.5**
SNAA pmax pmax
comp=Z,9.0nm,1.1s
S11A Rachel 90.47 50 P **P 05 56 47.6 -0.3**
SHPR Sheep Range 90.47 52 **P 05 56 47.8 -0.2**
214A Organ Pipe Nat 90.64 57 **P 05 56 48.4 -0.3**
214A IAmb IAmb 05 57 00.7
comp=Z,19nm,1.4s
E22K Anaktuvuk Pass 90.68 14 IAMs_20 IAMs_20 06 32 23.4
comp=Z,1µm,20.0s
S34M Telegraph Cree 90.71 28 IAMs_20 IAMs_20 06 33 28.8
comp=Z,2µm,20.0s
J08A Circle Bar Ran 90.80 44 P **P 05 56 48.8 -0.4**
J08A IAmb IAmb 05 56 52.2
comp=Z,13nm,0.9s
Q32M Nakina River 90.80 27 IAMs_20 IAMs_20 06 38 07.0
comp=Z,885nm,19.0s
I26K Coal Creek Min 90.87 18 IAMs_20 IAMs_20 06 32 25.7
comp=Z,1µm,20.0s
VNA3 Neumayer Olymp 91.03 181 ⇓P **P 05 56 50.0 +0.2**
comp=Z,12nm,0.8s
D22K Ayikyak River 91.08 13 IAMs_20 IAMs_20 06 33 37.8
comp=Z,2µm,20.0s
E23K Chandalar 91.14 15 IAMs_20 IAMs_20 06 34 34.5
comp=Z,1µm,19.0s
B21K Ikpikpuk River 91.27 12 IAMs_20 IAMs_20 06 34 44.8
comp=Z,981nm,18.0s
VNA2 Neumayer--Watz 91.31 182 ⇓P **P 05 56 49.8 -1.3**
comp=Z,13nm,0.7s,baz=158,slow=4.4
DLBC Dease Lake 91.49 28 LR LR 06 35 29.1
comp=Z,1µm,18.1s,baz=232,slow=34
I27K Kandik River 91.54 19 IAMs_20 IAMs_20 06 30 48.4
comp=Z,896nm,21.0s
D23K Nanushuk River 91.59 14 IAMs_20 IAMs_20 06 33 15.3
comp=Z,1µm,20.0s
R33M Jennings River 91.60 27 IAMs_20 IAMs_20 06 41 06.3
comp=Z,762nm,18.0s
VNA1 Neumayer--Stat 91.61 181 ⇓P **P 05 56 51.0 -1.4**
comp=Z,12nm,1.1s
N32M Quiet Lake 91.73 25 IAMs_20 IAMs_20 06 38 37.5
comp=Z,958nm,18.0s
F25K Christian Rive 91.80 16 IAMs_20 IAMs_20 06 40 06.9
comp=Z,887nm,18.0s
G26K Porcupine Rive 91.84 17 IAMs_20 IAMs_20 06 40 10.2
comp=Z,780nm,19.0s
I28M Miner Creek 91.96 19 IAMs_20 IAMs_20 06 43 30.4
comp=Z,742nm,18.0s
ELK Elko 92.00 48 LR LR 06 29 33.2
comp=Z,770nm,21.8s,baz=246,slow=30
ELK Elko 92.00 48 IAMs_20 IAMs_20 06 29 32.1
comp=Z,1µm,20.0s
H27K Steamboat Moun 92.00 18 IAMs_20 IAMs_20 06 33 01.3
comp=Z,866nm,20.0s
B22K Teshekpuk Lake 92.09 12 IAMs_20 IAMs_20 06 34 33.4
comp=Z,1µm,20.0s
BMO Blue Mountains 92.16 43 IAMs_20 IAMs_20 06 35 13.3
comp=Z,1µm,19.0s
CCUT Cedar City 92.19 51 **P 05 56 55.6 -0.4**
CCUT IAmb IAmb 05 57 19.1
comp=Z,22nm,1.8s
F26K Sheenjek River 92.27 16 IAMs_20 IAMs_20 06 35 05.5
comp=Z,894nm,20.0s
C23K Itkillik River 92.29 13 IAMs_20 IAMs_20 06 33 47.7
comp=Z,2µm,20.0s
B08A Colville Reser 92.30 40 P **P 05 56 54.1 -1.9**
TUC Tucson 92.37 57 P **P 05 56 55.5 -1.3**
TUC IAmb IAmb 05 57 09.0
comp=Z,9.0nm,1.1s
TUC Tucson 92.37 57 IAMs_20 IAMs_20 06 36 46.6
comp=Z,1µm,19.0s
TUC Tucson 92.37 57 P **P 05 56 55.5 -1.3**
TUC pmax pmax
comp=Z,9.0nm,1.1s
TUC MLR MLR
comp=Z,1µm,19.0s
C24K Franklin Bluff 92.62 14 IAMs_20 IAMs_20 06 33 48.8
comp=Z,2µm,22.0s
D25K Kavik River 92.87 15 IAMs_20 IAMs_20 06 35 40.3
comp=Z,853nm,19.0s
WUAZ Wupatki 92.99 54 **P 05 56 59.0 -0.7**
WUAZ IAmb IAmb 05 57 02.5
comp=Z,10nm,1.0s
WUAZ IAMs_20 IAMs_20 06 31 16.8
comp=Z,1µm,20.0s
PLID Pearl Lake 93.11 44 IAMs_20 IAMs_20 06 28 08.3
comp=Z,1µm,22.0s
TIXI Tiksi 93.21 348 LR LR 06 33 49.0
comp=Z,383nm,21.7s,baz=152,slow=32
TIXI Tiksi 93.21 348 P **P 05 56 58.9 -0.7**
TIXI Tiksi 93.21 348 *ce*P **P 05 56 59.2 -0.4**
TIXI pmax pmax
comp=Z,6.0nm,0.9s
MTPU Mount Pierson 93.24 51 **P 05 57 00.1 -0.9**
319A Douglas 93.27 58 **P 05 57 01.2 +0.2**
319A IAmb IAmb 05 57 05.0
comp=Z,14nm,0.9s
E27K Coleen River 93.31 17 IAMs_20 IAMs_20 06 33 55.9
comp=Z,812nm,20.0s
F28M Old Crow 93.41 18 IAMs_20 IAMs_20 06 37 01.6
comp=Z,930nm,19.0s
DUG Dugway, Tooele 93.52 49 IAMs_20 IAMs_20 06 40 31.6
comp=Z,1µm,19.0s
NEW Newport 93.61 40 LR LR 06 36 04.9
comp=Z,388nm,18.0s,baz=243,slow=34
C27K Jago River 93.75 15 IAMs_20 IAMs_20 06 35 58.5
comp=Z,1µm,21.0s
D27M Malcolm River 94.19 16 IAMs_20 IAMs_20 06 36 46.2
comp=Z,963nm,19.0s
E29M Blow River 94.48 18 IAMs_20 IAMs_20 06 36 28.9
comp=Z,814nm,20.0s
HYB Hyderabad 94.61 287 *e*P **P 05 57 06.2 -1.1**
HYB *e*SKSac **SKSac 06 07 41.7 -1.2**
F30M Barrier River 94.62 19 IAMs_20 IAMs_20 06 32 54.7
comp=Z,1µm,22.0s
WMQ Urumqi 95.38 314 *e*P **P 05 57 11.5 +1.2**
WMQ L L
comp=Z,580nm,15.5s
WMQ L L
comp=Z,650nm,16.5s
WMQ L L
comp=Z,400nm,18.5s
AHID Auburn Hatcher 95.60 47 IAMs_20 IAMs_20 06 31 48.5
comp=Z,1µm,21.0s
INK Inuvik 95.72 19 LR LR 06 34 12.4
comp=Z,747nm,21.6s,baz=242,slow=32
MVCO Mesa Verde 95.73 53 IAMs_20 IAMs_20 06 31 14.4
comp=Z,1µm,22.0s
FXWY Fox Creek 95.94 46 IAMs_20 IAMs_20 06 33 37.4
comp=Z,1µm,19.0s
BOZ Bozeman (W) 96.17 44 IAMs_20 IAMs_20 06 40 32.4
comp=Z,1µm,18.0s
LOHW Long Hollow 96.22 46 IAMs_20 IAMs_20 06 33 36.8
comp=Z,1µm,20.0s
MNTX Cornudas Mount 96.54 59 IAMs_20 IAMs_20 06 36 19.1
comp=Z,1µm,19.0s
ANMO Albuquerque 96.63 56 LR LR 06 35 20.9
comp=Z,518nm,18.4s,baz=258,slow=32
ANMO Albuquerque 96.63 56 IAMs_20 IAMs_20 06 37 49.2
comp=Z,765nm,19.0s
ANMO Albuquerque 96.63 56 IAMs_20 IAMs_20 06 37 48.8
comp=Z,764nm,19.0s
ANMO Albuquerque 96.63 56 IAMs_20 IAMs_20 06 37 49.3
comp=Z,772nm,19.0s
ANMO Albuquerque 96.63 56 *ce*P **P 05 57 14.5 -1.9**
ANMO pmax pmax
comp=Z,1.0nm,0.9s
PDAR Pinedale Array 96.68 47 P **P 05 57 15.6 -0.9**
comp=Z,0.8nm,0.9s,baz=256,slow=4.1,SNR=5.7
PDAR LR LR 06 34 30.4
comp=Z,270nm,20.1s,baz=246,slow=32
comp=Z,0.8nm,0.9s
TXAR Lajitas Array 97.28 62 P **P 05 57 19.1 -0.3**
comp=Z,1.4nm,0.9s,baz=252,slow=4.5,SNR=11
TXAR LR LR 06 35 49.2
comp=Z,1µm,18.0s,baz=245,slow=32
comp=Z,1.4nm,0.9s
DGZ Jazzator, Alta 97.48 320 *i*P **P 05 57 18.8 -1.0**
DGZ pmax pmax
comp=Z,2.0nm,1.0s

SDCO	**Great Sand Dun**	**98.17**	**53**	IAMs_20	IAMs_20	06 40 07.9	
	comp=Z,1µm,18.0s						
ISCO	**Idaho Springs**	**98.65**	**51**	IAMs_20	IAMs_20	06 36 51.6	
	comp=Z,1µm,20.0s						
Q24A	**Divide**	**98.77**	**52**	IAMs_20	IAMs_20	06 33 08.7	
	comp=Z,1µm,20.0s						
K22A	**Casper**	**98.78**	**48**	IAMs_20	IAMs_20	06 47 19.8	
	comp=Z,917nm,18.0s						
MKAR	**Makanchi Array**	**99.91**	**316**	P	**Pdif**	**05 57 30.9**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=104,slow=6.1,SNR=8.0						
MKAR				PKKPbc	**PKKPbc**	**06 13 47.4**	**-4.3**
	comp=Z,0.7nm,1.0s,baz=274,slow=4.0,SNR=3.9						
MKAR				LR	LR	06 41 04.4	
	comp=Z,485nm,22.0s,baz=90,slow=34						
	comp=Z,0.6nm,0.8s						
YKA	**Yellowknife Ar**	**100.11**	**27**	P	**Pdif**	**05 57 27.6**	**-3.5**
	comp=Z,0.6nm,0.7s,baz=260,slow=4.7,SNR=11						
ZALV	**Zalesovo Beam**	**100.31**	**323**	P	**Pdif**	**05 57 28.5**	**-3.6**
	comp=Z,0.7nm,0.6s,baz=97,slow=4.6,SNR=3.8						
JCT	**Junction City**	**100.82**	**61**	IAMs_20	IAMs_20	06 34 00.6	
	comp=Z,825nm,20.0s						
ABTX	**Abilene, Hawle**	**101.47**	**59**	IAMs_20	IAMs_20	06 39 32.9	
	comp=Z,1µm,19.0s						
GO05	**Hualane**	**102.60**	**133**	IAMs_20	IAMs_20	06 38 34.7	
	comp=Z,777nm,19.0s						
WMOK	**Wichita Mounta**	**102.67**	**57**	IAMs_20	IAMs_20	06 40 36.3	
	comp=Z,1µm,19.0s						
CBKS	**Cedar Bluff**	**102.83**	**53**	IAMs_20	IAMs_20	06 36 34.2	
	comp=Z,1µm,20.0s						
WHTX	**Lake Whitney,**	**103.13**	**60**	IAMs_20	IAMs_20	06 43 49.7	
	comp=Z,1µm,18.0s						
KURK	**Kurchatov**	**103.21**	**319**	IAMs_20	IAMs_20	06 47 56.1	
	comp=Z,676nm,18.0s						
KURBB	**Kurchatov Arra**	**103.24**	**319**	Pdiff	**Pdif**	**05 57 44.6**	**-0.7**
	comp=Z,0.1nm,0.4s,baz=97,slow=3.8,SNR=2.2						
KURBB				PP	**PP**	**06 01 58.9**	**-1.9**
	comp=Z,0.8nm,1.0s,baz=95,slow=4.9,SNR=3.3						
KURBB				PKKPbc	**PKKPbc**	**06 13 39.6**	**-2.4**
	comp=Z,0.3nm,0.5s,baz=283,slow=3.4,SNR=4.1						
KURBB				PKKP	**PKKPdf**	**06 13 50.5**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=279,slow=3.1,SNR=4.3						
NRIK	**Noril'sk**	**103.26**	**339**	Pdiff	**Pdif**	**05 57 44.5**	**-0.4**
	comp=Z,1.5nm,0.4s,baz=105,slow=5.4,SNR=4.4						
R32A	**Long Quarter,**	**103.53**	**54**	IAMs_20	IAMs_20	06 45 17.8	
	comp=Z,986nm,19.0s						
Z35A	**Perchaven, San**	**103.59**	**59**	IAMs_20	IAMs_20	06 40 15.9	
	comp=Z,731nm,20.0s						
BO04	**La Punta**	**104.07**	**133**	IAMs_20	IAMs_20	06 39 28.6	
	comp=Z,863nm,20.0s						
MT05	**Renca**	**104.31**	**133**	IAMs_20	IAMs_20	06 46 19.9	
	comp=Z,852nm,20.0s						
FFC	**Flin Flon**	**104.52**	**37**	IAMs_20	IAMs_20	06 37 47.6	
	comp=Z,1µm,20.0s						
SUSD	**Miller**	**104.55**	**48**	IAMs_20	IAMs_20	06 44 47.3	
	comp=Z,835nm,19.0s						
BGNE	**Belgrade**	**104.55**	**51**	IAMs_20	IAMs_20	06 38 19.7	
	comp=Z,1µm,21.0s						
KSU1	**Kansas State U**	**105.27**	**53**	IAMs_20	IAMs_20	06 40 02.9	
	comp=Z,1µm,21.0s						
AC05	**El Transito**	**107.09**	**129**	IAMs_20	IAMs_20	06 47 25.0	
	comp=Z,870nm,19.0s						
S39A	**Bolivar**	**107.57**	**55**	IAMs_20	IAMs_20	06 45 45.9	
	comp=Z,990nm,19.0s						
TGUH	**Tegucigalpa,Un**	**108.09**	**81**	IAMs_20	IAMs_20	06 38 25.2	
	comp=Z,805nm,19.0s						
BORK	**Borovoye**	**108.64**	**321**	IAMs_20	IAMs_20	06 48 14.8	
	comp=Z,666nm,18.0s						
NNA	**Nana**	**109.55**	**110**	IAMs_20	IAMs_20	06 42 52.9	
	comp=Z,797nm,18.0s						
VOI	**Vohitsoka**	**110.06**	**238**	IAMs_20	IAMs_20	06 44 40.9	
	comp=Z,1µm,20.0s						
F42A	**Maple Grove Fa**	**112.31**	**47**	IAMs_20	IAMs_20	06 48 56.7	
	comp=Z,1µm,19.0s						
OTAV	**Otavalo**	**112.55**	**97**	IAMs_20	IAMs_20	06 38 54.1	
	comp=Z,976nm,21.0s						
ARTI	**Arti**	**115.54**	**324**	*i* PKIKP	**PKiKP**	**06 02 25.2**	**-2.4**
ARTI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SPITS	**Spitsbergen Ar**	**118.17**	**354**	PKP	**PKPdf**	**06 02 31.6**	**-0.5**
	comp=Z,2.5nm,0.8s,baz=46,slow=4.4,SNR=1.2						
BOSA	**Boshof**	**121.29**	**219**	PKP	**PKPdf**	**06 02 38.9**	**-0.8**
	comp=Z,3.1nm,0.9s,baz=143,slow=5.1,SNR=3.9						
BELG	**Belogornoye**	**122.40**	**321**	*i* PKIKP	**PKPdf**	**06 02 39.9**	**-0.9**
ARCES	**ARCESS Array B**	**123.48**	**345**	PKP	**PKPdf**	**06 02 41.6**	**-0.9**
	comp=Z,3.9nm,0.8s,baz=43,slow=2.4,SNR=7.2						
KLMR	**Klimovskoe**	**123.79**	**332**	*e*PKIKP	**PKPdf**	**06 02 41.3**	**-2.0**
KLMR				pmax	pmax		
	comp=Z,20nm,1.3s						
VRH	**Novokhopyorsk**	**126.25**	**321**	*e*PKIKP	**PKiKP**	**06 02 52.0**	**+3.3**
VRH				pmax	pmax		
	comp=Z,7.0nm,0.3s						
GNI	**Garni**	**126.55**	**307**	*i* PKIKP	**PKiKP**	**06 02 50.1**	**+0.2**
ATD	**Arta Tunnel**	**126.61**	**271**	IAMs_20	IAMs_20	07 01 34.4	
	comp=Z,673nm,18.0s						
LPSR	**Galich'ya Gora**	**127.42**	**323**	*e*PKIKP	**PKPdf**	**06 02 49.6**	**-0.9**
LPSR				pmax	pmax		
	comp=Z,12nm,0.7s						
KIV	**Kislovodsk**	**127.44**	**312**	*i* PKIKP	**PKPdf**	**06 02 49.8**	**-1.2**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,370nm,23.0s						
SHA1	**Shidzhatmaz**	**127.51**	**312**	*i* PKIKP	**PKiKP**	**06 02 52.2**	**+0.4**
VORR	**Voronezh**	**127.58**	**322**	*e*PKIKP	**PKPdf**	**06 02 48.0**	**-2.8**
VORR				pmax	pmax		
	comp=Z,42nm,0.4s						
OBN	**Obninsk**	**127.70**	**327**	⥣*e*PKIKP	**PKPdf**	**06 02 51.0**	**+0.1**
OBN				*e*		06 04 55.5	
OBN				pmax	pmax		
	comp=Z,16nm,1.4s						
FINES	**FINESS Array B**	**128.90**	**338**	PKP	**PKPdf**	**06 02 52.6**	**-0.4**
	comp=Z,3.4nm,1.0s,baz=45,slow=2.2,SNR=5.3						
FURI	**Furi**	**129.91**	**267**	IAMs_20	IAMs_20	06 56 41.7	
	comp=Z,754nm,20.0s						
SMRT	**St. Maarten**	**131.67**	**82**	IAMs_20	IAMs_20	06 57 54.9	
	comp=Z,407nm,18.0s						
MNK	**Minsk**	**132.37**	**330**	*i* PKP	**PKiKP**	**06 03 01.0**	**0.0**
	comp=E,4.0nm,0.7s,baz=56						
MNK				*i* PKP	**PKiKP**	**06 03 01.0**	**0.0**
	comp=N,9.0nm,0.7s						
MNK				*i* PKP	**PKiKP**	**06 03 01.0**	**0.0**
	comp=Z,3.0nm,0.7s						
MNK				*i* PKiKP	**pPKPdf**	**06 03 02.3**	**-1.3**
	comp=Z,4.0nm,0.8s						
MNK				*i* PP	**PP**	**06 05 26.6**	**+4.0**
MNK				*i* SKP	**SKPdf**	**06 06 36.1**	**+1.3**
MNK				*i* PKS	**PKSdf**	**06 06 37.4**	**+1.4**
MNK				*i* PPP	PPP	06 08 17.7	
MNK				*i* SKS	SKSdf	06 10 35.1	+24
MNK				*i* SKKS		06 13 51.0	
MNK				*i* SS	**SS**	**06 23 06.3**	**+5.6**
MNK				*i* SSS	SSS	06 27 57.6	
MNK				*i* LQ	LQ	06 51 56.0	
MNK				*i* LR	LR	07 00 40.0	
MNK				*i* LRM	MLR	07 04 36.2	
	comp=E,362nm,15.9s						
MNK				*i* LRM	MLR	07 04 44.1	
	comp=Z,658nm,17.8s						
MNK				*i* LRM	MLR	07 05 47.4	
	comp=N,305nm,17.0s						
MNK	**Minsk**	**132.37**	**330**	*i* PKIKP	**PKiKP**	**06 03 00.9**	**0.0**
MNK				*i*		06 03 02.3	
MNK				*i*		06 05 26.6	
MNK				*i* PPP	PPP	06 08 17.7	
MNK				*i* SS	SS	06 23 06.3	+5.6
MNK				*i* SSS	SSS	06 27 57.6	
MNK				pmax	pmax		
	comp=E,4.0nm,0.7s						
MNK				pmax	pmax		
	comp=N,9.0nm,0.7s						
MNK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MNK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AKASG	**Malin Array Be**	**133.69**	**324**	PKP	**PKPdf**	**06 03 01.4**	**-1.0**
	comp=Z,1.1nm,0.7s,baz=64,slow=2.2,SNR=1.3						
AKASG				SKPbc	**SKPab**	**06 06 32.5**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=55,slow=2.6,SNR=4.0						
AK09	**Malin Array Si**	**133.70**	**324**	PKP	**PKPdf**	**06 03 01.7**	**-0.7**
AK01	**Malin Array Si**	**133.70**	**324**	PKP	**PKPdf**	**06 03 02.3**	**-0.1**
KIEV	**Kiev**	**133.70**	**324**	IAMs_20	IAMs_20	07 06 56.9	
	comp=Z,846nm,20.0s						
AK12	**Malin Array Si**	**133.75**	**324**	PKP	**PKPdf**	**06 03 01.6**	**-1.0**
NOA	**NORSAR Array B**	**133.85**	**344**	PKP	**PKPdf**	**06 03 01.8**	**-0.7**
	comp=Z,1.6nm,0.9s,baz=30,slow=1.7,SNR=4.7						
HFS	**Hagfors**	**133.94**	**342**	PKP	**PKPdf**	**06 03 02.6**	**0.0**
	comp=Z,2.6nm,0.8s,baz=23,slow=4.8,SNR=3.7						
LUBAR	**Lubar, Ukraine**	**134.89**	**324**	PKP	**PKPdf**	**06 03 03.4**	**-1.3**
BRTR	**Keskin Array B**	**135.00**	**309**	PKP	**PKPdf**	**06 03 04.7**	**-0.8**
	comp=Z,1.3nm,1.0s,baz=96,slow=3.3,SNR=4.3						
BR104	**Keskin Array S**	**135.00**	**309**	PKP	**PKPdf**	**06 03 04.1**	**-1.4**
TIRR	**Tirgusor**	**137.04**	**317**	IAMs_20	IAMs_20	07 10 28.3	
	comp=Z,596nm,20.0s						
STEB	**Steborice**	**140.08**	**330**	*e*PKP	**PKiKP**	**06 03 23.1**	**+6.3**
CLL	**Collm**	**141.20**	**335**	*i* PKIKP	**PKiKP**	**06 03 17.6**	**-1.4**
CLL				MLR	MLR		
	comp=Z,700nm,20.0s						
CLL	**Collm**	**141.20**	**335**	*i* PKPdf	**PKiKP**	**06 03 17.6**	**-1.4**
CLL				*e*PP	**PP**	**06 06 24.0**	**+6.3**
CLL				*e*PPS	PPS	06 18 36.0	
CLL				*e*SS	SS	06 24 54.0	+8.5
CLL				*e*x	x	06 26 42.0	
CLL				AMS	AMS	07 08 00.0	
	comp=N,500nm,21.1s						
CLL				AMS	AMS	07 08 00.0	
	comp=E,200nm,21.4s						
CLL				AMS	AMS	07 08 00.0	
	comp=Z,700nm,20.0s						
MODS	**Modra-Piesok**	**141.37**	**328**	*e*PKIKP	**PKiKP**	**06 03 19.5**	**0.0**
MODS	**Modra-Piesok**	**141.37**	**328**	*e*PKP	**PKiKP**	**06 03 19.5**	**0.0**
EKA	**Eskdalemuir Ar**	**142.05**	**352**	PKhKP	PKPpre	06 03 12.2	
	comp=Z,1.5nm,0.7s,baz=7.4,slow=3.7,SNR=3.6						
RONA	**Rosalia, Austr**	**142.31**	**328**	*e*PKP	**PKPdf**	**06 03 16.6**	**-1.9**
	comp=Z,2.1nm,0.7s						
CONA	**Conrad Observa**	**142.37**	**329**	*e*PKP	**PKPdf**	**06 03 15.3**	**-3.3**
	comp=Z,4.6nm,1.3s						
CKRC	**Cesky Krumlov**	**142.48**	**331**	*e*PKIKP	**PKPdf**	**06 03 16.6**	**-2.1**
CKRC	**Cesky Krumlov**	**142.48**	**331**	*e*PKP	**PKPdf**	**06 03 16.6**	**-2.1**
KHC	**Kasperske Hory**	**142.59**	**332**	*i* PKIKP	**PKPdf**	**06 03 17.2**	**-1.7**
KHC	**Kasperske Hory**	**142.59**	**332**	*e*PKP	**PKPdf**	**06 03 19.2**	**+0.3**
KHC				*e*pPKP	**sPKPdf**	**06 03 24.9**	**+0.9**
GERES	**GERESS Array B**	**142.74**	**332**	PKhKP	PKPpre	06 03 14.5	
	comp=Z,1.0nm,0.9s,baz=48,slow=1.5,SNR=3.6						
MOA	**Molln**	**143.19**	**330**	*e*PKP	PKPbc	06 03 17.8	+0.9
	comp=Z,5.3nm,1.1s						
BIOA	**Bad Ischl, Aus**	**143.60**	**330**	*e*PKP	PKPbc	06 03 19.0	+0.9
	comp=Z,0.2nm,0.3s						
SOKA	**Soboth**	**143.63**	**328**	*e*PKP	PKPbc	06 03 18.9	+0.6
	comp=Z,3.9nm,0.9s						
OBKA	**Obir**	**143.99**	**328**	*e*PKP	PKPbc	06 03 20.1	+0.8
	comp=Z,4.9nm,1.0s						
KBA	**Koelnbreinsper**	**144.18**	**330**	*e*PKP	PKPbc	06 03 19.9	-0.2
	comp=Z,8.6nm,1.1s						
LESA	**Schwarzleotal**	**144.25**	**331**	*e*PKP	PKPbc	06 03 20.3	+0.2
	comp=Z,7.8nm,0.9s						
BOJS	**Bojanci**	**144.31**	**326**	*i* PKPdf	PKPbc	06 03 20.6	+0.4
BTNL	**Ternell**	**144.31**	**340**	*d*PKPdf	PKPbc	06 03 20.7	+0.6
LJU	**Ljubljana**	**144.32**	**328**	*i* PKPdf	**PKPab**	**06 03 19.8**	**-0.2**
MEM	**Membach**	**144.33**	**340**	*d*PKPdf	PKPbc	06 03 20.7	+0.5
MYKA	**Terra Mystica**	**144.36**	**329**	*e*PKP	PKPbc	06 03 20.6	+0.1
	comp=Z,7.7nm,1.1s						
BSTI	**Sart Tilman**	**144.49**	**341**	*d*PKPdf	**PKPab**	**06 03 19.2**	**-1.2**
BHOU	**Houvegnez**	**144.55**	**340**	*d*PKPdf	PKPbc	06 03 21.4	+0.5
BHOU				*d*x	x	06 03 30.5	
CEY	**Cerknica**	**144.58**	**327**	*i* PKPdf	PKPbc	06 03 21.4	+0.2
UCC	**Uccle**	**144.67**	**342**	*d*PKP	**PKiKP**	**06 03 28.2**	**+2.1**
BCLA	**Clavier**	**144.72**	**341**	*d*PKPdf	**PKPdf**	**06 03 22.1**	**-0.4**
BCLA				*d*PKiKP	**pPKPdf**	**06 03 25.5**	**-0.9**
BCLA				*d*x	x	06 03 30.4	
ABTA	**Abfaltersbach**	**144.82**	**330**	*i* PKP	**PKPab**	**06 03 21.7**	**-0.2**
	comp=Z,10nm,0.8s,SNR=8.1						
BGES	**Gesves**	**144.82**	**341**	*d*PKPdf	PKPbc	06 03 21.6	-0.1
WTTA	**Wattenberg**	**144.84**	**332**	*i* PKP	**PKPdf**	**06 03 22.9**	**-0.2**
	comp=Z,24nm,1.1s,SNR=6.7						
RCHB	**Rochefort**	**144.97**	**340**	*d*PKPdf	**PKPab**	**06 03 17.8**	**-4.4**
BMRD	**Maredsous**	**144.99**	**341**	*d*PKPdf	PKPbc	06 03 22.2	0.0
MOTA	**Moosalm**	**145.02**	**332**	*i* PKP	**PKPab**	**06 03 21.9**	**-0.9**
	comp=Z,27nm,1.0s,SNR=12						
RETA	**Reutte**	**145.06**	**333**	*i* PKP	**PKPdf**	**06 03 23.1**	**-0.2**
	comp=Z,21nm,1.3s,SNR=7.6						
SQTA	**Sankt Quirin**	**145.07**	**332**	*i* PKP	**PKPab**	**06 03 22.9**	**+0.1**
	comp=Z,14nm,0.8s,SNR=12						
WLF	**Walferdange**	**145.09**	**339**	*d*PKPdf	**PKPdf**	**06 03 23.3**	**+0.1**
DOU	**Dourbes**	**145.22**	**341**	*d*PKPdf	**PKPbc**	**06 03 22.9**	**-0.1**
DOU				*d*x	x	06 03 32.4	
FETA	**Feichten**	**145.43**	**332**	*i* PKP	**PKPbc**	**06 03 23.8**	**-0.2**
	comp=Z,20nm,0.9s,SNR=12						
DAVA	**Damuels**	**145.60**	**333**	*i* PKP	**PKPab**	**06 03 24.6**	**-0.2**
	comp=Z,49nm,1.1s,SNR=12						
BNI	**Bardonecchia**	**148.73**	**334**	IAMs_20	IAMs_20	07 07 54.0	
	comp=Z,611nm,21.0s						
KEST	**Kesra**	**154.00**	**317**	PKPbc	**PKPbc**	**06 03 45.3**	**-0.6**
	comp=Z,3.4nm,0.8s,baz=58,slow=0.7,SNR=1.7						
PBRG	**Braganca**	**155.77**	**350**	*e*PKPab	**PKPab**	**06 04 06.9**	**+0.5**
POLO	**Lamas de Olo**	**156.35**	**352**	*e*PKPab	**PKPab**	**06 04 09.2**	**+0.2**
PVRL	**Vila Real**	**156.43**	**352**	*e*PKPab	**PKPab**	**06 04 10.2**	**+0.9**
MVO	**Moncorvo**	**156.44**	**350**	*e*PKPab	**PKPab**	**06 04 09.6**	**+0.2**
PVIS	**Viseu**	**157.01**	**352**	*e*PKPab	**PKPab**	**06 04 12.3**	**+0.5**
ESDC	**Sonseca Array**	**157.21**	**344**	PKPab	**PKPab**	**06 04 13.1**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=16,slow=4.4,SNR=7.4						
MTE	**Manteigas**	**157.27**	**351**	*e*PKPab	**PKPab**	**06 04 14.8**	**+1.9**
PCAS	**Casmilo, Conde**	**157.74**	**353**	*e*PKPab	**PKPab**	**06 04 14.5**	**-0.4**
PCBR	**Castelo Branco**	**157.81**	**351**	*e*PKPab	**PKPab**	**06 04 15.1**	**0.0**
PMRV	**Marv??o**	**158.19**	**350**	*e*PKPab	**PKPab**	**06 04 16.8**	**-0.1**
PSBE	**So Bento**	**158.31**	**353**	*e*PKPab	**PKPab**	**06 04 18.0**	**+0.6**
PARRA	**Arraiolos**	**158.89**	**351**	*e*PKPab	**PKPab**	**06 04 20.7**	**+0.8**
PCVE	**Castro Verde**	**160.05**	**350**	*e*PKPab	**PKPab**	**06 04 26.7**	**+1.7**
TORD	**Torodi Ar. Bea**	**165.87**	**252**	PKP	**PKPdf**	**06 03 50.8**	**-0.9**
	comp=Z,1.9nm,0.9s,baz=68,slow=0.2,SNR=7.8						
TORD				PKPab	**PKPab**	**06 04 51.6**	**+0.2**
	comp=Z,3.6nm,0.9s,baz=139,slow=2.4,SNR=6.0						

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*IDC **07** 05:52:08.9±4.3, 14°.74S×167°.17E, h98km±39km, mb3.8/11, mbtmp4.2/12, Error ellipse: s-maj=24.7km s-min=24.1km az=82.0*

ISC 07 05:52:05.6±0.9**, 14°.60S**±0°.09×**167°.2E**±0°.2**, h67**km**, n14,** σ**1s.12**/17**, mb4.1**/10**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.46**	**185**	P	**Pn**	**05 53 53.4**	**+1.5**
	16nm,0.4s,baz=11,slow=5.2,SNR=8.8						
DZM				S	**Sn**	**05 55 13.9**	**-1.3**
	15nm,0.5s,baz=0.0,slow=7.1,SNR=4.0						
CTA	**Charters Tower**	**20.72**	**252**	P	**P**	**05 56 42.5**	**+1.8**
	3.3nm,0.7s,baz=78,slow=13,SNR=8.1						
	3.3nm,0.7s						
URZ	**Urewera**	**25.14**	**161**	P	**P**	**05 57 25.1**	**+0.7**
	5.6nm,0.9s,baz=331,slow=19,SNR=1.8						
	5.6nm,0.9s						
STKA	**Stephens Creek**	**29.03**	**229**	P	**P**	**05 57 59.4**	**0.0**
	4.9nm,0.6s,baz=52,slow=12,SNR=13						
	4.9nm,0.6s						
WRA	**Warramunga Arr**	**31.80**	**256**	P	**P**	**05 58 22.8**	**-1.2**
	1.0nm,0.5s,baz=83,slow=8.5,SNR=5.8						
WRA				PcP	**PcP**	**06 01 12.8**	**-1.1**
	0.2nm,0.7s,baz=72,slow=2.8,SNR=1.3						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**32.66**	**249**	P	**P**	**05 58 30.2**	**-1.4**
	1.3nm,0.3s,baz=80,slow=8.8,SNR=30						
ASAR				PcP	**PcP**	**06 01 15.1**	**-1.3**
	0.6nm,0.9s,baz=85,slow=1.7,SNR=2.9						
	1.3nm,0.3s						
MJAR	**Matsushiro Arr**	**57.76**	**333**	P	**P**	**06 01 50.4**	**+0.6**
	1.1nm,0.5s,baz=178,slow=8.5,SNR=5.6						
	1.1nm,0.5s						
KSRS	**Korea Array**	**63.60**	**326**	P	**P**	**06 02 30.8**	**+1.3**
	0.8nm,0.7s,baz=134,slow=7.0,SNR=2.1						
	0.8nm,0.7s						
SONM	**Songino Array**	**82.36**	**324**	P	**P**	**06 04 20.6**	**+0.3**
	0.3nm,0.3s,baz=123,slow=5.3,SNR=5.0						
	0.3nm,0.3s						
ILAR	**Eielson Array**	**86.42**	**18**	P	**P**	**06 04 39.9**	**-0.4**
	1.1nm,0.7s,baz=233,slow=5.6,SNR=18						
	1.1nm,0.7s						
MKAR	**Makanchi Array**	**97.07**	**316**	P	**P**	**06 05 30.6**	**+0.3**
	0.7nm,0.7s,baz=104,slow=4.6,SNR=6.4						
	0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**97.25**	**324**	P	**P**	**06 05 30.6**	**-0.3**
	0.9nm,0.7s,baz=111,slow=3.2,SNR=4.1						
	0.9nm,0.7s						
ARCES	**ARCESS Array B**	**120.11**	**345**	PKP	**PKPdf**	**06 10 47.3**	**-0.9**
	0.5nm,0.3s,baz=48,slow=1.9,SNR=9.8						
FINES	**FINESS Array B**	**125.58**	**338**	PKP	**PKPdf**	**06 10 58.3**	**-0.6**
	1.6nm,1.0s,baz=40,slow=2.4,SNR=5.6						

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*NEIC **07** 06:03:09.6±0.6, 17°.91N±0°.03×66°.739W±0°.009, h10km±1km, ML3.0/37, Md3.2/4(RSPR), Error ellipse: s-maj=4.6km s-min=2.8km az=355.0*

*SDD **07** 06:03:09.5±0.7, 17°.87N×66°.72W, h15km±7km, MD3.3, ML2.8, MW3.1, Presumed earthquake*

*OSPL **07** 06:03:10.2±0.6, 17°.86N×66°.74W, h2km±999km, ML2.7, Presumed earthquake*

ISC 07 06:03:08.6±1.3**, 17°.89N**±0°.06×**66°.74W**±0°.03**, h18**km±3km**, n27,** σ**0s.40**/45**, 8C-3D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.16**	**303**		**Pg**	**06 03 13.2**	**+0.1**
GBPR					**Sg**	**06 03 15.7**	**-0.4**
OBIP	**Obispado Ponce**	**0.20**	**39**		**Pg**	**06 03 13.8**	**+0.2**
OBIP					**Sg**	**06 03 17.1**	**0.0**
OBIP	**Obispado Ponce**	**0.20**	**39**	*i* P	**Pg**	**06 03 13.9**	**+0.3**
OBIP				*e*S	**Sg**	**06 03 17.0**	**0.0**
OBIP				IAML		06 03 17.2	
	comp=Z,793nm,0.2s						
CELP	**Cerrillos**	**0.24**	**39**		**Pg**	**06 03 14.6**	**+0.4**
CELP				Sg	**Sg**	**06 03 18.6**	**+0.4**
CELP				IAML		06 03 19.1	
	comp=Z,2µm,0.2s						
CELP	**Cerrillos**	**0.24**	**39**	⥣*e*Pg	**Pg**	**06 03 14.6**	**+0.4**
CELP				⥥*e*Sg	**Sg**	**06 03 18.5**	**+0.4**
CELP				IAML		06 03 19.1	
	comp=N,686nm,0.2s						
MLPR	**Magueyes Islan**	**0.30**	**286**		**Pb**	**06 03 15.6**	**+0.1**
MLPR				Sg	**Sb**	**06 03 20.7**	**+0.6**
MLPR				IAML		06 03 20.9	
	comp=N,1µm,0.3s						
MLPR	**Magueyes Islan**	**0.30**	**286**	⥣*e*Pg	**Pb**	**06 03 15.6**	**+0.1**
MLPR				⥣*e*Sg	**Sb**	**06 03 20.5**	**+0.4**
MLPR				IAML		06 03 21.3	
	comp=N,477nm,0.2s						
UUPR	**Utuado, UPR, P**	**0.36**	**3**	Pg	**Pg**	**06 03 16.3**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.37**	**288**	Pg	**Pb**	**06 03 16.8**	**0.0**
CRPR				Sg	**Sb**	**06 03 22.5**	**+0.2**
CRPR				IAML		06 03 25.6	
	comp=N,1µm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.37**	**288**	*i* P	**Pb**	**06 03 16.8**	**0.0**
CRPR				*e*S	**Sb**	**06 03 22.4**	**+0.2**
CRPR				IAML		06 03 24.8	
	comp=Z,975nm,0.3s						
LSP	**Las Mesas**	**0.44**	**311**		**Pb**	**06 03 17.9**	**0.0**
LSP					**Sb**	**06 03 24.5**	**+0.4**
AOPR	**Arecibo Observ**	**0.46**	**358**		**Pg**	**06 03 17.9**	**-0.1**
AOPR				IAML		06 03 26.9	
	comp=Z,1µm,0.4s						
AOPR	**Arecibo Observ**	**0.46**	**358**	⥣*e*Pg	**Pg**	**06 03 17.8**	**-0.1**
AOPR				⥥*e*Sg	**Sb**	**06 03 24.4**	**-0.3**
AOPR				IAML		06 03 26.8	
	comp=N,1µm,0.3s						
PRSN	**Puerto Rico Se**	**0.51**	**310**		**Pb**	**06 03 19.1**	**+0.1**
PRSN				Sg	**Sb**	**06 03 26.3**	**+0.3**
PRSN	**Puerto Rico Se**	**0.51**	**310**	⥣*e*Pg	**Pb**	**06 03 19.1**	**+0.1**
PRSN				⥣*e*Sg	**Sg**	**06 03 26.0**	**+0.3**
PRSN				IAML		06 03 29.1	
	comp=N,3µm,0.3s						
ECPR	**Experimental S**	**0.56**	**40**		**Pg**	**06 03 20.2**	**+0.3**
ECPR				IAML		06 03 30.7	
	comp=N,868nm,0.2s						
ECPR				IAML		06 03 30.9	
	comp=N,2µm,0.2s						
SJG	**San Juan**	**0.60**	**68**		**Pg**	**06 03 21.2**	**+0.6**
SJG				Sg	**Sg**	**06 03 29.7**	**+1.0**
SJG				IAML		06 03 31.8	
	comp=N,738nm,0.2s						
SJG				IAML		06 03 32.0	
	comp=N,588nm,0.3s						
SJG	**San Juan**	**0.60**	**68**	*i* P	**Pg**	**06 03 21.2**	**+0.6**
SJG				*e*S	**Sg**	**06 03 29.5**	**+0.8**
SJG				IAML		06 03 31.3	
	comp=Z,444nm,0.3s						
AGPR	**Aguadilla, PR**	**0.68**	**329**		**Pb**	**06 03 21.8**	**-0.1**
AGPR				Sg	**Sg**	**06 03 31.1**	**+0.1**
AGPR				IAML		06 03 32.4	
	comp=Z,614nm,0.4s						
AGPR				IAML		06 03 35.8	
	comp=Z,639nm,0.5s						
AGPR	**Aguadilla, PR**	**0.68**	**329**	⥣*e*Pg	**Pb**	**06 03 21.8**	**-0.1**
AGPR				⥥*e*Sg	**Sg**	**06 03 31.6**	**+0.6**
AGPR				IAML		06 03 35.8	
	comp=N,464nm,0.3s						
PDPR	**Patillas Dam,**	**0.69**	**79**	Pg	**Pn**	**06 03 22.9**	**-0.6**
IDE	**Isla Desecheo**	**0.86**	**305**		**Pb**	**06 03 25.1**	**+0.1**
IDE					**Sg**	**06 03 37.0**	**+0.3**
HUMP	**Col San Antoni**	**0.88**	**73**	Pg	**Pn**	**06 03 25.9**	**-0.2**
HUMP				IAML		06 03 39.9	
	comp=N,425nm,0.2s						
HUMP	**Col San Antoni**	**0.88**	**73**		**Sn**	**06 03 37.9**	**-0.6**
CUPR	**Culebra, Puert**	**1.45**	**73**		**Pg**	**06 03 35.7**	**-0.8**
DR12	**Loma Pena Alta**	**2.66**	**290**	Pn	**Pn**	**06 03 50.8**	**+0.1**
HATOM	**Hato Mayor del**	**2.66**	**290**	⥣*e*Pg	**Pb**	**06 03 55.2**	**-0.6**
HATOM				IAML		06 04 39.5	
	comp=N,27nm,0.8s						

IDC 07 06:11:38.3±1.0**, 9°.62S×159°.38E, h0**km**, mb3.5**/5**, mbtmp3.5**/5**, Error ellipse: s-maj=18.2km s-min=8.6km az=165.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**0.59**	**72**	Pg	Pg	06 11 50.3	+0.7
	48nm,0.3s,baz=257,slow=14,SNR=350						
HNR				Lg	Lg	06 11 57.2	
	72nm,0.3s,baz=254,slow=22,SNR=15						
WRA	**Warramunga Arr**	**26.26**	**244**	P	P	06 17 15.8	+0.3
	1.1nm,1.0s,baz=71,slow=9.4,SNR=5.0						
	1.1nm,1.0s						
ASAR	**Alice Springs**	**28.05**	**237**	P	P	06 17 29.8	-1.9
	0.4nm,0.9s,baz=68,slow=10,SNR=5.0						
	0.4nm,0.9s						
SONM	**Songino Array**	**73.90**	**326**	P	P	06 23 17.0	+1.6
	0.2nm,0.4s,baz=123,slow=5.3,SNR=1.4						
	0.2nm,0.4s						
ILAR	**Eielson Array**	**84.26**	**20**	P	P	06 24 10.6	-1.0
	0.3nm,0.4s,baz=234,slow=5.1,SNR=14						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**88.23**	**318**	P	P	06 24 32.6	+1.0
	0.2nm,0.8s,baz=90,slow=4.6,SNR=2.0						
	0.2nm,0.8s						

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*SOME **07** 06:12:22.0, 40°.50N×77°.58E, h5km*

*KRNET **07** 06:12:23.2±0.1, 40°.50N×77°.54E, h20km, mb3.5*

*NNC **07** 06:12:23.0±0.9, 40°.47N×77°.62E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=6.0km s-min=4.3km az=168.0*

ISC 07 06:12:25.7±1.4**, 40°.56N**±0°.06×**77°.53E**±0°.04**, h10**km**, n55,** σ**1s.31**/85**, 27C-10D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.18**	**10**	⥥*e*P	**Pg**	**06 12 46.7**	**-1.8**
TARG				⥥*e*S	**Sb**	**06 13 03.9**	**-0.1**
NRN	**Naryn**	**1.45**	**307**	⥥*e*P	**Pn**	**06 12 51.2**	**-1.1**
NRN				⥥*e*S	**Sg**	**06 13 11.8**	**-0.6**
JNKS	**Jany-Kuch**	**1.53**	**289**	⥣*e*P	**Pn**	**06 12 51.8**	**-1.5**
JNKS				⥣*e*S	**Sn**	**06 13 12.7**	**-0.6**
KDJ	**Kajisay**	**1.59**	**350**	⥣*e*P	**Pn**	**06 12 53.8**	**-0.2**
KDJ				⥣*e*S	**Sg**	**06 13 16.1**	**-0.7**
ULHL	**Ulahol**	**1.94**	**330**	⥣*e*P	**Pb**	**06 12 59.7**	**-1.6**
ULHL				⥣*e*S	**Sb**	**06 13 26.3**	**+0.7**
PRZ	**Przheval'sk**	**2.03**	**18**	⥣*e*P	**Pb**	**06 13 01.1**	**-1.6**
PRZ				⥣*e*S	**Sb**	**06 13 28.6**	**+0.5**
ANVS	**Anan'yevo**	**2.22**	**3**	⥣*e*P	**Pn**	**06 13 03.7**	**+1.0**
ANVS				⥣*e*S	**Sb**	**06 13 33.2**	**-0.5**
BOOM	**Boomskoye usch**	**2.27**	**329**	⥣*e*P	**Pn**	**06 13 04.1**	**+0.7**
BOOM				⥣*e*S	**Sb**	**06 13 34.1**	**-0.9**
TNSS	**Tian-Shan**	**2.51**	**350**	Pg	**Pb**	**06 13 11.2**	**+0.1**
	6.5nm,0.4s						
TNSS				Lg	Lg	06 13 46.6	
	29nm,0.9s						
TNSS	**Tian-Shan**	**2.51**	**350**	*e*P	**Pb**	**06 13 11.2**	**+0.1**
	6.5nm,0.4s						
TNSS				*e*S	**Sg**	**06 13 46.6**	**+0.3**
	29nm,0.9s						
IZV	**Izvestkoviy**	**2.56**	**345**	Pg	**Pb**	**06 13 12.0**	**+0.1**
	16nm,0.5s						
IZV				Lg	Lg	06 13 47.9	
	70nm,0.7s						
IZV	**Izvestkoviy**	**2.56**	**345**	*e*P	**Pb**	**06 13 12.0**	**+0.1**
	16nm,0.5s						
IZV				*e*S	**Sg**	**06 13 47.9**	**-0.2**
	70nm,0.7s						
SATY	**Saty**	**2.58**	**14**	Pg	**Pb**	**06 13 12.4**	**+0.3**
	5.7nm,0.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SATY				Lg	Lg	06 13 48.3	
	58nm,0.6s						
MDOK	**Medeo**	**2.62**	**352**	Pg	**Pb**	**06 13 13.1**	**+0.2**
	24nm,0.5s						
MDOK				Lg	Lg	06 13 49.7	
	287nm,1.0s						
KOTS	**Kotyrbulak**	**2.69**	**353**	Pg	**Pb**	**06 13 14.6**	**+0.6**
	14nm,0.3s						
KOTS				Lg	Lg	06 13 52.7	
	114nm,0.8s						
KOTS	**Kotyrbulak**	**2.69**	**353**	*e*P	**Pb**	**06 13 14.6**	**+0.6**
	14nm,0.3s						
KOTS				*e*S	**Sg**	**06 13 52.7**	**+0.7**
	114nm,0.8s						
MTBS	**Maitube**	**2.69**	**343**	Pg	**Pb**	**06 13 14.3**	**+0.3**
	9.2nm,0.5s						
MTBS				Lg	Lg	06 13 52.1	
	61nm,0.6s						
MTBS	**Maitube**	**2.69**	**343**	*e*P	**Pb**	**06 13 14.3**	**+0.3**
	9.2nm,0.5s						
MTBS				*e*S	**Sg**	**06 13 52.1**	**-0.1**
	61nm,0.6s						
KST	**Kastek**	**2.74**	**335**	Pg	**Pb**	**06 13 15.4**	**+0.5**
	11nm,0.8s						
KST				Lg	Lg	06 13 53.8	
	50nm,0.5s						
KST	**Kastek**	**2.74**	**335**	*e*P	**Pb**	**06 13 15.4**	**+0.5**
	11nm,0.8s						
KST				*e*S	**Sg**	**06 13 53.8**	**0.0**
	50nm,0.5s						
ARLS	**Aral**	**2.75**	**299**	⇑*e*P	**Pn**	**06 13 10.4**	**+0.5**
ARLS				⇑*e*S	**Sn**	**06 13 44.9**	**+1.6**
TKM2	**Tokmak 2**	**2.77**	**329**	P	**Pb**	**06 13 14.3**	**-1.0**
	SNR=6.8						
TKM2	**Tokmak 2**	**2.77**	**329**	⇑*e*P	**Pn**	**06 13 11.1**	**+0.8**
TKM2				⇑*e*S	**Sb**	**06 13 46.1**	**-3.3**
UZB	**Uzynbulak**	**2.81**	**23**	Pg	**Pb**	**06 13 16.1**	**+0.1**
	5.9nm,0.3s						
UZB				Lg	Lg	06 13 54.7	
	38nm,0.8s						
UZB	**Uzynbulak**	**2.81**	**23**	*e*P	**Pb**	**06 13 16.1**	**+0.1**
	5.9nm,0.3s						
UZB				*e*S	**Sg**	**06 13 54.7**	**-1.3**
	38nm,0.8s						
UCH	**Uchtor**	**2.81**	**307**	P	**Pb**	**06 13 14.0**	**-2.3**
	SNR=6.7						
UCH	**Uchtor**	**2.81**	**307**	⇑*e*P	**Pn**	**06 13 11.8**	**+0.6**
UCH				⇑*e*S	**Sn**	**06 13 47.2**	**+1.8**
SALK	**Salom-Alik**	**2.84**	**278**	⇑*e*P	**Pn**	**06 13 11.5**	**+0.3**
SALK				⇑*e*S	**Sn**	**06 13 46.7**	**+1.1**
KBK	**Karagaybulak**	**2.85**	**318**	P	**Pb**	**06 13 17.6**	**+0.8**
	SNR=8.4						
KBK	**Karagaybulak**	**2.85**	**318**	⇑*e*P	**Pn**	**06 13 12.1**	**+0.7**
KBK				⇑*e*S	**Sn**	**06 13 48.0**	**+2.1**
KURS	**Kuram**	**2.96**	**9**	Pg	**Pb**	**06 13 18.8**	**+0.2**
	9.5nm,0.5s						
KURS				Lg	Lg	06 13 59.4	
	23nm,0.8s						
SHLS	**Shalkode**	**2.97**	**28**	*e*P	**Pg**	**06 13 21.9**	**-0.6**
	13nm,0.7s						
SHLS				*e*S	**Sg**	**06 14 04.7**	**+3.7**
	31nm,0.7s						
KPKS	**Kokpek**	**3.02**	**16**	Pg	**Pb**	**06 13 19.4**	**-0.2**
	0.2nm,0.1s						
KPKS				Lg	Lg	06 14 00.9	
	29nm,0.4s						
KPKS	**Kokpek**	**3.02**	**16**	*e*P	**Pb**	**06 13 19.4**	**-0.2**
	0.2nm,0.1s						
KPKS				*e*S	**Sg**	**06 14 00.9**	**-2.0**
	29nm,0.4s						
AAK	**Ala-Archa**	**3.08**	**313**	P	**Pb**	**06 13 21.2**	**+0.6**
	SNR=10						
AAK	**Ala-Archa**	**3.08**	**313**	⇑Pg	**Pb**	**06 13 20.4**	**-0.2**
	3.6nm,0.5s						
AAK				⇑Lg	Lg	06 14 02.5	
	24nm,0.8s						
AAK	**Ala-Archa**	**3.08**	**313**	⇑*e*P	**Pn**	**06 13 15.4**	**+0.9**
AAK				⇑*e*S	**Sn**	**06 13 53.4**	**+1.9**
PDGK	**Podgornoye**	**3.13**	**27**	⇓Pg	**Pb**	**06 13 19.9**	**-1.5**
	14nm,1.0s						
PDGK				⇓Lg	Lg	06 14 03.7	
	85nm,1.1s						
SFK	**Sufi-Kurgan**	**3.13**	**261**	⇓*e*P	**Pn**	**06 13 15.4**	**+0.1**
SFK				⇓*e*S	**Sn**	**06 13 53.4**	**+0.6**
CHMS	**Chumysh**	**3.20**	**320**	P	**Pb**	**06 13 23.6**	**+0.9**
	SNR=9.0						
CHMS	**Chumysh**	**3.20**	**320**	⇓*e*P	**Pn**	**06 13 16.9**	**+0.8**
CHMS				⇓*e*S	**Sn**	**06 13 56.1**	**+1.8**
KTBS	**Karatobe**	**3.21**	**349**	Pg	**Pb**	**06 13 23.4**	**+0.6**
	9.7nm,0.5s						
KTBS				Lg	Lg	06 14 07.7	
	23nm,0.5s						
KTBS	**Karatobe**	**3.21**	**349**	*e*P	**Pb**	**06 13 23.4**	**+0.6**
	9.7nm,0.5s						
KTBS				*e*S	**Sg**	**06 14 07.7**	**-1.1**
	23nm,0.5s						
KRBS	**Karabastau**	**3.42**	**337**	Pg	**Pb**	**06 13 27.1**	**+0.7**
	8.4nm,0.4s						
KRBS				Lg	Lg	06 14 13.7	
	4.4nm,0.5s						
KRBS	**Karabastau**	**3.42**	**337**	*e*P	**Pb**	**06 13 27.1**	**+0.7**
	8.4nm,0.4s						
KRBS				*e*S	**Sg**	**06 14 13.7**	**-1.9**
	4.4nm,0.5s						
USP	**Ospenovka**	**3.52**	**321**	P	**Pb**	**06 13 29.2**	**+1.0**
	SNR=11						
KTMS	**Ketmen**	**3.57**	**35**	Pg	**Pb**	**06 13 27.8**	**-1.1**
	1.1nm,0.1s						
KTMS				Lg	Lg	06 14 15.3	
	9.7nm,0.4s						
KTMS	**Ketmen**	**3.57**	**35**	*e*P	**Pb**	**06 13 27.8**	**-1.1**
	1.1nm,0.1s						
KTMS				*e*S	**Sb**	**06 14 15.3**	**+3.0**
	9.7nm,0.4s						
BLB	**Baldybastay**	**3.60**	**11**	Pg	**Pb**	**06 13 29.9**	**+0.4**
	0.2nm,0.1s						
BLB				Lg	Lg	06 14 18.8	
	44nm,0.5s						
ARXS	**Arharly**	**3.66**	**3**	Pg	**Pb**	**06 13 31.1**	**+0.7**
	7.3nm,0.5s						
ARXS				Lg	Lg	06 14 20.9	
	56nm,0.7s						
ARXS	**Arharly**	**3.66**	**3**	*e*P	**Pb**	**06 13 31.1**	**+0.7**
	7.3nm,0.5s						
ARXS				*e*S	**Sg**	**06 14 20.9**	**-2.1**
	56nm,0.7s						
MRKS	**Merke**	**3.89**	**305**	*e*P	**Pb**	**06 13 35.6**	**+1.1**
	2.4nm,0.3s						
MRKS				*e*S	**Sg**	**06 14 28.1**	**-2.6**
	8.6nm,0.6s						
DJR	**Jarkent**	**4.12**	**23**	Pg	**Pb**	**06 13 39.1**	**+0.8**
	0.8nm,0.1s						
DJR				Lg	Lg	06 14 34.5	
	5.6nm,0.7s						
DJR	**Jarkent**	**4.12**	**23**	*e*P	**Pb**	**06 13 39.1**	**+0.8**
	0.8nm,0.1s						
DJR				*e*S	**Sg**	**06 14 34.5**	**-3.5**
	5.6nm,0.7s						
KK31	**Karatay Array**	**5.83**	**298**	Pg	**Pb**	**06 14 11.1**	**+3.7**
	1.1nm,0.6s,baz=126,slow=17,SNR=4.4						
KK31				⇑Lg	Lg	06 15 30.8	
	6.4nm,1.0s,baz=104,slow=27,SNR=6.0						

IDC 07 06:18:59.5±5.3**, 4°.30S**×**152°.46E, h0**km**, mb3.6**/3**, mbtmp3.6**/3**, Error ellipse: s-maj=160.0km s-min=38.5km az=106.0, New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.53**	**227**	P	P	06 24 12.0	+0.4
	1.8nm,0.6s,baz=53,slow=9.8,SNR=34						
	1.8nm,0.6s						
ASAR	**Alice Springs**	**26.30**	**221**	P	P	06 24 36.6	-0.5
	0.7nm,0.8s,baz=49,slow=9.7,SNR=15						
	0.7nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**26.64**	**31**	T	T	06 51 58.1	
	baz=208						
H11S2	**WAKE ISLAND Hy**	**26.64**	**31**	T	T	06 51 51.7	
	baz=208						
H11S1	**WAKE ISLAND Hy**	**26.66**	**31**	T	T	06 51 59.3	
	baz=208						
MKAR	**Makanchi Array**	**79.72**	**319**	P	P	06 31 09.6	+0.2
	0.1nm,0.5s,baz=108,slow=4.7,SNR=1.8						
	0.1nm,0.5s						

IDC 07 06:35:37.0±2.0**, 0°.65N**×**126°.22E, h0**km**, mb3.3**/4**, mbtmp3.3**/4**, Error ellipse: s-maj=212.4km s-min=23.6km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.96**	**159**	P	P	06 40 31.6	-1.0
	0.6nm,0.6s,baz=337,slow=11,SNR=7.5						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**25.30**	**163**	P	P	06 41 06.2	+0.8
	0.3nm,0.5s,baz=345,slow=11,SNR=6.2						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**59.80**	**327**	P	P	06 45 43.7	-0.4
	0.2nm,0.5s,baz=126,slow=8.8,SNR=2.5						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**64.06**	**328**	P	P	06 46 12.8	+0.2
	0.2nm,0.6s,baz=134,slow=6.1,SNR=2.6						
	0.2nm,0.6s						

NNC ***07*** *06:36:37.9±0.8, 51°.96N×74°.37E, h0km, mb3.0, mpv2.7, Error ellipse: s-maj=41.2km s-min=5.1km az=26.0, Suspected Mining explosion.*

IDC ***07*** *06:36:42.0±0.9, 51°.89N×74°.42E, h0km, mbtmp2.6/4, ML2.1/4, Error ellipse: s-maj=25.7km s-min=7.9km az=28.0*

ISC 07 06:36:39.8±1.0**, 51°.8N**±0°.1×**74°.27E**±0°.06**, h0**km**, n9,** σ**1**s**72**/11**, 4C-5D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BVA0	**Borovoye Array**	**2.67**	**299**	⇓Pg	**Pb**	**06 37 26.7**	**-1.8**
	1.1nm,0.3s,baz=114,slow=21,SNR=15						
BVA0				⇑Lg	Lg	06 38 01.4	
	6.1nm,0.5s,baz=111,slow=26,SNR=4.3						
BVAR	**Borovoye Array**	**2.67**	**299**	Pn	**Pn**	**06 37 25.7**	**+1.7**
	0.3nm,0.3s,baz=117,slow=18,SNR=26						
BVAR				Sn	**Sb**	**06 38 02.1**	**+0.3**
	1.2nm,0.3s,baz=114,slow=27,SNR=39						
	2.6nm,0.3s						
KURBB	**Kurchatov Arra**	**2.93**	**112**	Pn	**Pn**	**06 37 29.1**	**+1.5**
	0.2nm,0.3s,baz=299,slow=14,SNR=12						
KURBB				Lg	Lg	06 38 10.8	
	0.3nm,0.3s,baz=302,slow=32,SNR=17						
	0.8nm,0.4s						
KURBB	**Kurchatov Arra**	**2.93**	**112**	⇑Pg	**Pb**	**06 37 32.6**	**-0.2**
	3.3nm,0.7s						
KURBB				⇓Lg	Lg	06 38 11.0	
	40nm,0.8s						
KURK	**Kurchatov**	**2.94**	**110**	⇑Pg	**Pb**	**06 37 30.5**	**-2.6**
	2.2nm,1.4s						
KURK				⇓Lg	Lg	06 38 11.8	
	6.6nm,0.8s						
I46RU	**ZALESOVO INFRA**	**6.74**	**67**	I	I	07 19 10.0	
	baz=250,slow=314,SNR=1.8						
ZALV	**Zalesovo Beam**	**6.74**	**67**	Pn	**Pn**	**06 38 20.9**	**+1.0**
	0.2nm,0.3s,baz=256,slow=14,SNR=5.4						
ZALV				Lg	Lg	06 40 12.3	
	0.1nm,0.3s,baz=253,slow=34,SNR=1.7						
	0.6nm,0.4s						
MK31	**Makanchi Array**	**7.25**	**131**	⇓Pn	**Pn**	**06 38 25.5**	**-1.5**
	0.7nm,0.8s,baz=355,slow=17,SNR=4.4						
MK31				⇓Sn	**Sn**	**06 39 50.8**	**+0.7**
	0.5nm,0.5s						
MK31				⇑Lg	Lg	06 40 31.1	
	5.1nm,0.9s,baz=320,slow=27,SNR=4.9						
MKAR	**Makanchi Array**	**7.25**	**131**	Pn	**Pn**	**06 38 29.2**	**+2.2**
	0.1nm,0.3s,baz=316,slow=12,SNR=5.1						
MKAR				Sn	**Sn**	**06 39 49.5**	**-0.5**
	0.1nm,0.3s,baz=322,slow=24,SNR=4.1						
MKAR				Lg	Lg	06 40 24.6	
	0.1nm,0.3s,baz=315,slow=26,SNR=8.0						
	0.1nm,0.3s						

IDC ***07*** *06:39:06.5±0.6, 18°.05S×167°.90E, h0km, mb4.4/22, mbtmp4.4/23, ML4.1/1, MS4.0/24, Error ellipse: s-maj=19.2km s-min=14.7km az=113.0*

NEIC ***07*** *06:39:08.3±1.7, 18°.00S±0°.05×167°.6E±0°.1, h10km±1km, mb4.8/37, Error ellipse: s-maj=17.3km s-min=8.1km az=88.0*

NOU ***07*** *06:39:08.5, 18°.09S×167°.87E, h22km, MLv5.0/20, Vanuatu Islands*

GCMT ***07*** *06:39:13.4±0.3, 17°.95S±0°.03×167°.55E±0°.02, h23km±1km, MW5.0/82, Moment Tensor Solution. s33,c38; s82,c105; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr2.94±.20; Mθθ-0.39±.12; Mφφ-2.55±.14; Mrθ0.65±.20; Mθφ0.46±.08; Mφr-2.18±.17; Best double couple: M0 3.60200×10^16 NP1:φs351.00000°, δ26.00000°, λ95.00000°. NP2: φs165.00000°, δ65.00000°, λ88.00000°. Principal axes: T 3.7530, Plg70.0000°, Azm70.0000°; N -0.2990, Plg2.0000°, Azm166.0000°; P -3.4500, Plg20.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 06:39:11.4±0.3**, 18°.06S**±0°.04×**167°.78E**±0°.05**, h32**km**, n139,** σ**1**s**91**/124**, mb4.7**/46**, MS4.0**/23**, 13D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**0.51**	**50**	P	**Pb**	**06 39 19.2**	**-2.8**
DVP	**Devils Point**	**0.51**	**50**	S	**Sb**	**06 39 26.9**	**-2.4**
RTV	**Rentapao**	**0.67**	**67**	P	**Pb**	**06 39 22.0**	**-2.6**
RTV	**Rentapao**	**0.67**	**67**	S	**Sn**	**06 39 31.8**	**-2.1**
SANVU	**Saraoutou**	**2.65**	**348**	P	**Pn**	**06 39 49.2**	**-2.7**
SANVU	**Saraoutou**	**2.65**	**348**	Pn	**Pn**	**06 39 48.8**	**-3.1**
SANVU				Sn	**Sn**	**06 40 19.2**	**-3.8**
MARNC	**Mare, Loyalty**	**3.42**	**176**	P	**Pn**	**06 40 00.6**	**-1.8**
MARNC	**Mare, Loyalty**	**3.42**	**176**	S	**Sn**	**06 40 39.2**	**-2.6**
MARNC	**Mare, Loyalty**	**3.42**	**176**		**Pn**	**06 40 00.7**	**-1.7**
YATNC	**Mamie plateau,**	**4.07**	**192**	P	**Pn**	**06 40 10.0**	**-1.4**
YATNC	**Mamie plateau,**	**4.07**	**192**	S	**Sn**	**06 40 55.5**	**-2.5**
DZM	**Mont Dzumac**	**4.19**	**197**	Pn	**Pn**	**06 40 12.1**	**-1.1**
	10nm,0.3s,baz=45,slow=10.0,SNR=85						
DZM				Sn	**Sn**	**06 40 58.4**	**-2.7**
	52nm,0.3s,baz=323,slow=20,SNR=7.1						
	27nm,0.3s						
DZM	**Mont Dzumac**	**4.19**	**197**	*e*Pn	**Pn**	**06 40 13.0**	**-0.1**
	109nm,1.1s						
DZM				*e*Sn	**Sn**	**06 40 57.2**	**-3.8**
	444nm,0.8s						
DZM				*e*LR	LR	06 41 05.3	
	2μm,24.9s						
DZM	**Mont Dzumac**	**4.19**	**197**	P	**Pn**	**06 40 12.2**	**-0.9**
DZM	**Mont Dzumac**	**4.19**	**197**	S	**Sn**	**06 40 58.6**	**-2.4**
ONTNC	**Ouen Toro**	**4.41**	**196**	S	**Sn**	**06 41 05.3**	**-1.0**
ONTNC	**Ouen Toro**	**4.41**	**196**	P	**Pn**	**06 40 14.6**	**-1.5**
ONTNC	**Ouen Toro**	**4.41**	**196**		**Pn**	**06 40 15.1**	**-1.0**
OUENC	**Ouen Island, N**	**4.43**	**191**	P	**Pn**	**06 40 15.8**	**-0.5**
MSVF	**Nonsavu**	**9.78**	**90**	Pn	Pn	06 41 33.5	+3.5
	0.2nm,0.3s,baz=270,slow=20,SNR=10						
MSVF				LR	LR	06 44 33.9	
	comp=Z,4μm,18.0s,baz=230,slow=34						
HNR	**Honiara**	**11.46**	**317**	LR	LR	06 45 51.2	
	comp=Z,41nm,18.6s,baz=230,slow=35						
EIDS	**Eidsvold**	**17.13**	**242**		**Pn**	**06 43 03.8**	**-4.6**
AFI	**Afiamalu**	**20.08**	**81**	LR	LR	06 49 47.9	
	comp=Z,557nm,20.4s,baz=259,slow=32						
CTA	**Charters Tower**	**20.45**	**261**	P	Pn	06 43 48.5	-0.1
	13nm,0.9s,baz=88,slow=11,SNR=10						
CTA				LR	LR	06 50 31.1	
	comp=Z,862nm,19.8s,baz=56,slow=33						
	13nm,0.9s						
TOZ	**Tahuroa Road**	**20.74**	**162**	P	Pn	06 43 50.4	-1.4
HIZ	**Hauiti**	**21.30**	**165**	P	**P**	**06 43 55.1**	**-0.2**
HIZ				IAmb	IAmb	06 44 16.3	
	comp=Z,41nm,1.0s						
URZ	**Urewera**	**21.72**	**160**	P	**P**	**06 44 00.7**	**+0.9**
	comp=Z,9.8nm,0.9s,baz=332,slow=11,SNR=5.0						
	comp=Z,9.8nm,0.9s						
PMG	**Port Moresby**	**21.78**	**291**	P	**P**	**06 44 02.0**	**+1.3**
	comp=Z,3.3nm,0.2s,baz=135,slow=16,SNR=1.5						
	comp=Z,3.3nm,0.2s						
RTZ	**Ruatahuna**	**22.00**	**160**		**P**	**06 44 02.9**	**0.0**
RTZ				IAmb	IAmb	06 44 15.4	
	comp=Z,47nm,1.2s						
CAN	**Canberra**	**23.95**	**220**	P	**P**	**06 44 21.4**	**-1.5**
CAN				IAmb	IAmb	06 44 26.7	
	comp=Z,48nm,1.3s						
COEN	**Coen**	**23.99**	**276**		**P**	**06 44 18.7**	**-4.7**
INKA	**Innaminka**	**26.65**	**244**		**P**	**06 44 46.9**	**-0.5**
STKA	**Stephens Creek**	**27.35**	**235**	P	**P**	**06 44 55.4**	**+1.7**
	comp=Z,5.9nm,0.9s,baz=71,slow=8.8,SNR=7.3						
STKA				LR	LR	06 55 51.9	
	comp=Z,498nm,18.1s,baz=39,slow=37						
	comp=Z,5.9nm,0.9s						
STKA	**Stephens Creek**	**27.35**	**235**	P	**P**	**06 44 51.3**	**-2.3**
RAR	**Rarotonga**	**30.69**	**101**	LR	LR	06 57 45.6	
	comp=Z,167nm,18.1s,baz=288,slow=37						
JAY	**Jayapura**	**30.71**	**297**	LR	LR	06 58 01.2	
	comp=Z,556nm,18.4s,baz=257,slow=37						
WB0	**Warramunga Arr**	**31.60**	**261**	P	**P**	**06 45 29.8**	**-1.8**
WRA	**Warramunga Arr**	**31.65**	**261**	P	**P**	**06 45 31.3**	**-0.6**
	comp=Z,1.8nm,1.1s,baz=91,slow=5.7,SNR=7.9						
	comp=Z,1.8nm,1.1s						
WRA	**Warramunga Arr**	**31.65**	**261**	P	**P**	**06 45 29.6**	**-2.3**
BBOO	**Buckleboo**	**32.05**	**237**	P	**P**	**06 45 33.6**	**-1.6**
AS31	**Alice Springs**	**32.09**	**254**	P	**P**	**06 45 33.9**	**-1.9**
ASAR	**Alice Springs**	**32.09**	**254**	P	**P**	**06 45 35.5**	**-0.3**
	comp=Z,3.4nm,0.7s,baz=86,slow=8.4,SNR=30						
ASAR				LR	LR	06 57 55.0	
	comp=Z,767nm,19.8s,baz=95,slow=35						
	comp=Z,3.4nm,0.7s						
ASAR	**Alice Springs**	**32.09**	**254**	P	**P**	**06 45 33.6**	**-2.2**
RKPI	**Ransiki, Papua**	**36.85**	**293**	P	**P**	**06 46 17.6**	**+0.6**
KNRA	**Kununurra**	**37.37**	**268**	P	**P**	**06 46 18.9**	**-2.5**
KNRA				IAmb	IAmb	06 46 36.2	
	comp=Z,19nm,1.2s						
FORT	**Forrest**	**38.13**	**243**	P	**P**	**06 46 25.6**	**-2.0**
FORT				IAmb	IAmb	06 47 09.5	
	comp=Z,11nm,0.8s						
GUMO	**Guam**	**38.73**	**323**	LR	LR	07 00 05.5	
	comp=Z,168nm,19.7s,baz=131,slow=32						
SIJI	**Sorong**	**39.72**	**291**	LR	LR	07 03 38.8	
	comp=Z,286nm,18.8s,baz=272,slow=37						
SIJI	**Sorong**	**39.72**	**291**	P	**P**	**06 46 45.1**	**+3.9**
SWI	**Sorong**	**39.73**	**291**	P	**P**	**06 46 44.6**	**+3.3**
FITZ	**Fitzroy Crossi**	**40.00**	**263**	P	**P**	**06 46 43.9**	**+0.5**
	comp=Z,22nm,1.3s,baz=92,slow=12,SNR=7.8						
FITZ				LR	LR	07 03 01.2	
	comp=Z,671nm,19.0s,baz=90,slow=36						
	comp=Z,22nm,1.3s						
TBI	**Tubuai**	**40.24**	**105**	*e*LQ	LQ	06 56 01.8	
	comp=Z,3μm,27.8s						
TBI				*e*LR	LR	06 57 51.4	
	comp=Z,916nm,25.8s						
PPT2	**Papeete2**	**40.53**	**96**	*e*LQ	LQ	06 56 12.5	
	comp=Z,418nm,28.5s						
PPT2				*e*LR	LR	06 58 05.1	
	comp=Z,383nm,26.8s						
PPT2				*e*LR	LR	06 58 10.4	
	comp=Z,447nm,24.8s						
PPTF	**Pamatai, Papee**	**40.54**	**96**	P	P	06 46 51.5	+3.4
PPTF				IAmb	IAmb	06 46 56.3	
	comp=Z,26nm,1.0s						
BATI	**Baumata**	**43.40**	**274**	LR	LR	07 05 24.5	
	comp=Z,242nm,18.1s,baz=146,slow=36						
EDFI	**Ende, Flores**	**45.67**	**275**	P	**P**	**06 47 32.0**	**+2.3**
	comp=Z,6.5nm,1.8s						
NWAO	**Narrogin (SRO)**	**47.54**	**242**	P	**P**	**06 47 42.6**	**-1.3**
MORW	**Morawa**	**48.35**	**247**	P	**P**	**06 47 48.3**	**-2.0**
DAV	**Davao City (W)**	**48.56**	**297**	LR	LR	07 07 48.4	
	comp=Z,82nm,18.1s,baz=139,slow=35						
KAPI	**Kappang**	**48.66**	**279**	LR	LR	07 08 11.0	
	comp=Z,76nm,19.0s,baz=96,slow=36						
TWSI	**Taliwang, Sumb**	**50.23**	**274**	P	**P**	**06 48 05.5**	**+0.6**
TAOE	**Nuku Hiva Isla**	**51.32**	**87**	*e*S	**S**	**06 55 34.4**	**+3.8**
	comp=Z,208nm,24.3s						
TAOE				*e*LR	LR	07 02 59.5	
	comp=Z,461nm,21.9s						
JOW	**Kunigami**	**58.83**	**318**	LR	LR	07 15 30.0	
	comp=Z,103nm,18.1s,baz=125,slow=37						
LEM	**Lembang**	**59.58**	**273**	LR	LR	07 16 25.4	
	comp=Z,168nm,18.6s,baz=158,slow=38						
MJAR	**Matsushiro Arr**	**61.07**	**333**	P	**P**	**06 49 22.2**	**0.0**
	comp=Z,4.3nm,1.1s,baz=155,slow=7.9,SNR=5.2						
MJAR				LR	LR	07 16 23.5	
	comp=Z,48nm,18.9s,baz=217,slow=37						
	comp=Z,4.3nm,1.1s						
JNU	**Nakatsue**	**61.91**	**325**	LR	LR	07 15 37.6	
	comp=Z,55nm,18.2s,baz=138,slow=35						
ASAJ	**Asahikawa**	**66.02**	**340**	P	**P**	**06 49 57.1**	**+2.4**
	comp=Z,1.4nm,0.3s,baz=174,slow=9.2,SNR=4.0						
	comp=Z,1.4nm,0.3s						
NJ2	**Nanjing**	**68.40**	**316**	*e*P	**P**	**06 50 10.3**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,31nm,0.5s						
WHN	**Wuhan**	**70.53**	**313**	P	P	06 50 16.7	-6.6
WHN				pmax	pmax		
	comp=Z,26nm,0.6s						
SHEM	**Shemya Is, Ala**	**70.70**	**4**	LR	LR	07 18 20.1	
	comp=Z,102nm,18.7s,baz=258,slow=33						
PETK	**Petropavlovsk-**	**71.40**	**354**	P	**P**	**06 50 28.9**	**+0.7**
	comp=Z,4.6nm,0.8s,baz=175,slow=6.2,SNR=4.0						
	comp=Z,4.6nm,0.8s						
MDJ	**Mudanjiang**	**71.44**	**332**	P	**P**	**06 50 30.1**	**+1.6**
MDJ				pmax	pmax		
	comp=Z,3μm,0.8s						
QSPA	**South Pole Qui**	**71.99**	**180**	P	**P**	**06 50 31.7**	**-0.1**
	comp=Z,12nm,1.0s,baz=20,slow=2.2,SNR=18						
QSPA				LR	LR	07 18 28.2	
	comp=Z,100nm,19.4s,baz=310,slow=33						
	comp=Z,12nm,1.0s						
QSPA	**South Pole Qui**	**71.99**	**180**	P	**P**	**06 50 33.1**	**+1.3**
BNX	**BinXian**	**73.28**	**332**	⇓P	**P**	**06 50 42.5**	**+3.0**
BNX				pmax	pmax		
	comp=Z,5.0nm,1.9s						
KLR	**Kul'dur**	**74.23**	**336**	P	**P**	**06 50 45.4**	**+0.4**
	comp=Z,2.5nm,1.1s,baz=142,slow=6.6,SNR=4.6						
KLR				LR	LR	07 20 05.8	
	comp=Z,45nm,21.2s,baz=256,slow=33						
	comp=Z,2.5nm,1.1s						
HNS	**HongShan**	**74.40**	**319**	⇓P	**P**	**06 50 50.1**	**+3.9**
HNS				pmax	pmax		
	comp=Z,5.0nm,1.2s						
HEH	**HeiHe**	**76.76**	**335**	*e*P	**P**	**06 51 02.7**	**+3.3**
CMAR	**Chiang Mai Arr**	**76.76**	**295**	P	**P**	**06 51 00.7**	**+0.6**
	comp=Z,2.8nm,0.3s,baz=113,slow=5.4,SNR=6.8						
	comp=Z,2.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**76.76**	**295**		**P**	**06 50 59.4**	**-0.8**
CHTO	**Chiang Mai**	**76.90**	**295**		**P**	**06 51 00.5**	**-0.5**
CHTO				IAmb	IAmb	06 51 17.4	
	comp=Z,5.5nm,1.0s						
CHTO	**Chiang Mai**	**76.90**	**295**	P	P	06 51 08.3	+7.3
PZH	**PanZhiHua**	**77.91**	**303**	P	**P**	**06 51 07.5**	**+0.9**
HHC	**Hu-ho-hao-te**	**78.43**	**320**	*e*P	**P**	**06 51 09.0**	**-0.2**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,110nm,4.5s						
MA2	**Magadan**	**78.59**	**351**	P	**P**	**06 51 08.8**	**-0.6**
	comp=Z,2.4nm,0.4s,baz=158,slow=15,SNR=4.8						
MA2				LR	LR	07 22 49.7	
	comp=Z,76nm,18.4s,baz=236,slow=33						
	comp=Z,2.4nm,0.4s						
SEY	**Seymchan**	**81.63**	**353**	P	**P**	**06 51 26.1**	**+0.3**
	comp=Z,3.8nm,0.8s,baz=147,slow=6.7,SNR=16						
	comp=Z,3.8nm,0.8s						
KDAK	**Kodiak Island**	**82.39**	**20**	LR	LR	07 25 51.0	
	comp=Z,61nm,18.6s,baz=101,slow=34						
BELA	**Belgrano 2**	**83.39**	**175**		**P**	**06 51 34.9**	**-0.1**
ULN	**Ulaanbaatar**	**85.10**	**324**		**P**	**06 51 43.6**	**-0.6**
ULN				IAmb	IAmb	06 51 59.0	
	comp=Z,5.7nm,1.1s						
ULN	**Ulaanbaatar**	**85.10**	**324**	P	P	06 51 48.4	+4.2
YAK	**Yakutsk**	**85.34**	**343**	P	**P**	**06 51 46.0**	**+1.2**
	comp=Z,15nm,0.7s,baz=182,slow=2.7,SNR=7.2						
	comp=Z,15nm,0.7s						
TNA	**Tin City**	**85.38**	**10**		**P**	**06 51 45.9**	**+1.0**
TNA				IAmb	IAmb	06 51 56.6	
	comp=Z,8.8nm,1.2s						
SONM	**Songino Array**	**85.45**	**324**	P	**P**	**06 51 47.0**	**+1.1**
	comp=Z,1.3nm,0.8s,baz=134,slow=4.2,SNR=7.9						
	comp=Z,1.3nm,0.8s						
SONM	**Songino Array**	**85.45**	**324**	P	**P**	**06 51 47.0**	**+1.1**
SONM				IAmb	IAmb	06 51 59.9	
	comp=Z,6.3nm,1.3s						
BILL	**Bilibino**	**85.86**	**359**		**P**	**06 51 47.3**	**0.0**
AFDM	**Forest Hills D**	**87.39**	**48**		**P**	**06 51 55.4**	**-0.2**
AFDM				IAmb	IAmb	06 51 56.4	
	comp=Z,4.5nm,1.0s						
CMB	**Columbia Colle**	**87.41**	**49**		**P**	**06 51 55.2**	**-0.5**
CMB				IAmb	IAmb	06 51 57.0	
	comp=Z,4.6nm,1.0s						
YBH	**Yreka Blue Hor**	**87.42**	**45**	LR	LR	07 26 27.8	
	comp=Z,8.0nm,18.2s,baz=271,slow=32						
ISA	**Isabella, Lake**	**87.82**	**51**		**P**	**06 51 57.8**	**0.0**
ISA				IAmb	IAmb	06 51 58.9	
	comp=Z,7.0nm,1.2s						
DPP	**Dos Picos Cty**	**87.93**	**54**	P	**P**	**06 51 58.3**	**0.0**
DPP				IAmb	IAmb	06 51 59.9	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,6.1nm,0.9s						
CLC	China Lake	88.53	52	P	P	06 52 01.3	+0.2
CLC				IAmb	IAmb	06 52 02.4	
	comp=Z,8.8nm,1.2s						
DSP	Deep Springs	88.88	50	P	P	06 52 02.7	+0.1
NVAR	Mina Array Bea	89.06	49	P	P	06 52 03.6	-0.2
	comp=Z,1.3nm,0.8s,baz=252,slow=5.7,SNR=9.1						
	comp=Z,1.3nm,0.8s						
GWY	Greenwater Val	89.37	52		P	06 52 05.1	-0.1
GWY				IAmb	IAmb	06 52 06.0	
	comp=Z,5.4nm,1.2s						
ILAR	Eielson Array	89.53	18	P	P	06 52 03.4	-1.6
	comp=Z,0.8nm,0.8s,baz=232,slow=4.4,SNR=8.9						
ILAR				LR	LR	07 27 12.2	
	comp=Z,54nm,19.3s,baz=189,slow=32						
	comp=Z,0.8nm,0.8s						
TROLL	Troll, Antarti	89.60	185	P	P	06 52 05.2	-0.5
SNAA	Sanae	90.27	183	⇓P	P	06 52 14.9	+6.3
	comp=Z,75nm,1.0s						
SNAA	Sanae	90.27	183	P	P	06 52 08.7	0.0
	comp=Z,2.6nm,0.7s,baz=200,slow=11,SNR=3.5						
	comp=Z,2.6nm,0.7s						
SNAA	Sanae	90.27	183	P	P	06 52 09.1	+0.4
VNA3	Neumayer Olymp	90.91	181	⇓P	P	06 52 12.7	+1.1
	comp=Z,6.1nm,0.9s						
VNA2	Neumayer--Watz	91.19	182	⇓P	P	06 52 14.0	+1.1
	comp=Z,7.2nm,0.8s,baz=186,slow=4.4						
VNA1	Neumayer--Stat	91.48	181	P	P	06 52 16.3	+2.1
	comp=Z,8.5nm,0.8s						
TUC	Tucson	92.52	57		P	06 52 20.4	+0.6
TUC				IAmb	IAmb	06 52 30.1	
	comp=Z,4.8nm,1.2s						
X16A	Lo Mia Camp, P	92.71	55	P	P	06 52 20.9	+0.1
TIXI	Tiksi	93.31	349	P	P	06 52 22.5	+0.1
	comp=Z,0.5nm,0.3s,baz=142,slow=18,SNR=3.6						
	comp=Z,0.5nm,0.3s						
WMQ	Urumqi	95.39	314	eP	P	06 52 33.0	+0.3
TXAR	Lajitas Array	97.42	62	P	Pdif	06 52 42.5	+0.1
	comp=Z,0.4nm,0.9s,baz=262,slow=3.2,SNR=2.7						
	comp=Z,0.4nm,0.9s						
MKAR	Makanchi Array	99.93	316	P	Pdif	06 52 53.6	+0.5
	comp=Z,0.2nm,0.6s,baz=99,slow=4.7,SNR=2.0						
MKAR				PKKPbc	PKKPbc	07 09 12.2	-1.8
	comp=Z,0.4nm,0.9s,baz=270,slow=2.9,SNR=3.7						
YKA	Yellowknife Ar	100.26	27	P	Pdif	06 52 52.1	-2.0
	comp=Z,0.2nm,0.6s,baz=260,slow=4.9,SNR=2.4						
ARCES	ARCESS Array B	123.58	345	PKP	PKiKP	06 58 05.0	-0.3
	comp=Z,1.6nm,0.7s,baz=58,slow=2.3,SNR=3.6						
LESA	Schwarzleotal	144.30	331	ePKP	PKPdf	06 58 44.5	+0.1
	comp=Z,2.9nm,0.7s						
BTNL	Ternell	144.39	340	dPKPdf	PKPdf	06 58 43.9	-0.4
MEM	Membach	144.41	340	dPKPdf	PKPdf	06 58 43.9	-0.3
BSTI	Sart Tilman	144.57	340	dPKPdf	PKPdf	06 58 44.5	0.0
BHOU	Houvegnez	144.63	340	dPKP	PKiKP	06 58 54.1	+5.7
BCLA	Clavier	144.80	340	dPKP	PKiKP	06 58 53.5	+4.8
ABTA	Abfaltersbach	144.87	330	ePKP	PKPdf	06 58 44.8	-0.5
	comp=Z,6.6nm,0.9s						
ABTA				epPKiKP	pPKPdf	06 58 53.7	-1.1
	comp=Z,0.4nm,0.3s						
WATA	Walderalm	144.88	332	ePKP	PKPab	06 58 43.6	-0.9
	comp=Z,8.0nm,1.6s						
WATA				epPKiKP	pPKPdf	06 58 54.2	-0.6
	comp=Z,16nm,1.6s						
WTTA	Wattenberg	144.90	331	ePKP	PKPdf	06 58 45.2	-0.3
	comp=Z,5.6nm,1.1s						
WTTA				epPKiKP	pPKPdf	06 58 54.5	-0.4
	comp=Z,21nm,1.5s						
RCHB	Rochefort	145.05	340	dPKP	PKiKP	06 58 53.5	+4.3
MOTA	Moosalm	145.08	332	ePKP	PKPdf	06 58 45.9	+0.2
	comp=Z,10nm,1.0s						
MOTA				epPKiKP	pPKPdf	06 58 55.0	-0.2
	comp=Z,25nm,1.2s						
RETA	Reutte	145.13	332	ePKP	PKPdf	06 58 45.9	+0.1
	comp=Z,14nm,1.5s						
RETA				epPKiKP	pPKPdf	06 58 55.0	-0.1
	comp=Z,0.1nm,0.2s						
SQTA	Sankt Quirin	145.13	332	epPKP	PKPdf	06 58 46.6	+0.8
	comp=Z,7.3nm,0.8s						
SQTA				epPKiKP	pPKPdf	06 58 55.2	0.0
	comp=Z,15nm,1.1s						
WLF	Walferdange	145.17	339	dPKPdf	PKPdf	06 58 46.3	+0.7
DOU	Dourbes	145.31	341	dPKP	PKiKP	06 58 55.4	+5.6
FETA	Feichten	145.49	332	ePKP	PKPdf	06 58 44.9	-1.6
	comp=Z,6.4nm,0.8s						
FETA				epPKiKP	pPKPab	06 58 56.5	+0.5
	comp=Z,26nm,1.1s						
DAVA	Damuels	145.66	333	ePKP	PKPdf	06 58 45.6	-1.2
	comp=Z,8.0nm,1.0s						
DAVA				epPKiKP	pPKPab	06 58 56.0	-0.6
	comp=Z,28nm,1.2s						
ESDC	Sonseca Array	157.30	343	PKPab	PKPab	06 59 36.6	+1.2
	comp=Z,0.9nm,0.8s,baz=26,slow=3.4,SNR=4.2						
TORD	Torodi Ar. Bea	165.74	252	PKP	PKPdf	06 59 14.6	+0.7
	comp=Z,1.6nm,1.0s,baz=52,slow=0.8,SNR=4.9						
TORD				PKPab	PKPab	07 00 14.4	+1.3
	comp=Z,1.6nm,0.9s,baz=120,slow=2.0,SNR=4.1						

*DJA **07** 07:05:08.9±0.3, 8°S±2°×12°0E±°, h258km±4km, M4.2/33, mB5.2/5, mb4.4/9, MLv4.0/33, Mw(mB)4.6/5, MwMwp5.3/1, Mwp5.5/1*
*IDC **07** 07:05:08.2±1.5, 7°48S×119°92E, h279km±12km, mb2.9/4, mbtmp3.8/9, Error ellipse: s-maj=42.9km s-min=10.2km az=53.0*
ISC 07 07:05:07.5±0.8, **7°79S**±0°06×**119°55E**±0°05, **h271**km±7km, **n37**, σ**1.16**/46, **mb3.0**/3, **Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBFI	Labuhan Bajo,	0.76	154	P	Pn	07 05 45.0	+1.2
DBNI	Kabupaten Domp	1.41	240	P	Pn	07 05 47.5	+0.2
DBNI				S	S	07 06 19.2	+0.4
WBSI	Waikabubak, Su	1.84	185	P	Pn	07 05 50.2	-0.4
WBSI				S	S	07 06 24.2	-0.6
BSSI	Bau Bau, Buton	1.89	30	P	Pn	07 05 51.7	+0.8
WSI	Waingapu	2.01	158	P	Pn	07 05 51.8	-0.1
WSI				S	S	07 06 25.8	-1.3
PLAI	Plampang	2.03	239	P	Pn	07 05 52.9	+0.8
PLAI				S	S	07 06 25.9	-1.5
EDFI	Ende, Flores	2.33	114	P	Pn	07 05 56.0	+1.2
EDFI				S	S	07 06 32.0	-0.3
MKS	Makassar	2.56	358	P	Pn	07 05 57.3	+0.3
KAPI	Kappang	2.77	4	P	Pn	07 05 58.5	-0.5
	5.0nm,0.5s,baz=184,slow=15,SNR=3.5						
KAPI	Kappang	2.77	4	P	Pn	07 05 59.1	+0.1
MMRI	Maumere	2.79	108	P	Pn	07 06 00.6	+1.3
TWSI	Taliwang, Sumb	2.80	250	P	Pn	07 05 59.1	-0.2
TWSI				S	S	07 06 39.7	-0.8
KLNI	Mataram	3.48	259	P	Pn	07 06 07.1	+0.6
SPSI	Sidrap Palu	3.81	3	P	Pn	07 06 11.1	+0.9
KHKI	Kahang-Kahang	3.94	261	P	Pn	07 06 13.2	+1.5
SRBI	Singaraja	4.30	266	P	Pn	07 06 16.5	+0.7
PMSI	Majene	4.31	352	P	Pn	07 06 16.1	+0.1
IGBI	Denpasar	4.47	257	P	Pn	07 06 17.3	-0.5
RTBI	Rangdo, Negare	4.61	261	P	Pn	07 06 19.8	+0.4
BATI	Baumata	4.72	121	P	Pn	07 06 21.9	+1.2
	24nm,0.5s,baz=309,slow=13,SNR=1.9						
BATI				S	S	07 07 16.9	-2.4
	52nm,0.4s,baz=294,slow=20,SNR=8.1						
BATI	Baumata	4.72	121	P	Pn	07 06 22.5	+1.7
SOEI	Soe	5.06	113	P	Pn	07 06 26.3	+1.4
	0.4nm47nm,0.6s						
MMSI	Mamuju	5.11	353	P	Pn	07 06 26.2	+0.8
	0.2nm69nm,0.7s						
JAGI	Jajag, Banyuwa	5.38	262	P	Pn	07 06 27.5	-1.2
KMMI	Kalianget	5.58	277	P	Pn	07 06 31.6	+0.5
BLJI	Banyuglugur	5.90	270	P	Pn	07 06 36.3	+1.4
	0.2nm38nm,0.4s						
GMJI	Gumukmas	6.06	265	P	Pn	07 06 35.9	-1.0
	0.2nm18µm23nm,1.0s						
SJI	Sawahan	7.71	270	P	Pn	07 06 59.5	+2.0
	47nm,0.5s						
SNJI	Sawahan-Nganju	7.72	270	P	Pn	07 06 59.5	+1.9
PCJI	Pacitan	8.30	267	P	Pn	07 07 04.4	-0.3
FITZ	Fitzroy Crossi	11.84	151	P	Pn	07 07 49.4	+0.7
	8.4nm,0.6s,baz=336,slow=7.5,SNR=30						
FITZ				S	S	07 10 01.1	+0.3
	1.0nm,0.4s,baz=331,slow=13,SNR=1.8						
SIJI	Sorong	13.55	60	P	Pn	07 08 03.8	-6.0
	4.3nm,0.4s,baz=236,slow=11,SNR=4.0						
WRA	Warramunga Arr	18.74	132	P	P	07 09 08.0	+1.0
	1.4nm,0.7s,baz=303,slow=12,SNR=19						
WRA				S	S	07 12 24.0	-1.8
	1.3nm,1.0s,baz=310,slow=21,SNR=6.3						
ASAR	Alice Springs	20.95	141	P	P	07 09 30.7	+0.5
	1.4nm,0.4s,baz=314,slow=9.7,SNR=18						
ASAR				S	S	07 13 08.0	+2.1
	0.7nm,0.9s,baz=313,slow=16,SNR=5.9						
	1.4nm,0.4s						
STKA	Stephens Creek	31.55	142	P	P	07 11 05.2	+0.2
	0.9nm,0.6s,baz=306,slow=7.2,SNR=2.1						
	0.9nm,0.6s						
MKAR	Makanchi Array	63.64	332	P	P	07 15 09.0	-1.0
	0.1nm,0.3s,baz=138,slow=5.7,SNR=4.9						
	0.1nm,0.3s						
KURBB	Kurchatov Arra	68.14	333	P	P	07 15 36.4	-2.0
	0.1nm,0.4s,baz=139,slow=6.8,SNR=1.8						
	0.1nm,0.4s						

*SSNC **07** 07:19:26.2±1.2, 19°36N×78°71W, h23km±26km, MD3.8, ML3.1, MW3.6, Presumed earthquake*
*JSN **07** 07:19:27.4±0.7, 19°34N×78°52W, h18km±19km, MD4.5, Presumed earthquake*
ISC 07 07:19:22.0±1.1, **19°35N**±0°06×**78°68W**±0°04, **h14**km, **n19**, σ**2.44**/24, **2C, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBCY	The Bluff, Cay	1.09	291	eP	Pb	07 19 43.1	+0.4
CBCY				eS	Sb	07 19 55.7	-1.2
CBCY				IAML		07 20 00.8	
	comp=N,286nm,0.2s						
CBCY				IAML		07 20 07.5	
	comp=E,426nm,0.7s						
LCCY	Blossom Villag	1.36	284	eP	Pn	07 19 47.6	+0.9
LCCY				eS	Sn	07 20 02.8	-1.8
LCCY				IAML		07 20 04.0	
	comp=E,202nm,0.2s						
LCCY				IAML		07 20 06.5	
	comp=N,211nm,0.3s						
MTDJ	Mount Denham	1.55	136	eP	Pn	07 19 51.3	+1.9
MTDJ				eS	Sn	07 20 09.3	-0.1
MTDJ				IAML		07 20 11.3	
	comp=N,380nm,0.2s						
MTDJ				IAML		07 20 12.4	
	comp=N,386nm,0.3s						
LMGC	Las Mercedes	1.73	65	eP	Pn	07 19 53.5	+1.8
CCCC	Cccc	2.03	25	eP	Pn	07 20 00.4	+4.5
STH	Stony Hill	2.17	125	⇑iP	Pn	07 19 59.8	+1.9
CHIV	Chivirico	2.22	73	eP	Pn	07 19 59.7	+1.2
HOJ	Hope	2.26	126	i P	Pn	07 20 01.4	+2.4
MARVS	Santiago de Cu	2.69	76	eP	Pn	07 20 06.5	+1.5
RCC	Rio Carpintero	2.88	77	eP	Pn	07 20 09.2	+1.7
RCC				eS	Sn	07 20 40.2	-1.8
RCC				eSg	Sb	07 20 43.0	-5.3
HLGC	Holguin	2.90	58	eP	Pn	07 20 09.9	+2.1
PINC	Pinares de May	2.94	67	eP	Pn	07 20 11.1	+2.7
MGV	Manicaragua	3.01	336	eP	Pn	07 20 10.3	+1.0
GTBY	Guantanamo Bay	3.41	80	⇑iP	Pn	07 20 17.0	+2.2
GTBY	Guantanamo Bay	3.41	80	eP	Pn	07 20 16.9	+2.1
NMDO	Nuevo Mundo	3.68	70	eP	Pn	07 20 20.1	+1.6
MOAC	Moa	3.73	69	eP	Pn	07 20 21.0	+1.8
QMBU	Quimbuelo	3.73	76	eP	Pn	07 20 20.7	+1.4
MASC	Masc	4.27	78	eP	Pn	07 20 30.4	+3.8

*CATAC **07** 07:34:34.9±0.7, 15°N±5°×9°3W±°, h29km±3km, M3.6/6, MLv3.6/6, Error ellipse: s-maj=11.0km s-min=4.0km az=26.6, confirmed*
*MEX **07** 07:34:36.2±1.0, 14°51N×92°71W, h40km±27km, MD4.1*
*GCG **07** 07:34:37.0±1.1, 14°57N×92°48W, h49km±11km, MD3.8, ML3.7, MW3.1, Presumed earthquake*
ISC 07 07:34:31.8±1.5, **14°40N**±0°05×**92°74W**±0°03, **h26**km±13km, **n39**, σ**2.16**/67, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.69	42	eP	Pn	07 34 46.6	+0.8
THIG				eS	Sn	07 34 55.6	0.0
THIG		0.69	42	i P	Pn	07 34 46.3	+0.5
THIG				IAML		07 34 56.1	
	comp=E,3µm,0.2s						
SMCA	Catarina	0.79	55	i P	Pb	07 34 48.1	+1.2
SMCA				i S	Sb	07 34 57.3	0.0
SMCA				IAML		07 34 59.0	
	comp=E,5µm,0.1s						
PATR	El Naranjo	0.87	34	eP	Pb	07 34 48.4	0.0
PATR				eS	Sb	07 34 58.4	-1.3
CHUJ	Union Juarez	0.92	41	eP	Pn	07 34 49.2	-0.2
CHUJ				eS	Sb	07 34 59.9	-1.4
PAVE	Pavencul	0.96	34	eP	Pn	07 34 49.9	+0.1
PAVE				eS	Sb	07 35 01.1	-1.3
RTAL	Retalhuleu	1.02	83	eP	Pn	07 34 52.0	+1.5
RTAL				eS	Sn	07 35 04.0	+0.1
RTAL	Retalhuleu	1.02	83	P	Pn	07 34 51.9	+1.5
RTAL				S	Sn	07 35 05.2	+1.3
QUEO	Labor Ovalle	1.28	68	i P	Pn	07 34 55.2	+1.0
QUEO				i S	Sn	07 35 09.5	-1.2
QUEO				IAML		07 35 11.0	
	comp=E,2µm,0.2s						
STG2	El Palmar, Qui	1.32	88	i P	Pn	07 34 52.4	-2.3
STG2				IAML		07 35 06.4	
	comp=N,10µm,0.1s						
STG8	El Palmar, Qui	1.35	88	i P	Pn	07 34 53.3	-1.9
STG8				i S	Sn	07 35 06.3	-6.0
STG8				IAML		07 35 09.5	
	comp=N,2µm,0.1s						
STG5	El Palmar, Qui	1.35	90	i P	Pn	07 34 53.0	-2.0
PCIG		1.38	340	eP	Pn	07 34 56.3	+0.9
PCIG				eS	Sn	07 35 11.9	-0.9
HUEH	Huehuetenango	1.51	52	eP	Pn	07 34 58.6	+1.3
HUEH				eS	Sn	07 35 15.1	-1.2
HUEH	Huehuetenango	1.51	52	P	Pn	07 34 58.8	+1.5
HUEH				S	Sn	07 35 16.3	0.0
HUEH	Huehuetenango	1.51	52	i P	Pn	07 34 57.7	+0.4
HUEH				i S	Sn	07 35 15.4	-0.9
HUEH				IAML		07 35 18.3	
	comp=N,886nm,0.4s						
CCIG	Comitan	1.96	17	eP	Pn	07 35 05.2	+1.7
CCIG				eS	Sn	07 35 26.5	-0.9
CCIG	Comitan	1.96	17	i P	Pn	07 35 05.3	+1.7
CCIG				i S	Sb	07 35 28.0	-3.1
CCIG				IAML		07 35 31.7	
	comp=N,379nm,0.4s						
FG8	Yepocapa, Chim	2.12	93	i P	Pn	07 35 02.0	-3.6
CARR	Arriaga	2.16	329	eP	Pn	07 35 08.2	+2.1
CARR				eS	Sn	07 35 32.9	+0.8
APG	El Apazote	2.28	74	i P	Pn	07 35 09.4	+1.4
PCG5	San Vicente Pa	2.30	94	i P	Pn	07 35 06.4	-1.8
TGIG		2.40	351	eP	Pn	07 35 10.7	+1.3
TGIG				eS	Sn	07 35 35.4	-2.6
FAME	Alcaldia de Sa	2.70	101	P	Pn	07 35 16.9	+3.4
FAME				S	Sn	07 35 46.4	+0.9
NUBE	Las Nubes	2.91	99	i P	Pn	07 35 19.2	+2.6
UXUV	UXUV	3.21	335	eP	Pn	07 35 22.8	+2.3
UXUV				eS	Sn	07 35 58.3	+0.5
CMIG	Matias Romero	3.38	323	eP	Pn	07 35 24.6	+1.6
CMIG				eS	Sn	07 36 02.4	+0.1
HUIG	Huatulco	3.53	293	eP	Pn	07 35 27.3	+2.3
HUIG				eS	Sn	07 36 02.9	-3.0
PETF	Flores	3.73	47	eP	Pn	07 35 28.8	+1.1
PETF				eS	Sn	07 36 10.2	-0.7
P5NO	Presa 5 de nov	3.88	96	S	Sn	07 36 19.8	+5.1
NEUV	Arroyo Zacate	4.42	319	eP	Pn	07 35 39.0	+1.8
NEUV				eS	Sn	07 36 28.1	+0.2
PEIG	Puerto Escondi	4.54	291	eP	Pn	07 35 39.9	+1.0
PEIG				eS	Sn	07 36 25.6	-5.3
VHO	Vista Hermosa	4.68	305	eP	Pn	07 35 43.1	+2.1
VHO				eS	Sn	07 36 26.4	-8.1
YOIG	Yosondua	5.24	298	eP	Pn	07 35 49.5	+0.8
YOIG				eS	Sn	07 36 46.1	-2.3
TOIG	Toxpalan	5.55	312	eP	Pn	07 35 55.8	+2.9
TOIG				eS	Sn	07 36 57.0	+1.1
PNIG	Pinotepa	5.56	292	eP	Pn	07 35 56.7	+3.8
PNIG				eS	Sn	07 36 52.3	-3.8
TXIG	Tlaxiaco	5.61	301	eP	Pn	07 35 56.3	+2.5
TXIG				eS	Sn	07 36 52.9	-4.8
FTIG	Fresnillo de T	6.25	305	eP	Pn	07 36 07.6	+5.1
FTIG				eS	Sn	07 37 11.8	-1.3
JAUV	Jalcomulco	6.29	322	eP	Pn	07 36 03.8	+0.8
JAUV				eS	Sn	07 37 12.1	-2.0

*KRNET **07** 08:11:50.7±0.1, 43°01N×77°13E, h19km, mb2.9*
*NNC **07** 08:11:50.1±0.5, 42°97N×77°16E, h0km, mb2.6, mpv2.9, Error ellipse: s-maj=3.4km s-min=1.9km az=25.0*
*SOME **07** 08:11:51.1, 43°00N×77°13E, h15km*
ISC 07 08:11:50.7±0.8, **42°99N**±0°03×**77°13E**±0°02, **h15**km±6km, **n27**, σ**0.27**/53, **11C-3D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNSS	Tian-Shan	0.14	290	P	Pg	08 11 55.0	+0.1
	1.0nm,0.0s						
TNSS				S	Sg	08 11 57.7	0.0
	35nm,0.1s						
TNSS	Tian-Shan	0.14	290	eP	Pg	08 11 55.0	+0.1
	1.0nm,0.0s						
TNSS				eS	Sg	08 11 57.7	0.0
	35nm,0.1s						
MDOK	Medeo	0.18	341	Pg	Pg	08 11 55.3	0.0
	34nm,0.1s						
MDOK				Lg	Lg	08 11 58.0	
	27nm,0.3s						
KOTS	Kotyrbulak	0.25	357	P	Pg	08 11 56.4	+0.2
	38nm,0.1s						
KOTS				S	Sg	08 11 59.6	-0.3
	74nm,0.2s						
KOTS	Kotyrbulak	0.25	357	eP	Pg	08 11 56.4	+0.2
KOTS				eS	Sg	08 11 59.7	-0.3
KOTS	Kotyrbulak	0.25	357	eP	Pg	08 11 56.4	+0.2
	38nm,0.1s						
KOTS				eS	Sg	08 11 59.6	-0.3
	74nm,0.2s						
KNDC	Almaty	0.26	332	⇓P	Pg	08 11 55.8	-0.6
	9.2nm,0.3s						
KNDC				⇑S	Sg	08 11 60.0	-0.2
	43nm,0.7s						
IZV	Izvestkoviy	0.38	277	P	Pg	08 11 58.7	+0.1
	12nm,0.1s						
IZV				S	Sg	08 12 03.9	0.0
	36nm,0.3s						
IZV	Izvestkoviy	0.38	277	eP	Pg	08 11 58.7	+0.1
	12nm,0.1s						
IZV				eS	Sg	08 12 03.9	0.0
	36nm,0.3s						
ANVS	Anan'yevo	0.45	117	⇑eP	Pg	08 11 59.3	-0.4
ANVS				⇑eS	Sg	08 12 05.8	0.0
MTBS	Maitube	0.53	286	P	Pg	08 12 01.3	+0.1
	2.8nm,0.1s						
MTBS				S	Sg	08 12 08.4	0.0
	18nm,0.3s						
MTBS	Maitube	0.53	286	eP	Pg	08 12 01.4	+0.1
	2.8nm,0.1s						
MTBS				eS	Sg	08 12 08.4	0.0
	18nm,0.3s						
KST	Kastek	0.86	274	P	Pg	08 12 07.2	-0.2
	1.9nm,0.1s						
KST				S	Sg	08 12 18.6	-0.1
	3.5nm,0.1s						
KST	Kastek	0.86	274	eP	Pg	08 12 07.2	-0.2
	1.9nm,0.1s						
KST				eS	Sg	08 12 18.6	-0.1
	3.5nm,0.1s						
KDJ	Kajisay	0.86	178	⇑eP	Pg	08 12 07.1	-0.3
KDJ				⇑eS	Sb	08 12 19.3	+0.4
SATY	Saty	0.94	85	P	Pb	08 12 08.6	-0.2
	4.2nm,0.1s						
SATY				S	Sb	08 12 20.7	-0.4
	19nm,0.1s						
BOOM	Boomskoye usch	1.01	241	⇑eP	Pb	08 12 09.5	-0.5
BOOM				⇑eS	Sb	08 12 23.3	+0.1
TKM2	Tokmak 2	1.13	267	⇑eP	Pb	08 12 11.7	-0.4
TKM2				⇑eS	Sb	08 12 27.0	+0.4
KRBS	Karabastau	1.27	304	P	Pb	08 12 14.3	-0.2
	2.3nm,0.2s						
KRBS				S	Sn	08 12 30.8	-0.2
	8.8nm,0.2s						
KRBS	Karabastau	1.27	304	eP	Pb	08 12 14.3	-0.2
KRBS				eS	Sn	08 12 30.8	-0.2
KRBS	Karabastau	1.27	304	eP	Pb	08 12 14.3	-0.2
	2.3nm,0.2s						
KRBS				eS	Sn	08 12 30.8	-0.2
	8.8nm,0.2s						
TARG	Taragay, Kyrgy	1.35	158	⇓eP	Pb	08 12 16.0	-0.1
TARG				⇓eS	Sg	08 12 34.5	0.0
UZB	Uzynbulak	1.40	83	P	Pb	08 12 16.4	-0.2
	2.6nm,0.1s						
UZB				S	Sb	08 12 34.7	+0.4
	7.2nm,0.2s						
UZB	Uzynbulak	1.40	83	eP	Pb	08 12 16.4	-0.2
UZB				eS	Sb	08 12 34.7	+0.4
UZB	Uzynbulak	1.40	83	eP	Pb	08 12 16.4	-0.2
	2.6nm,0.1s						
UZB				eS	Sb	08 12 34.7	+0.4
	7.2nm,0.2s						
BLB	Baldybastay	1.48	41	P	Pb	08 12 17.8	-0.2
	0.3nm,0.1s						
BLB				S	Sb	08 12 36.9	+0.2
	9.0nm,0.2s						
PDGK	Podgornoye	1.76	78	⇑P	Pn	08 12 21.4	+0.6
	2.4nm,0.7s						
PDGK				⇑S	Sb	08 12 44.9	+0.1
	4.8nm,0.9s						

*KRNET **07** 08:15:53.8±0.1, 43°10N×76°66E, h19km, mb3.2*
*NNC **07** 08:15:54.5±0.2, 43°14N×76°67E, h0km, mb3.1, mpv3.2, Error ellipse: s-maj=2.5km s-min=1.3km az=170.0*
*SOME **07** 08:15:54.7, 43°03N×76°63E, h15km*
*KNET **07** 08:15:56.1±0.4, 43°14N×76°51E, h11km±1km, ml1.8, Error ellipse: s-maj=3.5km s-min=2.2km az=165.0*
ISC 07 08:15:53.7±0.8, **43°16N**±0°02×**76°67E**±0°01, **h14**km±5km, **n52**, σ**0.98**/97, **29C-13D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZV	Izvestkoviy	0.13	199	P	Pg	08 15 56.9	-0.6
	100nm,0.1s						
IZV				S	Sg	08 15 58.3	-1.7
	979nm,0.1s						
IZV	Izvestkoviy	0.13	199	eP	Pg	08 15 56.9	-0.6
	100nm,0.1s						
IZV				eS	Sg	08 15 58.3	-1.7
	979nm,0.1s						
MTBS	Maitube	0.18	260	P	Pg	08 15 58.6	+0.5
	119nm,0.1s						
MTBS				S	Sg	08 16 01.4	+0.4
	230nm,0.2s						
MTBS	Maitube	0.18	260	eP	Pg	08 15 58.6	+0.5
	119nm,0.1s						
MTBS				eS	Sg	08 16 01.4	+0.4
	230nm,0.2s						
TNSS	Tian-Shan	0.24	122	P	Pg	08 15 59.0	-0.1
	28nm,0.1s						
TNSS				S	Sg	08 16 02.3	-0.5
	172nm,0.2s						
TNSS	Tian-Shan	0.24	122	eP	Pg	08 15 59.0	-0.1
	28nm,0.1s						
TNSS				eS	Sg	08 16 02.3	-0.5
	172nm,0.2s						
MDOK	Medeo	0.28	90	Pg	Pb	08 16 00.2	-0.3
	207nm,0.1s						
MDOK				Lg	Lg	08 16 04.3	
	146nm,0.1s						
KOTS	Kotyrbulak	0.33	77	P	Pb	08 16 01.6	+0.2
	42nm,0.1s						
KOTS				S	Sb	08 16 06.5	-0.3
	83nm,0.2s						
KOTS	Kotyrbulak	0.33	77	eP	Pb	08 16 01.7	+0.2
KOTS				eS	Sb	08 16 06.5	-0.3
KOTS	Kotyrbulak	0.33	77	eP	Pb	08 16 01.6	+0.2
	42nm,0.1s						
KOTS				eS	Sb	08 16 06.5	-0.3
	83nm,0.2s						
KST	Kastek	0.53	257	P	Pb	08 16 05.0	0.0
	29nm,0.2s						
KST				S	Sb	08 16 12.1	-0.4
	42nm,0.4s						
KST	Kastek	0.53	257	eP	Pb	08 16 05.0	0.0
	29nm,0.2s						
KST				eS	Sb	08 16 12.1	-0.4
	42nm,0.4s						
KTBS	Karatobe	0.55	1	P	Pn	08 16 06.1	-1.1
	38nm,0.1s						
KTBS				S	Sb	08 16 14.1	+1.1
	0.3nm,0.2s						
KTBS	Karatobe	0.55	1	eP	Pn	08 16 06.1	-1.1
	38nm,0.1s						
KTBS				eS	Sb	08 16 14.1	+1.1
	0.3nm,0.2s						
ANVS	Anan'yevo	0.82	117	⇑eP	Pg	08 16 09.1	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ANVS				⇑eS	Sg	08 16 19.6	-1.0
TKM2	Tokmak 2	0.82	253	⇑P	Pb	08 16 10.1	+0.2
	10nm,0.1s						
TKM2				⇑S	Sg	08 16 20.7	+0.1
	41nm,0.1s						
TKM2	Tokmak 2	0.82	253	⇑eP	Pg	08 16 09.4	-0.4
TKM2				⇑eS	Sg	08 16 20.2	-0.4
BOOM	Boomskoye usch	0.86	219	⇑eP	Pg	08 16 09.3	-1.2
BOOM				⇑eS	Sg	08 16 20.0	-1.8
KRBS	Karabastau	0.90	307	P	Pn	08 16 12.2	+0.1
	3.8nm,0.1s						
KRBS				S	Sn	08 16 24.3	-0.6
	40nm,0.3s						
KRBS	Karabastau	0.90	307	eP	Pn	08 16 12.2	+0.1
	3.8nm,0.1s						
KRBS				eS	Sn	08 16 24.4	-0.6
	40nm,0.3s						
KDJ	Kajisay	1.10	160	⇑eP	Pg	08 16 13.7	-1.2
KDJ				⇑eS	Sg	08 16 27.5	-1.8
KURS	Kuram	1.14	73	P	Pn	08 16 15.9	+0.5
	1.9nm,0.1s						
KURS				S	Sb	08 16 30.9	+0.9
	4.7nm,0.1s						
SATY	Saty	1.27	94	P	Pb	08 16 17.8	+0.2
	8.5nm,0.1s						
SATY				S	Sg	08 16 34.4	-0.5
	41nm,0.2s						
CHMS	Chumysh	1.42	264	⇑P	Pg	08 16 20.5	-0.5
	5.9nm,0.2s						
CHMS				⇑S	Sg	08 16 39.5	+0.1
	13nm,0.1s						
CHMS	Chumysh	1.42	264	⇑eP	Pb	08 16 19.9	-0.1
CHMS				⇑eS	Sn	08 16 38.4	+0.8
KPKS	Kokpek	1.50	78	P	Pg	08 16 22.6	0.0
	0.2nm,0.1s						
KPKS				S	Sg	08 16 42.4	+0.4
	21nm,0.4s						
KPKS	Kokpek	1.50	78	eP	Pg	08 16 22.6	0.0
	0.2nm,0.1s						
KPKS				eS	Sg	08 16 42.4	+0.4
	21nm,0.4s						
USP	Ospenovka	1.59	274	⇓P	Pg	08 16 23.4	-0.9
	4.0nm,0.1s						
USP				⇑S	Sg	08 16 44.8	-0.2
	15nm,0.2s						
USP	Ospenovka	1.59	274	⇓eP	Pb	08 16 22.8	-0.2
USP				⇓eS	Sg	08 16 44.2	-0.8
BLB	Baldybastay	1.61	54	P	Pg	08 16 24.8	+0.1
	0.3nm,0.1s						
BLB				S	Sg	08 16 46.0	+0.4
	42nm,0.2s						
TARG	Taragay, Kyrgy	1.66	149	⇓eP	Pn	08 16 22.8	0.0
TARG				⇓eS	Sn	08 16 44.7	+0.6
AAK	Ala-Archa	1.68	253	⇓P	Pb	08 16 24.8	+0.2
	2.9nm,0.2s						
AAK				⇑S	Sg	08 16 48.0	0.0
	12nm,0.4s						
AAK	Ala-Archa	1.68	253	⇑P	Pb	08 16 25.0	+0.4
	1.4nm,0.5s						
AAK				⇑S	Sg	08 16 47.4	-0.6
	1.2nm,0.4s						
AAK	Ala-Archa	1.68	253	⇑eP	Pn	08 16 23.8	+0.9
AAK				⇑eS	Sb	08 16 46.1	+0.4
UZB	Uzynbulak	1.72	90	P	Pb	08 16 25.7	+0.5
	3.6nm,0.2s						
UZB				S	Sg	08 16 48.1	-1.0
	11nm,0.2s						
UZB	Uzynbulak	1.72	90	eP	Pb	08 16 25.7	+0.5
UZB				eS	Sg	08 16 48.1	-1.0
UZB	Uzynbulak	1.72	90	eP	Pb	08 16 25.7	+0.5
	3.6nm,0.2s						
UZB				eS	Sg	08 16 48.1	-1.0
	11nm,0.2s						
UCH	Uchtor	1.85	240	⇑P	Pg	08 16 28.4	-0.7
	1.1nm,0.1s						
UCH				⇓S	Sg	08 16 53.0	-0.2
	3.9nm,0.2s						
UCH	Uchtor	1.85	240	⇑eP	Pn	08 16 26.0	+0.6
UCH				⇑eS	Sn	08 16 50.4	+1.6
PDGK	Podgornoye	2.07	84	⇓Pn	Pb	08 16 30.8	-0.2
	3.8nm,0.4s						
PDGK				⇓Sn	Sg	08 16 59.2	-1.0
	5.6nm,0.5s						
ARLS	Aral	2.17	234	⇓eP	Pn	08 16 30.1	+0.5
ARLS				⇓eS	Sn	08 16 57.7	+1.3
EKS2	Erkin-Say	2.19	258	⇑P	Pb	08 16 33.8	+0.7
	2.2nm,0.1s						
EKS2				⇑S	Sg	08 17 03.1	-0.8
	4.0nm,0.2s						
EKS2	Erkin-Say	2.19	258	⇑eP	Pn	08 16 30.7	+0.9
EKS2				⇑eS	Sn	08 16 58.6	+1.9
DJR	Jarkent	2.54	62	Pg	Pg	08 16 41.0	-1.5
	1.8nm,0.1s						
DJR				Lg	Lg	08 17 13.9	
	9.7nm,0.5s						
DJR	Jarkent	2.54	62	eP	Pg	08 16 41.0	-1.5
	1.8nm,0.1s						
DJR				eS	Sg	08 17 13.9	-1.5
	9.7nm,0.5s						
MRKS	Merke	2.56	262	Pg	Pb	08 16 40.6	+1.0
	2.9nm,0.2s						
MRKS				Lg	Lg	08 17 13.6	
	11nm,0.3s						
MRKS	Merke	2.56	262	eP	Pb	08 16 40.6	+1.0
	2.9nm,0.2s						
MRKS				eS	Sg	08 17 13.6	-2.5
	11nm,0.3s						
BTLS	Baital	2.67	316	Pg	Pg	08 16 43.3	-1.5
	1.6nm,0.5s						
BTLS				Lg	Lg	08 17 18.3	
	23nm,0.4s						
BTLS	Baital	2.67	316	eP	Pg	08 16 43.3	-1.5
	1.6nm,0.5s						
BTLS				eS	Sg	08 17 18.3	-1.0
	23nm,0.4s						
KAPS	Kapalarasan	2.87	41	Pg	Pg	08 16 46.7	-2.0
	1.3nm,0.1s						
KAPS				Lg	Lg	08 17 24.0	
	44nm,0.2s						
KK31	Karatay Array	4.51	271	⇓Pg	Pg	08 17 17.8	-2.3
	1.4nm,0.7s,baz=86,slow=14,SNR=5.6						
KK31				⇓Lg	Lg	08 18 18.0	
	0.8nm,0.3s,baz=89,slow=28,SNR=6.5						
MK31	Makanchi Array	5.39	46	⇑Pn	Pn	08 17 17.0	+3.3
	0.7nm,0.7s,baz=222,slow=16,SNR=3.3						
MK31				⇑Lg	Lg	08 18 44.7	
	0.9nm,0.7s,baz=223,slow=28,SNR=4.4						

*NAO **07** 08:20:09.2, 39.°23N×28.°25E, h10km, MB3.7*
*IDC **07** 08:20:09.6±0.5, 38.°19N×22.°94E, h0km, mb4.0/24, mbtmp3.9/36, ML3.7/8, MS3.2/10, Error ellipse: s-maj=11.4km s-min=10.4km az=55.0*
*ATH **07** 08:20:11.6, 38.°15N×22.°98E, h9km, Mw4.0, Moment Tensor Solution. s11 Moment tensor: M_{rr}-0.89; $M_{\theta\theta}$1.07; $M_{\phi\phi}$-0.17; $M_{r\theta}$-0.56; $M_{\theta\phi}$-0.09; $M_{\phi r}$-0.26; Fault plane solution: NP1:ϕ_s292.00000°, δ33.00000°, λ-60.00000°. NP2:ϕ_s78.00000°, δ62.00000°, λ-108.00000°.*
*THE **07** 08:20:11.9, 38.°2N±0.°8×23.°0E±0.°5, h9km±2km, M3.9/38, MLh3.9/38*
*MED_RC **07** 08:20:11.0±0.5, 38.°15N×22.°97E, h10km, MW4.1/10, Moment Tensor Solution.Mantle waves: s10,c12; Duration: 1.s0 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.50±.21; $M_{\theta\theta}$2.15±.14; $M_{\phi\phi}$-0.65±.24; $M_{r\theta}$-0.60±.47; $M_{\theta\phi}$-0.22±.17; $M_{\phi r}$0.32±.49; Best double couple: $M_0$1.97000×10^{15} NP1:ϕ_s258.00000°, δ38.00000°, λ-114.00000°. NP2:ϕ_s108.00000°, δ56.00000°, λ-72.00000°. Principal axes: T 2.2700, Plg10.0000°, Azm185.0000°; N -0.6000, Plg15.0000°, Azm278.0000°; P -1.6800, Plg72.0000°, Azm63.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*
*NEIC **07** 08:20:11.9±1.6, 38.°21N±0.°05×22.°92E±0.°05, h10km±1km, mb4.3/15 Error ellipse: s-maj=9.3km s-min=5.8km az=163.0*

ISC 07 08:20:11.8±0.7**, 38.°15N**±0.°02×**22.°97E**±0.°01**, h14**km±4km**,**
n252, σ0.s91/302**, mb4.2**/30**, MS3.2**/6**, 9C-7D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LTK	Loutraki	0.12	182	P	Pg	08 20 14.8	-0.4
LTK				S	Sg	08 20 17.1	-0.5
LTK	Loutraki	0.12	182	P	Pg	08 20 14.6	-0.7
LTK				S	Sg	08 20 16.9	-0.7
KIAA	Kiato	0.22	233	P	Pg	08 20 16.6	-0.1
KIAA				S	Sg	08 20 20.1	+0.1
VIL2	Platees	0.24	74	P	Pg	08 20 17.2	+0.1
VIL2				S	Sg	08 20 21.1	+0.4
VILL	Villia	0.27	86	P	Pg	08 20 17.5	-0.1
VILL				S	Sg	08 20 21.8	+0.3
MAGU	Magoula	0.43	99	P	Pg	08 20 20.5	+0.1
MAGU				S	Sg	08 20 26.4	+0.1
MAGU	Magoula	0.43	99	P	Pg	08 20 20.0	-0.5
MAGU				S	Sg	08 20 25.5	-0.8
STFN	Stefani	0.45	86	P	Pg	08 20 20.7	-0.1
STFN				S	Sg	08 20 27.3	+0.4
STFN	Stefani	0.45	86	P	Pg	08 20 20.7	-0.1
STFN				S	Sg	08 20 26.2	-0.7
ELFA	Athens-Elefsin	0.46	103	P	Pg	08 20 21.1	+0.1
ELFA				S	Sg	08 20 26.5	-0.7
DLFA	Delphi	0.50	312	P	Pg	08 20 21.2	-0.6
DLFA				S	Sg	08 20 28.7	+0.3
LKR	Lokris	0.50	2	P	Pg	08 20 21.4	-0.4
LKR				S	Sb	08 20 29.2	-0.5
LKR	Lokris	0.50	2	P	Pg	08 20 21.0	-0.8
LKR				S	Sg	08 20 28.5	-0.1
GUR	Goura	0.54	247	P	Pg	08 20 22.0	-0.5
GUR				S	Sg	08 20 28.8	-0.9
GUR	Goura	0.54	247	P	Pg	08 20 21.8	-0.7
GUR				S	Sg	08 20 29.2	-0.5
ARS1	Argos	0.55	201	P	Pg	08 20 22.2	-0.3
ARS1				S	Sg	08 20 29.0	-0.8
ATAL	Atalanti	0.55	4	P	Pg	08 20 22.1	-0.5
ATAL				S	Sb	08 20 32.0	+1.1
ATAL	Atalanti	0.55	4	P	Pg	08 20 22.0	-0.6
ATAL				S	Sg	08 20 30.0	0.0
NPLA	Nafplio	0.59	193	P	Pg	08 20 23.3	-0.2
NPLA				S	Sg	08 20 31.6	+0.3
MET2	Kameni Chora,	0.60	152	P	Pg	08 20 22.9	-0.7
MET2				S	Sg	08 20 31.5	-0.1
MET5	Makryloggos,Me	0.61	150	P	Pg	08 20 23.1	-0.6
MET5				S	Sg	08 20 31.7	0.0
ACHAR	Athens-Acharne	0.61	96	P	Pg	08 20 23.7	-0.1
ACHAR				S	Sg	08 20 31.9	0.0
ATH	Athens Observa	0.61	106	P	Pg	08 20 23.7	-0.1
ATH				S	Sg	08 20 31.3	-0.7
ATH	Athens Observa	0.61	106	P	Pg	08 20 23.4	-0.4
NOAC	Athens-Thissio	0.61	106	P	Pg	08 20 23.4	-0.5
MET4	Agioi Theodoro	0.62	147	P	Pg	08 20 23.6	-0.4
MET4				S	Sg	08 20 32.1	-0.2
ATH5	Athens Parliam	0.63	106	P	Pg	08 20 23.2	-0.9
ATH5				S	Sg	08 20 31.8	-0.6
MET6	Megalochori,Me	0.63	151	P	Pg	08 20 23.7	-0.4
MET6				S	Sg	08 20 32.2	-0.3
ATHP	Athens-Neo Psi	0.65	103	P	Pg	08 20 24.6	0.0
ATHP				S	Sg	08 20 32.6	-0.5
MET1	Methana Town,	0.66	150	P	Pg	08 20 24.1	-0.5
MET1				S	Sg	08 20 32.5	-0.7
KLV	Kalavryta, Ach	0.66	261	P	Pg	08 20 24.2	-0.4
KLV				S	Sg	08 20 33.2	-0.1
KLV	Kalavryta, Ach	0.66	261	P	Pb	08 20 24.8	-0.3
KLV				S	Sg	08 20 33.2	-0.1
ATHU	Athens Univers	0.67	105	P	Pg	08 20 24.4	-0.4
ATHU				S	Sg	08 20 33.8	+0.1
ATHU	Athens Univers	0.67	105	P	Pg	08 20 24.1	-0.8
ATHU				S	Sg	08 20 32.9	-0.7
AXAR	Agios Charalam	0.67	338	P	Pg	08 20 24.2	-0.6
AXAR				S	Sb	08 20 35.5	+1.1
AXAR	Agios Charalam	0.67	338	P	Pg	08 20 24.2	-0.6
AXAR				S	Sb	08 20 34.1	-0.3
KLV1	Kalavrita	0.69	261	P	Pg	08 20 25.2	-0.1
KLV1				S	Sb	08 20 34.8	-0.2
KALE	Kalithea	0.70	291	P	Pg	08 20 25.1	-0.4
KALE				S	Sb	08 20 36.5	+1.2
KALE	Kalithea	0.70	291	P	Pg	08 20 25.0	-0.4
KALE				S	Sb	08 20 35.0	-0.3
AIDA	Aidipsos	0.71	5	P	Pg	08 20 25.2	-0.5
AIDA				S	Sg	08 20 35.0	0.0
PTL	Penteli	0.71	98	P	Pg	08 20 25.3	-0.4
PTL				S	Sg	08 20 34.6	-0.5
PTL	Penteli	0.71	98	P	Pg	08 20 25.3	-0.4
PTL				S	Sg	08 20 35.1	+0.1
AGEO	AgiosGiorgios,	0.72	280	P	Pg	08 20 25.8	-0.2
TRIZ	Trizonia	0.74	287	P	Pg	08 20 26.1	-0.2
DION	Dionisos Attik	0.76	95	P	Pg	08 20 26.2	-0.4
DION				S	Sg	08 20 36.1	-0.5
DION	Dionisos Attik	0.76	95	P	Pg	08 20 26.7	+0.1
DION				S	Sg	08 20 36.4	-0.2
SERG	Sergoula	0.77	291	P	Pg	08 20 26.3	-0.5
SERG	Sergoula	0.77	291	P	Pg	08 20 26.4	-0.3
SERG				S	Sb	08 20 37.2	-0.1
ZIRI	Ziria, Aigiali	0.82	281	P	Pb	08 20 27.8	-0.1
MG00	Magoula, Dorid	0.85	289	P	Pb	08 20 28.4	+0.1
LAM2	Lamia	0.87	331	P	Pg	08 20 27.8	-0.8
EFP	Efpalio	0.88	289	P	Pg	08 20 28.4	-0.5
EFP	Efpalio	0.88	289	P	Pb	08 20 28.9	-0.1
YDRA	Hydra	0.89	154	P	Pg	08 20 28.1	-0.9
MALA	Malamata, Dori	0.90	286	P	Pg	08 20 29.0	-0.2
VLX	Vlachokerasia	0.91	211	P	Pg	08 20 28.5	-0.9
VLX				S	Sb	08 20 41.7	+0.4
ANX	Ano Chora	0.94	299	P	Pg	08 20 29.2	-0.8
ANX	Ano Chora	0.94	299	P	Pg	08 20 29.7	-0.3
RIOA	Rio	0.94	280	P	Pg	08 20 29.5	-0.5
UPR	University Cam	0.94	279	P	Pn	08 20 30.9	+0.3
LVRA	Laurium	0.96	116	P	Pg	08 20 29.9	-0.5
PATC	Patra C	0.96	278	P	Pg	08 20 30.2	-0.2
PATG	Patra B	0.98	276	P	Pg	08 20 30.5	-0.3
AGG	Agios Georgios	1.01	330	P	Pg	08 20 30.6	-0.8
AGG				S	Sn	08 20 46.1	+0.5
AGG	Agios Georgios	1.01	330	P	Pg	08 20 30.5	-0.8
KYMI	Kymi, Euboea I	1.01	61	P	Pg	08 20 30.1	-1.3
KYMI				S	Sb	08 20 45.2	+1.0
KYMI	Kymi, Euboea I	1.01	61	P	Pg	08 20 30.6	-0.7
AGRP	Agrapidokambos	1.01	285	P	Pg	08 20 31.2	-0.2
DRO	Drossia	1.01	259	P	Pg	08 20 31.0	-0.4
DRO	Drossia	1.01	259	P	Pg	08 20 30.8	-0.6
MAKR	Makrakomi, Fth	1.09	323	P	Pg	08 20 32.4	-0.5
MAKR	Makrakomi, Fth	1.09	323	P	Pg	08 20 32.2	-0.6
KARY	Karystos	1.16	95	P	Pb	08 20 33.5	-0.1
KARY				S	Sg	08 20 48.2	-1.2
KARY	Karystos	1.16	95	P	Pb	08 20 33.2	-0.5
AMT	Artemida-Makis	1.17	239	P	Pb	08 20 33.4	-0.4
AMT	Artemida-Makis	1.17	239	P	Pb	08 20 33.4	-0.4
NEO	Neokhori	1.18	10	P	Pb	08 20 33.7	-0.3
NEO	Neokhori	1.18	10	P	Pb	08 20 33.5	-0.4
RLS	Riolos of Patr	1.19	266	P	Pb	08 20 33.9	-0.2
RLS	Riolos of Patr	1.19	266	P	Pb	08 20 34.0	-0.2
EVR	Evrytania	1.19	311	P	Pn	08 20 34.6	+0.4
EVR	Evrytania	1.19	311	P	Pb	08 20 34.1	-0.2
AOS2	Alonissos-2	1.21	34	P	Pb	08 20 33.7	-0.8
VOL2	Volos	1.22	359	P	Pb	08 20 34.2	-0.4
PVO	Paravola	1.23	293	P	Pg	08 20 35.7	+0.2
PVO	Paravola	1.23	293	P	Pb	08 20 35.0	+0.1
ZARO	Zacharo	1.24	238	P	Pg	08 20 35.4	-0.3
MSL1	Messolongi	1.24	281	P	Pn	08 20 34.9	+0.2
AOS	Alonnisos	1.25	35	P	Pn	08 20 34.2	-0.6
AXS	Araxos	1.26	273	P	Pb	08 20 35.6	+0.3
AXS	Araxos	1.26	273	P	Pn	08 20 34.9	-0.1
ITM	Ithomi	1.27	221		Pn	08 20 35.3	+0.2
ITM	Ithomi	1.27	221	P	Pn	08 20 35.2	0.0
ITM	Ithomi	1.27	221	P	Pn	08 20 35.1	0.0
VLI	Veliai	1.43	181	P	Pn	08 20 36.8	-0.5
VLI	Veliai	1.43	181	P	Pn	08 20 37.1	-0.2
SKY	Skiros Island	1.44	59	P	Pb	08 20 38.5	+0.1
MNVA	Monemvasia	1.46	178	P	Pn	08 20 37.4	-0.3
CLEM	Kyllini,Ilia,G	1.47	261	P	Pn	08 20 38.7	+0.8
AMPL	Ampelaki	1.58	300	P	Pg	08 20 41.7	-0.5
AMPL	Ampelaki	1.58	300	P	Pn	08 20 40.4	+0.9
PYL	PYLOS	1.59	218	P	Pn	08 20 40.5	+1.0
PYL1	Pylos	1.59	220	P	Pb	08 20 40.8	-0.3
THL	Klokotos Trika	1.60	332	P	Pn	08 20 40.6	+0.9
THL	Klokotos Trika	1.60	332	P	Pn	08 20 40.3	+0.6
NPS1	Neapolis Lacon	1.63	177	P	Pn	08 20 40.8	+0.7
MTHA	Methoni	1.66	218	P	Pn	08 20 41.5	+1.0
TYRN	Tyrnavos	1.67	340	P	Pn	08 20 41.3	+0.8
KYPS	Kipseli, Zakin	1.73	260	P	Pn	08 20 42.4	+1.0
RTZL	Ratzakli, Kefa	1.74	268	P	Pb	08 20 44.0	+0.6
RTZL	Ratzakli, Kefa	1.74	268	P	Pb	08 20 43.0	-0.5
LTHK	Lithakia	1.74	256	P	Pn	08 20 42.6	+1.0
TETR	Tetrakomo, Epi	1.79	313	P	Pb	08 20 43.6	-0.8
TETR	Tetrakomo, Epi	1.79	313	P	Pn	08 20 43.2	+0.8
MILOS	Milos	1.82	140	P	Pn	08 20 43.8	+1.1
ORTH	Orthonies,Zaky	1.82	261	P	Pn	08 20 44.0	+1.3
SMHA	Samh	1.83	274	P	Pn	08 20 43.7	+0.9
TNSA	Tinos	1.84	109	P	Pn	08 20 43.2	+0.3
MHLO	Agia Marina, M	1.85	141	P	Pn	08 20 43.7	+0.7
NYDR	Nydri-Lefkada	1.87	288	P	Pb	08 20 46.0	+0.2
NYDR	Nydri-Lefkada	1.87	288	P	Pn	08 20 44.5	+1.2
VLS	Valsamata	1.88	272	P	Pb	08 20 45.0	-0.9
EVGI	Lefkada island	1.88	285	P	Pn	08 20 45.0	+1.4
KTHA	Kythira Island	1.89	178	P	Pn	08 20 44.2	+0.5
FSK	Fiskardo	1.92	280	P	Pn	08 20 45.2	+1.2
LKD2	Lefkada island	1.93	290	P	Pn	08 20 45.4	+1.2
TSLK	Tsoukalades, L	1.94	291	P	Pn	08 20 45.6	+1.3
DRAG	Dragano-Lefkad	1.96	287	P	Pn	08 20 45.8	+1.2
PRMD	Pramanda	2.01	314	P	Pn	08 20 46.4	+1.0
DMLN	Damoulianata-K	2.05	273	P	Pn	08 20 47.3	+1.5
EFSA	Agios Efstrati	2.10	48	P	Pn	08 20 46.6	+0.1
NAX1	Naxos Island	2.17	118	P	Pn	08 20 47.6	+0.1
KPRO	Kipourio	2.20	326	P	Pn	08 20 48.9	+0.9
KZN	Kozani	2.35	337	P	Pn	08 20 50.9	+0.8
CHOS	Chios island	2.44	83	P	Pn	08 20 51.2	-0.1
HORT	Hortiatis	2.45	2	P	Pn	08 20 51.0	-0.4
LIA	Limnos Island	2.46	44	P	Pn	08 20 51.1	-0.3
PENT	Pentalofos	2.49	326	P	Pn	08 20 53.1	+1.0
SOH	Sokhos	2.69	6	P	Pn	08 20 54.6	0.0
NEST	Nestorio	2.71	327	P	Pn	08 20 55.9	+0.8
CHAN	Chania	2.76	162	P	Pn	08 20 55.7	+0.1
IMMV	Iera Moni Meta	2.80	163	P	Pn	08 20 56.5	+0.3
THAS	Thassos island	2.81	28	P	Pn	08 20 55.5	-0.8
GRG	Griva	2.84	351	P	Pn	08 20 57.5	+0.8
VAM	Vamos	2.91	160	P	Pn	08 20 58.3	+0.6
KEK	Kerkira	2.93	303	Pn	Pn	08 20 57.0	-1.0
KEK	Kerkira	2.93	303	P	Pn	08 20 58.8	+0.9
KNDR	Palaiochora Ch	2.95	170	P	Pn	08 20 58.8	+0.6
VAY	Valandovo	3.19	355	*i* Pn	Pn	08 21 02.8	+1.3
IDI	Anoyia	3.24	151	Pn	Pn	08 21 02.9	+0.5
	34nm,0.5s,baz=340,slow=16,SNR=29						
IDI				Sn	Sn	08 21 38.7	-2.0
	25nm,0.3s,baz=304,slow=21,SNR=3.8						
IDI				Lg	Lg	08 21 55.1	
	21nm,0.3s,baz=325,slow=19,SNR=4.2						
IDI	Anoyia	3.24	151	Pn	Pn	08 21 02.4	+0.1
OHR	Ohrid	3.40	331	*i* Pn	Pn	08 21 07.8	+3.3
CAVK	Edirne/Enez-Ca	3.55	43	⇓P	Pn	08 21 10.0	+3.6
RDO	Rodhopi	3.59	33		Pn	08 21 05.4	-1.7
ALN	Alexandroupoli	3.63	40	Pn	Pn	08 21 06.6	-1.0
SCTE	Santa Cesarea	4.00	300	Pn	Pn	08 21 11.8	-0.8
BALB	Balikesir	4.11	67	Pn	Pn	08 21 15.1	+1.0
KARP	Karpathos	4.25	126		Pn	08 21 18.5	+2.5
MANT	Manisa	4.41	84		Pn	08 21 18.6	+0.1
ARG	Arkhangelos	4.54	114		Pn	08 21 21.3	+1.2
TIP	Timpagrande	4.97	284	⇑P	Pn	08 21 27.9	+1.9
TIP	Timpagrande	4.97	284		Pn	08 21 26.7	+0.6
PDG	Podgorica	5.14	328	⇓S	Sn	08 22 25.5	-1.8
PDG	Podgorica	5.14	328	Pn	Pn	08 21 28.1	-0.2
ELND	Elena	5.26	24	⇓P	Pn	08 21 31.4	+1.3
PLVB	Pleven	5.38	13	⇓P	Pn	08 21 33.3	+1.6
MATE	Matera	5.46	299	⇑P	Pn	08 21 34.9	+2.2
BLKB	Belogradchik	5.48	358	⇑S	Sn	08 22 34.3	-1.4
CEL	Celeste	5.58	273	Pn	Pn	08 21 32.7	-1.7
AKAS	Kas	5.63	108	Pn	Pn	08 21 36.6	+1.4
CUC	Castrocucco	5.87	291		Pn	08 21 38.2	-0.1
ACER	Acerenza	6.04	298		Pn	08 21 39.9	-0.9
BORA	Eskisehir	6.08	71	Pn	Pn	08 21 42.2	+0.9
SGRT	San Giovanni R	6.62	305	Pn	Pn	08 21 48.8	+0.1
MDVR	Moldovita	6.70	352	⇓P	Pn	08 21 50.8	+1.1
HERR	Herculane	6.74	357	⇑P	Pn	08 21 50.6	+0.3
VAE	Valguarnera	6.81	267	Pn	Pn	08 21 53.0	+1.7
	5.4nm,0.5s,baz=353,slow=18,SNR=1.7						
VAE				Sn	Sn	08 23 11.8	+3.2
	baz=352,slow=17						
RAFF	Raffo Rosso	6.89	265	Pn	Pn	08 21 52.8	+0.4
GZR	Gura Zlata	7.24	359	⇑P	Pn	08 21 58.5	+1.2
ARR	Arges	7.32	9	⇓P	Pn	08 21 58.8	+0.5
VOIR		7.45	11	⇑P	Pn	08 22 01.1	+1.0
MLR	Muntele Rosu	7.67	16	Pn	Pn	08 22 04.2	+1.1
	1.4nm,0.3s,baz=147,slow=17,SNR=9.6						
MLR				Sn	Sn	08 23 30.4	+0.6
	0.1nm,0.3s,baz=195,slow=20,SNR=1.2						
	6.3nm,0.8s						
MLR	Muntele Rosu	7.67	16	⇑P	Pn	08 22 04.7	+1.6
MLR	Muntele Rosu	7.67	16		Pn	08 22 03.3	+0.2
INTR	Introdacqua	7.95	302		Pn	08 22 06.1	-0.9
DOPR	Dopca	8.02	12	⇓P	Pn	08 22 09.6	+1.7
VRI	Vrincioaia	8.20	19	⇑P	Pn	08 22 13.1	+2.7
BR131	Keskin Array S	8.46	76		Pn	08 22 14.2	+0.1
BRTR	Keskin Array B	8.46	76	Pn	Pn	08 22 15.7	+1.6
	0.2nm,0.3s,baz=260,slow=9.4,SNR=11						
	2.4nm,1.0s						
CAMP	Campotosto	8.52	304	Pn	Pn	08 22 14.4	-0.4
MORH	Mrgy, Hungar	8.68	340	⇑P	Pn	08 22 18.2	+1.3
NRCA	Norcia	8.85	305		Pn	08 22 18.6	-0.7
FDMO	Fiordimonte	8.96	306	Pn	Pn	08 22 20.6	-0.2
MMAI	Mount Meron Ar	11.34	113	Pn	Pn	08 22 54.5	+1.0
	1.6nm,0.3s,baz=321,slow=16,SNR=4.8						
MMAI				Sn	Sn	08 25 04.5	+4.5
	0.1nm,0.3s,baz=305,slow=26,SNR=3.4						
	0.4nm,0.3s						
VRAC	Vranov	12.07	340	LR	LR	08 28 15.8	
	comp=Z,46nm,19.4s,baz=187,slow=40						
GERES	GERESS Array B	12.62	331	Pn	Pn	08 23 11.6	+0.7
	0.3nm,0.6s,baz=135,slow=13,SNR=2.0						
ASF	Jabal al Asfar	12.85	113	Pn	Pn	08 23 14.4	+0.3
	0.3nm,0.3s,baz=318,slow=15,SNR=1.4						
	0.9nm,0.3s						
DAVOX	Davos/Dischmat	12.94	316	Pn	Pn	08 23 15.9	+0.5
	0.1nm,0.3s,baz=124,slow=12,SNR=2.0						
DAVOX				Sn	Sn	08 25 36.1	-3.1
	baz=131,slow=21						
DAVOX				LR	LR	08 30 17.8	
	comp=Z,60nm,18.0s,baz=81,slow=47						
	0.9nm,0.5s						
EIL	Elat	13.05	127	Pn	Pn	08 23 16.9	+0.1
	0.6nm,0.3s,baz=338,slow=13,SNR=6.0						
EIL				Sn	Sn	08 25 39.5	-2.1
	0.5nm,0.3s,baz=298,slow=17,SNR=2.7						
	6.9nm,0.7s						
AKASG	Malin Array Be	13.32	17	Pn	Pn	08 23 19.6	-0.7
	0.1nm,0.3s,baz=211,slow=11,SNR=1.3						
AKASG				LR	LR	08 29 07.2	
	comp=Z,77nm,19.0s,baz=184,slow=40						
MARD	Mardin	14.12	88	Pn	Pn	08 23 33.5	+2.0
CLL	Collm	14.93	335	ePx	Px	08 23 38.0	
CLL				ex	x	08 23 52.0	
KBZ	Khabaz	16.04	63	Pn	Pn	08 23 57.8	+0.9
	baz=196,slow=21,SNR=2.5						
	2.6nm,0.9s						
GNI	Garni	17.00	76	P	Pn	08 24 09.6	+0.3
	0.9nm,0.3s,baz=334,slow=22,SNR=1.5						
GNI				LR	LR	08 30 50.1	
	comp=Z,38nm,18.3s,baz=288,slow=38						
	3.7nm,0.5s						
PABE	Paberze	17.38	2	P	P	08 24 14.8	-0.1
PABE				IAmb	IAmb	08 24 18.3	
	comp=Z,22nm,1.0s						
ESBB	Sonseca Array	20.99	283	P	P	08 24 55.1	+0.4
ESDC	Sonseca Array	20.99	283	P	P	08 24 54.6	-0.2
	comp=Z,3.1nm,0.7s,baz=75,slow=11,SNR=12						
	comp=Z,3.1nm,0.7s						
PAB	San Pablo	21.30	282	P	P	08 24 57.5	-0.5
PAB				IAmb	IAmb	08 25 02.5	
	comp=Z,6.5nm,0.9s						
HFS	Hagfors	22.78	348	P	P	08 25 13.0	-0.6
	comp=Z,3.3nm,0.8s,baz=152,slow=9.6,SNR=6.8						
HFS				LR	LR	08 35 52.0	
	comp=Z,63nm,20.1s,baz=205,slow=41						
	comp=Z,3.3nm,0.8s						
FINES	FINESS Array B	23.40	4	P	P	08 25 18.8	-1.2
	comp=Z,2.1nm,0.8s,baz=168,slow=9.8,SNR=4.5						
FINES				PcP	PcP	08 29 04.9	-1.1
	comp=Z,0.7nm,0.8s,baz=279,slow=2.7,SNR=1.4						
FINES				LR	LR	08 35 19.9	
	comp=Z,44nm,18.5s,baz=206,slow=39						
	comp=Z,2.1nm,0.8s						
FINES	FINESS Array B	23.40	4	P	P	08 25 19.2	-0.8
NC602	NORSAR Array S	23.73	346	P	P	08 25 22.4	-0.8
NC602				IAmb	IAmb	08 25 22.8	
	comp=Z,7.0nm,0.8s						
NB201	NORSAR Array S	24.07	346	P	P	08 25 25.8	-0.6
NB201				IAmb	IAmb	08 25 47.7	
	comp=Z,15nm,1.1s						
NB2	NORSAR Subarra	24.07	346	P	P	08 25 25.2	-1.3
	comp=Z,1.7nm,0.7s,baz=146,slow=10						
NOA	NORSAR Array B	24.07	346	P	P	08 25 25.0	-1.5
	comp=Z,0.8nm,0.7s,baz=148,slow=9.5,SNR=4.8						

	comp=Z,0.8nm,0.7s						
EKA	Eskdalemuir Ar	24.60	323	P	P	08 25 30.5	-0.8
	comp=Z,10nm,0.8s,baz=118,slow=9.2,SNR=18						
	comp=Z,10nm,0.8s						
ESK	Eskdalemuir	24.61	323	P	P	08 25 31.9	+0.5
TORD	Torodi Ar. Bea	31.27	223	P	P	08 26 31.0	-0.3
	comp=Z,1.5nm,0.6s,baz=31,slow=5.7,SNR=8.6						
	comp=Z,1.5nm,0.6s						
ARCES	ARCESS Array B	31.48	2	LR	LR	08 40 17.3	
	comp=Z,72nm,18.2s,baz=176,slow=38						
BVAR	Borovoye Array	35.66	50	P	P	08 27 09.3	+0.1
	comp=Z,0.4nm,0.5s,baz=284,slow=5.8,SNR=2.1						
BVAR				LR	LR	08 44 07.3	
	comp=Z,24nm,18.4s,baz=222,slow=40						
	comp=Z,0.4nm,0.5s						
KKAR	Karatay Array	36.04	67	P	P	08 27 13.0	+0.4
GAR	Garm	36.70	74	P	P	08 27 19.4	+1.0
GAR				IAmb	IAmb	08 27 20.6	
	comp=Z,7.3nm,0.9s						
DBIC	Dimbokro	40.22	226	P	P	08 27 48.5	+0.5
	comp=Z,3.2nm,0.7s,baz=54,slow=7.0,SNR=3.6						
	comp=Z,3.2nm,0.7s						
DBIC	Dimbokro	40.22	226	P	P	08 27 49.3	+1.3
DBIC				IAmb	IAmb	08 27 58.4	
	comp=Z,8.8nm,0.9s						
SPITS	Spitsbergen Ar	40.24	358	P	P	08 27 47.3	-0.2
	comp=Z,5.7nm,1.0s,baz=169,slow=10,SNR=6.3						
	comp=Z,5.7nm,1.0s						
KURBB	Kurchatov Arra	40.69	54	P	P	08 27 51.8	+0.1
	comp=Z,2.3nm,0.7s,baz=279,slow=8.6,SNR=19						
	comp=Z,2.3nm,0.7s						
KURK	Kurchatov	40.74	54	P	P	08 27 52.3	+0.3
MKAR	Makanchi Array	43.67	59	P	P	08 28 16.1	+0.1
	comp=Z,1.5nm,0.6s,baz=266,slow=8.4,SNR=15						
	comp=Z,1.5nm,0.6s						
ZAA0	Zalesovo Array	44.27	48	P	P	08 28 19.9	-0.8
ZAA0				IAmb	IAmb	08 28 21.4	
	comp=Z,4.7nm,0.8s						
ZALV	Zalesovo Beam	44.27	48	P	P	08 28 20.5	-0.2
	comp=Z,4.3nm,0.6s,baz=277,slow=9.5,SNR=23						
	comp=Z,4.3nm,0.6s						
ZALV	Zalesovo Beam	44.27	48	P	P	08 28 20.3	-0.3
NRIK	Noril'sk	45.96	26	P	P	08 28 34.1	+0.2
	comp=Z,3.1nm,0.9s,baz=234,slow=5.0,SNR=4.2						
	comp=Z,3.1nm,0.9s						
DRLN	Deer Lake	56.62	309	P	P	08 29 53.5	-0.6
POIN	Pond Inlet	57.17	340	P	P	08 29 57.6	0.0
POIN				IAmb	IAmb	08 29 58.5	
	comp=Z,3.0nm,1.0s						
TSUM	Tsumeb	57.27	186	LR	LR	08 55 43.5	
	comp=Z,36nm,20.1s,baz=332,slow=37						
SONM	Songino Array	58.98	51	P	P	08 30 10.6	-0.3
	comp=Z,1.2nm,0.8s,baz=283,slow=10,SNR=5.9						
	comp=Z,1.2nm,0.8s						
KUQ	Kuujjuuaa	59.26	322	P	P	08 30 12.5	0.0
KUQ				IAmb	IAmb	08 30 13.3	
	comp=Z,3.2nm,1.0s						
SCHQ	Schefferville	59.78	318	P	P	08 30 15.9	-0.3
	comp=Z,3.8nm,0.6s,baz=74,slow=7.0,SNR=15						
	comp=Z,3.8nm,0.6s						
SCHQ	Schefferville	59.78	318	P	P	08 30 15.4	-0.7
HHC	Hu-ho-hao-te	65.45	56	*e*P	P	08 30 55.0	+0.6
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,57nm,5.4s						
PZH	PanZhiHua	65.76	75	P	P	08 30 57.6	+1.0
BOSA	Boshof	66.45	178	P	P	08 31 02.6	+1.9
	comp=Z,1.4nm,0.7s,baz=43,slow=6.2,SNR=3.1						
BOSA				LR	LR	09 04 57.2	
	comp=Z,37nm,20.0s,baz=206,slow=40						
	comp=Z,1.4nm,0.7s						
CMAR	Chiang Mai Arr	67.98	83	P	P	08 31 11.8	+1.2
	comp=Z,1.3nm,0.3s,baz=242,slow=3.1,SNR=1.7						
	comp=Z,1.3nm,0.3s						
YKA	Yellowknife Ar	74.06	341	P	P	08 31 46.2	-0.7
	comp=Z,0.7nm,0.7s,baz=28,slow=5.5,SNR=12						
	comp=Z,0.7nm,0.7s						
ULM	Lac du Bonnet	76.86	325	P	P	08 32 02.8	-0.3
	comp=Z,2.1nm,0.7s,baz=56,slow=0.8,SNR=4.5						
	comp=Z,2.1nm,0.7s						
ILAR	Eielson Array	77.11	356	P	P	08 32 03.4	-0.9
	comp=Z,0.2nm,0.5s,baz=338,slow=3.5,SNR=8.3						
	comp=Z,0.2nm,0.5s						
KSRS	Korea Array	77.84	52	P	P	08 32 07.8	-1.1
	comp=Z,0.3nm,0.3s,baz=306,slow=6.4,SNR=2.1						
	comp=Z,0.3nm,0.3s						
PDAR	Pinedale Array	88.64	327	P	P	08 33 04.2	-0.6
	comp=Z,0.4nm,0.6s,baz=57,slow=5.5,SNR=5.3						
	comp=Z,0.4nm,0.6s						
NVAR	Mina Array Bea	95.88	330	P	P	08 33 39.0	+0.7
	comp=Z,0.3nm,0.7s,baz=19,slow=11,SNR=2.1						
	comp=Z,0.3nm,0.7s						
TXAR	Lajitas Array	96.38	315	P	P	08 33 40.9	+0.3
	comp=Z,0.5nm,0.8s,baz=81,slow=3.8,SNR=7.1						
	comp=Z,0.5nm,0.8s						
WRA	Warramunga Arr	118.61	94	PKP	PKPdf	08 38 57.7	-1.9
	comp=Z,0.2nm,0.6s,baz=323,slow=1.8,SNR=1.6						
ASAR	Alice Springs	120.25	98	PKP	PKPdf	08 39 01.1	-1.6
	comp=Z,0.5nm,0.8s,baz=324,slow=1.6,SNR=4.4						

IDC 07 08:44:18.4±5.0, 11°.86S×166°.48E, h134km±44km, mb3.7/9, mbtmp4.1/10, Error ellipse: s-maj=27.3km s-min=24.7km az=158.0

NEIC 07 08:44:19.2±1.0, 11°.9S±0°.1×166°.6E±0°.2, h140km±9km, mb4.3/14, Error ellipse: s-maj=26.1km s-min=15.7km az=82.0

ISC 07 08:44:20.1±0.7, 11°.94S±0°.08×166°.5E±0°.1, h150km, n27, σ0s.56/30, mb4.1/14, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	3.56	169		Pn	08 45 13.2	-1.4
MARNC	Mare, Loyalty	9.60	171	Pn	Pn	08 46 34.5	-0.4
DZM	Mont Dzumac	10.08	180	P	Pn	08 46 41.5	+0.3
	4.6nm,0.9s,baz=29,slow=13,SNR=7.3						
DZM				S	Sn	08 48 32.8	-0.1
	3.0nm,0.6s,baz=329,slow=19,SNR=1.9						
DZM	Mont Dzumac	10.08	180		Pn	08 46 40.6	-0.6
RABL	Rabaul	16.14	297	P	P	08 47 59.2	+0.1
PMG	Port Moresby	19.17	276	P	P	08 48 32.5	+0.2
PMG				IAmb	IAmb	08 48 33.8	
	comp=Z,12nm,0.8s						
EIDS	Eidsvold	19.77	225	P	Pn	08 48 40.8	-0.8
EIDS				IAmb	IAmb	08 49 09.6	
	comp=Z,9.5nm,1.1s						
ARMA	Armidale	22.98	215	P	P	08 49 12.7	+0.8
ARMA				IAmb	IAmb	08 49 42.0	
	comp=Z,27nm,1.4s						
RTZ	Ruatahuna	28.16	162	P	P	08 49 59.1	+0.7
STKA	Stephens Creek	30.32	225	P	P	08 50 17.8	+0.3
	comp=Z,1.5nm,0.7s,baz=61,slow=8.7,SNR=1.2						
	comp=Z,1.5nm,0.7s						
WB0	Warramunga Arr	31.81	252	P	P	08 50 30.9	+0.1
WB0				IAmb	IAmb	08 50 32.1	
	comp=Z,4.4nm,1.1s						
WRA	Warramunga Arr	31.89	251	P	P	08 50 31.2	-0.2
	comp=Z,0.8nm,0.7s,baz=84,slow=9.2,SNR=8.1						
WRA				PcP	PcP	08 53 18.9	+0.3
	comp=Z,0.2nm,0.8s,baz=89,slow=4.2,SNR=1.7						
	comp=Z,0.8nm,0.7s						
AS31	Alice Springs	33.07	245	P	P	08 50 41.1	-0.6
ASAR	Alice Springs	33.07	245	P	P	08 50 41.4	-0.4
	comp=Z,0.9nm,0.8s,baz=72,slow=9.8,SNR=9.7						
ASAR				PcP	PcP	08 53 22.1	+0.3
	comp=Z,0.1nm,0.5s,baz=52,slow=3.2,SNR=1.7						
	comp=Z,0.9nm,0.8s						
JEW	Eniwo	59.14	339	P	P	08 54 04.8	-0.1
CMAR	Chiang Mai Arr	73.14	294	P	P	08 55 35.3	+0.5
	comp=Z,1.6nm,0.3s,baz=110,slow=5.1,SNR=5.2						
	comp=Z,1.6nm,0.3s						
M14K	Bethel	76.67	15	P	P	08 55 53.9	-0.1
N15K	Kwethluk River	76.67	16	P	P	08 55 53.9	-0.2
N15K				IAmb	IAmb	08 55 55.4	
	comp=Z,8.5nm,1.4s						
M16K	Timber Creek	77.70	16	P	P	08 55 59.2	-0.6
M16K				IAmb	IAmb	08 56 29.9	
	comp=Z,10nm,1.4s						
QSPA	South Pole Qui	78.07	180	P	P	08 56 02.8	+0.7
	comp=Z,1.2nm,0.6s,baz=355,slow=3.9,SNR=7.0						
	comp=Z,1.2nm,0.6s						
QSPA	South Pole Qui	78.07	180	P	P	08 56 02.5	+0.3
QSPA				IAmb	IAmb	08 56 05.3	
	comp=Z,7.3nm,1.4s						
L18K	Granite Mounta	79.31	17	P	P	08 56 08.2	-0.4
L18K				IAmb	IAmb	08 56 27.2	
	comp=Z,5.5nm,1.4s						
ILAR	Eielson Array	84.12	18	P	P	08 56 33.4	-0.4
	comp=Z,0.3nm,0.6s,baz=208,slow=5.1,SNR=9.5						
	comp=Z,0.3nm,0.6s						
NVAR	Mina Array Bea	86.03	50	P	P	08 56 44.6	+0.3
	comp=Z,0.2nm,0.6s,baz=287,slow=2.9,SNR=1.8						
	comp=Z,0.2nm,0.6s						
MKAR	Makanchi Array	94.67	317	P	P	08 57 23.7	-0.5
	comp=Z,0.6nm,0.5s,baz=90,slow=6.7,SNR=7.5						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	94.67	317	P	P	08 57 23.3	-1.0
SNAA	Sanae	96.28	183	P	P	08 57 31.6	+0.5
	comp=Z,3.0nm,0.7s,baz=180,slow=2.0,SNR=3.2						
	comp=Z,3.0nm,0.7s						

KRSC 07 09:10:45.1±1.7, 52°.29N×156°.55E, h279km±15km, Ml3.6, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIPR	Malaya Ipel'ka	0.13	97	*e*P	Pn	09 11 21.8	+1.1
APC	Apacha	0.73	30	*e*P	Pn	09 11 22.5	+0.6
ASAK	Asacha	0.83	83	*e*P	Pn	09 11 24.3	+1.7
GRL	Gorelyy	0.97	74	*e*P	Pn	09 11 25.2	+2.0
MTVR	Mutnovka	1.02	79	*e*P	Pn	09 11 25.3	+1.8
KDTR	Khodutka, Kamc	1.06	117	*e*P	Pn	09 11 24.4	+0.8
KDTR				*e*S	S	09 11 53.0	-0.9
KRMR	Karymshinskiy	1.10	60	*e*P	Pn	09 11 24.9	+1.2
RUS	Russkaya	1.21	83	*e*P	Pn	09 11 25.8	+1.4
RUS				*e*S	S	09 11 55.4	0.0
PET	Petropavlovsk	1.48	59	*e*P	Pn	09 11 27.3	+1.4
PET				*e*S	S	09 11 58.7	+0.4
DALK	Dalny	1.53	60	*e*P	Pn	09 11 27.7	+1.4
DALK				*e*S	S	09 12 00.7	+1.7
KOK	Koryaka	1.61	51	*e*P	Pn	09 11 28.8	+1.7
GNL	Ganaly	1.64	30	*e*P	Pn	09 11 27.7	+0.5
AVH	Avacha	1.65	53	*e*P	Pn	09 11 29.0	+1.7
UGLR	Uglovaya	1.66	56	*e*P	Pn	09 11 29.5	+2.1
KRX	Arik	1.66	49	*e*P	Pn	09 11 28.8	+1.3
KRER	Koryakskii	1.68	52	*e*P	Pn	09 11 29.3	+1.6
SMAR	Somma	1.68	54	*e*P	Pn	09 11 29.4	+1.7
SDLR	Sedlovina	1.73	54	*e*P	Pn	09 11 29.3	+1.3
SDLR				*e*S	S	09 12 02.0	+0.1
NLC	Nalytchevo	1.91	62	*e*S	S	09 12 06.3	+2.1
SPN	Mys Shipunski	2.26	68	*e*P	Pn	09 11 32.9	+0.7
SPN				*e*S	S	09 12 07.8	-1.9
MKZ	Mys Kozlova	3.84	52	*e*P	Pn	09 11 49.0	+0.7
MKZ				*e*S	S	09 12 36.2	-2.6
KBTR	Krutoberegovo	5.38	41	*e*P	Pn	09 12 08.4	+2.2
KBTR				*e*S	S	09 13 10.1	-1.1

IDC 07 09:12:09.4±1.4, 6°.81S×155°.15E, h0km, mb3.5/4, mbtmp3.4/4, MS1.5/1, Error ellipse: s-maj=77.2km s-min=31.7km az=135.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.41	119	LR	LR	09 15 57.8	
	comp=Z,4.5nm,19.1s,baz=321,slow=42						
WRA	Warramunga Arr	24.05	235	P	P	09 17 26.9	+0.4
	0.9nm,0.9s,baz=58,slow=9.3,SNR=5.3						
WRA				PcP	PcP	09 21 07.1	-1.4
	0.3nm,0.7s,baz=60,slow=2.3,SNR=5.4						
	0.9nm,0.9s						
ASAR	Alice Springs	26.41	228	P	P	09 17 48.1	+0.1
	0.2nm,0.3s,baz=54,slow=9.3,SNR=4.1						
ASAR				PcP	PcP	09 21 12.7	-1.1
	0.2nm,0.7s,baz=54,slow=1.9,SNR=2.0						
	0.2nm,0.3s						
H11S3	WAKE ISLAND Hy	27.60	24	T	T	09 46 34.0	
	baz=203						
H11S2	WAKE ISLAND Hy	27.60	24	T	T	09 46 33.0	
	baz=203						
H11S1	WAKE ISLAND Hy	27.62	24	T	T	09 46 33.5	
	baz=203						
MKAR	Makanchi Array	83.37	319	P	P	09 24 39.7	+1.0
	0.1nm,0.6s,baz=113,slow=3.3,SNR=1.3						
	0.1nm,0.6s						
NVAR	Mina Array Bea	91.48	52	P	P	09 25 18.7	+0.3
	0.6nm,0.8s,baz=247,slow=6.1,SNR=4.0						
	0.6nm,0.8s						

BGSI 07 09:46:52.7±0.7, 26°.07S×30°.27E, h311km±46km, ML3.1

PRE 07 09:46:55.9±0.9, 26°.41S×29°.22E, h0km, ML2.7, Suspected explosion, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRLN	Carolina, Mapu	0.83	60	*e*P	Pg	09 47 11.6	-0.2
CRLN				*e*S	Sg	09 47 23.7	+1.1
CRLN				IAML		09 47 27.0	
	comp=Z,148nm,0.8s						
HRAO	HartRAO	1.48	290	*e*P	Pb	09 47 24.6	+0.3
HRAO				*e*S	Sn	09 47 45.0	+1.0
HRAO				IAML		09 47 45.4	
	comp=Z,157nm,0.3s						
WDLM	Western Deep L	1.61	269	*e*P	Pg	09 47 26.8	0.0
WDLM				*e*S	Sg	09 47 49.2	+1.3
WDLM				IAML		09 47 51.2	
	comp=Z,188nm,0.2s						
PRYS	Parys	1.74	252	*e*P	Pb	09 47 28.4	-0.5
PRYS				*e*S	Sg	09 47 51.7	-0.3
PRYS				IAML		09 47 53.0	
	comp=Z,158nm,0.2s						
PILG	Pilgrimsrest,	1.99	43	*e*P	Pn	09 47 31.7	+0.6
PILG				*e*S	Sb	09 47 58.0	-0.5
PILG				IAML		09 47 59.5	
	comp=Z,77nm,0.4s						
SNKL	Senekal, Frees	2.26	214	*e*P	Pn	09 47 35.7	+0.9
SNKL				*e*S	Sn	09 48 04.5	+1.0
SNKL				IAML		09 48 10.8	
	comp=Z,116nm,0.2s						
HOED	Hoedspruit, Li	2.52	38	*e*P	Pn	09 47 38.4	+0.3
HOED				*e*S	Sn	09 48 09.9	+0.3
HOED				IAML		09 48 13.2	
	comp=Z,43nm,0.3s						
LEPH	Lephalale, Lim	2.85	333	*e*P	Pn	09 47 43.0	+0.3
LEPH				*e*S	Sn	09 48 17.9	0.0
LEPH				IAML		09 48 29.4	
	comp=Z,52nm,0.4s						
TEMBE	Tembe Elephant	2.93	103	*e*P	Pn	09 47 44.1	+0.3
TEMBE				*e*S	Sn	09 48 19.5	-0.3
TEMBE				IAML		09 48 41.1	
	comp=Z,59nm,0.8s						
PMBG	Pietermaritzbu	3.29	160	*e*P	Pn	09 47 49.8	+1.0
PMBG				*e*S	Sn	09 48 29.6	+0.9
PMBG				IAML		09 48 48.8	
	comp=Z,28nm,0.7s						
LBTB	Lobatse	3.55	292	*e*P	Pn	09 47 53.6	+1.1
LBTB				*e*S	Sn	09 48 35.6	+0.3
LBTB				IAML		09 48 46.6	
	comp=Z,44nm,0.5s						
MUSN	Musina, Limpop	4.14	8	*e*P	Pn	09 48 02.3	+1.8
MUSN				*e*S	Sn	09 48 49.5	-0.3
MUSN				IAML		09 49 04.2	
	comp=Z,20nm,0.6s						
BOSA	Boshof	4.15	237	*e*P	Pn	09 48 02.0	+1.3
BOSA				*e*S	Sn	09 48 49.2	-0.8
BOSA				IAML		09 49 07.8	
	comp=Z,28nm,0.4s						
KSTD	Kokstad	4.19	179	*e*P	Pn	09 48 02.9	+1.6
KSTD				*e*S	Sn	09 48 50.7	-0.4
KSTD				IAML		09 49 10.0	
	comp=Z,20nm,0.4s						
LPHEP	Lephephe	4.30	314	*i* P	Pb	09 48 07.8	-4.7
LPHEP				IAML		09 49 10.8	
	comp=E,34nm,0.5s						
KDWAN	Kaudwane	5.12	305	*i* P	Pn	09 48 19.4	+5.4
KDWAN				IAML		09 49 35.9	
	comp=E,46nm,0.7s						
BROLN	Tlhalogang	5.56	341	*i* P	Pn	09 48 17.5	-2.5
BROLN				*i* S	Sn	09 49 20.2	-4.6
BROLN				IAML		09 49 50.8	
	comp=E,24nm,0.8s						
ALKP	Alkanpan, Nort	7.09	239	*e*P	Pn	09 48 42.1	+1.1
ALKP				*e*S	Sn	09 49 59.1	-3.3
ALKP				IAML		09 50 00.5	
	comp=Z,13nm,0.4s						
GRAF	Camdeboo Natio	7.16	214	*e*P	Pn	09 48 43.7	+1.7
GRAF				*e*S	Sn	09 50 01.2	-2.9
GRAF				IAML		09 50 41.7	
	comp=Z,7.5nm,0.5s						
BFON	Badsfontein, M	7.23	221	*e*P	Pn	09 48 44.5	+1.5
BFON				*e*S	Sn	09 50 02.8	-3.1
BFON				IAML		09 50 50.9	
	comp=N,14nm,0.5s						
GRHM	Grahamstown, E	7.28	199	*e*P	Pn	09 48 45.4	+1.9
GRHM				*e*S	Sn	09 50 03.8	-3.1
GRHM				IAML		09 51 02.2	
	comp=Z,7.2nm,0.6s						
KGCAE	Kacgae	7.30	298	*i* P	Pn	09 48 46.5	+2.6
KGCAE				IAML		09 50 50.0	
	comp=N,33nm,0.6s						
KEIM	Keimoes	7.67	251	*e*P	Pn	09 48 49.3	+0.2
KEIM				*e*S	Sn	09 50 13.4	-3.4
KEIM				IAML		09 50 14.3	
	comp=Z,3.3nm,0.9s						
BRAK	Brakfontein	7.70	224	*e*P	Pn	09 48 50.8	+1.4
BRAK				*e*S	Sn	09 50 13.6	-3.8
BRAK				IAML		09 50 19.7	
	comp=Z,4.9nm,0.3s						
ROOI	Rooidraai Farm	7.82	218	*e*P	Pn	09 48 51.9	+0.8
ROOI				*e*S	Sn	09 50 16.8	-3.6
ROOI				IAML		09 50 19.6	
	comp=Z,3.2nm,0.3s						
GRAN	Grantham	8.50	225	*e*P	Pn	09 49 01.1	+0.7
GRAN				*e*S	Sn	09 50 32.6	-4.5
GRAN				IAML		09 51 27.5	
	comp=Z,7.2nm,0.5s						
ARMS	Ukamas	8.60	257	*e*P	Pn	09 49 03.4	+1.6
ARMS				*e*S	Sn	09 50 35.7	-3.8
FRAZ	Fraserburg	8.77	229	*e*P	Pn	09 49 05.0	+0.9
FRAZ				*e*S	Sn	09 50 39.2	-4.5
FRAZ				IAML		09 50 55.3	
	comp=Z,3.3nm,0.4s						
MERW	Merweville	9.16	225	*e*P	Pn	09 49 10.4	+1.0
MERW				*e*S	Sn	09 50 48.5	-4.8
MERW				IAML		09 50 52.8	
	comp=Z,3.3nm,0.3s						
CVNA	Calvinia	9.71	236	*e*P	Pn	09 49 17.6	+0.7
CVNA				*e*S	Sn	09 51 01.9	-4.8
CVNA				IAML		09 52 07.6	
	comp=Z,6.9nm,0.4s						

AEIC 07 09:54:45.4±1.2, 51°.4N±0°.1×179°.92W±0°.05, h49km±8km, Error ellipse: s-maj=17.0km s-min=3.6km az=189.0

NEIC 07 09:54:45.7±1.0, 51°.4N±0°.1×179°.94W±0°.05, h57km±10km, mb3.5/10, ML3.3/8, ML2.7(AEIC), Error ellipse: s-maj=15.0km s-min=4.7km az=184.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMKA	Amchitka	0.47	272		Pn	09 54 56.8	-0.3
AMKA					Sn	09 55 04.8	-0.5
AMKA				IAML		09 55 05.7	
	comp=E,2μm,0.3s						
CESW	Semis' Southwe	0.62	330		Pn	09 54 58.2	-0.5
CERB	Semis' Cerberu	0.63	335		Pn	09 54 58.6	-0.2
CERB					Sn	09 55 08.2	-0.2
CEAP	Semis' Anvil P	0.70	335		Pn	09 54 59.5	-0.2
CEAP					Sn	09 55 10.2	+0.1
GAKI	Gareloi-Kavalg	0.73	75		Pn	09 54 59.5	-0.5
GAKI					Sn	09 55 10.2	-0.4
GASW	Gareloi Southw	0.79	58		Pn	09 55 00.5	-0.4
GASW					Sn	09 55 11.7	-0.4
GALAA	Gareloi Lava P	0.83	61		Pn	09 55 00.5	-0.8
GALAA					Sn	09 55 14.0	+1.1
LSSE	Little Sitkin	1.09	302		Pn	09 55 04.6	-0.1
LSPA	Little Sitkin	1.10	303		Pn	09 55 04.8	0.0
LSPA					Sn	09 55 19.3	+0.1
LSNW	Little Sitkin	1.14	303		Pn	09 55 04.9	-0.5
TANO	Tanaga North	1.26	63		Pn	09 55 06.8	-0.2
TANO					Sn	09 55 23.2	+0.2
TASE	Tanaga Southea	1.28	68		Pn	09 55 07.3	+0.1
TASE					Sn	09 55 23.0	-0.4
KIMD	Kanaga Island	1.73	76		Pn	09 55 13.6	+0.2
KIMD					Sn	09 55 34.4	0.0
KIKV	Kanaga Island	1.80	72		Pn	09 55 14.5	+0.1
KIKV					Sn	09 55 36.5	+0.4
KIWB	Kanaga Island	1.81	73		Pn	09 55 14.4	0.0
KIWB					Sn	09 55 36.4	+0.2
ADK	Adak	2.10	74		Pn	09 55 18.2	-0.1
ADK					Sn	09 55 43.5	+0.3
ADK	Adak	2.10	74	IAML		09 55 47.8	
	comp=E,149nm,0.5s						
ADK				IAML		09 55 50.8	
	comp=E,116nm,0.5s						
ETKA	Kagalaska Isla	2.26	76		Pn	09 55 20.6	0.0
ETKA					Sn	09 55 47.9	+0.7
GSCK	Great Sitkin C	2.44	73		Pn	09 55 23.3	+0.3
GSCK					Sn	09 55 52.4	+0.7
GSMY	Great Sitkin M	2.51	73		Pn	09 55 24.1	+0.1
GSMY					Sn	09 55 54.1	+0.8
GSTR	Great Sitkin T	2.52	72	Pn	Pn	09 55 24.6	+0.4
GSTR				IAML		09 56 07.4	
	comp=E,192nm,0.9s						
GSIG	Igitkin Island	2.58	74		Pn	09 55 24.9	0.0
GSIG					Sn	09 55 55.1	+0.1
KOWE	Korovin West	3.67	72		Pn	09 55 40.5	+0.6
GAMB	Gambell	13.19	16	Pn	Pn	09 57 50.4	+0.6
O14K	Tigyukauivet M	13.21	46	Pn	Pn	09 57 49.4	-0.8
OHAK	Old Harbor	16.56	59	Pn	Pn	09 58 32.9	-0.9
STLK	Strandline Lak	18.40	46	P	P	09 58 55.1	-0.8
STLK				IAmb	IAmb	09 59 32.0	
	comp=Z,5.0nm,1.4s						
F19K	Shaleruckik Mo	19.05	27	P	P	09 59 01.2	-1.6
F19K				IAmb	IAmb	09 59 21.9	
	comp=Z,4.8nm,1.5s						
L22K	Petersville	19.25	43	P	Pn	09 59 05.9	-0.6
L22K				IAmb	IAmb	09 59 13.1	
	comp=Z,5.9nm,1.5s						
KTH	Kantishna Hill	19.59	40	P	P	09 59 08.2	-0.6
SCM	Sheep Creek Mo	20.55	47	P	P	09 59 19.3	0.0
D20K	Etivluk River	20.69	24	P	P	09 59 20.5	-0.1
D20K				IAmb	IAmb	09 59 52.8	
	comp=Z,3.9nm,1.4s						
I23K	Minto, Yukon-K	20.90	37	P	P	09 59 21.9	-1.0
E22K	Anaktuvuk Pass	21.65	29	P	P	09 59 31.3	+0.4
E22K				IAmb	IAmb	09 59 49.0	
	comp=Z,3.3nm,1.4s						
B21K	Ikpikpuk River	21.84	24	P	P	09 59 32.7	-0.2
D22K	Ayikyak River	21.86	26	P	P	09 59 32.4	-0.8

IDC 07 10:03:52.2±4.7, 48°.62S×119°.87E, h0km, mb3.9/3, mbtmp3.9/3, MS3.4/11, Error ellipse: s-maj=318.3km s-min=27.3km az=104.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	14.35	341	T	T	10 22 56.3	
	baz=170						
H01W1	Cape Leeuwin H	14.35	341	T	T	10 22 54.2	
	baz=170						
H01W3	Cape Leeuwin H	14.37	341	T	T	10 22 57.9	
	baz=170						
STKA	Stephens Creek	23.42	52	LR	LR	10 16 34.7	
	comp=Z,55nm,19.2s,baz=207,slow=33						
ASAR	Alice Springs	27.27	29	P	P	10 09 37.6	-0.6
	2.6nm,1.1s,baz=200,slow=7.7,SNR=10						
ASAR				LR	LR	10 19 04.4	
	comp=Z,115nm,21.1s,baz=218,slow=34						
	2.6nm,1.1s						
FITZ	Fitzroy Crossi	30.80	11	LR	LR	10 22 18.4	
	comp=Z,49nm,21.3s,baz=180,slow=36						
WRA	Warramunga Arr	30.89	27	P	P	10 10 10.1	-0.3
	0.9nm,1.0s,baz=199,slow=8.8,SNR=4.9						
	0.9nm,1.0s						
VNDA	Vanda	33.12	165	LR	LR	10 22 42.7	
	comp=Z,61nm,18.4s,baz=256,slow=34						
CTA	Charters Tower	35.49	46	LR	LR	10 25 36.0	
	comp=Z,45nm,18.3s,baz=215,slow=37						
BATI	Baumata	38.42	6	LR	LR	10 25 40.2	
	comp=Z,64nm,20.0s,baz=125,slow=34						
QSPA	South Pole Qui	41.51	180	P	P	10 11 40.2	-0.7
	2.1nm,0.9s,baz=310,slow=4.5,SNR=4.2						
QSPA				LR	LR	10 28 04.7	
	comp=Z,98nm,18.1s,baz=226,slow=35						
	2.1nm,0.9s						
KAPI	Kappang	43.44	360	LR	LR	10 29 32.2	
	comp=Z,25nm,18.9s,baz=151,slow=35						
JAY	Jayapura	49.29	28	LR	LR	10 32 40.2	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,52nm,21.2s,baz=214,slow=35						
GUMO	Guam	65.78	27	LR	LR	10 42 11.3	
	comp=Z,15nm,21.9s,baz=95,slow=35						
AAK	Ala-Archa	99.26	328	LR	LR	10 57 15.4	
	comp=Z,13nm,19.9s,baz=169,slow=32						
PDAR	Pinedale Array	145.48	81	PKPbc	PKPdf	10 23 31.6	-0.2
	0.3nm,0.7s,baz=268,slow=7.7,SNR=3.6						
YKA	Yellowknife Ar	147.31	44	PKPbc	PKPbc	10 23 36.4	0.0
	0.5nm,0.7s,baz=287,slow=2.4,SNR=10						

TRN 07 10:18:12.8, 16.̊74N×60.̊73W, h22km, MD3.5, North-east of Guadeloupe., Leeward Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DSDZ	La Diserade, G	0.54	217	eP	Pn	10 18 25.4	+0.3
DSDZ				eS	Sn	10 18 35.0	+1.6
DHSZ	Broadband at M	1.10	245	eP	Pb	10 18 34.8	+1.7
DHSZ				eS	Sn	10 18 51.2	+3.8
MMLZ	Guadeloupe Bro	1.14	233	eP	Pb	10 18 34.9	+1.1
MMLZ				eS	Sn	10 18 50.2	+1.9
TBG	Guadaloupe-3	1.25	225	eP	Pb	10 18 36.5	+0.9
TBG				eS	Sb	10 18 54.5	+3.2
DWS	Wesley	1.29	206	eP	Pb	10 18 36.9	+0.4
DWS				eS	Sb	10 18 54.4	+1.7
ANWB	Willy Bob	1.37	312	eP	Pb	10 18 38.2	+0.6
DSLB	Salisbury	1.46	207	eP	Pb	10 18 39.3	0.0
DSLB				eS	Sb	10 18 58.9	+1.5
SKI	Saint Kitts	2.01	287	eP	Pb	10 18 47.9	-0.8
BIM	Bigot	2.24	189	eP	Pn	10 18 49.9	+1.3
BIM				eS	Sb	10 19 17.7	-2.1
SABA	Saba	2.56	290	eP	Pn	10 18 54.0	+1.0
SLBI	Saint Lucia, B	2.71	185	eP	Pb	10 18 58.0	-2.7
SLBI				eS	Sn	10 19 30.4	+3.1

*TEH **07** 10:21:56.9, 38.̊30N×44.̊37E, h6km±218km, ML2.6, Presumed earthquake*
*AZER **07** 10:21:58.0, 38.̊36N×44.̊55E, h10km, ml2.5*
*AFAD **07** 10:21:59.7, 38.̊39N×44.̊43E, h10km±4km, ML2.3*
*ISK **07** 10:22:03.2, 38.̊49N×44.̊48E, h10km, ML2.6/4*
ISC 07 10:22:00.3±1.2, **38.̊42N**±0.̊03×**44.̊53E**±0.̊02, **h6**km±10km, **n23**, σ**1.̊54**/41, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.49	300	P	Pg	10 22 08.0	-1.7
OZAP				S	Sg	10 22 15.4	-0.7
OZAP				IAML		10 22 23.0	
	comp=N,313nm,0.7s						
ISHB	Shabestar	0.86	99	Pg	Pg	10 22 15.2	-1.6
TVAN	Van	0.89	277	P	Pg	10 22 16.3	-1.1
TVAN				S	Sg	10 22 27.0	-2.0
TVAN				IAML		10 22 34.0	
	comp=N,101nm,0.6s						
TVAN				IAML		10 22 40.0	
	comp=E,95nm,0.4s						
VANB	Van	0.91	281	Pg	Pn	10 22 19.9	+0.1
VANB				Sg	Sn	10 22 32.4	-0.9
MAKU	Maku	0.94	7	Pg	Pg	10 22 17.2	-1.1
MAKU				Sg	Sb	10 22 32.2	+0.3
VMUR	Van-Muradiye	0.94	307	P	Pg	10 22 16.9	-1.4
VMUR				S	Sb	10 22 32.2	+0.3
VMUR				IAML		10 22 36.0	
	comp=N,102nm,0.5s						
VMUR				IAML		10 22 37.0	
	comp=E,97nm,0.4s						
IMRD	Marand	0.96	72	Pg	Pg	10 22 18.3	-0.5
NAX	Nakhchivan	1.06	45	P	Pg	10 22 20.1	-0.6
NAX				S	Sn	10 22 37.0	0.0
HAKT	HAKKARI	1.08	217	P	Pg	10 22 19.3	-1.7
HAKT				S	Sn	10 22 36.5	-1.0
ORD	Ordubad	1.25	66	P	Pn	10 22 23.5	-0.9
ORD				S	Sn	10 22 42.3	+0.7
SBZ	Shahbuz	1.26	39	P	Pn	10 22 23.7	-0.8
SBZ				S	Sn	10 22 42.9	+1.1
ITBZ	Tabriz	1.28	98	Pg	Pn	10 22 22.1	-2.8
HYR	Heyderabad	1.32	11	P	Pg	10 22 25.6	-0.1
HYR				S	Sg	10 22 45.7	+2.9
IAZR	Azarshahr	1.36	123	Pg	Pn	10 22 25.7	-0.4
CUKT	Cukurca	1.38	212	Pn	Pg	10 22 29.6	+2.8
CUKT				Sn	Sg	10 22 49.2	+4.5
IGDI	IGDIR	1.49	346	P	Pg	10 22 28.6	-0.2
IGDI				S	Sg	10 22 52.0	+3.9
AGRB	Hanur-Agry	1.66	314	Pn	Pg	10 22 32.2	0.0
AGRB				Sn	Sb	10 22 52.9	+0.2
DORK	Agr/Tutak/Do	1.67	306	P	Pn	10 22 30.4	+0.2
DORK				S	Sb	10 22 52.7	-0.2
KOTA	Agri, Merkez-K	1.72	324	P	Pb	10 22 31.9	-0.6
KOTA				S	Sb	10 22 54.2	-0.3
GNI	Garni	1.73	5	Pn	Pb	10 22 32.9	+0.3
GNI				Sn	Sg	10 22 56.2	+0.2
IHRS	Heris	1.98	92	Pn	Pb	10 22 36.0	-0.7
GDB	GEDABAY	2.48	22	P	Pn	10 22 42.1	+0.7
GDB				S	Sb	10 23 17.1	+0.8
YRD	Yardimli	2.94	79	P	Pn	10 22 48.7	+1.0
YRD				S	Sb	10 23 28.2	-1.4

*NEIC **07** 10:26:12.5±1.0, 19.̊07N±0.̊04×67.̊58W±0.̊03, h10km±1km, ML3.0/33, Md3.2/4(RSPR), Error ellipse: s-maj=8.7km s-min=3.0km az=30.0*
*OSPL **07** 10:26:12.1±0.7, 16.̊73N×67.̊63W, h28km±23km, ML2.9, Presumed earthquake*
*SDD **07** 10:26:14.7±2.5, 18.̊99N×67.̊67W, h0km±11km, MD3.0, ML2.7, MW2.8, Presumed earthquake*
ISC 07 10:26:11.8±1.4, **19.̊04N**±0.̊07×**67.̊63W**±0.̊03, **h5**km±11km, **n30**, σ**0.̊69**/46, **13C**, **Mona Passage**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.66	167		Pb	10 26 25.4	-0.5
IDE					Sb	10 26 34.7	-0.7
AGPR	Aguadilla, PR	0.75	139		Pb	10 26 27.2	-0.1
AGPR				IAML		10 26 40.2	
	500nm,0.3s						
AGPR				IAML		10 26 42.2	
	558nm,0.4s						
AGPR	Aguadilla, PR	0.75	139	⇑iP	Pb	10 26 27.4	0.0
AGPR				⇑iS	Sb	10 26 38.2	+0.3
AGPR				IAML		10 26 42.1	
	comp=N,410nm,0.3s						
PRSN	Puerto Rico Se	0.94	150		Pn	10 26 30.7	-0.9
PRSN				Sg	Sb	10 26 42.8	-0.4
LSP	Las Mesas	1.00	149		Pn	10 26 31.9	-0.6
LSP					Sn	10 26 47.9	+0.9
AOPR	Arecibo Observ	1.08	129		Pg	10 26 32.4	-0.1
AOPR				IAML		10 27 00.7	
	comp=N,336nm,0.3s						
AOPR	Arecibo Observ	1.08	129	⇑iP	Pn	10 26 34.6	+1.1
AOPR				i S	Sn	10 26 49.6	+0.7
AOPR				IAML		10 27 00.6	
	comp=N,300nm,0.3s						
HIDR	Higuey Centro	1.12	247	⇑iP	Pb	10 26 32.0	-1.6
HIDR				⇑iS	Sg	10 26 47.7	-0.1
HIDR				IAML		10 26 49.4	
	comp=N,462nm,0.2s						
CRPR	Cabo Rojo, PR	1.14	154		Pn	10 26 35.2	+0.9
CRPR					Sn	10 26 51.4	+1.1
CRPR	Cabo Rojo, PR	1.14	154	Pg	Pg	10 26 33.6	0.0
CRPR				IAML		10 26 53.2	
	comp=N,426nm,0.5s						
CRPR				IAML		10 26 53.6	
	comp=N,307nm,0.7s						
CRPR	Cabo Rojo, PR	1.14	154	i P	Pn	10 26 34.2	-0.1
CRPR				eS	Sn	10 26 49.9	-0.4
CRPR				IAML		10 26 53.1	
	comp=Z,375nm,0.5s						
UUPR	Utuado, UPR, P	1.16	132		Pb	10 26 34.1	-0.3
MLPR	Magueyes Islan	1.20	152		Pb	10 26 34.6	-0.3
MLPR				IAML		10 26 54.1	
	comp=Z,282nm,0.6s						
MLPR	Magueyes Islan	1.20	152	⇑iP	Pg	10 26 36.5	+1.6
MLPR				⇑iS	Sn	10 26 52.0	+0.2
MLPR				IAML		10 26 57.3	
	comp=N,74nm,0.6s						
GBPR	Guanica, Bosqu	1.27	146		Pg	10 26 37.0	+0.7
GBPR					Sn	10 26 54.3	+0.6
CELP	Cerrillos	1.38	134		Pb	10 26 37.7	-0.4
CELP				IAML		10 26 59.8	
	comp=N,321nm,0.3s						
CELP				IAML		10 27 03.3	
	comp=N,257nm,0.3s						
CELP	Cerrillos	1.38	134	⇑iP	Pg	10 26 38.4	+0.1
CELP				⇑iS	Sg	10 26 56.1	-0.2
CELP				IAML		10 27 03.9	
	comp=N,106nm,0.2s						
OBIP	Obispado Ponce	1.39	135	Pn	Pn	10 26 37.5	-0.3
OBIP	Obispado Ponce	1.39	135	i P	Pn	10 26 37.2	-0.6
OBIP				eS	Sg	10 26 56.2	-0.2
OBIP				IAML		10 27 04.4	
	comp=Z,74nm,0.4s						
ECPR	Experimental S	1.40	120		Pn	10 26 37.5	-0.5
ECPR				IAML		10 27 02.7	
	comp=Z,401nm,0.2s						
SMDR	Samana, DR	1.49	280		Pn	10 26 39.6	+0.4
SMDR					Sg	10 27 00.5	+0.6
SMDR	Samana, DR	1.49	280	⇑iP	Pn	10 26 39.4	+0.1
SMDR				⇑iS	Sg	10 27 00.8	+1.0
SMDR				IAML		10 27 01.9	
	comp=N,84nm,0.4s						
DR12	Loma Pena Alta	1.67	262	Pn	Pn	10 26 42.3	+0.5
HATOM	Hato Mayor del	1.67	262	⇑iP	Pb	10 26 43.0	-0.1
HATOM				⇑iS	Sb	10 27 04.3	-0.2
HATOM				IAML		10 27 07.8	
	comp=N,68nm,0.3s						
SJG	San Juan	1.68	123	eS	Sg	10 27 04.9	-0.9
SJG				IAML		10 27 09.0	
	comp=Z,90nm,0.2s						
PDPR	Patillas Dam,	1.83	123		Pn	10 26 43.8	-0.1
HUMP	Col San Antoni	1.91	117		Pn	10 26 45.5	+0.5
HUMP					Sb	10 27 11.3	+0.1
HUMP	Col San Antoni	1.91	117	Pn	Pn	10 26 44.6	-0.4
HUMP				IAML		10 27 14.7	
	comp=Z,72nm,0.3s						
HUMP				IAML		10 27 15.4	
	comp=Z,75nm,0.2s						
CUPR	Culebra, Puert	2.34	108	Pn	Pn	10 26 50.3	-0.7
SDDR	Presa de Saban	3.46	270	i P	Pb	10 27 12.0	-1.6

*IDC **07** 10:28:52.3±1.0, 42.̊89S×73.̊85W, h0km, mb4.1/9, mbtmp4.1/10, ML3.9/1, MS3.6/12, Error ellipse: s-maj=36.9km s-min=20.9km az=88.0*
*NEIC **07** 10:28:55.4±1.4, 42.̊85S±0.̊04×74.̊36W±0.̊06, h24km±4km, mb4.4/14, Mwr4.2/25, Mwr4.5(GUC), Error ellipse: s-maj=6.4km s-min=6.3km az=147.0, Moment Tensor Solution. Moment tensor: Scale 10^15Nm; Mrr1.41; Mθθ0.30; Mφφ-1.71; Mrθ-0.59; Mθφ-0.63; Mφr-1.77; Fault plane solution: M0 2.52000×10^15 NP1:φs198.10000°, δ69.27000°, λ91.88000°. NP2:φs12.81000°, δ20.81000°, λ85.06000°. Principal axes: T 2.2510, Plg66.0000°, Azm111.0000°; N 0.4761, Plg2.0000°, Azm17.0000°; P -2.7272, Plg24.0000°, Azm287.0000°;*
*NEIC **07** 10:28:55.5, 42.̊85S×74.̊35W, h25km*
*GUC **07** 10:28:56.5±0.9, 42.̊88S×74.̊31W, h22km±6km, ML4.4*
ISC 07 10:28:55.6±1.4, **42.̊85S**±0.̊03×**74.̊29W**±0.̊07, **h28**km±9km, **n94**, σ**1.̊14**/93, **mb4.2**/12, **MS3.7**/11, **5C-5D**, **Southern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GO07	Milladeo Hill,	0.53	120		Pb	10 29 06.7	+0.3
GO07					Sb	10 29 14.3	+0.5
GO07	Milladeo Hill,	0.53	120	⇓eP	Pb	10 29 06.3	-0.1
GO07				eS	Sb	10 29 13.8	0.0
GO07				IAML		10 29 15.0	
	comp=E,140μm,0.6s						
LL07	Hotel Espejo d	0.59	89		Pb	10 29 07.8	+0.3
LL07					Sb	10 29 16.6	+1.0
LL07	Hotel Espejo d	0.59	89	⇓eP	Pb	10 29 07.4	-0.1
LL07				eS	Sb	10 29 15.5	0.0
LL07				IAML		10 29 17.4	
	comp=N,60μm,0.5s						
LL06	Loncomilla	0.80	38	⇓eP	Pb	10 29 10.6	-0.3
LL06				eS	Sb	10 29 21.4	+0.1
LL06				IAML		10 29 23.0	
	comp=N,104μm,0.6s						
RMBA	Raºl Marn B	1.45	136	eP	Pn	10 29 19.5	-0.4
RMBA				eS	Sn	10 29 36.5	-1.4
RMBA				IAML		10 29 47.5	
	comp=E,7μm,0.5s						
LL01	San Ignacio de	1.46	72		Pb	10 29 21.8	-0.3
LL01	San Ignacio de	1.46	72	⇑eP	Pb	10 29 21.4	-0.6
LL01				eS	Sn	10 29 39.7	+1.5
LL01				IAML		10 29 46.9	
	comp=E,4μm,0.5s						
LL05	Los Muermos	1.56	23		Pn	10 29 21.4	-0.1
LL05	Los Muermos	1.56	23	eP	Pn	10 29 21.2	-0.2
LL05				eS	Sb	10 29 43.7	+0.6
LL05				IAML		10 29 50.6	
	comp=N,6μm,0.4s						
LJUN	La Junta	1.75	131	IAML		10 29 57.8	
	comp=N,2μm,0.4s						
LL02	Futaleuf	1.82	102		Pn	10 29 26.0	+1.0
LL02	Futaleuf	1.82	102	⇑eP	Pn	10 29 26.2	+1.2
LL02				eS	Sb	10 29 49.9	-0.7
AY01	Puyuhuapi	1.97	143		Pn	10 29 27.3	+0.2
AY01	Puyuhuapi	1.97	143	⇑eP	Pn	10 29 27.4	+0.4
AY01				eS	Sn	10 29 52.5	+1.7
AY01				IAML		10 29 59.8	
	comp=N,10μm,0.4s						
MGDN	Magdalena	2.04	152	⇑eP	Pn	10 29 28.4	+0.4
MGDN				eS	Sb	10 29 55.0	-1.8
MGDN				IAML		10 29 58.3	
	comp=E,2μm,0.5s						
USPA	Uspallante	2.27	158	eP	Pn	10 29 31.9	+0.7
USPA				eS	Sb	10 30 00.8	-2.7
LL04	Puerto Octay	2.39	37	eP	Pn	10 29 33.5	+0.7
LR04	Corral	3.04	13		Pn	10 29 43.6	+1.9
LR05	Currie	3.13	34		Pn	10 29 43.6	+0.6
LR05	Currie	3.13	34	eP	Pn	10 29 43.5	+0.6
LR05				eS	Sn	10 30 19.4	+0.1
LR05				IAML		10 30 29.6	
	comp=E,1μm,0.5s						
COYC	Coyhaique	3.15	151		Pn	10 29 45.0	+1.7
COYC	Coyhaique	3.15	151	eP	Pn	10 29 44.7	+1.4
COYC				IAML		10 30 35.9	
	comp=N,999nm,0.8s						
PLCA	Paso Flores	3.50	54	Pn	Pn	10 29 49.1	+0.9
	comp=N,2.6nm,0.3s,baz=232,slow=10,SNR=126						
PLCA				LR	LR	10 30 27.2	
	comp=N,123nm,20.4s,baz=252,slow=29						
PLCA				Lg	Lg	10 30 40.1	
	comp=N,12nm,0.3s,baz=216,slow=19,SNR=6.0						
PLCA	Paso Flores	3.50	54		Pn	10 29 49.6	+1.4
GO06	Curarrehue	3.89	34		Pn	10 29 54.8	+1.2
GO06	Curarrehue	3.89	34	⇑eP	Pn	10 29 54.6	+1.0
AY03	Cochrane	4.56	165		Pn	10 30 05.7	+3.0
GO08	Villa O'Higgin	5.75	168		Pn	10 30 20.0	+1.0
BI05	Punta Hualpn	6.15	8	Pn	Pn	10 30 24.0	-0.5
BI02	San Fabin de	6.60	22		Pn	10 30 31.3	+0.5
GO05	Hualane	8.04	14	Pn	Pn	10 30 50.8	+0.4
BO02	Sierra Bellavi	8.49	20		Pn	10 30 55.9	-0.9
GO09	Cerro Castillo	8.53	172	Pn	Pn	10 30 58.4	+1.3
MT01	Popeta	9.28	16	Pn	Pn	10 31 07.3	-0.2
BO04	La Punta	9.30	19	Pn	Pn	10 31 07.9	+0.1
MT09	Talagante	9.42	17	Pn	Pn	10 31 09.6	+0.1
MT13	San Alfonso	9.62	20		Pn	10 31 12.3	+0.1
H03S1	Juan Fernandez	9.69	337	T	T	10 41 09.6	
	baz=159,slow=74,SNR=53						
H03S2	Juan Fernandez	9.70	336	T	T	10 41 07.4	
	baz=159,slow=74,SNR=59						
H03S3	Juan Fernandez	9.71	337	T	T	10 41 08.7	
	baz=159,slow=74,SNR=72						
MT02	Curacav	9.89	16	Pn	Pn	10 31 14.4	-1.4
VA03	San Esteban	10.49	18		Pn	10 31 23.3	-0.8
TRQA	Tornquist	10.53	67	Pn	Pn	10 31 25.5	+0.9
CFA	Coronel Fontan	12.21	25	Pn	Pn	10 31 45.0	-2.7
	comp=N,0.7nm,0.3s,baz=203,slow=13,SNR=8.1						
CFA				Sn	Sn	10 33 54.1	-8.7
	comp=N,0.1nm,0.3s,baz=270,slow=20,SNR=1.4						
	comp=N,1.3nm,0.3s						
CO03	El Pedregal	12.33	15	Pn	Pn	10 31 48.2	-1.1
AC02	Maricunga	16.52	16		Pn	10 32 45.1	-0.7
PB14	IPOC Station P	18.46	11	P	P	10 33 09.3	0.0
PLTB	Pedras Altas	19.77	63	P	P	10 33 19.6	-3.8
PLTB				IAmb	IAmb	10 33 20.1	
	comp=Z,12nm,1.2s						
CPUP	Villa Florida	21.53	46	P	P	10 33 41.8	-0.6
	comp=Z,6.2nm,0.6s,baz=231,slow=9.3,SNR=18						
CPUP				LR	LR	10 42 45.6	
	comp=Z,113nm,20.8s,baz=184,slow=39						
	comp=Z,6.2nm,0.6s						
CPUP	Villa Florida	21.53	46	P	P	10 33 41.9	-0.5
CPUP				IAmb	IAmb	10 33 44.0	
	comp=Z,6.5nm,0.8s						
PMSA	Palmer Station	22.73	169	LR	LR	10 42 16.2	
	comp=Z,150nm,18.3s,baz=136,slow=36						
LPAZ	La Paz	26.99	13	P	P	10 34 37.0	+1.3
	comp=Z,0.7nm,0.4s,baz=228,slow=11,SNR=3.7						
	comp=Z,0.7nm,0.4s						
LPAZ	La Paz	26.99	13	P	P	10 34 34.7	-1.0
AQDB	Aquidauana	27.23	41	P	P	10 34 35.3	-1.8
AQDB				IAmb	IAmb	10 34 42.7	
	comp=Z,4.6nm,0.7s						
SPB	Sao Paulo	29.36	58	P	P	10 34 56.1	0.0
PTLB	Pontes e Lacer	30.24	30	P	P	10 35 04.5	+0.6
PTLB				IAmb	IAmb	10 35 15.2	
	comp=Z,3.7nm,0.8s						
RPN	Rapa Nui	32.44	287	LR	LR	10 45 30.7	
	comp=Z,128nm,20.8s,baz=164,slow=30						
BDFB	Brasilia	35.22	48	LR	LR	10 51 39.2	
	comp=Z,237nm,18.8s,baz=201,slow=39						
ATAH	Atahualpa	35.75	353	LR	LR	10 48 35.1	
	comp=Z,33nm,18.4s,baz=205,slow=33						
VNA2	Neumayer--Watz	42.71	154	⇓P	P	10 36 50.1	+0.6
	comp=Z,7.2nm,0.8s,baz=276,slow=11						
SNAA	Sanae	44.21	155	⇓P	P	10 37 02.4	+0.7
	comp=Z,79nm,0.6s						
SNAA	Sanae	44.21	155	P	P	10 37 01.7	0.0
	comp=Z,5.6nm,0.9s,baz=273,slow=7.1,SNR=5.4						
	comp=Z,5.6nm,0.9s						
SNAA	Sanae	44.21	155	P	P	10 37 02.5	+0.7
SNAA				IAmb	IAmb	10 37 03.7	
	comp=Z,5.9nm,0.8s						
TROLL	Troll, Antarti	45.88	155	P	P	10 37 15.9	+0.8
BOAV	Boa Vista	46.72	19	P	P	10 37 21.2	-0.9
BOAV				IAmb	IAmb	10 38 00.1	
	comp=Z,11nm,1.5s						
QSPA	South Pole Qui	47.40	180	P	P	10 37 28.0	+1.0
	comp=Z,0.9nm,0.7s,baz=292,slow=5.1,SNR=2.1						
	comp=Z,0.9nm,0.7s						
QSPA	South Pole Qui	47.40	180	P	P	10 37 27.6	+0.6
QSPA				IAmb	IAmb	10 38 06.3	
	comp=Z,5.4nm,1.2s						
RCBR	Riachuelo	50.07	54	P	P	10 37 48.2	+0.1
MAW	Mawson	65.21	163	LR	LR	11 07 52.4	
	comp=Z,65nm,18.3s,baz=107,slow=36						
LPIG	La Paz	74.43	326	LR	LR	11 05 15.1	
	comp=Z,42nm,20.7s,baz=109,slow=29						
TXAR	Lajitas Array	76.74	334	P	P	10 40 47.0	+2.7
	comp=Z,0.2nm,0.6s,baz=154,slow=5.2,SNR=3.8						
	comp=Z,0.2nm,0.6s						
TXAR	Lajitas Array	76.74	334	P	P	10 40 42.0	-2.2
BOSA	Boshof	77.55	117	P	P	10 40 48.2	-0.9
	comp=Z,3.2nm,0.7s,baz=229,slow=5.7,SNR=10.0						
	comp=Z,3.2nm,0.7s						
BOSA	Boshof	77.55	117	P	P	10 40 48.7	-0.4
TSUM	Tsumeb	78.53	105	LR	LR	11 09 12.7	
	comp=Z,33nm,21.9s,baz=154,slow=31						
DBIC	Dimbokro	79.72	71	P	P	10 41 00.9	0.0
	comp=Z,1.9nm,0.4s,baz=242,slow=5.1,SNR=6.9						
DBIC				LR	LR	11 15 02.0	
	comp=Z,42nm,18.8s,baz=254,slow=35						
	comp=Z,1.9nm,0.4s						
DBIC	Dimbokro	79.72	71	IAmb	IAmb	10 41 09.7	
	comp=Z,4.8nm,0.8s						
ANMO	Albuquerque	82.82	334	LR	LR	11 11 48.7	
	comp=Z,34nm,21.4s,baz=151,slow=31						
TORD	Torodi Ar. Bea	88.83	71	P	P	10 41 46.4	-0.7
	comp=Z,1.8nm,0.8s,baz=225,slow=6.1,SNR=8.1						
	comp=Z,1.8nm,0.8s						
PDAR	Pinedale Array	90.93	335	P	P	10 41 57.6	+1.1
	comp=Z,0.3nm,0.8s,baz=163,slow=2.2,SNR=3.5						
	comp=Z,0.3nm,0.8s						
PDAR	Pinedale Array	90.93	335	P	P	10 41 56.6	0.0
MDT	Midelt	98.65	53	LR	LR	11 25 16.6	
	comp=Z,48nm,20.8s,baz=222,slow=34						
AKTO	Aktyubinsk	146.87	60	PKPbc	PKPbc	10 48 34.6	+0.1
	comp=Z,2.5nm,0.6s,baz=266,slow=2.9,SNR=7.8						
ARTI	Arti	147.18	49	PKPbc	PKPbc	10 48 35.3	+0.2
	comp=Z,6.8nm,1.0s,baz=285,slow=4.3,SNR=6.3						
AB31	Akbulak array	148.00	62		PKPdf	10 48 36.2	+1.8
ABKAR	Akbulak array	148.00	62		PKPdf	10 48 36.5	+2.0
KURBB	Kurchatov Arra	159.90	58	PKPab	PKPab	10 49 30.6	-0.1
	comp=Z,1.0nm,0.4s,baz=280,slow=6.2,SNR=1.6						
KURK	Kurchatov	159.93	58		PKPab	10 49 29.9	-0.9
ZALV	Zalesovo Beam	162.30	44	PKPab	PKPab	10 49 40.4	-0.7
	comp=Z,0.8nm,0.6s,baz=297,slow=6.3,SNR=2.7						
ZALV	Zalesovo Beam	162.30	44		PKPab	10 49 40.6	-0.4
MKAR	Makanchi Array	162.94	69	PKPab	PKPab	10 49 43.9	-0.3
	comp=Z,1.1nm,0.6s,baz=268,slow=4.0,SNR=6.7						
LZH	Lanzhou	173.09	167	ePKP	PKPdf	10 49 03.6	+1.6
HHC	Hu-ho-hao-te	175.20	247	eP	PKPdf	10 49 02.4	-0.1

*NEIC **07** 10:29:10.5±1.4, 16.̊10N±0.̊05×92.̊99W±0.̊06, h173km±4km, mb4.5/208, Md4.7/144(MEX), Error ellipse: s-maj=8.8km s-min=6.1km az=52.0*
*CATAC **07** 10:29:10.8±0.6, 16˚N±3˚×9˚3W±˚, h164km±4km, M4.3/11, MLv4.3/11, Error ellipse: s-maj=8.1km s-min=5.9km az=42.3, confirmed*
*MEX **07** 10:29:10.5±0.7, 16.̊09N×93.̊06W, h178km±3km, MD4.7*
*GCG **07** 10:29:11.3±1.7, 16.̊12N×92.̊80W, h160km±10km, MD4.2, ML4.7, MW3.9, Presumed earthquake*
*IDC **07** 10:29:12.5±1.2, 16.̊38N×92.̊27W, h203km±11km, mb3.7/10, mbtmp4.3/12, Error ellipse: s-maj=34.9km s-min=10.9km az=59.0*
ISC 07 10:29:09.5±0.5, **16.̊04N**±0.̊03×**93.̊04W**±0.̊03, **h179**km±5km, **n609**, σ**2.̊00**/715, **mb4.4**/75, **Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCIG		0.38	208		Pn	10 29 33.3	-0.4
PCIG					Sn	10 29 51.7	-0.6
PCIG		0.38	208	eP	Pn	10 29 33.3	-0.4
PCIG				eS	Sn	10 29 51.7	-0.6
TGBT	Tuxtla Gutierr	0.73	356		Pn	10 29 35.0	-0.4
TGBT					Sn	10 29 53.2	-2.1
TGBT	Tuxtla Gutierr	0.73	356	eP	Pn	10 29 35.0	-0.4
TGBT				eS	Sn	10 29 53.2	-2.1
TGIG		0.74	354		Pn	10 29 35.0	-0.4
TGIG					Sn	10 29 52.9	-2.6
TGIG		0.74	354	eP	Pn	10 29 35.0	-0.4
TGIG				eS	Sn	10 29 52.9	-2.6
TGIG		0.74	354	i P	Pn	10 29 35.1	-0.4
TGIG				i S	Sn	10 29 52.8	-2.8
TGIG				IAML		10 29 54.7	
	comp=E,7μm,0.4s						
CARR	Arriaga	0.87	284	eP	Pn	10 29 36.2	+0.1
CARR				eS	Sn	10 29 56.0	-0.6
CCIG	Comitan	0.90	74		Pn	10 29 36.7	+0.1
CCIG				Sn	Sn	10 29 56.5	-0.9
CCIG	Comitan	0.90	74	eP	Pn	10 29 36.7	+0.1
CCIG				eS	Sn	10 29 56.5	-0.9
CCIG	Comitan	0.90	74	P	Pn	10 29 36.5	-0.1
CCIG	Comitan	0.90	74	i P	Pn	10 29 36.7	+0.1
CCIG				i S	Sn	10 29 55.8	-1.6
CCIG				IAML		10 29 58.2	
	comp=N,4μm,0.5s						
PAVE	Pavencul	1.18	135		Pn	10 29 38.8	0.0
PAVE					Sn	10 30 01.1	-0.3
PAVE	Pavencul	1.18	135	i P	Pn	10 29 38.8	0.0
PAVE				eS	Sn	10 30 01.1	-0.3
PATR	El Naranjo	1.20	140		Pn	10 29 38.4	-0.6
PATR					Sn	10 30 00.5	-1.2
PATR	El Naranjo	1.20	140	eP	Pn	10 29 38.4	-0.6
PATR				eS	Sn	10 30 00.5	-1.2
CHUJ	Union Juarez	1.30	136	eP	Pn	10 29 39.4	-0.4
CHUJ				eS	Sn	10 30 02.7	-0.5
THIG		1.35	146		Pn	10 29 40.2	+0.2
THIG					Sn	10 30 03.0	-0.5
THIG		1.35	146	eP	Pn	10 29 40.2	+0.2
THIG				eS	Sn	10 30 03.0	-0.5
THIG		1.35	146	i P	Pn	10 29 40.3	+0.3
THIG				i S	Sn	10 30 02.6	-1.0
THIG				IAML		10 30 06.0	
	comp=E,10μm,0.7s						
SMCA	Catarina	1.50	142	i P	Pn	10 29 41.3	-0.1
SMCA				i S	Sn	10 30 04.8	-1.3
SMCA				IAML		10 30 05.8	
	comp=N,5μm,0.3s						
HUEH	Huehuetenango	1.64	116		Pn	10 29 43.1	+0.1
HUEH				Sn	Sn	10 30 07.7	-1.2

HUEH Huehuetenango 1.64 116 *e*P Pn 10 29 42.9 -0.1
HUEH e S Sn 10 30 07.7 -1.2
HUEH Huehuetenango 1.64 116 P Pn 10 29 43.0 -0.1
HUEH Huehuetenango 1.64 116 *i* P Pn 10 29 43.0 -0.1
HUEH *i* S Sn 10 30 05.5 -3.3
HUEH IAML 10 30 21.7
comp=N,7µm,0.7s
UXUV UXUV 1.66 320 Pn 10 29 42.5 -0.4
UXUV Sn 10 30 05.9 -3.0
UXUV UXUV 1.66 320 *e*P Pn 10 29 42.5 -0.4
UXUV e S Sn 10 30 05.9 -3.0
VHSA Villahermosa 1.93 3 Pn 10 29 45.8 0.0
VHSA Sn 10 30 13.7 -0.3
VHSA Villahermosa 1.93 3 *e*P Pn 10 29 45.8 0.0
VHSA e S Sn 10 30 13.7 -0.3
RTAL Retalhuleu 1.99 139 Pn 10 29 46.9 +0.5
RTAL Sn Sn 10 30 15.0 +0.1
RTAL Retalhuleu 1.99 139 *e*P Pn 10 29 46.8 +0.4
RTAL e S Sn 10 30 14.2 -0.8
RTAL Retalhuleu 1.99 139 P Pn 10 29 47.1 +0.7
CMIG Matias Romero 2.06 301 Pn 10 29 46.5 -0.6
CMIG Sn 10 30 13.9 -2.4
CMIG Matias Romero 2.06 301 *e*P Pn 10 29 46.5 -0.6
CMIG *i* S Sn 10 30 13.9 -2.4
STG2 El Palmar, Qui 2.26 135 *i* P Pn 10 29 45.4 -4.1
STG2 *i* S Sn 10 30 12.8 -7.8
STG2 IAML 10 30 18.1
comp=E,10µm,0.3s
TUIG Tuzandepetl 2.39 326 Pn 10 29 50.1 -0.7
TUIG Sn 10 30 18.0 -5.0
TUIG Tuzandepetl 2.39 326 *e*P Pn 10 29 50.1 -0.7
TUIG e S Sn 10 30 18.0 -5.0
AVCB Coban 2.59 102 IAML 10 30 35.8
comp=N,4µm,0.5s
APG El Apazote 2.68 112 P Pn 10 29 54.0 -0.7
comp=N,4.6nm,0.3s,baz=223,slow=18,SNR=68
APG S Sn 10 30 26.0 -3.5
comp=N,22nm,0.4s,baz=231,slow=21,SNR=28
APG El Apazote 2.68 112 *i* P Pn 10 29 53.9 -0.7
APG *i* S Sn 10 30 27.1 -2.5
HUIG Huatulco 2.97 265 Pn 10 29 56.4 -1.4
HUIG Sn 10 30 32.1 -3.1
HUIG Huatulco 2.97 265 *e*P Pn 10 29 56.4 -1.4
HUIG e S Sn 10 30 32.1 -3.1
HUIG Huatulco 2.97 265 *i* P Pn 10 29 56.1 -1.6
NEUV Arroyo Zacate 3.13 303 Pn 10 29 59.1 -0.6
NEUV Sn 10 30 32.8 -6.0
NEUV Arroyo Zacate 3.13 303 *e*P Pn 10 29 59.1 -0.6
NEUV e S Sn 10 30 32.8 -6.0
PETF Flores 3.16 74 Pn 10 29 59.0 -1.1
PETF Sn Sn 10 30 36.6 -2.9
PETF Flores 3.16 74 *e*P Pn 10 29 58.8 -1.3
PETF e S Sn 10 30 36.4 -3.1
PETF Flores 3.16 74 P Pn 10 29 58.8 -1.3
PETF Flores 3.16 74 *i* P Pn 10 29 59.0 -1.1
PETF IAML 10 31 03.1
comp=E,653nm,0.5s
PMUV Sontecomapan 3.19 322 Pn 10 29 59.0 -1.5
PMUV Sn 10 30 33.8 -6.5
PMUV Sontecomapan 3.19 322 *e*P Pn 10 29 59.0 -1.5
PMUV e S Sn 10 30 33.8 -6.5
SCIG Sabancuy 3.40 31 Pn 10 30 02.2 -0.9
SCIG Sn 10 30 43.1 -1.8
SCIG Sabancuy 3.40 31 *e*P Pn 10 30 02.2 -0.9
SCIG e S Sn 10 30 43.1 -1.8
FAME Alcaldia de Sa 3.65 126 P Pn 10 30 06.7 +0.5
FAME S Sn 10 30 48.5 -1.9
OXLC Oaxaca 3.66 287 Pn 10 30 07.7 +1.1
OXLC Sn 10 30 42.0 -9.0
OXLC Oaxaca 3.66 287 *e*P Pn 10 30 07.7 +1.1
OXLC e S Sn 10 30 42.0 -9.0
OXBJ Oaxaca 3.68 287 Pn 10 30 07.6 +0.8
OXBJ Sn 10 30 41.8 -10
OXBJ Oaxaca 3.68 287 *e*P Pn 10 30 07.6 +0.8
OXBJ e S Sn 10 30 41.8 -10
OXIG Oaxaca 3.69 287 Pn 10 30 07.9 +1.0
OXIG Sn 10 30 49.4 -2.3
VHO Vista Hermosa 3.69 287 *e*P Pn 10 30 07.9 +1.0
VHO e S Sn 10 30 49.4 -2.3
NUBE Las Nubes 3.80 124 P Pn 10 30 08.5 +0.3
NUBE S Sn 10 30 52.3 -1.7
ESQI Esquipulas 3.86 112 Pn 10 30 08.5 -0.4
ESQI Esquipulas 3.86 112 P Pn 10 30 08.6 -0.3
ESQI S Sn 10 30 51.4 -3.9
MTO3 Montecristo 3.90 114 Pn 10 30 09.2 -0.5
PEIG Puerto Escondi 3.96 270 Pn 10 30 09.2 -0.9
PEIG Sn 10 30 53.1 -4.3
PEIG Puerto Escondi 3.96 270 *e*P Pn 10 30 09.2 -0.9
PEIG e S Sn 10 30 53.1 -4.3
SARH Santa Rosa de 4.31 106 P Pn 10 30 14.1 -0.5
SARH S Sn 10 30 01.0 -4.7
SARH Santa Rosa de 4.31 106 *i* P Pn 10 30 14.4 -0.3
TOIG Toxpalan 4.36 299 Pn 10 30 15.5 +0.2
TOIG Sn 10 30 59.0 -7.9
TOIG Toxpalan 4.36 299 *e*P Pn 10 30 15.5 +0.2
TOIG e S Sn 10 30 59.0 -7.9
YOIG Yosondua 4.40 281 Pn 10 30 16.4 +0.4
YOIG Sn 10 31 04.7 -3.4
YOIG Yosondua 4.40 281 *e*P Pn 10 30 16.4 +0.4
YOIG e S Sn 10 31 04.7 -3.4
TXIG Tlaxiaco 4.69 286 Pn 10 30 20.8 +1.0
TXIG Sn 10 31 08.4 -6.4
TXIG Tlaxiaco 4.69 286 *e*P Pn 10 30 20.8 +1.0
TXIG e S Sn 10 31 08.4 -6.4
TPIG Tehuac#an 4.76 300 Pn 10 30 21.2 +0.6
TPIG Sn 10 31 13.3 -3.0
TPIG Tehuac#an 4.76 300 *e*P Pn 10 30 21.2 +0.6
TPIG e S Sn 10 31 13.3 -3.0
LVIG Laguna Verde 4.88 319 Pn 10 30 20.4 -1.5
LVIG Sn 10 31 12.8 -5.9
LVIG Laguna Verde 4.88 319 *e*P Pn 10 30 20.4 -1.5
LVIG e S Sn 10 31 12.8 -5.9
JAUV Jalcomulco 4.88 313 Pn 10 30 20.3 -1.7
JAUV Sn 10 31 12.0 -6.9
JAUV Jalcomulco 4.88 313 *e*P Pn 10 30 20.3 -1.7
JAUV e S Sn 10 31 12.0 -6.9
HLIG Huajuapan de L 4.90 292 Pn 10 30 23.6 +1.2
HLIG Sn 10 31 15.1 -4.4
HLIG Huajuapan de L 4.90 292 *e*P Pn 10 30 23.6 +1.2
HLIG e S Sn 10 31 15.1 -4.4
PNIG Pinotepa 4.90 275 Pn 10 30 22.2 -0.1
PNIG Sn 10 31 14.8 -4.5
PNIG Pinotepa 4.90 275 *e*P Pn 10 30 22.2 -0.1
PNIG e S Sn 10 31 14.8 -4.5
FTIG Fresnillo de T 5.22 292 Pn 10 30 27.8 +1.3
FTIG Sn 10 31 23.2 -3.7
FTIG Fresnillo de T 5.22 292 *e*P Pn 10 30 27.8 +1.3
FTIG e S Sn 10 31 23.2 -3.7
MGIG Malinaltepec 5.50 283 Pn 10 30 31.3 +1.2
MGIG Sn 10 31 30.0 -3.4
MGIG Malinaltepec 5.50 283 *e*P Pn 10 30 31.3 +1.2
MGIG e S Sn 10 31 30.0 -3.4
TLIG Tlapa 5.51 287 Pn 10 30 31.9 +1.6
TLIG Tlapa 5.51 287 Sn 10 31 27.4 -6.2
TLIG Tlapa 5.51 287 *e*P Pn 10 30 31.8 +1.5
TLIG e S Sn 10 31 27.4 -6.2
MYIG Merida 5.80 32 Pn 10 30 31.9 -2.1
MYIG Sn 10 31 44.9 +4.5
MYIG Merida 5.80 32 *e*P Pn 10 30 31.9 -2.1
MYIG e S Sn 10 31 44.9 +4.5
CRIG Cruz Grande 5.89 278 Pn 10 30 35.4 +0.3
CRIG Sn 10 31 36.6 -5.9
CRIG Cruz Grande 5.89 278 *e*P Pn 10 30 35.4 +0.3
CRIG e S Sn 10 31 36.6 -5.9
CXUV Coxquihui 5.97 314 Pn 10 30 36.0 -0.1
CXUV Sn 10 31 38.8 -5.6
CXUV Coxquihui 5.97 314 *e*P Pn 10 30 36.0 -0.1
CXUV e S Sn 10 31 38.8 -5.6
PPSX Xalitzintla 6.04 301 *e*P Pn 10 30 40.9 +3.6
PPSX e S Sn 10 31 49.5 +3.1
PPCL Tochimilco 6.04 299 *e*P Pn 10 30 39.6 +2.2
PPCL e S Sn 10 31 42.1 -4.5
PPPT Popocatepetl 6.08 299 *e*P Pn 10 30 40.4 +2.3
PPPT e S Sn 10 31 44.9 -2.8
PBXN Popocatepetl 6.12 300 *e*P Pn 10 30 40.8 +2.1
PBXN *e*P 10 30 41.1
PBXN e S Sn 10 31 41.6 -7.1
PBXN e S 10 31 50.0
PPM Popocatepetl 6.12 300 *e*P Pn 10 30 41.2 +2.5
PPIG Popocatepetl 6.12 300 Pn 10 30 41.2 +2.5

TEIG Tepich 6.15 47 Pn 10 30 36.8 -1.7
TEIG Tepich 6.15 47 Sn 10 31 53.0 +4.5
TEIG Tepich 6.15 47 *e*P Pn 10 30 36.3 -2.1
TEIG e S Sn 10 31 53.0 +4.5
YAIG Yautepec 6.40 297 Pn 10 30 44.1 +2.1
YAIG Sn 10 31 50.4 -4.5
YAIG Yautepec 6.40 297 *e*P Pn 10 30 44.1 +2.1
YAIG e S Sn 10 31 50.4 -4.5
DAIG Los Arroyos 6.42 280 Pn 10 30 42.9 +0.8
DAIG Sn 10 31 49.5 -5.5
DAIG Los Arroyos 6.42 280 *e*P Pn 10 30 42.9 +0.8
DAIG e S Sn 10 31 49.5 -5.5
MPVM San Francisco 6.51 300 Pn 10 30 45.9 +2.5
MPVM Sn 10 31 59.3 +1.9
MPVM San Francisco 6.51 300 *e*P Pn 10 30 45.9 +2.5
MPVM *e*P 10 30 46.4
MPVM e S Sn 10 31 59.3 +1.9
THVM De Xico 6.53 301 Pn 10 30 45.9 +2.1
THVM De Xico 6.53 301 *e*P Pn 10 30 45.9 +2.1
MEIG Mezcala 6.57 288 Pn 10 30 46.1 +1.9
MEIG Sn 10 31 53.5 -5.2
MEIG Mezcala 6.57 288 *e*P Pn 10 30 46.1 +1.9
MEIG e S Sn 10 31 53.5 -5.2
VTVM Tizayuca 6.60 305 Pn 10 30 46.8 +2.1
VTVM Tizayuca 6.60 305 *e*P Pn 10 30 46.8 +2.1
PLIG Platanillo 6.61 292 Pn 10 30 46.7 +2.1
PLIG Sn 10 31 53.9 -5.7
PLIG Platanillo 6.61 292 *e*P Pn 10 30 46.7 +2.1
PLIG e S Sn 10 31 53.9 -5.7
XCVM Xochimilco 6.62 300 Pn 10 30 47.6 +2.6
XCVM Xochimilco 6.62 300 *e*P Pn 10 30 47.6 +2.6
PBVM Pinon 6.68 301 Pn 10 30 47.7 +2.2
PBVM Pinon 6.68 301 *e*P Pn 10 30 47.7 +2.2
MZVM 6.69 299 Pn 10 30 48.3 +2.8
MZVM Sn 10 31 56.0 -5.2
MZVM 6.69 299 *e*P Pn 10 30 48.3 +2.8
MZVM e S Sn 10 31 56.0 -5.2
UNM Universidad Na 6.71 300 Pn 10 30 48.9 +2.8
MCRU Las Cruces 6.77 300 *e*P Pn 10 30 47.2 +0.2
MHVM Bosque de Chap 6.77 301 Pn 10 30 49.9 +2.9
MHVM Bosque de Chap 6.77 301 *e*P Pn 10 30 49.9 +2.9
PTVM Pico Tres Padr 6.78 302 Pn 10 30 48.1 +1.1
PTVM Pico Tres Padr 6.78 302 *e*P Pn 10 30 48.1 +1.1
AOVM Tlapan 6.80 299 Pn 10 30 50.0 +2.5
AOVM Sn 10 31 54.2 -10
AOVM Tlapan 6.80 299 *e*P Pn 10 30 50.0 +2.5
AOVM e S Sn 10 31 54.2 -10
MAVM Malinalco, Edo 6.81 296 Pn 10 30 49.9 +2.4
MAVM Sn 10 32 03.5 -1.1
MAVM Malinalco, Edo 6.81 296 *e*P Pn 10 30 49.9 +2.4
MAVM e S Sn 10 32 03.5 -1.1
INVM La Marquesa 6.86 299 Pn 10 30 50.0 +1.8
INVM La Marquesa 6.86 299 *e*P Pn 10 30 50.0 +1.8
ZUVM ZUMPANGO 6.87 304 Pn 10 30 50.5 +2.2
ZUVM ZUMPANGO 6.87 304 *e*P Pn 10 30 50.5 +2.2
AZVM Cuida Lopez Ma 6.92 302 Pn 10 30 50.5 +1.6
AZVM Cuida Lopez Ma 6.92 302 *e*P Pn 10 30 50.5 +1.6
CAIG El Cayaco 7.01 279 Pn 10 30 50.8 +1.0
CAIG Sn 10 32 05.2 -3.7
CAIG El Cayaco 7.01 279 *e*P Pn 10 30 50.8 +1.0
CAIG e S Sn 10 32 05.2 -3.7
DEIG Demacu 7.11 308 *e*P Pn 10 30 53.6 +2.3
DEIG e S Sn 10 32 18.0 +6.4
DHIG Demacu 7.11 308 Pn 10 30 53.6 +2.3
DHIG Sn 10 32 18.0 +6.4
TOVM TOLUCA 7.11 298 Pn 10 30 53.4 +2.0
TOVM Sn 10 32 08.6 -3.2
TOVM TOLUCA 7.11 298 *e*P Pn 10 30 53.4 +2.0
TOVM e S Sn 10 32 08.6 -3.2
ARIG Puente Sto Nin 7.34 289 Pn 10 30 56.5 +2.4
ARIG Sn 10 32 16.2 -0.6
ARIG Puente Sto Nin 7.34 289 *e*P Pn 10 30 56.5 +2.4
ARIG e S Sn 10 32 16.2 -0.6
CTUV Llano Grande 7.39 318 Pn 10 30 55.7 +0.9
CTUV Sn 10 32 11.5 -6.5
CTUV Llano Grande 7.39 318 *e*P Pn 10 30 55.7 +0.9
CTUV e S Sn 10 32 11.5 -6.5
ACIG Acambay 7.60 302 Pn 10 31 00.2 +2.5
ACIG Acambay 7.60 302 *e*P Pn 10 31 00.2 +2.5
SIUN Universidad Ur 8.31 105 Pn Pn 10 31 07.1 0.0
MOIG Morelia 8.56 296 Pn 10 31 14.2 +3.6
MOIG Morelia 8.56 296 *e*P Pn 10 31 13.3 +2.8
RPIG Rio Verde 8.77 313 Pn 10 31 14.9 +1.7
RPIG Rio Verde 8.77 313 *e*P Pn 10 31 14.9 +1.7
SUJD Juan Diaz 3 9.35 128 Pn 10 31 20.5 -0.3
JTS Las Juntas de 9.72 125 P Pn 10 31 25.2 -0.5
comp=E,21nm,0.3s,baz=310,slow=20,SNR=16
JTS Las Juntas de 9.72 125 Pn 10 31 25.9 +0.2
MMIG Aquila 10.11 284 Pn 10 31 34.0 +3.4
MMIG Aquila 10.11 284 *e*P Pn 10 31 34.0 +3.4
HDC Heredia 10.56 124 Pn Pn 10 31 35.9 -0.7
INCO Volcan de Coli 10.65 291 *e*P Pn 10 31 41.3 +3.3
INCO e S S 10 33 40.0 +2.7
SOMAC Volcano de Col 10.67 291 *e*P Pn 10 31 42.8 +4.5
SOMAC e S S 10 33 40.0 +2.2
CEGR Campo Tres 10.84 289 *e*P Pn 10 31 44.8 +4.6
CEGR e S Sn 10 33 43.3 +2.5
CDAR Ciudad de Arme 10.86 287 *e*P P 10 31 46.5 -1.3
CDAR e S Sn 10 33 40.0 -1.1
ZAIG Zacatecas 11.21 308 Pn Pn 10 31 46.7 +1.6
ZAIG Zacatecas 11.21 308 *e*P Pn 10 31 47.4 +2.3
SOR Soroa 11.60 53 Pn Pn 10 31 48.6 -1.3
CJM Chamela 11.95 289 *e*P P 10 32 00.0 +0.1
735A Kenedy 13.49 342 Pn Pn 10 32 15.1 +1.2
735A P P 10 32 19.6 +2.5
HNDO Hondo 14.60 338 P 10 32 31.5 +2.1
DRIO Del Rio 15.04 334 Pn 10 32 34.1 +1.0
DRIO IAmb IAmb 10 32 43.0
comp=E,11nm,0.5s
JCT Junction City 15.65 338 P P 10 32 50.7 +10
JCT Junction City 15.65 338 IAmb IAmb 10 33 02.7
comp=E,13nm,0.8s
JCT Junction City 15.65 338 *e*P P 10 32 50.7 +10
BRDY Brady 16.12 341 Pn 10 32 47.6 +1.2
SAND Sanderson 16.17 331 P Pn 10 32 48.1 +1.1
CHIV Chivirico 16.29 74 P P 10 32 46.0 -2.1
CHIV IAmb IAmb 10 32 48.3
comp=E,13nm,0.8s
TX31 Lajitas Ar. Si 16.46 325 Pn 10 32 53.0 +2.5
TXAR Lajitas Array 16.46 325 P Pn 10 32 53.1 +2.6
comp=E,0.7nm,0.6s,baz=147,slow=13,SNR=17
TXAR Lajitas Array 16.46 325 P Pn 10 32 52.4 +1.9
OZNA Ozona 16.56 335 Pn 10 32 53.5 +1.8
352A Blakely 17.05 24 P P 10 32 56.2 -0.3
Z38A Mt. Pleasant 17.24 354 P P 10 32 58.9 +0.5
Z38A IAmb IAmb 10 33 06.8
comp=E,19nm,1.2s
ALPN Alpine 17.26 328 Pn 10 33 01.2 +1.0
FW06 Azle 17.35 347 P P 10 33 00.8 +1.1
FW06 IAmb IAmb 10 33 07.7
comp=E,13nm,0.9s
PLPT Palo Pinto 17.37 345 P P 10 33 01.0 +1.0
SGCY Sterling City 17.43 336 Pn 10 33 02.6 +0.4
SGCY IAmb IAmb 10 33 02.8
comp=E,20nm,0.6s
ABTX Abilene, Hawle 17.57 341 P P 10 33 03.2 +1.1
ABTX IAmb IAmb 10 33 18.9
comp=E,7.1nm,0.5s
WLAR White Oak Lake 17.57 360 Pn 10 33 03.8 +0.2
WLAR IAmb IAmb 10 33 14.8
comp=E,13nm,0.7s
MNHN Monahans 17.63 331 P 10 33 04.4 +1.5
MNHN IAmb IAmb 10 33 06.6
comp=E,9.1nm,0.7s
Z35A Perchaven, San 17.63 348 P P 10 33 03.6 +0.8
Z35A IAmb IAmb 10 33 10.2
comp=E,31nm,1.0s
Z47A Carrollton 17.66 14 P P 10 33 03.1 0.0
Z47A IAmb IAmb 10 33 04.0
comp=E,30nm,1.2s
NMDO Nuevo Mundo 17.72 73 P P 10 33 03.3 -0.5
LRAL Lakeview Retre 17.78 17 P P 10 33 04.5 +0.1
LRAL IAmb IAmb 10 33 31.2
comp=E,27nm,1.5s
PECS Pecos 18.18 329 P P 10 33 09.8 +0.9
VHRN Van Horn 18.30 325 Pn 10 33 12.7 +0.3
WTFS Witchita Falls 18.32 345 P P 10 33 10.9 +0.6
WTFS IAmb IAmb 10 33 15.2
comp=E,20nm,1.4s
APMT Aspermont 18.36 341 P P 10 33 11.3 +0.5
APMT IAmb IAmb 10 33 13.1

comp=E,15nm,0.6s
X40A Basin Creek Fa 18.37 1 P P 10 33 11.2 +0.4
SN07 Snyder 07 18.41 339 P P 10 33 12.0 +0.7
SN07 IAmb IAmb 10 33 12.6
comp=E,13nm,0.6s
MIAR Mount Ida 18.43 359 P P 10 33 11.7 +0.2
MIAR IAmb IAmb 10 33 12.5
comp=E,15nm,0.9s
POST Post 18.60 337 P P 10 33 14.4 +0.9
POST IAmb IAmb 10 33 15.2
comp=E,26nm,0.8s
CLNB Carlsbad 18.92 331 P P 10 33 17.6 +0.7
DKNS Dickens 18.94 339 P 10 33 18.5 +1.4
DKNS IAmb IAmb 10 33 36.4
comp=E,16nm,0.9s
X34A Smith Ranch, M 18.98 348 P Pn 10 33 22.5 +2.3
X34A IAmb IAmb 10 33 24.1
comp=E,40nm,1.5s
GDL2 Guadalupe Moun 19.10 329 P 10 33 21.1 +2.2
WHAR Wooly Hollow 19.18 2 P P 10 33 19.4 -0.1
MNTX Cornudas Mount 19.22 326 P P 10 33 20.5 +0.4
MNTX Cornudas Mount 19.22 326 IAmb IAmb 10 33 25.6
comp=E,5.4nm,0.9s
MNTX Cornudas Mount 19.22 326 *e*P P 10 33 20.5 +0.4
WMOK Wichita Mounta 19.32 346 P P 10 33 22.8 +1.6
W35A Tecumseh 19.34 350 P P 10 33 21.9 +0.6
OKCSW OKLAHOMA CITY 19.68 349 P P 10 33 26.1 +1.0
FCAR Ozark Folk Cen 19.79 2 P P 10 33 25.5 -0.6
FCAR IAmb IAmb 10 33 28.7
comp=E,6.5nm,0.7s
MSTX Muleshoe 19.89 336 Pn 10 33 30.8 -0.4
MSTX IAmb IAmb 10 33 31.7
comp=E,8.7nm,0.6s
TUL3 Leonard 19.94 353 P 10 33 30.1 +2.3
TUL3 IAmb IAmb 10 33 30.4
comp=E,14nm,0.8s
DEOK Depew 19.96 352 P P 10 33 30.4 +2.4
DEOK IAmb IAmb 10 33 31.0
comp=E,15nm,0.9s
LCAR Lake Charles 20.02 4 P P 10 33 27.6 -1.0
SMWD Samnorwood 20.05 343 P 10 33 29.8 +0.7
RLO Rose Lookout 20.12 355 P P 10 33 31.6 +1.9
RLO IAmb IAmb 10 33 32.0
comp=E,14nm,0.8s
OK052 Battle Ridge R 20.16 351 P P 10 33 31.5 +1.4
HHAR Hobbs 20.18 358 P 10 33 30.5 +0.2
AMTX Amarillo 20.30 339 P P 10 33 32.7 +0.9
AMTX IAmb IAmb 10 33 33.1
comp=E,15nm,0.6s
QUOK Quay 20.32 351 P P 10 33 30.9 -0.9
U38A Gravette 20.35 357 P 10 33 33.5 +1.3
U38A IAmb IAmb 10 33 34.1
comp=E,15nm,0.6s
OK048 Pawnee Station 20.59 351 P 10 33 36.0 +1.3
OK051 E0350 and S346 20.66 351 P P 10 33 36.6 +1.1
BLOK Blackwell 20.97 351 P P 10 33 39.3 +0.6
T42A Van Buren 20.98 4 P P 10 33 37.4 -1.4
T42A IAmb IAmb 10 33 37.5
comp=E,16nm,1.4s
T35A Sooner Cattle 21.02 352 P 10 33 38.5 -0.8
T35A IAmb IAmb 10 33 38.8
comp=E,9.8nm,0.8s
MGMO Mountain Grove 21.04 2 P P 10 33 40.0 +0.5
MGMO IAmb IAmb 10 33 40.9
comp=E,12nm,0.7s
TKL Tuckaleechee C 21.22 21 P P 10 33 36.7 -4.7
comp=E,5.2nm,1.0s,baz=204,slow=12,SNR=1.6
comp=E,5.2nm,1.0s
TKL Tuckaleechee C 21.22 21 IAmb IAmb 10 33 46.9
comp=E,16nm,1.2s
KAN01 Argonia South 21.44 350 P P 10 33 44.5 +0.7
T47A Sharon Grove 21.52 13 P P 10 33 43.3 -1.3
T47A IAmb IAmb 10 33 44.3
comp=E,7.8nm,0.7s
KAN08 Anthony NE Sta 21.55 349 P P 10 33 45.2 +0.3
S39A Bolivar 21.57 359 P 10 33 44.0 -1.1
INCA Colegio Marist 21.58 137 P P 10 33 40.0 -5.8
CRNM Carthage 21.69 328 P P 10 33 49.4 +2.9
Y22A Socorro 21.80 327 P 10 33 49.7 +2.1
DUN6 Lazy B Ranch 21.96 321 P P 10 33 52.2 +3.0
LENM Lemitar 21.98 328 P P 10 33 52.4 +2.9
CCM Cathedral Cave 21.99 4 P P 10 33 48.1 -1.2
RTBA Rita Blanca 22.07 339 P 10 33 51.1 +0.8
RTBA IAmb IAmb 10 33 51.7
comp=E,30nm,1.4s
R40A Maddies Statio 22.18 2 P P 10 33 49.5 -1.6
R40A IAmb IAmb 10 33 50.5
comp=E,25nm,1.2s
ANMO Albuquerque 22.34 330 P P 10 33 54.3 +1.3
ANMO Albuquerque 22.34 330 P 10 33 54.6 +1.6
ANMO IAmb IAmb 10 33 55.6
comp=E,3.0nm,0.9s
TUC Tucson 22.85 318 P P 10 33 60.0 +2.5
KSU1 Kansas State U 23.19 353 P 10 33 59.8 -0.6
T25A Trinidad 23.31 337 P 10 34 04.4 +2.6
T25A IAmb IAmb 10 34 05.4
comp=E,16nm,0.7s
P40A Paris 23.42 2 P 10 34 01.0 -1.5
P40A IAmb IAmb 10 34 02.2
comp=E,17nm,0.8s
P38A Dawn 23.50 359 P 10 34 02.9 -0.3
X18A Snowflake 23.87 324 P 10 34 10.3 +3.4
SDCO Great Sand Dun 24.26 335 P 10 34 12.4 +1.8
N38A Joes South For 24.66 360 P P 10 34 12.9 -0.9
X16A Lo Mia Camp, P 24.67 321 P P 10 34 17.2 +3.1
MVCO Mesa Verde 25.14 330 P 10 34 20.8 +2.3
MVCO IAmb IAmb 10 34 21.4
comp=E,14nm,0.7s
PV01 Paradox Valley 25.92 331 P P 10 34 28.6 +3.1
L40A Anamosa 25.98 3 P 10 34 24.3 -1.3
PV02 Paradox Valley 26.05 331 P P 10 34 29.7 +3.0
PV02 IAmb IAmb 10 34 30.1
comp=E,15nm,1.1s
PV13 Radium Mtn., P 26.05 331 P P 10 34 29.1 +2.4
PV13 IAmb IAmb 10 34 29.7
comp=E,9.9nm,1.0s
PV05 Paradox Valley 26.12 330 P P 10 34 29.5 +2.3
PV05 IAmb IAmb 10 34 30.1
comp=E,11nm,1.0s
PV03 Paradox Valley 26.14 331 P P 10 34 29.8 +2.3
PV03 IAmb IAmb 10 34 30.5
comp=E,8.4nm,1.1s
PV18 Skein Mesa, Pa 26.17 331 P P 10 34 30.0 +2.3
PV12 Saucer Basin, 26.17 331 P P 10 34 30.3 +2.6
PV12 IAmb IAmb 10 34 30.8
comp=E,13nm,0.9s
PV11 David Mesa, Pa 26.19 331 P P 10 34 30.2 +2.4
PV16 Nyswonger Mesa 26.22 331 P P 10 34 30.4 +2.3
PV16 IAmb IAmb 10 34 31.1
comp=E,14nm,1.2s
PV20 West Nyswonger 26.27 331 P P 10 34 30.7 +2.2
PV20 IAmb IAmb 10 34 31.9
comp=E,18nm,1.2s
PV04 Paradox Valley 26.28 331 P P 10 34 31.0 +2.4
PV04 IAmb IAmb 10 34 35.0
comp=E,10nm,1.1s
PV10 Paradox Valley 26.33 331 P P 10 34 30.8 +1.6
PV10 IAmb IAmb 10 34 31.9
comp=E,15nm,1.0s
PV22 Blue Mesa, Par 26.34 331 P P 10 34 31.5 +2.3
PV22 IAmb IAmb 10 34 32.0
comp=E,8.2nm,1.1s
PV23 Carpenter Ridg 26.38 331 P P 10 34 31.8 +2.2
PV23 IAmb IAmb 10 34 32.5
comp=E,14nm,1.0s
BC3 Big Chuckawall 26.76 315 P 10 34 35.9 +3.0
BC3 IAmb IAmb 10 34 36.4
comp=E,12nm,1.2s
HMU Henry Mountain 26.83 328 P P 10 34 36.3 +2.7
HMU IAmb IAmb 10 34 36.8
comp=E,5.3nm,0.8s
V12A Nelson 27.63 319 P 10 34 43.4 +2.8
P17A Butcher Ranch, 28.01 330 P P 10 34 46.4 +2.4
P17A IAmb IAmb 10 34 46.8
comp=E,5.0nm,0.9s
MPU Maple Canyon 28.86 330 P 10 34 53.8 +2.2
SPMN Marine on St. 29.09 0 P 10 34 52.1 -1.2
CCCA Chr Cany lake 29.13 316 P P 10 34 57.9 +4.1
CLC China Lake 29.45 317 P P 10 34 59.7 +3.0
PDAR Pinedale Array 30.16 335 P P 10 35 03.8 +0.7
comp=E,0.6nm,0.6s,baz=144,slow=9.6,SNR=7.6
PDAR PcP PcP 10 37 59.5 -0.4
comp=E,0.3nm,0.4s,baz=129,slow=5.5,SNR=7.8
comp=E,0.6nm,0.6s

VES **Vestal, Richgr** 30.46 315 P **P** 10 35 09.0 +3.5
VES IAmb IAmb 10 35 09.4
comp=Z,12nm,0.9s
SNOW **Snow King Moun** 31.23 335 P **P** **10 35 14.3 +1.8**
ELK **Elko** 31.25 326 **P** **10 35 15.4 +2.7**
LOHW **Long Hollow** 31.29 335 **P** **10 35 14.2 +1.2**
NV11 **Mina Array Sit** 31.38 320 P **P** **10 35 17.0 +3.2**
MOOW **Moose Ponds** 31.46 335 **P** **10 35 15.8 +1.3**
NVAR **Mina Array Bea** 31.47 320 P **P** **10 35 17.9 +3.3**
comp=Z,4.6nm,0.7s,baz=131,slow=8.5,SNR=45
NVAR PcP **PcP** **10 38 04.2 +0.8**
comp=Z,0.9nm,0.7s,baz=68,slow=3.9,SNR=7.2
comp=Z,4.6nm,0.7s
NVAR **Mina Array Bea** 31.47 320 **P** **P** **10 35 17.5 +2.9**
YNE **Yellowstone No** 32.23 337 P **P** **10 35 22.4 +1.3**
YMR **Madison River** 32.31 336 P **P** **10 35 24.4 +2.6**
YMR IAmb IAmb 10 35 24.6
comp=Z,4.8nm,0.8s
HLID **Hailey** 32.92 331 **P** **10 35 29.6 +2.5**
MCMT **McKenzie Canyo** 33.21 334 **P** **10 35 32.3 +2.5**
DLMT **Dillon** 33.54 335 P **P** **10 35 34.0 +1.6**
ULM **Lac du Bonnet** 34.20 357 P **P** **10 35 35.7 -2.2**
comp=Z,3.4nm,0.5s,baz=170,slow=8.0,SNR=8.6
comp=Z,3.4nm,0.5s
ULM **Lac du Bonnet** 34.20 357 IAmb IAmb 10 35 36.9
comp=Z,9.3nm,1.0s
WVOR **Wild Horse Val** 34.25 325 P **P** **10 35 41.4 +2.8**
J08A **Circle Bar Ran** 34.80 327 P **P** **10 35 45.3 +2.1**
BMO **Blue Mountains** 35.26 330 P **P** **10 35 48.2 +1.0**
F10A **Beach Ranch, E** 36.05 331 P **P** **10 35 55.1 +1.2**
F10A IAmb IAmb 10 35 55.7
comp=Z,7.5nm,1.0s
HOOD **Mount Hood Mea** 37.80 327 P **P** **10 36 11.7 +2.9**
LON **Longmire** 38.84 328 P **P** **10 36 19.2 +2.0**
LPAZ **La Paz** 40.44 141 P **P** **10 36 31.1 -0.4**
comp=Z,1.6nm,0.6s,baz=314,slow=4.7,SNR=5.7
comp=Z,1.6nm,0.6s
LPAZ **La Paz** 40.44 141 IAmb IAmb 10 36 32.8
comp=Z,2.0nm,0.8s
YKAW1 **Yellowknife Wh** 48.79 347 **P** **10 37 35.8 -0.3**
YKAW1 IAmb IAmb 10 37 36.1
comp=Z,5.3nm,0.6s
YKA **Yellowknife Ar** 48.82 347 P **P** **10 37 35.8 -0.6**
comp=Z,1.6nm,0.6s,baz=152,slow=7.0,SNR=43
YKA PcP **PcP** **10 38 57.8 -0.4**
comp=Z,0.5nm,0.6s,baz=151,slow=2.9,SNR=5.9
comp=Z,1.6nm,0.6s
YKAW3 **Yellowknife Wh** 48.88 347 **P** **10 37 36.5 -0.4**
KOTAN **Kotaneelee Air** 49.44 340 P **P** **10 37 41.5 +0.3**
baz=139
T35M **Bob Quinn** 49.53 334 P **P** **10 37 42.5 +0.5**
baz=130
CRAG **Craig** 49.86 331 P **P** **10 37 45.4 +1.0**
baz=126
WRAK **Wrangell Islan** 50.08 333 P **P** **10 37 46.7 +0.7**
baz=127
U33K **Whale Pass** 50.24 332 P **P** **10 37 47.8 +0.6**
baz=126
DLBC **Dease Lake** 50.39 336 P **P** **10 37 48.7 +0.2**
baz=131
S34M **Telegraph Cree** 50.50 335 P **P** **10 37 49.8 +0.7**
baz=130
WTLY **Watson Lake, Y** 51.06 338 P **P** **10 37 53.7 +0.2**
baz=134
R33M **Jennings River** 51.39 336 P **P** **10 37 56.6 +0.6**
baz=131
Q32M **Nakina River** 51.63 335 P **P** **10 37 58.1 +0.3**
baz=129
WRGLY **Wrigley** 51.66 343 P **P** **10 37 58.2 +0.5**
baz=142
S32K **Killisnoo** 51.69 333 P **P** **10 37 57.8 -0.2**
baz=126
R32K **Eaglecrest** 52.14 334 P **P** **10 38 01.4 0.0**
baz=126
P32M **Atlin** 52.60 335 P **P** **10 38 05.3 +0.5**
baz=128
P33M **Teslin, Yukon** 52.63 336 P **P** **10 38 05.7 +0.6**
baz=129
S31K **Pelican** 52.70 333 P **P** **10 38 06.3 +0.9**
baz=124
R31K **City Hall, Gus** 52.74 333 P **P** **10 38 06.6 +0.9**
baz=125
SKAG **Skagway** 53.18 335 P **P** **10 38 09.3 +0.4**
baz=126
N32M **Quiet Lake** 53.34 337 P **P** **10 38 11.9 +1.7**
N32M IAmb IAmb 10 38 13.0
comp=Z,8.6nm,0.9s
N32M **Quiet Lake** 53.34 337 P **P** **10 38 10.7 +0.5**
baz=130
WHY **Whitehorse** 53.72 336 P **P** **10 38 13.2 +0.2**
baz=127
P30M **Million Dollar** 54.24 335 P **P** **10 38 17.8 +1.1**
baz=125
O30N **Mendenhall** 54.26 336 P **P** **10 38 17.8 +0.9**
baz=126
BDFB **Brasilia** 54.46 123 P **P** **10 38 17.0 -2.0**
comp=Z,2.2nm,0.4s,baz=333,slow=9.0,SNR=3.5
comp=Z,2.2nm,0.4s
M31M **Drury Creek, Y** 54.48 338 P **P** **10 38 18.8 +0.4**
baz=129
N31M **Braeburn, Yuko** 54.57 336 P **P** **10 38 20.2 +1.2**
baz=127
CPUP **Villa Florida** 54.58 140 P **P** **10 38 18.0 -1.6**
comp=Z,1.5nm,0.7s,baz=315,slow=7.9,SNR=5.1
comp=Z,1.5nm,0.7s
CPUP **Villa Florida** 54.58 140 IAmb IAmb 10 38 19.4
comp=Z,2.1nm,0.9s
HYT **Haines Junctio** 54.86 335 P **P** **10 38 21.3 +0.1**
baz=124
O29M **Mount Kennedy** 55.01 334 P **P** **10 38 22.5 +0.2**
baz=123
N30M **Aishikik Lake** 55.06 336 P **P** **10 38 22.4 -0.2**
baz=125
YUK6 **Outpost Mounta** 55.27 335 P **P** **10 38 24.6 +0.3**
baz=124
M30M **Minto, Yukon** 55.60 337 P **P** **10 38 27.0 +0.6**
baz=126
PINM **Pinnacle** 55.60 334 P **P** **10 38 27.5 +0.9**
baz=121
YUK4 **Talbot Arm** 55.61 335 P **P** **10 38 27.6 +0.8**
baz=124
MAYO **Mayo, Yukon** 55.89 338 P **P** **10 38 29.2 +0.7**
baz=128
O28M **Mount Upton** 55.93 334 P **P** **10 38 29.8 +0.6**
baz=122
YUK8 **Steele Glacier** 56.03 335 P **P** **10 38 30.1 +0.3**
baz=122
M29M **Somme Creek** 56.16 336 P **P** **10 38 32.0 +1.6**
M29M IAmb IAmb 10 38 34.0
comp=Z,14nm,1.3s
M29M **Somme Creek** 56.16 336 P **P** **10 38 30.8 +0.3**
baz=124
MESA **MESA** 56.38 333 P **P** **10 38 32.3 +0.1**
baz=120
L29M **L29M** 56.41 337 P **P** **10 38 33.2 +1.0**
baz=125
CTG **Chitna Glacier** 56.51 334 P **P** **10 38 33.7 +0.6**
baz=120
YUK3 **Moose Creek** 56.57 335 P **P** **10 38 34.2 +0.6**
baz=122
K29M **Barlow Dome** 56.62 338 P **P** **10 38 34.1 +0.4**
baz=126
J30M **Hart River** 56.65 339 P **P** **10 38 34.7 +0.8**
baz=128
C36M **Paulatuk** 56.70 347 P **P** **10 38 34.5 +0.5**
baz=144
H31M **Peel River** 56.78 341 P **P** **10 38 35.2 +0.4**
baz=131
BGLC **Bering Glacier** 56.94 333 P **P** **10 38 36.4 +0.6**
baz=118
I30M **Mount Dempster** 57.06 340 P **P** **10 38 37.0 +0.1**
baz=128
BVCY **Beaver Creek** 57.07 336 P **P** **10 38 37.0 +0.1**
baz=122
CRQE **Cirque** 57.16 333 P **P** **10 38 37.8 +0.2**
baz=119
KAIM **Kayak Island** 57.35 332 P **P** **10 38 39.4 +0.6**
baz=117
DAWY **Dawson** 57.42 338 P **P** **10 38 39.8 +0.5**
baz=124
MCARA **McCarthy VSAT** 57.43 334 P **P** **10 38 39.6 +0.3**
baz=119
M27K **Edge Creek, AK** 57.45 335 P **P** **10 38 39.8 +0.2**
baz=121
G31M **Satah River** 57.49 342 P **P** **10 38 40.0 +0.4**
baz=131
F31M **Tsiigehtchic** 57.69 343 P **P** **10 38 41.1 +0.2**
baz=132
I29M **Ogilvie Camp,** 57.79 339 P **P** **10 38 42.0 +0.2**
baz=126
L27K **Beaver Creek,** 57.79 336 P **P** **10 38 43.2 +1.4**
L27K IAmb IAmb 10 38 43.8
comp=Z,4.2nm,0.9s
L27K **Beaver Creek,** 57.79 336 P **P** **10 38 42.3 +0.4**
baz=121
EPYK **Eagle Plains** 57.89 341 P **P** **10 38 42.8 +0.3**
baz=128
BMRM **Bremner River** 57.91 333 P **P** **10 38 43.2 +0.4**
baz=117
M26K **Nabesna, AK** 57.92 335 P **P** **10 38 43.2 +0.4**
baz=120
Q23K **Middleton Isla** 58.02 331 P **P** **10 38 43.6 +0.2**
baz=115
G30M **tAoh Zraii Nji** 58.12 342 P **P** **10 38 43.7 -0.4**
baz=129
N25K **Chitina, Valde** 58.20 334 P **P** **10 38 45.3 +0.5**
baz=118
INK **Inuvik** 58.21 344 P **P** **10 38 44.9 +0.3**
baz=133
EYAK **Cordova Ski Ar** 58.23 332 P **P** **10 38 45.4 +0.5**
baz=116
L26K **Log Cabin Wild** 58.37 336 P **P** **10 38 46.1 +0.2**
baz=120
F30M **Barrier River** 58.39 342 P **P** **10 38 46.4 +0.4**
baz=130
I28M **Miner Creek** 58.40 339 P **P** **10 38 46.9 +0.8**
baz=124
KLU **Klutina** 58.72 333 P **P** **10 38 48.7 +0.4**
baz=116
P23K **Montague Islan** 58.74 331 P **P** **10 38 48.9 +0.5**
baz=114
HARP **HAARP** 58.80 335 P **P** **10 38 49.1 +0.2**
baz=117
GLI **Glacier Island** 58.97 332 P **P** **10 38 50.2 +0.2**
baz=115
I27K **Kandik River** 59.07 339 P **P** **10 38 50.8 +0.2**
baz=123
SCRK **Sand Creek** 59.09 336 P **P** **10 38 51.1 +0.1**
baz=120
M24K **Tolsona, Glenn** 59.10 334 P **P** **10 38 51.5 +0.5**
baz=116
PAX **Paxson** 59.20 335 **P** **10 38 52.7 +1.1**
PAX IAmb IAmb 10 38 53.7
comp=Z,6.7nm,1.0s
PAX **Paxson** 59.20 335 P **P** **10 38 51.6 -0.1**
baz=117
RIDG **Independent Ri** 59.31 336 P **P** **10 38 52.3 -0.1**
baz=118
H27K **Steamboat Moun** 59.38 339 P **P** **10 38 53.1 +0.3**
baz=123
I26K **Coal Creek Min** 59.46 338 P **P** **10 38 53.8 +0.6**
baz=121
SCM **Sheep Creek Mo** 59.47 333 P **P** **10 38 53.9 +0.4**
baz=115
E29M **Blow River** 59.50 342 **P** **10 38 54.5 +0.9**
E29M IAmb IAmb 10 38 55.4
comp=Z,9.3nm,1.2s
E29M **Blow River** 59.50 342 P **P** **10 38 54.0 +0.4**
baz=128,SNR=5.2
M23K **Glacier View** 59.62 333 P **P** **10 38 54.5 0.0**
baz=114
F28M **Old Crow** 59.63 341 **P** **10 38 55.4 +1.0**
F28M IAmb IAmb 10 38 56.1
comp=Z,5.7nm,0.8s
F28M **Old Crow** 59.63 341 P **P** **10 38 54.6 +0.2**
baz=126,SNR=7.1
K24K **Donnelly Dome** 59.71 336 **P** **10 38 56.3 +1.2**
K24K **Donnelly Dome** 59.71 336 P **P** **10 38 55.5 +0.4**
baz=118,SNR=5.0
SEW **Seward** 59.73 331 P **P** **10 38 55.6 +0.4**
baz=112
KNK **Knik Glacier** 59.79 333 P **P** **10 38 56.1 +0.4**
baz=114
SML **Sawmill** 59.89 333 P **P** **10 38 56.9 +0.5**
baz=114
J25K **Salcha River,** 59.93 337 **P** **10 38 57.2 +0.7**
J25K **Salcha River,** 59.93 337 P **P** **10 38 57.3 +0.7**
baz=118
WAT6 **Susitna Watana** 59.96 334 P **P** **10 38 57.2 +0.3**
baz=115,SNR=5.4
O22K **Cooper Landing** 59.99 331 P **P** **10 38 57.5 +0.5**
baz=112
DHY **Denali Highway** 60.02 335 P **P** **10 38 57.4 0.0**
baz=116
GHO **Glory Hole Cre** 60.13 333 P **P** **10 38 59.3 +1.2**
GHO IAmb IAmb 10 38 59.9
comp=Z,9.0nm,0.8s
PMR **Palmer** 60.15 333 P **P** **10 38 58.4 +0.4**
baz=113
BRSE **Bradley Lake S** 60.20 330 P **P** **10 38 58.7 +0.2**
baz=110
RC01 **Rabbit Creek A** 60.23 332 P **P** **10 38 59.4 +0.8**
baz=112
D28M **Stokes Point** 60.32 343 P **P** **10 38 59.4 +0.4**
baz=128
WAT1 **Susitna Watana** 60.40 334 P **P** **10 39 00.2 +0.4**
baz=114
PRP **Porcupine Dome** 60.42 338 **P** **10 39 00.9 +0.9**
PRP IAmb IAmb 10 39 01.6
comp=Z,7.1nm,0.8s
PRP **Porcupine Dome** 60.42 338 P **P** **10 39 00.1 0.0**
baz=119,SNR=7.4
HDA **Harding Lake** 60.44 336 P **P** **10 39 00.3 +0.3**
baz=117
KDAK **Kodiak Island** 60.47 328 P **P** **10 39 00.3 0.0**
baz=108
E27K **Coleen River** 60.49 341 P **P** **10 39 01.1 +0.7**
E27K IAmb IAmb 10 39 01.9
comp=Z,4.7nm,0.9s
E27K **Coleen River** 60.49 341 P **P** **10 39 00.5 +0.2**
baz=124
G26K **Porcupine Rive** 60.53 339 P **P** **10 39 00.3 -0.2**
baz=121
IL31 **60.58 337** P **P** **10 39 01.5 +0.6**
IL31 IAmb IAmb 10 39 01.8
comp=Z,10.0nm,1.2s
ILAR **Eielson Array** 60.58 337 P **P** **10 39 01.2 +0.3**
comp=Z,3.1nm,0.7s,baz=124,slow=5.5,SNR=42
ILAR PcP **pP** **10 39 43.5 +0.8**
comp=Z,0.7nm,0.7s,baz=144,slow=2.4,SNR=6.3
comp=Z,3.1nm,0.7s
ILAR **Eielson Array** 60.58 337 P **P** **10 39 01.0 0.0**
Q20K **Shuyak Island** 60.63 329 P **P** **10 39 01.0 -0.3**
baz=108
OHAK **Old Harbor** 60.66 327 P **P** **10 39 01.7 +0.2**
baz=107
CAPN **Captain Cook N** 60.76 331 P **P** **10 39 02.4 +0.3**
baz=111
RND **Reindeer** 60.77 335 **P** **10 39 03.7 +1.3**
CCB **Clear Creek Bu** 60.88 336 **P** **10 39 03.3 +0.4**
D27M **Malcolm River** 60.91 342 P **P** **10 39 04.0 +0.9**
D27M **Malcolm River** 60.91 342 P **P** **10 39 03.4 +0.2**
baz=125
MCK **McKinley** 60.94 335 P **P** **10 39 03.1 -0.3**
baz=114
POKR **Poker Plat Res** 60.95 337 P **P** **10 39 03.1 -0.3**
baz=116
SII **Sitkinak Islan** 60.95 326 P **P** **10 39 03.8 +0.2**
baz=106
CUT **Chulitna** 60.97 333 P **P** **10 39 04.7 +1.1**
CUT **Chulitna** 60.97 333 P **P** **10 39 03.5 0.0**
baz=112
COLA **College** 61.00 336 P **P** **10 39 04.2 +0.5**
COLA **College** 61.00 336 P **P** **10 39 03.6 -0.1**
baz=116
F26K **Sheenjek River** 61.04 340 P **P** **10 39 04.3 +0.3**
baz=121
BMAR **Burnt Mountain** 61.04 340 **P** **10 39 04.8 +0.7**
SPU **Mount Spurr** 61.31 332 P **P** **10 39 07.0 +1.0**
SPU IAmb IAmb 10 39 07.2
comp=Z,5.8nm,1.1s
Q19K **Cape Douglas,** 61.34 329 P **P** **10 39 06.4 +0.2**
baz=107
SKT **Skwentna** 61.36 333 P **P** **10 39 06.5 +0.3**
baz=111
P19K **Oil Pt** 61.36 330 P **P** **10 39 06.3 0.0**
baz=108
TRF **Thorofare Moun** 61.38 334 P **P** **10 39 07.1 +0.6**
TRF **Thorofare Moun** 61.38 334 P **P** **10 39 06.8 +0.2**
baz=113,SNR=7.8
N20K **Mount Spurr** 61.39 332 P **P** **10 39 06.5 0.0**
baz=110
RED **Redoubt Volcan** 61.39 331 P **P** **10 39 07.5 +1.0**
SPCR **Spurr Chakacha** 61.39 332 P **P** **10 39 06.9 +0.3**
baz=110
H24K **Noodor Dome** 61.43 337 **P** **10 39 07.7 +0.9**
H24K IAmb IAmb 10 39 08.2
comp=Z,6.5nm,0.8s
H24K **Noodor Dome** 61.43 337 P **P** **10 39 07.1 +0.4**
baz=116,SNR=10
F25K **Christian Rive** 61.48 340 P **P** **10 39 08.5 +1.5**
F25K **Christian Rive** 61.48 340 P **P** **10 39 07.2 +0.2**
baz=120
KTH **Kantishna Hill** 61.68 334 P **P** **10 39 08.8 +0.4**
KTH IAmb IAmb 10 39 10.1
comp=Z,6.3nm,1.0s
G24K **Hadweenzic Riv** 61.68 338 P **P** **10 39 09.2 +0.8**
G24K IAmb IAmb 10 39 10.1
comp=Z,5.0nm,0.9s
G24K **Hadweenzic Riv** 61.68 338 P **P** **10 39 09.1 +0.7**
baz=117
I23K **Minto, Yukon-K** 61.69 336 P **P** **10 39 09.2 +0.8**
I23K **Minto, Yukon-K** 61.69 336 P **P** **10 39 08.7 +0.4**
baz=115,SNR=10
E25K **Arctic Village** 61.72 340 P **P** **10 39 09.5 +0.9**
E25K **Arctic Village** 61.72 340 P **P** **10 39 08.6 0.0**
baz=120
BPAW **Bear Paw Mtn.** 61.91 335 P **P** **10 39 10.6 +0.6**
BPAW IAmb IAmb 10 39 10.7
comp=Z,4.7nm,0.7s
BPAW **Bear Paw Mtn.** 61.91 335 P **P** **10 39 10.1 +0.2**
baz=112
C27K **Jago River** 61.93 342 P **P** **10 39 11.1 +1.2**
C27K IAmb IAmb 10 39 11.7
comp=Z,7.5nm,1.1s
C27K **Jago River** 61.93 342 P **P** **10 39 10.4 +0.5**
baz=122,SNR=7.1
Q18K **Katmai Hardscr** 61.95 328 P **P** **10 39 10.5 +0.2**
baz=106
PPLA **Purkeypile** 61.97 334 P **P** **10 39 10.4 -0.1**
baz=111
M20K **Styx River** 62.03 332 P **P** **10 39 10.8 0.0**
baz=109
O19K **Port Alsworth** 62.05 330 P **P** **10 39 11.0 +0.1**
baz=107
MLY **Manley** 62.18 336 **P** **10 39 12.3 +0.6**
MLY IAmb IAmb 10 39 13.1
comp=Z,7.4nm,0.7s
MLY **Manley** 62.18 336 P **P** **10 39 12.0 +0.2**
baz=113,SNR=9.4
P18K **Big Mountain,** 62.26 329 P **P** **10 39 12.3 -0.1**
baz=106
Q17K **Contact Creek** 62.29 328 P **P** **10 39 12.2 -0.4**
baz=105
N19K **Bonanza Creek** 62.31 331 P **P** **10 39 13.1 +0.3**
baz=107
R17L **Mt. Peulik Vol** 62.37 327 P **P** **10 39 13.3 +0.2**
baz=104
CHUM **Lake Minchumin** 62.38 335 P **P** **10 39 13.4 +0.4**
baz=111
O18K **Koktuh Hills** 62.38 330 P **P** **10 39 13.4 +0.3**
baz=106
C26K **Camden Bay** 62.44 342 P **P** **10 39 13.4 +0.2**
baz=121
D25K **Kavik River** 62.57 341 **P** **10 39 15.2 +0.9**
D25K IAmb IAmb 10 39 16.0
comp=Z,11nm,1.1s
D25K **Kavik River** 62.57 341 P **P** **10 39 14.6 +0.3**
baz=120,SNR=11
G23K **Bananza Creek** 62.60 338 P **P** **10 39 15.2 +0.7**
G23K **Bananza Creek** 62.60 338 P **P** **10 39 14.3 -0.1**
baz=115
M19K **Big River Lodg** 62.61 332 P **P** **10 39 14.7 +0.2**
baz=108
E24K **Your Creek** 62.66 340 P **P** **10 39 16.2 +1.4**
E24K IAmb IAmb 10 39 34.4
comp=Z,5.5nm,1.4s
E24K **Your Creek** 62.66 340 P **P** **10 39 14.7 -0.1**
baz=117
I21K **Tanana** 62.72 336 P **P** **10 39 15.7 +0.4**
baz=112
H22K **Ishtalitna Cre** 62.77 337 P **P** **10 39 15.9 +0.4**
H22K IAmb IAmb 10 39 16.6
comp=Z,3.3nm,0.8s
H22K **Ishtalitna Cre** 62.77 337 P **P** **10 39 15.7 +0.1**
baz=113
Q16K **King Salmon** 62.78 328 P **P** **10 39 15.7 0.0**
baz=104
P17K **Kvichak River** 62.81 329 P **P** **10 39 15.9 0.0**
baz=105
COLD **Coldfoot** 62.88 338 P **P** **10 39 16.5 +0.3**
baz=115
L19K **White Mountain** 62.90 332 P **P** **10 39 16.4 -0.1**
baz=108
K20K **Telida** 62.93 334 P **P** **10 39 16.9 +0.2**
K20K IAmb IAmb 10 39 17.6
comp=Z,6.7nm,0.7s
N18K **Kilae Creek** 62.94 331 P **P** **10 39 16.6 -0.2**
baz=106
R16K **Pilot Point** 62.99 327 P **P** **10 39 16.9 -0.2**
baz=103
E23K **Chandalar** 63.03 339 **P** **10 39 18.7 +1.4**
E23K IAmb IAmb 10 39 19.7
comp=Z,9.3nm,1.1s
E23K **Chandalar** 63.03 339 P **P** **10 39 17.3 -0.1**
baz=116
M18K **Stony River** 63.13 331 P **P** **10 39 17.9 -0.1**
baz=106
H21K **Melozitna Rive** 63.22 336 P **P** **10 39 18.5 -0.1**
baz=111
TOLK **Toolik Lake Re** 63.27 340 P **P** **10 39 18.7 -0.1**
baz=116,SNR=7.1
O17K **Koliganek Bris** 63.28 329 P **P** **10 39 19.1 +0.1**
baz=104
N17K **Nushagak Hills** 63.51 330 P **P** **10 39 20.8 +0.3**
baz=105
P16K **Nushagak River** 63.54 328 P **P** **10 39 21.3 +0.6**
baz=103
CHNA **Chernabura Isl** 63.56 324 P **P** **10 39 21.8 +0.9**
baz=100
O16K **Kokwok River B** 63.73 329 P **P** **10 39 22.1 +0.2**
baz=104
L18K **Granite Mounta** 63.73 332 P **P** **10 39 21.8 -0.2**
baz=106
D23K **Nanushuk River** 63.78 340 P **P** **10 39 23.8 +1.6**
D23K IAmb IAmb 10 39 25.1
comp=Z,4.9nm,1.2s
D23K **Nanushuk River** 63.78 340 P **P** **10 39 22.5 +0.4**
baz=115
J19K **Poorman** 63.79 334 **P** **10 39 22.1 -0.2**
J19K IAmb IAmb 10 39 23.1
comp=Z,4.8nm,0.8s
J19K **Poorman** 63.79 334 P **P** **10 39 22.3 0.0**
baz=108,SNR=5.2
G21K **Allakaket** 63.80 337 P **P** **10 39 23.0 +0.7**
G21K IAmb IAmb 10 39 23.7
comp=Z,4.8nm,0.7s
G21K **Allakaket** 63.80 337 P **P** **10 39 22.1 -0.2**
baz=111
E22K **Anaktuvuk Pass** 63.81 339 P **P** **10 39 23.3 +0.9**
E22K IAmb IAmb 10 39 24.1
comp=Z,7.0nm,1.1s
E22K **Anaktuvuk Pass** 63.81 339 P **P** **10 39 22.7 +0.3**
baz=114
M17K **Holitna River** 63.86 331 P **P** **10 39 23.1 +0.3**
baz=105
H20K **Anotleneega Mo** 63.97 336 P **P** **10 39 23.9 +0.5**
baz=109
F21K **Alatna River** 64.05 338 P **P** **10 39 25.2 +1.3**
F21K **Alatna River** 64.05 338 P **P** **10 39 24.4 +0.5**
baz=112
J18K **Innoko River** 64.10 333 P **P** **10 39 24.8 +0.5**
baz=107
C23K **Itkillik River** 64.13 341 P **P** **10 39 25.6 +1.2**
C23K **Itkillik River** 64.13 341 P **P** **10 39 24.7 +0.3**
baz=116,SNR=9.3
SDPT **Sand Point** 64.14 324 P **P** **10 39 25.6 +0.9**
baz=99
N16K **Nishlik Lake** 64.26 330 P **P** **10 39 25.9 +0.5**
baz=103
D22K **Ayikyak River** 64.40 340 P **P** **10 39 27.4 +1.1**
D22K IAmb IAmb 10 39 28.2
comp=Z,6.5nm,0.8s
D22K **Ayikyak River** 64.40 340 P **P** **10 39 26.7 +0.5**
baz=113
L17K **Donlin** 64.44 332 P **P** **10 39 26.7 +0.2**
baz=104
M16K **Timber Creek** 64.48 330 P **P** **10 39 27.0 +0.2**
baz=103
O15K **Ungalikthiuk R** 64.50 328 P **P** **10 39 26.9 -0.1**
baz=102
GCSA **Galena City Sc** 64.54 335 P **P** **10 39 26.8 -0.2**

	baz=107						
K17K	Iditarod	64.59	332	P	P	10 39 27.5	0.0
	baz=105						
E21K	Killik River	64.67	339	P	P	10 39 28.2	+0.2
	baz=112						
F20K	Avaraart Lake	64.81	337	P	P	10 39 29.6	+0.8
F20K				IAmb	IAmb	10 39 30.6	
	comp=Z,6.6nm,0.8s						
F20K	Avaraart Lake	64.81	337	P	P	10 39 29.6	+0.8
	baz=109,SNR=13						
N15K	Kwethluk River	64.83	329	P	P	10 39 29.6	+0.5
	baz=102						
L16K	Owhat River	64.88	331	P	P	10 39 29.5	+0.2
	baz=103						
G19K	Purcell Mounta	65.04	336	P	P	10 39 30.8	+0.5
G19K				IAmb	IAmb	10 39 31.6	
	comp=Z,4.8nm,0.8s						
G19K	Purcell Mounta	65.04	336	P	P	10 39 30.5	+0.1
	baz=108						
C21K	Knifeblade Rid	65.21	340	P	P	10 39 31.7	+0.3
	baz=111						
B22K	Teshekpuk Lake	65.22	341	P	P	10 39 32.1	+0.7
	baz=113						
M15K	Kasigluk River	65.23	330	P	P	10 39 32.1	+0.4
	baz=102						
H18K	Honhosa River	65.26	335	P	P	10 39 32.3	+0.5
	baz=106						
B21K	Ikpikpuk River	65.32	340	P	P	10 39 32.5	+0.5
B21K				IAmb	IAmb	10 39 33.5	
	comp=Z,4.7nm,0.8s						
B21K	Ikpikpuk River	65.32	340	P	P	10 39 32.6	+0.5
	baz=111						
E20K	Nigu River	65.38	339	P	P	10 39 33.3	+0.7
	baz=109,SNR=6.9						
E19K	Redstone River	65.50	338	P	P	10 39 33.7	+0.4
E19K				IAmb	IAmb	10 39 34.6	
	comp=Z,3.8nm,0.9s						
E19K	Redstone River	65.50	338	P	P	10 39 33.9	+0.6
	baz=108						
F19K	Shaleruckik Mo	65.51	337	P	P	10 39 34.2	+0.9
F19K				IAmb	IAmb	10 39 34.4	
	comp=Z,4.2nm,0.8s						
F19K	Shaleruckik Mo	65.51	337	P	P	10 39 33.9	+0.6
	baz=107						
G18K	Tagagawik	65.58	336	P	P	10 39 34.9	+1.1
G18K				IAmb	IAmb	10 39 35.1	
	comp=Z,3.5nm,0.9s						
G18K	Tagagawik	65.58	336	P	P	10 39 34.1	+0.2
	baz=106						
D20K	Etivluk River	65.68	339	P	P	10 39 33.8	-0.6
D20K	Etivluk River	65.68	339	P	P	10 39 34.5	+0.1
	baz=109,SNR=14						
J16K	Anvik River	65.75	333	P	P	10 39 36.4	+1.5
J16K				IAmb	IAmb	10 39 36.9	
	comp=Z,6.7nm,0.9s						
J16K	Anvik River	65.75	333	P	P	10 39 35.4	+0.5
	baz=103						
FALS	False Pass	65.75	323	P	P	10 39 35.4	+0.3
	baz=96						
L15K	Ungalak Mounta	65.81	331	P	P	10 39 36.0	+0.6
	baz=101						
H17K	Granite Mounta	65.84	335	P	P	10 39 36.0	+0.5
	baz=104						
M14K	Bethel	65.86	330		P	10 39 36.9	+1.3
M14K				IAmb	IAmb	10 39 37.1	
	comp=Z,8.0nm,0.8s						
M14K	Bethel	65.86	330	P	P	10 39 35.7	+0.1
	baz=100,SNR=5.3						
I17K	Unalakleet	65.92	333	P	P	10 39 36.5	+0.5
	baz=103						
K15K	Wolf Creek Mou	65.95	332	P	P	10 39 36.4	+0.1
	baz=102						
D19K	Kuna River	66.13	339	P	P	10 39 38.0	+0.6
D19K				IAmb	IAmb	10 39 38.8	
	comp=Z,4.3nm,0.9s						
D19K	Kuna River	66.13	339	P	P	10 39 37.3	-0.1
	baz=108						
F18K	Selawik	66.16	336	P	P	10 39 37.5	+0.1
	baz=105						
G17K	Kiwalik Mounta	66.28	335	P	P	10 39 38.8	+0.5
	baz=104						
B20K	Meade River	66.29	340	P	P	10 39 38.9	+0.7
B20K	Meade River	66.29	340	P	P	10 39 38.6	+0.4
	baz=109						
L14K	Kuka Creek	66.31	330	P	P	10 39 38.6	+0.1
	baz=100						
M13K	Dall Lake	66.48	329	P	P	10 39 40.0	+0.4
	baz=99						
A21K	Barrow	66.56	342	P	P	10 39 40.2	+0.2
	baz=110						
E18K	Tukpahlearik C	66.73	337	P	P	10 39 41.5	+0.3
	baz=105						
F17K	Baldwin Pennin	66.74	336	P	P	10 39 41.3	+0.2
	baz=104						
H16K	Elim	66.74	334	P	P	10 39 41.8	+0.6
	baz=102,SNR=6.0						
C19K	Lookout Ridge	66.82	339		P	10 39 43.2	+1.4
C19K				IAmb	IAmb	10 39 43.9	
	comp=Z,5.1nm,0.9s						
C19K	Lookout Ridge	66.82	339	P	P	10 39 42.2	+0.5
	baz=106,SNR=6.0						
G16K	Koyuk River	66.95	335	P	P	10 39 43.5	+0.9
G16K	Koyuk River	66.95	335	P	P	10 39 43.4	+0.9
	baz=102						
J14K	Nanvaranak Lak	66.96	332	P	P	10 39 44.4	+1.8
J14K				IAmb	IAmb	10 39 44.6	
	comp=Z,6.2nm,0.8s						
J14K	Nanvaranak Lak	66.96	332	P	P	10 39 43.0	+0.4
	baz=100						
E17K	Hotham Inlet	67.11	337	P	P	10 39 44.1	+0.6
	baz=103						
C18K	Utukok River	67.26	338	P	P	10 39 44.8	+0.3
C18K	Utukok River	67.26	338	P	P	10 39 45.0	+0.5
	baz=104						
K13K	Kusilvak Mount	67.33	331	P	P	10 39 45.5	+0.5
	baz=98						
UNV	Unalaska Valle	67.46	322	P	P	10 39 45.5	-0.4
	baz=94						
G15K	Niukluk	67.57	334	P	P	10 39 46.8	+0.3
	baz=100						
A19K	Wainwright	67.62	340	P	P	10 39 47.1	+0.5
	baz=105						
D17K	Noatak River	67.73	337	P	P	10 39 47.8	+0.4
	baz=102						
RDOG	Red Dog Mine	67.74	338	P	P	10 39 48.0	+0.5
	baz=103						
C17K	DeLong Mountai	67.93	338	P	P	10 39 49.3	+0.6
	baz=102						
F15K	North Star Dit	67.95	335	P	P	10 39 50.0	+1.2
F15K				IAmb	IAmb	10 39 51.0	
	comp=Z,9.7nm,1.3s						
F15K	North Star Dit	67.95	335	P	P	10 39 49.1	+0.3
	baz=100						
ANM	Nome	68.06	334	P	P	10 39 49.9	+0.4
	baz=99						
F14K	Arctic Creek	68.60	335	P	P	10 39 53.4	+0.5
	baz=98						
C16K	Lisburne Hills	68.67	338	P	P	10 39 53.6	+0.3
	baz=100						
NIKH	Nikolski High	68.83	321	P	P	10 39 54.6	+0.1
	baz=91						
TNA	Tin City	69.27	335	P	P	10 39 57.6	+0.7
	baz=97						
SPIA	Saint Paul Isl	69.74	326	P	P	10 40 00.7	+0.7
	baz=92						
GAMB	Gambell	70.73	333	P	P	10 40 06.6	+0.8
	baz=93						
TIXI	Tiksi	88.06	348	P	P	10 41 38.7	-0.6
	comp=Z,3.3nm,0.3s,baz=55,slow=6.6,SNR=7.6						
	comp=Z,3.3nm,0.3s						
TIXI	Tiksi	88.06	348	IAmb	IAmb	10 41 39.3	
	comp=Z,3.0nm,0.8s						
TIXI				P	P	10 41 39.4	+0.1
HHC	Hu-ho-hao-te	118.97	339	eP	PKiKP	10 47 39.6	+2.2
WRA	Warramunga Arr	134.89	258	PKP	PKPdf	10 48 08.2	+0.1
	comp=Z,0.2nm,0.5s,baz=88,slow=2.8,SNR=8.6						
WRA	Warramunga Arr	134.89	258		PKPdf	10 48 09.0	+0.9
ASAR	Alice Springs	135.36	252	PKP	PKPdf	10 48 08.5	-0.4
	comp=Z,0.6nm,0.8s,baz=80,slow=1.9,SNR=3.5						
ASAR	Alice Springs	135.36	252		PKPdf	10 48 09.4	+0.5
CMAR	Chiang Mai Arr	143.75	341	PKP	PKPab	10 48 21.4	-0.1
	comp=Z,1.4nm,0.3s,baz=26,slow=2.3,SNR=5.7						

*IDC **07** 10:36:44.8±1.3, 8°.85S×127°.19E, h0km, mb3.8/3, mbtmp4.0/7, ML4.2/4, Error ellipse: s-maj=37.1km s-min=23.3km az=59.0*

ISC 07 10:36:50.0±1.2**, 9°.09S**±0°.10×**127°.19E**±0°.09**, h35km, n7, σ1s.43**/11**, mb3.7**/3**, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	3.65	252	Pn	Pn	10 37 44.5	+0.3
	12nm,0.3s,baz=154,slow=5.9,SNR=8.3						
BATI				Sn	Sn	10 38 26.6	+0.5
	9.7nm,0.3s,baz=79,slow=19,SNR=4.1						
	43nm,0.3s						
FITZ	Fitzroy Crossi	9.08	189	Pn	Pn	10 38 59.6	+0.9
	2.1nm,0.3s,baz=5.5,slow=11,SNR=25						
FITZ				Sn	Sn	10 40 38.9	-1.0
	2.1nm,0.3s,baz=53,slow=20,SNR=7.1						
	5.0nm,0.3s						
WRA	Warramunga Arr	12.81	148	Pn	Pn	10 39 50.8	+1.0
	1.6nm,0.3s,baz=328,slow=13,SNR=98						
WRA				Sn	Sn	10 42 09.9	-1.4
	0.7nm,0.3s,baz=320,slow=22,SNR=8.6						
	1.6nm,0.3s						
ASAR	Alice Springs	15.86	157	Pn	Pn	10 40 31.5	+0.7
	1.0nm,0.3s,baz=341,slow=13,SNR=48						
ASAR				Sn	Sn	10 43 23.3	-2.2
	0.3nm,0.3s,baz=334,slow=22,SNR=8.6						
	3.4nm,0.6s						
CTA	Charters Tower	21.42	123	P	P	10 41 36.9	+1.8
	3.4nm,1.1s,baz=315,slow=8.6,SNR=3.1						
	3.4nm,1.1s						
MKAR	Makanchi Array	68.49	329	P	P	10 47 47.7	-1.1
	0.4nm,0.5s,baz=138,slow=7.5,SNR=3.1						
	0.4nm,0.5s						
ZALV	Zalesovo Beam	72.26	335	P	P	10 48 10.4	-1.2
	1.0nm,0.6s,baz=149,slow=6.0,SNR=3.7						
	1.0nm,0.6s						

*ASRS **07** 10:42:05.9±0.3, 50°N±3°×8°2E±°, h10km, MLh3.2/11, Error ellipse: s-maj=5.8km s-min=3.1km az=174.1, confirmed*
*NNC **07** 10:42:12.7±1.2, 49°.58N×80°.84E, h0km, mb3.2, mpv3.2, Error ellipse: s-maj=24.3km s-min=6.3km az=54.0, Suspected Mining explosion.*
ISC 07 10:42:06.5±0.8**, 50°.02N**±0°.03×**81°.64E**±0°.03**, h0km, n18, σ1s.56**/40**, 5C-4D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SEM	Semipalatinsk	0.97	294	P	Pn	10 42 30.2	+2.7
	243nm,0.1s						
SEM				S	Sn	10 42 42.9	+0.7
	961nm,0.1s						
KURK	Kurchatov	2.05	291	⇑Pn	Pb	10 42 44.9	+0.3
	2.2nm,0.3s						
KURK				⇑Sn	Sb	10 43 10.1	-0.5
	17nm,0.4s						
KURK	Kurchatov	2.05	291	Pg	Pn	10 42 43.1	+0.9
KURK				Sg	Sb	10 43 09.8	-0.8
KURBB	Kurchatov Arra	2.08	288	⇓Pn	Pb	10 42 45.0	0.0
	9.5nm,0.3s						
KURBB				⇓Sn	Sn	10 43 10.3	+1.1
	202nm,0.8s						
UKR	Ust'-Kan	2.20	64	Pg	Pg	10 42 48.1	-0.6
UKR				Sg	Sb	10 43 14.5	-0.5
MAKZ	Makanchi	3.22	176	⇑Pn	Pn	10 42 57.5	-0.8
	2.5nm,0.5s						
MAKZ				⇑Pg	Pg	10 43 07.5	-0.7
	2.4nm,0.4s						
MAKZ				⇑Lg	Lg	10 43 47.2	
	21nm,0.5s						
MAKZ	Makanchi	3.22	176	Pn	Pn	10 42 57.1	-1.3
MAKZ				Pg	Pg	10 43 07.8	-0.4
MAKZ				Sg	Sg	10 43 49.0	-0.9
MK31	Makanchi Array	3.26	172	Pn	Pn	10 42 59.0	+0.2
	0.2nm,0.2s,baz=355,slow=10.0,SNR=55						
MK31				⇓Pg	Pb	10 43 05.7	+0.6
	0.5nm,0.2s,baz=349,slow=11,SNR=50						
MK31				⇓Lg	Lg	10 43 47.8	
	5.7nm,0.3s,baz=357,slow=27,SNR=14						
ZSN	Zaisan	3.34	139	Pg	Pg	10 43 14.1	+3.6
	7.7nm,0.3s						
ZSN				Lg	Lg	10 43 57.4	
	38nm,0.3s						
DGZ	Jazzator, Alta	3.76	93	Pn	Pn	10 43 06.0	+0.2
DGZ				Pg	Pg	10 43 18.4	-0.1
DGZ				Sg	Sg	10 44 08.3	+1.0
CHBI	Chibit, Altay	3.78	83	Pn	Pn	10 43 07.8	+1.7
CHBI				Pg	Pg	10 43 21.2	+2.3
CHBI				Sg	Sg	10 44 07.0	-1.0
AKAR	Aktash	3.86	83	Pn	Pn	10 43 09.6	+2.4
AKAR				Pg	Pg	10 43 23.1	+2.8
AKAR				Sg	Sg	10 44 08.8	-1.5
ARTR	Artybash	3.99	61	Pg	Pg	10 43 22.3	-0.5
ARTR				Sg	Sg	10 44 12.4	-2.2
ULGR	Ulagan, Altay	4.10	79	Pn	Pn	10 43 11.1	+0.7
ULGR				Pg	Pg	10 43 24.6	-0.4
ULGR				Sg	Sg	10 44 16.8	-1.2
YALR	Yailyu, Altay	4.17	63	Pn	Pn	10 43 13.2	+1.9
YALR				Sg	Sg	10 44 17.1	-3.1
CUR	Chagan-Uzun	4.33	86	Pn	Pn	10 43 10.9	-2.7
CUR				Pg	Pg	10 43 29.3	0.0
CUR				Sg	Sg	10 44 25.6	+0.3
ELT	Eltsovka	4.33	40	Pn	Pn	10 43 13.0	-0.4
ELT				Sg	Sg	10 44 23.2	-2.2
KAPS	Kapalarasan	4.98	199	Pg	Pg	10 43 40.3	-1.6
	2.7nm,0.1s						
KAPS				Lg	Lg	10 44 42.5	
	39nm,0.1s						

*MEX **07** 11:26:04.9±1.3, 15°.64N×92°.50W, h178km±7km, MD4.2*
*GCG **07** 11:26:05.4±1.5, 15°.70N×92°.36W, h156km±15km, MD4.0, MW3.0, Presumed earthquake*
ISC 07 11:26:01.5±1.8**, 15°.53N**±0°.07×**92°.47W**±0°.06**, h185km**±11km**, n20, σ2s.24**/37**, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAVE	Pavencul	0.44	139	eP	Pn	11 26 28.9	+1.9
PAVE				eS	Sn	11 26 46.5	0.0
PATR	El Naranjo	0.47	151	eP	Pn	11 26 28.6	+1.5
PATR				eS	Sn	11 26 46.5	-0.3
CHUJ	Union Juarez	0.56	141	eP	Pn	11 26 29.4	+1.9
CHUJ				eS	Sn	11 26 48.7	+1.3
PCIG		0.74	284	eP	Pn	11 26 29.4	+1.4
PCIG				eS	Sn	11 26 48.2	-0.2
CCIG	Comitan	0.82	23	eP	Pn	11 26 29.9	+1.2
CCIG				eS	Sn	11 26 47.4	-2.5
CCIG	Comitan	0.82	23	iP	Pn	11 26 29.9	+1.2
CCIG				iS	Sn	11 26 47.0	-2.8
HUEH	Huehuetenango	0.96	102	eP	Pn	11 26 31.0	+1.3
HUEH				eS	Sn	11 26 50.5	-0.8
RTAL	Retalhuleu	1.25	143	eS	Sn	11 26 56.3	+1.2
TGIG		1.39	333	eP	Pn	11 26 34.2	+1.2
TGIG				eS	Sn	11 26 55.8	-1.7
TGIG		1.39	333	iP	Pn	11 26 34.2	+1.2
TGIG				iS	Sn	11 26 54.9	-2.6
STG2	El Palmar, Qui	1.52	136	iP	Pn	11 26 33.1	-1.1
STG5	El Palmar, Qui	1.56	136	iP	Pn	11 26 33.6	-0.9
STG5				iS	Sn	11 26 56.3	-3.9
CARR	Arriaga	1.56	297	eP	Pn	11 26 35.9	+1.4
CARR				eS	Sn	11 26 58.7	-1.3
APG	El Apazote	2.00	105	iP	Pn	11 26 41.0	+1.7
CMIG	Matias Romero	2.79	304	eP	Pn	11 26 49.3	+1.4
CMIG				eS	Sn	11 27 22.0	-2.1
HUIG	Huatulco	3.51	274	eP	Pn	11 26 57.6	+0.9
HUIG				eS	Sn	11 27 35.2	-4.6
VHO	Vista Hermosa	4.37	291	eP	Pn	11 27 11.0	+3.2
VHO				eS	Sn	11 27 57.1	-2.5
PEIG	Puerto Escondi	4.53	277	eP	Pn	11 27 11.3	+1.8
PEIG				eS	Sn	11 27 59.6	-3.3
TOIG	Toxpalan	5.09	301	eP	Pn	11 27 19.9	+3.1
TOIG				eS	Sn	11 28 13.2	-2.9
TXIG	Tlaxiaco	5.37	289	eP	Pn	11 27 24.6	+3.9
TXIG				eS	Sn	11 28 21.2	-1.6

DJA 07 11:35:04.6±0.6**, 8°S**±3°×**10°7E**±°**, h25km**±5km**, M4.3**/32**, mB5.4**/4**, mb4.7**/5**, MLv3.8**/32**, Mw(mB)4.9**/4**, MwMwp5.0**/1**, Mwp5.2**/1**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBJI	Bungbulang	0.70	63	P	Pb	11 35 18.5	+0.2
BBJI				S	Sn	11 35 28.9	-0.3
SKJI	Sukabumi	0.91	329	P	Pn	11 35 21.8	0.0
SKJI				S	Sn	11 35 33.7	-0.3
LEM	Lembang	1.13	32	P	Pb	11 35 25.4	-0.1
DBJI	Dramaga	1.26	348	P	Pn	11 35 26.5	-0.1
CGJI	Cibinong	1.76	312	P	Pn	11 35 33.1	-0.4
SBJI	Serang	1.88	332	P	Pn	11 35 35.4	+0.2
KPJI	Karang Pucung	1.95	77	P	Pn	11 35 36.1	0.0
CTJI	Waduk Cacaban	2.28	70	P	Pn	11 35 40.6	-0.1
KASI	Kota Agung	3.37	312	P	Pn	11 35 55.2	-0.5
UGM	Wanagama	3.47	92	P	Pn	11 35 56.8	-0.3
KLSI		3.83	323	P	Pn	11 36 01.5	-0.5
PCJI	Pacitan	4.14	96	P	Pn	11 36 05.4	-0.8
MDSI	Maura Dua	4.33	319	P	Pn	11 36 11.2	+2.3
SNJI	Sawahan-Nganju	4.70	90	P	Pn	11 36 15.1	+1.0
MNAI	Manna	5.29	310	P	Pn	11 36 21.2	-0.9
	92nm,1.1s						
EGSI	Enggano, Bengk	5.30	297	P	Pn	11 36 21.5	-0.7
	4μm60nm,0.7s						
JAGI	Jajag, Banyuwa	7.09	96	P	Pn	11 36 47.8	+0.9
	1μm39nm,1.1s						

*BJI **07** 11:35:21.2, 7°.71S×129°.13E, h177km, mB5.1/27, mb5.0/78*
*NEIC **07** 11:35:25.4, 7°.38S×128°.70E, h170km*
*NEIC **07** 11:35:25.4, 7°.48S×128°.80E, h170km, Moment Tensor Solution. Duration: 1s.1.0 Moment tensor: Scale 10^16 Nm; Mrr5.54; Mθθ-5.35; Mφφ-0.19; Mrθ1.30; Mθφ4.20; Mφr3.25; Fault plane solution: M0 7.71000×10^16 NP1: φs91.31000°, δ51.24000°, λ47.31000°. NP2:φs327.15000°, δ55.03000°, λ130.18000°. Principal axes: T 7.7175, Plg58.0000°, Azm297.0000°; N -0.0064, Plg32.0000°, Azm121.0000°; P -7.7112, Plg2.0000°, Azm30.0000°;*
*IDC **07** 11:35:25.9±0.4, 7°.30S×128°.67E, h163km±3km, mb4.6/28, mbtmp5.1/33, MS3.8/24 Error ellipse: s-maj=10.8km s-min=6.8km az=81.0*
*GFZ **07** 11:35:27.0, 7°.43S×128°.67E, h155km, MW5.2, Moment Tensor Solution. s54 Moment tensor: Mrr5.23; Mθθ-5.60; Mφφ0.36; Mrθ0.65; Mθφ3.20; Mφr2.30; Fault plane solution: NP1:φs89.00000°, δ49.00000°, λ53.00000°. NP2:φs317.00000°, δ52.00000°, λ124.00000°. Principal axes: T 6.4300, Plg63.0000°, Azm290.0000°; N 0.5600, Plg26.0000°, Azm114.0000°; P -7.0000, Plg1.0000°, Azm23.0000°;*
*NEIC **07** 11:35:26.1±1.5, 7°.38S±0°.07×128°.70E±0°.06, h165km±4km, mb5.1/161, Mww5.2/34 Error ellipse: s-maj=9.9km s-min=9.0km az=184.0*
*MOS **07** 11:35:26.2±0.8, 7°.29S×128°.72E, h183km, mb5.1/34, Error ellipse: s-maj=9.3km s-min=5.6km az=117.6*
*DJA **07** 11:35:26.1±0.1, 7°S±1°×12°9E±°, h170km±2km, M5.0/114, mB5.5/97, mb5.2/114, MLv5.8/30, Mw5.2/68, Mw(mB)5.0/97, MwMwp4.8/32, Mwp5.1/32*
*GCMT **07** 11:35:27.4±0.1, 7°.45S±0°.01×128°.70E±0°.01, h165km±1km, MW5.2/148, Moment Tensor Solution. s87,c115; s148,c250; Duration: 1s.0 Moment tensor: Scale 10^17 Nm; Mrr0.62±.01; Mθθ-0.81±.01; Mφφ0.19±.01; Mrθ0.03±.01; Mθφ0.31±.01; Mφr0.40±.01; Best double couple: M0 0.89600×10^17 NP1:φs77.00000°, δ51.00000°, λ45.00000°. NP2:φs315.00000°, δ57.00000°, λ131.00000°. Principal axes: T 0.8850, Plg57.0000°, Azm282.0000°; N 0.0220, Plg33.0000°, Azm109.0000°; P -0.9070, Plg3.0000°, Azm17.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 07 11:35:25.9±0.2**, 7°.33S**±0°.03×**128°.70E**±0°.03**, h170km**±2km**, h171km:pP-P, n665, σ1s.57**/683**, mb5.1**/173**, 36C-7D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.66	104	P	Pn	11 36 10.2	+0.2
SAUI	Saumlaki	2.66	104	S	Sn	11 36 44.8	+0.6
SAUI	Saumlaki	2.66	104		Pn	11 36 10.1	+0.2
SAUI				Sn	Sn	11 36 41.7	-2.5
SAUI	Saumlaki	2.66	104	P	Pn	11 36 10.1	+0.1
SAUI				S	Sn	11 36 43.6	-0.6
AAI	Ambon	3.66	352	P	Pn	11 36 24.3	+1.9
MSAI	Masohi	3.97	3	P	Pn	11 36 28.6	+2.2
KRAI	Karang Ratu	4.00	356	P	Pn	11 36 29.6	+2.8
NLAI	Namlea	4.37	339	P	Pn	11 36 34.2	+2.7
SOEI	Soe	5.00	241	P	Pn	11 36 39.8	-0.1
SOEI	Soe	5.00	241	S	Sn	11 37 35.1	-2.6
SOEI	Soe	5.00	241		Pn	11 36 39.7	-0.1
SOEI	Soe	5.00	241	P	Pn	11 36 39.7	-0.1
DRS	Darwin Rock St	5.51	157	P	Pn	11 36 45.4	-1.0
FAKI	Fak Fak	5.63	39	P	Pn	11 36 46.5	-1.5
FAKI	Fak Fak	5.63	39		Pn	11 36 46.5	-1.5
FAKI	Fak Fak	5.63	39	P	Pn	11 36 47.1	-1.0
	5.4nm4μm10μm404nm,0.7s						
BATI	Baumata	5.74	240	P	Pn	11 36 49.4	-0.1
	2μm,0.3s,baz=120,slow=2.0,SNR=516						
BATI				S	Sn	11 37 52.4	-2.6
	8μm,0.7s,baz=282,slow=20,SNR=30						
BATI				LR	LR	11 39 05.8	
	comp=Z,2μm,19.0s,baz=303,slow=38						
BATI	Baumata	5.74	240	P	Pn	11 36 49.3	-0.1
SANI	Sanana	5.90	333	P	Pn	11 36 53.6	+2.0
SANI	Sanana	5.90	333	P	Pn	11 36 53.9	+2.3
MTN	Manton Dam	5.98	157	P	Pn	11 36 50.6	-2.0
	comp=Z,1μm,0.5s,comp=Z,0.0nm						
MTN	Manton Dam	5.98	157		Pn	11 36 51.1	-1.4
KMPI	Kaimana, Papua	6.17	54	P	Pn	11 36 54.1	-1.1
MMRI	Maumere	6.53	258	P	Pn	11 37 00.3	+0.4
MMRI	Maumere	6.53	258		Pn	11 36 59.5	-0.4
MMRI	Maumere	6.53	258	P	Pn	11 37 00.3	+0.4
	comp=Z,3.3nmcomp=Z,6μmcomp=Z,8μmcomp=Z,590nm,0.9s						
SIJI	Sorong	6.91	22	P	Pn	11 37 04.4	-0.5
	comp=Z,299nm,0.4s,baz=282,slow=24,SNR=157						
SIJI				S	Sn	11 38 20.4	-2.5
	comp=Z,132nm,0.4s,baz=266,slow=22,SNR=15						
SIJI	Sorong	6.91	22	P	Pn	11 37 04.5	-0.5
	comp=Z,4.9nmcomp=Z,3μmcomp=Z,312nm,0.5s						
SWI	Sorong	6.92	22	P	Pn	11 37 04.6	-0.4
EDFI	Ende, Flores	7.08	258	P	Pn	11 37 07.7	+0.4
	comp=Z,1.6nmcomp=Z,6μmcomp=Z,5μmcomp=Z,244nm,1.1s						
KKSI	Kolaka, Sulawe	7.68	294	P	Pn	11 37 16.0	+0.9
	comp=Z,1.0nmcomp=Z,2μmcomp=Z,79nm,0.5s						
RKPI	Ransiki, Papua	7.95	44	P	Pn	11 37 17.6	-1.1
TNTI	Ternate	8.16	351		Pn	11 37 22.8	+1.4
TNTI	Ternate	8.16	351	P	Pn	11 37 23.7	+2.2
	comp=Z,3μmcomp=Z,258nm,1.4s						
BSSI	Bau Bau, Buton	8.24	278	P	Pn	11 37 22.7	+0.2
	comp=Z,2μmcomp=Z,3μmcomp=Z,180nm,0.8s						
KNRA	Kununurra	8.29	180	P	Pn	11 37 20.5	-2.7
	comp=Z,3μm,0.8s,comp=Z,0.0nm						
KNRA	Kununurra	8.29	180		Pn	11 37 20.6	-2.5
MWPI	Manokwari, Pap	8.30	40	P	Pn	11 37 23.9	+0.7
LUWI	Luwuk	8.60	316	Pn	Pn	11 37 27.3	0.0
LUWI	Luwuk	8.60	316	P	Pn	11 37 30.2	+2.9
	comp=Z,4μmcomp=Z,146nm,1.0s						
WSI	Waingapu	8.63	254	P	Pn	11 37 25.0	-2.6
LBFI	Labuhan Bajo,	8.80	262	P	Pn	11 37 29.6	-0.3
KAPI	Kappang	9.19	284	P	Pn	11 37 36.6	+1.5
	comp=Z,38nm,0.6s,baz=108,slow=6.6,SNR=12						
KAPI				S	Sn	11 39 09.7	-7.7
	comp=Z,13nm,0.5s,baz=192,slow=13,SNR=1.1						
KAPI	Kappang	9.19	284		Pn	11 37 36.0	+0.9
KAPI	Kappang	9.19	284	P	Pn	11 37 35.8	+0.8
KAPI	Kappang	9.19	284	P	Pn	11 37 36.5	+1.4
KAPI				S	Sn	11 39 20.9	+3.5
KAPI	Kappang	9.19	284	P	Pn	11 37 36.8	+1.8
SRPI	Serui, Papua	9.27	55	P	Pn	11 37 37.5	+1.4
	comp=Z,163nm,0.4s						
WBSI	Waikabubak, Su	9.49	255	P	Pn	11 37 36.8	-2.2
APSI	Ampana	9.49	312	P	Pn	11 37 41.8	+2.8
SPSI	Sidrap Palu	9.49	290	P	Pn	11 37 39.7	+0.6
MNI	Manado	9.53	336	P	Pn	11 37 42.9	+3.3
BAKI	Biak	9.58	51	P	Pn	11 37 41.7	+1.5
TTSI	Tana Toraja	9.81	295	P	Pn	11 37 44.4	+1.1
	comp=Z,2μmcomp=Z,102nm,1.0s						
MRSI	Marisa	10.28	319	P	Pn	11 37 52.2	+2.9
	comp=Z,2μmcomp=Z,154nm,1.1s						
DBNI	Kabupaten Domp	10.35	263	P	Pn	11 37 48.4	-2.0
	comp=Z,2μmcomp=Z,127nm,0.5s						
PMSI	Majene	10.46	291	P	Pn	11 37 53.7	+2.0
	comp=Z,2μmcomp=Z,3μmcomp=Z,100nm,0.7s						
WAMI	Wamena	10.54	72	P	Pn	11 37 54.5	+1.8
MMSI	Mamuju	10.79	295	P	Pn	11 37 58.4	+2.4
	comp=Z,2μmcomp=Z,218nm,0.6s						

PCI **Palu** **10.90 305** P Pn **11 37 59.7 +2.2**
comp=Z,5µmcomp=Z,150nm,1.1s
PCI **Palu** **10.90 305** P P 11 38 14.7 +10
PLAI **Plampang** **10.92 261** P Pn **11 37 55.1 -2.6**
PLAI **Plampang** **10.92 261** P Pn **11 37 55.8 -1.9**
FITZ **Fitzroy Crossi** **11.11 195** P Pn **11 37 55.9 -4.2**
comp=Z,597nm,0.7s,baz=24,slow=12,SNR=325
FITZ S Sn 11 39 52.0 -11
comp=Z,392nm,0.5s,baz=38,slow=12,SNR=3.5
FITZ LR LR 11 43 27.2
comp=Z,2µm,18.4s,baz=4.5,slow=43
SGSI **Sangihe** **11.39 344** P Pn **11 38 04.2 +0.3**
TOLI2 **Tolitoli** **11.52 316** P Pn **11 38 05.6 0.0**
TOLI2 **Tolitoli** **11.52 316** Pn **11 38 05.9 +0.3**
MPSI **Mapaga** **11.62 311** P Pn **11 38 09.0 +2.1**
MMPI **Merauke** **11.63 96** P Pn **11 38 06.1 -0.8**
comp=Z,607nm,1.2s
TWSI **Taliwang, Sumb** **11.78 262** P Pn **11 38 08.1 -0.8**
comp=Z,2µmcomp=Z,2µmcomp=Z,147nm,0.5s
GENI **Genyem** **12.36 68** P Pn **11 38 17.9 +1.6**
GENI **Genyem** **12.36 68** P Pn **11 38 17.0 +0.7**
comp=Z,3µmcomp=Z,160nm,0.8s
JAY **Jayapura** **12.88 69** P Pn **11 38 23.4 +0.3**
comp=Z,23nm,0.4s,baz=224,slow=6.3,SNR=18
JAY S Sn **11 40 41.8 -4.4**
comp=Z,82nm,0.9s,baz=166,slow=22,SNR=5.1
JAY **Jayapura** **12.88 69** P Pn **11 38 23.9 +0.8**
KHKI **Kahang-Kahang** **13.01 265** P Pn **11 38 25.6 +1.0**
comp=Z,2µmcomp=Z,127nm,0.9s
BKB **Balikpapan** **13.22 297** P P **11 38 31.5 +0.4**
BKB **Balikpapan** **13.22 297** P P 11 38 38.8 +7.7
IGBI **Denpasar** **13.50 263** P Pn **11 38 31.2 +0.4**
comp=Z,1µmcomp=Z,6µmcomp=Z,218nm,0.7s
WB0 **Warramunga Arr** **13.54 156** Pn **11 38 27.2 -4.1**
I07AU **WARRAMUNGA INT** **13.67 157** P Pn **11 38 29.6 -3.4**
baz=341,slow=20
I07AU S Sn 11 40 53.5 -11
baz=318,slow=24,SNR=1.2
WRAB **Tennant Creek** **13.67 157** Pn **11 38 28.9 -4.1**
WRAB **Tennant Creek** **13.67 157** *ce*P Pn **11 38 28.7 -4.3**
WRAB pmax pmax
comp=Z,593nm,1.7s
RTBI **Rangdo, Negare** **13.67 264** P Pn **11 38 33.2 +0.1**
WRA **Warramunga Arr** **13.68 157** P Pn **11 38 29.6 -3.4**
comp=Z,142nm,0.8s,baz=337,slow=13,SNR=285
WRA S Sn 11 40 52.7 -12
comp=Z,507nm,0.6s,baz=335,slow=22,SNR=15
WRA **Warramunga Arr** **13.68 157** Pn **11 38 29.1 -3.9**
WRA **Warramunga Arr** **13.68 157** P Pn **11 38 29.1 -3.9**
WR8 **Warramunga Arr** **13.75 156** Pn **11 38 29.8 -4.2**
BBKI **Banjar Baru** **14.32 285** P P **11 38 43.1 -0.2**
ABJI **Asem Bagus** **14.35 267** P Pn **11 38 41.5 0.0**
comp=Z,122nm,0.7s
JAGI **Jajag, Banyuwa** **14.45 265** P Pn **11 38 41.9 -0.9**
JAGI **Jajag, Banyuwa** **14.45 265** Pn **11 38 42.0 -0.8**
JAGI **Jajag, Banyuwa** **14.45 265** P Pn **11 38 42.0 -0.8**
comp=Z,3µmcomp=Z,186nm,0.6s
KMMI **Kalianget** **14.62 270** P P **11 38 47.5 +0.9**
comp=Z,2µmcomp=Z,164nm,1.0s
DAV **Davao City (W)** **14.64 348** S Sn **11 41 22.1 -6.2**
comp=Z,229nm,0.4s,baz=62,slow=10,SNR=1.8
BLJI **Banyuglugur** **14.98 267** P Pn **11 38 49.6 +0.3**
comp=Z,3µmcomp=Z,206nm,0.6s
COEN **Coen** **15.67 116** P Pn **11 38 57.4 -0.4**
comp=Z,86nm,0.8s
COEN **Coen** **15.67 116** P P **11 38 58.1 -0.2**
COEN **Coen** **15.67 116** Pn **11 38 57.2 -0.6**
MYLDM **Lahad Datu** **16.07 320** P P **11 39 03.6 +1.0**
MYLDM **Lahad Datu** **16.07 320** P P **11 39 06.4 +3.8**
comp=Z,2µmcomp=Z,142nm,1.4s
MBWA **Marble Bar** **16.25 211** P P **11 39 02.9 -1.8**
comp=Z,198nm,1.1s,comp=Z,0.0nm
MBWA **Marble Bar** **16.25 211** P P **11 39 03.2 -1.4**
MBWA **Marble Bar** **16.25 211** P P **11 39 02.9 -1.8**
MBWA **Marble Bar** **16.25 211** P P **11 39 02.5 -2.1**
MBWA S Sn **11 42 11.8 +5.1**
PSAC2 **Pilbara Seismi** **16.50 210** P P **11 39 05.6 -1.8**
comp=Z,335nm,1.0s
PSAC1 **Pilbara Seismi** **16.52 210** P P **11 39 05.5 -2.2**
comp=Z,336nm,0.6s
PSA00 **Pilbara Seismi** **16.54 210** P P **11 39 05.6 -2.2**
comp=Z,386nm,0.9s
PSA00 **Pilbara Seismi** **16.54 210** P P **11 39 07.2 -0.6**
PSA00 **Pilbara Seismi** **16.54 210** P P **11 39 05.8 -2.0**
PSAB3 **Pilbara Seismi** **16.55 210** P P **11 39 05.7 -2.3**
comp=Z,256nm,0.8s
SJI **Sawahan** **16.79 268** P P **11 39 09.6 -1.2**
comp=Z,3µmcomp=Z,106nm,0.4s
SNJI **Sawahan-Nganju** **16.80 267** P P **11 39 10.9 0.0**
comp=Z,3µmcomp=Z,241nm,0.8s
QIS **Mount Isa** **16.86 142** P P **11 39 11.0 -0.4**
comp=Z,90nm,0.8s
QIS **Mount Isa** **16.86 142** P Pn **11 39 11.9 -0.3**
AS31 **Alice Springs** **16.99 163** P P **11 39 12.3 -0.6**
ASAR **Alice Springs** **16.99 163** P P **11 39 12.5 -0.3**
comp=Z,131nm,0.4s,baz=335,slow=9.9,SNR=993
ASAR pP **pP** **11 39 41.8 +0.6**
comp=Z,175nm,0.6s,baz=340,slow=11,SNR=5.9
ASAR S S 11 42 05.9 -15
comp=Z,152nm,0.9s,baz=335,slow=18,SNR=9.0
ASAR **Alice Springs** **16.99 163** P P **11 39 11.6 -1.3**
ASAR **Alice Springs** **16.99 163** P P **11 39 11.6 -1.3**
NGJI **Ngawi** **17.10 269** P Pn **11 39 15.1 +0.1**
comp=Z,117nm,0.9s
PCJI **Pacitan** **17.38 266** P P **11 39 15.8 -1.4**
comp=Z,3µmcomp=Z,191nm,0.6s
WRKA **Warakurna** **17.61 181** P P **11 39 18.8 -0.8**
comp=Z,225nm,0.9s
UGM **Wanagama** **18.02 267** P P **11 39 23.8 -0.4**
KKM **Kota Kinabalu** **18.21 317** P Pn **11 39 28.5 +0.2**
KKM **Kota Kinabalu** **18.21 317** P Pn **11 39 27.4 -0.9**
KKM **Kota Kinabalu** **18.21 317** P Pn **11 39 28.3 0.0**
comp=Z,2µmcomp=Z,100nm,0.8s
YOGI **Yogyakarta** **18.25 267** P Pn **11 39 28.7 0.0**
comp=Z,345nm,1.6s
PMG **Port Moresby** **18.38 98** P P **11 39 28.9 +0.8**
comp=Z,76nm,0.8s,baz=242,slow=7.4,SNR=5.2
PMG S S **11 42 47.1 -2.1**
comp=Z,19nm,0.8s,baz=229,slow=20,SNR=1.5
PMG LR LR 11 46 46.8
comp=Z,313nm,22.0s,baz=296,slow=37
PMG **Port Moresby** **18.38 98** P Pn **11 39 29.9 -0.3**
PMG **Port Moresby** **18.38 98** P Pn **11 39 29.6 -0.6**
PMG **Port Moresby** **18.38 98** P P **11 39 28.4 +0.3**
PMG **Port Moresby** **18.38 98** P P **11 39 28.4 +0.3**
PMG **Port Moresby** **18.38 98** P Pn **11 39 30.1 -0.1**
comp=Z,1µmcomp=Z,110nm,0.8s
MTSU **Mount Surprise** **18.62 127** P Pn **11 39 32.0 -1.0**
comp=Z,94nm,0.8s
MTSU **Mount Surprise** **18.62 127** P Pn **11 39 32.2 -0.8**
SBUM **Sibu** **19.10 300** P Pn **11 39 38.2 -0.4**
SBUM **Sibu** **19.10 300** P Pn **11 39 37.9 -0.7**
SBUM **Sibu** **19.10 300** P Pn **11 39 37.5 -1.1**
comp=Z,2µmcomp=Z,118nm,1.5s
MANU **Manus Island** **19.33 75** P P **11 39 39.7 +1.3**
KPJI **Karang Pucung** **19.61 269** P P **11 39 39.7 -1.6**
comp=Z,104nm,0.9s
GIRL **Giralia** **20.63 221** P P **11 39 53.4 +1.2**
comp=Z,124nm,1.2s
GIRL **Giralia** **20.63 221** P P **11 39 52.0 -0.3**
BBJI **Bungbulang** **20.87 268** P P **11 39 53.5 -1.5**
BBJI **Bungbulang** **20.87 268** P P **11 39 53.2 -1.7**
BBJI **Bungbulang** **20.87 268** P P **11 39 54.3 -0.7**
comp=Z,101nm,0.6s
LEM **Lembang** **20.93 270** P P **11 39 55.9 +0.3**
comp=Z,54nm,0.7s,baz=67,slow=7.4,SNR=5.4
comp=Z,54nm,0.7s
CTA **Charters Tower** **21.22 128** P P **11 40 00.0 +1.4**
comp=Z,13nm,0.7s,baz=291,slow=7.0,SNR=36
CTA pP **pP** **11 40 27.1 -0.8**
comp=Z,28nm,0.8s,baz=301,slow=15,SNR=7.3
CTA S S **11 43 47.0 +2.5**
comp=Z,12nm,0.6s,baz=92,slow=23,SNR=1.8
CTA LR LR 11 49 30.5
comp=Z,248nm,18.6s,baz=285,slow=40
comp=Z,13nm,0.7s
CTAO **Charters Tower** **21.22 128** P P **11 39 59.9 +1.3**
CTAO **Charters Tower** **21.22 128** P P **11 39 58.2 -0.3**
CTAO **Charters Tower** **21.22 128** P P **11 39 58.3 -0.3**
TPI **Tanjungpandan** **21.45 281** P P **11 40 02.5 +1.5**
comp=Z,2µmcomp=Z,3µmcomp=Z,73nm,0.9s
MEEK **Meekatharra** **21.46 205** P P **11 40 00.5 -0.6**
comp=Z,151nm,1.1s,comp=Z,0.0nm
MEEK **Meekatharra** **21.46 205** P P **11 40 00.4 -0.7**
TGY **Tagaytay City** **22.65 340** P P **11 40 14.3 +1.4**
comp=Z,318nm,0.4s,baz=220,slow=9.5,SNR=3.6

CGJI **Cibinong** **22.85 270** P P **11 40 12.1 -2.6**
INKA **Innaminka** **23.29 152** P P **11 40 18.8 +0.3**
FORT **Forrest** **23.33 181** P P **11 40 18.5 -0.4**
comp=Z,157nm,1.1s
FORT **Forrest** **23.33 181** P P **11 40 18.3 -0.6**
KLSI **23.98 275** P P **11 40 27.8 +2.8**
QLP **Quilpie** **24.18 144** P P **11 40 26.5 -0.3**
comp=Z,141nm,0.5s
QLP **Quilpie** **24.18 144** P P **11 40 27.7 +1.0**
MDSI **Maura Dua** **24.55 275** P P **11 40 27.9 -2.3**
MORW **Morawa** **24.70 207** P P **11 40 30.6 -0.7**
comp=Z,142nm,0.8s
MORW **Morawa** **24.70 207** P P **11 40 31.5 +0.2**
MORW **Morawa** **24.70 207** P P **11 40 30.9 -0.5**
KMBL **Kambalda** **24.75 194** P P **11 40 32.3 +0.5**
comp=Z,56nm,0.9s
DSRI **Dabo** **25.00 285** P P **11 40 34.1 -0.1**
BLDU **Ballidu** **25.74 204** P P **11 40 40.3 -0.5**
comp=Z,68nm,0.8s
BLDU **Ballidu** **25.74 204** P P **11 40 40.6 -0.2**
KLBR **Kellerberrin** **26.21 202** P P **11 40 44.0 -1.0**
comp=Z,134nm,0.7s
KLBR **Kellerberrin** **26.21 202** P P **11 40 45.3 +0.3**
BBOO **Buckleboo** **26.26 166** P P **11 40 44.0 -1.4**
comp=Z,51nm,0.6s
BBOO **Buckleboo** **26.26 166** P P **11 40 45.6 +0.2**
BBOO **Buckleboo** **26.26 166** P P **11 40 44.4 -1.0**
GUMO **Guam** **26.27 38** P P **11 40 45.5 -0.1**
comp=Z,42nm,0.6s,baz=32,slow=22,SNR=1.9
comp=Z,42nm,0.6s
MYKOM **Kota Tinggi** **26.40 289** P P **11 40 48.0 +1.1**
MYKOM **Kota Tinggi** **26.40 289** P P **11 40 47.6 +0.7**
MYKOM IAmb IAmb 11 40 51.4
comp=Z,47nm,1.0s
MYKOM **Kota Tinggi** **26.40 289** P P **11 40 48.0 +1.1**
comp=Z,779nmcomp=Z,48nm,1.3s
MUN **Mundaring** **27.14 204** P P **11 40 52.4 -0.9**
comp=Z,33nm,0.9s,comp=Z,0.0nm
MUN **Mundaring** **27.14 204** P P **11 40 53.3 0.0**
STKA **Stephens Creek** **27.22 155** P P **11 40 54.1 0.0**
comp=Z,258nm,1.3s
STKA **Stephens Creek** **27.22 155** P P **11 40 54.6 +0.6**
comp=Z,19nm,0.6s
STKA **Stephens Creek** **27.22 155** P P **11 40 54.6 +0.6**
comp=Z,19nm,0.6s,baz=327,slow=9.2,SNR=45
STKA **Stephens Creek** **27.22 155** P P **11 40 53.8 -0.2**
STKA **Stephens Creek** **27.22 155** P P **11 40 53.8 -0.2**
STKA pmax pmax
comp=Z,440nm,1.0s
NWAO **Narrogin (SRO)** **27.60 201** P P **11 40 58.7 +1.3**
comp=Z,96nm,0.9s
NWAO **Narrogin (SRO)** **27.60 201** P P **11 40 57.9 +0.4**
comp=Z,25nm,0.3s,baz=47,slow=7.1,SNR=63
NWAO pP **pP** **11 41 32.5 +0.4**
comp=Z,67nm,0.8s,baz=24,slow=9.8,SNR=8.5
NWAO LR LR 11 53 04.3
comp=Z,553nm,18.6s,baz=48,slow=38
comp=Z,25nm,0.3s
NWAO **Narrogin (SRO)** **27.60 201** P P **11 40 57.8 +0.4**
NWAO **Narrogin (SRO)** **27.60 201** P P **11 40 57.6 +0.2**
NWAO **Narrogin (SRO)** **27.60 201** P P **11 40 57.6 +0.2**
HTT **Hallett** **27.64 161** P P **11 40 57.8 0.0**
comp=Z,20nm,0.9s
HTT **Hallett** **27.64 161** P P **11 40 58.5 +0.7**
EIDS **Eidsvold** **27.90 133** P P **11 40 59.8 -0.3**
EIDS IAmb IAmb 11 41 59.4
comp=Z,51nm,1.4s
BKNI **Bangkinang** **28.62 284** P P **11 41 06.4 -0.2**
CMSA **Cobar Meteorol** **28.84 149** P P **11 41 09.1 +0.7**
comp=Z,38nm,1.0s
CMSA **Cobar Meteorol** **28.84 149** P P **11 41 09.3 +0.9**
PPI **Padang Panjang** **29.03 282** P P **11 41 09.9 -0.4**
comp=Z,1µmcomp=Z,30nm,1.1s
RKGY **Rocky Lully** **29.21 200** P P **11 41 09.1 -2.6**
MNSI **Mandailing Nat** **30.15 284** P P **11 41 19.1 -1.1**
KULM **Kulim** **30.67 293** P P **11 41 25.1 +0.4**
KULM **Kulim** **30.67 293** P P **11 41 24.5 -0.3**
KULM IAmb IAmb 11 41 27.7
comp=Z,40nm,1.0s
TATA **Tatamba Isabel** **30.83 94** P P **11 41 26.8 +0.7**
HNR **Honiara** **30.98 96** LR LR 11 55 11.9
comp=Z,10nm,19.7s,baz=354,slow=38
NGOA **Tingoa Renbel** **31.21 100** P P **11 41 30.3 +0.8**
TPUB **Ta-pu** **31.45 346** P P **11 41 29.9 -1.6**
ARMA **Armidale** **31.46 140** P P **11 41 33.8 +2.2**
ARPS **Mount Arapiles** **31.66 160** P P **11 41 34.6 +1.5**
comp=Z,39nm,0.8s
YOJ **Yonaguni jima** **32.09 350** P P **11 41 36.5 -0.5**
QIZ **Qiongzhong** **32.12 325** P P **11 41 38.0 +0.6**
QIZ S S **11 46 34.8 -2.5**
QIZ sS sS **11 47 42.4 +3.0**
QIZ pmax pmax
comp=Z,23nm,1.6s
QIZ L L
comp=Z,300nm,12.3s
QIZ L L
comp=Z,210nm,14.6s
QIZ L L
comp=Z,290nm,15.8s
GSI **Gunungsitoli** **32.21 284** P P **11 41 38.4 +0.1**
GSI **Gunungsitoli** **32.21 284** P P **11 41 36.6 -1.7**
comp=Z,47nm,0.6s
YNG **Young** **32.41 149** P P **11 41 41.8 +2.0**
comp=Z,24nm,1.2s
YHNB **Yeheng** **32.60 348** P P **11 41 40.4 -1.2**
TPTI **33.17 287** P P **11 41 46.6 0.0**
CAN **Canberra** **33.51 149** P P **11 41 51.5 +2.1**
CNB **Canberra Magne** **33.70 149** P P **11 41 52.5 +1.5**
LHMI **Lhok Sumawe** **34.05 291** P P **11 41 54.5 +0.2**
JCJ **Chichijima** **36.63 20** P P **11 42 13.9 -2.2**
comp=Z,62nm,0.5s,baz=155,slow=19,SNR=2.8
JCJ **Chichijima** **36.63 20** P P **11 42 16.0 0.0**
JCJ **Chichijima** **36.63 20** P P **11 42 16.1 0.0**
GULI **GuiLin** **37.01 332** P P **11 42 20.7 +1.4**
GULI S S **11 47 51.4 -0.9**
GULI pmax pmax
comp=Z,27nm,1.3s
GULI L L
comp=Z,500nm,19.6s
GULI L L
comp=Z,690nm,19.2s
GULI L L
comp=Z,250nm,16.2s
CNSH **ChangSha** **38.45 337** P P **11 42 31.2 -0.1**
CNSH S S **11 48 09.0 -4.9**
CNSH pmax pmax
comp=Z,14nm,1.0s
CNSH L L
comp=Z,230nm,15.1s
CNSH L L
comp=Z,340nm,17.5s
CNSH L L
comp=Z,240nm,26.8s
SANVU **Saraoutou** **38.55 106** P P **11 42 34.2 +1.9**
SANVU **Saraoutou** **38.55 106** P P **11 42 33.5 +1.2**
SANVU **Saraoutou** **38.55 106** P P **11 42 33.8 +1.5**
JSU **Suzuyama** **38.66 2** P P **11 42 33.6 +0.5**
CM31 **Chiang Mai Arr** **38.97 311** P P **11 42 36.7 +0.9**
CM31 **Chiang Mai Arr** **38.97 311** P P **11 42 37.0 +1.2**
SNR=23
CMAR **Chiang Mai Arr** **38.97 311** P P **11 42 36.1 +0.3**
comp=Z,7.5nm,0.5s,baz=143,slow=6.8,SNR=70
CMAR PcP **PcP** **11 44 44.8 +1.9**
comp=Z,2.6nm,0.4s,baz=123,slow=3.8,SNR=7.0
CMAR ScP **ScP** **11 48 15.9 +0.6**
comp=Z,3.4nm,0.6s,baz=121,slow=3.7,SNR=9.7
comp=Z,7.5nm,0.5s
CMAR **Chiang Mai Arr** **38.97 311** P **PcP** **11 44 44.2 +1.3**
CHTO **Chiang Mai** **39.19 312** P P **11 42 38.8 +1.1**
CHTO **Chiang Mai** **39.19 312** P P **11 42 38.4 +0.7**
CHTO **Chiang Mai** **39.19 312** P P **11 42 38.4 +0.7**
CHTO pmax pmax
comp=Z,133nm,1.6s
CHTO **Chiang Mai** **39.19 312** P P **11 42 38.7 +1.1**
CHTO S S 11 48 35.4 +10
CHTO **Chiang Mai** **39.19 312** P P **11 42 38.1 +0.5**
CHTO x x 11 44 45.2
DZM **Mont Dzumac** **39.20 116** *e*P P **11 42 37.4 -0.4**
comp=Z,42nm,1.2s
DZM *e*pP **pP** **11 43 13.1 -1.5**
comp=Z,62nm,1.1s
DZM *e*S S **11 48 21.3 -4.3**
comp=Z,128nm,29.2s
DZM **Mont Dzumac** **39.20 116** P P **11 42 39.5 +1.7**

YATNC **Mamie plateau,** **39.60 116** P P **11 42 43.4 +2.4**
OUENC **Ouen Island, N** **39.65 116** P P **11 42 43.7 +2.3**
GYA **Guiyang** **39.82 328** ⇓P P **11 42 43.9 +1.0**
GYA pmax pmax
comp=Z,49nm,1.2s
WHN **Wuhan** **40.10 341** ⇑*i*P P **11 42 45.7 +0.8**
WHN pP **pwP** **11 43 24.4 -2.3**
WHN sP **sP** **11 43 44.0 +5.0**
WHN S S **11 48 38.2 -0.2**
WHN pmax pmax
comp=Z,260nm,1.3s
WHN pmax pmax
comp=Z,440nm,6.4s
NJ2 **Nanjing** **40.28 347** *e*P P **11 42 50.3 +3.9**
NJ2 pmax pmax
comp=Z,22nm,0.5s
MARNC **Mare, Loyalty** **40.47 115** P P **11 42 50.5 +2.3**
KMI **Kunming** **40.98 323** P P **11 42 54.1 +1.6**
KMI x x 11 43 32.5
KMI2 **Kunming** **41.00 323** ⇑⇑P P **11 42 54.3 +1.6**
KMI2 pP pwP 11 43 32.8 -1.7
KMI2 S S **11 48 51.5 -0.9**
KMI2 pmax pmax
comp=Z,66nm,1.2s
KMI2 pmax pmax
comp=Z,260nm,5.9s
KMI2 L L
comp=Z,220nm,14.0s
KMI2 L L
comp=Z,170nm,12.7s
KMI2 L L
comp=Z,280nm,24.6s
JMN **Monobe** **41.13 7** P P **11 42 54.1 +0.7**
ENH **Enshi** **41.69 335** P P **11 42 58.3 +0.3**
ENH **Enshi** **41.69 335** IAmb IAmb 11 42 58.6
comp=Z,28nm,0.7s
ENH **Enshi** **41.69 335** P P **11 42 58.0 0.0**
PZH **PanZhiHua** **42.61 323** P P **11 43 06.3 +0.7**
PZH S S **11 49 11.7 -4.1**
PZH pmax pmax
comp=Z,40nm,1.2s
PZH pmax pmax
comp=Z,170nm,3.5s
JGF **Kuroka** **43.48 10** P P **11 43 14.5 +2.2**
LYN **LuoYang** **44.40 341** P P **11 43 19.6 0.0**
LYN S S **11 49 37.6 -3.7**
LYN sS sS 11 50 48.8 +3.0
LYN SS **ScS** **11 52 59.3 -0.5**
LYN pmax pmax
comp=Z,45nm,1.2s
LYN pmax pmax
comp=Z,220nm,5.9s
LYN L L
comp=Z,170nm,12.7s
LYN L L
comp=Z,180nm,11.0s
LYN L L
comp=Z,220nm,17.5s
MJAR **Matsushiro Arr** **44.55 11** P P **11 43 19.7 -1.1**
comp=Z,16nm,1.1s,baz=190,slow=9.2,SNR=20
MJAR pP **pP** **11 43 56.3 -0.6**
comp=Z,11nm,1.1s,baz=186,slow=8.3,SNR=4.0
MJAR ScP **ScP** **11 48 37.3 +0.1**
comp=Z,2.4nm,0.7s,baz=186,slow=5.0,SNR=7.4
comp=Z,16nm,1.1s
MJAR **Matsushiro Arr** **44.55 11** P P **11 43 19.9 -0.9**
MAJO **Matsushiro** **44.55 11** P P **11 43 20.2 -0.6**
MAJO **Matsushiro** **44.55 11** P P **11 43 20.2 -0.6**
MAJO pmax pmax
comp=Z,15nm,1.0s
MAJO **Matsushiro** **44.55 11** P P **11 43 19.6 -1.2**
MAJO pP **pP** **11 43 55.6 -1.2**
MAJO sP **sP** **11 44 14.6 -0.8**
KSAR **Wonju Array Be** **44.55 359** P P **11 43 21.5 +0.7**
KSAR **Wonju Array Be** **44.55 359** P P **11 43 21.5 +0.7**
KSRS **Korea Array** **44.56 359** P P **11 43 21.5 +0.7**
comp=Z,5.5nm,0.5s,baz=178,slow=9.3,SNR=51
KSRS pP **pP** **11 43 58.1 +1.2**
comp=Z,5.4nm,0.9s,baz=178,slow=12,SNR=3.9
comp=Z,5.5nm,0.5s
KS19 **Wonju Array Si** **44.61 359** P P **11 43 21.7 +0.4**
CD2 **Chengdu** **44.91 329** P P **11 43 23.8 0.0**
CD2 pmax pmax
comp=Z,70nm,0.6s
CD2 L L
comp=Z,540nm,15.9s
CD2 L L
comp=Z,710nm,19.0s
CD2 L L
comp=Z,340nm,17.1s
XAN **Xi'an** **45.22 337** ⇑P P **11 43 25.6 -0.6**
XAN pmax pmax
comp=Z,70nm,1.1s
XAN L L
comp=Z,220nm,15.1s
XAN L L
comp=Z,180nm,15.8s
XAN L L
comp=Z,220nm,15.8s
MORE **Moreh** **45.94 314** IAmb IAmb 11 43 32.7
comp=Z,53nm,1.1s
HNS **HongShan** **46.38 345** ⇑P P **11 43 35.1 -0.1**
HNS S S **11 50 06.0 -3.7**
HNS pmax pmax
comp=Z,39nm,0.8s
DL2 **Dalian** **46.47 352** P P **11 43 35.4 -0.4**
DL2 pmax pmax
comp=Z,25nm,1.5s
SHL **Shillong** **48.48 314** P P **11 43 51.6 -0.3**
SHL IAmb IAmb 11 43 52.9
comp=Z,44nm,1.2s
SHL **Shillong** **48.48 314** P P **11 43 51.6 -0.3**
SHL pmax pmax
comp=Z,44nm,1.2s
SHL **Shillong** **48.48 314** P P **11 43 52.2 +0.3**
SNR=10
BJI2 **Beijing** **48.52 347** P P **11 43 51.6 0.0**
BJI2 pP **pP** **11 44 28.1 -0.1**
BJI2 sP **sP** **11 44 46.3 -0.3**
BJI2 S S **11 50 40.7 +0.9**
BJI2 pmax pmax
comp=Z,12nm,0.8s
BJT **Baijiatuau** **48.52 347** P P **11 43 52.3 +0.7**
BJT **Baijiatuau** **48.52 347** P P **11 43 51.6 0.0**
BJT x x 11 44 31.6
BJT x x 11 44 52.9
BJT PcP **PcP** **11 45 14.9 0.0**
LZDM **Lanzhou Array** **49.06 333** P P **11 43 57.0 +0.7**
comp=Z,18nm,0.5s,baz=170,slow=10,SNR=35
comp=Z,18nm,0.5s
LZH **Lanzhou** **49.10 333** P P **11 43 57.3 +0.9**
LZH pP pP 11 44 35.8 +2.7
LZH S S **11 50 45.2 -3.3**
LZH pmax pmax
comp=Z,140nm,1.1s
LZH pmax pmax
comp=Z,370nm,4.3s
MSVF **Nonsavu** **49.14 107** LR LR 12 03 30.5
comp=Z,145nm,18.3s,baz=308,slow=34
MSVF **Nonsavu** **49.14 107** P P **11 43 58.7 +1.8**
SNY **Shenyang** **49.15 355** ⇓P P **11 43 56.7 +0.4**
SNY S S **11 50 43.1 -5.4**
SNY pmax pmax
comp=Z,9.0nm,0.8s
SNY pmax pmax
comp=Z,130nm,4.3s
SNY L L
comp=Z,120nm,15.9s
SNY L L
comp=Z,150nm,13.0s
SNY L L
comp=Z,190nm,21.9s
OUZ **Omahuta** **49.60 131** P P **11 44 03.0 +3.0**
PALK **Pallekele** **50.02 286** LR LR 12 05 36.6
comp=Z,101nm,21.6s,baz=104,slow=36
PALK **Pallekele** **50.02 286** P P **11 44 03.2 -0.3**
PALK **Pallekele** **50.02 286** P P **11 44 03.6 +0.1**
PALK **Pallekele** **50.02 286** P P **11 44 03.2 -0.3**
PALK pmax pmax
comp=Z,16nm,1.1s
PALK **Pallekele** **50.02 286** P P **11 44 02.9 -0.6**
PALK PcP **PcP** **11 45 22.1 +1.0**
MSZ **Milford Sound** **50.43 144** P P **11 44 08.6 +2.6**
HHC **Hu-ho-hao-te** **50.47 343** *e*P P **11 44 07.0 +0.5**
HHC pmax pmax

comp=Z,20nm,0.8s
HHC pmax pmax

comp=Z,93nm,4.9s
JCZ Jackson Bay 50.59 143 P **P** **11 44 09.7 +2.3**
JCZ Jackson Bay 50.59 143 P **P** **11 44 09.6 +2.1**
JEM Erimo 50.86 14 P **P** **11 44 11.8 +2.5**
FOZ Fox Glacier 50.91 142 P **P** **11 44 11.1 +1.4**
MLZ Mavora Lakes 50.94 145 P **P** **11 44 11.3 +1.4**
WHZ Wether Hill Ro 51.15 145 P **P** **11 44 12.5 +1.0**
WVZ Waitaha Valley 51.24 141 P **P** **11 44 13.3 +1.2**
QRZ Quartz Range 51.27 138 P **P** **11 44 14.9 +2.4**
QRZ Quartz Range 51.27 138 P **P** **11 44 14.7 +2.2**
USRK Ussuriysk Ar. 51.38 3 P **P** **11 44 13.1 0.0**
comp=Z,5.2nm,0.5s,baz=182,slow=6.6,SNR=16
USRK pP **pP** **11 44 50.1 0.0**
comp=Z,6.6nm,0.7s,baz=189,slow=6.4,SNR=3.5
comp=Z,5.2nm,0.5s
LSA Lhasa 51.56 317 *i* P **P** **11 44 16.5 +1.2**
SNR=8.8
LBZ Lake Benmore 51.60 143 P **P** **11 44 15.9 +1.0**
MDJ Mudanjiang 51.72 1 P **P** **11 44 16.1 +0.5**
MDJ pP pP 11 44 53.7 +1.0
MDJ S **S** **11 51 24.9 +1.0**
MDJ pmax pmax
comp=Z,18nm,1.7s
MDJ Mudanjiang 51.72 1 P **P** **11 44 15.9 +0.3**
MDJ pP **pP** **11 44 54.0 +1.3**
MDJ x x 11 44 54.7
RPZ Rata Peaks 51.77 142 LR LR 12 07 15.9
comp=Z,364nm,19.6s,baz=36,slow=37
RPZ Rata Peaks 51.77 142 P **P** **11 44 17.8 +1.7**
HIZ Hauiti 51.85 134 P **P** **11 44 19.4 +2.6**
THZ Tophouse 51.97 139 P **P** **11 44 19.2 +1.5**
LTZ Lake Taylor 52.06 140 P **P** **11 44 19.2 +0.9**
DUWZ D'Urville Isla 52.20 137 P **P** **11 44 21.4 +2.0**
ODZ Otahua Downs 52.23 143 P **P** **11 44 20.6 +1.1**
XLT XiLinHaoTe 52.26 348 *e*P **P** **11 44 20.1 +0.4**
XLT pP pP 11 44 58.6 +1.8
XLT S **S** **11 51 25.7 -5.9**
XLT pmax pmax
comp=Z,20nm,0.7s
XLT pmax pmax
comp=Z,99nm,4.5s
TLZ Tolley Road 52.27 134 P **P** **11 44 22.5 +2.5**
WAZ Wanganui 52.47 135 P **P** **11 44 23.7 +2.3**
TUWZ Tuamarina 52.50 138 P **P** **11 44 22.9 +1.4**
TCW Tory Channel 52.62 137 P **P** **11 44 23.3 +0.8**
WTVZ West Tongariro 52.63 134 P **P** **11 44 25.6 +2.9**
GVZ Greta Valley S 52.64 140 P **P** **11 44 24.1 +1.6**
KATZ Kakaramea 52.64 134 P **P** **11 44 25.4 +2.6**
NGZ Ngauruhoe 52.66 134 P **P** **11 44 25.3 +2.4**
NTVZ North Tongarir 52.68 134 P **P** **11 44 26.1 +3.0**
KHZ Kahutara 52.70 139 P **P** **11 44 24.4 +1.5**
KHZ Kahutara 52.70 139 P **P** **11 44 24.2 +1.3**
OTVZ Oturere 52.70 134 P **P** **11 44 25.8 +2.5**
TMVZ Te Maari 52.71 134 P **P** **11 44 26.0 +2.8**
ETVZ East Tongariro 52.72 134 P **P** **11 44 26.0 +2.6**
ASAJ Asahikawa 52.73 13 P **P** **11 44 23.4 +0.3**
ASAJ pmax pmax
comp=Z,16nm,1.0s
JKA Kamikawa-asahi 52.73 13 **P** **11 44 23.4 +0.3**
BNX BinXian 52.84 359 ⇓P **P** **11 44 23.6 -0.3**
BNX pmax pmax
comp=Z,9.0nm,1.6s
MOVZ Moawhango 52.86 135 P **P** **11 44 25.6 +1.3**
KIW Kapiti Island 52.90 137 P **P** **11 44 25.8 +1.3**
OGWZ Otaki Gorge 53.05 136 P **P** **11 44 26.4 +0.8**
CAW Cannon Point 53.11 137 P **P** **11 44 26.6 +0.6**
MUGZ Murupara 53.22 133 P **P** **11 44 28.7 +1.8**
MRZ Mangatainoka R 53.27 136 P **P** **11 44 27.9 +0.7**
TSZ Takapari Road 53.28 135 P **P** **11 44 28.5 +1.2**
BKZ Black Stump Fm 53.29 134 P **P** **11 44 28.3 +0.9**
BKZ Black Stump Fm 53.29 134 P **P** **11 44 28.7 +1.3**
BKZ IAmb IAmb 11 44 29.4
comp=Z,18nm,0.8s
BKZ Black Stump Fm 53.29 134 P **P** **11 44 28.3 +0.9**
MSWZ Moikau Station 53.37 137 P **P** **11 44 28.7 +0.8**
URZ Urewera 53.38 133 P **P** **11 44 28.7 +0.7**
URZ Urewera 53.38 133 P **P** **11 44 28.4 +0.4**
RTZ Ruatahuna 53.42 133 P **P** **11 44 28.9 +0.5**
RTZ IAmb IAmb 11 45 38.7
comp=Z,36nm,1.1s
RTZ Ruatahuna 53.42 133 P **P** **11 44 29.5 +1.0**
NMHZ Naumai 53.48 134 P **P** **11 44 30.8 +1.9**
DVHZ Dannevirke 53.52 135 P **P** **11 44 29.7 +0.6**
HAZ Te Kaha 53.68 132 P **P** **11 44 31.5 +1.2**
MWZ Matawai 53.71 133 P **P** **11 44 31.6 +1.0**
BFZ Birch Farm 53.74 136 P **P** **11 44 31.8 +1.2**
BFZ Birch Farm 53.74 136 P **P** **11 44 31.9 +1.2**
GOMU GeErMu 53.74 326 P **P** **11 44 31.7 +0.6**
GOMU pmax pmax
comp=Z,15nm,1.2s
GTA2 Gaotai 53.74 332 ⇑P **P** **11 44 31.6 +0.9**
GTA2 pP pP 11 45 10.3 +2.2
GTA2 S **S** **11 51 50.1 -1.8**
GTA2 pmax pmax
comp=Z,60nm,0.9s
GTA2 L L
comp=Z,350nm,16.1s
GTA2 L L
comp=Z,350nm,16.8s
GTA2 L L
comp=Z,200nm,15.5s
RAO Raoul Island 54.64 121 LR LR 12 08 54.3
comp=Z,123nm,18.7s,baz=255,slow=37
HYB Hyderabad 55.31 297 *e*P **P** **11 44 42.5 +0.2**
KLR Kul'dur 56.39 2 pP pP 11 45 27.5 +0.5
comp=Z,11nm,1.0s,baz=195,slow=6.9,SNR=6.9
KLR Kul'dur 56.39 2*ce*P **P** **11 44 49.9 +0.6**
KLR pmax pmax
comp=Z,5.0nm,1.7s
HMDM Hanimaadhoo 57.12 283 P **P** **11 44 56.5 +1.3**
HEH HeiHe 57.36 359 ⇑P **P** **11 44 55.8 -0.3**
HEH pP **pP** **11 45 34.2 +0.2**
HEH pmax pmax
comp=Z,18nm,1.4s
ULN Ulaanbaatar 58.19 343 P **P** **11 45 03.0 +0.7**
ULN Ulaanbaatar 58.19 343*ce*P **P** **11 45 03.3 +1.1**
ULN pmax pmax
comp=Z,33nm,1.3s
ULN Ulaanbaatar 58.19 343 P **P** **11 45 03.3 +1.1**
ULN S **S** **11 52 58.7 +8.2**
ULN Ulaanbaatar 58.19 343 P **P** **11 45 03.2 +0.9**
SONM Songino Array 58.36 343 P **P** **11 45 04.2 +0.9**
comp=Z,9.0nm,0.6s,baz=159,slow=7.0,SNR=60
SONM pP **pP** **11 45 43.2 +1.9**
comp=Z,4.5nm,0.8s,baz=166,slow=7.7,SNR=2.1
SONM PKP2bc **P'P'bc** **12 14 53.5 +2.5**
comp=Z,1.4nm,1.0s,baz=331,slow=1.8,SNR=7.2
comp=Z,9.0nm,0.6s
SONM Songino Array 58.36 343 P **P** **11 45 04.3 +0.9**
AFI Afiamalu 58.75 102 LR LR 12 07 38.5
comp=Z,64nm,21.7s,baz=268,slow=33
DRV Dumont d'Urvil 59.75 175 P **P** **11 45 13.5 +1.0**
ZEA Zeya 60.85 359 *e*P **P** **11 45 20.4 +0.3**
ZEA *e* 11 46 00.2
ZEA pmax pmax
comp=Z,10.0nm,0.6s
ZAK Zakamensk 61.56 342 *e*P **P** **11 45 24.5 -0.6**
ZAK *e* 11 46 04.6
ZAK pmax pmax
comp=Z,23nm,2.0s
ZAK pmax pmax
comp=Z,14nm,1.6s
TLY Talaya 62.60 343 LR LR 12 15 42.5
comp=Z,48nm,19.6s,baz=138,slow=39
TLY Talaya 62.60 343 **P** **11 45 33.1 +1.3**
TLY Talaya 62.60 343*ce*P **P** **11 45 33.3 +1.4**
TLY pmax pmax
comp=Z,19nm,1.7s
TLY Talaya 62.60 343 P **P** **11 45 32.3 +0.5**
TLY Talaya 62.60 343 P **P** **11 45 32.7 +0.9**
IRK Irkutsk 62.91 343 *e*P **P** **11 45 34.8 +0.9**
IRK *e* 11 46 11.2
IRK pmax pmax
comp=Z,43nm,2.4s
WMQ Urumqi 62.98 328 ⇑P **P** **11 45 35.6 +1.0**
WMQ pP pP 11 46 14.8 +1.7
WMQ pmax pmax
comp=Z,42nm,0.7s
WMQ pmax pmax
comp=Z,250nm,3.7s
WMQ Urumqi 62.98 328 P **P** **11 45 35.5 +1.0**
WMQ sP **sP** **11 46 31.5 +0.5**
MOY Mondy 63.40 341 *e*P **P** **11 45 37.7 +0.4**
MOY pmax pmax
comp=Z,50nm,2.1s
PEA0B Petropavlovsk- 65.05 19 P **P** **11 45 48.6 +0.8**
PEA0B Petropavlovsk- 65.05 19 P **P** **11 45 48.6 +0.8**
PEA0B pmax pmax
comp=Z,109nm,1.5s
PETK Petropavlovsk- 65.05 19 P **P** **11 45 48.8 +1.0**
comp=Z,13nm,0.5s,baz=174,slow=2.9,SNR=82
PETK PcP **PcP** **11 46 19.3 +0.1**
comp=Z,4.0nm,0.5s,baz=178,slow=1.5,SNR=8.8
PETK pP **pP** **11 46 27.6 +0.8**
comp=Z,5.0nm,0.7s,baz=219,slow=6.6,SNR=1.8
comp=Z,13nm,0.5s
PETK Petropavlovsk- 65.05 19 P **P** **11 45 49.0 +1.2**
PET Petropavlovsk 65.29 19 P **P** **11 45 50.5 +1.2**
PET Petropavlovsk 65.29 19 P **P** **11 45 49.9 +0.6**
PET Petropavlovsk 65.29 19 *e*P **P** **11 45 50.0 +0.7**
PET *e**PP **PcP** **11 46 23.6 +3.4**
PET *eS* **S** **11 54 24.7 +5.6**
PET pmax pmax
comp=Z,45nm,1.4s
WUS Wushi 66.23 321 P **P** **11 45 56.9 +1.1**
NIL Nilore 66.46 311 **P** **11 45 57.5 +0.2**
NIL Nilore 66.46 311 P **P** **11 45 57.5 +0.2**
NIL pmax pmax
comp=Z,28nm,0.5s
NIL Nilore 66.46 311 P **P** **11 45 57.9 +0.6**
DGZ Jazzator, Alta 67.19 332 *i* P **P** **11 46 02.8 +1.1**
DGZ pmax pmax
comp=Z,62nm,1.5s
SHLS Shalkode 67.20 323*c i*P **P** **11 46 01.4 -0.5**
SHLS pmax pmax
comp=Z,61nm,1.6s
SHLS Shalkode 67.20 323⇑*i*P **P** **11 46 01.4 -0.5**
comp=Z,61nm,1.6s
TARG Taragay, Kyrgy 67.40 321 IAmb IAmb 11 46 07.4
comp=Z,58nm,1.6s
UZB Uzynbulak 67.46 323*c i*P **P** **11 46 04.5 +1.0**
UZB pmax pmax
comp=Z,37nm,1.4s
UZB Uzynbulak 67.46 323⇑*i*P **P** **11 46 04.5 +1.0**
comp=Z,37nm,1.4s
SATY Saty 67.78 322*c i*P **P** **11 46 06.6 +1.1**
SATY pmax pmax
comp=Z,53nm,1.5s
SATY Saty 67.78 322⇑*i*P **P** **11 46 06.7 +1.1**
comp=Z,53nm,1.5s
MK31 Makanchi Array 67.80 327 P **P** **11 46 06.5 +1.0**
MK31 IAmb IAmb 11 46 07.7
comp=Z,60nm,1.5s
MK31 Makanchi Array 67.80 327*ce*P **P** **11 46 06.2 +0.7**
MKAR Makanchi Array 67.80 327 P **P** **11 46 06.3 +0.8**
comp=Z,12nm,0.6s,baz=125,slow=7.4,SNR=190
comp=Z,12nm,0.6s
KPKS Kokpek 67.84 323 *e*P **P** **11 46 07.0 +1.1**
KPKS Kokpek 67.84 323 *e*P **P** **11 46 07.0 +1.1**
MAKZ Makanchi 67.98 327 P **P** **11 46 07.2 +0.6**
MAKZ IAmb IAmb 11 46 08.7
comp=Z,57nm,1.4s
MAKZ Makanchi 67.98 327 P **P** **11 46 07.2 +0.6**
MAKZ pmax pmax
comp=Z,57nm,1.4s
MAKZ Makanchi 67.98 327 P **P** **11 46 07.3 +0.6**
MAKZ PcP **PcP** **11 46 31.3 -0.3**
TNSS Tian-Shan 68.65 322 *e*P **P** **11 46 12.1 +0.8**
TNSS Tian-Shan 68.65 322 *e*P **P** **11 46 12.2 +0.8**
MDOK Medeo 68.66 322 *e*P **P** **11 46 12.2 +1.1**
MDOK Medeo 68.66 322 *e*P **P** **11 46 12.2 +1.1**
TDK Taldyqorghan 68.89 324 *e*P **P** **11 46 13.3 +1.1**
TDK pmax pmax
comp=Z,52nm,1.4s
TDK Taldyqorghan 68.89 324 *e*P **P** **11 46 13.4 +1.1**
comp=Z,52nm,1.4s
MA2 Magadan 68.98 12 P **P** **11 46 13.6 +1.1**
comp=Z,12nm,1.0s,baz=201,slow=7.6,SNR=17
MA2 pP **pP** **11 46 52.4 +0.7**
comp=Z,6.2nm,0.8s,baz=177,slow=9.3,SNR=2.6
MA2 LR LR 12 15 41.5
comp=Z,29nm,21.4s,baz=154,slow=35
comp=Z,12nm,1.0s
MA2 Magadan 68.98 12 P **P** **11 46 13.2 +0.7**
MA2 IAmb IAmb 11 46 14.8
comp=Z,41nm,1.4s
MA2 Magadan 68.98 12*ce*P **P** **11 46 13.4 +0.9**
MA2 pmax pmax
comp=Z,28nm,1.3s
MA2 Magadan 68.98 12 P **P** **11 46 12.9 +0.4**
comp=Z,25nm,1.4s
MA2 Magadan 68.98 12 P **P** **11 46 13.5 +1.1**
MA2 PcP **PcP** **11 46 36.0 +0.5**
YAK Yakutsk 69.16 0 P **P** **11 46 13.7 +0.2**
comp=Z,33nm,0.5s,baz=221,slow=1.8,SNR=16
comp=Z,33nm,0.5s
YAK Yakutsk 69.16 0 P **P** **11 46 13.8 +0.2**
YAK Yakutsk 69.16 0*c i*P **P** **11 46 13.6 +0.1**
YAK *e* 11 46 36.8
YAK *e* 11 48 46.6
YAK *e*PPP PPP 11 50 29.3
YAK *eS* **S** **11 55 03.0 -2.1**
YAK *e* 11 55 56.2
YAK *eSS* **SS** **11 59 32.6 -2.6**
YAK pmax pmax
comp=Z,26nm,0.5s
YAK pmax pmax
comp=N,9.0nm,0.6s
YAK pmax pmax
comp=E,4.0nm,0.7s
YAK pmax pmax
comp=Z,113nm,5.3s
YAK pmax pmax
comp=N,81nm,4.9s
YAK pmax pmax
comp=E,65nm,3.9s
YAK smax smax
comp=E,57nm,2.3s
YAK smax smax
comp=N,55nm,1.6s
AAK Ala-Archa 69.97 320 P **P** **11 46 20.5 +1.3**
AAK IAmb IAmb 11 46 22.7
comp=Z,59nm,1.2s
AAK Ala-Archa 69.97 320 *i* P **P** **11 46 20.2 +1.1**
SNR=15
AAK Ala-Archa 69.97 320*ce*P **P** **11 46 19.7 +0.6**
AAK pmax pmax
comp=Z,94nm,1.7s
AAK Ala-Archa 69.97 320 P **P** **11 46 20.6 +1.5**
AAK Ala-Archa 69.97 320 P **P** **11 46 20.4 +1.3**
AAK PcP **PcP** **11 46 40.0 -0.3**
KBL Kabul 70.00 311 P **P** **11 46 19.5 0.0**
KBL IAmb IAmb 11 46 21.3
comp=Z,61nm,1.8s
KBL Kabul 70.00 311 P **P** **11 46 19.5 0.0**
KBL pmax pmax
comp=Z,61nm,1.8s
KBL Kabul 70.00 311 P **P** **11 46 19.9 +0.4**
SNR=11
SGDS Sogindy 70.31 321 *e*P **P** **11 46 22.1 +1.1**
GAR Garm 70.99 315 P **P** **11 46 25.7 +0.3**
BTK Batken 71.12 317 P **P** **11 46 26.6 +0.5**
BTK IAmb IAmb 11 46 29.3
comp=Z,78nm,1.4s
BTK Batken 71.12 317 P **P** **11 46 26.6 +0.5**
BTK pmax pmax
comp=Z,78nm,1.4s
ZAA0 Zalesovo Array 71.32 334 P **P** **11 46 26.4 -0.4**
ZALV Zalesovo Beam 71.32 334 P **P** **11 46 26.5 -0.3**
comp=Z,22nm,0.5s,baz=140,slow=5.7,SNR=100
ZALV pP **pP** **11 47 06.7 +0.5**
comp=Z,15nm,1.0s,baz=131,slow=4.1,SNR=2.8
comp=Z,22nm,0.5s
ZALV Zalesovo Beam 71.32 334 **P** **11 46 26.8 0.0**
CHGR Chuyangaron 71.65 315 *i* P **P** **11 46 29.7 +0.4**
SHAA Shahritus 71.92 313 P **P** **11 46 29.9 -1.0**
SHAA IAmb IAmb 11 46 31.8
comp=Z,75nm,1.4s
DZA Taraz 72.11 319 *e*P **P** **11 46 33.1 +1.2**
DZA pmax pmax
comp=Z,24nm,1.3s
DZA Taraz 72.11 319 *e*P **P** **11 46 33.1 +1.2**
comp=Z,24nm,1.3s
KURBB Kurchatov Arra 72.12 329 P **P** **11 46 32.1 +0.5**
comp=Z,18nm,0.4s,baz=126,slow=5.0,SNR=309
KURBB pP **pP** **11 47 11.9 +0.5**
comp=Z,17nm,1.0s,baz=130,slow=5.2,SNR=3.6
comp=Z,18nm,0.4s
KURK Kurchatov 72.13 329 P **P** **11 46 32.3 +0.6**
KURK Kurchatov 72.13 329 P **P** **11 46 32.2 +0.5**
KURK *PP **pP** **11 47 12.0 +0.5**
KURK Kurchatov 72.13 329 P **P** **11 46 32.5 +0.8**
KURK S **SKiKP** **11 55 47.9 -3.0**
KURK Kurchatov 72.13 329 P **P** **11 46 32.3 +0.6**
KURK PcP **PcP** **11 46 49.5 +0.4**
KURK pP **pP** **11 47 11.7 +0.3**
VNDA Vanda 72.28 173 P **P** **11 46 32.7 +0.5**
comp=Z,4.2nm,0.6s,baz=312,slow=8.1,SNR=17
VNDA LR LR 12 17 58.4
comp=Z,146nm,19.7s,baz=311,slow=35
comp=Z,4.2nm,0.6s
VNDA Vanda 72.28 173 P **P** **11 46 32.9 +0.6**
SEY Seymchan 72.37 11 P **P** **11 46 34.0 +1.0**
comp=Z,18nm,0.5s,baz=212,slow=4.9,SNR=95
SEY pP **pP** **11 47 12.9 -0.1**
comp=Z,10nm,1.0s,baz=196,slow=6.4,SNR=2.7
comp=Z,18nm,0.5s
SEY Seymchan 72.37 11*ce*P **P** **11 46 33.9 +1.0**
SEY pmax pmax
comp=Z,46nm,1.3s
IUG Iuzhnay 72.61 318*c i*P **P** **11 46 36.1 +1.2**
IUG pmax pmax
comp=Z,51nm,1.2s
IUG Iuzhnay 72.61 318⇑*i*P **P** **11 46 36.1 +1.2**
comp=Z,51nm,1.2s
KK31 Karatay Array 72.74 319 P **P** **11 46 36.3 +0.7**
KK31 IAmb IAmb 11 46 37.8
comp=Z,82nm,1.4s
KK31 Karatay Array 72.74 319 P **P** **11 46 36.3 +0.7**
KK31 pmax pmax
comp=Z,83nm,1.4s
KKAR Karatay Array 72.74 319 P **P** **11 46 36.3 +0.7**
KKAR Karatay Array 72.74 319 P **P** **11 46 36.3 +0.7**
CHM Chimkent 72.97 318 *e*P **P** **11 46 38.1 +1.2**
CHM pmax pmax
comp=Z,60nm,1.3s
CHM Chimkent 72.97 318 *e*P **P** **11 46 38.2 +1.2**
comp=Z,60nm,1.3s
JLN Jalan Bani Buh 73.88 295 P **P** **11 46 42.5 -0.1**
MAW Mawson 74.17 201 P **P** **11 46 44.5 +1.1**
comp=Z,30nm,0.9s,baz=85,slow=4.5,SNR=8.7
MAW LR LR 12 17 03.6
comp=Z,139nm,20.2s,baz=62,slow=34
comp=Z,30nm,0.9s
WBK Wadi Bani Khal 74.39 296 P **P** **11 46 45.7 +0.1**
BRZS Berezniki 74.87 326 *e*P **P** **11 46 49.0 +1.3**
BRZS Berezniki 74.87 326 *e*P **P** **11 46 49.1 +1.3**
HRA Herat 75.14 308 P **P** **11 46 50.0 0.0**
HRA IAmb IAmb 11 46 51.8
comp=Z,57nm,1.5s
BIDO Bidbid 75.37 297 P **P** **11 46 51.5 +0.3**
SNR=6.0
HOQ Hoqain 76.11 296 P **P** **11 46 55.4 -0.1**
SOHO SOHO 76.94 297 *i* P **P** **11 47 00.4 +0.3**
SNR=7.3
UOSS Minazif 77.43 297 P **P** **11 47 02.7 -0.1**
HATD Hatta, Dubai 77.46 297 P **P** **11 47 03.4 +0.4**
HATD Hatta, Dubai 77.46 297 P **P** **11 47 04.2 +1.3**
SNR=6.5
ASHO Ashiyiah 77.49 297 *i* P **P** **11 47 04.0 +0.8**
SNR=9.9
ASHO Ashiyiah 77.49 297 P **P** **11 47 03.4 +0.2**
SNR=6.1
MSFE Esma-Masafi 77.57 298 *i* P **P** **11 47 04.5 +0.9**
SNR=8.9
MASF Masafi 77.57 298 P **P** **11 47 04.1 +0.5**
SNR=6.7
BANOM Banah 77.59 298 *i* P **P** **11 47 05.0 +1.3**
SNR=12
ALNE Al Ain 77.61 297 P **P** **11 47 05.3 +1.5**
SNR=5.1
BVAR Borovoye Array 77.66 328 P **P** **11 47 03.7 +0.3**
comp=Z,6.5nm,0.4s,baz=124,slow=8.8,SNR=50
BVAR pP **pP** **11 47 44.0 +0.1**
comp=Z,2.6nm,0.7s,baz=123,slow=7.8,SNR=1.5
comp=Z,6.5nm,0.4s
BORK Borovoye 77.71 328 P **P** **11 47 04.0 +0.3**
BORK Borovoye 77.71 328*ce*P **P** **11 47 03.9 +0.3**
BORK pmax pmax
comp=Z,19nm,1.3s
BORK Borovoye 77.71 328 P **P** **11 47 04.0 +0.3**
BORK PcP **PcP** **11 47 14.8 +1.7**
BORK pP **pP** **11 47 44.7 +0.6**
SHME Shamm 77.75 299 *i* P **P** **11 47 05.5 +1.0**
SNR=6.0
NAZ Nazwa, Dubai 77.92 297 P **P** **11 47 05.9 +0.5**
FAQ Al Faqa, Dubai 77.92 297 P **P** **11 47 05.2 -0.2**
ASUD Al Ashush, Dub 78.12 297 P **P** **11 47 07.1 +0.5**
TIXI Tiksi 78.82 0 P **P** **11 47 09.6 +0.2**
comp=Z,9.9nm,0.4s,baz=190,slow=6.1,SNR=61
TIXI LR LR 12 23 33.3
comp=Z,47nm,18.8s,baz=208,slow=37
comp=Z,9.9nm,0.4s
TIXI Tiksi 78.82 0 P **P** **11 47 08.8 -0.6**
TIXI IAmb IAmb 11 47 11.0
comp=Z,16nm,0.5s
TIXI Tiksi 78.82 0*ce*P **P** **11 47 09.2 -0.2**
TIXI pmax pmax
comp=Z,26nm,1.3s
TIXI Tiksi 78.82 0 P **P** **11 47 08.8 -0.6**
TIXI PcP **PcP** **11 47 17.9 +0.4**
MZR Muzera 79.40 295 P **P** **11 47 14.1 +0.5**
MZR Muzera 79.40 295 P **P** **11 47 14.8 +1.1**
SNR=7.0
BILL Bilibino 79.73 13 *i* P **P** **11 47 14.0 -0.4**
BILL pmax pmax
comp=Z,7.0nm,1.4s
VOI Vohitsoka 79.82 249 P **P** **11 47 17.3 +1.2**
VOI Vohitsoka 79.82 249 P **P** **11 47 16.8 +0.7**
NIKH Nikolski High 79.83 33 P **P** **11 47 16.0 +0.7**
NIKH Nikolski High 79.83 33 P **P** **11 47 15.6 +0.3**
PPT2 Papeete2 79.97 107 *e*P **P** **11 47 13.3 -3.6**
comp=Z,61nm,25.2s
PPT2 *e*S **S** **11 57 03.8 -3.3**
comp=Z,30nm,22.0s
PPT2 *e*LR LR 12 12 25.7
comp=Z,112nm,32.0s
JRN Qarnain Island 80.39 297 P **P** **11 47 18.7 -0.2**
NRIK Noril'sk 81.57 346 P **P** **11 47 24.4 +0.2**
comp=Z,5.5nm,0.5s,baz=150,slow=4.2,SNR=9.4
NRIK pP **pP** **11 48 04.2 -0.7**
comp=Z,2.1nm,0.5s,baz=116,slow=3.6,SNR=1.7
comp=Z,5.5nm,0.5s
NRIK Noril'sk 81.57 346 **P** **11 47 24.8 +0.6**
AB31 Akbulak array 81.97 322 P **P** **11 47 27.1 +0.4**
ABKAR Akbulak array 81.97 322 P **P** **11 47 27.1 +0.4**
QSPA South Pole Qui 82.65 180 P **P** **11 47 30.1 0.0**
comp=Z,15nm,0.7s,baz=285,slow=0.5,SNR=56
comp=Z,15nm,0.7s
QSPA South Pole Qui 82.65 180 P **P** **11 47 30.4 +0.3**
QSPA IAmb IAmb 11 47 31.7
comp=Z,32nm,1.1s
QSPA South Pole Qui 82.65 180 P **P** **11 47 30.4 +0.3**
GAMB Gambell 83.72 23 IAmb IAmb 11 47 37.9
comp=Z,54nm,1.6s
SVE Sverdlovsk 84.39 329 *e*P **P** **11 47 39.0 +0.1**
SDPT Sand Point 85.30 33 P **P** **11 47 43.9 +0.5**
ARTI Arti 85.39 328 **P** **11 47 44.3 +0.4**
ARTI IAmb IAmb 11 47 46.3
comp=Z,16nm,0.5s
ARTI Arti 85.39 328*d i*P **P** **11 47 44.5 +0.6**
ARTI 11 50 59.1
ARTI S **SKSac** **11 57 53.4 +0.7**
ARTI pmax pmax
comp=Z,26nm,1.5s
K13K Kusilvak Mount 85.74 26 IAmb IAmb 11 47 48.1
comp=Z,68nm,1.4s
O14K Tigyukauivet M 86.26 29 IAmb IAmb 11 47 50.8
comp=Z,30nm,1.4s
L14K Kuka Creek 86.37 27 IAmb IAmb 11 47 51.0
comp=Z,31nm,1.1s
RAYN Ar Rayn 86.70 294 P **P** **11 47 51.1 -0.1**
RAYN Ar Rayn 86.70 294 *i* P **P** **11 47 51.3 +0.1**
SNR=10
RAYN Ar Rayn 86.70 294 P **P** **11 47 51.1 -0.1**
RAYN pmax pmax
comp=Z,11nm,0.9s
RAYN Ar Rayn 86.70 294 P **P** **11 47 51.6 +0.4**
RAYN Ar Rayn 86.70 294 P **P** **11 47 51.3 +0.1**
N15K Kwethluk River 87.14 28 IAmb IAmb 11 47 55.2
comp=Z,36nm,1.2s
K15K Wolf Creek Mou 87.24 26 IAmb IAmb 11 47 56.0

comp=Z,26nm,1.5s
P16K Nushagak River 87.78 30 IAmb IAmb 11 47 56.6
comp=Z,36nm,1.2s
ELIB Princess Elisa 87.79 198 *d*P **P** **11 47 57.0 +1.5**
ELIB *d*pP **pP** **11 48 35.3 -1.7**
O16K Kokwok River B 87.90 29 IAmb IAmb 11 47 58.0
comp=Z,24nm,1.4s
L16K Owhat River 87.94 27 IAmb IAmb 11 47 57.4
comp=Z,38nm,1.7s
M16K Timber Creek 87.95 28 IAmb IAmb 11 47 58.4
comp=Z,33nm,1.4s
J16K Anvik River 87.99 25 IAmb IAmb 11 47 59.3
comp=Z,22nm,1.4s
K17K Iditarod 88.79 26 IAmb IAmb 11 48 02.2
comp=Z,37nm,1.6s
H17K Granite Mounta 88.85 24 IAmb IAmb 11 48 02.1
comp=Z,30nm,1.6s
SII Sitkinak Islan 89.03 33 P **P** **11 48 02.7 +1.3**
L18K Granite Mounta 89.35 27 IAmb IAmb 11 49 17.8
comp=Z,34nm,2.0s
OHAK Old Harbor 89.68 32 P **P** **11 48 04.9 +0.6**
J18K Innoko River 89.71 26 IAmb IAmb 11 48 05.8
comp=Z,26nm,1.6s
M19K Big River Lodg 90.31 27 IAmb IAmb 11 48 11.6
comp=Z,19nm,1.5s
BELG Belogornoye 90.34 323 *i* P **P** **11 48 08.8 +1.3**
BELG pmax pmax
comp=Z,3.0nm,1.4s
G19K Purcell Mounta 90.35 23 IAmb IAmb 11 48 08.9
comp=Z,24nm,1.4s
KIBK Kibwezi 90.35 268 P **P** **11 48 10.5 +1.9**
C19K Lookout Ridge 90.38 20 IAmb IAmb 11 48 10.0
comp=Z,26nm,1.1s
E19K Redstone River 90.69 22 IAmb IAmb 11 48 10.5
comp=Z,37nm,1.7s
D19K Kuna River 90.69 21 IAmb IAmb 11 48 10.2
comp=Z,32nm,1.6s
K20K Telida 90.82 26 IAmb IAmb 11 48 10.8
comp=Z,32nm,1.6s
GEVA Gevas 91.09 308 IAmb IAmb 11 48 14.3
comp=Z,14nm,0.9s
FURI Furi 91.14 279 LR LR 12 29 18.6
comp=Z,36nm,18.9s,baz=100,slow=36
D20K Etivluk River 91.28 21 IAmb IAmb 11 48 12.9
comp=Z,19nm,1.4s
B20K Meade River 91.48 19 IAmb IAmb 11 48 13.9
comp=Z,26nm,1.5s
IMAR Indian Mountai 91.61 24 P **P** **11 48 13.7 +0.5**
L22K Petersville 92.10 27 IAmb IAmb 11 48 15.4
comp=Z,16nm,1.4s
B21K Ikpikpuk River 92.22 20 IAmb IAmb 11 48 16.6
comp=Z,5.8nm,0.6s
KTH Kantishna Hill 92.24 26 IAmb IAmb 11 48 27.9
comp=Z,35nm,1.8s
MLY Manley 92.62 25 IAmb IAmb 11 51 34.5
comp=Z,22nm,1.9s
PMR Palmer 92.68 28 IAmb IAmb 11 49 19.0
comp=Z,36nm,1.9s
MARD Mardin 92.74 307 IAmb IAmb 11 48 20.7
comp=Z,22nm,1.3s
B22K Teshekpuk Lake 92.80 19 IAmb IAmb 11 48 19.8
comp=Z,26nm,1.5s
E22K Anaktuvuk Pass 92.85 22 IAmb IAmb 11 48 21.3
comp=Z,16nm,1.4s
KNK Knik Glacier 92.97 29 IAmb IAmb 11 48 21.4
comp=Z,15nm,1.1s
SML Sawmill 93.09 28 IAmb IAmb 11 48 21.7
comp=Z,18nm,1.1s
G23K Bananza Creek 93.24 23 IAmb IAmb 11 48 22.3
comp=Z,19nm,1.6s
COLD Coldfoot 93.27 23 IAmb IAmb 11 48 22.4
comp=Z,14nm,1.4s
D23K Nanushuk River 93.43 21 IAmb IAmb 11 48 23.5
comp=Z,23nm,1.4s
TROLL Troll, Antarti 93.52 195 ⇑P **P** **11 48 23.5 +1.3**
TROLL ⇓pP **pP** **11 49 02.2 -1.8**
WRH Wood River Hil 93.64 26 IAmb IAmb 11 48 23.5
comp=Z,11nm,1.0s
E23K Chandalar 93.65 22 IAmb IAmb 11 48 24.2
comp=Z,29nm,1.6s
CCB Clear Creek Bu 93.79 25 IAmb IAmb 11 48 23.1
comp=Z,33nm,1.6s
H24K Noodor Dome 93.94 24 IAmb IAmb 11 48 25.4
comp=Z,26nm,1.5s
ILAR Eielson Array 94.20 25 P **P** **11 48 23.9 -1.2**
comp=Z,1.8nm,0.7s,baz=242,slow=4.9,SNR=33
ILAR pP **pP** **11 49 05.4 -1.6**
comp=Z,1.6nm,1.0s,baz=270,slow=4.7,SNR=2.8
ILAR PP **PP** **11 52 07.5 -6.7**
comp=Z,1.6nm,1.1s,baz=268,slow=8.7,SNR=5.7
ILAR LR LR 12 27 29.8
comp=Z,20nm,19.6s,baz=287,slow=33
comp=Z,1.8nm,0.7s
BELA Belgrano 2 94.41 183 P **P** **11 48 25.5 -0.5**
BELA IAmb IAmb 11 48 27.5
comp=Z,13nm,1.0s
PAX Paxson 94.58 27 IAmb IAmb 11 48 28.2
comp=Z,20nm,1.4s
J25K Salcha River, 94.82 26 IAmb IAmb 11 48 28.2
comp=Z,15nm,1.6s
SNAA Sanae 95.04 194 ⇑P **P** **11 48 28.2 -0.9**
comp=Z,42nm,0.5s
SNAA Sanae 95.04 194 P **P** **11 48 28.3 -0.8**
comp=Z,7.3nm,1.0s,baz=130,slow=4.4,SNR=4.4
comp=Z,7.3nm,1.0s
SNAA Sanae 95.04 194 P **P** **11 48 28.9 -0.1**
SNAA Sanae 95.04 194 *ce*P **P** **11 48 28.4 -0.6**
SNAA pmax pmax
comp=Z,13nm,1.2s
F25K Christian Rive 95.07 23 IAmb IAmb 11 48 30.3
comp=Z,16nm,1.6s
E25K Arctic Village 95.16 22 IAmb IAmb 11 48 31.4
comp=Z,17nm,1.6s
DOT Dot Lake 95.29 27 IAmb IAmb 11 48 30.9
comp=Z,26nm,1.6s
SCRK Sand Creek 95.35 26 IAmb IAmb 11 48 31.5
comp=Z,19nm,1.6s
ASF Jabal al Asfar 95.37 302 LR LR 12 39 08.1
comp=Z,21nm,18.0s,baz=44,slow=40
BMAR Burnt Mountain 95.45 23 P **11 48 31.6 +0.7**
F26K Sheenjek River 95.65 23 IAmb IAmb 11 49 45.9
comp=Z,11nm,1.7s
G26K Porcupine Rive 95.72 23 IAmb IAmb 11 48 34.7
comp=Z,14nm,1.4s
C27K Jago River 95.98 21 IAmb IAmb 11 49 57.4
comp=Z,22nm,1.8s
ANN Anapa 96.01 314 *e*P **P** **11 48 29.3 -4.5**
ANN pmax pmax
comp=Z,21nm,1.1s
L27K Beaver Creek, 96.24 27 IAmb IAmb 11 48 36.3
comp=Z,21nm,1.6s
BCAR Beaver Creek A 96.26 27 P **P** **11 48 35.4 +0.7**
H27K Steamboat Moun 96.56 24 IAmb IAmb 11 48 38.0
comp=Z,11nm,1.4s
VNA2 Neumayer--Watz 96.61 193 ⇑P **P** **11 48 37.0 +0.8**
baz=138,slow=3.7
VNA2 ⇑pP **pP** **11 49 17.5 -0.6**
baz=120,slow=2.0
E27K Coleen River 96.64 22 IAmb IAmb 11 50 09.0
comp=Z,17nm,1.8s
MMAI Mount Meron Ar 96.70 302 LR LR 12 38 03.1
comp=Z,31nm,19.9s,baz=96,slow=39
EIL Elat 96.83 299 LR LR 12 37 32.3
comp=Z,23nm,20.8s,baz=62,slow=38
VNA3 Neumayer Olymp 96.88 193 ⇑P P 11 48 31.4 -5.9
comp=Z,4.9nm,1.0s
VNA3 ⇑pP pP 11 49 17.5 -1.5
VNA1 Neumayer--Stat 97.01 193 ⇑P Pdif 11 48 40.1 +2.2
comp=Z,5.0nm,0.8s
VNA1 ⇑pP pP 11 49 18.6 -1.3
OBN Obninsk 97.18 325 ⇑*e*P Pdif 11 48 39.1 +0.2
OBN pmax pmax
comp=Z,7.0nm,0.8s
I28M Miner Creek 97.19 25 IAmb IAmb 11 48 40.5
comp=Z,17nm,1.5s
MBAR Mbarara 97.82 268 LR LR 12 31 20.1
comp=Z,29nm,18.6s,baz=146,slow=34
J29N Klondike Camp 97.90 26 IAmb IAmb 11 48 43.9
comp=Z,14nm,1.4s
LSZ Lusaka 98.13 253 LR LR 12 29 36.3
comp=Z,46nm,18.9s,baz=154,slow=33
LSZ Lusaka 98.13 253 P **P** **11 48 42.7 -1.6**
BOSA Boshof 98.18 240 P **P** **11 48 44.2 -0.1**
comp=Z,0.6nm,0.4s,baz=68,slow=4.8,SNR=5.1
BOSA LR LR 12 26 51.4
comp=Z,44nm,21.5s,baz=144,slow=31
comp=Z,0.6nm,0.4s
K29M Barlow Dome 98.20 27 IAmb IAmb 11 48 47.0
comp=Z,17nm,1.6s
BRTR Keskin Array B 98.52 309 P **P** **11 48 44.8 -0.7**
comp=Z,0.8nm,0.4s,baz=130,slow=4.5,SNR=6.1
BRTR LR LR 12 40 24.8
comp=Z,12nm,20.2s,baz=98,slow=40
comp=Z,0.8nm,0.4s
SUR Sutherland 100.97 235 P **Pdif** **11 48 54.7 -2.0**
ARCES ARCESS Array B 101.44 340 P **Pdif** **11 48 57.1 -0.5**
comp=Z,1.1nm,0.4s,baz=87,slow=3.9,SNR=9.0
ARCES PKiKP **PKiKP** **11 53 21.3 +0.6**
comp=Z,6.0nm,1.1s,baz=105,slow=1.7,SNR=9.5
ARCES PKKPbc **PKKPbc** **12 05 05.3 -3.2**
comp=Z,20nm,1.4s,baz=250,slow=2.5,SNR=11
AK08 Malin Array Si 101.62 320 P **Pdif** **11 48 58.0 -0.8**
AK10 Malin Array Si 101.62 320 P **Pdif** **11 48 58.3 -0.5**
AKASG Malin Array Be 101.64 320 P **Pdif** **11 48 57.3 -1.6**
comp=Z,1.9nm,0.8s,baz=76,slow=4.2,SNR=4.9
SPITS Spitsbergen Ar 101.64 349 PKiKP **PKiKP** **11 53 21.8 +0.8**
comp=Z,10.0nm,1.1s,baz=172,slow=2.2,SNR=1.7
AK07 Malin Array Si 101.66 320 P **Pdif** **11 48 58.9 -0.1**
MNK Minsk 102.21 324 *i* P **Pdif** **11 49 01.5 +0.1**
comp=E,10.0nm,0.8s
MNK *i* P **Pdif** **11 49 01.5 +0.1**
comp=N,13nm,0.7s
MNK *i* P **Pdif** **11 49 01.5 +0.1**
comp=Z,8.0nm,0.7s,baz=85
MNK *i* pP **pPdif** **11 49 41.9 -1.5**
MNK *i* PP PP 11 53 05.2 -10
MNK *i* PPP PPP 11 55 26.4
MNK *i* S **SKSac** **11 59 25.4 +0.9**
MNK *i* sS SKKSac 12 00 39.7 +36
MNK *i* SS **SS** **12 07 41.8 +2.9**
MNK *i* SSS SSS 12 11 39.1
MNK *i* LR LR 12 33 35.9
MNK *i* LRM MLR 12 35 51.4
comp=E,46nm,16.2s
MNK *i* LRM MLR 12 36 12.3
comp=Z,44nm,17.5s
MNK *i* LRM MLR 12 36 56.0
comp=N,95nm,19.1s
MNK Minsk 102.21 324 *i* P **Pdif** **11 49 01.4 +0.1**
MNK *i* PPP PPP 11 55 26.3
MNK *i* S **SKSac** **11 59 25.4 +0.9**
MNK *i* SS **SS** **12 07 41.7 +2.9**
MNK *i* SSS SSS 12 11 39.0
MNK pmax pmax
comp=Z,8.0nm,0.7s
MNK pmax pmax
comp=N,13nm,0.7s
MNK pmax pmax
comp=E,10.0nm,0.8s
MNK MLR MLR
comp=E,46nm,16.0s
MNK MLR MLR
comp=Z,44nm,18.0s
MNK MLR MLR
comp=N,95nm,19.0s
FINES FINESS Array B 102.44 331 P **Pdif** **11 49 01.4 -0.7**
comp=N,2.0nm,1.0s,baz=60,slow=4.6,SNR=5.9
FINES PKiKP **PKiKP** **11 53 22.9 +0.2**
comp=N,0.9nm,0.4s,baz=120,slow=4.8,SNR=14
NACGM Naroch 102.81 325 *e*Pdif **Pdif** **11 49 04.4 +0.4**
RNPP5 Staryi Chortor 103.70 321 P **Pdif** **11 49 07.5 -0.6**
YKA Yellowknife Ar 108.61 26 PKiKP **PKiKP** **11 53 34.5 +0.3**
comp=N,0.3nm,0.4s,baz=317,slow=2.4,SNR=8.9
YKA PKKPbc **PKKPbc** **12 04 44.0 -2.5**
comp=N,0.2nm,0.4s,baz=102,slow=2.9,SNR=7.6
HFS Hagfors 108.64 331 Pdiff **Pdif** **11 49 29.1 -0.8**
comp=N,0.9nm,0.5s,baz=94,slow=6.5,SNR=5.8
HFS PKiKP **PKiKP** **11 53 34.1 -0.2**
comp=N,0.6nm,0.5s,baz=97,slow=3.6,SNR=5.8
NOA NORSAR Array B 109.48 333 PKiKP **PKiKP** **11 53 36.2 +0.3**
comp=N,0.3nm,0.4s,baz=262,slow=3.6,SNR=4.2
CONA Conrad Observa 110.66 319 *e*PKiKP **PKiKP** **11 53 38.9 +0.3**
comp=N,1.0nm,0.4s
MOA Molin 111.72 319 *e*PKiKP **PKiKP** **11 53 40.2 -0.3**
comp=N,0.1nm,0.3s
GERES GERESS Array B 111.84 320 PKiKP **PKiKP** **11 53 41.1 +0.3**
comp=N,2.2nm,0.5s,baz=57,slow=3.3,SNR=18
NVAR Mina Array Bea 112.51 52 PKiKP **PKiKP** **11 53 43.3 +0.7**
comp=N,0.2nm,0.4s,baz=356,slow=2.7,SNR=2.5
LESA Schwarzleotal 112.87 319 *e*PKiKP **PKiKP** **11 53 42.4 -0.4**
comp=N,0.4nm,0.3s
WTTA Wattenberg 113.59 319 *e*PKiKP **PKiKP** **11 53 44.6 +0.3**
comp=N,11nm,0.4s
WATA Walderalm 113.61 319 *e*PKP **PKiKP** **11 53 44.5 +0.3**
comp=N,3.5nm,0.4s
SQTA Sankt Quirin 113.88 319 *e*PKP **PKiKP** **11 53 44.1 -0.6**
comp=N,0.1nm,0.2s
MOTA Moosalm 113.92 319 *e*PKP **PKiKP** **11 53 45.0 +0.1**
comp=N,3.0nm,0.4s
RETA Reutte 114.10 319 *e*PKP **PKiKP** **11 53 45.2 +0.1**
comp=N,1.3nm,0.4s
FETA Feichten 114.25 318 *e*PKP **PKiKP** **11 53 45.8 +0.2**
comp=N,1.0nm,0.4s
DAVA Damuels 114.73 319 *e*PKP PKPdf 11 53 46.7 +0.3
comp=N,7.2nm,0.4s
LOHW Long Hollow 117.06 45 **PKiKP** **11 53 52.8 +1.6**
KEST Kesra 117.99 307 PKP **PKiKP** **11 53 54.0 +0.9**
comp=N,4.0nm,0.4s,baz=249,slow=1.1,SNR=6.7
PDAR Pinedale Array 118.04 45 PKP **PKiKP** **11 53 53.8 +0.7**
comp=N,0.6nm,0.5s,baz=76,slow=0.7,SNR=17
PDAR PKKPbc **PKKPbc** **12 04 13.8 -0.6**
comp=N,0.3nm,0.5s,baz=112,slow=6.0,SNR=4.4
EKA Eskdalemuir Ar 118.83 331 PKP **PKiKP** **11 53 54.2 +0.3**
comp=N,1.4nm,0.4s,baz=42,slow=4.0,SNR=16
LAO LASA Array 118.97 40 **PKiKP** **11 53 56.0 +1.4**
O20A White River Ci 119.75 48 **PKiKP** **11 53 58.1 +1.6**
PV18 Skein Mesa, Pa 119.77 50 **PKiKP** **11 53 57.7 +1.1**
RSSD Black Hills 121.37 42 **PKiKP** **11 53 59.8 +0.2**
RSSD Black Hills 121.37 42 PKiKP **PKiKP** **11 53 59.8 +0.2**
ULM Lac du Bonnet 123.42 33 PKP **PKPdf** **11 54 02.8 -0.1**
comp=N,1.6nm,0.4s,baz=327,slow=3.9,SNR=6.9
TXAR Lajitas Array 126.20 59 PKP **PKiKP** **11 54 10.3 +0.9**
comp=N,0.8nm,0.4s,baz=166,slow=3.0,SNR=46
TXAR pPKP **pPKPdf** **11 54 53.1 +0.4**
comp=N,0.9nm,0.8s,baz=323,slow=1.9,SNR=3.8
TXAR PKKPbc **PKKPbc** **12 03 43.3 +0.3**
comp=N,0.1nm,0.4s,baz=114,slow=5.6,SNR=6.3
ESDC Sonseca Array 126.83 315 PKP **PKiKP** **11 54 10.8 +0.5**
comp=N,1.5nm,0.8s,baz=89,slow=2.8,SNR=6.5
TORD Torodi Ar. Bea 127.61 281 PKP **PKiKP** **11 54 12.5 +0.1**
comp=N,2.4nm,0.5s,baz=185,slow=1.0,SNR=10
TORD pPKP **pPKPdf** **11 54 54.7 -1.3**
comp=N,1.2nm,0.8s,baz=129,slow=2.6,SNR=2.1
POLO Lamas de Olo 128.68 318 *e*PKPdf **PKiKP** **11 54 15.0 +1.0**
PGAV Gavieira, Arco 128.70 319 *e*PKPdf **PKiKP** **11 54 14.8 +0.8**
PLCA Paso Flores 128.99 161 PKP **PKiKP** **11 54 14.9 +0.2**
comp=N,7.3nm,1.0s,baz=234,slow=1.1,SNR=9.9
PLCA pPKP **pPKPdf** **11 54 58.5 +1.3**
comp=N,7.9nm,1.1s,baz=217,slow=3.2,SNR=4.4
PVIS Viseu 129.06 318 *e*tx tx 11 57 22.0
PCBR Castelo Branco 129.19 317 *e*PKPdf **PKiKP** **11 54 15.7 +0.8**
PCBR *e*tx tx 11 57 21.8
PMRV Marv??o 129.32 316 *e*tx tx 11 57 22.7
PBAR Barrancos 129.64 314 *e*tx tx 11 57 24.1
PESTR Estremoz 129.72 315 *e*PKPdf **PKPdf** **11 54 14.9 -0.4**
PESTR *e*tx tx 11 57 23.6
PSARD Sardoal 129.77 317 *e*tx tx 11 57 23.6
PARRA Arraiolos 130.05 316 *e*PKPdf **PKiKP** **11 54 17.6 +0.9**
PARRA *e*tx tx 11 57 24.4
PMTG Montargil 130.06 316 *e*tx tx 11 57 24.5
EVO Evora 130.16 315 *e*tx tx 11 57 26.4
PBEJ Beja 130.29 315 *e*tx tx 11 57 25.8
MOE Montemor 130.40 315 *e*PKPdf **PKiKP** **11 54 18.1 +0.6**
MOE *e*tx tx 11 57 27.1
PVAQ Vaqueiros 130.46 314 *e*PKPdf **PKiKP** **11 54 18.8 +1.3**
PVAQ *e*tx tx 11 57 27.2
PCVE Castro Verde 130.59 314 *e*PKPdf **PKiKP** **11 54 18.9 +1.1**
PCVE *e*tx tx 11 57 26.7
MESJ Messejana 130.62 315 *e*PKPdf **PKiKP** **11 54 18.9 +1.1**
MESJ *e*tx tx 11 57 27.3
PBDV Barranco-do-Ve 130.68 314 *e*tx tx 11 57 28.3
SCHQ Schefferville 131.02 12 PKP **PKiKP** **11 54 18.3 +0.1**
comp=N,3.9nm,0.4s,baz=298,slow=1.4,SNR=24
SCHQ SKPbc **SKPbc** **11 57 26.1 +0.1**
comp=N,7.9nm,0.6s,baz=320,slow=3.9,SNR=12
S39A Bolivar 131.44 45 **PKPdf** **11 54 19.0 +0.5**
BI02 San Fabin de 132.39 158 **PKiKP** **11 54 22.3 +0.7**
DBIC Dimbokro 133.91 272 PKP **PKPdf** **11 54 24.4 +0.5**
comp=N,4.7nm,0.7s,baz=222,slow=2.3,SNR=5.9
DBIC SKPbc **SKPbc** **11 57 37.1 -0.1**
comp=N,2.0nm,0.5s,baz=72,slow=2.9,SNR=4.0
BO02 Sierra Bellavi 134.24 157 **PKPdf** **11 54 22.8 -1.3**
CPUP Villa Florida 146.03 170 PKPbc **PKPab** **11 54 47.5 +0.2**
comp=N,9.7nm,0.5s,baz=215,slow=2.6,SNR=33
CPUP pPKPbc **pPKPdf** **11 55 28.1 -0.6**
comp=N,12nm,1.0s,baz=188,slow=2.3,SNR=3.7
CPUP SKPbc **SKiKP** **11 58 10.3 +0.3**
comp=N,1.9nm,0.6s,baz=133,slow=3.8,SNR=3.1
CPUP Villa Florida 146.03 170 PKPab **PKPab** **11 54 47.7 +0.4**
CPUP Villa Florida 146.03 170 *e*P **PKPdf** **11 54 39.3 -6.1**
HMBC Humberstone 147.03 147 PKPab **PKPab** **11 54 51.3 -0.2**
PB12 IPOC Station P 148.11 144 PKPbc **PKPbc** **11 54 51.4 -1.2**
NNA Nana 148.16 127 PKPbc **PKPbc** **11 54 53.6 +0.8**
comp=N,8.9nm,0.3s,baz=308,slow=0.1,SNR=5.7
NNA Nana 148.16 127 **PKiKP** **11 54 54.4 0.0**
NNA Nana 148.16 127 PKP2 **PKiKP** **11 54 54.4 0.0**
BRU2 Volcan 148.89 85 PKPab **PKiKP** **11 54 57.7 +1.6**
ATAH Atahualpa 149.39 117 PKP **PKPdf** **11 54 53.2 +1.4**
comp=N,3.0nm,0.6s,baz=287,slow=4.4,SNR=5.3
ATAH PKPbc **PKiKP** **11 54 58.6 +1.1**
comp=N,12nm,0.5s,baz=243,slow=3.1,SNR=17
LPAZ La Paz 151.22 145 PKP **PKPdf** **11 54 56.5 +1.7**
comp=N,5.2nm,0.9s,baz=306,slow=1.3,SNR=5.7
LPAZ PKPbc **PKiKP** **11 55 02.2 +0.8**
comp=N,9.7nm,0.4s,baz=358,slow=2.6,SNR=20
LPAZ pPKPbc **pPKPbc** **11 55 44.3 +0.4**
comp=N,24nm,1.1s,baz=320,slow=2.2,SNR=3.8
OTAV Otavalo 152.03 103 *e*P **PKPdf** **11 54 49.8 -6.1**
SIV San Ignacio 154.89 157 PKPab **PKPab** **11 55 25.0 +1.0**
ROSC El Rosal 156.98 95 PKPab **PKPab** **11 55 36.0 +2.3**
comp=N,5.8nm,0.4s,baz=54,slow=8.7,SNR=5.0

*NEIC **07** 11:42:46, 17.86N×66.85W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^14Nm; Mrr=0.10; Mθθ 1.37; Mϕϕ-1.27; Mrθ-0.30; Mrϕ 0.42; Mθϕ-0.58; Fault plane solution: M0 1.53000×10^14 NP1:ϕs 37.00000°, δ 85.00000°, λ -155.00000°. NP2:ϕs 305.00000°, δ 65.00000°, λ -5.00000°. Principal axes: T 1.5336, Plg 14.0000°, Azm 168.0000°; N 0.0007, Plg 65.0000°, Azm 47.0000°; P -1.5343, Plg 21.0000°, Azm 264.0000°;*
*NEIC **07** 11:42:46.6±0.7, 17.84N±0.03×66.84W±0.01, h10km±1km, ML3.8/35, Md3.7/5(RSPR), Mwr3.4/12(SLM) Error ellipse: s-maj=4.2km s-min=2.7km az=359.0*
*OSPL **07** 11:42:46.9±0.4, 17.82N×66.86W, h10km±7km, ML3.1, Presumed earthquake*
*SDD **07** 11:42:47.1±1.9, 17.88N×66.87W, h20km±11km, MD3.7, ML3.7, MW3.6, Presumed earthquake*

ISC 07 11:42:46.9±1.0, 17.92N±0.06×66.83W±0.02, h16km±6km, n35, σ0 56/49, 12C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.07**	**320**			**Pg**	**11 42 50.0**	**0.0**
GBPR						**Sg**	**11 42 52.9**	**+0.2**
MLPR	**Magueyes Islan**	**0.21**	**283**			**Pg**	**11 42 51.6**	**-0.2**
MLPR					Sg	**Sg**	**11 42 54.8**	**-0.2**
MLPR					IAML		11 42 55.3	
	24μm,0.6s							
MLPR					IAML		11 42 55.5	
	28μm,0.5s							
MLPR	**Magueyes Islan**	**0.21**	**283**	⇓*e*Pg		**Pg**	**11 42 51.5**	**-0.2**
MLPR				⇑*e*Sg		**Sg**	**11 42 54.8**	**-0.2**
MLPR					IAML		11 42 55.2	
	comp=N,8μm,0.4s							
OBIP	**Obispado Ponce**	**0.25**	**61**			**Pb**	**11 42 52.8**	**-0.2**
OBIP	**Obispado Ponce**	**0.25**	**61**	*i* P		**Pb**	**11 42 52.9**	**-0.2**
OBIP				*e*S		**Sb**	**11 42 57.6**	**+0.5**
OBIP					IAML		11 42 58.9	
	comp=Z,2μm,0.2s							
CRPR	**Cabo Rojo, PR**	**0.28**	**287**			**Pg**	**11 42 52.7**	**-0.2**
CRPR					IAML		11 42 57.0	
	comp=Z,8μm,0.3s							
CRPR					IAML		11 42 57.2	
	comp=Z,10μm,0.3s							
CRPR	**Cabo Rojo, PR**	**0.28**	**287**	*i* P		**Pg**	**11 42 52.7**	**-0.2**
CRPR				*e*S		**Sg**	**11 42 56.8**	**-0.2**
CRPR					IAML		11 42 57.0	
	comp=Z,10μm,0.2s							
CELP	**Cerrillos**	**0.28**	**58**			**Pb**	**11 42 53.6**	**-0.1**
CELP					IAML		11 42 59.4	
	comp=Z,20μm,0.3s							
CELP					IAML		11 42 59.4	
	comp=Z,9μm,0.2s							
CELP	**Cerrillos**	**0.28**	**58**	⇓*e*Pg		**Pb**	**11 42 53.6**	**-0.1**
CELP				⇑*e*Sg		**Sb**	**11 42 58.6**	**+0.4**
CELP					IAML		11 42 59.3	
	comp=N,7μm,0.3s							
UUPR	**Utuado, UPR, P**	**0.34**	**18**			**Pb**	**11 42 54.5**	**-0.2**
LSP	**Las Mesas**	**0.35**	**316**			**Pb**	**11 42 54.4**	**-0.4**
LSP						**Sb**	**11 43 00.2**	**+0.1**
PRSN	**Puerto Rico Se**	**0.42**	**315**			**Pg**	**11 42 55.5**	**+0.1**
PRSN	**Puerto Rico Se**	**0.42**	**315**	⇑*e*Pg		**Pg**	**11 42 55.4**	**+0.1**
PRSN				⇑*e*Sg		**Sg**	**11 43 00.8**	**-0.3**
PRSN					IAML		11 43 02.4	
	comp=N,11μm,0.2s							
AOPR	**Arecibo Observ**	**0.43**	**10**			**Pb**	**11 42 56.0**	**-0.1**
AOPR	**Arecibo Observ**	**0.43**	**10**	⇑*e*Pg		**Pb**	**11 42 56.0**	**-0.1**
AOPR				⇑*e*Sg		**Sb**	**11 43 02.4**	**0.0**
AOPR					IAML		11 43 02.8	
	comp=N,12μm,0.2s							
ECPR	**Experimental S**	**0.59**	**49**			**Pb**	**11 42 58.8**	**-0.2**
ECPR					IAML		11 43 09.9	
	comp=N,6μm,0.2s							
ECPR					IAML		11 43 09.9	
	comp=N,4μm,0.2s							
AGPR	**Aguadilla, PR**	**0.60**	**334**			**Pb**	**11 42 58.8**	**-0.3**
AGPR					IAML		11 43 07.9	
	comp=N,3μm,0.3s							
AGPR	**Aguadilla, PR**	**0.60**	**334**	⇑*e*Pg		**Pb**	**11 42 58.8**	**-0.3**
AGPR				⇑*e*Sg		**Sb**	**11 43 06.6**	**-0.8**
AGPR					IAML		11 43 07.8	
	comp=N,2μm,0.7s							
EMPR	**Esperanza - Ma**	**0.62**	**28**			**Pb**	**11 42 59.8**	**+0.4**
EMPR						**Sn**	**11 43 09.3**	**-1.4**
SJG	**San Juan**	**0.68**	**74**	Pg		**Pg**	**11 43 00.0**	**-0.2**
SJG	**San Juan**	**0.68**	**74**	*e*P		**Pg**	**11 43 00.2**	**0.0**
SJG				*e*S		**Sb**	**11 43 09.7**	**+0.2**
SJG	**San Juan**	**0.68**	**74**	⇓*e*Pg		**Pg**	**11 42 60.0**	**-0.2**
SJG				⇑*e*Sg		**Sb**	**11 43 09.7**	**+0.2**
SJG	**San Juan**	**0.68**	**74**	*i* P		**Pg**	**11 43 00.1**	**-0.2**
SJG					IAML		11 43 10.5	
	comp=Z,602nm,0.2s							
IDE	**Isla Desecheo**	**0.76**	**307**			**Pb**	**11 43 01.2**	**-0.7**
IDE						**Sb**	**11 43 11.7**	**-0.3**
PDPR	**Patillas Dam,**	**0.78**	**83**			**Pb**	**11 43 01.7**	**-0.4**
HUMP	**Col San Antoni**	**0.96**	**77**			**Pb**	**11 43 04.6**	**-0.6**
HUMP						**Sg**	**11 43 17.9**	**-0.3**
HUMP	**Col San Antoni**	**0.96**	**77**		IAML		11 43 21.6	
	comp=Z,2μm,0.3s							
HUMP					IAML		11 43 21.8	
	comp=Z,2μm,0.3s							
CUPR	**Culebra, Puert**	**1.52**	**75**	Pn		**Pb**	**11 43 14.6**	**-0.3**
DR12	**Loma Pena Alta**	**2.57**	**290**			**Pn**	**11 43 29.4**	**+1.4**
HATOM	**Hato Mayor del**	**2.57**	**290**	⇑*e*Pg		**Pn**	**11 43 29.3**	**+1.3**
HATOM					IAML		11 44 12.3	
	comp=N,97nm,1.2s							
SMDR	**Samana, DR**	**2.61**	**302**	⇑*e*Pg		**Pb**	**11 43 32.6**	**-0.8**
SMDR					IAML		11 44 21.3	
	comp=N,99nm,0.7s							
DR08	**Loma La Naviza**	**3.20**	**289**	⇑*e*Pg		**Pn**	**11 43 38.3**	**+1.6**
DR08					IAML		11 44 36.6	
	comp=N,1μm,0.2s							
BANI	**BANI**	**3.38**	**278**	Pn		**Pn**	**11 43 40.4**	**+1.2**
SMRT	**St. Maarten**	**3.58**	**87**	Pn		**Pn**	**11 43 42.0**	**+0.2**
SMRT	**St. Maarten**	**3.58**	**87**	x		**Pn**	**11 43 42.3**	**+0.5**

DJA 07 11:48:11.6±0.3, 7°S±2°×10°6E±°, h10km, M4.2/32, mB7.0/1, mb4.6/4, MLv4.0/32, Mw(mB)6.9/1, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.68**	**49**	P		Pg	11 48 25.1	+0.4
SKJI				S		Sb	11 48 35.5	+0.6
CGJI	**Cibinong**	**0.90**	**337**	P		Pg	11 48 28.4	-0.6
CGJI				S		Sg	11 48 40.4	-0.3
DBJI	**Dramaga**	**1.14**	**38**	P		Pb	11 48 32.7	-0.7
DBJI				S		Sg	11 48 48.5	+0.3
SBJI	**Serang**	**1.32**	**4**	P		Pn	11 48 35.6	-0.6
TNG	**Tangerang**	**1.41**	**25**	P		Pn	11 48 37.2	-0.1
TNG				P		Pb	11 48 37.3	-0.7
BBJI	**Bungbulang**	**1.60**	**91**	P		Pn	11 48 38.1	-1.9
LEM	**Lembang**	**1.68**	**69**	P		Pb	11 48 42.9	+0.1
KPJI	**Karang Pucung**	**2.87**	**88**	P		Pn	11 48 58.5	+1.1
KLSI		**3.04**	**335**	P		Pn	11 48 59.2	-0.5

LWLI Liwa 3.12 321 P Pn 11 49 01.6 +0.6
CTJI Waduk Cacaban 3.15 82 P Pg 11 49 11.2 -0.8
MDSI Maura Dua 3.48 328 P Pn 11 49 05.8 0.0
YOGI Yogyakarta 4.23 95 P Pn 11 49 16.8 +0.6
UGM Wanagama 4.47 96 P Pn 11 49 18.9 -0.6
TPI Tanjungpandan 4.93 19 P Pn 11 49 25.8 0.0
PCJI Pacitan 5.14 99 P Pn 11 49 27.5 -1.2
0.5nm55nm,0.8s
SNJI Sawahan-Nganju 5.68 94 P Pn 11 49 37.0 +0.7
0.3nm37nm,0.7s
JAGI Jajag, Banyuwa 8.10 98 P Pn 11 50 10.4 +1.0

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*NIED **07** 11:56:52.4, 35°.96N×140°.30E, h58km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.10; $M_{\theta\theta}$1.39; $M_{\phi\phi}$-0.29; $M_{r\theta}$-0.04; $M_{\theta\phi}$-0.25; $M_{\phi r}$0.37; Fault plane solution: $M_0$1.34000×10^{15} NP1: ϕ_s258.00000°, δ47.00000°, λ-120.00000°. NP2: ϕ_s118.00000°, δ51.00000°, λ-62.00000°.*
*JMA **07** 11:56:52.4±0.2, 36°.0N±0°.6×140°.3E±0°.8, h58km±1km, MD4.1/27, MV3.5/27, SOUTHERN IBARAKI PREF*
JMA Felt II J1 at SOUTHERN IBARAKI PREF .
*NEIC **07** 11:56:54.4±1.4, 35°.86N±0°.05×140°.21E±0°.07, h73km±7km, mb4.3/34, Error ellipse: s-maj=10.8km s-min=1.8km az=131.0*
*IDC **07** 11:56:54.3±1.4, 35°.86N×140°.23E, h78km±13km, mb3.7/19, mbtmp4.0/24, Error ellipse: s-maj=16.5km s-min=7.4km az=68.0*
ISC 07 11:56:52.5±0.8, **35°.92N**±0°.04×**140°.35E**±0°.05, **h61**km±7km, **n122**, σ**1s.46**/104, **mb4.2**/36, **3D, Near east coast of eastern Honshu**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JIHU Itakohorinouch 0.15 72 P Pn 11 57 01.8 0.0
JIHU A A 11 57 01.8
comp=N,52nm,0.7s,comp=E,34nm,1.2s
JSMT Sammumatsuo 0.29 163 iP Pn 11 57 03.3 +0.8
JSMT A A 11 57 03.3
comp=N,38nm,4.1s,comp=E,27nm,2.2s
JYT Yasato 0.33 338⇓iP Pn 11 57 02.3 -0.6
JYT A A 11 57 02.3
comp=N,36nm,0.4s,comp=E,51nm,0.4s
JYT ⇓eS Sn 11 57 10.0 -0.5
JCAJ Choshiashikaji 0.46 115 A A 11 57 04.3
comp=N,12nm,1.3s,comp=E,10.0nm,2.7s
JHYU Hitachinakayam 0.47 25 A A 11 57 03.6
comp=N,12nm,0.4s,comp=E,16nm,0.6s
TOK Tokyo 0.53 244 A A 11 57 04.4
comp=N,55nm,1.2s,comp=E,45nm,0.7s
JCCN Chibachonan 0.54 190 A A 11 57 05.1
comp=N,28nm,1.0s,comp=E,18nm,1.8s
JHO Hitachi 0.71 15 A A 11 57 06.4
comp=N,9.0nm,3.5s,comp=E,8.0nm,2.3s
JKUC kamogawauchiur 0.77 189 A A 11 57 07.9
comp=N,10.0nm,3.2s,comp=E,10.0nm,1.3s
JAG Ashikaga 0.88 305⇓iP Pn 11 57 08.8 -0.3
JAG A A 11 57 08.8
comp=N,16nm,0.6s,comp=E,11nm,0.8s
JYO Yokosk 0.89 219 A A 11 57 09.2
comp=N,11nm,2.0s,comp=E,10.0nm,1.7s
TATJ Tateyama 2 0.96 203 A A 11 57 10.3
comp=N,17nm,3.3s,comp=E,13nm,1.8s
JSB Shiboa 1.10 342 A A 11 57 11.3
comp=N,11nm,3.4s,comp=E,12nm,1.3s
JFFD Fukushimafurud 1.18 8 A A 11 57 12.6
comp=N,8.0nm,1.4s,comp=E,5.0nm,5.5s
JKT Katashina 1.23 314 A A 11 57 13.0
comp=N,10.0nm,1.1s,comp=E,11nm,0.4s
ONAJ Iwakimizuishiy 1.24 17 A A 11 57 13.4
comp=N,7.0nm,0.8s,comp=E,11nm,0.7s
JHTM Izuhatsuma 1.45 229 A A 11 57 16.9
comp=N,19nm,0.5s,comp=E,20nm,0.6s
JFY Yanaizu 1.57 341 A A 11 57 17.9
comp=N,3.0nm,1.9s,comp=E,3.0nm,1.7s
MJAR Matsushiro Arr 1.84 290 P Pn 11 57 21.5 -0.2
comp=E,60nm,0.4s,baz=92,slow=8.8,SNR=253
MJAR S Sn 11 57 44.7 +0.8
comp=E,48nm,0.3s,baz=78,slow=17,SNR=5.3
MJAR Matsushiro Arr 1.84 290 Pn Pn 11 57 22.1 +0.3
MAJO Matsushiro 1.84 290 P Pn 11 57 22.8 +1.0
MAJO Matsushiro 1.84 290 Pn Pn 11 57 22.3 +0.5
MJB9 Matsu-Tunnel 1.84 291 Pn Pn 11 57 23.6 +1.8
SHZ3 Shizuoka 3 1.94 245 A A 11 57 23.5
comp=N,5.0nm,1.0s,comp=E,5.0nm,0.7s
JYAR Yonezawaarcadi 2.00 355 A A 11 57 23.9
comp=N,8.0nm,1.1s,comp=E,5.0nm,1.0s
JSG Sagara 2.16 236 P Pn 11 57 27.6 +1.5
JSG Sagara 2.16 236 Pn Pn 11 57 27.0 +0.9
JGF Kuroka 2.45 263 P Pn 11 57 31.9 +1.8
JGF Kuroka 2.45 263 S Sn 11 58 03.7 +4.7
JGF Kuroka 2.45 263 Pn Pn 11 57 32.0 +1.8
INU Inuyama 2.77 259 P Pn 11 57 35.6 +1.2
INU Inuyama 2.77 259 Pn Pn 11 57 35.7 +1.3
JHJ Hachijo jima 2 2.83 190 P Pn 11 57 35.1 -0.2
comp=E,229nm,0.3s,baz=15,slow=6.7,SNR=18
JHJ S Sn 11 58 09.2 +1.0
comp=E,339nm,0.4s,baz=261,slow=23,SNR=8.5
JHJ2 Mitsune 2.83 189 P Pn 11 57 35.5 +0.2
JHJ2 Mitsune 2.83 189 S Sn 11 58 10.0 +1.7
JHJ2 Mitsune 2.83 189 Pn Pn 11 57 35.6 +0.3
JMN Monobe 5.75 250 P Pn 11 58 16.5 +1.2
JMN Monobe 5.75 250 Pn Pn 11 58 15.5 +0.2
JEM Erimo 6.47 19 P Pn 11 58 24.2 -0.9
JNU Nakatsue 8.29 253 P Pn 11 58 50.8 +0.7
comp=E,4.4nm,0.7s,baz=129,slow=6.6,SNR=6.3
ASAJ Asahikawa 8.37 11 P Pn 11 58 49.4 -1.6
comp=E,4.5nm,0.3s,baz=221,slow=8.2,SNR=24
ASAJ S Sn 12 00 19.8 -4.2
comp=E,6.3nm,0.8s,baz=80,slow=29,SNR=1.9
JKA Kamikawa-asahi 8.37 11 Pn Pn 11 58 48.6 -2.5
JCJ Chichijima 8.93 169 P Pn 11 58 54.4 -4.5
comp=E,46nm,0.4s,baz=310,slow=14,SNR=7.3
JCJ S Sn 12 00 27.1 -11
comp=E,82nm,0.8s,baz=134,slow=11,SNR=2.4
JCJ Chichijima 8.93 169 P Pn 11 58 58.5 -0.4
JCJ Chichijima 8.93 169 Pn Pn 11 58 53.4 -5.5
KSRS Korea Array 10.10 282 P Pn 11 59 15.7 +1.0
comp=E,1.3nm,0.5s,baz=95,slow=14,SNR=7.4
USRK Ussuriysk Ar. 10.46 325 P Pn 11 59 21.8 +2.2
comp=E,5.7nm,0.9s,baz=132,slow=14,SNR=4.7
YSS Yuzhno-Sakhali 11.17 9 Pn Pn 11 59 30.0 +0.7
KLR Kul'dur 14.72 337 P Pn 12 00 17.2 +0.1
comp=E,0.7nm,0.6s,baz=142,slow=12,SNR=3.9
NACB Ninganchiao 19.97 239 P P 12 01 15.7 -4.1
NACB IAmb IAmb 12 01 24.2
comp=Z,16nm,1.1s
YULB Yu-li 20.69 238 P P 12 01 22.9 -4.7
YULB IAmb IAmb 12 01 35.5
comp=Z,15nm,1.0s
TPUB Ta-pu 21.21 239 P P 12 01 29.4 -3.8
TPUB IAmb IAmb 12 01 36.5
comp=Z,30nm,1.4s
WHN Wuhan 22.36 264 P P 12 01 45.1 -0.4
WHN pmax pmax
comp=Z,16nm,0.7s
ENH Enshi 26.39 267 P P 12 02 21.3 -2.0
ENH IAmb IAmb 12 02 22.6
comp=Z,9.8nm,0.7s
SONM Songino Array 27.72 306 P P 12 02 33.8 -1.3
comp=Z,0.6nm,0.5s,baz=105,slow=9.4,SNR=5.6
comp=Z,0.6nm,0.5s
SONM Songino Array 27.72 306 P P 12 02 35.0 -0.2
H11N2 WAKE ISLAND Hy 28.36 118 T T 12 32 32.5
baz=308,slow=75,SNR=24
H11N1 WAKE ISLAND Hy 28.36 118 T T 12 32 28.7
baz=308,slow=75,SNR=21
H11N3 WAKE ISLAND Hy 28.37 118 T T 12 32 36.2
baz=308,slow=75,SNR=25
H11S1 WAKE ISLAND Hy 29.02 120 T T 12 33 48.5
baz=314,slow=76,SNR=19
H11S3 WAKE ISLAND Hy 29.02 120 T T 12 33 50.9
baz=314,slow=76,SNR=8.8
H11S2 WAKE ISLAND Hy 29.03 120 T T 12 33 50.5
baz=314,slow=76,SNR=11
AMKA Amchitka 31.71 49 P P 12 03 13.0 +2.8
TIXI Tiksi 36.30 354 P P 12 03 51.9 +2.2
comp=Z,2.5nm,0.4s,baz=164,slow=5.7,SNR=22
comp=Z,2.5nm,0.4s
TIXI Tiksi 36.30 354 P P 12 03 52.6 +2.8
TIXI IAmb IAmb 12 03 53.6
comp=Z,4.5nm,0.8s
GAMB Gambell 40.11 31 P P 12 04 22.6 +0.8
CMAR Chiang Mai Arr 40.38 256 P P 12 04 24.1 -0.6
comp=Z,0.5nm,0.3s,baz=56,slow=6.9,SNR=1.6
comp=Z,0.5nm,0.3s
ZALV Zalesovo Beam 42.04 313 P P 12 04 37.4 -0.4
comp=Z,0.8nm,0.5s,baz=87,slow=8.9,SNR=5.9
ZALV PcP PcP 12 06 31.4 -0.4
comp=Z,0.9nm,0.6s,baz=58,slow=3.9,SNR=4.1
comp=Z,0.8nm,0.5s
ZALV Zalesovo Beam 42.04 313 P P 12 04 37.3 -0.5
ZALV PcP 12 06 31.2 -0.5
K13K Kusilvak Mount 42.71 35 P P 12 04 43.4 +0.3
K13K IAmb IAmb 12 04 45.5
comp=Z,5.9nm,1.3s
ANM Nome 42.99 31 P P 12 04 47.1 +1.7
J14K Nanvaranak Lak 43.37 34 P P 12 04 49.5 +1.0
J14K IAmb IAmb 12 05 19.6
comp=Z,7.3nm,1.4s
F15K North Star Dit 43.59 29 P P 12 04 52.5 +2.2
MKAR Makanchi Array 43.99 303 P P 12 04 53.5 -0.3
comp=Z,0.8nm,0.7s,baz=91,slow=9.7,SNR=6.5
comp=Z,0.8nm,0.7s
KURK Kurchatov 45.95 309 P P 12 05 08.5 -0.7
KURK IAmb IAmb 12 05 15.2
comp=Z,3.8nm,0.7s
KURBB Kurchatov Arra 46.02 309 P P 12 05 08.9 -0.8
comp=Z,1.5nm,0.4s,baz=83,slow=7.5,SNR=13
comp=Z,1.5nm,0.4s
G18K Tagagawik 46.04 30 P P 12 05 11.0 +1.3
G18K IAmb IAmb 12 05 11.5
comp=Z,2.0nm,0.7s
H21K Melozitna Rive 48.41 31 P P 12 05 30.0 +1.8
H21K IAmb IAmb 12 05 30.4
comp=Z,4.1nm,1.3s
BVAR Borovoye Array 50.69 313 P P 12 05 47.9 +2.2
comp=Z,1.1nm,0.5s,baz=100,slow=9.1,SNR=2.6
ILAR Eielson Array 50.90 32 P P 12 05 47.5 +0.5
comp=Z,1.9nm,0.6s,baz=269,slow=6.0,SNR=30
comp=Z,1.9nm,0.6s
ILAR Eielson Array 50.90 32 P P 12 05 47.1 +0.1
BMAR Burnt Mountain 51.72 28 P P 12 05 55.0 +1.8
KK31 Karatay Array 52.94 301 P P 12 06 02.1 -0.5
KK31 IAmb IAmb 12 06 16.7
comp=Z,3.3nm,1.1s
KKAR Karatay Array 52.94 301 P P 12 06 02.3 -0.3
L27K Beaver Creek, 53.28 34 P P 12 06 06.3 +1.5
L27K IAmb IAmb 12 06 11.2
comp=Z,3.8nm,1.1s
BCAR Beaver Creek A 53.30 34 P P 12 06 06.2 +1.2
WB0 Warramunga Arr 55.67 187 P P 12 06 21.6 -0.9
WR8 Warramunga Arr 55.84 187 P P 12 06 22.7 -1.0
WRA Warramunga Arr 55.84 187 P P 12 06 23.0 -0.7
comp=Z,3.5nm,0.5s,baz=2.8,slow=7.3,SNR=107
comp=Z,3.5nm,0.5s
WRA Warramunga Arr 55.84 187 P P 12 06 22.4 -1.3
ARTI Arti 56.73 319 P P 12 06 29.3 -0.5
AB31 Akbulak array 58.00 310 P P 12 06 37.9 -0.9
AB31 IAmb IAmb 12 06 39.1
comp=Z,1.7nm,0.9s
ABKAR Akbulak array 58.00 310 P P 12 06 38.6 -0.2
ASAR Alice Springs 59.57 187 P P 12 06 49.8 -0.1
comp=Z,0.5nm,0.3s,baz=17,slow=12,SNR=15
comp=Z,0.5nm,0.3s
ASAR Alice Springs 59.57 187 P P 12 06 49.0 -0.9
MBWA Marble Bar 60.03 202 P P 12 06 52.7 -0.3
INKA Innaminka 63.32 180 P P 12 07 14.5 -0.5
INKA IAmb IAmb 12 07 15.5
comp=Z,2.9nm,0.8s
YKA Yellowknife Ar 65.20 30 P P 12 07 26.2 -0.8
comp=Z,0.3nm,0.8s,baz=299,slow=7.4,SNR=3.7
comp=Z,0.3nm,0.8s
STKA Stephens Creek 67.45 179 P P 12 07 41.1 -0.5
comp=Z,3.1nm,0.7s,baz=355,slow=4.9,SNR=5.3
comp=Z,3.1nm,0.7s
STKA Stephens Creek 67.45 179 P P 12 07 41.1 -0.5
FIA1 FINESS Array S 69.40 332 P P 12 07 53.4 -0.1
FINES FINESS Array B 69.40 332 P P 12 07 53.0 -0.6
comp=Z,1.1nm,0.6s,baz=73,slow=6.4,SNR=5.8
comp=Z,1.1nm,0.6s
FINES FINESS Array B 69.40 332 P P 12 07 53.4 -0.1
ILON Igloolik, Nuna 70.55 15 P P 12 08 00.2 -0.3
PINE Pine Mountain 71.72 49 P P 12 08 10.2 +2.0
PINE IAmb IAmb 12 08 22.1
comp=Z,8.5nm,1.4s
AKASG Malin Array Be 74.65 322 P P 12 08 24.6 -0.6
comp=Z,0.7nm,0.3s,baz=51,slow=5.8,SNR=4.9
comp=Z,0.7nm,0.3s
NC405 NORSAR Array S 74.66 337 P P 12 08 25.3 +0.2
HFS Hagfors 74.75 335 P P 12 08 25.3 -0.3
comp=Z,1.0nm,0.6s,baz=143,slow=0.7,SNR=4.5
comp=Z,1.0nm,0.6s
NOA NORSAR Array B 74.88 337 P P 12 08 26.4 0.0
comp=Z,1.2nm,0.8s,baz=39,slow=5.9,SNR=4.1
comp=Z,1.2nm,0.8s
LRM Limekiln Ridge 75.55 44 P P 12 08 31.6 +0.8
NVAR Mina Array Bea 76.35 52 P P 12 08 36.8 +1.4
comp=Z,1.1nm,0.8s,baz=299,slow=5.9,SNR=7.8
comp=Z,1.1nm,0.8s
NVAR Mina Array Bea 76.35 52 P P 12 08 36.4 +0.9
BURAR Bucovina Array 78.65 321 P P 12 08 47.9 -0.1
BRTR Keskin Array B 78.94 311 P P 12 08 49.3 -0.5
comp=Z,0.6nm,0.7s,baz=71,slow=5.2,SNR=3.1
comp=Z,0.6nm,0.7s
PDAR Pinedale Array 79.06 45 P P 12 08 50.3 -0.1
comp=Z,0.4nm,0.6s,baz=82,slow=1.5,SNR=7.0
comp=Z,0.4nm,0.6s
PDAR Pinedale Array 79.06 45 P P 12 08 50.7 +0.2
SRU San Rafael Swe 80.80 48 P P 12 09 00.9 +1.1
SRU IAmb IAmb 12 09 01.4
comp=Z,2.8nm,0.8s
PV10 Paradox Valley 82.16 48 P P 12 09 08.3 +1.1
PV10 IAmb IAmb 12 09 10.2
comp=Z,7.6nm,1.1s
PV01 Paradox Valley 82.59 48 P P 12 09 10.5 +1.1
PV01 IAmb IAmb 12 09 31.5
comp=Z,5.2nm,1.5s
TXAR Lajitas Array 91.48 52 P P 12 09 53.4 +0.7
comp=Z,0.6nm,0.6s,baz=313,slow=2.4,SNR=8.9
comp=Z,0.6nm,0.6s
TXAR Lajitas Array 91.48 52 P P 12 09 53.6 +1.0
LPAZ La Paz 148.00 60 PKPbc PKPbc 12 16 32.5 +0.3
comp=Z,0.7nm,0.3s,baz=47,slow=1.4,SNR=4.4

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*IDC **07** 12:09:00.8±1.0, 28°.51N×105°.31E, h0km, mb3.4/6, mbtmp3.4/8, ML3.4/2, Error ellipse: s-maj=35.0km s-min=18.7km az=66.0*
ISC 07 12:09:05.6±1.0, **28°.5N**±0°.1×**105°.3E**±0°.2, **h35**km, **n8**, σ**0s.75**/8, **mb3.4**/5, **Sichuan**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CMAR Chiang Mai Arr 11.55 212 Pn Pn 12 11 47.5 -0.5
0.1nm,0.3s,baz=28,slow=12,SNR=7.1
0.6nm,0.6s
SONM Songino Array 19.34 2 P P 12 13 28.3 +0.3
0.1nm,0.3s,baz=179,slow=13,SNR=3.0
0.3nm,0.5s
KSRS Korea Array 20.95 59 P P 12 13 44.4 -1.0
0.5nm,0.6s,baz=247,slow=10,SNR=2.9
0.5nm,0.6s
MKAR Makanchi Array 25.66 322 P P 12 14 31.5 -0.5
0.3nm,0.7s,baz=128,slow=11,SNR=2.6
0.3nm,0.7s
ZALV Zalesovo Beam 29.53 335 P P 12 15 06.4 -0.1
0.3nm,0.4s,baz=154,slow=7.3,SNR=2.5
0.3nm,0.4s
KURBB Kurchatov Arra 29.96 325 P P 12 15 11.1 +0.6
0.2nm,0.5s,baz=126,slow=9.3,SNR=2.1
0.2nm,0.5s
WRA Warramunga Arr 55.72 146 P P 12 18 39.4 +0.5
0.6nm,0.5s,baz=336,slow=8.3,SNR=20
0.6nm,0.5s
ASAR Alice Springs 58.72 149 P P 12 19 00.7 +0.7
0.6nm,0.7s,baz=328,slow=7.2,SNR=8.1
0.6nm,0.7s

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*WEL **07** 12:31:47.9±1.1, 34°S±9°×17°9W±1°4, h12km, M4.2/12, mB4.8/7, ML4.2/17, MLv4.3/12, Mw(mB)4.1/7, Error ellipse: s-maj=19.9km s-min=8.3km az=115.0, confirmed*
*IDC **07** 12:31:54.5±3.9, 33°.90S×179°.12W, h71km±46km, mb3.6/3, mbtmp4.0/4, ML4.3/1, Error ellipse: s-maj=66.7km s-min=24.8km az=132.0*
ISC 07 12:31:47.4±1.9, **33°.85S**±0°.09×**178°.4W**±0°.2, **h50**km, **n41**, σ**1s.23**/61, **South of Kermadec Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MXZ Matakaoa Point 4.59 215 P Pn 12 32 55.3 +1.1
MXZ S Sn 12 33 47.4 +1.2
WMGZ Waiomatatini S 4.75 212 P Pn 12 32 58.3 +1.9
WMGZ S Sn 12 33 53.2 +3.1
PKGZ Pakihiroa 4.94 215 P Pn 12 32 59.0 0.0
PKGZ S Sn 12 33 53.5 -1.3
HAZ Te Kaha 5.00 218 P Pn 12 33 00.2 +0.4
HAZ S Sn 12 33 59.5 +3.2
PUZ Puketiti 5.02 212 P Pn 12 33 00.2 0.0
PUZ S Sn 12 33 58.2 +1.2
RUGZ Raukumara Rang 5.21 217 P Pn 12 33 02.9 0.0
RUGZ S Sn 12 34 02.3 +0.6
TWGZ Tauwhareparae 5.24 213 P Pn 12 33 03.8 +0.7
TWGZ S Sn 12 34 03.8 +1.6
MWZ Matawai 5.57 215 P Pn 12 33 07.6 -0.2
MWZ S Sn 12 34 10.9 +0.4
URZ Urewera 5.72 218 P Pn 12 33 10.0 +0.3
9.8nm,0.3s,baz=270,slow=2.0,SNR=66
URZ S Sn 12 34 12.2 -1.9
26nm,0.6s,baz=146,slow=20,SNR=9.7
18nm,0.3s
URZ Urewera 5.72 218 P Pn 12 33 09.4 -0.4
URZ S Sn 12 34 12.7 -1.4
RIGZ Rimuhau 5.77 212 P Pn 12 33 10.7 +0.3
RIGZ S Sn 12 34 14.9 -0.3
SNGZ Shannon Statio 6.02 214 P Pn 12 33 15.1 +1.3
SNGZ S Sn 12 34 21.8 +0.4
RTZ Ruatahuna 6.06 217 P Pn 12 33 14.4 -0.1
MUGZ Murupara 6.06 219 P Pn 12 33 14.3 -0.1
MUGZ S Sn 12 34 21.1 -1.4
KNZ Kokohu 6.07 211 P Pn 12 33 14.3 -0.1
MHGZ Mahia Peninsul 6.08 208 P Pn 12 33 16.5 +1.8
KMRZ Kaimai 6.10 228 P Pn 12 33 16.5 +1.4
RAHZ Arahi 6.25 215 P Pn 12 33 17.8 +0.8
RAHZ S Sn 12 34 27.2 +0.2
WHHZ Waihua 6.31 213 P Pn 12 33 19.4 +1.7
WHHZ S Sn 12 34 28.6 +0.1
MTHZ Maungataniwha 6.31 216 P Pn 12 33 18.4 +0.5
MTHZ S Sn 12 34 28.6 -0.1
WCZ Waipu Caves 6.34 249 P Pn 12 33 18.8 +0.6
NMHZ Naumai 6.52 215 P Pn 12 33 21.9 +1.1
NMHZ S Sn 12 34 33.8 -0.1
BKZ Black Stump Fm 6.73 216 P Pn 12 33 23.3 -0.3
BKZ S Sn 12 34 37.3 -1.6
OUZ Omahuta 6.77 256 P Pn 12 33 24.0 -0.1
KWHZ Kaweka Forest 6.96 215 P Pn 12 33 26.7 -0.1
KWHZ S Sn 12 34 43.6 -1.1
KATZ Kakaramea 7.00 221 P Pn 12 33 28.2 +0.7
KAHZ Kahuranaki 7.05 211 P Pn 12 33 27.2 -0.8
TMVZ Te Maari 7.10 221 P Pn 12 33 27.9 -0.9
TMVZ S Sn 12 34 46.4 -1.7
NTVZ North Tongarir 7.10 221 P Pn 12 33 28.8 0.0
ETVZ East Tongariro 7.11 220 P Pn 12 33 28.6 -0.3
OTVZ Oturere 7.15 220 P Pn 12 33 29.7 +0.1
KRHZ Kereru 7.16 215 P Pn 12 33 28.9 -0.5
KRHZ S Sn 12 34 45.8 -3.6
SNVZ South Ngauruho 7.18 220 P Pn 12 33 30.3 +0.3
HIZ Hauiti 7.19 228 P Pn 12 33 31.3 +1.5
PNHZ Pukenui 7.45 214 P Pn 12 33 32.1 -1.4
BFZ Birch Farm 8.06 211 P Pn 12 33 41.0 -0.7
MRZ Mangatainoka R 8.34 214 P Pn 12 33 43.1 -2.5
AFI Afiamalu 20.73 18 P Pn 12 36 33.2 +6.5
7.6nm,0.6s,baz=180,slow=12,SNR=1.4
7.6nm,0.6s
ASAR Alice Springs 42.73 271 P P 12 39 40.0 +0.2
0.7nm,0.6s,baz=114,slow=8.6,SNR=15
0.7nm,0.6s
WRA Warramunga Arr 44.02 276 P P 12 39 50.5 +0.2
0.8nm,0.4s,baz=115,slow=8.5,SNR=26
0.8nm,0.4s
FINES FINESS Array B 148.24 338 PKPbc PKPab 12 51 29.7 -0.5
1.0nm,0.7s,baz=44,slow=6.1,SNR=7.7

IDC 07 12:36:07.0±10.0, **5°.49S**×**153°.79E**, **h161**km±74km, **mb3.0**/2, **mbtmp3.5**/3, **Error ellipse: s-maj=122.1km s-min=62.6km az=118.0, New Ireland region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PMG Port Moresby 7.64 239 P Pn 12 37 55.1 -0.5
6.9nm,0.8s,baz=147,slow=5.8,SNR=2.5
PMG S Sn 12 39 22.9 +1.8
7.5nm,0.6s,baz=32,slow=17,SNR=4.5
WRA Warramunga Arr 23.75 231 P P 12 41 04.8 -0.1
1.1nm,0.8s,baz=55,slow=9.8,SNR=10
1.1nm,0.8s
ASAR Alice Springs 26.33 225 P P 12 41 27.9 -0.3
0.3nm,0.5s,baz=57,slow=9.2,SNR=7.3
0.3nm,0.5s
TORD Torodi Ar. Bea 151.46 287 PKPbc PKPbc 12 55 43.2 +0.2
0.2nm,0.4s,baz=306,slow=1.6,SNR=2.2

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*IDC **07** 12:38:50.6±2.1, 9°.07S×122°.44E, h0km, mb3.6/3, mbtmp3.5/5, ML3.5/2, Error ellipse: s-maj=241.2km s-min=28.3km az=55.0*
*DJA **07** 12:38:59.0±1.0, 10°S±3°×12°2E±°, h23km±9km, M4.0/16, mb4.5/2, MLv3.7/16*
ISC 07 12:38:57.5±1.0, **9°.54S**±0°.06×**121°.86E**±0°.05, **h35**km, **n17**, σ**3s.23**/19, **mb3.6**/3, **Savu Sea**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
EDFI Ende, Flores 0.80 348 P Pn 12 39 14.3 +1.8
EDFI S Sn 12 39 25.5 +2.2
MMRI Maumere 0.98 23 P Pn 12 39 16.8 +2.0
MMRI S Sn 12 39 30.4 +3.0
WSI Waingapu 1.54 265 P Pn 12 39 25.2 +2.7
BATI Baumata 1.90 110 P Pn 12 39 31.9 +4.4
LBFI Labuhan Bajo, 2.21 298 P Pn 12 39 35.0 +3.3
SOEI Soe 2.39 95 P Pn 12 39 38.1 +3.8
WBSI Waikabubak, Su 2.43 267 P Pn 12 39 36.9 +2.1
BSSI Bau Bau, Buton 3.64 338 P Pn 12 39 52.7 +1.3
DBNI Kabupaten Domp 3.65 286 P Pn 12 39 55.0 +3.5
PLAI Plampang 4.09 280 P Pn 12 40 00.5 +2.9
TWSI Taliwang, Sumb 4.97 279 P Pn 12 40 13.1 +3.3
IGBI Denpasar 6.66 276 P Pn 12 40 35.7 +2.7
WRA Warramunga Arr 15.88 132 Pn Pn 12 42 33.7 -4.9
0.2nm,0.3s,baz=311,slow=15,SNR=7.4
WRA Sn Sn 12 45 18.2 -15
0.3nm,0.3s,baz=309,slow=24,SNR=7.0
0.2nm,0.3s
ASAR Alice Springs 18.16 142 P Pn 12 43 05.3 -1.8
0.2nm,0.3s,baz=316,slow=12,SNR=12
ASAR S Sn 12 46 12.4 -17
0.9nm,0.7s,baz=319,slow=23,SNR=5.3
0.3nm,0.3s
MKAR Makanchi Array 66.25 331 P P 12 49 40.2 -1.9
0.3nm,0.5s,baz=144,slow=7.6,SNR=5.0
0.3nm,0.5s
ZALV Zalesovo Beam 70.58 338 P P 12 50 05.7 -3.2
0.4nm,0.3s,baz=132,slow=7.8,SNR=2.4
0.4nm,0.3s
KURBB Kurchatov Arra 70.72 332 P P 12 50 07.2 -2.7
0.2nm,0.6s,baz=128,slow=6.1,SNR=1.5
0.2nm,0.6s

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*IDC **07** 12:39:50.3±0.9, 41°.02S×91°.80W, h0km, mb4.1/6, mbtmp4.1/6, Error ellipse: s-maj=45.7km s-min=25.5km az=104.0*
*NEIC **07** 12:39:52.7±1.9, 40°.86S±0°.07×91°.7W±0°.2, h10km±1km, mb4.5/25, Error ellipse: s-maj=21.6km s-min=8.6km az=243.0*
ISC 07 12:39:51.8±0.6, **40°.8S**±0°.1×**91°.82W**±0°.08, **h10**km, **n53**, σ**1s.30**/45, **mb4.5**/16, **West Chile Rise**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
H03S2 Juan Fernandez 12.41 60 T T 12 55 42.9
baz=230,slow=73,SNR=84
H03S1 Juan Fernandez 12.42 60 T T 12 55 44.5
baz=230,slow=73,SNR=109
H03S3 Juan Fernandez 12.43 60 T T 12 55 43.5
baz=230,slow=73,SNR=111
H03N3 Juan Fernandez 12.65 58 T T 12 55 55.5
baz=223
H03N2 Juan Fernandez 12.65 58 T T 12 56 00.3
baz=223
H03N1 Juan Fernandez 12.67 58 T T 12 55 56.2

	baz=223						
GO06	Curarrehue	15.60	92	Pn	Pn	12 43 30.1	-1.7
GO06				IAmb	IAmb	12 44 06.4	
	comp=Z,26nm,1.4s						
PLCA	Paso Flores	16.11	97	Pn	P	12 43 45.2	+3.5
	baz=301,slow=14,SNR=3.3						
BI02	San Fabin de	16.56	82		Pn	12 43 44.0	-0.1
BI02				IAmb	IAmb	12 44 13.4	
	comp=Z,41nm,1.5s						
GO05	Hualane	16.73	76	P	Pn	12 43 46.7	+0.5
ZON	Zonda	20.80	71	P	P	12 44 29.8	-3.5
LCO	Las Campanas	20.90	62	P	P	12 44 31.9	-2.7
AC05	El Transito	21.30	63	P	P	12 44 39.0	+0.3
AC05				IAmb	IAmb	12 44 54.8	
	comp=Z,27nm,1.2s						
TRQA	Tornquist	23.16	93	P	P	12 44 58.6	+0.2
TRQA				IAmb	IAmb	12 45 14.8	
	comp=Z,31nm,1.5s						
AC02	Maricunga	23.37	60	P	P	12 44 59.6	-1.5
LPAZ	La Paz	31.92	47	P	P	12 46 19.3	+1.0
	comp=Z,0.6nm,0.7s,baz=180,slow=7.0,SNR=5.8						
	comp=Z,0.6nm,0.7s						
LPAZ	La Paz	31.92	47	P	P	12 46 16.4	-1.9
AQDB	Aquidauana	36.76	67	P	P	12 47 00.0	+0.5
AQDB				IAmb	IAmb	12 47 07.7	
	comp=Z,10.0nm,1.1s						
TRCB	Terra Rica	37.48	73	P	P	12 47 04.0	-1.7
VILB	Vilhena	39.20	54	P	P	12 47 20.0	-0.2
VILB				IAmb	IAmb	12 47 27.9	
	comp=Z,7.1nm,0.7s						
ROSC	El Rosal	48.21	24	P	P	12 48 33.4	+0.3
	comp=Z,5.0nm,0.3s,baz=88,slow=22,SNR=1.6						
	comp=Z,5.0nm,0.3s						
ROSC	El Rosal	48.21	24	P	P	12 48 33.1	0.0
QSPA	South Pole Qui	49.39	180	P	P	12 48 39.8	-1.5
	comp=Z,1.6nm,0.7s,baz=129,slow=1.5,SNR=7.1						
	comp=Z,1.6nm,0.7s						
QSPA	South Pole Qui	49.39	180	P	P	12 48 41.7	+0.3
TBI	Tubuai	50.95	272	*e*S	S	12 56 09.3	-1.1
	comp=Z,1µm,36.2s						
TBI				*e*LR	LR	13 03 19.5	
	comp=Z,1µm,30.8s						
TBI				*e*LR	LR	13 03 26.6	
	comp=Z,8µm,28.0s						
SNAA	Sanae	51.52	156	P	P	12 48 57.3	+0.1
SNAA				IAmb	IAmb	12 49 34.7	
	comp=Z,7.9nm,1.2s						
BOAV	Boa Vista	51.63	41	P	P	12 48 58.3	-0.4
BOAV				IAmb	IAmb	12 49 38.9	
	comp=Z,9.3nm,1.3s						
SDV	Santo Domingo	53.20	26	P	P	12 49 10.4	0.0
SDV				IAmb	IAmb	12 49 23.3	
	comp=Z,9.2nm,1.2s						
TAOE	Nuku Hiva Isla	53.26	293	*e*S	S	12 56 40.3	-2.2
	comp=Z,203nm,25.9s						
TAOE				*e*LR	LR	13 04 30.4	
	comp=Z,802nm,24.6s						
PPT2	Papeete2	54.42	277	*e*S	S	12 56 57.9	-0.2
	comp=Z,367nm,25.5s						
PPT2				*e*LR	LR	13 04 56.7	
	comp=Z,787nm,30.8s						
PPT2				*e*LR	LR	13 05 03.6	
	comp=Z,1µm,27.8s						
HPIG		68.65	347	P	P	12 50 54.8	-0.5
HNDO	Hondo	70.36	353	P	P	12 51 06.4	+0.8
TXAR	Lajitas Array	70.68	349	P	P	12 51 09.0	+1.3
	comp=Z,0.8nm,1.0s,baz=174,slow=7.6,SNR=4.6						
	comp=Z,0.8nm,1.0s						
TXAR	Lajitas Array	70.68	349	P	P	12 51 08.6	+0.9
TX31	Lajitas Ar. Si	70.68	349	P	P	12 51 07.7	0.0
TX31				IAmb	IAmb	12 51 40.4	
	comp=Z,6.5nm,1.3s						
PLPT	Palo Pinto	73.53	354	P	P	12 51 25.8	+1.2
ANMO	Albuquerque	76.61	348	P	P	12 51 44.2	+1.6
	comp=Z,0.5nm,0.4s,baz=201,slow=5.3,SNR=4.8						
	comp=Z,0.5nm,0.4s						
PV01	Paradox Valley	80.08	347	P	P	12 52 03.1	+1.4
PV01				IAmb	IAmb	12 52 17.6	
	comp=Z,12nm,1.4s						
DZM	Mont Dzumac	84.25	246	*e*LR	LR	13 19 02.9	
	comp=Z,526nm,29.4s						
BW06	Boulder Array	84.76	347	P	P	12 52 26.6	+0.5
BW06				IAmb	IAmb	12 52 37.5	
	comp=Z,6.3nm,1.3s						
PD31	Pinedale Array	84.76	347	P	P	12 52 27.1	+1.0
PDAR	Pinedale Array	84.76	347	P	P	12 52 26.9	+0.8
	comp=Z,2.1nm,0.9s,baz=162,slow=4.7,SNR=14						
	comp=Z,2.1nm,0.9s						
TIXI	Tiksi	143.14	340	PKhKP	PKPpre	12 59 19.5	
	comp=Z,0.6nm,0.3s,baz=62,slow=2.9,SNR=4.8						
PALK	Pallekele	145.91	167	PKPdf	PKPdf	12 59 31.3	-0.1
KIV	Kislovodsk	146.58	69	PKPdf	PKPdf	12 59 32.1	+0.5
YULB	Yu-li	147.25	248		PKPdf	12 59 34.5	+1.2
YAK	Yakutsk	147.39	325	PKPbc	PKPdf	12 59 33.5	+1.2
	comp=Z,5.9nm,0.3s,baz=8.2,slow=0.8,SNR=1.3						
KLR	Kul'dur	148.46	300	PKPbc	PKPbc	12 59 38.6	+0.5
	comp=Z,0.7nm,0.7s,baz=337,slow=3.5,SNR=2.1						
KSRS	Korea Array	149.17	277	PKPbc	PKPbc	12 59 40.0	-0.2
	comp=Z,0.4nm,0.8s,baz=85,slow=4.3,SNR=5.2						
NRIK	Noril'sk	151.44	0	PKPbc	PKiKP	12 59 45.3	+0.2
	comp=Z,0.8nm,0.5s,baz=315,slow=1.4,SNR=2.3						
CMAR	Chiang Mai Arr	155.85	206	PKP	PKPdf	12 59 46.0	-0.4
	comp=Z,0.3nm,0.4s,baz=143,slow=2.5,SNR=4.5						
KURK	Kurchatov	168.09	31	PKPab	PKPab	13 01 06.3	+0.6
KURBB	Kurchatov Arra	168.13	31	PKPab	PKPab	13 01 07.1	+1.2
	comp=Z,0.9nm,0.9s,baz=315,slow=5.2,SNR=8.0						

*AEIC **07** 12:42:53.3±1.5, 52°.4N±0°.2×170°.5W±0°.2, h58km±8km, Error ellipse: s-maj=29.6km s-min=7.9km az=154.0*

NEIC 07 12:42:53.3±1.2**, 52°.2N**±0°.1×**170°.40W**±0°.08**, h35**km±2km**, ML3.2**/10**, ML2.8**(AEIC)**, Error ellipse: s-maj=20.8km s-min=3.1km az=155.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLES	Cleveland East	0.72	25		Pn	12 43 06.5	-0.4
CLES					Sn	12 43 16.7	-0.1
CLCO	Concord Point,	0.74	34		Pn	12 43 06.9	-0.4
CLCO					Sn	12 43 18.2	+0.9
NIKH	Nikolski High	1.23	49		Pn	12 43 13.5	-0.6
OKWE	Okmok W'ng Wal	1.84	44		Pn	12 43 22.4	-0.1
KOFP	Korovin Flat P	2.27	274		Pn	12 43 28.4	0.0
KOKV	Korovin Volcan	2.32	276		Pn	12 43 29.0	-0.1
KOKL	Mount Kliuchef	2.34	275		Pn	12 43 29.3	0.0
MGOD	Makushin Gods	2.68	51		Pn	12 43 34.3	+0.3
MREP	Makushin Rep't	2.75	52		Pn	12 43 35.4	+0.5
MNAT	Makushin Natee	2.82	51		Pn	12 43 36.3	+0.4
UNV	Unalaska Valle	2.89	53		Pn	12 43 37.8	+1.1
GSMY	Great Sitkin M	3.49	270		Pn	12 43 46.0	+0.9
GSTD	Great Sitkin T	3.54	270		Pn	12 43 46.3	+0.4
ADK	Adak	3.89	268	Pn	Pn	12 43 50.6	0.0
ADK				IAML		12 44 56.3	
	36nm,1.1s						
ADK				IAML		12 45 07.6	
	34nm,1.1s						
KIWB	Kanaga Island	4.18	268	Pn	Pn	12 43 54.2	-0.4
KIWB				IAML		12 45 09.4	
	comp=N,48nm,1.2s						
KIWB				IAML		12 45 11.6	
	comp=E,52nm,1.1s						
N14K	Kuskokwak Cree	9.16	29	Pn	Pn	12 45 00.7	-2.1

*IDC **07** 12:43:04.0±0.8, 40°.95S×91°.91W, h0km, mb4.2/8, mbtmp4.2/8, MS4.4/39, Error ellipse: s-maj=39.1km s-min=25.0km az=103.0*

*NEIC **07** 12:43:06.6±1.5, 41°.0S±0°.1×91°.9W±0°.2, h10km±1km, mb5.1/62, Error ellipse: s-maj=23.3km s-min=18.9km az=289.0*

*GCMT **07** 12:43:06.6±0.2, 41°.08S±0°.02×91°.78W±0°.01, h14km, MW5.1/129, Moment Tensor Solution. s53,c65; s129,c212; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-6.18±.21; $M_{\theta\theta}$-0.13±.12; $M_{\phi\phi}$6.31±.16; $M_{r\theta}$1.12±.31; $M_{\theta\phi}$-0.50±.10; $M_{\phi r}$-0.08±.28; Best double couple: $M_0$6.36600×10^{16} NP1:ϕ_s186.00000°,δ45.00000°, λ-76.00000°. NP2:ϕ_s346.00000°,δ47.00000°, λ-104.00000°. Principal axes: T 6.3510, Plg1.0000°, Azm85.0000°; N 0.0330, Plg10.0000°, Azm355.0000°; P -6.3810, Plg80.0000°, Azm180.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 12:43:05.9±0.5**, 40°.93S**±0°.09×**91°.88W**±0°.10**, h10**km**, n129,** σ**1.11**/76**, mb5.0**/42**, MS4.4**/37**, 5D, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	Juan Fernandez	12.49	60	T	T	12 58 58.5	
	baz=230,slow=73,SNR=35						
H03S1	Juan Fernandez	12.50	60	T	T	12 58 59.6	
	baz=230,slow=73,SNR=37						
H03S3	Juan Fernandez	12.51	60	T	T	12 58 54.8	
	baz=230,slow=73,SNR=35						
H03N3	Juan Fernandez	12.73	58	T	T	12 59 10.9	
	baz=231,slow=71,SNR=741						
H03N2	Juan Fernandez	12.73	58	T	T	12 59 10.7	
	baz=231,slow=71,SNR=729						
H03N1	Juan Fernandez	12.75	58	T	T	12 59 11.3	
	baz=231,slow=71,SNR=805						
LR05	Currie	15.12	94		Pn	12 46 40.8	+1.4
COYC	Coyhaique	15.14	114		P	12 46 43.5	-1.3
PLCA	Paso Flores	16.14	96	Pn	P	12 46 56.0	-0.1
	baz=265,slow=11,SNR=3.0						
PLCA				LR	LR	12 51 34.8	
	comp=Z,4µm,19.9s,baz=286,slow=32						
BI02	San Fabin de	16.61	82		Pn	12 46 58.9	0.0
ML02	Panimavida	16.85	79		P	12 47 04.2	+0.3
MT08	Bocatoma Ro	18.92	74	P	Pn	12 47 26.9	-0.7
RPN	Rapa Nui	19.92	308	LR	LR	12 53 11.7	
	comp=Z,2µm,19.0s,baz=130,slow=30						
CO01	Juntas del Tor	20.78	65	P	P	12 47 46.3	-1.1
ZON	Zonda	20.87	71		Pn	12 47 48.4	-2.2
LCO	Las Campanas	20.98	62		P	12 47 49.5	+0.1
CFA	Coronel Fontan	21.16	71	LR	LR	12 54 08.0	
	comp=Z,1µm,20.2s,baz=244,slow=31						
AC05	El Transito	21.37	62		P	12 47 53.4	-0.2
TRQA	Tornquist	23.20	93		P	12 48 14.6	+1.8
TRQA				IAmb	IAmb	12 48 32.1	
	comp=Z,140nm,1.9s						
AC02	Maricunga	23.45	60		P	12 48 14.2	-1.7
AC02				IAmb	IAmb	12 48 34.3	
	comp=Z,116nm,1.8s						
PB14	IPOC Station P	24.20	54		P	12 48 23.6	+0.7
PB03	IPOC Station P	26.52	51	P	P	12 48 44.2	+0.3
HMBC	Humberstone	27.82	49	P	P	12 48 56.0	+0.5
HMBC				IAmb	IAmb	12 49 13.0	
	comp=Z,42nm,1.7s						
PMSA	Palmer Station	28.74	155	LR	LR	12 57 04.9	
	comp=Z,889nm,21.6s,baz=320,slow=29						
PB16	IPOC Station P	29.59	47		P	12 49 11.6	-0.1
PB16				IAmb	IAmb	12 49 36.6	
	comp=Z,35nm,1.9s						
NNA	Nana	31.71	29	LR	LR	12 59 00.4	
	comp=Z,530nm,18.3s,baz=194,slow=30						
CPUP	Villa Florida	32.01	74	LR	LR	13 00 56.4	
	comp=Z,1µm,20.4s,baz=232,slow=34						
LPAZ	La Paz	32.01	47	P	P	12 49 33.5	+0.3
	comp=Z,1.4nm,0.7s,baz=217,slow=10.0,SNR=4.9						
LPAZ				LR	LR	12 59 39.9	
	comp=Z,743nm,19.0s,baz=213,slow=31						
	comp=Z,1.4nm,0.7s						
LPAZ	La Paz	32.01	47	P	P	12 49 33.6	+0.5
ATAH	Atahualpa	35.74	23	LR	LR	13 01 27.1	
	comp=Z,636nm,18.3s,baz=212,slow=31						
SIV	San Ignacio	36.43	56	LR	LR	13 03 19.0	
	comp=Z,963nm,21.8s,baz=241,slow=33						
PTLB	Pontes e Lacer	38.06	58	P	P	12 50 24.7	+0.1
OTAV	Otavalo	42.75	20	P	P	12 51 04.5	+0.5
BDFB	Brasilia	45.48	69	LR	LR	13 09 29.6	
	comp=Z,1µm,18.6s,baz=216,slow=35						
ROSC	El Rosal	48.31	24	P	P	12 51 48.6	+0.7
	comp=Z,6.7nm,0.4s,baz=153,slow=6.1,SNR=6.9						
ROSC				LR	LR	13 10 24.2	
	comp=Z,389nm,18.4s,baz=95,slow=34						
	comp=Z,6.7nm,0.4s						
QSPA	South Pole Qui	49.30	180	P	P	12 51 54.6	-0.1
	comp=Z,2.1nm,0.8s,baz=157,slow=1.9,SNR=5.7						
QSPA				LR	LR	13 10 53.2	
	comp=Z,218nm,18.9s,baz=164,slow=34						
	comp=Z,2.1nm,0.8s						
QSPA	South Pole Qui	49.30	180	P	P	12 51 54.8	0.0
QSPA				IAmb	IAmb	12 52 08.2	
	comp=Z,32nm,1.7s						
VNA3	Neumayer Olymp	49.40	155	⇓P	P	12 51 55.2	-0.1
	comp=Z,3.9nm,0.8s						
VNA1	Neumayer--Stat	49.95	154	⇓P	P	12 51 58.8	-0.6
	comp=Z,8.8nm,0.9s						
VNA2	Neumayer--Watz	50.19	155	⇓P	P	12 52 01.3	0.0
	comp=Z,5.1nm,0.9s,baz=281,slow=7.3						
RGM0	Gandoca	50.99	12	P	P	12 52 08.7	+0.9
JTS	Las Juntas de	51.36	9	LR	LR	13 08 27.8	
	comp=Z,428nm,21.5s,baz=198,slow=30						
SNAA	Sanae	51.45	156	⇓P	P	12 52 11.0	+0.1
	comp=Z,41nm,0.5s						
SNAA	Sanae	51.45	156	LR	LR	13 09 23.0	
	comp=Z,288nm,21.6s,baz=223,slow=31						
SNAA	Sanae	51.45	156	P	P	12 52 10.9	+0.1
SNAA				IAmb	IAmb	12 52 46.7	
	comp=Z,36nm,1.9s						
BOAV	Boa Vista	51.73	41	P	P	12 52 13.2	-0.2
BOAV				IAmb	IAmb	12 52 25.4	
	comp=Z,26nm,1.7s						
SBA	Scott Base	52.69	195	P	P	12 52 21.3	+1.4
TROLL	Troll, Antarti	52.97	157	P	P	12 52 22.1	0.0
SDV	Santo Domingo	53.30	27	LR	LR	13 13 36.2	
	comp=Z,522nm,18.6s,baz=188,slow=34						
SDV	Santo Domingo	53.30	27		P	12 52 25.0	-0.2
SDV				IAmb	IAmb	12 54 12.3	
	comp=Z,15nm,0.9s						
VNDA	Vanda	53.78	195	LR	LR	13 11 00.1	
	comp=Z,180nm,19.8s,baz=84,slow=31						
VNDA	Vanda	53.78	195	P	P	12 52 27.5	-0.4
VNDA				IAmb	IAmb	12 52 34.7	
	comp=Z,28nm,1.8s						
PPT	Papeete	54.41	277	LR	LR	13 09 36.1	
	comp=Z,266nm,18.4s,baz=135,slow=29						
CMIG	Matias Romero	57.79	357	LR	LR	13 12 06.4	
	comp=Z,131nm,20.7s,baz=164,slow=30						
MDP	Montagnes des	58.20	48	LR	LR	13 16 18.2	
	comp=Z,368nm,18.1s,baz=254,slow=34						
ELIB	Princess Elisa	58.71	161	*d*P	P	12 53 06.7	+3.4
RAR	Rarotonga	59.95	267	LR	LR	13 12 23.0	
	comp=Z,356nm,18.7s,baz=148,slow=29						
RCBR	Riachuelo	60.81	71	LR	LR	13 18 40.0	
	comp=Z,295nm,18.1s,baz=232,slow=35						
SJG	San Juan	63.41	27	LR	LR	13 18 26.6	
	comp=Z,208nm,21.2s,baz=180,slow=34						
URZ	Urewera	66.93	239	LR	LR	13 15 53.6	
	comp=Z,570nm,20.1s,baz=131,slow=29						
LPIG	La Paz	66.93	342	LR	LR	13 15 51.0	
	comp=Z,117nm,20.1s,baz=157,slow=29						
RPZ	Rata Peaks	67.56	231	LR	LR	13 17 25.8	
	comp=Z,306nm,18.3s,baz=234,slow=30						
RAO	Raoul Island	68.72	249	LR	LR	13 16 22.4	
	comp=Z,274nm,21.7s,baz=129,slow=29						
HNDO	Hondo	70.44	353		P	12 54 20.2	0.0
HNDO				IAmb	IAmb	12 54 34.0	
	comp=Z,22nm,1.2s						
TX31	Lajitas Ar. Si	70.76	349		P	12 54 23.6	+1.3
TX31				IAmb	IAmb	12 54 35.8	
	comp=Z,30nm,1.6s						
TXAR	Lajitas Array	70.76	349	P	P	12 54 22.2	0.0
	comp=Z,2.6nm,1.1s,baz=161,slow=8.0,SNR=10.0						
	comp=Z,2.6nm,1.1s						
TXAR	Lajitas Array	70.76	349	P	P	12 54 23.3	+1.1
SAND	Sanderson	71.17	351	P	P	12 54 26.0	+1.4
SAND				IAmb	IAmb	12 54 27.1	
	comp=Z,20nm,1.6s						
ALPN	Alpine	71.78	349	IAmb	IAmb	12 54 41.7	
	comp=Z,20nm,1.3s						
OZNA	Ozona	72.00	352		P	12 54 30.0	+0.3
OZNA				IAmb	IAmb	12 54 41.6	
	comp=Z,44nm,1.8s						
TPB01	Permian Basin	72.36	349	IAmb	IAmb	12 54 45.9	
	comp=Z,24nm,1.7s						
VHRN	Van Horn	72.38	348	P	P	12 54 33.0	+1.0
VHRN				IAmb	IAmb	12 54 43.7	
	comp=Z,40nm,1.9s						
MNHN	Monahans	72.61	350	IAmb	IAmb	12 54 46.2	
	comp=Z,44nm,1.8s						
AFI	Afiamalu	73.45	266	LR	LR	13 18 18.1	
	comp=Z,549nm,19.6s,baz=142,slow=29						
PLPT	Palo Pinto	73.62	354	IAmb	IAmb	12 54 51.8	
	comp=Z,36nm,1.4s						
TUC	Tucson	74.94	343	P	P	12 54 48.8	+1.8
TUC				IAmb	IAmb	12 55 07.3	
	comp=Z,16nm,1.1s						
SMWD	Samnorwood	76.05	353	IAmb	IAmb	12 55 06.8	
	comp=Z,40nm,1.6s						
TKL	Tuckaleechee C	76.58	7	LR	LR	13 22 34.0	
	comp=Z,96nm,20.9s,baz=172,slow=31						
ANMO	Albuquerque	76.69	348	P	P	12 54 57.1	+0.1
	comp=Z,1.5nm,0.9s,baz=179,slow=7.1,SNR=0.9						
ANMO				LR	LR	13 22 31.6	
	comp=Z,141nm,21.5s,baz=164,slow=31						
	comp=Z,1.5nm,0.9s						
PFO	Pinyon Flats O	77.56	339	LR	LR	13 21 10.6	
	comp=Z,98nm,20.4s,baz=157,slow=30						
CCM	Cathedral Cave	78.61	1	P	P	12 55 08.0	+0.6
CCM				IAmb	IAmb	12 55 19.7	
	comp=Z,41nm,1.6s						
MSVF	Nonsavu	78.66	256	LR	LR	13 24 02.1	
	comp=Z,248nm,19.6s,baz=147,slow=31						
PV03	Paradox Valley	80.32	347	IAmb	IAmb	12 55 25.6	
	comp=Z,40nm,1.2s						
PV04	Paradox Valley	80.47	347	IAmb	IAmb	12 55 23.3	
	comp=Z,28nm,1.0s						
NVAR	Mina Array Bea	82.59	339	P	P	12 55 30.0	+0.9
	comp=Z,1.0nm,0.8s,baz=141,slow=5.4,SNR=1.5						
NVAR				LR	LR	13 23 59.0	
	comp=Z,52nm,20.0s,baz=116,slow=30						
	comp=Z,1.0nm,0.8s						
K22A	Casper	84.25	349		P	12 55 39.0	+1.6
ECSD	EROS Data Cent	84.39	357	IAmb	IAmb	12 55 50.4	
	comp=Z,44nm,1.8s						
BW06	Boulder Array	84.83	347		P	12 55 41.0	+0.5
BW06				IAmb	IAmb	12 55 48.4	
	comp=Z,18nm,1.2s						
PDAR	Pinedale Array	84.83	347	P	P	12 55 40.1	-0.3
	comp=Z,3.4nm,0.8s,baz=157,slow=4.7,SNR=15						
PDAR				LR	LR	13 28 08.1	
	comp=Z,83nm,19.2s,baz=138,slow=32						
	comp=Z,3.4nm,0.8s						
PDAR	Pinedale Array	84.83	347	P	P	12 55 40.9	+0.4
AHID	Auburn Hatcher	85.11	346	IAmb	IAmb	12 55 55.0	
	comp=Z,22nm,1.3s						
RSSD	Black Hills	85.37	351	P	P	12 55 44.3	+1.1
RSSD				IAmb	IAmb	12 55 50.7	
	comp=Z,14nm,1.3s						
LOHW	Long Hollow	85.84	346		P	12 55 45.6	+0.1
LOHW				IAmb	IAmb	12 55 53.6	
	comp=Z,13nm,1.3s						
FXWY	Fox Creek	85.94	346	IAmb	IAmb	12 55 59.4	
	comp=Z,40nm,1.9s						
SADO	Sadowa	86.08	9	LR	LR	13 25 39.4	
	comp=Z,169nm,21.7s,baz=204,slow=30						
YHH	Holmes Hill	87.02	347		P	12 55 51.8	+0.5
G08A	Pilot Rock	89.20	341	IAmb	IAmb	12 56 16.3	
	comp=Z,33nm,1.8s						
E08A	Dider Farm, El	90.35	342	IAmb	IAmb	12 56 20.3	
	comp=Z,35nm,1.8s						
HAWA	Hanford	90.38	341	IAmb	IAmb	12 56 20.4	
	comp=Z,18nm,1.4s						
EPH	Ephrata	91.29	342	IAmb	IAmb	12 56 26.2	
	comp=Z,46nm,1.8s						
TSUM	Tsumeb	91.44	117	LR	LR	13 30 26.6	
	comp=Z,146nm,21.2s,baz=80,slow=31						
NEW	Newport	91.58	343	P	P	12 56 12.7	+0.3
	comp=Z,1.1nm,0.9s,baz=198,slow=3.2,SNR=4.0						
NEW				LR	LR	13 30 55.9	
	comp=Z,87nm,18.0s,baz=141,slow=31						
	comp=Z,1.1nm,0.9s						
LBTB	Lobatse	92.45	126	LR	LR	13 32 40.3	
	comp=Z,138nm,19.1s,baz=214,slow=32						
SCHQ	Schefferville	97.77	14	LR	LR	13 37 05.7	
	comp=Z,105nm,19.1s,baz=196,slow=33						
CTA	Charters Tower	98.81	234	LR	LR	13 35 28.6	
	comp=Z,145nm,18.1s,baz=120,slow=32						
TORD	Torodi Ar. Bea	101.16	82	PKiKP	PKiKP	13 01 21.9	+0.3
	comp=Z,1.5nm,0.8s,baz=287,slow=3.7,SNR=6.9						
KIBK	Kibwezi	117.35	120		PKiKP	13 01 53.4	+1.2
CLL	Collm	129.06	51	*i* PKPdf	PKPdf	13 02 12.0	-1.3
TIXI	Tiksi	143.21	340	PKhKP	PKPpre	13 02 33.9	
	comp=Z,0.8nm,0.5s,baz=68,slow=3.4,SNR=3.4						
TIXI	Tiksi	143.21	340		PKiKP	13 02 40.7	-1.5
GEVA	Gevas	145.48	79	PKPdf	PKPab	13 02 44.2	-0.2
PALK	Pallekele	145.84	167	PKPdf	PKPab	13 02 45.2	-1.0
YAK	Yakutsk	147.44	324	PKPbc	PKPbc	13 02 46.8	-2.1
	comp=Z,9.0nm,0.4s,baz=16,slow=1.0,SNR=5.1						
KLR	Kul'dur	148.47	300	PKPbc	PKPbc	13 02 51.3	-0.9
	comp=Z,0.6nm,0.6s,baz=7.2,slow=5.1,SNR=1.8						
KSRS	Korea Array	149.14	277	PKPbc	PKPbc	13 02 53.4	-0.8
	comp=Z,1.5nm,0.9s,baz=129,slow=4.0,SNR=6.2						
KSAR	Wonju Array Be	149.17	277		PKPab	13 02 59.0	+0.3
MDJ	Mudanjiang	149.57	291	P	PKPbc	13 02 53.0	-2.1
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.9s						
KIRV	Kirov	149.95	41	PKPbc	PKiKP	13 02 55.1	-1.3
	comp=Z,3.3nm,0.4s,baz=345,slow=4.0,SNR=3.7						
HEH	HeiHe	151.26	302	PKPbc	PKPdf	13 02 54.8	+1.9
NRIK	Noril'sk	151.53	0		PKiKP	13 02 58.6	-0.7
HYB	Hyderabad	155.16	158	*e*PKPdf	PKPdf	13 02 59.1	-0.5
HYB				*e*PKiKP	pPKPbc	13 03 08.7	-1.9
CM31	Chiang Mai Arr	155.75	206		PKPdf	13 03 00.7	+0.3
CMAR	Chiang Mai Arr	155.75	206	PKP	PKPdf	13 02 59.6	-0.7
	comp=Z,0.4nm,0.4s,baz=160,slow=5.7,SNR=2.8						
PZH	PanZhiHua	161.72	222	PKP	PKPdf	13 03 09.8	+2.4
HHC	Hu-ho-hao-te	162.28	277	*e*P	PKPdf	13 03 05.2	-2.3
HHC				LR	LR		
	comp=N,100nm,17.3s						
HHC				LR	LR		
	comp=E,120nm,17.5s						
HHC				LR	LR		
	comp=Z,120nm,17.7s						
SONM	Songino Array	165.24	304	PKPab	PKPab	13 04 07.6	-0.1
	comp=Z,0.2nm,0.3s,baz=116,slow=3.4,SNR=2.5						
ZALV	Zalesovo Beam	166.79	9	PKPab	PKPab	13 04 13.0	-0.9
	comp=Z,0.2nm,0.6s,baz=357,slow=6.2,SNR=1.2						
KURBB	Kurchatov Arra	168.23	31	PKPab	PKPab	13 04 18.0	-2.4
	comp=Z,1.0nm,0.9s,baz=318,slow=4.7,SNR=7.9						
WMQ	Urumqi	177.09	6	*e*PKP	PKPdf	13 03 18.4	+2.3

NOU 07 12:46:21.9, 14°.66S×167°.20E, h95km**, MLv4.8**/14**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.78	180	P	Pn	12 46 40.3	+0.6
SANVU	Saraoutou	0.78	180	P	Sn	12 46 54.8	+1.8
DVP	Devils Point	3.19	163	P	Pn	12 47 09.0	-1.1
DVP	Devils Point	3.19	163	S	Sn	12 47 47.7	+0.4
MARNC	Mare, Loyalty	6.83	173	P	Pn	12 48 00.8	+1.3
YATNC	Mamie plateau,	7.37	182	P	Pn	12 48 06.3	-0.5
DZM	Mont Dzumac	7.41	185	P	Pn	12 48 06.7	-0.7
OUENC	Ouen Island, N	7.72	182	P	Pn	12 48 12.5	+0.8

*NEIC **07** 12:51:16.4±0.7, 36°.114N±0°.004×117°.87W±0°.01, h3km±2km, ML3.5/176, Mwr3.7/4(PAS), Error ellipse: s-maj=1.6km s-min=0.5km az=107.0*

*PAS **07** 12:51:16.9±0.7, 36°.115N±0°.008×117°.86W±0°.02, h2km±1km, Error ellipse: s-maj=1.8km s-min=1.2km az=79.0*

*IDC **07** 12:51:17.8±0.7, 36°.15N×117°.66W, h0km, mb3.3/2, mbtmp3.1/6, ML3.1/4, MS2.6/4, Error ellipse: s-maj=18.4km s-min=5.6km az=76.0*

ISC 07 12:51:17.1±0.9**, 36°.12N**±0°.02×**117°.86W**±0°.02**, h1**km±6km**, n95,** σ**0.87**/85**, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MFS	McCloud Flat S	0.00	67		Pg	12 51 17.6	+0.1
MFS					Sg	12 51 17.9	+0.1
WRVM	Rose V. Centra	0.11	193		Pg	12 51 19.2	0.0
WRVM					Sg	12 51 21.0	+0.3
WCSM	Coso Springs S	0.12	140		Pg	12 51 19.4	+0.1
WCSM					Sg	12 51 21.3	+0.5
JRC2	Joshua Ridge	0.14	163		Pg	12 51 19.8	0.0
JRC2					Sg	12 51 22.1	+0.5
WVPM	Volcano Peak E	0.17	168		Pg	12 51 20.4	0.0
WVPM					Sg	12 51 22.9	+0.4
RCWM	Renegade Canyo	0.24	134		Pg	12 51 21.7	+0.1
RCWM					Sg	12 51 25.4	+0.6
DAC	Darwin (Calif)	0.27	53		Pg	12 51 22.2	0.0
DAC					Sg	12 51 26.2	+0.5
WNMM	Nine Mile Cany	0.28	188		Pn	12 51 26.2	-2.0
TOW	Tower One	0.32	166		Pg	12 51 23.5	+0.4
TOW					Sg	12 51 28.9	+1.7
CLC	China Lake	0.37	145		Pg	12 51 24.0	-0.1
CLC				Sg	Sg	12 51 28.9	0.0
CWC	Cottonwood Cre	0.37	331		Pg	12 51 24.0	-0.2
CWC	Cottonwood Cre	0.37	331		Sg	12 51 29.4	+0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CWC				IAML		12 51 29.7	
	comp=N,3µm,0.2s						
CWC				IAML		12 51 29.8	
	comp=E,4µm,0.2s						
SRTC	**Snort**	**0.43**	**168**		**Pg**	**12 51 25.7**	**+0.4**
SRTC					**Sb**	**12 51 32.8**	**-1.8**
CGO	**Cerro Gordo**	**0.44**	**6**		**Pg**	**12 51 25.4**	**-0.1**
CGO					**Sg**	**12 51 31.4**	**+0.3**
GPO	**China Lake**	**0.49**	**161**		**Pg**	**12 51 26.4**	**-0.1**
GPO					**Sg**	**12 51 33.8**	**+0.9**
WORM	**Onyx Ranch**	**0.52**	**217**		**Pg**	**12 51 26.7**	**-0.4**
WORM					**Sg**	**12 51 33.9**	**0.0**
WHFM	**Hanning Flat**	**0.58**	**224**		**Pg**	**12 51 27.9**	**-0.3**
WHFM					**Sg**	**12 51 35.8**	**+0.2**
WBSM	**Bird Springs**	**0.62**	**202**		**Pg**	**12 51 28.7**	**-0.3**
WBSM					**Sg**	**12 51 37.3**	**+0.3**
LRMC	**Laurel Mtn Rad**	**0.65**	**167**		**Pg**	**12 51 29.3**	**-0.3**
LRMC	**Laurel Mtn Rad**	**0.65**	**167**	Sg	**Sg**	**12 51 38.3**	**+0.3**
LRMC				IAML		12 51 39.0	
	comp=E,2µm,0.6s						
LRMC				IAML		12 51 43.8	
	comp=N,2µm,0.6s						
ISA	**Isabella, Lake**	**0.67**	**228**		**Pg**	**12 51 29.7**	**-0.3**
ISA				Sg	**Sg**	**12 51 38.4**	**-0.3**
ISA				IAML		12 51 39.4	
	comp=N,3µm,0.3s						
ISA				IAML		12 51 39.5	
	comp=E,2µm,0.2s						
WASM	**Alta Sierra Ca**	**0.68**	**237**		**Pg**	**12 51 29.9**	**-0.3**
WASM					**Sg**	**12 51 39.1**	**+0.2**
CCCA	**Chr Cany lake**	**0.71**	**146**		**Pg**	**12 51 30.9**	**+0.1**
CCCA				IAML		12 51 43.9	
	comp=N,4µm,0.6s						
SPG2	**Springville 2**	**0.74**	**277**		**Sg**	**12 51 40.5**	**-0.3**
QSM	**Queen of Sheba**	**0.82**	**100**		**Pg**	**12 51 32.4**	**-0.4**
QSM					**Sg**	**12 51 43.4**	**+0.1**
DTP	**Desert Tortois**	**0.85**	**179**		**Pg**	**12 51 32.8**	**-0.5**
DTP					**Sg**	**12 51 44.3**	**0.0**
FURC	**Furnace Creek,**	**0.88**	**66**		**Sb**	**12 51 46.2**	**-1.1**
FURC	**Furnace Creek,**	**0.88**	**66**		**Pg**	**12 51 34.0**	**+0.1**
GRAC	**Grapevine Rang**	**0.96**	**24**		**Pg**	**12 51 35.3**	**-0.2**
GRAC				IAML		12 51 53.4	
	comp=E,2µm,1.0s						
GRAC				IAML		12 51 54.8	
	comp=N,2µm,0.9s						
GWY	**Greenwater Val**	**0.97**	**85**	IAML		12 51 55.7	
	comp=N,2µm,0.4s						
TIN	**Tinemaha, Big**	**0.98**	**342**		**Pg**	**12 51 35.7**	**-0.2**
VES	**Vestal, Richgr**	**1.03**	**255**		**Pg**	**12 51 36.4**	**-0.4**
SGV	**South Grapevin**	**1.09**	**37**		**Pg**	**12 51 37.4**	**-0.6**
GSC	**Goldstone, Bar**	**1.18**	**133**	IAML		12 52 00.5	
	comp=N,857nm,0.8s						
GSC				IAML		12 52 02.3	
	comp=E,2µm,0.8s						
WCT	**Wildcat Mounta**	**1.20**	**55**		**Pg**	**12 51 39.4**	**-0.7**
WCT				IAML		12 52 00.1	
	comp=N,764nm,0.7s						
WCT				IAML		12 52 02.4	
	comp=E,1µm,0.9s						
DSP	**Deep Springs**	**1.25**	**356**		**Pg**	**12 51 39.9**	**-1.2**
TPO	**Tropico Hills**	**1.27**	**194**		**Pg**	**12 51 40.4**	**-1.0**
TPO				IAML		12 52 03.8	
	comp=E,1µm,0.6s						
SHOC	**Shoshone, Teco**	**1.30**	**99**		**Pg**	**12 51 40.8**	**-1.3**
TPNV	**Topopah Spring**	**1.54**	**57**		**Pn**	**12 51 45.2**	**-0.7**
TPNV				IAML		12 52 12.9	
	comp=E,760nm,0.6s						
TPNV				IAML		12 52 13.0	
	comp=E,791nm,0.9s						
OSI	**Osito Audit: C**	**1.66**	**205**		**Pn**	**12 51 47.1**	**-0.2**
OSI				IAML		12 52 12.4	
	comp=N,674nm,0.7s						
OSI				IAML		12 52 17.2	
	comp=E,567nm,0.6s						
KCC	**Kaiser Creek**	**1.68**	**316**		**Pn**	**12 51 47.7**	**-0.1**
FRI	**Friant**	**1.73**	**301**		**Pn**	**12 51 48.2**	**0.0**
MDPB	**Devils Postpil**	**1.80**	**327**	IAML		12 52 17.9	
	comp=N,619nm,0.8s						
MDPB				IAML		12 52 21.7	
	comp=E,466nm,0.9s						
YEG	**Yeguas Mountai**	**1.84**	**249**		**Pb**	**12 51 50.6**	**-0.9**
MWC	**Mount Wilson**	**1.90**	**185**		**Pn**	**12 51 50.2**	**-0.5**
MWC				IAML		12 52 18.7	
	comp=E,318nm,0.9s						
MWC				IAML		12 52 20.2	
	comp=N,340nm,0.7s						
PASC	**Pasadena Art C**	**1.96**	**188**	IAML		12 52 21.6	
	comp=E,258nm,0.8s						
MTPC	**Mountain Pass**	**1.98**	**108**		**Pn**	**12 51 50.5**	**-1.4**
MTPC				IAML		12 52 22.0	
	comp=E,419nm,0.3s						
MTPC				IAML		12 52 23.6	
	comp=N,471nm,0.5s						
PKD	**Bear Valley Ra**	**2.18**	**266**		**Pn**	**12 51 55.0**	**+0.4**
PKD				IAML		12 52 30.2	
	comp=N,308nm,0.6s						
PKD				IAML		12 52 33.5	
	comp=E,366nm,0.9s						
LHV	**Little Huntoon**	**2.19**	**347**		**Pn**	**12 51 55.3**	**+0.6**
LHV				IAML		12 52 38.3	
	comp=N,240nm,1.4s						
LHV				IAML		12 52 48.2	
	comp=E,224nm,1.1s						
SHPR	**Sheep Range**	**2.21**	**79**		**Pn**	**12 51 54.8**	**-0.4**
NV11	**Mina Array Sit**	**2.32**	**354**		**Pn**	**12 51 55.5**	**-1.2**
NVAR	**Mina Array Bea**	**2.34**	**351**	Pn	**Pn**	**12 51 56.6**	**-0.3**
	comp=E,2.2nm,0.3s,baz=171,slow=18,SNR=58						
NVAR				Pg	**Pg**	**12 52 00.9**	**-1.0**
	comp=E,6.2nm,0.3s,baz=164,slow=16,SNR=45						
NVAR				Lg	Lg	12 52 32.3	
	comp=E,22nm,0.3s,baz=55,slow=3.3,SNR=16						
	comp=E,8.8nm,0.7s						
NVAR	**Mina Array Bea**	**2.34**	**351**		**Pn**	**12 51 55.1**	**-1.8**
PMPB	**Monarch Peak**	**2.38**	**273**		**Pn**	**12 51 58.5**	**+1.1**
V12A	**Nelson**	**2.47**	**98**		**Pn**	**12 51 57.8**	**-0.9**
V12A				IAML		12 52 38.6	
	comp=N,216nm,0.9s						
V12A				IAML		12 52 38.9	
	comp=E,166nm,0.5s						
ELS	**Elsinore Mount**	**2.49**	**172**		**Pn**	**12 51 58.2**	**-0.6**
BBGB	**Big Mountain B**	**2.61**	**281**		**Pn**	**12 51 59.9**	**-0.6**
DNR	**Dunn Ranch,Anz**	**2.74**	**158**	IAML		12 52 51.9	
	comp=N,252nm,0.8s						
DNR				IAML		12 52 58.1	
	comp=E,320nm,1.0s						
HULI	**Fort Hunter Li**	**2.74**	**269**		**Pn**	**12 52 02.4**	**+0.2**
HULI				IAML		12 52 57.7	
	comp=E,223nm,0.8s						
HULI				IAML		12 53 02.7	
	comp=N,266nm,1.1s						
PMD	**Palm Desert**	**2.75**	**153**		**Pn**	**12 52 01.2**	**-1.2**
PFO	**Pinyon Flats O**	**2.75**	**155**	Pn	**Pn**	**12 52 01.3**	**-1.2**
	comp=N,0.8nm,0.3s,baz=337,slow=14,SNR=18						
PFO				Pg	**Pb**	**12 52 08.2**	**+1.0**
	comp=N,6.8nm,0.3s,baz=336,slow=16,SNR=38						
PFO				Lg	Lg	12 52 43.4	
	comp=N,15nm,0.3s,baz=92,slow=9.3,SNR=8.8						
PFO				LR	LR	12 53 18.6	
	comp=N,141nm,21.1s,baz=334,slow=44						
	comp=N,3.7nm,0.3s						
PFO	**Pinyon Flats O**	**2.75**	**155**		**Pn**	**12 52 01.5**	**-1.0**
CMB	**Columbia Colle**	**2.78**	**314**		**Pn**	**12 52 01.8**	**-1.1**
CMB				IAML		12 52 46.4	
	comp=E,188nm,0.7s						
CMB				IAML		12 52 54.1	
	comp=N,225nm,0.7s						
IRM	**Iron Mountain**	**2.96**	**131**	IAML		12 52 57.6	
	comp=E,88nm,1.1s						
SAO	**San Andreas Ge**	**2.96**	**284**		**Pn**	**12 52 05.4**	**+0.1**
BORC	**Borrego Spring**	**3.08**	**157**	IAML		12 53 03.9	
	comp=E,105nm,1.0s						
BC3	**Big Chuckawall**	**3.15**	**140**	IAML		12 53 16.1	
	comp=N,119nm,0.9s						
DPP	**Dos Picos Cty**	**3.20**	**166**	IAML		12 53 00.4	
	comp=E,76nm,0.8s						
PNTR	**Pine Nut**	**3.27**	**336**	IAML		12 53 17.1	
	comp=N,136nm,0.9s						
PNTR				IAML		12 53 19.1	
	comp=E,113nm,1.2s						
MHC	**Mount Hamilton**	**3.28**	**293**	IAML		12 53 01.4	
	comp=E,130nm,0.8s						
CPE	**Camp Elliot**	**3.28**	**169**	IAML		12 53 07.9	
	comp=E,68nm,1.0s						
W13A	**Hualapai Mount**	**3.39**	**106**	IAML		12 53 09.5	
	comp=N,116nm,0.6s						
W13A				IAML		12 53 09.9	
	comp=E,99nm,0.6s						
BLYC	**Blythe**	**3.62**	**130**	IAML		12 53 21.9	
	comp=E,71nm,1.2s						
BLYC				IAML		12 53 22.4	
	comp=N,76nm,0.9s						
AFDM	**Forest Hills D**	**3.76**	**320**	IAML		12 53 22.1	
	comp=N,116nm,1.1s						
CBX	**Cerro Bola**	**3.92**	**165**	IAML		12 53 21.7	
	comp=N,120nm,0.7s						
GLA	**Glamis**	**3.95**	**140**	IAML		12 53 31.7	
	comp=N,83nm,0.7s						
GLA				IAML		12 53 42.7	
	comp=E,106nm,0.8s						
PSUT	**Pine Spring**	**4.00**	**52**	IAML		12 53 32.5	
	comp=E,87nm,1.4s						
PSUT				IAML		12 53 39.3	
	comp=N,97nm,1.0s						
SZCU	**Shurtz Canyon**	**4.10**	**67**	IAML		12 53 33.0	
	comp=N,38nm,1.8s						
CVS	**Carmenet Viney**	**4.29**	**303**	IAML		12 53 29.6	
	comp=E,66nm,1.1s						
CVS				IAML		12 53 34.1	
	comp=N,42nm,0.8s						
ORV	**Oroville**	**4.48**	**321**	IAML		12 53 39.3	
	comp=N,44nm,0.9s						
ORV				IAML		12 53 40.2	
	comp=E,70nm,0.8s						
U15A	**North Rim**	**4.51**	**84**	IAML		12 53 50.1	
	comp=E,63nm,1.2s						
U15A				IAML		12 53 54.9	
	comp=N,40nm,1.6s						
Y14A	**Wickenburg**	**4.54**	**117**	IAML		12 53 47.3	
	comp=E,52nm,1.0s						
MNRC	**McLaughlin Min**	**4.57**	**308**	IAML		12 54 01.4	
	comp=N,80nm,1.1s						
113A	**Mohawk Valley,**	**4.75**	**133**	IAML		12 54 20.2	
	comp=E,23nm,3.9s						
MTPU	**Mount Pierson**	**4.93**	**65**	IAML		12 54 12.1	
	comp=N,30nm,2.3s						
MTPU				IAML		12 54 18.3	
	comp=E,26nm,4.8s						
VTX	**Valle De La Tr**	**5.02**	**159**	IAML		12 53 57.9	
	comp=E,26nm,4.0s						
ELK	**Elko**	**5.06**	**23**	Pn	**Pn**	**12 52 33.3**	**-1.0**
	comp=E,0.6nm,0.3s,baz=211,slow=9.1,SNR=13						
ELK				Lg	Lg	12 53 55.9	
	comp=E,3.0nm,0.3s,baz=295,slow=23,SNR=15						
	comp=E,3.3nm,0.8s						
ELK	**Elko**	**5.06**	**23**	IAML		12 54 02.0	
	comp=E,26nm,0.7s						
WUAZ	**Wupatki**	**5.30**	**95**	IAML		12 54 07.3	
	comp=E,48nm,0.5s						
YBH	**Yreka Blue Hor**	**6.76**	**327**	Pn	**Pn**	**12 53 01.7**	**+4.1**
	baz=124,slow=3.7,SNR=1.9						
YBH				Lg	Lg	12 54 47.2	
	baz=112,slow=3.3,SNR=3.7						
YBH				LR	LR	12 55 46.8	
	comp=E,5.6nm,18.9s,baz=143,slow=40						
PDAR	**Pinedale Array**	**9.23**	**41**	Pn	**Pn**	**12 53 32.6**	**+1.0**
	baz=226,slow=11,SNR=1.6						
	comp=E,0.2nm,0.7s						
ANMO	**Albuquerque**	**9.37**	**94**	Pg	Pn	12 54 06.9	+33
	comp=E,0.1nm,0.3s,baz=277,slow=14,SNR=6.7						
ANMO				Lg	Lg	12 56 07.6	
	comp=E,0.1nm,0.3s,baz=174,slow=15,SNR=1.6						
ANMO				LR	LR	12 57 15.0	
	comp=E,96nm,20.6s,baz=304,slow=39						
BBB	**Bella Bella**	**17.64**	**339**	LR	LR	13 02 36.3	
	comp=E,43nm,20.7s,baz=184,slow=38						
YKA	**Yellowknife Ar**	**26.48**	**3**	P	**P**	**12 56 55.9**	**+0.3**
	comp=E,0.4nm,0.9s,baz=189,slow=9.3,SNR=5.9						
	comp=E,0.4nm,0.9s						
ILAR	**Eielson Array**	**33.53**	**338**	P	**P**	**12 57 59.7**	**+1.7**
	comp=E,0.3nm,0.8s,baz=155,slow=7.7,SNR=5.2						
	comp=E,0.3nm,0.8s						

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*FUNV **07** 12:53:22.5, 8°.15N×71°.87W, h15^{km}, MW3.0, Presumed earthquake*

*RSNC **07** 12:53:25.0±0.0, 8°N±5°×7°2W±°, h43^{km}±80^{km}, ML1.7*

ISC 07 12:53:21.8±1.6**, 8°.3N**±0°.2×**71°.9W**±0°.2**, h26**^{km}±16^{km}**, n7, **σ**0^{s}86**/13**, Venezuela**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**0.55**	**224**	*e*P	**Pb**	**12 53 32.9**	**-0.1**
CAPV				*e*S	**Sb**	**12 53 39.9**	**-0.7**
SOCV	**Socops**	**1.06**	**89**	*e*P	**Pn**	**12 53 41.5**	**+0.4**
SOCV				*e*S	**Sn**	**12 53 54.7**	**-0.3**
PAMC	**Pamplona, Colo**	**1.19**	**220**	P	**Pb**	**12 53 44.2**	**+0.1**
PAMC				S	**Sn**	**12 53 59.8**	**+0.9**
SDV	**Santo Domingo**	**1.42**	**64**	P	**Pb**	**12 53 48.5**	**+0.7**
SDV				S	**Sb**	**12 54 05.5**	**-0.1**
SDV	**Santo Domingo**	**1.42**	**64**	*e*P	**Pb**	**12 53 47.9**	**+0.1**
SDV				*e*S	**Sb**	**12 54 06.1**	**+0.5**
MAPV	**Macapo**	**3.77**	**65**	*e*P	**Pn**	**12 54 18.7**	**+0.4**
BENV	**Beln**	**4.60**	**68**	*e*P	**Pn**	**12 54 29.6**	**-0.2**
BENV				*e*S	**Sn**	**12 55 20.4**	**-2.0**

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*CATAC **07** 13:10:32.7±0.3, 9°N±2°×8°3W±°, h18^{km}±2^{km}, M3.4/7, MLv3.4/7, Error ellipse: s-maj=5.3km s-min=3.5km az=3.1, confirmed*

*UPA **07** 13:10:33.6±0.9, 8°.60N×82°.89W, h23^{km}±6^{km}, ML3.9, MW3.6, Presumed earthquake*

*UCR **07** 13:10:34.0±0.7, 8°.58N×82°.89W, h16^{km}±2^{km}, MW3.6, Presumed earthquake*

ISC 07 13:10:33.3±0.9**, 8°.60N**±0°.02×**82°.91W**±0°.02**, h26**^{km}±5^{km}**, n62, **σ**0^{s}66**/83**, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CDITO	**Canoas**	**0.05**	**133**	P	**Pb**	**13 10 37.0**	**-0.8**
CDITO				S	**Sb**	**13 10 39.5**	**-1.4**
LPPC	**Paso Canoas**	**0.10**	**137**	*e*P	**Pb**	**13 10 37.2**	**-0.9**
LPPC				*e*S	**Sb**	**13 10 39.8**	**-1.6**
MLIR3	**Monte Lirio, C**	**0.20**	**24**	*e*P	**Pb**	**13 10 39.9**	**+0.6**
RSRNO	**Rio Sereno**	**0.22**	**12**	*i* P	**Pb**	**13 10 39.9**	**+0.5**
RSRNO	**Rio Sereno**	**0.22**	**12**	*e*P	**Pb**	**13 10 40.0**	**+0.5**
VITO	**San Vito**	**0.22**	**344**	*i* P	**Pb**	**13 10 39.9**	**+0.4**
VITO	**San Vito**	**0.22**	**344**	*e*P	**Pb**	**13 10 40.0**	**+0.5**
VITO				*e*S	**Sb**	**13 10 45.4**	**+1.7**
SCLRA	**Santa Clara, W**	**0.26**	**28**	*i* P	**Pb**	**13 10 40.2**	**+0.2**
SCLRA	**Santa Clara, W**	**0.26**	**28**	*e*P	**Pb**	**13 10 40.3**	**+0.3**
EDAD	**Golfito**	**0.26**	**280**	*e*P	**Pb**	**13 10 39.5**	**-0.5**
BRU2	**Volcan**	**0.28**	**48**	P	**Pb**	**13 10 40.5**	**0.0**
BRU2				S	**Sb**	**13 10 45.6**	**+0.4**
BRU2	**Volcan**	**0.28**	**48**	*i* P	**Pb**	**13 10 40.3**	**-0.1**
BRU2				*e*S	**Sb**	**13 10 45.5**	**+0.4**
BRU2				*i* S	**Sb**	**13 10 45.6**	**+0.4**
BRU2				IAML		13 10 45.8	
	comp=E,15µm,0.3s						
BRU2	**Volcan**	**0.28**	**48**	*e*P	**Pb**	**13 10 40.4**	**0.0**
BRU2				*e*S	**Sb**	**13 10 45.7**	**+0.4**
CLLRA	**Cordillera,**	**0.32**	**64**	*i* P	**Pb**	**13 10 40.8**	**-0.1**
CLLRA	**Cordillera,**	**0.32**	**64**	*e*P	**Pb**	**13 10 40.9**	**0.0**
JEFFS	**S de V. Baru**	**0.38**	**80**	*i* P	**Pb**	**13 10 41.6**	**-0.1**
JEFFS				*e*S	**Sb**	**13 10 48.2**	**+0.9**
JEFFS	**S de V. Baru**	**0.38**	**80**	*e*P	**Pb**	**13 10 41.6**	**-0.1**
PTJ1	**Puerto Jimnez**	**0.40**	**260**	P	**Pb**	**13 10 42.3**	**+0.4**
PTJ1				S	**Sb**	**13 10 48.9**	**+1.1**
PTJ1	**Puerto Jimnez**	**0.40**	**260**	*e*P	**Pb**	**13 10 42.3**	**+0.4**
PTPM	**Petroterminale**	**0.40**	**176**	*e*P	**Pb**	**13 10 42.0**	**0.0**
PTPM				*e*S	**Sb**	**13 10 48.0**	**+0.1**
BAGA3	**Bagala, Chiriq**	**0.40**	**110**	*e*P	**Pb**	**13 10 42.1**	**+0.1**
PTPA	**Petro Terminal**	**0.40**	**175**	*e*P	**Pb**	**13 10 42.0**	**-0.1**
PTPA				*e*S	**Sb**	**13 10 48.8**	**+0.8**
PTAR3	**Potrerillos Ar**	**0.41**	**78**	*e*P	**Pb**	**13 10 42.4**	**+0.1**
BQTLY	**Boquete Panama**	**0.47**	**71**	*i* P	**Pb**	**13 10 42.9**	**-0.3**
BQTLY	**Boquete Panama**	**0.47**	**71**	*e*P	**Pb**	**13 10 42.8**	**-0.3**
PIRO	**Carate, Puerto**	**0.47**	**245**	P	**Pb**	**13 10 43.1**	**0.0**
PIRO				S	**Sb**	**13 10 49.8**	**0.0**
PIRO	**Carate, Puerto**	**0.47**	**245**	*e*P	**Pb**	**13 10 43.1**	**0.0**
PIRO	**Carate, Puerto**	**0.47**	**245**	*e*P	**Pb**	**13 10 43.0**	**0.0**
DVD	**David**	**0.48**	**110**	*e*P	**Pb**	**13 10 43.0**	**-0.3**
DVD				*e*S	**Sb**	**13 10 50.0**	**-0.1**
BQSF3	**Alto Boquete,**	**0.49**	**74**	*e*P	**Pb**	**13 10 43.3**	**-0.2**
EDP2	**Potrero Grande**	**0.49**	**327**	*e*P	**Pn**	**13 10 44.4**	**-0.3**
LNBQ3	**Los Naranjos,**	**0.50**	**68**	*e*P	**Pb**	**13 10 43.3**	**-0.4**
LMNES	**Limones**	**0.50**	**175**	*i* P	**Pb**	**13 10 43.7**	**0.0**
LMNES	**Limones**	**0.50**	**175**	*e*P	**Pb**	**13 10 43.7**	**0.0**
LOCO3	**Loma Colorada,**	**0.52**	**112**	*e*P	**Pb**	**13 10 43.8**	**-0.2**
LOMA3	**Las Lomas, Chi**	**0.54**	**109**	*e*P	**Pb**	**13 10 44.1**	**-0.2**
LOMA3				*e*S	**Sb**	**13 10 52.4**	**+0.8**
BGUAL	**Bijagual, Pana**	**0.57**	**99**	*i* P	**Pb**	**13 10 44.3**	**-0.6**
PSOM3	**Paja de Sombre**	**0.58**	**82**	*e*P	**Pb**	**13 10 44.7**	**-0.4**
FIMO	**Fila Mora**	**0.58**	**311**	*e*P	**Pn**	**13 10 45.8**	**-0.3**
DRK0	**Durika**	**0.73**	**333**	P	**Pb**	**13 10 45.8**	**-1.9**
DRK0				S	**Sb**	**13 10 56.3**	**-1.1**
DRK0	**Durika**	**0.73**	**333**	*e*P	**Pb**	**13 10 45.9**	**-1.9**
DRK0				*e*S	**Sb**	**13 10 57.2**	**-0.2**
DRK0	**Durika**	**0.73**	**333**	*e*P	**Pb**	**13 10 45.8**	**-1.9**
PBNVO	**Pueblo Nuevo,**	**0.76**	**68**	*e*P	**Pb**	**13 10 47.4**	**-0.7**
RBALA	**Bur**	**0.79**	**70**	*i* P	**Pb**	**13 10 47.9**	**-0.6**
RBALA	**Bur**	**0.79**	**70**	*e*P	**Pb**	**13 10 48.1**	**-0.5**
CHGR2	**Aguacate**	**0.82**	**66**	*e*P	**Pb**	**13 10 48.5**	**-0.6**
CHGR2				*e*S	**Sb**	**13 10 59.1**	**-0.7**
EDPE	**Pejibaye, P**	**0.86**	**310**	*e*P	**Pn**	**13 10 49.8**	**0.0**
OCHAL	**Ojochal**	**0.88**	**304**	P	**Pb**	**13 10 49.5**	**-0.5**
OCHAL				S	**Sn**	**13 11 02.1**	**+0.1**
KKNTU	**Kakintº**	**1.11**	**78**	*i* P	**Pn**	**13 10 52.6**	**-0.6**
KKNTU	**Kakintº**	**1.11**	**78**	*e*P	**Pn**	**13 10 52.7**	**-0.6**
LAES	**El Progreso Va**	**1.16**	**353**	*e*P	**Pb**	**13 10 55.8**	**+1.1**
PDCAN	**Manzana , Fuen**	**1.24**	**104**	*e*P	**Pn**	**13 10 54.9**	**-0.1**
BUS1	**Rivas**	**1.26**	**319**	*e*P	**Pb**	**13 10 56.2**	**-0.5**
VERH	**Veragua Rainfo**	**1.34**	**348**	*e*P	**Pb**	**13 10 58.5**	**+0.6**
LCR2	**La Lucha 2**	**1.57**	**316**	S	**Sn**	**13 11 19.3**	**0.0**
ABRB	**Las Abras (San**	**1.61**	**330**	*e*P	**Pb**	**13 11 02.6**	**+0.1**
CVTQ	**Turrialba Volc**	**1.63**	**329**	*e*P	**Pb**	**13 11 02.9**	**-0.1**
VTR0	**Volcan Turrial**	**1.64**	**329**	*e*P	**Pb**	**13 11 03.0**	**-0.2**
CVTR	**Volcan Turrial**	**1.64**	**329**	*e*P	**Pb**	**13 11 02.9**	**-0.2**
TRT2	**Tortugero**	**2.11**	**337**	P	**Pn**	**13 11 06.7**	**-0.2**
TRT2				S	**Sn**	**13 11 32.2**	**-0.1**
COVE	**Coope Vega, Sa**	**2.57**	**325**	P	**Pn**	**13 11 13.3**	**+0.1**
COVE				S	**Sn**	**13 11 44.4**	**+0.7**
BCIP	**Isla Barro Col**	**3.08**	**79**	P	**Pn**	**13 11 21.1**	**+0.7**
BCIP				S	**Sn**	**13 11 57.1**	**+0.6**

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*IDC **07** 13:19:09.4±0.9, 56°.74S×140°.94W, h0^{km}, mb4.1/5, mbtmp4.1/5, MS3.9/29, Error ellipse: s-maj=35.5km s-min=26.8km az=17.0*

*GCMT **07** 13:19:15.0±0.3, 57°.14S±0°.02×140°.77W±0°.03, h24^{km}±2^{km}, MW4.9/87, Moment Tensor Solution. s15,c19; s87,c110; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.30±.17; $M_{\theta\theta}$1.74±.17; $M_{\phi\phi}$-1.44±.12; $M_{r\theta}$-0.33±.19; $M_{\theta\phi}$2.42±.11; $M_{\phi r}$-0.58±.17; Best double couple: $M_0$2.96900×10^{16} NP1:ϕ_s287.00000°, δ77.00000°, λ1.00000°. NP2: ϕ_s197.00000°, δ89.00000°, λ167.00000°. Principal axes: T 3.1400, Plg9.0000°, Azm151.0000°; N -0.3430, Plg77.0000°, Azm13.0000°; P -2.7980, Plg8.0000°, Azm242.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 07 13:19:10.7±1.0**, 56°.7S**±0°.2×**141°.0W**±0°.2**, h10**^{km}**, n43, **σ**1^{s}06**/9**, mb4.1**/5**, MS3.9**/29**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**28.43**	**203**	LR	LR	13 33 03.7	
	comp=Z,157nm,21.2s,baz=82,slow=29						
RPZ	**Rata Peaks**	**32.64**	**273**	LR	LR	13 35 35.6	
	comp=Z,225nm,21.3s,baz=313,slow=30						
URZ	**Urewera**	**33.15**	**286**	LR	LR	13 36 24.3	
	comp=Z,207nm,20.1s,baz=120,slow=31						
QSPA	**South Pole Qui**	**33.42**	**180**	P	**P**	**13 25 50.4**	**+1.2**
	7.1nm,1.0s,baz=83,slow=3.0,SNR=10						
QSPA				LR	LR	13 36 53.7	
	comp=Z,321nm,20.9s,baz=73,slow=32						
	7.1nm,1.0s						
PMSA	**Palmer Station**	**36.15**	**135**	LR	LR	13 36 54.7	
	comp=Z,186nm,20.0s,baz=262,slow=30						
RAR	**Rarotonga**	**38.11**	**331**	LR	LR	13 38 06.2	
	comp=Z,206nm,20.0s,baz=192,slow=30						
PPT	**Papeete**	**39.64**	**347**	LR	LR	13 39 22.1	
	comp=Z,135nm,19.7s,baz=170,slow=31						
H03S2	**Juan Fernandez**	**47.34**	**88**	T	T	14 18 37.2	
	baz=219,slow=74,SNR=12						
H03S1	**Juan Fernandez**	**47.34**	**88**	T	T	14 18 38.6	
	baz=219,slow=74,SNR=9.3						
H03S3	**Juan Fernandez**	**47.36**	**88**	T	T	14 18 37.8	
	baz=219,slow=74,SNR=9.9						
H03N3	**Juan Fernandez**	**47.62**	**88**	T	T	14 18 58.3	
	baz=222,slow=72,SNR=50						
H03N2	**Juan Fernandez**	**47.63**	**88**	T	T	14 18 55.7	
	baz=222,slow=72,SNR=93						
H03N1	**Juan Fernandez**	**47.64**	**88**	T	T	14 18 55.1	
	baz=222,slow=72,SNR=51						
SNAA	**Sanae**	**48.56**	**164**	P	**P**	**13 27 52.0**	**-1.5**
	2.8nm,0.7s,baz=222,slow=9.0,SNR=3.9						
SNAA				LR	LR	13 47 59.2	
	comp=Z,156nm,18.5s,baz=22,slow=36						
	2.8nm,0.7s						
AFI	**Afiamalu**	**48.79**	**319**	LR	LR	13 45 04.3	
	comp=Z,65nm,18.1s,baz=152,slow=32						
MSVF	**Nonsavu**	**49.53**	**305**	LR	LR	13 44 08.2	
	comp=Z,46nm,21.2s,baz=165,slow=30						
MAW	**Mawson**	**54.72**	**191**	LR	LR	13 49 05.5	
	comp=Z,114nm,21.4s,baz=166,slow=33						
STKA	**Stephens Creek**	**57.29**	**261**	LR	LR	13 48 31.1	
	comp=Z,75nm,20.6s,baz=184,slow=31						
CTA	**Charters Tower**	**64.02**	**273**	LR	LR	13 53 13.6	
	comp=Z,43nm,21.0s,baz=119,slow=32						
NNA	**Nana**	**65.94**	**75**	LR	LR	13 51 06.9	
	comp=Z,136nm,19.3s,baz=216,slow=29						
LPAZ	**La Paz**	**67.11**	**85**	P	**P**	**13 30 05.9**	**+0.8**
	0.7nm,0.5s,baz=228,slow=6.4,SNR=3.8						
LPAZ				LR	LR	13 51 54.0	
	comp=Z,86nm,22.0s,baz=225,slow=29						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**67.92**	**260**	P	**P**	**13 30 10.1**	**+0.6**
	1.0nm,0.8s,baz=143,slow=6.6,SNR=11						
ASAR				LR	LR	13 57 25.3	
	comp=Z,62nm,18.1s,baz=168,slow=34						
	1.0nm,0.8s						
ATAH	**Atahualpa**	**69.21**	**70**	LR	LR	13 53 13.8	
	comp=Z,92nm,21.4s,baz=222,slow=30						
WRA	**Warramunga Arr**	**70.69**	**263**	P	**P**	**13 30 27.2**	**+0.5**
	1.2nm,0.9s,baz=147,slow=5.7,SNR=8.9						
	1.2nm,0.9s						
FITZ	**Fitzroy Crossi**	**76.91**	**257**	LR	LR	14 01 27.1	
	comp=Z,69nm,19.1s,baz=169,slow=33						
JTS	**Las Juntas de**	**81.07**	**56**	LR	LR	13 58 10.4	
	comp=Z,49nm,20.7s,baz=124,slow=29						
BATI	**Baumata**	**84.49**	**260**	LR	LR	14 08 22.6	
	comp=Z,94nm,18.0s,baz=164,slow=35						
SIJI	**Sorong**	**88.06**	**271**	LR	LR	14 07 47.7	
	comp=Z,52nm,21.9s,baz=62,slow=33						
SUR	**Sutherland**	**89.89**	**165**	LR	LR	14 09 56.0	
	comp=Z,74nm,19.0s,baz=176,slow=34						
KAPI	**Kappang**	**90.93**	**260**	LR	LR	14 10 19.4	
	comp=Z,57nm,20.1s,baz=168,slow=34						
PFO	**Pinyon Flats O**	**92.37**	**20**	LR	LR	14 04 57.9	
	comp=Z,58nm,18.4s,baz=202,slow=30						
MDP	**Montagnes des**	**93.30**	**86**	LR	LR	14 08 09.4	
	comp=Z,50nm,19.0s,baz=86,slow=32						
BOSA	**Boshof**	**94.18**	**168**	LR	LR	14 13 03.3	
	comp=Z,43nm,18.3s,baz=200,slow=34						
NVAR	**Mina Array Bea**	**96.72**	**18**	LR	LR	14 07 26.9	
	comp=Z,61nm,18.5s,baz=240,slow=30						
LBTB	**Lobatse**	**97.78**	**168**	LR	LR	14 13 23.4	
	comp=Z,32nm,19.3s,baz=178,slow=33						
ELK	**Elko**	**99.52**	**20**	LR	LR	14 10 11.5	
	comp=Z,64nm,18.2s,baz=200,slow=31						
H10N3	**ASCENSION HYDR**	**102.20**	**125**	T	T	15 27 29.1	
	baz=206,slow=74						
H10N1	**ASCENSION HYDR**	**102.20**	**125**	T	T	15 27 29.1	
	baz=206,slow=74						
H10N2	**ASCENSION HYDR**	**102.21**	**125**	T	T	15 27 23.8	
	baz=206						
ILAR	**Eielson Array**	**121.27**	**357**	PKP	**PKiKP**	**13 38 02.2**	**-0.2**
	0.3nm,0.8s,baz=191,slow=3.7,SNR=2.8						
ESDC	**Sonseca Array**	**147.31**	**103**	PKPbc	**PKPbc**	**13 38 53.4**	**-0.3**
	0.3nm,0.6s,baz=298,slow=2.8,SNR=2.8						
MKAR	**Makanchi Array**	**151.90**	**268**	PKPbc	**PKiKP**	**13 39 05.2**	**0.0**
	0.6nm,0.8s,baz=150,slow=3.2,SNR=6.3						
ZALV	**Zalesovo Beam**	**154.20**	**283**	PKPab	**PKPab**	**13 39 22.2**	**-1.3**
	0.7nm,0.6s,baz=90,slow=3.0,SNR=3.9						

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*AZER **07** 13:23:21.0, 38°.37N×44°.60E, h10^{km}, ml2.4*

*AFAD **07** 13:23:21.9, 38°.41N×44°.47E, h7^{km}±3^{km}, ML2.0*

*ISK **07** 13:23:23.6, 38°.48N×44°.50E, h5^{km}, ML2.5/4*

ISC 07 13:23:22.6±1.3**, 38°.43N**±0°.03×**44°.50E**±0°.03**, h7**^{km}±11^{km}**, n16, **σ**1^{s}99**/29**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.46	301	P	Pg	13 23 30.5	-1.1
OZAP				S	Sb	13 23 38.3	-2.0
OZAP				IAML		13 23 40.0	
	comp=N,220nm,0.6s						
YOVA	Hakkari_Yksek	0.85	191	P	Pg	13 23 38.1	-0.8
YOVA				S	Sn	13 23 53.5	-0.5
YOVA				IAML		13 23 55.0	
	comp=E,42nm,0.4s						
YOVA				IAML		13 23 56.0	
	comp=N,58nm,0.6s						
TVAN	Van	0.86	277	P	Pg	13 23 38.4	-0.8
TVAN				S	Sb	13 23 50.6	-1.2
TVAN				IAML		13 24 01.0	
	comp=N,84nm,0.5s						
TVAN				IAML		13 24 05.0	
	comp=E,84nm,1.0s						
VANB	Van	0.89	281	Pg	Pn	13 23 41.2	-0.4
VMUR	Van-Muradiye	0.92	308	P	Pg	13 23 39.8	-0.5
VMUR				S	Sb	13 23 52.5	-0.9
VMUR				IAML		13 23 57.0	
	comp=E,66nm,0.4s						
HAKT	HAKKARI	1.07	216	P	Pb	13 23 42.4	-1.1
HAKT				S	Sn	13 23 59.3	-0.1
HAKT				IAML		13 24 01.0	
	comp=N,46nm,0.4s						
HAKT				IAML		13 24 02.0	
	comp=E,45nm,0.5s						
HAKT	HAKKARI	1.07	216	P	Pb	13 23 42.6	-1.0
HAKT				S	Sn	13 24 00.1	+0.7
NAX	Nakhchivan	1.08	46	P	Pg	13 23 42.1	-1.3
NAX				S	Sb	13 23 58.7	+0.6
GEVA	Gevas	1.14	265	P	Pg	13 23 42.0	-2.4
GEVA				S	Sb	13 23 58.9	-0.8
GEVA				IAML		13 24 06.0	
	comp=E,36nm,0.7s						
GEVA				IAML		13 24 08.0	
	comp=N,61nm,0.6s						
SBZ	Shahbuz	1.27	40	P	Pn	13 23 45.5	-1.4
SBZ				S	Sn	13 24 05.0	+0.7
ORD	Ordubad	1.27	66	P	Pn	13 23 45.8	-1.1
ORD				S	Sn	13 24 04.0	-0.3
HYR	Heyderabad	1.32	12	S	Sn	13 24 08.7	+3.3
CUKT	Cukurca	1.37	211	Pn	Pg	13 23 51.7	+2.8
CUKT				Sn	Sn	13 24 12.2	+5.5
IGDI	IGDIR	1.48	347	P	Pg	13 23 50.6	-0.3
IGDI				S	Sg	13 24 15.2	+5.1
AGRB	Hanur-Agry	1.64	315	Pn	Pg	13 23 54.2	+0.1
GNI	Garni	1.73	6	Pn	Pb	13 23 54.8	-0.1
GNI				Sn	Sg	13 24 18.6	+0.3

*NSSP **07** 13:38:02.2, 38.42N×44.57E, h10km, Ms3.1*
*AZER **07** 13:38:02.5, 38.45N×44.53E, h2km, ml3.2*
*AFAD **07** 13:38:04.8, 38.46N×44.47E, h6km±4km, ML3.1*
*TEH **07** 13:38:05.7, 38.48N×44.58E, h6km±62km, ML2.9, Presumed earthquake*
*ISK **07** 13:38:07.2, 38.54N×44.52E, h15km, ML3.0/8*
ISC 07 13:38:04.9±1.1**, 38.46N**±0.02×**44.52E**±0.02**, h2**km±10km**, n40,** σ1§**45**/66**, 2D, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.46	296	P	Pg	13 38 13.6	-0.2
OZAP				S	Sg	13 38 20.6	+0.8
OZAP				IAML		13 38 24.0	
	comp=N,2µm,0.6s						
ISHB	Shabestar	0.88	101	Pg	Pg	13 38 21.3	-0.4
TVAN	Van	0.88	275	P	Pg	13 38 20.4	-1.4
TVAN				S	Sg	13 38 33.5	+0.4
TVAN				IAML		13 38 42.0	
	comp=E,677nm,0.5s						
TVAN				IAML		13 38 49.0	
	comp=N,801nm,1.1s						
YOVA	Hakkari_Yksek	0.89	192	P	Pg	13 38 22.0	+0.1
YOVA				S	Sb	13 38 35.9	+0.3
YOVA				IAML		13 38 41.0	
	comp=E,434nm,0.5s						
YOVA				IAML		13 38 42.0	
	comp=N,435nm,0.7s						
VANB	Van	0.90	279	Pg	Pn	13 38 24.5	-0.2
VANB				Sg	Sn	13 38 37.3	-1.1
MAKU	Maku	0.90	8	Pg	Pg	13 38 22.3	+0.1
IMRD	Marand	0.96	74	Pg	Pb	13 38 23.7	-0.6
NAX	Nakhchivan	1.04	46	P	Pb	13 38 25.2	-0.5
NAX				S	Sn	13 38 41.0	-0.8
HAKT	HAKKARI	1.11	216	P	Pg	13 38 24.9	-1.1
HAKT				S	Sb	13 38 41.1	-0.7
HAKT				IAML		13 38 49.0	
	comp=E,371nm,0.5s						
HAKT	HAKKARI	1.11	216	P	Pg	13 38 25.4	-0.7
HAKT				S	Sn	13 38 44.1	+0.4
GEVA	Gevas	1.16	263	P	Pg	13 38 25.1	-2.0
GEVA				S	Sg	13 38 41.9	-0.3
GEVA				IAML		13 38 46.0	
	comp=E,323nm,0.7s						
SBZ	Shahbuz	1.23	40	P	Pn	13 38 28.6	-0.7
SBZ				S	Sn	13 38 49.2	+2.5
ORD	Ordubad	1.24	67	P	Pg	13 38 28.4	-0.3
ORD				S	Sn	13 38 46.9	+0.1
HYR	Heyderabad	1.28	11	P	Pg	13 38 29.6	+0.1
HYR				S	Sn	13 38 49.8	+2.0
ITBZ	Tabriz	1.30	99	Pg	Pn	13 38 29.0	-1.2
IAZR	Azarshahr	1.39	124	Pg	Pg	13 38 31.5	0.0
CUKT	Cukurca	1.41	211	Pn	Pg	13 38 34.0	+2.1
CUKT				Sn	Sg	13 38 53.6	+3.5
CUKT	Cukurca	1.41	211	P	Pg	13 38 34.1	+2.2
CUKT				S	Sg	13 38 51.2	+1.1
CUKT				IAML		13 39 00.0	
	comp=E,483nm,0.6s						
CUKT				IAML		13 39 02.0	
	comp=N,387nm,0.6s						
VAYK	Vayk	1.42	29	⇓eP	Pb	13 38 31.5	-0.7
VAYK				⇓eS	Sg	13 38 51.3	+0.8
IGDI	IGDIR	1.45	346	P	Pg	13 38 32.5	-0.1
IGDI				S	Sg	13 38 55.4	+3.9
AGRB	Hanur-Agry	1.63	314	Pn	Pn	13 38 34.4	-0.5
MLAZ	Malazgirt-MUS	1.69	294	Pn	Pb	13 38 36.6	-0.2
GNI	Garni	1.70	6	Pn	Pb	13 38 36.1	-0.9
GNI	Garni	1.70	6	eP	Pg	13 38 37.9	+0.5
GNI				eS	Sg	13 39 02.7	+3.3
EGVZ	Egvard	1.75	63	eP	Pb	13 38 37.0	-0.9
EGVZ				eS	Sg	13 39 01.6	+0.4
AYRK	Ayrk	1.92	30	eP	Pb	13 38 40.7	-0.2
AYRK				eS	Sg	13 39 07.2	+0.5
MAHB	Mahabad	1.93	151	Pn	Pg	13 38 41.5	-0.3
GURO	Guroymak-BITLI	1.96	273	Pn	Pb	13 38 40.8	-0.6
IHRS	Heris	1.98	93	Pn	Pb	13 38 41.5	-0.3
QRD	Qoradiz	2.40	64	P	Pn	13 38 46.1	+0.9
QRD				S	Sb	13 39 19.6	+0.7
GDB	GEDABAY	2.45	22	P	Pn	13 38 47.3	+1.1
GDB				S	Sg	13 39 22.7	-1.0
GANJ	Ganja	2.59	32	P	Pb	13 38 49.8	-2.3
GANJ				S	Sg	13 39 25.8	-2.3
AGDM	Agdam	2.60	50	P	Pb	13 38 49.6	-2.5
AGDM				S	Sb	13 39 24.4	-0.2
SVAN	Silvan-Diyarba	2.63	264	Pn	Pb	13 38 50.8	-2.0
GRMI	Germi	2.66	81	Pn	Pb	13 38 50.8	-2.6
QZX	Qazax, Azerbai	2.68	14	P	Pn	13 38 50.3	+1.2
QZX				S	Sb	13 39 26.7	-0.2
SENK	Senkaya-Erzuru	2.69	322	Pn	Pn	13 38 50.4	+1.0
YRD	Yardimli	2.94	80	P	Pn	13 38 54.5	+1.6
YRD				S	Sb	13 39 33.5	-1.2
LRK	Lerik	3.00	85	P	Pn	13 38 55.4	+1.8
LRK				S	Sb	13 39 35.7	-0.5
ASTR	Astara	3.35	87	P	Pn	13 38 60.0	+1.7
ASTR				S	Sb	13 39 43.3	-2.9

IDC 07 14:35:44.7±7.7**, 7.79S**×**128.31E, h193**km±84km**, mb2.7**/1**, mbtmp3.3**/4**, MS3.2**/1**, Error ellipse: s-maj=87.1km s-min=24.7km az=41.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	5.18	242	P	Pn	14 37 01.7	+0.5
	75nm,0.5s,baz=302,slow=2.1,SNR=17						
BATI				S	Sn	14 38 02.1	+0.6
	9.3nm,0.3s,baz=178,slow=17,SNR=2.0						
FITZ	Fitzroy Crossi	10.57	194	P	Pn	14 38 09.9	-1.5
	0.8nm,0.3s,baz=13,slow=16,SNR=7.7						
FITZ				S	Sn	14 40 02.1	-7.2
	2.0nm,0.3s,baz=148,slow=21,SNR=7.3						
WRA	Warramunga Arr	13.42	155	P	Pn	14 38 47.2	-0.5
	0.2nm,0.3s,baz=333,slow=12,SNR=6.6						
WRA				S	Sn	14 41 10.9	-6.6
	0.6nm,0.3s,baz=265,slow=8.4,SNR=8.9						
ASAR	Alice Springs	16.67	162	P	Pn	14 39 28.6	+1.0
	0.5nm,0.8s,baz=339,slow=10,SNR=4.9						
PMG	Port Moresby	18.71	96	LR	LR	14 48 43.0	
	comp=Z,73nm,18.6s,baz=176,slow=42						
MKAR	Makanchi Array	67.98	328	P	P	14 46 22.8	-0.1
	0.1nm,0.3s,baz=122,slow=5.4,SNR=1.7						
	0.1nm,0.3s						

*IDC **07** 14:55:53.5±1.9, 24.26S×67.04W, h165km±17km, mb3.4/5, mbtmp4.0/11, Error ellipse: s-maj=21.3km s-min=15.1km az=99.0*
*NEIC **07** 14:55:53.4±1.0, 24.31S±0.08×67.1W±0.2, h188km±13km, mb4.3/4, ML4.5(GUC), Error ellipse: s-maj=21.2km s-min=10.1km az=104.0*
*SJA **07** 14:55:53.5±0.6, 24.28S×67.23W, h198km, ML4.2, MW3.9*
*VAO **07** 14:55:55.5±0.9, 24.19S×67.07W, h190km±7km, mb4.4, Presumed earthquake*
*GUC **07** 14:55:56.1±0.7, 24.25S×67.44W, h204km±6km, ML4.5*
ISC 07 14:55:53.8±0.6**, 24.27S**±0.04×**67.25W**±0.04**, h192**km±6km**, n121,** σ1§**62**/150**, mb4.0**/7**, 9C-4D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AF01	San Pedro de A	1.56	327		Pn	14 56 29.5	+1.7
AF01	San Pedro de A	1.56	327	eP	Pn	14 56 29.5	+1.7
AF01				i S	Sn	14 56 55.0	+0.9
AF01				IAML		14 56 57.5	
	comp=E,2µm,0.4s						
AF01	San Pedro de A	1.56	327	eP	Pn	14 56 16.1	-12
AF01				eS	Sn	14 56 50.2	-3.8
AF01				IAML		14 57 01.2	
	comp=Z,787nm,0.3s						
SLA	San Lorenzo	1.65	106	⇓eP	Pn	14 56 29.1	+0.6
SLA	San Lorenzo	1.65	106	eP	Pn	14 56 29.3	+0.9
SLA				eS	Sn	14 56 55.5	+0.2
HJA	Humahuaca	1.99	58	eP	Pn	14 56 32.8	+0.7
FSA	Cafayete	2.17	148	eP	Pn	14 56 34.4	+0.6
FSA				eS	Sn	14 57 04.0	-0.9
YJA	Yavi	2.62	38	eP	Pn	14 56 39.7	+0.6
YJA	Yavi	2.62	38	eP	Pn	14 56 40.1	+1.0
YJA				eS	Sn	14 57 14.9	+0.5
PB06	IPOC Station P	2.64	306		Pn	14 56 40.2	+1.2
PB06				Sn	Sn	14 57 14.0	-0.2
PB06	IPOC Station P	2.64	306	⇑iP	Pn	14 56 40.6	+1.5
PB06				i S	Sn	14 57 13.8	-0.4
PB06				IAML		14 57 16.8	
	comp=N,2µm,0.2s						
PB06	IPOC Station P	2.64	306	eP	Pn	14 56 40.5	+1.5
PB06				eS	Sn	14 57 14.2	0.0
PB06				IAML		14 57 16.1	
	comp=Z,1µm,0.1s						
PB14	IPOC Station P	2.90	262		Pn	14 56 43.0	+0.8
PB14	IPOC Station P	2.90	262	eP	Pn	14 56 43.2	+1.1
PB14				i S	Sn	14 57 19.1	-0.8
PB14	IPOC Station P	2.90	262	eP	Pn	14 56 43.5	+1.3
PB14				eS	Sn	14 57 19.7	-0.2
PB14				IAML		14 57 24.8	
	comp=Z,210nm,0.2s						
AHML	Horco Molle	3.05	146	eP	Pn	14 56 30.4	-13
AHML				eS	Sn	14 57 13.2	-10
PB05	IPOC Station P	3.05	297		Pn	14 56 44.9	+1.1
PB05	IPOC Station P	3.05	297	⇑iP	Pn	14 56 45.0	+1.1
PB05				i S	Sn	14 57 21.6	-1.3
PB05				IAML		14 57 30.0	
	comp=E,409nm,0.3s						
PB05	IPOC Station P	3.05	297	eP	Pn	14 56 44.5	+0.6
PB05				eS	Sn	14 57 23.0	+0.2
PB05				IAML		14 57 25.1	
	comp=Z,287nm,0.4s						
PB09	IPOC Station P	3.07	323		Pn	14 56 45.9	+1.8
PB09	IPOC Station P	3.07	323	⇑iP	Pn	14 56 45.9	+1.8
PB09				i S	Sn	14 57 23.5	+0.1
PB09				IAML		14 57 24.9	
	comp=N,928nm,0.7s						
PB09	IPOC Station P	3.07	323	eP	Pn	14 56 44.0	-0.1
PB09				eS	Sn	14 57 24.0	+0.6
PB09				IAML		14 57 24.5	
	comp=Z,657nm,0.8s						
AC02	Maricunga	3.07	213		Pn	14 56 46.1	+1.7
AC02	Maricunga	3.07	213	⇑iP	Pn	14 56 46.1	+1.7
AC02				i S	Sn	14 57 24.9	+1.0
AC02	Maricunga	3.07	213	eP	Pn	14 56 46.1	+1.7
AC02				eS	Sn	14 57 26.7	+2.8
PB03	IPOC Station P	3.19	313		Pn	14 56 46.4	+0.9
PB03	IPOC Station P	3.19	313	eP	Pn	14 56 46.7	+1.1
PB03				i S	Sn	14 57 24.9	-1.1
PB03				IAML		14 57 28.7	
	comp=E,866nm,0.2s						
PB03	IPOC Station P	3.19	313	eP	Pn	14 56 46.7	+1.1
PB03				eS	Sn	14 57 25.6	-0.4
PB03				IAML		14 57 28.8	
	comp=Z,719nm,0.4s						
PB07	IPOC Station P	3.51	316		Pn	14 56 50.2	+0.8
PB07	IPOC Station P	3.51	316	eS	Sn	14 57 32.1	-0.8
PB07				IAML		14 57 35.4	
	comp=Z,703nm,0.3s						
AC01	Pan de Azucar	3.56	238		Pn	14 56 50.2	+0.3
AC01	Pan de Azucar	3.56	238	eP	Pn	14 56 50.4	+0.4
AC01				i S	Sn	14 57 32.3	-1.6
AC01	Pan de Azucar	3.56	238	eP	Pn	14 56 50.2	+0.3
AC01				eS	Sn	14 57 32.8	-1.2
AC01				IAML		14 57 35.9	
	comp=Z,269nm,0.4s						
TINO	Tinogasta	3.79	184	eP	Pn	14 56 54.9	+2.0
PB01	IPOC Station P	3.82	327		Pn	14 56 53.5	+0.3
PB01	IPOC Station P	3.82	327	⇑iP	Pn	14 56 53.6	+0.4
PB01				i S	Sn	14 57 37.6	-2.1
PB02	IPOC Station P	3.82	320	Pn	Pn	14 56 53.6	+0.4
PB02	IPOC Station P	3.82	320	eP	Pn	14 56 53.7	+0.4
PB02				i S	Sn	14 57 37.0	-2.7
PB02	IPOC Station P	3.82	320	eP	Pn	14 56 51.2	-2.0
PB02				eS	Sn	14 57 38.0	-1.6
PB02				IAML		14 57 41.8	
	comp=Z,729nm,0.3s						
AC06	Mina Casimiro	4.16	222		Pn	14 56 57.2	-0.1
AC06	Mina Casimiro	4.16	222	eP	Pn	14 56 57.4	+0.1
AC06				i S	Sn	14 57 45.5	-1.8
GO03	Copiapo	4.27	218		Pn	14 56 58.6	-0.1
GO03	Copiapo	4.27	218	eP	Pn	14 56 58.5	-0.2
GO03				eP		14 56 58.9	
GO03				i S	Sn	14 57 47.1	-2.7
GO03	Copiapo	4.27	218	eP	Pn	14 56 59.1	+0.4
GO03				eS	Sn	14 57 49.0	-0.8
GO03				IAML		14 57 52.5	
	comp=Z,364nm,0.3s						
PATCX	Punta Patache	4.35	321		Pn	14 56 59.5	-0.5
PATCX	Punta Patache	4.35	321	⇓eP	Pn	14 56 59.9	0.0
PB08	IPOC Station P	4.47	336		Pn	14 57 01.9	+0.2
PB08	IPOC Station P	4.47	336	eP	Pn	14 57 02.7	+1.0
PB08				eS	Sn	14 57 55.5	+0.6
PB08				IAML		14 57 57.5	
	comp=Z,78nm,0.5s						
VCA	Vinchina	4.53	191	eP	Pn	14 57 05.1	+2.9
VCA				eS	Sn	14 57 58.8	+2.7
GO01	Chusmiza	4.92	338		Pn	14 57 08.1	+0.5
GO01	Chusmiza	4.92	338	eP	Pn	14 57 08.1	+0.5
GO01				eS	Sn	14 58 07.2	+1.8
GO01				IAML		14 58 08.4	
	comp=Z,79nm,0.5s						
PB11	IPOC Station P	5.01	333		Pn	14 57 07.8	-0.6
PB11	IPOC Station P	5.01	333	eP	Pn	14 57 07.2	-1.2
PB11				eS	Sn	14 58 04.2	-2.9
PB11				IAML		14 58 06.0	
	comp=Z,131nm,0.5s						
AC04	Llanos de Chal	5.21	220		Pn	14 57 09.9	-0.8
AC04	Llanos de Chal	5.21	220	eP	Pn	14 57 10.0	-0.8
AC04	Llanos de Chal	5.21	220	eP	Pn	14 57 10.2	-0.5
AC04				eS	Sn	14 57 58.7	-13
AC04				IAML		14 58 17.5	
	comp=Z,107nm,0.7s						
AC05	El Transito	5.30	210		Pn	14 57 12.1	+0.1
LCO	Las Campanas	5.64	212		Pn	14 57 15.9	-0.7
CO03	El Pedregal	7.22	204	Pn	Pn	14 57 36.7	-0.2
CFA	Coronel Fontan	7.36	187	P	Pn	14 57 38.7	0.0
	comp=Z,1.9nm,0.2s,baz=18,slow=15,SNR=19						
CFA				S	Sn	14 58 56.4	-5.7
	comp=Z,3.1nm,0.3s,baz=110,slow=20,SNR=8.0						
CO02	Combarbal	7.67	205	Pn	Pn	14 57 42.6	-0.2
LPAZ	La Paz	7.98	354	P	Pn	14 57 48.4	+0.9
	comp=Z,12nm,0.3s,baz=152,slow=4.8,SNR=60						
LPAZ				S	Sn	14 59 14.6	-3.1
	comp=Z,5.3nm,0.7s,baz=354,slow=12,SNR=4.8						
LPAZ	La Paz	7.98	354	eP	Pn	14 57 48.3	+0.8
CO04	Los Peladeros	8.41	202	Pn	Pn	14 57 51.2	-1.5
CPUP	Villa Florida	9.21	105	P	Pn	14 57 58.7	-4.2
	comp=Z,0.8nm,0.3s,baz=272,slow=15,SNR=4.6						
MT02	Curacav	9.59	200	Pn	Pn	14 58 04.9	-2.8
SIV	San Ignacio	10.07	36	P	Pn	14 58 12.5	-1.7
	comp=Z,3.1nm,0.3s						
SIV				S	Sn	14 59 59.9	-6.8
PSAL	Palomas, Salto	10.91	131	eP	Pn	14 58 25.2	+0.3
AMBA	Amambai (Brazi	11.32	86	eP	Pn	14 58 29.1	-1.1
PTLB	Pontes e Lacer	11.62	42	Pn	Pn	14 58 33.1	-1.1
PTLB	Pontes e Lacer	11.62	42	eP	Pn	14 58 33.6	-0.6
BI02	San Fabin de	12.83	195	Pn	Pn	14 58 44.9	-4.5
PP1B	Ponte de Pedra	13.32	62	eP	Pn	14 58 55.9	+0.2
TRCB	Terra Rica	13.49	87	eP	Pn	14 58 57.5	-0.3
SALV	Santo Antonio	13.67	55	eP	Pn	14 58 58.8	-1.2
CPSB	Cacapava Do Su	13.71	120	eP	Pn	14 59 00.4	0.0
ITAB	Concordia	13.94	105	P	P	14 59 05.9	+0.4
PLTB	Pedras Altas	14.17	125	P	Pn	14 59 07.3	+1.1
PLTB	Pedras Altas	14.17	125	eP	Pn	14 59 07.0	+0.9
TRQA	Tornquist	14.46	163	P	Pn	14 59 08.4	-1.3
LDASE	Londrina, Braz	14.79	90	eP	Pn	14 59 13.7	-0.3
PDRB	Porto dos Gac	16.07	40	eP	P	14 59 29.1	0.0
ITRB	Iturama	16.31	77	eP	P	14 59 32.4	+0.7
PLCA	Paso Flores	16.65	189	P	Pn	14 59 38.0	+1.6
	comp=Z,3.0nm,0.9s,baz=8.4,slow=12,SNR=6.1						
PLCA	Paso Flores	16.65	189	P	P	14 59 31.6	-3.8
PLCA				IAmb	IAmb	14 59 46.6	
	comp=Z,7.4nm,0.9s						
ARAG	Araguaiana, MT	16.81	62	eP	P	14 59 37.8	+0.5
CLDB	Colider	17.21	41	eP	P	14 59 41.7	+0.1
BB19B	Bebedouro	17.57	83	eP	P	14 59 46.2	+0.6
RCLB	Rio Claro- Sao	18.20	88	eP	P	14 59 52.5	0.0
PET01	Itanhaem-SP	18.21	94	eP	P	14 59 53.1	+0.5
VAO	Valinhos	18.63	90	P	P	14 59 56.5	-0.6
VAO	Valinhos	18.63	90	eP	P	14 59 57.3	+0.2
IPMB	Ipameri, GO	18.82	74	eP	P	14 59 59.9	+0.6
SNDB	Serra Nova Dou	19.45	54	eP	P	15 00 05.6	-0.4
BDFB	Brasilia	20.00	68	P	P	15 00 12.1	+0.2
	comp=Z,20nm,0.6s,baz=239,slow=11,SNR=32						
TEFE	Tefe	20.79	7	eP	P	15 00 21.4	+1.2
BSCB	Bom Sucesso	21.00	86	eP	P	15 00 22.2	-0.3
JANB	Januaria	23.43	71	eP	P	15 00 45.1	-0.8
SDBA	SAO DESIDERIO	24.23	65	eP	P	15 00 53.2	0.0
SMTB	Santa Maria do	24.23	54	eP	P	15 00 53.0	-0.2
ALF01	Guarapari-ES	24.77	87	eP	P	15 00 58.4	+0.4
RIB01	Linhares ES	25.40	84	eP	P	15 01 03.7	0.0
NBPS	Pedro II - PI	31.75	56	eP	P	15 01 59.1	-1.0
RCBR	Riachuelo	35.25	64	P	P	15 02 28.1	-2.2
RCBR				IAmb	IAmb	15 02 32.5	
	comp=Z,13nm,0.9s						
VNA3	Neumayer Olymp	56.98	161	⇑P	P	15 05 24.1	+5.3
	comp=Z,2.5nm,0.6s						
VNA3				⇓PKiKP	PKiKP	15 12 39.3	+1.4
VNA1	Neumayer--Stat	57.18	160	PKiKP	PKiKP	15 12 36.7	-1.3
VNA2	Neumayer--Watz	57.54	160	⇑P	P	15 05 29.0	+6.2
	comp=Z,3.0nm,0.6s,baz=281,slow=5.7						
VNA2				⇑PKiKP	PKiKP	15 12 37.0	-1.6
	baz=282,slow=10						
TROLL	Troll, Antarti	60.89	161	⇑P	P	15 05 52.1	+6.3
TROLL				⇓PKiKP	PKiKP	15 12 43.6	+0.8
TXAR	Lajitas Array	63.76	325	P	P	15 06 09.1	+3.6
	comp=Z,0.2nm,0.5s,baz=165,slow=2.5,SNR=1.4						
	comp=Z,0.2nm,0.5s						
QSPA	South Pole Qui	65.94	180	P	P	15 06 22.1	+3.0
	comp=Z,1.4nm,0.5s,baz=170,slow=6.1,SNR=10						
	comp=Z,1.4nm,0.5s						
QSPA	South Pole Qui	65.94	180	P	P	15 06 20.3	+1.2
TORD	Torodi Ar. Bea	76.88	69	P	P	15 07 26.9	+1.8
	comp=Z,2.2nm,0.6s,baz=247,slow=7.5,SNR=14						
	comp=Z,2.2nm,0.6s						
PDAR	Pinedale Array	77.26	329	P	P	15 07 30.0	+3.0
	comp=Z,0.2nm,0.5s,baz=132,slow=7.7,SNR=4.5						
	comp=Z,0.2nm,0.5s						
YKA	Yellowknife Ar	94.30	340	P	P	15 08 51.8	+1.1
	comp=Z,0.2nm,0.5s,baz=136,slow=3.6,SNR=3.0						
	comp=Z,0.2nm,0.5s						
ASAR	Alice Springs	128.12	205	PKP	PKiKP	15 14 40.6	+2.3
	comp=Z,0.6nm,0.7s,baz=139,slow=1.8,SNR=9.9						
WRA	Warramunga Arr	131.28	207	PKP	PKiKP	15 14 46.5	+1.8
	comp=Z,0.6nm,0.7s,baz=144,slow=2.0,SNR=10						
MKAR	Makanchi Array	146.87	40	PKPbc	PKPab	15 15 16.2	+1.1
	comp=Z,0.8nm,0.5s,baz=298,slow=3.3,SNR=14						
KLR	Kul'dur	150.97	334	PKPbc	PKiKP	15 15 25.6	+1.6
	comp=Z,0.9nm,0.6s,baz=2.6,slow=4.0,SNR=4.4						
HHC	Hu-ho-hao-te	163.43	3	eP	PKPdf	15 15 29.1	-4.6
PZH	PanZhiHua	169.80	75	PKP	PKPdf	15 15 35.1	-3.9
NJ2	Nanjing	170.56	327	eP	PKPdf	15 15 35.4	-3.6
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						

*IDC **07** 14:59:19.9±1.0, 5.39N×125.48E, h0km, mb3.7/5, mbtmp3.7/5, MS2.8/5, Error ellipse: s-maj=48.0km s-min=12.1km az=84.0*
*MAN **07** 14:59:23.0, 5.87N×126.64E, h24km, MS3.6*
*DJA **07** 14:59:26.1±3.5, 6°N±7°×12°7E±°, h16km±36km, M4.4/12, mB5.0/3, mb4.5/8, MLv4.3/12, Mw(mB)4.3/3*
ISC 07 14:59:25.2±0.9**, 5.87N**±0.05×**126.59E**±0.08**, h35**km**, n33,** σ1§**97**/26**, mb3.6**/5**, MS2.6**/4**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.91	285	eP	Pn	14 59 41.9	+0.4
DDMP				eS	Sn	14 59 53.1	-0.3
DAV	Davao City (W)	1.56	320	Pg	Pn	14 59 51.3	+0.8
	102nm,0.3s,baz=95,slow=1.8,SNR=8.0						
DAV				Lg	Lg	15 00 13.0	
	63nm,0.3s,baz=234,slow=23,SNR=4.7						
DAV				LR	LR	15 00 34.1	
	comp=Z,68nm,20.2s,baz=116,slow=44						
DAV	Davao City (W)	1.56	320	P	Pn	14 59 51.8	+1.3
DMPH	Davao City--Mi	1.62	318	eP	Pn	14 59 52.0	+0.7
DMPH				i S	Sn	15 00 14.0	+3.1
GSPH	General Santos	1.65	278	i P	Pn	14 59 50.3	-1.5
GSPH				i S	Sn	15 00 10.0	-1.8
KCP	Kidapawan	1.88	307	eP	Pn	14 59 55.2	+0.4
KCP				i S	Sn	14 59 59.3	-18
BIPH	Bislig	2.31	354	eP	Pn	15 00 01.1	+0.3
BIPH				eS	Sn	15 00 29.4	+1.3
SGSI	Sangihe	2.41	206	P	Pn	15 00 05.4	+3.2
CTBH	Cotabato--PC H	2.69	300	i P	Pn	15 00 07.4	+1.4
CTBH				i S	Sn	15 00 40.2	+2.8
CGP	Cagayan de Oro	3.19	324	eP	Pn	15 00 14.5	+1.7
CGP				eS	Sn	15 00 52.4	+2.7
TBP	Tagbilaran	4.66	325	eP	Pn	15 00 34.3	+1.2
TNTI	Ternate	5.12	171	P	Pn	15 00 44.5	+5.1
	0.1nm21nm,1.1s						
GTOI	Gorontalo	6.31	215	P	Pn	15 00 57.8	+2.0
	0.2nm42nm,0.9s						
RCP	Roxas	6.82	326	i P	Pn	15 01 05.4	+2.6
MRSI	Marisa	7.09	221	P	Pn	15 01 09.8	+3.3
	0.2nm606nm55nm,0.6s						
LUWI	Luwuk	7.85	209	P	Pn	15 01 21.2	+4.2
	0.1nm2µm42nm,0.9s						
KAPI	Kappang	12.79	212	LR	LR	15 07 34.1	
	comp=Z,28nm,19.1s,baz=78,slow=42						
PLAI	Plampang	17.04	211	P	P	15 03 23.9	+1.5
WRA	Warramunga Arr	26.76	164	P	P	15 05 01.0	-0.9
	1.1nm,0.8s,baz=344,slow=10,SNR=5.7						
	1.1nm,0.8s						
JNU	Nakatsue	27.41	8	LR	LR	15 16 54.1	
	comp=Z,19nm,20.5s,baz=30,slow=38						
CMAR	Chiang Mai Arr	29.73	297	LR	LR	15 18 13.5	
	comp=Z,12nm,18.1s,baz=230,slow=39						
ASAR	Alice Springs	30.21	167	P	P	15 05 31.6	-1.0
	0.3nm,0.5s,baz=343,slow=6.8,SNR=9.3						
	0.3nm,0.5s						
KSRS	Korea Array	31.46	2	LR	LR	15 17 44.9	
	comp=Z,11nm,21.4s,baz=305,slow=35						
STKA	Stephens Creek	40.17	160	P	P	15 06 56.3	-1.8
	2.2nm,0.7s,baz=3.9,slow=11,SNR=4.1						
	2.2nm,0.7s						
H11S3	WAKE ISLAND Hy	41.04	69	T	T	15 50 55.2	
	baz=257,slow=75,SNR=13						

H11S1	WAKE ISLAND Hy	41.06	69	T	T	15 50 55.2	
	baz=257,slow=75,SNR=11						
H11S2	WAKE ISLAND Hy	41.06	69	T	T	15 50 55.4	
	baz=257,slow=75,SNR=33						
H11N1	WAKE ISLAND Hy	41.51	67	T	T	15 51 42.2	
	baz=255						
H11N2	WAKE ISLAND Hy	41.52	67	T	T	15 51 40.4	
	baz=255						
H11N3	WAKE ISLAND Hy	41.52	67	T	T	15 51 40.0	
	baz=255						
MKAR	Makanchi Array	55.74	325	P	P	15 08 56.0	-2.5
	0.4nm,0.7s,baz=120,slow=7.6,SNR=6.0						
	0.4nm,0.7s						
KURBB	Kurchatov Arra	59.88	327	P	P	15 09 25.9	-1.5
	0.5nm,0.7s,baz=126,slow=5.9,SNR=5.4						
	0.5nm,0.7s						
NOA	NORSAR Array B	96.82	334	LR	LR	15 59 27.1	
	comp=Z,7.9nm,18.4s,baz=245,slow=37						

*IDC **07** 15:02:12.7±2.6, 25°.95S×29°.15E, h0^{km}, mb3.6/1, mbtmp3.6/5, ML3.1/3, Error ellipse: s-maj=28.0km s-min=24.6km az=117.0*
*PRE **07** 15:02:13.3±0.9, 25°.99S×29°.23E, h0^{km}, ML3.2, Suspected explosion*
ISC 07 15:02:12.4±0.7**, 26°.01S**±0°.04×**29°.21E**±0°.03**, h0**^{km}**, n28,** σ**2**^{s}**37**/44**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRLN	Carolina, Mapu	0.73	89	eP	Pg	15 02 26.9	+0.5
CRLN				eS	Sg	15 02 36.4	+0.6
CRLN				IAML		15 02 43.3	
	comp=Z,421nm,0.6s						
HRAO	HartRAO	1.38	275	eP	Pg	15 02 39.3	+0.5
HRAO				eS	Sb	15 02 58.9	+1.5
HRAO				IAML		15 03 01.4	
	comp=Z,320nm,0.4s						
PILG	Pilgrimsrest,	1.73	52	eP	Pn	15 02 44.8	+0.9
PILG				eS	Sg	15 03 08.1	+0.1
PILG				IAML		15 03 10.0	
	comp=Z,336nm,0.5s						
PRYS	Parys	1.89	241	eP	Pn	15 02 48.0	+1.9
PRYS				eS	Sn	15 03 12.9	+2.1
PRYS				IAML		15 03 14.5	
	comp=Z,644nm,0.5s						
LEPH	Lephalale, Lim	2.50	329	eP	Pn	15 02 56.3	+1.9
LEPH				eS	Sn	15 03 27.6	+1.9
LEPH				IAML		15 03 33.2	
	comp=Z,104nm,0.7s						
SNKL	Senekal, Frees	2.59	209	eP	Pn	15 02 58.5	+2.7
SNKL				eS	Sn	15 03 30.2	+2.1
SNKL				IAML		15 03 45.1	
	comp=Z,237nm,0.6s						
LBTB	Lobatse	3.41	286	Pn	Pn	15 03 08.3	+1.3
	comp=Z,0.7nm,0.3s,baz=106,slow=12,SNR=9.1						
LBTB				Pg	Pb	15 03 14.2	+0.4
	comp=Z,7.0nm,0.3s,baz=108,slow=17,SNR=119						
LBTB				Lg	Lg	15 03 57.3	
	comp=Z,24nm,0.3s,baz=12,slow=23,SNR=29						
	comp=Z,4.3nm,0.5s						
LBTB	Lobatse	3.41	286	P	Pn	15 03 10.1	+3.0
LBTB				Pg	Pb	15 03 15.0	+1.2
LBTB	Lobatse	3.41	286	eP	Pn	15 03 09.2	+2.2
LBTB				eS	Sn	15 03 49.8	+1.6
LBTB				IAML		15 04 04.2	
	comp=Z,144nm,0.5s						
MREMI	Moremi	3.79	334	P	Pn	15 03 13.4	+1.2
BOSA	Boshof	4.37	233	Pn	Pn	15 03 19.9	-0.3
	comp=Z,0.4nm,0.3s,baz=59,slow=14,SNR=8.5						
BOSA				Pg	Pb	15 03 32.5	+2.4
	comp=Z,1.2nm,0.3s,baz=56,slow=13,SNR=13						
BOSA				Lg	Lg	15 04 28.5	
	comp=Z,38nm,0.3s,baz=325,slow=21,SNR=20						
	comp=Z,1.2nm,0.5s						
BOSA	Boshof	4.37	233	P	Pb	15 03 29.1	-1.1
BOSA	Boshof	4.37	233	eP	Pn	15 03 22.9	+2.7
BOSA				eS	Sn	15 04 12.6	+0.7
BOSA				IAML		15 04 37.9	
	comp=Z,119nm,0.6s						
I47ZA	BOSHOF INFRASO	4.39	233	I	I	15 29 20.0	
	comp=Z,0.1nm,0.9s,baz=53,slow=312,SNR=4.9						
KSTD	Kokstad	4.59	179	eP	Pn	15 03 25.2	+2.0
KSTD				eS	Sn	15 04 18.6	+1.3
KSTD				IAML		15 04 47.4	
	comp=Z,43nm,0.5s						
KDWAN	Kaudwane	4.90	301	P	Pb	15 03 41.1	+1.9
BROLN	Tlhalogang	5.18	340	P	Pn	15 03 32.6	+1.2
KHWEE	KHWEE	5.31	319	P	Pn	15 03 31.6	-1.6
KGCAE	Kacgae	7.12	295	P	Pb	15 04 10.3	-6.6
ALKP	Alkanpan, Nort	7.29	236	eP	Pn	15 04 03.0	+2.6
ALKP				eS	Sn	15 05 22.4	-1.6
ALKP				IAML		15 06 09.6	
	comp=Z,33nm,0.5s						
BRAK	Brakfontein	7.98	222	eP	Pn	15 04 12.3	+2.6
BRAK				eS	Sn	15 05 38.5	-2.3
BRAK				IAML		15 06 40.9	
	comp=Z,30nm,0.7s						
ARMS	Ukamas	8.69	254	eP	Pn	15 04 22.8	+3.4
ARMS				eS	Sn	15 05 55.7	-2.5
GRAN	Grantham	8.78	223	eP	Pn	15 04 23.6	+2.9
GRAN				eS	Sn	15 05 58.4	-2.1
GRAN				IAML		15 06 35.9	
	comp=Z,4.4nm,0.5s						
FRAZ	Fraserburg	9.02	227	eP	Pn	15 04 27.5	+3.4
FRAZ				eS	Sn	15 06 04.0	-2.6
FRAZ				IAML		15 06 29.7	
	comp=Z,7.0nm,0.6s						
SUR	Sutherland	9.70	227	Pn	Pn	15 04 33.0	-0.4
	comp=Z,0.6nm,0.3s,baz=55,slow=14,SNR=9.7						
SUR				Sn	Sn	15 06 16.3	-6.9
	comp=Z,0.9nm,0.3s,baz=358,slow=22,SNR=3.6						
SUR				Lg	Lg	15 07 15.4	
	comp=Z,3.0nm,0.3s,baz=334,slow=20,SNR=7.7						
	comp=Z,2.8nm,0.5s						
LSZ	Lusaka	10.72	355	Pn	Pn	15 04 45.2	-2.2
	comp=Z,3.9nm,0.6s,baz=170,slow=8.7,SNR=7.4						
LSZ				Sn	Sn	15 06 37.3	-11
	comp=Z,0.8nm,0.3s,baz=55,slow=8.0,SNR=10						
LSZ				Lg	Lg	15 07 43.7	
	comp=Z,0.5nm,0.3s,baz=80,slow=24,SNR=4.2						
TSUM	Tsumeb	12.69	300	Pn	Pn	15 05 08.8	-5.6
	comp=Z,0.1nm,0.3s,baz=2.4,slow=5.7,SNR=2.2						
TSUM				Sn	Sn	15 07 31.5	-5.2
	comp=Z,0.2nm,0.3s,baz=252,slow=9.6,SNR=4.1						
TSUM				Lg	Lg	15 08 38.4	
	comp=Z,0.6nm,0.3s,baz=72,slow=2.8,SNR=4.5						
TORD	Torodi Ar. Bea	47.25	322	P	P	15 10 47.3	-0.3
	comp=Z,0.5nm,0.5s,baz=154,slow=7.3,SNR=3.5						
	comp=Z,0.5nm,0.5s						

*SDD **07** 15:04:54.0±2.5, 17°.72N×68°.83W, h46^{km}±85^{km}, MD3.6, ML2.5, MW3.1, Presumed earthquake*
*OSPL **07** 15:04:55.9±1.9, 17°.76N×68°.70W, h50^{km}±999^{km}, ML2.3, Presumed earthquake*
ISC 07 15:04:48.5±1.5**, 17°.74N**±0°.08×**68°.76W**±0°.03**, h7**^{km}±12^{km}**, n15,** σ**1**^{s}**18**/27**, 17C, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HIDR	Higuey Centro	0.84	3	⇑ePg	Pn	15 05 08.3	+1.5
HIDR				⇑eSg	Sn	15 05 21.0	+1.5
HIDR				IAML		15 05 22.9	
	comp=N,173nm,0.1s						
HATOM	Hato Mayor del	1.20	330	⇑ePg	Pn	15 05 12.7	+1.0
HATOM				⇑eSg	Sb	15 05 26.9	-0.4
HATOM				IAML		15 05 27.8	
	comp=N,45nm,0.2s						
SMDR	Samana, DR	1.59	345	⇑eSg	Sn	15 05 37.2	-0.7
SMDR				IAML		15 05 42.9	
	comp=N,53nm,0.5s						
CRPR	Cabo Rojo, PR	1.59	80	i P	Pg	15 05 19.9	+0.9
CRPR				eS	Sn	15 05 37.7	-0.2
CRPR				IAML		15 05 40.5	
	comp=Z,34nm,1.2s						
MLPR	Magueyes Islan	1.65	82	⇑ePg	Pb	15 05 18.6	-0.6
MLPR				⇑eSg	Sn	15 05 39.3	0.0
MLPR				IAML		15 05 51.1	
	comp=N,9.4nm,5.0s						
BANI	BANI	1.65	293	⇑ePg	Pg	15 05 21.0	+0.8
BANI				IAML		15 06 03.7	
	comp=N,44nm,1.9s						
DR08	Loma La Naviza	1.71	315	⇑ePg	Pb	15 05 20.0	-0.3
DR08				⇑eSg	Sn	15 05 37.6	-3.3
DR08				IAML		15 05 48.0	
	comp=N,690nm,0.2s						
AGPR	Aguadilla, PR	1.72	65	⇑ePg	Pg	15 05 21.7	+0.1
AGPR				⇑eSg	Sg	15 05 42.8	-1.2
AGPR				IAML		15 05 49.9	
	comp=N,50nm,1.9s						
AOPR	Arecibo Observ	2.00	72	⇑ePg	Pb	15 05 24.5	-0.7
AOPR				⇑eSg	Sb	15 05 49.5	-0.9
AOPR				IAML		15 05 54.1	
	comp=N,65nm,0.2s						
OBIP	Obispado Ponce	2.07	81	i P	Pb	15 05 26.3	-0.2
OBIP				IAML		15 05 50.3	
	comp=Z,13nm,1.8s						
CELP	Cerrillos	2.10	81	ePg	Pb	15 05 26.3	-0.6
CELP				⇑eSg	Sn	15 05 51.0	+0.4
CELP				IAML		15 05 59.0	
	comp=N,6.8nm,1.7s						
SDDR	Presa de Saban	2.70	298	i P	Pb	15 05 38.1	+0.8
SDDR				eS	Sn	15 06 05.3	-0.2
SDDR				IAML		15 06 08.8	
	comp=Z,17nm,1.9s						
LONE3	El Aguacate, B	2.71	289	i P	Pb	15 05 35.6	-1.7
LONE3				eS	Sn	15 06 06.9	+1.2
LONE3				IAML		15 06 08.2	
	comp=Z,9.5nm,1.0s						
LOBH	Bahia de las A	2.75	273	i P	Pb	15 05 36.8	-1.2
LOBH				eS	Sn	15 06 07.5	+1.0
LOBH				IAML		15 06 10.9	
	comp=Z,38nm,2.4s						
REDR	Restauracion	2.87	300	⇑ePg	Pb	15 05 40.0	-0.1
REDR				⇑eSg	Sb	15 06 14.2	-1.3
REDR				IAML		15 06 25.9	
	comp=N,16nm,2.1s						

*IDC **07** 15:34:06.3±2.0, 4°.98N×125°.77E, h0^{km}, mb3.6/5, mbtmp3.6/5, MS3.4/4, Error ellipse: s-maj=224.2km s-min=21.1km az=66.0*
*MAN **07** 15:34:19.0, 5°.32N×127°.05E, h100^{km}, MS3.0*
ISC 07 15:34:14.2±1.2**, 4°.5N**±0°.1×**124°.6E**±0°.2**, h50**^{km}**, n11,** σ**1**^{s}**61**/9**, mb4.0**/5**, MS3.4**/4**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.91	35	eP	Pn	15 34 46.2	+1.8
DDMP				eS	Sn	15 35 07.8	+0.4
DMPH	Davao City--Mi	2.69	19	eP	Pn	15 34 54.0	-1.1
DMPH				i S	Sn	15 35 24.0	-2.5
WRA	Warramunga Arr	26.13	159	P	P	15 39 43.5	-0.4
	0.1nm,0.4s,baz=341,slow=9.9,SNR=4.9						
	0.1nm,0.4s						
JCJ	Chichijima	28.02	35	LR	LR	15 50 18.7	
	comp=Z,84nm,20.3s,baz=145,slow=36						
ASAR	Alice Springs	29.45	162	P	P	15 40 12.0	-1.5
	0.2nm,0.8s,baz=340,slow=8.8,SNR=1.6						
	0.2nm,0.8s						
STKA	Stephens Creek	39.65	157	LR	LR	15 58 22.0	
	comp=Z,60nm,20.5s,baz=203,slow=37						
ASAJ	Asahikawa	42.49	19	LR	LR	15 58 33.0	
	comp=Z,89nm,20.6s,baz=168,slow=35						
MKAR	Makanchi Array	55.70	326	P	P	15 43 47.0	+1.3
	0.7nm,0.4s,baz=126,slow=8.1,SNR=23						
	0.7nm,0.4s						
KURBB	Kurchatov Arra	59.94	328	P	P	15 44 15.7	+0.5
	0.8nm,0.5s,baz=127,slow=6.5,SNR=16						
	0.8nm,0.5s						
BVAR	Borovoye Array	65.50	327	P	P	15 44 52.8	+0.5
	0.7nm,0.5s,baz=123,slow=5.5,SNR=5.1						
	0.7nm,0.5s						
ILAR	Eielson Array	85.30	25	LR	LR	16 29 58.8	
	comp=Z,11nm,19.2s,baz=266,slow=40						

*RSNC **07** 15:36:39.0±0.0, 7°N±1°×7°2W±°, h-2^{km}±2^{km}, M3.0, mb3.9, ML2.7*
*FUNV **07** 15:36:39.9, 7°.18N×72°.16W, h20^{km}, MW3.9, Presumed earthquake*
ISC 07 15:36:36.2±1.4**, 7°.11N**±0°.03×**72°.02W**±0°.03**, h1**^{km}±11^{km}**, n38,** σ**1**^{s}**94**/69**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAMC	Pamplona, Colo	0.72	289	P	Pg	15 36 49.1	-0.9
PAMC				S	Sg	15 36 56.7	-2.6
CAPV	Capacho	0.81	339	eP	Pg	15 36 52.4	+0.6
CAPV				eS	Sg	15 37 03.2	+0.9
BARC	Barichara	1.27	246	P	Pg	15 36 59.7	-0.8
BARC				S	Sn	15 37 19.1	0.0
RUSC	La Rusia	1.61	221	P	Pn	15 37 06.5	+0.3
RUSC				S	Sn	15 37 26.3	-1.5
RUSC	La Rusia	1.61	221	eP	Pn	15 37 06.7	+0.6
RUSC				eS	Sn	15 37 25.8	-2.0
SOCV	Socops	1.64	44	eP	Pb	15 37 08.3	+1.1
SOCV				eS	Sn	15 37 29.0	+1.0
OCAC	Ocana	1.71	311	P	Pn	15 37 07.5	+0.2
OCAC				S	Sn	15 37 28.9	-1.1
BRJC	Barrancabermej	1.72	266	P	Pn	15 37 07.9	+0.6
BRJC				S	Sn	15 37 29.4	-0.6
SDV	Santo Domingo	2.24	38	P	Pn	15 37 16.5	+1.9
SDV				S	Sb	15 37 46.6	+0.8
SDV	Santo Domingo	2.24	38	eP	Pn	15 37 16.7	+2.1
SDV				eS	Sn	15 37 43.3	+0.4
PTBC	PUERTO BERRIO,	2.49	257	P	Pn	15 37 17.7	-0.2
PTBC				S	Sn	15 37 50.7	+1.7
SPBC	San Pablo de B	2.50	235	P	Pn	15 37 19.8	+1.6
SPBC				S	Sb	15 37 51.7	-1.7
PTGC	Puerto Gaitan,	2.89	182	P	Pb	15 37 30.2	+1.6
PTGC				S	Sn	15 38 02.5	+3.6
CHIC	Chingaza	3.00	215	P	Pn	15 37 26.5	+1.3
CHIC				S	Sn	15 38 02.6	+0.6
ROSC	El Rosal	3.21	226	P	Pn	15 37 31.9	+3.7
ROSC				S	Sb	15 38 13.1	-1.1
NORC	Norcasia	3.23	242	P	Pn	15 37 28.8	+0.7
NORC				S	Sn	15 38 07.3	+0.1
CVER	Cruz Verde, Cu	3.29	219	P	Pn	15 37 32.0	+2.7
VILC	Villavicencio,	3.41	209	P	Pn	15 37 31.6	+0.9
VILC				S	Sn	15 38 10.4	-1.5
UREC	San Jos de Ur	3.55	281	P	Pn	15 37 33.9	+1.4
UREC				S	Sn	15 38 17.5	+2.4
HELC	Santa Helena	3.61	256	P	Pn	15 37 33.7	+0.1
HELC				S	Sn	15 38 15.8	-1.3
GUY2C	Guyana, Caldas	3.82	241	P	Pn	15 37 37.9	+1.3
GUY2C				S	Sn	15 38 24.0	+1.5
CBOC	Ciudad Bolivar	4.16	253	P	Pn	15 37 44.1	+3.1
DBBC	Dabeiba	4.16	269	P	Pn	15 37 43.2	+2.2
DBBC				S	Sn	15 38 32.8	+2.4
SJCC	San Jacinto, C	4.18	312	P	Pn	15 37 42.0	+0.8
SJCC				S	Sn	15 38 31.5	+0.7
PRAC	Prado	4.42	220	P	Pn	15 37 45.5	+1.0
PRAC				S	Sn	15 38 37.9	+1.2
MAPV	Macapo	4.44	52	eP	Pn	15 37 45.9	+1.1
MAPV				eS	Sn	15 38 33.9	-3.3
URMC	La Uribe, Meta	4.50	212	P	Pn	15 37 47.1	+1.5
URMC				S	Sn	15 38 40.1	+1.4
ORTC	Ortega, Tolima	4.52	226	P	Pn	15 37 46.7	+0.8
ORTC				S	Sn	15 38 38.6	-0.6
URIC	Uribia, Colomb	4.57	0	P	Pn	15 37 45.4	-1.1
URIC				S	Sn	15 38 35.7	-4.5
APAC	Apartado, Choc	4.59	280	P	Pn	15 37 48.2	+1.3
APAC				S	Sn	15 38 42.0	+1.1
PLMC	San Jos del P	4.78	243	P	Pn	15 37 51.4	+2.0
BENV	Beln	5.21	57	eP	Pn	15 37 57.1	+1.7
BENV				eS	Sn	15 38 53.1	-3.1
MACC	Macarena, Meta	5.26	200	P	Pn	15 37 55.2	-0.8
	22nm,0.5s						
MACC				S	Sn	15 38 53.7	-3.6
	22nm,0.5s						
TURV	Turiamo	5.30	51	eP	Pn	15 37 57.1	+0.6
YOTC	Yotoco, Valle	5.31	234	P	Pn	15 37 57.5	+0.7
	11nm,1.1s						
CACV	CAICARA DEL OR	5.45	85	eP	Pb	15 38 07.1	-5.1
CACV				eS	Sb	15 39 12.7	-5.4
TACV	Tcata	5.78	58	eP	Pn	15 38 04.3	+1.1
TACV				eS	Sn	15 39 05.5	-4.7
POPC	Popayan, Colom	6.49	226	P	Pn	15 38 13.7	+0.5

*CATAC **07** 15:38:41.4±0.6, 14°N±4°×9°1W±°, h8^{km}±3^{km}, M3.4/12, MLv3.4/12, Error ellipse: s-maj=8.0km s-min=4.5km az=15.7, confirmed*
*MEX **07** 15:38:42.3, 14°.60N×90°.02W, h97^{km}*
*GCG **07** 15:38:42.0±1.1, 13°.50N×90°.70W, h25^{km}±7^{km}, MD3.6, ML3.4, Presumed earthquake*
*SNET **07** 15:38:43.5±1.4, 13°.52N×90°.64W, h15^{km}, ML3.4, Presumed earthquake*
ISC 07 15:38:39.1±1.8**, 13°.48N**±0°.08×**90°.72W**±0°.04**, h8**^{km}±11^{km}**, n32,** σ**1**^{s}**16**/50**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	Alcaldia de Sa	0.78	62	P	Pn	15 38 56.4	0.0
FAME				S	Sn	15 39 05.8	-2.5
FG8	Yepocapa, Chim	0.80	11	i P	Pn	15 39 00.0	+3.3
PCG5	San Vicente Pa	0.81	25	i P	Pn	15 38 58.5	+1.6
FG16	Alotenango, Sa	0.82	15	i P	Pn	15 38 59.7	+2.6
ESSG	Sabana Grande	0.91	353	i P	Pn	15 38 58.6	+0.3
NUBE	Las Nubes	1.01	65	P	Pn	15 38 59.9	+0.2
NUBE				S	Sn	15 39 12.9	-1.2
NUBE	Las Nubes	1.01	65	i P	Pn	15 38 59.9	+0.2
NUBE				IAML		15 39 18.8	
	comp=E,355nm,0.4s						
SLOZ	Alcaldia de Sa	1.06	59	P	Pn	15 39 01.0	+0.7
SLOZ				S	Sn	15 39 15.4	+0.1
STG5	El Palmar, Qui	1.10	327	i P	Pn	15 39 06.4	+5.5
CEVE	Cerro Verde	1.12	72	P	Pn	15 39 02.1	+0.7
CEVE				S	Sn	15 39 16.8	-0.4
CEVE	Cerro Verde	1.12	72	eP	Pn	15 39 01.9	+0.5
CEVE				eS	Sn	15 39 17.4	+0.2
STG8	El Palmar, Qui	1.14	328	i P	Pn	15 39 07.8	+6.2
STG8				IAML		15 39 30.0	
	comp=E,764nm,0.1s						
UNIC	Universidad Ca	1.25	66	P	Pn	15 39 03.4	+0.5
UNIC				S	Sn	15 39 19.9	0.0
JAYA	Jayaque - finc	1.25	82	P	Pg	15 39 03.4	+0.2
JAYA				S	Sn	15 39 20.1	-0.1
JAYA	Jayaque - finc	1.25	82	i P	Pg	15 39 03.4	+0.2
JAYA				i S	Sn	15 39 19.4	-0.7
JAYA				IAML		15 39 23.3	
	comp=E,1μm,0.3s						
JAYA	Jayaque - finc	1.25	82	i P	Pg	15 39 03.5	+0.2
JAYA				eS	Sn	15 39 20.0	-0.2
PMON	Piamonte	1.39	80	P	Pg	15 39 05.9	+0.1
PMON				S	Sn	15 39 24.2	+0.7
UEES	Universidad Ev	1.46	80	P	Pb	15 39 06.9	+0.3
UEES				S	Sn	15 39 25.7	+0.4
SOKI	Kika Raxquin	1.49	334	i P	Pb	15 39 08.3	+1.0
PANCS	Alcalda de	1.51	85	P	Pn	15 39 07.4	+0.9
PANCS				S	Sb	15 39 25.9	-0.8
IGN	Direccin Gen	1.53	81	P	Pb	15 39 08.1	+0.4
APG	El Apazote	1.54	9	i P	Pg	15 39 09.2	+0.5
UDBS	Universidad Do	1.54	81	P	Pb	15 39 08.4	+0.4
UDBS				S	Sg	15 39 28.3	-0.6
MTO3	Montecristo	1.61	55	P	Pg	15 39 08.9	-1.2
MTO3				S	Sg	15 39 30.7	-0.4
ESQI	Esquipulas	1.72	51	S	Sg	15 39 33.1	-1.4
PAVA	Las Pavas	1.75	82	P	Pn	15 39 11.4	+1.5
COEG	Centro de Oper	1.80	85	P	Pn	15 39 12.1	+1.6
COEG				S	Sb	15 39 34.9	-0.2
CHUJ	Union Juarez	2.10	320	eP	Pn	15 39 15.9	+1.2
CHUJ				eS	Sn	15 39 40.8	-0.3
PATR	El Naranjo	2.19	318	eP	Pn	15 39 17.0	+1.0
PATR				eS	Sn	15 39 42.2	-1.3
PAVE	Pavencul	2.21	321	eP	Pn	15 39 13.6	-2.7
PAVE				eS	Sn	15 39 43.2	-0.8
PACA	Pacayal	2.33	90	P	Pn	15 39 19.3	+1.4
PACA				S	Sb	15 39 49.6	-1.0
PCIG		3.28	313	eP	Pn	15 39 31.9	+1.2
PCIG				eS	Sn	15 40 08.3	-1.6

*IDC **07** 15:47:50.2±0.5, 28°.36N×142°.65E, h0^{km}, mb4.3/24, mbtmp4.3/28, ML3.7/4, MS3.5/27, Error ellipse: s-maj=16.9km s-min=11.6km az=80.0*
*BJI **07** 15:47:50.8, 28°.38N×142°.45E, h10^{km}, mB4.6/15, mb4.6/57, Ms4.0/10, Ms7 3.9/11*
*NEIC **07** 15:47:51.8±2.2, 28°.32N±0°.05×142°.6E±0°.1, h10^{km}±1^{km}, mb4.5/60, Error ellipse: s-maj=16.3km s-min=8.5km az=94.0*
*NIED **07** 15:47:52.9, 28°.40N×141°.99E, h7^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.31; $M_{\theta\theta}$-0.34; $M_{\phi\phi}$-1.97; $M_{r\theta}$-1.18; $M_{\theta\phi}$1.49; $M_{\phi r}$0.20; Fault plane solution: $M_0$2.88000×10^{15} NP1: ϕ_s170.00000°, δ41.00000°, λ124.00000°. NP2: ϕ_s309.00000°, δ57.00000°, λ64.00000°.*
*JMA **07** 15:47:52.9±0.1, 28°.4N±0°.4×14°2E±°, h7^{km}, MV4.9/36, NEAR CHICHIJIMA ISLAND*
ISC 07 15:47:52.5±0.7**, 28°.37N**±0°.04×**142°.59E**±0°.07**, h16**^{km}±3^{km}**, n171,** σ**1**^{s}**43**/157**, mb4.5**/69**, MS3.7**/29**, 2C-2D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.32	196	P	Pb	15 48 16.8	-0.1
CBIJ				eS	Sb	15 48 34.0	+0.4
JCJ	Chichijima	1.32	196	Pn	Pn	15 48 16.0	-0.3
	32nm,0.3s,baz=100,slow=23,SNR=23						
JCJ				Sn	Sb	15 48 32.3	-1.4
	171nm,0.3s,baz=53,slow=24,SNR=8.9						
JCJ	Chichijima	1.32	196		Pn	15 48 16.3	0.0
JCJ				Sn	Sb	15 48 31.4	-2.2
JHH2	Haha-jima-NKT2	1.77	192	eP	Pb	15 48 24.2	-0.4
JHCJ	Hachijojimakas	5.26	333	eS	Sn	15 50 08.8	-2.1
JHJ2	Mitsune	5.29	334	Pn	Pn	15 49 11.9	+1.0
JHJ	Hachijo jima 2	5.31	334	Pn	Pn	15 49 11.2	+0.1
	14nm,0.3s,baz=232,slow=22,SNR=1.3						
JHJ				Sn	Sn	15 50 06.9	-5.1
	32nm,0.3s,baz=8.9,slow=21,SNR=6.1						
	52nm,0.3s						
JMYK	Miyake Tsubota	6.24	336	eP	Pn	15 49 24.9	+1.1
BSO1	Boso 1	6.41	348	P	Pn	15 49 25.6	-0.1
BSO1				S	Sn	15 50 35.3	-3.0
BSO3	Boso 3	6.65	345	P	Pn	15 49 29.7	+0.4
BSO3				eS	Sn	15 50 44.0	-0.5
BSO4	Boso 4	6.87	344	P	Pn	15 49 33.6	+1.1
JOD2	Odawara 2	7.49	337	P	Pn	15 49 42.1	+1.1
JNY	Yasuok	8.04	331	eP	Pn	15 49 54.2	+5.5
JYT	Yasato	8.09	346	eP	Pn	15 49 49.3	0.0
JYT				S	Sn	15 51 17.3	-3.1
JRY	Ryogami san	8.24	339	P	Pn	15 49 52.2	+0.8
JRY				eS	Sn	15 51 20.5	-3.6
JHO	Hitachi	8.39	349	P	Pn	15 49 51.9	-1.5
INU	Inuyama	8.41	327		Pn	15 49 52.4	-1.3
JAG	Ashikaga	8.46	343	P	Pn	15 49 53.5	-0.8
JGF	Kuroka	8.46	330	Pn	Pn	15 49 59.9	+5.4
MJAR	Matsushiro Arr	8.95	337	Pn	Pn	15 50 02.0	+0.9
	1.4nm,0.3s,baz=155,slow=12,SNR=70						
MJAR				Sn	Sn	15 51 39.0	-2.5
	0.2nm,0.3s,baz=236,slow=31,SNR=4.9						
MJAR				LR	LR	15 53 02.4	
	comp=Z,123nm,21.2s,baz=172,slow=35						
	8.8nm,0.3s						
MJAR	Matsushiro Arr	8.95	337	Pn	Pn	15 50 01.8	+0.8
MAJO	Matsushiro	8.95	337		Pn	15 50 02.1	+1.0
MJB9	Matsu-Tunnel	8.95	337		Pn	15 50 03.2	+2.1
JNU	Nakatsue	11.13	298	Pn	Pn	15 50 32.5	+1.5
	0.2nm,0.3s,baz=54,slow=22,SNR=2.5						
JNU				LR	LR	15 54 22.2	
	comp=Z,215nm,20.5s,baz=68,slow=35						
	18nm,1.2s						
JOW	Kunigami	12.79	266	LR	LR	15 55 24.0	
	comp=Z,170nm,19.2s,baz=148,slow=35						
KSRS	Korea Array	15.28	310	Pn	P	15 51 31.9	-0.2
	0.9nm,0.3s,baz=122,slow=11,SNR=41						
KSRS				LR	LR	15 57 20.0	
	comp=Z,164nm,18.5s,baz=125,slow=37						
KSAR	Wonju Array Be	15.29	310	Pn	Pn	15 51 27.5	-0.2
KS19	Wonju Array Si	15.34	310	Pn	Pn	15 51 28.9	+0.6
ASAJ	Asahikawa	15.71	0	Pn	Pn	15 51 29.2	-3.9
	0.6nm,0.3s,baz=254,slow=13,SNR=8.8						
ASAJ				Sn	Sn	15 54 13.6	-13
	0.2nm,0.3s,baz=12,slow=27,SNR=1.7						
JKA	Kamikawa-asahi	15.71	0	Pn	Pn	15 51 32.5	-0.5
INCN	Inchon	16.17	308	Pn	Pn	15 51 39.1	0.0
USRK	Ussuriysk Ar.	17.93	335	P	Pn	15 52 00.6	-0.5
	0.8nm,0.3s,baz=140,slow=9.4,SNR=12						
	4.2nm,0.5s						
MDJ	Mudanjiang	19.25	331		P	15 52 15.8	-0.2
MDJ	Mudanjiang	19.25	331	P	P	15 52 16.6	+0.5
MDJ				pmax	pmax		
	comp=Z,24nm,1.0s						
YHNB	Yeheng	19.34	264	P	P	15 52 18.3	+1.0
YHNB				IAmb	IAmb	15 52 23.7	

comp=Z,16nm,0.7s
YULB Yu-li 19.79 260 P **Pn** **15 52 24.1 +0.4**
YULB IAmb IAmb 15 52 30.1
comp=Z,16nm,0.6s
SSLB Suanglung 19.96 262 **P** **15 52 22.4 -1.6**
SSLB IAmb IAmb 15 52 35.0
comp=Z,32nm,0.8s
DL2 Dalian 20.33 307 P **P** **15 52 28.7 +0.8**
DL2 S **S** **15 56 17.2 +2.0**
DL2 pmax pmax
comp=Z,27nm,1.6s
DL2 L L
comp=Z,220nm,18.5s
DL2 L L
comp=Z,380nm,18.0s
DL2 L L
comp=Z,400nm,15.6s
TPUB Ta-pu 20.39 261 P **P** **15 52 27.4 -1.4**
TPUB IAmb IAmb 15 52 45.0
comp=Z,22nm,0.9s
SNY Shenyang 20.49 316 ⇑P **P** **15 52 30.2 +0.6**
SNY pmax pmax
comp=Z,7.0nm,0.6s
SNY pmax pmax
comp=Z,69nm,5.2s
SNY L L
comp=Z,150nm,5.5s
SNY L L
comp=Z,92nm,4.9s
SNY L L
comp=Z,130nm,5.2s
NJ2 Nanjing 20.83 286 *e*P **P** **15 52 34.4 +1.0**
NJ2 sP **pwP** **15 52 44.4 +4.1**
NJ2 pmax pmax
comp=Z,51nm,0.9s
BNX BinXian 21.09 329 ⇑P **P** **15 52 36.8 +0.7**
BNX pmax pmax
comp=Z,36nm,0.7s
KLR Kul'dur 22.43 341 P **P** **15 52 50.6 +0.2**
comp=Z,5.8nm,0.7s,baz=152,slow=9.5,SNR=11
comp=Z,5.8nm,0.7s
H11N2 WAKE ISLAND Hy 23.77 106 T T 16 17 49.1
baz=297,slow=74,SNR=37
H11N1 WAKE ISLAND Hy 23.77 106 T T 16 17 49.1
baz=297,slow=74,SNR=29
H11N3 WAKE ISLAND Hy 23.79 106 T T 16 17 49.1
baz=297,slow=74,SNR=33
H11S3 WAKE ISLAND Hy 24.15 109 T T 16 18 27.3
baz=303
H11S1 WAKE ISLAND Hy 24.16 109 T T 16 18 24.4
baz=303
H11S2 WAKE ISLAND Hy 24.17 109 T T 16 18 26.7
baz=303
TGY Tagaytay City 24.62 239 LR LR 16 02 21.9
comp=Z,61nm,18.8s,baz=235,slow=35
BJI2 Beijing 24.66 305 P **P** **15 53 11.9 -0.5**
BJI2 S **S** **15 57 27.7 -5.6**
BJI2 pmax pmax
comp=Z,3.0nm,1.1s
BJI2 L L
comp=Z,67nm,15.7s
BJI2 L L
comp=Z,100nm,18.2s
BJI2 L L
comp=Z,140nm,16.0s
BJT Baijiatuan 24.66 305 P **P** **15 53 10.0 -2.5**
WHN Wuhan 24.66 282 P **P** **15 53 13.8 +1.2**
WHN pmax pmax
comp=Z,34nm,0.5s
HEH HeiHe 24.71 336 *e*P **P** **15 53 14.0 +1.2**
HEH pmax pmax
comp=Z,8.0nm,1.1s
DAV Davao City (W) 26.61 220 LR LR 16 01 58.7
comp=Z,59nm,21.5s,baz=48,slow=32
PETK Petropavlovsk- 27.12 20 LR LR 16 05 32.5
comp=Z,36nm,19.9s,baz=185,slow=39
HIA Hailar 27.24 326 **P** **15 53 35.6 -0.1**
HIA IAmb IAmb 15 53 40.1
comp=Z,17nm,1.1s
HHC Hu-ho-hao-te 28.26 304 *e*P **P** **15 53 46.0 +1.0**
HHC pmax pmax
comp=Z,7.0nm,0.6s
HHC pmax pmax
comp=Z,99nm,4.9s
HHC L L
comp=Z,98nm,12.7s
HHC L L
comp=Z,220nm,12.2s
HHC L L
comp=Z,190nm,12.6s
ENH Enshi 28.87 282 **P** **15 53 50.5 -0.1**
XAN Xi'an 29.26 290 ⇓P **P** **15 53 53.9 -0.1**
XAN pmax pmax
comp=Z,10.0nm,0.8s
XAN L L
comp=Z,73nm,13.7s
XAN L L
comp=Z,160nm,13.1s
XAN L L
comp=Z,190nm,15.8s
BTO2 Baotou 29.46 303 *e*P **P** **15 53 55.9 +0.1**
BTO2 pP **sP** **15 54 00.3 -1.3**
BTO2 sP **pwP** **15 54 02.9 -0.7**
BTO2 PP **PnPn** **15 54 49.2 -0.7**
BTO2 S **S** **15 58 48.3 -1.2**
BTO2 sS **sS** **15 58 55.6 -0.8**
BTO2 SS **SnSn** **16 00 20.2 +3.4**
BTO2 pmax pmax
comp=Z,19nm,0.8s
BTO2 pmax pmax
comp=Z,280nm,5.6s
BTO2 L L
comp=Z,270nm,14.2s
BTO2 L L
comp=Z,450nm,14.7s
BTO2 L L
comp=Z,690nm,15.5s
SIJI Sorong 31.04 202 LR LR 16 03 60.0
comp=Z,68nm,21.4s,baz=112,slow=31
GYA Guiyang 31.88 275 ⇓P **P** **15 54 18.0 +0.7**
GYA pmax pmax
comp=Z,16nm,0.9s
LZDM Lanzhou Array 33.62 293 P **P** **15 54 31.9 -0.6**
comp=Z,2.0nm,0.4s,baz=116,slow=6.8,SNR=4.2
comp=Z,2.0nm,0.4s
ULN Ulaanbaatar 33.66 315 **P** **15 54 31.7 -1.0**
ULN IAmb IAmb 15 54 35.3
comp=Z,6.2nm,1.1s
CD2 Chengdu 33.74 284 P **P** **15 54 33.3 -0.1**
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 pmax pmax
comp=Z,160nm,12.7s
CD2 L L
comp=Z,220nm,12.1s
CD2 L L
comp=Z,240nm,14.6s
SONM Songino Array 34.06 315 P **P** **15 54 36.7 +0.7**
comp=Z,1.3nm,0.4s,baz=126,slow=8.4,SNR=15
SONM LR LR 16 09 24.8
comp=Z,81nm,18.6s,baz=173,slow=38
comp=Z,1.3nm,0.4s
SONM Songino Array 34.06 315 P **P** **15 54 34.2 -1.9**
KMI2 Kunming 35.61 274 P **P** **15 54 51.2 +1.3**
KMI2 pmax pmax
comp=Z,10.0nm,0.9s
PZH PanZhiHua 36.18 277 P **P** **15 54 55.2 +0.6**
PZH pmax pmax
comp=Z,10.0nm,1.0s
GTA2 Gaotai 36.92 299 *e*P **P** **15 55 00.6 -0.2**
GTA2 pP sP 15 55 05.2 -1.4
GTA2 pmax pmax
comp=Z,4.0nm,0.9s
TLY Talaya 37.19 320 LR LR 16 11 02.1
comp=Z,112nm,18.4s,baz=104,slow=37
TLY Talaya 37.19 320 P **P** **15 55 02.8 0.0**
TNCH TengChong 39.35 276 P **P** **15 55 21.8 +0.3**
TNCH pmax pmax
comp=Z,21nm,1.2s
KAPI Kappang 39.83 217 LR LR 16 10 19.2
comp=Z,19nm,21.2s,baz=28,slow=34
GOMU GeErMu 40.80 294 P **P** **15 55 32.6 -1.1**
GOMU pP pP 15 55 36.0 -1.8
GOMU sP pwP 15 55 40.1 -1.5
GOMU pmax pmax
comp=Z,3.0nm,0.7s

CHTO Chiang Mai 40.93 266 **P** **15 55 32.4 -2.0**
CHTO IAmb IAmb 15 55 39.0
comp=Z,7.8nm,0.9s
CMAR Chiang Mai Arr 41.06 266 P **P** **15 55 36.3 +0.8**
comp=Z,1.9nm,0.9s,baz=48,slow=9.1,SNR=18
CMAR LR LR 16 13 31.8
comp=Z,25nm,19.4s,baz=60,slow=38
comp=Z,1.9nm,0.9s
CMAR Chiang Mai Arr 41.06 266 P **P** **15 55 35.1 -0.5**
COEN Coen 42.08 179 P **P** **15 55 40.8 -3.0**
COEN IAmb IAmb 15 55 51.7
comp=Z,16nm,1.2s
MTN Manton Dam 42.45 197 P **P** **15 55 46.9 +0.1**
MTN IAmb IAmb 15 55 49.7
comp=Z,11nm,0.8s
KNRA Kununurra 45.79 199 P **P** **15 56 13.2 -0.3**
KNRA IAmb IAmb 15 56 16.5
comp=Z,4.1nm,0.8s
WMQ Urumqi 46.13 305 *e*P **P** **15 56 17.9 +1.7**
WMQ pmax pmax
comp=Z,13nm,1.3s
ZSN Zaisan 48.20 310 *e*P **P** **15 56 33.7 +1.5**
WB0 Warramunga Arr 48.51 190 P **P** **15 56 33.8 -0.9**
ANM Nome 48.66 27 P **P** **15 56 36.4 +1.0**
WR8 Warramunga Arr 48.68 190 P **P** **15 56 36.1 +0.1**
WRA Warramunga Arr 48.69 190 P **P** **15 56 36.1 0.0**
comp=Z,15nm,0.7s,baz=13,slow=8.3,SNR=48
WRA PcP **PcP** **15 58 01.3 0.0**
comp=Z,1.0nm,0.5s,baz=8.4,slow=3.7,SNR=5.0
comp=Z,15nm,0.7s
WRA Warramunga Arr 48.69 190 P **P** **15 56 34.7 -1.4**
ZAA0 Zalesovo Array 48.77 318 IAmb IAmb 15 56 39.3
comp=Z,6.7nm,1.1s
ZALV Zalesovo Beam 48.77 318 P **P** **15 56 38.1 +1.6**
comp=Z,2.1nm,0.4s,baz=94,slow=6.2,SNR=8.8
ZALV PcP **PcP** **15 58 00.8 -0.4**
comp=Z,2.4nm,0.5s,baz=126,slow=3.6,SNR=6.6
ZALV LR LR 16 17 54.9
comp=Z,50nm,19.2s,baz=80,slow=37
comp=Z,2.1nm,0.4s
ZALV Zalesovo Beam 48.77 318 P **P** **15 56 36.7 +0.3**
ZALV PcP **PcP** **15 58 01.7 +0.6**
M14K Bethel 48.91 32 P **P** **15 56 37.5 +0.2**
MKAR Makanchi Array 49.95 309 P **P** **15 56 46.3 +0.7**
comp=Z,3.5nm,0.7s,baz=92,slow=9.2,SNR=49
MKAR PcP **PcP** **15 58 06.9 +1.2**
comp=Z,1.4nm,0.7s,baz=90,slow=4.3,SNR=4.3
MKAR ScP **ScP** **16 02 03.9 +3.1**
comp=Z,0.3nm,0.6s,baz=84,slow=5.9,SNR=3.6
MKAR LR LR 16 19 01.9
comp=Z,96nm,18.4s,baz=112,slow=37
comp=Z,3.5nm,0.7s
MKAR Makanchi Array 49.95 309 P **P** **15 56 44.7 -0.9**
MAKZ Makanchi 50.17 309 P **P** **15 56 47.5 +0.2**
MAKZ IAmb IAmb 15 56 49.9
comp=Z,3.4nm,0.6s
C16K Lisburne Hills 50.17 22 IAmb IAmb 15 56 50.4
comp=Z,4.4nm,0.9s
P16K Nushagak River 50.47 35 P **P** **15 56 49.9 +0.6**
O18K Koktuh Hills 52.01 35 P **P** **15 57 02.4 +1.5**
O18K IAmb IAmb 15 57 18.8
comp=Z,4.1nm,0.8s
SHLS Shalkode 52.15 304 *e*P **P** **15 57 01.5 -0.8**
comp=Z,10nm,1.5s
KURK Kurchatov 52.36 314 P **P** **15 57 04.7 +1.1**
AS31 Alice Springs 52.41 190 P **P** **15 57 03.2 -1.0**
ASAR Alice Springs 52.41 190 P **P** **15 57 04.0 -0.3**
comp=Z,1.0nm,0.5s,baz=14,slow=9.6,SNR=22
ASAR PcP **PcP** **15 58 16.1 +1.2**
comp=Z,1.1nm,0.7s,baz=8.4,slow=3.6,SNR=5.5
comp=Z,1.0nm,0.5s
ASAR Alice Springs 52.41 190 P **P** **15 57 04.0 -0.3**
KURBB Kurchatov Arra 52.41 314 P **P** **15 57 05.0 +1.0**
comp=Z,14nm,0.8s,baz=90,slow=7.0,SNR=146
comp=Z,14nm,0.8s
UZB Uzynbulak 52.47 304 *e*P **P** **15 57 06.3 +1.5**
comp=Z,15nm,1.7s
KPKS Kokpek 52.68 305 *e*P **P** **15 57 07.6 +1.4**
TDK Taldyqorghan 52.74 307 *e*P **P** **15 57 08.4 +1.8**
D19K Kuna River 52.74 23 IAmb IAmb 15 57 11.9
comp=Z,8.2nm,1.3s
SATY Saty 52.93 304 *e*P **P** **15 57 09.8 +1.7**
comp=Z,17nm,1.5s
K20K Telida 53.11 30 IAmb IAmb 15 57 29.9
comp=Z,4.0nm,0.8s
D20K Etivluk River 53.34 23 IAmb IAmb 15 57 14.8
comp=Z,6.7nm,0.8s
B20K Meade River 53.54 22 IAmb IAmb 15 57 16.4
comp=Z,6.5nm,0.8s
MDOK Medeo 53.90 304 *e*P **P** **15 57 16.9 +1.6**
TNSS Tian-Shan 53.99 304 *e*P **P** **15 57 17.3 +1.0**
B21K Ikpikpuk River 54.27 23 IAmb IAmb 15 57 21.9
comp=Z,5.6nm,0.9s
KUU Kurty 54.33 305 *e*P **P** **15 57 20.0 +1.8**
D22K Ayikyak River 54.76 24 IAmb IAmb 15 57 33.3
comp=Z,11nm,1.2s
E22K Anaktuvuk Pass 54.92 25 P **P** **15 57 23.9 +1.7**
E22K IAmb IAmb 15 57 38.7
comp=Z,7.5nm,1.2s
NEA2 Nenana 55.47 29 IAmb IAmb 15 57 43.1
comp=Z,7.6nm,1.1s
D23K Nanushuk River 55.49 24 IAmb IAmb 15 57 43.3
comp=Z,4.3nm,0.8s
SGDS Sogindy 55.62 305 *e*P **P** **15 57 29.3 +1.7**
KSH2 Kashi 55.62 300 P **P** **15 57 29.3 +1.5**
KSH2 pmax pmax
comp=Z,5.0nm,1.0s
C23K Itkillik River 55.68 23 IAmb IAmb 15 57 32.0
comp=Z,7.4nm,0.9s
AAK Ala-Archa 55.83 304 LR LR 16 23 48.7
comp=Z,45nm,18.2s,baz=68,slow=39
IL31 56.42 29 IAmb IAmb 15 57 35.8
comp=Z,6.3nm,1.2s
ILAR Eielson Array 56.42 29 P **P** **15 57 32.4 -0.6**
comp=Z,1.5nm,0.9s,baz=259,slow=5.8,SNR=13
ILAR LR LR 16 21 32.7
comp=Z,32nm,19.0s,baz=260,slow=36
comp=Z,1.5nm,0.9s
ILAR Eielson Array 56.42 29 P **P** **15 57 32.0 -0.9**
D25K Kavik River 57.07 24 P **P** **15 57 36.7 -0.8**
D25K IAmb IAmb 15 57 52.0
comp=Z,2.9nm,0.8s
BVAR Borovoye Array 57.35 317 P **P** **15 57 41.2 +1.5**
comp=Z,13nm,0.6s,baz=92,slow=7.6,SNR=65
BVAR LR LR 16 23 13.7
comp=Z,44nm,18.6s,baz=101,slow=37
comp=Z,13nm,0.6s
BORK Borovoye 57.40 317 P **P** **15 57 39.8 -0.2**
SCRK Sand Creek 57.64 30 P **P** **15 57 40.8 -1.0**
F26K Sheenjek River 57.73 26 IAmb IAmb 15 58 04.8
comp=Z,7.4nm,1.3s
C27K Jago River 58.03 23 IAmb IAmb 15 58 03.2
comp=Z,7.7nm,1.3s
DZA Taraz 58.09 305 *e*P **P** **15 57 46.6 +1.5**
KKAR Karatay Array 58.64 305 P **P** **15 57 49.7 +0.7**
H27K Steamboat Moun 58.71 27 IAmb IAmb 15 58 07.6
comp=Z,4.9nm,0.9s
IUG luzhnay 59.17 304 *e*P **P** **15 57 54.5 +1.7**
comp=Z,4.0nm,0.6s
CHM Chimkent 59.45 305 *e*P **P** **15 57 56.2 +1.6**
STKA Stephens Creek 59.92 181 P **P** **15 57 57.6 -0.2**
comp=Z,1.9nm,0.7s,baz=349,slow=10,SNR=4.3
comp=Z,1.9nm,0.7s
ARTI Arti 63.75 322 P **P** **15 58 22.7 -0.6**
AB31 Akbulak array 64.47 314 P **P** **15 58 28.6 +0.5**
ABKAR Akbulak array 64.47 314 P **P** **15 58 27.7 -0.4**
AKTO Aktyubinsk 65.37 316 LR LR 16 28 11.6
comp=Z,63nm,19.2s,baz=276,slow=37
KIRV Kirov 67.84 326 LR LR 16 31 32.8
comp=Z,34nm,18.4s,baz=73,slow=39
SPITS Spitsbergen Ar 69.19 350 P **P** **15 58 59.0 +1.1**
comp=Z,5.2nm,1.0s,baz=83,slow=4.8,SNR=1.3
comp=Z,5.2nm,1.0s
YKA Yellowknife Ar 70.85 29 P **P** **15 59 07.3 -0.9**
comp=Z,1.2nm,0.9s,baz=298,slow=6.6,SNR=10
comp=Z,1.2nm,0.9s
YKA Yellowknife Ar 70.85 29 P **P** **15 59 06.5 -1.6**
ARCES ARCESS Array B 72.46 341 P **P** **15 59 17.4 -0.3**
comp=Z,2.1nm,0.6s,baz=64,slow=8.2,SNR=5.4
comp=Z,2.1nm,0.6s
RAR Rarotonga 74.33 125 LR LR 16 28 27.9
comp=Z,51nm,19.2s,baz=242,slow=33
FINES FINESS Array B 76.96 334 P **P** **15 59 44.4 +0.4**
comp=Z,1.6nm,0.6s,baz=70,slow=4.4,SNR=13
comp=Z,1.6nm,0.6s
FINES FINESS Array B 76.96 334 P **P** **15 59 45.4 +1.4**
KBZ Khabaz 77.41 313 P **P** **15 59 47.9 +1.1**
comp=Z,10nm,0.8s,baz=98,slow=5.6,SNR=19
KBZ LR LR 16 35 34.2
comp=Z,33nm,19.2s,baz=44,slow=37
comp=Z,10nm,0.8s
NVAR Mina Array Bea 79.45 52 P **P** **16 00 00.2 +1.7**
comp=Z,0.8nm,0.7s,baz=294,slow=6.1,SNR=4.0
comp=Z,0.8nm,0.7s
ELK Elko 80.43 49 LR LR 16 27 09.4
comp=Z,33nm,20.9s,baz=334,slow=29
AKASG Malin Array Be 81.80 324 P **P** **16 00 10.7 +0.1**
comp=Z,0.9nm,0.4s,baz=53,slow=5.4,SNR=6.9
AKASG LR LR 16 39 05.9
comp=Z,72nm,18.4s,baz=354,slow=38
comp=Z,0.9nm,0.4s
HFS Hagfors 82.40 337 P **P** **16 00 13.0 -0.6**
comp=Z,2.3nm,0.9s,baz=45,slow=6.3,SNR=6.5
comp=Z,2.3nm,0.9s
NB2 NORSAR Subarra 82.56 338 P **P** **16 00 14.5 +0.1**
comp=Z,5.3nm,1.0s,baz=43,slow=5.3
NOA NORSAR Array B 82.56 338 P **P** **16 00 14.3 -0.1**
comp=Z,2.2nm,0.9s,baz=41,slow=5.2,SNR=5.6
comp=Z,2.2nm,0.9s
PDAR Pinedale Array 83.05 45 P **P** **16 00 18.8 +1.2**
comp=Z,0.3nm,0.7s,baz=301,slow=6.5,SNR=4.9
comp=Z,0.3nm,0.7s
PFO Pinyon Flats O 83.06 56 LR LR 16 31 37.6
comp=Z,37nm,19.6s,baz=173,slow=32
BRTR Keskin Array B 85.40 313 P **P** **16 00 29.0 -0.5**
comp=Z,3.8nm,0.7s,baz=66,slow=7.0,SNR=25
comp=Z,3.8nm,0.7s
BRTR Keskin Array B 85.40 313 P **P** **16 00 29.8 +0.3**
ANMO Albuquerque 89.38 50 LR LR 16 34 47.4
comp=Z,27nm,21.3s,baz=54,slow=32
GERES GERESS Array B 90.61 329 LR LR 16 45 15.4
comp=Z,34nm,18.8s,baz=259,slow=38
TXAR Lajitas Array 94.55 53 P **P** **16 01 14.6 +1.8**
comp=Z,0.6nm,0.8s,baz=296,slow=4.4,SNR=6.9
TXAR LR LR 16 40 11.0
comp=Z,44nm,21.0s,baz=351,slow=33
comp=Z,0.6nm,0.8s
QSPA South Pole Qui 118.14 180 PKP **PKPdf** **16 06 38.3 +0.3**
comp=Z,1.8nm,1.0s,baz=293,slow=1.9,SNR=2.9
TORD Torodi Ar. Bea 124.01 312 PKP **PKPdf** **16 06 49.9 -0.9**
comp=Z,0.5nm,0.8s,baz=299,slow=0.6,SNR=2.6
LPAZ La Paz 149.23 74 PKPbc **PKPbc** **16 07 41.0 -0.8**
comp=Z,4.3nm,0.9s,baz=2.7,slow=4.8,SNR=12
LPAZ La Paz 149.23 74 **PKPbc** **16 07 41.5 -0.3**
PLCA Paso Flores 150.22 123 PKPbc **PKiKP** **16 07 44.3 +0.6**
comp=Z,0.7nm,0.6s,baz=230,slow=7.9,SNR=1.5

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*IDC **07** 16:15:57.9±1.7, 59.93N×152.78W, h95km±18km, mb3.6/13, mbtmp4.0/19, Error ellipse: s-maj=18.6km s-min=13.8km az=2.0*
*NEIC **07** 16:15:58.1±0.6, 59.93N±0.03×152.81W±0.07, h95km±5km, mb4.3/2, ML3.8/190, ML3.6(AEIC), Error ellipse: s-maj=5.1km s-min=4.6km az=103.0*
*AEIC **07** 16:16:00.3±1.1, 59.94N±0.03×152.92W±0.06, h84km±4km, Error ellipse: s-maj=4.6km s-min=3.7km az=129.0*
ISC 07 16:15:57.6±0.6, 59.91N±0.03×152.80W±0.03, h98km±5km, n264, σ0.91/253, mb4.0/13, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ILS	**Iliamna Low So**	**0.14**	**289**		**Pn**	**16 16 11.5**	**-0.1**
ILS					**Sn**	**16 16 21.9**	**0.0**
ILSW	**Iliamna Southw**	**0.19**	**293**		**Pn**	**16 16 11.5**	**-0.2**
ILSW				Sn	**Sn**	**16 16 22.1**	**-0.1**
ILSW				IAML		16 16 22.8	
	comp=N,4μm,0.4s						
ILSW				IAML		16 16 23.9	
	comp=E,3μm,0.7s						
P19K	**Oil Pt**	**0.34**	**220**		**Sn**	**16 16 23.2**	**+0.1**
P19K	**Oil Pt**	**0.34**	**220**		**Pn**	**16 16 12.2**	**0.0**
P19K				IAML		16 16 23.9	
	comp=E,4μm,0.6s						
RED	**Redoubt Volcan**	**0.51**	**2**		**Pn**	**16 16 13.4**	**+0.1**
RED				IAML		16 16 25.3	
	comp=E,4μm,0.6s						
RED				IAML		16 16 26.0	
	comp=N,2μm,0.5s						
RED	**Redoubt Volcan**	**0.51**	**2**		**Sn**	**16 16 24.6**	**-0.5**
RDSO	**Redoubt South**	**0.55**	**3**		**Pn**	**16 16 13.8**	**+0.1**
RDSO					**Sn**	**16 16 25.3**	**-0.5**
AU22	**Augustine Moun**	**0.61**	**208**		**Pn**	**16 16 14.3**	**+0.2**
AU22					**Sn**	**16 16 26.6**	**+0.2**
AUL	**Augustine Lava**	**0.62**	**211**		**Pn**	**16 16 14.5**	**+0.3**
AUL					**Sn**	**16 16 27.1**	**+0.6**
AUF	**Augustine Flow**	**0.62**	**213**		**Pn**	**16 16 14.3**	**+0.2**
AUF					**Sn**	**16 16 26.9**	**+0.4**
HOM	**Homer**	**0.64**	**113**		**Pn**	**16 16 15.1**	**+0.8**
HOM	**Homer**	**0.64**	**113**		**Sn**	**16 16 27.9**	**+1.1**
AGU	**Augustine-Summ**	**0.64**	**210**		**Pn**	**16 16 14.7**	**+0.3**
AUCH	**Augustine Cone**	**0.64**	**211**		**Pn**	**16 16 14.7**	**+0.3**
AUJK	**Augustine Jueg**	**0.64**	**209**		**Pn**	**16 16 14.7**	**+0.4**
AUJK					**Sn**	**16 16 27.3**	**+0.5**
NCT	**North Crescent**	**0.66**	**354**		**Pn**	**16 16 14.7**	**+0.1**
NCT					**Sn**	**16 16 26.8**	**-0.4**
RDT	**Redoubt**	**0.69**	**16**		**Sn**	**16 16 27.6**	**-0.2**
Q19K	**Port Alsworth**	**0.81**	**291**		**Pn**	**16 16 16.0**	**+0.1**
Q19K				Sn	**Sn**	**16 16 29.5**	**-0.1**
CNPM	**China Poot**	**0.88**	**115**		**Pn**	**16 16 17.1**	**+0.5**
CNPM				Sn	**Sn**	**16 16 31.3**	**+0.4**
CNPM				IAML		16 16 31.5	
	comp=N,3μm,0.9s						
CNPM				IAML		16 16 32.7	
	comp=E,3μm,0.4s						
BRLK	**Bradley Lake**	**0.98**	**98**		**Pn**	**16 16 18.0**	**+0.3**
BRLK				IAML		16 16 34.9	
	comp=N,2μm,0.4s						
BRLK				IAML		16 16 35.1	
	comp=E,2μm,0.3s						
BRLK	**Bradley Lake**	**0.98**	**98**		**Sn**	**16 16 33.1**	**+0.4**
BRSE	**Bradley Lake S**	**1.05**	**98**		**Pn**	**16 16 18.9**	**+0.4**
BRSE					**Sn**	**16 16 34.5**	**+0.3**
Q19K	**Cape Douglas,**	**1.08**	**204**		**Pn**	**16 16 18.8**	**0.0**
Q19K				IAML		16 16 38.6	
	comp=N,1μm,0.5s						
Q19K				IAML		16 16 39.2	
	comp=E,934nm,0.9s						
Q19K	**Cape Douglas,**	**1.08**	**204**		**Sn**	**16 16 35.1**	**+0.5**
CAPN	**Captain Cook N**	**1.19**	**43**		**Pn**	**16 16 22.1**	**+2.2**
O18K	**Koktuh Hills**	**1.22**	**268**		**Pn**	**16 16 20.4**	**+0.1**
O18K				IAML		16 16 37.5	
	comp=N,2μm,0.8s						
O18K				IAML		16 16 37.9	
	comp=E,1μm,0.5s						
O18K	**Koktuh Hills**	**1.22**	**268**		**Sn**	**16 16 37.0**	**-0.5**
N19K	**Bonanza Creek**	**1.23**	**318**		**Pn**	**16 16 20.8**	**+0.2**
N19K	**Bonanza Creek**	**1.23**	**318**		**Sn**	**16 16 37.5**	**-0.4**
SYI	**Shuyak Island**	**1.32**	**171**		**Pn**	**16 16 22.1**	**+0.6**
SYI					**Sn**	**16 16 39.6**	**0.0**
SYI	**Shuyak Island**	**1.32**	**171**	IAML		16 16 40.5	
	comp=N,1μm,0.3s						
SYI				IAML		16 16 44.4	
	comp=E,1μm,0.3s						
SPCR	**Spurr Chakacha**	**1.32**	**13**		**Sn**	**16 16 39.8**	**-0.1**
SPU	**Mount Spurr**	**1.33**	**16**		**Pn**	**16 16 22.1**	**+0.4**
P18K	**Big Mountain,**	**1.34**	**248**		**Pn**	**16 16 21.6**	**-0.2**
P18K	**Big Mountain,**	**1.34**	**248**		**Sn**	**16 16 39.1**	**-1.0**
SLKM	**Skilak Lake**	**1.42**	**64**		**Pn**	**16 16 22.8**	**0.0**
SLKM				IAML		16 16 44.6	
	comp=E,2μm,0.3s						
SLKM				IAML		16 16 47.0	
	comp=N,2μm,0.2s						
O22K	**Cooper Landing**	**1.64**	**68**		**Pn**	**16 16 25.9**	**+0.4**
STLK	**Strandline Lak**	**1.66**	**16**		**Pn**	**16 16 26.3**	**+0.5**
STLK				IAML		16 16 49.5	
	comp=E,432nm,0.4s						
SEW	**Seward**	**1.69**	**82**		**Pn**	**16 16 26.1**	**0.0**
SEW				IAML		16 16 54.9	
	comp=N,597nm,0.5s						
SEW				IAML		16 16 56.0	
	comp=E,925nm,1.0s						
KAHC	**Katmai Hardscr**	**1.70**	**223**		**Sn**	**16 16 47.7**	**-0.5**
N18K	**Kilae Creek**	**1.72**	**298**		**Pn**	**16 16 26.6**	**+0.1**
N18K					**Sn**	**16 16 47.7**	**-0.8**
N18K	**Kilae Creek**	**1.72**	**298**	IAML		16 16 48.6	
	comp=E,778nm,0.7s						
KAWH	**Katmai**	**1.85**	**215**		**Sn**	**16 16 51.1**	**-0.3**
RC01	**Rabbit Creek A**	**1.92**	**51**		**Pn**	**16 16 29.5**	**+0.4**
M20K	**Styx River**	**1.98**	**355**		**Pn**	**16 16 30.8**	**+0.8**
P17K	**Kvichak River**	**1.99**	**250**		**Pn**	**16 16 30.4**	**+0.6**
P17K				IAML		16 17 19.0	

P17K IAML 16 17 21.4
comp=E,632nm,0.9s
KAKN Katmai Knife C 2.00 217 Sn 16 16 54.5 -0.4
KABU Katmai Buttres 2.09 219 Pn 16 16 32.1 +0.9
KABU Sn **16 16 57.0 0.0**
KDAK Kodiak Island 2.14 177 P Pn **16 16 31.3 -0.5**
comp=E,168nm,0.3s,baz=41,slow=4.0,SNR=501
KDAK S Sn **16 16 55.7 -2.3**
comp=E,150nm,0.3s,baz=14,slow=2.4,SNR=15
KDAK Kodiak Island 2.14 177 Pn 16 16 31.4 -0.4
KDAK IAML 16 17 00.2
comp=E,411nm,0.4s
KDAK IAML 16 17 00.4
comp=E,588nm,0.3s
M19K Big River Lodg 2.14 339 Pn 16 16 32.4 +0.5
ACHA Angle Creek He 2.15 218 Pn 16 16 33.0 +0.9
SKT Skwentna 2.17 16 Pn 16 16 32.8 +0.5
SKT IAML 16 17 04.0
comp=E,442nm,0.3s
SKT IAML 16 17 08.0
comp=N,375nm,0.4s
M22K Willow 2.27 34 Pn 16 16 34.2 +0.7
N17K Nushagak Hills 2.27 288 Pn 16 16 33.8 +0.2
N17K Nushagak Hills 2.27 288 IAML 16 17 01.5
comp=N,261nm,0.6s
Q16K King Salmon 2.33 240 Pn 16 16 35.1 +0.7
PMR Palmer 2.47 45 P Pn **16 16 36.6 +0.5**
PMR Palmer 2.47 45 S Sn **16 17 04.3 -1.4**
PMR Palmer 2.47 45 Pn 16 16 36.2 +0.1
PMR IAML 16 17 05.3
comp=N,621nm,0.2s
L19K White Mountain 2.49 337 Pn 16 16 36.9 +0.5
O16K Kokwok River B 2.70 265 Pn 16 16 39.5 +0.3
OHAK Old Harbor 2.71 186 P Pn **16 16 38.6 -0.8**
OHAK Old Harbor 2.71 186 Pn 16 16 38.5 -0.8
OHAK IAML 16 17 17.2
comp=N,203nm,0.5s
P23K Montague Islan 2.72 86 Pn 16 16 39.5 0.0
P23K IAML 16 17 13.4
comp=N,599nm,0.4s
M17K Holitna River 2.73 305 IAML 16 17 12.7
comp=N,282nm,1.1s
M17K IAML 16 17 14.4
comp=E,344nm,0.7s
CUT Chulitna 2.79 25 Pn 16 16 41.1 +0.7
P16K Nushagak River 2.79 254 Pn 16 16 41.2 +0.8
P16K IAML 16 17 30.4
comp=N,229nm,0.9s
P16K IAML 16 17 30.7
comp=E,207nm,0.7s
L22K Petersville 2.80 20 Pn 16 16 41.8 +1.1
L22K IAML 16 17 16.2
comp=E,483nm,0.3s
L22K IAML 16 17 21.0
comp=N,300nm,0.3s
PLK5 Peulik 5 2.85 229 Pn 16 16 42.4 +1.1
PLK3 Peulik 3 2.87 220 Pn 16 16 42.7 +1.2
PLK1 Peulik 1 2.90 225 Pn 16 16 42.7 +0.8
SML Sawmill 2.90 47 Pn 16 16 41.9 -0.1
SML IAML 16 17 27.0
comp=E,491nm,1.0s
PLK4 Peulik 4 2.94 221 Pn 16 16 44.0 +1.4
PLK4 Peulik 4 2.94 221 IAML 16 17 20.4
comp=N,239nm,1.0s
PLK4 IAML 16 17 41.4
comp=E,182nm,1.0s
L18K Granite Mounta 2.99 322 Pn 16 16 43.2 +0.1
L18K Granite Mounta 2.99 322 IAML 16 17 18.2
comp=N,123nm,1.0s
PPLA Purkeypile 3.01 5 Pn 16 16 44.2 +0.7
PPLA Purkeypile 3.01 5 IAML 16 17 24.9
comp=E,146nm,1.1s
PLBL Peulik Blue Cr 3.05 225 Pn 16 16 45.0 +1.1
HIN Hinchinbrook I 3.19 79 IAML 16 17 23.2
comp=E,276nm,0.4s
HIN IAML 16 17 23.2
comp=N,292nm,0.5s
M16K Timber Creek 3.25 293 Pn 16 16 47.0 +0.5
SCM Sheep Creek Mo 3.30 52 Pn 16 16 47.1 -0.2
R16K Pilot Point 3.42 229 Pn 16 16 49.7 +0.8
R16K Pilot Point 3.42 229 IAML 16 17 32.9
comp=N,152nm,1.1s
R16K IAML 16 17 47.3
comp=E,86nm,0.8s
SII Sitkinak Islan 3.44 193 P **Pn 16 16 48.4 -0.8**
SII Sitkinak Islan 3.44 193 S **Sn 16 17 26.5 -2.6**
SII Sitkinak Islan 3.44 193 Pn 16 16 48.5 -0.7
SII IAML 16 17 44.6
comp=N,304nm,0.8s
SII IAML 16 17 46.5
comp=E,201nm,0.8s
L17K Donlin 3.48 312 Pn 16 16 49.8 +0.1
K20K Telida 3.51 351 Pn 16 16 50.5 +0.4
EYAK Cordova Ski Ar 3.58 77 P **Pn 16 16 51.4 +0.5**
EYAK Cordova Ski Ar 3.58 77 IAML 16 17 31.1
comp=N,126nm,0.4s
EYAK IAML 16 17 40.5
comp=E,84nm,0.5s
O15K Ungalikthiuk R 3.65 261 Pn 16 16 53.1 +1.1
N15K Kwethluk River 3.67 277 Pn 16 16 53.3 +1.1
N15K IAML 16 17 59.3
comp=N,93nm,0.7s
DIV Divide 3.68 68 IAML 16 17 37.5
comp=N,246nm,0.2s
DIV IAML 16 17 37.6
comp=E,198nm,0.2s
L16K Owhat River 3.73 302 Pn 16 16 53.1 +0.1
TRF Thorofare Moun 3.75 18 IAML 16 17 42.9
comp=E,154nm,0.7s
TRF IAML 16 17 43.3
comp=N,176nm,0.7s
KTH Kantishna Hill 3.76 13 IAML 16 17 45.2
comp=N,132nm,0.6s
KTH IAML 16 18 03.0
comp=E,115nm,0.9s
K17K Iditarod 3.87 319 Pn 16 16 54.1 -0.7
K17K IAML 16 17 55.9
comp=E,86nm,1.1s
K17K IAML 16 17 57.9
comp=N,61nm,0.8s
RND Reindeer 3.98 27 Pn 16 16 57.1 +0.6
RND IAML 16 17 43.0
comp=E,97nm,0.5s
RND IAML 16 18 01.1
comp=N,92nm,0.7s
CHUM Lake Minchumin 3.99 3 Pn 16 16 57.3 +0.8
M15K Kasigluk River 4.00 285 Pn 16 16 56.8 +0.1
J18K Innoko River 4.02 334 Pn 16 16 57.2 +0.3
ANNW Aniakchak Nort 4.10 226 Pn 16 16 58.7 +0.6
BMRM Bremner River 4.20 72 IAML 16 18 03.3
comp=E,123nm,0.6s
BMRM IAML 16 18 05.7
comp=N,130nm,0.4s
KAIM Kayak Island 4.22 86 Pn 16 16 59.9 +0.2
KAIM IAML 16 17 55.7
comp=N,197nm,0.4s
KAIM IAML 16 18 03.9
comp=E,173nm,0.6s
ANPB Aniakchak Plen 4.25 225 Pn 16 17 00.8 +0.7
MCK McKinley 4.25 24 Pn 16 17 01.1 +1.1
MCK IAML 16 17 51.0
comp=E,89nm,0.5s
MCK IAML 16 17 54.2
comp=N,85nm,0.7s
BPAW Bear Paw Mtn. 4.29 11 Pn 16 17 00.5 -0.1
BPAW IAML 16 17 48.7
comp=N,56nm,0.7s
BPAW IAML 16 18 12.5
comp=E,48nm,1.1s
J19K Poorman 4.31 343 Pn 16 17 01.1 +0.3
O14K Tigyukauivet M 4.35 265 Pn 16 17 01.7 +0.3
N25K Chitina, Valde 4.37 64 Pn **Pn 16 17 01.1 -0.6**
N25K IAML 16 17 52.2
comp=E,181nm,0.4s
CHIR Chirikof Islan 4.37 201 P **Pn 16 17 00.9 -0.8**
CHIR Chirikof Islan 4.37 201 S **Sn 16 17 48.4 -3.0**
CHIR Chirikof Islan 4.37 201 Pn 16 17 00.9 -0.8
CHIR Chirikof Islan 4.37 201 IAML 16 17 49.5
comp=N,108nm,0.4s
CHIR IAML 16 17 50.5
comp=E,101nm,0.7s
N14K Kuskokwak Cree 4.47 274 Pn 16 17 03.6 +0.6
N14K Kuskokwak Cree 4.47 274 IAML 16 18 24.6
comp=E,50nm,1.1s

N14K IAML 16 18 35.8
comp=N,70nm,0.8s
SUCK Suckling Hills 4.54 84 Pn 16 17 04.5 +0.6
SUCK Suckling Hills 4.54 84 IAML 16 18 03.6
comp=E,72nm,0.8s
SUCK IAML 16 18 10.4
comp=N,106nm,1.2s
L15K Ungalak Mounta 4.61 296 Pn 16 17 04.7 -0.1
WACK Wrangell Chich 4.62 60 Pn 16 17 04.9 -0.5
M14K Bethel 4.63 284 Pn 16 17 06.2 +1.1
PAX Paxson 4.67 46 Pn 16 17 06.0 +0.2
PAX Paxson 4.67 46 IAML 16 17 60.0
comp=N,143nm,0.8s
PAX IAML 16 18 04.7
comp=E,123nm,0.5s
GLB Gilahina Butte 4.68 67 IAML 16 17 58.3
comp=E,94nm,0.2s
GLB IAML 16 18 00.1
comp=N,96nm,0.7s
VRDI Verde Repeater 4.80 70 IAML 16 18 01.6
comp=N,64nm,0.4s
VRDI IAML 16 18 03.1
comp=E,35nm,0.4s
K15K Wolf Creek Mou 4.86 303 Pn 16 17 08.2 -0.1
CRQM Cirque 4.88 76 Pn 16 17 07.8 -0.9
CRQM Cirque 4.88 76 IAML 16 18 03.5
comp=E,111nm,0.5s
NEA2 Nenana 5.01 19 Pn 16 17 10.4 +0.1
NEA2 Nenana 5.01 19 IAML 16 18 16.4
comp=E,28nm,0.4s
TGL Tana Glacier 5.03 76 Pn 16 17 09.7 -1.0
TGL Tana Glacier 5.03 76 IAML 16 18 07.5
comp=N,74nm,0.5s
TGL IAML 16 18 07.6
comp=E,88nm,0.4s
MCARA McCarthy VSAT 5.03 69 Pn 16 17 10.1 -0.6
MCARA McCarthy VSAT 5.03 69 IAML 16 18 09.9
comp=E,112nm,0.3s
L14K Kuka Creek 5.07 291 Pn 16 17 12.0 +0.9
L14K Kuka Creek 5.07 291 IAML 16 18 42.4
comp=E,43nm,1.1s
L14K IAML 16 18 53.6
comp=N,38nm,1.1s
WRH Wood River Hil 5.08 24 Pn 16 17 11.3 +0.1
WRH Wood River Hil 5.08 24 IAML 16 18 08.0
comp=E,45nm,0.5s
WRH IAML 16 18 12.3
comp=N,39nm,0.4s
GCSA Galena City Sc 5.21 340 Pn 16 17 12.8 -0.2
MLY Manley 5.23 10 Pn 16 17 13.0 -0.3
PTPK Patty Peak 5.26 71 Pn 16 17 13.3 -0.6
KIAG Kiagna River 5.27 74 Pn 16 17 13.1 -1.0
HDA Harding Lake 5.28 29 Pn 16 17 14.4 +0.5
CCB Clear Creek Bu 5.29 24 Pn 16 17 13.2 -1.0
CCB Clear Creek Bu 5.29 24 IAML 16 18 14.5
comp=N,31nm,0.4s
CCB IAML 16 18 16.1
comp=E,36nm,0.4s
M13K Dall Lake 5.29 280 Pn 16 17 15.4 +1.3
M13K Dall Lake 5.29 280 IAML 16 19 00.3
comp=E,23nm,1.1s
BALM Baldy 5.29 73 Pn 16 17 13.4 -0.9
I21K Tanana 5.30 4 Pn 16 17 14.4 +0.2
MENT Mentasta 5.31 51 P **Pn 16 17 14.7 +0.3**
M26K Nabesna, AK 5.36 58 Pn 16 17 15.0 -0.1
M26K Nabesna, AK 5.36 58 IAML 16 18 15.2
comp=E,43nm,0.4s
M26K IAML 16 18 35.0
comp=N,70nm,0.5s
RIDG Independent Ri 5.38 41 Pn 16 17 15.6 +0.2
MESA MESA 5.45 83 Pn 16 17 16.7 +0.3
I17K Unalakleet 5.46 320 Pn 16 17 16.0 -0.4
COLA College 5.49 23 P **Pn 16 17 16.9 +0.2**
COLA College 5.49 23 S **Sn 16 18 16.7 -1.7**
COLA College 5.49 23 Pn 16 17 16.6 -0.1
I23K Minto, Yukon-K 5.49 15 Pn 16 17 16.6 -0.2
MDM Murphy Dome 5.49 21 Pn 16 17 16.7 -0.1
GRNC Granite Creek 5.55 77 Pn 16 17 17.3 -0.6
DOT Dot Lake 5.59 44 Pn 16 17 18.1 0.0
IL31 5.60 27 Pn **Pn 16 17 18.4 +0.2**
ILAR Eielson Array 5.60 27 P **Pn 16 17 18.3 0.0**
comp=N,8.2nm,0.3s,baz=210,slow=13,SNR=100
ILAR S **Sn 16 18 17.0 -4.2**
comp=N,7.9nm,0.3s,baz=212,slow=13,SNR=1.7
BARN Barnard Glacie 5.63 73 Pn 16 17 18.6 -0.3
H20K Anotleneega Mo 5.68 351 Pn 16 17 20.3 +0.8
RKAV Rock Avalanche 5.74 81 Pn 16 17 20.3 -0.1
H21K Melozitna Rive 5.77 360 Pn 16 17 21.1 +0.5
CTGM Chitina Glacie 5.78 75 Pn 16 17 20.9 0.0
M27K Edge Creek, AK 5.83 60 Pn 16 17 21.7 +0.1
J25K Salcha River, 5.85 33 Pn 16 17 22.0 +0.2
H18K Honhosa River 5.85 336 Pn 16 17 22.0 +0.2
J14K Nanvanak Lak 5.91 303 Pn 16 17 22.6 +0.2
LOGN Logan Glacier 5.93 76 Pn 16 17 22.4 -0.6
H17K Granite Mounta 6.03 330 Pn 16 17 24.3 +0.2
H22K Ishtalitna Cre 6.04 6 Pn 16 17 24.7 +0.4
IMAR Indian Mountai 6.11 356 Pn **Pn 16 17 25.9 +0.6**
BC01 Beaver Creek A 6.13 54 Pn 16 17 25.3 -0.3
L27K Beaver Creek, 6.13 54 Pn 16 17 25.2 -0.4
YUK2 White River 6.14 67 Pn 16 17 25.7 -0.1
BCAR Beaver Creek A 6.15 54 Pn **Pn 16 17 25.2 -0.6**
SDPT Sand Point 6.16 225 S **Sn 16 18 32.1 -2.7**
SDPT Sand Point 6.16 225 Pn 16 17 25.9 0.0
PCA Pinnacle 6.30 83 Pn 16 17 28.8 +0.9
YUK3 Moose Creek 6.32 67 Pn 16 17 28.2 -0.1
O28M Mount Upton 6.32 77 Pn 16 17 28.4 0.0
H24K Noodor Dome 6.36 19 Pn 16 17 28.4 -0.3
PRP Porcupine Dome 6.54 28 Pn 16 17 30.9 -0.3
G19K Purcell Mounta 6.55 345 Pn 16 17 31.4 +0.2
YUK8 Steele Glacier 6.57 72 Pn 16 17 32.3 +0.6
G18K Tagagawik 6.57 339 Pn 16 17 31.2 -0.3
BCPM Bancas Point 6.62 84 Pn 16 17 32.3 +0.1
G21K Allakaket 6.64 358 Pn 16 17 32.9 +0.5
YKU2 Yakutat 6.66 88 P **Pn 16 17 33.3 +0.7**
YKU2 Yakutat 6.66 88 S **Sn 16 18 49.4 +2.5**
G17K Kiwalik Mounta 6.67 331 Pn 16 17 32.8 0.0
M11K Mekoryuk 6.71 280 Pn 16 17 31.3 -2.0
G23K Bananza Creek 6.94 9 Pn 16 17 35.9 -0.7
I26K Coal Creek Min 7.00 35 Pn 16 17 37.3 0.0
DT1 Dutton Round H 7.02 231 Pn 16 17 37.2 -0.4
O29M Mount Kennedy 7.12 81 Pn 16 17 39.5 +0.4
G24K Hadweenzic Riv 7.22 17 Pn 16 17 39.6 -0.7
YUK6 Outpost Mounta 7.22 76 Pn 16 17 40.3 -0.3
F20K Avaraart Lake 7.28 351 Pn 16 17 41.6 +0.5
G15K Niukluk 7.28 319 Pn 16 17 41.3 +0.1
M29M Somme Creek 7.38 64 Pn 16 17 42.3 -0.3
F18K Selawik 7.38 338 Pn 16 17 42.5 0.0
COLD Coldfoot 7.43 8 Pn 16 17 42.9 -0.3
YUK5 Granite Creek 7.47 74 Pn 16 17 43.8 -0.1
ANM Nome 7.49 314 Pn 16 17 43.8 -0.2
FYU Fort Yukon 7.50 24 Pn **Pn 16 17 43.9 -0.1**
DAWY Dawson 7.56 51 Pn 16 17 44.0 -0.9
F17K Baldwin Pennin 7.58 333 Pn 16 17 44.5 -0.7
HYT Haines Junctio 7.64 77 Pn 16 17 46.6 +0.4
I27K Kandik River 7.67 37 Pn 16 17 46.5 +0.1
L29M L29M 7.71 59 Pn 16 17 47.2 +0.2
E19K Redstone River 7.82 347 Pn 16 17 49.5 +1.0
N30M Aishikik Lake 7.87 72 Pn 16 17 48.1 -1.1
P30M Million Dollar 7.94 82 Pn 16 17 50.5 +0.3
G26K Porcupine Rive 8.13 26 Pn 16 17 51.8 -0.8
H27K Steamboat Moun 8.14 34 Pn 16 17 52.1 -0.7
M30M Minto, Yukon 8.16 64 Pn 16 17 52.3 -0.9
E17K Hotham Inlet 8.24 335 Pn 16 17 54.5 +0.4
F25K Christian Rive 8.33 19 Pn 16 17 54.5 -1.0
O30N Mendenhall 8.33 77 Pn **Pn 16 17 55.5 0.0**
BMAR Burnt Mountain 8.37 22 Pn **Pn 16 17 55.0 -1.0**
N31M Braeburn, Yuko 8.49 72 Pn 16 17 57.1 -0.6
S31K Pelican 8.79 96 Pn 16 18 01.1 -0.5
E25K Arctic Village 8.82 18 Pn 16 18 00.6 -1.5
SKAG Skagway 8.85 85 P **Pn 16 18 03.8 +1.3**
SKAG Skagway 8.85 85 S **Sn 16 19 41.7 +1.4**
SKAG Skagway 8.85 85 Pn **Pn 16 18 03.4 +1.0**
AKUT Akutan 9.13 236 P Pn 16 18 01.6 -4.7
SIT Sitka 9.58 100 P **Pn 16 18 11.6 -0.8**
JIS Juneau Island 9.62 92 P **Pn 16 18 14.6 +1.7**
C19K Lookout Ridge 9.67 345 Pn **Pn 16 18 14.2 +0.5**
S32K Killisnoo 9.79 97 Pn **Pn 16 18 16.5 +1.2**
U33K Whale Pass 11.10 101 Pn 16 18 32.1 -0.8
WRAK Wrangell Islan 11.34 99 Pn 16 18 37.2 +0.9
CRAG Craig 11.41 104 P **Pn 16 18 36.5 -0.8**
CRAG Craig 11.41 104 Pn **Pn 16 18 36.5 -0.8**
DLBC Dease Lake 11.76 87 P **Pn 16 18 42.3 +0.3**
comp=N,5.7nm,0.3s,baz=250,slow=7.5,SNR=40
DLBC S **Sn 16 20 49.1 -2.0**
comp=N,2.6nm,0.4s,baz=16,slow=26,SNR=3.1
INK Inuvik 11.85 37 P **Pn 16 18 43.5 +0.6**
comp=N,1.2nm,0.4s,baz=246,slow=13,SNR=12
INK S **Sn 16 20 48.1 -4.8**
comp=N,1.4nm,0.8s,baz=194,slow=27,SNR=3.3
BBB Bella Bella 15.74 109 P **Pn 16 19 34.9 +1.5**
comp=N,7.2nm,1.1s,baz=287,slow=9.9,SNR=6.4
BBB S **Sn 16 22 23.1 -4.1**
comp=N,6.9nm,0.9s,baz=92,slow=22,SNR=1.5
A36M Sachs Harbour 16.28 31 Pn **Pn 16 19 38.8 -1.2**
A36M IAmb IAmb 16 19 45.2
comp=Z,8.5nm,0.7s
YKA Yellowknife Ar 18.40 65 P **P 16 20 05.3 +0.8**
comp=Z,0.5nm,0.5s,baz=281,slow=10,SNR=12
PETK Petropavlovsk- 27.57 278 P **P 16 21 35.6 +0.6**
comp=Z,1.8nm,0.6s,baz=72,slow=14,SNR=19
comp=Z,1.8nm,0.6s
MA2 Magadan 27.71 294 P **P 16 21 37.0 +0.9**
comp=Z,1.5nm,0.3s,baz=61,slow=12,SNR=7.4
comp=Z,1.5nm,0.3s
PDAR Pinedale Array 31.28 104 P **P 16 22 08.8 +0.6**
comp=Z,0.1nm,0.3s,baz=314,slow=9.0,SNR=3.8
comp=Z,0.1nm,0.3s
ASAJ Asahikawa 40.99 277 P **P 16 23 31.5 +1.0**
comp=Z,7.2nm,1.1s,baz=160,slow=5.0,SNR=1.8
comp=Z,7.2nm,1.1s
SPITS Spitsbergen Ar 42.00 3 P **P 16 23 38.6 +0.2**
comp=Z,3.8nm,0.8s,baz=347,slow=5.0,SNR=5.8
comp=Z,3.8nm,0.8s
TXAR Lajitas Array 44.86 111 P **P 16 24 03.4 +1.4**
comp=Z,2.2nm,0.6s,baz=332,slow=11,SNR=2.6
comp=Z,0.2nm,0.6s
USRK Ussuriysk Ar. 46.16 285 P **P 16 24 11.4 -0.5**
comp=Z,0.8nm,0.6s,baz=33,slow=8.8,SNR=3.2
comp=Z,0.8nm,0.6s
KSRS Korea Array 53.30 283 P **P 16 25 07.5 +1.4**
comp=Z,1.8nm,0.5s,baz=38,slow=7.0,SNR=15
comp=Z,1.8nm,0.5s
SONM Songino Array 54.92 306 P **P 16 25 19.6 +1.6**
comp=Z,3.0nm,0.5s,baz=45,slow=6.2,SNR=24
comp=Z,3.0nm,0.5s
SONM Songino Array 54.92 306 P **P 16 25 18.9 +1.0**
SONM IAmb IAmb 16 25 20.0
comp=Z,3.0nm,0.6s
ZALV Zalesovo Beam 57.50 324 P **P 16 25 36.5 +0.5**
comp=Z,1.9nm,0.5s,baz=32,slow=6.8,SNR=10
comp=Z,1.9nm,0.5s
BVAR Borovoye Array 62.19 332 P **P 16 26 07.6 -0.5**
comp=Z,0.7nm,0.4s,baz=26,slow=5.4,SNR=6.3
comp=Z,0.7nm,0.4s
KURBB Kurchatov Arra 62.27 326 P **P 16 26 08.1 -0.6**
comp=Z,0.4nm,0.6s,baz=23,slow=7.1,SNR=5.0
comp=Z,0.4nm,0.6s
MKAR Makanchi Array 64.56 321 P **P 16 26 23.8 -0.1**
comp=Z,0.4nm,0.6s,baz=37,slow=7.4,SNR=5.4
comp=Z,0.4nm,0.6s
LPAZ La Paz 101.29 103 P **Pdif 16 29 36.3 -1.7**
comp=Z,0.8nm,0.4s,baz=316,slow=5.3,SNR=5.6
BOSA Boshof 148.68 3 PKPbc **PKPbc 16 35 32.6 -0.3**
comp=Z,1.9nm,1.0s,baz=332,slow=5.8,SNR=1.7

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*IDC **07** 16:18:42.0±3.1, 35°.69N×141°.14E, h37km±27km, mb3.4/6, mbtmp3.7/10, ML3.8/3, MS2.8/2, Error ellipse: s-maj=29.2km s-min=15.3km az=79.0*
*JMA **07** 16:18:42.6±0.2, 35°.8N±0°.6×14°.1E±°, h37km±1km, MV3.3/39, NEAR CHOSHI CITY*
JMA Felt I J1 at NEAR CHOSHI CITY .
*NIED **07** 16:18:42.6, 35°.77N×141°.02E, h37km, MW3.8, Moment Tension Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-3.99; $M_{\theta\theta}$3.19; $M_{\phi\phi}$0.80; $M_{r\theta}$3.13; $M_{r\phi}$-0.30; $M_{\theta\phi}$1.69; Fault plane solution: $M_0$5.00000×10^{14} NP1: ϕ_s105.00000°, δ26.00000°, λ-62.00000°. NP2: ϕ_s254.00000°, δ67.00000°, λ-103.00000°.*
ISC 07 16:18:39.9±1.6, 35.79N±0.05×141.26E±0.07, h26km±12km, n28, σ1s33/26, mb3.6/6, 5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JIHU	**Itakohorinouch**	**0.62**	**287**	↓*i*P	**Pb**		**16 18 53.0**	**+0.9**
JIHU				↓*e*S	**Sb**		**16 19 00.8**	**+0.3**
JSMT	**Sammumatsuo**	**0.68**	**258**	↓P	**Pb**		**16 18 53.3**	**+0.2**
JSMT				↓*e*S	**Sb**		**16 19 01.4**	**-0.6**
JHYU	**Hitachinakayam**	**0.78**	**316**	*i* P	**Pn**		**16 18 55.9**	**+0.7**
JCCN	**Chibachonan**	**0.93**	**245**	*e*P	**Pb**		**16 18 57.9**	**+0.6**
JYT	**Yasato**	**0.97**	**297**	P	**Pb**		**16 18 57.3**	**-0.7**
JYT				*e*S	**Sb**		**16 19 08.1**	**-2.3**
JHO	**Hitachi**	**0.99**	**326**	↓*i*P	**Pn**		**16 18 59.2**	**+1.0**
BSO4	**Boso 4**	**1.09**	**224**	P	**Pb**		**16 19 01.7**	**+1.6**
BSO1	**Boso 1**	**1.15**	**192**	*e*P	**Pb**		**16 19 01.0**	**+0.2**
BSO3	**Boso 3**	**1.16**	**212**	P	**Pn**		**16 19 00.7**	**+0.5**
JAG	**Ashikaga**	**1.59**	**294**	*e*P	**Pn**		**16 19 06.2**	**-0.3**
MJAR	**Matsushiro Arr**	**2.58**	**288**	Pn	**Pn**		**16 19 20.9**	**+0.9**
	4.2nm,0.3s,baz=93,slow=8.9,SNR=82							
MJAR					Sn		**16 19 50.4**	**-0.2**
	0.7nm,0.3s,baz=233,slow=31,SNR=6.0							
JHJ	**Hachijo jima 2**	**2.93**	**205**	Pn	**Pn**		**16 19 25.3**	**+0.5**
	11nm,0.3s,baz=304,slow=23,SNR=8.5							
JHJ					Sn		**16 19 57.0**	**-2.1**
	74nm,0.3s,baz=87,slow=20,SNR=9.3							
	87nm,0.6s							
ASAJ	**Asahikawa**	**8.38**	**7**	Pn	**Pn**		**16 20 40.8**	**+1.1**
	1.1nm,0.3s,baz=234,slow=13,SNR=14							
ASAJ					Sn		**16 22 10.8**	**-2.7**
	0.1nm,0.3s,baz=347,slow=22,SNR=2.5							
	2.3nm,0.4s							
JCJ	**Chichijima**	**8.70**	**175**	Pn	**Pn**		**16 20 42.4**	**-1.7**
	5.6nm,0.3s,baz=356,slow=20,SNR=7.0							
JCJ					Sn	Sn	16 22 13.3	-8.1
	4.1nm,0.3s,baz=284,slow=22,SNR=1.4							
	72nm,1.0s							
KSRS	**Korea Array**	**10.85**	**283**	LR	LR		16 25 14.5	
	comp=Z,42nm,19.3s,baz=70,slow=36							
KLR	**Kul'dur**	**15.13**	**335**	LR	LR		16 27 26.3	
	comp=Z,33nm,19.4s,baz=128,slow=34							
MA2	**Magadan**	**24.60**	**12**	P	**P**		**16 24 00.4**	**+2.7**
	0.8nm,0.4s,baz=206,slow=7.8,SNR=4.5							
	0.8nm,0.4s							
H11N2	**WAKE ISLAND Hy**	**27.64**	**119**	T	T		16 53 33.7	
	baz=310,slow=75,SNR=29							
H11N1	**WAKE ISLAND Hy**	**27.65**	**119**	T	T		16 53 34.2	
	baz=310,slow=75,SNR=18							
H11N3	**WAKE ISLAND Hy**	**27.66**	**119**	T	T		16 53 34.1	
	baz=310,slow=75,SNR=27							
H11S1	**WAKE ISLAND Hy**	**28.31**	**121**	T	T		16 54 23.8	
	baz=312,slow=75,SNR=80							
H11S3	**WAKE ISLAND Hy**	**28.31**	**121**	T	T		16 54 23.8	
	baz=312,slow=75,SNR=69							
H11S2	**WAKE ISLAND Hy**	**28.33**	**121**	T	T		16 54 22.1	
	baz=312,slow=75,SNR=49							
SONM	**Songino Array**	**28.39**	**306**	P	**P**		**16 24 33.6**	**+1.3**
	0.2nm,0.5s,baz=106,slow=8.3,SNR=2.1							
	0.2nm,0.5s							
MKAR	**Makanchi Array**	**44.68**	**303**	P	**P**		**16 26 49.7**	**-0.8**
	0.5nm,0.7s,baz=65,slow=6.4,SNR=5.6							
	0.5nm,0.7s							
KURBB	**Kurchatov Arra**	**46.68**	**309**	P	**P**		**16 27 06.1**	**-0.1**
	0.5nm,0.3s,baz=82,slow=7.6,SNR=8.9							
	0.5nm,0.3s							
WRA	**Warramunga Arr**	**55.81**	**188**	P	**P**		**16 28 14.5**	**-0.4**
	0.7nm,0.8s,baz=2.4,slow=8.0,SNR=14							
	0.7nm,0.8s							
ASAR	**Alice Springs**	**59.54**	**188**	P	**P**		**16 28 41.3**	**+0.2**
	0.3nm,0.8s,baz=3.6,slow=7.0,SNR=5.4							
	0.3nm,0.8s							

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*AZER **07** 16:25:21.0, 39°.58N×51°.34E, h54km, ml3.1*
ISC 07 16:25:17.5±1.4, 39.59N±0.07×51.60E±0.09, h111km±28km, n24, σ1s99/39, 3C-1D, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
GBS	**Qobustan**	**2.25**	**296**	Sn	**Sn**		**16 26 21.9**	**+0.5**
LKRN	**Lenkeran, Azer**	**2.36**	**249**	Pn	**Pn**		**16 25 56.0**	**+0.9**
LKRN				Sn	**Sn**		**16 26 22.1**	**-1.9**
ATGJ	**Altiaghaj**	**2.40**	**303**	Sn	**Sn**		**16 26 24.8**	**-0.2**
ASTR	**Astara**	**2.42**	**246**	Pn	**Pn**		**16 25 56.8**	**+1.0**
ASTR				Sn	**Sn**		**16 26 24.1**	**-1.1**
GLBA	**Clilabad**	**2.51**	**263**	Pn	**Pn**		**16 25 58.2**	**+1.3**
GLBA				Sn	**Sn**		**16 26 26.5**	**-0.8**
SIZA	**Siyzn**	**2.54**	**307**	Pn	**Pn**		**16 26 00.0**	**+2.5**
SIZA				Sn	**Sn**		**16 26 28.6**	**+0.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
YRD	**Yardimli**	**2.69**	**257**	Pn	**Pn**	**16 26 00.3**	**+0.7**
YRD				Sn	**Sn**	**16 26 30.4**	**-1.6**
LRK	**Lerik**	**2.71**	**251**	Pn	**Pn**	**16 26 00.5**	**+0.7**
LRK				Sn	**Sn**	**16 26 30.5**	**-1.7**
XNQ	**Khinaliq**	**3.08**	**302**	Pn	**Pn**	**16 26 06.2**	**+1.5**
XNQ				Sn	**Sn**	**16 26 40.3**	**-0.8**
BLQ	**Beylaqan**	**3.12**	**274**	Sn	**Sn**	**16 26 40.5**	**-1.3**
QBL	**Gabala**	**3.18**	**296**	Pn	**Pn**	**16 26 07.0**	**+1.1**
QBL				Sn	**Sn**	**16 26 41.7**	**-1.6**
QSAR	**Qusar**	**3.19**	**308**	Sn	**Sn**	**16 26 43.0**	**-0.5**
QRD	**Qoradiz**	**3.31**	**269**	Sn	**Sn**	**16 26 45.2**	**-1.1**
BRDA	**Brd**	**3.47**	**283**	Sn	**Sn**	**16 26 49.6**	**-0.4**
MNGR	**Mingechevir, A**	**3.66**	**290**	Sn	**Sn**	**16 26 53.9**	**-0.6**
SEKA	**Sheki**	**3.73**	**297**	Pn	**Pn**	**16 26 14.4**	**+1.2**
SEKA				Sn	**Sn**	**16 26 52.3**	**-4.1**
GANJ	**Ganja**	**4.18**	**286**	Sn	**Sn**	**16 27 04.4**	**-2.8**
ZKTA	**Zakatala**	**4.31**	**300**	Pn	**Pn**	**16 26 23.6**	**+2.7**
ZKTA				Sn	**Sn**	**16 27 09.9**	**-0.3**
ORD	**Ordubad**	**4.40**	**263**	Pn	**Pn**	**16 26 24.0**	**+1.8**
ORD				Sn	**Sn**	**16 27 11.9**	**-0.7**
GDB	**GEDABAY**	**4.62**	**286**	Pn	**Pn**	**16 26 27.2**	**+1.9**
GDB				Sn	**Sn**	**16 27 15.6**	**-2.4**
SBZ	**Shahbuz**	**4.68**	**270**	Pn	**Pn**	**16 26 29.3**	**+3.3**
SBZ				Sn	**Sn**	**16 27 18.7**	**-0.7**
QZX	**Qazax, Azerbai**	**4.98**	**289**	Sn	**Sn**	**16 27 24.9**	**-1.6**
AB31	**Akbulak array**	**11.35**	**29**	⇑P	**Pn**	**16 27 58.7**	**+2.6**
	1.4nm,0.9s,baz=212,slow=13,SNR=4.3						
AB31				⇓S	**Sn**	**16 29 58.5**	**-2.3**
	0.4nm,0.4s,baz=211,slow=25,SNR=3.9						
AKTO	**Aktyubinsk**	**11.75**	**21**	⇑P	**Pn**	**16 28 02.4**	**+1.0**
	1.4nm,1.0s						
AKTO				⇑S	**Sn**	**16 30 04.8**	**-5.8**
	1.5nm,0.8s						

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*RSNC **07** 16:45:23.7±0.0, 7°N±1°×7°3W±°, h151km±1km, M4.1, mB5.0, mb4.2, ML3.7, Mw(mB)4.2*
*IDC **07** 16:45:23.0±0.7, 6°.68N×72°.91W, h170km±7km, mb3.5/8, mbtmp3.9/10, Error ellipse: s-maj=16.2km s-min=8.5km az=126.0*
*FUNV **07** 16:45:23.2, 6°.76N×73°.13W, h169km, MW4.2, Presumed earthquake*
ISC 07 16:45:22.8±0.7, **6°.82N**±0°.03×**73°.11W**±0°.03, **h156**km±5km, **n65**, σ**1ˢ.48**/109, **mb3.8**/8, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.23**	**198**	P	**Pn**	**16 45 44.4**	**+0.2**
BARC				S	**Sn**	**16 45 59.6**	**-0.9**
BRJC	**Barrancabermej**	**0.65**	**284**	P	**Pn**	**16 45 46.3**	**+0.7**
BRJC				S	**Sn**	**16 46 03.6**	**+0.6**
PAMC	**Pamplona, Colo**	**0.66**	**38**	P	**Pn**	**16 45 47.5**	**+1.2**
PAMC				S	**Sn**	**16 46 04.4**	**+0.2**
RUSC	**La Rusia**	**0.92**	**178**	P	**Pn**	**16 45 48.1**	**0.0**
RUSC				S	**Sn**	**16 46 06.6**	**-0.8**
RUSC	**La Rusia**	**0.92**	**178**	eP	**Pn**	**16 45 48.0**	**0.0**
RUSC				eS	**Sn**	**16 46 07.0**	**-0.4**
CAPV	**Capacho**	**1.31**	**37**	eP	**Pn**	**16 45 52.4**	**+1.2**
CAPV				eS	**Sn**	**16 46 13.8**	**+0.9**
PTBC	**PUERTO BERRIO,**	**1.36**	**258**	P	**Pn**	**16 45 50.9**	**-0.6**
PTBC				S	**Sn**	**16 46 12.2**	**-1.2**
OCAC	**Ocana**	**1.43**	**352**	P	**Pn**	**16 45 52.7**	**+0.4**
OCAC				S	**Sn**	**16 46 15.1**	**+0.1**
SPBC	**San Pablo de B**	**1.50**	**220**	P	**Pn**	**16 45 53.1**	**+0.2**
SPBC				S	**Sn**	**16 46 14.5**	**-1.6**
NORC	**Norcasia**	**2.15**	**235**	P	**Pn**	**16 46 00.1**	**0.0**
NORC				S	**Sn**	**16 46 28.4**	**-0.3**
CHIC	**Chingaza**	**2.26**	**196**	P	**Pn**	**16 46 02.2**	**+0.4**
CHIC				S	**Sn**	**16 46 30.6**	**-1.2**
ROSC	**El Rosal**	**2.30**	**212**	P	**Pn**	**16 46 03.5**	**+1.3**
	129nm,0.3s,baz=79,slow=15,SNR=48						
ROSC				S	**Sn**	**16 46 34.6**	**+2.0**
	364nm,0.3s,baz=117,slow=18,SNR=12						
ROSC	**El Rosal**	**2.30**	**212**	P	**Pn**	**16 46 03.9**	**+1.7**
ROSC				S	**Sn**	**16 46 30.8**	**-1.8**
CVER	**Cruz Verde, Cu**	**2.47**	**203**	P	**Pn**	**16 46 05.8**	**+1.4**
CVER				S	**Sn**	**16 46 36.3**	**-0.1**
HELC	**Santa Helena**	**2.48**	**256**	P	**Pn**	**16 46 04.5**	**+0.1**
HELC				S	**Sn**	**16 46 35.4**	**-1.0**
HELC	**Santa Helena**	**2.48**	**256**	eP	**Pn**	**16 46 05.2**	**+0.8**
HELC				eS	**Sn**	**16 46 34.6**	**-1.8**
UREC	**San Jos de Ur**	**2.58**	**291**	P	**Pn**	**16 46 04.5**	**-0.7**
UREC				S	**Sn**	**16 46 35.9**	**-2.0**
SOCV	**Socops**	**2.67**	**57**	eP	**Pn**	**16 46 06.8**	**+0.5**
SOCV				eS	**Sn**	**16 46 39.1**	**-0.9**
GUY2C	**Guyana, Caldas**	**2.74**	**235**	P	**Pn**	**16 46 08.5**	**+0.8**
GUY2C				S	**Sn**	**16 46 41.2**	**-1.1**
VILC	**Villavicencio,**	**2.75**	**192**	P	**Pn**	**16 46 07.8**	**+0.4**
VILC				S	**Sn**	**16 46 41.1**	**-0.8**
PTGC	**Puerto Gaitan,**	**2.77**	**159**	P	**Pn**	**16 46 07.1**	**-0.5**
PTGC				S	**Sn**	**16 46 40.1**	**-2.3**
CBOC	**Ciudad Bolivar**	**3.04**	**252**	P	**Pn**	**16 46 12.0**	**+1.0**
CBOC				S	**Sn**	**16 46 46.4**	**-1.9**
DBBC	**Dabeiba**	**3.08**	**274**	P	**Pn**	**16 46 11.9**	**+0.4**
DBBC				S	**Sn**	**16 46 47.7**	**-1.6**
SDV	**Santo Domingo**	**3.20**	**50**	P	**Pn**	**16 46 14.1**	**+0.9**
	30nm,0.3s,baz=230,slow=10.0,SNR=49						
SDV				S	**Sn**	**16 46 52.6**	**+0.4**
	52nm,0.5s,baz=189,slow=22,SNR=4.2						
SDV	**Santo Domingo**	**3.20**	**50**	P	**Pn**	**16 46 14.0**	**+0.9**
SDV				S	**Sn**	**16 46 50.8**	**-1.4**
SDV	**Santo Domingo**	**3.20**	**50**	eP	**Pn**	**16 46 13.9**	**+0.7**
SDV				eS	**Sn**	**16 46 51.1**	**-1.1**
ARGC	**Ariguani, Magd**	**3.23**	**340**	P	**Pn**	**16 46 14.5**	**+1.2**
ARGC				S	**Sn**	**16 46 51.4**	**-1.1**
MCQV	**Machiques**	**3.26**	**10**	eP	**Pn**	**16 46 14.3**	**+0.6**
MCQV				eS	**Sn**	**16 46 52.0**	**-1.3**
PRAC	**Prado**	**3.55**	**210**	P	**Pn**	**16 46 17.7**	**+0.2**
PRAC				S	**Sn**	**16 46 59.8**	**-0.2**
ORTC	**Ortega, Tolima**	**3.58**	**216**	P	**Pn**	**16 46 18.4**	**+0.5**
ORTC				S	**Sn**	**16 47 00.5**	**-0.3**
APAC	**Apartado, Choc**	**3.61**	**288**	P	**Pn**	**16 46 18.4**	**+0.3**
APAC				S	**Sn**	**16 46 59.4**	**-1.7**
PLMC	**San Jos del P**	**3.68**	**239**	P	**Pn**	**16 46 19.9**	**+0.7**
PLMC				S	**Sn**	**16 47 01.4**	**-1.6**
SJCC	**San Jacinto, C**	**3.68**	**326**	P	**Pn**	**16 46 18.4**	**-0.8**
SJCC				S	**Sn**	**16 46 59.6**	**-3.4**
SJCC	**San Jacinto, C**	**3.68**	**326**	eP	**Pn**	**16 46 18.7**	**-0.5**
SJCC				eS	**Sn**	**16 47 00.5**	**-2.5**
URMC	**La Uribe, Meta**	**3.76**	**200**	P	**Pn**	**16 46 20.7**	**+0.4**
URMC				S	**Sn**	**16 47 03.2**	**-1.7**
LCBC	**Los crdobas,**	**3.81**	**302**	P	**Pn**	**16 46 22.1**	**+1.3**
LCBC				S	**Sn**	**16 47 05.9**	**0.0**
GUVC	**San Jose del G**	**4.27**	**173**	P	**Pn**	**16 46 26.3**	**-0.5**
GUVC				S	**Sn**	**16 47 13.2**	**-3.5**
YOTC	**Yotoco, Valle**	**4.28**	**229**	P	**Pn**	**16 46 26.9**	**-0.1**
YOTC				S	**Sn**	**16 47 16.7**	**-0.2**
SMRC	**Santa Marta, M**	**4.46**	**346**	P	**Pn**	**16 46 29.3**	**+0.1**
SMRC				S	**Sn**	**16 47 17.7**	**-3.4**
PIZC	**Pizarro, Choco**	**4.61**	**247**	P	**Pn**	**16 46 32.7**	**+1.5**
PIZC				S	**Sn**	**16 47 25.1**	**+0.6**
PTAC	**Punta Ardita,**	**4.67**	**274**	P	**Pn**	**16 46 32.1**	**0.0**
PTAC				S	**Sn**	**16 47 25.0**	**-1.1**
MACC	**Macarena, Meta**	**4.70**	**189**	P	**Pn**	**16 46 30.7**	**-1.7**
MACC				S	**Sn**	**16 47 22.0**	**-4.7**
URIC	**Uribia, Colomb**	**4.98**	**13**	P	**Pn**	**16 46 34.8**	**-1.3**
URIC				S	**Sn**	**16 47 30.3**	**-3.0**
URIC	**Uribia, Colomb**	**4.98**	**13**	eP	**Pn**	**16 46 34.8**	**-1.3**
TEPV	**Terepaima**	**4.98**	**51**	eP	**Pn**	**16 46 35.9**	**-0.3**
JAMC	**Jamundi, Valle**	**5.04**	**225**	P	**Pn**	**16 46 37.4**	**+0.3**
JAMC				S	**Sn**	**16 47 31.7**	**-3.3**
GARC	**Garzon, Huila**	**5.17**	**207**	P	**Pn**	**16 46 38.1**	**-0.8**
MAPV	**Macapo**	**5.49**	**57**	eP	**Pn**	**16 46 42.3**	**-0.6**
MAPV				eS	**Sn**	**16 47 40.7**	**-4.9**
POPC	**Popayan, Colom**	**5.54**	**220**	P	**Pn**	**16 46 44.0**	**+0.3**
	14nm,0.6s						
POPC				S	**Sn**	**16 47 46.2**	**-0.7**
	14nm,0.6s						
FLOC	**Florencia**	**5.78**	**206**	P	**Pn**	**16 46 46.1**	**-0.7**
	33nm,0.9s						
BENV	**Beln**	**6.29**	**60**	eP	**Pn**	**16 46 52.7**	**-0.7**
BBAC	**Balboa, Cauca**	**6.30**	**221**	P	**Pn**	**16 46 53.7**	**-0.1**
GR1C	**Gorgona, Isla**	**6.30**	**233**	P	**Pn**	**16 46 53.2**	**-0.4**
TURV	**Turiamo**	**6.34**	**55**	eP	**Pn**	**16 46 53.3**	**-0.8**
CACV	**CAICARA DEL OR**	**6.56**	**83**	eP	Pn	16 47 02.0	+5.0
LPAZ	**La Paz**	**23.48**	**168**	P	**P**	**16 50 16.9**	**-2.3**
	2.1nm,0.8s,baz=360,slow=11,SNR=6.1						
	2.1nm,0.8s						
BDFB	**Brasilia**	**33.40**	**132**	P	P	16 51 42.9	-4.0
	1.7nm,0.4s,baz=277,slow=8.1,SNR=3.3						
	1.7nm,0.4s						
TXAR	**Lajitas Array**	**36.47**	**312**	P	**P**	**16 52 13.8**	**+0.7**
	1.3nm,0.6s,baz=127,slow=9.3,SNR=17						
	1.3nm,0.6s						
ULM	**Lac du Bonnet**	**47.29**	**340**	P	**P**	**16 53 40.1**	**-0.3**
	2.9nm,0.5s,baz=133,slow=8.3,SNR=6.7						
	2.9nm,0.5s						
PDAR	**Pinedale Array**	**48.09**	**324**	P	**P**	**16 53 47.8**	**+0.8**
	0.8nm,0.6s,baz=125,slow=9.0,SNR=8.9						
	0.8nm,0.6s						
NVAR	**Mina Array Bea**	**51.49**	**315**	P	**P**	**16 54 13.6**	**+0.8**
	0.9nm,0.8s,baz=149,slow=6.6,SNR=3.9						
	0.9nm,0.8s						
YKA	**Yellowknife Ar**	**63.27**	**340**	P	**P**	**16 55 35.0**	**+0.4**
	1.1nm,0.6s,baz=134,slow=6.0,SNR=29						
	1.1nm,0.6s						
ILAR	**Eielson Array**	**76.97**	**335**	P	**P**	**16 56 56.5**	**-1.5**
	0.2nm,0.6s,baz=102,slow=6.2,SNR=4.6						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**149.12**	**234**	PKPbc	**PKPdf**	**17 04 52.5**	**+3.3**
	0.6nm,0.5s,baz=111,slow=3.7,SNR=9.3						
WRA	**Warramunga Arr**	**150.34**	**241**	PKPbc	**PKPdf**	**17 04 55.0**	**+3.7**
	0.5nm,0.4s,baz=105,slow=2.8,SNR=14						

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*IDC **07** 16:58:20.6±2.2, 22°.59S×67°.65W, h141km±22km, mb3.8/2, mbtmp4.1/5, Error ellipse: s-maj=34.6km s-min=17.6km az=100.0*
*SJA **07** 16:58:22.0±1.4, 22°.58S×67°.78W, h166km, ML3.5, MW3.5*
*SCB **07** 16:58:22.9±1.4, 22°.58S×67°.77W, h146km±18km, ML3.4/4, Error ellipse: s-maj=5.1km s-min=4.0km az=1.0*
*GUC **07** 16:58:23.4±0.9, 22°.54S×67°.91W, h175km±9km, ML3.6*
ISC 07 16:58:22.5±0.8, **22°.54S**±0°.04×**67°.81W**±0°.03, **h169**km±7km, **n64**, σ**1ˢ.04**/96, **7C**, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**0.53**	**220**	⇑iP	**Pn**	**16 58 46.5**	**0.0**
AF01	**San Pedro de A**	**0.53**	**220**	eP	**Pn**	**16 58 46.9**	**+0.4**
AF01				IAML		16 59 26.3	
	comp=Z,245nm,0.5s						
PB09	**IPOC Station P**	**1.52**	**299**	eP	**Pn**	**16 58 54.9**	**+0.9**
PB09				i S	**Sn**	**16 59 18.3**	**+0.1**
PB09				IAML		16 59 19.8	
	comp=N,352nm,0.8s						
PB09	**IPOC Station P**	**1.52**	**299**	eP	**Pn**	**16 58 55.1**	**+1.2**
PB09				eS	**Sn**	**16 59 18.9**	**+0.8**
PB09				IAML		16 59 22.4	
	comp=Z,166nm,0.2s						
PB09	**IPOC Station P**	**1.52**	**299**	P	**Pn**	**16 58 54.5**	**+0.5**
PB06	**IPOC Station P**	**1.64**	**264**	⇑iP	**Pn**	**16 58 55.4**	**+0.3**
PB06				i S	**Sn**	**16 59 19.6**	**-0.7**
PB06				IAML		16 59 23.1	
	comp=E,326nm,0.5s						
PB06	**IPOC Station P**	**1.64**	**264**	eP	**Pn**	**16 58 55.8**	**+0.7**
PB06				eS	**Sn**	**16 59 21.4**	**+1.2**
PB06				IAML		16 59 22.9	
	comp=Z,350nm,0.3s						
PB06	**IPOC Station P**	**1.64**	**264**	P	**Pn**	**16 58 55.3**	**+0.2**
PB03	**IPOC Station P**	**1.87**	**285**	⇑iP	**Pn**	**16 58 57.9**	**+0.4**
PB03				i S	**Sn**	**16 59 23.8**	**-0.8**
PB03				IAML		16 59 25.1	
	comp=N,564nm,0.2s						
PB03	**IPOC Station P**	**1.87**	**285**	eP	**Pn**	**16 58 57.9**	**+0.4**
PB03				eS	**Sn**	**16 59 24.5**	**-0.1**
PB03				IAML		16 59 25.1	
	comp=Z,360nm,0.5s						
PB07	**IPOC Station P**	**2.09**	**292**	eP	**Pn**	**16 59 00.4**	**+0.4**
PB07				eS	**Sn**	**16 59 28.7**	**-0.3**
PB07				IAML		16 59 34.0	
	comp=Z,212nm,0.5s						
YJA	**Yavi**	**2.15**	**81**	eP	**Pn**	**16 59 01.2**	**+0.2**
YJA				eS	**Sn**	**16 59 29.4**	**-1.2**
YJA	**Yavi**	**2.15**	**81**	P	**Pn**	**16 59 00.5**	**-0.5**
PB01	**IPOC Station P**	**2.16**	**313**	⇑eP	**Pn**	**16 59 01.0**	**+0.2**
PB01				i S	**Sn**	**16 59 30.2**	**0.0**
PB01				IAML		16 59 33.2	
	comp=N,145nm,0.2s						
PB01	**IPOC Station P**	**2.16**	**313**	eP	**Pn**	**16 59 00.6**	**-0.1**
PB01				eS	**Sn**	**16 59 30.9**	**+0.7**
PB01				IAML		16 59 31.5	
	comp=Z,111nm,0.2s						
PB01	**IPOC Station P**	**2.16**	**313**	P	**Pn**	**16 59 01.1**	**+0.4**
PB01				S	**Sn**	**16 59 30.7**	**+0.4**
PB01				IAML		16 59 35.6	
	comp=Z,132nm,0.2s						
PB05	**IPOC Station P**	**2.23**	**262**	⇑iP	**Pn**	**16 59 01.9**	**+0.3**
PB05				i S	**Sn**	**16 59 30.2**	**-1.6**
PB05				IAML		16 59 32.6	
	comp=E,338nm,0.3s						
PB05	**IPOC Station P**	**2.23**	**262**	eP	**Pn**	**16 59 01.9**	**+0.3**
PB05				eS	**Sn**	**16 59 31.3**	**-0.5**
PB05				IAML		16 59 32.6	
	comp=Z,220nm,0.4s						
PB02	**IPOC Station P**	**2.29**	**302**	eP	**Pn**	**16 59 02.4**	**+0.2**
PB02				i S	**Sn**	**16 59 31.5**	**-1.4**
PB02				IAML		16 59 37.3	
	comp=E,276nm,0.3s						
PB02	**IPOC Station P**	**2.29**	**302**	eP	**Pn**	**16 59 02.1**	**-0.1**
PB02				eS	**Sn**	**16 59 32.1**	**-0.9**
PB02				IAML		16 59 37.8	
	comp=Z,271nm,0.3s						
PB02	**IPOC Station P**	**2.29**	**302**	P	**Pn**	**16 59 02.6**	**+0.4**
PB02				S	**Sn**	**16 59 32.0**	**-0.9**
PB02				IAML		16 59 37.4	
	comp=Z,220nm,0.3s						
HJA	**Humahuaca**	**2.31**	**107**	eP	**Pn**	**16 59 02.8**	**+0.1**
HJA				eS	**Sn**	**16 59 34.2**	**+0.4**
PATCX	**Punta Patache**	**2.77**	**308**	eP	**Pn**	**16 59 07.8**	**-0.1**
PATCX				i S	**Sn**	**16 59 41.4**	**-1.8**
PATCX	**Punta Patache**	**2.77**	**308**	eP	**Pn**	**16 59 08.1**	**+0.2**
PATCX				eS	**Sn**	**16 59 44.9**	**+1.6**
HMBC	**Humberstone**	**2.97**	**319**	eP	**Pn**	**16 59 09.9**	**-0.6**
HMBC				i S	**Sn**	**16 59 45.1**	**-2.6**
HMBC				IAML		16 59 51.2	
	comp=E,189nm,0.2s						
HMBC	**Humberstone**	**2.97**	**319**	eP	**Pn**	**16 59 10.2**	**-0.3**
HMBC				eS	**Sn**	**16 59 47.4**	**-0.3**
HMBC				IAML		16 59 51.6	
	comp=Z,142nm,0.4s						
SLA	**San Lorenzo**	**3.03**	**136**	eP	**Pn**	**16 59 11.6**	**+0.5**
AOVT	**TarijaAcel**	**3.05**	**71**	P	**Pn**	**16 59 10.6**	**-0.8**
TA02	**Huaiquique**	**3.13**	**316**	eP	**Pn**	**16 59 09.5**	**-2.8**
TA02	**Huaiquique**	**3.13**	**316**	eS	**Sn**	**16 59 50.6**	**-0.4**
TA02				IAML		16 59 57.1	
	comp=Z,123nm,0.1s						
GO01	**Chusmiza**	**3.14**	**335**	eP	**Pn**	**16 59 13.5**	**+0.6**
GO01				eS	**Sn**	**16 59 52.2**	**+0.2**
GO01				IAML		16 59 54.8	
	comp=Z,60nm,0.2s						
GO01	**Chusmiza**	**3.14**	**335**	P	**Pn**	**16 59 13.6**	**+0.7**
PB14	**IPOC Station P**	**3.16**	**228**	⇑iP	**Pn**	**16 59 12.7**	**-0.2**
PB14				IAML		16 59 52.0	
	comp=E,105nm,0.2s						
PB14	**IPOC Station P**	**3.16**	**228**	eP	**Pn**	**16 59 12.7**	**-0.2**
PB14				eS	**Sn**	**16 59 51.0**	**-1.1**
PB14				IAML		16 59 53.0	
	comp=Z,211nm,0.1s						
PB14	**IPOC Station P**	**3.16**	**228**	P	**Pn**	**16 59 13.0**	**+0.1**
PB11	**IPOC Station P**	**3.26**	**328**	⇑eP	**Pn**	**16 59 13.6**	**-0.5**
PB11				i S	**Sn**	**16 59 52.5**	**-1.7**
PB11	**IPOC Station P**	**3.26**	**328**	eP	**Pn**	**16 59 13.6**	**-0.5**
PB11				eS	**Sn**	**16 59 53.8**	**-0.4**
PB11				IAML		16 59 56.8	
	comp=Z,84nm,0.4s						
PB11	**IPOC Station P**	**3.26**	**328**	P	**Pn**	**16 59 14.1**	**0.0**
PB11				S	**Sn**	**16 59 53.0**	**-1.2**
PB11				IAML		16 59 54.2	
	comp=Z,132nm,0.5s						
FSA	**Cafayete**	**3.92**	**155**	eP	Pn	16 59 08.8	-14
SOEO	**Opoqueri**	**3.96**	**359**	P	**Pn**	**16 59 24.9**	**+1.6**
AC01	**Pan de Azucar**	**4.40**	**215**	eP	**Pn**	**16 59 27.4**	**-1.0**
AC01				eS	**Sn**	**17 00 16.8**	**-3.3**
AC01				IAML		17 00 19.6	
	comp=Z,66nm,0.2s						
AC02	**Maricunga**	**4.44**	**195**	eP	**Pn**	**16 59 29.6**	**+0.2**
AC02				eS	**Sn**	**17 00 22.6**	**+0.9**
AC02				IAML		17 00 30.3	
	comp=Z,46nm,0.2s						
PB16	**IPOC Station P**	**4.48**	**339**	eP	**Pn**	**16 59 30.4**	**+0.4**
PB16				eS	**Sn**	**17 00 22.8**	**+0.1**
PB16				IAML		17 00 28.5	
	comp=Z,25nm,0.5s						
PB16	**IPOC Station P**	**4.48**	**339**	P	**Pn**	**16 59 30.7**	**+0.6**
PB16				S	**Sn**	**17 00 21.0**	**-1.8**
PB12	**IPOC Station P**	**4.57**	**328**	eP	**Pn**	**16 59 29.6**	**-1.1**
PB12				eS	**Sn**	**17 00 22.8**	**-1.2**
PB12				IAML		17 00 27.6	
	comp=Z,31nm,0.3s						
SOET	**ToroToro**	**4.79**	**23**	P	**Pn**	**16 59 34.3**	**+0.5**
SOET				S	**Sn**	**17 00 28.3**	**-1.3**
SOET				IAML		17 00 30.2	
	comp=Z,17nm,0.4s						
AOEA	**Aiquile**	**4.97**	**30**	P	**Pn**	**16 59 35.9**	**-0.2**
AOEA	**Aiquile**	**4.97**	**30**	P	**Pn**	**16 59 36.2**	**+0.1**
BBOJ	**La Paz, Jacaqu**	**5.55**	**356**	P	**Pn**	**16 59 45.0**	**+1.0**
SOEJ	**Jacaque**	**5.55**	**356**	P	**Pn**	**16 59 45.0**	**+1.0**
BBOE	**La Paz, Chanca**	**5.70**	**358**	P	**Pn**	**16 59 47.2**	**+1.1**
BBOD	**La Paz, Gloria**	**5.92**	**353**	P	**Pn**	**16 59 49.8**	**+0.9**
LPAZ	**La Paz**	**6.23**	**357**	P	**Pn**	**16 59 53.3**	**+0.2**
	comp=Z,11nm,0.3s,baz=151,slow=6.6,SNR=55						
LPAZ				S	**Sn**	**17 01 02.3**	**-1.8**
	comp=Z,2.2nm,0.6s,baz=348,slow=21,SNR=1.5						
LPAZ	**La Paz**	**6.23**	**357**	P	**Pn**	**16 59 53.6**	**+0.5**
BBOB	**La Paz, Bander**	**6.38**	**357**	P	**Pn**	**16 59 55.5**	**+0.6**
CFA	**Coronel Fontan**	**9.04**	**182**	P	**Pn**	**17 00 25.4**	**-4.1**
	comp=Z,0.9nm,0.3s,baz=354,slow=11,SNR=4.6						
CFA				S	Sn	17 01 59.8	-10
	comp=Z,1.2nm,0.4s,baz=135,slow=20,SNR=6.5						
PTLB	**Pontes e Lacer**	**10.81**	**51**	P	**Pn**	**17 00 52.6**	**-0.4**
BDFB	**Brasilia**	**19.91**	**73**	P	**P**	**17 02 40.3**	**-1.2**
	comp=Z,2.7nm,0.6s,baz=236,slow=15,SNR=4.2						
QSPA	**South Pole Qui**	**67.65**	**180**	P	**P**	**17 09 03.1**	**+2.0**
	comp=Z,1.0nm,0.5s,baz=178,slow=0.8,SNR=10						
	comp=Z,1.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**76.75**	**70**	P	**P**	**17 09 56.0**	**+0.3**
	comp=Z,1.7nm,0.5s,baz=250,slow=6.1,SNR=14						
	comp=Z,1.7nm,0.5s						
ASAR	**Alice Springs**	**129.45**	**206**	PKP	**PKPdf**	**17 17 11.9**	**0.0**
	comp=Z,0.3nm,0.8s,baz=130,slow=1.5,SNR=2.8						
NRIK	**Noril'sk**	**130.89**	**11**	PKP	**PKPdf**	**17 17 13.3**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=270,slow=1.0,SNR=4.6						
WRA	**Warramunga Arr**	**132.56**	**209**	PKP	**PKPdf**	**17 17 17.9**	**+0.1**
	comp=Z,0.1nm,0.6s,baz=143,slow=2.0,SNR=1.2						
MKAR	**Makanchi Array**	**145.85**	**38**	PKPbc	**PKPab**	**17 17 43.3**	**+0.6**
	comp=Z,0.4nm,0.9s,baz=259,slow=1.5,SNR=2.5						

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*OSPL **07** 16:58:52.1±1.5, 18°.67N×71°.71W, h0km±226km, ML1.5, Presumed earthquake*
*SDD **07** 16:58:53.6±1.4, 18°.68N×71°.59W, h23km±10km, MD2.7, ML1.9, MW2.5, Presumed earthquake*
ISC 07 16:58:52.7±1.4, **18°.68N**±0°.04×**71°.65W**±0°.06, **h5**km±13km, **n11**, σ**0ˢ.88**/19, **5C-3D**, **Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LONE3	**El Aguacate, B**	**0.20**	**111**	i P	**Pg**	**16 58 56.3**	**-0.3**
LONE3				eS	**Sg**	**16 58 59.1**	**-0.2**
LONE3				IAML		16 58 59.6	
	comp=Z,144nm,0.4s						
JIDR	**Jimani**	**0.26**	**225**	⇑ePg	**Pb**	**16 58 60.0**	**0.0**
JIDR				⇑eSg	**Sb**	**16 59 06.1**	**+1.3**
JIDR				IAML		16 59 06.6	
	comp=N,244nm,0.1s						
NEDR	**Neiba UASD**	**0.29**	**131**	⇑eSg	**Sg**	**16 59 03.4**	**+1.1**
NEDR				IAML		16 59 06.9	
	comp=N,81nm,0.4s						
LODU1	**El Espartillar**	**0.36**	**152**	i P	**Pg**	**16 58 60.0**	**+0.2**
LODU1				eS	**Sg**	**16 59 04.8**	**+0.2**
LODU1				IAML		16 59 05.9	
	comp=Z,55nm,0.4s						
SDDR	**Presa de Saban**	**0.46**	**49**	ePg	**Pg**	**16 59 01.2**	**-0.4**
SDDR				eSg	**Sg**	**16 59 07.8**	**+0.1**
SDDR				IAML		16 59 46.0	
	comp=N,26nm,3.6s						
SDDR	**Presa de Saban**	**0.46**	**49**	i P	**Pg**	**16 59 01.3**	**-0.4**
SDDR				eS	**Sg**	**16 59 07.7**	**0.0**
SDDR				IAML		16 59 08.5	
	comp=Z,19nm,0.5s						
REDR	**Restauracion**	**0.55**	**27**	⇓ePg	**Pb**	**16 59 04.9**	**+0.1**
REDR				⇓eSg	**Sb**	**16 59 14.0**	**+1.0**
REDR				IAML		16 59 14.3	
	comp=N,101nm,0.1s						
PODR	**Polo**	**0.62**	**145**	⇓ePg	**Pg**	**16 59 04.2**	**-0.5**
PODR				⇑eSg	**Sg**	**16 59 13.3**	**+0.6**
PODR				IAML		16 59 15.8	
	comp=N,78nm,0.4s						
PODR	**Polo**	**0.62**	**145**	i P	**Pg**	**16 59 04.2**	**-0.5**
PODR				eS	**Sg**	**16 59 13.3**	**+0.6**
LOBH	**Bahia de las A**	**0.81**	**179**	eS	**Sg**	**16 59 16.6**	**-2.2**
HATOM	**Hato Mayor del**	**2.16**	**87**	⇑eSg	**Sn**	**16 59 55.5**	**-1.0**
HATOM				IAML		17 00 07.6	
	comp=N,18nm,3.2s						

IDC 07 17:00:11.7±2.5, **6°.76S**×**127°.17E**, **h0**km, **mb3.1**/1, **mbtmp3.3**/3, **ML3.3**/2, **Error ellipse: s-maj=323.3km s-min=32.6km az=64.0**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.84**	**153**	Pn	Pn	17 03 43.6	+0.6
	0.1nm,0.3s,baz=332,slow=12,SNR=5.7						
WRA				Sn	Sn	17 06 18.4	-10
	0.1nm,0.3s,baz=330,slow=23,SNR=1.1						
	0.1nm,0.5s						
ASAR	**Alice Springs**	**18.02**	**160**	P	Pn	17 04 23.4	-0.3
	0.5nm,0.3s,baz=337,slow=8.8,SNR=42						
ASAR				S	Sn	17 07 42.2	-3.2
	0.2nm,0.7s,baz=351,slow=28,SNR=1.8						
	1.4nm,0.5s						
MKAR	**Makanchi Array**	**66.51**	**328**	P	P	17 11 03.4	0.0
	0.1nm,0.5s,baz=120,slow=5.7,SNR=1.9						
	0.1nm,0.5s						
TROLL	**Troll, Antarti**	**93.69**	**195**	P	P	17 13 26.7	-3.4

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*SOME **07** 17:03:43.9, 42°.85N×79°.12E, h15km*
*KRNET **07** 17:03:43.8±0.1, 42°.76N×79°.18E, h19km, mb2.6*
*NNC **07** 17:03:44.1±0.6, 42°.91N×79°.16E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=4.4km s-min=1.7km az=157.0*
ISC 07 17:03:44.1±0.9, **42°.85N**±0°.03×**79°.11E**±0°.04, **h10**km, **n23**, σ**1ˢ.39**/46, **15C-7D**, **Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UZB	**Uzynbulak**	**0.30**	**347**	P	**Pg**	**17 03 49.7**	**-0.5**
	33nm,0.1s						
UZB				S	**Sg**	**17 03 53.9**	**-0.5**
	47nm,0.2s						
UZB	**Uzynbulak**	**0.30**	**347**	eP	**Pg**	**17 03 49.7**	**-0.5**
	33nm,0.1s						
UZB				eS	**Sg**	**17 03 53.9**	**-0.5**
	47nm,0.2s						
SHLS	**Shalkode**	**0.40**	**40**	P	**Pn**	**17 03 55.9**	**-0.2**
	6.5nm,0.1s						
SHLS				S	**Sb**	**17 04 04.4**	**+4.8**
	40nm,0.3s						
SHLS	**Shalkode**	**0.40**	**40**	eP	**Pn**	**17 03 55.9**	**-0.2**
	6.5nm,0.1s						
SHLS				eS	**Sb**	**17 04 04.4**	**+4.8**
	40nm,0.3s						
PDGK	**Podgornoye**	**0.55**	**30**	⇑P	**Pg**	**17 03 53.4**	**-1.5**
	1.7nm,0.4s						
PDGK				⇑S	**Sg**	**17 04 00.1**	**-2.0**
	21nm,0.7s						
SATY	**Saty**	**0.56**	**292**	P	**Pg**	**17 03 55.0**	**0.0**
	3.1nm,0.1s						
SATY				S	**Sg**	**17 04 02.7**	**+0.3**
	14nm,0.1s						
PRZ	**Przheval'sk**	**0.64**	**235**	⇑iP	**Pg**	**17 03 56.0**	**-0.6**
PRZ				⇑iS	**Sg**	**17 04 04.9**	**-0.1**
KPKS	**Kokpek**	**0.69**	**333**	P	**Pg**	**17 03 56.5**	**-0.9**
	0.9nm,0.1s						
KPKS				S	**Sg**	**17 04 05.5**	**-1.0**
	9.7nm,0.1s						
KPKS	**Kokpek**	**0.69**	**333**	eP	**Pg**	**17 03 56.5**	**-0.9**
	0.9nm,0.1s						
KPKS				eS	**Sg**	**17 04 05.5**	**-1.0**
	9.7nm,0.1s						
ANVS	**Anan'yevo**	**1.07**	**267**	⇑iP	**Pg**	**17 04 04.4**	**-0.2**
ANVS				⇑iS	**Sb**	**17 04 19.6**	**+0.8**
TARG	**Taragay, Kyrgy**	**1.48**	**221**	⇓iP	**Pn**	**17 04 10.6**	**-0.6**
TARG				⇓iS	**Sn**	**17 04 29.9**	**-1.0**
KNOS	**Konyrlen**	**1.51**	**2**	P	**Pb**	**17 04 11.7**	**-0.6**
	3.3nm,0.2s						
KNOS				S	**Sb**	**17 04 31.5**	**0.0**
	8.4nm,0.2s						

DJR	**Jarkent**	**1.56**	**18**	P	**Pb**	**17 04 12.5**	**-0.7**
	3.6nm,0.2s						
DJR				S	**Sb**	**17 04 32.7**	**-0.2**
	3.8nm,0.3s						
DJR	**Jarkent**	**1.56**	**18**	*e*P	**Pb**	**17 04 12.5**	**-0.7**
	3.6nm,0.2s						
DJR				*e*S	**Sb**	**17 04 32.7**	**-0.2**
	3.8nm,0.3s						
KDJ	**Kajisay**	**1.60**	**244**	⇑*i*P	**Pb**	**17 04 13.0**	**-0.9**
KDJ				⇑*i*S	**Sb**	**17 04 34.4**	**+0.2**
KNDC	**Almaty**	**1.62**	**284**	⇑P	**Pn**	**17 04 13.0**	**+0.3**
	13nm,0.5s						
KNDC				⇓S	**Sg**	**17 04 36.2**	**+0.1**
	26nm,0.6s						
ARXS	**Arharly**	**1.65**	**326**	P	**Pb**	**17 04 14.3**	**-0.4**
	4.5nm,0.2s						
ARXS				S	**Sb**	**17 04 35.7**	**+0.1**
	4.0nm,0.3s						
ARXS	**Arharly**	**1.65**	**326**	*e*P	**Pb**	**17 04 14.3**	**-0.4**
	4.5nm,0.2s						
ARXS				*e*S	**Sb**	**17 04 35.7**	**+0.1**
	4.0nm,0.3s						
ULHL	**Ulahol**	**2.21**	**255**	⇑*i*P	**Pn**	**17 04 22.3**	**+1.3**
ULHL				⇑*i*S	**Sb**	**17 04 50.7**	**-1.0**
BOOM	**Boomskoye usch**	**2.37**	**262**	⇓*i*P	**Pn**	**17 04 24.6**	**+1.4**
BOOM				⇓*i*S	**Sb**	**17 04 54.7**	**-1.6**
TKM2	**Tokmak 2**	**2.58**	**273**	⇑*i*P	**Pn**	**17 04 27.9**	**+1.7**
TKM2				⇑*i*S	**Sn**	**17 05 00.3**	**+2.5**
NRN	**Naryn**	**2.71**	**240**	⇓*i*P	**Pn**	**17 04 29.3**	**+1.2**
NRN				⇓*i*S	**Sn**	**17 05 02.5**	**+1.4**
JNKS	**Jany-Kuch**	**3.16**	**237**	⇑*i*P	**Pn**	**17 04 34.8**	**+0.7**
JNKS				⇑*i*S	**Sn**	**17 05 12.0**	**0.0**

IDC 07 17:17:47.4±1.9**,6°.15S×127°.00E,h0**km**,mb3.0**/1**,**
mbtmp3.6/4**,ML3.5**/3**,Error ellipse: s-maj=45.5km**
s-min=28.0km az=87.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.76**	**39**	Pn	Pn	17 19 28.6	+0.6
	0.6nm,0.3s,baz=227,slow=22,SNR=5.4						
SIJI				Sn	Sn	17 20 45.6	-0.2
	0.4nm,0.3s,baz=301,slow=20,SNR=1.4						
	3.9nm,0.6s						
WRA	**Warramunga Arr**	**15.45**	**153**	Pn	Pn	17 21 27.1	+0.2
	0.1nm,0.3s,baz=334,slow=13,SNR=13						
WRA				Sn	Sn	17 24 10.4	-8.6
	baz=339,slow=22,SNR=2.1						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**18.64**	**160**	P	P	17 22 06.3	-0.6
	0.5nm,0.3s,baz=344,slow=11,SNR=80						
	2.1nm,0.4s						
MKAR	**Makanchi Array**	**65.91**	**328**	P	P	17 28 35.3	+0.1
	0.1nm,0.5s,baz=130,slow=7.3,SNR=1.6						
	0.1nm,0.5s						

IDC 07 17:28:44.0±4.0**,4°.79S×151°.03E,h114**km±27km**,mb3.3**/3**,**
mbtmp3.7/4**,Error ellipse: s-maj=117.6km**
s-min=26.8km az=124.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.98**	**220**	P	Pn	17 30 10.8	+0.6
	4.3nm,0.4s,baz=25,slow=5.3,SNR=5.6						
PMG				S	Sn	17 31 17.6	+0.1
	17nm,0.3s,baz=197,slow=14,SNR=7.5						
WRA	**Warramunga Arr**	**22.16**	**226**	P	P	17 33 30.9	0.0
	1.6nm,0.5s,baz=50,slow=10.0,SNR=27						
WRA				ScP	ScP	17 40 50.5	-0.4
	0.3nm,0.6s,baz=56,slow=2.7,SNR=2.9						
	1.6nm,0.5s						
ASAR	**Alice Springs**	**25.00**	**220**	P	P	17 33 57.7	+0.3
	0.7nm,0.4s,baz=54,slow=9.1,SNR=40						
	0.7nm,0.4s						
ILAR	**Eielson Array**	**82.82**	**22**	P	P	17 40 55.2	-0.1
	0.3nm,0.8s,baz=237,slow=6.3,SNR=2.0						
	0.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**148.62**	**287**	PKPbc	PKPbc	17 48 17.9	-1.0
	0.1nm,0.3s,baz=88,slow=3.1,SNR=1.3						

*SDD **07** 17:34:12.3±2.0,18°.94N×70°.88W,h84km±18km,MD3.2,*
ML2.1,MW3.4,Presumed earthquake
*OSPL **07** 17:34:14.3±2.1,19°.21N×71°.93W,h5km±48km,ML1.2,*
Presumed earthquake
ISC 07 17:34:13.2±2.0**,18°.97N**±0°.05×**70°.79W**±0°.05**,h67**km±19km**,**
n11,σ**1°.54**/19**,10C-1D,Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDDR	**Presa de Saban**	**0.47**	**272**	*e*Pg	**Pn**	**17 34 24.4**	**-1.2**
SDDR				⇑*e*Sg	**Sn**	**17 34 34.4**	**-0.2**
SDDR				IAML		17 34 44.2	
	comp=N,16nm,3.0s						
SDDR	**Presa de Saban**	**0.47**	**272**	⇓*i*P	**Pn**	**17 34 24.4**	**-1.2**
SDDR				*e*S	**Sn**	**17 34 34.2**	**-0.4**
SDDR				IAML		17 34 35.7	
	comp=Z,8.4nm,0.1s						
REDR	**Restauracion**	**0.60**	**289**	⇑*e*Pg	**Pn**	**17 34 27.9**	**+1.1**
REDR				⇑*e*Sg	**Sn**	**17 34 40.9**	**+4.0**
REDR				IAML		17 34 41.5	
	comp=N,38nm,0.2s						
LONE3	**El Aguacate, B**	**0.72**	**240**	*i*P	**Pn**	**17 34 27.2**	**-1.2**
LONE3				*e*S	**Sn**	**17 34 38.0**	**-1.5**
LONE3				*e*S		17 34 39.0	
LONE3				IAML		17 34 41.2	
	comp=Z,16nm,4.6s						
DR08	**Loma La Naviza**	**0.73**	**90**	⇑*e*Pg	**Pn**	**17 34 27.5**	**-0.9**
DR08				⇑*e*Sg	**Sn**	**17 34 40.5**	**+1.0**
DR08				IAML		17 34 41.8	
	comp=N,289nm,0.1s						
PODR	**Polo**	**0.92**	**210**	⇑*e*Pg	**Pn**	**17 34 30.4**	**-0.3**
PODR	**Polo**	**0.92**	**210**	*i*P	**Pn**	**17 34 30.5**	**-0.3**
PODR				*e*S	**Sn**	**17 34 46.3**	**+2.5**
LUDR	**Luperon**	**0.94**	**351**	⇑*e*Sg	**Sn**	**17 34 43.3**	**-0.5**
LOPP1	**Punta Rusia, P**	**0.96**	**337**	*i*P	**Pn**	**17 34 31.8**	**+0.7**
LOPP1				*e*S	**Sn**	**17 34 44.0**	**-0.4**
MCDR	**Montecristi**	**1.23**	**319**	⇑*e*Sg	**Sn**	**17 34 49.3**	**-1.2**
MCDR				IAML		17 34 59.6	
	comp=N,44nm,2.2s						
HATOM	**Hato Mayor del**	**1.35**	**97**	⇑*e*Pg	**Pn**	**17 34 35.6**	**-0.6**
HATOM				⇑*e*Sg	**Sn**	**17 34 54.2**	**+0.9**
HATOM				IAML		17 35 11.0	
	comp=N,14nm,1.5s						

*SDD **07** 17:44:34.9±2.0,17°.78N×66°.88W,h13km±27km,MD3.8,*
ML3.7,MW3.8,Presumed earthquake
*IDC **07** 17:44:35.5±1.4,17°.86N×66°.88W,h0km,mb3.5/3,*
mbtmp3.6/4,ML2.7/1,MS2.5/1,Error ellipse: s-maj=24.5km
s-min=10.3km az=168.0
*OSPL **07** 17:44:35.9±0.9,17°.78N×66°.88W,h2km±14km,ML2.9,*
Presumed earthquake
*NEIC **07** 17:44:35.4±0.8,17°.84N±0°.04×66°.88W±0°.01,h12km±4km,*
ML3.7/38,Md3.5/5(RSPR),Error ellipse: s-maj=5.5km
s-min=1.4km az=183.0
ISC 07 17:44:35.1±1.1**,17°.83N**±0°.05×**66°.87W**±0°.02**,h9**km±7km**,**
n50,σ**0°.91**/68**,mb3.5**/3**,13C-1D,Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.15**	**357**		**Pg**	**17 44 38.6**	**+0.3**
GBPR					**Sg**	**17 44 40.2**	**-0.3**
MLPR	**Magueyes Islan**	**0.22**	**311**		**Pg**	**17 44 40.1**	**+0.6**
MLPR				Sg	**Sg**	**17 44 42.8**	**+0.3**
MLPR				IAML		17 44 43.2	
	10µm,0.7s						
MLPR	**Magueyes Islan**	**0.22**	**311**	⇑*e*Pg	**Pg**	**17 44 40.1**	**+0.6**
MLPR				⇑*e*Sg	**Sg**	**17 44 42.5**	**0.0**
MLPR				IAML		17 44 43.2	
	comp=N,10µm,0.6s						
CRPR	**Cabo Rojo, PR**	**0.29**	**308**		**Pg**	**17 44 41.3**	**+0.5**
CRPR				Sg	**Sg**	**17 44 45.3**	**+0.6**
CRPR				IAML		17 44 46.9	
	comp=N,16µm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.29**	**308**	*i*P	**Pg**	**17 44 41.4**	**+0.5**
CRPR				*e*S	**Sg**	**17 44 45.9**	**+1.2**
CRPR				IAML		17 44 46.3	
	comp=Z,15µm,0.2s						
OBIP	**Obispado Ponce**	**0.33**	**50**		**Pg**	**17 44 42.2**	**+0.6**
OBIP				Sg	**Sg**	**17 44 47.1**	**+1.0**
OBIP	**Obispado Ponce**	**0.33**	**50**	*i*P	**Pg**	**17 44 42.3**	**+0.6**
OBIP				*e*S	**Sg**	**17 44 47.2**	**+1.1**
OBIP				IAML		17 44 51.7	
	comp=Z,1µm,0.5s						
CELP	**Cerrillos**	**0.37**	**48**		**Pg**	**17 44 42.9**	**+0.5**
CELP				Sg	**Sg**	**17 44 48.6**	**+1.3**
CELP	**Cerrillos**	**0.37**	**48**	⇓*e*Pg	**Pg**	**17 44 43.0**	**+0.6**
CELP				⇑*e*Sg	**Sb**	**17 44 48.9**	**-0.9**
CELP				IAML		17 44 52.3	
	comp=N,805nm,0.7s						
LSP	**Las Mesas**	**0.40**	**330**		**Pg**	**17 44 43.3**	**+0.3**
LSP					**Sg**	**17 44 49.3**	**+1.0**
UUPR	**Utuado, UPR, P**	**0.45**	**19**		**Pg**	**17 44 43.9**	**0.0**
UUPR				IAML		17 44 52.9	
	comp=N,12µm,0.5s						
PRSN	**Puerto Rico Se**	**0.47**	**326**		**Pg**	**17 44 44.4**	**+0.2**
PRSN				Sg	**Sg**	**17 44 51.1**	**+0.7**
PRSN	**Puerto Rico Se**	**0.47**	**326**	⇑*e*Pg	**Pg**	**17 44 44.4**	**+0.2**
PRSN				⇑*e*Sg	**Sb**	**17 44 51.5**	**-1.1**
PRSN				IAML		17 44 55.6	
	comp=N,8µm,0.3s						
AOPR	**Arecibo Observ**	**0.53**	**12**		**Pg**	**17 44 45.2**	**-0.1**
AOPR				IAML		17 44 58.7	
	comp=N,6µm,0.4s						
AOPR				IAML		17 45 02.0	
	comp=N,4µm,0.5s						
AOPR	**Arecibo Observ**	**0.53**	**12**	⇑*e*Pg	**Pg**	**17 44 45.3**	**-0.1**
AOPR				IAML		17 45 01.9	
	comp=N,3µm,0.5s						
AGPR	**Aguadilla, PR**	**0.68**	**340**		**Pg**	**17 44 48.0**	**-0.1**
AGPR				Sg	**Sg**	**17 44 56.5**	**-0.6**
AGPR				IAML		17 44 57.7	
	comp=N,4µm,0.6s						
AGPR				IAML		17 45 05.6	
	comp=N,3µm,1.1s						
AGPR	**Aguadilla, PR**	**0.68**	**340**	⇑*e*Pg	**Pg**	**17 44 48.0**	**-0.1**
AGPR				⇑*e*Sg	**Sg**	**17 44 57.0**	**0.0**
AGPR				IAML		17 44 57.6	
	comp=N,3µm,0.6s						
ECPR	**Experimental S**	**0.69**	**45**		**Pg**	**17 44 48.3**	**-0.1**
ECPR				Sg	**Sg**	**17 44 57.1**	**-0.2**
ECPR				IAML		17 44 59.2	
	comp=N,2µm,0.2s						
ECPR				IAML		17 44 59.9	
	comp=N,3µm,0.2s						
EMPR	**Esperanza - Ma**	**0.72**	**27**		**Pg**	**17 44 49.3**	**+0.3**
EMPR					**Sb**	**17 44 59.3**	**-0.6**
SJG	**San Juan**	**0.74**	**68**	Pg	**Pg**	**17 44 49.7**	**+0.3**
	comp=N,21nm,0.3s,baz=254,slow=15,SNR=26						
SJG				Lg	Lg	17 44 59.8	
	comp=N,122nm,0.3s,baz=167,slow=22,SNR=18						
SJG				LR	LR	17 45 10.6	
	comp=N,222nm,18.3s,baz=217,slow=48						
SJG	**San Juan**	**0.74**	**68**		**Pg**	**17 44 49.5**	**+0.2**
SJG	**San Juan**	**0.74**	**68**	⇑*e*Pg	**Pg**	**17 44 49.6**	**+0.2**
SJG				⇑*e*Sg	**Sg**	**17 44 57.0**	**-2.1**
SJG	**San Juan**	**0.74**	**68**	*i*P	**Pg**	**17 44 49.8**	**+0.3**
SJG				*e*S	**Sb**	**17 45 00.2**	**-0.3**
SJG				IAML		17 45 09.2	
	comp=Z,411nm,0.8s						
IDE	**Isla Desecheo**	**0.80**	**314**		**Pg**	**17 44 50.1**	**-0.4**
IDE					**Sg**	**17 45 01.3**	**+0.4**
PDPR	**Patillas Dam,**	**0.83**	**77**		**Pg**	**17 44 51.3**	**+0.2**
HUMP	**Col San Antoni**	**1.02**	**72**		**Pb**	**17 44 54.1**	**-0.9**
HUMP	**Col San Antoni**	**1.02**	**72**		**Sb**	**17 45 07.8**	**-0.7**
CUPR	**Culebra, Puert**	**1.58**	**72**		**Pn**	**17 45 03.5**	**+0.1**
DR12	**Loma Pena Alta**	**2.57**	**292**		**Pn**	**17 45 17.6**	**+0.6**
HATOM	**Hato Mayor del**	**2.57**	**292**	⇑*e*Pg	**Pb**	**17 45 19.4**	**-2.0**
HATOM				IAML		17 45 58.9	
	comp=N,291nm,0.7s						
SMDR	**Samana, DR**	**2.64**	**304**	⇑*e*Pg	**Pb**	**17 45 21.0**	**-1.5**
SMDR				IAML		17 46 05.1	
	comp=N,368nm,0.6s						
DR08	**Loma La Naviza**	**3.20**	**291**	⇑*e*Pg	**Pn**	**17 45 28.8**	**+3.1**
DR08				IAML		17 46 21.2	
	comp=N,2µm,0.2s						
SABA	**Saba**	**3.46**	**93**	Pn	**Pn**	**17 45 28.0**	**-1.3**
SC01	**Santiago de lo**	**3.99**	**294**		**Pn**	**17 45 35.5**	**-1.0**
LOVI	**El Cajuil, Ovi**	**4.28**	**270**	*i*P	**Pn**	**17 45 39.5**	**-1.0**
SDDR	**Presa de Saban**	**4.35**	**286**	Pn	**Pn**	**17 45 41.2**	**-0.3**
LOBH	**Bahia de las A**	**4.54**	**271**	*i*P	**Pn**	**17 45 44.2**	**+0.2**
GDHS	**Morne Mazeau,**	**5.12**	**107**	Pn	**Pn**	**17 45 51.8**	**-0.3**
ABD	**La Joyeuse, An**	**5.32**	**104**	Pn	**Pn**	**17 45 54.4**	**-0.3**
GDSD	**La Dsirade Is**	**5.75**	**104**	Pn	**Pn**	**17 46 00.5**	**-0.3**
BIM	**Bigot**	**6.47**	**120**	Pn	**Pn**	**17 46 09.9**	**-0.8**
NMDO	**Nuevo Mundo**	**8.13**	**291**	Pn	**Pn**	**17 46 32.8**	**-0.6**
SDV	**Santo Domingo**	**9.61**	**203**	Pn	**Pn**	**17 46 53.9**	**0.0**
	comp=N,0.8nm,0.3s,baz=215,slow=5.6,SNR=5.3						
	comp=N,1.4nm,0.3s						
SDV	**Santo Domingo**	**9.61**	**203**	Pn	**Pn**	**17 46 53.8**	**-0.1**
TKL	**Tuckaleechee C**	**23.25**	**323**	LR	LR	17 59 38.6	
	comp=N,12nm,19.1s,baz=29,slow=39						
TXAR	**Lajitas Array**	**35.47**	**296**	P	**P**	**17 51 34.0**	**+1.7**
	comp=N,0.4nm,0.6s,baz=106,slow=9.4,SNR=6.3						
	comp=N,0.4nm,0.6s						
TXAR	**Lajitas Array**	**35.47**	**296**	P	**P**	**17 51 30.9**	**-1.4**
YKA	**Yellowknife Ar**	**55.46**	**335**	P	**P**	**17 54 11.2**	**+1.3**
	comp=N,0.3nm,0.6s,baz=113,slow=7.1,SNR=7.3						
	comp=N,0.3nm,0.6s						
YKA	**Yellowknife Ar**	**55.46**	**335**	P	**P**	**17 54 10.2**	**+0.2**
ESDC	**Sonseca Array**	**58.11**	**54**	P	**P**	**17 54 31.6**	**+2.4**
	comp=N,0.6nm,0.9s,baz=267,slow=6.3,SNR=4.0						
	comp=N,0.6nm,0.9s						

IDC 07 18:01:52.2±3.4**,5°.33S×151°.35E,h0**km**,mb3.1**/2**,**
mbtmp3.2/3**,ML1.1**/1**,Error ellipse: s-maj=144.3km**
s-min=41.2km az=125.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.81**	**225**	Pn	Pn	18 03 20.8	+1.0
	0.4nm,0.3s,baz=214,slow=22,SNR=1.7						
PMG				Sn	Sn	18 04 26.6	-0.6
	0.2nm,0.3s,baz=115,slow=6.2,SNR=3.6						
	4.8nm,0.8s						
WRA	**Warramunga Arr**	**22.03**	**227**	P	P	18 06 48.8	+0.2
	0.4nm,0.5s,baz=53,slow=10,SNR=6.5						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**24.80**	**221**	P	P	18 07 16.1	-0.1
	0.3nm,0.6s,baz=58,slow=9.4,SNR=7.0						
	0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**149.09**	**287**	PKPbc	PKPbc	18 21 42.9	-0.7
	0.2nm,0.4s,baz=86,slow=4.3,SNR=1.5						

IDC 07 18:05:58.8±3.1**,5°.76S×151°.84E,h0**km**,mb3.3**/2**,**
mbtmp3.4/3**,ML1.3**/1**,MS3.3**/1**,Error ellipse:**
s-maj=122.8km s-min=41.6km az=130.0,New Britain
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.89**	**232**	Pn	Pn	18 07 28.4	+1.0
	0.5nm,0.3s,baz=52,slow=8.8,SNR=4.4						
PMG				Sn	Sn	18 08 37.4	+1.7
	0.6nm,0.3s,baz=305,slow=20,SNR=1.9						
	3.6nm,0.5s						
DZM	**Mont Dzumac**	**21.51**	**140**	LR	LR	18 17 56.6	
	comp=Z,71nm,18.1s,baz=195,slow=33						
WRA	**Warramunga Arr**	**22.10**	**229**	P	P	18 10 55.6	-0.3
	0.8nm,0.6s,baz=52,slow=10.0,SNR=9.5						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**24.80**	**222**	P	P	18 11 22.6	-0.3
	0.5nm,0.8s,baz=60,slow=9.1,SNR=6.4						
	0.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**149.67**	**286**	PKPbc	PKPbc	18 25 51.4	-0.2
	0.4nm,0.7s,baz=90,slow=2.3,SNR=2.0						

IDC 07 18:12:57.8±2.1**,6°.18S×142°.91E,h0**km**,mb3.5**/2**,**
mbtmp3.6/5**,ML3.4**/3**,MS3.2**/1**,Error ellipse:**
s-maj=48.6km s-min=25.3km az=99.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**4.26**	**329**	Pn	Pn	18 14 04.6	+0.6
	1.7nm,0.3s,baz=154,slow=17,SNR=9.7						
JAY				Sn	Sn	18 14 56.5	+2.1
	0.8nm,0.3s,baz=149,slow=18,SNR=1.5						
	6.6nm,0.4s						
WRA	**Warramunga Arr**	**16.01**	**211**	Pn	Pn	18 16 42.5	-2.1
	0.2nm,0.3s,baz=28,slow=13,SNR=9.9						
WRA				Sn	Sn	18 19 34.5	-8.4
	0.1nm,0.3s,baz=30,slow=24,SNR=2.1						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**19.42**	**206**	P	Pn	18 17 27.2	+0.3
	0.2nm,0.3s,baz=34,slow=10.0,SNR=28						
ASAR				LR	LR	18 24 57.2	
	comp=Z,70nm,19.8s,baz=156,slow=37						
	4.4nm,0.9s						
FITZ	**Fitzroy Crossi**	**20.60**	**233**	P	P	18 17 38.5	-0.2
	1.2nm,0.5s,baz=48,slow=14,SNR=6.3						
	1.2nm,0.5s						
ILAR	**Eielson Array**	**87.27**	**24**	P	P	18 25 45.5	-0.6
	0.2nm,0.6s,baz=247,slow=5.1,SNR=2.1						
	0.2nm,0.6s						

*AFAD **07** 18:45:13.0,38°.45N×44°.43E,h2km±11km,ML2.8*
*ISK **07** 18:45:13.6,38°.58N×44°.48E,h5km,ML3.1/8*
*AZER **07** 18:45:13.8,38°.59N×44°.56E,h3km,ml3.0*
*TEH **07** 18:45:15.3,38°.54N×44°.61E,h5km,ML2.8,Presumed*
earthquake
ISC 07 18:45:13.2±1.1**,38°.50N**±0°.02×**44°.55E**±0°.02**,h5**km±10km**,**
n49,σ**1°.42**/74**,Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**291**	P	**Pg**	**18 45 22.3**	**+0.1**
MAKU	**Maku**	**0.86**	**7**	Pg	**Pn**	**18 45 30.7**	**-1.5**
ISHB	**Shabestar**	**0.87**	**104**	Pg	**Pg**	**18 45 30.3**	**+0.5**
TVAN	**Van**	**0.90**	**272**	P	**Pg**	**18 45 30.0**	**-0.4**
TVAN				S	**Sg**	**18 45 42.2**	**+0.1**
TVAN				IAML		18 45 55.0	
	comp=N,423nm,0.5s						
VMUR	**Van-Muradiye**	**0.91**	**303**	P	**Pg**	**18 45 30.0**	**-0.6**
VMUR				S	**Sn**	**18 45 45.0**	**-1.5**
VMUR				IAML		18 45 47.0	
	comp=N,268nm,0.4s						
VANB	**Van**	**0.92**	**276**	Pg	**Pg**	**18 45 30.8**	**+0.1**
VANB				Sg	**Sb**	**18 45 43.9**	**-0.3**
IMRD	**Marand**	**0.93**	**76**	Pg	**Pn**	**18 45 32.7**	**-0.4**
NAX	**Nakhchivan**	**1.00**	**47**	P	**Pn**	**18 45 34.1**	**+0.1**
NAX				S	**Sn**	**18 45 49.5**	**+1.0**
HAKT	**HAKKARI**	**1.15**	**216**	P	**Pb**	**18 45 34.5**	**-1.3**
HAKT	**HAKKARI**	**1.15**	**216**	P	**Pb**	**18 45 34.7**	**-1.1**
HAKT				S	**Sn**	**18 45 53.6**	**+1.1**
GEVA	**Gevas**	**1.19**	**261**	P	**Pb**	**18 45 33.9**	**-2.4**
GEVA				S	**Sb**	**18 45 51.6**	**-0.4**
GEVA				IAML		18 46 00.0	
	comp=N,175nm,0.7s						
SBZ	**Shahbuz**	**1.19**	**41**	P	**Pn**	**18 45 37.3**	**+0.6**
SBZ				S	**Sn**	**18 45 55.4**	**+2.1**
ORD	**Ordubad**	**1.21**	**69**	P	**Pg**	**18 45 38.0**	**+1.6**
ORD				S	**Sn**	**18 45 55.9**	**+2.2**
DYDN	**Diyadin**	**1.24**	**328**	P	**Pg**	**18 45 38.0**	**+1.1**
DYDN				S	**Sn**	**18 45 53.2**	**-1.4**
DYDN				IAML		18 46 00.0	
	comp=E,207nm,0.4s						
HYR	**Heyderabad**	**1.24**	**11**	P	**Pg**	**18 45 38.3**	**+1.4**
HYR				S	**Sn**	**18 45 57.2**	**+2.7**
AKDM	**Akdamar-Van**	**1.25**	**263**	Pn	**Pn**	**18 45 35.7**	**-1.7**
ITBZ	**Tabriz**	**1.28**	**101**	Pg	**Pg**	**18 45 38.1**	**+0.3**
IAZR	**Azarshahr**	**1.40**	**126**	Pg	**Pg**	**18 45 41.3**	**+1.4**
IGDI	**IGDIR**	**1.42**	**345**	P	**Pg**	**18 45 41.1**	**+0.8**
IGDI				S	**Sg**	**18 46 02.1**	**+3.4**
IGDI	**IGDIR**	**1.42**	**345**	P	**Pg**	**18 45 41.5**	**+1.2**
IGDI				S	**Sg**	**18 46 03.0**	**+4.4**
CUKT	**Cukurca**	**1.46**	**211**	Pn	**Pg**	**18 45 42.7**	**+1.6**
CUKT	**Cukurca**	**1.46**	**211**	P	**Pg**	**18 45 43.8**	**+2.8**
ADCV	**BITLIS_Adilcev**	**1.46**	**283**	P	**Pb**	**18 45 41.1**	**+0.1**
ADCV				S	**Sg**	**18 46 00.7**	**+0.5**
ADCV				IAML		18 46 05.0	
	comp=N,138nm,0.5s						
AGRB	**Hanur-Agry**	**1.62**	**312**	Pn	**Pb**	**18 45 43.0**	**-0.7**
AGRB				Sn	**Sg**	**18 46 04.5**	**-0.8**
DORK	**Agr/Tutak/Do**	**1.64**	**303**	P	**Pb**	**18 45 43.0**	**-1.0**
GNI	**Garni**	**1.66**	**5**	Pn	**Pg**	**18 45 44.0**	**-0.9**
KOTA	**Agri, Merkez-K**	**1.67**	**322**	P	**Pb**	**18 45 44.1**	**-0.4**
PERV	**Siirt/Pervari-**	**1.68**	**251**	P	**Pn**	**18 45 43.3**	**0.0**
MLAZ	**Malazgirt-MUS**	**1.69**	**293**	Pn	**Pb**	**18 45 44.3**	**-0.6**
BLIS	**Bitlis-Merkez**	**1.91**	**268**	P	**Pb**	**18 45 47.7**	**-1.0**
MAHB	**Mahabad**	**1.96**	**152**	Pn	**Pg**	**18 45 51.6**	**+0.9**
SIRN	**Sırnak**	**1.96**	**240**	P	**Pb**	**18 45 49.9**	**+0.4**
IHRS	**Heris**	**1.97**	**94**	Pn	**Pg**	**18 45 50.8**	**-0.1**
GURO	**Guroymak-BITLI**	**1.98**	**272**	Pn	**Pb**	**18 45 48.7**	**-1.0**
SRTM	**Siirt_Merkez**	**2.13**	**257**	P	**Pb**	**18 45 51.6**	**-0.8**
SRTM				S	**Sg**	**18 46 21.4**	**-0.2**
SRTM				IAML		18 46 26.0	
	comp=N,136nm,0.7s						
QRD	**Qoradiz**	**2.36**	**65**	P	**Pb**	**18 45 56.9**	**+0.6**
QRD				S	**Sg**	**18 46 29.0**	**-0.1**
MUSM	**Mu-Merkez**	**2.39**	**276**	P	**Pb**	**18 45 56.5**	**-0.3**
GDB	**GEDABAY**	**2.41**	**22**	P	**Pb**	**18 45 57.3**	**+0.2**
GDB				S	**Sg**	**18 46 30.5**	**0.0**
VRTB	**Varto-Mus**	**2.50**	**286**	Pn	**Pn**	**18 45 55.9**	**+1.1**
GANJ	**Ganja**	**2.54**	**32**	P	**Pb**	**18 45 58.9**	**-0.4**
GANJ				S	**Sg**	**18 46 32.2**	**-2.7**
HOMI	**Horasan**	**2.57**	**308**	P	**Pb**	**18 46 00.4**	**+0.5**
QZX	**Qazax, Azerbai**	**2.63**	**14**	P	**Pb**	**18 46 00.3**	**-0.6**
QZX				S	**Sg**	**18 46 35.4**	**-2.4**
GRMI	**Germi**	**2.64**	**82**	Pn	**Pb**	**18 45 59.7**	**-1.3**
BLQ	**Beylaqan**	**2.64**	**62**	P	**Pb**	**18 46 00.5**	**-0.5**
BLQ				S	**Sg**	**18 46 36.6**	**-1.4**
BRDA	**Brd**	**2.69**	**48**	P	**Pb**	**18 46 00.8**	**-1.1**
BRDA				S	**Sg**	**18 46 36.6**	**-3.0**
YRD	**Yardimli**	**2.92**	**81**	P	**Pb**	**18 46 04.7**	**-1.2**
YRD				S	**Sb**	**18 46 43.0**	**+1.1**
LRK	**Lerik**	**2.98**	**86**	P	**Pb**	**18 46 05.2**	**-1.6**
LRK				S	**Sb**	**18 46 43.5**	**0.0**
GLBA	**Clilabad**	**3.09**	**75**	P	**Pb**	**18 46 08.5**	**-0.1**
GLBA				S	**Sb**	**18 46 46.5**	**-0.1**
LKRN	**Lenkeran, Azer**	**3.32**	**85**	P	**Pb**	**18 46 10.3**	**-2.3**
LKRN				S	**Sb**	**18 46 51.3**	**-1.9**

*NEIC **07** 19:21:02.8±1.2,23°.26S±0°.10×179°.5E±0°.2,h542km±7km,*
mb4.1/23,Error ellipse: s-maj=21.9km s-min=14.2km
az=99.0
*IDC **07** 19:21:02.5±1.6,23°.23S×179°.44E,h536km±15km,*
mb3.2/13,mbtmp4.1/16,Error ellipse: s-maj=19.1km
s-min=13.9km az=90.0
ISC 07 19:21:02.6±0.4**,23°.28S**±0°.06×**179°.51E**±0°.08**,h550**km**,**
n131,σ**1°.57**/139**,mb3.9**/27**,11C-14D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.69**	**346**	P	**P**	**19 22 37.7**	**-1.0**
	14nm,0.5s,baz=128,slow=23,SNR=32						
MSVF	**Nonsavu**	**5.69**	**346**	P	**P**	**19 22 37.5**	**-1.2**
NIUE	**Niue**	**10.70**	**69**	P	**P**	**19 23 25.2**	**-2.6**
MARNC	**Mare, Loyalty**	**10.77**	**277**	P	**P**	**19 23 27.8**	**-0.8**
OUENC	**Ouen Island, N**	**11.72**	**272**	P	**P**	**19 23 39.6**	**+1.3**
DZM	**Mont Dzumac**	**12.13**	**273**	P	**P**	**19 23 41.4**	**-1.2**
	4.5nm,0.9s,baz=172,slow=21,SNR=8.1						
AFI	**Afiamalu**	**12.45**	**43**	P	**P**	**19 23 42.1**	**-3.9**
	19nm,0.5s,baz=90,slow=3.6,SNR=4.8						
OUZ	**Omahuta**	**12.96**	**202**	P	**P**	**19 23 53.8**	**+2.8**
WCZ	**Waipu Caves**	**13.39**	**198**	P	**P**	**19 23 58.2**	**+2.9**
HAZ	**Te Kaha**	**14.51**	**185**	P	**P**	**19 24 06.4**	**-0.4**
HAZ				S	**S**	**19 26 30.9**	**-7.7**
RUGZ	**Raukumara Rang**	**14.72**	**186**	P	**P**	**19 24 08.9**	**-0.2**
RUGZ				S	**S**	**19 26 42.1**	**-0.8**
PUZ	**Puketiti**	**14.78**	**184**	P	**P**	**19 24 10.1**	**+0.4**
PUZ				S	**S**	**19 26 42.7**	**-1.1**
TOZ	**Tahuroa Road**	**14.81**	**193**	P	**P**	**19 24 14.1**	**+4.2**
KMRZ	**Kaimai**	**14.84**	**191**	P	**P**	**19 24 13.3**	**+3.0**
TWGZ	**Tauwhareparae**	**14.91**	**185**	P	**P**	**19 24 11.8**	**+0.8**
TWGZ				S	**S**	**19 26 45.1**	**-1.1**
URZ	**Urewera**	**15.07**	**187**	P	**P**	**19 24 11.2**	**-1.4**
	28nm,0.6s,baz=192,slow=0.1,SNR=30						
URZ				S	**S**	**19 26 43.9**	**-5.1**
	13nm,0.7s,baz=60,slow=22,SNR=9.6						
URZ	**Urewera**	**15.07**	**187**	P	**P**	**19 24 11.3**	**-1.4**
MWZ	**Matawai**	**15.10**	**186**	P	**P**	**19 24 11.5**	**-1.5**
MWZ				S	**S**	**19 26 47.1**	**-2.5**
MUGZ	**Murupara**	**15.33**	**188**	P	**P**	**19 24 14.8**	**-0.5**
TLZ	**Tolley Road**	**15.38**	**192**	P	**P**	**19 24 17.9**	**+2.1**
RTZ	**Ruatahuna**	**15.44**	**187**	P	**P**	**19 24 15.8**	**-0.7**
RIGZ	**Rimuhau**	**15.45**	**185**	P	**P**	**19 24 15.5**	**-1.1**
RIGZ				S	**S**	**19 26 53.5**	**-2.2**
MTHZ	**Maungataniwha**	**15.69**	**188**	P	**P**	**19 24 18.8**	**-0.2**
MTHZ				S	**S**	**19 26 55.7**	**-4.0**
RAHZ	**Arahi**	**15.72**	**187**	P	**P**	**19 24 19.1**	**-0.2**
BFZ	**Birch Farm**	**17.57**	**188**	P	**P**	**19 24 36.6**	**+0.2**
BFZ	**Birch Farm**	**17.57**	**188**	P	**P**	**19 24 37.0**	**+0.7**
MRZ	**Mangatainoka R**	**17.64**	**190**	P	**P**	**19 24 37.5**	**+0.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
QRZ	Quartz Range	18.46	197	P	P	19 24 46.7	+2.2
NNZ	Nelson	18.61	195	P	P	19 24 48.2	+2.4
RPZ	Rata Peaks	21.54	197	P	P	19 25 12.7	+0.3
	4.5nm,0.6s,baz=7.6,slow=22,SNR=1.2						
	4.5nm,0.6s						
ARMA	Armidale	25.83	248	P	P	19 25 52.1	+1.2
CAN	Canberra	29.07	239	P	P	19 26 20.7	+1.6
CTAO	Charters Tower	31.03	269	P	P	19 26 36.7	+0.6
CTAO				IAmb	IAmb	19 26 37.4	
	comp=Z,4.8nm,0.5s						
TOO	Toolangi	32.41	236		P	19 26 48.5	+0.8
PMG	Port Moresby	33.87	289	P	P	19 26 59.7	-0.6
PMG				IAmb	IAmb	19 27 01.3	
	comp=Z,7.1nm,0.7s						
STKA	Stephens Creek	34.54	247	P	P	19 27 05.9	+0.2
	comp=Z,1.1nm,0.4s,baz=91,slow=11,SNR=5.8						
	comp=Z,1.1nm,0.4s						
STKA	Stephens Creek	34.54	247	P	P	19 27 05.7	0.0
INKA	Innaminka	35.17	254	P	P	19 27 11.7	+0.8
BBOO	Buckleboo	39.28	246	P	P	19 27 44.3	-0.2
BBOO				IAmb	IAmb	19 28 08.9	
	comp=Z,6.5nm,1.0s						
AS31	Alice Springs	41.70	260	P	P	19 28 03.8	-0.1
ASAR	Alice Springs	41.70	260	P	P	19 28 04.3	+0.4
	comp=Z,2.3nm,0.6s,baz=90,slow=8.3,SNR=23						
ASAR				PcP	PcP	19 29 48.3	+0.7
	comp=Z,1.0nm,0.7s,baz=101,slow=3.6,SNR=7.3						
ASAR				S	S	19 33 39.3	-2.3
	comp=Z,0.3nm,0.6s,baz=99,slow=14,SNR=4.7						
	comp=Z,2.3nm,0.6s						
ASAR	Alice Springs	41.70	260	P	P	19 28 03.6	-0.3
WB0	Warramunga Arr	41.99	266	P	P	19 28 05.8	-0.5
WB0				IAmb	IAmb	19 28 06.6	
	comp=Z,4.9nm,0.6s						
WRA	Warramunga Arr	42.01	266	P	P	19 28 06.1	-0.3
	comp=Z,2.9nm,0.6s,baz=90,slow=5.8,SNR=40						
WRA				PcP	PcP	19 29 49.1	+0.5
	comp=Z,0.8nm,0.6s,baz=93,slow=3.0,SNR=4.2						
WRA				S	S	19 33 40.0	-6.1
	comp=Z,0.3nm,0.5s,baz=98,slow=17,SNR=5.4						
	comp=Z,2.9nm,0.6s						
WRA	Warramunga Arr	42.01	266	P	P	19 28 06.1	-0.3
KNRA	Kununurra	48.24	269	P	P	19 28 54.1	0.0
KNRA				IAmb	IAmb	19 28 54.8	
	comp=Z,4.8nm,0.4s						
SOEI	Soe	54.35	275	P	P	19 29 39.1	+0.6
SOEI				IAmb	IAmb	19 29 40.5	
	comp=Z,14nm,1.0s						
PSA00	Pilbara Seismi	54.84	259	P	P	19 29 41.8	+0.1
PSA00				IAmb	IAmb	19 30 02.0	
	comp=Z,9.7nm,1.1s						
MBWA	Marble Bar	55.04	260	P	P	19 29 42.3	-0.7
MBWA				IAmb	IAmb	19 29 43.6	
	comp=Z,6.8nm,0.8s						
MORW	Morawa	56.67	250	P	P	19 29 54.0	-0.3
MORW				IAmb	IAmb	19 30 11.8	
	comp=Z,6.8nm,1.1s						
TOLI2	Tolitoli	61.99	285	P	P	19 30 29.8	-0.2
TOLI2				IAmb	IAmb	19 30 31.9	
	comp=Z,4.5nm,0.7s						
JAGI	Jajag, Banyuwa	64.10	272	P	P	19 30 42.9	-0.6
QSPA	South Pole Qui	66.80	180	P	P	19 31 01.9	+2.2
	comp=Z,6.9nm,0.7s,baz=340,slow=1.0,SNR=23						
	comp=Z,6.9nm,0.7s						
QSPA	South Pole Qui	66.80	180	P	P	19 31 01.5	+1.8
QSPA				IAmb	IAmb	19 31 02.2	
	comp=Z,7.4nm,0.8s						
KKM	Kota Kinabalu	68.30	287	P	P	19 31 09.3	-0.4
KKM				IAmb	IAmb	19 31 33.5	
	comp=Z,3.9nm,1.0s						
MJAR	Matsushiro Arr	71.14	326	P	P	19 31 26.0	+0.1
	comp=Z,1.2nm,0.9s,baz=161,slow=5.9,SNR=4.1						
	comp=Z,1.2nm,0.9s						
MJAR	Matsushiro Arr	71.14	326	P	P	19 31 25.3	-0.7
KSRS	Korea Array	77.49	320	P	P	19 32 03.2	+1.5
	comp=Z,1.1nm,0.8s,baz=138,slow=5.6,SNR=6.8						
	comp=Z,1.1nm,0.8s						
PETK	Petropavlovsk-	78.40	347	P	P	19 32 06.8	+0.6
	comp=Z,1.5nm,0.6s,baz=168,slow=6.1,SNR=1.5						
	comp=Z,1.5nm,0.6s						
TROLL	Troll, Antarti	84.94	181	P	P	19 32 41.4	+1.7
SNAA	Sanae	85.29	179	P	P	19 32 41.7	+0.5
	comp=Z,1.2nm,0.4s,baz=204,slow=12,SNR=2.0						
	comp=Z,1.2nm,0.4s						
SNAA	Sanae	85.29	179	P	P	19 32 41.8	+0.5
SNAA				IAmb	IAmb	19 32 57.7	
	comp=Z,3.4nm,1.1s						
VNA3	Neumayer Olymp	85.52	177	⇓P	P	19 32 42.9	+0.6
	comp=Z,0.7nm,0.3s						
VNA2	Neumayer--Watz	85.93	178	⇑P	P	19 32 44.9	+0.7
	comp=Z,2.2nm,0.5s,baz=172,slow=4.5						
VNA1	Neumayer--Stat	86.17	177	⇑P	P	19 32 45.6	+0.3
	comp=Z,0.8nm,0.4s						
CMAR	Chiang Mai Arr	88.89	291	P	P	19 32 59.8	+0.7
	comp=Z,0.6nm,0.8s,baz=145,slow=2.5,SNR=5.8						
	comp=Z,0.6nm,0.8s						
CMAR	Chiang Mai Arr	88.89	291	P	P	19 32 59.4	+0.3
TXAR	Lajitas Array	90.48	58	P	P	19 33 08.8	+2.4
	comp=Z,0.3nm,0.8s,baz=209,slow=4.6,SNR=2.2						
	comp=Z,0.3nm,0.8s						
ILAR	Eielson Array	91.54	14	P	P	19 33 10.4	+0.1
	comp=Z,0.1nm,0.5s,baz=220,slow=3.9,SNR=1.4						
	comp=Z,0.1nm,0.5s						
SONM	Songino Array	96.34	320	P	P	19 33 33.6	+0.9
	comp=Z,0.2nm,0.5s,baz=134,slow=4.2,SNR=2.3						
	comp=Z,0.2nm,0.5s						
ZALV	Zalesovo Beam	111.19	321	PKiKP	PKiKP	19 38 32.7	-1.0
	comp=Z,0.4nm,0.3s,baz=102,slow=2.6,SNR=2.2						
MKAR	Makanchi Array	111.41	313	PKiKP	PKiKP	19 38 33.8	-0.6
	comp=Z,0.3nm,0.5s,baz=237,slow=0.4,SNR=7.2						
KURBB	Kurchatov Arra	114.49	317	PKP	PKPdf	19 38 39.9	-0.2
	comp=Z,0.3nm,0.3s,baz=114,slow=2.1,SNR=4.3						
BVAR	Borovoye Array	119.68	319	PKP	PKPdf	19 38 50.1	0.0
	comp=Z,1.2nm,0.5s,baz=198,slow=2.7,SNR=6.1						
BOSA	Boshof	122.75	207	PKP	PKiKP	19 38 57.6	+0.3
	comp=Z,2.2nm,1.0s,baz=84,slow=21,SNR=1.6						
SPITS	Spitsbergen Ar	124.47	356	PKP	PKPdf	19 38 59.0	+0.4
	comp=Z,8.0nm,1.0s,baz=215,slow=2.8,SNR=4.2						
ARCES	ARCESS Array B	131.19	348	PKP	PKPdf	19 39 12.1	+0.5
	comp=Z,0.6nm,0.4s,baz=37,slow=0.6,SNR=6.0						
ARCES	ARCESS Array B	131.19	348		PKPdf	19 39 11.5	-0.1
FINES	FINESS Array B	137.72	341	PKhKP	PKPpre	19 39 14.1	
	comp=Z,0.4nm,0.6s,baz=76,slow=2.4,SNR=4.5						
FINES				PKP	PKPdf	19 39 25.1	+1.2
	comp=Z,0.5nm,0.4s,baz=79,slow=1.4,SNR=4.0						
FINES				SKPbc	SKPbc	19 42 07.6	+1.4
	comp=Z,0.9nm,0.7s,baz=353,slow=4.4,SNR=5.6						
NB2	NORSAR Subarra	141.40	351	PKP	PKPdf	19 39 26.6	-4.1
	comp=Z,0.7nm,0.6s,baz=15,slow=3.0						
NOA	NORSAR Array B	141.40	351	PKhKP	PKPpre	19 39 26.4	
	comp=Z,0.3nm,0.6s,baz=358,slow=1.6,SNR=5.6						
HFS	Hagfors	141.85	349	PKhKP	PKPpre	19 39 27.3	
	comp=Z,2.2nm,0.5s,baz=64,slow=3.4,SNR=17						
ARPR	Arapgir-MALATY	143.54	305		PKPbc	19 39 34.8	+0.7
AKASG	Malin Array Be	144.21	327	PKP	PKPbc	19 39 35.5	0.0
	comp=Z,3.6nm,0.5s,baz=46,slow=4.0,SNR=11						
SORM	Soroca	146.24	324	⇑P	PKPbc	19 39 42.1	+0.5
BRTR	Keskin Array B	146.85	308	PKPbc	PKPbc	19 39 44.2	+0.5
	comp=Z,2.0nm,0.6s,baz=158,slow=5.2,SNR=8.5						
BRTR	Keskin Array B	146.85	308		PKPbc	19 39 43.7	-0.1
MMAI	Mount Meron Ar	147.04	295	PKPbc	PKiKP	19 39 46.1	-0.1
	comp=Z,3.2nm,0.4s,baz=55,slow=7.2,SNR=17						
EKA	Eskdalemuir Ar	147.93	3	PKPbc	PKPbc	19 39 46.2	+0.3
	comp=Z,0.5nm,0.3s,baz=1.3,slow=2.5,SNR=1.8						
GHRR		147.99	322	⇓P	PKPbc	19 39 46.7	+0.4
CFR	Carcaliu	148.07	320	⇓P	PKiKP	19 39 48.0	+0.2
TESR	Tescani	148.14	323	⇑P	PKPbc	19 39 46.5	-0.2
COSR	Cosmesti PH	148.16	322	⇑P	PKiKP	19 39 49.9	+1.9
BURAR	Bucovina Array	148.21	326	⇓P	PKPbc	19 39 47.9	+1.0
EFOR	EFORIE	148.36	318	⇓P	PKPab	19 39 51.1	-1.5
ONER	Baraj Valea Uz	148.39	323	⇓P	PKiKP	19 39 48.8	+0.3
CSS	Mathiatis	148.39	299	PKPbc	PKPbc	19 39 48.0	+0.3
BOSR	Bodos	148.95	323	⇓P	PKPdf	19 39 46.4	+2.4
MLR	Muntele Rosu	149.15	322	⇓P	PKPbc	19 39 49.9	+0.5
MLR	Muntele Rosu	149.15	322		PKPbc	19 39 49.6	+0.2
DOPR	Dopca	149.17	324	⇓P	PKiKP	19 39 50.8	+0.7
VOIR		149.68	323	⇑P	PKPbc	19 39 51.2	+0.6
LANS	Liptovska Anna	149.76	334	*e*PKP	PKiKP	19 39 52.7	+1.4
STEB	Steborice	149.79	336	*e*PKP	PKPbc	19 39 51.3	+0.7
OSTC	Ostas	149.82	339	*e*PKP	PKPbc	19 39 51.4	+0.7
CHVC	Chvalec	149.85	339	*e*PKP	PKiKP	19 39 52.0	+0.6
MARR	Marisel-Cluj	149.90	327	⇓P	PKiKP	19 39 51.9	+0.2
UPC	Upice	149.93	339	*e*PKP	PKiKP	19 39 52.0	+0.5
ARR	Arges	149.96	323	⇑P	PKiKP	19 39 52.4	+0.6
DPC	Dobruska-Polom	149.96	338	*e*PKP	PKiKP	19 39 52.3	+0.6
MORC	Moravsky Berou	150.01	336	⇑P	PKiKP	19 39 52.5	+0.7
MORC	Moravsky Berou	150.01	336	*e*PKP	PKiKP	19 39 52.4	+0.7
DRGR		150.03	327	⇓P	PKPbc	19 39 51.9	+0.6
KRLC	Kraliky	150.03	337	*e*PKP	PKPbc	19 39 51.9	+0.7
CLL	Collm	150.13	343	*e*P	PKPdf	19 39 45.0	-0.6
	comp=Z,4.0nm,0.8s						
CLL				*i* x	x	19 39 52.3	
	comp=Z,10.0nm,0.8s						
CLL				*e*x	x	19 39 59.0	
MAUC	Maruska	150.24	336	*e*PKP	PKiKP	19 39 53.0	+0.8
HUMR	Humele	150.28	322	⇓P	PKPbc	19 39 52.2	+0.3
PVCC	Panska Ves	150.38	340	*e*PKP	PKiKP	19 39 53.2	+0.8
HSKC	Hora Svate Kat	150.64	342	*e*PKP	PKPbc	19 39 51.7	-0.9
ELND	Elena	150.67	318	⇓P	PKiKP	19 39 53.8	+0.5
VRAC	Vranov	150.74	337	*e*PKP	PKiKP	19 39 53.9	+0.6
GZR	Gura Zlata	150.94	325	⇑P	PKPbc	19 39 53.8	+0.3
KRUC	Moravsky	151.02	337	*e*PKP	PKiKP	19 39 54.2	+0.4
KRUC				*e*		19 40 04.9	
MODS	Modra-Piesok	151.25	335	*e*PKP	PKiKP	19 39 55.6	+1.2
BZS	Buzias	151.39	327	⇓P	PKPbc	19 39 54.9	+0.5
HERR	Herculane	151.47	325	⇑P	PKPbc	19 39 54.8	+0.2
KHC	Kasperske Hory	151.91	340	*e*PKP	PKPbc	19 39 55.8	+0.3
CKRC	Cesky Krumlov	151.95	339	*e*PKP	PKPbc	19 39 56.1	+0.5
GERES	GERESS Array B	152.12	340	PKPbc	PKPbc	19 39 56.5	+0.5
	comp=Z,0.6nm,0.5s,baz=47,slow=2.5,SNR=4.6						
MORH	Mrgy, Hungar	152.38	331	⇑P	PKiKP	19 39 57.1	+0.5
TORD	Torodi Ar. Bea	169.71	192	PKPab	PKPab	19 41 26.7	+1.0
	comp=Z,1.5nm,0.8s,baz=188,slow=5.8,SNR=5.2						

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*IDC **07** 19:58:53.5±1.2, 33°.89S×178°.78W, h0km, mb4.2/5, mbtmp4.1/6, ML4.2/1, Error ellipse: s-maj=47.5km s-min=25.4km az=148.0*

*WEL **07** 19:58:57.1±0.8, 34°S±6°×17°9W±1°4, h100km, M4.2/10, mB4.9/6, ML4.3/8, MLv4.3/10, Mw(mB)4.1/6, Error ellipse: s-maj=20.1km s-min=3.9km az=111.7, confirmed*

ISC 07 19:58:57.1±0.9**, 33°.99S**±0°.07×**178°.5W**±0°.1**, h37km, n37, σ1s.75**/57**, mb4.1**/5**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.44	216	P	Pn	20 00 01.0	-0.8
MXZ				S	Sn	20 00 52.4	+0.3
WMGZ	Waiomatatini S	4.59	213	P	Pn	20 00 06.4	+2.5
GLKZ	Green Lake	4.73	6	P	Pn	20 00 03.1	-2.7
GLKZ				S	Sn	20 00 56.4	-3.0
PKGZ	Pakihiroa	4.79	215	P	Pn	20 00 06.8	+0.2
PKGZ				S	Sn	20 01 01.8	+1.0
HAZ	Te Kaha	4.85	218	P	Pn	20 00 09.0	+1.6
HAZ				S	Sn	20 01 05.3	+3.1
PUZ	Puketiti	4.87	212	P	Pn	20 00 09.5	+1.7
PUZ				S	Sn	20 01 04.4	+1.5
RUGZ	Raukumara Rang	5.06	217	P	Pn	20 00 10.4	-0.1
RUGZ				S	Sn	20 01 08.1	+0.4
TWGZ	Tauwhareparae	5.08	214	P	Pn	20 00 10.7	0.0
TWGZ				S	Sn	20 01 09.2	+1.1
TKGZ	Te Karaka	5.36	213	P	Pn	20 00 16.5	+2.1
TKGZ				S	Sn	20 01 14.7	-0.1
MWZ	Matawai	5.42	216	P	Pn	20 00 16.5	+1.1
MWZ				S	Sn	20 01 15.3	-1.2
GRZ	Great Barrier	5.48	244	P	Pn	20 00 17.8	+1.6
URZ	Urewera	5.58	219	Pn	Pn	20 00 17.6	+0.2
	7.7nm,0.3s,baz=341,slow=1.7,SNR=47						
URZ				Sn	Sn	20 01 18.9	-1.3
	4.3nm,0.3s,baz=280,slow=4.0,SNR=9.0						
	13nm,0.3s						
URZ	Urewera	5.58	219	P	Pn	20 00 17.2	-0.2
URZ				S	Sn	20 01 18.7	-1.5
RAGZ	Rawiri	5.60	215	P	Pn	20 00 19.0	+1.1
RIGZ	Rimuhau	5.61	212	P	Pn	20 00 18.5	+0.5
RIGZ				S	Sn	20 01 20.0	-1.2
MARZ	Manawahe	5.62	223	P	Pn	20 00 19.3	+1.3
PRGZ	Paritu Road	5.74	210	P	Pn	20 00 20.0	+0.3
PRGZ				S	Sn	20 01 23.4	-1.0
SNGZ	Shannon Statio	5.87	214	P	Pn	20 00 22.4	+1.0
SNGZ				S	Sn	20 01 27.7	+0.3
RTZ	Ruatahuna	5.91	217	P	Pn	20 00 22.5	+0.4
RAHZ	Arahi	6.09	215	P	Pn	20 00 25.7	+1.1
RAHZ				S	Sn	20 01 31.9	-1.1
TOZ	Tahuroa Road	6.17	231	P	Pn	20 00 27.4	+1.9
NMHZ	Naumai	6.37	215	P	Pn	20 00 29.7	+1.3
NMHZ				S	Sn	20 01 38.3	-1.6
BKZ	Black Stump Fm	6.58	217	P	Pn	20 00 31.1	-0.2
BKZ				S	Sn	20 01 42.0	-2.9
OUZ	Omahuta	6.67	257	P	Pn	20 00 33.5	+1.0
BFZ	Birch Farm	7.90	211	P	Pn	20 00 47.7	-1.7
BFZ				S	Sn	20 02 12.4	-5.1
MRZ	Mangatainoka R	8.18	214	P	Pn	20 00 52.7	-0.5
MRZ				S	Sn	20 02 18.6	-5.7
KHZ	Kahutara	10.51	214	P	Pn	20 01 24.6	-0.4
KHZ				S	Sn	20 03 11.2	-10
CTA	Charters Tower	34.17	285	P	P	20 05 37.7	-1.2
	2.6nm,0.6s,baz=108,slow=9.6,SNR=1.7						
	2.6nm,0.6s						
ASAR	Alice Springs	42.66	271	P	P	20 06 50.5	+0.1
	1.9nm,0.8s,baz=114,slow=7.4,SNR=13						
ASAR				PcP	PcP	20 08 42.2	+0.3
	0.2nm,0.5s,baz=103,slow=3.3,SNR=1.7						
	1.9nm,0.8s						
WRA	Warramunga Arr	43.97	276	P	P	20 07 00.4	-0.5
	1.5nm,0.5s,baz=116,slow=7.6,SNR=13						
	1.5nm,0.5s						
NVAR	Mina Array Bea	91.12	43	P	P	20 12 00.6	+2.6
	0.9nm,0.7s,baz=234,slow=7.6,SNR=5.7						
	0.9nm,0.7s						
CMAR	Chiang Mai Arr	94.22	289	P	P	20 12 12.1	-0.4
	0.3nm,0.4s,baz=98,slow=4.2,SNR=2.3						
	0.3nm,0.4s						
MKAR	Makanchi Array	119.75	309	PKP	PKiKP	20 17 43.7	+0.8
	0.1nm,0.5s,baz=90,slow=2.6,SNR=1.6						
KURBB	Kurchatov Arra	123.24	312	PKP	PKiKP	20 17 51.0	+1.4
	0.3nm,0.4s,baz=116,slow=2.0,SNR=4.4						
BVAR	Borovoye Array	128.66	314	PKP	PKiKP	20 18 01.8	+1.5
	0.6nm,0.5s,baz=90,slow=1.4,SNR=2.6						
FINES	FINESS Array B	148.34	338	PKPbc	PKiKP	20 18 40.1	-0.1
	3.7nm,0.9s,baz=25,slow=3.4,SNR=14						
HFS	Hagfors	152.66	347	PKPbc	PKiKP	20 18 51.7	+2.6
	3.0nm,1.0s,baz=32,slow=5.9,SNR=4.2						

IDC 07 19:59:06.8±3.7**, 16°.43S**×**174°.94W, h262km**±42km**, mb3.7**/2**, mbtmp4.2**/3**, Error ellipse: s-maj=268.3km s-min=34.6km az=143.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.96	51	P	Pn	20 00 11.4	+0.7
	18nm,0.5s,baz=183,slow=6.8,SNR=6.3						
AFI				S	S	20 01 01.7	+0.1
	31nm,0.3s,baz=294,slow=19,SNR=14						
WRA	Warramunga Arr	48.17	258	P	P	20 07 21.3	-0.1
	1.1nm,0.6s,baz=94,slow=7.2,SNR=10.0						
	1.1nm,0.6s						
ASAR	Alice Springs	48.38	253	P	P	20 07 22.8	-0.2
	5.5nm,0.6s,baz=89,slow=8.7,SNR=35						
	5.5nm,0.6s						
BRTR	Keskin Array B	145.98	319	PKPbc	PKPdf	20 18 15.4	+0.4
	0.5nm,0.8s,baz=81,slow=4.5,SNR=3.7						

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*NOU **07** 19:59:08.0, 11°.13S×162°.21E, h0km, mb5.0/7, Solomon Islands*

*NEIC **07** 19:59:10.3±2.1, 10°.9S±0°.1×162°.41E±0°.07, h35km±2km, mb4.4/18, Error ellipse: s-maj=21.4km s-min=3.1km az=213.0*

*IDC **07** 19:59:12.8±2.9, 10°.97S×162°.42E, h66km±23km, mb3.6/8, mbtmp4.0/10, MS3.4/22, Error ellipse: s-maj=24.9km s-min=16.6km az=73.0*

ISC 07 19:59:10.4±0.6**, 10°.94S**±0°.07×**162°.46E**±0°.09**, h46km, n66, σ1s.25**/45**, mb4.2**/14**, MS3.4**/19**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HURO	Huro Makira	0.73	311	P	Pn	19 59 20.8	-3.6
NGOA	Tingoa Renbel	2.43	255	P	Pn	19 59 43.8	-3.9
HNR	Honiara	2.90	301	P	Pn	19 59 54.9	+0.9
	9.8nm,0.8s,baz=215,slow=2.7,SNR=11						
HNR				S	Sn	20 00 30.9	+3.2
	59nm,1.0s,baz=93,slow=23,SNR=9.9						
HNR				LR	LR	20 01 05.9	
	comp=Z,70nm,18.5s,baz=192,slow=39						
HNR	Honiara	2.90	301	P	Pn	19 59 54.7	+0.6
HNR	Honiara	2.90	301		Pn	19 59 53.1	-1.0
HNR				Sn	Sn	20 00 27.1	-0.6
SAVO	Savo Central	3.16	304	P	Pn	19 59 59.2	+1.5
TATA	Tatamba Isabel	3.65	314	P	Pn	20 00 05.0	+0.6
SANVU	Saraoutou	6.43	135	P	Pn	20 00 44.3	+1.7
SANVU	Saraoutou	6.43	135		Pn	20 00 44.3	+1.7
DZM	Mont Dzumac	11.71	161	P	Pn	20 01 56.9	+1.9
	5.0nm,0.7s,baz=47,slow=8.3,SNR=12						
DZM				S	Sn	20 04 01.9	-2.4
	4.5nm,0.5s,baz=230,slow=20,SNR=5.6						
OUENC	Ouen Island, N	12.16	160	Pn	Pn	20 02 02.7	+1.6
MSVF	Nonsavu	16.54	116	LR	LR	20 07 47.0	
	comp=Z,209nm,20.8s,baz=296,slow=31						
EIDS	Eidsvold	17.95	215		Pn	20 03 16.4	-0.3
CTA	Charters Tower	18.06	238	P	P	20 03 19.1	+1.0
	28nm,0.9s,baz=61,slow=13,SNR=17						
CTA				LR	LR	20 09 27.7	
	comp=Z,149nm,20.4s,baz=40,slow=34						
CTAO	Charters Tower	18.06	238		P	20 03 18.1	-0.1
CTAO				IAmb	IAmb	20 03 21.9	
	comp=Z,52nm,1.1s						
COEN	Coen	19.07	259		P	20 03 29.6	+0.4
COEN				IAmb	IAmb	20 03 32.4	
	comp=Z,19nm,1.2s						
ARMA	Armidale	21.84	206	P	P	20 03 59.0	-0.3
ARMA				IAmb	IAmb	20 04 13.5	
	comp=Z,24nm,1.3s						
AFI	Afiamalu	25.32	99	LR	LR	20 12 34.9	
	comp=Z,152nm,20.5s,baz=34,slow=32						
INKA	Innaminka	26.37	228	P	P	20 04 42.8	+0.3
INKA				IAmb	IAmb	20 04 54.7	
	comp=Z,8.3nm,1.1s						
STKA	Stephens Creek	28.38	220	LR	LR	20 16 12.4	
	comp=Z,232nm,18.2s,baz=24,slow=36						
WB0	Warramunga Arr	28.42	249	P	P	20 05 00.8	-0.2
WRA	Warramunga Arr	28.51	248	P	P	20 05 02.1	+0.2
	comp=Z,0.9nm,0.7s,baz=78,slow=9.2,SNR=9.8						
WRA				PcP	PcP	20 08 13.0	+0.2
	comp=Z,0.3nm,0.7s,baz=86,slow=3.0,SNR=5.9						
	comp=Z,0.9nm,0.7s						
WRA	Warramunga Arr	28.51	248	P	P	20 05 02.1	+0.2
H11S2	WAKE ISLAND Hy	29.54	8	T	T	20 36 08.5	
	baz=188,slow=76,SNR=292						
H11S3	WAKE ISLAND Hy	29.54	8	T	T	20 36 06.9	
	baz=188,slow=76,SNR=253						
H11S1	WAKE ISLAND Hy	29.56	8	T	T	20 36 07.9	
	baz=188,slow=76,SNR=240						
GUMO	Guam	29.98	324	LR	LR	20 16 55.2	
	comp=Z,76nm,20.0s,baz=138,slow=35						
AS31	Alice Springs	29.98	241	P	P	20 05 14.2	-0.7
ASAR	Alice Springs	29.99	241	P	P	20 05 13.3	-1.6
	comp=Z,0.6nm,0.7s,baz=66,slow=10.0,SNR=12						
ASAR				PcP	PcP	20 08 16.5	-0.1
	comp=Z,1.0nm,0.9s,baz=83,slow=2.0,SNR=5.0						
ASAR				LR	LR	20 16 20.8	
	comp=Z,128nm,20.4s,baz=71,slow=34						
	comp=Z,0.6nm,0.7s						
ASAR	Alice Springs	29.99	241	P	P	20 05 14.7	-0.2
H11N1	WAKE ISLAND Hy	30.77	8	T	T	20 37 40.7	
	baz=188,slow=76,SNR=221						
H11N3	WAKE ISLAND Hy	30.78	8	T	T	20 37 41.2	
	baz=188,slow=76,SNR=201						
H11N2	WAKE ISLAND Hy	30.79	8	T	T	20 37 40.3	
	baz=188,slow=76,SNR=190						
BBOO	Buckleboo	32.60	224	P	P	20 05 36.6	-1.2
KNRA	Kununurra	33.11	258	P	P	20 05 40.5	-1.9
KNRA				IAmb	IAmb	20 05 48.1	
	comp=Z,7.3nm,1.1s						
FITZ	Fitzroy Crossi	36.30	254	LR	LR	20 20 47.2	
	comp=Z,171nm,19.4s,baz=94,slow=36						
BATI	Baumata	38.13	267	LR	LR	20 21 56.8	
	comp=Z,66nm,20.5s,baz=102,slow=36						
KAPI	Kappang	42.67	274	LR	LR	20 25 07.4	
	comp=Z,30nm,20.9s,baz=119,slow=36						
MYLDM	Lahad Datu	46.60	288	P	P	20 07 33.5	-0.9
MYLDM				IAmb	IAmb	20 07 55.3	
	comp=Z,8.6nm,1.0s						
PPT	Papeete	46.85	104	LR	LR	20 26 43.3	
	comp=Z,34nm,18.0s,baz=195,slow=35						
JHJ	Hachijo jima 2	48.86	335	LR	LR	20 29 32.4	
	comp=Z,24nm,18.8s,baz=297,slow=37						
MJAR	Matsushiro Arr	52.46	335	P	P	20 08 18.1	-0.6
	comp=Z,1.2nm,0.9s,baz=173,slow=8.8,SNR=5.5						
	comp=Z,1.2nm,0.9s						
MJAR	Matsushiro Arr	52.46	335	P	P	20 08 17.9	-0.8
MJAR				IAmb	IAmb	20 08 20.4	
	comp=Z,5.1nm,1.4s						
JKA	Kamikawa-asahi	57.69	343	P	P	20 08 56.8	+0.5
ASAJ	Asahikawa	57.70	343	LR	LR	20 32 25.1	
	comp=Z,56nm,20.3s,baz=207,slow=34						
KSRS	Korea Array	58.02	328	LR	LR	20 32 15.8	
	comp=Z,26nm,19.7s,baz=120,slow=34						
KLR	Kul'dur	65.73	338	LR	LR	20 37 25.9	
	comp=Z,21nm,19.9s,baz=146,slow=35						
CMAR	Chiang Mai Arr	69.13	295	LR	LR	20 39 08.7	
	comp=Z,5.1nm,21.4s,baz=265,slow=35						
MA2	Magadan	70.91	354	LR	LR	20 38 17.2	
	comp=Z,17nm,20.6s,baz=108,slow=33						
SONM	Songino Array	76.70	325	P	P	20 10 57.0	+0.1
	comp=Z,0.7nm,0.8s,baz=144,slow=5.2,SNR=6.0						
SONM				LR	LR	20 42 30.9	
	comp=Z,31nm,21.4s,baz=72,slow=34						
	comp=Z,0.7nm,0.8s						
SONM	Songino Array	76.70	325	P	P	20 10 56.1	-0.8
SONM				IAmb	IAmb	20 11 10.2	
	comp=Z,1.5nm,0.8s						
N15K	Kwethluk River	76.91	18	P	P	20 10 58.4	+0.8
N15K				IAmb	IAmb	20 11 24.9	
	comp=Z,10nm,1.4s						
J14K	Nanvaranak Lak	78.03	15	P	P	20 11 05.3	+1.6
M17K	Holitna River	78.69	18	P	P	20 11 07.9	+0.4
M17K				IAmb	IAmb	20 11 26.1	
	comp=Z,11nm,1.5s						
QSPA	South Pole Qui	79.06	180	P	P	20 11 10.7	+1.0
	comp=Z,5.7nm,1.1s,baz=298,slow=2.6,SNR=5.1						
	comp=Z,5.7nm,1.1s						
QSPA	South Pole Qui	79.06	180	P	P	20 11 10.3	+0.6
TLY	Talaya	80.27	327	LR	LR	20 47 56.2	
	comp=Z,16nm,18.1s,baz=42,slow=36						
RPN	Rapa Nui	83.51	116	LR	LR	20 40 18.0	
	comp=Z,49nm,21.5s,baz=168,slow=30						
H02S2	DAWSON INLET T	84.35	33	T	T	21 44 48.5	
	SNR=36						
ILAR	Eielson Array	84.46	19	P	P	20 11 38.7	+0.8
	comp=Z,0.3nm,0.5s,baz=246,slow=5.1,SNR=8.3						
	comp=Z,0.3nm,0.5s						
ILAR	Eielson Array	84.46	19	P	P	20 11 38.1	+0.2
DLBC	Dease Lake	87.87	29	LR	LR	20 45 34.7	
	comp=Z,58nm,18.9s,baz=263,slow=32						
PFO	Pinyon Flats O	88.67	56	LR	LR	20 46 27.9	
	comp=Z,47nm,18.3s,baz=194,slow=32						
MKAR	Makanchi Array	91.25	317	P	P	20 12 10.6	-0.4
	comp=Z,0.3nm,0.7s,baz=94,slow=7.6,SNR=4.2						
	comp=Z,0.3nm,0.7s						
MKAR	Makanchi Array	91.25	317	P	P	20 12 09.9	-1.1
YKA	Yellowknife Ar	96.37	28	P	P	20 12 33.4	-0.7
	comp=Z,0.2nm,0.6s,baz=265,slow=5.0,SNR=4.5						
	comp=Z,0.2nm,0.6s						

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*IDC **07** 20:06:58.1±4.6, 10°.06N×127°.48E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=371.7km s-min=24.2km az=67.0*

*MAN **07** 20:07:00.0, 10°.35N×125°.97E, h11km, MS2.8*

ISC 07 20:07:01.0±1.5**, 10°.33N**±0°.07×**126°.04E**±0°.10**, h35km, n12, σ2s.33**/13**, mb3.2**/4**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLP	Palo	1.34	309	*e*P	Pn	20 07 23.6	+0.5
PLP				*e*S	Sn	20 07 40.7	+1.0
LLP	Lapu-Lapu	2.04	270	*e*P	Pn	20 07 33.2	+0.4
LLP				*e*S	Sn	20 07 58.9	+1.7
BIPH	Bislig	2.15	172	*i* P	Pn	20 07 36.8	+2.4
BIPH				*i* S	Sn	20 08 03.8	+3.9
TBP	Tagbilaran	2.24	254	*e*P	Pn	20 07 36.2	+0.7
TBP				*e*S	Sn	20 08 20.1	+18
CGP	Cagayan de Oro	2.29	216	*e*S	Sn	20 08 02.6	-0.6
CGP	Cagayan de Oro	2.29	216	*e*P	Pn	20 07 36.0	-0.2
DMPH	Davao City--Mi	3.27	189	*e*P	Pn	20 08 15.0	+25
RCP	Roxas	3.46	291	*e*P	Pn	20 07 53.9	+1.5
RCP				*i* S	Sn	20 08 35.3	+3.0
WRA	Warramunga Arr	31.17	165	P	P	20 13 13.8	-3.1
	0.4nm,0.9s,baz=350,slow=9.8,SNR=2.1						
	0.4nm,0.9s						
ASAR	Alice Springs	34.65	167	P	P	20 13 44.5	-2.8
	0.2nm,0.6s,baz=352,slow=7.4,SNR=5.8						

	0.2nm,0.6s						
MKAR	Makanchi Array	51.85	323	P	P	20 16 16.3	+11
	0.4nm,0.7s,baz=120,slow=8.0,SNR=5.7						
	0.4nm,0.7s						
KURBB	Kurchatov Arra	55.90	325	P	P	20 16 44.6	+9.4
	0.1nm,0.3s,baz=126,slow=7.1,SNR=1.2						
	0.1nm,0.3s						

BER ***07*** *20:07:04.7±0.6, 67°.51N×34°.15E, h0km, ML2.4, Suspected explosion*

KOLA ***07*** *20:07:05.0±0.2, 67°.66N±0°.02×33°.76E±0°.05, h0km, M2.8(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

UPP ***07*** *20:07:07.0±3.0, 67°.64N×33°.44E, h0km, ML2.5, Presumed earthquake*

IDC ***07*** *20:07:08.1±1.6, 67°.64N×33°.25E, h0km, mbtmp3.7/5, ML2.6/4, Error ellipse: s-maj=16.6km s-min=8.5km az=86.0*

ISC 07 20:07:04.0±0.9, 67°.58N±0°.04×33°.82E±0°.04, h0km, n26, σ1^{s}34/39, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA	Apatity	0.16	266	P	Pg	20 07 08.4	+1.4
APA0	Apatity Array	0.32	275	P	Pg	20 07 10.8	+0.8
APA0				S	Sg	20 07 15.1	+1.0
LVZ	Lovozero	0.45	45	P	Pg	20 07 13.2	+0.6
LVZ				S	Sg	20 07 19.3	+0.9
KVDA	Kovda	0.97	203	P	Pb	20 07 24.5	+1.0
KVDA				S	Sb	20 07 37.7	+0.9
VADS	Vadso	3.02	330	eP	Pn	20 07 53.6	+0.7
VADS				eS	Sn	20 08 29.5	-0.2
VADS				IAML		20 08 35.3	
	comp=Z,36nm,0.5s						
VADS	Vadso	3.02	330	P	Pn	20 07 53.5	+0.5
VADS				S	Sn	20 08 28.8	-1.0
ARA0	ARCESS Array S	3.63	307	eP	Pn	20 08 02.2	+0.8
ARA0				IAML		20 09 02.3	
	comp=Z,21nm,0.4s						
ARCES	ARCESS Array B	3.63	307	Pn	Pn	20 08 02.2	+0.9
	comp=Z,3.3nm,0.3s,baz=122,slow=14,SNR=326						
ARCES				Pg	Pb	20 08 10.0	+1.1
	comp=Z,3.4nm,0.3s,baz=122,slow=15,SNR=28						
ARCES				Sn	Sn	20 08 43.1	-1.6
	comp=Z,2.2nm,0.3s,baz=122,slow=28,SNR=11						
ARCES				Lg	Lg	20 08 53.1	
	comp=Z,4.8nm,0.3s,baz=120,slow=31,SNR=12						
	comp=Z,10nm,0.2s						
ARCES	ARCESS Array B	3.63	307	P	Pn	20 08 01.6	+0.3
ARCES				S	Sn	20 08 43.2	-1.6
HEF	Hetta	3.91	287	eP	Pn	20 08 06.0	+0.8
HEF				eS	Sn	20 08 51.3	-0.5
KTK1	Kautokeino	4.18	295	eP	Pn	20 08 10.0	+1.1
KTK1				IAML		20 09 18.8	
	comp=Z,17nm,0.7s						
KALU	Kalix	4.50	252	P	Pn	20 08 14.2	+1.0
	baz=56						
KALU				S	Sn	20 09 05.4	-0.8
LANU	Lannavaara	4.51	281	P	Pn	20 08 13.5	0.0
LANU				S	Sn	20 09 04.5	-2.0
MASU	Masugnsbyn	4.54	274	P	Pn	20 08 14.2	+0.3
HAMF	Hammerfest	4.75	315	eP	Pn	20 08 17.0	+0.2
KIF	Kilpisjarvi	5.04	292	eP	Pn	20 08 20.7	+0.1
KUA	Kurravaara	5.13	280	P	Pn	20 08 22.1	+0.1
KOVU	Salmi	5.20	283	P	Pn	20 08 23.1	+0.2
RATU	Laukkuluspa	5.42	279	P	Pn	20 08 26.1	+0.1
NIKU	Nikkaluokta	5.63	280	P	Pn	20 08 29.1	+0.3
SALU	Saltoluokta	5.89	275	eP	Pn	20 08 32.5	+0.2
FINES	FINESS Array B	7.00	212	Pn	Pn	20 08 48.5	+0.8
	comp=Z,0.2nm,0.3s,baz=28,slow=14,SNR=8.9						
FINES				Sn	Sn	20 10 04.4	-3.4
	comp=Z,0.2nm,0.3s,baz=25,slow=25,SNR=1.8						
FINES				Lg	Lg	20 10 40.4	
	comp=Z,0.8nm,0.3s,baz=23,slow=32,SNR=18						
	comp=Z,0.5nm,0.3s						
FAUS	Fauske	7.11	277	P	Pn	20 08 48.3	-0.8
FAUS				S	Sn	20 10 06.2	-4.3
HFS	Hagfors	11.54	239	Pn	Pn	20 09 48.8	-1.0
	comp=Z,0.1nm,0.3s,baz=40,slow=14,SNR=2.4						
HFS				Sn	Sn	20 11 49.2	-10
	baz=43,slow=26						
HFS				Lg	Lg	20 13 02.9	
	comp=Z,0.2nm,0.3s,baz=46,slow=30,SNR=4.7						
	comp=Z,1.7nm,0.7s						
SPITS	Spitsbergen Ar	11.73	342	Pn	Pn	20 09 49.6	-2.7
	comp=Z,24nm,1.1s,baz=147,slow=16,SNR=14						
NOA	NORSAR Array B	11.74	247	Pn	Pn	20 09 51.7	-0.8
	baz=41,slow=12,SNR=3.8						
NOA				Lg	Lg	20 13 08.6	
	baz=46,slow=24,SNR=4.9						
	comp=Z,0.4nm,0.7s						

IDC 07 20:12:30.9±8.7, 7°.07S×129°.50E, h174km±92km, mb2.6/1, mbtmp3.4/5, Error ellipse: s-maj=81.8km s-min=26.7km az=39.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.56	241	P	Pn	20 14 06.8	+1.5
	5.0nm,0.4s,baz=319,slow=23,SNR=1.4						
BATI				S	Sn	20 15 19.2	-0.5
	12nm,0.5s,baz=76,slow=19,SNR=2.6						
FITZ	Fitzroy Crossi	11.59	199	P	Pn	20 15 11.1	-0.2
	0.6nm,0.4s,baz=13,slow=12,SNR=14						
FITZ				S	Sn	20 17 13.4	-6.6
	1.1nm,0.6s,baz=268,slow=20,SNR=1.6						
WRA	Warramunga Arr	13.63	160	P	Pn	20 15 35.8	-1.5
	0.3nm,0.5s,baz=342,slow=13,SNR=11						
WRA				S	Sn	20 17 59.4	-10
	0.3nm,0.3s,baz=291,slow=16,SNR=7.8						
ASAR	Alice Springs	17.04	166	P	Pn	20 16 19.4	+0.3
	0.4nm,0.5s,baz=345,slow=12,SNR=9.3						
MKAR	Makanchi Array	68.01	327	P	P	20 23 11.2	-0.2
	0.1nm,0.6s,baz=145,slow=5.3,SNR=1.5						
	0.1nm,0.6s						

TAP 07 20:16:57.9, 24°.40N×121°.42E, h7km, ML1.1, 1C-2D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNSB	Datong	0.04	307	⇓iP	Pg	20 16 59.6	+0.2
NNSB				iS	Sg	20 17 00.6	+0.1
NNS	Nan Shan	0.05	311	⇓iP	Pg	20 16 59.8	+0.2
NNS				iS	Sg	20 17 01.0	+0.2
LATG	Datong	0.16	37	⇑iP	Pg	20 17 01.7	+0.4
LATG				S	Sg	20 17 04.9	+1.3
ETLH	Xiulin Townshi	0.20	163	eP	Pg	20 17 02.9	+0.9
NDT	Datong Townshi	0.22	24	eS	Sg	20 17 06.0	+0.8
FUSS	Fushou	0.22	226	eP	Pg	20 17 02.9	+0.5
TWT	Tachien	0.27	236	eS	Sb	20 17 09.7	-0.3
YHNB	Yeheng	0.27	352	eP	Pg	20 17 03.3	+0.1
YHNB				iS	Sg	20 17 07.1	+0.3
ENTT	Nioudou	0.27	30	iP	Pg	20 17 04.1	+0.8
ENTT				iS	Sg	20 17 07.7	+0.8
NSK	Sanguang	0.28	349	S	Sg	20 17 08.2	+1.2
NACB	Ninganchiao	0.28	145	eS	Sg	20 17 07.6	+0.4
NDS	Dongshan	0.35	50	eP	Pg	20 17 05.0	+0.1
NFF	Wufeng Townshi	0.35	310	S	Sg	20 17 10.9	+1.3
FUSB	Fushanzhiwuyua	0.39	24	eP	Pb	20 17 06.4	-0.8
TWE	Neicheng	0.39	36	eP	Pg	20 17 06.0	+0.5
ETM	Tongmen	0.44	171	P	Pb	20 17 07.5	-0.6
WHP	Taichung City	0.45	254	eP	Pg	20 17 07.3	+0.7

JMA 07 20:17:20.7±0.2, 24°.9N±0°.8×123°.4E±0°.2, h12km, MV1.4/7, NW OFF ISHIGAKIJIMA IS, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.60	226	eP	Pg	20 17 32.3	-0.1
JYNG				eS	Sg	20 17 40.6	+0.1
IRIF	Iriomote-Funau	0.61	152	eP	Pg	20 17 32.4	-0.2
JIJ	Ishigaki jima	0.83	128	eP	Pg	20 17 36.2	-0.6
JIJ				eS	Sg	20 17 46.8	-0.9
JKRS	Kuro-shima	0.83	140	P	Pg	20 17 36.6	-0.2
JKRS				eS	Sg	20 17 47.9	+0.2
JISG	Ishigakijimahi	0.86	109	eP	Pg	20 17 36.9	-0.4
JISG				eS	Sg	20 17 48.5	-0.1

IDC 07 20:21:15.6±11.0, 14°.63S×167°.38E, h194km±129km, mb3.0/3, mbtmp3.6/4, Error ellipse: s-maj=117.8km s-min=34.9km az=155.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.46	187	P	Pn	20 23 02.8	+0.9
	2.7nm,0.3s,baz=357,slow=8.1,SNR=12						
DZM				S	Sn	20 24 24.9	-1.3
	1.7nm,0.4s,baz=97,slow=21,SNR=1.8						
WRA	Warramunga Arr	31.95	256	P	P	20 27 23.0	-0.5
	0.3nm,0.8s,baz=84,slow=8.8,SNR=2.1						
	0.3nm,0.8s						
ASAR	Alice Springs	32.81	249	P	P	20 27 31.1	+0.2
	0.7nm,0.7s,baz=78,slow=8.8,SNR=12						
	0.7nm,0.7s						
ILAR	Eielson Array	86.40	18	P	P	20 33 35.3	-0.2
	0.3nm,0.7s,baz=204,slow=4.0,SNR=2.0						
	0.3nm,0.7s						

IDC 07 20:24:49.1±29.0, 16°.97S×173°.48W, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=554.8km s-min=58.0km az=65.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	22.77	199	P	P	20 29 53.0	-0.1
	6.9nm,1.0s,baz=160,slow=20,SNR=1.7						
	6.9nm,1.0s						
STKA	Stephens Creek	43.21	241	P	P	20 32 52.6	+0.5
	1.6nm,0.7s,baz=100,slow=16,SNR=1.8						
	1.6nm,0.7s						
WRA	Warramunga Arr	49.43	258	P	P	20 33 41.0	-0.2
	0.4nm,0.9s,baz=96,slow=7.4,SNR=6.5						
	0.4nm,0.9s						
ASAR	Alice Springs	49.57	253	P	P	20 33 41.9	-0.4
	1.6nm,0.6s,baz=89,slow=8.1,SNR=17						
	1.6nm,0.6s						

GCG ***07*** *20:30:27.8±2.0, 15°.27N×94°.62W, h37km±999km, MD5.0, ML5.0, Presumed earthquake*

MEX ***07*** *20:30:29.1±0.8, 15°.21N×94°.57W, h19km±32km, MD4.8*

NEIC ***07*** *20:30:30.9±1.9, 15°.34N±0°.06×94°.45W±0°.05, h39km±9km, mb4.3/36, Md4.8/135(MEX), Error ellipse: s-maj=9.9km s-min=6.4km az=207.0*

CATAC ***07*** *20:30:30.9±0.6, 15°N±2°×9°4W±°, h32km±8km, M5.2/19, mb5.2/4, mB6.3/4, MLv4.9/19, Mw(mB)6.0/4, Error ellipse: s-maj=6.5km s-min=3.2km az=41.2, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.39; $M_{\theta\theta}$-1.26; $M_{\phi\phi}$0.88; $M_{r\theta}$0.86; $M_{\theta\phi}$0.69; $M_{\phi r}$-1.04; Fault plane solution: $M_0$1.89013×10^{15} NP1:ϕ_s144.32494°, δ82.89765°, λ130.55692°. NP2:ϕ_s242.54590°, δ41.06797°, λ10.84806°. Principal axes: T 1.7041, Plg38.3554°, Azm90.2199°; N 0.3289, Plg40.1817°, Azm318.2848°; P -2.0330, Plg26.4669°, Azm203.4216°; confirmed*

IDC ***07*** *20:30:32.0±1.1, 16°.75N×93°.40W, h0km, mb3.9/11, mbtmp3.9/14, ML3.8/3, MS3.4/6 Error ellipse: s-maj=28.1km s-min=11.4km az=19.0*

ISC 07 20:30:27.7±2.1, 15°.18N±0°.04×94°.59W±0°.03, h26km±16km, n231, σ2^{s}43/318, mb4.3/20, MS3.2/7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CARR	Arriaga	1.24	31	eP	Pn	20 30 47.2	-2.3
CARR				eS	Sn	20 31 00.9	-4.4
PCIG		1.42	68		Pn	20 30 50.2	-1.6
PCIG					Sn	20 31 06.7	-3.0
PCIG		1.42	68	eP	Pn	20 30 50.2	-1.6
PCIG				eS	Sn	20 31 06.7	-3.0
HUIG	Huatulco	1.58	292	eP	Pn	20 30 53.4	-0.7
HUIG				eS	Sn	20 31 10.6	-3.1
HUIG	Huatulco	1.58	292	iP	Pn	20 30 53.3	-0.7
HUIG				iS	Sn	20 31 10.5	-3.1
CMIG	Matias Romero	1.92	352	Pg	Pn	20 30 58.1	-0.6
	1μm,0.3s,baz=172,slow=11,SNR=7165						
CMIG				Lg	Lg	20 31 19.4	
	883nm,0.3s,baz=112,slow=19,SNR=52						
CMIG				LR	LR	20 31 40.6	
	comp=Z,329nm,21.1s,baz=164,slow=47						
CMIG	Matias Romero	1.92	352		Pn	20 30 58.0	-0.8
CMIG					Sn	20 31 20.0	-2.1
CMIG	Matias Romero	1.92	352	eP	Pn	20 30 58.0	-0.8
CMIG				eS	Sn	20 31 20.0	-2.1
TGIG		2.12	41		Pn	20 31 01.2	-0.3
TGIG					Sn	20 31 25.3	-1.9
TGIG		2.12	41	eP	Pn	20 31 01.2	-0.3
TGIG				eS	Sn	20 31 25.3	-1.9
TGIG		2.12	41	iP	Pn	20 31 01.3	-0.3
TGIG				iS	Sn	20 31 25.0	-2.2
TGIG				IAML		20 31 28.0	
	comp=E,14μm,0.4s						
TGBT	Tuxtla Gutierr	2.14	42		Pn	20 31 01.5	-0.3
TGBT					Sn	20 31 25.4	-2.1
TGBT	Tuxtla Gutierr	2.14	42	eP	Pn	20 31 01.5	-0.3
TGBT				eS	Sn	20 31 25.4	-2.1
THIG		2.26	97		Pn	20 31 03.1	-0.4
THIG		2.26	97	eP	Pn	20 31 03.1	-0.4
THIG				eS	Sn	20 31 26.9	-3.6
PATR	El Naranjo	2.27	91		Pn	20 31 02.2	-1.6
PATR	El Naranjo	2.27	91	eP	Pn	20 31 02.2	-1.6
PATR				eS	Sn	20 31 24.6	-6.5
PAVE	Pavencul	2.33	89		Pn	20 31 03.7	-0.9
PAVE					Sn	20 31 30.0	-2.5
PAVE	Pavencul	2.33	89	eP	Pn	20 31 03.7	-0.9
PAVE				eS	Sn	20 31 30.0	-2.5
CHUJ	Union Juarez	2.40	92	eP	Pn	20 31 04.4	-1.1
CHUJ				eS	Sn	20 31 30.9	-3.3
SMCA	Catarina	2.45	97	iP	Pn	20 31 06.5	+0.4
SMCA				IAML		20 31 37.5	
	comp=E,3μm,0.5s						
PEIG	Puerto Escondi	2.60	289		Pn	20 31 07.8	-0.3
PEIG	Puerto Escondi	2.60	289	eP	Pn	20 31 07.8	-0.3
PEIG				eS	Sn	20 31 35.0	-3.9
CCIG	Comitan	2.60	65		Pn	20 31 08.5	+0.2
CCIG				Sn	Sn	20 31 37.7	-1.5
CCIG	Comitan	2.60	65	eP	Pn	20 31 08.9	+0.6
CCIG				eS	Sn	20 31 38.7	-0.5
CCIG	Comitan	2.60	65	P	Pn	20 31 09.3	+1.0
CCIG				S	Sn	20 31 37.6	-1.5
CCIG	Comitan	2.60	65	iP	Pn	20 31 08.9	+0.6
CCIG				iS	Sn	20 31 38.6	-0.5
OXLC	Oaxaca	2.76	313		Pn	20 31 11.9	+1.3
OXLC					Sn	20 31 42.6	-0.6
OXLC	Oaxaca	2.76	313	iP	Pn	20 31 11.9	+1.3
OXLC				eS	Sn	20 31 42.6	-0.6
NEUV	Arroyo Zacate	2.77	335		Pn	20 31 09.9	-0.6
NEUV					Sn	20 31 42.4	-0.7
NEUV	Arroyo Zacate	2.77	335	eP	Pn	20 31 09.9	-0.6
NEUV				eS	Sn	20 31 42.4	-0.7
OXBJ	Oaxaca	2.78	313		Pn	20 31 12.1	+1.4
OXBJ					Sn	20 31 42.9	-0.7
OXBJ	Oaxaca	2.78	313	eP	Pn	20 31 12.1	+1.4
OXBJ				eS	Sn	20 31 42.9	-0.7
OXIG	Oaxaca	2.79	313		Pn	20 31 12.4	+1.5
OXIG					Sn	20 31 43.3	-0.6
VHO	Vista Hermosa	2.79	313	eP	Pn	20 31 12.4	+1.5
VHO				eS	Sn	20 31 43.3	-0.6
TUIG	Tuzandepetl	2.84	3		Pn	20 31 11.4	0.0
TUIG	Tuzandepetl	2.84	3	eP	Pn	20 31 11.4	0.0
RTAL	Retalhuleu	2.87	103		Pn	20 31 12.9	+1.0
RTAL				Sn	Sn	20 31 44.6	-1.0
RTAL	Retalhuleu	2.87	103	eP	Pn	20 31 11.8	0.0
RTAL	Retalhuleu	2.87	103	P	Pn	20 31 13.0	+1.1
RTAL				S	Sn	20 31 47.0	+1.3
HUEH	Huehuetenango	2.98	87		Pn	20 31 14.8	+1.2
HUEH	Huehuetenango	2.98	87	eP	Pn	20 31 15.0	+1.4
HUEH	Huehuetenango	2.98	87	P	Pn	20 31 14.8	+1.2
HUEH				S	Sn	20 31 48.4	-0.2
HUEH	Huehuetenango	2.98	87	iP	Pn	20 31 14.8	+1.2
HUEH				iS	Sn	20 31 50.3	+1.6
HUEH				IAML		20 32 01.0	
	comp=N,11μm,0.5s						
QUEO	Labor Ovalle	2.99	96	iP	Pn	20 31 14.5	+0.8
QUEO				IAML		20 31 59.9	
	comp=E,4μm,0.5s						
STG2	El Palmar, Qui	3.19	103	iP	Pn	20 31 11.7	-4.7
VHSA	Villahermosa	3.20	29		Pn	20 31 15.1	-1.3
VHSA					Sn	20 31 53.2	-0.5
VHSA	Villahermosa	3.20	29	eP	Pn	20 31 15.1	-1.3
VHSA				eS	Sn	20 31 53.2	-0.5
STG8	El Palmar, Qui	3.21	103	iP	Pn	20 31 12.1	-4.7
STG5	El Palmar, Qui	3.23	103	iP	Pn	20 31 12.3	-4.5
YOIG	Yosondua	3.29	301		Pn	20 31 20.0	+2.1
YOIG	Yosondua	3.29	301	eP	Pn	20 31 20.0	+2.1
YOIG				eS	Sn	20 31 53.3	-3.1
PMUV	Sontecomapan	3.38	351		Pn	20 31 16.8	-2.2
PMUV					Sn	20 31 55.9	-2.4
PMUV	Sontecomapan	3.38	351	eP	Pn	20 31 16.8	-2.2
PMUV				eS	Sn	20 31 55.9	-2.4
PNIG	Pinotepa	3.61	290		Pn	20 31 22.6	+0.5
PNIG	Pinotepa	3.61	290	eP	Pn	20 31 22.6	+0.5
PNIG				eS	Sn	20 31 59.3	-4.7
TXIG	Tlaxiaco	3.68	304		Pn	20 31 25.2	+1.9
TXIG	Tlaxiaco	3.68	304	eP	Pn	20 31 25.2	+1.9
TOIG	Toxpalan	3.75	321		Pn	20 31 26.1	+2.1
TOIG					Sn	20 32 08.2	+0.9
TOIG	Toxpalan	3.75	321	eP	Pn	20 31 26.1	+2.1
TOIG				eS	Sn	20 32 08.2	+0.9
APG	El Apazote	3.99	92	Pn	Pn	20 31 27.5	+0.1
	comp=E,1.8nm,0.3s,baz=199,slow=13,SNR=55						
APG				Lg	Lg	20 32 16.1	
	comp=E,3.1nm,0.3s,baz=75,slow=19,SNR=6.9						
	comp=E,5.0nm,0.4s						
APG	El Apazote	3.99	92	iP	Pn	20 31 29.1	+1.7
FG8	Yepocapa, Chim	4.00	103	iP	Pn	20 31 22.9	-4.6
HLIG	Huajuapan de L	4.05	311		Pn	20 31 30.8	+2.5
HLIG					Sn	20 32 14.4	-0.7
HLIG	Huajuapan de L	4.05	311	eP	Pn	20 31 30.8	+2.5
HLIG				eS	Sn	20 32 14.4	-0.7
TPIG	Tehuac#an	4.17	321		Pn	20 31 32.6	+2.7
TPIG	Tehuac#an	4.17	321	eP	Pn	20 31 32.6	+2.7
TPIG				eS	Sb	20 32 26.4	-4.2
FTIG	Fresnillo de T	4.35	309		Pn	20 31 34.9	+2.6
FTIG	Fresnillo de T	4.35	309	eP	Pn	20 31 34.9	+2.6
FTIG				eS	Sn	20 32 19.9	-2.3
MGIG	Malinaltepec	4.39	298		Pn	20 31 35.2	+2.3
MGIG	Malinaltepec	4.39	298	eP	Pn	20 31 35.2	+2.3
MGIG				eS	Sn	20 32 20.8	-2.5
TLIG	Tlapa	4.49	302		Pn	20 31 36.9	+2.5
TLIG	Tlapa	4.49	302	eP	Pn	20 31 36.8	+2.5
TLIG				eS	Sn	20 32 22.0	-3.8
TLIG	Tlapa	4.49	302	P	Pn	20 31 37.1	+2.9
TLIG				S	Sn	20 32 29.9	+4.1
FAME	Alcaldia de Sa	4.62	106	P	Pn	20 31 37.2	+1.3
FAME				S	Sn	20 32 29.5	+0.5
CRIG	Cruz Grande	4.63	290	eP	Pn	20 31 31.8	-4.3
CRIG				eS	Sn	20 32 21.8	-7.4
JAUV	Jalcomulco	4.67	333		Pn	20 31 35.0	-1.6
JAUV	Jalcomulco	4.67	333	eP	Pn	20 31 35.0	-1.6
JAUV				eS	Sn	20 32 23.1	-6.9
SLOZ	Alcaldia de Sa	4.79	103	P	Pn	20 31 40.4	+2.1
SLOZ				S	Sn	20 32 34.4	+1.3
NUBE	Las Nubes	4.83	105	P	Pn	20 31 41.1	+2.2
NUBE				S	Sn	20 32 34.3	+0.2
LVIG	Laguna Verde	4.84	339	eP	Pn	20 31 36.3	-2.6
LVIG				eS	Sn	20 32 28.6	-5.5
PETF	Flores	4.86	69		Pn	20 31 39.6	+0.4
PETF	Flores	4.86	69	eP	Pn	20 31 39.6	+0.4
PETF				eS	Sn	20 32 30.1	-4.5
PETF	Flores	4.86	69	P	Pn	20 31 39.9	+0.8
PETF				S	Sn	20 32 32.2	-2.3
PETF	Flores	4.86	69	iP	Pn	20 31 39.8	+0.7
SCIG	Sabancuy	4.97	40		Pn	20 31 38.8	-2.0
SCIG	Sabancuy	4.97	40	eP	Pn	20 31 38.8	-2.0
SCIG				eS	Sn	20 32 30.4	-7.1
SCIG	Sabancuy	4.97	40	P	Pn	20 31 40.5	-0.2
SCIG				S	Sn	20 32 34.2	-3.3
SCIG	Sabancuy	4.97	40	iP	Pn	20 31 40.0	-0.7
SCIG				IAML		20 33 04.4	
	comp=N,809nm,0.9s						
CEVE	Cerro Verde	4.99	105	P	Pn	20 31 43.5	+2.2
CEVE				S	Sn	20 32 39.2	+0.9
UNIC	Universidad Ca	5.02	103	P	Pn	20 31 42.7	+1.1
ESQI	Esquipulas	5.11	96	Pn	Pn	20 31 44.1	+1.3
ESQI	Esquipulas	5.11	96	P	Pn	20 31 43.8	+1.0
ESQI				S	Sn	20 32 40.8	-0.2
MTO3	Montecristo	5.12	98		Pn	20 31 44.5	+1.5
MTO3	Montecristo	5.12	98	P	Pn	20 31 44.3	+1.4
MTO3				S	Sn	20 32 41.1	-0.2
DAIG	Los Arroyos	5.20	291		Pn	20 31 44.3	+0.4
DAIG	Los Arroyos	5.20	291	eP	Pn	20 31 44.3	+0.4
DAIG				eS	Sn	20 32 36.7	-6.3
JAYA	Jayaque - finc	5.21	106	P	Pn	20 31 44.9	+0.8
JAYA				S	Sn	20 32 44.6	+1.1
CEDA	San Andres	5.21	105	P	Pn	20 31 45.3	+1.1
CEDA				S	Sn	20 32 45.1	+1.6
PMON	Piamonte	5.31	105	P	Pn	20 31 48.2	+2.7
PMON				S	Sn	20 32 47.6	+1.6
PPCL	Tochimilco	5.35	314	eP	Pn	20 31 50.0	+3.8
PPCL				eS	Sn	20 32 49.4	+2.3
LALI	Alcalda de L	5.38	108	P	Pn	20 31 47.2	+0.9
LALI				S	Sn	20 32 48.8	+1.4
PPPT	Popocatepetl	5.39	315	eP	Pn	20 31 50.8	+3.7
PPPT				eS	Sn	20 32 48.1	-0.5
PPSX	Xalitzintla	5.40	317	eP	Pn	20 31 53.9	+7.0
PPSX				eS	Sn	20 32 52.8	+4.4
PBXN	Popocatepetl	5.44	315	eP	Pn	20 31 51.6	+4.0
PBXN				eP	Pn	20 31 52.1	+4.5
PBXN				eS	Sn	20 32 49.4	-0.3
PBXN				eS	Sn	20 32 50.1	+0.4
PBPN	Popocatepetl	5.44	315	eP	Pn	20 31 51.8	+4.0
PBPN				eS	Sn	20 32 49.4	-0.4
PPM	Popocatepetl	5.46	316	eP	Pn	20 31 51.2	+3.2
PPM				eS	Sn	20 32 49.0	-1.2
PPIG	Popocatepetl	5.46	316		Pn	20 31 51.2	+3.2
PPIG					Sn	20 32 49.0	-1.2
MEIG	Mezcala	5.54	300		Pn	20 31 51.9	+3.3
MEIG	Mezcala	5.54	300	eP	Pn	20 31 51.9	+3.3
MEIG				eS	Sn	20 32 48.4	-3.2
YAIG	Yautepec	5.63	311		Pn	20 31 53.4	+3.4
YAIG	Yautepec	5.63	311	eP	Pn	20 31 53.4	+3.4
YAIG				eS	Sn	20 32 49.5	-4.5
SARH	Santa Rosa de	5.65	93	P	Pn	20 31 50.4	+0.3
SARH				S	Sn	20 32 54.0	-0.2
SARH	Santa Rosa de	5.65	93	iP	Pn	20 31 50.4	+0.3
PLIG	Platanillo	5.69	305		Pn	20 31 52.9	+2.2
PLIG	Platanillo	5.69	305	eP	Pn	20 31 52.9	+2.2
PLIG				eS	Sn	20 32 52.5	-2.7
CXUV	Coxquihui	5.73	330		Pn	20 31 49.6	-1.5
CXUV	Coxquihui	5.73	330	eP	Pn	20 31 49.6	-1.5
CXUV				eS	Sn	20 32 52.8	-3.4
CAIG	El Cayaco	5.76	290		Pn	20 31 51.0	-0.6
CAIG	El Cayaco	5.76	290	eP	Pn	20 31 51.0	-0.6
CAIG				eS	Sn	20 32 49.6	-7.4
MPVM	San Francisco	5.82	314		Pn	20 31 56.3	+3.7
MPVM					Sn	20 33 00.7	+2.1
MPVM	San Francisco	5.82	314	eP	Pn	20 31 56.3	+3.7
MPVM				eS	Sn	20 33 00.7	+2.1
THVM	De Xico	5.87	315	eS	Sn	20 33 04.7	+4.8
TLVM	San Miguel Top	5.92	313		Pn	20 31 54.3	+0.2
TLVM					Sn	20 33 02.7	+1.3
TLVM	San Miguel Top	5.92	313	eP	Pn	20 31 54.3	+0.2
TLVM				eS	Sn	20 33 02.7	+1.3
XCVM	Xochimilco	5.92	314		Sn	20 33 01.4	+0.1
XCVM	Xochimilco	5.92	314	eS	Sn	20 33 01.4	+0.1
MZVM		5.96	313		Sn	20 33 02.7	+0.9
MZVM		5.96	313	eP	Pn	20 31 58.9	+4.6
MZVM				eS	Sn	20 33 02.7	+0.9
MAVM	Malinalco, Edo	6.01	309		Pn	20 31 58.9	+3.7
MAVM					Sn	20 33 02.7	-0.6
MAVM	Malinalco, Edo	6.01	309	eP	Pn	20 31 58.9	+3.7
MAVM				eS	Sn	20 33 02.7	-0.6
VTVM	Tizayuca	6.06	319		Pn	20 31 58.9	+2.9
VTVM	Tizayuca	6.06	319	eP	Pn	20 31 58.9	+2.9
VTVM				eS	Sn	20 33 11.4	+6.6
MCRU	Las Cruces	6.07	313	eP	Pn	20 31 58.3	+2.2
MCRU				eS	Sn	20 33 09.4	+4.4
AOVM	Tlapan	6.08	313		Pn	20 32 00.4	+4.0
AOVM	Tlapan	6.08	313	eP	Pn	20 32 00.4	+4.0
AOVM				eS	Sn	20 33 02.7	-2.7
INVM	La Marquesa	6.14	312		Pn	20 32 00.9	+3.8
INVM					Sn	20 33 04.7	-2.0
INVM	La Marquesa	6.14	312	eP	Pn	20 32 00.9	+3.8
INVM				eS	Sn	20 33 04.7	-2.0
PTVM	Pico Tres Padr	6.16	316		Pn	20 31 56.9	-0.3
PTVM	Pico Tres Padr	6.16	316	eP	Pn	20 31 56.9	-0.3
PTVM				eS	Sn	20 33 00.7	-6.3

ZUVM ZUMPANGO 6.30 318 eS Sn 20 33 04.7 -5.8
TOVM TOLUCA 6.35 311 Sn 20 33 10.7 -1.1
TOVM TOLUCA 6.35 311 eP Pn 20 32 05.6 +5.6
TOVM eS Sn 20 33 10.7 -1.1
DEIG Demacu 6.62 321 eP Pn 20 32 11.6 +7.9
ZIIG Zihuatanejo 7.03 291 Pn 20 32 11.0 +2.1
ZIIG Zihuatanejo 7.03 291 eP Pn 20 32 11.0 +2.1
ZIIG eS Sn 20 33 22.8 -5.3
TGUH Tegucigalpa,Un 7.17 98 Pn Pn 20 32 12.4 +1.3
CTUV Llano Grande 7.21 331 Pn 20 32 14.2 +2.8
CTUV Sn 20 33 34.6 +2.1
CTUV Llano Grande 7.21 331 eP Pn 20 32 14.2 +2.8
CTUV eS Sn 20 33 34.6 +2.1
CRIN San Cristobal 7.72 108 Pn Pn 20 32 21.7 +3.0
MOIG Morelia 7.72 306 Pn 20 32 22.7 +3.9
MOIG Morelia 7.72 306 eP Pn 20 32 20.9 +2.1
TEIG Tepich 7.83 49 Pn 20 32 18.4 -1.6
CNGN Cerro Negro 8.11 108 Pn 20 32 25.8 +1.8
RPIG Rio Verde 8.40 323 eP Pn 20 32 13.9 -14
MMIG Aquila 8.94 291 Pn 20 32 37.8 +2.5
MMIG Aquila 8.94 291 eP Pn 20 32 37.8 +2.5
BOAB BOACO BROADBAN 9.08 106 Pn 20 32 39.8 +2.6
SIUN Universidad Ur 9.62 97 Pn 20 32 44.9 +0.4
INCO Volcan de Coli 9.63 298 eP Pn 20 32 50.0 +4.9
INCO eS Sn 20 34 37.1 +4.3
SOMAC Volcano de Col 9.65 298 eP Pn 20 32 51.0 +5.6
SOMAC eS Sn 20 34 39.7 +6.5
CDAR Ciudad de Arme 9.76 294 eP Pn 20 32 50.4 +4.0
CDAR eS Sn 20 34 29.8 -5.4
CEGR Campo Tres 9.79 297 eP Pn 20 32 52.1 +5.0
CEGR eS Sn 20 34 35.8 -0.6
JUD3 Juan Diaz 3 10.14 118 Pn 20 32 53.3 +1.5
JTS Las Juntas de 10.58 116 Pn Pn 20 33 01.9 +4.1
comp=N,1.6nm,0.3s,baz=283,slow=5.2,SNR=4.0
comp=N,6.5nm,0.5s
JTS Las Juntas de 10.58 116 Pn 20 32 59.4 +1.6
ZAIG Zacatecas 10.67 316 Pn Pn 20 33 00.5 +1.2
CJM Chamela 10.87 295 eP Pn 20 33 04.9 +3.2
ANIG Ahuacatlan 11.10 303 Pn 20 33 09.5 +4.5
ANIG Ahuacatlan 11.10 303 eP Pn 20 33 09.5 +4.5
PIRO Carate, Puerto 12.91 120 Pn 20 33 31.6 +2.0
SOR Soroa 13.31 54 Pn Pn 20 33 33.6 -1.4
833A Chaparral WMA, 13.81 342 Pn 20 33 43.5 +1.6
HNDO Hondo 14.92 344 Pn 20 33 56.9 -0.2
DRIO Del Rio 15.22 340 Pn 20 34 01.4 +0.3
435B Jarrell 15.77 350 Pn 20 34 07.6 -0.5
JCT Junction City 15.96 343 Pn 20 34 11.3 +0.6
JCT IAmb IAmb 20 34 27.3
comp=Z,15nm,0.6s
CAIB Caibarien 16.04 61 P 20 34 13.2 -1.6
CAIB IAmb IAmb 20 34 17.6
comp=Z,36nm,0.8s
SAND Sanderson 16.26 336 Pn 20 34 15.8 +1.3
TX31 Lajitas Ar. Si 16.39 331 Pn Pn 20 34 16.9 +0.7
TXAR Lajitas Array 16.39 331 Pn Pn 20 34 17.5 +1.3
comp=Z,0.2nm,0.3s,baz=153,slow=12,SNR=16
comp=Z,1.9nm,0.7s
BRDY Brady 16.53 347 Pn 20 34 17.6 -0.2
BRDY IAmb IAmb 20 34 33.9
comp=Z,14nm,0.8s
OZNA Ozona 16.77 340 Pn 20 34 20.9 -0.1
OZNA IAmb IAmb 20 34 29.5
comp=Z,29nm,0.9s
ABTX Abilene, Hawle 17.96 346 Pn 20 34 35.6 -0.2
ABTX IAmb IAmb 20 34 39.7
comp=Z,20nm,0.8s
CLNB Carlsbad 18.99 335 P Pn 20 34 48.7 +0.3
LRAL Lakeview Retre 19.06 20 P P 20 34 46.0 -2.1
MNTX Cornudas Mount 19.17 331 Pn 20 34 51.4 +1.0
MIAR Mount Ida 19.30 3 P P 20 34 50.1 -0.7
MIAR IAmb IAmb 20 35 00.9
comp=Z,17nm,1.0s
W35A Tecumseh 19.99 355 P 20 34 58.1 -0.2
W35A IAmb IAmb 20 35 25.7
comp=Z,21nm,0.7s
AMTX Amarillo 20.63 343 P 20 35 05.9 +0.5
121A Cookes Peak, D 21.03 327 P 20 35 10.0 +0.2
121A IAmb IAmb 20 35 16.5
comp=Z,15nm,0.9s
Y22A Socorro 21.77 331 P 20 35 17.8 +0.1
Y22A IAmb IAmb 20 35 34.0
comp=Z,9.4nm,0.9s
ANMO Albuquerque 22.39 334 P 20 35 26.0 +1.6
ROSC El Rosal 22.43 115 P P 20 35 26.1 +1.0
SLOR San Lorenzo - 22.43 133 P P 20 35 27.8 +2.5
S39A Bolivar 22.45 3 P 20 35 24.2 -0.6
S39A IAmb IAmb 20 35 51.4
comp=Z,16nm,1.4s
TKL Tuckaleechee C 22.57 23 P P 20 35 13.2 -13
comp=Z,0.9nm,0.3s,baz=4.1,slow=22,SNR=1.4
comp=Z,0.9nm,0.3s
TKL Tuckaleechee C 22.57 23 P P 20 35 25.4 -0.7
TKL IAmb IAmb 20 35 41.0
comp=Z,22nm,1.1s
CCM Cathedral Cave 22.97 7 P P 20 35 30.3 0.0
CCM IAmb IAmb 20 35 48.0
comp=Z,8.9nm,0.9s
SDV Santo Domingo 24.24 102 LR LR 20 44 16.2
comp=Z,64nm,19.8s,baz=278,slow=35
SDCO Great Sand Dun 24.46 339 P 20 35 45.8 +0.8
ISCO Idaho Springs 26.36 341 P P 20 36 03.3 +1.1
PDAR Pinedale Array 30.35 338 P P 20 36 37.7 0.0
comp=Z,0.2nm,0.6s,baz=166,slow=5.9,SNR=2.1
comp=Z,0.2nm,0.6s
NVAR Mina Array Bea 31.20 322 P P 20 36 48.5 +3.3
comp=Z,0.4nm,0.6s,baz=137,slow=8.8,SNR=3.8
NVAR LR LR 20 49 26.6
comp=Z,70nm,18.5s,baz=148,slow=37
comp=Z,0.4nm,0.6s
SADO Sadowa 32.26 21 LR LR 20 49 08.8
comp=Z,46nm,18.4s,baz=346,slow=37
AGMN Agassiz Nation 33.04 358 P 20 37 00.1 -0.9
EPLO Experimental L 34.41 1 P 20 37 12.0 -0.8
PLID Pearl Lake 34.87 333 P 20 37 17.9 +0.8
PLID IAmb IAmb 20 37 31.4
comp=Z,6.3nm,1.3s
ULM Lac du Bonnet 34.99 359 P P 20 37 13.4 -4.4
comp=Z,2.4nm,0.7s,baz=172,slow=7.2,SNR=4.2
ULM LR LR 20 52 09.7
comp=Z,34nm,19.1s,baz=191,slow=39
comp=Z,2.4nm,0.7s
YBH Yreka Blue Hor 35.91 323 LR LR 20 53 51.1
comp=Z,4.6nm,20.6s,baz=131,slow=40
FFC Flin Flon 39.88 353 P 20 37 59.3 +0.1
FFC IAmb IAmb 20 38 00.5
comp=Z,3.9nm,0.7s
MDP Montagnes des 42.41 99 LR LR 20 56 59.3
comp=Z,61nm,19.3s,baz=298,slow=38
SCHQ Schefferville 45.04 22 LR LR 20 58 58.8
comp=Z,76nm,19.4s,baz=248,slow=40
YKAW1 Yellowknife Wh 49.29 348 P 20 39 14.3 +0.1
YKAW1 IAmb IAmb 20 39 27.2
comp=Z,4.8nm,0.9s
YKA Yellowknife Ar 49.33 348 P P 20 39 13.4 -1.0
comp=Z,0.5nm,0.6s,baz=155,slow=6.8,SNR=9.2
comp=Z,0.5nm,0.6s
YKA Yellowknife Ar 49.33 348 P P 20 39 15.8 +1.3
INK Inuvik 58.61 344 P P 20 40 20.5 -1.6
comp=Z,0.6nm,0.6s,baz=39,slow=21,SNR=2.0
comp=Z,0.6nm,0.6s
INK Inuvik 58.61 344 P P 20 40 22.3 +0.2
INK IAmb IAmb 20 40 36.3
comp=Z,2.1nm,0.8s
ILAR Eielson Array 60.78 337 P P 20 40 37.4 +0.2
comp=Z,0.4nm,0.9s,baz=132,slow=5.6,SNR=7.2
comp=Z,0.4nm,0.9s
ILAR Eielson Array 60.78 337 P P 20 40 38.0 +0.8
RND Reindeer 60.91 335 P P 20 40 38.2 +0.1
RND IAmb IAmb 20 40 53.5
comp=Z,4.1nm,1.1s
BMAR Burnt Mountain 61.33 340 P P 20 40 41.8 +0.8
F21K Alatna River 64.28 338 P P 20 41 00.8 +0.2
F21K IAmb IAmb 20 41 13.4
comp=Z,4.2nm,0.8s
B20K Meade River 66.59 341 P P 20 41 16.3 +1.0
EKA Eskdalemuir Ar 78.47 36 P P 20 42 25.1 -1.3
comp=Z,5.2nm,0.9s,baz=268,slow=5.8,SNR=4.4
comp=Z,5.2nm,0.9s
SPITS Spitsbergen Ar 79.43 11 P P 20 42 31.0 -0.3
comp=Z,7.4nm,1.0s,baz=265,slow=14,SNR=6.9
comp=Z,7.4nm,1.0s
NOA NORSAR Array B 84.30 28 P P 20 42 55.9 -1.3
comp=Z,1.0nm,0.8s,baz=293,slow=5.3,SNR=3.7
comp=Z,1.0nm,0.8s
ARCES ARCESS Array B 85.79 18 P P 20 43 03.6 -1.0
comp=Z,2.7nm,0.8s,baz=300,slow=5.5,SNR=6.9
comp=Z,2.7nm,0.8s
ARCES ARCESS Array B 85.79 18 P P 20 43 04.5 -0.1
HHC Hu-ho-hao-te 119.20 337 eP PKiKP 20 49 17.0 +1.9
PZH PanZhiHua 135.63 339 PKP PKPdf 20 49 47.0 +0.3

IDC 07 20:51:58.1±2.4, 5.°00N×126.°47E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=177.2km s-min=29.2km az=66.0
MAN 07 20:52:03.0, 4.°85N×125.°17E, h2km, MS2.8
ISC 07 20:52:00.9±1.3, **4.°62N**±0.°08×**125.°3E**±0.°2, **h10**km, **n6**, σ**2.s30**/9, **mb3.3**/3, **Talaud Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GSPH General Santos 1.51 345 i P Pb 20 52 26.7 -2.5
GSPH i S Sn 20 52 51.0 +2.9
DDMP Don Marcelino, 1.52 14 eP Pb 20 52 28.7 -0.6
DDMP eS Sg 20 52 47.4 -2.6
BIPH Bislig 3.69 16 i P Pn 20 52 59.1 +1.0
BIPH i S Sn 20 53 43.7 +2.1
WRA Warramunga Arr 25.96 160 P P 20 57 32.2 -1.7
0.6nm,0.6s,baz=343,slow=10.0,SNR=7.7
0.6nm,0.6s
ASAR Alice Springs 29.32 164 P P 20 58 04.0 -0.1
0.3nm,0.6s,baz=342,slow=7.8,SNR=5.8
0.3nm,0.6s
MKAR Makanchi Array 56.04 326 P P 21 01 41.2 +1.1
0.3nm,0.9s,baz=111,slow=7.9,SNR=1.7
0.3nm,0.9s

BGR 07 20:57:50.6, 30.°05N×17.°17W, h10km, mb4.5
IDC 07 20:58:02.4±0.5, 32.°34N×16.°71W, h0km, mb4.4/31, mbtmp4.4/32, ML5.8/2, MS4.4/76, Error ellipse: s-maj=13.2km s-min=12.0km az=145.0
IGIL 07 20:58:03.4, 32.°32N×16.°92W, h6km, ML4.8
MOS 07 20:58:04.5±0.9, 32.°29N×16.°73W, h22km, mb5.0/77, MS4.4/10, Error ellipse: s-maj=9.4km s-min=3.7km az=50.9
NEIC 07 20:58:04.1±1.1, 32.°40N±0.°06×16.°82W±0.°09, h5km±3km, mb5.0/174, Mww5.3/47, Error ellipse: s-maj=11.8km s-min=6.3km az=57.0
NEIC 07 20:58:04.9, 32.°41N×16.°83W, h20km
NEIC 07 20:58:04.9, 32.°31N×17.°06W, h20km, Moment Tensor Solution. Duration: 2.s1 Moment tensor: Scale 10^17Nm; Mrr-0.70; Mθθ0.84; Mφφ-0.14; Mrθ-0.24; Mθφ-0.52; Mφr-0.33; Fault plane solution: M0 1.02000×10^17 NP1: φs322.28000°, δ51.13000°, λ-45.36000°. NP2: φs84.71000°, δ56.36000°, λ-131.08000°. Principal axes: T 1.0708, Plg3.0000°, Azm202.0000°; N -0.1038, Plg33.0000°, Azm110.0000°; P -0.9671, Plg57.0000°, Azm297.0000°;
MDD 07 20:58:05.9±0.5, 32.°50N×16.°76W, h20km±5km, Mb5.8/82, M_mb5.5/83 Error ellipse: s-maj=6.1km s-min=3.2km az=19.0
GCMT 07 20:58:05.9±0.1, 32.°36N±0.°01×16.°83W±0.°01, h14km, MW5.3/131, Moment Tensor Solution. s89,c147; s131,c233; Duration: 1.s0 Moment tensor: Scale 10^17 Nm; Mrr-0.56±.02; Mθθ0.95±.02; Mφφ-0.39±.01; Mrθ0.08±.03; Mθφ-0.59±.01; Mφr-0.21±.03; Best double couple: M0 0.97500×10^17 NP1: φs72.00000°, δ59.00000°, λ-152.00000°. NP2: φs327.00000°, δ66.00000°, λ-35.00000°. Principal axes: T 1.1840, Plg5.0000°, Azm21.0000°; N -0.4200, Plg49.0000°, Azm117.0000°; P -0.7650, Plg41.0000°, Azm287.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
GFZ 07 20:58:05.2, 32.°30N×16.°76W, h13km, MW5.2, Moment Tensor Solution. s71 Moment tensor: Mrr-6.90; Mθθ6.99; Mφφ-0.09; Mrθ4.50; Mθφ-2.73; Mφr1.71; Fault plane solution: NP1: φs128.00000°, δ35.00000°, λ-55.00000°. NP2: φs268.00000°, δ61.00000°, λ-111.00000°. Principal axes: T 8.8500, Plg14.0000°, Azm14.0000°; N 0.0600, Plg19.0000°, Azm279.0000°; P -8.9100, Plg65.0000°, Azm138.0000°;
CNRM 07 20:58:06.7, 32.°53N×16.°63W, h31km, ML5.7
INMG 07 20:58:06.0±1.9, 32.°33N×16.°76W, h4km, ML5.2, Ms4.0, Error ellipse: s-maj=6.2km s-min=2.4km az=88.0, #DIST_RANGE: LOCAL #IPMA_REGION: SW Desertas (Madeira) #FELT: V (MM56) at Ilha da Madeira: Canico (Santa Cruz)
NAO 07 20:58:11.3, 32.°18N×16.°74W, h10km, MB5.0
ISC 07 20:58:04.2±0.6, **32.°30N**±0.°03×**16.°75W**±0.°03, **h11**km±3km, **n1150**, σ**1.s77**/1151, **mb4.9**/242, **MS4.5**/95, **120C-36D, Madeira Islands region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FUL Funchal 0.37 341 ⇑iP Pg 20 58 11.4 -0.2
PMAR Madeira 0.45 342 ⇑eP Pg 20 58 12.5 -0.5
PMAR eS Sg 20 58 17.7 -1.3
PMAR i IAML 20 58 19.8
PMAR i IAML 20 58 21.5
PMAR i IAML 20 58 21.8
PMAR Madeira 0.45 342 P Pg 20 58 12.5 -0.5
PMAR S Sg 20 58 19.4 +0.4
PMOZ Porto Moniz, M 0.64 325 Pg 20 58 15.3 -1.5
PMOZ Sg Sg 20 58 20.9 -4.4
PMOZ Porto Moniz, M 0.64 325 ⇓eP Pg 20 58 15.4 -1.3
PMOZ eS Sg 20 58 22.9 -2.3
PMOZ i IAML 20 58 25.8
PMOZ i IAML 20 58 26.8
PMOZ i IAML 20 58 27.0
PMOZ Porto Moniz, M 0.64 325 P Pg 20 58 14.9 -1.9
PMOZ S Sg 20 58 25.3 0.0
PMPS Porto Santo 0.84 25 ⇑iP Pg 20 58 18.6 -1.7
PMPS eS Sg 20 58 29.1 -2.1
PMPS i IAML 20 58 33.6
PMPS i IAML 20 58 34.6
PMPS i IAML 20 58 39.8
PMPST Porto Santo, M 0.85 24 ⇑iP Pg 20 58 18.9 -1.9
PMPST eS Sg 20 58 29.8 -2.1
PMPST i IAML 20 58 33.5
PMPST i IAML 20 58 33.8
PMPST i IAML 20 58 37.6
CROM Garafia, La Pa 3.66 196 P Pn 20 58 57.6 -3.4
CROM S Sn 20 59 36.3 -7.9
CGOR Puntagorda, La 3.67 197 P Pn 20 58 58.1 -2.8
CGOR S Sn 20 59 36.0 -8.1
CMIR El Paso, La Pa 3.71 195 P Pn 20 58 57.8 -3.8
CMIR S Sn 20 59 35.3 -10
TBT Taburiente 3.74 196 P Pn 20 58 58.2 -3.6
TBT ⇑iIVmb_VC 20 59 00.2
74μm,SNR=171
TBT S Sn 20 59 36.6 -9.3
EBAJ Bajamar 3.76 174 P Pn 20 58 59.2 -2.9
EBAJ ⇑iIVmb_VC 20 59 01.7
13μm,SNR=20
EBAJ S Sn 20 59 38.1 -8.3
CBRE Brena Baja,La 3.77 194 P Pn 20 58 59.0 -3.2
CBRE S Sn 20 59 37.9 -8.7
CENR El Paso, La Pa 3.78 195 P Pn 20 58 59.2 -3.3
CENR S Sn 20 59 38.7 -8.3
CVIE Villa de Mazo, 3.81 194 P Pn 20 58 59.9 -3.1
CVIE S Sn 20 59 39.7 -8.1
CJED Jedey, El Paso 3.83 195 P Pn 20 59 00.3 -2.8
CJED S Sn 20 59 40.3 -7.8
EHIG Higuera 3.84 194 P Pn 20 59 00.1 -3.1
EHIG S Sn 20 59 41.1 -7.3
CTEN Fuencaliente, 3.92 194 P Pn 20 59 01.0 -3.3
CTEN ⇑iIVmb_VC 20 59 05.1
83μm,SNR=12
CTEN S Sn 20 59 42.7 -7.5
CREA Los Realejos, 3.94 178 P Pn 20 59 01.1 -3.5
CREA ⇑iIVmb_VC 20 59 04.7
22μm,SNR=36
CREA S Sn 20 59 43.4 -7.3
CBOL Buenavista del 3.97 181 P Pn 20 59 01.0 -4.2
CBOL ⇑iIVmb_VC 20 59 07.3
12μm,SNR=19
CBOL S Sn 20 59 43.6 -8.1
CGUI Guimar, Teneri 3.97 176 P Pn 20 59 01.3 -3.8
CGUI ⇑iIVmb_VC 20 59 05.5
30μm,SNR=33
CGUI S Sn 20 59 44.6 -7.1
CNOR Icod de los Vi 3.97 179 P Pn 20 59 01.6 -3.5
CNOR S Sn 20 59 45.3 -6.5
CFOR Fortaleza, Los 3.97 178 P Pn 20 59 01.6 -3.7
CFOR ⇑iIVmb_VC 20 59 04.9
29μm,SNR=71
CFOR S Sn 20 59 45.7 -6.2
CDOS Garachico, Isl 3.99 180 P Pn 20 59 01.9 -3.5
CDOS ⇑iIVmb_VC 20 59 05.1
49μm,SNR=47
CDOS S Sn 20 59 44.3 -8.0
CDIE La Orotava (Te 4.00 178 P Pn 20 59 01.7 -4.0
CDIE S Sn 20 59 45.1 -7.6
CRAJ Montana Rajada 4.02 178 P Pn 20 59 02.4 -3.5
CRAJ ⇑iIVmb_VC 20 59 07.2
20μm,SNR=27
CRAJ S Sn 20 59 46.3 -6.9
CPVI La Orotava (Te 4.02 179 P Pn 20 59 02.7 -3.3
CPVI S Sn 20 59 46.2 -7.2
GUIA Guia de Isora, 4.04 180 P Pn 20 59 02.9 -3.2
GUIA ⇑iIVmb_VC 20 59 07.7
30μm,SNR=32
GUIA S Sn 20 59 46.3 -7.2
MACI Morro de la Ar 4.04 177 Pn 20 59 02.5 -3.7
MACI Sn Sn 20 59 45.0 -8.5
MACI Morro de la Ar 4.04 177 P Pn 20 59 02.7 -3.5
MACI ⇑iIVmb_VC 20 59 08.6
11μm,SNR=13
MACI S Sn 20 59 45.6 -7.9
CCHO La Orotava (Te 4.06 179 P Pn 20 59 02.8 -3.6
CCHO ⇑iIVmb_VC 20 59 10.1
24μm,SNR=82
CCHO S Sn 20 59 46.3 -7.8
CCAN Las Canadas 4.06 178 P Pn 20 59 02.9 -3.6
CCAN ⇑iIVmb_VC 20 59 05.5
11μm,SNR=24
CCAN S Sn 20 59 45.3 -8.9
CADE Adeje, Tenerif 4.12 180 P Pn 20 59 03.2 -4.0
CADE ⇑iIVmb_VC 20 59 08.9
10μm,SNR=15
CADE S Sn 20 59 46.6 -8.8
CVIL Vilaflor 4.13 179 P Pn 20 59 03.2 -4.0
CVIL ⇑iIVmb_VC 20 59 06.3
13μm,SNR=19
CVIL S Sn 20 59 47.1 -8.5
CLAJ Vilaflor (Tene 4.13 179 P Pn 20 59 03.4 -3.9
CLAJ ⇑iIVmb_VC 20 59 08.2
13μm,SNR=15
CLAJ S Sn 20 59 47.2 -8.4
CBLAA Tinajo 4.18 140 P Pn 20 59 06.0 -1.9
CBLAA S Sn 20 59 51.1 -5.7
CGRA Granadilla de 4.18 177 P Pn 20 59 04.9 -3.1
CGRA ⇑iIVmb_VC 20 59 08.7
40μm,SNR=29
CGRA S Sn 20 59 48.8 -8.0
CTFS San Miguel de 4.20 179 P Pn 20 59 04.5 -3.7
CTFS ⇑iIVmb_VC 20 59 08.9
21μm,SNR=30
CTFS S Sn 20 59 49.6 -7.7
EFAM Famara 4.21 138 P Pn 20 59 06.9 -1.4
EFAM ⇑iIVmb_VC 20 59 10.5
19μm,SNR=20
EFAM S Sn 20 59 51.3 -6.1
CDLV Cueva Verdes 4.23 137 P Pn 20 59 06.6 -1.9
CDLV ⇑iIVmb_VC 20 59 11.7
31μm,SNR=29
CDLV S Sn 20 59 52.1 -5.8
CFUE Fuerteventura 4.38 146 P Pn 20 59 08.1 -2.5
CFUE ⇑iIVmb_VC 20 59 11.0
64μm,SNR=210
CFUE S Sn 20 59 52.6 -8.9
CFTV Fuerteventura 4.51 149 P Pn 20 59 09.3 -3.1
CFTV ⇑iIVmb_VC 20 59 14.0
9μm,SNR=32
CFTV S Sn 20 59 56.0 -8.8
CLUM San Bartolome 4.57 168 P Pn 20 59 10.0 -3.2
CLUM ⇑iIVmb_VC 20 59 14.9
11μm,SNR=18
CLUM S Sn 20 59 57.9 -8.3
CTIG El Hierro 4.61 193 P Pn 20 59 10.1 -3.6
CTIG ⇑iIVmb_VC 20 59 15.2
42μm,SNR=30
CTIG S Sn 20 59 59.5 -7.7
CCUM Cumbre, El Hie 4.67 194 P Pn 20 59 10.9 -3.7
CCUM S Sn 21 00 01.1 -7.7
CTAD Las Tabladas, 4.68 195 P Pn 20 59 11.0 -3.7
CTAD S Sn 21 00 00.9 -8.1
CGIN Giniginamar, F 4.69 150 P Pn 20 59 12.4 -2.4
CGIN ⇑iIVmb_VC 20 59 15.2
11μm,SNR=21
CGIN S Sn 20 59 59.9 -9.4
CJUL El Julan, El H 4.70 195 P Pn 20 59 11.3 -3.8
CJUL S Sn 21 00 01.9 -7.7
CMCL Mercadel, El H 4.70 194 P Pn 20 59 11.7 -3.5
CMCL S Sn 21 00 02.7 -7.0
CCAL Punta Orchilla 4.73 195 P Pn 20 59 11.7 -3.6
CCAL S Sn 21 00 02.1 -8.0
CTAC Tacoron (Front 4.74 194 P Pn 20 59 12.0 -3.6
CTAC ⇑iIVmb_VC 20 59 16.8
55μm,SNR=67
CTAC S Sn 21 00 04.0 -6.4
CNAO La Restinga, E 4.76 193 P Pn 20 59 12.6 -3.2
CNAO ⇑iIVmb_VC 20 59 17.3
59μm,SNR=38
CNAO S Sn 21 00 04.1 -6.8
CGR Cap Guir 6.10 104 P Pn 20 59 34.1 -0.2
CGR S Sn 21 00 42.6 -1.4
EAH EAH 6.13 94 P Pn 20 59 35.0 +0.4
EAH S Sn 21 00 43.2 -1.4
TANT Tantan 6.15 128 P Pn 20 59 35.8 +0.9
TANT S Sn 21 00 47.3 +2.1
TTIG Tnine Tigouga, 7.32 102 P Pn 20 59 48.7 -2.3
TTIG S Sn 21 01 10.1 -4.0
SRHM Skhour des Reh 7.49 86 P Pn 20 59 52.1 -1.3
SRHM S Sn 21 01 13.3 -5.1
OUK Oukaimeden 7.65 96 P Pn 20 59 55.2 -0.6
OUK S Sn 21 01 21.0 -1.6
AVE Averroes 7.93 80 P Pn 20 59 59.3 -0.1
AVE S Sn 21 01 21.9 -7.1
AVE Averroes 7.93 80 Pn 20 59 59.3 -0.1
AVE Averroes 7.93 80 P Pn 20 59 59.6 +0.3
AVE S Sn 21 01 26.9 -2.1
PFVI Vila Bisbo 8.11 51 P Pn 20 59 59.1 -2.8
PFVI S Sn 21 01 22.1 -11
PFVI Vila Bisbo 8.11 51 Pn 20 59 59.1 -2.8
PFVI Vila Bisbo 8.11 51 eP Pn 20 59 59.2 -2.6
PFVI eS Sn 21 01 21.4 -12
PFVI eT T 21 07 41.4
PFVI Vila Bisbo 8.11 51 P Pn 20 59 59.0 -2.9
PFVI S Sn 21 01 29.6 -3.9
TIO Tiouine 8.21 97 S Sn 21 01 31.6 -4.6
TIO Tiouine 8.21 97 P Pn 21 00 03.9 +0.5
TIO S Sn 21 01 35.1 -1.1
PSMN Pico do Norte, 8.30 307 eP Pn 21 00 01.3 -3.2
MORF Marmelete 8.32 51 eP Pn 21 00 02.1 -2.8
MORF eS Sn 21 01 28.9 -10
MORF IAML 21 01 34.9
comp=E,885nm,0.2s
MORF Marmelete 8.32 51 Pn 21 00 01.9 -2.9
MORF Marmelete 8.32 51 eP Pn 21 00 02.0 -2.8
MORF eS Sn 21 01 28.6 -10
MORF eT T 21 07 40.9
MORF Marmelete 8.32 51 eP Pn 21 00 02.1 -2.8
VPORT Vila do Porto, 8.33 306 P Pn 21 00 01.6 -3.3
VPORT ⇑iIVmb_VC 21 00 03.1
comp=E,16μm,SNR=18
VPORT S Sn 21 01 27.7 -11
PTEO Sao Teotonio 8.42 49 eP Pn 21 00 03.6 -2.4
PTEO eS Sn 21 01 31.3 -10
PTEO eT T 21 07 50.9
OUZM OUZ 8.63 97 P Pn 21 00 08.1 -1.1
OUZM S Sn 21 01 42.3 -4.3
PBDV Barranco-do-Ve 8.77 53 P Pn 21 00 08.6 -2.4
PBDV S Sn 21 01 41.2 -8.6
PBDV Barranco-do-Ve 8.77 53 eP Pn 21 00 08.6 -2.4
PBDV eS Sn 21 01 39.2 -11
PBDV eT T 21 07 54.0
TISM Timmit 8.78 91 P Pn 21 00 10.5 -0.4
TISM S Sn 21 01 46.0 -3.9
BART Pico Bartolome 8.80 311 eP Pn 21 00 10.1 -1.3
LIS Lisbon 8.91 42 eP Pn 21 00 09.8 -3.0
LIS eS Sn 21 01 41.8 -11
LIS IAML 21 01 47.0

comp=N,904nm,0.4s
LIS Lisbon 8.91 42 *e*P Sn **Pn 21 00 09.5 -3.3**
LIS *e*S Sn 21 01 42.2 -11
LIS Lisbon 8.91 42 *e*P **Pn 21 00 09.8 -3.0**
PCVE Castro Verde 8.91 51 P **Pn 21 00 10.6 -2.2**
PCVE S Sn 21 01 43.6 -10
PCVE Castro Verde 8.91 51 *e*P **Pn 21 00 10.6 -2.2**
PCVE *e*S Sn 21 01 43.1 -10
PCVE *e*T T 21 08 01.3
MESJ Messejana 8.91 49 *e*P **Pn 21 00 09.9 -2.9**
MESJ *e*S Sn 21 01 42.4 -11
MESJ IAML 21 01 47.8
comp=N,217nm,0.7s
MESJ Messejana 8.91 49 Pn 21 00 10.2 -2.7
MESJ Messejana 8.91 49 *e*P **Pn 21 00 10.0 -2.9**
MESJ *e*S Sn 21 01 42.7 -11
MESJ *e*T T 21 07 55.3
MESJ Messejana 8.91 49 *e*P **Pn 21 00 09.9 -2.9**
PGRON Lagoa das Cont 8.93 310 *e*P **Pn 21 00 11.8 -1.4**
PMAFR Mafra 9.00 40 P **Pn 21 00 11.1 -2.9**
PMAFR S Sn 21 01 43.5 -12
PMAFR Mafra 9.00 40 *e*P **Pn 21 00 11.3 -2.8**
PMAFR *e*S Sn 21 01 44.1 -11
PMAFR *e*T T 21 08 34.6
PVAQ Vaqueiros 9.00 53 Pn 21 00 12.5 -1.6
PCALD Caldeiras da R 9.02 310 *e*P **Pn 21 00 12.3 -2.0**
CMLA Cha da Macela 9.02 310 Pn 21 00 12.1 -2.3
CMLA Cha da Macela 9.02 310 P **Pn 21 00 12.6 -1.7**
CMLA S Sn 21 01 45.3 -11
CMLA Cha da Macela 9.02 310 P **Pn 21 00 12.1 -2.3**
CMLA Cha da Macela 9.02 310 P **Pn 21 00 12.3 -2.1**
CMLA Cha da Macela 9.02 310 *e*P **Pn 21 00 12.9 -1.5**
PDA Ponta Delgada 9.10 309 *e*P **Pn 21 00 14.1 -1.3**
PSET Sete Cidades 9.19 309 *e*P **Pn 21 00 15.8 -0.8**
EGRO El Granado 9.23 53 P **Pn 21 00 15.3 -1.9**
EGRO S Sn 21 01 50.0 -11
EGRO El Granado 9.23 53 P **Pn 21 00 15.0 -2.2**
EGRO ⇑*i*VmbVC 21 00 19.9
comp=N,6µm,SNR=58
EGRO S Sn 21 01 49.9 -11
MOE Montemor 9.25 45 *e*P **Pn 21 00 15.7 -1.7**
MOE *e*S Sn 21 01 51.4 -10
MOE *e*T T 21 08 14.8
PBEJ Beja 9.25 49 *e*P **Pn 21 00 14.9 -2.6**
PBEJ *e*S Sn 21 01 51.6 -10
PBEJ *e*T T 21 08 01.3
EVO Evora 9.46 46 P **Pn 21 00 18.5 -1.9**
EVO S Sn 21 01 56.1 -11
EVO Evora 9.46 46 *e*P **Pn 21 00 18.5 -1.9**
EVO *e*S Sn 21 01 57.3 -9.4
EVO *e*T T 21 08 25.0
RSA Sarsar 9.48 71 P **Pn 21 00 18.8 -1.9**
RSA S **Sn 21 02 02.7 -4.5**
ARNO Arenosillo 9.54 57 P **Pn 21 00 20.1 -1.2**
ARNO S Sn 21 01 58.9 -10
PARRA Arraiolos 9.62 45 *e*P **Pn 21 00 19.9 -2.7**
PARRA *e*S Sn 21 01 59.4 -11
PARRA *e*T T 21 08 32.6
CPS Cap Spartel 9.65 66 P **Pn 21 00 24.0 +1.0**
CPS S **Sn 21 02 06.3 -5.0**
SFS San Fernando 9.66 62 P **Pn 21 00 22.9 -0.1**
SFS S Sn 21 02 01.8 -1.0
SFS San Fernando 9.66 62 Pn 21 00 22.0 -1.0
SFS San Fernando 9.66 62 P **Pn 21 00 23.3 +0.3**
TZRR Tazzarine 9.66 96 P **Pn 21 00 22.9 -0.4**
TZRR S **Sn 21 02 09.4 -2.5**
PSBE So Bento 9.67 40 *e*P **Pn 21 00 21.0 -2.2**
PSBE *e*S Sn 21 02 01.2 -11
PMTG Montargil 9.68 43 *e*P **Pn 21 00 20.5 -2.8**
PMTG *e*S Sn 21 02 01.6 -10
PMTG *e*T T 21 08 15.6
CNIL Conil 9.73 62 P **Pn 21 00 22.8 -1.2**
CNIL S **Sn 21 02 05.6 -7.8**
SICH Sidi Chahed 9.75 76 P **Pn 21 00 23.7 -0.7**
SICH S **Sn 21 02 08.8 -5.1**
ZGR Zagora 9.78 100 P **Pn 21 00 24.5 -0.3**
IFR Ifrane 9.85 80 P **Pn 21 00 24.8 -1.1**
IFR S Sn 21 02 04.9 -12
PBAR Barrancos 9.87 51 P **Pn 21 00 24.1 -1.8**
PBAR S Sn 21 02 04.8 -12
PBAR Barrancos 9.87 51 *e*P **Pn 21 00 23.6 -2.3**
PBAR *e*S Sn 21 02 05.3 -11
PBAR *i*IAMs_20 IAMs_20 21 04 14.4
comp=N,2µm,18.2s
CZD Col de Zad 9.90 83 P **Pn 21 00 25.4 -1.3**
CZD S **Sn 21 02 13.6 -4.3**
EMIN Mina Concepcio 9.90 54 P **Pn 21 00 24.2 -2.2**
EMIN ⇑*i*VmbVC 21 00 27.1
comp=N,5µm,SNR=76
EMIN S Sn 21 02 06.4 -11
CHEFC Chefchaouen 9.91 70 P **Pn 21 00 24.4 -2.2**
CHEFC S **Sn 21 02 12.6 -5.3**
PESTR Estremoz 9.93 46 P **Pn 21 00 24.2 -2.1**
PESTR S Sn 21 02 07.3 -11
PESTR Estremoz 9.93 46 Pn 21 00 24.8 -2.0
PESTR Estremoz 9.93 46 *e*P **Pn 21 00 24.4 -2.4**
PESTR *i*IAmb IAmb 21 00 26.9
comp=N,233nm,0.6s
PESTR *e*S Sn 21 02 08.1 -10
PESTR *i*IAMs_20 IAMs_20 21 04 01.6
comp=N,1µm,17.7s
PESTR Estremoz 9.93 46 P **Pn 21 00 24.4 -2.4**
PESTR S **Sn 21 02 12.7 -5.4**
SMIR Smir Dam 10.03 67 P **Pn 21 00 25.9 -2.2**
SMIR S **Sn 21 02 14.6 -6.0**
GOLM Goulmima 10.04 90 P **Pn 21 00 28.6 +0.2**
GOLM S **Sn 21 02 18.7 -2.4**
ESPR Espera 10.07 60 P **Pn 21 00 25.8 -2.9**
ESPR S Sn 21 02 12.5 -9.2
ESPR Espera 10.07 60 P **Pn 21 00 26.1 -2.6**
ESPR ⇑*i*VmbVC 21 00 33.0
comp=N,9µm,SNR=101
ESPR S Sn 21 02 11.4 -10
PSARD Sardoal 10.07 41 *e*P **Pn 21 00 26.1 -2.6**
PSARD *i*IAmb IAmb 21 00 29.3
comp=N,860nm,0.3s
PSARD *e*S Sn 21 02 10.1 -12
PSARD *i*IAMs_20 IAMs_20 21 04 14.9
comp=N,1µm,17.9s
LCRM LCR 10.09 79 P **Pn 21 00 27.3 -1.8**
LCRM S **Sn 21 02 16.5 -5.8**
ECEU Ceuta 10.09 66 P **Pn 21 00 27.9 -1.1**
ECEU S **Sn 21 02 14.6 -7.7**
ECEU Ceuta 10.09 66 P **Pn 21 00 27.6 -1.5**
ECEU ⇑*i*VmbVC 21 00 30.8
comp=N,4µm,SNR=30
ECEU S Sn 21 02 11.3 -11
CEU Ceuta 10.10 66 P **Pn 21 00 28.8 -0.3**
CEU S Sn 21 02 13.2 -9.0
MD01 Midelt array s 10.14 84 Pn 21 00 28.1 -1.7
MD31 MD31 10.14 84 Pn 21 00 28.3 -1.4
MD31 MD31 10.14 84 P **Pn 21 00 29.1 -0.7**
MD31 S **Sn 21 02 21.1 -2.3**
EJIF Jimena Fronter 10.20 63 P **Pn 21 00 30.1 -0.5**
EJIF S Sn 21 02 13.8 -11
PCAS Casmilo, Conde 10.21 38 *e*P **Pn 21 00 27.8 -2.8**
PCAS *i*IAmb IAmb 21 00 31.9
comp=N,523nm,0.5s
PCAS *e*S Sn 21 02 15.0 -10
PCAS *i*IAMs_20 IAMs_20 21 04 08.3
comp=N,1µm,20.0s
MDT Midelt 10.27 84 Pn **Pn 21 00 29.9 -1.6**
comp=N,28nm,0.3s,baz=287,slow=8.6,SNR=388
MDT Sn Sn 21 02 13.7 -13
comp=N,83nm,0.3s,baz=54,slow=21,SNR=9.5
MDT LR LR 21 04 17.3
comp=N,3µm,18.7s,baz=282,slow=37
comp=N,74nm,0.4s
MDT Midelt 10.27 84 P **Pn 21 00 30.9 -0.6**
MDT S **Sn 21 02 22.4 -4.2**
PMRV Marv??o 10.40 44 *e*P **Pn 21 00 30.5 -2.8**
PMRV *e*S Sn 21 02 18.7 -11
PMRV *i*IAMs_20 IAMs_20 21 04 16.1
comp=N,2µm,17.2s
PSCM Serra do Cume 10.59 310 *e*P **Pn 21 00 35.7 -0.1**
PCBR Castelo Branco 10.62 42 *e*P **Pn 21 00 33.7 -2.6**
PCBR *i*IAmb IAmb 21 00 36.0
comp=N,372nm,1.0s
PCBR *e*S Sn 21 02 24.9 -10
E1302 La Puebla de C 10.63 60 P **Pn 21 00 33.9 -2.4**
E1302 ⇑*i*VmbVC 21 00 38.0
comp=N,4µm,SNR=38
E1302 S Sn 21 02 23.8 -11
ADH Angra Heroismo 10.64 310 *e*P **Pn 21 00 35.6 -0.8**
PAGU Agualva, Azore 10.67 310 *e*P **Pn 21 00 36.2 -0.7**
ARF Arif 10.69 91 P **Pn 21 00 37.0 -0.3**
ARF S **Sn 21 02 33.8 -3.3**
PSBA Serra de Santa 10.76 310 *e*P **Pn 21 00 38.1 -0.1**
ECAB El Cabril 10.92 55 P **Pn 21 00 37.3 -3.0**
ECAB ⇑*i*VmbVC 21 00 43.1
comp=N,3µm,SNR=40
ECAB S Sn 21 02 31.3 -11
MTE Manteigas 10.97 40 Pn 21 00 37.8 -3.4
MTE Manteigas 10.97 40 *e*P **Pn 21 00 37.7 -3.4**
MTE *i*IAmb IAmb 21 00 40.3
comp=N,432nm,0.5s
MTE *e*S Sn 21 02 31.6 -12
MTE *i*IAMs_20 IAMs_20 21 04 42.5
comp=N,2µm,19.6s
PTO Porto 10.98 34 *e*P **Pn 21 00 37.5 -3.5**
PTO *i*IAmb IAmb 21 00 40.5
comp=N,135nm,0.3s
PTO *e*S **Sn 21 02 34.9 -8.9**
AKLM AKL 11.00 75 P **Pn 21 00 39.7 -1.8**
AKLM S **Sn 21 02 39.0 -5.6**
PVIS Viseu 11.01 38 *e*P **Pn 21 00 39.0 -2.7**
PVIS *e*S Sn 21 02 31.9 -13
PALE Palemas 11.06 71 P **Pn 21 00 41.2 -1.0**
PALE S **Sn 21 02 38.7 -7.2**
EMAL Malaga-Limoner 11.10 63 P **Pn 21 00 41.2 -1.6**
EMAL S Sn 21 02 37.0 -10
PID Ribeirinha 11.12 307 *e*P **Pn 21 00 42.0 -1.1**
PMAN Manadas 11.19 308 *e*P **Pn 21 00 42.5 -1.6**
PPNO Prainha do Nor 11.23 306 *e*P **Pn 21 00 43.6 -1.1**
PGRA Graciosa 11.33 309 *e*P **Pn 21 00 46.5 +0.5**
ROSA Rosais 11.34 308 *e*P **Pn 21 00 44.7 -1.3**
PICO Pico 11.35 306 *e*P **Pn 21 00 45.2 -1.1**
PCAN Candelaria 11.38 306 *e*P **Pn 21 00 46.4 -0.2**
EGOR Sierra Gorda, 11.46 62 P **Pn 21 00 45.3 -2.5**
EGOR S Sn 21 02 46.4 -9.5
EGOR Sierra Gorda, 11.46 62 P **Pn 21 00 46.6 -1.2**
EGOR ⇑*i*VmbVC 21 00 49.0
comp=N,489nm,SNR=9.1
EGOR S Sn 21 02 43.1 -13
HOR Horta 11.51 306 *e*P **Pn 21 00 47.4 -0.9**
PVRL Vila Real 11.52 36 *e*P **Pn 21 00 45.1 -3.5**
EADA Adamuz 11.55 56 P **Pn 21 00 46.2 -2.7**
EADA S Sn 21 02 47.3 -11
EADA Adamuz 11.55 56 P **Pn 21 00 46.5 -2.5**
EADA ⇑*i*VmbVC 21 00 49.7
comp=N,2µm,SNR=37
EADA S Sn 21 02 44.5 -13
POLO Lamas de Olo 11.55 36 *e*P **Pn 21 00 45.6 -3.5**
POLO *i*IAmb IAmb 21 00 49.2
comp=N,106nm,0.5s
POLO *e*S Sn 21 02 44.7 -13
POLO *i*IAMs_20 IAMs_20 21 05 29.3
comp=N,722nm,16.7s
PFCBR Castelo Branco 11.56 306 *e*P **Pn 21 00 47.5 -1.6**
CALA Caldeira 11.58 306 *e*P **Pn 21 00 48.6 -0.9**
EPLA Plasencia 11.59 45 P **Pn 21 00 46.9 -2.6**
EPLA ⇑*i*VmbVC 21 00 49.5
comp=N,10µm,SNR=98
EPLA S Sn 21 02 45.2 -14
PCED Cedros 11.61 306 *e*P **Pn 21 00 48.6 -1.1**
PCAB Cabril 11.69 34 *e*P **Pn 21 00 48.4 -2.5**
PCAB *i*IAmb IAmb 21 00 52.0
comp=N,278nm,0.5s
PCAB *e*S Sn 21 02 50.4 -11
PCAB *i*IAMs_20 IAMs_20 21 05 47.0
comp=N,1µm,16.0s
EZAM Zamans 11.74 31 P **Pn 21 00 48.2 -3.3**
EZAM ⇑*i*VmbVC 21 00 52.7
comp=N,1µm,SNR=6.8
EZAM S Sn 21 02 49.4 -13
ELGU Los Guajares, 11.74 64 P **Pn 21 00 48.9 -2.7**
ELGU S Sn 21 02 49.5 -13
ELGU Los Guajares, 11.74 64 P **Pn 21 00 49.4 -2.2**
ELGU ⇑*i*VmbVC 21 00 53.3
comp=N,1µm,SNR=16
ELGU S Sn 21 02 50.5 -12
PGAV Gavieira, Arco 11.78 33 *e*P **Pn 21 00 49.4 -2.8**
PGAV *i*IAmb IAmb 21 00 54.3
comp=N,164nm,1.2s
PGAV *e*S Sn 21 02 52.1 -12
PGAV *i*IAMs_20 IAMs_20 21 04 41.3
comp=N,1µm,20.5s
MVO Moncorvo 11.79 39 *e*P **Pn 21 00 49.2 -3.1**
MVO *i*IAmb IAmb 21 00 52.9
comp=N,223nm,1.6s
MVO *e*S Sn 21 02 52.7 -11
MVO *i*IAMs_20 IAMs_20 21 05 37.2
comp=N,1µm,17.5s
ELOB Lobios 11.80 34 P **Pn 21 00 49.9 -2.6**
ELOB ⇑*i*VmbVC 21 00 53.0
comp=N,3µm,SNR=16
ELOB S Sn 21 02 49.3 -15
EQUE Quentar 11.99 62 P **Pn 21 00 54.2 -0.9**
EQUE ⇑*i*VmbVC 21 00 59.8
comp=N,1µm,SNR=14
EQUE S Sn 21 02 57.0 -12
TAF Taforalt 12.22 74 P **Pn 21 00 57.8 -0.5**
TAF S **Sn 21 03 09.9 -4.7**
EMAZ Mazaricos 12.28 28 P **Pn 21 00 56.1 -2.9**
EMAZ ⇑*i*VmbVC 21 00 59.8
comp=N,2µm,SNR=5.3
EMAZ S Sn 21 02 56.7 -19
EBER Berja 12.31 64 P **Pn 21 00 56.6 -2.9**
EBER S Sn 21 03 04.7 -12
EBER Berja 12.31 64 P **Pn 21 00 57.0 -2.5**
EBER ⇑*i*VmbVC 21 01 03.4
comp=N,800nm,SNR=9.5
EBER S Sn 21 03 03.6 -13
E0802 Ubeda,Jaen 12.34 59 P **Pn 21 00 56.7 -3.2**
E0802 S Sn 21 03 03.3 -14
EJUZ Juzbado, Salam 12.36 42 P **Pn 21 00 56.7 -3.4**
EJUZ S Sn 21 03 05.3 -12
PAB San Pablo 12.38 51 Pn 21 00 57.1 -3.3
PAB San Pablo 12.38 51 P **Pn 21 00 56.8 -3.5**
PAB ⇑*i*VmbVC 21 01 01.6
comp=N,2µm,SNR=26
PAB S Sn 21 03 03.8 -15
PAB San Pablo 12.38 51 P **Pn 21 00 57.1 -3.3**
PBRG Braganca 12.40 37 *e*P **Pn 21 00 57.7 -2.9**
PBRG *i*IAmb IAmb 21 01 02.4
comp=N,92nm,0.5s
PBRG *e*S Sn 21 03 04.9 -14
PBRG *i*IAMs_20 IAMs_20 21 06 05.4
comp=N,1µm,16.8s
PSIM Granatula de C 12.42 55 P **Pn 21 00 58.6 -2.3**
PSIM S Sn 21 03 05.1 -14
EQES Quesada 12.48 60 P **Pn 21 00 59.3 -2.4**
EQES ⇑*i*VmbVC 21 01 04.9
comp=N,982nm,SNR=11
EQES S Sn 21 03 06.7 -14
ECAL Calabor 12.50 37 P **Pn 21 00 58.7 -3.3**
ECAL S Sn 21 03 08.5 -13
ECAL Calabor 12.50 37 P **Pn 21 00 59.3 -2.7**
ECAL ⇑*i*VmbVC 21 01 06.4
comp=N,6µm,SNR=24
ECAL S Sn 21 03 07.6 -14
EAGO Agolada(Pontev 12.53 31 P **Pn 21 00 59.0 -3.3**
EAGO ⇑*i*VmbVC 21 01 03.6
comp=N,1µm,SNR=6.4
EAGO S Sn 21 03 07.5 -14
ESDC Sonseca Array 12.70 51 Pn **Pn 21 01 01.7 -3.0**
comp=N,22nm,0.3s,baz=243,slow=13,SNR=225
ESDC Sn Sn 21 03 12.1 -14
comp=N,17nm,0.3s,baz=241,slow=23,SNR=11
ESDC LR LR 21 05 45.8
comp=N,3µm,18.1s,baz=238,slow=37
ESDC Sonseca Array 12.70 51 Pn 21 01 02.0 -2.7
ESDC Sonseca Array 12.70 51 P **Pn 21 01 01.7 -3.0**
ESDC ⇑*i*VmbVC 21 01 05.4
comp=N,3µm,SNR=33
ESDC S Sn 21 03 12.4 -14
ESBB Sonseca Array 12.70 51 Pn 21 01 01.9 -2.8
ENIJ Nijar 12.85 65 P **Pn 21 01 05.1 -1.8**
ENIJ S Sn 21 03 16.8 -13
ENIJ Nijar 12.85 65 P **Pn 21 01 05.0 -1.8**
ENIJ ⇑*i*VmbVC 21 01 09.7
comp=N,815nm,SNR=6.9
ENIJ S Sn 21 03 17.7 -12
OBBL Beni Bahdel 12.95 75 P **Pn 21 01 08.8 +0.6**
FIGM Figuig 13.12 87 P **Pn 21 01 12.0 +1.4**
FIGM S **Sn 21 03 33.2 -3.4**
EPON Pontenova 13.36 32 P **Pn 21 01 10.0 -3.7**
EPON ⇑*i*VmbVC 21 01 17.3
comp=N,2µm,SNR=7.0
EPON S Sn 21 03 28.2 -14
UCM Universidad Co 13.50 50 P **Pn 21 01 13.2 -2.4**
UCM S Sn 21 03 33.2 -12
YEBES Yebes (Guadala 13.72 49 P **Pn 21 01 17.4 -1.2**
YEBES ⇑*i*VmbVC 21 01 20.1
comp=N,6µm,SNR=18
YEBES S Sn 21 03 38.4 -13
EMUR La Murta 13.85 62 P **Pn 21 01 19.6 -0.9**
EMUR S Sn 21 03 39.2 -15
EMUR La Murta 13.85 62 P **Pn 21 01 19.4 -1.0**
EMUR ⇑*i*VmbVC 21 01 24.2
comp=N,461nm,SNR=2.6
EMUR S Sn 21 03 41.1 -13
ETOB Tobarra 13.91 59 P **Pn 21 01 17.9 -3.3**
ETOB S Sn 21 03 41.7 -14
ETOB Tobarra 13.91 59 P **Pn 21 01 18.6 -2.7**
ETOB ⇑*i*VmbVC 21 01 23.6
comp=N,456nm,SNR=2.5
ETOB S Sn 21 03 42.9 -13
CART Cartagena 13.95 63 Pn **Pn 21 01 18.9 -2.9**
CART Cartagena 13.95 63 P **Pn 21 01 20.0 -1.8**
ODJA Bouhanifia 14.13 73 P **Pn 21 01 24.6 +0.3**
EARI Arriondas 14.26 36 P **Pn 21 01 24.5 -1.6**
EARI ⇑*i*VmbVC 21 01 30.1
comp=N,805nm,SNR=2.3
EARI S Sn 21 03 49.3 -15
OFRG Douar Fergoug 14.31 72 P **Pn 21 01 24.6 -2.1**
EVIV Cofrentes, Val 14.46 57 P **Pn 21 01 26.5 -2.3**
EVIV ⇑*i*VmbVC 21 01 33.2
comp=N,654nm,SNR=4.4
EVIV S Sn 21 03 54.9 -14
ETOR Torete 14.54 50 P **Pn 21 01 28.3 -1.6**
ETOR ⇑*i*VmbVC 21 01 30.9
comp=N,7µm,SNR=52
ETOR S Sn 21 03 56.7 -14
AFON Font Roja 14.65 60 P **Pn 21 01 29.8 -1.6**
AFON ⇑*i*VmbVC 21 01 33.9
comp=N,990nm,SNR=5.1
AFON S Sn 21 03 59.1 -15
ESMB Sidi M'hamed B 14.76 72 P **Pn 21 01 32.5 -0.3**
EBEN2 Beniarda presa 14.91 60 P **Pn 21 01 32.7 -2.1**
EBEN2 ⇑*i*VmbVC 21 01 38.5
comp=N,450nm,SNR=1.4
EBEN2 S Sn 21 04 05.9 -14
E0901 Celadas (Terue 14.99 53 P **Pn 21 01 34.9 -1.1**
E0901 ⇑*i*VmbVC 21 01 40.9
comp=N,2µm,SNR=15
E0901 S Sn 21 04 11.2 -11
ELAN Lanestosa 15.15 40 P **Pn 21 01 36.1 -2.0**
ELAN ⇑*i*VmbVC 21 01 40.3
comp=N,852nm,SNR=3.5
ELAN S Sn 21 04 11.5 -14
EANR 'Ain N'Sour 15.23 71 P **Pn 21 01 39.0 -0.2**
EMOS Mosqueruela 15.38 54 P **Pn 21 01 39.9 -1.4**
EMOS ⇑*i*VmbVC 21 01 44.6
comp=N,917nm,SNR=4.5
EMOS S Sn 21 04 15.9 -16
EADEB Ain Deheb 15.48 76 P **P 21 01 49.0 +2.0**
EBGR Bougara 15.85 73 P **Pn 21 01 48.2 +0.9**
EARA Aranguren 15.92 45 P **Pn 21 01 46.1 -2.0**
EARA ⇑*i*VmbVC 21 01 49.8
comp=N,2µm,SNR=6.4
EARA S Sn 21 04 32.0 -13
EARB Arib 16.01 70 P **Pn 21 01 49.5 +0.2**
ESAC San Caprasio 16.03 49 P **Pn 21 01 48.4 -1.2**
ESAC ⇑*i*VmbVC 21 01 53.6
comp=N,2µm,SNR=4.7
ESAC S Sn 21 04 32.7 -15
EZEK Zmalet El Emir 16.09 76 P **Pn 21 01 52.7 +2.3**
ERTA Horta de San J 16.19 53 P **Pn 21 01 49.9 -1.7**
ERTA ⇑*i*VmbVC 21 01 54.9
comp=N,480nm,SNR=2.1
ERTA S Sn 21 04 37.2 -14
EBR Ebro Roquetas 16.24 54 Pn 21 01 52.9 +0.7
EBR Ebro Roquetas 16.24 54 P **Pn 21 01 52.9 +0.7**
EPOB Poblet 16.87 53 P **Pn 21 01 59.7 -0.6**
EPOB ⇑*i*VmbVC 21 02 02.1
comp=N,804nm,SNR=5.0
EPOB S Sn 21 04 51.1 -17
ECHI Chisagues Biel 16.94 48 P **Pn 21 02 00.1 -1.2**
ECHI ⇑*i*VmbVC 21 02 03.9
comp=N,1µm,SNR=11
ECHI S Sn 21 04 52.7 -17
CEST Esterri de Car 17.58 49 Pn 21 02 09.0 -0.2
CEST IAmb IAmb 21 02 17.9
comp=Z,52nm,0.5s
CORI Orista 17.80 52 P **Pn 21 02 11.7 -0.2**
CORI IAmb IAmb 21 02 15.6
comp=Z,130nm,0.7s
SACV Santiago Islan 18.35 201 P **P 21 02 19.5 +0.8**
SACV Santiago Islan 18.35 201 P **Pn 21 02 20.7 +2.0**
JSA Saint Aubin 20.11 29 *e*P **P 21 02 37.7 -0.1**
VAL Valentia 20.20 12 P Pn 21 02 41.2 +0.6
SSB Saint Sauveur 20.98 46 P 21 02 48.2 +0.8
SSB Saint Sauveur 20.98 46 P **P 21 02 48.2 +0.8**
SSB pmax pmax
comp=Z,235nm,1.9s
CLF Chambon-Foret 21.31 37 P 21 02 51.2 +0.4
IWEX Carrickbyrne, 21.34 17 P **P 21 02 51.7 +0.7**
TAM Tamanrasset 21.87 110 P **P 21 02 58.3 +1.1**
TAM Tamanrasset 21.87 110 P **P 21 02 58.3 +1.1**
TAM pmax pmax
comp=Z,173nm,0.4s
KEST Kesra 21.88 74 P **P 21 02 56.0 -1.2**
comp=Z,5.9nm,0.7s,baz=269,slow=7.8,SNR=8.0
KEST LR LR 21 12 24.1
comp=Z,1µm,18.3s,baz=248,slow=40
comp=Z,5.9nm,0.7s
KEST Kesra 21.88 74 P **P 21 02 57.4 +0.2**
KEST Kesra 21.88 74 P **P 21 02 58.5 +1.4**
MONM Monmouth 22.03 23 *e*P **P 21 03 02.0 +3.5**
MONM IAmb IAmb 21 03 04.1
comp=Z,25nm,0.9s
MCH1 Michaelchurch 22.10 23 *e*P **P 21 03 04.8 +5.6**
MCH1 IAmb IAmb 21 03 07.6
comp=Z,139nm,1.1s
BNI Bardonecchia 22.20 48 P 21 03 01.3 +0.8
BNI IAmb IAmb 21 03 11.4
comp=Z,50nm,1.1s
BNI Bardonecchia 22.20 48 P **P 21 03 01.3 +0.8**
BNI pmax pmax
comp=Z,50nm,1.1s
STRD Stroud 22.20 24 *e*P **P 21 03 03.2 +2.9**
STRD IAmb IAmb 21 03 06.1
comp=Z,26nm,0.7s
DSB Dublin 22.23 17 P **P 21 02 59.6 -1.0**
DSB Dublin 22.23 17 P **P 21 03 03.7 +3.0**
DSB Dublin 22.23 17 P **P 21 03 00.5 -0.1**
DSB IAmb IAmb 21 03 08.1
comp=Z,51nm,1.0s
HMNX Herstmonceux 22.43 29 *e*P **P 21 03 09.2 +6.4**
HMNX IAmb IAmb 21 03 11.1
comp=Z,262nm,1.0s
HLM1 Long Mynd 22.58 22 *e*P **P 21 03 04.6 +0.2**
HLM1 IAmb IAmb 21 03 07.2
comp=Z,28nm,0.7s
ILTH Belurgan, Co L 22.96 16 P **P 21 03 09.6 +1.3**
ELSH Elham, Standar 22.98 30 *e*P **P 21 03 12.1 +3.5**
ELSH IAmb IAmb 21 03 14.1
comp=Z,160nm,0.9s
SENIN Lac Senin/Sane 23.19 46 P 21 03 12.4 +1.3
SENIN IAmb IAmb 21 03 33.7
comp=Z,36nm,1.1s
STBN Sutton Boningt 23.39 24 *e*P **P 21 03 13.9 +1.2**
IDGL Inch Island, C 23.69 13 P **P 21 03 16.7 +1.1**
LBWR Ladybower, Pea 23.70 23 *e*P **P 21 03 15.9 0.0**
LBWR IAmb IAmb 21 03 20.9
comp=Z,24nm,0.8s
DOU Dourbes 23.82 35 *d*P **P 21 03 15.7 -1.3**
comp=Z,31nm,1.0s
BMRD Maredsous 24.04 35 *d*P **P 21 03 20.2 +1.2**
comp=Z,22nm,1.0s
ECH Echery 24.06 42 P **P 21 03 20.4 +1.1**
ECH IAmb IAmb 21 03 30.7
comp=Z,62nm,1.4s
ECH Echery 24.06 42 P **P 21 03 20.4 +1.1**
ECH pmax pmax
comp=Z,62nm,1.4s

UCC Uccle 24.17 34 P 21 03 21.7 +1.4
UCC Uccle 24.17 34 P P 21 03 21.7 +1.4
UCC pmax pmax
comp=Z,95nm,1.2s
UCC Uccle 24.17 34 *d*P **P 21 03 20.1 -0.2**
comp=Z,39nm,1.0s
RCHB Rochefort 24.17 36 *d*P **P 21 03 20.2 -0.1**
comp=Z,28nm,0.9s
BGES Gesves 24.25 35 *d*P **P 21 03 22.3 +1.3**
comp=Z,34nm,0.9s
WLF Walferdange 24.34 38 P **P 21 03 20.5 -1.4**
WLF Walferdange 24.34 38 P 21 03 21.9 0.0
WLF Walferdange 24.34 38 P **P 21 03 21.9 0.0**
WLF pmax pmax
comp=Z,73nm,0.9s
WLF Walferdange 24.34 38 *d*P **P 21 03 21.4 -0.5**
comp=Z,56nm,0.9s
WLF Walferdange 24.34 38 *e*P **P 21 03 22.6 +0.7**
comp=Z,38nm,1.0s,baz=236,slow=8.8
PRMA PARMA 24.44 52 P 21 03 23.6 +0.9
PRMA IAmb IAmb 21 03 46.5
comp=Z,58nm,1.1s
BSTI Sart Tilman 24.61 36 *d*P **P 21 03 24.5 +0.2**
comp=Z,3.6nm,1.0s
BFO Black Forest 24.78 42 P 21 03 26.4 +0.5
BFO IAmb IAmb 21 03 41.2
comp=Z,29nm,0.9s
BFO Black Forest 24.78 42 P **P 21 03 26.4 +0.5**
BFO pmax pmax
comp=Z,29nm,0.9s
BFO Black Forest 24.78 42 *e*P **P 21 03 27.6 +1.7**
comp=Z,13nm,0.9s,baz=236,slow=8.8
BEBN Eben Emael 24.80 35 *d*P **P 21 03 28.6 +2.6**
comp=Z,38nm,0.8s
EDMD Edmundbyers 24.84 21 *e*P **P 21 03 27.5 +1.2**
EDMD IAmb IAmb 21 03 28.5
comp=Z,16nm,0.7s
MEM Membach 24.85 36 *d*P **P 21 03 26.6 +0.2**
comp=Z,21nm,0.9s
BTNL Ternell 24.89 36 *d*P **P 21 03 28.2 +1.3**
comp=Z,16nm,0.9s
SALO Salr 24.90 50 P **P 21 03 27.3 +0.3**
ESK Eskdalemuir 24.91 19 P **P 21 03 27.2 +0.2**
ESK IAmb IAmb 21 03 52.8
comp=Z,44nm,1.2s
ESK Eskdalemuir 24.91 19 P **P 21 03 27.2 +0.2**
ESK pmax pmax
comp=Z,44nm,1.2s
EKA Eskdalemuir Ar 24.94 19 P **P 21 03 26.6 -0.6**
comp=Z,3.7nm,0.7s,baz=213,slow=9.5,SNR=6.8
comp=Z,3.7nm,0.7s
DAVOX Davos/Dischmat 24.97 47 LR LR 21 12 54.5
comp=Z,1µm,19.3s,baz=242,slow=36
FUORN Ofenpass-Fuorn 25.14 47 P 21 03 29.6 +0.2
FUORN IAmb IAmb 21 03 43.7
comp=Z,18nm,0.8s
DAVA Damuels 25.19 46 *e*P **P 21 03 31.1 +1.3**
comp=Z,43nm,0.8s,SNR=19
CESX Cesi 25.35 58 P **P 21 03 30.9 -0.1**
CESX IAmb IAmb 21 04 03.7
comp=Z,32nm,1.3s
MURB Monte Urbino 25.48 56 P **P 21 03 32.0 -0.2**
TORD Torodi Ar. Bea 25.48 134 P **P 21 03 32.5 +0.1**
comp=Z,13nm,0.8s,baz=325,slow=5.8,SNR=40
TORD LR LR 21 13 53.6
comp=Z,332nm,19.7s,baz=314,slow=37
comp=Z,13nm,0.8s
STU Stuttgart 25.50 42 P 21 03 32.7 +0.3
STU IAmb IAmb 21 03 42.2
comp=Z,52nm,1.0s
STU Stuttgart 25.50 42 P **P 21 03 32.7 +0.3**
STU pmax pmax
comp=Z,53nm,1.0s
STU Stuttgart 25.50 42 *e*P **P 21 03 34.3 +1.8**
comp=Z,91nm,1.0s,baz=236,slow=8.8
UBR Ueberruh 25.51 45 *e*P **P 21 03 33.6 +1.1**
comp=Z,13nm,0.9s,baz=236,slow=8.8
TEOL Teolo 25.55 51 P **P 21 03 33.2 +0.4**
TEOL IAmb IAmb 21 03 44.8
comp=Z,34nm,0.7s
FETA Feichten 25.60 47 *ep*P **P 21 03 34.2 +0.7**
comp=Z,62nm,1.3s,SNR=7.3
RETA Reutte 25.82 46 *ep*P **P 21 03 36.2 +0.8**
comp=Z,36nm,0.9s,SNR=5.4
TNS Taunus Mts 25.87 39 *e*P **P 21 03 38.8 +3.0**
comp=Z,15nm,0.9s,baz=236,slow=8.8
MOTA Moosalm 25.97 47 *e*P **P 21 03 38.0 +1.2**
comp=Z,51nm,1.0s,SNR=8.5
SQTA Sankt Quirin 25.98 47 *ep*P **P 21 03 37.2 +0.3**
comp=Z,30nm,0.7s
BUG Bochum--Univer 25.99 36 *e*P **P 21 03 38.6 +1.9**
baz=236,slow=8.8
WATA Walderalm 26.25 47 *ep*P **P 21 03 40.4 +1.0**
comp=Z,17nm,0.6s
WTTA Wattenberg 26.26 47 *ep*P **P 21 03 40.6 +1.1**
comp=Z,14nm,0.7s
KASTN Kahler Asten 26.42 37 *e*P **P 21 03 42.0 +1.2**
baz=236,slow=8.8
STAL STALIGIAL 26.55 50 P 21 03 41.2 -0.8
STAL IAmb IAmb 21 04 16.5
comp=Z,32nm,1.1s
ABTA Abfaltersbach 26.61 49 *ep*P **P 21 03 42.6 +0.1**
comp=Z,26nm,1.4s
IBBN Ibbenburen 26.77 34 *e*P **P 21 03 48.5 +4.7**
comp=Z,9.6nm,0.8s,baz=236,slow=8.8
LESA Schwarzleotal 26.97 47 *e*P **P 21 03 45.6 -0.2**
comp=Z,12nm,0.7s
SABO M.te Sabotino 27.03 51 P **P 21 03 46.9 +0.5**
SABO IAmb IAmb 21 04 01.4
comp=Z,33nm,1.0s
GRFO Grafenberg 27.11 42 P **P 21 03 47.0 0.0**
GRFO IAmb IAmb 21 03 59.3
comp=Z,37nm,1.0s
GRFO Grafenberg 27.11 42 P **P 21 03 47.0 0.0**
GRFO pmax pmax
comp=Z,37nm,1.0s
GRA1 Grafenberg Arr 27.11 42 P **P 21 03 46.6 -0.4**
GRA1 IAmb IAmb 21 04 18.1
comp=Z,32nm,0.9s
GRF Grafenberg Arr 27.11 42 P **P 21 03 46.6 -0.4**
GRF pmax pmax
comp=Z,32nm,0.9s
GRF Grafenberg Arr 27.11 42 *e*P **P 21 03 48.0 +1.0**
comp=Z,12nm,1.1s,baz=236,slow=8.8
KBA Koelnbreinsper 27.26 48 *ep*P **P 21 03 48.5 0.0**
comp=Z,18nm,1.3s
MYKA Terra Mystica 27.28 50 *ep*P **P 21 03 49.2 +0.6**
comp=Z,27nm,1.1s
CUC Castrocucco 27.29 64 P **P 21 03 48.1 -0.6**
GTTG Gottingen 27.41 38 *e*P **P 21 03 51.2 +1.6**
comp=Z,9.3nm,0.8s,baz=236,slow=8.8
BIOA Bad Ischl, Aus 27.68 47 *ep*P **P 21 03 52.8 +0.8**
comp=Z,11nm,0.8s
MANZ Manzenberg 27.76 42 *e*P **P 21 03 52.8 0.0**
comp=Z,0.7nm,1.0s,baz=236,slow=8.8
CLZ Clausthal 27.79 37 *e*P **P 21 03 55.4 +2.3**
comp=Z,4.0nm,0.8s,baz=236,slow=8.8
DBIC Dimbokro 27.81 154 P **P 21 03 53.8 +0.4**
comp=Z,21nm,0.9s,baz=5.8,slow=9.9,SNR=16
DBIC LR LR 21 15 10.6
comp=Z,1µm,18.2s,baz=1.0,slow=37
comp=Z,21nm,0.9s
DBIC Dimbokro 27.81 154 P 21 03 53.8 +0.4
MOX Moxa 27.81 40 *e*P **P 21 03 54.2 +1.0**
comp=Z,6.1nm,1.0s,baz=236,slow=8.8
WET Wettzell 27.82 44 *e*P **P 21 03 54.2 +0.9**
comp=Z,7.1nm,1.1s,baz=236,slow=8.8
OBKA Obir 27.83 50 *ep*P **P 21 03 54.6 +1.1**
comp=Z,34nm,1.2s
MOA Molln 28.13 47 *e*P **P 21 03 55.2 -0.9**
comp=Z,9.2nm,0.6s
TANN Tannenbergstha 28.17 41 *e*P **P 21 03 56.8 +0.4**
comp=Z,2.2nm,0.9s,baz=236,slow=8.8
GEC2 GERESS Array S 28.18 45 P **P 21 03 56.4 -0.3**
GEC2 GERESS Array S 28.18 45 *e*P **P 21 03 57.2 +0.6**
baz=236,slow=8.8
GERES GERESS Array B 28.18 45 P **P 21 03 56.3 -0.3**
comp=Z,1.7nm,1.0s,baz=245,slow=13,SNR=6.9
GERES LR LR 21 14 31.6
comp=Z,1µm,19.6s,baz=238,slow=35
comp=Z,1.7nm,1.0s
SOKA Soboth 28.20 50 *e*P **P 21 03 56.4 -0.5**
comp=Z,17nm,1.3s
KHC Kasperske Hory 28.23 45 P 21 03 56.2 -0.8
KHC Kasperske Hory 28.23 45*ce*P **P 21 03 58.2 +1.2**
KHC pmax pmax
comp=Z,24nm,2.5s

KHC Kasperske Hory 28.23 45 *e*P **P 21 03 56.2 -0.8**
FLTG Flechtingen 28.50 37 *e*P **P 21 04 02.1 +2.8**
baz=236,slow=8.8
CKRC Cesky Krumlov 28.53 46 *e*P **P 21 04 00.4 +0.7**
CKRC Cesky Krumlov 28.53 46 *e*P **P 21 04 00.4 +0.7**
ARSA Arzberg 28.71 49 P 21 04 01.1 -0.2
ARSA Arzberg 28.71 49 *e*P **P 21 04 00.2 -1.1**
comp=Z,9.0nm,1.3s
CLL Collm 28.90 40 *e*P **P 21 04 02.0 -0.9**
CLL *e*S **S 21 08 52.0 -1.0**
CLL Collm 28.90 40 *e*P **P 21 04 02.0 -0.9**
CLL *e*x x 21 04 38.0
CLL *e*x x 21 04 51.0
CLL *e*S **S 21 08 52.0 -1.0**
CLL *e*x x 21 09 54.0
CLL AMS AMS 21 14 00.0
comp=N,2µm,18.5s
CLL AMS AMS 21 14 00.0
comp=E,1µm,19.5s
BSEG Bad Segeberg 28.99 34 *e*P **P 21 04 05.1 +1.5**
comp=E,5.4nm,0.8s,baz=236,slow=8.8
CONA Conrad Observa 29.16 48 *ep*P **P 21 04 05.4 +0.1**
comp=E,7.9nm,0.9s
BRG Berggiesshubel 29.21 42 *e*P **P 21 04 06.5 +0.8**
comp=E,3.5nm,0.8s,baz=236,slow=8.8
RONA Rosalia, Austr 29.35 49 *i* P **P 21 04 06.1 -0.9**
comp=E,4.0nm,0.6s
KRUC Moravsky 29.90 46 *e*P **P 21 04 11.9 +0.1**
RUE Ruedersdorf 29.91 39 *e*P **P 21 04 13.6 +1.9**
comp=E,7.7nm,0.8s,baz=236,slow=8.8
MPLH Magyarpolny 29.99 50 P **P 21 04 13.3 +0.7**
comp=E,52nm,0.9s
VRAC Vranov 30.11 46 LR LR 21 15 04.3
comp=E,1µm,20.1s,baz=240,slow=34
VRAC Vranov 30.11 46 *e*P **P 21 04 14.1 +0.4**
MODS Modra-Piesok 30.20 48 *e*P **P 21 04 15.1 +0.6**
MODS pmax pmax
comp=Z,31nm,0.9s
MODS Modra-Piesok 30.20 48 *e*P **P 21 04 15.1 +0.6**
CHVC Chvalec 30.29 43 *e*P **P 21 04 16.9 +1.6**
CHVC Chvalec 30.29 43 *e*P **P 21 04 16.9 +1.6**
SMOL Smolenice 30.34 48 *e*P **P 21 04 16.3 +0.6**
SMOL pmax pmax
comp=Z,4.0nm,0.8s
DPC Dobruska-Polom 30.35 44 *e*P **P 21 04 16.3 +0.5**
DPC MLR MLR
comp=Z,900nm,24.7s
DPC Dobruska-Polom 30.35 44 *e*P **P 21 04 16.3 +0.5**
DPC AMS AMS 21 13 50.0
comp=Z,900nm,24.7s
OSTC Ostas 30.37 43 *e*P **P 21 04 17.5 +1.5**
OSTC Ostas 30.37 43 *e*P **P 21 04 17.5 +1.5**
MORH Mrgy, Hungar 30.45 53 ⇓P **P 21 04 17.8 +1.1**
MORH Mrgy, Hungar 30.45 53 P **P 21 04 17.4 +0.7**
comp=Z,8.5nm,0.9s
KRLC Kraliky 30.51 45 *e*P **P 21 04 19.6 +2.3**
KRLC Kraliky 30.51 45 *e*P **P 21 04 19.6 +2.3**
KSP Ksiaz 30.54 43 *e*P **P 21 04 18.2 +0.8**
KSP Ksiaz 30.54 43 P **P 21 04 17.9 +0.5**
comp=Z,9.1nm,1.1s
JAVC Velka Javorina 30.61 47 *e*P **P 21 04 18.9 +0.8**
SRO Srobarova 30.68 49 *e*P **P 21 04 20.0 +1.3**
SRO pmax pmax
comp=Z,14nm,0.9s
SRO Srobarova 30.68 49 *e*P **P 21 04 20.0 +1.3**
ACRG Accra 30.70 146 P **P 21 04 19.8 +0.7**
MORC Moravsky Berou 30.86 45 ⇓P **P 21 04 20.8 +0.5**
MORC Moravsky Berou 30.86 45 P **P 21 04 20.3 0.0**
MORC Moravsky Berou 30.86 45 ⇓P **P 21 04 20.8 +0.5**
MORC Moravsky Berou 30.86 45 *e*P **P 21 04 21.0 +0.7**
MAUC Maruska 30.88 46 *e*P **P 21 04 21.7 +1.2**
LUNU Lund 31.45 33 *i* P **P 21 04 26.0 +0.6**
PSZ Piszkesteto 31.73 50 P **P 21 04 26.7 -1.4**
PSZ IAmb IAmb 21 04 43.1
comp=Z,13nm,1.0s
PSZ Piszkesteto 31.73 50 P **P 21 04 26.7 -1.4**
PSZ pmax pmax
comp=Z,13nm,1.0s
LANS Liptovska Anna 31.82 47 *e*P **P 21 04 29.9 +1.1**
LANS pmax pmax
comp=Z,3.0nm,0.8s
LANS Liptovska Anna 31.82 47 *e*P **P 21 04 29.9 +1.1**
GKP Gorka Klasztor 32.12 39 *e*P **P 21 04 32.8 +1.5**
MDVR Moldovita 32.27 56 ⇓P **P 21 04 33.8 +1.0**
BZS Buzias 32.35 55 ⇓P **P 21 04 34.7 +1.3**
BZS Buzias 32.35 55 ⇓P **P 21 04 34.7 +1.3**
OJC Ojcow 32.38 46 *e*P **P 21 04 34.5 +0.9**
OJC Ojcow 32.38 46 P **P 21 04 33.2 -0.4**
OJC Ojcow 32.38 46 P **P 21 04 33.2 -0.4**
OJC Ojcow 32.38 46 P **P 21 04 34.1 +0.5**
comp=Z,7.5nm,1.1s
NIE Niedzica 32.42 47 *e*P **P 21 04 35.7 +1.6**
NIE Niedzica 32.42 47 P **P 21 04 34.6 +0.5**
comp=Z,8.0nm,1.1s
BORG Borgarnes 32.60 356 LR LR 21 14 15.7
comp=Z,577nm,20.5s,baz=170,slow=30
HERR Herculane 32.78 56 ⇓P **P 21 04 38.1 +0.9**
GZR Gura Zlata 33.11 55 ⇑P **P 21 04 41.4 +1.2**
GZR Gura Zlata 33.11 55 ⇑P **P 21 04 41.4 +1.2**
DRGR 33.32 53 ⇑P **P 21 04 42.6 +0.6**
DRGR 33.32 53 ⇑P **P 21 04 42.6 +0.6**
BEL Belsk 33.52 43 *e*P **P 21 04 45.6 +2.0**
MARR Marisel-Cluj 33.58 53 ⇑P **P 21 04 44.8 +0.5**
BRIU Brid 33.86 50 P **P 21 04 47.1 +0.5**
CJR Cluj-Napoca 33.91 53 ⇓P **P 21 04 47.9 +0.8**
CJR Cluj-Napoca 33.91 53 ⇓P **P 21 04 47.9 +0.8**
KWP Kalwaria Pacla 33.99 48 *e*P **P 21 04 49.9 +2.2**
KWP Kalwaria Pacla 33.99 48 P **P 21 04 48.3 +0.6**
comp=Z,17nm,1.0s
NB2 NORSAR Subarra 34.05 24 P **P 21 04 47.8 -0.3**
comp=Z,38nm,1.4s,baz=225,slow=9.3
NB2 NORSAR Subarra 34.05 24 P **P 21 04 47.8 -0.3**
NOA NORSAR Array B 34.05 24 P **P 21 04 47.7 -0.3**
comp=Z,1.4nm,0.7s,baz=226,slow=8.3,SNR=6.7
comp=Z,1.4nm,0.7s
NB201 NORSAR Array S 34.08 24 P **P 21 04 49.0 +0.6**
PLVB Pleven 34.18 59 ⇑P **P 21 04 50.9 +1.5**
MEZ Mezhgor'ye 34.22 50 P **P 21 04 50.2 +0.5**
SHIU Shidnytsya 34.30 49 P **P 21 04 51.0 +0.6**
HFS Hagfors 34.33 27 P **P 21 04 50.2 -0.3**
comp=Z,2.9nm,0.6s,baz=216,slow=7.3,SNR=17
comp=Z,2.9nm,0.6s
MDB Medias 34.34 54 ⇓P **P 21 04 52.2 +1.5**
MDB Medias 34.34 54 ⇓P **P 21 04 52.3 +1.5**
ARR Arges 34.40 56 ⇑P **P 21 04 52.7 +1.3**
IDI Anoyia 34.56 73 P **P 21 04 53.6 +0.7**
VOIR 34.70 56 ⇑P **P 21 04 54.9 +0.8**
VOIR 34.70 56 ⇑P **P 21 04 54.9 +0.8**
VOIR 34.70 56 P **P 21 04 54.7 +0.7**
comp=Z,12nm,0.9s
DRLN Deer Lake 34.71 311 P 21 04 53.0 -0.9
RDO Rodhopi 34.75 63 P **P 21 04 54.8 +0.5**
RDO IAmb IAmb 21 05 00.9
comp=Z,20nm,0.9s
STNU Starunia 34.91 50 P **P 21 04 56.3 +0.7**
DOPR Dopca 35.01 55 ⇑P **P 21 04 57.2 +0.6**
ELND Elena 35.06 60 ⇑P **P 21 04 58.3 +1.2**
BUR08 Bucovina Ar. S 35.15 52 P 21 04 57.4 -0.5
BURAR Bucovina Array 35.16 52 ⇑P **P 21 04 59.2 +1.2**
BURAR Bucovina Array 35.16 52 P 21 04 57.7 -0.2
BURAR Bucovina Array 35.16 52 ⇑P **P 21 04 59.2 +1.2**
BOSR Bodos 35.21 55 ⇓P **P 21 05 00.5 +2.1**
OZUR 35.30 55 ⇑P **P 21 05 00.5 +1.3**
MLR Muntele Rosu 35.34 56 LR LR 21 20 25.6
comp=Z,696nm,18.6s,baz=265,slow=38
MLR Muntele Rosu 35.34 56 ⇑P **P 21 05 01.3 +1.7**
MLR Muntele Rosu 35.34 56 P 21 04 59.7 +0.1
MLR IAmb IAmb 21 05 14.6
comp=Z,17nm,0.9s
MLR Muntele Rosu 35.34 56 ⇑P **P 21 05 01.3 +1.7**
MLR Muntele Rosu 35.34 56 P **P 21 05 00.1 +0.6**
comp=Z,21nm,0.9s
COVR Voineasa-Covas 35.56 55 ⇑P **P 21 05 02.0 +0.7**
LOZB Loznitsa 35.61 59 ⇑P **P 21 05 02.5 +0.7**
SUW Suwalki 35.66 41 *e*P **P 21 05 02.2 +0.3**
SUW Suwalki 35.66 41 P 21 05 01.7 -0.3
SUW Suwalki 35.66 41 P **P 21 05 01.7 -0.3**
SUW Suwalki 35.66 41 *e*P **P 21 05 02.3 +0.3**
ISR Istrita 35.72 56 ⇑P **P 21 05 04.1 +1.4**
ISR Istrita 35.72 56 ⇑P **P 21 05 04.1 +1.4**
ISR Istrita 35.72 56 P **P 21 05 03.2 +0.5**
comp=Z,57nm,0.9s
ONER Baraj Valea Uz 35.75 54 ⇓P **P 21 05 04.5 +1.6**

PLOR Plostina 35.87 55 ⇓P **P 21 05 05.3 +1.3**
PLOR Plostina 35.87 55 ⇓P **P 21 05 05.3 +1.3**
GIRR Girov 35.91 53 ⇑P **P 21 05 05.4 +1.1**
VRI Vrincioaia 35.92 55 ⇓P **P 21 05 05.6 +1.1**
VRI Vrincioaia 35.92 55 ⇓P **P 21 05 05.6 +1.1**
VRI Vrincioaia 35.92 55 P **P 21 05 05.0 +0.5**
comp=Z,16nm,0.9s
TESR Tescani 35.95 54 ⇑P **P 21 05 05.7 +1.0**
TESR Tescani 35.95 54 P **P 21 05 05.2 +0.5**
comp=Z,18nm,0.8s
ODBI Odobesti 36.14 55 ⇓P **P 21 05 07.3 +1.0**
KMPD K-Podol'skiy 36.15 50 P **P 21 05 05.1 -1.2**
KMPD P **P 21 05 05.1 -1.2**
KMPD pP **pP 21 05 09.2 +0.6**
KMPD pP **sP 21 05 09.4 -0.2**
HORU Horodok 36.25 49 P **P 21 05 05.9 -1.3**
RNPP5 Staryi Chortor 36.37 46 P **P 21 05 07.9 -0.2**
RNPP8 Varash 36.38 46 P **P 21 05 08.1 -0.1**
GHRR 36.42 55 ⇓P **P 21 05 09.5 +0.9**
GHRR 36.42 55 P **P 21 05 08.7 +0.1**
RNPP9 Sopachiv 36.42 46 P **P 21 05 08.6 0.0**
BALB Balikesir 36.56 66 P **P 21 05 10.3 +0.4**
BALB IAmb IAmb 21 05 18.0
comp=Z,18nm,0.8s
BIR Birlad 36.59 54 ⇓P **P 21 05 10.6 +0.5**
BIR Birlad 36.59 54 ⇓P **P 21 05 10.6 +0.5**
PABE Paberze 36.63 38 P 21 05 09.8 -0.5
PABE IAmb IAmb 21 05 20.9
comp=Z,23nm,0.8s
PABE Paberze 36.63 38 *e*P **P 21 05 11.4 +1.1**
GBN Guysborough 36.77 304 P **P 21 05 11.6 -0.1**
SCTR Scanteiesti 36.79 56 ⇑P **P 21 05 11.4 -0.3**
CTYL Yalikoy Yolu 36.82 63 P **P 21 05 12.1 0.0**
comp=Z,37nm,0.7s
CFR Carcaliu 36.84 56 ⇑P **P 21 05 12.0 -0.2**
CFR Carcaliu 36.84 56 ⇑P **P 21 05 12.0 -0.2**
VLDR Vladesti 36.86 55 ⇑P **P 21 05 11.8 -0.6**
AAL Aland 36.89 30 *e*P **P 21 05 11.6 -0.9**
TIRR Tirgusor 36.99 58 ⇑P **P 21 05 13.7 +0.2**
TIRR Tirgusor 36.99 58 P 21 05 13.2 -0.3
TIRR IAmb IAmb 21 05 21.0
comp=Z,78nm,1.9s
TIRR Tirgusor 36.99 58 ⇑P **P 21 05 13.7 +0.2**
TIRR Tirgusor 36.99 58 P **P 21 05 12.6 -0.9**
comp=Z,502nmcomp=Z,12nm,0.9s
TPGR Topolog 37.02 57 ⇓P **P 21 05 13.4 -0.4**
LUBAR Lubar, Ukraine 37.24 48 P **P 21 05 15.2 -0.4**
SORM Soroca 37.32 52 ⇑P **P 21 05 16.4 +0.1**
SORM Soroca 37.32 52 ⇑P **P 21 05 16.4 +0.1**
SORM Soroca 37.32 52 P **P 21 05 15.8 -0.5**
comp=Z,31nm,0.7s
KLYT Kilyos 37.39 63 P **P 21 05 17.2 +0.2**
comp=Z,811nmcomp=Z,41nm,0.9s
MI28 Mi28,Pidlybu 37.39 47 P **P 21 05 16.1 -0.8**
ISAL Salakas 37.80 39 *e*P **P 21 05 20.2 0.0**
MTSE Matsula 37.88 34 *e*P **P 21 05 21.1 +0.3**
NACGM Naroch 37.94 40 *e*P **P 21 05 22.5 +1.1**
comp=E,21nm,1.0s
EDA Edea 37.96 133 P 21 05 22.7 +0.7
RAF Rauma 38.08 29 *e*P **P 21 05 21.6 -0.9**
PURM Purcari 38.16 54 P **P 21 05 22.3 -1.1**
comp=E,25nm,0.5s
AK20 Malin Array Si 38.19 47 P **P 21 05 23.3 -0.3**
AK17 Malin Array Si 38.20 48 P **P 21 05 23.4 -0.3**
AK18 Malin Array Si 38.22 47 P **P 21 05 23.5 -0.3**
AK22 Malin Array Si 38.23 47 P **P 21 05 23.4 -0.5**
AKAS Kas 38.23 71 P **P 21 05 24.7 +0.4**
AKAS IAmb IAmb 21 05 34.9
comp=Z,21nm,0.9s
AK12 Malin Array Si 38.26 48 P **P 21 05 23.2 -1.0**
AK07 Malin Array Si 38.27 48 P **P 21 05 23.1 -1.2**
AK11 Malin Array Si 38.27 48 P **P 21 05 23.7 -0.6**
AK06 Malin Array Si 38.27 48 P **P 21 05 23.7 -0.6**
KIEV Kiev 38.30 48 ⇑P **P 21 05 25.2 +0.7**
KIEV Kiev 38.30 48 P 21 05 24.3 -0.2
KIEV Kiev 38.30 48 P **P 21 05 24.7 +0.2**
KIEV Kiev 38.30 48 ⇑P **P 21 05 25.2 +0.7**
AKBB Malin Array Si 38.31 48 P 21 05 24.5 -0.1
AKBB Malin Array Si 38.31 48*ce*P **P 21 05 26.3 +1.7**
AKBB pmax pmax
comp=Z,10.0nm,0.8s
AKASG Malin Array Be 38.31 48 P **P 21 05 23.1 -1.5**
comp=Z,1.8nm,0.6s,baz=254,slow=9.4,SNR=6.0
AKASG LR LR 21 21 10.6
comp=Z,702nm,19.3s,baz=256,slow=36
comp=Z,1.8nm,0.6s
MNK Minsk 38.42 41 *i* P **P 21 05 25.5 -0.1**
comp=E,10.0nm,0.9s
MNK *i* P **P 21 05 25.5 -0.1**
comp=N,14nm,1.1s
MNK *i* P **P 21 05 25.5 -0.1**
comp=Z,15nm,0.9s,baz=253
MNK *i* PP **PP 21 06 53.0 -0.3**
MNK *i* PPP PPP 21 07 11.7
MNK *i* S **S 21 11 20.1 -0.1**
MNK *i* SS **SnSn 21 14 05.7 -0.3**
MNK *i* SSS SSS 21 14 22.8
MNK *i* LQ LQ 21 17 38.2
MNK *i* LR LR 21 21 05.3
MNK *i* LRM MLR 21 22 52.4
comp=E,337nm,15.5s
MNK *i* LRM MLR 21 23 11.3
comp=Z,640nm,15.4s
MNK *i* LRM MLR 21 23 11.9
comp=N,431nm,16.5s
MNK Minsk 38.42 41 *i* P **P 21 05 25.4 -0.1**
MNK *i* 21 06 53.0
MNK *i* S **S 21 11 20.1 -0.1**
MNK *i* SS **SnSn 21 14 05.7 -0.3**
MNK pmax pmax
comp=Z,15nm,0.9s
MNK pmax pmax
comp=N,14nm,1.1s
MNK pmax pmax
comp=E,10.0nm,0.9s
MNK MLR MLR
comp=E,337nm,15.0s
MNK MLR MLR
comp=Z,640nm,15.0s
MNK MLR MLR
comp=N,431nm,16.0s
BORA Eskisehir 38.52 65 P 21 05 26.2 -0.5
MEF Metsahovi 38.82 32 *e*P **P 21 05 28.5 -0.2**
VSU Vasula 39.16 35 *i* P **P 21 05 31.2 -0.4**
VSU pmax pmax
comp=Z,35nm,1.7s
VSU Vasula 39.16 35 *e*P **P 21 05 31.3 -0.4**
ARBE Arbavere 39.20 33 *e*P **P 21 05 32.9 +1.0**
VAF Ylistaro 39.51 27 *e*P **P 21 05 35.4 +0.9**
KEF Keuruu 39.94 29 *e*P **P 21 05 37.1 -1.0**
BATG Bathurst New B 40.05 307 P **P 21 05 39.1 -0.2**
BATG IAmb IAmb 21 05 41.2
comp=Z,61nm,1.2s
SFJD Kangerlussuaq 40.06 340 LR LR 21 18 58.3
comp=Z,344nm,18.6s,baz=142,slow=31
SFJD Kangerlussuaq 40.06 340 *i* P **P 21 05 38.1 -1.0**
SFJD IAmb IAmb 21 05 43.4
comp=Z,22nm,0.9s
FINES FINESS Array B 40.11 30 P **P 21 05 39.1 -0.4**
comp=Z,6.0nm,0.6s,baz=245,slow=7.8,SNR=51
FINES LR LR 21 22 30.4
comp=Z,783nm,18.3s,baz=236,slow=37
comp=Z,6.0nm,0.6s
FINES FINESS Array B 40.11 30 P 21 05 38.9 -0.6
FINES FINESS Array B 40.11 30 P **P 21 05 38.9 -0.6**
FIA1 FINESS Array S 40.11 30 P 21 05 39.1 -0.4
FIA1 IAmb IAmb 21 05 49.2
comp=Z,56nm,1.1s
SUF Sumiainen 40.73 29 *e*P **P 21 05 44.1 -0.5**
ILGA Ilgaz 40.92 63 P 21 05 47.2 +0.4
BR105 Keskin Array S 40.97 65 P **P 21 05 46.6 -0.5**
comp=Z,59nmcomp=Z,7.5nm,0.9s
BR131 Keskin Array S 40.98 65 P 21 05 47.2 0.0
BR131 Keskin Array S 40.98 65 P **P 21 05 47.2 0.0**
BR131 pmax pmax
comp=Z,8.0nm,1.1s
BR131 Keskin Array S 40.98 65 P **P 21 05 48.6 +1.3**
BR131 S S 21 11 43.0 -16
BRTR Keskin Array B 40.98 65 P **P 21 05 47.8 +0.5**
comp=Z,3.3nm,0.9s,baz=270,slow=5.4,SNR=20
BRTR LR LR 21 24 03.1
comp=Z,211nm,18.5s,baz=287,slow=38
comp=Z,3.3nm,0.9s
BRTR Keskin Array B 40.98 65 P 21 05 47.9 +0.7

BRTR Keskin Array B 40.98 65 *ce*P **P 21 05 48.2 +1.0**
BRTR pmax pmax
comp=Z,4.0nm,0.9s
BR104 Keskin Array S 40.99 65 P **P 21 05 47.0 -0.3**
comp=Z,42nmcomp=Z,5.4nm,0.9s
SCHQ Schefferville 41.57 318 P **P 21 05 52.2 +0.5**
comp=Z,24nm,0.9s,baz=103,slow=7.6,SNR=20
SCHQ LR LR 21 18 38.4
comp=Z,422nm,20.9s,baz=96,slow=30
comp=Z,24nm,0.9s
SCHQ Schefferville 41.57 318 P **P 21 05 52.1 +0.4**
F64A Sherman 41.58 304 **P 21 05 52.1 +0.3**
F64A IAmb IAmb 21 05 54.2
comp=Z,54nm,1.1s
ILULI Ilulissat 41.73 342 *i*P **P 21 05 56.1 +3.4**
ILULI IAmb IAmb 21 05 57.0
comp=Z,5.1nm,0.7s
SUMG Summit 41.92 350 P **P 21 05 54.1 -0.6**
SUMG Summit 41.92 350 P **P 21 05 54.5 -0.2**
SUMG Summit 41.92 350 P **P 21 05 54.5 -0.2**
SUMG pmax pmax
comp=Z,7.0nm,0.9s
SUMG Summit 41.92 350 *i*P **P 21 05 55.0 +0.3**
SUMG IAmb IAmb 21 05 56.4
comp=Z,6.5nm,0.9s
RCBR Riachuelo 42.07 209 LR LR 21 18 43.6
comp=Z,100nm,19.7s,baz=32,slow=30
DBG Daneborg 42.12 359 *i*P **P 21 05 55.9 0.0**
GDH Godhavn 42.39 342 *i*P **P 21 05 56.6 -1.5**
GDH IAmb IAmb 21 05 59.1
comp=Z,71nm,1.6s
BNN Bunyan 42.79 66 P **P 21 06 02.6 +0.6**
JOF Joensuu 42.96 30 *e*P **P 21 06 01.9 -1.0**
LMQ La Malbaie 42.96 307 P **P 21 06 03.1 0.0**
SAATT Saattut 42.98 344 *i*P **P 21 06 04.8 +1.9**
SAATT IAmb IAmb 21 06 07.2
comp=Z,21nm,1.2s
MDP Montagnes des 43.08 239 LR LR 21 19 09.4
comp=Z,435nm,21.2s,baz=50,slow=29
TOKA Tokat 43.09 64 P **P 21 06 04.5 +0.2**
KUQ Kuujjuuaa 43.15 322 **P 21 06 04.7 +0.3**
KUQ IAmb IAmb 21 06 06.2
comp=Z,41nm,1.1s
ANN Anapa 43.43 57 *e*P **P 21 06 10.1 +3.2**
ANN *e**PP **sP 21 06 13.2 +2.9**
ANN *e*S **S 21 12 41.6 +6.7**
ANN pmax pmax
comp=Z,21nm,1.0s
NIAQ Niaqornat 43.45 343 *i*P **P 21 06 08.7 +2.0**
NIAQ IAmb IAmb 21 06 13.4
comp=Z,7.1nm,0.9s
OBN Obninsk 43.46 42 P **P 21 06 06.3 -0.6**
OBN IAmb IAmb 21 06 16.0
comp=Z,41nm,1.2s
OBN Obninsk 43.46 42J *e*P **P 21 06 07.2 +0.2**
OBN *e* 21 06 14.0
OBN *e* 21 07 46.3
OBN *i*S **S 21 12 31.7 -3.4**
OBN pmax pmax
comp=Z,21nm,1.2s
OBN MLR MLR
comp=Z,451nm,14.0s
MMAI Mount Meron Ar 43.54 74 P **P 21 06 07.2 -0.8**
comp=Z,2.9nm,0.7s,baz=297,slow=9.2,SNR=5.1
MMAI LR LR 21 27 15.6
comp=Z,200nm,20.0s,baz=276,slow=40
comp=Z,2.9nm,0.7s
H05S1 Guadeloupe/Mar 43.86 257 T T 21 52 53.7
EIL Elat 44.06 79 LR LR 21 27 16.1
comp=Z,531nm,18.2s,baz=289,slow=40
ARCES ARCESS Array B 44.09 20 P **P 21 06 11.6 -0.3**
comp=Z,7.4nm,0.8s,baz=236,slow=8.6,SNR=21
ARCES LR LR 21 22 59.9
comp=Z,696nm,20.5s,baz=234,slow=34
comp=Z,7.4nm,0.8s
ARCES ARCESS Array B 44.09 20 **P 21 06 11.7 -0.2**
ARCES ARCESS Array B 44.09 20 P **P 21 06 11.7 -0.2**
ARCES pmax pmax
comp=Z,144nm,2.0s
GHAJ Ghor Haditha 44.11 77 P **P 21 06 13.7 +1.2**
MOS Moscow 44.15 41 *e*P **P 21 06 16.1 +3.6**
MOS MLR MLR
comp=Z,400nm,16.0s
MOS MLR MLR
comp=E,400nm,15.0s
LPSR Galich'ya Gora 44.55 46 *e*P **P 21 06 15.7 -0.1**
LPSR pmax pmax
comp=Z,30nm,0.8s
DAG Danmarks Havn 44.57 359 *i*P **P 21 06 15.0 -0.6**
DAG IAmb IAmb 21 06 17.4
comp=Z,12nm,1.0s
VSR Storozhevoye 44.61 48 *e*P **P 21 06 16.6 +0.3**
VSR pmax pmax
comp=Z,10.0nm,0.8s
VORR Voronezh 44.66 47 *e*P **P 21 06 17.6 +0.9**
VORR pmax pmax
comp=Z,23nm,0.4s
ARPR Arapgir-MALATY 44.67 65 P **P 21 06 17.9 +0.7**
ARPR IAmb IAmb 21 06 28.9
comp=Z,24nm,1.1s
VORD Divnogorie 44.68 48 *e*P **P 21 06 15.5 -1.3**
VORD pmax pmax
comp=Z,10.0nm,0.9s
FRB Frobisher Bay 44.83 330 LR LR 21 20 13.5
comp=Z,531nm,20.1s,baz=100,slow=30
ASF Jabal al Asfar 44.97 75 LR LR 21 28 04.2
comp=Z,162nm,20.5s,baz=272,slow=40
SOC Sochi 45.15 59 *e*P **P 21 06 21.1 +0.4**
SOC *e* 21 08 03.9
SOC *e*PPP PPP 21 08 46.9
SOC *e*S **S 21 12 59.6 -0.4**
SOC *e*SS **ScS 21 16 18.9 +1.2**
SOC *e*SSS SSS 21 17 08.5
SOC pmax pmax
comp=Z,27nm,0.8s
SOC MLR MLR
comp=Z,246nm,19.0s
VSLR Vesyoloye 45.39 59 *i*P **P 21 06 22.9 +0.3**
VSLR pmax pmax
comp=Z,41nm,1.1s
ERBR Yeremizino-Bor 45.53 56 *e*P **P 21 06 24.8 +1.1**
ERBR *e**PP **pP 21 06 27.9 +1.8**
ERBR *e*S **S 21 13 10.2 +4.7**
ERBR pmax pmax
comp=Z,12nm,0.6s
ERBR MLR MLR
comp=N,448nm,16.0s
ERBR MLR MLR
comp=Z,544nm,20.0s
ERBR MLR MLR
comp=E,741nm,16.0s
APA Apatity 45.63 24J *e*P **P 21 06 24.7 +0.5**
APA *e* 21 08 02.8
APA *e* 21 08 11.1
APA pmax pmax
comp=Z,7.0nm,1.1s
APA MLR MLR
comp=Z,2μm,17.9s
LABN Labinsk 45.78 57 *e*P P 21 06 19.0 -6.7
LABN pmax pmax
comp=Z,13nm,0.9s
KLMR Klimovskoe 46.06 34 *e*P **P 21 06 26.7 -1.0**
KLMR *e* 21 08 04.6
KLMR S **S 21 13 12.7 0.0**
KLMR pmax pmax
comp=Z,19nm,1.0s
KLMR MLR MLR
comp=Z,834nm,16.0s
KOPT Kop Dagi 46.18 64 **P 21 06 29.3 0.0**
KOPT IAmb IAmb 21 06 48.0
comp=Z,21nm,1.1s
LVZ Lovozero 46.20 24 P **P 21 06 28.4 -0.3**
LVZ Lovozero 46.20 24 P **P 21 06 28.4 -0.3**
LVZ pmax pmax
comp=Z,206nm,2.0s
VRH Novokhopyorsk 46.22 48 *e*P **P 21 06 28.3 -0.7**
VRH pmax pmax
comp=Z,10.0nm,0.8s
HUMP Col San Antoni 46.22 265 P **P 21 06 28.6 -0.9**
HUMP IAmb IAmb 21 06 35.4
comp=Z,21nm,1.1s
SJG San Juan 46.49 265 LR LR 21 21 32.1
comp=Z,304nm,21.4s,baz=32,slow=30
KIV Kislovodsk 47.25 58 *e*P **P 21 06 38.7 +1.3**
KIV *e*S **S 21 13 32.0 +1.6**
KIV pmax pmax
comp=Z,4.0nm,1.0s
KIV MLR MLR
comp=Z,136nm,16.0s
SHA1 Shidzhatmaz 47.26 58 *i*P **P 21 06 39.0 +1.4**
NEUR Neytrino 47.35 59 *i*P **P 21 06 38.5 +0.2**
NEUR pmax pmax
comp=Z,8.0nm,1.1s
KBZ Khabaz 47.43 58 P **P 21 06 39.5 +0.9**
comp=Z,10nm,1.2s,baz=325,slow=7.9,SNR=5.5
KBZ LR LR 21 30 53.0
comp=Z,158nm,18.2s,baz=296,slow=42
comp=Z,10nm,1.2s
KBZ Khabaz 47.43 58 *i*P **P 21 06 38.9 +0.3**
KBZ pmax pmax
comp=Z,10.0nm,1.0s
NEEM North Greenlan 47.78 350 *i*P **P 21 06 40.7 -0.6**
NEEM IAmb IAmb 21 06 54.0
comp=Z,12nm,0.9s
NCK Nalchik 47.96 58 *i*P **P 21 06 43.2 +0.4**
NCK pmax pmax
comp=Z,20nm,1.1s
SPITS Spitsbergen Ar 48.20 9 P **P 21 06 45.2 +1.0**
comp=Z,8.8nm,0.9s,baz=212,slow=5.1,SNR=7.4
SPITS LR LR 21 22 45.9
comp=Z,416nm,21.9s,baz=214,slow=31
comp=Z,8.8nm,0.9s
GEVA Gevas 48.45 65 P **P 21 06 47.4 +0.6**
SADO Sadowa 49.25 304 LR LR 21 25 25.3
comp=Z,228nm,18.6s,baz=118,slow=33
SADO Sadowa 49.25 304 **P 21 06 53.1 +0.4**
SADO IAmb IAmb 21 06 55.0
comp=Z,25nm,1.0s
GNI Garni 49.36 63 LR LR 21 29 21.9
comp=Z,182nm,20.7s,baz=304,slow=38
GNI Garni 49.36 63 P **P 21 06 54.7 +0.9**
GNI Garni 49.36 63*ce*P **P 21 06 56.4 +2.6**
GNI pmax pmax
comp=Z,20nm,1.7s
GNI Garni 49.36 63 P **P 21 06 54.7 +0.9**
BELG Belogornoye 49.86 46 LR LR 21 29 04.9
comp=Z,515nm,18.3s,baz=278,slow=37
BELG Belogornoye 49.86 46 *i*P **P 21 06 57.1 -0.1**
BELG pmax pmax
comp=Z,4.0nm,1.0s
TULEG Thule 50.29 346 **P 21 07 00.5 +0.3**
TULEG IAmb IAmb 21 07 14.0
comp=Z,12nm,1.0s
BOAV Boa Vista 50.72 243 P **P 21 07 04.4 +0.2**
KIRV Kirov 50.79 38 LR LR 21 28 10.7
comp=Z,1μm,20.6s,baz=269,slow=36
KIRV Kirov 50.79 38*ce*P **P 21 07 05.4 +1.3**
MAK Makhachkala 50.87 58*c i*P P 21 06 58.3 -6.7
MAK *e*S S 21 14 12.4 -8.6
MAK pmax pmax
comp=Z,399nm,1.2s
MAK MLR MLR
comp=Z,497nm,17.0s
POIN Pond Inlet 50.99 340 **P 21 07 05.5 0.0**
POIN IAmb IAmb 21 07 07.5
comp=Z,16nm,0.9s
TKL Tuckaleechee C 54.70 293 LR LR 21 26 09.5
comp=Z,220nm,21.8s,baz=58,slow=31
SDV Santo Domingo 54.91 257 LR LR 21 26 04.6
comp=Z,137nm,21.2s,baz=63,slow=31
SDV Santo Domingo 54.91 257 **P 21 07 35.3 -0.1**
SDV IAmb IAmb 21 07 37.7
comp=Z,19nm,1.1s
RAYN Ar Rayn 55.05 82 **P 21 07 36.3 +0.1**
RAYN Ar Rayn 55.05 82 P **P 21 07 36.8 +0.6**
RAYN Ar Rayn 55.05 82 P **P 21 07 36.3 +0.1**
RAYN pmax pmax
comp=Z,5.0nm,1.0s
RAYN Ar Rayn 55.05 82 P **P 21 07 35.9 -0.3**
MBAR Mbarara 55.48 117 LR LR 21 31 43.1
comp=Z,283nm,19.8s,baz=313,slow=36
MBAR Mbarara 55.48 117 P **P 21 07 39.8 +0.2**
MBAR Mbarara 55.48 117 *i*P **P 21 07 38.7 -0.8**
MBAR pmax pmax
comp=Z,11nm,1.1s
MBAR Mbarara 55.48 117 P **P 21 07 41.4 +1.9**
ARTI Arti 55.75 41 LR LR 21 32 14.1
comp=Z,352nm,18.9s,baz=274,slow=37
ARTI Arti 55.75 41 P **P 21 07 40.5 -0.2**
ARTI Arti 55.75 41*ce*P **P 21 07 41.6 +0.9**
ARTI pmax pmax
comp=Z,19nm,1.0s
RES Resolute Bay 56.02 342 LR LR 21 27 28.3
comp=Z,209nm,18.4s,baz=132,slow=32
RES Resolute Bay 56.02 342 **P 21 07 42.9 +0.6**
RES IAmb IAmb 21 07 44.3
comp=Z,13nm,0.9s
RES Resolute Bay 56.02 342 P **P 21 07 42.9 +0.6**
RES pmax pmax
comp=Z,13nm,1.0s
FURI Furi 56.19 102 LR LR 21 33 16.2
comp=Z,803nm,18.6s,baz=318,slow=38
FURI Furi 56.19 102 P **P 21 07 45.1 +0.3**
BDFB Brasilia 56.29 217 P **P 21 07 49.5 +4.4**
comp=Z,2.3nm,0.7s,baz=43,slow=15,SNR=3.5
BDFB LR LR 21 28 17.9
comp=Z,225nm,21.2s,baz=13,slow=32
AKTO Aktyubinsk 56.56 48 LR LR 21 32 37.3
comp=Z,304nm,19.0s,baz=222,slow=37
LODK Lodwar 56.59 109 P **P 21 07 47.9 +0.5**
LODK IAmb IAmb 21 07 56.1
comp=Z,14nm,1.1s
FCC Fort Churchill 56.59 322 **P 21 07 47.2 +0.6**
FCC IAmb IAmb 21 07 49.0
comp=Z,30nm,1.5s
FCC Fort Churchill 56.59 322 P **P 21 07 47.2 +0.6**
FCC pmax pmax
comp=Z,30nm,1.5s
BLKN Baker Lake 56.81 329 **P 21 07 47.9 -0.1**
SVE Sverdlovsk 56.92 40 *e*P **P 21 07 50.6 +1.6**
SVE pmax pmax
comp=Z,33nm,1.2s
EYMN Ely 57.08 309 **P 21 07 50.3 0.0**
EYMN IAmb IAmb 21 07 52.2
comp=Z,20nm,0.9s
OLIL Olney 57.10 298 P **P 21 07 50.8 +0.2**
AB31 Akbulak array 58.03 49 **P 21 07 57.3 +0.3**
ABKAR Akbulak array 58.03 49 P **P 21 07 57.1 +0.1**
EPLO Experimental L 58.11 312 **P 21 07 57.8 +0.2**
EPLO IAmb IAmb 21 07 59.2
comp=Z,21nm,0.9s
ATD Arta Tunnel 58.29 96 LR LR 21 35 22.7
comp=Z,27nm,18.6s,baz=319,slow=38
ULM Lac du Bonnet 59.31 313 P **P 21 08 04.1 -1.8**
comp=Z,6.0nm,0.9s,baz=67,slow=7.9,SNR=6.3
ULM LR LR 21 30 31.8
comp=Z,554nm,21.2s,baz=50,slow=33
comp=Z,6.0nm,0.9s
AGMN Agassiz Nation 59.82 311 **P 21 08 09.4 -0.1**
AGMN IAmb IAmb 21 08 11.4
comp=Z,18nm,1.1s
ROSC El Rosal 60.19 256 LR LR 21 32 07.7
comp=Z,196nm,19.3s,baz=51,slow=34
TSUM Tsumeb 60.85 142 LR LR 21 33 46.1
comp=Z,395nm,18.7s,baz=320,slow=35
GHWR Ruwais 61.02 79 P **P 21 08 17.7 -0.3**
ECSD EROS Data Cent 61.68 306 P **P 21 08 22.3 +0.1**
FFC Flin Flon 61.70 319 P **P 21 08 23.0 +0.9**
FFC IAmb IAmb 21 08 24.3
comp=Z,18nm,1.1s
FFC Flin Flon 61.70 319 P **P 21 08 23.0 +0.9**
FFC pmax pmax
comp=Z,18nm,1.1s
MZR Muzera 61.93 79 P **P 21 08 23.6 -0.6**
MZR Muzera 61.93 79 P **P 21 08 23.1 -1.1**
MZWR Madinat Zayed 61.94 78 P **P 21 08 22.7 -1.5**
X40A Basin Creek Fa 62.09 295 P **P 21 08 25.6 +0.5**
KIBK Kibwezi 62.21 113 P **P 21 08 27.8 +1.6**
KIBK Kibwezi 62.21 113 P **P 21 08 27.3 +1.1**
PTLB Pontes e Lacer 62.45 227 P **P 21 08 28.3 +0.8**
NAZ Nazwa, Dubai 62.90 76 P **P 21 08 30.2 -0.4**
BANOM Banah 63.03 75 *i*P **P 21 08 31.1 -0.4**
SNR=8.6
BANOM Banah 63.03 75 P **P 21 08 30.9 -0.6**
BORK Borovoye 63.26 42 P **P 21 08 33.4 +0.8**
BORK IAmb IAmb 21 08 43.9
comp=Z,17nm,1.2s
BORK Borovoye 63.26 42*ce*P **P 21 08 34.4 +1.9**
BORK pmax pmax
comp=Z,6.0nm,1.3s
MDH Madha 63.29 76 P **P 21 08 32.7 -0.6**
BVAR Borovoye Array 63.30 42 P **P 21 08 32.1 -0.8**
comp=Z,1.6nm,0.7s,baz=291,slow=4.6,SNR=7.8
BVAR LR LR 21 35 29.6
comp=Z,507nm,21.5s,baz=285,slow=36
comp=Z,1.6nm,0.7s
ASHO Ashiyiah 63.35 76 *i*P **P 21 08 32.6 -1.1**
SNR=9.1
ASHO Ashiyiah 63.35 76 P **P 21 08 33.0 -0.7**
SNR=9.1
HATD Hatta, Dubai 63.35 76 *i*P **P 21 08 33.0 -0.7**
SNR=7.1
HATD Hatta, Dubai 63.35 76 P **P 21 08 33.3 -0.3**
SNR=7.0
UOSS Minazif 63.36 76 P **P 21 08 34.4 +0.6**
ALNE Al Ain 63.37 77 *i*P **P 21 08 33.5 -0.3**
SNR=7.9
ALNE Al Ain 63.37 77 P **P 21 08 33.1 -0.7**
UMZA Um Al Zommool 63.45 79 P **P 21 08 34.1 -0.3**
LSZ Lusaka 63.94 131 LR LR 21 36 55.2
comp=Z,796nm,18.5s,baz=325,slow=36
LSZ Lusaka 63.94 131 P **P 21 08 38.3 +0.7**
LSZ Lusaka 63.94 131 P **P 21 08 38.3 +0.7**
LSZ pmax pmax
comp=Z,15nm,0.8s
LSZ Lusaka 63.94 131 P **P 21 08 38.7 +1.1**
SOHO SOHO 63.98 77 *i*P **P 21 08 37.1 -0.6**
SNR=11
SOHO SOHO 63.98 77 P **P 21 08 36.3 -1.4**
SIV San Ignacio 64.08 228 LR LR 21 32 44.3
comp=Z,276nm,20.8s,baz=66,slow=32
ARQ Araqi 64.31 78 P **P 21 08 40.0 0.0**
SNR=6.5
JASK Jask - Hormozg 64.33 75 P **P 21 08 40.7 +0.6**
HRA Herat 64.37 64 P **P 21 08 39.7 -0.7**
DOK Doka 64.42 83 P **P 21 08 40.0 -0.8**
SNR=8.9
WHFO Wadi Hawf 64.44 84 P **P 21 08 40.7 -0.2**
SNR=6.1
GRTLG Ghanzi 64.55 141 P **P 21 08 42.8 +1.3**
GRTLG IAmb IAmb 21 08 44.5
comp=Z,24nm,1.6s
HOQ Hoqain 64.86 77 P **P 21 08 42.0 -1.6**
NRIK Noril'sk 64.98 22 P **P 21 08 42.8 -0.8**
comp=Z,3.2nm,0.9s,baz=312,slow=2.4,SNR=4.9
NRIK LR LR 21 38 53.3
comp=Z,458nm,20.6s,baz=306,slow=38
comp=Z,3.2nm,0.9s
NRIK Noril'sk 64.98 22 P **P 21 08 44.5 +0.8**
NRIK IAmb IAmb 21 08 54.0
comp=Z,12nm,1.2s
NRIK Noril'sk 64.98 22 *i*P **P 21 08 44.4 +0.8**
NRIK pmax pmax
comp=Z,13nm,1.3s
A36M Sachs Harbour 65.05 341 P **P 21 08 43.6 -0.3**
baz=62
BSY Bisya 65.13 78 P **P 21 08 44.3 -1.0**
YKAW3 Yellowknife Wh 65.31 330 **P 21 08 45.8 0.0**
YKAW3 IAmb IAmb 21 08 48.6
comp=Z,11nm,1.3s
YKA Yellowknife Ar 65.34 330 P **P 21 08 45.9 -0.1**
comp=Z,2.3nm,0.9s,baz=66,slow=6.6,SNR=15
YKA LR LR 21 32 42.5
comp=Z,277nm,19.7s,baz=92,slow=32
comp=Z,2.3nm,0.9s
KOOLE Kule 65.35 142 P **P 21 08 47.7 +1.0**
KOOLE IAmb IAmb 21 08 52.8
comp=Z,7.3nm,0.7s
DMTO DMTO 65.53 84 P **P 21 08 46.7 -1.3**
BIDO Bidbid 65.56 77 P **P 21 08 48.2 +0.1**
SMDO Samad 65.70 77 P **P 21 08 48.5 -0.6**
BRZS Berezniki 65.70 45 *e*P **P 21 08 49.5 +0.9**
BRZS Berezniki 65.70 45 *e*P **P 21 08 49.6 +0.9**
C36M Paulatuk 65.94 338 P **P 21 08 49.6 -0.1**
baz=62
JMDO Jabal Madar 66.05 78 P **P 21 08 50.7 -0.6**
OTAV Otavalo 66.19 254 P **P 21 08 52.8 0.0**
OTAV IAmb IAmb 21 08 55.0
comp=Z,15nm,1.6s
OTAV Otavalo 66.19 254 P **P 21 08 52.8 0.0**
OTAV pmax pmax
comp=Z,15nm,1.7s
KGCAE Kacgae 66.29 141 P **P 21 08 53.6 +0.9**
MHTO MHTO 66.55 79 P **P 21 08 54.0 -0.5**
WBK Wadi Bani Khal 66.66 77 P **P 21 08 55.5 +0.3**
KK31 Karatay Array 66.94 53 **P 21 08 56.3 -0.4**
KK31 IAmb IAmb 21 09 07.6
comp=Z,12nm,1.4s
KK31 Karatay Array 66.94 53 P **P 21 08 56.3 -0.4**
KK31 pmax pmax
comp=Z,12nm,1.4s
KKAR Karatay Array 66.94 53 P **P 21 08 55.6 -1.1**
KKAR Karatay Array 66.94 53 P **P 21 08 55.6 -1.1**
IUG Iuzhnay 66.99 54 *e*P **P 21 08 57.9 +0.8**
IUG pmax pmax
comp=Z,7.0nm,0.9s
IUG Iuzhnay 66.99 54 *e*P **P 21 08 58.0 +0.8**
comp=Z,7.5nm,0.9s
JLN Jalan Bani Buh 67.23 77 P **P 21 08 57.8 -1.0**
KHWEE KHWEE 67.36 137 P **P 21 08 60.0 +0.3**
SHAA Shahritus 67.49 59 **P 21 09 00.6 +0.2**
SHAA IAmb IAmb 21 09 08.1
comp=Z,41nm,0.9s
BTK Batken 68.38 56 **P 21 09 06.0 +0.1**
BTK IAmb IAmb 21 09 13.6
comp=Z,16nm,1.3s
BTK Batken 68.38 56 P **P 21 09 06.0 +0.1**
BTK pmax pmax
comp=Z,16nm,1.3s
GAR Garm 68.47 57 P **P 21 09 07.2 +0.6**
EDM Edmonton 68.51 320 P **P 21 09 06.6 +0.2**
EDM Edmonton 68.51 320 P **P 21 09 06.6 +0.2**
EDM pmax pmax
comp=Z,42nm,1.2s
KURBB Kurchatov Arra 68.88 43 P **P 21 09 07.7 -1.0**
comp=Z,5.0nm,1.0s,baz=297,slow=7.2,SNR=21
KURBB LR LR 21 38 57.2
comp=Z,431nm,20.8s,baz=248,slow=36
comp=Z,5.0nm,1.0s
KURK Kurchatov 68.90 43 P **P 21 09 08.8 0.0**
KURK Kurchatov 68.90 43*ce*P **P 21 09 10.4 +1.6**
KURK pmax pmax
comp=Z,9.0nm,1.3s
KURK Kurchatov 68.90 43 P **P 21 09 10.5 +1.7**
LPAZ La Paz 68.93 234 P **P 21 09 10.9 +0.7**
comp=Z,1.2nm,0.8s,baz=21,slow=5.4,SNR=3.6
LPAZ LR LR 21 37 53.1
comp=Z,167nm,18.1s,baz=42,slow=35
comp=Z,1.2nm,0.8s
LPAZ La Paz 68.93 234 P **P 21 09 10.3 +0.1**
LPAZ IAmb IAmb 21 10 27.9
comp=Z,15nm,2.0s
LPAZ La Paz 68.93 234 P **P 21 09 10.3 +0.1**
LPAZ pmax pmax
comp=Z,15nm,2.0s
DRK Karamyk 69.31 56 P **P 21 09 12.6 +0.6**
DRK IAmb IAmb 21 09 21.0
comp=Z,8.5nm,0.8s
DRK Karamyk 69.31 56 P **P 21 09 12.6 +0.6**
DRK pmax pmax
comp=Z,8.0nm,0.8s
ARSB Arslanbob 69.34 54 P **P 21 09 11.7 -0.3**
ARSB IAmb IAmb 21 09 27.8
comp=Z,20nm,1.2s
ARSB Arslanbob 69.34 54 P **P 21 09 11.7 -0.3**
ARSB pmax pmax
comp=Z,20nm,1.2s
INK Inuvik 69.40 339 P **P 21 09 11.2 -0.4**
baz=54
KBL Kabul 69.43 62 P **P 21 09 11.4 -1.2**
KBL Kabul 69.43 62 P **P 21 09 11.5 -1.2**
KBL pmax pmax
comp=Z,5.0nm,0.9s
KBL Kabul 69.43 62 P **P 21 09 12.7 0.0**
SGDS Sogindy 69.54 51 *e*P **P 21 09 14.1 +1.0**
AAK Ala-Archa 69.80 52 LR LR 21 40 49.9
comp=Z,248nm,21.8s,baz=318,slow=37
AAK Ala-Archa 69.80 52 P **P 21 09 15.0 +0.2**
AAK IAmb IAmb 21 09 26.3
comp=Z,7.8nm,0.9s
AAK Ala-Archa 69.80 52 P **P 21 09 16.0 +1.2**
AAK Ala-Archa 69.80 52*ce*P **P 21 09 14.8 0.0**
AAK pmax pmax
comp=Z,8.0nm,1.3s
AAK Ala-Archa 69.80 52 P **P 21 09 16.8 +2.0**

LBTB Lobatse 69.86 139 LR LR 21 40 02.9
comp=Z,318nm,18.1s,baz=318,slow=36
LBTB Lobatse 69.86 139 P **P** **21 09 15.9 +0.7**
LBTB IAmb IAmb 21 10 10.6
comp=Z,39nm,1.9s
LBTB Lobatse 69.86 139 P **P** **21 09 15.9 +0.7**
LBTB pmax pmax
comp=Z,39nm,2.0s
CPUP Villa Florida 69.96 218 P **P** **21 09 16.1 +0.5**
comp=Z,2.5nm,0.8s,baz=37,slow=7.9,SNR=7.5
CPUP LR LR 21 36 45.9
comp=Z,130nm,19.5s,baz=36,slow=33
comp=Z,2.5nm,0.8s
CPUP Villa Florida 69.96 218 **P** **21 09 15.1 -0.5**
CPUP IAmb IAmb 21 09 30.5
comp=Z,11nm,1.3s
CPUP Villa Florida 69.96 218 P **P** **21 09 15.1 -0.5**
CPUP pmax pmax
comp=Z,11nm,1.3s
F31M Tsiigehtchic 69.98 339 P **P** **21 09 15.3 +0.1**
baz=53
SDCO Great Sand Dun 70.19 303 **P** **21 09 16.7 -0.7**
D28M Stokes Point 70.26 341 P **P** **21 09 17.1 +0.3**
baz=50
G31M Satah River 70.46 338 P **P** **21 09 18.0 -0.2**
baz=53
KUU Kurty 70.47 50 *e*P **P** **21 09 19.5 +0.8**
KUU Kurty 70.47 50 *e*P **P** **21 09 19.6 +0.8**
KOTAN Kotaneelee Air 70.47 330 P **P** **21 09 17.9 -0.4**
baz=59
F30M Barrier River 70.50 339 P **P** **21 09 18.6 +0.1**
baz=52,SNR=6.3
ATAH Atahualpa 70.51 248 LR LR 21 36 58.1
comp=Z,290nm,21.2s,baz=51,slow=33
E29M Blow River 70.63 340 P **P** **21 09 19.4 +0.2**
baz=50,SNR=9.0
PDAR Pinedale Array 70.78 309 P **P** **21 09 20.6 -0.3**
comp=Z,7.5nm,0.8s,baz=82,slow=5.6,SNR=7.6
PDAR LR LR 21 38 01.1
comp=Z,265nm,20.2s,baz=46,slow=34
comp=Z,7.5nm,0.8s
PDAR Pinedale Array 70.78 309 P **P** **21 09 20.4 -0.5**
ZAA0 Zalesovo Array 70.82 38 P **P** **21 09 20.9 +0.3**
ZAA0 IAmb IAmb 21 09 30.1
comp=Z,8.1nm,1.0s
ZALV Zalesovo Beam 70.82 38 P **P** **21 09 20.7 +0.1**
comp=Z,1.1nm,0.5s,baz=293,slow=7.6,SNR=6.7
ZALV LR LR 21 41 10.6
comp=Z,381nm,20.5s,baz=297,slow=37
comp=Z,1.1nm,0.5s
D27M Malcolm River 70.91 342 P **P** **21 09 21.3 +0.3**
baz=48
G30M tAoh Zraii Nji 71.03 339 P **P** **21 09 21.4 -0.3**
baz=51
H31M Peel River 71.17 337 P **P** **21 09 22.7 +0.2**
baz=52
CMIG Matias Romero 71.22 279 LR LR 21 37 26.2
comp=Z,194nm,19.3s,baz=63,slow=33
TNSS Tian-Shan 71.24 51 *e*P **P** **21 09 24.2 +0.3**
TNSS Tian-Shan 71.24 51 *e*P **P** **21 09 24.3 +0.3**
MDOK Medeo 71.25 50 *e*P **P** **21 09 24.4 +0.8**
MDOK Medeo 71.25 50 *e*P **P** **21 09 24.5 +0.8**
LRM Limekiln Ridge 71.26 313 P **P** **21 09 23.7 0.0**
TDK Taldyqorghan 71.29 48 *e*P **P** **21 09 24.7 +1.0**
TDK pmax pmax
comp=Z,21nm,1.4s
TDK Taldyqorghan 71.29 48 *e*P **P** **21 09 24.8 +1.0**
comp=Z,21nm,1.4s
PB16 IPOC Station P 71.30 233 P **P** **21 09 24.7 0.0**
PB16 IAmb IAmb 21 09 33.6
comp=Z,13nm,1.5s
NRN Naryn 71.34 52 **P** **21 09 24.6 +0.2**
NRN IAmb IAmb 21 09 33.4
comp=Z,15nm,1.1s
NRN Naryn 71.34 52 P **P** **21 09 24.6 +0.2**
NRN pmax pmax
comp=Z,15nm,1.1s
C27K Jago River 71.35 343 P **P** **21 09 24.5 +0.9**
C27K IAmb IAmb 21 09 29.3
comp=Z,16nm,0.9s
C27K Jago River 71.35 343 P **P** **21 09 24.2 +0.7**
baz=46
C26K Camden Bay 71.44 343 P **P** **21 09 24.4 +0.3**
baz=44
TGTN Hyland Airport 71.47 332 P **P** **21 09 25.1 +0.6**
baz=56
EPYK Eagle Plains 71.57 338 P **P** **21 09 25.7 +0.7**
baz=50
F28M Old Crow 71.70 340 P **P** **21 09 25.6 -0.2**
baz=48,SNR=5.1
E27K Coleen River 71.80 341 P **P** **21 09 26.7 +0.4**
baz=47,SNR=7.2
MMPY Sheldon Lake, 72.00 334 P **P** **21 09 28.0 +0.4**
baz=54,SNR=6.3
KSH2 Kashi 72.08 55 P **P** **21 09 29.6 +0.9**
KSH2 pmax pmax
comp=Z,36nm,0.8s
KSH2 L L
comp=Z,600nm,21.0s
KSH2 L L
comp=Z,430nm,18.6s
KSH2 L L
comp=Z,360nm,18.6s
ANMO Albuquerque 72.13 300 LR LR 21 37 32.1
comp=Z,448nm,21.4s,baz=54,slow=33
ANMO Albuquerque 72.13 300 P **P** **21 09 28.3 -0.9**
ANMO IAmb IAmb 21 09 33.0
comp=Z,24nm,1.6s
ANMO Albuquerque 72.13 300 *ce*P **P** **21 09 32.6 +3.5**
ANMO pmax pmax
comp=Z,21nm,2.5s
KPKS Kokpek 72.18 50 *e*P **P** **21 09 30.0 +0.9**
KPKS Kokpek 72.18 50 *e*P **P** **21 09 30.0 +0.9**
SATY Saty 72.19 50 *e*P **P** **21 09 30.2 +1.0**
SATY pmax pmax
comp=Z,10.0nm,1.5s
SATY Saty 72.19 50 *e*P **P** **21 09 30.2 +1.0**
comp=Z,10nm,1.5s
I30M Mount Dempster 72.19 337 P **P** **21 09 29.0 +0.2**
baz=50
D25K Kavik River 72.23 343 P **P** **21 09 29.0 +0.1**
baz=43
PB08 IPOC Station P 72.33 231 P **P** **21 09 32.6 +2.0**
NNA Nana 72.33 243 LR LR 21 37 29.9
comp=Z,149nm,21.8s,baz=45,slow=33
WTLY Watson Lake, Y 72.48 331 P **P** **21 09 30.9 +0.4**
baz=55
C24K Franklin Bluff 72.48 344 P **P** **21 09 31.0 +0.7**
baz=41
UZB Uzunbulak 72.54 50 *e*P **P** **21 09 32.1 +0.7**
UZB pmax pmax
comp=Z,5.0nm,0.7s
UZB Uzunbulak 72.54 50 *e*P **P** **21 09 32.2 +0.7**
comp=Z,5.4nm,0.7s
BOSA Boshof 72.55 142 P **P** **21 09 31.1 -0.3**
comp=Z,4.6nm,0.8s,baz=59,slow=4.3,SNR=6.4
BOSA LR LR 21 43 25.8
comp=Z,252nm,18.2s,baz=323,slow=38
comp=Z,4.6nm,0.8s
BOSA Boshof 72.55 142 P **P** **21 09 31.6 +0.2**
BOSA Boshof 72.55 142 P **P** **21 09 31.6 +0.2**
BOSA pmax pmax
comp=Z,36nm,1.7s
MVCO Mesa Verde 72.56 303 **P** **21 09 32.1 +0.3**
J30M Hart River 72.59 337 P **P** **21 09 30.8 -0.4**
baz=50
TXAR Lajitas Array 72.60 294 P **P** **21 09 32.4 +0.5**
comp=Z,1.0nm,0.8s,baz=76,slow=6.8,SNR=5.2
comp=Z,1.0nm,0.8s
MAKZ Makanchi 72.65 45 P **P** **21 09 31.9 +0.1**
MAKZ Makanchi 72.65 45 P **P** **21 09 31.9 +0.1**
MAKZ pmax pmax
comp=Z,4.0nm,0.9s
I29M Ogilvie Camp, 72.72 338 P **P** **21 09 32.1 +0.2**
baz=49,SNR=10
A22K Sinclair Lake 72.81 347 P **P** **21 09 32.5 +0.3**
baz=36
SHLS Shalkode 72.82 50 *e*P **P** **21 09 35.5 +2.5**
SHLS pmax pmax
comp=Z,11nm,0.9s
SHLS Shalkode 72.82 50 *e*P **P** **21 09 35.5 +2.5**
comp=Z,11nm,0.9s
C23K Itkillik River 72.83 345 P **P** **21 09 32.5 +0.1**
baz=40
F26K Sheenjek River 72.83 341 P **P** **21 09 32.9 +0.4**
baz=45
MK31 Makanchi Array 72.85 45 P **P** **21 09 33.0 0.0**
MK31 Makanchi Array 72.85 45 *ce*P **P** **21 09 33.6 +0.6**
MKAR Makanchi Array 72.85 45 P **P** **21 09 32.9 -0.1**
comp=Z,1.4nm,0.7s,baz=294,slow=5.1,SNR=22
MKAR LR LR 21 41 54.6
comp=Z,363nm,20.2s,baz=290,slow=36
comp=Z,1.4nm,0.7s
MKAR Makanchi Array 72.85 45 P **P** **21 09 33.2 +0.3**
MKAR Makanchi Array 72.85 45 *ce*P **P** **21 09 32.7 -0.3**
MKAR pmax pmax
comp=Z,1.0nm,0.7s
A21K Barrow 72.85 347 P **P** **21 09 32.5 0.0**
baz=35
E25K Arctic Village 72.90 342 P **P** **21 09 32.9 0.0**
baz=44,SNR=11
NEW Newport 72.92 317 LR LR 21 38 48.8
comp=Z,272nm,19.5s,baz=58,slow=34
D24K Happy Valley 72.94 344 P **P** **21 09 33.4 +0.3**
baz=41
NIL Nilore 72.95 61 **P** **21 09 34.7 +0.9**
NIL Nilore 72.95 61 P **P** **21 09 34.7 +0.9**
NIL pmax pmax
comp=Z,39nm,0.9s
NIL Nilore 72.95 61 P **P** **21 09 34.8 +0.9**
B22K Teshekpuk Lake 73.03 346 P **P** **21 09 34.3 +0.8**
baz=37
MAYO Mayo, Yukon 73.06 336 P **P** **21 09 34.0 +0.1**
baz=50
H27K Steamboat Moun 73.12 340 P **P** **21 09 34.6 +0.3**
baz=46,SNR=7.1
BMAR Burt Mountain 73.14 341 P **P** **21 09 35.6 +1.2**
I28M Miner Creek 73.17 339 P **P** **21 09 35.0 +0.3**
baz=48
CTU Camp Tracy 73.19 308 P **P** **21 09 35.3 +0.1**
CTU IAmb IAmb 21 09 39.8
comp=Z,12nm,0.8s
G26K Porcupine Rive 73.26 341 P **P** **21 09 36.1 +1.1**
baz=45,SNR=6.9
J29N Klondike Camp 73.29 337 P **P** **21 09 36.1 +0.8**
baz=49
F25K Christian Rive 73.30 342 P **P** **21 09 37.0 +1.7**
baz=43,SNR=6.7
M31M Drury Creek, Y 73.41 334 P **P** **21 09 37.2 +1.2**
baz=51
K29M Barlow Dome 73.46 337 P **P** **21 09 37.8 +1.4**
baz=49
SUR Sutherland 73.47 147 LR LR 21 43 17.2
comp=Z,255nm,18.2s,baz=317,slow=37
SUR Sutherland 73.47 147 P **P** **21 09 37.9 +1.0**
TOLK Toolik Lake Re 73.51 344 P **P** **21 09 37.9 +1.4**
baz=40
D23K Nanushuk River 73.51 344 P **P** **21 09 37.5 +1.0**
baz=39
HLID Hailey 73.56 311 **P** **21 09 37.8 +0.4**
HLID IAmb IAmb 21 09 40.5
comp=Z,14nm,1.1s
TIXI Tiksi 73.56 11 P **P** **21 09 37.4 +0.7**
TIXI Tiksi 73.56 11 *ce*P **P** **21 09 37.9 +1.2**
TIXI pmax pmax
comp=Z,8.0nm,1.0s
N32M Quiet Lake 73.57 333 P **P** **21 09 38.2 +1.2**
baz=52
I27K Kandik River 73.58 339 **P** **21 09 37.3 +0.3**
I27K IAmb IAmb 21 09 39.4
comp=Z,14nm,1.0s
I27K Kandik River 73.58 339 P **P** **21 09 37.6 +0.6**
baz=46,SNR=9.8
E24K Your Creek 73.67 343 P **P** **21 09 38.5 +1.0**
baz=41
R33M Jennings River 73.79 331 P **P** **21 09 39.6 +1.2**
baz=53
B21K Ikpikpuk River 73.85 346 P **P** **21 09 39.8 +1.3**
baz=36
DAWY Dawson 73.93 337 **P** **21 09 40.1 +1.0**
DAWY IAmb IAmb 21 09 41.6
comp=Z,14nm,1.0s
DAWY Dawson 73.93 337 P **P** **21 09 40.5 +1.4**
baz=48,SNR=9.9
FYU Fort Yukon 73.94 341 P **P** **21 09 39.5 +0.6**
FYU IAmb IAmb 21 09 52.0
comp=Z,34nm,1.5s
E23K Chandalar 73.96 343 P **P** **21 09 40.8 +1.5**
baz=40
DLBC Dease Lake 73.96 330 LR LR 21 38 11.7
comp=Z,277nm,19.7s,baz=32,slow=33
DLBC Dease Lake 73.96 330 P **P** **21 09 40.9 +1.5**
baz=54
D22K Ayikyak River 74.03 345 P **P** **21 09 41.2 +1.6**
baz=38
M30M Minto, Yukon 74.04 335 P **P** **21 09 41.2 +1.5**
baz=50,SNR=5.4
P33M Teslin, Yukon 74.04 332 P **P** **21 09 41.1 +1.2**
baz=52
B20K Meade River 74.05 347 P **P** **21 09 41.1 +1.6**
baz=34
ZSN Zaisan 74.05 44 *e*P **P** **21 09 41.2 +1.2**
ZSN pmax pmax
comp=Z,3.0nm,2.1s
ZSN Zaisan 74.05 44 *e*P **P** **21 09 41.3 +1.2**
comp=Z,2.9nm,2.1s
L29M L29M 74.15 336 P **P** **21 09 41.4 +1.0**
baz=49
I26K Coal Creek Min 74.25 339 P **P** **21 09 41.7 +0.8**
I26K IAmb IAmb 21 09 43.6
comp=Z,13nm,1.0s
I26K Coal Creek Min 74.25 339 P **P** **21 09 42.5 +1.7**
baz=45,SNR=8.0
C21K Knifeblade Rid 74.27 346 P **P** **21 09 42.7 +1.9**
baz=36
DGZ Jazzator, Alta 74.36 41 *i*P **P** **21 09 42.3 +0.3**
DGZ pmax pmax
comp=Z,24nm,1.4s
N31M Braeburn, Yuko 74.37 334 P **P** **21 09 43.3 +1.6**
baz=50
LLLB Lillooet 74.39 320 **P** **21 09 42.1 +0.1**
LLLB IAmb IAmb 21 09 53.4
comp=Z,23nm,1.1s
E22K Anaktuvuk Pass 74.43 344 P **P** **21 09 43.8 +1.9**
baz=38
G24K Hadweenzic Riv 74.45 342 P **P** **21 09 43.5 +1.5**
baz=42,SNR=7.6
WHY Whitehorse 74.56 333 P **P** **21 09 44.3 +1.4**
baz=51
Q32M Nakina River 74.59 331 P **P** **21 09 44.8 +1.7**
baz=52
A19K Wainwright 74.60 348 P **P** **21 09 44.8 +2.0**
baz=31
E21K Kilik River 74.67 345 P **P** **21 09 44.6 +1.4**
baz=36
M29M Somme Creek 74.71 336 P **P** **21 09 45.2 +1.5**
baz=48
BMO Blue Mountains 74.72 314 **P** **21 09 43.3 -0.8**
BMO Blue Mountains 74.72 314 P **P** **21 09 43.3 -0.8**
BMO pmax pmax
comp=Z,7.0nm,0.9s
COLD Coldfoot 74.75 343 P **P** **21 09 44.7 +1.0**
baz=40,SNR=8.2
S34M Telegraph Cree 74.75 330 P **P** **21 09 45.2 +1.4**
baz=53
P32M Atlin 74.78 332 P **P** **21 09 46.1 +2.0**
baz=51
PRP Porcupine Dome 74.79 340 P **P** **21 09 44.5 +0.3**
PRP IAmb IAmb 21 09 56.3
comp=Z,14nm,0.8s
PRP Porcupine Dome 74.79 340 P **P** **21 09 44.1 0.0**
baz=43,SNR=15
N30M Aishikik Lake 74.87 335 P **P** **21 09 46.4 +1.8**
baz=49
T35M Bob Quinn 74.92 329 P **P** **21 09 46.8 +1.9**
baz=53
O30N Mendenhall 74.95 334 P **P** **21 09 46.5 +1.5**
baz=50
D20K Etivluk River 75.01 346 P **P** **21 09 46.4 +1.1**
D20K Etivluk River 75.01 346 P **P** **21 09 46.6 +1.4**
baz=34
G23K Bananza Creek 75.10 343 P **P** **21 09 47.6 +1.8**
baz=46,SNR=7.0
H24K Noodor Dome 75.21 341 **P** **21 09 47.2 +0.8**
H24K Noodor Dome 75.21 341 P **P** **21 09 48.1 +1.7**
baz=41
C19K Lookout Ridge 75.27 347 P **P** **21 09 48.8 +2.0**
baz=32
E20K Nigu River 75.30 345 P **P** **21 09 48.8 +1.9**
baz=35
E07A Sunnyside 75.38 316 P **P** **21 09 47.9 +0.2**
E07A IAmb IAmb 21 10 00.2
comp=Z,26nm,1.5s
BCAR Beaver Creek A 75.40 337 P **P** **21 09 47.9 +0.3**
J25K Salcha River, 75.41 340 P **P** **21 09 49.4 +1.8**
baz=43
L27K Beaver Creek, 75.42 337 P **P** **21 09 49.4 +1.7**
baz=46
HYT Haines Junctio 75.44 334 P **P** **21 09 49.5 +1.5**
baz=49
SCRK Sand Creek 75.45 339 **P** **21 09 48.6 +0.6**
SCRK Sand Creek 75.45 339 P **P** **21 09 49.0 +1.0**
baz=44,SNR=5.5
ELK Elko 75.48 309 **P** **21 09 48.3 -0.4**
ELK IAmb IAmb 21 09 51.2
comp=Z,11nm,0.9s
ELK Elko 75.48 309 P **P** **21 09 48.3 -0.4**
ELK pmax pmax
comp=Z,11nm,1.0s
D19K Kuna River 75.50 346 P **P** **21 09 49.5 +1.5**
baz=33
SKAG Skagway 75.50 332 P **P** **21 09 48.8 +0.7**
baz=50
YUK4 Talbot Arm 75.51 335 P **P** **21 09 49.4 +1.0**
baz=48
F21K Alatna River 75.54 344 P **P** **21 09 49.3 +1.0**
baz=37,SNR=8.8
BVCY Beaver Creek 75.55 337 P **P** **21 09 48.9 +0.4**
baz=46
POKR Poker Plat Res 75.63 341 P **P** **21 09 50.6 +1.7**
baz=41
YUK6 Outpost Mounta 75.68 335 P **P** **21 09 47.5 -2.0**
baz=48
KNB Kanab 75.69 305 **P** **21 09 50.3 +0.3**
KNB IAmb IAmb 21 10 01.1
comp=Z,15nm,1.2s
KNB Kanab 75.69 305 P **P** **21 09 50.3 +0.3**
KNB pmax pmax
comp=Z,15nm,1.2s
P30M Million Dollar 75.70 333 P **P** **21 09 48.2 -1.2**
baz=49
IL31 75.73 340 P **P** **21 09 49.9 +0.6**
ILAR Eielson Array 75.73 340 P **P** **21 09 50.1 +0.7**
comp=Z,4.1nm,0.9s,baz=25,slow=5.1,SNR=46
ILAR LR LR 21 40 45.6
comp=Z,157nm,20.2s,baz=60,slow=34
comp=Z,4.1nm,0.9s
ILAR Eielson Array 75.73 340 P **P** **21 09 49.9 +0.5**
YUK3 Moose Creek 75.85 336 P **P** **21 09 50.6 +0.1**
baz=46,SNR=5.8
RIDG Independent Ri 75.89 339 P **P** **21 09 50.4 0.0**
baz=43,SNR=7.9
COLA College 75.93 341 *i*P **P** **21 09 52.3 +1.8**
COLA pmax pmax
comp=Z,29nm,4.3s
COLA College 75.93 341 P **P** **21 09 50.8 +0.3**
baz=41
M27K Edge Creek, AK 75.93 337 P **P** **21 09 51.4 +0.7**
baz=46
L26K Log Cabin Wild 75.94 338 P **P** **21 09 52.3 +1.6**
baz=44,SNR=7.9
R32K Eaglecrest 75.94 331 P **P** **21 09 50.8 +0.1**
baz=50
C18K Utukok River 75.97 347 P **P** **21 09 50.8 +0.1**
baz=30,SNR=9.1
HDA Harding Lake 76.02 340 P **P** **21 09 50.9 -0.2**
baz=42,SNR=7.0
H22K Ishtalitna Cre 76.08 342 P **P** **21 09 51.6 +0.1**
baz=38
CCB Clear Creek Bu 76.08 340 P **P** **21 09 52.5 +1.1**
CCB IAmb IAmb 21 09 53.8
comp=Z,13nm,1.0s
G21K Allakaket 76.11 344 P **P** **21 09 52.1 +0.5**
baz=37
K24K Donnelly Dome 76.12 339 P **P** **21 09 52.1 +0.3**
baz=42,SNR=5.7
I23K Minto, Yukon-K 76.13 341 P **P** **21 09 52.2 +0.5**
baz=40
WRAK Wrangell Islan 76.18 329 P **P** **21 09 51.8 -0.3**
baz=52
O29M Mount Kennedy 76.19 334 P **P** **21 09 51.8 -0.4**
baz=48
E19K Redstone River 76.19 345 P **P** **21 09 51.9 -0.1**
baz=34
F20K Avaraart Lake 76.20 345 P **P** **21 09 51.5 -0.5**
baz=35
M26K Nabesna, AK 76.27 337 P **P** **21 09 53.0 +0.4**
baz=45
WRH Wood River Hil 76.30 340 **P** **21 09 53.2 +0.5**
WRH IAmb IAmb 21 09 55.1
comp=Z,15nm,1.0s
O28M Mount Upton 76.45 335 P **P** **21 09 53.6 -0.3**
baz=46
S32K Killisnoo 76.47 331 P **P** **21 09 54.0 +0.3**
baz=50
C17K DeLong Mountai 76.48 348 P **P** **21 09 53.4 -0.2**
baz=29,SNR=17
NEA2 Nenana 76.48 341 P **P** **21 09 54.1 +0.4**
baz=40
V35K Ketchikan 76.53 328 P **P** **21 09 53.7 -0.4**
baz=52
TUC Tucson 76.56 300 P **P** **21 09 55.5 +0.6**
TUC IAmb IAmb 21 09 58.7
comp=Z,14nm,1.1s
TUC Tucson 76.56 300 P **P** **21 09 55.5 +0.6**
TUC pmax pmax
comp=Z,14nm,1.2s
MLY Manley 76.59 342 P **P** **21 09 54.0 -0.4**
baz=39,SNR=7.7
IMAR Indian Mountai 76.60 343 P **P** **21 09 55.4 +1.1**
H21K Melozitna Rive 76.63 343 P **P** **21 09 54.0 -0.6**
baz=37
PAX Paxson 76.64 339 P **P** **21 09 54.6 -0.2**
baz=43
U33K Whale Pass 76.71 329 P **P** **21 09 54.9 -0.2**
baz=51
CTG Chitna Glacier 76.72 336 P **P** **21 09 55.1 -0.2**
baz=46
BBB Bella Bella 76.75 324 LR LR 21 40 42.2
comp=Z,220nm,18.9s,baz=56,slow=33
RDOG Red Dog Mine 76.80 348 P **P** **21 09 55.6 +0.1**
baz=29
I21K Tanana 76.80 342 P **P** **21 09 55.3 -0.2**
baz=38
F19K Shaleruckik Mo 76.83 345 P **P** **21 09 56.0 +0.4**
baz=33,SNR=15
S31K Pelican 76.83 332 P **P** **21 09 55.0 -0.8**
baz=49
E18K Tukpahlearik C 76.91 346 P **P** **21 09 55.4 -0.7**
baz=31,SNR=9.4
PINM Pinnacle 76.94 335 P **P** **21 09 55.6 -0.8**
baz=46
HARP HAARP 76.97 338 P **P** **21 09 55.0 -1.5**
baz=43
MCARA McCarthy VSAT 77.00 337 P **P** **21 09 56.1 -0.6**
baz=44
C16K Lisburne Hills 77.03 349 P **P** **21 09 57.0 +0.3**
baz=27
SIT Sitka 77.05 331 P **P** **21 09 56.3 -0.7**
baz=50
MCK McKinley 77.10 340 P **P** **21 09 56.7 -0.6**
baz=40
CRAG Craig 77.12 328 P **P** **21 09 57.0 -0.4**
baz=51
D17K Noatak River 77.14 347 P **P** **21 09 57.3 -0.1**
baz=29
DHY Denali Highway 77.15 339 P **P** **21 09 57.8 +0.2**
baz=41
G19K Purcell Mounta 77.25 345 P **P** **21 09 57.3 -0.7**
baz=34,SNR=5.6
H20K Anotleneega Mo 77.28 343 P **P** **21 09 57.7 -0.5**
baz=35
N25K Chitina, Valde 77.37 337 P **P** **21 09 58.2 -0.6**
baz=43
BPAW Bear Paw Mtn. 77.39 341 P **P** **21 09 58.6 -0.2**
baz=38
F18K Selawik 77.42 346 P **P** **21 09 58.4 -0.5**
baz=32
E17K Hotham Inlet 77.45 347 P **P** **21 09 58.1 -1.0**
baz=30
CRQE Cirque 77.48 336 P **P** **21 09 58.7 -0.8**
baz=44
MESA MESA 77.49 335 P **P** **21 09 57.9 -1.8**
baz=45
M24K Tolsona, Glenn 77.50 338 P **P** **21 09 59.2 -0.4**
baz=42
WAT6 Susitna Watana 77.63 339 P **P** **21 09 59.4 -1.0**
baz=41,SNR=5.2
WMQ Urumqi 77.65 46 *e*P **P** **21 10 03.4 +2.7**
WMQ L L
comp=Z,390nm,19.1s
WAT1 Susitna Watana 77.69 339 P **P** **21 09 59.6 -0.9**

baz=40
TRF Thorofare Moun 77.71 341 P P 21 10 01.1 +0.3
TRF IAmb IAmb 21 10 02.8
comp=Z,9.1nm,1.1s
TRF Thorofare Moun 77.71 341 P P 21 09 59.7 -1.1
baz=39
KTH Kantishna Hill 77.81 341 P P 21 10 01.7 +0.4
G18K Tagagawik 77.81 345 P P 21 10 00.8 -0.3
baz=32,SNR=8.9
BMRM Bremner River 77.84 337 P P 21 10 00.6 -0.8
baz=43
KLU Klutina 77.88 338 P P 21 10 01.6 -0.1
KLU IAmb IAmb 21 10 12.9
comp=Z,14nm,1.1s
KLU Klutina 77.88 338 P P 21 10 01.2 -0.5
baz=42
F17K Baldwin Pennin 77.89 346 P P 21 10 00.3 -1.2
baz=30
CHUM Lake Minchumin 77.92 342 P P 21 10 02.0 +0.3
baz=37
BGLC Bering Glacier 78.00 336 P P 21 10 02.0 -0.2
baz=44
SCM Sheep Creek Mo 78.07 338 P P 21 10 02.5 -0.3
baz=41
M23K Glacier View 78.22 339 P P 21 10 03.2 -0.3
baz=41
HSIG 78.32 297 P P 21 10 04.8 +0.2
HSIG IAmb IAmb 21 10 15.2
comp=Z,5.2nm,0.6s
GCSA Galena City Sc 78.37 344 P P 21 10 04.4 +0.2
baz=34
H18K Honhosa River 78.38 344 P P 21 10 04.1 -0.2
baz=32
SML Sawmill 78.40 339 P P 21 10 04.3 -0.3
baz=40
CUT Chulitna 78.52 340 P P 21 10 04.9 -0.2
baz=39
EYAK Cordova Ski Ar 78.53 337 P P 21 10 05.1 0.0
baz=42
KAIM Kayak Island 78.53 336 P P 21 10 05.3 0.0
baz=43
G17K Kiwalik Mounta 78.58 345 P P 21 10 05.1 -0.3
baz=30,SNR=6.8
NV11 Mina Array Sit 78.60 308 P P 21 10 06.0 -0.2
PPLA Purkeypile 78.68 341 P P 21 10 05.4 -0.7
baz=37
J19K Poorman 78.69 343 P P 21 10 05.9 -0.1
baz=34,SNR=5.6
NVAR Mina Array Bea 78.70 308 P P 21 10 06.5 -0.3
comp=Z,1.3nm,0.9s,baz=46,slow=4.3,SNR=5.7
NVAR LR LR 21 43 42.7
comp=Z,296nm,18.7s,baz=82,slow=35
comp=Z,1.3nm,0.9s
NVAR Mina Array Bea 78.70 308 P P 21 10 06.4 -0.5
GLI Glacier Island 78.72 338 P P 21 10 05.1 -1.1
baz=41
KNK Knik Glacier 78.74 339 P P 21 10 06.0 -0.4
baz=40
PMR Palmer 78.81 339 P P 21 10 06.5 -0.2
baz=40
K20K Telida 78.81 342 P P 21 10 05.8 -0.9
baz=36
H17K Granite Mounta 78.91 345 P P 21 10 07.4 +0.2
baz=31,SNR=11
G16K Koyuk River 79.03 346 P P 21 10 08.0 +0.1
baz=29,SNR=11
KNGR Kungurtug, Tuv 79.16 36 *i* P P 21 10 10.1 +1.1
KNGR pmax pmax
comp=Z,6.0nm,0.9s
F15K North Star Dit 79.20 347 P P 21 10 09.2 +0.4
baz=27,SNR=8.6
SKT Skwentna 79.22 340 P P 21 10 09.6 +0.6
SKT IAmb IAmb 21 10 11.1
comp=Z,24nm,1.0s
SKT Skwentna 79.22 340 P P 21 10 08.9 -0.1
baz=38,SNR=13
RC01 Rabbit Creek A 79.39 339 P P 21 10 09.3 -0.5
baz=39
J18K Innoko River 79.40 343 P P 21 10 09.5 -0.5
baz=34
P23K Montague Islan 79.49 337 P P 21 10 10.0 -0.4
baz=41
Q23K Middleton Isla 79.56 336 P P 21 10 10.2 -0.6
baz=42
H16K Elim 79.67 346 P P 21 10 11.5 +0.1
baz=29,SNR=7.8
G15K Niukluk 79.72 346 P P 21 10 11.3 -0.3
baz=28,SNR=7.7
F14K Arctic Creek 79.72 348 P P 21 10 10.7 -0.9
baz=26
YBH Yreka Blue Hor 79.72 313 LR LR 21 43 10.5
comp=Z,16nm,21.3s,baz=65,slow=34
M20K Styx River 79.75 341 P P 21 10 11.3 -0.7
baz=36
O22K Cooper Landing 79.86 338 P P 21 10 11.1 -1.3
baz=39
TNA Tin City 79.93 348 P P 21 10 13.5 +0.8
TNA Tin City 79.93 348 P P 21 10 11.9 -0.8
baz=24,SNR=6.4
BILL Bilibino 79.94 359 P P 21 10 13.1 +0.3
BILL Bilibino 79.94 359 *ce*P P 21 10 13.4 +0.6
BILL pmax pmax
comp=Z,8.0nm,1.3s
CO01 Juntas del Tor 79.96 225 P P 21 10 14.3 +0.6
CO01 IAmb IAmb 21 10 31.8
comp=Z,55nm,2.0s
L19K White Mountain 79.99 341 P P 21 10 12.8 -0.4
baz=35
I17K Unalakleet 79.99 345 P P 21 10 12.6 -0.4
baz=30
PFO Pinyon Flats O 79.99 303 LR LR 21 42 45.8
comp=Z,208nm,21.6s,baz=52,slow=34
PFO Pinyon Flats O 79.99 303 P P 21 10 14.4 +0.5
PFO IAmb IAmb 21 10 17.9
comp=Z,21nm,1.2s
PFO Pinyon Flats O 79.99 303 P P 21 10 14.4 +0.5
PFO pmax pmax
comp=Z,21nm,1.3s
N20K Mount Spurr 80.04 340 P P 21 10 13.1 -0.4
baz=37
SPCR Spurr Chakacha 80.04 340 P P 21 10 12.3 -1.2
baz=37
CFA Coronel Fontan 80.06 223 LR LR 21 44 08.0
comp=Z,81nm,20.9s,baz=79,slow=34
SEW Seward 80.06 338 P P 21 10 12.4 -1.2
baz=39
CAPN Captain Cook N 80.07 339 P P 21 10 13.3 -0.3
baz=38
M19K Big River Lodg 80.09 341 P P 21 10 13.3 -0.4
baz=35
MOY Mondy 80.18 34 *eP* P 21 10 16.4 +1.8
MOY pmax pmax
comp=Z,24nm,2.2s
LPIG La Paz 80.33 292 LR LR 21 42 26.7
comp=Z,117nm,21.9s,baz=32,slow=33
ANM Nome 80.36 347 P P 21 10 14.9 -0.3
baz=26
K17K Iditarod 80.43 343 P P 21 10 15.1 -0.4
baz=32
L18K Granite Mounta 80.44 342 P P 21 10 15.6 0.0
baz=34
J16K Anvik River 80.49 344 P P 21 10 15.9 +0.1
baz=30
BRSE Bradley Lake S 80.75 338 P P 21 10 17.1 -0.3
baz=38
M18K Stony River 80.82 341 P P 21 10 17.3 -0.3
baz=34
L17K Donlin 80.92 343 P P 21 10 17.9 -0.2
baz=32
N19K Bonanza Creek 81.01 341 P P 21 10 17.8 -0.9
baz=35
HOM Homer 81.10 339 P P 21 10 18.5 -0.6
baz=37
MNRC McLaughlin Min 81.16 310 P P 21 10 20.7 +0.7
MNRC IAmb IAmb 21 10 23.6
comp=Z,22nm,0.9s
M17K Holitna River 81.32 342 P P 21 10 20.0 -0.3
baz=33
CO02 Combarbal 81.38 225 P P 21 10 22.0 +0.9
TLY Talaya 81.41 33 LR LR 21 47 39.5
comp=Z,402nm,20.2s,baz=313,slow=37
O19K Port Alsworth 81.47 340 P P 21 10 20.6 -0.4
baz=35
N18K Kilae Creek 81.51 341 P P 21 10 20.3 -1.1
baz=34
K15K Wolf Creek Mou 81.56 344 P P 21 10 20.6 -0.9
baz=30
L16K Owhat River 81.58 343 P P 21 10 21.0 -0.6
baz=31
P19K Oil Pt 81.59 339 P P 21 10 20.4 -1.4
baz=36
J14K Nanvaranak Lak 81.61 345 P P 21 10 20.2 -1.6
baz=28
N17K Nushagak Hills 81.99 341 P P 21 10 22.2 -1.6
baz=33
O18K Koktuh Hills 82.00 340 P P 21 10 22.8 -1.2
baz=34
M16K Timber Creek 82.03 342 P P 21 10 22.0 -2.1
baz=32
L15K Ungalak Mounta 82.09 344 P P 21 10 22.7 -1.6
baz=30
YAK Yakutsk 82.17 15 LR LR 21 49 23.3
comp=Z,183nm,21.6s,baz=312,slow=38
YAK Yakutsk 82.17 15 P P 21 10 24.5 -0.2
YAK Yakutsk 82.17 15 *eP* P 21 10 25.3 +0.6
YAK *e**PP PcP 21 10 30.7 +0.6
YAK *e* 21 10 33.4
YAK *e* 21 13 33.6
YAK *eS* S 21 20 42.9 +3.6
YAK *eSS* SS 21 26 03.9 +6.3
YAK pmax pmax
comp=Z,10.0nm,1.6s
YAK pmax pmax
comp=N,3.0nm,1.1s
YAK pmax pmax
comp=E,4.0nm,2.0s
YAK pmax pmax
comp=Z,98nm,5.3s
YAK pmax pmax
comp=N,79nm,5.1s
YAK pmax pmax
comp=E,42nm,4.4s
YAK smax smax
comp=N,73nm,5.1s
YAK smax smax
comp=E,53nm,3.6s
YAK MLR MLR
comp=Z,213nm,18.0s
YAK MLR MLR
comp=E,304nm,17.0s
YAK MLR MLR
comp=N,466nm,19.0s
Q20K Shuyak Island 82.17 338 P P 21 10 23.7 -1.1
baz=37
GAMB Gambell 82.21 349 P 21 10 25.2 +0.4
GAMB Gambell 82.21 349 P P 21 10 22.6 -2.3
baz=21
Q19K Cape Douglas, 82.30 339 P P 21 10 23.7 -1.9
baz=36
P18K Big Mountain, 82.39 340 P P 21 10 24.6 -1.4
baz=34
N16K Nishlik Lake 82.45 342 P P 21 10 26.1 -0.2
baz=32
K13K Kusilvak Mount 82.58 345 P P 21 10 25.1 -1.7
baz=27
O17K Kolignanek Bris 82.60 341 P P 21 10 25.9 -1.1
baz=33
L14K Kuka Creek 82.66 344 P P 21 10 27.6 +0.3
baz=28
M15K Kasigluk River 82.75 343 P P 21 10 26.2 -1.6
baz=30
KDAK Kodiak Island 82.90 338 P P 21 10 27.8 -0.8
baz=36
P17K Kwiniak River 82.90 340 P P 21 10 27.3 -1.2
baz=33
Q18K Katmai Hardscr 82.94 339 P P 21 10 27.7 -1.3
baz=34
M14K Bethel 83.01 344 P P 21 10 28.2 -0.9
baz=29
O16K Kokwok River B 83.02 341 P P 21 10 28.3 -0.9
baz=32
N15K Kwethluk River 83.06 342 P P 21 10 28.7 -0.7
baz=30
MT09 Talagante 83.22 223 P P 21 10 31.1 +0.4
P16K Nushagak River 83.47 341 P P 21 10 30.9 -0.7
baz=32
Q17K Contact Creek 83.52 340 P P 21 10 31.1 -0.9
baz=34
OHAK Old Harbor 83.58 338 P P 21 10 31.2 -0.9
baz=36
M13K Dall Lake 83.64 344 P P 21 10 31.9 -0.5
baz=28
N14K Kuskokwak Cree 83.67 343 P P 21 10 31.5 -1.0
baz=29
BO02 Sierra Bellavi 83.84 222 P 21 10 34.2 +0.5
O15K Ungalikthiuk R 83.84 342 P P 21 10 32.6 -0.8
baz=31
O14K Tigyukauivet M 84.15 343 P P 21 10 33.7 -1.3
baz=30
R17L Mt. Peulik Vol 84.19 339 P P 21 10 34.8 -0.5
baz=33
M11K Mekoryuk 84.30 345 P P 21 10 34.9 -0.8
baz=26
SII Sitkinak Islan 84.40 338 P P 21 10 35.7 -0.7
baz=35
R16K Pilot Point 84.60 340 P P 21 10 36.6 -0.7
baz=32
SEY Seymchan 84.70 5 *ce*P P 21 10 39.9 +2.2
SEY pmax pmax
comp=Z,8.0nm,1.5s
HYB Hyderabad 85.22 73 *eP* P 21 10 42.1 +0.9
HYB *ePcP* PcP 21 10 45.0 +0.6
SONM Songino Array 85.36 34 P P 21 10 41.8 +0.3
comp=Z,2.6nm,0.8s,baz=302,slow=5.7,SNR=20
SONM PP PP 21 13 56.5 -2.3
comp=Z,1.0nm,0.9s,baz=306,slow=9.6,SNR=3.7
SONM LR LR 21 52 01.1
comp=Z,548nm,18.6s,baz=332,slow=38
comp=Z,2.6nm,0.8s
SONM Songino Array 85.36 34 P P 21 10 41.7 +0.1
SONM IAmb IAmb 21 10 53.5
comp=Z,6.3nm,0.9s
CHIR Chirikof Islan 85.47 338 P P 21 10 40.4 -1.3
baz=34
ULN Ulaanbaatar 85.65 34 P P 21 10 43.5 +0.5
ULN IAmb IAmb 21 10 55.2
comp=Z,11nm,1.0s
ULN Ulaanbaatar 85.65 34 *ce*P P 21 10 45.1 +2.1
ULN pmax pmax
comp=Z,16nm,1.1s
EVN Everest 85.86 60 P 21 10 44.7 -0.4
EVN IAmb IAmb 21 11 02.0
comp=Z,13nm,1.1s
SDPT Sand Point 87.33 340 P P 21 10 50.0 -0.8
baz=30
GTA2 Gaotai 87.47 44 *eP* P 21 10 53.5 +1.4
GTA2 pP sP 21 10 56.7 +1.1
GTA2 pmax pmax
comp=Z,170nm,6.5s
GTA2 L L
comp=Z,400nm,17.5s
GTA2 L L
comp=Z,460nm,18.2s
GTA2 L L
comp=Z,350nm,18.2s
CHNA Chernabura Isl 87.52 340 P P 21 10 50.7 -1.1
baz=31
GO06 Curarrehue 87.68 219 P P 21 10 53.0 +0.2
MA2 Magadan 87.89 6 *i* P P 21 10 55.4 +1.9
MA2 pmax pmax
comp=Z,14nm,2.7s
LSA Lhasa 87.96 56 P P 21 10 54.7 -0.3
LSA Lhasa 87.96 56 P P 21 10 54.7 -0.3
LSA pmax pmax
comp=Z,4.0nm,0.9s
PLCA Paso Flores 88.03 218 P P 21 10 55.0 +0.7
comp=Z,4.8nm,1.0s,baz=40,slow=3.1,SNR=4.6
PLCA LR LR 21 48 12.3
comp=Z,258nm,20.0s,baz=44,slow=34
comp=Z,4.8nm,1.0s
SPIA Saint Paul Isl 88.10 346 P P 21 10 53.6 -0.9
baz=22
FALS False Pass 88.58 341 P P 21 10 55.3 -1.5
baz=28
UNV Unalaska Valle 90.30 343 P P 21 11 03.8 -1.1
baz=25
SHL Shillong 90.93 59 P P 21 11 07.8 -0.9
SHL Shillong 90.93 59 P P 21 11 07.8 -0.9
SHL pmax pmax
comp=Z,18nm,0.4s
NIKH Nikolski High 91.67 344 P P 21 11 08.9 -2.4
baz=23
LZH Lanzhou 92.14 44 *eP* P 21 11 09.0 -5.1
LZH pP PcP 21 11 13.6 -1.3
LZH pmax pmax
comp=Z,18nm,1.2s
LZH LR LR
comp=N,270nm,15.8s
LZH LR LR
comp=E,290nm,15.6s
LZH LR LR
comp=Z,280nm,16.2s
LZDM Lanzhou Array 92.14 44 LR LR 21 54 36.8
comp=Z,179nm,18.9s,baz=325,slow=37
PALK Pallekele 92.42 80 LR LR 21 54 42.9
comp=Z,168nm,18.8s,baz=308,slow=37
BRDH Bariadhala 92.47 61 LR LR 21 59 40.0
comp=Z,222nm,18.3s,baz=344,slow=40
HHC Hu-ho-hao-te 92.97 37 *eP* P 21 11 15.0 -2.8
HHC S S 21 22 14.2 -10
HHC pmax pmax
comp=Z,3.0nm,0.6s
HHC pmax pmax
comp=Z,54nm,4.8s
HHC L L
comp=Z,280nm,17.8s
HHC L L
comp=Z,330nm,17.5s
HHC L L
comp=Z,400nm,17.9s
KLR Kul'dur 94.12 20 LR LR 21 55 53.9
comp=Z,161nm,21.4s,baz=328,slow=37
SHEM Shemya Is, Ala 94.80 353 LR LR 21 50 25.1
comp=Z,91nm,21.5s,baz=70,slow=33
BNX BinXian 95.81 24 ⇑P P 21 11 27.8 -2.7
BNX pmax pmax
comp=Z,2.0nm,1.2s
CN2 Changchun 96.76 27 *eP* P 21 11 33.5 -1.4
CN2 *es*P sP 21 11 40.0 +1.6
CN2 *eS* S 21 22 50.7 -5.8
CN2 L L
comp=Z,200nm,16.0s
CN2 L L
comp=Z,200nm,16.0s
CN2 L L
comp=Z,400nm,17.0s
PZH PanZhiHua 97.24 53 P P 21 11 35.8 -1.7
LYN LuoYang 98.15 40 P P 21 11 39.9 -1.4
LYN pP pP 21 11 44.2 +0.3
LYN sP sP 21 11 46.6 +1.8
DL2 Dalian 99.29 32 P Pdif 21 11 46.6 +0.3
DL2 S S 21 23 19.0 +0.8
DL2 pmax pmax
comp=Z,6.0nm,0.8s
DL2 L L
comp=Z,540nm,15.8s
DL2 L L
comp=Z,580nm,15.4s
DL2 L L
comp=Z,770nm,19.0s
QIZ Qiongzhong 107.78 53 Pdif Pdif 21 12 23.3 -1.1
QIZ SS SS 21 32 06.9 +3.3
QIZ L L
comp=Z,170nm,18.6s
QIZ L L
comp=Z,260nm,14.7s
QIZ L L
comp=Z,190nm,17.9s
QSPA South Pole Qui 122.19 180 PKP PKPdf 21 16 58.7 +0.5
comp=Z,1.9nm,0.8s,baz=237,slow=1.8,SNR=3.8
QSPA South Pole Qui 122.19 180 PKPdf 21 16 58.5 +0.3
TAOE Nuku Hiva Isla 122.82 281 *e*LR LR 21 54 49.4
comp=Z,100nm,26.2s
PPT2 Papeete2 135.14 277 *e*LR LR 22 00 43.1
comp=Z,141nm,32.0s
PPT2 *e*LR LR 22 00 44.2
comp=Z,139nm,30.0s
KNRA Kununurra 144.61 70 PKPab 21 17 39.9 0.0
MTN Manton Dam 144.79 64 PKPdf PKPab 21 17 39.8 -0.9
WRA Warramunga Arr 151.37 72 PKPbc PKPbc 21 17 57.5 -1.0
comp=Z,3.7nm,0.7s,baz=317,slow=1.8,SNR=35
WRA Warramunga Arr 151.37 72 PKPbc 21 17 57.2 -1.3
ASAR Alice Springs 152.76 79 PKPbc PKPbc 21 18 02.1 +0.5
comp=Z,2.0nm,0.9s,baz=305,slow=1.9,SNR=12
ASAR Alice Springs 152.76 79 PKPdf 21 17 54.5 0.0
ASAR Alice Springs 152.76 79 PKIKP PKPdf 21 17 54.5 0.0
DZM Mont Dzumac 169.42 344 *e*LR LR 22 16 37.3
comp=Z,322nm,25.9s

IDC 07 21:17:51.2±9.8, 19°47S×178°21W, h564km, 46km, mb3.0/2, mbtmp3.8/3, Error ellipse: s-maj=241.9km s-min=47.4km az=139.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.95**	**295**	P	P	21 19 13.7	-0.1
	1.7nm,0.3s,baz=118,slow=19,SNR=2.2						
WRA	**Warramunga Arr**	**44.56**	**261**	P	P	21 25 13.8	0.0
	0.7nm,0.3s,baz=97,slow=7.7,SNR=24						
	0.7nm,0.3s						
ASAR	**Alice Springs**	**44.58**	**256**	P	P	21 25 13.8	-0.2
	1.3nm,0.6s,baz=97,slow=7.7,SNR=21						
	1.3nm,0.6s						
BRTR	**Keskin Array B**	**146.00**	**313**	PKPbc	PKPbc	21 36 27.8	-0.9
	0.3nm,0.5s,baz=84,slow=2.6,SNR=3.5						

MDD ***07*** *21:22:31.1±0.7, 32°.33N×16°.86W, h29km, Mb4.8/12, M_mb4.3/12, Error ellipse: s-maj=13.9km s-min=4.3km az=78.0*

INMG ***07*** *21:22:33.9±1.2, 32°.34N×16°.86W, h5km, ML2.2, Error ellipse: s-maj=7.3km s-min=1.8km az=91.0, #DIST_RANGE: LOCAL #IPMA_REGION: S Funchal (Madeira)*

ISC 07 21:22:27.3±0.9, 32°27N±0°.03×16°.81W±0°.08, h10km, n21, σ2°.04/32, 13C, Madeira Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FUL	**Funchal**	**0.38**	**350**	*eP*	**Pn**	**21 22 38.7**	**-0.2**
FUL				*eS*	**Sb**	**21 22 42.9**	**+0.7**
FUL				*i* IAML		21 22 43.3	
FUL				*i* IAML		21 22 43.3	
FUL				*i* IAML		21 22 45.9	
PMAR	**Madeira**	**0.46**	**349**	⇑*eP*	**Pn**	**21 22 39.9**	**-0.3**
PMAR				*eS*	**Sb**	**21 22 44.9**	**+0.2**
PMAR				*i* IAML		21 22 45.0	
PMAR				*i* IAML		21 22 46.0	
PMAR				*i* IAML		21 22 47.0	
PMOZ	**Porto Moniz, M**	**0.64**	**330**	*eS*	**Sb**	**21 22 49.7**	**0.0**
PMOZ				*i* IAML		21 22 50.9	
PMOZ				*i* IAML		21 22 51.7	
PMOZ				*i* IAML		21 22 53.1	
PMPS	**Porto Santo**	**0.88**	**27**	*eP*	**Pn**	**21 22 46.4**	**+0.6**
PMPST	**Porto Santo, M**	**0.90**	**27**	*eP*	**Pb**	**21 22 46.4**	**+1.3**
PMPST				*eS*	**Sg**	**21 22 56.6**	**+0.2**
PMPST				*i* IAML		21 22 59.2	
PMPST				*i* IAML		21 22 59.9	
CROM	**Garafia, La Pa**	**3.62**	**195**	P	**Pn**	**21 23 25.5**	**+1.9**
CROM				⇑*i*IVmb_VC		21 23 27.1	
	1μm,SNR=1.4						
CROM				S	**Sn**	**21 24 04.3**	**-2.3**
CMIR	**El Paso, La Pa**	**3.67**	**195**	P	**Pn**	**21 23 25.5**	**+1.2**
CMIR				⇑*i*IVmb_VC		21 23 26.4	
	980nm,SNR=2.2						
CMIR				S	**Sn**	**21 24 03.9**	**-3.9**
TBT	**Taburiente**	**3.70**	**195**	P	**Pn**	**21 23 26.0**	**+1.4**
TBT				⇑*i*IVmb_VC		21 23 29.2	
	568nm,SNR=1.2						
TBT				S	**Sn**	**21 24 04.7**	**-3.6**
CBRE	**Brena Baja,La**	**3.73**	**193**	⇑*i*IVmb_VC		21 23 30.3	
	2μm,SNR=1.2						
CBRE				S	**Sn**	**21 24 09.0**	**0.0**
CVIE	**Villa de Mazo,**	**3.77**	**194**	S	**Sn**	**21 24 09.6**	**-0.5**
CJED	**Jedey, El Paso**	**3.79**	**194**	P	**Pn**	**21 23 25.0**	**-0.8**
CJED				⇑*i*IVmb_VC		21 23 29.6	
	1μm,SNR=3.3						
CJED				S	**Sn**	**21 24 10.3**	**-0.3**
CNOR	**Icod de los Vi**	**3.95**	**178**	P	**Pn**	**21 23 29.7**	**+1.6**
CDOS	**Garachico, Isl**	**3.96**	**179**	P	**Pn**	**21 23 30.8**	**+2.5**
CDOS				⇑*i*IVmb_VC		21 23 37.3	
	2μm,SNR=1.3						
CDOS				S	**Sn**	**21 24 11.6**	**-3.4**
CDIE	**La Orotava (Te**	**3.98**	**177**	P	**Pn**	**21 23 30.0**	**+1.4**
CDIE				S	**Sn**	**21 24 14.4**	**-1.1**
CPVI	**La Orotava (Te**	**4.00**	**178**	P	**Pn**	**21 23 29.7**	**+0.7**
GUIA	**Guia de Isora,**	**4.01**	**179**	P	**Pn**	**21 23 30.6**	**+1.6**
GUIA				⇑*i*IVmb_VC		21 23 36.5	

	2µm,SNR=2.1						
MACI	**Morro de la Ar**	**4.01**	**176**	⇑*i*IVmb_VC		21 23 32.3	
	739nm,SNR=1.1						
MACI				S	**Sn**	**21 24 15.1**	**-1.1**
CCHO	**La Orotava (Te**	**4.03**	**178**	⇑*i*IVmb_VC		21 23 34.5	
	400nm,SNR=1.7						
CCHO				S	**Sn**	**21 24 14.8**	**-2.0**
CCAN	**Las Canadas**	**4.04**	**177**	P	**Pn**	**21 23 30.8**	**+1.3**
CCAN				⇑*i*IVmb_VC		21 23 35.6	
	441nm,SNR=0.9						
CCAN				S	**Sn**	**21 24 15.0**	**-1.9**
CFUE	**Fuerteventura**	**4.38**	**145**	⇑*i*IVmb_VC		21 23 36.2	
	396nm,SNR=1.5						
CFUE				S	**Sn**	**21 24 20.5**	**-4.6**
CLUM	**San Bartolome**	**4.55**	**167**	P	**Pn**	**21 23 38.9**	**+2.6**
CLUM				⇑*i*IVmb_VC		21 23 41.0	
	813nm,SNR=1.4						
CLUM				S	**Sn**	**21 24 25.8**	**-3.4**

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*IDC **07** 21:39:16.4±0.6, 27°.84N×139°.99E, h373km±6km, mb3.4/27, mbtmp4.2/35, Error ellipse: s-maj=11.3km s-min=8.6km az=68.0*

*NEIC **07** 21:39:17.7±1.6, 27°.89N±0°.08×140°.0E±0°.1, h379km±6km, mb4.1/58, Error ellipse: s-maj=15.2km s-min=11.3km az=77.0*

*JMA **07** 21:39:18.0±0.1, 28°N±1°×14°0E±°, h393km, MV4.2/32, W OFF OGASAWARA*

JMA Felt I J1 at W OFF OGASAWARA .

*NIED **07** 21:39:18.0, 28°.03N×140°.50E, h393km, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.87; $M_{\theta\theta}$1.07; $M_{\phi\phi}$-0.20; $M_{r\theta}$-0.38; $M_{\theta\phi}$-0.09; $M_{\phi r}$-0.21; Fault plane solution: $M_0$1.07000×10^{16} NP1: ϕ_s291.00000°, δ37.00000°, λ-64.00000°. NP2:ϕ_s79.00000°, δ57.00000°, λ-109.00000°.*

ISC 07 21:39:17.1±0.4**, 27°.87N**±0°.05×**140°.01E**±0°.06**, h379**km**,**
n170, σ0.98/186**, mb3.9**/56**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.08**	**111**	*i* P	**Pn**	**21 40 12.0**	**+0.4**
CBIJ				A	A	21 40 12.0	
	comp=N,14nm,0.5s,comp=E,9.0nm,1.0s						
CBIJ				S	**S**	**21 40 53.9**	**-1.6**
JCJ	**Chichijima**	**2.08**	**111**	P	**Pn**	**21 40 11.2**	**-0.4**
	comp=E,831nm,0.4s,baz=114,slow=1.6,SNR=294						
JCJ				S	**S**	**21 40 53.2**	**-2.4**
	comp=E,754nm,0.3s,baz=270,slow=18,SNR=5.9						
JCJ	**Chichijima**	**2.08**	**111**	P	**Pn**	**21 40 12.1**	**+0.5**
JCJ	**Chichijima**	**2.08**	**111**	S	**S**	**21 40 54.0**	**-1.5**
JCJ	**Chichijima**	**2.08**	**111**		**Pn**	**21 40 11.8**	**+0.2**
JCJ				Sn	**S**	**21 40 53.6**	**-1.9**
JHH2	**Haha-jima-NKT2**	**2.29**	**122**	P	**Pn**	**21 40 13.9**	**+0.9**
JHH2				A	A	21 40 13.9	
	comp=N,62nm,0.4s,comp=E,93nm,0.4s						
JHH2				S	**S**	**21 40 58.0**	**-0.1**
JHCJ	**Hachijojimakas**	**5.19**	**358**	*e*P	**Pn**	**21 40 41.3**	**+1.3**
JHJ2	**Mitsune**	**5.23**	**358**	Pn	**Pn**	**21 40 41.7**	**+1.3**
JHJ2				Sn	**S**	**21 41 44.3**	**-3.7**
JHJ2	**Mitsune**	**5.23**	**358**	P	**Pn**	**21 40 42.1**	**+1.8**
JHJ	**Hachijo jima 2**	**5.24**	**358**	P	**Pn**	**21 40 41.6**	**+1.1**
	comp=E,248nm,0.3s,baz=84,slow=23,SNR=16						
JHJ				S	**S**	**21 41 44.3**	**-3.9**
	comp=E,155nm,0.3s,baz=233,slow=23,SNR=5.8						
BSO1	**Boso 1**	**6.81**	**7**	*e*P	**Pn**	**21 40 58.2**	**+0.9**
BSO1				*e*S	**S**	**21 42 17.4**	**-1.9**
BSO3	**Boso 3**	**6.92**	**3**	*e*P	**Pn**	**21 40 59.5**	**+0.6**
JSG	**Sagara**	**6.96**	**347**	Pn	**P**	**21 41 00.7**	**+0.2**
JIE	**Ise**	**7.09**	**337**	*e*P	**P**	**21 41 04.3**	**+2.2**
BSO4	**Boso 4**	**7.10**	**2**	*e*P	**Pn**	**21 41 01.9**	**+0.8**
JHMK	**Hamakita**	**7.19**	**345**	*e*P	**P**	**21 41 03.9**	**+0.9**
HMMJ	**Hamamatsu 2**	**7.24**	**345**	*e*P	**P**	**21 41 04.8**	**+1.1**
JOD2	**Odawara 2**	**7.41**	**354**	*e*P	**P**	**21 41 05.8**	**+0.1**
JMN	**Monobe**	**7.87**	**319**	Pn	**P**	**21 41 13.3**	**+2.4**
INU	**Inuyama**	**7.88**	**342**	P	**P**	**21 41 12.3**	**+1.3**
INU	**Inuyama**	**7.88**	**342**		**P**	**21 41 12.0**	**+1.0**
JGF	**Kuroka**	**8.03**	**344**	P	**P**	**21 41 13.5**	**+0.2**
JGF	**Kuroka**	**8.03**	**344**		**P**	**21 41 13.1**	**-0.3**
MJAR	**Matsushiro Arr**	**8.78**	**350**	P	**Pn**	**21 41 20.1**	**-0.5**
	comp=E,8.2nm,0.4s,baz=166,slow=11,SNR=62						
MJAR	**Matsushiro Arr**	**8.78**	**350**		**Pn**	**21 41 20.4**	**-0.3**
MAJO	**Matsushiro**	**8.78**	**350**	P	**Pn**	**21 41 20.7**	**0.0**
MAJO	**Matsushiro**	**8.78**	**350**		**Pn**	**21 41 20.3**	**-0.4**
JNU	**Nakatsue**	**9.46**	**306**	P	**Pn**	**21 41 28.9**	**+0.2**
	comp=E,24nm,0.9s,baz=31,slow=3.7,SNR=12						
JOW	**Kunigami**	**10.49**	**267**	P	**P**	**21 41 39.8**	**-0.9**
	comp=E,8.5nm,0.4s,baz=105,slow=22,SNR=6.4						
JOW	**Kunigami**	**10.49**	**267**	P	**P**	**21 41 41.1**	**+0.4**
KSRS	**Korea Array**	**13.95**	**316**	P	**P**	**21 42 19.7**	**+0.9**
	comp=E,1.5nm,0.5s,baz=130,slow=10,SNR=9.7						
ASAJ	**Asahikawa**	**16.35**	**7**	P	**P**	**21 42 45.5**	**+0.8**
	comp=E,3.9nm,0.5s,baz=220,slow=10,SNR=9.4						
JKA	**Kamikawa-asahi**	**16.35**	**7**	P	**P**	**21 42 45.8**	**+1.1**
JKA				IAmb	IAmb	21 42 56.9	
	comp=Z,23nm,1.3s						
YHNB	**Yeheng**	**17.02**	**263**	P	**P**	**21 42 52.5**	**+0.3**
USRK	**Ussuriysk Ar.**	**17.52**	**341**	P	**P**	**21 42 57.9**	**+0.6**
	comp=Z,10nm,0.5s,baz=137,slow=10,SNR=22						
SSLB	**Suanglung**	**17.63**	**261**	P	**P**	**21 43 00.6**	**+1.9**
SSLB	**Suanglung**	**17.63**	**261**		**P**	**21 42 60.0**	**+1.3**
SSLB				IAmb	IAmb	21 43 03.0	
	comp=Z,21nm,1.0s						
TIA	**Tai'an**	**21.08**	**299**	P	**P**	**21 43 32.4**	**-0.3**
TIA				S	**S**	**21 47 02.6**	**+1.2**
TIA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TIA				LR	LR		
	comp=N,380nm,21.0s						
TIA				LR	LR		
	comp=E,310nm,18.6s						
TIA				LR	LR		
	comp=Z,450nm,19.8s						
KLR	**Kul'dur**	**22.26**	**346**	P	**P**	**21 43 44.5**	**+1.2**
	comp=Z,3.5nm,0.5s,baz=183,slow=7.2,SNR=27						
	comp=Z,3.5nm,0.5s						
HHC	**Hu-ho-hao-te**	**26.69**	**306**	*e*P	**P**	**21 44 23.4**	**+0.2**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,35nm,4.8s						
ENH	**Enshi**	**26.75**	**283**	P	**P**	**21 44 24.2**	**+0.4**
ENH	**Enshi**	**26.75**	**283**		**P**	**21 44 23.7**	**-0.2**
ENH				IAmb	IAmb	21 44 25.2	
	comp=Z,7.8nm,1.0s						
PETK	**Petropavlovsk-**	**28.42**	**23**	P	**P**	**21 44 39.1**	**+1.0**
	comp=Z,4.1nm,1.0s,baz=211,slow=10,SNR=2.1						
	comp=Z,4.1nm,1.0s						
CD2	**Chengdu**	**31.65**	**284**	P	**P**	**21 45 05.9**	**-0.9**
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
LZDM	**Lanzhou Array**	**31.73**	**294**	P	**P**	**21 45 06.7**	**-1.0**
	comp=Z,1.9nm,0.3s,baz=120,slow=11,SNR=4.0						
	comp=Z,1.9nm,0.3s						
MA2	**Magadan**	**32.55**	**10**	P	**P**	**21 45 14.4**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=218,slow=3.9,SNR=4.6						
	comp=Z,0.8nm,0.3s						
SONM	**Songino Array**	**32.83**	**317**	P	**P**	**21 45 16.8**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=125,slow=8.1,SNR=9.1						
SONM				PcP	**PcP**	**21 47 50.9**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=143,slow=2.9,SNR=4.2						
	comp=Z,0.7nm,0.5s						
SONM	**Songino Array**	**32.83**	**317**	P	**P**	**21 45 17.1**	**+0.3**
PZH	**PanZhiHua**	**33.98**	**277**	P	**P**	**21 45 26.9**	**0.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GTA2	**Gaotai**	**35.18**	**300**	*e*P	**P**	**21 45 36.8**	**-0.1**
GTA2				pP	pP	21 46 49.5	+2.5
GTA2				PcP	**PP**	**21 47 08.7**	**+2.2**
GTA2				S	**S**	**21 50 39.9**	**-1.8**
GTA2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SEY	**Seymchan**	**35.99**	**10**	P	**P**	**21 45 44.1**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=253,slow=19,SNR=1.9						
SEY				PcP	**PcP**	**21 48 00.1**	**0.0**
	comp=Z,0.3nm,0.3s,baz=131,slow=15,SNR=2.0						
	comp=Z,0.3nm,0.3s						
CHTO	**Chiang Mai**	**38.62**	**266**	P	**P**	**21 46 06.7**	**+1.0**
CHTO	**Chiang Mai**	**38.62**	**266**		**P**	**21 46 06.0**	**+0.3**
CHTO				IAmb	IAmb	21 46 07.9	
	comp=Z,5.5nm,1.1s						
CMAR	**Chiang Mai Arr**	**38.75**	**265**	P	**P**	**21 46 06.4**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=58,slow=8.2,SNR=8.2						
	comp=Z,0.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**38.75**	**265**	P	**P**	**21 46 07.8**	**+1.0**
LSA	**Lhasa**	**42.61**	**285**	P	**P**	**21 46 39.1**	**+0.8**
SHL	**Shillong**	**42.84**	**278**		**P**	**21 46 39.4**	**-0.5**
SHL				IAmb	IAmb	21 46 41.8	
	comp=Z,16nm,1.3s						
TIXI	**Tiksi**	**44.26**	**355**	P	**P**	**21 46 49.9**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=217,slow=7.1,SNR=5.5						
TIXI				PcP	**PcP**	**21 48 26.9**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=358,slow=23,SNR=1.7						
	comp=Z,0.5nm,0.3s						
TIXI	**Tiksi**	**44.26**	**355**	P	**P**	**21 46 49.8**	**-0.3**
TIXI				IAmb	IAmb	21 47 25.3	
	comp=Z,2.3nm,0.4s						
EVN	**Everest**	**46.69**	**283**		**P**	**21 47 10.7**	**+0.4**
EVN				IAmb	IAmb	21 47 12.3	
	comp=Z,6.1nm,0.4s						
ZALV	**Zalesovo Beam**	**47.64**	**319**	PcP	**PcP**	**21 48 38.2**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=79,slow=3.2,SNR=4.0						
WB0	**Warramunga Arr**	**47.67**	**187**	P	**P**	**21 47 17.0**	**-0.1**
WRA	**Warramunga Arr**	**47.85**	**187**	P	**P**	**21 47 18.3**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=5.8,slow=7.7,SNR=16						
	comp=Z,0.9nm,0.5s						
WRA	**Warramunga Arr**	**47.85**	**187**	P	**P**	**21 47 18.4**	**-0.1**
GSI	**Gunungsitoli**	**48.42**	**244**	P	**P**	**21 47 22.8**	**-0.1**
GSI				IAmb	IAmb	21 47 24.3	
	comp=Z,20nm,0.9s						
MKAR	**Makanchi Array**	**48.49**	**309**	P	**P**	**21 47 22.7**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=87,slow=10,SNR=17						
MKAR				PcP	**PcP**	**21 48 42.1**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=98,slow=3.7,SNR=6.2						
MKAR				ScP	**ScP**	**21 51 59.9**	**-0.4**
	comp=Z,0.1nm,0.6s,baz=86,slow=2.9,SNR=4.1						
	comp=Z,0.4nm,0.3s						
MKAR	**Makanchi Array**	**48.49**	**309**	P	**P**	**21 47 22.4**	**-0.7**
MKAR					**ScP**	**21 51 59.5**	**-0.8**
MAKZ	**Makanchi**	**48.71**	**309**	P	**P**	**21 47 23.5**	**-1.2**
J14K	**Nanvaranak Lak**	**50.35**	**30**	P	**P**	**21 47 37.4**	**+0.9**
F15K	**North Star Dit**	**50.83**	**26**	P	**P**	**21 47 40.5**	**+0.4**
KURK	**Kurchatov**	**51.07**	**314**	P	**P**	**21 47 41.6**	**-0.5**
KURBB	**Kurchatov Arra**	**51.12**	**314**	P	**P**	**21 47 42.2**	**-0.3**
	comp=Z,1.2nm,0.3s,baz=92,slow=7.6,SNR=30						
	comp=Z,1.2nm,0.3s						
NRIK	**Noril'sk**	**51.23**	**339**	P	**P**	**21 47 43.2**	**+0.2**
	comp=Z,1.9nm,0.3s,baz=166,slow=23,SNR=7.3						
	comp=Z,1.9nm,0.3s						
NRIK	**Noril'sk**	**51.23**	**339**		**P**	**21 47 43.0**	**0.0**
NRIK				IAmb	IAmb	21 47 45.0	
	comp=Z,5.5nm,0.9s						
AS31	**Alice Springs**	**51.57**	**187**	P	**P**	**21 47 47.1**	**+1.0**
ASAR	**Alice Springs**	**51.57**	**187**	P	**P**	**21 47 46.6**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=360,slow=4.8,SNR=13						
	comp=Z,0.5nm,0.7s						
P16K	**Nushagak River**	**52.20**	**35**	P	**P**	**21 47 51.4**	**+1.2**
P16K				IAmb	IAmb	21 48 21.0	
	comp=Z,28nm,1.5s						
BOOM	**Boomskoye usch**	**53.18**	**304**	P	**P**	**21 47 58.3**	**+0.4**
L18K	**Granite Mounta**	**53.33**	**31**	P	**P**	**21 48 00.2**	**+1.8**
O18K	**Koktuh Hills**	**53.71**	**35**	P	**P**	**21 48 02.6**	**+1.4**
O18K				IAmb	IAmb	21 48 05.4	
	comp=Z,15nm,1.3s						
KSH2	**Kashi**	**53.89**	**300**	P	**P**	**21 48 04.0**	**+1.0**
E19K	**Redstone River**	**54.17**	**25**	P	**P**	**21 48 05.7**	**+1.3**
AAK	**Ala-Archa**	**54.23**	**304**	P	**P**	**21 48 05.2**	**-0.2**
KDAK	**Kodiak Island**	**54.91**	**37**	P	**P**	**21 48 10.1**	**+0.4**
SYI	**Shuyak Island**	**55.05**	**36**	P	**P**	**21 48 10.8**	**+0.1**
ARSB	**Arslanbob**	**55.52**	**303**	P	**P**	**21 48 14.9**	**+0.3**
ARSB				IAmb	IAmb	21 48 16.6	
	comp=Z,5.4nm,1.2s						
SKT	**Skwentna**	**55.71**	**32**	P	**P**	**21 48 16.0**	**+0.7**
BPAW	**Bear Paw Mtn.**	**56.14**	**30**	P	**P**	**21 48 20.3**	**+1.9**
BVAR	**Borovoye Array**	**56.17**	**317**	P	**P**	**21 48 17.7**	**-1.0**
	comp=Z,1.7nm,0.5s,baz=87,slow=8.0,SNR=11						
	comp=Z,1.7nm,0.5s						
BORK	**Borovoye**	**56.21**	**317**		**P**	**21 48 19.0**	**+0.1**
BORK				IAmb	IAmb	21 48 21.0	
	comp=Z,8.9nm,1.4s						
NIL	**Nilore**	**56.78**	**294**	P	**P**	**21 48 23.8**	**+0.4**
NIL				IAmb	IAmb	21 48 25.5	
	comp=Z,17nm,1.4s						
GHO	**Glory Hole Cre**	**56.93**	**32**	P	**P**	**21 48 24.6**	**+0.7**
GHO				IAmb	IAmb	21 48 50.3	
	comp=Z,11nm,1.4s						
KK31	**Karatay Array**	**57.07**	**305**		**P**	**21 48 25.0**	**-0.1**
KK31				IAmb	IAmb	21 48 26.9	
	comp=Z,3.0nm,0.8s						
KKAR	**Karatay Array**	**57.07**	**305**		**P**	**21 48 25.1**	**0.0**
SML	**Sawmill**	**57.21**	**32**	P	**P**	**21 48 26.2**	**+0.4**
SML				IAmb	IAmb	21 48 45.5	
	comp=Z,20nm,1.5s						
BTK	**Batken**	**57.36**	**302**	P	**P**	**21 48 27.0**	**-0.2**
BTK				IAmb	IAmb	21 48 28.5	
	comp=Z,5.7nm,1.3s						
SCM	**Sheep Creek Mo**	**57.69**	**32**	P	**P**	**21 48 30.0**	**+0.9**
SCM				IAmb	IAmb	21 48 33.8	
	comp=Z,17nm,1.5s						
GAR	**Garm**	**57.94**	**300**		**P**	**21 48 31.2**	**-0.1**
ILAR	**Eielson Array**	**57.97**	**29**	P	**P**	**21 48 30.9**	**0.0**
	comp=Z,0.3nm,0.8s,baz=291,slow=8.7,SNR=4.8						
	comp=Z,0.3nm,0.8s						
KLU	**Klutina**	**58.36**	**33**	P	**P**	**21 48 34.3**	**+0.5**
KLU				IAmb	IAmb	21 48 46.6	
	comp=Z,3.3nm,0.9s						
EPYK	**Eagle Plains**	**62.13**	**27**	P	**P**	**21 49 00.2**	**+1.3**
EPYK				IAmb	IAmb	21 49 02.2	
	comp=Z,9.3nm,1.2s						
ARTI	**Arti**	**62.73**	**322**	P	**P**	**21 49 02.3**	**-0.6**
INK	**Inuvik**	**63.13**	**25**	P	**P**	**21 49 05.2**	**-0.1**
INK				IAmb	IAmb	21 49 41.0	
	comp=Z,3.6nm,1.4s						
AB31	**Akbulak array**	**63.17**	**314**		**P**	**21 49 05.4**	**-0.6**
AB31				IAmb	IAmb	21 49 07.1	
	comp=Z,2.5nm,0.9s						
ABKAR	**Akbulak array**	**63.17**	**314**	P	**P**	**21 49 05.4**	**-0.5**
AUMTC	**Mt Clear Colle**	**65.24**	**177**	P	**P**	**21 49 15.2**	**-3.9**
HRA	**Herat**	**65.39**	**297**	P	**P**	**21 49 20.2**	**-0.5**
HRA				IAmb	IAmb	21 49 22.6	
	comp=Z,2.8nm,0.9s						
SPA0	**Spitsbergen Ar**	**69.28**	**349**	*e*P	**P**	**21 49 44.7**	**+0.9**
SPB2	**Spitsbergen Ar**	**69.28**	**349**	P	**P**	**21 49 45.0**	**+1.3**
SPITS	**Spitsbergen Ar**	**69.28**	**349**	P	**P**	**21 49 43.4**	**-0.4**
	comp=Z,2.7nm,0.5s,baz=100,slow=9.4,SNR=11						
	comp=Z,2.7nm,0.5s						
VADS	**Vadso**	**70.72**	**340**	*e*P	**P**	**21 49 53.3**	**+0.7**
HAMF	**Hammerfest**	**72.09**	**342**	*e*P	**P**	**21 50 01.5**	**+0.8**
ARA0	**ARCESS Array S**	**72.17**	**340**	*e*P	**P**	**21 50 02.0**	**+0.8**
ARCES	**ARCESS Array B**	**72.17**	**340**	P	**P**	**21 50 01.0**	**-0.2**
	comp=Z,2.7nm,0.4s,baz=65,slow=8.2,SNR=36						
	comp=Z,2.7nm,0.4s						
ARCES	**ARCESS Array B**	**72.17**	**340**	P	**P**	**21 50 01.4**	**+0.3**
YKA	**Yellowknife Ar**	**72.37**	**28**	P	**P**	**21 50 02.7**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=298,slow=6.4,SNR=14						
	comp=Z,1.1nm,0.8s						
YKA	**Yellowknife Ar**	**72.37**	**28**	P	**P**	**21 50 02.2**	**-0.2**
KTK1	**Kautokeino**	**73.14**	**340**	*e*P	**P**	**21 50 07.7**	**+0.8**
JETT	**Jettan, Norway**	**73.64**	**341**	*e*P	**P**	**21 50 10.6**	**+0.8**
NLWA	**Neilton Lookou**	**73.91**	**45**	P	**P**	**21 50 13.4**	**+1.6**
BKZ	**Black Stump Fm**	**74.88**	**151**	P	**P**	**21 50 17.7**	**+0.6**
KBZ	**Khabaz**	**76.07**	**312**	P	**P**	**21 50 23.9**	**0.0**
	comp=Z,3.0nm,0.8s,baz=100,slow=11,SNR=6.0						
	comp=Z,3.0nm,0.8s						
STEI	**Steigen**	**76.13**	**341**	*e*P	**P**	**21 50 24.1**	**+0.3**
FIA1	**FINESS Array S**	**76.39**	**333**	P	**P**	**21 50 25.1**	**-0.3**
FINES	**FINESS Array B**	**76.40**	**333**	P	**P**	**21 50 25.2**	**-0.2**
	comp=Z,6.2nm,0.5s,baz=70,slow=5.3,SNR=110						
	comp=Z,6.2nm,0.5s						
FINES	**FINESS Array B**	**76.40**	**333**	P	**P**	**21 50 25.0**	**-0.4**
FAUS	**Fauske**	**76.48**	**341**	*e*P	**P**	**21 50 26.9**	**+1.2**
KCPM	**Cahto Peak**	**77.32**	**52**	P	**P**	**21 50 32.0**	**+0.9**
RAUS	**Rausandaksla**	**77.48**	**341**	*e*P	**P**	**21 50 31.6**	**+0.3**
MOR8	**Moi Rana**	**77.55**	**340**	*e*P	**P**	**21 50 31.2**	**-0.5**
LEIR	**Leirfjorden**	**77.98**	**341**	*e*P	**P**	**21 50 33.8**	**-0.3**
NSS	**Namsos**	**79.43**	**340**	*e*P	**P**	**21 50 42.7**	**+0.9**
NACGM	**Naroch**	**79.75**	**327**	*e*P	**P**	**21 50 44.0**	**+0.2**
	comp=Z,9.0nm,0.9s,baz=56						
SUMG	**Summit**	**79.82**	**360**	P	**P**	**21 50 44.7**	**+0.4**
AKASG	**Malin Array Be**	**80.85**	**323**	P	**P**	**21 50 49.1**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=54,slow=5.3,SNR=5.7						
	comp=Z,0.7nm,0.3s						
AKBB	**Malin Array Si**	**80.85**	**323**	P	**P**	**21 50 49.1**	**-0.5**
AKBB				IAmb	IAmb	21 50 50.4	
	comp=Z,7.5nm,1.4s						
AK01	**Malin Array Si**	**80.86**	**323**	P	**P**	**21 50 48.5**	**-1.2**
AK04	**Malin Array Si**	**80.87**	**323**	P	**P**	**21 50 49.0**	**-0.7**
AK02	**Malin Array Si**	**80.88**	**323**	P	**P**	**21 50 49.1**	**-0.7**
AK11	**Malin Array Si**	**80.89**	**323**	P	**P**	**21 50 49.1**	**-0.7**
AK22	**Malin Array Si**	**80.90**	**323**	P	**P**	**21 50 49.2**	**-0.7**
AK21	**Malin Array Si**	**80.90**	**323**	P	**P**	**21 50 49.2**	**-0.7**
AK16	**Malin Array Si**	**80.93**	**323**	P	**P**	**21 50 49.0**	**-1.0**
AK20	**Malin Array Si**	**80.94**	**323**	P	**P**	**21 50 49.1**	**-1.0**
AK07	**Malin Array Si**	**80.94**	**323**	P	**P**	**21 50 49.1**	**-1.0**
AK17	**Malin Array Si**	**80.95**	**323**	P	**P**	**21 50 49.1**	**-1.0**
AK19	**Malin Array Si**	**80.95**	**323**	P	**P**	**21 50 49.1**	**-1.1**
NVAR	**Mina Array Bea**	**81.55**	**51**	P	**P**	**21 50 54.0**	**+0.2**
	comp=Z,1.1nm,0.5s,baz=283,slow=5.5,SNR=7.1						
	comp=Z,1.1nm,0.5s						
HFS	**Hagfors**	**81.94**	**336**	P	**P**	**21 50 54.3**	**-0.8**
	comp=Z,3.8nm,0.3s,baz=40,slow=4.8,SNR=85						
	comp=Z,3.8nm,0.3s						
NC405	**NORSAR Array S**	**81.95**	**337**	P	**P**	**21 50 54.6**	**-0.6**
LUBAR	**Lubar, Ukraine**	**82.06**	**323**	P	**P**	**21 50 54.7**	**-1.3**
NB2	**NORSAR Subarra**	**82.17**	**337**	P	**P**	**21 50 55.4**	**-1.0**
	comp=Z,2.3nm,0.4s,baz=45,slow=5.1						
NB2	**NORSAR Subarra**	**82.17**	**337**	P	**P**	**21 50 55.4**	**-1.0**
NOA	**NORSAR Array B**	**82.17**	**337**	P	**P**	**21 50 55.7**	**-0.7**
	comp=Z,1.9nm,0.4s,baz=42,slow=4.4,SNR=16						
	comp=Z,1.9nm,0.4s						
RNPP8	**Varash**	**82.25**	**325**	P	**P**	**21 50 56.8**	**-0.1**
NC602	**NORSAR Array S**	**82.28**	**337**	*e*P	**P**	**21 50 57.1**	**+0.2**
RNPP1	**Kostyukhnivka**	**82.29**	**325**	P	**P**	**21 50 57.2**	**+0.1**
RNPP5	**Staryi Chortor**	**82.30**	**325**	P	**P**	**21 50 56.6**	**-0.5**
RAYN	**Ar Rayn**	**83.07**	**293**		**P**	**21 51 01.6**	**-0.1**
RAYN				IAmb	IAmb	21 51 03.4	
	comp=Z,6.5nm,1.1s						
PDAR	**Pinedale Array**	**85.01**	**44**	P	**P**	**21 51 10.9**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=246,slow=3.1,SNR=4.1						
	comp=Z,0.2nm,0.4s						
PDAR	**Pinedale Array**	**85.01**	**44**	P	**P**	**21 51 11.4**	**+0.2**
PFO	**Pinyon Flats O**	**85.22**	**55**	P	**P**	**21 51 12.2**	**-0.1**
PFO				IAmb	IAmb	21 51 15.5	
	comp=Z,8.6nm,1.4s						
GERES	**GERESS Array B**	**89.84**	**328**	P	**P**	**21 51 32.5**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=39,slow=7.2,SNR=2.9						
	comp=Z,0.4nm,0.5s						
TXAR	**Lajitas Array**	**96.67**	**52**	P	**P**	**21 52 05.2**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=296,slow=3.6,SNR=5.2						
	comp=Z,0.3nm,0.6s						
TXAR	**Lajitas Array**	**96.67**	**52**	P	**P**	**21 52 05.7**	**+0.2**
QSPA	**South Pole Qui**	**117.64**	**180**	PKP	**PKPdf**	**21 57 17.3**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=300,slow=1.4,SNR=6.4						
QSPA	**South Pole Qui**	**117.64**	**180**		**PKPdf**	**21 57 17.5**	**-0.4**
TORD	**Torodi Ar. Bea**	**122.61**	**310**	PKP	**PKPdf**	**21 57 28.3**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=34,slow=2.0,SNR=8.8						
LPAZ	**La Paz**	**151.56**	**72**	PKPbc	**PKPbc**	**21 58 28.6**	**+0.2**
	comp=Z,3.7nm,0.9s,baz=311,slow=2.6,SNR=11						
PLCA	**Paso Flores**	**151.83**	**125**	PKPbc	**PKPbc**	**21 58 28.1**	**+0.4**
	comp=Z,2.0nm,0.5s,baz=259,slow=3.3,SNR=15						

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*DJA **07** 21:42:49.9±0.2, 9°S±2°×11°0E±°, h10km, M4.6/42, mB5.3/8, mb4.7/13, MLv4.4/42, Mw(mB)4.7/8, MwMwp4.2/1, Mwp4.6/1*

*NEIC **07** 21:42:49.1±2.6, 9°.34S±0°.05×109°.91E±0°.08, h35km±2km, mb4.3/13, Error ellipse: s-maj=12.7km s-min=8.8km az=85.0*

*IDC **07** 21:42:53.3±0.8, 8°.83S×110°.19E, h60km±7km, mb3.8/14, mbtmp4.0/15, MS2.8/2, Error ellipse: s-maj=31.8km s-min=9.3km az=41.0*

ISC 07 21:42:51.7±0.7**, 9°.23S**±0°.06×**110°.02E**±0°.06**, h65**km±6km**,**
n78, σ1.63/87**, mb4.1**/19**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGM	**Wanagama**	**1.40**	**21**		**Pn**	**21 43 14.0**	**-1.4**
UGM				Sn	**Sn**	**21 43 29.5**	**-3.5**
UGM	**Wanagama**	**1.40**	**21**	P	**Pn**	**21 43 14.0**	**-1.4**
UGM				S	**Sn**	**21 43 31.9**	**-1.1**
YOGI	**Yogyakarta**	**1.43**	**11**	P	**Pn**	**21 43 14.5**	**-1.2**
YOGI				S	**Sn**	**21 43 32.0**	**-1.7**
PCJI	**Pacitan**	**1.54**	**48**	P	**Pn**	**21 43 15.3**	**-1.8**
KPJI	**Karang Pucung**	**2.17**	**330**	P	**Pn**	**21 43 26.4**	**+0.8**
SMRI	**Semarang**	**2.21**	**11**		**Pn**	**21 43 27.3**	**+1.1**
SMRI				Sn	**Sn**	**21 43 52.7**	**+0.2**
SMRI	**Semarang**	**2.21**	**11**	P	**Pn**	**21 43 27.6**	**+1.4**
SMRI				S	**Sn**	**21 43 53.8**	**+1.3**
SNJI	**Sawahan-Nganju**	**2.25**	**50**	P	**Pn**	**21 43 27.3**	**+0.5**
SJI	**Sawahan**	**2.28**	**49**	P	**Pn**	**21 43 27.2**	**0.0**
NGJI	**Ngawi**	**2.34**	**38**	P	**Pn**	**21 43 30.8**	**+2.9**
CTJI	**Waduk Cacaban**	**2.36**	**339**	P	**Pn**	**21 43 28.9**	**+0.7**
CTJI				S	**Sn**	**21 43 57.6**	**+1.5**
BBJI	**Bungbulang**	**2.93**	**307**		**Pn**	**21 43 34.6**	**-1.4**
BBJI	**Bungbulang**	**2.93**	**307**	P	**Pn**	**21 43 35.1**	**-0.9**
LEM	**Lembang**	**3.37**	**315**	P	**Pn**	**21 43 42.4**	**+0.3**
	37nm,0.5s,baz=96,slow=6.5,SNR=13						
LEM				S	**Sn**	**21 44 19.6**	**-1.4**
	156nm,0.7s,baz=288,slow=21,SNR=7.3						
LEM				LR	LR	21 45 10.6	
	comp=Z,191nm,19.6s,baz=146,slow=42						
LEM	**Lembang**	**3.37**	**315**	P	**Pn**	**21 43 43.9**	**+1.8**
BLJI	**Banyuglugur**	**3.83**	**68**	P	**Pn**	**21 43 49.0**	**+0.7**
JAGI	**Jajag, Banyuwa**	**4.16**	**80**		**Pn**	**21 43 52.7**	**0.0**
JAGI	**Jajag, Banyuwa**	**4.16**	**80**	P	**Pn**	**21 43 53.1**	**+0.4**
DBJI	**Dramaga**	**4.19**	**309**	P	**Pn**	**21 43 54.8**	**+1.6**
ABJI	**Asem Bagus**	**4.41**	**71**	P	**Pn**	**21 43 56.5**	**+0.3**
RTBI	**Rangdo, Negare**	**4.93**	**81**	P	**Pn**	**21 44 04.8**	**+1.5**
RTBI				pP		21 44 07.0	
CGJI	**Cibinong**	**5.01**	**301**	P	**Pn**	**21 44 04.3**	**-0.1**
IGBI	**Denpasar**	**5.08**	**86**	P	**Pn**	**21 44 05.2**	**-0.2**
	1.0nm5µm162nm,0.7s						
DNP	**Denpasar**	**5.16**	**84**	P	**Pn**	**21 44 06.9**	**+0.4**
KHKI	**Kahang-Kahang**	**5.59**	**82**	P	**Pn**	**21 44 13.1**	**+0.7**
	0.3nm900nm70nm,0.6s						
KASI	**Kota Agung**	**6.60**	**304**	P	**Pn**	**21 44 26.4**	**+0.2**
LWLI	**Liwa**	**7.25**	**305**	P	**Pn**	**21 44 35.7**	**+0.6**
	2µm30nm,0.9s						
MDSI	**Maura Dua**	**7.47**	**309**	P	**Pn**	**21 44 39.0**	**+0.9**
PLAI	**Plampang**	**7.67**	**88**	P	**Pn**	**21 44 41.0**	**+0.1**
	2µm102nm,0.7s						
DBNI	**Kabupaten Domp**	**8.23**	**86**	P	**Pn**	**21 44 48.5**	**0.0**
	876nm41nm,0.4s						
MNAI	**Manna**	**8.52**	**304**	Pn	**Pn**	**21 44 50.6**	**-1.9**
KSI	**Kapahiang**	**9.23**	**306**	P	**Pn**	**21 45 02.1**	**-0.1**
	34nm,0.5s						
LBFI	**Labuhan Bajo,**	**9.79**	**86**	P	**Pn**	**21 45 08.4**	**-1.4**
KAPI	**Kappang**	**10.53**	**67**	LR	LR	21 49 46.1	
	comp=Z,49nm,19.5s,baz=272,slow=40						
EDFI	**Ende, Flores**	**11.54**	**89**	P	**Pn**	**21 45 30.1**	**-3.8**
EDFI				S	Sn	21 47 31.8	-9.4
MMRI	**Maumere**	**12.09**	**88**	Pn	**Pn**	**21 45 36.9**	**-4.4**
BATI	**Baumata**	**13.49**	**95**	P	**Pn**	**21 45 56.8**	**-3.4**
	18nm,0.3s,baz=126,slow=4.8,SNR=7.9						
BATI				S	Sn	21 48 17.1	-12
	5.8nm,0.4s,baz=210,slow=22,SNR=1.4						
BATI	**Baumata**	**13.49**	**95**	P	**Pn**	**21 45 57.7**	**-2.6**
GIRL	**Giralia**	**13.93**	**164**	Pn	**Pn**	**21 46 02.6**	**-3.5**
SOEI	**Soe**	**14.07**	**93**	Pn	**Pn**	**21 46 06.1**	**-2.0**
MBWA	**Marble Bar**	**15.11**	**143**	Pn	**Pn**	**21 46 18.1**	**-3.3**
PSA00	**Pilbara Seismi**	**15.49**	**143**	Pn	**Pn**	**21 46 23.2**	**-3.2**
FITZ	**Fitzroy Crossi**	**17.54**	**122**	P	**Pn**	**21 46 51.6**	**-0.3**
	1.5nm,0.3s,baz=319,slow=10,SNR=15						
FITZ				S	Sn	21 49 49.6	-17
	3.0nm,0.9s,baz=45,slow=15,SNR=2.7						
KNRA	**Kununurra**	**19.38**	**111**	P	**Pn**	**21 47 13.4**	**-0.8**
KNRA				IAmb	IAmb	21 47 31.1	
	comp=Z,14nm,1.4s						
MTN	**Manton Dam**	**21.03**	**102**	P	**P**	**21 47 31.1**	**+0.7**
MTN				IAmb	IAmb	21 47 37.3	
	comp=Z,26nm,1.4s						
WRA	**Warramunga Arr**	**25.80**	**117**	P	**P**	**21 48 19.6**	**+2.6**
	comp=Z,0.4nm,0.4s,baz=10,slow=8.5,SNR=5.7						
WRA				PcP	**PcP**	**21 51 48.0**	**+2.7**
	comp=Z,0.4nm,0.6s,baz=298,slow=2.0,SNR=2.1						
	comp=Z,0.4nm,0.4s						
ASAR	**Alice Springs**	**26.97**	**125**	P	**P**	**21 48 30.3**	**+2.7**
	comp=Z,0.4nm,0.5s,baz=303,slow=9.0,SNR=7.7						
ASAR				pP	**pP**	**21 48 46.1**	**+3.6**
	comp=Z,1.3nm,0.6s,baz=303,slow=9.0,SNR=8.4						
ASAR				PcP	**PcP**	**21 51 51.0**	**+2.9**
	comp=Z,0.9nm,0.6s,baz=312,slow=1.9,SNR=6.4						
ASAR				pPcP		21 52 08.4	
	comp=Z,0.4nm,0.5s,baz=300,slow=2.0,SNR=4.2						
	comp=Z,0.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**29.61**	**338**	P	**P**	**21 48 51.4**	**+0.5**
STKA	**Stephens Creek**	**36.94**	**132**	P	**P**	**21 49 56.8**	**+2.1**
	comp=Z,1.5nm,0.5s,baz=312,slow=7.8,SNR=5.2						
STKA				pP	**pP**	**21 50 12.2**	**+2.1**
	comp=Z,1.5nm,0.6s,baz=327,slow=8.4,SNR=2.1						
	comp=Z,1.5nm,0.5s						
MJAR	**Matsushiro Arr**	**52.68**	**29**	P	**P**	**21 51 57.7**	**-2.0**
	comp=Z,1.4nm,0.7s,baz=210,slow=8.1,SNR=5.7						

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
	comp=Z,1.4nm,0.7s						
NIL	Nilore	55.13	323	P	P	21 52 16.6	-1.1
USRK	Ussuriysk Ar.	56.79	19	P	P	21 52 28.3	-0.9
	comp=Z,2.1nm,0.6s,baz=264,slow=13,SNR=4.1						
	comp=Z,2.1nm,0.6s						
SONM	Songino Array	56.91	357	P	P	21 52 30.1	0.0
	comp=Z,0.5nm,0.5s,baz=184,slow=8.0,SNR=6.8						
	comp=Z,0.5nm,0.5s						
SONM	Songino Array	56.91	357	P	P	21 52 29.8	-0.3
WUS	Wushi	57.64	333	P	P	21 52 35.2	-0.3
BTK	Batken	60.99	326	P	P	21 52 58.8	+0.2
BTK				IAmb	IAmb	21 53 11.6	
	comp=Z,1.4nm,0.6s						
MKAR	Makanchi Array	61.02	339	P	P	21 52 58.7	+0.2
	comp=Z,2.2nm,0.4s,baz=149,slow=7.7,SNR=41						
	comp=Z,2.2nm,0.4s						
MKAR	Makanchi Array	61.02	339	P	P	21 52 58.4	-0.1
HEH	HeiHe	61.15	13	eP	P	21 52 58.8	-0.5
HEH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
H04N2	CROZET ISLANDS	61.57	222	T	T	23 00 44.6	
	baz=71,slow=75,SNR=4.6						
H04N1	CROZET ISLANDS	61.59	222	T	T	23 00 46.4	
	baz=71,slow=75,SNR=4.4						
H04N3	CROZET ISLANDS	61.59	222	T	T	23 00 49.3	
	baz=71,slow=75,SNR=4.4						
KURBB	Kurchatov Arra	65.58	339	P	P	21 53 28.5	-0.1
	comp=Z,1.3nm,0.6s,baz=154,slow=5.5,SNR=10						
	comp=Z,1.3nm,0.6s						
KURK	Kurchatov	65.63	339	P	P	21 53 28.7	-0.2
KURK				IAmb	IAmb	21 53 29.5	
	comp=Z,2.2nm,0.7s						
ZALV	Zalesovo Beam	66.46	344	P	P	21 53 33.6	-0.5
	comp=Z,1.3nm,0.4s,baz=160,slow=4.7,SNR=7.0						
	comp=Z,1.3nm,0.4s						
ZALV	Zalesovo Beam	66.46	344	P	P	21 53 33.0	-1.1
BVAR	Borovoye Array	70.59	336	P	P	21 54 00.1	+0.2
	comp=Z,1.9nm,0.7s,baz=142,slow=7.4,SNR=8.0						
BVAR				pP	pP	21 54 16.6	+0.3
	comp=Z,0.6nm,0.5s,baz=146,slow=8.0,SNR=1.9						
	comp=Z,1.9nm,0.7s						
AB31	Akbulak array	72.86	328	P	P	21 54 14.1	+0.5
AB31				IAmb	IAmb	21 54 14.4	
	comp=Z,3.0nm,0.5s						
ABKAR	Akbulak array	72.86	328	P	P	21 54 13.9	+0.3
PETK	Petropavlovsk-	74.13	28	P	P	21 54 20.9	-0.1
	comp=Z,2.4nm,0.9s,baz=165,slow=1.7,SNR=4.9						
	comp=Z,2.4nm,0.9s						
ARTI	Arti	77.98	334	P	P	21 54 42.7	-0.1
SEY	Seymchan	78.93	18	P	P	21 54 48.5	+0.5
	comp=Z,0.4nm,0.4s,baz=257,slow=5.8,SNR=1.9						
	comp=Z,0.4nm,0.4s						
TIXI	Tiksi	81.68	6	P	P	21 55 02.0	-0.5
	comp=Z,0.7nm,0.4s,baz=138,slow=1.0,SNR=8.3						
	comp=Z,0.7nm,0.4s						
TIXI	Tiksi	81.68	6	P	P	21 55 02.2	-0.3
TIXI				IAmb	IAmb	21 55 23.6	
	comp=Z,2.5nm,0.8s						
BR131	Keskin Array S	85.54	311	P	P	21 55 24.0	+0.8
BR131				IAmb	IAmb	21 55 43.4	
	comp=Z,1.4nm,0.8s						
BRTR	Keskin Array B	85.54	311	P	P	21 55 24.6	+1.4
	comp=Z,1.1nm,0.7s,baz=142,slow=7.3,SNR=9.0						
BRTR				pP	pP	21 55 41.1	+1.2
	comp=Z,0.9nm,0.7s,baz=134,slow=7.8,SNR=5.0						
	comp=Z,1.1nm,0.7s						
BRTR	Keskin Array B	85.54	311	P	P	21 55 23.8	+0.6
TXAR	Lajitas Array	142.65	53	PKP	PKiKP	22 02 20.2	-1.3
	comp=Z,0.1nm,0.4s,baz=323,slow=5.3,SNR=1.9						

*TEH **07** 21:53:13.3, 38.°46N×44.°31E, h6km±302km, ML2.5, Presumed earthquake*
*AFAD **07** 21:53:13.2, 38.°46N×44.°41E, h2km±1km, ML2.4*
*ISK **07** 21:53:14.3, 38.°58N×44.°28E, h5km, ML2.8/8*
*AZER **07** 21:53:14.1, 38.°55N×44.°46E, h4km, ml2.5*
ISC 07 21:53:14.8±1.1**, 38.°50N**±0.°02×**44.°35E**±0.°02**, h10**km±10km**,**
n42, σ1s80/68**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.32	299	P	Pb	21 53 21.2	-1.6
OZAP				S	Sb	21 53 28.1	-0.1
OZAP				IAML		21 53 34.0	
	comp=N,1µm,1.2s						
TVAN	Van	0.74	272	P	Pb	21 53 28.8	-1.2
TVAN				S	Sn	21 53 40.7	-2.4
TVAN				IAML		21 53 44.0	
	comp=E,162nm,0.4s						
VANB	Van	0.76	277	Pg	Pb	21 53 28.9	-1.3
VMUR	Van-Muradiye	0.78	309	P	Pb	21 53 29.9	-0.7
VMUR				S	Sn	21 53 42.1	-1.8
VMUR				IAML		21 53 48.0	
	comp=N,127nm,0.3s						
MAKU	Maku	0.89	17	Pg	Pg	21 53 31.2	-0.8
MAKU				Sg	Sg	21 53 44.0	+0.3
ISHB	Shabestar	1.02	102	Pg	Pg	21 53 32.6	-1.8
GEVA	Gevas	1.03	260	P	Pb	21 53 33.5	-1.5
GEVA				S	Sn	21 53 49.7	-0.5
GEVA				IAML		21 53 52.0	
	comp=N,117nm,0.3s						
GEVA				IAML		21 53 56.0	
	comp=E,74nm,0.3s						
HAKT	HAKKARI	1.07	209	P	Pn	21 53 35.5	-0.7
HAKT				S	Sn	21 53 51.7	+0.5
HAKT	HAKKARI	1.07	209	P	Pn	21 53 35.3	-0.8
HAKT				S	Sn	21 53 54.2	+2.9
IMRD	Marand	1.08	78	Pg	Pb	21 53 35.1	-0.6
AKDM	Akdamar-Van	1.09	261	Pg	Pn	21 53 34.7	-1.7
AKDM				Sg	Sn	21 53 51.4	-0.2
NAX	Nakhchivan	1.12	53	P	Pn	21 53 36.1	-0.5
NAX				S	Sn	21 53 53.9	+1.8
HYR	Heyderabad	1.27	18	P	Pg	21 53 39.1	-0.2
HYR				S	Sn	21 54 00.0	+4.0
SBZ	Shahbuz	1.29	46	P	Pg	21 53 39.2	-0.5
SBZ				S	Sn	21 53 58.0	+1.5
ADCV	BITLIS_Adilcev	1.31	284	P	Pb	21 53 39.6	-0.1
ADCV				S	Sn	21 53 59.3	+2.3
ORD	Ordubad	1.35	71	P	Pg	21 53 40.3	-0.5
ORD				S	Sn	21 53 59.8	+1.8
IGDI	IGDIR	1.38	351	P	Pb	21 53 40.3	-0.5
IGDI				S	Sg	21 54 01.3	+2.0
IGDI				IAML		21 54 06.0	
	comp=E,47nm,1.0s						
IGDI	IGDIR	1.38	351	P	Pg	21 53 41.7	+0.3
IGDI				S	Sg	21 54 03.9	+4.6
CUKT	Cukurca	1.39	205	Pn	Pg	21 53 42.4	+1.0
CUKT				Sn	Sn	21 54 03.1	+4.3
CUKT	Cukurca	1.39	205	P	Pg	21 53 43.5	+2.0
ITBZ	Tabriz	1.44	100	Pg	Pn	21 53 40.2	-0.9
AGRB	Hanur-Agry	1.51	316	Pn	Pg	21 53 42.3	-1.5
DORK	Agr/Tutak/Do	1.51	306	P	Pg	21 53 42.4	-1.4
DORK				S	Sg	21 54 06.5	+3.0
IAZR	Azarshahr	1.53	122	Pg	Pg	21 53 42.9	-1.2
PERV	Siirt/Pervari-	1.53	249	P	Pg	21 53 45.0	+0.8
MLAZ	Malazgirt-MUS	1.54	295	Pn	Pg	21 53 42.9	-1.6
KOTA	Agri, Merkez-K	1.57	326	P	Pg	21 53 44.5	-0.5
GNI	Garni	1.67	10	Pn	Pb	21 53 44.9	-0.9
BLIS	Bitlis-Merkez	1.76	268	P	Pg	21 53 47.6	-1.0
GURO	Guroymak-BITLI	1.82	272	Pn	Pg	21 53 47.2	-2.5
SIRN	Sırnak	1.83	237	P	Pg	21 53 48.9	-1.1
SIRN				S	Sg	21 54 16.7	+3.0
SIRN				IAML		21 54 21.0	
	comp=N,52nm,0.6s						
SRTM	Siirt_Merkez	1.98	256	P	Pg	21 53 51.4	-1.4
SRTM				S	Sg	21 54 19.5	+1.0
SRTM				IAML		21 54 24.0	
	comp=N,58nm,0.7s						
IHRS	Heris	2.12	94	Pn	Pb	21 53 53.2	-0.3
MUSM	Mu-Merkez	2.23	277	P	Pg	21 53 55.2	-2.5
GDB	GEDABAY	2.47	26	P	Pb	21 53 58.6	-0.8
GDB				S	Sb	21 54 30.3	+0.5
QRD	Qoradiz	2.50	67	P	Pb	21 53 57.7	-2.2
QRD				S	Sb	21 54 31.3	+0.5
SENK	Senkaya-Erzuru	2.57	324	Pn	Pn	21 53 57.5	+0.7
GANJ	Ganja	2.63	35	P	Pb	21 54 00.3	-1.8
GANJ				S	Sb	21 54 36.0	+1.7
QZX	Qazax, Azerbai	2.67	17	P	Pb	21 54 00.8	-1.9
QZX				S	Sb	21 54 35.2	-0.4
AGDM	Agdam	2.67	52	P	Pb	21 54 00.5	-2.3
AGDM				S	Sb	21 54 36.0	+0.3
YRD	Yardimli	3.07	81	P	Pb	21 54 06.6	-3.1
YRD				S	Sb	21 54 45.2	-2.1
LRK	Lerik	3.13	86	P	Pb	21 54 07.4	-3.2
LRK				S	Sb	21 54 49.0	0.0

IDC 07 22:22:49.6±2.1**, 4.°44S**×**151.°34E, h0**km**, mb3.4**/3**,**
mbtmp3.4/4**, ML1.6**/1**, Error ellipse: s-maj=173.2km**
s-min=24.8km az=126.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
PMG	Port Moresby	6.44	220	Pn	Pn	22 24 23.8	-2.0
	0.8nm,0.3s,baz=23,slow=13,SNR=1.6						
PMG				Sn	Sn	22 25 40.3	+0.3
	0.6nm,0.3s,baz=242,slow=4.8,SNR=3.3						
	2.8nm,0.5s						
WRA	Warramunga Arr	22.62	226	P	P	22 27 52.7	+0.5
	0.6nm,0.6s,baz=51,slow=10,SNR=6.0						
	0.6nm,0.6s						
ASAR	Alice Springs	25.46	220	P	P	22 28 19.9	+0.4
	0.4nm,0.7s,baz=62,slow=8.0,SNR=7.6						
	0.4nm,0.7s						
ILAR	Eielson Array	82.38	22	P	P	22 35 13.2	-0.1
	0.3nm,0.7s,baz=255,slow=5.6,SNR=5.6						
	0.3nm,0.7s						

*IDC **07** 22:23:16.0±0.4, 58.°70S×25.°33W, h0km, mb4.6/12, mbtmp4.6/14, ML4.8/2, MS3.8/23, Error ellipse: s-maj=19.0km s-min=14.8km az=72.0*
*NEIC **07** 22:23:21.0±1.2, 58.°71S±0.°10×25.°3W±0.°2, h35km±1km, mb5.0/53, Error ellipse: s-maj=19.1km s-min=16.1km az=241.0*
ISC 07 22:23:21.1±0.3**, 58.°75S**±0.°06×**25.°34W**±0.°07**, h35**km**,**
h36km**:pP-P, n396, σ0s78**/387**, mb4.9**/33**, MS3.8**/21**, 4C-5D,**
South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	13.91	156	⇓P	Pn	22 26 34.0	-1.4
	comp=Z,51nm,0.3s						
VNA1				⇑S	Sn	22 28 59.5	-8.8
VNA3	Neumayer Olymp	14.11	159	⇓P	Pn	22 26 36.0	-2.0
	comp=Z,45nm,0.3s						
VNA3				⇑S	Sn	22 28 56.9	-16
VNA2	Neumayer--Watz	14.31	156	⇓P	Pn	22 26 38.6	-2.2
	comp=Z,30nm,0.3s,baz=318,slow=14						
VNA2				⇓S	Sn	22 29 03.2	-15
	baz=308,slow=15						
SNAA	Sanae	15.87	154	⇓P	Pn	22 27 00.3	-1.2
	comp=Z,500nm,0.3s						
SNAA				⇑S	Sn	22 29 44.4	-11
SNAA	Sanae	15.87	154	Pn	Pn	22 27 00.2	-1.2
	comp=Z,5.1nm,0.3s,baz=318,slow=15,SNR=56						
SNAA				Sn	Sn	22 29 43.2	-13
	comp=Z,0.7nm,0.3s,baz=334,slow=20,SNR=2.8						
SNAA				LR	LR	22 31 29.6	
	comp=Z,468nm,21.4s,baz=4.0,slow=31						
	comp=Z,18nm,0.3s						
SNAA	Sanae	15.87	154		Pn	22 27 00.1	-1.3
TROLL	Troll, Antarti	17.39	151	P	Pn	22 27 20.5	-0.2
TROLL				S	Sn	22 30 20.6	-12
PMSA	Palmer Station	19.03	235	P	Pn	22 27 41.1	+0.6
	comp=Z,1.9nm,0.3s,baz=76,slow=6.6,SNR=6.1						
PMSA				LR	LR	22 33 13.8	
	comp=Z,312nm,21.7s,baz=112,slow=31						
	comp=Z,14nm,0.9s						
PMSA	Palmer Station	19.03	235	P	Pn	22 27 40.3	-0.2
BELA	Belgrano 2	19.47	186	P	P	22 27 44.4	0.0
EFI	East Falkland	19.81	277	P	P	22 27 48.8	+0.6
MG02	Cerro Sombrero	25.02	265	P	P	22 28 40.5	-0.9
MG03	Isla Dawson	25.12	261	P	P	22 28 42.1	-0.2
MG05	Puerto Natales	27.32	264	P	P	22 29 00.7	-1.4
MG05				IAmb	IAmb	22 29 14.5	
	comp=Z,107nm,1.5s						
TRQA	Tornquist	31.34	295	P	P	22 29 38.0	0.0
TRQA				IAmb	IAmb	22 30 26.0	
	comp=Z,60nm,1.8s						
QSPA	South Pole Qui	31.49	180	P	P	22 29 40.4	+1.1
	comp=Z,11nm,0.6s,baz=207,slow=1.8,SNR=97						
QSPA				PcP	PcP	22 32 31.3	+0.1
	comp=Z,4.7nm,0.7s,baz=153,slow=8.5,SNR=3.0						
QSPA				LR	LR	22 41 35.6	
	comp=Z,215nm,19.5s,baz=220,slow=35						
	comp=Z,11nm,0.6s						
QSPA	South Pole Qui	31.49	180	P	P	22 29 40.3	+1.1
QSPA				IAmb	IAmb	22 29 41.2	
	comp=Z,12nm,0.6s						
QSPA	South Pole Qui	31.49	180	P	P	22 29 40.4	+1.1
QSPA				PcP	PcP	22 32 32.0	+0.8
AY01	Puyuhuapi	31.95	276	P	P	22 29 42.3	-0.9
AY01				IAmb	IAmb	22 29 50.9	
	comp=Z,16nm,0.9s						
PLTB	Pedras Altas	33.05	312	P	P	22 29 52.0	-1.1
PLTB				IAmb	IAmb	22 30 08.8	
	comp=Z,10nm,0.9s						
PLCA	Paso Flores	33.51	282	P	P	22 29 57.2	+0.2
	comp=Z,5.5nm,0.7s,baz=135,slow=8.5,SNR=10						
PLCA				LR	LR	22 42 50.3	
	comp=Z,117nm,18.3s,baz=146,slow=35						
	comp=Z,5.5nm,0.7s						
PLCA	Paso Flores	33.51	282		P	22 29 56.8	-0.2
PLCA				IAmb	IAmb	22 30 22.6	
	comp=Z,24nm,1.5s						
PLCA	Paso Flores	33.51	282	P	P	22 29 56.9	-0.2
PLCA				pP	pP	22 30 06.0	-0.4
PLCA				x	x	22 30 07.1	
LR05	Currie	34.62	281	P	P	22 30 06.2	-0.3
LR05				IAmb	IAmb	22 30 35.0	
	comp=Z,49nm,1.6s						
ITAB	Concordia	36.60	318	P	P	22 30 23.5	-0.1
BI02	San Fabin de	36.97	286	P	P	22 30 26.1	-0.8
BI02				IAmb	IAmb	22 31 31.8	
	comp=Z,49nm,2.0s						
MAW	Mawson	37.40	141	LR	LR	22 44 37.7	
	comp=Z,145nm,18.4s,baz=241,slow=34						
BO02	Sierra Bellavi	38.21	289		P	22 30 36.4	-0.8
BO02				IAmb	IAmb	22 30 42.3	
	comp=Z,9.5nm,0.6s						
BO01	Tunca	38.68	289		P	22 30 40.6	-0.6
BO04	La Punta	38.77	289	P	P	22 30 41.4	-0.5
BO04				IAmb	IAmb	22 30 43.2	
	comp=Z,18nm,0.6s						
VAO	Valinhos	38.91	327	P	P	22 30 42.8	-0.4
VAO				IAmb	IAmb	22 31 00.7	
	comp=Z,74nm,1.8s						
MT08	Bocatoma Ro	38.91	291	P	P	22 30 43.5	+0.1
MT08				IAmb	IAmb	22 30 48.5	
	comp=Z,11nm,0.6s						
MT05	Renca	39.31	290	P	P	22 30 45.9	-0.6
MT05				IAmb	IAmb	22 30 48.6	
	comp=Z,21nm,0.8s						
CPUP	Villa Florida	39.35	311	P	P	22 30 46.0	-0.8
	comp=Z,2.1nm,0.8s,baz=138,slow=7.8,SNR=4.7						
CPUP				LR	LR	22 47 43.4	
	comp=Z,51nm,19.3s,baz=134,slow=37						
	comp=Z,2.1nm,0.8s						
CPUP	Villa Florida	39.35	311	P	P	22 30 45.3	-1.5
PEL	Peldehue	39.48	290		P	22 30 48.5	+0.6
PEL				IAmb	IAmb	22 30 49.4	
	comp=Z,36nm,0.6s						
PEL	Peldehue	39.48	290	P	P	22 30 48.8	+0.8
PEL				pP	pP	22 30 57.6	0.0
PEL				sP	sP	22 31 01.9	+0.4
ALF01	Guarapari-ES	39.69	337	eP	P	22 30 51.6	+2.0
LDASE	Londrina, Braz	39.80	321	eP	P	22 30 50.9	+0.3
ZON	Zonda	39.82	294		P	22 30 50.1	-0.6
ZON				IAmb	IAmb	22 31 07.1	
	comp=Z,11nm,0.7s						
SUR	Sutherland	40.50	70	LR	LR	22 43 16.3	
	comp=Z,153nm,21.0s,baz=187,slow=30						
TRCB	Terra Rica	40.86	320	P	P	22 30 58.5	-0.9
TRCB				IAmb	IAmb	22 30 59.7	
	comp=Z,14nm,0.5s						
BB19B	Bebedouro	41.19	326	eP	P	22 31 03.0	+0.8
BSFB	Barra de Sao F	41.44	338	eP	P	22 31 05.6	+1.4
AMBA	Amambai (Brazi	41.56	317	eP	P	22 31 04.8	-0.4
SJMB	Sao Joao De Ma	41.64	337	eP	P	22 31 07.0	+1.2
CO01	Juntas del Tor	41.80	294	P	P	22 31 07.7	+0.4
CO01				IAmb	IAmb	22 31 25.0	
	comp=Z,14nm,0.8s						
AC05	El Transito	42.84	294		P	22 31 15.6	0.0
AC05				IAmb	IAmb	22 31 32.6	
	comp=Z,24nm,0.9s						
SBA	Scott Base	43.45	184	P	P	22 31 20.4	+0.6
VNDA	Vanda	43.91	182	P	P	22 31 25.4	+1.9
	comp=Z,8.3nm,0.7s,baz=184,slow=6.7,SNR=21						
	comp=Z,8.3nm,0.7s						
VNDA	Vanda	43.91	182	P	P	22 31 24.0	+0.4
VNDA	Vanda	43.91	182	P	P	22 31 25.5	+1.9
VNDA				PcP	PcP	22 33 10.7	+1.8
CMC01	Camacan, BA	44.58	340	eP	P	22 31 30.2	+0.6
NBIT	Itapeh - BA	44.99	341	eP	P	22 31 34.2	+1.5
H04S2	CROZET ISLANDS	45.60	110	T	T	23 21 55.3	
	baz=224,slow=75,SNR=74						
H04S3	CROZET ISLANDS	45.61	110	T	T	23 21 56.6	
	baz=224,slow=75,SNR=40						
H04S1	CROZET ISLANDS	45.62	110	T	T	23 21 57.4	
	baz=224,slow=75,SNR=51						
BOSA	Boshof	45.77	71	P	P	22 31 39.2	+0.1
	comp=Z,3.0nm,0.8s,baz=207,slow=7.9,SNR=6.0						
BOSA				LR	LR	22 46 42.4	
	comp=Z,82nm,18.0s,baz=196,slow=31						
	comp=Z,3.0nm,0.8s						
BOSA	Boshof	45.77	71	P	P	22 31 38.6	-0.5
BOSA				IAmb	IAmb	22 32 22.3	
	comp=Z,64nm,1.9s						
BOSA	Boshof	45.77	71	P	P	22 31 39.4	+0.3
BOSA				pP	pP	22 31 49.0	+0.2
BOSA				x	x	22 31 50.5	
BOSA				sP	sP	22 31 53.5	+0.8
JANB	Januaria	45.84	334	eP	P	22 31 40.7	+1.1
BDFB	Brasilia	46.20	329	P	P	22 31 43.1	+0.6
	comp=Z,3.0nm,0.5s,baz=139,slow=7.5,SNR=7.2						
BDFB				PcP	PcP	22 33 18.7	+0.8
	comp=Z,3.4nm,0.5s,baz=201,slow=3.3,SNR=5.6						
BDFB				LR	LR	22 47 42.3	
	comp=Z,118nm,20.9s,baz=134,slow=32						
	comp=Z,3.0nm,0.5s						
BDFB	Brasilia	46.20	329	P	P	22 31 42.3	-0.2
PP1B	Ponte de Pedra	46.44	320	eP	P	22 31 43.9	-0.5
ARAG	Araguaiana, MT	47.23	324	eP	P	22 31 50.2	-0.2
SALV	Santo Antonio	48.30	319	eP	P	22 31 58.7	0.0
SDBA	SAO DESIDERIO	48.54	334	eP	P	22 32 01.5	+0.8
LBTB	Lobatse	48.94	69	LR	LR	22 49 06.8	
	comp=Z,122nm,18.8s,baz=188,slow=32						
LBTB	Lobatse	48.94	69	P	P	22 32 03.0	-0.8
LBTB				IAmb	IAmb	22 32 16.9	
	comp=Z,25nm,1.8s						
KGCAE	Kacgae	49.15	64	P	P	22 32 05.6	+0.2
PTLB	Pontes e Lacer	49.93	316	P	P	22 32 09.9	-1.3
PTLB				IAmb	IAmb	22 32 12.2	
	comp=Z,5.0nm,0.5s						
PTLB	Pontes e Lacer	49.93	316	eP	P	22 32 10.4	-0.8
GRTLG	Ghanzi	49.97	62	P	P	22 32 11.2	-0.5
GRTLG				IAmb	IAmb	22 33 35.5	
	comp=Z,23nm,1.9s						
GO01	Chusmiza	50.22	302	P	P	22 32 12.8	-1.2
TSUM	Tsumeb	50.23	57	LR	LR	22 51 21.9	
	comp=Z,90nm,18.1s,baz=183,slow=34						
TSUM	Tsumeb	50.23	57	P	P	22 32 12.3	-1.3
SNDB	Serra Nova Dou	50.61	326	eP	P	22 32 17.1	+0.7
CASY	Casey	51.02	159	x	x	22 32 23.9	
PB16	IPOC Station P	51.53	302	P	P	22 32 22.9	-1.0
PB16				IAmb	IAmb	22 32 48.4	
	comp=Z,16nm,1.7s						
SMTB	Santa Maria do	52.59	332	eP	P	22 32 32.4	+1.2
VILB	Vilhena	52.62	315	eP	P	22 32 30.3	-1.1
PDRB	Porto dos Gac	52.65	320	eP	P	22 32 30.7	-0.9
LPAZ	La Paz	52.75	305	P	P	22 32 32.9	-0.2
	comp=Z,3.8nm,0.8s,baz=154,slow=5.7,SNR=16						
LPAZ				LR	LR	22 56 42.2	
	comp=Z,29nm,19.7s,baz=150,slow=38						
	comp=Z,3.8nm,0.8s						
LPAZ	La Paz	52.75	305	P	P	22 32 32.1	-1.0
LPAZ	La Paz	52.75	305	eP	P	22 32 31.4	-1.6
LPAZ	La Paz	52.75	305	P	P	22 32 32.7	-0.4
LPAZ				pP	pP	22 32 42.7	-0.2
LPAZ				PcP	PcP	22 33 42.6	+0.2
NBPV	Pedro Velho	52.77	348	eP	P	22 32 33.8	+1.4
RCBR	Riachuelo	53.42	347	P	P	22 32 37.2	0.0
RCBR				IAmb	IAmb	22 33 44.3	
	comp=Z,26nm,1.4s						
NBPA	Parau_RN	53.65	345	eP	P	22 32 40.0	+1.1
NBPS	Pedro II - PI	55.64	340	eP	P	22 32 54.5	+1.0
NBMO	Morrinhos-CE	56.47	342	eP	P	22 33 00.1	+0.8
LSZ	Lusaka	58.50	66	LR	LR	22 55 38.0	
	comp=Z,139nm,18.4s,baz=158,slow=33						
NNA	Nana	60.42	298	LR	LR	22 57 23.8	
	comp=Z,72nm,22.0s,baz=168,slow=34						
ATAH	Atahualpa	65.40	299	LR	LR	23 03 02.1	
	comp=Z,45nm,20.3s,baz=197,slow=36						
BOAV	Boa Vista	67.03	321	P	P	22 34 08.9	-1.4
BOAV	Boa Vista	67.03	321	eP	P	22 34 08.6	-1.8
DBIC	Dimbokro	67.25	22	P	P	22 34 12.7	+1.0
	comp=Z,6.0nm,0.7s,baz=218,slow=6.4,SNR=8.9						
DBIC				LR	LR	22 58 43.5	
	comp=Z,58nm,18.2s,baz=193,slow=32						
	comp=Z,6.0nm,0.7s						
DBIC	Dimbokro	67.25	22	P	P	22 34 10.8	-1.0
DBIC				IAmb	IAmb	22 34 13.6	
	comp=Z,6.8nm,0.7s						
DBIC	Dimbokro	67.25	22	P	P	22 34 12.7	+1.0
MDP	Montagnes des	67.29	330	LR	LR	23 01 31.8	
	comp=Z,74nm,19.3s,baz=162,slow=34						
MBAR	Mbarara	72.56	60	LR	LR	23 05 19.9	
	comp=Z,67nm,18.2s,baz=182,slow=35						
TORD	Torodi Ar. Bea	74.96	27	P	P	22 34 59.5	+1.2
	comp=Z,16nm,0.7s,baz=212,slow=10,SNR=81						
	comp=Z,16nm,0.7s						
KMBO	Kilima Mbogo	75.13	67	LR	LR	23 04 56.1	
	comp=Z,118nm,19.9s,baz=110,slow=33						
MLZ	Mavora Lakes	75.65	190	P	P	22 35 02.3	+0.1
SDV	Santo Domingo	76.62	314	LR	LR	23 08 51.4	
	comp=Z,98nm,20.7s,baz=128,slow=36						
SDV	Santo Domingo	76.62	314	P	P	22 35 07.2	-0.9
LTZ	Lake Taylor	77.78	193	P	P	22 35 14.3	+0.1
TAU	Tasmania Unive	78.52	175	P	P	22 35 17.6	-0.6
TAU	Tasmania Unive	78.52	175	P	P	22 35 18.6	+0.4
TAU				PcP	PcP	22 35 25.7	-1.6
THZ	Tophouse	78.71	194	P	P	22 35 20.1	+0.8
PDPR	Patillas Dam,	83.46	321	P	P	22 35 43.4	-1.2
PDPR				IAmb	IAmb	22 37 10.6	
	comp=Z,13nm,1.1s						
SJG	San Juan	83.59	321	LR	LR	23 13 24.7	
	comp=Z,20nm,20.6s,baz=94,slow=36						
CAN	Canberra	86.16	175	P	P	22 35 57.8	-0.6
MORW	Morawa	86.80	147	P	P	22 36 00.8	-0.8
FORT	Forrest	88.09	157	P	P	22 36 07.5	-0.2
FORT				IAmb	IAmb	22 39 27.3	
	comp=Z,10nm,0.9s						
STKA	Stephens Creek	89.06	169	P	P	22 36 12.8	+0.5
	comp=Z,3.8nm,0.7s,baz=176,slow=5.9,SNR=7.3						
	comp=Z,3.8nm,0.7s						
STKA	Stephens Creek	89.06	169	P	P	22 36 12.3	0.0
MDT	Midelt	92.85	17	LR	LR	23 14 11.7	
	comp=Z,50nm,18.4s,baz=208,slow=33						
ASAR	Alice Springs	96.11	161	P	P	22 36 44.5	-0.5
	comp=Z,2.0nm,0.6s,baz=184,slow=4.2,SNR=30						
ASAR				LR	LR	23 17 10.7	
	comp=Z,65nm,20.2s,baz=182,slow=34						
	comp=Z,2.0nm,0.6s						
ASAR	Alice Springs	96.11	161	P	P	22 36 44.2	-0.8
AS31	Alice Springs	96.11	161	P	P	22 36 44.1	-0.9
WRA	Warramunga Arr	99.82	161	P	Pdif	22 37 00.6	-1.1
	comp=Z,0.5nm,0.8s,baz=196,slow=4.3,SNR=4.7						
	comp=Z,0.5nm,0.8s						
SCHQ	Schefferville	118.04	334	PKP	PKPdf	22 42 01.7	-1.0
	comp=Z,2.8nm,0.6s,baz=260,slow=6.1,SNR=12						
RSSD	Black Hills	121.22	304		PKPdf	22 42 08.7	-0.7
BSUT	Blindstream Ca	121.38	297	PKPdf	PKiKP	22 42 10.3	+0.1
HFS	Hagfors	122.42	22	PKP	PKPdf	22 42 09.9	-1.0
	comp=Z,3.3nm,0.8s,baz=174,slow=4.3,SNR=8.8						
PDAR	Pinedale Array	122.59	300	PKP	PKPdf	22 42 11.7	-0.5
	comp=Z,1.4nm,0.5s,baz=133,slow=5.3,SNR=29						
PDAR	Pinedale Array	122.59	300		PKPdf	22 42 11.6	-0.6
HWUT	Hardware Ranch	122.60	297		PKPdf	22 42 11.9	-0.2
NB2	NORSAR Subarra	122.80	20	PKPdf	PKPdf	22 42 11.2	-0.5
	comp=Z,1.8nm,1.1s,baz=202,slow=1.9						
NOA	NORSAR Array B	122.80	20	PKP	PKiKP	22 42 11.7	-0.2
	comp=Z,2.6nm,0.9s,baz=197,slow=1.7,SNR=5.3						
ULM	Lac du Bonnet	122.87	314	PKP	PKPdf	22 42 11.7	-0.4
	comp=Z,4.5nm,0.5s,baz=148,slow=2.2,SNR=12						
CMAR	Chiang Mai Arr	123.18	110	PKP	PKPdf	22 42 13.8	0.0
	comp=Z,1.5nm,0.6s,baz=228,slow=3.6,SNR=11						
CMAR	Chiang Mai Arr	123.18	110		PKPdf	22 42 12.9	-0.8
NVAR	Mina Array Bea	123.32	290	PKP	PKiKP	22 42 14.9	+1.0
	comp=Z,2.8nm,0.7s,baz=146,slow=3.3,SNR=14						
NVAR	Mina Array Bea	123.32	290		PKiKP	22 42 14.2	+0.3
LOHW	Long Hollow	123.73	300		PKiKP	22 42 14.5	0.0
LAO	LASA Array	124.20	305	PKPdf	PKiKP	22 42 15.2	0.0
FINES	FINESS Array B	126.31	28	PKP	PKiKP	22 42 18.4	-0.4

comp=Z,3.5nm,0.5s,baz=160,slow=2.0,SNR=54
FINES FINESS Array B 126.31 28 PKPdf 22 42 18.2 -0.1
FIA1 FINESS Array S 126.31 28 PKPdf PKPdf 22 42 18.1 -0.2
AB31 Akbulak array 128.07 56 PKPdf PKPdf 22 42 21.9 -0.1
ABKAR Akbulak array 128.07 56 PKPdf 22 42 21.7 -0.4
KKAR Karatay Array 128.31 68 PKPdf PKPdf 22 42 22.3 -0.5
AAK Ala-Archa 129.91 71 PKPdf PKiKP 22 42 26.9 +0.1
PZH PanZhiHua 131.34 108 PKP PKPdf 22 42 29.2 0.0
ARCES ARCESS Array B 133.08 22 PKP PKPdf 22 42 31.0 0.0
comp=Z,2.2nm,0.4s,baz=208,slow=2.3,SNR=22
ARCES ARCESS Array B 133.08 22 PKPdf 22 42 30.9 0.0
BLKN Baker Lake 133.86 325 PKPdf 22 42 32.6 +0.1
DAG Danmarks Havn 135.33 2 *i* P PKPdf 22 42 34.0 -1.0
BVAR Borovoye Array 135.36 59 PKP PKiKP 22 42 38.0 +0.7
comp=Z,1.8nm,0.4s,baz=215,slow=2.0,SNR=8.2
CD2 Chengdu 135.96 106 PKP PKPdf 22 42 37.0 -0.7
MKAR Makanchi Array 136.76 73 PKhKP PKPpre 22 42 29.8
comp=Z,0.4nm,0.7s,baz=247,slow=0.9,SNR=4.7
MKAR PKP PKiKP 22 42 39.6 -0.8
comp=Z,0.4nm,0.5s,baz=243,slow=2.9,SNR=6.7
WMQ Urumqi 137.43 80 *e*PKP PKiKP 22 42 41.1 -0.8
KURBB Kurchatov Arra 137.52 66 PKhKP PKPpre 22 42 34.2
comp=Z,1.2nm,0.7s,baz=224,slow=2.6,SNR=4.6
KURBB PKP PKPdf 22 42 40.4 +0.6
comp=Z,0.2nm,0.2s,baz=229,slow=2.6,SNR=4.3
TULEG Thule 137.81 346 PKPdf PKPdf 22 42 40.1 +0.5
ENH Enshi 138.25 113 PKPdf PKPdf 22 42 41.7 -0.2
YKA Yellowknife Ar 138.82 315 PKP PKPdf 22 42 42.6 +0.8
comp=Z,10nm,0.8s,baz=126,slow=1.6,SNR=101
SPITS Spitsbergen Ar 139.00 12 PKhKP PKPpre 22 42 34.8
comp=Z,5.6nm,0.8s,baz=136,slow=2.9,SNR=4.9
SPITS PKP PKiKP 22 42 44.2 +0.2
comp=Z,4.0nm,0.7s,baz=222,slow=1.9,SNR=1.9
LZH Lanzhou 140.11 102 *e*PKP PKiKP 22 42 46.6 -1.2
LZH sPKP sPKPdf 22 42 57.2 -2.7
GTA2 Gaotai 140.58 94 *e*P PKPdf 22 42 44.2 -1.8
GTA2 pP PKiKP 22 42 49.0 +0.4
GTA2 pmax pmax
comp=Z,2.0nm,0.7s
ZALV Zalesovo Beam 142.61 66 PKhKP PKPpre 22 42 44.8
comp=Z,1.3nm,0.4s,baz=264,slow=3.8,SNR=6.0
TGTN Hyland Airport 143.60 308 P PKPdf 22 42 50.4 -0.2
baz=121
R33M Jennings River 143.61 304 P PKPdf 22 42 51.6 +0.8
baz=122
Q32M Nakina River 143.95 303 P PKPdf 22 42 51.4 0.0
baz=122
NJ2 Nanjing 144.07 122 *e*P PKPdf 22 42 53.6 +1.4
NJ2 pmax pmax
comp=Z,16nm,0.5s
S32K Killisnoo 144.18 299 P PKPdf 22 42 52.4 +0.9
baz=123
SIT Sitka 144.30 298 P PKPdf 22 42 52.3 +0.5
baz=123
R32K Eaglecrest 144.58 301 P PKPdf 22 42 51.7 -0.5
baz=122
P33M Teslin, Yukon 144.84 304 P PKPdf 22 42 52.6 -0.2
baz=120
P32M Atlin 144.91 303 P PKPdf 22 42 52.9 0.0
baz=120
S31K Pelican 145.19 299 P PKPdf 22 42 53.5 +0.2
baz=121
R31K City Hall, Gus 145.21 300 P PKPdf 22 42 54.0 +0.7
baz=121
MMPY Sheldon Lake, 145.36 309 P PKPab 22 42 53.9 +0.1
baz=118
N32M Quiet Lake 145.42 306 P PKPab 22 42 54.1 0.0
baz=119
SKAG Skagway 145.56 302 P PKPbc 22 42 54.2 0.0
baz=120
C36M Paulatuk 145.68 322 P PKPab 22 42 54.5 -0.2
baz=114
WHY Whitehorse 145.95 304 P PKPbc 22 42 55.2 -0.4
baz=119
M31M Drury Creek, Y 146.46 307 P PKPbc 22 42 56.4 -0.6
baz=117
O30N Mendenhall 146.53 304 P PKPbc 22 42 56.9 -0.3
baz=118
HNS HongShan 146.55 112 ⇑PKPbc PKPbc 22 42 58.2 +0.3
P30M Million Dollar 146.60 302 P PKPbc 22 42 57.1 -0.4
baz=118
BTO2 Baotou 146.72 103 *e*PKPbc PKPbc 22 42 58.5 0.0
BTO2 PP PP 22 46 34.5 +12
BTO2 pmax pmax
comp=Z,35nm,0.8s
BTO2 pmax pmax
comp=Z,260nm,5.2s
N31M Braeburn, Yuko 146.72 305 P PKPbc 22 42 57.7 0.0
baz=117
A36M Sachs Harbour 147.02 326 P PKPbc 22 42 58.3 +0.1
baz=109,SNR=46
HYT Haines Junctio 147.17 303 P PKPbc 22 42 59.6 +0.5
baz=117
N30M Aishikik Lake 147.27 304 P PKPbc 22 43 00.1 +0.8
baz=116
YUK6 Outpost Mounta 147.59 303 P PKPbc 22 42 59.8 -0.6
baz=116
M30M Minto, Yukon 147.63 306 P PKPbc 22 43 00.9 +0.7
baz=115,SNR=8.3
HHC Hu-ho-hao-te 147.65 104 *e*P PKPdf 22 42 58.0 -0.2
MAYO Mayo, Yukon 147.69 308 P PKPbc 22 43 00.1 -0.2
baz=114
YUK4 Talbot Arm 147.90 304 P PKPbc 22 43 00.9 -0.3
baz=116
H31M Peel River 147.94 313 P PKPbc 22 43 00.8 -0.1
baz=112
PINM Pinnacle 148.05 301 P PKPbc 22 43 01.0 -0.4
baz=117
J30M Hart River 148.25 310 P PKPbc 22 43 01.9 0.0
baz=112,SNR=9.2
M29M Somme Creek 148.28 306 P PKPbc 22 43 02.1 0.0
baz=114
F31M Tsiigehtchic 148.29 316 P PKPbc 22 43 01.8 +0.1
baz=110,SNR=15
G31M Satah River 148.31 315 P PKPbc 22 43 01.9 +0.1
baz=110,SNR=14
O28M Mount Upton 148.32 302 P PKPbc 22 43 02.0 -0.4
baz=116
YUK8 Steele Glacier 148.36 303 P PKPbc 22 43 02.0 -0.5
baz=115,SNR=5.2
L29M L29M 148.41 307 P PKPbc 22 43 02.3 0.0
baz=113
K29M Barlow Dome 148.45 308 P PKPbc 22 43 02.4 0.0
baz=113
INK Inuvik 148.50 317 P PKPbc 22 43 02.4 +0.2
baz=108,SNR=39
I30M Mount Dempster 148.51 311 P PKPbc 22 43 02.2 -0.4
baz=111,SNR=27
MESA MESA 148.85 300 P PKPbc 22 43 03.4 -0.2
baz=116
YUK3 Moose Creek 148.87 304 P PKPbc 22 43 03.5 -0.2
baz=114
CTG Chitna Glacier 148.91 302 P PKPbc 22 43 03.9 +0.2
baz=115
J29N Klondike Camp 148.96 309 P PKPbc 22 43 03.7 +0.1
baz=111,SNR=6.5
EPYK Eagle Plains 149.04 313 P PKPbc 22 43 03.9 +0.2
baz=109,SNR=15
G30M tAoh Zraii Nji 149.06 314 P PKPbc 22 43 04.0 +0.2
baz=109,SNR=22
F30M Barrier River 149.09 316 P PKPbc 22 43 04.1 +0.3
baz=108,SNR=15
BVCY Beaver Creek 149.29 305 P PKiKP 22 43 05.0 -0.6
baz=113,SNR=5.7
DAWY Dawson 149.30 308 P PKPbc 22 43 04.5 0.0
baz=111,SNR=11
I29M Ogilvie Camp, 149.32 311 P PKPbc 22 43 04.5 +0.1
baz=110,SNR=6.8
CRQE Cirque 149.61 301 P PKiKP 22 43 06.0 -0.5
baz=114
M27K Edge Creek, AK 149.71 304 P PKiKP 22 43 06.0 -0.6
baz=112
SONM Songino Array 149.82 90 PKPbc PKPbc 22 43 06.5 +0.1
comp=Z,4.8nm,0.7s,baz=225,slow=3.3,SNR=31
SONM Songino Array 149.82 90 PKPbc 22 43 05.9 -0.5
MCARA McCarthy VSAT 149.83 302 P PKiKP 22 43 06.6 -0.2
baz=113
KAIM Kayak Island 149.86 299 P PKiKP 22 43 06.4 -0.4
baz=115
L27K Beaver Creek, 149.95 306 P PKiKP 22 43 06.6 -0.3
baz=111
I28M Miner Creek 149.99 311 P PKPbc 22 43 06.2 0.0
baz=108
E29M Blow River 150.08 317 P PKPbc 22 43 06.3 +0.2
baz=105,SNR=64
M26K Nabesna, AK 150.21 304 P PKiKP 22 43 07.0 -0.5
baz=112
BMRM Bremner River 150.37 301 P PKPbc 22 43 07.4 +0.2
baz=113
NRIK Noril'sk 150.44 41 PKPbc PKPbc 22 43 07.0 0.0
comp=Z,4.3nm,0.9s,baz=9.9,slow=2.4,SNR=6.7
NRIK PKKP PKKPdf 22 51 55.2 +6.7
comp=Z,0.7nm,0.4s,baz=163,slow=0.1,SNR=4.0
Q23K Middleton Isla 150.54 297 P PKiKP 22 43 08.2 +0.1
baz=115
L26K Log Cabin Wild 150.59 305 P PKiKP 22 43 08.1 -0.2
baz=110
F28M Old Crow 150.59 315 P PKiKP 22 43 07.8 -0.3
baz=105
D28M Stokes Point 150.60 318 P PKiKP 22 43 08.3 +0.3
baz=103,SNR=37
N25K Chitina, Valde 150.61 302 P PKiKP 22 43 08.6 +0.1
baz=112
TLY Talaya 150.69 81 PKPbc 22 43 07.2 -1.0
I27K Kandik River 150.70 310 P PKiKP 22 43 08.5 0.0
baz=107
EYAK Cordova Ski Ar 150.72 299 P PKiKP 22 43 08.8 +0.3
baz=113
H27K Steamboat Moun 150.85 312 P PKiKP 22 43 08.8 +0.1
baz=106
HARP HAARP 151.15 303 P PKiKP 22 43 09.7 +0.3
baz=110
KLU Klutina 151.16 301 P PKiKP 22 43 09.9 +0.3
baz=111,SNR=12
SCRK Sand Creek 151.17 307 PKPbc PKiKP 22 43 09.7 +0.1
SCRK Sand Creek 151.17 307 P PKiKP 22 43 09.9 +0.4
baz=108,SNR=34
I26K Coal Creek Min 151.23 309 P PKiKP 22 43 09.7 +0.2
baz=106
P23K Montague Islan 151.26 298 P PKiKP 22 43 09.9 +0.2
baz=113
D27M Malcolm River 151.36 318 P PKiKP 22 43 10.3 +0.5
baz=101
E27K Coleen River 151.37 316 P PKiKP 22 43 09.9 +0.2
baz=102
RIDG Independent Ri 151.46 306 P PKiKP 22 43 10.5 +0.4
baz=108,SNR=37
GLI Glacier Island 151.46 299 P PKiKP 22 43 10.3 +0.2
baz=112
PAX Paxson 151.48 304 P PKiKP 22 43 10.5 +0.3
baz=109,SNR=12
M24K Tolsona, Glenn 151.49 302 P PKiKP 22 43 10.9 +0.7
baz=110,SNR=15
K24K Donnelly Dome 151.87 306 P PKiKP 22 43 11.0 +0.1
baz=107
G26K Porcupine Rive 151.91 313 P PKiKP 22 43 11.2 +0.4
baz=103
SCM Sheep Creek Mo 151.91 301 P PKiKP 22 43 11.6 +0.5
baz=110,SNR=9.0
J25K Salcha River, 151.94 307 P PKiKP 22 43 11.4 +0.4
baz=106
M23K Glacier View 152.07 301 P PKiKP 22 43 11.6 +0.2
baz=110,SNR=9.1
F26K Sheenjek River 152.20 314 P PKiKP 22 43 12.4 +0.9
baz=101
PRP Porcupine Dome 152.25 309 P PKiKP 22 43 12.0 +0.2
baz=104
SEW Seward 152.25 297 P PKiKP 22 43 11.8 +0.1
baz=112
KNK Knik Glacier 152.27 300 P PKiKP 22 43 12.0 +0.2
baz=110,SNR=6.6
DHY Denali Highway 152.34 304 P PKiKP 22 43 12.5 +0.5
baz=108
WAT6 Susitna Watana 152.34 303 P PKiKP 22 43 12.3 +0.2
baz=108,SNR=16
SML Sawmill 152.35 301 P PKiKP 22 43 12.1 +0.2
baz=110,SNR=11
C27K Jago River 152.38 318 P PKiKP 22 43 12.4 +0.6
baz=98
O22K Cooper Landing 152.52 298 P PKiKP 22 43 12.3 +0.1
baz=111
KSRS Korea Array 152.53 129 PKPbc PKPbc 22 43 12.8 +0.1
comp=Z,1.1nm,0.6s,baz=199,slow=2.2,SNR=5.9
KSRS PKPab pPKPbc 22 43 24.2 +0.5
comp=Z,2.3nm,0.8s,baz=219,slow=3.1,SNR=7.9
HDA Harding Lake 152.54 307 P PKiKP 22 43 12.8 +0.6
baz=106,SNR=10
ILAR Eielson Array 152.61 307 PKP PKPdf 22 43 03.2 -1.9
comp=Z,0.4nm,0.8s,baz=243,slow=1.7,SNR=4.2
ILAR PKPbc PKiKP 22 43 12.3 -0.1
comp=Z,18nm,0.8s,baz=141,slow=6.5,SNR=168
ILAR Eielson Array 152.61 307 PKPbc 22 43 12.1 -0.1
PMR Palmer 152.63 300 P PKiKP 22 43 12.9 +0.4
baz=109
BRSE Bradley Lake S 152.72 296 P PKiKP 22 43 13.1 +0.3
baz=112
RC01 Rabbit Creek A 152.74 299 P PKiKP 22 43 13.4 +0.6
baz=110
F25K Christian River 152.75 314 P PKiKP 22 43 13.4 +0.8
baz=100
WAT1 Susitna Watana 152.77 303 P PKiKP 22 43 13.5 +0.7
baz=107
E25K Arctic Village 152.81 315 P PKiKP 22 43 13.4 +0.7
baz=100
KDAK Kodiak Island 152.82 291 P PKiKP 22 43 13.5 +0.6
baz=115
C26K Camden Bay 152.83 319 P PKiKP 22 43 13.7 +1.1
baz=97,SNR=24
POKR Poker Plat Res 152.92 308 P PKiKP 22 43 13.5 +0.4
baz=104
OHAK Old Harbor 152.93 290 P PKiKP 22 43 13.7 +0.6
baz=115
CCB Clear Creek Bu 152.96 307 PKPbc 22 43 12.3 -0.6
COLA College 153.03 307 P PKiKP 22 43 13.8 +0.6
baz=104
Q20K Shuyak Island 153.07 293 P PKiKP 22 43 13.7 +0.2
baz=113
SII Sitka Sikan Islan 153.08 288 P PKiKP 22 43 14.1 +0.5
baz=116
HOM Homer 153.11 295 P PKiKP 22 43 14.1 +0.6
baz=112
M22K Willow 153.13 300 P PKiKP 22 43 14.5 +1.0
baz=108
MCK McKinley 153.20 305 P PKiKP 22 43 14.2 +0.6
baz=106
H24K Noodor Dome 153.27 310 P PKiKP 22 43 14.0 +0.2
baz=102
D25K Kavik River 153.27 317 P PKiKP 22 43 13.9 +0.2
baz=96
CAPN Captain Cook N 153.28 298 P PKiKP 22 43 14.3 +0.5
baz=110
G24K Hadweenzic Riv 153.28 311 P PKiKP 22 43 14.3 +0.6
baz=101
CUT Chulitna 153.40 301 P PKiKP 22 43 14.5 +0.4
baz=107,SNR=6.5
NEA2 Nenana 153.47 307 P PKiKP 22 43 14.4 +0.2
baz=104,SNR=11
TRF Thorofare Moun 153.71 304 P PKiKP 22 43 15.0 +0.2
baz=105,SNR=9.3
I23K Minto, Yukon-K 153.72 308 P PKiKP 22 43 14.5 -0.1
baz=102
Q19K Cape Douglas, 153.79 293 P PKiKP 22 43 15.0 0.0
baz=112
SKT Skwentna 153.84 300 P PKiKP 22 43 15.1 +0.1
baz=110,SNR=12
P19K Oil Pt 153.86 295 P PKiKP 22 43 15.3 +0.2
baz=111
E24K Your Creek 153.89 314 P PKiKP 22 43 15.5 +0.5
baz=97
N20K Mount Spurr 153.91 298 P PKiKP 22 43 15.7 +0.4
baz=108
SPCR Spurr Chakacha 153.91 298 P PKiKP 22 43 15.8 +0.5
baz=108
C24K Franklin Bluff 154.12 318 P PKiKP 22 43 16.0 +0.6
baz=94
D24K Happy Valley 154.13 317 P PKiKP 22 43 15.7 +0.3
baz=95
BPAW Bear Paw Mtn. 154.17 305 P PKiKP 22 43 15.7 +0.1
baz=103,SNR=24
MLY Manley 154.27 307 P PKiKP 22 43 16.2 +0.4
baz=102,SNR=6.0
G23K Bananza Creek 154.28 311 P PKiKP 22 43 16.9 +1.1
baz=99
E23K Chandalar 154.31 314 P PKiKP 22 43 16.6 +0.7
baz=96
Q18K Katmai Hardscr 154.34 292 P PKiKP 22 43 16.3 +0.1
baz=112
TOLK Toolik Lake Re 154.35 316 P PKiKP 22 43 16.6 +0.7
baz=95
PPLA Purkeypile 154.39 302 P PKiKP 22 43 16.8 +0.6
baz=105
COLD Coldfoot 154.43 312 P PKiKP 22 43 16.8 +0.7
baz=98
M20K Styx River 154.53 299 P PKiKP 22 43 16.6 0.0
baz=106
O19K Port Alsworth 154.56 295 P PKiKP 22 43 16.5 +0.1
baz=109
Q17K Contact Creek 154.62 290 P PKiKP 22 43 17.0 +0.2
baz=112
CHUM Lake Minchumin 154.69 304 P PKiKP 22 43 17.0 +0.3
baz=103,SNR=8.1
H22K Ishtalitna Cre 154.69 309 P PKiKP 22 43 17.0 +0.3
baz=99
P18K Big Mountain, 154.72 293 P PKiKP 22 43 17.0 +0.1
baz=110
D23K Nanushuk River 154.78 316 P PKiKP 22 43 17.4 +0.6
baz=94
C23K Itkillik River 154.79 318 P PKiKP 22 43 17.3 +0.6
baz=92,SNR=11
I21K Tanana 154.81 307 P PKiKP 22 43 17.4 +0.5
baz=100
N19K Bonanza Creek 154.84 297 P PKPbc 22 43 17.1 -0.1
baz=108
Q18K Koktuh Hills 154.87 294 P PKiKP 22 43 17.3 +0.1
baz=109
E22K Anaktuvuk Pass 155.13 314 P PKPdf 22 43 18.2 +10
baz=94
Q16K King Salmon 155.15 291 P PKPdf 22 43 18.5 +10
baz=111
R16K Pilot Point 155.19 288 P PKPdf 22 43 18.5 +10
baz=113
H21K Melozitna Rive 155.23 308 P PKPdf 22 43 18.3 +10
baz=99
P17K Kvichak River 155.23 292 P PKPdf 22 43 18.5 +10
baz=110
MJAR Matsushiro Arr 155.31 147 PKPab PKPab 22 43 35.0 -0.2
comp=Z,1.9nm,0.7s,baz=170,slow=4.9,SNR=6.2
K20K Telida 155.33 303 P PKPdf 22 43 18.6 +10
baz=103
L19K White Mountain 155.40 300 P PKPab 22 43 35.0 0.0
baz=105
N18K Kilae Creek 155.46 296 P PKPab 22 43 35.2 0.0
baz=107
D22K Ayikyak River 155.50 316 P PKPab 22 43 35.5 +0.3
baz=92
G21K Allakaket 155.63 310 P PKPab 22 43 35.6 -0.2
baz=96
M18K Stony River 155.66 298 P PKPab 22 43 36.2 +0.2
baz=106
F21K Alatna River 155.69 312 P PKPab 22 43 36.4 +0.3
baz=95
SDPT Sand Point 155.71 282 P PKPab 22 43 36.8 +0.4
baz=116
O17K Koliganek Bris 155.74 293 P PKPab 22 43 37.1 +0.7
baz=109
B22K Teshekpuk Lake 155.76 320 P PKPab 22 43 36.8 +0.6
baz=88
P16K Nushagak River 155.93 291 P PKPab 22 43 37.7 +0.5
baz=110
E21K Killik River 155.95 315 P PKPab 22 43 37.9 +0.7
baz=92
N17K Nushagak Hills 156.02 295 P PKPab 22 43 38.2 +0.6
baz=107
H20K Anotleneega Mo 156.06 308 P PKPab 22 43 38.5 +0.8
baz=98
J19K Poorman 156.14 304 P PKPab 22 43 38.4 +0.3
baz=100
O16K Kokwok River B 156.16 292 P PKPab 22 43 38.5 +0.2
baz=108
B21K Ikpikpuk River 156.19 318 P PKPab 22 43 38.7 +0.6
baz=88
A22K Sinclair Lake 156.23 321 P PKPab 22 43 38.9 +0.6
baz=85
L18K Granite Mounta 156.24 299 P PKPab 22 43 39.2 +0.7
baz=104
C21K Knifeblade Rid 156.26 317 P PKPab 22 43 39.1 +0.7
baz=89
M17K Holitna River 156.38 297 P PKPab 22 43 39.7 +0.6
baz=105
J18K Innoko River 156.52 302 P PKPab 22 43 40.1 +0.3
baz=101
F20K Avaraart Lake 156.56 311 P PKPab 22 43 40.4 +0.7
baz=93
A21K Barrow 156.73 322 P PKPab 22 43 41.4 +1.1
baz=82
N16K Nishlik Lake 156.75 294 P PKPab 22 43 41.6 +0.8
baz=106
E20K Nigu River 156.77 314 P PKPab 22 43 41.6 +0.9
baz=90
O15K Ungalikthiuk R 156.87 291 P PKPab 22 43 42.0 +0.7
baz=109
D20K Etivluk River 156.93 316 P PKPab 22 43 42.0 +0.7
baz=89
L17K Donlin 156.96 299 P PKPab 22 43 42.5 +0.9
baz=103
M16K Timber Creek 156.99 296 P PKPab 22 43 42.7 +0.9
baz=105
FALS False Pass 157.00 279 P PKPab 22 43 42.6 +0.6
baz=117
G19K Purcell Mounta 157.04 309 P PKPab 22 43 42.5 +0.6
baz=94
B20K Meade River 157.05 319 P PKPab 22 43 42.7 +1.0
baz=85
K17K Iditarod 157.08 300 P PKPab 22 43 42.7 +0.6
baz=101
E19K Redstone River 157.16 312 P PKPab 22 43 43.0 +0.6
baz=91
N15K Kwethluk River 157.30 293 P PKPab 22 43 43.2 0.0
baz=106
F19K Shaleruckik Mo 157.35 311 P PKPab 22 43 43.4 +0.2
baz=92
L16K Owhat River 157.40 297 P PKPab 22 43 44.4 +0.9
baz=103
H18K Honnosa River 157.48 306 P PKPab 22 43 44.9 +1.1
baz=96
D19K Kuna River 157.48 315 P PKPab 22 43 44.6 +0.8
baz=88
O14K Tigyukauivet M 157.60 290 P PKPab 22 43 45.2 +0.8
baz=108
G18K Tagagawik 157.66 308 P PKPab 22 43 45.6 +1.0
baz=94
M15K Kasigluk River 157.73 294 P PKPab 22 43 46.1 +1.1
baz=105
C19K Lookout Ridge 157.98 317 P PKPab 22 43 46.8 +0.9
baz=85
N14K Kuskokwak Cree 158.00 292 P PKPab 22 43 46.9 +0.8
baz=106
F18K Selawik 158.09 310 P PKPab 22 43 46.9 +0.5
baz=91
H17K Granite Mounta 158.11 306 P PKPab 22 43 47.2 +0.7
baz=95
UNV Unalaska Valle 158.13 274 P PKPab 22 43 47.4 +0.5
baz=118
J16K Anvik River 158.22 301 P PKPab 22 43 47.9 +0.9
baz=98
L15K Ungalak Mounta 158.33 297 P PKPab 22 43 48.4 +0.9
baz=102
I17K Unalakleet 158.34 303 P PKPab 22 43 48.3 +0.8
baz=97
M14K Bethel 158.35 294 P PKPab 22 43 48.5 +0.9
baz=104
A19K Wainwright 158.35 320 P PKPab 22 43 48.4 +1.0
baz=80
E18K Tukpahlearik C 158.46 312 P PKPab 22 43 48.8 +0.8
baz=88
G17K Kiwalik Mounta 158.46 307 P PKPab 22 43 49.0 +1.0
baz=93
K15K Wolf Creek Mou 158.47 298 P PKPab 22 43 49.4 +1.2
baz=100
C18K Utukok River 158.60 316 P PKPab 22 43 49.7 +1.0
baz=84
F17K Baldwin Pennin 158.73 310 P PKPab 22 43 50.0 +0.9
baz=90
L14K Kuka Creek 158.82 295 P PKPab 22 43 50.8 +1.1
baz=102
M13K Dall Lake 158.93 293 P PKPab 22 43 51.5 +1.3
baz=104
E17K Hotham Inlet 158.95 311 P PKPab 22 43 51.2 +1.1
baz=88
H16K Elim 159.08 304 P PKPab 22 43 51.8 +1.0
baz=94
G16K Koyuk River 159.17 307 P PKPab 22 43 51.9 +0.8
baz=92
RDOG Red Dog Mine 159.29 314 P PKPab 22 43 52.4 +0.8
baz=84
C17K DeLong Mountai 159.34 315 P PKPab 22 43 52.9 +1.1
baz=83
D17K Noatak River 159.39 313 P PKPab 22 43 52.9 +0.9
baz=85
J14K Nanvaranak Lak 159.47 299 P PKPab 22 43 53.4 +1.0
baz=98
K13K Kusilvak Mount 159.86 296 P PKPab 22 43 54.8 +0.6
baz=99

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
F15K	**North Star Dit**	**160.12**	**307**	P	**PKPab**	**22 43 55.6**	**+0.3**
	baz=89						
C16K	**Lisburne Hills**	**160.17**	**315**	P	**PKPab**	**22 43 55.9**	**+0.6**
	baz=81						
F14K	**Arctic Creek**	**160.83**	**307**	P	**PKPab**	**22 43 59.3**	**+1.0**
	baz=88						
TNA	**Tin City**	**161.49**	**307**	P	**PKPab**	**22 44 02.1**	**+0.9**
	baz=86						
PETK	**Petropavlovsk-**	**174.09**	**198**	PKPab	**PKPab**	**22 44 57.9**	**+0.7**
	comp=Z,3.3nm,0.8s,baz=125,slow=12,SNR=3.9						

IDC ***07*** *22:47:18.0±12.0, 0.°17N×121.°95E, h208km±135km, mb3.4/5, mbtmp3.9/6, Error ellipse: s-maj=78.4km s-min=23.6km az=61.0*
DJA ***07*** *22:47:17.5±0.6, 0°N±5°×12°2E±°, h167km±6km, M3.7/14, MLv3.7/14*
ISC 07 22:47:16.3±0.9**, 0.°3N**±0.°1×**122.°1E**±0.°1**, h202km, n13, σ2.s21**/12**, mb3.7**/5**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.27**	**329**	P	Pn	22 47 39.8	-3.2
MRSI				S	**S**	**22 47 58.2**	**-5.7**
GTOI	**Gorontalo**	**1.01**	**68**	P	Pn	22 47 43.8	-2.5
APSI	**Ampana**	**1.23**	**200**	P	**Pn**	**22 47 46.7**	**-1.3**
LUWI	**Luwuk**	**1.46**	**152**	P	**Pn**	**22 47 48.7**	**-1.1**
MPSI	**Mapaga**	**2.18**	**272**	P	**Pn**	**22 47 56.0**	**-0.9**
PCI	**Palu**	**2.52**	**243**	P	**Pn**	**22 47 59.4**	**-1.1**
MMSI	**Mamuju**	**4.31**	**227**	P	**Pn**	**22 48 22.2**	**+0.1**
FITZ	**Fitzroy Crossi**	**18.57**	**169**	P	**P**	**22 51 19.0**	**+0.8**
	5.1nm,0.6s,baz=3.6,slow=9.6,SNR=31						
WRA	**Warramunga Arr**	**23.39**	**150**	P	**P**	**22 52 08.3**	**+1.1**
	1.3nm,0.6s,baz=324,slow=11,SNR=40						
	1.3nm,0.6s						
ASAR	**Alice Springs**	**26.40**	**155**	P	**P**	**22 52 35.2**	**+0.8**
	0.8nm,0.6s,baz=344,slow=14,SNR=22						
	0.8nm,0.6s						
SONM	**Songino Array**	**49.32**	**346**	P	**P**	**22 55 46.3**	**+1.3**
	1.6nm,0.7s,baz=174,slow=7.4,SNR=14						
	1.6nm,0.7s						
MKAR	**Makanchi Array**	**57.92**	**329**	P	**P**	**22 56 48.6**	**+1.2**
	0.7nm,0.3s,baz=128,slow=8.6,SNR=30						
	0.7nm,0.3s						
KURBB	**Kurchatov Arra**	**62.29**	**330**	P	**P**	**22 57 18.0**	**+1.1**
	0.4nm,0.3s,baz=119,slow=5.8,SNR=6.6						
	0.4nm,0.3s						

IDC ***07*** *22:58:14.3±0.6, 36.°83N×75.°78E, h0km, mb4.1/23, mbtmp4.1/29, ML3.8/5, MS3.4/25, Error ellipse: s-maj=14.3km s-min=12.7km az=29.0*
MOS ***07*** *22:58:15.4±1.0, 36.°85N×75.°77E, h16km, mb4.5/28, Error ellipse: s-maj=6.9km s-min=4.1km az=100.2*
NNC ***07*** *22:58:15.5±5.1, 36.°79N×75.°75E, h0km, mb4.5, mpv4.4, Error ellipse: s-maj=43.6km s-min=35.2km az=173.0*
NEIC ***07*** *22:58:17.0±1.3, 36.°88N±0.°06×75.°78E±0.°08, h10km±1km, mb4.5/47, Error ellipse: s-maj=10.9km s-min=10.4km az=111.0*
BJI ***07*** *22:58:16.2, 36.°89N×75.°78E, h6km, mB4.3/3, mb4.2/19, ML4.1/6, Ms3.8/5, Ms7 3.6/3*
ISC 07 22:58:16.7±0.3**, 36.°89N**±0.°03×**75.°71E**±0.°04**, h10km, n249, σ1.s75**/256**, mb4.5**/67**, MS3.4**/23**, 25C-15D, Kashmir-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH2	**Kashi**	**2.26**	**357**	Pn	**Pb**	**22 58 57.1**	**-0.6**
KSH2				Sn	**Sb**	**22 59 24.7**	**-1.1**
KSH2				SMN			
	2µm,0.8s						
KSH2				SME			
	1µm,0.7s						
SRNI	**Srinagar**	**2.92**	**195**	eP	**Pb**	**22 59 07.6**	**-1.4**
SRNI				ex	**Sg**	**22 59 51.6**	**+1.0**
NIL	**Nilore**	**3.80**	**213**		**Pn**	**22 59 17.2**	**+1.9**
NIL	**Nilore**	**3.80**	**213**	PN	**Pn**	**22 59 17.2**	**+1.9**
DRK	**Karamyk**	**4.02**	**311**		**Pn**	**22 59 20.0**	**+1.4**
DRK	**Karamyk**	**4.02**	**311**	PN	**Pn**	**22 59 20.0**	**+1.4**
TSSA	**Tissa**	**4.05**	**175**	eP	**Pn**	**22 59 22.6**	**+3.6**
TSSA				eS	**Sb**	**23 00 12.9**	**-4.6**
TSSA				IAML		23 00 27.8	
	comp=N,516nm,0.5s						
TSSA				IAML		23 00 36.1	
	comp=E,485nm,0.5s						
JMU	**Jammu**	**4.16**	**190**	eP	Pn	22 59 25.2	+5.0
JMU				eS	**Sn**	**23 00 14.2**	**+5.4**
JMU				IAML		23 00 41.4	
	comp=E,479nm,0.8s						
JMU				IAML		23 00 42.6	
	comp=N,465nm,0.6s						
GAR	**Garm**	**4.75**	**298**		**Pn**	**22 59 30.4**	**+1.9**
ARSB	**Arslanbob**	**4.91**	**335**		**Pn**	**22 59 32.9**	**+2.1**
ARSB	**Arslanbob**	**4.91**	**335**	PN	**Pn**	**22 59 32.9**	**+2.1**
BTK	**Batken**	**4.97**	**311**		**Pn**	**22 59 34.5**	**+3.0**
BTK	**Batken**	**4.97**	**311**	PN	**Pn**	**22 59 34.5**	**+3.0**
WUS	**Wushi**	**5.10**	**31**		**Pn**	**22 59 34.1**	**+0.7**
TARG	**Taragay, Kyrgy**	**5.10**	**18**		**Pn**	**22 59 35.5**	**+1.9**
TARG	**Taragay, Kyrgy**	**5.10**	**18**	PN	**Pn**	**22 59 35.5**	**+1.9**
KDJ	**Kajisay**	**5.36**	**12**		**Pn**	**22 59 38.9**	**+1.9**
KDJ	**Kajisay**	**5.36**	**12**	PN	**Pn**	**22 59 38.9**	**+1.9**
UCH	**Uchtor**	**5.42**	**351**	P	Pn	22 59 42.7	+4.8
	SNR=12						
BHK	**Bhakra**	**5.50**	**174**	eP	**Pn**	**22 59 41.8**	**+3.0**
BHK				IAML		23 01 16.2	
	comp=N,228nm,0.8s						
BHK				IAML		23 01 17.9	
	comp=E,147nm,0.5s						
BOOM	**Boomskoye usch**	**5.60**	**2**		**Pn**	**22 59 42.6**	**+2.4**
BOOM	**Boomskoye usch**	**5.60**	**2**	PN	**Pn**	**22 59 42.6**	**+2.4**
KLP	**Kalpa**	**5.74**	**158**	eP	**Pn**	**22 59 44.9**	**+2.6**
KLP				eS	**Sn**	**23 00 50.8**	**+2.4**
KLP				IAML		23 01 00.6	
	comp=E,102nm,0.4s						
KLP				IAML		23 01 06.0	
	comp=N,105nm,0.7s						
KBK	**Karagaybulak**	**5.79**	**354**	P	Pn	22 59 48.0	+5.1
	SNR=24						
AAK	**Ala-Archa**	**5.82**	**351**	Pn	Pn	22 59 48.5	+5.3
	comp=N,6.2nm,0.3s,baz=174,slow=9.6,SNR=155						
AAK				Sn	**Sn**	**23 00 53.2**	**+3.1**
	comp=N,0.8nm,0.3s,baz=344,slow=18,SNR=7.3						
AAK				Lg	Lg	23 01 18.4	
	comp=N,1.9nm,0.3s,baz=32,slow=17,SNR=2.0						
AAK				LR	LR	23 02 13.8	
	comp=N,368nm,19.2s,baz=172,slow=41						
	comp=N,43nm,0.6s						
AAK	**Ala-Archa**	**5.82**	**351**		**Pn**	**22 59 44.8**	**+1.6**
AAK	**Ala-Archa**	**5.82**	**351**	P	Pn	22 59 48.3	+5.1
	SNR=34						
AAK	**Ala-Archa**	**5.82**	**351**	⇑P	**Pn**	**22 59 48.0**	**+4.7**
	comp=N,36nm,0.8s						
AAK				⇑S	**Sn**	**23 00 55.5**	**+5.4**
	comp=N,94nm,1.0s						
AAK	**Ala-Archa**	**5.82**	**351**	i PN	**Pn**	**22 59 42.4**	**-0.8**
SMLA	**Simla**	**5.87**	**168**	eP	**Pn**	**22 59 45.4**	**+1.7**
SMLA				eS	**Sn**	**23 00 55.5**	**+4.5**
SMLA				IAML		23 01 03.2	
	comp=N,103nm,0.2s						
SMLA				IAML		23 01 08.4	
	comp=E,144nm,0.5s						
KBL	**Kabul**	**5.90**	**249**		**Pn**	**22 59 46.5**	**+2.1**
KBL	**Kabul**	**5.90**	**249**	PN	**Pn**	**22 59 46.5**	**+2.1**
EKS2	**Erkin-Say**	**5.96**	**346**	P	Pn	22 59 50.5	+5.5
	SNR=6.2						
PRZ	**Przheval'sk**	**5.96**	**20**		**Pn**	**22 59 46.5**	**+1.2**
PRZ	**Przheval'sk**	**5.96**	**20**	PN	**Pn**	**22 59 46.5**	**+1.2**
FRU1	**Bishkek**	**5.98**	**352**		**Pn**	**22 59 46.8**	**+1.5**
FRU1	**Bishkek**	**5.98**	**352**	PN	**Pn**	**22 59 46.8**	**+1.5**
TKM2	**Tokmak 2**	**6.03**	**359**	P	Pn	22 59 51.5	+5.4
	SNR=17						
SHAA	**Shahritus**	**6.09**	**279**		**Pn**	**22 59 48.0**	**+1.1**
CHMS	**Chumysh**	**6.15**	**353**	P	Pn	22 59 52.6	+5.0
	SNR=18						
DDI	**Dehra Dun**	**6.83**	**163**	eP	**Pn**	**23 00 00.9**	**+3.9**
DDI				eS	**Sn**	**23 01 15.0**	**+0.1**
PDGK	**Podgornoye**	**7.06**	**23**	⇓P	**Pn**	**23 00 02.5**	**+2.3**
	comp=E,21nm,0.8s						
PDGK				⇑S	**Sn**	**23 01 21.9**	**+1.4**
	comp=E,66nm,1.0s						
JOSI	**Joshimath**	**7.08**	**152**	eP	**Pn**	**23 00 02.6**	**+2.0**
JOSI				eS	**Sn**	**23 01 21.2**	**0.0**
JOSI				IAML		23 01 25.6	
	comp=E,197nm,0.8s						
JOSI				IAML		23 01 28.4	
	comp=N,134nm,0.3s						
KK31	**Karatay Array**	**7.38**	**329**		**Pn**	**23 00 06.3**	**+1.8**
KK31	**Karatay Array**	**7.38**	**329**	⇑P	**Pn**	**23 00 06.8**	**+2.4**
	comp=N,9.6nm,0.5s,baz=134,slow=12,SNR=169						
KK31				⇓S	**Sn**	**23 01 31.4**	**+3.1**
	comp=N,21nm,0.6s,baz=161,slow=22,SNR=4.6						
KK31	**Karatay Array**	**7.38**	**329**	P	**Pn**	**23 00 06.3**	**+1.8**
KKAR	**Karatay Array**	**7.38**	**329**		**Pn**	**23 00 06.9**	**+2.4**
KKAR	**Karatay Array**	**7.38**	**329**	P	**Pn**	**23 00 06.9**	**+2.4**
PTH	**Pithoragarh**	**8.20**	**151**	eP	**Pn**	**23 00 16.3**	**+0.4**
PTH				eS	**Sn**	**23 01 46.4**	**-2.3**
NDI	**New Delhi**	**8.27**	**171**	eP	**Pn**	**23 00 20.9**	**+4.1**
NPLP	**NPLP New Delhi**	**8.32**	**171**	eP	**Pn**	**23 00 18.5**	**+1.2**
NPLP				eS	**Sn**	**23 01 50.3**	**-1.1**
NPLP				IAML		23 01 55.0	
	comp=N,61nm,0.2s						
NPLP				IAML		23 01 56.0	
	comp=E,50nm,0.2s						
LGTI	**Lohaghat**	**8.32**	**153**	eP	**Pn**	**23 00 18.2**	**+0.6**
LGTI				eS	**Sn**	**23 01 49.0**	**-2.6**
LGTI				IAML		23 01 52.3	
	comp=E,18nm,0.3s						
LGTI				IAML		23 01 53.2	
	comp=N,42nm,0.7s						
KUDL	**Kundal**	**8.74**	**175**	eP	**Pn**	**23 00 23.9**	**+0.7**
KUDL				IAML		23 02 03.1	
	comp=E,26nm,0.5s						
KUDL				IAML		23 02 04.8	
	comp=N,24nm,0.5s						
KUDL				eS	**Sn**	**23 02 06.9**	**+5.2**
AJM	**Ajmer**	**10.47**	**185**	eP	**Pn**	**23 00 46.9**	**-0.1**
AJM				eS	**Sn**	**23 02 39.7**	**-4.6**
AJM				IAML		23 02 43.0	
	comp=N,24nm,0.7s						
AJM				IAML		23 02 60.0	
	comp=E,30nm,0.7s						
MAKZ	**Makanchi**	**10.96**	**23**		**Pn**	**23 00 54.4**	**+0.9**
MAKZ	**Makanchi**	**10.96**	**23**	⇓P	**Pn**	**23 00 54.0**	**+0.5**
	comp=E,18nm,1.4s						
MAKZ	**Makanchi**	**10.96**	**23**	P	**Pn**	**23 00 54.4**	**+0.9**
MK31	**Makanchi Array**	**11.05**	**24**	P	**Pn**	**23 00 55.4**	**+0.7**
	comp=E,4.5nm,0.7s,baz=200,slow=12,SNR=40						
MK31	**Makanchi Array**	**11.05**	**24**	ceP	**Pn**	**23 00 55.0**	**+0.3**
MKAR	**Makanchi Array**	**11.05**	**24**	Pn	**Pn**	**23 00 55.8**	**+1.1**
	comp=E,0.8nm,0.3s,baz=201,slow=13,SNR=55						
MKAR				Sn	**Sn**	**23 02 55.8**	**-2.6**
	comp=E,0.2nm,0.3s,baz=197,slow=25,SNR=1.6						
MKAR				Lg	Lg	23 04 04.3	
	comp=E,0.2nm,0.3s,baz=193,slow=23,SNR=1.7						
MKAR				LR	LR	23 04 30.2	
	comp=E,27nm,19.5s,baz=196,slow=34						
	comp=E,3.6nm,0.7s						
MKAR	**Makanchi Array**	**11.05**	**24**		**Pn**	**23 00 55.4**	**+0.6**
MKAR	**Makanchi Array**	**11.05**	**24**	i P	**Pn**	**23 00 55.7**	**+1.0**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
WMQ	**Urumqi**	**11.47**	**49**	eP	**Pn**	**23 01 03.4**	**+2.8**
WMQ				pmax	pmax		
	comp=Z,20nm,0.7s						
JHNI	**Jhansi**	**11.66**	**167**	eP	**Pn**	**23 01 03.0**	**-0.2**
JHNI				eS	**Sn**	**23 03 08.8**	**-4.7**
JHNI				IAML		23 03 13.8	
	comp=N,157nm,0.2s						
JHNI				IAML		23 03 14.9	
	comp=E,155nm,0.2s						
VLK	**Valmikinagar**	**11.70**	**141**	eS	**Sn**	**23 03 10.6**	**-3.8**
GUNA	**GUNA**	**12.28**	**173**	IAML		23 03 28.0	
	comp=N,199nm,0.2s						
GUNA				IAML		23 03 39.4	
	comp=E,314nm,0.6s						
EVN	**Everest**	**12.93**	**130**		**Pn**	**23 01 17.4**	**-3.7**
BHPL	**Bhopal**	**13.68**	**173**	eP	**Pn**	**23 01 31.4**	**+0.6**
BHPL				ex	**Sn**	**23 03 55.0**	**-7.9**
KURBB	**Kurchatov Arra**	**13.88**	**8**	Pn	**Pn**	**23 01 33.7**	**+0.3**
	comp=E,0.1nm,0.3s,baz=191,slow=12,SNR=23						
KURBB				Lg	Lg	23 05 21.8	
	baz=191,slow=28						
	comp=E,4.3nm,0.8s						
KURK	**Kurchatov**	**13.98**	**8**		**Pn**	**23 01 34.5**	**-0.3**
KURK	**Kurchatov**	**13.98**	**8**	ceP	**Pn**	**23 01 33.8**	**-1.0**
KURK				pmax	pmax		
	comp=Z,22nm,1.3s						
LSA	**Lhasa**	**14.76**	**115**		**Pn**	**23 01 43.9**	**-2.1**
LSA	**Lhasa**	**14.76**	**115**	P	**Pn**	**23 01 43.9**	**-2.1**
DGZ	**Jazzator, Alta**	**15.37**	**30**	i P	**Pn**	**23 01 52.8**	**-0.9**
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BVAR	**Borovoye Array**	**16.56**	**349**	Pn	**Pn**	**23 02 07.7**	**-1.2**
	comp=Z,1.2nm,0.7s,baz=150,slow=12,SNR=4.0						
BVAR				Lg	Lg	23 06 53.1	
	baz=157,slow=24,SNR=1.9						
BVAR				LR	LR	23 08 46.4	
	comp=Z,121nm,20.5s,baz=166,slow=38						
BORK	**Borovoye**	**16.60**	**349**	P	**P**	**23 02 11.4**	**-0.4**
BORK				IAmb	IAmb	23 02 19.1	
	comp=Z,52nm,1.2s						
BORK	**Borovoye**	**16.60**	**349**	ceP	**Pn**	**23 02 08.9**	**-0.4**
BORK				pmax	pmax		
	comp=Z,36nm,1.7s						
AB31	**Akbulak array**	**16.85**	**322**	Pn	**Pn**	**23 02 10.7**	**-2.0**
AB31	**Akbulak array**	**16.85**	**322**	P	**Pn**	**23 02 10.6**	**-2.0**
	comp=Z,2.0nm,0.6s,baz=121,slow=9.9,SNR=32						
ABKAR	**Akbulak array**	**16.85**	**322**		**Pn**	**23 02 10.1**	**-2.5**
SHL	**Shillong**	**17.82**	**125**	Pn	**Pn**	**23 02 23.0**	**-2.1**
SHL				IAmb	IAmb	23 02 44.4	
	comp=Z,13nm,0.3s						
SHL	**Shillong**	**17.82**	**125**	P	**Pn**	**23 02 23.0**	**-2.1**
SHL				pmax	pmax		
	comp=Z,13nm,0.3s						
ZAA0	**Zalesovo Array**	**18.20**	**17**	P	**Pn**	**23 02 29.0**	**-0.2**
ZALV	**Zalesovo Beam**	**18.20**	**17**	P	**Pn**	**23 02 29.3**	**+0.1**
	comp=Z,1.4nm,0.3s,baz=211,slow=13,SNR=20						
ZALV				LR	LR	23 10 33.3	
	comp=Z,18nm,19.9s,baz=34,slow=40						
	comp=Z,5.6nm,0.5s						
AKTO	**Aktyubinsk**	**18.57**	**322**	P	**P**	**23 02 34.2**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=109,slow=11,SNR=12						
AKTO				LR	LR	23 10 15.7	
	comp=Z,209nm,21.4s,baz=19,slow=39						
	comp=Z,5.3nm,0.7s						
AKTO	**Aktyubinsk**	**18.57**	**322**	⇑P	**P**	**23 02 32.4**	**-1.3**
	comp=Z,4.7nm,0.8s						
GTA2	**Gaotai**	**19.07**	**75**	P	**Pn**	**23 02 42.0**	**+1.8**
GTA2				pP	sP	23 02 47.9	+2.3
GTA2				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HYB	**Hyderabad**	**19.55**	**172**	eP	**P**	**23 02 44.7**	**0.0**
KNGR	**Kungurtug, Tuv**	**20.79**	**42**	i P	**P**	**23 02 58.9**	**+0.9**
KNGR				pmax	pmax		
	comp=Z,25nm,0.8s						
SVE	**Sverdlovsk**	**22.36**	**338**	eP	**P**	**23 03 15.4**	**+0.7**
MAK	**Makhachkala**	**22.40**	**294**c	iP	**P**	**23 03 10.0**	**-5.3**
MAK				eS	**S**	**23 07 13.8**	**-7.5**
MAK				pmax	pmax		
	comp=Z,321nm,1.4s						
MAK				MLR	MLR		
	comp=Z,181nm,13.0s						
LZH	**Lanzhou**	**22.61**	**84**	eP	**P**	**23 03 20.2**	**+2.5**
LZH				sP	sP	23 03 29.1	+5.2
LZH				pmax	pmax		
	comp=Z,11nm,1.0s						
ARTI	**Arti**	**22.73**	**335**	LR	LR	23 12 32.5	
	comp=Z,122nm,20.8s,baz=154,slow=38						
ARTI	**Arti**	**22.73**	**335**		**P**	**23 03 18.5**	**-0.1**
ARTI				IAmb	IAmb	23 03 21.0	
	comp=Z,12nm,0.6s						
ARTI	**Arti**	**22.73**	**335**	ceP	**P**	**23 03 18.6**	**0.0**
ARTI				pmax	pmax		
	comp=Z,17nm,1.3s						
ZAK	**Zakamensk**	**23.92**	**47**	eP	**P**	**23 03 30.2**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
PZH	**PanZhiHua**	**24.38**	**108**	P	**P**	**23 03 36.6**	**+1.3**
GNI	**Garni**	**24.38**	**287**	LR	LR	23 16 04.3	
	comp=Z,37nm,18.1s,baz=76,slow=44						
GNI	**Garni**	**24.38**	**287**	P	**P**	**23 03 34.7**	**-0.5**
GNI				IAmb	IAmb	23 04 15.3	
	comp=Z,14nm,1.1s						
GNI	**Garni**	**24.38**	**287**	ceP	**P**	**23 03 34.8**	**-0.5**
GNI				pmax	pmax		
	comp=Z,13nm,1.3s						
TLY	**Talaya**	**24.68**	**44**	LR	LR	23 14 22.3	
	comp=Z,61nm,21.2s,baz=239,slow=39						
SONM	**Songino Array**	**25.02**	**54**	P	**P**	**23 03 40.7**	**-0.2**
	comp=Z,4.9nm,0.8s,baz=253,slow=9.1,SNR=26						
	comp=Z,4.9nm,0.8s						
SONM	**Songino Array**	**25.02**	**54**	P	**P**	**23 03 40.5**	**-0.4**
SONM				IAmb	IAmb	23 03 48.7	
	comp=Z,11nm,1.4s						
SONM	**Songino Array**	**25.02**	**54**	P	**P**	**23 03 40.5**	**-0.4**
SONM				pmax	pmax		
	comp=Z,11nm,1.4s						
BELG	**Belogornoye**	**25.07**	**317**	i P	**P**	**23 03 40.3**	**-0.8**
BELG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ULN	**Ulaanbaatar**	**25.46**	**55**	P	**P**	**23 03 44.6**	**-0.3**
ULN	**Ulaanbaatar**	**25.46**	**55**	ceP	**P**	**23 03 46.4**	**+1.5**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KBZ	**Khabaz**	**25.82**	**296**	P	**P**	**23 03 48.9**	**+0.9**
	comp=Z,2.2nm,0.9s,baz=70,slow=6.1,SNR=5.4						
KBZ				LR	LR	23 16 00.7	
	comp=Z,88nm,19.2s,baz=87,slow=41						
	comp=Z,2.2nm,0.9s						
KIV	**Kislovodsk**	**25.99**	**296**	eP	**P**	**23 03 50.1**	**+0.4**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,35nm,15.0s						
CM31	**Chiang Mai Arr**	**27.45**	**126**	P	**P**	**23 04 02.5**	**-0.4**
CMAR	**Chiang Mai Arr**	**27.45**	**126**	P	**P**	**23 04 03.2**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=307,slow=11,SNR=7.6						
CMAR				LR	LR	23 16 30.6	
	comp=Z,41nm,20.2s,baz=310,slow=40						
	comp=Z,0.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**27.45**	**126**	i P	**P**	**23 04 05.5**	**+2.5**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KIRV	**Kirov**	**27.67**	**330**	LR	LR	23 15 49.2	
	comp=Z,171nm,19.5s,baz=122,slow=38						
KIRV	**Kirov**	**27.67**	**330**	ceP	**P**	**23 04 03.5**	**-1.0**
VRH	**Novokhopyorsk**	**28.02**	**312**	eP	**P**	**23 04 07.2**	**-0.5**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC	**Hu-ho-hao-te**	**28.07**	**71**	eP	**P**	**23 04 09.0**	**+0.5**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
RAYN	**Ar Rayn**	**29.17**	**251**	P	**P**	**23 04 18.2**	**-0.1**
RAYN	**Ar Rayn**	**29.17**	**251**	P	**P**	**23 04 18.2**	**-0.1**
RAYN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
VORD	**Divnogorie**	**29.43**	**310**	eP	**P**	**23 04 19.4**	**-0.8**
VORD				pmax	pmax		
	comp=Z,6.0nm,0.6s						
VSR	**Storozhevoye**	**29.57**	**311**	eP	**P**	**23 04 20.9**	**-0.6**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VORR	**Voronezh**	**29.66**	**312**	eP	**P**	**23 04 21.1**	**-1.2**
VORR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
PALK	**Pallekele**	**29.82**	**170**	LR	LR	23 16 40.7	
	comp=Z,139nm,19.5s,baz=270,slow=37						
LPSR	**Galich'ya Gora**	**30.09**	**313**	eP	**P**	**23 04 25.7**	**-0.3**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
OBN	**Obninsk**	**32.17**	**317**	LR	LR	23 18 40.3	
	comp=Z,111nm,18.8s,baz=358,slow=38						
OBN	**Obninsk**	**32.17**	**317**	eP	**P**	**23 04 44.0**	**-0.4**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BR131	**Keskin Array S**	**32.92**	**288**	P	**P**	**23 04 51.5**	**+0.2**
BR131	**Keskin Array S**	**32.92**	**288**	P	**P**	**23 04 51.5**	**+0.2**
BR131				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BRTR	**Keskin Array B**	**32.92**	**288**	P	**P**	**23 04 52.8**	**+1.5**
	comp=Z,1.4nm,0.8s,baz=110,slow=8.1,SNR=10						
	comp=Z,1.4nm,0.8s						
BRTR	**Keskin Array B**	**32.92**	**288**	P	**P**	**23 04 51.5**	**+0.2**
NRIK	**Noril'sk**	**33.15**	**8**	P	**P**	**23 04 52.7**	**-0.1**
	comp=Z,5.7nm,0.9s,baz=194,slow=7.5,SNR=7.7						
NRIK				LR	LR	23 20 00.9	
	comp=Z,40nm,19.3s,baz=180,slow=39						
	comp=Z,5.7nm,0.9s						
NRIK	**Noril'sk**	**33.15**	**8**	P	**P**	**23 04 52.6**	**-0.2**
NRIK				IAmb	IAmb	23 04 54.5	
	comp=Z,6.0nm,0.9s						
NRIK	**Noril'sk**	**33.15**	**8**	i P	**P**	**23 04 52.6**	**-0.2**
NRIK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NJ2	**Nanjing**	**35.67**	**85**	eP	**P**	**23 05 15.0**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,23nm,0.5s						
AKASG	**Malin Array Be**	**35.68**	**308**	P	**P**	**23 05 14.6**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=82,slow=7.7,SNR=4.6						
AKASG				LR	LR	23 21 49.9	
	comp=Z,47nm,19.2s,baz=24,slow=40						
	comp=Z,0.3nm,0.3s						
AKASG	**Malin Array Be**	**35.68**	**308**	i P	**P**	**23 05 15.0**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	**Malin Array Si**	**35.68**	**308**	i P	**P**	**23 05 14.1**	**-0.8**
AKBB				pmax	pmax		
	comp=Z,19nm,2.5s						
SCTR	**Scanteiesti**	**36.45**	**299**	⇑P	**P**	**23 05 23.3**	**+1.7**
MNK	**Minsk**	**36.92**	**314**	i P	**P**	**23 05 25.8**	**+0.3**
	comp=E,9.0nm,1.0s						
MNK				i P	**P**	**23 05 25.8**	**+0.3**
	comp=N,7.0nm,0.8s						
MNK				i P	**P**	**23 05 25.8**	**+0.3**
	comp=Z,9.0nm,1.0s,baz=98						
MNK				i PP	**PP**	**23 06 49.6**	**+0.1**
MNK				i PPP	PPP	23 07 04.8	
MNK				i S	**S**	**23 11 11.0**	**+0.7**
MNK				i SS	**SnSn**	**23 13 43.9**	**+1.4**
MNK				i SSS	SSS	23 14 00.6	
MNK				i LQ	LQ	23 18 34.3	
MNK				i LR	LR	23 21 08.2	
MNK				i LRM	MLR	23 23 40.2	
	comp=Z,80nm,15.5s						
MNK				i LRM	MLR	23 23 40.8	
	comp=E,78nm,17.5s						
MNK				i LRM	MLR	23 23 44.6	
	comp=N,88nm,18.3s						
MNK	**Minsk**	**36.92**	**314**	i P	**P**	**23 05 25.8**	**+0.3**
MNK				i		23 06 49.6	
MNK				i S	**S**	**23 11 11.0**	**+0.7**
MNK				i SS	**SnSn**	**23 13 43.8**	**+1.4**
MNK				pmax	pmax		
	comp=E,9.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,7.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MNK				MLR	MLR		
	comp=Z,80nm,16.0s						
MNK				MLR	MLR		
	comp=E,78nm,17.0s						
MNK				MLR	MLR		
	comp=N,88nm,18.0s						
TESR	**Tescani**	**37.34**	**301**	⇓P	**P**	**23 05 29.9**	**+0.8**
PLOR	**Plostina**	**37.38**	**300**	⇓P	**P**	**23 05 31.0**	**+1.4**
PLOR	**Plostina**	**37.38**	**300**	⇓P	**P**	**23 05 31.0**	**+1.4**
GIRR	**Girov**	**37.42**	**301**	⇓P	**P**	**23 05 30.9**	**+1.1**
JOF	**Joensuu**	**37.48**	**328**	eP	**P**	**23 05 30.5**	**+0.3**
NACGM	**Naroch**	**37.61**	**314**	eP	**P**	**23 05 31.4**	**0.0**
	comp=Z,11nm,0.9s,baz=98						
COVR	**Voineasa-Covas**	**37.69**	**300**	⇑P	**P**	**23 05 33.3**	**+1.1**
MLR	**Muntele Rosu**	**37.90**	**299**	LR	LR	23 23 40.8	
	comp=Z,44nm,18.2s,baz=148,slow=40						
MLR	**Muntele Rosu**	**37.90**	**299**	⇑P	**P**	**23 05 34.8**	**+0.7**
MLR	**Muntele Rosu**	**37.90**	**299**	P	**P**	**23 05 35.1**	**+1.0**
MLR				IAmb	IAmb	23 05 37.1	
	comp=Z,8.8nm,1.0s						
MLR	**Muntele Rosu**	**37.90**	**299**	⇑P	**P**	**23 05 34.8**	**+0.7**
ELND	**Elena**	**38.24**	**295**	⇓P	**P**	**23 05 37.6**	**+0.7**
DOPR	**Dopca**	**38.25**	**300**	⇓P	**P**	**23 05 37.6**	**+0.7**
BURAR	**Bucovina Array**	**38.26**	**303**	P	**P**	**23 05 37.5**	**+0.4**
BUR08	**Bucovina Ar. S**	**38.27**	**303**	P	**P**	**23 05 37.4**	**+0.2**
VOIR		**38.53**	**299**	⇓P	**P**	**23 05 40.2**	**+0.9**
VOIR		**38.53**	**299**	⇓P	**P**	**23 05 40.2**	**+0.9**
ARR	**Arges**	**38.83**	**299**	⇓P	**P**	**23 05 42.3**	**+0.5**
ARBE	**Arbavere**	**38.87**	**322**	eP	**P**	**23 05 42.1**	**+0.3**
HEH	**HeiHe**	**39.00**	**53**	eP	**P**	**23 05 43.0**	**-0.1**
HEH				pmax	pmax		
	comp=Z,4.0nm,1.3s						
PABE	**Paberze**	**39.29**	**315**	eP	**P**	**23 05 45.7**	**+0.3**
FIA1	**FINESS Array S**	**39.32**	**325**	P	**P**	**23 05 44.7**	**-0.8**
FINES	**FINESS Array B**	**39.32**	**325**	P	**P**	**23 05 45.6**	**0.0**
	comp=Z,6.4nm,0.5s,baz=108,slow=9.5,SNR=77						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
FINES				LR	LR	23 22 44.2	
	comp=Z,104nm,19.2s,baz=132,slow=37						
	comp=Z,6.4nm,0.5s						
FINES	**FINESS Array B**	**39.32**	**325**	P	**P**	**23 05 45.1**	**-0.5**
LOT	**Lotru**	**39.43**	**299**	⇑P	**P**	**23 05 48.0**	**+1.1**
SUF	**Sumiainen**	**39.64**	**327**	*e*P	**P**	**23 05 48.5**	**+0.2**
MARR	**Marisel-Cluj**	**39.75**	**301**	⇓P	**P**	**23 05 51.1**	**+1.5**
MTSE	**Matsula**	**39.82**	**320**	*e*P	**P**	**23 05 49.8**	**0.0**
DRGR		**40.02**	**301**	⇓P	**P**	**23 05 52.8**	**+1.0**
DRGR		**40.02**	**301**	⇓P	**P**	**23 05 52.8**	**+1.0**
KEF	**Keuruu**	**40.06**	**326**	*e*P	**P**	**23 05 51.5**	**-0.2**
PBUR	**Paburge**	**40.49**	**316**	*e*P	**P**	**23 05 56.0**	**+0.7**
GSI	**Gunungsitoli**	**40.77**	**145**	P	**P**	**23 05 57.5**	**-0.6**
GSI				IAmb	IAmb	23 06 13.8	
	comp=Z,15nm,1.1s						
KSRS	**Korea Array**	**41.17**	**73**	LR	LR	23 25 28.7	
	comp=Z,18nm,20.1s,baz=110,slow=40						
VAF	**Ylistaro**	**41.26**	**326**	*e*P	**P**	**23 06 02.0**	**+0.3**
YAK	**Yakutsk**	**41.47**	**35**	*ce*P	**P**	**23 06 03.1**	**-0.3**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KLR	**Kul'dur**	**41.85**	**55**	*i* P	**P**	**23 06 05.8**	**-0.9**
KLR				pmax	pmax		
	comp=Z,8.0nm,2.1s						
AAL	**Aland**	**41.98**	**322**	*e*P	**P**	**23 06 07.1**	**-0.5**
ARCES	**ARCESS Array B**	**42.27**	**336**	P	**P**	**23 06 10.1**	**+0.1**
	comp=Z,1.2nm,0.5s,baz=111,slow=6.6,SNR=9.6						
ARCES				LR	LR	23 25 45.8	
	comp=Z,49nm,19.5s,baz=282,slow=39						
	comp=Z,1.2nm,0.5s						
ARCES	**ARCESS Array B**	**42.27**	**336**	P	**P**	**23 06 10.1**	**+0.1**
MORH	**Mrgy, Hungar**	**42.88**	**301**	⇑P	**P**	**23 06 15.6**	**+0.5**
VRAC	**Vranov**	**43.84**	**306**	LR	LR	23 25 41.8	
	comp=Z,37nm,18.8s,baz=142,slow=38						
VRAC	**Vranov**	**43.84**	**306**	⇑P	**P**	**23 06 24.0**	**+1.1**
VRAC	**Vranov**	**43.84**	**306**	⇑P	**P**	**23 06 24.0**	**+1.1**
TIXI	**Tiksi**	**44.02**	**21**	P	**P**	**23 06 23.6**	**-0.4**
TIXI				IAmb	IAmb	23 06 28.5	
	comp=Z,4.4nm,0.8s						
TIXI	**Tiksi**	**44.02**	**21**	*ce*P	**P**	**23 06 23.6**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HFS	**Hagfors**	**45.11**	**321**	P	**P**	**23 06 32.7**	**-0.1**
	comp=Z,6.0nm,0.5s,baz=98,slow=11,SNR=42						
HFS				LR	LR	23 26 15.9	
	comp=Z,77nm,18.3s,baz=64,slow=37						
	comp=Z,6.0nm,0.5s						
GERES	**GERESS Array B**	**45.79**	**306**	P	**P**	**23 06 38.9**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=156,slow=7.3,SNR=3.5						
	comp=Z,0.2nm,0.3s						
CLL	**Collm**	**45.89**	**309**	*i* P	**P**	**23 06 39.2**	**+0.1**
CLL	**Collm**	**45.89**	**309**	*i* P	**P**	**23 06 39.2**	**+0.1**
NC405	**NORSAR Array S**	**46.12**	**323**	P	**P**	**23 06 40.9**	**0.0**
TGY	**Tagaytay City**	**46.17**	**107**	LR	LR	23 27 20.2	
	comp=Z,81nm,19.4s,baz=37,slow=38						
CUC	**Castrocucco**	**46.24**	**293**	P	**P**	**23 06 42.8**	**+0.7**
NB2	**NORSAR Subarra**	**46.36**	**323**	P	**P**	**23 06 42.1**	**-0.7**
	comp=Z,4.3nm,0.6s,baz=92,slow=7.9						
NOA	**NORSAR Array B**	**46.36**	**323**	P	**P**	**23 06 42.3**	**-0.5**
	comp=Z,2.6nm,0.5s,baz=91,slow=7.7,SNR=18						
NOA				LR	LR	23 27 03.4	
	comp=Z,75nm,19.9s,baz=80,slow=37						
	comp=Z,2.6nm,0.5s						
FDMO	**Fiordimonte**	**47.41**	**298**	P	**P**	**23 06 51.6**	**+0.3**
SPITS	**Spitsbergen Ar**	**48.00**	**346**	P	**P**	**23 06 55.4**	**0.0**
	comp=Z,3.9nm,0.8s,baz=118,slow=11,SNR=5.1						
	comp=Z,3.9nm,0.8s						
SPITS	**Spitsbergen Ar**	**48.00**	**346**	P	**P**	**23 06 55.8**	**+0.5**
SPITS				pmax	pmax		
	comp=Z,40nm,1.3s						
FUORN	**Ofenpass-Fuorn**	**48.50**	**303**	P	**P**	**23 06 59.8**	**-0.1**
FUORN				IAmb	IAmb	23 07 10.9	
	comp=Z,3.3nm,0.8s						
DAVOX	**Davos/Dischmat**	**48.72**	**303**	LR	LR	23 32 35.2	
	comp=Z,85nm,18.5s,baz=106,slow=42						
JGF	**Kuroka**	**48.96**	**72**	P	**P**	**23 07 02.9**	**-0.4**
TUE	**Stuetta**	**49.15**	**303**	P	**P**	**23 07 05.1**	**+0.3**
TUE				IAmb	IAmb	23 07 49.1	
	comp=Z,5.4nm,1.1s						
MJAR	**Matsushiro Arr**	**49.28**	**70**	P	**P**	**23 07 05.1**	**-0.6**
	comp=Z,1.9nm,0.8s,baz=290,slow=9.6,SNR=6.5						
	comp=Z,1.9nm,0.8s						
LODK	**Lodwar**	**49.80**	**238**	P	**P**	**23 07 09.8**	**-0.2**
LODK				IAmb	IAmb	23 07 15.4	
	comp=Z,3.8nm,1.0s						
SENIN	**Lac Senin/Sane**	**50.55**	**303**	P	**P**	**23 07 15.4**	**0.0**
BNI	**Bardonecchia**	**51.32**	**302**	P	**P**	**23 07 20.9**	**-0.3**
BNI	**Bardonecchia**	**51.32**	**302**	P	**P**	**23 07 20.9**	**-0.3**
BNI				pmax	pmax		
	comp=Z,14nm,1.3s						
MA2	**Magadan**	**51.71**	**39**	*ce*P	**P**	**23 07 25.0**	**+1.3**
MA2				pmax	pmax		
	comp=Z,5.0nm,1.7s						
SEY	**Seymchan**	**51.98**	**34**	*ce*P	**P**	**23 07 27.2**	**+1.5**
SEY				pmax	pmax		
	comp=Z,11nm,2.5s						
EKA	**Eskdalemuir Ar**	**54.62**	**317**	P	**P**	**23 07 44.4**	**-0.9**
	comp=Z,2.9nm,0.7s,baz=92,slow=7.2,SNR=5.8						
	comp=Z,2.9nm,0.7s						
DAG	**Danmarks Havn**	**55.42**	**344**	*i* P	**P**	**23 07 50.0**	**-0.7**
DAG				IAmb	IAmb	23 07 51.0	
	comp=Z,4.3nm,0.6s						
MBAR	**Mbarara**	**55.88**	**239**	P	**P**	**23 07 54.6**	**-0.4**
MBAR				IAmb	IAmb	23 07 59.2	
	comp=Z,3.7nm,0.8s						
MBAR	**Mbarara**	**55.88**	**239**	P	**P**	**23 07 54.6**	**-0.4**
MBAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PETK	**Petropavlovsk-**	**57.03**	**45**	P	**P**	**23 08 00.8**	**-1.8**
	comp=Z,1.1nm,0.7s,baz=284,slow=8.0,SNR=1.2						
	comp=Z,1.1nm,0.7s						
ESDC	**Sonseca Array**	**60.59**	**299**	P	**P**	**23 08 26.6**	**-1.0**
	comp=Z,1.1nm,0.9s,baz=56,slow=6.6,SNR=11						
	comp=Z,1.1nm,0.9s						
ESDC	**Sonseca Array**	**60.59**	**299**	P	**P**	**23 08 27.0**	**-0.6**
ESDC				IAmb	IAmb	23 08 39.4	
	comp=Z,3.5nm,1.5s						
NEEM	**North Greenlan**	**61.44**	**348**	*i* P	**P**	**23 08 31.8**	**-1.2**
NEEM				IAmb	IAmb	23 08 33.5	
	comp=Z,16nm,1.1s						
SUMG	**Summit**	**61.90**	**342**	P	**P**	**23 08 36.5**	**+0.1**
SUMG				IAmb	IAmb	23 09 05.9	
	comp=Z,5.6nm,1.3s						
SUMG	**Summit**	**61.90**	**342**	P	**P**	**23 08 36.5**	**+0.1**
SUMG				pmax	pmax		
	comp=Z,6.0nm,1.3s						
SUMG	**Summit**	**61.90**	**342**	*i* P	**P**	**23 08 34.2**	**-2.2**
MD01	**Midelt array s**	**64.24**	**293**	P	**P**	**23 08 52.2**	**0.0**
TULEG	**Thule**	**64.66**	**351**	*i* P	**P**	**23 08 52.0**	**-2.1**
TULEG				IAmb	IAmb	23 08 54.0	
	comp=Z,1.2nm,0.8s						
B20K	**Meade River**	**66.75**	**17**	P	**P**	**23 09 06.6**	**-1.0**
B20K				IAmb	IAmb	23 09 13.2	
	comp=Z,4.7nm,1.1s						
F15K	**North Star Dit**	**67.67**	**23**	P	**P**	**23 09 13.6**	**+0.1**
F15K				IAmb	IAmb	23 09 19.5	
	comp=Z,3.6nm,1.1s						
ANM	**Nome**	**68.19**	**24**	P	**P**	**23 09 16.8**	**0.0**
ANM				IAmb	IAmb	23 09 18.1	
	comp=Z,2.0nm,0.9s						
ANM	**Nome**	**68.19**	**24**	P	**P**	**23 09 16.8**	**0.0**
ANM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
RES	**Resolute Bay**	**68.54**	**357**	LR	LR	23 40 46.6	
	comp=Z,41nm,19.7s,baz=18,slow=37						
POIN	**Pond Inlet**	**69.19**	**352**	P	**P**	**23 09 23.0**	**0.0**
TORD	**Torodi Ar. Bea**	**69.50**	**271**	P	**P**	**23 09 23.9**	**-1.9**
	comp=Z,1.1nm,0.7s,baz=46,slow=4.4,SNR=16						
	comp=Z,1.1nm,0.7s						
IMAR	**Indian Mountai**	**70.61**	**19**	P	**P**	**23 09 30.8**	**-1.0**
BMAR	**Burnt Mountain**	**71.63**	**15**	P	**P**	**23 09 37.9**	**-0.1**
KNRA	**Kununurra**	**72.32**	**126**	P	**P**	**23 09 42.6**	**-0.1**
KNRA				IAmb	IAmb	23 09 54.6	
	comp=Z,8.4nm,1.2s						
ILAR	**Eielson Array**	**73.32**	**18**	P	**P**	**23 09 45.9**	**-2.2**
	comp=Z,0.7nm,0.9s,baz=322,slow=4.3,SNR=8.2						
	comp=Z,0.7nm,0.9s						
ILAR	**Eielson Array**	**73.32**	**18**	P	**P**	**23 09 47.2**	**-0.9**
ILAR	**Eielson Array**	**73.32**	**18**	P	**P**	**23 09 47.2**	**-0.9**
SML	**Sawmill**	**75.39**	**20**	P	**P**	**23 09 59.1**	**-1.2**
SML				IAmb	IAmb	23 10 12.5	
	comp=Z,11nm,1.2s						
FRB	**Frobisher Bay**	**75.77**	**344**	P	**P**	**23 10 00.9**	**-1.3**
	comp=Z,2.3nm,0.6s,baz=39,slow=4.9,SNR=8.4						
	comp=Z,2.3nm,0.6s						
HYT	**Haines Junctio**	**78.91**	**16**	P	**P**	**23 10 19.9**	**-0.3**
HYT				IAmb	IAmb	23 10 33.3	
	comp=Z,9.7nm,1.5s						
BLKN	**Baker Lake**	**78.92**	**356**	P	**P**	**23 10 19.5**	**-0.4**
BLKN				IAmb	IAmb	23 10 20.2	
	comp=Z,5.0nm,0.9s						
WB0	**Warramunga Arr**	**78.96**	**125**	P	**P**	**23 10 20.1**	**-0.7**
WB0				IAmb	IAmb	23 10 23.8	
	comp=Z,7.6nm,1.3s						
WRA	**Warramunga Arr**	**79.05**	**125**	P	**P**	**23 10 20.2**	**-1.0**
	comp=Z,1.2nm,0.9s,baz=320,slow=4.9,SNR=7.1						
	comp=Z,1.2nm,0.9s						
WRA	**Warramunga Arr**	**79.05**	**125**	P	**P**	**23 10 19.2**	**-2.1**
WRA	**Warramunga Arr**	**79.05**	**125**	*i* P	**P**	**23 10 24.1**	**+2.8**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BOSA	**Boshof**	**80.55**	**223**	P	**P**	**23 10 29.5**	**+0.1**
	comp=Z,1.9nm,0.9s,baz=50,slow=7.9,SNR=3.4						
	comp=Z,1.9nm,0.9s						
BOSA	**Boshof**	**80.55**	**223**	P	**P**	**23 10 29.0**	**-0.4**
BOSA	**Boshof**	**80.55**	**223**	P	**P**	**23 10 29.0**	**-0.4**
BOSA				pmax	pmax		
	comp=Z,14nm,1.3s						
YKA	**Yellowknife Ar**	**80.62**	**5**	P	**P**	**23 10 27.9**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=345,slow=5.9,SNR=11						
	comp=Z,0.4nm,0.6s						
KUQ	**Kuujjuaq**	**80.70**	**342**	P	**P**	**23 10 29.0**	**-0.7**
ASAR	**Alice Springs**	**81.44**	**128**	P	**P**	**23 10 32.8**	**-1.4**
	comp=Z,0.8nm,0.8s,baz=341,slow=6.0,SNR=6.3						
	comp=Z,0.8nm,0.8s						
ASAR	**Alice Springs**	**81.44**	**128**	P	**P**	**23 10 33.0**	**-1.1**

WEL 07 23:05:05.0±1.0**,32°S**±8°×**17°9E**±1°5**,h338**km±22km**,M3.9**/7**, mB4.1**/3**,ML3.8**/6**,MLv4.0**/7**,Mw(mB)3.1**/3**,Error ellipse: s-maj=20.8km s-min=7.4km az=109.6,confirmed,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.74**	**38**	P	Pn	23 06 10.6	-0.1
WCZ	**Waipu Caves**	**5.61**	**228**	P	Pn	23 06 30.0	-0.9
WMGZ	**Waiomatatini S**	**5.63**	**188**	P	Pn	23 06 32.2	+1.2
WMGZ				S	S	23 07 42.9	+2.3
HAZ	**Te Kaha**	**5.67**	**193**	P	Pn	23 06 31.7	+0.2
HAZ				S	S	23 07 42.0	+0.6
OUZ	**Omahuta**	**5.71**	**237**	P	Pn	23 06 33.2	+1.3
PKGZ	**Pakihiroa**	**5.72**	**191**	P	Pn	23 06 32.2	+0.1
PKGZ				S	S	23 07 42.2	-0.4
RUGZ	**Raukumara Rang**	**5.89**	**194**	P	Pn	23 06 33.8	-0.3
RUGZ				S	S	23 07 44.4	-2.0
PUZ	**Puketiti**	**5.89**	**189**	P	Pn	23 06 34.9	+0.8
PUZ				S	S	23 07 46.9	+0.6
MWZ	**Matawai**	**6.28**	**194**	P	Pn	23 06 38.8	+0.2
MWZ				S	S	23 07 55.2	+0.9
URZ	**Urewera**	**6.30**	**197**	P	Pn	23 06 38.3	-0.5
URZ				S	S	23 07 55.8	+1.0
CNGZ	**Carnagh Statio**	**6.31**	**189**	P	Pn	23 06 39.3	+0.5
MUGZ	**Murupara**	**6.59**	**199**	P	Pn	23 06 42.1	-0.1
MUGZ				S	S	23 08 02.0	+1.0
RIGZ	**Rimuhau**	**6.59**	**192**	P	Pn	23 06 42.1	-0.1
RIGZ				S	S	23 08 01.1	0.0
MTHZ	**Maungataniwha**	**6.93**	**197**	P	Pn	23 06 46.0	-0.1
MTHZ				S	S	23 08 09.9	+1.6
BKZ	**Black Stump Fm**	**7.31**	**198**	P	Pn	23 06 49.8	-0.9
BKZ				S	S	23 08 16.9	+0.3

*NEIC **07** 23:24:24.4±1.2, 17°81N±0°03×66°88W±0°01, h10km±2km, ML3.7/39, ML3.4/5(RSPR), Mwr3.4/13(SLM), Error ellipse: s-maj=5.5km s-min=3.0km az=15.0*
*NEIC **07** 23:24:25, 17°86N×66°89W, h14km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.00; $M_{\theta\theta}$0.81; $M_{\phi\phi}$-0.81; $M_{r\theta}$0.43; $M_{\theta\phi}$0.96; $M_{\phi r}$-0.16; Fault plane solution: $M_0$1.33000×10^{14} NP1:ϕ_s110.00000°, δ90.00000°, λ20.00000°. NP2:ϕ_s20.00000°, δ70.00000°, λ180.00000°. Principal axes: T 1.3334, Plg14.0000°, Azm337.0000°; N 0.0000, Plg70.0000°, Azm110.0000°; P -1.3334, Plg14.0000°, Azm243.0000°;*
*OSPL **07** 23:24:25.4±0.3, 17°83N×66°88W, h12km±6km, ML3.2, Presumed earthquake*
*SDD **07** 23:24:26.4±1.7, 17°93N×66°86W, h9km±20km, MD3.5, ML3.3, MW3.2, Presumed earthquake*
ISC 07 23:24:24.5±0.9**, 17°97N**±0°05×**66°88W**±0°03**, h25**km±6km**, n40,**σ**1**§**11**/66**, 8C-2D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.01**	**341**		**Pb**	**23 24 28.6**	**-0.2**
GBPR					**Sb**	**23 24 31.0**	**-0.7**
MLPR	**Magueyes Islan**	**0.16**	**270**		**Pb**	**23 24 29.7**	**0.0**
MLPR				Sg	**Sb**	**23 24 32.9**	**-0.4**
MLPR				IAML		23 24 33.2	
	26µm,0.5s						
MLPR				IAML		23 24 33.3	
	22µm,0.4s						
MLPR	**Magueyes Islan**	**0.16**	**270**	⇑*e*Pg	**Pb**	**23 24 29.7**	**0.0**
MLPR				⇑*e*Sg	**Sb**	**23 24 32.6**	**-0.6**
MLPR				IAML		23 24 33.1	
	comp=N,9µm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.23**	**280**		**Pb**	**23 24 30.8**	**+0.3**
CRPR				Sg	**Sb**	**23 24 34.5**	**-0.1**
CRPR				IAML		23 24 35.0	
	comp=N,10µm,0.3s						
CRPR				IAML		23 24 35.5	
	comp=N,11µm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.23**	**280**	*i* P	**Pb**	**23 24 30.8**	**+0.3**
CRPR				*e*S	**Sb**	**23 24 34.7**	**+0.1**
CRPR				IAML		23 24 34.9	
	comp=Z,9µm,0.1s						
OBIP	**Obispado Ponce**	**0.27**	**74**		**Pn**	**23 24 31.7**	**-1.1**
OBIP				Sg	**Sn**	**23 24 36.5**	**-1.6**
OBIP	**Obispado Ponce**	**0.27**	**74**	*i* P	**Pn**	**23 24 31.7**	**-1.1**
OBIP				*e*S	**Sn**	**23 24 36.5**	**-1.6**
OBIP				IAML		23 24 37.5	
	comp=Z,1µm,0.5s						
LSP	**Las Mesas**	**0.29**	**316**		**Pn**	**23 24 32.5**	**-0.6**
LSP					**Sn**	**23 24 38.0**	**-0.7**
CELP	**Cerrillos**	**0.30**	**70**		**Pn**	**23 24 32.3**	**-1.0**
CELP				Sg	**Sn**	**23 24 37.6**	**-1.3**
CELP				IAML		23 24 38.2	
	comp=Z,4µm,0.3s						
CELP				IAML		23 24 38.2	
	comp=Z,9µm,0.3s						
CELP	**Cerrillos**	**0.30**	**70**	⇓*e*Pg	**Pn**	**23 24 32.3**	**-1.0**
CELP				⇑*e*Sg	**Sb**	**23 24 35.4**	**-1.1**
CELP				IAML		23 24 38.2	
	comp=N,3µm,0.3s						
UUPR	**Utuado, UPR, P**	**0.32**	**28**		**Pn**	**23 24 33.1**	**-0.5**
UUPR				Sg	**Sn**	**23 24 38.6**	**-0.8**
PRSN	**Puerto Rico Se**	**0.35**	**314**		**Pn**	**23 24 33.5**	**-0.5**
PRSN				Sg	**Sn**	**23 24 39.5**	**-0.7**
PRSN				IAML		23 24 40.6	
	comp=N,7µm,0.3s						
PRSN				IAML		23 24 42.1	
	comp=N,8µm,0.2s						
PRSN	**Puerto Rico Se**	**0.35**	**314**	⇑*e*Pg	**Pn**	**23 24 33.5**	**-0.5**
PRSN				⇑*e*Sg	**Sn**	**23 24 39.5**	**-0.7**
PRSN				IAML		23 24 41.2	
	comp=N,4µm,0.2s						
AOPR	**Arecibo Observ**	**0.39**	**17**		**Pn**	**23 24 34.4**	**-0.2**
AOPR				Sg	**Sn**	**23 24 40.8**	**-0.4**
AOPR				IAML		23 24 41.4	
	comp=N,6µm,0.2s						
AOPR	**Arecibo Observ**	**0.39**	**17**	⇑*e*Pg	**Pn**	**23 24 34.5**	**-0.2**
AOPR				*e*Sg	**Sn**	**23 24 40.9**	**-0.4**
AOPR				IAML		23 24 41.3	
	comp=N,5µm,0.3s						
AGPR	**Aguadilla, PR**	**0.54**	**336**		**Pn**	**23 24 37.0**	**+0.4**
AGPR	**Aguadilla, PR**	**0.54**	**336**	⇑*e*Pg	**Pn**	**23 24 37.0**	**+0.4**
AGPR				⇑*e*Sg	**Sb**	**23 24 43.7**	**+0.7**
AGPR				IAML		23 24 50.0	
	comp=N,890nm,0.4s						
ECPR	**Experimental S**	**0.60**	**54**		**Pn**	**23 24 37.4**	**0.0**
ECPR					**Sn**	**23 24 46.6**	**+0.3**
ECPR				IAML		23 24 48.3	
	comp=N,4µm,0.2s						
ECPR				IAML		23 24 48.6	
	comp=N,3µm,0.2s						
EMPR	**Esperanza - Ma**	**0.60**	**33**		**Pn**	**23 24 38.5**	**+1.0**
EMPR					**Sn**	**23 24 48.1**	**+1.8**
IDE	**Isla Desecheo**	**0.70**	**306**		**Pn**	**23 24 39.4**	**+0.5**
IDE					**Sn**	**23 24 49.7**	**+0.8**
SJG	**San Juan**	**0.71**	**78**		**Pn**	**23 24 38.6**	**-0.2**
SJG				Sg	**Sn**	**23 24 49.1**	**+0.2**
SJG				IAML		23 24 52.4	
	comp=N,2µm,0.5s						
SJG	**San Juan**	**0.71**	**78**	*e*P	**Pn**	**23 24 38.6**	**-0.2**
SJG	**San Juan**	**0.71**	**78**	⇓*e*Pg	**Pn**	**23 24 38.7**	**-0.2**
SJG				*e*Sg	**Sn**	**23 24 49.3**	**+0.4**
SJG	**San Juan**	**0.71**	**78**	*i* P	**Pn**	**23 24 38.8**	**-0.1**
SJG				IAML		23 24 52.3	
	comp=Z,906nm,0.2s						
PDPR	**Patillas Dam,**	**0.81**	**86**		**Pn**	**23 24 40.5**	**+0.1**
PDPR				Sg	**Sn**	**23 24 52.1**	**+0.5**
HUMP	**Col San Antoni**	**0.99**	**80**		**Pn**	**23 24 43.2**	**+0.4**
HUMP					**Sn**	**23 24 57.6**	**+1.7**
HUMP				IAML		23 25 00.4	
	comp=Z,2µm,0.5s						
CUPR	**Culebra, Puert**	**1.55**	**77**		**Pb**	**23 24 52.8**	**+0.3**
DR12	**Loma Pena Alta**	**2.51**	**289**		**Pb**	**23 25 06.5**	**-2.5**
BANI	**BANI**	**3.34**	**278**	Pn	**Pn**	**23 25 17.9**	**+2.8**
SMRT	**St. Maarten**	**3.62**	**88**	Pn	**Pn**	**23 25 20.5**	**+1.5**
SKI	**Saint Kitts**	**4.00**	**98**	*e*P	**Pn**	**23 25 27.3**	**+3.1**
SKI				*e*S	**Sn**	**23 26 11.1**	**+0.9**
SDDR	**Presa de Saban**	**4.31**	**284**	Pn	**Pn**	**23 25 30.7**	**+2.2**
ANWB	**Willy Bob**	**4.86**	**93**	*e*P	**Pn**	**23 25 37.1**	**+1.1**
ANWB				*e*S	**Sn**	**23 26 32.4**	**+0.9**
GDHS	**Morne Mazeau,**	**5.17**	**108**	Pn	**Pn**	**23 25 40.6**	**+0.3**
GDHS				IAML		23 28 12.6	
	comp=E,94nm,1.4s						
MMLZ	**Guadeloupe Bro**	**5.34**	**110**	*e*P	**Pn**	**23 25 42.2**	**-0.4**
MMLZ				*e*S	Sn	23 25 55.1	-48
CBE	**Ff, Capester**	**5.38**	**110**	Pn	**Pn**	**23 25 43.8**	**+0.6**
TBG	**Guadaloupe-3**	**5.43**	**112**	*e*P	**Pn**	**23 25 44.5**	**+0.6**
DSLB	**Salisbury**	**5.80**	**115**	*e*P	**Pn**	**23 25 49.6**	**+0.6**
DSLB				*e*S	**Sn**	**23 26 51.2**	**-3.6**
BIM	**Bigot**	**6.55**	**121**	Pn	**Pn**	**23 25 58.4**	**-0.9**
SLBI	**Saint Lucia, B**	**6.90**	**124**	*e*P	**Pn**	**23 26 03.7**	**-0.3**

*AZER **07** 23:30:49.7, 38°41N×44°47E, h3km, ml2.4*
*AFAD **07** 23:30:53.3, 38°45N×44°18E, h9km±2km, ML1.9*
*ISK **07** 23:30:55.5, 38°63N×44°09E, h7km, ML2.5/6*
ISC 07 23:30:53.5±1.2**, 38°46N**±0°03×**44°28E**±0°03**, h7**km±10km**, n27,**σ**1**§**99**/42**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.30**	**312**	P	**Pg**	**23 30 59.3**	**-0.1**
TVAN	**Van**	**0.69**	**276**	P	**Pg**	**23 31 05.2**	**-1.6**
VANB	**Van**	**0.71**	**281**	Pg	**Pb**	**23 31 06.6**	**-1.6**
VMUR	**Van-Muradiye**	**0.76**	**314**	P	**Pg**	**23 31 07.2**	**-0.9**
VMUR				S	**Sb**	**23 31 18.1**	**-1.7**
VMUR				IAML		23 31 26.0	
	comp=N,54nm,0.8s						
GEVA	**Gevas**	**0.97**	**262**	P	**Pg**	**23 31 10.4**	**-1.7**
GEVA				S	**Sn**	**23 31 27.9**	**+0.2**
GEVA				IAML		23 31 30.0	
	comp=N,28nm,0.3s						
GEVA				IAML		23 31 34.0	
	comp=E,51nm,0.7s						
HAKT	**HAKKARI**	**1.01**	**207**	P	**Pg**	**23 31 11.7**	**-1.1**
HAKT				S	**Sn**	**23 31 26.5**	**-2.2**
HAKT				IAML		23 31 31.0	
	comp=E,64nm,0.4s						
HAKT	**HAKKARI**	**1.01**	**207**	P	**Pg**	**23 31 12.0**	**-0.8**
HAKT				S	**Sn**	**23 31 29.1**	**+0.3**
NAX	**Nakhchivan**	**1.19**	**53**	P	**Pn**	**23 31 13.8**	**-2.8**
NAX				S	**Sg**	**23 31 31.5**	**-0.3**
ADCV	**BITLIS_Adilcev**	**1.26**	**286**	P	**Pn**	**23 31 17.2**	**-0.5**
ADCV				S	**Sn**	**23 31 37.7**	**+2.7**
ADCV				IAML		23 31 42.0	
	comp=N,29nm,0.5s						
CUKT	**Cukurca**	**1.32**	**204**	Pn	**Pg**	**23 31 22.4**	**+3.6**
CUKT				Sn	**Sn**	**23 31 42.2**	**+5.9**
CUKT	**Cukurca**	**1.32**	**204**	P	**Pg**	**23 31 21.1**	**+2.3**
HYR	**Heyderabad**	**1.33**	**19**	P	**Pn**	**23 31 17.0**	**-1.6**
HYR				S	**Sg**	**23 31 38.9**	**+2.5**
SBZ	**Shahbuz**	**1.37**	**46**	P	**Pn**	**23 31 16.8**	**-2.3**
SBZ				S	**Sb**	**23 31 36.5**	**-0.6**
IGDI	**IGDIR**	**1.41**	**354**	P	**Pn**	**23 31 19.0**	**-0.6**
IGDI	**IGDIR**	**1.41**	**354**	P	**Pb**	**23 31 20.1**	**-0.1**
IGDI				S	**Sg**	**23 31 42.6**	**+3.7**
ORD	**Ordubad**	**1.42**	**70**	P	**Pn**	**23 31 17.5**	**-2.2**
ORD				S	**Sn**	**23 31 36.9**	**-1.9**
PERV	**Siirt/Pervari-**	**1.46**	**250**	P	**Pg**	**23 31 21.4**	**0.0**
DORK	**Agr/Tutak/Do**	**1.49**	**309**	P	**Pn**	**23 31 19.6**	**-1.2**
AGRB	**Hanur-Agry**	**1.50**	**318**	Pn	**Pn**	**23 31 20.4**	**-0.5**
MLAZ	**Malazgirt-MUS**	**1.51**	**297**	Pn	**Pb**	**23 31 20.8**	**-1.1**
KOTA	**Agri, Merkez-K**	**1.58**	**328**	P	**Pn**	**23 31 21.7**	**-0.3**
GNI	**Garni**	**1.73**	**12**	Pn	**Pn**	**23 31 24.9**	**+0.9**
GURO	**Guroymak-BITLI**	**1.76**	**274**	Pn	**Pb**	**23 31 24.8**	**-1.4**
GDB	**GEDABAY**	**2.53**	**26**	P	**Pn**	**23 31 35.6**	**+0.5**
GDB				S	**Sb**	**23 32 11.2**	**+0.5**
QRD	**Qoradiz**	**2.58**	**66**	P	**Pn**	**23 31 33.9**	**-1.6**
QRD				S	**Sn**	**23 32 08.0**	**+0.9**
GANJ	**Ganja**	**2.69**	**35**	P	**Pn**	**23 31 37.3**	**0.0**
GANJ				S	**Sn**	**23 32 13.7**	**+3.6**
AGDM	**Agdam**	**2.75**	**52**	P	**Pn**	**23 31 36.7**	**-1.2**
AGDM				S	**Sn**	**23 32 13.2**	**+1.9**

*IDC **07** 23:35:20.9±1.1, 44°83S×35°85E, h0km, mb3.6/4, mbtmp3.6/5, ML3.3/1, MS3.4/2, Error ellipse: s-maj=55.6km s-min=27.9km az=57.0*
ISC 07 23:35:22.4±1.0**, 44°8S**±0°2×**35°7E**±0°3**, h10**km**, n8,**σ**1**§**16**/6**, mb3.6**/3**, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**18.21**	**329**	P	**Pn**	**23 39 34.3**	**-1.0**
	0.1nm,0.3s,baz=140,slow=13,SNR=3.2						
	2.5nm,0.8s						
LBTB	**Lobatse**	**21.41**	**334**	LR	LR	23 46 43.4	
	comp=Z,73nm,18.5s,baz=175,slow=32						
MBAR	**Mbarara**	**44.26**	**353**	LR	LR	00 01 37.4	
	comp=Z,55nm,18.2s,baz=182,slow=36						
QSPA	**South Pole Qui**	**45.38**	**180**	P	**P**	**23 43 40.6**	**-0.1**
	1.3nm,0.8s,baz=192,slow=0.7,SNR=5.7						
	1.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**65.44**	**323**	P	**P**	**23 46 06.4**	**+1.0**
	0.2nm,0.3s,baz=172,slow=7.9,SNR=1.3						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**79.19**	**112**	P	**P**	**23 47 26.7**	**-1.0**
	0.4nm,0.7s,baz=226,slow=5.2,SNR=5.6						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**82.07**	**110**	P	**P**	**23 47 44.1**	**+0.9**
	0.2nm,0.6s,baz=224,slow=3.8,SNR=1.4						
	0.2nm,0.6s						
TXAR	**Lajitas Array**	**144.50**	**258**	PKP	**PKPdf**	**23 54 58.7**	**-0.3**
	0.4nm,0.7s,baz=110,slow=1.7,SNR=5.4						

*NOU **08** 00:09:14.9, 11°06S×162°27E, h1km, MLv5.1/12, Solomon Islands*
*NEIC **08** 00:09:17.9±2.2, 11°0S±0°1×162°42E±0°10, h35km±2km, mb4.3/15, Error ellipse: s-maj=20.8km s-min=10.9km az=40.0*
*IDC **08** 00:09:18.9±2.3, 11°08S×162°33E, h59km±19km, mb3.5/7, mbtmp4.0/12, ML4.0/3, MS3.4/23, Error ellipse: s-maj=24.2km s-min=13.9km az=56.0*
ISC 08 00:09:17.8±0.6**, 10°99S**±0°06×**162°39E**±0°07**, h46**km**, n59,** σ**1**§**37**/47**, mb3.8**/11**, MS3.4**/18**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HURO	**Huro Makira**	**0.70**	**317**	P	**Pn**	**00 09 28.2**	**-3.2**
HURO	**Huro Makira**	**0.70**	**317**	S	**Sn**	**00 09 37.5**	**-3.8**
NGOA	**Tingoa Renbel**	**2.35**	**256**	P	**Pn**	**00 09 51.4**	**-2.5**
HNR	**Honiara**	**2.86**	**303**	P	**Pn**	**00 10 01.1**	**+0.2**
	6.6nm,0.3s,baz=46,slow=3.3,SNR=27						
HNR				S	**Sn**	**00 10 36.3**	**+2.3**
	65nm,0.5s,baz=34,slow=20,SNR=8.4						
HNR				LR	LR	00 11 12.3	
	comp=Z,103nm,18.3s,baz=222,slow=40						
	22nm,0.3s						
HNR	**Honiara**	**2.86**	**303**	P	**Pn**	**00 10 00.3**	**-0.6**
HNR	**Honiara**	**2.86**	**303**		**Pn**	**00 10 00.9**	**+0.1**
HNR				Sn	**Sn**	**00 10 35.4**	**+1.4**
SAVO	**Savo Central**	**3.12**	**306**	P	**Pn**	**00 10 05.2**	**+0.6**
TATA	**Tatamba Isabel**	**3.63**	**315**	P	**Pn**	**00 10 11.8**	**+0.3**
TATA	**Tatamba Isabel**	**3.63**	**315**	P	**Sn**	**00 10 56.1**	**+3.1**
SANVU	**Saraoutou**	**6.45**	**134**	P	**Pn**	**00 10 51.2**	**+0.9**

SANVU	**Saraoutou**	**6.45**	**134**		**Pn**	**00 10 51.0**	**+0.8**
DVP	**Devils Point**	**8.74**	**141**	P	**Pn**	**00 11 22.9**	**+1.2**
DZM	**Mont Dzumac**	**11.69**	**161**	P	**Pn**	**00 12 02.5**	**+0.5**
	1.1nm,0.3s,baz=26,slow=9.4,SNR=6.9						
DZM				S	**Sn**	**00 14 08.9**	**-2.3**
	3.5nm,0.6s,baz=72,slow=21,SNR=2.4						
DZM				LR	LR	00 15 54.2	
	comp=Z,246nm,19.5s,baz=353,slow=34						
	2.3nm,0.3s						
MARNC	**Mare, Loyalty**	**11.76**	**153**	Pn	**Pn**	**00 12 03.4**	**+0.5**
PMG	**Port Moresby**	**15.07**	**275**	P	**Pn**	**00 12 47.9**	**+0.1**
	2.3nm,0.3s,baz=128,slow=5.7,SNR=4.4						
PMG				LR	LR	00 18 24.8	
	comp=Z,656nm,21.6s,baz=104,slow=36						
PMG	**Port Moresby**	**15.07**	**275**		**Pn**	**00 12 49.0**	**+1.2**
PMG				IAmb	IAmb	00 12 55.4	
	comp=Z,18nm,0.9s						
MSVF	**Nonsavu**	**16.58**	**116**	P	**P**	**00 13 09.3**	**+0.1**
	comp=Z,8.3nm,1.0s,baz=266,slow=11,SNR=3.7						
MSVF				LR	LR	00 18 33.1	
	comp=Z,260nm,19.2s,baz=193,slow=33						
MSVF	**Nonsavu**	**16.58**	**116**		**Pn**	**00 13 07.6**	**+0.3**
EIDS	**Eidsvold**	**17.87**	**215**		**P**	**00 13 24.3**	**+1.0**
EIDS				IAmb	IAmb	00 13 55.1	
	comp=Z,18nm,1.1s						
CTA	**Charters Tower**	**17.97**	**238**	P	**Pn**	**00 13 23.9**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=63,slow=14,SNR=16						
CTA				LR	LR	00 19 44.7	
	comp=Z,156nm,19.7s,baz=50,slow=35						
	comp=Z,37nm,1.1s						
CTA	**Charters Tower**	**17.97**	**238**	P	**P**	**00 13 25.1**	**+0.6**
CTAO	**Charters Tower**	**17.97**	**238**	P	**P**	**00 13 25.1**	**+0.6**
CTAO	**Charters Tower**	**17.97**	**238**	P	**P**	**00 13 25.3**	**+0.8**
CTAO				IAmb	IAmb	00 13 29.4	
	comp=Z,56nm,1.1s						
PATS	**Pohnpei**	**18.16**	**347**		**Pn**	**00 13 27.1**	**+0.4**
COEN	**Coen**	**18.99**	**259**	P	**Pn**	**00 13 36.9**	**+0.2**
COEN	**Coen**	**18.99**	**259**	P	**Pn**	**00 13 36.9**	**+0.2**
COEN				IAmb	IAmb	00 13 39.9	
	comp=Z,22nm,1.1s						
INKA	**Innaminka**	**26.28**	**228**	P	**P**	**00 14 49.1**	**0.0**
INKA				IAmb	IAmb	00 14 52.8	
	comp=Z,6.7nm,1.0s						
STKA	**Stephens Creek**	**28.30**	**220**	P	**P**	**00 15 07.8**	**+0.7**
	comp=Z,1.8nm,0.7s,baz=12,slow=14,SNR=3.2						
STKA				LR	LR	00 26 21.4	
	comp=Z,162nm,18.3s,baz=26,slow=36						
	comp=Z,1.8nm,0.7s						
WB0	**Warramunga Arr**	**28.33**	**249**	P	**P**	**00 15 06.8**	**-0.7**
WB0				IAmb	IAmb	00 15 29.7	
	comp=Z,6.4nm,1.1s						
WRA	**Warramunga Arr**	**28.42**	**248**	P	**P**	**00 15 06.8**	**-1.5**
	comp=Z,0.9nm,0.8s,baz=78,slow=8.9,SNR=5.3						
	comp=Z,0.9nm,0.8s						
WRA	**Warramunga Arr**	**28.42**	**248**	P	**P**	**00 15 07.5**	**-0.8**
AS31	**Alice Springs**	**29.90**	**241**	P	**P**	**00 15 19.8**	**-1.6**
ASAR	**Alice Springs**	**29.90**	**241**	P	**P**	**00 15 19.4**	**-2.1**
	comp=Z,0.3nm,0.4s,baz=66,slow=10.0,SNR=8.1						
ASAR				PcP	**PcP**	**00 18 24.1**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=64,slow=3.4,SNR=4.8						
ASAR				LR	LR	00 26 27.3	
	comp=Z,142nm,21.7s,baz=99,slow=34						
	comp=Z,0.3nm,0.4s						
GUMO	**Guam**	**29.97**	**324**	LR	LR	00 26 28.3	
	comp=Z,74nm,21.6s,baz=98,slow=34						
URZ	**Urewera**	**30.19**	**157**	LR	LR	00 26 35.2	
	comp=Z,105nm,18.1s,baz=340,slow=34						
BKZ	**Black Stump Fm**	**30.75**	**158**	P	**P**	**00 15 30.0**	**+1.3**
BKZ				IAmb	IAmb	00 15 47.7	
	comp=Z,18nm,1.5s						
SIJI	**Sorong**	**32.50**	**286**	LR	LR	00 28 56.2	
	comp=Z,198nm,21.8s,baz=90,slow=36						
BBOO	**Buckleboo**	**32.52**	**224**	P	**P**	**00 15 43.7**	**-0.7**
KNRA	**Kununurra**	**33.02**	**258**	P	**P**	**00 15 48.2**	**-0.8**
FITZ	**Fitzroy Crossi**	**36.21**	**254**	LR	LR	00 30 23.5	
	comp=Z,186nm,21.8s,baz=82,slow=35						
RAR	**Rarotonga**	**37.66**	**110**	LR	LR	00 29 45.5	
	comp=Z,48nm,18.8s,baz=275,slow=33						
BATI	**Baumata**	**38.05**	**267**	LR	LR	00 33 52.3	
	comp=Z,82nm,18.8s,baz=105,slow=39						
DAV	**Davao City (W)**	**40.79**	**294**	LR	LR	00 31 11.9	
	comp=Z,95nm,20.6s,baz=140,slow=32						
KAPI	**Kappang**	**42.60**	**275**	LR	LR	00 35 25.7	
	comp=Z,42nm,22.0s,baz=110,slow=37						
PPT	**Papeete**	**46.91**	**104**	LR	LR	00 32 51.1	
	comp=Z,44nm,21.7s,baz=8.0,slow=30						
JOW	**Kunigami**	**50.10**	**319**	LR	LR	00 38 30.3	
	comp=Z,20nm,20.6s,baz=156,slow=35						
JNU	**Nakatsue**	**53.16**	**327**	LR	LR	00 39 14.2	
	comp=Z,18nm,19.6s,baz=132,slow=34						
LEM	**Lembang**	**54.21**	**269**	LR	LR	00 42 53.8	
	comp=Z,30nm,21.4s,baz=172,slow=37						
ASAJ	**Asahikawa**	**57.72**	**343**	LR	LR	00 42 08.9	
	comp=Z,36nm,20.4s,baz=213,slow=34						
KSRS	**Korea Array**	**58.02**	**328**	LR	LR	00 40 33.8	
	comp=Z,22nm,21.5s,baz=140,slow=32						
PETK	**Petropavlovsk-**	**63.97**	**357**	LR	LR	00 43 46.7	
	comp=Z,33nm,20.6s,baz=120,slow=32						
CMAR	**Chiang Mai Arr**	**69.08**	**295**	LR	LR	00 50 23.3	
	comp=Z,7.4nm,20.0s,baz=105,slow=36						
SONM	**Songino Array**	**76.70**	**325**	P	**P**	**00 21 02.9**	**-1.3**
	comp=Z,0.2nm,0.4s,baz=90,slow=4.8,SNR=1.7						
	comp=Z,0.2nm,0.4s						
QSPA	**South Pole Qui**	**79.02**	**180**	P	**P**	**00 21 15.3**	**-1.5**
	comp=Z,2.0nm,0.9s,baz=286,slow=12,SNR=3.1						
	comp=Z,2.0nm,0.9s						
QSPA	**South Pole Qui**	**79.02**	**180**	P	**P**	**00 21 17.0**	**+0.2**
QSPA				IAmb	IAmb	00 21 20.8	
	comp=Z,2.5nm,1.0s						
ILAR	**Eielson Array**	**84.53**	**19**	P	**P**	**00 21 45.2**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=252,slow=5.9,SNR=5.8						
	comp=Z,0.2nm,0.6s						
J25K	**Salcha River,**	**84.93**	**20**	P	**P**	**00 21 48.7**	**+1.0**
J25K				IAmb	IAmb	00 22 12.0	
	comp=Z,4.3nm,1.3s						
MKAR	**Makanchi Array**	**91.23**	**317**	P	**P**	**00 22 18.9**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=89,slow=7.7,SNR=4.7						
	comp=Z,0.1nm,0.3s						
MKAR	**Makanchi Array**	**91.23**	**317**	P	**P**	**00 22 17.1**	**-1.2**

*JMA **08** 00:25:41.2±0.2, 23.°6N±0.°3×121.°9E±0.°6, h11km±3km, MV2.6/11, TAIWAN REGION*
*TAP **08** 00:25:42.2, 23.°55N×121.°85E, h24km, ML3.0, C*
ISC 08 00:25:40.3±1.0**, 23.°49N**±0.°02×**121.°89E**±0.°02**, h17**km±8km**,**
n99, σ**0.s78**/178**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.39**	**304**	P	**Pb**	**00 25 49.5**	**+0.8**
TEGC				S	**Sb**	**00 25 55.4**	**+1.0**
SHUL	**Shoufeng**	**0.42**	**315**	*i* P	**Pb**	**00 25 49.9**	**+0.6**
SHUL				*i* S	**Sb**	**00 25 55.9**	**+0.6**
HGSD	**Ruisui**	**0.42**	**270**	*i* P	**Pb**	**00 25 50.1**	**+0.8**
HGSD				S	**Sb**	**00 25 56.2**	**+0.7**
ECBN	**Changbin**	**0.44**	**247**	*e*P	**Pn**	**00 25 51.2**	**-0.5**
ECBN				S	**Sn**	**00 25 58.0**	**-1.3**
EGFH	**Guangfu**	**0.46**	**293**	P	**Pb**	**00 25 50.7**	**+0.8**
EGFH				*i* S	**Sb**	**00 25 57.2**	**+0.8**
TEYL	**Yanliau Villag**	**0.46**	**325**	P	**Pb**	**00 25 50.8**	**+0.8**
TEYL				S	**Sb**	**00 25 57.4**	**+1.0**
EHYH	**Wanrong**	**0.50**	**270**	*i* P	**Pn**	**00 25 51.8**	**-0.9**
EHYH				S	**Sb**	**00 25 58.8**	**+1.2**
WARBT	**Fenglin Townsh**	**0.51**	**296**	*i* P	**Pb**	**00 25 51.1**	**+0.3**
WARBT				S	**Sg**	**00 25 57.9**	**+0.3**
EHY	**Hungye**	**0.52**	**272**	*i* P	**Pn**	**00 25 52.0**	**-1.0**
EHY				S	**Sb**	**00 25 59.5**	**+1.3**
ESL	**Shilin**	**0.53**	**308**	*i* P	**Pb**	**00 25 51.1**	**0.0**
ESL				S	**Sg**	**00 25 57.5**	**-0.4**
CHKH	**Chenggong**	**0.54**	**237**	*i* P	**Pn**	**00 25 52.3**	**-0.9**
CHKH				S	**Sb**	**00 25 59.6**	**+0.8**
EYUL	**Yuli**	**0.54**	**255**	*i* P	**Pn**	**00 25 52.9**	**-0.4**
EYUL				S	**Sb**	**00 25 60.0**	**+1.1**
HWA	**Hwalien**	**0.55**	**332**	*i* P	**Pb**	**00 25 51.8**	**+0.3**
HWA				S	**Sb**	**00 25 59.1**	**+0.1**
YULB	**Yu-li**	**0.55**	**260**	P	**Pn**	**00 25 52.5**	**-0.9**
YULB				S	**Sb**	**00 26 00.4**	**+1.3**
TWF1	**Yuli**	**0.56**	**256**	P	**Pn**	**00 25 52.8**	**-0.7**
TWF1				*e*S	**Sn**	**00 26 00.9**	**-1.5**
ETM	**Tongmen**	**0.59**	**323**	*i* P	**Pg**	**00 25 52.1**	**-0.1**
ETM				S	**Sg**	**00 26 00.1**	**0.0**
CHKT	**Chengkung**	**0.62**	**231**	*i* P	**Pn**	**00 25 53.5**	**-0.8**
CHKT				S	**Sb**	**00 26 01.5**	**+0.5**
FULB	**Fuli**	**0.62**	**242**	*i* P	**Pn**	**00 25 53.7**	**-0.6**
FULB				*i* S	**Sn**	**00 26 02.5**	**-1.3**
TWD	**Chiawan**	**0.64**	**336**	*i* P	**Pg**	**00 25 52.9**	**-0.2**
TWD				*i* S	**Sg**	**00 26 00.3**	**-1.4**
LXIB	**Xiulin Townshi**	**0.68**	**321**	*i* P	**Pg**	**00 25 53.6**	**-0.3**
LXIB				S	**Sg**	**00 26 02.8**	**-0.2**
ETL	**Fush Village**	**0.71**	**340**	*i* P	**Pg**	**00 25 53.9**	**-0.4**
ETL				S	**Sg**	**00 26 02.5**	**-1.2**
EHD	**Haiduan**	**0.71**	**242**	P	**Pn**	**00 25 55.0**	**-0.6**
EHD				S	**Sn**	**00 26 04.9**	**-1.3**
ECS	**Chishang**	**0.73**	**237**	P	**Pn**	**00 25 56.6**	**+0.7**
ECS				S	**Sn**	**00 26 06.7**	**+0.1**
NACB	**Ninganchiao**	**0.73**	**339**	*i* P	**Pb**	**00 25 54.0**	**-0.5**
NACB				S	**Sg**	**00 26 03.2**	**-1.2**
VWDT	**VWDT**	**0.73**	**291**	*i* P	**Pn**	**00 25 55.3**	**-0.5**
VWDT				*e*S	**Sg**	**00 26 04.3**	**-0.1**
OWD	**Renai**	**0.80**	**305**	*i* P	**Pg**	**00 25 56.0**	**0.0**
OWD				S	**Sb**	**00 26 06.1**	**-0.3**
ETLH	**Xiulin Townshi**	**0.80**	**333**	P	**Pb**	**00 25 55.5**	**-0.4**
ETLH				S	**Sb**	**00 26 05.6**	**-0.9**
EAHA	**Aohua**	**0.84**	**351**	*e*S	**Sb**	**00 26 07.7**	**+0.1**
ELDTW	**Lidau**	**0.85**	**250**	*e*P	**Pn**	**00 25 57.3**	**-0.4**
ELDTW				*e*S	**Sg**	**00 26 08.3**	**-0.1**
WUSB	**Renai**	**0.86**	**305**	*i* P	**Pg**	**00 25 57.2**	**0.0**
WUSB				*e*S	**Sb**	**00 26 07.1**	**-1.1**
WHF	**Hehuan Shan**	**0.86**	**319**	P	**Pb**	**00 25 56.8**	**-0.3**
WHF				S	**Sb**	**00 26 07.9**	**-0.7**
LDUT	**Ludao**	**0.90**	**205**	*i* P	**Pn**	**00 25 57.9**	**-0.3**
LDUT				S	**Sg**	**00 26 09.1**	**-0.6**
SSLB	**Suanglung**	**0.91**	**289**	P	**Pg**	**00 25 57.8**	**-0.1**
LONT	**Longtian**	**0.91**	**230**	P	**Pn**	**00 25 58.4**	**+0.1**
LONT				*e*S	**Sn**	**00 26 10.8**	**-0.2**
EWUT	**Wuta**	**0.95**	**354**	P	**Pb**	**00 25 58.4**	**0.0**
EWUT				S	**Sb**	**00 26 10.2**	**-0.5**
FUSS	**Fushou**	**0.96**	**322**	*i* P	**Pb**	**00 25 58.6**	**0.0**
FUSS				S	**Sb**	**00 26 10.5**	**-0.5**
WHYT	**Xinyi Township**	**0.97**	**282**	P	**Pn**	**00 25 59.2**	**+0.1**
WHYT				*e*S	**Sb**	**00 26 11.0**	**-0.2**
SMLT	**Sun Moon Lake**	**0.99**	**294**	*i* P	**Pg**	**00 25 59.5**	**-0.1**
ALS	**Alishan**	**0.99**	**271**	*i* P	**Pn**	**00 26 00.5**	**+0.7**
ALS				*e*S	**Sb**	**00 26 12.2**	**0.0**
TWT	**Tachien**	**1.00**	**319**	P	**Pg**	**00 26 00.1**	**+0.3**
TTN	**Taitung**	**1.00**	**223**	P	**Pn**	**00 25 59.3**	**-0.2**
TWGBT	**Beinan**	**1.00**	**228**	*e*P	**Pn**	**00 25 59.3**	**-0.2**
TWGBT				*e*S	**Sb**	**00 26 11.5**	**-0.6**
TWG	**Pinlang**	**1.00**	**229**	P	**Pg**	**00 25 59.7**	**-0.2**
TWG				*e*S	**Sb**	**00 26 10.9**	**-1.3**
TDCB	**Techi**	**1.01**	**319**	P	**Pn**	**00 25 59.8**	**0.0**
TYC	**Yuchr**	**1.03**	**294**	P	**Pb**	**00 25 59.9**	**+0.2**
TYC				*e*S	**Sg**	**00 26 13.7**	**-0.2**
NNSB	**Datong**	**1.04**	**334**	*i* P	**Pb**	**00 25 59.7**	**-0.2**
NNSB				S	**Sb**	**00 26 12.4**	**-1.0**
NNS	**Nan Shan**	**1.05**	**334**	*e*P	**Pb**	**00 26 00.0**	**-0.2**
NNS				S	**Sb**	**00 26 13.0**	**-0.8**
WCS	**Beigang Elemen**	**1.06**	**302**	*i* P	**Pn**	**00 26 00.5**	**+0.2**
STYH	**Taoyuan**	**1.07**	**253**	P	**Pg**	**00 26 01.1**	**0.0**
STYH				S	**Sg**	**00 26 14.5**	**-0.7**
LATG	**Datong**	**1.09**	**342**	*i* P	**Pb**	**00 26 00.5**	**-0.3**
LATG				*e*S	**Sb**	**00 26 13.9**	**-0.9**
CHN5	**Tsauling**	**1.11**	**276**	*e*P	**Pg**	**00 26 02.6**	**+0.7**
CHN5				*e*S	**Sg**	**00 26 16.9**	**+0.3**
NDS	**Dongshan**	**1.15**	**352**	*e*P	**Pn**	**00 26 01.4**	**-0.2**
NDT	**Datong Townshi**	**1.16**	**343**	P	**Pn**	**00 26 01.7**	**0.0**
WHP	**Taichung City**	**1.16**	**312**	P	**Pb**	**00 26 02.3**	**+0.3**
WHP				*e*S	**Sb**	**00 26 16.8**	**-0.1**
WNT	**Mingjian**	**1.17**	**289**	*e*P	**Pg**	**00 26 03.4**	**+0.5**
WNT				*e*S	**Sg**	**00 26 19.1**	**+0.8**
TPUB	**Ta-pu**	**1.17**	**261**	*i* P	**Pg**	**00 26 03.5**	**+0.5**
TPUB				S	**Sg**	**00 26 18.6**	**+0.3**
WCKO	**Fanlu**	**1.18**	**268**	*e*P	**Pg**	**00 26 03.0**	**-0.1**
WCKO				S	**Sg**	**00 26 19.6**	**+1.0**
ENTT	**Nioudou**	**1.18**	**346**	P	**Pn**	**00 26 02.1**	**+0.1**
WTP	**Ta-pu**	**1.20**	**258**	P	**Pg**	**00 26 03.7**	**+0.2**
WTP				*e*S	**Sg**	**00 26 18.9**	**-0.2**
TWE	**Neicheng**	**1.24**	**351**	P	**Pb**	**00 26 03.5**	**+0.3**
YHNB	**Yeheng**	**1.26**	**338**	P	**Pn**	**00 26 03.4**	**+0.1**
YHNB				*e*S	**Sb**	**00 26 17.9**	**-1.9**
SGST	**Jiashian**	**1.27**	**251**	*e*P	**Pb**	**00 26 04.1**	**+0.3**
SGST				*e*S	**Sg**	**00 26 21.0**	**-0.4**
NSK	**Sanguang**	**1.27**	**338**	*i* P	**Pn**	**00 26 03.7**	**+0.3**
NSK				*e*S	**Sb**	**00 26 18.4**	**-1.7**
CHN1	**Nanshi**	**1.29**	**257**	P	**Pg**	**00 26 05.6**	**+0.4**
CHN1				*e*S	**Sg**	**00 26 21.9**	**-0.1**
TCU	**Taichung**	**1.29**	**301**	*e*P	**Pg**	**00 26 06.0**	**+0.8**
TCU				*e*S	**Sg**	**00 26 23.9**	**+1.9**
FUSB	**Fushanzhiwuyua**	**1.29**	**348**	P	**Pn**	**00 26 03.9**	**+0.3**
FUSB				*e*S	**Sb**	**00 26 19.6**	**-0.9**
TWK	**Hsinying**	**1.30**	**260**	P	**Pg**	**00 26 05.8**	**+0.2**
TWK				*e*S	**Sg**	**00 26 22.8**	**+0.2**
NWLT	**Wulai**	**1.33**	**345**	*i* P	**Pn**	**00 26 04.4**	**+0.3**
NWLT				*e*S	**Sn**	**00 26 18.3**	**-3.1**
TWQ1	**Liyutan**	**1.33**	**310**	P	**Pg**	**00 26 06.3**	**+0.3**
TWQ1				S	**Sg**	**00 26 23.0**	**-0.4**
NFF	**Wufeng Townshi**	**1.34**	**328**	*e*P	**Pb**	**00 26 05.3**	**+0.3**
NFF				*e*S	**Sn**	**00 26 21.6**	**0.0**
EGS		**1.35**	**2**	P	**Pb**	**00 26 05.4**	**+0.3**
EGS				*e*S	**Sn**	**00 26 19.0**	**-2.8**
WCHH	**Zhanghua**	**1.35**	**296**	*e*P	**Pg**	**00 26 06.5**	**+0.1**
WCHH				S	**Sg**	**00 26 25.6**	**+1.5**
JYNG	**Yonagunijimaku**	**1.36**	**45**	*e*S	**Sn**	**00 26 21.8**	**-0.3**
NSTT	**Nanjuang**	**1.39**	**325**	P	**Pb**	**00 26 06.3**	**+0.4**
NSTT				S	**Sn**	**00 26 23.0**	**+0.1**
LIOB	**Emei**	**1.40**	**325**	P	**Pg**	**00 26 07.0**	**-0.4**
LIOB				*e*S	**Sb**	**00 26 23.7**	**+0.2**
YOJ	**Yonaguni jima**	**1.41**	**47**	*e*P	**Pb**	**00 26 06.3**	**+0.1**
YOJ				*e*S	**Sn**	**00 26 23.5**	**+0.2**
YOJ	**Yonaguni jima**	**1.41**	**47**	*e*S	**Sn**	**00 26 22.9**	**-0.4**
WDJ	**Dajia District**	**1.42**	**307**	P	**Pg**	**00 26 07.4**	**-0.5**
WDJ				*e*S	**Sg**	**00 26 26.3**	**-0.1**
KSHI	**Guanxi Townshi**	**1.44**	**333**	P	**Pb**	**00 26 07.2**	**+0.6**
KSHI				*e*S	**Sb**	**00 26 25.6**	**+1.0**
WRL	**Guolierlin Hig**	**1.44**	**287**	*e*P	**Pg**	**00 26 09.3**	**+1.2**
WRL				*e*S	**Sg**	**00 26 26.6**	**-0.4**
MASBT	**Mashibuluo**	**1.45**	**233**	P	**Pb**	**00 26 06.3**	**-0.5**
RLNB	**Erlin**	**1.46**	**286**	*e*S	**Sg**	**00 26 28.8**	**+1.4**
TIPB	**Shuangxi**	**1.48**	**358**	*i* P	**Pb**	**00 26 07.4**	**+0.1**
TIPB				S	**Sn**	**00 26 25.1**	**+0.1**
LAY	**Lan-yu**	**1.48**	**192**	*e*P	**Pn**	**00 26 05.5**	**-0.7**
LAY				*e*S	**Sn**	**00 26 22.7**	**-2.4**
LYUB	**Lan-yu**	**1.51**	**191**	P	**Pn**	**00 26 05.4**	**-1.1**
TWB1	**Santiao Chiao**	**1.51**	**3**	P	**Pn**	**00 26 07.4**	**+0.8**
NWF	**Wu-fen Shan**	**1.58**	**356**	*e*P	**Pb**	**00 26 09.1**	**0.0**
NWF				*e*S	**Sn**	**00 26 28.2**	**+0.6**
WFSB	**Wu-fen Shan**	**1.58**	**356**	P	**Pb**	**00 26 09.5**	**+0.5**
WFSB				*e*S	**Sn**	**00 26 28.3**	**+0.9**
SXI1	**Grass Mountain**	**1.60**	**360**	*i* P	**Pb**	**00 26 09.2**	**-0.2**
SXI1				S	**Sn**	**00 26 28.9**	**+0.8**
NCUH	**Zhongli**	**1.60**	**337**	P	**Pb**	**00 26 09.5**	**0.0**
NCUH				*e*S	**Sb**	**00 26 30.0**	**+0.6**
SCZT	**Fangliau**	**1.61**	**227**	*e*P	**Pb**	**00 26 09.8**	**+0.1**
SCZT				*e*S	**Sb**	**00 26 30.1**	**+0.4**
SMST	**Manzhou Townsh**	**1.76**	**214**	*e*P	**Pn**	**00 26 10.4**	**+0.4**
SMST				*e*S	**Sn**	**00 26 31.7**	**-0.2**
TWKBT	**Hengchun**	**1.83**	**213**	*e*P	**Pn**	**00 26 12.0**	**+1.0**
TWKBT				*e*S	**Sn**	**00 26 33.1**	**-0.7**
HATJ	**Hateruma jima**	**1.84**	**72**	*e*P	**Pn**	**00 26 12.1**	**+0.9**
HATJ				*e*S	**Sn**	**00 26 34.1**	**0.0**
IRIF	**Iriomote-Funau**	**1.88**	**63**	*e*P	**Pn**	**00 26 12.8**	**+1.1**
IRIF				*e*S	**Sn**	**00 26 35.9**	**+0.8**
JKRS	**Kuro-shima**	**2.08**	**69**	*e*P	**Pn**	**00 26 15.9**	**+1.5**
PHUB	**P'eng-hu**	**2.12**	**271**	*e*S	**Sn**	**00 26 42.3**	**+1.3**
JIJ	**Ishigaki jima**	**2.24**	**67**	*e*P	**Pn**	**00 26 17.6**	**+1.0**
VWUC	**VWUC**	**2.68**	**304**	*e*P	**Pn**	**00 26 23.2**	**+0.6**
VWUC				*e*S	**Sn**	**00 26 53.2**	**-1.5**

*RHSSO **08** 00:26:11.6±0.8, 41.°81N×20.°21E, h6km±2km, ML2.9/8*
*BEO **08** 00:26:12.8±0.4, 41.°85N×20.°11E, h5km±2km, ML2.4/16*
*TIR **08** 00:26:13.4, 41.°84N×20.°03E, h10km±1km, Ml2.7/5*
*PDG **08** 00:26:13.0±0.1, 41.°87N×20.°02E, h15km, ML2.7/12, Error ellipse: s-maj=0.1km s-min=0.2km az=0.0*
ISC 08 00:26:13.0±1.0**, 41.°87N**±0.°02×**20.°09E**±0.°02**, h7**km±9km**,**
n67, σ**0.s87**/112**, 14C-2D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.32**	**125**	⇑Pg	**Pg**	**00 26 19.5**	**+0.2**
PHP				Sg	**Sb**	**00 26 25.3**	**-1.2**
PHP				AML	AML	00 26 26.4	
	6.7nm,0.5s						
SDA	**Shkodra**	**0.48**	**293**	⇑Pg	**Pg**	**00 26 22.1**	**-0.1**
SDA				Sg	**Sg**	**00 26 29.4**	**+0.9**
SDA				AML	AML	00 26 30.5	
	1.7nm,0.2s						
TIR	**Tirane**	**0.55**	**198**	⇑Pg	**Pg**	**00 26 23.5**	**-0.1**
TIR				Sg	**Sg**	**00 26 30.9**	**+0.2**
TIR				AML	AML	00 26 34.5	
	1.2nm,0.3s						
ULC	**Ulcinj**	**0.64**	**279**	*e*Pg	**Pg**	**00 26 24.3**	**-0.9**
ULC				*i* Sg	**Sg**	**00 26 33.6**	**0.0**
PVY	**Plav**	**0.73**	**352**	*e*Pg	**Pg**	**00 26 26.8**	**-0.2**
PVY				*i* Sg	**Sb**	**00 26 38.3**	**0.0**
DRME	**Dracevica, Mon**	**0.74**	**295**	⇓*i*Pg	**Pg**	**00 26 26.2**	**-1.1**
DRME				*i* Sg	**Sg**	**00 26 37.4**	**+0.4**
PDG	**Podgorica**	**0.83**	**312**	⇑Pg	**Pg**	**00 26 28.2**	**-0.8**
PDG				Sg	**Sb**	**00 26 41.8**	**+0.6**
PDG	**Podgorica**	**0.83**	**312**	*e*Pg	**Pg**	**00 26 28.0**	**-1.1**
PDG				*e*Sg	**Sg**	**00 26 41.0**	**+1.1**
PDG	**Podgorica**	**0.83**	**312**	*e*Pg	**Pg**	**00 26 27.9**	**-1.1**
PDG				*i* Sg	**Sg**	**00 26 40.7**	**+0.8**
PDG	**Podgorica**	**0.83**	**312**	⇑*i*Pg	**Pg**	**00 26 27.8**	**-1.2**
PDG				*e*Sg	**Sg**	**00 26 40.9**	**+1.1**
BUM	**Brajici-Budva**	**0.99**	**296**	*e*Pg	**Pg**	**00 26 30.8**	**-1.1**
BUM				*i* Sg	**Sg**	**00 26 45.7**	**+0.9**
IVA	**Berane**	**1.01**	**352**	*e*Pg	**Pg**	**00 26 31.9**	**-0.5**
IVA				*i* Sg	**Sn**	**00 26 47.8**	**-0.3**
KOME	**Kolasin**	**1.07**	**337**	⇓*i*Pg	**Pg**	**00 26 32.7**	**-0.8**
KOME				*i* Sg	**Sn**	**00 26 49.3**	**-0.2**
CEME	**Cevo**	**1.10**	**308**	*e*Pg	**Pb**	**00 26 32.8**	**-1.6**
CEME				*i* Sg	**Sb**	**00 26 49.7**	**+0.8**
NKME	**Niksic**	**1.23**	**317**	*e*Pg	**Pn**	**00 26 35.4**	**-1.2**
NKME				*i* Sg	**Sn**	**00 26 54.2**	**+0.7**
HCY	**Herceg Novi**	**1.32**	**296**	⇑*i*Pg	**Pn**	**00 26 36.8**	**-1.0**
HCY				*i* Sg	**Sg**	**00 26 57.0**	**+1.6**
HCY	**Herceg Novi**	**1.32**	**296**	⇑*i*Pg	**Pn**	**00 26 37.3**	**-0.5**
HCY				*e*Sg	**Sg**	**00 26 57.5**	**+2.1**
KBN	**Korca**	**1.35**	**157**	P	**Pg**	**00 26 38.6**	**-0.2**
KBN				S	**Sg**	**00 26 57.8**	**+1.4**
KBN				AML	AML	00 27 06.5	
	0.6nm,0.6s						
SJES	**Sjenica**	**1.39**	**357**	*e*Pg	**Pn**	**00 26 38.4**	**-0.5**
SJES				*e*Sg	**Sg**	**00 26 58.5**	**+0.7**
SJES	**Sjenica**	**1.39**	**357**	⇑*i*Pg	**Pn**	**00 26 38.1**	**-0.8**
SJES				*e*Sg	**Sg**	**00 26 58.5**	**+0.7**
BRY	**Bratogost**	**1.54**	**312**	*e*Pg	**Pn**	**00 26 41.0**	**0.0**
BRY				*i* Sg	**Sg**	**00 27 03.5**	**+0.9**
BRY	**Bratogost**	**1.54**	**312**	*e*Pn	**Pn**	**00 26 41.6**	**+0.6**
BRY				*e*Sn	**Sb**	**00 27 02.2**	**+0.5**
TREB	**Trebinje**	**1.54**	**304**	*e*Pn	**Pn**	**00 26 40.4**	**-0.4**
TREB				*e*Sn	**Sn**	**00 27 01.0**	**-0.1**
TREB	**Trebinje**	**1.54**	**304**	⇑*i*Pn	**Pn**	**00 26 40.5**	**-0.4**
TREB				*e*Sn	**Sg**	**00 27 03.0**	**+0.4**
PLE	**Pljevlja**	**1.55**	**341**	⇑*i*Pg	**Pn**	**00 26 41.5**	**+0.5**
PLE				*i* Sg	**Sg**	**00 27 04.2**	**+1.5**
SELS	**Selova**	**1.55**	**29**	*e*Pg	**Pn**	**00 26 40.7**	**-0.2**
SELS				*e*Sg	**Sn**	**00 27 01.2**	**-0.1**
BARS	**Barje**	**1.59**	**53**	*e*Pg	**Pb**	**00 26 41.9**	**-0.8**
BARS				*e*Sg	**Sg**	**00 27 04.2**	**+0.1**
UPM	**Unac-Piva**	**1.59**	**327**	*e*Pg	**Pn**	**00 26 42.0**	**+0.3**
UPM				*i* Sg	**Sg**	**00 27 04.9**	**+0.7**
UPM	**Unac-Piva**	**1.59**	**327**	⇑*i*Pn	**Pn**	**00 26 41.4**	**-0.3**
UPM				*e*Sn	**Sb**	**00 27 03.9**	**+0.7**
NEST	**Nestorio**	**1.62**	**153**	Pn	**Pg**	**00 26 43.4**	**-0.7**
NEST				Sn	**Sg**	**00 27 07.3**	**+2.1**
NEST				AML	AML	00 27 10.3	
	0.3nm,0.4s						
IVAS	**Ivanjica**	**1.71**	**2**	*e*Pg	**Pn**	**00 26 42.7**	**-0.4**
IVAS				*e*Sg	**Sb**	**00 27 07.3**	**+1.0**
KLINJ	**Klinje**	**1.71**	**320**	*e*Pn	**Pn**	**00 26 43.1**	**-0.1**
KLINJ				*e*Sn	**Sb**	**00 27 06.8**	**+0.3**
RUDO	**Rudo**	**1.83**	**343**	*e*Pn	**Pn**	**00 26 45.0**	**+0.3**
RUDO				*e*Sn	**Sb**	**00 27 09.5**	**-0.2**
RUDO	**Rudo**	**1.83**	**343**	⇑*i*Pn	**Pn**	**00 26 44.0**	**-0.7**
RUDO				*e*Sn	**Sn**	**00 27 08.6**	**+0.5**
BOSS	**Bosilegrad**	**1.88**	**70**	*e*Pn	**Pn**	**00 26 44.9**	**-0.6**
SRN	**Sarande**	**1.99**	**182**	Pn	**Pg**	**00 26 50.4**	**-0.6**
SRN				Sn	**Sg**	**00 27 17.1**	**+0.3**
STON	**Ston**	**2.03**	**300**	*e*Pn	**Pn**	**00 26 48.0**	**+0.5**
STON				*e*Sn	**Sn**	**00 27 14.1**	**+0.9**
BBLS	**Lazi&#263i**	**2.06**	**346**	*e*Pn	**Pn**	**00 26 48.4**	**+0.4**
BBLS				*e*Sn	**Sn**	**00 27 14.7**	**+0.8**
BBLS	**Lazi&#263i**	**2.06**	**346**	⇑*i*Pn	**Pn**	**00 26 47.4**	**-0.6**
BBLS				*e*Sn	**Sn**	**00 27 14.7**	**+0.8**
GRUS	**Gruza**	**2.07**	**13**	*e*Pn	**Pn**	**00 26 48.6**	**+0.5**
DIVS	**Divibare**	**2.23**	**358**	*e*Pn	**Pn**	**00 26 50.0**	**-0.3**
DIVS				*e*Sn	**Sn**	**00 27 18.8**	**+0.7**
IGT	**Igoumenitsa**	**2.34**	**175**	Pn	**Pn**	**00 26 52.9**	**+1.1**
IGT	**Igoumenitsa**	**2.34**	**175**	*e*Sn	**Sn**	**00 27 21.6**	**+0.8**
ZAPS	**Zavoj**	**2.34**	**52**	*e*Pn	**Pn**	**00 26 53.1**	**+1.2**
TRUS	**Trudelj**	**2.36**	**6**	*e*Pn	**Pn**	**00 26 52.6**	**+0.5**
VTS	**Vitosha**	**2.45**	**71**	*e*Pn	**Pn**	**00 26 51.9**	**-1.6**
VTS	**Vitosha**	**2.45**	**71**	*e*Pn	**Pn**	**00 26 52.8**	**-0.7**
VTS				*e*Sn	**Sn**	**00 27 22.4**	**-1.3**
ZAGS	**Zajecar**	**2.50**	**38**	*e*Pn	**Pn**	**00 26 53.0**	**-1.0**
NOCI	**Noci**	**2.52**	**246**	Pn	**Pn**	**00 26 54.1**	**-0.2**
TEKS	**Tekeris**	**2.71**	**351**	*e*Pn	**Pn**	**00 26 56.6**	**-0.3**
KUBS	**Kucevo**	**2.79**	**24**	*e*Pn	**Pn**	**00 26 58.8**	**+0.8**
AVAS	**Avala Beograd**	**2.84**	**6**	*e*Pn	**Pn**	**00 27 00.1**	**+1.4**
AVAS				*e*Sn	**Sn**	**00 27 34.4**	**+1.2**
MDVR	**Moldovita**	**3.14**	**22**	*e*Pn	**Pn**	**00 27 02.6**	**-0.3**
SGRT	**San Giovanni R**	**3.25**	**269**	Pn	**Pn**	**00 27 03.5**	**-0.9**
FRGS	**Fruska Gora**	**3.29**	**357**	*e*Pn	**Pn**	**00 27 04.0**	**-0.9**
FRGS				*e*Sn	**Sn**	**00 27 45.6**	**+1.3**
FRGS	**Fruska Gora**	**3.29**	**357**	⇑*i*Pn	**Pn**	**00 27 04.6**	**-0.3**
FRGS				*e*Sn	**Sn**	**00 27 44.4**	**+0.1**
VRSS	**Vrsac**	**3.37**	**15**	*e*Pn	**Pn**	**00 27 06.7**	**+0.7**
BLY	**Banja Luka**	**3.57**	**325**	*e*Pn	**Pn**	**00 27 09.3**	**+0.6**
BLY				*e*Sn	**Sn**	**00 27 52.1**	**+0.9**
BZS	**Buzias**	**3.91**	**16**	*e*Pn	**Pn**	**00 27 12.2**	**-1.1**
MORH	**Mrgy, Hungar**	**4.47**	**347**	*e*Pn	**Pn**	**00 27 20.6**	**-0.4**
MORH				*e*Sn	**Sn**	**00 28 12.2**	**-1.0**
SOKA	**Soboth**	**6.02**	**325**	*e*Pn	**Pn**	**00 27 41.6**	**-0.8**
	0.4nm,0.2s						
ARSA	**Arzberg**	**6.29**	**330**	*e*Pn	**Pn**	**00 27 47.9**	**+1.8**
	0.8nm,0.4s						
KBA	**Koelnbreinsper**	**7.10**	**319**	*e*Pn	**Pn**	**00 27 57.4**	**+0.1**
	2.2nm,0.7s						
ABTA	**Abfaltersbach**	**7.30**	**314**	*i* Pn	**Pn**	**00 28 00.6**	**+0.6**
	0.8nm,0.4s						
LESA	**Schwarzleotal**	**7.66**	**319**	*i* Pn	**Pn**	**00 28 05.8**	**+0.8**
	2.2nm,0.4s						
WTTA	**Wattenberg**	**8.09**	**315**	*i* Pn	**Pn**	**00 28 12.1**	**+1.2**
	0.5nm,0.3s						
SQTA	**Sankt Quirin**	**8.29**	**313**	*i* Pn	**Pn**	**00 28 15.6**	**+1.9**
	1.2nm,0.3s						

*NEIC **08** 00:33:31.6, 36.°11N×117.°86W, h5km*
*NEIC **08** 00:33:31.3±1.2, 36.°106N±0.°005×117.°86W±0.°01, h1km±1km, ML3.8/146, Mwr3.7/41, Mwr3.8/4(PAS), Error ellipse: s-maj=1.7km s-min=0.4km az=113.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-4.51; $M_{\theta\theta}$0.04; $M_{\phi\phi}$4.47; $M_{r\theta}$0.80; $M_{\theta\phi}$0.77; $M_{\phi r}$-1.33; Fault plane solution: $M_0$4.82000×10^{14} NP1: ϕ_s357.85000°, δ53.44000°, λ-104.43000°. NP2: ϕ_s201.21000°, δ38.93000°, λ-71.43000°. Principal axes: T 4.7565, Plg7.0000°, Azm98.0000°; N 0.1178, Plg12.0000°, Azm7.0000°; P -4.8743, Plg76.0000°, Azm220.0000°;*
*IDC **08** 00:33:32.2±0.9, 36.°12N×117.°86W, h0km, mb3.5/2, mbtmp3.2/7, ML3.3/5, MS3.2/7 Error ellipse: s-maj=19.6km s-min=5.5km az=76.0*
*PAS **08** 00:33:32±1.0, 36.°111N±0.°009×117.°86W±0.°01, h2km±2km, Error ellipse: s-maj=1.5km s-min=1.3km az=117.0*
ISC 08 00:33:32.2±0.8**, 36.°11N**±0.°01×**117.°86W**±0.°02**, h1**km±5km**,**
n99, σ**0.s81**/123**, MS3.4**/3**, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MFS	**McCloud Flat S**	**0.01**	**30**		**Pg**	**00 33 32.7**	**-0.1**
MFS					**Sg**	**00 33 33.5**	**+0.4**
WRVM	**Rose V. Centra**	**0.11**	**194**		**Pg**	**00 33 34.3**	**0.0**
WRVM					**Sg**	**00 33 36.0**	**+0.3**
WCSM	**Coso Springs S**	**0.11**	**139**		**Pg**	**00 33 34.5**	**+0.1**
WCSM					**Sg**	**00 33 36.4**	**+0.5**
JRC2	**Joshua Ridge**	**0.14**	**163**		**Pg**	**00 33 34.8**	**0.0**
JRC2					**Sg**	**00 33 37.0**	**+0.4**
WVPM	**Volcano Peak E**	**0.17**	**168**		**Pg**	**00 33 35.4**	**-0.1**
WVPM					**Sg**	**00 33 38.0**	**+0.4**

RCWM	Renegade Canyo	0.24	133		Pg	00 33 36.8	+0.1
RCWM					Sg	00 33 40.4	+0.6
DAC	Darwin (Calif)	0.27	52		Pg	00 33 37.3	-0.1
DAC					Sg	00 33 41.3	+0.4
WNMM	Nine Mile Cany	0.27	188		Pg	00 33 37.2	-0.1
WNMM					Sg	00 33 41.6	+0.6
MPMC	Manual Prospec	0.30	100		Pg	00 33 38.0	0.0
MPMC				Sg	Sg	00 33 42.3	+0.3
MPMC				IAML		00 33 44.1	
	comp=E,14µm,0.7s						
MPMC				IAML		00 33 48.1	
	comp=N,8µm,0.6s						
TOW	Tower One	0.31	166		Pg	00 33 38.6	+0.4
TOW					Sb	00 33 44.0	-2.1
CLC	China Lake	0.36	144		Pg	00 33 39.0	-0.1
CLC				Sg	Sg	00 33 43.9	0.0
WLHM	Little Horse	0.37	276		Pg	00 33 39.1	-0.2
CWC	Cottonwood Cre	0.37	331		Pg	00 33 39.1	-0.2
CWC					Sg	00 33 44.4	+0.2
CWC				IAML		00 33 44.9	
	comp=E,7µm,0.3s						
CWC				IAML		00 33 48.9	
	comp=N,7µm,0.3s						
SRTC	Snort	0.43	168		Pg	00 33 40.8	+0.3
SRTC					Sb	00 33 47.9	-1.6
CGO	Cerro Gordo	0.44	6		Pg	00 33 40.5	-0.2
CGO					Sg	00 33 47.0	+0.6
GPO	China Lake	0.49	161		Pg	00 33 41.5	-0.1
GPO					Sg	00 33 48.9	+1.0
WORM	Onyx Ranch	0.52	217		Pg	00 33 41.8	-0.4
WORM					Sg	00 33 48.8	-0.1
WHFM	Hanning Flat	0.58	224		Pg	00 33 42.9	-0.3
WHFM					Sg	00 33 50.8	+0.1
WBSM	Bird Springs	0.62	202		Sg	00 33 52.3	+0.2
LRMC	Laurel Mtn Rad	0.65	167		Pg	00 33 44.2	-0.4
LRMC					Sg	00 33 53.2	+0.2
LRMC				IAML		00 33 53.8	
	comp=E,4µm,0.5s						
LRMC				IAML		00 33 55.2	
	comp=N,4µm,0.2s						
ISA	Isabella, Lake	0.67	228		Pg	00 33 44.7	-0.4
ISA				IAML		00 33 54.4	
	comp=N,6µm,0.4s						
ISA				IAML		00 33 54.5	
	comp=E,6µm,0.2s						
ISA	Isabella, Lake	0.67	228		Sg	00 33 53.8	0.0
WASM	Alta Sierra Ca	0.68	237		Pg	00 33 44.9	-0.3
WASM					Sg	00 33 54.1	+0.1
CCCA	Chr Cany lake	0.71	145		Pg	00 33 45.9	+0.1
CCCA					Sg	00 33 55.9	+0.9
CCCA				IAML		00 34 03.0	
	comp=N,6µm,0.5s						
SPG2	Springville 2	0.74	277		Sg	00 33 55.5	-0.5
QSM	Queen of Sheba	0.82	100		Pg	00 33 47.4	-0.5
QSM					Sg	00 33 58.4	0.0
DTP	Desert Tortois	0.84	179		Pg	00 33 47.8	-0.5
DTP					Sg	00 33 59.2	0.0
FURC	Furnace Creek,	0.88	66		Pg	00 33 49.0	0.0
FURC				IAML		00 34 12.0	
	comp=N,5µm,0.6s						
GWY	Greenwater Val	0.96	85		Pg	00 33 50.4	-0.3
GWY					Sg	00 34 03.5	+0.3
GWY				IAML		00 34 07.9	
	comp=E,4µm,0.4s						
GWY				IAML		00 34 12.6	
	comp=N,3µm,0.7s						
GRAC	Grapevine Rang	0.97	24		Pg	00 33 50.3	-0.5
GRAC				IAML		00 34 09.9	
	comp=E,3µm,0.9s						
GRAC				IAML		00 34 10.0	
	comp=N,3µm,0.8s						
TIN	Tinemaha, Big	0.99	342		Pg	00 33 50.8	-0.4
VES	Vestal, Richgr	1.03	255		Pg	00 33 51.4	-0.6
VES					Sg	00 34 04.9	-0.4
SGV	South Grapevin	1.09	37		Pg	00 33 52.5	-0.6
GSC	Goldstone, Bar	1.18	133		Pg	00 33 53.8	-1.0
GSC				IAML		00 34 15.5	
	comp=N,1µm,0.7s						
GSC				IAML		00 34 17.4	
	comp=E,2µm,0.9s						
WCT	Wildcat Mounta	1.20	55		Pg	00 33 54.5	-0.8
WCT					Sg	00 34 10.1	-0.8
WCT				IAML		00 34 13.2	
	comp=N,1µm,0.5s						
WCT				IAML		00 34 17.1	
	comp=E,1µm,0.8s						
DSP	Deep Springs	1.26	356		Pg	00 33 55.3	-1.1
DSP					Sg	00 34 12.1	-0.5
TPO	Tropico Hills	1.27	194		Pg	00 33 55.5	-1.0
TPO					Sg	00 34 12.2	-0.7
TPO				IAML		00 34 18.8	
	comp=E,2µm,0.7s						
SHOC	Shoshone, Teco	1.30	99		Pg	00 33 56.0	-1.1
TPNV	Topopah Spring	1.54	57		Pn	00 34 00.3	-0.7
TPNV				IAML		00 34 28.1	
	comp=E,1µm,0.6s						
TPNV				IAML		00 34 28.2	
	comp=E,1µm,0.9s						
OSI	Osito Audit: C	1.65	206		Pn	00 34 01.6	-0.8
OSI				IAML		00 34 27.4	
	comp=N,1µm,0.6s						
OSI				IAML		00 34 32.3	
	comp=E,958nm,0.6s						
KCC	Kaiser Creek	1.68	316		Pn	00 34 02.8	0.0
FRI	Friant	1.73	301		Pn	00 34 03.1	-0.2
MDPB	Devils Postpil	1.81	328		Pn	00 34 04.9	+0.2
MDPB				IAML		00 34 31.1	
	comp=E,908nm,0.5s						
MDPB				IAML		00 34 32.9	
	comp=N,1µm,0.5s						
YEG	Yeguas Mountai	1.84	249		Pb	00 34 05.7	-0.9
MWC	Mount Wilson	1.89	185		Pn	00 34 04.9	-0.8
MWC				IAML		00 34 33.4	
	comp=N,594nm,0.5s						
MWC				IAML		00 34 34.1	
	comp=E,547nm,1.0s						
PASC	Pasadena Art C	1.96	188		Pn	00 34 05.4	-1.1
PASC				IAML		00 34 36.4	
	comp=E,419nm,0.7s						
MTPC	Mountain Pass	1.98	108		Pn	00 34 05.5	-1.4
MTPC				IAML		00 34 37.1	
	comp=E,676nm,0.3s						
MTPC				IAML		00 34 38.7	
	comp=N,761nm,0.4s						
PKD	Bear Valley Ra	2.18	266		Pn	00 34 09.8	+0.2
PKD				IAML		00 34 45.3	
	comp=N,558nm,0.6s						
PKD				IAML		00 34 48.5	
	comp=E,573nm,0.9s						
LHV	Little Huntoon	2.20	347		Pn	00 34 10.0	+0.3
LHV				IAML		00 34 53.6	
	comp=N,332nm,1.6s						
LHV				IAML		00 35 03.9	
	comp=E,322nm,1.5s						
SHPR	Sheep Range	2.21	79		Pn	00 34 09.9	-0.3
S11A	Rachel	2.28	47		Pn	00 34 10.6	-0.5
S11A				IAML		00 34 53.8	
	comp=N,830nm,1.4s						
NV11	Mina Array Sit	2.33	354		Pn	00 34 11.5	-0.3
NVAR	Mina Array Bea	2.34	351	Pn	Pn	00 34 11.2	-0.8
	comp=N,1.8nm,0.3s,baz=176,slow=13,SNR=16						
NVAR				Pg	Pb	00 34 14.9	-0.4
	comp=N,10.0nm,0.3s,baz=172,slow=16,SNR=50						
NVAR				Lg	Lg	00 34 46.6	
	comp=N,46nm,0.3s,baz=170,slow=20,SNR=19						
	comp=N,12nm,0.8s						
NVAR	Mina Array Bea	2.34	351		Pn	00 34 11.5	-0.5
PMPB	Monarch Peak	2.38	273		Pn	00 34 12.9	+0.5
V12A	Nelson	2.47	98		Pn	00 34 12.6	-1.0
V12A				IAML		00 34 53.8	
	comp=N,315nm,0.9s						
V12A				IAML		00 34 54.0	
	comp=E,242nm,0.5s						
ELS	Elsinore Mount	2.48	172		Pn	00 34 13.2	-0.6
DANC	Danby, Needles	2.50	125		Pn	00 34 12.5	-1.5
DANC				IAML		00 34 58.5	
	comp=E,529nm,0.5s						
DANC				IAML		00 35 00.1	
	comp=N,612nm,0.7s						
PRN	Pahroc Range	2.60	59		Pn	00 34 14.8	-0.7
PRN				IAML		00 35 04.0	
	comp=E,479nm,1.0s						
PRN				IAML		00 35 05.1	
	comp=N,506nm,0.7s						
BBGB	Big Mountain B	2.61	281		Pn	00 34 16.0	+0.4
DNR	Dunn Ranch,Anz	2.73	158		Pn	00 34 16.9	-0.4
DNR				IAML		00 35 05.8	
	comp=N,464nm,0.7s						
DNR				IAML		00 35 13.7	
	comp=E,493nm,1.0s						
HULI	Fort Hunter Li	2.74	269		Pn	00 34 17.8	+0.5
HULI				IAML		00 34 57.2	
	comp=E,383nm,0.9s						
HULI				IAML		00 34 57.8	
	comp=N,444nm,0.8s						
PMD	Palm Desert	2.74	153		Pn	00 34 16.3	-1.0
PFO	Pinyon Flats O	2.75	155	Pn	Pn	00 34 16.6	-0.9
	comp=N,1.5nm,0.3s,baz=343,slow=8.9,SNR=20						
PFO				Pg	Pb	00 34 22.8	+0.7
	comp=N,9.0nm,0.3s,baz=334,slow=15,SNR=30						
PFO				Lg	Lg	00 34 59.0	
	comp=N,24nm,0.3s,baz=235,slow=22,SNR=9.1						
PFO				LR	LR	00 35 32.7	
	comp=N,190nm,20.6s,baz=47,slow=44						
	comp=N,5.7nm,0.3s						
PFO	Pinyon Flats O	2.75	155		Pn	00 34 16.5	-1.0
IRM	Iron Mountain	2.96	130		Pn	00 34 18.6	-1.7
SAO	San Andreas Ge	2.97	284		Pn	00 34 19.1	-1.3
BORC	Borrego Spring	3.08	157		Pn	00 34 20.9	-0.9
BORC				IAML		00 35 13.6	
	comp=E,156nm,0.8s						
BC3	Big Chuckawall	3.15	140		Pn	00 34 21.4	-1.6
BC3				IAML		00 35 31.1	
	comp=N,182nm,1.0s						
DPP	Dos Picos Cty	3.20	166		Pn	00 34 22.9	-0.7
CPE	Camp Elliot	3.28	169		Pn	00 34 23.8	-0.9
MHC	Mount Hamilton	3.28	293	Pn	Pn	00 34 25.7	+0.9
MHC				IAML		00 35 16.4	
	comp=E,239nm,0.8s						
W13A	Hualapai Mount	3.39	106		Pn	00 34 25.4	-1.0
W13A				IAML		00 35 24.6	
	comp=N,162nm,0.6s						
W13A				IAML		00 35 24.7	
	comp=E,153nm,0.6s						
BAR	Barrett	3.56	164		Pn	00 34 28.2	-0.4
BAR				IAML		00 35 24.4	
	comp=E,91nm,0.7s						
BLYC	Blythe	3.61	130		Pn	00 34 27.6	-1.7
BLYC				IAML		00 35 30.2	
	comp=N,104nm,0.9s						
BLYC				IAML		00 35 37.0	
	comp=E,98nm,0.8s						
MPK	Martis Peak	3.61	332		Pn	00 34 28.4	-1.2
YUH	Yuha Desert	3.81	155	Pn	Pn	00 34 30.8	-1.2
LCMT	Little Creek M	3.82	75	Pn	Pn	00 34 32.4	+0.1
CCUT	Cedar City	3.88	67		Pn	00 34 33.4	+0.2
CBX	Cerro Bola	3.92	165		Pn	00 34 33.4	-0.1
CBX				IAML		00 35 36.8	
	comp=N,182nm,0.8s						
GLA	Glamis	3.95	140		Pn	00 34 31.9	-2.0
GLA				IAML		00 35 46.7	
	comp=N,131nm,0.7s						
GLA				IAML		00 35 47.7	
	comp=E,144nm,1.0s						
ESJX	Sierra Juarez	4.39	158		Pn	00 34 39.8	-0.4
ESJX				IAML		00 35 36.2	
	comp=E,82nm,0.1s						
Y14A	Wickenburg	4.54	117		Pn	00 34 40.8	-1.2
Y14A				IAML		00 36 02.0	
	comp=N,131nm,0.8s						
Y14A				IAML		00 36 02.0	
	comp=E,78nm,0.7s						
ELK	Elko	5.06	23	Pn	Pn	00 34 50.0	+0.6
	comp=E,0.7nm,0.3s,baz=209,slow=12,SNR=17						
ELK				Pg	Pg	00 35 07.5	-1.7
	comp=E,1.9nm,0.3s,baz=220,slow=14,SNR=12						
ELK				Lg	Lg	00 36 12.8	
	comp=E,6.2nm,0.3s,baz=296,slow=21,SNR=12						
	comp=E,2.2nm,0.4s						
ELK	Elko	5.06	23		Pn	00 34 49.7	+0.3
ELK				IAML		00 36 17.1	
	comp=E,32nm,0.7s						
WUAZ	Wupatki	5.30	95	Pn	Pn	00 34 51.8	-0.8
WUAZ				IAML		00 36 27.0	
	comp=E,65nm,2.1s						
WUAZ				IAML		00 36 38.8	
	comp=E,61nm,1.7s						
YBH	Yreka Blue Hor	6.77	327	Lg	Lg	00 36 59.8	
	baz=86,slow=2.3,SNR=4.2						
YBH				LR	LR	00 37 26.7	
	comp=E,7.0nm,19.8s,baz=154,slow=35						
TUC	Tucson	6.98	121		Pn	00 35 14.9	-0.7
PV20	West Nyswonger	7.43	70	Pn	Pn	00 35 20.8	-1.2
PDAR	Pinedale Array	9.24	41	Pn	Pn	00 35 48.5	+1.8
	comp=E,0.1nm,0.3s,baz=228,slow=14,SNR=5.2						
PDAR				LR	LR	00 39 51.2	
	comp=E,63nm,19.6s,baz=179,slow=41						
	comp=E,0.1nm,0.4s						
PDAR	Pinedale Array	9.24	41		Pn	00 35 46.4	-0.3
ANMO	Albuquerque	9.37	94	LR	LR	00 39 48.5	
	comp=E,129nm,18.6s,baz=270,slow=40						
TXAR	Lajitas Array	13.72	115	Pn	Pn	00 36 50.4	+2.4
	baz=289,slow=12,SNR=7.6						
	comp=E,0.8nm,0.9s						
BBB	Bella Bella	17.64	339	LR	LR	00 45 17.5	
	comp=E,102nm,19.1s,baz=139,slow=40						
DLBC	Dease Lake	23.74	344	LR	LR	00 49 13.2	
	comp=E,89nm,18.5s,baz=62,slow=40						
YKA	Yellowknife Ar	26.48	3	P	P	00 39 11.6	+0.9
	comp=E,0.6nm,0.9s,baz=188,slow=8.7,SNR=6.7						
	comp=E,0.6nm,0.9s						
TKL	Tuckaleechee C	27.54	81	LR	LR	00 50 38.8	
	comp=E,106nm,18.6s,baz=50,slow=37						
ILAR	Eielson Array	33.53	338	P	P	00 40 14.5	+1.5
	comp=E,0.8nm,0.9s,baz=155,slow=7.2,SNR=10						
	comp=E,0.8nm,0.9s						
NNA	Nana	61.53	133	LR	LR	01 08 05.3	
	comp=E,28nm,18.0s,baz=247,slow=34						

*ISK **08** 00:45:04.2, 38°.28N×38°.81E, h2km, ML3.6/27*
*AFAD **08** 00:45:04.5, 38°.26N×38°.78E, h7km±2km, MW3.6*
*IDC **08** 00:45:05.3±1.0, 38°.36N×38°.66E, h0km, mb3.6/3, mbtmp3.3/10, ML3.0/7, MS2.7/7, Error ellipse: s-maj=15.6km s-min=10.4km az=159.0*
ISC 08 00:45:05.7±0.7**, 38°.27N**±0°.02×**38°.80E**±0°.02**, h10km, n60, σ1s.19**/66**, mb3.5**/3**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDYL	Doganyol-Malat	0.19	75	Pg	Pg	00 45 08.9	-0.9
MDYL				Sg	Sg	00 45 12.2	-0.4
ESGZ	Sivrice-Elazig	0.26	51	Pg	Pg	00 45 10.1	-1.0
ESGZ				Sg	Sg	00 45 14.3	-0.4
ELZG	Elazig	0.27	32	P	Pg	00 45 10.6	-0.7
ELZG				S	Sg	00 45 14.6	-0.4
ELZG				IAML		00 45 15.0	
	comp=E,10µm,0.7s						
ELZG				IAML		00 45 16.0	
	comp=N,6µm,0.4s						
MAYA	Malatya/Merkez	0.30	282	P	Pg	00 45 10.7	-1.1
NARI	Adyaman-Kaht	0.38	185	P	Pg	00 45 12.1	-1.1
SVRC	Sivrice-ELAZID	0.41	74	Pg	Pg	00 45 12.6	-1.3
SVRC				Sg	Sg	00 45 19.6	+0.3
ESIJ	Sivrice-Elazig	0.44	65	Pg	Pg	00 45 13.7	-0.7
ESIJ				Sg	Sb	00 45 20.8	-1.6
KAHTU	Kahta	0.48	198	P	Pg	00 45 13.8	-1.3
ELZ	Elazig	0.53	37	P	Pg	00 45 14.9	-1.1
ELZ				IAML		00 45 23.0	
	comp=N,2µm,0.3s						
ELZ				S	Sb	00 45 23.4	-1.5
AZEY	Adyaman-Merk	0.63	224	P	Pg	00 45 16.9	-0.9
HANM	anlurfa/Hi	0.69	175	P	Pg	00 45 17.7	-1.2
AKCD	Akcadag	0.69	273	P	Pg	00 45 17.6	-1.4
AKCD				S	Sb	00 45 27.9	-1.7
AKCD				IAML		00 45 28.0	
	comp=N,1µm,0.5s						
AKCD				IAML		00 45 31.0	
	comp=E,2µm,0.4s						
MDNT	Maden	0.70	79	P	Pg	00 45 18.7	-0.6
MDNT				S	Sg	00 45 27.6	-1.0
MDNT				IAML		00 45 29.0	
	comp=N,1µm,0.5s						
MCKZ	Bingol	0.86	9	P	Pg	00 45 21.0	-1.4
MCKZ				S	Sb	00 45 33.7	-0.9
MCKZ				IAML		00 45 34.0	
	comp=E,988nm,0.3s						
MCKZ				IAML		00 45 35.0	
	comp=N,773nm,0.4s						
ATAB	Bozova	0.89	207	P	Pg	00 45 21.8	-1.0
HEKM	Malatya_Hekimh	0.90	313	P	Pb	00 45 22.6	-0.9
ARPR	Arapgir-MALATY	0.90	336	Pg	Pg	00 45 22.3	-0.8
KOVA	Elazig, Kovanc	0.91	61	P	Pg	00 45 22.1	-1.0
AKCA	Adyaman/G¶l	1.00	242	P	Pg	00 45 23.9	-0.9
TNCL	Tunceli-Merkez	1.03	34	P	Pg	00 45 23.8	-1.7
DIYA	Diyarbakir	1.10	108	P	Pn	00 45 28.9	+1.8
DYBB	Diyarbakir	1.10	106	Pn	Pb	00 45 25.8	-1.0
SANL	SANLIURFA_Merk	1.10	172	P	Pb	00 45 25.5	-1.3
ILIC	ilic-Erzincan	1.20	351	Pn	Pb	00 45 27.2	-1.4
MDIV		1.21	331	P	Pg	00 45 29.3	+0.4
MAYK		1.31	69	P	Pn	00 45 29.3	-0.8
ERZN	Erzincan	1.50	28	Pn	Pn	00 45 32.4	-0.4
KHMN	Narli-Kahraman	1.57	237	Pn	Pg	00 45 34.4	-1.3
EUZM	Uzumlu	1.60	26	P	Pb	00 45 34.6	-0.8
BNGB	Bingl	1.64	63	Pn	Pb	00 45 35.7	-0.4
GAZ	Gaziantep	1.67	230	Pn	Pb	00 45 35.7	-0.8
KMRS	Kahramanmaras	1.69	244	Pn	Pb	00 45 35.3	-1.5
YEDI	Yedisu-Bingol	1.79	49	Pn	Pb	00 45 37.2	-1.6
SARI	SarD1z-Kayseri	1.88	275	Pn	Pb	00 45 39.4	-0.8
SVAN	Silvan-Diyarba	1.89	93	Pn	Pn	00 45 38.1	0.0
KARO	Karliova-Bingo	2.04	59	Pn	Pn	00 45 40.7	+0.4
SVSK	Karacayir	2.17	320	Pn	Pb	00 45 42.9	-2.0
VRTB	Varto-Mus	2.26	66	Pn	Pn	00 45 44.1	+0.8
BAYT	Aydıntepe-Bayb	2.37	26	Pn	Pb	00 45 46.1	-2.4
BNN	Bunyan	2.39	285	Pn	Pn	00 45 45.7	+0.7
KOZT	Kozan	2.48	253	Pn	Pn	00 45 46.9	+0.8
GURO	Guroymak-BITLI	2.55	83	Pn	Pn	00 45 47.9	+0.6
TOKT	Tokat	2.70	320	Pn	Pn	00 45 50.0	+0.8
MLAZ	Malazgirt-MUS	3.06	72	Pn	Pn	00 45 55.2	+0.9
CHOM	Cayeli-Rize	3.21	28	Pn	Pn	00 45 57.2	+1.1
AKDM	Akdamar-Van	3.29	88	Pn	Pn	00 45 58.5	+1.1
AGRB	Hanur-Agry	3.52	67	Pn	Pn	00 46 01.9	+1.3
BRTR	Keskin Array B	4.28	292	Pn	Pn	00 46 11.7	+0.7
	0.6nm,0.3s,baz=115,slow=12,SNR=31						
BRTR				Pg	Pb	00 46 21.1	0.0
	0.7nm,0.3s,baz=115,slow=16,SNR=11						
BRTR				Lg	Lg	00 47 22.0	
	0.1nm,0.3s,baz=126,slow=28,SNR=7.3						
BRTR				LR	LR	00 48 10.0	
	comp=Z,132nm,18.9s,baz=108,slow=45						
	3.3nm,0.6s						
GNI	Garni	4.98	66	Pn	Pn	00 46 25.0	+4.3
	0.2nm,0.3s,baz=286,slow=7.4,SNR=1.9						
GNI				LR	LR	00 47 53.8	
	comp=Z,14nm,20.6s,baz=126,slow=33						
	1.2nm,0.4s						
MMAI	Mount Meron Ar	5.92	209	Pn	Pn	00 46 33.8	+0.3
	1.5nm,0.3s,baz=49,slow=17,SNR=13						
MMAI				Lg	Lg	00 48 16.3	
	1.7nm,0.3s,baz=20,slow=25,SNR=4.2						
MMAI				LR	LR	00 49 07.0	
	comp=Z,81nm,19.3s,baz=30,slow=41						
	0.8nm,0.4s						
ASF	Jabal al Asfar	6.28	195	Pn	Pn	00 46 39.0	+0.6
	0.5nm,0.3s,baz=59,slow=2.2,SNR=6.4						
ASF				Lg	Lg	00 48 25.6	
	0.9nm,0.3s,baz=358,slow=21,SNR=4.2						
ASF				LR	LR	00 49 17.9	
	comp=Z,68nm,19.6s,baz=20,slow=40						
	0.5nm,0.3s						
KBZ	Khabaz	6.28	28	Pn	Pn	00 46 40.7	+2.5
	0.1nm,0.3s,baz=203,slow=15,SNR=1.0						
	0.6nm,0.6s						
KVAR	Kislovodsk Arr	6.40	26	Pn	Pn	00 46 42.1	+2.0
	baz=164,slow=7.4						
	1.0nm,0.4s						
EIL	Elat	9.15	202	LR	LR	00 50 49.2	
	comp=Z,88nm,19.3s,baz=32,slow=37						
MLR	Muntele Rosu	11.99	311	LR	LR	00 53 48.8	
	comp=Z,60nm,20.5s,baz=76,slow=44						
AKTO	Aktyubinsk	18.29	42	P	P	00 49 20.6	+1.1
	0.2nm,0.3s,baz=234,slow=11,SNR=3.6						
	0.9nm,0.5s						
VRAC	Vranov	19.39	312	LR	LR	00 58 39.5	
	comp=Z,30nm,19.1s,baz=132,slow=42						
FINES	FINESS Array B	24.52	345	P	P	00 50 25.9	+0.9
	2.4nm,1.0s,baz=146,slow=14,SNR=4.9						
	2.4nm,1.0s						
KURBB	Kurchatov Arra	30.57	53	P	P	00 51 21.2	+2.0
	0.7nm,0.9s,baz=266,slow=9.0,SNR=5.2						
	0.7nm,0.9s						
MKAR	Makanchi Array	32.81	61	P	P	00 51 41.1	+2.0
	0.3nm,0.6s,baz=278,slow=5.6,SNR=4.3						
	0.3nm,0.6s						

*IDC **08** 01:03:43.9±0.9, 56°.26S×146°.69E, h0km, mb4.2/7, mbtmp4.3/7, MS4.3/38, Error ellipse: s-maj=77.1km s-min=18.1km az=79.0*
*NEIC **08** 01:03:45.4±1.5, 56°.4S±0°.1×147°.0E±0°.2, h10km±1km, mb4.5/20, Error ellipse: s-maj=22.6km s-min=13.3km az=133.0*
*GCMT **08** 01:03:48.4±0.2, 56°.39S±0°.01×147°.25E±0°.02, h12km, MW5.1/128, Moment Tensor Solution. s56,c69; s128,c204; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.57±.11; $M_{\theta\theta}$2.25±.09; $M_{\phi\phi}$-1.67±.10; $M_{r\theta}$-1.10±.26; $M_{\theta\phi}$-4.26±.07; $M_{\phi r}$-0.27±.27; Best double couple: $M_0$4.82900×10^{16} NP1:ϕ_s347.00000°,δ76.00000°, λ-3.00000°. NP2:ϕ_s78.00000°,δ87.00000°,λ-166.00000°. Principal axes: T 5.0890, Plg8.0000°, Azm212.0000°; N -0.5150, Plg76.0000°, Azm89.0000°; P -4.5690, Plg12.0000°, Azm304.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 08 01:03:45.7±0.5**, 56°.37S**±0°.09×**147°.0E**±0°.1**, h11km, n125, σ1s.77**/85**, mb4.5**/16**, MS4.3**/40**, 12C-3D, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYZ	Puysegur Point	15.94	58	Pn	Pn	01 07 29.5	-0.2
WHZ	Wether Hill Ro	16.74	60	Pn	Pn	01 07 39.3	-0.6
TOO	Toolangi	18.83	356		P	01 08 05.1	-0.2
RPZ	Rata Peaks	19.84	61	LR	LR	01 14 23.2	
	comp=Z,2µm,20.1s,baz=174,slow=32						
CAN	Canberra	21.09	5	P	P	01 08 30.6	+0.7
CAN				IAmb	IAmb	01 08 53.1	
	comp=Z,23nm,1.1s						
VNDA	Vanda	21.88	171	P	P	01 08 37.6	-0.4
	comp=Z,7.1nm,1.2s,baz=338,slow=7.4,SNR=3.6						
VNDA				LR	LR	01 15 27.0	
	comp=Z,227nm,18.8s,baz=350,slow=32						
	comp=Z,7.1nm,1.2s						
VNDA	Vanda	21.88	171	P	P	01 08 36.9	-1.1
VNDA				IAmb	IAmb	01 08 45.2	
	comp=Z,29nm,1.4s						
BBOO	Buckleboo	24.75	338	P	P	01 09 06.2	-0.8
BBOO				IAmb	IAmb	01 09 23.2	
	comp=Z,17nm,1.1s						
STKA	Stephens Creek	24.77	349	P	P	01 09 05.5	-1.8
	comp=Z,8.2nm,0.8s,baz=153,slow=14,SNR=11						
STKA				LR	LR	01 17 03.4	
	comp=Z,685nm,18.2s,baz=174,slow=32						
	comp=Z,8.2nm,0.8s						
STKA	Stephens Creek	24.77	349		P	01 09 06.6	-0.7
URZ	Urewera	26.96	61	LR	LR	01 19 12.9	
	comp=Z,957nm,20.7s,baz=202,slow=34						
FORT	Forrest	28.83	325	P	P	01 09 43.7	0.0
INKA	Innaminka	28.95	348		P	01 09 44.6	-0.3
NWAO	Narrogin (SRO)	31.16	306	LR	LR	01 19 44.7	
	comp=Z,1µm,21.3s,baz=131,slow=31						
QSPA	South Pole Qui	33.74	180	P	P	01 10 27.5	+0.6
	comp=Z,1.7nm,0.9s,baz=336,slow=1.9,SNR=3.6						
QSPA				LR	LR	01 24 13.8	
	comp=Z,612nm,21.4s,baz=13,slow=36						
	comp=Z,1.7nm,0.9s						
QSPA	South Pole Qui	33.74	180	P	P	01 10 27.6	+0.8
ASAR	Alice Springs	34.05	338	P	P	01 10 27.9	-1.9
	comp=Z,3.4nm,0.8s,baz=167,slow=9.1,SNR=16						
ASAR				PcP	PcP	01 13 07.5	+0.2
	comp=Z,1.8nm,0.8s,baz=159,slow=2.8,SNR=7.3						
ASAR				LR	LR	01 22 09.0	
	comp=Z,351nm,21.4s,baz=159,slow=33						
	comp=Z,3.4nm,0.8s						
ASAR	Alice Springs	34.05	338		P	01 10 29.8	+0.1
AS31	Alice Springs	34.05	338		P	01 10 29.0	-0.8
CTA	Charters Tower	36.23	359	LR	LR	01 24 27.7	
	comp=Z,1µm,18.6s,baz=185,slow=34						
CTAO	Charters Tower	36.23	359	P	P	01 10 47.3	-1.2
CTAO				IAmb	IAmb	01 11 11.5	
	comp=Z,14nm,1.2s						
RAO	Raoul Island	36.69	57	LR	LR	01 23 12.5	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,464nm,21.7s,baz=174,slow=32						
WR8	**Warramunga Arr**	**37.54**	**340**		**P**	**01 10 58.6**	**-1.1**
WR8				IAmb	IAmb	01 11 02.1	
	comp=Z,8.4nm,0.9s						
WRA	**Warramunga Arr**	**37.58**	**340**	P	**P**	**01 10 57.9**	**-2.2**
	comp=Z,8.9nm,1.0s,baz=166,slow=7.4,SNR=22						
WRA				PcP	**PcP**	**01 13 17.0**	**-0.8**
	comp=Z,1.8nm,0.8s,baz=174,slow=2.4,SNR=5.0						
	comp=Z,8.9nm,1.0s						
WRA	**Warramunga Arr**	**37.58**	**340**		**P**	**01 10 59.0**	**-1.0**
MAW	**Mawson**	**37.88**	**218**	LR	LR	01 26 10.6	
	comp=Z,915nm,18.1s,baz=88,slow=36						
PSA00	**Pilbara Seismi**	**40.13**	**319**		**P**	**01 11 21.2**	**-0.1**
PSA00				IAmb	IAmb	01 11 24.6	
	comp=Z,11nm,1.1s						
PSA00	**Pilbara Seismi**	**40.13**	**319**	P	**P**	**01 11 21.7**	**+0.3**
PSA00				IAmb	IAmb	01 11 24.6	
	comp=Z,12nm,1.0s						
MBWA	**Marble Bar**	**40.55**	**319**	P	**P**	**01 11 24.8**	**0.0**
MBWA				IAmb	IAmb	01 11 30.5	
	comp=Z,9.1nm,0.7s						
FITZ	**Fitzroy Crossi**	**41.46**	**328**	P	**P**	**01 11 31.2**	**-1.1**
	comp=Z,4.9nm,0.9s,baz=178,slow=9.4,SNR=7.8						
FITZ				LR	LR	01 28 18.7	
	comp=Z,302nm,18.2s,baz=166,slow=36						
	comp=Z,4.9nm,0.9s						
COEN	**Coen**	**42.42**	**354**	P	**P**	**01 11 39.1**	**-1.1**
COEN				IAmb	IAmb	01 11 48.1	
	comp=Z,7.8nm,1.1s						
KNRA	**Kununurra**	**42.93**	**334**	P	**P**	**01 11 43.7**	**-0.6**
KNRA				IAmb	IAmb	01 11 49.3	
	comp=Z,20nm,1.4s						
MSVF	**Nonsavu**	**45.10**	**44**	LR	LR	01 27 33.9	
	comp=Z,419nm,18.9s,baz=193,slow=32						
PMG	**Port Moresby**	**46.84**	**0**	LR	LR	01 29 46.7	
	comp=Z,864nm,19.6s,baz=166,slow=33						
HNR	**Honiara**	**47.91**	**17**	LR	LR	01 29 17.9	
	comp=Z,9.2nm,18.5s,baz=241,slow=32						
BATI	**Baumata**	**49.52**	**329**	LR	LR	01 32 43.8	
	comp=Z,514nm,19.5s,baz=188,slow=35						
SNAA	**Sanae**	**50.51**	**192**	LR	LR	01 34 07.3	
	comp=Z,1μm,18.1s,baz=181,slow=36						
RAR	**Rarotonga**	**52.43**	**71**	LR	LR	01 31 20.1	
	comp=Z,261nm,20.5s,baz=212,slow=32						
H04S1	**CROZET ISLANDS**	**55.23**	**236**	T	T	02 13 54.2	
	baz=140,slow=75,SNR=48						
H04S2	**CROZET ISLANDS**	**55.23**	**236**	T	T	02 13 57.4	
	baz=140,slow=75,SNR=46						
H04S3	**CROZET ISLANDS**	**55.25**	**236**	T	T	02 13 52.8	
	baz=140,slow=75,SNR=58						
SIJI	**Sorong**	**56.77**	**341**	LR	LR	01 37 10.5	
	comp=Z,180nm,21.5s,baz=88,slow=35						
PMSA	**Palmer Station**	**56.88**	**165**	LR	LR	01 35 28.2	
	comp=Z,344nm,18.3s,baz=212,slow=33						
LEM	**Lembang**	**58.32**	**312**	LR	LR	01 37 04.6	
	comp=Z,295nm,19.4s,baz=160,slow=34						
PPT	**Papeete**	**60.87**	**78**	LR	LR	01 34 12.7	
	comp=Z,120nm,21.9s,baz=184,slow=30						
DAV	**Davao City (W)**	**65.64**	**337**	LR	LR	01 43 21.8	
	comp=Z,120nm,19.9s,baz=162,slow=36						
GUMO	**Guam**	**69.71**	**358**	LR	LR	01 45 42.0	
	comp=Z,64nm,18.1s,baz=162,slow=36						
RPN	**Rapa Nui**	**74.95**	**116**	LR	LR	01 40 23.0	
	comp=Z,156nm,18.7s,baz=198,slow=29						
H08S2	**Diego Garcia H**	**75.10**	**279**	T	T	02 38 04.1	
	baz=146,slow=76,SNR=53						
H08S1	**Diego Carcia H**	**75.11**	**279**	T	T	02 37 55.9	
	baz=146,slow=76,SNR=48						
H08S3	**Diego Garcia H**	**75.12**	**279**	T	T	02 37 56.9	
	baz=146,slow=76,SNR=52						
PLCA	**Paso Flores**	**78.18**	**152**	LR	LR	01 43 41.2	
	comp=Z,154nm,19.8s,baz=190,slow=31						
SUR	**Sutherland**	**80.52**	**224**	LR	LR	01 47 32.2	
	comp=Z,196nm,18.2s,baz=155,slow=33						
QIZ	**Qiongzhong**	**81.36**	**325**	P	**P**	**01 16 02.2**	**+0.2**
QIZ	**Qiongzhong**	**81.36**	**325**	S	**S**	**01 26 15.2**	**+2.5**
QIZ				LR	LR		
	comp=N,130nm,12.7s						
QIZ				LR	LR		
	comp=E,190nm,10.8s						
QIZ				LR	LR		
	comp=Z,140nm,17.9s						
BOSA	**Boshof**	**82.04**	**229**	LR	LR	01 47 21.6	
	comp=Z,126nm,19.7s,baz=175,slow=32						
H03S2	**Juan Fernandez**	**82.05**	**143**	T	T	02 47 09.5	
	baz=202,slow=74,SNR=22						
H03S1	**Juan Fernandez**	**82.05**	**143**	T	T	02 47 10.8	
	baz=202,slow=74,SNR=28						
H03S3	**Juan Fernandez**	**82.06**	**143**	T	T	02 47 10.8	
	baz=202,slow=74,SNR=22						
PALK	**Pallekele**	**83.26**	**294**	LR	LR	01 44 59.6	
	comp=Z,116nm,21.6s,baz=150,slow=30						
JOW	**Kunigami**	**84.38**	**343**	LR	LR	01 52 26.5	
	comp=Z,92nm,21.1s,baz=278,slow=35						
CMAR	**Chiang Mai Arr**	**84.75**	**315**	P	**P**	**01 16 18.3**	**-1.3**
	comp=Z,0.6nm,0.3s,baz=181,slow=4.4,SNR=8.7						
CMAR				LR	LR	01 52 29.7	
	comp=Z,139nm,20.1s,baz=165,slow=35						
	comp=Z,0.6nm,0.3s						
LBTB	**Lobatse**	**85.05**	**231**	LR	LR	01 50 02.4	
	comp=Z,126nm,18.5s,baz=152,slow=33						
CHTO	**Chiang Mai**	**85.07**	**315**		**P**	**01 16 20.1**	**-1.1**
JHJ	**Hachijo jima 2**	**89.34**	**354**	LR	LR	01 52 51.5	
	comp=Z,120nm,21.7s,baz=66,slow=33						
JNU	**Nakatsue**	**90.19**	**347**	LR	LR	01 57 24.4	
	comp=Z,57nm,18.5s,baz=157,slow=36						
PZH	**PanZhiHua**	**91.02**	**320**	P	**P**	**01 16 53.4**	**+3.7**
NJ2	**Nanjing**	**91.27**	**336**	*e*P	**P**	**01 16 53.8**	**+3.3**
NJ2				pmax	pmax		
	comp=Z,21nm,0.5s						
BRDH	**Bariadhala**	**91.51**	**311**	LR	LR	01 58 20.9	
	comp=Z,142nm,20.2s,baz=170,slow=36						
LSZ	**Lusaka**	**92.37**	**238**	LR	LR	01 52 08.6	
	comp=Z,266nm,20.2s,baz=146,slow=32						
MJAR	**Matsushiro Arr**	**92.85**	**353**	LR	LR	01 59 39.9	
	comp=Z,36nm,19.0s,baz=166,slow=36						
TSUM	**Tsumeb**	**93.57**	**227**	LR	LR	01 55 10.8	
	comp=Z,190nm,18.1s,baz=160,slow=33						
KSRS	**Korea Array**	**94.85**	**345**	LR	LR	01 59 57.0	
	comp=Z,42nm,19.0s,baz=135,slow=36						
CPUP	**Villa Florida**	**95.08**	**158**	LR	LR	01 57 06.9	
	comp=Z,64nm,18.4s,baz=200,slow=34						
HHC	**Hu-ho-hao-te**	**101.39**	**333**	*e*P	**Pdif**	**01 17 39.0**	**+2.6**
WMQ	**Urumqi**	**111.57**	**318**	PKP	**PKiKP**	**01 22 21.2**	**+1.9**
WMQ				PP	PP	01 23 11.1	+10
WMQ				LR	LR		
	comp=Z,160nm,24.0s						
MKAR	**Makanchi Array**	**116.13**	**316**	PKP	**PKPdf**	**01 22 26.9**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=221,slow=2.1,SNR=4.2						
TORD	**Torodi Ar. Bea**	**129.31**	**226**	PKP	**PKiKP**	**01 22 54.8**	**0.0**
	comp=Z,0.8nm,0.8s,baz=212,slow=3.8,SNR=4.2						
AKASG	**Malin Array Be**	**143.72**	**288**	PKP	**PKPdf**	**01 23 19.4**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=97,slow=2.7,SNR=4.9						
GZR	**Gura Zlata**	**144.11**	**276**	⇑P	**PKPab**	**01 23 18.0**	**-0.1**
BURAR	**Bucovina Array**	**144.11**	**281**	⇑P	**PKiKP**	**01 23 22.9**	**-1.1**
DEV	**Deva**	**144.34**	**277**	⇑P	**PKPdf**	**01 23 20.0**	**-0.8**
CJR	**Cluj-Napoca**	**144.46**	**279**	⇑P	**PKiKP**	**01 23 25.4**	**+0.7**
MARR	**Marisel-Cluj**	**144.70**	**278**	⇓P	**PKPdf**	**01 23 21.1**	**-0.4**
KEST	**Kesra**	**144.86**	**252**	PKP	**PKPdf**	**01 23 22.9**	**+0.8**
	comp=Z,18nm,1.0s,baz=280,slow=1.2,SNR=7.7						
BZS	**Buzias**	**144.89**	**276**	⇑P	**PKPdf**	**01 23 21.6**	**-0.1**
DRGR		**145.00**	**278**	⇑P	**PKiKP**	**01 23 26.4**	**+0.6**
BLY	**Banja Luka**	**146.81**	**271**	⇓P	**PKiKP**	**01 23 32.6**	**+3.0**
MORH	**Mrgy, Hungar**	**146.90**	**274**	⇑P	**PKiKP**	**01 23 29.0**	**-0.6**
STHS	**Stebnicka Huta**	**147.31**	**281**	*e*PKP	**PKiKP**	**01 23 30.5**	**+0.1**
LANS	**Liptovska Anna**	**148.13**	**280**	*e*PKP	**PKPab**	**01 23 33.1**	**-0.3**
LANS				*e*		01 23 36.0	
MODS	**Modra-Piesok**	**148.91**	**277**	*e*PKP	**PKPab**	**01 23 36.2**	**-0.4**
RONA	**Rosalia, Austr**	**149.07**	**275**	*e*PKiKP	**PKPab**	**01 23 37.0**	**-0.2**
	comp=Z,6.4nm,0.9s						
SOKA	**Soboth**	**149.18**	**272**	*e*PKiKP	**PKPab**	**01 23 37.4**	**-0.4**
	comp=Z,13nm,1.3s						
ARSA	**Arzberg**	**149.24**	**274**	*e*PKP	**PKiKP**	**01 23 35.7**	**+1.2**
	comp=Z,8.6nm,1.0s						
CONA	**Conrad Observa**	**149.44**	**275**	*i* PKiKP	**PKPab**	**01 23 37.7**	**-1.1**
	comp=Z,8.5nm,1.4s						
STEB	**Steborice**	**149.49**	**280**	⇑*e*PKP	**PKPab**	**01 23 37.6**	**-1.2**
MORC	**Moravsky Berou**	**149.53**	**279**	⇓P	**PKPab**	**01 23 38.7**	**-0.4**
MORC	**Moravsky Berou**	**149.53**	**279**	*e*PKP	**PKiKP**	**01 23 36.5**	**+1.5**
KRUC	**Moravsky**	**149.78**	**277**	*e*PKP	**PKiKP**	**01 23 36.9**	**+1.4**
VRAC	**Vranov**	**149.80**	**278**	*e*PKP	**PKiKP**	**01 23 37.2**	**+1.6**
MYKA	**Terra Mystica**	**149.93**	**271**	*i* pPKP	**PKPab**	**01 23 40.3**	**-0.5**
	comp=Z,5.5nm,0.9s						
FINES	**FINESS Array B**	**150.01**	**304**	PKPbc	**PKPbc**	**01 23 32.8**	**-1.9**
	comp=Z,6.2nm,0.9s,baz=113,slow=5.0,SNR=8.9						
MOA	**Molln**	**150.28**	**274**	*i* PKP	**PKiKP**	**01 23 37.9**	**+1.3**
	comp=Z,4.6nm,1.2s						
KBA	**Koelnbreinsper**	**150.35**	**272**	*e*PKiKP	**PKPab**	**01 23 40.3**	**-2.4**
	comp=Z,12nm,1.3s						
DPC	**Dobruska-Polom**	**150.50**	**279**	⇑*e*PKP	**PKiKP**	**01 23 37.6**	**+0.6**
RES	**Resolute Bay**	**150.53**	**28**	PKPbc	**PKiKP**	**01 23 35.9**	**-0.4**
	comp=Z,2.4nm,0.8s,baz=274,slow=3.6,SNR=4.6						
BIOA	**Bad Ischl, Aus**	**150.54**	**273**	*i* PKiKP	**PKPab**	**01 23 40.8**	**-2.5**
	comp=Z,3.2nm,0.8s						
ABTA	**Abfaltersbach**	**150.62**	**270**	*i* pPKP	**PKPab**	**01 23 41.6**	**-2.2**
	comp=Z,4.9nm,0.9s						
OSTC	**Ostas**	**150.66**	**280**	⇑*e*PKP	**PKPab**	**01 23 41.5**	**-2.2**
CHVC	**Chvalec**	**150.77**	**280**	⇑*e*PKP	**PKiKP**	**01 23 39.8**	**+2.3**
LESA	**Schwarzleotal**	**150.93**	**272**	*i* pPKP	**PKPab**	**01 23 42.4**	**-2.5**
	comp=Z,6.2nm,0.7s						
GERES	**GERESS Array B**	**151.15**	**275**	PKPbc	**PKPbc**	**01 23 37.9**	**-0.1**
	comp=Z,3.5nm,1.0s,baz=199,slow=2.4,SNR=13						
ZVC	**Zvikov**	**151.20**	**276**	⇑*e*PKP	**PKiKP**	**01 23 41.5**	**+3.1**
WTTA	**Wattenberg**	**151.41**	**271**	*i* pPKP	**PKPab**	**01 23 43.5**	**-3.6**
	comp=Z,5.4nm,0.9s						
WATA	**Walderalm**	**151.49**	**271**	*i* PKiKP	**PKiKP**	**01 23 42.8**	**+3.5**
	comp=Z,4.6nm,1.2s						
SQTA	**Sankt Quirin**	**151.62**	**270**	*e*PKiKP	**PKiKP**	**01 23 43.2**	**+3.6**
	comp=Z,12nm,1.5s						
ARCES	**ARCESS Array B**	**151.65**	**321**	PKPbc	**PKPbc**	**01 23 38.0**	**-0.4**
	comp=Z,5.5nm,0.8s,baz=66,slow=2.9,SNR=6.4						
ARCES	**ARCESS Array B**	**151.65**	**321**		**PKPbc**	**01 23 37.7**	**-0.7**
MOTA	**Moosalm**	**151.75**	**270**	*i* pPKP	**PKPab**	**01 23 44.1**	**-4.4**
	comp=Z,8.6nm,0.9s						
FETA	**Feichten**	**151.78**	**269**	*e*pPKP	**PKPab**	**01 23 44.5**	**-4.1**
	comp=Z,8.3nm,1.0s						
RETA	**Reutte**	**152.03**	**270**	*e*PKiKP	**PKiKP**	**01 23 44.0**	**+3.7**
	comp=Z,7.6nm,1.2s						
DAVA	**Damuels**	**152.40**	**269**	*i* pPKP	**PKPab**	**01 23 46.1**	**-5.1**
	comp=Z,8.6nm,1.1s						
SPITS	**Spitsbergen Ar**	**152.59**	**340**	PKPbc	**PKPbc**	**01 23 39.9**	**-0.4**
	comp=Z,14nm,1.1s,baz=92,slow=5.8,SNR=7.4						
ESDC	**Sonseca Array**	**154.67**	**241**	PKPbc	**PKPbc**	**01 23 45.4**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=100,slow=1.4,SNR=5.0						

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*IDC **08** 01:16:19.9±0.9, 15°.36S×167°.51E, h0km, mb4.0/12, mbtmp4.1/14, ML5.0/2, MS3.8/9, Error ellipse: s-maj=23.6km s-min=20.1km az=133.0*

*NOU **08** 01:16:19.8, 15°.27S×167°.80E, h0km, mB5.8/11, Vanuatu Islands*

*NEIC **08** 01:16:21.2±1.8, 15°.3S±0°.1×167°.73E±0°.06, h10km±1km, mb4.5/13, Error ellipse: s-maj=19.8km s-min=6.0km az=337.0*

ISC 08 01:16:21.0±0.6**, 15°.26S**±0°.07×**167°.71E**±0°.06**, h10**km**, n52,** σ1s.**21**/46**, mb4.0**/16**, MS3.9**/9**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.52**	**249**	P	**Pg**	**01 16 31.7**	**+0.6**
SANVU	**Saraoutou**	**0.52**	**249**	S	**Sg**	**01 16 38.7**	**+0.8**
SANVU	**Saraoutou**	**0.52**	**249**		**Pg**	**01 16 31.9**	**+0.8**
SANVU					**Sg**	**01 16 38.4**	**+0.4**
DVP	**Devils Point**	**2.49**	**169**	P	**Pn**	**01 17 01.0**	**-0.6**
RTV	**Rentapao**	**2.61**	**165**	P	**Pn**	**01 17 02.8**	**-0.4**
MARNC	**Mare, Loyalty**	**6.19**	**177**	P	**Pn**	**01 17 51.9**	**-0.6**
MARNC	**Mare, Loyalty**	**6.19**	**177**	Pn	**Pn**	**01 17 50.7**	**-1.8**
YATNC	**Mamie plateau,**	**6.80**	**186**	P	**Pn**	**01 18 00.4**	**-0.5**
DZM	**Mont Dzumac**	**6.88**	**190**	Pn	**Pn**	**01 18 01.2**	**-0.8**
	13nm,0.3s,baz=31,slow=15,SNR=93						
DZM				Sn	**Sn**	**01 19 20.3**	**-0.2**
	4.1nm,0.3s,baz=339,slow=20,SNR=1.4						
	47nm,0.4s						
DZM	**Mont Dzumac**	**6.88**	**190**	P	**Pn**	**01 18 02.1**	**+0.1**
DZM	**Mont Dzumac**	**6.88**	**190**		**Pn**	**01 18 02.1**	**+0.1**
ONTNC	**Ouen Toro**	**7.11**	**189**	P	**Pn**	**01 18 05.8**	**+0.7**
ONTNC	**Ouen Toro**	**7.11**	**189**		**Pn**	**01 18 06.4**	**+1.3**
OUENC	**Ouen Island, N**	**7.16**	**186**	Pn	**Pn**	**01 18 07.4**	**+1.6**
HURO	**Huro Makira**	**7.40**	**309**	P	**Pn**	**01 18 10.3**	**+1.2**
NGOA	**Tingoa Renbel**	**8.30**	**295**	P	**Pn**	**01 18 22.2**	**+0.7**
MSVF	**Nonsavu**	**10.22**	**105**	Pn	**Pn**	**01 18 51.2**	**+3.3**
	0.7nm,0.3s,baz=271,slow=11,SNR=13						
	28nm,0.9s						
MSVF	**Nonsavu**	**10.22**	**105**		Pn	01 18 54.4	+6.4
FUNA	**Funafuti**	**13.08**	**61**	Pn	**Pn**	**01 19 24.8**	**-2.3**
EIDS	**Eidsvold**	**18.53**	**235**	P	**Pn**	**01 20 38.9**	**+0.9**
PMG	**Port Moresby**	**20.89**	**284**	P	**P**	**01 21 02.6**	**-1.0**
	2.7nm,0.3s,baz=110,slow=9.0,SNR=4.9						
	2.7nm,0.3s						
PMG	**Port Moresby**	**20.89**	**284**	P	**P**	**01 21 02.7**	**-1.0**
PMG				IAmb	IAmb	01 21 24.9	
	comp=Z,31nm,1.1s						
COEN	**Coen**	**23.77**	**270**	P	**P**	**01 21 33.6**	**-0.4**
COEN				IAmb	IAmb	01 21 43.0	
	comp=Z,9.5nm,1.0s						
INKA	**Innaminka**	**27.91**	**239**	P	**P**	**01 22 12.1**	**+0.6**
INKA				IAmb	IAmb	01 22 12.5	
	comp=Z,6.0nm,0.7s						
RPZ	**Rata Peaks**	**28.50**	**175**	LR	LR	01 33 00.1	
	comp=Z,233nm,18.4s,baz=89,slow=35						
STKA	**Stephens Creek**	**28.98**	**231**	P	**P**	**01 22 19.6**	**-1.3**
	comp=Z,1.6nm,0.5s,baz=38,slow=5.1,SNR=4.2						
STKA				LR	LR	01 33 36.4	
	comp=Z,90nm,19.7s,baz=65,slow=36						
	comp=Z,1.6nm,0.5s						
STKA	**Stephens Creek**	**28.98**	**231**	P	**P**	**01 22 20.7**	**-0.2**
JAY	**Jayapura**	**29.48**	**293**	LR	LR	01 32 18.4	
	comp=Z,497nm,20.6s,baz=31,slow=33						
WB0	**Warramunga Arr**	**32.05**	**257**	P	**P**	**01 22 46.5**	**-1.7**
WB0				IAmb	IAmb	01 23 12.5	
	comp=Z,8.9nm,1.3s						
WRA	**Warramunga Arr**	**32.11**	**257**	P	**P**	**01 22 47.2**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=84,slow=8.8,SNR=2.7						
	comp=Z,0.3nm,0.6s						
WRA	**Warramunga Arr**	**32.11**	**257**	P	**P**	**01 22 46.3**	**-2.4**
AS31	**Alice Springs**	**32.88**	**250**	P	**P**	**01 22 54.3**	**-1.2**
ASAR	**Alice Springs**	**32.88**	**250**	P	**P**	**01 22 54.5**	**-1.0**
	comp=Z,1.4nm,0.7s,baz=77,slow=9.0,SNR=19						
	comp=Z,1.4nm,0.7s						
ASAR	**Alice Springs**	**32.88**	**250**	P	**P**	**01 22 55.1**	**-0.5**
BBOO	**Buckleboo**	**33.59**	**233**	P	**P**	**01 23 01.5**	**-0.1**
KNRA	**Kununurra**	**37.50**	**264**	P	**P**	**01 23 34.1**	**-1.3**
KNRA				IAmb	IAmb	01 24 14.7	
	comp=Z,13nm,1.3s						
FITZ	**Fitzroy Crossi**	**40.33**	**260**	P	**P**	**01 23 58.1**	**-0.9**
	comp=Z,1.2nm,0.5s,baz=76,slow=9.6,SNR=8.4						
	comp=Z,1.2nm,0.5s						
TGY	**Tagaytay City**	**54.68**	**300**	LR	LR	01 47 30.4	
	comp=Z,58nm,21.1s,baz=122,slow=34						
USRK	**Ussuriysk Ar.**	**67.55**	**333**	P	**P**	**01 27 18.1**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=216,slow=3.0,SNR=1.4						
	comp=Z,1.0nm,0.6s						
QSPA	**South Pole Qui**	**74.77**	**180**	P	**P**	**01 27 59.9**	**-1.3**
	comp=Z,1.4nm,0.8s,baz=37,slow=16,SNR=2.5						
	comp=Z,1.4nm,0.8s						
QSPA	**South Pole Qui**	**74.77**	**180**	P	**P**	**01 27 59.9**	**-1.3**
CMAR	**Chiang Mai Arr**	**75.55**	**294**	P	**P**	**01 28 05.2**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=87,slow=7.0,SNR=0.8						
	comp=Z,0.4nm,0.3s						
SONM	**Songino Array**	**83.17**	**323**	P	**P**	**01 28 47.3**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=134,slow=6.2,SNR=2.4						
	comp=Z,0.4nm,0.4s						
SONM	**Songino Array**	**83.17**	**323**	P	**P**	**01 28 47.8**	**+0.3**
SONM				IAmb	IAmb	01 29 01.0	
	comp=Z,5.1nm,1.4s						
K20K	**Telida**	**83.78**	**16**	P	**P**	**01 28 50.0**	**-0.1**
K20K				IAmb	IAmb	01 29 26.4	
	comp=Z,2.6nm,1.2s						
ILAR	**Eielson Array**	**86.90**	**18**	P	**P**	**01 29 08.2**	**+2.5**
	comp=Z,0.9nm,0.9s,baz=233,slow=6.5,SNR=8.0						
	comp=Z,0.9nm,0.9s						
PFO	**Pinyon Flats O**	**86.97**	**54**	LR	LR	02 06 44.3	
	comp=Z,77nm,18.7s,baz=227,slow=35						
NVAR	**Mina Array Bea**	**87.30**	**49**	P	**P**	**01 29 09.5**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=280,slow=3.5,SNR=2.2						
	comp=Z,0.5nm,0.6s						
LPIG	**La Paz**	**89.04**	**65**	LR	LR	02 03 10.2	
	comp=Z,43nm,18.1s,baz=210,slow=32						
ANMO	**Albuquerque**	**95.26**	**55**	LR	LR	02 07 26.6	
	comp=Z,92nm,19.8s,baz=226,slow=32						
MKAR	**Makanchi Array**	**97.88**	**316**	P	**P**	**01 29 56.9**	**-0.1**
	comp=Z,0.3nm,0.8s,baz=111,slow=7.9,SNR=1.7						
MKAR				LR	LR	02 12 40.1	
	comp=Z,45nm,21.8s,baz=46,slow=35						
	comp=Z,0.3nm,0.8s						
ZALV	**Zalesovo Beam**	**98.07**	**324**	LR	LR	02 14 40.7	
	comp=Z,20nm,20.4s,baz=112,slow=36						

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*GUC **08** 01:28:38.7±0.6, 21°.87S×67°.57W, h205km±9km, ML3.5*

*SCB **08** 01:28:38.4±1.2, 21°.89S×67°.41W, h168km±11km, MB5.6, ML3.2/3, Error ellipse: s-maj=4.9km s-min=3.3km az=0.0*

ISC 08 01:28:37.4±2.1**, 21°.90S**±0°.06×**67°.40W**±0°.05**, h185**km±17km**, n27,** σ0s.**92**/39**, 5C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**1.71**	**273**	⇓*e*P	**Pn**	**01 29 13.1**	**+1.2**
PB09				*e*S	**Sn**	**01 29 39.6**	**+0.9**
PB09	**IPOC Station P**	**1.71**	**273**	P	**Pn**	**01 29 13.0**	**+1.0**
MOCB	**Mochara**	**1.77**	**69**	P	**Pn**	**01 29 13.0**	**+0.2**
MOCB				S	**Sn**	**01 29 39.1**	**-1.1**
MOCB				IAML		01 29 40.7	
	78nm,0.4s						
YJA	**Yavi**	**1.77**	**99**	P	**Pn**	**01 29 13.6**	**+0.7**
PB01	**IPOC Station P**	**2.12**	**293**	⇑*e*P	**Pn**	**01 29 16.3**	**+0.1**
PB01				*e*S	**Sn**	**01 29 45.9**	**-0.3**
PB01				IAML		01 29 46.9	
	comp=N,214nm,0.4s						
PB01	**IPOC Station P**	**2.12**	**293**	P	**Pn**	**01 29 16.8**	**+0.6**
PB06	**IPOC Station P**	**2.16**	**248**	*e*S	**Sn**	**01 29 47.2**	**0.0**
PB06	**IPOC Station P**	**2.16**	**248**	P	**Pn**	**01 29 17.6**	**+0.9**
PB03	**IPOC Station P**	**2.19**	**266**	*e*P	**Pn**	**01 29 17.7**	**+0.8**
PB03				*e*S	**Sn**	**01 29 47.2**	**-0.5**
PB03				IAML		01 29 47.8	
	comp=E,119nm,0.2s						
PB07	**IPOC Station P**	**2.31**	**274**	⇑*e*P	**Pn**	**01 29 18.9**	**+0.5**
PB07				*e*S	**Sn**	**01 29 49.5**	**-0.8**
PB07				IAML		01 29 50.8	
	comp=N,109nm,0.1s						
PB02	**IPOC Station P**	**2.39**	**283**	⇓*e*P	**Pn**	**01 29 19.7**	**+0.5**
PB02				*e*S	**Sn**	**01 29 50.5**	**-1.1**
PB02				IAML		01 29 52.4	
	comp=E,136nm,0.2s						
PB02	**IPOC Station P**	**2.39**	**283**	P	**Pn**	**01 29 19.9**	**+0.7**
PB02				S	**Sn**	**01 29 50.9**	**-0.8**
PB02				IAML		01 29 52.3	
	comp=E,125nm,0.2s						
PB08	**IPOC Station P**	**2.39**	**317**	⇑*e*P	**Pn**	**01 29 20.7**	**+1.1**
PB08				*e*S	**Sn**	**01 29 52.6**	**+0.3**
PB08	**IPOC Station P**	**2.39**	**317**	P	**Pn**	**01 29 20.4**	**+0.9**
PB05	**IPOC Station P**	**2.76**	**249**	*e*S	**Sn**	**01 29 57.8**	**-1.6**
PATCX	**Punta Patache**	**2.78**	**292**	*i* P	**Pn**	**01 29 23.7**	**+0.1**
PATCX				*i* S	**Sn**	**01 29 58.3**	**-1.4**
PATCX				IAML		01 29 59.9	
	comp=N,102nm,0.2s						
GO01	**Chusmiza**	**2.78**	**323**	⇑*e*P	**Pn**	**01 29 24.7**	**+0.6**
GO01				*e*S	**Sn**	**01 29 59.8**	**-0.7**
GO01				IAML		01 30 05.9	
	comp=E,147nm,0.2s						
GO01	**Chusmiza**	**2.78**	**323**	P	**Pn**	**01 29 25.0**	**+0.9**
PB11	**IPOC Station P**	**2.99**	**315**	⇑*e*P	**Pn**	**01 29 26.1**	**-0.3**
PB11				*e*S	**Sn**	**01 30 02.7**	**-1.8**
PB11				IAML		01 30 04.6	
	comp=N,118nm,0.2s						
PB11	**IPOC Station P**	**2.99**	**315**	P	**Pn**	**01 29 26.2**	**-0.2**
PB11				S	**Sn**	**01 30 03.1**	**-1.4**
PB11				IAML		01 30 04.8	
	comp=N,58nm,0.2s						
PB14	**IPOC Station P**	**3.87**	**225**	P	**Pn**	**01 29 37.5**	**+0.2**
SOET	**ToroToro**	**4.05**	**22**	P	**Pn**	**01 29 39.8**	**+0.1**
PB16	**IPOC Station P**	**4.06**	**330**	P	**Pn**	**01 29 41.0**	**+1.0**
BBOJ	**La Paz, Jacaqu**	**4.95**	**351**	P	**Pn**	**01 29 52.5**	**+1.1**
BBOE	**La Paz, Chanca**	**5.09**	**354**	P	**Pn**	**01 29 54.4**	**+1.2**
LPAZ	**La Paz**	**5.62**	**353**	P	**Pn**	**01 30 01.2**	**+1.0**
BBOB	**La Paz, Bander**	**5.77**	**353**	P	**Pn**	**01 30 02.8**	**+0.8**

IDC 08 01:40:39.5±21.0**, 22°.72S**×**177°.99E, h490**km±385km**, mb3.1**/3**, mbtmp4.0**/4**, Error ellipse: s-maj=790.9km s-min=101.8km az=91.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.96**	**1**	P	P	01 42 05.7	-0.1
	4.7nm,0.4s,baz=90,slow=20,SNR=9.9						
STKA	**Stephens Creek**	**33.47**	**246**	P	P	01 46 37.2	0.0
	1.6nm,0.7s,baz=69,slow=8.6,SNR=3.4						
	1.6nm,0.7s						
ASAR	**Alice Springs**	**40.41**	**260**	P	P	01 47 34.5	-0.2
	1.2nm,0.5s,baz=93,slow=7.5,SNR=20						
	1.2nm,0.5s						
WRA	**Warramunga Arr**	**40.65**	**265**	P	P	01 47 36.4	-0.1
	1.7nm,0.6s,baz=102,slow=8.0,SNR=24						
	1.7nm,0.6s						

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*IDC **08** 01:59:26.8±1.6, 18°.25S×178°.13W, h581km±17km, mb3.4/14, mbtmp4.3/16, Error ellipse: s-maj=18.6km s-min=13.8km az=123.0*

*NEIC **08** 01:59:27.7±2.2, 18°.2S±0°.1×178°.2W±0°.1, h587km±7km, mb4.4/85, Error ellipse: s-maj=20.0km s-min=17.1km az=134.0*

*NOU **08** 01:59:34.2, 17°.96S×178°.23W, h511km, MLv4.0/5, Fiji Islands Region*

ISC 08 01:59:28.1±0.5**, 18°.25S**±0°.10×**178°.18W**±0°.09**, h600**km**, n370,** σ0s.**73**/342**, mb4.3**/62**, 12C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**0.60**	**272**	P	**P**	**02 00 36.1**	**-2.5**
TAVE	**Taveuni**	**2.25**	**313**	P	**P**	**02 00 40.6**	**-2.9**
DGTI	**Dogotuki**	**2.78**	**314**	P	**P**	**02 00 43.2**	**-2.9**
MSVF	**Nonsavu**	**3.62**	**278**	P	**P**	**02 00 49.7**	**-1.4**
	582nm,0.6s,baz=138,slow=5.7,SNR=500						
MSVF				S	**S**	**02 01 58.1**	**-0.6**
	73nm,1.0s,baz=140,slow=22,SNR=9.6						
MSVF	**Nonsavu**	**3.62**	**278**	P	**P**	**02 00 50.0**	**-1.1**
MSVF	**Nonsavu**	**3.62**	**278**		**P**	**02 00 50.2**	**-1.0**
FUTU	**Fugatoga**	**3.92**	**1**	P	**P**	**02 00 50.6**	**-2.5**
FUTU	**Fugatoga**	**3.92**	**1**	P	**P**	**02 00 50.8**	**-2.3**
SANVU	**Saraoutou**	**14.26**	**279**	P	**P**	**02 02 29.3**	**-0.2**
DZM	**Mont Dzumac**	**14.93**	**253**	P	**P**	**02 02 35.1**	**-0.6**
	4.0nm,0.6s,baz=108,slow=21,SNR=9.4						
DZM	**Mont Dzumac**	**14.93**	**253**	P	**P**	**02 02 33.5**	**-2.2**
URZ	**Urewera**	**20.36**	**191**	P	**P**	**02 03 23.3**	**-1.5**
	5.6nm,0.8s,baz=264,slow=4.1,SNR=7.2						
	5.6nm,0.8s						
THZ	**Tophouse**	**24.64**	**196**	P	**P**	**02 04 02.7**	**-0.3**
PMG	**Port Moresby**	**34.73**	**280**		**P**	**02 05 30.2**	**+0.3**
COEN	**Coen**	**37.32**	**271**	P	**P**	**02 05 51.2**	**0.0**
COEN				IAmb	IAmb	02 06 23.4	
	comp=Z,12nm,1.3s						
STKA	**Stephens Creek**	**38.65**	**242**	P	**P**	**02 06 03.2**	**+1.4**
	comp=Z,1.4nm,0.7s,baz=22,slow=8.8,SNR=2.9						
	comp=Z,1.4nm,0.7s						
WR8	**Warramunga Arr**	**44.63**	**260**	P	**P**	**02 06 48.7**	**-0.2**
WRA	**Warramunga Arr**	**44.78**	**260**	P	**P**	**02 06 49.2**	**-0.9**
	comp=Z,3.1nm,0.8s,baz=92,slow=7.6,SNR=26						
WRA				PcP	**PcP**	**02 08 18.5**	**-0.4**
	comp=Z,0.6nm,0.9s,baz=96,slow=3.8,SNR=5.1						
	comp=Z,3.1nm,0.8s						
WRA	**Warramunga Arr**	**44.78**	**260**		**P**	**02 06 49.7**	**-0.4**
AS31	**Alice Springs**	**44.90**	**255**		**P**	**02 06 51.5**	**+0.5**
ASAR	**Alice Springs**	**44.91**	**255**	P	**P**	**02 06 51.5**	**+0.4**
	comp=Z,8.2nm,0.8s,baz=87,slow=9.0,SNR=76						
ASAR				PcP	**PcP**	**02 08 20.2**	**+0.8**
	comp=Z,1.1nm,0.5s,baz=98,slow=4.4,SNR=6.5						
ASAR				S	**S**	**02 12 45.8**	**-0.8**
	comp=Z,1.7nm,1.1s,baz=90,slow=16,SNR=7.8						
	comp=Z,8.2nm,0.8s						
ASAR	**Alice Springs**	**44.91**	**255**	P	**P**	**02 06 50.7**	**-0.3**
KNRA	**Kununurra**	**50.67**	**264**	P	**P**	**02 07 33.6**	**-0.3**
MJAR	**Matsushiro Arr**	**68.31**	**323**	P	**P**	**02 09 30.2**	**-0.4**
	comp=Z,5.9nm,0.8s,baz=160,slow=6.5,SNR=5.2						
	comp=Z,5.9nm,0.8s						
MAJO	**Matsushiro**	**68.31**	**323**	P	**P**	**02 09 30.7**	**+0.1**
MAJO				IAmb	IAmb	02 10 08.5	
	comp=Z,20nm,1.4s						
ADK	**Adak**	**69.84**	**1**	P	**P**	**02 09 38.2**	**-1.2**
NIKH	**Nikolski High**	**71.38**	**6**	P	**P**	**02 09 49.4**	**+1.1**
	baz=189						
QSPA	**South Pole Qui**	**71.81**	**180**	P	**P**	**02 09 51.7**	**+0.8**
	comp=Z,3.1nm,0.8s,baz=340,slow=0.3,SNR=8.5						
	comp=Z,3.1nm,0.8s						
QSPA	**South Pole Qui**	**71.81**	**180**	P	**P**	**02 09 51.8**	**+0.9**
QSPA				IAmb	IAmb	02 09 54.0	
	comp=Z,16nm,1.4s						
UNV	**Unalaska Valle**	**72.50**	**7**	P	**P**	**02 09 53.5**	**-1.3**
UNV	**Unalaska Valle**	**72.50**	**7**	P	**P**	**02 09 56.2**	**+1.4**
	baz=192						
TPUB	**Ta-pu**	**72.62**	**302**	P	**P**	**02 09 55.1**	**-1.1**
FALS	**False Pass**	**73.90**	**9**	P	**P**	**02 10 03.1**	**+0.4**
	baz=194						
PEA0B	**Petropavlovsk-**	**74.06**	**345**	P	**P**	**02 10 03.6**	**-0.1**

PETK Petropavlovsk- 74.06 345 P P 02 10 03.9 +0.2
comp=Z,8.5nm,0.8s,baz=103,slow=8.7,SNR=16
comp=Z,8.5nm,0.8s
PETK Petropavlovsk- 74.06 345 P P 02 10 03.6 -0.1
CHNA Chernabura Isl 74.50 11 P P 02 10 06.3 +0.2
baz=198
SDPT Sand Point 74.84 10 P P 02 10 08.1 +0.1
baz=197
KSRS Korea Array 75.10 318 P P 02 10 10.8 +1.0
comp=Z,0.9nm,0.8s,baz=132,slow=6.7,SNR=3.3
comp=Z,0.9nm,0.8s
KSAR Wonju Array Be 75.11 318 P P 02 10 08.8 -1.1
SPIA Saint Paul Isl 75.43 4 P P 02 10 10.9 -0.3
baz=188
CHIR Chirikof Islan 76.21 13 P P 02 10 15.3 -0.3
baz=202
SII Sitkinak Islan 77.21 13 P P 02 10 21.0 0.0
baz=203
R16K Pilot Point 77.46 11 P P 02 10 21.8 -0.5
baz=200
R17L Mt. Peulik Vol 77.75 12 P P 02 10 23.6 -0.4
baz=201
OHAK Old Harbor 78.01 14 P P 02 10 25.5 +0.2
OHAK IAmb IAmb 02 10 26.1
comp=Z,12nm,1.0s
OHAK Old Harbor 78.01 14 P P 02 10 24.6 -0.7
baz=204
Q17K Contact Creek 78.43 12 P P 02 10 26.7 -0.9
baz=202
O14K Tigyukauivet M 78.46 9 P P 02 10 27.2 -0.4
baz=196
O15K Ungalikthiuk R 78.60 10 P P 02 10 28.1 -0.3
baz=198
Q16K King Salmon 78.67 11 P P 02 10 28.1 -0.6
baz=201
KDAK Kodiak Island 78.68 14 P P 02 10 27.7 -1.1
baz=205
P16K Nushagak River 78.77 10 P P 02 10 28.4 -0.8
baz=200
M11K Mekoryuk 78.96 6 P P 02 10 30.0 -0.2
baz=192
Q18K Katmai Hardscr 78.96 12 P P 02 10 30.1 -0.4
baz=202
N14K Kuskokwak Cree 79.05 8 P P 02 10 31.2 +0.5
N14K Kuskokwak Cree 79.05 8 P P 02 10 30.6 -0.1
baz=196,SNR=7.1
P17K Kvichak River 79.20 11 P 02 10 31.4 -0.1
P17K Kvichak River 79.20 11 P P 02 10 31.1 -0.4
baz=201
O16K Kokwok River B 79.28 10 P P 02 10 31.2 -0.8
baz=199
M13K Dall Lake 79.30 7 P P 02 10 31.8 -0.2
baz=194
Q20K Shuyak Island 79.48 13 P P 02 10 32.8 -0.2
baz=205
Q19K Cape Douglas, 79.50 13 P P 02 10 33.0 -0.2
baz=204
N15K Kwethluk River 79.51 9 P P 02 10 32.5 -0.7
baz=197
NVAR Mina Array Bea 79.52 44 P P 02 10 34.1 +0.1
comp=Z,1.2nm,0.7s,baz=224,slow=9.1,SNR=11
comp=Z,1.2nm,0.7s
P18K Big Mountain, 79.61 12 P 02 10 33.3 -0.5
P18K IAmb IAmb 02 10 34.0
comp=Z,10nm,0.8s
P18K Big Mountain, 79.61 12 P P 02 10 33.0 -0.7
baz=202
O17K Koliganek Bris 79.62 11 P P 02 10 33.3 -0.4
baz=200
M14K Bethel 79.81 8 P P 02 10 34.5 -0.1
baz=196
M15K Kasigluk River 79.93 9 P P 02 10 34.9 -0.4
baz=197
N16K Nishlik Lake 80.01 10 P P 02 10 35.8 0.0
baz=199
O18K Koktuh Hills 80.05 12 P 02 10 35.8 -0.2
O18K Koktuh Hills 80.05 12 P P 02 10 35.6 -0.4
baz=202
P19K Oil Pt 80.25 13 P P 02 10 36.3 -0.8
baz=204
L14K Kuka Creek 80.29 8 P P 02 10 37.1 0.0
baz=195
N17K Nushagak Hills 80.32 10 P P 02 10 37.3 -0.1
baz=200
CN2 Changchun 80.42 322 P P 02 10 39.2 +0.9
CN2 pmax pmax
comp=Z,10.0nm,1.1s
J05D Fort Rock, OR 80.45 38 P 02 10 39.7 +1.0
BNX BinXian 80.50 325 ⇑P P 02 10 39.6 +1.0
BNX pmax pmax
comp=Z,13nm,0.8s
M16K Timber Creek 80.50 9 P P 02 10 39.3 +1.0
M16K IAmb IAmb 02 10 39.9
comp=Z,12nm,0.9s
M16K Timber Creek 80.50 9 P P 02 10 38.5 +0.2
baz=198,SNR=7.3
O19K Port Alsworth 80.53 12 IAmb IAmb 02 10 38.9
comp=Z,17nm,0.8s
O19K Port Alsworth 80.53 12 P P 02 10 38.6 +0.1
baz=203
ILSW Iliamna Southw 80.57 12 P P 02 10 37.9 -0.9
ILSW IAmb IAmb 02 10 39.0
comp=Z,12nm,0.8s
HOM Homer 80.59 13 P P 02 10 38.8 0.0
baz=205
K13K Kusilvak Mount 80.63 6 P P 02 10 39.3 +0.3
K13K Kusilvak Mount 80.63 6 P P 02 10 38.9 0.0
baz=193
N18K Kilae Creek 80.69 11 P P 02 10 39.3 0.0
baz=201
L15K Ungalak Mounta 80.76 8 P P 02 10 39.7 0.0
baz=196
BRSE Bradley Lake S 80.87 14 P P 02 10 40.3 0.0
baz=206
PINE Pine Mountain 80.93 38 P 02 10 42.6 +1.4
PINE IAmb IAmb 02 10 43.4
comp=Z,6.9nm,0.9s
RED Redoubt Volcan 81.05 12 IAmb IAmb 02 10 40.7
comp=Z,6.0nm,0.8s
N19K Bonanza Creek 81.07 12 P P 02 10 41.4 +0.1
baz=203
L16K Owhat River 81.08 9 P 02 10 41.7 +0.4
L16K IAmb IAmb 02 10 42.9
comp=Z,10nm,1.0s
L16K Owhat River 81.08 9 P P 02 10 41.5 +0.3
baz=198,SNR=7.0
M17K Holitna River 81.10 10 IAmb IAmb 02 10 43.5
comp=Z,16nm,0.9s
M17K Holitna River 81.10 10 P P 02 10 41.5 +0.1
baz=200,SNR=8.1
K15K Wolf Creek Mou 81.35 8 P 02 10 43.8 +1.2
K15K Wolf Creek Mou 81.35 8 P P 02 10 42.6 -0.1
baz=196,SNR=15
M18K Stony River 81.46 11 P P 02 10 43.1 -0.1
baz=201
SEW Seward 81.49 14 P P 02 10 43.2 -0.2
baz=207
J14K Nanvaranak Lak 81.55 7 P P 02 10 43.7 +0.1
baz=194
MA2 Magadan 81.58 345 P P 02 10 43.1 -0.8
comp=Z,7.7nm,1.1s
Q23K Middleton Isla 81.66 16 P P 02 10 44.2 -0.1
baz=210
L17K Donlin 81.66 9 P P 02 10 44.3 +0.1
baz=199
SLKM Skilak Lake 81.67 14 P 02 10 44.0 -0.4
SLKM IAmb IAmb 02 10 44.8
comp=Z,11nm,0.8s
CAPN Captain Cook N 81.70 13 P P 02 10 44.4 0.0
baz=206
N20K Mount Spurr 81.87 12 P P 02 10 45.2 -0.3
baz=205
SPCR Spurr Chakacha 81.87 12 P P 02 10 45.3 -0.2
baz=205
P23K Montague Islan 81.88 15 P P 02 10 45.3 -0.1
baz=209
GAMB Gambell 81.92 3 P P 02 10 45.4 0.0
baz=186
L18K Granite Mounta 81.99 10 IAmb IAmb 02 10 47.6
comp=Z,6.7nm,0.8s
L18K Granite Mounta 81.99 10 P P 02 10 46.2 +0.3
baz=200
K17K Iditarod 82.21 9 P P 02 10 47.2 +0.2
baz=199
L19K White Mountain 82.27 11 P 02 10 47.5 +0.2
L19K White Mountain 82.27 11 P P 02 10 47.3 -0.1
baz=202
RC01 Rabbit Creek A 82.30 14 P P 02 10 47.6 +0.1
baz=207
M20K Styx River 82.31 12 P P 02 10 47.3 -0.4
baz=204
J16K Anvik River 82.43 8 P 02 10 48.8 +0.7
J16K Anvik River 82.43 8 P P 02 10 48.1 0.0
baz=197,SNR=7.1
KAIM Kayak Island 82.59 16 P P 02 10 48.9 0.0
baz=212
SKT Skwentna 82.72 12 P P 02 10 49.5 -0.1
baz=205
GLI Glacier Island 82.73 15 P P 02 10 49.1 -0.6
baz=210
CRAG Craig 82.74 24 P P 02 10 49.4 -0.4
baz=223
EYAK Cordova Ski Ar 82.78 15 P P 02 10 49.3 -0.6
baz=211
M22K Willow 82.81 13 P P 02 10 49.5 -0.5
baz=207
KNK Knik Glacier 82.88 14 P P 02 10 49.8 -0.6
baz=208
PMR Palmer 82.88 14 P P 02 10 49.8 -0.5
baz=208
I17K Unalakleet 82.99 8 P P 02 10 50.3 -0.5
baz=197
GHO Glory Hole Cre 83.09 14 IAmb IAmb 02 10 52.5
comp=Z,11nm,0.8s
ANM Nome 83.14 6 P P 02 10 51.3 -0.3
baz=192
J18K Innoko River 83.16 10 IAmb IAmb 02 10 52.9
comp=Z,8.2nm,0.8s
J18K Innoko River 83.16 10 P P 02 10 51.5 -0.3
baz=200,SNR=9.3
U33K Whale Pass 83.22 24 P P 02 10 51.3 -0.8
baz=223
V35K Ketchikan 83.23 25 P P 02 10 51.9 -0.3
baz=224
SML Sawmill 83.25 14 P P 02 10 51.7 -0.6
baz=208
DIV Divide 83.27 15 IAmb IAmb 02 10 53.0
comp=Z,7.1nm,0.8s
CUT Chulitna 83.36 13 P P 02 10 51.8 -1.0
baz=207,SNR=5.5
M23K Glacier View 83.38 14 P P 02 10 53.0 +0.1
baz=209
PPLA Purkeypile 83.42 12 P P 02 10 52.9 -0.4
baz=205
BMRM Bremner River 83.43 16 P P 02 10 52.8 -0.3
baz=212
MESA MESA 83.48 17 P P 02 10 53.1 -0.6
baz=214
S31K Pelican 83.49 21 P P 02 10 52.9 -0.6
baz=220
K20K Telida 83.50 11 IAmb IAmb 02 10 54.4
K20K Telida 83.50 11 P P 02 10 53.0 -0.4
baz=203,SNR=7.3
SCM Sheep Creek Mo 83.51 14 IAmb IAmb 02 10 54.2
comp=Z,11nm,0.8s
SCM Sheep Creek Mo 83.51 14 P P 02 10 52.7 -0.9
baz=209
H16K Elim 83.53 7 P P 02 10 53.3 -0.2
baz=195,SNR=8.9
KLU Klutina 83.55 15 P P 02 10 52.1 -1.7
baz=211
CRQE Cirque 83.64 17 P P 02 10 52.7 -1.7
baz=213
G15K Niukluk 83.69 6 P P 02 10 53.9 -0.4
baz=194,SNR=7.9
S32K Killisnoo 83.69 22 P P 02 10 53.1 -1.4
baz=221
WRAK Wrangell Islan 83.73 24 P P 02 10 53.1 -1.5
baz=220
J19K Poorman 83.83 10 P P 02 10 54.3 -0.7
baz=202
PINM Pinnacle 83.90 18 P P 02 10 54.4 -1.2
baz=216
TNA Tin City 83.92 4 P P 02 10 54.7 -0.6
baz=190,SNR=5.2
F14K Arctic Creek 83.95 5 P P 02 10 55.3 -0.3
baz=191,SNR=8.7
N25K Chitina, Valde 83.97 15 IAmb IAmb 02 10 56.4
comp=Z,8.2nm,0.8s
N25K Chitina, Valde 83.97 15 P P 02 10 55.6 -0.3
baz=212,SNR=7.5
M24K Tolsona, Glenn 84.02 15 P P 02 10 56.1 0.0
baz=210
GLB Gilahina Butte 84.03 16 IAmb IAmb 02 10 56.9
comp=Z,7.2nm,0.8s
WAT6 Susitna Watana 84.07 14 P P 02 10 56.3 -0.1
baz=209,SNR=6.2
H17K Granite Mounta 84.10 8 P P 02 10 56.1 -0.3
baz=197
WAT1 Susitna Watana 84.11 13 P P 02 10 56.1 -0.4
baz=208
MCARA McCarthy VSAT 84.19 16 P P 02 10 56.6 -0.3
baz=213
LYN LuoYang 84.21 309 P P 02 10 59.3 +1.7
LYN pmax pmax
comp=Z,25nm,0.7s
G16K Koyuk River 84.25 7 P P 02 10 56.5 -0.6
baz=195
KTH Kantishna Hill 84.27 12 IAmb IAmb 02 10 57.3
comp=Z,6.5nm,0.9s
BARN Barnard Glacie 84.29 17 IAmb IAmb 02 10 58.8
comp=Z,9.7nm,0.9s
TRF Thorofare Moun 84.30 12 P P 02 10 57.0 -0.6
baz=206,SNR=11
CHUM Lake Minchumin 84.30 11 P P 02 10 57.3 -0.1
baz=205,SNR=5.7
CTG Chitna Glacier 84.30 17 P P 02 10 56.7 -1.0
baz=215
R32K Eaglecrest 84.32 22 P P 02 10 57.0 -0.5
baz=221
F15K North Star Dit 84.33 6 P P 02 10 57.5 +0.1
baz=193
O28M Mount Upton 84.47 18 P P 02 10 58.2 -0.5
baz=216
HARP HAARP 84.51 15 P P 02 10 58.5 0.0
baz=211
H18K Honhosa River 84.51 8 P P 02 10 58.7 +0.3
baz=199
G17K Kiwalik Mounta 84.55 7 P P 02 10 59.2 +0.6
baz=197
O29M Mount Kennedy 84.57 19 P P 02 10 59.2 +0.3
baz=217
DHY Denali Highway 84.58 14 P P 02 10 59.5 +0.6
baz=209
BPAW Bear Paw Mtn. 84.75 12 P P 02 10 59.8 +0.2
baz=206
MCK McKinley 84.83 13 IAmb IAmb 02 11 00.4
comp=Z,14nm,1.1s
MCK McKinley 84.83 13 P P 02 10 59.8 -0.2
baz=208,SNR=5.3
PAX Paxson 84.93 14 P P 02 10 59.8 -0.7
baz=211
P30M Million Dollar 84.93 19 P P 02 10 60.0 -0.6
baz=219
SKAG Skagway 84.94 20 P P 02 11 01.4 +0.9
baz=220
T35M Bob Quinn 84.95 24 P P 02 11 00.9 +0.3
baz=225
YUK8 Steele Glacier 85.01 18 P P 02 11 01.0 -0.2
baz=216
M26K Nabesna, AK 85.05 16 IAmb IAmb 02 11 02.3
comp=Z,8.3nm,1.0s
M26K Nabesna, AK 85.05 16 P P 02 11 01.1 -0.1
baz=213
YUK6 Outpost Mounta 85.14 18 P P 02 11 02.2 +0.3
baz=218
YUK3 Moose Creek 85.21 17 P P 02 11 02.5 +0.4
baz=216,SNR=5.6
S34M Telegraph Cree 85.28 23 IAmb IAmb 02 11 04.2
comp=Z,5.5nm,0.8s
S34M Telegraph Cree 85.28 23 P P 02 11 02.3 +0.1
baz=224
M27K Edge Creek, AK 85.31 16 IAmb IAmb 02 11 03.4
comp=Z,7.8nm,1.0s
M27K Edge Creek, AK 85.31 16 P P 02 11 02.2 -0.3
baz=214
HYT Haines Junctio 85.31 19 P P 02 11 01.6 -0.9
baz=218
H20K Anotleneega Mo 85.34 10 P P 02 11 02.6 +0.2
baz=202
YUK4 Talbot Arm 85.38 18 P P 02 11 03.1 +0.2
baz=217
F17K Baldwin Pennin 85.39 7 P P 02 11 02.6 +0.1
baz=196
L26K Log Cabin Wild 85.49 15 P P 02 11 02.9 -0.2
baz=213
I21K Tanana 85.54 11 P P 02 11 03.5 +0.2
baz=205
NEA2 Nenana 85.56 12 P P 02 11 03.4 0.0
baz=208
K24K Donnelly Dome 85.57 14 P P 02 11 03.2 -0.3
baz=211
P32M Atlin 85.58 21 P P 02 11 03.8 +0.1
baz=222
Q32M Nakina River 85.62 22 P P 02 11 03.9 -0.2
baz=223
BVCY Beaver Creek 85.62 16 P P 02 11 03.8 -0.1
baz=215
G19K Purcell Mounta 85.63 8 IAmb IAmb 02 11 04.0
comp=Z,4.2nm,0.6s
G19K Purcell Mounta 85.63 8 P P 02 11 03.3 -0.4
baz=200,SNR=8.4
MLY Manley 85.63 11 P P 02 11 03.5 -0.3
baz=206
WRH Wood River Hil 85.66 13 IAmb IAmb 02 11 04.9
comp=Z,11nm,1.1s
O30N Mendenhall 85.70 19 P P 02 11 04.2 0.0
baz=220
F18K Selawik 85.73 7 P P 02 11 04.4 +0.3
baz=198
RIDG Independent Ri 85.73 14 P P 02 11 04.1 -0.3
baz=212
H21K Melozitna Rive 85.84 10 P P 02 11 04.4 -0.4
baz=204
HDA Harding Lake 85.84 13 IAmb IAmb 02 11 05.1
comp=Z,4.3nm,0.8s
HDA Harding Lake 85.84 13 P P 02 11 04.7 -0.1
baz=210
CCB Clear Creek Bu 85.87 13 IAmb IAmb 02 11 05.1
comp=Z,1.1nm,1.3s
L27K Beaver Creek, 85.90 16 P P 02 11 04.4 -0.7
baz=214
N30M Aishikik Lake 85.93 18 P P 02 11 05.3 0.0
baz=219
E17K Hotham Inlet 85.95 6 P P 02 11 05.5 +0.3
baz=196
TXAR Lajitas Array 86.00 58 P P 02 11 08.3 +1.8
comp=Z,0.4nm,0.8s,baz=230,slow=5.9,SNR=4.7
comp=Z,0.4nm,0.8s
I23K Minto, Yukon-K 86.00 12 P P 02 11 05.9 +0.5
baz=207
WHY Whitehorse 86.00 20 P P 02 11 05.3 -0.5
baz=221
COLA College 86.06 12 P P 02 11 05.3 -0.4
COLA College 86.06 12 P P 02 11 06.3 +0.6
baz=209
DLBC Dease Lake 86.06 23 P P 02 11 05.5 -0.5
baz=225
SCRK Sand Creek 86.14 14 P P 02 11 05.7 -0.6
baz=212
XLT XiLinHaoTe 86.15 319 eP P 02 11 08.6 +1.8
XLT pmax pmax
comp=Z,9.0nm,0.8s
IL31 86.17 13 IAmb IAmb 02 11 06.5
comp=Z,8.5nm,1.2s
ILAR Eielson Array 86.17 13 P P 02 11 05.5 -0.8
comp=Z,1.5nm,0.4s,baz=220,slow=5.0,SNR=44
comp=Z,1.5nm,0.4s
ILAR Eielson Array 86.17 13 P P 02 11 05.9 -0.4
F19K Shaleruckik Mo 86.19 8 P P 02 11 06.1 -0.2
baz=199
H22K Ishtalitna Cre 86.30 11 P P 02 11 06.5 -0.4
baz=205
M29M Somme Creek 86.31 17 P P 02 11 06.9 -0.3
baz=217
P33M Teslin, Yukon 86.35 21 P P 02 11 06.8 -0.6
baz=223
N31M Braeburn, Yuko 86.35 19 P P 02 11 06.5 -0.8
baz=220
POKR Poker Plat Res 86.36 13 P P 02 11 06.8 -0.4
baz=209
J25K Salcha River, 86.36 14 P P 02 11 07.2 -0.2
baz=211
R33M Jennings River 86.40 22 P P 02 11 07.4 -0.3
baz=224
E18K Tukpahlearik C 86.41 7 P P 02 11 07.5 +0.1
baz=197
D17K Noatak River 86.42 6 P P 02 11 07.7 +0.3
baz=194
G21K Allakaket 86.51 10 IAmb IAmb 02 11 08.7
comp=Z,3.9nm,0.8s
G21K Allakaket 86.51 10 P P 02 11 07.9 0.0
baz=203
XAN Xi'an 86.64 307 ⇑P P 02 11 11.4 +2.1
XAN pmax pmax
comp=Z,13nm,0.9s
F20K Avaraart Lake 86.67 9 P P 02 11 08.7 +0.1
baz=201
C16K Lisburne Hills 86.79 5 P P 02 11 09.3 +0.2
baz=192
E19K Redstone River 86.85 8 P P 02 11 09.9 +0.4
baz=200
M30M Minto, Yukon 86.89 18 IAmb IAmb 02 11 11.0
comp=Z,9.4nm,1.1s
M30M Minto, Yukon 86.89 18 P P 02 11 10.2 +0.3
baz=219,SNR=6.2
L29M L29M 86.93 17 IAmb IAmb 02 11 11.7
comp=Z,8.7nm,1.1s
L29M L29M 86.93 17 P P 02 11 10.7 +0.7
baz=218,SNR=6.2
PRP Porcupine Dome 87.11 13 P P 02 11 11.2 +0.3
baz=211
F21K Alatna River 87.17 9 P P 02 11 11.3 +0.3
baz=203
C17K DeLong Mountai 87.17 5 P P 02 11 11.2 +0.2
baz=194
G23K Bananza Creek 87.28 11 P P 02 11 11.9 +0.3
baz=207
M31M Drury Creek, Y 87.33 19 P P 02 11 12.2 +0.3
baz=221
DAWY Dawson 87.36 16 IAmb IAmb 02 11 13.1
comp=Z,7.8nm,1.3s
DAWY Dawson 87.36 16 P P 02 11 13.0 +1.0
baz=216,SNR=5.4
PDAR Pinedale Array 87.45 43 P P 02 11 13.8 +0.6
comp=Z,0.6nm,0.7s,baz=215,slow=4.0,SNR=7.5
comp=Z,0.6nm,0.7s
I26K Coal Creek Min 87.45 14 IAmb IAmb 02 11 13.5
comp=Z,10nm,1.5s
I26K Coal Creek Min 87.45 14 P P 02 11 13.0 +0.7
baz=213
C18K Utukok River 87.53 6 P P 02 11 13.4 +0.7
baz=196
HHC Hu-ho-hao-te 87.66 314 eP P 02 11 13.8 -0.2
HHC pmax pmax
comp=Z,5.0nm,0.6s
HHC pmax pmax
comp=Z,45nm,6.6s
K29M Barlow Dome 87.68 17 P P 02 11 13.7 +0.1
baz=218
WTLY Watson Lake, Y 87.69 22 P P 02 11 14.3 +0.7
baz=226
COLD Coldfoot 87.71 11 IAmb IAmb 02 11 14.8
comp=Z,6.1nm,0.9s
COLD Coldfoot 87.71 11 P P 02 11 14.1 +0.6
baz=206,SNR=6.2
D19K Kuna River 87.72 7 P P 02 11 13.5 -0.1
baz=199
E20K Nigu River 87.74 8 P P 02 11 14.2 +0.5
baz=201
G24K Hadweenzic Riv 87.74 12 P P 02 11 13.6 -0.1
baz=209
MAYO Mayo, Yukon 87.94 18 P P 02 11 15.5 +0.8
baz=220
D20K Etivluk River 88.11 8 P P 02 11 15.5 +0.2
baz=200
C19K Lookout Ridge 88.13 7 P P 02 11 15.6 +0.2
baz=198
E21K Killik River 88.22 9 IAmb IAmb 02 11 16.4
comp=Z,3.7nm,0.9s
E21K Killik River 88.22 9 P P 02 11 15.8 -0.1
baz=203
E22K Anaktuvuk Pass 88.26 10 IAmb IAmb 02 11 17.1
comp=Z,6.2nm,1.1s
E22K Anaktuvuk Pass 88.26 10 P P 02 11 16.5 +0.3
baz=205
I28M Miner Creek 88.34 15 P P 02 11 17.0 +0.4
baz=216
E23K Chandalar 88.56 10 P P 02 11 18.1 +0.6
baz=207
J30M Hart River 88.58 17 P P 02 11 18.3 +0.6
baz=219
H27K Steamboat Moun 88.60 14 P P 02 11 18.1 +0.4

	baz=214						
MMPY	**Sheldon Lake,**	**88.62**	**20**	P	**P**	**02 11 18.4**	**+0.5**
	baz=224						
G26K	**Porcupine Rive**	**88.70**	**13**	P	**P**	**02 11 18.8**	**+0.7**
	baz=212						
E24K	**Your Creek**	**88.77**	**11**	P	**P**	**02 11 18.7**	**+0.2**
	baz=208						
C21K	**Knifeblade Rid**	**88.77**	**8**	P	**P**	**02 11 19.1**	**+0.8**
	baz=202,SNR=6.0						
D22K	**Ayikyak River**	**88.81**	**9**	IAmb	IAmb	02 11 19.5	
	comp=Z,4.6nm,0.7s						
D22K	**Ayikyak River**	**88.81**	**9**	P	**P**	**02 11 19.1**	**+0.5**
	baz=204						
TGTN	**Hyland Airport**	**88.85**	**22**	P	**P**	**02 11 19.8**	**+0.8**
	baz=227						
F25K	**Christian Rive**	**88.88**	**12**	P	**P**	**02 11 19.9**	**+1.0**
	baz=211						
A19K	**Wainwright**	**89.04**	**6**	P	**P**	**02 11 19.9**	**+0.4**
	baz=196						
I30M	**Mount Dempster**	**89.07**	**16**	P	**P**	**02 11 20.4**	**+0.3**
	baz=219						
TOLK	**Toolik Lake Re**	**89.08**	**10**	P	**P**	**02 11 20.2**	**+0.3**
	baz=207						
D23K	**Nanushuk River**	**89.20**	**10**	P	**P**	**02 11 21.1**	**+0.7**
	baz=206,SNR=6.0						
CMAR	**Chiang Mai Arr**	**89.20**	**290**	P	**P**	**02 11 23.8**	**+2.3**
	comp=Z,1.5nm,0.3s,baz=114,slow=2.6,SNR=11						
	comp=Z,1.5nm,0.3s						
B21K	**Ikpikpuk River**	**89.22**	**8**	P	**P**	**02 11 20.6**	**+0.1**
	baz=202						
F26K	**Sheenjek River**	**89.26**	**12**	P	**P**	**02 11 21.2**	**+0.4**
	baz=212						
B20K	**Meade River**	**89.27**	**7**	P	**P**	**02 11 20.9**	**+0.2**
	baz=200						
E25K	**Arctic Village**	**89.34**	**12**	P	**P**	**02 11 21.1**	**0.0**
	baz=211						
KOTAN	**Kotaneelee Air**	**89.47**	**24**	P	**P**	**02 11 22.0**	**+0.2**
	baz=230						
PZH	**PanZhiHua**	**89.50**	**298**	P	**P**	**02 11 24.1**	**+1.1**
D24K	**Happy Valley**	**89.67**	**10**	P	**P**	**02 11 23.0**	**+0.5**
	baz=208						
EPYK	**Eagle Plains**	**89.88**	**15**	P	**P**	**02 11 23.4**	**-0.2**
	baz=219						
C23K	**Itkillik River**	**89.99**	**9**	P	**P**	**02 11 24.5**	**+0.5**
	baz=206						
B22K	**Teshekpuk Lake**	**90.05**	**8**	IAmb	IAmb	02 11 25.2	
	comp=Z,4.9nm,1.0s						
B22K	**Teshekpuk Lake**	**90.05**	**8**	P	**P**	**02 11 24.5**	**+0.2**
	baz=203						
H31M	**Peel River**	**90.06**	**17**	P	**P**	**02 11 24.4**	**-0.1**
	baz=221						
F28M	**Old Crow**	**90.11**	**14**	P	**P**	**02 11 24.6**	**-0.1**
	baz=216						
C24K	**Franklin Bluff**	**90.19**	**10**	P	**P**	**02 11 25.2**	**+0.3**
	baz=208						
E27K	**Coleen River**	**90.20**	**13**	P	**P**	**02 11 25.1**	**0.0**
	baz=214						
D25K	**Kavik River**	**90.24**	**11**	P	**P**	**02 11 25.1**	**-0.2**
	baz=210						
A22K	**Sinclair Lake**	**90.46**	**7**	P	**P**	**02 11 26.5**	**+0.3**
	baz=202						
G30M	**tAoh Zraii Nji**	**90.47**	**15**	P	**P**	**02 11 26.6**	**+0.2**
	baz=219,SNR=6.9						
A21K	**Barrow**	**90.57**	**7**	P	**P**	**02 11 26.4**	**-0.2**
	baz=200						
G31M	**Satah River**	**90.93**	**16**	P	**P**	**02 11 28.4**	**0.0**
	baz=221,SNR=6.7						
C27K	**Jago River**	**90.99**	**11**	P	**P**	**02 11 29.1**	**+0.4**
	baz=212						
C26K	**Camden Bay**	**91.01**	**11**	P	**P**	**02 11 29.9**	**+1.2**
	baz=211						
F30M	**Barrier River**	**91.07**	**15**	P	**P**	**02 11 29.5**	**+0.5**
	baz=220						
E29M	**Blow River**	**91.18**	**14**	P	**P**	**02 11 30.3**	**+0.7**
	baz=218						
D27M	**Malcolm River**	**91.21**	**12**	IAmb	IAmb	02 12 02.6	
	comp=Z,4.2nm,1.4s						
D27M	**Malcolm River**	**91.21**	**12**	P	**P**	**02 11 30.1**	**+0.3**
	baz=215						
F31M	**Tsiigehtchic**	**91.45**	**16**	P	**P**	**02 11 30.9**	**+0.1**
	baz=222,SNR=6.0						
D28M	**Stokes Point**	**91.74**	**13**	P	**P**	**02 11 32.5**	**+0.4**
	baz=217						
INK	**Inuvik**	**92.16**	**15**	P	**P**	**02 11 34.0**	**0.0**
	baz=222						
YKA	**Yellowknife Ar**	**94.55**	**25**	P	**P**	**02 11 45.0**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=254,slow=4.7,SNR=5.9						
	comp=Z,0.3nm,0.6s						
WMQ	**Urumqi**	**105.32**	**312**	Pdif	**Pdif**	**02 12 32.3**	**-1.4**
WMQ				PP	**PP**	**02 17 07.1**	**+2.5**
WMQ				LR	LR		
	comp=E,730nm,24.0s						
WMQ				LR	LR		
	comp=Z,150nm,24.2s						
BVAR	**Borovoye Array**	**117.24**	**321**	PKP	**PKiKP**	**02 17 05.7**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=174,slow=1.5,SNR=4.1						
ARCES	**ARCESS Array B**	**126.69**	**350**	PKP	**PKPdf**	**02 17 22.9**	**-0.7**
	comp=Z,1.9nm,0.8s,baz=15,slow=5.0,SNR=3.8						
AKASG	**Malin Array Be**	**140.96**	**332**	PKhKP	PKPpre	02 17 45.2	
	comp=Z,0.3nm,0.4s,baz=45,slow=2.9,SNR=4.3						
BUR08	**Bucovina Ar. S**	**145.00**	**332**		**PKPab**	**02 18 00.6**	**+0.5**
BURAR	**Bucovina Array**	**145.01**	**332**	PKPab	**PKPab**	**02 18 00.4**	**+0.3**
BRTR	**Keskin Array B**	**145.17**	**315**	PKPbc	**PKPab**	**02 18 00.1**	**-0.9**
	comp=Z,2.8nm,0.9s,baz=128,slow=3.6,SNR=19						
OSTC	**Ostas**	**145.78**	**344**	⇑*e*PKP	**PKPab**	**02 18 02.6**	**-0.3**
CHVC	**Chvalec**	**145.79**	**344**	⇑*e*PKP	**PKPab**	**02 18 01.8**	**-1.1**
CLL	**Collm**	**145.84**	**347**		**PKPab**	**02 18 01.6**	**-1.5**
CLL	**Collm**	**145.84**	**347**	*i* PKPbc	**PKPab**	**02 18 01.7**	**-1.4**
	comp=Z,18nm,1.0s						
STEB	**Steborice**	**145.89**	**342**	⇑*e*PKP	**PKPab**	**02 18 02.0**	**-1.3**
DPC	**Dobruska-Polom**	**145.94**	**343**	⇑*e*PKP	**PKPab**	**02 18 02.5**	**-1.1**
LANS	**Liptovska Anna**	**146.03**	**339**	*e*PKP	**PKPab**	**02 18 03.5**	**-0.5**
KRLC	**Kraliky**	**146.06**	**343**	⇑*e*PKP	**PKPab**	**02 18 02.9**	**-1.1**
MORC	**Moravsky Berou**	**146.10**	**342**	*e*PKP	**PKPbc**	**02 18 02.4**	**+0.4**
PVCC	**Panska Ves**	**146.22**	**345**	⇑*e*PKP	**PKiKP**	**02 18 03.3**	**-1.2**
MAUC	**Maruska**	**146.38**	**341**	⇑*e*PKP	**PKiKP**	**02 18 04.0**	**-0.9**
MMAI	**Mount Meron Ar**	**146.51**	**303**	PKPbc	**PKiKP**	**02 18 04.3**	**-1.4**
	comp=Z,1.3nm,0.4s,baz=59,slow=6.9,SNR=10						
PRU	**Pruhonice**	**146.73**	**345**	⇑*e*PKP	**PKiKP**	**02 18 04.7**	**-0.8**
VRAC	**Vranov**	**146.80**	**342**	*e*PKP	**PKPbc**	**02 18 04.1**	**+0.3**
JAVC	**Velka Javorina**	**146.87**	**341**	*e*PKP	**PKiKP**	**02 18 05.8**	**-0.1**
KRUC	**Moravsky**	**147.08**	**342**	*e*PKP	**PKiKP**	**02 18 05.0**	**-1.3**
BORA	**Eskisehir**	**147.21**	**317**		**PKiKP**	**02 18 05.9**	**-1.1**
MODS	**Modra-Piesok**	**147.43**	**341**	*e*PKP	**PKiKP**	**02 18 07.1**	**+0.1**
KHC	**Kasperske Hory**	**147.76**	**345**	⇑*e*PKP	**PKiKP**	**02 18 07.1**	**-0.6**
KHC				*e*PKPAB	**PKPab**	**02 18 11.8**	**+0.9**
CKRC	**Cesky Krumlov**	**147.87**	**344**	⇑*e*PKP	**PKiKP**	**02 18 07.3**	**-0.6**
GERES	**GERESS Array B**	**148.00**	**345**	PKPbc	**PKiKP**	**02 18 07.3**	**-1.0**
	comp=Z,2.2nm,0.7s,baz=327,slow=2.2,SNR=18						
CONA	**Conrad Observa**	**148.25**	**342**	*i* PKiKP	**PKiKP**	**02 18 08.8**	**-0.1**
	comp=Z,10nm,1.1s						
RONA	**Rosalia, Austr**	**148.33**	**341**	*i* PKiKP	**PKiKP**	**02 18 09.0**	**+0.1**
	comp=Z,6.4nm,1.0s						
MOA	**Molln**	**148.77**	**344**	*e*PKiKP	**PKiKP**	**02 18 10.0**	**+0.1**
	comp=Z,6.7nm,1.3s						
BIOA	**Bad Ischl, Aus**	**149.08**	**344**	*i* PKP	**PKiKP**	**02 18 09.9**	**-0.6**
	comp=Z,10nm,1.1s						
LESA	**Schwarzleotal**	**149.57**	**345**	*i* PKP	**PKPbc**	**02 18 10.7**	**-0.2**
	comp=Z,5.7nm,1.2s						
SOKA	**Soboth**	**149.62**	**342**	*i* PKP	**PKPbc**	**02 18 10.7**	**-0.4**
	comp=Z,4.7nm,1.0s						
KBA	**Koelnbreinsper**	**149.73**	**344**	*e*PKP	**PKiKP**	**02 18 11.4**	**-0.6**
	comp=Z,5.1nm,1.1s						
WATA	**Walderalm**	**149.91**	**347**	*i* PKiKP	**PKiKP**	**02 18 12.2**	**-0.2**
	comp=Z,2.8nm,0.5s						
RETA	**Reutte**	**149.93**	**348**	*i* PKP	**PKiKP**	**02 18 11.5**	**-0.8**
	comp=Z,7.8nm,1.3s						
WTTA	**Wattenberg**	**149.96**	**347**	*i* PKiKP	**PKiKP**	**02 18 12.5**	**0.0**
	comp=Z,8.5nm,0.7s,SNR=7.0						
MOTA	**Moosalm**	**150.00**	**347**	*i* PKiKP	**PKiKP**	**02 18 12.9**	**+0.3**
	comp=Z,6.4nm,0.9s						
SQTA	**Sankt Quirin**	**150.09**	**347**	*i* PKiKP	**PKiKP**	**02 18 12.8**	**+0.1**
	comp=Z,4.8nm,0.7s,SNR=4.1						
ABTA	**Abfaltersbach**	**150.24**	**345**	*i* PKP	**PKiKP**	**02 18 12.5**	**-0.5**
	comp=Z,11nm,1.0s,SNR=7.8						
DAVA	**Damuels**	**150.29**	**349**	*i* PKiKP	**PKiKP**	**02 18 13.4**	**+0.2**
	comp=Z,9.8nm,1.2s						
FETA	**Feichten**	**150.38**	**348**	*i* PKiKP	**PKiKP**	**02 18 13.7**	**+0.3**
	comp=Z,4.4nm,0.8s,SNR=4.1						
FUORN	**Ofenpass-Fuorn**	**150.86**	**348**		**PKiKP**	**02 18 14.7**	**+0.2**
ESDC	**Sonseca Array**	**158.07**	**12**	PKPab	**PKPab**	**02 18 54.5**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=341,slow=3.9,SNR=4.3						

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*IDC **08** 02:23:29.4±0.9, 30°.41S×177°.49W, h0km, mb4.2/6, mbtmp4.1/7, ML3.7/1, MS3.4/3, Error ellipse: s-maj=28.7km s-min=21.2km az=113.0*

*NEIC **08** 02:23:36.7±1.8, 30°.30S±0°.07×177°.6W±0°.2, h35km±2km, mb4.7/11, Error ellipse: s-maj=26.3km s-min=12.4km az=88.0*

ISC 08 02:23:34.5±0.7**, 30°.34S**±0°.05×**177°.6W**±0°.1**, h33km, n69, σ1s.74/62, mb4.5**/13**, 2D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.12**	**344**	P	**Pn**	**02 23 53.0**	**-0.8**
GLKZ				S	**Sn**	**02 24 05.0**	**-3.1**
RAO	**Raoul Island**	**1.13**	**344**	Pn	**Pn**	**02 23 53.8**	**-0.3**
	316nm,0.3s,baz=348,slow=15,SNR=27						
RAO				Sn	**Sn**	**02 24 06.1**	**-2.3**
	2µm,0.3s,baz=176,slow=23,SNR=13						
RAO	**Raoul Island**	**1.13**	**344**		**Pn**	**02 23 53.7**	**-0.3**
RAO	**Raoul Island**	**1.13**	**344**	P	**Pn**	**02 23 53.7**	**-0.3**
RAO				S	**Sn**	**02 24 04.8**	**-3.6**
RIZ	**Raoul Island**	**1.14**	**344**	P	Pn	02 23 45.9	-8.2
RIZ				S	Sn	02 23 58.1	-11
MXZ	**Matakaoa Point**	**7.98**	**204**	S	**Sn**	**02 26 57.5**	**+0.4**
WMGZ	**Waiomatatini S**	**8.17**	**203**	P	**Pn**	**02 25 30.8**	**+0.1**
WMGZ				S	**Sn**	**02 27 02.0**	**+0.1**
PKGZ	**Pakihiroa**	**8.33**	**205**	P	**Pn**	**02 25 31.9**	**-1.0**
PKGZ				S	**Sn**	**02 27 04.1**	**-1.7**
HAZ	**Te Kaha**	**8.34**	**206**	P	**Pn**	**02 25 32.2**	**-0.8**
HAZ				S	**Sn**	**02 27 07.5**	**+1.4**
PUZ	**Puketiti**	**8.45**	**203**	P	**Pn**	**02 25 32.9**	**-1.7**
PUZ				S	**Sn**	**02 27 06.1**	**-2.7**
RUGZ	**Raukumara Rang**	**8.56**	**206**	P	**Pn**	**02 25 35.5**	**-0.8**
RUGZ				S	**Sn**	**02 27 11.8**	**0.0**
TWGZ	**Tauwhareparae**	**8.64**	**204**	P	**Pn**	**02 25 35.8**	**-1.4**
TWGZ				S	**Sn**	**02 27 11.4**	**-2.1**
WCZ	**Waipu Caves**	**8.79**	**228**	P	Pn	02 25 46.9	+7.8
CNGZ	**Carnagh Statio**	**8.84**	**202**	P	**Pn**	**02 25 36.9**	**-3.0**
OUZ	**Omahuta**	**8.89**	**235**	P	Pn	02 25 47.8	+7.2
MWZ	**Matawai**	**8.95**	**206**	P	**Pn**	**02 25 39.6**	**-1.8**
MWZ				S	**Sn**	**02 27 20.3**	**-0.7**
URZ	**Urewera**	**9.04**	**208**	Pn	**Pn**	**02 25 39.9**	**-2.8**
	0.7nm,0.3s,baz=276,slow=6.5,SNR=8.4						
URZ				Sn	**Sn**	**02 27 21.1**	**-2.2**
	4.3nm,0.3s,baz=52,slow=23,SNR=11						
	2.1nm,0.5s						
URZ	**Urewera**	**9.04**	**208**	P	**Pn**	**02 25 39.8**	**-2.8**
URZ				S	**Sn**	**02 27 21.3**	**-2.0**
RIGZ	**Rimuhau**	**9.19**	**204**	S	**Sn**	**02 27 26.4**	**-0.7**
MUGZ	**Murupara**	**9.37**	**208**	S	**Sn**	**02 27 28.6**	**-2.8**
RTZ	**Ruatahuna**	**9.40**	**207**	Pn	**Pn**	**02 25 46.8**	**-0.9**
KNZ	**Kokohu**	**9.50**	**203**	S	**Sn**	**02 27 30.4**	**-4.2**
OTVZ	**Oturere**	**10.41**	**210**	P	**Pn**	**02 26 03.6**	**+2.0**
MSVF	**Nonsavu**	**13.18**	**341**	LR	LR	02 30 37.5	
	comp=Z,111nm,20.2s,baz=165,slow=32						
DZM	**Mont Dzumac**	**16.54**	**296**	LR	LR	02 32 11.5	
	comp=Z,121nm,21.6s,baz=116,slow=31						
CTAO	**Charters Tower**	**34.16**	**279**	P	**P**	**02 30 19.2**	**+2.4**
STKA	**Stephens Creek**	**34.86**	**257**	P	**P**	**02 30 23.6**	**+0.9**
	2.9nm,0.5s,baz=97,slow=8.2,SNR=10						
	2.9nm,0.5s						
STKA	**Stephens Creek**	**34.86**	**257**	P	**P**	**02 30 24.7**	**+2.0**
INKA	**Innaminka**	**36.40**	**263**	P	**P**	**02 30 37.8**	**+1.9**
BBOO	**Buckleboo**	**39.35**	**254**	P	**P**	**02 31 01.2**	**+0.4**
BBOO				IAmb	IAmb	02 31 31.2	
	comp=Z,25nm,1.4s						
COEN	**Coen**	**39.62**	**286**	P	**P**	**02 31 04.3**	**+1.1**
COEN				IAmb	IAmb	02 31 20.6	
	comp=Z,14nm,1.4s						
AS31	**Alice Springs**	**43.49**	**267**	P	**P**	**02 31 34.9**	**-0.1**
ASAR	**Alice Springs**	**43.49**	**267**	P	**P**	**02 31 34.5**	**-0.5**
	comp=Z,1.7nm,0.4s,baz=104,slow=7.5,SNR=48						
	comp=Z,1.7nm,0.4s						
ASAR	**Alice Springs**	**43.49**	**267**	P	**P**	**02 31 34.9**	**0.0**
WR8	**Warramunga Arr**	**44.33**	**272**	P	**P**	**02 31 42.5**	**+0.8**
WR8				IAmb	IAmb	02 32 02.2	
	comp=Z,9.3nm,1.3s						
WRA	**Warramunga Arr**	**44.48**	**272**	P	**P**	**02 31 42.9**	**0.0**
	comp=Z,4.7nm,0.3s,baz=110,slow=8.1,SNR=92						
	comp=Z,4.7nm,0.3s						
WB0	**Warramunga Arr**	**44.50**	**272**	P	**P**	**02 31 43.9**	**+0.8**
WB0				IAmb	IAmb	02 31 44.2	
	comp=Z,7.3nm,0.5s						
KNRA	**Kununurra**	**51.08**	**274**	P	**P**	**02 32 34.4**	**+0.3**
QSPA	**South Pole Qui**	**59.77**	**180**	P	**P**	**02 33 36.0**	**0.0**
	comp=Z,1.6nm,1.0s,baz=130,slow=5.6,SNR=1.4						
	comp=Z,1.6nm,1.0s						
QSPA	**South Pole Qui**	**59.77**	**180**	P	**P**	**02 33 39.9**	**+3.9**
QSPA				IAmb	IAmb	02 33 47.1	
	comp=Z,10nm,1.1s						
BELA	**Belgrano 2**	**69.79**	**172**	P	**P**	**02 34 43.1**	**+2.1**
BELA				IAmb	IAmb	02 35 04.7	
	comp=Z,9.4nm,1.5s						
TROLL	**Troll, Antarti**	**77.93**	**180**	P	P	02 35 20.5	-8.4
VNA3	**Neumayer Olymp**	**78.34**	**176**	⇓P	**P**	**02 35 27.6**	**-3.4**
	comp=Z,3.2nm,0.7s						
VNA2	**Neumayer--Watz**	**78.78**	**177**	⇓P	P	02 35 28.1	-5.3
	comp=Z,2.4nm,0.8s,baz=197,slow=4.9						
H03S2	**Juan Fernandez**	**80.18**	**123**	T	T	04 04 55.7	
	baz=238,slow=74,SNR=21						
H03S1	**Juan Fernandez**	**80.19**	**123**	T	T	04 05 01.6	
	baz=238,slow=74,SNR=23						
H03S3	**Juan Fernandez**	**80.20**	**123**	T	T	04 04 54.3	
	baz=238,slow=74,SNR=21						
H03N3	**Juan Fernandez**	**80.37**	**123**	T	T	04 05 09.1	
	baz=241,slow=72,SNR=12						
H03N2	**Juan Fernandez**	**80.37**	**123**	T	T	04 05 05.8	
	baz=241,slow=72,SNR=15						
H03N1	**Juan Fernandez**	**80.39**	**123**	T	T	04 05 06.0	
	baz=241,slow=72,SNR=17						
PLCA	**Paso Flores**	**82.27**	**133**	LR	LR	03 04 39.8	
	comp=Z,42nm,21.7s,baz=186,slow=30						
NVAR	**Mina Array Bea**	**87.94**	**42**	P	**P**	**02 36 21.5**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=221,slow=4.0,SNR=1.7						
	comp=Z,0.1nm,0.3s						
ILAR	**Eielson Array**	**97.79**	**13**	P	**P**	**02 37 04.4**	**-1.3**
	comp=Z,0.4nm,1.0s,baz=164,slow=1.6,SNR=2.1						
	comp=Z,0.4nm,1.0s						
MKAR	**Makanchi Array**	**118.03**	**310**	PKP	**PKPdf**	**02 42 17.1**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=144,slow=2.7,SNR=2.4						
MKAR	**Makanchi Array**	**118.03**	**310**		**PKPdf**	**02 42 16.7**	**-1.0**
H10S2	**ASCENSION HYDR**	**137.62**	**154**	T	T	05 17 29.8	
	baz=16,slow=74,SNR=14						
H10S3	**ASCENSION HYDR**	**137.62**	**154**	T	T	05 17 27.4	
	baz=204,slow=74,SNR=12						
H10N3	**ASCENSION HYDR**	**138.70**	**154**	T	T	05 18 43.0	
	baz=203,slow=75,SNR=35						
H10N1	**ASCENSION HYDR**	**138.70**	**154**	T	T	05 18 45.9	
	baz=203,slow=75,SNR=49						
H10N2	**ASCENSION HYDR**	**138.72**	**154**	T	T	05 18 49.8	
	baz=203,slow=75,SNR=46						
FIA1	**FINESS Array S**	**145.22**	**340**	PKPbc	**PKPdf**	**02 43 08.2**	**+0.2**
FINES	**FINESS Array B**	**145.22**	**340**	PKPbc	**PKPdf**	**02 43 08.0**	**+0.1**
	comp=Z,4.4nm,0.5s,baz=52,slow=4.0,SNR=68						
FINES	**FINESS Array B**	**145.22**	**340**		**PKPdf**	**02 43 08.1**	**+0.2**
NB2	**NORSAR Subarra**	**148.75**	**352**	PKP	**PKPab**	**02 43 24.1**	**+2.5**
	comp=Z,3.3nm,0.8s,baz=6.4,slow=3.7						
NOA	**NORSAR Array B**	**148.75**	**352**	PKPbc	**PKPbc**	**02 43 18.5**	**+0.6**
	comp=Z,0.7nm,0.8s,baz=11,slow=3.2,SNR=1.8						
HFS	**Hagfors**	**149.26**	**349**	PKPbc	**PKPbc**	**02 43 19.1**	**0.0**
	comp=Z,2.2nm,0.8s,baz=46,slow=6.4,SNR=4.7						
AKASG	**Malin Array Be**	**151.48**	**323**	PKPbc	**PKPbc**	**02 43 24.4**	**-0.2**
	comp=Z,0.8nm,0.4s,baz=48,slow=3.1,SNR=6.1						
MMAI	**Mount Meron Ar**	**151.88**	**284**	PKPbc	**PKPbc**	**02 43 26.4**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=72,slow=8.9,SNR=6.0						
BRTR	**Keskin Array B**	**152.91**	**299**	PKPbc	**PKiKP**	**02 43 28.8**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=130,slow=6.4,SNR=3.6						

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*SOME **08** 02:23:30.6, 41°.77N×83°.05E, h10km*

*NNC **08** 02:23:52.2±1.9, 43°.19N×82°.81E, h0km, mb2.7, mpv2.3, Error ellipse: s-maj=19.2km s-min=9.2km az=133.0*

ISC 08 02:23:34.3±3.2**, 41°.8N**±0°.2×**82°.8E**±0°.1**, h10km, n6, σ1s.63**/8**, 2C-2D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**2.84**	**300**	*e*P	**Pn**	**02 24 20.2**	**+0.3**
	3.1nm,0.3s						
SHLS				*e*S	**Sn**	**02 24 55.9**	**+1.6**
	12nm,0.6s						
PDGK	**Podgornoye**	**2.91**	**303**	⇑Pn	**Pg**	**02 24 30.6**	**+0.5**
	4.0nm,1.2s						
PDGK				⇑Lg	Lg	02 25 09.5	
	5.4nm,0.8s						
UZB	**Uzynbulak**	**3.13**	**297**	*e*P	**Pg**	**02 24 31.5**	**-2.8**
	5.2nm,0.2s						
UZB				*e*S	**Sg**	**02 25 15.2**	**+0.4**
	2.5nm,0.4s						
DJR	**Jarkent**	**3.38**	**320**	*e*P	**Pb**	**02 24 35.2**	**+0.8**
	1.2nm,0.1s						
DJR				*e*S	**Sg**	**02 25 21.7**	**-1.3**
	2.4nm,0.5s						
MK31	**Makanchi Array**	**5.02**	**356**	Pn	**Pn**	**02 24 49.7**	**-0.1**
	0.2nm,0.5s,baz=167,slow=16,SNR=6.6						
MK31				⇓Lg	Lg	02 25 47.8	
	3.1nm,0.7s,baz=165,slow=27,SNR=10						
MAKZ	**Makanchi**	**5.06**	**353**	⇓Lg	Lg	02 25 48.9	
	1.9nm,0.9s						

TRN 08 02:27:09.4, 15°.85N×61°.51W, h19km, MD3.7, South of Guadeloupe, near Les Saintes., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBG	**Guadaloupe-3**	**0.13**	**270**	*e*P	Pg	02 27 14.9	+1.5
MMLZ	**Guadeloupe Bro**	**0.24**	**322**	*e*P	Pg	02 27 17.0	+1.9
MMLZ				*e*S	Sg	02 27 20.5	+1.5
DWS	**Wesley**	**0.34**	**146**	*e*P	Pn	02 27 18.8	-0.6
DWS				*e*S	Sn	02 27 25.3	-0.4
DSLB	**Salisbury**	**0.42**	**168**	*e*P	Pn	02 27 20.7	+0.2
DSLB				*e*S	Sn	02 27 26.9	-0.8
DHSZ	**Broadband at M**	**0.48**	**330**	*e*P	Pn	02 27 21.2	-0.2
DHSZ				*e*S	Sn	02 27 29.0	-0.3
DLPL	**La Plaine**	**0.57**	**154**	*e*P	Pg	02 27 21.7	+0.8
DLPL				*e*S	Sn	02 27 32.1	+0.5
DSDZ	**La Diserade, G**	**0.63**	**43**	*e*P	Pn	02 27 24.5	+1.2
DSDZ				*e*S	Sn	02 27 33.9	+1.0
SVN	**Savane Anatole**	**1.06**	**162**	*e*P	Pg	02 27 31.8	+1.9
SVN				*e*S	Sg	02 27 46.1	+2.2
BIM	**Bigot**	**1.39**	**162**	*e*P	Pg	02 27 36.4	+0.1
BIM				*e*S	Sg	02 27 54.5	0.0
ANWB	**Willy Bob**	**1.83**	**352**	*e*P	Pb	02 27 42.3	0.0
ANWB				*e*S	Sb	02 28 05.6	+0.8
SKI	**Saint Kitts**	**1.89**	**322**	*e*P	Pb	02 27 43.5	+0.2
SKI				*e*S	Sb	02 28 06.6	+0.1
SLBI	**Saint Lucia, B**	**1.89**	**164**	*e*P	Pb	02 27 42.5	-0.8
SLBI				*e*S	Sb	02 28 06.2	-0.4

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*IDC **08** 02:52:43.4±1.0, 59°.65S×26°.19W, h0km, mb3.8/5, mbtmp3.9/6, ML4.0/1, Error ellipse: s-maj=37.9km s-min=24.5km az=59.0*

*NEIC **08** 02:52:43.0±1.9, 59°.4S±0°.1×25°.3W±0°.2, h10km±2km, mb4.3/9, Error ellipse: s-maj=24.6km s-min=12.7km az=18.0*

ISC 08 02:52:47.7±0.8**, 59°.9S**±0°.1×**26°.0W**±0°.2**, h35km, n22, σ2s.80**/25**, mb4.1**/6**, 6C-1D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.99**	**310**	Pn	**Pn**	**02 54 39.4**	**-1.7**
VNA1	**Neumayer--Stat**	**13.05**	**153**	⇑P	**Pn**	**02 55 52.6**	**+2.3**
	comp=Z,11nm,0.3s						
VNA1				⇑S	**Sn**	**02 58 07.8**	**-6.2**
VNA3	**Neumayer Olymp**	**13.21**	**157**	⇑P	**Pn**	**02 55 54.1**	**+1.7**
	comp=Z,4.2nm,0.2s						
VNA3				⇑S	**Sn**	**02 58 10.9**	**-6.8**
VNA2	**Neumayer--Watz**	**13.45**	**153**	⇑P	**Pn**	**02 55 57.8**	**+2.1**
	comp=Z,2.3nm,0.2s,baz=312,slow=12						
VNA2				⇓S	**Sn**	**02 58 19.4**	**-4.3**
	baz=325,slow=24						
SNAA	**Sanae**	**15.04**	**151**	⇑P	**Pn**	**02 56 19.4**	**+2.1**
	comp=Z,32nm,0.2s						
SNAA	**Sanae**	**15.04**	**151**	Pn	**Pn**	**02 56 18.2**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=292,slow=9.7,SNR=8.7						
	comp=Z,1.5nm,0.3s						
SNAA	**Sanae**	**15.04**	**151**		**Pn**	**02 56 17.5**	**+0.3**
SNAA				IAmb	IAmb	02 56 30.6	
	comp=Z,15nm,1.4s						
TROLL	**Troll, Antarti**	**16.59**	**149**	P	**P**	**02 56 40.2**	**+0.7**
BELA	**Belgrano 2**	**18.33**	**186**	P	**Pn**	**02 57 01.9**	**+3.3**
QSPA	**South Pole Qui**	**30.39**	**180**	P	**P**	**02 58 59.4**	**+3.4**
	comp=Z,1.3nm,0.6s,baz=218,slow=1.2,SNR=10						
	comp=Z,1.3nm,0.6s						
QSPA	**South Pole Qui**	**30.39**	**180**	P	**P**	**02 59 00.1**	**+4.0**
QSPA				IAmb	IAmb	02 59 14.7	
	comp=Z,5.5nm,1.3s						
TRQA	**Tornquist**	**31.54**	**297**	P	**P**	**02 59 06.5**	**+0.2**
PLCA	**Paso Flores**	**33.45**	**285**	P	**P**	**02 59 22.1**	**-1.0**
	comp=Z,1.7nm,1.0s,baz=162,slow=6.4,SNR=3.0						
	comp=Z,1.7nm,1.0s						
PLCA	**Paso Flores**	**33.45**	**285**	P	**P**	**02 59 22.2**	**-0.9**
PLCA				IAmb	IAmb	03 00 00.3	
	comp=Z,8.2nm,1.5s						
CPUP	**Villa Florida**	**39.85**	**313**	P	**P**	**03 00 16.9**	**-0.7**
	comp=Z,1.1nm,0.8s,baz=160,slow=12,SNR=3.3						
	comp=Z,1.1nm,0.8s						
AC05	**El Transito**	**43.01**	**296**	P	**P**	**03 00 43.6**	**-0.1**
AC05				IAmb	IAmb	03 00 59.7	
	comp=Z,13nm,1.4s						
PB16	**IPOC Station P**	**51.86**	**304**	P	**P**	**03 01 51.3**	**-1.6**
PB16				IAmb	IAmb	03 02 24.6	
	comp=Z,2.2nm,1.0s						
LPAZ	**La Paz**	**53.13**	**306**	P	**P**	**03 02 02.2**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=180,slow=7.1,SNR=2.7						
	comp=Z,0.4nm,0.4s						
LPAZ	**La Paz**	**53.13**	**306**	P	**P**	**03 02 00.7**	**-1.7**
TORD	**Torodi Ar. Bea**	**76.09**	**28**	P	**P**	**03 04 32.4**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=197,slow=5.4,SNR=4.8						
	comp=Z,0.4nm,0.6s						
SONM	**Songino Array**	**150.13**	**92**	PKPbc	**PKiKP**	**03 12 34.8**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=223,slow=2.2,SNR=6.9						
ILAR	**Eielson Array**	**153.01**	**306**	PKPbc	**PKPbc**	**03 12 38.8**	**-0.8**
	comp=Z,0.4nm,0.9s,baz=145,slow=3.3,SNR=2.7						

GUC 08 02:54:36.2±0.7**, 21°.53S×68°.53W, h124km**±4km**, ML3.3, 8C-3D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.72**	**248**	⇓*e*P	Pn	02 54 56.2	-0.1
PB09				*e*S	Sn	02 55 11.6	+0.1
PB09				IAML		02 55 12.7	
	comp=N,542nm,0.3s						
PB01	**IPOC Station P**	**1.02**	**298**	⇑*e*P	Pn	02 54 58.3	-0.7
PB01				*e*S	Sn	02 55 15.4	-0.7
PB01				IAML		02 55 17.0	
	comp=E,408nm,0.2s						
PB03	**IPOC Station P**	**1.25**	**245**	⇑*e*P	Pn	02 55 00.8	-0.5
PB03				*e*S	Sn	02 55 19.9	-0.6
PB03				IAML		02 55 21.1	
	comp=E,696nm,0.2s						
PB07	**IPOC Station P**	**1.28**	**261**	⇑*e*P	Pn	02 55 01.3	-0.4
PB07				*e*S	Sn	02 55 20.5	-0.5
PB07				IAML		02 55 21.0	
	comp=E,810nm,0.3s						
PB02	**IPOC Station P**	**1.29**	**279**	⇑*e*P	Pn	02 55 01.1	-0.6
PB02				*e*S	Sn	02 55 20.6	-0.5
PB02				IAML		02 55 21.9	
	comp=E,1µm,0.2s						
AF01	**San Pedro de A**	**1.45**	**167**	*e*P	Pn	02 55 03.9	+0.2
AF01				*e*S	Sn	02 55 23.9	-0.6
AF01				IAML		02 55 40.5	
	comp=E,235nm,0.2s						
PB08	**IPOC Station P**	**1.50**	**337**	⇑*e*P	Pn	02 55 04.5	+0.1
PB08				*e*S	Sn	02 55 25.8	+0.1
PB08				IAML		02 55 27.7	
	comp=N,252nm,0.2s						
PB06	**IPOC Station P**	**1.52**	**220**	⇓*e*P	Pn	02 55 04.0	-0.3
PB06				*e*S	Sn	02 55 25.4	-0.4
PB06				IAML		02 55 26.2	
	comp=E,663nm,0.1s						
PATCX	**Punta Patache**	**1.68**	**295**	⇑*e*P	Pn	02 55 05.5	-0.6
PATCX				*e*S	Sn	02 55 27.9	-0.9
PATCX				IAML		02 55 29.6	
	comp=N,440nm,0.3s						
GO01	**Chusmiza**	**1.96**	**341**	⇑*e*P	Pn	02 55 09.5	-0.4
GO01				*e*S	Sn	02 55 34.6	-0.9
GO01				IAML		02 55 37.7	
	comp=N,418nm,0.2s						
PB05	**IPOC Station P**	**2.04**	**229**	⇑*e*P	Pn	02 55 09.7	-0.7
PB05				*e*S	Sn	02 55 35.3	-1.4
PB05				IAML		02 55 43.2	
	comp=N,120nm,0.3s						
PB11	**IPOC Station P**	**2.06**	**329**	⇓*e*P	Pn	02 55 09.8	-1.0
PB11				*e*S	Sn	02 55 36.0	-1.2
PB11				IAML		02 55 37.5	
	comp=E,262nm,0.4s						

SCB 08 02:54:39.9±0.8**, 21°45S×66°67W, h220**km±6km**, ML3.3**/3**,**
Error ellipse: s-maj=3.7km s-min=2.5km az=0.0,
Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**0.98**	**79**	P	Pn	02 55 12.8	+0.6
MOCB				S	S	02 55 37.0	-0.3
MOCB				IAML		02 55 37.7	
	294nm,0.6s						
YJA	**Yavi**	**1.30**	**124**	P	Pn	02 55 15.1	+0.8
AOVT	**TarijaAcel**	**1.83**	**93**	P	Pn	02 55 18.6	0.0
PB01	**IPOC Station P**	**2.66**	**278**	P	Pn	02 55 27.6	+0.7
PB01				S	S	02 56 02.9	-0.5
PB01				IAML		02 56 03.8	
	91nm,0.3s						
PB02	**IPOC Station P**	**3.01**	**272**	P	Pn	02 55 31.4	+0.6
PB11	**IPOC Station P**	**3.26**	**301**	P	Pn	02 55 34.8	+1.0
SOET	**ToroToro**	**3.42**	**14**	P	Pn	02 55 36.7	+0.8
SOET				S	S	02 56 19.0	-0.6
SOET				IAML		02 56 22.9	
	19nm,0.9s						
AOEA	**Aiquile**	**3.52**	**23**	P	Pn	02 55 37.4	+0.3
PB16	**IPOC Station P**	**4.09**	**319**	P	Pn	02 55 44.9	+0.7

IDC 08 02:59:18.9±5.5**, 6°13S×149°02E, h75**km±54km**, mb3.3**/2**,**
mbtmp3.8/4**, ML4.2**/1**, Error ellipse: s-maj=113.3km**
s-min=35.4km az=127.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.74**	**209**	P	Pn	03 00 13.5	-0.8
	23nm,0.3s,baz=29,slow=10,SNR=13						
PMG				S	Sn	03 00 58.4	+1.2
	67nm,0.7s,baz=35,slow=20,SNR=8.7						
WRA	**Warramunga Arr**	**19.80**	**225**	P	P	03 03 42.8	-0.7
	0.7nm,0.3s,baz=50,slow=11,SNR=32						
	2.7nm,0.3s						
ASAR	**Alice Springs**	**22.71**	**218**	P	P	03 04 13.8	-0.8
	2.0nm,0.8s,baz=55,slow=8.9,SNR=27						
	2.0nm,0.8s						
ILAR	**Eielson Array**	**84.81**	**23**	P	P	03 11 46.2	+1.3
	0.3nm,0.8s,baz=246,slow=5.7,SNR=2.8						
	0.3nm,0.8s						

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*SJA **08** 03:05:03.1±0.7, 17°65S×67°85W, h339km±7km, ML4.0, MW3.8*
*NEIC **08** 03:05:04.2±1.1, 18°01S±0°06×67°02W±0°08, h285km±9km, mb4.3/14, Error ellipse: s-maj=12.8km s-min=6.3km az=120.0*
*SCB **08** 03:05:04.5±1.4, 18°08S×67°08W, h276km±16km, MB5.4, ML3.9/3, Error ellipse: s-maj=6.5km s-min=4.4km az=2.0*
*IDC **08** 03:05:06.3±3.0, 17°22S×66°52W, h272km±12km, mb3.2/5, mbtmp3.8/5, Error ellipse: s-maj=119.8km s-min=29.6km az=22.0*
ISC 08 03:05:04.2±0.7**, 17°98S**±0°05×**67°20W**±0°09**, h286**km±7km**,**
n71, σ1°32/78**, mb4.0**/8**, Central Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEO	**Opoqueri**	**0.88**	**229**	P	**Pn**	**03 05 43.5**	**+0.3**
SOET	**ToroToro**	**1.32**	**96**	P	Pn	03 05 44.0	-1.4
BBOJ	**La Paz, Jacaqu**	**1.38**	**316**	P	**Pn**	**03 05 47.1**	**+1.1**
SOEJ	**Jacaque**	**1.38**	**316**	P	**Pn**	**03 05 47.1**	**+1.1**
BBOE	**La Paz, Chanca**	**1.39**	**327**	P	**Pn**	**03 05 46.9**	**+0.8**
AOEA	**Aiquile**	**1.88**	**96**	P	Pn	03 05 47.3	-1.9
AOEA	**Aiquile**	**1.88**	**96**	P	Pn	03 05 47.9	-1.3
BBOD	**La Paz, Gloria**	**1.89**	**315**	P	**Pn**	**03 05 50.3**	**+0.6**
LPAZ	**La Paz**	**1.91**	**332**	P	**Pn**	**03 05 50.2**	**+0.4**
	177nm,0.3s,baz=126,slow=2.4,SNR=2251						
LPAZ				S	**S**	**03 06 24.3**	**-1.8**
	48nm,0.7s,baz=275,slow=3.7,SNR=14						
LPAZ	**La Paz**	**1.91**	**332**	eP	**Pn**	**03 05 50.2**	**+0.4**
LPAZ				eS	**S**	**03 06 24.8**	**-1.2**
LPAZ	**La Paz**	**1.91**	**332**	P	**Pn**	**03 05 50.3**	**+0.4**
BBOB	**La Paz, Bander**	**2.04**	**334**	P	**Pn**	**03 05 51.1**	**+0.3**
PB18	**Visviri**	**2.21**	**280**		**Pn**	**03 05 54.8**	**+2.5**
PB16	**IPOC Station P**	**2.23**	**261**		**Pn**	**03 05 54.1**	**+1.7**
PB16	**IPOC Station P**	**2.23**	**261**	P	**Pn**	**03 05 53.8**	**+1.4**
GO01	**Chusmiza**	**2.53**	**228**		**Pn**	**03 05 56.1**	**+1.1**
GO01	**Chusmiza**	**2.53**	**228**	eP	**Pn**	**03 05 55.9**	**+0.9**
GO01				eS	**S**	**03 06 38.7**	**+3.4**
GO01	**Chusmiza**	**2.53**	**228**	P	**Pn**	**03 05 55.9**	**+0.9**
PB08	**IPOC Station P**	**2.84**	**220**		**Pn**	**03 05 58.8**	**+0.9**
PB08	**IPOC Station P**	**2.84**	**220**	eP	**Pn**	**03 05 58.8**	**+0.9**
PB08				eS	**S**	**03 06 42.4**	**+1.9**
PB08	**IPOC Station P**	**2.84**	**220**	P	**Pn**	**03 05 58.7**	**+0.9**
PB11	**IPOC Station P**	**2.93**	**232**		**Pn**	**03 05 58.8**	**+0.3**
PB11	**IPOC Station P**	**2.93**	**232**	eP	**Pn**	**03 05 58.4**	**-0.1**
PB11				eS	**S**	**03 06 41.3**	**-0.4**
PB11	**IPOC Station P**	**2.93**	**232**	P	**Pn**	**03 05 58.8**	**+0.3**
PB11				S	**S**	**03 06 40.1**	**-1.6**
PB11				IAML		03 06 42.0	
	206nm,0.2s						
AP01	**Chacalluta**	**3.02**	**262**	eP	**Pn**	**03 05 59.9**	**+0.7**
PB12	**IPOC Station P**	**3.04**	**258**		**Pn**	**03 06 00.1**	**+0.5**
PB12	**IPOC Station P**	**3.04**	**258**	eP	**Pn**	**03 05 58.9**	**-0.7**
PB12				eS	**S**	**03 06 38.1**	**-5.6**
PB12				IAML		03 06 44.1	
	comp=Z,288nm,0.3s						
MOCB	**Mochara**	**3.57**	**156**	P	**Pn**	**03 06 05.4**	**-0.1**
TA02	**Huaiquique**	**3.59**	**230**	eP	**Pn**	**03 06 05.8**	**+0.6**
PB01	**IPOC Station P**	**3.73**	**215**		**Pn**	**03 06 07.4**	**+0.5**
PB01	**IPOC Station P**	**3.73**	**215**	eP	**Pn**	**03 06 07.0**	**+0.1**
PB01				eS	**S**	**03 06 55.7**	**-1.3**
PB01				IAML		03 06 57.0	
	comp=Z,89nm,0.2s						
PB01	**IPOC Station P**	**3.73**	**215**	P	**Pn**	**03 06 07.1**	**+0.2**
PB01				S	**S**	**03 06 54.4**	**-2.6**
PB01				IAML		03 06 58.3	
	comp=Z,79nm,0.2s						
PATCX	**Punta Patache**	**3.97**	**224**		**Pn**	**03 06 10.1**	**+0.6**
PATCX	**Punta Patache**	**3.97**	**224**	eP	**Pn**	**03 06 09.3**	**-0.2**
PB02	**IPOC Station P**	**4.18**	**217**		**Pn**	**03 06 12.7**	**+0.8**
PB02	**IPOC Station P**	**4.18**	**217**	eP	**Pn**	**03 06 12.0**	**+0.1**
PB02	**IPOC Station P**	**4.18**	**217**	P	**Pn**	**03 06 12.3**	**+0.4**
PB02				S	**S**	**03 07 02.9**	**-3.2**
PB02				IAML		03 07 07.0	
	comp=Z,124nm,0.2s						
PB09	**IPOC Station P**	**4.25**	**207**		**Pn**	**03 06 13.9**	**+1.1**
PB09	**IPOC Station P**	**4.25**	**207**	eP	**Pn**	**03 06 13.2**	**+0.4**
PB09	**IPOC Station P**	**4.25**	**207**	P	**Pn**	**03 06 13.6**	**+0.8**
PB07	**IPOC Station P**	**4.50**	**214**		**Pn**	**03 06 16.3**	**+0.6**
PB07	**IPOC Station P**	**4.50**	**214**	eP	**Pn**	**03 06 15.2**	**-0.4**
PB03	**IPOC Station P**	**4.71**	**210**		**Pn**	**03 06 18.4**	**+0.4**
PB03	**IPOC Station P**	**4.71**	**210**	eP	**Pn**	**03 06 17.9**	**-0.1**
PB06	**IPOC Station P**	**5.20**	**205**		**Pn**	**03 06 23.8**	**0.0**
PB06	**IPOC Station P**	**5.20**	**205**	eP	**Pn**	**03 06 23.5**	**-0.3**
PB06	**IPOC Station P**	**5.20**	**205**	P	**Pn**	**03 06 24.3**	**+0.5**
PB05	**IPOC Station P**	**5.61**	**210**		**Pn**	**03 06 28.5**	**-0.1**
AC01	**Pan de Azucar**	**8.72**	**201**	Pn	**Pn**	**03 07 06.0**	**-0.6**
AC02	**Maricunga**	**8.99**	**191**	Pn	**Pn**	**03 07 11.1**	**+0.6**
AC04	**Llanos de Chal**	**10.78**	**199**	Pn	**Pn**	**03 07 31.9**	**-0.2**
VA03	**San Esteban**	**15.03**	**191**	Pn	**Pn**	**03 08 24.4**	**+0.9**
VA03				IAmb	IAmb	03 08 58.5	
	comp=Z,22nm,1.5s						
MT02	**Curacav**	**15.62**	**192**	P	**P**	**03 08 28.9**	**+0.1**
ITAB	**Concordia**	**16.67**	**126**	Pn	**P**	**03 08 40.2**	**-0.1**
ITAB				IAmb	IAmb	03 08 50.3	
	comp=Z,33nm,1.5s						
BOAV	**Boa Vista**	**21.29**	**19**	P	**P**	**03 09 28.5**	**-0.6**
CELP	**Cerrillos**	**35.84**	**1**	P	**P**	**03 11 36.8**	**-0.5**
CELP				IAmb	IAmb	03 12 10.0	
	comp=Z,16nm,1.2s						
735A	**Kenedy**	**55.17**	**327**	P	**P**	**03 14 04.9**	**-2.8**
TXAR	**Lajitas Array**	**58.75**	**323**	P	**P**	**03 14 34.2**	**+1.3**
	comp=Z,0.1nm,0.4s,baz=126,slow=4.0,SNR=2.1						
	comp=Z,0.1nm,0.4s						
TX31	**Lajitas Ar. Si**	**58.75**	**323**	P	**P**	**03 14 35.2**	**+2.3**
CCM	**Cathedral Cave**	**60.15**	**338**	P	**P**	**03 14 42.0**	**-0.1**
CCM				IAmb	IAmb	03 14 42.5	
	comp=Z,3.6nm,0.7s						
S39A	**Bolivar**	**60.59**	**336**	P	**P**	**03 14 45.4**	**+0.3**
S39A				IAmb	IAmb	03 15 27.2	
	comp=Z,5.8nm,1.4s						
R40A	**Maddies Statio**	**60.73**	**338**	P	**P**	**03 14 45.9**	**-0.1**
P43A	**Skaggs, Pawnee**	**61.00**	**340**	P	**P**	**03 14 47.1**	**-0.7**
P43A				IAmb	IAmb	03 14 51.7	
	comp=Z,17nm,1.4s						
PDAR	**Pinedale Array**	**71.93**	**329**	P	**P**	**03 15 58.3**	**+1.4**
	comp=Z,0.2nm,0.4s,baz=132,slow=9.0,SNR=4.1						
	comp=Z,0.2nm,0.4s						
PDAR	**Pinedale Array**	**71.93**	**329**	P	**P**	**03 15 58.6**	**+1.7**
SCHQ	**Schefferville**	**72.52**	**0**	P	**P**	**03 15 59.3**	**-0.5**
	comp=Z,3.3nm,0.9s,baz=175,slow=11,SNR=2.5						
	comp=Z,3.3nm,0.9s						
SCHQ	**Schefferville**	**72.52**	**0**	P	**P**	**03 15 59.5**	**-0.3**
SCHQ				IAmb	IAmb	03 16 07.2	
	comp=Z,3.9nm,1.1s						
TORD	**Torodi Ar. Bea**	**74.66**	**70**	P	**P**	**03 16 11.3**	**-1.7**
	comp=Z,0.3nm,0.4s,baz=252,slow=4.8,SNR=8.0						
	comp=Z,0.3nm,0.4s						
YKA	**Yellowknife Ar**	**88.44**	**340**	P	**P**	**03 17 25.4**	**+1.7**
	comp=Z,0.6nm,0.5s,baz=129,slow=3.9,SNR=16						
	comp=Z,0.6nm,0.5s						
YKA	**Yellowknife Ar**	**88.44**	**340**	P	**P**	**03 17 25.1**	**+1.4**
SONM	**Songino Array**	**149.77**	**9**	PKPbc	**PKiKP**	**03 24 21.7**	**+0.3**
	comp=Z,0.1nm,0.4s,baz=327,slow=2.2,SNR=4.4						

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*IDC **08** 03:05:13.2±2.9, 24°41S×179°49W, h500km±26km, mb3.5/3, mbtmp4.3/6, Error ellipse: s-maj=40.6km s-min=30.4km az=132.0*
ISC 08 03:05:13.8±1.8**, 24°4S**±0°1×**179°5W**±0°3**, h500**km**, n21,**
σ1°08/20**, mb4.2**/3**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.97**	**341**	P	**P**	**03 07 00.1**	**+0.1**
	2.6nm,0.4s,baz=109,slow=23,SNR=4.9						
DZM	**Mont Dzumac**	**13.09**	**277**	P	**P**	**03 08 04.9**	**+0.8**
	3.5nm,0.7s,baz=198,slow=21,SNR=7.3						
URZ	**Urewera**	**14.14**	**191**	P	**P**	**03 08 12.9**	**-1.9**
	5.9nm,0.7s,baz=292,slow=3.6,SNR=15						
TMVZ	**Te Maari**	**15.25**	**194**	P	**P**	**03 08 28.4**	**+1.8**
ETVZ	**East Tongariro**	**15.27**	**194**	P	**P**	**03 08 28.5**	**+1.8**
OTVZ	**Oturere**	**15.30**	**194**	P	**P**	**03 08 28.4**	**+1.2**
KWHZ	**Kaweka Forest**	**15.40**	**192**	P	**P**	**03 08 29.7**	**+1.6**
KRHZ	**Kereru**	**15.62**	**192**	P	**P**	**03 08 31.0**	**+0.6**
BFZ	**Birch Farm**	**16.65**	**191**	P	**P**	**03 08 40.8**	**-0.2**
MRZ	**Mangatainoka R**	**16.76**	**193**	P	**P**	**03 08 41.1**	**-1.1**
OGWZ	**Otaki Gorge**	**16.99**	**194**	P	**P**	**03 08 43.7**	**-0.8**
HOWZ	**Holdsworth Sta**	**17.00**	**193**	P	**P**	**03 08 43.5**	**-1.1**
KIW	**Kapiti Island**	**17.09**	**194**	P	**P**	**03 08 44.9**	**-0.7**
DUWZ	**D'Urville Isla**	**17.28**	**197**	P	**P**	**03 08 47.6**	**+0.2**
TRWZ	**Traveller**	**17.45**	**192**	P	**P**	**03 08 48.9**	**-0.1**
TCW	**Tory Channel**	**17.58**	**196**	P	**P**	**03 08 50.1**	**0.0**
CTA	**Charters Tower**	**31.91**	**271**	P	**P**	**03 10 57.2**	**-0.5**
	6.9nm,0.4s,baz=95,slow=8.9,SNR=16						
	6.9nm,0.4s						
ASAR	**Alice Springs**	**42.38**	**261**	P	**P**	**03 12 23.6**	**-0.2**
	1.6nm,0.8s,baz=92,slow=7.4,SNR=15						
	1.6nm,0.8s						
WRA	**Warramunga Arr**	**42.80**	**266**	P	**P**	**03 12 26.4**	**-0.7**
	3.6nm,0.5s,baz=98,slow=8.3,SNR=56						
	3.6nm,0.5s						
HFS	**Hagfors**	**143.08**	**349**	PKP	PKPbc	03 23 47.6	-0.2
	1.4nm,0.7s,baz=49,slow=4.4,SNR=6.7						
BRTR	**Keskin Array B**	**148.20**	**307**	PKPbc	**PKPbc**	**03 24 03.5**	**+0.1**
	0.7nm,1.0s,baz=85,slow=6.4,SNR=4.1						

ISC 08 03:39:57.4±1.3**, 16°43N**±0°05×**95°21W**±0°03**, h27**km±15km**,**
n14, σ1°23/28**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.73**	**25**	eP	**Pn**	**03 40 12.5**	**+0.4**
CMIG				eS	**Sn**	**03 40 23.1**	**+0.7**
HUIG	**Huatulco**	**1.09**	**233**	eP	**Pb**	**03 40 17.5**	**-0.1**
HUIG				eS	**Sn**	**03 40 33.5**	**+2.4**
CARR	**Arriaga**	**1.25**	**98**	eP	**Pb**	**03 40 20.2**	**-0.2**
CARR				eS	**Sb**	**03 40 36.5**	**+0.2**
NEUV	**Arroyo Zacate**	**1.40**	**336**	eP	**Pn**	**03 40 21.1**	**-0.2**
NEUV				eS	**Sn**	**03 40 38.3**	**-0.6**
VHO	**Vista Hermosa**	**1.60**	**294**	eP	**Pb**	**03 40 26.1**	**-0.3**
VHO				eS	**Sb**	**03 40 46.1**	**-0.1**
PEIG	**Puerto Escondi**	**1.91**	**257**	eP	**Pn**	**03 40 27.9**	**-0.5**
PEIG				eS	**Sn**	**03 40 50.4**	**-1.2**
TGIG		**2.03**	**80**	eP	**Pn**	**03 40 29.4**	**-0.6**
TGIG				eS	**Sn**	**03 40 53.8**	**-0.7**
PCIG		**2.04**	**110**	eP	**Pn**	**03 40 30.0**	**-0.1**
PCIG				eS	**Sn**	**03 40 55.6**	**+0.9**
YOIG	**Yosondua**	**2.28**	**281**	eP	**Pn**	**03 40 35.4**	**+1.7**
YOIG				eS	**Sn**	**03 41 00.8**	**-0.3**
TOIG	**Toxpalan**	**2.43**	**313**	eP	**Pn**	**03 40 37.0**	**+1.5**
TOIG				eS	**Sn**	**03 41 05.0**	**+0.4**
TXIG	**Tlaxiaco**	**2.59**	**289**	eP	**Pn**	**03 40 39.5**	**+1.7**
TXIG				eS	**Sn**	**03 41 07.2**	**-1.4**
PNIG	**Pinotepa**	**2.80**	**270**	eP	**Pn**	**03 40 40.3**	**-0.3**
PNIG				eS	**Sn**	**03 41 10.9**	**-2.7**
HLIG	**Huajuapan de L**	**2.85**	**300**	eP	**Pn**	**03 40 43.1**	**+1.7**
HLIG				eS	**Sn**	**03 41 14.1**	**-0.9**
FTIG	**Fresnillo de T**	**3.16**	**298**	eP	**Pn**	**03 40 47.0**	**+1.4**
FTIG				eS	**Sn**	**03 41 20.9**	**-1.7**

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*JMA **08** 03:46:19.7±0.1, 23°9N±0°3×12°2E±°, h7km±2km, MV2.6/11, TAIWAN REGION*
*TAP **08** 03:46:19.7, 23°87N×121°54E, h10km, ML3.5, C*
ISC 08 03:46:20.1±0.8**, 23°86N**±0°01×**121°57E**±0°02**, h14**km±4km**,**
n145, σ0°64/237**, 7C-12D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEYL	**Yanliau Villag**	**0.03**	**69**	⇑iP	**Pg**	**03 46 22.5**	**0.0**
TEYL				iS	**Sg**	**03 46 24.6**	**+0.4**
SHUL	**Shoufeng**	**0.07**	**187**	⇑iP	**Pg**	**03 46 22.7**	**-0.1**
SHUL				S	**Sg**	**03 46 25.0**	**+0.3**
HWA	**Hwalien**	**0.12**	**14**	⇓P	**Pg**	**03 46 23.5**	**+0.1**
HWA				iS	**Sg**	**03 46 26.6**	**+0.9**
ETM	**Tongmen**	**0.13**	**326**	iP	**Pg**	**03 46 22.8**	**-0.7**
ETM				iS	**Sg**	**03 46 24.8**	**-1.1**
ESL	**Shilin**	**0.14**	**251**	⇓iP	**Pg**	**03 46 22.6**	**-1.0**
ESL				iS	**Sg**	**03 46 24.4**	**-1.6**
TEGC	**Jichi Village**	**0.15**	**191**	P	**Pg**	**03 46 24.1**	**+0.3**
TEGC				S	**Sg**	**03 46 27.5**	**+1.1**
LXIB	**Xiulin Townshi**	**0.22**	**318**	⇓iP	**Pg**	**03 46 24.4**	**-0.6**
LXIB				S	**Sg**	**03 46 27.3**	**-1.0**
WARBT	**Fenglin Townsh**	**0.22**	**230**	⇓iP	**Pg**	**03 46 24.1**	**-0.8**
WARBT				iS	**Sg**	**03 46 26.8**	**-1.5**
TWD	**Chiawan**	**0.22**	**6**	⇓iP	**Pg**	**03 46 24.8**	**-0.2**
TWD				iS	**Sg**	**03 46 28.2**	**-0.1**
ETL	**Fush Village**	**0.30**	**9**	P	**Pg**	**03 46 26.2**	**-0.2**
ETL				S	**Sg**	**03 46 30.3**	**-0.3**
NACB	**Ninganchiao**	**0.31**	**4**	P	**Pg**	**03 46 26.2**	**-0.4**
NACB	**Ninganchiao**	**0.31**	**4**	S	**Sg**	**03 46 30.6**	**-0.4**
NACB	**Ninganchiao**	**0.31**	**4**	⇓iP	**Pg**	**03 46 26.2**	**-0.4**
NACB				iS	**Sg**	**03 46 30.3**	**-0.7**
ETLH	**Xiulin Townshi**	**0.36**	**347**	iP	**Pg**	**03 46 27.2**	**-0.2**
ETLH				S	**Sg**	**03 46 31.7**	**-0.5**
OWD	**Renai**	**0.38**	**285**	P	**Pg**	**03 46 27.2**	**-0.5**
OWD				iS	**Sg**	**03 46 32.1**	**-0.8**
HGSD	**Ruisui**	**0.39**	**200**	P	**Pb**	**03 46 28.5**	**-0.2**
WHF	**Hehuan Shan**	**0.40**	**315**	P	**Pg**	**03 46 27.9**	**-0.3**
WHF				S	**Sg**	**03 46 32.9**	**-0.9**
VWDT	**VWDT**	**0.41**	**255**	⇓iP	**Pg**	**03 46 28.2**	**0.0**
VWDT				S	**Sg**	**03 46 33.5**	**-0.2**
EHY	**Hungye**	**0.42**	**213**	P	**Pg**	**03 46 27.9**	**-0.6**
EHY				S	**Sg**	**03 46 33.1**	**-1.0**
EHYH	**Wanrong**	**0.42**	**210**	eP	**Pg**	**03 46 28.5**	**0.0**
EHYH				eS	**Sg**	**03 46 33.7**	**-0.4**
WUSB	**Renai**	**0.44**	**288**	⇑iP	**Pg**	**03 46 28.7**	**-0.1**
WUSB				S	**Sg**	**03 46 34.5**	**-0.2**
FUSS	**Fushou**	**0.49**	**322**	eP	**Pg**	**03 46 29.9**	**0.0**
FUSS				eS	**Sg**	**03 46 36.5**	**0.0**
EAHA	**Aohua**	**0.49**	**18**	eP	**Pg**	**03 46 29.9**	**+0.1**
EAHA				eS	**Sg**	**03 46 36.5**	**+0.1**
YULB	**Yu-li**	**0.53**	**209**	P	**Pg**	**03 46 30.4**	**-0.1**
YULB	**Yu-li**	**0.53**	**209**	S	**Sb**	**03 46 39.1**	**+0.5**
YULB	**Yu-li**	**0.53**	**209**	P	**Pg**	**03 46 30.0**	**-0.5**
YULB				S	**Sg**	**03 46 36.7**	**-0.8**
TWT	**Tachien**	**0.53**	**317**	P	**Pb**	**03 46 30.8**	**-0.5**
TWT				S	**Sg**	**03 46 37.2**	**-0.6**
TDCB	**Techi**	**0.55**	**316**	⇓P	**Pg**	**03 46 30.9**	**+0.1**
TDCB				eS	**Sg**	**03 46 37.6**	**-0.5**
ECBN	**Changbin**	**0.55**	**192**	eP	**Pb**	**03 46 31.1**	**-0.4**
EYUL	**Yuli**	**0.56**	**205**	eP	**Pb**	**03 46 31.4**	**-0.3**
TWF1	**Yuli**	**0.56**	**207**	eP	**Pg**	**03 46 30.7**	**-0.4**
TWF1				eS	**Sg**	**03 46 38.3**	**-0.3**
SSLB	**Suanglung**	**0.57**	**263**	P	**Pg**	**03 46 31.2**	**-0.1**
SSLB	**Suanglung**	**0.57**	**263**	⇑iP	**Pg**	**03 46 30.9**	**-0.3**
SSLB				S	**Sg**	**03 46 37.9**	**-0.9**
WPL	**Puli Township**	**0.58**	**285**	eP	**Pb**	**03 46 31.6**	**-0.5**
WPL				eS	**Sg**	**03 46 39.0**	**-0.2**
ENA	**Nanau**	**0.59**	**15**	eP	**Pb**	**03 46 31.9**	**-0.3**
ENA				eS	**Sb**	**03 46 40.1**	**-0.3**
NNSB	**Datong**	**0.59**	**343**	⇓iP	**Pg**	**03 46 31.6**	**-0.1**
NNSB				S	**Sg**	**03 46 39.0**	**-0.6**
NNS	**Nan Shan**	**0.61**	**343**	P	**Pg**	**03 46 31.9**	**0.0**
NNS				S	**Sg**	**03 46 39.3**	**-0.8**
DPDB	**Guoxing**	**0.62**	**287**	eP	**Pg**	**03 46 31.9**	**-0.3**
SMLT	**Sun Moon Lake**	**0.62**	**272**	⇑iP	**Pg**	**03 46 32.0**	**-0.2**
SMLT				eS	**Sg**	**03 46 40.2**	**-0.2**
WCS	**Beigang Elemen**	**0.64**	**288**	eP	**Pg**	**03 46 32.4**	**0.0**
WCS				eS	**Sg**	**03 46 40.2**	**-0.7**
TYC	**Yuchr**	**0.66**	**274**	⇑iP	**Pg**	**03 46 32.5**	**-0.3**
TYC				S	**Sg**	**03 46 40.9**	**-0.6**
YUS	**Yu-Shan**	**0.68**	**237**	eP	**Pb**	**03 46 33.4**	**-0.5**
YUS				eS	**Sg**	**03 46 42.6**	**+0.2**
WHYT	**Xinyi Township**	**0.68**	**256**	eP	**Pg**	**03 46 33.2**	**-0.1**
WHYT				eS	**Sg**	**03 46 41.8**	**-0.5**
CHKH	**Chenggong**	**0.68**	**194**	eP	**Pb**	**03 46 34.2**	**+0.4**
CHKH				eS	**Sb**	**03 46 44.6**	**+1.5**
FULB	**Fuli**	**0.70**	**201**	eP	**Pb**	**03 46 34.8**	**+0.6**
WHP	**Taichung City**	**0.71**	**306**	eP	**Pb**	**03 46 34.1**	**-0.2**
WHP				eS	**Sg**	**03 46 43.1**	**-0.1**
NDT	**Datong Townshi**	**0.74**	**356**	eP	**Pb**	**03 46 34.8**	**0.0**
NDT				eS	**Sg**	**03 46 43.8**	**-0.5**
WJS	**Zhushan**	**0.77**	**267**	⇑P	**Pn**	**03 46 36.3**	**-0.3**
WJS				eS	**Sb**	**03 46 46.3**	**+0.6**
ENTT	**Nioudou**	**0.78**	**360**	eP	**Pb**	**03 46 35.2**	**-0.2**
ENTT				eS	**Sb**	**03 46 45.6**	**-0.3**
CHKT	**Chengkung**	**0.78**	**194**	eP	**Pb**	**03 46 35.1**	**-0.3**
EHD	**Haiduan**	**0.78**	**205**	eP	**Pg**	**03 46 35.1**	**-0.2**
EHD				eS	**Sb**	**03 46 45.6**	**-0.3**
NDS	**Dongshan**	**0.78**	**10**	eP	**Pg**	**03 46 35.0**	**-0.3**
NDS				eS	**Sg**	**03 46 45.2**	**-0.4**
ALS	**Alishan**	**0.78**	**244**	eP	**Pb**	**03 46 35.4**	**-0.2**
ALS				eS	**Sg**	**03 46 45.6**	**-0.1**
TWC	**Suao**	**0.79**	**19**	eP	**Pb**	**03 46 35.4**	**-0.2**
TWC				eS	**Sb**	**03 46 46.1**	**0.0**
WNT	**Mingjian**	**0.81**	**272**	eP	**Pb**	**03 46 36.4**	**+0.4**
WNT				eS	**Sb**	**03 46 47.7**	**+0.9**
ECS	**Chishang**	**0.83**	**203**	eP	**Pb**	**03 46 36.1**	**-0.1**
YHNB	**Yeheng**	**0.83**	**348**	P	**Pb**	**03 46 36.3**	**0.0**
YHNB	**Yeheng**	**0.83**	**348**	S	**Sb**	**03 46 47.4**	**+0.1**
YHNB	**Yeheng**	**0.83**	**348**	⇓P	**Pb**	**03 46 36.3**	**0.0**
YHNB				S	**Sg**	**03 46 46.3**	**-0.7**
NSK	**Sanguang**	**0.84**	**347**	P	**Pb**	**03 46 36.5**	**+0.1**
NSK				S	**Sg**	**03 46 46.8**	**-0.6**
ELDTW	**Lidau**	**0.84**	**217**	eP	**Pg**	**03 46 35.7**	**-0.7**
ELDTW				eS	**Sg**	**03 46 46.9**	**-0.5**
CHN5	**Tsauling**	**0.86**	**253**	P	**Pb**	**03 46 37.1**	**+0.3**
CHN5				S	**Sb**	**03 46 49.4**	**+1.2**
TWE	**Neicheng**	**0.86**	**6**	eP	**Pb**	**03 46 36.9**	**0.0**
TWE				eS	**Sb**	**03 46 48.8**	**+0.6**
TCU	**Taichung**	**0.87**	**290**	eP	**Pn**	**03 46 37.6**	**-0.3**
TCU				eS	**Sn**	**03 46 49.9**	**-0.5**
NFF	**Wufeng Townshi**	**0.87**	**332**	eP	**Pb**	**03 46 37.6**	**+0.5**
NFF				eS	**Sg**	**03 46 47.8**	**-0.7**
TWQ1	**Liyutan**	**0.88**	**304**	eP	**Pn**	**03 46 38.0**	**0.0**
FUSB	**Fushanzhiwuyua**	**0.90**	**1**	eP	**Pb**	**03 46 37.4**	**0.0**
FUSB				eS	**Sb**	**03 46 50.0**	**+0.6**
NWLT	**Wulai**	**0.92**	**356**	eP	**Pb**	**03 46 37.8**	**0.0**
NWLT				eS	**Sg**	**03 46 49.1**	**-0.7**
NSY	**Sanyi**	**0.93**	**307**	eP	**Pn**	**03 46 39.2**	**+0.5**
NSY				eS	**Sb**	**03 46 50.7**	**+0.6**
NSTT	**Nanjuang**	**0.93**	**326**	eP	**Pb**	**03 46 38.5**	**+0.5**
NSTT				eS	**Sg**	**03 46 49.8**	**-0.4**
LIOB	**Emei**	**0.93**	**327**	eP	**Pn**	**03 46 38.8**	**-0.1**
LIOB				eS	**Sb**	**03 46 50.7**	**+0.3**
WGK	**Gukeng**	**0.94**	**260**	eS	**Sn**	**03 46 52.9**	**+0.7**
WCHH	**Zhanghua**	**0.95**	**284**	eP	**Pn**	**03 46 39.4**	**+0.4**
WCHH				eS	**Sn**	**03 46 52.8**	**+0.4**
WCH1	**Changhua City**	**0.96**	**283**	eP	**Pg**	**03 46 37.7**	**-1.0**
WCH1				eS	**Sn**	**03 46 52.9**	**+0.2**
WDLH	**Douliu**	**0.96**	**260**	eP	**Pn**	**03 46 39.6**	**+0.4**
WDLH				eS	**Sn**	**03 46 53.3**	**+0.6**
NJD	**Zhudong**	**0.98**	**333**	eP	**Pb**	**03 46 38.7**	**-0.1**
WCKO	**Fanlu**	**0.98**	**245**	eP	**Pn**	**03 46 39.4**	**0.0**
WCKO				eS	**Sb**	**03 46 52.5**	**+0.8**
WDJ	**Dajia District**	**0.98**	**300**	eP	**Pn**	**03 46 40.2**	**+0.8**
WDJ				eS	**Sn**	**03 46 53.4**	**+0.2**
KSHI	**Guanxi Townshi**	**0.98**	**339**	eP	**Pn**	**03 46 39.7**	**+0.2**
KSHI				eS	**Sb**	**03 46 52.6**	**+0.9**
NMLH	**Miaoli**	**0.98**	**314**	eP	**Pn**	**03 46 40.3**	**+0.8**
NMLH				eS	**Sn**	**03 46 53.5**	**+0.3**
STYH	**Taoyuan**	**1.00**	**227**	eP	**Pb**	**03 46 39.2**	**0.0**
STYT	**Tauyuan**	**1.02**	**227**	P	**Pb**	**03 46 39.6**	**0.0**
STYT				S	**Sb**	**03 46 53.5**	**+0.7**
TPUB	**Ta-pu**	**1.03**	**237**	P	**Pn**	**03 46 40.5**	**+0.4**
TPUB	**Ta-pu**	**1.03**	**237**	S	**Sn**	**03 46 55.1**	**+0.8**
TPUB	**Ta-pu**	**1.03**	**237**	P	**Pn**	**03 46 40.2**	**+0.1**
TPUB				eS	**Sb**	**03 46 53.4**	**+0.4**
CHN4	**Tsaushan**	**1.03**	**241**	⇓eP	**Pn**	**03 46 40.1**	**0.0**
CHN4				eS	**Sb**	**03 46 54.0**	**+0.9**
LONT	**Longtian**	**1.03**	**203**	eP	**Pb**	**03 46 39.8**	**+0.1**
HSN1	**Hsinchu**	**1.04**	**331**	eP	**Pg**	**03 46 38.8**	**-1.5**
WTP	**Ta-pu**	**1.07**	**235**	eP	**Pn**	**03 46 41.0**	**+0.2**
WTP				eS	**Sb**	**03 46 55.1**	**+0.8**
SBCB	**Hsinchu**	**1.07**	**330**	eP	**Pn**	**03 46 42.1**	**+1.4**
HSN	**Hsinchu**	**1.09**	**330**	eP	**Pn**	**03 46 41.1**	**+0.2**
WRL	**Guolierlin Hig**	**1.09**	**272**	eP	**Pb**	**03 46 41.0**	**+0.2**
WRL				eS	**Sn**	**03 46 56.5**	**+0.5**
WTK	**Tuku**	**1.10**	**261**	eP	**Pb**	**03 46 40.9**	**+0.1**
RLNB	**Erlin**	**1.11**	**272**	eP	**Pn**	**03 46 41.9**	**+0.7**
RLNB				eS	**Sn**	**03 46 57.0**	**+0.7**
CHY	**Chiayi**	**1.11**	**251**	eP	**Pg**	**03 46 40.8**	**-0.7**
CHY				eS	**Sn**	**03 46 57.0**	**+0.6**
TATO	**Taipei**	**1.11**	**356**	P	**Pg**	**03 46 40.7**	**-0.9**
TATO	**Taipei**	**1.11**	**356**	eP	**Pg**	**03 46 40.9**	**-0.7**
TATO				eS	**Sg**	**03 46 54.8**	**-1.3**
TWA	**Mucha**	**1.12**	**1**	eP	**Pn**	**03 46 41.8**	**+0.4**
TWA				eS	**Sb**	**03 46 56.0**	**+0.4**
TWG	**Pinlang**	**1.13**	**204**	eP	**Pg**	**03 46 41.3**	**-0.6**
TWGBT	**Beinan**	**1.13**	**204**	P	**Pn**	**03 46 42.3**	**+0.8**
TWGBT	**Beinan**	**1.13**	**204**	eP	**Pg**	**03 46 41.1**	**-0.8**
TIPB	**Shuangxi**	**1.13**	**12**	eP	**Pg**	**03 46 41.4**	**-0.5**
TIPB				eS	**Sg**	**03 46 55.8**	**-0.9**
TWK	**Hsinying**	**1.16**	**240**	eP	**Pn**	**03 46 42.5**	**+0.6**
TWK				S	**Sn**	**03 46 57.9**	**+0.4**
NCUH	**Zhongli**	**1.16**	**342**	eP	**Pn**	**03 46 43.3**	**+1.4**
NCU	**National Centr**	**1.16**	**342**	eS	**Sn**	**03 46 58.4**	**+0.8**
CHN1	**Nanshi**	**1.17**	**235**	eP	**Pn**	**03 46 42.8**	**+0.7**
CHN1				eS	**Sn**	**03 46 58.5**	**+0.6**
SGST	**Jiashian**	**1.19**	**230**	eP	**Pn**	**03 46 42.8**	**+0.5**
SGST				eS	**Sn**	**03 46 59.1**	**+0.7**
TWB1	**Santiao Chiao**	**1.21**	**18**	eP	**Pg**	**03 46 43.5**	**+0.2**
SLGT	**Liugui**	**1.21**	**225**	eP	**Pg**	**03 46 43.2**	**-0.2**
SLGT				eS	**Sn**	**03 46 59.9**	**+1.1**
WFSB	**Wu-fen Shan**	**1.22**	**9**	eP	**Pg**	**03 46 44.2**	**+0.6**
WFSB				eS	**Sn**	**03 47 00.2**	**+1.1**
TWS1	**Kuangyinshan**	**1.24**	**354**	eP	**Pn**	**03 46 43.3**	**+0.2**
WSF	**Szhu**	**1.26**	**260**	eP	**Pg**	**03 46 43.8**	**-0.4**
WSF				eS	**Sn**	**03 47 01.0**	**+1.1**
SXI1	**Grass Mountain**	**1.26**	**13**	eP	**Pg**	**03 46 43.9**	**-0.4**
WSL	**Shuilin Townsh**	**1.28**	**255**	eP	**Pg**	**03 46 44.7**	**+0.1**
YM01	**YM01**	**1.28**	**360**	eP	**Pn**	**03 46 43.9**	**+0.3**
ZUZH	**Zhuzihu**	**1.30**	**359**	eP	**Pg**	**03 46 44.9**	**-0.2**
ZUZH				eS	**Sb**	**03 47 01.1**	**+0.2**
ECL	**Taimali**	**1.38**	**204**	eP	**Pn**	**03 46 43.9**	**-1.0**
JYNG	**Yonagunijimaku**	**1.39**	**65**	eP	**Pn**	**03 46 44.8**	**-0.2**
TSMG	**Majia**	**1.43**	**217**	eP	**Pn**	**03 46 45.9**	**+0.3**
SCLT	**Jiali**	**1.44**	**242**	eP	**Pb**	**03 46 46.4**	**-0.2**
YOJ	**Yonaguni jima**	**1.45**	**65**	P	**Pn**	**03 46 45.9**	**+0.1**
YOJ	**Yonaguni jima**	**1.45**	**65**	S	**Sn**	**03 47 04.8**	**+0.2**
YOJ	**Yonaguni jima**	**1.45**	**65**	⇓P	**Pn**	**03 46 46.0**	**+0.2**
YOJ				eS	**Sn**	**03 47 04.7**	**+0.2**
YOJ	**Yonaguni jima**	**1.45**	**65**	eP	**Pn**	**03 46 45.8**	**0.0**
YOJ				eS	**Sn**	**03 47 04.5**	**-0.1**
TWM1	**Shoushan**	**1.48**	**226**	eP	**Pg**	**03 46 47.9**	**-0.5**
MASBT	**Mashibuluo**	**1.51**	**215**	eP	**Pn**	**03 46 47.1**	**+0.3**
MASBT				eS	**Sg**	**03 47 08.1**	**-0.7**
TSCK	**Chigu Township**	**1.54**	**243**	eS	**Sg**	**03 47 09.8**	**+0.2**
SCZT	**Fangliau**	**1.72**	**211**	eP	**Pb**	**03 46 51.2**	**-0.3**
LAY	**Lan-yu**	**1.81**	**181**	eP	**Pn**	**03 46 48.9**	**-2.0**
LYUB	**Lan-yu**	**1.85**	**180**	eP	**Pn**	**03 46 49.2**	**-2.1**
WDGT	**Dungji**	**1.85**	**252**	eP	**Pb**	**03 46 52.9**	**-0.9**
WDGT				eS	**Sb**	**03 47 17.0**	**+0.2**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHUB	P'eng-hu	1.86	260	eP	Pb	03 46 53.0	-1.0
PHUB				eS	Sn	03 47 16.2	+1.2
PNG	Penghu	1.87	261	eP	Pn	03 46 52.8	+1.1
PNG				eS	Sb	03 47 16.7	-0.6
SMST	Manzhou Townsh	1.95	200	eP	Pn	03 46 53.8	+1.0
IRIF	Iriomote-Funau	2.03	76	eS	Sn	03 47 20.9	+1.9
TWKBT	Hengchun	2.03	200	eP	Pb	03 46 55.6	-1.2
VCHM	Qimei	2.07	252	eP	Pn	03 46 55.7	+1.3
VCHM				eS	Sn	03 47 21.7	+1.7
VWUC	VWUC	2.24	301	eP	Pn	03 46 57.2	+0.5
VWUC				eS	Sn	03 47 22.7	-1.5
JKRS	Kuro-shima	2.26	80	eP	Pn	03 46 57.5	+0.4
JIJ	Ishigaki jima	2.40	77	eP	Pn	03 46 58.6	-0.3
JIJ				eS	Sn	03 47 27.7	-0.6
PTMZ	Houxiangcun	2.52	298	eP	Pn	03 47 00.9	+0.3
PTMZ				eS	Sn	03 47 30.9	-0.4
MATB	Ma-tsu	2.72	327	eP	Pn	03 47 03.6	+0.3
MATB				eS	Sn	03 47 35.7	-0.4
KNMB	Chin-men Tao	2.97	282	eP	Pn	03 47 07.6	+0.8
KNMB				eS	Sn	03 47 42.7	+0.5
LYJJ	Jianjiangzhen	3.14	329	eP	Pn	03 47 09.8	+0.7
AXDP	Jialang	3.44	288	eP	Pn	03 47 13.8	+0.4

*NEIC **08** 03:52:49.1±2.1, 15°.75N±0°.06×95°.46W±0°.04, h10^{km}±2^{km}, mb4.2/5, Md4.3/105(MEX), Error ellipse: s-maj=10.7km s-min=5.2km az=204.0*

*MEX **08** 03:52:51.1±0.7, 15°.70N×95°.53W, h11^{km}±10^{km}, MD4.3*

ISC 08 03:52:44.7±1.1**, 15°.70N**±0°.03×**95°.54W**±0°.02**, h12**^{km}±9^{km}**, n99,** σ**2^{s}41**/175**, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.56	277		Pn	03 53 01.3	+2.9
HUIG					Sn	03 53 08.9	+1.3
HUIG	Huatulco	0.56	277	eP	Pn	03 53 01.3	+2.9
HUIG				eS	Sn	03 53 08.9	+1.3
CMIG	Matias Romero	1.52	24		Pg	03 53 14.1	+0.1
CMIG					Sg	03 53 33.4	-0.2
CMIG	Matias Romero	1.52	24	eP	Pg	03 53 14.1	+0.1
CMIG				eS	Sg	03 53 33.4	-0.2
PEIG	Puerto Escondi	1.58	281		Pg	03 53 15.6	+0.6
PEIG					Sn	03 53 32.6	-0.3
PEIG	Puerto Escondi	1.58	281	eP	Pg	03 53 15.6	+0.6
PEIG				eS	Sn	03 53 32.6	-0.3
CARR	Arriaga	1.65	71	eP	Pg	03 53 15.4	-1.0
CARR				eS	Sg	03 53 35.8	-2.2
OXLC	Oaxaca	1.76	321		Pg	03 53 19.4	+0.8
OXLC					Sg	03 53 43.4	+1.9
OXLC	Oaxaca	1.76	321	eP	Pg	03 53 19.4	+0.8
OXLC				eS	Sg	03 53 43.4	+1.9
OXBJ	Oaxaca	1.78	320		Pg	03 53 20.5	+1.7
OXBJ					Sg	03 53 42.3	+0.4
OXBJ	Oaxaca	1.78	320	eP	Pg	03 53 20.5	+1.7
OXBJ				eS	Sg	03 53 42.3	+0.4
OXIG	Oaxaca	1.79	320		Pg	03 53 20.1	+1.1
OXIG					Sg	03 53 41.7	-0.5
VHO	Vista Hermosa	1.79	320	eP	Pg	03 53 20.1	+1.1
VHO				eS	Sg	03 53 41.7	-0.5
NEUV	Arroyo Zacate	2.02	353		Pg	03 53 23.9	+0.5
NEUV					Sg	03 53 49.7	+0.1
NEUV	Arroyo Zacate	2.02	353	eP	Pg	03 53 23.9	+0.5
NEUV				eS	Sg	03 53 49.7	+0.1
PCIG		2.23	90		Pb	03 53 24.6	-0.3
PCIG					Sb	03 53 51.0	-1.5
PCIG		2.23	90	eP	Pb	03 53 24.6	-0.3
PCIG				eS	Sb	03 53 51.0	-1.5
YOIG	Yosondua	2.25	301		Pg	03 53 27.6	-0.3
YOIG					Sb	03 53 52.4	-0.9
YOIG	Yosondua	2.25	301	eP	Pg	03 53 27.6	-0.3
YOIG				eS	Sb	03 53 52.4	-0.9
TGIG		2.56	65		Pb	03 53 30.3	-0.2
TGIG					Sb	03 53 58.9	-3.0
TGIG		2.56	65	eP	Pb	03 53 30.3	-0.2
TGIG				eS	Sb	03 53 58.9	-3.0
TUIG	Tuzandepetl	2.56	24		Pn	03 53 25.2	-0.7
TUIG					Sb	03 54 02.5	+0.6
TUIG	Tuzandepetl	2.56	24	eP	Pn	03 53 25.2	-0.7
TUIG				eS	Sb	03 54 02.5	+0.6
TGBT	Tuxtla Gutierr	2.58	65		Pg	03 53 37.5	+3.3
TGBT					Sb	03 54 01.8	-0.9
TGBT	Tuxtla Gutierr	2.58	65	eP	Pg	03 53 37.5	+3.3
TGBT				eS	Sb	03 54 01.8	-0.9
PNIG	Pinotepa	2.58	286		Pb	03 53 30.1	-0.9
PNIG					Sn	03 53 56.3	-1.4
PNIG	Pinotepa	2.58	286	eP	Pb	03 53 30.1	-0.9
PNIG				eS	Sn	03 53 56.3	-1.4
TXIG	Tlaxiaco	2.64	306		Pg	03 53 33.7	-1.7
TXIG					Sb	03 54 02.4	-2.2
TXIG	Tlaxiaco	2.64	306	eP	Pg	03 53 33.7	-1.7
TXIG				eS	Sb	03 54 02.4	-2.2
TOIG	Toxpalan	2.80	329		Pg	03 53 36.4	-2.0
TOIG					Sg	03 54 13.5	-1.1
TOIG	Toxpalan	2.80	329	eP	Pg	03 53 36.4	-2.0
TOIG				eS	Sg	03 54 13.5	-1.1
PMUV	Sontecomapan	2.86	8		Pb	03 53 34.4	-1.3
PMUV					Sn	03 54 01.2	-3.3
PMUV	Sontecomapan	2.86	8	eP	Pb	03 53 34.4	-1.3
PMUV				eS	Sn	03 54 01.2	-3.3
HLIG	Huajuapan de L	3.04	315		Pg	03 53 40.7	-2.2
HLIG					Sb	03 54 15.3	-0.6
HLIG	Huajuapan de L	3.04	315	eP	Pg	03 53 40.7	-2.2
HLIG				eS	Sb	03 54 15.3	-0.6
TPIG	Tehuac#an	3.22	327		Pg	03 53 46.3	-0.2
TPIG					Sb	03 54 20.6	-0.6
TPIG	Tehuac#an	3.22	327	eP	Pg	03 53 46.3	-0.2
TPIG				eS	Sb	03 54 20.6	-0.6
PATR	El Naranjo	3.24	100		Pb	03 53 39.3	-2.9
PATR					Sb	03 54 17.3	-4.4
PATR	El Naranjo	3.24	100	eP	Pb	03 53 39.3	-2.9
PATR				eS	Sb	03 54 17.3	-4.4
THIG		3.25	104		Pb	03 53 43.7	+1.3
THIG					Sb	03 54 16.9	-5.0
THIG		3.25	104	eP	Pb	03 53 43.7	+1.3
THIG				eS	Sb	03 54 16.9	-5.0
PAVE	Pavencul	3.28	98		Pb	03 53 40.5	-2.5
PAVE					Sb	03 54 19.1	-3.8
PAVE	Pavencul	3.28	98	eP	Pb	03 53 40.5	-2.5
PAVE				eS	Sb	03 54 19.1	-3.8
FTIG	Fresnillo de T	3.32	312		Pb	03 53 42.2	-1.4
FTIG					Sn	03 54 18.6	+2.6
FTIG	Fresnillo de T	3.32	312	eP	Pb	03 53 42.2	-1.4
FTIG				eS	Sn	03 54 18.6	+2.6
CCIG	Comitan	3.32	79		Pb	03 53 41.5	-2.1
CCIG					Sb	03 54 18.8	-5.3
CCIG	Comitan	3.32	79	eP	Pb	03 53 41.5	-2.1
CCIG				eS	Sb	03 54 18.8	-5.3
MGIG	Malinaltepec	3.34	298		Pb	03 53 41.9	-2.0
MGIG					Sn	03 54 16.4	-0.3
MGIG	Malinaltepec	3.34	298	eP	Pb	03 53 41.9	-2.0
MGIG				eS	Sn	03 54 16.4	-0.3
CHUJ	Union Juarez	3.36	100	eP	Pb	03 53 41.2	-3.2
CHUJ				eS	Sn	03 54 19.8	+2.6
TLIG	Tlapa	3.45	303		Pb	03 53 44.6	-1.2
TLIG					Sb	03 54 25.8	-1.9
TLIG	Tlapa	3.45	303	eP	Pb	03 53 44.6	-1.2
TLIG				eS	Sb	03 54 25.8	-1.9
CRIG	Cruz Grande	3.60	287		Pb	03 53 44.6	-3.8
CRIG					Sn	03 54 19.7	-3.2
CRIG	Cruz Grande	3.60	287	eP	Pb	03 53 44.6	-3.8
CRIG				eS	Sn	03 54 19.7	-3.2
JAUV	Jalcomulco	3.84	342		Pb	03 53 49.5	-3.0
JAUV					Sb	03 54 35.0	-4.0
JAUV	Jalcomulco	3.84	342	eP	Pb	03 53 49.5	-3.0
JAUV				eS	Sb	03 54 35.0	-4.0
RTAL	Retalhuleu	3.89	107	Pn	Pb	03 53 49.5	-3.7
RTAL	Retalhuleu	3.89	107	eP	Pb	03 53 52.7	-0.6
RTAL				eS	Sb	03 54 35.7	-4.6
HUEH	Huehuetenango	3.91	95		Pb	03 53 53.0	-0.7
HUEH					Sb	03 54 39.5	-1.5
HUEH	Huehuetenango	3.91	95	eP	Pb	03 53 53.0	-0.7
HUEH				eS	Sb	03 54 39.5	-1.5
LVIG	Laguna Verde	4.09	348		Pb	03 53 52.9	-3.7
LVIG					Sb	03 54 44.4	-1.7
LVIG	Laguna Verde	4.09	348	eP	Pb	03 53 52.9	-3.7
LVIG				eS	Sb	03 54 44.4	-1.7
DAIG	Los Arroyos	4.16	289		Pn	03 53 48.7	+0.6
DAIG					Sn	03 54 34.0	-2.7
DAIG	Los Arroyos	4.16	289	eP	Pn	03 53 48.7	+0.6
DAIG				eS	Sn	03 54 34.0	-2.7
PPM	Popocatepetl	4.46	319	eP	Pb	03 54 00.1	-3.2
PPM				eS	Sn	03 54 48.6	+3.8
PPIG	Popocatepetl	4.46	319		Pb	03 54 00.1	-3.2
PPIG					Sn	03 54 48.6	+3.8
MEIG	Mezcala	4.50	300		Pn	03 53 55.0	+2.3
MEIG					Sn	03 54 45.2	+0.3
MEIG	Mezcala	4.50	300	eP	Pn	03 53 55.0	+2.3
MEIG				eS	Sn	03 54 45.2	+0.3
YAIG	Yautepec	4.61	314		Pb	03 54 00.5	-5.2
YAIG					Sn	03 54 48.2	+0.2
YAIG	Yautepec	4.61	314	eP	Pb	03 54 00.5	-5.2
YAIG				eS	Sn	03 54 48.2	+0.2
PLIG	Platanillo	4.64	306		Pb	03 54 02.5	-3.7
PLIG					Sn	03 54 49.7	+1.1
PLIG	Platanillo	4.64	306	eP	Pb	03 54 02.5	-3.7
PLIG				eS	Sn	03 54 49.7	+1.1
CAIG	El Cayaco	4.74	287		Pn	03 54 00.7	+4.8
CAIG					Sn	03 54 46.4	-4.3
CAIG	El Cayaco	4.74	287	eP	Pn	03 54 00.7	+4.8
CAIG				eS	Sn	03 54 46.4	-4.3
MPVM	San Francisco	4.81	317	e	Pg	03 54 18.1	+1.3
CXUV	Coxquihui	4.86	337		Pb	03 54 06.0	-3.8
CXUV					Sb	03 55 03.6	-4.7
CXUV	Coxquihui	4.86	337	eP	Pb	03 54 06.0	-3.8
CXUV				eS	Sb	03 55 03.6	-4.7
MZVM		4.95	315	eP	Pg	03 54 19.1	-0.4
MZVM				e		03 55 13.0	
MAVM	Malinalco, Edo	4.98	311		Sn	03 54 58.1	+1.1
MAVM	Malinalco, Edo	4.98	311	e	Pb	03 54 10.7	-1.2
MAVM				eS	Sn	03 54 58.1	+1.1
AOVM	Tlapan	5.07	315	e	Pg	03 54 25.6	+3.8
AOVM				e		03 55 22.8	
INVM	La Marquesa	5.12	315	e	Pg	03 54 26.5	+3.6
INVM				e		03 55 03.7	
ARIG	Puente Sto Nin	5.27	300		Pn	03 54 09.3	+6.0
ARIG					Sn	03 55 02.6	-1.4
ARIG	Puente Sto Nin	5.27	300	eP	Pn	03 54 09.3	+6.0
ARIG				eS	Sn	03 55 02.6	-1.4
SCIG	Sabancuy	5.28	51		Pn	03 54 06.8	+3.4
SCIG					Sn	03 55 02.0	-2.0
SCIG	Sabancuy	5.28	51	eP	Pn	03 54 06.8	+3.4
SCIG				eS	Sn	03 55 02.0	-2.0
PETF	Flores	5.58	77		Pn	03 54 11.2	+3.7
PETF					Sn	03 55 09.5	-2.0
PETF	Flores	5.58	77	eP	Pn	03 54 11.2	+3.7
PETF				eS	Sn	03 55 09.5	-2.0
ZIIG	Zihuatanejo	5.99	289		Pn	03 54 18.6	+5.5
ZIIG					Sn	03 55 17.4	-4.3
ZIIG	Zihuatanejo	5.99	289	eP	Pn	03 54 18.6	+5.5
ZIIG				eS	Sn	03 55 17.4	-4.3
CTUV	Llano Grande	6.33	335		Pn	03 54 23.7	+5.8
CTUV					Sn	03 55 30.6	+0.5
CTUV	Llano Grande	6.33	335	eP	Pn	03 54 23.7	+5.8
CTUV				eS	Sn	03 55 30.6	+0.5
TEIG	Tepich	8.25	56		Pn	03 54 46.7	+2.6
833A	Chaparral WMA,	13.06	345	Pn	Pn	03 55 52.6	+2.6
TXAR	Lajitas Array	15.50	332	Pn	P	03 56 27.2	-0.5
WHTX	Lake Whitney,	16.31	354	Pn	P	03 56 36.7	+0.2
LOOK	Love County	18.28	356	P	P	03 57 02.4	+4.1
MIAR	Mount Ida	18.85	5	P	Pn	03 57 06.2	+1.1
MIAR				IAmb	IAmb	03 57 31.9	
	comp=Z,8.1nm,1.1s						
TCRU	Three Creeks R	27.24	330	P	P	03 58 29.5	+0.6
TCRU				IAmb	IAmb	03 59 01.3	
	comp=Z,6.8nm,0.5s						

*IDC **08** 04:03:42.6±4.5, 3°.01S×102°.51E, h0^{km}, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=195.0km s-min=25.5km az=56.0*

*DJA **08** 04:03:53.7±0.3, 3°S±4°×10°2E±°, h81^{km}±6^{km}, M3.5/19, MLv3.5/19*

ISC 08 04:03:53.1±1.0**, 3°.40S**±0°.09×**102°.2E**±0°.1**, h100**^{km}**, n17,** σ**1^{s}60**/17**, mb3.4**/4**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASI	Maura Aman, Be	0.27	11	P	Pn	04 04 08.3	+0.7
UBSI	University, Be	0.36	167	P	Pn	04 04 08.3	+0.3
KSI	Kapahiang	0.47	121	P	Pn	04 04 09.0	+0.3
MNAI	Manna	1.22	141	P	Pn	04 04 16.5	+0.5
KRJI	Kerinci	1.49	331	P	Pn	04 04 18.8	-0.6
EGSI	Enggano, Bengk	1.94	177	P	Pn	04 04 26.0	+1.1
MDSI	Maura Dua	2.26	118	P	Pn	04 04 29.6	+0.6
LWLI	Liwa	2.46	131	P	Pn	04 04 33.1	+1.3
KLSI		2.84	117	P	Pn	04 04 37.5	+0.8
PDSI	Padang	3.02	325	P	Pn	04 04 39.2	+0.1
KASI	Kota Agung	3.12	133	P	Pn	04 04 41.0	+0.6
PPI	Padang Panjang	3.43	329	P	Pn	04 04 49.2	+4.6
SISI	Saibi	3.72	304	P	Pn	04 04 48.5	0.0
WRA	Warramunga Arr	35.40	120	P	P	04 10 38.0	-1.7
	0.4nm,0.9s,baz=299,slow=7.5,SNR=4.5						
	0.4nm,0.9s						
ASAR	Alice Springs	36.66	126	P	P	04 10 52.5	+2.1
	0.3nm,0.5s,baz=302,slow=8.2,SNR=7.0						
	0.3nm,0.5s						
SONM	Songino Array	51.16	4	P	P	04 12 45.2	-0.8
	0.3nm,0.5s,baz=188,slow=5.8,SNR=2.0						
	0.3nm,0.5s						
MKAR	Makanchi Array	52.98	343	P	P	04 12 58.4	-1.0
	0.2nm,0.5s,baz=165,slow=6.9,SNR=4.3						
	0.2nm,0.5s						

*NNC **08** 04:04:32.5±5.3, 37°.23N×71°.24E, h176^{km}±96^{km}, mb2.5, mpv3.4, Error ellipse: s-maj=55.9km s-min=32.1km az=28.0*

ISC 08 04:04:23.4±1.3**, 36°.70N**±0°.09×**71°.3E**±0°.1**, h100**^{km}**, n10,** σ**3^{s}26**/17**, 2C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMU	Jammu	4.86	142	eS	Sn	04 06 30.9	+1.5
ALCI	Alchi Leh	5.39	116	eS	Sn	04 06 41.9	-0.9
TSSA	Tissa	5.54	133	eP	Pn	04 05 45.4	+1.8
TSSA				eS	Sn	04 06 43.6	-2.4
TSSA				IAML		04 06 46.6	
	comp=E,53nm,0.2s						
TSSA				IAML		04 06 48.4	
	comp=N,61nm,0.3s						
THN	Thein Dam	5.61	138	eP	Pn	04 05 46.2	+1.7
THN				eS	Sn	04 06 46.4	-1.1
DHRM	DHARAMSHALA	6.05	136	eP	Pn	04 05 51.9	+1.3
DHRM				eS	Sn	04 06 55.7	-2.9
DHRM				IAML		04 06 58.7	
	comp=E,55nm,0.1s						
DHRM				IAML		04 06 59.7	
	comp=N,87nm,0.3s						
AAK	Ala-Archa	6.42	21	⇓P	Pn	04 05 58.7	+3.2
	comp=N,0.6nm,0.5s						
AAK				⇑S	Sn	04 07 07.2	-0.1
	comp=N,2.2nm,0.6s						
KK31	Karatay Array	6.43	355	⇑P	Pn	04 05 57.8	+2.4
	comp=N,2.2nm,0.2s,baz=181,slow=13,SNR=139						
KK31				S	Sn	04 07 06.2	-1.2
	comp=N,7.3nm,0.6s,baz=183,slow=18,SNR=12						
HNLY	HANLEY	7.41	120	ex	x	04 05 59.0	
HNLY				eS	Sn	04 07 29.6	-2.6
KLP	Kalpa	7.72	130	eP	Pn	04 06 14.5	+1.2
KLP				eS	Sn	04 07 32.2	-7.1
KLP				IAML		04 07 40.8	
	comp=E,16nm,0.4s						
AB31	Akbulak array	15.04	330	P	Pn	04 07 51.2	+0.8
	comp=E,0.7nm,0.5s,baz=155,slow=12,SNR=15						
AB31				S	Sn	04 10 29.5	-6.8
	comp=E,0.4nm,0.4s,baz=154,slow=22,SNR=3.4						

*BER **08** 04:17:38.4±3.2, 79°.70N×3°.94E, h10^{km}, Mw3.3, ML2.7(NAO), Confirmed Earthquake*

*NAO **08** 04:17:40.7±1.5, 79°.52N×4°.62E, h10^{km}, ML2.7*

*KOLA **08** 04:17:41.4, 79°.45N×5°.37E, h0^{km}, ML2.1, Error ellipse: s-maj=42.8km s-min=20.8km az=20.0, Greenland sea,Knipovich ridge, north*

*DNK **08** 04:17:41.2±2.6, 79°.44N×4°.37E, h36^{km}±31^{km}, ML1.8, Presumed earthquake*

*FCIAR **08** 04:17:43.0, 79°.35N×5°.13E, h10^{km}, station ZFI2 has station magnitude of 3.40 station OMEGA has station magnitude of 3.30*

*IDC **08** 04:17:43.8±3.1, 79°.64N×6°.34E, h0^{km}, mb3.3/3, mbtmp3.4/6, ML2.4/2, MS3.1/2, Error ellipse: s-maj=51.8km s-min=30.2km az=62.0*

ISC 08 04:17:37.9±0.9**, 79°.62N**±0°.07×**3°.85E**±0°.05**, h10**^{km}**, n42,** σ**3^{s}22**/64**, mb3.2**/3**, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	1.67	111	Pb	Pn	04 18 06.4	-0.7
KBS				Sb	Sn	04 18 24.3	-4.2
KBS	Kingsbay	1.67	111	eP	Pn	04 18 06.3	-0.7
KBS				eS	Sn	04 18 24.5	-4.0
KBS				IAML		04 18 26.9	
	comp=Z,38nm,0.2s						
KBS	Kingsbay	1.67	111	i P	Pn	04 18 05.1	-2.0
KBS	Kingsbay	1.67	111	P	Pn	04 18 05.9	-1.2
KBS				S	Sn	04 18 24.4	-4.2
BRBB	Barentsburg B	2.53	122	Pn	Pn	04 18 19.8	+0.8
BRBB	Barentsburg B	2.53	122	eP	Pn	04 18 19.4	+0.5
BRBB				eS	Sn	04 18 47.5	-2.3
BRBB	Barentsburg B	2.53	122	P	Pn	04 18 19.4	+0.5
BRBB				S	Sn	04 18 47.1	-2.6
BRBA	Barentsburg A	2.55	123	Pn	Pn	04 18 19.9	+0.6
BRBA				Sn	Sn	04 18 48.5	-1.8
BRBA	Barentsburg A	2.55	123	eP	Pn	04 18 19.7	+0.4
BRBA				eS	Sn	04 18 48.0	-2.3
BRBA				IAML		04 18 53.2	
	comp=Z,23nm,0.3s						
SPA0	Spitsbergen Ar	2.82	115	Pn	Pn	04 18 22.9	0.0
	baz=323,slow=11						
SPA0				Sn	Sn	04 18 53.8	-3.1
	baz=322,slow=37						
SPA0	Spitsbergen Ar	2.82	115	Pn	Pn	04 18 22.9	0.0
SPA0				Sn	Sn	04 18 53.8	-3.1
SPA0	Spitsbergen Ar	2.82	115	eP	Pn	04 18 22.9	0.0
SPA0				eS	Sn	04 18 52.6	-4.3
SPITS	Spitsbergen Ar	2.82	115	Pn	Pn	04 18 22.9	0.0
	comp=Z,18nm,0.3s,baz=316,slow=8.2,SNR=23						
SPITS				Sn	Sn	04 18 53.2	-3.7
	baz=322,slow=16						
SPITS	Spitsbergen Ar	2.82	115	P	Pn	04 18 22.6	-0.3
SPITS				S	Sn	04 18 53.2	-3.7
HSPB	Hornsund (broa	3.54	132	Pn	Pn	04 18 32.5	-0.4
HSPB				Sn	Sn	04 19 10.3	-4.3
HSPB	Hornsund (broa	3.54	132	eP	Pn	04 18 32.4	-0.4
HSPB				eS	Sn	04 19 09.3	-5.4
HSPB				IAML		04 19 13.2	
	comp=Z,5.4nm,0.3s						
HSPB	Hornsund (broa	3.54	132	eP	Pn	04 18 32.4	-0.5
HSPB				eS	Sn	04 19 09.0	-5.6
HSPB	Hornsund (broa	3.54	132	P	Pn	04 18 32.3	-0.5
HSPB				S	Sn	04 19 08.3	-6.3
HOPEN	Hopen	5.35	115	Pn	Pn	04 18 57.4	-0.3
HOPEN				Sn	Sn	04 19 54.6	-4.6
HOPEN	Hopen	5.35	115	eP	Pn	04 18 57.5	-0.3
HOPEN				eS	Sn	04 19 54.4	-4.8
HOPEN				IAML		04 20 00.4	
	comp=Z,5.2nm,0.3s						
DAG	Danmarks Havn	5.40	250	i P	Pn	04 18 58.0	-0.3
DAG				i S	Sn	04 19 53.4	-6.9
DAG				IAML		04 20 05.5	
	comp=Z,4.4nm,0.8s						
DAG	Danmarks Havn	5.40	250	i P	Pn	04 18 58.0	-0.3
DAG				i P	Pn	04 18 58.0	-0.3
DAG				i S	Sn	04 19 53.4	-6.9
DAG				IAML		04 20 05.5	
	comp=Z,4.4nm,0.8s						
BJO1	Bjornoya	6.14	139	eP	Pn	04 19 07.6	-0.8
ZFI2	Zemlya Franca-	7.40	60	eP	Pn	04 19 25.9	+0.2
ZFI2				eS	Sn	04 20 42.6	-7.0
	comp=Z,10.0nm,2.9s						
OMEGA	Omega	7.42	60	eP	Pn	04 19 26.0	0.0
OMEGA				eS	Sn	04 20 42.5	-7.5
	comp=Z,9.5nm,3.4s						
DBG	Daneborg	7.54	238	Pn	Pn	04 19 28.2	+0.6
DBG				Sn	Sn	04 20 46.3	-6.6
DBG	Daneborg	7.54	238	i P	Pn	04 19 26.9	-0.8
DBG				i S	Sn	04 20 45.2	-7.7
DBG				IAML		04 20 49.8	
	comp=Z,2.9nm,0.5s						
DBG	Daneborg	7.54	238	i P	Pn	04 19 26.9	-0.8
DBG				i S	Sn	04 20 45.2	-7.7
DBG				IAML		04 20 49.8	
	comp=Z,2.9nm,0.5s						
JNE	Jan Mayen East	9.17	206	eP	Pn	04 19 51.6	+1.5
NEEM	North Greenlan	10.76	287	i P	Pn	04 20 10.7	-1.3
NEEM				i S	Sn	04 22 01.7	-11
NEEM	North Greenlan	10.76	287	i P	Pn	04 20 10.7	-1.3
NEEM				i S	Sn	04 22 01.7	-11
ARA0	ARCESS Array S	11.52	139	Pn	Pn	04 20 22.7	+0.6
	baz=346,slow=12						
ARA0	ARCESS Array S	11.52	139	Pn	Pn	04 20 22.7	+0.6
ARCES	ARCESS Array B	11.52	139	Pn	Pn	04 20 22.4	+0.3
	comp=Z,0.1nm,0.3s,baz=339,slow=12,SNR=3.6						
	comp=Z,3.5nm,0.8s						
SUMG	Summit	12.00	257	i P	Pn	04 20 26.6	-2.4
SUMG	Summit	12.00	257	i P	Pn	04 20 26.6	-2.4
SFJD	Kangerlussuaq	18.97	260	LR	LR	04 30 15.7	
	comp=Z,58nm,18.2s,baz=194,slow=39						
FINES	FINESS Array B	19.42	147	P	Pn	04 22 08.6	+3.7
	baz=346,slow=20,SNR=1.9						
	comp=Z,1.0nm,0.8s						
BVAR	Borovoye Array	34.17	99	P	P	04 24 27.4	+4.7
	comp=Z,0.6nm,0.8s,baz=331,slow=5.6,SNR=2.3						
	comp=Z,0.6nm,0.8s						
KURBB	Kurchatov Arra	37.94	92	P	P	04 24 58.9	+3.9
	comp=Z,0.1nm,0.2s,baz=340,slow=7.5,SNR=5.5						
	comp=Z,0.1nm,0.2s						
MKAR	Makanchi Array	42.31	90	P	P	04 25 34.1	+2.9
	comp=Z,0.1nm,0.6s,baz=352,slow=7.1,SNR=5.2						
	comp=Z,0.1nm,0.6s						
AAK	Ala-Archa	44.92	100	LR	LR	04 47 58.3	
	comp=Z,19nm,18.1s,baz=249,slow=41						

IDC 08 04:20:20.4±4.1**, 44°.20N**×**29°.27W, h0**^{km}**, mb3.7**/4**, mbtmp3.5**/5**, ML3.3**/1**, MS3.4**/3**, Error ellipse: s-maj=95.7km s-min=38.4km az=73.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESDC	Sonseca Array	19.33	95	P	Pn	04 24 48.3	+0.1
	baz=308,slow=13,SNR=1.6						
	0.5nm,1.0s						
SADO	Sadowa	35.14	289	LR	LR	04 41 23.0	
	comp=Z,90nm,18.2s,baz=94,slow=36						
MLR	Muntele Rosu	38.51	68	LR	LR	04 45 09.6	
	comp=Z,42nm,18.2s,baz=260,slow=39						
TORD	Torodi Ar. Bea	40.72	130	P	P	04 28 02.6	-0.3
	1.7nm,0.8s,baz=321,slow=10,SNR=8.2						
	1.7nm,0.8s						
BRTR	Keskin Array B	45.98	73	P	P	04 28 44.5	-0.9
	0.6nm,0.8s,baz=301,slow=6.4,SNR=3.2						
	0.6nm,0.8s						
KVAR	Kislovodsk Arr	50.11	64	LR	LR	04 51 27.4	
	comp=Z,24nm,18.3s,baz=228,slow=37						
KURBB	Kurchatov Arra	66.70	41	P	P	04 31 12.9	0.0
	0.7nm,0.7s,baz=311,slow=7.2,SNR=6.6						
	0.7nm,0.7s						
MKAR	Makanchi Array	71.14	42	P	P	04 31 41.0	+0.4
	0.3nm,0.7s,baz=329,slow=7.5,SNR=3.9						
	0.3nm,0.7s						

*ISK **08** 04:21:04.7, 40°.71N×29°.26E, h5^{km}, ML4.0/57*

*AFAD **08** 04:21:04.7, 40°.69N×29°.22E, h11^{km}, MW3.9*

*IDC **08** 04:21:04.0±0.9, 40°.78N×29°.40E, h0^{km}, mb3.6/9, mbtmp3.6/14, ML3.8/4, MS2.8/9, Error ellipse: s-maj=16.3km s-min=9.2km az=45.0*

*NEIC **08** 04:21:05.4±1.5, 40°.71N±0°.05×29°.23E±0°.04, h10^{km}±1^{km}, mb4.4/7, Error ellipse: s-maj=8.6km s-min=4.5km az=158.0*

*MCSM **08** 04:21:06.2±0.7, 41°N±4°×2°9E±°, h11^{km}±5^{km}, mb4.4, mB5.4, MLv4.4, Mw(mB)4.8*

*THE **08** 04:21:07.1, 41°N±7°×2°9E±3°4, h11^{km}, M3.6/11, MLh3.6/11*

*CFUSG **08** 04:21:08.0, 40°.90N×29°.30E, h10^{km}, Mb4.2/6, MD3.4/5, MSH3.9/6*

ISC 08 04:21:05.0±0.7**, 40°.71N**±0°.01×**29°.26E**±0°.01**, h12**^{km}±4^{km}**, n266,** σ**1^{s}46**/317**, mb3.7**/9**, MS2.9**/3**, 30C-24D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAFA	**Gebze-Kocaeli**	**0.09**	**56**	Pg	**Pg**	**04 21 07.5**	**-0.1**
LAFA				Sg	**Sg**	**04 21 09.4**	**-0.1**
TUZL	**Tuzla-Istanbul**	**0.10**	**1**	Pg	**Pg**	**04 21 07.8**	**0.0**
TUZL				Sg	**Sg**	**04 21 09.6**	**-0.2**
KURT	**Yalova, Merkez**	**0.13**	**199**	P	**Pg**	**04 21 07.9**	**-0.2**
KURT				P		04 21 08.1	
KURT				IAML		04 21 10.0	
	comp=E,3µm,0.2s						
KURT				S	**Sg**	**04 21 10.1**	**-0.4**
BUYA	**Buyukada-Istan**	**0.19**	**327**	Pg	**Pg**	**04 21 09.3**	**+0.2**
BUYA				Sg	**Sg**	**04 21 12.4**	**+0.4**
HYBA	**Heybeliada-Ist**	**0.21**	**320**	Pg	**Pg**	**04 21 09.6**	**+0.1**
HYBA				Sg	**Sg**	**04 21 13.2**	**+0.6**
BRGA	**Burgazada-Ista**	**0.23**	**319**	Pg	**Pg**	**04 21 09.9**	**+0.1**
BRGA				Sg	**Sg**	**04 21 13.6**	**+0.5**
SATE	**Sancaktepe,**	**0.30**	**3**	P	**Pg**	**04 21 11.6**	**+0.5**
SATE				IAML		04 21 16.0	
	comp=N,3µm,0.4s						
SATE				IAML		04 21 16.0	
	comp=E,2µm,0.3s						
SATE				S	**Sg**	**04 21 16.1**	**+0.9**
HRT	**Hereke**	**0.33**	**70**	Pg	**Pg**	**04 21 11.7**	**+0.1**
HRT				Sg	**Sg**	**04 21 16.4**	**+0.4**
ARMT	**Armutlu**	**0.34**	**245**	Pg	**Pg**	**04 21 11.9**	**+0.1**
OSMT	**Osmaniye**	**0.35**	**108**	Pg	**Pg**	**04 21 11.8**	**-0.2**
KAVV	**Kandilli-Istan**	**0.38**	**336**	Pg	**Pg**	**04 21 13.2**	**+0.6**
KAVV				Sg	**Sg**	**04 21 18.8**	**+1.0**
ISK	**Istanbul-Kandi**	**0.39**	**336**	Pg	**Pg**	**04 21 12.8**	**+0.1**
SEMS	**Kocaeli-K¶rfe**	**0.40**	**66**	P	**Pg**	**04 21 13.0**	**+0.2**
SEMS				S	**Sg**	**04 21 18.9**	**+0.7**
SEMS				IAML		04 21 19.0	
	comp=N,6µm,0.5s						
MDNY	**Mudanya-Bursa**	**0.45**	**220**	Pg	**Pg**	**04 21 13.9**	**+0.1**
MDNY				Sg	**Sg**	**04 21 20.7**	**+1.0**
IGD	**Bursa**	**0.45**	**186**	P	**Pg**	**04 21 14.0**	**+0.2**
IGD				IAML		04 21 19.0	
	comp=N,459nm,0.2s						
IGD				S	**Sg**	**04 21 20.0**	**+0.2**
IGD				IAML		04 21 20.0	
	comp=E,6µm,0.4s						
ADVT	**Abdulvahap**	**0.46**	**127**	Pg	**Pg**	**04 21 14.1**	**+0.1**
ADVT				Sg	**Sg**	**04 21 20.9**	**+0.9**
AVCI	**Avcilar-stanb**	**0.50**	**305**	Pg	**Pg**	**04 21 15.4**	**+0.7**
SILT	**Sile**	**0.53**	**33**	⇑P	**Pg**	**04 21 15.9**	**+0.6**
SILT				⇑S	**Sg**	**04 21 22.4**	**+0.1**
SILT	**Sile**	**0.53**	**33**	Pg	**Pg**	**04 21 15.7**	**+0.4**
HISA	**Bilecik-Osmane**	**0.56**	**116**	P	**Pg**	**04 21 16.0**	**+0.1**
KLYT	**Kilyos**	**0.57**	**343**	Pg	**Pg**	**04 21 16.3**	**+0.3**
KLYT	**Kilyos**	**0.57**	**343**	P	**Pg**	**04 21 16.3**	**+0.3**
ULDT	**Uludag**	**0.58**	**190**	P	**Pg**	**04 21 16.2**	**0.0**
ULDT				S	**Sg**	**04 21 23.9**	**0.0**
ULDT				IAML		04 21 24.0	
	comp=E,4µm,0.4s						
ULDT				IAML		04 21 25.0	
	comp=N,2µm,0.3s						
BGKT	**Bogazkoy**	**0.60**	**322**	Pg	**Pg**	**04 21 16.7**	**+0.1**
SINB	**Sinanoba-Istan**	**0.62**	**298**	Pg	**Pg**	**04 21 17.6**	**+0.6**
BILE	**Bilecik/Merkez**	**0.72**	**139**	P	**Pg**	**04 21 19.1**	**+0.1**
ORLT	**Orhaneli**	**0.72**	**203**	Pg	**Pg**	**04 21 19.1**	**+0.1**
ORLT	**Orhaneli**	**0.72**	**203**	P	**Pg**	**04 21 19.1**	**+0.1**
ORLT				S	**Sg**	**04 21 28.9**	**+0.5**
ORLT				IAML		04 21 29.0	
	comp=N,7µm,0.3s						
ELBA	**Catalca**	**0.77**	**305**	P	**Pg**	**04 21 19.7**	**-0.1**
ELBA				S	**Sg**	**04 21 29.8**	**-0.1**
ELBA				IAML		04 21 30.0	
	comp=N,415nm,0.1s						
CTKS	**Kestanelik-??a**	**0.78**	**313**	Pg	**Pg**	**04 21 19.7**	**-0.3**
SAUV	**Serdivan-Sakar**	**0.81**	**88**	Pg	**Pg**	**04 21 20.6**	**0.0**
GEYV	**SAKARYA_Geyve**	**0.82**	**106**	P	**Pg**	**04 21 21.1**	**+0.3**
GEYV				S	**Sb**	**04 21 32.7**	**+0.5**
GEYV				IAML		04 21 36.0	
	comp=N,8µm,0.5s						
KCTX	**Karacabey (Bur**	**0.82**	**237**	Pg	**Pg**	**04 21 20.5**	**-0.4**
KAYN	**Sakarya, Kayna**	**0.86**	**72**	P	**Pg**	**04 21 21.2**	**-0.3**
KAYN				S	**Sg**	**04 21 30.5**	**-2.2**
KAYN				IAML		04 21 35.0	
	comp=N,2µm,0.6s						
GPA	**Golpazari**	**0.90**	**118**	Pg	**Pg**	**04 21 22.9**	**+0.5**
CATL	**atalca, ST**	**0.93**	**313**	P	**Pg**	**04 21 22.4**	**-0.5**
SLVT	**Silivri**	**0.95**	**303**	Pg	**Pg**	**04 21 23.4**	**+0.1**
BAND	**Balkesir-Ban**	**0.96**	**248**	P	**Pg**	**04 21 22.8**	**-0.6**
BAND				S	**Sg**	**04 21 35.8**	**-0.1**
BAND				IAML		04 21 38.0	
	comp=N,3µm,0.5s						
DOMA	**Ktahya-Doman**	**0.98**	**160**	P	**Pg**	**04 21 23.7**	**-0.2**
DOMA				S	**Sg**	**04 21 37.2**	**+0.4**
DOMA				IAML		04 21 41.0	
	comp=E,2µm,0.4s						
AUBOZ	**BOZOYUK**	**0.99**	**143**	P	**Pg**	**04 21 24.2**	**+0.1**
AUBOZ				S	**Sb**	**04 21 38.3**	**+1.0**
AUBOZ				IAML		04 21 43.0	
	comp=N,5µm,0.4s						
GULT	**Gulveren**	**0.99**	**106**	Pg	**Pg**	**04 21 24.2**	**+0.1**
BOTS	**Marmara Eregli**	**1.01**	**286**	Pg	**Pb**	**04 21 25.0**	**+0.6**
CTYL	**Yalikoy Yolu**	**1.06**	**316**	Pg	**Pg**	**04 21 24.9**	**-0.5**
CTYL	**Yalikoy Yolu**	**1.06**	**316**	P	**Pg**	**04 21 25.5**	**+0.1**
EDC	**Edincik**	**1.13**	**252**	Pn	**Pb**	**04 21 26.3**	**-0.1**
SUSR	**Susurluk-Balik**	**1.17**	**231**	Pn	**Pb**	**04 21 27.0**	**-0.2**
CMHT	**Manyas**	**1.21**	**235**	P	**Pn**	**04 21 27.5**	**-0.3**
CMHT				S	**Sb**	**04 21 43.6**	**+0.1**
CMHT				IAML		04 21 49.0	
	comp=N,2µm,0.4s						
DST	**Dursunbey**	**1.21**	**204**	Pn	**Pb**	**04 21 28.4**	**+0.5**
SAHE	**Sakarya_HENDEK**	**1.22**	**83**	⇑P	**Pg**	**04 21 29.8**	**+1.4**
SAHE				⇓S	**Sn**	**04 21 46.2**	**+1.9**
SAHE	**Sakarya_HENDEK**	**1.22**	**83**	P	**Pn**	**04 21 27.6**	**-0.2**
SAHE				S	**Sb**	**04 21 44.4**	**+0.8**
SAHE				IAML		04 21 47.0	
	comp=N,4µm,0.6s						
CRLT	**Corlu**	**1.23**	**290**	Pn	**Pb**	**04 21 28.8**	**+0.6**
BORA	**Eskisehir**	**1.23**	**132**		**Pn**	**04 21 27.9**	**-0.2**
BORA	**Eskisehir**	**1.23**	**132**	P	**Pn**	**04 21 28.3**	**+0.1**
BORA				P	**Pb**	**04 21 28.5**	**+0.3**
BORA				S	**Sb**	**04 21 43.8**	**-0.3**
BORA				IAML		04 21 48.0	
	comp=N,2µm,0.5s						
SRCK	**Saricakaya, Es**	**1.24**	**122**	Pn	**Pn**	**04 21 28.4**	**+0.2**
SUSU	**Bolu-G¶ynk-**	**1.26**	**107**	P	**Pb**	**04 21 29.4**	**+0.6**
DURS	**Dursunbey**	**1.26**	**209**	P	**Pn**	**04 21 28.4**	**-0.1**
DURS				S	**Sb**	**04 21 44.4**	**-0.7**
DURS				IAML		04 21 47.0	
	comp=E,4µm,0.5s						
TVSB	**Tavsanli**	**1.27**	**173**	Pn	**Pn**	**04 21 28.9**	**+0.2**
MRMT	**Marmara Adasi**	**1.27**	**266**	Pn	**Pb**	**04 21 29.5**	**+0.5**
BLKS	**Balkesir-Sus**	**1.30**	**230**	P	**Pn**	**04 21 28.5**	**-0.4**
BLKS				P	**Pn**	**04 21 28.6**	**-0.4**
BLKS				S	**Sb**	**04 21 45.0**	**-1.0**
BLKS				IAML		04 21 48.0	
	comp=N,2µm,0.9s						
ANDZ	**Kutahya, Merke**	**1.30**	**158**	P	**Pn**	**04 21 29.3**	**+0.3**
ANDZ				S	**Sb**	**04 21 43.8**	**-2.2**
ANDZ				IAML		04 21 54.0	
	comp=E,490nm,0.4s						
MADA	**Marmara adas**	**1.31**	**265**	P	**Pn**	**04 21 29.1**	**+0.1**
MADA				IAML		04 21 50.0	
	comp=N,1µm,0.6s						
BTAS	**Taskesti**	**1.33**	**96**	P	**Pb**	**04 21 30.6**	**+0.6**
BTAS				S	**Sb**	**04 21 46.9**	**0.0**
BTAS				IAML		04 21 53.0	
	comp=N,4µm,0.6s						
EMET	**Ktahya-Emet**	**1.34**	**178**	P	**Pn**	**04 21 30.0**	**+0.4**
TKR	**Tekirdag**	**1.34**	**283**	Pn	**Pn**	**04 21 30.1**	**+0.6**
GONE	**Gonen-Balikesi**	**1.38**	**242**	Pn	**Pn**	**04 21 30.7**	**+0.7**
VIZE	**Kirklareli, Vi**	**1.38**	**309**	P	**Pn**	**04 21 30.5**	**+0.4**
VIZE				S	**Sb**	**04 21 46.9**	**-1.5**
VIZE				IAML		04 21 50.0	
	comp=N,3µm,0.5s						
BKES	**Balkesir-Mer**	**1.41**	**227**	P	**Pn**	**04 21 30.4**	**-0.2**
BKES				S	**Sn**	**04 21 49.4**	**+0.3**
BKES				IAML		04 21 55.0	
	comp=N,2µm,0.7s						
MURA	**Muratl, TEK**	**1.42**	**289**	P	**Pn**	**04 21 31.2**	**+0.6**
MURA				S	**Sn**	**04 21 49.7**	**+0.5**
MURA				IAML		04 22 04.0	
	comp=N,516nm,0.9s						
KUTH	**Kutahya**	**1.44**	**156**	P	**Pn**	**04 21 31.0**	**0.0**
ATIT	**Gnen**	**1.44**	**245**	P	**Pg**	**04 21 32.7**	**+0.1**
ATIT				S	**Sb**	**04 21 50.8**	**+0.7**
GAZK	**Gazikoy-TEKIRD**	**1.47**	**272**	Pn	**Pn**	**04 21 31.9**	**+0.6**
MDUB	**Mudurnu**	**1.49**	**99**		**Pb**	**04 21 33.0**	**+0.3**
MDUB	**Mudurnu**	**1.49**	**99**	Pn	**Pb**	**04 21 33.4**	**+0.7**
BALB	**Balikesir**	**1.51**	**225**		**Pn**	**04 21 31.8**	**0.0**
BALB	**Balikesir**	**1.51**	**225**	Pn	**Pn**	**04 21 32.7**	**+0.9**
KRBG	**Karabiga-Canak**	**1.53**	**259**	Pn	**Pb**	**04 21 34.0**	**+0.7**
SART	**Tekirdag**	**1.58**	**270**	P	**Pn**	**04 21 33.5**	**+0.6**
RKY	**Sarkoy-Tekirda**	**1.59**	**270**	Pn	**Pb**	**04 21 34.6**	**+0.3**
PHSR	**Pinarhisar**	**1.60**	**306**	Pn	**Pb**	**04 21 34.8**	**+0.3**
SMAA	**Simav-Kutahya**	**1.62**	**188**	Pn	**Pb**	**04 21 35.1**	**+0.2**
SIMA	**Simav-Kutahya**	**1.64**	**188**	Pn	**Pn**	**04 21 34.3**	**+0.5**
BIGA	**Biga-Canakkale**	**1.67**	**256**	Pn	**Pb**	**04 21 35.9**	**+0.3**
GEDZ	**Gediz**	**1.67**	**176**	Pn	**Pn**	**04 21 35.3**	**+1.1**
SHAP	**Saphane-Kutahy**	**1.69**	**181**	Pn	**Pn**	**04 21 35.7**	**+1.3**
SGAZ	**Eskisehir, Sey**	**1.69**	**134**	P	**Pn**	**04 21 35.5**	**+1.1**
DEMI	**Demirci**	**1.72**	**194**	P	**Pn**	**04 21 35.8**	**+0.9**
DEMI				S	**Sn**	**04 21 57.5**	**+0.7**
DEMI				IAML		04 22 03.0	
	comp=N,1µm,0.5s						
YENI	**Yenice-Canakka**	**1.73**	**244**	Pn	**Pb**	**04 21 36.6**	**-0.1**
AUKIR	**Kırka- Seyitga**	**1.73**	**145**	P	**Pn**	**04 21 35.5**	**+0.5**
ALT	**Altintas**	**1.78**	**158**	Pn	**Pn**	**04 21 37.0**	**+1.3**
STEP	**BALIKESIR_Sava**	**1.79**	**222**	P	**Pn**	**04 21 37.2**	**+1.5**
STEP				S	**Sn**	**04 21 59.7**	**+1.4**
STEP				IAML		04 22 08.0	
	comp=N,3µm,0.7s						
ARMN	**Kirklareli, Me**	**1.80**	**310**	P	**Pb**	**04 21 38.0**	**+0.1**
ARMN				S	**Sn**	**04 21 59.4**	**+0.8**
ARMN				IAML		04 22 07.0	
	comp=N,950nm,0.4s						
CANM	**Can-anakkale**	**1.83**	**248**	Pn	**Pn**	**04 21 37.4**	**+1.2**
BOLU	**Bolu-Merkez-Mu**	**1.83**	**87**	P	**Pn**	**04 21 37.5**	**+1.0**
YUVA	**Yuva-Kibriscik**	**1.88**	**99**	Pn	**Pn**	**04 21 38.4**	**+1.4**
LAPS	**Lapseki, ANA**	**1.91**	**257**	P	**Pb**	**04 21 39.1**	**-0.6**
RUZG	**Kolk¶y-BOLU**	**1.92**	**89**	Pn	**Pb**	**04 21 39.7**	**-0.4**
CIFT	**Cifteler, Eski**	**1.93**	**134**	Pn	**Pn**	**04 21 38.9**	**+1.1**
LPK	**Lapseki**	**1.94**	**261**	Pn	**Pb**	**04 21 39.6**	**-0.6**
GORD	**Gordes-Manisa**	**1.99**	**205**	Pn	**Pn**	**04 21 40.2**	**+1.7**
UKOP	**Uzunkopru-Edir**	**2.04**	**283**	Pn	**Pn**	**04 21 40.9**	**+1.8**
SOMA	**Soma-Manisa**	**2.04**	**221**	Pn	**Pn**	**04 21 41.0**	**+1.8**
ERIK	**Erikli-Kesan**	**2.09**	**270**	Pn	**Pn**	**04 21 41.6**	**+1.7**
SVRH	**Sivrihisar-ESK**	**2.15**	**125**	Pn	**Pn**	**04 21 42.1**	**+1.4**
GELI	**Tayfur-Gelibol**	**2.15**	**263**	Pn	**Pn**	**04 21 42.6**	**+2.0**
KULA	**Kula-Manisa**	**2.24**	**192**	Pn	**Pn**	**04 21 44.1**	**+2.0**
MANT	**Manisa**	**2.28**	**194**		**Pn**	**04 21 42.8**	**+0.1**
CAVK	**Edirne/Enez-Ca**	**2.35**	**271**	⇓P	**Pb**	**04 21 49.1**	**+1.8**
ENEZ	**Enez**	**2.36**	**272**	P	**Pn**	**04 21 43.2**	**-0.4**
EZN	**Ezine**	**2.42**	**249**	P	**Pn**	**04 21 43.8**	**-0.5**
EZN	**Ezine**	**2.42**	**249**	P	**Pn**	**04 21 46.6**	**+2.3**
ALN	**Alexandroupoli**	**2.45**	**275**		**Pn**	**04 21 44.6**	**-0.2**
ALN	**Alexandroupoli**	**2.45**	**275**	P	**Pn**	**04 21 44.3**	**-0.5**
ALN				S	**Sn**	**04 22 13.7**	**-0.9**
GADA	**Gvkgeada**	**2.62**	**260**	P	**Pn**	**04 21 46.7**	**-0.4**
JMB	**Yambol**	**2.71**	**312**	P	**Pn**	**04 21 48.8**	**+0.4**
JMB	**Yambol**	**2.71**	**312**	P	**Pn**	**04 21 49.4**	**+1.0**
PRK	**Paraskevi**	**2.73**	**238**	P	**Pn**	**04 21 48.7**	**+0.2**
PRD	**Provadia**	**2.81**	**331**	P	**Pn**	**04 21 51.3**	**+1.6**
RDO	**Rodhopi**	**2.86**	**280**		**Pn**	**04 21 50.7**	**+0.4**
RDO	**Rodhopi**	**2.86**	**280**	P	**Pn**	**04 21 50.1**	**-0.3**
BLCB	**Balcova**	**2.89**	**217**	P	**Pn**	**04 21 50.6**	**-0.2**
NEF	**NEVSHA**	**2.95**	**330**	P	**Pn**	**04 21 53.0**	**+1.3**
CIDE	**Kastamonu/Cide**	**3.01**	**66**	⇑P	**Pn**	**04 21 54.9**	**+2.4**
PSN	**Preselentsi**	**3.04**	**344**	P	**Pn**	**04 21 54.4**	**+1.5**
ISP	**Isparta**	**3.05**	**161**		**Pn**	**04 21 53.7**	**+0.6**
DIM	**Dimitrovgrad**	**3.08**	**297**	P	**Pn**	**04 21 53.8**	**+0.4**
DIM	**Dimitrovgrad**	**3.08**	**297**	P	**Pn**	**04 21 54.9**	**+1.5**
KDZ	**Kurdzhali**	**3.10**	**288**	P	**Pn**	**04 21 51.9**	**-1.8**
KDZ				S	**Sn**	**04 22 32.2**	**+1.5**
MANR	**Mangalia**	**3.14**	**351**	⇓P	**Pn**	**04 21 56.8**	**+2.5**
LIA	**Limnos Island**	**3.22**	**257**	P	**Pn**	**04 21 56.1**	**+0.7**
LOZB	**Loznitsa**	**3.32**	**324**	⇓P	**Pn**	**04 22 00.2**	**+3.5**
ELND	**Elena**	**3.36**	**312**	⇓P	**Pn**	**04 22 00.3**	**+2.9**
ILGA	**Ilgaz**	**3.39**	**83**		**Pn**	**04 21 59.3**	**+1.3**
BR106	**Keskin Array S**	**3.47**	**105**	P	**Pn**	**04 21 59.9**	**+0.9**
BR105	**Keskin Array S**	**3.48**	**105**	P	**Pn**	**04 22 00.0**	**+0.9**
BR131	**Keskin Array S**	**3.49**	**105**		**Pn**	**04 22 00.4**	**+1.1**
BRTR	**Keskin Array B**	**3.49**	**105**	Pn	**Pn**	**04 21 59.6**	**+0.4**
	2.1nm,0.3s,baz=273,slow=11,SNR=56						
BRTR				Sn	**Sn**	**04 22 40.6**	**0.0**
	4.9nm,0.3s,baz=273,slow=20,SNR=5.8						
BRTR				LR	LR	04 22 45.2	
	comp=Z,36nm,20.5s,baz=286,slow=30						
BRTR				Lg	Lg	04 22 58.1	
	4.3nm,0.3s,baz=282,slow=24,SNR=8.5						
	7.0nm,0.5s						
BRTR	**Keskin Array B**	**3.49**	**105**		**Pn**	**04 22 00.0**	**+0.8**
BR104	**Keskin Array S**	**3.50**	**105**	P	**Pn**	**04 22 00.3**	**+0.9**
MFTR	**Murfatlar**	**3.52**	**350**	⇓P	**Pn**	**04 22 02.9**	**+3.4**
SZH	**Strazhitsa**	**3.54**	**317**	P	**Pn**	**04 22 00.6**	**+0.8**
RZN	**Rozhen**	**3.55**	**288**	P	**Pn**	**04 22 00.8**	**+0.7**
ICOR	**Ion Corvin**	**3.57**	**343**	⇑P	**Pn**	**04 22 02.4**	**+2.2**
KAVA	**Kavala**	**3.61**	**276**	P	**Pn**	**04 22 00.2**	**-0.6**
BZK	**Bozkurt**	**3.78**	**69**	⇑P	**Pn**	**04 22 05.3**	**+2.2**
BZK	**Bozkurt**	**3.78**	**69**		**Pn**	**04 22 05.2**	**+2.2**
TIRR	**Tirgusor**	**3.80**	**351**	⇓P	**Pn**	**04 22 05.0**	**+1.7**
TIRR	**Tirgusor**	**3.80**	**351**		**Pn**	**04 22 04.3**	**+1.0**
TIRR	**Tirgusor**	**3.80**	**351**	P	**Pn**	**04 22 03.9**	**+0.6**
PVL	**Pavlikeni**	**3.89**	**310**	P	**Pn**	**04 22 05.9**	**+1.3**
KIRS	**Kirsehir-Merke**	**3.91**	**112**	⇓P	**Pn**	**04 22 07.8**	**+2.8**
ELL	**Elmali**	**3.99**	**173**		**Pn**	**04 22 08.2**	**+2.1**
ZIMR		**4.13**	**317**	⇑P	**Pn**	**04 22 11.2**	**+3.4**
NVR	**Nevrokopi**	**4.13**	**281**	P	**Pn**	**04 22 07.7**	**-0.3**
AMRR	**Amara**	**4.15**	**341**	⇓P	**Pn**	**04 22 10.4**	**+2.3**
LEHL	**Lehliu**	**4.17**	**335**	⇑P	**Pn**	**04 22 10.9**	**+2.5**
TPGR	**Topolog**	**4.19**	**352**	⇓P	**Pn**	**04 22 12.0**	**+3.3**
MMB	**Musomishta**	**4.25**	**283**	P	**Pn**	**04 22 10.4**	**+0.8**
PLVB	**Pleven**	**4.37**	**309**	⇑P	**Pn**	**04 22 15.3**	**+4.1**
AKAS	**Kas**	**4.48**	**176**		**Pn**	**04 22 14.1**	**+1.2**
TLCR		**4.48**	**356**	⇑P	**Pn**	**04 22 14.2**	**+1.4**
CFR	**Carcaliu**	**4.54**	**350**	⇑P	**Pn**	**04 22 15.6**	**+2.1**
COPA	**Copaceanca**	**4.54**	**320**	⇑P	**Pn**	**04 22 17.4**	**+3.8**
PLNA	**Plana**	**4.72**	**294**	P	**Pn**	**04 22 17.5**	**+1.4**
KKB	**Krupnik**	**4.76**	**286**	P	**Pn**	**04 22 17.9**	**+1.3**
GIUM	**Giurgiulesti**	**4.83**	**351**	⇓P	**Pn**	**04 22 19.3**	**+1.7**
ISR	**Istrita**	**4.84**	**337**	⇓P	**Pn**	**04 22 21.1**	**+3.4**
VLAD	**Vladila**	**4.87**	**314**	⇑P	**Pn**	**04 22 22.1**	**+4.0**
MPEP	**Malo Peshtene**	**4.89**	**305**	P	**Pn**	**04 22 19.1**	**+0.8**
VTS	**Vitosha**	**4.90**	**295**	P	**Pn**	**04 22 19.9**	**+1.3**
BLSH	**Balsha**	**4.96**	**298**	P	**Pn**	**04 22 20.8**	**+1.4**
SEV	**Sevastopol'**	**5.02**	**39**	⇑*e*P	**Pn**	**04 22 20.9**	**+0.8**
SEV				pmax	pmax	04 22 21.6	
	comp=Z,41nm,0.3s						
SEV				*e*S	**Sn**	**04 23 16.3**	**-1.8**
SEV				smax	smax	04 23 22.0	
	comp=N,37nm,0.3s						
SEV				smax	smax	04 23 22.0	
	comp=E,82nm,0.5s						
SCTR	**Scanteiesti**	**5.04**	**350**	⇓P	**Pn**	**04 22 22.6**	**+2.2**
VAY	**Valandovo**	**5.10**	**279**	*i* Pn	**Pn**	**04 22 21.9**	**+0.7**
BISRR	**Bisoca**	**5.18**	**340**	P	**Pn**	**04 22 23.5**	**+1.1**
	comp=E,2.7nmcomp=E,8µmcomp=E,273nm,0.7s						
NEHR	**Nehoiu**	**5.19**	**336**	⇓P	**Pn**	**04 22 25.9**	**+3.4**
VLDR	**Vladesti**	**5.20**	**351**	⇑P	**Pn**	**04 22 25.2**	**+2.6**
YAL	**Yalta**	**5.22**	**42**	⇑*e*P	**Pn**	**04 22 23.1**	**+0.2**
YAL				pmax	pmax	04 22 24.8	
	comp=Z,123nm,0.6s						
YAL				*e*S	**Sn**	**04 23 20.3**	**-2.7**
YAL				smax	smax	04 23 26.0	
	comp=N,42nm,0.3s						
YAL				smax	smax	04 23 26.0	
	comp=E,80nm,0.5s						
VARL	**Varlezi**	**5.29**	**349**	⇑P	**Pn**	**04 22 26.2**	**+2.5**
ODBI	**Odobesti**	**5.30**	**343**	⇓P	**Pn**	**04 22 27.2**	**+3.3**
MLR	**Muntele Rosu**	**5.36**	**334**	Pn	**Pn**	**04 22 26.7**	**+1.8**
	comp=E,4.1nm,0.4s,baz=180,slow=15						
MLR				Sn	**Sn**	**04 23 26.4**	**-0.2**
	comp=E,1.8nm,0.3s,baz=302,slow=14,SNR=3.2						
MLR				Lg	Lg	04 23 57.9	
	comp=E,3.0nm,0.3s,baz=142,slow=11,SNR=5.2						
MLR				LR	LR	04 25 09.7	
	comp=E,147nm,19.1s,baz=158,slow=46						
MLR	**Muntele Rosu**	**5.36**	**334**	⇑P	**Pn**	**04 22 27.6**	**+2.7**
MLR	**Muntele Rosu**	**5.36**	**334**		**Pn**	**04 22 24.7**	**-0.2**
BNN	**Bunyan**	**5.40**	**108**		**Pn**	**04 22 27.6**	**+2.0**
VRI	**Vrincioaia**	**5.47**	**341**	⇑P	**Pn**	**04 22 28.7**	**+2.3**
PLOR	**Plostina**	**5.48**	**341**	⇑P	**Pn**	**04 22 28.7**	**+2.2**
DNZ2	**Donuzlav2**	**5.49**	**31**	*e*P	**Pn**	**04 22 27.6**	**+1.1**
DNZ2				pmax	pmax	04 22 30.8	
	comp=Z,99nm,0.5s						
DNZ2				*e*S	**Sn**	**04 23 28.1**	**-1.4**
DNZ2				smax	smax	04 23 37.5	
	comp=N,176nm,0.9s						
DNZ2				smax	smax	04 23 37.5	
	comp=E,97nm,0.4s						
GHRR		**5.51**	**346**	⇓P	**Pn**	**04 22 29.6**	**+2.7**
SIM	**Simferopol'**	**5.54**	**39**	⇑*e*P	**Pn**	**04 22 28.6**	**+1.4**
SIM				pmax	pmax	04 22 29.1	
	comp=Z,380nm,0.5s						
SIM				*e*S	**Sn**	**04 23 28.7**	**-2.1**
SIM				smax	smax	04 23 29.0	
	comp=N,112nm,0.4s						
SIM				smax	smax	04 23 29.0	
	comp=E,284nm,0.9s						
VOIR		**5.64**	**328**	⇑P	**Pn**	**04 22 30.8**	**+2.1**
BIR	**Birlad**	**5.68**	**348**	⇑P	**Pn**	**04 22 31.3**	**+2.1**
ARR	**Arges**	**5.76**	**325**	⇑P	**Pn**	**04 22 32.7**	**+2.4**
SUDU	**Sudak**	**5.94**	**43**	⇑*i*P	**Pn**	**04 22 33.2**	**+0.5**
SUDU				pmax	pmax	04 22 34.4	
	comp=Z,301nm,0.8s						
SUDU				*e*S	**Sn**	**04 23 39.0**	**-1.6**
SUDU				smax	smax	04 23 45.7	
	comp=N,263nm,0.8s						
SUDU				smax	smax	04 23 45.7	
	comp=E,94nm,0.7s						
OZUR		**5.95**	**336**	⇓P	**Pn**	**04 22 35.3**	**+2.5**
DOPR	**Dopca**	**5.96**	**333**	⇑P	**Pn**	**04 22 35.3**	**+2.2**
ONER	**Baraj Valea Uz**	**5.99**	**341**	⇑P	**Pn**	**04 22 35.7**	**+2.1**
TESR	**Tescani**	**6.10**	**343**	⇓P	**Pn**	**04 22 36.5**	**+1.6**
TESR	**Tescani**	**6.10**	**343**	P	**Pn**	**04 22 35.1**	**+0.1**
	comp=E,0.1nmcomp=E,21nm,0.6s						
LOT	**Lotru**	**6.21**	**321**	⇓P	**Pn**	**04 22 39.9**	**+3.3**
FEO	**Feodosiya**	**6.23**	**44**	*e*P	**Pn**	**04 22 37.2**	**+0.5**
FEO				pmax	pmax	04 22 37.5	
	comp=Z,80nm,0.4s						
FEO				*e*S	**Sn**	**04 23 47.4**	**-0.4**
FEO				smax	smax	04 23 50.8	
	comp=N,43nm,0.3s						
FEO				smax	smax	04 23 50.8	
	comp=E,19nm,0.3s						
KIS	**Kishinev**	**6.29**	**357**	P	**Pn**	**04 22 37.8**	**+0.2**
	comp=E,0.3nmcomp=E,1µmcomp=E,51nm,0.6s						
MDB	**Medias**	**6.49**	**328**	⇓P	**Pn**	**04 22 43.5**	**+3.3**
HERR	**Herculane**	**6.54**	**312**	⇑P	**Pn**	**04 22 44.0**	**+3.1**
CSS	**Mathiatis**	**6.58**	**149**	Pn	**Pn**	**04 22 41.0**	**-0.6**
GZR	**Gura Zlata**	**6.67**	**317**	⇓P	**Pn**	**04 22 46.2**	**+3.4**
PRAR	**RASCA**	**7.00**	**343**	⇑P	**Pn**	**04 22 50.7**	**+3.4**
MARR	**Marisel-Cluj**	**7.44**	**325**	⇓P	**Pn**	**04 22 55.6**	**+2.2**
SORM	**Soroca**	**7.45**	**355**	⇓P	**Pn**	**04 22 54.6**	**+1.2**
SORM	**Soroca**	**7.45**	**355**	P	**Pn**	**04 22 53.8**	**+0.3**
	comp=E,0.2nmcomp=E,53nm,0.6s						
BURAR	**Bucovina Array**	**7.49**	**339**	⇓P	**Pn**	**04 22 57.0**	**+2.9**
BURAR	**Bucovina Array**	**7.49**	**339**		**Pn**	**04 22 54.3**	**+0.2**
DRGR		**7.71**	**324**	⇑P	**Pn**	**04 23 00.4**	**+3.3**
MMAI	**Mount Meron Ar**	**9.12**	**145**	Pn	**Pn**	**04 23 16.6**	**+0.1**
	comp=E,1.1nm,0.3s,baz=352,slow=19,SNR=1.8						
MMAI				LR	LR	04 26 56.5	
	comp=E,60nm,21.4s,baz=340,slow=39						
	comp=E,0.3nm,0.3s						
LUBAR	**Lubar, Ukraine**	**9.27**	**354**	P	**Pn**	**04 23 18.3**	**-0.1**
AK07	**Malin Array Si**	**9.84**	**360**	P	**Pn**	**04 23 25.5**	**-0.7**
AK06	**Malin Array Si**	**9.88**	**360**	P	**Pn**	**04 23 25.9**	**-0.8**
AK10	**Malin Array Si**	**9.89**	**360**	P	**Pn**	**04 23 26.0**	**-0.9**
AK13	**Malin Array Si**	**9.90**	**359**	P	**Pn**	**04 23 26.2**	**-0.9**
AK09	**Malin Array Si**	**9.90**	**0**	P	**Pn**	**04 23 26.2**	**-0.9**
AK05	**Malin Array Si**	**9.91**	**360**	P	**Pn**	**04 23 26.3**	**-0.9**
AK14	**Malin Array Si**	**9.92**	**359**	P	**Pn**	**04 23 26.4**	**-0.9**
AK08	**Malin Array Si**	**9.92**	**360**	P	**Pn**	**04 23 26.5**	**-0.8**
AK12	**Malin Array Si**	**9.93**	**360**	P	**Pn**	**04 23 26.6**	**-0.9**
AK02	**Malin Array Si**	**9.95**	**360**	P	**Pn**	**04 23 26.8**	**-0.9**
AK16	**Malin Array Si**	**9.96**	**359**	P	**Pn**	**04 23 27.0**	**-0.8**
AK11	**Malin Array Si**	**9.97**	**360**	P	**Pn**	**04 23 27.1**	**-0.9**
AK17	**Malin Array Si**	**9.97**	**359**	P	**Pn**	**04 23 27.2**	**-0.9**
AK01	**Malin Array Si**	**9.98**	**360**	P	**Pn**	**04 23 27.2**	**-0.9**
KIEV	**Kiev**	**9.98**	**360**		**Pn**	**04 23 27.2**	**-1.0**
AKBB	**Malin Array Si**	**9.99**	**360**		**Pn**	**04 23 27.1**	**-1.2**
AKASG	**Malin Array Be**	**9.99**	**360**	Pn	**Pn**	**04 23 26.5**	**-1.8**
	comp=E,1.9nm,0.3s,baz=182,slow=12,SNR=10						
AKASG				Sn	**Sn**	**04 25 13.4**	**-6.8**
	comp=E,2.7nm,0.3s,baz=181,slow=23,SNR=5.6						
AKASG				LR	LR	04 27 48.1	
	comp=E,46nm,20.1s,baz=184,slow=41						
	comp=E,0.5nm,0.3s						
AK04	**Malin Array Si**	**10.01**	**360**	P	**Pn**	**04 23 27.6**	**-1.0**
AK18	**Malin Array Si**	**10.01**	**359**	P	**Pn**	**04 23 27.1**	**-1.5**
AK19	**Malin Array Si**	**10.01**	**359**	P	**Pn**	**04 23 27.4**	**-1.2**
AK03	**Malin Array Si**	**10.02**	**360**	P	**Pn**	**04 23 27.4**	**-1.2**
AK20	**Malin Array Si**	**10.03**	**359**	P	**Pn**	**04 23 27.7**	**-1.2**
AK22	**Malin Array Si**	**10.05**	**359**	P	**Pn**	**04 23 27.9**	**-1.2**
AK21	**Malin Array Si**	**10.07**	**359**	P	**Pn**	**04 23 28.1**	**-1.2**
MI28	**Mi28,Pidlybu**	**10.28**	**354**	P	**Pn**	**04 23 31.0**	**-1.2**
ASF	**Jabal al Asfar**	**10.50**	**142**	LR	LR	04 28 27.9	
	comp=E,81nm,19.2s,baz=248,slow=42						
RNPP8	**Varash**	**10.88**	**349**	P	**Pn**	**04 23 41.4**	**+0.9**
RNPP9	**Sopachiv**	**10.95**	**349**	P	**Pn**	**04 23 41.6**	**+0.2**
GNI	**Garni**	**11.81**	**88**	LR	LR	04 27 41.3	
	comp=E,28nm,19.1s,baz=248,slow=34						
NRCA	**Norcia**	**12.24**	**285**	Pn	**Pn**	**04 23 58.9**	**-0.4**
FDMO	**Fiordimonte**	**12.28**	**286**	Pn	**Pn**	**04 23 58.7**	**-1.0**
MNK	**Minsk**	**13.83**	**357**	*i* P	**Pn**	**04 24 17.5**	**-3.2**
	comp=E,12nm,1.2s						
MNK				*i* P	**Pn**	**04 24 17.5**	**-3.2**
	comp=N,17nm,1.2s						
MNK				*i* P	**Pn**	**04 24 17.5**	**-3.2**
	comp=Z,11nm,0.9s,baz=176						
MNK				*i* PP	**PnPn**	**04 24 25.1**	**-3.5**
MNK				*i* PPP	PPP	04 24 33.6	
MNK				*i* S	**Sn**	**04 26 50.7**	**-3.4**
MNK				*i* SS	**SnSn**	**04 27 05.4**	**-1.1**
MNK				*i* LR	LR	04 28 34.8	
MNK				*i* LRM	MLR	04 30 05.6	
	comp=Z,77nm,16.9s						
MNK				*i* LRM	MLR	04 30 09.8	
	comp=N,76nm,17.1s						
MNK				*i* LRM	MLR	04 30 17.4	
	comp=E,76nm,16.4s						
NACGM	**Naroch**	**14.30**	**354**	*e*P	**Pn**	**04 24 25.0**	**-2.1**
	comp=Z,16nm,0.9s,baz=173						
PABE	**Paberze**	**15.21**	**348**	Pn	**Pn**	**04 24 39.1**	**-0.3**
PABE				IAmb	IAmb	04 24 47.6	
	comp=Z,20nm,1.4s						
BELG	**Belogornoye**	**17.15**	**41**	P	**Pn**	**04 25 02.4**	**-1.9**
	comp=Z,0.7nm,0.3s,baz=292,slow=2.6,SNR=3.9						
	comp=Z,10.0nm,0.8s						
FINES	**FINESS Array B**	**20.85**	**356**	P	**P**	**04 25 46.1**	**-0.3**
	comp=Z,2.7nm,0.7s,baz=166,slow=9.5,SNR=12						
	comp=Z,2.7nm,0.7s						
FINES	**FINESS Array B**	**20.85**	**356**	P	**P**	**04 25 46.8**	**+0.4**
FIA1	**FINESS Array S**	**20.85**	**356**	P	**P**	**04 25 46.3**	**-0.2**
FIA1				IAmb	IAmb	04 25 58.0	
	comp=Z,24nm,1.2s						
HFS	**Hagfors**	**21.72**	**339**	P	**P**	**04 25 56.3**	**+0.5**
	comp=Z,4.9nm,1.0s,baz=162,slow=20,SNR=3.0						
HFS				LR	LR	04 35 28.9	
	comp=Z,68nm,20.3s,baz=200,slow=40						
	comp=Z,4.9nm,1.0s						
AKTO	**Aktyubinsk**	**22.23**	**54**	P	**P**	**04 26 01.6**	**+0.2**
	comp=Z,2.5nm,0.8s,baz=257,slow=13,SNR=5.7						
	comp=Z,2.5nm,0.8s						
NOA	**NORSAR Array B**	**23.17**	**337**	P	**P**	**04 26 12.0**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=146,slow=11,SNR=3.7						
NOA				LR	LR	04 36 58.5	
	comp=Z,25nm,19.0s,baz=145,slow=41						
	comp=Z,0.6nm,0.8s						
ARTI	**Arti**	**24.59**	**41**	P	**P**	**04 26 25.0**	**+0.2**
	comp=Z,1.5nm,0.4s,baz=230,slow=5.5,SNR=4.9						
	comp=Z,1.5nm,0.4s						
ARTI	**Arti**	**24.59**	**41**	IAmb	IAmb	04 26 29.4	
	comp=Z,5.8nm,0.4s						
ESDC	**Sonseca Array**	**25.32**	**279**	P	**P**	**04 26 34.2**	**+2.6**
	comp=Z,0.4nm,0.7s,baz=68,slow=9.8,SNR=5.0						
	comp=Z,0.4nm,0.7s						
BVAR	**Borovoye Array**	**30.27**	**52**	LR	LR	04 41 39.6	
	comp=Z,28nm,19.0s,baz=274,slow=41						
GAR	**Garm**	**31.36**	**80**	P	**P**	**04 27 26.4**	**+0.8**
KURBB	**Kurchatov Arra**	**35.23**	**57**	P	**P**	**04 28 00.0**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=277,slow=9.2,SNR=4.1						
	comp=Z,0.3nm,0.5s						
TORD	**Torodi Ar. Bea**	**36.56**	**229**	P	**P**	**04 28 10.6**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=34,slow=8.2,SNR=4.1						
	comp=Z,0.6nm,0.7s						
MKAR	**Makanchi Array**	**38.17**	**63**	P	**P**	**04 28 23.9**	**-0.3**
	comp=Z,1.1nm,1.0s,baz=283,slow=6.1,SNR=6.5						
	comp=Z,1.1nm,1.0s						
MKAR	**Makanchi Array**	**38.17**	**63**	P	**P**	**04 28 24.9**	**+0.7**
C18K	**Utukok River**	**70.68**	**4**	P	**P**	**04 32 21.8**	**+1.5**
C18K				IAmb	IAmb	04 32 29.9	
	comp=Z,6.3nm,1.5s						

E19K	**Redstone River**	**72.04**	**3**	P	**P**	**04 32 30.0**	**+1.6**
E19K				IAmb	IAmb	04 32 32.3	
	comp=Z,1.0nm,1.1s						
IMAR	**Indian Mountai**	**73.61**	**1**	P	**P**	**04 32 39.0**	**+1.3**

*IDC **08** 04:44:51.6±3.2,60˚28N×152˚64W,h72km±30km,mb2.9/1, mbtmp3.4/4,Error ellipse: s-maj=74.0km s-min=10.5km az=102.0*
*NEIC **08** 04:44:52.5±0.7,60˚23N±0˚04×152˚97W±0˚08, h122km±5km,ML2.7/122,ML2.6(AEIC),Error ellipse: s-maj=5.5km s-min=5.3km az=144.0*
*AEIC **08** 04:44:53.5±0.7,60˚23N±0˚01×152˚94W±0˚08, h120km±4km,Error ellipse: s-maj=5.7km s-min=1.3km az=105.0*

ISC 08 04:44:52.6±1.0,**60˚23N**±0˚03×**152˚92W**±0˚04, **h124**km±6km,**n78,σ0°93/73,Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RED	**Redoubt Volcan**	**0.20**	**22**		**Pn**	**04 45 09.5**	**-0.4**
RED				Sn	**Sn**	**04 45 22.6**	**-0.3**
RED				IAML		04 45 24.0	
	comp=N,95nm,0.5s						
RED				IAML		04 45 24.3	
	comp=E,122nm,0.7s						
RDSO	**Redoubt South**	**0.24**	**22**		**Pn**	**04 45 09.6**	**-0.4**
RDSO					**Sn**	**04 45 22.6**	**-0.5**
ILSW	**Iliamna Southw**	**0.28**	**204**		**Pn**	**04 45 09.5**	**-0.6**
ILSW				Sn	**Sn**	**04 45 22.3**	**-0.9**
ILSW				IAML		04 45 23.6	
	comp=N,233nm,0.8s						
ILSW				IAML		04 45 24.4	
	comp=E,298nm,0.4s						
ILS	**Iliamna Low So**	**0.29**	**195**		**Pn**	**04 45 09.7**	**-0.5**
ILS					**Sn**	**04 45 23.1**	**-0.2**
NCT	**North Crescent**	**0.33**	**359**		**Pn**	**04 45 10.0**	**-0.3**
DFR	**Drift River**	**0.38**	**18**		**Pn**	**04 45 10.0**	**-0.5**
RDT	**Redoubt**	**0.43**	**37**		**Pn**	**04 45 10.4**	**-0.3**
RDT					**Sn**	**04 45 24.0**	**-0.4**
P19K	**Oil Pt**	**0.60**	**195**		**Pn**	**04 45 11.6**	**-0.2**
P19K				Sn	**Sn**	**04 45 26.0**	**-0.1**
O19K	**Port Alsworth**	**0.70**	**267**		**Pn**	**04 45 11.8**	**-0.5**
O19K				Sn	**Sn**	**04 45 25.9**	**-1.3**
HOM	**Homer**	**0.86**	**131**	Pn	**Pn**	**04 45 14.0**	**+0.3**
HOM				Sn	**Sn**	**04 45 29.1**	**-0.5**
AUF	**Augustine Flow**	**0.89**	**198**		**Pn**	**04 45 13.4**	**-0.5**
AUL	**Augustine Lava**	**0.89**	**197**		**Pn**	**04 45 13.7**	**-0.3**
AUJK	**Augustine Jueg**	**0.92**	**196**		**Sn**	**04 45 30.3**	**-0.3**
N19K	**Bonanza Creek**	**0.97**	**308**		**Pn**	**04 45 14.2**	**-0.5**
N19K				IAML		04 45 30.9	
	comp=N,157nm,0.3s						
N19K				IAML		04 45 31.2	
	comp=E,206nm,0.8s						
SPU	**Mount Spurr**	**1.04**	**24**		**Pn**	**04 45 15.4**	**0.0**
CNPM	**China Poot**	**1.11**	**129**		**Pn**	**04 45 16.0**	**-0.1**
BRSE	**Bradley Lake S**	**1.20**	**113**		**Pn**	**04 45 17.5**	**+0.5**
O18K	**Koktuh Hills**	**1.21**	**253**		**Pn**	**04 45 16.5**	**-0.6**
Q19K	**Cape Douglas,**	**1.36**	**196**		**Pn**	**04 45 18.2**	**-0.5**
Q19K				IAML		04 46 03.6	
	comp=N,111nm,0.9s						
Q19K				IAML		04 46 06.2	
	comp=E,125nm,1.1s						
SLKM	**Skilak Lake**	**1.37**	**77**		**Pn**	**04 45 18.6**	**-0.2**
STLK	**Strandline Lak**	**1.38**	**22**		**Pn**	**04 45 19.1**	**+0.1**
P18K	**Big Mountain,**	**1.44**	**235**		**Pn**	**04 45 18.9**	**-0.7**
N18K	**Kilae Creek**	**1.54**	**288**		**Pn**	**04 45 20.1**	**-0.6**
O22K	**Cooper Landing**	**1.61**	**80**		**Pn**	**04 45 21.5**	**0.0**
SYI	**Shuyak Island**	**1.65**	**170**		**Pn**	**04 45 21.5**	**-0.5**
SYI				IAML		04 45 44.3	
	comp=E,105nm,0.7s						
M20K	**Styx River**	**1.66**	**357**		**Pn**	**04 45 22.5**	**+0.3**
SEW	**Seward**	**1.74**	**93**		**Pn**	**04 45 22.5**	**-0.5**
SEW				IAML		04 45 48.5	
	comp=N,78nm,0.7s						
SEW				IAML		04 45 51.2	
	comp=E,84nm,0.5s						
RC01	**Rabbit Creek A**	**1.79**	**60**		**Pn**	**04 45 23.4**	**-0.2**
RC01				IAML		04 45 48.0	
	comp=N,98nm,0.3s						
SKT	**Skwentna**	**1.88**	**20**		**Pn**	**04 45 24.8**	**+0.1**
SKT				IAML		04 45 51.8	
	comp=E,43nm,0.5s						
SKT				IAML		04 45 52.4	
	comp=N,36nm,0.4s						
M18K	**Stony River**	**1.90**	**313**		**Pn**	**04 45 24.4**	**-0.6**
KAHG	**Katmai Hook Gl**	**1.93**	**206**		**Pn**	**04 45 25.2**	**-0.3**
KARR	**Katmai Rainbow**	**1.97**	**208**		**Pn**	**04 45 25.8**	**-0.1**
P17K	**Kvichak River**	**2.06**	**241**		**Pn**	**04 45 27.0**	**0.0**
P17K				IAML		04 45 54.6	
	comp=N,65nm,0.7s						
N17K	**Nushagak Hills**	**2.14**	**280**		**Pn**	**04 45 27.4**	**-0.6**
N17K				IAML		04 45 55.0	
	comp=E,24nm,0.9s						
L19K	**White Mountain**	**2.17**	**335**	IAML		04 45 55.7	
	comp=N,23nm,1.0s						
L19K				IAML		04 45 55.7	
	comp=E,25nm,0.7s						
PMR	**Palmer**	**2.30**	**52**		**Pn**	**04 45 28.8**	**-1.1**
PMR				IAML		04 46 05.1	
	comp=E,36nm,0.5s						
PMR				IAML		04 46 05.2	
	comp=N,40nm,0.3s						
ACHA	**Angle Creek He**	**2.38**	**212**		**Pn**	**04 45 30.8**	**-0.2**
ANCK	**Angle Creek**	**2.43**	**214**		**Pn**	**04 45 31.6**	**-0.2**
KDAK	**Kodiak Island**	**2.46**	**176**	P	**Pn**	**04 45 30.9**	**-1.2**
	comp=N,39nm,0.4s,baz=43,slow=6.1,SNR=247						
KDAK				S	**Sn**	**04 45 59.9**	**-2.4**
	comp=N,15nm,0.3s,baz=299,slow=19,SNR=8.9						
KDAK	**Kodiak Island**	**2.46**	**176**		**Pn**	**04 45 30.5**	**-1.5**
KDAK				IAML		04 46 01.5	
	comp=N,27nm,0.3s						
KDAK				IAML		04 46 04.0	
	comp=N,32nm,0.6s						
GHO	**Glory Hole Cre**	**2.48**	**50**		**Pn**	**04 45 31.5**	**-0.9**
GHO				IAML		04 46 04.8	
	comp=N,57nm,0.6s						
GHO				IAML		04 46 09.0	
	comp=E,50nm,0.4s						
M17K	**Holitna River**	**2.50**	**300**		**Pn**	**04 45 32.1**	**-0.4**
M17K				IAML		04 46 03.6	
	comp=E,22nm,0.8s						
M17K				IAML		04 46 21.8	
	comp=N,21nm,0.6s						
L22K	**Petersville**	**2.52**	**23**		**Pn**	**04 45 33.0**	**+0.2**
L22K				IAML		04 46 06.8	
	comp=N,35nm,0.4s						
L22K				IAML		04 46 07.2	
	comp=E,55nm,0.4s						
O16K	**Kokwok River B**	**2.68**	**258**		**Pn**	**04 45 34.7**	**-0.1**
PPLA	**Purkeypile**	**2.69**	**7**		**Pn**	**04 45 36.3**	**+1.2**
PPLA				IAML		04 46 10.0	
	comp=E,21nm,0.8s						
PPLA				IAML		04 46 13.6	
	comp=N,13nm,0.8s						
L18K	**Granite Mounta**	**2.70**	**319**	IAML		04 46 06.8	
	comp=N,12nm,0.7s						
SML	**Sawmill**	**2.73**	**53**	IAML		04 46 10.4	
	comp=N,36nm,0.8s						
SML				IAML		04 46 11.7	
	comp=E,24nm,0.8s						
P23K	**Montague Islan**	**2.77**	**93**	Pn	**Pn**	**04 45 35.8**	**-0.2**
OHAK	**Old Harbor**	**3.03**	**184**		**Pn**	**04 45 37.3**	**-2.1**
OHAK				IAML		04 46 16.7	
	comp=E,17nm,1.1s						
OHAK				IAML		04 46 17.2	
	comp=N,17nm,1.0s						
PLK5	**Peulik 5**	**3.03**	**224**		**Pn**	**04 45 39.6**	**+0.2**
SCM	**Sheep Creek Mo**	**3.16**	**57**	IAML		04 46 20.2	
	comp=E,30nm,0.2s						
SCM				IAML		04 46 21.5	
	comp=N,22nm,0.3s						
K20K	**Telida**	**3.18**	**351**		**Pn**	**04 45 41.6**	**+0.2**
TRF	**Thorofare Moun**	**3.46**	**20**	IAML		04 46 27.2	
	comp=E,24nm,0.5s						
KTH	**Kantishna Hill**	**3.46**	**15**	IAML		04 46 27.2	
	comp=N,20nm,0.6s						
KTH				IAML		04 46 27.6	
	comp=E,15nm,0.8s						
N15K	**Kwethluk River**	**3.58**	**272**		**Pn**	**04 45 47.2**	**+0.6**
K17K	**Iditarod**	**3.59**	**316**		**Pn**	**04 45 46.6**	**-0.1**
K17K				IAML		04 46 46.1	
	comp=N,8.8nm,1.1s						
K17K				IAML		04 46 51.9	
	comp=E,10.0nm,1.1s						
KLU	**Klutina**	**3.65**	**67**	IAML		04 46 29.9	
	comp=E,22nm,0.4s						
KLU				IAML		04 46 33.3	
	comp=N,18nm,0.6s						
J18K	**Innoko River**	**3.71**	**333**		**Pn**	**04 45 48.1**	**-0.2**
RND	**Reindeer**	**3.72**	**29**		**Pn**	**04 45 48.1**	**-0.4**
RND				IAML		04 46 31.7	
	comp=E,16nm,0.5s						
RND				IAML		04 46 37.1	
	comp=N,12nm,0.5s						
M24K	**Tolsona, Glenn**	**3.77**	**57**	IAML		04 46 41.3	
	comp=N,19nm,0.7s						
DHY	**Denali Highway**	**3.89**	**40**		**Pn**	**04 45 50.5**	**-0.3**
J19K	**Poorman**	**3.98**	**343**		**Pn**	**04 45 51.9**	**0.0**
MCK	**McKinley**	**3.98**	**26**	IAML		04 46 37.7	
	comp=N,13nm,0.6s						
MCK				IAML		04 46 38.3	
	comp=E,15nm,0.6s						
BPAW	**Bear Paw Mtn.**	**3.98**	**12**		**Pn**	**04 45 51.4**	**-0.5**
BPAW				IAML		04 46 36.5	
	comp=E,6.4nm,1.1s						
BPAW				IAML		04 46 38.0	
	comp=N,7.6nm,0.8s						
PAX	**Paxson**	**4.49**	**49**	IAML		04 46 52.6	
	comp=E,5.8nm,0.2s						
PAX				IAML		04 47 04.3	
	comp=N,10nm,0.7s						
NEA2	**Nenana**	**4.73**	**21**	IAML		04 46 55.7	
	comp=N,3.5nm,1.1s						
NEA2				IAML		04 47 03.2	
	comp=E,3.7nm,1.2s						
J16K	**Anvik River**	**4.76**	**313**		**Pn**	**04 46 01.6**	**-0.6**
WRH	**Wood River Hil**	**4.81**	**26**	IAML		04 46 55.5	
	comp=E,4.0nm,0.9s						
WRH				IAML		04 46 55.8	
	comp=N,4.9nm,1.0s						
CCB	**Clear Creek Bu**	**5.03**	**26**	IAML		04 47 04.1	
	comp=N,4.1nm,0.3s						
CCB				IAML		04 47 04.5	
	comp=E,6.0nm,0.3s						
RIDG	**Independent Ri**	**5.18**	**44**	IAML		04 47 08.1	
	comp=N,6.8nm,1.1s						
I23K	**Minto, Yukon-K**	**5.20**	**17**	IAML		04 47 26.4	
	comp=E,2.6nm,0.6s						
I23K				IAML		04 47 50.3	
	comp=N,2.0nm,0.8s						
COLA	**College**	**5.21**	**25**		**Pn**	**04 46 08.4**	**+0.1**
PTPK	**Patty Peak**	**5.22**	**75**		**Pn**	**04 46 08.5**	**-0.2**
ILAR	**Eielson Array**	**5.34**	**29**	P	**Pn**	**04 46 09.1**	**-1.0**
	comp=N,6.0nm,0.4s,baz=213,slow=14,SNR=142						
ILAR				S	**Sn**	**04 47 05.7**	**-4.8**
	comp=N,1.2nm,0.4s,baz=218,slow=24,SNR=9.1						
ILAR	**Eielson Array**	**5.34**	**29**		**Pn**	**04 46 09.4**	**-0.7**
O28M	**Mount Upton**	**6.31**	**80**		**Pn**	**04 46 23.2**	**-0.2**
YKA	**Yellowknife Ar**	**18.32**	**66**	P	**Pn**	**04 48 58.3**	**0.0**
	comp=N,0.2nm,0.5s,baz=282,slow=11,SNR=4.3						
NVAR	**Mina Array Bea**	**30.80**	**119**	P	**P**	**04 50 59.3**	**+2.7**
	comp=N,0.2nm,0.6s,baz=312,slow=8.5,SNR=2.1						
	comp=N,0.2nm,0.6s						

*AZER **08** 04:51:16.3,40˚01N×51˚64E,h62km,ml3.2*
ISC 08 04:51:13.0±1.3,**40˚05N**±0˚07×**51˚89E**±0˚09,**h124**km±28km, **n18,σ1°80/35,2C-1D,Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATGJ	**Altiaghaj**	**2.40**	**291**	Pn	**Pn**	**04 51 53.1**	**+1.4**
ATGJ				Sn	**Sn**	**04 52 20.3**	**-1.1**
SIZA	**Siyzn**	**2.50**	**295**	Pn	**Pn**	**04 51 55.0**	**+2.0**
SIZA				Sn	**Sn**	**04 52 23.7**	**0.0**
GLBA	**Clilabad**	**2.82**	**255**	Pn	**Pn**	**04 51 58.1**	**+1.2**
GLBA				Sn	**Sn**	**04 52 30.1**	**-0.8**
ASTR	**Astara**	**2.83**	**239**	Pn	**Pn**	**04 51 58.3**	**+1.2**
ASTR				Sn	**Sn**	**04 52 29.8**	**-1.3**
QUBA	**Quba, Azerbaij**	**2.90**	**298**	Pn	**Pn**	**04 52 00.0**	**+2.0**
QUBA				Sn	**Sn**	**04 52 32.8**	**0.0**
YRD	**Yardimli**	**3.04**	**249**	Pn	**Pn**	**04 52 00.5**	**+0.3**
YRD				Sn	**Sn**	**04 52 34.2**	**-2.2**
XNQ	**Khinaliq**	**3.07**	**293**	Pn	**Pn**	**04 52 01.6**	**+1.1**
XNQ				Sn	**Sn**	**04 52 35.9**	**-1.9**
LRK	**Lerik**	**3.09**	**244**	Pn	**Pn**	**04 52 01.6**	**+0.9**
LRK				Sn	**Sn**	**04 52 35.4**	**-2.1**
QSAR	**Qusar**	**3.12**	**299**	Pn	**Pn**	**04 52 02.9**	**+1.9**
SEKA	**Sheki**	**3.75**	**290**	Pn	**Pn**	**04 52 09.8**	**+0.4**
SEKA				Sn	**Sn**	**04 52 52.7**	**-0.4**
GANJ	**Ganja**	**4.30**	**280**	Pn	**Pn**	**04 52 17.2**	**+0.6**
GANJ				Sn	**Sn**	**04 53 03.5**	**-2.4**
ZKTA	**Zakatala**	**4.30**	**293**	Pn	**Pn**	**04 52 18.2**	**+1.6**
ZKTA				Sn	**Sn**	**04 53 07.1**	**+1.1**
ORD	**Ordubad**	**4.70**	**258**	Pn	**Pn**	**04 52 24.4**	**+2.4**
ORD				Sn	**Sn**	**04 53 15.0**	**-0.6**
GDB	**GEDABAY**	**4.74**	**280**	Pn	**Pn**	**04 52 24.5**	**+2.0**
GDB				Sn	**Sn**	**04 53 13.8**	**-2.8**
SBZ	**Shahbuz**	**4.93**	**264**	Pn	**Pn**	**04 52 27.8**	**+2.6**
SBZ				Sn	**Sn**	**04 53 21.7**	**+0.5**
QZX	**Qazax, Azerbai**	**5.07**	**284**	Pn	**Pn**	**04 52 27.7**	**+0.8**
QZX				Sn	**Sn**	**04 53 22.4**	**-2.0**
AB31	**Akbulak array**	**10.84**	**29**	Pn	**Pn**	**04 53 47.7**	**+3.2**
	0.4nm,0.5s,baz=210,slow=13,SNR=11						
AB31				⇓Sn	**Sn**	**04 55 41.5**	**-2.3**
	0.3nm,0.3s,baz=201,slow=24,SNR=6.0						
AKTO	**Aktyubinsk**	**11.24**	**20**	⇑Pn	**Pn**	**04 53 48.9**	**-1.0**
	3.5nm,1.4s						
AKTO				⇑Sn	**Sn**	**04 55 50.2**	**-3.4**
	1.4nm,0.6s						

*NEIC **08** 05:03:20.7±1.9,6˚46S±0˚10×106˚34E±0˚09,h105km±7km, mb4.0/21,Error ellipse: s-maj=16.7km s-min=8.5km az=220.0*
*DJA **08** 05:03:20.5±0.4,7˚S±5˚×10˚6E±˚,h89km±4km,M4.3/19, MLv4.3/19*
*IDC **08** 05:03:20.3±0.7,6˚38S×106˚20E,h108km±5km,mb3.7/17, mbtmp4.1/18,MS2.6/1,Error ellipse: s-maj=18.7km s-min=7.5km az=38.0*

ISC 08 05:03:19.0±0.4,**6˚56S**±0˚07×**106˚18E**±0˚05,**h97**km,**n82,** **σ1°65/83,mb3.9/23,Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBJI	**Serang**	**0.43**	**353**	P	**Pn**	**05 03 36.8**	**+2.7**
CGJI	**Cibinong**	**0.49**	**263**	P	**Pn**	**05 03 36.3**	**+1.9**
CGJI				S	**Sn**	**05 03 47.9**	**+2.0**
DBJI	**Dramaga**	**0.57**	**90**	P	**Pn**	**05 03 36.7**	**+1.7**
SKJI	**Sukabumi**	**0.58**	**140**	P	**Pn**	**05 03 36.2**	**+1.0**
SKJI				S	**Sn**	**05 03 48.4**	**+1.2**
TNG	**Tangerang**	**0.60**	**51**	P	**Pn**	**05 03 37.5**	**+2.2**
LEM	**Lembang**	**1.45**	**101**	P	**Pn**	**05 03 47.5**	**+2.8**
	660nm,0.4s,baz=147,slow=23,SNR=74						
LEM				S	**Sn**	**05 04 07.0**	**+2.9**
	1µm,0.6s,baz=66,slow=21,SNR=23						
LEM	**Lembang**	**1.45**	**101**	P	**Pn**	**05 03 47.2**	**+2.5**
BLSI	**Bandar Lampung**	**1.50**	**322**	P	**Pn**	**05 03 48.3**	**+3.1**
BBJI	**Bungbulang**	**1.72**	**122**		**Pn**	**05 03 48.9**	**+1.0**
KASI	**Kota Agung**	**1.96**	**301**	P	**Pn**	**05 03 53.9**	**+2.9**
JCJI	**Jatiwangi**	**2.08**	**88**	P	**Pn**	**05 03 54.5**	**+2.0**
KLI	**Kotabumi**	**2.13**	**322**	P	**Pn**	**05 03 56.9**	**+3.6**
LWLI	**Liwa**	**2.60**	**306**	P	**Pn**	**05 04 03.2**	**+3.6**
KPJI	**Karang Pucung**	**2.84**	**106**	P	**Pn**	**05 04 04.6**	**+2.0**
MDSI	**Maura Dua**	**2.86**	**316**	P	**Pn**	**05 04 06.3**	**+3.4**
CTJI	**Waduk Cacaban**	**3.02**	**99**	P	**Pn**	**05 04 07.5**	**+2.5**
PMBI	**Palembang**	**3.87**	**339**		Pn	05 04 20.9	+4.4
MNAI	**Manna**	**3.88**	**304**		**Pn**	**05 04 19.4**	**+2.8**
MNAI	**Manna**	**3.88**	**304**	P	**Pn**	**05 04 19.7**	**+3.1**
EGSI	**Enggano, Bengk**	**4.06**	**287**	P	**Pn**	**05 04 21.4**	**+2.4**
SMRI	**Semarang**	**4.26**	**97**		**Pn**	**05 04 22.7**	**+1.0**
UGM	**Wanagama**	**4.51**	**108**		**Pn**	**05 04 26.8**	**+1.6**
JAGI	**Jajag, Banyuwa**	**8.13**	**104**		**Pn**	**05 05 15.2**	**+0.8**
KAPI	**Kappang**	**13.59**	**84**	LR	LR	05 11 19.6	
	comp=Z,29nm,21.6s,baz=253,slow=35						
BATI	**Baumata**	**17.67**	**103**	P	**Pn**	**05 07 20.1**	**+0.9**
	20nm,0.4s,baz=321,slow=6.5,SNR=2.7						
BATI				S	**S**	**05 10 40.0**	**+2.8**
	26nm,0.5s,baz=63,slow=8.6,SNR=3.6						
GIRL	**Giralia**	**17.78**	**155**	P	**P**	**05 07 20.2**	**+0.4**
MBWA	**Marble Bar**	**19.57**	**139**	P	**P**	**05 07 38.6**	**-0.8**
PSA00	**Pilbara Seismi**	**19.94**	**140**	P	**P**	**05 07 43.2**	**-0.2**
PSA00	**Pilbara Seismi**	**19.94**	**140**	P	**P**	**05 07 43.7**	**+0.3**
PSA00				IAmb	IAmb	05 07 47.8	
	comp=Z,7.5nm,0.8s						
KNRA	**Kununurra**	**23.92**	**114**	P	**P**	**05 08 23.7**	**-0.5**
KNRA				IAmb	IAmb	05 08 28.2	
	comp=Z,4.6nm,0.7s						
MTN	**Manton Dam**	**25.36**	**106**	P	**P**	**05 08 36.9**	**-0.5**
MTN				IAmb	IAmb	05 08 57.9	
	comp=Z,5.9nm,0.9s						
CMAR	**Chiang Mai Arr**	**25.86**	**344**	P	**P**	**05 08 40.9**	**-0.9**
	comp=Z,1.2nm,0.3s,baz=180,slow=7.9,SNR=4.2						
	comp=Z,1.2nm,0.3s						
WB0	**Warramunga Arr**	**30.38**	**118**	P	**P**	**05 09 22.1**	**0.0**
WB0				IAmb	IAmb	05 09 38.4	
	comp=Z,3.7nm,1.1s						
WRA	**Warramunga Arr**	**30.40**	**119**	P	**P**	**05 09 22.1**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=291,slow=9.9,SNR=14						
WRA				PcP	**PcP**	**05 12 20.2**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=302,slow=2.1,SNR=9.6						
	comp=Z,0.6nm,0.5s						
WRA	**Warramunga Arr**	**30.40**	**119**	P	**P**	**05 09 22.0**	**-0.3**
WR8	**Warramunga Arr**	**30.55**	**119**	P	**P**	**05 09 23.3**	**-0.3**
WR8				IAmb	IAmb	05 09 31.4	
	comp=Z,3.7nm,1.1s						
ASAR	**Alice Springs**	**31.61**	**126**	P	**P**	**05 09 33.1**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=297,slow=7.9,SNR=22						
ASAR				PcP	**PcP**	**05 12 23.8**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=300,slow=1.2,SNR=4.9						
ASAR				S	**S**	**05 14 31.5**	**-3.6**
	comp=Z,2.0nm,0.9s,baz=291,slow=15,SNR=13						
	comp=Z,0.7nm,0.4s						
ASAR	**Alice Springs**	**31.61**	**126**	P	**P**	**05 09 32.3**	**-0.6**
AS31	**Alice Springs**	**31.61**	**126**	P	**P**	**05 09 32.9**	**-0.1**
H08S2	**Diego Garcia H**	**33.44**	**266**	T	T	05 45 43.1	
	baz=92,slow=75,SNR=4.4						
H08S3	**Diego Garcia H**	**33.46**	**266**	T	T	05 45 44.3	
	baz=92,slow=75,SNR=14						
H08S1	**Diego Carcia H**	**33.46**	**266**	T	T	05 45 35.3	
	baz=92,slow=75,SNR=7.7						
COEN	**Coen**	**37.10**	**104**	P	**P**	**05 10 20.4**	**0.0**
EVN	**Everest**	**39.08**	**332**	P	**P**	**05 10 36.4**	**-1.2**
EVN				IAmb	IAmb	05 10 55.2	
	comp=Z,1.5nm,0.7s						
STKA	**Stephens Creek**	**41.54**	**132**	P	**P**	**05 10 58.3**	**+1.2**
	comp=Z,8.6nm,0.6s,baz=306,slow=8.0,SNR=20						
	comp=Z,8.6nm,0.6s						
STKA	**Stephens Creek**	**41.54**	**132**	P	**P**	**05 10 57.6**	**+0.4**
KSRS	**Korea Array**	**48.26**	**23**	P	**P**	**05 11 50.2**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=213,slow=7.4,SNR=1.9						
KSRS				pP	**pP**	**05 12 14.7**	**+1.3**
	comp=Z,0.9nm,0.8s,baz=226,slow=7.8,SNR=2.1						
	comp=Z,0.5nm,0.5s						
SONM	**Songino Array**	**54.16**	**0**	P	**P**	**05 12 33.2**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=175,slow=8.2,SNR=5.7						
SONM				pP	**pP**	**05 12 59.7**	**+1.7**
	comp=Z,0.7nm,0.8s,baz=170,slow=9.0,SNR=3.5						
	comp=Z,0.5nm,0.5s						
SONM	**Songino Array**	**54.16**	**0**	P	**P**	**05 12 33.7**	**-0.6**
SONM				IAmb	IAmb	05 13 00.6	
	comp=Z,1.5nm,1.0s						
MKAR	**Makanchi Array**	**57.20**	**341**	P	**P**	**05 12 54.1**	**-1.9**
	comp=Z,0.5nm,0.5s,baz=149,slow=7.7,SNR=8.0						
	comp=Z,0.5nm,0.5s						
MAKZ	**Makanchi**	**57.31**	**340**	P	**P**	**05 12 55.8**	**-1.0**
KKAR	**Karatay Array**	**59.07**	**330**	P	**P**	**05 13 07.9**	**-1.2**
H04N2	**CROZET ISLANDS**	**61.07**	**220**	T	T	06 19 42.7	
	baz=68,slow=75,SNR=28						
H04N1	**CROZET ISLANDS**	**61.08**	**220**	T	T	06 19 40.8	
	baz=68,slow=75,SNR=26						
H04N3	**CROZET ISLANDS**	**61.09**	**220**	T	T	06 19 42.0	
	baz=68,slow=75,SNR=30						
KURBB	**Kurchatov Arra**	**61.76**	**340**	P	**P**	**05 13 25.7**	**-1.5**
	comp=Z,0.4nm,0.6s,baz=150,slow=5.3,SNR=4.2						
KURBB				sP	**PcP**	**05 14 05.1**	**-2.4**
	comp=Z,0.3nm,0.4s,baz=154,slow=3.8,SNR=2.2						
	comp=Z,0.4nm,0.6s						
BVAR	**Borovoye Array**	**66.64**	**337**	P	**P**	**05 13 57.5**	**-1.7**
	comp=Z,0.7nm,0.5s,baz=125,slow=9.3,SNR=4.3						
	comp=Z,0.7nm,0.5s						
AB31	**Akbulak array**	**68.62**	**329**	P	**P**	**05 14 11.0**	**-0.7**
AB31				IAmb	IAmb	05 14 11.8	
	comp=Z,1.9nm,0.7s						
ABKAR	**Akbulak array**	**68.62**	**329**	P	**P**	**05 14 10.0**	**-1.6**
PETK	**Petropavlovsk-**	**73.61**	**29**	P	**P**	**05 14 39.7**	**-2.0**
	comp=Z,1.0nm,0.6s,baz=160,slow=3.8,SNR=5.8						
	comp=Z,1.0nm,0.6s						
PETK	**Petropavlovsk-**	**73.61**	**29**	P	**P**	**05 14 40.3**	**-1.4**
KBZ	**Khabaz**	**75.78**	**318**	P	**P**	**05 14 54.3**	**-0.1**
	comp=Z,3.3nm,0.9s,baz=207,slow=2.8,SNR=4.8						
	comp=Z,3.3nm,0.9s						
VNDA	**Vanda**	**76.55**	**169**	P	**P**	**05 14 58.8**	**+0.6**
	comp=Z,8.2nm,1.2s,baz=322,slow=7.7,SNR=3.0						
	comp=Z,8.2nm,1.2s						
VNDA	**Vanda**	**76.55**	**169**	P	**P**	**05 14 59.9**	**+1.6**
BOSA	**Boshof**	**78.94**	**242**	P	**P**	**05 15 13.8**	**+1.1**
	comp=Z,0.8nm,0.5s,baz=135,slow=7.1,SNR=1.3						
	comp=Z,0.8nm,0.5s						
BOSA	**Boshof**	**78.94**	**242**	P	**P**	**05 15 13.9**	**+1.2**
BOSA				IAmb	IAmb	05 15 26.1	
	comp=Z,2.2nm,0.9s						
BR131	**Keskin Array S**	**80.93**	**312**	P	**P**	**05 15 22.5**	**-0.6**
BR131				IAmb	IAmb	05 15 49.6	
	comp=Z,

EAHA	**Aohua**	**0.21 251**	*i* P	**Pb**	05 50 17.7	-0.1
EAHA			S	**Sb**	05 50 22.1	+0.5
EHP	**Heping Village**	**0.22 246**	P	**Pb**	05 50 17.8	-0.1
EHP			S	**Sb**	05 50 22.6	+0.8
TWC	**Suao**	**0.23 334**	*i* P	**Pb**	05 50 17.9	-0.1
TWC			S	**Sb**	05 50 21.9	-0.1
NDS	**Dongshan**	**0.32 316**	*i* P	**Pb**	05 50 19.3	-0.1
NDS			S	**Sb**	05 50 24.4	0.0
ETL	**Fush Village**	**0.39 232**	*i* P	**Pb**	05 50 20.6	+0.1
ETL			S	**Sn**	05 50 27.5	-1.7
NACB	**Ninganchiao**	**0.40 236**	P	**Pb**	05 50 20.3	-0.4
NACB	**Ninganchiao**	**0.40 236**	S	**Sb**	05 50 27.3	+0.8
NACB	**Ninganchiao**	**0.40 236**	*i* P	**Pb**	05 50 20.4	-0.4
NACB			*i* S	**Sb**	05 50 27.3	+0.8
ILA	**Ilan**	**0.41 332**	*eP*	**Pb**	05 50 20.9	0.0
ILA			*i* S	**Sb**	05 50 27.2	+0.4
TWE	**Neicheng**	**0.42 320**	*i* P	**Pb**	05 50 20.7	-0.2
TWE			*i* S	**Sb**	05 50 26.7	-0.2
LATG	**Datong**	**0.42 289**	*i* P	**Pb**	05 50 20.8	-0.3
LATG			*i* S	**Sb**	05 50 27.1	0.0
ENTT	**Nioudou**	**0.43 304**	*i* P	**Pb**	05 50 21.0	-0.3
ENTT			*i* S	**Sb**	05 50 27.2	-0.2
EGS		**0.45 356**	*i* P	**Pb**	05 50 21.6	+0.2
EGS			S	**Sb**	05 50 28.1	+0.4
NDT	**Datong Townshi**	**0.46 296**	P	**Pb**	05 50 21.4	-0.2
NDT			S	**Sb**	05 50 27.9	-0.2
TWD	**Chiawan**	**0.46 227**	*i* P	**Pb**	05 50 21.6	-0.1
TWD			*i* S	**Sb**	05 50 29.0	+0.9
ETLH	**Xiulin Townshi**	**0.48 247**	P	**Pb**	05 50 21.9	-0.2
ETLH			S	**Sb**	05 50 29.4	+0.7
FUSB	**Fushanzhiwuyua**	**0.50 317**	*i* P	**Pb**	05 50 22.2	-0.1
FUSB			S	**Sb**	05 50 29.3	+0.1
NNSB	**Datong**	**0.53 273**	P	**Pb**	05 50 22.5	+0.4
NNSB			*eS*	**Sb**	05 50 29.7	-0.5
HWA	**Hwalien**	**0.53 218**	*eP*	**Pb**	05 50 23.3	+0.5
NNS	**Nan Shan**	**0.54 275**	P	**Pb**	05 50 22.6	-0.5
NNS			*eS*	**Sb**	05 50 30.1	-0.4
NWLT	**Wulai**	**0.56 312**	*eP*	**Pb**	05 50 23.1	-0.3
NWLT			*eS*	**Sb**	05 50 30.6	-0.4
TIPB	**Shuangxi**	**0.58 348**	*i* P	**Pb**	05 50 23.7	-0.1
TIPB			S	**Sb**	05 50 31.4	-0.3
YHNB	**Yeheng**	**0.60 297**	P	**Pb**	05 50 23.7	-0.4
YHNB	**Yeheng**	**0.60 297**	S	**Sb**	05 50 31.8	-0.3
YHNB	**Yeheng**	**0.60 297**	P	**Pb**	05 50 23.6	-0.4
YHNB			S	**Sb**	05 50 31.8	-0.3
TWB1	**Santiao Chiao**	**0.61 2**	P	**Pb**	05 50 24.3	+0.1
TWB1			S	**Sb**	05 50 32.7	+0.4
ETM	**Tongmen**	**0.61 225**	*eP*	**Pb**	05 50 23.9	-0.3
ETM			S	**Sb**	05 50 33.1	+0.8
NSK	**Sanguang**	**0.62 297**	*i* P	**Pb**	05 50 23.8	-0.5
NSK			*i* S	**Sb**	05 50 32.2	-0.4
TEYL	**Yanliau Villag**	**0.62 212**	*eP*	**Pb**	05 50 24.3	-0.2
TEYL			*eS*	**Sn**	05 50 34.0	-0.9
LXIB	**Xiulin Townshi**	**0.63 233**	P	**Pb**	05 50 24.1	-0.4
LXIB			S	**Sn**	05 50 34.3	-0.9
FUSS	**Fushou**	**0.67 257**	*i* P	**Pb**	05 50 25.2	-0.2
FUSS			S	**Sb**	05 50 34.9	+0.5
TWA	**Mucha**	**0.67 329**	*eP*	**Pn**	05 50 25.5	-0.9
TWA			*eS*	**Sb**	05 50 34.5	+0.3
WHF	**Hehuan Shan**	**0.69 249**	*i* P	**Pb**	05 50 25.2	-0.5
WHF			*i* S	**Sb**	05 50 35.1	+0.2
NHDH	**Xindian Distri**	**0.69 325**	*eP*	**Pn**	05 50 25.7	-0.8
NHDH			*eS*	**Sn**	05 50 34.9	-1.6
NWF	**Wu-fen Shan**	**0.69 346**	*i* P	**Pn**	05 50 25.9	-0.7
NWF			*eS*	**Sn**	05 50 35.5	-1.2
WFSB	**Wu-fen Shan**	**0.69 346**	*eP*	**Pn**	05 50 26.0	-0.6
WFSB			S	**Sn**	05 50 35.8	-1.1
SXI1	**Grass Mountain**	**0.70 354**	*i* P	**Sn**	05 50 26.0	-0.7
SXI1			S	**Sn**	05 50 36.1	-0.8
SHUL	**Shoufeng**	**0.71 211**	*i* P	**Pb**	05 50 26.0	+0.1
SHUL			S	**Sn**	05 50 36.9	-0.1
TATO	**Taipei**	**0.72 323**	P	**Pn**	05 50 26.3	-0.6
TATO	**Taipei**	**0.72 323**	S	**Sn**	05 50 35.8	-1.4
TATO	**Taipei**	**0.72 323**	P	**Pb**	05 50 25.8	-0.3
TATO			S	**Sb**	05 50 35.6	+0.2
TWT	**Tachien**	**0.73 259**	*eP*	**Pn**	05 50 26.6	-0.6
TWT			S	**Sn**	05 50 37.0	-0.9
TDCB	**Techi**	**0.75 259**	*eP*	**Pb**	05 50 26.4	-0.2
TDCB			*eS*	**Sb**	05 50 36.7	+0.3
ESL	**Shilin**	**0.76 220**	*eP*	**Pb**	05 50 26.1	-0.6
ESL			*eS*	**Sb**	05 50 37.1	+0.6
TAP	**Taipei**	**0.76 327**	*eS*	**Sn**	05 50 37.6	-0.7
TNOU	**National Taiwa**	**0.77 347**	*eP*	**Pn**	05 50 27.1	-0.5
TNOU			*eS*	**Sn**	05 50 37.1	-1.3
NFF	**Wufeng Townshi**	**0.80 287**	*eP*	**Pn**	05 50 27.8	-0.6
KSHI	**Guanxi Townshi**	**0.81 298**	P	**Pn**	05 50 28.1	-0.1
KSHI			*eS*	**Sn**	05 50 39.6	+0.1
YM01	**YM01**	**0.83 334**	*i* P	**Pn**	05 50 28.4	0.0
YM01			S	**Sn**	05 50 39.6	-0.3
OWD	**Renai**	**0.84 239**	*i* P	**Pb**	05 50 27.6	-0.7
OWD			*i* S	**Sb**	05 50 39.2	0.0
ZUZH	**Zhuzihu**	**0.85 334**	P	**Pn**	05 50 28.2	-0.6
ZUZH			S	**Sn**	05 50 40.0	-0.6
TWS1	**Kuangyinshan**	**0.86 325**	*eP*	**Pn**	05 50 29.0	+0.1
TWS1			S	**Sn**	05 50 41.3	+0.6
WARBT	**Fenglin Townsh**	**0.86 218**	*eP*	**Pb**	05 50 27.1	-1.3
WARBT			*eS*	**Sn**	05 50 40.2	-0.5
NJD	**Zhudong**	**0.86 293**	*eP*	**Pn**	05 50 28.8	-0.1
WUSB	**Renai**	**0.87 242**	*i* P	**Pb**	05 50 28.3	-0.4
WUSB			S	**Sn**	05 50 40.7	-0.5
EGFH	**Guangfu**	**0.88 214**	*eP*	**Pb**	05 50 27.9	-0.8
ANP	**Anpu**	**0.88 333**	*eP*	**Pn**	05 50 29.3	0.0
NTST	**Danshui**	**0.89 329**	*eP*	**Pn**	05 50 29.6	+0.2
NTST			*eS*	**Sn**	05 50 42.2	+0.7
LIOB	**Emei**	**0.90 286**	*i* P	**Pn**	05 50 29.6	+0.2
LIOB			*eS*	**Sn**	05 50 41.7	0.0
JYNG	**Yonagunijimaku**	**0.90 86**	*eP*	**Pb**	05 50 29.3	+0.2
JYNG			S	**Sn**	05 50 41.8	+0.2
NCU	**National Centr**	**0.91 309**	*eP*	**Pb**	05 50 27.8	-1.5
NCU			*eS*	**Sn**	05 50 40.8	-1.1
NCUH	**Zhongli**	**0.91 309**	*i* P	**Pn**	05 50 29.5	0.0
NCUH			*eS*	**Sn**	05 50 42.9	+1.0
NSTT	**Nanjuang**	**0.91 285**	P	**Pn**	05 50 29.5	0.0
NSTT			S	**Sn**	05 50 41.6	-0.3
TWY	**Chenhua**	**0.93 339**	*eP*	**Pn**	05 50 30.3	+0.4
TWY			*eS*	**Sn**	05 50 43.3	+0.7
WHP	**Taichung City**	**0.94 263**	P	**Pn**	05 50 30.1	+0.1
WHP			S	**Sn**	05 50 42.7	0.0
YOJ	**Yonaguni jima**	**0.96 86**	P	**Sn**	05 50 30.2	0.0
YOJ			S	**Sn**	05 50 43.8	+0.7
SBCB	**Hsinchu**	**0.97 294**	P	**Pn**	05 50 31.0	+0.7
SBCB			*eS*	**Sn**	05 50 45.4	+1.8
VWDT	**VWDT**	**0.99 230**	P	**Pn**	05 50 30.0	-0.6
VWDT			*eS*	**Sn**	05 50 44.0	+0.2
HSN	**Hsinchu**	**0.99 294**	*i* P	**Pb**	05 50 30.7	0.0
HSN			S	**Sn**	05 50 44.6	+0.7
DPDB	**Guoxing**	**1.01 249**	*eP*	**Pb**	05 50 30.8	-0.3
DPDB			*eS*	**Sn**	05 50 44.4	-0.3
WCS	**Beigang Elemen**	**1.02 251**	*eP*	**Pb**	05 50 31.4	+0.3
WCS			*eS*	**Sn**	05 50 44.7	+0.1
HGSD	**Ruisui**	**1.03 209**	*eP*	**Pn**	05 50 30.6	-0.5
EHYH	**Wanrong**	**1.06 212**	*eP*	**Pn**	05 50 31.1	-0.6
EHY	**Hungye**	**1.06 214**	*eP*	**Pn**	05 50 30.4	-1.3
EHY			*eS*	**Sn**	05 50 45.6	-0.2
NMLH	**Miaoli**	**1.08 278**	*eP*	**Pb**	05 50 32.6	+0.5
NMLH			*eS*	**Sn**	05 50 48.1	+2.0
TWQ1	**Liyutan**	**1.09 268**	*eP*	**Pb**	05 50 32.7	+0.5
TWQ1			*eS*	**Sn**	05 50 47.5	+1.2
NSY	**Sanyi**	**1.09 271**	*eP*	**Pb**	05 50 33.5	+1.1
NSY			*eS*	**Sb**	05 50 47.6	+1.3
SMLT	**Sun Moon Lake**	**1.10 242**	*eP*	**Pn**	05 50 32.0	-0.3
SSLB	**Suanglung**	**1.10 237**	P	**Pn**	05 50 31.7	-0.6
SSLB	**Suanglung**	**1.10 237**	*eP*	**Pn**	05 50 31.9	-0.4
SSLB			*eS*	**Sb**	05 50 47.2	+0.6
TYC	**Yuchr**	**1.12 244**	*eP*	**Pb**	05 50 32.6	-0.3
TYC			*eS*	**Sb**	05 50 48.1	+1.1
YULB	**Yu-li**	**1.17 211**	P	**Pn**	05 50 31.3	-1.9
YULB	**Yu-li**	**1.17 211**	*eP*	**Pn**	05 50 31.7	-1.5
YULB			*eS*	**Sn**	05 50 48.1	-0.4
TCU	**Taichung**	**1.20 258**	*eS*	**Sb**	05 50 51.6	+2.3
TWF1	**Yuli**	**1.21 210**	*eP*	**Pn**	05 50 32.2	-1.5
TWF1			*eS*	**Sn**	05 50 49.3	0.0
WDJ	**Dajia District**	**1.21 268**	*eS*	**Sb**	05 50 51.6	+2.1
WWF	**Wufeng**	**1.21 253**	*eP*	**Pb**	05 50 34.0	-0.3
PCYT	**Pengchaiyu**	**1.23 5**	*eP*	**Pb**	05 50 34.3	-0.4
WHYT	**Xinyi Township**	**1.23 236**	*eP*	**Pb**	05 50 34.4	-0.4
WJS	**Zhushan**	**1.27 243**	P	**Pb**	05 50 35.5	+0.2
WJS			*i* S	**Sb**	05 50 53.9	+2.7
WNT	**Mingjian**	**1.28 246**	*eP*	**Pb**	05 50 35.9	+0.4
WNT			*eS*	**Sb**	05 50 54.2	+2.7
YUS	**Yu-Shan**	**1.29 226**	*eP*	**Pn**	05 50 34.7	-0.6
YUS			*eS*	**Sn**	05 50 52.0	-0.1
CHKH	**Chenggong**	**1.31 203**	*eP*	**Pn**	05 50 34.8	-0.3
WCHH	**Zhanghua**	**1.32 256**	*eP*	**Pb**	05 50 36.6	+0.3
WCHH			*eS*	**Sb**	05 50 54.2	+1.4
FULB	**Fuli**	**1.34 207**	*eP*	**Pn**	05 50 35.7	+0.2
ALS	**Alishan**	**1.38 230**	*eP*	**Pn**	05 50 36.5	+0.2
ALS			*eS*	**Sb**	05 50 55.6	+0.8
CHKT	**Chengkung**	**1.40 203**	*eP*	**Pn**	05 50 36.2	-0.2
CHKT			*eS*	**Sb**	05 50 54.8	-0.4
CHN5	**Tsauling**	**1.42 236**	P	**Pb**	05 50 37.8	-0.2
CHN5			S	**Sb**	05 50 57.5	+1.8
EHM	**Haiduan**	**1.42 209**	*eP*	**Pb**	05 50 36.8	+0.1
WGK	**Gukeng**	**1.46 241**	*eP*	**Pb**	05 50 38.4	-0.3
WGK			*eS*	**Sb**	05 50 58.1	+1.2
WDLH	**Douliu**	**1.48 242**	P	**Pb**	05 50 39.0	-0.1
WDLH			S	**Sb**	05 50 59.0	+1.6
ELDTW	**Lidau**	**1.48 216**	*eP*	**Pn**	05 50 37.8	+0.2
WRL	**Guolierlin Hig**	**1.53 251**	*eP*	**Pb**	05 50 39.1	-0.7
WRL			S	**Sb**	05 50 58.9	+0.1
RLNB	**Erlin**	**1.55 251**	*eP*	**Pb**	05 50 39.5	-0.7
RLNB			*i* S	**Sb**	05 51 00.1	+0.8
WCKO	**Fanlu**	**1.57 233**	*eP*	**Pb**	05 50 40.6	+0.1
WCKO			*eS*	**Sb**	05 51 01.3	+1.4
IRIF	**Iriomote-Funau**	**1.61 92**	*eP*	**Pn**	05 50 39.6	+0.4
IRIF			S	**Sn**	05 50 59.8	+0.5
CHN4	**Tsaushan**	**1.63 231**	*eP*	**Pb**	05 50 41.5	-0.1
CHN4			*eS*	**Sb**	05 51 03.5	+1.8
STYH	**Taoyuan**	**1.64 222**	*eP*	**Pn**	05 50 40.1	+0.6
STYH			*eS*	**Sb**	05 51 01.7	-0.2
TPUB	**Ta-pu**	**1.64 228**	*eP*	**Pb**	05 50 41.1	-0.7
TPUB			S	**Sb**	05 51 03.0	+1.4
STYT	**Tauyuan**	**1.65 222**	*eP*	**Pb**	05 50 40.8	-1.2
CHY	**Chiayi**	**1.67 238**	*eP*	**Pb**	05 50 42.0	-0.3
CHY			*eS*	**Sb**	05 51 03.9	+1.1
WTP	**Ta-pu**	**1.69 227**	*eP*	**Pb**	05 50 42.1	-0.4
WTP			*eS*	**Sb**	05 51 04.5	+1.2
HATJ	**Hateruma jima**	**1.72 101**	*eS*	**Sb**	05 51 04.0	-0.2
TWK	**Hsinying**	**1.76 230**	P	**Pb**	05 50 42.7	-1.1
TWK			S	**Sb**	05 51 06.5	+1.0
WSF	**Szhu**	**1.76 245**	*eP*	**Pn**	05 50 41.5	+0.2
WSF			*eS*	**Sb**	05 51 06.1	+0.6
TWG	**Pinlang**	**1.77 208**	*eP*	**Pn**	05 50 42.1	+0.7
TWGBT	**Beinan**	**1.77 207**	*eP*	**Pn**	05 50 42.2	+0.8
CHN1	**Nanshi**	**1.79 228**	*eP*	**Pb**	05 50 43.4	-0.9
CHN1			*i* S	**Sb**	05 51 07.5	+1.3
WSL	**Shuilin Townsh**	**1.81 242**	P	**Sb**	05 50 43.9	-0.7
WSL			*eS*	**Sb**	05 51 07.3	+0.4
SGST	**Jiashian**	**1.82 224**	*eP*	**Pn**	05 50 43.0	+0.8
SGST			*eS*	**Sb**	05 51 08.1	+0.8
JKRS	**Kuro-shima**	**1.87 94**	*eP*	**Pn**	05 50 43.9	+1.1
JKRS			S	**Sn**	05 51 07.0	+1.2
CHN8	**Yiju**	**1.92 237**	*eS*	**Sb**	05 51 11.4	+1.6
JIJ	**Ishigaki jima**	**1.99 91**	*eP*	**Pn**	05 50 45.3	+0.9
JIJ			S	**Sn**	05 51 08.9	+0.3
SCLT	**Jiali**	**2.03 233**	*eS*	**Sb**	05 51 13.8	+0.7
SSD	**Sandimen**	**2.05 217**	*eP*	**Pb**	05 50 47.1	-1.6
SSD			*eS*	**Sb**	05 51 13.7	-0.1
TSCK	**Chigu Township**	**2.12 234**	*eP*	**Pn**	05 50 47.8	+1.6
TSCK			*eS*	**Sb**	05 51 15.5	-0.4
JISG	**Ishigakijimahi**	**2.15 85**	*eP*	**Pn**	05 50 46.7	+0.1
JISG			*eS*	**Sn**	05 51 12.8	+0.3
MASBT	**Mashibuluo**	**2.16 215**	P	**Pb**	05 50 48.6	-1.9
MASBT			*eS*	**Sb**	05 51 16.3	-0.5
EAST	**Anshuo**	**2.25 207**	*eP*	**Pn**	05 50 48.8	+0.7
TAW	**Tawu**	**2.26 206**	*eS*	**Sn**	05 51 16.8	-0.4
PNG	**Penghu**	**2.35 250**	*eP*	**Pn**	05 50 49.5	+0.3
PNG			*eS*	**Sn**	05 51 18.1	+0.5
PHUB	**P'eng-hu**	**2.36 249**	*eP*	**Pn**	05 50 49.5	0.0
PHUB			*eS*	**Sn**	05 51 18.0	+0.3
VWUC	**VWUC**	**2.36 285**	*eP*	**Pn**	05 50 49.5	0.0
VWUC			*eS*	**Sn**	05 51 17.4	-0.4
SCZT	**Fangliau**	**2.36 212**	*eP*	**Pb**	05 50 51.8	-2.3
LAY	**Lan-yu**	**2.38 189**	*eP*	**Pn**	05 50 48.9	-1.0
WDGT	**Dungji**	**2.39 242**	*eP*	**Pn**	05 50 49.8	-0.2
WDGT			*eS*	**Sn**	05 51 19.9	+1.3
LYUB	**Lan-yu**	**2.41 188**	*eP*	**Pn**	05 50 48.9	-1.4
LYUB			*eS*	**Sn**	05 51 17.2	-1.8
MATB	**Ma-tsu**	**2.53 314**	*eP*	**Pn**	05 50 51.4	-0.4
MATB			*eS*	**Sn**	05 51 22.8	+0.9

*JMA **08** 05:56:11.2±0.2, 24°.3N±0°.7×121°.9E±0°.8, h48km±2km, MV2.6/11, TAIWAN REGION*
*TAP **08** 05:56:11.6, 24°.41N×121°.95E, h25km, ML3.3, C*
ISC 08 05:56:11.7±0.8, 24°.37N±0°.02×121°.97E±0°.02, h17km±6km, n114, σ0°.79/181, 9C-9D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EAHA	**Aohua**	**0.21**	**260**	⇓P		**Pb**	05 56 17.5	+0.3
EAHA				S		**Sg**	05 56 22.0	+1.8
EHP	**Heping Village**	**0.22**	**255**	⇓P		**Pb**	05 56 17.5	+0.3
EHP				*eS*		**Sg**	05 56 22.2	+1.9
ENA	**Nanau**	**0.22**	**287**	⇑*i*P		**Pb**	05 56 17.5	+0.3
ENA				S		**Sg**	05 56 21.4	+1.1
ESAO	**Su ao**	**0.24**	**331**	⇑P		**Pb**	05 56 17.3	-0.3
ESAO				*i* S		**Sg**	05 56 21.3	+0.1
TWC	**Suao**	**0.27**	**335**	⇓*i*P		**Pb**	05 56 17.6	-0.4
TWC				*i* S		**Sg**	05 56 21.1	-0.5
NDS	**Dongshan**	**0.35**	**319**	⇑*i*P		**Pb**	05 56 19.1	-0.4
NDS				*i* S		**Sg**	05 56 24.0	-0.2
ETL	**Fush Village**	**0.38**	**237**	*eP*		**Pb**	05 56 20.6	+0.6
ETL				S		**Sb**	05 56 27.4	+1.8
NACB	**Ninganchiao**	**0.39**	**241**	P		**Pb**	05 56 20.1	-0.1
NACB	**Ninganchiao**	**0.39**	**241**	S		**Sb**	05 56 27.0	+1.1
NACB	**Ninganchiao**	**0.39**	**241**	⇓P		**Pb**	05 56 20.2	0.0
NACB				*i* S		**Sb**	05 56 27.1	+1.1
LATG	**Datong**	**0.44**	**293**	⇓P		**Pb**	05 56 20.6	-0.5
LATG				*eS*		**Sb**	05 56 27.0	-0.4
TWD	**Chiawan**	**0.45**	**230**	⇑P		**Pb**	05 56 21.3	+0.2
TWD				*i* S		**Sb**	05 56 29.1	+1.7
ILA	**Ilan**	**0.45**	**333**	*i* P		**Pb**	05 56 20.9	-0.3
ILA				*i* S		**Sb**	05 56 27.3	-0.3
TWE	**Neicheng**	**0.45**	**322**	⇑*i*P		**Pg**	05 56 20.9	-0.2
TWE				*i* S		**Sg**	05 56 26.5	-0.4
ENTT	**Nioudou**	**0.46**	**307**	⇑P		**Pg**	05 56 20.8	-0.2
ENTT				*i* S		**Sg**	05 56 26.9	-0.4
ETLH	**Xiulin Townshi**	**0.47**	**251**	P		**Pb**	05 56 21.7	+0.1
ETLH				*i* S		**Sb**	05 56 28.7	+0.3
EGS		**0.48**	**356**	⇓P		**Pg**	05 56 21.4	0.0
EGS				S		**Sg**	05 56 28.0	+0.1
NDT	**Datong Townshi**	**0.48**	**300**	P		**Pb**	05 56 21.2	-0.5
NDT				*i* S		**Sb**	05 56 28.3	-0.2
HWA	**Hwalien**	**0.51**	**221**	P		**Pb**	05 56 22.6	+0.3
HWA				*eS*		**Sb**	05 56 32.8	+3.4
FUSB	**Fushanzhiwuyua**	**0.53**	**318**	⇑*i*P		**Pg**	05 56 22.0	-0.3
FUSB				S		**Sg**	05 56 28.8	-0.5
NNSB	**Datong**	**0.54**	**277**	P		**Pb**	05 56 22.3	-0.5
NNSB				*eS*		**Sb**	05 56 30.2	-0.1
NNS	**Nan Shan**	**0.55**	**278**	*i* P		**Pb**	05 56 22.6	-0.3
NNS				*i* S		**Sb**	05 56 30.3	-0.4
ETM	**Tongmen**	**0.59**	**228**	*eP*		**Pb**	05 56 23.5	-0.1
ETM				*eS*		**Sn**	05 56 33.8	+1.8
NWLT	**Wulai**	**0.59**	**314**	*i* P		**Pg**	05 56 23.0	-0.4
NWLT				S		**Sg**	05 56 30.3	-1.1
TEYL	**Yanliau Villag**	**0.60**	**215**	*eP*		**Pb**	05 56 23.8	0.0
LXIB	**Xiulin Townshi**	**0.61**	**236**	⇓P		**Pb**	05 56 23.7	-0.4
LXIB				S		**Sn**	05 56 34.1	-1.2
TIPB	**Shuangxi**	**0.62**	**348**	P		**Pg**	05 56 23.5	-0.5
TIPB				*i* S		**Sg**	05 56 31.3	-0.9
YHNB	**Yeheng**	**0.62**	**299**	P		**Pg**	05 56 23.4	-0.6
YHNB	**Yeheng**	**0.62**	**299**	S		**Sg**	05 56 31.6	-0.7
YHNB	**Yeheng**	**0.62**	**299**	⇑P		**Pg**	05 56 23.5	-0.6
YHNB				*i* S		**Sg**	05 56 31.8	-0.6
NSK	**Sanguang**	**0.64**	**299**	⇓P		**Pg**	05 56 23.8	-0.6
NSK				*i* S		**Sg**	05 56 31.8	-1.0
TWB1	**Santiao Chiao**	**0.64**	**1**	⇑P		**Pg**	05 56 24.2	-0.2
TWB1				S		**Sg**	05 56 32.3	-0.6
FUSS	**Fushou**	**0.67**	**260**	*i* P		**Pb**	05 56 25.1	0.0
FUSS				*i* S		**Sb**	05 56 34.0	-0.4
WHF	**Hehuan Shan**	**0.68**	**251**	⇓P		**Pb**	05 56 25.4	0.0
WHF				S		**Sb**	05 56 34.9	+0.3
SHUL	**Shoufeng**	**0.69**	**213**	*eP*		**Pb**	05 56 25.7	+0.5
TWA	**Mucha**	**0.71**	**330**	*i* P		**Pb**	05 56 25.9	+0.3
TWA				*eS*		**Sg**	05 56 34.3	-0.6
NHDH	**Xindian Distri**	**0.72**	**326**	*eP*		**Pg**	05 56 25.5	-0.3
NWF	**Wu-fen Shan**	**0.72**	**346**	*eP*		**Pg**	05 56 25.7	-0.2
WFSB	**Wu-fen Shan**	**0.72**	**346**	*eP*		**Pb**	05 56 26.0	+0.2
WFSB				*i* S		**Sg**	05 56 35.5	0.0
SXI1	**Grass Mountain**	**0.73**	**353**	P		**Pg**	05 56 25.7	-0.3
SXI1				S		**Sg**	05 56 35.5	-0.3
TWT	**Tachien**	**0.73**	**261**	*eP*		**Pb**	05 56 26.5	+0.3
TWT				S		**Sb**	05 56 36.7	+0.7
ESL	**Shilin**	**0.74**	**222**	*eP*		**Pb**	05 56 25.9	-0.2
ESL				*eS*		**Sb**	05 56 36.5	+0.6
TATO	**Taipei**	**0.75**	**324**	P		**Pb**	05 56 26.5	+0.2
TATO	**Taipei**	**0.75**	**324**	S		**Sg**	05 56 35.5	-0.8
TDCB	**Techi**	**0.75**	**262**	P		**Pb**	05 56 26.5	+0.1
TDCB				S		**Sb**	05 56 37.1	+0.7
TEGC	**Jichi Village**	**0.76**	**211**	*eP*		**Pn**	05 56 28.0	+0.3
NHY	**Taipei**	**0.76**	**332**	*eP*		**Pb**	05 56 26.8	+0.2
TAP	**Taipei**	**0.79**	**328**	*eS*		**Sg**	05 56 37.5	-0.2
TNOU	**National Taiwa**	**0.80**	**347**	*eP*		**Pg**	05 56 26.9	-0.4
NFF	**Wufeng Townshi**	**0.82**	**289**	*i* P		**Pb**	05 56 27.6	0.0
NFF				*eS*		**Sb**	05 56 38.6	+0.2
KSHI	**Guanxi Townshi**	**0.83**	**300**	*i* P		**Pb**	05 56 28.2	+0.5
KSHI				*eS*		**Sn**	05 56 40.4	-0.1
OWD	**Renai**	**0.83**	**241**	*eP*		**Pb**	05 56 27.3	-0.5
WARBT	**Fenglin Townsh**	**0.84**	**220**	*eP*		**Pg**	05 56 26.9	-1.2
YM01	**YM01**	**0.86**	**335**	*eP*		**Pg**	05 56 28.2	-0.2
YM01				*eS*		**Sb**	05 56 40.0	+0.6
WUSB	**Renai**	**0.86**	**245**	*i* P		**Pb**	05 56 28.2	-0.2
WUSB				*eS*		**Sb**	05 56 39.8	+0.1
ZUZH	**Zhuzihu**	**0.88**	**334**	*eP*		**Pg**	05 56 28.5	-0.4
ZUZH				S		**Sb**	05 56 40.7	+0.6
TWS1	**Kuangyinshan**	**0.89**	**326**	*i* P		**Pb**	05 56 28.7	0.0
TWS1				*i* S		**Sb**	05 56 41.4	+1.1
JYNG	**Yonagunijimaku**	**0.89 84**		P		**Pb**	05 56 28.9	+0.2
JYNG				S		**Sb**	05 56 41.9	+1.5
LIOB	**Emei**	**0.91**	**288**	*eP*		**Pb**	05 56 29.5	+0.4
NSTT	**Nanjuang**	**0.92**	**287**	*eP*		**Pb**	05 56 29.5	+0.2
NSTT				*eS*		**Sb**	05 56 41.2	0.0
NTST	**Danshui**	**0.93**	**329**	*eP*		**Pb**	05 56 29.4	+0.1
NTST				S		**Sb**	05 56 42.7	+1.3
NCUH	**Zhongli**	**0.93**	**310**	*eP*		**Pb**	05 56 29.7	+0.2
NCUH				S		**Sb**	05 56 42.7	+1.2
WHP	**

HVD Gariep Dam 3.73 193 *e*P **Pn** 05 59 14.4 -1.0
HVD *e*S **Sn** 05 59 57.7 -2.2
KDWAN Kaudwane 3.91 335 *i* P **Pn** 05 59 20.3 +2.3
KDWAN *i* S **Sn** 06 00 04.6 +0.3
ALKP Alkanpan, Nort 4.74 230 *e*P **Pn** 05 59 29.4 0.0
ALKP *e*S **Sn** 06 00 23.1 -1.7
ALKP IAML 06 00 53.0
comp=Z,225nm,0.7s
KHWEE KHWEE 5.07 349 *i* P **Pn** 05 59 35.5 +1.6
KHWEE *i* S **Sn** 06 00 31.6 -1.4
KHWEE KHWEE 5.07 349 **Pn** 05 59 36.1 +2.2
BFON Badsfontein, M 5.39 206 *e*P **Pn** 05 59 37.9 -0.4
BFON *e*S **Sn** 06 00 38.6 -2.2
BFON IAML 06 01 05.7
comp=Z,112nm,0.5s
GRAF Camdeboo Natio 5.57 197 *e*P **Pn** 05 59 40.4 -0.3
GRAF *e*S **Sn** 06 00 42.7 -2.5
GRAF IAML 06 01 17.4
comp=Z,162nm,0.6s
KGCAE Kacgae 5.61 316 *i* P **Pn** 05 59 42.0 +0.7
KGCAE *i* S **Sn** 06 00 45.8 -0.5
KGCAE IAML 06 01 20.2
comp=E,205nm,0.4s
KGCAE Kacgae 5.61 316 **Pn** 05 59 43.6 +2.2
BRAK Brakfontein 5.72 212 *e*P **Pn** 05 59 43.0 +0.3
BRAK *e*S **Sn** 06 00 45.1 -3.8
BRAK IAML 06 01 16.2
comp=Z,99nm,0.6s
BROLN Tlhalogang 5.89 8 *i* P **Pn** 05 59 45.0 -0.1
BROLN *i* S **Sn** 06 00 49.6 -3.5
BROLN IAML 06 01 21.7
comp=E,207nm,0.4s
ARMS Ukamas 6.05 258 *e*P **Pn** 05 59 48.1 +0.8
ARMS *e*S **Sn** 06 00 55.3 -1.8
GRHM Grahamstown, E 6.30 181 Pn **Pn** 05 59 49.7 -0.9
GRHM Grahamstown, E 6.30 181 *e*P **Pn** 05 59 49.8 -0.9
GRHM *e*S **Sn** 06 00 58.3 -4.8
GRHM IAML 06 01 44.5
comp=Z,56nm,0.8s
SOOWA Sowa 6.37 358 *i* P **Pn** 05 59 52.5 +0.7
GRAN Grantham 6.50 214 *e*P **Pn** 05 59 53.7 +0.2
GRAN *e*S **Sn** 06 01 03.9 -4.1
GRAN IAML 06 01 40.2
comp=Z,87nm,0.8s
FRAZ Fraserburg 6.62 220 *e*P **Pn** 05 59 55.5 +0.3
FRAZ *e*S **Sn** 06 01 07.4 -3.7
FRAZ IAML 06 01 46.0
comp=Z,71nm,0.9s
SUR Sutherland 7.29 221 Pn **Pn** 06 00 05.1 +0.6
comp=Z,3.0nm,0.3s,baz=47,slow=10,SNR=53
SUR Sn **Sn** 06 01 26.0 -1.8
comp=Z,4.9nm,0.3s,baz=163,slow=21,SNR=6.5
SUR Lg Lg 06 02 01.9
comp=Z,13nm,0.3s,baz=326,slow=20,SNR=9.2
comp=Z,11nm,0.2s
SUR Sutherland 7.29 221 **Pn** 06 00 05.4 +0.9
GRTLG Ghanzi 7.34 318 *i* P **Pn** 06 00 04.3 -0.7
GRTLG *i* S **Sn** 06 01 24.2 -4.6
GRTLG IAML 06 02 09.9
comp=E,89nm,0.3s
GRTLG Ghanzi 7.34 318 **Pn** 06 00 06.7 +1.7
CVNA Calvinia 7.38 231 *e*P **Pn** 06 00 05.9 +0.4
CVNA *e*S **Sn** 06 01 25.0 -4.7
CVNA IAML 06 02 15.5
comp=Z,93nm,0.5s
CER Ceres 8.89 222 *e*P **Pn** 06 00 26.9 +0.6
CER *e*S **Sn** 06 02 01.0 -5.8
AUSN Aus 9.10 270 *e*P **Pn** 06 00 30.5 +1.2
AUSN *e*S **Sn** 06 02 07.9 -4.5
KSANE Kasane 9.19 352 *i* P **Pn** 06 00 29.4 -1.1
KSANE *i* S **Sn** 06 02 06.8 -7.6
KSANE Kasane 9.19 352 **Pn** 06 00 31.0 +0.5
ELIM Elim 9.54 215 *e*P **Pn** 06 00 34.8 -0.5
ELIM *e*S **Sn** 06 02 17.1 -5.8
ELIM IAML 06 03 29.4
comp=Z,38nm,0.5s
WIN Windhoek 9.55 295 Pn **Pn** 06 00 37.0 +1.5
TSUM Tsumeb 11.23 312 Pn **Pn** 06 00 59.4 +1.0
comp=Z,1.8nm,0.3s,baz=147,slow=19,SNR=8.8
TSUM Sn **Sn** 06 03 00.7 -3.7
comp=Z,0.9nm,0.3s,baz=115,slow=3.4,SNR=3.0
TSUM Lg Lg 06 04 09.6
comp=Z,0.5nm,0.3s,baz=62,slow=20,SNR=5.7
TSUM Tsumeb 11.23 312 **Pn** 06 00 59.6 +1.2
LSZ Lusaka 11.74 8 Pn **Pn** 06 01 04.6 -0.8
comp=Z,12nm,0.5s,baz=193,slow=12,SNR=34
LSZ Sn **Sn** 06 03 10.0 -6.9
comp=Z,2.3nm,0.3s,baz=62,slow=18,SNR=5.6
LSZ Lg Lg 06 04 25.4
comp=Z,0.9nm,0.3s,baz=278,slow=20,SNR=6.3
VOI Vohitsoka 19.19 79 P **P** 06 02 40.3 -1.6
VOI IAmb IAmb 06 02 45.5
comp=Z,14nm,1.1s
DBIC Dimbokro 45.13 313 P **P** 06 06 34.8 0.0
comp=Z,9.6nm,1.0s,baz=150,slow=8.6,SNR=4.2
comp=Z,9.6nm,1.0s
DBIC Dimbokro 45.13 313 P **P** 06 06 35.1 +0.3
TORD Torodi Ar. Bea 46.55 326 P **P** 06 06 46.5 +0.5
comp=Z,4.0nm,0.8s,baz=157,slow=7.7,SNR=19
comp=Z,4.0nm,0.8s
SNAA Sanae 47.62 192 P **P** 06 06 53.7 0.0
comp=Z,4.8nm,0.8s,baz=42,slow=6.6,SNR=5.2
comp=Z,4.8nm,0.8s
SNAA Sanae 47.62 192 P **P** 06 06 53.9 +0.1
SNAA IAmb IAmb 06 06 56.4
comp=Z,4.6nm,0.8s
BELA Belgrano 2 57.86 193 P **P** 06 08 09.7 +0.3
BELA IAmb IAmb 06 08 22.9
comp=Z,1.7nm,1.1s
QSPA South Pole Qui 63.23 180 P **P** 06 08 45.7 -0.6
comp=Z,3.3nm,1.0s,baz=245,slow=6.4,SNR=4.6
comp=Z,3.3nm,1.0s
QSPA South Pole Qui 63.23 180 P **P** 06 08 45.8 -0.5
QSPA IAmb IAmb 06 08 47.5
comp=Z,4.6nm,1.1s
BRTR Keskin Array B 66.68 6 P **P** 06 09 10.4 +1.4
comp=Z,0.7nm,0.9s,baz=186,slow=11,SNR=4.8
comp=Z,0.7nm,0.9s
BRTR Keskin Array B 66.68 6 P **P** 06 09 09.4 +0.5
BDFB Brasilia 69.44 262 P **P** 06 09 27.7 +0.8
comp=Z,2.2nm,0.8s,baz=160,slow=6.9,SNR=4.3
comp=Z,2.2nm,0.8s
ESDC Sonseca Array 72.10 336 P **P** 06 09 43.4 +0.9
comp=Z,1.0nm,0.8s,baz=182,slow=4.5,SNR=6.4
comp=Z,1.0nm,0.8s
ESDC Sonseca Array 72.10 336 P **P** 06 09 43.5 +1.1
GERES GERESS Array B 76.32 351 P **P** 06 10 08.7 +1.8
comp=Z,0.7nm,0.8s,baz=232,slow=1.5,SNR=4.5
comp=Z,0.7nm,0.8s
AKASG Malin Array Be 77.36 2 P **P** 06 10 13.3 +0.8
comp=Z,0.6nm,0.4s,baz=189,slow=5.3,SNR=6.7
comp=Z,0.6nm,0.4s
KKAR Karatay Array 80.64 31 P **P** 06 10 31.6 +0.8
CMAR Chiang Mai Arr 83.52 66 P **P** 06 10 47.8 +1.3
comp=Z,0.8nm,0.3s,baz=218,slow=1.8,SNR=1.2
comp=Z,0.8nm,0.3s
LPAZ La Paz 86.72 254 P **P** 06 11 04.3 +0.9
comp=Z,1.2nm,0.8s,baz=104,slow=4.7,SNR=4.8
comp=Z,1.2nm,0.8s
FINES FINESS Array B 88.09 360 P **P** 06 11 08.8 +0.8
comp=Z,1.3nm,0.7s,baz=182,slow=5.2,SNR=5.5
comp=Z,1.3nm,0.7s
FINES FINESS Array B 88.09 360 P **P** 06 11 09.4 +1.3
BVAR Borovoye Array 88.35 25 P **P** 06 11 10.1 +0.6
comp=Z,0.7nm,0.6s,baz=264,slow=5.5,SNR=2.8
comp=Z,0.7nm,0.6s
MKAR Makanchi Array 89.05 35 P **P** 06 11 12.9 -0.2
comp=Z,0.4nm,0.8s,baz=232,slow=5.9,SNR=3.7
comp=Z,0.4nm,0.8s
MKAR Makanchi Array 89.05 35 P **P** 06 11 13.4 +0.4
ASAR Alice Springs 93.76 119 P **P** 06 11 36.0 +0.3
comp=Z,0.3nm,0.8s,baz=208,slow=3.8,SNR=2.6
comp=Z,0.3nm,0.8s
YKA Yellowknife Ar 136.19 335 PKP **PKiKP** 06 17 41.2 +0.6
comp=Z,0.1nm,0.7s,baz=13,slow=2.7,SNR=4.1
TXAR Lajitas Array 136.21 285 PKP **PKiKP** 06 17 42.4 +0.6
comp=Z,0.3nm,0.8s,baz=151,slow=2.9,SNR=4.4
PDAR Pinedale Array 141.07 306 PKP **PKPdf** 06 17 50.0 +1.1
comp=Z,0.7nm,0.9s,baz=116,slow=3.4,SNR=4.5
ILAR Eielson Array 141.94 355 PKhKP PKPpre 06 17 46.5
comp=Z,0.2nm,0.7s,baz=322,slow=3.5,SNR=5.5
L19K White Mountain 144.77 1 **PKPdf** 06 17 55.7 +1.2
MCARA McCarthy VSAT 144.85 351 **PKPdf** 06 17 56.1 +1.5
SCM Sheep Creek Mo 144.88 355 PKPdf **PKPdf** 06 17 55.1 +0.3
SKT Skwentna 144.96 358 **PKPdf** 06 17 55.3 +0.5

*KRSC **08** 06:19:41.2±1.3,51°.82N×159°.05E,h52km±16km,Ml4.2*
*MOS **08** 06:19:42.2±1.0,51°.82N×158°.95E,h59km,mb3.8/1,Error ellipse: s-maj=12.6km s-min=4.5km az=93.1*
*IDC **08** 06:19:47.3±2.6,51°.88N×158°.71E,h83km±16km,mb3.4/13,mbtmp3.7/13,MS3.3/1,Error ellipse: s-maj=25.5km s-min=22.9km az=157.0*

ISC 08 06:19:42.9±1.1,51°.82N±0°.05×159°.03E±0°.05,h45km±10km, n85,σ0°90/102,mb3.7/13,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDTR	**Khodutka, Kamc**	**0.59**	**270**	PN	**Pn**	**06 19 54.6**	**-0.4**
KDTR				S	**Sn**	**06 20 03.0**	**-0.6**
KDTR	**Khodutka, Kamc**	**0.59**	**270**	*e*P	**Pn**	**06 19 54.7**	**-0.4**
KDTR				*e*S	**Sn**	**06 20 03.1**	**-0.6**
RUS	**Russkaya**	**0.69**	**333**	PN	**Pn**	**06 19 56.0**	**-0.4**
RUS				S	**Sn**	**06 20 05.6**	**-0.5**
RUS	**Russkaya**	**0.69**	**333**	*e*P	**Pn**	**06 19 56.0**	**-0.4**
RUS				*e*S	**Sn**	**06 20 05.6**	**-0.5**
MTVR	**Mutnovka**	**0.85**	**323**	PN	**Pn**	**06 19 58.6**	**0.0**
MTVR				S	**Sn**	**06 20 10.0**	**0.0**
MTVR	**Mutnovka**	**0.85**	**323**	*e*P	**Pn**	**06 19 58.7**	**0.0**
MTVR				*e*S	**Sn**	**06 20 10.1**	**0.0**
ASAK	**Asacha**	**0.90**	**310**	PN	**Pn**	**06 19 59.6**	**+0.4**
ASAK				S	**Sn**	**06 20 11.6**	**+0.5**
ASAK	**Asacha**	**0.90**	**310**	*e*P	**Pn**	**06 19 59.6**	**+0.4**
ASAK				*e*S	**Sn**	**06 20 11.6**	**+0.5**
GRL	**Gorelyy**	**0.94**	**322**	PN	**Pn**	**06 20 00.2**	**+0.4**
GRL				S	**Sn**	**06 20 12.9**	**+0.6**
GRL	**Gorelyy**	**0.94**	**322**	*e*P	**Pn**	**06 20 00.3**	**+0.4**
GRL				*e*S	**Sn**	**06 20 12.9**	**+0.6**
KRMR	**Karymshinskiy**	**1.16**	**332**	PN	**Pn**	**06 20 02.9**	**+0.3**
KRMR				S	**Sn**	**06 20 17.4**	**+0.2**
KRMR	**Karymshinskiy**	**1.16**	**332**	*e*P	**Pn**	**06 20 02.9**	**+0.3**
KRMR				*e*S	**Sn**	**06 20 17.5**	**+0.2**
DALK	**Dalny**	**1.23**	**352**	PN	**Pn**	**06 20 03.4**	**-0.2**
DALK				S	**Sn**	**06 20 18.8**	**-0.3**
DALK	**Dalny**	**1.23**	**352**	*e*P	**Pn**	**06 20 03.5**	**-0.2**
DALK				*e*S	**Sn**	**06 20 18.8**	**-0.3**
PET	**Petropavlovsk**	**1.23**	**349**	PN	**Pn**	**06 20 03.5**	**-0.2**
PET				S	**Sn**	**06 20 18.9**	**-0.2**
PET	**Petropavlovsk**	**1.23**	**349**	*e*P	**Pn**	**06 20 03.5**	**-0.2**
PET				*e*S	**Sn**	**06 20 18.9**	**-0.2**
INSR	**Institute**	**1.28**	**349**	PN	**Pn**	**06 20 04.3**	**0.0**
INSR				S	**Sn**	**06 20 20.5**	**+0.2**
INSR	**Institute**	**1.28**	**349**	*e*P	**Pn**	**06 20 04.4**	**0.0**
INSR				*e*S	**Sn**	**06 20 20.6**	**+0.2**
NLC	**Nalytchevo**	**1.37**	**8**	PN	**Pn**	**06 20 04.7**	**-0.9**
NLC				S	**Sn**	**06 20 20.8**	**-1.7**
NLC	**Nalytchevo**	**1.37**	**8**	*e*P	**Pn**	**06 20 04.7**	**-0.9**
NLC				*e*S	**Sn**	**06 20 20.9**	**-1.7**
UGLR	**Uglovaya**	**1.40**	**355**	PN	**Pn**	**06 20 06.3**	**+0.2**
UGLR	**Uglovaya**	**1.40**	**355**	*e*P	**Pn**	**06 20 06.3**	**+0.2**
PAU	**Pauzhetka**	**1.42**	**257**	PN	**Pn**	**06 20 06.4**	**+0.1**
PAU				S	**Sn**	**06 20 24.6**	**+0.8**
PAU	**Pauzhetka**	**1.42**	**257**	*e*P	**Pn**	**06 20 06.4**	**+0.1**
PAU				*e*S	**Sn**	**06 20 24.6**	**+0.8**
SPN	**Mys Shipunski**	**1.42**	**25**	PN	**Pn**	**06 20 07.1**	**+0.8**
SPN				S	**Sn**	**06 20 25.6**	**+1.8**
SPN	**Mys Shipunski**	**1.42**	**25**	*e*P	**Pn**	**06 20 07.1**	**+0.8**
SPN				*e*S	**Sn**	**06 20 25.7**	**+1.8**
SMAR	**Somma**	**1.46**	**355**	PN	**Pn**	**06 20 06.7**	**-0.3**
SMAR	**Somma**	**1.46**	**355**	*e*P	**Pn**	**06 20 06.7**	**-0.3**
AVH	**Avacha**	**1.46**	**353**	PN	**Pn**	**06 20 07.1**	**+0.2**
AVH	**Avacha**	**1.46**	**353**	*e*P	**Pn**	**06 20 07.2**	**+0.2**
SDLR	**Sedlovina**	**1.47**	**357**	PN	**Pn**	**06 20 06.7**	**-0.3**
SDLR	**Sedlovina**	**1.47**	**357**	*e*P	**Pn**	**06 20 06.7**	**-0.3**
MIPR	**Malaya Ipel'ka**	**1.48**	**289**	PN	**Pn**	**06 20 08.1**	**+1.1**
MIPR	**Malaya Ipel'ka**	**1.48**	**289**	*e*P	**Pn**	**06 20 08.1**	**+1.1**
KOK	**Koryaka**	**1.50**	**351**	PN	**Pn**	**06 20 07.9**	**+0.5**
KOK	**Koryaka**	**1.50**	**351**	*e*P	**Pn**	**06 20 08.0**	**+0.5**
KRER	**Koryakskii**	**1.50**	**354**	PN	**Pn**	**06 20 07.8**	**+0.2**
KRER	**Koryakskii**	**1.50**	**354**	*e*P	**Pn**	**06 20 07.8**	**+0.2**
PEA0B	**Petropavlovsk-**	**1.53**	**328**	*i* PN	**Pn**	**06 20 08.4**	**+0.6**
PETK	**Petropavlovsk-**	**1.53**	**328**	P	**Pn**	**06 20 08.9**	**+1.2**
	376nm,0.4s,baz=128,slow=17,SNR=2185						
PETK				S	**Sn**	**06 20 29.5**	**+3.0**
	71nm,0.6s,baz=129,slow=25,SNR=7.7						
KRX	**Arik**	**1.56**	**352**	PN	**Pn**	**06 20 08.6**	**+0.2**
KRX	**Arik**	**1.56**	**352**	*e*P	**Pn**	**06 20 08.6**	**+0.2**
APC	**Apacha**	**1.60**	**315**	PN	**Pn**	**06 20 08.5**	**+0.9**
APC	**Apacha**	**1.60**	**315**	*e*P	**Pn**	**06 20 09.6**	**+0.9**
GNL	**Ganaly**	**2.00**	**341**	PN	**Pn**	**06 20 15.4**	**+1.1**
GNL	**Ganaly**	**2.00**	**341**	*e*P	**Pn**	**06 20 15.4**	**+1.1**
SKR	**Severo-Kuril's**	**2.15**	**239**	*e*PN	**Pn**	**06 20 16.5**	**+0.2**
SKR				*e*S	**Sn**	**06 20 42.5**	**+0.8**
SKR				pmax	pmax		
	comp=Z,75nm,0.4s						
SKR				smax	smax		
	comp=N,310nm,0.3s						
SKR				smax	smax		
	comp=E,295nm,0.3s						
SKR	**Severo-Kuril's**	**2.15**	**239**	*e*P	**Pn**	**06 20 16.3**	**+0.1**
SKR				*e*S	**Sn**	**06 20 41.1**	**-0.5**
KII	**Karymskiy**	**2.24**	**6**	PN	**Pn**	**06 20 19.0**	**+1.5**
KII	**Karymskiy**	**2.24**	**6**	*e*P	**Pn**	**06 20 19.1**	**+1.5**
MKZ	**Mys Kozlova**	**3.19**	**30**	PN	**Pn**	**06 20 30.9**	**+0.4**
MKZ				S	**Sn**	**06 21 06.2**	**-1.0**
MKZ	**Mys Kozlova**	**3.19**	**30**	*e*P	**Pn**	**06 20 30.9**	**+0.4**
MKZ				*e*S	**Sn**	**06 21 06.3**	**-1.0**
ESO	**Esso**	**4.12**	**357**	PN	**Pn**	**06 20 45.3**	**+2.0**
ESO	**Esso**	**4.12**	**357**	*e*P	**Pn**	**06 20 45.3**	**+2.0**
KBTR	**Krutoberegovo**	**4.94**	**25**	PN	**Pn**	**06 20 55.8**	**+1.4**
KBTR	**Krutoberegovo**	**4.94**	**25**	*e*P	**Pn**	**06 20 55.9**	**+1.4**
SMKR	**Semkarok**	**4.99**	**16**	PN	Pn	06 20 59.3	+4.1
SMKR	**Semkarok**	**4.99**	**16**	*e*P	Pn	06 20 59.4	+4.1
YSS	**Yuzhno-Sakhali**	**11.66**	**252**	*i* PN	**Pn**	**06 22 27.7**	**+1.2**
MJAR	**Matsushiro Arr**	**21.24**	**232**	P	**P**	**06 24 26.1**	**+1.1**
	comp=E,1.3nm,0.6s,baz=22,slow=11,SNR=5.4						
	comp=E,1.3nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**32.61**	**166**	T	T	07 01 14.5	
	baz=351,slow=76,SNR=145						
H11N3	**WAKE ISLAND Hy**	**32.62**	**166**	T	T	07 01 22.0	
	baz=351,slow=76,SNR=120						
H11N1	**WAKE ISLAND Hy**	**32.62**	**166**	T	T	07 01 15.7	
	baz=351,slow=76,SNR=120						
H11S1	**WAKE ISLAND Hy**	**33.78**	**167**	T	T	07 02 28.6	
	baz=351,slow=76,SNR=37						
H11S3	**WAKE ISLAND Hy**	**33.79**	**167**	T	T	07 02 38.4	
	baz=351,slow=76,SNR=53						
H11S2	**WAKE ISLAND Hy**	**33.80**	**167**	T	T	07 02 36.8	
	baz=351,slow=76,SNR=18						
KURK	**Kurchatov**	**47.86**	**302**	P	**P**	**06 28 15.2**	**-0.7**
KURBB	**Kurchatov Arra**	**47.96**	**302**	P	**P**	**06 28 15.2**	**-1.4**
	comp=E,0.4nm,0.6s,baz=61,slow=7.4,SNR=4.4						
	comp=E,0.4nm,0.6s						
MKAR	**Makanchi Array**	**48.12**	**296**	P	**P**	**06 28 17.0**	**-1.0**
	comp=E,0.2nm,0.5s,baz=55,slow=6.5,SNR=2.8						
	comp=E,0.2nm,0.5s						
SPITS	**Spitsbergen Ar**	**48.29**	**350**	P	**P**	**06 28 18.3**	**-0.6**
	comp=E,0.7nm,0.4s,baz=46,slow=6.2,SNR=12						
	comp=E,0.7nm,0.4s						
KIRV	**Kirov**	**56.03**	**323**	LR	LR	06 55 40.4	
	comp=E,26nm,18.9s,baz=274,slow=38						
PDAR	**Pinedale Array**	**58.73**	**59**	P	**P**	**06 29 37.3**	**+1.2**
	comp=E,0.2nm,0.6s,baz=317,slow=4.5,SNR=4.2						
	comp=E,0.2nm,0.6s						
FINES	**FINESS Array B**	**61.03**	**336**	P	**P**	**06 29 49.4**	**-1.9**
	comp=E,1.3nm,0.9s,baz=53,slow=5.6,SNR=1.6						
	comp=E,1.3nm,0.9s						
NB2	**NORSAR Subarra**	**64.58**	**343**	P	**P**	**06 30 14.6**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=24,slow=6.9						
NOA	**NORSAR Array B**	**64.58**	**343**	P	**P**	**06 30 14.7**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=21,slow=6.7,SNR=4.3						
	comp=Z,0.7nm,0.6s						
HFS	**Hagfors**	**64.96**	**342**	P	**P**	**06 30 17.0**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=18,slow=5.2,SNR=7.4						
	comp=Z,1.2nm,0.6s						
AKASG	**Malin Array Be**	**69.37**	**329**	P	**P**	**06 30 44.0**	**-1.5**
	comp=Z,0.5nm,0.3s,baz=34,slow=6.8,SNR=3.1						
	comp=Z,0.5nm,0.3s						
TXAR	**Lajitas Array**	**71.75**	**66**	P	**P**	**06 31 02.0**	**+1.5**
	comp=Z,0.2nm,0.5s,baz=290,slow=4.8,SNR=6.5						
	comp=Z,0.2nm,0.5s						
TXAR	**Lajitas Array**	**71.75**	**66**	P	**P**	**06 31 02.0**	**+1.5**
EKA	**Eskdalemuir Ar**	**72.20**	**349**	P	**P**	**06 31 02.8**	**+0.2**
	comp=Z,1.5nm,0.8s,baz=22,slow=6.4,SNR=1.8						
	comp=Z,1.5nm,0.8s						
GERES	**GERESS Array B**	**75.44**	**337**	P	**P**	**06 31 20.8**	**-1.0**
	comp=Z,0.2nm,0.4s,baz=357,slow=6.3,SNR=1.9						
	comp=Z,0.2nm,0.4s						
ESDC	**Sonseca Array**	**87.69**	**347**	P	**P**	**06 32 26.0**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=360,slow=3.8,SNR=2.1						
	comp=Z,0.3nm,0.6s						
H03N2	**Juan Fernandez**	**134.86**	**89**	T	T	09 09 23.2	
	baz=314,slow=77,SNR=40						
H03N1	**Juan Fernandez**	**134.88**	**89**	T	T	09 09 26.7	
	baz=314,slow=77,SNR=42						
H03N3	**Juan Fernandez**	**134.88**	**89**	T	T	09 09 24.6	
	baz=314,slow=77,SNR=48						

*IDC **08** 06:50:53.0±1.0,28°.23N×104°.91E,h0km,mb3.6/7,mbtmp3.6/9,ML3.8/2,Error ellipse: s-maj=41.4km s-min=17.2km az=60.0*

ISC 08 06:50:55.9±1.3,28°.3N±0°.2×104°.9E±0°.2,h19km,n9, σ0°91/9,mb3.6/7,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LZDM	**Lanzhou Array**	**7.75**	**352**	Pn	**Pn**	**06 52 48.7**	**+0.8**
	baz=179,slow=13						
	1.5nm,0.3s						
SONM	**Songino Array**	**19.58**	**3**	P	**P**	**06 55 21.1**	**-1.7**
	0.3nm,0.3s,baz=180,slow=12,SNR=2.5						
	0.5nm,0.5s						
KSRS	**Korea Array**	**21.33**	**59**	P	**P**	**06 55 42.3**	**+0.5**
	0.6nm,0.6s,baz=242,slow=12,SNR=2.6						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**25.64**	**322**	P	**P**	**06 56 24.8**	**+0.6**
	0.6nm,0.8s,baz=121,slow=9.7,SNR=6.0						
	0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**29.60**	**336**	P	**P**	**06 56 59.7**	**+0.1**
	0.8nm,0.7s,baz=129,slow=10,SNR=3.9						
	0.8nm,0.7s						
KURBB	**Kurchatov Arra**	**29.97**	**325**	P	**P**	**06 57 03.3**	**+0.5**
	0.8nm,0.7s,baz=131,slow=9.6,SNR=12						
	0.8nm,0.7s						
BVAR	**Borovoye Array**	**35.49**	**324**	P	**P**	**06 57 50.3**	**-0.8**
	0.3nm,0.5s,baz=146,slow=8.0,SNR=1.7						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**55.71**	**146**	P	**P**	**07 00 31.2**	**-0.1**
	1.1nm,0.8s,baz=335,slow=7.6,SNR=7.7						
	1.1nm,0.8s						
ASAR	**Alice Springs**	**58.69**	**149**	P	**P**	**07 00 52.5**	**+0.1**
	0.8nm,0.8s,baz=322,slow=6.6,SNR=9.3						
	0.8nm,0.8s						

*NEIC **08** 06:54:26.2±2.1,43°.26N±0°.06×127°.0W±0°.2,h10km±2km, ML3.0/78,ML2.0/7(SEA),Error ellipse: s-maj=21.6km s-min=10.2km az=257.0*
*PGC **08** 06:54:48.4,44°.27N×125°.01W,h5km,MLSn3.0/9,Mw3.6/9, ML2.0(SEA),155km west of Eugene, Oregon, Usa Off Coast Of Oregon*
*SEA **08** 06:54:48.4±4.3,44°.27N±0°.05×125°.0W±0°.1,h5km±2km, Error ellipse: s-maj=13.4km s-min=8.4km az=250.0*

ISC 08 06:54:24.6±2.4,43°.29N±0°.07×127°.0W±0°.1,h10km,n60, σ1s91/63,Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
J01E	**Myrtle Point**	**2.25**	**92**	Pn	**Pn**	**06 55 01.5**	**-0.4**
KBO	**Bosley Butte**	**2.31**	**117**	Pn	**Pn**	**06 55 03.0**	**+0.2**
KBO				IAML		06 55 26.2	
	comp=E,92nm,3.9s						
KBO				IAML		06 56 02.7	
	comp=N,97nm,2.5s						
I02E	**Swisshome, OR**	**2.43**	**69**	Pn	**Pn**	**06 55 04.4**	**0.0**
I02E				IAML		06 55 40.8	
	comp=E,67nm,3.6s						
K02D	**Willamette Mer**	**2.52**	**102**	Pn	**Pn**	**06 55 05.6**	**-0.1**
I03D	**Drain, OR**	**2.69**	**80**		**Pn**	**06 55 08.4**	**+0.4**
MPOR	**Mary's Peak**	**2.78**	**63**		**Pn**	**06 55 09.7**	**+0.4**
L02F	**Cave Junction**	**2.79**	**114**	Pn	**Pn**	**06 55 10.2**	**+0.9**
COR	**Corvallis**	**2.97**	**63**		**Pn**	**06 55 12.9**	**+1.1**
COR	**Corvallis**	**2.97**	**63**	IAML		06 56 15.5	
	comp=E,42nm,2.8s						
COR				IAML		06 56 30.0	
	comp=E,34nm,2.8s						
BUCK	**Buck Mountain**	**3.05**	**71**		**Pn**	**06 55 14.5**	**+1.5**
BUCK				IAML		06 55 44.5	
	comp=E,37nm,3.6s						
BUCK				IAML		06 56 01.0	
	comp=N,34nm,4.5s						
BBOR	**Butler Butte**	**3.19**	**96**		**Pn**	**06 55 16.4**	**+1.3**
G03D	**McMinnville, O**	**3.30**	**53**		**Pn**	**06 55 17.5**	**+1.2**
G03D				IAML		06 55 57.7	
	comp=N,43nm,1.9s						
G03D				IAML		06 57 23.9	
	comp=E,43nm,2.9s						
H04D	**Lebanon**	**3.32**	**67**		**Pn**	**06 55 18.5**	**+1.8**
H04D				IAML		06 56 05.0	
	comp=N,28nm,4.5s						
H04D				IAML		06 56 42.4	
	comp=E,46nm,4.1s						
I04A	**Tendick Farm,**	**3.38**	**80**		**Pn**	**06 55 19.0**	**+1.6**
I04A				IAML		06 56 39.4	
	comp=E,22nm,3.1s						
BROR	**Big Rock Looko**	**3.44**	**72**		**Pn**	**06 55 19.9**	**+1.6**
YBH	**Yreka Blue Hor**	**3.54**	**115**	Pn	**Pn**	**06 55 22.2**	**+2.6**
YBH				IAML		06 56 55.2	
	comp=N,30nm,1.0s						
J04A	**Umpqua Nationa**	**3.58**	**89**		**Pn**	**06 55 22.7**	**+2.4**
J04A				IAML		06 56 16.6	
	comp=E,41nm,2.2s						
J04A				IAML		06 56 39.3	
	comp=N,45nm,3.8s						
F03A	**Seaside**	**3.61**	**42**		**Pn**	**06 55 22.1**	**+1.5**
L04D	**Klamath Falls**	**3.62**	**106**	Pn	**Pn**	**06 55 23.0**	**+2.1**
L04D				IAML		06 57 11.3	
	comp=E,34nm,4.8s						
L04D				IAML		06 57 29.0	
	comp=N,24nm,4.7s						
H04A	**Detroit Lake**	**3.75**	**67**		**Pn**	**06 55 24.6**	**+2.1**
H04A				IAML		06 57 47.8	
	comp=N,18nm,4.5s						
G04A	**Mulino**	**3.77**	**58**		**Pn**	**06 55 25.0**	**+2.1**
**WI

SYMB	**Survey Mountai**	**5.72**	**22**	Pn	**Pn**	**06 55 51.5**	**+1.7**
MXC	**Moxie City**	**5.79**	**53**	Pn	**Pn**	**06 55 53.0**	**+2.4**
B926	**Mesachie Lake**	**5.88**	**19**	Sn	**Sn**	**06 56 56.6**	**-2.6**
CLRS	**Cowichan Lake**	**5.88**	**19**	Pn	**Pn**	**06 55 53.5**	**+1.7**
CLRS	**Cowichan Lake**	**5.88**	**19**	Pn	**Pn**	**06 55 53.3**	**+1.5**
CLRS				Sn	**Sn**	**06 56 56.4**	**-2.8**
B009	**North Saanich**	**5.90**	**24**	Pn	**Pn**	**06 55 54.1**	**+2.0**
B009				Sn	**Sn**	**06 56 56.9**	**-2.8**
B010	**North Saanich**	**5.91**	**24**	Sn	**Sn**	**06 56 58.5**	**-1.3**
B011	**North Saanich**	**5.91**	**24**	Pn	**Pn**	**06 55 54.0**	**+1.9**
B011				Sn	**Sn**	**06 56 58.6**	**-1.2**
PGC	**Sidney**	**5.91**	**24**	Pn	**Pn**	**06 55 53.5**	**+1.5**
PGC	**Sidney**	**5.91**	**24**	Pn	**Pn**	**06 55 54.1**	**+2.0**
PGC				Sn	**Sn**	**06 56 58.4**	**-1.3**
MGRB	**Mount Grey**	**5.93**	**15**	Pn	**Pn**	**06 55 54.1**	**+1.5**
LTY	**Liberty**	**5.98**	**46**	Pn	**Pn**	**06 55 55.6**	**+2.4**
SNB	**Saturna Island**	**6.10**	**25**	Pn	**Pn**	**06 55 57.2**	**+2.4**
G08A	**Pilot Rock**	**6.11**	**68**		**Pn**	**06 55 57.4**	**+2.3**
HAWA	**Hanford**	**6.15**	**57**	Pn	**Pn**	**06 55 57.0**	**+1.5**
WVOR	**Wild Horse Val**	**6.21**	**95**	Pn	**Pn**	**06 55 57.1**	**+0.7**
WAH2	**Wahluke Slope**	**6.31**	**54**	Pn	**Pn**	**06 55 57.8**	**+0.1**
MYRA	**Myra Falls**	**6.34**	**8**	Sn	**Sn**	**06 57 06.9**	**-3.7**
E08A	**Dider Farm, El**	**6.49**	**58**	Pn	**Pn**	**06 56 01.2**	**+1.1**
SHB	**Sechelt**	**6.67**	**18**	Pn	**Pn**	**06 56 04.7**	**+2.0**
VDEB	**Vedder Mountai**	**6.71**	**29**	Pn	**Pn**	**06 56 05.5**	**+2.2**
C09A	**Chrisman Ranch**	**7.61**	**51**	Pn	**Pn**	**06 56 17.7**	**+2.2**
PNT	**Penticton**	**7.90**	**38**	Pn	**Pn**	**06 56 21.5**	**+2.0**

IDC 08 06:59:07.7±1.1, 9°47'S×159°35'E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=41.4km s-min=8.7km az=171.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**0.59**	**86**	Pg	Pg	06 59 19.6	+0.6
	74nm,0.3s,baz=126,slow=20,SNR=329						
HNR				Lg	Lg	06 59 26.5	
	81nm,0.3s,baz=294,slow=16,SNR=14						
WRA	**Warramunga Arr**	**26.30**	**244**	P	P	07 04 45.6	+0.2
	1.1nm,1.0s,baz=73,slow=9.1,SNR=4.9 1.1nm,1.0s						
ASAR	**Alice Springs**	**28.11**	**237**	P	P	07 05 00.3	-1.4
	0.2nm,0.5s,baz=57,slow=9.5,SNR=4.7 0.2nm,0.5s						
MAW	**Mawson**	**83.78**	**203**	P	P	07 11 39.1	+0.5
	43nm,0.3s,baz=127,slow=5.1,SNR=89						
ILAR	**Eielson Array**	**84.13**	**20**	P	P	07 11 40.4	0.0
	0.4nm,0.4s,baz=243,slow=4.9,SNR=15 0.4nm,0.4s						

*CNRM **08** 07:03:31.5, 27°.56N×4°.58E, h10km*
*IDC **08** 07:03:32.5±1.3, 34°.96N×6°.13E, h0km, mb3.2/5, mbtmp3.3/8, ML3.4/3, MS3.2/1, Error ellipse: s-maj=35.9km s-min=21.2km az=142.0*
*CRAAG **08** 07:03:35.0, 35°.11N×5°.97E, Ml3.6, Algrie 13km NE Djemorah*

ISC 08 07:03:34.8±0.7, 35°.00N±0°.04×5°.96E±0°.03, h10km, n35, σ1°99/38, mb3.2/4, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CKTS	**El Kantara**	**0.31**	**316**	P	**Pg**	**07 03 41.1**	**-0.1**
CTGD	**Timgad**	**0.71**	**41**	P	**Pb**	**07 03 48.8**	**-0.6**
CJSR	**Ain Djasser**	**0.86**	**359**	P	**Pb**	**07 03 51.8**	**-0.1**
CBBAR	**Babar**	**1.02**	**82**	P	**Pn**	**07 03 56.1**	**+0.7**
CKHR	**Kef el Ahmar**	**1.08**	**340**	P	**Pn**	**07 03 58.1**	**+2.0**
CTEI	**Djebel Teioual**	**1.12**	**19**	P	**Pn**	**07 03 57.6**	**+0.9**
COAT	**Oued Athmania**	**1.26**	**12**	P	**Pg**	**07 03 59.8**	**+0.8**
SET	**Setif**	**1.28**	**339**	P	**Sn**	**07 04 18.0**	**+1.8**
CSGS	**Sigus**	**1.28**	**28**	P	**Pg**	**07 04 00.8**	**+1.3**
CASM	**Ain Smara**	**1.33**	**19**	P	**Pg**	**07 04 00.9**	**+0.5**
CAZD	**Ain Tagrout**	**1.34**	**331**	P	**Pg**	**07 04 01.4**	**+0.8**
CNGR	**Negrine**	**1.38**	**112**	P	**Pg**	**07 04 03.0**	**+1.6**
CKFL	**Kef-Lekhel**	**1.53**	**24**	P	**Pg**	**07 04 03.6**	**-0.6**
DFRA	**Djebel Bou Aff**	**1.54**	**358**	P	**Pg**	**07 04 04.1**	**-0.3**
CRHA	**Rehia**	**1.57**	**61**	P	**Pg**	**07 04 06.0**	**+0.9**
CBHR	**Beni Haroun da**	**1.58**	**9**	P	**Pg**	**07 04 04.4**	**-0.8**
CBST	**Bordj Sabath**	**1.68**	**33**	P	**Pb**	**07 04 05.8**	**-0.1**
CTCHA	**Tamokra**	**1.78**	**324**	P	**Pg**	**07 04 08.0**	**-1.0**
CBOS	**Bilal Ibnou Ra**	**1.81**	**9**	P	**Pb**	**07 04 07.4**	**-0.7**
CAEH	**'Ain El Ouahch**	**1.92**	**22**	P	**Pb**	**07 04 08.3**	**-1.6**
AKET	**Djebel Ketaf**	**1.99**	**302**	P	**Pb**	**07 04 11.0**	**-0.2**
ABRIN	**Birine**	**2.40**	**286**	P	**Pb**	**07 04 16.1**	**-2.1**
KEST	**Kesra**	**2.86**	**74**	Pn	**Pb**	**07 04 23.5**	**-2.6**
	3.2nm,0.3s,baz=311,slow=5.5,SNR=19						
KEST				Sn	**Sb**	**07 05 01.9**	**+0.7**
	2.6nm,0.3s,baz=177,slow=17,SNR=6.0						
FIGM	**Figuig**	**6.67**	**247**	P	**Pn**	**07 05 14.8**	**+1.7**
FIGM				S	**Sn**	**07 06 29.0**	**-0.2**
MDT	**Midelt**	**9.05**	**259**	Pn	**Pn**	**07 05 46.8**	**+1.1**
	0.4nm,0.3s,baz=50,slow=5.5,SNR=14						
MDT				Sn	**Sn**	**07 07 24.8**	**-2.8**
	0.1nm,0.3s,baz=246,slow=12,SNR=1.4 0.8nm,0.2s						
MDT	**Midelt**	**9.05**	**259**	P	**Pn**	**07 05 46.4**	**+0.8**
MDT				S	Sn	07 07 40.5	+13
MD31	**MD31**	**9.16**	**260**	P	**Pn**	**07 05 49.8**	**+2.7**
MD31				S	**Sn**	**07 07 38.4**	**+8.2**
ESDC	**Sonseca Array**	**9.17**	**303**	Pn	**Pn**	**07 05 47.6**	**+0.3**
	baz=118,slow=14,SNR=2.2 0.1nm,0.3s						
MLR	**Muntele Rosu**	**18.46**	**49**	P	**P**	**07 07 48.7**	**-2.0**
	baz=196,slow=15,SNR=3.2 0.5nm,0.4s						
TORD	**Torodi Ar. Bea**	**22.10**	**191**	P	**P**	**07 08 29.0**	**-1.3**
	2.5nm,0.8s,baz=8.3,slow=12,SNR=10 2.5nm,0.8s						
BRTR	**Keskin Array B**	**22.46**	**70**	P	**P**	**07 08 32.0**	**-2.3**
	0.2nm,0.3s,baz=254,slow=8.5,SNR=5.3 0.2nm,0.3s						
AKASG	**Malin Array Be**	**23.03**	**40**	P	**P**	**07 08 37.6**	**-2.3**
	0.2nm,0.3s,baz=240,slow=9.2,SNR=1.9 0.2nm,0.3s						
DBIC	**Dimbokro**	**29.91**	**202**	LR	LR	07 23 12.6	
	comp=Z,44nm,19.1s,baz=144,slow=39						
KURBB	**Kurchatov Arra**	**53.36**	**49**	P	**P**	**07 12 53.4**	**-0.8**
	0.3nm,0.7s,baz=288,slow=8.8,SNR=2.2 0.3nm,0.7s						
MKAR	**Makanchi Array**	**56.76**	**53**	P	**P**	**07 13 17.6**	**-1.3**
	0.2nm,0.6s,baz=284,slow=6.3,SNR=2.5 0.2nm,0.6s						

SSNC 08 07:05:12.4±2.2, 19°.30N×77°.78W, h0km, ML2.6, Presumed earthquake, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMGC	**Las Mercedes**	**1.05**	**44**	*e*P	Pg	07 05 32.3	-0.4
LMGC				*e*		07 05 32.3	
	baz=179,slow=22						
LMGC				*e*S	Sg	07 05 45.1	-1.2
LMGC				AMP		07 05 46.6	
	comp=E,326nm,0.1s						
LMGC				AMP		07 05 48.7	
	comp=N,750nm,0.1s						
LMGC	**Las Mercedes**	**1.05**	**44**	*i* P	Pg	07 05 32.2	-0.5
LMGC				*e*		07 05 32.2	
	baz=216,slow=18						
LMGC				*i* S	Sg	07 05 45.2	-1.1
CCCC	**Cccc**	**1.89**	**1**	*e*P	Pn	07 05 41.3	-4.6
CCCC				*e*S	Sn	07 06 05.4	-5.1
CCCC				IAML		07 06 07.7	
	comp=E,2.9nm,0.3s						
CCCC				IAML		07 06 08.2	
	comp=N,1.2nm,0.2s						
CCCC	**Cccc**	**1.89**	**1**	*i* P	Pn	07 05 43.3	-2.6
CCCC				IAML		07 05 59.4	
	comp=Z,47nm,1.0s						
CCCC				*i* S	Sn	07 06 05.6	-4.8

*IDC **08** 07:11:36.4±0.6, 21°.73N±0°.08×143°.2E±0°.1, h300km, n29, σ0°83/34, mb3.7/23, Mariana Islands region*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.42**	**350**	P	**Pn**	**07 12 58.4**	**-0.4**
	106nm,0.7s,baz=299,slow=20,SNR=10						
JCJ				S	**S**	**07 14 03.8**	**-1.3**
	47nm,0.3s,baz=260,slow=23,SNR=6.8						
GUMO	**Guam**	**8.25**	**169**	P	**Pn**	**07 13 33.9**	**+0.7**
	75nm,0.6s,baz=12,slow=14,SNR=4.0						
MJAR	**Matsushiro Arr**	**15.38**	**345**	P	**P**	**07 14 57.7**	**0.0**
	2.6nm,0.5s,baz=171,slow=11,SNR=14						
KSRS	**Korea Array**	**20.50**	**323**	P	**P**	**07 15 53.5**	**+1.1**
	1.5nm,0.7s,baz=149,slow=9.1,SNR=11 1.5nm,0.7s						
LZDM	**Lanzhou Array**	**37.14**	**301**	P	**P**	**07 18 20.0**	**+0.5**
	1.8nm,0.3s,baz=144,slow=5.3,SNR=3.9 1.8nm,0.3s						
SONM	**Songino Array**	**39.33**	**320**	P	**P**	**07 18 39.1**	**+1.8**
	0.9nm,0.6s,baz=119,slow=8.4,SNR=1.9 0.9nm,0.6s						
CMAR	**Chiang Mai Arr**	**41.60**	**274**	P	**P**	**07 18 56.0**	**0.0**
	0.8nm,0.3s,baz=80,slow=12,SNR=1.5 0.8nm,0.3s						
WRA	**Warramunga Arr**	**42.32**	**192**	P	**P**	**07 19 00.8**	**-0.9**
	1.3nm,0.7s,baz=12,slow=8.5,SNR=16 1.3nm,0.7s						
ASAR	**Alice Springs**	**46.03**	**192**	P	**P**	**07 19 29.9**	**-0.9**
	0.3nm,0.4s,baz=18,slow=13,SNR=8.8 0.3nm,0.4s						
STKA	**Stephens Creek**	**53.33**	**182**	P	**P**	**07 20 24.8**	**-0.6**
	1.7nm,0.7s,baz=340,slow=4.0,SNR=4.0 1.7nm,0.7s						
ZALV	**Zalesovo Beam**	**54.20**	**322**	P	**P**	**07 20 31.4**	**+0.1**
	1.4nm,0.6s,baz=88,slow=7.6,SNR=6.8						
ZALV				PcP	**PcP**	**07 21 30.9**	**-0.7**
	1.1nm,0.4s,baz=144,slow=3.7,SNR=4.6 1.4nm,0.6s						
MKAR	**Makanchi Array**	**54.69**	**313**	P	**P**	**07 20 35.7**	**+0.6**
	0.8nm,0.5s,baz=93,slow=9.2,SNR=11						
MKAR				PcP	**PcP**	**07 21 33.8**	**0.0**
	0.9nm,0.5s,baz=80,slow=4.9,SNR=9.7 0.8nm,0.5s						
KURBB	**Kurchatov Arra**	**57.52**	**317**	P	**P**	**07 20 55.1**	**+0.3**
	2.5nm,0.6s,baz=94,slow=7.5,SNR=32						
KURBB				PcP	**PcP**	**07 21 43.8**	**-0.8**
	0.1nm,0.5s,baz=106,slow=3.7,SNR=4.6 2.5nm,0.6s						
AAK	**Ala-Archa**	**60.16**	**308**	P	**P**	**07 21 14.0**	**+0.7**
	0.7nm,0.4s,baz=1.6,slow=9.7,SNR=1.9 0.7nm,0.4s						
ILAR	**Eielson Array**	**61.99**	**27**	P	**P**	**07 21 24.9**	**0.0**
	1.2nm,0.7s,baz=261,slow=5.2,SNR=28 1.2nm,0.7s						
BVAR	**Borovoye Array**	**62.66**	**319**	P	**P**	**07 21 30.0**	**+0.4**
	4.1nm,0.5s,baz=94,slow=6.4,SNR=18						
BVAR				PcP	**PcP**	**07 22 04.9**	**-0.4**
	0.9nm,0.6s,baz=92,slow=4.9,SNR=3.7 4.1nm,0.5s						
AKTO	**Aktyubinsk**	**70.56**	**317**	P	**P**	**07 22 18.3**	**-0.9**
	1.3nm,0.9s,baz=128,slow=5.3,SNR=3.6 1.3nm,0.9s						
SPITS	**Spitsbergen Ar**	**75.80**	**350**	P	**P**	**07 22 49.9**	**+0.6**
	2.6nm,0.7s,baz=76,slow=12,SNR=6.1 2.6nm,0.7s						
YKA	**Yellowknife Ar**	**76.41**	**28**	P	**P**	**07 22 53.5**	**+0.6**
	1.2nm,0.5s,baz=297,slow=6.2,SNR=22 1.2nm,0.5s						
ARCES	**ARCESS Array B**	**78.89**	**341**	P	**P**	**07 23 06.9**	**+0.5**
	6.2nm,0.7s,baz=70,slow=8.7,SNR=17 6.2nm,0.7s						
KBZ	**Khabaz**	**82.36**	**314**	P	**P**	**07 23 25.9**	**+0.7**
	5.3nm,0.9s,baz=86,slow=8.2,SNR=7.9 5.3nm,0.9s						
NVAR	**Mina Array Bea**	**83.10**	**51**	P	**P**	**07 23 30.5**	**+1.1**
	1.2nm,0.7s,baz=278,slow=5.6,SNR=14 1.2nm,0.7s						
FINES	**FINESS Array B**	**83.16**	**334**	P	**P**	**07 23 28.4**	**-0.5**
	1.9nm,0.4s,baz=67,slow=4.8,SNR=46 1.9nm,0.4s						
PDAR	**Pinedale Array**	**87.35**	**45**	P	**P**	**07 23 49.5**	**-0.7**
	0.1nm,0.4s,baz=264,slow=2.8,SNR=1.8 0.1nm,0.4s						
AKASG	**Malin Array Be**	**87.49**	**324**	P	**P**	**07 23 49.0**	**-1.4**
	0.5nm,0.4s,baz=55,slow=4.4,SNR=1.6 0.5nm,0.4s						
HFS	**Hagfors**	**88.70**	**337**	P	**P**	**07 23 54.5**	**-1.4**
	2.7nm,0.8s,baz=90,slow=3.6,SNR=8.3 2.7nm,0.8s						
BRTR	**Keskin Array B**	**90.33**	**313**	P	**P**	**07 24 03.3**	**-0.8**
	0.7nm,0.7s,baz=69,slow=2.3,SNR=3.0 0.7nm,0.7s						
PLCA	**Paso Flores**	**145.76**	**131**	PKPbc	**PKPbc**	**07 30 41.1**	**+0.4**
	2.8nm,0.6s,baz=250,slow=4.8,SNR=18						
LPAZ	**La Paz**	**149.91**	**85**	PKPbc	**PKPbc**	**07 30 53.7**	**+0.8**
	2.2nm,0.5s,baz=321,slow=2.4,SNR=14						

*IPEC **08** 07:18:32.9±0.2, 51°.41N×16°.30E, h1km, ML2.2/6, Error ellipse: s-maj=2.3km s-min=1.3km az=84.0*
*VIE **08** 07:18:33.4±1.3, 51°.38N×16°.36E, h0km, mb2.5/4, ml2.6/4, Error ellipse: s-maj=13.1km s-min=8.3km az=102.0 56 km NW of Wroclaw Suspected Mining induced.*
*DNK **08** 07:18:33.9±1.2, 51°.49N×16°.52E, h30km±41km, ML2.0, Presumed earthquake*
*PRU **08** 07:18:35.0, 51°.33N×16°.22E, h0km*

ISC 08 07:18:31.2±0.8, 51°.51N±0°.03×16°.23E±0°.03, h0km, n36, σ1°37/66, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.67**	**177**	*e*Pg	**Pg**	**07 18 43.9**	**0.0**
KSP				*e*Sg	**Sg**	**07 18 51.6**	**-1.0**
CHVC	**Chvalec**	**0.93**	**187**	*e*PG	**Pg**	**07 18 48.9**	**0.0**
CHVC				*e*SG	**Sg**	**07 18 59.9**	**-1.0**
	comp=Z,22nm,0.4s						
OSTC	**Ostas**	**0.95**	**181**	*e*PG	**Pg**	**07 18 49.6**	**+0.2**
OSTC				*e*SG	**Sg**	**07 19 00.7**	**-1.0**
	comp=Z,23nm,0.3s						
UPC	**Upice**	**1.01**	**188**	*e*PG	**Pg**	**07 18 50.3**	**-0.2**
UPC				*e*SG	**Sg**	**07 19 02.8**	**-0.8**
	comp=Z,79nm,0.4s						
DPC	**Dobruska-Polom**	**1.16**	**177**	*e*PG	**Pg**	**07 18 52.9**	**-0.5**
DPC				*e*SG	**Sg**	**07 19 06.5**	**-1.9**
	comp=Z,18nm,0.4s						
PIVO	**Banosovice**	**1.34**	**171**	*e*Pg	**Pg**	**07 18 56.5**	**-0.3**
	baz=353						
PIVO				*e*Sg	**Sg**	**07 19 11.7**	**-2.4**
	26nm,0.3s,baz=353						
PVCC	**Panska Ves**	**1.44**	**228**	*e*PG	**Pb**	**07 18 59.2**	**+0.4**
PVCC				*e*SG	**Sg**	**07 19 17.5**	**+0.2**
	comp=Z,100nm,0.3s						
KRLC	**Kraliky**	**1.48**	**166**	*e*PG	**Pn**	**07 18 58.8**	**-0.3**
KRLC				*e*SG	**Sg**	**07 19 16.9**	**-1.7**
	comp=Z,20nm,0.4s						
RYBC	**Ceska Rybna**	**1.71**	**184**	*e*Pn	**Pn**	**07 19 02.5**	**+0.3**
	baz=5.1						
RYBC				*e*Sg	**Sn**	**07 19 23.3**	**-1.4**
	21nm,0.2s,baz=5.1						
STEB	**Steborice**	**1.86**	**147**	*e*PG	**Pn**	**07 19 05.0**	**+0.8**
STEB				*e*SG	**Sn**	**07 19 28.1**	**-0.3**
	comp=Z,22nm,0.4s						
PRU	**Pruhonice**	**1.86**	**216**	*e*PG	**Pb**	**07 19 05.8**	**-0.2**
PRU				*e*SG	**Sn**	**07 19 29.1**	**+0.6**
	comp=Z,19nm,0.6s						
MORC	**Moravsky Berou**	**1.93**	**154**	*e*Pn	**Pn**	**07 19 04.9**	**-0.3**
	baz=335						
MORC				*e*Sg	**Sn**	**07 19 30.2**	**+0.1**
	15nm,0.5s,baz=335						
HSKC	**Hora Svate Kat**	**1.98**	**244**	*e*SG	**Sg**	**07 19 34.4**	**-0.4**
	comp=Z,13nm,0.3s						
CLL	**Collm**	**2.03**	**266**	*e*Pn	**Pn**	**07 19 08.0**	**+1.4**
CLL				*e*Pg	**Pg**	**07 19 10.0**	**-0.1**
CLL				*e*Sg	**Sb**	**07 19 36.0**	**+1.3**
	comp=Z,8.0nm,0.4s						
VRAC	**Vranov**	**2.21**	**174**	*e*Pn	**Pn**	**07 19 09.4**	**+0.2**
	baz=355						
VRAC				*e*Sg	**Sb**	**07 19 39.1**	**-0.9**
	comp=Z,13nm,0.4s,baz=355						
TREC	**Trest**	**2.27**	**192**	*e*SG	**Sb**	**07 19 41.5**	**0.0**
ZVC	**Zvikov**	**2.45**	**213**	*e*SG	**Sb**	**07 19 47.2**	**+0.5**
KRUC	**Moravsky**	**2.45**	**177**	*e*Pn	**Pn**	**07 19 12.8**	**+0.4**
	baz=358						
KRUC				*e*Sg	**Sb**	**07 19 46.6**	**-0.2**
	comp=Z,13nm,0.7s,baz=358						
OJC	**Ojcow**	**2.60**	**118**	*e*Pg	**Pg**	**07 19 21.7**	**+0.6**
OJC				*e*Sg	**Sg**	**07 19 55.8**	**+1.0**
NKC	**Novy Kostel**	**2.71**	**243**	*e*SG	**Sg**	**07 19 58.3**	**0.0**
	comp=Z,17nm,0.4s						
JAVC	**Velka Javorina**	**2.81**	**160**	*e*Pn	**Pn**	**07 19 17.6**	**+0.2**
	baz=341						
JAVC	**Velka Javorina**	**2.81**	**160**	*e*PN	**Pn**	**07 19 17.7**	**+0.3**
KHC	**Kasperske Hory**	**2.92**	**217**	*e*PG	**Pb**	**07 19 25.6**	**+1.4**
KHC				*e*SN	**Sn**	**07 19 53.0**	**-1.8**
KHC				*e*SG	**Sb**	**07 20 02.3**	**+1.8**
	comp=Z,10nm,0.6s						
CKRC	**Cesky Krumlov**	**2.96**	**205**	*e*PG	**Pb**	**07 19 25.8**	**+1.0**
CKRC				*e*SG	**Sb**	**07 20 01.8**	**+0.3**
	comp=Z,9.7nm,0.7s						
LANS	**Liptovska Anna**	**3.14**	**137**	*e*PG	**Pg**	**07 19 34.1**	**+2.7**
LANS				*e*SG	**Sg**	**07 20 11.5**	**-0.6**
MODS	**Modra-Piesok**	**3.21**	**167**	*e*SG	**Sg**	**07 20 14.2**	**0.0**
CONA	**Conrad Observa**	**3.59**	**184**	*i* Pn	**Pn**	**07 19 28.3**	**+0.2**
	comp=Z,0.2nm,0.2s						
CONA				*i* Sg	**Sb**	**07 20 22.6**	**+2.9**
	comp=Z,2.0nm,0.3s						
BSD	**Bornholm Skovb**	**3.70**	**348**	*i* P	**Pn**	**07 19 30.0**	**+0.5**
BSD				*i* S	**Sn**	**07 20 10.9**	**-2.8**
BSD				IAML		07 20 16.1	
	comp=Z,1.1nm,0.4s						
RONA	**Rosalia, Austr**	**3.81**	**179**	*i* Pn	**Pn**	**07 19 31.3**	**+0.1**
	comp=Z,0.3nm,0.3s						
RONA				*e*Sg	**Sg**	**07 20 30.3**	**-3.3**
	comp=Z,1.1nm,0.3s						
HAMD	**Hammershus, De**	**3.87**	**348**	*i* P	**Pn**	**07 19 32.7**	**+0.8**
HAMD				*i* S	**Sn**	**07 20 15.9**	**-2.1**
HAMD				IAML		07 20 21.1	
	comp=Z,1.5nm,0.3s						
MOA	**Molln**	**3.88**	**200**	*e*Pn	**Pn**	**07 19 32.2**	**+0.2**
	comp=Z,0.2nm,0.1s						
MOA				*e*Sg	**Sg**	**07 20 36.3**	**+0.6**
	comp=Z,1.2nm,0.2s						
ARSA	**Arzberg**	**4.29**	**186**	*i* Pn	**Pn**	**07 19 38.1**	**+0.5**
	comp=Z,0.7nm,0.4s						
ARSA				*e*Sg	**Sg**	**07 20 45.8**	**-3.0**
	comp=Z,1.6nm,0.5s						
LUNU	**Lund**	**4.45**	**339**	*i* P	**Pn**	**07 19 41.9**	**+2.0**
LUNU				*i* S	**Sn**	**07 20 30.7**	**-1.6**
BLEU	**Blekinge**	**4.81**	**357**	*i* P	**Pn**	**07 19 46.0**	**+1.3**
BLEU				*i* S	**Sn**	**07 20 37.6**	**-3.5**
BJUU	**Bjuv**	**4.95**	**339**	*i* P	**Pn**	**07 19 47.2**	**+0.5**
DEL	**Delary**	**5.16**	**345**	*i* P	**Pn**	**07 19 50.4**	**+0.8**
DEL				*i* S	**Sn**	**07 20 46.6**	**-3.2**

TRN 08 07:52:28.0, 15°.81N×61°.32W, h174km, MD3.5, Near South of Dominica., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DWS	**Wesley**	**0.24**	**179**	*e*P	Pn	07 52 52.0	+0.7
DWS				*e*S	Sn	07 53 09.0	-0.2
TBG	**Guadaloupe-3**	**0.32**	**277**	*e*P	Pn	07 52 51.8	+0.4
TBG				*e*S	Sn	07 53 12.0	+2.6
DSLB	**Salisbury**	**0.39**	**195**	*e*P	Pn	07 52 52.3	+0.5
MMLZ	**Guadeloupe Bro**	**0.41**	**304**	*e*P	Pn	07 52 52.7	+1.0
MMLZ				*e*S	Sn	07 53 11.0	+1.1
DSDZ	**La Diserade, G**	**0.55**	**26**	*e*P	Pn	07 52 54.5	+2.2
DSDZ				*e*S	Sn	07 53 11.8	+0.7
DHSZ	**Broadband at M**	**0.63**	**317**	*e*P	Pn	07 52 53.9	+1.2
DHSZ				*e*S	Sn	07 53 11.8	+0.1
SVN	**Savane Anatole**	**0.98**	**171**	*e*P	Pn	07 52 55.8	+0.8
BIM	**Bigot**	**1.31**	**169**	*e*P	Pn	07 52 58.7	+0.9
BIM				*e*S	Sn	07 53 21.9	+1.1
SLBI	**Saint Lucia, B**	**1.81**	**169**	*e*P	Pn	07 53 03.3	+0.7
SLBI				*e*S	Sn	07 53 29.6	+0.1
ANWB	**Willy Bob**	**1.90**	**346**	*e*P	Pn	07 53 05.2	+1.7
ANWB				*e*S	Sn	07 53 30.6	-0.5
SKI	**Saint Kitts**	**2.03**	**318**	*e*P	Pn	07 53 06.0	+1.0
SKI				*e*S	Sn	07 53 34.2	+0.4
SVB	**Belmont**	**2.53**	**179**	*e*P	Pn	07 53 11.8	+1.1

*OSPL **08** 07:52:47.8±0.6, 17°.84N×66°.82W, h2km±999km, ML2.1, Presumed earthquake*
*NEIC **08** 07:52:48.4±1.0, 17°.96N±0°.03×66°.813W±0°.004, h10km±1km, ML2.6/35, Md3.1/3(RSPR), Error ellipse: s-maj=5.1km s-min=2.4km az=178.0*
*SDD **08** 07:52:48.0±0.8, 17°.92N×66°.83W, h19km±10km, MD3.1, ML2.4, MW2.6, Presumed earthquake*

ISC 08 07:52:48.0±1.1, 17°.94N±0°.05×66°.81W±0°.02, h16km±6km, n28, σ0°71/46, 7C-5D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.07**	**297**		**Pg**	**07 52 50.6**	**-0.4**
GBPR					**Sg**	**07 52 52.6**	**-0.4**
OBIP	**Obispado Ponce**	**0.22**	**63**		**Pg**	**07 52 52.7**	**-0.3**
OBIP	**Obispado Ponce**	**0.22**	**63**	*i* P	**Pg**	**07 52 52.7**	**-0.3**
OBIP				*e*S	**Sg**	**07 52 56.7**	**+0.3**
OBIP				IAML		07 52 59.5	
	comp=Z,174nm,0.2s						
MLPR	**Magueyes Islan**	**0.22**	**277**		**Pg**	**07 52 52.7**	**-0.3**
MLPR				Sg	**Sg**	**07 52 56.1**	**-0.3**
MLPR				IAML		07 52 56.8	
	comp=Z,1μm,0.6s						
MLPR				IAML		07 52 57.0	
	comp=Z,953nm,0.3s						
CELP	**Cerrillos**	**0.26**	**59**		**Pg**	**07 52 53.5**	**-0.1**
CELP	**Cerrillos**	**0.26**	**59**	⇓*e*Pg	**Pg**	**07 52 53.5**	**-0.1**
CELP				⇓*e*Sg	**Sg**	**07 52 58.3**	**+0.9**
CELP				IAML		07 52 59.0	
	comp=N,188nm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.29**	**283**	Pg	**Pg**	**07 52 53.8**	**-0.4**
CRPR				Sg	**Sg**	**07 52 58.0**	**-0.4**
CRPR				I

*IDC **08** 08:20:21.9±1.4,2˚.36N×126˚.87E,h0^{km},mb3.7/6, mbtmp3.7/6,MS2.9/2,Error ellipse: s-maj=110.4km s-min=18.2km az=68.0*

*DJA **08** 08:20:27.4±0.3,2˚.N±4˚×12˚.7E±˚,h10^{km},M3.6/8,MLv3.6/8*

ISC 08 08:20:28.6±1.2,2˚.2N±0˚.2×126˚.67E±0˚.08,h47^{km},n9, σ1°15/8,mb3.8/5,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**1.18**	**109**	P	**Pn**	**08 20 49.8**	**+1.0**
MNI	**Manado**	**1.98**	**247**	P	**Pn**	**08 21 00.6**	**+0.9**
SIJI	**Sorong**	**5.53**	**124**	LR	LR	08 23 18.7	
	comp=Z,38nm,20.0s,baz=18,slow=32						
FITZ	**Fitzroy Crossi**	**20.21**	**183**	P	**P**	**08 25 00.1**	**+0.4**
	1.5nm,0.8s,baz=359,slow=9.0,SNR=1.3						
	1.5nm,0.8s						
WRA	**Warramunga Arr**	**23.27**	**161**	P	**P**	**08 25 32.8**	**+0.4**
	1.7nm,0.5s,baz=340,slow=10,SNR=19						
	1.7nm,0.5s						
ASAR	**Alice Springs**	**26.67**	**165**	P	**P**	**08 26 04.3**	**+0.9**
	0.2nm,0.3s,baz=346,slow=9.0,SNR=10						
	0.2nm,0.3s						
STKA	**Stephens Creek**	**36.75**	**159**	P	**P**	**08 27 29.8**	**-1.9**
	1.3nm,0.7s,baz=315,slow=11,SNR=3.3						
	1.3nm,0.7s						
MKAR	**Makanchi Array**	**58.76**	**326**	P	**P**	**08 30 21.7**	**-0.3**
	0.3nm,0.4s,baz=130,slow=7.3,SNR=10						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**62.97**	**328**	P	**P**	**08 30 50.5**	**0.0**
	0.5nm,0.5s,baz=127,slow=5.3,SNR=6.3						
KURBB				LR	LR	08 59 11.3	
	comp=Z,31nm,19.9s,baz=178,slow=37						
	0.5nm,0.5s						

*IDC **08** 08:24:55.8±6.5,52˚.36N×171˚.83W,h0^{km},mb3.6/3, mbtmp3.4/5,ML2.8/2,MS3.1/1,Error ellipse: s-maj=164.3km s-min=31.4km az=168.0*

*NEIC **08** 08:24:58.7±0.9,51˚.8N±0˚.1×171˚.57W±0˚.06,h35^{km}±2^{km}, ML3.5/14,ML3.0(AEIC),Error ellipse: s-maj=19.9km s-min=5.7km az=170.0*

*AEIC **08** 08:24:59.3±1.3,52˚.0N±0˚.2×171˚.57W±0˚.06,h20^{km}±7^{km}, Error ellipse: s-maj=22.3km s-min=3.8km az=169.0*

ISC 08 08:24:58.4±2.6,51˚.8N±0˚.3×171˚.55W±0˚.07,h42^{km}±18^{km}, n34,σ0°78/34,mb3.7/3,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLES	**Cleveland East**	**1.44**	**44**	Pn	**Pn**	**08 25 22.1**	**+0.2**
CLES				Sn	**Sn**	**08 25 41.2**	**+1.5**
CLES				IAML		08 25 46.8	
	comp=N,864nm,0.7s						
CLES				IAML		08 25 47.1	
	comp=E,782nm,0.3s						
CLCO	**Concord Point,**	**1.49**	**48**		**Pn**	**08 25 23.3**	**+0.7**
CLCO					**Sn**	**08 25 40.7**	**-0.2**
KOSE	**Korovin Southe**	**1.63**	**290**		**Pn**	**08 25 24.7**	**+0.1**
KOSE					**Sn**	**08 25 44.4**	**-0.1**
KOFP	**Korovin Flat P**	**1.64**	**288**		**Pn**	**08 25 24.4**	**-0.3**
KOFP					**Sn**	**08 25 44.3**	**-0.3**
KONE	**Korovin Northe**	**1.69**	**291**		**Pn**	**08 25 25.6**	**+0.3**
KONE					**Sn**	**08 25 46.2**	**+0.5**
KOKV	**Korovin Volcan**	**1.70**	**290**		**Pn**	**08 25 25.7**	**+0.1**
KOKV					**Sn**	**08 25 46.4**	**+0.2**
KOKL	**Mount Kliuchef**	**1.71**	**289**		**Pn**	**08 25 26.1**	**+0.3**
NIKH	**Nikolski High**	**2.02**	**54**		**Pn**	**08 25 30.1**	**+0.2**
NIKH				Sn	**Sn**	**08 25 53.1**	**-0.9**
NIKH				IAML		08 26 02.9	
	comp=N,361nm,0.5s						
OKSP	**Okmok Steeple**	**2.46**	**53**		**Pn**	**08 25 36.2**	**+0.2**
GSMY	**Great Sitkin M**	**2.80**	**277**		**Pn**	**08 25 40.2**	**-0.4**
GSTR	**Great Sitkin T**	**2.80**	**278**	Pn	**Pn**	**08 25 40.0**	**-0.6**
GSTD	**Great Sitkin T**	**2.85**	**277**		**Pn**	**08 25 41.6**	**+0.2**
ADAG	**Mount Adagdak**	**3.13**	**275**		**Pn**	**08 25 46.3**	**+1.2**
ADK	**Adak**	**3.18**	**273**	Pn	**Pn**	**08 25 43.9**	**-1.9**
ADK				IAML		08 26 34.2	
	comp=N,124nm,0.4s						
ADK				IAML		08 26 34.8	
	comp=N,105nm,0.8s						
KIWB	**Kanaga Island**	**3.47**	**273**	Pn	**Pn**	**08 25 50.1**	**+0.3**
KIWB				IAML		08 26 40.5	
	comp=N,81nm,1.0s						
KIWB				IAML		08 26 47.5	
	comp=E,98nm,1.0s						
UNV	**Unalaska Valle**	**3.68**	**54**	Pn	**Pn**	**08 25 52.8**	**+0.1**
LVA	**Lava Point**	**4.08**	**53**	Pn	**Pn**	**08 25 58.3**	**+0.1**
LVA				IAML		08 28 15.0	
	comp=E,92nm,1.1s						
AMKA	**Amchitka**	**5.72**	**269**	Pn	**Pn**	**08 26 20.6**	**-0.1**
FALS	**False Pass**	**5.75**	**55**	Pn	**Pn**	**08 26 21.6**	**+0.6**
SDPT	**Sand Point**	**7.49**	**57**	Pn	**Pn**	**08 26 45.1**	**+0.2**
M11K	**Mekoryuk**	**9.10**	**17**	Pn	**Pn**	**08 27 05.7**	**-1.2**
P16K	**Nushagak River**	**10.56**	**41**	Pn	**Pn**	**08 27 26.7**	**-0.2**
ILAR	**Eielson Array**	**18.18**	**35**	P	**Pn**	**08 29 05.5**	**-1.7**
	baz=234,slow=12,SNR=4.8						
	comp=E,0.2nm,0.6s						
PETK	**Petropavlovsk-**	**18.71**	**286**	P	**P**	**08 29 13.8**	**+0.7**
	comp=E,0.1nm,0.3s,baz=71,slow=12,SNR=1.4						
	comp=E,0.9nm,0.6s						
YKA	**Yellowknife Ar**	**31.62**	**48**	P	**P**	**08 31 18.3**	**+1.4**
	comp=E,0.1nm,0.5s,baz=278,slow=8.3,SNR=2.8						
	comp=E,0.1nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**36.19**	**216**	T	T	09 10 30.9	
	baz=21,slow=76,SNR=6.5						
H11N3	**WAKE ISLAND Hy**	**36.20**	**216**	T	T	09 10 28.6	
	baz=21,slow=76,SNR=6.5						
H11N1	**WAKE ISLAND Hy**	**36.21**	**216**	T	T	09 10 33.6	
	baz=21,slow=76,SNR=5.6						
H11S1	**WAKE ISLAND Hy**	**37.38**	**215**	T	T	09 11 59.5	
	baz=22,slow=76,SNR=8.0						
H11S2	**WAKE ISLAND Hy**	**37.40**	**215**	T	T	09 12 02.0	
	baz=22,slow=76,SNR=7.7						
H11S3	**WAKE ISLAND Hy**	**37.40**	**215**	T	T	09 12 00.9	
	baz=22,slow=76,SNR=6.0						
ARCES	**ARCESS Array B**	**58.33**	**353**	LR	LR	09 01 16.9	
	comp=E,16nm,18.1s,baz=190,slow=38						
MKAR	**Makanchi Array**	**63.20**	**312**	P	**P**	**08 35 21.0**	**-0.9**
	comp=E,0.2nm,0.3s,baz=46,slow=6.2,SNR=4.3						
	comp=E,0.2nm,0.3s						
BVAR	**Borovoye Array**	**63.36**	**323**	P	**P**	**08 35 22.9**	**0.0**
	comp=E,1.6nm,0.5s,baz=40,slow=5.7,SNR=7.8						
	comp=E,1.6nm,0.5s						

*SJA **08** 08:50:54.9±0.7,21˚.76S×67˚.22W,h211^{km}±4^{km},ML3.8, MW3.6*

*NEIC **08** 08:50:56.6±2.1,21˚.81S±0˚.06×67˚.3W±0˚.1,h209^{km}±7^{km}, mb4.1/4,ML3.9(GUC),Error ellipse: s-maj=14.1km s-min=8.5km az=79.0*

*IDC **08** 08:50:56.5±2.1,21˚.81S×67˚.07W,h171^{km}±21^{km},mb3.0/2, mbtmp3.5/6,Error ellipse: s-maj=28.6km s-min=17.8km az=65.0*

*GUC **08** 08:50:57.4±0.7,21˚.83S×67˚.42W,h218^{km}±5^{km},ML3.9*

*SCB **08** 08:50:57.7±1.2,21˚.82S×67˚.27W,h176^{km}±9^{km},MB4.8, ML3.9/4,Error ellipse: s-maj=4.5km s-min=2.7km az=0.0*

ISC 08 08:50:56.0±0.7,21˚.82S±0˚.04×67˚.28W±0˚.04,h203^{km}±7^{km}, n101,σ1°11/135,1C,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**1.40**	**216**		**Pn**	**08 51 30.5**	**+1.0**
AF01	**San Pedro de A**	**1.40**	**216**	*e*P	Pn	08 51 47.5	+18
MOCB	**Mochara**	**1.63**	**70**	P	**Pn**	**08 51 31.8**	**+0.1**
MOCB				S	**S**	**08 51 57.0**	**-1.8**
MOCB				IAML		08 51 58.4	
	701nm,0.3s						
YJA	**Yavi**	**1.68**	**103**	*e*P	**Pn**	**08 51 32.6**	**+0.5**
YJA	**Yavi**	**1.68**	**103**	*e*P	**Pn**	**08 51 30.2**	**-1.9**
YJA				*e*S	**S**	**08 51 59.6**	**+0.1**
YJA	**Yavi**	**1.68**	**103**	P	**Pn**	**08 51 32.2**	**+0.1**
PB09	**IPOC Station P**	**1.82**	**270**		**Pn**	**08 51 34.2**	**+1.0**
PB09	**IPOC Station P**	**1.82**	**270**	*i* P	**Pn**	**08 51 34.2**	**+1.0**
PB09				IAML		08 52 04.0	
PB09	**IPOC Station P**	**1.82**	**270**	*e*P	**Pn**	**08 51 34.1**	**+0.9**
PB09				*e*S	**S**	**08 52 02.4**	**+0.9**
PB09	**IPOC Station P**	**1.82**	**270**	P	**Pn**	**08 51 34.2**	**+1.0**
PB01	**IPOC Station P**	**2.20**	**290**		**Pn**	**08 51 37.4**	**+0.5**
PB01				Sn	**S**	**08 52 07.3**	**-0.8**
PB01	**IPOC Station P**	**2.20**	**290**	*i* P	**Pn**	**08 51 37.4**	**+0.5**
PB01				*e*S	**S**	**08 52 08.1**	**0.0**
PB01				IAML		08 52 08.9	
	comp=N,661nm,0.2s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**2.20**	**290**	*e*P	**Pn**	**08 51 37.5**	**+0.5**
PB01				*e*S	**S**	**08 52 08.1**	**0.0**
PB01				IAML		08 52 09.7	
	comp=Z,300nm,0.2s						
PB01	**IPOC Station P**	**2.20**	**290**	P	**Pn**	**08 51 37.6**	**+0.7**
HJA	**Humahuaca**	**2.21**	**129**	*e*P	**Pn**	**08 51 38.7**	**+1.4**
HJA				*e*S	**S**	**08 52 10.3**	**+1.2**
PB06	**IPOC Station P**	**2.30**	**247**		**Pn**	**08 51 38.6**	**+0.6**
PB06				Sn	**S**	**08 52 10.3**	**+0.1**
PB06	**IPOC Station P**	**2.30**	**247**	*i* P	**Pn**	**08 51 38.7**	**+0.6**
PB06				IAML		08 52 12.1	
	comp=E,386nm,0.3s						
PB06	**IPOC Station P**	**2.30**	**247**	*e*P	**Pn**	**08 51 38.7**	**+0.6**
PB06				*e*S	**S**	**08 52 11.5**	**+1.3**
PB06				IAML		08 52 12.3	
	comp=Z,113nm,0.3s						
PB06	**IPOC Station P**	**2.30**	**247**	P	**Pn**	**08 51 38.7**	**+0.6**
PB03	**IPOC Station P**	**2.31**	**264**		**Pn**	**08 51 38.3**	**+0.2**
PB03				Sn	**S**	**08 52 09.7**	**-0.6**
PB03	**IPOC Station P**	**2.31**	**264**	*i* P	**Pn**	**08 51 39.0**	**+0.8**
PB03				*e*S	**S**	**08 52 09.8**	**-0.5**
PB03				IAML		08 52 10.4	
	comp=N,662nm,0.1s						
PB03	**IPOC Station P**	**2.31**	**264**	*e*P	**Pn**	**08 51 38.6**	**+0.5**
PB03				*e*S	**S**	**08 52 10.1**	**-0.2**
PB03				IAML		08 52 10.3	
	comp=Z,278nm,0.2s						
AOVT	**TarijaAcel**	**2.41**	**84**	P	**Pn**	**08 51 39.8**	**+0.5**
PB08	**IPOC Station P**	**2.42**	**313**		**Pn**	**08 51 40.6**	**+1.0**
PB08	**IPOC Station P**	**2.42**	**313**	*i* P	**Pn**	**08 51 40.9**	**+1.3**
PB08				*e*S	**S**	**08 52 14.0**	**+1.1**
PB08	**IPOC Station P**	**2.42**	**313**	*e*P	**Pn**	**08 51 41.0**	**+1.3**
PB08				*e*S	**S**	**08 52 14.7**	**+1.8**
PB08				IAML		08 52 16.1	
	comp=Z,137nm,0.1s						
PB08	**IPOC Station P**	**2.42**	**313**	P	**Pn**	**08 51 40.7**	**+1.0**
PB08				S	**S**	**08 52 12.3**	**-0.6**
PB08				IAML		08 52 16.6	
	comp=Z,175nm,0.2s						
PB07	**IPOC Station P**	**2.42**	**272**		**Pn**	**08 51 39.9**	**+0.5**
PB07	**IPOC Station P**	**2.42**	**272**	*i* P	**Pn**	**08 51 40.2**	**+0.8**
PB07				*e*S	**S**	**08 52 12.0**	**-0.6**
PB07				IAML		08 52 12.7	
	comp=E,434nm,0.4s						
PB07	**IPOC Station P**	**2.42**	**272**	*e*P	**Pn**	**08 51 40.0**	**+0.5**
PB07				*e*S	**S**	**08 52 12.4**	**-0.2**
PB07				IAML		08 52 13.2	
	comp=Z,473nm,0.4s						
PB02	**IPOC Station P**	**2.48**	**281**		**Pn**	**08 51 40.3**	**+0.3**
PB02	**IPOC Station P**	**2.48**	**281**	*i* P	**Pn**	**08 51 40.5**	**+0.5**
PB02				*e*S	**S**	**08 52 12.8**	**-0.9**
PB02	**IPOC Station P**	**2.48**	**281**	*e*P	**Pn**	**08 51 40.5**	**+0.5**
PB02				*e*S	**S**	**08 52 13.4**	**-0.3**
PB02				IAML		08 52 14.2	
	comp=Z,756nm,0.2s						
PB02	**IPOC Station P**	**2.48**	**281**	P	**Pn**	**08 51 40.9**	**+0.9**
PB02				S	**S**	**08 52 12.9**	**-0.8**
PB02				IAML		08 52 13.2	
	comp=Z,840nm,0.3s						
GO01	**Chusmiza**	**2.79**	**320**		**Pn**	**08 51 44.8**	**+0.9**
GO01	**Chusmiza**	**2.79**	**320**	*i* P	**Pn**	**08 51 44.8**	**+0.9**
GO01	**Chusmiza**	**2.79**	**320**	*e*P	**Pn**	**08 51 45.1**	**+1.2**
GO01				*e*S	**S**	**08 52 22.9**	**+2.3**
GO01				IAML		08 52 26.1	
	comp=Z,126nm,0.5s						
GO01	**Chusmiza**	**2.79**	**320**	P	**Pn**	**08 51 44.9**	**+1.0**
PATCX	**Punta Patache**	**2.86**	**290**		**Pn**	**08 51 44.7**	**+0.4**
PATCX	**Punta Patache**	**2.86**	**290**	*i* P	**Pn**	**08 51 44.6**	**+0.4**
PATCX				*e*S	**S**	**08 52 20.3**	**-0.9**
PATCX				IAML		08 52 24.2	
	comp=N,501nm,0.3s						
PATCX	**Punta Patache**	**2.86**	**290**	*e*P	**Pn**	**08 51 44.1**	**-0.1**
PATCX				IAML		08 52 24.9	
	comp=Z,235nm,0.3s						
PB05	**IPOC Station P**	**2.90**	**249**		**Pn**	**08 51 45.2**	**+0.5**
PB05	**IPOC Station P**	**2.90**	**249**	*i* P	**Pn**	**08 51 45.5**	**+0.8**
PB05				*e*S	**S**	**08 52 20.9**	**-1.2**
PB05				IAML		08 52 21.4	
	comp=N,184nm,0.6s						
PB05	**IPOC Station P**	**2.90**	**249**	*e*P	**Pn**	**08 51 45.5**	**+0.8**
PB05				*e*S	**S**	**08 52 20.9**	**-1.2**
PB05				IAML		08 52 23.4	
	comp=Z,77nm,0.2s						
PB11	**IPOC Station P**	**3.02**	**312**		**Pn**	**08 51 46.3**	**+0.1**
PB11	**IPOC Station P**	**3.02**	**312**	*i* P	**Pn**	**08 51 46.4**	**+0.1**
PB11				*e*S	**S**	**08 52 23.9**	**-0.9**
PB11	**IPOC Station P**	**3.02**	**312**	*e*P	**Pn**	**08 51 46.3**	**+0.1**
PB11				*e*S	**S**	**08 52 24.1**	**-0.8**
PB11				IAML		08 52 25.4	
	comp=Z,198nm,0.3s						
PB11	**IPOC Station P**	**3.02**	**312**	P	**Pn**	**08 51 46.6**	**+0.3**
PB11				S	**S**	**08 52 24.1**	**-0.8**
PB11				IAML		08 52 25.6	
	comp=Z,334nm,0.2s						
TA02	**Huaiquique**	**3.08**	**300**	*e*P	**Pn**	**08 51 46.2**	**-0.5**
TA02				*e*S	**S**	**08 52 25.1**	**-0.6**
TA02				IAML		08 52 27.4	
	comp=Z,246nm,0.1s						
SOEO	**Opoqueri**	**3.29**	**350**	P	**Pn**	**08 51 50.9**	**+1.1**
SLA	**San Lorenzo**	**3.32**	**151**	*e*P	**Pn**	**08 51 51.7**	**+2.0**
SLA				*e*S	**S**	**08 52 33.2**	**+1.9**
SLA	**San Lorenzo**	**3.32**	**151**	*e*P	**Pn**	**08 51 51.8**	**+2.0**
SLA				*e*S	**S**	**08 52 29.9**	**-1.4**
SOET	**ToroToro**	**3.93**	**21**	P	**Pn**	**08 51 58.4**	**+0.9**
PB14	**IPOC Station P**	**4.01**	**225**		**Pn**	**08 51 59.0**	**+0.8**
PB14	**IPOC Station P**	**4.01**	**225**	*e*P	**Pn**	**08 51 59.1**	**+0.8**
PB14				*e*S	**S**	**08 52 45.4**	**-1.2**
PB14				IAML		08 52 48.3	
	comp=Z,82nm,0.3s						
PB14	**IPOC Station P**	**4.01**	**225**	P	**Pn**	**08 51 59.5**	**+1.2**
PB16	**IPOC Station P**	**4.05**	**328**		**Pn**	**08 52 00.7**	**+1.6**
PB16	**IPOC Station P**	**4.05**	**328**	*i* P	**Pn**	**08 52 00.4**	**+1.3**
PB16				*e*S	**S**	**08 52 48.0**	**-0.1**
PB16	**IPOC Station P**	**4.05**	**328**	*e*P	**Pn**	**08 52 00.4**	**+1.3**
PB16				*e*S	**S**	**08 52 45.0**	**-3.0**
PB16				IAML		08 52 50.6	
	comp=Z,67nm,0.8s						
PB16	**IPOC Station P**	**4.05**	**328**	P	**Pn**	**08 52 00.6**	**+1.5**
AOEA	**Aiquile**	**4.10**	**28**	P	**Pn**	**08 52 00.0**	**+0.5**
PB12	**IPOC Station P**	**4.28**	**318**		**Pn**	**08 52 00.6**	**-1.0**
PB12	**IPOC Station P**	**4.28**	**318**	*i* P	**Pn**	**08 52 00.3**	**-1.2**
PB12	**IPOC Station P**	**4.28**	**318**	*e*S	**S**	**08 52 50.5**	**-2.1**
PB12				IAML		08 52 52.5	
	comp=Z,72nm,0.2s						
AP01	**Chacalluta**	**4.48**	**319**	Pn	**Pn**	**08 52 03.8**	**-0.1**
PB18	**Visviri**	**4.69**	**333**		**Pn**	**08 52 07.3**	**+0.2**
BBOJ	**La Paz, Jacaqu**	**4.89**	**350**	P	**Pn**	**08 52 11.7**	**+2.0**
SOEJ	**Jacaque**	**4.89**	**350**	P	**Pn**	**08 52 11.4**	**+1.7**
BBOE	**La Paz, Chanca**	**5.02**	**352**	P	**Pn**	**08 52 12.9**	**+1.5**
AC01	**Pan de Azucar**	**5.27**	**214**	Pn	**Pn**	**08 52 13.6**	**-0.3**
AC01	**Pan de Azucar**	**5.27**	**214**	*e*P	**Pn**	**08 52 13.8**	**-0.2**
AC01				*e*S	**S**	**08 53 13.2**	**-1.9**
AC01				IAML		08 53 39.2	
	comp=Z,31nm,2.4s						
AC02	**Maricunga**	**5.27**	**198**		**Pn**	**08 52 15.5**	**+1.1**
AC02	**Maricunga**	**5.27**	**198**	*e*P	**Pn**	**08 52 15.5**	**+1.1**
AC02				*e*S	**S**	**08 53 14.0**	**-1.9**
BBOD	**La Paz, Gloria**	**5.30**	**346**	P	**Pn**	**08 52 16.7**	**+1.8**
LPAZ	**La Paz**	**5.56**	**352**	P	**Pn**	**08 52 19.4**	**+1.0**
LPAZ	comp=Z,1.9nm,0.3s,baz=129,slow=1.7,SNR=28			S	**S**	**08 53 21.8**	**-1.0**
	comp=Z,5.7nm,0.8s,baz=355,slow=13,SNR=8.2						
LPAZ	**La Paz**	**5.56**	**352**		**Pn**	**08 52 19.9**	**+1.6**
LPAZ	**La Paz**	**5.56**	**352**	P	**Pn**	**08 52 19.9**	**+1.6**
BBOB	**La Paz, Bander**	**5.71**	**352**	P	**Pn**	**08 52 21.9**	**+1.8**
AC06	**Mina Casimiro**	**6.18**	**206**	Pn	**Pn**	**08 52 25.1**	**-0.6**
GO03	**Copiapo**	**6.35**	**204**	Pn	**Pn**	**08 52 27.0**	**-0.9**
AC04	**Llanos de Chal**	**7.23**	**208**	Pn	**Pn**	**08 52 37.0**	**-2.2**
AC05	**El Transito**	**7.49**	**201**	Pn	**Pn**	**08 52 42.4**	**-0.4**
LCO	**Las Campanas**	**7.80**	**203**	Pn	**Pn**	**08 52 45.4**	**-1.5**
SIV	**San Ignacio**	**8.25**	**46**	P	**Pn**	**08 52 51.7**	**-1.0**
CO03	**El Pedregal**	**9.49**	**198**	Pn	**Pn**	**08 53 08.2**	**-0.5**
PTLB	**Pontes e Lacer**	**9.98**	**52**	Pn	**Pn**	**08 53 15.5**	**+0.4**
CPUP	**Villa Florida**	**10.14**	**118**	P	**Pn**	**08 53 16.4**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=301,slow=10,SNR=3.1						
CPUP	**Villa Florida**	**10.14**	**118**	Pn	**Pn**	**08 53 16.5**	**-0.5**
VILB	**Vilhena**	**11.11**	**39**		**Pn**	**08 53 30.7**	**+1.2**
MT01	**Popeta**	**12.50**	**195**	Pn	**Pn**	**08 53 47.9**	**+0.8**
ITAB	**Concordia**	**14.80**	**114**	Pn	**Pn**	**08 54 13.8**	**-1.9**
PLTB	**Pedras Altas**	**15.71**	**132**	P	**Pn**	**08 54 27.2**	**+0.4**
PLTB				IAmb	IAmb	08 54 53.7	
	comp=Z,8.7nm,1.2s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRQA	**Tornquist**	**16.82**	**165**	P	**P**	**08 54 37.1**	**-1.6**
GO06	**Curarrehue**	**18.07**	**190**	P	**P**	**08 54 51.8**	**-0.6**
GO06				IAmb	IAmb	08 54 58.3	
	comp=Z,7.7nm,0.9s						
PLCA	**Paso Flores**	**19.06**	**188**	P	**Pn**	**08 55 05.6**	**-0.8**
	comp=Z,1.4nm,0.8s,baz=29,slow=6.2,SNR=4.7						
BDFB	**Brasilia**	**19.25**	**75**	P	**Pn**	**08 55 07.5**	**-1.3**
	comp=Z,1.2nm,0.5s,baz=230,slow=7.9,SNR=3.9						
DR12	**Loma Pena Alta**	**40.41**	**357**	P	**P**	**08 58 14.6**	**-0.1**
PMSA	**Palmer Station**	**42.99**	**178**	P	**P**	**08 58 36.8**	**+1.8**
TXAR	**Lajitas Array**	**61.77**	**324**	P	P	09 00 59.3	+5.9
	comp=Z,0.2nm,0.8s,baz=128,slow=5.9,SNR=1.5						
	comp=Z,0.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**76.04**	**70**	P	**P**	**09 02 23.3**	**+1.8**
	comp=Z,0.5nm,0.4s,baz=256,slow=4.4,SNR=5.6						
	comp=Z,0.5nm,0.4s						
MKAR	**Makanchi Array**	**144.98**	**37**	PKP	**PKiKP**	**09 10 12.0**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=327,slow=4.1,SNR=4.8						

CATAC 08 09:03:51.1±0.3,12˚N±2˚×87˚W±˚,h52^{km}±2^{km},M3.6/34, MLv3.6/34,Error ellipse: s-maj=5.9km s-min=2.8km az=38.8,confirmed,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALEN	**Leon**	**0.33**	**30**	P	Pn	09 04 01.7	+1.0
ALEN				S	Sn	09 04 10.5	+2.9
COPN	**Copaltepe**	**0.44**	**88**	P	Pn	09 04 02.8	+1.1
QUEN	**Al S del Volca**	**0.46**	**24**	P	Pn	09 04 03.4	+1.3
QUEN				S	Sn	09 04 13.2	+3.2
CNGA	**Al SSO del Vol**	**0.46**	**45**	P	Pn	09 04 03.3	+1.1
CNGN	**Cerro Negro**	**0.47**	**45**	P	Pn	09 04 03.2	+1.0
LEVN	**Ruinas Leon Vi**	**0.48**	**61**	P	Pn	09 04 03.0	+0.8
LEVN				S	Sn	09 04 12.9	+2.8
TELN	**Telica**	**0.48**	**25**	P	Pn	09 04 02.7	+0.4
TELN				S	Sn	09 04 13.3	+2.9
HERN	**Volcan Telica**	**0.48**	**25**	P	Pn	09 04 03.2	+0.8
HERN				S	Sn	09 04 13.8	+3.3
CRIN	**San Cristobal**	**0.53**	**359**	P	Pn	09 04 04.1	+1.2
CRIN				S	Sn	09 04 14.4	+3.0
AMTN	**Mateare**	**0.60**	**83**	P	Pn	09 04 04.9	+1.2
AMTN				S	Sn	09 04 15.8	+3.1
MOM2	**El Cardon**	**0.61**	**64**	P	Pn	09 04 04.6	+0.8
MOM2				S	Sn	09 04 15.6	+2.7
APQ3	**Volcan Apoyequ**	**0.67**	**81**	P	Pn	09 04 05.2	+0.7
APQ3				S	Sn	09 04 16.7	+2.5
APYN	**Apoyeque**	**0.68**	**84**	P	Pn	09 04 05.4	+0.7
APYN				S	Sn	09 04 16.9	+2.4
APQ2	**Apoyeque**	**0.70**	**87**	P	Pn	09 04 05.8	+0.9
APQ2				S	Sn	09 04 17.6	+2.6
ABCN	**Banco Central**	**0.72**	**94**	P	Pn	09 04 05.9	+0.7
ABCN				S	Sn	09 04 17.6	+2.2
ALLN	**Telcor Managua**	**0.75**	**91**	P	Pn	09 04 06.4	+0.9
ALLN				S	Sn	09 04 18.4	+2.3
TISN	**Laguna Tiscapa**	**0.76**	**92**	P	Pn	09 04 05.3	-0.4
UNAN	**Cigeo UNAN**	**0.76**	**94**	P	Pn	09 04 06.4	+0.7
UNAN				S	Sn	09 04 18.1	+1.9
MAS3	**Al N del Volca**	**0.86**	**99**	P	Pn	09 04 07.6	+0.6
MAS3				S	Sn	09 04 20.2	+1.6
SABN	**Sabanita**	**0.89**	**104**	P	Pn	09 04 07.9	+0.5
NANN	**Nandasmo**	**0.93**	**104**	P	Pn	09 04 09.5	+1.6
NANN				S	Sn	09 04 23.2	+2.9
MATN	**Matagalpa**	**1.33**	**55**	P	Pn	09 04 12.5	-0.8
MATN				S	Sn	09 04 29.7	-0.3
CNCH	**Conchagua**	**1.35**	**325**	P	Pn	09 04 13.6	-0.1
CNCH				S	Sn	09 04 31.3	+0.7
BOAB	**BOACO BROADBAN**	**1.37**	**78**	P	Pn	09 04 13.6	-0.3
BOAB				S	Sn	09 04 31.3	+0.3
LCND	**La Caada**	**1.41**	**324**	P	Pn	09 04 14.0	-0.3
CONN	**Concepcion**	**1.51**	**113**	P	Pn	09 04 15.4	-0.4

BBOO					IAmb	IAmb	09 54 08.6		
	comp=Z,20nm,1.1s								
AS31	**Alice Springs**	**45.66**	**259**		**P**	**P**	**09 54 10.8**	**-1.7**	
ASAR	**Alice Springs**	**45.66**	**259**	P	**P**		**09 54 10.7**	**-1.8**	
	comp=Z,4.7nm,0.6s,baz=99,slow=7.1,SNR=90								
ASAR				PcP	**PcP**		**09 55 47.9**	**-1.3**	
	comp=Z,1.1nm,0.5s,baz=100,slow=4.1,SNR=5.0								
	comp=Z,4.7nm,0.6s								
ASAR	**Alice Springs**	**45.66**	**259**	P	**P**		**09 54 10.4**	**-2.1**	
WB0	**Warramunga Arr**	**45.95**	**264**	P	**P**		**09 54 12.8**	**-2.1**	
WRA	**Warramunga Arr**	**45.96**	**264**	P	**P**		**09 54 12.3**	**-2.6**	
	comp=Z,3.4nm,0.7s,baz=93,slow=8.1,SNR=93								
WRA				PcP	**PcP**		**09 55 49.4**	**-0.8**	
	comp=Z,1.2nm,0.7s,baz=90,slow=3.6,SNR=5.0								
	comp=Z,3.4nm,0.7s								
KNRA	**Kununurra**	**52.18**	**267**	P	**P**		**09 55 00.9**	**-1.5**	
KNRA				IAmb	IAmb		09 55 48.1		
	comp=Z,15nm,1.4s								
MBWA	**Marble Bar**	**59.00**	**258**	P	**P**		**09 55 48.2**	**-3.0**	
MBWA				IAmb	IAmb		09 56 26.1		
	comp=Z,10nm,1.2s								
TOLI2	**Tolitoli**	**65.66**	**282**	P	**P**		**09 56 34.8**	**-1.0**	
TOLI2				IAmb	IAmb		09 56 38.7		
	comp=Z,16nm,1.3s								
QSPA	**South Pole Qui**	**67.39**	**180**	P	**P**		**09 56 47.2**	**+1.1**	
	comp=Z,3.1nm,1.0s,baz=211,slow=1.7,SNR=3.8								
	comp=Z,3.1nm,1.0s								
QSPA	**South Pole Qui**	**67.39**	**180**	P	**P**		**09 56 46.6**	**+0.5**	
QSPA				IAmb	IAmb		09 57 59.6		
	comp=Z,35nm,2.0s								
KKM	**Kota Kinabalu**	**71.90**	**285**	P	**P**		**09 57 12.3**	**-2.3**	
KKM				IAmb	IAmb		09 58 51.1		
	comp=Z,11nm,1.1s								
ADK	**Adak**	**74.25**	**360**	P	**P**		**09 57 26.4**	**-1.0**	
JKA	**Kamikawa-asahi**	**76.42**	**331**	P	**P**		**09 57 39.7**	**-0.3**	
JKA				IAmb	IAmb		09 58 58.1		
	comp=Z,31nm,1.3s								
TPUB	**Ta-pu**	**76.53**	**303**	P	P		09 57 37.7	-3.5	
PEA0B	**Petropavlovsk-**	**78.80**	**344**	P	**P**		**09 57 52.0**	**-1.1**	
PETK	**Petropavlovsk-**	**78.80**	**344**	P	**P**		**09 57 52.2**	**-0.9**	
	comp=Z,2.6nm,0.7s,baz=109,slow=7.1,SNR=9.1								
	comp=Z,2.6nm,0.7s								
PETK	**Petropavlovsk-**	**78.80**	**344**	P	**P**		**09 57 52.1**	**-1.0**	
VES	**Vestal, Richgr**	**79.43**	**44**	P	**P**		**09 57 57.0**	**+0.1**	
VES				IAmb	IAmb		09 58 25.7		
	comp=Z,20nm,1.7s								
O02D	**Mt. Diablo Mer**	**79.92**	**39**	P	**P**		**09 58 00.4**	**+0.8**	
NVAR	**Mina Array Bea**	**81.51**	**42**	P	**P**		**09 58 08.7**	**+0.4**	
	comp=Z,1.2nm,1.0s,baz=220,slow=8.4,SNR=6.0								
	comp=Z,1.2nm,1.0s								
NJ2	**Nanjing**	**82.53**	**309**	*e*P	**P**		**09 58 13.6**	**+0.2**	
NJ2				pmax	pmax				
	comp=Z,18nm,0.5s								
H03S2	**Juan Fernandez**	**83.41**	**124**	T	T		11 30 33.1		
	baz=246,slow=74,SNR=16								
H03S1	**Juan Fernandez**	**83.42**	**124**	T	T		11 30 34.1		
	baz=246,slow=74,SNR=17								
H03S3	**Juan Fernandez**	**83.43**	**124**	T	T		11 30 32.4		
	baz=246,slow=74,SNR=17								
H03N2	**Juan Fernandez**	**83.56**	**123**	T	T		11 30 36.1		
	baz=251,slow=72,SNR=20								
H03N3	**Juan Fernandez**	**83.56**	**123**	T	T		11 30 40.8		
	baz=251,slow=72,SNR=21								
H03N1	**Juan Fernandez**	**83.58**	**123**	T	T		11 30 42.9		
	baz=251,slow=72,SNR=18								
O19K	**Port Alsworth**	**84.50**	**11**	P	**P**		**09 58 22.1**	**-0.7**	
O19K				IAmb	IAmb		09 58 23.1		
	comp=Z,12nm,0.8s								
M16K	**Timber Creek**	**84.58**	**8**	P	**P**		**09 58 23.4**	**+0.1**	
M16K				IAmb	IAmb		10 00 32.5		
	comp=Z,33nm,1.8s								
ELIB	**Princess Elisa**	**84.66**	**186**	*d*P	**P**		**09 58 24.4**	**+0.5**	
K15K	**Wolf Creek Mou**	**85.50**	**7**	P	**P**		**09 58 28.1**	**+0.3**	
K15K				IAmb	IAmb		09 59 31.7		
	comp=Z,21nm,1.2s								
L18K	**Granite Mounta**	**86.05**	**9**	P	**P**		**09 58 31.0**	**+0.5**	
L18K				IAmb	IAmb		09 58 32.6		
	comp=Z,13nm,1.5s								
TXAR	**Lajitas Array**	**86.87**	**57**	P	**P**		**09 58 36.3**	**+0.8**	
	comp=Z,1.5nm,0.9s,baz=218,slow=7.8,SNR=16								
	comp=Z,1.5nm,0.9s								
L22K	**Petersville**	**87.31**	**12**	P	**P**		**09 58 35.7**	**-1.1**	
L22K				IAmb	IAmb		09 59 38.0		
	comp=Z,30nm,1.8s								
PDAR	**Pinedale Array**	**89.44**	**43**	P	**P**		**09 58 47.1**	**-0.4**	
	comp=Z,0.6nm,0.8s,baz=228,slow=3.8,SNR=5.3								
	comp=Z,0.6nm,0.8s								
ILAR	**Eielson Array**	**90.09**	**12**	P	**P**		**09 58 49.0**	**-0.7**	
	comp=Z,1.5nm,0.9s,baz=220,slow=5.0,SNR=7.3								
	comp=Z,1.5nm,0.9s								
HHC	**Hu-ho-hao-te**	**92.05**	**314**	*e*P	**P**		**09 59 00.9**	**+1.4**	
HHC				pmax	pmax				
	comp=Z,8.0nm,0.6s								
HHC				pmax	pmax				
	comp=Z,59nm,6.1s								
CMAR	**Chiang Mai Arr**	**92.38**	**289**	P	**P**		**09 59 01.2**	**-0.3**	
	comp=Z,0.7nm,0.4s,baz=130,slow=3.9,SNR=6.9								
	comp=Z,0.7nm,0.4s								
PZH	**PanZhiHua**	**93.17**	**297**	P	**P**		**09 59 05.6**	**+0.5**	
WMQ	**Urumqi**	**109.59**	**310**	Pdif	**Pdif**		**10 00 18.3**	**+0.1**	
WMQ				LR	LR				
	comp=Z,190nm,24.2s								
MKAR	**Makanchi Array**	**113.88**	**313**	PKiKP	**PKiKP**		**10 04 26.6**	**-2.1**	
	comp=Z,0.3nm,0.5s,baz=92,slow=1.7,SNR=5.3								
KURBB	**Kurchatov Arra**	**116.76**	**317**	PKP	**PKPdf**		**10 04 31.9**	**-2.1**	
	comp=Z,0.8nm,0.2s,baz=89,slow=1.6,SNR=4.5								
BVAR	**Borovoye Array**	**121.80**	**319**	PKP	**PKPdf**		**10 04 42.2**	**-1.5**	
SPITS	**Spitsbergen Ar**	**124.13**	**357**	PKP	**PKPdf**		**10 04 45.8**	**-1.7**	
	comp=Z,4.2nm,0.9s,baz=341,slow=3.1,SNR=4.0								
BOSA	**Boshof**	**124.95**	**203**	PKP	**PKPdf**		**10 04 50.5**	**-0.3**	
	comp=Z,1.9nm,0.7s,baz=180,slow=1.0,SNR=3.4								
ARCES	**ARCESS Array B**	**131.35**	**350**	PKP	**PKPdf**		**10 05 00.3**	**-1.2**	
	comp=Z,1.8nm,0.5s,baz=10,slow=1.5,SNR=15								
FINES	**FINESS Array B**	**138.32**	**344**	PKP	**PKPdf**		**10 05 14.6**	**-0.1**	
	comp=Z,1.1nm,0.5s,baz=46,slow=4.0,SNR=8.6								
HFS	**Hagfors**	**141.94**	**352**	PKhKP	PKPpre		10 05 14.2		
	comp=Z,0.9nm,0.3s,baz=64,slow=3.4,SNR=11								
AK03	**Malin Array Si**	**145.70**	**331**	PKP	**PKPdf**		**10 05 26.6**	**-1.5**	
AKASG	**Malin Array Be**	**145.71**	**331**	PKPbc	**PKPdf**		**10 05 26.7**	**-1.4**	
	comp=Z,2.2nm,0.3s,baz=42,slow=4.3,SNR=22								
AKBB	**Malin Array Si**	**145.71**	**331**	PKP	**PKPdf**		**10 05 27.0**	**-1.1**	
AK04	**Malin Array Si**	**145.72**	**331**	PKP	**PKPdf**		**10 05 27.0**	**-1.1**	
AK01	**Malin Array Si**	**145.72**	**331**	PKP	**PKPdf**		**10 05 26.8**	**-1.3**	
AK22	**Malin Array Si**	**145.74**	**331**	PKP	**PKPdf**		**10 05 26.9**	**-1.3**	
AK21	**Malin Array Si**	**145.74**	**331**	PKP	**PKPdf**		**10 05 26.8**	**-1.4**	
AK16	**Malin Array Si**	**145.79**	**331**	PKP	**PKPdf**		**10 05 27.1**	**-1.1**	
AK13	**Malin Array Si**	**145.85**	**331**	PKP	**PKPdf**		**10 05 27.3**	**-1.1**	
MI28	**Mi28,Pidlybu**	**146.23**	**333**	PKP	**PKPdf**		**10 05 28.0**	**-1.0**	
RNPP9	**Sopachiv**	**146.59**	**335**	PKP	**PKPdf**		**10 05 28.3**	**-1.3**	
LUBAR	**Lubar, Ukraine**	**146.93**	**331**	PKP	**PKPdf**		**10 05 29.1**	**-1.1**	
EKA	**Eskdalemuir Ar**	**146.99**	**7**	PKPbc	**PKPdf**		**10 05 30.9**	**+0.8**	
	comp=Z,2.2nm,0.7s,baz=345,slow=2.3,SNR=4.5								
BRTR	**Keskin Array B**	**149.51**	**311**	PKPbc	**PKPdf**		**10 05 37.9**	**+2.9**	
	comp=Z,1.1nm,0.6s,baz=115,slow=3.7,SNR=7.2								
STHS	**Stebnicka Huta**	**149.96**	**337**	*e*PKP	**PKPdf**		**10 05 38.0**	**+2.8**	
MMAI	**Mount Meron Ar**	**150.29**	**297**	PKPbc	**PKPbc**		**10 05 41.4**	**-0.2**	
	comp=Z,1.9nm,0.5s,baz=60,slow=8.5,SNR=4.7								
OSTC	**Ostas**	**150.53**	**344**	*e*PKP	**PKPbc**		**10 05 41.7**	**+0.2**	
CLL	**Collm**	**150.54**	**348**	*i*PKPbc	**PKPdf**		**10 05 40.8**	**+4.8**	
	comp=Z,13nm,1.0s								
CLL				*i* PKPab	**PKPab**		**10 05 48.0**	**-0.4**	
	comp=Z,9.0nm,1.1s								
STEB	**Steborice**	**150.66**	**341**	*e*PKP	**PKPbc**		**10 05 41.5**	**-0.3**	
DPC	**Dobruska-Polom**	**150.69**	**343**	*e*PKP	**PKPbc**		**10 05 41.4**	**-0.5**	
LANS	**Liptovska Anna**	**150.81**	**339**	*e*PKP	**PKPbc**		**10 05 42.3**	**0.0**	
LANS				*e*			10 05 49.7		
KRLC	**Kraliky**	**150.81**	**343**	*e*PKP	**PKPbc**		**10 05 42.0**	**-0.2**	
MORC	**Moravsky Berou**	**150.87**	**342**	*e*PKP	**PKPdf**		**10 05 39.8**	**+3.1**	
PVCC	**Panska Ves**	**150.95**	**346**	*e*PKP	**PKPbc**		**10 05 42.5**	**0.0**	
HSKC	**Hora Svate Kat**	**151.12**	**347**	*e*PKP	**PKPbc**		**10 05 42.5**	**-0.4**	
MAUC	**Maruska**	**151.15**	**341**	*e*PKP	**PKPbc**		**10 05 43.2**	**+0.2**	
PRU	**Pruhonice**	**151.46**	**345**	*e*PKP	**PKPbc**		**10 05 43.3**	**-0.4**	
VRAC	**Vranov**	**151.56**	**342**	*e*PKP	**PKPdf**		**10 05 41.6**	**+3.9**	
VRAC				*e*			10 05 51.9		
KRUC	**Moravsky**	**151.84**	**342**	*e*PKP	**PKPbc**		**10 05 43.7**	**-0.9**	
KRUC				*e*			10 05 53.1		
KHC	**Kasperske Hory**	**152.49**	**346**	*e*PKP	**PKPbc**		**10 05 45.0**	**-1.1**	
GERES	**GERESS Array B**	**152.73**	**346**	PKPbc	**PKPbc**		**10 05 45.6**	**-1.1**	
	comp=Z,1.2nm,0.5s,baz=46,slow=2.8,SNR=8.6								
CONA	**Conrad Observa**	**153.02**	**342**	*i* PKiKP	**PKPbc**		**10 05 46.5**	**-0.8**	
	comp=Z,2.4nm,0.9s								
RONA	**Rosalia, Austr**	**153.09**	**341**	*i* PKP	**PKPbc**		**10 05 46.2**	**-1.2**	
	comp=Z,2.8nm,0.6s								
MOA	**Molln**	**153.52**	**344**	*e*PKP	**PKPab**		**10 06 01.0**	**0.0**	
	comp=Z,5.9nm,1.2s								
ARSA	**Arzberg**	**153.73**	**342**	*e*PKiKP	**PKPbc**		**10 05 48.8**	**-0.1**	
	comp=Z,2.5nm,1.2s								
BIOA	**Bad Ischl, Aus**	**153.82**	**345**	*i* PKiKP	**PKiKP**		**10 05 53.7**	**+4.6**	
	comp=Z,4.4nm,0.8s								
LESA	**Schwarzleotal**	**154.30**	**346**	*i* PKP	**PKPab**		**10 06 00.8**	**-3.6**	
	comp=Z,5.7nm,1.4s								
SOKA	**Soboth**	**154.39**	**342**	*e*PKP	**PKPab**		**10 06 04.0**	**-0.8**	
	comp=Z,1.1nm,0.4s								
KBA	**Koelnbreinsper**	**154.47**	**345**	*i* PKP	**PKPab**		**10 06 05.4**	**+0.2**	
	comp=Z,2.7nm,0.7s								
RETA	**Reutte**	**154.62**	**349**	*e*PKiKP	**PKPbc**		**10 05 51.1**	**+0.2**	
	comp=Z,0.9nm,0.2s								
OBKA	**Obir**	**154.68**	**342**	*i* PKP	**PKPab**		**10 06 05.6**	**-0.5**	
	comp=Z,2.4nm,0.6s								
MYKA	**Terra Mystica**	**154.81**	**344**	*i* PKP	**PKPab**		**10 06 05.9**	**-0.7**	
	comp=Z,1.0nm,0.4s								

NAO ***08*** *09:46:55.3, 30.75N×49.60E, h33km, MB4.7*
MOS ***08*** *09:47:05.3± 1.1, 32.37N×48.81E, h11km, mb4.9/41, Error ellipse: s-maj=5.5km s-min=3.5km az=106.9*
BJI ***08*** *09:47:05.0, 32.20N×48.80E, h10km, mB5.0/13, mb4.7/39, Ms4.5/19, Ms7 4.3/21*
NEIC ***08*** *09:47:07.7± 2.0, 32.41N± 0.05×48.90E± 0.07, h10km± 1km, mb4.7/69, Error ellipse: s-maj=13.6km s-min=3.8km az=49.0*
TEH ***08*** *09:47:07.7, 32.51N×48.88E, h9km± 22km, ML4.7, Presumed earthquake*
THR ***08*** *09:47:08.7± 0.0, 32.45N×48.85E, h15km± 2km, ML4.6, Presumed earthquake*
IDC ***08*** *09:47:10.5± 1.8, 32.44N×48.82E, h32km± 12km, mb4.3/29, mbtmp4.5/38, ML3.9/8, MS3.8/53, Error ellipse: s-maj=12.6km s-min=9.5km az=166.0*
DSN ***08*** *09:47:12.0± 0.7, 32.21N×49.03E, h30km, mb5.5/1, ML4.4/3, Error ellipse: s-maj=15.7km s-min=6.5km az=53.0*
ISC 08 09:47:08.4± 0.5, **32.46N**± 0.03×**48.85E**± 0.03, **h17**km± 2km, **h17**km:**pP-P, n757,** σ1‡**20**/756, **mb4.8**/151, **MS3.9**/58, **19C-32D, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTMR	**Gotvand**	**0.22**	**88**	*e*Pg	**Pg**	**09 47 13.4**	**-0.2**
GTMR				*e*Sg	**Sb**	**09 47 17.8**	**0.0**
GTMR				IAML		09 47 18.6	
	comp=Z,71μm,1.0s						
AMIS	**Naft Sefid**	**0.88**	**155**	Pg	**Pb**	**09 47 25.3**	**+0.2**
AMIS				Sg	**Sn**	**09 47 39.1**	**+0.8**
AHWZ	**Ahwaz**	**1.14**	**189**	Pg	**Pg**	**09 47 31.5**	**+1.0**
AHWZ				Sg	**Sg**	**09 47 49.1**	**+3.7**
IDOB	**Doab**	**1.44**	**337**	Pg	**Pg**	**09 47 35.5**	**-0.6**
BDRS	**Dareh Seyedi**	**1.49**	**1**	Pg	**Pb**	**09 47 36.2**	**+0.4**
JHBN	**Jahan bin**	**1.56**	**98**	Pg	**Pg**	**09 47 38.3**	**-0.1**
KHMZ	**Khomeyn**	**1.58**	**36**	*e*Pn	**Pg**	**09 47 37.8**	**-1.0**
KHMZ				IAML		09 48 04.6	
	comp=Z,8μm,1.0s						
ZNGN	**Zangian**	**1.73**	**101**	Pg	**Pg**	**09 47 41.2**	**-0.5**
IPIR	**Pirpir**	**1.74**	**82**	Pg	**Pb**	**09 47 40.6**	**+0.6**
IBRJ	**Brojen**	**2.12**	**104**	Pn	**Pb**	**09 47 46.1**	**-0.4**
IBZA	**Bozab**	**2.17**	**338**	Pn	**Pb**	**09 47 46.7**	**-0.6**
ASAO	**Ashtian**	**2.30**	**25**	*e*Pn	**Pb**	**09 47 49.3**	**-0.3**
ASAO				IAML		09 48 28.7	
	comp=Z,5μm,1.0s						
HAGD	**Aghdareh**	**2.37**	**6**	Pn	**Pb**	**09 47 49.0**	**-1.7**
IKLH	**Kolahrood**	**2.45**	**69**	Pn	**Pb**	**09 47 51.6**	**-0.6**
QAMS	**Qamsar**	**2.49**	**59**	Pn	**Pb**	**09 47 51.1**	**-1.7**
IGHG	**Ghaleghazi**	**2.67**	**315**	Pn	**Pb**	**09 47 53.8**	**-2.0**
KLNJ	**Kolanjah**	**2.75**	**121**	*e*Pn	**Pn**	**09 47 54.2**	**+2.2**
KLNJ				IAML		09 48 51.4	
	comp=Z,2μm,1.0s						
KLNJ	**Kolanjah**	**2.75**	**121**	Pn	**Pb**	**09 47 54.7**	**-2.6**
GHVR	**GHOM**	**2.87**	**45**	*e*Pn	**Pb**	**09 47 57.4**	**-1.8**
GHVR				IAML		09 48 30.8	
	comp=Z,400nm,1.0s						
GLG1	**Gilan-e-Gharb**	**2.96**	**305**	Pn	**Pn**	**09 47 57.2**	**+2.5**
IZEF	**Zefreh**	**2.97**	**81**	Pn	**Pn**	**09 47 57.6**	**+2.7**
IQOM	**Qom**	**3.01**	**37**	Pn	**Pn**	**09 47 58.1**	**+2.6**
QABG	**Abgarm-Qazvin**	**3.29**	**10**	Pn	**Pn**	**09 48 02.4**	**+3.0**
NASN	**Na'in**	**3.36**	**83**	*e*Pn	**Pn**	**09 48 03.2**	**+2.8**
NASN				IAML		09 49 05.0	
	comp=Z,530nm,1.0s						
ISFB	**Sefidab**	**3.41**	**55**	Pn	**Pn**	**09 48 03.3**	**+2.5**
IVRN	**Varamin**	**3.48**	**43**	Pn	**Pn**	**09 48 04.7**	**+2.8**
KAZ2	**Kazeron-Fars-I**	**3.73**	**139**	Pn	**Pn**	**09 48 08.4**	**+3.1**
THKV	**Tehran--Karaj**	**3.83**	**25**	*e*Pn	**Pn**	**09 48 10.0**	**+3.2**
THKV				IAML		09 49 23.4	
	comp=Z,930nm,1.0s						
CHTH	**Charan**	**3.92**	**28**	*e*Pn	**Pn**	**09 48 10.8**	**+2.7**
CHTH				IAML		09 49 33.6	
	comp=Z,350nm,1.0s						
IGZV	**Ghazvin**	**4.08**	**16**	Pn	**Pn**	**09 48 12.7**	**+2.5**
DAMV	**Damavand**	**4.09**	**38**	*e*Pn	**Pn**	**09 48 12.9**	**+2.6**
DAMV				IAML		09 49 49.7	
	comp=Z,4.1nm,1.0s						
ZNJK	**Zanjan**	**4.20**	**358**	*e*Pn	**Pn**	**09 48 14.8**	**+2.9**
ZNJK				IAML		09 50 10.8	
	comp=Z,4.5nm,1.0s						
GIDE	**GILAN DEYLAMAN**	**4.54**	**11**	*e*Pn	**Pn**	**09 48 19.3**	**+2.8**
GIDE				IAML		09 49 50.0	
	comp=Z,2μm,1.0s						
MZPU	**Pul - Mazandar**	**4.56**	**29**	Pn	**Pn**	**09 48 19.4**	**+2.6**
SRSL	**SARDASHT**	**4.69**	**324**	*e*Pn	**Pn**	**09 48 20.6**	**+2.1**
SRSL				IAML		09 49 22.6	
	comp=Z,830nm,1.0s						
YZKH	**Yazd**	**4.86**	**89**	*e*Pn	**Pn**	**09 48 23.3**	**+2.5**
YZKH				IAML		09 49 53.6	
	comp=Z,210nm,1.0s						
IALA	**Alasht**	**4.88**	**41**	Pn	**Pn**	**09 48 23.9**	**+2.7**
GRMI	**Germi**	**6.38**	**353**	*e*Pn	**Pn**	**09 48 44.3**	**+2.6**
GRMI				IAML		09 50 47.2	
	comp=Z,86nm,1.0s						
SHRO	**Shahrood**	**6.90**	**57**	*e*Pn	**Pn**	**09 48 51.6**	**+2.8**
SHRO				IAML		09 50 25.2	
	comp=Z,2.7nm,1.0s						
TABS	**Tabas**	**7.04**	**78**	*e*Pn	**Pn**	**09 48 53.0**	**+2.2**
TABS				IAML		09 50 53.8	
	comp=Z,2.1nm,1.0s						
GEVA	**Gevas**	**7.51**	**323**		**Pn**	**09 48 58.5**	**+1.2**
GEVA				Sn	**Sn**	**09 50 22.7**	**+0.6**
BNDS	**Bandar-Abbas**	**8.11**	**127**	*e*Pn	**Pn**	**09 49 06.5**	**+0.9**
MARD	**Mardin**	**8.21**	**308**		**Pn**	**09 49 06.3**	**-0.5**
GURO	**Guroymak-BITLI**	**8.23**	**319**		**Pn**	**09 49 07.6**	**+0.4**
GNI	**Garni**	**8.36**	**338**	Pn	Pn	09 49 13.9	+5.0
	comp=Z,1.3nm,0.3s,baz=332,slow=16,SNR=4.4						
GNI				LR	LR	09 52 52.0	
	comp=Z,1μm,19.7s,baz=162,slow=41						
	comp=Z,8.3nm,0.7s						
GNI	**Garni**	**8.36**	**338**		**Pn**	**09 49 11.2**	**+2.4**
GNI	**Garni**	**8.36**	**338**	P	Pn	09 49 14.9	+6.0
GNI	**Garni**	**8.36**	**338**	*i* P	**Pn**	**09 49 08.0**	**-0.9**
BSRN	**Basiran**	**8.72**	**91**	*e*Pn	**Pn**	**09 49 15.7**	**+1.8**
BJRD	**Bojnurd**	**8.74**	**51**	*e*Pn	**Pn**	**09 49 16.8**	**+2.6**
SHME	**Shamm**	**9.02**	**133**	*i* P	**Pn**	**09 49 17.2**	**-0.6**
	SNR=14						
SHME				S	**Sn**	**09 50 52.9**	**-6.2**
AKT	**Akhty**	**9.05**	**355**	*e*P	**Pn**	**09 49 22.6**	**+4.3**
AKT				pmax	pmax		
	comp=Z,13nm,0.9s						
AKT				MLR	MLR		
	comp=Z,771nm,11.0s						
BANOM	**Banah**	**9.21**	**133**	*i* P	**Pn**	**09 49 19.8**	**-0.7**
	SNR=34						
KARS	**Kars**	**9.38**	**332**	Pn	**Pn**	**09 49 25.8**	**+3.0**
KARS	**Kars**	**9.38**	**332**	P	**Pn**	**09 49 25.8**	**+3.0**
RAYN	**Ar Rayn**	**9.38**	**199**		**Pn**	**09 49 20.9**	**-1.9**
RAYN	**Ar Rayn**	**9.38**	**199**	*i* P	**Pn**	**09 49 21.6**	**-1.3**
	SNR=139						
RAYN	**Ar Rayn**	**9.38**	**199**	P	**Pn**	**09 49 21.6**	**-1.3**
MSFE	**Esma-Masafi**	**9.54**	**136**	*i* P	**Pn**	**09 49 24.3**	**-0.8**
	SNR=14						
NAZ	**Nazwa, Dubai**	**9.55**	**140**	*i* P	**Pn**	**09 49 24.9**	**-0.2**
	SNR=25						
ASUD	**Al Ashush, Dub**	**9.66**	**142**	*i* P	**Pn**	**09 49 26.7**	**0.0**
	SNR=16						
MDH	**Madha**	**9.67**	**136**	*i* P	**Pn**	**09 49 25.6**	**-1.2**
	SNR=14						
SHRT	**Shahrakht**	**9.68**	**80**	*e*Pn	**Pn**	**09 49 29.7**	**+2.8**
UOSS	**Minazif**	**9.88**	**137**		**Pn**	**09 49 27.9**	**-1.8**
UOSS	**Minazif**	**9.88**	**137**	*i* P	**Pn**	**09 49 28.2**	**-1.5**
	SNR=9.3						
HATD	**Hatta, Dubai**	**9.94**	**138**	*i* P	**Pn**	**09 49 29.8**	**-0.7**
	SNR=14						
ASHO	**Ashiyiah**	**10.01**	**139**	*i* P	**Pn**	**09 49 30.3**	**-1.1**
	SNR=38						
KOPT	**Kop Dagi**	**10.11**	**321**		**Pn**	**09 49 35.7**	**+2.7**
ASF	**Jabal al Asfar**	**10.12**	**272**	Pn	**Pn**	**09 49 31.8**	**-1.2**
	comp=Z,4.9nm,0.3s,baz=76,slow=13,SNR=20						
ASF				Sn	**Sn**	**09 51 21.0**	**-5.1**
	comp=Z,6.1nm,0.3s,baz=282,slow=17,SNR=2.6						
ASF				Lg	Lg	09 52 30.9	
	comp=Z,2.1nm,0.3s,baz=270,slow=20,SNR=2.6						
ASF				LR	LR	09 54 35.1	
	comp=Z,246nm,20.5s,baz=78,slow=44						
	comp=Z,15nm,0.4s						
MZR	**Muzera**	**10.28**	**155**	*i* P	**Pn**	**09 49 34.4**	**-0.7**
	SNR=102						
ALNE	**Al Ain**	**10.35**	**142**	*i* P	**Pn**	**09 49 35.5**	**-0.5**
	SNR=20						
MAK	**Makhachkala**	**10.54**	**355**	*c i* P	**Pn**	**09 49 36.1**	**-2.4**
MAK				*e*S	**Sn**	**09 51 34.0**	**-2.1**
MAK				pmax	pmax		
	comp=Z,324nm,1.3s						
MAK				MLR	MLR		
	comp=Z,1μm,13.0s						
GAZ	**Gaziantep**	**10.66**	**299**		**Pn**	**09 49 39.6**	**-0.7**
SOHO	**SOHO**	**10.71**	**139**	*i* P	**Pn**	**09 49 39.2**	**-1.7**
	SNR=12						
ARPR	**Arapgir-MALATY**	**10.80**	**311**		**Pn**	**09 49 45.0**	**+2.7**
KSHT	**Keshet**	**11.00**	**276**	P	Sn	09 52 59.0	+71
NATI	**Neve Ativ**	**11.06**	**278**	P	Sn	09 52 59.9	+71
GEM	**Giv'at Ha'Em**	**11.12**	**277**	P	Sn	09 53 00.6	+70
HMDT	**Nahal Hemdat**	**11.27**	**273**	P	Sn	09 53 02.6	+68
MMA0B	**Mount Meron ar**	**11.34**	**276**	P	Sn	09 53 03.7	+68
MMAI	**Mount Meron Ar**	**11.34**	**276**	Pn	**Pn**	**09 49 51.6**	**+1.9**
	comp=Z,1.7nm,0.3s,baz=71,slow=16,SNR=5.7						
MMAI				Sn	**Sn**	**09 51 55.6**	**-0.4**
	comp=Z,3.0nm,0.3s,baz=59,slow=22,SNR=1.9						
MMAI				Lg	Lg	09 53 08.5	
	baz=80,slow=33						
MMAI				LR	LR	09 55 24.4	
	comp=Z,286nm,19.0s,baz=82,slow=44						
	comp=Z,0.4nm,0.3s						
DSI	**Dead Sea**	**11.47**	**269**	P	Sn	09 53 04.8	+66
BLGI	**Bet Lehem HaGe**	**11.52**	**275**	P	Sn	09 53 06.1	+66
MSBI	**Mazada**	**11.53**	**268**	P	Sn	09 53 05.7	+65
SLTI	**Sal'it**	**11.68**	**273**	P	Sn	09 53 08.0	+64
OFRI	**`Ofer**	**11.70**	**274**	P	Sn	09 53 08.4	+64
YTIR	**Yattir**	**11.72**	**268**	P	Sn	09 53 08.5	+63
NCK	**Nalchik**	**11.77**	**341**	*i* P	**Pn**	**09 49 56.6**	**+1.2**
NEUR	**Neytrino**	**11.82**	**338**	*i* P	**Pn**	**09 49 58.0**	**+1

comp=Z,58nm,0.7s
KK31 Karatay Array 20.09 52 Pn 09 51 42.4 -0.6
KK31 IAmb IAmb 09 51 46.9
comp=Z,54nm,1.3s
KK31 Karatay Array 20.09 52 P Pn 09 51 42.4 -0.6
KK31 pmax pmax
comp=Z,54nm,1.3s
KKAR Karatay Array 20.09 52 P P 09 51 41.6 +0.5
KKAR Karatay Array 20.09 52 P P 09 51 41.6 +0.5
TPGR Topolog 20.12 314 ⇓P P 09 51 41.4 0.0
VORR Voronezh 20.45 343 eP P 09 51 43.2 -1.7
VORR pmax pmax
comp=Z,60nm,0.5s
CFR Carcaliu 20.46 314 ⇓P P 09 51 44.9 -0.2
CFR Carcaliu 20.46 314 P P 09 51 44.9 -0.2
NIL Nilore 20.48 80 P 09 51 45.1 -0.2
NIL Nilore 20.48 80 P P 09 51 45.2 -0.2
NIL pmax pmax
comp=Z,19nm,0.8s
RDO Rodhopi 20.54 302 P P 09 51 45.9 +0.1
RDO IAmb IAmb 09 51 51.7
comp=Z,42nm,0.9s
RAZG Razgrad 20.74 309 ⇓P P 09 51 48.9 +0.8
BAL3X Bal3x, Balta 21.24 322 P P 09 51 53.5 0.0
GHRR 21.36 316 P P 09 51 55.4 +0.6
SGRR Singureni 21.37 310 ⇓P P 09 51 55.0 +0.2
LPSR Galich'ya Gora 21.38 343 eP P 09 51 53.7 -1.1
LPSR eS S 09 55 49.6 -1.8
LPSR pmax pmax
comp=Z,343nm,0.7s
LPSR pmax pmax
comp=Z,300nm,0.7s
LPSR smax smax
comp=E,300nm,1.8s
ISR Istrita 21.41 313 ⇑P P 09 51 57.0 +1.6
ISR Istrita 21.41 313 P P 09 51 57.0 +1.6
ODBI Odobesti 21.42 315 ⇑P P 09 51 56.1 +0.7
PANC Panciu 21.42 315 ⇑P P 09 51 56.5 +1.2
ATD Arta Tunnel 21.55 196 P P 09 51 58.5 +1.4
comp=E,0.2nm,0.4s,baz=23,slow=13,SNR=4.0
ATD LR LR 10 00 56.7
comp=E,22nm,19.4s,baz=352,slow=38
ATD Arta Tunnel 21.55 196 P P 09 51 57.5 +0.4
ATD IAmb IAmb 09 52 15.2
comp=Z,51nm,1.4s
VRI Vrincioaia 21.67 315 ⇓P P 09 51 58.7 +0.6
VRI Vrincioaia 21.67 315 P P 09 51 58.6 +0.6
VRI Vrincioaia 21.67 315 P P 09 51 58.5 +0.4
comp=Z,48nm,0.7s
VRI pP **pP 09 52 01.1 -2.0**
comp=Z,48nm,0.7s
PLOR Plostina 21.71 314 ⇓P P 09 51 59.3 +0.8
PLOR Plostina 21.71 314 P P 09 51 59.3 +0.8
PLVB Pleven 21.93 307 ⇑P P 09 52 01.3 +0.4
MLR Muntele Rosu 21.96 313 P P 09 52 02.7 +1.3
comp=Z,19nm,0.7s,baz=60,slow=3.4,SNR=37
MLR LR LR 10 02 40.0
comp=Z,140nm,21.3s,baz=126,slow=42
comp=Z,19nm,0.7s
MLR Muntele Rosu 21.96 313 ⇓P P 09 52 02.7 +1.3
MLR Muntele Rosu 21.96 313 P P 09 52 03.1 +1.7
MLR IAmb IAmb 09 52 18.6
comp=Z,43nm,0.8s
MLR Muntele Rosu 21.96 313 P P 09 52 03.1 +1.7
MLR pmax pmax
comp=Z,43nm,0.8s
COVR Voineasa-Covas 21.97 314 ⇓P P 09 52 03.2 +0.9
SORM Soroca 22.02 321 ⇓P P 09 52 00.2 -1.6
SORM Soroca 22.02 321 P P 09 52 00.2 -1.6
TESR Tescani 22.05 316 ⇑P P 09 52 02.1 0.0
TESR Tescani 22.05 316 P P 09 52 02.3 +0.2
comp=Z,1µmcomp=Z,53nm,0.7s
ONER Baraj Valea Uz 22.11 315 ⇓P P 09 52 05.6 +2.8
OZUR 22.35 314 ⇓P P 09 52 06.2 +0.7
BOSR Bodos 22.42 314 ⇓P P 09 52 06.9 +0.8
VOIR 22.49 312 ⇑P P 09 52 08.2 +1.2
VOIR 22.49 312 P P 09 52 08.3 +1.3
DOPR Dopca 22.53 314 ⇑P P 09 52 07.7 +0.3
ITM Ithomi 22.56 290 P P 09 52 09.3 +1.5
ITM IAmb IAmb 09 52 16.0
comp=Z,38nm,0.9s
KSH2 Kashi 22.62 65 P P 09 52 10.2 +1.6
KSH2 pmax pmax
comp=Z,55nm,1.3s
KSH2 L L
comp=Z,490nm,13.7s
KSH2 L L
comp=Z,650nm,14.8s
KSH2 L L
comp=Z,650nm,15.8s
AAK Ala-Archa 22.65 56 LR LR 10 02 20.8
comp=Z,678nm,18.6s,baz=260,slow=40
AAK Ala-Archa 22.65 56 P P 09 52 09.9 +1.1
AAK Ala-Archa 22.65 56 *i* P P 09 52 10.5 +1.7
AAK pmax pmax
comp=Z,99nm,1.2s
ARR Arges 22.73 312 ⇓P P 09 52 10.1 +0.6
VAY Valandovo 22.73 300 *i* P P 09 52 15.7 +6.2
AKASG Malin Array Be 23.28 327 P P 09 52 13.4 -1.6
comp=Z,3.5nm,0.5s,baz=134,slow=9.5,SNR=22
AKASG PcP **PcP 09 56 02.2 +0.1**
comp=Z,0.8nm,0.5s,baz=92,slow=2.0,SNR=2.9
AKASG ScP **ScP 09 59 36.3 -3.1**
comp=Z,1.9nm,0.9s,baz=92,slow=2.0,SNR=5.1
AKASG LR LR 10 03 04.1
comp=Z,176nm,19.6s,baz=138,slow=41
comp=Z,3.5nm,0.5s
AKASG Malin Array Be 23.28 327 P P 09 52 16.0 +1.0
AKASG Malin Array Be 23.28 327 *i* P P 09 52 13.3 -1.7
AKASG pmax pmax
comp=Z,3.0nm,0.4s
AKBB Malin Array Si 23.28 327 P P 09 52 15.4 +0.4
AKBB IAmb IAmb 09 52 27.2
comp=Z,21nm,0.8s
AKBB Malin Array Si 23.28 327 *i* P P 09 52 14.9 -0.1
AKBB pmax pmax
comp=Z,12nm,0.4s
AKBB Malin Array Si 23.28 327 P P 09 52 15.2 +0.2
KIEV Kiev 23.28 327 ⇓P P 09 52 13.8 -1.2
KIEV Kiev 23.28 327 P P 09 52 15.1 +0.1
KIEV IAmb IAmb 09 52 27.2
comp=Z,18nm,0.8s
KIEV Kiev 23.28 327 P P 09 52 15.1 +0.1
KIEV pmax pmax
comp=Z,18nm,0.8s
LUBAR Lubar, Ukraine 23.45 324 P P 09 52 15.9 -0.8
BURAR Bucovina Array 23.46 317 ⇑P P 09 52 17.2 +0.1
BURAR Bucovina Array 23.46 317 P P 09 52 16.7 -0.3
BURAR Bucovina Array 23.46 317 P P 09 52 17.1 +0.1
BUR08 Bucovina Ar. S 23.48 317 P P 09 52 16.8 -0.5
MI29 MI29, Kamyanyy 23.73 325 P P 09 52 19.5 0.0
comp=Z,247nm,1.3s
MI30 MI30,Zelenitsa 23.79 326 P P 09 52 18.8 -1.2
comp=Z,59nm,1.2s
GZR Gura Zlata 23.92 310 ⇑P P 09 52 21.7 +0.2
GZR Gura Zlata 23.92 310 P P 09 52 21.6 +0.2
HERR Herculane 23.96 309 ⇓P P 09 52 22.5 +0.8
OHR Ohrid 23.99 299 *i* P P 09 52 23.3 +1.2
OBN Obninsk 24.25 343 P P 09 52 25.1 +0.9
OBN Obninsk 24.25 343 *d* *i* P P 09 52 25.2 +1.0
OBN *i* *PP **pP 09 52 27.4 -2.2**
OBN *e*SP **sP 09 52 30.7 -1.1**
OBN *e*PPP PPP 09 53 01.8
OBN *e*S **S 09 56 33.7 -8.2**
OBN *e*SS **SnSn 09 57 27.0 +2.4**
OBN SSS SSS 09 57 44.0
OBN pmax pmax
comp=Z,29nm,0.6s
OBN MLR MLR
comp=Z,384nm,18.0s
MARR Marisel-Cluj 24.25 313 ⇓P P 09 52 25.2 +0.6
MDVR Moldovita 24.39 308 ⇑P P 09 52 26.6 +0.9
KDJ Kajisay 24.42 59 P 09 52 26.8 +0.5
KDJ IAmb IAmb 09 52 35.7
comp=Z,16nm,1.0s
KDJ Kajisay 24.42 59 P P 09 52 26.8 +0.5
KDJ pmax pmax
comp=Z,17nm,1.0s
KEK Kerkira 24.50 295 P P 09 52 26.8 +0.1
DRGR 24.55 313 ⇓P P 09 52 28.3 +1.0
DRGR 24.55 313 P P 09 52 28.3 +1.0
MOS Moscow 24.56 345 eP P 09 52 27.5 +0.4
MOS pmax pmax
comp=Z,95nm,0.8s

BZS Buzias 24.76 310 ⇑P P 09 52 29.9 +0.8
BZS Buzias 24.76 310 P P 09 52 29.8 +0.8
TARG Taragay, Kyrgy 24.78 60 P P 09 52 29.6 -0.2
TARG IAmb IAmb 09 52 38.3
comp=Z,12nm,0.9s
TARG Taragay, Kyrgy 24.78 60 P P 09 52 29.6 -0.2
TARG pmax pmax
comp=Z,12nm,0.9s
ARTI Arti 24.82 13 LR LR 10 05 26.4
comp=Z,174nm,19.3s,baz=236,slow=44
ARTI Arti 24.82 13 *c* *i* P P 09 52 30.3 +0.8
ARTI S S **09 56 53.0 +1.7**
ARTI pmax pmax
comp=Z,31nm,1.2s
RNPP5 Staryi Chortor 25.20 325 P P 09 52 33.2 +0.2
FURI Furi 25.27 204 LR LR 10 03 02.7
comp=Z,507nm,19.1s,baz=46,slow=38
RNPP8 Varash 25.29 325 P P 09 52 33.7 0.0
RNPP9 Sopachiv 25.32 325 P P 09 52 34.0 0.0
PRZ Przheval'sk 25.39 58 P P 09 52 35.1 +0.1
PRZ IAmb IAmb 09 52 46.2
comp=Z,22nm,1.0s
PRZ Przheval'sk 25.39 58 P P 09 52 35.1 +0.1
PRZ pmax pmax
comp=Z,22nm,1.0s
SVE Sverdlovsk 25.69 15 eP P 09 52 38.2 +0.9
SVE pmax pmax
comp=Z,20nm,1.2s
BORK Borovoye 25.74 31 P P 09 52 38.2 +0.5
BORK IAmb IAmb 09 52 52.3
comp=Z,13nm,0.9s
BORK Borovoye 25.74 31 *c* eP P 09 52 38.7 +0.9
BORK pmax pmax
comp=Z,14nm,1.0s
BVA0 Borovoye Array 25.75 31 *i* P P 09 52 37.7 -0.2
BVAR Borovoye Array 25.75 31 P P 09 52 38.5 +0.5
comp=Z,6.5nm,0.6s,baz=229,slow=7.6,SNR=26
BVAR PcP **PcP 09 56 06.9 -0.6**
comp=Z,1.0nm,0.5s,baz=270,slow=1.4,SNR=2.4
BVAR LR LR 10 04 51.8
comp=Z,328nm,18.7s,baz=223,slow=41
comp=Z,6.5nm,0.6s
KIRV Kirov 26.13 1 *c* eP P 09 52 41.0 -0.2
PDGK Podgornoye 26.36 57 P P 09 52 47.0 +3.2
MNK Minsk 26.58 332 *i* P P 09 52 45.6 +0.3
comp=E,30nm,0.7s
MNK *i* P P **09 52 45.6 +0.3**
comp=N,62nm,0.8s
MNK *i* P P **09 52 45.6 +0.3**
comp=Z,119nm,0.7s,baz=137
MNK *i* PP **PnPn 09 53 25.9 0.0**
MNK *i* PPP PPP 09 53 34.1
MNK *i* S **S 09 57 21.1 +2.0**
MNK *i* SS **SnSn 09 58 24.4 +2.8**
MNK *i* SSS SSS 09 58 47.5
MNK *i* LQ LQ 10 01 15.5
MNK *i* LR LR 10 02 16.1
MNK *i* LRM MLR 10 04 27.1
comp=Z,281nm,18.3s
MNK *i* LRM MLR 10 04 32.8
comp=N,220nm,17.6s
MNK *i* LRM MLR 10 04 34.8
comp=E,123nm,15.8s
MNK Minsk 26.58 332 *i* P P 09 52 45.6 +0.3
MNK *i* 09 53 25.9
MNK *i* S **S 09 57 21.1 +2.0**
MNK *i* SS **SnSn 09 58 24.4 +2.8**
MNK *i* SSS SSS 09 58 47.5
MNK pmax pmax
comp=E,30nm,0.7s
MNK pmax pmax
comp=Z,119nm,0.7s
MNK pmax pmax
comp=N,62nm,0.8s
MNK MLR MLR
comp=Z,281nm,18.0s
MNK MLR MLR
comp=N,220nm,18.0s
MNK MLR MLR
comp=E,123nm,16.0s
STHS Stebnicka Huta 26.65 318 eP P 09 52 49.2 +3.1
STHS pmax pmax
comp=Z,8.0nm,0.8s
STHS Stebnicka Huta 26.65 318 eP P 09 52 49.2 +3.1
PSZ Piszkesteto 26.77 314 P P 09 52 48.0 +0.8
PSZ Piszkesteto 26.77 314 P P 09 52 48.1 +0.8
PSZ pmax pmax
comp=Z,12nm,1.0s
TIP Timpagrande 26.78 294 ⇓P P 09 52 48.0 +0.6
TIP Timpagrande 26.78 294 P P 09 52 47.4 0.0
MORH Mrgy, Hungar 26.91 309 P P 09 52 48.6 +0.1
comp=Z,18nm,1.0s
MATE Matera 26.97 297 ⇓P P 09 52 52.0 +2.9
MATE Matera 26.97 297 eP P 09 52 47.1 -2.0
NIE Niedzica 27.19 317 eP P 09 52 55.1 +4.0
NACGM Naroch 27.31 332 eP P 09 52 52.5 +0.6
comp=Z,79nm,0.9s,baz=136
LANS Liptovska Anna 27.55 316 eP P 09 52 56.0 +1.7
LANS pmax pmax
comp=Z,5.0nm,0.8s
LANS Liptovska Anna 27.55 316 eP P 09 52 56.0 +1.7
OJC Ojcow 27.86 318 eP P 09 52 57.4 +0.4
OJC Ojcow 27.86 318 P P 09 52 57.6 +0.6
OJC Ojcow 27.86 318 P P 09 52 57.6 +0.6
OJC Ojcow 27.86 318 P P 09 52 57.1 +0.1
comp=Z,22nm,1.0s
SUW Suwalki 28.25 327 eP P 09 53 00.4 0.0
KURBB Kurchatov Arra 28.40 42 P P 09 53 03.0 +1.2
comp=Z,6.5nm,0.8s,baz=244,slow=9.4,SNR=32
KURBB ScP **ScP 09 59 51.7 -2.5**
comp=Z,0.7nm,0.7s,baz=243,slow=4.1,SNR=4.6
KURBB LR LR 10 06 58.2
comp=Z,76nm,18.7s,baz=177,slow=42
comp=Z,6.5nm,0.8s
KURBB Kurchatov Arra 28.40 42 P P 09 53 02.3 +0.5
KURK Kurchatov 28.50 41 P P 09 53 03.4 +0.8
KURK IAmb IAmb 09 53 05.2
comp=Z,16nm,1.0s
KURK Kurchatov 28.50 41 *c* eP P 09 53 04.4 +1.8
KURK pmax pmax
comp=Z,24nm,1.3s
JAVC Velka Javorina 28.51 314 eP P 09 53 04.2 +1.4
SMOL Smolenice 28.52 313 eP P 09 53 04.1 +1.2
MODS Modra-Piesok 28.56 313 eP P 09 53 03.6 +0.4
MODS pmax pmax
comp=Z,140nm,2.3s
MODS Modra-Piesok 28.56 313 eP P 09 53 03.6 +0.4
PABE Paberze 28.88 330 P P 09 53 06.2 +0.3
PABE Paberze 28.88 330 eP P 09 53 06.5 +0.5
STEB Steborice 28.89 316 eP P 09 53 06.3 +0.1
RONA Rosalia, Austr 28.93 311 *i* P P 09 53 06.7 +0.1
comp=Z,4.4nm,0.6s
MORC Moravsky Berou 28.96 316 eP P 09 53 06.6 -0.2
MAKZ Makanchi 29.01 51 P P 09 53 07.7 +0.4
MAKZ Makanchi 29.01 51 P P 09 53 07.7 +0.4
MAKZ pmax pmax
comp=Z,12nm,1.4s
KLMR Klimovskoe 29.05 351 eP P 09 53 06.1 -1.4
KLMR pmax pmax
comp=Z,39nm,1.3s
MK31 Makanchi Array 29.21 51 *i* P P 09 53 10.1 +1.0
MK31 pmax pmax
comp=Z,8.0nm,0.6s
MKAR Makanchi Array 29.21 51 P P 09 53 10.5 +1.4
comp=Z,7.5nm,0.7s,baz=247,slow=8.3,SNR=78
MKAR LR LR 10 06 16.2
comp=Z,201nm,18.8s,baz=250,slow=39
comp=Z,7.5nm,0.7s
VSVD Vaisvydziai 29.22 331 eP P 09 53 09.5 +0.5
ARSA Arzberg 29.28 310 P P 09 53 10.1 +0.5
ARSA Arzberg 29.28 310 *i* P P 09 53 10.3 +0.6
comp=Z,3.9nm,0.7s
CONA Conrad Observa 29.28 312 *i* P P 09 53 10.1 +0.4
comp=Z,4.6nm,1.0s
VRAC Vranov 29.33 315 LR LR 10 07 04.5
comp=Z,129nm,18.3s,baz=101,slow=41
VRAC Vranov 29.33 315 eP P 09 53 10.1 0.0
KRUC Moravsky 29.36 314 eP P 09 53 10.4 +0.1
KRLC Kraliky 29.53 316 eP P 09 53 12.0 +0.1
KRLC Kraliky 29.53 316 eP P 09 53 12.0 +0.1
OBKA Obir 29.70 308 *i* P P 09 53 14.1 +0.6
comp=Z,20nm,1.4s
DPC Dobruska-Polom 29.91 316 eP P 09 53 14.8 -0.5
DPC Dobruska-Polom 29.91 316 eP P 09 53 14.8 -0.5
VSU Vasula 29.99 337 eP P 09 53 15.2 -0.6

OSTC Ostas 30.06 317 eP P 09 53 16.6 +0.1
OSTC Ostas 30.06 317 eP P 09 53 16.6 +0.1
PBUR Paburge 30.09 330 eP P 09 53 17.3 +0.6
KSP Ksiaz 30.14 317 eP P 09 53 17.1 -0.1
KSP Ksiaz 30.14 317 P P 09 53 17.6 +0.4
comp=Z,12nm,1.1s
UPC Upice 30.16 316 eP P 09 53 17.6 +0.2
UPC Upice 30.16 316 eP P 09 53 17.6 +0.2
MOA Molln 30.27 311 *i* P P 09 53 18.9 +0.4
comp=Z,8.8nm,0.6s
CESX Cesi 30.29 300 P P 09 53 19.3 +0.7
CESX IAmb IAmb 09 53 27.0
comp=Z,14nm,0.8s
CKRC Cesky Krumlov 30.56 313 eP P 09 53 20.9 -0.1
CKRC Cesky Krumlov 30.56 313 eP P 09 53 20.9 -0.1
BIOA Bad Ischl, Aus 30.63 310 *i* P P 09 53 22.2 +0.6
comp=Z,14nm,0.5s,SNR=9.0
KBA Koelnbreinsper 30.65 309 *i* P P 09 53 22.3 +0.3
comp=Z,14nm,0.6s,SNR=7.2
ZVC Zvikov 30.84 314 eP P 09 53 23.8 +0.4
GEC2 GERESS Array S 30.95 312 eP P 09 53 23.8 -0.7
comp=Z,2.9nm,0.9s,baz=109,slow=9.3
GERES GERESS Array B 30.95 312 P P 09 53 24.3 -0.2
comp=Z,1.9nm,0.6s,baz=111,slow=7.3,SNR=16
GERES PcP **PcP 09 56 19.3 -1.2**
comp=Z,0.6nm,0.6s,baz=115,slow=1.6,SNR=3.1
GERES LR LR 10 08 47.7
comp=Z,81nm,20.2s,baz=81,slow=42
comp=Z,1.9nm,0.6s
ARBE Arbavere 30.99 337 eP P 09 53 25.5 +0.9
SLIT Slitere, Latvi 31.01 332 eP P 09 53 25.0 +0.2
KHC Kasperske Hory 31.12 313 P P 09 53 26.3 +0.4
KHC IAmb IAmb 09 53 27.1
comp=Z,12nm,1.3s
KHC Kasperske Hory 31.12 313 *c* eP P 09 53 26.7 +0.8
KHC pmax pmax
comp=Z,10.0nm,1.3s
KHC Kasperske Hory 31.12 313 eP P 09 53 25.6 -0.3
ABTA Abfaltersbach 31.12 308 *i* P P 09 53 26.7 +0.7
comp=Z,17nm,1.1s
LESA Schwarzleotal 31.18 309 *i* P P 09 53 26.6 0.0
comp=Z,7.9nm,0.5s
LESA eS **S 09 58 32.1 +0.2**
comp=Z,8.8nm,1.6s
RJOB Jochberg 31.19 310 eP P 09 53 25.7 -0.9
comp=Z,6.7nm,0.8s,baz=109,slow=9.3
MTSE Matsula 31.20 335 eP P 09 53 26.9 +0.5
CTI Castel Tesino 31.54 306 P P 09 53 30.4 +0.7
CTI IAmb IAmb 09 53 31.3
comp=Z,8.4nm,0.8s
CTI Castel Tesino 31.54 306 P P 09 53 30.4 +0.7
CTI pmax pmax
comp=Z,8.0nm,0.8s
LODK Lodwar 31.54 206 P P 09 53 29.3 -0.6
WET Wettzell 31.55 313 eP P 09 53 29.4 -0.4
comp=Z,6.0nm,0.8s,baz=109,slow=9.3
ZCCA Zocca 31.69 303 P P 09 53 31.5 +0.4
WTTA Wattenberg 31.82 309 *i* P P 09 53 32.4 0.0
comp=Z,16nm,0.6s,SNR=8.9
WTTA *i* S S **09 58 39.6 -2.5**
comp=Z,22nm,1.6s
WATA Walderalm 31.88 309 *i* P P 09 53 32.7 -0.1
comp=Z,28nm,1.3s,SNR=5.9
WATA eS **S 09 58 40.1 -2.9**
comp=Z,20nm,1.5s
SQTA Sankt Quirin 32.10 308 *i* P P 09 53 34.5 -0.2
comp=Z,19nm,0.5s,SNR=9.3
SQTA *i* S S **09 58 44.0 -2.3**
comp=Z,13nm,1.1s
MEF Metsahovi 32.11 337 eP P 09 53 34.8 +0.4
ROTZ Rotzenmuhle 32.17 313 eP P 09 53 35.1 0.0
comp=Z,2.3nm,0.7s,baz=109,slow=9.3
MOTA Moosalm 32.20 309 *i* P P 09 53 35.1 -0.4
comp=Z,22nm,0.8s,SNR=8.3
MOTA eS **S 09 58 44.2 -3.7**
comp=Z,11nm,1.0s
CLL Collm 32.23 316 *i* P P 09 53 35.5 -0.1
CLL pmax pmax
comp=Z,15nm,1.2s
CLL Collm 32.23 316 *i* P P 09 53 35.5 -0.1
comp=Z,15nm,1.2s
CLL Collm 32.23 316 eP P 09 53 35.1 -0.5
comp=Z,5.7nm,0.8s,baz=109,slow=9.3
RUE Ruedersdorf 32.24 319 eP P 09 53 34.7 -0.9
comp=Z,15nm,0.8s,baz=109,slow=9.3
FUR Furstenfeldbru 32.29 310 eP P 09 53 35.9 -0.3
comp=Z,45nm,0.8s,baz=109,slow=9.3
MANZ Manzenberg 32.30 314 eP P 09 53 36.1 -0.2
comp=Z,1.0nm,0.8s,baz=109,slow=9.3
WMQ Urumqi 32.31 58 eP P 09 53 42.4 +5.9
WMQ pmax pmax
comp=Z,8.0nm,0.9s
WMQ L L
comp=Z,610nm,24.1s
WMQ L L
comp=Z,180nm,23.8s
FETA Feichten 32.37 308 *i* P P 09 53 37.0 -0.1
comp=Z,26nm,1.0s,SNR=7.5
FETA eS **S 09 58 48.2 -2.4**
comp=Z,13nm,1.4s
JOF Joensuu 32.45 345 eP P 09 53 37.1 -0.3
RETA Reutte 32.45 309 *i* P P 09 53 37.0 -0.8
comp=Z,11nm,0.9s
RETA *i* S S **09 58 49.0 -2.8**
comp=Z,14nm,1.2s
FIA1 FINESS Array S 32.54 340 P P 09 53 38.1 -0.1
FINES FINESS Array B 32.54 340 P P 09 53 38.0 -0.2
comp=Z,4.4nm,0.4s,baz=146,slow=10,SNR=79
FINES PcP **PcP 09 56 23.6 -0.8**
comp=Z,1.1nm,0.6s,baz=152,slow=6.3,SNR=1.5
FINES LR LR 10 08 28.0
comp=Z,213nm,18.1s,baz=193,slow=39
comp=Z,4.4nm,0.4s
FINES FINESS Array B 32.54 340 P P 09 53 38.1 -0.1
FINES FINESS Array B 32.54 340 *i* P P 09 53 38.4 +0.2
FINES pmax pmax
comp=Z,4.0nm,0.4s
FUORN Ofenpass-Fuorn 32.60 307 P P 09 53 39.2 0.0
FUORN IAmb IAmb 09 54 10.2
comp=Z,8.9nm,1.1s
KEST Kesra 32.73 287 P P 09 53 42.9 +2.7
comp=Z,9.2nm,0.8s,baz=42,slow=5.3,SNR=3.8
GRF Grafenberg Arr 32.75 313 eP P 09 53 40.6 +0.3
comp=Z,14nm,0.8s,baz=109,slow=9.3
MOX Moxa 32.81 315 eP P 09 53 40.5 -0.3
comp=Z,4.7nm,1.1s,baz=109,slow=9.3
BSD Bornholm Skovb 32.84 324 *i* P P 09 53 39.8 -1.1
DAVOX Davos/Dischmat 32.89 307 LR LR 10 10 30.1
comp=Z,108nm,18.1s,baz=78,slow=43
UBR Ueberruh 32.93 309 eP P 09 53 41.6 -0.3
comp=Z,20nm,0.9s,baz=109,slow=9.3
DAVA Damuels 32.99 308 *i* P P 09 53 42.3 -0.2
comp=Z,61nm,1.1s,SNR=9.7
DAVA *i* S S **09 58 56.7 -3.6**
comp=Z,18nm,1.4s
BLEU Blekinge 33.02 326 *i* P P 09 53 41.7 -0.7
TUE Stuetta 33.19 307 P P 09 53 43.8 -0.5
TUE Stuetta 33.19 307 P P 09 53 44.3 0.0
comp=Z,54nm,2.4s
DGZ Jazzator, Alta 33.35 47 *i* P P 09 53 46.6 +1.0
DGZ pmax pmax
comp=Z,4.0nm,0.6s
ZAA0 Zalesovo Array 33.35 39 P P 09 53 45.2 -0.2
ZAA0 IAmb IAmb 09 53 53.6
comp=Z,18nm,1.1s
ZALV Zalesovo Beam 33.35 39 P P 09 53 45.9 +0.5
comp=Z,5.1nm,0.5s,baz=260,slow=8.9,SNR=33
ZALV LR LR 10 09 58.5
comp=Z,57nm,21.6s,baz=14,slow=41
comp=Z,5.1nm,0.5s
KEF Keuruu 33.47 340 eP P 09 53 46.7 +0.4
SUF Sumiainen 33.55 341 eP P 09 53 47.4 +0.4
RAF Rauma 33.59 336 eP P 09 53 45.6 -1.7
AAL Aland 33.62 334 eP P 09 53 47.6 0.0
FLTG Flechtingen 33.62 317 eP P 09 53 47.8 +0.1
comp=Z,7.6nm,0.9s,baz=109,slow=9.3
LUNU Lund 33.83 324 *i* P P 09 53 49.2 -0.3
UBBA Unterbreizbach 33.84 314 eP P 09 53 49.9 +0.3
comp=Z,2.8nm,0.6s,baz=109,slow=9.3
CLZ Clausthal 33.95 316 eP P 09 53 51.0 +0.3
comp=Z,14nm,0.8s,baz=109,slow=9.3
DEL Delary 34.03 325 *i* P P 09 53 50.7 -0.6
SENIN Lac Senin/Sane 34.56 306 P P 09 53 55.8 -0.5
VAF Ylistaro 34.79 339 eP P 09 53 58.3 +0.5
BNI Bardonecchia 34.82 304 P P 09 53 58.3 -0.2
BNI Bardonecchia 34.82 304 P P 09 53 58.3 -0.2

BNI pmax pmax
comp=Z,22nm,0.8s
KASTN Kahler Asten 34.91 315 *e*P **P 09 53 59.8 +0.8**
comp=Z,8.2nm,0.8s,baz=109,slow=9.3
ECH Echery 34.98 309 P **P 09 53 59.3 -0.4**
ECH IAmb IAmb 09 54 00.4
comp=Z,16nm,1.2s
ECH Echery 34.98 309 P **P 09 53 59.3 -0.4**
ECH pmax pmax
comp=Z,15nm,1.2s
BORU Boraas 35.13 327 *i* P **P 09 54 00.1 -0.7**
WLF Walferdange 35.93 311 **P 09 54 07.4 -0.3**
WLF Walferdange 35.93 311 P **P 09 54 07.4 -0.3**
WLF pmax pmax
comp=Z,19nm,0.8s
WLF Walferdange 35.93 311 *d*P **P 09 54 07.3 -0.4**
comp=Z,16nm,1.0s
HFS Hagfors 36.06 331 P **P 09 54 08.9 +0.2**
comp=Z,64nm,0.7s,baz=120,slow=10,SNR=181
HFS LR LR 10 10 12.2
comp=Z,199nm,20.1s,baz=143,slow=38
BTNL Ternell 36.15 313 *d*P **P 09 54 11.1 +1.5**
comp=Z,9.4nm,0.8s
MEM Membach 36.23 313 *d*P **P 09 54 10.5 +0.2**
comp=Z,8.7nm,1.1s
STRU Stroemstad 36.56 328 *i* P **P 09 54 11.9 -1.0**
RCHB Rochefort 36.62 312 *d*P **P 09 54 13.7 +0.1**
comp=Z,9.0nm,1.0s
BCLA Clavier 36.63 312 *d*P **P 09 54 14.0 +0.3**
BGES Gesves 36.75 312 *d*P **P 09 54 15.3 +0.6**
DOU Dourbes 37.00 312 *d*P **P 09 54 17.1 +0.2**
comp=Z,12nm,1.0s
MBAR Mbarara 37.07 211 P **P 09 54 18.1 +0.1**
MBAR IAmb IAmb 09 54 20.8
comp=Z,13nm,1.2s
MBAR Mbarara 37.07 211 *ce*P **P 09 54 20.5 +2.5**
MBAR pmax pmax
comp=Z,9.0nm,1.0s
OSL Oslo 37.22 329 *e*P **P 09 54 19.0 +0.4**
NC602 NORSAR Array S 37.28 331 *e*P **P 09 54 20.1 +1.0**
UCC Uccle 37.29 313 *d*P **P 09 54 19.9 +0.6**
comp=Z,14nm,0.8s
HOMB Hombersund 37.44 326 *e*P **P 09 54 21.3 +0.8**
KONO Kongsberg 37.57 328 *e*P **P 09 54 21.4 -0.2**
NB2 NORSAR Subarra 37.58 331 P **P 09 54 21.4 -0.3**
comp=Z,8.5nm,0.6s,baz=123,slow=8.6
NB2 NORSAR Subarra 37.58 331 P **P 09 54 21.4 -0.3**
NOA NORSAR Array B 37.58 331 P **P 09 54 21.1 -0.7**
comp=Z,16nm,0.8s,baz=123,slow=8.3,SNR=40
NOA LR LR 10 10 58.1
comp=Z,199nm,19.7s,baz=130,slow=38
comp=Z,16nm,0.8s
SNART Snartemo 38.09 325 *i* P **P 09 54 21.5 -4.5**
SKAR Skarslia 38.63 329 *e*P **P 09 54 31.5 +0.9**
BLS5 Blasjo 38.90 327 *e*P **P 09 54 34.8 +2.0**
BRDH Bariadhala 38.95 93 LR LR 10 14 57.9
comp=Z,103nm,21.4s,baz=40,slow=43
DOMB Dombas 38.99 331 *e*P **P 09 54 34.0 +0.4**
ODD1 Odda 39.03 327 *e*P **P 09 54 35.1 +1.2**
VADS Vadso 39.23 350 *e*P **P 09 54 36.0 +0.6**
NSS Namsos 39.28 336 *e*P **P 09 54 36.3 +0.4**
ARA0 ARCESS Array S 39.37 347 *e*P **P 09 54 37.5 +0.9**
ARCES ARCESS Array B 39.37 347 P **P 09 54 37.0 +0.3**
comp=Z,2.1nm,0.5s,baz=154,slow=8.4,SNR=24
ARCES LR LR 10 12 26.4
comp=Z,219nm,20.0s,baz=144,slow=38
comp=Z,2.1nm,0.5s
ARCES ARCESS Array B 39.37 347 P **P 09 54 37.0 +0.3**
KMY Karmoy 39.38 326 *e*P **P 09 54 38.1 +1.4**
KTK1 Kautokeino 39.38 346 *e*P **P 09 54 37.4 +0.7**
MOR8 Moi Rana 39.52 339 *e*P **P 09 54 37.9 +0.1**
RAUS Rausandaksla 39.81 339 *e*P **P 09 54 40.8 +0.5**
BER Bergen 39.81 328 *e*P **P 09 54 41.2 +0.8**
MOL Molde 39.87 332 *e*P **P 09 54 41.5 +0.7**
KNGR Kungurtug, Tuv 39.88 48 *i* P **P 09 54 42.9 +1.7**
KNGR pmax pmax
comp=Z,24nm,0.9s
LEIR Leirfjorden 39.89 338 *e*P **P 09 54 41.5 +0.7**
ASK Askoy 39.92 328 *e*P **P 09 54 41.9 +0.7**
STOK Stokkvaagen 40.06 338 *e*P **P 09 54 42.6 +0.3**
FAUS Fauske 40.09 341 *e*P **P 09 54 42.8 +0.3**
KONS Konsvik 40.13 339 *e*P **P 09 54 43.5 +0.6**
VAGH Vaagaholmen 40.24 339 *e*P **P 09 54 44.2 +0.5**
JETT Jettan, Norway 40.42 345 *e*P **P 09 54 46.1 +0.8**
FOO Floro 40.46 329 *e*P **P 09 54 46.5 +0.8**
STEI Steigen 40.48 341 *e*P **P 09 54 46.4 +0.6**
HAMF Hammerfest 40.65 347 *e*P **P 09 54 48.0 +0.9**
TRO Tromso 40.81 345 *e*P **P 09 54 48.8 +0.3**
MOY Mondy 42.18 47 *e*P **P 09 55 02.2 +2.0**
MOY pmax pmax
comp=Z,15nm,1.9s
EKA Eskdalemuir Ar 42.63 318 P **P 09 55 02.9 -0.7**
comp=Z,4.7nm,0.7s,baz=105,slow=8.3,SNR=19
comp=Z,4.7nm,0.7s
ESDC Sonseca Array 42.77 295 P **P 09 55 05.4 +0.3**
comp=Z,3.0nm,0.9s,baz=66,slow=8.5,SNR=16
ESDC PcP **PcP 09 56 56.3 0.0**
comp=Z,0.8nm,0.8s,baz=70,slow=3.2,SNR=4.5
ESDC ScP **ScP 10 00 45.0 -1.6**
comp=Z,0.3nm,0.5s,baz=64,slow=4.0,SNR=4.1
comp=Z,3.0nm,0.9s
NRIK Noril'sk 42.82 19 P **P 09 55 05.8 +0.9**
comp=Z,11nm,1.0s,baz=230,slow=4.6,SNR=19
NRIK LR LR 10 16 55.2
comp=Z,59nm,19.3s,baz=218,slow=42
comp=Z,11nm,1.0s
NRIK Noril'sk 42.82 19 *i* P **P 09 55 05.6 +0.7**
NRIK pmax pmax
comp=Z,15nm,1.2s
ZAK Zakamensk 43.52 49 *e*P **P 09 55 10.9 -0.1**
ZAK pmax pmax
comp=Z,6.0nm,1.8s
TLY Talaya 43.83 47 LR LR 10 15 08.8
comp=Z,128nm,19.3s,baz=267,slow=38
TLY Talaya 43.83 47 *ce*P **P 09 55 15.0 +1.6**
TLY pmax pmax
comp=Z,2.0nm,0.8s
DSB Dublin 44.22 315 P **P 09 55 16.3 -0.1**
IWEX Carrickbyrne, 44.39 314 P **P 09 55 19.0 +1.2**
PBRG Braganca 44.61 299 *e*P **P 09 55 19.9 +0.1**
PBRG *i* IAmb IAmb 09 55 42.6
comp=Z,39nm,1.9s
LZDM Lanzhou Array 44.99 70 P **P 09 55 23.7 +0.4**
comp=Z,1.6nm,0.4s,baz=263,slow=7.1,SNR=4.4
comp=Z,1.6nm,0.4s
PBAR Barrancos 45.38 294 *e*P **P 09 55 26.5 +0.6**
PBAR *i* IAmb IAmb 09 55 40.2
comp=Z,23nm,1.5s
MTE Manteigas 45.40 297 *e*P **P 09 55 27.2 +1.0**
MTE *i* IAmb IAmb 09 55 29.6
comp=Z,30nm,2.1s
PCBR Castelo Branco 45.43 296 *e*P **P 09 55 27.2 +0.9**
PCBR *i* IAmb IAmb 09 55 31.5
comp=Z,30nm,1.7s
PMRV Marv??o 45.43 295 *e*P **P 09 55 27.1 +0.7**
PMRV *i* IAmb IAmb 09 55 35.2
comp=Z,27nm,2.1s
POLO Lamas de Olo 45.45 298 *e*P **P 09 55 27.1 +0.6**
POLO *i* IAmb IAmb 09 55 42.8
comp=Z,20nm,1.5s
HOPEN Hopen 45.51 352 *e*P **P 09 55 27.6 +1.1**
SONM Songimo Array 45.54 53 P **P 09 55 27.9 +0.6**
comp=Z,3.3nm,0.7s,baz=272,slow=8.8,SNR=9.7
SONM LR LR 10 17 20.2
comp=Z,95nm,18.6s,baz=74,slow=40
comp=Z,3.3nm,0.7s
PESTR Estremoz 45.68 295 *e*P **P 09 55 28.7 +0.4**
PESTR *i* IAmb IAmb 09 55 33.3
comp=Z,21nm,1.7s
PGAV Gavieira, Arco 45.72 299 *e*P **P 09 55 29.7 +0.9**
PGAV *i* IAmb IAmb 09 55 38.2
comp=Z,43nm,1.9s
ULN Ulaanbaatar 45.98 53 P **P 09 55 31.5 +0.7**
ULN Ulaanbaatar 45.98 53 *i* P **P 09 55 31.6 +0.8**
ULN pmax pmax
comp=Z,14nm,1.0s
ULN Ulaanbaatar 45.98 53 P **P 09 55 31.8 +1.0**
comp=Z,75nm,1.0s
PSARD Sardoal 45.99 296 *e*P **P 09 55 31.7 +0.9**
PSARD *i* IAmb IAmb 09 55 50.6
comp=Z,31nm,1.7s
PARRA Arraiolos 46.03 295 *e*P **P 09 55 30.9 -0.2**
PARRA *i* IAmb IAmb 09 55 32.5
comp=Z,21nm,1.7s
PZH PanZhiHua 46.04 83 P **P 09 55 32.3 +0.8**

PBEJ Beja 46.05 294 *e*P **P 09 55 32.0 +0.8**
PBEJ *i* IAmb IAmb 09 55 40.2
comp=Z,15nm,2.3s
PMTG Montargil 46.13 295 *e*P **P 09 55 32.8 +0.9**
PMTG *i* IAmb IAmb 09 55 37.9
comp=Z,19nm,2.0s
PCAS Casmilo, Conde 46.17 296 *e*P **P 09 55 33.3 +1.1**
PCAS *i* IAmb IAmb 09 55 45.0
comp=Z,39nm,1.9s
CMAR Chiang Mai Arr 46.93 95 P **P 09 55 38.0 -0.4**
comp=Z,1.3nm,0.3s,baz=296,slow=8.7,SNR=5.0
CMAR LR LR 10 19 33.9
comp=Z,29nm,18.5s,baz=315,slow=41
comp=Z,1.3nm,0.3s
PMAFR Mafra 46.96 295 *e*P **P 09 55 36.5 -1.9**
PMAFR *i* IAmb IAmb 09 55 42.8
comp=Z,70nm,1.4s
TORD Torodi Ar. Bea 47.10 257 P **P 09 55 39.4 -0.3**
comp=Z,9.8nm,0.7s,baz=61,slow=5.3,SNR=48
comp=Z,9.8nm,0.7s
KMI2 Kunming 47.38 84 P **P 09 55 44.2 +2.2**
KMI2 pmax pmax
comp=Z,14nm,0.9s
SPA0 Spitsbergen Ar 47.95 351 *e*P **P 09 55 46.2 +0.6**
SPITS Spitsbergen Ar 47.95 351 P **P 09 55 45.8 +0.3**
comp=Z,6.6nm,0.4s,baz=133,slow=9.3,SNR=86
comp=Z,6.6nm,0.4s
BTO2 Baotou 48.82 62 *e*P **P 09 55 53.9 +1.0**
BTO2 pP **pP 09 55 58.4 0.0**
BTO2 sP **sP 09 56 00.9 +0.3**
BTO2 pmax pmax
comp=Z,54nm,0.8s
BTO2 pmax pmax
comp=Z,150nm,4.8s
BTO2 L L
comp=Z,280nm,10.9s
BTO2 L L
comp=Z,410nm,14.4s
BTO2 L L
comp=Z,500nm,17.9s
XAN Xi'an 49.62 71 ⇓P **P 09 55 59.2 +0.2**
XAN pmax pmax
comp=Z,8.0nm,1.3s
XAN L L
comp=Z,180nm,14.4s
XAN L L
comp=Z,180nm,15.8s
XAN L L
comp=Z,180nm,18.0s
HHC Hu-ho-hao-te 50.06 62 *e*P **P 09 56 03.2 +0.9**
HHC pmax pmax
comp=Z,9.0nm,0.6s
HHC pmax pmax
comp=Z,140nm,4.8s
HHC L L
comp=Z,130nm,11.4s
HHC L L
comp=Z,160nm,12.0s
HHC L L
comp=Z,150nm,10.0s
OPO Ambohidratompo 50.77 182 LR LR 10 18 36.3
comp=Z,109nm,19.3s,baz=192,slow=37
LSZ Lusaka 51.42 206 LR LR 10 19 24.7
comp=Z,230nm,18.9s,baz=184,slow=38
BORG Borgarnes 52.73 330 LR LR 10 22 46.0
comp=Z,71nm,19.2s,baz=90,slow=40
DAG Danmarks Havn 53.54 345 *i* P **P 09 56 27.0 -0.6**
BJI2 Beijing 53.67 62 P **P 09 56 29.7 +0.6**
BJI2 pP **pP 09 56 34.0 -0.7**
BJI2 sP **sP 09 56 36.1 -0.7**
BJI2 PcP **PcP 09 57 35.1 -0.2**
BJI2 S **S 10 04 00.9 -1.4**
BJI2 pmax pmax
comp=Z,4.0nm,0.6s
BJI2 pmax pmax
comp=Z,70nm,6.3s
TIA Tai'an 55.44 66 P **P 09 56 42.9 +0.8**
TIA sP **sP 09 56 49.2 -0.6**
TIA pmax pmax
comp=Z,18nm,0.9s
DBIC Dimbokro 56.03 255 P **P 09 56 47.3 +0.7**
comp=Z,3.6nm,0.5s,baz=49,slow=7.6,SNR=5.9
DBIC LR LR 10 22 51.6
comp=Z,121nm,18.7s,baz=122,slow=38
comp=Z,3.6nm,0.5s
TIXI Tiksi 56.42 22 LR LR 10 25 17.8
comp=Z,109nm,18.4s,baz=323,slow=40
TIXI Tiksi 56.42 22 P **P 09 56 48.4 -0.1**
TIXI IAmb IAmb 09 56 55.7
comp=Z,9.6nm,0.9s
TIXI Tiksi 56.42 22 P **P 09 56 48.4 -0.1**
TIXI pmax pmax
comp=Z,10.0nm,0.9s
YAK Yakutsk 57.69 33 LR LR 10 26 36.0
comp=Z,81nm,18.6s,baz=264,slow=41
ZEA Zeya 57.95 43 *e*P **P 09 57 01.3 +1.7**
ZEA MLR MLR
comp=Z,100nm,17.0s
DL2 Dalian 58.03 61 P **P 09 57 00.4 0.0**
DL2 pmax pmax
comp=Z,47nm,0.7s
NJ2 Nanjing 58.16 70 *e*P **P 09 57 01.7 +0.3**
NJ2 pmax pmax
comp=Z,14nm,0.5s
SUMG Summit 58.58 339 P **P 09 57 04.6 +0.4**
SUMG Summit 58.58 339 P **P 09 57 04.6 +0.4**
SUMG pmax pmax
comp=Z,37nm,0.9s
SUMG Summit 58.58 339 *i* P **P 09 57 04.0 -0.2**
HEH HeiHe 58.86 47 *e*P **P 09 57 06.0 0.0**
HEH pmax pmax
comp=Z,19nm,1.1s
HEH L L
comp=Z,99nm,14.7s
HEH L L
comp=Z,170nm,13.1s
HEH L L
comp=Z,280nm,15.3s
CN2 Changchun 59.32 55 P **P 09 57 09.1 -0.2**
CN2 sP sP 09 57 15.9 -1.1
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 L L
comp=Z,200nm,12.0s
CN2 L L
comp=Z,200nm,12.0s
CN2 L L
comp=Z,200nm,13.0s
BNX BinXian 60.08 52 ⇓P **P 09 57 14.3 -0.2**
BNX pmax pmax
comp=Z,8.0nm,1.3s
KGCAE Kacgae 60.61 208 P **P 09 57 19.3 +0.9**
LBTB Lobatse 61.31 204 LR LR 10 24 49.1
comp=Z,185nm,18.7s,baz=55,slow=37
LBTB Lobatse 61.31 204 P **P 09 57 23.0 -0.1**
LBTB IAmb IAmb 09 57 40.4
comp=Z,15nm,1.3s
LBTB Lobatse 61.31 204 P **P 09 57 23.0 -0.1**
LBTB pmax pmax
comp=Z,15nm,1.3s
KLR Kul'dur 61.84 48 LR LR 10 28 11.4
comp=Z,47nm,21.7s,baz=280,slow=40
KS19 Wonju Array Si 63.13 61 P **P 09 57 35.0 -0.3**
KSAR Wonju Array Be 63.17 61 P **P 09 57 35.3 -0.2**
KSAR Wonju Array Be 63.17 61 P **P 09 57 35.3 -0.2**
KSRS Korea Array 63.19 61 P **P 09 57 35.3 -0.3**
comp=Z,12nm,0.6s,baz=283,slow=6.7,SNR=77
KSRS LR LR 10 29 30.9
comp=Z,62nm,19.5s,baz=285,slow=40
comp=Z,12nm,0.6s
USRK Ussuriysk Ar. 63.66 53 P **P 09 57 38.0 -0.6**
comp=Z,3.8nm,0.7s,baz=298,slow=6.7,SNR=8.0
comp=Z,3.8nm,0.7s
USRK Ussuriysk Ar. 63.66 53 P **P 09 57 38.0 -0.6**
SFJD Kangerlussuaq 64.12 334 LR LR 10 25 30.5
comp=Z,116nm,19.5s,baz=122,slow=36
BOSA Boshof 64.75 203 P **P 09 57 45.2 -0.7**
comp=Z,6.1nm,1.0s,baz=24,slow=7.7,SNR=6.1
BOSA LR LR 10 27 19.5
comp=Z,241nm,19.5s,baz=26,slow=37
comp=Z,6.1nm,1.0s
JNU Nakatsue 67.11 64 LR LR 10 30 48.2
comp=Z,77nm,19.1s,baz=249,slow=39
SEY Seymchan 67.39 29 *e*P **P 09 58 00.4 -2.0**
SEY pmax pmax
comp=Z,12nm,1.2s
JOW Kunigami 67.76 72 LR LR 10 31 24.6

comp=Z,76nm,19.1s,baz=236,slow=39
LEM Lembang 68.15 114 LR LR 10 29 21.7
comp=Z,63nm,19.8s,baz=320,slow=37
MA2 Magadan 68.22 32 LR LR 10 31 30.5
comp=Z,44nm,18.7s,baz=307,slow=39
MA2 Magadan 68.22 32 P **P 09 58 07.7 0.0**
MA2 IAmb IAmb 09 58 08.9
comp=Z,5.9nm,1.0s
MA2 Magadan 68.22 32 P **P 09 58 07.7 0.0**
MA2 pmax pmax
comp=Z,6.0nm,1.0s
YSS Yuzhno-Sakhali 69.53 47 *e*P **P 09 58 15.0 -1.1**
YSS pmax pmax
comp=Z,10.0nm,1.1s
YSS MLR MLR
comp=Z,200nm,12.0s
YSS MLR MLR
comp=E,200nm,13.0s
SUR Sutherland 69.72 205 LR LR 10 29 52.7
comp=E,265nm,18.4s,baz=360,slow=37
RES Resolute Bay 70.50 350 LR LR 10 31 00.4
comp=E,77nm,18.6s,baz=18,slow=37
ASAJ Asahikawa 70.69 50 LR LR 10 32 39.5
comp=E,61nm,18.4s,baz=330,slow=39
MJAR Matsushiro Ar 71.08 58 LR LR 10 31 13.5
comp=E,50nm,20.7s,baz=334,slow=37
PETK Petropavlovsk- 74.84 36 LR LR 10 37 13.0
comp=E,47nm,18.1s,baz=288,slow=40
A21K Barrow 74.94 8 P **P 09 58 48.5 +0.5**
baz=338
A19K Wainwright 75.37 10 P **P 09 58 51.3 +0.8**
baz=334,SNR=18
A36M Sachs Harbour 75.76 358 **P 09 58 52.1 -0.5**
A36M Sachs Harbour 75.76 358 P **P 09 58 52.6 -0.1**
baz=5.1,SNR=15
B20K Meade River 76.10 9 P **P 09 58 55.2 +0.6**
baz=338
B22K Teshekpuk Lake 76.24 8 P **P 09 58 55.9 +0.4**
baz=341,SNR=19
C16K Lisburne Hills 76.38 12 P **P 09 58 55.9 -0.4**
baz=331
C17K DeLong Mountai 76.59 12 P **P 09 58 57.6 +0.1**
baz=332,SNR=18
C19K Lookout Ridge 76.59 10 P **P 09 58 57.5 0.0**
baz=336
C18K Utukok River 76.76 11 P **P 09 58 58.6 +0.1**
baz=334,SNR=21
B21K Ikpikpuk River 76.78 8 P **P 09 58 59.1 +0.5**
baz=340
RDOG Red Dog Mine 77.01 12 P **P 09 58 60.0 +0.1**
baz=333,SNR=5.9
C23K Itkillik River 77.02 7 P **P 09 59 00.6 +0.7**
baz=343,SNR=9.9
SCHQ Schefferville 77.07 328 P **P 09 58 59.9 -0.6**
comp=E,6.8nm,0.6s,baz=43,slow=4.9,SNR=20
SCHQ LR LR 10 33 28.7
comp=E,94nm,18.1s,baz=177,slow=36
comp=E,6.8nm,0.6s
C21K Knifeblade Rid 77.20 8 P **P 09 59 01.5 +0.6**
baz=340
D17K Noatak River 77.30 12 P **P 09 59 01.3 -0.2**
baz=333,SNR=16
C24K Franklin Bluff 77.31 6 P **P 09 59 02.2 +0.6**
baz=345
D19K Kuna River 77.37 10 P **P 09 59 02.0 +0.1**
baz=337
D20K Etivluk River 77.38 9 P **P 09 59 02.2 +0.3**
baz=338,SNR=7.7
C26K Camden Bay 77.43 5 P **P 09 59 02.5 +0.3**
baz=348
D22K Ayikyak River 77.71 8 **P 09 59 03.4 -0.4**
D22K IAmb IAmb 09 59 05.5
comp=Z,11nm,1.1s
D22K Ayikyak River 77.71 8 P **P 09 59 04.1 +0.3**
baz=342
C27K Jago River 77.80 4 P **P 09 59 04.7 +0.5**
baz=349
D23K Nanushuk River 77.85 7 P **P 09 59 04.9 +0.3**
baz=343,SNR=8.9
D24K Happy Valley 77.85 6 P **P 09 59 04.9 +0.3**
baz=345
E20K Nigu River 77.86 9 P **P 09 59 04.8 +0.1**
baz=338
D25K Kavik River 77.90 5 P **P 09 59 05.1 +0.2**
baz=347,SNR=13
E18K Tukpahlearik C 77.97 11 P **P 09 59 05.2 0.0**
baz=335
E21K Killik River 77.97 8 P **P 09 59 05.3 0.0**
baz=340
E17K Hotham Inlet 78.07 12 P **P 09 59 05.4 -0.4**
baz=334,SNR=5.2
TNA Tin City 78.23 15 P **P 09 59 06.5 -0.2**
baz=329,SNR=5.4
TOLK Toolik Lake Re 78.28 7 P **P 09 59 07.4 +0.4**
baz=344,SNR=14
D27M Malcolm River 78.34 4 P **P 09 59 07.0 -0.3**
baz=352
C36M Paulatuk 78.36 357 P **P 09 59 06.5 -0.9**
baz=6.1,SNR=8.9
D28M Stokes Point 78.36 3 P **P 09 59 07.6 +0.3**
baz=353,SNR=8.9
E19K Redstone River 78.46 10 P **P 09 59 07.7 -0.3**
baz=338
E22K Anaktuvuk Pass 78.52 8 P **P 09 59 08.2 -0.1**
baz=342,SNR=5.9
F14K Arctic Creek 78.64 14 P **P 09 59 08.5 -0.5**
baz=330
F17K Baldwin Pennin 78.75 12 P **P 09 59 09.2 -0.3**
baz=334
F15K North Star Dit 78.77 13 **P 09 59 09.8 0.0**
F15K IAmb IAmb 09 59 11.4
comp=Z,11nm,1.4s
F15K North Star Dit 78.77 13 P **P 09 59 09.8 0.0**
baz=332,SNR=8.5
E23K Chandalar 78.83 7 P **P 09 59 10.3 +0.2**
baz=344,SNR=6.2
GAMB Gambell 78.86 17 P **P 09 59 10.1 -0.1**
baz=326
F18K Selawik 78.87 11 P **P 09 59 09.9 -0.2**
baz=336,SNR=13
E24K Your Creek 78.93 7 P **P 09 59 10.7 +0.1**
baz=345
F19K Shaleruckik Mo 78.96 10 P **P 09 59 09.9 -0.8**
baz=337
F20K Avaraart Lake 79.06 10 P **P 09 59 11.0 -0.2**
baz=339
E25K Arctic Village 79.14 5 P **P 09 59 11.9 +0.1**
baz=348,SNR=12
F21K Alatna River 79.19 9 P **P 09 59 12.2 +0.1**
baz=341,SNR=10
E29M Blow River 79.33 3 P **P 09 59 13.0 +0.3**
baz=354,SNR=12
E27K Coleen River 79.35 4 P **P 09 59 13.1 +0.2**
baz=351,SNR=8.2
G16K Koyuk River 79.49 13 P **P 09 59 13.7 +0.1**
baz=334
INK Inuvik 79.52 1 LR LR 10 42 47.4
comp=Z,40nm,18.8s,baz=304,slow=42
INK Inuvik 79.52 1 P **P 09 59 13.8 +0.1**
baz=358
G15K Niukluk 79.53 14 P **P 09 59 13.7 -0.1**
baz=332
COLD Coldfoot 79.57 7 P **P 09 59 14.6 +0.5**
baz=344,SNR=7.4
ANM Nome 79.64 14 P **P 09 59 15.0 +0.5**
baz=331,SNR=14
BLKN Baker Lake 79.65 345 **P 09 59 13.9 -0.6**
BLKN IAmb IAmb 09 59 15.2
comp=Z,6.0nm,0.9s
F25K Christian Rive 79.66 6 P **P 09 59 15.0 +0.4**
baz=348,SNR=5.9
F26K Sheenjek River 79.67 5 P **P 09 59 14.7 0.0**
baz=349
G18K Tagagawik 79.68 11 P **P 09 59 14.3 -0.4**
baz=337
G19K Purcell Mounta 79.70 10 P **P 09 59 14.7 -0.1**
baz=338,SNR=26
G17K Kiwalik Mounta 79.71 12 P **P 09 59 14.7 -0.1**
baz=335,SNR=7.3
G21K Allakaket 79.86 9 P **P 09 59 15.7 0.0**
baz=341,SNR=9.0
F28M Old Crow 80.02 3 P **P 09 59 16.5 0.0**
baz=352
G23K Bananza Creek 80.09 8 P **P 09 59 17.0 0.0**
baz=344
F30M Barrier River 80.18 2 P **P 09 59 17.3 0.0**
baz=356,SNR=6.5
H16K Elim 80.20 13 P **P 09 59 17.4 0.0**

baz=334,SNR=5.8
H17K Granite Mounta 80.35 12 P P 09 59 18.1 -0.3
baz=336,SNR=11
G24K Hadweenzic Riv 80.36 7 P 09 59 18.3 -0.1
G24K IAmb IAmb 09 59 26.4
comp=Z,13nm,1.4s
G24K Hadweenzic Riv 80.36 7 P P 09 59 18.3 -0.1
baz=346
F31M Tsiigehtchic 80.39 1 P P 09 59 18.4 -0.1
baz=358,SNR=9.1
H18K Honhosa River 80.42 11 P P 09 59 18.6 -0.1
baz=337
G26K Porcupine Rive 80.43 5 P P 09 59 19.0 +0.3
baz=349,SNR=5.2
H20K Anotleneega Mo 80.64 10 P P 09 59 20.0 +0.1
baz=340
H22K Ishtalitna Cre 80.72 8 P P 09 59 20.7 +0.4
baz=343
H21K Melozitna Rive 80.77 9 P P 09 59 21.0 +0.4
baz=342,SNR=11
G30M tAoh Zraii Nji 80.80 2 P 09 59 20.0 -0.7
G30M IAmb IAmb 09 59 21.4
comp=Z,12nm,1.1s
G30M tAoh Zraii Nji 80.80 2 P P 09 59 20.3 -0.4
baz=356,SNR=6.3
G31M Satah River 80.90 1 P P 09 59 20.7 -0.4
baz=357
GCSA Galena City Sc 81.03 11 P P 09 59 22.0 +0.1
baz=338
H24K Noodor Dome 81.17 7 P P 09 59 22.8 +0.1
baz=346
I17K Unalakleet 81.17 13 P P 09 59 22.9 +0.2
baz=335
H27K Steamboat Moun 81.30 4 P 09 59 23.9 +0.5
H27K IAmb IAmb 09 59 31.5
comp=Z,13nm,1.3s
H27K Steamboat Moun 81.30 4 P P 09 59 23.8 +0.3
baz=351,SNR=5.2
EPYK Eagle Plains 81.39 2 P P 09 59 23.6 -0.3
baz=355
J14K Nanvaranak Lak 81.62 14 P P 09 59 25.4 +0.3
baz=333,SNR=6.4
MLY Manley 81.63 8 P P 09 59 25.4 +0.2
baz=343,SNR=7.1
PRP Porcupine Dome 81.70 6 P P 09 59 25.6 -0.1
baz=348
J16K Anvik River 81.73 13 P P 09 59 25.8 +0.1
baz=335,SNR=7.6
POKR Poker Plat Res 81.91 7 P P 09 59 26.9 +0.2
baz=346
I27K Kandik River 81.92 4 P P 09 59 26.7 0.0
baz=351
J19K Poorman 81.94 11 P 09 59 26.6 -0.1
J19K IAmb IAmb 09 59 28.1
comp=Z,7.0nm,1.0s
J19K Poorman 81.94 11 P P 09 59 26.8 +0.1
baz=339,SNR=5.9
H31M Peel River 82.02 1 P P 09 59 27.1 -0.1
baz=357
I26K Coal Creek Min 82.10 5 P P 09 59 27.6 0.0
baz=350
COLA College 82.11 7 P P 09 59 27.6 0.0
baz=346
K13K Kusilvak Mount 82.11 15 P P 09 59 27.7 0.0
baz=332
I28M Miner Creek 82.17 4 P 09 59 27.6 -0.5
I28M IAmb IAmb 09 59 28.2
comp=Z,8.6nm,1.2s
I28M Miner Creek 82.17 4 P P 09 59 27.8 -0.3
baz=352,SNR=5.8
NEA2 Nenana 82.25 8 P P 09 59 28.5 +0.1
baz=345
J18K Innoko River 82.26 11 P P 09 59 28.5 +0.1
baz=338
ILAR Eielson Array 82.31 7 P P 09 59 27.8 -0.9
comp=Z,1.9nm,0.9s,baz=334,slow=3.9,SNR=14
ILAR LR LR 10 45 15.6
comp=Z,41nm,18.2s,baz=76,slow=42
comp=Z,1.9nm,0.9s
ILAR Eielson Array 82.31 7 P P 09 59 28.4 -0.3
K15K Wolf Creek Mou 82.45 14 P P 09 59 29.7 +0.3
baz=334,SNR=7.6
BPAW Bear Paw Mtn. 82.49 9 P P 09 59 29.6 -0.1
baz=343,SNR=13
CHUM Lake Minchumin 82.53 9 P P 09 59 29.9 +0.1
baz=342,SNR=10
I30M Mount Dempster 82.55 2 P P 09 59 29.9 -0.2
baz=356,SNR=5.8
J25K Salcha River, 82.60 6 P P 09 59 30.3 0.0
baz=348,SNR=7.2
HDA Harding Lake 82.65 7 P P 09 59 30.5 0.0
baz=347
K17K Iditarod 82.68 12 P P 09 59 30.8 +0.1
baz=337
K20K Telida 82.78 10 P P 09 59 31.2 0.0
baz=341
KRAI Karang Ratu 82.97 98 P P 09 59 36.5 +3.5
L15K Ungalak Mounta 83.02 14 P P 09 59 32.5 +0.1
baz=334
L14K Kuka Creek 83.07 15 P P 09 59 33.0 +0.3
baz=334,SNR=5.5
MCK McKinley 83.10 8 P P 09 59 32.4 -0.4
baz=345,SNR=5.7
M11K Mekoryuk 83.11 17 P P 09 59 33.1 +0.2
baz=331
J30M Hart River 83.20 2 P P 09 59 33.4 -0.1
baz=356
TRF Thorofare Moun 83.21 9 P P 09 59 33.7 +0.1
baz=344
L17K Donlin 83.22 12 P P 09 59 33.6 +0.2
baz=337
J29N Klondike Camp 83.25 3 P P 09 59 33.8 +0.1
baz=354
SCRK Sand Creek 83.35 6 P 09 59 34.6 +0.3
SCRK Sand Creek 83.35 6 P P 09 59 34.3 +0.1
baz=349,SNR=8.0
K24K Donnelly Dome 83.36 6 P P 09 59 34.3 +0.1
baz=348
L16K Owhat River 83.39 13 P P 09 59 34.5 +0.2
baz=336
L18K Granite Mounta 83.42 12 P P 09 59 34.6 +0.1
baz=338
PPLA Purkeypile 83.49 10 P P 09 59 34.8 -0.2
baz=342
RIDG Independent Ri 83.51 6 P P 09 59 34.7 -0.3
baz=348
DAWY Dawson 83.58 4 P P 09 59 35.2 -0.2
baz=353
M13K Dall Lake 83.76 15 P P 09 59 36.0 -0.2
baz=333
M14K Bethel 83.76 15 P P 09 59 36.1 -0.1
baz=334
L19K White Mountain 83.77 11 P P 09 59 36.3 -0.1
baz=340
K29M Barlow Dome 83.89 3 P P 09 59 36.6 -0.4
baz=355
DHY Denali Highway 83.91 7 P P 09 59 36.8 -0.5
baz=346
WAT1 Susitna Watana 84.02 8 P P 09 59 37.3 -0.3
baz=345
M17K Holitna River 84.06 12 P P 09 59 37.4 -0.4
baz=338
M15K Kasigluk River 84.08 14 P P 09 59 38.1 +0.2
baz=335
M16K Timber Creek 84.12 13 P P 09 59 38.3 +0.2
baz=337
MAYO Mayo, Yukon 84.20 2 P P 09 59 38.4 0.0
baz=356
PAX Paxson 84.21 7 P P 09 59 38.5 -0.2
baz=348
CUT Chulitna 84.22 9 P P 09 59 38.4 -0.1
baz=344
M18K Stony River 84.25 12 P P 09 59 38.7 0.0
baz=339
M20K Styx River 84.32 10 P P 09 59 39.0 -0.2
baz=341
L26K Log Cabin Wild 84.34 6 P P 09 59 39.1 -0.2
baz=350
WAT6 Susitna Watana 84.35 8 P P 09 59 39.0 -0.5
baz=346
L27K Beaver Creek, 84.42 5 P P 09 59 40.0 +0.3
baz=351,SNR=6.3
WRGLY Wrigley 84.44 357 P P 09 59 39.5 -0.2
baz=6.5
YKA Yellowknife Ar 84.44 352 P P 09 59 39.0 -0.7
comp=Z,2.9nm,0.9s,baz=4.3,slow=5.5,SNR=23
comp=Z,2.9nm,0.9s
YKA Yellowknife Ar 84.44 352 P P 09 59 39.0 -0.7

SKT Skwentna 84.45 10 P P 09 59 39.5 -0.3
baz=343
N14K Kuskokwak Cree 84.56 15 P P 09 59 40.3 0.0
baz=334
L29M L29M 84.59 3 P P 09 59 40.5 0.0
baz=354
N16K Nishlik Lake 84.66 13 P P 09 59 40.6 -0.4
baz=352
N15K Kwethluk River 84.68 14 P P 09 59 40.8 -0.2
baz=336
HARP HAARP 84.80 6 P P 09 59 41.2 -0.4
baz=348
M22K Willow 84.86 9 P P 09 59 41.6 -0.2
baz=344
M26K Nabesna, AK 84.99 6 P P 09 59 42.3 -0.2
baz=350
N18K Kilae Creek 85.00 12 P P 09 59 42.5 -0.1
baz=339
SML Sawmill 85.04 8 P P 09 59 42.6 -0.2
baz=346
SPCR Spurr Chakacha 85.10 10 P P 09 59 42.9 -0.3
baz=342
N20K Mount Spurr 85.11 10 P P 09 59 42.7 -0.5
baz=342
M27K Edge Creek, AK 85.12 5 P P 09 59 43.0 -0.4
baz=351
N19K Bonanza Creek 85.12 11 P 09 59 43.5 +0.3
N19K Bonanza Creek 85.12 11 P P 09 59 43.2 -0.1
baz=340,SNR=6.6
M23K Glacier View 85.12 8 P P 09 59 43.0 -0.2
baz=346
SCM Sheep Creek Mo 85.13 8 P P 09 59 43.0 -0.3
baz=346
BVCY Beaver Creek 85.13 5 P P 09 59 43.2 0.0
baz=352
PMR Palmer 85.15 9 P P 09 59 43.1 -0.1
baz=345
M30M Minto, Yukon 85.19 3 P P 09 59 43.4 -0.1
baz=355
M29M Somme Creek 85.24 3 P P 09 59 43.8 -0.1
baz=354
O14K Tigyukauivet M 85.27 15 P P 09 59 43.9 0.0
baz=335
KNK Knik Glacier 85.40 8 P P 09 59 44.6 0.0
baz=345
RC01 Rabbit Creek A 85.56 9 P P 09 59 45.2 -0.1
baz=344
O16K Kokwok River B 85.61 13 P P 09 59 45.8 +0.2
baz=337,SNR=5.4
KLU Klutina 85.61 7 P P 09 59 45.7 0.0
baz=348,SNR=6.4
N25K Chitina, Valde 85.63 6 P P 09 59 45.5 -0.3
baz=349
O17K Koliganek Bris 85.63 13 P P 09 59 45.8 +0.1
baz=338
O15K Ungalikthiuk R 85.64 14 P P 09 59 46.0 +0.2
baz=336
CAPN Captain Cook N 85.67 10 P P 09 59 45.8 0.0
baz=343
O19K Port Alsworth 85.73 11 P P 09 59 46.0 -0.2
baz=340
YUK3 Moose Creek 85.79 4 P P 09 59 46.5 -0.3
baz=352,SNR=6.1
O18K Koh Hills 85.90 12 P P 09 59 47.2 +0.1
baz=340,SNR=5.0
O22K Cooper Landing 86.14 9 P P 09 59 48.3 +0.1
baz=344
P16K Nushagak River 86.15 14 P P 09 59 48.3 +0.1
baz=338
N30M Aishikik Lake 86.29 3 P P 09 59 49.4 +0.3
baz=355
P17K Kvichak River 86.30 13 P P 09 59 49.5 +0.5
baz=339,SNR=5.2
N31M Braeburn, Yuko 86.31 2 P P 09 59 49.2 0.0
baz=356
YUK8 Steele Glacier 86.33 4 P P 09 59 49.1 -0.4
baz=353
P18K Big Mountain, 86.33 12 P P 09 59 49.1 -0.1
baz=340
YUK4 Talbot Arm 86.33 4 P P 09 59 48.8 -0.6
baz=354
P19K Oil Pt 86.42 11 P P 09 59 49.7 0.0
baz=341
CTG Chitna Glacier 86.54 5 P P 09 59 50.2 -0.2
baz=351
CTGM Chitina Glacie 86.54 5 P 09 59 50.9 +0.5
SEW Seward 86.55 9 P P 09 59 50.2 0.0
baz=345
EYAK Cordova Ski Ar 86.56 7 P P 09 59 50.3 +0.1
baz=348
CRQE Cirque 86.61 6 P P 09 59 50.4 -0.3
baz=350
HOM Homer 86.67 10 P P 09 59 50.9 0.0
baz=343
N32M Quiet Lake 86.71 1 P P 09 59 51.0 -0.1
baz=358
BRSE Bradley Lake S 86.72 10 P P 09 59 51.2 +0.1
baz=344
Q16K King Salmon 86.74 13 P P 09 59 51.2 0.0
baz=339
YUK6 Ouoost Mounta 86.75 4 P P 09 59 51.2 -0.3
baz=354
O28M Mount Upton 86.81 4 P P 09 59 51.8 -0.1
baz=352
HYT Haines Junctio 86.91 3 P P 09 59 52.1 -0.1
baz=355,SNR=5.4
P23K Montague Islan 86.91 8 P P 09 59 51.7 -0.3
baz=346
O30N Mendenhall 87.02 2 P P 09 59 52.5 -0.1
baz=356
Q19K Cape Douglas, 87.04 11 P P 09 59 52.4 -0.4
baz=341
Q18K Katmai Hardscr 87.07 12 P P 09 59 52.0 -0.9
baz=340
WHY Whitehorse 87.17 2 P P 09 59 52.7 -0.7
baz=357
BGLC Bering Glacier 87.22 6 P P 09 59 53.1 -0.3
baz=350
MESA MESA 87.27 5 P P 09 59 53.4 -0.6
baz=351
Q17K Contact Creek 87.27 13 P P 09 59 53.7 -0.2
baz=339
KAIM Kayak Island 87.30 7 P P 09 59 53.9 0.0
baz=349
O29M Mount Kennedy 87.37 4 P P 09 59 54.2 -0.3
baz=354
PINM Pinnacle 87.48 5 P P 09 59 54.8 -0.1
baz=352
Q20K Shuyak Island 87.55 11 P P 09 59 55.4 +0.3
baz=342
KOTAN Kotaneelee Air 87.56 356 P P 09 59 55.3 +0.1
baz=6.0
Q23K Middleton Isla 87.58 8 P P 09 59 55.4 +0.2
baz=347
R16K Pilot Point 87.59 14 P P 09 59 55.2 -0.1
baz=338
P30M Million Dollar 87.63 3 P P 09 59 55.5 -0.1
baz=355
P33M Teslin, Yukon 87.66 1 P P 09 59 55.8 0.0
baz=359
M65A Busby, Falmout 87.67 319 P P 09 59 56.2 +0.2
baz=47
WTLY Watson Lake, Y 87.75 359 P P 09 59 56.5 +0.3
baz=2.0,SNR=5.1
R17L Mt. Peulik Vol 87.77 13 P P 09 59 56.2 0.0
baz=339
P32M Atlin 88.27 1 P P 09 59 58.7 0.0
baz=358
KDAK Kodiak Island 88.31 11 P P 09 59 58.7 0.0
baz=342
SKAG Skagway 88.36 2 P P 09 59 59.1 +0.2
baz=356
R33M Jennings River 88.49 360 P P 09 59 59.6 -0.2
baz=0.1
FALS False Pass 88.71 18 P P 10 00 00.8 +0.1
baz=333
OHAK Old Harbor 88.72 12 P P 10 00 00.8 +0.1
baz=341
UNV Unalaska Valle 88.75 20 P P 10 00 00.9 0.0
baz=331
NIKH Nikolski High 88.80 22 P P 10 00 00.9 -0.3
baz=329
Q32M Nakina River 88.92 1 P P 10 00 01.7 -0.2
baz=359
SDPT Sand Point 89.00 16 P P 10 00 02.1 +0.1
baz=336
SII Sitkinak Islan 89.19 13 P P 10 00 02.9 -0.1
baz=341

R31K City Hall, Gus 89.39 2 P P 10 00 04.1 +0.3
baz=356
DLBC Dease Lake 89.44 359 P P 10 00 04.2 0.0
baz=0.9
R32K Eaglecrest 89.57 2 P P 10 00 04.7 0.0
baz=357
CHIR Chirikof Islan 89.61 14 P P 10 00 05.1 +0.2
baz=340
CHNA Chernabura Isl 89.68 16 P P 10 00 05.5 +0.3
baz=336
S31K Pelican 89.82 3 P P 10 00 06.0 +0.2
baz=356
S34M Telegraph Cree 89.97 360 P P 10 00 06.7 +0.1
baz=360
S32K Killisnoo 90.37 2 P P 10 00 08.6 +0.2
baz=357
SIT Sitka 90.76 2 P P 10 00 10.4 +0.1
baz=356
T35M Bob Quinn 90.90 360 P P 10 00 11.0 0.0
baz=0.7
WRAK Wrangell Islan 91.47 1 P P 10 00 13.7 +0.2
baz=359
U33K Whale Pass 91.76 1 P P 10 00 15.1 +0.2
baz=358
ULM Lac du Bonnet 91.92 338 P P 10 00 14.6 -1.2
comp=Z,3.7nm,0.8s,baz=31,slow=5.5,SNR=7.8
ULM LR LR 10 43 44.4
comp=Z,65nm,18.4s,baz=20,slow=37
comp=Z,3.7nm,0.8s
V35K Ketchikan 92.56 0 P P 10 00 18.9 +0.3
baz=360
WRA Warramunga Arr 96.81 109 P P 10 00 36.8 -1.9
comp=Z,0.6nm,1.0s,baz=314,slow=4.0,SNR=4.6
comp=Z,0.6nm,1.0s
WRA Warramunga Arr 96.81 109 *i* P P 10 00 39.0 +0.3
ASAR Alice Springs 98.42 113 P P 10 00 44.1 -1.8
comp=Z,0.3nm,0.7s,baz=302,slow=5.1,SNR=5.3
comp=Z,0.3nm,0.7s
NEW Newport 98.66 351 LR LR 10 46 56.8
comp=Z,78nm,19.4s,baz=56,slow=36
QSPA South Pole Qui 122.30 180 PKP PKPdf 10 06 01.5 -0.1
comp=Z,2.0nm,0.9s,baz=291,slow=1.4,SNR=5.1

NNC ***08*** *09:55:49.5±0.3, 43°.01N×75°.50E, h4km±3km, mb3.2, mpv3.0, Error ellipse: s-maj=4.5km s-min=1.6km az=158.0, Suspected Mining explosion.*
KRNET ***08*** *09:55:49.6±0.1, 43°.04N×75°.50E, h22km, mb3.0*
KNET ***08*** *09:55:50.5±0.4, 43°.00N×75°.43E, h16km±2km, ml1.6, Error ellipse: s-maj=3.5km s-min=2.2km az=6.0*
SOME ***08*** *09:55:50.5, 43°.10N×75°.45E*
ISC 08 09:55:48.7±0.8, 43°.08N±0°.03×75°.44E±0°.02, h0km, n29, σ0§94/55, 20C-16D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TKM2	**Tokmak 2**	**0.20**	**143**	⇑P	**Pg**	**09 55 54.5**	**+2.1**
	72nm,0.1s						
TKM2				⇑S	**Sg**	**09 55 57.6**	**+2.7**
	728nm,0.1s						
TKM2	**Tokmak 2**	**0.20**	**143**	⇓*i*P	**Pg**	**09 55 54.5**	**+2.1**
TKM2				⇓*i*S	**Sg**	**09 55 57.7**	**+2.7**
DGS	**Degeres**	**0.30**	**56**	P	**Pb**	**09 55 56.9**	**-0.1**
	12nm,0.1s						
DGS				S	**Sb**	**09 56 01.4**	**-1.1**
	94nm,0.1s						
KST	**Kastek**	**0.39**	**95**	P	**Pg**	**09 55 57.6**	**+1.4**
	28nm,0.1s						
KST				S	**Sg**	**09 56 02.5**	**+1.3**
	64nm,0.2s						
CHMS	**Chumysh**	**0.51**	**261**	⇓P	**Pb**	**09 56 00.7**	**+0.1**
	2.7nm,0.1s						
CHMS				⇑S	**Sb**	**09 56 07.7**	**-0.8**
	32nm,0.2s						
CHMS	**Chumysh**	**0.51**	**261**	⇓*i*P	**Pb**	**09 56 00.5**	**0.0**
CHMS				⇓*i*S	**Sb**	**09 56 08.2**	**-0.3**
KBK	**Karagaybulak**	**0.55**	**221**	⇓P	**Pb**	**09 56 01.1**	**-0.3**
	6.8nm,0.1s						
KBK				⇑S	**Sb**	**09 56 08.8**	**-1.1**
	21nm,0.1s						
KBK	**Karagaybulak**	**0.55**	**221**	⇑*i*P	**Pb**	**09 56 00.9**	**-0.5**
KBK				⇑*i*S	**Sb**	**09 56 08.9**	**-1.1**
KRBS	**Karabastau**	**0.64**	**16**	P	**Pb**	**09 56 03.3**	**+0.4**
	12nm,0.1s						
KRBS				S	**Sb**	**09 56 12.4**	**-0.1**
	6.6nm,0.1s						
BOOM	**Boomskoye usch**	**0.69**	**147**	⇑*i*P	**Pg**	**09 56 02.1**	**+0.1**
BOOM				⇑*i*S	**Sg**	**09 56 10.9**	**-0.1**
MTBS	**Maitube**	**0.73**	**86**	P	**Pg**	**09 56 03.4**	**+0.7**
	5.4nm,0.2s						
MTBS				S	**Sg**	**09 56 12.5**	**+0.3**
	42nm,0.2s						
AAK	**Ala-Archa**	**0.82**	**238**	⇓P	**Pb**	**09 56 06.0**	**+0.1**
	1.4nm,0.1s						
AAK				⇑S	**Sb**	**09 56 17.4**	**-0.2**
	6.0nm,0.2s						
AAK	**Ala-Archa**	**0.82**	**238**	⇑P	**Pb**	**09 56 06.0**	**+0.1**
	2.4nm,0.9s						
AAK				⇓S	**Sb**	**09 56 17.0**	**-0.6**
	1.3nm,0.4s						
AAK	**Ala-Archa**	**0.82**	**238**	⇓*i*P	**Pb**	**09 56 05.8**	**-0.1**
AAK				⇓*i*S	**Sb**	**09 56 17.2**	**-0.4**
IZV	**Izvestkoviy**	**0.86**	**92**	P	**Pg**	**09 56 06.1**	**+0.9**
	16nm,0.2s						
IZV				S	**Sg**	**09 56 17.2**	**+0.7**
	56nm,0.2s						
ULHL	**Ulahol**	**1.02**	**144**	⇓*i*P	**Pg**	**09 56 07.7**	**-0.6**
ULHL				⇓*i*S	**Sg**	**09 56 20.8**	**-0.7**
UCH	**Uchtor**	**1.09**	**219**	⇑P	**Pb**	**09 56 10.6**	**-0.1**
	1.0nm,0.1s						
UCH				⇑S	**Sb**	**09 56 24.9**	**-0.7**
	15nm,0.3s						
KTBS	**Karatobe**	**1.11**	**55**	P	**Pg**	**09 56 10.5**	**+0.5**
	1.6nm,0.1s						
KTBS				S	**Sg**	**09 56 24.7**	**+0.4**
	0.3nm,0.1s						
TNSS	**Tian-Shan**	**1.11**	**92**	P	**Pg**	**09 56 10.1**	**+0.2**
	1.6nm,0.1s						
TNSS				S	**Sg**	**09 56 24.2**	**-0.2**
	7.9nm,0.4s						
MDOK	**Medeo**	**1.18**	**85**	Pg	**Pg**	**09 56 11.3**	**-0.1**
	4.8nm,0.2s						
MDOK				Lg	Lg	09 56 26.3	
	18nm,0.2s						
KOTS	**Kotyrbulak**	**1.24**	**82**	P	**Pg**	**09 56 12.9**	**+0.5**
	2.5nm,0.2s						
KOTS				S	**Sg**	**09 56 28.7**	**+0.2**
	16nm,0.3s						
EKS2	**Erkin-Say**	**1.29**	**252**	⇑P	**Pn**	**09 56 14.6**	**+0.5**
	1.8nm,0.1s						
EKS2				⇑S	**Sn**	**09 56 32.6**	**+0.5**
	2.9nm,0.1s						
EKS2	**Erkin-Say**	**1.29**	**252**	⇑*i*P	**Pb**	**09 56 13.9**	**0.0**
EKS2				⇑*i*S	**Sb**	**09 56 31.5**	**+0.5**
ARLS	**Aral**	**1.47**	**214**	⇑*i*P	**Pn**	**09 56 16.4**	**-0.2**
ARLS				⇑*i*S	**Sb**	**09 56 36.0**	**-0.3**
KDJ	**Kajisay**	**1.60**	**126**	⇓*i*P	**Pn**	**09 56 17.8**	**-0.6**
KDJ				⇓*i*S	**Sn**	**09 56 38.1**	**-1.8**
MRKS	**Merke**	**1.66**	**259**	P	**Pg**	**09 56 21.3**	**+0.9**
	5.8nm,0.3s						
MRKS				S	**Sg**	**09 56 43.3**	**+1.4**
	12nm,0.4s						
JNKS	**Jany-Kuch**	**2.03**	**176**	⇑*i*P	**Pn**	**09 56 24.1**	**-0.3**
JNKS				⇑*i*S	**Sn**	**09 56 49.2**	**-1.3**
SATY	**Saty**	**2.18**	**89**	Pg	**Pb**	**09 56 29.2**	**+0.1**
	2.3nm,0.2s						
SATY				Lg	Lg	09 56 57.1	
	8.1nm,0.2s						
KK31	**Karatay Array**	**3.61**	**272**	⇓Pg	**Pg**	**09 56 56.9**	**-1.0**
	0.4nm,0.4s,baz=86,slow=16,SNR=7.4						
KK31				⇓Lg	Lg	09 57 45.8	
	1.4nm,0.6s,baz=84,slow=29,SNR=9.7						

IDC ***08*** *10:04:20.1±2.1, 28°.36N×142°.62E, h0km, mb3.7/7, mbtmp3.7/8, ML2.9/1, Error ellipse: s-maj=74.2km s-min=15.3km az=84.0*
ISC 08 10:04:23.9±2.1, 28°.38N±0°.08×142°.5E±0°.5, h25km, n9, σ0§66/10, mb3.9/7, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**1.31**	**194**	Pn	**Pn**	**10 04 46.1**	**-0.5**
	13nm,0.3s,baz=98,slow=22,SNR=9.8						
JCJ				Sn	**Sb**	**10 05 04.8**	**+0.5**
	70nm,0.3s,baz=262,slow=23,SNR=17						

MJAR	**Matsushiro Arr**	**8.93**	**337**	Pn		**Pn**	**10 06 30.6**	**-0.6**
	0.1nm,0.3s,baz=160,slow=13,SNR=9.7							
MJAR				Sn		Sn	10 08 00.7	-10
	0.1nm,0.3s,baz=223,slow=24,SNR=5.7							
	0.9nm,0.4s							
WRA	**Warramunga Arr**	**48.69**	**190**	P		**P**	**10 13 06.2**	**+0.1**
	0.8nm,0.5s,baz=16,slow=8.9,SNR=15							
	0.8nm,0.5s							
ZALV	**Zalesovo Beam**	**48.74**	**318**	P		**P**	**10 13 07.1**	**+0.9**
	0.4nm,0.3s,baz=92,slow=7.3,SNR=2.1							
	0.4nm,0.3s							
MKAR	**Makanchi Array**	**49.91**	**309**	P		**P**	**10 13 15.3**	**-0.2**
	0.1nm,0.3s,baz=89,slow=8.7,SNR=4.7							
	0.1nm,0.3s							
KURBB	**Kurchatov Arra**	**52.38**	**314**	P		**P**	**10 13 34.4**	**+0.6**
	0.6nm,0.4s,baz=90,slow=7.8,SNR=6.9							
	0.6nm,0.4s							
ASAR	**Alice Springs**	**52.41**	**190**	P		**P**	**10 13 33.8**	**-0.5**
	0.1nm,0.5s,baz=12,slow=8.2,SNR=4.5							
	0.1nm,0.5s							
BVAR	**Borovoye Array**	**57.32**	**317**	P		**P**	**10 14 10.1**	**+0.5**
	0.7nm,0.5s,baz=87,slow=8.8,SNR=5.4							
	0.7nm,0.5s							
FINES	**FINESS Array B**	**76.94**	**334**	P		**P**	**10 16 14.6**	**+0.7**
	1.6nm,1.0s,baz=72,slow=6.2,SNR=3.3							
	1.6nm,1.0s							

*IDC **08** 10:10:38.9±0.8, 6°.70N×72°.88W, h164km±10km, mb2.6/1, mbtmp3.6/3, Error ellipse: s-maj=46.8km s-min=7.5km az=132.0*
*RSNC **08** 10:10:39.7±0.0, 7°.1N±1°×7°.3W±°, h147km±1km, M3.3, mB4.8, mb4.0, ML2.9, Mw(mB)4.0*
*FUNV **08** 10:10:39.1, 6°.77N×73°.14W, h158km, MW4.0, Presumed earthquake*

ISC 08 10:10:38.0±0.9, 6°.83N±0°.03×73°.10W±0°.04, h152km±6km, n51, σ1§52/89, 3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.25**	**199**	P	**Pn**	**10 10 59.7**	**+0.7**
BARC				S	**Sn**	**10 11 14.4**	**-0.6**
PAMC	**Pamplona, Colo**	**0.65**	**38**	P	**Pn**	**10 11 02.5**	**+1.5**
PAMC				S	**Sn**	**10 11 19.1**	**+0.6**
BRJC	**Barrancabermej**	**0.65**	**283**	P	**Pn**	**10 11 01.5**	**+1.0**
BRJC				S	**Sn**	**10 11 17.9**	**+0.4**
RUSC	**La Rusia**	**0.93**	**179**	P	**Pn**	**10 11 03.5**	**+0.4**
RUSC				S	**Sn**	**10 11 22.0**	**-0.1**
RUSC	**La Rusia**	**0.93**	**179**	*eP*	**Pn**	**10 11 03.6**	**+0.6**
RUSC				*eS*	**Sn**	**10 11 20.5**	**-1.6**
CAPV	**Capacho**	**1.29**	**37**	*iP*	**Pn**	**10 11 07.7**	**+1.8**
CAPV				*eS*	**Sn**	**10 11 28.8**	**+1.5**
PTBC	**PUERTO BERRIO,**	**1.38**	**258**	P	**Pn**	**10 11 06.6**	**+0.1**
PTBC				S	**Sn**	**10 11 27.9**	**-0.4**
OCAC	**Ocana**	**1.42**	**351**	P	**Pn**	**10 11 08.0**	**+0.9**
OCAC				S	**Sn**	**10 11 29.5**	**+0.1**
SPBC	**San Pablo de B**	**1.52**	**220**	P	**Pn**	**10 11 08.6**	**+0.5**
SPBC				S	**Sn**	**10 11 30.5**	**-0.6**
CHIC	**Chingaza**	**2.27**	**196**	P	**Pn**	**10 11 17.8**	**+0.8**
CHIC				S	**Sn**	**10 11 45.3**	**-1.6**
ROSC	**El Rosal**	**2.32**	**212**	P	**Pn**	**10 11 19.7**	**+2.3**
	46nm,0.3s,baz=49,slow=20,SNR=55						
ROSC				S	**Sn**	**10 11 50.6**	**+2.8**
	149nm,0.5s,baz=171,slow=24,SNR=16						
ROSC	**El Rosal**	**2.32**	**212**	P	**Pn**	**10 11 19.5**	**+2.0**
ROSC				S	**Sn**	**10 11 48.0**	**+0.2**
CVER	**Cruz Verde, Cu**	**2.49**	**203**	P	**Pn**	**10 11 21.3**	**+1.7**
UREC	**San Jos de Ur**	**2.58**	**291**	P	**Pn**	**10 11 20.1**	**-0.1**
UREC				S	**Sn**	**10 11 51.4**	**-1.4**
SOCV	**Socops**	**2.66**	**57**	*eP*	**Pn**	**10 11 22.7**	**+1.5**
SOCV				*eS*	**Sn**	**10 11 54.1**	**-0.4**
GUY2C	**Guyana, Caldas**	**2.76**	**235**	P	**Pn**	**10 11 24.4**	**+1.5**
GUY2C				S	**Sn**	**10 11 56.7**	**-0.8**
VILC	**Villavicencio,**	**2.76**	**192**	P	**Pn**	**10 11 23.4**	**+0.7**
VILC				S	**Sn**	**10 11 56.8**	**-0.4**
NIZA	**Niza - Manizal**	**2.94**	**233**	P	**Pn**	**10 11 26.8**	**+1.8**
NIZA				S	**Sn**	**10 11 59.9**	**-1.4**
CBOC	**Ciudad Bolivar**	**3.05**	**252**	P	**Pn**	**10 11 27.7**	**+1.4**
CBOC				S	**Sn**	**10 12 03.5**	**0.0**
DBBC	**Dabeiba**	**3.09**	**274**	P	**Pn**	**10 11 27.8**	**+1.1**
DBBC				S	**Sn**	**10 12 03.1**	**-1.3**
SDV	**Santo Domingo**	**3.19**	**50**	P	**Pn**	**10 11 29.2**	**+1.1**
	42nm,0.3s,baz=234,slow=11,SNR=64						
SDV				S	**Sn**	**10 12 07.0**	**+0.2**
	68nm,0.4s,baz=90,slow=22,SNR=18						
SDV	**Santo Domingo**	**3.19**	**50**	P	**Pn**	**10 11 29.3**	**+1.2**
SDV				S	**Sn**	**10 12 06.6**	**-0.2**
SDV	**Santo Domingo**	**3.19**	**50**	*eP*	**Pn**	**10 11 29.6**	**+1.5**
SDV				*eS*	**Sn**	**10 12 05.4**	**-1.4**
ARGC	**Ariguani, Magd**	**3.21**	**339**	P	**Pn**	**10 11 30.0**	**+1.8**
ARGC				S	**Sn**	**10 12 08.4**	**+1.2**
MCQV	**Machiques**	**3.25**	**10**	*iP*	**Pn**	**10 11 30.1**	**+1.4**
MCQV				*eS*	**Sn**	**10 12 06.8**	**-1.2**
PRAC	**Prado**	**3.57**	**210**	P	**Pn**	**10 11 33.6**	**+0.8**
PRAC				S	**Sn**	**10 12 14.9**	**-0.5**
APAC	**Apartado, Choc**	**3.61**	**287**	P	**Pn**	**10 11 34.3**	**+1.0**
APAC				S	**Sn**	**10 12 17.8**	**+1.6**
SJCC	**San Jacinto, C**	**3.67**	**326**	P	**Pn**	**10 11 34.1**	**-0.1**
SJCC				S	**Sn**	**10 12 15.8**	**-2.0**
SJCC	**San Jacinto, C**	**3.67**	**326**	*eP*	**Pn**	**10 11 34.2**	**-0.1**
SJCC				*eS*	**Sn**	**10 12 15.2**	**-2.6**
PLMC	**San Jos del P**	**3.70**	**239**	P	**Pn**	**10 11 35.7**	**+1.2**
PLMC				S	**Sn**	**10 12 18.1**	**-0.2**
URMC	**La Uribe, Meta**	**3.78**	**200**	P	**Pn**	**10 11 36.7**	**+1.1**
URMC				S	**Sn**	**10 12 20.3**	**0.0**
YOTC	**Yotoco, Valle**	**4.29**	**229**	P	**Pn**	**10 11 42.5**	**+0.2**
PIZC	**Pizarro, Choco**	**4.62**	**247**	P	**Pn**	**10 11 48.1**	**+1.6**
PTAC	**Punta Ardita,**	**4.68**	**274**	P	**Pn**	**10 11 47.0**	**-0.3**
MACC	**Macarena, Meta**	**4.71**	**189**	P	**Pn**	**10 11 46.9**	**-0.9**
MACC				S	**Sn**	**10 12 38.7**	**-3.4**
URIC	**Uribia, Colomb**	**4.96**	**13**	P	**Pn**	**10 11 50.6**	**-0.4**
URIC				S	**Sn**	**10 12 45.4**	**-2.6**
URIC	**Uribia, Colomb**	**4.96**	**13**	*eP*	**Pn**	**10 11 50.7**	**-0.3**
TEPV	**Terepaima**	**4.97**	**51**	*eP*	**Pn**	**10 11 51.4**	**+0.3**
JAMC	**Jamundi, Valle**	**5.05**	**225**	P	**Pn**	**10 11 52.5**	**0.0**
	760nm14nm,0.5s						
JAMC				S	**Sn**	**10 12 51.7**	**+1.2**
	760nm14nm,0.5s						
GARC	**Garzon, Huila**	**5.19**	**207**	P	**Pn**	**10 11 54.0**	**-0.3**
GARC				S	**Sn**	**10 12 50.8**	**-3.0**
MAPV	**Macapo**	**5.48**	**57**	*eP*	**Pn**	**10 11 58.2**	**+0.3**
MAPV				*eS*	**Sn**	**10 12 55.8**	**-4.5**
POPC	**Popayan, Colom**	**5.55**	**220**	P	**Pn**	**10 11 59.7**	**+0.6**
	8.3nm,0.5s						
POPC				S	**Sn**	**10 13 01.4**	**-1.0**
	8.3nm,0.5s						
FLOC	**Florencia**	**5.80**	**206**	P	**Pn**	**10 12 02.0**	**-0.2**
	6.4nm,0.5s						
FLOC				S	**Sn**	**10 13 08.5**	**+0.5**
	6.4nm,0.5s						
BENV	**Beln**	**6.27**	**60**	*eP*	**Pn**	**10 12 08.4**	**0.0**
BENV				*eS*	**Sn**	**10 13 13.9**	**-5.4**
BBAC	**Balboa, Cauca**	**6.32**	**221**	P	**Pn**	**10 12 10.9**	**+1.7**
BBAC				S	**Sn**	**10 13 17.1**	**-3.5**
TURV	**Turiamo**	**6.33**	**55**	*eP*	**Pn**	**10 12 09.1**	**0.0**
CACV	**CAICARA DEL OR**	**6.55**	**83**	*eP*	Pn	10 12 18.0	+5.9
TACV	**Tcata**	**6.85**	**61**	*eP*	**Pn**	**10 12 15.6**	**-0.6**
TXAR	**Lajitas Array**	**36.47**	**312**	P	**P**	**10 17 30.5**	**+1.8**
	0.2nm,0.6s,baz=124,slow=8.1,SNR=2.1						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**149.13**	**234**	PKPbc	**PKiKP**	**10 30 08.8**	**-1.7**
	0.3nm,0.7s,baz=119,slow=3.3,SNR=4.2						
WRA	**Warramunga Arr**	**150.36**	**241**	PKPbc	**PKiKP**	**10 30 11.5**	**-1.6**
	0.1nm,0.4s,baz=108,slow=2.9,SNR=6.2						

*MAN **08** 10:12:54.0, 6°.99N×126°.66E, h120km, MS2.9*
*IDC **08** 10:12:55.7±1.1, 6°.96N×126°.51E, h146km±9km, mb3.5/8, mbtmp4.1/11, Error ellipse: s-maj=35.7km s-min=12.1km az=63.0*

ISC 08 10:12:54.7±0.8, 6°.99N±0°.05×126°.56E±0°.08, h135km±7km, n20, σ1§10/30, mb3.9/8, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**0.98**	**275**	P	**Pn**	**10 13 19.2**	**+1.3**
	686nm,0.4s,baz=246,slow=2.1,SNR=9.7						
DAV				S	**Sn**	**10 13 38.0**	**+2.5**
	689nm,0.4s,baz=340,slow=23,SNR=20						
DMPH	**Davao City--Mi**	**1.05**	**275**	*i* P	**Pn**	**10 13 19.5**	**+0.9**
DMPH				*i* S	**Sn**	**10 13 33.5**	**-3.3**
BIPH	**Bislig**	**1.20**	**350**	*i* P	**Pn**	**10 13 19.7**	**-0.5**
BIPH				*eS*	**Sn**	**10 13 37.5**	**-2.0**
DDMP	**Don Marcelino,**	**1.22**	**224**	*eP*	**Pn**	**10 13 20.4**	**+0.1**
DDMP				*eS*	**Sn**	**10 13 39.5**	**-0.2**
GSPH	**General Santos**	**1.84**	**241**	*i* P	**Pn**	**10 13 26.9**	**-0.3**
GSPH				*i* S	**Sn**	**10 13 51.1**	**-0.9**
CTBH	**Cotabato--PC H**	**2.31**	**276**	*i* P	**Pn**	**10 13 33.5**	**+0.7**
CGP	**Cagayan de Oro**	**2.36**	**308**	*eP*	**Pn**	**10 13 33.5**	**+0.1**
CGP				*eS*	**Sn**	**10 14 02.9**	**-0.2**
SCPH	**Surigao**	**2.97**	**339**	*eP*	**Pn**	**10 13 42.0**	**+0.8**
SCPH				*eS*	**Sn**	**10 14 18.5**	**+1.4**
TBP	**Tagbilaran**	**3.79**	**315**	*eP*	**Pn**	**10 13 52.1**	**+0.2**
TBP				*eS*	**Sn**	**10 14 35.6**	**-0.5**
SIJI	**Sorong**	**9.11**	**149**	P	**Pn**	**10 15 03.8**	**+0.7**
	5.2nm,0.4s,baz=336,slow=20,SNR=4.9						
JAY	**Jayapura**	**16.98**	**123**	P	**Pn**	**10 16 44.9**	**+0.5**
	19nm,1.0s,baz=356,slow=19,SNR=1.8						
BATI	**Baumata**	**17.32**	**190**	P	**Pn**	**10 16 49.0**	**+0.6**
	13nm,0.4s,baz=287,slow=3.7,SNR=4.7						
WRA	**Warramunga Arr**	**27.84**	**164**	P	**P**	**10 18 31.1**	**-0.5**
	0.1nm,0.4s,baz=342,slow=8.3,SNR=1.6						
WRA				PcP	**PcP**	**10 21 43.3**	**-1.2**
	0.3nm,0.9s,baz=338,slow=1.9,SNR=1.5						
	0.1nm,0.4s						
ASAR	**Alice Springs**	**31.30**	**167**	P	**P**	**10 19 01.9**	**-0.3**
	0.2nm,0.4s,baz=340,slow=7.4,SNR=18						
ASAR				PcP	**PcP**	**10 21 52.8**	**-0.6**
	0.4nm,0.9s,baz=347,slow=2.4,SNR=2.3						
	0.2nm,0.4s						
ASAJ	**Asahikawa**	**39.55**	**18**	P	**P**	**10 20 12.8**	**+0.3**
	1.2nm,0.4s,baz=155,slow=17,SNR=1.5						
	1.2nm,0.4s						
STKA	**Stephens Creek**	**41.23**	**160**	P	**P**	**10 20 26.6**	**+0.3**
	1.8nm,0.8s,baz=329,slow=12,SNR=2.2						
	1.8nm,0.8s						
MKAR	**Makanchi Array**	**54.82**	**324**	P	**P**	**10 22 10.6**	**-0.2**
	1.3nm,0.5s,baz=120,slow=7.6,SNR=33						
	1.3nm,0.5s						
KURBB	**Kurchatov Arra**	**58.94**	**326**	P	**P**	**10 22 39.5**	**-0.2**
	0.8nm,0.6s,baz=124,slow=6.3,SNR=7.2						
	0.8nm,0.6s						
BVAR	**Borovoye Array**	**64.53**	**326**	P	**P**	**10 23 16.8**	**-0.3**
	1.2nm,0.4s,baz=116,slow=5.6,SNR=7.3						
	1.2nm,0.4s						
FINES	**FINESS Array B**	**88.90**	**332**	P	**P**	**10 25 33.8**	**+0.2**
	1.2nm,0.8s,baz=62,slow=3.3,SNR=4.5						
	1.2nm,0.8s						

*OSPL **08** 10:21:09.9±3.3, 19°.71N×69°.76W, h45km±60km, ML2.5, Presumed earthquake*
*SDD **08** 10:21:10.6±2.0, 19°.40N×69°.86W, h18km±8km, MD2.8, ML2.5, MW2.8, Presumed earthquake*

ISC 08 10:21:10.3±1.1, 19°.35N±0°.06×69°.84W±0°.04, h24km±6km, n14, σ1§54/23, 8C-7D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NADR	**Nagua**	**0.02**	**292**	*e*Pg	**Pb**	**10 21 12.9**	**-1.5**
NADR				*e*Sg	**Sb**	**10 21 16.1**	**-1.1**
NADR				IAML		10 21 16.3	
	comp=N,12μm,0.2s						
LONA1	**Toro Cenizo, N**	**0.04**	**323**	*i* P		10 21 19.3	
LONA1				*e*S	**Sb**	**10 21 22.4**	**+5.0**
SFDR	**San Fco. de Ma**	**0.39**	**261**	*e*Pg	**Pb**	**10 21 16.8**	**-1.8**
SFDR				*e*Sg	**Sb**	**10 21 23.3**	**-1.0**
SFDR				IAML		10 21 24.9	
	comp=N,258nm,0.1s						
DR08	**Loma La Naviza**	**0.42**	**204**	*e*Pg	**Pb**	**10 21 18.1**	**-1.1**
DR08				*e*Sg	**Sb**	**10 21 25.3**	**0.0**
DR08				IAML		10 21 25.9	
	comp=N,1μm,0.2s						
SMDR	**Samana, DR**	**0.62**	**95**	*e*Pg	**Pn**	**10 21 22.1**	**-1.4**
SMDR				IAML		10 21 38.1	
	comp=N,43nm,0.8s						
HATOM	**Hato Mayor del**	**0.70**	**142**	*e*Pg	**Pb**	**10 21 23.6**	**-0.3**
HATOM				*e*Sg	**Sb**	**10 21 35.1**	**+1.8**
HATOM				IAML		10 21 36.6	
	comp=N,31nm,0.2s						
SC01	**Santiago de lo**	**0.84**	**276**	*e*Pg	**Pb**	**10 21 25.3**	**-1.0**
SC01				IAML		10 21 45.3	
	comp=N,122nm,1.4s						
SC01	**Santiago de lo**	**0.84**	**276**	*i* P	**Pb**	**10 21 25.4**	**-0.9**
SC01				*e*S	**Sn**	**10 21 38.7**	**+0.4**
BANI	**BANI**	**1.07**	**207**	*e*Pg	**Pn**	**10 21 29.2**	**-0.7**
BANI				*e*Sg	**Sn**	**10 21 45.0**	**+0.9**
BANI				IAML		10 21 46.3	
	comp=N,149nm,0.1s						
MADR	**Mao Valverde**	**1.21**	**281**	*e*Pg	**Pb**	**10 21 32.8**	**+0.2**
MADR				IAML		10 21 54.6	
	comp=N,169nm,2.4s						
SDDR	**Presa de Saban**	**1.42**	**255**	*e*Pg	**Pn**	**10 21 34.6**	**-0.1**
SDDR				*e*Sg	**Sn**	**10 21 53.3**	**+0.7**
SDDR				IAML		10 22 01.5	
	comp=N,40nm,3.4s						
SDDR	**Presa de Saban**	**1.42**	**255**	*i* P	**Pn**	**10 21 34.5**	**-0.2**
SDDR				*e*S	**Sn**	**10 21 53.2**	**+0.6**
SDDR				IAML		10 21 57.6	
	comp=Z,14nm,0.3s						
LONE3	**El Aguacate, B**	**1.70**	**245**	*i* P	**Pn**	**10 21 39.6**	**+1.0**
LONE3				*e*S	**Sb**	**10 22 02.3**	**+0.3**
LONE3				IAML		10 22 06.5	
	comp=Z,34nm,3.0s						
LODU1	**El Espartillar**	**1.84**	**238**	*i* P	**Pb**	**10 21 42.9**	**-0.4**
LODU1				IAML		10 22 18.7	
	comp=Z,54nm,2.9s						

IDC 08 10:23:00.0±2.6, 7°.72N×124°.84E, h0km, mb3.7/3, mbtmp3.7/3, MS3.1/1, Error ellipse: s-maj=227.3km s-min=28.7km az=64.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**17.84**	**184**	LR	LR	10 35 31.2	
	comp=Z,62nm,19.1s,baz=352,slow=42						
WRA	**Warramunga Arr**	**29.03**	**161**	P	P	10 29 02.3	+0.2
	0.7nm,0.4s,baz=341,slow=8.3,SNR=16						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**32.42**	**164**	P	P	10 29 31.7	-0.3
	0.7nm,0.3s,baz=339,slow=7.6,SNR=46						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**53.23**	**325**	P	P	10 32 20.4	0.0
	0.2nm,0.5s,baz=135,slow=5.6,SNR=2.4						
	0.2nm,0.5s						

*IDC **08** 10:34:58.0±0.6, 9°.74S×159°.76E, h0km, mb4.3/18, mbtmp4.2/21, ML4.2/3, MS3.6/13, Error ellipse: s-maj=20.1km s-min=9.1km az=128.0*
*NEIC **08** 10:35:00.8±1.4, 9°.73S±0°.07×159°.56E±0°.05, h10km±1km, mb4.7/21, Error ellipse: s-maj=15.0km s-min=3.0km az=144.0*

ISC 08 10:35:03.0±0.4, 9°.71S±0°.04×159°.65E±0°.05, h26km, n318, σ0§93/315, mb4.6/37, MS3.7/11, 2C-1D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**0.40**	**46**	Pn	**Pb**	**10 35 10.5**	**-1.2**
	159nm,0.3s,baz=319,slow=2.6,SNR=1504						
HNR				Sn	**Sb**	**10 35 17.3**	**-0.2**
	378nm,0.3s,baz=81,slow=17,SNR=19						
HNR	**Honiara**	**0.40**	**46**	P	**Pb**	**10 35 10.5**	**-1.2**
HNR	**Honiara**	**0.40**	**46**	S	**Sb**	**10 35 17.4**	**-0.2**
HNR	**Honiara**	**0.40**	**46**		**Pb**	**10 35 10.1**	**-1.5**
SAVO	**Savo Central**	**0.58**	**16**	P	**Pb**	**10 35 14.1**	**-0.5**
SAVO	**Savo Central**	**0.58**	**16**	S	**Sn**	**10 35 24.6**	**+0.3**
TATA	**Tatamba Isabel**	**1.32**	**6**	P	**Pn**	**10 35 27.0**	**+1.2**
TATA	**Tatamba Isabel**	**1.32**	**6**	S	**Sb**	**10 35 45.9**	**+2.1**
ALEG	**Aligegeo Malai**	**1.40**	**47**	P	**Pb**	**10 35 28.4**	**-0.1**
NGOA	**Tingoa Renbel**	**1.88**	**168**	P	**Pb**	**10 35 37.4**	**+0.8**
HURO	**Huro Makira**	**2.34**	**109**	P	**Pn**	**10 35 39.7**	**-0.1**
HURO	**Huro Makira**	**2.34**	**109**	S	**Sn**	**10 36 08.4**	**+0.7**
SANVU	**Saraoutou**	**9.31**	**128**	P	**Pn**	**10 37 18.1**	**+2.4**
SANVU	**Saraoutou**	**9.31**	**128**	S	**Sn**	**10 38 59.6**	**-0.1**
SANVU	**Saraoutou**	**9.31**	**128**		**Pn**	**10 37 14.8**	**-0.9**
PMG	**Port Moresby**	**12.33**	**270**	Pn	**Pn**	**10 37 55.0**	**-2.0**
DZM	**Mont Dzumac**	**13.91**	**153**	Pn	**Pn**	**10 38 14.8**	**-3.9**
	0.2nm,0.3s,baz=330,slow=20,SNR=3.4						
DZM				LR	LR	10 42 32.7	
	comp=Z,313nm,19.0s,baz=14,slow=33						
	2.7nm,0.9s						
MANU	**Manus Island**	**14.39**	**301**	Pn	**Pn**	**10 38 21.8**	**-3.4**
AUAYR	**Ayr State High**	**15.37**	**229**	P	**P**	**10 38 44.0**	**+1.3**
CTA	**Charters Tower**	**16.54**	**230**	Pn	**Pn**	**10 38 52.0**	**-1.3**
	0.3nm,0.3s,baz=54,slow=13,SNR=14						
CTA				LR	LR	10 45 05.3	
	comp=Z,472nm,18.2s,baz=50,slow=37						
	2.3nm,0.7s						
CTA	**Charters Tower**	**16.54**	**230**	P	**P**	**10 38 57.7**	**+1.9**
CTAO	**Charters Tower**	**16.54**	**230**	P	**P**	**10 38 57.9**	**+2.1**
CTAO	**Charters Tower**	**16.54**	**230**	Pn	**Pn**	**10 38 51.3**	**-2.1**
MTSU	**Mount Surprise**	**17.07**	**239**	P	**P**	**10 39 03.8**	**+2.2**
MSVF	**Nonsavu**	**19.56**	**116**	P	**P**	**10 39 26.3**	**-2.8**
	0.1nm,0.3s,baz=319,slow=20,SNR=4.0						
MSVF				LR	LR	10 46 02.2	
	comp=Z,80nm,19.1s,baz=263,slow=34						
	2.0nm,0.5s						
MSVF	**Nonsavu**	**19.56**	**116**	P	**Pn**	**10 39 33.0**	**+2.5**
MSVF	**Nonsavu**	**19.56**	**116**	P	**Pn**	**10 39 30.3**	**-0.2**
MSVF				IAmb	IAmb	10 39 35.5	
	comp=Z,37nm,1.3s						
JAY	**Jayapura**	**20.14**	**290**	LR	LR	10 48 11.3	
	comp=Z,126nm,18.2s,baz=360,slow=39						
ARMA	**Armidale**	**21.92**	**199**	P	**P**	**10 39 53.9**	**-0.7**
INKA	**Innaminka**	**25.28**	**222**		**P**	**10 40 26.6**	**-0.8**
WR8	**Warramunga Arr**	**26.32**	**244**	P	**P**	**10 40 35.2**	**-1.8**
WR8				IAmb	IAmb	10 40 43.8	
	comp=Z,18nm,1.2s						
WRA	**Warramunga Arr**	**26.46**	**245**	P	**P**	**10 40 36.9**	**-1.4**
	comp=Z,3.2nm,0.8s,baz=71,slow=9.7,SNR=23						
WRA				PcP	**PcP**	**10 44 02.2**	**-1.0**
	comp=Z,3.8nm,1.4s,baz=74,slow=2.8,SNR=3.6						
	comp=Z,3.2nm,0.8s						
WRA	**Warramunga Arr**	**26.46**	**245**		**P**	**10 40 36.2**	**-2.1**
GUMO	**Guam**	**27.41**	**327**	LR	LR	10 50 47.8	
	comp=Z,42nm,22.0s,baz=152,slow=35						
STKA	**Stephens Creek**	**27.69**	**215**	P	**P**	**10 40 48.1**	**-1.0**
	comp=Z,1.0nm,0.4s,baz=49,slow=13,SNR=4.3						
STKA				LR	LR	10 51 46.1	
	comp=Z,191nm,18.6s,baz=27,slow=36						
	comp=Z,1.0nm,0.4s						
AS31	**Alice Springs**	**28.23**	**237**		**P**	**10 40 51.8**	**-2.3**
ASAR	**Alice Springs**	**28.23**	**237**	P	**P**	**10 40 52.3**	**-1.8**
	comp=Z,2.0nm,0.7s,baz=61,slow=10,SNR=17						
ASAR				PcP	**PcP**	**10 44 06.4**	**-1.0**
	comp=Z,0.6nm,0.8s,baz=68,slow=2.6,SNR=3.4						
ASAR				LR	LR	10 52 07.0	
	comp=Z,190nm,18.0s,baz=79,slow=36						
	comp=Z,2.0nm,0.7s						
ASAR	**Alice Springs**	**28.23**	**237**	P	**P**	**10 40 52.0**	**-2.1**
KNRA	**Kununurra**	**30.69**	**256**	P	**P**	**10 41 15.5**	**-0.5**
KNRA				IAmb	IAmb	10 41 58.1	
	comp=Z,12nm,1.2s						
RTZ	**Ruatahuna**	**32.71**	**154**	P	**P**	**10 41 33.3**	**-0.2**
BATI	**Baumata**	**35.44**	**266**	LR	LR	10 57 45.5	
	comp=Z,166nm,18.7s,baz=126,slow=38						
KAPI	**Kappang**	**39.83**	**274**	LR	LR	10 59 08.2	
	comp=Z,26nm,19.5s,baz=88,slow=36						
KMMI	**Kalianget**	**45.25**	**270**	P	**P**	**10 43 22.6**	**+3.9**
NWAO	**Narrogin (SRO)**	**45.35**	**233**	LR	LR	11 02 06.2	
	comp=Z,188nm,18.3s,baz=356,slow=36						
PPT	**Papeete**	**49.83**	**105**	LR	LR	11 00 27.9	
	comp=Z,64nm,21.0s,baz=269,slow=31						
KSRS	**Korea Array**	**55.54**	**329**	P	**P**	**10 44 35.1**	**-1.0**
	comp=Z,3.0nm,1.0s,baz=157,slow=8.1,SNR=9.5						
	comp=Z,3.0nm,1.0s						
KSAR	**Wonju Array Be**	**55.55**	**329**	P	**P**	**10 44 35.8**	**-0.5**
NJ2	**Nanjing**	**56.96**	**319**	*e*P	**P**	**10 44 47.6**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**59.23**	**337**	P	**P**	**10 45 01.4**	**-0.6**
	comp=Z,3.6nm,1.0s,baz=157,slow=5.4,SNR=5.9						
	comp=Z,3.6nm,1.0s						
CN2	**Changchun**	**61.66**	**332**	P	**P**	**10 45 19.1**	**+0.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BNX	**BinXian**	**62.34**	**335**	P	**P**	**10 45 23.6**	**+0.4**
BNX				pmax	pmax		
	comp=Z,3.0nm,1.1s						
PETK	**Petropavlovsk-**	**62.59**	**359**	P	**P**	**10 45 25.0**	**+0.3**
	comp=Z,6.0nm,0.9s,baz=140,slow=5.9,SNR=12						
PETK				LR	LR	11 09 52.6	
	comp=Z,60nm,20.6s,baz=157,slow=33						
	comp=Z,6.0nm,0.9s						
HNS	**HongShan**	**62.98**	**321**	P	**P**	**10 45 27.9**	**+0.3**
HNS				pmax

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=220						
O16K	Kokwok River B	76.89	21	P	P	10 46 53.3	+0.7
	baz=223						
OHAK	Old Harbor	77.02	24	P	P	10 46 54.0	+0.6
	baz=228						
P17K	Kvichak River	77.18	21	P	P	10 46 54.9	+0.7
	baz=225						
N16K	Nishlik Lake	77.31	20	P	P	10 46 55.7	+0.7
	baz=222						
Q18K	Katmai Hardscr	77.32	22	P	P	10 46 55.5	+0.2
	baz=226						
L15K	Ungalak Mounta	77.36	18	P	P	10 46 55.8	+0.6
	baz=219						
O17K	Koliganek Bris	77.36	21	P	P	10 46 55.7	+0.5
	baz=224						
J14K	Nanvaranak Lak	77.61	16	P	P	10 46 57.5	+0.9
	baz=217,SNR=8.1						
M16K	Timber Creek	77.65	19	P	P	10 46 57.8	+0.9
	baz=222						
KDAK	Kodiak Island	77.67	24	P	P	10 46 57.7	+0.7
	baz=228						
P18K	Big Mountain,	77.76	22	P	P	10 46 58.0	+0.4
	baz=226						
K15K	Wolf Creek Mou	77.83	17	P	P	10 46 58.6	+0.7
	baz=219,SNR=9.4						
N17K	Nushagak Hills	77.88	20	P	P	10 46 58.9	+0.8
	baz=224						
L16K	Owhat River	78.01	19	P	P	10 46 59.6	+0.8
	baz=221						
Q19K	Cape Douglas,	78.03	23	P	P	10 46 59.8	+0.7
	baz=227						
O18K	Koktuh Hills	78.09	21	P	P	10 47 00.3	+0.9
	baz=226						
Q20K	Shuyak Island	78.30	23	P	P	10 47 01.4	+0.9
	baz=228						
M17K	Holitna River	78.43	20	P	P	10 47 01.7	+0.5
	baz=223						
N18K	Kilae Creek	78.44	21	P	P	10 47 01.8	+0.6
	baz=225						
ANM	Nome	78.60	15		P	10 47 02.9	+0.8
ANM				IAmb	IAmb	10 47 04.0	
	comp=Z,6.9nm,1.2s						
ANM	Nome	78.60	15	P	P	10 47 02.7	+0.6
	baz=215						
O19K	Port Alsworth	78.65	22	P	P	10 47 02.9	+0.5
	baz=226						
P19K	Oil Pt	78.68	22	P	P	10 47 03.0	+0.4
	baz=228						
L17K	Donlin	78.69	19	P	P	10 47 03.1	+0.5
	baz=222						
TNA	Tin City	78.82	13	P	P	10 47 03.8	+0.6
	baz=213,SNR=8.1						
J16K	Anvik River	78.86	17	P	P	10 47 04.3	+0.7
	baz=220,SNR=20						
N19K	Bonanza Creek	79.02	21	P	P	10 47 05.0	+0.4
	baz=226						
M18K	Stony River	79.04	20	P	P	10 47 05.1	+0.6
	baz=225						
F14K	Arctic Creek	79.12	14	P	P	10 47 05.6	+0.7
	baz=214						
K17K	Iditarod	79.13	18		P	10 47 05.9	+0.8
K17K				IAmb	IAmb	10 47 07.6	
	comp=Z,13nm,1.1s						
K17K	Iditarod	79.13	18	P	P	10 47 05.8	+0.8
	baz=222,SNR=7.9						
L18K	Granite Mounta	79.27	19	P	P	10 47 06.5	+0.7
	baz=224						
G15K	Niukluk	79.28	15	P	P	10 47 06.5	+0.7
	baz=216						
HOM	Homer	79.28	23	P	P	10 47 06.7	+0.8
	baz=229						
I17K	Unalakleet	79.30	17	P	P	10 47 07.0	+1.1
	baz=220,SNR=6.0						
H16K	Elim	79.46	16	P	P	10 47 07.6	+0.8
	baz=218						
BRSE	Bradley Lake S	79.69	23	P	P	10 47 08.8	+0.7
	baz=230						
F15K	North Star Dit	79.71	14		P	10 47 08.0	-0.1
F15K				IAmb	IAmb	10 47 10.6	
	comp=Z,10nm,1.3s						
F15K	North Star Dit	79.71	14	P	P	10 47 08.7	+0.6
	baz=216						
M19K	Big River Lodg	79.81	20	P	P	10 47 09.8	+1.0
	baz=226						
L19K	White Mountain	79.85	20		P	10 47 10.0	+1.0
L19K	White Mountain	79.85	20	P	P	10 47 09.8	+0.7
	baz=226						
G16K	Koyuk River	80.03	15		P	10 47 10.2	+0.4
G16K				IAmb	IAmb	10 47 11.7	
	comp=Z,12nm,1.2s						
G16K	Koyuk River	80.03	15	P	P	10 47 10.5	+0.6
	baz=218						
N20K	Mount Spurr	80.10	21	P	P	10 47 10.9	+0.5
	baz=228						
SPCR	Spurr Chakacha	80.10	21	P	P	10 47 10.9	+0.5
	baz=228						
J18K	Innoko River	80.17	18	P	P	10 47 11.2	+0.5
	baz=224,SNR=5.4						
M20K	Styx River	80.23	21	P	P	10 47 11.4	+0.3
	baz=227						
QSPA	South Pole Qui	80.28	180	P	P	10 47 11.2	-0.3
	comp=Z,1.0nm,0.8s,baz=354,slow=10,SNR=6.2						
	comp=Z,1.0nm,0.8s						
H17K	Granite Mounta	80.33	16	P	P	10 47 11.8	+0.3
	baz=220						
SEW	Seward	80.42	23	P	P	10 47 12.2	+0.2
	baz=231						
O22K	Cooper Landing	80.55	23	P	P	10 47 12.8	+0.1
	baz=231						
G17K	Kiwalik Mounta	80.56	16	P	P	10 47 13.1	+0.4
	baz=220						
SKT	Skwentna	80.86	21	P	P	10 47 14.9	+0.4
	baz=229						
J19K	Poorman	80.89	18	P	P	10 47 15.1	+0.6
	baz=225						
H18K	Honhosa River	80.92	17	P	P	10 47 15.1	+0.5
	baz=222						
K20K	Telida	80.93	19	P	P	10 47 15.4	+0.7
	baz=226,SNR=7.0						
RC01	Rabbit Creek A	80.94	22	P	P	10 47 15.2	+0.4
	baz=230						
GCSA	Galena City Sc	81.05	17	P	P	10 47 15.6	+0.3
	baz=223						
F17K	Baldwin Pennin	81.14	15	P	P	10 47 16.3	+0.6
	baz=219						
P23K	Montague Islan	81.16	24	P	P	10 47 16.3	+0.3
	baz=233						
M22K	Willow	81.22	22	P	P	10 47 16.7	+0.4
	baz=230						
PPLA	Purkeypile	81.24	20	P	P	10 47 16.7	+0.1
	baz=228						
Q23K	Middleton Isla	81.25	25	P	P	10 47 16.5	+0.1
	baz=234						
G18K	Tagagawik	81.40	16	P	P	10 47 17.5	+0.3
	baz=222						
PMR	Palmer	81.48	22	P	P	10 47 17.4	-0.3
PMR				IAmb	IAmb	10 47 18.8	
	comp=Z,10nm,0.8s						
PMR	Palmer	81.48	22	P	P	10 47 17.8	+0.1
	baz=231,SNR=5.2						
E17K	Hotham Inlet	81.50	14	P	P	10 47 18.0	+0.3
	baz=218,SNR=11						
CUT	Chulitna	81.59	21	P	P	10 47 18.1	-0.1
	baz=230,SNR=5.5						
KNK	Knik Glacier	81.62	22	P	P	10 47 18.7	+0.2
	baz=232						
C16K	Lisburne Hills	81.66	12	P	P	10 47 18.6	+0.2
	baz=215						
F18K	Selawik	81.67	15	P	P	10 47 18.9	+0.3
	baz=221,SNR=9.0						
D17K	Noatak River	81.69	14	P	P	10 47 19.1	+0.5
	baz=217						
GLI	Glacier Island	81.82	23	P	P	10 47 19.8	+0.3
	baz=233						
CHUM	Lake Minchumin	81.86	19	P	P	10 47 20.1	+0.4
	baz=228,SNR=7.3						
SML	Sawmill	81.91	22	P	P	10 47 20.5	+0.4
	baz=232						
RDOG	Red Dog Mine	82.01	13	P	P	10 47 21.0	+0.6
	baz=217						
G19K	Purcell Mounta	82.02	16	P	P	10 47 20.9	+0.4
	baz=223,SNR=12						
E18K	Tukpahlearik C	82.06	14	P	P	10 47 21.1	+0.5
	baz=220						
M23K	Glacier View	82.13	22	P	P	10 47 21.6	+0.5
	baz=232						
EYAK	Cordova Ski Ar	82.15	24	P	P	10 47 21.7	+0.5
	baz=234						
H20K	Anotleneega Mo	82.18	17	P	P	10 47 21.8	+0.5
	baz=225						
TRF	Thorofare Moun	82.26	20	P	P	10 47 21.8	-0.2
	baz=230,SNR=7.1						
C17K	DeLong Mountai	82.29	13	P	P	10 47 22.1	+0.2
	baz=217,SNR=6.1						
SCM	Sheep Creek Mo	82.31	22	P	P	10 47 22.3	+0.1
	baz=233						
KAIM	Kayak Island	82.33	25	P	P	10 47 22.5	+0.3
	baz=236						
F19K	Shaleruckik Mo	82.34	16	P	P	10 47 22.4	+0.3
	baz=222						
BPAW	Bear Paw Mtn.	82.45	20	P	P	10 47 22.6	-0.2
	baz=229						
WAT1	Susitna Watana	82.47	21	P	P	10 47 22.8	-0.1
	baz=231						
WAT6	Susitna Watana	82.61	22	P	P	10 47 23.7	-0.1
	baz=232						
KLU	Klutina	82.64	23	P	P	10 47 23.9	0.0
	baz=234						
BMRM	Bremner River	82.85	24	P	P	10 47 25.2	+0.2
	baz=235						
C18K	Utukok River	82.88	13	P	P	10 47 25.2	+0.2
	baz=219,SNR=5.3						
MCK	McKinley	82.90	21	P	P	10 47 25.0	-0.2
	baz=231,SNR=26						
M24K	Tolsona, Glenn	82.91	23	P	P	10 47 25.4	+0.2
	baz=234						
H21K	Melozitna Rive	82.92	18	P	P	10 47 25.7	+0.5
	baz=227						
BGLC	Bering Glacier	82.92	25	P	P	10 47 25.6	+0.4
	baz=236						
E19K	Redstone River	82.94	15	P	P	10 47 25.8	+0.5
	baz=223						
DHY	Denali Highway	83.05	21	P	P	10 47 26.3	+0.2
	baz=232,SNR=5.4						
F20K	Avaraart Lake	83.05	16	P	P	10 47 26.3	+0.5
	baz=224						
MLY	Manley	83.14	19	P	P	10 47 26.8	+0.4
	baz=229,SNR=12						
N25K	Chitina, Valde	83.22	23	P	P	10 47 27.3	+0.3
	baz=235						
G21K	Allakaket	83.30	17	P	P	10 47 27.6	+0.5
	baz=226						
CRQE	Cirque	83.34	25	P	P	10 47 27.8	+0.2
	baz=237						
NEA2	Nenana	83.40	20	P	P	10 47 27.3	-0.4
	baz=231,SNR=10						
HARP	HAARP	83.46	23	P	P	10 47 28.2	+0.2
	baz=235						
D19K	Kuna River	83.49	14	P	P	10 47 28.4	+0.3
	baz=222						
MESA	MESA	83.51	25	P	P	10 47 28.3	-0.3
	baz=238						
H22K	Ishtalitna Cre	83.51	18	P	P	10 47 28.6	+0.3
	baz=228						
C19K	Lookout Ridge	83.60	14	P	P	10 47 29.1	+0.4
	baz=220						
I23K	Minto, Yukon-K	83.66	19	P	P	10 47 29.4	+0.4
	baz=230						
PAX	Paxson	83.68	22	P	P	10 47 29.6	+0.3
	baz=234						
MCARA	McCarthy VSAT	83.72	24	P	P	10 47 29.9	+0.5
	baz=237						
F21K	Alatna River	83.79	17	P	P	10 47 30.3	+0.6
	baz=226						
E20K	Nigu River	83.80	15	P	P	10 47 30.4	+0.7
	baz=224						
WMQ	Urumqi	83.95	316	*e*P	P	10 47 32.4	+1.3
WMQ				LR	LR		
	comp=Z,130nm,24.0s						
COLA	College	83.99	20	P	P	10 47 30.8	+0.2
	baz=232						
HDA	Harding Lake	84.01	21	P	P	10 47 31.0	+0.1
	baz=233,SNR=12						
D20K	Etivluk River	84.02	15	P	P	10 47 31.2	+0.4
D20K				IAmb	IAmb	10 47 32.5	
	comp=Z,8.0nm,1.1s						
D20K	Etivluk River	84.02	15	P	P	10 47 31.2	+0.4
	baz=223,SNR=6.0						
K24K	Donnelly Dome	84.06	21	P	P	10 47 31.3	+0.2
	baz=234						
A19K	Wainwright	84.12	13	P	P	10 47 31.7	+0.5
	baz=219,SNR=8.0						
CTG	Chitna Glacier	84.18	25	P	P	10 47 32.1	+0.2
	baz=238						
PINM	Pinnacle	84.19	26	P	P	10 47 32.4	+0.5
	baz=239						
ILAR	Eielson Array	84.25	20	P	P	10 47 31.2	-0.8
	comp=Z,2.6nm,0.5s,baz=247,slow=4.9,SNR=109						
	comp=Z,2.6nm,0.5s						
POKR	Poker Plat Res	84.28	20	P	P	10 47 32.9	+0.7
	baz=232						
M26K	Nabesna, AK	84.30	23	P	P	10 47 33.0	+0.6
	baz=237						
RIDG	Independent Ri	84.36	22	P	P	10 47 33.4	+0.7
	baz=235,SNR=5.6						
G23K	Bananza Creek	84.46	18	P	P	10 47 33.8	+0.7
	baz=230,SNR=8.4						
L26K	Log Cabin Wild	84.51	23	P	P	10 47 34.0	+0.6
	baz=236						
E21K	Killik River	84.51	16	P	P	10 47 33.9	+0.6
	baz=226						
O28M	Mount Upton	84.56	25	P	P	10 47 34.5	+0.5
	baz=239						
H24K	Noodor Dome	84.58	19	P	P	10 47 34.4	+0.7
	baz=232						
J25K	Salcha River,	84.68	21	P	P	10 47 34.6	+0.3
	baz=234						
M27K	Edge Creek, AK	84.71	24	P	P	10 47 35.1	+0.5
	baz=238						
COLD	Coldfoot	84.75	17	P	P	10 47 35.2	+0.8
	baz=230						
C21K	Knifeblade Rid	84.81	15	P	P	10 47 35.4	+0.7
	baz=225						
SCRK	Sand Creek	84.81	22	P	P	10 47 35.4	+0.4
	baz=236,SNR=9.4						
B20K	Meade River	84.84	14	P	P	10 47 35.6	+0.8
	baz=223						
E22K	Anaktuvuk Pass	84.89	16	P	P	10 47 35.8	+0.6
	baz=228,SNR=5.2						
YUK3	Moose Creek	84.97	24	P	P	10 47 36.4	+0.4
	baz=239						
YUK8	Steele Glacier	85.00	25	P	P	10 47 36.7	+0.4
	baz=240						
SIT	Sitka	85.00	30	P	P	10 47 36.4	+0.5
	baz=244						
O29M	Mount Kennedy	85.02	26	P	P	10 47 36.8	+0.7
	baz=241						
L27K	Beaver Creek,	85.11	23	P	P	10 47 37.5	+1.1
	baz=238						
BVCY	Beaver Creek	85.14	24	P	P	10 47 37.5	+0.9
	baz=238						
D22K	Ayikyak River	85.16	16	P	P	10 47 37.7	+1.2
	baz=227						
PRP	Porcupine Dome	85.16	20	P	P	10 47 37.5	+0.7
	baz=234						
B21K	Ikpikpuk River	85.18	15	P	P	10 47 37.3	+0.8
	baz=225,SNR=6.5						
G24K	Hadweenzic Riv	85.24	19	P	P	10 47 38.0	+1.0
	baz=232,SNR=7.1						
YUK6	Outpost Mounta	85.42	26	P	P	10 47 39.1	+0.8
	baz=241						
CRAG	Craig	85.44	32	P	P	10 47 39.0	+0.9
	baz=246						
E23K	Chandalar	85.46	17	P	P	10 47 39.1	+1.0
	baz=230,SNR=5.8						
YUK4	Talbot Arm	85.50	25	P	P	10 47 40.2	+1.5
	baz=241,SNR=13						
S32K	Killisnoo	85.55	30	P	P	10 47 39.5	+0.8
	baz=244						
P30M	Million Dollar	85.64	27	P	P	10 47 39.8	+0.6
	baz=242						
U33K	Whale Pass	85.70	31	P	P	10 47 40.0	+0.6
	baz=246						
HYT	Haines Junctio	85.73	26	P	P	10 47 40.6	+0.9
	baz=242,SNR=7.8						
D23K	Nanushuk River	85.75	16	P	P	10 47 40.5	+1.0
	baz=229						
E24K	Your Creek	85.79	17	P	P	10 47 40.7	+0.9
	baz=231						
TOLK	Toolik Lake Re	85.84	17	P	P	10 47 40.6	+0.6
	baz=230						
I26K	Coal Creek Min	85.85	21	P	P	10 47 40.9	+0.9
	baz=236						
R32K	Eaglecrest	85.93	29	P	P	10 47 41.2	+0.7
	baz=244						
A21K	Barrow	85.94	13	P	P	10 47 41.4	+1.1
	baz=223						
B22K	Teshekpuk Lake	85.98	14	P	P	10 47 41.4	+0.9
	baz=226,SNR=5.0						
SKAG	Skagway	86.07	28	P	P	10 47 41.9	+0.7
	baz=244						
M29M	Somme Creek	86.12	24	P	P	10 47 42.0	+0.5
	baz=241						
V35K	Ketchikan	86.17	32	P	P	10 47 42.4	+0.6
	baz=247						
N30M	Aishikik Lake	86.21	25	P	P	10 47 42.6	+0.6
	baz=242						
WRAK	Wrangell Islan	86.22	31	P	P	10 47 42.6	+0.6
	baz=246						
O30N	Mendenhall	86.32	26	P	P	10 47 43.3	+0.8
	baz=243						
C23K	Itkillik River	86.34	15	P	P	10 47 43.4	+1.0
	baz=229						
F25K	Christian Rive	86.35	18	P	P	10 47 43.4	+0.9
	baz=234						
D24K	Happy Valley	86.38	16	P	P	10 47 43.6	+1.0
	baz=231						
I27K	Kandik River	86.56	21	P	P	10 47 44.8	+1.2
	baz=238,SNR=6.6						
DAWY	Dawson	86.56	23	P	P	10 47 44.7	+1.1
	baz=240,SNR=6.3						
G26K	Porcupine Rive	86.57	19	P	P	10 47 44.9	+1.4
	baz=236,SNR=12						
L29M	L29M	86.58	24	P	P	10 47 45.1	+1.4
	baz=241,SNR=5.7						
BMAR	Burnt Mountain	86.59	19		P	10 47 44.3	+0.6
E25K	Arctic Village	86.69	18	P	P	10 47 45.3	+1.1
	baz=234						
C24K	Franklin Bluff	86.78	16	P	P	10 47 45.6	+1.1
	baz=231						
N31M	Braeburn, Yuko	86.78	26	P	P	10 47 45.7	+0.9
	baz=243,SNR=6.5						
WHY	Whitehorse	86.80	27	P	P	10 47 44.9	0.0
	baz=244						
M30M	Minto, Yukon	86.86	25	P	P	10 47 45.8	+0.7
	baz=242						
P32M	Atlin	86.87	28	P	P	10 47 45.8	+0.6
	baz=245						
F26K	Sheenjek River	86.88	19	P	P	10 47 46.2	+1.1
	baz=235						
H27K	Steamboat Moun	86.92	20	P	P	10 47 46.1	+0.8
	baz=238,SNR=6.1						
I28M	Miner Creek	87.07	21	P	P	10 47 46.9	+0.7
	baz=239						
K29M	Barlow Dome	87.17	23	P	P	10 47 47.6	+0.9
	baz=242,SNR=8.5						
D25K	Kavik River	87.17	17	P	P	10 47 47.5	+1.0
	baz=233,SNR=5.9						
J29N	Klondike Camp	87.20	23	P	P	10 47 48.1	+1.4
	baz=241,SNR=9.4						
Q32M	Nakina River	87.28	29	P	P	10 47 47.9	+0.5
	baz=246						
S34M	Telegraph Cree	87.42	30	P	P	10 47 48.6	+0.7
	baz=247						
T35M	Bob Quinn	87.51	31	P	P	10 47 49.2	+0.9
	baz=248						
P33M	Teslin, Yukon	87.54	28	P	P	10 47 49.0	+0.5
	baz=246						
I29M	Ogilvie Camp,	87.61	22	P	P	10 47 49.7	+1.0
	baz=241,SNR=5.2						
M31M	Drury Creek, Y	87.69	25	P	P	10 47 49.8	+0.7
	baz=244						
MAYO	Mayo, Yukon	87.70	24	P	P	10 47 50.2	+1.1
	baz=243						
N32M	Quiet Lake	87.81	27	P	P	10 47 50.6	+0.9
	baz=246						
C26K	Camden Bay	87.94	17	P	P	10 47 51.6	+1.5
	baz=234,SNR=16						
E27K	Coleen River	87.95	19	P	P	10 47 51.9	+1.6
	baz=238,SNR=9.5						
J30M	Hart River	87.98	23	P	P	10 47 51.8	+1.2
	baz=242						
R33M	Jennings River	88.07	29	P	P	10 47 51.8	+0.7
	baz=247						
C27K	Jago River	88.11	17	P	P	10 47 52.2	+1.3
	baz=236						
DLBC	Dease Lake	88.16	30	P	P	10 47 52.3	+0.8
	baz=248						
F28M	Old Crow	88.21	19	P	P	10 47 52.7	+1.3
	baz=239						
I30M	Mount Dempster	88.26	22	P	P	10 47 53.1	+1.2
	baz=242,SNR=7.4						
MKAR	Makanchi Array	88.49	318	P	P	10 47 52.6	-0.7
	comp=Z,1.3nm,0.8s,baz=96,slow=6.3,SNR=14						
	comp=Z,1.3nm,0.8s						
MKAR	Makanchi Array	88.49	318		P	10 47 52.7	-0.5
EPYK	Eagle Plains	88.67	21	P	P	10 47 55.0	+1.3
	baz=242						
D27M	Malcolm River	88.72	18	P	P	10 47 55.1	+1.2
	baz=238						
ZALV	Zalesovo Beam	89.01	325	P	P	10 47 54.4	-1.1
	comp=Z,0.9nm,0.6s,baz=122,slow=5.4,SNR=3.8						
	comp=Z,0.9nm,0.6s						
G30M	tAoh Zraii Nji	89.13	21	P	P	10 47 56.9	+1.0
	baz=243						
E29M	Blow River	89.24	19	P	P	10 47 57.2	+0.9
	baz=241						
WTLY	Watson Lake, Y	89.36	28	P	P	10 47 57.7	+0.6
	baz=249						
D28M	Stokes Point	89.44	18	P	P	10 47 58.0	+0.9
	baz=240						
F30M	Barrier River	89.57	20	P	P	10 47 58.6	+0.8
	baz=243						
G31M	Satah River	89.80	21	P	P	10 47 59.6	+0.7
	baz=244						
NVAR	Mina Array Bea	89.80	51	P	P	10 47 59.5	-0.4
	comp=Z,1.2nm,0.9s,baz=238,slow=5.5,SNR=9.1						
	comp=Z,1.2nm,0.9s						
NVAR	Mina Array Bea	89.80	51	P	P	10 48 00.5	+0.6
F31M	Tsiigehtchic	90.20	21	P	P	10 48 01.4	+0.6
	baz=245						
INK	Inuvik	90.65	20	P	P	10 48 03.1	+0.3
	baz=245						
KURBB	Kurchatov Arra	91.85	321	P	P	10 48 07.5	-1.3
	comp=Z,0.4nm,0.4s,baz=116,slow=2.1,SNR=4.0						
	comp=Z,0.4nm,0.4s						
WRGLY	Wrigley	92.76	26	P	P	10 48 12.9	+0.2
	baz=254						
C36M	Paulatuk	94.23	20	P	P	10 48 19.4	+0.1
	baz=254						
YKA	Yellowknife Ar	96.57	28	P	P	10 48 29.4	-0.8
	comp=Z,0.7nm,0.7s,baz=267,slow=5.1,SNR=15						
	comp=Z,0.7nm,0.7s						
PDAR	Pinedale Array	97.09	48	P	P	10 48 32.2	-1.1
	comp=Z,0.5nm,0.9s,baz=259,slow=4.9,SNR=3.4						
	comp=Z,0.5nm,0.9s						
BVAR	Borovoye Array	97.23	322	P	P	10 48 31.9	-1.6
	comp=Z,0.4nm,0.5s,baz=64,slow=3.4,SNR=2.8						
	comp=Z,0.4nm,0.5s						

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*IDC **08** 10:56:24.4±0.7, 55°.38S×35°.71W, h0km, mb4.4/9, mbtmp4.4/9, MS4.1/16, Error ellipse: s-maj=24.5km s-min=16.7km az=43.0*

*NEIC **08** 10:56:27.7±1.9, 55°.17S±0°.07×35°.8W±0°.2, h10km±1km, mb4.9/29, Error ellipse: s-maj=20.3km s-min=8.3km az=62.0*

*GCMT **08** 10:56:27.7±0.3, 55°.50S±0°.02×35°.47W±0°.03, h14km±2km, MW4.9/99, Moment Tensor Solution. s20,c20; s99,c125; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.33±.12; $M_{\theta\theta}$-0.66±.11; $M_{\phi\phi}$0.98±.11; $M_{r\theta}$-0.68±.28; $M_{\theta\phi}$2.53±.12; $M_{\phi r}$-1.27±.30; Best double couple: $M_0$2.94700×10^{16} NP1: ϕ_s263.00000°, δ71.00000°, λ11.00000°. NP2: ϕ_s170.00000°, δ80.00000°, λ160.00000°. Principal axes: T 3.3760, Plg21.0000°, Azm125.0000°; N -0.8570, Plg68.0000°, Azm323.0000°; P -2.5180, Plg6.0000°, Azm218.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 10:56:26.9±0.4, **55°.29S**±0°.07×**35°.72W**±0°.08, **h10**km, **n93**, σ**1§57**/74, **mb4.8**/18, **MS4.1**/15, **4C, South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	1.10	336		Pb	10 56 45.3	-2.7
HOPE				Sn	Sb	10 57 00.7	-1.7
EFI	East Falkland	13.77	276	Pn	Pn	10 59 40.3	-1.6
PMSA	Palmer Station	16.89	224	LR	LR	11 05 41.9	
	comp=Z,740nm,18.2s,baz=54,slow=33						
PMSA	Palmer Station	16.89	224	*e*P	Pn	11 00 23.1	+0.2

VNA1	**Neumayer--Stat**	19.52	153	⇑P		Pn	11 01 00.4	+5.2			
	comp=Z,24nm,0.7s										
VNA3	**Neumayer Olymp**	19.55	155	⇑P		Pn	11 00 56.0	+0.4			
	comp=Z,33nm,0.8s										
VNA2	**Neumayer--Watz**	19.92	153	⇑P		Pn	11 00 59.0	-1.0			
	comp=Z,34nm,0.6s,baz=309,slow=14										
MG03	**Isla Dawson**	20.07	260	P		P	11 00 59.4	-0.7			
MG03				IAmb		IAmb	11 01 04.9				
	comp=Z,78nm,1.2s										
SNAA	**Sanae**	21.55	152	⇑P		P	11 01 15.0	-1.0			
	comp=Z,184nm,0.9s										
SNAA	**Sanae**	21.55	152	P		P	11 01 14.0	-2.1			
	comp=Z,15nm,0.9s,baz=300,slow=12,SNR=9.7										
SNAA				LR		LR	11 07 36.0				
	comp=Z,438nm,21.5s,baz=312,slow=31										
	comp=Z,15nm,0.9s										
SNAA	**Sanae**	21.55	152			P	11 01 17.3	+1.3			
MG05	**Puerto Natales**	22.01	264	P		P	11 01 20.9	-0.1			
MG05				IAmb		IAmb	11 01 28.3				
	comp=Z,49nm,0.8s										
GO09	**Cerro Castillo**	22.09	265	P		P	11 01 21.5	-0.4			
BELA	**Belgrano 2**	22.69	179	P		P	11 01 28.8	+0.7			
TROLL	**Troll, Antarti**	23.19	151	P		P	11 01 33.1	-0.4			
GO08	**Villa O'Higgin**	23.52	271			P	11 01 38.3	+1.4			
TRQA	**Tornquist**	24.70	303			P	11 01 48.5	+0.4			
TRQA				IAmb		IAmb	11 01 53.0				
	comp=Z,90nm,1.8s										
COYC	**Coyhaique**	24.85	278			P	11 01 49.7	+0.5			
LL02	**Futaleuf**	26.19	282			P	11 02 01.6	+0.2			
LL02				IAmb		IAmb	11 02 08.5				
	comp=Z,39nm,1.3s										
PLCA	**Paso Flores**	27.13	288	P		P	11 02 09.2	-0.7			
	comp=Z,9.0nm,0.9s,baz=140,slow=8.7,SNR=12										
PLCA				LR		LR	11 12 34.6				
	comp=Z,359nm,20.5s,baz=129,slow=36										
	comp=Z,9.0nm,0.9s										
PLCA	**Paso Flores**	27.13	288			P	11 02 09.9	-0.1			
PLCA	**Paso Flores**	27.13	288	*e*P		P	11 02 11.5	+1.5			
GO05	**Hualane**	32.08	294	P		P	11 02 53.5	-0.4			
BO01	**Tunca**	32.12	296	P		P	11 02 54.0	-0.1			
BO01				IAmb		IAmb	11 03 57.9				
	comp=Z,54nm,1.9s										
CFA	**Coronel Fontan**	32.93	302	LR		LR	11 17 22.0				
	comp=Z,286nm,20.0s,baz=170,slow=38										
CPUP	**Villa Florida**	32.95	323	P		P	11 03 01.6	+0.1			
	comp=Z,2.7nm,0.8s,baz=173,slow=8.2,SNR=5.8										
CPUP				LR		LR	11 15 43.4				
	comp=Z,356nm,20.6s,baz=159,slow=35										
	comp=Z,2.7nm,0.8s										
CPUP	**Villa Florida**	32.95	323			P	11 03 01.9	+0.4			
CPUP				IAmb		IAmb	11 04 07.4				
	comp=Z,17nm,1.6s										
CPUP	**Villa Florida**	32.95	323	*e*P		P	11 03 02.3	+0.8			
VA06	**Catapilco**	33.67	298	P		P	11 03 08.7	+0.9			
QSPA	**South Pole Qui**	34.96	180	P		P	11 03 17.2	-1.7			
	comp=Z,12nm,0.9s,baz=186,slow=4.5,SNR=20										
	comp=Z,12nm,0.9s										
QSPA	**South Pole Qui**	34.96	180			P	11 03 18.0	-0.9			
QSPA				IAmb		IAmb	11 03 26.1				
	comp=Z,19nm,1.0s										
CO01	**Juntas del Tor**	35.17	302	P		P	11 03 20.3	-0.8			
CO01				IAmb		IAmb	11 03 26.9				
	comp=Z,18nm,1.4s										
AC05	**El Transito**	36.20	303	P		P	11 03 29.3	-0.5			
AC05				IAmb		IAmb	11 04 18.8				
	comp=Z,12nm,1.1s										
MURT	**Porto Murtinho**	37.37	325	*e*P		P	11 03 43.1	+3.5			
PMNB	**Patos De Minas**	37.59	343	*e*P		P	11 03 43.4	+1.9			
BDQN	**Bodoquena, MS**	38.23	327	*e*P		P	11 03 50.6	+3.7			
AF01	**San Pedro de A**	40.27	310	P		P	11 04 04.5	+0.2			
PP1B	**Ponte de Pedra**	40.37	331	*e*P		P	11 04 07.0	+2.2			
BDFB	**Brasilia**	40.69	342	P		P	11 04 07.5	-0.1			
	comp=Z,3.2nm,0.9s,baz=166,slow=7.5,SNR=4.0										
	comp=Z,3.2nm,0.9s										
BDFB	**Brasilia**	40.69	342	P		P	11 04 06.7	-0.8			
BDFB				IAmb		IAmb	11 04 41.6				
	comp=Z,36nm,1.9s										
PB05	**IPOC Station P**	41.26	308	P		P	11 04 12.1	-0.2			
ARAG	**Araguaiana, MT**	41.41	336	*e*P		P	11 04 17.6	+4.2			
PB03	**IPOC Station P**	41.76	309	P		P	11 04 16.2	-0.2			
PB07	**IPOC Station P**	42.10	309	P		P	11 04 19.2	0.0			
PTLB	**Pontes e Lacer**	43.67	326	*e*P		P	11 04 32.8	+1.1			
SIV	**San Ignacio**	43.80	323	LR		LR	11 23 11.4				
	comp=Z,396nm,19.6s,baz=140,slow=37										
SNDB	**Serra Nova Dou**	44.91	338	*e*P		P	11 04 43.6	+2.0			
SUR	**Sutherland**	45.25	84	LR		LR	11 21 06.3				
	comp=Z,103nm,19.5s,baz=206,slow=33										
LPAZ	**La Paz**	46.18	314	P		P	11 04 52.0	-0.4			
	comp=Z,4.7nm,0.8s,baz=165,slow=6.0,SNR=16										
LPAZ				LR		LR	11 26 28.3				
	comp=Z,229nm,19.5s,baz=153,slow=39										
	comp=Z,4.7nm,0.8s										
LPAZ	**La Paz**	46.18	314	P		P	11 04 52.2	-0.2			
LPAZ	**La Paz**	46.18	314	*e*P		P	11 04 54.9	+2.5			
PDRB	**Porto dos Gac**	46.59	331	*e*P		P	11 04 56.5	+1.6			
VNDA	**Vanda**	47.00	185	LR		LR	11 21 59.7				
	comp=Z,106nm,21.4s,baz=170,slow=33										
SMTB	**Santa Maria do**	47.26	344	*e*P		P	11 05 02.7	+2.6			
H10N3	**ASCENSION HYDR**	50.25	28	T		T	11 59 07.6				
	baz=195,slow=75,SNR=368										
H10N1	**ASCENSION HYDR**	50.25	28	T		T	11 59 04.6				
	baz=195,slow=75,SNR=248										
H10N2	**ASCENSION HYDR**	50.26	28	T		T	11 59 08.8				
	baz=195,slow=75,SNR=277										
PRPB	**Parauapebas**	50.26	342	*e*P		P	11 05 25.6	+2.3			
BOSA	**Boshof**	50.60	84	P		P	11 05 24.6	-1.3			
	comp=Z,2.6nm,0.6s,baz=229,slow=7.3,SNR=11										
BOSA				LR		LR	11 21 46.3				
	comp=Z,144nm,20.5s,baz=208,slow=30										
	comp=Z,2.6nm,0.6s										
BOSA	**Boshof**	50.60	84	P		P	11 05 25.7	-0.2			
BOSA				IAmb		IAmb	11 05 51.8				
	comp=Z,27nm,1.5s										
H04S2	**CROZET ISLANDS**	52.20	120	T		T	12 02 22.3				
	baz=225,slow=75,SNR=54										
H04S3	**CROZET ISLANDS**	52.21	120	T		T	12 02 23.5				
	baz=225,slow=75,SNR=60										
H04S1	**CROZET ISLANDS**	52.22	120	T		T	12 02 19.3				
	baz=225,slow=75,SNR=38										
LBTB	**Lobatse**	53.56	82	P		P	11 05 47.5	-0.5			
LBTB				IAmb		IAmb	11 05 48.6				
	comp=Z,38nm,1.9s										
TSUM	**Tsumeb**	53.76	70	P		P	11 05 49.6	+0.1			
TSUM				IAmb		IAmb	11 06 16.1				
	comp=Z,19nm,1.6s										
NNA	**Nana**	53.78	307	LR		LR	11 28 10.7				
	comp=Z,300nm,21.2s,baz=130,slow=35										
NNA	**Nana**	53.78	307	P		P	11 05 48.8	-0.7			
MACA	**Manacapuru-AM**	55.75	329	P		P	11 06 04.1	+0.4			
MACA				IAmb		IAmb	11 06 10.3				
	comp=Z,11nm,0.7s										
TEFE	**Tefe**	56.66	325	*e*P		P	11 06 10.3	+0.1			
RPN	**Rapa Nui**	58.95	266	LR		LR	11 27 49.9				
	comp=Z,57nm,21.6s,baz=148,slow=32										
LSZ	**Lusaka**	62.77	77	P		P	11 06 51.7	-0.8			
	comp=Z,2.2nm,0.5s,baz=217,slow=6.3,SNR=5.4										
	comp=Z,2.2nm,0.5s										
OTAV	**Otavalo**	65.37	312	*e*P		P	11 07 12.5	+2.5			
SDV	**Santo Domingo**	70.27	323	P		P	11 07 41.2	+0.7			
SDV				IAmb		IAmb	11 07 44.9				
	comp=Z,10.0nm,0.9s										
SDV	**Santo Domingo**	70.27	323	*e*P		P	11 07 41.7	+1.3			
TORD	**Torodi Ar. Bea**	75.10	38	P		P	11 08 08.3	-0.5			
	comp=Z,3.5nm,0.9s,baz=208,slow=6.7,SNR=8.7										
	comp=Z,3.5nm,0.9s										
RPZ	**Rata Peaks**	78.78	199	LR		LR	11 40 27.2				
	comp=Z,135nm,18.8s,baz=177,slow=34										
RAO	**Raoul Island**	89.78	212	LR		LR	11 41 59.2				
	comp=Z,85nm,21.1s,baz=158,slow=30										
STKA	**Stephens Creek**	93.16	178	LR		LR	11 50 29.0				
	comp=Z,87nm,19.2s,baz=200,slow=35										
ESDC	**Sonseca Array**	98.41	24	LR		LR	11 49 12.7				
	comp=Z,110nm,20.9s,baz=195,slow=32										
ASAR	**Alice Springs**	100.87	170	P		Pdif	11 10 14.7	-1.5			
	comp=Z,0.4nm,0.6s,baz=188,slow=4.4,SNR=5.4										
BISRR	**Bisoca**	113.43	43	P		Pdif	11 11 10.9	-0.3			
CLL	**Collm**	113.68	31	*e*PS		PS	11 25 33.0	-0.3			
CLL				*e*PPS		PPS	11 26 42.0				
FINES	**FINESS Array B**	126.12	32	PKP		PKPdf	11 15 26.8	-1.1			
	comp=Z,1.7nm,0.9s,baz=171,slow=3.7,SNR=5.0										
YKA	**Yellowknife Ar**	132.47	322	PKP		PKPdf	11 15 38.3	-1.7			
	comp=Z,0.2nm,0.5s,baz=126,slow=2.0,SNR=4.5										
PZH	**PanZhiHua**	137.88	115	PKP		PKiKP	11 15 52.7	-0.7			
MKAR	**Makanchi Array**	141.31	76	PKhKP		PKPpre	11 15 50.6				
	comp=Z,0.2nm,0.4s,baz=262,slow=1.3,SNR=5.4										
KURBB	**Kurchatov Arra**	141.44	69	PKhKP		PKPpre	11 15 51.0				
	comp=Z,1.1nm,0.9s,baz=242,slow=4.0,SNR=6.9										
ILAR	**Eielson Array**	146.06	314	PKPbc		PKPdf	11 16 03.2	-1.4			
	comp=Z,5.1nm,0.7s,baz=127,slow=1.9,SNR=65										
LZDM	**Lanzhou Array**	146.30	108	PKPbc		PKPdf	11 16 06.9	+0.6			
	comp=Z,0.6nm,0.2s,baz=205,slow=6.4,SNR=1.5										
ZALV	**Zalesovo Beam**	146.45	67	PKPbc		PKPdf	11 16 05.8	+0.3			
	comp=Z,2.7nm,0.6s,baz=250,slow=4.1,SNR=10										
NJ2	**Nanjing**	150.68	132	*e*P		PKPdf	11 16 14.4	+1.2			
NJ2				pmax		pmax					
	comp=Z,15nm,0.6s										
HHC	**Hu-ho-hao-te**	154.10	110	*e*P		PKPdf	11 16 14.9	-3.2			
SONM	**Songino Array**	155.55	92	PKPab		PKPab	11 16 44.8	-1.2			
	comp=Z,0.2nm,0.4s,baz=193,slow=4.4,SNR=3.7										

IDC 08 11:06:17.2±2.6, 5.70S×146.82E, h224km±49km, mb3.0/3, mbtmp3.3/5, Error ellipse: s-maj=90.8km s-min=19.7km az=110.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	3.69	175	P		Pn	11 07 16.8	+0.6
	12nm,1.1s,baz=247,slow=13,SNR=1.9							
PMG				S		S	11 08 03.1	+0.5
	6.7nm,0.3s,baz=134,slow=20,SNR=6.1							
WRA	**Warramunga Arr**	18.65	220	P		P	11 10 17.8	-0.8
	0.2nm,0.4s,baz=44,slow=11,SNR=8.0							
WRA				S		S	11 13 39.6	+0.5
	0.2nm,0.6s,baz=40,slow=18,SNR=1.4							
ASAR	**Alice Springs**	21.77	214	P		P	11 10 51.2	-0.1
	0.8nm,0.6s,baz=42,slow=7.4,SNR=14							
	0.8nm,0.6s							
FITZ	**Fitzroy Crossi**	24.07	237	P		P	11 11 13.9	+1.6
	0.7nm,0.5s,baz=49,slow=11,SNR=1.4							
	0.7nm,0.5s							
SONM	**Songino Array**	64.06	331	P		P	11 16 26.8	-0.5
	0.4nm,0.7s,baz=122,slow=5.4,SNR=2.5							
	0.4nm,0.7s							

*IDC **08** 11:11:27.3±1.8, 52.62N×169.23W, h0km, mb3.5/7, mbtmp3.5/10, ML3.2/3, Error ellipse: s-maj=45.1km s-min=19.9km az=179.0*
*AEIC **08** 11:11:29.9±2.8, 52.20N±0.04×169.23W±0.09, h15km±6km, Error ellipse: s-maj=7.5km s-min=6.2km az=83.0*
*NEIC **08** 11:11:32.0±2.4, 52.26N±0.06×169.29W±0.07, h35km±2km, mb3.8/16, ML3.5/14, ML2.9(AEIC), Error ellipse: s-maj=10.9km s-min=7.1km az=171.0*
ISC 08 11:11:30.6±0.9, 52.22N±0.09×169.25W±0.06, h35km, n66, σt1.85/62, mb3.7/7, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CLCO	**Concord Point,**	0.63	333			Pn	11 11 43.1	0.0
CLCO						Sn	11 11 53.3	+1.3
CLES	**Cleveland East**	0.72	327			Pn	11 11 44.2	0.0
CLES				IAML			11 11 59.7	
	comp=E,3μm,0.3s							
CLES				IAML			11 12 08.2	
	comp=N,2μm,0.3s							
CLES	**Cleveland East**	0.72	327			Sn	11 11 54.8	+0.8
NIKH	**Nikolski High**	0.79	18			Pn	11 11 44.6	-0.6
NIKH				IAML			11 12 00.2	
	comp=E,1μm,0.7s							
OKSP	**Okmok Steeple**	1.18	29			Pn	11 11 50.9	+0.3
OKCE	**Okmok Cone E**	1.37	28			Pn	11 11 54.1	+0.9
OKTU	**Okmok Mt. Tuli**	1.37	32			Pn	11 11 54.0	+0.7
OKTU						Sn	11 12 12.1	+1.8
OKFG	**Magazine Ridge**	1.44	34			Pn	11 11 54.7	+0.6
MNAT	**Makushin Natee**	2.27	42			Pn	11 12 07.0	+1.4
UNV	**Unalaska Valle**	2.32	44			Pn	11 12 06.8	+0.6
AKRB	**Akutan Reef Bi**	2.70	44			Pn	11 12 13.4	+2.0
ZRO	**Akutan Zero**	2.71	45			Pn	11 12 14.1	+2.4
LVA	**Lava Point**	2.74	44	Pn		Pn	11 12 13.7	+1.7
LVA				IAML			11 13 11.7	
	comp=E,144nm,1.0s							
LVA				IAML			11 13 15.2	
	comp=N,200nm,0.9s							
AKBBA	**Akutan Broad B**	2.74	45			Pn	11 12 14.7	+2.7
KOSE	**Korovin Southe**	2.95	274			Pn	11 12 16.1	+1.2
KOFP	**Korovin Flat P**	2.98	273			Pn	11 12 16.3	+0.9
GSTR	**Great Sitkin T**	4.20	271	Pn		Pn	11 12 32.2	+0.1
GSTR				IAML			11 13 47.6	
	comp=E,97nm,1.0s							
ADK	**Adak**	4.60	269	Pn		Pn	11 12 37.2	-0.4
ADK				IAML			11 13 34.9	
	comp=E,43nm,1.1s							
ADK				IAML			11 14 54.6	
	comp=E,38nm,1.1s							
SPIA	**Saint Paul Isl**	5.00	354	Pn		Pn	11 12 45.7	+2.7
SDPT	**Sand Point**	6.07	55	Pn		Pn	11 12 59.4	+1.7
AMKA	**Amchitka**	7.15	268	Pn		Pn	11 13 12.8	+0.2
M11K	**Mekoryuk**	9.35	10	Pn		Pn	11 13 32.0	+3.1
O15K	**Ungalikthiuk R**	8.76	34	Pn		Pn	11 13 37.7	+3.1
N14K	**Kuskokwak Cree**	8.79	26	Pn		Pn	11 13 38.6	+3.6
PLK4	**Peulik 4**	9.18	49	Pn		Pn	11 13 43.7	+3.3
N15K	**Kwethluk River**	9.45	29	Pn		Pn	11 13 46.4	+2.4
O16K	**Kokwok River B**	9.67	36	Pn		Pn	11 13 49.7	+2.6
M16K	**Timber Creek**	10.47	29	Pn		Pn	11 13 59.2	+1.2
P18K	**Big Mountain,**	10.65	42	Pn		Pn	11 14 02.2	+1.7
O18K	**Koktuh Hills**	10.94	40	Pn		Pn	11 14 05.8	+1.4
KDAK	**Kodiak Island**	11.06	53	Pn		Pn	11 14 04.8	-1.2
KDAK				Pn		Sn	11 16 01.3	-6.9
	comp=E,0.2nm,0.3s,baz=123,slow=1.6,SNR=11							
	comp=E,0.1nm,0.3s,baz=11,slow=12,SNR=1.4							
	comp=E,3.8nm,1.0s							
Q19K	**Cape Douglas,**	11.08	47	Pn		Pn	11 14 07.0	+0.7
BRLK	**Bradley Lake**	12.72	46	Pn		Pn	11 14 30.4	+1.7
SLKM	**Skilak Lake**	13.37	44	Pn		Pn	11 14 37.6	0.0
SCM	**Sheep Creek Mo**	15.25	42	Pn		Pn	11 15 01.9	-1.2
SCM				IAmb		IAmb	11 15 03.3	
	comp=Z,7.7nm,0.8s							
KLU	**Klutina**	15.69	45			Pn	11 15 08.0	-0.8
KLU				IAmb		IAmb	11 15 46.8	
	comp=Z,9.2nm,1.3s							
M24K	**Tolsona, Glenn**	15.86	42	Pn		Pn	11 15 10.5	-0.4
DHY	**Denali Highway**	15.87	38	Pn		Pn	11 15 10.1	-1.1
DHY				IAmb		IAmb	11 15 22.8	
	comp=Z,6.2nm,1.4s							
MLY	**Manley**	15.96	29	Pn		P	11 15 13.7	-1.7
BMRM	**Bremner River**	16.05	47	Pn		Pn	11 15 12.8	-0.7
N25K	**Chitina, Valde**	16.31	45	Pn		Pn	11 15 16.7	0.0
N25K				IAmb		IAmb	11 15 33.4	
	comp=Z,5.8nm,1.1s							
I23K	**Minto, Yukon-K**	16.46	30	Pn		P	11 15 19.8	-1.1
HDA	**Harding Lake**	16.79	35	Pn		Pn	11 15 22.6	0.0
ILAR	**Eielson Array**	17.03	34	Pn		Pn	11 15 20.3	-5.4
	baz=233,slow=10,SNR=7.1							
	comp=Z,0.3nm,0.9s							
F25K	**Christian Rive**	19.22	28	P		Pn	11 15 52.8	+0.4
F25K				IAmb		IAmb	11 16 10.1	
	comp=Z,4.6nm,1.0s							
G26K	**Porcupine Rive**	19.37	31	P		Pn	11 15 53.8	-0.3
G26K				IAmb		IAmb	11 16 04.7	
	comp=Z,6.0nm,1.0s							
DAWY	**Dawson**	19.49	41	P		Pn	11 15 55.1	-0.6
C23K	**Itkillik River**	19.67	19	P		Pn	11 15 56.7	-1.1
H27K	**Steamboat Moun**	19.70	34	P		P	11 15 56.7	+0.2
H27K				IAmb		IAmb	11 16 03.8	
	comp=Z,7.4nm,1.2s							
PEA0B	**Petropavlovsk-**	19.97	286	P		P	11 15 58.8	-0.7
PETK	**Petropavlovsk-**	19.97	286	P		P	11 15 59.5	-0.1
	comp=Z,0.7nm,0.3s,baz=85,slow=14,SNR=33							
	comp=Z,2.2nm,0.4s							
PETK	**Petropavlovsk-**	19.97	286	P		P	11 15 59.4	-0.2
O30N	**Mendenhall**	20.00	52	P		Pn	11 16 02.6	+0.9
O30N				IAmb		IAmb	11 16 03.5	
	comp=Z,7.8nm,1.4s							
YKA	**Yellowknife Ar**	30.28	49	P		P	11 17 38.8	+0.9
	comp=Z,0.2nm,0.5s,baz=278,slow=8.5,SNR=3.6							
	comp=Z,0.2nm,0.5s							
H11N2	**WAKE ISLAND Hy**	37.39	219	T		T	11 59 04.1	
	baz=24							
H11N3	**WAKE ISLAND Hy**	37.40	219	T		T	11 59 03.9	
	baz=24							
H11N1	**WAKE ISLAND Hy**	37.41	219	T		T	11 59 09.5	
	baz=24							
H11S1	**WAKE ISLAND Hy**	38.58	218	T		T	12 00 00.2	
	baz=23,slow=76,SNR=14							
H11S2	**WAKE ISLAND Hy**	38.59	218	T		T	12 00 04.8	
	baz=23,slow=76,SNR=11							
H11S3	**WAKE ISLAND Hy**	38.59	218	T		T	12 00 01.6	
	baz=23,slow=76,SNR=7.4							
PDAR	**Pinedale Array**	40.36	79	P		P	11 19 06.7	+1.8
	comp=Z,0.2nm,0.4s,baz=327,slow=2.5,SNR=4.1							
	comp=Z,0.2nm,0.4s							
TXAR	**Lajitas Array**	52.67	89	P		P	11 20 42.4	+0.9
	comp=Z,0.1nm,0.6s,baz=324,slow=8.2,SNR=1.5							
	comp=Z,0.1nm,0.6s							
KURBB	**Kurchatov Arra**	62.64	318	P		P	11 21 51.0	0.0
	comp=Z,0.3nm,0.5s,baz=46,slow=7.9,SNR=4.7							
	comp=Z,0.3nm,0.5s							
BVAR	**Borovoye Array**	63.87	325	P		P	11 21 59.0	-0.2
	comp=Z,0.5nm,0.4s,baz=56,slow=8.8,SNR=3.1							
	comp=Z,0.5nm,0.4s							
FINES	**FINESS Array B**	66.02	352	P		P	11 22 12.9	-0.1
	comp=Z,1.1nm,0.7s,baz=8.4,slow=11,SNR=1.6							
	comp=Z,1.1nm,0.7s							
HFS	**Hagfors**	67.97	358	P		P	11 22 24.9	-0.5
	comp=Z,0.8nm,0.6s,baz=16,slow=6.6,SNR=0.8							
	comp=Z,0.8nm,0.6s							

*IDC **08** 11:16:21.2±0.5, 33.78N×38.63W, h0km, mb4.2/28, mbtmp4.1/28, MS4.2/68, Error ellipse: s-maj=14.8km s-min=11.9km az=160.0*
*NEIC **08** 11:16:23.5±0.8, 33.8N±0.1×38.7W±0.1, h10km±1km, mb4.9/52, Error ellipse: s-maj=19.9km s-min=14.8km az=181.0*
*GFZ **08** 11:16:24.9, 33.97N×38.59W, h10km, MW5.0, Moment Tensor Solution. s82 Moment tensor: Mrr=0.18; Mθθ=0.79; Mϕϕ=-0.61; Mrθ=-1.85; Mθϕ=4.10; Mϕr=0.46; Fault plane solution: NP1:ϕs=94.00000°, δ86.00000°, λ=-24.00000°. NP2:ϕs=185.00000°, δ65.00000°, λ=-175.00000°. Principal axes: T 4.5300, Plg14.0000°, Azm142.0000°; N 0.1000, Plg65.0000°, Azm265.0000°; P -4.6300, Plg19.0000°, Azm47.0000°;*
*GCMT **08** 11:16:25.5±0.1, 33.75N±0.01×38.62W±0.01, h16km, MW5.1/142, Moment Tensor Solution. s80,c97; s142,c235; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=0.31±.12; Mθθ=3.01±.12; Mϕϕ=-2.70±.10; Mrθ=-1.24±.31; Mθϕ=5.48±.10; Mϕr=0.61±.28; Best double couple: Mo=6.33600×10¹⁶ NP1:ϕs=194.00000°, δ78.00000°, λ=-177.00000°. NP2:ϕs=103.00000°, δ87.00000°, λ=-12.00000°. Principal axes: T 6.4170, Plg6.0000°, Azm149.0000°; N -0.1590, Plg77.0000°, Azm269.0000°; P -6.2560, Plg11.0000°, Azm58.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*INMG **08** 11:16:38.0±3.7, 34.16N×38.49W, h124km, M4.6, mb4.5, #DIST_RANGE: DISTANT*
ISC 08 11:16:22.9±0.4, 33.80N±0.07×38.69W±0.05, h10km, n481, σt0.92/440, mb4.7/100, MS4.2/73, 4D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PSET	**Sete Cidades**	11.26	65	*e*P		Pn	11 19 03.7	-0.2
PSET				IAmb		IAmb	11 19 09.7	
	388nm,1.7s							
CMLA	**Cha da Macela**	11.40	66	Pn		Pn	11 19 04.0	-1.7
CMLA	**Cha da Macela**	11.40	66	*e*P		Pn	11 19 05.4	-0.3
CMLA				IAmb		IAmb	11 19 11.5	
	271nm,1.7s							
PGRON	**Lagoa das Cont**	11.51	66	*e*P		Pn	11 19 06.8	-0.5
PGRON				IAmb		IAmb	11 19 14.0	
	404nm,1.7s							
PSMN	**Pico do Norte,**	11.56	70	*e*P		Pn	11 19 08.4	+0.4
PSMN				IAmb		IAmb	11 19 15.9	
	93nm,1.9s							
BART	**Pico Bartolome**	11.67	66	*e*P		Pn	11 19 09.7	+0.2
BART				IAmb		IAmb	11 19 11.8	
	136nm,0.9s							
PMOZ	**Por

BGES Gesves 35.87 49 *d*P **P 11 23 22.8 0.0**
WLF Walferdange 36.43 50 *d*P **P 11 23 27.0 -0.6**
comp=Z,14nm,1.0s
WLF *d*PP **PnPn 11 24 49.3 -0.5**
SENIN Lac Senin/Sane 36.85 56 P **P 11 23 32.1 +0.6**
SENIN IAmb IAmb 11 23 45.3
comp=Z,36nm,1.6s
TKL Tuckaleechee C 36.86 286 LR LR 11 35 27.1
comp=Z,273nm,20.9s,baz=94,slow=31
TUE Stuetta 38.27 56 P **P 11 23 43.6 +0.1**
comp=Z,60nm,1.1s
TUE pP **sP 11 23 47.1 +0.3**
comp=Z,60nm,1.1s
SDV Santo Domingo 38.45 237 **P 11 23 45.8 +0.5**
SDV IAmb IAmb 11 24 10.3
comp=Z,19nm,1.1s
DAVOX Davos/Dischmat 38.65 56 LR LR 11 36 41.4
comp=Z,513nm,21.9s,baz=255,slow=32
DAVA Damuels 38.67 55 *i* P **P 11 23 47.9 +1.1**
comp=Z,22nm,1.5s
KEST Kesra 39.20 73 LR LR 11 37 21.7
comp=Z,192nm,21.9s,baz=260,slow=32
FETA Feichten 39.24 55 *e*P **P 11 23 52.1 +0.5**
comp=Z,13nm,1.3s
RETA Reutte 39.28 54 *i* P **P 11 23 52.6 +0.8**
comp=Z,10nm,1.3s
RCBR Riachuelo 39.50 176 LR LR 11 36 35.9
comp=Z,137nm,18.4s,baz=358,slow=31
MOTA Moosalm 39.51 55 *i* P **P 11 23 54.0 +0.3**
comp=Z,9.0nm,1.0s
SQTA Sankt Quirin 39.57 55 *i* pP pP 11 23 55.9 -0.7
comp=Z,18nm,1.1s
GRF Grafenberg Arr 39.70 51 *e*P **P 11 23 55.7 +0.5**
comp=Z,6.1nm,0.9s,baz=264,slow=8.5
WATA Walderalm 39.83 55 *i* P **P 11 23 56.7 +0.2**
comp=Z,11nm,0.8s,SNR=7.4
WTTA Wattenberg 39.87 55 *e*P **P 11 23 57.4 +0.6**
comp=Z,6.8nm,0.8s,SNR=5.3
ABTA Abfaltersbach 40.46 56 *e*P **P 11 24 01.7 0.0**
comp=Z,12nm,1.0s
NKC Novy Kostel 40.53 50 AMS AMS 11 38 00.0
comp=Z,1µm,17.2s
LESA Schwarzleotal 40.58 55 *e*P **P 11 24 02.9 +0.3**
comp=Z,8.5nm,1.2s
CLL Collm 40.97 49 *i* P **P 11 24 05.3 -0.3**
comp=Z,4.0nm,0.8s
CLL *i* x x 11 24 13.4
CLL *e*PP **PP 11 25 36.0 -3.9**
CLL *e*S **S 11 30 14.0 -3.5**
CLL *e*SS **SnSn 11 33 26.0 -0.3**
CLL Collm 40.97 49 P **P 11 24 04.9 -0.7**
comp=Z,11nm,1.9s
KBA Koelnbreinsper 41.03 55 *i* P **P 11 24 06.0 -0.5**
comp=Z,4.2nm,0.8s
FDMO Fiordimonte 41.03 61 P **P 11 24 06.3 0.0**
FDMO IAmb IAmb 11 24 07.3
comp=Z,20nm,0.8s
HSKC Hora Svate Kat 41.19 50 *e*P **P 11 24 07.6 +0.1**
KHC Kasperske Hory 41.21 52 *e*P **P 11 24 07.5 -0.2**
KHC Kasperske Hory 41.21 52 P **P 11 24 07.3 -0.4**
comp=Z,7.7nm,1.4s
BIOA Bad Ischl, Aus 41.23 54 *e*P **P 11 24 06.3 -1.6**
comp=Z,9.0nm,1.1s
GERES GERESS Array B 41.28 52 P **P 11 24 07.5 -1.0**
comp=Z,1.4nm,0.6s,baz=274,slow=7.9,SNR=8.7
GERES LR LR 11 38 45.6
comp=Z,286nm,19.1s,baz=254,slow=33
comp=Z,1.4nm,0.6s
DBIC Dimbokro 41.33 123 P **P 11 24 07.5 -1.5**
comp=Z,15nm,0.7s,baz=321,slow=11,SNR=18
DBIC LR LR 11 38 18.1
comp=Z,377nm,21.6s,baz=328,slow=32
comp=Z,15nm,0.7s
DBIC Dimbokro 41.33 123 P **P 11 24 07.2 -1.7**
DBIC IAmb IAmb 11 24 08.4
comp=Z,17nm,0.8s
MOA Molln 41.65 54 *i* P **P 11 24 10.5 -0.8**
comp=Z,6.1nm,1.2s
NOA NORSAR Array B 41.86 34 P **P 11 24 12.4 -0.5**
comp=Z,2.2nm,1.0s,baz=255,slow=8.3,SNR=3.3
NOA LR LR 11 38 33.3
comp=Z,238nm,21.2s,baz=255,slow=32
comp=Z,2.2nm,1.0s
OBKA Obir 41.87 56 *i* P **P 11 24 12.9 -0.3**
comp=Z,9.4nm,0.9s,SNR=6.2
PVCC Panska Ves 41.91 50 AMS AMS 11 38 20.0
comp=Z,1µm,20.6s
TORD Torodi Ar. Bea 42.01 109 P **P 11 24 12.9 -1.7**
comp=Z,9.5nm,1.1s,baz=287,slow=8.1,SNR=29
comp=Z,9.5nm,1.1s
TORD Torodi Ar. Bea 42.01 109 **P 11 24 13.2 -1.4**
TORD IAmb IAmb 11 25 39.8
comp=Z,18nm,0.5s
SOKA Soboth 42.20 56 *i* P **P 11 24 15.5 -0.4**
comp=Z,6.8nm,1.6s
ARSA Arzberg 42.51 55 *e*P **P 11 24 17.6 -0.8**
comp=Z,4.7nm,1.0s
CONA Conrad Observa 42.72 54 *e*P **P 11 24 19.8 -0.4**
comp=Z,5.2nm,2.0s
HFS Hagfors 42.79 36 LR LR 11 39 11.4
comp=Z,281nm,20.2s,baz=242,slow=32
UPC Upice 42.83 50 *e*P **P 11 24 21.1 +0.2**
VAE Valguarnera 42.84 69 LR LR 11 40 18.3
comp=Z,638nm,18.3s,baz=118,slow=34
CHVC Chvalec 42.85 50 *e*P **P 11 24 21.2 +0.1**
OSTC Ostas 42.96 50 *e*P **P 11 24 21.5 -0.5**
DPC Dobruska-Polom 43.02 50 *e*P **P 11 24 22.8 +0.2**
DPC Dobruska-Polom 43.02 50 P **P 11 24 22.7 +0.2**
comp=Z,14nm,2.4s
RONA Rosalia, Austr 43.02 54 *e*P **P 11 24 21.2 -1.4**
comp=Z,2.7nm,0.7s
KRUC Moravsky 43.06 52 *e*P **P 11 24 22.0 -0.8**
VRAC Vranov 43.19 52 LR LR 11 39 45.0
comp=Z,247nm,18.7s,baz=247,slow=32
VRAC Vranov 43.19 52 *e*P **P 11 24 23.5 -0.3**
CUC Castrocucco 43.45 65 P **P 11 24 26.6 +0.5**
CUC IAmb IAmb 11 24 39.1
comp=Z,35nm,1.3s
MODS Modra-Piesok 43.66 53 *e*P **P 11 24 29.5 +1.8**
MORC Moravsky Berou 43.80 51 **P 11 24 29.5 +0.7**
MORC Moravsky Berou 43.80 51 *e*P **P 11 24 24.6 -4.2**
ROSC El Rosal 43.88 237 LR LR 11 41 44.8
comp=Z,441nm,18.8s,baz=69,slow=35
MPLH Magyarpolny 43.89 55 P **P 11 24 28.8 -0.7**
comp=Z,28nm,0.9s
STEB Steborice 43.95 51 *e*P **P 11 24 29.8 -0.2**
FCC Fort Churchill 44.03 322 **P 11 24 31.1 +0.7**
ULM Lac du Bonnet 44.42 310 P **P 11 24 33.0 -0.6**
comp=Z,7.5nm,0.8s,baz=90,slow=7.7,SNR=13
ULM LR LR 11 41 34.5
comp=Z,551nm,21.4s,baz=62,slow=34
comp=Z,7.5nm,0.8s
AGMN Agassiz Nation 44.47 307 **P 11 24 34.8 +0.6**
MORH Mrgy, Hungar 44.72 56 P **P 11 24 35.6 -0.5**
comp=Z,7.7nm,0.9s
MORH pP **pP 11 24 38.4 0.0**
comp=Z,7.7nm,0.9s
MDND Maddock 47.01 306 P **P 11 24 55.1 +0.9**
KWP Kalwaria Pacla 47.16 51 P **P 11 24 54.4 -1.0**
comp=Z,69nm,0.6s
H10N2 ASCENSION HYDR 47.34 146 T T 12 14 54.7
baz=332,slow=75,SNR=210
H10N3 ASCENSION HYDR 47.35 147 T T 12 15 02.5
baz=332,slow=75,SNR=470
H10N1 ASCENSION HYDR 47.36 146 T T 12 15 02.2
baz=332,slow=75,SNR=658
FFC Flin Flon 48.08 316 **P 11 25 03.0 +0.6**
RES Resolute Bay 48.94 343 LR LR 11 41 35.8
comp=Z,180nm,21.3s,baz=98,slow=31
FINES FINESS Array B 48.99 35 P **P 11 25 08.8 -0.4**
comp=Z,2.1nm,0.8s,baz=268,slow=7.0,SNR=5.9
FINES LR LR 11 43 13.0
comp=Z,251nm,18.9s,baz=246,slow=33
comp=Z,2.1nm,0.8s
RNPP8 Varash 49.02 49 P **P 11 25 08.5 -1.2**
RNPP9 Sopachiv 49.04 49 P **P 11 25 08.9 -0.9**
RNPP2 Kostyukhnivka 49.04 49 P **P 11 25 08.9 -1.0**
RNPP2 pP **sP 11 25 12.8 -0.3**
RNPP5 Staryi Chortor 49.05 49 P **P 11 25 09.6 -0.3**
VOIR 49.26 56 P **P 11 25 11.1 -0.6**
comp=Z,5.3nm,1.0s
NACGM Naroch 49.33 44 *e*P **P 11 25 12.5 +0.5**
comp=Z,13nm,0.9s,baz=273
KMPD K-Podol'skiy 49.73 52 P **P 11 25 13.6 -1.5**
KMPD P **pP 11 25 14.0 -3.5**
ARCES ARCESS Array B 49.77 25 P **P 11 25 16.4 +1.2**
comp=Z,2.1nm,0.8s,baz=266,slow=12,SNR=3.6
ARCES LR LR 11 43 42.4
comp=Z,127nm,18.1s,baz=256,slow=33
comp=Z,2.1nm,0.8s
MLR Muntele Rosu 49.87 56 LR LR 11 44 57.7
comp=Z,202nm,19.3s,baz=280,slow=34
MLR Muntele Rosu 49.87 56 **P 11 25 17.7 +1.3**
MLR IAmb IAmb 11 25 30.6
comp=Z,15nm,1.0s
BDFB Brasilia 49.97 192 P **P 11 25 17.2 -0.1**
comp=Z,3.4nm,0.7s,baz=14,slow=11,SNR=5.8
BDFB LR LR 11 43 48.7
comp=Z,305nm,18.8s,baz=347,slow=33
comp=Z,3.4nm,0.7s
MNK Minsk 49.99 44 *i* P **P 11 25 17.1 0.0**
comp=E,16nm,0.7s
MNK *i* P **P 11 25 17.1 0.0**
comp=N,17nm,0.8s
MNK *i* P **P 11 25 17.1 0.0**
comp=Z,23nm,0.8s,baz=274
MNK *i* PP **PP 11 27 10.9 -0.9**
MNK *i* PPP PPP 11 28 07.5
MNK *i* S **S 11 32 28.4 +0.8**
MNK *i* SS **SS 11 36 02.8 +2.8**
MNK *i* SSS SSS 11 37 25.6
MNK *i* LR LR 11 40 04.9
MNK *i* LRM MLR 11 41 45.3
comp=E,818nm,22.2s
MNK *i* LRM MLR 11 43 09.6
comp=N,358nm,20.9s
MNK *i* LRM MLR 11 43 15.6
SPITS Spitsbergen Ar 50.19 13 LR LR 11 40 53.4
comp=N,151nm,19.9s,baz=226,slow=29
MI28 Mi28,Pidlybu 50.20 49 P **P 11 25 17.5 -1.2**
LUBAR Lubar, Ukraine 50.38 50 P **P 11 25 20.0 -0.1**
MI30 MI30,Zelenitsa 50.55 49 P **P 11 25 20.8 -0.5**
comp=N,21nm,0.8s
MI30 pP **pP 11 25 23.5 -0.2**
comp=N,21nm,0.8s
SORM Soroca 51.04 52 P **P 11 25 23.0 -2.1**
comp=N,5µmcomp=N,9.1nm,0.8s
AK20 Malin Array Si 51.07 49 P **P 11 25 24.5 -0.7**
AK19 Malin Array Si 51.07 49 P **P 11 25 24.6 -0.7**
AK21 Malin Array Si 51.08 49 P **P 11 25 24.7 -0.7**
AK22 Malin Array Si 51.10 49 P **P 11 25 24.7 -0.8**
AK17 Malin Array Si 51.10 49 P **P 11 25 24.5 -1.0**
AK18 Malin Array Si 51.11 49 P **P 11 25 24.6 -0.9**
AK16 Malin Array Si 51.14 49 P **P 11 25 25.1 -0.7**
AK14 Malin Array Si 51.15 49 P **P 11 25 24.9 -0.9**
AK15 Malin Array Si 51.15 49 P **P 11 25 25.2 -0.6**
AK04 Malin Array Si 51.17 49 P **P 11 25 25.2 -0.8**
AK12 Malin Array Si 51.17 49 P **P 11 25 25.4 -0.6**
AK11 Malin Array Si 51.18 49 P **P 11 25 25.3 -0.8**
KIEV Kiev 51.20 49 P **P 11 25 25.3 -0.9**
comp=N,50nm,1.1s
AK01 Malin Array Si 51.20 49 P **P 11 25 25.5 -0.8**
AK03 Malin Array Si 51.20 49 P **P 11 25 25.5 -0.8**
AK06 Malin Array Si 51.21 49 P **P 11 25 25.3 -1.0**
AKASG Malin Array Be 51.21 49 P **P 11 25 25.2 -1.0**
comp=N,8.6nm,0.8s,baz=276,slow=6.9,SNR=25
AKASG LR LR 11 44 52.8
comp=N,514nm,20.4s,baz=262,slow=33
comp=N,8.6nm,0.8s
AKBB Malin Array Si 51.21 49 P **P 11 25 25.4 -0.9**
AK07 Malin Array Si 51.22 49 P **P 11 25 25.4 -1.0**
AK08 Malin Array Si 51.24 49 P **P 11 25 25.8 -0.7**
AK10 Malin Array Si 51.24 49 P **P 11 25 25.8 -0.7**
AK09 Malin Array Si 51.26 49 P **P 11 25 25.9 -0.8**
TIRR Tirgusor 51.79 57 P **P 11 25 29.6 -1.1**
comp=N,14nm,2.4s
BAL3X Bal3x, Balta 51.90 53 P **P 11 25 31.0 -0.5**
SIV San Ignacio 53.92 207 LR LR 11 45 09.7
comp=N,228nm,20.7s,baz=90,slow=32
YKA Yellowknife Ar 54.23 326 P **P 11 25 48.0 -0.4**
comp=N,1.1nm,0.9s,baz=82,slow=6.9,SNR=13
YKA LR LR 11 48 09.8
comp=N,598nm,19.5s,baz=86,slow=35
comp=N,1.1nm,0.9s
YNE Yellowstone No 54.59 304 P **P 11 25 52.2 +0.5**
TXAR Lajitas Array 54.73 284 P **P 11 25 53.0 +0.2**
comp=N,0.5nm,0.8s,baz=100,slow=6.9,SNR=4.6
TXAR LR LR 11 46 13.9
comp=N,234nm,21.9s,baz=63,slow=33
comp=N,0.5nm,0.8s
PDAR Pinedale Array 54.86 302 P **P 11 25 53.5 -0.2**
comp=N,0.9nm,0.5s,baz=73,slow=7.5,SNR=12
PDAR LR LR 11 49 12.7
comp=N,100nm,18.6s,baz=76,slow=36
comp=N,0.9nm,0.5s
OBN Obninsk 54.90 43 LR LR 11 47 03.2
comp=N,380nm,21.1s,baz=328,slow=34
ANMO Albuquerque 54.93 292 LR LR 11 47 26.4
comp=N,244nm,20.4s,baz=70,slow=34
PV03 Paradox Valley 55.67 296 P **P 11 25 59.5 -0.2**
DLMT Dillon 56.26 305 P **P 11 26 04.6 +1.0**
BR106 Keskin Array S 56.79 61 P **P 11 26 07.6 +0.2**
comp=N,48nmcomp=N,5.6nm,0.9s
BR131 Keskin Array S 56.81 61 **P 11 26 07.9 +0.3**
BRTR Keskin Array B 56.81 61 P **P 11 26 07.4 -0.2**
comp=N,4.8nm,0.9s,baz=270,slow=4.9,SNR=18
BRTR LR LR 11 48 38.6
comp=N,120nm,21.9s,baz=284,slow=34
comp=N,4.8nm,0.9s
BR104 Keskin Array S 56.81 61 P **P 11 26 07.4 -0.2**
LPAZ La Paz 57.18 214 P **P 11 26 10.5 -0.4**
comp=N,2.1nm,0.7s,baz=18,slow=7.5,SNR=6.8
LPAZ LR LR 11 48 07.3
comp=N,283nm,21.3s,baz=34,slow=33
comp=N,2.1nm,0.7s
LPAZ La Paz 57.18 214 **P 11 26 10.5 -0.4**
LPAZ IAmb IAmb 11 26 21.6
comp=Z,16nm,1.4s
A36M Sachs Harbour 57.19 338 P **P 11 26 10.3 +0.7**
baz=81
C36M Paulatuk 57.21 335 P **P 11 26 10.2 +0.5**
baz=81
WRGLY Wrigley 58.12 328 P **P 11 26 16.3 0.0**
baz=78
NNA Nana 58.24 225 LR LR 11 50 43.7
comp=Z,155nm,21.6s,baz=14,slow=35
NEW Newport 58.43 310 LR LR 11 50 35.7
comp=Z,540nm,21.0s,baz=72,slow=35
NEW Newport 58.43 310 **P 11 26 19.0 +0.2**
NEW IAmb IAmb 11 26 20.0
comp=Z,10nm,1.1s
PLID Pearl Lake 58.64 306 **P 11 26 20.3 -0.2**
PLID IAmb IAmb 11 26 37.2
comp=Z,12nm,1.2s
BNN Bunyan 58.71 62 **P 11 26 21.1 +0.1**
BNN IAmb IAmb 11 26 30.4
comp=Z,18nm,1.2s
KOTAN Kotaneelee Air 59.13 324 P **P 11 26 23.9 +0.5**
baz=75
ELK Elko 59.52 301 LR LR 11 53 10.6
comp=Z,214nm,18.1s,baz=75,slow=37
PB16 IPOC Station P 59.60 214 **P 11 26 27.3 -0.4**
WAH2 Wahluke Slope 60.47 309 P **P 11 26 33.5 +0.7**
WAH2 IAmb IAmb 11 26 34.3
comp=Z,9.1nm,1.0s
INK Inuvik 60.80 335 LR LR 11 52 35.4
comp=Z,258nm,18.4s,baz=40,slow=36
INK Inuvik 60.80 335 P **P 11 26 35.4 +0.8**
baz=72,SNR=9.4
J08A Circle Bar Ran 60.89 305 P **P 11 26 36.3 +0.4**
J08A IAmb IAmb 11 26 58.4
comp=Z,9.1nm,1.1s
PB11 IPOC Station P 60.90 214 **P 11 26 36.0 -0.1**
LTY Liberty 61.02 310 P **P 11 26 36.4 -0.3**
LTY IAmb IAmb 11 26 37.5
comp=Z,10nm,1.2s
F31M Tsiigehtchic 61.15 334 P **P 11 26 37.8 +0.8**
F31M Tsiigehtchic 61.15 334 P **P 11 26 37.3 +0.2**
baz=71,SNR=6.3
WTLY Watson Lake, Y 61.41 325 P **P 11 26 39.4 +0.4**
baz=72
G31M Satah River 61.51 333 P **P 11 26 39.8 +0.3**
baz=70
EIL Elat 61.52 72 LR LR 11 53 38.9
comp=Z,98nm,18.1s,baz=242,slow=36
F30M Barrier River 61.83 334 P **P 11 26 42.4 +0.7**
baz=70
H31M Peel River 61.92 332 P **P 11 26 43.2 +0.8**
baz=70
BELG Belogornoye 61.94 44 LR LR 11 52 14.8
comp=Z,469nm,18.9s,baz=288,slow=35
KBZ Khabaz 61.98 54 P **P 11 26 43.9 +0.8**
comp=Z,5.1nm,0.9s,baz=294,slow=6.7,SNR=7.8
KBZ LR LR 11 52 17.0
comp=Z,94nm,19.4s,baz=328,slow=35
comp=Z,5.1nm,0.9s
G30M tAoh Zraii Nji 62.21 334 P **P 11 26 44.7 +0.3**
baz=69
D28M Stokes Point 62.22 337 P **P 11 26 44.8 +0.6**
baz=68,SNR=9.3
E29M Blow River 62.29 336 P **P 11 26 45.3 +0.5**
baz=68
LPIG La Paz 62.30 282 LR LR 11 53 34.3
comp=Z,64nm,19.4s,baz=69,slow=36
CPUP Villa Florida 62.37 199 P **P 11 26 46.3 +0.6**
comp=Z,1.2nm,0.8s,baz=35,slow=12,SNR=2.9
CPUP LR LR 11 51 32.6
comp=Z,107nm,19.5s,baz=29,slow=34
comp=Z,1.2nm,0.8s
PINE Pine Mountain 62.41 306 **P 11 26 47.7 +1.4**
DLBC Dease Lake 62.57 324 LR LR 11 54 02.0
comp=Z,420nm,18.2s,baz=54,slow=36
DLBC Dease Lake 62.57 324 P **P 11 26 47.0 +0.1**
baz=70
NVAR Mina Array Bea 62.57 299 P **P 11 26 46.9 -0.5**
comp=Z,0.6nm,0.8s,baz=75,slow=7.2,SNR=4.4
NVAR LR LR 11 52 28.8
comp=Z,235nm,20.4s,baz=70,slow=35
comp=Z,0.6nm,0.8s
EPYK Eagle Plains 62.62 333 P **P 11 26 47.5 +0.4**
baz=68
R33M Jennings River 62.69 325 P **P 11 26 48.1 +0.4**
baz=69
I30M Mount Dempster 62.92 332 P **P 11 26 50.1 +0.9**
baz=68
D27M Malcolm River 62.98 337 P **P 11 26 50.5 +1.0**
baz=66
N32M Quiet Lake 63.04 327 P **P 11 26 51.0 +1.1**
baz=69
PFO Pinyon Flats O 63.11 294 LR LR 11 53 29.4
comp=Z,223nm,19.8s,baz=74,slow=35
J30M Hart River 63.15 331 P **P 11 26 50.8 +0.1**
baz=68
T35M Bob Quinn 63.20 322 P **P 11 26 51.5 +0.5**
baz=69
M31M Drury Creek, Y 63.23 329 P **P 11 26 52.1 +0.9**
baz=68
P33M Teslin, Yukon 63.27 326 P **P 11 26 52.5 +1.0**
baz=68
F28M Old Crow 63.28 335 P **P 11 26 52.0 +0.6**
baz=66,SNR=5.3
S34M Telegraph Cree 63.30 323 P **P 11 26 51.8 +0.2**
baz=69
MAYO Mayo, Yukon 63.34 330 P **P 11 26 52.7 +0.8**
baz=68
U35K Hyder 63.47 321 P **P 11 26 53.4 +0.7**
baz=68
Q32M Nakina River 63.47 325 P **P 11 26 52.9 -0.2**
baz=68
I29M Ogilvie Camp, 63.62 333 P **P 11 26 54.3 +0.7**
baz=66
E27K Coleen River 63.63 336 P **P 11 26 54.2 +0.5**
baz=65
C27K Jago River 63.70 338 P **P 11 26 54.6 +0.5**
baz=64,SNR=10.0
BBB Bella Bella 63.80 317 LR LR 11 54 49.9
comp=Z,437nm,18.1s,baz=64,slow=36
K29M Barlow Dome 63.91 331 P **P 11 26 56.5 +0.8**
baz=66
P32M Atlin 63.92 326 P **P 11 26 56.1 +0.4**
baz=67
C26K Camden Bay 63.94 338 P **P 11 26 56.2 +0.5**
baz=63
J29N Klondike Camp 63.95 332 P **P 11 26 56.6 +0.7**
baz=66
WHY Whitehorse 64.04 327 P **P 11 26 57.1 +0.4**
baz=67
N31M Braeburn, Yuko 64.12 328 P **P 11 26 57.8 +0.7**
baz=67
M30M Minto, Yukon 64.12 329 P **P 11 26 57.9 +0.8**
baz=66
I28M Miner Creek 64.20 333 P **P 11 26 58.6 +1.0**
baz=65
YBH Yreka Blue Hor 64.40 304 LR LR 11 55 49.5
comp=Z,20nm,18.2s,baz=75,slow=37
H27K Steamboat Moun 64.45 334 P **P 11 26 59.4 +0.2**
baz=64
L29M L29M 64.46 330 P **P 11 27 00.0 +0.7**
baz=66
WRAK Wrangell Islan 64.48 322 P **P 11 27 00.3 +0.9**
baz=67
V35K Ketchikan 64.53 321 P **P 11 27 00.1 +0.4**
baz=67
O30N Mendenhall 64.55 327 P **P 11 27 00.3 +0.5**
baz=66
DAWY Dawson 64.58 331 P **P 11 27 00.5 +0.5**
baz=65
GNI Garni 64.61 57 LR LR 11 55 55.8
comp=Z,90nm,19.1s,baz=290,slow=37
D25K Kavik River 64.67 338 P **P 11 27 01.2 +0.7**
baz=61
N30M Aishikik Lake 64.70 328 P **P 11 27 01.9 +1.0**
baz=66
F26K Sheenjek River 64.72 336 P **P 11 27 01.4 +0.5**
baz=62
SKAG Skagway 64.73 326 P **P 11 27 01.4 +0.5**
baz=66
I27K Kandik River 64.76 333 P **P 11 27 01.7 +0.5**
baz=64
R32K Eaglecrest 64.82 324 P **P 11 27 02.3 +0.6**
baz=66
M29M Somme Creek 64.88 330 P **P 11 27 03.1 +1.0**
baz=65
G26K Porcupine Rive 64.94 335 P **P 11 27 02.6 +0.4**
baz=62
E25K Arctic Village 64.99 337 P **P 11 27 03.2 +0.5**
baz=62,SNR=6.0
U33K Whale Pass 65.00 322 P **P 11 27 04.0 +1.2**
baz=66
S32K Killisnoo 65.18 324 P **P 11 27 04.4 +0.4**
baz=66
C24K Franklin Bluff 65.19 339 P **P 11 27 04.8 +1.0**
baz=60
P30M Million Dollar 65.21 327 P **P 11 27 04.2 0.0**
baz=65
CRAG Craig 65.26 321 P **P 11 27 04.9 +0.4**
baz=66
F25K Christian Rive 65.27 336 P **P 11 27 06.0 +1.5**
F25K Christian Rive 65.27 336 P **P 11 27 05.2 +0.7**
baz=61
YUK4 Talbot Arm 65.43 329 P **P 11 27 05.9 +0.1**
baz=64
I26K Coal Creek Min 65.47 333 P **P 11 27 06.8 +1.0**
baz=62
YUK6 Outpost Mounta 65.48 328 P **P 11 27 06.4 +0.2**
baz=64
D24K Happy Valley 65.52 338 P **P 11 27 06.5 +0.5**
baz=59
C23K Itkillik River 65.70 339 P **P 11 27 08.2 +1.1**
C23K Itkillik River 65.70 339 P **P 11 27 07.3 +0.2**
baz=58
SIT Sitka 65.72 323 P **P 11 27 07.6 +0.2**
baz=65
S31K Pelican 65.78 325 P **P 11 27 08.1 +0.3**
baz=65
O29M Mount Kennedy 65.86 327 P **P 11 27 09.0 +0.5**
baz=64
BVCY Beaver Creek 65.90 330 P **P 11 27 09.1 +0.5**
baz=63
YUK8 Steele Glacier 65.94 329 P **P 11 27 09.0 -0.2**
baz=64
E24K Your Creek 65.97 337 P **P 11 27 09.5 +0.5**
baz=59
L27K Beaver Creek, 66.00 331 P **P 11 27 09.8 +0.6**
baz=62
TOLK Toolik Lake Re 66.02 338 P **P 11 27 09.8 +0.5**
baz=58
YUK3 Moose Creek 66.02 329 P **P 11 27 10.1 +0.5**
baz=63
D23K Nanushuk River 66.18 339 P **P 11 27 10.9 +0.6**
baz=58
B22K Teshekpuk Lake 66.22 340 P **P 11 27 11.2 +0.7**
baz=56
PRP Porcupine Dome 66.24 334 P **P 11 27 10.9 0.0**
baz=60
E23K Chandalar 66.34 337 P **P 11 27 12.3 +0.9**
baz=58
G24K Hadweenzic Riv 66.34 336 **P 11 27 13.0 +1.7**
G24K IAmb IAmb 11 27 14.3
comp=Z,6.0nm,0.9s
G24K Hadweenzic Riv 66.34 336 P **P 11 27 11.9 +0.5**

baz=59
M27K **Edge Creek, AK** **66.35 330** **P** **11 27 12.5 +0.9**
M27K IAmb IAmb 11 27 38.6
comp=Z,12nm,1.3s
M27K **Edge Creek, AK** **66.35 330** P **P** **11 27 12.1 +0.5**
baz=62
O28M **Mount Upton** **66.36 328** P **P** **11 27 12.0 0.0**
baz=63
SCRK **Sand Creek** **66.42 332** P **P** **11 27 12.3 +0.3**
baz=61
A21K **Barrow** **66.51 342** P **P** **11 27 13.1 +0.8**
baz=53
L26K **Log Cabin Wild** **66.63 331** P **P** **11 27 13.5 +0.3**
baz=61
J25K **Salcha River,** **66.63 333** P **P** **11 27 13.7 +0.3**
baz=60
PINM **Pinnacle** **66.70 328** P **P** **11 27 14.6 +0.7**
baz=63
CTG **Chitna Glacier** **66.77 329** P **P** **11 27 15.1 +0.8**
baz=62
M26K **Nabesna, AK** **66.78 331** P **P** **11 27 15.5 +1.2**
baz=61
D22K **Ayikyak River** **66.83 339** P **P** **11 27 15.2 +0.8**
baz=56
RIDG **Independent Ri** **66.87 332** P **P** **11 27 15.4 +0.6**
baz=60
H24K **Noodor Dome** **66.92 335** P **P** **11 27 15.8 +0.7**
baz=59
COLD **Coldfoot** **66.97 337** P **P** **11 27 16.1 +0.8**
baz=57,SNR=5.4
B21K **Ikpikpuk River** **66.97 340** P **P** **11 27 15.6 +0.3**
baz=54
E22K **Anaktuvuk Pass** **66.99 338** **P** **11 27 16.6 +1.1**
E22K IAmb IAmb 11 27 38.3
comp=Z,7.5nm,1.1s
E22K **Anaktuvuk Pass** **66.99 338** P **P** **11 27 15.8 +0.3**
baz=56
ILAR **Eielson Array** **67.12 334** P **P** **11 27 16.9 +0.6**
comp=Z,0.7nm,0.9s,baz=44,slow=4.7,SNR=6.5
ILAR LR LR 11 55 25.8
comp=Z,128nm,21.0s,baz=54,slow=35
comp=Z,0.7nm,0.9s
POKR **Poker Plat Res** **67.14 334** P **P** **11 27 16.7 +0.3**
baz=59
G23K **Bananza Creek** **67.19 336** **P** **11 27 18.0 +1.2**
G23K IAmb IAmb 11 27 39.5
comp=Z,13nm,1.2s
G23K **Bananza Creek** **67.19 336** P **P** **11 27 17.6 +0.8**
baz=57
K24K **Donnelly Dome** **67.19 333** P **P** **11 27 17.6 +0.7**
baz=60
MCARA **McCarthy VSAT** **67.29 330** P **P** **11 27 17.4 -0.1**
baz=61
C21K **Knifeblade Rid** **67.30 340** P **P** **11 27 17.9 +0.5**
baz=54
HDA **Harding Lake** **67.33 333** P **P** **11 27 18.6 +0.9**
HDA **Harding Lake** **67.33 333** P **P** **11 27 17.8 +0.2**
baz=59
MESA **MESA** **67.41 328** P **P** **11 27 18.7 +0.2**
baz=61
COLA **College** **67.42 334** P **P** **11 27 19.0 +0.8**
baz=58
B20K **Meade River** **67.45 341** P **P** **11 27 19.0 +0.7**
baz=52
E21K **Killik River** **67.47 339** P **P** **11 27 18.4 -0.2**
baz=55
PAX **Paxson** **67.50 332** P **P** **11 27 19.1 +0.3**
baz=60
CRQE **Cirque** **67.63 329** P **P** **11 27 19.8 0.0**
baz=61
HARP **HAARP** **67.66 331** P **P** **11 27 19.7 -0.1**
baz=60
I23K **Minto, Yukon-K** **67.81 335** P **P** **11 27 20.8 +0.1**
baz=57
N25K **Chitina, Valde** **67.83 330** P **P** **11 27 21.3 +0.3**
baz=60
NEA2 **Nenana** **68.01 334** P **P** **11 27 22.6 +0.6**
baz=57
BGLC **Bering Glacier** **68.02 328** P **P** **11 27 22.8 +0.8**
baz=60
F21K **Alatna River** **68.03 338** P **P** **11 27 22.5 +0.4**
baz=55
D20K **Etivluk River** **68.09 340** P **P** **11 27 24.0 +1.5**
D20K IAmb IAmb 11 27 44.5
comp=Z,10nm,1.2s
D20K **Etivluk River** **68.09 340** P **P** **11 27 23.4 +1.0**
baz=52,SNR=6.2
H22K **Ishtalitna Cre** **68.10 336** P **P** **11 27 22.9 +0.4**
baz=56
BMRM **Bremner River** **68.16 330** P **P** **11 27 23.6 +0.5**
baz=60
DHY **Denali Highway** **68.19 332** P **P** **11 27 23.2 0.0**
baz=58
M24K **Tolsona, Glenn** **68.22 331** P **P** **11 27 23.2 -0.2**
baz=59
E20K **Nigu River** **68.25 339** P **P** **11 27 24.0 +0.6**
baz=53
MLY **Manley** **68.36 335** P **P** **11 27 24.5 +0.2**
baz=56
A19K **Wainwright** **68.37 342** P **P** **11 27 24.4 +0.4**
baz=49
MCK **McKinley** **68.43 333** P **P** **11 27 24.9 +0.2**
baz=57
KLU **Klutina** **68.44 330** P **P** **11 27 24.3 -0.5**
baz=59
G21K **Allakaket** **68.45 337** P **P** **11 27 25.7 +1.0**
G21K IAmb IAmb 11 27 47.0
comp=Z,9.9nm,1.2s
G21K **Allakaket** **68.45 337** P **P** **11 27 25.1 +0.4**
baz=54
WAT6 **Susitna Watana** **68.59 332** P **P** **11 27 26.5 +0.6**
baz=58
KAIM **Kayak Island** **68.61 329** P **P** **11 27 26.0 +0.3**
baz=59
D19K **Kuna River** **68.66 340** P **P** **11 27 26.4 +0.4**
baz=51
AKTO **Aktyubinsk** **68.68 43** LR LR 11 56 52.0
comp=Z,318nm,18.5s,baz=338,slow=35
C19K **Lookout Ridge** **68.69 341** P **P** **11 27 26.4 +0.2**
baz=50
I21K **Tanana** **68.72 335** P **P** **11 27 26.5 +0.2**
baz=55
H21K **Melozitna Rive** **68.72 336** P **P** **11 27 26.4 0.0**
baz=55
WAT1 **Susitna Watana** **68.77 332** P **P** **11 27 27.2 +0.4**
baz=57
SCM **Sheep Creek Mo** **68.83 331** P **P** **11 27 27.7 +0.5**
baz=58
F20K **Avaraart Lake** **68.84 338** P **P** **11 27 27.5 +0.4**
baz=53
EYAK **Cordova Ski Ar** **68.86 330** P **P** **11 27 27.7 +0.4**
baz=58
BPAW **Bear Paw Mtn.** **68.98 334** P **P** **11 27 28.3 +0.2**
baz=56
M23K **Glacier View** **69.01 331** P **P** **11 27 28.5 +0.2**
baz=57
E19K **Redstone River** **69.05 339** P **P** **11 27 28.9 +0.5**
baz=52
TRF **Thorofare Moun** **69.09 333** P **P** **11 27 29.3 +0.4**
baz=56
SML **Sawmill** **69.25 331** P **P** **11 27 30.1 +0.3**
baz=57
GLI **Glacier Island** **69.25 330** P **P** **11 27 30.2 +0.5**
baz=58
C18K **Utukok River** **69.43 341** P **P** **11 27 31.0 +0.2**
baz=49
KNK **Knik Glacier** **69.51 331** P **P** **11 27 32.1 +0.7**
baz=57
H20K **Anotleneega Mo** **69.52 336** P **P** **11 27 31.8 +0.5**
baz=53
CHUM **Lake Minchumin** **69.58 334** P **P** **11 27 31.9 +0.2**
baz=54
F19K **Shaleruckik Mo** **69.61 338** P **P** **11 27 31.8 0.0**
baz=51
CUT **Chulitna** **69.67 332** P **P** **11 27 33.1 +0.8**
baz=56
PMR **Palmer** **69.68 331** P **P** **11 27 33.2 +0.9**
baz=56
Q23K **Middleton Isla** **69.71 329** P **P** **11 27 32.9 +0.4**
baz=58
G19K **Purcell Mounta** **69.83 338** P **P** **11 27 33.5 +0.3**
baz=51
P23K **Montague Islan** **69.85 330** P **P** **11 27 33.7 +0.2**
baz=57
NRIK **Noril'sk** **69.94 18** P **P** **11 27 34.0 +0.1**
comp=Z,1.3nm,0.7s,baz=163,slow=20,SNR=2.2
comp=Z,1.3nm,0.7s
M22K **Willow** **69.98 332** P **P** **11 27 34.7 +0.5**
baz=56
E18K **Tukpahlearik C** **70.07 340** P **P** **11 27 35.1 +0.4**
baz=49
C17K **DeLong Mountai** **70.08 341** P **P** **11 27 35.4 +0.6**
baz=47
PPLA **Purkeypile** **70.11 333** P **P** **11 27 35.4 +0.2**
baz=54
RC01 **Rabbit Creek A** **70.21 331** P **P** **11 27 35.2 -0.4**
baz=56
RDOG **Red Dog Mine** **70.30 341** P **P** **11 27 35.6 -0.5**
baz=47
F18K **Selawik** **70.33 339** P **P** **11 27 36.5 +0.2**
baz=49
AB31 **Akbulak array** **70.34 43** **P** **11 27 36.9 +0.3**
ABKAR **Akbulak array** **70.34 43** P **P** **11 27 36.8 +0.1**
SKT **Skwentna** **70.40 332** P **P** **11 27 37.2 +0.3**
baz=54
G18K **Tagagawik** **70.48 338** P **P** **11 27 37.3 0.0**
baz=50
K20K **Telida** **70.53 334** P **P** **11 27 37.7 +0.1**
baz=53
O22K **Cooper Landing** **70.55 331** P **P** **11 27 37.8 +0.1**
baz=56
D17K **Noatak River** **70.59 340** P **P** **11 27 38.1 +0.3**
baz=47
GCSA **Galena City Sc** **70.64 336** P **P** **11 27 38.1 0.0**
baz=51
SEW **Seward** **70.65 330** P **P** **11 27 38.5 +0.2**
baz=56
E17K **Hotham Inlet** **70.66 340** P **P** **11 27 38.5 +0.3**
baz=48
J19K **Poorman** **70.69 335** P **P** **11 27 38.4 -0.1**
baz=52
C16K **Lisburne Hills** **70.80 342** P **P** **11 27 39.3 +0.2**
baz=45
H18K **Honnosa River** **70.87 337** P **P** **11 27 39.4 -0.2**
baz=50
F17K **Baldwin Pennin** **70.92 339** P **P** **11 27 39.9 +0.1**
baz=48
CAPN **Captain Cook N** **70.96 331** P **P** **11 27 40.4 +0.3**
baz=54
M20K **Styx River** **71.07 333** P **P** **11 27 40.3 -0.7**
baz=53
N20K **Mount Spurr** **71.12 332** P **P** **11 27 41.3 0.0**
baz=54
SPCR **Spurr Chakacha** **71.12 332** P **P** **11 27 41.5 +0.2**
baz=54
G17K **Kiwalik Mounta** **71.37 338** P **P** **11 27 43.0 +0.4**
baz=48
BRSE **Bradley Lake S** **71.39 330** P **P** **11 27 43.3 +0.4**
baz=54
J18K **Innoko River** **71.40 335** P **P** **11 27 43.3 +0.4**
baz=51
H17K **Granite Mounta** **71.51 337** P **P** **11 27 43.8 +0.3**
baz=49
M19K **Big River Lodg** **71.53 333** P **P** **11 27 44.4 +0.6**
baz=52
L19K **White Mountain** **71.53 334** P **P** **11 27 44.2 +0.5**
baz=52
HOM **Homer** **71.81 331** P **P** **11 27 45.6 +0.3**
baz=54
G16K **Koyuk River** **71.97 339** P **P** **11 27 46.8 +0.6**
baz=47
L18K **Granite Mounta** **72.18 334** P **P** **11 27 48.1 +0.6**
baz=50
N19K **Bonanza Creek** **72.24 332** P **P** **11 27 48.9 +0.9**
baz=52
M18K **Stony River** **72.32 333** P **P** **11 27 49.2 +0.8**
baz=51
F15K **North Star Dit** **72.43 339** P **P** **11 27 49.7 +0.7**
baz=45
K17K **Iditarod** **72.43 335** P **P** **11 27 49.8 +0.8**
baz=49
H16K **Elim** **72.45 338** P **P** **11 27 50.1 +1.0**
baz=47
P19K **Oil Pt** **72.46 331** P **P** **11 27 49.9 +0.6**
baz=52
I17K **Unalakleet** **72.47 337** P **P** **11 27 50.0 +0.8**
baz=48
O19K **Port Alsworth** **72.56 332** P **P** **11 27 50.2 +0.4**
baz=52
Q20K **Shuyak Island** **72.75 330** P **P** **11 27 51.4 +0.4**
baz=53
G15K **Niukluk** **72.75 339** P **P** **11 27 51.7 +0.8**
baz=45
L17K **Donlin** **72.81 335** P **P** **11 27 52.2 +0.9**
baz=49
J16K **Anvik River** **72.84 336** P **P** **11 27 51.2 -0.2**
baz=48
N18K **Kilae Creek** **72.86 333** P **P** **11 27 51.1 -0.6**
baz=51
M17K **Holitna River** **72.98 334** P **P** **11 27 51.9 -0.5**
baz=50
Q19K **Cape Douglas,** **73.07 331** P **P** **11 27 52.8 -0.2**
baz=52
F14K **Arctic Creek** **73.09 340** P **P** **11 27 52.9 0.0**
baz=44,SNR=5.6
O18K **Koktuh Hills** **73.12 332** P **P** **11 27 53.4 +0.2**
baz=51
KDAK **Kodiak Island** **73.33 329** LR LR 12 00 34.9
comp=Z,606nm,19.4s,baz=53,slow=36
KDAK **Kodiak Island** **73.33 329** P **P** **11 27 54.6 +0.2**
baz=53
P18K **Big Mountain,** **73.42 331** P **P** **11 27 54.7 -0.3**
baz=51
N17K **Nushagak Hills** **73.45 333** P **P** **11 27 54.9 -0.3**
baz=50
ANM **Nome** **73.46 339** P **P** **11 27 55.2 +0.1**
baz=44
TNA **Tin City** **73.48 340** P **P** **11 27 55.0 -0.2**
baz=42,SNR=9.2
L16K **Owhat River** **73.51 335** P **P** **11 27 56.0 +0.6**
baz=48
M16K **Timber Creek** **73.78 334** P **P** **11 27 57.2 +0.1**
baz=48
Q18K **Katmai Hardscr** **73.80 331** P **P** **11 27 58.0 +0.6**
baz=51
K15K **Wolf Creek Mou** **73.83 336** P **P** **11 27 57.8 +0.4**
baz=47
O17K **Koliganek Bris** **73.91 332** P **P** **11 27 58.2 +0.4**
baz=50
BVAR **Borovoye Array** **73.92 36** P **P** **11 27 58.2 +0.2**
comp=Z,1.3nm,0.7s,baz=308,slow=7.1,SNR=4.8
BVAR LR LR 12 00 51.4
comp=Z,150nm,18.0s,baz=298,slow=36
comp=Z,1.3nm,0.7s
OHAK **Old Harbor** **73.97 329** P **P** **11 27 58.3 +0.1**
baz=52
P17K **Kvichak River** **74.02 332** P **P** **11 27 58.4 -0.1**
baz=50
N16K **Nishlik Lake** **74.08 334** P **P** **11 27 59.0 +0.1**
baz=48
J14K **Nanvaranak Lak** **74.19 337** P **P** **11 27 59.0 -0.3**
baz=45
L15K **Ungalak Mounta** **74.24 335** P **P** **11 28 00.3 +0.5**
baz=47
Q17K **Contact Creek** **74.40 331** P **P** **11 28 00.9 0.0**
baz=50
O16K **Kokwok River B** **74.41 333** P **P** **11 28 01.3 +0.5**
baz=49
Q16K **King Salmon** **74.44 331** P **P** **11 28 00.7 -0.2**
baz=50
TIXI **Tiksi** **74.47 4** LR LR 11 58 14.2
comp=Z,46nm,18.9s,baz=12,slow=34
FURI **Furi** **74.63 90** LR LR 12 00 47.0
comp=Z,180nm,19.0s,baz=160,slow=36
M15K **Kasigluk River** **74.63 334** P **P** **11 28 01.6 -0.4**
baz=47
P16K **Nushagak River** **74.74 332** P **P** **11 28 03.0 +0.3**
baz=49
SII **Sitkinak Islan** **74.77 329** P **P** **11 28 02.4 -0.6**
baz=51
N15K **Kwethluk River** **74.77 334** P **P** **11 28 02.5 -0.4**
baz=47
L14K **Kuka Creek** **74.89 336** P **P** **11 28 03.1 -0.3**
baz=46
R17L **Mt. Peulik Vol** **75.00 330** P **P** **11 28 03.5 -0.8**
baz=50
M14K **Bethel** **75.05 335** P **P** **11 28 04.5 +0.1**
baz=46
K13K **Kusilvak Mount** **75.13 337** P **P** **11 28 05.8 +0.9**
K13K **Kusilvak Mount** **75.13 337** P **P** **11 28 05.2 +0.3**
baz=44
O15K **Ungalikthiuk R** **75.35 333** P **P** **11 28 06.0 -0.2**
baz=47
R16K **Pilot Point** **75.54 331** P **P** **11 28 07.0 -0.3**
baz=49
M13K **Dall Lake** **75.78 335** P **P** **11 28 09.1 +0.6**
baz=45
O14K **Tigyukauivet M** **75.83 333** P **P** **11 28 08.7 -0.3**
baz=46
CHIR **Chirikof Islan** **75.86 329** P **P** **11 28 09.0 -0.2**
baz=50
GAMB **Gambell** **75.89 340** P **P** **11 28 09.1 -0.1**
baz=39
ATD **Arta Tunnel** **76.69 85** LR LR 12 01 27.4
comp=Z,12nm,19.0s,baz=12,slow=35
BILL **Bilibino** **76.75 351** **P** **11 28 14.6 +0.6**
M11K **Mekoryuk** **76.78 336** P **P** **11 28 13.8 -0.5**
baz=43
CHNA **Chernabura Isl** **78.22 330** P **P** **11 28 21.9 -0.5**
baz=47
SDPT **Sand Point** **78.23 330** P **P** **11 28 22.4 -0.1**
baz=46
KURBB **Kurchatov Arra** **79.38 35** P **P** **11 28 28.7 -0.2**
comp=Z,2.3nm,0.9s,baz=311,slow=5.8,SNR=12
KURBB LR LR 12 03 59.8
comp=Z,111nm,18.1s,baz=161,slow=36
comp=Z,2.3nm,0.9s
FALS **False Pass** **79.78 331** P **P** **11 28 30.5 -0.4**
baz=44
PLCA **Paso Flores** **79.78 204** P **P** **11 28 32.9 +1.8**
comp=Z,2.8nm,0.9s,baz=39,slow=8.5,SNR=4.5
PLCA LR LR 12 03 17.1
comp=Z,78nm,19.3s,baz=29,slow=35
comp=Z,2.8nm,0.9s
ZALV **Zalesovo Beam** **79.92 30** P **P** **11 28 33.1 +1.3**
comp=Z,0.4nm,0.4s,baz=306,slow=5.0,SNR=3.9
ZALV LR LR 12 03 44.0
comp=Z,45nm,18.6s,baz=295,slow=36
comp=Z,0.4nm,0.4s
LSZ **Lusaka** **80.17 116** LR LR 12 01 22.8
comp=Z,222nm,21.9s,baz=324,slow=34
SPIA **Saint Paul Isl** **80.59 336** P **P** **11 28 34.3 -1.0**
baz=39
UNV **Unalaska Valle** **81.75 332** P **P** **11 28 40.7 -0.8**
baz=42
GAR **Garm** **82.19 48** **P** **11 28 44.4 -0.1**
GAR IAmb IAmb 11 28 48.7
comp=Z,8.9nm,0.9s
AAK **Ala-Archa** **82.42 43** LR LR 12 05 47.7
comp=Z,202nm,19.2s,baz=312,slow=36
NIKH **Nikolski High** **83.33 332** P **P** **11 28 49.4 -0.4**
baz=40
MAKZ **Makanchi** **83.64 36** **P** **11 28 52.3 +0.7**
MAKZ IAmb IAmb 11 29 07.2
comp=Z,15nm,1.8s
MKAR **Makanchi Array** **83.81 36** P **P** **11 28 52.0 -0.5**
comp=Z,1.8nm,1.0s,baz=318,slow=5.2,SNR=9.8
MKAR LR LR 12 05 29.0
comp=Z,208nm,21.0s,baz=315,slow=35
comp=Z,1.8nm,1.0s
LBTB **Lobatse** **84.55 125** P **P** **11 28 55.3 -1.2**
comp=Z,3.9nm,1.0s,baz=292,slow=11,SNR=3.6
LBTB LR LR 12 01 35.2
comp=Z,196nm,20.2s,baz=311,slow=32
comp=Z,3.9nm,1.0s
KSH2 **Kashi** **85.28 45** P **P** **11 29 01.2 +0.9**
KSH2 pP PcP 11 29 05.0 +1.6
KSH2 pmax pmax
comp=Z,6.0nm,1.1s
SUR **Sutherland** **86.42 133** LR LR 11 59 30.3
comp=Z,104nm,21.7s,baz=330,slow=30
BOSA **Boshof** **86.69 128** LR LR 12 05 38.3
comp=Z,151nm,18.3s,baz=324,slow=34
WMQ **Urumqi** **88.59 36** *e*P **P** **11 29 17.4 +1.2**
WMQ **Urumqi** **88.59 36** SKS S 11 39 48.4 -14
WMQ **Urumqi** **88.59 36** LR LR
comp=Z,210nm,21.3s
WMQ **Urumqi** **88.59 36** LR LR
comp=N,440nm,14.7s
SHEM **Shemya Is, Ala** **89.21 341** LR LR 12 12 50.8
comp=N,34nm,18.1s,baz=50,slow=38
PETK **Petropavlovsk-** **92.28 350** LR LR 12 11 01.9
comp=N,136nm,19.6s,baz=8.1,slow=36
SONM **Songino Array** **92.91 23** P **P** **11 29 36.3 0.0**
comp=N,0.2nm,0.4s,baz=338,slow=6.4,SNR=3.6
comp=N,0.2nm,0.4s
HHC **Hu-ho-hao-te** **100.81 23** *e*P **Pdif** **11 30 10.5 -1.6**
HHC pmax pmax
comp=Z,5.0nm,0.5s
HHC pmax pmax
comp=Z,74nm,5.4s
TAOE **Nuku Hiva Isla** **104.37 269** *e*LR LR 12 04 53.2
comp=Z,116nm,24.2s
PZH **PanZhiHua** **109.23 37** PKP **PKiKP** **11 34 53.4 -0.3**
PPT2 **Papeete2** **116.71 266** *e*LR LR 12 10 29.3
comp=Z,55nm,24.8s
TBI **Tubuai** **119.32 260** *e*LR LR 12 11 28.4
comp=Z,300nm,30.5s
DZM **Mont Dzumac** **154.98 291** *e*LR LR 12 28 23.7
comp=Z,187nm,22.8s
WRA **Warramunga Arr** **164.87 26** PKPab **PKPab** **11 37 22.8 -0.7**
comp=Z,0.6nm,1.0s,baz=332,slow=4.2,SNR=2.6
ASAR **Alice Springs** **168.00 35** PKP **PKPdf** **11 36 29.8 -0.3**
comp=Z,0.3nm,0.7s,baz=5.7,slow=0.9,SNR=2.1
ASAR PKPab **PKPab** **11 37 37.6 +0.3**
comp=Z,1.5nm,0.9s,baz=333,slow=4.5,SNR=8.5

IDC 08 11:32:51.8±4.6, 18°.31S×178°.01W, h586km±27km, mb2.6/2, mbtmp3.5/3, Error ellipse: s-maj=126.9km s-min=60.0km az=149.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.79**	**278**	P	P	11 34 14.8	-0.1
	3.2nm,0.4s,baz=97,slow=23,SNR=8.1						
WRA	**Warramunga Arr**	**44.93**	**260**	P	P	11 40 16.0	+0.1
	0.3nm,0.4s,baz=97,slow=7.6,SNR=9.3						
WRA				PcP	PcP	11 41 43.9	-0.6
	0.2nm,0.6s,baz=80,slow=1.5,SNR=1.8						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**45.05**	**255**	P	P	11 40 16.5	-0.2
	0.9nm,0.7s,baz=93,slow=7.6,SNR=18						
ASAR				PcP	PcP	11 41 44.5	-0.5
	0.4nm,0.9s,baz=100,slow=3.5,SNR=2.4						
	0.9nm,0.7s						
AKASG	**Malin Array Be**	**141.09**	**332**	PKP	PKPdf	11 51 16.3	+0.3
	0.8nm,0.5s,baz=60,slow=2.2,SNR=2.9						

IDC 08 11:47:50.8±5.9, 31°.04N×109°.36E, h0km, mb3.3/3, mbtmp3.3/3, MS2.8/1, Error ellipse: s-maj=679.5km s-min=29.3km az=52.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOW	**Kunigami**	**17.07**	**99**	LR	LR	11 58 15.9	
	comp=Z,35nm,19.7s,baz=192,slow=37						
MKAR	**Makanchi Array**	**26.11**	**315**	P	P	11 53 26.4	0.0
	0.6nm,1.0s,baz=125,slow=7.6,SNR=3.7						
	0.6nm,1.0s						
WRA	**Warramunga Arr**	**56.08**	**151**	P	P	11 57 32.3	+0.4
	0.5nm,0.9s,baz=336,slow=8.2,SNR=6.8						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**59.26**	**154**	P	P	11 57 53.7	-0.6
	0.3nm,0.8s,baz=334,slow=8.2,SNR=4.9						
	0.3nm,0.8s						

*IDC **08** 11:58:53.7±3.4, 8°.91S×119°.13E, h123km±28km, mb3.3/5, mbtmp3.7/9, Error ellipse: s-maj=43.9km s-min=9.2km az=57.0*
*DJA **08** 11:58:53.2±0.3, 9°.5±3°×11°.9E±°, h60km±7km, M3.9/19, mb3.8/2, MLv3.9/19*

ISC 08 11:58:50.5±0.8, 9°.12S±0°.05×118°.98E±0°.04, h96km±8km, n27, σ2S19/37, mb3.8/4, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**0.66**	**142**	P	**Pn**	**11 59 07.3**	**0.0**
WBSI				S	**Sn**	**11 59 19.9**	**+0.1**
DBNI	**Kabupaten Domp**	**0.90**	**313**	P	**Pn**	**11 59 10.3**	**+0.7**
DBNI				S	**Sn**	**11 59 23.6**	**-0.3**
LBFI	**Labuhan Bajo,**	**1.10**	**55**	P	**Pn**	**11 59 12.7**	**+0.9**
PLAI	**Plampang**	**1.22**	**283**	P	**Pn**	**11 59 14.0**	**+0.8**
PLAI				S	**Sn**	**11 59 31.1**	**+0.7**
WSI	**Waingapu**	**1.41**	**113**	P	**Pn**	**11 59 16.2**	**+0.7**
WSI				S	**Sn**	**11 59 35.4**	**+1.0**
BASI	**Baing, Sumba**	**1.92**	**125**	P	**Pn**	**11 59 24.2**	**+2.3**
TWSI	**Taliwang, Sumb**	**2.11**	**280**	P	**Pn**	**11 59 26.4**	**+2.0**
TWSI				S	**Sn**	**11 59 51.7**	**+1.5**
EDFI	**Ende, Flores**	**2.70**	**82**	P	**Pn**	**11 59 34.4**	**+2.1**
EDFI				S	**Sn**	**12 00 05.8**	**+1.3**

MMRI	**Maumere**	**3.25**	**82**	P	**Pn**	**11 59 42.8 +3.2**
BSSI	**Bau Bau, Buton**	**3.31**	**27**	P	**Pn**	**11 59 41.4 +1.0**
KHKI	**Kahang-Kahang**	**3.42**	**282**	P	**Pn**	**11 59 44.3 +2.5**
DNP	**Denpasar**	**3.75**	**276**	P	**Pn**	**11 59 48.2 +1.9**
IGBI	**Denpasar**	**3.80**	**274**	P	**Pn**	**11 59 48.8 +1.8**
MKS	**Makassar**	**3.90**	**7**	P	**Pn**	**11 59 50.3 +1.9**
RTBI	**Rangdo, Negare**	**4.04**	**279**	P	**Pn**	**11 59 52.8 +2.5**
KAPI	**Kappang**	**4.15**	**11**	P	**Pn**	**11 59 52.4 +0.7**
	7.2nm,0.3s,baz=246,slow=8.3,SNR=2.0					
KAPI				S	**Sn**	**12 00 37.5 -1.6**
	18nm,0.2s,baz=352,slow=22,SNR=12					
BATI	**Baumata**	**4.74**	**104**	P	**Pn**	**12 00 01.8 +2.0**
	14nm,0.3s,baz=56,slow=4.5,SNR=5.5					
BATI				S	**Sn**	**12 00 56.9 +3.2**
	28nm,0.3s,baz=313,slow=21,SNR=7.2					
BATI	**Baumata**	**4.74**	**104**	P	**Pn**	**12 00 01.4 +1.6**
JAGI	**Jajag, Banyuwa**	**4.81**	**277**	P	**Pn**	**12 00 03.1 +2.3**
SOEI	**Soe**	**5.25**	**97**	P	**Pn**	**12 00 10.6 +3.8**
	0.1nm18nm,0.7s					
FITZ	**Fitzroy Crossi**	**11.03**	**145**	P	**Pn**	**12 01 27.2 +2.0**
	0.8nm,0.5s,baz=106,slow=15,SNR=2.2					
FITZ				S	**Sn**	**12 03 21.3 -5.3**
	1.8nm,0.3s,baz=170,slow=19,SNR=8.4					
WRA	**Warramunga Arr**	**18.34**	**128**	P	**Pn**	**12 02 59.8 +1.2**
	0.2nm,0.6s,baz=305,slow=13,SNR=6.1					
WRA				S	**S**	**12 06 17.1 -5.0**
	0.6nm,0.9s,baz=306,slow=25,SNR=5.2					
ASAR	**Alice Springs**	**20.32**	**137**	P	Pn	12 03 22.2 +0.2
	0.4nm,0.6s,baz=315,slow=11,SNR=9.2					
ASAR				S	**S**	**12 07 02.0 +0.2**
	0.2nm,0.5s,baz=306,slow=21,SNR=4.8					
	0.4nm,0.6s					
SONM	**Songino Array**	**57.79**	**350**	P	**P**	**12 08 31.1 -0.7**
	0.5nm,0.6s,baz=180,slow=7.1,SNR=3.4					
	0.5nm,0.6s					
MKAR	**Makanchi Array**	**64.55**	**333**	P	**P**	**12 09 17.6 +0.2**
	0.5nm,0.6s,baz=138,slow=7.8,SNR=8.2					
	0.5nm,0.6s					
KURBB	**Kurchatov Arra**	**69.06**	**334**	P	**P**	**12 09 44.4 -1.5**
	0.7nm,0.2s,baz=134,slow=5.4,SNR=1.2					
	0.7nm,0.2s					
ZALV	**Zalesovo Beam**	**69.14**	**339**	P	**P**	**12 09 45.4 -1.0**
	0.9nm,0.5s,baz=137,slow=6.7,SNR=4.3					
	0.9nm,0.5s					

*RSNC **08** 12:02:30.8±0.0,9°.81N×73°.12W, h0km±1km, M2.7, mb3.5, ML2.5, MLv3.3*
*FUNV **08** 12:02:31.8, 9°.73N×73°.08W, h4km, MW3.4, Presumed earthquake*
ISC 08 12:02:31.4±1.7, 9°.84N±0°.04×73°.11W±0°.03, h17km±12km, n25, σ1°$ 03/43, 3C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MCQV	**Machiques**	**0.60**	**69**	⇑*eP*	**Pg**		**12 02 43.2**	**-0.1**
MCQV				*eS*	**Sb**		**12 02 52.8**	**+1.0**
ARGC	**Ariguani, Magd**	**1.12**	**271**	P	**Pn**		**12 02 51.3**	**-1.1**
ARGC				S	**Sb**		**12 03 06.3**	**-0.5**
OCAC	**Ocana**	**1.60**	**188**	P	**Pn**		**12 02 58.9**	**-0.3**
OCAC				S	**Sn**		**12 03 19.4**	**-0.1**
SJCC	**San Jacinto, C**	**2.04**	**272**	P	**Pn**		**12 03 06.1**	**+0.9**
SJCC				S	**Sb**		**12 03 32.5**	**-0.9**
SJCC	**San Jacinto, C**	**2.04**	**272**	⇑*eP*	**Pn**		**12 03 06.5**	**+1.3**
SJCC				*eS*	**Sb**		**12 03 33.0**	**-0.4**
CAPV	**Capacho**	**2.11**	**158**	*eP*	**Pn**		**12 03 05.3**	**-0.9**
CAPV				*eS*	**Sn**		**12 03 31.5**	**-0.7**
URIC	**Uribia, Colomb**	**2.15**	**30**	P	**Pn**		**12 03 06.9**	**+0.3**
URIC				S	**Sb**		**12 03 36.0**	**-0.4**
URIC	**Uribia, Colomb**	**2.15**	**30**	*eP*	**Pn**		**12 03 07.9**	**+1.3**
URIC				*eS*	**Sb**		**12 03 36.8**	**+0.4**
PAMC	**Pamplona, Colo**	**2.52**	**171**	P	**Pn**		**12 03 11.8**	**-0.2**
PAMC				S	**Sn**		**12 03 44.4**	**+1.9**
SDV	**Santo Domingo**	**2.62**	**111**	P	**Pn**		**12 03 13.4**	**+0.2**
SDV				S	**Sn**		**12 03 46.6**	**+1.9**
SDV	**Santo Domingo**	**2.62**	**111**	⇑*eP*	**Pn**		**12 03 13.6**	**+0.4**
SDV				*eS*	**Sn**		**12 03 44.0**	**-0.7**
SOCV	**Socops**	**2.71**	**125**	*eP*	**Pn**		**12 03 15.0**	**+0.8**
SOCV				*eS*	**Sn**		**12 03 45.0**	**-1.6**
BRJC	**Barrancabermej**	**2.92**	**193**	P	**Pn**		**12 03 17.0**	**-0.1**
BRJC				S	**Sn**		**12 03 52.6**	**+0.8**
BARC	**Barichara**	**3.23**	**181**	P	**Pn**		**12 03 21.6**	**0.0**
BARC				S	**Sn**		**12 04 00.8**	**+1.0**
LCBC	**Los crdobas,**	**3.36**	**253**	P	**Pn**		**12 03 23.8**	**+0.5**
LCBC				S	**Sn**		**12 04 02.1**	**-0.7**
PTBC	**PUERTO BERRIO,**	**3.54**	**202**	P	**Pn**		**12 03 25.2**	**-0.5**
PTBC				S	**Sn**		**12 04 07.6**	**+0.4**
TEPV	**Terepaima**	**3.86**	**88**	*eP*	**Pn**		**12 03 30.8**	**+0.7**
TEPV				*eS*	**Sn**		**12 04 13.5**	**-1.6**
RUSC	**La Rusia**	**3.92**	**180**	P	**Pn**		**12 03 31.8**	**+0.4**
RUSC	**La Rusia**	**3.92**	**180**	*eP*	**Pn**		**12 03 30.3**	**-1.0**
SPBC	**San Pablo de B**	**4.27**	**193**	P	**Pn**		**12 03 35.3**	**-0.5**
HELC	**Santa Helena**	**4.35**	**214**	P	**Pn**		**12 03 38.4**	**+1.3**
MAPV	**Macapo**	**4.58**	**90**	*eP*	**Pn**		**12 03 40.8**	**+0.8**
MAPV				*eS*	**Sn**		**12 04 29.9**	**-3.0**
CHIC	**Chingaza**	**5.21**	**187**	P	**Pn**		**12 03 50.2**	**+1.1**
	0.0nm4.9nm,1.4s							
CHIC				S	**Sn**		**12 04 49.5**	**+0.5**
	0.0nm4.9nm,1.4s							
BENV	**Beln**	**5.43**	**88**	*eP*	**Pn**		**12 03 51.5**	**-0.2**
CACV	**CAICARA DEL OR**	**6.87**	**109**	*eP*	Pn		12 04 17.4	+5.8

NNC 08 12:04:46.8±4.9, 36°.77N×70°.53E, h66km±142km, mb3.5, mpv3.6, 3C-1D, Error ellipse: s-maj=42.4km s-min=36.1km az=115.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.32**	**360**	⇓P		Pn	12 06 18.6	+1.3
	8.4nm,0.4s,baz=180,slow=13,SNR=108							
KK31				⇑S		Sn	12 07 28.4	+0.3
	1.3nm,0.3s,baz=186,slow=26,SNR=5.0							
AAK	**Ala-Archa**	**6.60**	**26**	⇑P		Pn	12 06 19.9	-1.4
	0.5nm,0.4s							
AAK				⇑S		Sn	12 07 36.4	+1.2
	2.0nm,0.7s							
AB31	**Akbulak array**	**14.66**	**332**	P		Pn	12 08 10.7	+0.3
	0.3nm,0.3s,baz=139,slow=13,SNR=29							
AB31				S		Sn	12 10 51.4	-0.2
	0.4nm,0.4s,baz=155,slow=23,SNR=4.5							

*IDC **08** 12:11:28.2±1.7, 8°.27S×115°.88E, h0km, mb3.2/4, mbtmp3.5/6, ML3.9/2, MS2.7/2, Error ellipse: s-maj=39.2km s-min=16.8km az=51.0*
*DJA **08** 12:11:32.1±0.2, 8°.5S×111°.6E±°, h10km, M4.3/22, mB5.0/2, mb4.5/5, MLv4.1/22, Mw(mB)4.4/2*
ISC 08 12:11:31.2±0.7, 8°.38S±0°.07×116°.00E±0°.03, h10km, n25, σ1°$ 47/30, mb3.3/4, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KHKI	**Kahang-Kahang**	**0.39**	**272**	P	**Pg**		**12 11 39.7**	**+0.8**
KHKI				S	**Sg**		**12 11 45.3**	**+1.3**
DNP	**Denpasar**	**0.84**	**249**	P	**Pb**		**12 11 48.4**	**+0.6**
DNP				S	**Sb**		**12 12 00.0**	**+0.8**
TWSI	**Taliwang, Sumb**	**0.94**	**113**	P	**Pg**		**12 11 49.6**	**+0.2**
TWSI				S	**Sn**		**12 12 04.2**	**+0.1**
IGBI	**Denpasar**	**0.95**	**242**	P	**Pg**		**12 11 49.2**	**-0.4**
RTBI	**Rangdo, Negare**	**1.05**	**265**	P	**Pg**		**12 11 51.5**	**+0.1**
PLAI	**Plampang**	**1.81**	**104**	P	**Pn**		**12 12 04.5**	**+2.0**
JAGI	**Jajag, Banyuwa**	**1.83**	**267**	P	**Pn**		**12 12 02.3**	**-0.5**
ABJI	**Asem Bagus**	**1.84**	**288**	P	**Pn**		**12 12 04.4**	**+1.5**
DBNI	**Kabupaten Domp**	**2.29**	**93**	P	**Pn**		**12 12 10.2**	**+1.1**
KMMI	**Kalianget**	**2.41**	**303**	P	**Pn**		**12 12 13.1**	**+2.4**
BLJI	**Banyuglugur**	**2.46**	**285**	P	**Pn**		**12 12 13.2**	**+1.8**
WBSI	**Waikabubak, Su**	**3.58**	**111**	P	**Pn**		**12 12 28.1**	**+1.3**
SJI	**Sawahan**	**4.24**	**278**	P	**Pn**		**12 12 35.7**	**-0.3**
SNJI	**Sawahan-Nganju**	**4.24**	**278**	P	**Pn**		**12 12 36.6**	**+0.5**
PCJI	**Pacitan**	**4.78**	**272**	P	**Pn**		**12 12 44.4**	**+1.1**
BSSI	**Bau Bau, Buton**	**4.98**	**64**	P	**Pn**		**12 12 46.0**	**0.0**
KAPI	**Kappang**	**5.00**	**48**	Pn	**Pn**		**12 12 46.6**	**+0.2**
	11nm,0.3s,baz=201,slow=4.1,SNR=22							
KAPI				Sn	**Sn**		**12 13 45.1**	**+0.8**
	1.6nm,0.3s,baz=71,slow=18,SNR=3.9							
KAPI				LR	LR		12 14 38.8	
	comp=Z,40nm,20.1s,baz=100,slow=38							
	30nm,0.3s							
KAPI	**Kappang**	**5.00**	**48**	P	**Pn**		**12 12 46.8**	**+0.4**
UGM	**Wanagama**	**5.44**	**274**	P	**Pn**		**12 12 53.8**	**+1.3**
LEM	**Lembang**	**8.45**	**280**	LR	LR		12 17 14.0	
	comp=Z,94nm,18.3s,baz=152,slow=42							

FITZ	**Fitzroy Crossi**	**13.46**	**137**	Pn	**Pn**	**12 14 43.2 +0.8**
	0.2nm,0.3s,baz=311,slow=12,SNR=5.3					
FITZ				Sn	**Sn**	**12 17 09.2 -3.0**
	0.1nm,0.3s,baz=108,slow=18,SNR=2.3					
	1.3nm,0.6s					
WRA	**Warramunga Arr**	**21.15**	**125**	P	**P**	**12 16 17.0 +0.4**
	0.9nm,0.8s,baz=301,slow=12,SNR=12					
WRA				S	**S**	**12 20 15.2 +3.2**
	0.4nm,0.9s,baz=312,slow=30,SNR=1.8					
	0.9nm,0.8s					
ASAR	**Alice Springs**	**22.92**	**134**	P	**P**	**12 16 35.4 -0.1**
	0.4nm,0.5s,baz=305,slow=9.3,SNR=9.8					
	0.4nm,0.5s					
SONM	**Songino Array**	**56.61**	**352**	P	**P**	**12 21 12.3 -2.0**
	0.3nm,0.6s,baz=154,slow=5.9,SNR=2.4					
	0.3nm,0.6s					
MKAR	**Makanchi Array**	**62.59**	**335**	P	**P**	**12 21 52.7 -2.8**
	0.2nm,0.7s,baz=141,slow=7.1,SNR=2.0					
	0.2nm,0.7s					

*NEIC **08** 12:12:24.6±1.6, 19°.19N±0°.04×67°.67W±0°.03, h10km±1km, ML3.3/37, Md3.2/7(RSPR), Error ellipse: s-maj=7.1km s-min=4.1km az=211.0*
*SDD **08** 12:12:25.2±2.5, 19°.27N×67°.68W, h17km±124km, MD3.6, ML3.1, MW3.4, Presumed earthquake*
ISC 08 12:12:23.6±1.4, 19°.24N±0°.06×67°.66W±0°.03, h9km±11km, n39, σ0°$ 89/55, 24C-2D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.86**	**168**		**Pg**		**12 12 40.1**	**-0.2**
IDE					**Sg**		**12 12 51.3**	**-0.2**
AGPR	**Aguadilla, PR**	**0.93**	**146**	Pg	**Pg**		**12 12 41.3**	**-0.1**
AGPR				IAML			12 12 55.3	
	798nm,0.3s							
AGPR				IAML			12 13 00.3	
	867nm,0.4s							
AGPR	**Aguadilla, PR**	**0.93**	**146**	⇑*ePg*	**Pb**		**12 12 41.9**	**0.0**
AGPR				⇑*eSg*	**Sb**		**12 12 54.6**	**+0.3**
AGPR				IAML			12 12 55.2	
	comp=N,597nm,0.2s							
PRSN	**Puerto Rico Se**	**1.13**	**154**		**Pb**		**12 12 44.9**	**-0.4**
PRSN	**Puerto Rico Se**	**1.13**	**154**	⇑*ePg*	**Pg**		**12 12 45.3**	**0.0**
PRSN				⇑*eSg*	**Sb**		**12 12 59.9**	**-0.2**
PRSN				IAML			12 13 06.4	
	comp=N,1μm,0.2s							
HIDR	**Higuey Centro**	**1.19**	**237**	⇑*ePg*	**Pn**		**12 12 44.9**	**-1.5**
HIDR				IAML			12 13 02.2	
	comp=N,795nm,0.2s							
LSP	**Las Mesas**	**1.19**	**152**		**Pg**		**12 12 46.7**	**+0.2**
LSP					**Sn**		**12 13 04.0**	**+1.2**
AOPR	**Arecibo Observ**	**1.23**	**136**		**Pn**		**12 12 46.6**	**-0.5**
AOPR				IAML			12 13 09.9	
	comp=N,599nm,0.3s							
AOPR				IAML			12 13 12.8	
	comp=N,977nm,0.3s							
AOPR	**Arecibo Observ**	**1.23**	**136**	⇑*ePg*	**Pn**		**12 12 46.1**	**-1.0**
AOPR				⇑*eSg*	**Sg**		**12 13 05.6**	**+2.1**
AOPR				IAML			12 13 09.8	
	comp=N,539nm,0.3s							
EMPR	**Esperanza - Ma**	**1.31**	**125**		**Pg**		**12 12 49.1**	**+0.3**
EMPR					**Sg**		**12 13 06.2**	**+0.3**
UUPR	**Utuado, UPR, P**	**1.32**	**137**		**Pb**		**12 12 48.2**	**-0.5**
CRPR	**Cabo Rojo, PR**	**1.33**	**157**		**Pn**		**12 12 48.0**	**-0.4**
CRPR	**Cabo Rojo, PR**	**1.33**	**157**		**Sg**		**12 13 08.2**	**+1.7**
MLPR	**Magueyes Islan**	**1.39**	**155**		**Pn**		**12 12 48.9**	**-0.4**
MLPR	**Magueyes Islan**	**1.39**	**155**	⇑*ePg*	**Pn**		**12 12 48.9**	**-0.4**
MLPR				⇑*eSg*	**Sg**		**12 13 09.6**	**+1.2**
MLPR				IAML			12 13 15.4	
	comp=N,77nm,0.3s							
SMDR	**Samana, DR**	**1.44**	**272**		**Pb**		**12 12 50.4**	**-0.3**
SMDR					**Sg**		**12 13 09.6**	**-0.4**
SMDR	**Samana, DR**	**1.44**	**272**	⇑*ePg*	**Pb**		**12 12 50.3**	**-0.3**
SMDR				⇑*eSg*	**Sg**		**12 13 10.4**	**+0.4**
SMDR				IAML			12 13 15.5	
	comp=N,244nm,0.6s							
GBPR	**Guanica, Bosqu**	**1.46**	**149**		**Sg**		**12 13 10.9**	**+0.3**
ECPR	**Experimental S**	**1.53**	**126**		**Pb**		**12 12 51.7**	**-0.6**
CELP	**Cerrillos**	**1.55**	**138**		**Pb**		**12 12 52.0**	**-0.5**
CELP				IAML			12 13 17.1	
	comp=N,353nm,0.8s							
CELP				IAML			12 13 17.2	
	comp=N,600nm,0.6s							
CELP	**Cerrillos**	**1.55**	**138**	⇑*ePg*	**Pb**		**12 12 51.9**	**-0.6**
CELP				⇑*eSg*	**Sg**		**12 13 13.6**	**+0.2**
CELP				IAML			12 13 17.1	
	comp=N,211nm,0.4s							
OBIP	**Obispado Ponce**	**1.55**	**140**		**Pb**		**12 12 51.9**	**-0.7**
OBIP	**Obispado Ponce**	**1.55**	**140**		**Sb**		**12 13 12.5**	**+0.1**
DR12	**Loma Pena Alta**	**1.68**	**255**		**Pb**		**12 12 53.9**	**-1.0**
HATOM	**Hato Mayor del**	**1.69**	**255**	⇑*ePg*	**Pb**		**12 12 54.0**	**-0.7**
HATOM				⇑*eSg*	**Sb**		**12 13 15.9**	**-0.3**
HATOM				IAML			12 13 20.7	
	comp=N,136nm,0.2s							
SJG	**San Juan**	**1.82**	**128**		**Pb**		**12 12 56.5**	**-0.6**
SJG				IAML			12 13 21.5	
	comp=N,202nm,0.5s							
SJG				IAML			12 13 27.4	
	comp=N,201nm,0.5s							
SJG	**San Juan**	**1.82**	**128**		**Pb**		**12 12 56.4**	**-0.7**
SJG	**San Juan**	**1.82**	**128**	⇑*ePg*	**Pb**		**12 12 56.1**	**-1.0**
SJG				⇑*eSg*	**Sg**		**12 13 21.1**	**-1.1**
PDPR	**Patillas Dam,**	**1.97**	**128**		**Pn**		**12 12 58.0**	**+0.7**
PDPR				IAML			12 13 29.4	
	comp=N,173nm,0.4s							
HUMP	**Col San Antoni**	**2.04**	**122**		**Pb**		**12 12 59.7**	**-1.1**
HUMP				IAML			12 13 35.5	
	comp=N,177nm,0.2s							
HUMP	**Col San Antoni**	**2.04**	**122**		**Sb**		**12 13 24.5**	**-1.8**
NADR	**Nagua**	**2.07**	**274**	⇑*ePg*	**Pb**		**12 13 00.6**	**-0.9**
NADR				⇑*eSg*	**Sb**		**12 13 28.0**	**+0.6**
NADR				IAML			12 13 40.8	
	comp=N,471nm,0.2s							
DR08	**Loma La Naviza**	**2.25**	**263**	⇑*ePg*	**Pb**		**12 13 04.1**	**-0.3**
DR08				⇑*eSg*	**Sb**		**12 13 31.2**	**-1.2**
DR08				IAML			12 13 36.2	
	comp=N,3μm,0.1s							
SDD	**Santo Domingo**	**2.27**	**250**	⇑*ePg*	**Pb**		**12 13 04.5**	**-0.3**
SDD				⇑*eSg*	**Sb**		**12 13 32.1**	**-0.8**
SDD				IAML			12 13 36.0	
	comp=N,102nm,0.8s							
CUPR	**Culebra, Puert**	**2.44**	**112**	Pn	**Pn**		**12 13 04.2**	**+0.5**
BANI	**BANI**	**2.69**	**252**		**Pn**		**12 13 09.0**	**+1.8**
BANI	**BANI**	**2.69**	**252**	⇑*ePg*	**Pb**		**12 13 10.8**	**-1.2**
BANI				⇑*eSg*	**Sb**		**12 13 45.0**	**-0.2**
BANI				IAML			12 13 53.6	
	comp=N,126nm,0.2s							
ABDR	**Alto Bandera**	**2.83**	**262**	⇑*eSg*	**Sb**		**12 13 48.5**	**-1.1**
ABDR				IAML			12 14 30.6	
	comp=N,0.4nm,0.8s							
SDDR	**Presa de Saban**	**3.44**	**266**		**Pn**		**12 13 19.4**	**+1.9**
SDDR				IAML			12 14 16.2	
	comp=N,97nm,1.1s							

*IDC **08** 12:36:13.5±1.6, 34°.50N×85°.68E, h0km, mb3.4/5, mbtmp3.4/9, ML2.7/3, Error ellipse: s-maj=61.0km s-min=18.4km az=68.0*
ISC 08 12:36:18.6±1.5, 34°.6N±0°.2×85°.6E±0°.3, h35km, n9, σ0°$ 59/9, mb3.4/4, Xizang

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**12.45**	**349**	Pn	**Pn**		**12 39 12.6**	**-0.6**
	0.1nm,0.3s,baz=161,slow=14,SNR=6.8							
	0.4nm,0.7s							
KURBB	**Kurchatov Arra**	**16.84**	**344**	Pn	**Pn**		**12 40 11.0**	**-0.4**
	baz=162,slow=10,SNR=5.9							
	0.5nm,0.8s							
ZALV	**Zalesovo Beam**	**19.36**	**359**	P	**Pn**		**12 40 42.2**	**-0.1**
	0.1nm,0.3s,baz=178,slow=12,SNR=4.2							
	0.6nm,0.7s							
CMAR	**Chiang Mai Arr**	**19.96**	**140**	P	**P**		**12 40 48.3**	**+0.4**
	0.5nm,0.3s,baz=329,slow=11,SNR=4.9							
SONM	**Songino Array**	**20.38**	**43**	P	**P**		**12 40 52.5**	**+0.2**
	1.1nm,1.0s,baz=243,slow=13,SNR=5.2							
	1.1nm,1.0s							
BVAR	**Borovoye Array**	**21.38**	**334**	P	**P**		**12 41 03.8**	**+0.9**
	0.5nm,0.5s,baz=141,slow=9.6,SNR=3.6							
	0.5nm,0.5s							
WRA	**Warramunga Arr**	**71.30**	**132**	P	**P**		**12 47 34.2**	**-0.5**
	0.7nm,0.5s,baz=328,slow=6.3,SNR=18							
	0.7nm,0.5s							
ILAR	**Eielson Array**	**72.81**	**21**	P	**P**		**12 47 43.3**	**+0.1**
	0.3nm,0.9s,baz=308,slow=5.4,SNR=2.6							
	0.3nm,0.9s							
ASAR	**Alice Springs**	**73.86**	**135**	P	**P**		**12 47 49.5**	**-0.4**
	0.6nm,0.9s,baz=305,slow=6.5,SNR=6.2							
	0.6nm,0.9s							

*IDC **08** 12:47:09.0±1.8, 33°.98N×85°.29E, h0km, mb3.3/4, mbtmp3.3/8, ML2.6/3, Error ellipse: s-maj=64.2km s-min=19.9km az=68.0*
ISC 08 12:47:15.6±2.0, 34°.4N±0°.3×86°.2E±0°.7, h35km, n8, σ0°$ 66/7, mb3.5/3, Xizang

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**12.72**	**348**		Pn	**Pn**	**12 50 14.1**	**+0.1**
	baz=160,slow=15,SNR=2.8							
	0.2nm,0.6s							
KURBB	**Kurchatov Arra**	**17.15**	**343**	P		**Pn**	**12 51 12.0**	**-0.3**
	baz=153,slow=11,SNR=4.2							
	0.4nm,0.9s							
CMAR	**Chiang Mai Arr**	**19.52**	**141**	P		**P**	**12 51 39.1**	**-0.9**
	0.7nm,0.3s,baz=345,slow=11,SNR=3.2							
ZALV	**Zalesovo Beam**	**19.56**	**358**	P		**Pn**	**12 51 41.5**	**-0.1**
	0.1nm,0.3s,baz=178,slow=10,SNR=3.5							
	0.3nm,0.3s							
SONM	**Songino Array**	**20.18**	**42**	P		Pn	12 51 55.2	+6.0
	0.4nm,0.6s,baz=246,slow=12,SNR=3.6							
	0.4nm,0.6s							
BVAR	**Borovoye Array**	**21.75**	**334**	P		**P**	**12 52 03.8**	**-0.2**
	0.5nm,0.6s,baz=149,slow=12,SNR=2.7							
	0.5nm,0.6s							
WRA	**Warramunga Arr**	**70.82**	**132**	P		**P**	**12 58 29.2**	**+0.3**
	0.4nm,0.5s,baz=319,slow=6.1,SNR=6.7							
	0.4nm,0.5s							
ASAR	**Alice Springs**	**73.39**	**135**	P		**P**	**12 58 45.1**	**+0.9**
	0.5nm,0.9s,baz=325,slow=7.1,SNR=4.5							
	0.5nm,0.9s							

*NOU **08** 13:06:13.7, 20°.02S×177°.73W, h558km, mb4.5/25, Fiji Islands Region*
*NEIC **08** 13:06:13.8±1.0, 19°.9S±0°.1×177°.8W±0°.1, h560km±4km, mb4.5/29, Error ellipse: s-maj=17.1km s-min=16.7km az=135.0*
*IDC **08** 13:06:14.1±1.3, 19°.83S×177°.94W, h573km±12km, mb3.3/7, mbtmp4.3/10, Error ellipse: s-maj=18.5km s-min=14.5km az=87.0*
ISC 08 13:06:13.9±0.5, 19°.88S±0°.08×177°.82W±0°.08, h569km, n121, σ1°$ 24/124, mb4.3/24, 1C-3D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TAVE	**Taveuni**	**3.73**	**328**	P		**P**	**13 07 35.5**	**+0.2**
DGTI	**Dogotuki**	**4.25**	**326**	P		**P**	**13 07 39.1**	**0.0**
MSVF	**Nonsavu**	**4.46**	**298**	P		**P**	**13 07 41.4**	**+0.6**
	18nm,0.6s,baz=129,slow=13,SNR=29							
MSVF				S		**S**	**13 08 50.3**	**-1.1**
	6.7nm,1.0s,baz=50,slow=13,SNR=1.0							
MSVF	**Nonsavu**	**4.46**	**298**	P		**P**	**13 07 41.3**	**+0.6**
MSVF	**Nonsavu**	**4.46**	**298**			**P**	**13 07 41.6**	**+0.9**
FUTU	**Fugatoga**	**5.55**	**357**	P		**P**	**13 07 48.8**	**-0.9**
NIUE	**Niue**	**7.49**	**85**	P		**P**	**13 08 06.1**	**-1.1**
RTV	**Rentapao**	**13.19**	**277**	P		**P**	**13 09 05.7**	**+0.9**
MARNC	**Mare, Loyalty**	**13.34**	**261**	P		**P**	**13 09 06.2**	**-0.1**
MARNC	**Mare, Loyalty**	**13.34**	**261**	P		**P**	**13 09 05.6**	**-0.8**
DVP	**Devils Point**	**13.43**	**277**	P		**P**	**13 09 08.4**	**+1.2**
DZM	**Mont Dzumac**	**14.86**	**259**	P		**P**	**13 09 21.2**	**-0.6**
	8.3nm,0.8s,baz=107,slow=20,SNR=3.8							
SANVU	**Saraoutou**	**14.94**	**285**	P		**P**	**13 09 23.1**	**+0.7**
SANVU	**Saraoutou**	**14.94**	**285**	P		**P**	**13 09 22.1**	**-0.4**
OUZ	**Omahuta**	**17.06**	**205**	P		**P**	**13 09 41.6**	**-0.5**
OUZ	**Omahuta**	**17.06**	**205**	P		**P**	**13 09 44.2**	**+2.2**
WCZ	**Waipu Caves**	**17.42**	**202**	P		**P**	**13 09 47.1**	**+1.7**
WMGZ	**Waiomatatini S**	**18.17**	**190**	P		**P**	**13 09 52.7**	**+0.5**
HAZ	**Te Kaha**	**18.22**	**191**	P		**P**	**13 09 52.1**	**-0.6**
PKGZ	**Pakihiroa**	**18.27**	**190**	P		**P**	**13 09 54.1**	**+0.9**
RUGZ	**Raukumara Rang**	**18.44**	**191**	P		**P**	**13 09 56.2**	**+1.3**
PUZ	**Puketiti**	**18.44**	**190**	P		**P**	**13 09 54.9**	**+0.1**
TWGZ	**Tauwhareparae**	**18.59**	**190**	P		**P**	**13 09 56.2**	**+0.1**
KMRZ	**Kaimai**	**18.70**	**196**	P		**P**	**13 09 58.9**	**+1.7**
TOZ	**

	comp=Z,12nm,1.5s							
AS31	**Alice Springs**	**44.83**	**256**		**P**	**P**	**13 13 37.9**	**-0.4**
ASAR	**Alice Springs**	**44.83**	**256**	P	**P**	**P**	**13 13 38.0**	**-0.3**
	comp=Z,6.9nm,0.7s,baz=88,slow=7.7,SNR=214							
ASAR				S	**S**	**S**	**13 19 33.1**	**-2.0**
	comp=Z,1.2nm,0.6s,baz=88,slow=16,SNR=11							
	comp=Z,6.9nm,0.7s							
ASAR	**Alice Springs**	**44.83**	**256**	P	**P**	**P**	**13 13 37.5**	**-0.8**
WB0	**Warramunga Arr**	**44.84**	**262**		**P**	**P**	**13 13 37.8**	**-0.5**
WB0				IAmb	IAmb	IAmb	13 13 38.2	
	comp=Z,4.9nm,0.5s							
WRA	**Warramunga Arr**	**44.86**	**261**	P	**P**	**P**	**13 13 37.5**	**-1.0**
	comp=Z,2.8nm,0.5s,baz=98,slow=8.1,SNR=120							
WRA				S	**S**	**S**	**13 19 30.1**	**-5.4**
	comp=Z,0.3nm,0.7s,baz=101,slow=12,SNR=2.5							
	comp=Z,2.8nm,0.5s							
WRA	**Warramunga Arr**	**44.86**	**261**		**P**	**P**	**13 13 37.8**	**-0.8**
MTN	**Manton Dam**	**49.33**	**270**	P	**P**	**P**	**13 14 11.1**	**-1.1**
MTN				IAmb	IAmb	IAmb	13 14 38.8	
	comp=Z,17nm,1.2s							
KNRA	**Kununurra**	**50.87**	**266**	P	**P**	**P**	**13 14 22.7**	**-0.7**
SOEI	**Soe**	**56.66**	**271**	P	**P**	**P**	**13 15 04.5**	**+0.1**
SOEI				IAmb	IAmb	IAmb	13 15 06.5	
	comp=Z,22nm,1.0s							
PSA00	**Pilbara Seismi**	**57.98**	**256**	P	**P**	**P**	**13 15 12.2**	**-0.8**
MBWA	**Marble Bar**	**58.16**	**257**	P	**P**	**P**	**13 15 13.7**	**-0.6**
MBWA				IAmb	IAmb	IAmb	13 15 47.0	
	comp=Z,13nm,1.1s							
VNDA	**Vanda**	**58.54**	**185**	P	**P**	**P**	**13 15 16.6**	**+0.7**
GIRL	**Giralia**	**62.88**	**254**	P	**P**	**P**	**13 15 45.8**	**+0.4**
TOLI2	**Tolitoli**	**63.65**	**282**	P	**P**	**P**	**13 15 50.7**	**+0.3**
TOLI2				IAmb	IAmb	IAmb	13 16 03.4	
	comp=Z,8.4nm,1.1s							
KKM	**Kota Kinabalu**	**69.77**	**285**	P	**P**	**P**	**13 16 28.0**	**-0.2**
KKM				IAmb	IAmb	IAmb	13 16 28.8	
	comp=Z,6.5nm,0.7s							
MJAR	**Matsushiro Arr**	**69.82**	**323**	P	**P**	**P**	**13 16 26.9**	**-1.0**
	comp=Z,2.4nm,0.8s,baz=156,slow=5.5,SNR=8.4							
	comp=Z,2.4nm,0.8s							
MJAR	**Matsushiro Arr**	**69.82**	**323**	P	**P**	**P**	**13 16 27.6**	**-0.4**
UGM	**Wanagama**	**70.15**	**269**	P	**P**	**P**	**13 16 30.6**	**+0.1**
QSPA	**South Pole Qui**	**70.18**	**180**	P	**P**	**P**	**13 16 30.3**	**+0.6**
	comp=Z,7.4nm,0.8s,baz=26,slow=0.7,SNR=23							
	comp=Z,7.4nm,0.8s							
QSPA	**South Pole Qui**	**70.18**	**180**	P	**P**	**P**	**13 16 30.8**	**+1.0**
QSPA				IAmb	IAmb	IAmb	13 16 31.5	
	comp=Z,6.8nm,0.8s							
HOPS	**Hopland Field**	**77.79**	**41**	P	**P**	**P**	**13 17 14.4**	**+1.4**
HOPS				IAmb	IAmb	IAmb	13 17 37.1	
	comp=Z,35nm,1.5s							
BNX	**BinXian**	**82.02**	**325**	⇑P	**P**	**P**	**13 17 34.7**	**-0.2**
BNX				pmax	pmax			
	comp=Z,4.0nm,0.7s							
ELIB	**Princess Elisa**	**87.27**	**186**	*d*P	**P**	**P**	**13 17 60.0**	**-0.3**
	comp=Z,3.2nm,0.7s							
ILAR	**Eielson Array**	**87.68**	**13**	P	**P**	**P**	**13 18 00.7**	**-1.3**
	comp=Z,0.4nm,1.0s,baz=209,slow=4.9,SNR=2.2							
	comp=Z,0.4nm,1.0s							
VNA3	**Neumayer Olymp**	**88.74**	**176**	⇓P	**P**	**P**	**13 18 05.8**	**-1.2**
	comp=Z,9.9nm,0.9s							
HHC	**Hu-ho-hao-te**	**89.05**	**314**	*e*P	**P**	**P**	**13 18 11.3**	**+2.3**
HHC				pmax	pmax			
	comp=Z,6.0nm,0.6s							
HHC				pmax	pmax			
	comp=Z,57nm,4.9s							
VNA2	**Neumayer--Watz**	**89.19**	**177**	⇓P	**P**	**P**	**13 18 09.1**	**0.0**
	comp=Z,4.8nm,0.6s,baz=192,slow=2.3							
CMAR	**Chiang Mai Arr**	**90.07**	**290**	P	**P**	**P**	**13 18 14.4**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=118,slow=4.5,SNR=5.2							
	comp=Z,0.6nm,0.6s							
PZH	**PanZhiHua**	**90.57**	**298**	P	**P**	**P**	**13 18 17.4**	**+0.9**
BRTR	**Keskin Array B**	**146.55**	**313**	PKPbc	**PKPdf**	**13 24 51.4**	**+1.5**
	comp=Z,0.3nm,0.5s,baz=46,slow=4.2,SNR=3.8							
CLL	**Collm**	**147.50**	**347**	*e*PKPbc	**PKPbc**	**13 24 54.0**	**-0.3**
GERES	**GERESS Array B**	**149.65**	**345**	PKPbc	**PKPbc**	**13 24 58.9**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=351,slow=1.8,SNR=3.5							

*BGR **08** 13:15:37.0,22.˚12S×176.˚21W,h33km*
*NOU **08** 13:16:41.3,19.˚70S×177.˚38W,h551km,mb4.5/57,Fiji Islands Region*
*NEIC **08** 13:16:41.7±1.4,19.˚73S±0.˚09×177.˚52W±0.˚08, h541km±4km,mb4.4/178,Error ellipse: s-maj=14.2km s-min=10.0km az=204.0*
*IDC **08** 13:16:42.2±1.1,19.˚77S×177.˚55W,h554km±11km, mb3.7/16,mbtmp4.6/19,Error ellipse: s-maj=13.2km s-min=9.4km az=153.0*

ISC 08 13:16:41.4±0.3,19.˚77S±0.˚06×177.˚45W±0.˚06,h550km, n581,σ0&67/525,mb4.4/112,30C-16D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	**2.00**	**320**	P	**P**	**13 17 50.6**	**-0.6**
LKBA	**Tubou, Lakemba**	**2.00**	**320**	S	**S**	**13 18 47.5**	**-0.2**
TAVE	**Taveuni**	**3.84**	**322**	P	**P**	**13 18 02.1**	**0.0**
TAVE	**Taveuni**	**3.84**	**322**	S	**S**	**13 19 08.7**	**+0.9**
DGTI	**Dogotuki**	**4.37**	**322**	P	**P**	**13 18 05.7**	**-0.5**
DGTI	**Dogotuki**	**4.37**	**322**	S	**S**	**13 19 16.0**	**+0.8**
MSVF	**Nonsavu**	**4.72**	**295**	P	**P**	**13 18 09.7**	**+0.6**
	162nm,0.5s,baz=141,slow=6.5,SNR=352						
MSVF				S	**S**	**13 19 20.7**	**+0.3**
	17nm,0.8s,baz=18,slow=19,SNR=0.6						
MSVF	**Nonsavu**	**4.72**	**295**	P	**P**	**13 18 09.5**	**+0.5**
MSVF	**Nonsavu**	**4.72**	**295**	S	**S**	**13 19 22.4**	**+1.9**
MSVF	**Nonsavu**	**4.72**	**295**		**P**	**13 18 09.3**	**+0.3**
FUTU	**Fugatoga**	**5.47**	**353**	P	**P**	**13 18 14.0**	**-1.4**
FUTU	**Fugatoga**	**5.47**	**353**	P	**P**	**13 18 13.7**	**-1.7**
NIUE	**Niue**	**7.14**	**86**	P	**P**	**13 18 30.9**	**+0.2**
NIUE	**Niue**	**7.14**	**86**	P	**P**	**13 18 29.8**	**-0.9**
MARNC	**Mare, Loyalty**	**13.70**	**260**	P	**P**	**13 19 37.3**	**-0.2**
MARNC	**Mare, Loyalty**	**13.70**	**260**	P	**P**	**13 19 36.6**	**-0.9**
DZM	**Mont Dzumac**	**15.22**	**259**	P	**P**	**13 19 53.4**	**+0.1**
	3.6nm,0.6s,baz=85,slow=15,SNR=2.2						
SANVU	**Saraoutou**	**15.24**	**284**	P	**P**	**13 19 53.2**	**-0.3**
SANVU	**Saraoutou**	**15.24**	**284**	S	**S**	**13 22 33.6**	**+2.3**
SANVU	**Saraoutou**	**15.24**	**284**	P	**P**	**13 19 52.3**	**-1.1**
TOZ	**Tahuroa Road**	**18.92**	**197**	P	**P**	**13 20 28.7**	**+1.2**
TOZ				IAmb	IAmb	13 20 36.2	
	comp=Z,22nm,1.4s						
URZ	**Urewera**	**19.02**	**193**	P	**P**	**13 20 27.4**	**-1.0**
	comp=Z,8.5nm,0.4s,baz=17,slow=11,SNR=28						
URZ				S	**S**	**13 23 27.2**	**-5.5**
	comp=Z,7.1nm,0.8s,baz=52,slow=22,SNR=14						
URZ	**Urewera**	**19.02**	**193**	P	**P**	**13 20 27.9**	**-0.5**
HIZ	**Hauiti**	**19.83**	**198**	P	**P**	**13 20 38.2**	**+2.4**
HIZ	**Hauiti**	**19.83**	**198**	S	**S**	**13 23 48.2**	**+2.4**
BKZ	**Black Stump Fm**	**20.02**	**194**	P	**P**	**13 20 38.2**	**+0.6**
BFZ	**Birch Farm**	**21.53**	**193**	P	**P**	**13 20 52.0**	**+0.9**
QRZ	**Quartz Range**	**22.66**	**200**	P	**P**	**13 21 01.6**	**+0.4**
NNZ	**Nelson**	**22.76**	**198**	P	**P**	**13 21 00.7**	**-1.4**
TUWZ	**Tuamarina**	**22.80**	**197**	P	**P**	**13 21 01.1**	**-1.3**
LTZ	**Lake Taylor**	**24.52**	**198**	P	**P**	**13 21 16.3**	**-1.5**
TATA	**Tatamba Isabel**	**24.75**	**294**	P	**P**	**13 21 19.7**	**-0.5**
PPT	**Papeete**	**26.49**	**90**	P	**P**	**13 21 35.8**	**+0.3**
	comp=Z,15nm,0.8s,baz=233,slow=20,SNR=4.8						
	comp=Z,15nm,0.8s						
EIDS	**Eidsvold**	**29.54**	**253**	P	**P**	**13 22 02.3**	**+0.3**
ARMA	**Armidale**	**29.85**	**243**	P	**P**	**13 22 05.4**	**+0.7**
ARMA	**Armidale**	**29.85**	**243**	P	**P**	**13 22 05.2**	**+0.5**
CNB	**Canberra Magne**	**33.06**	**235**	P	**P**	**13 22 32.9**	**+0.9**
CTA	**Charters Tower**	**34.08**	**263**	PcP	**PcP**	**13 25 02.4**	**0.0**
	comp=Z,2.5nm,0.7s,baz=45,slow=1.4,SNR=2.5						
CTA	**Charters Tower**	**34.08**	**263**	P	**P**	**13 22 40.6**	**-0.1**
CTAO	**Charters Tower**	**34.08**	**263**	P	**P**	**13 22 40.6**	**-0.1**
CTAO	**Charters Tower**	**34.08**	**263**		**P**	**13 22 40.8**	**+0.1**
CMSA	**Cobar Meteorol**	**35.07**	**243**	P	**P**	**13 22 48.9**	**+0.1**
QLP	**Quilpie**	**35.77**	**252**	P	**P**	**13 22 54.9**	**+0.2**
MTSU	**Mount Surprise**	**36.15**	**266**	P	**P**	**13 22 57.7**	**-0.2**
TOO	**Toolangi**	**36.74**	**233**	P	**P**	**13 23 03.0**	**+0.4**
TOO				IAmb	IAmb	13 23 03.7	
	comp=Z,3.7nm,0.7s						
COEN	**Coen**	**38.06**	**272**	P	**P**	**13 23 13.8**	**+0.2**
COEN	**Coen**	**38.06**	**272**		**P**	**13 23 13.7**	**+0.1**
COEN				IAmb	IAmb	13 23 14.5	
	comp=Z,14nm,0.9s						
STKA	**Stephens Creek**	**38.57**	**243**	P	**P**	**13 23 18.1**	**+0.6**
	comp=Z,9.1nm,0.5s,baz=89,slow=9.2,SNR=15						
	comp=Z,9.1nm,0.5s						
STKA	**Stephens Creek**	**38.57**	**243**	P	**P**	**13 23 18.3**	**+0.8**
STKA	**Stephens Creek**	**38.57**	**243**		**P**	**13 23 18.1**	**+0.6**
INKA	**Innaminka**	**38.92**	**250**		**P**	**13 23 21.3**	**+0.9**
INKA				IAmb	IAmb	13 23 22.4	
	comp=Z,8.5nm,0.9s						
QIS	**Mount Isa**	**40.23**	**261**	P	**P**	**13 23 31.4**	**+0.3**

MGBR	**Mount Gambier**	**40.53**	**235**	P	**P**	**13 23 34.0**	**+0.9**
HTT	**Hallett**	**41.02**	**242**	P	**P**	**13 23 37.5**	**+0.3**
BBOO	**Buckleboo**	**43.33**	**243**	P	**P**	**13 23 55.4**	**+0.1**
BBOO	**Buckleboo**	**43.33**	**243**	P	**P**	**13 23 55.5**	**+0.1**
HMH	**Humu'ula Sheep**	**44.67**	**30**	P	**P**	**13 24 06.4**	**+0.3**
KEKH	**Kekaha**	**44.98**	**24**	P	**P**	**13 24 08.1**	**0.0**
WR8	**Warramunga Arr**	**45.06**	**261**		**P**	**13 24 08.1**	**-0.8**
WR8				IAmb	IAmb	13 24 09.7	
	comp=Z,9.4nm,0.8s						
AS31	**Alice Springs**	**45.19**	**256**	P	**P**	**13 24 09.6**	**-0.2**
AS31				IAmb	IAmb	13 24 11.4	
	comp=Z,7.0nm,0.8s						
ASAR	**Alice Springs**	**45.19**	**256**	P	**P**	**13 24 09.7**	**-0.2**
	comp=Z,21nm,0.7s,baz=85,slow=8.5,SNR=395						
ASAR				PcP	**PcP**	**13 25 38.5**	**+0.1**
	comp=Z,3.9nm,0.5s,baz=97,slow=4.4,SNR=13						
ASAR				S	**S**	**13 30 08.4**	**-1.5**
	comp=Z,1.7nm,0.7s,baz=91,slow=14,SNR=13						
	comp=Z,21nm,0.7s						
ASAR	**Alice Springs**	**45.19**	**256**	P	**P**	**13 24 09.6**	**-0.2**
ASAR					**PcP**	**13 25 37.6**	**-0.8**
WB0	**Warramunga Arr**	**45.19**	**261**	P	**P**	**13 24 09.0**	**-0.9**
WB0				IAmb	IAmb	13 24 09.9	
	comp=Z,14nm,0.9s						
WRAB	**Tennant Creek**	**45.20**	**261**	P	**P**	**13 24 09.4**	**-0.6**
WRAB	**Tennant Creek**	**45.20**	**261**	P	**P**	**13 24 09.2**	**-0.8**
WRAB				IAmb	IAmb	13 24 10.1	
	comp=Z,13nm,0.9s						
WRA	**Warramunga Arr**	**45.21**	**261**	P	**P**	**13 24 09.2**	**-0.9**
	comp=Z,4.7nm,0.3s,baz=98,slow=7.3,SNR=359						
WRA				PcP	**PcP**	**13 25 38.3**	**-0.2**
	comp=Z,2.4nm,0.8s,baz=94,slow=3.7,SNR=6.2						
WRA				S	**S**	**13 30 08.2**	**-2.1**
	comp=Z,0.7nm,1.0s,baz=94,slow=8.6,SNR=4.6						
	comp=Z,4.7nm,0.3s						
WRA	**Warramunga Arr**	**45.21**	**261**	P	**P**	**13 24 09.5**	**-0.5**
MTN	**Manton Dam**	**49.67**	**270**	P	**P**	**13 24 43.0**	**-0.5**
MTN				IAmb	IAmb	13 24 43.8	
	comp=Z,9.1nm,0.7s						
FORT	**Forrest**	**50.05**	**246**	P	**P**	**13 24 45.8**	**-0.3**
KNRA	**Kununurra**	**51.22**	**265**		**P**	**13 24 54.2**	**-0.5**
KNRA				IAmb	IAmb	13 24 55.3	
	comp=Z,10nm,1.1s						
SOEI	**Soe**	**56.99**	**271**	P	**P**	**13 25 37.1**	**+1.5**
SOEI	**Soe**	**56.99**	**271**		**P**	**13 25 36.4**	**+0.8**
PSA00	**Pilbara Seismi**	**58.33**	**256**	P	**P**	**13 25 43.9**	**-0.6**
PSA00	**Pilbara Seismi**	**58.33**	**256**	P	**P**	**13 25 43.7**	**-0.8**
PSA00	**Pilbara Seismi**	**58.33**	**256**		**P**	**13 25 43.6**	**-0.8**
PSA00				IAmb	IAmb	13 25 44.7	
	comp=Z,14nm,0.8s						
MBWA	**Marble Bar**	**58.52**	**257**	P	**P**	**13 25 45.2**	**-0.5**
MBWA	**Marble Bar**	**58.52**	**257**		**P**	**13 25 44.9**	**-0.8**
MBWA				IAmb	IAmb	13 25 45.8	
	comp=Z,18nm,0.7s						
MEEK	**Meekatharra**	**58.64**	**250**	P	**P**	**13 25 45.9**	**-0.6**
NWAO	**Narrogin (SRO)**	**59.15**	**243**	P	**P**	**13 25 50.2**	**+0.4**
MMRI	**Maumere**	**59.24**	**272**	P	**P**	**13 25 49.9**	**-0.8**
BLDU	**Ballidu**	**59.82**	**245**	P	**P**	**13 25 54.0**	**-0.3**
MUN	**Mundaring**	**60.10**	**244**	P	**P**	**13 25 56.4**	**+0.3**
MORW	**Morawa**	**60.58**	**247**	P	**P**	**13 25 59.3**	**0.0**
MORW	**Morawa**	**60.58**	**247**	P	**P**	**13 25 58.9**	**-0.4**
MORW				IAmb	IAmb	13 25 59.8	
	comp=Z,18nm,1.2s						
GIRL	**Giralia**	**63.24**	**254**	P	**P**	**13 26 17.7**	**+1.0**
PLAI	**Plampang**	**63.38**	**270**	P	**P**	**13 26 17.3**	**-0.4**
TOLI2	**Tolitoli**	**63.96**	**281**	P	**P**	**13 26 22.3**	**+0.9**
TOLI2	**Tolitoli**	**63.96**	**281**	P	**P**	**13 26 21.5**	**+0.1**
TOLI2				IAmb	IAmb	13 26 21.9	
	comp=Z,9.4nm,0.9s						
JGF	**Kuroka**	**69.76**	**322**	P	**P**	**13 26 56.5**	**-0.2**
JGF	**Kuroka**	**69.76**	**322**	P	**P**	**13 26 56.5**	**-0.2**
JGF				IAmb	IAmb	13 27 25.8	
	comp=Z,19nm,1.3s						
MJAR	**Matsushiro Arr**	**69.93**	**323**	P	**P**	**13 26 57.4**	**-0.3**
	comp=Z,4.3nm,0.6s,baz=162,slow=6.0,SNR=25						
	comp=Z,4.3nm,0.6s						
MJAR	**Matsushiro Arr**	**69.93**	**323**	P	**P**	**13 26 57.1**	**-0.6**
MAJO	**Matsushiro**	**69.94**	**323**	P	**P**	**13 26 57.6**	**-0.1**
MAJO	**Matsushiro**	**69.94**	**323**	P	**P**	**13 26 57.6**	**-0.1**
MAJO				IAmb	IAmb	13 27 03.0	
	comp=Z,27nm,1.5s						
KKM	**Kota Kinabalu**	**70.07**	**284**	P	**P**	**13 26 59.6**	**+0.5**
KKM	**Kota Kinabalu**	**70.07**	**284**		**P**	**13 26 59.1**	**0.0**
QSPA	**South Pole Qui**	**70.29**	**180**	P	**P**	**13 27 00.9**	**+1.4**
	comp=Z,4.6nm,0.8s,baz=2.8,slow=0.5,SNR=18						
	comp=Z,4.6nm,0.8s						
QSPA	**South Pole Qui**	**70.29**	**180**	P	**P**	**13 27 01.0**	**+1.4**
UGM	**Wanagama**	**70.49**	**268**	P	**P**	**13 27 01.6**	**+0.1**
UGM	**Wanagama**	**70.49**	**268**	P	**P**	**13 27 01.4**	**-0.2**
KIWB	**Kanaga Island**	**71.32**	**0**	P	**P**	**13 27 05.0**	**-0.4**
SBUM	**Sibu**	**72.39**	**279**		**P**	**13 27 11.6**	**-1.0**
NIKH	**Nikolski High**	**72.82**	**5**	P	**P**	**13 27 14.8**	**+0.7**
	baz=188						
JKA	**Kamikawa-asahi**	**73.34**	**331**		**P**	**13 27 18.3**	**+1.0**
BBJI	**Bungbulang**	**73.34**	**268**	P	**P**	**13 27 17.3**	**-0.8**
YULB	**Yu-li**	**73.53**	**303**	P	**P**	**13 27 18.0**	**-0.9**
YULB	**Yu-li**	**73.53**	**303**	P	**P**	**13 27 17.8**	**-1.1**
NACB	**Ninganchiao**	**73.70**	**304**	P	**P**	**13 27 19.6**	**-0.2**
UNV	**Unalaska Valle**	**73.92**	**7**	P	**P**	**13 27 20.7**	**+0.4**
	baz=191						
SSLB	**Suanglung**	**74.00**	**303**	P	**P**	**13 27 20.8**	**-0.8**
SSLB	**Suanglung**	**74.00**	**303**	P	**P**	**13 27 20.5**	**-1.1**
TPUB	**Ta-pu**	**74.02**	**302**	P	**P**	**13 27 20.3**	**-1.4**
PET	**Petropavlovsk**	**75.40**	**345**	P	**P**	**13 27 28.0**	**-0.6**
PET	**Petropavlovsk**	**75.40**	**345**	P	**P**	**13 27 27.9**	**-0.8**
PEA0B	**Petropavlovsk-**	**75.70**	**345**	P	**P**	**13 27 30.2**	**-0.2**
PETK	**Petropavlovsk-**	**75.70**	**345**	P	**P**	**13 27 30.1**	**-0.3**
	comp=Z,8.0nm,0.8s,baz=118,slow=8.4,SNR=29						
	comp=Z,8.0nm,0.8s						
CHNA	**Chernabura Isl**	**75.86**	**11**	P	**P**	**13 27 31.4**	**+0.2**
	baz=197						
SDPT	**Sand Point**	**76.21**	**10**	P	**P**	**13 27 33.2**	**+0.1**
	baz=196						
KSRS	**Korea Array**	**76.69**	**318**	P	**P**	**13 27 36.7**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=132,slow=6.9,SNR=5.5						
	comp=Z,1.4nm,0.8s						
SPIA	**Saint Paul Isl**	**76.89**	**4**	P	**P**	**13 27 37.1**	**+0.3**
	baz=187						
PKD	**Bear Valley Ra**	**77.25**	**44**	P	**P**	**13 27 40.1**	**+0.8**
CHIR	**Chirikof Islan**	**77.54**	**12**	P	**P**	**13 27 39.8**	**-0.5**
	baz=201						
KMRM	**Mail Ridge**	**77.87**	**39**	P	**P**	**13 27 44.0**	**+1.4**
KMRM				IAmb	IAmb	13 27 44.8	
	comp=Z,9.4nm,0.8s						
MWC	**Mount Wilson**	**77.94**	**47**	P	**P**	**13 27 44.1**	**+0.8**
DPP	**Dos Picos Cty**	**78.04**	**48**	P	**P**	**13 27 44.7**	**+1.1**
O02D	**Mt. Diablo Mer**	**78.39**	**40**	P	**P**	**13 27 46.6**	**+1.1**
ISA	**Isabella, Lake**	**78.46**	**45**	P	**P**	**13 27 46.9**	**+0.9**
SII	**Sitkinak Islan**	**78.52**	**13**	P	**P**	**13 27 46.1**	**+0.4**
SII	**Sitkinak Islan**	**78.52**	**13**	P	**P**	**13 27 45.7**	**+0.1**
	baz=202						
CMB	**Columbia Colle**	**78.58**	**43**		**P**	**13 27 47.2**	**+0.7**
USRK	**Ussuriysk Ar.**	**78.66**	**325**	P	**P**	**13 27 48.0**	**+1.4**
	comp=Z,8.0nm,0.9s,baz=116,slow=1.6,SNR=8.1						
	comp=Z,8.0nm,0.9s						
AFDM	**Forest Hills D**	**78.76**	**42**		**P**	**13 27 47.6**	**+0.3**
ORV	**Oroville**	**78.79**	**41**	P	**P**	**13 27 47.9**	**+0.4**
R16K	**Pilot Point**	**78.81**	**11**	P	**P**	**13 27 47.1**	**-0.1**
	baz=199						
R17L	**Mt. Peulik Vol**	**79.09**	**11**	P	**P**	**13 27 48.8**	**+0.1**
	baz=200						
CLC	**China Lake**	**79.14**	**46**	P	**P**	**13 27 50.2**	**+0.7**
MDPB	**Devils Postpil**	**79.19**	**43**	P	**P**	**13 27 50.9**	**+0.9**
OHAK	**Old Harbor**	**79.33**	**13**	P	**P**	**13 27 49.8**	**0.0**
OHAK	**Old Harbor**	**79.33**	**13**	P	**P**	**13 27 49.5**	**-0.3**
	baz=203						
YBH	**Yreka Blue Hor**	**79.40**	**38**	P	**P**	**13 27 51.8**	**+1.0**
K02D	**Willamette Mer**	**79.46**	**37**	P	**P**	**13 27 51.9**	**+0.9**
M03C	**McCloud**	**79.47**	**39**	P	**P**	**13 27 52.0**	**+0.8**
M03C				IAmb	IAmb	13 27 53.0	
	comp=Z,8.5nm,0.6s						
MPK	**Martis Peak**	**79.55**	**42**	P	**P**	**13 27 52.9**	**+1.0**
MPK				IAmb	IAmb	13 27 53.7	
	comp=Z,12nm,0.6s						
PNTR	**Pine Nut**	**79.70**	**42**		**P**	**13 27 53.7**	**+1.1**
PNTR				IAmb	IAmb	13 27 54.6	
	comp=Z,11nm,0.8s						
Q17K	**Contact Creek**	**79.78**	**11**	P	**P**	**13 27 52.2**	**-0.2**
	baz=201						
O14K	**Tigyukauivet M**	**79.85**	**8**	P	**P**	**13 27 52.2**	**-0.4**
	baz=196						
O15K	**Ungalikthiuk R**	**79.98**	**9**	P	**P**	**13 27 53.2**	**-0.1**
	baz=197						
KDAK	**Kodiak Island**	**79.99**	**13**	P	**P**	**13 27 53.4**	**+0.1**

	baz=204							
Q16K	**King Salmon**	**80.03**	**11**	P	**P**	**13 27 53.5**	**0.0**
	baz=200							
P16K	**Nushagak River**	**80.13**	**10**	P	**P**	**13 27 53.8**	**-0.3**
P16K				IAmb	IAmb	13 27 55.1		
	comp=Z,21nm,1.0s							
P16K	**Nushagak River**	**80.13**	**10**	P	**P**	**13 27 53.7**	**-0.3**
	baz=199							
NVAR	**Mina Array Bea**	**80.15**	**43**	P	**P**	**13 27 56.1**	**+1.2**
	comp=Z,2.2nm,0.7s,baz=222,slow=7.9,SNR=20							
	comp=Z,2.2nm,0.7s							
MDJ	**Mudanjiang**	**80.22**	**325**	IAmb	IAmb	13 27 56.8		
	comp=Z,12nm,0.9s							
Q18K	**Katmai Hardscr**	**80.30**	**12**	P	**P**	**13 27 54.4**	**-0.8**
	baz=201							
M11K	**Mekoryuk**	**80.39**	**6**	P	**P**	**13 27 55.2**	**-0.2**
	baz=191							
N14K	**Kuskokwak Cree**	**80.44**	**8**	P	**P**	**13 27 55.6**	**-0.1**
	baz=195							
P17K	**Kvichak River**	**80.55**	**11**	P	**P**	**13 27 55.5**	**-0.7**
	baz=200							
O16K	**Kokwok River B**	**80.65**	**10**	P	**P**	**13 27 56.4**	**-0.3**
	baz=198							
J04A	**Umpqua Nationa**	**80.69**	**38**	IAmb	IAmb	13 27 59.7		
	comp=Z,13nm,0.7s							
M13K	**Dall Lake**	**80.72**	**7**	P	**P**	**13 27 57.3**	**+0.3**
	baz=194							
Q20K	**Shuyak Island**	**80.79**	**13**	P	**P**	**13 27 57.6**	**+0.1**
	baz=204							
Q19K	**Cape Douglas,**	**80.83**	**12**	P	**P**	**13 27 57.5**	**-0.2**
	baz=203							
N15K	**Kwethluk River**	**80.90**	**9**	P	**P**	**13 27 58.0**	**0.0**
	baz=197							
P18K	**Big Mountain,**	**80.96**	**11**	IAmb	IAmb	13 27 58.5		
	comp=Z,7.6nm,0.8s							
P18K	**Big Mountain,**	**80.96**	**11**	P	**P**	**13 27 58.0**	**-0.4**
	baz=201							
O17K	**Koliganek Bris**	**80.99**	**10**	P	**P**	**13 27 58.2**	**-0.2**
	baz=199							
K05A	**Summer Lake**	**81.08**	**38**	IAmb	IAmb	13 28 02.0		
	comp=Z,12nm,1.0s							
M14K	**Bethel**	**81.21**	**8**	P	**P**	**13 28 00.2**	**+0.6**
	baz=195							
J05D	**Fort Rock, OR**	**81.22**	**38**		**P**	**13 28 01.4**	**+1.1**
J05D				IAmb	IAmb	13 28 02.5		
	comp=Z,13nm,0.7s							
M15K	**Kasigluk River**	**81.32**	**8**	P	**P**	**13 28 00.4**	**+0.2**
	baz=196							
N16K	**Nishlik Lake**	**81.39**	**9**	P	**P**	**13 28 00.6**	**0.0**
	baz=198							
O18K	**Koktuh Hills**	**81.39**	**11**	IAmb	IAmb	13 28 01.1		
	comp=Z,13nm,0.9s							
O18K	**Koktuh Hills**	**81.39**	**11**	P	**P**	**13 27 59.7**	**-0.9**
	baz=201							
H04A	**Detroit Lake**	**81.54**	**36**	P	**P**	**13 28 02.5**	**+0.7**
H04A				IAmb	IAmb	13 28 03.5		
	comp=Z,25nm,1.5s							
P19K	**Oil Pt**	**81.58**	**12**	P	**P**	**

M22K	**Willow** baz=206	84.13	13	P	P	13 28 13.9	-0.3	
KNK	**Knik Glacier** baz=207	84.18	14	P	P	13 28 14.1	-0.5	
PMR	**Palmer**	84.20	13	P	P	13 28 14.1	-0.5	
PMR	**Palmer** baz=207	84.20	13	P	P	13 28 13.9	-0.7	
SIT	**Sitka** baz=219	84.26	22	P	P	13 28 14.7	-0.3	
V35K	**Ketchikan** baz=223	84.32	24	P	P	13 28 15.7	+0.4	
U33K	**Whale Pass** baz=221	84.33	23	P	P	13 28 15.7	+0.3	
I17K	**Unalakleet** baz=196	84.40	7	P	P	13 28 15.9	+0.4	
J18K	**Innoko River** comp=Z,6.6nm,0.7s	84.54	9	IAmb	IAmb	13 28 17.2		
J18K	**Innoko River** baz=200	84.54	9	P	P	13 28 16.8	+0.5	
SML	**Sawmill** baz=207	84.56	13	P	P	13 28 16.6	+0.1	
ANM	**Nome** baz=192	84.58	5	P	P	13 28 15.3	-1.1	
S31K	**Pelican** baz=219	84.66	21	P	P	13 28 16.0	-0.9	
M23K	**Glacier View** baz=208	84.68	14	P	P	13 28 15.9	-1.1	
CUT	**Chulitna** baz=206	84.69	12	P	P	13 28 16.4	-0.6	
BMRM	**Bremner River** baz=211	84.70	15	P	P	13 28 16.2	-0.9	
MESA	**MESA** baz=213	84.72	17	P	P	13 28 15.8	-1.7	
PPLA	**Purkeypile** baz=204	84.77	11	P	P	13 28 16.2	-1.4	
SCM	**Sheep Creek Mo** baz=208	84.81	14	P	P	13 28 17.0	-0.7	
KLU	**Klutina** baz=210	84.83	15	P	P	13 28 17.8	-0.1	
S32K	**Killisnoo** baz=220	84.84	22	P	P	13 28 17.6	-0.2	
K20K	**Telida** comp=Z,5.2nm,0.7s	84.86	10	IAmb	IAmb	13 28 18.5		
K20K	**Telida** baz=202	84.86	10	P	P	13 28 17.8	-0.1	
CRQE	**Cirque** baz=212	84.90	16	P	P	13 28 18.0	-0.3	
T33K	**Petersburg** baz=222	84.92	23	P	P	13 28 17.5	-0.7	
H16K	**Elim** baz=194	84.96	7	P	P	13 28 18.0	-0.2	
HEH	**HeiHe**	84.97	328	*e*P	P	13 28 18.7	+0.1	
F10A	**Beach Ranch, E** comp=Z,9.6nm,0.9s	85.11	37	IAmb	IAmb	13 28 21.0		
G15K	**Niukluk** baz=193	85.12	6	P	P	13 28 18.8	-0.2	
PINM	**Pinnacle** baz=215	85.13	18	P	P	13 28 18.6	-0.7	
J19K	**Poorman** baz=201	85.21	9	P	P	13 28 19.4	0.0	
N25K	**Chitina, Valde** comp=Z,7.2nm,0.7s	85.25	15	IAmb	IAmb	13 28 20.6		
N25K	**Chitina, Valde** baz=211	85.25	15	P	P	13 28 19.4	-0.4	
M24K	**Tolsona, Glenn** baz=209	85.31	14	P	P	13 28 19.5	-0.6	
B08A	**Colville Reser** comp=Z,4.2nm,0.8s	85.34	35	IAmb	IAmb	13 28 21.6		
TNA	**Tin City** comp=Z,4.1nm,0.7s	85.38	4	IAmb	IAmb	13 28 21.0		
TNA	**Tin City** baz=189,SNR=8.6	85.38	4	P	P	13 28 20.3	+0.1	
WAT6	**Susitna Watana** baz=208	85.38	13	P	P	13 28 19.8	-0.7	
F14K	**Arctic Creek** baz=191	85.40	5	P	P	13 28 20.0	-0.3	
WAT1	**Susitna Watana** baz=207	85.43	13	P	P	13 28 20.5	-0.1	
MCARA	**McCarthy VSAT** baz=212	85.46	16	P	P	13 28 20.5	-0.2	
H17K	**Granite Mounta** baz=197	85.51	7	P	P	13 28 20.1	-0.8	
CTG	**Chitna Glacier** baz=214	85.55	17	P	P	13 28 20.8	-0.5	
TRF	**Thorofare Moun** comp=Z,8.5nm,0.7s	85.63	12	IAmb	IAmb	13 28 22.1		
TRF	**Thorofare Moun** baz=206	85.63	12	P	P	13 28 20.7	-1.1	
CHUM	**Lake Minchumin** baz=204	85.65	11	P	P	13 28 20.9	-0.7	
G16K	**Koyuk River** baz=194	85.68	6	P	P	13 28 21.2	-0.5	
O28M	**Mount Upton** baz=215	85.71	17	P	P	13 28 21.4	-1.0	
GCSA	**Galena City Sc** baz=199	85.73	9	P	P	13 28 21.7	-0.2	
F15K	**North Star Dit** baz=192	85.77	5	P	P	13 28 21.4	-0.7	
O29M	**Mount Kennedy** baz=216	85.79	18	P	P	13 28 22.0	-0.6	
HARP	**HAARP** baz=210	85.80	14	P	P	13 28 22.0	-0.4	
VHRN	**Van Horn** comp=Z,4.0nm,0.8s	85.82	55	IAmb	IAmb	13 28 25.9		
DHY	**Denali Highway** baz=208	85.89	13	P	P	13 28 22.8	-0.2	
MNTX	**Cornudas Mount** comp=Z,4.0nm,0.8s	85.91	54	IAmb	IAmb	13 28 26.0		
H18K	**Honhosa River** baz=198	85.91	8	P	P	13 28 22.7	-0.2	
G17K	**Kiwalik Mounta** baz=196	85.97	7	P	P	13 28 22.6	-0.5	
T35M	**Bob Quinn** baz=224	86.05	24	P	P	13 28 23.6	-0.1	
ENH	**Enshi** comp=Z,7.4nm,0.8s	86.06	304	IAmb	IAmb	13 28 26.1		
BPAW	**Bear Paw Mtn.** baz=205	86.09	11	P	P	13 28 23.5	-0.2	
SKAG	**Skagway** baz=219	86.12	20	P	P	13 28 23.5	-0.4	
P30M	**Million Dollar** baz=218	86.13	19	P	P	13 28 23.9	-0.1	
MCK	**McKinley** comp=Z,7.8nm,0.8s	86.16	12	IAmb	IAmb	13 28 24.9		
MCK	**McKinley** baz=207	86.16	12	P	P	13 28 23.7	-0.4	
PAX	**Paxson** baz=210	86.22	14	P	P	13 28 24.4	-0.1	
TXAR	**Lajitas Array** comp=Z,2.2nm,0.7s,baz=218,slow=6.4,SNR=37 comp=Z,2.2nm,0.7s	86.23	57	P	P	13 28 27.1	+1.8	
YUK8	**Steele Glacier** baz=215	86.25	17	P	P	13 28 24.2	-0.6	
PV10	**Paradox Valley** comp=Z,3.8nm,0.8s	86.31	47	IAmb	IAmb	13 28 30.3		
M26K	**Nabesna, AK** baz=212	86.33	15	P	P	13 28 24.8	-0.1	
PV23	**Carpenter Ridg** comp=Z,9.9nm,1.1s	86.36	47	IAmb	IAmb	13 28 28.5		
YUK6	**Outpost Mounta** baz=217	86.37	18	P	P	13 28 26.1	+0.7	
S34M	**Telegraph Cree** comp=Z,6.0nm,0.8s	86.40	23	IAmb	IAmb	13 28 27.2		
S34M	**Telegraph Cree** baz=223	86.40	23	P	P	13 28 25.4	+0.1	
YUK3	**Moose Creek** baz=215	86.46	17	P	P	13 28 25.5	-0.3	
HYT	**Haines Junctio** baz=217	86.53	18	P	P	13 28 25.2	-0.8	
ANMO	**Albuquerque**	86.55	51		P	13 28 27.3	+0.4	
ANMO	**Albuquerque** comp=Z,3.3nm,0.9s	86.55	51	IAmb	IAmb	13 28 28.5		
M27K	**Edge Creek, AK** comp=Z,3.7nm,0.7s	86.57	16	IAmb	IAmb	13 28 27.2		
M27K	**Edge Creek, AK** baz=213	86.57	16	P	P	13 28 25.8	-0.4	
G18K	**Tagagawik** baz=198	86.59	8	P	P	13 28 25.7	-0.3	
YUK4	**Talbot Arm** baz=216	86.61	18	P	P	13 28 26.6	+0.1	
ALPN	**Alpine** comp=Z,4.7nm,0.6s	86.69	56	IAmb	IAmb	13 28 29.3		
H20K	**Anotleneega Mo** baz=201	86.73	9	P	P	13 28 26.6	-0.1	
P32M	**Atlin** baz=221	86.75	21	P	P	13 28 26.6	-0.4	
Q32M	**Nakina River** baz=222	86.77	22	P	P	13 28 26.8	-0.5	
L26K	**Log Cabin Wild** baz=212	86.77	15	P	P	13 28 26.5	-0.5	
F17K	**Baldwin Pennin** baz=195	86.81	6	P	P	13 28 26.6	-0.5	
TPB01	**Permian Basin** comp=Z,4.8nm,0.8s	86.82	56	IAmb	IAmb	13 28 30.2		
BVCY	**Beaver Creek** baz=214	86.88	16	P	P	13 28 26.6	-0.9	
K24K	**Donnelly Dome** baz=210	86.88	13	P	P	13 28 27.0	-0.5	
NEA2	**Nenana** baz=207	86.90	12	P	P	13 28 26.8	-0.7	
I21K	**Tanana** baz=204	86.90	10	P	P	13 28 26.6	-0.9	
O30N	**Mendenhall** baz=219	86.91	19	P	P	13 28 26.9	-0.8	
MLY	**Manley** comp=Z,4.2nm,0.6s	86.98	11	IAmb	IAmb	13 28 27.7		
MLY	**Manley** baz=205	86.98	11	P	P	13 28 27.0	-1.0	
WRH	**Wood River Hil** comp=Z,9.5nm,0.9s	86.98	12	IAmb	IAmb	13 28 28.2		
G19K	**Purcell Mounta** baz=199	87.03	8	P	P	13 28 27.3	-0.8	
RIDG	**Independent Ri** baz=211	87.03	14	P	P	13 28 27.0	-1.2	
F18K	**Selawik** baz=197	87.14	7	P	P	13 28 27.6	-0.9	
N30M	**Aishikik Lake** baz=218	87.15	18	P	P	13 28 27.8	-1.1	
HDA	**Harding Lake** baz=209	87.16	13	P	P	13 28 28.3	-0.5	
L27K	**Beaver Creek,** baz=213	87.17	15	P	P	13 28 28.8	-0.1	
DLBC	**Dease Lake** baz=224	87.18	23	P	P	13 28 28.7	-0.4	
WHY	**Whitehorse** baz=220	87.20	19	P	P	13 28 28.6	-0.6	
H21K	**Melozitna Rive** comp=Z,3.6nm,0.8s	87.20	10	IAmb	IAmb	13 28 30.7		
H21K	**Melozitna Rive** baz=203	87.20	10	P	P	13 28 28.7	-0.2	
I23K	**Minto, Yukon-K** comp=Z,2.9nm,0.6s	87.34	11	IAmb	IAmb	13 28 29.6		
I23K	**Minto, Yukon-K** baz=206	87.34	11	P	P	13 28 28.8	-0.8	
IMAR	**Indian Mountai**	87.36	9	P	P	13 28 29.5	-0.1	
E17K	**Hotham Inlet** baz=195,SNR=5.0	87.38	6	P	P	13 28 28.9	-0.7	
COLA	**College**	87.39	12	P	P	13 28 29.3	-0.5	
COLA	**College**	87.39	12	P	P	13 28 28.6	-1.2	
COLA	**College** baz=208	87.39	12	P	P	13 28 29.0	-0.8	
ELIB	**Princess Elisa** comp=Z,7.6nm,0.6s	87.42	186	*d*P	P	13 28 30.5	+0.3	
SCRK	**Sand Creek** baz=211	87.44	14	P	P	13 28 29.9	-0.3	
IL31	comp=Z,4.5nm,0.8s	87.50	13	IAmb	IAmb	13 28 29.9		
ILAR	**Eielson Array** comp=Z,2.8nm,0.7s,baz=230,slow=5.3,SNR=47 comp=Z,2.8nm,0.7s	87.50	13	P	P	13 28 29.4	-0.9	
DLMT	**Dillon** comp=Z,4.9nm,0.7s	87.50	40	IAmb	IAmb	13 28 32.9		
P33M	**Teslin, Yukon** baz=222	87.52	21	P	P	13 28 30.2	-0.5	
R33M	**Jennings River** baz=223	87.54	22	P	P	13 28 30.5	-0.3	
M29M	**Somme Creek** baz=216	87.55	17	P	P	13 28 30.4	-0.3	
S22A	**4UR Ranch, Cre** comp=Z,4.8nm,1.0s	87.55	48	IAmb	IAmb	13 28 33.5		
N31M	**Braeburn, Yuko** baz=213	87.56	19	P	P	13 28 30.9	+0.2	
F19K	**Shaleruckik Mo** baz=199	87.59	8	P	P	13 28 30.3	-0.4	
H22K	**Ishtalitna Cre** comp=Z,6.9nm,0.6s	87.66	10	IAmb	IAmb	13 28 31.7		
H22K	**Ishtalitna Cre** baz=204	87.66	10	P	P	13 28 30.7	-0.4	
J25K	**Salcha River,** comp=Z,3.8nm,0.6s	87.68	13	IAmb	IAmb	13 28 31.3		
J25K	**Salcha River,** baz=210	87.68	13	P	P	13 28 30.9	-0.3	
POKR	**Poker Plat Res** baz=208	87.69	12	P	P	13 28 30.7	-0.5	
E18K	**Tukpahlearik C** baz=196	87.83	6	P	P	13 28 31.5	-0.3	
D17K	**Noatak River** baz=194	87.86	5	P	P	13 28 32.0	+0.1	
G21K	**Allakaket** baz=202	87.89	9	P	P	13 28 31.7	-0.5	
FLWY	**Flagg Ranch** comp=Z,8.2nm,1.0s	88.01	41	IAmb	IAmb	13 28 35.8		
F20K	**Avaraart Lake** baz=200	88.06	8	P	P	13 28 32.4	-0.5	
PD31	**Pinedale Array** comp=Z,2.3nm,0.7s	88.08	43	IAmb	IAmb	13 28 35.0		
PDAR	**Pinedale Array** comp=Z,1.7nm,0.6s,baz=200,slow=3.1,SNR=22 comp=Z,1.7nm,0.6s	88.08	43	P	P	13 28 34.4	+0.5	
YHL	**Hebgen Lake** comp=Z,9.8nm,1.0s	88.10	41	IAmb	IAmb	13 28 36.6		
XAN	**Xi'an**	88.10	307	⇑P	P	13 28 35.0	+1.1	
XAN	comp=Z,18nm,1.0s			pmax	pmax			
M30M	**Minto, Yukon** comp=Z,5.5nm,0.7s	88.12	18	IAmb	IAmb	13 28 34.0		
M30M	**Minto, Yukon** baz=218,SNR=8.0	88.12	18	P	P	13 28 32.9	-0.5	
N32M	**Quiet Lake** baz=221	88.14	20	P	P	13 28 33.1	-0.4	
L29M	**L29M** baz=217	88.18	17	P	P	13 28 33.2	-0.4	
BOZ	**Bozeman (W)** comp=Z,4.5nm,0.8s	88.20	40	IAmb	IAmb	13 28 36.4		
RDOG	**Red Dog Mine** baz=194	88.22	5	P	P	13 28 33.7	0.0	
C16K	**Lisburne Hills** baz=192	88.24	4	P	P	13 28 33.1	-0.6	
H24K	**Noodor Dome** baz=208	88.24	12	P	P	13 28 33.2	-0.7	
E19K	**Redstone River** comp=Z,6.7nm,0.9s	88.25	8	IAmb	IAmb	13 28 34.7		
E19K	**Redstone River** baz=199,SNR=12	88.25	8	P	P	13 28 33.2	-0.6	
PRP	**Porcupine Dome** comp=Z,1.8nm,0.6s	88.43	13	IAmb	IAmb	13 28 36.4		
PRP	**Porcupine Dome** baz=210	88.43	13	P	P	13 28 34.7	-0.1	
TROLL	**Troll, Antarti**	88.45	180	P	P	13 28 35.8	+0.8	
M31M	**Drury Creek, Y** baz=220	88.54	19	P	P	13 28 35.1	-0.1	
F21K	**Alatna River** baz=203	88.55	9	P	P	13 28 35.1	-0.2	
C17K	**DeLong Mountai** baz=194	88.61	5	P	P	13 28 35.4	0.0	
DAWY	**Dawson** comp=Z,5.5nm,0.7s	88.62	16	IAmb	IAmb	13 28 36.7		
DAWY	**Dawson** baz=216,SNR=7.1	88.62	16	P	P	13 28 35.6	0.0	
G23K	**Bananza Creek** baz=206	88.64	11	P	P	13 28 35.9	+0.3	
DRIO	**Del Rio** comp=Z,6.9nm,1.1s	88.69	58	IAmb	IAmb	13 28 38.6		
I26K	**Coal Creek Min** baz=212	88.76	14	P	P	13 28 36.3	+0.1	
WTLY	**Watson Lake, Y** baz=225	88.83	22	P	P	13 28 36.8	+0.1	
VNA3	**Neumayer Olymp** comp=Z,13nm,0.6s	88.83	176	⇑P	P	13 28 37.0	+0.4	
YNE	**Yellowstone No** comp=Z,5.1nm,0.9s	88.90	41	IAmb	IAmb	13 28 40.0		
K29M	**Barlow Dome** baz=217	88.93	17	P	P	13 28 37.1	-0.1	
C18K	**Utukok River** baz=195	88.96	6	P	P	13 28 37.1	-0.1	
COLD	**Coldfoot** comp=Z,5.2nm,0.8s	89.07	10	IAmb	IAmb	13 28 38.8		
COLD	**Coldfoot** baz=206,SNR=8.6	89.07	10	P	P	13 28 37.5	-0.1	
G24K	**Hadweenzic Riv** baz=208	89.08	11	P	P	13 28 37.5	-0.2	
D19K	**Kuna River** baz=198	89.14	7	P	P	13 28 37.8	-0.2	
E20K	**Nigu River** baz=200,SNR=15	89.14	8	P	P	13 28 37.9	-0.1	
MAYO	**Mayo, Yukon** baz=219	89.18	17	P	P	13 28 38.4	+0.2	
HHC	**Hu-ho-hao-te**	89.22	314	*e*P	P	13 28 40.1	+1.1	
HHC	comp=Z,8.0nm,0.6s			pmax	pmax			
HHC	comp=Z,9.1nm,5.2s			pmax	pmax			
J29N	**Klondike Camp** baz=217,SNR=7.3	89.24	16	P	P	13 28 39.0	+0.5	
VNA2	**Neumayer--Watz** comp=Z,5.7nm,0.6s,baz=184,slow=3.6	89.28	177	⇑P	P	13 28 39.3	+0.5	
I27K	**Kandik River** baz=214	89.36	14	P	P	13 28 39.2	+0.2	
KMI2	**Kunming**	89.48	297	P	P	13 28 42.1	+1.3	
KMI2	comp=Z,11nm,1.2s			pmax	pmax			
D20K	**Etivluk River** baz=200	89.52	7	P	P	13 28 39.3	-0.4	
C19K	**Lookout Ridge** comp=Z,6.2nm,0.8s	89.56	6	IAmb	IAmb	13 28 41.0		
C19K	**Lookout Ridge** baz=197	89.56	6	P	P	13 28 39.9	0.0	
E21K	**Killik River** baz=202	89.61	8	P	P	13 28 38.7	-1.4	
I28M	**Miner Creek** comp=Z,3.6nm,0.8s	89.62	15	IAmb	IAmb	13 28 40.9		
I28M	**Miner Creek** baz=215	89.62	15	P	P	13 28 39.7	-0.7	
E22K	**Anaktuvuk Pass** comp=Z,5.5nm,0.8s	89.64	9	IAmb	IAmb	13 28 41.1		
E22K	**Anaktuvuk Pass** baz=204,SNR=9.4	89.64	9	P	P	13 28 39.8	-0.5	
J30M	**Hart River** baz=218	89.83	16	P	P	13 28 40.8	-0.6	
H27K	**Steamboat Moun** comp=Z,4.3nm,1.1s	89.90	14	IAmb	IAmb	13 28 42.8		
H27K	**Steamboat Moun** baz=214	89.90	14	P	P	13 28 41.4	-0.1	
E23K	**Chandalar** comp=Z,2.4nm,0.8s	89.92	10	IAmb	IAmb	13 28 42.6		
E23K	**Chandalar** baz=206	89.92	10	P	P	13 28 41.5	-0.2	
I29M	**Ogilvie Camp,** baz=216	89.95	15	P	P	13 28 41.6	-0.1	
G26K	**Porcupine Rive** comp=Z,8.6nm,1.3s	90.03	13	IAmb	IAmb	13 28 43.4		
G26K	**Porcupine Rive** baz=212	90.03	13	P	P	13 28 42.6	+0.5	
E24K	**Your Creek** baz=207	90.13	10	P	P	13 28 42.9	+0.3	
C21K	**Knifeblade Rid** baz=201	90.17	8	P	P	13 28 43.4	+0.8	
D22K	**Ayikyak River** baz=203	90.20	9	P	P	13 28 43.2	+0.4	
F25K	**Christian Rive** baz=210	90.22	12	P	P	13 28 43.0	0.0	
I30M	**Mount Dempster** comp=Z,4.8nm,0.9s	90.33	16	IAmb	IAmb	13 28 44.4		
I30M	**Mount Dempster** baz=218	90.33	16	P	P	13 28 43.8	+0.2	
CMAR	**Chiang Mai Arr** comp=Z,4.2nm,0.9s,baz=118,slow=2.9,SNR=25 comp=Z,4.2nm,0.9s	90.36	289	P	P	13 28 46.3	+1.6	
TOLK	**Toolik Lake Re** baz=206	90.45	10	P	P	13 28 43.6	-0.5	
A19K	**Wainwright** baz=196	90.48	6	P	P	13 28 43.2	-0.8	
CHTO	**Chiang Mai**	90.48	290		P	13 28 45.2	-0.1	
CHTO	comp=Z,6.0nm,0.8s			IAmb	IAmb	13 28 47.1		
D23K	**Nanushuk River** baz=205	90.58	9	P	P	13 28 44.4	-0.2	
KOTAN	**Kotaneelee Air** baz=229	90.58	24	P	P	13 28 44.3	-0.5	
F26K	**Sheenjek River** baz=211	90.59	12	P	P	13 28 44.9	+0.2	
B21K	**Ikpikpuk River** baz=202	90.63	8	P	P	13 28 45.0	+0.2	
B20K	**Meade River** baz=199	90.69	7	P	P	13 28 45.2	+0.2	
E25K	**Arctic Village** baz=210	90.69	11	P	P	13 28 45.6	+0.5	
PZH	**PanZhiHua**	90.82	298	P	P	13 28 47.5	+0.7	
PZH	comp=Z,10.0nm,0.7s			pmax	pmax			
D24K	**Happy Valley** baz=207	91.04	10	P	P	13 28 46.8	+0.2	
EPYK	**Eagle Plains** baz=218	91.15	15	P	P	13 28 46.7	-0.6	
H31M	**Peel River** baz=220	91.32	16	P	P	13 28 47.6	-0.5	
C23K	**Itkillik River** baz=205	91.38	9	P	P	13 28 48.0	-0.2	
F28M	**Old Crow** baz=215	91.42	14	P	P	13 28 48.2	-0.3	
B22K	**Teshekpuk Lake** baz=203	91.45	8	P	P	13 28 48.3	-0.2	
E27K	**Coleen River** baz=214	91.53	13	P	P	13 28 48.5	-0.5	
C24K	**Franklin Bluff** baz=207	91.56	10	P	P	13 28 48.7	-0.4	
D25K	**Kavik River** baz=209	91.60	11	P	P	13 28 48.7	-0.6	
G30M	**tAoh Zraii Nji** baz=218	91.76	15	P	P	13 28 49.0	-1.1	
A21K	**Barrow** baz=200	91.99	7	P	P	13 28 50.2	-0.8	
G31M	**Satah River** baz=220	92.20	16	P	P	13 28 51.7	-0.3	
C27K	**Jago River** baz=212	92.33	11	P	P	13 28 52.6	0.0	
F30M	**Barrier River** baz=219	92.36	15	P	P	13 28 52.3	-0.5	
C26K	**Camden Bay** baz=210	92.37	11	P	P	13 28 52.0	-0.8	
E29M	**Blow River** baz=217	92.49	14	P	P	13 28 52.9	-0.5	
D27M	**Malcolm River** baz=214	92.54	12	P	P	13 28 53.5	-0.1	
F31M	**Tsiigehtchic** baz=221	92.73	15	P	P	13 28 54.5	+0.1	
WRGLY	**Wrigley** baz=230	92.81	22	P	P	13 28 55.0	+0.1	
D28M	**Stokes Point** baz=216	93.06	13	P	P	13 28 56.6	+0.7	
INK	**Inuvik** comp=Z,5.3nm,1.2s	93.44	15	IAmb	IAmb	13 28 57.8		
INK	**Inuvik** baz=221	93.44	15	P	P	13 28 58.1	+0.4	
SONM	**Songino Array** comp=Z,0.2nm,0.4s,baz=134,slow=4.7,SNR=2.6 comp=Z,0.2nm,0.4s	95.54	319	P	P	13 29 08.6	+0.6	
YKA	**Yellowknife Ar** comp=Z,0.3nm,0.9s,baz=253,slow=4.8,SNR=5.1 comp=Z,0.3nm,0.9s	95.64	25	P	P	13 29 07.4	-0.4	
ZALV	**Zalesovo Beam** comp=Z,0.4nm,0.3s,baz=60,slow=2.1,SNR=5.0	110.25	321	PKiKP	PKiKP	13 34 09.7	-1.1	
MKAR	**Makanchi Array** comp=Z,1.0nm,0.5s,baz=144,slow=0.7,SNR=27	111.07	314	PKiKP	PKiKP	13 34 11.4	-1.1	
KURBB	**Kurchatov Arra** comp=Z,1.5nm,0.6s,baz=95,slow=1.8,SNR=23	113.86	317	PKiKP	PKiKP	13 34 16.6	-1.2	
SCHQ	**Schefferville** comp=Z,1.4nm,0.7s,baz=270,slow=3.0,SNR=1.7	117.79	38	PKP	PKiKP	13 34 25.4	+0.1	
BVAR	**Borovoye Array** comp=Z,3.2nm,0.3s,baz=112,slow=2.3,SNR=22	118.85	320	PKP	PKPdf	13 34 26.6	-0.7	
SPITS	**Spitsbergen Ar** comp=Z,9.8nm,0.9s,baz=46,slow=6.0,SNR=6.6	121.17	357	PKP	PKPdf	13 34 30.8	-0.3	
ARTI	**Arti**	125.00	326		PKPdf	13 34 38.9	-0.1	
BOSA	**Boshof** comp=Z,1.2nm,0.6s,baz=88,slow=5.7,SNR=4.7	127.13	205	PKP	PKiKP	13 34 45.1	+0.4	
BOSA	**Boshof**	127.13	205		PKPdf	13 34 43.8	-0.4	
ARCES	**ARCESS Array B** comp=Z,2.7nm,0.4s,baz=22,slow=1.4,SNR=30	128.30	350	PKP	PKPdf	13 34 45.0	0.0	
FINES	**FINESS Array B** comp=Z,1.5nm,0.8s,baz=127,slow=25,SNR=4.1	135.22	344	PKhKP	PKPpre	13 34 46.0		
FINES				PKP	sPdif	13 34 58.7	-0.5	
NB2	comp=Z,0.7nm,0.5s,baz=56,slow=3.0,SNR=6.6 **NORSAR Subarra** comp=Z,2.2nm,0.6s,baz=17,slow=2.6	138.32	354	PKP	PKPpre	13 34 57.8		
NOA	**NORSAR Array B** comp=Z,0.3nm,0.4s,baz=21,slow=3.8,SNR=3.3	138.32	354	PKhKP	PKPpre	13 34 54.6		
NOA	comp=Z,0.8nm,0.7s,baz=14,slow=3.8,SNR=4.0			PKP	PKiKP	13 35 05.1	-1.1	
HFS	**Hagfors** comp=Z,4.0nm,0.8s,baz=61,slow=5.8,SNR=11	138.90	352	PKhKP	PKPpre	13 34 55.5		
AKASG	**Malin Array Be** comp=Z,3.0nm,0.4s,baz=44,slow=4.3,SNR=16	142.62	332	PKhKP	PKPpre	13 35 08.1		
AKASG	comp=Z,2.0nm,0.4s,baz=43,slow=2.7,SNR=5.1			PKP	PKPdf	13 35 13.5	+1.6	

EKA	**Eskdalemuir Ar**	**144.24**	**6**	PKP	PKPbc	13 35 13.9	-0.4	
	comp=Z,1.6nm,0.4s,baz=327,slow=2.7,SNR=16							
BSEG	**Bad Segeberg**	**145.38 352**		*e*PKPbc	**PKPbc**	**13 35 18.3**	**+0.5**	
	baz=15,slow=2.4							
TLCR		**146.61 325**	⇑	P	**PKPbc**	**13 35 21.8**	**+0.2**	
BURAR	**Bucovina Array**	**146.68 332**			**PKPbc**	**13 35 22.2**	**+0.4**	
BR131	**Keskin Array S**	**146.72 313**			**PKPbc**	**13 35 22.2**	**0.0**	
BRTR	**Keskin Array B**	**146.72 313**		PKPbc	**PKPbc**	**13 35 21.9**	**-0.4**	
	comp=Z,5.6nm,0.5s,baz=138,slow=4.8,SNR=30							
GHRR		**146.76 328**	⇑	P	**PKPdf**	**13 35 20.5**	**+1.3**	
KIRS	**Kirsehir-Merke**	**146.80 312**	⇓	P	**PKPbc**	**13 35 22.5**	**+0.1**	
FLTG	**Flechtingen**	**146.81 350**		*e*PKPbc	**PKPbc**	**13 35 21.7**	**-0.2**	
	baz=15,slow=2.4							
JURR	**Jurilovca**	**146.85 325**	⇑	P	**PKPbc**	**13 35 22.5**	**+0.3**	
TPGR	**Topolog**	**147.04 325**	⇓	P	**PKPbc**	**13 35 22.9**	**+0.1**	
ONER	**Baraj Valea Uz**	**147.06 329**	⇑	P	**PKPbc**	**13 35 23.2**	**+0.4**	
ASSE	**Asse, Remlinge**	**147.09 351**		*e*PKPbc	**PKPbc**	**13 35 22.8**	**+0.2**	
	baz=15,slow=2.4							
VRI	**Vrincioaia**	**147.23 328**	⇓	P	**PKPbc**	**13 35 23.2**	**-0.1**	
TIRR	**Tirgusor**	**147.31 325**	⇑	P	**PKPbc**	**13 35 23.7**	**+0.3**	
BMR	**Baia Mare**	**147.38 333**	⇓	P	**PKPbc**	**13 35 22.9**	**-0.6**	
CLZ	**Clausthal**	**147.41 351**		*e*PKPbc	**PKPbc**	**13 35 23.5**	**0.0**	
	baz=15,slow=2.4							
OSTC	**Ostas**	**147.42 344**	⇑	*e*PKP	**PKPbc**	**13 35 24.3**	**+0.7**	
CLL	**Collm**	**147.47 348**	⇓	/PKPbc	**PKPbc**	**13 35 23.7**	**+0.1**	
	comp=Z,20nm,1.0s							
CLL				*/* PKPab	**PKPab**	**13 35 27.0**	**-0.5**	
	comp=Z,13nm,1.1s							
CLL	**Collm**	**147.47 348**		*e*PKPbc	**PKPbc**	**13 35 23.8**	**+0.1**	
	baz=15,slow=2.4							
COVR	**Voineasa-Covas**	**147.51 329**	⇓	P	**PKPbc**	**13 35 23.7**	**-0.3**	
UPC	**Upice**	**147.52 344**	⇑	*e*PKP	**PKPbc**	**13 35 24.2**	**+0.4**	
STEB	**Steborice**	**147.55 342**	⇑	*e*PKP	**PKPbc**	**13 35 24.2**	**+0.3**	
STEB				*e*PKPAB	**PKPab**	**13 35 28.0**	**+0.1**	
DPC	**Dobruska-Polom**	**147.58 343**	⇑	*e*PKP	**PKPbc**	**13 35 24.5**	**+0.5**	
MANR	**Mangalia**	**147.62 324**	⇓	P	**PKPbc**	**13 35 24.9**	**+0.6**	
BRG	**Berggiesshubel**	**147.68 346**		*e*PKPbc	**PKPbc**	**13 35 24.7**	**+0.5**	
	baz=15,slow=2.4							
LANS	**Liptovska Anna**	**147.69 339**		*e*PKP	**PKiKP**	**13 35 25.5**	**-0.3**	
KRLC	**Kraliky**	**147.71 343**	⇑	*e*PKP	**PKPbc**	**13 35 24.6**	**+0.2**	
MORC	**Moravsky Berou**	**147.76 342**	⇑	P	**PKPbc**	**13 35 24.8**	**+0.3**	
MORC	**Moravsky Berou**	**147.76 342**		*e*PKP	**PKPbc**	**13 35 24.7**	**+0.2**	
MORC				*e*		13 35 29.1		
GTTG	**Gottingen**	**147.76 351**		*e*PKPbc	**PKPbc**	**13 35 24.5**	**+0.1**	
	baz=15,slow=2.4							
DOPR	**Dopca**	**147.81 329**	⇓	P	**PKiKP**	**13 35 25.5**	**-0.6**	
PVCC	**Panska Ves**	**147.86 346**	⇑	*e*PKP	**PKPbc**	**13 35 25.1**	**+0.4**	
MLR	**Muntele Rosu**	**147.89 328**		PKPbc	**PKPbc**	**13 35 24.3**	**-0.8**	
	comp=Z,5.6nm,0.5s,baz=345,slow=8.4,SNR=12							
MLR	**Muntele Rosu**	**147.89 328**	⇓	P	**PKPbc**	**13 35 25.6**	**+0.5**	
MMAI	**Mount Meron Ar**	**147.89 301**		PKPbc	**PKiKP**	**13 35 26.2**	**-0.6**	
	comp=Z,5.7nm,0.5s,baz=50,slow=7.8,SNR=12							
MAUC	**Maruska**	**148.03 341**	⇑	*e*PKP	**PKiKP**	**13 35 25.8**	**+0.6**	
KASTN	**Kahler Asten**	**148.29 353**		*e*PKPbc	**PKPbc**	**13 35 25.9**	**+0.1**	
	baz=15,slow=2.4							
MARR	**Marisel-Cluj**	**148.32 333**	⇓	P	**PKPbc**	**13 35 25.7**	**-0.3**	
VOIR		**148.36 329**	⇑	P	**PKPbc**	**13 35 26.3**	**+0.1**	
MOX	**Moxa**	**148.37 349**		*e*PKPbc	**PKPbc**	**13 35 25.9**	**-0.1**	
	baz=15,slow=2.4							
PRU	**Pruhonice**	**148.37 345**	⇑	*e*PKP	**PKPbc**	**13 35 26.1**	**+0.1**	
DRGR		**148.40 333**	⇑	P	**PKPbc**	**13 35 25.7**	**-0.5**	
TANN	**Tannenbergstha**	**148.43 348**		*e*PKPbc	**PKPbc**	**13 35 26.4**	**+0.2**	
	baz=15,slow=2.4							
VRAC	**Vranov**	**148.45 342**		PKPbc	**PKPbc**	**13 35 26.3**	**+0.1**	
	comp=Z,1.6nm,0.5s,baz=329,slow=3.5,SNR=5.9							
VRAC	**Vranov**	**148.45 342**	⇑	P	**PKPbc**	**13 35 26.6**	**+0.4**	
VRAC	**Vranov**	**148.45 342**		*e*PKP	**PKPbc**	**13 35 26.6**	**+0.4**	
VRAC				*e*		13 35 32.0		
UBBA	**Unterbreizbach**	**148.46 351**		*e*PKPbc	**PKPbc**	**13 35 26.4**	**+0.4**	
	baz=15,slow=2.4							
JAVC	**Velka Javorina**	**148.53 341**		*e*PKP	**PKiKP**	**13 35 27.8**	**+0.2**	
PSZ	**Piszkesteto**	**148.59 337**	⇑	P	**PKPbc**	**13 35 26.9**	**+0.3**	
NKC	**Novy Kostel**	**148.60 348**	⇑	*e*PKP	**PKPbc**	**13 35 26.9**	**+0.3**	
ARR	**Arges**	**148.61 329**	⇓	P	**PKiKP**	**13 35 27.8**	**-0.1**	
KRUC	**Moravsky**	**148.73 342**		*e*PKP	**PKPbc**	**13 35 27.1**	**+0.2**	
KRUC				*e*		13 35 33.0		
MANZ	**Manzenberg**	**148.90 348**		*e*PKPbc	**PKPbc**	**13 35 27.4**	**+0.1**	
	baz=15,slow=2.4							
CSS	**Mathiatis**	**148.91 306**			**PKPbc**	**13 35 27.5**	**-0.3**	
LOT	**Lotru**	**148.96 330**	⇓	P	**PKPbc**	**13 35 26.9**	**-0.8**	
ZVC	**Zvikov**	**148.97 345**	⇑	*e*PKP	**PKPbc**	**13 35 27.9**	**+0.5**	
ZVC				*e*PKPAB	**PKPab**	**13 35 33.8**	**0.0**	
MODS	**Modra-Piesok**	**149.08 341**		*e*PKP	**PKiKP**	**13 35 28.8**	**+0.1**	
MODS				*e*		13 35 35.3		
ROTZ	**Rotzenmuhle**	**149.09 348**		*e*PKPbc	**PKPbc**	**13 35 27.8**	**0.0**	
	baz=15,slow=2.4							
TNS	**Taunus Mts**	**149.26 353**		*e*PKPbc	**PKPbc**	**13 35 28.3**	**+0.1**	
	baz=15,slow=2.4							
GRF	**Grafenberg Arr**	**149.35 349**		*e*PKPbc	**PKPbc**	**13 35 28.5**	**+0.1**	
	baz=15,slow=2.4							
KHC	**Kasperske Hory**	**149.40 346**	⇑	*e*PKP	**PKPbc**	**13 35 28.8**	**+0.2**	
GZR	**Gura Zlata**	**149.46 331**	⇓	P	**PKPbc**	**13 35 28.5**	**-0.4**	
CKRC	**Cesky Krumlov**	**149.51 345**	⇑	*e*PKP	**PKPbc**	**13 35 29.0**	**+0.2**	
WET	**Wettzell**	**149.54 347**		*e*PKPbc	**PKPbc**	**13 35 28.8**	**-0.1**	
	baz=15,slow=2.4							
GEC2	**GERESS Array S**	**149.64 345**		*e*PKPbc	**PKPbc**	**13 35 29.3**	**+0.1**	
	baz=15,slow=2.4							
GERES	**GERESS Array B**	**149.64 345**		PKPbc	**PKPbc**	**13 35 29.4**	**+0.1**	
	comp=Z,6.9nm,0.8s,baz=352,slow=2.0,SNR=5.5							
WINA	**Alland / Wiene**	**149.68 342**		*/* PKP	**PKiKP**	**13 35 30.0**	**+0.1**	
	SNR=8.4							
ELND	**Elena**	**149.70 325**	⇑	P	**PKPbc**	**13 35 29.3**	**-0.1**	
BZS	**Buzias**	**149.80 333**	⇑	P	**PKPbc**	**13 35 29.4**	**-0.2**	
CONA	**Conrad Observa**	**149.91 342**		*/* PKP	**PKiKP**	**13 35 30.2**	**-0.3**	
	comp=Z,12nm,0.6s,SNR=19							
RONA	**Rosalia, Austr**	**149.98 341**		*e*PKP	**PKiKP**	**13 35 30.3**	**-0.3**	
	comp=Z,18nm,0.5s							
HERR	**Herculane**	**150.02 331**	⇑	P	**PKPbc**	**13 35 29.5**	**-0.6**	
WLF	**Walferdange**	**150.04 355**		*e*PKPbc	**PKPbc**	**13 35 30.2**	**+0.3**	
	baz=15,slow=2.4							
PLVB	**Pleven**	**150.04 327**	⇑	P	**PKiKP**	**13 35 30.6**	**-0.2**	
MDVR	**Moldovita**	**150.41 332**	⇓	P	**PKPbc**	**13 35 31.1**	**0.0**	
MOA	**Molln**	**150.42 344**		*/* PKP	**PKPbc**	**13 35 30.8**	**-0.2**	
	comp=Z,3.9nm,0.6s,SNR=5.3							
MORH	**Mrgy, Hungar**	**150.49 337**	⇓	P	**PKPbc**	**13 35 30.9**	**-0.2**	
STU	**Stuttgart**	**150.58 351**		*e*PKPbc	**PKPbc**	**13 35 31.4**	**+0.2**	
	baz=15,slow=2.4							
ARSA	**Arzberg**	**150.62 342**		*e*PKP	**PKPbc**	**13 35 31.1**	**-0.3**	
	comp=Z,1.4nm,0.6s							
BIOA	**Bad Ischl, Aus**	**150.73 345**		*/* PKP	**PKPbc**	**13 35 31.1**	**-0.6**	
	comp=Z,9.1nm,0.9s,SNR=4.3							
FUR	**Furstenfeldbru**	**150.81 348**		*e*PKPbc	**PKPbc**	**13 35 31.8**	**-0.1**	
	baz=15,slow=2.4							
RJOB	**Jochberg**	**150.89 346**		*e*PKPbc	**PKPbc**	**13 35 31.9**	**-0.2**	
	baz=15,slow=2.4							
BFO	**Black Forest**	**151.13 352**		*e*PKPbc	**PKPbc**	**13 35 32.4**	**-0.2**	
	baz=15,slow=2.4							
LESA	**Schwarzleotal**	**151.21 346**		*e*PKP	**PKPbc**	**13 35 32.7**	**-0.2**	
	comp=Z,2.7nm,0.4s							
SOKA	**Soboth**	**151.28 342**		*/* PKP	**PKPbc**	**13 35 32.5**	**-0.6**	
	comp=Z,7.2nm,1.0s,SNR=5.1							
SOKA	**Soboth**	**151.28 342**		*e*P	**PKPbc**	**13 35 32.5**	**-0.6**	
	comp=Z,7.2nm,1.0s,SNR=5.1							
KBA	**Koelnbreinsper**	**151.37 344**		*/* PKP	**PKPbc**	**13 35 33.2**	**-0.2**	
	comp=Z,3.9nm,0.5s,SNR=9.9							
UBR	**Ueberruh**	**151.49 349**		*e*PKPbc	**PKPbc**	**13 35 33.5**	**0.0**	
	baz=15,slow=2.4							
WATA	**Walderalm**	**151.54 347**		*/* PKP	**PKPbc**	**13 35 33.3**	**-0.4**	
	comp=Z,3.8nm,0.4s,SNR=4.3							
WATA	**Walderalm**	**151.54 347**		*e*P	**PKPbc**	**13 35 33.3**	**-0.4**	
	comp=Z,3.8nm,0.4s,SNR=4.3							
RETA	**Reutte**	**151.56 348**		*e*PKP	**PKiKP**	**13 35 34.5**	**+0.6**	
	comp=Z,2.3nm,0.4s							
OBKA	**Obir**	**151.57 342**		*e*PKiKP	**PKiKP**	**13 35 34.8**	**+0.8**	
	comp=Z,0.4nm,0.4s							
WTTA	**Wattenberg**	**151.59 347**		*e*PKP	**PKPbc**	**13 35 33.8**	**-0.1**	
	comp=Z,6.1nm,0.4s							
MOTA	**Moosalm**	**151.62 348**		*/* PKP	**PKPbc**	**13 35 33.6**	**-0.3**	
	comp=Z,3.9nm,0.8s							
MYKA	**Terra Mystica**	**151.71 344**		*e*PKP	**PKPbc**	**13 35 33.0**	**-1.0**	
	comp=Z,4.4nm,0.6s							
SQTA	**Sankt Quirin**	**151.72 347**		*/* PKP	**PKPbc**	**13 35 33.8**	**-0.3**	
	comp=Z,7.3nm,0.7s,SNR=6.4							
SQTA	**Sankt Quirin**	**151.72 347**		*e*P	**PKPbc**	**13 35 33.8**	**-0.3**	
	comp=Z,7.3nm,0.7s,SNR=6.4							
ABTA	**Abfaltersbach**	**151.88 345**		*/* PKP	**PKPbc**	**13 35 33.9**	**-0.5**	
	comp=Z,9.3nm,0.5s,SNR=10							
FETA	**Feichten**	**152.01 348**		*/* PKP	**PKiKP**	**13 35 34.9**	**-0.1**	
	comp=Z,4.2nm,0.6s,SNR=5.2							
FETA	**Feichten**	**152.01 348**		*e*P	**PKiKP**	**13 35 34.9**	**-0.1**	
	comp=Z,4.2nm,0.6s,SNR=5.2							
DAVOX	**Davos/Dischmat**	**152.40 349**		PKPbc	**PKPbc**	**13 35 35.6**	**-0.1**	
	comp=Z,9.6nm,0.5s,baz=294,slow=12,SNR=29							
FUORN	**Ofenpass-Fuorn**	**152.48 348**			**PKiKP**	**13 35 36.3**	**+0.2**	
TUE	**Stuetta**	**152.79 350**			**PKPbc**	**13 35 36.5**	**0.0**	

ESDC	**Sonseca Array**	**159.39**	**14**	PKP	**PKPdf**	**13 35 36.7**	**-0.7**	
	comp=Z,0.6nm,1.0s,baz=300,slow=4.3,SNR=2.2							
ESDC				PKPab	**PKPab**	**13 36 18.4**	**-0.2**	
	comp=Z,0.7nm,0.9s,baz=348,slow=5.8,SNR=4.4							
TORD	**Torodi Ar. Bea**	**173.36**	**173**	PKP	**PKPdf**	**13 35 47.2**	**-1.4**	
	comp=Z,1.1nm,0.9s,baz=239,slow=3.2,SNR=4.9							
TORD				PKPab	**PKPab**	**13 37 21.1**	**+0.4**	
	comp=Z,0.2nm,0.5s,baz=194,slow=5.2,SNR=1.7							

*IDC **08** 13:42:44.0±3.6,36.°70N×75.°72E,h0km,mb3.6/2, mbtmp3.4/8, ML3.1/6, MS3.4/1, Error ellipse: s-maj=51.8km s-min=33.3km az=4.0*

ISC 08 13:42:48.0±2.0,36.°6N±0.°2×75.°7E±0.°1,h35km,n12, σ1§52/15,2C-1D,Kashmir-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**6.12**	**351**	Pn	**Pn**	**13 44 18.1**	**+2.0**
	0.6nm,0.3s,baz=161,slow=12,SNR=8.7						
AAK				Sn	**Sn**	**13 45 24.4**	**-0.6**
	0.1nm,0.3s,baz=191,slow=20,SNR=1.1						
AAK				Lg	Lg	13 45 50.1	
	0.6nm,0.3s,baz=162,slow=20,SNR=1.8						
	1.5nm,0.4s						
AAK	**Ala-Archa**	**6.12**	**351**	⇑Pn	**Pn**	**13 44 19.5**	**+3.4**
	5.1nm,0.9s						
AAK				⇓Sn	**Sn**	**13 45 25.6**	**+0.6**
	7.4nm,0.9s						
KK31	**Karatay Array**	**7.64**	**330**	Pn	**Pn**	**13 44 37.1**	**+0.2**
	0.6nm,0.3s,baz=136,slow=12,SNR=26						
KK31				⇑Sn	**Sn**	**13 46 01.9**	**-0.3**
	2.6nm,0.6s,baz=151,slow=26,SNR=5.0						
MKAR	**Makanchi Array**	**11.32**	**24**	Pn	**Pn**	**13 45 26.3**	**-0.8**
	0.1nm,0.3s,baz=208,slow=16,SNR=8.5						
	0.4nm,0.5s						
WMQ	**Urumqi**	**11.66**	**48**	*e*P	**Pn**	**13 45 33.1**	**+1.2**
WMQ				PP	**PnPn**	**13 45 40.2**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
KURBB	**Kurchatov Arra**	**14.18**	**7**	Pn	**Pn**	**13 46 04.2**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=192,slow=12,SNR=8.8						
	comp=Z,0.8nm,1.0s						
BVAR	**Borovoye Array**	**16.86**	**349**	Pn	**Pn**	**13 46 39.0**	**-2.1**
	baz=166,slow=13,SNR=4.8						
	comp=Z,0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**18.48**	**17**	P	**P**	**13 47 00.6**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=222,slow=11,SNR=9.6						
	comp=Z,0.9nm,0.5s						
AKTO	**Aktyubinsk**	**18.82**	**323**	P	**P**	**13 47 03.8**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=123,slow=13,SNR=1.9						
	comp=Z,0.5nm,0.4s						
SONM	**Songino Array**	**25.19**	**54**	P	**P**	**13 48 10.7**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=251,slow=9.9,SNR=4.5						
	comp=Z,0.6nm,0.8s						
FINES	**FINESS Array B**	**39.57**	**325**	P	**P**	**13 50 15.4**	**0.0**
	comp=Z,0.8nm,0.5s,baz=111,slow=11,SNR=8.3						
	comp=Z,0.8nm,0.5s						
SEY	**Seymchan**	**52.22**	**34**	LR	LR	14 17 01.6	
	comp=Z,40nm,20.8s,baz=334,slow=40						

*NEIC **08** 13:56:58.9±1.8,38.°09S±0.°08×176.°01E±0.°10,h209km±5km, mb4.5/19, Error ellipse: s-maj=11.2km s-min=10.8km az=221.0*

*NOU **08** 13:56:59.0,38.°19S×175.°91E,h202km,MLv5.0/35, North Island, New Zealand*

*IDC **08** 13:56:59.5±0.8,37.°93S×176.°08E,h214km±7km,mb4.1/13, mbtmp4.7/14, Error ellipse: s-maj=15.3km s-min=10.4km az=54.0*

*WEL **08** 13:57:00.9±0.6,38.°5S±3.°1×17.°6E±1.°,h188km±5km,M4.3/85, ML3.5/7,MLv4.3/85, Error ellipse: s-maj=3.8km s-min=3.6km az=114.7, confirmed*

*WEL **08** 13:57:00.8,38.°05S×176.°02E,h196km,ML4.7,Mw4.4, Moment Tensor Solution. s9 Moment tensor: Scale 10¹⁵ Nm; Mrr5.12; Mθθ0.45; Mϕϕ-5.57; Mrθ2.21; Mθϕ0.21; Mϕr0.71; Fault plane solution: M05.83000×10¹⁵ NP1: ϕs19.00000°,δ52.00000°,λ118.00000°. NP2: ϕs158.00000°,δ46.00000°,λ59.00000°. Principal axes: T 6.0455, Plg68.0000°, Azm352.0000°; N -0.4318, Plg22.0000°, Azm180.0000°; P -5.6137, Plg3.0000°, Azm89.0000°; Stations used: OPRZ URZ WIZ HIZ MKAZ BKZ VRZ KNZ WCZ REVERSE FAULTING*

ISC 08 13:56:59.3±0.5,38.°10S±0.°04×175.°93E±0.°04,h213km±4km, n277,σ1§53/303,mb4.4/23,4C,North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NGRZ	**Ngongotaha**	**0.20**	**90**	P	**Pn**	**13 57 26.5**	**-0.7**
UTU	**Utuhina**	**0.22**	**110**	P	**Pn**	**13 57 26.6**	**-0.6**
KMRZ	**Kaimai**	**0.26**	**1**	P	**Pn**	**13 57 26.3**	**-1.0**
KARZ	**Kaharoa**	**0.26**	**71**	P	**Pn**	**13 57 26.3**	**-1.0**
HSRZ	**Hossack Road**	**0.32**	**130**	P	**Pn**	**13 57 26.8**	**-0.6**
OMRZ	**Omania**	**0.35**	**91**	P	**Pn**	**13 57 26.6**	**-0.9**
HLRZ	**Highlands Stat**	**0.36**	**114**	P	**Pn**	**13 57 27.2**	**-0.4**
LIRZ	**Lichensteins R**	**0.37**	**75**	P	**Pn**	**13 57 26.6**	**-0.9**
TLZ	**Tolley Road**	**0.39**	**234**	P	**Pn**	**13 57 27.3**	**-0.3**
KUTZ	**Kaahu Road**	**0.40**	**193**	P	**Pn**	**13 57 27.3**	**-0.3**
HRRZ	**Handcock Road**	**0.40**	**136**	P	**Pn**	**13 57 26.9**	**-0.7**
MKRZ	**Makatiti**	**0.42**	**95**	P	**Pn**	**13 57 27.4**	**-0.4**
WPRZ	**Whakapapatarin**	**0.45**	**157**	P	**Pn**	**13 57 27.2**	**-0.6**
TGRZ	**Tauranga**	**0.45**	**35**	P	**Pn**	**13 57 26.6**	**-1.2**
TARZ	**Mount Tarawera**	**0.47**	**107**	P	**Pn**	**13 57 27.4**	**-0.5**
TOZ	**Tahuroa Road**	**0.50**	**317**		**Pn**	**13 57 27.1**	**-0.9**
TOZ	**Tahuroa Road**	**0.50**	**317**	P	**Pn**	**13 57 27.1**	**-0.9**
RRRZ	**Republican Roa**	**0.52**	**117**	P	**Pn**	**13 57 27.1**	**-0.8**
PRRZ	**Plateau Road**	**0.54**	**138**	P	**Pn**	**13 57 27.4**	**-0.6**
OPRZ	**Ohinepanea**	**0.56**	**62**	P	**Pn**	**13 57 26.8**	**-1.3**
ALRZ	**Allen Road**	**0.56**	**145**	P	**Pn**	**13 57 27.5**	**-0.6**
WHTZ	**Whakaora**	**0.56**	**178**	P	**Pn**	**13 57 28.3**	**+0.1**
MARZ	**Manawahe**	**0.60**	**79**	P	**Pn**	**13 57 27.3**	**-1.0**
WATZ	**Wairara**	**0.62**	**195**	P	**Pn**	**13 57 28.3**	**-0.1**
EDRZ	**Edgecumbe**	**0.64**	**91**	P	**Pn**	**13 57 27.7**	**-0.8**
MUGZ	**Murupara**	**0.76**	**120**	P	**Pn**	**13 57 28.1**	**-0.9**
RATZ	**Rangitukua**	**0.77**	**189**	P	**Pn**	**13 57 28.9**	**-0.2**
MRHZ	**Matea Rd**	**0.82**	**153**	P	**Pn**	**13 57 29.0**	**-0.4**
WHRZ	**Whale Island**	**0.86**	**74**	P	**Pn**	**13 57 28.8**	**-0.8**
RITZ	**Rihia Road**	**0.88**	**184**	P	**Pn**	**13 57 30.0**	**+0.4**
KATZ	**Kakaramea**	**0.89**	**192**	P	**Pn**	**13 57 29.8**	**-0.1**
URZ	**Urewera**	**0.94**	**100**	P	**Pn**	**13 57 28.7**	**-1.3**
	3µm,0.5s,baz=253,slow=4.7,SNR=6092						
URZ				S	**S**	**13 57 50.3**	**-3.5**
	4µm,0.3s,baz=233,slow=20,SNR=13						
URZ	**Urewera**	**0.94**	**100**	P	**Pn**	**13 57 28.5**	**-1.5**
URZ	**Urewera**	**0.94**	**100**	S	**S**	**13 57 50.5**	**-3.3**
URZ	**Urewera**	**0.94**	**100**	P	**Pn**	**13 57 28.4**	**-1.5**
URZ				S	**S**	**13 57 50.5**	**-3.3**
HIZ	**Hauiti**	**0.94**	**244**	P	**Pn**	**13 57 29.7**	**-0.3**
HIZ	**Hauiti**	**0.94**	**244**		**Pn**	**13 57 29.8**	**-0.1**
HIZ	**Hauiti**	**0.94**	**244**	P	**Pn**	**13 57 29.9**	**-0.1**
RTZ	**Ruatahuna**	**0.97**	**122**		**Pn**	**13 57 29.6**	**-0.7**
RTZ				Sn	**S**	**13 57 52.4**	**-1.9**
RTZ	**Ruatahuna**	**0.97**	**122**	P	**Pn**	**13 57 29.5**	**-0.7**
NTVZ	**North Tongarir**	**1.01**	**191**	P	**Pn**	**13 57 30.6**	**0.0**
KRVZ	**Karewarewa**	**1.02**	**193**	P	**Pn**	**13 57 30.6**	**-0.1**
TMVZ	**Te Maari**	**1.03**	**190**	P	**Pn**	**13 57 30.6**	**-0.1**
MTHZ	**Maungataniwha**	**1.03**	**137**	P	**Pn**	**13 57 30.2**	**-0.5**
MTHZ				S	**S**	**13 57 53.0**	**-2.0**
TWVZ	**Taurewa**	**1.04**	**202**	P	**Pn**	**13 57 30.8**	**0.0**
ETVZ	**East Tongariro**	**1.05**	**190**	P	**Pn**	**13 57 30.8**	**0.0**
WTVZ	**West Tongariro**	**1.05**	**195**	P	**Pn**	**13 57 30.8**	**0.0**
OTVZ	**Oturere**	**1.08**	**191**	P	**Pn**	**13 57 31.1**	**0.0**
NGZ	**Ngauruhoe**	**1.10**	**194**	P	**Pn**	**13 57 31.2**	**0.0**
SNVZ	**South Ngauruho**	**1.11**	**192**	P	**Pn**	**13 57 31.2**	**-0.1**
COVZ	**Chateau Observ**	**1.14**	**195**	P	**Pn**	**13 57 31.3**	**+0.1**
BKZ	**Black Stump Fm**	**1.15**	**158**	P	**Pn**	**13 57 31.0**	**-0.4**
BKZ	**Black Stump Fm**	**1.15**	**158**	P	**S**	**13 57 55.0**	**-1.5**
BKZ	**Black Stump Fm**	**1.15**	**158**		**Pn**	**13 57 31.0**	**-0.4**
BKZ	**Black Stump Fm**	**1.15**	**158**	P	**Pn**	**13 57 31.1**	**-0.4**
BKZ				S	**S**	**13 57 54.4**	**-2.1**
WIZ	**White Island**	**1.15**	**60**	P	**Pn**	**13 57 30.0**	**-1.4**
MKAZ	**Moumakai**	**1.17**	**328**	P	**Pn**	**13 57 30.6**	**-1.0**
TUVZ	**Tukino**	**1.18**	**191**	P	**Pn**	**13 57 32.0**	**+0.2**
FWVZ	**Far West T-bar**	**1.19**	**194**	P	**Pn**	**13 57 32.0**	**+0.1**
MAVZ	**Matarangi**	**1.20**	**194**	P	**Pn**	**13 57 32.3**	**+0.2**
NMHZ	**Naumai**	**1.21**	**146**	P	**Pn**	**13 57 32.5**	**+0.6**
NMHZ				S	**S**	**13 57 56.7**	**-0.5**
WHVZ	**Whangaehu Hut**	**1.21**	**193**	P	**Pn**	**13 57 32.2**	**+0.1**
WHVZ				S	**S**	**13 57 56.5**	**-1.1**
RAHZ	**Arahi**	**1.22**	**132**	P	**Pn**	**13 57 31.9**	**+0.1**
RAHZ				S	**S**	**13 57 56.1**	**-1.1**

RAGZ	**Rawiri**	**1.23**	**109**	P		**Pn**	**13 57 31.5**	**-0.5**
RAGZ				S		**S**	**13 57 55.3**	**-2.1**
TRVZ	**Turoa**	**1.23**	**194**	P		**Pn**	**13 57 32.4**	**+0.2**
WNVZ	**Wahianoa**	**1.25**	**192**	P		**Pn**	**13 57 32.3**	**0.0**
WNVZ				S		**S**	**13 57 56.5**	**-1.6**
PKVZ	**Pokaka**	**1.27**	**201**	P		**Pn**	**13 57 32.5**	**+0.2**
PKVZ				S		**S**	**13 57 57.5**	**-0.5**
MWZ	**Matawai**	**1.28**	**101**	P		**Pn**	**13 57 31.4**	**-1.0**
MWZ				S		**S**	**13 57 54.8**	**-3.1**
SNGZ	**Shannon Statio**	**1.30**	**122**	P		**Pn**	**13 57 32.3**	**-0.1**
SNGZ				S		**S**	**13 57 56.4**	**-1.8**
KBAZ	**Karaka Road Bo**	**1.30**	**320**	P		**Pn**	**13 57 31.8**	**-0.8**
MOVZ	**Moawhango**	**1.31**	**186**	P		**Pn**	**13 57 32.3**	**-0.4**
MOVZ				S		**S**	**13 57 56.9**	**-1.7**
MTWZ	**Mangateitei**	**1.33**	**196**	P		**Pn**	**13 57 32.9**	**+0.1**
KWHZ	**Kaweka Forest**	**1.37**	**164**	P		**Pn**	**13 57 33.2**	**+0.1**
VRZ	**Vera Road**	**1.37**	**222**	P		**Pn**	**13 57 33.7**	**+0.7**
RUGZ	**Raukumara Rang**	**1.38**	**85**	P		**Pn**	**13 57 31.2**	**-2.1**
RUGZ				S		**S**	**13 57 54.8**	**-4.8**
ETAZ	**East Tamaki Re**	**1.40**	**325**	P		**Pn**	**13 57 32.2**	**-1.2**
WHHZ	**Waihua**	**1.41**	**134**	P		**Pn**	**13 57 33.5**	**+0.2**
ARHZ	**Aropaoanui**	**1.43**	**145**	P		**Pn**	**13 57 33.8**	**+0.3**
ARHZ				S		**S**	**13 57 58.9**	**-1.1**
WIAZ	**Waiheke Island**	**1.45**	**334**	P		**Pn**	**13 57 32.7**	**-1.1**
AWAZ	**Awhitu Peninsu**	**1.46**	**315**	P		**Pn**	**13 57 33.0**	**-0.8**
MCHZ	**McNeill Hill**	**1.47**	**156**	P		**Pn**	**13 57 34.4**	**+0.6**
HAZ	**Te Kaha**	**1.50**	**77**	P		**Pn**	**13 57 32.2**	**-1.9**
HAZ				S		**S**	**13 57 56.8**	**-4.2**
TKGZ	**Te Kara

MSVF	**Nonsavu**	**20.38**	**6**	P		**P**	**14 01 20.3**	**+0.3**
MSVF	**Nonsavu**	**20.38**	**6**	P		**P**	**14 01 19.3**	**-0.6**
MSVF				IAmb		IAmb	14 01 21.0	
	comp=Z,29nm,1.0s							
SANVU	**Saraoutou**	**23.85**	**339**	P		**P**	**14 01 55.0**	**+1.7**
SANVU	**Saraoutou**	**23.85**	**339**	P		**P**	**14 01 52.5**	**-0.8**
CMSA	**Cobar Meteorol**	**25.61**	**276**	P		**P**	**14 02 09.6**	**+0.5**
STKA	**Stephens Creek**	**28.70**	**272**	P		**P**	**14 02 39.1**	**+2.5**
	comp=Z,5.1nm,0.8s,baz=101,slow=6.3,SNR=6.7							
	comp=Z,5.1nm,0.8s							
INKA	**Innaminka**	**31.13**	**279**	P		**P**	**14 02 59.5**	**+1.5**
CTAO	**Charters Tower**	**31.35**	**297**	P		**P**	**14 03 00.4**	**+0.4**
CTAO				IAmb		IAmb	14 03 02.9	
	comp=Z,8.1nm,0.9s							
BBOO	**Buckleboo**	**32.73**	**267**	P		**P**	**14 03 13.7**	**+1.8**
TATA	**Tatamba Isabel**	**32.98**	**330**	P		**P**	**14 03 14.0**	**-0.2**
MTSU	**Mount Surprise**	**34.01**	**297**	P		**P**	**14 03 25.0**	**+1.9**
COEN	**Coen**	**37.69**	**301**	P		**P**	**14 03 55.4**	**+1.1**
COEN	**Coen**	**37.69**	**301**	P		**P**	**14 03 55.4**	**+1.1**
COEN				IAmb		IAmb	14 03 56.4	
	comp=Z,16nm,0.8s							
AS31	**Alice Springs**	**38.50**	**280**	P		**P**	**14 04 01.9**	**+0.7**
ASAR	**Alice Springs**	**38.50**	**280**	P		**P**	**14 04 02.1**	**+0.9**
	comp=Z,7.6nm,0.7s,baz=123,slow=8.3,SNR=142							
ASAR				PcP		**PcP**	**14 06 08.1**	**-1.4**
	comp=Z,1.1nm,0.4s,baz=121,slow=3.7,SNR=5.9							
ASAR				S		**S**	**14 09 42.1**	**+1.4**
	comp=Z,0.5nm,0.9s,baz=124,slow=14,SNR=4.2							
	comp=Z,7.6nm,0.7s							
ASAR	**Alice Springs**	**38.50**	**280**	P		**P**	**14 04 01.5**	**+0.4**
PMG	**Port Moresby**	**38.55**	**310**	P		**P**	**14 04 01.9**	**+0.4**
	comp=Z,7.2nm,0.7s,baz=185,slow=11,SNR=3.6							
	comp=Z,7.2nm,0.7s							
PMG	**Port Moresby**	**38.55**	**310**	IAmb		IAmb	14 04 22.6	
	comp=Z,15nm,1.1s							
WRAB	**Tennant Creek**	**40.23**	**285**	P		**P**	**14 04 16.0**	**+0.6**
WRA	**Warramunga Arr**	**40.23**	**285**	P		**P**	**14 04 16.0**	**+0.6**
	comp=Z,2.6nm,0.6s,baz=122,slow=8.0,SNR=56							
WRA				PcP		**PcP**	**14 06 13.5**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=120,slow=3.4,SNR=2.4							
	comp=Z,2.6nm,0.6s							
WRA	**Warramunga Arr**	**40.23**	**285**	P		**P**	**14 04 15.5**	**0.0**
CASY	**Casey**	**45.98**	**211**	P		**P**	**14 04 60.0**	**-0.8**
CASY				IAmb		IAmb	14 05 37.0	
	comp=Z,28nm,1.1s							
MTN	**Manton Dam**	**47.02**	**290**	P		**P**	**14 05 10.0**	**+0.5**
MTN				IAmb		IAmb	14 05 11.0	
	comp=Z,8.4nm,0.7s							
KNRA	**Kununurra**	**47.03**	**285**	P		**P**	**14 05 10.2**	**+0.7**
KNRA				IAmb		IAmb	14 05 12.1	
	comp=Z,5.8nm,0.6s							
JAY	**Jayapura**	**47.89**	**309**	P		**P**	**14 05 16.5**	**+0.3**
	comp=Z,8.2nm,0.7s,baz=180,slow=10,SNR=1.5							
	comp=Z,8.2nm,0.7s							
FITZ	**Fitzroy Crossi**	**48.00**	**280**	P		**P**	**14 05 17.7**	**+0.7**
	comp=Z,3.9nm,0.5s,baz=171,slow=6.4,SNR=22							
FITZ				PcP		**PcP**	**14 06 40.9**	**-0.7**
	comp=Z,2.4nm,0.7s,baz=152,slow=7.0,SNR=3.9							
	comp=Z,3.9nm,0.5s							
MEEK	**Meekatharra**	**49.06**	**266**	P		**P**	**14 05 25.3**	**+0.3**
MORW	**Morawa**	**49.95**	**262**	P		**P**	**14 05 32.5**	**+0.8**
MBWA	**Marble Bar**	**50.94**	**273**	P		**P**	**14 05 39.3**	**+0.1**
QSPA	**South Pole Qui**	**52.02**	**180**	P		**P**	**14 05 49.9**	**+3.1**
	comp=Z,10nm,0.5s,baz=319,slow=0.2,SNR=104							
	comp=Z,10nm,0.5s							
QSPA	**South Pole Qui**	**52.02**	**180**	P		**P**	**14 05 50.2**	**+3.4**
QSPA				IAmb		IAmb	14 05 51.4	
	comp=Z,12nm,0.6s							
BELA	**Belgrano 2**	**62.80**	**173**	P		**P**	**14 07 01.5**	**-0.1**
TOLI2	**Tolitoli**	**63.97**	**294**	P		**P**	**14 07 11.9**	**+1.8**
TROLL	**Troll, Antarti**	**70.09**	**182**	P		**P**	**14 07 49.3**	**+1.4**
SNAA	**Sanae**	**70.53**	**180**	⇑P		**P**	**14 07 52.0**	**+1.6**
	comp=Z,60nm,0.4s							
SNAA	**Sanae**	**70.53**	**180**	P		**P**	**14 07 51.9**	**+1.5**
	comp=Z,3.3nm,0.5s,baz=201,slow=9.2,SNR=5.9							
	comp=Z,3.3nm,0.5s							
SNAA	**Sanae**	**70.53**	**180**	IAmb		IAmb	14 07 52.6	
	comp=Z,6.4nm,1.0s							
KKM	**Kota Kinabalu**	**70.65**	**294**	P		**P**	**14 07 52.8**	**+0.7**
KKM	**Kota Kinabalu**	**70.65**	**294**	P		**P**	**14 07 52.1**	**0.0**
KKM				IAmb		IAmb	14 07 53.5	
	comp=Z,28nm,1.4s							
VNA3	**Neumayer Olymp**	**70.89**	**178**	⇑P		**P**	**14 07 53.9**	**+1.3**
	comp=Z,5.3nm,0.5s							
SBUM	**Sibu**	**71.16**	**289**	P		**P**	**14 07 55.3**	**+0.3**
VNA2	**Neumayer--Watz**	**71.25**	**179**	⇑P		**P**	**14 07 56.3**	**+1.5**
	comp=Z,28nm,0.6s,baz=168,slow=5.9							
VNA1	**Neumayer--Stat**	**71.51**	**179**	⇑P		**P**	**14 07 57.9**	**+1.6**
	comp=Z,2.9nm,0.4s							
PLCA	**Paso Flores**	**80.78**	**135**	P		**P**	**14 08 51.3**	**+2.1**
	comp=Z,3.8nm,0.7s,baz=243,slow=4.6,SNR=19							
	comp=Z,3.8nm,0.7s							
MJAR	**Matsushiro Arr**	**82.06**	**330**	P		**P**	**14 08 55.4**	**-0.2**
	comp=Z,3.9nm,0.8s,baz=171,slow=4.5,SNR=11							
	comp=Z,3.9nm,0.8s							
MJAR	**Matsushiro Arr**	**82.06**	**330**	P		**P**	**14 08 55.3**	**-0.2**
MJAR				IAmb		IAmb	14 08 56.4	
	comp=Z,4.1nm,0.9s							
KSRS	**Korea Array**	**87.25**	**324**	P		**P**	**14 09 22.8**	**+1.4**
	comp=Z,12nm,0.6s,baz=143,slow=5.5,SNR=62							
	comp=Z,12nm,0.6s							
KSAR	**Wonju Array Be**	**87.26**	**324**	P		**P**	**14 09 21.6**	**+0.2**
KS19	**Wonju Array Si**	**87.32**	**324**	P		**P**	**14 09 22.0**	**+0.2**
NJ2	**Nanjing**	**87.73**	**314**	*eP*		**P**	**14 09 25.4**	**+1.6**
NJ2				pmax		pmax		
	comp=Z,9.0nm,0.6s							
CMAR	**Chiang Mai Arr**	**91.42**	**292**	P		**P**	**14 09 42.3**	**+0.9**
	comp=Z,2.3nm,0.5s,baz=145,slow=3.6,SNR=17							
	comp=Z,2.3nm,0.5s							
CMAR	**Chiang Mai Arr**	**91.42**	**292**	P		**P**	**14 09 42.5**	**+1.1**
PZH	**PanZhiHua**	**94.60**	**300**	P		**P**	**14 09 58.0**	**+2.0**
HHC	**Hu-ho-hao-te**	**98.14**	**316**	*eP*		Pdif	14 10 12.0	+0.3
LZH	**Lanzhou**	**99.43**	**309**	*eP*		**Pdif**	**14 10 12.7**	**-4.9**
LZH				pmax		pmax		
	comp=Z,9.0nm,1.1s							
WMQ	**Urumqi**	**113.98**	**308**	PKP		**PKiKP**	**14 15 11.2**	**-1.4**
WMQ				PP		**PP**	**14 16 06.1**	**-4.5**
WMQ				LR		LR		
	comp=Z,120nm,24.3s							
MKAR	**Makanchi Array**	**118.75**	**309**	PKP		**PKPdf**	**14 15 19.6**	**-2.0**
	comp=Z,0.4nm,0.5s,baz=183,slow=0.9,SNR=9.8							
MKAR				PKKPbc		**PKKPab**	**14 25 39.0**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=342,slow=2.9,SNR=6.8							
ZALV	**Zalesovo Beam**	**120.31**	**317**	PKP		**PKPdf**	**14 15 21.6**	**-2.7**
	comp=Z,0.5nm,0.6s,baz=127,slow=0.7,SNR=2.1							
KURK	**Kurchatov**	**122.56**	**312**			**PKPdf**	**14 15 26.7**	**-2.0**
KURBB	**Kurchatov Arra**	**122.58**	**311**	PKP		**PKPdf**	**14 15 26.7**	**-2.0**
	comp=Z,0.9nm,0.5s,baz=117,slow=1.7,SNR=15							
BVAR	**Borovoye Array**	**128.13**	**312**	PKP		**PKPdf**	**14 15 38.0**	**-1.3**
	comp=Z,0.9nm,0.6s,baz=187,slow=2.3,SNR=2.0							
SPITS	**Spitsbergen Ar**	**138.91**	**354**	PKhKP		PKPpre	14 15 49.0	
	comp=Z,25nm,1.2s,baz=95,slow=1.7,SNR=1.7							
KBZ	**Khabaz**	**144.45**	**294**	PKP		**PKPab**	**14 16 08.2**	**-0.4**
	comp=Z,5.7nm,0.8s,baz=138,slow=4.3,SNR=13							
ARCES	**ARCESS Array B**	**144.74**	**343**	PKP		PKPbc	14 16 08.5	-0.5
	comp=Z,1.4nm,0.5s,baz=50,slow=3.6,SNR=7.5							
MMAI	**Mount Meron Ar**	**147.66**	**273**	PKPbc		**PKPbc**	**14 16 19.1**	**+0.4**
	comp=Z,2.1nm,0.4s,baz=70,slow=8.1,SNR=6.1							
DBIC	**Dimbokro**	**148.70**	**178**	PKPbc		**PKPbc**	**14 16 21.1**	**-0.6**
	comp=Z,6.6nm,0.7s,baz=176,slow=2.9,SNR=11							
FINES	**FINESS Array B**	**150.08**	**331**	PKPbc		**PKPbc**	**14 16 22.4**	**-1.3**
	comp=Z,6.1nm,0.9s,baz=27,slow=3.1,SNR=19							
FINES				PKPab		**PKPab**	**14 16 29.2**	**-1.2**
	comp=Z,3.8nm,0.7s,baz=68,slow=5.0,SNR=11							
BRTR	**Keskin Array B**	**150.75**	**285**	PKPbc		**PKPbc**	**14 16 25.0**	**-1.2**
	comp=Z,2.8nm,0.8s,baz=147,slow=5.1,SNR=16							
BRTR				PKPab		**PKPab**	**14 16 33.5**	**-0.6**
	comp=Z,2.0nm,0.6s,baz=131,slow=3.8,SNR=7.6							
BRTR	**Keskin Array B**	**150.75**	**285**			**PKPbc**	**14 16 25.0**	**-1.2**
AKASG	**Malin Array Be**	**153.33**	**309**	PKPbc		**PKPbc**	**14 16 29.7**	**-1.7**
	comp=Z,1.0nm,0.5s,baz=66,slow=1.8,SNR=2.3							
AKASG				PKPab		**PKPab**	**14 16 43.5**	**-0.9**
	comp=Z,3.9nm,0.7s,baz=63,slow=4.6,SNR=8.5							
TORD	**Torodi Ar. Bea**	**154.62**	**193**	PKP		**PKPdf**	**14 16 28.7**	**+2.1**
	comp=Z,0.2nm,0.4s,baz=146,slow=3.2,SNR=5.7							
TORD				PKPab		**PKPab**	**14 16 50.2**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=188,slow=5.1,SNR=6.5							
HFS	**Hagfors**	**155.24**	**339**	PKPab		**PKPab**	**14 16 51.4**	**-0.8**
	comp=Z,3.4nm,0.9s,baz=321,slow=1.8,SNR=5.0							

*IDC **08** 14:09:07.5±4.4, 30.°04S×178.°55W, h0km, mb4.5/3, mbtmp4.5/3, Error ellipse: s-maj=186.8km s-min=66.4km az=160.0*
*NEIC **08** 14:10:00.8±0.7, 30.°4S±0.°3×179.°8E±0.°3, h430km±19km, mb4.2/17, Error ellipse: s-maj=47.1km s-min=22.3km az=148.0*

ISC 08 14:10:00.2±1.4, 30.°3S±0.°3×179.°4E±0.°2, h400km, n23, σ0990/22, mb4.1/12, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.58**	**66**	P	**Pn**	**14 11 01.0**	**+0.9**
SANVU	**Saraoutou**	**18.56**	**320**	P	**P**	**14 13 51.4**	**+0.6**
CTAO	**Charters Tower**	**31.56**	**281**	P	**P**	**14 15 48.6**	**+1.0**
CTAO				IAmb	IAmb	14 16 02.4	
	comp=Z,11nm,1.4s						
STKA	**Stephens Creek**	**32.29**	**257**	P	**P**	**14 15 54.7**	**+0.9**
	comp=Z,3.5nm,0.7s,baz=95,slow=8.1,SNR=5.7						
	comp=Z,3.5nm,0.7s						
STKA	**Stephens Creek**	**32.29**	**257**	P	**P**	**14 15 55.2**	**+1.4**
INKA	**Innaminka**	**33.77**	**265**	P	**P**	**14 16 07.8**	**+1.3**
BBOO	**Buckleboo**	**36.81**	**255**	P	**P**	**14 16 32.2**	**+0.2**
BBOO				IAmb	IAmb	14 16 40.3	
	comp=Z,14nm,1.1s						
COEN	**Coen**	**37.09**	**288**	P	**P**	**14 16 35.6**	**+1.1**
COEN				IAmb	IAmb	14 16 44.6	
	comp=Z,10nm,1.4s						
AS31	**Alice Springs**	**40.85**	**268**	P	**P**	**14 17 05.2**	**0.0**
ASAR	**Alice Springs**	**40.85**	**268**	P	**P**	**14 17 05.4**	**+0.1**
	comp=Z,1.6nm,0.4s,baz=106,slow=7.3,SNR=47						
	comp=Z,1.6nm,0.4s						
ASAR	**Alice Springs**	**40.85**	**268**	P	**P**	**14 17 05.0**	**-0.2**
WR8	**Warramunga Arr**	**41.69**	**274**	P	**P**	**14 17 12.4**	**+0.4**
WR8				IAmb	IAmb	14 17 13.4	
	comp=Z,3.8nm,0.7s						
WRAB	**Tennant Creek**	**41.83**	**274**	P	**P**	**14 17 13.4**	**+0.3**
WRAB				IAmb	IAmb	14 17 13.7	
	comp=Z,4.8nm,0.5s						
WRA	**Warramunga Arr**	**41.84**	**274**	P	**P**	**14 17 13.5**	**+0.3**
	comp=Z,5.3nm,0.4s,baz=112,slow=8.1,SNR=127						
	comp=Z,5.3nm,0.4s						
WRA	**Warramunga Arr**	**41.84**	**274**	P	**P**	**14 17 13.5**	**+0.3**
WB0	**Warramunga Arr**	**41.86**	**274**	P	**P**	**14 17 13.7**	**+0.4**
WB0				IAmb	IAmb	14 17 14.3	
	comp=Z,7.9nm,0.5s						
FORT	**Forrest**	**43.87**	**256**	P	**P**	**14 17 28.5**	**-0.6**
FORT				IAmb	IAmb	14 18 05.3	
	comp=Z,15nm,1.0s						
MTN	**Manton Dam**	**47.74**	**281**	P	**P**	**14 17 59.0**	**-0.1**
MTN				IAmb	IAmb	14 17 59.5	
	comp=Z,20nm,1.4s						
KNRA	**Kununurra**	**48.45**	**276**	P	**P**	**14 18 04.8**	**+0.4**
KNRA				IAmb	IAmb	14 18 41.8	
	comp=Z,12nm,1.3s						
SBUM	**Sibu**	**71.71**	**284**	P	**P**	**14 20 38.6**	**-1.8**
JHJ2	**Mitsune**	**73.37**	**326**	P	**P**	**14 20 48.5**	**-1.1**
MNAI	**Manna**	**76.10**	**273**	P	**P**	**14 21 04.4**	**-1.2**
FINES	**FINESS Array B**	**144.28**	**338**	PKP	PKPbc	14 28 44.9	-2.9
	comp=Z,1.4nm,0.5s,baz=50,slow=2.2,SNR=8.6						

*IDC **08** 14:10:20.1±1.0, 33.°90S×178.°72W, h0km, mb4.1/4, mbtmp4.2/5, ML4.1/1, Error ellipse: s-maj=35.5km s-min=27.0km az=134.0*
*NEIC **08** 14:10:22.1±1.8, 34.°02S±0.°09×178.°6W±0.°2, h10km±1km, mb4.5/14, Error ellipse: s-maj=24.9km s-min=12.6km az=113.0*
*WEL **08** 14:10:22.7±1.2, 34.°S±8.°×17.°8W±1.°3, h33km, M4.2/17, mB4.8/9, ML4.2/17, MLv4.5/17, Mw(mB)4.0/9, Error ellipse: s-maj=18.5km s-min=8.8km az=113.0, confirmed*

ISC 08 14:10:25.2±0.8, 34.°00S±0.°07×178.°5W±0.°1, h37km, n69, σ1912/76, mb4.3/11, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.39**	**215**	Pn	**Pn**	**14 11 28.1**	**-1.1**
MXZ	**Matakaoa Point**	**4.39**	**215**	P	**Pn**	**14 11 28.5**	**-0.7**
MXZ				S	**Sn**	**14 12 18.1**	**-0.9**
WMGZ	**Waiomatatini S**	**4.55**	**212**	P	**Pn**	**14 11 31.3**	**-0.1**
WMGZ				S	**Sn**	**14 12 25.4**	**+2.5**
PKGZ	**Pakihiroa**	**4.74**	**214**	P	**Pn**	**14 11 33.0**	**-1.1**
PKGZ				S	**Sn**	**14 12 27.9**	**+0.2**
RAO	**Raoul Island**	**4.76**	**7**	Pn	**Pn**	**14 11 34.9**	**+0.6**
HAZ	**Te Kaha**	**4.80**	**217**	P	**Pn**	**14 11 34.3**	**-0.5**
HAZ				S	**Sn**	**14 12 31.9**	**+2.8**
PUZ	**Puketiti**	**4.83**	**212**	P	**Pn**	**14 11 33.3**	**-1.9**
PUZ				S	**Sn**	**14 12 30.5**	**+0.6**
RUGZ	**Raukumara Rang**	**5.01**	**217**	P	**Pn**	**14 11 36.7**	**-1.2**
RUGZ				S	**Sn**	**14 12 36.2**	**+1.6**
TWGZ	**Tauwhareparae**	**5.04**	**213**	P	**Pn**	**14 11 36.7**	**-1.5**
TWGZ				S	**Sn**	**14 12 36.0**	**+0.9**
CNGZ	**Carnagh Statio**	**5.19**	**209**	P	**Pn**	**14 11 40.7**	**+0.4**
TKGZ	**Te Karaka**	**5.31**	**212**	P	**Pn**	**14 11 41.3**	**-0.6**
MWZ	**Matawai**	**5.37**	**215**	P	**Pn**	**14 11 40.5**	**-2.3**
GRZ	**Great Barrier**	**5.41**	**244**	P	**Pn**	**14 11 43.2**	**-0.1**
URZ	**Urewera**	**5.52**	**218**	Pn	**Pn**	**14 11 43.0**	**-1.8**
	5.7nm,0.3s,baz=78,slow=11,SNR=50						
URZ				Sn	**Sn**	**14 12 46.5**	**-0.5**
	8.0nm,0.3s,baz=129,slow=20,SNR=9.3						
	23nm,0.5s						
URZ	**Urewera**	**5.52**	**218**	P	**Pn**	**14 11 43.9**	**-0.9**
OPRZ	**Ohinepanea**	**5.53**	**225**	P	**Pn**	**14 11 45.5**	**+0.6**
RAGZ	**Rawiri**	**5.55**	**215**	P	**Pn**	**14 11 45.2**	**-0.1**
MARZ	**Manawahe**	**5.56**	**223**	P	**Pn**	**14 11 46.1**	**+0.8**
RIGZ	**Rimuhau**	**5.57**	**211**	P	**Pn**	**14 11 44.2**	**-1.2**
SNGZ	**Shannon Statio**	**5.82**	**214**	P	**Pn**	**14 11 47.9**	**-1.0**
RTZ	**Ruatahuna**	**5.86**	**217**		**Pn**	**14 11 48.1**	**-1.4**
RTZ	**Ruatahuna**	**5.86**	**217**	P	**Pn**	**14 11 49.9**	**+0.4**
MUGZ	**Murupara**	**5.86**	**219**	P	**Pn**	**14 11 48.5**	**-1.0**
KNZ	**Kokohu**	**5.87**	**210**	P	**Pn**	**14 11 47.1**	**-2.5**
MHGZ	**Mahia Peninsul**	**5.89**	**208**	P	**Pn**	**14 11 49.5**	**-0.3**
KMRZ	**Kaimai**	**5.90**	**228**	P	**Pn**	**14 11 50.8**	**+0.8**
RAHZ	**Arahi**	**6.04**	**214**	P	**Pn**	**14 11 51.8**	**-0.2**
PRRZ	**Plateau Road**	**6.08**	**221**	P	**Pn**	**14 11 53.3**	**+0.8**
TOZ	**Tahuroa Road**	**6.11**	**231**		**Pn**	**14 11 52.1**	**-0.7**
TOZ	**Tahuroa Road**	**6.11**	**231**	P	**Pn**	**14 11 54.0**	**+1.2**
WHHZ	**Waihua**	**6.11**	**213**	P	**Pn**	**14 11 52.6**	**-0.2**
MTHZ	**Maungataniwha**	**6.11**	**216**	P	**Pn**	**14 11 52.5**	**-0.5**
WCZ	**Waipu Caves**	**6.16**	**250**	P	**Pn**	**14 11 51.5**	**-2.0**
NMHZ	**Naumai**	**6.32**	**215**	P	**Pn**	**14 11 56.2**	**+0.3**
ARHZ	**Arapoaanui**	**6.37**	**213**	P	**Pn**	**14 11 55.9**	**-0.4**
BKZ	**Black Stump Fm**	**6.53**	**216**		**Pn**	**14 11 57.1**	**-1.6**
BKZ	**Black Stump Fm**	**6.53**	**216**	P	**Pn**	**14 11 57.0**	**-1.6**
OUZ	**Omahuta**	**6.60**	**257**	P	**Pn**	**14 12 01.1**	**+1.5**
KWHZ	**Kaweka Forest**	**6.76**	**215**	P	**Pn**	**14 12 01.9**	**0.0**
HIZ	**Hauiti**	**6.99**	**228**	Pn	**Pn**	**14 12 04.8**	**-0.1**
HIZ	**Hauiti**	**6.99**	**228**	P	**Pn**	**14 12 05.0**	**+0.1**
TOO	**Toolangi**	**29.29**	**253**	P	**P**	**14 16 23.4**	**-0.6**
TOO				IAmb	IAmb	14 16 43.8	
	comp=Z,5.4nm,1.4s						
STKA	**Stephens Creek**	**33.38**	**262**	P	**P**	**14 17 00.7**	**+0.7**
	comp=Z,1.3nm,0.7s,baz=90,slow=11,SNR=2.8						
	comp=Z,1.3nm,0.7s						
STKA	**Stephens Creek**	**33.38**	**262**	P	**P**	**14 17 00.2**	**+0.1**
CTAO	**Charters Tower**	**34.10**	**285**	P	**P**	**14 17 05.6**	**-0.8**
CTAO				IAmb	IAmb	14 17 20.0	
	comp=Z,13nm,1.4s						
INKA	**Innaminka**	**35.33**	**269**	P	**P**	**14 17 16.8**	**-0.2**
INKA				IAmb	IAmb	14 17 31.4	
	comp=Z,5.5nm,1.4s						
COEN	**Coen**	**39.96**	**291**	P	**P**	**14 17 55.9**	**-0.3**
COEN				IAmb	IAmb	14 18 24.7	
	comp=Z,7.0nm,1.1s						
RABL	**Rabaul**	**40.27**	**311**	P	**P**	**14 17 58.5**	**-0.3**
RABL				IAmb	IAmb	14 18 26.0	
	comp=Z,28nm,0.7s						
AS31	**Alice Springs**	**42.59**	**271**		**P**	**14 18 16.1**	**-1.7**
ASAR	**Alice Springs**	**42.59**	**271**	P	**P**	**14 18 16.6**	**-1.3**
	comp=Z,4.3nm,0.7s,baz=111,slow=7.3,SNR=30						
	comp=Z,4.3nm,0.7s						
ASAR	**Alice Springs**	**42.59**	**271**	P	**P**	**14 18 15.9**	**-1.9**
WR8	**Warramunga Arr**	**43.76**	**276**	P	**P**	**14 18 25.9**	**-1.4**
WRA	**Warramunga Arr**	**43.90**	**276**	P	**P**	**14 18 26.8**	**-1.6**
	comp=Z,3.4nm,0.6s,baz=121,slow=7.6,SNR=21						
	comp=Z,3.4nm,0.6s						
WRA	**Warramunga Arr**	**43.90**	**276**	IAmb	IAmb	14 18 27.3	
	comp=Z,0.3nm,0.8s						
WB0	**Warramunga Arr**	**43.94**	**276**	P	**P**	**14 18 27.3**	**-1.4**
WB0				IAmb	IAmb	14 18 27.9	
	comp=Z,5.7nm,0.8s						
KNRA	**Kununurra**	**50.62**	**278**	P	**P**	**14 19 19.6**	**-1.2**
KNRA				IAmb	IAmb	14 19 38.2	
	comp=Z,8.2nm,1.0s						
QSPA	**South Pole Qui**	**56.12**	**180**	P	**P**	**14 20 02.1**	**+1.4**
	comp=Z,1.0nm,0.7s,baz=331,slow=6.6,SNR=3.3						
	comp=Z,1.0nm,0.7s						
QSPA	**South Pole Qui**	**56.12**	**180**	P	**P**	**14 20 02.1**	**+1.4**
QSPA				IAmb	IAmb	14 20 26.5	
	comp=Z,8.4nm,1.4s						
SHEM	**Shemya Is, Ala**	**86.60**	**356**	P	**P**	**14 23 04.9**	**+0.9**
SMY	**Shemya**	**86.60**	**356**	P	**P**	**14 23 04.9**	**+0.9**
MKAR	**Makanchi Array**	**119.69**	**309**	PKP	**PKPdf**	**14 29 10.7**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=80,slow=2.2,SNR=2.2						
ZALV	**Zalesovo Beam**	**120.38**	**317**	PKP	**PKPdf**	**14 29 11.8**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=122,slow=7.0,SNR=1.8						
KURK	**Kurchatov**	**123.16**	**312**		**PKPdf**	**14 29 16.8**	**-0.6**
KURBB	**Kurchatov Arra**	**123.19**	**312**	PKP	**PKPdf**	**14 29 16.8**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=114,slow=1.8,SNR=8.2						
BVAR	**Borovoye Array**	**128.61**	**314**	PKP	**PKiKP**	**14 29 28.5**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=52,slow=2.4,SNR=2.6						
FINES	**FINESS Array B**	**148.32**	**338**	PKPbc	**PKPbc**	**14 30 06.8**	**+0.2**
	comp=Z,5.6nm,0.8s,baz=354,slow=1.9,SNR=9.8						
HFS	**Hagfors**	**152.65**	**347**	PKPbc	**PKiKP**	**14 30 17.6**	**+0.4**
	comp=Z,1.4nm,0.7s,baz=52,slow=17,SNR=1.3						
BRTR	**Keskin Array B**	**153.72**	**292**	PKPbc	**PKiKP**	**14 30 20.9**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=27,slow=9.7,SNR=2.3						
AKASG	**Malin Array Be**	**153.77**	**318**	PKPbc	**PKiKP**	**14 30 20.1**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=65,slow=2.2,SNR=4.0						

*OSPL **08** 14:11:28.8±1.9, 18.°66N×69.°22W, h95km±15km, ML3.6, Presumed earthquake*
*SDD **08** 14:11:32.1±2.6, 18.°76N×69.°45W, h89km±8km, MD3.7, ML3.8, MW3.9, Presumed earthquake*

ISC 08 14:11:28.9±1.3, 18.75N±0.°05×69.46W±0.°03, h105km±7km, n36, σ221/58, 32C-3D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATOM	**Hato Mayor del**	**0.09**	**64**	⇑*e*Pg	**Pn**	**14 11 42.9**	**-0.6**
HATOM				⇑*e*Sg	**Sn**	**14 11 52.3**	**-2.2**
HATOM				IAML		14 11 53.1	
	comp=N,5μm,0.2s						
SPM1	**San Pedro UASD**	**0.34**	**154**	⇑*e*Pg	**Sn**	**14 11 55.0**	**-0.8**
SPM1				IAML		14 11 55.8	
	comp=N,2μm,0.3s						
SDD	**Santo Domingo**	**0.52**	**236**	⇑*e*Pg	**Pn**	**14 11 45.1**	**-0.2**
SDD				⇑*e*Sg	**Sn**	**14 11 56.1**	**-1.5**
SDD				IAML		14 11 57.2	
	comp=N,1μm,0.2s						
SDD	**Santo Domingo**	**0.52**	**236**	*i* P	**Pn**	**14 11 45.1**	**-0.2**
SDD				*e*S	**Sn**	**14 11 56.1**	**-1.5**
DR08	**Loma La Naviza**	**0.57**	**292**	⇑*e*Pg	**Pn**	**14 11 45.7**	**-0.1**
DR08				⇑*e*Sg	**Sn**	**14 11 57.2**	**-1.3**
DR08				IAML		14 11 58.0	
	comp=N,73μm,0.2s						
SMDR	**Samana, DR**	**0.60**	**

12nm,0.7s,baz=71,slow=18,SNR=7.8
OUZ Omahuta 17.77 208 P Pn 14 16 01.0 +0.4
WCZ Waipu Caves 18.07 205 P Pn 14 16 04.7 +4.5
WMGZ Waiomatatini S 18.57 193 P S 14 16 07.5 +2.0
WMGZ S S 14 19 18.4 -2.7
HAZ Te Kaha 18.65 195 P S 14 16 07.2 +0.9
HAZ S S 14 19 27.3 +4.7
PKGZ Pakihiroa 18.69 194 P S 14 16 07.8 +1.1
PKGZ S S 14 19 20.6 -2.8
PUZ Puketiti 18.84 193 P S 14 16 09.3 +0.8
PUZ S S 14 19 22.1 -4.4
RUGZ Raukumara Rang 18.87 195 P S 14 16 09.5 +0.6
RUGZ S S 14 19 29.6 +2.3
TWGZ Tauwhareparae 19.00 194 P S 14 16 11.6 +1.3
TWGZ S S 14 19 31.6 +2.0
MWZ Matawai 19.26 195 P S 14 16 12.0 -1.0
MWZ S S 14 19 37.6 +3.0
TOZ Tahuroa Road 19.26 200 P S 14 16 12.2 -0.7
TOZ IAmb IAmb 14 16 26.5
comp=Z,24nm,1.4s
TKGZ Te Karaka 19.29 194 P S 14 16 13.7 +0.6
URZ Urewera 19.29 196 P S 14 16 12.2 -1.1
comp=Z,13nm,0.4s,baz=14,slow=4.9,SNR=19
URZ S S 14 19 31.3 -3.7
comp=Z,2.4nm,0.7s,baz=32,slow=23,SNR=1.2
URZ Urewera 19.29 196 P S 14 16 12.1 -1.1
MUGZ Murupara 19.58 196 P S 14 16 15.2 -1.2
RTZ Ruatahuna 19.66 196 P S 14 16 16.9 -0.4
SNGZ Shannon Statio 19.73 195 P S 14 16 19.1 +1.2
KNZ Kokohu 19.88 194 P S 14 16 19.8 +0.3
KNZ S S 14 19 43.5 -2.3
HIZ Hauiti 20.18 200 P S 14 16 25.6 +3.1
TCW Tory Channel 22.83 198 P S 14 16 46.1 -1.2
NNZ Nelson 23.11 200 P S 14 16 50.0 +0.2
KHZ Kahutara 24.15 198 P S 14 16 59.4 +0.1
RPZ Rata Peaks 26.11 201 P S 14 17 17.9 +1.0
comp=Z,9.7nm,0.8s,baz=23,slow=13,SNR=5.8
comp=Z,9.7nm,0.8s
LBZ Lake Benmore 27.00 201 P S 14 17 24.5 -0.2
EIDS Eidsvold 30.49 253 P S 14 17 55.6 -0.2
EIDS IAmb IAmb 14 18 27.4
comp=Z,26nm,1.4s
ARMA Armidale 30.74 243 P S 14 17 57.9 -0.2
ARMA IAmb IAmb 14 18 16.8
comp=Z,29nm,1.5s
CTAO Charters Tower 35.06 263 P S 14 18 34.7 -0.6
PMG Port Moresby 36.65 281 P S 14 18 48.0 -0.8
COEN Coen 39.04 272 P S 14 19 07.9 -0.7
COEN IAmb IAmb 14 19 08.7
comp=Z,12nm,0.8s
STKA Stephens Creek 39.46 244 P S 14 19 11.2 -0.8
comp=Z,2.2nm,0.8s,baz=83,slow=12,SNR=8.8
comp=Z,2.2nm,0.8s
STKA Stephens Creek 39.46 244 P S 14 19 11.6 -0.3
STKA IAmb IAmb 14 19 33.3
comp=Z,35nm,1.2s
MANU Manus Island 39.53 292 P S 14 19 12.2 -0.5
INKA Innaminka 39.86 250 P S 14 19 14.7 -0.5
BBOO Buckleboo 44.22 243 P S 14 19 49.3 -0.9
BBOO IAmb IAmb 14 19 58.0
comp=Z,28nm,1.3s
JAY Jayapura 45.24 287 P S 14 19 58.1 -0.3
comp=Z,14nm,0.5s,baz=126,slow=8.7,SNR=2.8
comp=Z,14nm,0.5s
WR8 Warramunga Arr 46.04 261 P S 14 20 02.7 -1.8
AS31 Alice Springs 46.15 256 P S 14 20 04.0 -1.5
ASAR Alice Springs 46.15 256 P S 14 20 04.3 -1.1
comp=Z,9.6nm,0.5s,baz=92,slow=8.5,SNR=104
ASAR PcP PcP 14 21 34.5 -1.5
comp=Z,0.9nm,0.4s,baz=100,slow=3.4,SNR=4.9
comp=Z,9.6nm,0.5s
ASAR Alice Springs 46.15 256 P S 14 20 03.6 -1.8
WB0 Warramunga Arr 46.17 261 P S 14 20 03.6 -1.9
WB0 IAmb IAmb 14 20 04.7
comp=Z,9.7nm,0.5s
WRAB Tennant Creek 46.18 261 P S 14 20 03.8 -1.9
WRAB IAmb IAmb 14 20 04.5
comp=Z,6.7nm,0.5s
WRA Warramunga Arr 46.19 261 P S 14 20 03.9 -1.9
comp=Z,4.8nm,0.3s,baz=93,slow=5.7,SNR=95
WRA PcP PcP 14 21 34.9 -1.2
comp=Z,0.3nm,0.4s,baz=101,slow=2.9,SNR=1.5
comp=Z,4.8nm,0.3s
MTN Manton Dam 50.66 269 P S 14 20 37.8 -1.9
MTN IAmb IAmb 14 21 08.9
comp=Z,22nm,1.2s
KNRA Kununurra 52.21 265 P S 14 20 49.8 -1.2
KNRA IAmb IAmb 14 20 51.5
comp=Z,8.3nm,0.7s
FAKI Fak Fak 52.80 282 P S 14 20 54.4 -1.0
SIJI Sorong 54.50 284 P S 14 21 07.0 -0.7
comp=Z,16nm,0.5s,baz=143,slow=5.8,SNR=27
comp=Z,16nm,0.5s
FITZ Fitzroy Crossi 54.61 261 P S 14 21 07.4 -1.0
comp=Z,4.5nm,0.7s,baz=97,slow=5.4,SNR=5.4
comp=Z,4.5nm,0.7s
SOEI Soe 57.98 271 P S 14 21 31.6 -0.6
PSA00 Pilbara Seismi 59.30 256 P S 14 21 39.4 -1.7
PSA00 IAmb IAmb 14 21 40.1
comp=Z,6.7nm,0.8s
MBWA Marble Bar 59.48 257 P S 14 21 40.6 -1.7
MBWA IAmb IAmb 14 22 06.6
comp=Z,12nm,1.2s
JCJ Chichijima 61.47 318 P S 14 21 55.2 -0.2
QSPA South Pole Qui 70.32 180 P S 14 22 50.4 -0.8
comp=Z,1.9nm,0.8s,baz=61,slow=1.8,SNR=3.6
comp=Z,1.9nm,0.8s
QSPA South Pole Qui 70.32 180 P S 14 22 50.7 -0.5
QSPA IAmb IAmb 14 23 14.1
comp=Z,5.7nm,1.4s
MJAR Matsushiro Arr 70.50 323 P S 14 22 50.9 -1.6
comp=Z,0.9nm,0.5s,baz=163,slow=6.0,SNR=7.5
comp=Z,0.9nm,0.5s
MJAR Matsushiro Arr 70.50 323 P S 14 22 50.7 -1.8
MJAR IAmb IAmb 14 22 57.1
comp=Z,6.5nm,1.4s
KKM Kota Kinabalu 71.02 284 P S 14 22 55.5 -0.7
KKM IAmb IAmb 14 22 55.8
comp=Z,5.8nm,0.6s
JKA Kamikawa-asahi 73.79 331 P S 14 23 11.9 +0.2
PETK Petropavlovsk- 75.94 344 P S 14 23 22.1 -1.6
comp=Z,2.2nm,0.6s,baz=120,slow=8.7,SNR=11
comp=Z,2.2nm,0.6s
PETK Petropavlovsk- 75.94 344 P S 14 23 23.9 +0.2
NVAR Mina Array Bea 79.45 43 P S 14 23 45.2 +1.6
comp=Z,0.6nm,0.7s,baz=240,slow=4.2,SNR=3.7
comp=Z,0.6nm,0.7s
N14K Kuskokwak Cree 80.28 7 P S 14 23 48.0 +0.8
N14K IAmb IAmb 14 24 00.2
comp=Z,8.2nm,1.0s
M16K Timber Creek 81.70 8 P S 14 23 55.7 +1.0
M16K IAmb IAmb 14 24 02.2
comp=Z,9.9nm,1.5s
L18K Granite Mounta 83.18 9 P S 14 24 03.0 +0.7
L18K IAmb IAmb 14 24 04.2
comp=Z,3.6nm,0.9s
J16K Anvik River 83.68 7 P S 14 24 05.6 +0.8
J16K IAmb IAmb 14 24 06.3
comp=Z,2.5nm,0.7s
J18K Innoko River 84.36 9 P S 14 24 08.8 +0.6
N25K Chitina, Valde 84.97 15 P S 14 24 11.9 +0.5
N25K IAmb IAmb 14 24 12.5
comp=Z,4.8nm,0.9s
J19K Poorman 85.02 9 P S 14 24 11.9 +0.5
TXAR Lajitas Array 85.39 57 P S 14 24 15.6 +1.4
comp=Z,0.7nm,1.0s,baz=197,slow=3.9,SNR=4.3
comp=Z,0.7nm,1.0s
RND Reindeer 85.64 12 P S 14 24 15.0 +0.4
RND IAmb IAmb 14 24 15.3
comp=Z,4.2nm,1.0s
M27K Edge Creek, AK 86.28 15 P S 14 24 18.6 +0.8
I21K Tanana 86.70 10 P S 14 24 19.6 0.0
I21K IAmb IAmb 14 24 20.4
comp=Z,4.1nm,1.2s
IMAR Indian Mountai 87.17 9 P S 14 24 22.1 +0.2
ILAR Eielson Array 87.25 12 P S 14 24 22.0 -0.3
comp=Z,0.2nm,0.5s,baz=226,slow=5.5,SNR=8.9
comp=Z,0.2nm,0.5s
ILAR Eielson Array 87.25 12 P S 14 24 22.7 +0.5
PDAR Pinedale Array 87.39 43 P S 14 24 23.7 0.0
comp=Z,0.4nm,0.8s,baz=268,slow=8.4,SNR=2.3
comp=Z,0.4nm,0.8s
PDAR Pinedale Array 87.39 43 P S 14 24 23.3 -0.4
ELIB Princess Elisa 87.56 186 *dP* **P 14 24 22.9 -1.1**
BILL Bilibino 88.45 354 P S 14 24 28.1 +0.4

FYU Fort Yukon 89.17 12 P S 14 24 31.7 +0.6
FYU IAmb IAmb 14 24 32.8
comp=Z,5.5nm,1.3s
D20K Etivluk River 89.37 7 P S 14 24 32.4 +0.2
E24K Your Creek 89.92 10 P S 14 24 35.5 +0.7
D22K Ayikyak River 90.02 8 P S 14 24 35.8 +0.6
CMAR Chiang Mai Arr 91.28 289 P S 14 24 42.5 +0.4
comp=Z,1.5nm,0.9s,baz=131,slow=2.5,SNR=9.1
comp=Z,1.5nm,0.9s
CMAR Chiang Mai Arr 91.28 289 P S 14 24 42.6 +0.5
MKAR Makanchi Array 111.77 313 PKiKP **PKiKP 14 30 07.7 -1.4**
comp=Z,0.2nm,0.4s,baz=150,slow=1.4,SNR=9.6
KURBB Kurchatov Arra 114.50 317 PKiKP PKPdf 14 30 12.8 -1.3
comp=Z,0.1nm,0.3s,baz=96,slow=2.1,SNR=4.1
BVAR Borovoye Array 119.46 320 PKP PKPdf 14 30 22.5 -1.1
comp=Z,0.7nm,0.4s,baz=105,slow=1.4,SNR=6.1
ARCES ARCESS Array B 128.44 350 PKP PKPdf 14 30 40.2 -0.2
comp=Z,1.0nm,0.4s,baz=20,slow=1.4,SNR=13
FINES FINESS Array B 135.45 345 PKP PKPdf 14 30 54.2 +0.4
comp=Z,2.4nm,0.8s,baz=60,slow=3.4,SNR=1.7
NOA NORSAR Array B 138.39 354 PKP PKPdf 14 31 00.3 +1.0
comp=Z,0.3nm,0.6s,baz=14,slow=3.9,SNR=1.9
HFS Hagfors 139.01 352 PKhKP PKPpre 14 30 50.4
comp=Z,8.2nm,1.1s,baz=48,slow=2.2,SNR=6.0
AKASG Malin Array Be 143.05 333 PKhKP PKPpre 14 31 03.5
comp=Z,0.8nm,0.5s,baz=41,slow=4.1,SNR=4.7
AK04 Malin Array Si 143.06 333 PKP PKPab 14 31 02.9 -1.2
AK01 Malin Array Si 143.06 333 PKP PKPab 14 31 03.5 -0.6
AK21 Malin Array Si 143.08 333 PKP PKPab 14 31 03.0 -1.2
EKA Eskdalemuir Ar 144.10 7 PKP PKPab 14 31 07.0 -1.1
comp=Z,0.4nm,0.3s,baz=313,slow=3.2,SNR=6.1
LUBAR Lubar, Ukraine 144.26 333 PKP PKPab 14 31 07.3 -1.6
BAL3X Bal3x, Balta 144.86 329 PKP PKPbc 14 31 05.6 -5.5
BUR08 Bucovina Ar. S 147.09 333 PKPdf 14 31 17.4 +2.3
BRTR Keskin Array B 147.41 314 PKPbc **PKPdf 14 31 18.0 +2.0**
comp=Z,1.2nm,0.7s,baz=157,slow=3.3,SNR=5.2
OSTC Ostas 147.66 345 *e*PKP **PKPbc 14 31 19.5 +0.4**
STEB Steborice 147.82 343 *e*PKP **PKPdf 14 31 19.5 +3.4**
PVCC Panska Ves 148.07 347 *e*PKP **PKPbc 14 31 20.9 +0.8**
PRU Pruhonice 148.58 346 *e*PKP **PKPbc 14 31 21.8 +0.4**
MMAI Mount Meron Ar 148.72 301 PKPbc **PKPdf 14 31 22.0 +3.8**
comp=Z,1.1nm,0.4s,baz=54,slow=4.2,SNR=2.1
MMAI Mount Meron Ar 148.72 301 PKPdf 14 31 22.0 +3.8
JAVC Velka Javorina 148.82 342 *e*PKP **PKPbc 14 31 23.5 +1.4**
KRUC Moravsky 148.99 344 *e*PKP **PKPbc 14 31 22.7 +0.2**
ZVC Zvikov 149.18 346 *e*PKP **PKPbc 14 31 22.9 0.0**
KHC Kasperske Hory 149.60 347 *e*PKP **PKPbc 14 31 24.6 +0.6**
CKRC Cesky Krumlov 149.73 346 *e*PKP **PKPbc 14 31 24.8 +0.5**
GERES GERESS Array B 149.85 347 PKPbc **PKPbc 14 31 24.8 +0.1**
comp=Z,2.5nm,0.7s,baz=352,slow=2.0,SNR=17
WINA Alland / Wiene 149.95 343 *i* PKP **PKPbc 14 31 25.5 +0.7**
SNR=4.0
WINA Alland / Wiene 149.95 343 *eP* **PKPbc 14 31 25.5 +0.7**
SNR=4.0
CONA Conrad Observa 150.17 343 *i* PKP **PKPbc 14 31 25.9 +0.4**
comp=Z,4.8nm,0.6s,SNR=7.5
CONA Conrad Observa 150.17 343 *eP* **PKPbc 14 31 25.9 +0.4**
comp=Z,4.8nm,0.6s,SNR=7.5
RONA Rosalia, Austr 150.26 343 *i* PKP **PKPbc 14 31 26.0 +0.4**
comp=Z,7.2nm,0.5s
MOA Molln 150.65 345 *e*PKP **PKPbc 14 31 26.6 +0.1**
comp=Z,2.2nm,0.5s
ARSA Arzberg 150.88 343 *e*PKP **PKPbc 14 31 26.5 -0.6**
comp=Z,1.5nm,0.7s
BIOA Bad Ischl, Aus 150.95 346 *e*PKP **PKPbc 14 31 26.9 -0.3**
comp=Z,3.4nm,0.5s
LESA Schwarzleotal 151.41 347 *i* PKP **PKPbc 14 31 27.9 -0.5**
comp=Z,2.3nm,0.4s,SNR=4.9
SOKA Soboth 151.54 343 *i* PKP **PKPbc 14 31 27.9 -0.8**
comp=Z,3.7nm,0.8s
KBA Koelnbreinsper 151.59 346 *i* PKP **PKPbc 14 31 28.4 -0.5**
comp=Z,2.5nm,0.5s,SNR=7.2
KBA Koelnbreinspei 151.59 346 *eP* **PKPbc 14 31 28.4 -0.5**
comp=Z,2.5nm,0.5s,SNR=7.2
WATA Walderalm 151.72 348 *i* PKP **PKPbc 14 31 28.9 -0.2**
comp=Z,5.1nm,0.5s,SNR=5.4
WATA Walderalm 151.72 348 *eP* **PKPbc 14 31 28.9 -0.2**
comp=Z,5.1nm,0.5s,SNR=5.4
WTTA Wattenberg 151.77 348 *i* PKP **PKPbc 14 31 29.3 0.0**
comp=Z,9.1nm,0.5s,SNR=14
WTTA Wattenberg 151.77 348 *eP* **PKPbc 14 31 29.3 0.0**
comp=Z,9.1nm,0.5s,SNR=14
MOTA Moosalm 151.79 349 *i* PKP **PKPbc 14 31 29.0 -0.3**
comp=Z,5.3nm,0.8s
OBKA Obir 151.83 344 *e*PKP **PKPbc 14 31 30.3 +1.0**
comp=Z,13nm,1.5s
SQTA Sankt Quirin 151.90 349 *i* PKP **PKPbc 14 31 29.3 -0.2**
comp=Z,6.5nm,0.6s,SNR=5.0
MYKA Terra Mystica 151.94 345 *i* PKP **PKPbc 14 31 28.4 -1.2**
comp=Z,4.1nm,0.5s
ABTA Abfaltersbach 152.09 347 *i* PKP **PKPbc 14 31 29.2 -0.7**
comp=Z,8.0nm,0.5s,SNR=13
FETA Feichten 152.17 350 *i* PKP **PKPbc 14 31 30.2 +0.1**
comp=Z,8.1nm,1.1s,SNR=7.4
FUORN Ofenpass-Fuorn 152.64 350 PKPbc 14 31 31.1 -0.3
TORD Torodi Ar. Bea 173.19 164 PKPab **PKPab 14 33 15.1 +1.7**
comp=Z,0.6nm,1.1s,baz=211,slow=8.1,SNR=2.5

*NEIC **08** 14:16:45.5±0.9, 16°.5S±0°.1×173°.65W±0°.08, h102km±7km, mb4.4/16, Error ellipse: s-maj=17.6km s-min=10.8km az=198.0*
*IDC **08** 14:16:50.0±3.6, 16°.24S×173°.92W, h143km±34km, mb3.4/8, mbtmp3.9/10, MS2.8/3, Error ellipse: s-maj=33.0km s-min=18.4km az=156.0*
ISC 08 14:16:45.0±0.6, 16°.4S±0°.1×173°.65W±0°.09, h100km, n40, σ1s06/37, mb4.1/16, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
NIUE	**Niue**	**4.41**	**127**	Pn	**Pn**	**14 17 49.6**	**-0.1**
FUTU	**Fugatoga**	**4.81**	**295**	Pn	**Pn**	**14 17 55.8**	**+0.7**
MSVF	**Nonsavu**	**8.05**	**260**	P	**Pn**	**14 18 41.3**	**+2.1**
21nm,1.0s,baz=117,slow=15,SNR=7.7							
MSVF	**Nonsavu**	**8.05**	**260**	Pn	Pn	14 18 31.8	-7.4
RAR	**Rarotonga**	**13.96**	**112**	P	**P**	**14 20 03.9**	**+0.7**
6.9nm,0.4s,baz=288,slow=7.1,SNR=4.0							
RAR	**Rarotonga**	**13.96**	**112**	P	**P**	**14 20 01.7**	**-1.6**
DZM	**Mont Dzumac**	**19.61**	**250**	LR	LR	14 27 06.6	
comp=Z,38nm,21.5s,baz=32,slow=32							
URZ	**Urewera**	**23.21**	**199**	P	**P**	**14 21 45.9**	**+2.6**
1.6nm,0.4s,baz=83,slow=15,SNR=1.0							
1.6nm,0.4s							
MRZ	**Mangatainoka R**	**25.89**	**199**	P	**P**	**14 22 07.0**	**-0.5**
HNR	**Honiara**	**26.64**	**282**	LR	LR	14 30 56.6	
comp=Z,5.1nm,20.8s,baz=213,slow=32							
QRZ	**Quartz Range**	**27.09**	**203**	P	**P**	**14 22 17.9**	**-0.4**
WR8	**Warramunga Arr**	**49.23**	**258**	P	**P**	**14 25 22.7**	**-1.0**
WR8					IAmb IAmb	14 25 30.6	
comp=Z,13nm,1.5s							
WB0	**Warramunga Arr**	**49.35**	**258**	P	**P**	**14 25 23.6**	**-1.0**
WB0					IAmb IAmb	14 25 50.8	
comp=Z,12nm,1.4s							
WRA	**Warramunga Arr**	**49.39**	**258**	P	**P**	**14 25 24.1**	**-0.8**
comp=Z,0.2nm,0.3s,baz=96,slow=7.4,SNR=9.6							
comp=Z,0.2nm,0.3s							
AS31	**Alice Springs**	**49.57**	**253**	P	**P**	**14 25 25.6**	**-0.6**
ASAR	**Alice Springs**	**49.57**	**253**	P	**P**	**14 25 25.4**	**-0.8**
comp=Z,1.2nm,0.5s,baz=86,slow=8.7,SNR=13							
ASAR					LR LR	14 44 44.6	
comp=Z,25nm,20.2s,baz=162,slow=34							
comp=Z,1.2nm,0.5s							
ASAR	**Alice Springs**	**49.57**	**253**	P	**P**	**14 25 25.2**	**-1.0**
SOEI	**Soe**	**60.65**	**268**	P	**P**	**14 26 44.7**	**-1.5**
PETK	**Petropavlovsk-**	**73.54**	**342**	P	**P**	**14 28 05.8**	**-0.9**
comp=Z,2.0nm,0.8s,baz=163,slow=5.1,SNR=1.9							
comp=Z,2.0nm,0.8s							
NVAR	**Mina Array Bea**	**75.25**	**42**	P	**P**	**14 28 19.2**	**+1.9**
comp=Z,3.0nm,0.6s,baz=287,slow=2.6,SNR=2.2							
comp=Z,0.3nm,0.6s							
NVAR	**Mina Array Bea**	**75.25**	**42**	P	**P**	**14 28 18.3**	**+1.0**
M16K	**Timber Creek**	**78.08**	**7**	P	**P**	**14 28 33.1**	**+0.6**
M16K					IAmb IAmb	14 28 35.0	
comp=Z,13nm,1.4s							
K15K	**Wolf Creek Mou**	**79.05**	**6**	P	**P**	**14 28 38.6**	**+0.9**
K15K					IAmb IAmb	14 29 09.5	
comp=Z,5.5nm,1.4s							
L18K	**Granite Mounta**	**79.53**	**8**	P	**P**	**14 28 41.4**	**+1.0**
L18K					IAmb IAmb	14 29 11.0	
comp=Z,4.4nm,1.4s							
J16K	**Anvik River**	**80.11**	**6**	P	**P**	**14 28 44.5**	**+1.1**
BMRM	**Bremner River**	**80.57**	**14**	P	**P**	**14 28 46.6**	**+0.5**
J18K	**Innoko River**	**80.73**	**8**	P	**P**	**14 28 47.5**	**+0.8**
TXAR	**Lajitas Array**	**81.38**	**56**	P	**P**	**14 28 52.2**	**+1.0**
comp=Z,1.6nm,1.1s,baz=255,slow=4.9,SNR=4.7							
comp=Z,1.6nm,1.1s							

MCK McKinley 82.18 11 P P 14 28 54.6 +0.2
MCK IAmb IAmb 14 29 07.4
comp=Z,6.5nm,1.3s
PDAR Pinedale Array 83.19 42 P P 14 29 01.1 +0.6
comp=Z,0.7nm,0.8s,baz=166,slow=3.1,SNR=7.0
comp=Z,0.7nm,0.8s
PDAR Pinedale Array 83.19 42 P P 14 29 00.7 +0.3
ILAR Eielson Array 83.50 11 P P 14 29 00.6 -0.6
comp=Z,0.2nm,0.6s,baz=232,slow=6.3,SNR=7.0
comp=Z,0.2nm,0.6s
ILAR Eielson Array 83.50 11 P P 14 29 01.1 -0.1
IMAR Indian Mountai 83.52 8 P P 14 29 01.6 +0.3
E19K Redstone River 84.52 6 P P 14 29 07.0 +0.7
D19K Kuna River 85.44 6 P P 14 29 11.0 +0.1
D19K IAmb IAmb 14 29 40.5
comp=Z,5.8nm,1.4s
BMAR Burnt Mountain 86.31 11 P P 14 29 16.0 +0.7
D22K Ayikyak River 86.40 7 P P 14 29 16.0 +0.3
D22K IAmb IAmb 14 29 21.3
comp=Z,4.4nm,1.4s
BRTR Keskin Array B 146.80 320 PKPbc PKPdf 14 36 12.9 -1.2
comp=Z,0.3nm,0.5s,baz=30,slow=3.6,SNR=1.9
GERES GERESS Array B 147.12 351 PKPbc PKPdf 14 36 13.0 -1.2
comp=Z,0.1nm,0.3s,baz=346,slow=7.4,SNR=2.1

*IDC **08** 14:22:56.6±2.4, 6°.85S×129°.48E, h75km±30km, mb3.1/1, mbtmp4.1/6, Error ellipse: s-maj=29.0km s-min=20.4km az=122.0*
*NEIC **08** 14:22:58.6±1.3, 6°.61S±0°.09×129°.24E±0°.07, h166km±13km, mb4.1/8, Error ellipse: s-maj=13.2km s-min=9.9km az=195.0*
ISC 08 14:22:57.1±0.8, 6°.58S±0°.07×129°.26E±0°.07, h165km, n23, σ1s53/26, mb4.0/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
SAUI	**Saumlaki**	**2.46**	**125**	Pn	**Pn**	**14 23 39.6**	**+1.2**
SAUI					Sn	**Sn**	**14 24 10.9**	**+0.5**
FAKI	**Fak Fak**	**4.70**	**39**	Pn	**Pn**	**14 24 08.4**	**+1.5**
SOEI	**Soe**	**5.86**	**237**	Pn	**Pn**	**14 24 23.5**	**+1.3**
SIJI	**Sorong**	**6.02**	**19**	P	**Pn**	**14 24 25.1**	**+0.9**
10nm,0.2s,baz=187,slow=16,SNR=30							
SIJI					S Sn	**14 25 29.7**	**-2.9**
9.4nm,0.2s,baz=233,slow=20,SNR=10.0							
MTN	**Manton Dam**	**6.49**	**164**	Pn	**Pn**	**14 24 31.9**	**+1.5**
BATI	**Baumata**	**6.61**	**237**	P	**Pn**	**14 24 33.1**	**+1.1**
22nm,0.5s,baz=3.4,slow=17,SNR=9.0							
BATI					S Sn	**14 25 46.0**	**-0.6**
18nm,0.4s,baz=29,slow=19,SNR=8.0							
KNRA	**Kununurra**	**9.05**	**183**		**Pn**	**14 25 04.8**	**+0.5**
FITZ	**Fitzroy Crossi**	**11.98**	**197**	P	**Pn**	**14 25 42.1**	**-0.5**
2.6nm,0.3s,baz=29,slow=14,SNR=28							
FITZ					S Sn	14 27 46.3	-9.2
1.5nm,0.4s,baz=116,slow=15,SNR=2.0							
WB0	**Warramunga Arr**	**14.02**	**160**	Pn	**Pn**	**14 26 07.8**	**-1.0**
WRAB	**Tennant Creek**	**14.16**	**160**	Pn	**Pn**	**14 26 09.6**	**-0.8**
WRA	**Warramunga Arr**	**14.17**	**160**	P	**Pn**	**14 26 10.1**	**-0.5**
1.0nm,0.3s,baz=338,slow=12,SNR=26							
WRA					S Sn	14 28 37.3	-11
1.3nm,0.5s,baz=335,slow=21,SNR=5.7							
WR8	**Warramunga Arr**	**14.23**	**160**	Pn	**Pn**	**14 26 10.1**	**-1.3**
COEN	**Coen**	**15.52**	**119**	Pn	**Pn**	**14 26 27.1**	**-0.3**
COEN					IAmb IAmb	14 26 42.2	
comp=Z,6.9nm,1.1s							
AS31	**Alice Springs**	**17.56**	**166**		**P**	**14 26 51.3**	**+0.6**
ASAR	**Alice Springs**	**17.56**	**166**	P	**P**	**14 26 51.6**	**+1.0**
comp=Z,4.0nm,0.6s,baz=347,slow=11,SNR=55							
ASAR					S Sn	**14 29 59.8**	**-5.1**
comp=Z,1.7nm,0.9s,baz=347,slow=22,SNR=5.9							
ASAR	**Alice Springs**	**17.56**	**166**		**P**	**14 26 51.4**	**+0.8**
CTAO	**Charters Tower**	**21.27**	**131**	P	**P**	**14 27 31.6**	**+1.0**
CTAO					IAmb IAmb	14 27 43.7	
comp=Z,9.8nm,1.2s							
INKA	**Innaminka**	**23.70**	**154**	P	**P**	**14 27 53.9**	**0.0**
INKA					IAmb IAmb	14 28 01.7	
comp=Z,4.7nm,1.4s							
MNAI	**Manna**	**26.28**	**273**	P	**P**	**14 28 18.4**	**+0.9**
BBOO	**Buckleboo**	**26.85**	**167**	P	**P**	**14 28 21.6**	**-0.7**
STKA	**Stephens Creek**	**27.68**	**157**	P	**P**	**14 28 30.2**	**+0.5**
STKA					IAmb IAmb	14 28 50.1	
comp=Z,37nm,1.4s							
CAN	**Canberra**	**33.88**	**150**	P	**P**	**14 29 24.8**	**+0.6**
MKAR	**Makanchi Array**	**67.48**	**327**	P	P	14 33 47.0	+12
comp=Z,0.2nm,0.5s,baz=134,slow=6.8,SNR=4.9							
comp=Z,0.2nm,0.5s							

*IDC **08** 15:15:31.1±1.6, 9°.40S×124°.61E, h0km, mb3.3/2, mbtmp3.5/5, ML3.6/3, MS2.5/1, Error ellipse: s-maj=26.2km s-min=16.0km az=126.0*
*DJA **08** 15:15:36.3±0.4, 10°.S±3°.×12°.4E±°, h10km, M3.1/10, MLv3.1/10*
ISC 08 15:15:33.3±1.0, 9°.64S±0°.09×124°.62E±0°.10, h25km, n12, σ2s77/14, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
SOEI	**Soe**	**0.36**	**251**	P	**Pb**	**15 15 40.3**	**-1.1**
BATI	**Baumata**	**1.10**	**239**	Pg	**Pn**	**15 15 54.8**	**+1.7**
53nm,0.3s,baz=90,slow=1.4,SNR=103							
BATI					Lg Lg	15 16 11.2	
32nm,0.3s,baz=123,slow=22,SNR=17							
BATI	**Baumata**	**1.10**	**239**	P	**Pn**	**15 15 54.6**	**+1.5**
MMRI	**Maumere**	**2.55**	**293**	P	**Pn**	**15 16 13.8**	**+0.7**
EDFI	**Ende, Flores**	**3.02**	**287**	P	**Pn**	**15 16 19.4**	**-0.3**
LBFI	**Labuhan Bajo,**	**4.81**	**283**	P	**Pn**	**15 16 42.8**	**-1.4**
KAPI	**Kappang**	**6.66**	**313**	LR	LR	15 19 34.1	
comp=Z,41nm,19.7s,baz=186,slow=37							
FITZ	**Fitzroy Crossi**	**8.47**	**173**	P	**Pn**	**15 17 38.7**	**+4.3**
0.5nm,0.3s,baz=354,slow=8.6,SNR=21							
FITZ					Sn	**Sn**	**15 19 08.9**	**-0.4**
1.5nm,0.3s,baz=315,slow=20,SNR=10							
1.7nm,0.4s							
WRA	**Warramunga Arr**	**13.90**	**139**	Pn	**Pn**	**15 18 50.9**	**+2.1**
0.4nm,0.3s,baz=310,slow=14,SNR=19							
WRA					Sn	**Sn**	**15 21 19.7**	**-2.7**
0.3nm,0.3s,baz=311,slow=24,SNR=4.7							
1.0nm,0.5s							
ASAR	**Alice Springs**	**16.53**	**149**	Pn	**P**	**15 19 26.9**	**+0.8**
0.1nm,0.3s,baz=319,slow=11,SNR=14							
ASAR					Sn	**Sn**	**15 22 20.4**	**-6.2**
0.1nm,0.3s,baz=325,slow=25,SNR=4.6							
0.6nm,0.6s							
CMAR	**Chiang Mai Arr**	**37.70**	**318**	P	**P**	**15 22 45.3**	**-1.8**
0.2nm,0.3s,baz=132,slow=7.9,SNR=2.1							
0.2nm,0.3s							
MKAR	**Makanchi Array**	**67.66**	**330**	P	**P**	**15 26 30.3**	**+2.0**
0.2nm,0.8s,baz=147,slow=6.6,SNR=2.4							
0.2nm,0.8s							

*IDC **08** 15:38:22.4±0.4, 57°.13N×33°.54W, h0km, mb4.4/36, mbtmp4.4/41, ML3.9/5, MS4.0/79, Error ellipse: s-maj=12.4km s-min=9.9km az=178.0*
*NEIC **08** 15:38:24.4±1.1, 57°.20N±0°.07×33°.5W±0°.1, h10km±1km, mb4.9/450, Error ellipse: s-maj=13.4km s-min=8.9km az=144.0*
*GFZ **08** 15:38:25.1, 57°.18N×33°.42W, h11km, MW4.8, Moment Tensor Solution. s80 Moment tensor: Mrr-1.61; Mθθ-0.20; Mφφ 1.81; Mrθ 0.06; Mrφ 0.22; Mθφ-1.40; Fault plane solution: NP1:φs193.00000°, δ25.00000°, λ-78.00000°. Principal axes: T 2.3200, Plg19.0000°, Azm94.0000°; N -0

ISC 08 15:38:24.4±0.5,**57°20N**±0.05×**33°57W**±0.04,**h12**km±2km,
h12km:**pP-P,n818,**σ**0984/618,mb4.9**/320,**MS4.0**/77,
19C-28D,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRS	**Narsarsuaq**	**7.26**	**308**	Pn	**Pn**	**15 40 10.8**	**+0.6**
NRS	**Narsarsuaq**	**7.26**	**308**	*i* P	**Pn**	**15 40 11.9**	**+1.7**
IVI	**Ivigtut**	**8.49**	**304**	Pn	**Pn**	**15 40 27.7**	**+0.6**
IVI	**Ivigtut**	**8.49**	**304**	*i* P	**Pn**	**15 40 28.3**	**+1.2**
ANGG	**Ammassalik, Gr**	**8.66**	**349**	Pn	**Pn**	**15 40 28.8**	**-0.6**
ANGG	**Ammassalik, Gr**	**8.66**	**349**	*i* P	**Pn**	**15 40 26.1**	**-3.3**
ANGG				IAmb	IAmb	15 40 34.3	
	comp=Z,18nm,0.7s						
BORG	**Borgarnes**	**9.61**	**33**	Pn	**Pn**	**15 40 42.9**	**+0.6**
	comp=Z,3.1nm,0.3s,baz=198,slow=8.3,SNR=12						
BORG				Sn	**Sn**	**15 42 30.8**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=270,slow=20,SNR=1.2						
BORG				LR	LR	15 43 30.1	
	comp=Z,2μm,18.6s,baz=252,slow=32						
	comp=Z,14nm,0.7s						
BORG	**Borgarnes**	**9.61**	**33**	Pn	**Pn**	**15 40 42.4**	**+0.1**
SFJD	**Kangerlussuaq**	**12.60**	**328**	Pn	**Pn**	**15 41 22.4**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=140,slow=11,SNR=5.8						
SFJD				Sn	Sn	15 43 31.6	-12
	comp=Z,1.8nm,0.3s,baz=151,slow=21,SNR=12						
SFJD				LR	LR	15 45 27.5	
	comp=Z,1μm,19.1s,baz=136,slow=34						
	comp=Z,8.8nm,0.8s						
SFJD	**Kangerlussuaq**	**12.60**	**328**		**Pn**	**15 41 23.2**	**0.0**
SFJD	**Kangerlussuaq**	**12.60**	**328**	*i* P	**Pn**	**15 41 21.5**	**-1.8**
IGLA	**Glengowla, Co**	**14.26**	**95**	P	**Pn**	**15 41 47.1**	**+1.3**
ILULI	**Ilulissat**	**14.32**	**334**		**Pn**	**15 41 47.4**	**+0.6**
IDGL	**Inch Island, C**	**14.65**	**87**	P	**Pn**	**15 41 52.7**	**+1.5**
GDH	**Godhavn**	**14.95**	**332**	*i* P	**Pn**	**15 41 53.7**	**-1.6**
SAQQ	**Saqqaq**	**15.12**	**335**	*i* P	**Pn**	**15 41 57.2**	**-0.3**
SUMG	**Summit**	**15.57**	**355**		**Pn**	**15 42 03.0**	**-0.8**
SUMG	**Summit**	**15.57**	**355**	*i* P	**Pn**	**15 42 04.0**	**+0.3**
ILTH	**Belurgan, Co L**	**15.66**	**90**	P	**Pn**	**15 42 04.0**	**-0.6**
SAATT	**Saattut**	**15.67**	**338**	*i* P	**Pn**	**15 42 01.1**	**-3.6**
DSB	**Dublin**	**15.96**	**93**	P	**Pn**	**15 42 04.8**	**-3.7**
PGBU	**Glenifferbraes**	**16.06**	**83**	*e*P	**P**	**15 42 11.0**	**-2.2**
PGBU				IAmb	IAmb	15 42 12.6	
	comp=Z,64nm,0.8s						
NIAQ	**Niaqornat**	**16.09**	**336**	*i* P	**Pn**	**15 42 08.8**	**-1.3**
IWEX	**Carrickbyrne,**	**16.13**	**96**	P	**Pn**	**15 42 11.1**	**+0.4**
MCD	**Coleburn Disti**	**16.28**	**76**	*e*P	**P**	**15 42 13.6**	**-2.1**
IOMK	**Kirk Michael**	**16.54**	**88**	*e*P	**P**	**15 42 16.6**	**-1.8**
IOMK				IAmb	IAmb	15 42 18.0	
	comp=Z,11nm,1.0s						
NUUG	**Nuugaatsiaq**	**16.56**	**338**	*i* P	**Pn**	**15 42 13.1**	**-2.9**
EDI	**Edinburgh**	**16.73**	**82**	*e*P	**Pn**	**15 42 18.5**	**+0.2**
EDI				IAmb	IAmb	15 42 20.1	
	comp=Z,49nm,0.9s						
DRUM	**Mains of Drumt**	**16.84**	**78**	*e*P	**P**	**15 42 20.2**	**-1.6**
DRUM				IAmb	IAmb	15 42 21.9	
	comp=Z,29nm,1.0s						
EKA	**Eskdalemuir Ar**	**16.92**	**83**	Pn	**P**	**15 42 21.6**	**-1.2**
	baz=296,slow=11						
EKA				LR	LR	15 47 45.1	
	comp=Z,1μm,18.4s,baz=256,slow=33						
	comp=Z,12nm,0.9s						
RSBS	**Rosebush, Pemb**	**17.43**	**95**	*e*P	**Pn**	**15 42 27.2**	**0.0**
RSBS				IAmb	IAmb	15 42 28.1	
	comp=Z,19nm,0.8s						
DBG	**Daneborg**	**17.94**	**12**	*i* P	**P**	**15 42 33.5**	**-0.3**
UPNV	**Upernavik**	**18.10**	**338**	*i* P	**P**	**15 42 35.3**	**-0.3**
HLM1	**Long Mynd**	**18.18**	**92**	*e*P	**P**	**15 42 37.3**	**+0.6**
HLM1				IAmb	IAmb	15 42 39.3	
	comp=Z,32nm,0.9s						
FRB	**Frobisher Bay**	**18.25**	**305**	P	**P**	**15 42 38.2**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=94,slow=11,SNR=12						
FRB				LR	LR	15 48 21.6	
	comp=Z,722nm,22.0s,baz=80,slow=33						
	comp=Z,29nm,1.0s						
MCH1	**Michaelchurch**	**18.36**	**93**	*e*P	**Pn**	**15 42 38.0**	**-0.6**
MCH1				IAmb	IAmb	15 42 41.1	
	comp=Z,62nm,0.9s						
KUQ	**Kuujjuuaa**	**18.55**	**288**		**P**	**15 42 40.8**	**+0.2**
KUQ				IAmb	IAmb	15 42 46.2	
	comp=Z,103nm,1.4s						
SCHQ	**Schefferville**	**18.64**	**277**	P	**P**	**15 42 42.1**	**+0.3**
	comp=Z,1.7nm,0.3s,baz=62,slow=8.0,SNR=31						
SCHQ				LR	LR	15 48 36.9	
	comp=Z,1μm,18.7s,baz=52,slow=33						
	comp=Z,25nm,0.8s						
SCHQ	**Schefferville**	**18.64**	**277**		**P**	**15 42 42.4**	**+0.7**
SCHQ				IAmb	IAmb	15 42 47.7	
	comp=Z,165nm,1.6s						
STRD	**Stroud**	**18.92**	**93**	*e*P	**Pn**	**15 42 44.7**	**-0.7**
STRD				IAmb	IAmb	15 42 47.6	
	comp=Z,60nm,0.9s						
DAG	**Danmarks Havn**	**20.36**	**10**	*i* P	Pn	15 43 00.8	-1.6
DAG				IAmb	IAmb	15 43 06.2	
	comp=Z,43nm,1.4s						
GBN	**Guysborough**	**20.91**	**248**	P	**P**	**15 43 06.6**	**+0.1**
GBN				IAmb	IAmb	15 43 13.4	
	comp=Z,89nm,1.1s						
NEEM	**North Greenlan**	**21.23**	**350**	*i* P	**P**	**15 43 09.5**	**-0.5**
NEEM				IAmb	IAmb	15 43 18.2	
	comp=Z,36nm,1.1s						
ICQ	**Pointe Anglais**	**21.35**	**263**		**P**	**15 43 11.3**	**+0.1**
BATG	**Bathurst New B**	**22.03**	**257**		**P**	**15 43 19.2**	**+0.6**
BATG				IAmb	IAmb	15 43 33.3	
	comp=Z,78nm,1.4s						
PGAV	**Gavieira, Arco**	**22.20**	**123**	*e*P	**P**	**15 43 20.4**	**-0.1**
PGAV				*i* IAmb	IAmb	15 43 24.2	
	comp=Z,104nm,1.6s						
PGAV				*i* IAMs_20	IAMs_20	15 50 13.9	
	comp=Z,708nm,20.0s						
PCAB	**Cabril**	**22.52**	**123**	*e*P	**P**	**15 43 23.3**	**-0.4**
PCAB				*i* IAmb	IAmb	15 43 35.3	
	comp=Z,114nm,1.7s						
PTO	**Porto**	**22.71**	**124**	*e*P	**P**	**15 43 26.8**	**+1.0**
POLO	**Lamas de Olo**	**22.89**	**123**	*e*P	**P**	**15 43 28.8**	**+1.0**
POLO				*i* IAmb	IAmb	15 43 44.5	
	comp=Z,28nm,1.8s						
NB2	**NORSAR Subarra**	**22.95**	**62**	P	**P**	**15 43 27.0**	**-1.2**
	comp=Z,160nm,2.5s,baz=278,slow=10						
NB2	**NORSAR Subarra**	**22.95**	**62**	P	**P**	**15 43 27.0**	**-1.2**
NOA	**NORSAR Array B**	**22.95**	**62**	P	**P**	**15 43 27.5**	**-0.7**
	comp=Z,7.1nm,1.2s,baz=276,slow=11,SNR=5.5						
NOA				LR	LR	15 50 58.6	
	comp=Z,311nm,20.6s,baz=280,slow=33						
	comp=Z,7.1nm,1.2s						
UCC	**Uccle**	**22.96**	**90**	*d*P	**P**	**15 43 26.9**	**-1.4**
NB201	**NORSAR Array S**	**22.98**	**62**	P	**P**	**15 43 27.9**	**-0.7**
PVRL	**Vila Real**	**23.00**	**123**	*e*P	**P**	**15 43 30.3**	**+1.3**
PBRG	**Braganca**	**23.04**	**120**	*e*P	**P**	**15 43 30.5**	**+1.2**
PBRG				*i* IAmb	IAmb	15 43 58.3	
	comp=Z,50nm,1.9s						
TULEG	**Thule**	**23.12**	**340**	P	**P**	**15 43 29.6**	**-0.2**
TULEG				IAmb	IAmb	15 43 43.8	
	comp=Z,80nm,1.3s						
TULEG	**Thule**	**23.12**	**340**	*i* P	**P**	**15 43 29.8**	**0.0**
TULEG				IAmb	IAmb	15 43 40.1	
	comp=Z,66nm,1.2s						
PVIS	**Viseu**	**23.37**	**124**	*e*P	**P**	**15 43 32.8**	**+0.1**
MVO	**Moncorvo**	**23.41**	**122**	*e*P	**P**	**15 43 32.8**	**-0.2**
MVO				*i* IAmb	IAmb	15 43 48.8	
	comp=Z,53nm,1.4s						
MVO				*i* IAMs_20	IAMs_20	15 51 00.4	
	comp=Z,698nm,18.0s						
BMRD	**Maredsous**	**23.44**	**91**	*d*P	**P**	**15 43 32.4**	**-0.8**
	comp=Z,19nm,1.1s						
DOU	**Dourbes**	**23.45**	**91**	*d*P	**P**	**15 43 31.9**	**-1.5**
	comp=Z,22nm,0.8s						
DOU				*dx*	x	15 43 39.1	
POIN	**Pond Inlet**	**23.53**	**328**		**P**	**15 43 34.2**	**+0.3**
BGES	**Gesves**	**23.57**	**90**	*d*P	**P**	**15 43 33.7**	**-0.8**
BGES				*d*PP	**PnPn**	**15 44 01.1**	**-0.1**
PCAS	**Casmilo, Conde**	**23.64**	**126**	*e*P	**P**	**15 43 34.5**	**-0.7**
BCLA	**Clavier**	**23.67**	**90**	*d*P	**P**	**15 43 34.5**	**-1.0**
	comp=Z,13nm,1.0s						
BEBN	**Eben Emael**	**23.68**	**89**	*d*P	**P**	**15 43 34.5**	**-1.0**
BSTI	**Sart Tilman**	**23.73**	**89**	*d*P	**P**	**15 43 35.5**	**-0.5**
D62A	**Allapoint, All**	**23.75**	**260**	P	**P**	**15 43 36.4**	**+0.1**
D62A				IAmb	IAmb	15 43 39.8	
	comp=Z,36nm,1.2s						
RCHB	**Rochefort**	**23.77**	**91**	*d*P	**P**	**15 43 35.6**	**-0.8**
	comp=Z,14nm,1.0s						
MTE	**Manteigas**	**23.78**	**124**	*e*P	**P**	**15 43 37.8**	**+1.1**
MTE				*i* IAMs_20	IAMs_20	15 50 59.8	
	comp=Z,506nm,20.0s						
PSBE	**So Bento**	**23.95**	**127**	*e*P	**P**	**15 43 38.0**	**-0.3**
PSBE				*i* IAmb	IAmb	15 43 45.8	
	comp=Z,97nm,1.6s						
MEM	**Membach**	**23.95**	**89**	*d*P	**P**	**15 43 37.2**	**-0.9**
	comp=Z,26nm,0.9s						
BTNL	**Ternell**	**24.03**	**89**	*d*P	**P**	**15 43 38.6**	**-0.3**
	comp=Z,15nm,0.9s						
BHOU	**Houvegnez**	**24.08**	**89**	*d*P	**P**	**15 43 38.9**	**-0.6**
ILON	**Igloolik, Nuna**	**24.09**	**320**	P	**P**	**15 43 38.9**	**-0.4**
ILON				IAmb	IAmb	15 43 42.6	
	comp=Z,34nm,1.1s						
F64A	**Sherman**	**24.15**	**257**	P	**P**	**15 43 40.5**	**+0.4**
F64A				IAmb	IAmb	15 43 48.3	
	comp=Z,31nm,1.2s						
PSARD	**Sardoal**	**24.15**	**126**	*e*P	**P**	**15 43 40.2**	**0.0**
PSARD				*i* IAmb	IAmb	15 43 43.0	
	comp=Z,101nm,1.4s						
PMAFR	**Mafra**	**24.20**	**129**	*e*P	**P**	**15 43 40.6**	**0.0**
PMAFR				*i* IAmb	IAmb	15 43 41.3	
	comp=Z,206nm,1.4s						
PCBR	**Castelo Branco**	**24.26**	**125**	*e*P	**P**	**15 43 40.9**	**-0.3**
PCBR				*i* IAmb	IAmb	15 43 48.6	
	comp=Z,81nm,1.5s						
HFS	**Hagfors**	**24.33**	**63**	P	**P**	**15 43 41.1**	**-0.5**
	comp=Z,8.0nm,0.8s,baz=251,slow=12,SNR=6.6						
HFS				LR	LR	15 52 00.1	
	comp=Z,321nm,18.5s,baz=288,slow=34						
	comp=Z,8.0nm,0.8s						
LDAQ	**Lac Daran**	**24.40**	**264**	P	**P**	**15 43 42.7**	**+0.3**
LDAQ				IAmb	IAmb	15 43 50.0	
	comp=Z,28nm,1.1s						
PMTG	**Montargil**	**24.56**	**127**	*e*P	**P**	**15 43 43.6**	**-0.3**
PMTG				*i* IAmb	IAmb	15 43 45.6	
	comp=Z,68nm,1.5s						
PMRV	**Marv??o**	**24.64**	**125**	*e*P	**P**	**15 43 44.1**	**-0.5**
PMRV				*i* IAmb	IAmb	15 43 47.3	
	comp=Z,48nm,1.7s						
PMRV				*i* IAMs_20	IAMs_20	15 51 26.9	
	comp=Z,420nm,18.0s						
PARRA	**Arraiolos**	**24.85**	**127**	*e*P	**P**	**15 43 45.6**	**-0.9**
PARRA				*i* IAmb	IAmb	15 43 55.5	
	comp=Z,54nm,1.6s						
MOE	**Montemor**	**24.96**	**128**	*e*P	**P**	**15 43 46.9**	**-0.6**
MOE				*i* IAmb	IAmb	15 43 56.3	
	comp=Z,76nm,1.7s						
PESTR	**Estremoz**	**25.01**	**126**	P	**P**	**15 43 46.9**	**-1.0**
PESTR				IAmb	IAmb	15 43 49.4	
	comp=Z,44nm,1.1s						
PESTR	**Estremoz**	**25.01**	**126**	*e*P	**P**	**15 43 47.4**	**-0.5**
PESTR				*i* IAmb	IAmb	15 44 10.0	
	comp=Z,52nm,1.5s						
EVO	**Evora**	**25.10**	**127**	*e*P	**P**	**15 43 48.2**	**-0.5**
EVO				*i* IAmb	IAmb	15 43 58.0	
	comp=Z,40nm,1.4s						
PBEJ	**Beja**	**25.59**	**128**	*e*P	**P**	**15 43 53.4**	**+0.2**
PBEJ				*i* IAmb	IAmb	15 44 03.1	
	comp=Z,55nm,1.5s						
MESJ	**Messejana**	**25.59**	**128**	*e*P	**P**	**15 43 53.4**	**+0.2**
MESJ				IAmb	IAmb	15 43 55.6	
	comp=Z,56nm,1.2s						
MESJ	**Messejana**	**25.59**	**128**	*e*P	**P**	**15 43 54.0**	**+0.8**
MESJ				*i* IAmb	IAmb	15 44 02.5	
	comp=Z,57nm,1.3s						
PTEO	**Sao Teotonio**	**25.63**	**129**	*e*P	**P**	**15 43 53.6**	**+0.1**
PTEO				*i* IAmb	IAmb	15 43 58.1	
	comp=Z,118nm,1.5s						
PBAR	**Barrancos**	**25.82**	**126**	*e*P	**P**	**15 43 55.1**	**-0.2**
PBAR				*i* IAmb	IAmb	15 43 59.5	
	comp=Z,64nm,1.7s						
PCVE	**Castro Verde**	**25.84**	**128**	*e*P	**P**	**15 43 56.6**	**+1.1**
PCVE				*i* IAmb	IAmb	15 43 58.7	
	comp=Z,78nm,1.5s						
MORF	**Marmelete**	**25.86**	**130**	*e*P	**P**	**15 43 55.7**	**-0.1**
MORF				IAmb	IAmb	15 43 56.1	
	comp=Z,32nm,0.8s						
MORF	**Marmelete**	**25.86**	**130**	*e*P	**P**	**15 43 55.6**	**-0.1**
MORF				*i* IAmb	IAmb	15 44 02.0	
	comp=Z,87nm,1.4s						
ECH	**Echery**	**25.90**	**93**	IAmb	IAmb	15 43 59.0	
	comp=Z,30nm,1.3s						
PFVI	**Vila Bisbo**	**25.93**	**130**	P	**P**	**15 43 55.8**	**-0.5**
PFVI	**Vila Bisbo**	**25.93**	**130**	*e*P	**P**	**15 43 56.6**	**+0.3**
PFVI				*i* IAmb	IAmb	15 43 57.2	
	comp=Z,116nm,1.3s						
PAB	**San Pablo**	**25.94**	**120**	P	**P**	**15 43 56.0**	**-0.5**
PAB				IAmb	IAmb	15 44 03.0	
	comp=Z,82nm,1.9s						
ESDC	**Sonseca Array**	**26.02**	**120**	P	**P**	**15 43 56.6**	**-0.5**
	comp=Z,10nm,0.9s,baz=317,slow=7.4,SNR=30						
ESDC				LR	LR	15 52 18.8	
	comp=Z,404nm,18.7s,baz=324,slow=32						
	comp=Z,10nm,0.9s						
ESDC	**Sonseca Array**	**26.02**	**120**	P	**P**	**15 43 57.4**	**+0.3**
PBDV	**Barranco-do-Ve**	**26.22**	**129**	*e*P	**P**	**15 44 00.7**	**+1.8**
CEST	**Estetri de Car**	**26.41**	**109**	IAmb	IAmb	15 44 02.8	
	comp=Z,47nm,1.2s						
BFO	**Black Forest**	**26.47**	**91**	P	**P**	**15 44 00.9**	**-0.2**
PMOZ	**Porto Moniz, M**	**26.84**	**148**	*e*P	**P**	**15 44 06.1**	**+1.4**
PMOZ				*i* IAMs_20	IAMs_20	15 52 05.5	
	comp=Z,255nm,20.0s						
TRQ	**Mont Tremblant**	**27.25**	**264**	P	**P**	**15 44 09.0**	**+0.7**
TRQ				IAmb	IAmb	15 44 12.3	
	comp=Z,20nm,1.0s						
GRA1	**Grafenberg Arr**	**27.28**	**87**	IAmb	IAmb	15 44 09.7	
	comp=Z,32nm,1.1s						
GRF	**Grafenberg Arr**	**27.28**	**87**	*e*P	**P**	**15 44 08.7**	**+0.4**
	comp=Z,14nm,0.8s,baz=300,slow=8.9						
CLL	**Collm**	**27.39**	**82**	P	**P**	**15 44 08.7**	**-0.6**
CLL	**Collm**	**27.39**	**82**	*i* P	**P**	**15 44 07.9**	**-1.4**
	comp=Z,15nm,0.9s						
CLL				*i* x	x	15 44 15.1	
CLL				*e*PPP	PPP	15 45 01.0	
CLL				*ex*	x	15 48 06.0	
CLL				*eS*	**S**	**15 48 54.0**	**+5.2**
CLL				*e*SS	SnSn	15 49 30.0	-28
CLL	**Collm**	**27.39**	**82**	P	**P**	**15 44 08.5**	**-0.8**
	comp=Z,18nm,1.1s						
NKC	**Novy Kostel**	**27.65**	**85**	*e*P	**P**	**15 44 11.6**	**-0.1**
VLDQ	**Val d'Or**	**27.68**	**270**	P	**P**	**15 44 14.1**	**+2.1**
VLDQ				IAmb	IAmb	15 44 16.3	
	comp=Z,24nm,1.2s						
ARCES	**ARCESS Array B**	**27.91**	**40**	P	**P**	**15 44 13.8**	**0.0**
	comp=Z,1.5nm,0.7s,baz=347,slow=2.6,SNR=4.7						
ARCES				LR	LR	15 53 06.3	
	comp=Z,140nm,20.1s,baz=289,slow=32						
	comp=Z,1.5nm,0.7s						
ARCES	**ARCESS Array B**	**27.91**	**40**	IAmb	IAmb	15 44 22.8	
	comp=Z,93nm,1.9s						
DAVA	**Damuels**	**27.93**	**92**	*e*P	**P**	**15 44 13.7**	**-0.8**
	comp=Z,19nm,1.5s						
TUE	**Stuetta**	**28.14**	**94**	P	**P**	**15 44 16.9**	**+0.6**
	comp=Z,61nm,1.3s						
DAVOX	**Davos/Dischmat**	**28.24**	**93**	LR	LR	15 54 42.6	
	comp=Z,873nm,20.2s,baz=268,slow=35						
M65A	**Busby, Falmout**	**28.32**	**253**	P	**P**	**15 44 18.4**	**+0.7**
	baz=44						
FETA	**Feichten**	**28.55**	**92**	*i* P	**P**	**15 44 20.3**	**+0.3**
	comp=Z,4.4nm,1.0s						
MOTA	**Moosalm**	**28.56**	**91**	*e*P	**P**	**15 44 20.1**	**+0.1**
	comp=Z,3.1nm,1.0s						
RES	**Resolute Bay**	**28.58**	**331**	LR	LR	15 55 12.0	
	comp=Z,214nm,18.3s,baz=144,slow=35						
RES	**Resolute Bay**	**28.58**	**331**	P	**P**	**15 44 20.7**	**+1.0**
SQTA	**Sankt Quirin**	**28.70**	**91**	*e*P	**P**	**15 44 21.6**	**+0.4**
	comp=Z,5.0nm,1.0s						
WATA	**Walderalm**	**28.82**	**90**	*e*P	**P**	**15 44 21.1**	**-1.3**
	comp=Z,5.7nm,1.3s						
KHC	**Kasperske Hory**	**28.87**	**86**	*e*P	**P**	**15 44 22.3**	**-0.3**
WTTA	**Wattenberg**	**28.90**	**90**	*i* P	**P**	**15 44 22.7**	**-0.3**
	comp=Z,4.6nm,1.2s						
ZVC	**Zvikov**	**29.03**	**85**	*e*P	**P**	**15 44 24.1**	**+0.1**
GERES	**GERESS Array B**	**29.10**	**86**	P	**P**	**15 44 24.9**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=287,slow=9.2,SNR=11						
GERES				LR	LR	15 55 14.8	
	comp=Z,392nm,18.7s,baz=302,slow=35						
	comp=Z,1.6nm,0.8s						
LESA	**Schwarzleotal**	**29.37**	**89**	*e*P	**P**	**15 44 25.9**	**-1.2**
	comp=Z,3.4nm,1.1s						
KSP	**Ksiaz**	**29.40**	**81**	*e*P	**P**	**15 44 26.3**	**-1.0**
KSP	**Ksiaz**	**29.40**	**81**	P	**P**	**15 44 27.4**	**+0.2**
	comp=Z,19nm,1.3s						
CHVC	**Chvalec**	**29.41**	**81**	*e*P	**P**	**15 44 26.8**	**-0.5**
CKRC	**Cesky Krumlov**	**29.44**	**86**	*e*P	**P**	**15 44 27.8**	**+0.1**
OSTC	**Ostas**	**29.51**	**81**	*e*P	**P**	**15 44 28.5**	**+0.2**
DPC	**Dobruska-Polom**	**29.68**	**82**	*e*P	**P**	**15 44 29.6**	**-0.2**
DPC				AMS	AMS	15 56 40.0	
	comp=Z,800nm,18.7s						
DPC	**Dobruska-Polom**	**29.68**	**82**	P	**P**	**15 44 30.2**	**+0.4**
	comp=Z,21nm,1.4s						
ABTA	**Abfaltersbach**	**29.69**	**91**	*i* P	**P**	**15 44 29.2**	**-0.8**
	comp=Z,5.6nm,1.8s						
BIOA	**Bad Ischl, Aus**	**29.73**	**88**	*e*P	**P**	**15 44 29.5**	**-0.8**
	comp=Z,5.0nm,1.0s						
FINES	**FINESS Array B**	**29.78**	**57**	P	**P**	**15 44 30.1**	**-0.4**
	comp=Z,3.8nm,0.8s,baz=297,slow=8.4,SNR=5.7						
FINES				LR	LR	15 55 23.1	
	comp=Z,136nm,19.6s,baz=293,slow=34						
	comp=Z,3.8nm,0.8s						
FIA1	**FINESS Array S**	**29.79**	**57**	P	**P**	**15 44 30.6**	**+0.1**
KBA	**Koelnbreinsper**	**29.94**	**89**	*i* P	**P**	**15 44 31.5**	**-0.8**
	comp=Z,12nm,1.9s						
MOA	**Molln**	**29.98**	**87**	*e*P	**P**	**15 44 32.4**	**-0.1**
	comp=Z,6.3nm,1.1s						
STAL	**STALIGIAL**	**30.10**	**91**	IAmb	IAmb	15 44 40.1	
	comp=Z,21nm,1.4s						
BLKN	**Baker Lake**	**30.14**	**310**	P	**P**	**15 44 34.0**	**+0.4**
BLKN				IAmb	IAmb	15 44 40.1	
	comp=Z,30nm,0.9s						
MYKA	**Terra Mystica**	**30.38**	**90**	*i* P	**P**	**15 44 36.4**	**+0.3**
	comp=Z,9.1nm,1.1s						
VRAC	**Vranov**	**30.40**	**83**	LR	LR	15 56 19.2	
	comp=Z,547nm,19.9s,baz=306,slow=35						
VRAC	**Vranov**	**30.40**	**83**	⇓P	**P**	**15 44 35.6**	**-0.6**
VRAC	**Vranov**	**30.40**	**83**	*e*P	**P**	**15 44 35.8**	**-0.3**
KRUC	**Moravsky**	**30.43**	**84**	*e*P	**P**	**15 44 35.7**	**-0.7**
MORC	**Moravsky Berou**	**30.65**	**82**	⇑P	**P**	**15 44 38.1**	**-0.3**
MORC	**Moravsky Berou**	**30.65**	**82**	*e*P	**P**	**15 44 38.0**	**-0.3**
SADO	**Sadowa**	**30.66**	**266**	LR	LR	15 55 40.9	
	comp=Z,735nm,18.8s,baz=112,slow=34						
SADO	**Sadowa**	**30.66**	**266**	P	**P**	**15 44 39.8**	**+1.3**
SADO				IAmb	IAmb	15 44 42.6	
	comp=Z,20nm,1.1s						
STEB	**Steborice**	**30.69**	**81**	*e*P	**P**	**15 44 38.4**	**-0.2**
CONA	**Conrad Observa**	**30.80**	**86**	*e*P	**P**	**15 44 38.6**	**-1.2**
	comp=Z,4.9nm,1.2s						
WINA	**Allan] / Wiene**	**30.81**	**86**	*i* P	**P**	**15 44 39.8**	**0.0**
	comp=Z,11nm,0.8s,SNR=8.0						
OKC	**Ostrava-Krasne**	**30.94**	**81**	AMS	AMS	15 57 30.0	
	comp=Z,1μm,16.0s						
OBKA	**Obir**	**30.95**	**89**	*i* P	**P**	**15 44 40.0**	**-1.1**
	comp=Z,9.6nm,1.6s						
ARSA	**Arzberg**	**31.02**	**87**	*e*P	**P**	**15 44 41.0**	**-0.7**
	comp=Z,6.5nm,1.0s						
MAUC	**Maruska**	**31.04**	**82**	*e*P	**P**	**15 44 42.2**	**+0.4**
SOKA	**Soboth**	**31.11**	**89**	*i* P	**P**	**15 44 41.5**	**-1.0**
	comp=Z,6.5nm,1.1s						
PABE	**Paberze**	**31.11**	**68**	P	**P**	**15 44 41.6**	**-0.7**
RONA	**Rosalia, Austr**	**31.18**	**86**	*e*P	**P**	**15 44 42.3**	**-0.7**
	comp=Z,6.3nm,1.1s						
FCC	**Fort Churchill**	**31.18**	**299**	P	**P**	**15 44 43.9**	**+1.1**
FCC				IAmb	IAmb	15 44 46.4	
	comp=Z,27nm,1.2s						
JAVC	**Velka Javorina**	**31.24**	**83**	*e*P	**P**	**15 44 43.4**	**-0.2**
BEL	**Belsk**	**31.27**	**76**	*e*P	**P**	**15 44 44.4**	**+0.6**
MD01	**Midelt array s**	**31.30**	**129**	P	**P**	**15 44 44.4**	**0.0**
MODS	**Modra-Piesok**	**31.31**	**84**	*e*P	**P**	**15 44 44.2**	**0.0**
MDT	**Midelt**	**31.41**	**129**	LR	LR	15 55 35.2	
	comp=Z,119nm,19.7s,baz=358,slow=33						
SUW	**Suwalki**	**31.42**	**71**	*e*P	**P**	**15 44 44.6**	**-0.4**
OJC	**Ojcow**	**31.62**	**80**	*e*P	**P**	**15 44 46.7**	**-0.1**
OJC	**Ojcow**	**31.62**	**80**	P	**P**	**15 44 46.4**	**-0.4**
	comp=Z,1μmcomp=Z,17nm,2.1s						
LANS	**Liptovska Anna**	**32.04**	**81**	*e*P	**P**	**15 44 51.4**	**+0.8**
MPLH	**Magyarpolny**	**32.17**	**86**	P	**P**	**15 44 51.7**	**0.0**
	comp=Z,31nm,1.8s						
SRO	**Srobarova**	**32.20**	**84**	*e*P	**P**	**15 44 52.6**	**+0.7**
NIE	**Niedzica**	**32.34**	**80**	*e*P	**P**	**15 44 54.3**	**+1.1**
NIE	**Niedzica**	**32.34**	**80**	P	**P**	**15 44 54.0**	**+0.8**
	comp=Z,4.6n

ULM LR LR 15 59 00.4
comp=Z,514nm,18.9s,baz=15,slow=34
comp=Z,16nm,0.9s
ULM Lac du Bonnet 36.33 286 P **P** **15 45 27.9 +0.2**
ULM IAmb IAmb 15 45 31.1
comp=Z,32nm,1.1s
AK02 Malin Array Si 36.34 73 P **P** **15 45 27.3 -0.4**
Q52A Bidwell 36.35 261 IAmb IAmb 15 45 32.7
comp=Z,25nm,1.1s
AK06 Malin Array Si 36.38 73 P **P** **15 45 27.5 -0.6**
P51A Williamsport 36.40 263 IAmb IAmb 15 45 32.9
comp=Z,31nm,1.2s
MDB Medias 36.51 82 ⇑P **P** **15 45 30.6 +1.3**
O49A Covington 36.59 265 IAmb IAmb 15 45 34.5
comp=Z,28nm,1.1s
LOT Lotru 36.62 83 ⇑P **P** **15 45 30.3 0.0**
N47A Urbana 36.84 267 IAmb IAmb 15 45 36.4
comp=Z,22nm,1.0s
FFC Flin Flon 36.92 296 P **P** **15 45 33.7 +1.0**
FFC **pP** **15 45 33.9 -1.8**
VAE Valguarnera 37.05 101 LR LR 15 58 24.7
comp=Z,398nm,21.8s,baz=333,slow=32
ARR Arges 37.14 83 ⇓P **P** **15 45 35.0 +0.3**
DOPR Dopca 37.16 82 ⇓P **P** **15 45 35.1 +0.3**
OZUR 37.29 81 ⇑P **P** **15 45 36.2 +0.2**
VOIR 37.32 83 ⇑P **P** **15 45 36.0 -0.2**
VOIR 37.32 83 P **P** **15 45 36.2 -0.1**
comp=Z,16nm,1.2s
SORM Soroca 37.39 77 ⇑P **P** **15 45 34.9 -1.8**
SORM Soroca 37.39 77 P **P** **15 45 35.6 -1.1**
comp=Z,20nm,1.0s
OBN Obninsk 37.54 62 P **P** **15 45 37.5 -0.4**
comp=Z,28nm,1.1s
A36M Sachs Harbour 37.60 329 P **P** **15 45 38.7 +0.5**
baz=63,SNR=11
P48A Milroy 37.70 265 P **P** **15 45 40.0 +0.6**
P48A **pP** **15 45 40.6 -1.9**
P48A IAmb IAmb 15 45 43.5
comp=Z,33nm,1.1s
MLR Muntele Rosu 37.76 82 LR LR 16 02 13.6
comp=Z,602nm,18.4s,baz=318,slow=38
MLR Muntele Rosu 37.76 82 ⇑P P 15 45 44.4 +4.3
MLR Muntele Rosu 37.76 82 IAmb IAmb 15 45 45.5
comp=Z,28nm,1.6s
PLOR Plostina 37.91 81 ⇑P **P** **15 45 38.6 -2.7**
VRI Vrincioaia 37.95 81 ⇓P **P** **15 45 41.7 +0.2**
R50A Paris 37.95 262 IAmb IAmb 15 45 45.7
comp=Z,20nm,1.2s
SFIN Lafayette 37.96 267 IAmb IAmb 15 45 46.0
comp=Z,31nm,1.1s
S51A Beattyville 38.03 261 IAmb IAmb 15 45 46.4
comp=Z,14nm,0.8s
BAL3X Bal3x, Balta 38.17 76 P **P** **15 45 43.0 -0.4**
L42A Oliver, Polo 38.23 271 IAmb IAmb 15 45 48.3
comp=Z,36nm,1.1s
COPA Copaceanca 38.26 84 ⇑P **P** **15 45 44.0 -0.1**
PLVB Pleven 38.43 85 ⇑P **P** **15 45 44.7 -0.8**
YKAW1 Yellowknife Wh 38.48 313 P **P** **15 45 46.3 +0.6**
YKAW3 Yellowknife Wh 38.49 313 P **P** **15 45 46.3 +0.5**
YKAW3 IAmb IAmb 15 45 52.6
comp=Z,38nm,1.8s
C36M Paulatuk 38.50 325 P **P** **15 45 46.0 +0.2**
baz=61
YKA Yellowknife Ar 38.52 313 P **P** **15 45 46.5 +0.4**
comp=Z,6.3nm,0.9s,baz=57,slow=9.0,SNR=39
YKA PcP **PcP** **15 47 56.9 -1.7**
comp=Z,0.5nm,0.7s,baz=51,slow=3.2,SNR=3.6
YKA LR LR 16 00 59.7
comp=Z,990nm,18.2s,baz=84,slow=35
comp=Z,6.3nm,0.9s
SGRR Singureni 38.61 83 ⇓P **P** **15 45 45.9 -1.1**
TZTN Tazewell 38.81 260 IAmb IAmb 15 45 58.9
comp=Z,24nm,1.1s
WCI Wyandotte Cave 39.05 264 P **P** **15 45 51.5 +0.6**
CFR Carcaliu 39.15 81 ⇓P **P** **15 45 50.2 -1.3**
RAZG Razgrad 39.33 84 ⇓P **P** **15 45 51.5 -1.6**
ELND Elena 39.41 85 ⇓P **P** **15 45 53.1 -0.8**
TKL Tuckaleechee C 39.60 259 LR LR 16 01 20.0
comp=Z,640nm,18.7s,baz=20,slow=35
N41A Harden Midland 39.77 271 IAmb IAmb 15 46 02.0
comp=Z,31nm,1.1s
USIN University of 39.99 265 IAmb IAmb 15 46 06.0
comp=Z,46nm,1.1s
Q44A Meyer Farm, Va 40.05 267 IAmb IAmb 15 46 04.3
comp=Z,38nm,0.9s
CPCT Cooper Cave 40.16 260 IAmb IAmb 15 46 08.1
comp=Z,29nm,1.4s
RDO Rodhopi 40.45 87 P **P** **15 46 02.5 +0.1**
RDO IAmb IAmb 15 46 03.4
comp=Z,27nm,0.9s
ECSD EROS Data Cent 40.82 279 IAmb IAmb 15 46 12.8
comp=Z,20nm,0.8s
ALN Alexandroupoli 40.90 87 IAmb IAmb 15 46 07.3
comp=Z,34nm,1.0s
GOGA Godfrey 41.15 256 IAmb IAmb 15 46 12.8
comp=Z,25nm,1.2s
P40A Paris 41.25 271 IAmb IAmb 15 46 16.3
comp=Z,25nm,1.2s
WVT Waverly 41.43 263 P **P** **15 46 11.4 +0.9**
KIRV Kirov 41.45 52 LR LR 16 01 06.4
comp=Z,98nm,21.4s,baz=284,slow=33
FVM French Village 41.47 268 IAmb IAmb 15 46 18.5
comp=Z,31nm,1.5s
WRGLY Wrigley 41.55 317 IAmb IAmb 15 46 21.3
comp=Z,23nm,1.2s
WRGLY Wrigley 41.55 317 P **P** **15 46 11.0 -0.2**
baz=55,SNR=5.6
INK Inuvik 41.95 327 LR LR 16 03 26.6
comp=Z,257nm,18.4s,baz=47,slow=36
INK Inuvik 41.95 327 P **P** **15 46 14.0 -0.4**
INK **P** **15 46 14.3 -0.1**
INK Inuvik 41.95 327 P **P** **15 46 14.2 -0.1**
baz=53,SNR=8.4
T42A Van Buren 42.53 267 IAmb IAmb 15 46 50.9
comp=Z,51nm,1.7s
F31M Tsiigehtchic 42.53 326 P **P** **15 46 19.4 +0.2**
F31M Tsiigehtchic 42.53 326 P **P** **15 46 18.9 -0.3**
baz=52,SNR=32
D28M Stokes Point 42.80 330 P **P** **15 46 21.2 -0.2**
baz=50,SNR=7.4
G31M Satah River 43.02 325 P **P** **15 46 23.2 +0.1**
G31M IAmb IAmb 15 46 26.0
comp=Z,34nm,1.3s
G31M Satah River 43.02 325 P **P** **15 46 23.2 +0.1**
baz=52,SNR=13
F30M Barrier River 43.05 327 IAmb IAmb 15 46 30.3
comp=Z,26nm,1.1s
F30M Barrier River 43.05 327 P **P** **15 46 23.4 0.0**
baz=51,SNR=15
E29M Blow River 43.17 328 P **P** **15 46 24.1 -0.2**
baz=50
EDM Edmonton 43.25 300 IAmb IAmb 15 46 32.0
comp=Z,28nm,1.0s
D27M Malcolm River 43.47 330 P **P** **15 46 26.7 -0.1**
baz=49
G30M tAoh Zraii Nji 43.58 326 P **P** **15 46 27.9 +0.2**
baz=50
KOTAN Kotaneelee Air 43.62 313 P **P** **15 46 28.1 0.0**
baz=52
H31M Peel River 43.74 324 IAmb IAmb 15 46 36.3
comp=Z,30nm,1.2s
H31M Peel River 43.74 324 P **P** **15 46 27.8 -1.3**
baz=50,SNR=19
C27K Jago River 43.93 332 P **P** **15 46 30.3 -0.2**
baz=47
BORA Eskisehir 44.01 85 IAmb IAmb 15 46 38.6
comp=Z,34nm,1.5s
C26K Camden Bay 44.04 332 P **P** **15 46 30.4 -0.9**
baz=47
EPYK Eagle Plains 44.12 326 IAmb IAmb 15 46 39.6
comp=Z,22nm,1.1s
EPYK Eagle Plains 44.12 326 P **P** **15 46 32.1 -0.1**
baz=50,SNR=12
F28M Old Crow 44.24 328 P **P** **15 46 32.9 -0.1**
F28M Old Crow 44.24 328 P **P** **15 46 32.3 -0.7**
baz=48,SNR=10.0
E27K Coleen River 44.34 329 IAmb IAmb 15 46 40.1
comp=Z,13nm,0.9s
E27K Coleen River 44.34 329 P **P** **15 46 32.9 -1.0**
baz=48,SNR=17
BELG Belogornoye 44.44 60 LR LR 16 03 59.7
comp=Z,255nm,21.1s,baz=285,slow=35
WHAR Wooly Hollow 44.47 266 P **P** **15 46 36.0 +0.9**
WHAR IAmb IAmb 15 46 44.3
comp=Z,16nm,1.1s
U38A Gravette 44.76 269 IAmb IAmb 15 46 43.6
comp=Z,20nm,1.3s

I30M Mount Dempster 44.77 324 IAmb IAmb 15 46 41.4
comp=Z,14nm,1.0s
I30M Mount Dempster 44.77 324 P **P** **15 46 37.7 +0.3**
baz=49,SNR=15
D25K Kavik River 44.82 332 P **P** **15 46 37.7 0.0**
baz=45
C24K Franklin Bluff 45.12 334 P **P** **15 46 39.6 -0.3**
baz=44
J30M Hart River 45.19 324 IAmb IAmb 15 46 45.5
comp=Z,16nm,1.1s
J30M Hart River 45.19 324 P **P** **15 46 41.1 +0.4**
baz=48,SNR=11
I29M Ogilvie Camp, 45.28 325 P **P** **15 46 42.1 +0.8**
I29M IAmb IAmb 15 46 48.5
comp=Z,17nm,1.0s
I29M Ogilvie Camp, 45.28 325 P **P** **15 46 42.0 +0.6**
baz=48,SNR=19
X40A Basin Creek Fa 45.37 266 P **P** **15 46 43.3 +1.0**
X40A IAmb IAmb 15 46 46.1
comp=Z,19nm,1.1s
F26K Sheenjek River 45.38 330 P **P** **15 46 41.9 -0.2**
baz=46
E25K Arctic Village 45.47 331 IAmb IAmb 15 46 45.1
comp=Z,47nm,2.0s
E25K Arctic Village 45.47 331 P **P** **15 46 42.8 0.0**
baz=45,SNR=8.6
WTLY Watson Lake, Y 45.47 316 IAmb IAmb 15 46 48.0
comp=Z,18nm,1.0s
WTLY Watson Lake, Y 45.47 316 P **P** **15 46 43.9 +1.0**
baz=49,SNR=13
C23K Itkillik River 45.49 334 P **P** **15 46 43.0 +0.2**
baz=43,SNR=13
D24K Happy Valley 45.56 333 P **P** **15 46 43.9 +0.5**
baz=44
H27K Steamboat Moun 45.66 327 P **P** **15 46 44.8 +0.5**
baz=46,SNR=11
A21K Barrow 45.69 338 P **P** **15 46 44.8 +0.4**
baz=40
BMAR Burnt Mountain 45.69 330 **P** **15 46 45.5 +0.9**
MAYO Mayo, Yukon 45.70 322 IAmb IAmb 15 47 22.2
comp=Z,20nm,1.1s
MAYO Mayo, Yukon 45.70 322 P **P** **15 46 45.4 +0.8**
baz=48
MIAR Mount Ida 45.73 267 IAmb IAmb 15 46 55.0
comp=Z,13nm,1.0s
I28M Miner Creek 45.73 326 IAmb IAmb 15 46 53.8
comp=Z,10nm,0.9s
I28M Miner Creek 45.73 326 P **P** **15 46 45.3 +0.4**
baz=47,SNR=13
B22K Teshekpuk Lake 45.76 336 P **P** **15 46 45.8 +0.9**
baz=41
G26K Porcupine Rive 45.81 329 P **P** **15 46 46.3 +0.9**
baz=45,SNR=8.1
BR106 Keskin Array S 45.82 82 P **P** **15 46 47.1 +1.0**
comp=Z,136nmcomp=Z,18nm,1.0s
BR105 Keskin Array S 45.83 82 P **P** **15 46 47.3 +1.1**
comp=Z,172nmcomp=Z,22nm,1.1s
BR131 Keskin Array S 45.84 82 P **P** **15 46 46.0 -0.2**
BR131 IAmb IAmb 15 46 48.5
comp=Z,21nm,1.0s
BRTR Keskin Array B 45.84 82 P **P** **15 46 47.2 +1.0**
comp=Z,10.0nm,0.8s,baz=320,slow=5.5,SNR=58
BRTR PcP **PcP** **15 48 24.8 +1.4**
comp=Z,1.5nm,0.9s,baz=298,slow=3.1,SNR=2.9
BRTR LR LR 16 06 49.4
comp=Z,76nm,19.5s,baz=300,slow=37
comp=Z,10.0nm,0.8s
BRTR Keskin Array B 45.84 82 P **P** **15 46 47.0 +0.7**
BR104 Keskin Array S 45.85 82 P **P** **15 46 47.3 +1.0**
comp=Z,164nmcomp=Z,21nm,1.1s
F25K Christian Rive 45.86 330 P **P** **15 46 46.2 +0.3**
baz=45,SNR=8.3
J29N Klondike Camp 45.87 324 P **P** **15 46 46.7 +0.7**
baz=47
SJG San Juan 45.95 225 LR LR 16 02 14.4
comp=Z,37nm,20.4s,baz=82,slow=31
K29M Barlow Dome 46.06 323 IAmb IAmb 15 46 51.9
comp=Z,24nm,1.4s
K29M Barlow Dome 46.06 323 P **P** **15 46 48.5 +0.8**
baz=47,SNR=14
TOLK Toolik Lake Re 46.12 333 P **P** **15 46 48.9 +1.0**
baz=43,SNR=13
I27K Kandik River 46.12 327 P **P** **15 46 47.7 -0.4**
baz=46
M31M Drury Creek, Y 46.12 320 IAmb IAmb 15 46 58.3
comp=Z,12nm,1.2s
M31M Drury Creek, Y 46.12 320 P **P** **15 46 47.8 -0.3**
baz=48
D23K Nanushuk River 46.15 334 P **P** **15 46 48.2 +0.1**
baz=42,SNR=12
E24K Your Creek 46.26 332 P **P** **15 46 48.7 -0.4**
baz=43
N32M Quiet Lake 46.37 319 P **P** **15 46 49.5 -0.5**
baz=48
KIRS Kirsehir-Merke 46.41 83 ⇑P **P** **15 46 51.5 +0.8**
DAWY Dawson 46.51 324 P **P** **15 46 52.0 +0.9**
DAWY **pP** **15 46 52.8 -1.4**
DAWY Dawson 46.51 324 P **P** **15 46 51.0 -0.1**
baz=46,SNR=19
E23K Chandalar 46.56 332 P **P** **15 46 51.5 0.0**
baz=42
B21K Ikpikpuk River 46.57 336 P **P** **15 46 51.1 -0.3**
baz=40
ARTI Arti 46.61 50 LR LR 16 05 14.3
comp=Z,193nm,18.1s,baz=255,slow=35
ARTI Arti 46.61 50 P **P** **15 46 51.8 -0.1**
ARTI IAmb IAmb 15 46 54.8
comp=Z,15nm,0.8s
M30M Minto, Yukon 46.69 322 P **P** **15 46 52.9 +0.4**
baz=47,SNR=7.6
D22K Ayikyak River 46.69 334 P **P** **15 46 52.3 -0.1**
baz=41
L29M L29M 46.77 323 IAmb IAmb 15 47 00.4
comp=Z,10nm,1.0s
L29M L29M 46.77 323 P **P** **15 46 53.5 +0.3**
baz=46,SNR=8.7
R33M Jennings River 46.77 316 IAmb IAmb 15 46 58.8
comp=Z,17nm,1.1s
R33M Jennings River 46.77 316 P **P** **15 46 53.3 +0.1**
baz=48,SNR=11
I26K Coal Creek Min 46.79 327 P **P** **15 46 52.8 -0.4**
baz=45
NRIK Noril'sk 46.80 25 P **P** **15 46 54.1 +0.9**
comp=Z,1.0nm,0.5s,baz=321,slow=4.5,SNR=6.5
NRIK LR LR 16 07 07.3
comp=Z,78nm,18.7s,baz=323,slow=37
comp=Z,1.0nm,0.5s
NRIK Noril'sk 46.80 25 P **P** **15 46 53.1 -0.1**
LYMT Lyon Mountain 46.83 293 P **P** **15 46 54.5 +0.5**
B20K Meade River 46.83 337 P **P** **15 46 53.9 +0.5**
baz=38
P33M Teslin, Yukon 46.91 318 IAmb IAmb 15 46 58.4
comp=Z,12nm,1.4s
P33M Teslin, Yukon 46.91 318 P **P** **15 46 54.3 0.0**
baz=47
C21K Knifeblade Rid 46.97 335 P **P** **15 46 54.3 -0.3**
baz=40,SNR=11
G24K Hadweenzic Riv 47.00 330 IAmb IAmb 15 47 02.1
comp=Z,7.8nm,0.9s
G24K Hadweenzic Riv 47.00 330 P **P** **15 46 54.6 -0.2**
baz=43
E22K Anaktuvuk Pass 47.05 333 P **P** **15 46 55.6 +0.4**
baz=41,SNR=9.5
DLBC Dease Lake 47.06 314 LR LR 16 06 17.6
comp=Z,869nm,18.6s,baz=74,slow=36
DLBC Dease Lake 47.06 314 P **P** **15 46 55.5 +0.1**
baz=48
N31M Braeburn, Yuko 47.09 320 P **P** **15 46 55.6 -0.1**
baz=46
PRP Porcupine Dome 47.33 328 IAmb IAmb 15 47 04.7
comp=Z,29nm,1.8s
PRP Porcupine Dome 47.33 328 P **P** **15 46 56.3 -1.3**
baz=43
COLD Coldfoot 47.33 332 P **P** **15 46 58.3 +0.9**
COLD Coldfoot 47.33 332 P **P** **15 46 56.0 -1.4**
baz=41
E21K Killik River 47.33 334 P **P** **15 46 56.6 -0.9**
baz=40
M29M Somme Creek 47.34 322 P **P** **15 46 57.4 -0.3**
baz=30,SNR=20
WHY Whitehorse 47.35 319 P **P** **15 46 57.2 -0.5**
baz=46
BOZ Bozeman (W) 47.44 291 P **P** **15 46 59.7 +1.0**
A19K Wainwright 47.48 338 P **P** **15 46 58.1 -0.3**
baz=36
Q32M Nakina River 47.56 316 P **P** **15 46 58.5 -1.0**
baz=47
N30M Aishikik Lake 47.57 321 P **P** **15 46 58.8 -0.6**
baz=46

KIV Kislovodsk 47.65 72 P **P** **15 47 00.5 +0.2**
KIV Kislovodsk 47.65 72 P **P** **15 47 01.1 +0.8**
comp=Z,12nm,1.2s
P32M Atlin 47.66 317 P **P** **15 46 59.9 -0.2**
baz=46
G23K Bananza Creek 47.67 331 P **P** **15 46 59.9 -0.2**
baz=41
O30N Mendenhall 47.70 320 P **P** **15 47 00.4 0.0**
baz=46,SNR=8.9
YHL Hebgen Lake 47.73 290 IAmb IAmb 15 47 05.2
comp=Z,12nm,1.0s
D20K Etivluk River 47.73 336 P **P** **15 47 00.5 0.0**
baz=38
H17A Grant Village 47.73 289 IAmb IAmb 15 47 08.1
comp=Z,18nm,1.2s
MSO Missoula 47.75 294 P **P** **15 47 01.5 +0.5**
MSO IAmb IAmb 15 47 07.5
comp=Z,9.8nm,0.9s
H24K Noodor Dome 47.75 330 IAmb IAmb 15 47 07.9
comp=Z,7.7nm,0.9s
H24K Noodor Dome 47.75 330 P **P** **15 47 00.7 -0.1**
baz=42
YHB Horse Butte 47.80 290 IAmb IAmb 15 47 07.2
comp=Z,17nm,1.1s
S34M Telegraph Cree 47.84 314 IAmb IAmb 15 47 10.1
comp=Z,11nm,1.1s
S34M Telegraph Cree 47.84 314 P **P** **15 47 01.7 +0.3**
baz=47
KBZ Khabaz 47.92 72 P **P** **15 47 03.2 +1.0**
comp=Z,4.6nm,0.8s,baz=307,slow=9.4,SNR=9.6
KBZ LR LR 16 08 17.9
comp=Z,134nm,18.4s,baz=323,slow=38
comp=Z,4.6nm,0.8s
YPP Pitchstone Pla 47.94 289 IAmb IAmb 15 47 11.6
comp=Z,28nm,1.6s
J25K Salcha River, 47.95 327 IAmb IAmb 15 47 13.7
comp=Z,18nm,1.4s
J25K Salcha River, 47.95 327 P **P** **15 47 01.9 -0.4**
baz=43
BCAR Beaver Creek A 47.98 324 P **P** **15 47 03.4 +0.9**
E20K Nigu River 47.99 335 P **P** **15 47 02.7 +0.1**
baz=38
L27K Beaver Creek, 48.00 324 P **P** **15 47 03.2 +0.5**
baz=44,SNR=10
SCRK Sand Creek 48.00 326 IAmb IAmb 15 47 10.1
comp=Z,16nm,1.0s
SCRK Sand Creek 48.00 326 P **P** **15 47 02.8 0.0**
baz=43,SNR=12
C19K Lookout Ridge 48.07 337 IAmb IAmb 15 47 07.7
comp=Z,16nm,1.1s
C19K Lookout Ridge 48.07 337 P **P** **15 47 03.2 +0.1**
baz=36,SNR=17
DLMT Dillon 48.09 292 IAmb IAmb 15 47 12.9
comp=Z,18nm,1.1s
T35M Bob Quinn 48.14 313 P **P** **15 47 04.1 +0.3**
baz=46
BVCY Beaver Creek 48.15 323 P **P** **15 47 03.8 0.0**
baz=44
HYT Haines Junctio 48.16 320 IAmb IAmb 15 47 09.2
comp=Z,18nm,1.2s
HYT Haines Junctio 48.16 320 P **P** **15 47 04.2 +0.1**
baz=45
F21K Alatna River 48.16 333 P **P** **15 47 04.1 +0.3**
baz=39,SNR=6.7
POKR Poker Plat Res 48.17 329 P **P** **15 47 04.2 +0.3**
baz=42
YUK4 Talbot Arm 48.18 321 P **P** **15 47 03.1 -1.2**
baz=45,SNR=9.4
D19K Kuna River 48.24 336 P **P** **15 47 04.5 0.0**
baz=37
DOT Dot Lake 48.26 326 IAmb IAmb 15 47 09.5
comp=Z,15nm,1.2s
IL31 48.27 328 IAmb IAmb 15 47 11.6
comp=Z,12nm,1.0s
ILAR Eielson Array 48.27 328 P **P** **15 47 05.7 +1.0**
comp=Z,8.6nm,1.1s,baz=33,slow=6.5,SNR=28
ILAR PcP **PcP** **15 48 30.8 -0.6**
comp=Z,0.7nm,0.8s,baz=15,slow=3.9,SNR=4.2
ILAR LR LR 16 06 38.2
comp=Z,132nm,20.1s,baz=76,slow=35
comp=Z,8.6nm,1.1s
ILAR Eielson Array 48.27 328 P **P** **15 47 05.1 +0.4**
MOOW Moose Ponds 48.27 289 IAmb IAmb 15 47 12.5
comp=Z,11nm,1.3s
LOHW Long Hollow 48.30 289 IAmb IAmb 15 47 12.8
comp=Z,12nm,1.3s
NEW Newport 48.32 297 LR LR 16 06 28.7
comp=Z,493nm,18.9s,baz=48,slow=35
NEW Newport 48.32 297 P **P** **15 47 05.8 +0.5**
NEW IAmb IAmb 15 47 12.1
comp=Z,9.5nm,0.8s
SKAG Skagway 48.35 318 P **P** **15 47 06.2 +0.9**
baz=45
BW06 Boulder Array 48.35 287 IAmb IAmb 15 47 12.2
comp=Z,15nm,1.1s
PD31 Pinedale Array 48.35 287 IAmb IAmb 15 47 12.2
comp=Z,15nm,1.1s
PDAR Pinedale Array 48.35 287 P **P** **15 47 05.8 -0.1**
comp=Z,8.9nm,1.0s,baz=64,slow=7.1,SNR=22
PDAR PP **PP** **15 49 01.4 +3.2**
comp=Z,3.5nm,1.1s,baz=57,slow=11,SNR=6.1
PDAR LR LR 16 06 18.2
comp=Z,332nm,19.0s,baz=25,slow=35
comp=Z,8.9nm,1.0s
YUK6 Outpost Mounta 48.37 321 P **P** **15 47 06.1 +0.3**
baz=45
ISCO Idaho Springs 48.39 281 IAmb IAmb 15 47 14.4
comp=Z,18nm,1.2s
RIDG Independent Ri 48.43 326 IAmb IAmb 15 47 17.2
comp=Z,20nm,1.2s
RIDG Independent Ri 48.43 326 P **P** **15 47 06.4 +0.4**
baz=43
P30M Million Dollar 48.47 319 P **P** **15 47 06.9 +0.6**
baz=45
COLA College 48.47 329 P **P** **15 47 06.5 +0.3**
baz=41
SNOW Snow King Moun 48.48 289 IAmb IAmb 15 47 13.8
comp=Z,12nm,0.8s
YUK3 Moose Creek 48.48 323 P **P** **15 47 06.5 -0.1**
baz=44
FXWY Fox Creek 48.49 289 IAmb IAmb 15 47 14.3
comp=Z,13nm,1.1s
M27K Edge Creek, AK 48.52 324 IAmb IAmb 15 47 13.8
comp=Z,20nm,1.3s
M27K Edge Creek, AK 48.52 324 P **P** **15 47 07.1 +0.3**
baz=44
HDA Harding Lake 48.56 328 P **P** **15 47 07.7 +0.8**
HDA IAmb IAmb 15 47 14.6
comp=Z,6.6nm,0.8s
HDA Harding Lake 48.56 328 P **P** **15 47 06.8 -0.1**
baz=42,SNR=7.0
YUK8 Steele Glacier 48.60 322 P **P** **15 47 07.5 -0.2**
baz=44
CCB Clear Creek Bu 48.62 328 IAmb IAmb 15 47 09.5
comp=Z,24nm,1.9s
H22K Ishtalitna Cre 48.65 331 P **P** **15 47 07.7 +0.1**
baz=40,SNR=6.2
K24K Donnelly Dome 48.67 327 P **P** **15 47 08.0 +0.2**
baz=42
MENT Mentasta 48.68 325 IAmb IAmb 15 47 15.3
comp=Z,9.3nm,1.1s
I23K Minto, Yukon-K 48.68 330 P **P** **15 47 07.2 -0.7**
baz=41,SNR=9.3
G21K Allakaket 48.72 332 P **P** **15 47 08.3 +0.2**
baz=39
C18K Utukok River 48.78 337 P **P** **15 47 08.3 -0.4**
baz=35,SNR=9.4
U35K Hyder 48.79 312 P **P** **15 47 09.0 +0.3**
baz=46
WRH Wood River Hil 48.84 328 IAmb IAmb 15 47 16.5
comp=Z,32nm,1.6s
F20K Avaraart Lake 48.84 334 P **P** **15 47 09.4 +0.3**
baz=38
M26K Nabesna, AK 48.85 324 IAmb IAmb 15 47 22.7
comp=Z,17nm,1.2s
M26K Nabesna, AK 48.85 324 P **P** **15 47 08.9 -0.3**
baz=43
E19K Redstone River 48.87 335 IAmb IAmb 15 47 16.1
comp=Z,11nm,0.8s
E19K Redstone River 48.87 335 P **P** **15 47 09.8 +0.5**
baz=37,SNR=21
R32K Eaglecrest 48.88 316 IAmb IAmb 15 47 13.8
comp=Z,25nm,1.3s
R32K Eaglecrest 48.88 316 P **P** **15 47 09.8 +0.3**
baz=45
O29M Mount Kennedy 48.90 320 IAmb IAmb 15 47 18.1
comp=Z,30nm,1.5s

O29M	**Mount Kennedy** baz=44	48.90	320	P	P	15 47 10.0	+0.2
LLLB	**Lillooet** comp=Z,9.7nm,1.0s	48.95	302	IAmb	IAmb	15 47 15.0	
NEA2	**Nenana** comp=Z,10nm,1.1s	49.02	329	IAmb	IAmb	15 47 18.0	
NEA2	**Nenana** baz=40	49.02	329	P	P	15 47 10.3	-0.1
O28M	**Mount Upton** baz=44	49.12	322	P	P	15 47 11.3	-0.3
MLY	**Manley** comp=Z,34nm,1.9s	49.15	330	IAmb	IAmb	15 47 13.6	
MLY	**Manley** baz=40,SNR=8.0	49.15	330	P	P	15 47 11.0	-0.5
AHID	**Auburn Hatcher** comp=Z,11nm,0.9s	49.15	288	IAmb	IAmb	15 47 29.3	
PAX	**Paxson** comp=Z,15nm,1.2s	49.20	326	IAmb	IAmb	15 47 23.5	
PAX	**Paxson** baz=42	49.20	326	P	P	15 47 12.4	+0.5
IMAR	**Indian Mountai**	49.20	332	P	P	15 47 12.6	+0.8
H21K	**Melozitna Rive** comp=Z,27nm,1.8s	49.21	331	IAmb	IAmb	15 47 14.6	
H21K	**Melozitna Rive** baz=39	49.21	331	P	P	15 47 12.4	+0.5
RTBA	**Rita Blanca** comp=Z,24nm,1.3s	49.30	276	IAmb	IAmb	15 47 23.4	
KOPT	**Kop Dagi** comp=Z,21nm,1.2s	49.30	77	IAmb	IAmb	15 47 22.3	
C17K	**DeLong Mountai** baz=34	49.33	338	P	P	15 47 12.8	0.0
CTGM	**Chitina Glacie** comp=Z,14nm,1.2s	49.36	322	IAmb	IAmb	15 47 15.6	
WRAK	**Wrangell Islan** baz=45	49.36	314	P	P	15 47 13.4	+0.3
CTG	**Chitna Glacier** baz=43	49.36	322	P	P	15 47 13.6	+0.3
I21K	**Tanana** baz=39	49.37	331	P	P	15 47 13.2	+0.1
BARN	**Barnard Glacie** comp=Z,13nm,1.0s	49.40	322	IAmb	IAmb	15 47 18.5	
S32K	**Killisnoo** baz=44	49.48	316	P	P	15 47 14.6	+0.6
F19K	**Shaleruckik Mo** baz=36	49.50	335	P	P	15 47 14.5	+0.4
HARP	**HAARP** baz=42	49.53	325	P	P	15 47 13.6	-0.8
O20A	**White River Ci** comp=Z,14nm,1.1s	49.54	284	IAmb	IAmb	15 47 27.3	
MCARA	**McCarthy VSAT** baz=42	49.61	323	P	P	15 47 15.2	+0.2
RDOG	**Red Dog Mine** comp=Z,20nm,1.2s	49.63	338	IAmb	IAmb	15 47 19.0	
RDOG	**Red Dog Mine** baz=34	49.63	338	P	P	15 47 15.0	-0.1
MCK	**McKinley** baz=40,SNR=8.9	49.64	328	P	P	15 47 15.2	0.0
E18K	**Tukpahlearik C** comp=Z,13nm,1.1s	49.66	336	IAmb	IAmb	15 47 19.4	
E18K	**Tukpahlearik C** baz=35	49.66	336	P	P	15 47 15.8	+0.5
T25A	**Trinidad** comp=Z,13nm,1.0s	49.68	278	IAmb	IAmb	15 47 23.4	
DHY	**Denali Highway** comp=Z,12nm,1.1s	49.69	327	IAmb	IAmb	15 47 22.8	
DHY	**Denali Highway** baz=41	49.69	327	P	P	15 47 16.0	+0.3
S31K	**Pelican** baz=44	49.74	317	P	P	15 47 16.7	+0.7
V35K	**Ketchikan** baz=45	49.84	312	P	P	15 47 17.0	+0.2
RND	**Reindeer** comp=Z,12nm,1.1s	49.87	328	IAmb	IAmb	15 47 24.7	
H20K	**Anotleneega Mo** baz=37,SNR=14	49.87	332	P	P	15 47 17.5	+0.5
U33K	**Whale Pass** baz=44	49.88	314	P	P	15 47 17.8	+0.7
G19K	**Purcell Mounta** baz=36,SNR=9.6	49.90	334	P	P	15 47 18.0	+0.8
C16K	**Lisburne Hills** comp=Z,9.6nm,0.9s	49.94	339	IAmb	IAmb	15 47 23.9	
C16K	**Lisburne Hills** baz=32,SNR=15	49.94	339	P	P	15 47 17.7	+0.3
BPAW	**Bear Paw Mtn.** comp=Z,20nm,1.4s	49.94	329	IAmb	IAmb	15 47 25.0	
BPAW	**Bear Paw Mtn.** baz=39	49.94	329	P	P	15 47 18.0	+0.5
N25K	**Chitina, Valde** baz=42	49.95	324	P	P	15 47 18.0	+0.4
D17K	**Noatak River** baz=33,SNR=14	49.97	337	P	P	15 47 17.9	+0.3
F10A	**Beach Ranch, E**	49.97	295	P	P	15 47 18.5	+0.4
F10A	comp=Z,14nm,0.9s			IAmb	IAmb	15 47 24.2	
PLID	**Pearl Lake**	49.99	294	P	P	15 47 18.8	+0.3
PLID	comp=Z,19nm,0.9s			IAmb	IAmb	15 47 24.7	
SIT	**Sitka** baz=44	50.06	316	P	P	15 47 19.0	+0.6
M24K	**Tolsona, Glenn** baz=41	50.06	326	P	P	15 47 19.3	+0.8
CRQE	**Cirque** baz=42	50.10	323	P	P	15 47 19.2	+0.3
F18K	**Selawik** baz=35,SNR=13	50.13	335	P	P	15 47 19.2	+0.4
MESA	**MESA** baz=42	50.15	322	P	P	15 47 19.3	0.0
EPH	**Ephrata** comp=Z,7.5nm,1.2s	50.15	298	IAmb	IAmb	15 47 49.2	
WAT6	**Susitna Watana** baz=40,SNR=8.3	50.18	327	P	P	15 47 19.3	-0.2
HWUT	**Hardware Ranch** comp=Z,19nm,1.0s	50.22	287	IAmb	IAmb	15 47 26.8	
WAT1	**Susitna Watana** baz=40	50.23	327	P	P	15 47 20.1	+0.4
TRF	**Thorofare Moun** comp=Z,33nm,1.5s	50.25	329	IAmb	IAmb	15 47 23.1	
TRF	**Thorofare Moun** baz=39	50.25	329	P	P	15 47 20.1	+0.1
HLID	**Hailey** comp=Z,16nm,1.1s	50.28	291	IAmb	IAmb	15 47 31.5	
CRAG	**Craig** baz=44	50.34	313	P	P	15 47 20.6	0.0
BMRM	**Bremner River** baz=41	50.43	324	P	P	15 47 21.0	-0.3
KLU	**Klutina** comp=Z,14nm,1.0s	50.45	325	IAmb	IAmb	15 47 33.0	
KLU	**Klutina** baz=41	50.45	325	P	P	15 47 21.6	+0.1
CHUM	**Lake Minchumin** baz=38	50.47	330	P	P	15 47 21.5	0.0
G18K	**Tagagawik** baz=35	50.48	334	P	P	15 47 21.8	+0.3
AKTO	**Aktyubinsk** comp=Z,174nm,18.0s,baz=122,slow=36	50.55	56	LR	LR	16 08 26.1	
BSUT	**Blindstream Ca**	50.58	286	P	P	15 47 23.9	+0.9
BBB	**Bella Bella** comp=Z,156nm,19.9s,baz=36,slow=35	50.62	307	LR	LR	16 07 39.2	
F17K	**Baldwin Pennin** baz=34	50.62	336	P	P	15 47 22.2	-0.4
SCM	**Sheep Creek Mo** baz=40	50.62	326	P	P	15 47 23.0	+0.2
HVU	**Hansel Valley**	50.72	288	P	P	15 47 23.9	0.0
LTY	**Liberty**	50.73	299	P	P	15 47 23.6	-0.2
LTY	comp=Z,14nm,0.9s			IAmb	IAmb	15 47 29.7	
M23K	**Glacier View** baz=40	50.78	326	P	P	15 47 24.6	+0.8
HAWA	**Hanford** comp=Z,29nm,1.8s	50.80	297	IAmb	IAmb	15 49 03.5	
BMO	**Blue Mountains** comp=Z,15nm,0.9s	50.81	294	IAmb	IAmb	15 47 29.9	
TIXI	**Tiksi** comp=Z,30nm,20.1s,baz=16,slow=33	50.85	7	LR	LR	16 06 21.4	
TIXI	**Tiksi**	50.85	7	P	P	15 47 25.1	+1.0
CBB	**Campbell River**	50.94	304	P	P	15 47 26.5	+1.3
SML	**Sawmill** baz=39	50.95	326	P	P	15 47 25.9	+0.7
P18A	**Preston Nutter** comp=Z,18nm,1.3s	50.97	285	IAmb	IAmb	15 47 55.8	
GCSA	**Galena City Sc** baz=36	50.98	333	P	P	15 47 25.6	+0.3
H18K	**Honhosa River** comp=Z,15nm,0.9s	51.01	333	IAmb	IAmb	15 47 33.0	
H18K	**Honhosa River** baz=35,SNR=16	51.01	333	P	P	15 47 26.0	+0.4
CUT	**Chulitna** baz=39	51.06	328	P	P	15 47 26.1	+0.2
L22K	**Petersville** comp=Z,31nm,1.6s	51.11	328	IAmb	IAmb	15 47 27.9	
EYAK	**Cordova Ski Ar** baz=40	51.12	324	P	P	15 47 26.3	-0.1
BRDY	**Brady** comp=Z,12nm,1.0s	51.15	269	IAmb	IAmb	15 47 32.7	
KAIM	**Kayak Island** baz=41	51.16	323	P	P	15 47 26.6	-0.1
PV12	**Saucer Basin,** comp=Z,22nm,1.0s	51.16	282	IAmb	IAmb	15 47 51.3	
PPLA	**Purkeypile**	51.22	329	P	P	15 47 27.7	+0.3
PPLA	comp=Z,26nm,1.4s			IAmb	IAmb	15 47 29.8	
PPLA	**Purkeypile** baz=38	51.22	329	P	P	15 47 27.0	-0.3
PV16	**Nyswonger Mesa** comp=Z,14nm,1.1s	51.23	283	IAmb	IAmb	15 47 35.5	
PV03	**Paradox Valley** comp=Z,12nm,1.0s	51.23	282	IAmb	IAmb	15 47 35.4	
PV19	**Morning Glory** comp=Z,21nm,1.2s	51.27	283	IAmb	IAmb	15 47 35.8	
G17K	**Kiwalik Mounta** baz=34,SNR=10	51.27	335	P	P	15 47 27.2	-0.3
J19K	**Poorman** baz=36,SNR=12	51.27	331	P	P	15 47 27.8	+0.3
PV17	**East Wray Mesa** comp=Z,22nm,1.4s	51.28	283	IAmb	IAmb	15 47 39.3	
GLI	**Glacier Island** baz=40	51.29	325	P	P	15 47 27.7	0.0
PV13	**Radium Mtn., P** comp=Z,21nm,1.1s	51.29	282	IAmb	IAmb	15 47 35.3	
KNK	**Knik Glacier** baz=39	51.29	326	P	P	15 47 27.6	-0.2
PMR	**Palmer** baz=39	51.36	326	P	P	15 47 27.7	-0.4
K20K	**Telida** baz=37,SNR=7.0	51.37	330	P	P	15 47 27.5	-0.8
MPU	**Maple Canyon** comp=Z,26nm,1.2s	51.41	286	IAmb	IAmb	15 47 37.0	
MARD	**Mardin** comp=Z,16nm,0.9s	51.43	79	IAmb	IAmb	15 47 37.2	
GNI	**Garni** comp=Z,88nm,20.4s,baz=328,slow=36	51.44	74	LR	LR	16 09 29.3	
GNI	**Garni**	51.44	74	P	P	15 47 29.2	0.0
GNI	comp=Z,22nm,0.9s			IAmb	IAmb	15 47 37.5	
BGU	**Big Grassy Mou** comp=Z,20nm,1.6s	51.48	288	IAmb	IAmb	15 47 35.7	
SRU	**San Rafael Swe** comp=Z,34nm,1.9s	51.49	284	IAmb	IAmb	15 47 48.4	
PV05	**Paradox Valley** comp=Z,19nm,1.0s	51.50	282	IAmb	IAmb	15 47 36.0	
TORD	**Torodi Ar. Bea** comp=Z,3.8nm,0.8s,baz=312,slow=6.4,SNR=13 comp=Z,3.8nm,0.8s	51.50	134	P	P	15 47 28.6	-1.2
M22K	**Willow** baz=38	51.53	327	P	P	15 47 29.3	-0.1
H17K	**Granite Mounta** comp=Z,24nm,1.5s	51.57	334	IAmb	IAmb	15 47 33.1	
H17K	**Granite Mounta** baz=34,SNR=9.5	51.57	334	P	P	15 47 29.1	-0.7
G16K	**Koyuk River** baz=33	51.75	335	P	P	15 47 29.8	-1.2
MMAI	**Mandel Meron Ar** comp=Z,5.0nm,1.0s,baz=340,slow=8.1,SNR=3.8	51.75	87	P	P	15 47 32.0	+0.4
MMAI	comp=Z,210nm,21.4s,baz=310,slow=38 comp=Z,5.0nm,1.0s			LR	LR	16 10 51.5	
SKT	**Skwentna**	51.76	328	P	P	15 47 31.7	+0.4
SKT	comp=Z,27nm,1.4s			IAmb	IAmb	15 47 37.5	
SKT	**Skwentna** baz=38	51.76	328	P	P	15 47 31.2	-0.1
MVCO	**Mesa Verde** comp=Z,24nm,1.4s	51.82	281	IAmb	IAmb	15 47 46.1	
RC01	**Rabbit Creek A** comp=Z,25nm,1.2s	51.93	326	IAmb	IAmb	15 47 35.3	
RC01	**Rabbit Creek A** baz=38	51.93	326	P	P	15 47 32.7	+0.2
J18K	**Innoko River** baz=35,SNR=6.9	51.98	331	P	P	15 47 32.0	-0.9
F15K	**North Star Dit** baz=31,SNR=12	51.99	337	P	P	15 47 32.9	0.0
P23K	**Montague Islan** baz=39	52.07	324	P	P	15 47 33.1	-0.3
Q23K	**Middleton Isla** baz=39	52.17	323	P	P	15 47 34.5	+0.3
JCT	**Junction City** comp=Z,16nm,0.8s	52.21	269	IAmb	IAmb	15 47 38.6	
AB31	**Akbulak array** comp=Z,12nm,1.1s	52.27	56	IAmb	IAmb	15 47 45.7	
ABKAR	**Akbulak array**	52.27	56	P	P	15 47 35.3	+0.2
M20K	**Styx River** baz=37	52.30	329	P	P	15 47 35.0	-0.3
H16K	**Elim** baz=32	52.36	335	P	P	15 47 35.3	-0.3
O22K	**Cooper Landing** baz=38	52.41	326	P	P	15 47 35.9	-0.1
ANMO	**Albuquerque** comp=Z,654nm,18.2s,baz=51,slow=35	52.42	278	LR	LR	16 09 02.4	
G15K	**Niuluk** baz=31	52.47	336	P	P	15 47 36.6	+0.3
HMU	**Henry Mountain** comp=Z,30nm,1.4s	52.47	284	IAmb	IAmb	15 47 52.9	
L19K	**White Mountain** baz=36	52.53	330	P	P	15 47 37.2	+0.2
SLKM	**Skilak Lake** comp=Z,31nm,1.3s	52.54	326	IAmb	IAmb	15 47 39.5	
F14K	**Arctic Creek** baz=30	52.55	337	P	P	15 47 37.1	+0.1
SPU	**Mount Spurr**	52.55	328	P	P	15 47 37.7	+0.5
SPU	comp=Z,24nm,1.6s			IAmb	IAmb	15 47 44.2	
SPCR	**Spurr Chakacha** baz=37	52.58	328	P	P	15 47 37.5	+0.1
N20K	**Mount Spurr** baz=37,SNR=6.6	52.58	328	P	P	15 47 37.6	+0.2
OZNA	**Ozona** comp=Z,14nm,0.9s	52.59	270	IAmb	IAmb	15 47 45.2	
HOOD	**Mount Hood Mea** comp=Z,20nm,1.0s	52.60	297	IAmb	IAmb	15 47 44.7	
CAPN	**Captain Cook N** baz=37	52.61	327	P	P	15 47 37.7	+0.2
SEW	**Seward** baz=38	52.62	325	P	P	15 47 37.2	-0.4
M19K	**Big River Lodg** baz=36	52.63	329	P	P	15 47 36.5	-1.2
I17K	**Unalakleet** baz=33	52.63	334	P	P	15 47 37.3	-0.3
ELK	**Elko** comp=Z,570nm,18.4s,baz=48,slow=35	52.75	289	LR	LR	16 09 10.4	
TNA	**Tin City**	52.80	338	P	P	15 47 39.8	+1.0
TNA	comp=Z,18nm,1.2s			IAmb	IAmb	15 47 43.2	
TNA	**Tin City** baz=29,SNR=20	52.80	338	P	P	15 47 38.2	-0.6
L18K	**Granite Mounta** comp=Z,17nm,1.2s	53.00	331	IAmb	IAmb	15 47 44.5	
L18K	**Granite Mounta** baz=35,SNR=8.6	53.00	331	P	P	15 47 39.6	-0.8
J16K	**Anvik River** comp=Z,15nm,1.3s	53.12	333	IAmb	IAmb	15 47 46.3	
J16K	**Anvik River** baz=33,SNR=8.8	53.12	333	P	P	15 47 40.3	-0.9
ANM	**Nome** baz=30	53.13	336	P	P	15 47 39.7	-1.6
I05D	**Terrebonne, OR** comp=Z,16nm,1.3s	53.17	296	IAmb	IAmb	15 47 45.5	
ASF	**Jabal al Asfar** comp=Z,114nm,20.9s,baz=295,slow=38	53.21	86	LR	LR	16 11 48.7	
WVOR	**Wild Horse Val**	53.23	293	P	P	15 47 43.3	+0.8
WVOR	comp=Z,23nm,1.1s			IAmb	IAmb	15 47 49.3	
BRSE	**Bradley Lake S** baz=37	53.31	326	P	P	15 47 41.9	-0.9
H04A	**Detroit Lake** comp=Z,20nm,1.2s	53.33	297	IAmb	IAmb	15 47 46.4	
M18K	**Stony River** baz=35	53.37	330	P	P	15 47 42.1	-1.0
L17K	**Donlin** baz=34	53.50	331	P	P	15 47 42.7	-1.3
N19K	**Bonanza Creek** baz=35	53.55	328	P	P	15 47 43.5	-1.1
WIFE	**Three Sisters-** comp=Z,12nm,1.1s	53.61	296	IAmb	IAmb	15 47 56.5	
HOM	**Homer** baz=36	53.65	326	P	P	15 47 44.9	-0.2
PSUT	**Pine Spring**	53.67	286	IAmb	IAmb	15 47 54.9	
PKCU	**Pink Cliffs** comp=Z,19nm,1.1s	53.67	284	IAmb	IAmb	15 47 56.7	
833A	**Chaparral WMA,** comp=Z,18nm,1.1s	53.67	267	IAmb	IAmb	15 47 51.9	
BORK	**Borovoye**	53.85	47	P	P	15 47 47.1	+0.4
M17K	**Holitna River** baz=34	53.88	330	P	P	15 47 46.4	-0.4
BVAR	**Borovoye Array** comp=Z,4.3nm,0.8s,baz=314,slow=8.6,SNR=22	53.89	47	P	P	15 47 47.8	+0.8
BVAR	comp=Z,1.8nm,0.7s,baz=318,slow=4.1,SNR=4.2			PcP	PcP	15 48 52.9	+0.5
BVAR	comp=Z,60nm,18.3s,baz=303,slow=36 comp=Z,4.3nm,0.8s			LR	LR	16 10 24.0	
J05D	**Fort Rock, OR**	53.89	295	P	P	15 47 48.5	+1.1
O19K	**Port Alsworth** baz=35	54.01	328	P	P	15 47 47.4	-0.4
N18K	**Kilae Creek** baz=34	54.05	329	P	P	15 47 47.7	-0.4
EIL	**Elat** comp=Z,85nm,18.0s,baz=350,slow=40	54.08	90	LR	LR	16 14 45.7	
I04A	**Tendick Farm,** comp=Z,20nm,1.2s	54.09	297	IAmb	IAmb	15 48 01.3	
MDP	**Montagnes des** comp=Z,59nm,21.2s,baz=324,slow=30	54.09	204	LR	LR	16 05 40.0	
P19K	**Oil Pt** baz=36	54.13	327	P	P	15 47 47.6	-1.1
L16K	**Owhat River** baz=33	54.16	332	P	P	15 47 48.1	-0.8
K15K	**Wolf Creek Mou** baz=32	54.19	333	P	P	15 47 48.1	-1.0
KNB	**Kanab** comp=Z,14nm,1.1s	54.26	284	IAmb	IAmb	15 48 07.7	
J14K	**Nanvaranak Lak** baz=31	54.28	334	P	P	15 47 48.8	-1.0
LCMT	**Little Creek M** comp=Z,17nm,1.6s	54.49	285	IAmb	IAmb	15 47 53.6	
N17K	**Nushagak Hills** baz=34	54.54	330	P	P	15 47 50.8	-0.9
O18K	**Koktuh Hills** comp=Z,13nm,1.0s	54.54	328	IAmb	IAmb	15 47 57.4	
O18K	**Koktuh Hills** baz=35	54.54	328	P	P	15 47 50.4	-1.3
M16K	**Timber Creek** baz=33	54.60	331	P	P	15 47 51.0	-1.1
WUAZ	**Wupatki** comp=Z,17nm,1.4s	54.62	282	IAmb	IAmb	15 48 04.2	
L15K	**Ungalak Mounta** baz=32,SNR=5.9	54.70	333	P	P	15 47 51.9	-0.9
Q20K	**Shuyak Island** baz=36	54.73	326	P	P	15 47 52.6	-0.5
Q19K	**Cape Douglas,**	54.84	327	P	P	15 47 54.3	+0.3
Q19K	**Cape Douglas,** baz=35	54.84	327	P	P	15 47 53.4	-0.6
P18K	**Big Mountain,** comp=Z,14nm,1.1s	54.93	328	IAmb	IAmb	15 47 59.8	
P18K	**Big Mountain,** baz=34	54.93	328	P	P	15 47 53.6	-0.9
N16K	**Nishlik Lake** baz=33	55.01	330	P	P	15 47 55.1	0.0
PRN	**Pahroc Range** comp=Z,11nm,1.1s	55.14	286	IAmb	IAmb	15 48 04.4	
O17K	**Koliganek Bris** baz=34	55.14	329	P	P	15 47 55.6	-0.4
GAMB	**Gambell** baz=26	55.15	339	P	P	15 47 55.0	-0.9
DBIC	**Dimbokro** comp=Z,13nm,1.2s,baz=350,slow=3.9,SNR=4.5	55.18	144	P	P	15 47 55.5	-1.3
DBIC	comp=Z,245nm,18.4s,baz=352,slow=33 comp=Z,13nm,1.2s			LR	LR	16 09 01.1	
DBIC	**Dimbokro**	55.18	144	P	P	15 47 55.9	-1.0
TXAR	**Lajitas Array** comp=Z,147nm,19.3s,baz=54,slow=35	55.21	271	LR	LR	16 10 37.7	
K13K	**Kusilvak Mount** comp=Z,13nm,1.1s	55.25	334	IAmb	IAmb	15 47 59.1	
K13K	**Kusilvak Mount** baz=30,SNR=11	55.25	334	P	P	15 47 56.2	-0.6
L14K	**Kuka Creek** comp=Z,13nm,1.2s	55.29	333	IAmb	IAmb	15 48 00.8	
L14K	**Kuka Creek** baz=31	55.29	333	P	P	15 47 56.6	-0.4
M15K	**Kasigluk River** baz=32	55.33	332	P	P	15 47 55.7	-1.7
P17K	**Kvichak River** baz=34	55.44	328	P	P	15 47 57.4	-0.7
KDAK	**Kodiak Island** comp=Z,200nm,18.9s,baz=50,slow=36	55.46	325	LR	LR	16 11 46.7	
KDAK	**Kodiak Island** baz=35	55.46	325	P	P	15 47 57.3	-1.0
Q18K	**Katmai Hardscr** baz=34	55.48	327	P	P	15 47 57.2	-1.5
O16K	**Kokwok River B** comp=Z,28nm,1.4s	55.57	329	IAmb	IAmb	15 48 01.5	
O16K	**Kokwok River B** baz=33,SNR=6.2	55.57	329	P	P	15 47 58.7	-0.4
M14K	**Bethel** comp=Z,15nm,0.8s	55.61	332	IAmb	IAmb	15 48 06.8	
M14K	**Bethel** baz=31,SNR=8.9	55.61	332	P	P	15 47 58.3	-1.1
N15K	**Kwethluk River** baz=32	55.63	331	P	P	15 47 59.1	-0.5
YBH	**Yreka Blue Hor** comp=Z,21nm,18.2s,baz=60,slow=35	55.78	295	LR	LR	16 11 08.5	
YBH	**Yreka Blue Hor** comp=Z,11nm,1.1s	55.78	295	IAmb	IAmb	15 48 05.7	
L02F	**Cave Junction** comp=Z,10nm,0.8s	55.91	296	IAmb	IAmb	15 48 07.6	
Q16K	**King Salmon** baz=33	55.94	328	P	P	15 48 00.9	-0.8
NV11	**Mina Array Sit** comp=Z,17nm,1.4s	55.97	289	IAmb	IAmb	15 48 09.1	
P16K	**Nushagak River** baz=33	56.02	329	P	P	15 48 01.5	-0.8
NVAR	**Mina Array Bea** comp=Z,1.6nm,0.8s,baz=50,slow=7.4,SNR=7.8	56.05	289	P	P	15 48 03.9	+0.8
NVAR	comp=Z,0.9nm,0.7s,baz=79,slow=4.3,SNR=6.1			PP	PP	15 50 04.8	-2.9
NVAR	comp=Z,446nm,18.6s,baz=48,slow=35 comp=Z,1.6nm,0.8s			LR	LR	16 11 14.8	
Q17K	**Contact Creek** baz=34	56.06	327	P	P	15 48 02.1	-0.7
SDV	**Santo Domingo** comp=Z,30nm,20.6s,baz=64,slow=34	56.09	226	LR	LR	16 09 57.3	
OHAK	**Old Harbor** baz=35	56.14	325	P	P	15 48 01.9	-1.3
PNTR	**Pine Nut** comp=Z,15nm,1.0s	56.21	291	IAmb	IAmb	15 48 11.5	
N14K	**Kuskokwak Cree** comp=Z,20nm,1.1s	56.25	332	IAmb	IAmb	15 48 09.1	
N14K	**Kuskokwak Cree** baz=31	56.25	332	P	P	15 48 03.3	-0.6
M13K	**Dall Lake** baz=30	56.25	333	P	P	15 48 03.0	-1.0
LHV	**Little Huntoon** comp=Z,18nm,1.4s	56.29	289	IAmb	IAmb	15 48 18.3	
N02D	**Trinity Center**	56.35	295	P	P	15 48 05.1	+0.1
N02D	comp=Z,7.6nm,0.8s			IAmb	IAmb	15 48 10.3	
O15K	**Ungalikthiuk R** baz=32	56.40	330	P	P	15 48 04.2	-0.9
O14K	**Tigyukauivet M** baz=31	56.72	331	P	P	15 48 06.9	-0.4
KHBM	**Hayfork Bally** comp=Z,14nm,0.9s	56.84	295	IAmb	IAmb	15 48 15.1	
MTPC	**Mountain Pass** comp=Z,16nm,1.4s	56.86	285	IAmb	IAmb	15 48 16.1	
GWY	**Greenwater Val** comp=Z,16nm,1.0s	56.91	287	IAmb	IAmb	15 48 16.9	
SII	**Sitkinak Islan** baz=34	56.97	325	P	P	15 48 08.8	-0.3
M11K	**Mekoryuk** baz=28	56.97	334	P	P	15 48 09.0	-0.1
R16K	**Pilot Point** baz=32	57.13	328	P	P	15 48 09.8	-0.5
CWC	**Cottonwood Cre** comp=Z,22nm,2.0s	57.45	288	IAmb	IAmb	15 48 24.4	
GSC	**Goldstone, Bar** comp=Z,13nm,1.2s	57.65	286	IAmb	IAmb	15 48 22.0	
CCCA	**Chr Cany lake** comp=Z,13nm,1.0s	57.77	287	IAmb	IAmb	15 48 22.9	
CHIR	**Chirikof Islan** baz=33	58.03	326	P	P	15 48 15.7	-0.8
ISA	**Isabella, Lake** comp=Z,14nm,1.4s	58.25	287	IAmb	IAmb	15 48 35.1	
ZALV	**Zalesovo Beam**	58.42	38	P	P	15 48 19.4	0.0

comp=Z,0.5nm,0.4s,baz=357,slow=7.4,SNR=4.9
ZALV PcP **PcP** **15 49 09.7 -0.3**
comp=Z,2.1nm,0.6s,baz=346,slow=5.4,SNR=8.3
ZALV LR LR 16 14 45.8
comp=Z,47nm,18.9s,baz=347,slow=37
comp=Z,0.5nm,0.4s
MHC Mount Hamilton 58.58 291 IAmb IAmb 15 48 25.8
comp=Z,18nm,1.2s
BOAV Boa Vista 58.70 212 P **P** **15 48 22.1 +0.4**
TPO Tropico Hills 58.72 287 IAmb IAmb 15 48 30.0
comp=Z,15nm,1.0s
PFO Pinyon Flats O 58.77 284 LR LR 16 12 38.0
comp=Z,282nm,21.2s,baz=55,slow=35
PFO Pinyon Flats O 58.77 284 P **P** **15 48 23.2 +0.9**
PFO IAmb IAmb 15 48 30.2
comp=Z,12nm,1.1s
KURK Kurchatov 58.87 43 P **P** **15 48 22.6 0.0**
KURBB Kurchatov Arra 58.91 44 P **P** **15 48 23.1 +0.2**
comp=Z,3.4nm,0.7s,baz=324,slow=7.2,SNR=23
KURBB PcP **PcP** **15 49 13.7 +1.7**
comp=Z,0.7nm,0.8s,baz=335,slow=4.2,SNR=4.1
comp=Z,3.4nm,0.7s
ELS Elsinore Mount 59.26 285 IAmb IAmb 15 48 30.0
comp=Z,10nm,1.2s
ZAIG Zacatecas 59.81 265 IAmb IAmb 15 48 32.8
comp=Z,22nm,1.6s
SDPT Sand Point 59.87 328 P **P** **15 48 28.3 -1.1**
baz=30
CHNA Chernabura Isl 60.06 327 P **P** **15 48 29.6 -1.1**
baz=30
SEY Seymchan 60.11 357 LR LR 16 14 01.8
comp=Z,92nm,20.5s,baz=338,slow=36
CMIG Matias Romero 60.34 255 LR LR 16 14 30.8
comp=Z,157nm,20.4s,baz=3.5,slow=36
YAK Yakutsk 60.39 9 LR LR 16 14 01.9
comp=Z,52nm,18.9s,baz=20,slow=35
SPIA Saint Paul Isl 60.80 335 P **P** **15 48 34.5 -1.1**
baz=25
JTS Las Juntas de 61.11 241 LR LR 16 15 21.3
comp=Z,96nm,18.5s,baz=125,slow=36
FALS False Pass 61.13 330 P **P** **15 48 36.8 -1.2**
baz=28
ROSC El Rosal 61.24 228 P **P** **15 48 40.2 +0.5**
comp=Z,9.0nm,0.6s,baz=316,slow=20,SNR=7.1
ROSC LR LR 16 12 42.2
comp=Z,62nm,20.9s,baz=9.1,slow=34
comp=Z,9.0nm,0.6s
UNV Unalaska Valle 62.87 331 P **P** **15 48 48.0 -1.6**
baz=26
LPIG La Paz 62.95 273 LR LR 16 15 23.0
comp=Z,81nm,19.2s,baz=40,slow=35
MAKZ Makanchi 63.35 44 P **P** **15 48 53.4 +0.3**
MKAR Makanchi Array 63.48 44 P **P** **15 48 53.7 -0.3**
comp=Z,2.5nm,0.9s,baz=329,slow=4.2,SNR=17
MKAR LR LR 16 16 48.5
comp=Z,64nm,18.0s,baz=308,slow=36
comp=Z,2.5nm,0.9s
MKAR Makanchi Array 63.48 44 P **P** **15 48 54.1 +0.1**
MA2 Magadan 63.52 358 LR LR 16 15 21.4
comp=Z,52nm,20.6s,baz=0.5,slow=35
ARSB Arslanbob 64.21 53 IAmb IAmb 15 49 11.9
comp=Z,9.0nm,1.4s
NIKH Nikolski High 64.27 332 P **P** **15 48 57.0 -1.9**
baz=25
CHGR Chuyangaron 64.66 58 IAmb IAmb 15 49 29.0
comp=Z,10nm,1.1s
RAYN Ar Rayn 64.68 86 P **P** **15 49 02.3 +0.2**
GAR Garm 64.91 57 P **P** **15 49 03.3 -0.2**
TLY Talaya 65.93 28 LR LR 16 19 34.5
comp=Z,44nm,18.6s,baz=338,slow=38
H10N2 ASCENSION HYDR 66.67 159 T T 17 01 08.4
baz=350,slow=75,SNR=18
H10N3 ASCENSION HYDR 66.67 159 T T 17 01 09.1
baz=350,slow=75,SNR=23
H10N1 ASCENSION HYDR 66.68 159 T T 17 01 10.8
baz=350,slow=75,SNR=37
OTAV Otavalo 67.10 230 P **P** **15 49 18.2 0.0**
OTAV IAmb IAmb 15 49 26.0
comp=Z,10nm,1.1s
KSH2 Kashi 67.12 53 P **P** **15 49 19.4 +1.6**
KSH2 pmax pmax
comp=Z,6.0nm,1.2s
H10S3 ASCENSION HYDR 67.73 160 T T 17 02 29.8
baz=350,slow=74,SNR=14
H10S2 ASCENSION HYDR 67.74 160 T T 17 02 30.4
baz=230,slow=74,SNR=15
WMQ Urumqi 68.01 42 *e*P **P** **15 49 26.5 +3.3**
WMQ sP pwP 15 49 36.8 +7.6
WMQ PcP **PcP** **15 49 47.9 -1.5**
SHEM Shemya Is, Ala 68.11 342 LR LR 16 19 18.1
comp=Z,39nm,21.9s,baz=304,slow=36
PETK Petropavlovsk- 69.66 353 P **P** **15 49 33.3 0.0**
comp=Z,4.5nm,1.0s,baz=347,slow=6.1,SNR=4.0
PETK LR LR 16 21 04.5
comp=Z,27nm,19.2s,baz=51,slow=37
comp=Z,4.5nm,1.0s
SONM Songino Array 70.17 27 P **P** **15 49 37.3 +0.7**
comp=Z,4.8nm,1.1s,baz=324,slow=6.0,SNR=20
SONM LR LR 16 21 06.2
comp=Z,58nm,20.2s,baz=0.5,slow=36
comp=Z,4.8nm,1.1s
SONM Songino Array 70.17 27 P **P** **15 49 36.5 -0.1**
ULN Ulaanbaatar 70.31 27 P **P** **15 49 37.0 -0.5**
ULN IAmb IAmb 15 49 39.5
comp=Z,8.7nm,1.1s
HEH HeiHe 71.76 13 *e*P **P** **15 49 46.6 +0.5**
HEH pmax pmax
comp=Z,11nm,1.3s
FURI Furi 72.97 100 LR LR 16 21 37.1
comp=Z,68nm,20.7s,baz=9.5,slow=36
KLR Kul'dur 73.24 10 P **P** **15 49 54.6 -0.3**
comp=Z,2.0nm,0.7s,baz=346,slow=7.7,SNR=8.0
KLR LR LR 16 21 29.2
comp=Z,28nm,19.2s,baz=28,slow=35
comp=Z,2.0nm,0.7s
BDFB Brasilia 73.56 195 P **P** **15 49 56.4 -0.8**
comp=Z,1.4nm,0.4s,baz=10,slow=5.6,SNR=4.8
BDFB LR LR 16 17 23.8
comp=Z,90nm,20.0s,baz=59,slow=32
comp=Z,1.4nm,0.4s
BDFB Brasilia 73.56 195 IAmb IAmb 15 50 03.6
comp=Z,14nm,1.4s
ATAH Atahualpa 73.77 227 LR LR 16 23 30.3
comp=Z,37nm,20.0s,baz=5.6,slow=37
GTA2 Gaotai 75.97 35 *e*P **P** **15 50 11.7 +0.6**
GTA2 pP pP 15 50 14.8 +0.5
GTA2 pmax pmax
comp=Z,4.0nm,0.9s
YSS Yuzhno-Sakhali 76.17 3 P **P** **15 50 12.4 +0.5**
BNX BinXian 76.20 14 ⇑P **P** **15 50 12.2 +0.1**
BNX pmax pmax
comp=Z,9.0nm,1.1s
MBAR Mbarara 76.87 112 LR LR 16 25 16.7
comp=Z,172nm,18.3s,baz=332,slow=37
NNA Nana 77.61 223 LR LR 16 24 34.8
comp=Z,38nm,19.8s,baz=342,slow=36
BTO2 Baotou 77.69 28 *e*P **P** **15 50 21.3 +0.6**
BTO2 pP **sP** **15 50 26.1 +1.0**
BTO2 sP **pwP** **15 50 28.4 +1.7**
BTO2 pmax pmax
comp=Z,12nm,0.9s
BTO2 pmax pmax
comp=Z,290nm,5.4s
CN2 Changchun 77.84 15 P **P** **15 50 20.0 -1.3**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
HHC Hu-ho-hao-te 78.00 26 *e*P **P** **15 50 21.7 -0.8**
HHC pmax pmax
comp=Z,8.0nm,0.6s
HHC pmax pmax
comp=Z,78nm,5.7s
USRK Ussuriysk Ar. 78.24 11 P **P** **15 50 23.3 -0.3**
comp=Z,1.6nm,0.6s,baz=332,slow=7.6,SNR=5.7
comp=Z,1.6nm,0.6s
LPAZ La Paz 78.66 214 P **P** **15 50 26.4 -0.4**
comp=Z,1.3nm,1.0s,baz=339,slow=4.9,SNR=3.8
LPAZ LR LR 16 23 37.5
comp=Z,26nm,20.3s,baz=18,slow=34
comp=Z,1.3nm,1.0s
ASAJ Asahikawa 79.00 3 P **P** **15 50 28.2 +0.5**
comp=Z,4.5nm,0.8s,baz=321,slow=7.8,SNR=4.8
comp=Z,4.5nm,0.8s
JKA Kamikawa-asahi 79.00 3 P **P** **15 50 28.3 +0.5**
BJI2 Beijing 79.84 23 P **P** **15 50 32.6 +0.2**
BJI2 pP **sP** **15 50 37.4 +0.6**
BJI2 sP **PcP** **15 50 39.6 -0.4**
BJI2 PcP **pwP** **15 50 41.6 +3.2**
BJI2 pmax pmax
LZH Lanzhou 80.36 34 *e*P **P** **15 50 35.4 -0.1**
LZH pP pP 15 50 40.0 +1.2
LZH pmax pmax
comp=Z,16nm,1.0s
LZDM Lanzhou Array 80.44 34 P **P** **15 50 35.9 -0.2**
comp=Z,0.5nm,0.3s,baz=338,slow=3.4,SNR=1.2
comp=Z,0.5nm,0.3s
HNS HongShan 82.03 25 ⇑P **P** **15 50 45.6 +1.5**
HNS pmax pmax
comp=Z,11nm,1.2s
GO01 Chusmiza 82.17 214 IAmb IAmb 15 50 51.7
comp=Z,7.9nm,0.8s
PB11 IPOC Station P 82.40 214 P **P** **15 50 46.4 +0.1**
PB11 IAmb IAmb 15 50 52.8
comp=Z,14nm,1.0s
XAN Xi'an 83.75 31 ⇓P **P** **15 50 54.0 +0.8**
XAN pmax pmax
comp=Z,9.0nm,0.8s
PB07 IPOC Station P 84.32 214 IAmb IAmb 15 50 57.6
comp=Z,11nm,1.0s
KSRS Korea Array 84.42 15 P **P** **15 50 56.5 +0.1**
comp=Z,4.9nm,0.8s,baz=350,slow=5.2,SNR=19
KSRS LR LR 16 32 09.1
comp=Z,22nm,18.3s,baz=325,slow=38
comp=Z,4.9nm,0.8s
KSAR Wonju Array Be 84.42 15 P **P** **15 50 56.5 0.0**
CD2 Chengdu 85.13 36 *e*P **P** **15 50 59.0 -1.2**
CPUP Villa Florida 85.59 201 P **P** **15 51 01.9 -0.3**
comp=Z,3.0nm,0.9s,baz=17,slow=5.7,SNR=5.3
comp=Z,3.0nm,0.9s
CPUP Villa Florida 85.59 201 IAmb IAmb 15 51 03.4
comp=Z,17nm,1.6s
MJAR Matsushiro Arr 86.36 7 P **P** **15 51 05.5 -0.7**
comp=Z,0.8nm,0.8s,baz=1.7,slow=5.0,SNR=2.1
comp=Z,0.8nm,0.8s
MJAR Matsushiro Arr 86.36 7 IAmb IAmb 15 53 35.6
comp=Z,21nm,2.0s
TSUM Tsumeb 87.23 133 LR LR 16 28 51.8
comp=Z,80nm,18.9s,baz=336,slow=35
NJ2 Nanjing 88.08 23 *e*P **P** **15 51 13.0 -1.6**
NJ2 pmax pmax
comp=Z,12nm,0.5s
LSZ Lusaka 88.34 122 LR LR 16 31 29.2
comp=Z,134nm,19.0s,baz=329,slow=36
PZH PanZhiHua 88.53 39 P **P** **15 51 16.2 -0.8**
PZH pmax pmax
comp=Z,10.0nm,1.1s
KMI2 Kunming 90.12 39 P **P** **15 51 23.9 -0.7**
KMI2 pmax pmax
comp=Z,14nm,0.8s
LCO Las Campanas 91.42 212 P **P** **15 51 30.9 +0.7**
CMAR Chiang Mai Arr 94.88 45 P **P** **15 51 46.0 -0.4**
comp=Z,1.9nm,0.8s,baz=323,slow=6.1,SNR=16
comp=Z,1.9nm,0.8s
LBTB Lobatse 95.72 128 LR LR 16 32 36.7
comp=Z,68nm,21.9s,baz=346,slow=34
PALK Pallekele 96.68 66 LR LR 16 38 13.2
comp=Z,76nm,18.6s,baz=334,slow=37
BOSA Boshof 98.74 130 LR LR 16 35 50.5
comp=Z,62nm,18.7s,baz=334,slow=35
TAOE Nuku Hiva Isla 106.37 279 *e*LR LR 16 27 43.5
comp=Z,128nm,24.4s
PPT2 Papeete2 118.66 282 *e*LR LR 16 33 23.8
comp=Z,154nm,24.5s
PPT2 *e*LR LR 16 33 33.2
comp=Z,198nm,23.8s
TBI Tubuai 123.30 278 *e*LR LR 16 35 26.4
comp=Z,378nm,24.8s
SNAA Sanae 130.38 168 PKP **PKPdf** **15 57 32.6 -0.3**
comp=Z,3.0nm,0.7s,baz=338,slow=1.8,SNR=3.6
ELIB Princess Elisa 134.79 158 *d*PKPdf **PKPdf** **15 57 41.9 +0.5**
WRA Warramunga Arr 141.73 19 PKP **PKPdf** **15 57 53.3 -2.3**
comp=Z,1.2nm,1.1s,baz=339,slow=2.7,SNR=5.7
DZM Mont Dzumac 141.98 329 *e*LR LR 16 44 12.2
comp=Z,118nm,22.9s
ASAR Alice Springs 145.28 20 PKPbc **PKPbc** **15 58 01.1 -0.4**
comp=Z,7.1nm,0.9s,baz=346,slow=2.7,SNR=49
ASAR Alice Springs 145.28 20 **PKPbc** **15 58 00.9 -0.6**
QSPA South Pole Qui 147.10 180 PKPbc **PKPdf** **15 58 03.6 +0.1**
comp=Z,9.0nm,0.8s,baz=182,slow=1.5,SNR=16
QSPA South Pole Qui 147.10 180 PKPdf **PKPdf** **15 58 04.8 +1.3**

WEL 08 15:53:00.3±1.3, 34°S±23″×17°9′W±3′6, h12km, M3.4/4, mB4.3/1, ML3.5/7, MLv3.4/4, Mw(mB)3.4/1, Error ellipse: s-maj=54.3km s-min=9.5km az=121.7, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**4.04**	**206**	P	Pn	15 54 03.1	+1.1
PKGZ	**Pakihiroa**	**4.21**	**209**	P	Pn	15 54 03.5	-0.9
PKGZ				S	Sn	15 54 53.9	+0.4
HAZ	**Te Kaha**	**4.25**	**213**	P	Pn	15 54 06.1	+1.3
HAZ				S	Sn	15 54 56.8	+2.5
PUZ	**Puketiti**	**4.33**	**206**	P	Pn	15 54 05.4	-0.5
PUZ				S	Sn	15 54 56.4	+0.1
RUGZ	**Raukumara Rang**	**4.47**	**212**	P	Pn	15 54 07.9	0.0
RUGZ				S	Sn	15 55 01.4	+1.5
TWGZ	**Tauwhareparae**	**4.52**	**208**	P	Pn	15 54 07.9	-0.8
TWGZ				S	Sn	15 55 03.9	+2.7
MWZ	**Matawai**	**4.84**	**211**	P	Pn	15 54 13.0	0.0
MWZ				S	Sn	15 55 08.6	-0.4
URZ	**Urewera**	**4.97**	**214**	P	Pn	15 54 14.0	-0.7
URZ				S	Sn	15 55 11.8	-0.2
SNGZ	**Shannon Statio**	**5.30**	**210**	P	Pn	15 54 19.0	-0.3
SNGZ				S	Sn	15 55 20.6	+0.4
MUGZ	**Murupara**	**5.30**	**215**	P	Pn	15 54 18.6	-0.7
MUGZ				S	Sn	15 55 21.6	+1.3
MTHZ	**Maungataniwha**	**5.57**	**213**	P	Pn	15 54 23.9	+0.8
MTHZ				S	Sn	15 55 27.7	+0.7

*JMA **08** 16:03:54.5±0.2, 26°N±1°×126°7E±0°9, h77km±1km, MV3.7/19, NEAR OKINAWAJIMA ISLAND*
*IDC **08** 16:03:54.2±2.1, 26°36N×126°69E, h82km±20km, mb3.4/11, mbtmp3.7/14, MS2.3/1, Error ellipse: s-maj=22.4km s-min=13.2km az=70.0*

ISC 08 16:03:53.9±0.8, 26°28N±0′06×126°73E±0′05, h85km±6km, n44, σ1$22/56, mb3.6/11, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKE	**Kume jima 2**	**0.07**	**49**	P	**Pn**	**16 04 05.7**	**-0.2**
JKE				S	**Sn**	**16 04 13.9**	**-0.9**
JAGN	**Aguni-jima**	**0.55**	**56**	P	**Pn**	**16 04 08.6**	**0.0**
JAGN				S	**Sn**	**16 04 18.9**	**-0.5**
JJT3	**Tamagusuku3**	**0.96**	**98**	P	**Pn**	**16 04 14.4**	**+1.7**
JNTH	**Nagotoyohara**	**1.18**	**78**	P	**Pn**	**16 04 16.4**	**+0.9**
JNTH				*e*S	**Sn**	**16 04 32.1**	**+0.5**
JIH	**Iheya**	**1.33**	**56**	P	**Pn**	**16 04 18.0**	**+0.7**
JIH				*e*S	**Sn**	**16 04 34.8**	**-0.2**
JOW	**Kunigami**	**1.49**	**68**	P	**Pn**	**16 04 19.9**	**+0.6**
	286nm,0.3s,baz=160,slow=10,SNR=265						
JOW				S	**Sn**	**16 04 38.5**	**0.0**
	226nm,0.2s,baz=306,slow=23,SNR=8.7						
JOW	**Kunigami**	**1.49**	**68**	P	**Pn**	**16 04 20.3**	**+1.0**
JOW	**Kunigami**	**1.49**	**68**	P	**Sn**	**16 04 38.9**	**+0.5**
JOW	**Kunigami**	**1.49**	**68**	*e*P	**Pn**	**16 04 19.8**	**+0.6**
JOW				*e*S	**Sn**	**16 04 38.6**	**+0.2**
JYRO	**Yoronjima**	**1.71**	**64**	*e*P	**Pn**	**16 04 22.6**	**+0.5**
JYRO				*e*S	**Sn**	**16 04 42.9**	**-0.6**
JIKM	**Ikemajima**	**1.91**	**225**	*e*P	**Pn**	**16 04 25.0**	**+0.3**
JOGS	**Gusukube**	**1.93**	**219**	*e*P	**Pn**	**16 04 25.9**	**+0.8**
JMJ	**Miyako jima 2**	**1.96**	**222**	P	**Pn**	**16 04 26.8**	**+1.4**
JOKE	**Okinoerabujima**	**1.96**	**56**	*e*P	**Pn**	**16 04 25.4**	**-0.1**
JTK	**Tokunoshima**	**2.48**	**52**	*e*P	**Pn**	**16 04 32.3**	**-0.1**
JTK				*e*S	**Sn**	**16 05 00.5**	**-1.3**
JAMN	**Amaminishikomi**	**2.92**	**48**	*e*P	**Pn**	**16 04 37.7**	**-0.6**
JAMN				*e*S	**Sn**	**16 05 10.6**	**-1.9**
JAM	**Amami Oshima**	**3.32**	**50**	*e*P	**Pn**	**16 04 43.4**	**-0.3**
JAM				*e*S	**Sn**	**16 05 20.1**	**-2.0**
JTAJ	**Takarajima**	**3.60**	**37**	*e*P	**Pn**	**16 04 48.1**	**+0.6**
YOJ	**Yonaguni jima**	**3.82**	**242**	P	**Pn**	**16 04 50.5**	**0.0**
JMZ	**Minamidaito 2**	**4.07**	**96**	P	**Pn**	**16 04 53.7**	**-0.1**
JMZ	**Minamidaito 2**	**4.07**	**96**	*e*P	**Pn**	**16 04 51.8**	**-2.0**
JKDJ	**Kitadaitoujima**	**4.12**	**94**	*e*P	**Pn**	**16 04 52.5**	**-2.0**
JKDJ				*e*S	**Sn**	**16 05 37.3**	**-4.2**
YHNB	**Yeheng**	**5.10**	**253**	P	**Pn**	**16 05 08.4**	**+0.4**
NACB	**Ninganchiao**	**5.10**	**247**	P	**Pn**	**16 05 07.1**	**-0.9**
YULB	**Yu-li**	**5.71**	**241**	P	**Pn**	**16 05 13.8**	**-2.5**
SSLB	**Suanglung**	**5.80**	**246**	P	**Pn**	**16 05 16.6**	**-0.9**
JSU	**Suzuyama**	**6.14**	**31**	P	**Pn**	**16 05 21.9**	**-0.2**
TWGBT	**Beinan**	**6.20**	**237**	P	**Pn**	**16 05 20.5**	**-2.3**
TPUB	**Ta-pu**	**6.29**	**243**	P	**Pn**	**16 05 23.7**	**-0.5**
JNU	**Nakatsue**	**7.71**	**27**	P	**Pn**	**16 05 44.5**	**+1.0**
	5.6nm,0.3s,baz=239,slow=5.7,SNR=30						
JNU				S	**Sn**	**16 07 09.8**	**+0.6**
	4.3nm,0.9s,baz=153,slow=16,SNR=1.3						
JMN	**Monobe**	**9.66**	**38**	P	**Pn**	**16 06 07.7**	**-2.4**
KSRS	**Korea Array**	**11.18**	**5**	P	**Pn**	**16 06 31.6**	**+0.9**
	1.1nm,0.7s,baz=184,slow=15,SNR=5.3						
KSRS				LR	LR	16 10 17.3	
	comp=Z,15nm,21.5s,baz=220,slow=34						
MJAR	**Matsushiro Arr**	**14.15**	**41**	P	**Pn**	**16 07 11.7**	**+1.3**
	0.7nm,0.8s,baz=228,slow=9.4,SNR=6.2						
SONM	**Songino Array**	**26.79**	**329**	P	**P**	**16 09 25.9**	**-0.2**
	0.5nm,0.7s,baz=134,slow=9.4,SNR=5.0						
	0.5nm,0.7s						
PETK	**Petropavlovsk-**	**35.36**	**32**	P	**P**	**16 10 41.6**	**+0.5**
	3.6nm,1.0s,baz=203,slow=4.9,SNR=6.1						
	3.6nm,1.0s						
MKAR	**Makanchi Array**	**40.50**	**312**	P	**P**	**16 11 23.8**	**-0.8**
	0.5nm,0.5s,baz=98,slow=10,SNR=14						
	0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**41.40**	**323**	P	**P**	**16 11 31.0**	**-0.7**
	0.7nm,0.4s,baz=104,slow=8.0,SNR=4.7						
	0.7nm,0.4s						
KURBB	**Kurchatov Arra**	**43.89**	**317**	P	**P**	**16 11 51.3**	**-0.7**
	0.2nm,0.2s,baz=81,slow=6.7,SNR=2.9						
	0.2nm,0.2s						
WRA	**Warramunga Arr**	**46.54**	**170**	P	**P**	**16 12 14.0**	**+0.8**
	0.6nm,0.6s,baz=352,slow=8.6,SNR=7.7						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**50.14**	**171**	P	**P**	**16 12 42.4**	**+1.5**
	0.5nm,0.7s,baz=355,slow=8.3,SNR=11						
	0.5nm,0.7s						
STKA	**Stephens Creek**	**59.55**	**165**	P	**P**	**16 13 49.6**	**+1.0**
	1.0nm,0.6s,baz=16,slow=1.5,SNR=4.4						
	1.0nm,0.6s						
ILAR	**Eielson Array**	**65.03**	**28**	P	**P**	**16 14 24.6**	**-0.2**
	0.1nm,0.5s,baz=277,slow=6.1,SNR=5.1						
	0.1nm,0.5s						
FINES	**FINESS Array B**	**72.15**	**330**	P	**P**	**16 15 08.5**	**-0.7**
	2.2nm,1.0s,baz=80,slow=11,SNR=1.9						
	2.2nm,1.0s						
YKA	**Yellowknife Ar**	**79.04**	**25**	P	**P**	**16 15 49.2**	**+0.7**
	0.2nm,0.5s,baz=304,slow=6.3,SNR=4.2						
	0.2nm,0.5s						

NOU 08 16:13:10.8, 15°48S×168°06E, h146km, MLv4.2/7, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**2.24**	**177**	P	Pn	16 13 49.2	+0.7
MARNC	**Mare, Loyalty**	**5.97**	**180**	P	Pn	16 14 37.4	+0.4
YATNC	**Mamie plateau,**	**6.64**	**189**	P	Pn	16 14 44.9	-1.1
YATNC	**Mamie plateau,**	**6.64**	**189**	S	Sn	16 16 01.2	+0.6
ONTNC	**Ouen Toro**	**6.96**	**192**	P	Pn	16 14 51.0	+0.7
OUENC	**Ouen Island, N**	**7.00**	**189**	P	Pn	16 14 51.1	+0.3

IDC 08 16:23:36.0±9.0, 6°13S×151°20E, h72km±64km, mb3.2/2, mbtmp3.5/3, ML1.6/1, Error ellipse: s-maj=112.4km s-min=57.1km az=128.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.16**	**231**	P	Pn	16 24 51.4	+0.7
	1.4nm,0.3s,baz=40,slow=12,SNR=7.8						
PMG				S	Sn	16 25 50.1	+1.1
	20nm,0.5s,baz=37,slow=19,SNR=9.4						
	3.9nm,0.4s						
WRA	**Warramunga Arr**	**21.38**	**228**	P	P	16 28 17.0	-0.8
	0.9nm,0.9s,baz=53,slow=10,SNR=7.1						
	0.9nm,0.9s						
ASAR	**Alice Springs**	**24.10**	**222**	P	P	16 28 44.6	-0.6
	1.4nm,0.7s,baz=55,slow=9.3,SNR=35						
	1.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**149.16**	**285**	PKPbc	PKPbc	16 43 17.8	+0.4
	0.2nm,0.6s,baz=107,slow=4.4,SNR=1.6						

*NEIC **08** 16:29:45.5±2.1, 23°4S±0°1×179°7W±0°1, h532km±6km, mb4.5/52, Error ellipse: s-maj=19.1km s-min=14.8km az=122.0*
*IDC **08** 16:29:46.8±1.2, 23°41S×179°86W, h548km, 11km, mb3.4/15, mbtmp4.3/17, Error ellipse: s-maj=16.6km s-min=11.4km az=140.0*
*NOU **08** 16:29:46.1, 23°60S×179°72W, h534km, ML4.1/17, South of Fiji Islands*

ISC 08 16:29:45.0±0.4, 23°54S±0°06×179°82W±0°06, h532km, n206, σ1$32/222, mb4.4/45, 22C-11D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	**5.36**	**10**	P	**P**	**16 31 19.2**	**+2.1**
MSVF	**Nonsavu**	**6.11**	**341**	P	**P**	**16 31 25.5**	**+1.5**
	71nm,0.6s,baz=185,slow=5.7,SNR=74						
MSVF				S	**S**	**16 32 46.5**	**+1.7**
	7.0nm,0.8s,baz=187,slow=22,SNR=0.9						
MSVF	**Nonsavu**	**6.11**	**341**	P	**P**	**16 31 25.4**	**+1.4**
MSVF	**Nonsavu**	**6.11**	**341**		**P**	**16 31 25.3**	**+1.3**
TAVE	**Taveuni**	**6.79**	**359**	P	**P**	**16 31 32.7**	**+2.2**
DGTI	**Dogotuki**	**7.21**	**357**	P	**P**	**16 31 36.0**	**+1.4**
FUTU	**Fugatoga**	**9.32**	**10**	P	**P**	**16 31 56.3**	**+0.4**
NIUE	**Niue**	**10.23**	**66**	P	**P**	**16 32 06.7**	**+1.5**
NIUE				S	**S**	**16 34 03.6**	**+3.2**
MARNC	**Mare, Loyalty**	**11.41**	**278**	P	**P**	**16 32 20.1**	**+2.6**
MARNC	**Mare, Loyalty**	**11.41**	**278**	P	**P**	**16 32 20.1**	**+2.6**
DZM	**Mont Dzumac**	**12.75**	**274**	P	**P**	**16 32 33.9**	**+2.3**
	5.1nm,0.6s,baz=40,slow=18,SNR=5.7						
MKAZ	**Moumakai**	**14.20**	**197**	P	**P**	**16 32 47.9**	**+1.6**
HAZ	**Te Kaha**	**14.32**	**188**	P	**P**	**16 32 50.9**	**+3.4**
RUGZ	**Raukumara Rang**	**14.54**	**188**	P	**P**	**16 32 52.2**	**+2.3**
RUGZ				S	**S**	**16 35 20.8**	**-1.7**
PUZ	**Puketiti**	**14.58**	**186**	P	**P**	**16 32 52.7**	**+2.4**
TWGZ	**Tauwhareparae**	**14.71**	**187**	P	**P**	**16 32 56.0**	**+4.3**
TWGZ				S	**S**	**16 35 26.3**	**+0.7**
URZ	**Urewera**	**14.91**	**189**	P	**P**	**16 32 52.9**	**-0.8**
	4.2nm,0.3s,baz=34,slow=7.8,SNR=15						
URZ				S	**S**	**16 35 26.1**	**-3.0**
	6.6nm,0.8s,baz=322,slow=20,SNR=5.7						
URZ	**Urewera**	**14.91**	**189**	P	**P**	**16 32 52.7**	**-0.9**
URZ	**Urewera**	**14.91**	**189**	P	**P**	**16 32 53.1**	**-0.5**
URZ				S	**S**	**16 35 27.1**	**-2.1**
MWZ	**Matawai**	**14.92**	**188**	P	**P**	**16 32 54.1**	**+0.2**
MWZ				S	**S**	**16 35 28.7**	**-0.8**
RTZ	**Ruatahuna**	**15.28**	**190**	P	**P**	**16 32 59.2**	**+1.6**
RTZ				IAmb	IAmb	16 33 43.0	
	comp=Z,16nm,1.2s						
HIZ	**Hauiti**	**15.61**	**196**	P	**P**	**16 33 02.3**	**+1.4**
HIZ	**Hauiti**	**15.61**	**196**	P	**P**	**16 33 04.6**	**+3.7**
BKZ	**Black Stump Fm**	**15.89**	**191**	P	**P**	**16 33 03.7**	**-0.2**
BKZ	**Black Stump Fm**	**15.89**	**191**	P	**P**	**16 33 02.6**	**-1.3**
BKZ				S	**S**	**16 35 43.9**	**-3.0**
TMVZ	**Te Maari**	**15.99**	**193**	P	**P**	**16 33 05.0**	**+0.1**
ETVZ	**East Tongariro**	**16.01**	**193**	P	**P**	**16 33 07.5**	**+2.4**
OTVZ	**Oturere**	**16.04**	**193**	P	**P**	**16 33 04.9**	**-0.5**
VRZ	**Vera Road**	**16.21**	**195**	P	**P**	**16 33 10.8**	**+3.9**
PNHZ	**Pukenui**	**16.67**	**191**	P	**P**	**16 33 10.8**	**-0.6**
PNHZ				S	**S**	**16 35 59.1**	**-0.9**
TSZ	**Takapari Road**	**16.85**	**191**	P	**P**	**16 33 13.1**	**0.0**
TSZ				S	**S**	**16 36 00.3**	**-2.7**
DVHZ	**Dannevirke**	**17.05**	**191**	P	**P**	**16 33 16.1**	**+1.1**
DVHZ				S	**S**	**16 36 04.6**	**-1.7**
BFZ	**Birch Farm**	**17.41**	**190**	P	**P**	**16 33 18.2**	**-0.1**
BFZ	**Birch Farm**	**17.41**	**190**	P	**P**	**16 33 18.1**	**-0.1**
BFZ	**Birch Farm**	**17.41**	**190**	P	**P**	**16 33 18.0**	**-0.2**
MRZ	**Mangatainoka R**	**17.51**	**192**	P	**P**	**16 33 18.5**	**-0.6**
MRZ				S	**S**	**16 36 11.3**	**-2.3**
OGWZ	**Otaki Gorge**	**17.74**	**193**	P	**P**	**16 33 21.2**	**0.0**
HOWZ	**Holdsworth Sta**	**17.75**	**192**	P	**P**	**16 33 21.8**	**+0.5**
DUWZ	**D'Urville Isla**	**18.00**	**196**	P	**P**	**16 33 25.0

OXZ **Oxford** 20.85 197 P **P** **16 33 51.6 +2.1**
RPZ **Rata Peaks** 21.48 198 P **P** **16 33 55.8 +0.6**
comp=Z,6.9nm,0.8s,baz=5.6,slow=6.0,SNR=1.4
comp=Z,6.9nm,0.8s
WHZ **Wether Hill Ro** 24.41 201 P **P** **16 34 23.6 +2.4**
WHZ IAmb IAmb 16 34 36.9
comp=Z,26nm,1.3s
ARMA **Armidale** 26.30 249 P **P** **16 34 39.6 +1.2**
ARMA IAmb IAmb 16 34 41.7
comp=Z,16nm,1.1s
EIDS **Eidsvold** 26.53 260 P **P** **16 34 41.9 +1.6**
EIDS **Eidsvold** 26.53 260 P **P** **16 34 41.2 +0.9**
CAN **Canberra** 29.46 239 P **P** **16 35 08.0 +2.1**
CAN **Canberra** 29.46 239 P **P** **16 35 07.7 +1.8**
CAN IAmb IAmb 16 35 29.9
comp=Z,23nm,1.4s
CMSA **Cobar Meteorol** 31.50 248 P **P** **16 35 24.9 +1.5**
CTA **Charters Tower** 31.64 270 P **P** **16 35 26.2 +1.4**
CTAO **Charters Tower** 31.64 270 P **P** **16 35 26.0 +1.3**
TOO **Toolangi** 32.78 237 P **P** **16 35 36.1 +1.8**
MTSU **Mount Surprise** 33.89 272 P **P** **16 35 45.1 +1.3**
PMG **Port Moresby** 34.53 288 P **P** **16 35 48.8 -0.4**
comp=Z,13nm,0.8s,baz=125,slow=6.8,SNR=5.8
comp=Z,13nm,0.8s
PMG **Port Moresby** 34.53 288 P **P** **16 35 49.3 +0.1**
PMG IAmb IAmb 16 35 50.5
comp=Z,14nm,0.8s
STKA **Stephens Creek** 35.01 248 P **P** **16 35 54.6 +1.6**
comp=Z,5.7nm,0.6s,baz=95,slow=11,SNR=12
comp=Z,5.7nm,0.6s
STKA **Stephens Creek** 35.01 248 P **P** **16 35 54.6 +1.6**
INKA **Innaminka** 35.69 255 P **P** **16 36 00.6 +1.8**
COEN **Coen** 36.22 279 P **P** **16 36 04.0 +0.7**
COEN IAmb IAmb 16 36 05.7
comp=Z,6.8nm,1.1s
BBOO **Buckleboo** 39.74 247 P **P** **16 36 32.2 +0.5**
BBOO IAmb IAmb 16 36 44.0
comp=Z,29nm,1.4s
AS31 **Alice Springs** 42.26 260 **P** **16 36 52.3 +0.4**
ASAR **Alice Springs** 42.26 260 P **P** **16 36 52.5 +0.6**
comp=Z,10nm,0.8s,baz=93,slow=7.0,SNR=205
ASAR PcP **PcP** **16 38 33.6 +0.1**
comp=Z,1.0nm,0.6s,baz=94,slow=3.6,SNR=5.2
ASAR ScP **ScP** **16 41 33.8 +0.2**
comp=Z,0.3nm,0.9s,baz=99,slow=3.9,SNR=1.9
ASAR S **S** **16 42 32.8 -1.4**
comp=Z,0.8nm,0.7s,baz=99,slow=13,SNR=8.7
comp=Z,10nm,0.8s
ASAR **Alice Springs** 42.26 260 P **P** **16 36 51.7 -0.2**
WR8 **Warramunga Arr** 42.45 266 **P** **16 36 53.1 -0.3**
WR8 IAmb IAmb 16 36 54.0
comp=Z,7.3nm,0.8s
WB0 **Warramunga Arr** 42.59 266 **P** **16 36 54.3 -0.2**
WB0 IAmb IAmb 16 36 55.2
comp=Z,16nm,0.7s
WRAB **Tennant Creek** 42.59 266 **P** **16 36 54.3 -0.2**
WRAB IAmb IAmb 16 36 55.2
comp=Z,11nm,0.8s
WRA **Warramunga Arr** 42.60 266 P **P** **16 36 54.5 -0.1**
comp=Z,11nm,0.6s,baz=89,slow=5.8,SNR=218
WRA PcP **pwP** **16 38 35.0 +0.1**
comp=Z,1.7nm,0.9s,baz=100,slow=2.9,SNR=4.6
WRA ScP **ScP** **16 41 35.0 0.0**
comp=Z,0.3nm,0.6s,baz=105,slow=3.1,SNR=2.3
WRA S **S** **16 42 32.7 -6.4**
comp=Z,1.5nm,1.0s,baz=99,slow=14,SNR=8.2
comp=Z,11nm,0.6s
WRA **Warramunga Arr** 42.60 266 **P** **16 36 54.4 -0.2**
FORT **Forrest** 46.59 249 P **P** **16 37 25.4 +0.2**
FORT IAmb IAmb 16 37 26.1
comp=Z,13nm,0.7s
MTN **Manton Dam** 47.59 274 P **P** **16 37 32.0 -1.0**
MTN IAmb IAmb 16 37 36.0
comp=Z,17nm,1.2s
KNRA **Kununurra** 48.85 269 P **P** **16 37 42.7 +0.3**
KNRA IAmb IAmb 16 37 43.5
comp=Z,20nm,1.2s
PUH **Pauahi** 48.94 31 P **P** **16 37 41.7 -1.2**
FAKI **Fak Fak** 50.64 286 P **P** **16 37 55.2 -0.2**
FAKI IAmb IAmb 16 38 12.0
comp=Z,18nm,1.1s
SOEI **Soe** 54.98 275 **P** **16 38 27.5 +0.9**
SOEI IAmb IAmb 16 38 38.0
comp=Z,31nm,0.9s
PSA00 **Pilbara Seismi** 55.39 259 P **P** **16 38 29.0 -0.3**
NWAO **Narrogin (SRO)** 55.53 245 P **P** **16 38 30.6 +0.5**
NWAO IAmb IAmb 16 39 07.9
comp=Z,16nm,1.0s
MBWA **Marble Bar** 55.60 260 P **P** **16 38 30.6 -0.1**
MBWA IAmb IAmb 16 38 31.4
comp=Z,14nm,0.8s
MORW **Morawa** 57.15 250 P **P** **16 38 41.7 +0.3**
MORW IAmb IAmb 16 38 42.5
comp=Z,14nm,0.8s
TOLI2 **Tolitoli** 62.65 284 **P** **16 39 17.1 -1.0**
TOLI2 IAmb IAmb 16 39 19.6
comp=Z,9.2nm,0.7s
QSPA **South Pole Qui** 66.54 180 P **P** **16 39 43.7 +1.7**
comp=Z,1.1nm,0.6s,baz=130,slow=7.9,SNR=6.8
comp=Z,1.1nm,0.6s
QSPA **South Pole Qui** 66.54 180 IAmb IAmb 16 39 51.1
comp=Z,1.3nm,1.1s
MJAR **Matsushiro Arr** 71.69 325 P **P** **16 40 12.6 -0.6**
comp=Z,1.9nm,0.8s,baz=153,slow=6.5,SNR=4.3
comp=Z,1.9nm,0.8s
MJAR **Matsushiro Arr** 71.69 325 IAmb IAmb 16 40 21.5
comp=Z,6.8nm,1.5s
ADK **Adak** 75.14 2 P **P** **16 40 31.2 -1.2**
KSRS **Korea Array** 78.08 320 P **P** **16 40 49.0 +0.2**
comp=Z,1.0nm,0.7s,baz=124,slow=5.5,SNR=5.2
comp=Z,1.0nm,0.7s
PETK **Petropavlovsk-** 78.79 346 P **P** **16 40 52.1 -0.2**
comp=Z,3.1nm,0.6s,baz=110,slow=6.8,SNR=10
comp=Z,3.1nm,0.6s
PETK **Petropavlovsk-** 78.79 346 P **P** **16 40 51.4 -0.9**
NJ2 **Nanjing** 80.55 311 *e*P **P** **16 41 03.2 +1.2**
NJ2 pmax pmax
comp=Z,13nm,0.7s
USRK **Ussuriysk Ar.** 80.55 327 P **P** **16 41 01.1 -0.7**
comp=Z,1.5nm,0.6s,baz=96,slow=7.3,SNR=6.4
comp=Z,1.5nm,0.6s
CLC **China Lake** 83.32 46 P **P** **16 41 16.4 +0.2**
OHAK **Old Harbor** 83.49 14 P **P** **16 41 15.9 -0.5**
OHAK IAmb IAmb 16 41 33.2
comp=Z,21nm,1.4s
CN2 **Changchun** 83.69 324 P **P** **16 41 18.1 +0.4**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
BNX **BinXian** 83.95 326 ⇑P **P** **16 41 18.6 -0.4**
BNX pmax pmax
comp=Z,6.0nm,0.9s
TIA **Tai'an** 84.10 314 P **P** **16 41 20.7 +0.7**
TIA pmax pmax
comp=Z,6.0nm,1.0s
P16K **Nushagak River** 84.22 11 P **P** **16 41 19.1 -0.8**
NVAR **Mina Array Bea** 84.38 44 P **P** **16 41 21.8 +0.3**
comp=Z,0.9nm,0.8s,baz=247,slow=6.6,SNR=4.0
comp=Z,0.9nm,0.8s
N14K **Kuskokwak Cree** 84.48 9 P **P** **16 41 20.7 -0.4**
N14K IAmb IAmb 16 41 33.2
comp=Z,23nm,1.4s
O16K **Kokwok River B** 84.73 11 P **P** **16 41 21.5 -0.9**
O16K IAmb IAmb 16 41 22.9
comp=Z,8.8nm,1.4s
O18K **Koktuh Hills** 85.51 12 P **P** **16 41 25.6 -0.7**
O18K IAmb IAmb 16 41 26.2
comp=Z,10nm,0.7s
N18K **Kilae Creek** 86.14 12 P **P** **16 41 28.5 -0.8**
N18K IAmb IAmb 16 41 52.4
comp=Z,7.1nm,1.4s
MA2 **Magadan** 86.27 345 P **P** **16 41 29.2 -0.7**
comp=Z,9.3nm,1.1s
N19K **Bonanza Creek** 86.53 12 P **P** **16 41 29.9 -1.3**
N19K IAmb IAmb 16 42 03.9
comp=Z,6.5nm,1.3s
I07A **Izee** 87.00 39 P **P** **16 41 33.9 0.0**
HEH **HeiHe** 87.02 329 *e*P **P** **16 41 34.0 +0.4**
L18K **Granite Mounta** 87.44 11 P **P** **16 41 34.9 -0.4**
KNK **Knik Glacier** 88.35 15 P **P** **16 41 39.1 -0.6**
GHO **Glory Hole Cre** 88.56 14 P **P** **16 41 40.1 -0.6**
XAN **Xi'an** 88.65 308 ⇑P **P** **16 41 42.7 +1.0**
XAN pmax pmax
comp=Z,9.0nm,0.8s
CMAR **Chiang Mai Arr** 89.56 290 P **P** **16 41 47.5 +1.2**
comp=Z,0.8nm,0.3s,baz=135,slow=3.2,SNR=15
comp=Z,0.8nm,0.3s

TXAR **Lajitas Array** 90.10 58 P **P** **16 41 49.5 +0.8**
comp=Z,0.9nm,0.7s,baz=216,slow=5.8,SNR=12
comp=Z,0.9nm,0.7s
HHC **Hu-ho-hao-te** 90.28 315 *e*P **P** **16 41 48.9 -0.3**
HWUT **Hardware Ranch** 90.44 44 P **P** **16 41 49.9 -0.2**
ILAR **Eielson Array** 91.64 13 P **P** **16 41 53.4 -1.4**
comp=Z,0.4nm,0.7s,baz=225,slow=5.5,SNR=6.9
comp=Z,0.4nm,0.7s
BILL **Bilibino** 91.88 355 P **P** **16 41 55.1 -0.7**
PDAR **Pinedale Array** 92.32 44 P **P** **16 41 57.6 -1.1**
comp=Z,0.6nm,0.7s,baz=199,slow=4.4,SNR=6.5
comp=Z,0.6nm,0.7s
G30M **tAoh Zraii Nji** 95.95 16 P **P** **16 42 14.0 -0.4**
G30M IAmb IAmb 16 42 17.1
comp=Z,7.0nm,1.5s
WMQ **Urumqi** 107.62 311 Pdif **Pdif** **16 43 05.8 -1.2**
WMQ LR LR
comp=N,390nm,9.5s
WMQ LR LR
comp=E,520nm,14.9s
WMQ LR LR
comp=Z,160nm,22.7s
ZALV **Zalesovo Beam** 111.78 321 PKiKP **PKiKP** **16 47 17.5 -1.5**
comp=Z,0.4nm,0.4s,baz=46,slow=4.2,SNR=2.5
MKAR **Makanchi Array** 112.03 313 PKiKP **PKiKP** **16 47 18.5 -1.2**
comp=Z,0.5nm,0.5s,baz=142,slow=0.5,SNR=11
KURK **Kurchatov** 115.05 317 **PKPdf** **16 47 23.9 -1.5**
KURBB **Kurchatov Arra** 115.10 316 PKiKP **PKPdf** **16 47 23.9 -1.6**
comp=Z,0.9nm,0.7s,baz=111,slow=1.6,SNR=11
KK31 **Karatay Array** 119.78 307 **PKPdf** **16 47 33.7 -1.1**
BVAR **Borovoye Array** 120.28 319 PKP **PKPdf** **16 47 34.1 -1.3**
comp=Z,1.4nm,0.5s,baz=69,slow=0.7,SNR=9.4
SPITS **Spitsbergen Ar** 124.77 356 PKP **PKPdf** **16 47 42.5 -0.9**
comp=Z,5.6nm,0.7s,baz=315,slow=1.0,SNR=7.2
ARCES **ARCESS Array B** 131.57 348 PKP **PKPdf** **16 47 55.5 -1.0**
comp=Z,1.5nm,0.5s,baz=38,slow=2.2,SNR=9.8
FINES **FINESS Array B** 138.16 342 PKhKP PKPpre 16 47 57.1
comp=Z,1.2nm,0.7s,baz=46,slow=5.5,SNR=5.3
FINES PKP **PKPdf** **16 48 07.7 -1.2**
comp=Z,1.5nm,0.7s,baz=98,slow=2.0,SNR=5.9
FINES SKPbc **SKPbc** **16 50 50.5 -2.6**
comp=Z,3.0nm,0.9s,baz=57,slow=5.1,SNR=3.4
GURO **Guroymak-BITLI** 141.49 303 PKPpre 16 48 12.5
NB2 **NORSAR Subarra** 141.75 351 PKP PKPpre 16 48 10.4
comp=Z,2.6nm,0.7s,baz=18,slow=4.8
NOA **NORSAR Array B** 141.75 351 PKhKP PKPpre 16 48 10.0
comp=Z,2.6nm,0.7s,baz=98,slow=0.9,SNR=5.3
HFS **Hagfors** 142.22 349 PKhKP PKPpre 16 48 11.8
comp=Z,8.8nm,0.5s,baz=66,slow=3.7,SNR=83
AK03 **Malin Array Si** 144.74 328 PKP **PKPdf** **16 48 19.9 -1.1**
AKASG **Malin Array Be** 144.75 328 PKP **PKPdf** **16 48 20.2 -0.8**
comp=Z,8.6nm,0.6s,baz=45,slow=4.0,SNR=29
AKBB **Malin Array Si** 144.75 328 PKPdf **PKPdf** **16 48 20.3 -0.7**
AK01 **Malin Array Si** 144.77 328 PKP **PKPdf** **16 48 20.2 -0.8**
KIEV **Kiev** 144.77 328 ⇓P **PKPdf** **16 48 20.4 -0.6**
KIEV **Kiev** 144.77 328 PKPdf **PKPdf** **16 48 20.2 -0.8**
AK04 **Malin Array Si** 144.77 328 PKP **PKPdf** **16 48 20.0 -1.0**
AK22 **Malin Array Si** 144.79 328 PKP **PKPdf** **16 48 20.3 -0.8**
AK02 **Malin Array Si** 144.79 328 PKP **PKPdf** **16 48 20.2 -0.9**
AK21 **Malin Array Si** 144.80 328 PKP **PKPdf** **16 48 20.2 -0.9**
SUW **Suwalki** 145.00 336 *e*PKP **PKPdf** **16 48 21.4 +0.1**
MI28 **Mi28,Pidlybu** 145.35 329 PKP **PKPdf** **16 48 21.5 -0.5**
RNPP9 **Sopachiv** 145.84 331 PKP **PKPdf** **16 48 23.4 +0.6**
RNPP5 **Staryi Chortor** 145.97 331 PKP **PKPbc** **16 48 24.0 -0.9**
LUBAR **Lubar, Ukraine** 145.98 328 PKP **PKPbc** **16 48 24.3 -0.7**
SORM **Soroca** 146.80 325 ⇑P **PKPbc** **16 48 26.4 -0.9**
BRTR **Keskin Array B** 147.49 308 PKPbc **PKPbc** **16 48 28.9 -0.7**
comp=Z,1.8nm,0.7s,baz=133,slow=4.6,SNR=12
BEL **Belsk** 147.61 336 *e*PKP **PKPbc** **16 48 29.4 +0.1**
MMAI **Mount Meron Ar** 147.70 295 PKPbc **PKiKP** **16 48 31.1 -0.7**
comp=Z,5.1nm,0.5s,baz=46,slow=7.1,SNR=13
EKA **Eskdalemuir Ar** 148.15 4 PKPbc **PKPbc** **16 48 29.8 -0.8**
comp=Z,1.5nm,0.4s,baz=346,slow=6.6,SNR=16
KWP **Kalwaria Pacla** 148.53 331 *e*PKP **PKPbc** **16 48 31.5 -0.2**
GHRR 148.57 322 ⇓P **PKiKP** **16 48 33.5 +0.5**
CFR **Carcaliu** 148.66 320 ⇑P **PKPbc** **16 48 31.6 -0.5**
ONER **Baraj Valea Uz** 148.96 324 ⇑P **PKiKP** **16 48 34.3 +0.4**
MFTR **Murfatlar** 149.04 319 ⇓P **PKiKP** **16 48 36.0 +1.9**
CSS **Mathiatis** 149.05 299 **PKPbc** **16 48 33.2 -0.3**
MANR **Mangalia** 149.13 318 ⇑P **PKPbc** **16 48 33.5 +0.2**
OJC **Ojcow** 149.28 335 *e*PKP **PKPbc** **16 48 32.2 -1.4**
STHS **Stebnicka Huta** 149.32 333 *e*PKP **PKPbc** **16 48 33.0 -0.7**
OZUR 149.44 324 ⇑P **PKPdf** **16 48 29.3 +0.3**
NIE **Niedzica** 149.71 334 *e*PKP **PKiKP** **16 48 35.2 -0.2**
MLR **Muntele Rosu** 149.73 323 ⇓P **PKPbc** **16 48 33.8 -1.1**
DOPR **Dopca** 149.74 324 ⇑P **PKPbc** **16 48 34.8 0.0**
SILT **Sile** 149.74 313 ⇓P **PKPbc** **16 48 34.6 -0.3**
KSP **Ksiaz** 150.01 339 *e*PKP **PKiKP** **16 48 35.5 -0.3**
CJR **Cluj-Napoca** 150.18 327 ⇓P **PKPbc** **16 48 35.6 -0.2**
VOIR 150.25 323 ⇑P **PKPbc** **16 48 35.3 -0.8**
LANS **Liptovska Anna** 150.26 334 *e*PKP **PKiKP** **16 48 36.9 +0.4**
STEB **Steborice** 150.27 337 ⇑*e*PKP **PKPbc** **16 48 35.9 0.0**
STEB *e*PKPAB **PKPab** **16 48 44.8 +0.3**
OSTC **Ostas** 150.28 339 ⇑*e*PKP **PKiKP** **16 48 36.5 0.0**
CHVC **Chvalec** 150.30 339 ⇑*e*PKP **PKPbc** **16 48 36.0 0.0**
DPC **Dobruska-Polom** 150.42 339 ⇑*e*PKP **PKPbc** **16 48 36.4 +0.1**
MARR **Marisel-Cluj** 150.45 327 ⇑P **PKiKP** **16 48 37.0 0.0**
MORC **Moravsky Berou** 150.48 337 ⇑P **PKPbc** **16 48 36.0 -0.4**
MORC **Moravsky Berou** 150.48 337 *e*PKP **PKPbc** **16 48 36.4 -0.1**
KRLC **Kraliky** 150.50 338 ⇑*e*PKP **PKPbc** **16 48 36.1 -0.4**
ARR **Arges** 150.53 324 ⇓P **PKiKP** **16 48 37.2 0.0**
CLL **Collm** 150.56 344 *i* PKPbc **PKPbc** **16 48 36.2 -0.3**
comp=Z,13nm,0.8s
CLL *e*PKPab **PKPab** **16 48 45.0 -0.6**
DRGR 150.57 328 ⇓P **PKPbc** **16 48 36.1 -0.7**
MAUC **Maruska** 150.72 336 ⇑*e*PKP **PKiKP** **16 48 37.4 0.0**
PVCC **Panska Ves** 150.82 341 ⇑*e*PKP **PKiKP** **16 48 37.3 -0.2**
HSKC **Hora Svate Kat** 151.08 342 ⇑*e*PKP **PKPbc** **16 48 37.4 -0.3**
JAVC **Velka Javorina** 151.19 336 *e*PKP **PKiKP** **16 48 38.7 +0.2**
VRAC **Vranov** 151.22 337 *e*PKP **PKPbc** **16 48 37.2 -0.9**
ELND **Elena** 151.27 319 ⇑P **PKiKP** **16 48 39.1 +0.4**
KRUC **Moravsky** 151.49 337 *e*PKP **PKPbc** **16 48 38.4 -0.3**
GZR **Gura Zlata** 151.50 325 ⇓P **PKPbc** **16 48 38.1 -0.8**
PLVB **Pleven** 151.75 320 ⇓P **PKPbc** **16 48 38.9 -0.5**
BZS **Buzias** 151.94 327 ⇑P **PKPbc** **16 48 39.1 -0.7**
HERR **Herculane** 152.03 325 ⇓P **PKPbc** **16 48 39.1 -0.9**
KHC **Kasperske Hory** 152.36 341 ⇑*e*PKP **PKPbc** **16 48 39.9 -0.8**
GERES **GERESS Array B** 152.57 340 PKPbc **PKPbc** **16 48 40.5 -0.7**
comp=Z,0.4nm,0.4s,baz=64,slow=3.1,SNR=4.1
CONA **Conrad Observa** 152.64 337 *i* PKiKP **PKPbc** **16 48 40.7 -0.7**
comp=Z,0.4nm,0.4s
RONA **Rosalia, Austr** 152.67 336 *i* PKiKP **PKPbc** **16 48 41.1 -0.3**
comp=Z,3.8nm,0.9s
SOKA **Soboth** 154.00 336 *i* PKP **PKPbc** **16 48 42.5 -1.8**
comp=Z,3.7nm,1.1s
WTTA **Wattenberg** 154.61 342 *e*PKiKP **PKiKP** **16 48 44.6 -1.1**
comp=Z,5.4nm,1.2s
RETA **Reutte** 154.65 343 *e*PKP **PKiKP** **16 48 44.1 -1.5**
comp=Z,8.4nm,2.0s
ESDC **Sonseca Array** 163.53 11 PKPab **PKPab** **16 49 41.2 -0.9**
comp=Z,1.1nm,1.1s,baz=342,slow=5.1,SNR=3.8

*IDC **08** 16:59:15.1±0.7,32.˚67N×85.˚40E,h0km,mb3.8/21, mbtmp3.8/26,ML3.4/4,MS3.6/29,Error ellipse: s-maj=20.5km s-min=12.8km az=39.0*
*BJI **08** 16:59:15.5,32.˚67N×85.˚57E,h9km,mB4.7/4,mb4.2/32, Ms4.1/31,Ms7 3.9/30*
*NEIC **08** 16:59:17.2±1.1,32.˚72N±0.˚07×85.˚47E±0.˚07,h10km±1km, mb4.2/23,Error ellipse: s-maj=11.7km s-min=9.3km az=149.0*
*NDI **08** 16:59:17.2±3.8,32.˚90N×85.˚88E,h10km,ML4.0,MW3.9, mb4.2(NEIC),Presumed earthquake*
ISC 08 16:59:17.4±0.4,32.˚80N±0.˚05×85.˚53E±0.˚04,h10km,n110, σ2s00/104,mb4.0/30,MS3.7/26,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVN	**Everest**	**4.95**	**167**		**Pn**	**17 00 34.7**	**+2.3**
JOSI	**Joshimath**	**5.56**	**248**	*e*P	Pn	17 00 44.8	+4.4
JOSI				*e*S	**Sn**	**17 01 50.3**	**+5.9**
JOSI				IAML		17 01 57.5	
	comp=N,971nm,0.9s						
JOSI				IAML		17 01 58.3	
	comp=E,768nm,0.8s						
PTH	**Pithoragarh**	**5.57**	**236**	*e*P	**Pn**	**17 00 43.2**	**+2.6**
PTH				*e*S	**Sn**	**17 01 47.7**	**+3.0**
PTH				IAML		17 01 50.3	
	comp=N,98nm,0.6s						
PTH				IAML		17 01 53.2	
	comp=E,96nm,1.2s						
LSA	**Lhasa**	**5.72**	**121**	Pn	**Pn**	**17 00 43.8**	**+1.0**
LSA				Sn	**Sn**	**17 01 53.9**	**+5.1**
LSA				L	L		
	comp=E,2μm,11.5s						
LSA				L	L		
	comp=E,1μm,11.7s						
LGTI	**Lohaghat**	**5.76**	**235**	*e*S	**Sn**	**17 01 52.4**	**+2.9**
GTK	**Tadong**	**6.07**	**153**	*e*P	**Pn**	**17 00 48.1**	**+0.7**
KLP	**Kalpa**	**6.30**	**260**	*e*P	**Pn**	**17 00 54.0**	**+3.3**
KLP				*e*S	**Sn**	**17 02 06.9**	**+4.1**
KLP				IAML		17 02 15.8	
	comp=E,82nm,0.7s						
KLP				IAML		17 02 30.2	
	comp=N,84nm,0.8s						
ALCI	**Alchi Leh**	**7.11**	**284**	*e*P	**Pn**	**17 01 03.0**	**+1.1**
SMLA	**Simla**	**7.30**	**259**	*e*P	**Pn**	**17 01 05.9**	**+1.8**
SMLA				*e*S	**Sn**	**17 02 28.5**	**+1.6**
SMLA				IAML		17 02 33.5	
	comp=E,65nm,0.6s						
SMLA				IAML		17 02 35.2	
	comp=N,61nm,0.8s						
DHUB	**DHUBRI**	**7.79**	**149**	*e*P	**Pn**	**17 01 08.6**	**-2.3**
DHRM	**DHARAMSHALA**	**7.81**	**268**	*e*P	**Pn**	**17 01 12.6**	**+1.2**
DHRM				*e*S	**Sn**	**17 02 40.8**	**+0.8**
DHRM				IAML		17 02 53.1	
	comp=E,43nm,0.6s						
DHRM				IAML		17 02 53.1	
	comp=N,41nm,0.6s						
BHK	**Bhakra**	**7.88**	**262**	*e*P	**Pn**	**17 01 10.4**	**-1.8**
BHK				IAML		17 02 45.5	
	comp=N,436nm,0.5s						
BHK				IAML		17 02 49.5	
	comp=E,260nm,0.4s						
TSSA	**Tissa**	**7.89**	**273**	*e*P	**Pn**	**17 01 13.9**	**+1.5**
TSSA				*e*S	**Sn**	**17 02 43.6**	**+1.7**
TSSA				IAML		17 02 51.2	
	comp=N,44nm,0.8s						
TSSA				IAML		17 02 56.0	
	comp=E,50nm,0.5s						
ALBI	**Allahabad**	**8.14**	**205**	*e*P	**Pn**	**17 01 16.0**	**+0.3**
GOMU	**GeErMu**	**8.38**	**64**	P	**Pn**	**17 01 19.1**	**-0.2**
GOMU				S	**Sn**	**17 02 55.7**	**+1.5**
GOMU				pmax	pmax		
	comp=E,1.0nm,0.7s						
GOMU				L	L		
	comp=E,410nm,10.9s						
GOMU				L	L		
	comp=E,170nm,10.7s						
JMU	**Jammu**	**9.01**	**273**	*e*P	**Pn**	**17 01 29.4**	**+1.8**
KUDL	**Kundal**	**9.07**	**242**	*e*P	**Pn**	**17 01 31.5**	**+3.1**
KUDL				*e*S	**Sn**	**17 03 09.8**	**-0.8**
KUDL				IAML		17 03 14.0	
	comp=E,13nm,0.8s						
KUDL				IAML		17 03 21.3	
	comp=N,17nm,0.5s						
SHL	**Shillong**	**9.09**	**141**		**Pn**	**17 01 27.2**	**-1.7**
SHL	**Shillong**	**9.09**	**141**	*e*P	**Pn**	**17 01 27.4**	**-1.5**
JHNI	**Jhansi**	**9.49**	**221**	*e*P	**Pn**	**17 01 34.7**	**+0.6**
JHNI				*e*S	**Sn**	**17 03 16.4**	**-4.5**
JHNI				IAML		17 03 20.1	
	comp=E,119nm,1.0s						
JHNI				IAML		17 03 20.4	
	comp=N,125nm,0.4s						
WUS	**Wushi**	**9.78**	**331**		**Pn**	**17 01 37.8**	**-0.5**
KSH2	**Kashi**	**10.26**	**311**	P	**Pn**	**17 01 45.9**	**+1.1**
KSH2				pP		17 01 49.2	
KSH2				pmax	pmax		
	comp=N,5.0nm,0.6s						
KSH2				L	L		
	comp=N,760nm,8.7s						
KSH2				L	L		
	comp=N,700nm,8.7s						
KSH2				L	L		
	comp=N,790nm,8.1s						
KOHI	**KOHIMA**	**10.29**	**131**	*e*P	**Pn**	**17 01 45.1**	**-0.1**
KOHI				IAML		17 03 46.6	
	comp=E,110nm,0.5s						
KOHI				IAML		17 03 56.5	
	comp=N,112nm,1.0s						
NIL	**Nilore**	**10.32**	**278**		**Pn**	**17 01 43.5**	**-2.0**
TARG	**Taragay, Kyrgy**	**10.83**	**328**		**Pn**	**17 01 52.6**	**-0.3**
WMQ	**Urumqi**	**11.14**	**8**	*e*P	**Pn**	**17 01 59.3**	**+2.5**
WMQ				pP		17 02 03.6	
WMQ				PP	**PnPn**	**17 02 11.9**	**+7.3**
WMQ				pmax	pmax		
	comp=N,14nm,1.1s						
WMQ				L	L		
	comp=N,570nm,14.3s						
WMQ				L	L		
	comp=N,280nm,15.7s						
KDJ	**Kajisay**	**11.43**	**327**		**Pn**	**17 02 00.9**	**0.0**
BRDH	**Bariadhala**	**11.44**	**150**	LR	LR	17 07 36.0	
	comp=N,252nm,21.2s,baz=336,slow=44						
MORE	**Moreh**	**11.49**	**136**		**Pn**	**17 01 59.6**	**-2.1**
BOOM	**Boomskoye usch**	**12.29**	**325**	Pn	**Pn**	**17 02 12.7**	**+0.1**
AAK	**Ala-Archa**	**13.13**	**322**	Pn	**Pn**	**17 02 24.2**	**+0.1**
	comp=N,0.1nm,0.3s,baz=163,slow=11,SNR=4.0						
AAK				LR	LR	17 07 32.3	
	comp=N,177nm,19.4s,baz=134,slow=38						
	comp=N,0.7nm,0.5s						
AAK	**Ala-Archa**	**13.13**	**322**		**Pn**	**17 02 24.5**	**+0.4**
ARSB	**Arslanbob**	**13.13**	**314**	Pn	**Pn**	**17 02 24.7**	**+0.5**
GTA2	**Gaotai**	**13.29**	**56**	*e*P	**Pn**	**17 02 29.0**	**+2.7**
GTA2				sP	P	17 02 34.4	-1.7
GTA2				pmax	pmax		
	comp=N,2.0nm,1.3s						
GTA2				L	L		
	comp=N,530nm,13.4s						
GTA2				L	L		
	comp=N,360nm,11.3s						
GAR	**Garm**	**13.79**	**301**		**Pn**	**17 02 29.6**	**-3.5**
KBL	**Kabul**	**13.84**	**282**		**Pn**	**17 02 29.7**	**-4.1**
MKAR	**Makanchi Array**	**14.20**	**351**	Pn	**Pn**	**17 02 39.1**	**+0.6**
	comp=N,0.1nm,0.3s,baz=163,slow=13,SNR=41						
MKAR				LR	LR	17 09 09.3	
	comp=N,179nm,20.1s,baz=162,slow=42						
	comp=N,4.0nm,0.8s						
MKAR	**Makanchi Array**	**14.20**	**351**		**Pn**	**17 02 37.4**	**-1.1**
MAKZ	**Makanchi**	**14.26**	**350**		**Pn**	**17 02 38.4**	**-0.9**
CHGR	**Chuyangaron**	**14.52**	**298**	Pn	Pn	17 02 38.1	-4.9
SHAA	**Shahritus**	**15.00**	**293**	Pn	Pn	17 02 43.2	-6.3
LZDM	**Lanzhou Array**	**15.33**	**73**	Pn	**Pn**	**17 02 55.6**	**+1.4**
	comp=N,2.0nm,0.4s,baz=280,slow=12,SNR=4.1						
PZH	**PanZhiHua**	**15.42**	**110**	P	**Pn**	**17 02 54.7**	**-0.5**
PZH				pmax	pmax		
	comp=N,10.0nm,0.5s						
KK31	**Karatay Array**	**15.67**	**315**	P	**P**	**17 03 02.0**	**-0.4**
KKAR	**Karatay Array**	**15.67**	**315**	P	**P**	**17 03 02.2**	**-0.1**
KMI2	**Kunming**	**16.87**	**112**	P	**Pn**	**17 03 14.1**	**+0.1**
KMI2				PP	**PnPn**	**17 03 28.8**	**+5.4**
KMI2				pmax	pmax		
	comp=N,17nm,0.8s						
KMI2				L	L		
	comp=N,320nm,12.0s						
KMI2				L	L		
	comp=N,250nm,11.2s						
KMI2				L	L		
	comp=N,250nm,10.5s						
CHTO	**Chiang Mai**	**18.41**	**136**	P	**Pn**	**17 03 30.9**	**-1.9**
KURBB	**Kurchatov Arra**	**18.55**	**346**	P	**P**	**17 03 33.5**	**-0.5**
	comp=N,0.1nm,0.3s,baz=163,slow=11,SNR=23						
KURBB				LR	LR	17 11 29.9	
	comp=N,102nm,19.5s,baz=188,slow=39						
	comp=N,5.1nm,0.9s						
KURK	**Kurchatov**	**18.62**	**346**	P	**P**	**17 03 35.4**	**+0.

SONM LR LR 17 13 15.7
comp=Z,124nm,20.2s,baz=228,slow=38
comp=Z,1.6nm,0.8s
SONM Songino Array 21.78 40 P **P** **17 04 09.9 +0.4**
SONM IAmb IAmb 17 04 18.2
comp=Z,8.1nm,1.3s
HHC Hu-ho-hao-te 22.28 61 *e*P **P** **17 04 13.2 -1.7**
HHC sP sP 17 04 21.9 +0.7
HHC S **S** **17 08 14.5 -5.5**
HHC sS pS 17 08 25.1 -0.9
HHC pmax pmax
comp=Z,6.0nm,0.7s
HHC pmax pmax
comp=Z,92nm,4.5s
HHC L L
comp=Z,490nm,10.6s
HHC L L
comp=Z,330nm,10.6s
HHC L L
comp=Z,190nm,10.6s
BVAR Borovoye Array 22.97 336 P **P** **17 04 21.0 -0.8**
comp=Z,0.9nm,0.7s,baz=155,slow=11,SNR=9.6
BVAR LR LR 17 13 33.7
comp=Z,136nm,19.0s,baz=148,slow=37
comp=Z,0.9nm,0.7s
TLY Talaya 23.04 30 LR LR 17 15 08.6
comp=Z,32nm,20.2s,baz=218,slow=41
AB31 Akbulak array 25.18 318 P **P** **17 04 42.5 -0.4**
AB31 IAmb IAmb 17 05 01.1
comp=Z,3.8nm,0.9s
ABKAR Akbulak array 25.18 318 P **P** **17 04 42.5 -0.3**
PALK Pallekele 25.79 191 LR LR 17 15 15.5
comp=Z,72nm,19.5s,baz=338,slow=37
AKTO Aktyubinsk 26.86 319 LR LR 17 16 49.8
comp=Z,146nm,18.7s,baz=78,slow=39
DL2 Dalian 29.75 68 *e*P **P** **17 05 23.4 -0.6**
DL2 S **S** **17 10 18.2 -2.0**
DL2 pmax pmax
comp=Z,25nm,1.0s
DL2 L L
comp=Z,500nm,13.2s
DL2 L L
comp=Z,250nm,12.0s
DL2 L L
comp=Z,220nm,13.4s
ARTI Arti 30.13 330 LR LR 17 17 29.6
comp=Z,104nm,19.1s,baz=198,slow=36
GNI Garni 33.39 294 LR LR 17 22 02.5
comp=Z,96nm,21.0s,baz=96,slow=41
KSRS Korea Array 34.77 70 P **P** **17 06 06.4 -1.6**
comp=Z,0.5nm,0.8s,baz=281,slow=9.3,SNR=1.7
comp=Z,0.5nm,0.8s
KBZ Khabaz 34.86 301 P **P** **17 06 07.5 -1.2**
comp=Z,1.1nm,0.9s,baz=47,slow=18,SNR=1.4
comp=Z,1.1nm,0.9s
NRIK Noril'sk 36.61 1 P **P** **17 06 24.9 +1.6**
comp=Z,1.9nm,0.7s,baz=167,slow=7.1,SNR=6.4
NRIK LR LR 17 23 17.4
comp=Z,201nm,18.7s,baz=181,slow=39
comp=Z,1.9nm,0.7s
ASF Jabal al Asfar 40.73 283 LR LR 17 26 49.7
comp=Z,108nm,19.3s,baz=39,slow=41
BRTR Keskin Array B 41.92 295 P **P** **17 07 08.2 -0.2**
comp=Z,0.7nm,0.8s,baz=115,slow=8.3,SNR=5.2
BRTR LR LR 17 27 47.1
comp=Z,56nm,19.8s,baz=117,slow=41
comp=Z,0.7nm,0.8s
EIL Elat 43.03 280 LR LR 17 27 49.3
comp=Z,193nm,20.2s,baz=64,slow=40
MJAR Matsushiro Arr 43.05 70 P **P** **17 07 18.1 +0.7**
comp=Z,1.2nm,0.8s,baz=269,slow=10,SNR=2.5
comp=Z,1.2nm,0.8s
MJAR Matsushiro Arr 43.05 70 IAmb IAmb 17 07 51.7
comp=Z,5.2nm,1.4s
AKASG Malin Array Be 44.51 311 P **P** **17 07 26.8 -2.1**
comp=Z,0.7nm,0.6s,baz=78,slow=7.7,SNR=5.6
AKASG LR LR 17 26 23.6
comp=Z,107nm,19.1s,baz=72,slow=37
comp=Z,0.7nm,0.6s
AKASG Malin Array Be 44.51 311 IAmb IAmb 17 07 33.9
comp=Z,1.5nm,0.9s
TIXI Tiksi 45.14 18 P **P** **17 07 34.4 +0.8**
TIXI IAmb IAmb 17 07 36.9
comp=Z,5.4nm,1.1s
MLR Muntele Rosu 46.91 304 LR LR 17 30 40.5
comp=Z,115nm,18.1s,baz=72,slow=40
FINES FINESS Array B 47.27 326 P **P** **17 07 50.7 +0.1**
comp=Z,3.0nm,0.8s,baz=95,slow=8.3,SNR=8.8
comp=Z,3.0nm,0.8s
ARCES ARCESS Array B 49.26 336 P **P** **17 08 05.4 -0.4**
comp=Z,0.9nm,0.5s,baz=84,slow=5.0,SNR=5.1
ARCES LR LR 17 29 41.2
comp=Z,65nm,18.2s,baz=124,slow=37
comp=Z,0.9nm,0.5s
ARCES ARCESS Array B 49.26 336 IAmb IAmb 17 08 13.7
comp=Z,20nm,1.4s
VRAC Vranov 52.72 310 LR LR 17 34 41.8
comp=Z,94nm,19.8s,baz=76,slow=40
HFS Hagfors 53.26 324 P **P** **17 08 35.3 -0.6**
comp=Z,2.0nm,0.7s,baz=87,slow=9.1,SNR=1.9
HFS LR LR 17 31 04.0
comp=Z,96nm,20.5s,baz=131,slow=36
comp=Z,2.0nm,0.7s
NB2 NORSAR Subarra 54.42 325 P **P** **17 08 43.8 -0.7**
comp=Z,5.9nm,0.8s,baz=86,slow=7.4
NOA NORSAR Array B 54.42 325 P **P** **17 08 43.5 -1.0**
comp=Z,1.4nm,0.6s,baz=86,slow=7.2,SNR=7.6
NOA LR LR 17 32 16.3
comp=Z,32nm,18.3s,baz=95,slow=36
comp=Z,1.4nm,0.6s
GERES GERESS Array B 54.67 310 P **P** **17 08 44.4 -2.2**
comp=Z,0.2nm,0.4s,baz=58,slow=3.9,SNR=1.7
GERES LR LR 17 35 43.3
comp=Z,96nm,18.7s,baz=84,slow=40
comp=Z,0.2nm,0.4s
DAVOX Davos/Dischmat 57.65 308 LR LR 17 36 35.8
comp=Z,92nm,20.8s,baz=68,slow=39
EKA Eskdalemuir Ar 63.03 320 P **P** **17 09 43.8 -0.6**
comp=Z,2.2nm,0.8s,baz=79,slow=8.7,SNR=3.7
comp=Z,2.2nm,0.8s
ESDC Sonseca Array 69.60 305 P **P** **17 10 27.0 +0.1**
comp=Z,0.4nm,0.8s,baz=21,slow=5.8,SNR=2.0
ESDC LR LR 17 45 28.4
comp=Z,55nm,19.2s,baz=38,slow=40
comp=Z,0.4nm,0.8s
ESDC Sonseca Array 69.60 305 IAmb IAmb 17 10 30.1
comp=Z,2.5nm,1.4s
E21K Killik River 69.94 20 P **P** **17 10 28.9 +0.3**
E21K IAmb IAmb 17 10 39.8
comp=Z,3.0nm,0.9s
WB0 Warramunga Arr 70.09 131 P **P** **17 10 28.9 -1.1**
J14K Nanvaranak Lak 70.11 27 P **P** **17 10 30.2 +0.7**
J14K IAmb IAmb 17 10 51.7
comp=Z,6.0nm,1.4s
WRA Warramunga Arr 70.18 131 P **P** **17 10 29.7 -0.8**
comp=Z,0.9nm,0.5s,baz=326,slow=6.4,SNR=26
comp=Z,0.9nm,0.5s
WRA Warramunga Arr 70.18 131 P **P** **17 10 29.4 -1.2**
WR8 Warramunga Arr 70.30 131 P **P** **17 10 30.3 -0.9**
AS31 Alice Springs 72.68 134 P **P** **17 10 44.6 -1.0**
ASAR Alice Springs 72.68 134 P **P** **17 10 44.8 -0.8**
comp=Z,0.5nm,0.6s,baz=322,slow=5.8,SNR=16
comp=Z,0.5nm,0.6s
M16K Timber Creek 72.89 27 P **P** **17 10 46.9 +0.6**
ILAR Eielson Array 74.52 21 P **P** **17 10 57.3 +1.4**
comp=Z,0.6nm,0.9s,baz=288,slow=4.9,SNR=5.4
comp=Z,0.6nm,0.9s
ILAR Eielson Array 74.52 21 P **P** **17 10 56.2 +0.3**
SFJD Kangerlussuaq 75.11 344 LR LR 17 52 48.3
comp=Z,31nm,18.9s,baz=66,slow=43
F30M Barrier River 75.19 15 P **P** **17 11 00.3 +0.6**
F30M IAmb IAmb 17 11 17.9
comp=Z,3.5nm,1.0s
G31M Satah River 76.09 15 P **P** **17 11 05.4 +0.6**
G31M IAmb IAmb 17 11 13.1
comp=Z,4.4nm,1.4s
TORD Torodi Ar. Bea 77.88 278 P **P** **17 11 14.6 -1.2**
comp=Z,1.3nm,0.7s,baz=30,slow=3.0,SNR=6.9
comp=Z,1.3nm,0.7s
HYT Haines Junctio 80.31 20 P **P** **17 11 28.9 +0.4**
HYT IAmb IAmb 17 12 02.1
comp=Z,5.2nm,1.3s
FRB Frobisher Bay 81.61 349 LR LR 17 51 35.1
comp=Z,76nm,19.1s,baz=23,slow=38
YKA Yellowknife Ar 83.67 9 P **P** **17 11 45.3 -0.6**
comp=Z,0.4nm,0.8s,baz=336,slow=5.8,SNR=7.0
YKA LR LR 17 52 36.2
comp=Z,32nm,19.1s,baz=80,slow=38
comp=Z,0.4nm,0.8s
TXAR Lajitas Array 117.60 9 PKP **PKiKP** **17 18 05.0 +0.8**
comp=Z,0.1nm,0.5s,baz=351,slow=3.3,SNR=1.9

*HEL **08** 17:01:56.3±0.3, 67.88N×19.98E, h0km, ML1.5, Explosion*
*UPP **08** 17:01:56.9±0.0, 67.84N×20.22E, h0km, ML2.5, Confirmed Induced event*
ISC 08 17:01:57.0±0.8, 67.84N±0.02×20.22E±0.03, h0km, n26, σ0.68/39, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.12**	**20**	P	**Pg**		**17 01 59.5**	**+0.1**
KUA				S	**Sg**		**17 02 01.2**	**+0.3**
RATU	**Laukkuluspa**	**0.24**	**267**	P	**Pg**		**17 02 01.6**	**+0.1**
RATU				S	**Sg**		**17 02 05.0**	**+0.3**
KOVU	**Salmi**	**0.39**	**357**	P	**Pg**		**17 02 04.2**	**-0.1**
	baz=166							
KOVU				S	**Sg**		**17 02 09.4**	**0.0**
NIKU	**Nikkaluokta**	**0.45**	**274**	P	**Pg**		**17 02 05.5**	**-0.1**
NIKU				S	**Sg**		**17 02 11.6**	**+0.2**
LANU	**Lannavaara**	**0.70**	**72**	P	**Pg**		**17 02 10.2**	**-0.2**
LANU				S	**Sg**		**17 02 19.5**	**+0.1**
LANU	**Lannavaara**	**0.70**	**72**	PG	**Pg**		**17 02 10.5**	**0.0**
LANU				SG	**Sg**		**17 02 19.6**	**+0.1**
DUNU	**Dundret**	**0.73**	**169**	P	**Pg**		**17 02 10.7**	**-0.3**
DUNU				S	**Sg**		**17 02 20.8**	**+0.3**
SALU	**Saltoluokta**	**0.80**	**236**	P	**Pg**		**17 02 12.0**	**-0.3**
KIF	**Kilpisjarvi**	**1.19**	**10**	PN	**Pg**		**17 02 20.0**	**+0.2**
KIF				smax	smax		17 02 32.9	
	comp=Z,5.5nm,0.2s							
KIF				SN	**Sg**		**17 02 35.5**	**+0.3**
HEF	**Hetta**	**1.41**	**64**	PG	**Pn**		**17 02 23.1**	**-0.8**
	baz=254							
HEF				smax	smax		17 02 40.6	
	comp=Z,2.6nm,0.2s							
HEF				SG	**Sg**		**17 02 41.3**	**-0.9**
ERTU	**Ertsjaerv**	**1.50**	**148**	P	**Pn**		**17 02 24.7**	**-0.5**
ERTU	**Ertsjaerv**	**1.50**	**148**	PG	**Pn**		**17 02 24.7**	**-0.5**
ERTU				SN	**Sn**		**17 02 45.7**	**+0.3**
KLF	**Kolari**	**1.56**	**111**	PG	**Pn**		**17 02 26.2**	**+0.2**
KLF				smax	smax		17 02 45.8	
	comp=Z,2.7nm,0.2s							
KLF				SG	**Sg**		**17 02 47.2**	**+0.1**
KTK1	**Kautokeino**	**1.62**	**42**	SN	**Sg**		**17 02 50.0**	**+0.9**
HARU	**Harads**	**1.71**	**170**	P	**Pn**		**17 02 28.1**	**+0.2**
KALU	**Kalix**	**2.34**	**147**	PB	**Pn**		**17 02 37.8**	**+1.2**
	baz=325							
KALU				SB	**Sb**		**17 03 09.6**	**+0.3**
TOF	**Tornio**	**2.39**	**136**	PB	**Pb**		**17 02 39.2**	**-1.6**
TOF				smax	smax		17 03 09.9	
	comp=Z,1.7nm,0.2s							
TOF				SG	**Sb**		**17 03 11.4**	**+0.6**
RNF	**Rovaniemi**	**2.57**	**116**	SB	**Sb**		**17 03 16.0**	**+0.1**
ARA0	**ARCESS Array S**	**2.58**	**46**	SB	**Sb**		**17 03 14.5**	**-1.6**
RAJF	**Raja-Jooseppi**	**3.09**	**74**	SB	**Sb**		**17 03 30.5**	**-0.4**
KEV	**Kevo**	**3.13**	**49**	SN	**Sn**		**17 03 26.4**	**+1.0**
RANF	**Ranua**	**3.17**	**122**	SG	**Sb**		**17 03 34.8**	**+1.6**
VRF	**Varrio**	**3.57**	**87**	SB	**Sb**		**17 03 45.4**	**+0.8**
OLKF	**Oulanka, Finla**	**3.90**	**109**	SG	**Sg**		**17 04 01.6**	**-0.5**
UMAU	**Umeaa**	**3.98**	**177**	SN	**Sn**		**17 03 45.8**	**-0.6**
KU6	**Riekki**	**4.22**	**111**	PG	**Pb**		**17 03 12.8**	**+0.8**
	baz=299							

*MAN **08** 17:04:30.0, 11.92N×125.82E, h9km, MS4.7*
MAN INTENSITY III - DOLORES & ORAS EASTERN SAMAR; . INTENSITY II - BORONGAN CITY SAN JULIAN SAN POLICARPO & SULAT EASTERN SAMAR.
*DJA **08** 17:04:31.6±0.9, 12.1N×12.6E×, h25km±7km, M4.7/91, mb4.8/91, mB5.3/28, Mw(mB)4.7/28, MwMwp4.9/2, Mwp5.2/2*
*BJI **08** 17:04:31.9, 11.66N×125.78E, h52km, mB5.0/23, mb4.6/67, Ms4.4/49, Ms7 4.2/47*
*NEIC **08** 17:04:33.2±2.6, 11.84N±0.09×125.6E±0.1, h35km±2km, mb4.8/96, Error ellipse: s-maj=18.6km s-min=14.4km az=81.0*
*IDC **08** 17:04:33.1±4.6, 11.81N×125.65E, h29km±33km, mb4.3/27, mbtmp4.4/32, ML4.1/5, MS3.9/48, Error ellipse: s-maj=20.1km s-min=9.8km az=77.0*
*GCMT **08** 17:04:34.2±0.3, 11.88N±0.03×125.86E±0.03, h27km±1km, MW5.0/67, Moment Tensor Solution. s42,c47; s67,c91; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.28±.16; Mθθ-0.24±.09; Mφφ-2.04±.10; Mrθ-0.33±.18; Mrφ0.32±.06; Mθφ2.52±.21; Best double couple: Mo3.35300×10^16 NP1:φs169.00000°, δ20.00000°, λ87.00000°. NP2: φs352.00000°, δ70.00000°, λ91.00000°. Principal axes: T 3.4470, Plg65.0000°, Azm264.0000°; N -0.1880, Plg1.0000°, Azm172.0000°; P -3.2590, Plg25.0000°, Azm81.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 08 17:04:34.2±0.5, 11.88N±0.03×125.73E±0.05, h41km±4km, h40km:pP-P, n313, σ2.21/268, mb4.7/121, MS4.0/57, 1C-4D, Samar

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**1.03**	**226**	*e*P		**Pn**	**17 04 50.6**	**-1.5**
PLP				*e*S		**Sn**	**17 05 05.1**	**-0.3**
SCPH	**Surigao**	**2.10**	**187**	*e*P		**Pn**	**17 05 05.8**	**-1.1**
SCPH				*e*S		**Sn**	**17 05 32.5**	**+0.6**
LLP	**Lapu-Lapu**	**2.33**	**228**	*e*P		**Pn**	**17 05 10.5**	**+0.5**
LLP				*e*S		Sn	17 05 45.3	+7.8
TBP	**Tagbilaran**	**2.85**	**220**	*e*P		**Pn**	**17 05 18.1**	**+0.9**
TBP				*e*S		**Sn**	**17 05 55.8**	**+5.5**
TSSP	**Tandag City**	**2.86**	**171**	*e*P		**Pn**	**17 05 15.1**	**-2.2**
IBAJ	**Ibajay, Aklan**	**3.49**	**269**	*e*P		**Pn**	**17 05 27.7**	**+1.7**
SNPH	**Sibulan**	**3.52**	**224**	*i* P		**Pn**	**17 05 27.6**	**+1.2**
SNPH				*i* S		Sn	17 06 16.8	+10
CGP	**Cagayan de Oro**	**3.56**	**197**	*e*P		**Pn**	**17 05 27.1**	**+0.2**
CGP				*e*S		**Sn**	**17 06 14.2**	**+6.5**
BIPH	**Bislig**	**3.73**	**170**	*e*P		**Pn**	**17 05 28.2**	**-1.1**
BIPH				*e*S		**Sn**	**17 06 05.6**	**-6.4**
GQP	**Guinayangan**	**3.78**	**302**	*e*P		**Pn**	**17 05 30.7**	**+0.7**
GQP				*e*S		**Sn**	**17 06 14.2**	**+0.9**
JAP	**San Jose, Anti**	**3.88**	**253**	*e*P		**Pn**	**17 05 34.5**	**+3.2**
DCPH	**Dipolog City**	**4.03**	**216**	*i* P		**Pn**	**17 05 33.9**	**+0.5**
BOAC	**Boac**	**4.11**	**293**	*e*P		**Pn**	**17 05 36.3**	**+1.8**
BOAC				*e*S		**Sn**	**17 06 14.0**	**-7.2**
DMPH	**Davao City--Mi**	**4.78**	**183**	*e*P		**Pn**	**17 05 40.2**	**-3.5**
DAV	**Davao City (W)**	**4.79**	**182**	Pn		**Pn**	**17 05 43.7**	**-0.1**
	24nm,0.3s,baz=317,slow=6.6,SNR=1.4							
DAV				Sn		**Sn**	**17 06 36.0**	**-2.1**
	40nm,0.3s,baz=95,slow=24,SNR=1.4							
DAV				LR		LR	17 07 53.4	
	comp=Z,3μm,20.5s,baz=1.5,slow=42 99nm,0.4s							
DAV	**Davao City (W)**	**4.79**	**182**	Pn		**Pn**	**17 05 42.5**	**-1.3**
CTBH	**Cotabato--PC H**	**4.86**	**198**	*e*P		**Pn**	**17 05 46.4**	**+1.5**
TGY	**Tagaytay City**	**5.17**	**296**	Pn		**Pn**	**17 05 48.4**	**-0.7**
	13nm,0.3s,baz=136,slow=4.3,SNR=8.8							
TGY				Sn		**Sn**	**17 06 50.6**	**+3.0**
	7.7nm,0.3s,baz=307,slow=21,SNR=0.8							
TGY				LR		LR	17 07 57.7	
	comp=Z,2μm,21.8s,baz=64,slow=40 53nm,0.4s							
TGY	**Tagaytay City**	**5.17**	**296**	*e*P		Pn	17 05 54.6	+5.5
TGY				*e*S		Sn	17 07 03.3	+16
DDMP	**Don Marcelino,**	**5.74**	**180**	*e*P		**Pn**	**17 05 57.5**	**+0.6**
DDMP				*e*S		**Sn**	**17 06 59.8**	**-1.9**
SIPP	**Brgy, Tapao**	**7.88**	**320**	*e*P		Pn	17 06 20.3	-5.9
SIPP				*e*S		**Sn**	**17 08 00.5**	**+6.4**
PIP	**Pasuquin**	**8.09**	**323**	*e*P		**Pn**	**17 06 30.4**	**+1.3**
PIP				*e*S		Sn	17 07 47.1	-12
MYLDM	**Lahad Datu**	**9.77**	**228**			**Pn**	**17 06 51.5**	**-0.7**
MYLDM	**Lahad Datu**	**9.77**	**228**	P		Pn	17 06 58.2	+6.0
	32nm,1.1s							
MNI	**Manado**	**10.41**	**185**	P		Pn	17 07 06.4	+5.4
KKM	**Kota Kinabalu**	**11.05**	**239**	Pn		Pn	17 07 04.6	-5.2
KKM	**Kota Kinabalu**	**11.05**	**239**	P		**Pn**	**17 07 13.2**	**+3.4**
	452nm48nm,1.1s							
TNTI	**Ternate**	**11.16**	**172**	P		Pn	17 07 18.9	+7.7
	19nm,0.7s							
GTOI	**Gorontalo**	**11.50**	**194**	P		**Pn**	**17 07 19.7**	**+3.8**
	459nm42nm,1.1s							
TARAI	**Tarakan**	**11.73**	**224**	P		**Pn**	**17 07 22.7**	**+3.6**
TOLI2	**Tolitoli**	**11.78**	**205**	Pn		**Pn**	**17 07 20.1**	**+0.4**

MRSI Marisa 11.94 199 P Pn 17 07 27.3 +5.3
LBMI Labuha 12.56 172 P P 17 07 36.0 -5.2
MPSI Mapaga 12.85 207 P **Pn** **17 07 37.5 +3.1**
LUWI Luwuk 13.17 193 P **P** **17 07 44.5 -3.5**
1μm65nm,1.2s
APSI Ampana 13.34 198 P **P** **17 07 47.5 -2.4**
634nm35nm,1.2s
SWI Sorong 13.80 156 P **Pn** **17 07 50.4 +3.0**
SIJI Sorong 13.81 156 Pn **Pn** **17 07 46.9 -0.6**
0.8nm,0.3s,baz=346,slow=12,SNR=6.0
SIJI LR LR 17 15 01.2
comp=Z,205nm,18.9s,baz=318,slow=46
1.5nm,0.4s
SIJI Sorong 13.81 156 P **Pn** **17 07 50.0 +2.5**
SANI Sanana 13.85 179 P **P** **17 07 52.3 -3.1**
20nm,0.9s
PCI Palu 13.99 205 P **P** **17 07 57.0 -0.1**
1μm61nm,1.1s
JOW Kunigami 15.06 9 Pn **Pn** **17 08 05.0 +0.8**
0.9nm,0.3s,baz=118,slow=20,SNR=1.3
JOW LR LR 17 13 02.0
comp=Z,346nm,18.5s,baz=122,slow=34
16nm,1.0s
NLAI Namlea 15.09 175 P **P** **17 08 12.0 +2.8**
30nm,0.8s
MWPI Manokwari, Pap 15.17 146 P **P** **17 08 12.0 +1.8**
107nm,1.1s
KRAI Karang Ratu 15.33 170 P **P** **17 08 15.1 +3.1**
2μm16nm,0.8s
MSAI Masohi 15.46 168 P **P** **17 08 15.0 +1.6**
RKPI Ransiki, Papua 15.73 147 P **P** **17 08 19.5 +3.1**
983nm21nm,1.2s
BKB Balikpapan 15.74 214 P **P** **17 08 16.1 -0.4**
63nm,0.8s
TTSI Tana Toraja 15.96 202 P **P** **17 08 21.7 +2.8**
42nm,0.7s
MMSI Mamuju 15.99 206 P **P** **17 08 22.7 +3.4**
29nm,1.1s
KDI Kendari 16.04 191 P **P** **17 08 24.2 +4.4**
FAKI Fak Fak 16.07 156 P **P** **17 08 24.9 +4.7**
31nm,1.0s
SBUM Sibu 16.35 236 Pn **Pn** **17 08 16.2 -4.7**
SBUM Sibu 16.35 236 P **P** **17 08 24.1 +0.8**
KKSI Kolaka, Sulawe 16.46 195 P **P** **17 08 29.3 +4.8**
14nm,0.8s
BAKI Biak 16.58 141 P **P** **17 08 30.4 +4.5**
80nm,1.2s
PMSI Majene 16.72 204 P **P** **17 08 32.3 +4.9**
57nm,1.2s
SPSI Sidrap Palu 16.82 201 P **P** **17 08 33.3 +4.8**
43nm,0.7s
QIZ Qiongzhong 16.88 297 P **Pn** **17 08 24.8 -2.7**
QIZ S **Sn** **17 11 31.7 -2.4**
QIZ pmax pmax
comp=Z,280nm,10.8s
QIZ L L
comp=N,350nm,18.8s
QIZ L L
comp=E,400nm,18.3s
QIZ L L
comp=Z,680nm,19.1s
SRPI Serui, Papua 17.20 142 P **P** **17 08 37.6 +4.9**
13nm,0.5s
KMPI Kaimana, Papua 17.36 152 P **P** **17 08 37.6 +3.1**
KAPI Kappang 17.81 200 P **Pn** **17 08 37.7 -1.4**
0.7nm,0.3s,baz=52,slow=2.5,SNR=5.2
KAPI LR LR 17 16 37.1
comp=Z,190nm,18.4s,baz=56,slow=41
5.0nm,0.8s
KAPI Kappang 17.81 200 **Pn** **17 08 36.2 -2.8**
KAPI Kappang 17.81 200 P **P** **17 08 44.0 +4.6**
MKS Makassar 18.10 200 P **P** **17 08 47.8 +5.2**
49nm,1.3s
KSM Kuching 18.47 237 P **Pn** **17 08 49.5 +2.4**
BSSI Bau Bau, Buton 18.65 197 P **Pn** **17 08 55.5 +6.2**
53nm,1.3s
BBKI Banjar Baru 18.70 216 P **Pn** **17 08 53.8 +3.8**
GUMO Guam 18.74 83 LR LR 17 14 48.3
comp=Z,386nm,19.5s,baz=255,slow=33
CNSH ChangSha 20.16 325 P Pn 17 09 06.4 -0.8
CNSH S Sn 17 12 54.4 +1.1
CNSH pmax pmax
comp=Z,9.0nm,0.6s
CNSH L L
comp=N,420nm,16.9s
CNSH L L
comp=E,560nm,18.4s
CNSH L L
comp=Z,690nm,14.7s
MMRI Maumere 20.68 190 P **P** **17 09 08.3 -2.5**
MMRI IAmb IAmb 17 09 17.5
comp=Z,41nm,0.9s
MMRI Maumere 20.68 190 P Pn 17 09 12.4 -1.0
comp=Z,49nm,0.9s
EDFI Ende, Flores 20.89 191 P Pn 17 09 17.4 +1.5
comp=Z,20nm,0.8s
LBFI Labuhan Bajo, 21.05 196 P **P** **17 09 19.9 +5.1**
NJ2 Nanjing 21.05 344 *e*P **P** **17 09 16.2 +1.5**
NJ2 pmax pmax
comp=Z,31nm,0.6s
NJ2 pmax pmax
comp=Z,510nm,4.0s
NJ2 L L
comp=Z,910nm,13.3s
NJ2 L L
comp=Z,550nm,9.5s
NJ2 L L
comp=Z,880nm,15.6s
WHN Wuhan 21.36 332 P **P** **17 09 19.7 +1.7**
WHN S **S** **17 13 12.5 -0.5**
WHN pmax pmax
comp=Z,140nm,1.3s
WHN L L
comp=Z,2μm,19.5s
WHN L L
comp=Z,540nm,9.8s
WHN L L
comp=Z,1μm,13.3s
SOEI Soe 21.55 184 **P** **17 09 18.7 -1.6**
SOEI Soe 21.55 184 P **P** **17 09 22.6 +2.3**
comp=Z,834nmcomp=Z,87nm,0.8s
JCJ Chichijima 21.63 43 LR LR 17 16 43.8
comp=Z,248nm,19.6s,baz=234,slow=34
JNU Nakatsue 21.66 12 P **P** **17 09 21.4 +0.1**
comp=Z,7.3nm,1.0s,baz=160,slow=6.0,SNR=3.7
JNU LR LR 17 17 10.5
comp=Z,76nm,21.1s,baz=150,slow=35
comp=Z,7.3nm,1.0s
BATI Baumata 22.04 185 P **P** **17 09 25.1 -0.4**
comp=Z,39nm,0.4s,baz=17,slow=0.6,SNR=22
BATI LR LR 17 18 33.5
comp=Z,182nm,21.0s,baz=17,slow=38
comp=Z,39nm,0.4s
BATI Baumata 22.04 185 P **P** **17 09 25.9 +0.4**
PLAI Plampang 22.05 201 P **P** **17 09 27.7 +2.2**
comp=Z,502nmcomp=Z,31nm,0.9s
WBSI Waikabubak, Su 22.30 197 P **P** **17 09 34.2 +6.0**
comp=Z,23nm,0.8s
KHKI Kahang-Kahang 22.50 207 P **P** **17 09 36.1 +5.8**
comp=Z,17nm,0.8s
GYA Guiyang 23.07 312 ||P **P** **17 09 36.6 +0.1**
GYA pmax pmax
comp=Z,9.0nm,1.5s
TPI Tanjungpandan 23.12 232 P **P** **17 09 37.1 +0.2**
comp=Z,642nmcomp=Z,52nm,1.2s
TPRI Tanjung Pinang 23.70 244 P **P** **17 09 44.0 +1.6**
comp=Z,21nm,1.5s
ENH Enshi 23.71 323 P **P** **17 09 42.0 -0.5**
ENH IAmb IAmb 17 09 44.2
comp=Z,34nm,1.0s
NGJI Ngawi 23.82 217 P **P** **17 09 47.2 +3.7**
MYKOM Kota Tinggi 23.91 247 P **P** **17 09 40.6 -3.8**
MYKOM IAmb IAmb 17 09 45.8
comp=Z,58nm,1.2s
MYKOM Kota Tinggi 23.91 247 P **P** **17 09 44.9 +0.5**
comp=Z,574nmcomp=Z,38nm,1.4s
SJI Sawahan 23.93 216 P **P** **17 09 47.1 +2.4**
comp=Z,42nm,1.1s
SNJI Sawahan-Nganju 23.98 216 P **P** **17 09 48.3 +3.1**
comp=Z,54nm,1.1s
JHJ Hachijo jima 2 24.75 29 LR LR 17 17 48.3
comp=Z,335nm,21.5s,baz=102,slow=32
CTJI Waduk Cacaban 24.96 222 P P 17 10 07.9 +14
KMI2 Kunming 25.42 304 P **P** **17 09 59.3 +0.9**
KMI2 pmax pmax
comp=Z,14nm,1.0s
KMI2 L L

KMI2 L L
comp=Z,300nm,15.5s
KMI2 L L
comp=Z,370nm,19.2s
TIA Tai'an 25.44 344 P **P** **17 09 58.7 +0.5**
TIA pP **pP** **17 10 08.1 -0.2**
TIA sP **sP** **17 10 14.0 +1.1**
TIA SS 17 15 30.0
TIA pmax pmax
comp=Z,13nm,1.2s
KSAR Wonju Array Be 25.52 4 P **P** **17 09 57.6 -1.3**
KSRS Korea Array 25.54 4 P **P** **17 09 59.9 +0.9**
comp=Z,8.8nm,1.1s,baz=181,slow=11,SNR=19
comp=Z,8.8nm,1.1s
KS19 Wonju Array Si 25.58 4 P **P** **17 09 58.7 -0.8**
KS19 IAmb IAmb 17 10 08.2
comp=Z,33nm,1.4s
LYN LuoYang 25.59 334 P **P** **17 10 01.0 +1.4**
LYN pP pP 17 10 11.1 +0.8
LYN pmax pmax
comp=Z,25nm,0.9s
LYN pmax pmax
comp=Z,210nm,5.5s
LYN L L
comp=Z,470nm,20.3s
LYN L L
comp=Z,440nm,20.1s
LYN L L
comp=Z,400nm,15.7s
CMAR Chiang Mai Arr 26.65 287 P **P** **17 10 09.1 -0.2**
comp=Z,3.3nm,0.8s,baz=101,slow=7.2,SNR=21
CMAR PcP **PcP** **17 13 33.9 +1.2**
comp=Z,0.8nm,0.8s,baz=86,slow=2.5,SNR=4.2
CMAR LR LR 17 21 58.1
comp=Z,94nm,18.2s,baz=115,slow=39
comp=Z,3.3nm,0.8s
CMAR Chiang Mai Arr 26.65 287 P **P** **17 10 05.3 -4.0**
CMAR PcP **PcP** **17 13 32.3 -0.4**
CHTO Chiang Mai 26.71 288 P **P** **17 10 03.7 -6.2**
CHTO Chiang Mai 26.71 288 P P 17 10 19.2 +9.3
PZH PanZhiHua 26.85 306 P **P** **17 10 11.2 0.0**
PZH S **S** **17 14 50.6 +5.4**
PZH pmax pmax
comp=Z,10.0nm,1.3s
PZH L L
comp=Z,170nm,12.9s
PZH L L
comp=Z,220nm,16.5s
PZH L L
comp=Z,230nm,13.7s
XAN Xi'an 26.86 328 ⇓P **P** **17 10 11.6 +0.5**
XAN pP pP 17 10 21.4 -0.7
XAN pmax pmax
comp=Z,27nm,1.2s
XAN L L
comp=Z,460nm,14.1s
XAN L L
comp=Z,370nm,15.8s
XAN L L
comp=Z,680nm,17.2s
MJAR Matsushiro Arr 27.00 23 LR LR 17 19 22.0
comp=Z,227nm,20.7s,baz=192,slow=33
HNS HongShan 27.27 341 ⇓P **P** **17 10 15.6 +1.0**
HNS pmax pmax
comp=Z,17nm,1.1s
HNS L L
comp=Z,310nm,14.3s
HNS L L
comp=Z,250nm,17.8s
KNRA Kununurra 27.55 174 P P 17 10 09.3 -8.0
KNRA IAmb IAmb 17 10 58.5
comp=Z,19nm,1.1s
KCSI Kotacane, Aceh 28.90 256 P **P** **17 10 29.6 +0.1**
comp=Z,11nm,1.1s
BJI2 Beijing 29.27 345 P **P** **17 10 32.9 +0.4**
BJI2 PP **PnPn** **17 11 27.6 +0.6**
BJI2 S **S** **17 15 17.6 -5.1**
BJI2 pmax pmax
comp=Z,2.0nm,1.3s
BJI2 pmax pmax
comp=Z,71nm,4.9s
BJI2 L L
comp=Z,91nm,14.1s
BJI2 L L
comp=Z,110nm,15.4s
BJI2 L L
comp=Z,94nm,20.2s
BJT Baijiatuau 29.27 345 P **P** **17 10 31.4 -1.1**
GSI Gunungsitoli 29.84 251 P **P** **17 10 33.6 -4.3**
GSI IAmb IAmb 17 10 52.8
comp=Z,25nm,1.1s
LZH Lanzhou 31.16 324 eP **P** **17 10 51.8 +2.3**
LZH pP pP 17 11 01.1 +0.7
LZH pmax pmax
comp=Z,22nm,1.0s
LZH L L
comp=Z,520nm,14.4s
LZH L L
comp=Z,440nm,13.9s
LZH L L
comp=Z,740nm,16.0s
HHC Hu-ho-hao-te 31.43 339 eP **P** **17 10 52.4 +0.7**
HHC pmax pmax
comp=Z,6.0nm,0.7s
HHC pmax pmax
comp=Z,120nm,5.0s
HHC L L
comp=Z,220nm,16.2s
HHC L L
comp=Z,130nm,15.3s
CN2 Changchun 31.80 360 P P 17 11 04.2 +9.4
CN2 pmax pmax
comp=Z,10.0nm,0.9s
USRK Ussuriysk Ar. 32.65 8 P **P** **17 11 03.8 +1.6**
comp=Z,1.6nm,0.8s,baz=187,slow=8.8,SNR=2.5
comp=Z,1.6nm,0.8s
WRA Warramunga Arr 32.74 165 P **P** **17 11 02.0 -1.3**
comp=Z,1.0nm,0.6s,baz=345,slow=9.1,SNR=11
WRA PcP **PcP** **17 13 48.1 -0.1**
comp=Z,2.5nm,0.9s,baz=344,slow=3.0,SNR=7.3
comp=Z,1.0nm,0.6s
MDJ Mudanjiang 32.78 5 P **P** **17 11 04.9 +1.5**
MDJ pmax pmax
comp=Z,5.0nm,1.2s
SAIH SAIHA 32.94 293 eP **P** **17 11 04.8 -0.5**
SAIH IAmb IAmb 17 11 17.8
comp=Z,14nm,0.9s
XLT XiLinHaoTe 32.97 347 eP **P** **17 11 05.9 +0.7**
XLT sP sP 17 11 23.5 +3.5
XLT pmax pmax
comp=Z,8.0nm,1.1s
XLT L L
comp=Z,210nm,13.8s
XLT L L
comp=Z,200nm,18.5s
PSA00 Pilbara Seismi 33.75 190 **P** **17 11 09.4 -2.6**
BNX BinXian 33.77 2 ⇑P **P** **17 11 11.8 -0.2**
BNX pmax pmax
comp=Z,11nm,1.1s
BRDH Bariadhala 34.20 293 LR LR 17 25 32.4
comp=Z,250nm,21.9s,baz=106,slow=37
ASAJ Asahikawa 35.25 21 LR LR 17 24 12.9
comp=Z,85nm,20.3s,baz=218,slow=33
GTA2 Gaotai 35.85 325 P **P** **17 11 31.4 +1.2**
GTA2 sP sP 17 11 47.4 +1.3
GTA2 PcP **PcP** **17 13 58.2 +1.2**
GTA2 pmax pmax
comp=Z,14nm,1.2s
AS31 Alice Springs 36.22 167 P **P** **17 11 32.8 -0.6**
ASAR Alice Springs 36.23 167 P **P** **17 11 32.3 -1.1**
comp=Z,2.3nm,0.7s,baz=351,slow=6.6,SNR=36
ASAR PcP **PcP** **17 13 58.0 -0.2**
comp=Z,2.0nm,0.6s,baz=353,slow=3.2,SNR=6.8
comp=Z,2.3nm,0.7s
ASAR Alice Springs 36.23 167 P **P** **17 11 29.7 -3.7**
LSA Lhasa 36.68 304 P **P** **17 11 36.8 -1.0**
LSA IAmb IAmb 17 11 40.1
comp=Z,14nm,1.2s
LSA Lhasa 36.68 304 P **P** **17 11 35.6 -2.2**
LSA pmax pmax
comp=Z,10.0nm,1.3s
LSA Lhasa 36.68 304 P **P** **17 11 38.7 +1.0**
LSA x x 17 11 46.4
GOMU GeErMu 36.91 316 P **P** **17 11 38.3 -1.3**
GOMU S **S** **17 17 20.2 -1.9**

GOMU pmax pmax
comp=Z,1.0nm,0.8s
GOMU L L
comp=Z,370nm,14.9s
GOMU L L
comp=Z,470nm,14.8s
GOMU L L
comp=Z,830nm,15.1s
KLR Kul'dur 37.57 6 P **P** **17 11 44.8 +0.3**
comp=Z,2.1nm,0.9s,baz=205,slow=7.2,SNR=6.1
KLR PcP **PcP** **17 14 02.5 +0.7**
comp=Z,0.8nm,0.4s,baz=247,slow=5.4,SNR=3.1
KLR LR LR 17 27 20.5
comp=Z,98nm,20.6s,baz=231,slow=36
comp=Z,2.1nm,0.9s
CTA Charters Tower 37.65 147 LR LR 17 30 20.3
comp=Z,108nm,18.6s,baz=317,slow=41
GTK Tadong 38.03 299 eP **P** **17 11 49.4 +0.5**
HEH HeiHe 38.28 2 eP **P** **17 11 51.1 +0.6**
HEH PcP **PcP** **17 14 04.2 +0.2**
HEH pmax pmax
comp=Z,11nm,1.0s
ULN Ulaanbaatar 39.13 340 P **P** **17 11 56.5 -1.4**
ULN Ulaanbaatar 39.13 340 P **P** **17 12 00.6 +2.7**
SONM Songino Array 39.33 339 P **P** **17 12 00.2 +0.7**
comp=Z,1.3nm,0.8s,baz=161,slow=9.1,SNR=11
SONM PcP **PcP** **17 14 08.0 +0.4**
comp=Z,0.9nm,0.9s,baz=151,slow=3.3,SNR=2.3
SONM LR LR 17 29 44.7
comp=Z,145nm,18.5s,baz=166,slow=38
comp=Z,1.3nm,0.8s
SONM Songino Array 39.33 339 P **P** **17 11 56.6 -2.9**
BOK Bokaro 39.60 293 eP **P** **17 12 02.2 +0.2**
EVN Everest 39.73 300 P 17 11 57.9 -5.8
EVN IAmb IAmb 17 12 22.1
comp=Z,15nm,1.2s
H11S3 WAKE ISLAND Hy 40.00 75 T T 17 55 31.0
baz=273,slow=74
H11S1 WAKE ISLAND Hy 40.01 75 T T 17 55 22.5
baz=273,slow=74
H11S2 WAKE ISLAND Hy 40.02 75 T T 17 55 27.4
baz=273,slow=74
HNR Honiara 40.06 120 LR LR 17 26 16.2
comp=Z,12nm,20.9s,baz=24,slow=32
H11N1 WAKE ISLAND Hy 40.28 74 T T 17 55 31.0
baz=266,slow=75,SNR=49
H11N2 WAKE ISLAND Hy 40.28 74 T T 17 55 30.2
baz=266,slow=75,SNR=43
H11N3 WAKE ISLAND Hy 40.30 74 T T 17 55 32.1
baz=266,slow=75,SNR=45
INKA Innaminka 41.99 160 **P** **17 12 19.2 -2.3**
TLY Talaya 43.55 340 LR LR 17 31 52.2
comp=Z,87nm,21.0s,baz=142,slow=38
TLY Talaya 43.55 340 P **P** **17 12 34.0 +0.1**
PALK Pallekele 44.60 268 LR LR 17 30 35.4
comp=Z,91nm,21.3s,baz=92,slow=35
WMQ Urumqi 45.64 321 eP **P** **17 12 51.8 +1.0**
WMQ pmax pmax
comp=Z,14nm,1.1s
WMQ L L
comp=Z,370nm,9.5s
WMQ L L
comp=Z,180nm,24.0s
STKA Stephens Creek 46.09 161 P **P** **17 12 54.6 +0.3**
comp=Z,15nm,1.0s,baz=333,slow=8.5,SNR=10
comp=Z,15nm,1.0s
STKA Stephens Creek 46.09 161 **P** **17 12 53.6 -0.7**
BHPL Bhopal 47.23 291 IAmb IAmb 17 13 03.7
comp=Z,6.5nm,0.8s
BHPL IAmb IAmb 17 13 21.6
comp=Z,8.6nm,0.9s
KLP Kalpa 47.83 302 eP **P** **17 13 07.7 -0.8**
NPLP NPLP New Delhi 48.17 298 eP **P** **17 13 08.6 -2.1**
PETK Petropavlovsk- 48.40 25 P **P** **17 13 13.9 +1.8**
comp=Z,5.8nm,0.9s,baz=246,slow=3.2,SNR=7.7
comp=Z,5.8nm,0.9s
SMLA Simla 48.65 301 eP **P** **17 13 10.7 -3.6**
SMLA IAmb IAmb 17 13 15.2
comp=Z,11nm,0.6s
DHRM DHARAMSHALA 49.61 302 eP **P** **17 13 21.2 -0.7**
DHRM IAmb IAmb 17 13 30.0
comp=Z,10nm,0.8s
WUS Wushi 50.02 314 P **P** **17 13 25.6 +0.8**
YAK Yakutsk 50.15 2 **P** **17 13 23.8 -1.5**
MKAR Makanchi Array 50.43 322 P **P** **17 13 28.9 +1.1**
comp=Z,17nm,1.0s,baz=119,slow=7.5,SNR=101
MKAR PcP **PcP** **17 14 44.8 -0.8**
comp=Z,3.9nm,0.9s,baz=128,slow=4.2,SNR=1.6
MKAR LR LR 17 34 42.8
comp=Z,128nm,18.5s,baz=127,slow=36
comp=Z,17nm,1.0s
MKAR Makanchi Array 50.43 322 **P** **17 13 27.4 -0.4**
MAKZ Makanchi 50.63 322 **P** **17 13 27.6 -1.7**
MAKZ Makanchi 50.63 322 P **P** **17 13 30.5 +1.3**
MAKZ pP **pP** **17 13 40.5 -0.2**
MAKZ x x 17 13 44.1
PRZ Przheval'sk 51.07 316 P **P** **17 13 31.1 -1.7**
MA2 Magadan 51.13 16 LR LR 17 35 09.9
comp=Z,37nm,18.7s,baz=220,slow=36
TARG Taragay, Kyrgy 51.20 315 **P** **17 13 31.9 -2.2**
KDJ Kajisay 51.78 315 **P** **17 13 36.6 -1.5**
KDJ IAmb IAmb 17 13 40.6
comp=Z,7.8nm,1.0s
KSH2 Kashi 51.96 311 P **P** **17 13 40.4 +0.9**
KSH2 sP sP 17 13 56.5 +1.0
KSH2 pmax pmax
comp=Z,8.0nm,1.3s
NIL Nilore 52.40 303 **P** **17 13 40.9 -1.9**
ZAA0 Zalesovo Array 52.97 331 **P** **17 13 45.0 -1.4**
ZAA0 IAmb IAmb 17 13 49.6
comp=Z,19nm,1.8s
ZALV Zalesovo Beam 52.97 331 P **P** **17 13 46.3 -0.2**
comp=Z,3.6nm,0.9s,baz=120,slow=5.6,SNR=14
ZALV LR LR 17 37 57.2
comp=Z,102nm,18.4s,baz=126,slow=38
comp=Z,3.6nm,0.9s
ZALV Zalesovo Beam 52.97 331 **P** **17 13 45.2 -1.3**
AAK Ala-Archa 53.82 315 LR LR 17 37 21.6
comp=Z,264nm,19.3s,baz=99,slow=37
AAK Ala-Archa 53.82 315 **P** **17 13 51.6 -1.6**
AAK IAmb IAmb 17 14 04.8
comp=Z,11nm,1.6s
KURK Kurchatov 54.45 325 **P** **17 13 57.8 +0.4**
KURK Kurchatov 54.45 325 P **P** **17 13 58.4 +1.0**
KURK x x 17 14 15.2
KURBB Kurchatov Arra 54.46 325 P **P** **17 13 58.3 +0.9**
comp=Z,19nm,1.0s,baz=122,slow=7.3,SNR=100
comp=Z,19nm,1.0s
ARSB Arslanbob 54.49 313 P **P** **17 13 57.1 -0.9**
ARSB IAmb IAmb 17 14 00.1
comp=Z,9.2nm,1.0s
BTK Batken 55.74 311 IAmb IAmb 17 14 08.9
comp=Z,16nm,1.2s
KBL Kabul 56.00 304 **P** **17 14 07.5 -1.6**
KBL IAmb IAmb 17 14 10.3
comp=Z,6.0nm,0.9s
SHEM Shemya Is, Ala 56.09 33 LR LR 17 32 27.1
comp=Z,66nm,21.9s,baz=302,slow=30
KKAR Karatay Array 56.75 314 **P** **17 14 13.5 -0.6**
TIXI Tiksi 59.76 1 **P** **17 14 34.5 0.0**
TIXI IAmb IAmb 17 14 35.8
comp=Z,7.6nm,1.1s
TIXI Tiksi 59.76 1 P **P** **17 14 34.8 +0.2**
BVAR Borovoye Array 60.05 325 P **P** **17 14 37.9 +1.0**
comp=Z,6.0nm,0.9s,baz=110,slow=8.7,SNR=31
BVAR LR LR 17 42 02.3
comp=Z,154nm,19.3s,baz=113,slow=37
comp=Z,6.0nm,0.9s
BORK Borovoye 60.09 325 **P** **17 14 36.9 -0.3**
BORK Borovoye 60.09 325 P **P** **17 14 38.0 +0.9**
BORK pP **pP** **17 14 47.8 -1.2**
BORK sP **sP** **17 14 52.3 -1.3**
BORK PcP **PcP** **17 15 21.8 -0.9**
NRIK Noril'sk 62.33 346 P **P** **17 14 53.1 +1.1**
comp=Z,8.5nm,0.9s,baz=132,slow=5.6,SNR=20
NRIK LR LR 17 44 19.3
comp=Z,98nm,20.3s,baz=138,slow=38
comp=Z,8.5nm,0.9s
NRIK Noril'sk 62.33 346 **P** **17 14 52.6 +0.5**
AB31 Akbulak array 65.32 319 **P** **17 15 10.1 -1.9**
AB31 IAmb IAmb 17 15 13.7
comp=Z,10nm,1.0s
ABKAR Akbulak array 65.32 319 **P** **17 15 09.5 -2.6**
AKTO Aktyubinsk 66.76 320 LR LR 17 46 21.0
comp=Z,158nm,20.1s,baz=162,slow=38
ARTI Arti 67.69 326 LR LR 17 45 38.8

comp=Z,72nm,18.6s,baz=151,slow=36
ARTI Arti 67.69 326 **P** **17 15 25.6 -1.5**
ARTI IAmb IAmb 17 15 27.9
comp=Z,9.3nm,0.9s
ARTI Arti 67.69 326 P **P** **17 15 26.8 -0.3**
URZ Urewera 69.22 139 LR LR 17 48 33.9
comp=Z,51nm,18.4s,baz=333,slow=38
C16K Lisburne Hills 71.28 22 IAmb IAmb 17 16 05.7
comp=Z,8.4nm,1.1s
N15K Kwethluk River 71.90 30 IAmb IAmb 17 16 09.5
comp=Z,10nm,0.9s
H17K Granite Mounta 72.69 25 **P** **17 15 59.2 +1.7**
C19K Lookout Ridge 73.51 21 IAmb IAmb 17 16 19.8
comp=Z,12nm,1.1s
D19K Kuna River 73.94 22 IAmb IAmb 17 16 21.2
comp=Z,9.8nm,1.0s
G19K Purcell Mounta 74.02 24 IAmb IAmb 17 16 18.4
comp=Z,11nm,1.6s
E19K Redstone River 74.13 23 IAmb IAmb 17 16 20.1
comp=Z,10.0nm,1.0s
B20K Meade River 74.50 20 IAmb IAmb 17 16 16.2
comp=Z,7.1nm,0.9s
D20K Etivluk River 74.52 22 IAmb IAmb 17 16 22.3
comp=Z,21nm,1.4s
B21K Ikpikpuk River 75.33 21 IAmb IAmb 17 16 27.0
comp=Z,10nm,1.1s
G21K Allakaket 75.50 24 IAmb IAmb 17 16 31.7
comp=Z,7.1nm,1.0s
GNI Garni 75.59 309 LR LR 17 54 17.7
comp=Z,53nm,18.3s,baz=80,slow=40
I21K Tanana 76.06 26 IAmb IAmb 17 16 34.5
comp=Z,7.9nm,1.0s
BPAW Bear Paw Mtn. 76.46 27 IAmb IAmb 17 16 35.8
comp=Z,12nm,1.2s
RAYN Ar Rayn 76.49 292 **P** **17 16 18.9 -1.6**
RAYN Ar Rayn 76.49 292 P **P** **17 16 20.0 -0.5**
RAYN x x 17 16 27.7
C23K Itkillik River 76.74 21 IAmb IAmb 17 16 34.1
comp=Z,16nm,1.4s
KBZ Khabaz 76.74 312 P **P** **17 16 22.1 +0.7**
comp=Z,8.4nm,1.1s,baz=74,slow=7.4,SNR=11
comp=Z,8.4nm,1.1s
KIV Kislovodsk 76.87 313 **P** **17 16 20.7 -1.6**
KIV Kislovodsk 76.87 313 P **P** **17 16 22.7 +0.4**
comp=Z,19nm,1.1s
KIV Kislovodsk 76.87 313 P **P** **17 16 23.1 +0.7**
KIV sP **sP** **17 16 37.6 -1.4**
G23K Bananza Creek 76.89 24 IAmb IAmb 17 16 32.7
comp=Z,9.9nm,1.4s
GEVA Gevas 77.03 307 IAmb IAmb 17 16 25.4
comp=Z,12nm,1.0s
E23K Chandalar 77.06 23 IAmb IAmb 17 16 37.3
comp=Z,9.4nm,1.1s
C24K Franklin Bluff 77.40 21 IAmb IAmb 17 16 38.5
comp=Z,9.1nm,1.1s
E24K Your Creek 77.48 23 IAmb IAmb 17 16 39.3
comp=Z,19nm,1.6s
H24K Noodor Dome 77.77 25 IAmb IAmb 17 16 53.0
comp=Z,18nm,1.8s
G24K Hadweenzic Riv 77.91 24 IAmb IAmb 17 16 41.0
comp=Z,9.7nm,1.2s
ILAR Eielson Array 78.23 26 P **P** **17 16 29.6 +0.3**
comp=Z,0.5nm,0.8s,baz=241,slow=4.6,SNR=5.4
comp=Z,0.5nm,0.8s
ILAR Eielson Array 78.23 26 P **P** **17 16 27.6 -1.7**
BMAR Burnt Mountain 79.00 23 **P** **17 16 34.8 +1.3**
C27K Jago River 79.14 21 IAmb IAmb 17 16 52.0
comp=Z,9.7nm,1.4s
OBN Obninsk 79.88 324 LR LR 17 54 21.8
comp=Z,107nm,19.1s,baz=331,slow=37
D27M Malcolm River 80.15 21 IAmb IAmb 17 16 57.0
comp=Z,9.4nm,1.1s
RAR Rarotonga 80.18 114 LR LR 17 47 09.8
comp=Z,84nm,21.1s,baz=284,slow=32
ARPR Arapgir-MALATY 80.61 308 IAmb IAmb 17 16 45.4
comp=Z,13nm,1.0s
M29M Somme Creek 82.23 28 IAmb IAmb 17 17 06.9
comp=Z,25nm,2.0s
L29M L29M 82.26 27 IAmb IAmb 17 17 05.1
comp=Z,12nm,1.2s
SPITS Spitsbergen Ar 82.34 349 P **P** **17 16 52.3 +1.1**
comp=Z,6.1nm,0.9s,baz=96,slow=8.5,SNR=4.9
SPITS LR LR 17 57 44.5
comp=Z,50nm,20.9s,baz=46,slow=39
comp=Z,6.1nm,0.9s
ARCES ARCESS Array B 82.51 340 P **P** **17 16 52.9 +0.6**
comp=Z,10nm,1.1s,baz=20,slow=3.9,SNR=5.4
ARCES LR LR 17 57 39.0
comp=Z,48nm,18.9s,baz=99,slow=39
comp=Z,10nm,1.1s
BNN Bunyan 82.57 308 **P** **17 16 51.6 -1.7**
BNN IAmb IAmb 17 16 54.8
comp=Z,9.3nm,1.0s
ASF Jabal al Asfar 82.80 301 LR LR 17 57 21.7
comp=Z,78nm,21.1s,baz=34,slow=38
ILGA Ilgaz 83.81 311 IAmb IAmb 17 17 01.4
comp=Z,14nm,1.2s
BR131 Keskin Array S 84.11 309 **P** **17 17 00.1 -1.2**
BR131 IAmb IAmb 17 17 09.6
comp=Z,4.4nm,0.9s
BRTR Keskin Array B 84.11 309 P **P** **17 17 00.8 -0.4**
comp=Z,2.4nm,0.9s,baz=108,slow=4.1,SNR=16
BRTR LR LR 17 58 55.0
comp=Z,24nm,18.6s,baz=86,slow=39
comp=Z,2.4nm,0.9s
BRTR Keskin Array B 84.11 309 **P** **17 17 00.6 -0.7**
BR104 Keskin Array S 84.11 309 P **P** **17 17 00.8 -0.5**
comp=Z,4.2nm,0.9s
BR106 Keskin Array S 84.12 309 P **P** **17 17 00.6 -0.7**
comp=Z,3.5nm,1.0s
BR105 Keskin Array S 84.13 309 P **P** **17 17 00.9 -0.5**
comp=Z,4.6nm,0.8s
FINES FINESS Array B 84.23 332 P **P** **17 17 01.7 +0.5**
comp=Z,13nm,1.0s,baz=75,slow=8.1,SNR=15
FINES LR LR 17 56 48.3
comp=Z,90nm,18.5s,baz=84,slow=37
comp=Z,13nm,1.0s
FINES FINESS Array B 84.23 332 P **P** **17 17 00.2 -1.0**
A36M Sachs Harbour 84.54 17 IAmb IAmb 17 17 14.2
comp=Z,4.4nm,0.9s
NE56 Odesa 84.75 316 P **P** **17 17 03.7 -0.4**
EIL Elat 84.89 299 LR LR 18 00 05.1
comp=Z,81nm,19.0s,baz=64,slow=39
AK09 Malin Array Si 84.97 321 P **P** **17 17 04.9 -0.3**
AK03 Malin Array Si 84.98 321 P **P** **17 17 04.8 -0.4**
AK08 Malin Array Si 84.98 321 P **P** **17 17 04.9 -0.3**
AKASG Malin Array Be 84.99 321 P **P** **17 17 04.9 -0.3**
comp=Z,6.5nm,0.8s,baz=65,slow=4.8,SNR=24
AKASG LR LR 17 55 05.4
comp=Z,66nm,20.5s,baz=50,slow=36
comp=Z,6.5nm,0.8s
AKBB Malin Array Si 84.99 321 P **P** **17 17 05.1 -0.2**
AK10 Malin Array Si 85.00 321 P **P** **17 17 05.0 -0.3**
KIEV Kiev 85.00 321 P **P** **17 17 04.7 -0.6**
KIEV Kiev 85.00 321 P **P** **17 17 04.9 -0.4**
AK07 Malin Array Si 85.03 320 P **P** **17 17 05.6 +0.1**
AK16 Malin Array Si 85.07 321 P **P** **17 17 05.2 -0.5**
AK14 Malin Array Si 85.08 321 P **P** **17 17 05.3 -0.4**
AK20 Malin Array Si 85.11 321 P **P** **17 17 05.6 -0.3**
AK19 Malin Array Si 85.12 321 P **P** **17 17 05.6 -0.3**
CSS Mathiatis 85.24 305 **P** **17 17 06.2 -0.7**
CSS Mathiatis 85.24 305 P **P** **17 17 07.1 +0.2**
comp=Z,37nm,1.1s
BAL3X Bal3x, Balta 85.35 318 P **P** **17 17 07.1 0.0**
MI28 Mi28,Pidlybu 85.90 321 P **P** **17 17 08.7 -1.1**
LUBAR Lubar, Ukraine 86.08 320 P **P** **17 17 10.6 -0.1**
SORM Soroca 86.12 318 P **P** **17 17 10.6 -0.3**
comp=Z,2µmcomp=Z,19nm,1.3s
RNPP9 Sopachiv 86.86 322 P **P** **17 17 14.4 -0.1**
RNPP5 Staryi Chortor 86.91 322 P **P** **17 17 14.6 -0.2**
TIRR Tirgusor 86.93 315 P **P** **17 17 14.1 -0.9**
comp=Z,8.3nm,2.1s
KMPD K-Podol'skiy 87.24 319 P **P** **17 17 16.0 -0.4**
BUR08 Bucovina Ar. S 88.30 318 **P** **17 17 22.0 +0.3**
PPT Papeete 88.57 108 LR LR 17 49 28.9
comp=Z,49nm,19.6s,baz=288,slow=30
KMBO Kilima Mbogo 88.74 269 LR LR 17 53 53.1
comp=Z,54nm,18.8s,baz=92,slow=33
KWP Kalwaria Pacla 89.31 321 P **P** **17 17 26.3 0.0**
HOLU Holmets 89.85 320 P **P** **17 17 29.3 +0.5**
HFS Hagfors 90.38 332 P **P** **17 17 30.7 -0.3**
comp=Z,6.0nm,1.0s,baz=239,slow=19,SNR=2.8
HFS LR LR 18 00 10.5
comp=Z,120nm,18.0s,baz=82,slow=37
comp=Z,6.0nm,1.0s
NOA NORSAR Array B 91.09 334 P **P** **17 17 33.6 -0.7**
comp=Z,1.3nm,0.9s,baz=67,slow=4.7,SNR=2.2

NOA				LR		LR		18 01 25.8	
	comp=Z,81nm,18.5s,baz=55,slow=38								
	comp=Z,1.3nm,0.9s								
YKA	**Yellowknife Ar**	**92.50**	**24**	P		**P**		**17 17 42.5**	**+1.7**
	comp=Z,0.8nm,1.1s,baz=308,slow=7.6,SNR=8.3								
	comp=Z,0.8nm,1.1s								
JAVC	**Velka Javorina**	**92.68**	**321**	*e*P		**P**		**17 17 42.8**	**+0.8**
VRAC	**Vranov**	**93.17**	**322**	LR		LR		18 04 02.9	
	comp=Z,69nm,18.5s,baz=74,slow=38								
VRAC	**Vranov**	**93.17**	**322**	*e*P		**P**		**17 17 44.1**	**-0.1**
KRUC	**Moravsky**	**93.39**	**322**	*e*P		**P**		**17 17 44.8**	**-0.4**
ARSA	**Arzberg**	**94.62**	**320**	*i* PcP		**P**		**17 17 50.9**	**0.0**
	comp=Z,6.9nm,2.0s								
MBAR	**Mbarara**	**95.01**	**270**	LR		LR		17 57 11.7	
	comp=Z,73nm,21.9s,baz=80,slow=33								
GERES	**GERESS Array B**	**95.10**	**322**	P		**P**		**17 17 52.9**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=88,slow=3.2,SNR=6.2								
GERES				LR		LR		18 03 41.1	
	comp=Z,62nm,18.6s,baz=87,slow=37								
	comp=Z,0.2nm,0.3s								
SOKA	**Soboth**	**95.16**	**320**	*e*PcP		**PcP**		**17 17 54.0**	**+0.3**
	comp=Z,2.4nm,0.7s								
MOA	**Molln**	**95.17**	**321**	*e*PcP		**PcP**		**17 17 54.5**	**+0.8**
	comp=Z,4.9nm,1.0s								
OBKA	**Obir**	**95.53**	**320**	*e*PcP		**P**		**17 17 54.0**	**-1.2**
	comp=Z,4.8nm,1.5s								
BIOA	**Bad Ischl, Aus**	**95.62**	**321**	*e*P		**P**		**17 17 53.3**	**-2.1**
	comp=Z,3.2nm,1.5s								
KBA	**Koelnbreinsper**	**96.05**	**321**	*e*PcP		**P**		**17 17 57.0**	**-0.6**
	comp=Z,2.6nm,1.0s								
LESA	**Schwarzleotal**	**96.32**	**321**	*e*PcP		**P**		**17 17 58.0**	**-0.7**
	comp=Z,8.8nm,1.5s								
ABTA	**Abfaltersbach**	**96.71**	**320**	*e*PcP		**P**		**17 17 59.5**	**-1.0**
	comp=Z,8.5nm,1.2s								
WTTA	**Wattenberg**	**97.03**	**321**	*e*P		**P**		**17 18 00.3**	**-1.8**
	comp=Z,3.7nm,0.9s								
SQTA	**Sankt Quirin**	**97.31**	**321**	*e*PcP		**P**		**17 18 02.0**	**-1.3**
	comp=Z,3.1nm,1.0s								
MOTA	**Moosalm**	**97.32**	**321**	*e*PcP		**P**		**17 18 01.8**	**-1.6**
	comp=Z,3.2nm,0.7s								
DAVOX	**Davos/Dischmat**	**98.32**	**321**	LR		LR		18 05 13.4	
	comp=Z,130nm,18.1s,baz=63,slow=37								
BORG	**Borgarnes**	**99.65**	**346**	LR		LR		18 09 34.5	
	comp=Z,50nm,18.2s,baz=51,slow=39								
VNA2	**Neumayer--Watz**	**114.41**	**195**	⇓P		**Pdif**		**17 19 12.2**	**-6.4**
	comp=Z,3.2nm,0.3s								
TXAR	**Lajitas Array**	**117.16**	**48**	PKP		**PKiKP**		**17 23 17.2**	**+1.5**
	comp=Z,0.3nm,0.8s,baz=327,slow=2.3,SNR=2.4								
LL02	**Futaleuf**	**145.28**	**157**			**PKPbc**		**17 24 06.5**	**-1.0**
PLCA	**Paso Flores**	**147.89**	**156**	PKPbc		**PKPbc**		**17 24 16.1**	**+0.8**
	comp=Z,9.4nm,1.2s,baz=213,slow=7.6,SNR=6.9								
LPAZ	**La Paz**	**165.86**	**110**	PKP		**PKPdf**		**17 24 37.7**	**+1.3**
	comp=Z,2.0nm,1.0s,baz=4.3,slow=4.8,SNR=4.2								

*IDC **08** 17:08:42.0±1.0, 29.°43N×139.°40E, h393km±19km, mb3.2/7, mbtmp4.0/11, Error ellipse: s-maj=53.2km s-min=10.4km az=74.0*
*JMA **08** 17:08:43.4±0.2, 30.°N±1.°×14.°0E±.°, h412km, MV3.6/16, NEAR TORISHIMA IS*

ISC 08 17:08:42.6±0.7, 29.°51N±0.°07×139.°7E±0.°1, h400km, n24, σ1s75/30, mb3.6/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**3.25**	**137**	*e*P	**Pn**	**17 09 49.2**	**+1.3**
CBIJ				*e*S	**S**	**17 10 41.1**	**+0.3**
JCJ	**Chichijima**	**3.25**	**137**	P	**Pn**	**17 09 48.5**	**+0.5**
	62nm,0.4s,baz=307,slow=20,SNR=13						
JCJ				S	**S**	**17 10 41.2**	**+0.5**
	116nm,0.3s,baz=307,slow=22,SNR=17						
JHH2	**Haha-jima-NKT2**	**3.60**	**142**	*e*S	**S**	**17 10 47.0**	**+0.6**
BSO1	**Boso 1**	**5.24**	**12**	*e*P	**Pn**	**17 10 08.9**	**+2.5**
BSO3	**Boso 3**	**5.32**	**7**	*e*S	**S**	**17 11 17.4**	**+0.7**
JIE	**Ise**	**5.50**	**333**	*e*P	**Pn**	**17 10 12.4**	**+2.8**
JKN2	**Miekihoku**	**5.55**	**329**	*e*P	**Pn**	**17 10 12.6**	**+2.4**
HMMJ	**Hamamatsu 2**	**5.59**	**343**	*e*P	**Pn**	**17 10 12.4**	**+1.8**
INU	**Inuyama**	**6.25**	**339**	P	**Pn**	**17 10 20.2**	**+2.4**
JGF	**Kuroka**	**6.39**	**343**	P	**Pn**	**17 10 22.4**	**+3.0**
JMN	**Monobe**	**6.51**	**312**	P	**P**	**17 10 22.0**	**+0.7**
JAG	**Ashikaga**	**6.90**	**358**	*e*P	**Pn**	**17 10 24.8**	**-0.2**
JAG				*e*S	**S**	**17 11 43.9**	**-4.8**
JHO	**Hitachi**	**7.12**	**6**	*e*P	**P**	**17 10 28.7**	**+0.6**
JHO				*e*S	**S**	**17 11 50.7**	**-2.5**
MJAR	**Matsushiro Arr**	**7.13**	**350**	P	**Pn**	**17 10 27.3**	**-0.3**
	2.4nm,0.5s,baz=172,slow=10,SNR=18						
MJAR				S	**S**	**17 11 54.6**	**+1.3**
	1.3nm,0.7s,baz=212,slow=17,SNR=4.2						
MAJO	**Matsushiro**	**7.13**	**350**	P	**P**	**17 10 28.3**	**+0.2**
ASAJ	**Asahikawa**	**14.76**	**8**	P	**P**	**17 11 54.7**	**+2.4**
	1.6nm,0.4s,baz=195,slow=20,SNR=5.9						
USRK	**Ussuriysk Ar.**	**15.90**	**339**	P	**P**	**17 12 04.1**	**-0.4**
	3.1nm,0.7s,baz=174,slow=14,SNR=5.0						
WRA	**Warramunga Arr**	**49.44**	**187**	P	**P**	**17 16 53.5**	**-0.6**
	0.6nm,0.3s,baz=1.3,slow=7.7,SNR=16						
WRA				PcP	**PcP**	**17 18 09.3**	**-0.1**
	0.2nm,0.4s,baz=359,slow=3.8,SNR=1.3						
	0.6nm,0.3s						
KURBB	**Kurchatov Arra**	**49.80**	**313**	P	**P**	**17 16 55.0**	**-1.4**
	1.1nm,0.7s,baz=95,slow=6.8,SNR=9.1						
	1.1nm,0.7s						
ASAR	**Alice Springs**	**53.16**	**187**	P	**P**	**17 17 20.6**	**-0.7**
	0.3nm,0.7s,baz=3.9,slow=6.5,SNR=6.4						
	0.3nm,0.7s						
BVAR	**Borovoye Array**	**54.80**	**316**	P	**P**	**17 17 31.8**	**-0.9**
	1.4nm,0.4s,baz=98,slow=7.6,SNR=10						
	1.4nm,0.4s						
FINES	**FINESS Array B**	**74.82**	**333**	P	**P**	**17 19 39.8**	**-0.2**
	1.0nm,0.5s,baz=46,slow=5.5,SNR=4.5						
	1.0nm,0.5s						
HFS	**Hagfors**	**80.34**	**336**	P	**P**	**17 20 09.7**	**-0.5**
	1.5nm,0.8s,baz=59,slow=3.8,SNR=5.2						
	1.5nm,0.8s						
NOA	**NORSAR Array B**	**80.56**	**337**	P	**P**	**17 20 11.3**	**-0.1**
	1.3nm,0.9s,baz=45,slow=4.8,SNR=2.9						
	1.3nm,0.9s						

*AZER **08** 17:08:56.8, 38.°42N×44.°52E, h10km, ml2.6*
*TEH **08** 17:08:59.1, 38.°45N×44.°51E, h10km, ML2.6, Presumed earthquake*
*AFAD **08** 17:08:59.2, 38.°38N×44.°43E, h8km±2km, ML2.5*
*ISK **08** 17:09:00.4, 38.°50N×44.°48E, h6km, ML2.7/7*

ISC 08 17:08:59.1±1.1, 38.°44N±0.°02×44.°52E±0.°02, h8km±10km, n37, σ1s36/55, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**298**	P	**Pg**	**17 09 08.0**	**-0.2**
OZAP				S	**Sg**	**17 09 14.7**	**+0.2**
OZAP				IAML		17 09 22.0	
	comp=N,544nm,0.8s						
ISHB	**Shabestar**	**0.88**	**100**	Pg	**Pg**	**17 09 15.3**	**-0.7**
TVAN	**Van**	**0.88**	**276**	P	**Pg**	**17 09 14.8**	**-1.3**
TVAN				S	**Sg**	**17 09 27.1**	**-0.4**
TVAN				IAML		17 09 37.0	
	comp=E,200nm,0.5s						
TVAN				IAML		17 09 38.0	
	comp=N,250nm,0.9s						
VANB	**Van**	**0.90**	**280**	Pg	**Pg**	**17 09 16.4**	**0.0**
VANB				Sg	**Sb**	**17 09 29.3**	**0.0**
MAKU	**Maku**	**0.92**	**8**	Pg	**Pg**	**17 09 16.2**	**-0.7**
VMUR	**Van-Muradiye**	**0.92**	**307**	P	**Pb**	**17 09 17.2**	**-0.3**
VMUR				S	**Sb**	**17 09 30.1**	**0.0**
VMUR				IAML		17 09 35.0	
	comp=E,109nm,0.5s						
VMUR				IAML		17 09 37.0	
	comp=N,130nm,0.4s						
IMRD	**Marand**	**0.97**	**73**	Pg	**Pg**	**17 09 17.8**	**+0.1**
NAX	**Nakhchivan**	**1.06**	**46**	P	**Pg**	**17 09 19.5**	**+0.1**
NAX				S	**Sn**	**17 09 36.0**	**+0.7**
HAKT	**HAKKARI**	**1.09**	**216**	P	**Pg**	**17 09 18.8**	**-1.2**
HAKT	**HAKKARI**	**1.09**	**216**	P	**Pg**	**17 09 18.8**	**-1.2**
HAKT				S	**Sn**	**17 09 35.9**	**-0.4**
GEVA	**Gevas**	**1.16**	**264**	P	**Pb**	**17 09 19.4**	**-2.1**
GEVA				S	**Sg**	**17 09 35.9**	**-0.4**
GEVA				IAML		17 09 44.0	
	comp=N,102nm,0.4s						
SBZ	**Shahbuz**	**1.25**	**40**	P	**Pb**	**17 09 22.9**	**-0.1**
SBZ				S	**Sn**	**17 09 41.5**	**+1.4**
ORD	**Ordubad**	**1.25**	**67**	P	**Pn**	**17 09 22.9**	**-0.2**
ORD				S	**Sn**	**17 09 41.1**	**+1.0**
DYDN	**Diyadin**	**1.28**	**330**	P	**Pn**	**17 09 22.7**	**-0.8**
DYDN				S	**Sg**	**17 09 40.0**	**-0.3**
DYDN				IAML		17 09 47.0	
	comp=N,84nm,0.4s						
HYR	**Heyderabad**	**1.30**	**11**	P	**Pg**	**17 09 24.1**	**0.0**
HYR				S	**Sg**	**17 09 43.4**	**+2.4**
CUKT	**Cukurca**	**1.39**	**212**	Pn	**Pg**	**17 09 27.6**	**+1.8**
CUKT				Sn	**Sg**	**17 09 47.2**	**+3.3**
CUKT	**Cukurca**	**1.39**	**212**	P	Pg	17 09 30.9	+5.1
ADCV	**BITLIS_Adilcev**	**1.46**	**285**	P	**Pb**	**17 09 26.5**	**0.0**
IGDI	**IGDIR**	**1.47**	**347**	P	**Pg**	**17 09 26.9**	**-0.4**
IGDI	**IGDIR**	**1.47**	**347**	P	**Pg**	**17 09 26.9**	**-0.4**
IGDI				S	**Sg**	**17 09 50.0**	**+3.7**
PERV	**Siirt/Pervari-**	**1.64**	**253**	P	**Pg**	**17 09 31.4**	**+0.9**
AGRB	**Hanur-Agry**	**1.65**	**314**	Pn	**Pb**	**17 09 16.5**	**-0.3**
AGRB				Sn	**Sg**	**17 09 51.2**	**-0.8**
DORK	**Agr/Tutak/Do**	**1.66**	**305**	P	**Pb**	**17 09 29.4**	**-0.6**
MLAZ	**Malazgirt-MUS**	**1.69**	**295**	Pn	**Pb**	**17 09 30.3**	**-0.3**
GNI	**Garni**	**1.72**	**6**	Pn	**Pb**	**17 09 30.9**	**-0.1**
SIRN	**Sirnak**	**1.91**	**241**	P	**Pb**	**17 09 34.6**	**+0.3**
GURO	**Guroymak-BITLI**	**1.96**	**274**	Pn	**Pb**	**17 09 34.7**	**-0.4**
IHRS	**Heris**	**1.98**	**93**	Pn	**Pb**	**17 09 35.7**	**+0.1**
SRTM	**Siirt_Merkez**	**2.10**	**258**	P	**Pb**	**17 09 36.8**	**-0.6**
MUSM	**Mu-Merkez**	**2.38**	**278**	P	**Pg**	**17 09 43.4**	**-1.2**
GDB	**GEDABAY**	**2.47**	**22**	P	**Pb**	**17 09 41.7**	**-2.2**
GDB				S	**Sb**	**17 10 12.8**	**-1.7**
GANJ	**Ganja**	**2.61**	**32**	P	**Pb**	**17 09 44.9**	**-1.3**
GANJ				S	**Sb**	**17 10 16.0**	**-2.3**
AGDM	**Agdam**	**2.61**	**50**	P	**Pb**	**17 09 46.2**	**+0.1**
QZX	**Qazax, Azerbai**	**2.70**	**14**	P	**Pb**	**17 09 48.6**	**+0.9**
QZX				S	**Sn**	**17 10 17.1**	**+1.4**
SENK	**Senkaya-Erzuru**	**2.70**	**322**	Pn	**Pn**	**17 09 44.9**	**+1.8**
YRD	**Yardimli**	**2.95**	**80**	P	**Pn**	**17 09 48.3**	**+1.8**
YRD				S	**Sb**	**17 10 25.9**	**-2.5**
LRK	**Lerik**	**3.00**	**85**	P	**Pb**	**17 09 51.0**	**-1.9**
LRK				S	**Sb**	**17 10 26.9**	**-2.9**

*UPP **08** 17:10:04.7±0.0, 67.°19N×20.°65E, h0km, ML2.2, Confirmed Induced event*
*HEL **08** 17:10:05.3±0.0, 67.°19N×20.°64E, h0km, ML1.7, ML2.2(UPP), Confirmed Induced event*
*IDC **08** 17:10:05.0±1.0, 67.°15N×20.°81E, h0km, mbtmp3.0/4, ML1.9/4, Error ellipse: s-maj=15.5km s-min=7.5km az=116.0*

ISC 08 17:10:03.5±0.7, 67.°21N±0.°02×20.°66E±0.°03, h0km, n38, σ0s84/58, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.10**	**201**	P	**Pg**	**17 10 06.5**	**+1.2**
DUNU				S	**Sg**	**17 10 07.7**	**+1.2**
DUNU	**Dundret**	**0.10**	**201**	*i* P	**Pg**	**17 10 06.5**	**+1.2**
DUNU				*i* S	**Sg**	**17 10 07.7**	**+1.2**
MASU	**Masugnsbyn**	**0.57**	**64**	P	**Pb**	**17 10 16.0**	**-0.4**
MASU	**Masugnsbyn**	**0.57**	**64**	*i* P	**Pb**	**17 10 16.0**	**-0.4**
RATU	**Laukkuluspa**	**0.74**	**327**	P	**Pb**	**17 10 18.9**	**-0.4**
RATU	**Laukkuluspa**	**0.74**	**327**	*i* P	**Pb**	**17 10 18.9**	**-0.4**
KUA	**Kurravaara**	**0.76**	**351**	P	**Pb**	**17 10 19.1**	**-0.4**
	baz=175						
KUA				S	**Sb**	**17 10 30.1**	**-0.3**
KUA	**Kurravaara**	**0.76**	**351**	*i* P	**Pb**	**17 10 19.1**	**-0.4**
KUA				*i* S	**Sb**	**17 10 30.1**	**-0.3**
SALU	**Saltoluokta**	**0.85**	**282**	P	**Pb**	**17 10 20.8**	**-0.4**
SALU	**Saltoluokta**	**0.85**	**282**	*i* P	**Pb**	**17 10 20.8**	**-0.4**
ERTU	**Ertsjaerv**	**0.90**	**137**	P	**Pg**	**17 10 20.8**	**+0.2**
ERTU				S	**Sg**	**17 10 32.8**	**+0.7**
ERTU	**Ertsjaerv**	**0.90**	**137**	*e*P	**Pg**	**17 10 20.8**	**+0.2**
ERTU				*e*S	**Sg**	**17 10 32.4**	**+0.2**
NIKU	**Nikkaluokta**	**0.91**	**317**	P	**Pb**	**17 10 21.8**	**-0.2**
NIKU	**Nikkaluokta**	**0.91**	**317**	*e*P	**Pb**	**17 10 21.8**	**-0.2**
LANU	**Lannavaara**	**0.98**	**31**	P	**Pb**	**17 10 23.2**	**-0.2**
LANU	**Lannavaara**	**0.98**	**31**	*e*P	**Pb**	**17 10 23.2**	**-0.2**
LANU				*e*S	**Sb**	**17 10 36.3**	**-0.6**
KOVU	**Salmi**	**1.03**	**350**	P	**Pb**	**17 10 24.1**	**-0.1**
KOVU	**Salmi**	**1.03**	**350**	*e*P	**Pb**	**17 10 24.1**	**-0.1**
HARU	**Harads**	**1.06**	**173**	P	**Pg**	**17 10 23.6**	**-0.1**
HARU	**Harads**	**1.06**	**173**	*e*P	**Pg**	**17 10 23.6**	**-0.1**
KLF	**Kolari**	**1.29**	**87**	*e*P	**Pb**	**17 10 28.3**	**-0.2**
KLF				*e*S	**Sb**	**17 10 45.1**	**-0.4**
HEF	**Hetta**	**1.66**	**42**	*e*P	**Pb**	**17 10 34.6**	**-0.3**
HEF	**Hetta**	**1.66**	**42**	*e*P	**Pg**	**17 10 34.9**	**-0.3**
HEF				*e*S	**Sg**	**17 10 56.6**	**0.0**
KALU	**Kalix**	**1.73**	**140**	P	**Pb**	**17 10 35.6**	**-0.5**
KALU	**Kalix**	**1.73**	**140**	*e*P	**Pb**	**17 10 35.6**	**-0.5**
KALU				*e*S	**Sb**	**17 10 58.0**	**-0.4**
KALU				smax	smax	17 11 00.6	
	comp=Z,5.5nm,0.1s						
SJUU	**Sjulsmark**	**1.75**	**167**	P	**Pb**	**17 10 35.9**	**-0.5**
SJUU	**Sjulsmark**	**1.75**	**167**	*e*P	**Pb**	**17 10 35.9**	**-0.5**
KIF	**Kilpisjarvi**	**1.80**	**2**	*e*P	**Pg**	**17 10 38.0**	**+0.1**
KIF	**Kilpisjarvi**	**1.80**	**2**	*e*PN	**Pg**	**17 10 38.2**	**+0.3**
KIF				*e*SG	**Sg**	**17 11 02.4**	**+1.1**
KIF				smax	smax	17 11 05.4	
	comp=Z,5.2nm,0.1s						
TOF	**Tornio**	**1.85**	**126**	*e*P	**Pb**	**17 10 37.7**	**-0.4**
TOF				*e*S	**Sb**	**17 11 01.5**	**-0.2**
TOF				smax	smax	17 11 04.7	
	comp=Z,4.3nm,0.1s						
KTK1	**Kautokeino**	**2.05**	**27**	*e*PB	**Pb**	**17 10 41.6**	**+0.1**
KTK1				*e*SG	**Sg**	**17 11 09.0**	**-0.3**
RNF	**Rovaniemi**	**2.20**	**104**	*e*P	**Pb**	**17 10 42.8**	**-1.2**
RNF				*e*SB	**Sb**	**17 11 11.8**	**+0.1**
RNF				smax	smax	17 11 16.6	
	comp=Z,4.0nm,0.2s						
SGF	**Sodankyl**	**2.29**	**81**	*e*PB	**Pb**	**17 10 45.0**	**-0.5**
SGF				*e*SB	**Sb**	**17 11 14.6**	**+0.4**
TRO	**Tromso**	**2.52**	**346**	*e*PB	**Pb**	**17 10 49.0**	**-0.5**
TRO				*e*SG	**Sg**	**17 11 23.3**	**-0.9**
ARCES	**ARCESS Array B**	**2.94**	**35**	Pn	**Pn**	**17 10 53.8**	**+2.3**
	comp=Z,0.3nm,0.3s,baz=216,slow=13,SNR=24						
ARCES				Sn	**Sn**	**17 11 29.3**	**+1.9**
	comp=Z,0.6nm,0.3s,baz=216,slow=28,SNR=7.7						
	comp=Z,0.7nm,0.3s						
FINES	**FINESS Array B**	**6.25**	**155**	Pn	**Pn**	**17 11 38.1**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=345,slow=14,SNR=4.6						
FINES				Sn	**Sn**	**17 12 47.5**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=337,slow=21,SNR=6.9						
FINES				Lg	Lg	17 13 18.6	
	comp=Z,0.4nm,0.3s,baz=342,slow=29,SNR=6.9						
	comp=Z,4.1nm,1.1s						
NOA	**NORSAR Array B**	**7.44**	**218**	Pn	**Pn**	**17 11 51.4**	**-1.7**
	baz=45,slow=19,SNR=1.9						
NOA				Sn	**Sn**	**17 13 16.6**	**-1.5**
	baz=150,slow=9.7,SNR=1.1						
NOA				Lg	Lg	17 13 57.2	
	baz=98,slow=18,SNR=3.5						
	comp=Z,1.1nm,0.8s						
HFS	**Hagfors**	**7.74**	**207**	Pn	**Pn**	**17 11 57.1**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=27,slow=14,SNR=0.8						
HFS				Sn	**Sn**	**17 13 22.9**	**-2.6**
	comp=Z,0.2nm,0.3s,baz=18,slow=24,SNR=0.9						
HFS				Lg	Lg	17 14 07.0	
	comp=Z,0.3nm,0.3s,baz=27,slow=27,SNR=5.0						
	comp=Z,0.7nm,0.6s						

*SDD **08** 17:35:55.5±2.3, 20.°03N×71.°01W, h25km±12km, MD3.2, ML2.6, Presumed earthquake*
*OSPL **08** 17:35:57.3±1.5, 19.°92N×71.°18W, h0km±23km, ML1.8, Presumed earthquake*

ISC 08 17:35:50.4±2.6, 20.°2N±0.°1×71.°05W±0.°06, h14km±10km, n10, σ1s05/16, 11C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUDR	**Luperon**	**0.28**	**161**	⇑*e*Pg	**Pn**	**17 36 00.4**	**+0.3**
LUDR				⇑*e*Sg	**Sb**	**17 36 03.4**	**+1.7**
LOPP1	**Punta Rusia, P**	**0.33**	**205**	*i* P	**Pg**	**17 35 57.5**	**+0.3**
LOPP1				IAML		17 36 08.8	
	comp=Z,70nm,0.8s						
MCDR	**Montecristi**	**0.63**	**245**	⇑*e*Sg	**Sn**	**17 36 14.7**	**0.0**
MCDR				IAML		17 36 16.4	
	comp=N,317nm,0.7s						
SC01	**Santiago de lo**	**0.79**	**157**	⇑*e*Sg	**Sg**	**17 36 15.4**	**-0.7**
SC01				IAML		17 36 15.8	
	comp=N,164nm,3.6s						
SDDR	**Presa de Saban**	**1.19**	**191**	⇑*e*Pg	**Pg**	**17 36 14.0**	**+0.6**
SDDR				⇑*e*Sg	**Sb**	**17 36 27.0**	**-1.1**
SDDR				IAML		17 37 02.6	
	comp=N,53nm,2.8s						
SDDR	**Presa de Saban**	**1.19**	**191**	*i* P	**Pg**	**17 36 14.5**	**+1.1**
SDDR				*e*S	**Sb**	**17 36 26.0**	**-2.1**
SDDR				IAML		17 36 30.1	
	comp=Z,33nm,3.1s						

DR08	**Loma La Naviza**	**1.53**	**141**	⇑*e*Sg		**Sn**		**17 36 36.5**	**-0.7**
DR08				IAML				17 37 09.8	
	comp=N,626nm,0.2s								
LONE3	**El Aguacate, B**	**1.59**	**194**	*i* P		**Pg**		**17 36 21.6**	**+0.5**
LONE3				*e*S		**Sn**		**17 36 39.4**	**+0.7**
LONE3				IAML				17 36 42.0	
	comp=Z,15nm,2.1s								
BANI	**BANI**	**1.87**	**159**	⇑*e*Pg		**Pg**		**17 36 26.4**	**0.0**
BANI				⇑*e*Sg		**Sn**		**17 36 46.7**	**+1.1**
BANI				IAML				17 36 55.0	
	comp=N,57nm,2.9s								
HATOM	**Hato Mayor del**	**2.08**	**131**	⇑*e*Pg		**Pb**		**17 36 27.5**	**-0.6**
HATOM				⇑*e*Sg		**Sn**		**17 36 50.9**	**+0.1**
HATOM				IAML				17 36 57.2	
	comp=N,28nm,2.0s								

*IDC **08** 17:48:12.0±2.0, 5.°12S×149.°55E, h0km, mb3.5/4, mbtmp3.6/6, ML2.6/2, MS3.1/2, Error ellipse: s-maj=72.5km s-min=23.7km az=102.0*

ISC 08 17:48:15.7±1.6, 5.°2S±0.°2×149.°8E±0.°4, h35km, n8, σ1s28/9, mb3.4/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.93**	**212**	Pn	**Pn**	**17 49 27.0**	**-0.5**
	2.6nm,0.3s,baz=34,slow=12,SNR=9.3						
PMG				Sn	**Sn**	**17 50 23.4**	**+0.1**
	4.8nm,0.3s,baz=101,slow=17,SNR=3.7						
	8.5nm,0.5s						
CTA	**Charters Tower**	**15.19**	**193**	Pn	**Pn**	**17 51 46.8**	**-1.0**
	0.1nm,0.3s,baz=9.8,slow=19,SNR=2.2						
	2.5nm,0.9s						
WRA	**Warramunga Arr**	**21.01**	**224**	P	**P**	**17 52 57.1**	**+0.7**
	0.6nm,0.4s,baz=49,slow=11,SNR=15						
WRA				PcP	**PcP**	**17 57 02.7**	**-0.3**
	0.3nm,0.6s,baz=46,slow=1.9,SNR=1.9						
	0.6nm,0.4s						
DZM	**Mont Dzumac**	**23.24**	**138**	LR	LR	18 00 37.0	
	comp=Z,63nm,18.1s,baz=12,slow=32						
ASAR	**Ice Springs**	**23.91**	**218**	P	**P**	**17 53 26.0**	**-0.6**
	0.4nm,0.6s,baz=52,slow=8.5,SNR=9.4						
ASAR				LR	LR	18 02 20.7	
	comp=Z,32nm,19.6s,baz=144,slow=36						
	0.4nm,0.6s						
STKA	**Stephens Creek**	**27.63**	**195**	P	**P**	**17 54 02.6**	**+2.5**
	3.7nm,1.0s,baz=10,slow=11,SNR=3.0						
	3.7nm,1.0s						
SONM	**Songino Array**	**65.12**	**329**	P	**P**	**17 58 53.5**	**+0.3**
	0.3nm,0.6s,baz=119,slow=5.1,SNR=2.3						
	0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**147.59**	**286**	PKPbc	**PKiKP**	**18 07 58.4**	**-1.2**
	1.9nm,0.6s,baz=63,slow=2.9,SNR=11						

*MAN **08** 18:03:17.0, 11.°95N×125.°97E, h4km, MS4.4*
MAN INTENSITY III - DOLORES AND ORAS EASTERN SAMAR; . INTENSITY II - BORONGAN CITY; SAN JULIAN SAN POLICARPO AND SULAT EASTERN SAMAR.
*NEIC **08** 18:03:23.1±2.1, 11.°85N±0.°08×125.°69E±0.°09, h35km±2km, mb4.5/31, Error ellipse: s-maj=18.9km s-min=7.0km az=230.0*
*IDC **08** 18:03:25.3±2.3, 11.°82N×125.°77E, h56km±21km, mb4.0/20, mbtmp4.3/23, ML4.6/4, MS3.4/15, Error ellipse: s-maj=21.4km s-min=9.7km az=66.0*
*DJA **08** 18:03:36.7±0.6, 12.°N±5.°×12.°6E±.°, h235km±9km, M4.8/16, mb4.2/16, mB5.8/3, MLv5.0/1, Mw(mB)5.4/3*

ISC 08 18:03:19.8±1.8, 11.°81N±0.°04×125.°95E±0.°06, h18km±12km, n153, σ1s74/142, mb4.5/57, MS3.5/15, 2C-1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLP	**Palo**	**1.15**	**236**	*e*P	**Pn**	**18 03 40.2**	**-0.7**
PLP				*i* S	**Sb**	**18 03 54.6**	**-1.0**
SCPH	**Surigao**	**2.06**	**193**	*e*P	**Pn**	**18 03 55.1**	**+1.6**
SCPH				*e*S	**Sb**	**18 04 21.1**	**-1.0**
MMPH	**Masbate**	**2.34**	**284**	*e*P	**Pn**	**18 03 57.7**	**+0.4**
M

comp=Z,14nm,0.8s
KSRS Korea Array 25.60 4 P P 18 08 48.0 +0.1
comp=Z,1.9nm,0.6s,baz=187,slow=9.9,SNR=11
KSRS LR LR 18 18 33.6
comp=Z,32nm,20.7s,baz=170,slow=36
comp=Z,1.9nm,0.6s
LYN LuoYang 25.75 334 P P 18 08 53.4 +4.0
LYN pmax pmax
comp=Z,12nm,0.9s
CMAR Chiang Mai Arr 26.87 288 P P 18 08 59.4 -0.4
comp=Z,2.5nm,0.8s,baz=100,slow=7.4,SNR=20
comp=Z,2.5nm,0.8s
CMAR Chiang Mai Arr 26.87 288 P P 18 08 57.9 -1.9
MJAR Matsushiro Arr 26.99 22 LR LR 18 18 20.9
comp=Z,53nm,20.7s,baz=179,slow=33
XAN Xi'an 27.04 328 ⇑P P 18 09 00.6 -0.6
XAN pP pwP 18 09 09.6 -0.7
XAN sP sP 18 09 13.0 +5.9
XAN pmax pmax
comp=Z,14nm,1.1s
XAN LR LR
comp=N,110nm,13.7s
XAN LR LR
comp=E,170nm,15.8s
XAN LR LR
comp=Z,210nm,15.1s
PZH PanZhiHua 27.07 306 P P 18 09 01.6 0.0
PZH pmax pmax
comp=Z,10.0nm,0.7s
HNS HongShan 27.41 340 ⇓P P 18 09 04.9 +0.6
HNS pmax pmax
comp=Z,9.0nm,0.9s
BJI2 Beijing 29.40 345 P P 18 09 22.5 +0.4
BJI2 pmax pmax
comp=Z,1.0nm,0.7s
LZH Lanzhou 31.35 324 eP P 18 09 39.5 -0.1
LZH pP pP 18 09 43.8 -0.2
LZH sP pwP 18 09 48.0 -0.7
LZH pmax pmax
comp=Z,13nm,1.1s
LZH LR LR
comp=N,220nm,15.1s
LZH LR LR
comp=E,150nm,13.4s
LZH LR LR
comp=Z,210nm,14.4s
HHC Hu-ho-hao-te 31.57 339 eP P 18 09 41.6 +0.2
HHC pmax pmax
comp=Z,5.0nm,0.6s
HHC pmax pmax
comp=Z,97nm,5.0s
WRA Warramunga Arr 32.62 165 P P 18 09 50.4 -0.2
comp=Z,0.3nm,0.4s,baz=346,slow=9.2,SNR=7.7
WRA PcP **PcP 18 12 37.6 +0.8**
comp=Z,1.0nm,0.7s,baz=345,slow=3.1,SNR=5.8
comp=Z,0.3nm,0.4s
WRA Warramunga Arr 32.62 165 P P 18 09 47.0 -3.6
USRK Uesuriysk Ar. 32.69 8 P P 18 09 51.7 +0.7
comp=Z,1.4nm,0.6s,baz=163,slow=7.9,SNR=2.1
comp=Z,1.4nm,0.6s
BNX BinXian 33.84 2 ⇑P P 18 10 02.2 +1.2
BNX pmax pmax
comp=Z,5.0nm,0.8s
BRDH Bariadhala 34.42 293 LR LR 18 24 22.2
comp=Z,99nm,19.8s,baz=196,slow=37
GTA2 Gaotai 36.03 325 eP P 18 10 20.7 +0.5
GTA2 sP pwP 18 10 31.9 +2.5
GTA2 PcP **PcP 18 12 47.5 +1.0**
GTA2 pmax pmax
comp=Z,6.0nm,1.2s
AS31 Alice Springs 36.10 168 P 18 10 22.5 +1.6
ASAR Alice Springs 36.11 168 P P 18 10 22.4 +1.6
comp=Z,0.7nm,0.4s,baz=350,slow=6.7,SNR=18
ASAR PcP **PcP 18 12 47.2 +0.5**
comp=Z,1.0nm,0.6s,baz=336,slow=3.3,SNR=8.2
comp=Z,0.7nm,0.4s
LSA Lhasa 36.89 304 P P 18 10 27.4 -0.7
LSA IAmb IAmb 18 10 29.2
comp=Z,9.0nm,1.3s
LSA Lhasa 36.89 304 P P 18 10 25.1 -3.0
LSA pmax pmax
comp=Z,5.0nm,1.0s
GOMU GeErMu 37.11 316 P P 18 10 29.8 0.0
GOMU pP pP 18 10 33.7 -0.6
GOMU sP pwP 18 10 37.6 -1.5
GOMU pmax pmax
comp=Z,4.0nm,0.8s
CTA Charters Tower 37.47 148 LR LR 18 28 51.7
comp=Z,40nm,18.3s,baz=284,slow=41
HEH HeiHe 38.35 2 eP P 18 10 40.3 +0.7
HEH pmax pmax
comp=Z,6.0nm,0.9s
SONM Songino Array 39.48 339 P P 18 10 49.4 +0.2
comp=Z,0.7nm,0.6s,baz=153,slow=9.5,SNR=8.0
SONM PcP **PcP 18 12 57.3 +0.4**
comp=Z,0.3nm,0.7s,baz=149,slow=3.4,SNR=2.3
SONM LR LR 18 28 14.5
comp=Z,56nm,18.3s,baz=193,slow=38
comp=Z,0.7nm,0.6s
SONM Songino Array 39.48 339 P P 18 10 49.5 +0.2
H11S3 WAKE ISLAND Hy 39.81 75 T T 18 54 06.7
baz=269,slow=75
H11S1 WAKE ISLAND Hy 39.83 75 T T 18 54 11.4
baz=269,slow=75
H11S2 WAKE ISLAND Hy 39.83 75 T T 18 54 07.0
baz=269,slow=75
EVN Everest 39.95 300 P 18 10 52.4 -1.6
EVN IAmb IAmb 18 10 54.3
comp=Z,12nm,1.3s
H11N1 WAKE ISLAND Hy 40.10 73 T T 18 54 27.7
baz=265,slow=74
H11N2 WAKE ISLAND Hy 40.10 73 T T 18 54 28.1
baz=265,slow=74,SNR=30
H11N3 WAKE ISLAND Hy 40.11 73 T T 18 54 29.0
baz=265,slow=74,SNR=40
TLY Talaya 43.69 340 LR LR 18 30 29.6
comp=Z,33nm,19.0s,baz=58,slow=37
PALK Pallekele 44.81 268 LR LR 18 30 30.1
comp=Z,32nm,18.6s,baz=82,slow=36
WMQ Urumqi 45.83 321 eP P 18 11 42.7 +1.9
WMQ pmax pmax
comp=Z,11nm,1.1s
STKA Stephens Creek 45.95 161 P P 18 11 43.6 +1.8
comp=Z,2.9nm,0.6s,baz=340,slow=9.2,SNR=6.7
comp=Z,2.9nm,0.6s
STKA Stephens Creek 45.95 161 P P 18 11 44.2 +2.5
PETK Petropavlovsk- 48.38 25 P P 18 12 03.0 +2.5
comp=Z,3.1nm,0.8s,baz=211,slow=1.7,SNR=4.5
comp=Z,3.1nm,0.8s
PETK Petropavlovsk- 48.38 25 P P 18 12 02.7 +2.2
MKAR Makanchi Array 50.62 322 P P 18 12 18.4 +0.6
comp=Z,8.7nm,0.8s,baz=120,slow=8.5,SNR=89
MKAR PcP **PcP 18 13 35.2 0.0**
comp=Z,1.1nm,0.6s,baz=117,slow=4.5,SNR=5.6
MKAR LR LR 18 35 14.7
comp=Z,45nm,19.1s,baz=112,slow=38
comp=Z,8.7nm,0.8s
MKAR Makanchi Array 50.62 322 P 18 12 17.9 +0.2
MAKZ Makanchi 50.82 322 P 18 12 19.6 +0.3
MAKZ IAmb IAmb 18 12 20.8
comp=Z,9.2nm,1.0s
KSH2 Kashi 52.17 311 P P 18 12 29.8 +0.1
KSH2 pmax pmax
comp=Z,4.0nm,1.0s
NIL Nilore 52.62 303 P 18 12 31.1 -1.9
NIL IAmb IAmb 18 12 33.2
comp=Z,8.7nm,0.8s
ZALV Zalesovo Beam 53.13 331 P P 18 12 36.3 0.0
comp=Z,1.7nm,0.6s,baz=112,slow=7.0,SNR=10
comp=Z,1.7nm,0.6s
ZALV Zalesovo Beam 53.13 331 P P 18 12 36.1 -0.2
AAK Ala-Archa 54.02 315 LR LR 18 36 20.4
comp=Z,60nm,18.5s,baz=82,slow=37
AAK Ala-Archa 54.02 315 P P 18 12 42.8 -0.5
AAK IAmb IAmb 18 12 50.5
comp=Z,5.0nm,1.4s
KURK Kurchatov 54.63 325 P 18 12 46.4 -0.9
KURBB Kurchatov Arra 54.64 325 P P 18 12 47.7 +0.3
comp=Z,9.2nm,0.8s,baz=122,slow=7.4,SNR=88
comp=Z,9.2nm,0.8s
GAR Garm 56.08 309 P 18 12 55.8 -2.3
KK31 Karatay Array 56.96 314 P 18 13 02.8 -1.5
KKAR Karatay Array 56.96 314 P 18 13 03.9 -0.4
TIXI Tiksi 59.83 1 LR LR 18 41 53.5
comp=Z,16nm,18.2s,baz=192,slow=39
BVAR Borovoye Array 60.23 325 P P 18 13 27.2 +0.4
comp=Z,3.4nm,0.8s,baz=126,slow=7.5,SNR=19
comp=Z,3.4nm,0.8s
BORK Borovoye 60.28 325 P 18 13 26.2 -0.9
NRIK Noril'sk 62.45 346 P P 18 13 42.0 +0.4
comp=Z,3.8nm,0.8s,baz=133,slow=5.8,SNR=7.9
comp=Z,3.8nm,0.8s
AB31 Akbulak array 65.51 319 IAmb IAmb 18 14 02.7
comp=Z,5.0nm,0.9s
ABKAR Akbulak array 65.51 319 P 18 13 59.9 -2.2
C19K Lookout Ridge 73.51 21 IAmb IAmb 18 15 03.5
comp=Z,5.0nm,1.1s
D19K Kuna River 73.93 22 IAmb IAmb 18 15 04.9
comp=Z,5.8nm,1.1s
D20K Etivluk River 74.51 22 P P 18 14 57.9 +0.9
D20K IAmb IAmb 18 15 08.8
comp=Z,4.4nm,0.9s
B21K Ikpikpuk River 75.33 21 IAmb IAmb 18 15 13.6
comp=Z,4.1nm,0.9s
B22K Teshekpuk Lake 75.80 20 IAmb IAmb 18 15 15.4
comp=Z,7.2nm,1.3s
RAYN Ar Rayn 76.71 292 P 18 15 08.3 -2.2
KBZ Khabaz 76.94 312 P P 18 15 11.1 -0.3
comp=Z,2.5nm,0.9s,baz=127,slow=1.4,SNR=3.9
comp=Z,2.5nm,0.9s
KIV Kislovodsk 77.08 313 P P 18 15 12.7 +0.4
comp=Z,13nm,1.1s
GEVA Gevas 77.24 307 IAmb IAmb 18 15 14.5
comp=Z,4.2nm,0.9s
ILAR Eielson Array 78.20 26 P P 18 15 18.9 +0.9
comp=Z,0.4nm,0.7s,baz=246,slow=4.7,SNR=5.7
comp=Z,0.4nm,0.7s
MARD Mardin 79.14 306 IAmb IAmb 18 15 24.2
comp=Z,5.3nm,0.7s
D27M Malcolm River 80.14 21 P P 18 15 29.8 +1.2
F28M Old Crow 80.76 23 P P 18 15 32.4 +0.5
F28M IAmb IAmb 18 16 17.0
comp=Z,4.9nm,1.2s
ARCES ARCESS Array B 82.65 340 P P 18 15 42.4 +0.6
comp=Z,3.3nm,0.7s,baz=79,slow=6.3,SNR=7.8
comp=Z,3.3nm,0.7s
BRTR Keskin Array B 84.32 309 P P 18 15 50.0 -1.1
comp=Z,2.1nm,0.7s,baz=101,slow=4.4,SNR=19
comp=Z,2.1nm,0.7s
BRTR Keskin Array B 84.32 309 P 18 15 48.0 -3.2
BR104 Keskin Array S 84.32 309 P P 18 15 50.2 -1.0
comp=Z,3.2nm,0.9s
BR106 Keskin Array S 84.33 309 P P 18 15 50.3 -0.9
comp=Z,2.6nm,0.7s
FINES FINESS Array B 84.39 332 P P 18 15 50.8 -0.1
comp=Z,4.1nm,0.8s,baz=74,slow=3.3,SNR=15
comp=Z,4.1nm,0.8s
FINES FINESS Array B 84.39 332 P P 18 15 49.4 -1.5
AK09 Malin Array Si 85.16 321 P P 18 15 54.3 -0.7
AK03 Malin Array Si 85.18 321 P P 18 15 54.1 -0.9
AKASG Malin Array Be 85.18 321 P P 18 15 54.2 -0.8
comp=Z,5.2nm,0.7s,baz=67,slow=4.8,SNR=9.2
comp=Z,5.2nm,0.7s
AKASG Malin Array Be 85.18 321 P P 18 15 53.6 -1.4
AKASG IAmb IAmb 18 15 55.5
comp=Z,6.5nm,1.1s
AKBB Malin Array Si 85.18 321 P P 18 15 54.2 -0.9
AK10 Malin Array Si 85.19 321 P P 18 15 54.5 -0.6
AK01 Malin Array Si 85.19 321 P P 18 15 54.3 -0.8
KIEV Kiev 85.19 321 P P 18 15 54.2 -0.9
comp=Z,42nm,0.9s
AK02 Malin Array Si 85.20 321 P P 18 15 54.4 -0.8
AK05 Malin Array Si 85.21 321 P P 18 15 54.4 -0.8
AK11 Malin Array Si 85.22 321 P P 18 15 54.2 -1.1
AK06 Malin Array Si 85.22 321 P P 18 15 54.2 -1.1
AK07 Malin Array Si 85.23 321 P P 18 15 54.8 -0.5
AK22 Malin Array Si 85.26 321 P P 18 15 54.7 -0.8
AK14 Malin Array Si 85.27 321 P P 18 15 54.9 -0.6
AK18 Malin Array Si 85.27 321 P P 18 15 54.6 -0.9
AK21 Malin Array Si 85.28 321 P P 18 15 54.9 -0.6
AK20 Malin Array Si 85.30 321 P P 18 15 54.6 -1.1
AK19 Malin Array Si 85.31 321 P P 18 15 54.8 -0.9
CSS Mathiatis 85.45 305 P 18 15 55.5 -1.4
CSS Mathiatis 85.45 305 P P 18 15 56.7 -0.1
comp=Z,22nm,1.0s
LUBAR Lubar, Ukraine 86.28 320 P P 18 15 59.0 -1.5
SORM Soroca 86.32 318 P P 18 15 59.4 -1.4
comp=Z,11nm,0.9s
RNPP5 Stanyi Chortor 87.10 322 P P 18 16 04.7 +0.1
KMPD K-Podol'skiy 87.44 319 P P 18 16 05.9 -0.3
MLR Muntele Rosu 88.57 316 LR LR 18 58 43.1
comp=Z,27nm,18.4s,baz=56,slow=38
NOA NORSAR Array B 91.25 334 LR LR 18 59 08.5
comp=Z,27nm,19.3s,baz=260,slow=37
MBAR Mbarara 95.22 270 LR LR 18 59 50.2
comp=Z,17nm,18.4s,baz=264,slow=36
TORD Torodi Ar. Bea 119.40 292 PKP PKPdf 18 22 08.1 -1.1
comp=Z,0.3nm,0.5s,baz=101,slow=2.1,SNR=2.3
PLCA Paso Flores 147.73 196 PKPbc PKiKP 18 23 04.9 -1.0
comp=Z,2.7nm,0.9s,baz=247,slow=3.3,SNR=4.8
LPAZ La Paz 165.63 110 PKP PKPdf 18 23 27.4 +2.2
comp=Z,0.7nm,0.6s,baz=164,slow=5.2,SNR=2.1

*MOS **08** 18:24:50.3±0.8, 45.64N×26.51E, h135km, mb4.4/8, Error ellipse: s-maj=4.8km s-min=4.6km az=104.8*
*NEIC **08** 18:24:51.8±2.4, 45.63N±0.07×26.6E±0.1, h131km±7km, mb4.3/11, Error ellipse: s-maj=12.4km s-min=8.3km az=49.0*
*IDC **08** 18:24:51.5±0.5, 45.63N×26.38E, h130km±4km, mb3.7/15, mbtmp4.0/25, MS3.6/1, Error ellipse: s-maj=13.3km s-min=8.6km az=159.0*
*BUC **08** 18:24:51.1±0.2, 45.60N×26.50E, h133km±1km, ml4.2/87, Error ellipse: s-maj=1.3km s-min=1.0km az=10.0*
*SOF **08** 18:24:51.5, 45.57N±0.02×26.45E±0.02, h130km±2km, MD4.0/7*
*SIGU **08** 18:24:51.3±0.2, 46°N±2°×2°7E±°, h131km, mb3.2/11, MD3.9/14*
*CFUSG **08** 18:24:52.3, 45.60N×26.60E, h150km, Mb3.9/5, MD3.8/5, MSH3.5/5*
*PRU **08** 18:24:55.5, 45.75N×26.21E, h40km, M4.3*
*BEO **08** 18:25:01.0±0.3, 45.30N×25.30E, h0km, ML4.0/21*
ISC 08 18:24:51.2±0.5, 45.58N±0.02×26.41E±0.03, h135km±4km, h135km:pP-P, n335, σ1983/464, mb4.2/24, 81C-88D, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NEHR	**Nehoiu**	**0.17**	**209**	⇓P		**Pn**		**18 25 10.3**	**+0.5**
NEHR				⇓S		**Sn**		**18 25 23.9**	**+0.2**
BISRR	**Bisoca**	**0.21**	**99**	⇓P		**Pn**		**18 25 10.2**	**+0.4**
BISRR				⇓S		**Sn**		**18 25 24.4**	**+0.5**
COVR	**Voineasa-Covas**	**0.30**	**331**	⇑P		**Pn**		**18 25 10.0**	**0.0**
COVR				⇑S		**Sn**		**18 25 23.6**	**-0.8**
PLOR	**Plostina**	**0.32**	**31**	⇑P		**Pn**		**18 25 09.9**	**-0.2**
PLOR				⇓S		**Sn**		**18 25 23.5**	**-0.9**
PLOR	**Plostina**	**0.32**	**31**	P		**Pn**		**18 25 09.8**	**-0.2**
MLR	**Muntele Rosu**	**0.34**	**255**	P		**Pn**		**18 25 10.7**	**+0.4**
	2μm,0.5s,baz=335,slow=1.6								
MLR				LR		LR		18 25 11.3	
	comp=Z,36nm,18.4s,baz=326,slow=59								
MLR				S		**Sn**		**18 25 25.1**	**+0.4**
	2μm,0.5s,baz=9.3,slow=22,SNR=26								
MLR	**Muntele Rosu**	**0.34**	**255**	⇑P		**Pn**		**18 25 10.9**	**+0.6**
MLR				⇑S		**Sn**		**18 25 25.0**	**+0.2**
MLR	**Muntele Rosu**	**0.34**	**255**			**Pn**		**18 25 10.1**	**-0.2**
MLR					Sn	**Sn**		**18 25 25.7**	**+1.0**
MLR	**Muntele Rosu**	**0.34**	**255**	P		**Pn**		**18 25 10.1**	**-0.2**
MLR								18 25 25.7	
MLR	**Muntele Rosu**	**0.34**	**255**		ePg	**Pn**		**18 25 10.7**	**+0.4**
MLR					eSg	**Sn**		**18 25 21.5**	**-3.2**
VRI	**Vrincioaia**	**0.36**	**37**	⇑P		**Pn**		**18 25 10.2**	**-0.1**
VRI				⇓S		**Sn**		**18 25 23.6**	**-1.1**
VRI	**Vrincioaia**	**0.36**	**37**	P		**Pn**		**18 25 10.1**	**-0.1**
GRER		**0.44**	**117**	⇓S		**Sn**		**18 25 25.4**	**+0.2**
ISR	**Istrita**	**0.47**	**169**	⇓P		**Pn**		**18 25 11.4**	**+0.6**
ISR				⇑S		**Sn**		**18 25 26.6**	**+1.0**
ISR	**Istrita**	**0.47**	**169**	P		**Pn**		**18 25 11.2**	**+0.4**
ODBI	**Odobesti**	**0.48**	**68**	⇓S		**Sn**		**18 25 25.1**	**-0.5**
PANC	**Panciu**	**0.59**	**60**	⇓P		**Pn**		**18 25 11.5**	**+0.2**
PANC				⇓S		**Sn**		**18 25 26.3**	**-0.4**
OZUR		**0.68**	**320**	⇑P		**Pn**		**18 25 11.9**	**-0.1**
COSR	**Cosmesti PH**	**0.69**	**66**	⇓P		**Pn**		**18 25 11.8**	**-0.2**
COSR				⇓S		**Sn**		**18 25 26.6**	**-1.1**
PLAR	**PLOIESTI**	**0.72**	**202**	⇓S		**Sn**		**18 25 30.0**	**+1.7**
BOSR	**Bodos**	**0.72**	**313**	⇑P		**Pn**		**18 25 12.5**	**+0.1**
ONER	**Baraj Valea Uz**	**0.75**	**359**	⇑P		**Pn**		**18 25 12.5**	**-0.1**
ONER				⇑S		**Sn**		**18 25 28.6**	**-0.2**
DOPR	**Dopca**	**0.81**	**299**	⇑P		**Pn**		**18 25 13.4**	**+0.4**
GHRR		**0.84**	**55**	⇓P		**Pn**		**18 25 13.2**	**0.0**
GHRR				⇓S		**Sn**		**18 25 29.9**	**-0.1**
TUDR		**0.88**	**89**	⇓P		**Pn**		**18 25 13.0**	**-0.5**
TUDR				⇓S		**Sn**		**18 25 28.9**	**-1.5**
SULR		**0.91**	**187**	⇓S		**Sn**		**18 25 32.3**	**+1.4**
TESR	**Tescani**	**0.95**	**10**	⇑P		**Pn**		**18 25 13.5**	**-0.6**
IZVR	**Izvoarele**	**0.95**	**92**	⇓P		**Pn**		**18 25 13.4**	**-0.7**
IZVR				⇓S		**Sn**		**18 25 29.6**	**-1.9**
VOIR		**0.97**	**262**	⇑P		**Pn**		**18 25 15.0**	**+0.6**
VOIR				⇓S		**Sn**		**18 25 32.3**	**+0.3**
VOIR		**0.97**	**262**	P		**Pn**		**18 25 14.8**	**+0.4**
SCHL	**Schela**	**1.00**	**94**	⇓P		**Pn**		**18 25 14.0**	**-0.5**
SCHL				⇓S		**Sn**		**18 25 32.1**	**-0.2**
SCHLR	**Schela**	**1.00**	**96**	⇓P		**Pn**		**18 25 14.0**	**-0.5**
SCHLR				⇓S		**Sn**		**18 25 30.4**	**-1.8**
MTUR	**Matau**	**1.02**	**250**	⇑P		**Pn**		**18 25 15.8**	**+0.9**
MTUR	**Matau**	**1.02**	**250**	P		**Pn**		**18 25 15.9**	**+1.1**
NEGRR	**Negrea**	**1.03**	**92**	⇓P		**Pn**		**18 25 14.5**	**-0.3**
NEGRR				⇓S		**Sn**		**18 25 31.7**	**-1.1**
VARL	**Varlezi**	**1.05**	**72**	⇓P		**Pn**		**18 25 14.7**	**-0.4**
VARL				⇓S		**Sn**		**18 25 31.5**	**-1.7**
BIR	**Birlad**	**1.09**	**51**	⇓P		**Pn**		**18 25 15.0**	**-0.4**
BIR				⇓S		**Sn**		**18 25 32.5**	**-1.3**
BIR	**Birlad**	**1.09**	**51**	P		**Pn**		**18 25 14.9**	**-0.4**
SCTR	**Scanteiesti**	**1.11**	**85**	⇓P		**Pn**		**18 25 15.5**	**-0.1**
SCTR				⇓S		**Sn**		**18 25 32.7**	**-1.5**
LEHL	**Lehliu**	**1.14**	**165**	⇓P		**Pn**		**18 25 16.6**	**+0.7**
LEHL				⇓S		**Sn**		**18 25 35.7**	**+1.0**
TATR	**Tatarca**	**1.15**	**89**	⇓P		**Pn**		**18 25 15.9**	**-0.1**
TATR				⇓S		**Sn**		**18 25 33.5**	**-1.3**
INCR	**INCERC-Sediu C**	**1.15**	**189**	⇓P		**Pn**		**18 25 16.6**	**+0.6**
INCR				⇓S		**Sn**		**18 25 35.3**	**+0.4**
GISR	**Galati**	**1.16**	**96**	⇓P		**Pn**		**18 25 16.0**	**-0.1**
GISR				⇓S		**Sn**		**18 25 34.4**	**-0.6**
AMRR	**Amara**	**1.17**	**146**	⇑P		**Pn**		**18 25 16.3**	**+0.1**
AMRR				⇑S		**Sn**		**18 25 35.1**	**-0.1**
AMRR	**Amara**	**1.17**	**146**	P		**Pn**		**18 25 16.6**	**+0.4**
VLDR	**Vladesti**	**1.20**	**77**	⇓P		**Pn**		**18 25 16.2**	**-0.3**
VLDR				⇓S		**Sn**		**18 25 34.2**	**-1.4**
STFAR	**Stefanesti-Arg**	**1.25**	**236**	⇑P		**Pn**		**18 25 17.9**	**+0.8**
BUC1	**Bucharest**	**1.26**	**193**	⇑P		**Pn**		**18 25 17.4**	**+0.3**
BUC1				⇑S		**Sn**		**18 25 38.1**	**+1.3**
BUC1	**Bucharest**	**1.26**	**193**	P		**Pn**		**18 25 18.0**	**+0.9**
GIUM	**Giurgiulesti**	**1.26**	**94**	⇓P		**Pn**		**18 25 17.0**	**-0.1**
GIUM				⇓S		**Sn**		**18 25 36.7**	**-0.1**
GIUM	**Giurgiulesti**	**1.26**	**94**	P		**Pn**		**18 25 16.8**	**-0.3**
GIUM					S	**Sn**		**18 25 36.7**	**-0.1**
ARR	**Arges**	**1.27**	**261**	⇑P		**Pn**		**18 25 18.2**	**+0.9**
ARR				⇑S		**Sn**		**18 25 37.5**	**+0.3**
CFR	**Carcaliu**	**1.28**	**108**	⇓P		**Pn**		**18 25 16.1**	**-0.7**
CFR				⇓S		**Sn**		**18 25 35.4**	**-1.7**
CFR	**Carcaliu**	**1.28**	**108**	P		**Pn**		**18 25 16.8**	**-0.5**
JOSR	**Joseni**	**1.29**	**331**	⇑P		**Pn**		**18 25 17.4**	**-0.1**
GIRR	**Girov**	**1.38**	**2**	⇑P		**Pn**		**18 25 18.4**	**+0.1**
GIRR				⇑S		**Sn**		**18 25 37.6**	**-1.4**
SGRR	**Singureni**	**1.39**	**193**	⇑P		**Pn**		**18 25 19.3**	**+0.8**
SGRR				⇑S		**Sn**		**18 25 39.3**	**+0.1**
VASR	**Vaslui**	**1.43**	**42**	⇓P		**Pn**		**18 25 18.4**	**-0.4**
VASR				⇓S		**Sn**		**18 25 37.9**	**-2.1**
HUMR	**Humele**	**1.46**	**225**	⇑P		**Pn**		**18 25 20.1**	**+0.8**
HUMR				⇑S		**Sn**		**18 25 41.5**	**+0.9**
TNR	**Turnu Rosu**	**1.50**	**273**	⇑P		**Pn**		**18 25 20.5**	**+0.7**
TNR				⇓S		**Sn**		**18 25 41.8**	**+0.3**
TNR	**Turnu Rosu**	**1.50**	**273**	P		**Pn**		**18 25 20.4**	**+0.7**
MDB	**Medias**	**1.53**	**292**	⇓P		**Pn**		**18 25 20.8**	**+0.8**
MDB	**Medias**	**1.53**	**292**	P		**Pn**		**18 25 20.8**	**+0.8**
LEOM	**Leova**	**1.56**	**54**	P		**Pn**		**18 25 19.1**	**-1.0**
LEOM	**Leova**	**1.56**	**54**	P		**Pn**		**18 25 19.8**	**-0.4**
LEOM					S	**Sn**		**18 25 40.7**	**-1.7**
TPGR	**Topolog**	**1.59**	**116**	⇓P		**Pn**		**18 25 20.1**	**-0.6**
TPGR				⇓S		**Sn**		**18 25 42.0**	**-1.2**
TGMR	**Targu Mures**	**1.62**	**306**	⇓P		**Pn**		**18 25 21.3**	**+0.3**
COPA	**Copaceanca**	**1.68**	**211**	⇑P		**Pn**		**18 25 22.5**	**+0.8**
COPA				⇑S		**Sn**		**18 25 46.5**	**+1.6**
CVDA	**Cernavoda**	**1.70**	**137**	⇓P		**Pn**		**18 25 22.2**	**+0.3**
CVDA				⇓S		**Sn**		**18 25 44.2**	**-1.0**
CVD1	**Cernavoda-Powe**	**1.72**	**137**	⇓P		**Pn**		**18 25 22.4**	**+0.3**
CVD1				⇓S		**Sn**		**18 25 44.5**	**-1.2**
TLCR		**1.74**	**102**	⇓P		**Pn**		**18 25 21.8**	**-0.5**
TLCR				⇓S		**Sn**		**18 25 44.4**	**-1.7**
TLCR		**1.74**	**102**	P		**Pn**		**18 25 22.1**	**-0.2**
ICOR	**Ion Corvin**	**1.77**	**146**	⇓P		**Pn**		**18 25 22.9**	**+0.2**
ICOR				⇓S		**Sn**		**18 25 45.9**	**-0.8**
PRAR	**RASCA**	**1.79**	**356**	⇑P		**Pn**		**18 25 23.3**	**+0.4**
PRAR				⇑S		**Sn**		**18 25 47.1**	**-0.2**
IASR	**Iasi**	**1.79**	**26**	⇓P		**Pn**		**18 25 22.7**	**+0.1**
TIRR	**Tirgusor**	**1.81**	**128**	⇓P		**Pn**		**18 25 23.1**	**-0.1**
TIRR				⇓S		**Sn**		**18 25 46.2**	**-1.3**
TIRR	**Tirgusor**	**1.81**	**128**			**Pn**		**18 25 22.6**	**-0.5**
TIRR					Sn	**Sn**		**18 25 46.3**	**-1.3**
TIRR	**Tirgusor**	**1.81**	**128**	P		**Pn**		**18 25 23.0**	**-0.1**
LOT	**Lotru**	**1.86**	**267**	⇑P		**Pn**		**18 25 24.5**	**+0.6**
LOT				⇑S		**Sn**		**18 25 49.6**	**+0.7**
JURR	**Jurilovca**	**1.92**	**114**	⇓P		**Pn**		**18 25 24.3**	**-0.2**
MFTR	**Murfatlar**	**2.00**	**134**	⇓P		**Pn**		**18 25 25.5**	**+0.1**
MFTR				⇓S		**Sn**		**18 25 50.4**	**-1.3**
RAZG	**Razgrad**	**2.02**	**178**	⇑P		**Pn**		**18 25 26.2**	**+0.5**
RAZG				⇑S		**Sn**		**18 25 51.7**	**-0.4**
ZIMR		**2.06**	**202**	⇑P		**Pn**		**18 25 27.1**	**+0.8**
ZIMR				⇑S		**Sn**		**18 25 53.0**	**0.0**
ZIMR		**2.06**	**202**	P		**Pn**		**18 25 27.0**	**+0.8**
VLAD	**Vladila**	**2.13**	**223**	⇑P		**Pn**		**18 25 27.7**	**+0.6**
TSCT	**Constanta Port**	**2.13**	**131**	⇑P		**Pn**		**18 25 27.2**	**+0.1**
TSCT				⇑S		**Sn**		**18 25 53.1**	**-1.5**
EFOR	**EFORIE**	**2.18**	**133**	⇓P		**Pn**		**18 25 27.8**	**+0.2**
EFOR				⇓S		**Sn**		**18 25 54.5**	**-0.9**
KIS	**Kishinev**	**2.19**	**49**	⇓P		**Pn**		**18 25 27.0**	**-0.6**
KIS				⇓S		**Sn**		**18 25 54.0**	**-1.8**
KIS	**Kishinev**	**2.19**	**49**	P		**Pn**		**18 25 26.9**	**-0.8**
KIS	**Kishinev**	**2.19**	**49**	P		**Pn**		**18 25 26.9**	**-0.8**
KIS					S	**Sn**		**18 25 53.9**	**-1.8**
BURAR	**Bucovina Array**	**2.20**	**338**	⇑P		**Pn**		**18 25 29.2**	**+1.2**
BURAR	**Bucovina Array**	**2.20**	**338**			**Pn**		**18 25 28.6**	**+0.7**
BURAR	**Bucovina Array**	**2.20**	**338**	P		**Pn**		**18 25 29.1**	**+1.2**
LOZB	**Loznitsa**	**2.21**	**177**	⇑P		**Pn**		**18 25 28.7**	**+0.6**
BUR08	**Bucovina Ar. S**	**2.23**	**338**			**Pn**		**18 25 28.4**	**+0.1**
CJR	**Cluj-Napoca**	**2.26**	**301**	⇑P		**Pn**		**18 25 29.0**	**+0.3**
CJR	**Cluj-Napoca**	**2.26**	**301**	P		**Pn**		**18 25 29.0**	**+0.3**
PSN	**Preselentsi**	**2.30**	**147**	P		**Pn**		**18 25 29.5**	**+0.4**
PSN					S	**Sn**		**18 25 56.3**	**-1.9**
SZH	**Strazhitsa**	**2.34**	**188**	P		**Pn**		**18 25 30.4**	**+0.8**
SZH					S	**Sn**		**18 25 58.2**	**-0.8**
MANR	**Mangalia**	**2.35**	**138**	⇓P		**Pn**		**18 25 29.8**	**+0.1**
MANR				⇓S		**Sn**		**18 25 58.4**	**-0.8**
TSMN	**Mangalia Port-**	**2.36**	**138**	⇓P		**Pn**		**18 25 29.5**	**-0.

VALD S Sn 18 26 11.0 +0.5
MESR Meseseni 2.87 304 ⇑P Pn 18 25 36.5 +0.2
SORM Soroca 2.88 27 ⇓P Pn 18 25 35.1 -1.2
SORM Soroca 2.88 27 P Pn 18 25 35.2 -1.2
SORM Soroca 2.88 27 P Pn 18 25 35.2 -1.2
KSV Kosov 2.89 342 *e*Pn Pn 18 25 37.3 +0.8
KSV pmax pmax 18 25 51.7
KSV *e*Sn Sn 18 26 02.0 -10
KSV smax smax 18 26 34.2
RAKU Rahkiv 2.89 329 *e*Pn Pn 18 25 37.5 +0.9
RAKU pmax pmax 18 25 38.7
RAKU *e*Sn **Sn 18 26 11.6 0.0**
RAKU smax smax 18 26 18.3
BMR Baia Mare 2.90 317 ⇑P Pn 18 25 37.4 +0.7
BMR Baia Mare 2.90 317 P Pn 18 25 37.4 +0.7
DJES Djerdap 2.91 253 ⇓P Pn 18 25 36.6 -0.2
DJES Djerdap 2.91 253 *e*Pn Pn 18 25 36.5 -0.2
DJES *e*Sn Sn 18 26 05.4 -6.5
HERR Herculane 2.91 258 ⇑P Pn 18 25 37.1 +0.3
MPEP Malo Peshtene 2.94 222 P Pn 18 25 38.1 +0.9
MPEP S Sn 18 26 11.7 -0.9
NSLU Nyzhne Selyshc 2.94 334 *e*Pn Pn 18 25 42.8 +5.6
KMPD K-Podol'skiy 2.98 1 *e*Pn Pn 18 25 35.6 -2.1
KMPD *e*Sn Sn 18 26 10.5 -3.2
BZS Buzias 3.37 272 ⇓P Pn 18 25 43.3 +0.6
BZS ⇓S Sn 18 26 22.9 +0.4
BZS Buzias 3.37 272 P Pn 18 25 43.2 +0.5
BZS Buzias 3.37 272 *e*Pn Pn 18 25 43.2 +0.5
BZS *e*Sn Sn 18 26 16.8 -5.8
STNU Starunia 3.39 338 *e*Pn Pn 18 25 43.6 +0.6
STNU *e*Sn Sn 18 26 23.4 +0.2
MDVR Moldovita 3.42 258 ⇓P Pn 18 25 43.8 +0.4
MDVR Moldovita 3.42 258 *e*Pn Pn 18 25 43.7 +0.2
MDVR *e*Sn Sn 18 26 18.0 -5.9
KORU Korolevo 3.42 320 *e*Pn Pn 18 25 44.4 +1.0
KORU pmax pmax 18 26 17.6
KORU *e*Sn Sn 18 26 24.0 +0.2
KORU smax smax 18 27 08.9
TRSU Trosnyk 3.46 318 *e*Pn Pn 18 26 00.8 +17
BORS2 Bor- Borsko je 3.46 246 *e*Pn Pn 18 25 42.9 -1.1
BORS2 *e*Sn Sn 18 26 19.7 -5.2
PGB Panagyurishte 3.47 209 P Pn 18 25 45.6 +1.5
PGB S Sn 18 26 25.0 0.0
ZAGS Zajecar 3.47 241 *e*Pn Pn 18 25 43.9 -0.1
ZAGS *e*Sn Sn 18 26 18.1 -6.8
BLSH Balsha 3.54 221 P Pn 18 25 46.6 +1.6
BLSH S Sn 18 26 26.4 -0.2
MEZ Mezhgor'ye 3.54 327 *e*Pn Pn 18 25 46.5 +1.5
MEZ pmax pmax 18 26 02.1
MEZ *e*Sn Sn 18 26 29.3 +2.6
MEZ smax smax 18 26 31.1
ZAPS Zavoj 3.56 231 *e*Pn Pn 18 25 45.5 +0.2
ZAPS *e*Sn Sn 18 26 20.5 -6.6
KUBS Kucevo 3.56 253 *e*Pn Pn 18 25 44.0 -1.3
KUBS *e*Sn Sn 18 26 21.2 -5.9
BRIU Brid 3.61 321 *e*Pn Pn 18 25 46.3 +0.5
BRIU pmax pmax 18 25 47.9
BRIU *e*Sn Sn 18 26 27.8 -0.3
BRIU smax smax 18 27 24.8
VRSS Vrsac 3.62 265 *e*Pn Pn 18 25 46.5 +0.5
VRSS *e*Sn Sn 18 26 21.9 -6.5
HORU Horodok 3.63 0 *e*Pn Pn 18 26 11.8 +26
BERU Beregovo 3.70 317 *e*Pg Pn 18 25 47.5 +0.4
BERU pmax pmax 18 25 50.4
BERU *e*Sn Sn 18 26 29.3 -1.1
BERU smax smax 18 27 12.4
PLNA Plana 3.78 216 P Pn 18 25 50.4 +2.1
PLNA S Sn 18 26 31.7 -0.7
MUKU Mukachevo 3.84 320 *e*Pn Pn 18 25 48.9 0.0
MUKU pmax pmax 18 26 24.5
MUKU *e*Sn Sn 18 26 37.0 +3.3
MUKU smax smax 18 26 47.3
HOLU Holmets 4.03 318 *e*Pn Pn 18 25 52.0 +0.6
BOSS Bosilegrad 4.19 224 *e*Pn Pn 18 25 54.5 +0.9
BOSS *e*Sn Sn 18 26 35.2 -6.8
AVAS Avala Beograd 4.27 260 *e*Pn Pn 18 25 53.7 -0.9
AVAS *e*Sn Sn 18 26 39.1 -4.7
STZU Stuzhytsa 4.30 324 *e*Pn Pn 18 25 56.2 +1.3
BARS Barje 4.31 232 *e*Pn Pn 18 25 56.3 +1.1
GRUS Gruza 4.40 249 *e*Pn Pn 18 25 57.0 +0.7
GRUS *e*Sn Sn 18 26 41.1 -5.8
GOCS Kraljevo Serbi 4.44 245 *e*Pn Pn 18 25 57.4 +0.4
GOCS *e*Sn Sn 18 26 43.0 -5.1
SELS Selova 4.47 240 *e*Pn Pn 18 25 58.2 +0.9
SELS *e*Sn Sn 18 26 45.8 -5.2
RDO Rodhopi 4.48 189 Pn Pn 18 25 58.5 +1.1
TRUS Trudelj 4.48 254 *e*Pn Pn 18 25 57.8 +0.4
TRUS *e*Sn Sn 18 26 41.9 -6.9
FRGS Fruska Gora 4.67 267 *e*Pn Pn 18 26 00.5 +0.5
FRGS *e*Sn Sn 18 26 47.5 -6.0
FRGS Fruska Gora 4.67 267 *e*Pn Pn 18 26 00.7 +0.7
ALN Alexandroupoli 4.69 183 Pn Pn 18 26 01.2 +1.0
ALN Alexandroupoli 4.69 183 P Pn 18 26 01.2 +1.0
DNZ2 Donuzlav2 4.79 90 ⇓*i*P Pn 18 26 00.5 -0.9
DNZ2 pmax pmax 18 26 01.0
comp=Z,110nm,0.2s
DNZ2 *ex* x 18 26 05.1
DNZ2 *e*S Sn 18 26 52.0 -4.1
DNZ2 smax smax 18 26 55.7
comp=N,108nm,0.7s
DNZ2 smax smax 18 26 55.7
comp=E,274nm,0.9s
DIVS Divibare 4.80 254 *e*Pn Pn 18 26 02.4 +0.6
DIVS *e*Sn Sn 18 26 50.2 -6.5
IVAS Ivanjica 4.90 248 *e*Pn Pn 18 26 03.1 0.0
IVAS *e*Sn Sn 18 26 51.2 -7.8
TEKS Tekeris 4.99 261 *e*Pn Pn 18 26 04.3 +0.1
TEKS *e*Sn Sn 18 26 54.5 -6.5
SILT Sile 5.01 151 ⇓P Pn 18 26 04.3 -0.2
PSZ Piszkesteto 5.05 300 ⇑P Pn 18 26 04.7 -0.4
PSZ Piszkesteto 5.05 300 Pn 18 26 03.8 -1.3
PSZ Piszkesteto 5.05 300 P Pn 18 26 03.8 -1.3
VAY Valandovo 5.09 215 *i* Pn Pn 18 26 06.8 +1.2
SJES Sjenica 5.16 246 *e*Pn Pn 18 26 06.8 +0.2
SJES *e*Sn Sn 18 26 58.3 -7.0
SJES Sjenica 5.16 246 *e*Pn Pn 18 26 07.8 +1.2
SEV Sevastopol' 5.24 99 ⇓*i*P Pn 18 26 06.8 -0.7
SEV *e*S Sn 18 27 05.1 -1.9
SEV pmax pmax
comp=Z,63nm,0.7s
SEV smax smax
comp=N,30nm,0.6s
SEV smax smax
comp=E,38nm,0.8s
SEV Sevastopol' 5.24 99 ⇓*i*P Pn 18 26 06.8 -0.7
SEV pmax pmax 18 26 07.7
comp=Z,63nm,0.7s
SEV *e*S Sn 18 27 05.1 -1.9
SEV smax smax 18 27 06.9
comp=N,30nm,0.6s
SEV smax smax 18 27 06.9
comp=E,38nm,0.8s
SEV Sevastopol' 5.24 99 P Pn 18 26 06.8 -0.7
SEV pmax pmax 18 26 07.7
SEV S Sn 18 27 05.1 -1.9
SEV smax smax 18 27 06.9
BBLS Lazi&#263i 5.28 254 *e*Pn Pn 18 26 09.3 +1.2
BBLS Lazi&#263i 5.28 254 *e*Pn Pn 18 26 08.9 +0.8
RUDO Rudo 5.40 251 *e*Pn Pn 18 26 06.2 -3.5
KIEV Kiev 5.45 19 ⇑P Pn 18 26 08.8 -1.4
KIEV Kiev 5.45 19 Pn 18 26 08.7 -1.5
KIEV Kiev 5.45 19 P Pn 18 26 08.7 -1.5
AKASG Malin Array Be 5.46 19 P Pn 18 26 09.1 -1.2
comp=E,2.1nm,0.4s,baz=207,slow=11,SNR=11
AKASG S Sn 18 27 04.1 -8.0
comp=E,11nm,0.4s,baz=202,slow=21,SNR=14
AKASG Malin Array Be 5.46 19 Pn Pn 18 26 07.6 -2.8
AKASG Malin Array Be 5.46 19 P Pn 18 26 07.6 -2.8
AKBB Malin Array Si 5.46 19 Pn 18 26 08.8 -1.6
AKBB Malin Array Si 5.46 19 *i* P Pn 18 26 08.4 -2.0
MORH Mrgy, Hungar 5.46 279 ⇑P Pn 18 26 10.4 0.0
MORH Mrgy, Hungar 5.46 279 *e*Pn Pn 18 26 11.1 +0.7
SIM Simferopol' 5.47 94 *e*P Pn 18 26 09.5 -1.1
SIM *e*S Sn 18 27 08.5 -4.1
SIM pmax pmax
comp=Z,48nm,0.9s
SIM smax smax
comp=N,98nm,1.0s
SIM smax smax
comp=E,136nm,1.2s
SIM Simferopol' 5.47 94 ⇓*i*P Pn 18 26 10.6 0.0
SIM pmax pmax 18 26 10.8
comp=Z,40nm,0.3s
SIM *e*S Sn 18 27 09.3 -3.3
SIM smax smax 18 27 11.1
comp=N,99nm,0.9s
SIM smax smax 18 27 11.1
comp=E,105nm,1.2s
SIM Simferopol' 5.47 94 P Pn 18 26 10.6 0.0
SIM pmax pmax 18 26 10.8
SIM S Sn 18 27 09.3 -3.3
SIM smax smax 18 27 11.1
YAL Yalta 5.59 99 *e*P Pn 18 26 11.4 -0.8
YAL *e*S Sn 18 27 13.5 -1.9
YAL pmax pmax
comp=Z,15nm,0.4s
YAL Yalta 5.59 99 *e*P Pn 18 26 11.4 -0.8
YAL pmax pmax 18 26 11.8
comp=Z,15nm,0.4s
YAL *e*S Sn 18 27 13.5 -1.9
YAL smax smax 18 27 14.8
comp=E,0.0nm,0.4s
YAL Yalta 5.59 99 P Pn 18 26 11.4 -0.8
YAL S Sn 18 27 13.5 -1.9
ALU Alushta 5.72 96 ⇓*i*P Pn 18 26 12.1 -1.9
ALU *e*S Sn 18 27 14.9 -3.6
ALU pmax pmax
comp=Z,50nm,0.6s
ALU smax smax
comp=N,17nm,0.4s
ALU smax smax
comp=E,8.0nm,0.4s
ALU Alushta 5.72 96 ⇓*i*P Pn 18 26 12.1 -1.9
ALU pmax pmax 18 26 12.5
comp=Z,50nm,0.6s
ALU *e*S Sn 18 27 14.9 -3.6
ALU smax smax 18 27 21.8
comp=N,17nm,0.4s
ALU smax smax 18 27 21.8
comp=E,8.0nm,0.4s
ALU Alushta 5.72 96 P Pn 18 26 12.1 -1.9
ALU pmax pmax 18 26 12.5
ALU S Sn 18 27 14.9 -3.6
ALU smax smax 18 27 21.8
LANS Liptovska Anna 5.92 310 *e*P Pn 18 26 17.9 +1.3
LANS Liptovska Anna 5.92 310 *e*P Pn 18 26 17.9 +1.3
SRO Srobarova 6.00 295 *e*P Pn 18 26 19.5 +1.8
SRO Srobarova 6.00 295 *e*P Pn 18 26 19.5 +1.8
CIDE Kastamonu/Cide 6.00 126 ⇓P Pn 18 26 16.5 -1.3
CIDE ⇑S Sn 18 27 23.4 -1.9
SUDU Sudak 6.10 93 *e*P Pn 18 26 17.3 -1.7
SUDU *e*S Sn 18 27 23.9 -3.8
SUDU pmax pmax
comp=Z,98nm,0.7s
SUDU smax smax
comp=N,90nm,0.6s
SUDU smax smax
comp=E,51nm,0.8s
SUDU Sudak 6.10 93 *e*P Pn 18 26 17.3 -1.7
SUDU pmax pmax 18 26 19.1
comp=Z,98nm,0.7s
SUDU *ex* x 18 26 29.4
SUDU *e*S Sn 18 27 23.9 -3.8
SUDU smax smax 18 27 27.5
comp=N,90nm,0.6s
SUDU smax smax 18 27 27.5
comp=E,51nm,0.8s
SUDU Sudak 6.10 93 P Pn 18 26 17.3 -1.7
SUDU pmax pmax 18 26 19.1
SUDU S Sn 18 27 23.9 -3.8
SUDU smax smax 18 27 27.5
BORA Eskisehir 6.43 151 Pn 18 26 23.2 -0.3
TREB Trebinje 6.47 247 *e*Pn Pn 18 26 25.8 +1.8
BZK Bozkurt 6.58 121 ⇑P Pn 18 26 24.0 -1.5
BZK Bozkurt 6.58 121 Pn 18 26 22.2 -3.2
BLY Banja Luka 6.58 266 *e*Pn Pn 18 26 27.0 +1.5
JAVC Velka Javorina 6.80 302 *e*P Pn 18 26 29.8 +1.4
MODS Modra-Piesok 6.85 297 *e*P Pn 18 26 30.0 +1.0
MODS Modra-Piesok 6.85 297 *e*P Pn 18 26 30.0 +1.0
MAUC Maruska 6.94 306 *e*P Pn 18 26 31.1 +0.8
ILGA Ilgaz 6.99 128 Pn 18 26 30.5 -0.7
KOGS Kog 7.13 281 *i* Pn Pn 18 26 34.5 +1.7
RONA Rosalia, Austr 7.28 291 *e*Pn Pn 18 26 36.1 +1.2
comp=E,1.5nn,0.5s
MORC Moravsky Berou 7.31 308 *e*P Pn 18 26 34.4 -0.9
WINA Alland / Wiene 7.53 293 Pn Pn 18 26 39.2 +1.0
SNR=4.1
CONA Conrad Observa 7.62 292 *e*Pn Pn 18 26 40.1 +0.7
comp=E,0.6nn,0.4s
VRAC Vranov 7.63 303 P Pn 18 26 38.9 -0.6
comp=E,6.8nn,0.9s,baz=114,slow=12,SNR=10.0
VRAC Vranov 7.63 303 ⇓P Pn 18 26 38.5 -1.0
VRAC Vranov 7.63 303 *e*P Pn 18 26 39.9 +0.3
KRUC Moravsky 7.65 301 *e*P Pn 18 26 39.4 -0.4
ARSA Arzberg 7.71 286 *e*Pn Pn 18 26 41.5 +0.9
comp=E,1.8nn,0.5s
ANN Anapa 7.82 92 *e*P Pn 18 26 39.9 -2.3
ANN *e*S Sn 18 28 04.6 -4.6
ANN pmax pmax
comp=Z,15nn,0.8s
BR131 Keskin Array S 7.91 135 Pn 18 26 42.4 -1.1
BR131 Keskin Array S 7.91 135 P Pn 18 26 42.4 -1.1
BRTR Keskin Array B 7.91 135 P Pn 18 26 43.4 -0.1
comp=Z,2.7nn,0.6s,baz=324,slow=11,SNR=22
BRTR Keskin Array B 7.91 135 Pn Pn 18 26 42.0 -1.5
BRTR Keskin Array B 7.91 135 *ce*P Pn 18 26 43.0 -0.5
BRTR pmax pmax
comp=Z,3.0nn,0.6s
PDKS Podkum 7.99 278 *e*Pn Pn 18 26 46.6 +2.2
OBKA Obir 8.31 281 *i* Pn Pn 18 26 49.6 +0.9
comp=Z,0.6nn,0.4s
LJU Ljubljana 8.32 277 *e*Pn Pn 18 26 50.8 +2.0
CHVC Chvalec 8.55 310 *e*P Pn 18 26 53.0 +1.1
CHVC Chvalec 8.55 310 *e*P Pn 18 26 53.0 +1.1
CKRC Cesky Krumlov 8.86 296 *e*P Pn 18 26 57.6 +1.6
CKRC Cesky Krumlov 8.86 296 *e*P Pn 18 26 57.6 +1.6
GERES GERESS Array B 9.25 295 P Pn 18 27 01.8 +0.5
comp=Z,1.5nn,0.8s,baz=113,slow=13,SNR=11
NACGM Naroch 9.34 1 *e*P Pn 18 27 03.1 +0.8
KHC Kasperske Hory 9.41 297 *e*P Pn 18 27 05.3 +1.9
KHC Kasperske Hory 9.41 297 *e*P Pn 18 27 05.3 +1.9
TIP Timpagrande 9.59 232 Pn Pn 18 27 04.9 -1.0
SOC Sochi 9.70 97 *e*P Pn 18 27 05.8 -1.5
SOC *e*S Sn 18 28 55.5 +1.0
SOC pmax pmax
comp=Z,3.0nn,0.6s
CAMP Campotosto 9.85 257 Pn Pn 18 27 08.7 -0.7
ERBR Yeremizino-Bor 9.86 84 *e*P Pn 18 27 08.1 -1.3
ERBR pmax pmax
comp=Z,9.0nn,0.5s
NRCA Norcia 9.94 259 Pn 18 27 09.6 -1.0
VORD Divnogorie 10.13 53 *e*P Pn 18 27 11.0 -2.0
VORD pmax pmax
comp=Z,6.0nn,0.3s
LABN Labinsk 10.16 90 *e*P Pn 18 27 12.5 -1.0
LABN *e*S Sn 18 29 03.9 -1.8
VSR Storozhevoye 10.18 52 *e*P Pn 18 27 12.6 -1.0
VSR *e*S Sn 18 28 58.0 -7.9
VSR pmax pmax
comp=Z,10.0nn,0.6s
VORR Voronezh 10.43 50 *e*P Pn 18 27 23.4 +6.5
VORR *e*S Sn 18 29 14.4 +2.5
VORR pmax pmax
comp=Z,47nn,0.4s
VORR pmax pmax
comp=Z,100nn,0.4s
VORR smax smax
comp=E,100nn,0.5s
LPSR Galich'ya Gora 10.79 45 *e*P Pn 18 27 21.5 -0.3
LPSR pmax pmax
comp=Z,9.0nn,0.6s
OBN Obninsk 11.53 30 ⇓*i*P Pn 18 27 30.2 -1.2
OBN *i* S Sn 18 29 27.7 -11
OBN pmax pmax
comp=Z,13nn,0.5s
OBN MLR MLR
comp=Z,51nn,16.0s
VRH Novokhopyorsk 11.62 56 *e*P Pn 18 27 29.3 -3.4
VRH pmax pmax
comp=Z,20nn,0.5s
KIV Kislovodsk 11.68 92 *e*P Pn 18 27 33.4 -0.4
KIV pmax pmax
comp=Z,5.0nn,1.1s
KVAR Kislovodsk Arr 11.69 92 P Pn 18 27 34.1 +0.2
comp=Z,1.7nn,0.5s,baz=204,slow=12,SNR=2.3

SHA1 Shidzhatmaz 11.72 93 *i* P Pn 18 27 34.8 +0.5
KBZ Khabaz 11.89 93 P Pn 18 27 36.8 +0.5
comp=Z,0.9nn,0.4s,baz=128,slow=5.7,SNR=5.3
SENIN Lac Senin/Sane 13.32 280 P 18 28 01.1 +1.2
ARBE Arbavere 13.88 359 *e*P P 18 28 06.1 +0.4
GNI Garni 14.49 106 *i* P Pn 18 28 08.9 -1.0
MEF Metsahovi 14.71 356 *e*P P 18 28 14.9 0.0
BELG Belogornoye 15.47 56 P P 18 28 22.4 -0.9
comp=Z,46nn,0.7s,baz=236,slow=0.6,SNR=25
BELG Belogornoye 15.47 56 *i* P Pn 18 28 22.3 +0.4
RAF Rauma 15.71 352 *e*P Pn 18 28 25.2 +0.4
FINES FINESS Array B 15.89 359 P Pn 18 28 26.9 -0.1
comp=Z,2.3nn,0.5s,baz=167,slow=12,SNR=24
FINES FINESS Array B 15.89 359 Pn Pn 18 28 26.6 -0.4
FINES FINESS Array B 15.89 359 *i* P P 18 28 28.0 0.0
FINES pmax pmax
comp=Z,2.0nn,0.4s
AKT Akhty 15.98 97 *e*P P 18 28 29.8 +0.5
AKT pmax pmax
comp=Z,24nn,1.0s
KEST Kesra 16.23 239 P Pn 18 28 32.7 +1.1
comp=Z,5.2nn,0.9s,baz=334,slow=1.2,SNR=6.4
HFS Hagfors 16.43 337 P Pn 18 28 33.6 0.0
comp=Z,3.3nn,0.8s,baz=133,slow=10,SNR=5.6
KEF Keuruu 16.64 357 *e*P Pn 18 28 36.4 +0.2
KLMR Klimovskoe 17.14 22 *e*P P 18 28 40.8 -0.9
KLMR pmax pmax
comp=Z,28nm,1.3s
SUF Sumiainen 17.17 360 *e*P Pn 18 28 43.1 +0.5
JOF Joensuu 17.60 7 *e*P P 18 28 46.7 0.0
VAF Ylistaro 17.63 354 *e*P P 18 28 47.4 +0.3
NOA NORSAR Array B 17.88 335 P P 18 28 50.2 +0.4
comp=Z,0.5nn,0.6s,baz=142,slow=10,SNR=1.8
KIRV Kirov 19.09 39 *ce*P P 18 29 03.3 +0.3
EKA Eskdalemuir Ar 21.05 308 P P 18 29 24.3 +0.1
comp=Z,1.4nn,0.8s,baz=103,slow=11,SNR=3.7
comp=Z,1.4nn,0.8s
AKTO Aktyubinsk 21.59 66 P P 18 29 30.1 0.0
comp=Z,4.3nn,0.8s,baz=260,slow=7.6,SNR=14
comp=Z,4.3nn,0.8s
ARTI Arti 22.64 50 P P 18 29 40.4 -0.1
comp=Z,12nn,0.4s,baz=255,slow=8.0,SNR=44
comp=Z,12nn,0.4s
ARTI Arti 22.64 50 *c* iP P 18 29 39.7 -0.8
ARTI 18 30 09.1
ARTI S S 18 33 36.9 -1.1
ARTI SS SnSn 18 34 28.7 +4.9
ARTI pmax pmax
comp=Z,6.0nn,0.4s
LVZ Lovozero 22.78 8 *ce*P P 18 29 41.1 -0.7
LVZ pmax pmax
comp=Z,287nm,0.8s
AB31 Akbulak array 22.87 69 P 18 29 42.6 -0.2
ABKAR Akbulak array 22.87 69 P P 18 29 41.4 -1.4
ESDC Sonseca Array 23.03 266 P P 18 29 44.4 -0.1
comp=Z,0.9nn,0.4s,baz=65,slow=9.7,SNR=16
comp=Z,0.9nn,0.4s
ARCES ARCESS Array B 24.02 359 P P 18 29 53.1 0.0
comp=Z,0.9nn,0.5s,baz=187,slow=8.3,SNR=6.7
comp=Z,0.9nn,0.5s
BORK Borovoye 29.19 59 P P 18 30 38.8 -0.8
BORK lAmb lAmb 18 30 41.6
comp=Z,2.7nn,0.7s
BORK Borovoye 29.19 59 P P 18 30 38.8 -0.8
BORK pmax pmax
comp=Z,3.0nn,0.7s
BVAR Borovoye Array 29.23 59 P P 18 30 41.2 +1.2
comp=Z,1.2nn,0.5s,baz=278,slow=10.0,SNR=8.5
BVAR pP **pP** 18 31 08.9 -0.1
comp=Z,0.8nn,0.4s,baz=254,slow=42,SNR=2.5
comp=Z,1.2nn,0.5s
KKAR Karatay Array 31.34 78 P 18 30 59.1 +0.4
KKAR Karatay Array 31.34 78 P P 18 30 59.1 +0.4
SPITS Spitsbergen Ar 32.95 356 P P 18 31 12.4 +0.1
comp=Z,8.3nn,1.0s,baz=144,slow=13,SNR=6.1
comp=Z,8.3nn,1.0s
ARSB Arslanbob 33.70 80 P P 18 31 20.1 +0.7
ARSB Arslanbob 33.70 80 P P 18 31 20.1 +0.7
ARSB pmax pmax
comp=Z,4.0nn,0.5s
AAK Ala-Archa 34.24 77 P 18 31 25.9 +1.8
AAK lAmb lAmb 18 31 27.2
comp=Z,3.5nn,0.7s
AAK Ala-Archa 34.24 77 *ce*P P 18 31 26.1 +2.0
AAK pmax pmax
comp=Z,3.0nn,0.6s
KURBB Kurchatov Arra 34.56 62 P P 18 31 27.4 +0.8
comp=Z,1.5nn,0.4s,baz=287,slow=9.5,SNR=33
KURBB pP **pP** 18 31 55.1 -0.9
comp=Z,0.2nn,0.5s,baz=288,slow=9.8,SNR=1.5
comp=Z,1.5nn,0.4s
KURK Kurchatov 34.60 62 P P 18 31 27.4 +0.5
KURK lAmb lAmb 18 31 28.0
comp=Z,2.5nn,0.4s
KURK Kurchatov 34.60 62 P P 18 31 27.4 +0.5
KURK *PP **pP** 18 31 55.1 -1.2
ZAA0 Zalesovo Array 37.66 56 P 18 31 53.6 +0.8
ZAA0 lAmb lAmb 18 31 54.4
comp=Z,4.4nn,0.7s
ZALV Zalesovo Beam 37.66 56 P P 18 31 53.8 +0.9
comp=Z,4.2nn,0.4s,baz=281,slow=8.5,SNR=28
ZALV pP **pP** 18 32 22.2 -0.3
comp=Z,1.8nn,0.6s,baz=279,slow=9.4,SNR=4.6
comp=Z,4.2nn,0.4s
ZALV Zalesovo Beam 37.66 56 P 18 31 52.9 +0.1
MK31 Makanchi Array 38.01 67 *ce*P P 18 31 57.5 +1.6
MKAR Makanchi Array 38.01 67 P P 18 31 57.0 +1.1
comp=Z,1.3nn,0.5s,baz=273,slow=8.2,SNR=35
MKAR pP **pP** 18 32 25.9 +0.2
comp=Z,0.7nn,0.7s,baz=284,slow=6.7,SNR=4.3
comp=Z,1.3nn,0.5s
MKAR Makanchi Array 38.01 67 P P 18 31 56.7 +0.8
TORD Torodi Ar. Bea 38.52 221 P P 18 32 02.0 +1.5
comp=Z,2.3nn,0.5s,baz=31,slow=9.3,SNR=29
comp=Z,2.3nn,0.5s
DGZ Jazzator, Alta 40.33 61 *i* P P 18 32 16.5 +1.2
DGZ pmax pmax
comp=Z,4.0nn,0.6s
DBIC Dimbokro 47.28 225 P P 18 33 11.3 +0.4
comp=Z,4.1nn,0.4s,baz=56,slow=8.4,SNR=15
comp=Z,4.1nn,0.4s
EVN Everest 50.30 89 P P 18 33 35.6 +1.0
EVN lAmb lAmb 18 33 38.9
comp=Z,2.4nn,0.5s
SONM Songino Array 52.53 57 P P 18 33 51.8 +1.4
comp=Z,2.9nn,0.8s,baz=300,slow=8.5,SNR=25
SONM pP **pP** 18 34 21.6 -0.2
comp=Z,0.7nn,0.8s,baz=297,slow=6.5,SNR=4.1
comp=Z,2.9nn,0.8s
SONM Songino Array 52.53 57 P P 18 33 51.1 +0.7
SONM Songino Array 52.53 57 P P 18 33 51.1 +0.7
SONM pmax pmax
comp=Z,2.0nn,0.7s
HHC Hu-ho-hao-te 59.41 61 *e*P P 18 34 38.7 -0.7
PZH PanZhiHua 61.62 80 P P 18 34 54.2 -0.4
CHTO Chiang Mai 64.67 89 P P 18 35 14.0 -0.6
CHTO lAmb lAmb 18 35 16.1
comp=Z,4.5nn,0.9s
CHTO Chiang Mai 64.67 89 P P 18 35 14.0 -0.6
CHTO pmax pmax
comp=Z,4.0nn,0.9s
CMAR Chiang Mai Arr 64.90 89 P P 18 35 16.9 +0.6
comp=Z,1.9nn,0.7s,baz=308,slow=7.8,SNR=13
comp=Z,1.9nn,0.7s
CMAR Chiang Mai Arr 64.90 89 P P 18 35 15.8 -0.4
E29M Blow River 65.75 354 P P 18 35 21.9 +1.0
E29M lAmb lAmb 18 35 22.4
comp=Z,1.9nn,0.6s
F31M Tsiigehtchic 66.30 352 P P 18 35 24.5 +0.1
YKA Yellowknife Ar 67.85 342 P P 18 35 34.4 +0.2
comp=Z,0.1nn,0.4s,baz=31,slow=6.1,SNR=4.2
YKA LR LR 19 03 32.2
comp=Z,38nn,18.2s,baz=318,slow=34
comp=Z,0.1nn,0.4s

NEIC ***08*** *18:30:28.2±2.1, 17.9S±0.2×172.6W±0.1, h10km±1km, mb4.6/14, Error ellipse: s-maj=27.4km s-min=18.8km az=18.0*
IDC ***08*** *18:30:29.1±0.7, 18.12S×172.70W, h0km, mb4.1/10, mbtmp4.2/13, ML4.0/3, MS3.7/3, Error ellipse: s-maj=25.0km s-min=13.7km az=124.0*
ISC 08 18:30:31.1±0.5, 18.13S±0.08×172.63W±0.08, h21km, n59, σ1s51/57, mb4.4/17, 1C, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**2.73**	**111**		**Pn**	**18 31 11.3**	**-2.3**
AFI	**Afiamalu**	**4.28**	**11**	Pn	**Pn**	**18 31 35.3**	**+0.2**
	8.2nm,0.3s,baz=124,slow=14,SNR=5.1						
AFI				Sn	Sn	18 32 09.8	-15
	10nm,0.3s,baz=182,slow=22,SNR=5.7						
	19nm,0.4s						
MSVF	**Nonsavu**	**8.88**	**271**	Pn	**Pn**	**18 32 38.9**	**+0.5**
	0.1nm,0.3s,baz=135,slow=17,SNR=2.6						
MSVF				LR	LR	18 35 37.6	
	comp=Z,131nm,19.0s,baz=223,slow=35						
	4.0nm,0.9s						
RAR	**Rarotonga**	**12.49**	**106**	Pn	**Pn**	**18 33 28.6**	**+0.9**
	1.8nm,0.3s,baz=260,slow=11,SNR=4.4						
	22nm,0.8s						
RAR	**Rarotonga**	**12.49**	**106**		Pn	18 33 21.7	-5.9
SANVU	**Saraoutou**	**19.50**	**275**	P	**P**	**18 34 54.8**	**-2.1**
SANVU				IAmb	IAmb	18 35 03.5	
	comp=Z,29nm,1.1s						
URZ	**Urewera**	**21.97**	**202**	P	**P**	**18 35 25.2**	**+1.7**
	comp=Z,7.4nm,0.4s,baz=295,slow=2.2,SNR=17						
URZ				S	**S**	**18 39 29.0**	**+4.0**
	comp=Z,3.3nm,0.7s,baz=128,slow=1.6,SNR=3.1						
	comp=Z,7.4nm,0.4s						
TOZ	**Tahuroa Road**	**22.12**	**206**		**P**	**18 35 25.1**	**-0.1**
RTZ	**Ruatahuna**	**22.33**	**202**		**P**	**18 35 28.9**	**+1.4**
RTZ				IAmb	IAmb	18 35 50.6	
	comp=Z,22nm,1.0s						
CTA	**Charters Tower**	**38.83**	**260**	P	**P**	**18 37 55.0**	**+0.1**
	comp=Z,3.3nm,0.8s,baz=87,slow=9.5,SNR=6.3						
	comp=Z,3.3nm,0.8s						
CTAO	**Charters Tower**	**38.83**	**260**	P	**P**	**18 37 53.2**	**-1.8**
COEN	**Coen**	**42.60**	**269**	P	**P**	**18 38 23.9**	**-2.3**
COEN				IAmb	IAmb	18 38 47.9	
	comp=Z,12nm,1.5s						
WR8	**Warramunga Arr**	**49.84**	**259**	P	**P**	**18 39 20.9**	**-2.2**
WR8				IAmb	IAmb	18 39 59.3	
	comp=Z,4.8nm,1.1s						
WRA	**Warramunga Arr**	**49.99**	**259**	P	**P**	**18 39 24.0**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=98,slow=6.1,SNR=33						
	comp=Z,1.4nm,0.5s						
WRA	**Warramunga Arr**	**49.99**	**259**	P	**P**	**18 39 23.3**	**-1.0**
AS31	**Alice Springs**	**50.02**	**254**	P	**P**	**18 39 24.6**	**+0.1**
ASAR	**Alice Springs**	**50.02**	**254**	P	**P**	**18 39 24.2**	**-0.3**
	comp=Z,4.2nm,0.6s,baz=91,slow=8.9,SNR=83						
ASAR				PcP	**PcP**	**18 40 45.7**	**+1.4**
	comp=Z,0.8nm,0.7s,baz=109,slow=3.2,SNR=1.5						
	comp=Z,4.2nm,0.6s						
ASAR	**Alice Springs**	**50.02**	**254**	P	**P**	**18 39 23.8**	**-0.7**
PSA00	**Pilbara Seismi**	**63.16**	**255**	P	**P**	**18 40 56.1**	**-1.9**
NVAR	**Mina Array Bea**	**75.87**	**41**	P	**P**	**18 42 18.0**	**+1.7**
	comp=Z,1.4nm,0.8s,baz=229,slow=10,SNR=6.8						
	comp=Z,1.4nm,0.8s						
KSRS	**Korea Array**	**78.62**	**316**	P	**P**	**18 42 33.8**	**+2.4**
	comp=Z,2.3nm,1.1s,baz=129,slow=5.2,SNR=6.5						
	comp=Z,2.3nm,1.1s						
KSAR	**Wonju Array Be**	**78.64**	**316**		**P**	**18 42 31.7**	**+0.2**
O18K	**Koktuh Hills**	**79.00**	**9**	P	P	18 42 27.2	-5.8
PDAR	**Pinedale Array**	**83.81**	**41**	P	**P**	**18 43 00.3**	**+1.1**
	comp=Z,1.0nm,0.9s,baz=224,slow=4.1,SNR=6.6						
	comp=Z,1.0nm,0.9s						
DOT	**Dot Lake**	**84.50**	**12**	P	**P**	**18 43 00.0**	**-2.0**
DOT				IAmb	IAmb	18 43 04.2	
	comp=Z,6.9nm,1.2s						
CCB	**Clear Creek Bu**	**84.70**	**10**	P	**P**	**18 43 01.5**	**-1.4**
CCB				IAmb	IAmb	18 43 04.2	
	comp=Z,6.3nm,1.0s						
ILAR	**Eielson Array**	**84.97**	**11**	P	**P**	**18 43 04.8**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=229,slow=5.9,SNR=14						
	comp=Z,1.0nm,0.8s						
ILAR	**Eielson Array**	**84.97**	**11**	P	**P**	**18 43 03.1**	**-1.2**
H22K	**Ishtalitna Cre**	**85.30**	**9**	P	**P**	**18 43 04.2**	**-1.8**
H22K				IAmb	IAmb	18 43 25.6	
	comp=Z,6.7nm,1.4s						
E18K	**Tukpahlearik C**	**85.77**	**5**		**P**	**18 43 07.8**	**-0.4**
E18K				IAmb	IAmb	18 43 21.8	
	comp=Z,5.6nm,1.2s						
ATAH	**Atahualpa**	**91.80**	**98**	LR	LR	19 12 36.9	
	comp=Z,49nm,21.5s,baz=214,slow=28						
YKA	**Yellowknife Ar**	**92.30**	**23**	P	**P**	**18 43 41.1**	**+1.8**
	comp=Z,0.2nm,0.5s,baz=242,slow=5.1,SNR=5.0						
	comp=Z,0.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**94.17**	**288**	P	**P**	**18 43 51.4**	**+2.4**
	comp=Z,0.3nm,0.3s,baz=124,slow=36,SNR=2.1						
	comp=Z,0.3nm,0.3s						
ROSC	**El Rosal**	**99.37**	**88**	LR	LR	19 21 34.3	
	comp=Z,89nm,19.1s,baz=208,slow=31						
MKAR	**Makanchi Array**	**113.25**	**314**	PKiKP	**PKiKP**	**18 49 08.3**	**+1.1**
	comp=Z,0.2nm,0.6s,baz=92,slow=4.3,SNR=3.9						
KURBB	**Kurchatov Arra**	**115.73**	**318**	PKP	**PKPdf**	**18 49 11.3**	**-0.5**
	comp=Z,0.3nm,0.8s,baz=90,slow=2.0,SNR=4.6						
CLL	**Collm**	**146.60**	**354**	*i* PKPbc	**PKiKP**	**18 50 12.9**	**-0.9**
CLL				*i* x	x	18 50 22.3	
	comp=Z,17nm,1.0s						
OSTC	**Ostas**	**146.89**	**350**	*e*PKP	**PKiKP**	**18 50 14.9**	**+0.4**
DPC	**Dobruska-Polom**	**147.07**	**349**	*e*PKP	**PKiKP**	**18 50 14.9**	**0.0**
STEB	**Steborice**	**147.19**	**348**	*e*PKP	**PKiKP**	**18 50 14.9**	**-0.2**
MAUC	**Maruska**	**147.72**	**347**	*e*PKP	**PKPab**	**18 50 16.6**	**+0.1**
KHC	**Kasperske Hory**	**148.68**	**352**	*e*PKP	**PKPab**	**18 50 18.6**	**-1.7**
KHC				*ex*	x	18 50 27.2	
BRTR	**Keskin Array B**	**148.72**	**319**	PKPbc	**PKPab**	**18 50 19.5**	**-1.5**
	comp=Z,0.9nm,0.8s,baz=96,slow=3.3,SNR=7.6						
CKRC	**Cesky Krumlov**	**148.88**	**351**	*e*PKP	**PKPab**	**18 50 19.5**	**-1.6**
GERES	**GERESS Array B**	**148.94**	**352**	PKPbc	**PKPab**	**18 50 19.5**	**-1.9**
	comp=Z,0.6nm,0.7s,baz=338,slow=3.2,SNR=6.7						
CONA	**Conrad Observa**	**149.48**	**349**	*e*PKiKP	**PKPab**	**18 50 21.2**	**-2.5**
	comp=Z,1.4nm,0.7s						
RONA	**Rosalia, Austr**	**149.62**	**348**	*i* PKiKP	**PKPab**	**18 50 21.4**	**-2.8**
	comp=Z,2.6nm,0.8s						
BIOA	**Bad Ischl, Aus**	**150.08**	**352**	*i* PKiKP	**PKiKP**	**18 50 20.1**	**-1.0**
	comp=Z,7.2nm,1.3s						
ARSA	**Arzberg**	**150.20**	**349**	*e*PKiKP	**PKiKP**	**18 50 20.7**	**-0.6**
	comp=Z,1.3nm,0.9s						
LESA	**Schwarzleotal**	**150.47**	**353**	*i* PKP	**PKiKP**	**18 50 20.7**	**-1.3**
	comp=Z,6.9nm,1.6s						
RETA	**Reutte**	**150.59**	**355**	*e*PKiKP	**PKiKP**	**18 50 23.5**	**+1.2**
	comp=Z,4.6nm,1.2s						
WATA	**Walderalm**	**150.67**	**354**	*e*PKiKP	**PKiKP**	**18 50 24.2**	**+1.6**
	comp=Z,5.9nm,1.4s						
MOTA	**Moosalm**	**150.71**	**355**	*i* PKiKP	**PKiKP**	**18 50 21.5**	**-1.1**
	comp=Z,8.3nm,1.3s						
WTTA	**Wattenberg**	**150.74**	**354**	*e*PKiKP	**PKiKP**	**18 50 23.1**	**+0.4**
	comp=Z,5.3nm,0.8s						
SQTA	**Sankt Quirin**	**150.82**	**355**	*e*PKiKP	**PKiKP**	**18 50 23.4**	**+0.7**
	comp=Z,7.4nm,1.4s						
DAVA	**Damuels**	**150.85**	**356**	*e*PKiKP	**PKiKP**	**18 50 23.1**	**+0.2**
	comp=Z,4.7nm,0.9s						
FETA	**Feichten**	**151.06**	**355**	*i* PKiKP	**PKiKP**	**18 50 25.1**	**+1.8**
	comp=Z,5.2nm,1.1s						
MYKA	**Terra Mystica**	**151.12**	**351**	*e*PKiKP	**PKiKP**	**18 50 24.1**	**+0.7**
	comp=Z,6.1nm,1.6s						
ABTA	**Abfaltersbach**	**151.15**	**353**	*i* PKiKP	**PKiKP**	**18 50 24.2**	**+0.8**
	comp=Z,4.9nm,0.9s						

*IDC **08** 18:58:28.8±1.8,2°.70N×122°.99E,h494km±24km, mb2.9/7, mbtmp4.1/10, Error ellipse: s-maj=29.7km s-min=11.7km az=65.0*

ISC 08 18:58:29.3±0.8,2°.68N±0°.07×122°.9E±0°.1,h500km,n11, σ0°65/14,mb3.3/6,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**6.45**	**32**	*eP*	**P**	**19 00 09.4**	**-0.6**
BIPH				*eS*	**S**	**19 01 33.7**	**+1.3**
SIJI	**Sorong**	**9.05**	**113**	P	**P**	**19 00 36.7**	**-0.1**
	3.0nm,0.4s,baz=319,slow=20,SNR=7.3						
BATI	**Baumata**	**12.82**	**177**	P	**P**	**19 01 16.6**	**-0.1**
	24nm,0.4s,baz=9.5,slow=1.9,SNR=25						
BATI				S	**S**	**19 03 35.2**	**+0.4**
	6.4nm,0.8s,baz=80,slow=23,SNR=2.2						
LEM	**Lembang**	**17.97**	**238**	P	**P**	**19 02 10.2**	**+0.4**
	28nm,0.7s,baz=343,slow=19,SNR=6.6						
FITZ	**Fitzroy Crossi**	**20.82**	**173**	P	**P**	**19 02 35.3**	**-0.2**
	2.1nm,0.3s,baz=15,slow=10,SNR=28						
	2.1nm,0.3s						
WRA	**Warramunga Arr**	**25.12**	**154**	P	**P**	**19 03 12.9**	**-1.1**
	1.3nm,0.5s,baz=335,slow=9.5,SNR=16						
	1.3nm,0.5s						
ASAR	**Alice Springs**	**28.29**	**158**	P	**P**	**19 03 41.6**	**-0.3**
	0.6nm,0.5s,baz=337,slow=8.0,SNR=24						
ASAR				ScP	**ScP**	**19 09 33.6**	**+0.7**
	0.2nm,0.5s,baz=345,slow=3.4,SNR=6.9						
	0.6nm,0.5s						
STKA	**Stephens Creek**	**38.67**	**154**	P	**P**	**19 05 09.9**	**+0.3**
	1.5nm,0.4s,baz=354,slow=10,SNR=7.0						
	1.5nm,0.4s						
SONM	**Songino Array**	**47.19**	**345**	P	**P**	**19 06 15.9**	**-0.4**
	0.2nm,0.5s,baz=134,slow=6.2,SNR=2.2						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**56.32**	**327**	P	**P**	**19 07 22.2**	**+0.1**
	0.7nm,0.5s,baz=129,slow=7.6,SNR=18						
	0.7nm,0.5s						
KURBB	**Kurchatov Arra**	**60.63**	**329**	P	**P**	**19 07 51.1**	**-0.1**
	0.3nm,0.6s,baz=134,slow=6.9,SNR=7.0						
	0.3nm,0.6s						

IDC 08 19:08:18.0±1.6,18°.80S×176°.40E,h0km,mb3.7/3, mbtmp3.6/3,MS3.3/8,Error ellipse: s-maj=95.9km s-min=19.0km az=155.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**1.89**	**56**	Pn	Pb	19 08 52.7	-0.7
	26nm,0.3s,baz=240,slow=14,SNR=66						
MSVF				Sn	Sn	19 09 16.7	+0.4
	123nm,0.3s,baz=282,slow=24,SNR=13						
MSVF				LR	LR	19 09 26.6	
	comp=Z,299nm,18.1s,baz=217,slow=36						
DZM	**Mont Dzumac**	**9.89**	**249**	LR	LR	19 13 51.3	
	comp=Z,232nm,21.1s,baz=66,slow=34						
DZM	**Mont Dzumac**	**9.89**	**249**	*e*LR	LR	19 12 54.0	
	315nm,25.9s						
RAO	**Raoul Island**	**11.62**	**155**	LR	LR	19 14 14.5	
	comp=Z,56nm,20.6s,baz=192,slow=31						
RAR	**Rarotonga**	**22.51**	**100**	LR	LR	19 20 20.4	
	comp=Z,36nm,21.4s,baz=274,slow=32						
CTA	**Charters Tower**	**28.44**	**262**	LR	LR	19 23 49.5	
	comp=Z,88nm,19.0s,baz=46,slow=33						
TBI	**Tubuai**	**32.13**	**104**	*e*LR	LR	19 23 02.3	
	594nm,28.5s						
PPT2	**Papeete2**	**32.32**	**93**	*e*LR	LR	19 23 03.4	
	113nm,26.2s						
PPT2				*e*LR	LR	19 23 11.2	
	106nm,31.5s						
PPT	**Papeete**	**32.32**	**93**	LR	LR	19 24 29.3	
	comp=Z,56nm,21.3s,baz=210,slow=30						
STKA	**Stephens Creek**	**33.89**	**241**	LR	LR	19 27 10.8	
	comp=Z,44nm,19.6s,baz=25,slow=33						
WRA	**Warramunga Arr**	**39.62**	**261**	P	P	19 15 51.5	-0.3
	0.8nm,0.9s,baz=95,slow=9.0,SNR=5.7						
	0.8nm,0.9s						
ASAR	**Alice Springs**	**39.80**	**255**	P	P	19 15 53.5	+0.3
	1.8nm,0.8s,baz=86,slow=8.5,SNR=17						
ASAR				LR	LR	19 30 55.2	
	comp=Z,61nm,19.4s,baz=130,slow=34						
	1.8nm,0.8s						
TAOE	**Nuku Hiva Isla**	**43.23**	**83**	*e*LR	LR	19 28 16.2	
	211nm,27.5s						
FITZ	**Fitzroy Crossi**	**48.02**	**262**	LR	LR	19 35 57.5	
	comp=Z,72nm,19.0s,baz=131,slow=35						
TXAR	**Lajitas Array**	**90.66**	**59**	P	P	19 21 22.1	-1.0
	0.2nm,0.7s,baz=212,slow=4.4,SNR=5.8						
	0.2nm,0.7s						

NEIC 08 19:11:37.0±2.3,8°.27S±0°.09×80°.4W±0°.2,h56km±18km, mb4.2/11,Error ellipse: s-maj=26.1km s-min=11.0km az=73.0,Off coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**5.09**	**137**	Pn	Pn	19 12 52.4	+1.6
NNA				Sn	Sn	19 13 45.8	-2.5
COHC	**Cochancay**	**5.87**	**11**	Pn	Pn	19 13 02.7	+1.2
SLOR	**San Lorenzo -**	**7.72**	**14**	Pn	Pn	19 13 27.5	+0.3
OTAV	**Otavalo**	**8.67**	**13**	Pn	Pn	19 13 39.3	-1.0
LPAZ	**La Paz**	**14.39**	**125**	Pn	Pn	19 14 59.6	+1.3
PB16	**IPOC Station P**	**14.57**	**134**	Pn	Pn	19 15 02.2	+1.6
PB11	**IPOC Station P**	**15.45**	**139**	Pn	Pn	19 15 11.8	0.0
PB11				IAmb	IAmb	19 15 21.6	
	comp=Z,8.1nm,0.8s						
GO01	**Chusmiza**	**15.69**	**137**	P	P	19 15 17.5	-0.7
PATCX	**Punta Patache**	**15.93**	**143**	P	P	19 15 20.7	+0.3
PATCX				IAmb	IAmb	19 15 35.1	
	comp=Z,13nm,0.9s						
PB08	**IPOC Station P**	**16.05**	**139**	Pn	Pn	19 15 18.8	-0.8
MACA	**Manacapuru-AM**	**20.26**	**77**	P	P	19 16 07.0	-1.0
VILB	**Vilhena**	**20.39**	**105**	P	P	19 16 08.5	-0.9
VILB				IAmb	IAmb	19 16 11.8	
	comp=Z,11nm,0.6s						
AC06	**Mina Casimiro**	**21.24**	**155**	P	P	19 16 17.8	-0.6
AC06				IAmb	IAmb	19 16 20.0	
	comp=Z,9.6nm,0.6s						
PTLB	**Pontes e Lacer**	**21.98**	**111**	P	P	19 16 27.6	+1.1
PTLB				IAmb	IAmb	19 16 29.5	
	comp=Z,7.1nm,0.7s						
BOAV	**Boa Vista**	**22.47**	**63**	P	P	19 16 29.8	-2.1
BOAV				IAmb	IAmb	19 16 51.7	
	comp=Z,10nm,1.3s						
AC05	**El Transito**	**22.57**	**156**	P	P	19 16 31.2	-1.7
CO01	**Juntas del Tor**	**23.66**	**157**	P	P	19 16 42.9	-0.9
CO01				IAmb	IAmb	19 16 59.7	
	comp=Z,11nm,1.4s						

*IDC **08** 19:17:52.7±1.5,32°.69N×85°.56E,h0km,mb3.4/6, mbtmp3.3/9,ML3.3/3,MS3.2/7,Error ellipse: s-maj=52.1km s-min=19.8km az=66.0*

ISC 08 19:17:57.8±1.3,32°.8N±0°.2×85°.6E±0°.3,h35km,n13, σ1°16/9,mb3.3/6,MS3.1/5,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**14.24**	**351**	Pn	**Pn**	**19 21 15.2**	**-1.7**
	baz=165,slow=12,SNR=4.3						
MKAR				LR	LR	19 27 47.4	
	comp=Z,65nm,18.3s,baz=167,slow=42						
	0.2nm,0.8s						
KURBB	**Kurchatov Arra**	**18.59**	**346**	P	**Pn**	**19 22 11.5**	**-0.8**
	baz=160,slow=11,SNR=9.9						
KURBB				LR	LR	19 30 17.0	
	comp=Z,83nm,18.1s,baz=168,slow=40						
	0.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**18.61**	**137**	P	**P**	**19 22 10.8**	**-1.5**
	0.4nm,0.3s,baz=324,slow=12,SNR=13						
	0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**21.18**	**359**	P	**P**	**19 22 40.3**	**+0.3**
	0.3nm,0.4s,baz=179,slow=10,SNR=2.3						
ZALV				LR	LR	19 32 17.0	
	comp=Z,40nm,18.1s,baz=20,slow=41						
	0.3nm,0.4s						
SONM	**Songino Array**	**21.75**	**40**	P	**P**	**19 22 47.1**	**+0.8**
	0.3nm,0.8s,baz=227,slow=10,SNR=7.1						
	0.3nm,0.8s						
PALK	**Pallekele**	**25.77**	**191**	LR	LR	19 33 04.1	
	comp=Z,48nm,20.5s,baz=2.5,slow=36						
GNI	**Garni**	**33.46**	**295**	LR	LR	19 40 28.8	
	comp=Z,44nm,20.7s,baz=101,slow=40						
MMAI	**Mount Meron Ar**	**41.84**	**285**	LR	LR	19 46 12.5	
	comp=Z,38nm,18.1s,baz=88,slow=41						
EIL	**Elat**	**43.11**	**280**	LR	LR	19 46 02.1	
	comp=Z,62nm,19.6s,baz=62,slow=39						
FINES	**FINESS Array B**	**47.34**	**326**	P	**P**	**19 26 28.3**	**+0.5**
	1.9nm,0.9s,baz=100,slow=7.9,SNR=3.4						
	1.9nm,0.9s						
WRA	**Warramunga Arr**	**70.11**	**131**	P	**P**	**19 29 06.9**	**+0.2**
	0.3nm,0.5s,baz=316,slow=5.8,SNR=2.2						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**72.60**	**134**	P	**P**	**19 29 22.1**	**+0.4**
	0.4nm,0.7s,baz=309,slow=5.5,SNR=5.5						
	0.4nm,0.7s						
YKA	**Yellowknife Ar**	**83.69**	**9**	P	**P**	**19 30 23.6**	**+1.1**
	0.1nm,0.6s,baz=341,slow=5.7,SNR=3.8						
	0.1nm,0.6s						

*BJI **08** 19:28:39.4,33°.03N×132°.42E,h60km,mB4.9/31,mb4.8/82, Ms4.0/44,Ms7 3.8/46*

*MOS **08** 19:28:43.3±0.9,33°.29N×131°.86E,h61km,mb5.1/46,Error ellipse: s-maj=7.3km s-min=4.2km az=115.7*

*NEIC **08** 19:28:44.7±2.7,33°.33N±0°.06×131°.99E±0°.07,h58km±5km, mb4.9/250,Error ellipse: s-maj=9.6km s-min=7.2km az=143.0*

*GCMT **08** 19:28:45.7±0.3,33°.37N±0°.02×132°.00E±0°.02,h61km±2km, MW4.7/80,Moment Tensor Solution. s25,c29; s80,c108; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr1.04±.10; Mθθ-1.29±.06; Mθφ0.24±.07; Mrθ-0.01±.04; Mθφ-0.39±.07; Mφφ0.96±.04; Best double couple: Mo1.55400×10¹⁶*

NP1:φ285.00000°,δ49.00000°,λ138.00000°. NP2: φ46.00000°,δ60.00000°,λ50.00000°. Principal axes: T 1.7000, Plg55.0000°, Azm262.0000°; N -0.2950, Plg34.0000°, Azm69.0000°; P -1.4090, Plg6.0000°, Azm163.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

*NIED **08** 19:28:45.8,33°.32N×132°.03E,h59km,MW4.7,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr0.99; Mθθ-1.06; Mφφ0.07; Mrθ-0.06; Mθφ-0.05; Mφr0.90; Fault plane solution: Mo1.30000×10¹⁶ NP1:φ61.00000°, δ52.00000°,λ48.00000°. NP2:φ296.00000°,δ54.00000°, λ130.00000°.*

*JMA **08** 19:28:45.8±0.1,33°.3N±0°.2×132°.0E±0°.2,h59km,MD4.7/40, MW4.7/40,IYONADA SETONAIKAI*

JMA Felt III J1 at IYONADA SETONAIKAI .

*IDC **08** 19:28:46.0±0.4,33°.38N×131°.86E,h68km±2km,mb4.4/30, mbtmp4.7/36,MS3.7/64,Error ellipse: s-maj=8.1km s-min=7.6km az=150.0*

*BGR **08** 19:28:48.1,34°.51N×132°.03E,h33km,mb4.9*

ISC 08 19:28:45.1±0.2,33°.32N±0°.03×132°.01E±0°.02,h63km±1km, h63km:pP-P,n899,σ1°28/829,mb4.9/291,24C-10D, Shikoku

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JUS	**Usuki**	**0.33**	**221**	P	**Pn**	**19 28 56.2**	**+0.5**
JUS				A	A	19 28 56.2	
	comp=N,307nm,0.6s,comp=E,406nm,0.7s						
JUS				*e*S	**Sn**	**19 29 03.5**	**+0.1**
JNA	**Nagahama**	**0.46**	**59**	*i* P	**Pn**	**19 28 57.1**	**+0.2**
JNA				A	A	19 28 57.1	
	comp=N,169nm,0.9s,comp=E,239nm,0.8s						
JNA				*i* S	**Sn**	**19 29 05.3**	**-0.3**
OIT2	**Oita 2**	**0.47**	**265**	*i* P	**Pn**	**19 28 57.8**	**+0.8**
OIT2				*e*S	**Sn**	**19 29 06.3**	**+0.6**
JKI	**Kunimi**	**0.48**	**311**	⇓*i* P	**Pn**	**19 28 57.6**	**+0.5**
JKI				A	A	19 28 57.6	
	comp=N,70nm,0.5s,comp=E,105nm,1.1s						
JKI				⇓*e*S	**Sn**	**19 29 05.9**	**0.0**
JBEP	**Beppuamama**	**0.50**	**272**	A	A	19 28 57.9	
	comp=N,133nm,0.3s,comp=E,125nm,0.4s						
JSKE	**Saikikamae**	**0.53**	**190**	A	A	19 28 58.1	
	comp=N,83nm,1.3s,comp=E,151nm,0.5s						
UWA2	**Uwa jima 2**	**0.53**	**101**	*i* P	**Pn**	**19 28 57.6**	**0.0**
UWA2				A	A	19 28 57.6	
	comp=N,44nm,1.0s,comp=E,82nm,2.5s						
UWA2				*e*S	**Sn**	**19 29 06.1**	**-0.6**
JKD	**Kudamatsu**	**0.74**	**351**	A	A	19 29 00.6	
	comp=N,78nm,2.1s,comp=E,44nm,0.6s						
JTO	**Tosashimizu**	**0.81**	**124**	*i* P	**Pn**	**19 29 01.0**	**+0.1**
JTO				A	A	19 29 01.0	
	comp=N,35nm,0.5s,comp=E,65nm,2.3s						
JTO				*e*S	**Sn**	**19 29 11.7**	**-0.8**
JKIT	**Kitakata**	**0.83**	**214**	A	A	19 29 01.9	
	comp=N,52nm,0.5s,comp=E,37nm,1.5s						
JKU	**Kubokawa**	**0.88**	**90**	*i* P	**Pn**	**19 29 01.8**	**0.0**
JKU				A	A	19 29 01.8	
	comp=N,52nm,2.3s,comp=E,90nm,1.3s						
JKU				*e*S	**Sn**	**19 29 13.8**	**-0.3**
JHHC	**Hyugahichiya**	**0.93**	**200**	A	A	19 29 03.1	
	comp=N,26nm,1.0s,comp=E,25nm,2.4s						
JNU	**Nakatsue**	**0.97**	**259**	P	**Pn**	**19 29 03.5**	**+0.6**
	comp=E,10μm,0.3s,baz=58,slow=4.4						
JNU				S	**Sn**	**19 29 16.7**	**+0.6**
	comp=E,6μm,0.6s,baz=272,slow=10.0,SNR=5.5						
JNU				LR	LR	19 29 33.7	
	comp=E,2μm,19.3s,baz=59,slow=55						
JNU	**Nakatsue**	**0.97**	**259**	A	A	19 29 03.8	
	comp=N,25nm,0.6s,comp=E,37nm,0.8s						
JET	**Tanbara**	**0.98**	**62**	*i* P	**Pn**	**19 29 03.2**	**+0.1**
JET				A	A	19 29 03.2	
	comp=N,59nm,0.3s,comp=E,39nm,1.0s						
JET				*e*S	**Sn**	**19 29 15.9**	**-0.5**
JFA	**Akaike**	**1.09**	**292**	A	A	19 29 05.4	
	comp=N,20nm,1.0s,comp=E,14nm,0.6s						
JTSN	**Tsuno**	**1.15**	**202**	A	A	19 29 06.1	
	comp=N,45nm,0.7s,comp=E,28nm,1.9s						
JHIK	**Hikimi**	**1.21**	**357**	A	A	19 29 06.9	
	comp=N,20nm,0.9s,comp=E,12nm,1.1s						
JTY	**Toyota**	**1.23**	**320**	A	A	19 29 07.3	
	comp=N,49nm,0.2s,comp=E,21nm,0.2s						
JKHR	**Kochiharuno**	**1.26**	**81**	A	A	19 29 07.3	
	comp=N,57nm,0.6s,comp=E,86nm,0.4s						
JIU3	**Izumi3**	**1.26**	**233**	*i* P	**Pn**	**19 29 07.4**	**+0.6**
JTA	**Tamana**	**1.29**	**254**	A	A	19 29 08.2	
	comp=N,23nm,0.5s,comp=E,76nm,0.8s						
JFI	**Itaya**	**1.36**	**275**	A	A	19 29 09.2	
	comp=N,17nm,0.4s,comp=E,25nm,1.0s						
JHT	**Toyohira**	**1.38**	**14**	⇓*i* P	**Pn**	**19 29 09.4**	**+1.0**
JHT				A	A	19 29 09.4	
	comp=N,14nm,1.2s,comp=E,17nm,1.8s						
JHT				⇓*e*S	**Sn**	**19 29 27.0**	**+1.2**
JTZ	**Takazaki**	**1.61**	**209**	A	A	19 29 12.6	
	comp=N,21nm,3.4s,comp=E,35nm,1.8s						

INCN Inchon 6.04 315 P **Pn** 19 30 13.7 +1.8
INCN S **Sn** 19 31 19.2 -0.5
JHJ Hachijo jima 2 6.52 90 P **Pn** 19 30 18.8 +0.4
comp=E,358nm,0.3s,baz=72,slow=21,SNR=4.9
JHJ S **Sn** 19 31 30.6 -0.7
comp=E,287nm,0.5s,baz=92,slow=21,SNR=1.6
JHJ LR LR 19 32 54.6
comp=E,894nm,18.5s,baz=74,slow=37
JHJ2 Mitsune 6.55 90 P **Pn** 19 30 19.0 +0.2
JOW Kunigami 7.23 208 P **Pn** 19 30 27.9 -0.3
comp=E,6.8nm,0.3s,baz=86,slow=24,SNR=13
JOW S **Sn** 19 31 44.2 -4.6
comp=E,20nm,0.3s,baz=102,slow=26,SNR=8.0
JOW Kunigami 7.23 208 P **Pn** 19 30 28.0 -0.1
JOW Kunigami 7.23 208 **Pn** 19 30 27.4 -0.7
JMZ Minamidaito 2 7.50 185 P **Pn** 19 30 31.8 -0.1
JMZ Minamidaito 2 7.50 185 Pn **Pn** 19 30 31.4 -0.5
PSTR Posyet 9.37 355 *i* P **Pn** 19 30 58.1 +0.8
VLA Vladivostok 9.79 359 *i* P **Pn** 19 31 04.2 +1.2
DL2 Dalian 10.07 307 P **Pn** 19 31 06.8 -0.2
DL2 S **Sn** 19 33 01.5 +3.1
DL2 pmax pmax
comp=E,32nm,0.9s
DL2 pmax pmax
comp=E,210nm,3.7s
DL2 L L
comp=E,890nm,11.2s
DL2 L L
comp=E,570nm,12.8s
DL2 L L
comp=E,540nm,17.3s
JCJ Chichijima 10.77 123 P **Pn** 19 31 17.4 +0.9
comp=E,159nm,0.8s,baz=38,slow=20,SNR=2.4
JCJ S **Sn** 19 33 11.7 -3.7
comp=E,63nm,0.4s,baz=279,slow=23,SNR=5.6
JCJ LR LR 19 34 56.5
comp=E,451nm,20.2s,baz=282,slow=34
SNY Shenyang 10.80 324 ⇑P Pn 19 31 22.0 +5.1
SNY S Sn 19 33 26.1 +10
SNY pmax pmax
comp=E,28nm,1.3s
SNY L L
comp=E,130nm,7.1s
SNY L L
comp=E,190nm,5.4s
SNY L L
comp=E,480nm,14.4s
USRK Ussuriysk Ar. 10.87 360 P **Pn** 19 31 20.2 +2.5
comp=E,4.1nm,0.3s,baz=182,slow=11,SNR=30
NJ2 Nanjing 11.16 267 ⇑P **Pn** 19 31 24.7 +2.9
NJ2 pmax pmax
comp=E,62nm,0.8s
NJ2 pmax pmax
comp=E,380nm,3.6s
NJ2 L L
comp=E,570nm,8.5s
NJ2 L L
comp=E,1μm,13.7s
NJ2 L L
comp=E,1μm,14.0s
MDJ Mudanjiang 11.44 351 P **Pn** 19 31 29.0 +3.5
MDJ Mudanjiang 11.44 351 P **Pn** 19 31 28.6 +3.1
MDJ sP 19 31 46.2
MDJ S **Sn** 19 33 34.0 +2.4
MDJ pmax pmax
comp=E,22nm,1.7s
MDJ L L
comp=E,340nm,14.5s
MDJ L L
comp=E,200nm,11.3s
MDJ L L
comp=E,530nm,19.6s
CN2 Changchun 11.65 336 P **Pn** 19 31 32.4 +3.9
CN2 sP 19 31 50.6
CN2 S **Sn** 19 33 40.4 +3.5
CN2 pmax pmax
comp=E,10.0nm,1.0s
CN2 pmax pmax
comp=E,100nm,4.0s
CN2 L L
comp=E,300nm,8.0s
CN2 L L
comp=E,200nm,8.0s
CN2 L L
comp=E,400nm,8.0s
TEY Ternei 12.23 16⇑ *e*P Pn 19 31 41.1 +4.8
TEY pmax pmax
comp=N,30nm,1.0s
TEY pmax pmax
comp=Z,20nm,1.0s
JEM Erimo 12.38 42 P **Pn** 19 31 39.6 +1.2
TIA Tai'an 12.57 287 P **Pn** 19 31 44.3 +3.1
TIA PP P 19 31 55.4 +4.9
TIA sP 19 32 03.1
TIA pmax pmax
comp=Z,41nm,1.5s
TIA L L
comp=Z,490nm,14.5s
TIA L L
comp=Z,380nm,16.3s
TIA L L
comp=Z,590nm,20.2s
NACB Ninganchiao 12.89 228 P **Pn** 19 31 45.6 +0.1
BNX BinXian 12.90 345 ⇓P **Pn** 19 31 47.9 +2.4
BNX pmax pmax
comp=Z,7.0nm,0.6s
ASAJ Asahikawa 13.57 34 P **Pn** 19 31 55.3 +0.7
comp=Z,19nm,0.9s,baz=220,slow=11,SNR=12
ASAJ LR LR 19 36 56.6
comp=Z,243nm,21.9s,baz=239,slow=36
ASAJ Asahikawa 13.57 34 P **Pn** 19 31 54.2 -0.4
JKA Kamikawa-asahi 13.57 34 **Pn** 19 31 54.2 -0.4
SSLB Suanglung 13.57 228 P **Pn** 19 31 55.4 +0.6
YULB Yu-li 13.65 226 P **Pn** 19 31 56.1 +0.3
BJI2 Beijing 14.35 302 P **Pn** 19 32 05.5 +0.5
BJI2 pP P 19 32 15.3 +5.0
BJI2 S **Sn** 19 34 43.9 +1.2
BJI2 pmax pmax
comp=Z,5.0nm,1.2s
BJI2 pmax pmax
comp=Z,48nm,6.1s
BJT Baijiatuan 14.35 302 P **Pn** 19 32 07.0 +2.0
BJT Baijiatuan 14.35 302 **Pn** 19 32 05.8 +0.8
BJT Baijiatuan 14.35 302 P **Pn** 19 32 05.8 +0.8
HNS HongShan 14.69 291 ⇑P **P** 19 32 11.7 -2.3
HNS pP Pn 19 32 16.5 +7.1
HNS S **Sn** 19 34 52.9 +2.0
HNS pmax pmax
comp=Z,78nm,1.2s
HNS L L
comp=Z,280nm,19.6s
HNS L L
comp=Z,320nm,19.0s
HNS L L
comp=Z,350nm,17.6s
WHN Wuhan 15.25 264 P **P** 19 32 21.8 +1.6
WHN pmax pmax
comp=Z,110nm,0.8s
YSS Yuzhno-Sakhali 15.88 28 *e*P **Pn** 19 32 24.1 -0.5
YSS *e*S **Sn** 19 35 12.8 -6.9
YSS pmax pmax
comp=Z,20nm,1.0s
YSS MLR MLR
comp=Z,300nm,17.0s
YSS MLR MLR
comp=N,200nm,15.0s
YSS MLR MLR
comp=E,200nm,14.0s
KLR Kul'dur 15.90 359 P **P** 19 32 26.0 -1.4
comp=E,25nm,0.9s,baz=175,slow=10,SNR=30
KLR S **S** 19 35 26.8 -4.2
comp=E,1.0nm,0.5s,baz=319,slow=22,SNR=6.0
KLR LR LR 19 38 16.4
comp=E,170nm,19.9s,baz=174,slow=36
KLR Kul'dur 15.90 359 P **P** 19 32 26.0 -1.4
LYN LuoYang 16.27 280 P **P** 19 32 32.0 +0.5
LYN pmax pmax
comp=E,48nm,0.9s
LYN pmax pmax
comp=E,470nm,4.9s
LYN L L
comp=E,170nm,13.1s
LYN L L
comp=E,410nm,19.0s
LYN L L
comp=E,520nm,19.2s

XLT XiLinHaoTe 16.30 315 *e*P **P** 19 32 34.8 +2.9
XLT PP **pP** 19 32 47.7 +2.5
XLT pmax pmax
comp=E,13nm,0.7s
XLT pmax pmax
comp=E,140nm,4.7s
XLT L L
comp=E,31nm,22.4s
XLT L L
comp=E,250nm,18.4s
XLT L L
comp=E,300nm,15.8s
TIY Taiyuan 16.52 291 P **P** 19 32 36.9 +2.4
TIY SS S 19 35 55.5 +11
TIY pmax pmax
comp=E,63nm,0.5s
TIY pmax pmax
comp=E,210nm,3.7s
CNSH ChangSha 17.17 258 P **P** 19 32 42.8 +1.2
CNSH pmax pmax
comp=E,22nm,0.7s
HEH HeiHe 17.26 350 *e*P **P** 19 32 44.8 +2.4
HEH sP **sP** 19 33 01.9 -1.7
HEH pmax pmax
comp=E,31nm,1.0s
HEH L L
comp=E,260nm,20.3s
HEH L L
comp=E,140nm,20.9s
HEH L L
comp=E,290nm,18.3s
GRNR Gornyy 17.74 9 *e*P **Pn** 19 32 46.4 -1.2
GRNR MLR MLR
comp=E,60nm,14.0s
GRNR MLR MLR
comp=N,150nm,15.0s
GRNR MLR MLR
comp=Z,210nm,18.0s
HHC Hu-ho-hao-te 17.94 301 *e*P **Pn** 19 32 52.0 +1.8
HHC sP *sP* 19 33 10.6 -0.7
HHC S **Sn** 19 36 04.1 -5.5
HHC pmax pmax
comp=Z,22nm,1.3s
HHC pmax pmax
comp=Z,300nm,4.7s
HHC L L
comp=Z,150nm,13.6s
HHC L L
comp=Z,180nm,13.6s
HHC L L
comp=Z,140nm,15.3s
BTO2 Baotou 19.13 299 *e*P **Pn** 19 33 04.8 +0.2
BTO2 pP **pP** 19 33 16.4 -0.1
BTO2 PP **sP** 19 33 23.8 -0.7
BTO2 sP P 19 33 25.0 +22
BTO2 S **S** 19 36 32.7 -4.1
BTO2 sS sS 19 36 49.4 -9.0
BTO2 pmax pmax
comp=Z,21nm,0.8s
BTO2 pmax pmax
comp=Z,680nm,5.5s
BTO2 L L
comp=Z,470nm,13.6s
BTO2 L L
comp=Z,420nm,15.1s
TYV Tymovskoe 19.19 21 *e*P **Pn** 19 33 05.7 +0.6
TYV *e*S **Sn** 19 36 42.1 +2.6
TYV pmax pmax
comp=Z,20nm,1.0s
TYV pmax pmax
comp=Z,100nm,4.0s
TYV smax smax
comp=N,300nm,4.6s
TYV smax smax
comp=E,400nm,4.6s
XAN Xi'an 19.22 279 ⇑P **Pn** 19 33 04.9 -0.8
XAN sP sP 19 33 27.4 +1.7
XAN pmax pmax
comp=E,17nm,1.3s
XAN pmax pmax
comp=E,290nm,7.2s
XAN L L
comp=E,170nm,11.7s
XAN L L
comp=E,280nm,12.4s
XAN L L
comp=E,260nm,14.4s
ENH Enshi 19.38 267 P **Pn** 19 33 06.6 -0.9
ENH Enshi 19.38 267 P **P** 19 33 05.7 -0.1
ENH IAmb IAmb 19 33 11.6
comp=E,64nm,0.9s
ZEA Zeya 20.69 352 *e*P Pn 19 33 21.4 -1.4
ZEA *e* 19 37 10.7
ZEA pmax pmax
comp=E,100nm,1.5s
ZEA pmax pmax
comp=E,70nm,0.7s
ZEA MLR MLR
comp=E,100nm,15.0s
GUMO Guam 22.87 146 LR LR 19 41 04.1
comp=E,66nm,20.7s,baz=356,slow=32
GYA Guiyang 22.98 259 ⇓P **P** 19 33 44.3 -0.3
GYA pmax pmax
comp=E,19nm,0.8s
CIT Chita 22.98 330 *e*P P 19 33 56.8 +12
CIT *e* 19 34 09.6
CIT *e* 19 34 18.8
CIT pmax pmax
comp=E,22nm,1.5s
LZH Lanzhou 23.29 285 P **P** 19 33 46.7 -0.9
LZH sP sP 19 34 07.7 -1.8
LZH pmax pmax
comp=E,190nm,1.3s
LZH pmax pmax
comp=E,230nm,4.6s
LZH L L
comp=E,130nm,12.9s
LZH L L
comp=E,200nm,13.2s
LZH L L
comp=E,300nm,17.0s
LZDM Lanzhou Array 23.41 284 P **P** 19 33 48.5 -0.4
comp=E,111nm,0.6s,baz=128,slow=6.4,SNR=74
LZDM LR LR 19 43 57.7
comp=E,102nm,19.8s,baz=155,slow=39
comp=E,111nm,0.6s
ULN Ulaanbaatar 23.74 315 **P** 19 33 52.0 +0.3
ULN Ulaanbaatar 23.74 315*ce*P **P** 19 33 51.9 +0.3
ULN pmax pmax
comp=E,100nm,1.3s
ULN Ulaanbaatar 23.74 315 P **P** 19 33 52.1 +0.4
ULN Ulaanbaatar 23.74 315 P **P** 19 33 51.3 -0.4
CD2 Chengdu 24.02 272 P **P** 19 33 53.6 -0.6
CD2 pmax pmax
comp=E,110nm,0.6s
CD2 L L
comp=E,710nm,14.3s
CD2 L L
comp=E,450nm,10.8s
SONM Songino Array 24.12 315 P **P** 19 33 55.3 +0.2
comp=E,46nm,0.8s,baz=129,slow=9.9,SNR=338
SONM PcP **PcP** 19 37 34.7 +0.1
comp=E,1.9nm,0.7s,baz=121,slow=2.8,SNR=5.4
SONM LR LR 19 44 31.2
comp=E,295nm,18.4s,baz=129,slow=39
comp=E,46nm,0.8s
SONM Songino Array 24.12 315 **P** 19 33 55.3 +0.2
SONM IAmb IAmb 19 33 56.9
comp=E,54nm,0.9s
QIZ Qiongzhong 24.39 240 P **P** 19 33 57.7 +0.1
QIZ S **S** 19 38 14.4 +1.5
QIZ L L
comp=E,140nm,12.8s
QIZ L L
comp=E,150nm,14.6s
QIZ L L
comp=E,210nm,24.1s
GTA2 Gaotai 26.58 293 P **P** 19 34 16.5 -1.0
GTA2 pP pP 19 34 28.4 -4.4
GTA2 PcP **PcP** 19 37 41.1 +0.7
GTA2 pmax pmax
comp=E,10.0nm,1.0s
GTA2 L L
comp=E,120nm,13.1s
GTA2 L L
comp=E,240nm,14.8s

GTA2 L L
comp=Z,290nm,16.5s
KMI2 Kunming 26.73 260 ⇓P **P** 19 34 20.4 +1.3
KMI2 pmax pmax
comp=Z,15nm,0.8s
KMI2 L L
comp=Z,180nm,17.5s
KMI2 L L
comp=Z,300nm,18.8s
KMI2 L L
comp=Z,260nm,21.4s
DAV Davao City (W) 26.79 194 LR LR 19 46 33.1
comp=Z,38nm,18.0s,baz=350,slow=40
DAV Davao City (W) 26.79 194 P **P** 19 34 21.5 +2.1
DAV Davao City (W) 26.79 194 P **P** 19 34 20.2 +0.8
PETK Petropavlovsk- 26.99 35 P **P** 19 34 21.1 +0.2
comp=Z,3.8nm,0.9s,baz=217,slow=9.8,SNR=2.9
PETK PcP **PcP** 19 37 41.0 +0.1
comp=Z,3.8nm,0.9s,baz=46,slow=1.0,SNR=4.0
comp=Z,3.8nm,0.9s
PETK Petropavlovsk- 26.99 35 P **P** 19 34 16.9 -4.0
PZH PanZhiHua 27.04 263 P **P** 19 34 21.1 -0.6
PZH pmax pmax
comp=Z,20nm,0.7s
ZAK Zakamensk 27.12 318 *e*P **P** 19 34 21.7 -0.5
ZAK pmax pmax
comp=Z,19nm,1.2s
IRK Irkutsk 27.52 322 *e*P **P** 19 34 25.3 -0.3
IRK pmax pmax
comp=Z,21nm,1.5s
TLY Talaya 27.56 320 LR LR 19 46 27.6
comp=Z,214nm,19.8s,baz=114,slow=39
TLY Talaya 27.56 320 *i* P **P** 19 34 25.6 -0.4
TLY pmax pmax
comp=Z,5.0nm,0.9s
TLY Talaya 27.56 320 P **P** 19 34 26.6 +0.7
YAK Yakutsk 28.77 358 LR LR 19 45 56.4
comp=Z,114nm,20.6s,baz=190,slow=36
YAK Yakutsk 28.77 358 **P** 19 34 34.3 -2.2
YAK Yakutsk 28.77 358 *e*P **P** 19 34 34.4 -2.2
YAK *e**PP **pP** 19 34 50.2 -1.6
YAK *e* 19 35 25.5
YAK *e* 19 37 43.9
YAK *e*S **S** 19 39 17.0 -4.3
YAK *e**SS sS 19 39 38.2 -9.2
YAK pmax pmax
comp=Z,42nm,0.9s
YAK pmax pmax
comp=N,13nm,1.0s
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK pmax pmax
comp=Z,50nm,3.0s
YAK pmax pmax
comp=N,25nm,2.5s
YAK pmax pmax
comp=E,68nm,4.8s
YAK smax smax
comp=E,56nm,1.9s
YAK smax smax
comp=N,29nm,1.8s
MOY Mondy 28.99 319 *e*P **P** 19 34 38.4 -0.5
MA2 Magadan 29.06 20 LR LR 19 47 24.0
comp=N,58nm,18.6s,baz=218,slow=38
MA2 Magadan 29.06 20*ce*P **P** 19 34 40.3 +1.1
MA2 pmax pmax
comp=Z,5.0nm,1.1s
TNCH TengChong 30.28 263 ⇑P **P** 19 34 49.9 -0.7
TNCH pP pP 19 35 05.9 -0.1
TNCH sP sP 19 35 12.0 -1.4
TNCH S **S** 19 39 46.3 0.0
TNCH sS sS 19 40 10.4 -2.1
TNCH pmax pmax
comp=Z,9.0nm,0.9s
TNCH pmax pmax
comp=Z,140nm,4.6s
TNCH L L
comp=Z,88nm,3.9s
TNCH L L
comp=Z,200nm,5.1s
TNCH L L
comp=Z,300nm,22.5s
KNGR Kungurtug, Tuv 30.56 315 *i* P **P** 19 34 52.5 -0.2
KNGR pmax pmax
comp=Z,5.0nm,0.7s
GOMU GeErMu 30.57 286 P **P** 19 34 51.9 -1.4
GOMU pmax pmax
comp=Z,19nm,1.0s
MYLDM Lahad Datu 30.69 207 P **P** 19 34 52.2 -1.8
MYLDM Lahad Datu 30.69 207 P **P** 19 34 51.9 -2.1
comp=Z,12nm,1.1s
SEY Seymchan 32.30 17*ce*P **P** 19 35 08.8 +1.1
SEY pmax pmax
comp=Z,3.0nm,0.9s
MNI Manado 32.41 193 P **P** 19 35 07.3 -1.9
TNTI Ternate 32.67 189 P **P** 19 35 11.8 +0.4
comp=Z,28nm,1.1s
CHTO Chiang Mai 32.87 252 P **P** 19 35 13.9 +0.7
CHTO Chiang Mai 32.87 252 **P** 19 35 11.8 -1.4
CHTO Chiang Mai 32.87 252 P **P** 19 35 11.8 -1.4
CHTO pmax pmax
comp=Z,3.0nm,0.8s
CHTO Chiang Mai 32.87 252 P **P** 19 35 12.8 -0.3
CHTO Chiang Mai 32.87 252 P **P** 19 35 12.9 -0.3
CM31 Chiang Mai Arr 33.06 252 P **P** 19 35 13.2 -1.6
CM31 Chiang Mai Arr 33.06 252 P **P** 19 35 14.9 0.0
CMAR Chiang Mai Arr 33.06 252 P **P** 19 35 14.3 -0.5
comp=Z,1.7nm,0.6s,baz=50,slow=7.5,SNR=20
CMAR PcP **PcP** 19 37 57.7 +0.5
comp=Z,1.5nm,0.7s,baz=22,slow=1.8,SNR=11
CMAR LR LR 19 49 58.8
comp=Z,97nm,18.8s,baz=50,slow=39
comp=Z,1.7nm,0.6s
CMAR Chiang Mai Arr 33.06 252 P **P** 19 35 13.3 -1.6
CMAR **PcP** 19 37 57.4 +0.2
GTOI Gorontalo 33.59 196 P **P** 19 35 16.5 -2.9
comp=Z,19nm,0.9s
TOLI2 Tolitoli 33.73 201 P **P** 19 35 20.0 -0.6
TOLI2 Tolitoli 33.73 201 **P** 19 35 19.3 -1.4
H11N2 WAKE ISLAND Hy 33.85 105 T T 20 10 31.4
baz=300,slow=75,SNR=6.3
H11N1 WAKE ISLAND Hy 33.86 105 T T 20 10 28.0
baz=300,slow=75,SNR=6.4
H11N3 WAKE ISLAND Hy 33.87 105 T T 20 10 29.5
baz=300,slow=75,SNR=7.9
SWI Sorong 34.01 181 P **P** 19 35 22.7 -0.3
comp=Z,15nm,1.1s
MRSI Marisa 34.01 198 P **P** 19 35 22.6 -0.5
comp=Z,17nm,0.8s
SIJI Sorong 34.01 181 LR LR 19 48 57.5
comp=Z,64nm,19.5s,baz=44,slow=36
SIJI Sorong 34.01 181 P **P** 19 35 22.9 -0.2
comp=Z,9.7nm,1.1s
LBMI Labuha 34.04 188 P **P** 19 35 23.9 +0.6
MORE Moreh 34.12 265 IAmb IAmb 19 35 24.1
comp=Z,5.9nm,0.6s
MWPI Manokwari, Pap 34.12 176 P **P** 19 35 24.4 +0.4
comp=Z,72nm,1.0s
H11S3 WAKE ISLAND Hy 34.33 107 T T 20 11 09.0
baz=304,slow=75,SNR=6.6
H11S1 WAKE ISLAND Hy 34.33 107 T T 20 11 06.7
baz=304,slow=75,SNR=3.8
H11S2 WAKE ISLAND Hy 34.34 107 T T 20 11 04.0
baz=304,slow=75,SNR=4.2
RKPI Ransiki, Papua 34.70 176 P **P** 19 35 31.5 +2.4
comp=Z,15nm,0.8s
MPSI Mapaga 34.73 202 P **P** 19 35 28.5 -0.8
comp=Z,20nm,1.3s
LSA Lhasa 34.86 275 P **P** 19 35 27.7 -3.3
LSA pmax pmax
comp=Z,7.0nm,1.2s
LUWI Luwuk 35.27 196 P **P** 19 35 30.1 -3.8
comp=Z,806nmcomp=Z,30nm,0.8s
SANI Sanana 35.63 190 P **P** 19 35 35.9 -1.2
SANI Sanana 35.63 190 P **P** 19 35 36.2 -0.9
comp=Z,488nmcomp=Z,44nm,0.7s
SHEM Shemya Is, Ala 35.72 44 LR LR 19 49 44.5
comp=Z,68nm,22.0s,baz=341,slow=35
WMQ Urumqi 35.82 300 *e*P **P** 19 35 38.4 -0.1
WMQ pP sP 19 35 56.7 -4.8
WMQ pmax pmax
comp=Z,18nm,1.3s
WMQ L L
comp=Z,460nm,18.9s
WMQ L L
comp=Z,160nm,24.1s

SBUM Sibu 35.87 215 P **P** 19 35 38.8 -0.3
SBUM Sibu 35.87 215 **P** 19 35 37.2 -1.9
SBUM Sibu 35.87 215 P **P** 19 35 38.7 -0.3
PCI Palu 35.92 201 P **P** 19 35 38.3 -1.3
comp=Z,26nm,1.2s
FAKI Fak Fak 36.04 180 P **P** 19 35 41.5 +0.9
FAKI Fak Fak 36.04 180 **P** 19 35 40.6 +0.1
FAKI Fak Fak 36.04 180 P **P** 19 35 41.3 +0.7
comp=Z,59nm,0.9s
JAY Jayapura 36.58 165 P **P** 19 35 47.8 +2.6
comp=Z,19nm,1.1s
DGZ Jazzator, Alta 36.58 310 *i* P **P** 19 35 44.2 -0.8
DGZ pmax pmax
comp=Z,5.0nm,0.7s
MSAI Masohi 36.58 185 P **P** 19 35 45.3 +0.1
KRAI Karang Ratu 36.60 186 P **P** 19 35 45.4 +0.1
comp=Z,26nm,1.6s
NLAI Namlea 36.66 188 P **P** 19 35 46.4 +0.6
comp=Z,28nm,0.8s
KMPI Kaimana, Papua 36.81 177 P **P** 19 35 46.5 -0.6
AAI Ambon 36.98 186 P **P** 19 35 49.0 +0.5
comp=Z,60nm,0.8s
BRDH Bariadhala 36.98 264 LR LR 19 53 46.6
comp=Z,202nm,18.7s,baz=38,slow=41
BKB Balikpapan 37.23 206 P **P** 19 35 51.1 +0.4
comp=Z,36nm,0.6s
MMSI Mamuju 37.89 202 P **P** 19 35 56.8 +0.5
comp=Z,31nm,0.7s
TTSI Tana Toraja 37.96 200 P **P** 19 35 56.0 -0.8
comp=Z,10nm,0.9s
ZSN Zaisan 37.99 306 *e*P **P** 19 35 56.4 -0.5
ZSN Zaisan 37.99 306 *e*P **P** 19 35 56.4 -0.5
KDI Kendari 38.12 195 P **P** 19 35 58.6 +0.4
TIXI Tiksi 38.43 358 LR LR 19 52 15.7
comp=Z,162nm,20.6s,baz=190,slow=37
TIXI Tiksi 38.43 358 **P** 19 35 59.5 -0.7
TIXI IAmb IAmb 19 36 23.8
comp=Z,14nm,1.0s
TIXI Tiksi 38.43 358 *i* P **P** 19 35 59.2 -1.0
TIXI pmax pmax
comp=Z,7.0nm,0.6s
TIXI Tiksi 38.43 358 P **P** 19 35 59.5 -0.7
TIXI x x 19 36 11.4
TIXI pP **pP** **19 36 14.6 -1.2**
TIXI x x 19 36 19.9
TIXI PcP **PcP** **19 38 11.2 -0.9**
KKSI Kolaka, Sulawe 38.55 197 P **P** 19 36 01.0 -0.8
comp=Z,55nm,0.7s
PMSI Majene 38.66 201 P **P** 19 36 00.3 -2.4
comp=Z,41nm,1.0s
SPSI Sidrap Palu 38.85 200 P **P** 19 36 05.6 +1.3
comp=Z,11nm,0.7s
ZALV Zalesovo Beam 38.98 316 P **P** 19 36 04.3 -0.7
comp=Z,3.5nm,0.6s,baz=97,slow=8.5,SNR=26
ZALV PcP **PcP** **19 38 13.3 -0.9**
comp=Z,5.0nm,0.8s,baz=97,slow=3.6,SNR=9.4
ZALV ScP **ScP** **19 41 54.0 -3.1**
comp=Z,1.3nm,0.8s,baz=71,slow=6.2,SNR=5.6
ZALV LR LR 19 53 29.9
comp=Z,171nm,18.2s,baz=102,slow=38
comp=Z,3.5nm,0.6s
ZALV Zalesovo Beam 38.98 316 **PcP** 19 36 03.1 -2.0
ZALV **PcP** **19 38 13.3 -0.9**
MK31 Makanchi Array 39.72 305 *ce*P **P** 19 36 10.0 -1.3
MKAR Makanchi Array 39.72 305 P **P** 19 36 10.8 -0.6
comp=Z,6.6nm,0.9s,baz=93,slow=10,SNR=50
MKAR PcP **PcP** **19 38 16.0 -0.8**
comp=Z,3.4nm,1.0s,baz=74,slow=2.4,SNR=5.9
MKAR ScP **ScP** **19 41 58.7 -1.5**
comp=Z,0.8nm,0.9s,baz=93,slow=5.0,SNR=4.9
MKAR PKiKP **PKiKP** **19 45 26.1 -1.8**
comp=Z,0.3nm,0.6s,baz=79,slow=0.4,SNR=4.2
MKAR LR LR 19 54 11.4
comp=Z,122nm,19.6s,baz=84,slow=38
comp=Z,6.6nm,0.9s
MKAR Makanchi Array 39.72 305 **P** 19 36 10.3 -1.0
MKAR **PcP** **19 38 15.8 -1.0**
KAPI Kappang 39.85 199 LR LR 19 53 05.7
comp=Z,19nm,21.2s,baz=1.0,slow=37
KAPI Kappang 39.85 199 **P** 19 36 10.8 -1.9
KAPI IAmb IAmb 19 36 13.9
comp=Z,13nm,0.8s
KAPI Kappang 39.85 199 P **P** 19 36 10.8 -1.9
KAPI pmax pmax
comp=Z,13nm,0.8s
KAPI Kappang 39.85 199 P **P** 19 36 12.6 -0.1
KAPI Kappang 39.85 199 P **P** 19 36 13.0 +0.3
comp=Z,15nm,1.3s
BILL Bilibino 39.93 19 *ce*P **P** 19 36 13.9 +1.2
BILL pmax pmax
comp=Z,20nm,1.4s
BILL Bilibino 39.93 19 P **P** 19 36 14.7 +2.0
BILL pP **sP** **19 36 30.9 -4.9**
BILL x x 19 36 34.8
BILL x x 19 36 37.0
BILL PcP **PcP** **19 38 18.2 +1.2**
MAKZ Makanchi 39.93 305 **P** 19 36 12.2 -0.9
MAKZ Makanchi 39.93 305 P **P** 19 36 12.2 -0.9
MAKZ pmax pmax
comp=Z,8.0nm,0.9s
MAKZ Makanchi 39.93 305 P **P** 19 36 12.5 -0.6
MAKZ pP **pP** **19 36 29.0 +0.1**
MAKZ sP **sP** **19 36 35.5 -0.8**
BBKI Banjar Baru 40.02 207 P **P** 19 36 16.4 +2.3
comp=Z,67nm,0.9s
MKS Makassar 40.13 200 P **P** 19 36 14.2 -0.7
comp=Z,57nm,0.8s
KULM Kulim 40.35 233 P **P** 19 36 16.8 -0.1
KULM Kulim 40.35 233 **P** 19 36 16.3 -0.6
KULM IAmb IAmb 19 36 17.6
comp=Z,20nm,1.2s
PBKI Pangkalan Bun 40.66 212 P **P** 19 36 19.3 0.0
PBA Port Blair 41.85 248 P **P** 19 36 28.0 -1.2
WUS Wushi 42.20 297 P **P** 19 36 31.6 -0.3
MMPI Merauke 42.31 168 P **P** 19 36 33.9 +1.1
KURK Kurchatov 42.31 311 **P** 19 36 31.3 -1.2
KURK Kurchatov 42.31 311 P **P** 19 36 32.1 -0.4
KURK *PP **pP** **19 36 49.9 +1.5**
KURK 19 38 23.8
KURK Kurchatov 42.31 311 P **P** 19 36 31.8 -0.7
KURK Kurchatov 42.31 311 P **P** 19 36 31.7 -0.8
KURK sP **sP** **19 36 55.0 -0.7**
KURK PcP **PcP** **19 38 24.5 -0.6**
KURBB Kurchatov Arra 42.36 311 P **P** 19 36 32.1 -0.8
comp=Z,9.0nm,0.8s,baz=97,slow=9.1,SNR=83
KURBB pP **pP** **19 36 49.9 +1.1**
comp=Z,4.4nm,0.8s,baz=93,slow=8.8,SNR=8.2
KURBB PcP **PcP** **19 38 23.8 -1.4**
comp=Z,0.9nm,0.7s,baz=89,slow=3.4,SNR=4.7
KURBB ScP **ScP** **19 42 07.6 -2.9**
comp=Z,0.2nm,0.6s,baz=96,slow=4.8,SNR=2.6
KURBB LR LR 19 55 40.4
comp=Z,157nm,20.1s,baz=158,slow=38
comp=Z,9.0nm,0.8s
TDK Taldyqorghan 42.45 302 *e*P **P** 19 36 33.2 -0.6
TDK Taldyqorghan 42.45 302 *e*P **P** 19 36 33.2 -0.6
SATY Saty 42.60 299 *e*P **P** 19 36 34.4 -0.8
SATY Saty 42.60 299 *e*P **P** 19 36 34.4 -0.8
TPI Tanjungpandan 42.62 217 P **P** 19 36 35.2 -0.2
comp=Z,13nm,1.1s
MMRI Maumere 42.74 194 P **P** 19 36 37.0 +0.7
comp=Z,63nm,0.8s
PPBI Pangkal Pinang 42.91 220 P **P** 19 36 38.0 +0.2
LHMI Lhok Sumawe 42.94 237 P **P** 19 36 36.8 -1.2
comp=Z,82nm,1.1s
EDFI Ende, Flores 42.97 195 P **P** 19 36 37.7 -0.6
comp=Z,30nm,1.2s
TSI Tuntungan 43.07 234 P **P** 19 36 39.5 +0.5
comp=Z,37nm,1.5s
LBFI Labuhan Bajo, 43.14 198 P **P** 19 36 38.8 -0.7
comp=Z,6.8nm,0.7s
SOEI Soe 43.46 191 P **P** 19 36 41.7 -0.6
SOEI Soe 43.46 191 **P** 19 36 40.5 -1.8
SOEI Soe 43.46 191 P **P** 19 36 42.7 +0.4
comp=Z,65nm,0.9s
MDOK Medeo 43.58 300 *e*P **P** 19 36 42.6 -0.5
MDOK Medeo 43.58 300 *e*P **P** 19 36 42.6 -0.5
DBNI Kabupaten Domp 43.58 200 P **P** 19 36 44.7 +1.6
comp=Z,405nmcomp=Z,36nm,0.8s
KDJ Kajisay 43.60 298 **P** 19 36 41.6 -1.7
KDJ Kajisay 43.60 298 P **P** 19 36 41.6 -1.7
KDJ pmax pmax
comp=Z,7.0nm,0.7s
TNSS Tian-Shan 43.67 299 *e*P **P** 19 36 43.3 -0.8
TNSS Tian-Shan 43.67 299 *e*P **P** 19 36 43.3 -0.8

AAA Alma-Ata 43.67 300 *e*P **P** 19 36 43.3 -0.4
AAA pmax pmax
comp=Z,13nm,0.7s
AAA Alma-Ata 43.67 300 *e*P **P** 19 36 43.4 -0.4
comp=Z,13nm,0.7s
NRIK Noril'sk 43.68 339 P **P** 19 36 42.6 -0.6
comp=Z,5.0nm,0.6s,baz=112,slow=11,SNR=10
NRIK LR LR 19 56 05.8
comp=Z,150nm,19.6s,baz=132,slow=38
comp=Z,5.0nm,0.6s
NRIK Noril'sk 43.68 339 *i* P **P** 19 36 42.5 -0.8
NRIK pmax pmax
comp=Z,6.0nm,0.6s
BATI Baumata 44.01 192 P **P** 19 36 46.2 -0.3
PLAI Plampang 44.05 200 P **P** 19 36 45.9 -0.9
PLAI Plampang 44.05 200 P **P** 19 36 46.1 -0.7
comp=Z,617nmcomp=Z,62nm,0.8s
KHKI Kahang-Kahang 44.29 204 P **P** 19 36 51.0 +2.2
comp=Z,585nmcomp=Z,52nm,1.4s
MNSI Mandailing Nat 44.42 230 P **P** 19 36 49.1 -0.8
comp=Z,31nm,0.8s
TKM2 Tokmak 2 44.66 299 P **P** 19 36 52.0 +0.2
SNR=10
KBK Karagaybulak 45.17 299 P **P** 19 36 55.9 +0.1
SNR=12
CHMS Chumysh 45.27 300 P **P** 19 36 56.6 +0.1
SNR=7.0
KSH2 Kashi 45.28 294 P **P** 19 36 56.8 +0.1
KSH2 pP pP 19 37 11.9 -0.8
KSH2 pmax pmax
comp=Z,17nm,0.8s
GSI Gunungsitoli 45.35 233 P **P** 19 36 56.2 -1.1
GSI Gunungsitoli 45.35 233 **P** 19 36 55.8 -1.5
GSI Gunungsitoli 45.35 233 P **P** 19 36 56.1 -1.2
USP Ospenovka 45.42 300 P **P** 19 36 57.2 -0.4
SNR=8.1
SPIA Saint Paul Isl 45.42 40 P **P** 19 36 57.7 +0.3
baz=264
AAK Ala-Archa 45.51 299 LR LR 19 57 13.2
comp=Z,85nm,21.1s,baz=72,slow=38
AAK Ala-Archa 45.51 299 **P** 19 36 56.9 -1.6
AAK Ala-Archa 45.51 299 P **P** 19 36 58.1 -0.3
SNR=8.8
AAK Ala-Archa 45.51 299 *ce*P **P** 19 36 58.0 -0.5
AAK pmax pmax
comp=Z,11nm,1.1s
AAK Ala-Archa 45.51 299 P **P** 19 36 58.0 -0.5
AAK Ala-Archa 45.51 299 P **P** 19 36 58.0 -0.5
AAK x x 19 37 11.5
AAK pP **pP** **19 37 14.5 0.0**
AAK x x 19 37 18.9
AAK PcP **PcP** **19 38 37.4 +1.0**
UCH Uchtor 45.55 299 P **P** 19 36 59.5 +0.4
SNR=13
GAMB Gambell 45.87 31 P **P** 19 37 01.1 +0.3
baz=256
MTN Manton Dam 45.91 181 P **P** 19 37 02.0 +0.4
comp=Z,50nm,1.0s
MDSI Maura Dua 45.91 220 P **P** 19 37 02.2 +0.5
comp=Z,18nm,1.0s
NIKH Nikolski High 45.96 46 P **P** 19 37 01.7 0.0
baz=269
EKS2 Erkin-Say 46.03 299 P **P** 19 37 01.7 -0.9
SNR=5.6
TNG Tangerang 46.06 216 P **P** 19 37 02.3 -0.5
TNG P **P** **19 37 02.4 -0.4**
ARSB Arslanbob 46.83 298 P **P** 19 37 08.5 -0.4
ARSB IAmb IAmb 19 37 10.0
comp=Z,21nm,1.1s
ARSB Arslanbob 46.83 298 P **P** 19 37 08.5 -0.4
ARSB pmax pmax
comp=Z,21nm,1.1s
UNV Unalaska Valle 47.37 45 P **P** 19 37 13.0 +0.4
baz=270
BVAR Borovoye Array 47.46 314 P **P** 19 37 12.8 -0.6
comp=Z,21nm,0.6s,baz=100,slow=8.9,SNR=66
BVAR pP **pP** **19 37 30.2 +0.7**
comp=Z,6.5nm,0.6s,baz=101,slow=9.1,SNR=5.2
BVAR PcP **PcP** **19 38 42.4 -0.5**
comp=Z,1.7nm,0.5s,baz=101,slow=4.1,SNR=2.0
BVAR LR LR 19 57 51.6
comp=Z,126nm,21.9s,baz=78,slow=37
comp=Z,21nm,0.6s
BORK Borovoye 47.50 314 **P** 19 37 13.2 -0.5
BORK Borovoye 47.50 314 *ce*P **P** 19 37 13.2 -0.5
BORK pmax pmax
comp=Z,25nm,0.6s
BORK Borovoye 47.50 314 P **P** 19 37 13.2 -0.5
BORK sP **sP** **19 37 36.9 -0.2**
BORK PcP **PcP** **19 38 42.5 -0.5**
DZA Taraz 47.77 300 *e*P **P** 19 37 15.6 -0.4
DZA Taraz 47.77 300 *e*P **P** 19 37 15.7 -0.4
M11K Mekoryuk 47.85 36 P **P** 19 37 17.1 +0.9
baz=264
TNA Tin City 47.86 29 P **P** 19 37 17.3 +1.1
baz=258
COEN Coen 48.20 165 P **P** 19 37 20.5 +1.0
comp=Z,9.2nm,1.0s
COEN Coen 48.20 165 P **P** 19 37 20.4 +0.9
KKAR Karatay Array 48.33 300 **P** 19 37 19.6 -0.7
KKAR Karatay Array 48.33 300 P **P** 19 37 19.6 -0.7
NIL Nilore 48.41 288 P **P** 19 37 20.9 -0.2
NIL IAmb IAmb 19 37 22.7
comp=Z,20nm,1.2s
NIL Nilore 48.41 288 P **P** 19 37 20.9 -0.2
NIL pmax pmax
comp=Z,20nm,1.3s
F14K Arctic Creek 48.49 29 P **P** 19 37 22.3 +1.1
baz=260,SNR=8.6
BTK Batken 48.69 296 P **P** 19 37 21.6 -1.5
BTK IAmb IAmb 19 37 23.5
comp=Z,13nm,1.2s
BTK Batken 48.69 296 P **P** 19 37 21.7 -1.5
BTK pmax pmax
comp=Z,13nm,1.2s
K13K Kusilvak Mount 48.74 34 P **P** 19 37 24.4 +1.2
baz=264
ANM Nome 48.75 31 P **P** 19 37 23.7 +0.5
baz=262,SNR=9.8
KNRA Kunumurra 48.82 184 P **P** 19 37 24.4 +0.2
comp=Z,48nm,0.9s
IUG Iuzhnay 48.85 299 *e*P **P** 19 37 23.9 -0.5
IUG pmax pmax
comp=Z,9.0nm,0.7s
IUG Iuzhnay 48.85 299 *e*P **P** 19 37 23.9 -0.5
comp=Z,9.3nm,0.7s
CHM Chimkent 49.13 300 *e*P **P** 19 37 26.1 -0.3
CHM pmax pmax
comp=Z,10.0nm,0.8s
CHM Chimkent 49.13 300 *e*P **P** 19 37 26.1 -0.3
comp=Z,9.7nm,0.8s
FALS False Pass 49.16 44 P **P** 19 37 27.2 +0.8
baz=272
F15K North Star Dit 49.22 29 IAmb IAmb 19 37 46.3
comp=Z,11nm,0.7s
F15K North Star Dit 49.22 29 P **P** 19 37 27.7 +0.9
baz=261,SNR=9.8
M13K Dall Lake 49.26 36 P **P** 19 37 28.2 +1.1
baz=267
J14K Nanvaranak Lak 49.33 33 P **P** 19 37 28.1 +0.4
baz=265
G15K Niukluk 49.37 30 P **P** 19 37 28.0 +0.1
baz=262
C16K Lisburne Hills 49.41 26 P **P** 19 37 28.9 +0.7
baz=258
L14K Kuka Creek 49.64 35 IAmb IAmb 19 37 49.8
comp=Z,8.7nm,0.7s
L14K Kuka Creek 49.64 35 P **P** 19 37 30.5 +0.5
baz=267
M14K Bethel 49.96 36 P **P** 19 37 33.1 +0.6
baz=268
N14K Kuskokwak Cree 50.08 37 P **P** 19 37 33.9 +0.6
baz=269
H16K Elim 50.10 31 P **P** 19 37 33.6 +0.2
baz=264,SNR=9.5
G16K Koyuk River 50.13 30 P **P** 19 37 33.9 +0.3
baz=264
D17K Noatak River 50.15 27 P **P** 19 37 33.7 0.0
baz=261,SNR=8.8
L15K Ungalak Mounta 50.23 35 P **P** 19 37 35.1 +0.6
baz=268
C17K DeLong Mountai 50.24 26 P **P** 19 37 34.1 -0.4
baz=260
K15K Wolf Creek Mou 50.24 34 P **P** 19 37 34.3 -0.2
baz=267
CHGR Chuyangaron 50.26 295 *i* P **P** 19 37 34.2 -1.0

RDOG Red Dog Mine 50.27 26 P **P** 19 37 34.9 +0.2
baz=261
O14K Tigyukauivet M 50.28 38 P **P** 19 37 34.8 -0.1
baz=270
E17K Hotham Inlet 50.54 28 P **P** 19 37 36.4 -0.4
baz=263,SNR=6.4
M15K Kasigluk River 50.59 36 P **P** 19 37 36.2 -1.0
baz=269
F17K Baldwin Pennin 50.69 29 P **P** 19 37 37.6 -0.2
baz=264
I17K Unalakleet 50.71 32 IAmb IAmb 19 37 57.6
comp=Z,8.3nm,0.8s
I17K Unalakleet 50.71 32 P **P** 19 37 38.8 +0.8
baz=266
J16K Anvik River 50.72 33 P **P** 19 37 38.1 0.0
baz=267
SDPT Sand Point 50.83 43 P **P** 19 37 38.6 -0.5
baz=274
G17K Kiwalik Mounta 50.84 30 P **P** 19 37 39.3 +0.3
baz=265
N15K Kwethluk River 50.88 37 P **P** 19 37 40.1 +0.7
baz=270
C18K Utukok River 50.98 26 IAmb IAmb 19 37 59.6
comp=Z,10nm,0.8s
C18K Utukok River 50.98 26 P **P** 19 37 39.9 -0.2
baz=262
O15K Ungalikthiuk R 51.02 38 P **P** 19 37 40.6 +0.1
baz=271
E18K Tukpahlearik C 51.05 27 P **P** 19 37 41.0 +0.4
baz=264,SNR=15
H17K Granite Mounta 51.11 31 P **P** 19 37 40.0 -1.1
baz=266,SNR=5.2
L16K Owhat River 51.19 35 P **P** 19 37 42.1 +0.5
baz=269
A19K Wainwright 51.26 24 P **P** 19 37 42.5 +0.5
baz=261
SHAA Shahritus 51.33 294 IAmb IAmb 19 38 08.9
comp=Z,26nm,0.9s
F18K Selawik 51.34 28 P **P** 19 37 43.3 +0.6
baz=265,SNR=7.3
CHNA Chernabura Isl 51.37 44 P **P** 19 37 43.2 +0.1
baz=275
M16K Timber Creek 51.43 36 P **P** 19 37 43.5 0.0
baz=270
KBL Kabul 51.48 290 **P** 19 37 42.6 -2.0
KBL IAmb IAmb 19 37 44.8
comp=Z,10nm,0.8s
KBL Kabul 51.48 290 P **P** 19 37 42.6 -2.0
KBL pmax pmax
comp=Z,10.0nm,0.9s
KBL Kabul 51.48 290 P **P** 19 37 44.4 -0.2
N16K Nishlik Lake 51.53 36 P **P** 19 37 43.8 -0.5
baz=271
C19K Lookout Ridge 51.62 25 IAmb IAmb 19 38 03.8
comp=Z,7.8nm,0.8s
C19K Lookout Ridge 51.62 25 P **P** 19 37 45.3 +0.5
baz=263,SNR=12
G18K Tagagawik 51.70 29 IAmb IAmb 19 38 05.2
comp=Z,18nm,1.1s
G18K Tagagawik 51.70 29 P **P** 19 37 45.2 -0.2
baz=267
L17K Donlin 51.75 34 P **P** 19 37 46.4 +0.6
baz=270
K17K Iditarod 51.75 33 IAmb IAmb 19 38 05.5
comp=Z,13nm,0.8s
K17K Iditarod 51.75 33 P **P** 19 37 45.6 -0.2
baz=270
H18K Honhosa River 51.78 30 IAmb IAmb 19 38 05.0
comp=Z,8.1nm,0.7s
H18K Honhosa River 51.78 30 P **P** 19 37 46.8 +0.7
baz=268,SNR=5.6
O16K Kokwok River B 51.90 37 IAmb IAmb 19 38 07.1
comp=Z,18nm,1.4s
O16K Kokwok River B 51.90 37 P **P** 19 37 47.4 +0.4
baz=272
P16K Nushagak River 51.97 38 P **P** 19 37 47.9 +0.3
baz=273
NGOA Tingoa Renbel 52.02 144 P **P** 19 37 49.5 +1.1
D19K Kuna River 52.09 26 P **P** 19 37 48.8 +0.5
baz=265
F19K Shaleruckik Mo 52.10 28 P **P** 19 37 49.1 +0.6
baz=267
M17K Holitna River 52.16 35 P **P** 19 37 50.0 +1.0
baz=271
R16K Pilot Point 52.28 40 P **P** 19 37 50.4 +0.5
baz=274
N17K Nushagak Hills 52.31 36 IAmb IAmb 19 38 09.6
comp=Z,9.3nm,0.8s
N17K Nushagak Hills 52.31 36 P **P** 19 37 51.4 +1.3
baz=272
G19K Purcell Mounta 52.35 29 P **P** 19 37 50.9 +0.6
baz=268
E19K Redstone River 52.35 27 IAmb IAmb 19 38 10.0
comp=Z,19nm,0.9s
E19K Redstone River 52.35 27 P **P** 19 37 51.3 +1.0
baz=267
O17K Koliganek Bris 52.40 37 P **P** 19 37 51.6 +0.9
baz=273
GCSA Galena City Sc 52.40 31 P **P** 19 37 51.4 +0.7
baz=269
J18K Innoko River 52.47 32 P **P** 19 37 51.6 +0.4
baz=270
L18K Granite Mounta 52.50 34 P **P** 19 37 52.1 +0.7
baz=271
D20K Etivluk River 52.66 26 P **P** 19 37 53.3 +0.8
baz=266
P17K Kvichak River 52.76 38 P **P** 19 37 54.6 +1.2
baz=274
E20K Nigu River 52.79 26 P **P** 19 37 54.0 +0.4
baz=267
WB0 Warramunga Arr 52.84 177 IAmb IAmb 19 37 55.1
comp=Z,8.5nm,0.7s
SVE Sverdlovsk 52.86 319 *e*P **P** 19 37 53.8 -0.4
SVE pmax pmax
comp=Z,20nm,0.9s
A21K Barrow 52.86 23 P **P** 19 37 55.1 +1.1
baz=264,SNR=8.0
F20K Avaraart Lake 52.92 28 P **P** 19 37 55.6 +1.2
baz=269
M18K Stony River 52.94 35 P **P** 19 37 56.0 +1.3
baz=273
N18K Kilae Creek 52.95 36 P **P** 19 37 55.6 +0.8
baz=273
J19K Poorman 52.95 32 IAmb IAmb 19 38 13.6
comp=Z,12nm,0.8s
J19K Poorman 52.95 32 P **P** 19 37 56.1 +1.3
baz=271,SNR=8.5
WRAB Tennant Creek 53.00 177 P **P** 19 37 55.2 -0.3
WRAB Tennant Creek 53.00 177 P **P** 19 37 56.0 +0.4
WRAB pP **pP** **19 38 11.5 -0.4**
WRAB sP **sP** **19 38 19.0 0.0**
WRA Warramunga Arr 53.01 177 P **P** 19 37 56.0 +0.3
comp=Z,6.0nm,0.6s,baz=353,slow=8.2,SNR=87
WRA pP **pP** **19 38 13.2 +1.2**
comp=Z,5.0nm,0.6s,baz=354,slow=7.8,SNR=6.7
WRA PcP **PcP** **19 39 04.6 +1.0**
comp=Z,5.2nm,1.0s,baz=350,slow=4.2,SNR=5.2
comp=Z,6.0nm,0.6s
WRA Warramunga Arr 53.01 177 P **P** 19 37 53.9 -1.7
WR8 Warramunga Arr 53.03 177 IAmb IAmb 19 37 56.7
comp=Z,13nm,0.8s
Q17K Contact Creek 53.12 39 P **P** 19 37 56.8 +0.6
baz=275
H20K Anotleneega Mo 53.25 30 P **P** 19 37 57.9 +1.0
baz=270
C21K Knifeblade Rid 53.34 25 P **P** 19 37 58.6 +1.0
baz=268,SNR=13
O18K Koktuh Hills 53.34 37 P **P** 19 37 58.6 +0.9
baz=274
L19K White Mountain 53.36 34 P **P** 19 37 58.7 +0.8
baz=273
P18K Big Mountain, 53.37 38 P **P** 19 37 58.7 +0.8
baz=275
B21K Ikpikpuk River 53.42 25 P **P** 19 37 59.5 +1.4
baz=268,SNR=16
CHIR Chirikof Islan 53.53 42 P **P** 19 37 59.4 +0.4
baz=277
Q18K Katmai Hardscr 53.55 38 P **P** 19 37 58.9 -0.5
baz=276
M19K Big River Lodg 53.60 34 P **P** 19 37 59.3 -0.2
baz=274
E21K Killik River 53.62 26 P **P** 19 37 59.3 -0.3
baz=269
N19K Bonanza Creek 53.63 36 P **P** 19 37 59.1 -0.8
baz=274
K20K Telida 53.66 33 P **P** 19 37 59.8 -0.2
baz=273,SNR=9.6
F21K Alatna River 53.80 28 IAmb IAmb 19 38 19.9

comp=Z,10nm,0.9s
F21K Alatna River 53.80 28 P **P** **19 38 00.2 -0.7**
baz=270
G21K Allakaket 53.80 29 P **P** **19 38 01.5 +0.5**
baz=271
B22K Teshekpuk Lake 53.85 24 P **P** **19 38 02.1 +0.9**
baz=268
PALK Pallekele 53.98 253 P **P** **19 38 03.2 +0.1**
QIS Mount Isa 54.06 171 P **P** **19 38 04.2 +0.9**
comp=Z,47nm,1.0s
QIS Mount Isa 54.06 171 P **P** **19 38 03.9 +0.6**
D22K Ayikyak River 54.09 26 P **P** **19 38 03.5 +0.4**
baz=270,SNR=17
H21K Melozitna Rive 54.11 30 P **P** **19 38 03.4 +0.2**
baz=272
ARTI Arti 54.15 319 LR LR 20 03 49.6
comp=Z,79nm,18.1s,baz=141,slow=39
ARTI Arti 54.15 319 IAmb IAmb 19 38 03.5
comp=Z,15nm,0.8s
ARTI Arti 54.15 319 *c i* P **P** **19 38 02.7 -0.9**
ARTI *PP **pP** **19 38 19.7 -0.3**
ARTI S **S** **19 45 35.6 0.0**
ARTI pmax pmax
comp=Z,13nm,0.8s
ARTI Arti 54.15 319 P **P** **19 38 02.7 -0.9**
ARTI pP **pP** **19 38 18.4 -1.7**
M20K Styx River 54.19 34 P **P** **19 38 04.2 +0.3**
baz=275
Q19K Cape Douglas, 54.23 38 P **P** **19 38 04.2 0.0**
baz=276
SII Sitkinak Islan 54.23 41 P **P** **19 38 05.3 +1.1**
SII Sitkinak Islan 54.23 41 P **P** **19 38 04.1 -0.1**
baz=278
P19K Oil Pt 54.36 37 P **P** **19 38 05.2 +0.1**
baz=276
AB31 Akbulak array 54.41 310 IAmb IAmb 19 38 05.8
comp=Z,14nm,0.8s
ABKAR Akbulak array 54.41 310 **P** **19 38 04.3 -1.3**
E22K Anaktuvuk Pass 54.42 27 IAmb IAmb 19 38 24.4
comp=Z,9.1nm,0.8s
E22K Anaktuvuk Pass 54.42 27 P **P** **19 38 05.3 -0.2**
baz=271,SNR=12
I21K Tanana 54.48 30 IAmb IAmb 19 38 26.3
comp=Z,20nm,1.0s
I21K Tanana 54.48 30 P **P** **19 38 06.4 +0.6**
baz=273
PPLA Purkeypile 54.55 33 IAmb IAmb 19 38 26.4
comp=Z,10nm,0.7s
PPLA Purkeypile 54.55 33 P **P** **19 38 06.6 0.0**
baz=275
OHAK Old Harbor 54.63 40 P **P** **19 38 08.6 +1.6**
OHAK Old Harbor 54.63 40 P **P** **19 38 06.8 -0.2**
baz=278
H22K Ishtalitna Cre 54.68 29 IAmb IAmb 19 38 27.4
comp=Z,10nm,0.9s
H22K Ishtalitna Cre 54.68 29 P **P** **19 38 07.6 +0.2**
baz=273,SNR=6.2
N20K Mount Spurr 54.70 35 P **P** **19 38 07.8 +0.2**
baz=276
SPCR Spurr Chakacha 54.70 35 P **P** **19 38 07.7 0.0**
baz=276
C23K Itkillik River 54.81 24 IAmb IAmb 19 38 11.3
comp=Z,19nm,1.3s
C23K Itkillik River 54.81 24 P **P** **19 38 08.3 0.0**
baz=271
D23K Nanushuk River 54.81 26 IAmb IAmb 19 38 11.8
comp=Z,21nm,1.4s
D23K Nanushuk River 54.81 26 P **P** **19 38 08.6 +0.3**
baz=272
CTA Charters Tower 54.82 164 P **P** **19 38 09.0 +0.2**
CTAO Charters Tower 54.82 164 P **P** **19 38 09.0 +0.2**
KDAK Kodiak Island 54.92 39 LR LR 20 01 46.6
comp=Z,87nm,21.7s,baz=244,slow=36
KDAK Kodiak Island 54.92 39 P **P** **19 38 08.7 -0.5**
baz=278
SKT Skwentna 54.94 34 P **P** **19 38 08.6 -0.7**
baz=276
BPAW Bear Paw Mtn. 54.98 32 P **P** **19 38 09.7 +0.1**
baz=275
MLY Manley 55.01 30 **P** **19 38 10.8 +1.0**
MLY IAmb IAmb 19 38 29.6
comp=Z,12nm,0.8s
MLY Manley 55.01 30 P **P** **19 38 09.9 +0.1**
baz=275,SNR=8.5
KTH Kantishna Hill 55.06 32 IAmb IAmb 19 38 29.4
comp=Z,14nm,0.8s
COLD Coldfoot 55.07 28 IAmb IAmb 19 38 30.1
comp=Z,9.0nm,1.0s
COLD Coldfoot 55.07 28 P **P** **19 38 10.1 0.0**
baz=274,SNR=5.3
HOM Homer 55.16 37 P **P** **19 38 10.6 -0.2**
baz=278
G23K Bananza Creek 55.18 28 IAmb IAmb 19 38 30.3
comp=Z,7.7nm,0.8s
G23K Bananza Creek 55.18 28 P **P** **19 38 10.9 -0.1**
baz=274
TOLK Toolik Lake Re 55.23 26 P **P** **19 38 09.9 -1.4**
baz=273
L22K Petersville 55.23 33 IAmb IAmb 19 38 30.3
comp=Z,15nm,0.7s
E23K Chandalar 55.25 27 IAmb IAmb 19 38 31.1
comp=Z,17nm,0.8s
E23K Chandalar 55.25 27 P **P** **19 38 11.6 +0.1**
baz=274
CAPN Captain Cook N 55.26 36 P **P** **19 38 11.9 +0.4**
baz=277
TRF Thorofare Moun 55.35 32 P **P** **19 38 12.0 -0.4**
baz=276
AKTO Aktyubinsk 55.39 312 LR LR 20 02 33.5
comp=Z,108nm,18.1s,baz=58,slow=37
MBWA Marble Bar 55.42 194 P **P** **19 38 13.5 +0.4**
comp=Z,54nm,0.8s
MBWA Marble Bar 55.42 194 P **P** **19 38 12.9 -0.3**
MBWA Marble Bar 55.42 194 **P** **19 38 11.6 -1.5**
MBWA Marble Bar 55.42 194 P **P** **19 38 13.5 +0.4**
MBWA Marble Bar 55.42 194 P **P** **19 38 13.2 0.0**
MBWA PcP **PcP** **19 39 13.3 +0.6**
D24K Happy Valley 55.47 25 P **P** **19 38 14.0 +1.0**
baz=273
CUT Chulitna 55.48 34 P **P** **19 38 13.8 +0.7**
baz=277
C24K Franklin Bluff 55.48 25 P **P** **19 38 14.1 +1.0**
baz=273
I23K Minto, Yukon-K 55.58 30 P **P** **19 38 14.6 +0.8**
baz=276
BRSE Bradley Lake S 55.60 37 P **P** **19 38 14.3 +0.2**
baz=278
M22K Willow 55.63 34 P **P** **19 38 13.7 -0.5**
baz=277
E24K Your Creek 55.67 27 IAmb IAmb 19 38 34.0
comp=Z,14nm,0.7s
E24K Your Creek 55.67 27 P **P** **19 38 13.9 -0.6**
baz=274,SNR=14
NEA2 Nenana 55.76 31 P **P** **19 38 15.1 -0.1**
baz=276,SNR=12
PSAC1 Pilbara Seismi 55.77 194 P **P** **19 38 16.1 +0.4**
comp=Z,76nm,1.0s
PSAC2 Pilbara Seismi 55.78 194 P **P** **19 38 16.1 +0.4**
comp=Z,79nm,0.9s
PSA00 Pilbara Seismi 55.80 194 P **P** **19 38 16.3 +0.4**
comp=Z,66nm,1.0s
PSA00 Pilbara Seismi 55.80 194 P **P** **19 38 15.5 -0.4**
PSA00 Pilbara Seismi 55.80 194 **P** **19 38 14.7 -1.2**
PSA00 Pilbara Seismi 55.80 194 IAmb IAmb 19 38 16.9
comp=Z,46nm,0.7s
PSAB3 Pilbara Seismi 55.82 194 P **P** **19 38 15.7 -0.3**
comp=Z,74nm,0.8s
RC01 Rabbit Creek A 55.90 35 P **P** **19 38 16.5 +0.3**
baz=278
MCK McKinley 55.92 32 **P** **19 38 17.4 +1.1**
MCK IAmb IAmb 19 38 35.2
comp=Z,9.3nm,0.8s
MCK McKinley 55.92 32 P **P** **19 38 17.5 +1.1**
MCK pmax pmax
comp=Z,9.0nm,0.8s
MCK McKinley 55.92 32 P **P** **19 38 16.4 +0.1**
baz=277
O22K Cooper Landing 55.99 36 P **P** **19 38 17.2 +0.4**
baz=279
PMR Palmer 56.12 34 P **P** **19 38 17.7 +0.1**
baz=278
H24K Noodor Dome 56.12 29 IAmb IAmb 19 38 37.8
comp=Z,14nm,0.9s
H24K Noodor Dome 56.12 29 P **P** **19 38 18.2 +0.4**
baz=276,SNR=6.0
SEW Seward 56.19 36 P **P** **19 38 18.7 +0.5**
baz=279
G24K Hadweenzic Riv 56.19 28 IAmb IAmb 19 38 38.1
comp=Z,15nm,0.9s
G24K Hadweenzic Riv 56.19 28 P **P** **19 38 18.3 +0.2**
baz=276,SNR=7.2
WRH Wood River Hil 56.20 31 IAmb IAmb 19 38 38.5
comp=Z,8.6nm,0.8s
WAT1 Susitna Watana 56.21 33 P **P** **19 38 18.9 +0.4**
baz=278
COLA College 56.25 30 P **P** **19 38 19.1 +0.5**
baz=277
CCB Clear Creek Bu 56.30 31 **P** **19 38 20.2 +1.3**
CCB IAmb IAmb 19 38 39.9
comp=Z,8.6nm,0.8s
D25K Kavik River 56.33 25 IAmb IAmb 19 38 38.2
comp=Z,14nm,0.8s
D25K Kavik River 56.33 25 P **P** **19 38 19.3 +0.1**
baz=276
POKR Poker Plat Res 56.39 30 P **P** **19 38 19.9 +0.2**
baz=277
SML Sawmill 56.46 34 P **P** **19 38 20.6 +0.4**
baz=279
KNK Knik Glacier 56.46 35 P **P** **19 38 20.6 +0.4**
baz=279
WAT6 Susitna Watana 56.62 33 P **P** **19 38 21.3 -0.2**
baz=279
IL31 56.67 30 IAmb IAmb 19 38 41.2
comp=Z,8.8nm,0.8s
ILAR Eielson Array 56.67 30 P **P** **19 38 22.6 +1.0**
comp=Z,3.7nm,0.7s,baz=263,slow=6.2,SNR=54
ILAR pP **pP** **19 38 38.9 +0.8**
comp=Z,6.9nm,0.7s,baz=289,slow=9.4,SNR=22
ILAR PcP **PcP** **19 39 17.5 +0.4**
comp=Z,2.0nm,0.8s,baz=281,slow=4.6,SNR=4.6
ILAR LR LR 20 06 39.2
comp=Z,47nm,18.0s,baz=279,slow=40
comp=Z,3.7nm,0.7s
ILAR Eielson Array 56.67 30 P **P** **19 38 22.4 +0.7**
ASAR Alice Springs 56.70 178 P **P** **19 38 22.9 +0.6**
comp=Z,5.6nm,0.6s,baz=9.7,slow=13,SNR=136
ASAR pP **pP** **19 38 40.4 +1.6**
comp=Z,5.3nm,0.9s,baz=3.5,slow=6.5,SNR=6.3
ASAR sP **sP** **19 38 48.6 +2.8**
comp=Z,5.1nm,0.8s,baz=358,slow=7.9,SNR=5.9
ASAR PcP **PcP** **19 39 19.1 +1.3**
comp=Z,3.9nm,0.9s,baz=4.1,slow=4.0,SNR=5.7
ASAR LR LR 20 03 48.0
comp=Z,34nm,20.2s,baz=88,slow=37
ASAR PKP2bc **P'P'bc** **20 08 26.8 +3.6**
comp=Z,0.6nm,0.7s,baz=180,slow=2.2,SNR=6.0
comp=Z,5.6nm,0.6s
ASAR Alice Springs 56.70 178 **P** **19 38 22.5 +0.2**
HDA Harding Lake 56.70 31 P **P** **19 38 21.8 0.0**
baz=278,SNR=8.5
DHY Denali Highway 56.71 33 IAmb IAmb 19 38 41.5
comp=Z,10.0nm,0.7s
DHY Denali Highway 56.71 33 P **P** **19 38 21.8 -0.3**
baz=279
M23K Glacier View 56.75 34 P **P** **19 38 21.1 -1.2**
baz=279
E25K Arctic Village 56.75 26 P **P** **19 38 23.0 +0.8**
baz=277
C26K Camden Bay 56.78 24 P **P** **19 38 22.4 +0.1**
baz=276,SNR=10.0
F25K Christian Rive 56.79 27 IAmb IAmb 19 38 42.5
comp=Z,8.4nm,0.8s
F25K Christian Rive 56.79 27 P **P** **19 38 22.0 -0.5**
baz=277,SNR=13
SCM Sheep Creek Mo 56.93 34 P **P** **19 38 24.0 +0.5**
baz=280
PRP Porcupine Dome 57.13 29 IAmb IAmb 19 38 44.5
comp=Z,12nm,0.8s
PRP Porcupine Dome 57.13 29 P **P** **19 38 25.5 +0.4**
baz=279,SNR=8.8
GLI Glacier Island 57.20 35 P **P** **19 38 25.9 +0.4**
baz=280
P23K Montague Islan 57.22 36 P **P** **19 38 25.1 -0.5**
baz=281
BMAR Burnt Mountain 57.22 27 **P** **19 38 26.3 +0.7**
C27K Jago River 57.23 24 IAmb IAmb 19 38 45.0
comp=Z,12nm,0.8s
C27K Jago River 57.23 24 P **P** **19 38 25.8 +0.3**
baz=276
K24K Donnelly Dome 57.30 32 P **P** **19 38 26.6 +0.5**
baz=280
J25K Salcha River, 57.34 31 P **P** **19 38 25.9 -0.5**
baz=280
F26K Sheenjek River 57.34 27 IAmb IAmb 19 38 46.2
comp=Z,10.0nm,0.7s
F26K Sheenjek River 57.34 27 P **P** **19 38 26.4 0.0**
baz=279,SNR=11
M24K Tolsona, Glenn 57.42 34 P **P** **19 38 26.8 -0.2**
baz=280
PAX Paxson 57.58 32 P **P** **19 38 29.3 +1.1**
baz=280
G26K Porcupine Rive 57.60 28 IAmb IAmb 19 38 48.4
comp=Z,14nm,1.1s
G26K Porcupine Rive 57.60 28 P **P** **19 38 28.4 +0.3**
baz=279,SNR=7.2
KLU Klutina 57.65 34 P **P** **19 38 28.5 -0.1**
baz=281
RIDG Independent Ri 57.72 31 IAmb IAmb 19 38 47.6
comp=Z,5.8nm,0.5s
HARP HAARP 57.83 33 P **P** **19 38 29.8 0.0**
baz=281
Q23K Middleton Isla 57.85 37 P **P** **19 38 31.2 +1.2**
baz=282
SCRK Sand Creek 58.05 31 P **P** **19 38 32.0 +0.5**
baz=281,SNR=12
DOT Dot Lake 58.08 32 IAmb IAmb 19 38 49.7
comp=Z,9.4nm,0.8s
WRKA Warakurna 58.14 184 P **P** **19 38 33.1 +0.7**
comp=Z,9.0nm,0.8s
I26K Coal Creek Min 58.14 30 IAmb IAmb 19 38 53.2
comp=Z,8.9nm,0.8s
I26K Coal Creek Min 58.14 30 P **P** **19 38 31.7 -0.3**
baz=281
E27K Coleen River 58.21 26 P **P** **19 38 31.6 -0.9**
baz=281,SNR=6.9
D27M Malcolm River 58.25 25 IAmb IAmb 19 38 52.1
comp=Z,9.8nm,0.7s
D27M Malcolm River 58.25 25 P **P** **19 38 31.7 -1.0**
baz=280,SNR=16
N25K Chitina, Valde 58.25 34 IAmb IAmb 19 39 00.7
comp=Z,12nm,0.8s
N25K Chitina, Valde 58.25 34 P **P** **19 38 31.7 -1.2**
baz=282
BMRM Bremner River 58.38 35 P **P** **19 38 32.0 -1.7**
baz=282
G27K Doyon Strip 58.45 28 P **P** **19 38 33.9 -0.3**
baz=281
KIRV Kirov 58.52 322 LR LR 20 06 56.6
comp=Z,131nm,19.3s,baz=76,slow=39
KIRV Kirov 58.52 322 *c e* P **P** **19 38 34.2 -0.4**
L26K Log Cabin Wild 58.52 32 IAmb IAmb 19 38 54.2
comp=Z,10.0nm,0.8s
L26K Log Cabin Wild 58.52 32 P **P** **19 38 33.0 -1.7**
baz=282,SNR=5.1
H27K Steamboat Moun 58.62 28 IAmb IAmb 19 38 56.2
comp=Z,20nm,1.4s
H27K Steamboat Moun 58.62 28 P **P** **19 38 34.3 -1.0**
baz=282,SNR=6.3
KAIM Kayak Island 58.70 36 P **P** **19 38 35.2 -0.7**
baz=283
I27K Kandik River 58.72 29 P **P** **19 38 35.2 -0.8**
baz=282,SNR=8.6
M26K Nabesna, AK 58.81 33 P **P** **19 38 36.6 -0.1**
baz=283,SNR=8.2
E28M Babbage River 58.88 25 IAmb IAmb 19 38 56.5
comp=Z,6.7nm,0.8s
E28M Babbage River 58.88 25 P **P** **19 38 37.5 +0.5**
baz=282
F28M Old Crow 58.97 27 IAmb IAmb 19 38 57.9
comp=Z,6.9nm,0.8s
F28M Old Crow 58.97 27 P **P** **19 38 37.7 +0.1**
baz=282,SNR=13
D28M Stokes Point 59.01 24 P **P** **19 38 38.5 +0.6**
baz=282
MCARA McCarthy VSAT 59.03 34 P **P** **19 38 39.3 +1.1**
baz=283
CRQE Cirque 59.15 35 P **P** **19 38 39.4 +0.3**
baz=284
L27K Beaver Creek, 59.19 32 IAmb IAmb 19 38 59.1
comp=Z,14nm,0.9s
L27K Beaver Creek, 59.19 32 P **P** **19 38 39.8 +0.5**
baz=283,SNR=5.7
BCAR Beaver Creek A 59.21 32 P **P** **19 38 40.4 +0.9**
BGLC Bering Glacier 59.21 35 P **P** **19 38 40.3 +1.0**
baz=284
M27K Edge Creek, AK 59.33 33 IAmb IAmb 19 38 59.9
comp=Z,12nm,0.7s
M27K Edge Creek, AK 59.33 33 P **P** **19 38 39.6 -0.8**
baz=284
I28M Miner Creek 59.43 29 P **P** **19 38 42.0 +1.0**
baz=284,SNR=12
E29M Blow River 59.52 25 IAmb IAmb 19 39 01.1
comp=Z,9.7nm,0.8s
E29M Blow River 59.52 25 P **P** **19 38 42.3 +0.9**
baz=284,SNR=12
BVCY Beaver Creek 59.78 33 P **P** **19 38 43.2 -0.1**
baz=285
CTG Chitna Glacier 59.93 34 P **P** **19 38 44.9 +0.3**
baz=285
DAWY Dawson 60.00 31 P **P** **19 38 45.3 +0.5**
baz=285
I29M Ogilvie Camp, 60.11 29 P **P** **19 38 46.2 +0.6**
baz=285,SNR=6.2
YUK3 Moose Creek 60.12 33 P **P** **19 38 45.8 -0.2**
baz=285
J29N Klondike Camp 60.39 30 IAmb IAmb 19 39 07.0
comp=Z,9.7nm,0.8s
J29N Klondike Camp 60.39 30 P **P** **19 38 47.9 +0.3**
baz=286,SNR=8.1
EPYK Eagle Plains 60.47 28 P **P** **19 38 48.8 +0.7**
baz=286,SNR=17
F30M Barrier River 60.48 26 P **P** **19 38 48.2 +0.2**
baz=286,SNR=12
G30M tAoh Zraii Nji 60.50 27 P **P** **19 38 49.2 +1.0**
baz=286
O28M Mount Upton 60.52 34 P **P** **19 38 48.9 +0.1**
baz=286
YUK8 Steele Glacier 60.58 34 P **P** **19 38 49.8 +0.7**
baz=286
PINM Pinnacle 60.68 35 P **P** **19 38 50.1 +0.5**
baz=286
L29M L29M 60.80 31 IAmb IAmb 19 39 10.3
comp=Z,11nm,0.8s
L29M L29M 60.80 31 P **P** **19 38 52.0 +1.7**
baz=286,SNR=6.1
M29M Somme Creek 60.84 32 IAmb IAmb 19 39 10.9
comp=Z,7.2nm,0.7s
M29M Somme Creek 60.84 32 P **P** **19 38 52.3 +1.6**
baz=287
K29M Barlow Dome 60.85 30 IAmb IAmb 19 39 10.2
comp=Z,7.9nm,0.8s
K29M Barlow Dome 60.85 30 P **P** **19 38 52.3 +1.5**
baz=287,SNR=6.4
I30M Mount Dempster 60.93 29 P **P** **19 38 52.6 +1.3**
baz=287,SNR=15
MEEK Meekatharra 60.97 194 P **P** **19 38 51.6 -0.2**
comp=Z,29nm,0.8s
MEEK Meekatharra 60.97 194 P **P** **19 38 51.5 -0.3**
YUK4 Talbot Arm 61.08 33 P **P** **19 38 52.4 0.0**
baz=287
INK Inuvik 61.10 25 LR LR 20 08 09.4
comp=Z,28nm,19.3s,baz=291,slow=39
INK Inuvik 61.10 25 IAmb IAmb 19 39 10.7
comp=Z,7.6nm,0.7s
INK Inuvik 61.10 25 P **P** **19 38 53.2 +1.0**
baz=288,SNR=9.7
J30M Hart River 61.14 30 P **P** **19 38 53.4 +0.7**
baz=287
BELG Belogornoye 61.17 316 LR LR 20 07 27.2
comp=Z,239nm,18.1s,baz=86,slow=38
BELG Belogornoye 61.17 316 *i* P **P** **19 38 51.7 -1.2**
BELG pmax pmax
comp=Z,3.0nm,0.9s
G31M Satah River 61.25 27 IAmb IAmb 19 39 11.9
comp=Z,10.0nm,0.8s
G31M Satah River 61.25 27 P **P** **19 38 54.0 +0.8**
baz=288
F31M Tsiigehtchic 61.29 26 IAmb IAmb 19 39 11.8
comp=Z,7.0nm,0.8s
F31M Tsiigehtchic 61.29 26 P **P** **19 38 54.3 +0.8**
baz=288,SNR=6.1
INKA Innaminka 61.29 171 **P** **19 38 55.3 +1.4**
INKA IAmb IAmb 19 38 56.1
comp=Z,5.8nm,0.8s
YUK6 Outpost Mounta 61.33 34 P **P** **19 38 54.6 +0.4**
baz=287
O29M Mount Kennedy 61.42 35 P **P** **19 38 55.4 +0.7**
baz=288
M30M Minto, Yukon 61.55 32 P **P** **19 38 56.6 +1.2**
baz=288
H31M Peel River 61.56 28 P **P** **19 38 57.0 +1.5**
baz=288,SNR=7.8
HYT Haines Junctio 61.77 34 P **P** **19 38 58.4 +1.4**
baz=288,SNR=6.1
P30M Million Dollar 62.24 34 P **P** **19 39 01.5 +1.3**
baz=289
N31M Braeburn, Yuko 62.34 33 P **P** **19 39 01.9 +1.2**
baz=289
O30N Mendenhall 62.44 34 P **P** **19 39 02.5 +1.0**
baz=289
A36M Sachs Harbour 62.48 20 P **P** **19 39 02.5 +1.1**
baz=293,SNR=56
SPA0 Spitsbergen Ar 62.60 348 *e* P **P** **19 39 02.5 +0.3**
SPITS Spitsbergen Ar 62.60 348 P **P** **19 39 02.0 -0.2**
comp=Z,3.4nm,0.6s,baz=75,slow=7.9,SNR=11
SPITS LR LR 20 08 16.9
comp=Z,71nm,19.4s,baz=22,slow=38
comp=Z,3.4nm,0.6s
SPITS Spitsbergen Ar 62.60 348 P **P** **19 39 02.0 -0.2**
KLMR Klimovskoe 62.68 327 *e* P **P** **19 39 00.1 -2.8**
KLMR *e* *PP **pP** **19 39 20.7 +1.0**
KLMR pmax pmax
comp=Z,13nm,0.8s
M31M Drury Creek, Y 62.73 32 P **P** **19 39 03.7 +0.5**
baz=290
WHY Whitehorse 63.04 33 P **P** **19 39 06.5 +1.0**
baz=290
N32M Quiet Lake 63.68 33 IAmb IAmb 19 39 31.1
comp=Z,7.6nm,0.8s
N32M Quiet Lake 63.68 33 P **P** **19 39 10.2 +0.5**
baz=292
MORW Morawa 63.87 196 P **P** **19 39 11.2 +0.1**
comp=Z,26nm,1.1s
MORW Morawa 63.87 196 P **P** **19 39 10.7 -0.4**
MORW Morawa 63.87 196 P **P** **19 39 09.4 -1.6**
C36M Paulatuk 63.92 23 P **P** **19 39 11.6 +0.7**
baz=295,SNR=31
MMPY Sheldon Lake, 63.93 31 P **P** **19 39 11.6 +0.3**
baz=292
P32M Atlin 63.97 34 P **P** **19 39 11.9 +0.4**
baz=292
R32K Eaglecrest 64.07 36 P **P** **19 39 11.8 -0.4**
baz=292
SIT Sitka 64.11 37 P **P** **19 39 12.8 +0.4**
baz=292
DZM Mont Dzumac 64.13 144 LR LR 20 04 38.5
comp=Z,28nm,19.8s,baz=346,slow=34
P33M Teslin, Yukon 64.15 34 IAmb IAmb 19 39 34.0
comp=Z,13nm,0.9s
P33M Teslin, Yukon 64.15 34 P **P** **19 39 13.0 +0.2**
baz=292,SNR=7.4
NOR Nord 64.18 355 *i* P **P** **19 39 11.3 -1.2**
NOR IAmb IAmb 19 39 13.3
comp=Z,4.0nm,0.9s
ALE Alert 64.19 2 P **P** **19 39 14.0 +1.4**
ALE pP **pP** **19 39 30.5 +1.1**
ALE sP **sP** **19 39 37.6 +1.2**
S32K Killisnoo 64.34 37 P **P** **19 39 14.5 +0.6**
baz=292
ARA0 ARCESS Array S 64.65 338 *e* P **P** **19 39 15.6 -0.2**
ARCES ARCESS Array B 64.65 338 P **P** **19 39 15.0 -0.8**
comp=Z,6.3nm,0.7s,baz=64,slow=8.5,SNR=17
ARCES pP **pP** **19 39 32.4 -0.2**
comp=Z,2.0nm,0.6s,baz=61,slow=9.9,SNR=1.7
ARCES LR LR 20 12 18.7
comp=Z,85nm,19.0s,baz=68,slow=40
comp=Z,6.3nm,0.7s
Q32M Nakina River 64.89 35 P **P** **19 39 18.1 +0.3**
baz=293
BANOM Banah 64.92 286 P **P** **19 39 18.3 0.0**
AKT Akhty 64.94 304 *i* P **P** **19 39 17.5 -0.8**
AKT *e* *PP **pP** **19 39 32.1 -3.1**
AKT *e* 19 41 41.3
AKT pmax pmax
comp=Z,43nm,0.8s
SHME Shamm 64.99 286 P **P** **19 39 18.9 +0.2**
VRH Novokhopyorsk 65.02 316 *e* P **P** **19 39 16.6 -1.8**
VRH pmax pmax
comp=Z,10.0nm,0.6s
KMBL Kambalda 65.05 190 P **P** **19 39 18.9 +0.2**
comp=Z,15nm,1.1s

MDH Madha 65.20 285 P P 19 39 22.5 +2.4
BLDU Ballidu 65.21 195 P P 19 39 19.4 -0.4
R33M Jennings River 65.33 34 P P 19 39 20.8 +0.3
baz=294
STKA Stephens Creek 65.47 171 P P 19 39 22.9 +1.4
comp=Z,89nm,1.1s
STKA Stephens Creek 65.47 171 P P 19 39 22.8 +1.3
comp=Z,9.4nm,0.6s,baz=348,slow=6.8,SNR=20
STKA LR LR 20 06 18.4
comp=Z,26nm,21.4s,baz=26,slow=34
comp=Z,9.4nm,0.6s
STKA Stephens Creek 65.47 171 P P 19 39 22.5 +1.0
STKA Stephens Creek 65.47 171 P P 19 39 22.1 +0.6
STKA Stephens Creek 65.47 171 P P 19 39 22.1 +0.6
STKA pmax pmax
comp=Z,95nm,1.2s
SOHO SOHO 65.53 284 P P 19 39 21.6 -0.7
U33K Whale Pass 65.60 38 P P 19 39 22.9 +0.8
baz=294
KTK1 Kautokeino 65.61 338 eP P 19 39 21.9 -0.1
TGTN Hyland Airport 65.66 31 P P 19 39 23.2 +0.7
baz=295,SNR=11
ASHO Ashiyiah 65.67 284 P P 19 39 22.7 -0.5
CMSA Cobar Meteorol 65.79 167 P P 19 39 25.9 +2.3
comp=Z,12nm,1.6s
CMSA Cobar Meteorol 65.79 167 P P 19 39 25.4 +1.9
CRAG Craig 65.86 38 P P 19 39 24.9 +1.1
baz=294
S34M Telegraph Cree 65.86 36 P P 19 39 25.0 +1.2
baz=294
BBOO Buckleboo 65.89 176 P P 19 39 25.0 +0.9
ARQ Araqi 65.91 283 P P 19 39 24.6 -0.1
KLBR Kellerberrin 65.95 193 P P 19 39 24.9 +0.4
comp=Z,55nm,0.9s
KLBR Kellerberrin 65.95 193 P P 19 39 24.7 +0.1
WTLY Watson Lake, Y 66.03 33 P P 19 39 26.0 +1.1
baz=295
LPSR Galich'ya Gora 66.06 318 eP P 19 39 22.9 -2.2
LPSR pmax pmax
comp=Z,20nm,1.3s
DLBC Dease Lake 66.17 35 P P 19 39 26.9 +0.9
baz=295
ALNE Al Ain 66.20 284 P P 19 39 26.3 -0.3
SNR=5.5
VORR Voronezh 66.28 317 eP P 19 39 24.3 -2.3
VORR pmax pmax
comp=Z,10.0nm,0.5s
OBN Obninsk 66.30 321 ⇓ iP P 19 39 25.8 -0.8
OBN i *PP pP 19 39 42.7 -0.8
OBN e*SP sP 19 39 49.6 -1.0
OBN e 19 39 57.0
OBN S S 19 48 16.0 +4.8
OBN *SS sS 19 48 42.0 +2.3
OBN pmax pmax
comp=Z,41nm,2.5s
OBN MLR MLR
comp=Z,107nm,17.0s
VSR Storozhevoye 66.49 317 eP P 19 39 26.1 -1.8
VSR pmax pmax
comp=Z,10.0nm,0.7s
GOF Gofitskoye 66.65 309 ceP P 19 39 29.1 0.0
V35K Ketchikan 66.70 38 P P 19 39 29.9 +0.7
baz=295
HTT Hallett 66.71 174 P P 19 39 31.1 +1.6
comp=Z,8.2nm,1.3s
HTT Hallett 66.71 174 P P 19 39 30.6 +1.1
MSVF Nonsavu 67.14 132 LR LR 20 07 36.8
comp=Z,28nm,18.3s,baz=54,slow=35
KBZ Khabaz 67.29 308 P P 19 39 32.5 -0.6
comp=Z,16nm,0.9s,baz=87,slow=2.4,SNR=32
KBZ LR LR 20 12 20.9
comp=Z,109nm,18.8s,baz=56,slow=39
comp=Z,16nm,0.9s
KBZ Khabaz 67.29 308 ceP P 19 39 32.8 -0.3
KBZ pmax pmax
comp=Z,18nm,0.9s
KIV Kislovodsk 67.34 309 eP P 19 39 32.8 -0.8
KIV pmax pmax
comp=Z,23nm,1.1s
KIV MLR MLR
comp=Z,75nm,17.0s
KIV Kislovodsk 67.34 309 P P 19 39 32.9 -0.7
comp=Z,20nm,1.1s
KIV Kislovodsk 67.34 309 P P 19 39 32.9 -0.7
NWAO Narrogin (SRO) 67.35 193 P P 19 39 33.6 +0.2
SHA1 Shidzhatmaz 67.45 308 ceP P 19 39 33.8 -0.7
GNI Garni 67.56 304 LR LR 20 11 51.9
comp=Z,48nm,19.6s,baz=70,slow=38
GNI Garni 67.56 304 ceP P 19 39 36.0 +0.9
GNI pmax pmax
comp=Z,18nm,1.3s
RES Resolute Bay 67.97 12 LR LR 20 10 22.4
comp=Z,38nm,20.6s,baz=334,slow=37
JRN Qarnain Island 68.14 286 P P 19 39 37.3 -1.5
FINES FINESS Array B 68.34 330 P P 19 39 38.5 -0.9
comp=Z,10nm,0.6s,baz=63,slow=5.6,SNR=69
FINES LR LR 20 10 06.3
comp=Z,68nm,18.2s,baz=57,slow=36
comp=Z,10nm,0.6s
FINES FINESS Array B 68.34 330 P P 19 39 38.0 -1.4
MZR Muzera 68.54 284 P P 19 39 39.8 -1.5
DAG Danmarks Havn 68.66 353 iP P 19 39 41.0 -0.2
DAG IAmb IAmb 19 39 42.1
comp=Z,36nm,1.0s
STEI Steigen 68.67 339 eP P 19 39 41.1 -0.3
FAUS Fauske 68.99 338 eP P 19 39 43.0 -0.3
SHMA Al-Shehemyia 69.23 288 P P 19 39 43.8 -1.8
NEEM North Greenlan 69.48 1 iP P 19 39 46.1 -0.5
NEEM IAmb IAmb 19 39 48.5
comp=Z,11nm,0.7s
GEVA Gevas 69.54 303 IAmb IAmb 19 39 48.2
comp=Z,13nm,1.0s
TRNA Turayna 69.56 287 P P 19 39 45.1 -2.5
TULEG Thule 69.63 5 iP P 19 39 46.9 -0.3
TULEG IAmb IAmb 19 39 48.3
comp=Z,23nm,1.0s
RAUS Rausandaksla 69.96 338 eP P 19 39 49.1 -0.3
DOK Doka 70.11 280 P P 19 39 49.7 -1.4
SNR=9.1
KONS Konsvik 70.21 338 eP P 19 39 50.7 -0.2
ARPS Mount Arapiles 70.33 172 P P 19 39 52.3 +0.4
comp=Z,14nm,1.4s
YKA Yellowknife Ar 70.74 27 P P 19 39 55.7 +1.5
comp=Z,3.9nm,0.8s,baz=307,slow=6.7,SNR=63
YKA pP pP 19 40 12.4 +1.2
comp=Z,3.2nm,0.8s,baz=308,slow=6.7,SNR=9.4
YKA PKP2bc P'P'bc 20 07 44.8 -8.7
comp=Z,0.1nm,0.3s,baz=106,slow=2.4,SNR=5.1
YKA LR LR 20 15 52.5
comp=Z,4.9nm,19.2s,baz=12,slow=40
comp=Z,3.9nm,0.8s
YKA Yellowknife Ar 70.74 27 P P 19 39 55.3 +1.1
YKA Yellowknife Ar 70.74 27 iP P 19 39 55.9 +1.7
YKA pmax pmax
comp=Z,4.0nm,0.8s
WHFO Wadi Hawf 70.75 279 P P 19 39 53.4 -1.7
SNR=6.7
YKAW1 Yellowknife Wh 70.79 27 IAmb IAmb 19 39 58.3
comp=Z,9.4nm,0.7s
MNK Minsk 71.04 323 iP P 19 39 55.5 -0.7
comp=E,16nm,1.1s
MNK i P P 19 39 55.5 -0.7
comp=N,22nm,1.5s
MNK i P P 19 39 55.5 -0.7
comp=Z,15nm,0.8s,baz=59
MNK i pP pP 19 40 12.7 -0.6
MNK i sP sP 19 40 18.2 -2.0
MNK i PP PP 19 42 32.6 -1.2
MNK i PPP PPP 19 44 18.3
MNK i S S 19 49 08.2 +0.8
MNK i sS SKiKP 19 49 30.9 -0.9
MNK i SS SS 19 53 49.5 +8.8
MNK i SSS SSS 19 56 54.3
MNK i LQ LQ 20 06 17.9
MNK i LR LR 20 11 28.3
MNK i LRM MLR 20 14 15.8
comp=Z,56nm,14.6s
MNK i LRM MLR 20 14 19.6
comp=E,108nm,23.8s
MNK i LRM MLR 20 14 30.2
comp=N,95nm,16.5s
MNK Minsk 71.04 323 iP P 19 39 55.5 -0.7
MNK i *PP pP 19 40 12.6 -0.6
MNK i *SP sP 19 40 18.1 -2.0
MNK i 19 42 32.6

MNK i PPP PPP 19 44 18.3
MNK i S S 19 49 08.1 +0.8
MNK i *SS SKiKP 19 49 30.8 -0.9
MNK i SS SS 19 53 49.5 +8.8
MNK i SSS SSS 19 56 54.3
MNK pmax pmax
comp=Z,15nm,0.8s
MNK pmax pmax
comp=E,16nm,1.1s
MNK pmax pmax
comp=N,22nm,1.5s
MNK MLR MLR
comp=Z,56nm,15.0s
MNK MLR MLR
comp=E,108nm,24.0s
MNK MLR MLR
comp=N,95nm,17.0s
DBG Daneborg 71.07 352 iP P 19 39 55.0 -1.0
DBG IAmb IAmb 19 39 57.2
comp=Z,7.9nm,0.8s
MARD Mardin 71.60 303 IAmb IAmb 19 40 00.4
comp=Z,18nm,0.7s
TOO Toolangi 71.64 169 P P 19 40 02.2 +2.4
comp=Z,7.7nm,1.8s
NSS Namsos 71.84 337 eP P 19 40 01.0 +0.2
KULLO Kullorsuaq 72.20 3 iP P 19 40 02.1 -0.7
KULLO IAmb IAmb 19 40 04.3
comp=Z,15nm,0.9s
AKASG Malin Array Be 72.29 319 P P 19 40 02.4 -1.4
comp=Z,3.4nm,0.5s,baz=57,slow=6.4,SNR=14
AKASG LR LR 20 13 52.4
comp=Z,75nm,19.6s,baz=69,slow=38
comp=Z,3.4nm,0.5s
AKBB Malin Array Si 72.30 319 IAmb IAmb 19 40 02.9
comp=Z,8.3nm,0.6s
AKBB Malin Array Si 72.30 319 ceP P 19 40 02.7 -1.1
KIEV Kiev 72.31 319 P P 19 40 01.9 -1.9
KIEV IAmb IAmb 19 40 02.9
comp=Z,7.5nm,0.6s
KIEV Kiev 72.31 319 P P 19 40 01.9 -1.9
KIEV pmax pmax
comp=Z,7.0nm,0.6s
ARPR Arapgir-MALATY 72.44 305 IAmb IAmb 19 40 06.0
comp=Z,13nm,0.9s
UPNV Upernavik 74.03 3 iP P 19 40 12.3 -1.3
UPNV IAmb IAmb 19 40 15.3
comp=Z,6.5nm,0.8s
HFS Hagfors 74.06 333 P P 19 40 13.0 -1.0
comp=Z,5.0nm,0.6s,baz=66,slow=3.6,SNR=21
HFS LR LR 20 17 07.6
comp=Z,68nm,18.9s,baz=76,slow=39
comp=Z,5.0nm,0.6s
LLLB Lillooet 74.14 40 IAmb IAmb 19 40 17.8
comp=Z,12nm,1.0s
GAZ Gaziantep 74.16 304 IAmb IAmb 19 40 15.8
comp=Z,9.4nm,0.8s
SUMG Summit 74.18 357 P P 19 40 15.9 +0.9
SUMG Summit 74.18 357 P P 19 40 15.9 +0.9
SUMG pmax pmax
comp=Z,31nm,0.8s
SUMG Summit 74.18 357 iP P 19 40 16.0 +0.9
SUMG IAmb IAmb 19 40 17.4
comp=Z,35nm,1.0s
NB2 NORSAR Subarra 74.40 334 P P 19 40 14.8 -1.2
comp=Z,2.6nm,0.6s,baz=50,slow=6.2
NB2 NORSAR Subarra 74.40 334 P P 19 40 14.8 -1.2
NOA NORSAR Array B 74.40 334 P P 19 40 14.8 -1.2
comp=Z,3.1nm,0.7s,baz=48,slow=5.6,SNR=15
NOA LR LR 20 16 06.2
comp=Z,51nm,18.9s,baz=260,slow=38
comp=Z,3.1nm,0.7s
NC602 NORSAR Array S 74.48 334 eP P 19 40 15.3 -1.1
RAYN Ar Rayn 74.70 288 P P 19 40 17.3 -1.2
RAYN Ar Rayn 74.70 288 P P 19 40 17.3 -1.2
RAYN pmax pmax
comp=Z,7.0nm,0.8s
RAYN Ar Rayn 74.70 288 P P 19 40 17.4 -1.1
BR131 Keskin Array S 75.28 308 iP P 19 40 20.6 -1.1
BRTR Keskin Array B 75.28 308 P P 19 40 21.0 -0.7
comp=Z,6.4nm,0.8s,baz=96,slow=5.5,SNR=44
BRTR LR LR 20 17 19.8
comp=Z,40nm,19.4s,baz=46,slow=39
comp=Z,6.4nm,0.8s
BRTR Keskin Array B 75.28 308 P P 19 40 20.3 -1.3
BR104 Keskin Array S 75.29 308 P P 19 40 20.8 -0.9
comp=Z,74nmcomp=Z,9.7nm,0.9s
BR106 Keskin Array S 75.29 308 P P 19 40 20.7 -1.0
comp=Z,59nmcomp=Z,8.5nm,0.9s
BR105 Keskin Array S 75.30 308 P P 19 40 21.1 -0.7
SAATT Saattut 76.13 1 iP P 19 40 25.1 -0.6
SAATT IAmb IAmb 19 40 28.2
comp=Z,28nm,1.4s
PLOR Plostina 76.35 316 ⇑ P PKiKP 19 46 12.4 +0.6
LTY Liberty 76.68 42 IAmb IAmb 19 40 31.6
comp=Z,5.7nm,0.5s
SAQQ Saqqaq 76.93 1 iP P 19 40 30.0 -0.2
SAQQ IAmb IAmb 19 40 32.0
comp=Z,21nm,0.9s
MLR Muntele Rosu 76.96 316 LR LR 20 17 53.4
comp=Z,140nm,19.5s,baz=56,slow=38
EPH Ephrata 77.22 41 IAmb IAmb 19 40 51.6
comp=Z,13nm,1.1s
H04A Detroit Lake 77.27 45 IAmb IAmb 19 40 35.2
comp=Z,8.6nm,0.7s
MXC Moxie City 77.28 42 IAmb IAmb 19 40 36.1
comp=Z,17nm,1.3s
STHS Stebnicka Huta 77.28 321 eP P 19 40 32.0 -0.7
STHS pmax pmax
comp=Z,8.0nm,1.0s
STHS Stebnicka Huta 77.28 321 eP P 19 40 32.0 -0.7
BORA Eskisehir 77.28 309 IAmb IAmb 19 40 32.7
comp=Z,11nm,1.0s
K02D Willamette Mer 77.49 47 P P 19 40 35.3 +1.3
MMAI Mount Meron Ar 77.55 301 P P 19 40 34.1 -0.4
comp=Z,1.9nm,0.5s,baz=38,slow=9.6,SNR=5.4
MMAI LR LR 20 20 05.5
comp=Z,34nm,18.9s,baz=40,slow=40
comp=Z,1.9nm,0.5s
GDH Godhavn 77.65 2 iP P 19 40 33.7 -0.6
GDH IAmb IAmb 19 40 35.9
comp=Z,8.6nm,0.7s
ILULI Ilulissat 77.75 1 iP P 19 40 34.6 -0.2
ILULI IAmb IAmb 19 40 36.6
comp=Z,19nm,0.8s
D08A Wollman Farm, 77.77 41 IAmb IAmb 19 40 38.4
comp=Z,16nm,0.9s
HAWA Hanford 77.81 42 IAmb IAmb 19 40 39.0
comp=Z,10nm,0.7s
WIFE Three Sisters- 77.84 45 IAmb IAmb 19 40 39.4
comp=Z,7.1nm,0.7s
F07A Phinny Hill Vi 77.88 43 IAmb IAmb 19 40 39.4
comp=Z,10nm,0.8s
I05D Terrebonne, OR 77.96 45 IAmb IAmb 19 40 39.7
comp=Z,14nm,0.7s
E08A Dider Farm, El 78.02 42 IAmb IAmb 19 40 40.0
comp=Z,13nm,1.0s
NEW Newport 78.03 40 LR LR 20 17 40.5
comp=Z,24nm,18.4s,baz=12,slow=38
NEW Newport 78.03 40 IAmb IAmb 19 40 39.9
comp=Z,13nm,0.8s
YPT Yellepit 78.34 42 IAmb IAmb 19 40 42.0
comp=Z,15nm,1.0s
ISP Isparta 78.36 308 ceP P 19 40 38.2 -0.8
ISP pmax pmax
comp=Z,15nm,2.5s
LANS Liptovska Anna 78.37 322 eP P 19 40 39.8 +1.1
LANS pmax pmax
comp=Z,3.0nm,0.9s
LANS Liptovska Anna 78.37 322 eP P 19 40 39.8 +1.1
E09A Wood Farm, Sta 78.52 42 IAmb IAmb 19 40 42.9
comp=Z,15nm,1.0s
L04D Klamath Falls 78.59 47 IAmb IAmb 19 41 08.1
comp=Z,28nm,1.2s
J05D Fort Rock, OR 78.63 45 IAmb IAmb 19 40 43.9
comp=Z,12nm,0.6s
STEB Steborice 78.75 323 eP P 19 40 40.1 -0.6
LNOR Lincton Mounta 78.82 42 IAmb IAmb 19 40 45.6
comp=Z,17nm,1.5s
MORC Moravsky Berou 78.96 323 eP P 19 40 41.6 -0.4
DPC Dobruska-Polom 79.20 324 eP P 19 40 42.7 -0.6
DPC Dobruska-Polom 79.20 324 eP P 19 40 42.7 -0.6
M03C McCloud 79.24 48 IAmb IAmb 19 40 46.9
comp=Z,13nm,0.8s
ELL Elmali 79.36 307 IAmb IAmb 19 40 44.1
comp=Z,13nm,0.8s
JAVC Velka Javorina 79.48 322 eP P 19 40 45.5 +0.7

VRAC Vranov 79.74 323 LR LR 20 19 56.5
comp=Z,80nm,18.9s,baz=34,slow=39
VRAC Vranov 79.74 323 eP P 19 40 45.9 -0.3
SRO Srobarova 79.80 321 eP P 19 40 47.1 +0.6
SRO pmax pmax
comp=Z,6.0nm,0.7s
SRO Srobarova 79.80 321 eP P 19 40 47.1 +0.6
SMOL Smolenice 79.82 322 eP P 19 40 47.0 +0.4
SMOL pmax pmax
comp=Z,6.0nm,1.0s
SFJD Kangerlussuaq 79.98 1 LR LR 20 18 24.0
comp=Z,51nm,18.3s,baz=342,slow=37
SFJD Kangerlussuaq 79.98 1 iP P 19 40 45.9 -1.2
SFJD IAmb IAmb 19 40 48.6
comp=Z,10.0nm,0.8s
MODS Modra-Piesok 79.98 322 eP P 19 40 47.8 +0.3
MODS pmax pmax
comp=Z,306nm,3.0s
MODS Modra-Piesok 79.98 322 eP P 19 40 47.8 +0.3
BMO Blue Mountains 79.99 43 IAmb IAmb 19 40 50.9
comp=Z,18nm,1.4s
KRUC Moravsky 80.00 323 eP P 19 40 47.0 -0.6
BORG Borgarnes 80.04 349 LR LR 20 20 37.2
comp=Z,18nm,18.1s,baz=48,slow=39
CLL Collm 80.17 326 IAmb IAmb 19 40 48.8
comp=Z,16nm,1.0s
CLL Collm 80.17 326 iP P 19 40 47.7 -0.7
CLL e*SP sP 19 41 12.0 -0.7
CLL pmax pmax
comp=Z,20nm,1.1s
CLL Collm 80.17 326 iP P 19 40 47.7 -0.7
comp=Z,20nm,1.1s
CLL esP sP 19 41 12.0 -0.7
CLL ex x 19 41 17.0
CLL ePP PP 19 43 51.0 +0.2
J08A Circle Bar Ran 80.21 44 IAmb IAmb 19 40 52.4
comp=Z,28nm,1.3s
TREC Trest 80.30 324 eP P 19 40 45.9 -3.3
TREC Trest 80.30 324 eP P 19 40 45.9 -3.3
PRU Pruhonice 80.31 324 eP P 19 40 49.1 -0.1
PRU Pruhonice 80.31 324 eP P 19 40 49.1 -0.1
HSKC Hora Svate Kat 80.44 325 eP P 19 40 50.2 +0.3
MSO Missoula 80.61 39 IAmb IAmb 19 40 53.7
comp=Z,18nm,1.4s
FFC Flin Flon 80.81 28 P P 19 40 53.0 +1.3
FFC Flin Flon 80.81 28 P P 19 40 53.1 +1.3
FFC pmax pmax
comp=Z,33nm,0.9s
FFC Flin Flon 80.81 28 P P 19 40 53.2 +1.4
FFC pP pP 19 41 10.7 +1.5
FFC sP sP 19 41 17.1 +1.0
ZVC Zvikov 80.84 324 eP P 19 40 51.9 -0.2
RONA Rosalia, Austr 80.92 322 iP P 19 40 53.0 +0.4
comp=Z,6.4nm,1.0s
CONA Conrad Observa 81.00 322 eP P 19 40 52.9 -0.2
comp=Z,7.2nm,0.9s
NKC Novy Kostel 81.15 326 eP P 19 40 54.0 +0.2
NKC Novy Kostel 81.15 326 eP P 19 40 54.0 +0.2
KHC Kasperske Hory 81.35 324 ceP P 19 40 54.9 +0.1
KHC pmax pmax
comp=Z,8.0nm,1.7s
KHC Kasperske Hory 81.35 324 eP P 19 40 54.6 -0.2
GERES GERESS Array B 81.48 324 P P 19 40 54.9 -0.8
comp=Z,2.3nm,0.8s,baz=32,slow=3.8,SNR=15
GERES LR LR 20 21 53.7
comp=Z,106nm,19.7s,baz=68,slow=39
comp=Z,2.3nm,0.8s
ARSA Arzberg 81.61 322 iP P 19 40 56.0 -0.2
comp=Z,4.8nm,1.1s
MFID Camas Ranch 81.71 43 IAmb IAmb 19 41 00.2
comp=Z,18nm,1.2s
MOA Molln 81.86 323 eP P 19 40 57.7 +0.2
comp=Z,3.0nm,0.9s
FRB Frobisher Bay 81.89 9 LR LR 20 18 12.4
comp=Z,50nm,21.2s,baz=42,slow=36
GRF Grafenberg Arr 82.10 326 eP P 19 40 59.1 +0.4
comp=Z,10nm,0.9s,baz=53,slow=4.8
SOKA Soboth 82.24 322 iP P 19 40 59.2 -0.4
comp=Z,11nm,0.8s,SNR=16
BIOA Bad Ischl, Aus 82.28 323 iP P 19 40 59.7 -0.1
comp=Z,5.1nm,0.8s
OBKA Obir 82.61 322 iP P 19 41 01.5 0.0
comp=Z,4.6nm,0.8s
BOZ Bozeman (W) 82.63 39 IAmb IAmb 19 41 04.8
comp=Z,9.9nm,0.8s
KBA Koelnbreinsper 82.84 323 eP P 19 41 01.3 -1.5
comp=Z,6.2nm,1.0s
LESA Schwarzleotal 82.94 323 iP P 19 41 02.8 -0.5
comp=Z,11nm,1.0s,SNR=8.6
MYKA Terra Mystica 82.99 322 eP P 19 41 02.8 -0.8
comp=Z,4.6nm,0.9s
NVAR Mina Array Bea 83.29 48 P P 19 41 07.8 +2.4
comp=Z,3.7nm,0.6s,baz=283,slow=5.9,SNR=22
NVAR pP pP 19 41 24.8 +1.9
comp=Z,2.9nm,0.6s,baz=296,slow=5.2,SNR=7.0
comp=Z,3.7nm,0.6s
NVAR Mina Array Bea 83.29 48 P P 19 41 07.7 +2.2
YHL Hebgen Lake 83.36 40 IAmb IAmb 19 41 09.8
comp=Z,25nm,1.4s
YHB Horse Butte 83.42 40 IAmb IAmb 19 41 09.4
comp=Z,16nm,0.9s
ABTA Abfaltersbach 83.49 323 iP P 19 41 05.0 -1.1
comp=Z,4.2nm,0.8s
WATA Walderalm 83.55 324 iP P 19 41 05.3 -1.1
comp=Z,4.1nm,0.9s
WTTA Wattenberg 83.57 324 iP P 19 41 05.7 -0.9
comp=Z,3.7nm,0.7s
YMR Madison River 83.60 40 IAmb IAmb 19 41 35.0
comp=Z,13nm,1.0s
STAL STALIGIAL 83.72 323 IAmb IAmb 19 41 06.3
comp=Z,9.5nm,0.9s
EKA Eskdalemuir Ar 83.72 336 P P 19 41 06.2 -0.7
comp=Z,0.7nm,0.5s,baz=63,slow=3.4,SNR=4.9
EKA LR LR 20 21 46.6
comp=Z,91nm,19.8s,baz=30,slow=38
comp=Z,0.7nm,0.5s
MOTA Moosalm 83.78 324 iP P 19 41 06.8 -0.9
comp=Z,6.5nm,1.0s
SQTA Sankt Quirin 83.81 324 iP P 19 41 06.8 -1.0
comp=Z,3.3nm,0.8s,SNR=4.2
RETA Reutte 83.85 324 iP P 19 41 07.6 -0.3
comp=Z,7.3nm,1.1s
FETA Feichten 84.19 324 iP P 19 41 08.9 -0.8
comp=Z,4.1nm,0.9s,SNR=6.1
RLMT Red Lodge 84.19 39 IAmb IAmb 19 41 13.1
comp=Z,31nm,1.5s
VES Vestal, Richgr 84.36 51 IAmb IAmb 19 41 31.2
comp=Z,11nm,0.7s
BFO Black Forest 84.42 326 P P 19 41 10.2 -0.5
BFO IAmb IAmb 19 41 10.8
comp=Z,10nm,0.9s
BFO Black Forest 84.42 326 P P 19 41 10.2 -0.5
BFO pmax pmax
comp=Z,10.0nm,0.9s
DAVA Damuels 84.42 325 iP P 19 41 10.3 -0.6
comp=Z,16nm,1.0s
BMRD Maredsous 84.57 329 dP P 19 41 10.9 -0.5
RAR Rarotonga 84.65 120 LR LR 20 14 43.9
comp=Z,54nm,18.6s,baz=279,slow=32
FUORN Ofenpass-Fuorn 84.69 324 P P 19 41 11.9 -0.6
FUORN IAmb IAmb 19 41 13.0
comp=Z,12nm,0.9s
DAVOX Davos/Dischmat 84.77 324 LR LR 20 23 50.8
comp=Z,159nm,18.1s,baz=36,slow=39
TUE Stuetta 85.25 324 IAmb IAmb 19 41 15.3
comp=Z,6.1nm,0.8s
TPNV Topopah Spring 85.48 48 IAmb IAmb 19 41 37.1
comp=Z,9.5nm,0.9s
DUG Dugway, Tooele 85.49 44 IAmb IAmb 19 41 44.0
comp=Z,11nm,0.9s
TPO Tropico Hills 85.50 51 IAmb IAmb 19 41 37.2
comp=Z,11nm,0.9s
PDAR Pinedale Array 85.62 40 P P 19 41 18.6 +1.4
comp=Z,3.2nm,0.7s,baz=296,slow=0.9,SNR=37
PDAR pP pP 19 41 35.9 +1.2
comp=Z,4.3nm,0.8s,baz=323,slow=1.2,SNR=11
PDAR LR LR 20 21 09.0
comp=Z,15nm,19.8s,baz=340,slow=37
comp=Z,3.2nm,0.7s
PDAR Pinedale Array 85.62 40 P P 19 41 16.6 -0.6
CCCA Chr Cany lake 85.66 50 IAmb IAmb 19 41 44.4
comp=Z,6.6nm,0.8s
ULM Lac du Bonnet 86.64 28 P P 19 41 22.9 +1.2
comp=Z,30nm,0.9s,baz=317,slow=5.6,SNR=35
ULM pP pP 19 41 39.9 +0.7
comp=Z,26nm,0.9s,baz=317,slow=4.7,SNR=10
ULM LR LR 20 26 18.3

comp=Z,17nm,19.1s,baz=16,slow=40
comp=Z,30nm,0.9s

KUQ	**Kuujjuaa**	**87.32**	**11**	IAmb	IAmb	19 41 43.5	
	comp=Z,7.2nm,0.8s						
PFO	**Pinyon Flats O**	**87.44**	**51**	LR	LR	20 11 29.2	
	comp=Z,41nm,21.0s,baz=241,slow=29						
DPP	**Dos Picos Cty**	**87.50**	**52**	IAmb	IAmb	19 41 26.8	
	comp=Z,6.7nm,0.5s						
RSSD	**Black Hills**	**87.57**	**37**	P	**P**	**19 41 28.0**	**+1.4**
RSSD	**Black Hills**	**87.57**	**37**	P	**P**	**19 41 28.0**	**+1.4**
RSSD				pmax	pmax		
	comp=Z,14nm,0.9s						
RSSD	**Black Hills**	**87.57**	**37**	P	**P**	**19 41 28.5**	**+1.9**
RSSD				pP	**pP**	**19 41 46.0**	**+1.8**
RSSD				x	x	19 41 48.4	
RSSD				sP	**sP**	**19 41 52.4**	**+1.3**
ISCO	**Idaho Springs**	**89.82**	**41**	IAmb	IAmb	19 41 58.3	
	comp=Z,4.2nm,0.7s						
PPT	**Papeete**	**90.21**	**111**	LR	LR	20 14 16.6	
	comp=Z,32nm,20.7s,baz=297,slow=30						
SCHQ	**Schefferville**	**90.72**	**11**	P	**P**	**19 41 40.4**	**-0.5**
	comp=Z,7.8nm,0.8s,baz=348,slow=3.5,SNR=8.8						
SCHQ				pP	**pP**	**19 41 59.0**	**+0.4**
	comp=Z,3.0nm,0.7s,baz=57,slow=8.8,SNR=2.9						
	comp=Z,7.8nm,0.8s						
ESDC	**Sonseca Array**	**96.72**	**327**	LR	LR	20 30 34.8	
	comp=Z,64nm,20.0s,baz=36,slow=38						
SADO	**Sadowa**	**97.28**	**22**	LR	LR	20 29 38.9	
	comp=Z,43nm,18.0s,baz=224,slow=38						
LPIG	**La Paz**	**97.67**	**55**	LR	LR	20 23 13.2	
	comp=Z,23nm,18.2s,baz=3.0,slow=33						
TXAR	**Lajitas Array**	**98.38**	**47**	P	Pdif	19 42 17.9	+1.3
	comp=Z,0.7nm,0.6s,baz=292,slow=2.7,SNR=10						
TXAR				pP	sP	19 42 37.3	-3.8
	comp=Z,0.9nm,0.5s,baz=298,slow=3.4,SNR=6.1						
	comp=Z,0.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**113.84**	**306**	PKiKP	**PKiKP**	**19 47 16.1**	**-1.3**
	comp=Z,1.1nm,0.7s,baz=329,slow=1.7,SNR=7.4						
BOSA	**Boshof**	**118.21**	**253**	PKP	**PKPdf**	**19 47 24.8**	**-0.7**
	comp=Z,2.6nm,0.8s,baz=39,slow=5.1,SNR=3.6						
DBIC	**Dimbokro**	**122.95**	**306**	PKP	**PKPdf**	**19 47 34.0**	**-0.9**
	comp=Z,3.9nm,0.7s,baz=132,slow=4.6,SNR=3.5						
QSPA	**South Pole Qui**	**123.07**	**180**	PKP	**PKPdf**	**19 47 33.2**	**-0.4**
	comp=Z,5.6nm,0.7s,baz=285,slow=1.4,SNR=19						
QSPA	**South Pole Qui**	**123.07**	**180**		**PKPdf**	**19 47 33.6**	**0.0**
TROLL	**Troll, Antarti**	**133.24**	**199**	Pdiff	**Pdif**	**19 44 55.8**	**+5.3**
VNA2	**Neumayer--Watz**	**136.50**	**198**	Pdiff	**Pdif**	**19 45 02.0**	**-2.8**
	baz=100,slow=3.2						
VNA3	**Neumayer Olymp**	**136.87**	**197**	Pdiff	**Pdif**	**19 45 03.7**	**-2.7**
LPAZ	**La Paz**	**155.14**	**52**	PKP	**PKPdf**	**19 48 32.3**	**-0.1**
	comp=Z,1.6nm,0.8s,baz=25,slow=17,SNR=4.6						
LPAZ				PKPab	**PKPab**	**19 48 57.9**	**+0.6**
	comp=Z,3.6nm,0.9s,baz=12,slow=6.3,SNR=4.5						
PLCA	**Paso Flores**	**160.56**	**119**	PKPab	**PKPab**	**19 49 21.1**	**+1.6**
	comp=Z,2.2nm,0.7s,baz=206,slow=4.9,SNR=5.8						
BDFB	**Brasilia**	**162.40**	**0**	PKP	**PKPdf**	**19 48 39.8**	**-0.6**
	comp=Z,4.0nm,0.7s,baz=98,slow=4.2,SNR=6.4						
BDFB				PKPab	**PKPab**	**19 49 27.6**	**-0.3**
	comp=Z,6.0nm,0.9s,baz=19,slow=3.5,SNR=6.2						
CPUP	**Villa Florida**	**169.32**	**52**	PKP	**PKPdf**	**19 48 45.1**	**-0.4**
	comp=Z,1.8nm,0.8s,baz=228,slow=2.4,SNR=4.8						

*NEIC **08** 19:34:55.3±1.9, 34°.2S±0°.1×178°.7W±0°.1, h10km±2km, mb4.6/10, Error ellipse: s-maj=19.9km s-min=15.1km az=335.0*

*IDC **08** 19:34:55.9±0.8, 34°.15S×179°.11W, h0km, mb4.4/5, mbtmp4.4/6, ML4.4/1, MS3.0/1, Error ellipse: s-maj=32.5km s-min=26.7km az=97.0*

*WEL **08** 19:34:59.0±1.2, 35°.S±.9°×17°.9W±1°.3, h12km, M4.5/13, mB5.0/5, ML4.5/14, MLv4.6/13, Mw(mB)4.4/5, Error ellipse: s-maj=18.3km s-min=9.6km az=117.5, confirmed*

*NOU **08** 19:35:08.2, 34°.88S×179°.20W, h82km, MLv4.6/9, South of Kermadec Islands*

ISC 08 19:34:59.7±0.7, 34°.37S±0°.07×178°.75W±0°.10, h35km, n105, σ1§45/114, mb4.5/11, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.98**	**216**	P	**Pn**	**19 35 58.9**	**+0.7**
MXZ	**Matakaoa Point**	**3.98**	**216**		**Pn**	**19 35 58.5**	**+0.3**
MXZ	**Matakaoa Point**	**3.98**	**216**	P	**Pn**	**19 35 58.0**	**-0.1**
MXZ				S	**Sn**	**19 36 42.2**	**-1.4**
MXZ				T	T	19 40 13.1	
WMGZ	**Waiomatatini S**	**4.14**	**213**	P	**Pn**	**19 36 01.3**	**+0.9**
WMGZ				S	**Sn**	**19 36 50.0**	**+2.5**
PKGZ	**Pakihiroa**	**4.33**	**215**	P	**Pn**	**19 36 02.4**	**-0.6**
PKGZ				S	**Sn**	**19 36 54.1**	**+1.8**
HAZ	**Te Kaha**	**4.39**	**219**	P	**Pn**	**19 36 04.5**	**+0.6**
HAZ				S	**Sn**	**19 36 56.6**	**+2.8**
PUZ	**Puketiti**	**4.42**	**212**	P	**Pn**	**19 36 01.0**	**-3.2**
PUZ				S	**Sn**	**19 36 56.3**	**+1.9**
RUGZ	**Raukumara Rang**	**4.61**	**218**	P	**Pn**	**19 36 06.9**	**-0.1**
TWGZ	**Tauwhareparae**	**4.63**	**214**	P	**Pn**	**19 36 06.8**	**-0.3**
CNGZ	**Carnagh Statio**	**4.78**	**210**	P	**Pn**	**19 36 10.1**	**+0.9**
TKGZ	**Te Karaka**	**4.90**	**213**	P	**Pn**	**19 36 10.8**	**0.0**
WHRZ	**Whale Island**	**4.91**	**224**	P	**Pn**	**19 36 14.1**	**+3.1**
MWZ	**Matawai**	**4.97**	**216**	P	**Pn**	**19 36 11.1**	**-0.7**
URZ	**Urewera**	**5.12**	**220**	Pn	**Pn**	**19 36 12.7**	**-1.2**
	13nm,0.3s,baz=61,slow=2.9,SNR=49						
URZ				Sn	**Sn**	**19 37 11.8**	**+0.1**
	18nm,0.3s,baz=87,slow=20,SNR=14						
	55nm,0.3s						
URZ	**Urewera**	**5.12**	**220**	P	**Pn**	**19 36 13.7**	**-0.2**
URZ	**Urewera**	**5.12**	**220**	P	**Pn**	**19 36 13.6**	**-0.3**
URZ				S	**Sn**	**19 37 11.9**	**+0.1**
OPRZ	**Ohinepanea**	**5.14**	**226**	P	**Pn**	**19 36 15.3**	**+1.1**
OPRZ				S	**Sn**	**19 37 13.9**	**+1.6**
RIGZ	**Rimuhau**	**5.16**	**212**	P	**Pn**	**19 36 14.6**	**+0.2**
SNGZ	**Shannon Statio**	**5.41**	**214**	P	**Pn**	**19 36 18.0**	**+0.1**
TARZ	**Mount Tarawera**	**5.44**	**223**	P	**Pn**	**19 36 19.1**	**+0.8**
RTZ	**Ruatahuna**	**5.46**	**218**		**Pn**	**19 36 16.3**	**-2.2**
RTZ	**Ruatahuna**	**5.46**	**218**	P	**Pn**	**19 36 18.1**	**-0.5**
MUGZ	**Murupara**	**5.46**	**220**	P	**Pn**	**19 36 17.8**	**-0.8**
MHGZ	**Mahia Peninsul**	**5.47**	**208**	P	**Pn**	**19 36 18.7**	**0.0**
HLRZ	**Highlands Stat**	**5.54**	**224**	P	**Pn**	**19 36 21.0**	**+1.4**
HSRZ	**Hossack Road**	**5.64**	**224**	P	**Pn**	**19 36 22.7**	**+1.7**
WHHZ	**Waihua**	**5.70**	**213**	P	**Pn**	**19 36 23.4**	**+1.6**
MTHZ	**Maungataniwha**	**5.71**	**217**	P	**Pn**	**19 36 21.9**	**-0.1**
TOZ	**Tahuroa Road**	**5.74**	**233**		**Pn**	**19 36 21.4**	**-1.0**
TOZ	**Tahuroa Road**	**5.74**	**233**	P	**Pn**	**19 36 23.9**	**+1.6**
WCZ	**Waipu Caves**	**5.87**	**253**	P	**Pn**	**19 36 25.7**	**+1.6**
NMHZ	**Naumai**	**5.91**	**216**	P	**Pn**	**19 36 25.2**	**+0.3**
ARHZ	**Aropaoanui**	**5.96**	**214**	P	**Pn**	**19 36 25.3**	**0.0**
BKZ	**Black Stump Fm**	**6.12**	**217**	P	**Pn**	**19 36 27.1**	**-0.6**
BKZ	**Black Stump Fm**	**6.12**	**217**		**Pn**	**19 36 26.9**	**-0.8**
BKZ	**Black Stump Fm**	**6.12**	**217**	P	**Pn**	**19 36 28.8**	**-0.8**
MCHZ	**McNeill Hill**	**6.24**	**214**	P	**Pn**	**19 36 30.1**	**+0.9**
RATZ	**Rangitukua**	**6.29**	**223**	P	**Pn**	**19 36 30.1**	**+0.1**
RITZ	**Rihia Road**	**6.32**	**222**	P	**Pn**	**19 36 32.3**	**+2.0**
KWHZ	**Kaweka Forest**	**6.36**	**216**	P	**Pn**	**19 36 32.1**	**+1.2**
OUZ	**Omahuta**	**6.36**	**260**	P	**Pn**	**19 36 32.9**	**+2.0**
OUZ	**Omahuta**	**6.36**	**260**	P	**Pn**	**19 36 32.8**	**+2.0**
KATZ	**Kakaramea**	**6.41**	**223**	P	**Pn**	**19 36 31.5**	**-0.1**
KAHZ	**Kahuranaki**	**6.44**	**212**	P	**Pn**	**19 36 30.2**	**-1.9**
TMVZ	**Te Maari**	**6.50**	**222**	P	**Pn**	**19 36 32.1**	**-0.9**
NTVZ	**North Tongariro**	**6.50**	**222**	P	**Pn**	**19 36 32.2**	**-0.8**
ETVZ	**East Tongariro**	**6.51**	**221**	P	**Pn**	**19 36 32.5**	**-0.6**
KRVZ	**Karewarewa**	**6.52**	**222**	P	**Pn**	**19 36 33.1**	**-0.1**
KRHZ	**Kereru**	**6.55**	**215**	P	**Pn**	**19 36 33.4**	**-0.2**
OTVZ	**Oturere**	**6.55**	**222**	P	**Pn**	**19 36 33.0**	**-0.7**
WTVZ	**West Tongariro**	**6.56**	**222**	P	**Pn**	**19 36 35.2**	**+1.4**
SNVZ	**South Ngauruho**	**6.58**	**222**	P	**Pn**	**19 36 33.6**	**-0.6**
NGZ	**Ngauruhoe**	**6.60**	**222**	P	**Pn**	**19 36 35.9**	**+1.6**
HIZ	**Hauiti**	**6.61**	**229**	P	**Pn**	**19 36 35.3**	**+1.0**
HIZ	**Hauiti**	**6.61**	**229**	Pn	**Pn**	**19 36 34.2**	**-0.1**
HIZ	**Hauiti**	**6.61**	**229**	P	**Pn**	**19 36 35.1**	**+0.8**
MOVZ	**Moawhango**	**6.68**	**220**	P	**Pn**	**19 36 34.9**	**-0.5**
TSZ	**Takapari Road**	**7.07**	**215**	P	**Pn**	**19 36 40.3**	**-0.4**
DVHZ	**Dannevirke**	**7.17**	**213**	P	**Pn**	**19 36 41.9**	**-0.1**
WAZ	**Wanganui**	**7.34**	**221**	P	**Pn**	**19 36 46.1**	**+1.6**
BFZ	**Birch Farm**	**7.45**	**211**	P	**Pn**	**19 36 43.5**	**-2.3**
BFZ	**Birch Farm**	**7.45**	**211**	P	**Pn**	**19 36 43.4**	**-2.4**
PRWZ	**Pori Road**	**7.46**	**213**	P	**Pn**	**19 36 45.4**	**-0.6**
MRZ	**Mangatainoka R**	**7.73**	**214**	P	**Pn**	**19 36 47.7**	**-1.9**
TMWZ	**Te Maipa**	**7.95**	**211**	P	**Pn**	**19 36 50.5**	**-2.2**
PAWZ	**Paruwai Farm**	**8.38**	**212**	P	**Pn**	**19 36 56.7**	**-1.9**
CTZ	**Chatham Island**	**9.49**	**171**	P	**Pn**	**19 37 16.4**	**+2.5**
CTZ	**Chatham Island**	**9.49**	**171**		**Pn**	**19 37 14.8**	**+0.9**
THZ	**Tophouse**	**9.88**	**219**	P	**Pn**	**19 37 16.8**	**-2.4**
KHZ	**Kahutara**	**10.05**	**215**	P	**Pn**	**19 37 21.7**	**+0.2**
KHZ	**Kahutara**	**10.05**	**215**	P	**Pn**	**19 37 19.5**	**-2.0**
RPZ	**Rata Peaks**	**12.23**	**217**	Pn	**Pn**	**19 37 48.4**	**-3.0**
	0.7nm,0.3s,baz=94,slow=23,SNR=38						
RPZ				Sn	Sn	19 39 53.1	-13
	1.6nm,0.3s,baz=6.7,slow=17,SNR=4.1						
TMZ	**Timaru**	**12.75**	**215**	P	**Pn**	**19 37 56.1**	**-2.2**
ODZ	**Otahua Downs**	**13.41**	**214**	P	**Pn**	**19 38 06.7**	**-0.7**
DZM	**Mont Dzumac**	**17.88**	**309**	P	**P**	**19 39 08.0**	**+1.8**
	8.5nm,0.9s,baz=43,slow=20,SNR=4.4						
RAR	**Rarotonga**	**21.25**	**57**	LR	LR	19 49 11.9	
	comp=Z,33nm,18.0s,baz=261,slow=40						
COEN	**Coen**	**39.93**	**291**	P	**P**	**19 42 29.1**	**-1.6**
COEN				IAmb	IAmb	19 42 32.5	
	comp=Z,13nm,1.1s						
AS31	**Alice Springs**	**42.42**	**272**	P	**P**	**19 42 50.4**	**-0.8**
ASAR	**Alice Springs**	**42.43**	**272**	P	**P**	**19 42 50.5**	**-0.7**
	comp=Z,3.6nm,0.7s,baz=115,slow=7.8,SNR=25						
ASAR				PcP	**PcP**	**19 44 43.9**	**-0.1**
	comp=Z,1.2nm,0.8s,baz=116,slow=3.1,SNR=5.2						
	comp=Z,3.6nm,0.7s						
ASAR	**Alice Springs**	**42.43**	**272**	P	**P**	**19 42 48.5**	**-2.7**
WR8	**Warramunga Arr**	**43.63**	**277**	P	**P**	**19 42 58.8**	**-2.2**
WR8				IAmb	IAmb	19 43 14.9	
	comp=Z,5.6nm,0.8s						
WRA	**Warramunga Arr**	**43.77**	**277**	P	**P**	**19 43 01.0**	**-1.1**
	comp=Z,2.1nm,0.5s,baz=117,slow=7.7,SNR=25						
WRA				PcP	**PcP**	**19 44 48.8**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=117,slow=3.1,SNR=1.8						
	comp=Z,2.1nm,0.5s						
WRA	**Warramunga Arr**	**43.77**	**277**	P	**P**	**19 42 59.7**	**-2.4**
WB0	**Warramunga Arr**	**43.81**	**277**	P	**P**	**19 43 00.8**	**-1.7**
WB0				IAmb	IAmb	19 43 16.6	
	comp=Z,5.3nm,0.7s						
FORT	**Forrest**	**44.55**	**259**	P	**P**	**19 43 06.3**	**-1.9**
FORT				IAmb	IAmb	19 43 16.0	
	comp=Z,11nm,1.1s						
KNRA	**Kununurra**	**50.50**	**278**	P	**P**	**19 43 54.7**	**+0.1**
KNRA				IAmb	IAmb	19 44 29.4	
	comp=Z,21nm,1.4s						
MORW	**Morawa**	**54.88**	**256**	P	**P**	**19 44 25.2**	**-1.7**
MORW				IAmb	IAmb	19 44 28.3	
	comp=Z,21nm,1.4s						
QSPA	**South Pole Qui**	**55.75**	**180**	P	**P**	**19 44 37.2**	**+4.5**
	comp=Z,5.6nm,1.0s,baz=48,slow=4.2,SNR=7.2						
	comp=Z,5.6nm,1.0s						
QSPA	**South Pole Qui**	**55.75**	**180**	P	**P**	**19 44 31.5**	**-1.3**
LUWI	**Luwuk**	**63.74**	**288**	P	**P**	**19 45 26.8**	**-1.4**
KSRS	**Korea Array**	**86.97**	**320**	P	**P**	**19 47 42.5**	**+1.5**
	comp=Z,0.5nm,0.8s,baz=146,slow=5.2,SNR=1.9						
	comp=Z,0.5nm,0.8s						
PETK	**Petropavlovsk-**	**89.50**	**346**	P	**P**	**19 47 54.5**	**+1.8**
	comp=Z,8.4nm,0.9s,baz=108,slow=6.7,SNR=9.2						
	comp=Z,8.4nm,0.9s						
PETK	**Petropavlovsk-**	**89.50**	**346**	P	**P**	**19 47 51.8**	**-0.9**
MKAR	**Makanchi Array**	**119.79**	**309**	PKP	**PKPdf**	**19 53 45.4**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=128,slow=0.6,SNR=4.9						
ZALV	**Zalesovo Beam**	**120.54**	**317**	PKP	**PKPdf**	**19 53 46.2**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=127,slow=2.2,SNR=1.4						
KURBB	**Kurchatov Arra**	**123.32**	**312**	PKP	**PKiKP**	**19 53 52.8**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=111,slow=1.8,SNR=6.5						
BVAR	**Borovoye Array**	**128.74**	**314**	PKP	**PKiKP**	**19 54 03.1**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=197,slow=3.0,SNR=2.7						
KBZ	**Khabaz**	**146.64**	**299**	PKPbc	**PKPbc**	**19 54 37.1**	**-0.2**
	comp=Z,2.9nm,1.0s,baz=141,slow=4.9,SNR=4.6						
FINES	**FINESS Array B**	**148.60**	**337**	PKPbc	**PKiKP**	**19 54 43.4**	**-0.2**
	comp=Z,6.6nm,0.8s,baz=46,slow=4.0,SNR=29						
MMAI	**Mount Meron Ar**	**151.63**	**277**	PKPbc	**PKiKP**	**19 54 50.7**	**-0.2**
	comp=Z,4.3nm,0.9s,baz=163,slow=5.6,SNR=3.4						
NOA	**NORSAR Array B**	**152.55**	**349**	PKPbc	**PKiKP**	**19 54 52.6**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=15,slow=2.5,SNR=1.6						
HFS	**Hagfors**	**152.97**	**346**	PKPbc	**PKiKP**	**19 54 53.8**	**+1.2**
	comp=Z,3.2nm,0.8s,baz=85,slow=3.0,SNR=2.5						
BRTR	**Keskin Array B**	**153.69**	**291**	PKPbc	**PKiKP**	**19 54 55.4**	**+0.4**
	comp=Z,1.4nm,0.9s,baz=130,slow=3.7,SNR=8.2						
AKASG	**Malin Array Be**	**153.93**	**317**	PKPbc	**PKiKP**	**19 54 55.4**	**+0.5**
	comp=Z,0.2nm,0.2s,baz=54,slow=3.2,SNR=1.7						
TORD	**Torodi Ar. Bea**	**158.87**	**181**	PKPab	**PKPab**	**19 55 32.6**	**+2.3**
	comp=Z,0.8nm,0.8s,baz=201,slow=2.9,SNR=2.9						

*SOF **08** 19:45:12.9, 42°.96N±0°.01×23°.33E±0°.01, h15km±1km, MD3.5/14*

*BEO **08** 19:45:12.9±0.3, 42°.96N×23°.35E, h3km±1km, ML3.3/22*

*CFUSG **08** 19:45:14.8, 43°.10N×23°.50E, h5km, Mb3.1/4, MD3.4/3, MSH3.0/4*

*THE **08** 19:45:15.2, 43°.N±4°×2°.3E±°, h0km±7km, M3.3/17, MLh3.3/17*

ISC 08 19:45:13.8±0.9, 42°.97N±0°.02×23°.31E±0°.02, h9km±7km, n136, σ1§06/205, 32C-35D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
BLSH	**Balsha**	**0.12**	**190**	Pg	**Pg**	**19 45 16.0**	**-0.6**
BLSH				Sg	**Sg**	**19 45 19.6**	**+1.1**
SOF	**Sofia**	**0.30**	**171**	Pg	**Pg**	**19 45 19.7**	**-0.1**
SOF				Sg	**Sg**	**19 45 24.3**	**+0.6**
VTS	**Vitosha**	**0.36**	**189**	P	**Pg**	**19 45 20.3**	**-0.6**
VTS				S	**Sg**	**19 45 24.1**	**-1.5**
VTS	**Vitosha**	**0.36**	**189**	Pg	**Pg**	**19 45 20.4**	**-0.6**
VTS				Sg	**Sg**	**19 45 25.3**	**-0.3**
VTS	**Vitosha**	**0.36**	**189**	*e*Pg	**Pg**	**19 45 20.3**	**-0.6**
VTS				*e*Sg	**Sg**	**19 45 24.8**	**-0.8**
MPEP	**Malo Peshtene**	**0.50**	**39**	Pg	**Pg**	**19 45 23.4**	**-0.1**
MPEP				Sg	**Sg**	**19 45 29.4**	**-0.7**
TRAN	**Tran**	**0.50**	**255**	P	**Pg**	**19 45 23.3**	**-0.3**
TRAN				Sg	**Sg**	**19 45 31.1**	**+1.0**
PLNA	**Plana**	**0.50**	**170**	Pg	**Pg**	**19 45 22.8**	**-0.8**
PLNA				Sg	**Sg**	**19 45 30.0**	**-0.2**
ZAPS	**Zavoj**	**0.58**	**302**	*e*Pg	**Pg**	**19 45 24.3**	**-0.8**
ZAPS				*e*Sg	**Sg**	**19 45 32.6**	**-0.1**
VALD	**Valchedram**	**0.72**	**7**	Pg	**Pg**	**19 45 27.8**	**0.0**
BOSS	**Bosilegrad**	**0.77**	**232**	*e*Pg	**Pg**	**19 45 28.2**	**-0.5**
BOSS				*e*Sg	**Sg**	**19 45 38.0**	**-0.8**
PGB	**Panagyurishte**	**0.78**	**125**	Pg	**Pg**	**19 45 27.8**	**-1.1**
PGB				Sg	**Sg**	**19 45 38.2**	**-0.9**
BLKB	**Belogradchik**	**0.80**	**325**	↓S	**Sg**	**19 45 38.0**	**-1.7**
BLKB	**Belogradchik**	**0.80**	**325**	*e*Pg	**Pg**	**19 45 28.4**	**-0.8**
BLKB				*e*Sg	**Sg**	**19 45 39.3**	**-0.3**
PLVB	**Pleven**	**1.05**	**66**	↓P	**Pg**	**19 45 33.7**	**-0.2**
PLVB				↓S	**Sb**	**19 45 48.3**	**+0.4**
BARS	**Barje**	**1.11**	**263**	*e*Pg	**Pb**	**19 45 33.8**	**-1.4**
BARS				*e*Sg	**Sg**	**19 45 49.1**	**-0.4**
KKB	**Krupnik**	**1.14**	**187**	P	**Pb**	**19 45 34.0**	**-1.7**
KKB				S	**Sb**	**19 45 49.0**	**-1.5**
KKB	**Krupnik**	**1.14**	**187**	Pg	**Pb**	**19 45 34.2**	**-1.5**
KKB				Sg	**Sb**	**19 45 49.3**	**-1.2**
ZAGS	**Zajecar**	**1.15**	**317**	*e*Pg	**Pb**	**19 45 34.6**	**-1.3**
ZAGS				*e*Sg	**Sn**	**19 45 52.0**	**0.0**
VLAD	**Vladila**	**1.30**	**37**	↓P	**Pn**	**19 45 38.5**	**+0.3**
VLAD				↓S	**Sb**	**19 45 55.4**	**+0.2**
PUNG	**Punghina**	**1.33**	**348**	↑P	**Pn**	**19 45 38.2**	**-0.5**
PUNG				↓S	**Sb**	**19 45 55.4**	**-0.8**
PLD	**Plovdiv**	**1.34**	**127**	P	**Pn**	**19 45 37.4**	**-1.4**
PLD				S	**Sb**	**19 45 54.7**	**-1.8**
PLD	**Plovdiv**	**1.34**	**127**	P	**Pn**	**19 45 37.5**	**-1.3**
PLD				S	**Sb**	**19 45 55.3**	**-1.2**
PLD	**Plovdiv**	**1.34**	**127**	*e*Pg	**Pn**	**19 45 37.5**	**-1.3**
PLD				*e*Sg	**Sb**	**19 45 54.5**	**-2.0**
PVL	**Pavlikeni**	**1.38**	**83**	P	**Pn**	**19 45 39.4**	**+0.2**
PVL				S	**Sg**	**19 45 59.0**	**+0.9**
MMB	**Musomishta**	**1.46**	**167**	P	**Pn**	**19 45 39.9**	**-0.5**
MMB				S	**Sn**	**19 45 59.5**	**-0.2**
MMB	**Musomishta**	**1.46**	**167**	P	**Pn**	**19 45 40.0**	**-0.4**
MMB				S	**Sn**	**19 46 00.1**	**+0.4**
BORS2	**Bor- Borsko je**	**1.46**	**320**	*e*Pg	**Pn**	**19 45 38.8**	**-1.6**
BORS2				*e*Sg	**Sn**	**19 45 59.1**	**-0.6**
SELS	**Selova**	**1.62**	**280**	*e*Pg	**Pn**	**19 45 42.2**	**-0.5**
SELS				*e*Sg	**Sb**	**19 46 05.0**	**+0.4**
RZN	**Rozhen**	**1.66**	**140**	P	**Pn**	**19 45 42.8**	**-0.5**
RZN	**Rozhen**	**1.66**	**140**	P	**Pb**	**19 45 45.4**	**+0.7**
RZN				S	**Sb**	**19 46 06.8**	**+1.0**
NVR	**Nevrokopi**	**1.67**	**166**	P	**Pn**	**19 45 43.9**	**+0.6**
NVR				S	**Sn**	**19 46 05.2**	**+0.3**
SRE	**Strehaia**	**1.69**	**358**	↑P	**Pn**	**19 45 42.4**	**-1.2**
VAY	**Valandovo**	**1.74**	**199**	*i* Pn	**Pn**	**19 45 43.8**	**-0.4**
VAY				*i* Sn	**Sb**	**19 46 08.8**	**+1.0**
RMGR	**Halanga-Turnu**	**1.75**	**345**	↓P	**Pn**	**19 45 43.5**	**-0.9**
RMGR				↓S	**Sn**	**19 46 06.1**	**-0.7**
COPA	**Copaceanca**	**1.81**	**49**	↓P	**Pn**	**19 45 44.5**	**-0.7**
COPA				↓S	**Sb**	**19 46 09.9**	**0.0**
KNT	**Kendrikon**	**1.83**	**190**	P	**Pn**	**19 45 45.2**	**-0.4**
KNT				S	**Sn**	**19 46 07.7**	**-1.2**
SRS	**Serrai**	**1.86**	**173**	P	**Pn**	**19 45 45.6**	**-0.3**
SRS	**Serrai**	**1.86**	**173**	*e*Pn	**Pn**	**19 45 45.7**	**-0.3**
SRS				*e*Sn	**Sn**	**19 46 10.3**	**+0.7**
KUBS	**Kucevo**	**1.86**	**321**	*e*Pn	**Pn**	**19 45 44.7**	**-1.3**
KUBS				*e*Sn	**Sn**	**19 46 09.7**	**0.0**
GOCS	**Kraljevo Serbi**	**1.87**	**289**	*e*Pn	**Pn**	**19 45 46.0**	**-0.2**
GOCS				*e*Sn	**Sn**	**19 46 10.0**	**0.0**
ELND	**Elena**	**1.89**	**90**	↓P	**Pn**	**19 45 45.9**	**-0.4**
ELND				↓S	**Sb**	**19 46 13.7**	**+1.6**
DIM	**Dimitrovgrad**	**1.92**	**118**	P	**Pn**	**19 45 46.5**	**-0.2**
DIM	**Dimitrovgrad**	**1.92**	**118**	P	**Pn**	**19 45 47.6**	**+1.0**
DIM				S	**Sb**	**19 46 14.5**	**+1.5**
HUMR	**Humele**	**1.97**	**37**	↑P	**Pn**	**19 45 46.7**	**-0.8**
SZH	**Strazhitsa**	**1.98**	**81**	P	**Pn**	**19 45 46.9**	**-0.6**
SZH	**Strazhitsa**	**1.98**	**81**	P	**Pn**	**19 45 47.3**	**-0.2**
SZH				S	**Sb**	**19 46 15.2**	**+0.5**
HERR	**Herculane**	**2.02**	**342**	↑P	**Pn**	**19 45 46.8**	**-1.3**
GRUS	**Gruza**	**2.10**	**297**	*e*Pn	**Pn**	**19 45 48.9**	**-0.3**
GRUS				*e*Sn	**Sb**	**19 46 17.6**	**-0.7**
MDVR	**Moldovita**	**2.15**	**328**	↓P	**Pn**	**19 45 49.1**	**-0.8**
MDVR				↓S	**Sn**	**19 46 17.5**	**+0.8**
SOH	**Sokhos**	**2.15**	**179**	P	**Pn**	**19 45 49.4**	**-0.4**
KAVA	**Kavala**	**2.17**	**155**	P	**Pn**	**19 45 49.9**	**-0.2**
SGRR	**Singureni**	**2.31**	**56**	↓P	**Pn**	**19 45 51.3**	**-0.7**
SGRR				↑S	**Sn**	**19 46 20.9**	**+0.3**
IVAS	**Ivanjica**	**2.38**	**286**	*e*Pn	**Pn**	**19 45 52.3**	**-0.8**
IVAS				*e*Sn	**Sn**	**19 46 22.6**	**+0.1**
RAZG	**Razgrad**	**2.41**	**75**	↑P	**Pn**	**19 45 54.2**	**+0.7**
RAZG				↑S	**Sn**	**19 46 24.9**	**+1.8**
JMB	**Yambol**	**2.42**	**100**	P	**Pn**	**19 45 54.0**	**+0.4**
JMB				S	**Sn**	**19 46 24.0**	**+0.6**
GZR	**Gura Zlata**	**2.45**	**351**	↓P	**Pn**	**19 45 52.6**	**-1.5**
GZR				↓S	**Sn**	**19 46 23.3**	**-1

SUDU				*e*S		**Sn**	19 48 59.7	**+2.8**
SUDU				smax	smax	19 49 01.3		
	comp=N,14nm,0.6s							
SUDU				smax	smax	19 49 01.3		
	comp=E,6.0nm,0.5s							
WTTA	**Wattenberg**	**9.30**	**301**	*e*Pn	**Pn**	19 47 30.0	**+1.8**
	comp=E,2.0nm,0.5s							
FETA	**Feichten**	**9.79**	**299**	*e*Pn	**Pn**	19 47 37.1	**+2.3**
	comp=E,0.8nm,0.4s							
FETA				*e*Sn	**Sn**	19 49 22.7	**-2.2**
	comp=E,4.5nm,1.2s							

OTT 08 20:09:15.8±0.3, 44°61N×56°36W, h18km, ML3.7/10, 280km south from Grand Bank, NI Laurentian Slope Seismic Zone., North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBN	**Guysborough**	**3.74**	**284**	PN	Pn	20 10 11.6	-1.0
GBN				SN	Sn	20 10 53.9	-2.3
GBN				Trac		20 10 57.9	
	comp=Z,15nm,0.2s						
SJNN	**Saint John's**	**3.93**	**39**	SN	Sn	20 10 57.6	-3.2
DRLN	**Deer Lake**	**4.71**	**351**	PN	Pn	20 10 24.5	-1.4
DRLN				SN	Sn	20 11 16.0	-4.0
DRLN				Trac		20 11 22.3	
	comp=Z,416nm,1.3s						
HAL	**Halifax**	**5.17**	**273**	PN	Pn	20 10 30.8	-1.4
HAL				SN	Sn	20 11 24.9	-6.3
HAL				Trac		20 11 29.0	
	comp=Z,5.2nm,0.1s						
LMN	**Caledonia Moun**	**6.09**	**285**	SN	Sn	20 11 48.8	-5.4
LMN				SN	Sb	20 11 49.1	-25
LMN				Trac		20 11 54.5	
	comp=Z,6.1nm,0.3s						
ELNB	**Elgin, New Bru**	**6.33**	**284**	PN	Pn	20 10 46.7	-1.5
ELNB				SN	Sn	20 11 54.6	-5.4
ELNB				Trac		20 12 03.8	
	comp=Z,16nm,0.5s						
HKNB	**Havelock Quarr**	**6.51**	**285**	PN	Pn	20 10 43.8	-6.8
HKNB				SN	Sn	20 11 54.8	-10
HKNB				Trac		20 11 56.3	
	comp=Z,20nm,0.3s						
WCNB	**Wards Creek**	**6.56**	**282**	PN	Pn	20 10 49.5	-1.7
WCNB				SN	Sn	20 12 00.5	-5.0
WCNB				Trac		20 12 05.0	
	comp=Z,4.5nm,0.2s						
SRNB	**Snider Mountai**	**6.67**	**284**	SN	Sn	20 12 00.2	-8.1
SRNB				SN	Sb	20 12 01.4	-29
SRNB				Trac		20 12 10.8	
	comp=Z,0.3nm,0.0s						
PCAQ	**Pointe Carleto**	**6.81**	**321**	PN	Pn	20 10 53.1	-1.5
PCAQ				SN	Sn	20 12 06.1	-5.5
PCAQ				Trac		20 12 15.0	
	comp=Z,57nm,0.8s						
BJBQ	**Baie Johan-Bee**	**7.16**	**325**	PN	Pn	20 10 58.5	-1.0
BJBQ				SN	Sn	20 12 16.1	-4.3
BJBQ				Trac		20 12 19.4	
	comp=Z,556nm,2.1s						
HSNB	**Heath Steele M**	**7.27**	**295**	PN	Pn	20 10 59.2	-1.9
HSNB				SN	Sn	20 12 16.4	-6.7
HSNB				Trac		20 12 19.8	
	comp=Z,5.8nm,0.2s						
GGN	**Saint George**	**7.47**	**278**	SN	Sn	20 12 20.0	-7.9
GGN				SN	Sb	20 12 21.4	-32
GGN				Trac		20 12 24.4	
	comp=Z,3.3nm,0.1s						

*ISK **08** 20:20:33.8, 39°.11N×27°.84E, h5km, ML3.7/36*
*AFAD **08** 20:20:34.9, 39°.10N×27°.82E, h7km±2km, MW3.5*
*THE **08** 20:20:36.8, 39°N±7°×2°.8E±1°.0, h18km±20km, M3.2/13, MLh3.2/13*
*CFUSG **08** 20:20:36.6, 39°.30N×28°.00E, h5km, Mb2.7/5, MD3.3/2, MSH2.9/5*

ISC 08 20:20:35.1±0.9, 39°.12N±0°.02×27°.84E±0°.02, h12km±7km, n116, σ0°85/137, 9C-8D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.24**	**186**	P	**Pg**	**20 20 40.0**	**-0.2**
AKHS				S	**Sg**	**20 20 43.7**	**+0.1**
AKHS				IAML		20 20 44.0	
	comp=E,1μm,0.3s						
SOMA	**Soma-Manisa**	**0.24**	**280**	Pg	**Pg**	**20 20 39.7**	**-0.6**
STEP	**BALIKESIR_Sava**	**0.28**	**340**	P	**Pg**	**20 20 40.8**	**-0.1**
STEP				IAML		20 20 45.0	
	comp=N,2μm,0.4s						
STEP				S	**Sg**	**20 20 45.1**	**+0.3**
GORD	**Gordes-Manisa**	**0.33**	**128**	Pg	**Pg**	**20 20 41.9**	**0.0**
GORD				Sg	**Sg**	**20 20 47.2**	**+0.8**
GOMA	**Golmarmara-Man**	**0.41**	**172**	Pg	**Pg**	**20 20 43.1**	**-0.2**
GOMA				Sg	**Sg**	**20 20 49.9**	**+1.1**
KTTT	**Salihli**	**0.47**	**155**	P	**Pg**	**20 20 44.2**	**-0.2**
KTTT				S	**Sg**	**20 20 49.8**	**-0.8**
KTTT				IAML		20 20 52.0	
	comp=N,2μm,0.5s						
BALB	**Balikesir**	**0.52**	**3**	Pg	**Pb**	**20 20 45.6**	**-0.6**
BALB				Sg	**Sb**	**20 20 54.2**	**+0.4**
CAMT	**Merkez**	**0.55**	**229**	P	**Pg**	**20 20 45.9**	**0.0**
CAMT				S	**Sg**	**20 20 53.3**	**0.0**
CAMT				IAML		20 20 58.0	
	comp=E,2μm,0.4s						
CAMT				IAML		20 21 00.0	
	comp=N,2μm,0.4s						
BKES	**Balkesir-Mer**	**0.62**	**6**	P	**Pg**	**20 20 47.1**	**-0.1**
BALY	**Balya**	**0.65**	**345**	P	**Pg**	**20 20 47.7**	**0.0**
DEMI	**Demirci**	**0.68**	**96**	P	**Pb**	**20 20 48.2**	**-0.3**
DURS	**Dursunbey**	**0.69**	**45**	P	**Pb**	**20 20 48.6**	**-0.5**
BUHA	**Balikesir, Bur**	**0.71**	**303**	P	**Pg**	**20 20 48.5**	**-0.4**
IZMD	**zmir-Dikili-**	**0.72**	**260**	P	**Pg**	**20 20 49.0**	**-0.2**
DKL	**Dikili**	**0.73**	**267**	Pg	**Pg**	**20 20 49.4**	**+0.1**
BLKS	**Balkesir-Sus**	**0.76**	**7**	P	**Pg**	**20 20 49.3**	**-0.6**
DST	**Dursunbey**	**0.77**	**51**	Pg	**Pb**	**20 20 49.9**	**-0.6**
MANT	**Manisa**	**0.84**	**138**	P	**Pg**	**20 20 50.9**	**-0.4**
ODEM	**Odemis-Izmir**	**0.86**	**168**	Pg	**Pg**	**20 20 51.6**	**-0.1**
SUSR	**Susurluk-Balik**	**0.87**	**12**	Pg	**Pb**	**20 20 51.8**	**-0.3**
KULA	**Kula-Manisa**	**0.88**	**133**	Pg	**Pg**	**20 20 51.7**	**-0.4**
SMAA	**Simav-Kutahya**	**0.89**	**91**	Pg	**Pb**	**20 20 52.0**	**-0.4**
SIMA	**Simav-Kutahya**	**0.89**	**92**	Pg	**Pb**	**20 20 52.1**	**-0.4**
BAGT	**Foa**	**0.90**	**240**	P	**Pg**	**20 20 52.3**	**-0.1**
CMHT	**Manyas**	**0.90**	**6**	P	**Pb**	**20 20 52.4**	**-0.2**
AYVA	**Ayvalik**	**0.92**	**282**	P	**Pb**	**20 20 52.7**	**-0.1**
GONE	**Gonen-Balikesi**	**0.94**	**353**	Pg	**Pb**	**20 20 53.3**	**0.0**
YENI	**Yenice-Canakka**	**0.94**	**331**	Pg	**Pg**	**20 20 53.0**	**-0.3**
DUVT	**Torbali**	**0.95**	**199**	P	**Pg**	**20 20 53.2**	**-0.1**
DUVT				S	**Sg**	**20 21 05.4**	**-0.3**
DUVT				IAML		20 21 08.0	
	comp=N,4μm,0.4s						
DUVT				IAML		20 21 09.0	
	comp=E,3μm,0.4s						
FOCM	**Foa**	**0.96**	**245**	Pg	**Pg**	**20 20 53.0**	**-0.6**
BLCB	**Balcova**	**0.96**	**221**	P	**Pg**	**20 20 53.1**	**-0.6**
BLCB				S	**Sg**	**20 21 06.5**	**+0.3**
BLCB	**Balcova**	**0.96**	**221**	Pg	**Pg**	**20 20 53.0**	**-0.6**
IZMR	**zmir-demi**	**0.98**	**175**	P	**Pg**	**20 20 54.2**	**+0.2**
ATIT	**Gnen**	**0.99**	**347**	P	**Pg**	**20 20 53.9**	**-0.3**
USAK	**Uak-Merkez**	**1.00**	**113**	P	**Pg**	**20 20 54.2**	**-0.2**
KIRA	**zmir-Kiraz**	**1.02**	**154**	P	**Pg**	**20 20 54.3**	**-0.4**
SHAP	**Saphane-Kutahy**	**1.08**	**94**	Pn	**Pb**	**20 20 56.0**	**+0.3**
CANM	**Can-anakkale**	**1.08**	**326**	Pn	**Pg**	**20 20 55.7**	**-0.3**
KRBN	**Karaburun**	**1.13**	**243**	Pn	**Pg**	**20 20 56.7**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**1.17**	**178**	Pn	**Pg**	**20 20 56.9**	**-0.7**
EMET	**Ktahya-Emet**	**1.18**	**77**	P	**Pn**	**20 20 58.1**	**+0.7**
BAYC	**CANAKKALE_Bayr**	**1.18**	**302**	P	**Pg**	**20 20 57.2**	**-0.7**
NAZL	**Nazilli-Aydin**	**1.20**	**163**	Pn	**Pg**	**20 20 57.9**	**-0.4**
KARB	**zmir-Karabur**	**1.21**	**248**	P	**Pg**	**20 20 57.5**	**-0.8**
KCTX	**Karacabey (Bur**	**1.22**	**19**	Pn	**Pb**	**20 20 58.1**	**+0.1**
GEDZ	**Gediz**	**1.22**	**93**	Pn	**Pn**	**20 20 58.4**	**+0.3**
PRK	**Paraskevi**	**1.23**	**277**	P	**Pg**	**20 20 58.1**	**-0.6**
PRK				S	**Sg**	**20 21 14.6**	**-0.1**
EDC	**Edincik**	**1.23**	**1**	Pn	**Pn**	**20 20 58.5**	**+0.4**
ORLT	**Orhaneli**	**1.23**	**41**	Pn	**Pn**	**20 20 58.7**	**+0.5**
ORLT	**Orhaneli**	**1.23**	**41**	P	**Pn**	**20 20 58.9**	**+0.7**
BAND	**Balkesir-Ban**	**1.25**	**9**	⇑P	**Pg**	**20 20 58.4**	**-0.8**
BAND				⇑S	**Sn**	**20 21 15.7**	**+0.5**
BAND	**Balkesir-Ban**	**1.25**	**9**	P	**Pg**	**20 20 58.5**	**-0.7**
GMLD	**Gumuldur**	**1.27**	**215**	Pn	**Pn**	**20 20 59.1**	**+0.5**
GDZ	**Gediz**	**1.27**	**91**	P	**Pn**	**20 20 59.2**	**+0.4**
BIGA	**Biga-Canakkale**	**1.28**	**336**	Pn	**Pg**	**20 20 59.2**	**-0.6**
SULTU	**Buldan**	**1.28**	**145**	P	**Pg**	**20 20 58.9**	**-1.0**
TVSB	**Tavsanli**	**1.30**	**75**	Pn	**Pn**	**20 20 59.9**	**+0.7**
DGB	**zmir**	**1.30**	**216**	P	**Pn**	**20 20 59.7**	**+0.6**
EZNE	**Ezine-Canakkal**	**1.31**	**300**	Pn	**Pn**	**20 21 00.1**	**+0.9**
KUSD	**Kusadasi-Aydin**	**1.33**	**199**	Pn	**Pn**	**20 21 00.0**	**+0.6**
ZEYE	**Izmir, Urla-Ze**	**1.37**	**231**	P	**Pn**	**20 20 59.8**	**-0.2**
GPNR	**Gulpinar-Canak**	**1.37**	**285**	Pn	**Pn**	**20 21 01.0**	**+1.0**
EZN	**Ezine**	**1.37**	**302**	P	**Pn**	**20 21 00.1**	**+0.1**
EZN				S	**Sb**	**20 21 17.9**	**-0.2**
EZN	**Ezine**	**1.37**	**302**	Pn	**Pn**	**20 21 00.9**	**+0.9**
ESEN	**Aydn-Nazilli**	**1.37**	**163**	P	**Pn**	**20 20 59.9**	**-0.2**
LAPS	**Lapseki, ANA**	**1.38**	**326**	P	**Pn**	**20 21 00.4**	**+0.3**
KOCA	**Canakkale, Ayv**	**1.38**	**287**	P	**Pn**	**20 21 01.0**	**+0.9**
AYDN	**Tasoluk**	**1.45**	**179**	P	**Pn**	**20 21 00.9**	**-0.3**
MDNY	**Mudanya-Bursa**	**1.49**	**32**	Pn	**Pn**	**20 21 01.9**	**+0.3**
GCAM	**G?zelcaml?**	**1.49**	**199**	P	**Pn**	**20 21 02.4**	**+0.8**
PASA	**Karahalli, USA**	**1.50**	**120**	P	**Pn**	**20 21 02.7**	**+0.8**
LPK	**Lapseki**	**1.51**	**327**	Pn	**Pn**	**20 21 02.5**	**+0.6**
SIGR	**SIGRI**	**1.55**	**274**	P	**Pn**	**20 21 02.2**	**-0.3**
SMG	**Samos**	**1.61**	**210**	P	**Pn**	**20 21 02.7**	**-0.6**
ARMT	**Armutlu**	**1.65**	**28**	Pn	**Pb**	**20 21 05.5**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.65**	**342**	Pn	**Pb**	**20 21 05.3**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.66**	**321**	Pn	**Pn**	**20 21 04.9**	**+0.9**
GAZK	**Gazikoy-TEKIRD**	**1.68**	**346**	Pn	**Pb**	**20 21 05.7**	**-0.2**
DDIM	**Aydin, Didim**	**1.72**	**196**	P	**Pb**	**20 21 07.2**	**+0.6**
GADA	**Gvkgeada**	**1.85**	**306**	P	**Pn**	**20 21 06.7**	**+0.1**
GADA	**Gvkgeada**	**1.85**	**306**	Pn	**Pn**	**20 21 08.0**	**+1.4**
ERIK	**Erikli-Kesan**	**1.86**	**327**	Pn	**Pn**	**20 21 08.3**	**+1.6**
YER	**Yerkesik**	**2.01**	**170**	P	**Pn**	**20 21 08.6**	**-0.3**
CAVK	**Edirne/Enez-Ca**	**2.03**	**321**	⇑P	**Pn**	**20 21 10.0**	**+0.9**
CAVK				⇓S	**Sb**	**20 21 36.7**	**-0.5**
ENEZ	**Enez**	**2.08**	**322**	P	**Pn**	**20 21 10.9**	**+1.2**
LIA	**Limnos Island**	**2.20**	**292**	P	**Pn**	**20 21 12.2**	**+0.8**
SMTH	**Samothraki Isl**	**2.24**	**308**	P	**Pn**	**20 21 12.7**	**+0.8**
ALN	**Alexandroupoli**	**2.25**	**323**	P	**Pn**	**20 21 12.4**	**+0.3**
SILT	**Sile**	**2.46**	**34**	⇓P	**Pn**	**20 21 15.1**	**+0.1**
SILT				⇓S	**Sn**	**20 21 47.0**	**+2.1**
FETY	**Fethiye**	**2.66**	**158**	P	**Pn**	**20 21 18.6**	**+0.8**
RDO	**Rodhopi**	**2.69**	**320**	P	**Pn**	**20 21 19.0**	**+0.8**
KDZ	**Kurdzhali**	**3.16**	**324**	*i* P	**Pn**	**20 21 25.0**	**+0.4**
KAVA	**Kavala**	**3.17**	**307**	P	**Pn**	**20 21 25.1**	**+0.3**
DIM	**Dimitrovgrad**	**3.40**	**330**	*i* P	**Pb**	**20 21 32.3**	**-2.9**
RZN	**Rozhen**	**3.50**	**318**	*i* P	**Pn**	**20 21 31.0**	**+1.5**
RZN				*i* S	**Sn**	**20 22 11.8**	**+0.9**
JMB	**Yambol**	**3.52**	**344**	*i* P	**Pn**	**20 21 32.0**	**+2.5**
NVR	**Nevrokopi**	**3.78**	**307**	P	**Pn**	**20 21 33.7**	**+0.6**
SRS	**Serrai**	**3.82**	**303**	P	**Pn**	**20 21 34.3**	**+0.6**
PLD	**Plovdiv**	**3.84**	**323**	*i* P	**Pn**	**20 21 35.7**	**+1.8**
PLD				*i* S	**Sn**	**20 22 21.0**	**+2.1**
ELND	**Elena**	**4.09**	**339**	⇓P	**Pn**	**20 21 38.9**	**+1.5**
SZH	**Strazhitsa**	**4.38**	**342**	*i* P	**Pn**	**20 21 42.5**	**+1.1**
PVL	**Palvikeni**	**4.48**	**334**	*i* P	**Pn**	**20 21 44.0**	**+1.2**
PLVB	**Pleven**	**4.91**	**331**	⇓P	**Pn**	**20 21 48.9**	**+0.3**
MLR	**Muntele Rosu**	**6.52**	**348**	⇑P	**Pn**	**20 22 10.6**	**-0.4**
VOIR		**6.65**	**343**	⇑P	**Pn**	**20 22 13.5**	**+0.9**
PLOR	**Plostina**	**6.79**	**353**	⇓P	**Pn**	**20 22 15.0**	**+0.4**
VRI	**Vrincioaia**	**6.80**	**353**	⇓P	**Pn**	**20 22 15.7**	**+1.1**
SEV	**Sevastopol'**	**6.95**	**37**	⇓*e*P	**Pn**	**20 22 17.1**	**+0.4**
SEV				pmax	pmax	20 22 19.9	
	comp=Z,1.0nm,0.3s						
SEV				*e*S	**Sn**	**20 23 32.4**	**-3.2**
SEV				smax	smax	20 23 35.4	
	comp=N,2.0nm,0.3s						
SEV				smax	smax	20 23 35.4	
	comp=E,2.0nm,0.4s						
HERR	**Herculane**	**7.04**	**327**	⇑P	**Pn**	**20 22 18.3**	**+0.5**
YAL	**Yalta**	**7.14**	**39**	*e*P	**Pn**	**20 22 19.4**	**+0.1**
YAL				pmax	pmax	20 22 23.6	
	comp=Z,5.0nm,0.6s						
YAL				*e*S	**Sn**	**20 23 38.5**	**-1.8**
YAL				smax	smax	20 23 39.6	
	comp=N,8.0nm,0.5s						
YAL				smax	smax	20 23 39.6	
	comp=E,10.0nm,0.4s						
MDVR	**Moldovita**	**7.27**	**323**	⇑P	**Pn**	**20 22 21.8**	**+0.6**
ONER	**Baraj Valea Uz**	**7.29**	**352**	⇑P	**Pn**	**20 22 22.1**	**+0.7**
GZR	**Gura Zlata**	**7.31**	**331**	⇑P	**Pn**	**20 22 22.6**	**+0.9**
ALU	**Alushta**	**7.41**	**39**	*e*P	**Pn**	**20 22 22.6**	**-0.3**
ALU				pmax	pmax	20 22 24.1	
	comp=Z,2.0nm,0.3s						
ALU				*e*S	**Sn**	**20 23 45.2**	**-1.6**
ALU				smax	smax	20 23 45.8	
	comp=N,2.0nm,0.2s						
ALU				smax	smax	20 23 45.8	
	comp=E,5.0nm,0.5s						
DNZ2	**Donuzlav2**	**7.41**	**31**	*e*P	**Pn**	**20 22 24.4**	**+1.4**
DNZ2				pmax	pmax	20 22 30.3	
	comp=Z,4.0nm,0.4s						
DNZ2				*e*S	**Sn**	**20 23 48.2**	**+1.2**
DNZ2				smax	smax	20 23 48.5	
	comp=N,4.0nm,0.3s						
DNZ2				smax	smax	20 23 48.5	
	comp=E,7.0nm,0.7s						
SUDU	**Sudak**	**7.85**	**40**	*e*P	**Pn**	**20 22 31.2**	**+2.2**
SUDU				pmax	pmax	20 22 31.6	
	comp=Z,3.0nm,0.4s						
SUDU				*e*S	**Sn**	**20 23 58.3**	**+0.5**
SUDU				smax	smax	20 24 00.1	
	comp=N,15nm,0.6s						
SUDU				smax	smax	20 24 00.1	
	comp=E,4.0nm,0.3s						

*IDC **08** 20:28:07.4±4.0, 17°.77S×178°.47W, h537km±22km, mb3.4/3, mbtmp4.2/4, Error ellipse: s-maj=128.4km s-min=36.5km az=143.0*

ISC 08 20:28:05.9±3.0, 17°.4S±0°.8×178°.3W±0°.6, h547km, n7, σ0°80/7, mb4.0/3, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.46**	**264**	P	**P**	**20 29 23.5**	**-0.3**
	11nm,0.7s,baz=115,slow=12,SNR=8.7						
STKA	**Stephens Creek**	**38.93**	**241**	P	**P**	**20 34 45.0**	**-0.2**
	3.3nm,0.8s,baz=67,slow=13,SNR=3.9						
	3.3nm,0.8s						
WRA	**Warramunga Arr**	**44.79**	**259**	P	**P**	**20 35 31.8**	**+0.2**
	1.4nm,0.5s,baz=95,slow=6.8,SNR=52						
	1.4nm,0.5s						
ASAR	**Alice Springs**	**44.99**	**254**	P	**P**	**20 35 33.5**	**+0.4**
	11nm,0.5s,baz=88,slow=8.3,SNR=241						
	11nm,0.5s						
MKAR	**Makanchi Array**	**108.82**	**314**	PKiKP	**PKiKP**	**20 45 34.1**	**+0.9**
	0.1nm,0.5s,baz=151,slow=0.9,SNR=4.7						
BRTR	**Keskin Array B**	**144.46**	**315**	PKP	**PKiKP**	**20 46 43.4**	**-1.1**
	0.6nm,0.6s,baz=79,slow=3.1,SNR=4.8						
MMAI	**Mount Meron Ar**	**145.91**	**304**	PKPbc	**PKiKP**	**20 46 47.6**	**0.0**
	0.6nm,0.5s,baz=150,slow=4.0,SNR=4.4						

*IDC **08** 20:58:57.7±0.5, 37°.63N×31°.71W, h0km, mb4.2/31, mbtmp4.2/31, MS4.3/74, Error ellipse: s-maj=14.5km s-min=11.8km az=151.0*
*NEIC **08** 20:58:59.4±1.9, 37°.7N±0°.1×31°.6W±0°.1, h11km±4km, mb4.9/155, Error ellipse: s-maj=18.3km s-min=12.9km az=172.0*
*SVSA **08** 20:58:59.0±1.4, 37°.32N×31°.71W, h10km, ML4.6(INMG), Error ellipse: s-maj=15.2km s-min=7.5km az=24.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Crista Mdia AtIntico N*
*GCMT **08** 20:59:00.4±0.1, 37°.54N±0°.01×31°.71W±0°.01, h12km, MW5.1/122, Moment Tensor Solution. s42,c66; s122,c194; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-3.73±.10; Mθθ2.51±.10; Mϕϕ 1.21±.09; Mrθ-0.78±.27; Mθϕ4.08±.07; Mϕr-0.44±.26; Best double couple: Mo4.94800×10^16 NP1:ϕs223.00000°, δ40.00000°, λ-100.00000°. NP2:ϕs55.00000°, δ50.00000°, λ-82.00000°. Principal axes: T 6.0700, Plg5.0000°, Azm140.0000°; N -2.2530, Plg6.0000°, Azm230.0000°; P -3.8260, Plg82.0000°, Azm10.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 20:58:59.0±0.3, 37°.60N±0°.06×31°.56W±0°.04, h10km, n513, σ1°22/404, mb4.8/132, MS4.3/76, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H07S1	**FLORES T-PHASE**	**1.80**	**9**	Pn	**Pn**	**20 59 26.8**	**-3.2**
H07S1				T	T	21 01 17.3	
	SNR=12						
H07N1	**FLORES T-PHASE**	**2.12**	**9**	Pn	**Pn**	**20 59 31.3**	**-3.1**
CALA	**Caldeira**	**2.46**	**66**	*e*P	**Pn**	**20 59 38.8**	**-0.3**
PCED	**Cedros**	**2.47**	**65**	*e*P	**Pn**	**20 59 38.2**	**-1.1**
PCAN	**Candelaria**	**2.57**	**69**	*e*P	**Pn**	**20 59 38.6**	**-2.1**
PICO	**Pico**	**2.63**	**69**	*e*P	**Pn**	**20 59 40.0**	**-1.5**
PID	**Ribeirinha**	**2.84**	**72**	*e*P	**Pn**	**20 59 42.8**	**-1.6**
ROSA	**Rosais**	**2.84**	**66**	*e*P	**Pn**	**20 59 43.2**	**-1.2**
PMAN	**Manadas**	**2.92**	**68**	*e*P	**Pn**	**20 59 44.7**	**-0.8**
PGRA	**Graciosa**	**3.15**	**62**	*e*P	**Pn**	**20 59 47.4**	**-1.3**
ADH	**Angra Heroismo**	**3.56**	**72**	*e*P	**Pn**	**20 59 52.9**	**-1.4**
PAGU	**Agualva, Azore**	**3.63**	**70**	*e*P	**Pn**	**20 59 54.4**	**-0.9**
PSCM	**Serra do Cume**	**3.67**	**71**	*e*P	**Pn**	**20 59 53.8**	**-1.9**
PSET	**Sete Cidades**	**4.63**	**85**	*e*P	**Pn**	**21 00 06.6**	**-2.4**
PSET				*e*S	**Sn**	**21 00 57.6**	**-5.2**
PSET				IAML		21 01 03.5	
PSET				IAML		21 01 03.7	
PSET				IAML		21 01 04.0	
PDA	**Ponta Delgada**	**4.68**	**86**	*e*P	**Pn**	**21 00 07.5**	**-2.1**
CMLA	**Cha da Macela**	**4.79**	**86**		**Pn**	**21 00 09.4**	**-1.7**
CMLA	**Cha da Macela**	**4.79**	**86**	*e*P	**Pn**	**21 00 09.4**	**-1.7**
CMLA				*e*S	**Sn**	**21 01 01.3**	**-5.3**
CMLA				IAML		21 01 05.1	
CMLA				IAML		21 01 05.8	
CMLA				IAML		21 01 08.7	
PGRON	**Lagoa das Cont**	**4.91**	**86**	*e*P	**Pn**	**21 00 11.0**	**-1.8**
PGRON				*e*S	**Sn**	**21 01 05.3**	**-4.3**
PGRON				IAML		21 01 08.9	
PGRON				IAML		21 01 09.5	
PGRON				IAML		21 01 10.1	
BART	**Pico Bartolome**	**5.07**	**86**	*e*P	**Pn**	**21 00 13.5**	**-1.5**
BART				*e*S	**Sn**	**21 01 09.6**	**-4.1**
BART				IAML		21 01 13.8	
BART				IAML		21 01 14.1	
BART				IAML		21 01 16.1	
PSMN	**Pico do Norte,**	**5.21**	**95**	*e*P	**Pn**	**21 00 14.7**	**-2.2**
PSMN				*e*S	**Sn**	**21 01 10.6**	**-6.4**
PSMN				IAML		21 01 14.2	
PSMN				IAML		21 01 15.2	
PSMN				IAML		21 01 15.9	
PMOZ	**Porto Moniz, M**	**12.67**	**108**		**Pn**	**21 01 59.2**	**0.0**
ESDC	**Sonseca Array**	**21.62**	**76**	P	**P**	**21 03 51.6**	**+2.3**
	8.3nm,1.0s,baz=276,slow=9.8,SNR=20						
ESDC				LR	LR	21 10 43.9	
	comp=Z,601nm,19.7s,baz=276,slow=32						
	8.3nm,1.0s						
ESBB	**Sonseca Array**	**21.62**	**76**		**P**	**21 03 50.6**	**+1.3**
DRLN	**Deer Lake**	**22.04**	**310**	P	**P**	**21 03 50.5**	**-3.1**
DRLN				IAmb	IAmb	21 03 58.0	
	comp=Z,55nm,1.3s						
MD01	**Midelt array s**	**22.36**	**94**		**P**	**21 03 58.1**	**+0.8**
MDT	**Midelt**	**22.50**	**94**	LR	LR	21 11 13.0	
	comp=Z,1μm,18.7s,baz=302,slow=32						
CEST	**Esterri de Car**	**25.49**	**68**		**P**	**21 04 28.7**	**+1.3**
CEST				IAmb	IAmb	21 04 31.8	
	comp=Z,24nm,1.1s						
EKA	**Eskdalemuir Ar**	**26.12**	**38**	P	**P**	**21 04 33.0**	**+0.1**
	comp=Z,2.8nm,0.8s,baz=231,slow=6.3,SNR=4.6						
EKA				LR	LR	21 12 04.0	
	comp=Z,466nm,18.6s,baz=244,slow=30						
	comp=Z,2.8nm,0.8s						
BATG	**Bathurst New B**	**27.05**	**302**	P	**P**	**21 04 40.5**	**-0.8**
BORG	**Borgarnes**	**27.86**	**9**	LR	LR	21 12 41.9	
	comp=Z,670nm,18.5s,baz=207,slow=30						
F64A	**Sherman**	**28.47**	**299**	P	**P**	**21 04 51.5**	**-2.5**
SCHQ	**Schefferville**	**29.46**	**317**	P	**P**	**21 05 01.2**	**-1.6**
	comp=Z,2.4nm,1.0s,baz=82,slow=14,SNR=1.7						
SCHQ				LR	LR	21 15 18.1	
	comp=Z,2μm,21.4s,baz=104,slow=33						
	comp=Z,2.4nm,1.0s						
SCHQ	**Schefferville**	**29.46**	**317**	P	**P**	**21 05 00.4**	**-2.3**
SENIN	**Lac Senin/Sane**	**29.93**	**61**	P	**P**	**21 05 07.5**	**+0.2**
TUE	**Stuetta**	**31.35**	**60**		**P**	**21 05 20.9**	**+1.1**
TUE				IAmb	IAmb	21 05 40.0	
	comp=Z,27nm,1.5s						
SFJD	**Kangerlussuaq**	**31.38**	**346**	LR	LR	21 15 15.4	
	comp=Z,2μm,18.4s,baz=156,slow=31						
FETA	**Feichten**	**32.31**	**59**	*e*P	**P**	**21 05 30.1**	**+1.9**
	comp=Z,11nm,1.6s						
RETA	**Reutte**	**32.35**	**59**	*i* P	**P**	**21 05 29.

comp=Z,8.5nm,1.1s
OJC Ojcow 38.35 54 *e*P **P 21 06 21.0 +1.1**
PSZ Piszkesteto 38.51 58 P P 21 06 20.6 -0.8
NIE Niedzica 38.69 55 *e*P **P 21 06 22.3 -0.6**
DBIC Dimbokro 39.20 135 P **P 21 06 27.6 +0.3**
comp=Z,5.8nm,0.9s,baz=326,slow=6.0,SNR=4.1
DBIC LR LR 21 21 24.1
comp=Z,1µm,19.2s,baz=340,slow=34
comp=Z,5.8nm,0.9s
DAG Danmarks Havn 39.69 5 *i* P **P 21 06 32.0 +1.3**
DAG IAmb IAmb 21 06 37.0
comp=Z,3.2nm,0.8s
KWP Kalwaria Pacla 40.25 55 *e*P **P 21 06 37.3 +1.5**
BERU Beregovo 40.32 57 pP pP 21 06 44.8 +6.0
SUW Suwalki 40.44 48 *e*P **P 21 06 37.5 +0.3**
SHIU Shidnytsya 40.70 55 pP pP 21 06 48.6 +6.5
NEEM North Greenlan 40.83 354 *i* P **P 21 06 37.3 -3.3**
NEEM IAmb IAmb 21 06 51.5
comp=Z,4.0nm,1.0s
TKL Tuckaleechee C 41.51 284 LR LR 21 21 24.2
comp=Z,378nm,20.6s,baz=80,slow=32
FINES FINESS Array B 42.51 37 P **P 21 06 55.2 +1.0**
comp=Z,3.8nm,0.8s,baz=230,slow=4.7,SNR=7.0
FINES LR LR 21 24 27.7
comp=Z,213nm,18.9s,baz=281,slow=36
comp=Z,3.8nm,0.8s
NACGM Naroch 42.54 47 *e*P **P 21 06 56.0 +1.5**
NBPS Pedro II - Pl 42.78 195 *e*P **P 21 06 57.0 0.0**
KMPD K-Podol'skiy 42.81 56 P **P 21 06 57.3 +0.6**
MNK Minsk 43.19 47 *i* P **P 21 06 59.6 -0.2**
comp=E,12nm,1.7s
MNK *i* P **P 21 06 59.6 -0.2**
comp=N,18nm,1.1s
MNK *i* P **P 21 06 59.6 -0.2**
comp=Z,10.0nm,0.9s,baz=273
MNK *i* PP **PP 21 08 40.6 +0.7**
MNK *i* PPP PPP 21 09 09.4
MNK *i* S **S 21 13 24.4 -1.8**
MNK *i* SS SS 21 16 26.9 -12
MNK *i* SSS SSS 21 17 09.9
MNK *i* LQ LQ 21 20 26.9
MNK *i* LR LR 21 23 07.2
MNK *i* LRM MLR 21 24 46.4
comp=E,299nm,15.2s
MNK *i* LRM MLR 21 25 11.2
comp=N,275nm,15.7s
MNK *i* LRM MLR 21 25 17.9
comp=Z,334nm,16.8s
RCBR Riachuelo 43.39 186 LR LR 21 21 49.1
comp=Z,94nm,18.4s,baz=20,slow=32
ARCES ARCESS Array B 43.89 25 P **P 21 07 05.2 0.0**
comp=Z,3.7nm,0.9s,baz=270,slow=1.2,SNR=3.8
ARCES LR LR 21 21 18.7
comp=Z,343nm,21.6s,baz=270,slow=30
comp=Z,3.7nm,0.9s
ARCES ARCESS Array B 43.89 25 P **P 21 07 04.7 -0.5**
BOAV Boa Vista 43.98 224 P **P 21 07 07.2 +0.6**
AK19 Malin Array Si 44.18 53 P **P 21 07 08.1 +0.3**
AK21 Malin Array Si 44.19 53 P **P 21 07 08.0 +0.1**
AK22 Malin Array Si 44.21 53 P **P 21 07 08.5 +0.5**
AK17 Malin Array Si 44.22 53 P **P 21 07 08.2 +0.1**
AK18 Malin Array Si 44.22 53 P **P 21 07 08.1 0.0**
AK04 Malin Array Si 44.28 53 P **P 21 07 09.1 +0.5**
AK11 Malin Array Si 44.28 53 P **P 21 07 08.8 +0.2**
KIEV Kiev 44.31 53 P **P 21 07 09.2 +0.4**
comp=Z,57nm,3.0s
AK01 Malin Array Si 44.31 53 P **P 21 07 09.1 +0.3**
AK02 Malin Array Si 44.31 53 P **P 21 07 09.1 +0.3**
AK03 Malin Array Si 44.31 53 P **P 21 07 09.4 +0.6**
AKASG Malin Array Be 44.32 53 P **P 21 07 09.1 +0.2**
comp=Z,3.2nm,0.8s,baz=277,slow=7.9,SNR=13
comp=Z,3.2nm,0.8s
AK08 Malin Array Si 44.35 53 P **P 21 07 09.3 +0.2**
AK10 Malin Array Si 44.35 53 P **P 21 07 09.3 +0.2**
SPITS Spitsbergen Ar 45.23 12 P **P 21 07 14.7 -1.2**
comp=Z,11nm,1.0s,baz=230,slow=13,SNR=2.6
SPITS LR LR 21 22 56.7
comp=Z,132nm,19.0s,baz=217,slow=32
comp=Z,11nm,1.0s
SDV Santo Domingo 45.37 241 LR LR 21 23 30.2
comp=Z,103nm,21.7s,baz=62,slow=32
SDV Santo Domingo 45.37 241 *e*P **P 21 07 17.0 -0.9**
ULM Lac du Bonnet 46.62 307 P **P 21 07 26.7 -0.4**
comp=Z,4.4nm,1.0s,baz=91,slow=9.2,SNR=4.1
ULM LR LR 21 26 50.6
comp=Z,774nm,18.5s,baz=60,slow=36
comp=Z,4.4nm,1.0s
LCAR Lake Charles 47.02 287 IAmb IAmb 21 07 42.7
comp=Z,10nm,1.1s
RES Resolute Bay 47.12 341 LR LR 21 24 55.1
comp=Z,504nm,18.1s,baz=20,slow=33
ITTB Itaituba 47.43 214 *e*P **P 21 07 33.7 -0.1**
S39A Bolivar 48.09 290 IAmb IAmb 21 07 43.8
comp=Z,9.6nm,0.8s
SMTB Santa Maria do 48.59 201 *e*P **P 21 07 43.3 +0.5**
ECSD EROS Data Cent 48.60 299 IAmb IAmb 21 07 55.4
comp=Z,13nm,1.1s
MACA Manacapuru-AM 48.74 220 *e*P **P 21 07 43.4 -0.5**
X40A Basin Creek Fa 48.87 286 IAmb IAmb 21 07 49.9
comp=Z,12nm,1.0s
FFC Flin Flon 49.51 314 P 21 07 49.4 -0.1
NPGB Novo Progresso 49.66 212 *e*P **P 21 07 50.9 -0.2**
BRTR Keskin Array B 49.93 66 P **P 21 07 54.4 +1.3**
comp=Z,0.8nm,0.7s,baz=266,slow=3.3,SNR=5.0
BRTR LR LR 21 29 24.8
comp=Z,56nm,18.2s,baz=286,slow=36
comp=Z,0.8nm,0.7s
ROSC El Rosal 50.80 241 LR LR 21 26 52.3
comp=Z,229nm,20.9s,baz=44,slow=33
TEFE Tefe 51.15 224 *e*P **P 21 08 02.8 +0.6**
SDBA SAO DESIDERIO 51.30 197 *e*P **P 21 08 02.0 -1.4**
SNDB Serra Nova Dou 52.68 205 *e*P **P 21 08 14.1 +0.5**
CMC01 Camacan, BA 53.21 190 *e*P **P 21 08 16.6 -0.9**
CLDB Colider 53.31 210 *e*P **P 21 08 16.2 -2.0**
JANB Januaria 53.73 195 *e*P **P 21 08 20.6 -0.8**
MMAI Mount Meron Ar 53.80 73 LR LR 21 32 07.2
comp=Z,44nm,19.7s,baz=274,slow=37
KIRV Kirov 54.35 40 LR LR 21 30 20.7
comp=Z,254nm,18.2s,baz=295,slow=35
PDRB Porto dos Gac 54.35 211 *e*P **P 21 08 25.5 -0.4**
YKA Yellowknife Ar 54.36 325 P **P 21 08 25.1 -0.4**
comp=Z,1.6nm,0.9s,baz=74,slow=6.3,SNR=12
YKA LR LR 21 29 33.7
comp=Z,619nm,18.6s,baz=88,slow=34
comp=Z,1.6nm,0.9s
KBZ Khabaz 55.05 58 P **P 21 08 31.8 +1.1**
comp=Z,2.8nm,1.0s,baz=309,slow=8.8,SNR=5.7
comp=Z,2.8nm,1.0s
BDFB Brasilia 55.17 199 P **P 21 08 32.2 +0.2**
comp=Z,2.5nm,0.8s,baz=27,slow=17,SNR=4.5
BDFB LR LR 21 29 11.7
comp=Z,242nm,19.1s,baz=6.3,slow=33
comp=Z,2.5nm,0.8s
A36M Sachs Harbour 55.84 338 P **P 21 08 34.8 -1.2**
baz=73
C36M Paulatuk 56.24 335 P **P 21 08 38.5 -0.4**
baz=73
ARAG Araguaiana, MT 56.34 204 *e*P **P 21 08 41.1 +0.9**
OZNA Ozona 56.71 286 IAmb IAmb 21 08 47.6
comp=Z,18nm,1.3s
SJMB Sao Joao De Ma 56.73 191 *e*P **P 21 08 42.3 -0.6**
DIAM Diamantina, MG 56.76 194 *e*P **P 21 08 42.4 -0.9**
OTAV Otavalo 56.96 241 *e*P **P 21 08 45.2 -0.1**
DRIO Del Rio 57.01 284 IAmb IAmb 21 08 50.2
comp=Z,12nm,1.1s
VILB Vilhena 57.03 214 *e*P **P 21 08 45.2 0.0**
RIB01 Linhares ES 57.22 190 *e*P **P 21 08 46.2 -0.2**
YMP Mirror Lake Pl 57.45 304 IAmb IAmb 21 09 08.3
comp=Z,15nm,0.9s
GNI Garni 57.69 62 LR LR 21 34 07.5
comp=Z,60nm,20.8s,baz=320,slow=36
MNHN Monahans 57.76 287 IAmb IAmb 21 08 55.7
comp=Z,9.1nm,0.9s
PDAR Pinedale Array 57.82 302 P **P 21 08 50.0 -0.8**
comp=Z,2.7nm,1.0s,baz=67,slow=5.9,SNR=12
PDAR LR LR 21 32 44.0
comp=Z,833nm,20.6s,baz=62,slow=35
comp=Z,2.7nm,1.0s
PDAR Pinedale Array 57.82 302 P 21 08 49.6 -1.2
SALV Santo Antonio 57.86 208 *e*P **P 21 08 50.7 -0.2**
WRGLY Wrigley 58.01 328 P **P 21 08 51.3 -0.2**
baz=69
FXWY Fox Creek 58.45 303 IAmb IAmb 21 09 01.3
comp=Z,11nm,1.2s
RDMU Red Mountain 58.72 299 IAmb IAmb 21 09 06.9
comp=Z,7.1nm,1.0s
CMIG Matias Romero 58.77 268 LR LR 21 34 07.8
comp=Z,49nm,19.1s,baz=49,slow=36
PTLB Pontes e Lacer 58.80 211 *e*P **P 21 08 57.8 +0.3**
AHID Auburn Hatcher 58.86 302 IAmb IAmb 21 09 03.5
comp=Z,12nm,1.1s
ALPN Alpine 58.88 286 IAmb IAmb 21 09 21.9
comp=Z,11nm,1.4s
ANMO Albuquerque 58.91 292 LR LR 21 32 13.6
comp=Z,660nm,21.2s,baz=64,slow=34
TX31 Lajitas Ar. Si 59.39 285 IAmb IAmb 21 09 22.1
comp=Z,14nm,1.4s
TXAR Lajitas Array 59.39 285 P **P 21 09 01.2 -0.6**
comp=Z,4.6nm,1.0s,baz=94,slow=7.0,SNR=19
TXAR LR LR 21 32 55.1
comp=Z,362nm,20.6s,baz=54,slow=34
comp=Z,4.6nm,1.0s
TXAR Lajitas Array 59.39 285 P 21 09 01.4 -0.4
KOTAN Kotaneelee Air 59.43 324 P **P 21 09 02.7 +1.3**
baz=67
BSUT Blindstream Ca 59.55 300 IAmb IAmb 21 09 26.5
comp=Z,11nm,1.2s
P18A Preston Nutter 59.59 299 IAmb IAmb 21 09 08.8
comp=Z,7.6nm,1.0s
BSCB Bom Sucesso 59.60 194 *e*P **P 21 09 01.6 -1.4**
ARTI Arti 59.64 40 LR LR 21 33 26.0
comp=Z,144nm,18.9s,baz=313,slow=35
HWUT Hardware Ranch 59.65 301 IAmb IAmb 21 09 14.2
comp=Z,6.5nm,0.8s
INK Inuvik 59.82 335 LR LR 21 32 08.4
comp=Z,1µm,18.9s,baz=52,slow=33
INK Inuvik 59.82 335 P 21 09 02.2 -1.7
INK IAmb IAmb 21 09 25.6
comp=Z,16nm,1.4s
INK Inuvik 59.82 335 P **P 21 09 02.2 -1.7**
baz=64
DUB01 Friburgo-RJ 60.23 192 *e*P **P 21 09 06.1 -1.2**
F31M Tsiigehtchic 60.27 334 P **P 21 09 05.7 -1.4**
baz=63
NEW Newport 60.46 310 LR LR 21 35 10.8
comp=Z,568nm,18.0s,baz=38,slow=36
G31M Satah River 60.70 334 P **P 21 09 09.0 -1.0**
baz=63
TGTN Hyland Airport 60.74 327 P **P 21 09 11.8 +1.3**
baz=65
F30M Barrier River 60.89 335 P 21 09 10.7 -0.7
F30M IAmb IAmb 21 09 18.3
comp=Z,14nm,1.1s
F30M Barrier River 60.89 335 P **P 21 09 10.4 -1.0**
baz=62
D28M Stokes Point 61.01 337 P **P 21 09 12.1 0.0**
baz=60
PLID Pearl Lake 61.10 306 P 21 09 12.8 -0.7
E29M Blow River 61.21 336 P **P 21 09 13.3 -0.3**
baz=60
H31M Peel River 61.24 333 P **P 21 09 13.5 -0.3**
baz=62
G30M tAoh Zraii Nji 61.34 334 P **P 21 09 14.6 +0.1**
baz=61
MMPY Sheldon Lake, 61.52 329 P **P 21 09 16.1 +0.3**
baz=63
D27M Malcolm River 61.73 338 IAmb IAmb 21 09 36.3
comp=Z,14nm,1.2s
D27M Malcolm River 61.73 338 P **P 21 09 16.5 -0.6**
baz=58
EPYK Eagle Plains 61.82 334 P **P 21 09 17.2 -0.5**
baz=60
E09A Wood Farm, Sta 61.83 309 IAmb IAmb 21 09 23.7
comp=Z,10nm,1.2s
AKTO Aktyubinsk 61.91 46 LR LR 21 36 32.5
comp=Z,192nm,18.0s,baz=136,slow=36
PKCU Pink Cliffs 62.01 297 IAmb IAmb 21 09 38.7
comp=Z,13nm,1.1s
BMO Blue Mountains 62.04 307 P 21 09 19.3 -0.3
F28M Old Crow 62.25 336 P **P 21 09 20.2 -0.3**
baz=58
I30M Mount Dempster 62.27 333 IAmb IAmb 21 09 48.3
comp=Z,8.0nm,1.2s
I30M Mount Dempster 62.27 333 P **P 21 09 21.1 +0.3**
baz=60
ATAH Atahualpa 62.34 235 LR LR 21 36 06.1
comp=Z,76nm,18.9s,baz=29,slow=36
C27K Jago River 62.34 339 P **P 21 09 19.8 -1.4**
baz=56
U15A North Rim 62.46 296 P 21 09 23.6 +0.8
U15A IAmb IAmb 21 09 43.1
comp=Z,9.5nm,1.3s
E27K Coleen River 62.50 337 IAmb IAmb 21 09 34.4
comp=Z,7.7nm,1.1s
E27K Coleen River 62.50 337 P **P 21 09 21.1 -1.1**
baz=57
C26K Camden Bay 62.52 339 P **P 21 09 21.6 -0.6**
baz=55
ELK Elko 62.52 302 LR LR 21 35 35.7
comp=Z,759nm,20.4s,baz=68,slow=35
YPT Yelepit 62.55 308 IAmb IAmb 21 09 27.9
comp=Z,11nm,1.2s
J30M Hart River 62.57 332 IAmb IAmb 21 09 41.8
comp=Z,12nm,1.4s
J30M Hart River 62.57 332 P **P 21 09 22.7 -0.2**
baz=60
PSUT Pine Spring 62.59 299 IAmb IAmb 21 09 41.5
comp=Z,6.6nm,0.9s
I29M Ogilvie Camp, 62.89 333 IAmb IAmb 21 09 43.9
comp=Z,12nm,1.1s
I29M Ogilvie Camp, 62.89 333 P **P 21 09 25.1 +0.2**
baz=59,SNR=6.1
R33M Jennings River 62.90 325 IAmb IAmb 21 09 33.1
comp=Z,12nm,1.1s
R33M Jennings River 62.90 325 P **P 21 09 26.4 +1.2**
baz=62
MAYO Mayo, Yukon 62.90 331 P **P 21 09 25.4 +0.4**
baz=60
DLBC Dease Lake 62.92 324 LR LR 21 35 04.6
comp=Z,662nm,19.5s,baz=90,slow=34
DLBC Dease Lake 62.92 324 P **P 21 09 27.5 +2.2**
baz=62
N32M Quiet Lake 62.98 328 P **P 21 09 25.9 +0.3**
baz=61
LTY Liberty 63.05 310 IAmb IAmb 21 09 35.1
comp=Z,15nm,1.3s
MXC Moxie City 63.13 309 IAmb IAmb 21 09 36.6
comp=Z,9.1nm,1.4s
D25K Kavik River 63.29 339 IAmb IAmb 21 09 46.2
comp=Z,6.9nm,1.1s
D25K Kavik River 63.29 339 P **P 21 09 26.9 -0.5**
baz=54
P33M Teslin, Yukon 63.32 327 P **P 21 09 29.0 +1.1**
baz=61
J29N Klondike Camp 63.34 332 P **P 21 09 27.9 0.0**
baz=58
K29M Barlow Dome 63.40 332 IAmb IAmb 21 09 48.0
comp=Z,10nm,1.2s
K29M Barlow Dome 63.40 332 P **P 21 09 28.4 0.0**
baz=59
I28M Miner Creek 63.43 334 P **P 21 09 28.0 -0.5**
baz=57
H27K Steamboat Moun 63.55 335 P **P 21 09 29.0 -0.2**
baz=56
F26K Sheenjek River 63.57 337 IAmb IAmb 21 09 48.2
comp=Z,10.0nm,1.4s
F26K Sheenjek River 63.57 337 P **P 21 09 28.9 -0.4**
baz=55
S34M Telegraph Cree 63.69 324 P **P 21 09 31.8 +1.6**
baz=61
LPAZ La Paz 63.69 220 P **P 21 09 31.4 0.0**
comp=Z,20nm,1.0s,baz=0.4,slow=7.0,SNR=27
LPAZ LR LR 21 33 58.0
comp=Z,187nm,20.9s,baz=22,slow=33
comp=Z,20nm,1.0s
LPAZ La Paz 63.69 220 P 21 09 31.1 -0.3
LPAZ La Paz 63.69 220 *e*P **P 21 09 31.2 -0.2**
Q32M Nakina River 63.70 325 P **P 21 09 31.9 +1.4**
baz=60
C24K Franklin Bluff 63.70 340 P P 21 09 31.1 +1.0
C24K IAmb IAmb 21 09 48.8
comp=Z,12nm,1.1s
C24K Franklin Bluff 63.70 340 P **P 21 09 29.3 -0.8**
baz=52
T35M Bob Quinn 63.72 323 P **P 21 09 32.3 +1.8**
baz=61
E25K Arctic Village 63.76 338 IAmb IAmb 21 09 52.1
comp=Z,7.8nm,1.1s
E25K Arctic Village 63.76 338 P **P 21 09 30.1 -0.4**
baz=54
M30M Minto, Yukon 63.78 330 IAmb IAmb 21 09 49.3
comp=Z,8.2nm,1.1s
M30M Minto, Yukon 63.78 330 P **P 21 09 31.8 +1.0**
baz=59,SNR=6.1
G26K Porcupine Rive 63.89 336 P **P 21 09 31.4 0.0**
baz=55
I27K Kandik River 63.93 334 P **P 21 09 31.9 +0.1**
baz=56
N31M Braeburn, Yuko 63.93 329 P **P 21 09 32.3 +0.5**
baz=59
DAWY Dawson 63.98 332 IAmb IAmb 21 09 53.3
comp=Z,11nm,1.2s
DAWY Dawson 63.98 332 P **P 21 09 31.6 -0.5**
baz=57
WHY Whitehorse 63.98 328 P **P 21 09 32.6 +0.3**
baz=59
WVOR Wild Horse Val 64.00 305 IAmb IAmb 21 09 54.4
comp=Z,15nm,1.4s
L29M L29M 64.02 331 P **P 21 09 32.7 +0.3**
baz=58
P32M Atlin 64.03 326 P **P 21 09 33.7 +1.2**
baz=60
D24K Happy Valley 64.08 339 P **P 21 09 32.3 -0.3**
baz=52
F25K Christian Rive 64.09 337 IAmb IAmb 21 09 53.4
comp=Z,6.7nm,1.1s
F25K Christian Rive 64.09 337 P **P 21 09 32.5 -0.4**
baz=54
C23K Itkillik River 64.14 340 P **P 21 09 32.4 -0.6**
baz=50
O30N Mendenhall 64.44 328 IAmb IAmb 21 09 42.9
comp=Z,12nm,1.4s
O30N Mendenhall 64.44 328 P **P 21 09 35.4 +0.2**
baz=58
NRIK Noril'sk 64.48 20 P **P 21 09 36.2 +1.0**
comp=Z,1.3nm,0.6s,baz=338,slow=4.4,SNR=4.3
NRIK LR LR 21 35 10.0
comp=Z,72nm,21.8s,baz=320,slow=34
comp=Z,1.3nm,0.6s
A22K Sinclair Lake 64.48 342 P **P 21 09 34.5 -0.7**
baz=47
N30M Aishikik Lake 64.48 329 IAmb IAmb 21 09 42.8
comp=Z,14nm,1.4s
N30M Aishikik Lake 64.48 329 P **P 21 09 35.5 0.0**
baz=58
M29M Somme Creek 64.50 330 P **P 21 09 36.0 +0.4**
baz=57
B22K Teshekpuk Lake 64.55 341 P **P 21 09 35.1 -0.6**
baz=48
TOLK Toolik Lake Re 64.62 339 P **P 21 09 34.8 -1.5**
baz=51
I26K Coal Creek Min 64.62 334 IAmb IAmb 21 09 54.7
comp=Z,15nm,1.4s
I26K Coal Creek Min 64.62 334 P **P 21 09 36.0 -0.2**
baz=55
A21K Barrow 64.65 343 P **P 21 09 35.0 -1.2**
baz=46
E24K Your Creek 64.66 338 IAmb IAmb 21 10 00.8
comp=Z,8.6nm,1.1s
E24K Your Creek 64.66 338 P **P 21 09 36.1 -0.4**
baz=52,SNR=9.4
D23K Nanushuk River 64.72 340 IAmb IAmb 21 09 56.4
comp=Z,10nm,1.3s
D23K Nanushuk River 64.72 340 P **P 21 09 35.9 -1.0**
baz=50
SKAG Skagway 64.80 327 P **P 21 09 38.5 +1.0**
baz=58
BBB Bella Bella 64.98 318 LR LR 21 37 23.3
comp=Z,1µm,18.9s,baz=64,slow=36
HYT Haines Junctio 65.00 329 P **P 21 09 39.6 +0.7**
baz=57
E23K Chandalar 65.00 339 P **P 21 09 38.2 -0.6**
baz=51
WRAK Wrangell Islan 65.01 323 P **P 21 09 41.1 +2.3**
baz=59
R32K Eaglecrest 65.06 325 P **P 21 09 41.1 +1.9**
baz=58
NNA Nana 65.08 230 LR LR 21 36 59.4
comp=Z,71nm,19.7s,baz=6.5,slow=35
P30M Million Dollar 65.15 328 P **P 21 09 41.0 +1.2**
baz=58
YUK4 Talbot Arm 65.18 329 P **P 21 09 40.2 0.0**
baz=57
G24K Hadweenzic Riv 65.21 337 IAmb IAmb 21 09 53.7
comp=Z,10nm,1.1s
G24K Hadweenzic Riv 65.21 337 P **P 21 09 39.8 -0.3**
baz=52
V35K Ketchikan 65.21 322 P **P 21 09 43.6 +3.4**
baz=59
YUK6 Outpost Mounta 65.28 329 P **P 21 09 41.7 +0.8**
baz=57
PRP Porcupine Dome 65.30 335 P **P 21 09 40.6 -0.2**
baz=53,SNR=5.6
D22K Ayikyak River 65.33 340 IAmb IAmb 21 09 54.3
comp=Z,9.7nm,1.1s
D22K Ayikyak River 65.33 340 P **P 21 09 40.3 -0.5**
baz=48
B21K Ikpikpuk River 65.33 341 P **P 21 09 40.7 -0.1**
baz=47,SNR=5.8
L27K Beaver Creek, 65.45 332 P **P 21 09 42.1 +0.5**
baz=55
BVCY Beaver Creek 65.45 331 P **P 21 09 42.6 +0.9**
baz=55
S32K Killisnoo 65.51 325 P **P 21 09 43.8 +1.8**
baz=58
U33K Whale Pass 65.54 323 P **P 21 09 44.8 +2.6**
baz=59
E22K Anaktuvuk Pass 65.58 339 IAmb IAmb 21 10 00.4
comp=Z,9.2nm,1.4s
E22K Anaktuvuk Pass 65.58 339 P **P 21 09 42.3 -0.2**
baz=49
NV11 Mina Array Sit 65.60 301 IAmb IAmb 21 09 52.8
comp=Z,6.9nm,1.1s
YUK3 Moose Creek 65.66 330 P **P 21 09 43.8 +0.5**
baz=56
YUK8 Steele Glacier 65.66 330 P **P 21 09 43.7 +0.4**
baz=56
GWY Greenwater Val 65.68 298 IAmb IAmb 21 09 53.4
comp=Z,9.4nm,1.3s
SCRK Sand Creek 65.70 333 P 21 09 44.1 +0.7
SCRK Sand Creek 65.70 333 P **P 21 09 44.0 +0.6**
baz=54
C21K Knifeblade Rid 65.70 341 P **P 21 09 43.0 -0.2**
baz=47
B20K Meade River 65.70 342 IAmb IAmb 21 09 56.9
comp=Z,11nm,1.1s
B20K Meade River 65.70 342 P **P 21 09 43.1 0.0**
baz=45
NVAR Mina Array Bea 65.70 301 P **P 21 09 43.3 -0.7**
comp=Z,1.0nm,0.8s,baz=66,slow=5.8,SNR=7.6
NVAR LR LR 21 38 06.7
comp=Z,804nm,20.1s,baz=68,slow=36
comp=Z,1.0nm,0.8s
COLD Coldfoot 65.71 338 P **P 21 09 43.3 +0.1**
baz=50
O29M Mount Kennedy 65.72 329 P **P 21 09 44.2 +0.6**
baz=56
J25K Salcha River, 65.80 334 IAmb IAmb 21 10 01.7
comp=Z,10nm,1.3s
J25K Salcha River, 65.80 334 P **P 21 09 44.4 +0.4**
baz=53
M27K Edge Creek, AK 65.87 331 IAmb IAmb 21 09 51.5
comp=Z,7.2nm,0.9s
M27K Edge Creek, AK 65.87 331 P **P 21 09 45.1 +0.6**
baz=55
CRAG Craig 65.87 322 P **P 21 09 47.6 +3.1**
baz=58
H24K Noodor Dome 65.87 336 IAmb IAmb 21 09 51.3
comp=Z,6.4nm,1.1s
H24K Noodor Dome 65.87 336 P **P 21 09 44.3 -0.1**
baz=51
E21K Killik River 65.97 340 P **P 21 09 44.1 -0.8**
baz=47
G23K Bananza Creek 65.99 338 P **P 21 09 45.4 +0.2**
baz=50
S31K Pelican 66.00 326 P **P 21 09 47.5 +2.3**
baz=57
L26K Log Cabin Wild 66.03 332 P **P 21 09 46.4 +1.0**
baz=54
SIT Sitka 66.07 325 P **P 21 09 48.0 +2.3**
baz=58
PB16 IPOC Station P 66.11 220 P 21 09 47.2 +0.1
O28M Mount Upton 66.12 329 P **P 21 09 47.5 +1.1**
baz=55
RIDG Independent Ri 66.14 333 P **P 21 09 46.7 +0.5**
baz=53
POKR Poker Plat Res 66.18 335 P **P 21 09 46.7 +0.4**
baz=51
ILAR Eielson Array 66.22 335 P **P 21 09 46.3 -0.3**
comp=Z,0.7nm,0.7s,baz=39,slow=6.6,SNR=9.1
ILAR LR LR 21 36 08.4
comp=Z,849nm,19.4s,baz=58,slow=34
comp=Z,0.7nm,0.7s

M26K	**Nabesna, AK**	**66.27 332**	P	**P**	**21 09 47.5 +0.5**	
	baz=54					
K24K	**Donnelly Dome**	**66.43 334**	P	**P**	**21 09 48.3 +0.2**	
	baz=52					
HDA	**Harding Lake**	**66.46 335**	P	**P**	**21 09 48.4 +0.3**	
	baz=51					
CTG	**Chitna Glacier**	**66.47 330**	P	**P**	**21 09 49.7 +1.3**	
	baz=54					
A19K	**Wainwright**	**66.48 343**	P	**P**	**21 09 48.1 -0.1**	
	baz=42					
D20K	**Etivluk River**	**66.48 341**	IAmb	IAmb	21 10 00.8	
	comp=Z,9.9nm,1.4s					
D20K	**Etivluk River**	**66.48 341**	P	**P**	**21 09 48.1 -0.1**	
	baz=45					
PINM	**Pinnacle**	**66.53 329**	P	**P**	**21 09 49.4 +0.6**	
	baz=55					
CCB	**Clear Creek Bu**	**66.60 335**		**P**	**21 09 48.8 -0.2**	
CCB			IAmb	IAmb	21 10 06.6	
	comp=Z,7.8nm,1.1s					
F21K	**Alatna River**	**66.67 339**	P	**P**	**21 09 50.2 +0.8**	
	baz=47					
E20K	**Nigu River**	**66.69 340**	P	**P**	**21 09 49.9 +0.2**	
	baz=45					
I23K	**Minto, Yukon-K**	**66.79 336**	P	**P**	**21 09 51.0 +0.8**	
	baz=50,SNR=6.1					
PFO	**Pinyon Flats O**	**66.82 295**	LR	LR	21 38 50.9	
	comp=Z,355nm,18.5s,baz=60,slow=36					
PAX	**Paxson**	**66.84 333**	P	**P**	**21 09 51.0 +0.3**	
	baz=52					
MCARA	**McCarthy VSAT**	**66.89 331**	P	**P**	**21 09 51.5 +0.6**	
	baz=53					
H22K	**Ishtalitna Cre**	**66.94 337**	P	**P**	**21 09 51.3 +0.1**	
	baz=48					
C19K	**Lookout Ridge**	**66.95 342**	IAmb	IAmb	21 10 07.0	
	comp=Z,13nm,1.2s					
C19K	**Lookout Ridge**	**66.95 342**	P	**P**	**21 09 51.3 0.0**	
	baz=43,SNR=7.0					
YBH	**Yreka Blue Hor**	**66.99 306**	LR	LR	21 39 17.3	
	comp=Z,49nm,18.5s,baz=72,slow=36					
D19K	**Kuna River**	**67.03 341**	IAmb	IAmb	21 10 05.7	
	comp=Z,11nm,1.4s					
D19K	**Kuna River**	**67.03 341**	P	**P**	**21 09 51.1 -0.6**	
	baz=44					
NEA2	**Nenana**	**67.06 335**	IAmb	IAmb	21 10 04.3	
	comp=Z,7.7nm,0.8s					
NEA2	**Nenana**	**67.06 335**	P	**P**	**21 09 52.1 +0.2**	
	baz=50,SNR=6.9					
HARP	**HAARP**	**67.08 332**	P	**P**	**21 09 52.9 +0.8**	
	baz=52					
LPIG	**La Paz**	**67.15 283**	LR	LR	21 39 54.1	
	comp=Z,148nm,18.8s,baz=35,slow=37					
G21K	**Allakaket**	**67.16 338**	IAmb	IAmb	21 10 15.7	
	comp=Z,8.1nm,1.4s					
G21K	**Allakaket**	**67.16 338**	P	**P**	**21 09 52.3 -0.3**	
	baz=47					
MESA	**MESA**	**67.18 329**	P	**P**	**21 09 53.9 +0.8**	
	baz=54					
CRQE	**Cirque**	**67.29 330**	P	**P**	**21 09 54.8 +1.1**	
	baz=53					
MLY	**Manley**	**67.31 336**	P	**P**	**21 09 54.5 +0.9**	
	baz=49					
N25K	**Chitina, Valde**	**67.35 332**	P	**P**	**21 09 54.7 +0.8**	
	baz=52					
BVAR	**Borovoye Array**	**67.36 40**	P	**P**	**21 09 55.7 +1.6**	
	comp=Z,1.1nm,0.6s,baz=318,slow=8.6,SNR=5.0					
BVAR			LR	LR	21 39 21.1	
	comp=Z,123nm,18.0s,baz=307,slow=36					
	comp=Z,1.1nm,0.6s					
PB11	**IPOC Station P**	**67.39 219**		**P**	**21 09 54.4 -0.3**	
F20K	**Avaraart Lake**	**67.42 339**	P	**P**	**21 09 54.5 +0.3**	
	baz=45					
DHY	**Denali Highway**	**67.45 334**	P	**P**	**21 09 55.1 +0.5**	
	baz=51					
H21K	**Melozitna Rive**	**67.53 337**	P	**P**	**21 09 55.7 +0.7**	
	baz=47					
E19K	**Redstone River**	**67.54 340**	IAmb	IAmb	21 10 08.2	
	comp=Z,6.3nm,1.1s					
E19K	**Redstone River**	**67.54 340**	P	**P**	**21 09 55.3 +0.3**	
	baz=44					
MCK	**McKinley**	**67.57 335**	P	**P**	**21 09 56.1 +0.9**	
	baz=50					
I21K	**Tanana**	**67.60 337**	P	**P**	**21 09 56.1 +0.7**	
	baz=48					
M24K	**Tolsona, Glenn**	**67.63 332**	P	**P**	**21 09 56.6 +0.9**	
	baz=51					
C18K	**Utukok River**	**67.68 342**	P	**P**	**21 09 55.7 -0.2**	
	baz=41					
BGLC	**Bering Glacier**	**67.75 330**	P	**P**	**21 09 57.6 +1.3**	
	baz=53					
BMRM	**Bremner River**	**67.75 331**	P	**P**	**21 09 57.2 +0.7**	
	baz=52					
WAT6	**Susitna Watana**	**67.90 333**	P	**P**	**21 09 57.8 +0.4**	
	baz=50					
KLU	**Klutina**	**67.92 332**	P	**P**	**21 09 58.1 +0.6**	
	baz=51					
BPAW	**Bear Paw Mtn.**	**68.01 336**		**P**	**21 09 58.4 +0.4**	
BPAW			IAmb	IAmb	21 10 01.8	
	comp=Z,6.6nm,1.0s					
BPAW	**Bear Paw Mtn.**	**68.01 336**	P	**P**	**21 09 57.8 -0.2**	
	baz=48					
WAT1	**Susitna Watana**	**68.02 334**	P	**P**	**21 09 58.7 +0.6**	
	baz=50					
CPUP	**Villa Florida**	**68.05 205**	P	**P**	**21 09 59.8 +1.3**	
	comp=Z,1.6nm,0.9s,baz=345,slow=16,SNR=3.2					
CPUP			LR	LR	21 36 17.8	
	comp=Z,58nm,19.3s,baz=18,slow=33					
	comp=Z,1.6nm,0.9s					
F19K	**Shaleruckik Mo**	**68.14 340**	P	**P**	**21 09 59.0 +0.3**	
	baz=44					
TRF	**Thorofare Moun**	**68.21 335**	P	**P**	**21 10 00.0 +0.5**	
	baz=48					
SCM	**Sheep Creek Mo**	**68.23 333**	P	**P**	**21 10 00.4 +1.0**	
	baz=50					
H20K	**Anotleneega Mo**	**68.27 338**	P	**P**	**21 10 00.1 +0.5**	
	baz=46					
C17K	**DeLong Mountai**	**68.28 343**	P	**P**	**21 09 59.9 +0.3**	
	baz=40					
KAIM	**Kayak Island**	**68.32 330**	P	**P**	**21 10 01.0 +1.1**	
	baz=52					
M23K	**Glacier View**	**68.40 333**	P	**P**	**21 10 00.9 +0.5**	
	baz=50					
EYAK	**Cordova Ski Ar**	**68.45 331**	P	**P**	**21 10 01.7 +0.9**	
	baz=51					
G19K	**Purcell Mounta**	**68.45 339**	P	**P**	**21 10 01.3 +0.5**	
	baz=44					
E18K	**Tukpahlearik C**	**68.45 341**	P	**P**	**21 10 01.3 +0.6**	
	baz=42					
SML	**Sawmill**	**68.61 333**	P	**P**	**21 10 02.6 +0.8**	
	baz=50					
MBAR	**Mbarara**	**68.72 108**	LR	LR	21 39 27.1	
	comp=Z,416nm,18.9s,baz=310,slow=35					
GLI	**Glacier Island**	**68.75 332**	P	**P**	**21 10 03.8 +1.2**	
	baz=50					
F18K	**Selawik**	**68.82 340**	P	**P**	**21 10 03.4 +0.5**	
	baz=42,SNR=5.3					
D17K	**Noatak River**	**68.86 342**	P	**P**	**21 10 03.7 +0.5**	
	baz=40					
CUT	**Chulitna**	**68.90 334**	P	**P**	**21 10 04.6 +1.1**	
	baz=48					
KNK	**Knik Glacier**	**68.91 333**	P	**P**	**21 10 05.0 +1.4**	
	baz=49					
C16K	**Lisburne Hills**	**68.94 343**	IAmb	IAmb	21 10 17.0	
	comp=Z,8.2nm,1.2s					
C16K	**Lisburne Hills**	**68.94 343**	P	**P**	**21 10 04.2 +0.5**	
	baz=38					
FURI	**Furi**	**68.97 95**	LR	LR	21 39 40.5	
	comp=Z,450nm,21.1s,baz=323,slow=35					
E17K	**Hotham Inlet**	**69.03 341**	P	**P**	**21 10 04.7 +0.5**	
	baz=40					
PMR	**Palmer**	**69.04 333**	P	**P**	**21 10 06.1 +1.8**	
	baz=49					
G18K	**Tagagawik**	**69.07 339**	P	**P**	**21 10 05.2 +0.6**	
	baz=43					
PPLA	**Purkeypile**	**69.22 335**	P	**P**	**21 10 07.0 +1.3**	
	baz=47					
F17K	**Baldwin Pennin**	**69.36 341**	P	**P**	**21 10 06.1 -0.2**	
	baz=41					
Q23K	**Middleton Isla**	**69.39 330**	P	**P**	**21 10 07.9 +1.2**	
	baz=50					
P23K	**Montague Islan**	**69.44 331**	P	**P**	**21 10 07.4 +0.5**	
	baz=50					
K20K	**Telida**	**69.52 336**	P	**P**	**21 10 07.2 -0.2**	
	baz=46					
H18K	**Honhosa River**	**69.54 339**	P	**P**	**21 10 07.5 +0.1**	
	baz=43					
J19K	**Poorman**	**69.56 337**	P	**P**	**21 10 07.5 -0.1**	
	baz=44					
RC01	**Rabbit Creek A**	**69.59 333**	P	**P**	**21 10 08.0 +0.1**	
	baz=48					
SKT	**Skwentna**	**69.63 334**	P	**P**	**21 10 08.7 +0.6**	
	baz=47					
G17K	**Kiwalik Mounta**	**69.92 340**	P	**P**	**21 10 09.5 -0.3**	
	baz=41					
STLK	**Strandline Lak**	**70.06 334**	IAmb	IAmb	21 10 33.8	
	comp=Z,11nm,1.3s					
H17K	**Granite Mounta**	**70.14 339**	P	**P**	**21 10 11.1 -0.1**	
	baz=41					
TIXI	**Tiksi**	**70.17 6**	LR	LR	21 40 11.1	
	comp=Z,99nm,18.1s,baz=12,slow=35					
M20K	**Styx River**	**70.24 335**	IAmb	IAmb	21 10 17.6	
	comp=Z,12nm,1.0s					
M20K	**Styx River**	**70.24 335**	P	**P**	**21 10 12.2 +0.2**	
	baz=46					
J18K	**Innoko River**	**70.28 337**	P	**P**	**21 10 12.0 -0.1**	
	baz=44					
N20K	**Mount Spurr**	**70.40 334**	P	**P**	**21 10 13.6 +0.7**	
	baz=46					
SPCR	**Spurr Chakacha**	**70.40 334**	P	**P**	**21 10 14.1 +1.2**	
	baz=46					
G16K	**Koyuk River**	**70.46 340**	P	**P**	**21 10 12.9 -0.2**	
	baz=40					
L19K	**White Mountain**	**70.61 335**	P	**P**	**21 10 14.4 +0.2**	
	baz=45					
M19K	**Big River Lodg**	**70.65 335**	IAmb	IAmb	21 10 31.8	
	comp=Z,8.5nm,1.1s					
M19K	**Big River Lodg**	**70.65 335**	P	**P**	**21 10 14.3 -0.1**	
	baz=45					
ATD	**Arta Tunnel**	**70.73 90**	LR	LR	21 41 54.7	
	comp=Z,12nm,18.2s,baz=324,slow=36					
F15K	**North Star Dit**	**70.81 341**	IAmb	IAmb	21 10 30.1	
	comp=Z,13nm,1.4s					
F15K	**North Star Dit**	**70.81 341**	P	**P**	**21 10 15.0 -0.3**	
	baz=38					
BRSE	**Bradley Lake S**	**70.87 332**	P	**P**	**21 10 15.8 +0.1**	
	baz=47					
H16K	**Elim**	**71.01 340**	P	**P**	**21 10 16.7 +0.2**	
	baz=40					
I17K	**Unalakleet**	**71.16 339**	P	**P**	**21 10 18.1 +0.7**	
	baz=40					
L18K	**Granite Mounta**	**71.18 336**	P	**P**	**21 10 17.6 0.0**	
	baz=43					
G15K	**Niuluk**	**71.22 341**	P	**P**	**21 10 17.0 -0.7**	
	baz=38					
HOM	**Homer**	**71.26 332**	P	**P**	**21 10 18.8 +0.7**	
	baz=46					
K17K	**Iditarod**	**71.32 337**	IAmb	IAmb	21 10 34.2	
	comp=Z,12nm,1.2s					
K17K	**Iditarod**	**71.32 337**	P	**P**	**21 10 19.0 +0.6**	
	baz=42					
F14K	**Arctic Creek**	**71.42 342**	P	**P**	**21 10 19.1 +0.2**	
	baz=36					
M18K	**Stony River**	**71.43 335**	P	**P**	**21 10 19.5 +0.4**	
	baz=44					
N19K	**Bonanza Creek**	**71.46 334**	P	**P**	**21 10 19.7 +0.3**	
	baz=45					
J16K	**Anvik River**	**71.59 338**	P	**P**	**21 10 20.5 +0.5**	
	baz=40					
TNA	**Tin City**	**71.74 342**	P	**P**	**21 10 21.1 +0.3**	
	baz=35					
L17K	**Donlin**	**71.75 337**	P	**P**	**21 10 21.5 +0.5**	
	baz=42					
ANM	**Nome**	**71.91 341**	P	**P**	**21 10 21.5 -0.4**	
	baz=37					
M17K	**Holitna River**	**72.02 336**	P	**P**	**21 10 23.4 +0.8**	
	baz=42					
N18K	**Kilae Creek**	**72.04 335**	P	**P**	**21 10 23.2 +0.4**	
	baz=44					
Q20K	**Shuyak Island**	**72.27 332**	P	**P**	**21 10 25.3 +1.2**	
	baz=46					
O18K	**Kokhtla Hills**	**72.40 334**	P	**P**	**21 10 25.9 +0.9**	
	baz=44					
L16K	**Owhat River**	**72.44 337**	P	**P**	**21 10 25.7 +0.5**	
	baz=41					
Q19K	**Cape Douglas,**	**72.50 333**	P	**P**	**21 10 26.9 +1.3**	
	baz=45					
N17K	**Nushagak Hills**	**72.59 335**	P	**P**	**21 10 26.5 +0.5**	
	baz=42					
K15K	**Wolf Creek Mou**	**72.62 338**	P	**P**	**21 10 26.6 +0.3**	
	baz=40					
P18K	**Big Mountain,**	**72.74 334**	P	**P**	**21 10 27.8 +0.8**	
	baz=44					
M16K	**Timber Creek**	**72.80 336**	P	**P**	**21 10 28.6 +1.3**	
	baz=41					
KURK	**Kurchatov**	**72.85 39**		**P**	**21 10 28.0 +0.3**	
J14K	**Nanvaranak Lak**	**72.86 339**	IAmb	IAmb	21 10 34.0	
	comp=Z,20nm,1.5s					
J14K	**Nanvaranak Lak**	**72.86 339**	P	**P**	**21 10 28.7 +1.2**	
	baz=38					
KURBB	**Kurchatov Arra**	**72.86 39**	P	**P**	**21 10 28.7 +0.9**	
	comp=Z,2.6nm,1.0s,baz=311,slow=6.8,SNR=14					
KURBB			LR	LR	21 42 03.2	
	comp=Z,283nm,19.1s,baz=179,slow=36					
	comp=Z,2.6nm,1.0s					
KDAK	**Kodiak Island**	**72.92 331**	LR	LR	21 40 52.7	
	comp=Z,427nm,18.6s,baz=47,slow=34					
KDAK	**Kodiak Island**	**72.92 331**	P	**P**	**21 10 29.7 +1.6**	
	baz=45					
TSUM	**Tsneb**	**73.00 132**	LR	LR	21 38 07.9	
	comp=Z,629nm,21.9s,baz=322,slow=32					
L15K	**Ungalak Mounta**	**73.09 338**	P	**P**	**21 10 29.8 +0.8**	
	baz=40					
O17K	**Koliganek Bris**	**73.11 335**	P	**P**	**21 10 30.9 +1.7**	
	baz=42					
N16K	**Nishlik Lake**	**73.15 336**	P	**P**	**21 10 30.9 +1.5**	
	baz=41					
Q18K	**Katmai Hardscr**	**73.20 333**	P	**P**	**21 10 31.3 +1.4**	
	baz=44					
OHAK	**Old Harbor**	**73.58 331**	P	**P**	**21 10 33.1 +1.1**	
	baz=45					
O16K	**Kokwok River B**	**73.59 335**	P	**P**	**21 10 33.3 +1.4**	
	baz=42					
M15K	**Kasigluk River**	**73.60 337**	P	**P**	**21 10 33.1 +1.1**	
	baz=40					
ZALV	**Zalesovo Beam**	**73.65 33**	P	**P**	**21 10 33.8 +1.4**	
	comp=Z,1.4nm,0.8s,baz=284,slow=7.5,SNR=5.3					
ZALV			LR	LR	21 42 26.1	
	comp=Z,110nm,18.8s,baz=320,slow=35					
	comp=Z,1.4nm,0.8s					
L14K	**Kuka Creek**	**73.71 338**	IAmb	IAmb	21 10 35.7	
	comp=Z,12nm,0.9s					
L14K	**Kuka Creek**	**73.71 338**	P	**P**	**21 10 33.3 +0.7**	
	baz=38					
Q17K	**Contact Creek**	**73.80 333**	P	**P**	**21 10 34.7 +1.4**	
	baz=43					
N15K	**Kwethluk River**	**73.81 336**	P	**P**	**21 10 34.4 +1.1**	
	baz=40					
K13K	**Kusilvak Mount**	**73.82 339**	IAmb	IAmb	21 10 53.1	
	comp=Z,18nm,1.4s					
K13K	**Kusilvak Mount**	**73.82 339**	P	**P**	**21 10 34.1 +0.8**	
	baz=37					
M14K	**Bethel**	**73.95 337**	IAmb	IAmb	21 10 37.2	
	comp=Z,13nm,0.9s					
M14K	**Bethel**	**73.95 337**	P	**P**	**21 10 35.3 +1.3**	
	baz=39					
P16K	**Nushagak River**	**73.97 334**	P	**P**	**21 10 35.4 +1.2**	
	baz=42					
KMBO	**Kilima Mbogo**	**74.03 104**	LR	LR	21 43 22.9	
	comp=Z,152nm,18.0s,baz=283,slow=36					
GAMB	**Gambell**	**74.13 343**	P	**P**	**21 10 35.9 +0.8**	
	baz=32					
SII	**Sitkinak Islan**	**74.41 331**	P	**P**	**21 10 38.1 +1.3**	
	baz=44					
O15K	**Ungalikthiuk R**	**74.48 335**	P	**P**	**21 10 38.3 +1.1**	
	baz=40					
N14K	**Kuskokwak Cree**	**74.51 336**	P	**P**	**21 10 38.5 +1.2**	
	baz=39					
M13K	**Dall Lake**	**74.64 337**	P	**P**	**21 10 38.9 +0.8**	
	baz=38					
O14K	**Tigyukauivet M**	**74.90 336**	P	**P**	**21 10 40.9 +1.3**	
	baz=39					
R16K	**Pilot Point**	**74.92 333**	P	**P**	**21 10 41.7 +2.0**	
	baz=42					
CHIR	**Chirikof Islan**	**75.49 331**	P	**P**	**21 10 45.1 +2.0**	
	baz=43					
M11K	**Mekoryuk**	**75.52 339**	P	**P**	**21 10 44.2 +1.2**	
	baz=36					
AAK	**Ala-Archa**	**75.64 47**	LR	LR	21 42 29.0	
	comp=Z,90nm,20.7s,baz=336,slow=34					
LSZ	**Lusaka**	**76.87 121**	LR	LR	21 42 59.5	
	comp=Z,582nm,21.5s,baz=316,slow=34					
MKAR	**Makanchi Array**	**77.24 40**	P	**P**	**21 10 53.5 +0.3**	
	comp=Z,3.7nm,1.1s,baz=317,slow=5.1,SNR=15					
MKAR			LR	LR	21 44 17.3	
	comp=Z,137nm,18.2s,baz=314,slow=35					
	comp=Z,3.7nm,1.1s					
MKAR	**Makanchi Array**	**77.24 40**		**P**	**21 10 52.1 -1.1**	
SDPT	**Sand Point**	**77.66 333**	P	**P**	**21 10 57.3 +2.0**	
	baz=39					
KSH2	**Kashi**	**78.45 49**	P	**P**	**21 11 02.6 +2.3**	
KSH2			pmax	pmax		
	comp=Z,5.0nm,1.6s					
YAK	**Yakutsk**	**79.56 9**	LR	LR	21 45 24.3	
	comp=Z,99nm,18.2s,baz=357,slow=35					
SEY	**Seymchan**	**79.76 358**	P	**P**	**21 11 07.5 +0.7**	
	comp=Z,1.0nm,0.7s,baz=106,slow=0.8,SNR=3.8					
	comp=Z,1.0nm,0.7s					
LBTB	**Lobatse**	**82.22 130**	LR	LR	21 44 23.7	
	comp=Z,536nm,20.8s,baz=328,slow=33					
TLY	**Talaya**	**82.84 26**	LR	LR	21 49 25.0	
	comp=Z,90nm,18.2s,baz=340,slow=36					
MA2	**Magadan**	**83.16 359**	LR	LR	21 44 53.3	
	comp=Z,166nm,21.9s,baz=26,slow=33					
BOSA	**Boshof**	**84.67 132**	LR	LR	21 44 26.6	
	comp=Z,222nm,21.9s,baz=323,slow=32					
SUR	**Sutherland**	**85.03 138**	LR	LR	21 44 27.1	
	comp=Z,99nm,20.5s,baz=327,slow=32					
PLCA	**Paso Flores**	**85.75 209**	P	**P**	**21 11 37.6 -0.5**	
	comp=Z,2.4nm,0.9s,baz=4.8,slow=4.9,SNR=3.8					
PLCA			LR	LR	21 51 03.9	
	comp=Z,55nm,18.3s,baz=77,slow=36					
	comp=Z,2.4nm,0.9s					
SONM	**Songino Array**	**87.04 27**	P	**P**	**21 11 44.8 0.0**	
	comp=Z,2.0nm,1.0s,baz=313,slow=5.6,SNR=14					
SONM			LR	LR	21 50 55.6	
	comp=Z,140nm,20.7s,baz=357,slow=36					
	comp=Z,2.0nm,1.0s					
SHEM	**Shemya Is, Ala**	**87.31 345**	LR	LR	21 53 44.6	
	comp=Z,61nm,18.1s,baz=100,slow=38					
PETK	**Petropavlovsk-**	**89.31 354**	LR	LR	21 52 50.9	
	comp=Z,214nm,18.2s,baz=19,slow=36					
GTA2	**Gaotai**	**91.20 36**	*eP*	**P**	**21 12 05.2 +0.7**	
GTA2			pP	pwP	21 12 11.1 +1.3	
GTA2			pmax	pmax		
	comp=Z,5.0nm,1.6s					
ASAJ	**Asahikawa**	**98.49 4**	LR	LR	21 55 13.7	
	comp=Z,86nm,19.6s,baz=10,slow=34					
BRDH	**Bariadhala**	**99.72 52**	LR	LR	22 01 10.2	
	comp=Z,93nm,18.1s,baz=29,slow=37					
TAOE	**Nuku Hiva Isla**	**110.07 274**	*eLR*	LR	21 51 00.9	
	comp=Z,179nm,24.1s					
PPT2	**Papeete2**	**122.58 272**	*eLR*	LR	21 56 12.1	
	comp=Z,85nm,21.2s					
TBI	**Tubuai**	**125.53 266**	*eLR*	LR	21 58 07.7	
	comp=Z,532nm,26.8s					
QSPA	**South Pole Qui**	**127.49 180**	PKP	**PKiKP**	**21 18 03.5 -0.2**	
	comp=Z,2.3nm,1.0s,baz=215,slow=1.5,SNR=6.7					
QSPA	**South Pole Qui**	**127.49 180**	PKPdf	**PKiKP**	**21 18 03.8 +0.1**	
VNDA	**Vanda**	**139.56 184**	PKP	**PKiKP**	**21 18 27.1 -0.7**	
	comp=Z,4.1nm,1.1s,baz=198,slow=3.2,SNR=4.0					
FITZ	**Fitzroy Crossi**	**152.13 52**	PKPbc	**PKiKP**	**21 18 55.9 +0.5**	
	comp=Z,6.7nm,1.1s,baz=332,slow=5.7,SNR=3.6					
DZM	**Mont Dzumac**	**158.08 310**	*eLR*	LR	22 13 17.9	
	comp=Z,315nm,25.8s					
WRA	**Warramunga Arr**	**158.54 39**	PKPab	**PKPab**	**21 19 31.8 -0.1**	
	comp=Z,1.5nm,1.0s,baz=335,slow=4.2,SNR=5.7					
ASAR	**Alice Springs**	**161.34 46**	PKPab	**PKPab**	**21 19 44.4 +0.3**	
	comp=Z,0.9nm,0.8s,baz=340,slow=5.0,SNR=4.3					

*IDC **08** 21:11:25.7±2.4, 7.96S×120.13E, h201km±24km, mb2.8/3, mbtmp3.4/6, Error ellipse: s-maj=79.1km s-min=14.9km az=51.0*
*DJA **08** 21:11:26.1±0.4, 8.5S±3.1×12.0E±.1°, h154km±7km, M3.6/18, mB4.7/1, mb4.0/2, MLv3.4/18, Mw(mB)4.0/1*
ISC 08 21:11:23.5±1.0, 8.40S±0.06×119.76E±0.05, h176km±10km, n20, σ2s16/23, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LBFI	**Labuhan Bajo,**	**0.15**	**120**	P	**Pn**	**21 11 47.6**	**+0.7**
WBSI	**Waikabubak, Su**	**1.28**	**196**	P	**Pn**	**21 11 54.1**	**+0.9**
WSI	**Waingapu**	**1.37**	**157**	P	**Pn**	**21 11 54.8**	**+0.9**
DBNI	**Kabupaten Domp**	**1.43**	**266**	P	**Pn**	**21 11 55.8**	**+1.3**
EDFI	**Ende, Flores**	**1.94**	**100**	P	**Pn**	**21 12 00.5**	**+0.7**
PLAI	**Plampang**	**2.00**	**258**	P	**Pn**	**21 12 01.3**	**+0.9**
MMRI	**Maumere**	**2.46**	**96**	P	**Pn**	**21 12 07.3**	**+1.7**
MKS	**Makassar**	**3.18**	**355**	P	**Pn**	**21 12 14.2**	**0.0**
KHKI	**Kahang-Kahang**	**4.11**	**270**	P	**Pn**	**21 12 27.2**	**+1.3**
BATI	**Baumata**	**4.25**	**115**	P	**Pn**	**21 12 30.3**	**+2.6**
	10nm,0.3s,baz=302,slow=9.5,SNR=6.3						
BATI				S	**Sn**	**21 13 15.8**	**-2.3**
	14nm,0.4s,baz=297,slow=18,SNR=5.3						
BATI	**Baumata**	**4.25**	**115**	P	**Pn**	**21 12 30.4**	**+2.6**
SPSI	**Sidrap Palu**	**4.41**	**0**	P	**Pn**	**21 12 30.8**	**+1.0**
SOEI	**Soe**	**4.65**	**107**	P	**Pn**	**21 12 36.0**	**+3.0**
RTBI	**Rangdo, Negare**	**4.76**	**269**	P	**Pn**	**21 12 36.7**	**+2.3**
TTSI	**Tana Toraja**	**5.32**	**1**	P	**Pn**	**21 12 43.7**	**+2.0**
	0.1nm1μm10nm,0.8s						
FITZ	**Fitzroy Crossi**	**11.21**	**150**	P	**Pn**	**21 14 01.8**	**+2.9**
	1.0nm,0.5s,baz=332,slow=13,SNR=13						
FITZ				S	**Sn**	**21 15 58.6**	**-4.8**
	2.4nm,1.0s,baz=322,slow=21,SNR=1.4						
WRA	**Warramunga Arr**	**18.19**	**131**	P	**P**	**21 15 23.5**	**+0.4**
	0.2nm,0.4s,baz=303,slow=13,SNR=1.8						
WRA				S	**S**	**21 18 42.9**	**+0.6**
	0.6nm,0.7s,baz=319,slow=24,SNR=3.0						
ASAR	**Alice Springs**	**20.35**	**140**	P	**P**	**21 15 48.0**	**+1.5**
	0.2nm,0.6s,baz=317,slow=11,SNR=1.8						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**64.27**	**332**	P	**P**	**21 21 38.4**	**-1.6**
	0.3nm,0.7s,baz=134,slow=6.2,SNR=4.1						
	0.3nm,0.7s						
ZALV	**Zalesovo Beam**	**68.76**	**339**	P	**P**	**21 22 05.9**	**-2.2**
	0.3nm,0.3s,baz=123,slow=5.3,SNR=2.6						
	0.3nm,0.3s						

*IDC **08** 21:13:21.8±3.1, 6.94S×147.68E, h117km±31km, mb3.4/5, mbtmp3.8/9, MS2.8/2, Error ellipse: s-maj=39.1km s-min=29.0km az=124.0*
ISC 08 21:13:20.5±1.2, 6.87S±0.08×147.6E±0.2, h100km, n10, σ1s74/12, mb3.7/5, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.56**	**190**	P	**Pn**	**21 14 01.2**	**+0.7**
	36nm,0.3s,baz=19,slow=13,SNR=20						
PMG				S	**Sn**	**21 14 33.0**	**+2.0**
	64nm,0.4s,baz=228,slow=23,SNR=6.2						
CTA	**Charters Tower**	**13.21**	**186**	P	**Pn**	**21 16 23.7**	**-0.5**
	0.9nm,0.3s,baz=347,slow=18,SNR=0.9						
CTA				LR	LR	21 21 35.6	
	comp=Z,28nm,18.1s,baz=30,slow=38						
SIJI	**Sorong**	**17.34**	**289**	P	**P**	**21 17 18.6**	**+2.2**
	1.0nm,0.3s,baz=174,slow=23,SNR=1.8						
WRA	**Warramunga Arr**	**18.29**	**223**	P	**P**	**21 17 26.6**	**-0.2**
	0.6nm,0.5s,baz=42,slow=13,SNR

ETM	**Tongmen**	**0.21**	**204**	*i* P	Pg	21 31 52.7	+0.4
ETM				S	Sg	21 31 55.6	+0.2
LXIB	**Xiulin Townshi**	**0.21**	**230**	*i* P	Pg	21 31 52.8	+0.5
LXIB				*e*S	Sb	21 31 56.5	-0.6
WHF	**Hehuan Shan**	**0.29**	**268**	P	Pb	21 31 54.8	-0.1
WHF				*e*S	Sb	21 31 59.3	-0.5
ENA	**Nanau**	**0.30**	**27**	*e*P	Pg	21 31 52.7	-1.2
ENA				*e*S	Sg	21 31 57.7	-0.5
NNSB	**Datong**	**0.33**	**325**	P	Pb	21 31 54.9	-0.4
NNSB				*e*S	Sb	21 32 00.1	-0.5
EWUT	**Wuta**	**0.34**	**31**	*e*P	Pg	21 31 54.1	-0.4
NNS	**Nan Shan**	**0.34**	**325**	P	Pg	21 31 55.1	+0.5
NNS				*e*S	Sb	21 32 00.6	-0.4
ESL	**Shilin**	**0.37**	**202**	*e*P	Pg	21 31 55.2	+0.2
ESL				*e*S	Sg	21 31 60.0	-0.1
SHUL	**Shoufeng**	**0.37**	**183**	*e*P	Pb	21 31 55.8	-0.2
SHUL				S	Sb	21 32 01.5	-0.1
OWD	**Renai**	**0.43**	**242**	*e*P	Pb	21 31 57.0	0.0
OWD				*e*S	Sb	21 32 02.8	-0.6
WUSB	**Renai**	**0.46**	**249**	*e*P	Pb	21 31 58.0	+0.4
WUSB				*e*S	Sb	21 32 04.3	-0.1
WARBT	**Fenglin Townsh**	**0.47**	**203**	*e*P	Pg	21 31 57.1	+0.1
WARBT				*e*S	Sg	21 32 02.9	-0.4
ENTT	**Nioudou**	**0.48**	**358**	*e*P	Pg	21 31 57.5	+0.4
NDS	**Dongshan**	**0.49**	**14**	*i* P	Pg	21 31 56.9	-0.4
NDS				*e*S	Sg	21 32 03.0	-0.9
YHNB	**Yeheng**	**0.55**	**339**	*e*P	Pb	21 31 58.9	-0.1
YHNB				S	Sg	21 32 05.9	+0.3
NSK	**Sanguang**	**0.56**	**338**	*e*S	Sg	21 32 06.4	+0.4
VWDT	**VWDT**	**0.57**	**226**	*e*S	Sb	21 32 08.3	+0.9
WHP	**Taichung City**	**0.60**	**282**	*e*S	Sb	21 32 09.3	+1.0
FUSB	**Fushanzhiwuyua**	**0.60**	**0**	*e*S	Sb	21 32 08.0	-0.3
NWLT	**Wulai**	**0.62**	**353**	*e*S	Sg	21 32 07.8	-0.2
YULB	**Yu-li**	**0.81**	**199**	*e*S	Sb	21 32 15.1	+0.9

JMA 08 21:31:49.0±0.1, 24°.8N±0°.7×123°.4E±0°.2, h26km, MV1.7/6, NW OFF ISHIGAKIJIMA IS, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.44**	**229**	*e*P	Pb	21 31 58.0	-0.2
YOJ				S	Sb	21 32 04.3	-0.2
JYNG	**Yonagunijimaku**	**0.49**	**232**	P	Pb	21 31 58.9	-0.2
JYNG				S	Sb	21 32 06.0	0.0
IRIF	**Iriomote-Funau**	**0.53**	**142**	P	Pb	21 31 59.5	-0.3
IRIF				S	Sb	21 32 06.7	-0.3
JKRS	**Kuro-shima**	**0.77**	**131**	S	Sb	21 32 14.1	+0.2

*IDC **08** 21:35:29.7±1.1, 3°.48S×151°.91E, h0km, mb4.1/15, mbtmp4.1/17, ML1.8/1, MS3.6/12, Error ellipse: s-maj=36.4km s-min=16.1km az=115.0*

ISC 08 21:35:31.0±1.1, 3°.5S±0°.1×151°.9E±0°.2, h10km, n34, σ0.90/17, mb4.1/14, MS3.6/10, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.54**	**219**	Pn	**Pn**	**21 37 21.6**	**+0.6**
	0.8nm,0.3s,baz=49,slow=12,SNR=4.0 19nm,0.9s						
HNR	**Honiara**	**9.89**	**127**	LR	LR	21 42 00.8	
	comp=Z,22nm,18.3s,baz=9.5,slow=39						
JAY	**Jayapura**	**11.27**	**275**	LR	LR	21 41 45.7	
	comp=Z,485nm,18.1s,baz=66,slow=34						
CTA	**Charters Tower**	**17.38**	**198**	P	**P**	**21 39 33.5**	**-1.7**
	1.1nm,0.3s,baz=28,slow=4.7,SNR=4.0						
CTA				LR	LR	21 46 04.7	
	comp=Z,156nm,18.7s,baz=24,slow=36						
SIJI	**Sorong**	**20.82**	**277**	P	Pn	21 40 13.4	-2.0
	8.4nm,0.3s,baz=65,slow=5.1,SNR=6.2						
SIJI				LR	LR	21 48 27.9	
	comp=Z,114nm,18.2s,baz=141,slow=37 8.4nm,0.3s						
WRA	**Warramunga Arr**	**23.69**	**225**	P	**P**	**21 40 42.2**	**-1.0**
	2.8nm,1.0s,baz=49,slow=10,SNR=14 2.8nm,1.0s						
H11S3	**WAKE ISLAND Hy**	**26.26**	**33**	T	T	22 08 37.1	
	baz=220						
H11S2	**WAKE ISLAND Hy**	**26.26**	**33**	T	T	22 08 37.8	
	baz=220						
H11S1	**WAKE ISLAND Hy**	**26.27**	**33**	T	T	22 08 38.9	
	baz=220						
ASAR	**Alice Springs**	**26.55**	**219**	P	**P**	**21 41 09.7**	**+0.3**
	1.9nm,0.9s,baz=56,slow=8.3,SNR=14 1.9nm,0.9s						
H11N1	**WAKE ISLAND Hy**	**27.36**	**32**	T	T	22 09 55.7	
	baz=218,slow=76						
H11N3	**WAKE ISLAND Hy**	**27.38**	**32**	T	T	22 09 52.8	
	baz=218,slow=76						
H11N2	**WAKE ISLAND Hy**	**27.38**	**32**	T	T	22 09 56.4	
	baz=218,slow=76						
BATI	**Baumata**	**28.83**	**255**	LR	LR	21 54 31.1	
	comp=Z,129nm,18.5s,baz=102,slow=40						
FITZ	**Fitzroy Crossi**	**29.55**	**239**	P	**P**	**21 41 37.0**	**+0.8**
	5.1nm,1.0s,baz=54,slow=8.7,SNR=3.6 5.1nm,1.0s						
STKA	**Stephens Creek**	**29.84**	**198**	LR	LR	21 53 51.4	
	comp=Z,58nm,21.1s,baz=16,slow=37						
KAPI	**Kappang**	**32.13**	**266**	LR	LR	21 56 05.4	
	comp=Z,60nm,18.7s,baz=58,slow=38						
KSRS	**Korea Array**	**46.48**	**333**	P	**P**	**21 43 57.2**	**-1.1**
	0.9nm,0.8s,baz=141,slow=8.1,SNR=5.0 0.9nm,0.8s						
USRK	**Ussuriysk Ar.**	**50.77**	**342**	P	**P**	**21 44 30.4**	**-0.8**
	1.4nm,0.6s,baz=133,slow=10.0,SNR=2.4 1.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**56.56**	**295**	P	**P**	**21 45 14.4**	**+0.1**
	0.7nm,0.3s,baz=107,slow=5.1,SNR=6.1 0.7nm,0.3s						
PETK	**Petropavlovsk-**	**56.62**	**4**	P	**P**	**21 45 14.2**	**+0.1**
	3.6nm,0.9s,baz=160,slow=5.6,SNR=2.2						
PETK				LR	LR	22 05 48.7	
	comp=Z,76nm,20.3s,baz=174,slow=32 3.6nm,0.9s						
SHEM	**Shemya Is, Ala**	**59.08**	**16**	LR	LR	22 06 59.4	
	comp=Z,57nm,21.9s,baz=303,slow=32						
MA2	**Magadan**	**62.91**	**359**	LR	LR	22 07 40.7	
	comp=Z,44nm,21.7s,baz=163,slow=31						
SONM	**Songino Array**	**64.79**	**328**	P	**P**	**21 46 10.1**	**0.0**
	1.3nm,0.6s,baz=147,slow=6.4,SNR=9.1 1.3nm,0.6s						
ZALV	**Zalesovo Beam**	**79.62**	**326**	P	**P**	**21 47 38.2**	**-0.3**
	0.9nm,0.5s,baz=116,slow=6.8,SNR=6.1						
ZALV				LR	LR	22 23 03.9	
	comp=Z,25nm,20.6s,baz=82,slow=36 0.9nm,0.5s						
ILAR	**Eielson Array**	**81.30**	**22**	P	**P**	**21 47 47.2**	**-0.1**
	2.8nm,0.7s,baz=244,slow=5.6,SNR=38 2.8nm,0.7s						
KURBB	**Kurchatov Arra**	**82.27**	**322**	P	**P**	**21 47 53.0**	**+0.3**
	0.6nm,0.8s,baz=110,slow=4.6,SNR=5.2 0.6nm,0.8s						
H02S2	**DAWSON INLET T**	**84.21**	**36**	T	T	23 20 50.2	
	SNR=24						
NRIK	**Noril'sk**	**84.48**	**341**	P	**P**	**21 48 03.4**	**-0.3**
	5.5nm,0.9s,baz=101,slow=9.2,SNR=6.3 5.5nm,0.9s						
BVAR	**Borovoye Array**	**87.71**	**323**	P	**P**	**21 48 21.1**	**+1.1**
	1.0nm,0.5s,baz=110,slow=13,SNR=4.2 1.0nm,0.5s						
YKA	**Yellowknife Ar**	**94.70**	**28**	P	**P**	**21 48 53.7**	**+1.4**
	0.2nm,0.7s,baz=276,slow=4.8,SNR=2.1 0.2nm,0.7s						
ARTI	**Arti**	**94.88**	**326**	LR	LR	22 32 16.1	
	comp=Z,29nm,20.5s,baz=146,slow=36						
LPIG	**La Paz**	**98.50**	**66**	LR	LR	22 27 17.2	
	comp=Z,33nm,18.7s,baz=242,slow=32						
TORD	**Torodi Ar. Bea**	**149.08**	**290**	PKPbc	**PKiKP**	**21 55 21.1**	**-0.9**
	2.1nm,0.9s,baz=165,slow=0.6,SNR=8.0						

*IDC **08** 21:36:22.1±0.8, 0°.53N×124°.12E, h0km, mb4.0/5, mbtmp4.0/8, ML3.8/3, MS3.6/2, Error ellipse: s-maj=39.1km s-min=16.1km az=64.0*

*NEIC **08** 21:36:33.2±1.0, 0°.32N±0°.10×124°.1E±0°.1, h82km±7km, mb4.0/6, Error ellipse: s-maj=16.9km s-min=11.4km az=50.0*

*DJA **08** 21:36:38.3±0.2, 0°.S±2°×12°.4E±°, h113km±6km, M4.2/37, mB4.8/6, mb4.1/12, MLv4.3/37, Mw(mB)4.1/6*

ISC 08 21:36:37.3±1.0, 0°.02S±0°.07×123°.71E±0°.06, h124km±9km, n41, σ1$41/44, mb3.9/10, 1C, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.39**	**223**		**Pn**	**21 37 03.5**	**-0.1**
LUWI					**Sn**	**21 37 22.7**	**-1.0**
LUWI	**Luwuk**	**1.39**	**223**	P	**Pn**	**21 37 03.6**	**-0.1**
MNI	**Manado**	**1.84**	**38**	P	**Pn**	**21 37 10.5**	**+1.5**
MRSI	**Marisa**	**1.84**	**286**	P	**Pn**	**21 37 08.1**	**-0.8**
APSI	**Ampana**	**2.25**	**247**	P	**Pn**	**21 37 14.7**	**+0.7**
SANI	**Sanana**	**3.04**	**132**	P	**Pn**	**21 37 22.1**	**-2.1**
TOLI2	**Tolitoli**	**3.14**	**291**		**Pn**	**21 37 23.4**	**-2.1**
TNTI	**Ternate**	**3.74**	**78**	P	**Pn**	**21 37 34.2**	**+0.8**
MPSI	**Mapaga**	**3.83**	**275**	P	**Pn**	**21 37 36.6**	**+1.9**
PCI	**Palu**	**3.98**	**257**	P	**Pn**	**21 37 37.1**	**+0.5**
KKM	**Kolaka, Sulawe**	**4.61**	**206**	P	**Pn**	**21 37 45.9**	**+0.8**
NLAI	**Namlea**	**4.66**	**133**	P	**Pn**	**21 37 46.5**	**+0.8**
TTSI	**Tana Toraja**	**4.92**	**232**	P	**Pn**	**21 37 50.3**	**+1.1**
SPSI	**Sidrap Palu**	**5.56**	**225**	P	**Pn**	**21 37 59.3**	**+1.5**
	0.1nm719nm16nm,0.6s						
KRAI	**Karang Ratu**	**5.71**	**125**	P	**Pn**	**21 38 01.9**	**+2.0**
	3μm15nm,0.5s						
KAPI	**Kappang**	**6.35**	**218**	Pn	**Pn**	**21 38 06.9**	**-1.6**
	1.6nm,0.3s,baz=55,slow=16,SNR=2.1						
KAPI				Sn	**Sn**	**21 39 20.1**	**+0.4**
	2.0nm,0.3s,baz=140,slow=22,SNR=5.6 7.1nm,0.3s						
KAPI	**Kappang**	**6.35**	**218**		**Pn**	**21 38 10.3**	**+1.9**
MYLDM	**Lahad Datu**	**7.33**	**315**	Pn	**Pn**	**21 38 24.5**	**+2.7**
MYLDM	**Lahad Datu**	**7.33**	**315**	P	**Pn**	**21 38 24.0**	**+2.2**
	0.1nm33nm,0.8s						
SIJI	**Sorong**	**7.60**	**96**	Pn	Pn	21 38 10.6	-15
	0.4nm,0.3s,baz=229,slow=20,SNR=1.5 1.4nm,0.4s						
FAKI	**Fak Fak**	**9.01**	**109**	Pn	Pn	21 38 36.2	-8.1
LBFI	**Labuhan Bajo,**	**9.23**	**204**	P	**Pn**	**21 38 47.3**	**-0.1**
KKM	**Kota Kinabalu**	**9.61**	**309**	P	**Pn**	**21 38 54.4**	**+1.9**
FITZ	**Fitzroy Crossi**	**18.07**	**174**	P	**Pn**	**21 40 39.6**	**-0.8**
	0.5nm,0.3s,baz=359,slow=6.5,SNR=11 2.5nm,0.5s						
WRA	**Warramunga Arr**	**22.37**	**153**	P	**P**	**21 41 25.1**	**-0.3**
	5.1nm,0.7s,baz=335,slow=10,SNR=31 5.1nm,0.7s						
WRA	**Warramunga Arr**	**22.37**	**153**	P	**P**	**21 41 25.4**	**-0.1**
ASAR	**Alice Springs**	**25.51**	**158**	P	**P**	**21 41 56.3**	**+2.0**
	1.1nm,0.4s,baz=331,slow=10,SNR=19						
ASAR				PcP	**PcP**	**21 45 24.1**	**+1.2**
	0.2nm,0.6s,baz=336,slow=2.5,SNR=1.3 1.1nm,0.4s						
ASAR	**Alice Springs**	**25.51**	**158**	P	**P**	**21 41 56.7**	**+2.4**
ASAR					**PcP**	**21 45 22.9**	**0.0**
STKA	**Stephens Creek**	**35.92**	**154**	P	**P**	**21 43 27.1**	**+1.3**
	2.1nm,0.4s,baz=326,slow=8.2,SNR=5.8 2.1nm,0.4s						
STKA	**Stephens Creek**	**35.92**	**154**	P	**P**	**21 43 26.9**	**+1.2**
MJAR	**Matsushiro Arr**	**38.78**	**19**	LR	LR	21 59 09.7	
	comp=Z,79nm,21.2s,baz=40,slow=36						
EVN	**Everest**	**44.98**	**311**		**P**	**21 44 40.7**	**-0.4**
EVN				IAmb	IAmb	21 44 43.2	
	comp=Z,4.6nm,1.0s						
BNX	**BinXian**	**45.68**	**4**	⇑P	P	21 44 50.4	+4.8
BNX				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MKAR	**Makanchi Array**	**59.00**	**328**	P	**P**	**21 46 23.2**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=126,slow=8.4,SNR=10						
MKAR				PcP	**PcP**	**21 47 10.4**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=134,slow=4.2,SNR=6.3 comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**59.00**	**328**	P	**P**	**21 46 22.9**	**-1.1**
MKAR					**PcP**	**21 47 10.1**	**-1.6**
KURBB	**Kurchatov Arra**	**63.34**	**330**	P	**P**	**21 46 51.8**	**-1.3**
	comp=Z,0.6nm,0.7s,baz=119,slow=7.7,SNR=9.3						
KURBB				PcP	**PcP**	**21 47 27.1**	**-2.0**
	comp=Z,0.1nm,0.4s,baz=120,slow=3.9,SNR=4.2 comp=Z,0.6nm,0.7s						
KURK	**Kurchatov**	**63.35**	**330**	P	**P**	**21 46 52.0**	**-1.1**
KURK				IAmb	IAmb	21 46 53.5	
	comp=Z,1.5nm,0.7s						
KURK					**PcP**	**21 47 29.4**	**+0.3**
TIXI	**Tiksi**	**71.63**	**2**	P	**P**	**21 47 43.5**	**-1.3**
TIXI				IAmb	IAmb	21 47 44.5	
	comp=Z,1.4nm,0.8s						
AB31	**Akbulak array**	**73.18**	**322**	P	**P**	**21 47 55.2**	**+0.7**
AB31				IAmb	IAmb	21 48 32.8	
	comp=Z,0.8nm,0.9s						
ABKAR	**Akbulak array**	**73.18**	**322**	P	**P**	**21 47 54.5**	**0.0**
NRIK	**Noril'sk**	**73.37**	**347**	LR	LR	22 23 15.2	
	comp=Z,53nm,19.1s,baz=74,slow=39						

*IDC **08** 21:54:00.2±0.8, 22°.53S×171°.21E, h0km, mb4.1/11, mbtmp4.1/14, ML4.1/3, MS3.6/9, Error ellipse: s-maj=26.5km s-min=19.5km az=168.0*

*NEIC **08** 21:54:06.3±1.6, 22°.48S±0°.09×171°.20E±0°.07, h35km±2km, mb4.6/20, Error ellipse: s-maj=15.8km s-min=11.0km az=175.0*

ISC 08 21:54:06.1±0.5, 22°.51S±0°.09×171°.22E±0°.06, h42km, n80, σ1$23/77, mb4.2/19, MS3.6/8, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**3.13**	**289**	Pn	**Pn**	**21 54 53.8**	**+0.9**
MARNC				Sn	**Sn**	**21 55 27.2**	**-1.8**
OUENC	**Ouen Island, N**	**4.05**	**270**	Pn	**Pn**	**21 55 05.4**	**-0.2**
ONTNC	**Ouen Toro**	**4.41**	**272**		**Pn**	**21 55 11.3**	**+0.8**
DZM	**Mont Dzumac**	**4.44**	**275**	Pn	**Pn**	**21 55 10.6**	**-0.5**
	6.1nm,0.3s,baz=103,slow=7.6,SNR=53						
DZM				Sn	**Sn**	**21 55 59.7**	**-1.9**
	2.1nm,0.3s,baz=111,slow=16,SNR=4.6 13nm,0.3s						
MSVF	**Nonsavu**	**7.99**	**55**	Pn	**Pn**	**21 56 02.8**	**+3.1**
	baz=209,slow=15						
MSVF	**Nonsavu**	**7.99**	**55**		**Pn**	**21 55 59.4**	**-0.3**
HIZ	**Hauiti**	**16.25**	**170**	Pn	**P**	**21 57 52.8**	**-1.1**
HIZ				IAmb	IAmb	21 58 29.1	
	comp=Z,121nm,1.3s						
URZ	**Urewera**	**16.49**	**163**	Pn	**Pn**	**21 57 53.0**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=298,slow=7.5,SNR=5.7						
URZ				LR	LR	22 03 08.0	
	comp=Z,152nm,18.7s,baz=334,slow=33 comp=Z,7.4nm,0.8s						
RTZ	**Ruatahuna**	**16.79**	**164**		**P**	**21 58 00.4**	**+0.4**
RTZ				IAmb	IAmb	21 58 08.3	
	comp=Z,38nm,1.2s						
AFI	**Afiamalu**	**18.27**	**65**	P	**P**	**21 58 16.3**	**-0.1**
	comp=Z,5.7nm,0.3s,baz=156,slow=22,SNR=2.2						
AFI				S	**Sn**	**22 01 33.0**	**-6.7**
	comp=Z,21nm,0.3s,baz=156,slow=21,SNR=5.9 comp=Z,14nm,0.4s						
ARMA	**Armidale**	**19.21**	**242**	P	**P**	**21 58 26.3**	**-0.3**
RPZ	**Rata Peaks**	**21.15**	**180**	LR	LR	22 05 23.0	
	comp=Z,226nm,19.5s,baz=64,slow=32						
CAN	**Canberra**	**23.20**	**232**	P	**P**	**21 59 09.6**	**+0.3**
CAN				IAmb	IAmb	21 59 49.6	
	comp=Z,29nm,1.5s						
CTA	**Charters Tower**	**23.38**	**271**	P	**P**	**21 59 11.7**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=63,slow=18,SNR=0.7 comp=Z,0.5nm,0.3s						
TOO	**Toolangi**	**26.74**	**230**	P	**P**	**21 59 42.4**	**+0.6**
RAR	**Rarotonga**	**26.94**	**93**	P	**P**	**21 59 44.6**	**+0.9**
STKA	**Stephens Creek**	**27.88**	**244**	P	**P**	**21 59 52.1**	**+0.1**
	comp=Z,2.7nm,0.9s,baz=286,slow=6.4,SNR=3.0						
STKA				LR	LR	22 10 16.5	
	comp=Z,97nm,18.1s,baz=52,slow=35 comp=Z,2.7nm,0.9s						
STKA	**Stephens Creek**	**27.88**	**244**	P	**P**	**21 59 52.5**	**+0.5**
COEN	**Coen**	**27.92**	**283**	P	**P**	**21 59 52.7**	**+0.2**
WR8	**Warramunga Arr**	**34.27**	**267**	P	**P**	**22 00 46.9**	**-1.5**
WR8				IAmb	IAmb	22 01 02.8	
	comp=Z,9.2nm,1.4s						
ASAR	**Alice Springs**	**34.28**	**261**	P	**P**	**22 00 46.8**	**-1.8**
	comp=Z,2.8nm,0.9s,baz=90,slow=9.0,SNR=14 comp=Z,2.8nm,0.9s						
ASAR	**Alice Springs**	**34.28**	**261**	P	**P**	**22 00 47.4**	**-1.1**
WB0	**Warramunga Arr**	**34.40**	**268**	P	**P**	**22 00 48.4**	**-1.2**
WB0				IAmb	IAmb	22 01 08.7	
	comp=Z,5.4nm,1.1s						
WRA	**Warramunga Arr**	**34.42**	**267**	P	**P**	**22 00 48.8**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=99,slow=8.3,SNR=7.2 comp=Z,0.7nm,0.7s						
WRA	**Warramunga Arr**	**34.42**	**267**	P	**P**	**22 00 48.3**	**-1.4**
MTN	**Manton Dam**	**39.28**	**277**	P	**P**	**22 01 31.8**	**+0.7**
MTN				IAmb	IAmb	22 01 35.9	
	comp=Z,17nm,1.1s						
KNRA	**Kununurra**	**40.59**	**272**	P	**P**	**22 01 42.2**	**+0.3**
KNRA				IAmb	IAmb	22 02 21.8	
	comp=Z,17nm,1.3s						
FITZ	**Fitzroy Crossi**	**42.85**	**267**	P	**P**	**22 02 00.3**	**-0.1**
	comp=Z,9.5nm,1.1s,baz=17,slow=11,SNR=8.4 comp=Z,9.5nm,1.1s						
MBWA	**Marble Bar**	**47.62**	**261**	P	**P**	**22 02 38.4**	**+0.2**
TOLI2	**Tolitoli**	**54.44**	**289**	P	**P**	**22 03 29.2**	**-0.4**
TOLI2				IAmb	IAmb	22 03 42.6	
	comp=Z,5.1nm,0.8s						
CASY	**Casey**	**57.91**	**205**	P	**P**	**22 03 53.8**	**+0.2**
QSPA	**South Pole Qui**	**67.56**	**180**	P	**P**	**22 04 58.7**	**+0.6**
	comp=Z,2.2nm,0.9s,baz=16,slow=2.5,SNR=8.7 comp=Z,2.2nm,0.9s						
QSPA	**South Pole Qui**	**67.56**	**180**	P	**P**	**22 05 00.3**	**+2.3**
ASAJ	**Asahikawa**	**71.30**	**339**	LR	LR	22 30 23.6	
	comp=Z,38nm,21.6s,baz=162,slow=31						
KSRS	**Korea Array**	**72.24**	**325**	P	**P**	**22 05 27.3**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=112,slow=40,SNR=2.5 comp=Z,0.7nm,0.6s						
PETK	**Petropavlovsk-**	**76.21**	**352**	LR	LR	22 36 20.8	
	comp=Z,23nm,19.1s,baz=145,slow=33						
CMAR	**Chiang Mai Arr**	**81.52**	**294**	P	**P**	**22 06 20.6**	**+1.0**
	comp=Z,1.6nm,0.6s,baz=133,slow=4.3,SNR=15 comp=Z,1.6nm,0.6s						
CMAR	**Chiang Mai Arr**	**81.52**	**294**	P	**P**	**22 06 20.4**	**+0.7**
CHTO	**Chiang Mai**	**81.68**	**294**	P	**P**	**22 06 21.1**	**+0.7**
CHTO				IAmb	IAmb	22 06 23.2	
	comp=Z,2.9nm,0.8s						
MA2	**Magadan**	**83.50**	**350**	LR	LR	22 39 38.3	
	comp=Z,42nm,18.6s,baz=170,slow=33						
KDAK	**Kodiak Island**	**85.51**	**19**	LR	LR	22 37 48.1	
	comp=Z,31nm,19.5s,baz=143,slow=31						
M02C	**Callahan**	**88.11**	**43**	P	**P**	**22 06 52.4**	**0.0**
M02C				IAmb	IAmb	22 06 54.3	
	comp=Z,6.7nm,1.4s						
NVAR	**Mina Array Bea**	**89.60**	**48**	P	**P**	**22 06 59.1**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=214,slow=7.1,SNR=5.2 comp=Z,0.9nm,0.6s						
NVAR	**Mina Array Bea**	**89.60**	**48**	P	**P**	**22 06 59.2**	**-0.4**
YAK	**Yakutsk**	**90.54**	**342**	LR	LR	22 42 38.0	
	comp=Z,13nm,19.8s,baz=276,slow=32						
SONM	**Songino Array**	**90.93**	**322**	P	**P**	**22 07 05.9**	**+0.4**
	comp=Z,0.9nm,0.9s,baz=189,slow=5.9,SNR=6.1 comp=Z,0.9nm,0.9s						
SONM	**Songino Array**	**90.93**	**322**	P	**P**	**22 07 05.7**	**+0.2**
ILAR	**Eielson Array**	**92.81**	**17**	P	**P**	**22 07 15.7**	**+2.1**
	comp=Z,0.3nm,0.7s,baz=252,slow=4.7,SNR=2.6						
ILAR				LR	LR	22 45 53.6	
	comp=Z,38nm,18.8s,baz=286,slow=34 comp=Z,0.3nm,0.7s						
ILAR	**Eielson Array**	**92.81**	**17**	P	**P**	**22 07 16.2**	**+2.6**
STEB	**Steborice**	**145.59**	**329**	*e*PKP	**PKPdf**	**22 13 39.2**	**-0.4**
MORC	**Moravsky Berou**	**145.81**	**329**	*e*PKP	**PKPab**	**22 13 41.2**	**+0.2**
CHVC	**Chvalec**	**145.92**	**331**	*e*PKP	**PKPbc**	**22 13 40.8**	**-0.1**
KRLC	**Kraliky**	**145.96**	**330**	*e*PKP	**PKPbc**	**22 13 40.7**	**-0.3**
DPC	**Dobruska-Polom**	**145.97**	**331**	*e*PKP	**PKPab**	**22 13 41.4**	**-0.2**
JAVC	**Velka Javorina**	**146.37**	**328**	*e*PKP	**PKPab**	**22 13 43.2**	**0.0**
VRAC	**Vranov**	**146.58**	**329**	*e*PKP	**PKPbc**	**22 13 42.6**	**-0.3**
KRUC	**Moravsky**	**146.84**	**329**	*e*PKP	**PKPbc**	**22 13 43.4**	**-0.2**
PRU	**Pruhonice**	**147.02**	**332**	*e*PKP	**PKPbc**	**22 13 44.0**	**-0.1**
RONA	**Rosalia, Austr**	**147.83**	**327**	*i* PKP	**PKPbc**	**22 13 46.4**	**-0.1**
	comp=Z,3.6nm,0.6s,SNR=5.0						
CONA	**Conrad Observa**	**147.88**	**328**	*i* PKP	**PKPbc**	**22 13 46.7**	**0.0**
	comp=Z,2.2nm,0.6s						
CKRC	**Cesky Krumlov**	**147.98**	**331**	*e*PKP	**PKPbc**	**22 13 46.6**	**-0.2**
KHC	**Kasperske Hory**	**148.08**	**332**	*e*PKP	**PKPbc**	**22 13 46.3**	**-0.8**
GERES	**GERESS Array B**	**148.24**	**331**	PKPbc	**PKPbc**	**22 13 47.1**	**-0.4**
	comp=Z,1.3nm,0.7s,baz=67,slow=4.5,SNR=11						
ARSA	**Arzberg**	**148.52**	**328**	*i* PKP	**PKiKP**	**22 13 49.3**	**-0.5**
	comp=Z,3.4nm,1.2s						
MOA	**Molln**	**148.70**	**329**	*i* PKP	**PKPbc**	**22 13 48.7**	**0.0**
	comp=Z,7.8nm,1.5s						
BIOA	**Bad Ischl, Aus**	**149.11**	**330**	*i* PKP	**PKPbc**	**22 13 48.8**	**-1.0**
	comp=Z,4.1nm,1.1s						
SOKA	**Soboth**	**149.15**	**327**	*e*PKP	**PKPbc**	**22 13 49.5**	**-0.4**
	comp=Z,2.9nm,1.1s						
OBKA	**Obir**	**149.51**	**327**	*i* PKP	**PKPbc**	**22 13 50.9**	**0.0**
	comp=Z,2.6nm,0.8s						
KBA	**Koelnbreinsper**	**149.69**	**329**	*i* PKP	**PKPbc**	**22 13 51.0**	**-0.4**
	comp=Z,5.5nm,1.1s						
LESA	**Schwarzleotal**	**149.75**	**330**	*i* PKP	**PKPbc**	**22 13 50.6**	**-0.8**
	comp=Z,1.9nm,0.5s						
MYKA	**Terra Mystica**	**149.87**	**328**	*i* PKP	**PKPbc**	**22 13 50.4**	**-1.3**
	comp=Z,3.6nm,0.8s						
WATA	**Walderalm**	**150.31**	**331**	*i* PKP	**PKPbc**	**22 13 52.4**	**-0.5**
	comp=Z,5.6nm,1.3s						
ABTA	**Abfaltersbach**	**150.32

s-min=5.9km az=221.0
IDC ***08*** *22:13:45.9±1.5, 17°.92S×178°.19W, h582km±11km, mb3.5/5, mbtmp4.3/7, Error ellipse: s-maj=31.4km s-min=21.5km az=163.0*
ISC 08 22:13:46.1±0.8, 18°.0S±0°.1×178°.3W±0°.1, h590km, n39, σ1°11/44, mb4.1/15, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.54**	**274**	P	**P**	**22 15 05.9**	**-1.9**
	50nm,0.7s,baz=125,slow=12,SNR=41						
MSVF				S	**S**	**22 16 14.7**	**+0.3**
	7.8nm,0.9s,baz=130,slow=19,SNR=5.5						
MSVF	**Nonsavu**	**3.54**	**274**		**P**	**22 15 05.5**	**-2.3**
MSVF					**S**	**22 16 12.4**	**-2.0**
FUTU	**Fugatoga**	**3.71**	**2**	P	P	22 15 02.7	-6.3
DZM	**Mont Dzumac**	**14.93**	**252**	P	**P**	**22 16 54.2**	**+0.2**
	2.7nm,0.6s,baz=137,slow=19,SNR=2.3						
RTZ	**Ruatahuna**	**20.92**	**191**	P	**P**	**22 17 46.4**	**-2.1**
MRZ	**Mangatainoka R**	**23.16**	**192**	P	**P**	**22 18 06.6**	**-1.7**
QRZ	**Quartz Range**	**24.06**	**197**	P	**P**	**22 18 16.0**	**-0.3**
THZ	**Tophouse**	**24.83**	**196**	P	**P**	**22 18 22.1**	**-1.1**
LTZ	**Lake Taylor**	**25.95**	**196**	P	**P**	**22 18 31.3**	**-1.7**
WHZ	**Wether Hill Ro**	**30.05**	**199**	P	**P**	**22 19 07.9**	**-0.6**
CAN	**Canberra**	**33.75**	**233**	P	**P**	**22 19 40.1**	**0.0**
TOO	**Toolangi**	**37.21**	**231**	P	**P**	**22 20 08.4**	**-0.2**
TOO				IAmb	IAmb	22 20 11.8	
	comp=Z,10nm,1.4s						
COEN	**Coen**	**37.26**	**271**	P	**P**	**22 20 09.1**	**-0.2**
COEN				IAmb	IAmb	22 20 29.8	
	comp=Z,14nm,1.4s						
STKA	**Stephens Creek**	**38.70**	**241**	P	**P**	**22 20 22.2**	**+1.4**
	comp=Z,3.9nm,0.7s,baz=84,slow=10,SNR=5.6						
	comp=Z,3.9nm,0.7s						
STKA	**Stephens Creek**	**38.70**	**241**	P	**P**	**22 20 21.4**	**+0.6**
MGBR	**Mount Gambier**	**40.94**	**233**	P	**P**	**22 20 39.1**	**+0.6**
BBOO	**Buckleboo**	**43.48**	**241**	P	**P**	**22 21 00.1**	**+1.6**
BBOO				IAmb	IAmb	22 21 17.5	
	comp=Z,20nm,1.4s						
WRA	**Warramunga Arr**	**44.76**	**260**	P	**P**	**22 21 09.4**	**+0.8**
	comp=Z,2.0nm,0.5s,baz=95,slow=7.3,SNR=47						
WRA				PcP	**PcP**	**22 22 38.7**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=97,slow=3.0,SNR=3.2						
	comp=Z,2.0nm,0.5s						
WRA	**Warramunga Arr**	**44.76**	**260**	P	**P**	**22 21 09.2**	**+0.6**
WRA					**PcP**	**22 22 38.6**	**+0.8**
AS31	**Alice Springs**	**44.90**	**254**		**P**	**22 21 10.6**	**+0.9**
AS31				IAmb	IAmb	22 21 11.9	
	comp=Z,3.9nm,0.8s						
ASAR	**Alice Springs**	**44.90**	**254**	P	**P**	**22 21 11.0**	**+1.3**
	comp=Z,13nm,0.6s,baz=88,slow=8.3,SNR=156						
ASAR				PcP	**PcP**	**22 22 39.3**	**+1.0**
	comp=Z,1.0nm,0.6s,baz=95,slow=3.6,SNR=6.7						
ASAR				S	**S**	**22 27 07.4**	**+1.6**
	comp=Z,0.5nm,0.8s,baz=89,slow=16,SNR=5.1						
	comp=Z,13nm,0.6s						
MTN	**Manton Dam**	**48.95**	**269**	P	**P**	**22 21 39.9**	**-0.2**
FORT	**Forrest**	**50.09**	**245**	P	**P**	**22 21 48.2**	**0.0**
FORT				IAmb	IAmb	22 22 21.1	
	comp=Z,9.9nm,0.8s						
KNRA	**Kununurra**	**50.63**	**264**	P	**P**	**22 21 52.6**	**+0.3**
KNRA				IAmb	IAmb	22 22 08.8	
	comp=Z,16nm,1.4s						
MBWA	**Marble Bar**	**58.19**	**256**	P	**P**	**22 22 45.6**	**+0.5**
MBWA				IAmb	IAmb	22 22 47.5	
	comp=Z,14nm,1.2s						
VNDA	**Vanda**	**60.33**	**185**	P	**P**	**22 22 59.5**	**+1.1**
MORW	**Morawa**	**60.57**	**246**	P	**P**	**22 23 01.0**	**+0.2**
MORW				IAmb	IAmb	22 23 11.9	
	comp=Z,29nm,1.5s						
UGM	**Wanagama**	**69.80**	**268**	P	**P**	**22 23 59.2**	**+0.4**
QSPA	**South Pole Qui**	**72.02**	**180**	P	**P**	**22 24 11.9**	**+0.9**
	comp=Z,1.4nm,0.7s,baz=144,slow=6.1,SNR=6.5						
	comp=Z,1.4nm,0.7s						
QSPA	**South Pole Qui**	**72.02**	**180**	P	**P**	**22 24 11.2**	**+0.2**
SPIA	**Saint Paul Isl**	**75.22**	**4**	P	**P**	**22 24 31.3**	**+2.4**
K15K	**Wolf Creek Mou**	**81.15**	**8**	P	**P**	**22 25 00.2**	**-0.3**
K15K				IAmb	IAmb	22 25 15.6	
	comp=Z,5.3nm,1.3s						
L18K	**Granite Mounta**	**81.80**	**10**	P	**P**	**22 25 03.5**	**-0.3**
BELA	**Belgrano 2**	**82.02**	**173**	P	**P**	**22 25 04.8**	**-0.1**
BELA				IAmb	IAmb	22 25 06.0	
	comp=Z,5.6nm,1.1s						
CMAR	**Chiang Mai Arr**	**89.07**	**290**	P	**P**	**22 25 38.5**	**-1.4**
	comp=Z,0.7nm,0.3s,baz=96,slow=6.7,SNR=4.2						
	comp=Z,0.7nm,0.3s						
BRTR	**Keskin Array B**	**144.98**	**315**	PKP	**PKPbc**	**22 32 17.3**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=72,slow=2.5,SNR=5.8						
BRTR	**Keskin Array B**	**144.98**	**315**		**PKPdf**	**22 32 17.2**	**-0.2**
MMAI	**Mount Meron Ar**	**146.34**	**303**	PKPbc	**PKPbc**	**22 32 22.6**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=77,slow=9.0,SNR=5.5						
GERES	**GERESS Array B**	**147.78**	**345**	PKPbc	**PKPbc**	**22 32 25.3**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=21,slow=5.7,SNR=5.0						

GCG ***08*** *22:41:35.4±2.2, 15°.59N×94°.29W, h35km±999km, MD4.4, ML4.2, Presumed earthquake*
MEX ***08*** *22:41:36.9±1.1, 15°.68N×94°.27W, h57km±20km, MD4.1*
ISC 08 22:41:35.0±1.2, 15°.66N±0°.05×94°.26W±0°.03, h68km±15km, n36, σ2°.8°01/64, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CARR	**Arriaga**	**0.68**	**29**	*eP*	**Pn**	**22 41 50.4**	**+0.9**
CARR				*eS*	**Sn**	**22 42 00.7**	**+0.5**
PCIG		**1.00**	**87**	*eP*	**Pn**	**22 41 53.9**	**+0.5**
PCIG				*eS*	**Sn**	**22 42 06.4**	**-0.7**
CMIG	**Matias Romero**	**1.55**	**337**	*eP*	**Pn**	**22 42 01.5**	**+0.9**
CMIG				*eS*	**Sn**	**22 42 17.3**	**-2.6**
TGIG		**1.56**	**44**	*eP*	**Pn**	**22 42 01.3**	**+0.5**
TGIG				*eS*	**Sn**	**22 42 18.4**	**-1.8**
TGIG		**1.56**	**44**	*i P*	**Pn**	**22 42 01.0**	**+0.2**
HUIG	**Huatulco**	**1.79**	**274**	*eP*	**Pn**	**22 42 04.2**	**+0.5**
HUIG				*eS*	**Sn**	**22 42 24.0**	**-1.6**
HUIG	**Huatulco**	**1.79**	**274**	*i P*	**Pn**	**22 42 04.3**	**+0.5**
HUIG				*i S*	**Sn**	**22 42 24.1**	**-1.5**
PATR	**El Naranjo**	**2.02**	**105**	*eP*	**Pn**	**22 42 08.1**	**+0.9**
PATR				*eS*	**Sn**	**22 42 30.5**	**-1.1**
PAVE	**Pavencul**	**2.06**	**103**	*eP*	**Pn**	**22 42 08.9**	**+1.3**
PAVE				*eS*	**Sn**	**22 42 32.1**	**-0.3**
CCIG	**Comitan**	**2.13**	**73**	*eP*	**Pn**	**22 42 11.1**	**+2.5**
CCIG				*eS*	**Sn**	**22 42 34.4**	**+0.2**
CCIG	**Comitan**	**2.13**	**73**	*i P*	**Pn**	**22 42 10.9**	**+2.3**
CHUJ	**Union Juarez**	**2.15**	**105**	*eP*	**Pn**	**22 42 10.0**	**+1.1**
CHUJ				*eS*	**Sn**	**22 42 33.9**	**-0.8**
SMCA	**Catarina**	**2.25**	**110**	*i P*	**Pn**	**22 42 11.1**	**+1.0**
NEUV	**Arroyo Zacate**	**2.52**	**324**	*eP*	**Pn**	**22 42 15.4**	**+1.6**
NEUV				*eS*	**Sn**	**22 42 42.9**	**-0.6**
RTAL	**Retalhuleu**	**2.72**	**114**	*eP*	**Pn**	**22 42 17.5**	**+1.1**
RTAL				*eS*	**Sn**	**22 42 48.7**	**+0.5**
VHO	**Vista Hermosa**	**2.76**	**301**	*eP*	**Pn**	**22 42 20.0**	**+2.8**
VHO				*eS*	**Sn**	**22 42 50.6**	**+1.0**
PEIG	**Puerto Escondi**	**2.80**	**277**	*eP*	**Pn**	**22 42 17.6**	**+0.1**
PEIG				*eS*	**Sn**	**22 42 47.5**	**-2.8**
STG2	**El Palmar, Qui**	**3.04**	**113**	*eP*	Pn	22 42 17.1	-3.8
STG2				*i S*	Sn	22 42 47.8	-8.3
STG2				IAML		22 42 55.5	
	comp=E,2μm,0.3s						
STG8	**El Palmar, Qui**	**3.05**	**113**	*i P*	**Pn**	**22 42 17.9**	**-3.3**
STG8				IAML		22 42 58.8	
	comp=E,424nm,0.2s						
YOIG	**Yosondua**	**3.38**	**291**	*eP*	**Pn**	**22 42 28.7**	**+3.0**
YOIG				*eS*	**Sn**	**22 43 04.4**	**-0.3**
TOIG	**Toxpalan**	**3.62**	**312**	*eP*	**Pn**	**22 42 32.5**	**+3.7**
TOIG				*eS*	**Sn**	**22 43 10.9**	**+0.5**
APG	**El Apazote**	**3.72**	**100**	*i P*	**Pn**	**22 42 33.2**	**+3.0**
TXIG	**Tlaxiaco**	**3.73**	**296**	*eP*	**Pn**	**22 42 33.6**	**+3.2**
TXIG				*eS*	**Sn**	**22 43 10.1**	**-3.1**
PNIG	**Pinotepa**	**3.79**	**282**	*eP*	**Pn**	**22 42 31.7**	**+0.6**
PNIG				*eS*	**Sn**	**22 43 12.0**	**-2.5**
HLIG	**Huajuapan de L**	**4.03**	**303**	*eP*	**Pn**	**22 42 37.7**	**+3.3**
HLIG				*eS*	**Sn**	**22 43 18.8**	**-1.7**
FTIG	**Fresnillo de T**	**4.34**	**302**	*eP*	**Pn**	**22 42 41.6**	**+3.1**
FTIG				*eS*	**Sn**	**22 43 27.3**	**-0.6**
PETF	**Flores**	**4.40**	**73**	*eP*	**Pn**	**22 42 39.9**	**+0.6**
PETF				*eS*	**Sn**	**22 43 26.1**	**-3.2**
PETF	**Flores**	**4.40**	**73**	*i P*	**Pn**	**22 42 40.4**	**+1.0**
PETF				IAML		22 43 34.6	
	comp=N,253nm,0.5s						
SCIG	**Sabancuy**	**4.41**	**41**	*eP*	**Pn**	**22 42 40.0**	**+0.6**
SCIG				*eS*	**Sn**	**22 43 26.1**	**-3.4**
JAUV	**Jalcomulco**	**4.42**	**327**	*eP*	**Pn**	**22 42 40.6**	**+1.0**
JAUV				*eS*	**Sn**	**22 43 28.0**	**-1.9**
MGIG	**Malinaltepec**	**4.48**	**291**	*eP*	**Pn**	**22 42 42.1**	**+1.4**
MGIG				*eS*	**Sn**	**22 43 30.8**	**-0.8**
TLIG	**Tlapa**	**4.55**	**295**	*eP*	**Pn**	**22 42 45.1**	**+3.6**
TLIG				*eS*	**Sn**	**22 43 30.0**	**-3.1**
DAIG	**Los Arroyos**	**5.35**	**285**	*eP*	**Pn**	**22 42 51.7**	**-0.7**
DAIG				*eS*	**Sn**	**22 43 51.6**	**-1.2**
CXUV	**Coxquihui**	**5.50**	**325**	*eP*	**Pn**	**22 42 55.1**	**+0.7**
CXUV				*eS*	**Sn**	**22 43 55.7**	**-0.7**
PLIG	**Platanillo**	**5.71**	**299**	*eP*	**Pn**	**22 42 58.1**	**+0.8**
PLIG				*eS*	**Sn**	**22 43 58.7**	**-2.9**
ARIG	**Puente Sto Nin**	**6.39**	**295**	*eP*	**Pn**	**22 43 10.6**	**+4.1**
ARIG				*eS*	**Sn**	**22 44 15.1**	**-3.0**

CATAC ***08*** *22:46:42.8±0.6, 13°.N±3°.×8°.9W±°, h25km±3km, M3.4/14, MLv3.4/14, Error ellipse: s-maj=7.4km s-min=4.5km az=24.3, confirmed*
SNET ***08*** *22:46:43.2±0.7, 13°.06N×89°.33W, h36km, ML3.4, Presumed earthquake*
GCG ***08*** *22:46:44.7±0.4, 13°.26N×89°.35W, h53km±10km, MD3.7, ML3.4, Presumed earthquake*
ISC 08 22:46:43.6±1.5, 13°.12N±0°.06×89°.34W±0°.04, h25km±13km, n41, σ0°.86/58, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.37**	**3**	*i* P	**Pn**	**22 46 53.3**	**-0.2**
LALI				*i* S	**Sn**	**22 47 00.4**	**+0.5**
PANCS	**Alcalda de**	**0.52**	**18**	P	Pn	22 47 04.2	+8.7
JAYA	**Jayaque - finc**	**0.55**	**349**	P	**Pn**	**22 46 55.5**	**-0.6**
JAYA				S	**Sn**	**22 47 04.5**	**0.0**
JAYA	**Jayaque - finc**	**0.55**	**349**	*i* P	**Pb**	**22 46 55.2**	**+0.4**
JAYA				IAML		22 47 08.5	
	comp=E,2μm,0.2s						
LOMA	**Loma Larga**	**0.55**	**17**	*eP*	**Pn**	**22 46 55.6**	**-0.5**
LOMA				*eS*	**Sn**	**22 47 05.3**	**+0.7**
LFRS	**El Faro**	**0.57**	**28**	*eP*	**Pn**	**22 46 55.8**	**-0.6**
PMON	**Piamonte**	**0.59**	**2**	P	**Pn**	**22 46 56.1**	**-0.6**
PMON				S	**Sn**	**22 47 06.4**	**+0.7**
PMON	**Piamonte**	**0.59**	**2**	*eP*	**Pn**	**22 46 56.0**	**-0.6**
SEMO	**Seminario San**	**0.60**	**11**	P	**Pn**	**22 46 56.3**	**-0.3**
SEMO				S	**Sn**	**22 47 06.1**	**+0.5**
UEES	**Universidad Ev**	**0.61**	**9**	P	**Pn**	**22 46 56.4**	**-0.4**
UEES				S	**Sn**	**22 47 06.5**	**+0.6**
UEES	**Universidad Ev**	**0.61**	**9**	*eP*	**Pb**	**22 46 56.0**	**+0.3**
BOQS	**Boqueron**	**0.62**	**5**	*eP*	**Pn**	**22 46 56.5**	**-0.6**
TECO	**Alcaldia de Te**	**0.69**	**52**	P	**Pb**	**22 46 56.8**	**-0.2**
TECO				S	**Sn**	**22 47 07.6**	**-0.2**
PAVA	**Las Pavas**	**0.71**	**33**	P	**Pn**	**22 46 57.9**	**-0.4**
PAVA				S	**Sn**	**22 47 09.3**	**+0.8**
SBLS	**San Blas**	**0.77**	**339**	*eP*	**Pn**	**22 46 58.6**	**-0.6**
UNIC	**Universidad Ca**	**0.89**	**347**	P	**Pn**	**22 47 00.4**	**-0.2**
NUBE	**Las Nubes**	**0.89**	**331**	P	**Pb**	**22 47 00.2**	**-0.4**
NUBE				S	**Sb**	**22 47 12.2**	**0.0**
NUBE	**Las Nubes**	**0.89**	**331**	*i* P	**Pb**	**22 46 59.7**	**-0.8**
NUBE				*i* S	**Sb**	**22 47 11.6**	**-0.5**
TECA	**Tecapa**	**0.90**	**65**	*i* P	**Pb**	**22 46 59.9**	**-0.8**
PQSS	**Presa 15 de Se**	**0.91**	**56**	P	**Pn**	**22 47 00.1**	**-0.8**
PQSS				S	**Sn**	**22 47 13.3**	**0.0**
PQSS	**Presa 15 de Se**	**0.91**	**56**	*eP*	**Pn**	**22 46 59.9**	**-1.0**
FAME	**Alcaldia de Sa**	**0.98**	**318**	P	**Pn**	**22 47 00.9**	**-1.0**
SLOZ	**Alcaldia de Sa**	**1.00**	**335**	*eP*	**Pn**	**22 47 01.7**	**-0.6**
P5NO	**Presa 5 de nov**	**1.03**	**33**	P	**Pn**	**22 47 02.1**	**-0.5**
P5NO				S	**Sn**	**22 47 16.1**	**-0.3**
PACA	**Pacayal**	**1.05**	**70**	P	**Pn**	**22 47 02.5**	**-0.5**
PACA	**Pacayal**	**1.05**	**70**	*eP*	**Pn**	**22 47 02.3**	**-0.6**
PACA				*eS*	**Sb**	**22 47 17.2**	**+0.5**
LCY	**Lacayo**	**1.06**	**73**	*eP*	**Pn**	**22 47 02.5**	**-0.6**
RANC	**El Ranchito**	**1.07**	**73**	P	**Pn**	**22 47 02.6**	**-0.6**
RANC				S	**Sb**	**22 47 17.8**	**+0.5**
LLGN	**La Laguna**	**1.11**	**20**	P	**Pn**	**22 47 03.0**	**-0.8**
LLGN				S	**Sn**	**22 47 18.7**	**+0.4**
BLLM	**Bellamira**	**1.12**	**73**	*eP*	**Pn**	**22 47 03.4**	**-0.5**
INTP	**Intipuca**	**1.26**	**86**	*eP*	**Pn**	**22 47 04.3**	**-1.3**
INTP				*eS*	**Sn**	**22 47 20.6**	**-1.2**
MTO3	**Montecristo**	**1.28**	**359**	P	**Pn**	**22 47 05.7**	**-0.5**
LCND	**La Caada**	**1.43**	**82**	P	**Pn**	**22 47 07.5**	**-0.5**
ESQI	**Esquipulas**	**1.44**	**360**	P	**Pn**	**22 47 08.3**	**+0.1**
ESQI				S	**Sb**	**22 47 27.5**	**-0.3**
CNCH	**Conchagua**	**1.48**	**84**	P	**Pn**	**22 47 07.8**	**-1.0**
CNCH				S	**Sn**	**22 47 27.8**	**+0.4**
FG8	**Yepocapa, Chim**	**1.64**	**314**	*i* P	**Pb**	**22 47 15.7**	**+2.4**
CSGN	**Cosiguina Volc**	**1.74**	**94**	P	**Pb**	**22 47 18.7**	**+3.7**
ESSG	**Sabana Grande**	**1.92**	**311**	*i* P	**Pn**	**22 47 14.1**	**-0.8**
PKGN	**Cerro Pekin**	**2.35**	**101**	P	**Pb**	**22 47 24.5**	**-0.8**
STG8	**El Palmar, Qui**	**2.36**	**304**	*i* P	**Pb**	**22 47 25.5**	**-0.1**
LIMN	**Finca el Limon**	**2.90**	**91**	P	**Pn**	**22 47 27.7**	**-0.6**

IDC ***08*** *22:48:58.5±0.5, 7°.39N×35°.70W, h0km, mb4.2/28, mbtmp4.3/30, ML4.5/2, MS4.1/71, Error ellipse: s-maj=15.8km s-min=11.3km az=142.0*
BGR ***08*** *22:48:58.5, 5°.81N×34°.69W, h10km, mb4.8*
NEIC ***08*** *22:49:00.5±1.3, 7°.33N±0°.09×35°.67W±0°.09, h10km±1km, mb4.9/120, Error ellipse: s-maj=16.4km s-min=13.7km az=143.0*
GFZ ***08*** *22:49:01.1, 7°.11N×35°.50W, h11km, MW5.0, Moment Tensor Solution. s9 Moment tensor: Mrr=1.01; Mθθ=0.02; Mφφ=0.99; Mrθ=-0.48; Mrφ=-4.40; Mθφ=0.38; Fault plane solution: NP1:φs=273.00000°, δ=87.00000°, λ=174.00000°. NP2:φs=3.00000°, δ=84.00000°, λ=2.00000°. Principal axes: T 4.9900, Plg5.0000°, Azm228.0000°; N -1.0600, Plg83.0000°, Azm68.0000°; P -3.9300, Plg2.0000°, Azm318.0000°;*
GCMT ***08*** *22:49:01.5±0.2, 7°.47N±0°.01×35°.70W±0°.01, h24km±1km, MW5.2/131, Moment Tensor Solution. s66,c91; s131,c219; Duration: 0 Moment tensor: Scale 1016Nm; Mrr=1.20±.17; Mθθ=0.79±.15; Mφφ=1.98±.15; Mrθ=-0.56±.22; Mθφ=-7.12±.14; Mrφ=-0.13±.20; Best double couple: M=7.28000×10^16 NP1:φs=5.00000°, δ=85.00000°, λ=-3.00000°. NP2:φs=96.00000°, δ=87.00000°, λ=-175.00000°. Principal axes: T 7.8580, Plg2.0000°, Azm230.0000°; N -1.1600, Plg84.0000°, Azm124.0000°; P -6.7030, Plg5.0000°, Azm321.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
INMG ***08*** *22:49:02.0±6.0, 7°.20N×35°.79W, h10km, M4.8, mb4.9, #DIST_RANGE: DISTANT*
ISC 08 22:48:59.8±0.3, 7°.30N±0°.06×35°.68W±0°.06, h10km, n297, σ0°.96/243, mb4.8/113, MS4.2/73, 4D, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NBMO	**Morrinhos-CE**	**11.41**	**203**	*eP*	**Pn**	**22 51 42.6**	**-0.4**
NBPS	**Pedro II - PI**	**12.97**	**207**	*eP*	**Pn**	**22 52 03.3**	**-1.0**
NBPA	**Parau_RN**	**13.04**	**186**	*eP*	**Pn**	**22 52 05.4**	**0.0**
RCBR	**Riachuelo**	**13.04**	**181**	Pn	**Pn**	**22 52 05.4**	**0.0**
	7.7nm,0.3s,baz=360,slow=20,SNR=137						
RCBR				Sn	Sn	22 54 20.8	-10
	7.6nm,0.3s,baz=98,slow=22,SNR=12						
RCBR				LR	LR	22 55 56.2	
	comp=Z,289nm,18.2s,baz=14,slow=32						
	22nm,0.4s						
RCBR	**Riachuelo**	**13.04**	**181**		**Pn**	**22 52 06.1**	**+0.7**
RCBR	**Riachuelo**	**13.04**	**181**	*eP*	**Pn**	**22 52 05.2**	**-0.2**
NBPB	**Pedra_Branca-C**	**13.34**	**197**	*eP*	**Pn**	**22 52 09.9**	**+0.5**
NBPV	**Pedro Velho**	**13.63**	**178**	*eP*	**Pn**	**22 52 14.0**	**+0.6**
SACV	**Santiago Islan**	**14.07**	**56**	Pn	**Pn**	**22 52 14.8**	**-4.7**
NBMA	**Muriti-CE**	**14.89**	**192**	*eP*	**Pn**	**22 52 31.3**	**+0.6**
NBTA	**Tacaratu-PE**	**16.49**	**188**	*eP*	**P**	**22 52 52.7**	**-1.4**
NBAN	**Anadia - AL**	**16.87**	**182**	*eP*	**P**	**22 52 57.6**	**-0.7**
MDP	**Montagnes des**	**17.01**	**264**	Pn	**Pn**	**22 52 57.5**	**-0.5**
	0.5nm,0.3s,baz=83,slow=12,SNR=5.4						
MDP				Sn	Sn	22 55 49.8	-17
	0.4nm,0.3s,baz=131,slow=11,SNR=1.7						
MDP				LR	LR	22 58 08.7	
	comp=Z,403nm,21.6s,baz=76,slow=32						
	13nm,0.7s						
NBLA	**Lagarto - SE**	**18.30**	**187**	*eP*	**P**	**22 53 14.7**	**+0.6**
NBPN	**Ponto Novo - B**	**18.58**	**194**	*eP*	**Pn**	**22 53 18.5**	**+1.0**
PRPB	**Parauapebas**	**19.45**	**227**	*eP*	**Pn**	**22 53 27.5**	**-0.5**
SMTB	**Santa Maria do**	**19.97**	**217**	*eP*	**P**	**22 53 32.9**	**+0.4**
BOAV	**Boa Vista**	**25.23**	**260**		**P**	**22 54 27.1**	**+0.9**
H05S1	**Guadeloupe/Mar**	**25.68**	**288**	T	T	23 21 03.5	
	SNR=53						
BDFB	**Brasilia**	**25.87**	**208**	P	**P**	**22 54 32.3**	**+0.3**
	11nm,1.0s,baz=29,slow=15,SNR=12						
BDFB				LR	LR	23 04 15.7	
	comp=Z,729nm,18.5s,baz=5.8,slow=35						
	11nm,1.0s						
BDFB	**Brasilia**	**25.87**	**208**		**P**	**22 54 31.5**	**-0.5**
BDFB				IAmb	IAmb	22 54 36.1	
	comp=Z,31nm,1.2s						
H10N3	**ASCENSION HYDR**	**25.92**	**125**	T	T	23 21 45.2	
	baz=305,slow=75,SNR=69						
H10N2	**ASCENSION HYDR**	**25.93**	**125**	T	T	23 21 30.9	
	baz=305,slow=75,SNR=39						
H10N1	**ASCENSION HYDR**	**25.95**	**125**	T	T	23 21 29.7	
	baz=305,slow=75,SNR=63						
H05N1	**Guadeloupe/Mar**	**26.38**	**292**	T	T	23 21 52.8	
	SNR=32						
H10S3	**ASCENSION HYDR**	**26.44**	**127**	T	T	23 22 09.8	
	baz=303,slow=74,SNR=62						
H10S2	**ASCENSION HYDR**	**26.46**	**127**	T	T	23 22 14.0	
	baz=277,slow=74,SNR=70						
MACA	**Manacapuru-AM**	**27.04**	**248**		**P**	**22 54 43.1**	**+0.6**
MACA				IAmb	IAmb	22 55 17.1	
	comp=Z,45nm,1.3s						
DBIC	**Dimbokro**	**30.59**	**89**	P	**P**	**22 55 14.2**	**-0.1**
	comp=Z,4.5nm,0.7s,baz=296,slow=9.5,SNR=7.0						
DBIC				LR	LR	23 04 49.8	
	comp=Z,192nm,19.8s,baz=280,slow=31						
	comp=Z,4.5nm,0.7s						
DBIC	**Dimbokro**	**30.59**	**89**	P	**P**	**22 55 13.9**	**-0.4**
DBIC				IAmb	IAmb	22 55 26.0	
	comp=Z,35nm,1.6s						
PSMN	**Pico do Norte,**	**31.11**	**17**	*eT*	T	23 27 14.3	
SJG	**San Juan**	**31.55**	**293**	LR	LR	23 05 26.0	
	comp=Z,316nm,20.1s,baz=98,slow=31						
CELP	**Cerrillos**	**31.94**	**293**	P	**P**	**22 55 26.1**	**0.0**
PTLB	**Pontes e Lacer**	**32.42**	**226**		**P**	**22 55 30.9**	**+0.6**
PTLB				IAmb	IAmb	22 55 33.4	
	comp=Z,19nm,1.2s						
SIV	**San Ignacio**	**34.17**	**227**	LR	LR	23 09 04.3	
	comp=Z,1μm,19.2s,baz=68,slow=35						
TRCB	**Terra Rica**	**34.21**	**209**	P	**P**	**22 55 45.4**	**-0.4**
SDV	**Santo Domingo**	**34.64**	**275**		**P**	**22 55 49.1**	**-0.8**
BBSR	**BB Station**	**36.74**	**317**	P	**P**	**22 56 07.6**	**+0.1**
AVE	**Averroes**	**36.80**	**41**	P	**P**	**22 56 08.3**	**+0.3**
AVE				IAmb	IAmb	22 56 21.9	
	comp=Z,27nm,0.9s						
TORD	**Torodi Ar. Bea**	**37.20**	**78**	P	**P**	**22 56 11.4**	**-0.2**
	comp=Z,9.4nm,0.6s,baz=261,slow=11,SNR=74						
TORD				LR	LR	23 09 07.2	
	comp=Z,656nm,22.0s,baz=257,slow=32						
	comp=Z,9.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**37.20**	**78**	P	**P**	**22 56 13.1**	**+1.4**
MD31	**MD31**	**38.33**	**44**		**P**	**22 56 20.3**	**-0.8**
MD01	**Midelt array s**	**38.33**	**44**	P	**P**	**22 56 21.7**	**+0.5**
MDT	**Midelt**	**38.41**	**44**	LR	LR	23 10 30.9	
	comp=Z,446nm,20.1s,baz=246,slow=34						
PFVI	**Vila Bisbo**	**38.44**	**35**	*eP*	P	22 56 31.1	+9.2
ROSC	**El Rosal**	**38.50**	**269**	P	**P**	**22 56 23.9**	**+0.8**
	comp=Z,17nm,0.6s,baz=111,slow=12,SNR=13						
	comp=Z,17nm,0.6s						
ROSC	**El Rosal**	**38.50**	**269**		**P**	**22 56 23.5**	**+0.4**
ROSC				IAmb	IAmb	22 56 26.6	
	comp=Z,20nm,0.7s						
MORF	**Marmelete**	**38.66**	**35**	*eP*	**P**	**22 56 24.7**	**+0.9**
PBDV	**Barranco-do-Ve**	**39.04**	**36**	*eP*	**P**	**22 56 28.5**	**+1.6**
PBDV				*i* IAmb	IAmb	22 56 39.8	
	comp=Z,42nm,2.1s						
PCVE	**Castro Verde**	**39.24**	**36**	*eP*	**P**	**22 56 30.4**	**+1.8**
PCVE				*i* IAmb	IAmb	22 56 38.0	
	comp=Z,33nm,1.5s						
MESJ	**Messejana**	**39.28**	**35**	*eP*	**P**	**22 56 30.2**	**+1.3**
MESJ				*i* IAmb	IAmb	22 56 40.3	
	comp=Z,23nm,2.4s						
CPUP

comp=Z,9.2nm,0.8s
KEST Kesra 49.92 49 P P 22 57 53.3 -0.7
KEST IAmb IAmb 22 58 23.2
comp=Z,14nm,0.9s
CO03 El Pedregal 50.62 220 P P 22 57 59.4 0.0
CO06 Fray Jorge 51.12 221 P P 22 58 01.8 -1.2
BG3 Lake Jocassee 51.33 309 P P 22 58 05.0 +0.4
BG3 IAmb IAmb 22 58 24.6
comp=Z,23nm,1.4s
MT08 Bocatoma Ro 52.01 217 P P 22 58 08.3 -1.6
MT08 IAmb IAmb 22 58 21.8
comp=Z,22nm,1.1s
TKL Tuckaleechee C 52.21 310 LR LR 23 15 40.7
comp=Z,160nm,21.7s,baz=124,slow=31
TEIG Tepich 52.47 290 LR LR 23 16 55.6
comp=Z,2µm,20.3s,baz=116,slow=32
BO04 La Punta 52.74 217 P P 22 58 14.8 -0.3
BO04 IAmb IAmb 22 58 19.9
comp=Z,20nm,1.0s
MT09 Talagante 52.82 217 P P 22 58 14.9 -0.9
MT09 IAmb IAmb 22 58 26.8
comp=Z,27nm,1.1s
SADO Sadowa 53.02 322 LR LR 23 17 09.8
comp=Z,116nm,20.2s,baz=132,slow=32
Q51A Peebles 53.16 314 P P 22 58 18.0 -0.2
Q51A IAmb IAmb 22 58 30.1
comp=Z,12nm,0.8s
BO02 Sierra Bellavi 53.40 216 P P 22 58 19.7 -0.3
BO02 IAmb IAmb 22 58 21.9
comp=Z,23nm,1.1s
SCHQ Schefferville 53.55 338 P P 22 58 20.3 -0.5
comp=Z,2.3nm,0.6s,baz=162,slow=6.3,SNR=8.4
SCHQ LR LR 23 16 50.0
comp=Z,102nm,21.8s,baz=133,slow=31
SCHQ Schefferville 53.55 338 P P 22 58 20.8 +0.1
SCHQ IAmb IAmb 22 59 34.8
comp=Z,35nm,1.9s
LRAL Lakeview Retre 53.89 306 P P 22 58 23.3 -0.3
LRAL IAmb IAmb 22 58 56.7
comp=Z,32nm,1.7s
DOU Dourbes 54.26 31 *d***P P 22 58 26.6 +0.6**
comp=Z,13nm,0.7s
VAE Valguarnera 54.35 49 LR LR 23 20 12.3
comp=Z,515nm,21.8s,baz=293,slow=34
EKA Eskdalemuir Ar 54.44 22 P P 22 58 26.5 -0.7
comp=Z,1.1nm,0.7s,baz=216,slow=8.3,SNR=4.2
EKA LR LR 23 16 27.1
comp=Z,207nm,21.5s,baz=212,slow=30
comp=Z,1.1nm,0.7s
V48A Smith Brothers 54.57 309 P P 22 58 27.6 -0.9
V48A IAmb IAmb 22 58 34.3
comp=Z,8.4nm,0.9s
BGES Gesves 54.69 31 *d***P P 22 58 29.4 +0.3**
comp=Z,7.5nm,1.0s
ZCCA Zocca 54.80 40 P P 22 58 29.4 -0.6
WLF Walferdange 54.81 32 *d***P P 22 58 30.7 +0.7**
BI02 San Fabin de 55.01 215 P P 22 58 31.4 -0.3
BI02 IAmb IAmb 22 59 03.5
comp=Z,19nm,1.1s
T47A Sharon Grove 55.19 310 P P 22 58 32.1 -0.9
T47A IAmb IAmb 22 58 39.1
comp=Z,22nm,1.2s
DAVOX Davos/Dischmat 55.31 37 LR LR 23 20 03.8
comp=Z,368nm,19.0s,baz=252,slow=34
FUORN Ofenpass-Fuorn 55.46 37 P P 22 58 34.9 -0.2
FUORN IAmb IAmb 22 59 09.6
comp=Z,27nm,1.7s
WVT Waverly 55.47 309 P P 22 58 34.8 -0.3
DAVA Damuels 55.57 36 *i* **P P 22 58 36.3 +0.5**
comp=Z,4.7nm,0.7s
TEOL Teolo 55.71 39 P P 22 58 35.4 -1.2
TEOL IAmb IAmb 22 58 39.3
comp=Z,10nm,0.8s
FETA Feichten 55.94 37 *i* **P P 22 58 38.6 +0.2**
comp=Z,4.5nm,1.1s
CTI Castel Tesino 56.02 38 P P 22 58 38.7 -0.2
CTI IAmb IAmb 22 58 40.0
comp=Z,7.9nm,0.8s
RETA Reutte 56.19 36 *i* **P P 22 58 40.2 +0.1**
comp=Z,3.5nm,0.6s
MOTA Moosalm 56.32 37 *i* **P P 22 58 41.1 0.0**
comp=Z,4.3nm,0.6s
SQTA Sankt Quirin 56.32 37 *i* **P P 22 58 41.1 0.0**
comp=Z,5.4nm,0.6s,SNR=8.3
WATA Walderalm 56.60 37 *i* **P P 22 58 42.9 -0.1**
comp=Z,3.0nm,0.6s,SNR=4.3
WTTA Wattenberg 56.60 37 *i* **P P 22 58 43.1 0.0**
comp=Z,5.4nm,0.6s,SNR=11
KUQ Kuujjuuaa 56.63 340 P P 22 58 43.3 +0.4
KUQ IAmb IAmb 22 58 55.1
comp=Z,11nm,0.9s
ABTA Abfaltersbach 56.88 38 *i* **P P 22 58 45.2 +0.2**
comp=Z,5.7nm,0.9s
GO06 Curarrehue 57.20 213 P P 22 58 47.1 -0.3
GO06 IAmb IAmb 22 58 49.9
comp=Z,21nm,1.3s
LESA Schwarzleotal 57.29 37 *i* **P P 22 58 48.0 +0.1**
comp=Z,4.3nm,0.5s,SNR=10
MYKA Terra Mystica 57.51 38 *i* **P P 22 58 50.1 +0.6**
comp=Z,3.4nm,0.6s
KBA Koelnbreinsper 57.53 38 *i* **P P 22 58 49.6 -0.1**
comp=Z,1.2nm,0.4s
PLCA Paso Flores 57.56 211 P P 22 58 50.9 +1.0
comp=Z,9.1nm,1.2s,baz=34,slow=8.1,SNR=4.4
PLCA LR LR 23 24 14.3
comp=Z,607nm,19.6s,baz=48,slow=37
comp=Z,9.1nm,1.2s
PLCA Paso Flores 57.56 211 P P 22 58 50.1 +0.2
GRF Grafenberg Arr 57.57 34 *eP* **P 22 58 50.6 +0.8**
comp=Z,8.0nm,0.7s,baz=235,slow=6.8
GBRS Gornja Briga 57.76 40 *eP* **P 22 58 51.9 +0.7**
BIOA Bad Ischl, Aus 57.99 37 *i* **P P 22 58 53.4 +0.6**
comp=Z,2.4nm,0.5s
OBKA Obir 58.02 39 *i* **P P 22 58 54.2 +1.2**
comp=Z,2.0nm,0.7s
BOJS Bojanci 58.03 40 *eP* **P 22 58 54.0 +0.9**
BORG Borgarnes 58.24 7 LR LR 23 17 56.2
comp=Z,180nm,21.0s,baz=197,slow=30
SOKA Soboth 58.39 39 *i* **P P 22 58 56.1 +0.4**
comp=Z,4.4nm,0.9s
PERS Pernice 58.43 39 *eP* **P 22 58 56.3 +0.4**
MOA Molln 58.44 37 *i* **P P 22 58 56.0 0.0**
comp=Z,2.1nm,0.5s
GERES GERESS Array B 58.57 36 P P 22 58 57.0 +0.1
comp=Z,0.9nm,0.6s,baz=235,slow=4.7,SNR=9.4
GERES LR LR 23 20 51.8
comp=Z,242nm,21.9s,baz=256,slow=33
comp=Z,0.9nm,0.6s
KHC Kasperske Hory 58.63 36 *eP* **P 22 58 57.6 +0.3**
TSUM Tsumeb 58.70 118 LR LR 23 18 27.4
comp=Z,352nm,20.9s,baz=290,slow=30
CKRC Cesky Krumlov 58.91 36 *eP* **P 22 58 59.4 +0.2**
ARSA Arzberg 58.94 38 *i* **P P 22 58 59.5 +0.1**
comp=Z,3.9nm,1.0s
ZVC Zvikov 59.13 36 *eP* **P 22 59 01.0 +0.3**
N41A Harden Midland 59.16 313 P P 22 59 01.5 +0.5
MGMO Mountain Grove 59.18 309 P P 22 59 01.4 +0.1
MGMO IAmb IAmb 22 59 35.5
comp=Z,19nm,1.3s
CLL Collm 59.37 33 *eS* **S 23 07 13.0 +1.9**
CLL *eSS* **SS 23 11 12.0 +6.1**
CLL AMS AMS 23 20 00.0
comp=Z,300nm,18.8s
CONA Conrad Observa 59.44 38 *i* **P P 22 59 04.0 +1.1**
comp=Z,3.0nm,0.8s
R40A Maddies Statio 59.49 310 P P 22 59 04.1 +0.8
R40A IAmb IAmb 23 01 05.6
comp=Z,9.5nm,1.1s
RONA Rosalia, Austr 59.61 38 *i* **P P 22 59 04.4 +0.4**
comp=Z,4.5nm,1.0s
P40A Paris 59.67 312 P P 22 59 04.6 0.0
P40A IAmb IAmb 22 59 10.1
comp=Z,17nm,1.3s
PVCC Panska Ves 59.86 35 *eP* **P 22 59 07.0 +1.3**
S39A Bolivar 60.13 309 P P 22 59 06.8 -1.0
VRAC Vranov 60.48 37 LR LR 23 21 48.7
comp=Z,242nm,21.9s,baz=250,slow=33
MODS Modra-Piesok 60.49 38 *eP* **P 22 59 10.5 +0.4**
CHVC Chvalec 60.73 35 *eP* **P 22 59 11.8 +0.1**
DPC Dobruska-Polom 60.78 35 *eP* **P 22 59 12.6 +0.6**
SRO Srobarova 60.90 39 *eP* **P 22 59 13.8 +1.0**
KRLC Kralicky 60.92 36 *eP* **P 22 59 13.6 +0.6**
FRB Frobisher Bay 61.08 344 LR LR 23 21 19.8
comp=Z,92nm,21.0s,baz=189,slow=32
MAUC Maruska 61.23 37 *eP* **P 22 59 16.0 +0.9**

STEB Steborice 61.44 36 *eP* **P 22 59 17.8 +1.4**
IDI Anoyia 61.87 54 LR LR 23 26 23.3
comp=Z,108nm,21.4s,baz=294,slow=36
PSZ Piszkesteto 61.92 39 P P 22 59 20.4 +0.6
SPMN Marine on St. 61.98 318 P P 22 59 19.7 -0.5
SPMN IAmb IAmb 22 59 30.3
comp=Z,6.9nm,0.7s
LANS Liptovska Anna 62.13 38 *eP* **P 22 59 22.7 +1.5**
BRDY Brady 63.48 301 P P 22 59 29.9 -0.6
BRDY IAmb IAmb 22 59 34.6
comp=Z,11nm,1.2s
NB2 NORSAR Subarra 63.88 23 P P 22 59 33.0 +0.4
comp=Z,7.2nm,1.0s,baz=234,slow=6.9
NOA NORSAR Array B 63.88 23 P P 22 59 33.1 +0.4
comp=Z,1.7nm,0.6s,baz=233,slow=6.7,SNR=6.7
NOA LR LR 23 22 29.9
comp=Z,208nm,21.9s,baz=235,slow=32
comp=Z,1.7nm,0.6s
HFS Hagfors 64.37 25 P P 22 59 35.9 +0.2
comp=Z,2.7nm,0.7s,baz=194,slow=5.4,SNR=5.1
HFS LR LR 23 24 20.2
comp=Z,214nm,18.8s,baz=250,slow=33
comp=Z,2.7nm,0.7s
MLR Muntele Rosu 65.08 43 LR LR 23 27 46.0
comp=Z,208nm,19.2s,baz=262,slow=36
MLR Muntele Rosu 65.08 43 P P 22 59 41.8 +1.0
MLR Muntele Rosu 65.08 43 P P 22 59 41.7 +0.9
comp=Z,14nm,1.1s
OZNA Ozona 65.24 301 P P 22 59 42.6 +0.5
OZNA IAmb IAmb 22 59 47.6
comp=Z,16nm,1.1s
ULM Lac du Bonnet 65.59 322 P P 22 59 42.9 -1.0
comp=Z,2.0nm,0.8s,baz=95,slow=5.6,SNR=3.4
ULM LR LR 23 23 02.8
comp=Z,110nm,21.9s,baz=110,slow=31
comp=Z,2.0nm,0.8s
ULM Lac du Bonnet 65.59 322 P P 22 59 43.5 -0.3
SAND Sanderson 66.00 299 P P 22 59 48.9 +1.9
SAND IAmb IAmb 22 59 54.3
comp=Z,14nm,1.4s
SUW Suwalki 66.13 34 P P 22 59 46.6 -0.6
ELL Elmali 66.14 53 P P 22 59 48.1 +0.3
KMPD K-Podol'skiy 66.27 40 P P 22 59 47.9 -0.4
SUR Sutherland 66.66 130 LR LR 23 23 19.0
comp=Z,140nm,21.5s,baz=284,slow=31
RNPP1 Kostyukhnivka 66.69 37 P P 22 59 51.8 +0.9
MBAR Mbarara 66.70 94 LR LR 23 26 52.4
comp=Z,55nm,21.2s,baz=274,slow=34
LSZ Lusaka 67.13 110 LR LR 23 23 50.8
comp=Z,84nm,21.8s,baz=257,slow=31
TXAR Lajitas Array 67.28 299 P P 22 59 55.1 -0.2
comp=Z,0.4nm,0.5s,baz=103,slow=5.1,SNR=8.8
TXAR LR LR 23 28 24.3
comp=Z,59nm,21.3s,baz=79,slow=35
comp=Z,0.4nm,0.5s
TX31 Lajitas Ar. Si 67.28 299 P P 22 59 54.1 -1.2
TX31 IAmb IAmb 23 02 03.0
comp=Z,14nm,1.9s
ALPN Alpine 67.34 300 P P 22 59 55.8 +0.1
LUBAR Lubar, Ukraine 67.47 39 P P 22 59 55.7 -0.2
LUBAR pP **sP 22 59 59.8 +1.0**
LBTB Lobatse 67.70 121 LR LR 23 24 32.8
comp=Z,134nm,18.5s,baz=276,slow=32
MI28 Mi28,Pidlybu 67.70 38 P P 22 59 56.8 -0.6
MI28 pP **sP 23 00 00.6 +0.4**
FCC Fort Churchill 67.75 331 P P 22 59 58.0 +0.5
AK19 Malin Array Si 68.47 38 P P 23 00 02.2 0.0
AK20 Malin Array Si 68.47 38 P P 23 00 02.1 -0.1
AK17 Malin Array Si 68.48 38 P P 23 00 02.1 -0.2
AK16 Malin Array Si 68.51 38 P P 23 00 02.4 0.0
VHRN Van Horn 68.53 300 P P 23 00 03.1 -0.1
VHRN IAmb IAmb 23 00 54.9
comp=Z,28nm,2.0s
AK07 Malin Array Si 68.54 38 P P 23 00 02.4 -0.2
AKASG Malin Array Be 68.59 38 P P 23 00 02.8 -0.2
comp=Z,3.0nm,0.7s,baz=260,slow=5.7,SNR=8.8
AKASG LR LR 23 29 38.4
comp=Z,66nm,18.8s,baz=232,slow=36
comp=Z,3.0nm,0.7s
AK08 Malin Array Si 68.59 38 P P 23 00 02.7 -0.2
BOSA Boshof 68.68 124 P P 23 00 04.2 +0.1
comp=Z,4.9nm,0.9s,baz=279,slow=5.9,SNR=3.4
BOSA LR LR 23 24 30.7
comp=Z,179nm,19.4s,baz=280,slow=31
comp=Z,4.9nm,0.9s
MNTX Cornudas Mount 68.94 301 P P 23 00 04.9 -0.6
BR106 Keskin Array S 69.46 50 P P 23 00 09.7 +0.9
comp=Z,2.7nm,1.0s
BR104 Keskin Array S 69.47 50 P P 23 00 09.6 +0.7
BR131 Keskin Array S 69.47 50 P P 23 00 08.3 -0.6
BRTR Keskin Array B 69.47 50 P P 23 00 08.8 0.0
comp=Z,1.5nm,0.8s,baz=254,slow=5.2,SNR=11
BRTR LR LR 23 32 39.1
comp=Z,57nm,18.6s,baz=283,slow=38
comp=Z,1.5nm,0.8s
BRTR Keskin Array B 69.47 50 P P 23 00 08.7 -0.2
EIL Elat 69.60 61 LR LR 23 31 38.4
comp=Z,367nm,19.5s,baz=271,slow=37
SDCO Great Sand Dun 69.62 307 P P 23 00 09.8 -0.2
ANMO Albuquerque 70.11 304 LR LR 23 27 05.4
comp=Z,164nm,21.8s,baz=100,slow=33
POIN Pond Inlet 70.12 348 P P 23 00 12.6 +0.7
POIN IAmb IAmb 23 00 56.3
comp=Z,18nm,1.8s
MMAI Mount Meron Ar 70.20 58 P P 23 00 13.6 +0.2
comp=Z,0.7nm,0.5s,baz=288,slow=10,SNR=1.8
MMAI LR LR 23 32 18.5
comp=Z,78nm,21.4s,baz=260,slow=37
comp=Z,0.7nm,0.5s
FINES FINESS Array B 70.35 27 P P 23 00 13.4 -0.2
comp=Z,4.9nm,0.9s,baz=276,slow=3.6,SNR=11
FINES LR LR 23 28 29.7
comp=Z,244nm,19.3s,baz=238,slow=34
comp=Z,4.9nm,0.9s
FINES FINESS Array B 70.35 27 P P 23 00 13.2 -0.4
BLKN Baker Lake 70.87 336 P P 23 00 18.4 +1.7
BNN Bunyan 71.07 52 P P 23 00 18.7 +0.1
LAO LASA Array 71.40 317 P P 23 00 21.6 +1.3
LAO IAmb IAmb 23 00 53.0
comp=Z,16nm,1.2s
ASF Jabal al Asfar 71.41 59 LR LR 23 34 48.2
comp=Z,107nm,18.4s,baz=220,slow=38
O20A White River Ci 72.00 310 P P 23 00 24.8 +0.4
O20A IAmb IAmb 23 00 35.8
comp=Z,25nm,1.4s
ARPR Arapgir-MALATY 73.03 51 P P 23 00 31.8 +1.4
LPIG La Paz 73.05 293 LR LR 23 31 05.0
comp=Z,53nm,21.6s,baz=54,slow=35
RDMU Red Mountain 73.06 310 P P 23 00 30.6 -0.1
RDMU IAmb IAmb 23 00 42.4
comp=Z,9.0nm,0.9s
BW06 Boulder Array 73.25 312 P P 23 00 31.7 0.0
PD31 Pinedale Array 73.25 312 P P 23 00 30.8 -0.9
PDAR Pinedale Array 73.25 312 P P 23 00 31.1 -0.7
comp=Z,0.8nm,0.6s,baz=106,slow=5.4,SNR=16
PDAR LR LR 23 28 24.2
comp=Z,105nm,21.3s,baz=104,slow=32
comp=Z,0.8nm,0.6s
PDAR Pinedale Array 73.25 312 P P 23 00 30.7 -1.1
RLMT Red Lodge 73.29 315 P P 23 00 31.9 0.0
ARCES ARCESS Array B 73.36 19 P P 23 00 31.3 -0.3
comp=Z,2.6nm,0.8s,baz=261,slow=4.8,SNR=4.5
ARCES LR LR 23 29 17.7
comp=Z,73nm,18.9s,baz=230,slow=33
comp=Z,2.6nm,0.8s
P18A Preston Nutter 73.50 309 P P 23 00 33.9 +0.5
FURI Furi 73.52 83 LR LR 23 32 21.8
comp=Z,164nm,18.1s,baz=276,slow=35
TUC Tucson 73.56 301 P P 23 00 33.2 -0.4
SRU San Rafael Swe 73.68 309 P P 23 00 34.2 -0.1
SRU IAmb IAmb 23 00 44.9
comp=Z,22nm,1.6s
OBN Obninsk 73.91 35 LR LR 23 33 09.7
comp=Z,34nm,18.1s,baz=180,slow=36
BSUT Blindstream Ca 73.96 310 P P 23 00 36.8 +0.6
BSUT IAmb IAmb 23 00 47.1
comp=Z,9.1nm,1.1s
LOHW Long Hollow 74.09 313 P P 23 00 36.9 +0.2
LOHW IAmb IAmb 23 00 48.0
comp=Z,8.5nm,1.0s
FLWY Flagg Ranch 74.20 314 P P 23 00 37.3 0.0
FLWY IAmb IAmb 23 00 49.0
comp=Z,17nm,1.1s
FXWY Fox Creek 74.40 313 P P 23 00 37.8 -0.7
HWUT Hardware Ranch 74.64 311 P P 23 00 39.9 0.0
HWUT IAmb IAmb 23 00 50.5

comp=Z,13nm,1.1s
KOPT Kop Dagi 74.76 51 P P 23 00 40.5 -0.2
KOPT IAmb IAmb 23 00 52.1
comp=Z,27nm,1.9s
MTPU Mount Pierson 74.92 307 P P 23 00 41.2 -0.5
RES Resolute Bay 75.13 346 LR LR 23 28 02.7
comp=Z,71nm,22.0s,baz=12,slow=31
DUG Dugway, Tooele 75.50 310 P P 23 00 44.6 -0.2
DUG IAmb IAmb 23 00 55.9
comp=Z,18nm,1.7s
SPITS Spitsbergen Ar 75.56 10 LR LR 23 25 31.1
comp=Z,78nm,21.5s,baz=220,slow=29
BGU Big Grassy Mou 75.70 310 P P 23 00 45.8 -0.2
BGU IAmb IAmb 23 00 57.5
comp=Z,9.9nm,1.2s
CCUT Cedar City 75.83 307 P 23 00 46.5 -0.3
GURO Guroymak-BITLI 75.88 52 P 23 00 47.6 +0.6
PSUT Pine Spring 76.25 308 P 23 00 48.8 -0.5
KBZ Khabaz 76.74 47 P P 23 00 51.8 +0.3
comp=Z,1.4nm,0.7s,baz=253,slow=9.0,SNR=3.3
KBZ LR LR 23 38 13.2
comp=Z,42nm,18.4s,baz=302,slow=38
comp=Z,1.4nm,0.7s
HLID Hailey 76.85 313 P 23 00 51.7 -0.8
PRN Pahroc Range 77.17 307 P 23 00 53.1 -1.3
ELK Elko 77.37 310 P P 23 00 55.4 -0.1
GNI Garni 78.01 51 LR LR 23 36 28.4
comp=Z,120nm,21.9s,baz=280,slow=36
PFO Pinyon Flats O 78.34 303 LR LR 23 33 36.5
comp=Z,79nm,19.8s,baz=74,slow=34
YKA Yellowknife Ar 78.45 332 P P 23 00 59.6 -1.1
comp=Z,0.6nm,0.8s,baz=95,slow=5.1,SNR=12
YKA LR LR 23 32 39.2
comp=Z,144nm,19.4s,baz=98,slow=34
comp=Z,0.6nm,0.8s
YKA Yellowknife Ar 78.45 332 P P 23 01 00.9 +0.2
YKAW3 Yellowknife Wh 78.46 332 P P 23 00 59.8 -1.0
NEW Newport 78.90 318 LR LR 23 34 27.4
comp=Z,61nm,18.1s,baz=54,slow=35
RPN Rapa Nui 78.96 241 LR LR 23 31 45.3
comp=Z,134nm,21.5s,baz=92,slow=32
DSP Deep Springs 79.50 307 P P 23 01 08.8 +1.7
NVAR Mina Array Bea 79.74 308 P P 23 01 08.5 -0.1
comp=Z,0.4nm,0.5s,baz=69,slow=5.2,SNR=6.6
comp=Z,0.4nm,0.5s
NVAR Mina Array Bea 79.74 308 P P 23 01 07.7 -0.9
VNA3 Neumayer Olymp 80.27 172 ⇓P P 23 01 13.0 +2.5
comp=Z,4.1nm,0.9s
SNAA Sanae 81.73 170 LR LR 23 30 33.7
comp=Z,71nm,18.3s,baz=204,slow=30
ORV Oroville 82.19 309 P 23 01 20.6 -0.9
ORV IAmb IAmb 23 01 42.7
comp=Z,12nm,1.6s
YBH Yreka Blue Hor 82.98 311 LR LR 23 36 20.8
comp=Z,6.9nm,19.2s,baz=102,slow=34
BELA Belgrano 2 85.05 180 P 23 01 35.9 +0.7
BELA IAmb IAmb 23 01 47.9
comp=Z,11nm,1.3s
BBB Bella Bella 85.78 322 LR LR 23 35 56.8
comp=Z,72nm,20.3s,baz=75,slow=33
DLBC Dease Lake 86.11 328 LR LR 23 37 46.9
comp=Z,93nm,19.1s,baz=98,slow=34
INK Inuvik 86.17 338 LR LR 23 37 35.7
comp=Z,150nm,19.7s,baz=310,slow=34
ARTI Arti 86.22 34 LR LR 23 40 42.8
comp=Z,105nm,18.1s,baz=252,slow=36
ARTI Arti 86.22 34 P 23 01 41.2 -0.3
ARTI IAmb IAmb 23 02 05.0
comp=Z,9.3nm,1.0s
AKTO Aktyubinsk 86.78 40 LR LR 23 39 32.5
comp=Z,75nm,21.2s,baz=252,slow=35
D25K Kavik River 90.37 341 P 23 02 00.9 -0.2
ILAR Eielson Array 92.28 336 P P 23 02 10.2 +0.2
comp=Z,0.4nm,1.0s,baz=72,slow=3.3,SNR=4.7
ILAR LR LR 23 41 27.8
comp=Z,158nm,19.2s,baz=62,slow=34
comp=Z,0.4nm,1.0s
ILAR Eielson Array 92.28 336 P P 23 02 09.0 -1.0
BVAR Borovoye Array 93.74 36 P P 23 02 18.1 +1.2
comp=Z,0.1nm,0.3s,baz=284,slow=5.8,SNR=2.4
BVAR LR LR 23 42 52.3
comp=Z,138nm,20.6s,baz=301,slow=34
comp=Z,0.1nm,0.3s
NRIK Noril'sk 94.30 17 LR LR 23 43 29.1
comp=Z,31nm,19.1s,baz=323,slow=35
KDAK Kodiak Island 97.69 331 LR LR 23 42 44.5
comp=Z,104nm,21.6s,baz=64,slow=33
KURBB Kurchatov Arra 99.31 36 LR LR 23 48 41.0
comp=Z,58nm,18.7s,baz=179,slow=36
AAK Ala-Archa 99.62 45 LR LR 23 48 22.5
comp=Z,72nm,21.3s,baz=336,slow=36
WMQ Urumqi 107.93 39 Pdif Pdif 23 03 21.7 +0.8
WMQ LR LR
comp=Z,150nm,24.0s
TBI Tubuai 114.67 248 *e***LR LR** 23 42 02.9
comp=Z,784nm,28.2s
TBI *e***LR LR** 23 42 04.9
comp=Z,738nm,32.2s
PPT2 Papeete2 114.92 254 *e***LR LR** 23 42 12.0
comp=Z,139nm,27.0s
PPT2 *e***LR LR** 23 42 12.2
comp=Z,130nm,31.5s
HHC Hu-ho-hao-te 123.41 29 *eP* **PKPdf 23 07 53.8 -4.1**
HHC LR LR
comp=N,220nm,17.9s
HHC LR LR
comp=E,200nm,17.0s
HHC LR LR
comp=Z,210nm,16.2s
CD2 Chengdu 125.67 43 PKP PKPdf 23 08 01.0 -1.4
MDJ Mudanjiang 126.64 13 P PKiKP 23 08 03.7 -0.6
MDJ pmax pmax
comp=Z,6.0nm,1.2s
PZH PanZhiHua 126.76 49 PKP PKPdf 23 08 03.4 -1.3
NJ2 Nanjing 133.93 30 *eP* **PKPdf 23 08 17.0 -1.0**
NJ2 pmax pmax
comp=Z,20nm,0.5s
NJ2 pmax pmax
comp=Z,17nm,0.6s
ASAR Alice Springs 160.90 150 PKPab PKPab 23 09 43.4 -0.2
comp=Z,0.5nm,0.8s,baz=211,slow=4.5,SNR=1.5
ASAR Alice Springs 160.90 150 PKPab 23 09 43.8 +0.2
WRA Warramunga Arr 164.14 143 PKPab PKPab 23 09 58.9 +1.1
comp=Z,0.5nm,0.8s,baz=216,slow=3.8,SNR=2.5
WRA Warramunga Arr 164.14 143 PKPab 23 09 58.6 +0.8

*IDC **08** 22:53:09.9±1.0, 17°.34N×122°.52E, h0km, mb3.7/8, mbtmp3.7/8, MS4.0/2, Error ellipse: s-maj=43.6km s-min=18.3km az=67.0*
*MAN **08** 22:53:11.0, 17°.60N×122°.66E, h9km, MS3.5*
*NEIC **08** 22:53:16.3±1.7, 17°.38N±0°.03×122°.6E±0°.1, h40km±8km, mb4.4/18, Error ellipse: s-maj=20.5km s-min=2.1km az=79.0*
ISC 08 22:53:14.4±0.6**, 17°.27N**±0°.06×**122°.54E**±0°.08**, h31**km**, n41, σ0s90/35, mb4.3/17, MS3.9/3, Luzon**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIPP	**Brgy, Tapao**	**2.09**	**289**	*eP*	**Pn**	**22 53 47.6**	**+0.2**
SIPP				*eS*	Sb	22 54 45.0	+28
PIP	**Pasuquin**	**2.11**	**300**	*eP*	**Pn**	**22 53 47.1**	**-0.5**
PIP				*eS*	**Sn**	**22 54 12.3**	**-0.5**
GQP	**Guinayangan**	**3.34**	**182**	*eP*	**Pb**	**22 54 11.8**	**-1.3**
GQP				*i* S	**Sb**	**22 54 51.7**	**-1.6**
YULB	**Yu-li**	**6.21**	**349**	Pn	**Pn**	**22 54 43.9**	**-0.1**
NACB	**Ninganchiao**	**6.93**	**353**	Pn	**Pn**	**22 54 54.1**	**+0.2**
KSRS	**Korea Array**	**20.66**	**12**	P	**P**	**22 57 50.5**	**-1.2**
	0.4nm,0.3s,baz=204,slow=11,SNR=1.6						
KSRS				LR	LR	23 06 36.7	
	comp=Z,11nm,19.0s,baz=55,slow=39						
	0.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**22.49**	**277**	P	**P**	**22 58 11.2**	**-0.3**
	1.2nm,0.3s,baz=94,slow=11,SNR=1.6						
	1.2nm,0.3s						
MAJO	**Matsushiro**	**23.68**	**33**	P	**P**	**22 58 22.3**	**-1.1**
MAJO					IAmb	IAmb	22 58 34.6
	comp=Z,14nm,1.5s						
MMRI	**Maumere**	**25.74**	**181**	P	**P**	**22 58 42.3**	**-0.1**
MMRI					IAmb	IAmb	22 59 14.4
	comp=Z,23nm,1.0s						
SHL	**Shillong**	**29.66**	**291**	P	**P**	**22 59 19.1**	**+1.5**
SHL					IAmb	IAmb	22 59 54.8
	comp=Z,4.3nm,0.4s						
SONM	**Songino Array**	**33.24**	**340**	P	**P**	**22 59 49.1**	**+0.2**
	comp=Z,0.1nm,0.4s,baz=157,slow=7.8,SNR=1.5						

comp=Z,0.1nm,0.4s
SONM Songino Array 33.24 340 P **P** **22 59 48.5 -0.4**
KNRA Kununurra 33.30 169 P **P** **22 59 50.6 +1.1**
KNRA IAmb IAmb 23 00 26.7
comp=Z,18nm,1.4s
WB0 Warramunga Arr 38.60 162 P **P** **23 00 35.4 +0.5**
WB0 IAmb IAmb 23 00 43.7
comp=Z,3.0nm,0.9s
PSA00 Pilbara Seismi 38.69 184 P **P** **23 00 37.7 +2.1**
PSA00 IAmb IAmb 23 01 06.5
comp=Z,14nm,1.4s
WRA Warramunga Arr 38.75 162 P **P** **23 00 37.0 +0.9**
comp=Z,1.7nm,0.8s,baz=342,slow=9.1,SNR=9.7
comp=Z,1.7nm,0.8s
WRA Warramunga Arr 38.75 162 P **P** **23 00 36.6 +0.5**
WR8 Warramunga Arr 38.81 162 P **P** **23 00 37.7 +1.0**
WR8 IAmb IAmb 23 00 46.2
comp=Z,10nm,1.4s
H11S3 WAKE ISLAND Hy 41.96 81 T T 23 46 00.9
baz=276,slow=74,SNR=249
H11S1 WAKE ISLAND Hy 41.97 81 T T 23 45 57.9
baz=276,slow=74,SNR=290
H11S2 WAKE ISLAND Hy 41.97 81 T T 23 46 02.4
baz=276,slow=74,SNR=197
H11N1 WAKE ISLAND Hy 42.05 80 T T 23 46 04.4
baz=275,slow=75,SNR=88
H11N2 WAKE ISLAND Hy 42.05 80 T T 23 46 04.4
baz=275,slow=75,SNR=64
H11N3 WAKE ISLAND Hy 42.06 80 T T 23 46 04.3
baz=275,slow=75,SNR=67
ASAR Alice Springs 42.17 164 P **P** **23 01 04.8 +0.4**
comp=Z,0.6nm,0.7s,baz=0.0,slow=7.8,SNR=5.8
comp=Z,0.6nm,0.7s
MK31 Makanchi Array 44.32 321 P **P** **23 01 22.3 +0.7**
MKAR Makanchi Array 44.32 321 P **P** **23 01 21.0 -0.6**
comp=Z,0.4nm,0.4s,baz=113,slow=8.4,SNR=16
comp=Z,0.4nm,0.4s
MKAR Makanchi Array 44.32 321 P **P** **23 01 22.2 +0.6**
MAKZ Makanchi 44.52 320 P **P** **23 01 24.2 +1.0**
ZALV Zalesovo Beam 46.79 330 P **P** **23 01 41.6 +0.6**
KURK Kurchatov 48.30 324 P **P** **23 01 52.3 -0.4**
KURK IAmb IAmb 23 01 55.8
comp=Z,3.6nm,1.2s
KURBB Kurchatov Arra 48.31 324 P **P** **23 01 51.9 -0.9**
comp=Z,0.7nm,0.5s,baz=120,slow=7.3,SNR=13
comp=Z,0.7nm,0.5s
GAR Garm 50.13 307 P **P** **23 02 07.4 +0.2**
GAR IAmb IAmb 23 02 14.9
comp=Z,2.9nm,0.8s
AB31 Akbulak array 59.27 317 P **P** **23 03 12.3 -0.7**
AB31 IAmb IAmb 23 03 13.1
comp=Z,3.7nm,1.4s
ABKAR Akbulak array 59.27 317 P **P** **23 03 12.1 -0.9**
LHI Lord Howe Isla 59.85 144 P **P** **23 03 18.4 +1.2**
NIKH Nikolski High 63.53 39 P **P** **23 03 42.0 +0.3**
FUTU Fugatoga 66.43 115 P **P** **23 04 00.0 -1.2**
BELG Belogornoye 67.33 320 LR LR 23 36 33.6
comp=Z,145nm,18.4s,baz=294,slow=39
FINES FINESS Array B 78.05 331 P **P** **23 05 09.4 -0.5**
comp=Z,3.1nm,1.0s,baz=69,slow=5.5,SNR=4.5
comp=Z,3.1nm,1.0s
VNDA Vanda 97.30 172 LR LR 23 53 55.4
comp=Z,39nm,18.4s,baz=199,slow=37

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*NEIC **08** 22:55:44.8±1.4, 19°.02N±0°.03×67°.62W±0°.04, h10km±2km, ML2.9/39, Md3.2/4(RSPR), Error ellipse: s-maj=7.7km s-min=3.0km az=225.0*
*SDD **08** 22:55:45.3±2.1, 19°.10N×67°.69W, h20km±999km, MD3.6, ML2.7, MW3.1, Presumed earthquake*
ISC 08 22:55:44.7±1.6, **19°.04N**±0°.08×**67°.67W**±0°.03, **h14**km±9km, **n32**, σ0**s99**/47, **15C, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDE	**Isla Desecheo**	**0.67**	**164**		**Pg**	**22 55 57.2**	**-0.6**
IDE					**Sg**	**22 56 06.6**	**-0.1**
AGPR	**Aguadilla, PR**	**0.77**	**137**		**Pg**	**22 55 58.9**	**-0.9**
AGPR				Sg	**Sg**	**22 56 08.7**	**-1.2**
AGPR				IAML		22 56 11.4	
	366nm,0.2s						
AGPR	**Aguadilla, PR**	**0.77**	**137**	⇑*e*Pg	**Pg**	**22 55 59.0**	**-0.7**
AGPR				⇑*e*Sg	**Sg**	**22 56 10.5**	**+0.6**
AGPR				IAML		22 56 11.6	
	comp=N,226nm,0.2s						
PRSN	**Puerto Rico Se**	**0.95**	**149**		**Pb**	**22 56 03.2**	**+0.2**
PRSN				Sg	**Sb**	**22 56 14.1**	**-1.3**
PRSN	**Puerto Rico Se**	**0.95**	**149**	⇑*e*Sg	**Sg**	**22 56 16.5**	**+0.8**
PRSN				IAML		22 56 20.3	
	comp=N,463nm,0.2s						
LSP	**Las Mesas**	**1.02**	**147**		**Pb**	**22 56 03.9**	**-0.2**
LSP					**Sn**	**22 56 19.9**	**+1.2**
HIDR	**Higuey Centro**	**1.09**	**246**	⇑*e*Pg	**Pb**	**22 56 03.7**	**-1.6**
HIDR				⇑*e*Sg	**Sb**	**22 56 17.3**	**-2.1**
HIDR				IAML		22 56 21.6	
	comp=N,424nm,0.2s						
AOPR	**Arecibo Observ**	**1.10**	**128**	Pg	**Pb**	**22 56 04.7**	**-0.9**
AOPR				Sg	**Sb**	**22 56 19.0**	**-0.9**
AOPR				IAML		22 56 32.5	
	comp=N,253nm,0.3s						
AOPR	**Arecibo Observ**	**1.10**	**128**	⇑*e*Pg	**Pb**	**22 56 05.9**	**+0.3**
AOPR				⇑*e*Sg	**Sn**	**22 56 21.4**	**+0.5**
AOPR				IAML		22 56 32.5	
	comp=N,212nm,0.3s						
CRPR	**Cabo Rojo, PR**	**1.15**	**153**		**Pg**	**22 56 07.4**	**+0.5**
CRPR					**Sg**	**22 56 24.7**	**+2.7**
CRPR	**Cabo Rojo, PR**	**1.15**	**153**		**Pb**	**22 56 07.0**	**+0.6**
CRPR				IAML		22 56 25.1	
	comp=N,226nm,0.5s						
CRPR				IAML		22 56 28.8	
	comp=N,210nm,0.9s						
UUPR	**Utuado, UPR, P**	**1.19**	**131**		**Pn**	**22 56 06.0**	**-0.9**
EMPR	**Esperanza - Ma**	**1.21**	**117**		**Pn**	**22 56 06.8**	**-0.4**
EMPR					**Sg**	**22 56 24.4**	**+0.5**
MLPR	**Magueyes Islan**	**1.22**	**151**		**Pn**	**22 56 07.1**	**-0.1**
MLPR	**Magueyes Islan**	**1.22**	**151**	⇑*e*Pg	**Pn**	**22 56 06.0**	**-1.2**
MLPR				⇑*e*Sg	**Sn**	**22 56 24.1**	**+0.6**
MLPR				IAML		22 56 26.4	
	comp=N,40nm,0.8s						
GBPR	**Guanica, Bosqu**	**1.29**	**145**		**Pg**	**22 56 11.1**	**+1.5**
GBPR					**Sn**	**22 56 26.3**	**+0.9**
CELP	**Cerrillos**	**1.41**	**133**		**Pn**	**22 56 09.3**	**-0.6**
CELP				IAML		22 56 35.2	
	comp=N,170nm,0.4s						
CELP				IAML		22 56 35.9	
	comp=N,190nm,0.3s						
CELP	**Cerrillos**	**1.41**	**133**	⇑*e*Pg	**Pn**	**22 56 09.4**	**-0.5**
CELP				⇑*e*Sg	**Sn**	**22 56 28.2**	**-0.1**
CELP				IAML		22 56 35.8	
	comp=N,69nm,0.2s						
OBIP	**Obispado Ponce**	**1.41**	**134**		**Sn**	**22 56 28.7**	**+0.3**
OBIP	**Obispado Ponce**	**1.41**	**134**		**Pn**	**22 56 09.4**	**-0.6**
ECPR	**Experimental S**	**1.43**	**120**		**Pn**	**22 56 09.8**	**-0.4**
ECPR				IAML		22 56 34.6	
	comp=N,243nm,0.3s						
SMDR	**Samana, DR**	**1.46**	**280**	⇑*e*Sg	**Sn**	**22 56 28.8**	**-0.7**
SMDR				IAML		22 57 10.2	
	comp=N,165nm,1.4s						
DR12	**Loma Pena Alta**	**1.64**	**262**	Pn	**Pn**	**22 56 14.2**	**+1.1**
HATOM	**Hato Mayor del**	**1.64**	**262**	⇑*e*Pg	**Pn**	**22 56 13.5**	**+0.4**
HATOM				IAML		22 56 38.5	
	comp=N,92nm,0.8s						
SJG	**San Juan**	**1.71**	**122**	Pn	**Pn**	**22 56 13.7**	**-0.4**
SJG				IAML		22 56 41.3	
	comp=N,94nm,0.3s						
SJG				IAML		22 56 42.2	
	comp=N,142nm,0.4s						
SJG	**San Juan**	**1.71**	**122**	⇑*e*Pg	**Pn**	**22 56 14.3**	**+0.3**
SJG				⇑*e*Sg	**Sn**	**22 56 36.3**	**+0.6**
PDPR	**Patillas Dam,**	**1.86**	**123**	Pn	**Pn**	**22 56 16.4**	**+0.3**
HUMP	**Col San Antoni**	**1.94**	**117**		**Pn**	**22 56 17.1**	**-0.1**
HUMP					**Sn**	**22 56 42.6**	**+1.2**
HUMP	**Col San Antoni**	**1.94**	**117**		**Pn**	**22 56 18.0**	**+0.8**
HUMP				IAML		22 56 47.6	
	comp=N,48nm,0.5s						
HUMP				IAML		22 56 48.4	
	comp=N,60nm,0.3s						
SDD	**Santo Domingo**	**2.20**	**255**	Pn	**Pn**	**22 56 22.0**	**+1.1**
BANI	**BANI**	**2.63**	**256**	Pn	**Pn**	**22 56 28.0**	**+1.2**
SDDR	**Presa de Saban**	**3.42**	**270**		**Pn**	**22 56 39.5**	**+1.8**
SDDR				IAML		22 58 34.0	
	comp=N,42nm,3.9s						

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*NEIC **08** 22:56:18.1±1.6, 17°.86S±0°.04×167°.79E±0°.08, h10km±1km, mb4.6/34, Error ellipse: s-maj=13.0km s-min=6.4km az=283.0*
*IDC **08** 22:56:18.0±0.9, 17°.91S×167°.71E, h0km, mb4.2/12, mbtmp4.2/13, ML3.8/1, MS3.9/15, Error ellipse: s-maj=23.1km s-min=21.6km az=57.0*
*NOU **08** 22:56:20.0, 17°.96S×167°.63E, h19km, MLv4.7/13, Vanuatu Islands*
ISC 08 22:56:20.1±0.4, **17°.93S**±0°.04×**167°.74E**±0°.05, **h23**km, **n93,** σ1**s55**/83, **mb4.5**/28, **MS3.8**/14, **1C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**0.47**	**65**	P	**Pn**	**22 56 32.1**	**+0.7**
DVP	**Devils Point**	**0.47**	**65**	S	**Sn**	**22 56 42.1**	**+3.0**
RTV	**Rentapao**	**0.67**	**79**	P	**Pn**	**22 56 35.0**	**+0.9**
RTV	**Rentapao**	**0.67**	**79**	S	**Sn**	**22 56 46.9**	**+3.0**
SANVU	**Saraoutou**	**2.52**	**348**	P	**Pn**	**22 56 59.9**	**+0.3**
SANVU	**Saraoutou**	**2.52**	**348**	Pn	**Pn**	**22 56 58.8**	**-0.8**
SANVU				Sn	**Sn**	**22 57 28.3**	**-1.2**
MARNC	**Mare, Loyalty**	**3.55**	**176**	P	**Pn**	**22 57 14.0**	**+0.2**
MARNC	**Mare, Loyalty**	**3.55**	**176**	Pn	**Pn**	**22 57 13.9**	**+0.1**
YATNC	**Mamie plateau,**	**4.19**	**191**	P	**Pn**	**22 57 21.9**	**-0.7**
DZM	**Mont Dzumac**	**4.30**	**196**	Pn	**Pn**	**22 57 23.9**	**-0.3**
	4.9nm,0.3s,baz=6.7,slow=17,SNR=40						
DZM				Sn	**Sn**	**22 58 12.4**	**-1.3**
	6.4nm,0.3s,baz=85,slow=20,SNR=4.9						
DZM				LR	LR	22 59 01.9	
	comp=Z,878nm,18.1s,baz=101,slow=38						
	15nm,0.3s						
DZM	**Mont Dzumac**	**4.30**	**196**	*e*Pn	**Pn**	**22 57 24.8**	**+0.6**
	157nm,1.2s						
DZM				*e*Sn	**Sn**	**22 58 16.9**	**+3.2**
	290nm,1.2s						
ONTNC	**Ouen Toro**	**4.52**	**195**	P	**Pn**	**22 57 28.3**	**+1.1**
ONTNC	**Ouen Toro**	**4.52**	**195**	S	**Sn**	**22 58 18.5**	**-0.6**
ONTNC	**Ouen Toro**	**4.52**	**195**		**Pn**	**22 57 28.2**	**+1.0**
MSVF	**Nonsavu**	**9.83**	**90**	Pn	Pn	22 58 45.9	+5.8
	0.9nm,0.3s,baz=183,slow=8.2,SNR=6.0						
MSVF				LR		23 01 38.9	
	comp=Z,671nm,20.2s,baz=224,slow=33						
MSVF	**Nonsavu**	**9.83**	**90**		**Pn**	**22 58 38.1**	**-2.0**
HNR	**Honiara**	**11.33**	**317**	LR	LR	23 02 45.4	
	comp=Z,16nm,19.2s,baz=220,slow=34						
ARMA	**Armidale**	**19.22**	**227**	P	**P**	**23 00 41.5**	**-1.3**
AFI	**Afiamalu**	**20.10**	**81**	LR	LR	23 06 53.3	
	comp=Z,271nm,21.2s,slow=32						
CTA	**Charters Tower**	**20.42**	**261**	P	Pn	23 00 57.3	-0.8
	7.7nm,1.0s,baz=72,slow=13,SNR=5.9						
CTA				LR	LR	23 07 47.0	
	comp=Z,351nm,19.3s,baz=44,slow=34						
	7.7nm,1.0s						
CTAO	**Charters Tower**	**20.42**	**261**		**P**	**23 00 55.5**	**-0.3**
CTAO				IAmb	IAmb	23 01 06.2	
	comp=Z,26nm,1.1s						
PMG	**Port Moresby**	**21.70**	**290**	P	**P**	**23 01 11.2**	**+1.6**
	comp=Z,7.6nm,0.4s,baz=187,slow=16,SNR=1.8						
	comp=Z,7.6nm,0.4s						
URZ	**Urewera**	**21.86**	**160**	P	**P**	**23 01 13.5**	**+2.5**
	comp=Z,3.6nm,0.7s,baz=350,slow=9.5,SNR=6.7						
URZ				LR	LR	23 08 17.1	
	comp=Z,366nm,18.6s,baz=346,slow=33						
	comp=Z,3.6nm,0.7s						
RTZ	**Ruatahuna**	**22.14**	**160**	P	**P**	**23 01 13.6**	**-0.7**
RTZ				IAmb	IAmb	23 01 33.3	
	comp=Z,34nm,1.4s						
BKZ	**Black Stump Fm**	**22.50**	**162**	P	**P**	**23 01 18.4**	**+0.4**
BKZ				IAmb	IAmb	23 01 48.1	
	comp=Z,21nm,1.1s						
MRNZ	**Matariki Terra**	**23.79**	**171**	P	**P**	**23 01 32.3**	**+1.3**
COEN	**Coen**	**23.94**	**276**	P	**P**	**23 01 31.1**	**-1.6**
CAN	**Canberra**	**24.03**	**220**	P	**P**	**23 01 33.2**	**-0.2**
THZ	**Tophouse**	**24.17**	**171**	P	**P**	**23 01 32.3**	**-2.4**
THZ				IAmb	IAmb	23 01 45.2	
	comp=Z,32nm,1.2s						
RPZ	**Rata Peaks**	**25.86**	**174**	LR	LR	23 11 41.3	
	comp=Z,312nm,18.8s,baz=122,slow=36						
INKA	**Innaminka**	**26.67**	**244**		**P**	**23 01 58.3**	**+0.9**
INKA				IAmb	IAmb	23 02 04.0	
	comp=Z,13nm,1.2s						
STKA	**Stephens Creek**	**27.39**	**235**	P	**P**	**23 02 05.7**	**+1.8**
	comp=Z,5.5nm,0.9s,baz=75,slow=9.6,SNR=5.1						
STKA				LR	LR	23 11 54.5	
	comp=Z,226nm,19.9s,baz=36,slow=34						
	comp=Z,5.5nm,0.9s						
STKA	**Stephens Creek**	**27.39**	**235**		**P**	**23 02 03.1**	**-0.7**
TOO	**Toolangi**	**27.64**	**220**	P	**P**	**23 02 05.0**	**-1.1**
RAR	**Rarotonga**	**30.76**	**101**	LR	LR	23 14 23.7	
	comp=Z,45nm,18.5s,baz=265,slow=35						
WR8	**Warramunga Arr**	**31.47**	**261**	P	**P**	**23 02 41.1**	**+0.8**
WR8				IAmb	IAmb	23 02 50.3	
	comp=Z,12nm,1.4s						
WB0	**Warramunga Arr**	**31.58**	**261**	P	**P**	**23 02 41.6**	**+0.4**
WB0				IAmb	IAmb	23 02 48.4	
	comp=Z,10.0nm,1.2s						
WRA	**Warramunga Arr**	**31.62**	**261**	P	**P**	**23 02 41.5**	**-0.1**
	comp=Z,4.2nm,1.1s,baz=94,slow=8.5,SNR=8.7						
	comp=Z,4.2nm,1.1s						
WRA	**Warramunga Arr**	**31.62**	**261**	P	**P**	**23 02 41.5**	**-0.1**
BBOO	**Buckleboo**	**32.08**	**236**	P	**P**	**23 02 46.8**	**+1.3**
BBOO				IAmb	IAmb	23 03 11.7	
	comp=Z,15nm,1.1s						
AS31	**Alice Springs**	**32.09**	**254**	P	**P**	**23 02 45.1**	**-0.6**
ASAR	**Alice Springs**	**32.09**	**254**	P	**P**	**23 02 45.4**	**-0.3**
	comp=Z,1.5nm,0.5s,baz=83,slow=8.1,SNR=26						
ASAR				LR	LR	23 15 09.9	
	comp=Z,341nm,19.5s,baz=102,slow=35						
	comp=Z,1.5nm,0.5s						
ASAR	**Alice Springs**	**32.09**	**254**	P	**P**	**23 02 45.2**	**-0.5**
FORT	**Forrest**	**38.15**	**243**	P	**P**	**23 03 36.7**	**-1.1**
FORT				IAmb	IAmb	23 03 40.1	
	comp=Z,8.3nm,0.8s						
GUMO	**Guam**	**38.59**	**323**	LR	LR	23 18 20.6	
	comp=Z,80nm,18.9s,baz=142,slow=34						
SIJI	**Sorong**	**39.63**	**291**	P	**P**	**23 03 52.0**	**+1.6**
	comp=Z,4.8nm,0.5s,baz=75,slow=16,SNR=3.8						
SIJI				LR	LR	23 20 23.1	
	comp=Z,109nm,19.6s,baz=100,slow=36						
	comp=Z,4.8nm,0.5s						
FITZ	**Fitzroy Crossi**	**39.97**	**263**	LR	LR	23 20 14.9	
	comp=Z,297nm,18.2s,baz=95,slow=36						
TBI	**Tubuai**	**40.31**	**105**	*e*LQ	LQ	23 13 13.0	
	comp=Z,1μm,26.2s						
TBI				*e*LR	LR	23 14 58.1	
	comp=Z,464nm,25.8s						
PPT2	**Papeete2**	**40.59**	**96**	*e*S	**S**	**23 10 04.1**	**-2.9**
	comp=Z,87nm,24.2s						
PPT2				*e*LQ	LQ	23 13 20.4	
	comp=Z,263nm,27.8s						
PPT2				*e*LR	LR	23 15 08.6	
	comp=Z,172nm,26.5s						
BATI	**Baumata**	**43.35**	**274**	LR	LR	23 22 30.3	
	comp=Z,145nm,18.1s,baz=106,slow=36						
PSA00	**Pilbara Seismi**	**45.09**	**257**	P	**P**	**23 04 34.7**	**-0.1**
PSA00				IAmb	IAmb	23 04 45.0	
	comp=Z,7.7nm,1.3s						
TOLI2	**Tolitoli**	**49.92**	**287**	P	**P**	**23 05 10.1**	**-2.3**
TOLI2				IAmb	IAmb	23 05 46.0	
	comp=Z,6.9nm,1.0s						
TAOE	**Nuku Hiva Isla**	**51.35**	**87**	*e*S	**S**	**23 12 36.9**	**-5.0**
	comp=Z,186nm,26.2s						
TAOE				*e*LR	LR	23 19 54.1	
	comp=Z,247nm,27.1s						
HPAH	**Hawaii Prepara**	**52.06**	**45**	P	**P**	**23 05 27.3**	**-1.2**
KKM	**Kota Kinabalu**	**56.14**	**290**	P	**P**	**23 05 56.5**	**-1.9**
KKM				IAmb	IAmb	23 06 04.6	
	comp=Z,5.8nm,0.9s						
SBUM	**Sibu**	**58.29**	**285**	P	**P**	**23 06 13.2**	**-0.4**
TJN	**Taejon**	**66.13**	**325**	P	**P**	**23 07 05.0**	**-0.6**
NJ2	**Nanjing**	**68.28**	**316**	*e*P	**P**	**23 07 20.2**	**+0.9**
QSPA	**South Pole Qui**	**72.12**	**180**	P	**P**	**23 07 44.7**	**+2.1**
	comp=Z,3.5nm,1.1s,baz=292,slow=3.0,SNR=3.9						
	comp=Z,3.5nm,1.1s						
QSPA	**South Pole Qui**	**72.12**	**180**	P	**P**	**23 07 41.6**	**-1.0**
QSPA				IAmb	IAmb	23 07 54.5	
	comp=Z,8.5nm,1.1s						
BNX	**BinXian**	**73.15**	**332**	⇑P	**P**	**23 07 51.7**	**+3.0**
BNX				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HEH	**HeiHe**	**76.62**	**335**	*e*P	P	23 08 03.4	-5.3
CMAR	**Chiang Mai Arr**	**76.67**	**295**	P	**P**	**23 08 12.3**	**+2.6**
	comp=Z,1.1nm,0.4s,baz=113,slow=5.1,SNR=10.0						
	comp=Z,1.1nm,0.4s						
CMAR	**Chiang Mai Arr**	**76.67**	**295**	P	**P**	**23 08 08.8**	**-0.8**
CHTO	**Chiang Mai**	**76.81**	**295**	P	**P**	**23 08 10.1**	**-0.4**
CHTO				IAmb	IAmb	23 08 17.7	
	comp=Z,6.8nm,1.1s						
HHC	**Hu-ho-hao-te**	**78.30**	**320**	*e*P	**P**	**23 08 20.3**	**+1.8**
MAW	**Mawson**	**79.11**	**202**	LR	LR	23 38 59.5	
	comp=Z,71nm,21.1s,baz=259,slow=32						
M11K	**Mekoryuk**	**80.83**	**13**	P	**P**	**23 08 30.8**	**-0.8**
M14K	**Bethel**	**82.11**	**14**	P	**P**	**23 08 37.9**	**-0.5**
M14K				IAmb	IAmb	23 08 52.6	
	comp=Z,9.8nm,1.3s						
BELA	**Belgrano 2**	**83.52**	**175**		**P**	**23 08 47.5**	**+1.9**
GTA2	**Gaotai**	**85.27**	**314**	*e*P	P	23 09 01.4	+6.1
GTA2				sP	pwP	23 09 07.1	+0.9
GTA2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SONM	**Songino Array**	**85.32**	**324**	P	**P**	**23 08 57.5**	**+2.1**
	comp=Z,1.4nm,1.0s,baz=140,slow=4.8,SNR=7.0						
	comp=Z,1.4nm,1.0s						
SONM	**Songino Array**	**85.32**	**324**	P	**P**	**23 08 55.4**	**+0.1**
BILL	**Bilibino**	**85.72**	**359**		**P**	**23 08 57.6**	**+0.9**
G16K	**Koyuk River**	**86.12**	**12**	P	**P**	**23 08 59.0**	**+0.3**
G16K				IAmb	IAmb	23 09 27.1	
	comp=Z,7.5nm,1.4s						
NVAR	**Mina Array Bea**	**89.01**	**49**	P	**P**	**23 09 14.8**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=298,slow=5.7,SNR=2.2						
	comp=Z,0.4nm,0.6s						
NVAR	**Mina Array Bea**	**89.01**	**49**	P	**P**	**23 09 12.6**	**-1.0**
ILAR	**Eielson Array**	**89.41**	**18**	P	**P**	**23 09 14.6**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=238,slow=5.2,SNR=5.0						
	comp=Z,0.4nm,0.8s						
ILAR	**Eielson Array**	**89.41**	**18**	P	**P**	**23 09 14.1**	**-0.4**
LPIG	**La Paz**	**90.14**	**65**	LR	LR	23 43 34.5	
	comp=Z,72nm,18.5s,baz=30,slow=32						
G08A	**Pilot Rock**	**91.35**	**43**	P	**P**	**23 09 23.8**	**-0.4**
G08A				IAmb	IAmb	23 09 26.9	
	comp=Z,7.0nm,1.4s						
WMQ	**Urumqi**	**95.27**	**314**	*e*P	**P**	**23 09 43.5**	**+1.3**
WMQ				LR	LR		
	comp=Z,180nm,24.0s						
PV13	**Radium Mtn., P**	**95.89**	**52**	P	**P**	**23 09 44.0**	**-1.4**
CONA	**Conrad Observa**	**142.29**	**329**	*e*pPKP	**PKiKP**	**23 15 52.5**	**-1.4**
	comp=Z,3.4nm,1.3s						
KBA	**Koelnbreinsper**	**144.10**	**330**	*e*PKiKP	**PKiKP**	**23 15 58.2**	**+0.5**
	comp=Z,3.8nm,1.3s						
LESA	**Schwarzleotal**	**144.17**	**331**	*e*PKiKP	**PKiKP**	**23 15 58.3**	**+0.6**
	comp=Z,3.9nm,1.2s						
ABTA	**Abfaltersbach**	**144.74**	**330**	*i* PKiKP	**PKiKP**	**23 15 58.5**	**-0.4**
	comp=Z,2.3nm,0.9s						
MOTA	**Moosalm**	**144.95**	**332**	*e*PKiKP	**PKiKP**	**23 15 59.6**	**+0.2**
	comp=Z,7.5nm,1.7s						
SQTA	**Sankt Quirin**	**144.99**	**332**	*e*PKiKP	**PKiKP**	**23 15 59.2**	**-0.3**
	comp=Z,4.8nm,1.1s						
FETA	**Feichten**	**145.36**	**332**	*e*pPKP	**PKiKP**	**23 15 58.7**	**-1.6**
	comp=Z,6.2nm,1.1s						
DAVA	**Damuels**	**145.53**	**333**	*i* PKiKP	**PKiKP**	**23 16 01.5**	**+0.8**
	comp=Z,18nm,1.4s						
TORD	**Torodi Ar. Bea**	**165.74**	**253**	PKP	**PKPdf**	**23 16 25.1**	**+1.1**
	comp=Z,0.7nm,0.9s,baz=166,slow=17,SNR=4.1						
TORD				PKPab	**pPKPab**	**23 17 25.5**	**-4.1**
	comp=Z,1.1nm,1.0s,baz=73,slow=1.4,SNR=3.9						
TORD	**Torodi Ar. Bea**	**165.74**	**253**		**PKPdf**	**23 16 21.2**	**-2.7**

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*NNC **08** 23:11:32.6±2.3, 36°.04N×70°.59E, h163km±44km, mb3.0, mpv3.8, Error ellipse: s-maj=24.0km s-min=15.9km az=49.0*
ISC 08 23:11:28.8±1.6, **35°.8N**±0°.1×**70°.6E**±0°.1, **h110**km, **n10,** σ2**s42**/14, **2C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMU	**Jammu**	**4.64**	**130**	*e*S	**Sn**	**23 13 30.4**	**+0.8**
JMU				IAML		23 14 00.5	
	comp=N,163nm,0.5s						
JMU				IAML		23 14 04.4	
	comp=E,104nm,0.5s						
THN	**Thein Dam**	**5.45**	**127**	*e*S	**Sn**	**23 13 48.5**	**-0.8**
TSSA	**Tissa**	**5.48**	**122**	*e*P	**Pn**	**23 12 49.0**	**+0.7**
TSSA				*e*S	**Sn**	**23 13 48.0**	**-2.2**
TSSA				IAML		23 13 50.8	
	comp=E,111nm,0.2s						
TSSA				IAML		23 13 51.3	
	comp=N,99nm,0.2s						
ALCI	**Alchi Leh**	**5.64**	**105**	*ex*	x	23 13 10.4	
ALCI				*e*S	Sn	23 13 42.3	-12
ALCI				*e*S	Sn	23 13 42.3	-12
ALCI				IAML		23 13 43.5	
	comp=E,82nm,0.2s						
ALCI				IAML		23 13 44.2	
	comp=N,103nm,0.2s						
BHK	**Bhakra**	**6.54**	**131**	*e*S	**Sn**	**23 14 20.6**	**+4.8**
SMLA	**Simla**	**7.22**	**129**	*e*P	**Pn**	**23 13 12.0**	**+0.4**
SMLA				*e*S	**Sn**	**23 14 29.3**	**-2.8**
SMLA				IAML		23 14 32.0	
	comp=N,33nm,0.2s						
SMLA				IAML		23 14 32.3	
	comp=E,36nm,0.2s						
KK31	**Karatay Array**	**7.26**	**359**	⇑P	**Pn**	**23 13 13.1**	**+0.9**
	comp=E,3.9nm,0.3s						
KK31				⇓S	**Sn**	**23 14 33.3**	**+0.3**
	comp=E,11nm,0.7s						
AAK	**Ala-Archa**	**7.43**	**23**	⇓P	**Pn**	**23 13 16.1**	**+1.5**
	comp=E,2.2nm,0.8s						
AAK				⇑S	**Sn**	**23 14 37.8**	**+0.4**
	comp=E,2.9nm,0.8s						
JOSI	**Joshimath**	**9.16**	**123**	*e*S	**Sn**	**23 15 15.5**	**-4.3**
AB31	**Akbulak array**	**15.52**	**333**	⇓P	**Pn**	**23 15 00.6**	**-0.8**
	comp=E,1.2nm,0.4s,baz=142,slow=12,SNR=39						
AB31				S	**Sn**	**23 17 50.8**	**-2.2**
	comp=E,0.6nm,0.

CELP	**Cerrillos**	**1.56 135**	⇑*i*P		**Pg**	**23 12 49.3**	**-0.2**
CELP			⇑*i*S		**Sn**	**23 13 07.1**	**+0.3**
CELP			IAML			23 13 13.9	
	comp=N,18nm,0.2s						
OBIP	**Obispado Ponce**	**1.57 136**			**Pn**	**23 12 46.0**	**-0.7**
OBIP					**Sn**	**23 13 06.5**	**-0.3**
ECPR	**Experimental S**	**1.57 123**	Pn		**Pn**	**23 12 46.9**	**+0.1**
ECPR					**Sn**	**23 13 06.6**	**-0.3**
ECPR			IAML			23 13 11.4	
	comp=N,83nm,0.3s						
ECPR			IAML			23 13 12.7	
	comp=N,77nm,0.3s						
DR12	**Loma Pena Alta**	**1.59 256**	Pn		**Pn**	**23 12 44.5**	**-2.7**
HATOM	**Hato Mayor del**	**1.59 256**	⇑*i*P		**Pg**	**23 12 51.2**	**+1.1**
HATOM			*i* S		**Sg**	**23 13 13.4**	**+2.6**
HATOM			IAML			23 13 18.1	
	comp=N,32nm,0.9s						
SJG	**San Juan**	**1.85 125**	Pn		**Pn**	**23 12 50.7**	**0.0**
SJG			IAML			23 13 20.2	
	comp=N,37nm,0.3s						
SJG	**San Juan**	**1.85 125**	⇑*i*P		**Pn**	**23 12 51.7**	**+1.0**
SJG			*i* S		**Sn**	**23 13 14.7**	**+0.8**
PDPR	**Patillas Dam,**	**2.01 125**	Pn		**Pb**	**23 12 54.3**	**-1.3**
HUMP	**Col San Antoni**	**2.08 120**			**Sn**	**23 13 19.9**	**+0.5**
HUMP	**Col San Antoni**	**2.08 120**	Pn		**Pn**	**23 12 54.6**	**+0.9**
HUMP			IAML			23 13 25.1	
	comp=N,27nm,1.9s						
BANI	**BANI**	**2.59 253**	Pn		**Pn**	**23 12 57.0**	**-4.0**

*IDC **08** 23:17:08.8±1.4,8.°87S×127.°17E,h0km,mb3.4/3, mbtmp3.6/7,ML3.8/4,MS4.0/1,Error ellipse: s-maj=34.9km s-min=24.8km az=82.0*
ISC 08 23:17:13.3±1.2,9.°05S±0.°10×127.°25E±0.°10,h35km,n8, σ1s09/11,mb3.3/3,Timor Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.71 252**		Pn		**Pn**	**23 18 08.3**	**+0.1**
	18nm,0.3s,baz=132,slow=3.8,SNR=11							
BATI				Sn		**Sn**	**23 18 51.2**	**+0.4**
	21nm,0.3s,baz=331,slow=19,SNR=6.0 59nm,0.4s							
FITZ	**Fitzroy Crossi**	**9.12 190**		Pn		**Pn**	**23 19 24.1**	**+1.5**
	0.6nm,0.3s,baz=16,slow=13,SNR=9.1							
FITZ				Sn		**Sn**	**23 21 02.6**	**-1.5**
	2.2nm,0.3s,baz=0.0,slow=20,SNR=7.8 1.7nm,0.3s							
WRA	**Warramunga Arr**	**12.81 148**		Pn		**Pn**	**23 20 14.8**	**+1.7**
	0.4nm,0.3s,baz=320,slow=13,SNR=9.3							
WRA				Sn		**Sn**	**23 22 33.8**	**-0.7**
	0.7nm,0.3s,baz=317,slow=25,SNR=8.7 0.7nm,0.5s							
ASAR	**Alice Springs**	**15.87 157**		Pn		**P**	**23 20 56.5**	**-1.0**
	0.3nm,0.3s,baz=332,slow=12,SNR=11							
ASAR				Sn		**Sn**	**23 23 48.7**	**-0.3**
	0.3nm,0.3s,baz=327,slow=18,SNR=6.1 0.4nm,0.4s							
SONM	**Songino Array**	**59.58 344**		LR		LR	23 54 58.4	
	comp=Z,140nm,21.9s,baz=346,slow=38							
MKAR	**Makanchi Array**	**68.49 329**		P		**P**	**23 28 12.0**	**-0.1**
	0.2nm,0.7s,baz=124,slow=8.1,SNR=2.6 0.2nm,0.7s							
ZALV	**Zalesovo Beam**	**72.25 335**		P		**P**	**23 28 34.5**	**-0.3**
	0.3nm,0.3s,baz=139,slow=5.3,SNR=2.0 0.3nm,0.3s							
KURBB	**Kurchatov Arra**	**72.87 330**		P		**P**	**23 28 37.9**	**-0.6**
	0.1nm,0.5s,baz=134,slow=5.5,SNR=1.7 0.1nm,0.5s							

*NEIC **08** 23:35:17.7±1.2,19.°07N±0.°03×67.°57W±0.°03,h10km±1km, ML3.3/45,Md3.5/10(RSPR),Error ellipse: s-maj=5.8km s-min=4.2km az=198.0*
*SDD **08** 23:35:20.3±2.5,18.°89N×67.°72W,h19km±76km,MD3.7, ML3.2,MW3.4,Presumed earthquake*
ISC 08 23:35:18.0±1.4,19.°02N±0.°06×67.°64W±0.°03,h13km±10km, n36,σ0s97/58,18C-2D,Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.64 166**				**Pg**	**23 35 30.3**	**-0.3**
IDE						**Sb**	**23 35 39.9**	**0.0**
AGPR	**Aguadilla, PR**	**0.74 138**				**Pg**	**23 35 31.9**	**-0.4**
AGPR				Sg		**Sg**	**23 35 42.2**	**+0.2**
AGPR				IAML			23 35 44.6	
	985nm,0.2s							
AGPR	**Aguadilla, PR**	**0.74 138**	⇑*e*Pg			**Pg**	**23 35 32.3**	**0.0**
AGPR			⇑*e*Sg			**Sn**	**23 35 44.3**	**-0.9**
AGPR			IAML				23 35 45.2	
	comp=N,622nm,0.3s							
PRSN	**Puerto Rico Se**	**0.92 149**				**Pb**	**23 35 35.7**	**-0.1**
PRSN						**Sg**	**23 35 48.2**	**+0.4**
PRSN	**Puerto Rico Se**	**0.92 149**	⇑*e*Pg			**Pb**	**23 35 35.8**	**+0.1**
PRSN			IAML				23 35 53.5	
	comp=N,1μm,0.2s							
LSP	**Las Mesas**	**0.98 148**				**Pb**	**23 35 36.9**	**+0.1**
LSP						**Sg**	**23 35 50.4**	**+0.5**
AOPR	**Arecibo Observ**	**1.07 128**				**Pb**	**23 35 37.5**	**-0.9**
AOPR				Sg		**Sb**	**23 35 51.3**	**-0.9**
AOPR				IAML			23 36 00.2	
	comp=N,577nm,0.2s							
AOPR				IAML			23 36 00.0	
	comp=N,1μm,0.3s							
AOPR	**Arecibo Observ**	**1.07 128**	⇑*e*Pg			**Pn**	**23 35 39.2**	**+0.6**
AOPR			⇑*e*Sg			**Sg**	**23 35 52.9**	**+0.3**
AOPR			IAML				23 36 03.8	
	comp=N,482nm,0.3s							
HIDR	**Higuey Centro**	**1.11 248**	⇑*e*Pg			**Pb**	**23 35 36.8**	**-2.2**
HIDR			⇑*e*Sg			**Sb**	**23 35 49.5**	**-3.8**
HIDR			IAML				23 35 54.6	
	comp=N,560nm,0.2s							
CRPR	**Cabo Rojo, PR**	**1.12 153**				**Pb**	**23 35 39.5**	**+0.3**
CRPR						**Sn**	**23 35 57.0**	**+2.4**
CRPR			IAML				23 35 58.2	
	comp=N,528nm,0.5s							
CRPR			IAML				23 35 58.7	
	comp=N,430nm,0.7s							
UUPR	**Utuado, UPR, P**	**1.15 131**				**Pb**	**23 35 38.9**	**-0.9**
UUPR						**Sb**	**23 35 53.9**	**-0.7**
EMPR	**Esperanza - Ma**	**1.18 117**				**Pn**	**23 35 40.5**	**+0.4**
EMPR						**Sb**	**23 35 55.4**	**+0.1**
MLPR	**Magueyes Islan**	**1.18 152**				**Pg**	**23 35 41.1**	**+0.3**
MLPR						**Sg**	**23 35 57.2**	**+1.1**
MLPR	**Magueyes Islan**	**1.18 152**	⇑*e*Pg			**Pn**	**23 35 40.0**	**-0.2**
MLPR			⇑*e*Sg			**Sb**	**23 35 55.4**	**0.0**
MLPR			IAML				23 36 02.1	
	comp=N,82nm,0.2s							
GBPR	**Guanica, Bosqu**	**1.26 145**				**Pn**	**23 35 41.2**	**0.0**
GBPR						**Sb**	**23 35 57.9**	**+0.2**
CELP	**Cerrillos**	**1.37 133**				**Pn**	**23 35 42.6**	**-0.2**
CELP						**Sb**	**23 36 01.8**	**+0.9**
CELP			IAML				23 36 08.3	
	comp=N,407nm,0.4s							
CELP			IAML				23 36 09.0	
	comp=N,524nm,0.3s							
CELP	**Cerrillos**	**1.37 133**	⇓*e*Pg			**Pn**	**23 35 42.5**	**-0.2**
CELP			⇑*e*Sg			**Sb**	**23 36 01.4**	**+0.5**
CELP			IAML				23 36 09.0	
	comp=N,193nm,0.2s							
OBIP	**Obispado Ponce**	**1.38 135**				**Pn**	**23 35 42.2**	**-0.6**
OBIP						**Sb**	**23 36 01.3**	**+0.3**
ECPR	**Experimental S**	**1.39 120**				**Pn**	**23 35 42.4**	**-0.7**
ECPR						**Sn**	**23 36 01.3**	**0.0**
ECPR			IAML				23 36 08.9	
	comp=N,687nm,0.2s							
SMDR	**Samana, DR**	**1.49 281**	⇑*e*Sg			**Sb**	**23 36 05.9**	**+1.5**
SMDR			IAML				23 36 06.2	
	comp=N,165nm,0.8s							
DR12	**Loma Pena Alta**	**1.67 262**	Pn			**Pn**	**23 35 48.0**	**+1.1**
DR12			Sn			**Sb**	**23 36 09.9**	**+0.5**
HATOM	**Hato Mayor del**	**1.67 262**	⇑*e*Pg			**Pn**	**23 35 47.4**	**+0.5**
HATOM			⇑*e*Sg			**Sn**	**23 36 07.8**	**-0.4**
HATOM			IAML				23 36 11.6	
	comp=N,118nm,1.0s							
SJG	**San Juan**	**1.67 122**				**Pn**	**23 35 47.3**	**+0.4**
SJG			IAML				23 36 15.3	
	comp=N,332nm,0.4s							
SJG	**San Juan**	**1.67 122**	⇓*e*Pg			**Pn**	**23 35 47.4**	**+0.5**
SJG			⇑*e*Sg			**Sb**	**23 36 10.8**	**+1.3**
PDPR	**Patillas Dam,**	**1.82 123**				**Pn**	**23 35 48.7**	**-0.3**
HUMP	**Col San Antoni**	**1.90 117**				**Pn**	**23 35 49.8**	**-0.3**
HUMP	**Col San Antoni**	**1.90 117**				**Sb**	**23 36 16.0**	**-0.2**
NADR	**Nagua**	**2.12 279**	⇑*e*Pg			**Pb**	**23 35 56.0**	**-0.3**
NADR					⇑*e*Sg	**Sb**	**23 36 22.8**	**+0.2**
NADR					IAML		23 36 42.4	
	comp=N,453nm,1.3s							
SDD	**Santo Domingo**	**2.23 256**		Pn		**Pn**	**23 35 54.8**	**+0.3**
SDD				IAML			23 36 34.5	
	comp=E,173nm,0.7s							
SDD				IAML			23 36 37.6	
	comp=N,160nm,2.0s							
DR08	**Loma La Naviza**	**2.26 269**	⇑*e*Pg			**Pb**	**23 35 57.8**	**-0.8**
DR08				IAML			23 36 31.8	
	comp=N,1μm,0.2s							
CUPR	**Culebra, Puert**	**2.34 107**		Pn		**Pn**	**23 35 56.6**	**+0.5**
BANI	**BANI**	**2.65 257**		Pn		**Pn**	**23 36 01.3**	**+0.8**
BANI	**BANI**	**2.65 257**	⇑*e*Pg			**Pb**	**23 36 04.8**	**-0.6**
BANI				IAML			23 36 45.9	
	comp=N,122nm,0.7s							
SC01	**Santiago de lo**	**2.95 278**		Pn		**Pn**	**23 36 06.2**	**+1.7**
SDDR	**Presa de Saban**	**3.46 270**				**Pn**	**23 36 12.6**	**+1.1**
SDDR				IAML			23 37 08.4	
	comp=N,84nm,1.9s							
SDDR				IAML			23 37 10.3	
	comp=N,63nm,0.8s							
SABA	**Saba**	**4.40 108**		Pn		**Pn**	**23 36 22.2**	**-2.3**

*MAN **08** 23:39:04.0,11.°90N×125.°85E,h9km,MS4.4*
MAN INTENSITY III - DOLORES & ORAS EASTERN SAMAR; . INTENSITY II - BORONGAN CITY SAN JULIAN SAN POLICARPO & SULAT EASTERN SAMAR.
*BJI **08** 23:39:05.9,11.°81N×125.°77E,h37km,mB4.9/14,mb4.6/59, Ms4.3/44,Ms7 4.1/45*
*NEIC **08** 23:39:08.3±1.8,11.°85N±0.°07×125.°55E±0.°10,h35km±1km, mb4.9/72,Error ellipse: s-maj=16.6km s-min=12.4km az=102.0*
*IDC **08** 23:39:11.6±1.9,11.°80N×125.°70E,h74km±17km,mb4.1/29, mbtmp4.4/33,MS3.7/36,Error ellipse: s-maj=16.9km s-min=7.8km az=68.0*
*DJA **08** 23:39:22.2±0.5,12.°N±3.°×12.°6E±.°,h163km±5km,M4.5/57, mb4.4/57,mB5.2/22,Mw(mB)4.6/22*
ISC 08 23:39:06.4±0.5,11.°86N±0.°03×125.°77E±0.°04,h26km±3km, h26km:pP-P,n256,σ1s76/255,mb4.8/101,MS3.9/46, 11C-10D,Samar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PLP	**Palo**	**1.04 228**		*i* P		**Pn**	**23 39 24.5**	**-0.7**
PLP				*i* S		**Sb**	**23 39 38.4**	**-0.5**
SCPH	**Surigao**	**2.08 188**		*e*P		**Pn**	**23 39 39.8**	**+0.1**
SCPH				*e*S		**Sn**	**23 40 02.4**	**-2.4**
MMPH	**Masbate**	**2.15 283**		*e*P		**Pb**	**23 39 42.7**	**-2.0**
MMPH				*i* S		**Sb**	**23 40 13.1**	**+2.1**
LLP	**Lapu-Lapu**	**2.34 229**		*e*P		**Pn**	**23 39 44.9**	**+1.7**
LLP				*e*S		**Sb**	**23 40 19.6**	**+3.2**
TSSP	**Tandag City**	**2.83 171**		*e*P		**Pn**	**23 39 48.6**	**-1.4**
TSSP				*e*S		**Sn**	**23 40 21.0**	**-2.3**
TBP	**Tagbilaran**	**2.86 221**		*e*P		**Pn**	**23 39 52.1**	**+1.8**
TBP				*i* S		**Sb**	**23 40 34.7**	**+3.4**
RCP	**Roxas**	**2.98 265**		*e*P		**Pn**	**23 39 53.6**	**+1.7**
RCP				*i* S		**Sb**	**23 40 36.6**	**+1.9**
IBAJ	**Ibajay, Aklan**	**3.52 270**		*e*P		**Pn**	**23 40 00.8**	**+1.3**
SNPH	**Sibulan**	**3.53 225**		*i* P		**Pn**	**23 40 02.2**	**+2.6**
SNPH				*i* S		**Sb**	**23 40 55.5**	**+4.8**
CGP	**Cagayan de Oro**	**3.55 197**		*e*P		**Pn**	**23 40 01.1**	**+1.3**
CGP				*e*S		**Sb**	**23 40 46.9**	**-4.2**
BIPH	**Bislig**	**3.70 171**		*e*P		**Pn**	**23 40 01.6**	**-0.3**
BIPH				*e*S		**Sn**	**23 40 42.7**	**-2.0**
DCPH	**Dipolog City**	**4.03 216**		*i* P		**Pn**	**23 40 07.6**	**+1.2**
DAV	**Davao City (W)**	**4.76 182**		P		**Pn**	**23 40 20.6**	**+4.0**
DAV	103nm,0.4s,baz=300,slow=2.3,SNR=2.3 167nm,0.5s,baz=58,slow=20,SNR=1.6			S		**Sn**	**23 41 14.7**	**+3.7**
DAV				LR		LR	23 42 26.7	
	comp=Z,2μm,20.4s,baz=352,slow=42							
DAV	**Davao City (W)**	**4.76 182**		Pn		**Pn**	**23 40 17.9**	**+1.3**
CTBH	**Cotabato--PC H**	**4.85 198**		*i* P		Pn	23 40 22.5	+4.8
TGY	**Tagaytay City**	**5.21 296**		P		Pn	23 40 28.0	+5.2
TGY	184nm,0.4s,baz=209,slow=3.6,SNR=5.0 130nm,0.3s,baz=161,slow=12,SNR=3.1			S		**Sn**	**23 41 24.4**	**+2.4**
TGY				LR		LR	23 42 32.0	
	comp=Z,1μm,21.8s,baz=72,slow=39							
TGY	**Tagaytay City**	**5.21 296**		*e*P		Pn	23 40 29.6	+6.9
ZCP	**Zamboanga City**	**6.10 217**		*i* P		**Pn**	**23 40 31.7**	**-3.2**
MYLDM	**Lahad Datu**	**9.78 228**		P		Pn	23 41 34.9	+9.4
	14nm,1.0s							
KKM	**Kota Kinabalu**	**11.06 239**		P		Pn	23 41 50.9	+7.8
	26nm,1.2s							
GTOI	**Gorontalo**	**11.48 194**		P		Pn	23 41 58.7	+10
	21nm,1.2s							
YOJ	**Yonaguni jima**	**12.80 349**		Pn		**Pn**	**23 42 06.5**	**-0.2**
MPSI	**Mapaga**	**12.85 207**		P		**P**	**23 42 19.4**	**+1.4**
	1μm12nm,1.0s							
APSI	**Ampana**	**13.33 198**		P		**P**	**23 42 24.5**	**+1.1**
	1μm22nm,1.5s							
SIJI	**Sorong**	**13.78 156**		P		**P**	**23 42 24.8**	**-3.7**
	3.6nm,0.4s,baz=354,slow=15,SNR=3.5							
SIJI				LR		LR	23 49 34.9	
	comp=Z,154nm,19.1s,baz=308,slow=45							
PCI	**Palu**	**13.98 205**		P		**P**	**23 42 33.0**	**+2.3**
	41nm,1.0s							
NLAI	**Namlea**	**15.06 175**		P		**P**	**23 42 47.2**	**+4.5**
	1μm25nm,1.1s							
MWPI	**Manokwari, Pap**	**15.13 147**		P		**P**	**23 42 49.5**	**+6.0**
	74nm,1.1s							
MSAI	**Masohi**	**15.43 168**		P		**P**	**23 42 50.4**	**+3.6**
BKB	**Balikpapan**	**15.74 215**		P		**P**	**23 42 52.9**	**+2.7**
	58nm,0.9s							
TTSI	**Tana Toraja**	**15.95 202**		P		**P**	**23 42 55.4**	**+2.9**
	23nm,0.9s							
MMSI	**Mamuju**	**15.98 206**		P		**P**	**23 42 56.4**	**+3.5**
	17nm,0.6s							
KDI	**Kendari**	**16.02 191**		P		**P**	**23 42 57.6**	**+4.2**
FAKI	**Fak Fak**	**16.04 156**		P		**P**	**23 42 57.4**	**+3.9**
	23nm,1.6s							
SBUM	**Sibu**	**16.36 236**				**Pn**	**23 42 55.2**	**+0.8**
SBUM	**Sibu**	**16.36 236**		P		**P**	**23 42 58.5**	**+1.4**
SPSI	**Sidrap Palu**	**16.82 201**		P		**P**	**23 43 06.4**	**+4.2**
	28nm,0.8s							
QIZ	**Qiongzhong**	**16.91 297**		P		**Pn**	**23 43 00.9**	**-0.5**
QIZ				S		**Sn**	**23 46 06.4**	**-2.4**
QIZ				pmax		pmax		
	comp=Z,260nm,8.3s							
QIZ				L		L		
	comp=N,250nm,15.9s							
QIZ				L		L		
	comp=E,380nm,14.4s							
QIZ				L		L		
	comp=Z,500nm,17.5s							
KMPI	**Kaimana, Papua**	**17.32 152**		P		**P**	**23 43 14.2**	**+6.4**
KAPI	**Kappang**	**17.80 200**		P		**P**	**23 43 14.4**	**+1.4**
	4.7nm,0.3s,baz=25,slow=4.2,SNR=6.7							
KAPI				LR		LR	23 51 36.9	
	comp=Z,145nm,18.6s,baz=54,slow=42							
KAPI	**Kappang**	**17.80 200**		P		**P**	**23 43 15.5**	**+2.5**
	11nm,1.1s							
MKS	**Makassar**	**18.09 201**		P		**P**	**23 43 20.8**	**+4.6**
	36nm,1.0s							
GUMO	**Guam**	**18.71 83**		P		**Pn**	**23 43 26.2**	**+2.5**
	59nm,0.3s,baz=188,slow=18,SNR=1.6							
GUMO				LR		LR	23 49 30.5	
	comp=Z,253nm,19.2s,baz=274,slow=33							
CNSH	**ChangSha**	**20.20 325**		P		Pn	23 43 40.8	-0.4
CNSH				S		Sn	23 47 27.2	-0.8
CNSH				pmax		pmax		
	comp=Z,11nm,1.2s							
CNSH				L		L		
	comp=N,390nm,14.2s							
CNSH				L		L		
	comp=E,220nm,13.3s							
CNSH				L		L		
	comp=Z,430nm,15.8s							
EDFI	**Ende, Flores**	**20.87 191**		P		Pn	23 43 50.9	+1.5
	17nm,0.7s							
LBFI	**Labuhan Bajo,**	**21.04 196**		P		**P**	**23 43 52.5**	**+4.1**
NJ2	**Nanjing**	**21.08 343**		*e*P		**P**	**23 43 50.2**	**+1.4**
NJ2				pmax		pmax		
	comp=Z,24nm,0.5s							
WHN	**Wuhan**	**21.39 332**		P		**P**	**23 43 54.2**	**+2.1**
WHN				pmax		pmax		
	comp=Z,180nm,1.4s							
WHN				L		L		
	comp=Z,780nm,17.3s							
SOEI	**Soe**	**21.53 184**		P		**P**	**23 43 58.3**	**+4.5**
DBNI	**Kabupaten Domp**	**21.55 200**		P		**P**	**23 43 58.4**	**+4.5**
JCJ	**Chichijima**	**21.62 43**		LR		LR	23 51 17.1	
	comp=Z,186nm,20.3s,baz=154,slow=33							
BATI	**Baumata**	**22.02 186**		P		**P**	**23 44 01.1**	**+2.1**
	44nm,0.6s,baz=50,slow=1.4,SNR=6.5 44nm,0.6s							
BATI	**Baumata**	**22.02 186**		P		**P**	**23 44 00.2**	**+1.1**
PLAI	**Plampang**	**22.04 201**		P		**P**	**23 43 59.8**	**+0.6**
	18nm,1.1s							
TWSI	**Taliwang, Sumb**	**22.29 204**		P		**P**	**23 44 04.6**	**+2.7**
	18nm,0.9s							
KHKI	**Kahang-Kahang**	**22.49 207**		P		**P**	**23 44 06.9**	**+2.9**
	22nm,1.1s							
RTBI	**Rangdo, Negare**	**22.88 209**		P		**P**	**23 44 11.0**	**+2.8**
	30nm,1.1s							
GYA	**Guiyang**	**23.11 312**	⇓P			**P**	**23 44 09.8**	**-0.8**
GYA			S			**S**	**23 48 13.5**	**-7.1**
GYA			pmax			pmax		
	comp=Z,9.0nm,0.6s							
GYA			pmax			pmax		
	comp=Z,60nm,3.1s							
GYA			L			L		
	comp=N,430nm,19.4s							
GYA			L			L		
	comp=E,580nm,17.2s							
GYA			L			L		
	comp=Z,570nm,19.4s							
TPI	**Tanjungpandan**	**23.13 232**		P		**P**	**23 44 11.2**	**+0.4**
	630nm45nm,1.2s							
NGJI	**Ngawi**	**23.82 217**		P		**P**	**23 44 19.7**	**+2.2**
	62nm,1.1s							
MYKOM	**Kota Tinggi**	**23.93 247**		P		**P**	**23 44 18.9**	**+0.4**
	496nm31nm,1.4s							
SNJI	**Sawahan-Nganju**	**23.98 216**		P		**P**	**23 44 20.9**	**+1.8**
	39nm,1.8s							
KMI2	**Kunming**	**25.46 304**		P		**P**	**23 44 33.3**	**+0.6**
KMI2				pmax		pmax		
	comp=Z,13nm,0.8s							
KMI2				L		L		
	comp=N,140nm,10.9s							
KMI2				L		L		
	comp=E,230nm,12.6s							
KMI2				L		L		
	comp=Z,360nm,22.5s							
TIA	**Tai'an**	**25.47 344**		P		**P**	**23 44 32.5**	**+0.1**
TIA				sP		**sP**	**23 44 42.5**	**-0.3**
TIA				pmax		pmax		
	comp=Z,11nm,1.3s							
KSRS	**Korea Array**	**25.56 4**		P		**P**	**23 44 33.7**	**+0.6**
	3.5nm,0.7s,baz=182,slow=10,SNR=18							
KSRS				LR		LR	23 54 18.1	
	comp=Z,102nm,21.4s,baz=340,slow=35 3.5nm,0.7s							
LYN	**LuoYang**	**25.63 334**		P		**P**	**23 44 37.3**	**+3.5**
LYN				pP		sP	23 44 47.2	+3.1
LYN				sS		sS	23 49 20.1	+7.3
LYN				pmax		pmax		
	comp=Z,23nm,1.1s							
LYN				L		L		
	comp=N,360nm,13.7s							
LYN				L		L		
	comp=E,240nm,12.7s							
LYN				L		L		
	comp=Z,330nm,13.1s							
BBJI	**Bungbulang**	**26.33 224**		P		**P**	**23 44 38.6**	**-1.8**
CMAR	**Chiang Mai Arr**	**26.69 288**		P		**P**	**23 44 43.4**	**-0.3**
	1.4nm,0.4s,baz=102,slow=7.7,SNR=13							
CMAR				LR		LR	23 55 25.9	
	comp=Z,70nm,20.6s,baz=105,slow=37 1.4nm,0.4s							
PZH	**PanZhiHua**	**26.89 306**		P		**P**	**23 44 45.5**	**0.0**
PZH				S		**S**	**23 49 22.7**	**+1.7**
PZH				pmax		pmax		
	comp=Z,10.0nm,1.4s							
PZH				L		L		
	comp=N,170nm,15.3s							
PZH				L		L		
	comp=E,160nm,16.7s							
PZH				L		L		
	comp=Z,170nm,14.7s							
XAN	**Xi'an**	**26.90 328**	⇓P			**P**	**23 44 45.4**	**0.0**
XAN			pP			pP	23 44 53.3	+0.8
XAN			pmax			pmax		
	comp=Z,23nm,1.1s							
XAN			L			L		
	comp=N,340nm,13.1s							
XAN			L			L		
	comp=E,340nm,16.7s							
XAN			L			L		
	comp=Z,520nm,15.8s							
MJAR	**Matsushiro Arr**	**27.01 22**		LR		LR	23 54 15.0	
	comp=Z,146nm,19.6s,baz=203,slow=33							
DL2	**Dalian**	**27.18 353**		P		**P**	**23 44 48.2**	**+0.4**
DL2				pmax		pmax		
	comp=Z,31nm,1.2s							
HNS	**HongShan**	**27.30 341**	⇑P			**P**	**23 44 49.1**	**+0.2**
HNS			pmax			pmax		
	comp=Z,13nm,1.1s							
HNS			L			L		
	comp=E,260nm,14.4s							
HNS			L			L		
	comp=Z,230nm,16.1s							
CD2	**Chengdu**	**27.82 316**	P			**P**	**23 44 53.8**	**+0.1**
CD2			S			**S**	**23 49 40.2**	**+4.9**
CD2			pmax			pmax		
	comp=Z,20nm,0.4s							
CD2			L			L		
	comp=N,760nm,16.7s							
CD2			L			L		
	comp=E,1μm,20.0s							
CD2			L			L		
	comp=Z,810nm,18.0s							
BJI2	**Beijing**	**29.30 345**	P			**P**	**23 45 06.9**	**+0.2**
BJI2			pP			**sP**	**23 45 16.4**	**-0.8**
BJI2			PcP			**PcP**	**23 48 12.9**	**-0.2**
BJI2			S			**S**	**23 49 57.6**	**-0.8**
BJI2			pmax			pmax		
	comp=Z,2.0nm,0.9s							
BJI2			pmax			pmax		
	comp=Z,54nm,6.3s							
BJI2			L			L		
	comp=N,62nm,15.3s							
BJI2			L			L		
	comp=E,83nm,16.1s							
FITZ	**Fitzroy Crossi**	**29.77 180**	P			**P**	**23 45 09.8**	**-1.3**
	1.8nm,0.4s,baz=2.2,slow=9.1,SNR=10.0							
FITZ			LR			LR	23 58 27.4	
	comp=Z,72nm,20.0s,baz=245,slow=39 1.8nm,0.4s							
COEN	**Coen**	**30.92 146**	P			**P**	**23 45 23.2**	**+2.0**
COEN			IAmb			IAmb	23 45 34.8	
	comp=Z,22nm,1.3s							
LZDM	**Lanzhou Array**	**31.19 324**	P			**P**	**23 45 24.4**	**+0.5**
	comp=Z,1.0nm,0.3s,baz=173,slow=13,SNR=4.0 comp=Z,1.0nm,0.3s		

comp=Z,12nm,1.3s
GTA2 Gaotai 35.88 325 P **P** **23 46 05.7 +1.2**
GTA2 pP pwP 23 46 13.3 -1.1
GTA2 PcP **PcP** **23 48 32.1 +0.7**
GTA2 pmax pmax
comp=Z,12nm,1.0s
GTA2 L L
comp=Z,260nm,14.1s
GTA2 L L
comp=Z,150nm,16.5s
GTA2 L L
comp=Z,210nm,16.8s
ASAR Alice Springs 36.20 167 P **P** **23 46 05.9 -1.3**
comp=Z,0.9nm,0.4s,baz=350,slow=6.5,SNR=9.0
ASAR PcP **PcP** **23 48 31.6 -0.8**
comp=Z,1.6nm,0.8s,baz=343,slow=2.4,SNR=4.8
comp=Z,0.9nm,0.4s
LSA Lhasa 36.72 304 P **P** **23 46 10.1 -2.0**
LSA pmax pmax
comp=Z,7.0nm,1.2s
GOMU GeErMu 36.95 316 P **P** **23 46 13.5 -0.4**
GOMU S **S** **23 51 54.5 -3.4**
GOMU pmax pmax
comp=Z,7.0nm,0.9s
GOMU L L
comp=Z,250nm,15.1s
GOMU L L
comp=Z,370nm,15.5s
GOMU L L
comp=Z,560nm,15.1s
KLR Kul'dur 37.59 6 LR LR 00 02 05.8
comp=Z,64nm,21.2s,baz=272,slow=36
CTA Charters Tower 37.61 147 P **P** **23 46 19.5 +0.3**
comp=Z,3.7nm,0.8s,baz=336,slow=11,SNR=4.7
comp=Z,3.7nm,0.8s
HEH HeiHe 38.30 2 *eP* **P** **23 46 25.3 +0.6**
HEH pmax pmax
comp=Z,10.0nm,1.1s
ULN Ulaanbaatar 39.17 340 P **P** **23 46 32.7 +0.5**
ULN Ulaanbaatar 39.17 340 P **P** **23 46 34.6 +2.4**
comp=Z,26nm,1.8s
SONM Songino Array 39.37 339 P **P** **23 46 34.0 +0.2**
comp=Z,0.8nm,0.5s,baz=158,slow=10,SNR=14
comp=Z,0.8nm,0.5s
SONM Songino Array 39.37 339 P **P** **23 46 34.3 +0.5**
EVN Everest 39.76 300 P **P** **23 46 37.2 -0.8**
H11S3 WAKE ISLAND Hy 39.97 75 T T 00 29 56.2
baz=265,slow=74
H11S1 WAKE ISLAND Hy 39.99 75 T T 00 30 00.8
baz=265,slow=74
H11S2 WAKE ISLAND Hy 39.99 75 T T 00 30 11.6
baz=265
HNR Honiara 40.02 120 LR LR 00 00 16.2
comp=Z,9.4nm,21.9s,baz=24,slow=32
H11N1 WAKE ISLAND Hy 40.25 74 T T 00 30 11.9
baz=265,slow=74,SNR=35
H11N2 WAKE ISLAND Hy 40.26 73 T T 00 30 09.5
baz=265,slow=74,SNR=27
H11N3 WAKE ISLAND Hy 40.27 74 T T 00 30 14.9
baz=265,slow=74,SNR=29
MORW Morawa 41.76 193 P **P** **23 46 52.3 -1.3**
MORW IAmb IAmb 23 47 12.7
comp=Z,66nm,1.9s
INKA Innaminka 41.96 160 P **P** **23 46 55.6 +0.4**
TLY Talaya 43.58 340 LR LR 00 06 25.9
comp=Z,87nm,19.8s,baz=220,slow=38
PALK Pallekele 44.63 269 LR LR 00 04 58.4
comp=Z,84nm,21.4s,baz=50,slow=35
NWAO Narrogin (SRO) 45.28 190 P **P** **23 47 20.2 -1.7**
comp=Z,2.4nm,0.4s,baz=30,slow=7.1,SNR=6.4
comp=Z,2.4nm,0.4s
WMQ Urumqi 45.67 321 *eP* **P** **23 47 26.8 +1.7**
WMQ pP pwP 23 47 34.9 -0.3
WMQ pmax pmax
comp=Z,10.0nm,1.3s
STKA Stephens Creek 46.06 161 P **P** **23 47 27.7 -0.4**
comp=Z,4.9nm,0.7s,baz=338,slow=8.5,SNR=6.3
comp=Z,4.9nm,0.7s
STKA Stephens Creek 46.06 161 P **P** **23 47 28.2 +0.1**
PEA0B Petropavlovsk- 48.41 25 P **P** **23 47 47.8 +1.6**
PETK Petropavlovsk- 48.41 25 P **P** **23 47 47.4 +1.2**
comp=Z,4.1nm,0.8s,baz=233,slow=5.3,SNR=7.1
comp=Z,4.1nm,0.8s
PETK Petropavlovsk- 48.41 25 P **P** **23 47 47.7 +1.5**
ARMA Armidale 48.85 150 P **P** **23 47 52.8 +2.8**
YAK Yakutsk 50.17 2 LR LR 00 09 29.9
comp=Z,49nm,20.2s,baz=244,slow=36
MKAR Makanchi Array 50.47 322 P **P** **23 48 02.8 +0.7**
comp=Z,14nm,0.9s,baz=118,slow=8.6,SNR=81
MKAR PcP **PcP** **23 49 19.2 -0.8**
comp=Z,1.1nm,0.6s,baz=112,slow=3.9,SNR=1.3
MKAR LR LR 00 11 00.8
comp=Z,116nm,18.9s,baz=129,slow=38
comp=Z,14nm,0.9s
MAKZ Makanchi 50.67 322 P **P** **23 48 03.5 -0.1**
MAKZ IAmb IAmb 23 48 05.5
comp=Z,20nm,1.1s
MAKZ Makanchi 50.67 322 P **P** **23 48 04.2 +0.6**
MAKZ x x 23 48 13.0
MAKZ PcP **PcP** **23 49 20.1 -0.6**
TARG Taragay, Kyrgy 51.24 315 P **P** **23 48 08.5 +0.1**
KDJ Kajisay 51.82 315 P **P** **23 48 12.9 +0.4**
CAN Canberra 51.83 156 P P 23 48 16.9 +4.6
KSH2 Kashi 52.00 311 P **P** **23 48 14.4 +0.5**
KSH2 pmax pmax
comp=Z,7.0nm,1.2s
NIL Nilore 52.44 303 P **P** **23 48 15.3 -1.8**
NIL IAmb IAmb 23 48 17.9
comp=Z,16nm,1.0s
BOOM Boomskoye usch 52.80 315 P **P** **23 48 19.6 -0.2**
ZAA0 Zalesovo Array 53.00 331 P **P** **23 48 19.9 -0.9**
ZALV Zalesovo Beam 53.00 331 P **P** **23 48 21.0 +0.2**
comp=Z,3.0nm,0.8s,baz=116,slow=6.9,SNR=12
ZALV LR LR 00 11 39.6
comp=Z,65nm,20.3s,baz=119,slow=37
comp=Z,3.0nm,0.8s
ZALV Zalesovo Beam 53.00 331 P **P** **23 48 20.3 -0.5**
AAK Ala-Archa 53.86 315 LR LR 00 12 05.3
comp=Z,176nm,18.6s,baz=98,slow=37
AAK Ala-Archa 53.86 315 P **P** **23 48 27.4 -0.1**
KURK Kurchatov 54.49 325 P **P** **23 48 31.9 +0.2**
KURK Kurchatov 54.49 325 P **P** **23 48 32.3 +0.5**
KURK x x 23 48 41.0
KURBB Kurchatov Arra 54.49 325 P **P** **23 48 32.1 +0.3**
comp=Z,21nm,1.1s,baz=123,slow=7.4,SNR=77
KURBB LR LR 00 14 36.2
comp=Z,108nm,18.6s,baz=172,slow=39
comp=Z,21nm,1.1s
ARSB Arslanbob 54.53 313 P **P** **23 48 31.3 -1.2**
ARSB IAmb IAmb 23 48 33.9
comp=Z,9.1nm,1.0s
GAR Garm 55.90 309 P **P** **23 48 42.3 -0.1**
SHEM Shemya Is, Ala 56.09 33 LR LR 00 07 24.4
comp=Z,47nm,21.2s,baz=328,slow=30
SMY Shemya 56.09 33 P **P** **23 48 45.7 +2.4**
KK31 Karatay Array 56.79 314 P **P** **23 48 48.8 +0.3**
KK31 IAmb IAmb 23 48 49.7
comp=Z,12nm,0.8s
KKAR Karatay Array 56.79 314 P **P** **23 48 48.7 +0.2**
TIXI Tiksi 59.78 1 P **P** **23 49 08.9 +0.1**
TIXI pP **pwP** **23 49 20.0 -0.4**
TIXI x x 23 49 24.8
BVAR Borovoye Array 60.09 325 P **P** **23 49 11.4 +0.1**
comp=Z,4.8nm,0.8s,baz=119,slow=8.6,SNR=22
BVAR LR LR 00 16 25.6
comp=Z,82nm,20.5s,baz=116,slow=37
comp=Z,4.8nm,0.8s
BORK Borovoye 60.13 325 P **P** **23 49 11.9 +0.4**
BORK IAmb IAmb 23 49 24.5
comp=Z,17nm,1.0s
BORK Borovoye 60.13 325 P **P** **23 49 12.6 +1.0**
BORK pP **sP** **23 49 23.2 +1.0**
BORK PcP **PcP** **23 49 57.1 0.0**
NRIK Noril'sk 62.36 346 P **P** **23 49 25.9 -0.4**
comp=Z,6.8nm,0.9s,baz=134,slow=5.8,SNR=12
NRIK LR LR 00 18 42.4
comp=Z,83nm,20.4s,baz=144,slow=38
comp=Z,6.8nm,0.9s
AB31 Akbulak array 65.36 319 P **P** **23 49 45.9 -0.6**
AB31 IAmb IAmb 23 49 56.1
comp=Z,13nm,1.2s
ABKAR Akbulak array 65.36 319 P **P** **23 49 46.2 -0.3**
ARTI Arti 67.72 326 P **P** **23 50 00.5 -0.9**
ARTI IAmb IAmb 23 50 01.8
comp=Z,10nm,1.0s
ARTI Arti 67.72 326 P **P** **23 50 01.1 -0.3**
ARTI pP **sP** **23 50 11.9 -0.4**
URZ Urewera 69.18 139 LR LR 00 23 54.0
comp=Z,48nm,18.7s,baz=282,slow=39
C16K Lisburne Hills 71.29 22 P **P** **23 50 24.3 +1.1**
Q19K Cape Douglas, 75.07 32 P **P** **23 50 45.2 -0.6**
HUH Hualalai 75.29 73 P **P** **23 50 48.0 -0.1**
KDAK Kodiak Island 75.61 33 LR LR 00 22 40.5
comp=Z,30nm,19.5s,baz=239,slow=34
GNI Garni 75.63 309 LR LR 00 27 32.7
comp=Z,58nm,19.8s,baz=86,slow=38
GNI Garni 75.63 309 P **P** **23 50 49.6 0.0**
comp=Z,9.6nm,1.5s
B22K Teshekpuk Lake 75.81 20 P **P** **23 50 50.9 +1.1**
SKT Skwentna 76.19 29 P **P** **23 50 52.4 +0.3**
SKT IAmb IAmb 23 52 43.5
comp=Z,32nm,1.9s
E22K Anaktuvuk Pass 76.25 22 P **P** **23 50 52.1 -0.3**
E22K IAmb IAmb 23 51 03.4
comp=Z,12nm,1.4s
CNPM China Poot 76.32 31 P **P** **23 50 52.8 -0.2**
BPAW Bear Paw Mtn. 76.47 27 P **P** **23 50 54.2 +0.5**
BPAW IAmb IAmb 23 51 04.1
comp=Z,13nm,1.2s
BRLK Bradley Lake 76.49 31 P **P** **23 50 53.6 -0.4**
RAYN Ar Rayn 76.53 292 P **P** **23 50 53.2 -1.7**
RAYN IAmb IAmb 23 50 54.7
comp=Z,12nm,0.9s
RAYN Ar Rayn 76.53 292 P **P** **23 50 54.0 -0.9**
L22K Petersville 76.55 28 P **P** **23 50 54.5 +0.2**
L22K IAmb IAmb 23 51 39.0
comp=Z,28nm,1.9s
D23K Nanushuk River 76.69 22 P **P** **23 50 56.1 +1.3**
D23K IAmb IAmb 23 51 06.2
comp=Z,14nm,1.4s
C23K Itkillik River 76.75 21 P **P** **23 50 55.7 +0.5**
C23K IAmb IAmb 23 51 06.6
comp=Z,20nm,1.7s
KBZ Khabaz 76.78 312 P **P** **23 50 55.9 +0.1**
comp=Z,7.3nm,1.1s,baz=92,slow=12,SNR=9.1
comp=Z,7.3nm,1.1s
KIV Kislovodsk 76.91 313 ⇑P **P** **23 50 57.4 +0.7**
KIV Kislovodsk 76.91 313 P **P** **23 50 55.1 -1.6**
KIV IAmb IAmb 23 50 58.2
comp=Z,16nm,0.9s
KIV Kislovodsk 76.91 313 P **P** **23 50 56.8 +0.1**
comp=Z,16nm,1.1s
KIV Kislovodsk 76.91 313 P **P** **23 50 56.9 +0.2**
GEVA Gevas 77.07 307 P **P** **23 50 57.7 -0.1**
GEVA IAmb IAmb 23 50 59.2
comp=Z,11nm,1.1s
E23K Chandalar 77.07 23 P **P** **23 50 57.5 +0.4**
E23K IAmb IAmb 23 51 08.4
comp=Z,16nm,1.6s
MCK McKinley 77.37 27 P **P** **23 50 58.5 -0.3**
MCK IAmb IAmb 23 51 09.9
comp=Z,13nm,1.3s
GURO Guroymak-BITLI 77.85 307 P **P** **23 51 01.7 -0.4**
GURO IAmb IAmb 23 51 03.9
comp=Z,19nm,0.9s
HDA Harding Lake 78.22 26 P **P** **23 51 02.6 -1.0**
HDA IAmb IAmb 23 52 53.8
comp=Z,27nm,1.9s
ILAR Eielson Array 78.23 26 P **P** **23 51 03.4 -0.2**
comp=Z,0.5nm,0.8s,baz=242,slow=6.7,SNR=5.8
comp=Z,0.5nm,0.8s
D25K Kavik River 78.23 21 P **P** **23 51 04.2 +0.6**
D25K IAmb IAmb 23 51 17.1
comp=Z,11nm,1.5s
E25K Arctic Village 78.59 22 P **P** **23 51 06.6 +1.1**
E25K IAmb IAmb 23 51 16.9
comp=Z,27nm,1.9s
KOPT Kop Dagi 78.88 309 P **P** **23 51 07.9 -0.1**
KOPT IAmb IAmb 23 51 12.3
comp=Z,16nm,1.1s
MARD Mardin 78.96 306 P **P** **23 51 07.5 -0.8**
MARD IAmb IAmb 23 51 09.4
comp=Z,21nm,1.5s
BMAR Burnt Mountain 79.01 23 P **P** **23 51 09.2 +1.3**
OBN Obninsk 79.92 324 P **P** **23 51 12.2 -0.7**
comp=Z,16nm,1.4s
RAR Rarotonga 80.14 114 LR LR 00 19 03.7
comp=Z,40nm,20.9s,baz=258,slow=30
D27M Malcolm River 80.16 21 P **P** **23 51 15.2 +1.1**
D27M IAmb IAmb 23 51 35.4
comp=Z,24nm,1.9s
MCARA McCarthy VSAT 80.27 29 P **P** **23 51 16.3 +1.6**
MCARA IAmb IAmb 23 51 21.3
comp=Z,39nm,1.6s
I27K Kandik River 80.38 25 P **P** **23 51 16.6 +1.3**
I27K IAmb IAmb 23 51 41.6
comp=Z,35nm,2.0s
TGL Tana Glacier 80.44 30 P **P** **23 51 14.4 -1.4**
TGL IAmb IAmb 23 52 01.5
comp=Z,31nm,1.4s
BCAR Beaver Creek A 80.63 27 P **P** **23 51 17.3 +0.6**
F28M Old Crow 80.78 23 P **P** **23 51 18.2 +0.8**
SPITS Spitsbergen Ar 82.37 349 P **P** **23 51 24.5 -1.1**
comp=Z,5.2nm,0.9s,baz=90,slow=7.8,SNR=4.8
comp=Z,5.2nm,0.9s
ARCES ARCESS Array B 82.54 340 P **P** **23 51 26.6 -0.1**
comp=Z,3.6nm,0.7s,baz=70,slow=5.8,SNR=6.9
comp=Z,3.6nm,0.7s
ARCES ARCESS Array B 82.54 340 P **P** **23 51 26.4 -0.2**
M30M Minto, Yukon 82.97 28 P **P** **23 51 30.2 +1.1**
M30M IAmb IAmb 23 54 08.3
comp=Z,15nm,1.6s
INK Inuvik 82.99 22 P **P** **23 51 28.9 -0.1**
INK IAmb IAmb 23 51 40.1
comp=Z,12nm,1.8s
G31M Satah River 83.05 23 P **P** **23 51 29.7 +0.5**
G31M IAmb IAmb 23 53 37.0
comp=Z,24nm,1.9s
MMAI Mount Meron Ar 83.94 302 P **P** **23 51 35.2 +0.5**
comp=Z,4.7nm,1.0s,baz=60,slow=8.7,SNR=1.9
comp=Z,4.7nm,1.0s
KIRS Kirsehir-Merke 84.04 309 ⇑P **P** **23 51 33.3 -1.8**
BR131 Keskin Array S 84.15 309 P **P** **23 51 34.8 -0.9**
BRTR Keskin Array B 84.15 309 P **P** **23 51 34.8 -0.9**
comp=Z,2.0nm,0.7s,baz=105,slow=4.1,SNR=19
BRTR LR LR 00 32 14.2
comp=Z,25nm,20.3s,baz=276,slow=38
comp=Z,2.0nm,0.7s
BR104 Keskin Array S 84.15 309 P **P** **23 51 34.7 -1.0**
comp=Z,39nmcomp=Z,3.6nm,0.9s
BR106 Keskin Array S 84.16 309 P **P** **23 51 34.8 -1.0**
comp=Z,36nmcomp=Z,3.5nm,0.7s
FIA1 FINESS Array S 84.26 332 P **P** **23 51 35.5 -0.1**
FINES FINESS Array B 84.26 332 P **P** **23 51 35.6 0.0**
comp=Z,9.5nm,0.9s,baz=76,slow=5.5,SNR=21
comp=Z,9.5nm,0.9s
FINES FINESS Array B 84.26 332 P **P** **23 51 34.9 -0.7**
VOI Vohitsoka 84.37 246 P **P** **23 51 35.3 -1.8**
A36M Sachs Harbour 84.55 17 P **P** **23 51 36.5 -0.3**
A36M IAmb IAmb 23 51 47.1
comp=Z,7.5nm,1.1s
EIL Elat 84.92 299 LR LR 00 34 17.2
comp=Z,61nm,19.5s,baz=68,slow=39
AK09 Malin Array Si 85.01 321 P **P** **23 51 38.9 -0.7**
AK08 Malin Array Si 85.02 321 P **P** **23 51 39.2 -0.5**
AK08 pP **sP** **23 51 49.6 -1.1**
AKASG Malin Array Be 85.03 321 P **P** **23 51 38.9 -0.8**
comp=Z,6.6nm,0.8s,baz=64,slow=5.0,SNR=20
AKASG LR LR 00 29 50.3
comp=Z,62nm,19.6s,baz=38,slow=36
comp=Z,6.6nm,0.8s
AKBB Malin Array Si 85.03 321 P **P** **23 51 39.0 -0.7**
AKBB pP **sP** **23 51 49.9 -0.8**
AK01 Malin Array Si 85.04 321 P **P** **23 51 39.2 -0.5**
KIEV Kiev 85.04 321 ⇑P **P** **23 51 39.2 -0.5**
KIEV Kiev 85.04 321 P **P** **23 51 39.0 -0.7**
comp=Z,63nm,1.6s
KIEV Kiev 85.04 321 P **P** **23 51 39.2 -0.5**
KIEV PcP **PcP** **23 51 42.5 -0.5**
KIEV pP **sP** **23 51 49.8 -1.0**
AK02 Malin Array Si 85.05 321 P **P** **23 51 39.0 -0.8**
AK05 Malin Array Si 85.06 321 P **P** **23 51 39.2 -0.6**
AK04 Malin Array Si 85.06 321 P **P** **23 51 39.1 -0.7**
AK19 Malin Array Si 85.15 321 P **P** **23 51 39.8 -0.5**
CSS Mathiatis 85.28 305 P **P** **23 51 40.9 -0.5**
CSS Mathiatis 85.28 305 P **P** **23 51 40.7 -0.6**
comp=Z,437nmcomp=Z,27nm,1.1s
FURI Furi 85.38 278 LR LR 00 27 38.3
comp=Z,38nm,20.2s,baz=116,slow=34
BAL3X Bal3x, Balta 85.39 318 P **P** **23 51 41.2 -0.3**
PURM Purcari 85.51 316 ⇑P **P** **23 51 41.6 -0.5**
LUBAR Lubar, Ukraine 86.12 320 P **P** **23 51 44.6 -0.6**
SORM Soroca 86.16 318 ⇓P **P** **23 51 44.6 -0.8**
SORM Soroca 86.16 318 P **P** **23 51 44.4 -1.0**
TLCR 86.53 315 ⇑P **P** **23 51 47.0 -0.3**
CFR Carcaliu 86.99 315 ⇓P **P** **23 51 49.3 -0.2**
TESR Tescani 87.67 317 ⇑P **P** **23 51 53.8 +1.0**
VRI Vrincioaia 87.79 316 ⇑P **P** **23 51 53.6 +0.2**
PLOR Plostina 87.84 316 ⇓P **P** **23 51 53.9 +0.2**
NEHR Nehoiu 88.19 316 ⇓P **P** **23 51 55.3 0.0**
BURAR Bucovina Array 88.33 318 ⇑P **P** **23 51 55.8 -0.2**
BUR08 Bucovina Ar. S 88.33 318 P **P** **23 51 55.8 -0.3**
BUR08 IAmb IAmb 23 51 56.9
comp=Z,19nm,1.7s
MLR Muntele Rosu 88.41 316 LR LR 00 34 17.7
comp=Z,61nm,18.9s,baz=58,slow=37
MLR Muntele Rosu 88.41 316 ⇓P **P** **23 51 55.8 -0.7**
MLR Muntele Rosu 88.41 316 P **P** **23 51 56.5 0.0**
MLR IAmb IAmb 23 52 18.1
comp=Z,17nm,1.7s
LOZB Loznitsa 88.51 314 ⇑P **P** **23 51 56.1 -0.8**
PPT Papeete 88.53 108 LR LR 00 23 50.0
comp=Z,28nm,20.9s,baz=170,slow=30
HG4B Hotspring 88.54 37 P **P** **23 51 57.4 +0.6**
ELND Elena 89.14 314 ⇑P **P** **23 51 57.1 -2.8**
MARR Marisel-Cluj 89.97 318 ⇓P **P** **23 52 03.6 -0.2**
DRGR 90.20 318 ⇓P **P** **23 52 04.4 -0.4**
HFS Hagfors 90.42 332 P **P** **23 52 04.4 -1.1**
comp=Z,1.5nm,0.7s,baz=78,slow=9.0,SNR=1.5
HFS LR LR 00 35 40.1
comp=Z,99nm,19.3s,baz=49,slow=38
comp=Z,1.5nm,0.7s
NOA NORSAR Array B 91.12 334 LR LR 00 36 00.3
comp=Z,58nm,18.9s,baz=75,slow=37
NC204 NORSAR Array S 91.21 334 P **P** **23 52 09.9 +0.7**
YKA Yellowknife Ar 92.51 24 P **P** **23 52 15.0 -0.1**
comp=Z,0.2nm,0.6s,baz=302,slow=5.9,SNR=6.4
comp=Z,0.2nm,0.6s
VRAC Vranov 93.21 322 LR LR 00 35 11.2
comp=Z,32nm,18.5s,baz=42,slow=36
ITM Ithomi 93.68 309 P **P** **23 52 18.5 -2.5**
GERES GERESS Array B 95.14 322 P **P** **23 52 26.3 -1.3**
comp=Z,0.1nm,0.3s,baz=75,slow=10,SNR=4.0
GERES LR LR 00 36 31.2
comp=Z,38nm,18.1s,baz=82,slow=36
comp=Z,0.1nm,0.3s
DAVOX Davos/Dischmat 98.36 321 LR LR 00 38 26.7
comp=Z,88nm,18.3s,baz=74,slow=36
TORD Torodi Ar. Bea 119.21 292 PKP **PKPdf** **23 57 52.5 -1.7**
comp=Z,0.1nm,0.4s,baz=162,slow=3.0,SNR=4.6
PLCA Paso Flores 147.85 156 PKPbc **PKPbc** **23 58 49.8 +0.3**
comp=Z,3.3nm,0.9s,baz=257,slow=4.4,SNR=5.7

CATAC ***08*** *23:42:29.9±0.8, 14°N±3°×9°3W±°, h19km±6km, M3.7/9, MLv3.7/9, Error ellipse: s-maj=7.9km s-min=4.9km az=24.4, confirmed*
MEX ***08*** *23:42:31.2±0.6, 14°.08N×92°.42W, h92km±14km, MD4.1*
GCG ***08*** *23:42:31.5±2.2, 13°.96N×92°.59W, h35km±34km, MD4.3, ML4.1, Presumed earthquake*

ISC 08 23:42:29.0±1.8, 14°08N±0°06×92°61W±0°04, h15km±10km, n32, σ1°81/48, 1D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**0.89**	**22**	*eP*	**Pn**	**23 42 47.8**	**+0.9**
THIG				*eS*	**Sn**	**23 43 00.6**	**+1.1**
SMCA	**Catarina**	**0.93**	**34**	*iP*	**Pn**	**23 42 48.5**	**+1.0**
RTAL	**Retalhuleu**	**0.99**	**63**	*eP*	**Pn**	**23 42 49.9**	**+1.6**
RTAL				*eS*	**Sg**	**23 42 59.0**	**-2.0**
RTAL	**Retalhuleu**	**0.99**	**63**	P	**Pn**	**23 42 50.0**	**+1.7**
RTAL				S	**Sn**	**23 43 05.5**	**+3.4**
PATR	**El Naranjo**	**1.09**	**19**	*eP*	**Pn**	**23 42 50.3**	**+0.3**
PATR				*eS*	**Sn**	**23 43 05.7**	**+0.8**
CHUJ	**Union Juarez**	**1.12**	**26**	*eP*	**Pn**	**23 42 50.9**	**+0.6**
CHUJ				*eS*	**Sg**	**23 43 05.1**	**-0.1**
PAVE	**Pavencul**	**1.18**	**21**	*eP*	**Pn**	**23 42 51.7**	**+0.5**
PAVE				*eS*	**Sb**	**23 43 04.4**	**-2.0**
STG2	**El Palmar, Qui**	**1.25**	**73**	*iP*	**Pn**	**23 42 51.8**	**-0.2**
STG2				IAML		23 43 12.0	
	comp=E,6μm,0.3s						
STG5	**El Palmar, Qui**	**1.26**	**75**	*iP*	**Pn**	**23 42 51.8**	**-0.3**
STG8	**El Palmar, Qui**	**1.27**	**73**	*iP*	**Pn**	**23 42 52.2**	**-0.2**
QUEO	**Labor Ovalle**	**1.32**	**53**	*iP*	**Pg**	**23 42 54.9**	**+0.4**
QUEO				IAML		23 43 18.1	
	comp=E,1μm,0.5s						
SOKI	**Kika Raxquin**	**1.38**	**58**	*iP*	**Pg**	**23 42 55.8**	**+0.2**
HUEH	**Huehuetenango**	**1.63**	**41**	P	**Pg**	**23 43 00.4**	**+0.1**
HUEH				S	**Sg**	**23 43 22.4**	**+0.8**
PCIG		**1.72**	**340**	*eP*	**Sn**	**23 42 58.9**	**+0.5**
PCIG				*eS*	**Sn**	**23 43 14.2**	**-5.9**
FG8	**Yepocapa, Chim**	**1.99**	**85**	*iP*	**Pn**	**23 42 58.7**	**-3.6**
FG16	**Alotenango, Sa**	**2.04**	**84**	*iP*	**Pn**	**23 42 59.9**	**-3.2**
FG16				IAML		23 43 26.4	
	comp=N,2μm,0.2s						
PCG5	**San Vicente Pa**	**2.17**	**86**	⇓*iP*	**Pn**	**23 43 04.3**	**-0.4**
CCIG	**Comitan**	**2.23**	**12**	*eP*	**Pb**	**23 43 09.3**	**+0.1**
CCIG				*eS*	**Sb**	**23 43 37.8**	**+1.1**
CCIG	**Comitan**	**2.23**	**12**	S	**Sb**	**23 43 36.9**	**+0.2**
CCIG	**Comitan**	**2.23**	**12**	*iP*	**Pb**	**23 43 09.5**	**+0.3**
APG	**El Apazote**	**2.27**	**66**	*iP*	**Pb**	**23 43 08.9**	**-0.9**
FAME	**Alcaldia de Sa**	**2.53**	**95**	P	**Pn**	**23 43 10.9**	**+1.4**
FAME				S	**Sn**	**23 43 41.9**	**+1.8**
TGIG		**2.73**	**350**	*eP*	**Pn**	**23 43 14.3**	**+2.0**
TGIG				*eS*	**Sn**	**23 43 45.8**	**+0.7**
TGIG		**2.73**	**350**	*iP*	**Pn**	**23 43 14.7**	**+2.4**
TGIG				*iS*	**Sb**	**23 43 48.8**	**-2.0**
NUBE	**Las Nubes**	**2.75**	**93**	P	**Pn**	**23 43 14.4**	**+1.7**
NUBE	**Las Nubes**	**2.75**	**93**	*iP*	**Pn**	**23 43 14.6**	**+1.9**
NUBE				*iS*	**Sn**	**23 43 45.3**	**-0.5**
CMIG	**Matias Romero**	**3.71**	**324**	*eP*	**Pn**	**23 43 26.6**	**+0.8**
CMIG				*eS*	**Sn**	**23 44 07.8**	**-1.5**
NEUV	**Arroyo Zacate**	**4.74**	**320**	*eP*	**Pn**	**23 43 41.4**	**+1.4**
NEUV				*eS*	**Sn**	**23 44 33.8**	**-1.0**
YOIG	**Yosondua**	**5.50**	**301**	*eP*	**Pn**	**23 43 53.0**	**+2.3**
TOIG	**Toxpalan**	**5.86**	**314**	*eP*	**Pn**	**23 43 56.9**	**+1.5**
TOIG				*eS*	**Sn**	**23 44 59.8**	**-2.6**
TXIG	**Tlaxiaco**	**5.89**	**303**	*eP*	**Pn**	**23 43 58.0**	**+2.0**
FTIG	**Fresnillo de T**	**6.54**	**306**	*eP*	**Pn**	**23 44 06.7**	**+2.0**

IDC ***08*** *23:50:08.5±5.6, 20°.89S×178°.25W, h493km±32km, mb3.3/5, mbtmp4.2/6, Error ellipse: s-maj=93.3km s-min=40.9km az=127.0*

ISC 08 23:50:08.3±3.9, 20°8S±0°3×178°2W±0°5, h500km, n7, σ0°44/7, mb3.8/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.70**	**310**	P	**P**	**23 51 32.4**	**-0.4**
	26nm,0.5s,baz=129,slow=7.8,SNR=46						
CTA	**Charters Tower**	**33.28**	**265**	P	**P**	**23 56 04.2**	**+0.3**
	1.8nm,0.4s,baz=92,slow=11,SNR=6.9						
	1.8nm,0.4s						
STKA	**Stephens Creek**	**37.49**	**244**	P	**P**	**23 56 38.5**	**-0.3**
	1.6nm,0.6s,baz=108,slow=9.6,SNR=3.3						
	1.6nm,0.6s						
ASAR	**Alice Springs**	**44.27**	**257**	P	**P**	**23 57 33.1**	**0.0**
	1.7nm,0.5s,baz=92,slow=8.3,SNR=28						
	1.7nm,0.5s						
WRA	**Warramunga Arr**	**44.38**	**262**	P	**P**	**23 57 33.8**	**-0.2**
	0.5nm,0.3s,baz=96,slow=7.6,SNR=10						
	0.5nm,0.3s						
SIJI	**Sorong**	**53.15**	**285**	P	**P**	**23 58 40.0**	**+0.6**
	8.3nm,0.8s,baz=118,slow=17,SNR=4.8						
	8.3nm,0.8s						
BRTR	**Keskin Array B**	**146.92**	**312**	PKPbc	**PKPbc**	**00 08 54.7**	**0.0**
	0.4nm,0.7s,baz=68,slow=3.9,SNR=2.5						

IDC ***09*** *00:31:39.0±2.3, 25°.28S×179°.69E, h506km±24km, mb3.1/4, mbtmp4.0/6, Error ellipse: s-maj=24.0km s-min=20.9km az=94.0*
NEIC ***09*** *00:31:40.7±2.1, 25°.1S±0°.1×179°.7E±0°.1, h527km±7km, mb4.4/6, Error ellipse: s-maj=22.0km s-min=17.8km az=150.0*

ISC 09 00:31:38.0±0.7, 25°21S±0°09×179°9E±0°1, h500km, n24, σ1°48/25, mb3.6/7, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**7.63**	**347**	P	**P**	**00 33 32.5**	**+1.7**
	2.6nm,0.3s,baz=197,slow=19,SNR=4.2						
MSVF	**Nonsavu**	**7.63**	**347**	P	**P**	**00 33 32.4**	**+1.6**

MARNC	**Mare, Loyalty**	**11.49**	**286**	P	**P**	**00 34 11.2**	**0.0**
DZM	**Mont Dzumac**	**12.70**	**281**	P	**P**	**00 34 26.0**	**+1.9**
	7.1nm,0.9s,baz=86,slow=14,SNR=4.3						
TOZ	**Tahuroa Road**	**13.03**	**196**	P	**P**	**00 34 30.4**	**+3.2**
URZ	**Urewera**	**13.22**	**190**	P	**P**	**00 34 28.0**	**-1.2**
	3.2nm,0.6s,baz=0.0,slow=3.0,SNR=2.3						
URZ				S	**S**	**00 36 49.7**	**-0.7**
	6.7nm,0.8s,baz=53,slow=20,SNR=9.7						
SANVU	**Saraoutou**	**15.33**	**307**	P	**P**	**00 34 50.1**	**-1.6**
AS31	**Alice Springs**	**41.72**	**262**	P	**P**	**00 38 41.7**	**-1.1**
AS31				IAmb	IAmb	00 38 56.3	
	comp=Z,1.1nm,0.5s						
ASAR	**Alice Springs**	**41.72**	**262**	P	**P**	**00 38 42.1**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=89,slow=7.1,SNR=13						
	comp=Z,0.5nm,0.3s						
ASAR	**Alice Springs**	**41.72**	**262**	P	**P**	**00 38 42.3**	**-0.6**
WRA	**Warramunga Arr**	**42.22**	**268**	P	**P**	**00 38 45.7**	**-1.0**
	comp=Z,0.9nm,0.5s,baz=103,slow=8.0,SNR=9.9						
	comp=Z,0.9nm,0.5s						
WRA	**Warramunga Arr**	**42.22**	**268**	P	**P**	**00 38 45.6**	**-1.2**
KNRA	**Kununurra**	**48.58**	**271**	P	**P**	**00 39 34.9**	**-0.6**
KNRA				IAmb	IAmb	00 39 46.5	
	comp=Z,25nm,1.4s						
QSPA	**South Pole Qui**	**64.88**	**180**	P	**P**	**00 41 27.4**	**+0.4**
	comp=Z,2.9nm,0.7s,baz=64,slow=1.9,SNR=8.8						
	comp=Z,2.9nm,0.7s						
QSPA	**South Pole Qui**	**64.88**	**180**	P	**P**	**00 41 27.5**	**+0.4**
QSPA				IAmb	IAmb	00 41 28.8	
	comp=Z,16nm,1.5s						
TXAR	**Lajitas Array**	**91.22**	**58**	P	**P**	**00 43 51.7**	**+2.0**
	comp=Z,0.5nm,0.8s,baz=212,slow=5.4,SNR=4.7						
	comp=Z,0.5nm,0.8s						
TXAR	**Lajitas Array**	**91.22**	**58**	P	**P**	**00 43 51.3**	**+1.6**
O29M	**Mount Kennedy**	**91.71**	**19**	P	**P**	**00 43 49.6**	**-1.6**
O29M				IAmb	IAmb	00 43 52.8	
	comp=Z,8.2nm,0.7s						
NB2	**NORSAR Subarra**	**143.35**	**351**	PKP	**PKPdf**	**00 50 12.7**	**-1.8**
	comp=Z,0.7nm,0.6s,baz=14,slow=3.3						
NOA	**NORSAR Array B**	**143.35**	**351**	PKP	**PKPdf**	**00 50 12.6**	**-1.8**
	comp=Z,0.4nm,0.5s,baz=21,slow=3.9,SNR=3.7						
HFS	**Hagfors**	**143.80**	**348**	PKP	**PKPdf**	**00 50 13.7**	**-1.5**
	comp=Z,3.5nm,0.6s,baz=333,slow=1.9,SNR=9.8						
MMAI	**Mount Meron Ar**	**148.11**	**292**	PKPbc	**PKiKP**	**00 50 28.0**	**-0.8**
	comp=Z,0.8nm,0.3s,baz=66,slow=8.4,SNR=6.7						
BRTR	**Keskin Array B**	**148.25**	**305**	PKPbc	**PKPbc**	**00 50 27.3**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=61,slow=3.0,SNR=2.8						
EKA	**Eskdalemuir Ar**	**149.82**	**3**	PKPbc	**PKiKP**	**00 50 31.0**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=6.5,slow=5.0,SNR=1.6						

LDG 09 00:52:02.2±0.2, 44°60′N×7°18′E, h10km, Md1.3/1, Error ellipse: s-maj=3.3km s-min=2.5km az=109.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBDF	**Montbardon**	**0.32**	**294**	*e*Pg	Pg	00 52 08.6	-0.1
MBDF				*e*Sg	Sg	00 52 13.1	+0.1
	2.4nm,0.2s						

STR 09 00:52:56.6±0.1, 44°6′N±0°1′×6°8′E±0°1, h11km, MLv0.2/2, LOCSAT earthModelID alpes_taup-2.11 preliminary, France

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SURF	**Saint Ours**	**0.10**	**178**	Pg	Pg	00 52 59.3	-0.2
SURF				Sg	Sg	00 53 01.1	-0.4
CREF	**Crivoux**	**0.14**	**258**	Pg	Pg	00 52 59.8	-0.2
CREF				Sg	Sg	00 53 02.1	-0.3
JAUF	**Jausiers**	**0.15**	**196**	Pg	Pg	00 53 00.3	0.0
JAUF				Sg	Sg	00 53 02.7	-0.1
PZZ	**Stroppo**	**0.23**	**108**	Pg	Pg	00 53 01.4	-0.1
PZZ				Sg	Sg	00 53 04.8	-0.1

*IDC **09** 01:02:13.6±1.1, 10°.18S×161°.08E, h0km, mb3.6/7, mbtmp3.6/7, MS3.5/2, Error ellipse: s-maj=27.9km s-min=22.9km az=33.0*

ISC 09 01:02:22.8±1.0, 10°.1S±0°.2×160°.8E±0°.1, h67km, n10, σ1s47/9, mb3.4/7, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.09**	**307**	Pn	**Pn**	**01 02 40.1**	**-2.2**
	6.5nm,0.3s,baz=76,slow=4.2,SNR=52						
HNR				Sn	**Sn**	**01 02 57.8**	**+1.0**
	21nm,0.3s,baz=128,slow=19,SNR=9.9						
CTA	**Charters Tower**	**17.21**	**233**	LR	LR	01 11 25.7	
	comp=Z,47nm,18.2s,baz=44,slow=32						
WRA	**Warramunga Arr**	**27.35**	**246**	P	**P**	**01 08 02.8**	**+0.9**
	0.5nm,0.7s,baz=75,slow=9.3,SNR=4.9						
	0.5nm,0.7s						
RAO	**Raoul Island**	**27.55**	**137**	LR	LR	01 16 06.5	
	comp=Z,296nm,19.1s,baz=232,slow=30						
ASAR	**Alice Springs**	**29.01**	**239**	P	**P**	**01 08 16.6**	**-0.1**
	0.2nm,0.5s,baz=72,slow=8.8,SNR=1.9						
	0.2nm,0.5s						
SONM	**Songino Array**	**75.09**	**325**	P	**P**	**01 13 58.9**	**+1.2**
	0.4nm,0.7s,baz=132,slow=6.0,SNR=5.1						
	0.4nm,0.7s						
QSPA	**South Pole Qui**	**79.90**	**180**	P	**P**	**01 14 23.6**	**-0.7**
	2.4nm,1.0s,baz=335,slow=4.4,SNR=4.1						
	2.4nm,1.0s						
ILAR	**Eielson Array**	**84.21**	**20**	P	**P**	**01 14 45.4**	**-1.2**
	0.2nm,0.6s,baz=238,slow=4.9,SNR=5.0						
	0.2nm,0.6s						
NVAR	**Mina Array Bea**	**89.14**	**51**	P	**P**	**01 15 11.9**	**+0.4**
	0.2nm,0.5s,baz=253,slow=7.3,SNR=2.3						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**89.54**	**318**	P	**P**	**01 15 14.7**	**+1.7**
	0.1nm,0.4s,baz=105,slow=5.1,SNR=4.7						
	0.1nm,0.4s						

IDC 09 01:45:11.1±1.4, 23°.01S×13°.38W, h0km, mb3.8/5, mbtmp3.8/5, MS3.3/6, Error ellipse: s-maj=44.4km s-min=31.0km az=153.0, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10S2	**ASCENSION HYDR**	**14.02**	**355**	T	T	02 02 53.1	
	baz=45,slow=74,SNR=28						
H10S3	**ASCENSION HYDR**	**14.03**	**355**	T	T	02 02 49.6	
	baz=175,slow=74,SNR=19						
SUR	**Sutherland**	**31.57**	**115**	LR	LR	02 02 42.8	
	comp=Z,41nm,18.2s,baz=274,slow=33						
BDFB	**Brasilia**	**33.43**	**276**	LR	LR	02 03 35.8	
	comp=Z,67nm,19.0s,baz=177,slow=33						
BOSA	**Boshof**	**35.12**	**107**	P	P	01 52 06.2	-0.4
	2.5nm,0.8s,baz=240,slow=8.1,SNR=2.0						
BOSA				LR	LR	02 03 47.5	
	comp=Z,37nm,19.3s,baz=192,slow=32						
	2.5nm,0.8s						
LBTB	**Lobatse**	**35.58**	**101**	LR	LR	02 05 24.9	
	comp=Z,29nm,19.7s,baz=200,slow=34						
TORD	**Torodi Ar. Bea**	**38.85**	**24**	P	P	01 52 37.2	-0.9
	1.8nm,0.6s,baz=202,slow=8.3,SNR=31						
	1.8nm,0.6s						
CPUP	**Villa Florida**	**39.93**	**256**	P	P	01 52 46.9	-0.3
	0.8nm,0.6s,baz=105,slow=12,SNR=3.5						
	0.8nm,0.6s						
MDP	**Montagnes des**	**47.45**	**301**	LR	LR	02 11 07.1	
	comp=Z,32nm,20.0s,baz=234,slow=33						
ATAH	**Atahualpa**	**64.27**	**273**	LR	LR	02 22 43.4	
	comp=Z,74nm,19.8s,baz=72,slow=35						
BRTR	**Keskin Array B**	**76.29**	**36**	P	P	01 57 02.6	+0.8
	0.8nm,1.0s,baz=216,slow=5.8,SNR=3.7						
	0.8nm,1.0s						
AKASG	**Malin Array Be**	**82.46**	**26**	P	P	01 57 36.0	+1.0
	0.2nm,0.4s,baz=224,slow=5.1,SNR=1.4						
	0.2nm,0.4s						

*IDC **09** 01:53:21.4±4.2, 22°.11S×177°.87W, h0km, mb4.3/4, mbtmp4.3/4, Error ellipse: s-maj=107.3km s-min=40.4km az=29.0*

*NEIC **09** 01:54:26.7±1.0, 23°.82S±0°.08×179°.8W±0°.2, h532km±21km, mb4.1/17, Error ellipse: s-maj=26.0km s-min=12.2km az=87.0*

ISC 09 01:54:25.3±0.8, 23°.9S±0°.1×179°.8W±0°.1, h518km, n26, σ1s36/26, mb4.1/13, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.44**	**341**		**P**	**01 56 07.8**	**+0.9**
NIUE	**Niue**	**10.34**	**64**	P	**P**	**01 56 47.5**	**+1.0**
BFZ	**Birch Farm**	**17.09**	**190**	P	**P**	**01 57 54.0**	**-2.2**
TCW	**Tory Channel**	**17.99**	**195**	P	**P**	**01 58 05.0**	**+0.6**
QRZ	**Quartz Range**	**18.09**	**199**	P	**P**	**01 58 06.0**	**+0.6**
WHZ	**Wether Hill Ro**	**24.11**	**201**	P	**P**	**01 59 01.1**	**+1.4**
WHZ				IAmb	IAmb	01 59 17.1	
	comp=Z,7.9nm,1.0s						
EIDS	**Eidsvold**	**26.51**	**261**	P	**P**	**01 59 21.8**	**+0.6**
EIDS				IAmb	IAmb	01 59 24.9	
	comp=Z,12nm,1.1s						
CTAO	**Charters Tower**	**31.68**	**270**	P	**P**	**02 00 06.7**	**+0.5**
CTAO				IAmb	IAmb	02 00 07.6	
	comp=Z,4.8nm,0.6s						
TOO	**Toolangi**	**32.63**	**237**	P	**P**	**02 00 15.0**	**+0.9**
TOO				IAmb	IAmb	02 00 33.1	
	comp=Z,2.7nm,1.1s						
STKA	**Stephens Creek**	**34.92**	**248**	P	**P**	**02 00 34.3**	**+0.9**
	comp=Z,2.4nm,0.5s,baz=90,slow=10,SNR=5.4						
	comp=Z,2.4nm,0.5s						
STKA	**Stephens Creek**	**34.92**	**248**	P	**P**	**02 00 34.1**	**+0.7**
INKA	**Innaminka**	**35.64**	**255**	P	**P**	**02 00 39.6**	**+0.2**
BBOO	**Buckleboo**	**39.64**	**247**	P	**P**	**02 01 11.7**	**-0.4**
BBOO				IAmb	IAmb	02 01 21.4	
	comp=Z,5.3nm,1.0s						
AS31	**Alice Springs**	**42.23**	**261**	P	**P**	**02 01 32.7**	**-0.3**
ASAR	**Alice Springs**	**42.24**	**261**	P	**P**	**02 01 33.0**	**0.0**
	comp=Z,2.3nm,0.8s,baz=97,slow=7.5,SNR=20						
	comp=Z,2.3nm,0.8s						
ASAR	**Alice Springs**	**42.24**	**261**	P	**P**	**02 01 32.4**	**-0.6**
WR8	**Warramunga Arr**	**42.46**	**266**	P	**P**	**02 01 34.0**	**-0.7**
WR8				IAmb	IAmb	02 01 39.0	
	comp=Z,4.5nm,1.1s						
WB0	**Warramunga Arr**	**42.60**	**266**	P	**P**	**02 01 35.0**	**-0.9**
WB0				IAmb	IAmb	02 01 35.9	
	comp=Z,4.3nm,0.7s						
WRA	**Warramunga Arr**	**42.61**	**266**	P	**P**	**02 01 35.3**	**-0.7**
	comp=Z,2.7nm,0.4s,baz=97,slow=8.1,SNR=39						
	comp=Z,2.7nm,0.4s						
WRA	**Warramunga Arr**	**42.61**	**266**	P	**P**	**02 01 35.2**	**-0.7**
FORT	**Forrest**	**46.51**	**250**	P	**P**	**02 02 05.2**	**-0.6**
KNRA	**Kununurra**	**48.89**	**270**	P	**P**	**02 02 23.4**	**-0.4**
KNRA				IAmb	IAmb	02 02 47.6	
	comp=Z,3.6nm,0.9s						
MORW	**Morawa**	**57.07**	**250**	P	**P**	**02 03 22.1**	**0.0**
MORW				IAmb	IAmb	02 03 22.5	
	comp=Z,6.7nm,0.7s						
QSPA	**South Pole Qui**	**66.21**	**180**	P	**P**	**02 04 22.0**	**+0.7**
	comp=Z,1.9nm,0.7s,baz=24,slow=0.7,SNR=5.3						
	comp=Z,1.9nm,0.7s						
QSPA	**South Pole Qui**	**66.21**	**180**	P	**P**	**02 04 21.9**	**+0.6**
HFS	**Hagfors**	**142.56**	**349**	PKP	**PKPdf**	**02 12 53.5**	**-5.1**
	comp=Z,0.9nm,0.6s,baz=45,slow=2.2,SNR=5.6						

*IDC **09** 02:07:19.0±1.3, 6°.58S×127°.58E, h400km±17km, mb3.0/6, mbtmp3.8/10, Error ellipse: s-maj=23.8km s-min=10.8km az=81.0*

*DJA **09** 02:07:20.4±0.7, 7°.S±5°×12°8E±°, h381km±12km, M4.5/18, mb4.7/7, mB5.4/4, MLv4.4/18, Mw(mB)4.8/4*

ISC 09 02:07:18.9±0.7, 6°.53S±0°.06×127°.64E±0°.09, h408km, n21, σ1s69/27, mb3.2/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**2.87**	**11**	P	**P**	**02 08 22.6**	**+0.9**
KRAI	**Karang Ratu**	**3.27**	**13**	P	**P**	**02 08 24.6**	**-0.4**
NLAI	**Namlea**	**3.31**	**351**	P	**P**	**02 08 26.1**	**+0.8**
NLAI				S	**S**	**02 09 17.3**	**-1.8**
MSAI	**Masohi**	**3.41**	**22**	P	**P**	**02 08 26.9**	**+0.8**
MSAI				S	**S**	**02 09 18.5**	**-2.2**
SAUI	**Saumlaki**	**3.91**	**112**	P	**P**	**02 08 31.5**	**+1.0**
SOEI	**Soe**	**4.63**	**226**	P	**P**	**02 08 36.5**	**-1.1**
SANI	**Sanana**	**4.74**	**340**	P	**P**	**02 08 38.4**	**-0.2**
BATI	**Baumata**	**5.37**	**227**	P	**P**	**02 08 45.1**	**+0.1**
	343nm,0.4s,baz=70,slow=1.8,SNR=46						
BATI				S	**S**	**02 09 52.6**	**-2.9**
	143nm,0.8s,baz=332,slow=19,SNR=7.2						
BATI	**Baumata**	**5.37**	**227**	P	**P**	**02 08 44.7**	**-0.3**
FAKI	**Fak Fak**	**5.82**	**52**	P	**P**	**02 08 49.5**	**-0.3**
	0.5nm2µm65nm,0.6s						
EDFI	**Ende, Flores**	**6.30**	**249**	P	**P**	**02 08 53.7**	**-1.2**
	0.1nm16nm,0.8s						
SIJI	**Sorong**	**6.68**	**33**	P	**P**	**02 09 00.1**	**+0.3**
	7.5nm,0.4s,baz=253,slow=22,SNR=7.0						
SIJI				S	**S**	**02 10 15.7**	**-5.6**
	8.2nm,0.4s,baz=240,slow=22,SNR=6.0						
FITZ	**Fitzroy Crossi**	**11.67**	**189**	P	**P**	**02 09 55.0**	**+0.3**
	2.9nm,0.5s,baz=14,slow=8.7,SNR=12						
WRA	**Warramunga Arr**	**14.84**	**155**	P	**P**	**02 10 29.8**	**+0.3**
	1.2nm,0.6s,baz=330,slow=11,SNR=9.6						
WRA				S	**S**	**02 13 05.7**	**-1.5**
	1.9nm,0.8s,baz=327,slow=19,SNR=5.6						
ASAR	**Alice Springs**	**18.07**	**161**	P	**P**	**02 11 04.5**	**+0.4**
	0.8nm,0.4s,baz=347,slow=14,SNR=13						
ASAR				S	**S**	**02 14 11.0**	**+1.0**
	1.9nm,0.8s,baz=333,slow=17,SNR=7.2						
KSRS	**Korea Array**	**43.75**	**0**	P	**P**	**02 14 47.9**	**+1.7**
	0.8nm,0.5s,baz=184,slow=8.2,SNR=2.6						
	0.8nm,0.5s						
MJAR	**Maushiro Arr**	**43.97**	**12**	P	**P**	**02 14 47.2**	**-0.8**
	2.6nm,1.0s,baz=174,slow=9.2,SNR=2.0						
	2.6nm,1.0s						
USRK	**Ussuriysk Ar.**	**50.64**	**4**	P	**P**	**02 15 40.0**	**+1.6**
	1.1nm,0.5s,baz=197,slow=4.4,SNR=2.5						
	1.1nm,0.5s						
SONM	**Songino Array**	**57.28**	**343**	P	**P**	**02 16 27.8**	**+1.8**
	0.3nm,0.5s,baz=168,slow=7.4,SNR=2.3						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**66.56**	**328**	P	**P**	**02 17 27.4**	**+0.5**
	0.2nm,0.6s,baz=141,slow=5.5,SNR=3.5						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**70.90**	**329**	P	**P**	**02 17 53.8**	**+0.7**
	0.3nm,0.6s,baz=124,slow=4.8,SNR=1.7						
	0.3nm,0.6s						

*IDC **09** 02:58:43.4±0.9, 34°.45N×85°.83E, h0km, mb3.7/8, mbtmp3.7/14, ML2.8/4, MS2.3/1, Error ellipse: s-maj=26.5km s-min=16.1km az=56.0*

ISC 09 02:58:48.7±0.9, 34°.5N±0°.1×85°.9E±0°.1, h35km, n14, σ0s83/14, mb3.8/6, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**12.06**	**316**	Pn	**Pn**	**03 01 39.3**	**+1.2**
	0.1nm,0.3s,baz=59,slow=8.6,SNR=4.8						
AAK				LR	LR	03 07 25.2	
	comp=Z,14nm,20.5s,baz=174,slow=43						
	1.2nm,0.6s						
MKAR	**Makanchi Array**	**12.56**	**348**	Pn	**Pn**	**03 01 44.0**	**-0.8**
	baz=165,slow=14,SNR=10						
	1.0nm,0.8s						
LZDM	**Lanzhou Array**	**14.59**	**79**	Pn	**Pn**	**03 02 12.6**	**-0.2**
	0.7nm,0.3s,baz=247,slow=11,SNR=1.5						
KURBB	**Kurchatov Arra**	**16.97**	**344**	P	**Pn**	**03 02 42.5**	**-0.6**
	baz=162,slow=11,SNR=9.8						
	0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**19.43**	**358**	P	**P**	**03 03 11.6**	**-0.3**
	0.1nm,0.3s,baz=169,slow=8.9,SNR=7.4						
	1.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**19.76**	**141**	P	**P**	**03 03 15.7**	**0.0**
	1.5nm,0.3s,baz=327,slow=12,SNR=8.0						
SONM	**Songino Array**	**20.26**	**43**	P	**P**	**03 03 22.4**	**+1.3**
	0.9nm,0.8s,baz=238,slow=12,SNR=8.0						
	0.9nm,0.8s						
BVAR	**Borovoye Array**	**21.55**	**334**	P	**P**	**03 03 34.8**	**0.0**
	1.0nm,0.7s,baz=128,slow=9.7,SNR=5.6						
	1.0nm,0.7s						
BRTR	**Keskin Array B**	**41.53**	**293**	P	**P**	**03 06 33.1**	**+0.2**
	1.1nm,1.1s,baz=72,slow=5.3,SNR=5.3						
	1.1nm,1.1s						
TIXI	**Tiksi**	**43.39**	**18**	P	**P**	**03 06 47.5**	**+0.2**
	1.2nm,0.3s,baz=317,slow=1.0,SNR=4.7						
	1.2nm,0.3s						
WRA	**Warramunga Arr**	**71.08**	**132**	P	**P**	**03 10 03.6**	**+0.1**
	1.0nm,0.6s,baz=325,slow=6.2,SNR=11						
	1.0nm,0.6s						
ILAR	**Eielson Array**	**72.78**	**21**	P	**P**	**03 10 13.5**	**+0.4**
	1.0nm,1.1s,baz=329,slow=6.4,SNR=2.3						
	1.0nm,1.1s						
ASAR	**Alice Springs**	**73.64**	**135**	P	**P**	**03 10 19.2**	**+0.4**
	1.3nm,0.9s,baz=328,slow=6.6,SNR=10.0						
	1.3nm,0.9s						
TORD	**Torodi Ar. Bea**	**77.98**	**278**	P	**P**	**03 10 42.1**	**-1.7**
	0.5nm,0.8s,baz=45,slow=2.8,SNR=3.1						
	0.5nm,0.8s						

*PTWC **09** 02:59:05,40°.30N×125°.40W,h14km,Mwp6.2/7*

*IPGP **09** 02:59:06.0,40°.40N×125°.30W,h12km,Mw5.9,Fault plane solution: NP1:φs183.00000°,δ90.00000°,λ14.00000°. NP2:φs93.00000°,δ76.00000°,λ180.00000°.*

*BJI **09** 02:59:07.0,40°.40N×125°.10W,h10km,mB5.7/41, mb5.0/57,Ms5.6/69,Ms7 5.3/67*

*IDC **09** 02:59:08.0±0.3,40°.50N×125°.01W,h0km,mb4.8/44, mbtmp4.8/49,ML4.8/5,MS5.3/91,Error ellipse: s-maj=8.3km s-min=5.6km az=29.0*

*NEIC **09** 02:59:08.5±2.4,40°.37N±0°.05×125°.20W±0°.05,h10km±1km, mb5.5/243,ML5.4/122,Ms_20 5.4/537,Mwb5.7/85, Mww5.8/120,Mwr5.8/4(NCEDC),Error ellipse: s-maj=8.2km s-min=6.5km az=189.0,Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr=0.53; Mθθ=0.55; Mφφ=0.03; Mrθ=0.42; Mrφ=-3.48; Mθr=1.52; Fault plane solution: Mo3.85000×10^17 NP1:φs184.45000°, δ80.84000°,λ24.08000°. NP2:φs90.38000°,δ66.25000°, λ169.98000°. Principal axes: T 3.8324, Plg23.0000°, Azm50.00000°; N 0.0439, Plg64.0000°, Azm204.0000°; P -3.8764, Plg10.0000°, Azm315.0000°;*

*NCEDC **09** 02:59:08.9±2.6,40°.39N±0°.05×125°.09W±0°.05,h3km±3km Error ellipse: s-maj=7.2km s-min=5.3km az=192.0*

*NEIC **09** 02:59:09.1,40°.38N×125°.15W,h10km*

*NEIC **09** 02:59:09.1,40°.38N×125°.13W,h12km*

*BGR **09** 02:59:09.0,40°.80N×129°.59W,h33km,mb4.6*

*NEIC **09** 02:59:09.1,40°.38N×125°.13W,h12km,Moment Tensor Solution. Duration: 4s2 Moment tensor: Scale 10^17Nm; Mrr-0.66; Mθθ-0.58; Mφφ 1.24; Mrθ-1.19; Mφφ-6.56; Mθr0.17; Fault plane solution: Mo6.75000×10^17 NP1:φs3.94000°, δ79.61000°,λ-0.84000°. NP2:φs94.09000°,δ89.17000°, λ-169.61000°. Principal axes: T 7.0596, Plg7.0000°, Azm229.0000°; N -0.6595, Plg80.0000°, Azm299.0000°; P -6.4000, Plg8.0000°, Azm319.0000°;*

*MOS **09** 02:59:10.3±1.2,40°.43N×124°.91W,h22km,mb5.4/71, MS5.6/41 Error ellipse: s-maj=6.9km s-min=4.3km az=91.5*

*GFZ **09** 02:59:10.6,40°.49N×125°.10W,h16km,MW5.8,Moment Tensor Solution. s144 Moment tensor: Mrr-0.66; Mθθ-0.88; Mφφ 1.53; Mrθ0.29; Mrφ-6.46; Mθr-0.80; Fault plane solution: NP1:φs95.00000°,δ83.00000°, λ177.00000°. NP2:φs185.00000°,δ87.00000°,λ6.00000°. Principal axes: T 6.9900, Plg6.0000°, Azm50.0000°; N -0.7300, Plg83.0000°, Azm204.0000°; P -6.2600, Plg2.0000°, Azm320.0000°;*

*GCMT **09** 02:59:13.5±0.1,40°.44N×125°.16W,h21km,MW5.9/170, Moment Tensor Solution. s152,c311; s170,c554; Duration: 2s1 Moment tensor: Scale 10^17Nm; Mrr-0.09±.05; Mθθ-1.68±.05; Mφφ 1.77±.05; Mrθ0.45±.10; Mφφ-7.92±.05; Mθr-0.14±.10; Best double couple: Mo8.11900×10^17 NP1:φs186.00000°,δ87.00000°, λ1.00000°. NP2:φs96.00000°,δ89.00000°,λ177.00000°. Principal axes: T 8.1700, Plg3.0000°, Azm51.0000°; N -0.1010, Plg87.0000°, Azm266.0000°; P -8.0690, Plg2.0000°, Azm141.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 09 02:59:09.2±0.4, 40°.37N±0°.03×125°.10W±0°.03, h11km±2km, h11km:pP-P,n1331,σ1s60/1174, mb5.3/288, MS5.4/395, 30C-22D, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETL	**Petrolia**	**0.58**	**97**		**Pb**	**02 59 21.6**	**+0.2**
PETL					**Sn**	**02 59 31.7**	**-1.3**
KCTM	**Capetown**	**0.59**	**79**		**Pn**	**02 59 22.3**	**-1.3**
KCTM					**Sn**	**02 59 33.2**	**-0.1**
KCTM	**Capetown**	**0.59**	**79**	P	**Pn**	**02 59 22.4**	**-1.3**
KMPM	**Mount Pierce**	**0.75**	**86**	Pg	**Pn**	**02 59 24.5**	**-1.3**
KMPM				Sg	**Sn**	**02 59 35.3**	**-2.0**
JCC	**Jacoby Creek,**	**0.93**	**61**	Pg	**Pb**	**02 59 26.1**	**-1.3**
JCC				Sg	**Sb**	**02 59 38.0**	**-1.7**
JCC				IAML		02 59 39.3	
	comp=N,85µm,1.7s						
JCC				IAML		02 59 39.5	
	comp=E,124µm,1.1s						
JCC	**Jacoby Creek,**	**0.93**	**61**	P	**Pg**	**02 59 26.3**	**-0.9**
BRIC	**Briceland Vine**	**0.96**	**105**		**Pb**	**02 59 27.4**	**-0.4**
KCRM	**Chalk Rock**	**0.98**	**86**		**Pg**	**02 59 27.9**	**-0.2**
KMRM	**Mail Ridge**	**1.07**	**97**	Pg	**Pb**	**02 59 29.5**	**-0.4**
KMRM	**Mail Ridge**	**1.07**	**97**	P	**Pn**	**02 59 29.6**	**-0.7**
DMOR	**Dinsmores, CA**	**1.12**	**72**		**Pb**	**02 59 29.8**	**-0.9**
KRPM	**Rodgers**	**1.14**	**46**		**Pb**	**02 59 29.1**	**-1.9**
KRPM				IAML		02 59 44.7	
	comp=E,88µm,0.9s						
KRPM				IAML		02 59 45.0	
	comp=N,109µm,0.8s						
KRPM	**Rodgers**	**1.14**	**46**	P	**Pb**	**02 59 28.9**	**-2.1**
KHMM	**Horse Mountain**	**1.16**	**64**	Pg	**Pb**	**02 59 29.9**	**-1.5**
KHMM				IAML		02 59 46.8	
	comp=N,149µm,0.6s						
KHMM				IAML		02 59 46.8	
	comp=E,107µm,0.9s						
KHMM	**Horse Mountain**	**1.16**	**64**	P	**Pb**	**02 59 27.8**	**-3.6**
KCPM	**Cahto Peak**	**1.35**	**120**	Pn	**Pn**	**02 59 32.8**	**-1.4**
KCPM	**Cahto Peak**	**1.35**	**120**	P	**Pn**	**02 59 33.1**	**-1.0**
KIPM	**Iron Peak**	**1.36**	**114**		**Pn**	**02 59 33.6**	**-0.7**
KIPM					**Pn**	**02 59 33.8**	**-1.0**
RVIT	**Round Valley I**	**1.40**	**109**		**Pn**	**02 59 33.9**	**-0.8**
RVIT					**Pb**	**02 59 34.1**	**-1.2**
KHBM	**

GDXM IAML 03 00 51.5
comp=N,13µm,1.7s
M03C McCloud 2.44 67 Pn Pn 02 59 48.5 -0.5
O03E Paynes Creek 2.52 91 Pn Pn 02 59 49.1 -1.1
O03E IAML 03 00 30.3
comp=N,28µm,0.7s
MNRC McLaughlin Min 2.53 125 Pn Pn 02 59 49.2 -1.2
MNRC IAML 03 00 48.8
comp=N,15µm,2.2s
MNRC IAML 03 01 04.3
comp=E,22µm,2.2s
K02D Willamette Mer 2.57 24 Pn Pn 02 59 48.2 -2.6
SUTB Sutter Butte 2.79 113 Pn Pn 02 59 52.5 -1.4
SUTB IAML 03 00 45.7
comp=N,24µm,0.6s
L04D Klamath Falls 2.80 48 Pn Pn 02 59 53.6 -0.5
L04D IAML 03 00 30.4
comp=N,17µm,0.8s
L04D IAML 03 00 49.1
comp=E,17µm,1.7s
HATC Hat Creek Radi 2.81 80 Pn Pn 02 59 53.8 -0.3
HATC Hat Creek Radi 2.81 80 P Pn 02 59 54.2 0.0
MCCM Marconi Confer 2.81 141 Pn Pn 02 59 52.0 -2.1
MCCM IAML 03 00 30.8
comp=N,11µm,1.2s
MCCM IAML 03 01 18.0
comp=E,15µm,1.6s
MCCM Marconi Confer 2.81 141 P Pn 02 59 51.4 -2.6
CVS Carmenet Viney 2.87 134 Pn Pn 02 59 53.4 -1.6
CVS IAML 03 01 15.1
comp=E,11µm,1.6s
CVS IAML 03 01 22.6
comp=N,8µm,2.2s
ORV Oroville 2.88 105 Pn Pn 02 59 54.5 -0.6
ORV IAML 03 00 31.7
comp=N,14µm,0.6s
ORV IAML 03 00 32.1
comp=E,12µm,0.5s
ORV Oroville 2.88 105 P Pn 02 59 54.5 -0.6
ORV Oroville 2.88 105 P Pn 02 59 53.8 -1.3
RUSS Russell Ranch 3.09 125 IAML 03 01 45.7
comp=N,21µm,2.7s
RUSS IAML 03 01 53.8
comp=E,22µm,2.8s
BBOR Butler Butte 3.10 35 IAML 03 00 46.5
comp=E,7µm,1.5s
FARB Farallon Islan 3.12 148 IAML 03 00 34.8
comp=E,8µm,0.6s
FARB IAML 03 00 35.7
comp=N,7µm,0.7s
BKS Berkeley--Byer 3.34 137 P Pn 02 59 58.9 -2.5
AFDM Forest Hills D 3.49 113 Pn Pn 03 00 02.5 -0.9
AFDM IAML 03 00 45.2
comp=E,5µm,0.9s
AFDM IAML 03 00 53.4
comp=N,5µm,1.0s
JRSC Jasper Ridge 3.71 142 Pn Pn 03 00 04.3 -2.1
JRSC IAML 03 01 25.4
comp=E,4µm,1.6s
JRSC IAML 03 01 47.5
comp=N,6µm,2.5s
WELL Weller Preserv 3.90 118 IAML 03 01 01.6
comp=N,6µm,1.1s
WELL IAML 03 01 04.6
comp=E,6µm,1.0s
BABR Babbit Peak 3.91 100 P Pb 03 00 14.7 -3.7
K05A Summer Lake 3.94 52 IAML 03 01 32.9
comp=N,5µm,1.7s
K05A IAML 03 01 42.6
comp=E,6µm,2.8s
I04A Tendick Farm, 3.97 29 IAML 03 00 58.6
comp=E,3µm,1.1s
MHC Mount Hamilton 4.05 137 IAML 03 01 01.3
comp=E,5µm,1.1s
MHC IAML 03 01 01.5
comp=N,4µm,1.0s
MHC Mount Hamilton 4.05 137 P Pn 03 00 08.8 -2.5
J05D Fort Rock, OR 4.11 43 IAML 03 01 26.4
comp=E,4µm,1.5s
J05D IAML 03 02 35.0
comp=N,3µm,4.0s
BUCK Buck Mountain 4.14 22 IAML 03 01 53.0
comp=N,4µm,2.3s
BUCK IAML 03 02 03.0
comp=E,5µm,2.1s
CMB Columbia Colle 4.34 121 IAML 03 01 43.3
comp=N,2µm,1.1s
COR Corvallis 4.42 17 Pn Pn 03 00 15.1 -1.2
COR IAML 03 01 42.3
comp=N,2µm,1.8s
COR Corvallis 4.42 17 P Pn 03 00 15.1 -1.2
WIFE Three Sisters- 4.42 32 IAML 03 01 49.8
comp=N,3µm,2.2s
WIFE IAML 03 02 35.6
comp=E,2µm,4.2s
PAHR Pah Rah Range 4.44 97 IAML 03 01 24.9
comp=E,5µm,2.3s
FORD Fort Ord Natur 4.50 144 IAML 03 02 58.3
comp=N,7µm,3.3s
FORD IAML 03 03 11.7
comp=E,8µm,3.0s
SAO San Andreas Ge 4.60 140 Pn Pn 03 00 16.6 -2.1
SAO San Andreas Ge 4.60 140 P Pn 03 00 16.6 -2.1
PINE Pine Mountain 4.62 41 IAML 03 01 47.7
comp=E,2µm,2.0s
H04A Detroit Lake 4.82 26 IAML 03 01 19.0
comp=N,2µm,0.5s
I05D Terrebonne, OR 4.85 34 IAML 03 02 00.2
comp=E,2µm,3.9s
I05D IAML 03 02 28.6
comp=N,2µm,2.2s
BBGB Big Mountain B 4.94 139 Pn Pn 03 00 22.2 -1.3
NVAR Mina Array Bea 5.61 108 Pn Pn 03 00 33.9 +1.1
comp=N,29nm,0.3s,baz=283,slow=14,SNR=550
NVAR Sn Sn **03 01 38.6 +1.3**
comp=N,62nm,0.3s,baz=282,slow=16,SNR=4.3
NVAR LR LR 03 02 28.8
comp=N,48µm,18.1s,baz=282,slow=35
comp=N,74nm,0.6s
NVAR Mina Array Bea 5.61 108 Pn Pn 03 00 33.2 +0.5
RADR Rader Ridge 6.13 8 Pn Pn 03 00 39.1 -0.6
G08A Pilot Rock 6.68 40 Pn Pn 03 00 47.9 +0.6
LON Longmire 6.81 19 Pn Pn 03 00 47.9 -1.3
LON Longmire 6.81 19 P Pn 03 00 47.9 -1.3
ISA Isabella, Lake 7.03 130 Pn Pn 03 00 53.2 +1.2
ISA Isabella, Lake 7.03 130 P Pn 03 00 53.3 +1.2
YPT Yellepit 7.24 36 Pn Pn 03 00 55.2 +0.4
GNW Green Mountain 7.38 12 Pn Pn 03 00 55.9 -0.9
ELK Elko 7.52 84 Pn Pn 03 00 59.1 +0.1
comp=N,2.8nm,0.3s,baz=292,slow=14,SNR=86
ELK Sn **Sn 03 02 24.3 -0.1**
baz=233,slow=20
ELK LR LR 03 04 08.1
comp=N,29µm,19.0s,baz=264,slow=40
comp=N,37nm,0.8s
C03A Quillayute Air 7.59 3 Pn Pn 03 00 59.6 -0.1
GWY Greenwater Val 7.83 120 Pn Pn 03 01 04.8 +1.5
F10A Beach Ranch, E 8.03 43 Pn Pn 03 01 06.7 +0.8
CLRS Cowichan Lake 8.48 4 Pn Pn 03 01 11.7 -0.3
PFO Pinyon Flats O 9.65 132 Pn Pn 03 01 29.0 +0.8
comp=N,16nm,0.3s,baz=307,slow=10,SNR=102
PFO Sn **Sn 03 03 13.9 -2.7**
comp=N,3.1nm,0.3s,baz=351,slow=19,SNR=1.4
PFO LR LR 03 05 24.1
comp=N,23µm,18.7s,baz=290,slow=39
comp=N,64nm,0.5s
PFO Pinyon Flats O 9.65 132 Pn Pn 03 01 28.3 +0.2
PFO Pinyon Flats O 9.65 132 P Pn 03 01 28.3 +0.2
NEW Newport 9.74 33 Pn Pn 03 01 29.1 -0.2
comp=N,4.0nm,0.3s,baz=202,slow=13,SNR=53
NEW LR LR 03 05 30.6
comp=N,31µm,18.3s,baz=222,slow=40
comp=N,38nm,0.6s
LCMT Little Creek M 9.86 106 Pn Pn 03 01 32.5 +1.6
BC3 Big Chuckawall 10.21 128 Pn Pn 03 01 36.1 +0.3
BAR Barrett 10.23 136 Pn Pn 03 01 36.8 +0.7
MSO Missoula 10.35 48 Pn Pn 03 01 38.8 +1.1
LLLB Lillooet 10.49 11 Pn Pn 03 01 39.1 -0.4
BLYC Blythe 10.72 125 Pn Pn 03 01 43.6 +1.0
BSUT Blindstream Ca 10.93 84 Pn Pn 03 01 48.2 +2.3
LOHW Long Hollow 11.27 69 Pn Pn 03 01 51.8 +1.5
FLWY Flagg Ranch 11.30 66 Pn Pn 03 01 53.4 +2.5
VTX Valle De La Tr 11.71 137 Pn Pn 03 01 57.8 +1.6
PDAR Pinedale Array 11.89 73 Pn Pn 03 02 00.2 +1.4
comp=N,0.5nm,0.3s,baz=254,slow=11,SNR=203
PDAR PKiKP **PKiKP 03 15 43.5 -0.3**
comp=N,0.6nm,0.7s,baz=117,slow=2.0,SNR=5.1
comp=N,46nm,1.0s
PDAR Pinedale Array 11.89 73 Pn Pn 03 02 00.4 +1.5
BBB Bella Bella 12.00 351 Pn Pn 03 02 02.5 +2.4
comp=N,0.7nm,0.3s,baz=175,slow=10,SNR=23
BBB Sn **Sn 03 04 13.7 -0.2**
comp=N,0.1nm,0.3s,baz=149,slow=12,SNR=1.0
BBB LR LR 03 05 28.5
comp=N,9µm,20.8s,baz=176,slow=32
H02S2 DAWSON INLET T 13.79 341 Pn Pn 03 02 21.9 -2.5
H02S2 T T 03 15 22.4
SNR=15
TUC Tucson 14.05 120 Pn Pn 03 02 29.0 +0.7
TUC Tucson 14.05 120 P Pn 03 02 29.0 +0.7
K22A Casper 14.11 75 Pn Pn 03 02 28.8 -0.3
RUBB Prince Rupert 14.39 348 Pn Pn 03 02 33.4 +0.6
DUN6 Lazy B Ranch 15.04 116 IAmb IAmb 03 02 48.4
comp=Z,211nm,0.9s
LAO LASA Array 15.07 59 IAmb IAmb 03 02 45.0
comp=Z,241nm,1.1s
EDM Edmonton 15.14 28 Pn Pn 03 02 40.2 -2.8
EDM IAmb IAmb 03 02 48.8
comp=Z,367nm,1.1s
EDM Edmonton 15.14 28 P Pn 03 02 40.2 -2.8
EDM pmax pmax
comp=Z,367nm,1.1s
Q24A Divide 15.43 89 IAmb IAmb 03 02 53.8
comp=Z,297nm,1.0s
V35K Ketchikan 15.59 346 Pn Pn 03 02 48.2 -0.5
V35K Ketchikan 15.59 346 P P 03 02 49.5 -3.5
baz=161
ANMO Albuquerque 15.72 104 Pn P 03 02 53.7 -1.1
comp=Z,0.6nm,0.3s,baz=301,slow=12,SNR=64
ANMO Sn **Sn 03 05 47.2 +2.3**
baz=307,slow=8.9,SNR=1.6
ANMO LR LR 03 08 46.8
comp=Z,8µm,19.9s,baz=288,slow=37
ANMO Albuquerque 15.72 104 P P 03 02 52.8 -2.0
ANMO Albuquerque 15.72 104 IAmb IAmb 03 02 55.3
comp=Z,40nm,1.0s
ANMO Albuquerque 15.72 104 *ce*P **P 03 02 52.4 -2.4**
ANMO pmax pmax
comp=Z,76nm,1.3s
U35K Hyder 15.90 350 P P 03 02 54.7 -1.7
U35K Hyder 15.90 350 P P 03 02 53.6 -2.8
baz=166
CRAG Craig 16.02 343 P P 03 02 55.2 -2.6
baz=157
RSSD Black Hills 16.04 70 Pn Pn 03 02 52.0 -2.9
RSSD IAmb IAmb 03 03 01.8
comp=Z,724nm,1.5s
RSSD Black Hills 16.04 70 P Pn 03 02 52.0 -2.9
RSSD pmax pmax
comp=Z,724nm,1.5s
U33K Whale Pass 16.62 344 P P 03 03 02.7 -1.7
baz=158,SNR=11
WRAK Wrangell Islan 16.75 346 Pn Pn 03 03 02.4 -1.2
WRAK Wrangell Islan 16.75 346 P P 03 03 04.5 -1.4
baz=160
T35M Bob Quinn 16.96 350 P P 03 03 06.0 -2.3
baz=166,SNR=13
T33K Petersburg 17.24 345 P P 03 03 09.8 -1.5
baz=159
RTBA Rita Blanca 17.95 95 Pn Pn 03 03 18.0 -0.9
SIT Sitka 17.98 342 P P 03 03 19.1 -0.3
baz=154
S34M Telegraph Cree 17.99 350 P P 03 03 20.8 +1.3
baz=165,SNR=12
MNTX Cornudas Mount 18.11 112 P 03 03 21.1 -0.1
S32K Killisnoo 18.18 343 P P 03 03 22.9 +1.3
baz=156
DLBC Dease Lake 18.36 352 P P 03 03 25.9 +2.1
comp=Z,48nm,1.0s,baz=160,slow=10,SNR=17
DLBC S **S 03 06 51.4 -2.0**
comp=Z,4.7nm,1.1s,baz=141,slow=24,SNR=1.1
DLBC Dease Lake 18.36 352 P P 03 03 25.9 +2.1
baz=168,SNR=27
E28A Huff 18.73 63 P P 03 03 25.1 -2.8
VHRN Van Horn 18.91 114 P Pn 03 03 31.5 +0.8
R32K Eaglecrest 18.91 345 P Pn 03 03 32.1 +1.8
baz=157
PH02 Texas Public H 18.92 98 IAmb IAmb 03 03 41.2
comp=Z,66nm,0.9s
Q32M Nakina River 19.16 349 P Pn 03 03 34.2 +0.7
baz=163,SNR=18
K30B Basset 19.20 75 P P 03 03 31.3 -1.8
BESE Bessie Mountai 19.26 344 P P 03 03 32.4 -1.2
R31K City Hall, Gus 19.30 343 P Pn 03 03 35.6 +0.6
baz=155
R33M Jennings River 19.41 351 P Pn 03 03 37.3 +0.9
baz=166,SNR=35
CBKS Cedar Bluff 19.59 86 P P 03 03 36.1 -1.3
CBKS Cedar Bluff 19.59 86 P P 03 03 36.1 -1.3
CBKS pmax pmax
comp=Z,2µm,1.5s
TPB01 Permian Basin 19.67 112 IAmb IAmb 03 03 47.8
comp=Z,82nm,0.9s
TPB06 Permian Basin 19.69 109 IAmb IAmb 03 03 44.1
comp=Z,254nm,1.6s
SUSD Miller 19.70 69 P P 03 03 35.9 -2.6
MDND Maddock 19.72 59 P P 03 03 37.3 -1.3
128A Castleberry Fa 19.72 106 IAmb IAmb 03 03 43.1
comp=Z,25nm,0.9s
KOTAN Kotaneelee Air 19.80 2 P Pn 03 03 41.9 +1.0
baz=182,SNR=50
WTLY Watson Lake, Y 19.91 355 P Pn 03 03 41.1 -1.1
WTLY IAmb IAmb 03 03 53.4
comp=Z,256nm,1.5s
WTLY Watson Lake, Y 19.91 355 P Pn 03 03 43.1 +0.9
baz=172,SNR=14
P32M Atlin 20.00 347 P Pn 03 03 41.6 -1.7
P32M Atlin 20.00 347 P Pn 03 03 43.6 +0.3
baz=160,SNR=10
TPB05 Hovey Rd 20.01 111 IAmb IAmb 03 03 47.9
comp=Z,246nm,1.5s
SKAG Skagway 20.17 345 P Pn 03 03 44.9 -0.4
baz=157,SNR=9.8
BGNE Belgrade 20.38 78 IAMs_20 IAMs_20 03 12 03.9
comp=Z,16µm,18.0s
LPIG La Paz 20.43 138 P Pn 03 03 49.2 +0.5
comp=Z,292nm,1.1s,baz=352,slow=1.8,SNR=23
LPIG S Sn 03 07 41.5 +2.7
comp=Z,12nm,0.4s,baz=299,slow=19,SNR=1.4
LPIG LR LR 03 11 19.2
comp=Z,14µm,19.5s,baz=328,slow=36
comp=Z,292nm,1.1s
P33M Teslin, Yukon 20.45 349 P P 03 03 45.6 -0.9
P33M IAMs_20 IAMs_20 03 12 30.5
comp=Z,11µm,18.0s
P33M Teslin, Yukon 20.45 349 P Pn 03 03 48.2 -0.5
baz=263,SNR=29
R32A Long Quarter, 20.46 87 P P 03 03 45.8 -1.1
R32A IAMs_20 IAMs_20 03 11 40.4
comp=Z,13µm,20.0s
TMB01 Midkiff 20.50 108 IAmb IAmb 03 04 00.5
comp=Z,62nm,1.0s
TX31 Lajitas Ar. Si 20.70 115 P Pn 03 03 50.6 -1.2
TX31 IAmb IAmb 03 03 59.9
comp=Z,355nm,1.4s
TXAR Lajitas Array 20.70 115 P Pn 03 03 51.6 -0.3
comp=Z,36nm,0.7s,baz=299,slow=8.4,SNR=441
TXAR S Sn 03 07 43.5 -1.8
comp=Z,3.8nm,1.2s,baz=250,slow=12,SNR=2.3
TXAR PcP **PcP 03 07 59.9 +0.7**
comp=Z,2.6nm,0.9s,baz=296,slow=1.1,SNR=2.2
TXAR LR LR 03 12 38.6
comp=Z,12µm,19.2s,baz=300,slow=39
comp=Z,36nm,0.7s
HPIG 20.94 124 P Pn 03 03 54.9 0.0
HPIG IAmb IAmb 03 03 56.9
comp=Z,585nm,1.8s
SLBS Sierra La Lagu 20.96 138 P P 03 03 52.6 +0.2
SLBS Sierra La Lagu 20.96 138 IAMs_20 IAMs_20 03 11 14.0
comp=Z,15µm,20.0s
SGCY Sterling City 21.07 106 IAmb IAmb 03 04 00.5
comp=Z,290nm,1.5s
FFC Flin Flon 21.07 39 P P 03 03 52.4 -0.9
FFC Flin Flon 21.07 39 IAMs_20 IAMs_20 03 12 26.8
comp=Z,13µm,20.0s
FFC Flin Flon 21.07 39 P P 03 03 52.4 -0.9
FFC pmax pmax
comp=Z,1µm,1.3s
FFC MLR MLR
comp=Z,13µm,20.0s
P30M Million Dollar 21.12 343 P P 03 03 55.5 +1.7
baz=154
WHY Whitehorse 21.20 347 P P 03 03 55.4 -0.3
WHY IAmb IAmb 03 04 10.2
comp=Z,249nm,1.4s
WHY Whitehorse 21.20 347 P P 03 03 55.7 +0.9
baz=159,SNR=16
TGTN Hyland Airport 21.28 356 P P 03 03 56.6 +1.1
baz=173,SNR=42
ECSD EROS Data Cent 21.37 72 P P 03 03 53.8 -2.8
ECSD IAmb IAmb 03 04 03.0
comp=Z,199nm,1.0s
ECSD EROS Data Cent 21.37 72 IAMs_20 IAMs_20 03 11 46.3
comp=Z,15µm,22.0s
N32M Quiet Lake 21.38 349 IAMs_20 IAMs_20 03 12 59.3
comp=Z,12µm,18.0s
N32M Quiet Lake 21.38 349 P P 03 03 58.0 +1.4
baz=163
SAND Sanderson 21.41 112 IAmb IAmb 03 04 13.0
comp=Z,362nm,1.7s
KAN01 Argonia South 21.53 90 P P 03 03 57.2 -1.2
KAN01 IAmb IAmb 03 04 02.9
comp=Z,302nm,0.9s
O30N Mendenhall 21.53 345 P P 03 03 59.7 +1.5
baz=157,SNR=31
CROK Carrier 21.55 92 IAmb IAmb 03 04 04.1
comp=Z,345nm,1.0s
WMOK Wichita Mounta 21.57 97 IAMs_20 IAMs_20 03 12 44.8
comp=Z,13µm,18.0s
L34A Svendsen Farm, 21.64 76 IAMs_20 IAMs_20 03 12 53.5
comp=Z,14µm,18.0s
O29M Mount Kennedy 21.65 342 P P 03 04 00.4 +0.9
baz=151,SNR=16
F33A 5 Mile Ranch, 21.67 66 IAMs_20 IAMs_20 03 13 19.0
comp=Z,12µm,20.0s
ABTX Abilene, Hawle 21.83 103 IAMs_20 IAMs_20 03 12 28.6
comp=Z,9µm,18.0s
HYT Haines Junctio 21.87 344 P P 03 04 02.5 +0.6
HYT IAmb IAmb 03 04 18.8
comp=Z,156nm,1.2s
HYT Haines Junctio 21.87 344 P P 03 04 03.0 +1.0
baz=154,SNR=16
PINM Pinnacle 21.90 339 P P 03 04 02.6 +0.4
baz=148
KSU1 Kansas State U 21.91 84 IAMs_20 IAMs_20 03 12 00.7
comp=Z,10µm,22.0s
N31M Braeburn, Yuko 22.14 346 P P 03 04 04.9 +0.3
N31M Braeburn, Yuko 22.14 346 P P 03 04 05.4 +0.7
baz=158,SNR=22
YUK6 Outpost Mounta 22.17 343 P P 03 04 05.6 +0.4
baz=152,SNR=5.6
WTFS Witchita Falls 22.20 99 P P 03 04 05.1 -0.5
WTFS IAmb IAmb 03 04 19.7
comp=Z,351nm,1.4s
AGMN Agassiz Nation 22.27 59 P P 03 04 05.0 -1.1
AGMN IAMs_20 IAMs_20 03 13 24.7
comp=Z,14µm,21.0s
N35A Tabor 22.33 79 IAMs_20 IAMs_20 03 13 14.6
comp=Z,15µm,18.0s
N30M Aishikik Lake 22.36 345 P P 03 04 07.6 +0.5
baz=155,SNR=21
OK051 E0350 and S346 22.43 91 IAMs_20 IAMs_20 03 13 21.5
comp=Z,8µm,18.0s
MESA MESA 22.44 338 P P 03 04 08.1 0.0
baz=144
O28M Mount Upton 22.46 340 P P 03 04 09.0 +0.6
baz=149,SNR=8.6
T35A Sooner Cattle 22.55 90 P P 03 04 07.4 -1.9
T35A IAmb IAmb 03 04 20.5
comp=Z,286nm,1.2s
T35A IAMs_20 IAMs_20 03 13 14.7
comp=Z,17µm,18.0s
M31M Drury Creek, Y 22.58 349 IAmb IAmb 03 04 24.2
comp=Z,165nm,1.2s
M31M IAMs_20 IAMs_20 03 13 48.9
comp=Z,14µm,18.0s
M31M Drury Creek, Y 22.58 349 P P 03 04 10.8 +1.4
baz=161,SNR=18
YUK4 Talbot Arm 22.59 343 P P 03 04 09.7 0.0
baz=152,SNR=7.5
ULM Lac du Bonnet 22.67 54 P P 03 04 08.9 -1.5
comp=Z,598nm,1.1s,baz=258,slow=9.6,SNR=213
ULM S **S 03 08 19.8 +1.4**
comp=Z,8.0nm,1.0s,baz=246,slow=20,SNR=1.0
ULM LR LR 03 14 02.7
comp=Z,16µm,19.3s,baz=255,slow=40
ULM Lac du Bonnet 22.67 54 P P 03 04 08.5 -1.9
ULM Lac du Bonnet 22.67 54 P P 03 04 08.5 -1.9
ULM pmax pmax
comp=Z,844nm,1.2s
JCT Junction City 22.79 108 IAMs_20 IAMs_20 03 13 09.1
comp=Z,18µm,20.0s
BGLC Bering Glacier 22.79 336 P P 03 04 12.1 +0.5
baz=142
YUK8 Steele Glacier 22.80 342 P P 03 04 11.9 0.0
baz=150,SNR=22
WRGLY Wrigley 22.92 2 P P 03 04 13.9 +1.0
baz=185,SNR=20
CTG Chitna Glacier 22.92 339 P P 03 04 13.2 +0.1
baz=147,SNR=6.0
BRDY Brady 22.95 105 IAmb IAmb 03 04 30.1
comp=Z,234nm,1.0s
KAIM Kayak Island 23.00 335 P P 03 04 14.0 +0.2
baz=140
YKA Yellowknife Ar 23.05 12 P P 03 04 13.6 -0.6
comp=Z,14nm,0.7s,baz=193,slow=17,SNR=121
YKA S **S 03 08 24.8 +0.1**
comp=Z,0.8nm,0.7s,baz=156,slow=25,SNR=1.3
YKA LR LR 03 13 36.1
comp=Z,5µm,18.9s,baz=197,slow=38
comp=Z,14nm,0.7s
YKA Yellowknife Ar 23.05 12 P P 03 04 13.2 -1.0
YKAW1 Yellowknife Wh 23.05 13 P P 03 04 12.4 -1.9
BARN Barnard Glacie 23.09 339 IAmb IAmb 03 04 27.7
comp=Z,87nm,0.9s
YKAW3 Yellowknife Wh 23.11 12 IAmb IAmb 03 04 30.2
comp=Z,245nm,1.2s
FW06 Azle 23.23 100 IAmb IAmb 03 04 23.1
comp=Z,97nm,1.0s
CRQE Cirque 23.24 337 P P 03 04 16.6 +0.2
baz=143
CRQM Cirque 23.26 337 IAMs_20 IAMs_20 03 11 06.3
comp=Z,8µm,18.0s
Q23K Middleton Isla 23.30 332 P P 03 04 17.1 +0.3
baz=136
Z35A Perchaven, San 23.30 99 IAMs_20 IAMs_20 03 13 36.7
comp=Z,20µm,20.0s
M30M Minto, Yukon 23.33 346 P P 03 04 18.1 +0.9
baz=157,SNR=19
YUK3 Moose Creek 23.39 342 P P 03 04 18.9 +1.0
baz=149,SNR=12
TUL3 Leonard 23.42 92 P P 03 04 16.4 -1.9
TUL3 IAmb IAmb 03 04 26.3
comp=Z,186nm,1.1s
M29M Somme Creek 23.53 344 IAmb IAmb 03 04 32.6
comp=Z,293nm,1.9s
M29M Somme Creek 23.53 344 P P 03 04 21.0 +1.7
baz=154,SNR=15
I37A Lemond, Waseca 23.69 71 IAMs_20 IAMs_20 03 13 41.6
comp=Z,14µm,22.0s
VRDI Verde Repeater 23.73 338 IAmb IAmb 03 04 33.0
comp=Z,225nm,1.9s
MCARA McCarthy VSAT 23.73 338 P P 03 04 21.8 +0.7
MCARA IAmb IAmb 03 04 38.6
comp=Z,151nm,1.3s
MCARA McCarthy VSAT 23.73 338 P P 03 04 22.7 +1.6
baz=144,SNR=6.5
WHTX Lake Whitney, 23.76 102 IAMs_20 IAMs_20 03 13 52.8
comp=Z,16µm,20.0s
BMRM Bremner River 23.87 336 P P 03 04 23.7 +1.2
baz=141
EYAK Cordova Ski Ar 23.91 335 IAMs_20 IAMs_20 03 11 19.0
comp=Z,8µm,19.0s
EYAK Cordova Ski Ar 23.91 335 P P 03 04 24.3 +1.5
baz=138
SCIA State Center 24.00 76 IAMs_20 IAMs_20 03 14 43.7
comp=Z,15µm,19.0s
GLB Gilahina Butte 24.00 338 P P 03 04 24.4 +0.6
BVCY Beaver Creek 24.04 342 P P 03 04 25.5 +1.4
baz=149,SNR=10
L29M L29M 24.07 345 IAmb IAmb 03 04 45.7
comp=Z,384nm,1.7s
L29M L29M 24.07 345 P P 03 04 26.2 +1.9
baz=155,SNR=27
P23K Montague Islan 24.08 332 P P 03 04 25.5 +1.2
baz=135
SPMN Marine on St. 24.09 68 P P 03 04 22.7 -2.0
SPMN IAMs_20 IAMs_20 03 13 54.2
comp=Z,10µm,19.0s
MAYO Mayo, Yukon 24.13 348 P P 03 04 26.6 +1.8
baz=160

P38A	**Dawn**	**24.13**	**81**	IAmb	IAmb	03 04 29.4			
	comp=Z,240nm,1.2s								
P38A				IAMs_20	IAMs_20	03 14 27.5			
	comp=Z,12µm,18.0s								
N38A	**Joes South For**	**24.14**	**79**	IAMs_20	IAMs_20	03 14 30.6			
	comp=Z,17µm,18.0s								
M27K	**Edge Creek, AK**	**24.24**	**341**	P	**P**	**03 04 27.6**	**+1.6**		
	baz=148,SNR=18								
833A	**Chaparral WMA,**	**24.30**	**112**	P	**P**	**03 04 26.8**	**+0.1**		
833A				IAmb	IAmb	03 04 46.8			
	comp=Z,168nm,1.4s								
U38A	**Gravette**	**24.32**	**89**	IAMs_20	IAMs_20	03 14 17.6			
	comp=Z,17µm,19.0s								
N25K	**Chitina, Valde**	**24.36**	**337**	IAMs_20	IAMs_20	03 11 41.1			
	comp=Z,8µm,20.0s								
N25K	**Chitina, Valde**	**24.36**	**337**	P	**P**	**03 04 28.4**	**+1.3**		
	baz=142,SNR=9.1								
M26K	**Nabesna, AK**	**24.56**	**340**	P	**P**	**03 04 30.1**	**+1.2**		
	baz=146								
GLI	**Glacier Island**	**24.60**	**334**	P	**P**	**03 04 29.3**	**+0.1**		
GLI				IAmb	IAmb	03 04 58.7			
	comp=Z,145nm,1.3s								
GLI	**Glacier Island**	**24.60**	**334**	P	**P**	**03 04 30.3**	**+1.1**		
	baz=137								
K29M	**Barlow Dome**	**24.63**	**347**	P	**P**	**03 04 31.0**	**+1.5**		
	baz=157,SNR=28								
H06N1	**SOCORRO T-PHAS**	**24.63**	**146**	P	**P**	**03 04 28.0**	**-1.7**		
EF02	**Christine**	**24.65**	**110**	IAmb	IAmb	03 04 38.7			
	comp=Z,760nm,1.4s								
KLU	**Klutina**	**24.68**	**336**	P	**P**	**03 04 30.8**	**+0.8**		
	baz=139,SNR=9.0								
H06S1	**SOCORRO T**	**24.75**	**146**	P	**P**	**03 04 30.0**	**-0.9**		
S39A	**Bolivar**	**24.76**	**86**	IAmb	IAmb	03 04 57.0			
	comp=Z,129nm,1.1s								
S39A				IAMs_20	IAMs_20	03 14 16.2			
	comp=Z,11µm,22.0s								
KDAK	**Kodiak Island**	**24.79**	**324**	LR	LR	03 11 44.8			
	comp=Z,10µm,21.1s,baz=132,slow=31								
KDAK	**Kodiak Island**	**24.79**	**324**	IAMs_20	IAMs_20	03 11 34.1			
	comp=Z,8µm,18.0s								
KDAK	**Kodiak Island**	**24.79**	**324**	P	**P**	**03 04 31.8**	**+0.9**		
	baz=123								
OHAK	**Old Harbor**	**24.82**	**322**	P	**P**	**03 04 31.3**	**+0.2**		
OHAK				IAmb	IAmb	03 04 45.0			
	comp=Z,125nm,1.5s								
OHAK	**Old Harbor**	**24.82**	**322**	P	**P**	**03 04 31.1**	**0.0**		
	baz=121,SNR=7.5								
BCAR	**Beaver Creek A**	**24.82**	**342**	P	**P**	**03 04 31.1**	**0.0**		
L27K	**Beaver Creek,**	**24.82**	**342**	P	**P**	**03 04 32.3**	**+1.1**		
	baz=148								
SEW	**Seward**	**24.90**	**331**	P	**P**	**03 04 32.8**	**+0.9**		
	baz=132								
SII	**Sitkinak Islan**	**24.92**	**320**	P	**P**	**03 04 31.5**	**-0.5**		
	baz=118								
E38A	**The Farm, Brul**	**25.00**	**64**	IAMs_20	IAMs_20	03 14 15.0			
	comp=Z,12µm,18.0s								
Z38A	**Mt. Pleasant**	**25.05**	**97**	IAMs_20	IAMs_20	03 13 56.0			
	comp=Z,15µm,18.0s								
J30M	**Hart River**	**25.12**	**349**	IAMs_20	IAMs_20	03 15 18.0			
	comp=Z,13µm,18.0s								
J30M	**Hart River**	**25.12**	**349**	P	**P**	**03 04 34.9**	**+1.0**		
	baz=160,SNR=48								
EYMN	**Ely**	**25.12**	**61**	IAMs_20	IAMs_20	03 15 12.2			
	comp=Z,12µm,19.0s								
HARP	**HAARP**	**25.15**	**338**	P	**P**	**03 04 35.0**	**+0.8**		
	baz=142								
BRSE	**Bradley Lake S**	**25.16**	**329**	P	**P**	**03 04 34.6**	**+0.4**		
	baz=129								
Q20K	**Shuyak Island**	**25.16**	**326**	P	**P**	**03 04 35.2**	**+1.0**		
	baz=124								
L26K	**Log Cabin Wild**	**25.17**	**340**	P	**P**	**03 04 35.6**	**+1.3**		
	baz=146,SNR=17								
DAWY	**Dawson**	**25.18**	**345**	P	**P**	**03 04 35.8**	**+1.4**		
	baz=154,SNR=38								
CNPM	**China Poot**	**25.22**	**328**	IAMs_20	IAMs_20	03 11 49.8			
	comp=Z,10µm,20.0s								
M24K	**Tolsona, Glenn**	**25.23**	**337**	P	**P**	**03 04 35.6**	**+0.7**		
	baz=140								
BRLK	**Bradley Lake**	**25.23**	**329**	IAMs_20	IAMs_20	03 12 00.0			
	comp=Z,7µm,20.0s								
O22K	**Cooper Landing**	**25.25**	**331**	P	**P**	**03 04 35.7**	**+0.7**		
	baz=132								
J29N	**Klondike Camp**	**25.31**	**347**	IAMs_20	IAMs_20	03 15 27.2			
	comp=Z,8µm,18.0s								
J29N	**Klondike Camp**	**25.31**	**347**	P	**P**	**03 04 36.8**	**+1.2**		
	baz=156,SNR=38								
SCM	**Sheep Creek Mo**	**25.38**	**335**	P	**P**	**03 04 36.9**	**+0.7**		
	baz=138,SNR=11								
R40A	**Maddies Statio**	**25.40**	**84**	IAMs_20	IAMs_20	03 13 57.1			
	comp=Z,10µm,21.0s								
KNK	**Knik Glacier**	**25.45**	**334**	P	**P**	**03 04 37.7**	**+0.9**		
	baz=135,SNR=12								
L40A	**Anamosa**	**25.45**	**75**	IAMs_20	IAMs_20	03 15 38.2			
	comp=Z,14µm,18.0s								
HOM	**Homer**	**25.47**	**328**	IAMs_20	IAMs_20	03 11 58.3			
	comp=Z,9µm,21.0s								
HOM	**Homer**	**25.47**	**328**	P	**P**	**03 04 36.5**	**-0.5**		
	baz=127								
M23K	**Glacier View**	**25.48**	**335**	P	**P**	**03 04 36.8**	**-0.3**		
	baz=137,SNR=15								
RC01	**Rabbit Creek A**	**25.67**	**332**	P	**P**	**03 04 38.4**	**-0.4**		
	baz=133								
SML	**Sawmill**	**25.69**	**334**	P	**P**	**03 04 38.1**	**-0.9**		
	baz=136,SNR=12								
PAX	**Paxson**	**25.69**	**338**	P	**P**	**03 04 39.1**	**0.0**		
	baz=142								
I30M	**Mount Dempster**	**25.73**	**349**	IAMs_20	IAMs_20	03 15 48.3			
	comp=Z,13µm,19.0s								
I30M	**Mount Dempster**	**25.73**	**349**	P	**P**	**03 04 40.5**	**+1.0**		
	baz=160,SNR=30								
PMR	**Palmer**	**25.80**	**333**	P	**P**	**03 04 40.2**	**+0.2**		
	baz=134,SNR=15								
DOT	**Dot Lake**	**25.87**	**341**	IAMs_20	IAMs_20	03 12 47.9			
	comp=Z,9µm,21.0s								
Q19K	**Cape Douglas,**	**25.88**	**325**	P	**P**	**03 04 40.0**	**-0.8**		
	baz=123								
ZAIG	**Zacatecas**	**25.89**	**126**	P	**P**	**03 04 41.6**	**+0.1**		
ZAIG				IAmb	IAmb	03 04 47.8			
	comp=Z,197nm,1.7s								
G40A	**Rib Lake**	**25.93**	**67**	IAMs_20	IAMs_20	03 15 44.9			
	comp=Z,14µm,18.0s								
N41A	**Harden Midland**	**25.94**	**78**	IAMs_20	IAMs_20	03 15 44.1			
	comp=Z,14µm,21.0s								
CAPN	**Captain Cook N**	**25.97**	**331**	P	**P**	**03 04 41.6**	**0.0**		
	baz=130								
HKT	**Hockley**	**25.98**	**104**	P	**P**	**03 04 43.0**	**+1.2**		
HKT	**Hockley**	**25.98**	**104**	IAMs_20	IAMs_20	03 15 49.3			
	comp=Z,12µm,21.0s								
HKT	**Hockley**	**25.98**	**104**	*i* P	**P**	**03 04 44.1**	**+2.3**		
HKT				pmax	pmax				
	comp=Z,123nm,1.1s								
HKT				MLR	MLR				
	comp=Z,20µm,14.0s								
H31M	**Peel River**	**26.02**	**351**	IAMs_20	IAMs_20	03 15 53.0			
	comp=Z,9µm,20.0s								
H31M	**Peel River**	**26.02**	**351**	P	**P**	**03 04 41.9**	**-0.2**		
	baz=164,SNR=33								
JFWS	**Jewell Farm**	**26.06**	**73**	IAMs_20	IAMs_20	03 15 33.3			
	comp=Z,10µm,22.0s								
WAT6	**Susitna Watana**	**26.07**	**336**	P	**P**	**03 04 41.6**	**-1.0**		
	baz=138,SNR=12								
P19K	**Oil Pt**	**26.11**	**327**	IAMs_20	IAMs_20	03 12 20.4			
	comp=Z,8µm,20.0s								
P19K	**Oil Pt**	**26.11**	**327**	P	**P**	**03 04 42.9**	**-0.1**		
	baz=125								
SCRK	**Sand Creek**	**26.12**	**341**	IAMs_20	IAMs_20	03 12 55.6			
	comp=Z,7µm,21.0s								
SCRK	**Sand Creek**	**26.12**	**341**	P	**P**	**03 04 42.4**	**-0.7**		
	baz=146,SNR=18								
RIDG	**Independent Ri**	**26.14**	**340**	IAMs_20	IAMs_20	03 12 55.2			
	comp=Z,10µm,21.0s								
RIDG	**Independent Ri**	**26.14**	**340**	P	**P**	**03 04 42.8**	**-0.4**		
	baz=144								
I29M	**Ogilvie Camp,**	**26.16**	**347**	IAMs_20	IAMs_20	03 15 53.7			
	comp=Z,11µm,19.0s								
I29M	**Ogilvie Camp,**	**26.16**	**347**	P	**P**	**03 04 43.4**	**+0.2**		
	baz=157,SNR=14								
CCM	**Cathedral Cave**	**26.24**	**84**	IAMs_20	IAMs_20	03 14 22.6			
	comp=Z,11µm,20.0s								
M22K	**Willow**	**26.25**	**333**	P	**P**	**03 04 43.6**	**-0.5**		
	baz=133								
DHY	**Denali Highway**	**26.33**	**337**	P	**P**	**03 04 44.6**	**-0.3**		
	baz=139,SNR=18								
Q18K	**Katmai Hardscr**	**26.34**	**324**	P	**P**	**03 04 43.9**	**-1.2**		
	baz=121								
K24K	**Donnelly Dome**	**26.44**	**339**	P	**P**	**03 04 45.9**	**+0.1**		
	baz=143								
WAT1	**Susitna Watana**	**26.50**	**336**	P	**P**	**03 04 47.3**	**+0.9**		
	baz=137								
I28M	**Miner Creek**	**26.53**	**346**	P	**P**	**03 04 46.8**	**+0.1**		
	baz=154,SNR=22								
Q17K	**Contact Creek**	**26.54**	**323**	P	**P**	**03 04 47.3**	**+0.4**		
	baz=119								
L42A	**Oliver, Polo**	**26.61**	**75**	IAMs_20	IAMs_20	03 16 24.7			
	comp=Z,11µm,18.0s								
N20K	**Mount Spurr**	**26.65**	**331**	P	**P**	**03 04 47.8**	**0.0**		
	baz=129,SNR=10								
SPCR	**Spurr Chakacha**	**26.65**	**331**	P	**P**	**03 04 47.7**	**-0.1**		
	baz=129,SNR=8.4								
T42A	**Van Buren**	**26.65**	**86**	IAMs_20	IAMs_20	03 15 59.2			
	comp=Z,12µm,19.0s								
CUT	**Chulitna**	**26.75**	**334**	P	**P**	**03 04 48.9**	**+0.3**		
	baz=134								
P18K	**Big Mountain,**	**26.82**	**325**	P	**P**	**03 04 48.9**	**-0.4**		
	baz=122,SNR=8.6								
EPYK	**Eagle Plains**	**26.86**	**350**	IAMs_20	IAMs_20	03 16 32.3			
	comp=Z,12µm,19.0s								
EPYK	**Eagle Plains**	**26.86**	**350**	P	**P**	**03 04 50.5**	**+0.9**		
	baz=160,SNR=20								
EPYK				S	**S**	**03 09 27.0**	**+1.2**		
	baz=160								
O19K	**Port Alsworth**	**26.88**	**327**	IAMs_20	IAMs_20	03 12 43.5			
	comp=Z,11µm,21.0s								
O19K	**Port Alsworth**	**26.88**	**327**	P	**P**	**03 04 50.2**	**+0.5**		
	baz=124,SNR=9.6								
FCC	**Fort Churchill**	**26.89**	**36**	P	**P**	**03 04 49.2**	**-0.6**		
FCC	**Fort Churchill**	**26.89**	**36**	P	**P**	**03 04 49.2**	**-0.6**		
FCC				pmax	pmax				
	comp=Z,518nm,1.5s								
SKT	**Skwentna**	**26.90**	**332**	P	**P**	**03 04 50.4**	**+0.4**		
	baz=131								
I42A	**Draeger Farm,**	**26.93**	**70**	IAMs_20	IAMs_20	03 16 06.3			
	comp=Z,12µm,20.0s								
I27K	**Kandik River**	**26.99**	**345**	P	**P**	**03 04 51.3**	**+0.5**		
	baz=151,SNR=25								
I27K				S	**S**	**03 09 30.1**	**+2.3**		
	baz=151								
J25K	**Salcha River,**	**26.99**	**341**	IAMs_20	IAMs_20	03 13 22.4			
	comp=Z,8µm,21.0s								
J25K	**Salcha River,**	**26.99**	**341**	P	**P**	**03 04 51.1**	**+0.3**		
	baz=144,SNR=30								
J25K				S	**S**	**03 09 32.2**	**+4.3**		
	baz=144								
RND	**Reindeer**	**27.02**	**336**	IAMs_20	IAMs_20	03 13 12.4			
	comp=Z,7µm,20.0s								
R16K	**Pilot Point**	**27.02**	**320**	P	**P**	**03 04 50.7**	**-0.4**		
	baz=116								
I26K	**Coal Creek Min**	**27.05**	**343**	P	**P**	**03 04 52.4**	**+1.1**		
	baz=149,SNR=24								
I26K				S	**S**	**03 09 33.3**	**+4.7**		
	baz=149								
CHNA	**Chernabura Isl**	**27.06**	**314**	P	**P**	**03 04 51.6**	**+0.2**		
	baz=108								
CHNA				S	**S**	**03 09 28.4**	**-0.5**		
	baz=108								
O18K	**Koktuh Hills**	**27.06**	**326**	IAMs_20	IAMs_20	03 12 59.3			
	comp=Z,6µm,19.0s								
O18K	**Koktuh Hills**	**27.06**	**326**	P	**P**	**03 04 51.6**	**+0.1**		
	baz=123								
O18K				S	**S**	**03 09 30.8**	**+1.9**		
	baz=123								
G31M	**Satah River**	**27.10**	**352**	IAMs_20	IAMs_20	03 16 17.5			
	comp=Z,10µm,19.0s								
G31M	**Satah River**	**27.10**	**352**	P	**P**	**03 04 52.3**	**+0.7**		
	baz=164,SNR=35								
G31M				S	**S**	**03 09 34.5**	**+5.2**		
	baz=164								
Q16K	**King Salmon**	**27.10**	**323**	P	**P**	**03 04 52.3**	**+0.6**		
	baz=119,SNR=13								
Q16K				S	**S**	**03 09 31.7**	**+2.2**		
	baz=119								
P43A	**Skaggs, Pawnee**	**27.16**	**80**	IAMs_20	IAMs_20	03 15 39.4			
	comp=Z,6µm,19.0s								
HDA	**Harding Lake**	**27.24**	**339**	P	**P**	**03 04 53.2**	**+0.3**		
	baz=142,SNR=11								
HDA				S	**S**	**03 09 33.3**	**+1.7**		
	baz=142								
P17K	**Kvichak River**	**27.25**	**324**	P	**P**	**03 04 52.7**	**-0.4**		
	baz=120,SNR=6.2								
P17K				S	**S**	**03 09 33.6**	**+1.7**		
	baz=120								
MCK	**McKinley**	**27.29**	**337**	P	**P**	**03 04 53.3**	**-0.1**		
	baz=138,SNR=12								
MCK				S	**S**	**03 09 34.7**	**+2.3**		
	baz=138								
N19K	**Bonanza Creek**	**27.30**	**328**	IAMs_20	IAMs_20	03 13 16.7			
	comp=Z,7µm,20.0s								
N19K	**Bonanza Creek**	**27.30**	**328**	P	**P**	**03 04 52.7**	**-0.9**		
	baz=125,SNR=7.3								
N19K				S	**S**	**03 09 35.7**	**+2.9**		
	baz=125								
F42A	**Maple Grove Fa**	**27.37**	**66**	IAMs_20	IAMs_20	03 16 44.9			
	comp=Z,8µm,18.0s								
G30M	**tAoh Zraii Nji**	**27.38**	**351**	IAMs_20	IAMs_20	03 16 42.9			
	comp=Z,6µm,20.0s								
G30M	**tAoh Zraii Nji**	**27.38**	**351**	P	**P**	**03 04 54.4**	**+0.2**		
	baz=161,SNR=10								
G30M				S	**S**	**03 09 36.4**	**+2.6**		
	baz=161								
M20K	**Styx River**	**27.42**	**331**	P	**P**	**03 04 53.8**	**-0.9**		
	baz=129								
M20K				S	**S**	**03 09 34.7**	**0.0**		
	baz=129								
K43A	**Burlington**	**27.49**	**73**	IAMs_20	IAMs_20	03 16 37.0			
	comp=Z,10µm,18.0s								
TRF	**Thorofare Moun**	**27.50**	**336**	P	**P**	**03 04 55.6**	**+0.1**		
	baz=135,SNR=7.3								
TRF				S	**S**	**03 09 37.1**	**+1.1**		
	baz=135								
ILAR	**Eielson Array**	**27.51**	**340**	P	**P**	**03 04 56.1**	**+0.8**		
	comp=Z,8.3nm,0.8s,baz=152,slow=8.1,SNR=104								
ILAR				PcP	**PcP**	**03 08 14.3**	**+1.1**		
	comp=Z,2.0nm,0.8s,baz=183,slow=2.4,SNR=7.6								
ILAR				LR	LR	03 13 57.6			
	comp=Z,8µm,21.1s,baz=130,slow=32								
	comp=Z,8.3nm,0.8s								
ILAR	**Eielson Array**	**27.51**	**340**	P	**P**	**03 04 55.1**	**-0.3**		
H27K	**Steamboat Moun**	**27.52**	**346**	P	**P**	**03 04 55.9**	**+0.3**		
	baz=152,SNR=20								
H27K				S	**S**	**03 09 38.7**	**+2.5**		
	baz=152								
F31M	**Tsiigehtchic**	**27.55**	**353**	IAMs_20	IAMs_20	03 16 38.4			
	comp=Z,9µm,19.0s								
F31M	**Tsiigehtchic**	**27.55**	**353**	P	**P**	**03 04 55.7**	**0.0**		
	baz=166,SNR=21								
F31M				S	**S**	**03 09 39.6**	**+3.2**		
	baz=166								
SDPT	**Sand Point**	**27.70**	**315**	P	**P**	**03 04 56.6**	**-0.5**		
	baz=108								
SDPT				S	**S**	**03 09 40.6**	**+1.6**		
	baz=108								
Q44A	**Meyer Farm, Va**	**27.71**	**81**	IAMs_20	IAMs_20	03 17 22.1			
	comp=Z,12µm,18.0s								
PPLA	**Purkeypile**	**27.74**	**333**	P	**P**	**03 04 57.9**	**+0.3**		
	baz=132,SNR=13								
PPLA				S	**S**	**03 09 41.4**	**+1.5**		
	baz=132								
PRP	**Porcupine Dome**	**27.77**	**342**	IAMs_20	IAMs_20	03 13 58.1			
	comp=Z,7µm,22.0s								
PRP	**Porcupine Dome**	**27.77**	**342**	P	**P**	**03 04 57.6**	**-0.3**		
	baz=145,SNR=20								
PRP				S	**S**	**03 09 44.0**	**+3.7**		
	baz=145								
N18K	**Kilae Creek**	**27.79**	**327**	IAMs_20	IAMs_20	03 13 20.8			
	comp=Z,9µm,19.0s								
N18K	**Kilae Creek**	**27.79**	**327**	P	**P**	**03 04 57.7**	**-0.3**		
	baz=123,SNR=6.5								
N18K				S	**S**	**03 09 42.8**	**+2.3**		
	baz=123								
GNAR	**Gosnell**	**27.82**	**88**	P	**P**	**03 04 58.9**	**+0.5**		
GNAR				IAmb	IAmb	03 05 30.0			
	comp=Z,130nm,1.2s								
O17K	**Koliganek Bris**	**27.83**	**325**	P	**P**	**03 04 57.7**	**-0.5**		
	baz=120								
O17K				S	**S**	**03 09 44.7**	**+3.7**		
	baz=120								
COLA	**College**	**27.84**	**339**	P	**P**	**03 04 58.6**	**+0.3**		
	baz=141								
COLA				S	**S**	**03 09 45.2**	**+4.1**		
	baz=141								
S44A	**Carbondale**	**27.86**	**84**	IAMs_20	IAMs_20	03 15 23.0			
	comp=Z,10µm,18.0s								
P16K	**Nushagak River**	**27.88**	**323**	P	**P**	**03 04 58.3**	**-0.4**		
	baz=118								
P16K				S	**S**	**03 09 44.5**	**+2.8**		
	baz=118								
M44A	**Midewin, Midew**	**27.91**	**76**	IAMs_20	IAMs_20	03 17 05.2			
	comp=Z,13µm,19.0s								
POKR	**Poker Plat Res**	**27.92**	**340**	P	**P**	**03 04 59.4**	**+0.3**		
	baz=142								
POKR				S	**S**	**03 09 45.9**	**+3.4**		
	baz=142								
F30M	**Barrier River**	**27.93**	**351**	IAMs_20	IAMs_20	03 17 02.3			
	comp=Z,7µm,18.0s								
F30M	**Barrier River**	**27.93**	**351**	P	**P**	**03 04 59.4**	**+0.3**		
	baz=162								
F30M				S	**S**	**03 09 45.1**	**+2.7**		
	baz=162								
NEA2	**Nenana**	**27.97**	**338**	P	**P**	**03 05 00.1**	**+0.6**		
	baz=139,SNR=22								
NEA2				S	**S**	**03 09 46.8**	**+3.6**		
	baz=139								
143A	**Socs Landing,**	**28.01**	**95**	IAMs_20	IAMs_20	03 17 57.2			
	comp=Z,13µm,19.0s								
BPAW	**Bear Paw Mtn.**	**28.18**	**336**	P	**P**	**03 05 01.7**	**+0.3**		
BPAW	**Bear Paw Mtn.**	**28.18**	**336**	P	**P**	**03 05 01.7**	**+0.3**		
	baz=135,SNR=15								
BPAW				S	**S**	**03 09 48.0**	**+1.5**		
	baz=135								
O16K	**Kokwok River B**	**28.19**	**324**	P	**P**	**03 05 01.7**	**+0.2**		
	baz=118,SNR=5.5								
O16K				S	**S**	**03 09 48.9**	**+2.3**		
	baz=118								
M18K	**Stony River**	**28.22**	**329**	P	**P**	**03 05 01.7**	**-0.1**		
	baz=124,SNR=7.6								
M18K				S	**S**	**03 09 49.3**	**+2.2**		
	baz=124								
L19K	**White Mountain**	**28.25**	**331**	P	**P**	**03 05 02.6**	**+0.5**		
	baz=127,SNR=13								
L19K				S	**S**	**03 09 49.6**	**+2.0**		
	baz=127								
N17K	**Nushagak Hills**	**28.25**	**326**	IAMs_20	IAMs_20	03 13 44.9			
	comp=Z,6µm,19.0s								
N17K	**Nushagak Hills**	**28.25**	**326**	P	**P**	**03 05 02.9**	**+0.8**		
	baz=121								
N17K				S	**S**	**03 09 49.0**	**+1.3**		
	baz=121								
INK	**Inuvik**	**28.37**	**353**	LR	LR	03 17 22.6			
	comp=Z,6µm,19.2s,baz=158,slow=39								
INK	**Inuvik**	**28.37**	**353**	P	**P**	**03 05 02.6**	**-0.3**		
INK				IAmb	IAmb	03 05 39.0			
	comp=Z,141nm,1.8s								
INK	**Inuvik**	**28.37**	**353**	P	**P**	**03 05 02.7**	**-0.3**		
INK				pmax	pmax				
	comp=Z,141nm,1.8s								
INK	**Inuvik**	**28.37**	**353**	P	**P**	**03 05 03.7**	**+0.7**		
	baz=166,SNR=27								
INK				S	**S**	**03 09 51.2**	**+1.9**		
	baz=166								
CHUM	**Lake Minchumin**	**28.45**	**335**	P	**P**	**03 05 04.1**	**+0.3**		
	baz=133,SNR=11								
CHUM				S	**S**	**03 09 52.0**	**+1.4**		
	baz=133								
I23K	**Minto, Yukon-K**	**28.47**	**339**	P	**P**	**03 05 04.7**	**+0.8**		
	baz=139,SNR=23								
I23K				S	**S**	**03 09 53.9**	**+3.0**		
	baz=139								
F28M	**Old Crow**	**28.49**	**348**	IAMs_20	IAMs_20	03 17 34.1			
	comp=Z,12µm,18.0s								
F28M	**Old Crow**	**28.49**	**348**	P	**P**	**03 05 04.5**	**+0.4**		
	baz=156,SNR=20								
F28M				S	**S**	**03 09 52.7**	**+1.4**		
	baz=156								
T45A	**Paducah**	**28.52**	**85**	IAMs_20	IAMs_20	03 15 42.7			
	comp=Z,7µm,19.0s								
G26K	**Porcupine Rive**	**28.60**	**345**	P	**P**	**03 05 05.7**	**+0.7**		
	baz=149,SNR=27								
G26K				S	**S**	**03 09 55.7**	**+2.8**		
	baz=149								
H24K	**Noodor Dome**	**28.61**	**341**	IAMs_20	IAMs_20	03 14 23.2			
	comp=Z,8µm,22.0s								
H24K	**Noodor Dome**	**28.61**	**341**	P	**P**	**03 05 05.8**	**+0.6**		
	baz=142,SNR=15								
H24K				S	**S**	**03 09 56.2**	**+3.0**		
	baz=142								
K20K	**Telida**	**28.69**	**333**	P	**P**	**03 05 06.4**	**+0.4**		
	baz=130,SNR=13								
K20K				S	**S**	**03 09 54.7**	**+0.1**		
	baz=130								
MLY	**Manley**	**28.77**	**338**	P	**P**	**03 05 07.5**	**+0.8**		
	baz=137,SNR=30								
MLY				S	**S**	**03 09 58.2**	**+2.3**		
	baz=137								
O15K	**Ungalikthiuk R**	**28.79**	**322**	IAMs_20	IAMs_20	03 13 39.1			
	comp=Z,7µm,22.0s								
O15K	**Ungalikthiuk R**	**28.79**	**322**	P	**P**	**03 05 06.8**	**-0.1**		
	baz=115								
O15K				S	**S**	**03 09 59.0**	**+2.9**		
	baz=115								
SFIN	**Lafayette**	**28.81**	**77**	IAMs_20	IAMs_20	03 17 23.1			
	comp=Z,15µm,20.0s								
M17K	**Holitna River**	**28.82**	**328**	IAMs_20	IAMs_20	03 14 02.8			
	comp=Z,8µm,21.0s								
M17K	**Holitna River**	**28.82**	**328**	P	**P**	**03 05 07.3**	**+0.3**		
	baz=122,SNR=7.8								
M17K				S	**S**	**03 09 57.3**	**+0.7**		
	baz=122								
I45A	**Fountain**	**28.84**	**70**	IAMs_20	IAMs_20	03 16 39.9			
	comp=Z,14µm,21.0s								
VBMS	**Vicksburg**	**28.89**	**95**	IAMs_20	IAMs_20	03 18 41.6			
	comp=Z,11µm,18.0s								
P46A	**Rosedale**	**28.90**	**79**

WVT MLR MLR
comp=Z,15µm,19.0s
O14K Tigyukauivet M **29.50 322** IAmb IAmb 03 06 11.2
comp=Z,92nm,1.9s
O14K Tigyukauivet M **29.50 322** P **P** **03 05 13.8 +0.7**
baz=114,SNR=7.3
O14K S **S** **03 10 09.0 +1.9**
baz=114
F25K Christian Rive **29.53 344** P **P** **03 05 15.1 +1.7**
baz=147,SNR=21
F25K S **S** **03 10 11.4 +3.7**
baz=147
L17K Donlin **29.55 329** P **P** **03 05 15.0 +1.4**
baz=122,SNR=11
L17K S **S** **03 10 10.8 +2.7**
baz=122
H22K Ishtalitna Cre **29.59 338** IAMs_20 IAMs_20 03 14 47.2
comp=Z,6µm,22.0s
H22K Ishtalitna Cre **29.59 338** P **P** **03 05 15.5 +1.6**
baz=137,SNR=22
H22K S **S** **03 10 10.8 +2.1**
baz=137
J19K Poorman **29.63 333** P **P** **03 05 15.4 +1.1**
baz=128,SNR=14
J19K S **S** **03 10 11.5 +2.3**
baz=128
J18K Innoko River **29.70 332** P **P** **03 05 16.1 +1.2**
baz=126,SNR=19
J18K S **S** **03 10 13.2 +2.8**
baz=126
T47A Sharon Grove **29.70 84** IAMs_20 IAMs_20 03 16 19.9
comp=Z,8µm,20.0s
L16K Owhat River **29.81 327** IAMs_20 IAMs_20 03 14 45.0
comp=Z,6µm,20.0s
L16K Owhat River **29.81 327** P **P** **03 05 17.4 +1.6**
baz=120,SNR=18
L16K S **S** **03 10 13.6 +1.4**
baz=120
146A Union **29.83 93** IAMs_20 IAMs_20 03 17 14.3
comp=Z,11µm,19.0s
H21K Melozitna Rive **29.83 337** P **P** **03 05 17.3 +1.3**
baz=134,SNR=19
H21K S **S** **03 10 16.1 +3.7**
baz=134
G23K Bananza Creek **29.84 340** IAMs_20 IAMs_20 03 15 10.7
comp=Z,7µm,21.0s
G23K Bananza Creek **29.84 340** P **P** **03 05 17.4 +1.3**
baz=140,SNR=30
G23K S **S** **03 10 16.2 +3.7**
baz=140
M15K Kasigluk River **29.85 325** P **P** **03 05 17.4 +1.2**
baz=117
M15K S **S** **03 10 13.8 +1.1**
baz=117
K17K Iditarod **29.87 330** P **P** **03 05 17.5 +1.1**
baz=123,SNR=13
K17K S **S** **03 10 15.2 +2.2**
baz=123
GLMI Grayling **29.91 68** IAMs_20 IAMs_20 03 18 05.1
comp=Z,11µm,20.0s
D28M Stokes Point **29.92 350** P **P** **03 05 18.3 +1.6**
baz=159,SNR=16
D28M S **S** **03 10 16.1 +2.5**
baz=159
WCI Wyandotte Cave **29.95 81** P **P** **03 05 16.4 -0.9**
WCI IAmb IAmb 03 05 35.2
comp=Z,92nm,0.9s
WCI Wyandotte Cave **29.95 81** P **P** **03 05 16.4 -0.9**
WCI pmax pmax
comp=Z,92nm,1.0s
WCI MLR MLR
comp=Z,15µm,19.0s
E25K Arctic Village **29.96 345** P **P** **03 05 18.6 +1.5**
baz=148,SNR=23
E25K S **S** **03 10 19.0 +4.6**
baz=148
J47A Sunmer **29.96 71** IAMs_20 IAMs_20 03 17 36.6
comp=Z,13µm,21.0s
N14K Kuskokwak Cree **29.96 323** P **P** **03 05 18.0 +0.8**
baz=114,SNR=11
N14K S **S** **03 10 14.3 -0.2**
baz=114
E46A Sault Ste Mari **30.00 65** IAMs_20 IAMs_20 03 16 34.5
comp=Z,7µm,20.0s
346A Big Creek Wild **30.07 96** IAMs_20 IAMs_20 03 17 26.8
comp=Z,11µm,20.0s
D27M Malcolm River **30.15 349** IAMs_20 IAMs_20 03 18 36.1
comp=Z,9µm,20.0s
D27M Malcolm River **30.15 349** P **P** **03 05 20.4 +1.6**
baz=155,SNR=15
D27M S **S** **03 10 22.4 +5.0**
baz=155
P48A Milroy **30.27 79** IAMs_20 IAMs_20 03 18 31.9
comp=Z,9µm,19.0s
COLD Coldfoot **30.28 341** IAMs_20 IAMs_20 03 15 26.4
comp=Z,8µm,21.0s
COLD Coldfoot **30.28 341** P **P** **03 05 21.5 +1.5**
baz=140,SNR=7.7
COLD S **S** **03 10 22.8 +3.4**
baz=140
V48A Smith Brothers **30.33 86** IAMs_20 IAMs_20 03 17 11.6
comp=Z,12µm,22.0s
IMAR Indian Mountai **30.34 337** P **P** **03 05 21.0 +0.5**
Z47A Carrollton **30.34 92** IAMs_20 IAMs_20 03 17 31.0
comp=Z,7µm,20.0s
H20K Anotleneega Mo **30.35 336** P **P** **03 05 22.0 +1.4**
baz=131,SNR=21
H20K S **S** **03 10 22.2 +1.7**
baz=131
M14K Bethel **30.43 324** P **P** **03 05 22.7 +1.3**
baz=115,SNR=9.2
M14K S **S** **03 10 24.9 +3.0**
baz=115
GCSA Galena City Sc **30.53 334** P **P** **03 05 23.5 +1.4**
baz=128,SNR=6.5
GCSA S **S** **03 10 24.8 +1.6**
baz=128
E24K Your Creek **30.54 343** IAMs_20 IAMs_20 03 15 48.3
comp=Z,6µm,22.0s
E24K Your Creek **30.54 343** P **P** **03 05 24.1 +1.7**
baz=143,SNR=26
E24K S **S** **03 10 28.3 +4.8**
baz=143
UNM Universidad Na **30.55 126** IAMs_20 IAMs_20 03 17 24.8
comp=Z,7µm,18.0s
X48A Hartselle **30.63 89** IAMs_20 IAMs_20 03 19 05.6
comp=Z,8µm,18.0s
G21K Allakaket **30.64 338** P **P** **03 05 24.8 +1.6**
baz=134,SNR=21
G21K S **S** **03 10 28.0 +3.0**
baz=134
L15K Ungalak Mounta **30.64 326** P **P** **03 05 24.3 +1.1**
baz=117
L15K S **S** **03 10 27.2 +2.1**
baz=117
UNV Unalaska Valle **30.77 310** P **P** **03 05 25.1 +0.8**
UNV Unalaska Valle **30.77 310** P **P** **03 05 25.6 +1.2**
baz=99,SNR=8.0
UNV S **S** **03 10 28.1 +0.9**
baz=99
R49A Shelbyville **30.78 81** IAMs_20 IAMs_20 03 17 14.3
comp=Z,10µm,19.0s
E23K Chandalar **30.78 342** IAMs_20 IAMs_20 03 15 54.8
comp=Z,6µm,22.0s
E23K Chandalar **30.78 342** P **P** **03 05 26.3 +1.7**
baz=142,SNR=33
E23K S **S** **03 10 31.0 +3.6**
baz=142
N49A Columbus Grove **30.85 75** IAMs_20 IAMs_20 03 18 22.2
comp=Z,12µm,21.0s
U49A Red Boiling Sp **30.86 84** IAMs_20 IAMs_20 03 18 12.7
comp=Z,12µm,22.0s
C27K Jago River **30.92 347** IAMs_20 IAMs_20 03 19 11.6
comp=Z,10µm,18.0s
C27K Jago River **30.92 347** P **P** **03 05 27.7 +2.0**
baz=152
C27K S **S** **03 10 31.8 +2.4**
baz=152
M13K Dall Lake **30.92 323** P **P** **03 05 26.0 +0.4**
baz=113,SNR=11
K15K Wolf Creek Mou **30.95 327** IAMs_20 IAMs_20 03 15 41.1
comp=Z,5µm,20.0s
K15K Wolf Creek Mou **30.95 327** P **P** **03 05 26.8 +0.9**
baz=118,SNR=11
K15K S **S** **03 10 32.6 +2.7**
baz=118
AAM Ann Arbor **30.96 73** IAMs_20 IAMs_20 03 18 33.1
comp=Z,8µm,21.0s

L14K Kuka Creek **31.01 325** P **P** **03 05 27.0 +0.6**
baz=115
L14K S **S** **03 10 33.6 +2.9**
baz=115
J16K Anvik River **31.06 329** P **P** **03 05 28.0 +1.1**
baz=121,SNR=18
J16K S **S** **03 10 32.6 +0.9**
baz=121
D25K Kavik River **31.13 346** IAMs_20 IAMs_20 03 18 42.2
comp=Z,6µm,19.0s
D25K Kavik River **31.13 346** P **P** **03 05 29.6 +2.0**
baz=148,SNR=55
D25K S **S** **03 10 36.3 +3.5**
baz=148
F21K Alatna River **31.13 339** P **P** **03 05 29.0 +1.4**
baz=135,SNR=12
F21K S **S** **03 10 35.1 +2.3**
baz=135
SWET Sewanee **31.20 87** IAmb IAmb 03 06 33.8
comp=Z,57nm,1.2s
TOLK Toolik Lake Re **31.23 343** P **P** **03 05 30.7 +2.2**
baz=142,SNR=34
TOLK S **S** **03 10 38.7 +4.3**
baz=142
H18K Honhosa River **31.28 333** P **P** **03 05 29.8 +1.0**
baz=126,SNR=13
H18K S **S** **03 10 37.3 +2.2**
baz=126
Y49A Blount Mountai **31.34 89** IAMs_20 IAMs_20 03 18 53.5
comp=Z,9µm,19.0s
E22K Anaktuvuk Pass **31.37 341** IAMs_20 IAMs_20 03 16 12.2
comp=Z,7µm,21.0s
E22K Anaktuvuk Pass **31.37 341** P **P** **03 05 31.4 +1.7**
baz=139,SNR=33
E22K S **S** **03 10 40.4 +3.9**
baz=139
C26K Camden Bay **31.38 347** P **P** **03 05 32.1 +2.5**
baz=150,SNR=48
C26K S **S** **03 10 39.6 +3.1**
baz=150
I17K Unalakleet **31.41 330** P **P** **03 05 31.3 +1.4**
baz=121,SNR=16
I17K S **S** **03 10 40.0 +2.9**
baz=121
T50A Nancy **31.41 83** IAMs_20 IAMs_20 03 17 25.2
comp=Z,8µm,19.0s
R50A Paris **31.42 80** IAMs_20 IAMs_20 03 18 53.2
comp=Z,12µm,22.0s
G19K Purcell Mounta **31.47 336** P **P** **03 05 31.3 +0.8**
baz=129,SNR=14
G19K S **S** **03 10 40.1 +2.1**
baz=129
D24K Happy Valley **31.48 344** IAMs_20 IAMs_20 03 16 21.3
comp=Z,5µm,19.0s
D24K Happy Valley **31.48 344** P **P** **03 05 32.4 +1.9**
baz=144
D24K S **S** **03 10 42.0 +3.8**
baz=144
M50A Fremont **31.59 74** IAMs_20 IAMs_20 03 18 54.7
comp=Z,8µm,20.0s
K50A Casco **31.63 71** IAMs_20 IAMs_20 03 18 36.7
comp=Z,10µm,21.0s
F20K Avaraart Lake **31.65 338** P **P** **03 05 33.0 +1.1**
baz=132,SNR=13
F20K S **S** **03 10 41.7 +1.0**
baz=132
W50A Signal Mountai **31.68 86** IAMs_20 IAMs_20 03 17 53.2
comp=Z,10µm,21.0s
H17K Granite Mounta **31.69 332** IAMs_20 IAMs_20 03 16 20.8
comp=Z,5µm,19.0s
H17K Granite Mounta **31.69 332** P **P** **03 05 33.2 +0.8**
baz=124,SNR=6.5
H17K S **S** **03 10 44.1 +2.6**
baz=124
A36M Sachs Harbour **31.70 360** IAMs_20 IAMs_20 03 17 30.0
comp=Z,7µm,18.0s
A36M Sachs Harbour **31.70 360** P **P** **03 05 33.4 +1.0**
baz=180,SNR=18
A36M S **S** **03 10 43.2 +1.8**
baz=180
D23K Nanushuk River **31.74 343** IAMs_20 IAMs_20 03 16 38.0
comp=Z,7µm,22.0s
D23K Nanushuk River **31.74 343** P **P** **03 05 34.7 +1.9**
baz=141
D23K S **S** **03 10 46.9 +4.7**
baz=141
G18K Tagagawik **31.82 334** P **P** **03 05 33.9 +0.3**
baz=127
G18K S **S** **03 10 46.9 +3.4**
baz=127
C24K Franklin Bluff **31.92 345** P **P** **03 05 34.0 -0.4**
C24K IAmb IAmb 03 05 52.1
comp=Z,103nm,1.3s
C24K IAMs_20 IAMs_20 03 19 35.8
comp=Z,6µm,20.0s
C24K Franklin Bluff **31.92 345** P **P** **03 05 35.6 +1.2**
baz=145,SNR=19
C24K S **S** **03 10 49.6 +4.7**
baz=145
Q51A Pebbles **31.95 79** IAMs_20 IAMs_20 03 19 32.0
comp=Z,9µm,19.0s
J14K Nanvaranak Lak **31.99 327** IAmb IAmb 03 05 47.1
comp=Z,76nm,1.6s
J14K IAMs_20 IAMs_20 03 16 04.7
comp=Z,6µm,19.0s
J14K Nanvaranak Lak **31.99 327** P **P** **03 05 36.0 +0.9**
baz=116,SNR=12
J14K S **S** **03 10 50.3 +4.2**
baz=116
NIKH Nikolski High **32.05 308** P **P** **03 05 35.5 -0.3**
baz=95
NIKH S **S** **03 10 43.6 -3.8**
baz=95
K13K Kusilvak Mount **32.11 325** IAMs_20 IAMs_20 03 16 07.8
comp=Z,5µm,19.0s
K13K Kusilvak Mount **32.11 325** P **P** **03 05 36.0 -0.1**
baz=114
K13K S **S** **03 10 50.8 +2.8**
baz=114
F19K Shaleruckik Mo **32.12 336** P **P** **03 05 36.9 +0.7**
baz=129,SNR=19
F19K S **S** **03 10 49.5 +1.4**
baz=129
E21K Killik River **32.14 340** IAMs_20 IAMs_20 03 16 34.7
comp=Z,8µm,22.0s
E21K Killik River **32.14 340** P **P** **03 05 37.5 +1.1**
baz=136,SNR=20
E21K S **S** **03 10 50.9 +2.4**
baz=136
D22K Ayikyak River **32.14 342** IAMs_20 IAMs_20 03 16 48.7
comp=Z,5µm,21.0s
D22K Ayikyak River **32.14 342** P **P** **03 05 38.0 +1.6**
baz=138,SNR=21
D22K S **S** **03 10 52.0 +3.5**
baz=138
M11K Mekoryuk **32.23 322** IAMs_20 IAMs_20 03 15 47.0
comp=Z,6µm,21.0s
M11K Mekoryuk **32.23 322** P **P** **03 05 37.5 +0.3**
baz=110
M11K S **S** **03 10 52.9 +3.0**
baz=110
X51A Calhoun **32.26 87** IAMs_20 IAMs_20 03 18 21.6
comp=Z,9µm,20.0s
G17K Kiwalik Mounta **32.27 333** P **P** **03 05 38.2 +0.7**
baz=124,SNR=15
G17K S **S** **03 10 54.5 +4.0**
baz=124
E19K Redstone River **32.36 337** P **P** **03 05 39.6 +1.3**
baz=131
E19K S **S** **03 10 54.3 +2.4**
baz=131
H16K Elim **32.38 331** P **P** **03 05 39.7 +1.3**
baz=120,SNR=16
H16K S **S** **03 10 57.0 +4.9**
baz=120
C23K Itkillik River **32.41 344** IAMs_20 IAMs_20 03 17 00.8
comp=Z,6µm,20.0s
C23K Itkillik River **32.41 344** P **P** **03 05 40.5 +1.8**
baz=142,SNR=44
C23K S **S** **03 10 55.5 +2.9**
baz=142
F18K Selawik **32.56 335** P **P** **03 05 41.3 +1.3**
baz=126,SNR=19
F18K S **S** **03 10 57.7 +2.7**
baz=126
E20K Nigu River **32.60 339** P **P** **03 05 41.8 +1.3**
baz=133,SNR=58
E20K S **S** **03 10 58.1 +2.4**
baz=133
TKL Tuckaleechee C **32.68 85** LR LR 03 19 10.3
comp=Z,7µm,20.7s,baz=290,slow=37
Q52A Bidwell **32.77 78** IAMs_20 IAMs_20 03 20 07.0
comp=Z,11µm,19.0s
W52A Murphy **32.77 86** IAMs_20 IAMs_20 03 18 40.2
comp=Z,10µm,21.0s
M52A Chesterland **32.80 73** IAMs_20 IAMs_20 03 19 41.6
comp=Z,9µm,19.0s
G16K Koyuk River **32.81 332** IAMs_20 IAMs_20 03 16 56.2
comp=Z,5µm,18.0s
G16K Koyuk River **32.81 332** P **P** **03 05 43.2 +1.1**
baz=121,SNR=8.7
G16K S **S** **03 11 00.8 +2.0**
baz=121
C21K Knifeblade Rid **32.86 341** P **P** **03 05 44.6 +1.9**
baz=136,SNR=29
C21K S **S** **03 11 03.6 +3.9**
baz=136
F17K Baldwin Pennin **33.00 334** P **P** **03 05 45.3 +1.5**
baz=124
F17K S **S** **03 11 06.2 +4.5**
baz=124
D20K Etivluk River **33.02 340** P **P** **03 05 45.2 +1.1**
baz=133,SNR=18
D20K S **S** **03 11 03.9 +1.7**
baz=133
152A Waverly Hall **33.12 90** IAMs_20 IAMs_20 03 20 19.6
comp=Z,8µm,20.0s
Y52A Lilburn **33.14 88** IAMs_20 IAMs_20 03 18 48.9
comp=Z,7µm,21.0s
POHA Pohakuloa **33.15 241** IAMs_20 IAMs_20 03 16 05.6
comp=Z,8µm,19.0s
B21K Ikpikpuk River **33.16 342** IAMs_20 IAMs_20 03 17 31.6
comp=Z,5µm,20.0s
B21K Ikpikpuk River **33.16 342** P **P** **03 05 46.5 +1.4**
baz=136,SNR=25
B21K S **S** **03 11 08.3 +4.2**
baz=136
G15K Niukluk **33.22 331** P **P** **03 05 46.9 +1.1**
baz=119,SNR=18
G15K S **S** **03 11 09.7 +4.4**
baz=119
451A Vernon **33.25 94** IAMs_20 IAMs_20 03 20 05.1
comp=Z,10µm,20.0s
P53A Whipple **33.28 77** IAMs_20 IAMs_20 03 20 24.5
comp=Z,9µm,20.0s
D19K Kuna River **33.29 339** P **P** **03 05 47.1 +0.6**
baz=131
D19K S **S** **03 11 07.8 +1.4**
baz=131
E18K Tukpahlearik C **33.35 336** P **P** **03 05 48.2 +1.2**
baz=126,SNR=10
E18K S **S** **03 11 10.5 +3.1**
baz=126
V53A Saluda **33.41 84** IAMs_20 IAMs_20 03 20 09.1
comp=Z,7µm,19.0s
B22K Teshekpuk Lake **33.41 343** IAMs_20 IAMs_20 03 17 43.3
comp=Z,5µm,21.0s
B22K Teshekpuk Lake **33.41 343** P **P** **03 05 48.9 +1.5**
baz=139,SNR=31
B22K S **S** **03 11 11.7 +3.5**
baz=139
SPIA Saint Paul Isl **33.43 316** P **P** **03 05 48.6 +0.8**
baz=100
ANM Nome **33.53 330** IAMs_20 IAMs_20 03 17 43.3
comp=Z,6µm,18.0s
ANM Nome **33.53 330** P **P** **03 05 49.6 +1.1**
baz=117,SNR=18
ANM S **S** **03 11 12.9 +2.8**
baz=117
E17K Hotham Inlet **33.55 335** P **P** **03 05 49.8 +1.2**
baz=124,SNR=7.5
E17K S **S** **03 11 11.6 +1.3**
baz=124
BG3 Lake Jocassee **33.57 85** P **P** **03 05 49.9 +0.7**
BG3 IAmb IAmb 03 06 08.9
comp=Z,62nm,0.9s
ERPA Erie **33.67 72** IAMs_20 IAMs_20 03 20 14.7
comp=Z,10µm,18.0s
GOGA Godfrey **33.77 88** IAMs_20 IAMs_20 03 21 27.8
comp=Z,6µm,19.0s
SADO Sadowa **33.78 67** LR LR 03 20 33.9
comp=Z,9µm,19.0s,baz=302,slow=38
F15K North Star Dit **33.79 332** IAMs_20 IAMs_20 03 17 27.3
comp=Z,5µm,21.0s
F15K North Star Dit **33.79 332** P **P** **03 05 52.4 +1.6**
baz=119,SNR=23
F15K S **S** **03 11 17.9 +3.7**
baz=119
S54A Dingess, Beckl **33.83 80** IAMs_20 IAMs_20 03 20 35.2
comp=Z,9µm,19.0s
B20K Meade River **34.06 341** IAMs_20 IAMs_20 03 18 00.4
comp=Z,6µm,21.0s
B20K Meade River **34.06 341** P **P** **03 05 54.4 +1.3**
baz=134,SNR=29
B20K S **S** **03 11 19.3 +1.2**
baz=134
C19K Lookout Ridge **34.09 339** IAMs_20 IAMs_20 03 17 44.3
comp=Z,5µm,20.0s
C19K Lookout Ridge **34.09 339** P **P** **03 05 54.8 +1.3**
baz=130,SNR=23
C19K S **S** **03 11 21.2 +2.3**
baz=130
A22K Sinclair Lake **34.26 343** P **P** **03 05 56.5 +1.7**
baz=138,SNR=32
A22K S **S** **03 11 23.8 +2.6**
baz=138
C18K Utukok River **34.27 337** IAMs_20 IAMs_20 03 18 13.8
comp=Z,5µm,19.0s
C18K Utukok River **34.27 337** P **P** **03 05 55.7 +0.7**
baz=127
C18K S **S** **03 11 23.2 +1.6**
baz=127
D17K Noatak River **34.30 335** P **P** **03 05 56.2 +1.1**
baz=123,SNR=12
D17K S **S** **03 11 24.5 +2.6**
baz=123
F14K Arctic Creek **34.30 331** P **P** **03 05 56.5 +1.3**
baz=117,SNR=17
F14K S **S** **03 11 26.0 +4.0**
baz=117
154A Montrose **34.38 89** IAMs_20 IAMs_20 03 21 12.9
comp=Z,10µm,18.0s
MCWV Mont Chateau **34.38 76** IAMs_20 IAMs_20 03 20 53.6
comp=Z,10µm,20.0s
RDOG Red Dog Mine **34.44 336** P **P** **03 05 57.5 +1.1**
baz=124,SNR=12
RDOG S **S** **03 11 27.3 +3.2**
baz=124
TIGA Tifton **34.52 92** IAMs_20 IAMs_20 03 20 01.7
comp=Z,9µm,21.0s
BLA Blacksburg **34.69 81** IAMs_20 IAMs_20 03 21 10.9
comp=Z,10µm,18.0s
KMSC Kings Mountain **34.73 84** IAMs_20 IAMs_20 03 19 51.9
comp=Z,7µm,21.0s
C17K DeLong Mountai **34.76 336** P **P** **03 06 00.2 +1.0**
baz=124,SNR=32
C17K S **S** **03 11 30.6 +1.6**
baz=124
A21K Barrow **34.86 343** P **P** **03 06 01.4 +1.4**
baz=136,SNR=11
A21K S **S** **03 11 33.2 +2.8**
baz=136
CMIG Matias Romero **34.92 123** LR LR 03 20 00.2
comp=Z,5µm,20.9s,baz=258,slow=36
TNA Tin City **34.94 330** P **P** **03 06 01.8 +1.1**
baz=115,SNR=8.5
TNA S **S** **03 11 35.8 +4.0**
baz=115
A19K Wainwright **35.19 340** P **P** **03 06 04.2 +1.3**
baz=129
A19K S **S** **03 11 36.6 +1.0**
baz=129
C16K Lisburne Hills **35.33 335** P **P** **03 06 04.7 +0.7**
C16K IAmb IAmb 03 06 17.0
comp=Z,159nm,1.9s
C16K IAMs_20 IAMs_20 03 18 41.9
comp=Z,4µm,20.0s
C16K Lisburne Hills **35.33 335** P **P** **03 06 05.2 +1.2**
baz=121,SNR=30
C16K S **S** **03 11 41.9 +4.2**
baz=121
SSPA Standing Stone **35.56 74** P **P** **03 06 06.0 -0.4**
SSPA Standing Stone **35.56 74** IAMs_20 IAMs_20 03 20 27.8
comp=Z,9µm,22.0s
BIRD Birdtown, Kers **35.58 85** IAmb IAmb 03 06 24.9
comp=Z,108nm,1.1s

W57A Gilead 35.74 84 IAMs_20 IAMs_20 03 21 13.8
comp=Z,6µm,20.0s
GAMB Gambell 35.79 326 IAMs_20 IAMs_20 03 18 32.1
comp=Z,4µm,19.0s
GAMB Gambell 35.79 326 P **P** **03 06 09.2 +1.2**
baz=108,SNR=17
GAMB S **S** **03 11 47.3 +2.4**
baz=108
Y57A Sumter 35.88 86 IAMs_20 IAMs_20 03 20 34.4
comp=Z,9µm,20.0s
M57A Sunshine Farm, 35.93 72 IAMs_20 IAMs_20 03 21 02.6
comp=Z,8µm,21.0s
K57A Scipio Center 36.04 70 IAMs_20 IAMs_20 03 20 51.4
comp=Z,11µm,22.0s
456A Hilliard 36.04 92 IAMs_20 IAMs_20 03 22 02.8
comp=Z,8µm,20.0s
257A Skidaway Islan 36.24 89 IAMs_20 IAMs_20 03 23 24.1
comp=Z,5µm,20.0s
N58A Sunbury 36.37 73 IAMs_20 IAMs_20 03 21 42.9
comp=Z,8µm,21.0s
NHSC New Hope 36.41 87 IAMs_20 IAMs_20 03 20 51.4
comp=Z,6µm,19.0s
X58A Rowland 36.47 84 IAMs_20 IAMs_20 03 21 18.8
comp=Z,5µm,18.0s
Y58A Scranton 36.47 85 IAMs_20 IAMs_20 03 21 50.0
comp=Z,8µm,18.0s
ILON Igloolik, Nuna 36.83 24 IAmb IAmb 03 06 32.1
comp=Z,101nm,1.1s
KSPA Keystone Colle 36.87 72 P **P** **03 06 17.6 +0.1**
KSPA IAmb IAmb 03 06 29.2
comp=Z,205nm,1.6s
MVL Millersville 36.87 74 IAmb IAmb 03 06 20.5
comp=Z,151nm,1.2s
LONY Lake Ozonia 37.01 66 IAMs_20 IAMs_20 03 22 27.7
comp=Z,8µm,18.0s
RES Resolute Bay 37.12 13 LR LR 03 21 10.0
comp=Z,4µm,19.8s,baz=226,slow=36
TEIG Tepich 37.24 112 P **P** **03 06 21.7 +0.8**
TEIG IAmb IAmb 03 06 29.2
comp=Z,134nm,1.2s
TEIG IAMs_20 IAMs_20 03 17 40.9
comp=Z,4µm,19.0s
TEIG Tepich 37.24 112 P **P** **03 06 21.5 +0.6**
comp=Z,244nm,2.4s
DWPF Disney Wildern 37.76 95 IAMs_20 IAMs_20 03 23 00.3
comp=Z,9µm,19.0s
P61A Hammonton 38.11 74 IAMs_20 IAMs_20 03 23 51.1
comp=Z,8µm,19.0s
VT1 Waterbury 38.35 66 IAMs_20 IAMs_20 03 23 22.3
comp=Z,8µm,19.0s
J61A Chester 38.72 68 IAMs_20 IAMs_20 03 22 40.1
comp=Z,7µm,20.0s
HNH Hanover 38.82 67 IAMs_20 IAMs_20 03 23 45.8
comp=Z,8µm,20.0s
K62A Royalston 39.12 69 IAMs_20 IAMs_20 03 23 17.6
comp=Z,7µm,20.0s
061Z Ochoppi 39.33 98 IAMs_20 IAMs_20 03 23 08.0
comp=Z,7µm,22.0s
APG El Apazote 39.33 120 LR LR 03 24 06.2
comp=Z,215nm,18.3s,baz=224,slow=38
H62A Milan 39.41 66 IAMs_20 IAMs_20 03 22 30.2
comp=Z,7µm,20.0s
M63A Gales Ferry 39.60 71 IAmb IAmb 03 06 44.1
comp=Z,80nm,1.1s
HRV Adam Dziewonsk 39.64 69 P **P** **03 06 41.3 +0.4**
HRV IAmb IAmb 03 06 44.6
comp=Z,160nm,1.4s
HRV Adam Dziewonsk 39.64 69 P **P** **03 06 41.3 +0.4**
HRV pmax pmax
comp=Z,160nm,1.4s
HRV MLR MLR
comp=Z,8µm,18.0s
I63A Otisfield 39.94 66 IAMs_20 IAMs_20 03 22 47.2
comp=Z,7µm,19.0s
BCX Boston College 39.97 69 IAMs_20 IAMs_20 03 23 09.0
comp=Z,8µm,21.0s
FRB Frobisher Bay 40.08 35 LR LR 03 24 01.9
comp=Z,8µm,19.0s,baz=264,slow=37
WVL Waterville 40.45 65 IAmb IAmb 03 06 51.3
comp=Z,141nm,1.1s
WVL IAMs_20 IAMs_20 03 22 45.7
comp=Z,6µm,22.0s
PKME Peaks-Kenny Pk 40.54 64 P **P** **03 06 48.5 +0.3**
PKME IAmb IAmb 03 06 51.9
comp=Z,156nm,1.1s
M65A Busby, Falmout 40.56 70 P **P** **03 06 49.4 +0.9**
baz=287
M65A S **S** **03 12 60.0 +2.4**
baz=287
SCHQ Schefferville 40.65 49 P **P** **03 06 49.2 0.0**
comp=Z,90nm,0.9s,baz=277,slow=7.4,SNR=41
SCHQ LR LR 03 23 18.7
comp=Z,9µm,19.9s,baz=274,slow=36
comp=Z,90nm,0.9s
SCHQ Schefferville 40.65 49 P **P** **03 06 49.1 0.0**
SCHQ IAmb IAmb 03 06 54.6
comp=Z,145nm,1.1s
ICQ Pointe Anglais 41.02 57 P **P** **03 06 52.3 +0.1**
TGUH Tegucigalpa,Un 42.15 118 IAMs_20 IAMs_20 03 27 09.0
comp=Z,7µm,18.0s
TGUH Tegucigalpa,Un 42.15 118 P **P** **03 07 04.8 +2.8**
comp=Z,3µmcomp=Z,2µmcomp=Z,113nm,1.0s
BATG Bathurst New B 42.26 60 P **P** **03 07 02.2 -0.2**
BATG IAmb IAmb 03 07 05.8
comp=Z,138nm,1.0s
SHEM Shemya Is, Ala 42.37 308 LR LR 03 20 59.4
comp=Z,1µm,19.8s,baz=90,slow=31
TULEG Thule 43.40 16 IAMs_20 IAMs_20 03 22 50.5
comp=Z,8µm,21.0s
TULEG Thule 43.40 16 *i* P **P** **03 07 11.5 +0.2**
TULEG IAmb IAmb 03 07 13.4
comp=Z,20nm,0.8s
LMN Caledonia Moun 43.45 62 IAmb IAmb 03 07 16.0
comp=Z,157nm,1.1s
SIUN Universidad Ur 44.10 115 IAmb IAmb 03 07 28.6
comp=Z,78nm,1.3s
HAL Halifax 44.61 63 P **P** **03 07 20.6 -0.8**
HAL Halifax 44.61 63 P **P** **03 07 20.6 -0.8**
HAL pmax pmax
comp=Z,218nm,1.4s
JOHN Johnston Islan 44.97 252 IAMs_20 IAMs_20 03 21 12.7
comp=Z,4µm,20.0s
BILL Bilibino 45.37 331 P **P** **03 07 26.6 -0.6**
BILL IAMs_20 IAMs_20 03 24 44.6
comp=Z,3µm,18.0s
BILL Bilibino 45.37 331 *ce* P **P** **03 07 27.6 +0.4**
BILL pmax pmax
comp=Z,35nm,1.7s
BILL MLR MLR
comp=Z,3µm,17.0s
KULLO Kullorsuaq 45.69 20 *i* P **P** **03 07 30.2 +0.7**
KULLO IAmb IAmb 03 07 35.3
comp=Z,44nm,1.1s
UPNV Upernavik 45.77 23 *i* P **P** **03 07 30.5 +0.3**
UPNV IAmb IAmb 03 07 35.7
comp=Z,24nm,0.8s
JTS Las Juntas de 46.43 119 LR LR 03 28 17.9
comp=Z,3µm,20.4s,baz=327,slow=38
JTS Las Juntas de 46.43 119 IAMs_20 IAMs_20 03 29 35.7
comp=Z,3µm,20.0s
NIAQ Niaqornat 46.43 26 *i* P **P** **03 07 36.0 +0.7**
NIAQ IAmb IAmb 03 07 37.6
comp=Z,16nm,1.0s
ATTUG Attu 46.45 30 *i* P **P** **03 07 36.6 +1.0**
GDH Godhavn 46.46 28 *i* P **P** **03 07 36.6 +0.9**
GDH IAmb IAmb 03 07 38.6
comp=Z,156nm,1.7s
NUUG Nuugaatsiaq 46.60 25 *i* P **P** **03 07 37.4 +0.7**
NUUG IAmb IAmb 03 07 38.7
comp=Z,51nm,1.6s
SAQQ Saqqaq 47.00 27 *i* P **P** **03 07 37.9 -2.0**
SAQQ IAmb IAmb 03 07 41.1
comp=Z,28nm,1.1s
SAATT Saattut 47.10 26 *i* P **P** **03 07 41.6 +0.9**
SAATT IAmb IAmb 03 07 42.5
comp=Z,20nm,1.0s
HDC Heredia 47.20 118 IAMs_20 IAMs_20 03 28 43.1
comp=Z,5µm,20.0s
ILULI Ilulissat 47.33 28 *i* P **P** **03 07 43.4 +1.0**
ILULI IAmb IAmb 03 07 44.0
comp=Z,20nm,0.8s
NEEM North Greenlan 47.51 17 *i* P **P** **03 07 44.5 +0.3**
NEEM IAmb IAmb 03 07 46.8
comp=Z,53nm,1.1s
SFJD Kangerlussuaq 47.66 31 LR LR 03 26 47.7
comp=Z,7µm,18.9s,baz=276,slow=35
SFJD Kangerlussuaq 47.66 31 P **P** **03 07 44.7 -0.4**
SFJD IAmb IAmb 03 08 01.9
comp=Z,90nm,1.2s
SFJD Kangerlussuaq 47.66 31 P **P** **03 07 44.7 -0.4**
SFJD pmax pmax
comp=Z,90nm,1.3s
SFJD Kangerlussuaq 47.66 31 *i* P **P** **03 07 46.1 +1.0**
SFJD IAmb IAmb 03 07 47.8
comp=Z,59nm,1.2s
BBSR BB Station 48.47 79 P **P** **03 07 53.0 +1.3**
BBSR BB Station 48.47 79 IAMs_20 IAMs_20 03 26 41.4
comp=Z,5µm,21.0s
PIRO Carate, Puerto 48.89 119 P **P** **03 07 55.9 +0.7**
IVI Ivigtut 49.60 38 *i* P P 03 08 05.9 +5.9
SDDR Presa de Saban 50.54 98 IAmb IAmb 03 08 33.7
comp=Z,87nm,1.1s
SDDR IAMs_20 IAMs_20 03 29 27.1
comp=Z,6µm,21.0s
SDDR Presa de Saban 50.54 98 P P 03 08 12.4 +4.5
BCIP Isla Barro Col 50.72 115 IAMs_20 IAMs_20 03 29 40.1
comp=Z,3µm,22.0s
SUMG Summit 51.05 23 P **P** **03 08 11.3 -0.1**
SUMG Summit 51.05 23 P **P** **03 08 11.2 -0.1**
SUMG IAmb IAmb 03 08 18.9
comp=Z,59nm,1.0s
SUMG Summit 51.05 23 P **P** **03 08 11.2 -0.2**
SUMG pmax pmax
comp=Z,59nm,1.0s
SUMG MLR MLR
comp=Z,11µm,20.0s
SUMG Summit 51.05 23 *i* P **P** **03 08 11.7 +0.3**
SUMG IAmb IAmb 03 08 12.8
comp=Z,45nm,0.9s
PET Petropavlovsk 51.40 311 P **P** **03 08 13.6 -0.2**
PET IAmb IAmb 03 08 24.2
comp=Z,62nm,1.0s
PET Petropavlovsk 51.40 311 *eP* P **03 08 09.4 -4.4**
PET *eS* **S** **03 15 26.9 -6.2**
PET pmax pmax
comp=Z,500nm,8.5s
PET pmax pmax
comp=Z,300nm,7.5s
PET pmax pmax
comp=Z,200nm,13.8s
PET Petropavlovsk 51.40 311 P **P** **03 08 14.2 +0.4**
comp=Z,1µmcomp=Z,70nm,1.7s
BANI BANI 51.60 98 P **P** **03 08 17.6 +1.7**
SEY Seymchan 51.74 325 P **P** **03 08 16.2 0.0**
comp=Z,17nm,1.0s,baz=80,slow=9.3,SNR=27
SEY LR LR 03 28 23.8
comp=Z,3µm,20.8s,baz=76,slow=34
comp=Z,17nm,1.0s
SEY Seymchan 51.74 325 *ce* P **P** **03 08 16.8 +0.6**
SEY pmax pmax
comp=Z,47nm,1.7s
PEA0B Petropavlovsk- 51.92 312 IAmb IAmb 03 08 40.1
comp=Z,118nm,1.1s
PEA0B Petropavlovsk- 51.92 312 *i* P **P** **03 08 18.4 +0.7**
PETK Petropavlovsk- 51.92 312 P **P** **03 08 18.2 +0.5**
comp=Z,13nm,0.6s,baz=76,slow=12,SNR=24
PETK LR LR 03 27 03.4
comp=Z,1µm,21.9s,baz=80,slow=32
comp=Z,13nm,0.6s
MA2 Magadan 53.48 321 P **P** **03 08 29.8 +0.6**
comp=Z,9.1nm,0.8s,baz=84,slow=10,SNR=12
MA2 S **S** **03 16 01.2 -0.2**
comp=Z,0.9nm,0.2s,baz=140,slow=23,SNR=0.8
MA2 LR LR 03 30 28.4
comp=Z,1µm,18.5s,baz=67,slow=35
comp=Z,9.1nm,0.8s
MA2 Magadan 53.48 321 P **P** **03 08 29.2 +0.1**
MA2 Magadan 53.48 321 *ce* P **P** **03 08 29.7 +0.6**
MA2 pmax pmax
comp=Z,41nm,1.2s
APAC Apartado, Choc 53.88 113 P **P** **03 08 33.1 +0.4**
comp=Z,108nm,1.1s
UUPR Utuado, UPR, P 54.44 96 P **P** **03 08 36.2 -0.5**
DAG Danmarks Havn 54.69 16 *i* P **P** **03 08 37.0 -0.7**
DAG *i* P **P** **03 08 37.0 -0.7**
DAG IAmb IAmb 03 08 39.6
comp=Z,29nm,1.3s
UREC San Jos de U 54.72 112 P **P** **03 08 38.8 0.0**
comp=Z,37nm,1.2s
DBBC Dabeiba 54.76 114 P **P** **03 08 40.0 +0.8**
SJG San Juan 54.96 96 LR LR 03 33 18.1
comp=Z,3µm,21.6s,baz=282,slow=37
SJG San Juan 54.96 96 P **P** **03 08 40.6 +0.1**
SJG San Juan 54.96 96 IAMs_20 IAMs_20 03 32 56.0
comp=Z,4µm,20.0s
SJG San Juan 54.96 96 P **P** **03 08 40.6 +0.1**
SJG pmax pmax
comp=Z,140nm,1.1s
SJG MLR MLR
comp=Z,4µm,20.0s
SJG San Juan 54.96 96 P **P** **03 08 41.7 +1.2**
comp=Z,49nm,1.0s
DBG Daneborg 55.43 19 *i* P **P** **03 08 43.1 0.0**
DBG IAmb IAmb 03 08 44.7
comp=Z,61nm,1.5s
CBOC Ciudad Bolivar 55.72 115 P **P** **03 08 47.3 +1.1**
comp=Z,1µmcomp=Z,73nm,1.3s
OCAC Ocana 55.96 110 P **P** **03 08 49.1 +1.2**
comp=Z,1µmcomp=Z,49nm,0.6s
PLMC San Jos del P 56.21 116 P **P** **03 08 50.1 +0.5**
comp=Z,770nmcomp=Z,46nm,1.4s
PTBC PUERTO BERRIO, 56.33 113 P **P** **03 08 50.8 +0.4**
comp=Z,1µmcomp=Z,86nm,1.2s
GUY2C Guyana, Caldas 56.62 114 P **P** **03 08 54.6 +1.6**
comp=Z,1µmcomp=Z,102nm,1.1s
YOTC Yotoco, Valle 56.84 116 P **P** **03 08 54.8 +0.7**
comp=Z,602nmcomp=Z,57nm,1.2s
TIXI Tiksi 56.97 339 P **P** **03 08 53.5 -0.6**
comp=Z,15nm,0.8s,baz=78,slow=7.9,SNR=21
TIXI LR LR 03 33 56.2
comp=Z,2µm,20.3s,baz=72,slow=37
comp=Z,15nm,0.8s
TIXI Tiksi 56.97 339 P **P** **03 08 53.0 -1.1**
TIXI Tiksi 56.97 339 *ce* P **P** **03 08 54.0 -0.1**
TIXI pmax pmax
comp=Z,40nm,1.7s
TIXI MLR MLR
comp=Z,2µm,21.0s
PAMC Pamplona, Colo 57.02 110 P **P** **03 08 56.2 +0.3**
comp=Z,392nmcomp=Z,51nm,0.9s
JAMC Jamundi, Valle 57.17 117 P **P** **03 08 57.3 +0.7**
comp=Z,2µmcomp=Z,59nm,1.4s
BARC Barichara 57.20 112 P **P** **03 08 56.7 -0.1**
comp=Z,1µmcomp=Z,161nm,0.9s
SPBC San Pablo de B 57.22 113 P **P** **03 08 56.8 0.0**
comp=Z,1µmcomp=Z,28nm,1.2s
SMRT St. Maarten 57.34 94 IAMs_20 IAMs_20 03 35 16.9
comp=Z,4µm,21.0s
SDV Santo Domingo 57.47 107 P **P** **03 08 58.7 +0.1**
comp=Z,9.4nm,0.8s,baz=326,slow=5.4,SNR=11
SDV S **S** **03 16 56.7 +0.6**
comp=Z,1.4nm,0.3s,baz=13,slow=19,SNR=1.6
SDV LR LR 03 39 11.6
comp=Z,1µm,18.2s,baz=335,slow=42
comp=Z,9.4nm,0.8s
SDV Santo Domingo 57.47 107 P **P** **03 08 58.3 -0.4**
SDV IAmb IAmb 03 09 21.2
comp=Z,49nm,1.0s
SDV IAMs_20 IAMs_20 03 33 57.7
comp=Z,3µm,22.0s
SDV Santo Domingo 57.47 107 P **P** **03 08 59.3 +0.6**
comp=Z,767nmcomp=Z,55nm,1.6s
SDV Santo Domingo 57.47 107 *eP* P **03 08 59.7 +1.0**
ROSC El Rosal 57.62 114 P **P** **03 09 00.1 +0.2**
comp=Z,3.8nm,0.4s,baz=0.3,slow=7.0,SNR=7.2
ROSC S **S** **03 17 01.3 +2.8**
comp=Z,2.8nm,0.4s,baz=294,slow=20,SNR=1.0
ROSC LR LR 03 38 03.2
comp=Z,2µm,18.2s,baz=339,slow=40
comp=Z,3.8nm,0.4s
ROSC El Rosal 57.62 114 P P 03 09 07.9 +7.9
ORTC Ortega, Tolima 57.64 115 P **P** **03 09 00.0 +0.3**
comp=Z,1µmcomp=Z,48nm,1.0s
BBAC Balboa, Cauca 57.66 119 P **P** **03 09 01.2 +1.2**
comp=Z,932nmcomp=Z,57nm,1.5s
POPC Popayan, Colom 57.66 118 P **P** **03 09 00.0 0.0**
comp=Z,36nm,1.6s
RUSC La Rusia 57.75 112 P **P** **03 09 01.5 +0.5**
comp=Z,2µmcomp=Z,1µmcomp=Z,95nm,1.3s
CVER Cruz Verde, Cu 58.02 114 P **P** **03 09 03.5 +0.6**
comp=Z,4µmcomp=Z,207nm,1.3s
PRAC Prado 58.03 115 P **P** **03 09 04.0 +1.6**
comp=Z,953nmcomp=Z,37nm,1.4s
CHIC Chingaza 58.18 114 P **P** **03 09 04.5 +0.6**
comp=Z,1µmcomp=Z,101nm,1.2s
OTAV Otavalo 58.19 121 P **P** **03 09 03.4 -0.6**
OTAV IAmb IAmb 03 09 18.1
comp=Z,82nm,1.2s
OTAV Otavalo 58.19 121 P **P** **03 09 03.4 -0.6**
OTAV pmax pmax
comp=Z,82nm,1.3s
OTAV Otavalo 58.19 121 P **P** **03 09 05.7 +1.7**
comp=Z,1µmcomp=Z,52nm,1.3s
OTAV Otavalo 58.19 121 *eP* P **03 09 03.6 -0.4**
TULM Tulcn-Chalpat 58.26 120 P P 03 09 09.3 +4.7
ANWB Willy Bob 58.55 93 IAMs_20 IAMs_20 03 35 55.0
comp=Z,4µm,21.0s
VILC Villavicencio, 58.58 114 P **P** **03 09 08.3 +1.9**
comp=Z,304nmcomp=Z,35nm,0.7s
URMC La Uribe, Meta 58.72 115 P **P** **03 09 08.4 +1.1**
comp=Z,1µmcomp=Z,65nm,1.2s
GARC Garzon, Huila 58.72 117 P **P** **03 09 08.6 +1.1**
comp=Z,8µmcomp=Z,33nm,0.6s
CASC Dorado de Casc 58.99 120 P P 03 09 17.6 +8.4
FLOC Florencia 59.05 118 P **P** **03 09 12.2 +2.7**
comp=Z,2µmcomp=Z,924nmcomp=Z,81nm,1.5s
GDHS Morne Mazeau, 59.40 94 P **P** **03 09 11.4 -0.6**
GDHS IAMs_20 IAMs_20 03 39 06.5
comp=Z,4µm,19.0s
SPITS Spitsbergen Ar 59.47 9 P **P** **03 09 11.4 -0.2**
comp=Z,20nm,1.1s,baz=344,slow=2.1,SNR=4.2
comp=Z,20nm,1.1s
SPITS Spitsbergen Ar 59.47 9 P **P** **03 09 11.6 0.0**
SPITS pmax pmax
comp=Z,54nm,1.1s
ABD La Joyeuse, An 59.49 94 IAMs_20 IAMs_20 03 35 25.1
comp=Z,5µm,22.0s
BORG Borgarnes 59.69 29 LR LR 03 34 52.4
comp=Z,6µm,18.9s,baz=294,slow=36
MACC Macarena, Meta 59.88 116 P **P** **03 09 13.4 -1.8**
GDSD La Dsirade Is 59.91 94 IAMs_20 IAMs_20 03 35 37.2
comp=Z,5µm,22.0s
H05N1 Guadeloupe/Mar 59.92 94 P **P** **03 09 18.2 +2.7**
SNR=10
SVN Savane Anatole 60.73 95 IAMs_20 IAMs_20 03 35 34.0
comp=Z,3µm,21.0s
MCRA Macar, Loja 60.76 126 P **P** **03 09 21.8 +0.6**
H11N3 WAKE ISLAND Hy 60.91 272 T T 04 16 41.1
baz=54,slow=75,SNR=95
H11N2 WAKE ISLAND Hy 60.91 272 T T 04 16 53.2
baz=54,slow=75,SNR=95
H11N1 WAKE ISLAND Hy 60.93 272 T T 04 16 43.2
baz=54,slow=75,SNR=112
BIM Bigot 61.00 95 IAMs_20 IAMs_20 03 33 57.3
comp=Z,4µm,21.0s
MPOM Morne Pois Mar 61.21 95 IAMs_20 IAMs_20 03 34 42.6
comp=Z,4µm,22.0s
H05S1 Guadeloupe/Mar 61.24 95 P **P** **03 09 27.2 +2.7**
SNR=6.3
NKL Nikolayevsk 61.24 317 *eP* **P** **03 09 24.1 +0.1**
NKL *eS* **S** **03 17 44.3 +0.8**
NKL pmax pmax
comp=E,63nm,1.1s
NKL pmax pmax
comp=N,35nm,1.2s
NKL pmax pmax
comp=Z,64nm,0.8s
NKL smax smax
comp=E,135nm,5.3s
NKL smax smax
comp=N,233nm,4.5s
TYV Tymovskoe 61.31 314 *eP* **P** **03 09 25.5 +1.0**
TYV *eS* **S** **03 17 46.4 +1.9**
TYV pmax pmax
comp=Z,15nm,0.9s
TYV pmax pmax
comp=Z,200nm,2.1s
TYV smax smax
comp=N,400nm,5.0s
TYV smax smax
comp=E,200nm,5.0s
YAK Yakutsk 61.68 329 P **P** **03 09 25.9 -0.9**
comp=E,15nm,0.5s,baz=59,slow=3.3,SNR=15
YAK LR LR 03 34 22.6
comp=E,3µm,21.2s,baz=43,slow=34
comp=E,15nm,0.5s
YAK Yakutsk 61.68 329 P **P** **03 09 26.6 -0.1**
YAK Yakutsk 61.68 329 IAMs_20 IAMs_20 03 34 14.6
comp=Z,3µm,21.0s
YAK Yakutsk 61.68 329 *eP* **P** **03 09 26.7 -0.1**
YAK *e*PP **sP** **03 09 31.6 +0.7**
YAK *e* 03 10 03.1
YAK *e* 03 11 40.9
YAK *eS* **S** **03 17 49.8 +0.9**
YAK *e*SS sS 03 18 01.8 +8.4
YAK *e* 03 19 14.7
YAK *eSS* **SS** **03 21 49.3 -0.2**
YAK pmax pmax
comp=Z,36nm,1.1s
YAK pmax pmax
comp=N,10.0nm,1.5s
YAK pmax pmax
comp=E,12nm,1.1s
YAK pmax pmax
comp=Z,201nm,5.1s
YAK pmax pmax
comp=N,72nm,5.4s
YAK pmax pmax
comp=E,160nm,6.2s
YAK smax smax
comp=E,518nm,8.0s
YAK smax smax
comp=N,324nm,5.4s
YAK MLR MLR
comp=Z,2µm,20.0s
YAK MLR MLR
comp=N,899nm,26.0s
YAK MLR MLR
comp=E,2µm,22.0s
H11S1 WAKE ISLAND Hy 61.78 271 T T 04 18 00.1
baz=54,slow=75,SNR=471
H11S2 WAKE ISLAND Hy 61.79 271 T T 04 17 56.7
baz=54,slow=75,SNR=718
H11S3 WAKE ISLAND Hy 61.80 271 T T 04 18 02.1
baz=54,slow=75,SNR=535
PPT Papeete 61.98 207 P **P** **03 09 30.4 +1.1**
comp=E,13nm,0.8s,baz=341,slow=18,SNR=2.1
PPT LR LR 03 29 52.1
comp=E,2µm,18.9s,baz=22,slow=30
comp=E,13nm,0.8s
YSS Yuzhno-Sakhali 63.23 310 *eP* **P** **03 09 37.3 -0.1**
YSS *eS* **S** **03 18 08.6 -0.2**
YSS *eSS* SS 03 22 24.6 +10
YSS *eSSS* SSS 03 25 09.4
YSS pmax pmax
comp=Z,300nm,7.0s
YSS pmax pmax
comp=Z,30nm,1.3s
YSS smax smax
comp=N,400nm,6.7s
YSS smax smax
comp=E,300nm,6.9s
YSS MLR MLR
comp=Z,400nm,16.0s
YSS MLR MLR
comp=N,500nm,15.0s
YSS MLR MLR
comp=E,600nm,15.0s
ATAH Atahualpa 63.87 126 P **P** **03 09 44.5 +2.0**
comp=E,11nm,0.8s,baz=336,slow=8.4,SNR=11
comp=E,11nm,0.8s
GRNR Gornyy 64.73 316 *eP* **P** **03 09 50.0 +2.7**
ZEA Zeya 67.58 322 *eP* **P** **03 10 05.9 +0.4**
ZEA *eS* **S** **03 19 02.6 +0.6**
ZEA *e* 03 19 53.9
ZEA *eSS* **SS** **03 23 18.7 -3.0**
ZEA pmax pmax
comp=Z,100nm,8.8s
ZEA pmax pmax
comp=Z,10.0nm,1.2s
ZEA smax smax
comp=E,400nm,16.1s
TEY Ternei 67.87 311 *eP* **P** **03 10 02.7 -4.7**
TEY *e* 03 19 03.8
NRIK Noril'sk 67.99 348 P **P** **03 10 07.9 +0.1**
comp=E,14nm,1.0s,baz=24,slow=6.1,SNR=14
NRIK LR LR 03 42 12.6
comp=E,1µm,18.0s,baz=32,slow=38
comp=E,14nm,1.0s
NRIK Noril'sk 67.99 348 P **P** **03 10 07.3 -0.5**
NRIK IAmb IAmb 03 10 35.3

comp=Z,27nm,1.0s
NRIK Noril'sk 67.99 348 *i* P **P** **03 10 07.0 -0.8**
NRIK pmax pmax
comp=Z,13nm,1.0s
NRIK MLR MLR
comp=Z,1μm,17.0s
KLR Kul'dur 68.08 317 LR LR 03 39 55.9
comp=Z,419nm,18.9s,baz=44,slow=36
KLR Kul'dur 68.08 317 *ce*P **P** **03 10 09.0 +0.2**
KLR pmax pmax
comp=Z,6.0nm,1.0s
KLR MLR MLR
comp=Z,571nm,17.0s
ARCES ARCESS Array B 68.30 11 P **P** **03 10 10.1 +0.3**
comp=Z,7.0nm,1.1s,baz=322,slow=7.7,SNR=4.5
ARCES LR LR 03 41 20.7
comp=Z,2μm,18.3s,baz=332,slow=37
comp=Z,7.0nm,1.1s
ARCES ARCESS Array B 68.30 11 P **P** **03 10 09.5 -0.3**
ARCES IAmb IAmb 03 10 23.6
comp=Z,35nm,1.4s
ARCES ARCESS Array B 68.30 11 P **P** **03 10 09.5 -0.3**
ARCES pmax pmax
comp=Z,35nm,1.4s
KEV Kevo 68.30 10 IAMs_20 IAMs_20 03 41 48.3
comp=Z,3μm,18.0s
NNA Nana 68.62 128 P **P** **03 10 12.2 -0.3**
comp=Z,9.1nm,0.8s,baz=321,slow=9.8,SNR=4.3
NNA LR LR 03 38 27.6
comp=Z,556nm,18.6s,baz=338,slow=34
comp=Z,9.1nm,0.8s
NNA Nana 68.62 128 P **P** **03 10 11.5 -1.0**
NNA IAmb IAmb 03 10 48.0
comp=Z,49nm,1.3s
NNA IAMs_20 IAMs_20 03 36 20.5
comp=Z,1μm,19.0s
NNA Nana 68.62 128 P **P** **03 10 11.5 -1.0**
NNA pmax pmax
comp=Z,49nm,1.3s
RPN Rapa Nui 68.73 165 LR LR 03 33 44.1
comp=Z,997nm,18.6s,baz=346,slow=30
AFI Afiamalu 69.21 229 LR LR 03 32 59.4
comp=Z,3μm,21.6s,baz=47,slow=29
BOAV Boa Vista 69.24 105 P **P** **03 10 16.4 0.0**
BOAV IAmb IAmb 03 10 38.9
comp=Z,37nm,1.0s
BOAV Boa Vista 69.24 105 *e*P **P** **03 10 17.4 +0.9**
RAR Rarotonga 69.25 215 LR LR 03 33 18.4
comp=Z,2μm,21.3s,baz=21,slow=30
HEH HeiHe 69.68 319 *e*P **P** **03 10 18.4 -0.2**
HEH pP **pP** **03 10 22.0 +0.4**
HEH S **S** **03 19 27.0 0.0**
HEH pmax pmax
comp=Z,12nm,1.3s
HEH L L
comp=Z,510nm,14.2s
HEH L L
comp=Z,680nm,16.6s
HEH L L
comp=Z,1μm,15.7s
TEFE Tefe 70.32 113 *e*P **P** **03 10 23.9 +0.8**
LVZ Lovozero 70.98 8 P **P** **03 10 26.6 +0.2**
LVZ IAmb IAmb 03 10 33.7
comp=Z,56nm,1.1s
LVZ IAMs_20 IAMs_20 03 39 50.2
comp=Z,3μm,21.0s
LVZ Lovozero 70.98 8 *ce*P **P** **03 10 29.2 +2.8**
LVZ pmax pmax
comp=Z,56nm,1.0s
USRK Ussuriysk Ar. 71.01 312 P **P** **03 10 28.1 +1.2**
comp=Z,13nm,0.8s,baz=56,slow=6.0,SNR=16
comp=Z,13nm,0.8s
IDGL Inch Island, C 71.08 33 P **P** **03 10 26.9 -0.2**
APA Apatity 71.16 9 ‖ *e*P **P** **03 10 27.0 -0.4**
APA *e* 03 10 44.0
APA pmax pmax
comp=Z,12nm,1.1s
IGLA Glengowla, Co 71.44 35 P **P** **03 10 30.4 +1.1**
MJAR Matsushiro Arr 71.89 303 P **P** **03 10 32.2 -0.2**
comp=Z,8.0nm,0.9s,baz=40,slow=6.1,SNR=17
MJAR LR LR 03 37 02.4
comp=Z,717nm,19.9s,baz=60,slow=32
comp=Z,8.0nm,0.9s
MJAR Matsushiro Arr 71.89 303 P **P** **03 10 31.3 -1.1**
MJAR IAmb IAmb 03 10 37.6
comp=Z,56nm,2.0s
MJAR Matsushiro Arr 71.89 303 P **P** **03 10 31.3 -1.1**
MJAR pmax pmax
comp=Z,56nm,2.0s
MAJO Matsushiro 71.90 303 P **P** **03 10 31.9 -0.6**
MAJO IAmb IAmb 03 10 42.1
comp=Z,30nm,1.0s
MAJO Matsushiro 71.90 303 *i* P **P** **03 10 32.2 -0.2**
MAJO pmax pmax
comp=Z,19nm,0.8s
MJB9 Matsu-Tunnel 71.90 303 IAmb IAmb 03 10 43.1
comp=Z,30nm,1.0s
MDJ Mudanjiang 72.09 314 P **P** **03 10 34.3 +0.9**
MDJ S **S** **03 19 57.4 +2.2**
MDJ ScS **SKSac** **03 20 35.9 -1.6**
MDJ pmax pmax
comp=Z,11nm,1.9s
MDJ pmax pmax
comp=Z,340nm,7.3s
MDJ L L
comp=Z,1μm,16.2s
MDJ L L
comp=Z,190nm,14.9s
MDJ L L
comp=Z,1μm,16.2s
ILTH Belurgan, Co L 72.30 33 P **P** **03 10 34.2 -0.3**
BNX BinXian 72.56 316 ⇑P **P** **03 10 36.5 +0.3**
BNX S **S** **03 19 59.6 -1.0**
BNX pmax pmax
comp=Z,16nm,0.9s
BNX pmax pmax
comp=Z,290nm,6.0s
BNX L L
comp=Z,820nm,14.5s
BNX L L
comp=Z,760nm,18.5s
BNX L L
comp=Z,640nm,17.6s
EKA Eskdalemuir Ar 72.63 31 P **P** **03 10 35.9 -0.6**
comp=Z,5.7nm,1.0s,baz=304,slow=6.1,SNR=9.7
EKA LR LR 03 42 31.2
comp=Z,4μm,18.1s,baz=316,slow=36
comp=Z,5.7nm,1.0s
PSTR Posyet 72.65 311 *i* P **P** **03 10 37.9 +1.1**
NC303 NORSAR Array S 72.75 20 IAmb IAmb 03 10 53.8
comp=Z,35nm,1.1s
DSB Dublin 72.85 33 P **P** **03 10 39.7 +1.9**
NB2 NORSAR Subarra 72.86 21 P **P** **03 10 37.5 -0.3**
comp=Z,2.8nm,0.6s,baz=325,slow=6.2
NOA NORSAR Array B 72.86 21 P **P** **03 10 37.8 0.0**
comp=Z,3.7nm,0.7s,baz=327,slow=5.8,SNR=18
NOA LR LR 03 42 13.2
comp=Z,3μm,20.1s,baz=325,slow=36
comp=Z,3.7nm,0.7s
MACA Manacapuru-AM 72.90 110 P **P** **03 10 38.0 -0.5**
MACA IAmb IAmb 03 10 56.1
comp=Z,88nm,1.5s
MACA Manacapuru-AM 72.90 110 *e*P **P** **03 10 39.0 +0.5**
JHJ Hachijo jima 2 72.92 299 LR LR 03 34 06.9
comp=Z,883nm,21.9s,baz=44,slow=29
NAO01 NORSAR Array S 72.94 21 IAmb IAmb 03 10 53.6
comp=Z,60nm,1.2s
IWEX Carrickbyrne, 73.30 34 P **P** **03 10 41.9 +1.5**
MDP Montagnes des 73.36 98 P **P** **03 10 42.2 +0.8**
comp=Z,20nm,1.1s,baz=294,slow=6.8,SNR=7.6
MDP LR LR 03 46 39.4
comp=Z,2μm,19.5s,baz=317,slow=39
comp=Z,20nm,1.1s
HIA Hailar 74.06 322 IAMs_20 IAMs_20 03 48 02.8
comp=Z,1μm,20.0s
HFS Hagfors 74.29 20 P **P** **03 10 45.8 -0.3**
comp=Z,12nm,0.7s,baz=343,slow=4.6,SNR=16
HFS LR LR 03 42 47.1
comp=Z,6μm,19.8s,baz=327,slow=35
comp=Z,12nm,0.7s
CIT Chita 74.84 327 *e*P **P** **03 10 49.0 -0.5**
CIT pmax pmax
comp=Z,137nm,2.2s
CN2 Changchun 74.89 315 P **P** **03 10 50.8 +0.9**
CN2 sP pwP 03 10 57.9 +2.5
CN2 S **S** **03 20 25.1 -1.7**
CN2 SS **SS** **03 25 20.4 +6.4**
CN2 pmax pmax
comp=Z,20nm,1.6s
CN2 pmax pmax
comp=Z,300nm,5.0s
CN2 L L
comp=Z,700nm,16.0s
CN2 L L
comp=Z,700nm,16.0s
CN2 L L
comp=Z,800nm,24.0s
JCJ Chichijima 74.93 293 LR LR 03 36 40.9
comp=Z,2μm,20.9s,baz=56,slow=30
ADZR Andozero 75.21 8 *e*P **P** **03 10 48.4 -3.0**
ADZR S **S** **03 20 25.5 -4.3**
ADZR pmax pmax
comp=Z,52nm,1.8s
ADZR MLR MLR
comp=Z,2μm,16.0s
FINES FINESS Array B 75.87 14 P **P** **03 10 54.9 -0.3**
comp=Z,7.7nm,0.8s,baz=349,slow=4.8,SNR=12
FINES LR LR 03 45 27.2
comp=Z,2μm,19.5s,baz=340,slow=37
comp=Z,7.7nm,0.8s
FINES FINESS Array B 75.87 14 P **P** **03 10 54.3 -0.9**
BORU Boraas 76.17 22 *i* P **P** **03 10 57.3 +0.4**
FABU Falkenberg 76.69 22 *i* P **P** **03 11 00.2 +0.3**
SNY Shenyang 77.23 314 ⇑P **P** **03 11 04.0 +0.7**
SNY S **S** **03 20 55.1 +2.4**
SNY pmax pmax
comp=Z,15nm,1.0s
SNY pmax pmax
comp=Z,390nm,5.8s
SNY L L
comp=Z,460nm,17.3s
SNY L L
comp=Z,560nm,19.1s
SNY L L
comp=Z,1μm,19.2s
LPAZ La Paz 77.28 124 P **P** **03 11 04.5 +0.1**
comp=Z,7.0nm,0.8s,baz=335,slow=5.7,SNR=28
LPAZ LR LR 03 46 17.4
comp=Z,1μm,18.8s,baz=325,slow=37
comp=Z,7.0nm,0.8s
LPAZ La Paz 77.28 124 P **P** **03 11 03.3 -1.2**
LPAZ La Paz 77.28 124 P **P** **03 11 03.3 -1.2**
LPAZ pmax pmax
comp=Z,17nm,0.9s
LPAZ La Paz 77.28 124 *e*P **P** **03 11 04.6 +0.1**
ITTB Itaituba 77.31 107 *e*P **P** **03 11 04.5 +0.4**
KSRS Korea Array 77.69 309 P **P** **03 11 06.4 +0.5**
comp=Z,7.6nm,0.8s,baz=55,slow=5.5,SNR=26
KSRS LR LR 03 40 41.1
comp=Z,471nm,21.9s,baz=55,slow=32
comp=Z,7.6nm,0.8s
KS19 Wonju Array Si 77.70 309 IAmb IAmb 03 11 16.4
comp=Z,53nm,1.5s
KSAR Wonju Array Be 77.73 309 P **P** **03 11 06.0 -0.1**
KSAR Wonju Array Be 77.73 309 P **P** **03 11 06.0 -0.1**
LUNU Lund 78.08 23 *i* P **P** **03 11 08.0 +0.2**
MSVF Nonsavu 78.29 235 LR LR 03 39 46.1
comp=Z,3μm,19.1s,baz=32,slow=31
MSVF Nonsavu 78.29 235 P **P** **03 11 09.0 -0.5**
MSVF IAmb IAmb 03 12 30.7
comp=Z,95nm,2.0s
MSVF Nonsavu 78.29 235 P **P** **03 11 09.0 -0.5**
MSVF pmax pmax
comp=Z,95nm,2.0s
IRK Irkutsk 78.30 332 *e*P **P** **03 11 09.3 +0.2**
IRK pmax pmax
comp=Z,135nm,2.2s
KLMR Klimovskoe 78.35 8 *e*P **P** **03 11 08.6 -0.6**
KLMR *e* 03 14 06.5
KLMR S **S** **03 21 04.1 0.0**
KLMR pmax pmax
comp=Z,57nm,1.3s
KLMR MLR MLR
comp=Z,2μm,16.0s
BSEG Bad Segeberg 78.55 25 *e*P **P** **03 11 11.3 +0.9**
comp=Z,5.1nm,0.8s,baz=331,slow=5.2
JNU Nakatsue 78.73 304 LR LR 03 40 27.7
comp=Z,570nm,21.1s,baz=80,slow=32
HAMD Hammershus, De 78.77 22 *i* P **P** **03 11 11.9 +0.3**
HAMD IAmb IAmb 03 11 12.3
comp=Z,31nm,1.0s
TLY Talaya 78.98 332 P **P** **03 11 13.3 +0.4**
comp=Z,5.0nm,0.6s,baz=28,slow=4.8
TLY LR LR 03 46 21.1
comp=Z,1μm,18.1s,baz=27,slow=36
comp=Z,5.0nm,0.6s
TLY Talaya 78.98 332 P **P** **03 11 12.9 0.0**
TLY Talaya 78.98 332 *ce*P **P** **03 11 13.4 +0.5**
TLY pmax pmax
comp=Z,52nm,2.0s
UCC Uccle 79.02 30 *d*P **P** **03 11 13.6 +0.6**
NPGB Novo Progresso 79.40 109 *e*P **P** **03 11 15.8 +0.1**
PATCX Punta Patache 79.48 129 IAMs_20 IAMs_20 03 50 56.5
comp=Z,2μm,18.0s
PB08 IPOC Station P 79.56 128 IAMs_20 IAMs_20 03 38 37.6
comp=Z,1μm,19.0s
BMRD Maredsous 79.58 30 *d*P **P** **03 11 16.6 +0.6**
comp=Z,11nm,1.1s
BUG Bochum--Univer 79.58 28 *e*P **P** **03 11 17.9 +1.9**
comp=Z,7.3nm,1.0s,baz=331,slow=5.2
BGES Gesves 79.63 30 *d*P **P** **03 11 16.8 +0.4**
comp=Z,12nm,1.0s
XLT XiLinHaoTe 79.66 320 *e*P **P** **03 11 18.6 +1.8**
XLT PcP **PcP** **03 11 27.4 +2.8**
XLT S **S** **03 21 18.4 -0.5**
XLT sS SKSac 03 21 31.4 -2.1
XLT SS **SS** **03 26 28.5 +2.4**
XLT pmax pmax
comp=Z,13nm,1.0s
XLT pmax pmax
comp=Z,260nm,3.6s
XLT L L
comp=Z,82nm,12.9s
XLT L L
comp=Z,700nm,15.2s
XLT L L
comp=Z,960nm,16.9s
DOU Dourbes 79.68 30 *d*P **P** **03 11 15.0 -1.6**
MEM Membach 79.80 29 *d*P **P** **03 11 16.9 -0.3**
comp=Z,8.5nm,1.1s
RCHB Rochefort 79.87 30 *d*P **P** **03 11 18.0 +0.4**
comp=Z,11nm,1.0s
MOY Mondy 79.94 333 *e*P **P** **03 11 19.2 +1.0**
MOY pmax pmax
comp=Z,65nm,2.4s
PGAV Gavieira, Arco 80.06 43 *e*LR LR 03 37 49.1
PGAV *i* IAMs_20 IAMs_20 03 42 26.5
comp=Z,3μm,20.0s
VILB Vilhena 80.08 116 IAmb IAmb 03 11 44.0
comp=Z,59nm,0.8s
VILB Vilhena 80.08 116 *e*P **P** **03 11 20.4 +1.1**
ZAK Zakamensk 80.17 331 *e*P **P** **03 11 19.6 +0.1**
ZAK pmax pmax
comp=Z,28nm,2.1s
ASSE Asse, Remlinge 80.19 26 *e*P **P** **03 11 19.8 +0.6**
comp=Z,4.7nm,0.8s,baz=331,slow=5.2
CLZ Clausthal 80.33 26 *e*P **P** **03 11 21.0 +0.8**
baz=331,slow=5.2
DL2 Dalian 80.33 313 P **P** **03 11 18.2 -2.2**
DL2 S **S** **03 21 27.5 +1.6**
DL2 SS **SS** **03 26 36.8 +0.6**
DL2 pmax pmax
comp=Z,24nm,0.9s
DL2 pmax pmax
comp=Z,520nm,5.7s
DL2 L L
comp=Z,670nm,14.7s
DL2 L L
comp=Z,900nm,15.6s
DL2 L L
comp=Z,830nm,19.1s
ULN Ulaanbaatar 80.72 327 P **P** **03 11 22.0 -0.5**
ULN Ulaanbaatar 80.72 327 IAMs_20 IAMs_20 03 45 41.0
comp=Z,2μm,22.0s
ULN Ulaanbaatar 80.72 327 *ce*P **P** **03 11 22.4 -0.1**
ULN pmax pmax
comp=Z,46nm,2.1s
POLO Lamas de Olo 80.74 43 *e*P **P** **03 11 23.1 +0.5**
POLO *i* IAmb IAmb 03 11 27.9
comp=Z,28nm,1.3s
PVRL Vila Real 80.85 43 *e*P **P** **03 11 24.1 +0.9**
PVRL *i* IAmb IAmb 03 11 36.2
comp=Z,92nm,1.5s
PABE Paberze 80.93 17 IAmb IAmb 03 11 52.6
comp=Z,68nm,1.1s
PBRG Braganca 80.96 42 *e*P **P** **03 11 24.3 +0.5**
PBRG *i* IAmb IAmb 03 11 27.1
comp=Z,43nm,1.9s
TNS Taunus Mts 81.01 28 *e*P **P** **03 11 25.3 +1.4**
comp=Z,3.0nm,0.9s,baz=331,slow=5.2
SONM Songino Array 81.01 328 P **P** **03 11 24.8 +0.8**
comp=Z,6.6nm,1.0s,baz=50,slow=3.7,SNR=34
SONM S **S** **03 21 33.8 +0.7**
comp=Z,0.2nm,0.4s,baz=108,slow=4.7,SNR=1.0
SONM LR LR 03 46 34.8
comp=Z,2μm,21.7s,baz=30,slow=35
comp=Z,6.6nm,1.0s
PB05 IPOC Station P 81.02 130 IAmb IAmb 03 11 44.8
comp=Z,56nm,1.4s
PVIS Viseu 81.16 43 *e*P **P** **03 11 25.1 +0.2**
GKP Gorka Klasztor 81.23 22 *e*P **P** **03 11 25.7 +0.8**
MVO Moncorvo 81.28 42 *e*P **P** **03 11 27.1 +1.6**
MVO *i* IAmb IAmb 03 11 38.9
comp=Z,63nm,1.5s
MVO *e*LR LR 03 38 13.3
MVO *i* IAMs_20 IAMs_20 03 43 03.2
comp=Z,3μm,20.0s
KIRV Kirov 81.31 3 LR LR 03 50 45.9
comp=Z,1μm,20.4s,baz=351,slow=38
KIRV Kirov 81.31 3 *ce*P **P** **03 11 25.9 +0.7**
PCAS Casmilo, Conde 81.32 44 *e*P **P** **03 11 26.4 +0.7**
PCAS *i* IAmb IAmb 03 12 19.4
comp=Z,81nm,1.8s
NEUB Neuenburg 81.33 26 *e*P **P** **03 11 26.4 +0.9**
comp=Z,12nm,0.8s,baz=331,slow=5.2
PMOZ Porto Moniz, M 81.36 54 *e*P **P** **03 11 29.8 +3.6**
PMOZ *e*LR LR 03 38 14.3
PMOZ *i* IAMs_20 IAMs_20 03 44 07.5
comp=Z,2μm,20.0s
GUMO Guam 81.36 280 LR LR 03 39 37.9
comp=Z,1μm,21.8s,baz=60,slow=30
PDRB Porto dos Gac 81.55 113 *e*P **P** **03 11 26.5 -0.7**
PSBE So Bento 81.55 45 *e*P **P** **03 11 28.1 +1.2**
MTE Manteigas 81.57 43 *e*P **P** **03 11 28.5 +1.4**
MTE *i* IAmb IAmb 03 11 39.4
comp=Z,52nm,1.6s
MTE *e*LQ LQ 03 34 21.1
MTE *e*LR LR 03 38 06.9
MTE *i* IAMs_20 IAMs_20 03 43 11.1
comp=Z,3μm,20.0s
CLL Collm 81.65 25 *i* P **P** **03 11 27.6 +0.4**
CLL pmax pmax
comp=Z,17nm,1.0s
CLL MLR MLR
comp=Z,4μm,21.7s
CLL Collm 81.65 25 *i* P **P** **03 11 27.6 +0.4**
comp=Z,17nm,1.0s
CLL *e*S S 03 21 54.0 +15
CLL *e*SS SS 03 27 24.0 +29
CLL AMS AMS 03 45 00.0
comp=Z,4μm,21.7s
CLL Collm 81.65 25 *e*P **P** **03 11 27.4 +0.2**
comp=Z,6.9nm,0.8s,baz=331,slow=5.2
SIV San Ignacio 81.65 119 P **P** **03 11 27.9 +0.2**
comp=Z,10.0nm,0.7s,baz=274,slow=4.5
SIV LR LR 03 51 48.9
comp=Z,1μm,18.1s,baz=336,slow=39
comp=Z,10.0nm,0.7s
CLDB Colider 81.70 112 *e*P **P** **03 11 29.0 +1.0**
MOX Moxa 81.76 26 *e*P **P** **03 11 28.5 +0.7**
comp=Z,5.5nm,0.9s,baz=331,slow=5.2
PSARD Sardoal 81.83 44 *e*P **P** **03 11 28.8 +0.5**
PSARD *i* IAmb IAmb 03 11 41.3
comp=Z,72nm,1.5s
KNGR Kungurtug, Tuv 82.02 334 *i* P **P** **03 11 30.5 +1.2**
KNGR pmax pmax
comp=Z,25nm,1.2s
KNGR MLR MLR
comp=Z,1μm,18.0s
PCBR Castelo Branco 82.02 44 *e*P **P** **03 11 29.7 +0.4**
PCBR *i* IAmb IAmb 03 11 42.7
comp=Z,47nm,1.6s
SUW Suwalki 82.11 18 *e*P **P** **03 11 29.7 +0.1**
PMTG Montargil 82.18 44 *e*P **P** **03 11 30.7 +0.5**
PMTG *i* IAmb IAmb 03 11 37.9
comp=Z,36nm,1.8s
TANN Tannenbergstha 82.24 26 *e*P **P** **03 11 30.6 +0.3**
comp=Z,3.2nm,0.8s,baz=331,slow=5.2
PB14 IPOC Station P 82.27 131 P **P** **03 11 29.5 -1.5**
PB14 IPOC Station P 82.27 131 IAmb IAmb 03 11 45.2
comp=Z,37nm,1.1s
AF01 San Pedro de A 82.28 129 IAmb IAmb 03 11 33.6
comp=Z,44nm,0.9s
BRG Berggiesshubel 82.33 25 *e*P **P** **03 11 31.0 +0.3**
comp=Z,15nm,0.8s,baz=331,slow=5.2
PMRV Marv??o 82.36 44 *e*P **P** **03 11 31.4 +0.2**
PMRV *i* IAmb IAmb 03 11 44.2
comp=Z,50nm,1.3s
PMRV *e*LQ LQ 03 36 16.6
PMRV *e*LR LR 03 38 29.9
PMRV *i* IAMs_20 IAMs_20 03 43 33.3
comp=Z,2μm,22.0s
NKC Novy Kostel 82.39 26 AMS AMS 03 52 00.0
comp=Z,4μm,15.6s
HSKC Hora Svate Kat 82.39 25 *e*P **P** **03 11 32.1 +1.0**
HSKC AMS AMS 03 47 50.0
comp=Z,4μm,18.7s
GRA1 Grafenberg Arr 82.43 27 IAmb IAmb 03 12 06.9
comp=Z,36nm,1.3s
GRF Grafenberg Arr 82.43 27 *e*P **P** **03 11 32.3 +0.9**
comp=Z,7.4nm,0.8s,baz=331,slow=5.2
BJI2 Beijing 82.46 317 P **P** **03 11 32.4 +0.7**
BJI2 sP **pwP** **03 11 39.6 +2.3**
BJI2 PP **PP** **03 14 41.0 +0.9**
BJI2 S **S** **03 21 44.8 -3.2**
BJI2 pmax pmax
comp=Z,100nm,6.7s
BJI2 L L
comp=Z,440nm,23.5s
BJI2 L L
comp=Z,250nm,23.5s
BJI2 L L
comp=Z,690nm,32.9s
PARRA Arraiolos 82.46 45 *e*P **P** **03 11 31.9 +0.2**
PARRA *i* IAmb IAmb 03 11 55.5
comp=Z,43nm,1.4s
MANZ Manzenberg 82.48 26 *e*P **P** **03 11 32.0 +0.4**
comp=Z,0.9nm,0.8s,baz=331,slow=5.2
BFO Black Forest 82.53 29 *e*P **P** **03 11 33.6 +1.7**
comp=Z,3.1nm,0.8s,baz=331,slow=5.2
PTLB Pontes e Lacer 82.57 117 IAmb IAmb 03 11 51.7
comp=Z,28nm,1.1s
PTLB Pontes e Lacer 82.57 117 *e*P **P** **03 11 33.2 +0.8**
ZAA0 Zalesovo Array 82.59 343 IAmb IAmb 03 11 47.6
comp=Z,34nm,1.2s
ZALV Zalesovo Beam 82.59 343 P **P** **03 11 32.4 +0.4**
comp=Z,5.0nm,0.7s,baz=19,slow=5.0,SNR=22
ZALV S **S** **03 21 48.8 0.0**
comp=Z,0.4nm,0.4s,baz=106,slow=9.6,SNR=1.5
ZALV LR LR 03 50 15.1
comp=Z,843nm,20.7s,baz=9.5,slow=37
comp=Z,5.0nm,0.7s
ZALV Zalesovo Beam 82.59 343 P **P** **03 11 32.2 +0.2**
ZALV Zalesovo Beam 82.59 343 *i* P **P** **03 11 32.7 +0.6**
ZALV pmax pmax
comp=Z,6.0nm,0.8s
PESTR Estremoz 82.67 44 P **P** **03 11 31.3 -1.5**
PESTR Estremoz 82.67 44 IAmb IAmb 03 11 58.9
comp=Z,58nm,1.6s
PESTR Estremoz 82.67 44 *e*P **P** **03 11 32.7 -0.1**
PESTR *i* IAmb IAmb 03 11 36.4
comp=Z,34nm,1.4s
EVO Evora 82.68 45 P **P** **03 11 31.6 -1.2**
EVO Evora 82.68 45 *e*P **P** **03 11 33.0 +0.1**
EVO *i* IAmb IAmb 03 11 36.7
comp=Z,38nm,1.6s
MNK Minsk 82.70 15 *i* P **P** **03 11 31.6 -1.1**
comp=E,12nm,1.0s
MNK *i* P **P** **03 11 31.6 -1.1**
comp=N,6.0nm,0.7s
MNK *i* P **P** **03 11 31.6 -1.1**
comp=Z,15nm,0.8s,baz=340
MNK *i* PP **PP** **03 14 42.3 +0.7**
MNK *i* PPP PPP 03 16 35.2
MNK *i* S **S** **03 21 49.5 -0.5**
MNK *i* SS **SS** **03 27 13.0 +2.5**
MNK *i* SSS SSS 03 30 42.5
MNK *i* LQ LQ 03 43 10.8
MNK *i* LR LR 03 48 19.9

MNK *i* LRM MLR 03 49 21.4
comp=E,1µm,15.9s
MNK *i* LRM MLR 03 49 48.6
comp=N,2µm,16.6s
MNK *i* LRM MLR 03 49 51.5
comp=Z,3µm,15.5s
MNK Minsk 82.70 15 *i* P **P** **03 11 31.5 -1.1**
MNK *i* 03 14 42.2
MNK *i* PPP PPP 03 16 35.1
MNK *i* S **S** **03 21 49.4 -0.5**
MNK *i* SS **SS** **03 27 12.9 +2.5**
MNK *i* SSS SSS 03 30 42.4
MNK pmax pmax
comp=E,12nm,1.0s
MNK pmax pmax
comp=N,6.0nm,0.7s
MNK pmax pmax
comp=Z,15nm,0.8s
MNK MLR MLR
comp=E,1µm,16.0s
MNK MLR MLR
comp=N,2µm,17.0s
MNK MLR MLR
comp=Z,3µm,15.0s
ROTZ Rotzenmuhle 82.71 26 *eP* **P** **03 11 33.2 +0.4**
comp=Z,0.4nm,0.8s,baz=331,slow=5.2
PVCC Panska Ves 82.83 25 *eP* **P** **03 11 34.9 +1.5**
PVCC AMS AMS 03 46 30.0
comp=Z,5µm,22.5s
PRPB Parauapebas 82.87 104 *eP* **P** **03 11 34.9 +0.8**
SVE Sverdlovsk 83.05 357 *eP* **P** **03 11 35.4 +1.0**
SVE *eS* **S** **03 21 53.9 +0.5**
SVE pmax pmax
comp=Z,19nm,1.2s
MESJ Messejana 83.07 45 *eP* **P** **03 11 35.4 +0.5**
MESJ IAMs_20 IAMs_20 03 46 19.0
comp=Z,3µm,20.0s
MESJ Messejana 83.07 45 *eP* **P** **03 11 35.7 +0.8**
MESJ Messejana 83.07 45 *eP* **P** **03 11 35.4 +0.5**
KSP Ksiaz 83.09 23 *eP* **P** **03 11 35.2 +0.5**
KSP Ksiaz 83.09 23 P **P** **03 11 35.5 +0.8**
comp=Z,22nm,1.9s
KSP pP **sP** **03 11 38.8 0.0**
comp=Z,22nm,1.9s
MOS Moscow 83.14 10 *eP* **P** **03 11 33.4 -1.5**
MOS *eS* **S** **03 21 51.7 -2.6**
MOS *eSS* **SS** **03 27 16.8 -0.1**
MOS pmax pmax
comp=Z,29nm,1.2s
MOS MLR MLR
comp=N,2µm,18.0s
MOS MLR MLR
comp=Z,2µm,18.0s
MORF Marmelete 83.22 46 *eP* **P** **03 11 35.9 +0.2**
MORF IAMs_20 IAMs_20 03 43 52.7
comp=E,3µm,26.3s
MORF Marmelete 83.22 46 *eP* **P** **03 11 37.0 +1.2**
MORF Marmelete 83.22 46 *eP* **P** **03 11 35.9 +0.2**
R9F13 Warsaw-Wawer 83.23 20 *eP* **P** **03 11 36.9 +1.5**
CHVC Chvalec 83.24 24 *eP* **P** **03 11 36.4 +0.9**
CHVC MLR MLR
comp=Z,6µm,19.7s
CHVC Chvalec 83.24 24 *eP* **P** **03 11 36.4 +0.9**
CHVC AMS AMS 03 47 50.0
comp=Z,6µm,19.7s
PRU Pruhonice 83.29 25 *eP* **P** **03 11 36.7 +0.9**
PRU MLR MLR
comp=Z,4µm,21.2s
PRU Pruhonice 83.29 25 *eP* **P** **03 11 36.7 +0.9**
PRU AMS AMS 03 46 50.0
comp=Z,4µm,21.2s
UPC Upice 83.30 24 AMS AMS 03 47 50.0
comp=Z,6µm,19.2s
OSTC Ostas 83.32 24 *eP* **P** **03 11 37.1 +1.2**
OSTC MLR MLR
comp=Z,6µm,19.2s
OSTC Ostas 83.32 24 *eP* **P** **03 11 37.1 +1.2**
OSTC AMS AMS 03 47 50.0
comp=Z,6µm,19.2s
PCVE Castro Verde 83.32 45 P **P** **03 11 34.1 -2.0**
PCVE Castro Verde 83.32 45 *eP* **P** **03 11 38.0 +1.8**
PBAR Barrancos 83.47 44 P **P** **03 11 34.3 -2.6**
PBAR Barrancos 83.47 44 *eP* **P** **03 11 38.2 +1.3**
PBAR *i* IAmb IAmb 03 11 39.7
comp=Z,45nm,1.7s
WET Wettzell 83.47 26 *eP* **P** **03 11 37.0 +0.3**
comp=Z,1.6nm,0.9s,baz=331,slow=5.2
BEL Belsk 83.49 21 *eP* **P** **03 11 38.1 +1.4**
DPC Dobruska-Polom 83.53 24 *eP* **P** **03 11 38.3 +1.2**
DPC MLR MLR
comp=Z,5µm,19.2s
DPC Dobruska-Polom 83.53 24 *eP* **P** **03 11 38.3 +1.2**
DPC AMS AMS 03 48 00.0
comp=Z,5µm,19.2s
ARTI Arti 83.57 358 LR LR 03 48 31.0
comp=Z,632nm,21.8s,baz=354,slow=36
ARTI Arti 83.57 358 P **P** **03 11 36.6 -0.5**
ARTI IAmb IAmb 03 11 38.1
comp=Z,14nm,0.7s
ARTI IAMs_20 IAMs_20 03 54 13.6
comp=Z,1µm,18.0s
ARTI Arti 83.57 358*d* iP **P** **03 11 37.6 +0.5**
ARTI 03 14 50.2
ARTI S **SKSac** **03 21 59.5 +0.1**
ARTI SS **SS** **03 27 27.7 +4.5**
ARTI pmax pmax
comp=Z,20nm,1.0s
OBN Obninsk 83.61 10 LR LR 03 51 56.1
comp=Z,1µm,18.9s,baz=346,slow=38
OBN Obninsk 83.61 10*de* P **P** **03 11 37.2 -0.1**
OBN *e**SP **pwP** **03 11 45.0 +2.2**
OBN *e* 03 14 49.8
OBN *e*PPP PPP 03 16 43.7
OBN *e*S **S** **03 21 52.2 -6.9**
OBN *e*SS **SS** **03 27 27.6 +3.8**
OBN pmax pmax
comp=Z,52nm,1.7s
ZVC Zvikov 83.65 25 *eP* **P** **03 11 38.8 +1.2**
ZVC AMS AMS 03 52 40.0
comp=Z,4µm,17.9s
KHC Kasperske Hory 83.71 26 IAmb IAmb 03 11 40.6
comp=Z,35nm,1.7s
KHC Kasperske Hory 83.71 26*ce* P **P** **03 11 39.4 +1.4**
KHC pmax pmax
comp=Z,32nm,2.5s
KHC MLR MLR
comp=Z,2µm,18.0s
KHC Kasperske Hory 83.71 26 *eP* **P** **03 11 39.0 +0.9**
KHC AMS AMS 03 53 10.0
comp=Z,3µm,14.2s
KHC Kasperske Hory 83.71 26 P **P** **03 11 38.9 +0.9**
comp=Z,12nm,2.5s
UBR Ueberruh 83.73 29 *eP* **P** **03 11 39.5 +1.3**
comp=Z,5.1nm,0.9s,baz=331,slow=5.2
SANVU Saraoutou 83.75 244 IAMs_20 IAMs_20 03 38 28.6
comp=Z,2µm,22.0s
UCM Universidad Co 83.84 41 P **P** **03 11 37.6 -1.2**
PAB San Pablo 83.86 42 P **P** **03 11 38.9 -0.1**
PAB IAmb IAmb 03 12 16.4
comp=Z,32nm,1.4s
PAB San Pablo 83.86 42 P **P** **03 11 38.9 -0.1**
PAB pmax pmax
comp=Z,32nm,1.4s
KRLC Kraliky 83.91 24 *eP* **P** **03 11 40.1 +1.1**
KRLC MLR MLR
comp=Z,5µm,19.4s
KRLC Kraliky 83.91 24 *eP* **P** **03 11 40.1 +1.1**
KRLC AMS AMS 03 48 10.0
comp=Z,5µm,19.4s
ESBB Sonseca Array 83.96 42 IAmb IAmb 03 11 52.1
comp=Z,23nm,1.2s
ESDC Sonseca Array 83.96 42 P **P** **03 11 39.7 +0.2**
comp=Z,7.0nm,0.8s,baz=311,slow=4.6,SNR=41
ESDC LR LR 03 45 39.6
comp=Z,2µm,21.1s,baz=309,slow=33
comp=Z,7.0nm,0.8s
ESDC Sonseca Array 83.96 42 P **P** **03 11 39.1 -0.4**
DAVA Damuels 83.98 29 *i* PcP **P** **03 11 40.2 +0.7**
comp=Z,20nm,1.7s
GEC2 GERESS Array S 84.00 26 *eP* **P** **03 11 39.8 +0.3**
comp=Z,3.5nm,0.9s,baz=331,slow=5.2
GERES GERESS Array B 84.00 26 P **P** **03 11 39.9 +0.3**
comp=Z,3.2nm,0.9s,baz=343,slow=4.2,SNR=16
GERES LR LR 03 50 51.4
comp=Z,3µm,18.4s,baz=327,slow=37
comp=Z,3.2nm,0.9s
RETA Reutte 84.14 28 *i* PcP **PcP** **03 11 41.3 -2.8**
comp=Z,13nm,1.2s
HHC Hu-ho-hao-te 84.16 320 ⇓*i* P **P** **03 11 41.7 +1.2**
HHC sP pwP 03 11 51.0 +4.8
HHC S **SKSac** **03 22 03.0 -1.0**
HHC SS **SS** **03 27 33.1 0.0**
HHC pmax pmax
comp=Z,17nm,1.2s
HHC pmax pmax
comp=Z,190nm,6.6s
HHC L L
comp=Z,600nm,16.9s
HHC L L
comp=Z,1µm,16.7s
HHC L L
comp=Z,1µm,18.6s
TREC Trest 84.19 25 AMS AMS 03 47 20.0
comp=Z,5µm,22.8s
CEST Esterri de Car 84.22 37 IAmb IAmb 03 11 59.8
comp=Z,49nm,1.3s
CKRC Cesky Krumlov 84.22 26 *eP* **P** **03 11 41.6 +1.0**
CKRC MLR MLR
comp=Z,3µm,13.9s
CKRC Cesky Krumlov 84.22 26 *eP* **P** **03 11 41.6 +1.0**
CKRC AMS AMS 03 53 30.0
comp=Z,3µm,13.9s
MOTA Moosalm 84.38 28 *i* PcP **P** **03 11 42.2 +0.6**
comp=Z,18nm,1.2s,SNR=6.3
DAVOX Davos/Dischmat 84.41 29 LR LR 03 50 16.8
comp=Z,5µm,18.5s,baz=324,slow=36
MORC Moravsky Berou 84.41 23 ⇑P **P** **03 11 42.4 +0.8**
MORC Moravsky Berou 84.41 23 P **P** **03 11 42.3 +0.8**
MORC Moravsky Berou 84.41 23 *eP* **P** **03 11 41.9 +0.3**
TUE Stuetta 84.47 30 IAmb IAmb 03 12 16.7
comp=Z,75nm,1.9s
FETA Feichten 84.52 29 *i* PcP **PcP** **03 11 43.3 -2.7**
comp=Z,18nm,1.1s,SNR=7.1
SQTA Sankt Quirin 84.52 28 *i* PcP **PcP** **03 11 43.5 -2.4**
comp=Z,25nm,1.2s,SNR=8.5
VRAC Vranov 84.53 24 LR LR 03 50 10.9
comp=Z,3µm,18.4s,baz=326,slow=36
VRAC Vranov 84.53 24 ⇓P **P** **03 11 43.4 +1.2**
VRAC Vranov 84.53 24 P **P** **03 11 43.3 +1.2**
VRAC Vranov 84.53 24 *eP* **P** **03 11 42.8 +0.7**
OKC Ostrava-Krasne 84.53 23 *eP* **P** **03 11 43.2 +1.1**
OKC MLR MLR
comp=Z,4µm,21.7s
OKC Ostrava-Krasne 84.53 23 *eP* **P** **03 11 43.2 +1.1**
OKC AMS AMS 03 48 50.0
comp=Z,4µm,21.7s
WATA Walderalm 84.56 28 *i* PcP **PcP** **03 11 43.3 -2.7**
comp=Z,22nm,1.1s,SNR=6.7
JOW Kunigami 84.59 301 LR LR 03 43 21.3
comp=Z,512nm,21.6s,baz=78,slow=31
BNI Bardonecchia 84.59 32 P **P** **03 11 43.7 +1.0**
BNI IAmb IAmb 03 12 18.5
comp=Z,51nm,1.4s
BNI Bardonecchia 84.59 32 P **P** **03 11 43.7 +1.0**
BNI pmax pmax
comp=Z,51nm,1.4s
BNI MLR MLR
comp=Z,5µm,18.0s
WTTA Wattenberg 84.64 28 *i* PcP **PcP** **03 11 43.9 -2.6**
comp=Z,21nm,1.1s,SNR=5.9
RJOB Jochberg 84.64 27 *eP* **P** **03 11 43.5 +0.7**
comp=Z,6.0nm,0.9s,baz=331,slow=5.2
OJC Ojcow 84.67 22 *eP* **P** **03 11 43.2 +0.4**
OJC Ojcow 84.67 22 P **P** **03 11 43.3 +0.4**
comp=Z,29nm,1.0s
KRUC Moravsky 84.69 24 *eP* **P** **03 11 43.3 +0.4**
TIA Tai'an 84.75 314 P **P** **03 11 44.9 +1.4**
TIA S **SKSac** **03 22 04.3 -3.5**
TIA SS **SS** **03 27 43.6 +1.7**
TIA pmax pmax
comp=Z,21nm,2.0s
TIA pmax pmax
comp=Z,280nm,5.7s
TIA L L
comp=Z,690nm,23.7s
TIA L L
comp=Z,590nm,24.1s
TIA L L
comp=Z,2µm,20.2s
HNR Honiara 84.80 253 LR LR 03 44 08.7
comp=Z,39nm,19.4s,baz=144,slow=32
RAO Raoul Island 84.84 224 LR LR 03 40 50.1
comp=Z,975nm,20.9s,baz=295,slow=29
RAO Raoul Island 84.84 224 IAMs_20 IAMs_20 03 39 33.0
comp=Z,2µm,19.0s
LESA Schwarzleotal 84.87 27 *i* PcP **PcP** **03 11 44.7 -2.7**
comp=Z,14nm,1.1s,SNR=6.6
H03N2 Juan Fernandez 84.92 143 T T 04 46 54.4
baz=326
H03N1 Juan Fernandez 84.93 143 T T 04 46 56.1
baz=326
H03N3 Juan Fernandez 84.93 143 T T 04 46 55.2
baz=326
BIOA Bad Ischl, Aus 84.97 27 *i* PcP **PcP** **03 11 44.9 -2.8**
comp=Z,16nm,1.3s,SNR=6.0
BTO2 Baotou 85.05 321 *eP* **P** **03 11 44.2 -0.9**
BTO2 pP **sP** **03 11 49.0 -0.2**
BTO2 sP **pwP** **03 11 51.1 +0.4**
BTO2 S **S** **03 22 11.5 -2.9**
BTO2 SS **SS** **03 27 44.0 -2.3**
BTO2 pmax pmax
comp=Z,12nm,0.8s
BTO2 pmax pmax
comp=Z,600nm,8.8s
BTO2 L L
comp=Z,2µm,17.1s
BTO2 L L
comp=Z,2µm,16.6s
BTO2 L L
comp=Z,3µm,19.0s
MOA Molln 85.05 26 *i* PcP **PcP** **03 11 45.3 -2.8**
comp=Z,20nm,1.3s
RNPP9 Sopachiv 85.16 18 P **P** **03 11 45.4 +0.2**
HNS HongShan 85.17 316 ⇓P **P** **03 11 47.1 +1.5**
HNS S **S** **03 22 15.1 -0.2**
HNS SS **SS** **03 27 50.3 +2.3**
HNS pmax pmax
comp=Z,10.0nm,1.5s
HNS L L
comp=Z,440nm,14.5s
HNS L L
comp=Z,1µm,21.1s
HNS L L
comp=Z,1µm,19.2s
RNPP8 Varash 85.22 18 P **P** **03 11 45.5 0.0**
SALV Santo Antonio 85.24 115 *eP* **P** **03 11 46.6 +0.5**
JAVC Velka Javorina 85.26 24 *eP* **P** **03 11 47.2 +1.3**
RNPP5 Staryi Chortor 85.32 18 P **P** **03 11 46.4 +0.3**
ABTA Abfaltersbach 85.39 28 *i* PcP **P** **03 11 46.9 +0.3**
comp=Z,17nm,1.0s,SNR=6.1
KBA Koelnbreinsper 85.40 27 *i* PcP **PcP** **03 11 47.5 -2.3**
comp=Z,23nm,1.4s,SNR=8.8
WINA Alland / Wiene 85.42 25 *i* PcP **PcP** **03 11 47.7 -1.9**
comp=Z,39nm,1.5s,SNR=8.4
SMOL Smolenice 85.49 24 *eP* **P** **03 11 47.8 +0.8**
SMOL pmax pmax
comp=Z,31nm,1.7s
LCO Las Campanas 85.51 134 P **P** **03 11 47.2 -0.3**
LCO IAmb IAmb 03 11 49.6
comp=Z,40nm,1.1s
LCO Las Campanas 85.51 134 P **P** **03 11 47.2 -0.3**
LCO pmax pmax
comp=Z,40nm,1.1s
CONA Conrad Observa 85.51 25 *i* PcP **PcP** **03 11 48.2 -2.0**
comp=Z,23nm,1.0s,SNR=11
NIE Niedzica 85.54 22 *eP* **P** **03 11 47.4 +0.2**
NIE Niedzica 85.54 22 P **P** **03 11 47.9 +0.7**
comp=Z,15nm,1.4s
LANS Liptovska Anna 85.54 22 *eP* **P** **03 11 48.7 +1.5**
LANS pmax pmax
comp=Z,9.0nm,0.9s
LANS Liptovska Anna 85.54 22 *eP* **P** **03 11 48.7 +1.5**
MODS Modra-Piesok 85.57 24 *eP* **P** **03 11 48.5 +1.1**
MODS pmax pmax
comp=Z,187nm,1.8s
MODS Modra-Piesok 85.57 24 *eP* **P** **03 11 48.5 +1.1**
AC05 El Transito 85.61 134 IAmb IAmb 03 11 50.1
comp=Z,32nm,0.9s
SNDB Serra Nova Dou 85.67 110 *eP* **P** **03 11 50.1 +1.8**
CTI Castel Tesino 85.68 29 IAmb IAmb 03 12 04.2
comp=Z,57nm,1.7s
STHS Stebnicka Huta 85.80 21 *eP* **P** **03 11 50.6 +2.1**
STHS pmax pmax
comp=Z,15nm,1.1s
STHS Stebnicka Huta 85.80 21 *eP* **P** **03 11 50.6 +2.1**
DGZ Jazzator, Alta 85.85 340 ⇑*i* P **P** **03 11 50.2 +1.3**
DGZ pmax pmax
comp=Z,21nm,0.9s
DGZ MLR MLR
comp=Z,2µm,20.0s
RONA Rosalia, Austr 85.85 25 *i* PcP **PcP** **03 11 49.9 -1.7**
comp=Z,22nm,1.3s,SNR=9.0
MYKA Terra Mystica 85.89 27 *i* PcP **P** **03 11 49.0 -0.1**
comp=Z,13nm,1.2s
ARSA Arzberg 85.99 26 *i* PcP **PcP** **03 11 50.3 -1.9**
comp=Z,13nm,1.2s,SNR=6.0
KWP Kalwaria Pacla 86.00 20 *eP* **P** **03 11 50.8 +1.3**
MI28 Mi28,Pidlybu 86.01 17 P **P** **03 11 49.4 -0.1**
BORK Borovoye 86.01 351 P **P** **03 11 49.3 -0.2**
BORK IAmb IAmb 03 12 08.0
comp=Z,18nm,0.8s
BORK Borovoye 86.01 351 IAMs_20 IAMs_20 03 54 46.2
comp=Z,2µm,19.0s
BORK Borovoye 86.01 351 P **P** **03 11 49.3 -0.2**
BORK pmax pmax
comp=Z,18nm,0.9s
BVAR Borovoye Array 86.02 351 P **P** **03 11 50.5 +0.9**
comp=Z,13nm,1.1s,baz=33,slow=3.5,SNR=27
BVAR S **SKSac** **03 22 16.0 +0.8**
comp=Z,0.4nm,0.4s,baz=350,slow=15,SNR=1.5
BVAR LR LR 03 54 58.9
comp=Z,950nm,18.1s,baz=8.7,slow=39
comp=Z,13nm,1.1s
SSE Sheshan 86.10 308 P **P** **03 11 48.9 -1.4**
SSE S **S** **03 22 23.7 -1.0**
SSE pmax pmax
comp=Z,7.0nm,0.9s
SSE L L
comp=Z,520nm,23.7s
SSE L L
comp=Z,220nm,23.4s
TIY Taiyuan 86.12 318 P P 03 11 55.5 +5.1
TIY S **S** **03 22 27.0 +2.1**
TIY pmax pmax
comp=Z,310nm,3.6s
TIY L L
comp=Z,750nm,19.2s
TIY L L
comp=Z,780nm,19.2s
TIY L L
comp=Z,700nm,17.9s
CADS Cadrg 86.27 27 *i* P **P** **03 11 50.5 -0.4**
TEOL Teolo 86.27 29 IAmb IAmb 03 12 18.3
comp=Z,32nm,1.0s
SMTB Santa Maria do 86.30 105 *eP* **P** **03 11 53.5 +2.0**
OBKA Obir 86.31 27 *i* PcP **PcP** **03 11 51.3 -2.5**
comp=Z,20nm,0.9s,SNR=8.6
SOKA Soboth 86.33 26 *i* PcP **PcP** **03 11 51.4 -2.4**
comp=Z,22nm,1.2s,SNR=9.8
LPSR Galich'ya Gora 86.38 10 *eP* **P** **03 11 51.2 0.0**
LPSR pmax pmax
comp=Z,50nm,1.0s
LPSR MLR MLR
comp=Z,2µm,18.0s
SRO Srobarova 86.39 24 *eP* **P** **03 11 54.4 +3.0**
SRO pmax pmax
comp=Z,63nm,1.9s
SRO Srobarova 86.39 24 *eP* **P** **03 11 54.4 +3.0**
PERS Pernice 86.39 26 *i* P **P** **03 11 51.5 0.0**
KECS Kecovo 86.43 22 *eP* **P** **03 11 53.2 +1.6**
KECS Kecovo 86.43 22 *eP* **P** **03 11 53.2 +1.6**
SABO M.te Sabotino 86.44 27 IAmb IAmb 03 12 15.7
comp=Z,32nm,1.0s
AK20 Malin Array Si 86.48 16 P **P** **03 11 51.7 -0.1**
AK19 Malin Array Si 86.50 16 P **P** **03 11 51.7 -0.2**
AK04 Malin Array Si 86.53 16 P **P** **03 11 51.7 -0.3**
AKASG Malin Array Be 86.56 16 P **P** **03 11 51.5 -0.7**
comp=Z,5.3nm,0.7s,baz=340,slow=4.2,SNR=39
AKASG LR LR 03 51 54.2
comp=Z,2µm,19.5s,baz=330,slow=37
comp=Z,5.3nm,0.7s
AKASG Malin Array Be 86.56 16 P **P** **03 11 51.6 -0.6**
AKASG IAmb IAmb 03 11 53.4
comp=Z,46nm,1.9s
AKASG Malin Array Be 86.56 16 P **P** **03 11 51.6 -0.6**
AKASG pmax pmax
comp=Z,47nm,1.9s
AKBB Malin Array Si 86.56 16 IAmb IAmb 03 12 27.4
comp=Z,32nm,1.1s
AKBB Malin Array Si 86.56 16*ce* P **P** **03 11 52.1 -0.1**
AKBB MLR MLR
comp=Z,3µm,19.0s
KIEV Kiev 86.56 16 ⇑P **P** **03 11 51.9 -0.3**
KIEV Kiev 86.56 16 P **P** **03 11 51.8 -0.4**
KIEV IAmb IAmb 03 12 27.4
comp=Z,29nm,1.1s
KIEV Kiev 86.56 16 P **P** **03 11 51.8 -0.4**
KIEV pmax pmax
comp=Z,29nm,1.2s
KIEV MLR MLR
comp=Z,2µm,20.0s
KIEV Kiev 86.56 16 P **P** **03 11 52.1 -0.1**
comp=Z,90nm,1.8s
AK11 Malin Array Si 86.57 16 P **P** **03 11 52.0 -0.2**
CO01 Juntas del Tor 86.59 135 IAmb IAmb 03 12 14.4
comp=Z,33nm,1.4s
PSZ Piszkesteto 86.77 23 ⇑P **P** **03 11 53.9 +0.5**
PSZ Piszkesteto 86.77 23 IAmb IAmb 03 12 19.2
comp=Z,60nm,1.4s
PSZ Piszkesteto 86.77 23 P **P** **03 11 53.9 +0.5**
NJ2 Nanjing 86.80 310 *eP* P 03 11 57.5 +3.8
NJ2 S **S** **03 22 35.2 +3.7**
NJ2 pmax pmax
comp=Z,25nm,0.6s
NJ2 L L
comp=Z,2µm,20.8s
NJ2 L L
comp=Z,2µm,21.8s
NJ2 L L
comp=Z,2µm,22.7s
SEM Semipalatinsk 86.91 344 *eP* **P** **03 11 55.4 +1.2**
SEM pmax pmax
comp=Z,22nm,1.5s
SEM Semipalatinsk 86.91 344 *eP* **P** **03 11 55.5 +1.2**
comp=Z,22nm,1.5s
SEM LR LR 03 51 41.0
CO03 El Pedregal 86.94 136 IAmb IAmb 03 11 55.9
comp=Z,30nm,0.9s
KURK Kurchatov 86.95 345 P **P** **03 11 53.7 -0.3**
KURK IAmb IAmb 03 12 07.3
comp=Z,18nm,0.9s
KURK Kurchatov 86.95 345 IAMs_20 IAMs_20 03 54 20.0
comp=Z,2µm,20.0s
KURK Kurchatov 86.95 345*ce* P **P** **03 11 55.0 +0.9**
KURK pmax pmax
comp=Z,51nm,2.5s
KURK MLR MLR
comp=Z,2µm,18.0s
LUBAR Lubar, Ukraine 86.98 17 P **P** **03 11 54.0 -0.2**
PP1B Ponte de Pedra 86.98 116 *eP* **P** **03 11 55.9 +1.2**
KURBB Kurchatov Arra 87.05 345 P **P** **03 11 55.2 +0.6**
comp=Z,7.0nm,0.9s,baz=18,slow=4.6,SNR=36
KURBB LR LR 03 54 43.9
comp=Z,2µm,19.8s,baz=358,slow=38
comp=Z,7.0nm,0.9s
MUKU Mukachevo 87.08 21 P **P** **03 11 55.2 +0.5**
VORR Voronezh 87.32 10 *eP* **P** **03 11 53.8 -2.1**
VORR pmax pmax
comp=Z,25nm,0.5s
BELG Belogornoye 87.40 4 LR LR 03 54 31.6
comp=Z,834nm,20.2s,baz=325,slow=38
BELG Belogornoye 87.40 4 *i* P **P** **03 11 56.9 +0.7**
BELG pmax pmax
comp=Z,8.0nm,0.9s
BELG MLR MLR
comp=Z,239nm,18.0s
BDQN Bodoquena, MS 87.69 119 *eP* **P** **03 11 58.7 +0.7**
VSR Storozhevoye 87.77 10 *eP* **P** **03 11 57.8 -0.2**
VSR pmax pmax
comp=Z,30nm,1.4s
VSR MLR MLR
comp=Z,2µm,19.0s
ARAG Araguaiana, MT 87.82 113 *eP* **P** **03 12 00.3 +1.6**
MORH Mrgy, Hungar 87.91 24 ⇑P **P** **03 11 58.7 -0.1**
MORH Mrgy, Hungar 87.91 24 P **P** **03 11 59.5 +0.7**
comp=Z,15nm,1.2s
KMPD K-Podol'skiy 87.94 18 P **P** **03 11 58.8 -0.1**

MURT Porto Murtinho 87.97 121 *e*P **P** **03 12 00.1 +0.7**
NBPS Pedro II - PI 87.99 97 *e*P **P** **03 12 01.0 +1.2**
VORD Divnogorie 88.03 10 *e*P **P** **03 11 58.5 -0.8**
VORD pmax pmax
comp=Z,60nm,0.6s
VRH Novokhopyorsk 88.08 8 *e*P **P** **03 11 58.9 -0.6**
VRH pmax pmax
comp=Z,40nm,1.7s
VRH MLR MLR
comp=Z,1μm,15.0s
AQDB Aquidauana 88.41 119 *e*P **P** **03 12 01.1 -0.4**
BUR08 Bucovina Ar. S 88.48 20 IAmb IAmb 03 12 25.8
comp=Z,50nm,2.0s
LYN LuoYang 88.51 316 P **P** **03 12 03.1 +1.2**
LYN pP pwP 03 12 07.4 -0.2
LYN S **S** **03 22 47.4 -0.4**
LYN sS sS 03 22 58.7 +5.8
LYN pmax pmax
comp=Z,25nm,1.9s
LYN pmax pmax
comp=Z,480nm,5.9s
LYN L L
comp=Z,1μm,17.9s
LYN L L
comp=Z,690nm,18.6s
LYN L L
comp=Z,2μm,38.1s
BURAR Bucovina Array 88.51 20 ⇑P **P** **03 12 01.1 -0.7**
BURAR Bucovina Array 88.51 20 P **P** **03 12 02.0 +0.2**
BURAR Bucovina Array 88.51 20 P **P** **03 12 01.1 -0.7**
ZON Zonda 88.57 135 IAmb IAmb 03 12 38.0
comp=Z,44nm,1.1s
ZSN Zaisan 88.59 340 *e*P **P** **03 12 03.4 +1.4**
ZSN pmax pmax
comp=Z,14nm,1.5s
ZSN Zaisan 88.59 340 *e*P **P** **03 12 03.5 +1.4**
comp=Z,14nm,1.5s
DRGR 88.60 21 ⇑P **P** **03 12 02.4 +0.1**
DRGR 88.60 21 P **P** **03 12 02.3 +0.1**
MD01 Midelt array s 88.65 47 P **P** **03 12 02.7 -0.1**
BRZS Berezniki 88.68 349 *e*P **P** **03 12 04.0 +1.6**
BRZS Berezniki 88.68 349 *e*P **P** **03 12 04.0 +1.6**
BLY Banja Luka 88.74 26 ⇓P **P** **03 12 03.4 +0.6**
MDT Midelt 88.77 47 LR LR 03 47 10.0
comp=Z,1μm,21.8s,baz=340,slow=32
SORM Soroca 88.79 17 P **P** **03 12 02.6 -0.3**
comp=Z,21nm,1.5s
CFA Coronel Fontan 88.86 134 LR LR 03 45 50.8
comp=Z,364nm,20.6s,baz=6.0,slow=32
MT05 Renca 88.91 137 IAMs_20 IAMs_20 03 47 46.3
comp=Z,900nm,19.0s
MT08 Bocatoma Ro 89.33 137 P **P** **03 12 06.5 +0.7**
MT08 IAmb IAmb 03 12 20.4
comp=Z,34nm,0.9s
MT13 San Alfonso 89.42 137 IAmb IAmb 03 12 43.9
comp=Z,62nm,1.4s
BO04 La Punta 89.44 137 IAMs_20 IAMs_20 03 42 39.4
comp=Z,1μm,20.0s
BO01 Tunca 89.51 138 P **P** **03 12 06.9 +0.6**
BO01 IAmb IAmb 03 12 26.5
comp=Z,41nm,1.3s
AKTO Aktyubinsk 89.54 358 LR LR 03 54 07.3
comp=Z,2μm,20.3s,baz=344,slow=37
GO05 Hualane 89.57 139 IAMs_20 IAMs_20 03 42 09.8
comp=Z,1μm,22.0s
MK31 Makanchi Array 89.85 342 *ce*P **P** **03 12 08.7 +0.7**
MKAR Makanchi Array 89.85 342 P **P** **03 12 08.1 +0.1**
comp=Z,3.9nm,1.1s,baz=23,slow=4.0,SNR=16
MKAR LR LR 03 54 00.1
comp=Z,1μm,20.7s,baz=358,slow=37
comp=Z,3.9nm,1.1s
MKAR Makanchi Array 89.85 342 P **P** **03 12 07.8 -0.2**
MKAR Makanchi Array 89.85 342 *i* P **P** **03 12 08.8 +0.8**
MKAR pmax pmax
comp=Z,4.0nm,1.1s
GZR Gura Zlata 89.90 22 ⇓P **P** **03 12 07.6 -0.7**
GZR Gura Zlata 89.90 22 P **P** **03 12 07.6 -0.7**
MAKZ Makanchi 89.91 342 P **P** **03 12 08.1 -0.2**
MAKZ IAMs_20 IAMs_20 03 53 50.5
comp=Z,2μm,21.0s
MAKZ Makanchi 89.91 342 P **P** **03 12 08.1 -0.2**
MAKZ pmax pmax
comp=Z,16nm,0.9s
MAKZ MLR MLR
comp=Z,2μm,21.0s
BO02 Sierra Bellavi 89.98 138 IAMs_20 IAMs_20 03 45 44.7
comp=Z,1μm,21.0s
LOT Lotru 90.13 21 ⇓P **P** **03 12 08.7 -0.8**
ARR Arges 90.44 21 ⇑P **P** **03 12 10.3 -0.6**
BDFB Brasilia 90.48 110 P **P** **03 12 10.9 -0.5**
comp=Z,4.7nm,1.0s,baz=291,slow=5.1,SNR=6.0
BDFB LR LR 03 56 40.4
comp=Z,2μm,20.2s,baz=317,slow=38
comp=Z,4.7nm,1.0s
BDFB Brasilia 90.48 110 IAmb IAmb 03 12 27.3
comp=Z,19nm,1.1s
VOIR 90.49 21 ⇓P **P** **03 12 10.1 -0.9**
VOIR 90.49 21 P **P** **03 12 10.1 -0.9**
WHN Wuhan 90.51 312 P **P** **03 12 12.7 +1.4**
WHN SKS **SKSac** **03 22 44.6 +1.8**
WHN S **ScS** **03 23 09.4 -0.8**
WHN pmax pmax
comp=Z,43nm,1.1s
WHN pmax pmax
comp=Z,810nm,4.7s
WHN L L
comp=Z,2μm,18.5s
WHN L L
comp=Z,6μm,29.3s
WHN L L
comp=Z,2μm,19.9s
PLOR Plostina 90.52 19 ⇓P **P** **03 12 11.2 +0.1**
PLOR Plostina 90.52 19 P **P** **03 12 11.2 +0.1**
VRI Vrincioaia 90.52 19 ⇓P **P** **03 12 10.9 -0.3**
VRI Vrincioaia 90.52 19 P **P** **03 12 10.8 -0.3**
AMBA Amambai (Brazi 90.59 120 *e*P **P** **03 12 13.0 +1.4**
GTA2 Gaotai 90.60 327 P **P** **03 12 13.0 +1.2**
GTA2 pP sP 03 12 16.6 +0.7
GTA2 SKS **SKSac** **03 22 45.6 +2.1**
GTA2 S **S** **03 23 01.7 -5.8**
GTA2 SS **SS** **03 29 09.5 +2.4**
GTA2 pmax pmax
comp=Z,10.0nm,1.1s
GTA2 L L
comp=Z,1μm,20.6s
GTA2 L L
comp=Z,1μm,23.0s
GTA2 L L
comp=Z,2μm,21.0s
SDBA SAO DESIDERIO 90.61 106 *e*P **P** **03 12 12.4 +0.4**
AB31 Akbulak array 90.65 357 IAmb IAmb 03 12 14.0
comp=Z,20nm,1.1s
ABKAR Akbulak array 90.65 357 P **P** **03 12 12.0 +0.4**
MLR Muntele Rosu 90.67 20 LR LR 03 53 24.7
comp=Z,8μm,20.3s,baz=335,slow=36
MLR Muntele Rosu 90.67 20 ⇓P **P** **03 12 12.2 +0.2**
MLR Muntele Rosu 90.67 20 P **P** **03 12 12.2 +0.2**
XAN Xi'an 90.76 318 ⇓P **P** **03 12 13.7 +1.2**
XAN pP pwP 03 12 18.6 +0.4
XAN SKS **SKSac** **03 22 43.8 -0.6**
XAN S **S** **03 23 07.6 -1.3**
XAN pmax pmax
comp=Z,21nm,1.7s
XAN L L
comp=Z,1μm,16.3s
XAN L L
comp=Z,420nm,12.4s
XAN L L
comp=Z,740nm,19.9s
WMQ Urumqi 91.13 337 *e*P **P** **03 12 16.0 +1.9**
WMQ sP pwP 03 12 25.2 +5.5
WMQ S **S** **03 23 12.1 +0.1**
WMQ pmax pmax
comp=Z,15nm,1.1s
WMQ pmax pmax
comp=Z,100nm,3.7s
WMQ L L
comp=Z,1μm,24.5s
WMQ L L
comp=Z,1μm,22.7s
WMQ L L
comp=Z,1μm,24.3s
CPUP Villa Florida 91.44 124 P **P** **03 12 15.6 +0.1**
comp=Z,0.9nm,0.3s,baz=281,slow=2.7,SNR=5.8
CPUP LR LR 03 56 14.7
comp=Z,439nm,19.9s,baz=338,slow=38
comp=Z,0.9nm,0.3s
CPUP Villa Florida 91.44 124 IAmb IAmb 03 12 27.8
comp=Z,29nm,1.7s
CPUP Villa Florida 91.44 124 *e*P **P** **03 12 15.4 0.0**
CFR Carcaliu 91.52 19 ⇑P **P** **03 12 15.3 -0.4**
CFR Carcaliu 91.52 19 P **P** **03 12 15.3 -0.4**
LZH Lanzhou 91.61 322 *e*P **P** **03 12 15.7 -0.9**
LZH sP pwP 03 12 26.8 +4.6
LZH PP **PP** **03 15 51.6 -2.4**
LZH pmax pmax
comp=Z,280nm,5.5s
LZH L L
comp=Z,1μm,17.3s
LZH L L
comp=Z,1μm,17.9s
LZH L L
comp=Z,2μm,18.9s
LZDM Lanzhou Array 91.79 322 P **P** **03 12 18.4 +0.8**
comp=Z,1.3nm,0.4s,baz=132,slow=2.2,SNR=5.0
comp=Z,1.3nm,0.4s
TPGR Topolog 91.89 18 ⇓P **P** **03 12 17.8 +0.4**
NBPA Parau_RN 92.15 96 *e*P **P** **03 12 18.3 -0.8**
TDK Taldyqorghan 92.43 344 *e*P **P** **03 12 21.5 +1.5**
TDK pmax pmax
comp=Z,683nm,15.0s
TDK Taldyqorghan 92.43 344 *e*P **P** **03 12 21.6 +1.5**
comp=Z,683nm,15.0s
TDK LR LR 03 54 53.0
comp=Z,550nm,16.9s
RCBR Riachuelo 93.12 95 LR LR 04 02 51.0
comp=Z,173nm,18.0s,baz=313,slow=41
RCBR Riachuelo 93.12 95 IAMs_20 IAMs_20 03 58 11.1
comp=Z,2μm,20.0s
ERBR Yeremizino-Bor 93.33 10 *e*P **P** **03 12 24.3 +0.2**
ERBR *e**PP **pP** **03 12 27.0 -0.2**
ERBR *e*S **SKSac** **03 22 58.1 -0.2**
ERBR pmax pmax
comp=Z,21nm,1.0s
ENH Enshi 93.41 315 IAmb IAmb 03 13 05.9
comp=Z,20nm,1.3s
ENH IAMs_20 IAMs_20 04 01 16.3
comp=Z,944nm,21.0s
KEST Kesra 93.45 36 P **P** **03 12 24.9 -0.1**
comp=Z,5.3nm,0.9s,baz=274,slow=9.1,SNR=2.6
KEST LR LR 03 52 25.1
comp=Z,2μm,20.2s,baz=329,slow=34
comp=Z,5.3nm,0.9s
PMNB Patos De Minas 93.52 111 *e*P **P** **03 12 25.6 +0.2**
PTGB Pitanga 93.75 119 *e*P **P** **03 12 26.7 +0.4**
ANN Anapa 93.78 12 *e*P **P** **03 12 26.3 +0.2**
ANN *e**PP **sP** **03 12 29.8 -0.4**
ANN *e* 03 16 11.3
ANN *e*S **SKSac** **03 23 00.4 -0.3**
ANN *e*SS **SS** **03 29 56.4 +4.6**
ANN pmax pmax
comp=Z,8.0nm,0.8s
KUU Kurty 93.92 345 *e*P **P** **03 12 28.2 +1.3**
KUU MLR MLR
comp=Z,1μm,19.0s
KUU Kurty 93.92 345 *e*P **P** **03 12 28.2 +1.3**
KUU LR LR 03 55 34.6
comp=Z,1μm,19.1s
SHLS Shalkode 93.95 342 *e*P **P** **03 12 28.0 +0.9**
SHLS pmax pmax
comp=Z,13nm,1.3s
SHLS Shalkode 93.95 342 *e*P **P** **03 12 28.1 +0.9**
comp=Z,13nm,1.3s
NBPV Pedro Velho 93.96 95 *e*P **P** **03 12 27.8 +0.3**
CEL Celeste 93.99 30 IAMs_20 IAMs_20 03 54 01.5
comp=Z,2μm,20.0s
UZB Uzynbulak 94.06 343 *e*P **P** **03 12 28.8 +1.1**
UZB Uzynbulak 94.06 343 *e*P **P** **03 12 28.9 +1.1**
VAE Valguarnera 94.10 31 LR LR 03 54 48.9
comp=Z,3μm,18.6s,baz=333,slow=36
GOF Gofitskoye 94.30 8 *ce*P **P** **03 12 29.4 +0.9**
PMG Port Moresby 94.30 261 LR LR 03 46 56.8
comp=Z,2μm,22.0s,baz=22,slow=30
PMG Port Moresby 94.30 261 IAMs_20 IAMs_20 03 53 40.7
comp=Z,2μm,19.0s
LABN Labinsk 94.42 10 *e*P **P** **03 12 29.6 +0.5**
LABN *e**PP **sP** **03 12 33.2 0.0**
LABN *e*S **SKSac** **03 23 04.5 +0.2**
LABN pmax pmax
comp=Z,5.0nm,0.6s
LABN MLR MLR
comp=N,792nm,11.0s
LABN MLR MLR
comp=Z,2μm,17.0s
LABN MLR MLR
comp=E,3μm,16.0s
URZ Urewera 94.43 222 LR LR 03 47 20.9
comp=E,2μm,20.4s,baz=40,slow=31
AAA Alma-Ata 94.46 344 *e*P **P** **03 12 30.7 +1.2**
AAA pmax pmax
comp=Z,4.0nm,0.4s
AAA Alma-Ata 94.46 344 *e*P **P** **03 12 30.7 +1.2**
comp=Z,4.2nm,0.4s
AAA LR LR 03 55 57.0
MDOK Medeo 94.48 344 *e*P **P** **03 12 30.7 +1.1**
MDOK Medeo 94.48 344 *e*P **P** **03 12 30.8 +1.1**
MDOK LR LR 03 55 47.4
PSAL Palomas, Salto 94.62 127 *e*P **P** **03 12 31.1 +1.1**
TNSS Tian-Shan 94.62 344 *e*P **P** **03 12 31.5 +0.9**
TNSS Tian-Shan 94.62 344 *e*P **P** **03 12 31.5 +0.9**
SGDS Sogindy 94.68 346 *e*P **P** **03 12 31.8 +1.3**
PLCA Paso Flores 94.74 142 P **P** **03 12 31.6 +1.2**
comp=Z,2.6nm,0.9s,baz=341,slow=5.7,SNR=5.3
PLCA LR LR 03 48 39.8
comp=Z,915nm,18.2s,baz=348,slow=31
comp=Z,2.6nm,0.9s
PLCA Paso Flores 94.74 142 *e*P **P** **03 12 31.9 +1.5**
JAY Jayapura 94.82 271 LR LR 03 47 26.0
comp=Z,1μm,20.5s,baz=10,slow=30
TOZ Tahuroa Road 94.86 223 IAMs_20 IAMs_20 03 53 40.3
comp=Z,2μm,19.0s
SOC Sochi 95.32 11 *e*P **P** **03 12 33.3 +0.1**
SOC *e* 03 16 20.3
SOC *e*S **SKSac** **03 23 08.4 -0.7**
SOC *e*SS **SS** **03 30 13.7 0.0**
SOC *e*SSS SSS 03 34 00.0
SOC pmax pmax
comp=Z,9.0nm,1.2s
SOC MLR MLR
comp=Z,3μm,22.0s
KIV Kislovodsk 95.34 9 IAMs_20 IAMs_20 03 56 16.2
comp=Z,1μm,20.0s
KIV Kislovodsk 95.34 9 *e*P **P** **03 12 34.0 +0.5**
KIV pmax pmax
comp=Z,6.0nm,1.1s
KIV MLR MLR
comp=Z,1μm,20.0s
KVAR Kislovodsk Arr 95.34 9 LR LR 03 57 37.3
comp=Z,1μm,19.6s,baz=268,slow=37
BKZ Black Stump Fm 95.43 222 IAMs_20 IAMs_20 03 46 08.4
comp=Z,2μm,22.0s
GOMU GeErMu 95.43 329 P **P** **03 12 33.3 -1.1**
GOMU pmax pmax
comp=Z,170nm,5.4s
GOMU L L
comp=Z,1μm,19.0s
GOMU L L
comp=Z,840nm,19.1s
GOMU L L
comp=Z,2μm,19.9s
AAK Ala-Archa 95.50 346 LR LR 04 00 08.4
comp=Z,1μm,18.8s,baz=5.0,slow=38
AAK Ala-Archa 95.50 346 IAMs_20 IAMs_20 03 59 47.2
comp=Z,2μm,18.0s
AAK Ala-Archa 95.50 346 *i* P **P** **03 12 35.6 +1.3**
AAK pmax pmax
comp=Z,7.0nm,1.6s
SHA1 Shidzhatmaz 95.55 9 *ce*P **P** **03 12 36.5 +1.9**
KBZ Khabaz 95.59 9 P **P** **03 12 35.3 +0.9**
comp=Z,4.5nm,0.9s,baz=297,slow=3.5,SNR=9.6
KBZ LR LR 03 56 45.1
comp=Z,1μm,19.0s,baz=338,slow=36
comp=Z,4.5nm,0.9s
KBZ Khabaz 95.59 9 *ce*P **P** **03 12 35.8 +1.3**
KBZ pmax pmax
comp=Z,9.0nm,1.1s
KK31 Karatay Array 95.72 349 P **P** **03 12 35.0 -0.2**
KK31 Karatay Array 95.72 349 P **P** **03 12 35.0 -0.2**
KK31 pmax pmax
comp=Z,4.0nm,1.0s
KKAR Karatay Array 95.72 349 P **P** **03 12 35.0 -0.1**
KKAR Karatay Array 95.72 349 P **P** **03 12 35.0 -0.1**
DZA Taraz 95.80 348 *e*P **P** **03 12 36.9 +1.4**
DZA Taraz 95.80 348 *e*P **P** **03 12 37.0 +1.4**
WUS Wushi 95.86 342 IAMs_20 IAMs_20 03 57 35.9
comp=Z,1μm,21.0s
CD2 Chengdu 95.87 319 P **P** **03 12 36.5 +0.4**
CD2 SKS **SKSac** **03 23 06.0 -6.6**
CD2 S **ScS** **03 23 55.0 0.0**
CD2 SS **SS** **03 30 17.8 -5.0**
CD2 pmax pmax
comp=Z,180nm,6.3s
CD2 L L
comp=Z,1μm,21.6s
CD2 L L
comp=Z,1μm,18.2s
CD2 L L
comp=Z,1μm,16.2s
SPB Sao Paulo 96.14 116 IAMs_20 IAMs_20 03 57 32.1
comp=Z,2μm,22.0s
CHM Chimkent 96.63 349 *e*P **P** **03 12 40.8 +1.5**
CHM pmax pmax
comp=Z,4.0nm,0.5s
CHM Chimkent 96.63 349 *e*P **P** **03 12 40.8 +1.5**
comp=Z,4.0nm,0.5s
CHM LR LR 03 57 05.0
BFZ Birch Farm 96.70 221 IAMs_20 IAMs_20 03 46 51.9
comp=Z,2μm,20.0s
IUG luzhnay 96.73 349 *e*P **P** **03 12 41.3 +1.4**
IUG pmax pmax
comp=Z,13nm,1.3s
IUG luzhnay 96.73 349 *e*P **P** **03 12 41.3 +1.4**
comp=Z,12nm,1.3s
MAK Makhachkala 96.79 5 *e*P **P** **03 12 35.6 -4.3**
MAK *e* 03 16 36.6
MAK *e* 03 23 09.4
MAK *e*SS SS 03 30 32.4 -2.1
MAK *e*SSS SSS 03 34 16.6
MAK pmax pmax
comp=Z,244nm,1.3s
MAK MLR MLR
comp=Z,3μm,19.0s
MRZ Mangatainoka R 97.02 221 IAMs_20 IAMs_20 03 47 11.4
comp=Z,2μm,22.0s
BHW Baring Head 97.93 221 IAMs_20 IAMs_20 03 46 31.6
comp=Z,1μm,20.0s
SNZO South Karori 97.94 221 IAMs_20 IAMs_20 03 47 28.8
comp=Z,2μm,22.0s
BRTR Keskin Array B 97.96 16 P Pdif 03 12 45.0 -0.5
comp=Z,0.8nm,0.8s,baz=293,slow=2.8,SNR=5.5
BRTR PP **PP** **03 16 40.7 -2.3**
comp=Z,1.1nm,0.9s,baz=0.0,slow=5.8,SNR=4.2
BRTR LR LR 03 59 40.1
comp=Z,2μm,20.0s,baz=331,slow=37
comp=Z,0.8nm,0.8s
BRTR Keskin Array B 97.96 16 P **P** **03 12 44.2 -1.3**
BRTR Keskin Array B 97.96 16 *i* P Pdif 03 12 46.4 +0.8
BRTR pmax pmax
comp=Z,1.0nm,0.8s
TGY Tagaytay City 98.33 296 LR LR 03 49 27.7
comp=Z,763nm,21.6s,baz=68,slow=31
QRZ Quartz Range 98.70 223 IAMs_20 IAMs_20 03 51 06.9
comp=Z,1μm,19.0s
ISP Isparta 99.04 19 *ce*P Pdif 03 12 52.2 +1.9
ISP pmax pmax
comp=Z,9.0nm,1.7s
GNI Garni 99.33 8 LR LR 04 00 47.5
comp=Z,974nm,19.4s,baz=348,slow=37
GNI Garni 99.33 8 IAMs_20 IAMs_20 04 00 35.7
comp=Z,1μm,20.0s
GNI Garni 99.33 8 *ce*P **Pdif** **03 12 53.2 +1.5**
GNI pmax pmax
comp=Z,6.0nm,1.3s
ARPR Arapgir-MALATY 99.48 13 IAMs_20 IAMs_20 03 58 30.9
comp=Z,1μm,22.0s
IDI Anoyia 99.80 25 LR LR 03 58 35.4
comp=Z,1μm,21.7s,baz=316,slow=36
DAV Davao City (W) 99.91 288 LR LR 03 50 25.9
comp=Z,731nm,21.3s,baz=60,slow=31
PZH PanZhiHua 100.48 318 P **Pdif** **03 12 57.3 +0.3**
FAKI Fak Fak 101.52 276 IAMs_20 IAMs_20 03 52 43.4
comp=Z,882nm,21.0s
CTAO Charters Tower 101.73 254 IAMs_20 IAMs_20 03 52 30.8
comp=Z,919nm,20.0s
QIZ Qiongzhong 101.89 308 P **Pdif** **03 13 03.7 +0.5**
QIZ PP **PP** **03 17 12.6 -1.0**
QIZ SS SS 03 31 50.6 +2.8
QIZ L L
comp=Z,700nm,27.5s
QIZ L L
comp=Z,650nm,30.8s
QIZ L L
comp=Z,640nm,29.0s
CSS Mathiatis 102.45 18 IAMs_20 IAMs_20 04 04 41.7
comp=Z,1μm,19.0s
LSA Lhasa 102.60 328 IAMs_20 IAMs_20 04 00 08.1
comp=Z,2μm,22.0s
MORE Moreh 106.00 323 IAMs_20 IAMs_20 04 02 19.6
comp=Z,664nm,20.0s
GHAJ Ghor Haditha 106.47 17 IAMs_20 IAMs_20 04 03 45.2
comp=Z,742nm,19.0s
KKM Kota Kinabalu 107.29 294 IAMs_20 IAMs_20 03 54 17.3
comp=Z,997nm,22.0s
TORD Torodi Ar. Bea 107.46 55 PKiKP **PKiKP** **03 17 34.8 -1.6**
comp=Z,1.7nm,1.1s,baz=325,slow=2.3,SNR=3.9
TORD PKKPbc **PKKPbc** **03 28 49.9 0.0**
comp=Z,0.6nm,0.8s,baz=179,slow=3.8,SNR=3.7
CHTO Chiang Mai 108.27 316 IAMs_20 IAMs_20 04 12 35.0
comp=Z,627nm,18.0s
CMAR Chiang Mai Arr 108.56 316 PKiKP **PKiKP** **03 17 38.6 +0.2**
comp=Z,0.8nm,0.3s,baz=333,slow=1.8,SNR=5.0
WRA Warramunga Arr 110.52 261 PKiKP **PKiKP** **03 17 41.2 -0.8**
comp=Z,0.7nm,0.7s,baz=49,slow=1.7,SNR=6.6
ASAR Alice Springs 113.03 258 PKiKP **PKiKP** **03 17 46.1 -0.6**
comp=Z,1.2nm,0.8s,baz=75,slow=1.6,SNR=10
ASAR PKKPbc **PKKPbc** **03 28 32.6 +0.5**
comp=Z,0.6nm,0.6s,baz=240,slow=3.7,SNR=6.3
ASAR Alice Springs 113.03 258 **PKiKP** **03 17 45.0 -1.7**
UOSS Minazif 115.02 359 IAMs_20 IAMs_20 04 16 03.9
comp=Z,682nm,20.0s
RAYN Ar Rayn 115.84 10 IAMs_20 IAMs_20 04 14 59.0
comp=Z,812nm,19.0s
MBWA Marble Bar 122.33 269 IAMs_20 IAMs_20 04 03 53.2
comp=Z,1μm,22.0s
VNDA Vanda 125.54 195 PKP **PKiKP** **03 18 09.7 +0.2**
comp=Z,2.7nm,0.9s,baz=27,slow=4.5,SNR=2.7
VNDA Vanda 125.54 195 **PKiKP** **03 18 09.9 +0.5**
VNDA Vanda 125.54 195 PKiKP **PKiKP** **03 18 09.9 +0.5**
PALK Pallekele 126.96 327 IAMs_20 IAMs_20 04 23 05.6
comp=Z,737nm,19.0s
ATD Arta Tunnel 127.17 15 IAMs_20 IAMs_20 04 24 29.5
comp=Z,628nm,18.0s
FURI Furi 128.74 21 IAMs_20 IAMs_20 04 24 12.5
comp=Z,948nm,18.0s
QSPA South Pole Qui 130.18 180 PKP **PKiKP** **03 18 18.7 -0.4**
comp=Z,12nm,0.8s,baz=123,slow=0.7,SNR=31
QSPA South Pole Qui 130.18 180 PKPdf **PKiKP** **03 18 18.4 -0.6**
LODK Lodwar 132.89 27 IAMs_20 IAMs_20 04 23 42.8
comp=Z,1μm,18.0s
MBAR Mbarara 134.74 35 IAMs_20 IAMs_20 04 17 28.3
comp=Z,1μm,20.0s
SNAA Sanae 137.82 157 PKP **PKiKP** **03 18 32.9 -1.6**
comp=Z,6.8nm,1.0s,baz=303,slow=2.7,SNR=4.2
SNAA Sanae 137.82 157 PKPdf **PKiKP** **03 18 33.9 -0.6**
SNAA Sanae 137.82 157 PKIKP **PKiKP** **03 18 33.9 -0.6**
NVL N'lazarevskaya 142.53 158 *e*PKiKP **PKiKP** **03 18 42.8 -1.2**
NVL *e* 03 21 55.9
NVL *e*PPP PPP 03 24 58.9
NVL *e* 03 25 52.6
NVL *e*SS SS 03 40 28.5 +4.0
NVL *e*SSS SSS 03 45 47.9
NVL pmax pmax
comp=Z,49nm,3.0s
MSEY Mahe Island 144.46 359 IAMs_20 IAMs_20 04 29 53.2
comp=Z,814nm,22.0s
ELIB Princess Elisa 144.68 164 *d*PKPdf **PKPdf** **03 18 44.1 -0.8**
GRTLG Ghanzi 145.72 67 *i* P **PKPab** **03 18 48.6 -0.4**
KSANE Kasane 145.90 57 *i* P **PKPab** **03 18 49.1 -0.6**
KOOLE Kule 146.04 70 *i* P **PKPab** **03 18 49.1 -1.0**
KGCAE Kacgae 147.38 68 *i* P **PKPbc** **03 18 53.0 -0.4**
SOOWA Sowa 148.58 60 *i* P **PKPbc** **03 18 55.6 -1.1**
KHWEE KHWEE 149.03 63 *i* P **PKPbc** **03 18 56.2 -1.5**
KDWAN Kaudwane 149.44 66 *i* P **PKPbc** **03 18 55.6 -3.2**
BROLN Tlhalogang 149.70 59 *i* P **PKPbc** **03 18 56.7 -2.7**
LPHEP Lephephe 150.26 64 *i* P **PKPbc** **03 18 57.9 -2.8**
MAW Mawson 152.36 187 PKP **PKPdf** **03 18 59.2 +2.0**
comp=Z,12nm,0.8s,baz=259,slow=5.2,SNR=1.5

BOSA	**Boshof**	**153.03**	**73**	PKPbc	**PKiKP**	**03 19 07.1**	**0.0**
	comp=Z,8.1nm,0.7s,baz=306,slow=3.7,SNR=3.1						
BOSA	**Boshof**	**153.03**	**73**		**PKiKP**	**03 19 06.6**	**-0.6**

*OMAN **09** 03:06:04.9±1.0,26.09N×50.51E,h10km,ml3.1/4,Error ellipse: s-maj=8.9km s-min=6.9km az=148.0*
*TEH **09** 03:06:13.4,26.67N×50.71E,h20km,ML3.4,Presumed earthquake*

ISC 09 03:06:05.2±1.1,**26.04N**±0.05×**50.54E**±0.06,**h10**km,**n19**, σ1s**4**/**54**/24,**Eastern Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAKB	**Bahrain**	**0.06**	**179**	P	**Pg**	**03 06 05.8**	**-1.6**
SAKB				S	**Sg**	**03 06 07.3**	**-1.6**
SHMA	**Al-Shehemyia** SNR=139	**0.43**	**115**	P	**Pg**	**03 06 13.2**	**-0.4**
SHMA				S	**Sb**	**03 06 19.6**	**-1.8**
SMRA	**Abu-Samra**	**1.32**	**168**	P	**Pg**	**03 06 30.2**	**-0.3**
SMRA				S	**Sg**	**03 06 50.6**	**+3.0**
TRNA	**Turayna** SNR=17	**1.44**	**155**	P	**Pg**	**03 06 32.2**	**-0.6**
TRNA				S	**Sg**	**03 06 54.9**	**+3.4**
JRN	**Qarnain Island**	**2.36**	**117**	P	**Pn**	**03 06 44.3**	**+0.3**
DSBU	**Dashti - Bushe**	**2.40**	**15**	Pg	**Pn**	**03 06 45.7**	**+1.1**
KHL1	**Khalili_Fars**	**2.94**	**57**	Pn	**Pb**	**03 06 55.9**	**-1.8**
MZR	**Muzera**	**4.04**	**138**	P	**Pn**	**03 07 07.4**	**+0.2**
KLNJ	**Kolanjah**	**5.04**	**10**	Pn	**Pn**	**03 07 22.2**	**+1.0**
ASHO	**Ashiyiah** SNR=5.2	**5.18**	**104**	P	**Pn**	**03 07 23.1**	**+0.3**
BANOM	**Banah**	**5.19**	**90**	P	**Pn**	**03 07 22.5**	**-0.5**
BANOM				S	**Sn**	**03 08 24.3**	**+1.3**
RAYN	**Ar Rayn**	**5.21**	**242**	P	**Pn**	**03 07 23.0**	**-0.3**
IBRJ	**Brojen**	**5.88**	**6**	Pn	**Pn**	**03 07 34.1**	**+1.4**
ZNGN	**Zangian**	**6.06**	**3**	Pn	**Pn**	**03 07 36.6**	**+1.4**
IMEH	**Mehriz**	**6.42**	**33**	Pn	**Pn**	**03 07 41.6**	**+1.5**
JASK	**Jask - Hormozg**	**6.60**	**90**	P	**Pn**	**03 07 42.7**	**+0.3**
HOQ	**Hoqain**	**6.62**	**110**	P	**Pn**	**03 07 43.3**	**+0.6**
DOBD	**Dorbid, Yazd**	**6.87**	**29**	Pn	**Pn**	**03 07 48.0**	**+1.8**
IBAF	**Bafgh**	**7.07**	**37**	Pn	**Pn**	**03 07 50.6**	**+1.6**

*IGQ **09** 03:20:52.4±0.7,0.0N×2.8×80.0W×,h15km,6km,M3.6/23, Mjma3.6/23,ML3.9/23,MLv3.4/23,Ms(BB)3.7/16*
*RSNC **09** 03:20:54.8±0.0,0.0N×3.3×80.0W×,h70km,9km,M3.3,ML2.9, MLv3.6*

ISC 09 03:20:50.8±1.4,**0.00S**±0.02×**80.32W**±0.03,**h3**km±11km, **n148**, σ1s**19**/164,**2C-3D**,**Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABH3	**Manabi, Bahia**	**0.60**	**190**	P	**Pn**	**03 21 05.0**	**-1.3**
ABH3				S	**Sn**	**03 21 16.2**	**-0.3**
ABH2	**Ecuador-Univer**	**0.66**	**187**	P	**Pn**	**03 21 07.4**	**+0.3**
ABH2				S	**Sn**	**03 21 18.4**	**+0.5**
ABH2	**Ecuador-Univer**	**0.66**	**187**	P	**Pn**	**03 21 07.2**	**+0.1**
ABH2				S	**Sn**	**03 21 19.2**	**+1.3**
PECV	**Mancha de Ca P**	**0.81**	**161**	P	**Pn**	**03 21 08.3**	**-0.9**
PECV	**Mancha de Ca P**	**0.81**	**161**	P	**Pb**	**03 21 07.9**	**+0.2**
AV18	**Acelerografo,**	**0.90**	**69**	P	**Pn**	**03 21 10.7**	**+0.3**
AV18				S	**Sn**	**03 21 26.7**	**+2.7**
AV18	**Acelerografo,**	**0.90**	**69**	P	**Pn**	**03 21 11.1**	**+0.7**
AV18				S	**Sn**	**03 21 27.4**	**+3.4**
AATC	**Ecuador-Atacam**	**0.97**	**28**	P	**Pn**	**03 21 10.9**	**-0.6**
AATC	**Ecuador-Atacam**	**0.97**	**28**	P	**Pn**	**03 21 11.0**	**-0.4**
AATC				S	**Sn**	**03 21 25.5**	**-0.3**
AMNT	**Manta-Manabi**	**1.02**	**204**	P	**Pn**	**03 21 11.5**	**-0.5**
AMNT				S	**Sn**	**03 21 27.1**	**+0.2**
ATON	**Ecuador-Tonsup**	**1.02**	**30**	P	**Pg**	**03 21 09.8**	**-0.7**
AMA1	**Acelerografo,**	**1.11**	**33**	P	**Pn**	**03 21 13.8**	**+0.5**
AMA1	**Acelerografo,**	**1.11**	**33**	P	**Pn**	**03 21 13.7**	**+0.4**
AMA1				S	**Sn**	**03 21 30.8**	**+1.7**
AES2	**Ecuador-Puerto**	**1.20**	**34**	P	**Pb**	**03 21 13.7**	**-0.5**
AES2	**Ecuador-Puerto**	**1.20**	**34**	P	**Pg**	**03 21 14.3**	**+0.5**
AES2				S	**Sn**	**03 21 32.9**	**+1.6**
ASDO	**Santo Domingo**	**1.22**	**102**	P	**Pg**	**03 21 14.7**	**+0.3**
APR2	**Miler**	**1.35**	**87**	P	**Pn**	**03 21 16.3**	**-0.4**
APR2	**Miler**	**1.35**	**87**	P	**Pn**	**03 21 16.3**	**-0.4**
APR2				S	**Sg**	**03 21 35.3**	**+0.9**
JIPI	**JIPIJAPA**	**1.37**	**190**	P	**Pb**	**03 21 17.3**	**+0.1**
JIPI	**JIPIJAPA**	**1.37**	**190**	P	**Pg**	**03 21 17.9**	**+0.8**
RVRD	**Rio Verde**	**1.42**	**41**	P	**Pb**	**03 21 17.6**	**-0.3**
RVRD	**Rio Verde**	**1.42**	**41**	P	**Pg**	**03 21 18.3**	**+0.3**
ISPT	**Isla de la Pla**	**1.46**	**211**	P	**Pb**	**03 21 18.7**	**0.0**
ISPT	**Isla de la Pla**	**1.46**	**211**	P	**Pn**	**03 21 16.8**	**-1.3**
PAC1	**Pacto, Paraso**	**1.55**	**80**	P	**Pn**	**03 21 19.2**	**-0.4**
PAC1	**Pacto, Paraso**	**1.55**	**80**	P	**Pn**	**03 21 18.9**	**-0.7**
PAC1	**Pacto, Paraso**	**1.55**	**80**	P	**Pn**	**03 21 19.4**	**-0.1**
PAC1				S	**Sn**	**03 21 38.4**	**-1.9**
PPLP	**Puerto Lpez**	**1.60**	**197**	P	**Pb**	**03 21 20.7**	**-0.3**
PPLP	**Puerto Lpez**	**1.60**	**197**	P	**Pb**	**03 21 20.7**	**-0.3**
CSOL	**CASCOL**	**1.65**	**185**	P	**Pg**	**03 21 22.6**	**+0.1**
GGPT	**Toaza - Volcan**	**1.71**	**97**	P	**Pb**	**03 21 22.6**	**-0.6**
GGPT	**Toaza - Volcan**	**1.71**	**97**	P	**Pn**	**03 21 22.1**	**+0.1**
TERV	**Terraza Guagua**	**1.72**	**96**	P	**Pb**	**03 21 22.9**	**-0.6**
TERV	**Terraza Guagua**	**1.72**	**96**	⇓P	**Pb**	**03 21 22.6**	**-0.9**
JUA2	**San Juan 2**	**1.73**	**97**	P	**Pg**	**03 21 23.9**	**-0.1**
JUA2	**San Juan 2**	**1.73**	**97**	⇑P	**Pb**	**03 21 22.6**	**-0.9**
GGPC	**Guagua Pichinc**	**1.73**	**96**	P	**Pb**	**03 21 22.9**	**-0.7**
GGPC	**Guagua Pichinc**	**1.73**	**96**	P	**Pb**	**03 21 22.8**	**-0.8**
ILLI	**Illinizas Sur**	**1.74**	**114**	P	**Pn**	**03 21 22.4**	**-0.1**
ILLI	**Illinizas Sur**	**1.74**	**114**	P	**Pn**	**03 21 22.4**	**-0.1**
YANA	**Yana**	**1.75**	**94**	P	**Pn**	**03 21 22.6**	**0.0**
YANA	**Yana**	**1.75**	**94**	P	**Pb**	**03 21 23.0**	**-0.9**
PULU	**Pululahua**	**1.82**	**89**	P	**Pb**	**03 21 24.1**	**-0.9**
PULU	**Pululahua**	**1.82**	**89**	P	**Pn**	**03 21 23.7**	**+0.3**
OTAV	**Otavalo**	**1.88**	**83**	P	**Pn**	**03 21 24.2**	**-0.2**
OTAV				S	**Sn**	**03 21 40.4**	**-2.5**
TING	**Casa Alexandra**	**1.89**	**98**	P	**Pb**	**03 21 26.0**	**-0.2**
TING	**Casa Alexandra**	**1.89**	**98**	P	**Pb**	**03 21 25.7**	**-0.5**
SRAM	**San Ramn-Vol**	**1.90**	**113**	P	**Pb**	**03 21 26.6**	**+0.2**
SRAM	**San Ramn-Vol**	**1.90**	**113**	P	**Pb**	**03 21 26.7**	**+0.2**
SUCR	**Mariscal Sucre**	**1.93**	**109**	P	**Pb**	**03 21 27.0**	**0.0**
SUCR	**Mariscal Sucre**	**1.93**	**109**	P	**Pb**	**03 21 26.7**	**-0.3**
CUSE	**Cuicocha Este**	**1.94**	**81**	P	**Pb**	**03 21 26.4**	**-0.9**
CUSE	**Cuicocha Este**	**1.94**	**81**	P	**Pb**	**03 21 26.1**	**-1.1**
CUSE	**Cuicocha Este**	**1.94**	**81**	P	**Pb**	**03 21 25.9**	**-1.3**
CUSE				S	**Sn**	**03 21 49.8**	**-0.6**
TOMA	**Boca Toma-Volc**	**1.95**	**105**	P	**Pg**	**03 21 27.9**	**-0.3**
TOMA	**Boca Toma-Volc**	**1.95**	**105**	P	**Pb**	**03 21 27.2**	**0.0**
AV11	**Acelerografo,**	**1.95**	**92**	P	**Pb**	**03 21 27.2**	**0.0**
PUEM	**Granja Avicola**	**1.96**	**94**	P	**Pg**	**03 21 28.1**	**-0.3**
PUEM	**Granja Avicola**	**1.96**	**94**	P	**Pb**	**03 21 27.4**	**+0.1**
SNLR	**San Lorenzo-Es**	**1.96**	**49**	P	**Pb**	**03 21 26.6**	**-0.6**
SLOR	**San Lorenzo -**	**1.96**	**112**	P	**Pb**	**03 21 27.5**	**0.0**
SLOR	**San Lorenzo -**	**1.96**	**112**	P	**Pb**	**03 21 27.0**	**-0.5**
PITA	**Cotopaxi Volc**	**1.97**	**106**	P	**Pb**	**03 21 27.6**	**0.0**
PITA	**Cotopaxi Volc**	**1.97**	**106**	P	**Pb**	**03 21 27.2**	**-0.4**
CUIC	**Cuicocha-Domo**	**1.98**	**81**	P	**Pb**	**03 21 26.7**	**-1.1**
CUIC	**Cuicocha-Domo**	**1.98**	**81**	P	**Pn**	**03 21 26.1**	**+0.4**
BREF	**Cotopaxi Volca**	**1.99**	**109**	P	**Pb**	**03 21 28.2**	**+0.1**
BMOR	**Cotopaxi Volca**	**2.00**	**111**	P	**Pb**	**03 21 28.3**	**+0.1**
BMOR	**Cotopaxi Volca**	**2.00**	**111**	P	**Pb**	**03 21 27.6**	**-0.6**
BRRN	**Barrancas-Volc**	**2.00**	**113**	P	**Pb**	**03 21 28.3**	**+0.2**
BRRN	**Barrancas-Volc**	**2.00**	**113**	P	**Pb**	**03 21 27.7**	**-0.5**
COTA	**Cotacachi**	**2.01**	**80**	P	**Pb**	**03 21 27.3**	**-1.1**
BVC2	**Cotopaxi Volca**	**2.02**	**109**	P	**Pb**	**03 21 28.6**	**+0.1**
BVC2	**Cotopaxi Volca**	**2.02**	**109**	P	**Pb**	**03 21 28.2**	**-0.3**
VC1	**Cotopaxi 1**	**2.02**	**108**	P	**Pb**	**03 21 28.7**	**+0.2**
VC1	**Cotopaxi 1**	**2.02**	**108**	P	**Pb**	**03 21 28.3**	**-0.2**
BTAM	**Cotopaxi Volca**	**2.04**	**109**	P	**Pb**	**03 21 28.8**	**0.0**
BTAM	**Cotopaxi Volca**	**2.04**	**109**	P	**Pb**	**03 21 28.5**	**-0.3**
TAMB	**Tambo**	**2.07**	**109**	P	**Pb**	**03 21 29.6**	**+0.3**
TAMB	**Tambo**	**2.07**	**109**	P	**Pb**	**03 21 29.1**	**-0.2**
CHSH	**Refugio Sur-Vo**	**2.07**	**136**	P	**Pb**	**03 21 28.9**	**-0.6**
CHSH	**Refugio Sur-Vo**	**2.07**	**136**	P	**Pb**	**03 21 28.4**	**-1.0**
VCES	**Cotopaxi**	**2.08**	**112**	P	**Pb**	**03 21 28.9**	**-0.7**
VCES	**Cotopaxi**	**2.08**	**112**	P	**Pb**	**03 21 28.7**	**-0.9**
URCU	**Urcuqui**	**2.11**	**78**	P	**Pb**	**03 21 29.2**	**-0.8**
URCU	**Urcuqui**	**2.11**	**78**	P	**Pb**	**03 21 29.6**	**-0.5**
ALIT	**Ecuador-Imbabu**	**2.11**	**68**	P	**Pb**	**03 21 28.4**	**-1.5**
LITE1	**Lita**	**2.11**	**68**	P	**Pn**	**03 21 27.9**	**+0.6**
ANTG	**Antisana-Guama**	**2.12**	**103**	P	**Pb**	**03 21 29.9**	**-0.4**
ANTG	**Antisana-Guama**	**2.12**	**103**	⇓P	**Pb**	**03 21 29.6**	**-0.7**
IMBA	**Imbabura, San**	**2.14**	**83**	P	**Pb**	**03 21 31.1**	**+0.5**
IMBA	**Imbabura, San**	**2.14**	**83**	P	**Pb**	**03 21 30.9**	**+0.3**
ANTM	**Antisana-La Mi**	**2.16**	**104**	P	**Pb**	**03 21 30.4**	**-0.6**
JSCH	**Cashca Tororas**	**2.17**	**142**	P	**Pb**	**03 21 29.9**	**-1.1**
JSCH	**Cashca Tororas**	**2.17**	**142**	P	**Pb**	**03 21 29.3**	**-1.7**
TAMH	**Tambohuasha Ch**	**2.17**	**135**	P	**Pb**	**03 21 30.1**	**-1.0**
TAMH	**Tambohuasha Ch**	**2.17**	**135**	⇓P	**Pb**	**03 21 29.7**	**-1.3**
PIS1	**Pisayambo**	**2.20**	**118**	P	**Pb**	**03 21 31.7**	**+0.1**
PIS1	**Pisayambo**	**2.20**	**118**	P	**Pb**	**03 21 31.5**	**-0.1**
ANTI	**Antisana**	**2.20**	**102**	P	**Pb**	**03 21 31.4**	**-0.3**
ANTI	**Antisana**	**2.20**	**102**	P	**Pb**	**03 21 31.0**	**-0.7**
ANTS	**Antisana-Sarah**	**2.20**	**103**	P	**Pb**	**03 21 31.2**	**-0.5**
ANTS	**Antisana-Sarah**	**2.20**	**103**	P	**Pb**	**03 21 31.1**	**-0.6**
IGUA	**Igualata**	**2.24**	**131**	P	**Pb**	**03 21 32.0**	**-0.3**
IGUA	**Igualata**	**2.24**	**131**	P	**Pb**	**03 21 32.0**	**-0.3**
SALI	**Salinas**	**2.27**	**197**	P	**Pb**	**03 21 32.2**	**-0.3**
ANGU	**Angureal**	**2.31**	**89**	P	**Pb**	**03 21 33.8**	**+0.2**
ANGU	**Angureal**	**2.31**	**89**	P	**Pb**	**03 21 33.6**	**0.0**
CAYR	**Refugio Cayamb**	**2.31**	**90**	P	**Pb**	**03 21 33.3**	**-0.4**
CAYR	**Refugio Cayamb**	**2.31**	**90**	P	**Pb**	**03 21 33.2**	**-0.4**
JUI6	**Juive**	**2.33**	**127**	P	**Pb**	**03 21 32.8**	**-0.9**
JUI6	**Juive**	**2.33**	**127**	P	**Pb**	**03 21 32.5**	**-1.2**
BBIL	**Ulba Tungurahu**	**2.33**	**128**	P	**Pb**	**03 21 32.8**	**-0.9**
BBIL	**Ulba Tungurahu**	**2.33**	**128**	P	**Pb**	**03 21 32.3**	**-1.4**
BMAS	**Trigal station**	**2.37**	**129**	P	**Pn**	**03 21 31.1**	**+0.1**
MILO	**Milagro-Astudi**	**2.38**	**161**	P	**Pn**	**03 21 30.5**	**-0.4**
MILO	**Milagro-Astudi**	**2.38**	**161**	P	**Pn**	**03 21 30.5**	**-0.4**
BPAT	**Tungurahua Vol**	**2.40**	**128**	P	**Pb**	**03 21 34.9**	**-0.2**
BPAT	**Tungurahua Vol**	**2.40**	**128**	P	**Pb**	**03 21 34.5**	**-0.6**
CHMA	**Chilma**	**2.42**	**69**	P	**Pn**	**03 21 31.7**	**+0.2**
CHMA	**Chilma**	**2.42**	**69**	P	**Pn**	**03 21 31.3**	**-0.3**
LNGL	**El Angel-Carch**	**2.43**	**72**	P	**Pn**	**03 21 32.5**	**+0.5**
ECEN	**Cerro Negro**	**2.49**	**71**	P	**Pb**	**03 21 34.7**	**-1.8**
ECEN	**Cerro Negro**	**2.49**	**71**	P	**Pn**	**03 21 34.2**	**+1.4**
CHL1	**Volcn Chiles**	**2.50**	**72**	P	**Pb**	**03 21 34.6**	**-2.2**
CHL1	**Volcn Chiles**	**2.50**	**72**	P	**Pb**	**03 21 34.5**	**-2.3**
CHL2	**Volcn Chiles**	**2.53**	**72**	P	**Pb**	**03 21 34.9**	**-2.4**
CHL2	**Volcn Chiles**	**2.53**	**72**	⇑P	**Pn**	**03 21 34.5**	**+1.1**
MORR	**Playas El Morr**	**2.62**	**180**	P	**Pb**	**03 21 38.1**	**-0.4**
MORR	**Playas El Morr**	**2.62**	**180**	P	**Pb**	**03 21 38.7**	**+0.3**
CMBC	**Cumbal**	**2.67**	**69**	P	**Pn**	**03 21 36.4**	**+1.3**
COHC	**Cochancay**	**2.67**	**156**	P	**Pn**	**03 21 36.0**	**+1.3**
COHC	**Cochancay**	**2.67**	**156**	P	**Pn**	**03 21 36.3**	**+1.5**
REVS	**Reventador Sur**	**2.70**	**92**	P	**Pb**	**03 21 39.7**	**-0.3**
REVS	**Reventador Sur**	**2.70**	**92**	P	**Pb**	**03 21 39.2**	**-0.8**
REVS				S	**Sb**	**03 22 13.6**	**-0.1**
SANGA	**Volcan Sangay**	**2.82**	**136**	P	**Pb**	**03 21 40.3**	**-1.8**
PKYU	**Pakayacu**	**3.18**	**121**	P	**Pb**	**03 21 47.3**	**-0.6**
PKYU	**Pakayacu**	**3.18**	**121**	P	**Pb**	**03 21 45.5**	**-2.5**
PCRA	**Pucara 2**	**3.29**	**166**	P	**Pn**	**03 21 43.8**	**+0.1**
PCRA	**Pucara 2**	**3.29**	**166**	P	**Pn**	**03 21 44.5**	**+0.8**
ARNL	**Arenillas**	**3.53**	**176**	P	**Pb**	**03 21 50.3**	**-3.7**
ARNL	**Arenillas**	**3.53**	**176**	P	**Pb**	**03 21 50.3**	**-3.7**
BBAC	**Balboa, Cauca**	**3.67**	**57**	P	**Pn**	**03 21 49.6**	**+0.8**
BBAC	**Balboa, Cauca**	**3.67**	**57**	P	**Pn**	**03 21 49.2**	**+0.4**
BBAC				S	**Sn**	**03 22 32.0**	**-0.8**
CRUC	**La Cruz**	**3.71**	**65**	P	**Pn**	**03 21 52.1**	**+2.6**
CRUC				S	**Sn**	**03 22 37.4**	**+3.4**
POPC	**Popayan, Colom**	**4.43**	**55**	P	**Pn**	**03 22 00.1**	**+0.8**
POPC				S	**Sn**	**03 22 45.5**	**-6.1**
ZUMB	**Zumba**	**4.97**	**166**	P	Pn	03 22 11.6	+5.1
ZUMB	**Zumba**	**4.97**	**166**	P	**Pn**	**03 22 10.7**	**+4.1**

IDC 09 03:22:01.9±1.4,**12.95N×143.76E,h0**km,**mb3.7**/6, **mbtmp3.7**/6,**Error ellipse: s-maj=55.0km s-min=22.6km az=85.0**,**South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.26**	**60**	LR	LR	03 22 58.7	
	comp=Z,100nm,18.3s,baz=264,slow=45						
WRA	**Warramunga Arr**	**33.98**	**196**	P	P	03 28 47.4	-0.1
	0.7nm,0.5s,baz=20,slow=9.6,SNR=16 0.7nm,0.5s						
ASAR	**Alice Springs**	**37.65**	**195**	P	P	03 29 18.8	-0.1
	0.5nm,0.7s,baz=16,slow=9.0,SNR=7.7 0.5nm,0.7s						
MKAR	**Makanchi Array**	**61.20**	**316**	P	P	03 32 18.5	-0.1
	0.3nm,0.7s,baz=84,slow=8.3,SNR=2.7 0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**64.41**	**320**	P	P	03 32 39.8	-0.2
	0.6nm,0.7s,baz=104,slow=6.8,SNR=7.2 0.6nm,0.7s						
BVAR	**Borovoye Array**	**69.75**	**322**	P	P	03 33 13.9	0.0
	0.6nm,0.3s,baz=103,slow=8.3,SNR=4.8 0.6nm,0.3s						
NVAR	**Mina Array Bea**	**88.16**	**51**	P	P	03 34 55.7	+0.3
	0.4nm,0.7s,baz=297,slow=7.1,SNR=2.8 0.4nm,0.7s						

*NEIC **09** 03:26:36.4±1.4,61.50N±0.03×149.91W±0.05,h43km±4km, mb4.2/41,ML4.1/187,ML3.9(AEIC),Error ellipse: s-maj=4.2km s-min=3.8km az=172.0*
*IDC **09** 03:26:36.2±2.0,61.55N×150.10W,h50km±17km,mb3.7/22, mbtmp4.0/28,ML3.6/6,MS3.6/1,Error ellipse: s-maj=15.5km s-min=11.6km az=68.0*
*AEIC **09** 03:26:37.2±1.2,61.48N±0.03×149.89W±0.05,h41km±4km, Error ellipse: s-maj=4.8km s-min=3.4km az=170.0*

ISC 09 03:26:36.3±0.7,**61.49N**±0.03×**149.90W**±0.03,**h48**km±6km, **n319**, σ0s**85**/302,**mb4.1**/44,**Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
M22K	**Willow**	**0.28**	**338**		**Pn**	**03 26 44.2**	**-0.9**
M22K					**Sn**	**03 26 50.9**	**-0.5**
PMR	**Palmer**	**0.38**	**74**	P	**Pn**	**03 26 45.3**	**-0.7**
PMR	**Palmer**	**0.38**	**74**	S	**Sn**	**03 26 52.3**	**-0.7**
PMR	**Palmer**	**0.38**	**74**	Pn	**Pn**	**03 26 45.4**	**-0.7**
PMR				Sn	**Sn**	**03 26 52.1**	**-0.9**
PMR				IAML		03 26 52.9	
	comp=N,19µm,0.6s						
PMR				IAML		03 26 53.0	
	comp=E,15µm,0.6s						
RC01	**Rabbit Creek A**	**0.41**	**169**	Pn	**Pn**	**03 26 45.7**	**-0.7**
RC01				Sn	**Sn**	**03 26 53.0**	**-0.6**
RC01				IAML		03 26 54.3	
	comp=N,20µm,0.5s						
GHO	**Glory Hole Cre**	**0.54**	**58**	Pn	**Pn**	**03 26 47.6**	**-0.4**
GHO				Sn	**Sn**	**03 26 56.0**	**-0.5**
GHO				IAML		03 26 57.0	
	comp=E,12µm,0.7s						
GHO				IAML		03 26 57.6	
	comp=N,15µm,0.5s						
KNK	**Knik Glacier**	**0.70**	**96**	Pn	**Pn**	**03 26 49.8**	**-0.1**
KNK				IAML		03 27 03.4	
	comp=E,10µm,0.3s						
KNK				IAML		03 27 03.9	
	comp=N,11µm,0.6s						
KNK	**Knik Glacier**	**0.70**	**96**		**Sn**	**03 27 00.2**	**+0.4**
SML	**Sawmill**	**0.81**	**66**	Pn	**Pn**	**03 26 51.1**	**-0.4**
SML				Sn	**Sn**	**03 27 02.4**	**-0.2**
SML				IAML		03 27 05.6	
	comp=E,7µm,0.5s						
SML				IAML		03 27 07.1	
	comp=N,5µm,0.6s						
SKT	**Skwentna**	**0.92**	**303**	Pn	**Pn**	**03 26 52.6**	**-0.3**
SKT				Sn	**Sn**	**03 27 05.0**	**0.0**
SKT				IAML		03 27 06.2	
	comp=N,8µm,0.3s						
STLK	**Strandline Lak**	**0.93**	**271**		**Sn**	**03 27 05.7**	**+0.4**
STLK	**Strandline Lak**	**0.93**	**271**		**Pn**	**03 26 53.0**	**-0.1**
STLK				IAML		03 27 06.5	
	comp=E,6µm,0.4s						
STLK				IAML		03 27 06.9	
	comp=N,9µm,0.6s						
CUT	**Chulitna**	**0.93**	**349**	Pn	**Pn**	**03 26 53.0**	**-0.1**
CUT	**Chulitna**	**0.93**	**349**		**Sn**	**03 27 05.8**	**+0.5**
CAPN	**Captain Cook N**	**0.95**	**221**	Pn	**Pn**	**03 26 54.5**	**+1.3**
SLKM	**Skilak Lake**	**1.00**	**189**	Pn	**Pn**	**03 26 54.0**	**0.0**
SLKM				IAML		03 27 10.2	
	comp=E,3µm,0.6s						
O22K	**Cooper Landing**	**1.02**	**175**	Pn	**Pn**	**03 26 53.8**	**-0.3**
SPCG	**Spurr Capps Gl**	**1.04**	**260**		**Sn**	**03 27 09.2**	**+1.1**
SPU	**Mount Spurr**	**1.08**	**254**	Pn	**Pn**	**03 26 55.1**	**-0.1**
L22K	**Petersville**	**1.12**	**339**	Pn	**Pn**	**03 26 55.5**	**-0.1**
L22K				IAML		03 27 11.8	
	comp=E,3µm,0.4s						
L22K				IAML		03 27 12.5	
	comp=N,3µm,0.4s						
L22K	**Petersville**	**1.12**	**339**		**Sn**	**03 27 09.8**	**-0.1**
SPCN	**Chakachatna No**	**1.13**	**257**		**Pn**	**03 26 56.2**	**+0.4**
SPCR	**Spurr Chakacha**	**1.15**	**256**		**Pn**	**03 26 56.2**	**+0.1**
SPCR					**Sn**	**03 27 11.3**	**+0.6**
SCM	**Sheep Creek Mo**	**1.27**	**73**	Pn	**Pn**	**03 26 58.2**	**+0.5**
SEW	**Seward**	**1.41**	**171**	Pn	**Pn**	**03 26 59.4**	**-0.1**
WAT7	**Susitna Watana**	**1.43**	**20**		**Pn**	**03 27 00.7**	**+0.8**
WAT1	**Susitna Watana**	**1.48**	**25**		**Pn**	**03 27 01.3**	**+0.7**
GLI	**Glacier Island**	**1.49**	**113**	Pn	**Pn**	**03 27 00.8**	**+0.2**
WAT6	**Susitna Watana**	**1.49**	**42**		**Sn**	**03 27 20.7**	**+1.5**
RDT	**Redoubt**	**1.53**	**234**		**Sn**	**03 27 21.2**	**+1.3**
M20K	**Styx River**	**1.59**	**286**		**Pn**	**03 27 02.6**	**+0.6**
M20K				IAML		03 27 25.2	
	comp=N,2µm,0.9s						
M20K				IAML		03 27 25.3	
	comp=E,2µm,0.7s						
RDSO	**Redoubt South**	**1.73**	**234**		**Pn**	**03 27 04.4**	**+0.3**
RDSO					**Sn**	**03 27 26.6**	**+1.5**
RED	**Redoubt Volcan**	**1.77**	**234**	Pn	**Pn**	**03 27 04.7**	**+0.2**
RED				IAML		03 27 32.8	
	comp=E,2µm,1.1s						
PPLA	**Purkeypile**	**1.77**	**324**	Pn	**Pn**	**03 27 04.9**	**+0.3**
PPLA				IAML		03 27 30.4	
	comp=E,2µm,0.7s						
PPLA				IAML		03 27 31.9	
	comp=N,2µm,0.6s						
BRLK	**Bradley Lake**	**1.80**	**196**	Pn	**Pn**	**03 27 04.9**	**0.0**
BRSE	**Bradley Lake S**	**1.80**	**194**		**Pn**	**03 27 04.7**	**-0.2**
M24K	**Tolsona, Glenn**	**1.87**	**69**	Pn	**Pn**	**03 27 07.2**	**+1.2**
KLU	**Klutina**	**1.91**	**88**	Pn	**Pn**	**03 27 06.6**	**+0.3**
KLU				IAML		03 27 35.5	
	comp=N,3µm,0.4s						
KLU				IAML		03 27 36.1	
	comp=E,2µm,0.7s						
KLU	**Klutina**	**1.91**	**88**		**Sn**	**03 27 30.6**	**+1.3**
P23K	**Montague Islan**	**1.94**	**140**	Pn	**Pn**	**03 27 06.0**	**-0.7**
TRF	**Thorofare Moun**	**1.98**	**355**	Pn	**Pn**	**03 27 08.2**	**+0.8**
TRF				IAML		03 27 36.9	
	comp=N,2µm,0.7s						
TRF				IAML		03 27 45.0	
	comp=E,1µm,1.0s						
DHY	**Denali Highway**	**1.98**	**35**	IAML		03 27 38.2	
	comp=E,1µm,0.7s						
RND	**Reindeer**	**1.98**	**14**	Pn	**Pn**	**03 27 08.3**	**+0.9**
HIN	**Hinchinbrook I**	**1.99**	**122**	Pn	**Pn**	**03 27 07.5**	**0.0**
HIN				IAML		03 27 42.4	
	comp=N,2µm,0.7s						
DIV	**Divide**	**2.02**	**99**	Pn	**Pn**	**03 27 07.7**	**-0.2**
DIV				IAML		03 27 34.6	
	comp=E,1µm,0.3s						
DIV				IAML		03 27 34.7	
	comp=N,2µm,0.4s						
HOM	**Homer**	**2.03**	**206**	Pn	**Pn**	**03 27 08.3**	**+0.4**
CNPM	**China Poot**	**2.08**	**199**	Pn

BALM	Baldy	3.68	94			Pn	03 27 30.3	-0.3	
N17K	Nushagak Hills	3.68	258			Pn	03 27 31.0	+0.5	
N17K	Nushagak Hills	3.68	258		IAML		03 28 31.8		
	comp=N,306nm,1.1s								
SCRK	Sand Creek	3.69	45			Pn	03 27 31.6	+0.7	
SCRK	Sand Creek	3.69	45		IAML		03 28 34.0		
	comp=E,395nm,0.8s								
SCRK					IAML		03 28 35.5		
	comp=N,301nm,1.0s								
KIAG	Kiagna River	3.69	96			Pn	03 27 30.5	-0.4	
J18K	Innoko River	3.73	305		Pn	Pn	03 27 31.8	+0.4	
J18K					IAML		03 28 16.3		
	comp=N,247nm,0.8s								
J25K	Salcha River,	3.75	31		Pn	Pn	03 27 33.4	+1.8	
J25K					IAML		03 28 23.1		
	comp=N,230nm,0.6s								
J25K					IAML		03 28 23.4		
	comp=E,443nm,0.5s								
POKR	Poker Plat Res	3.81	16			Pn	03 27 33.0	+0.7	
KAHC	Katmai Hardscr	3.83	224			Pn	03 27 33.2	+0.4	
KARR	Katmai Rainbow	3.85	221			Pn	03 27 33.7	+0.7	
M27K	Edge Creek, AK	3.89	74			Pn	03 27 34.7	+1.1	
M27K	Edge Creek, AK	3.89	74		IAML		03 28 42.3		
	comp=E,191nm,0.7s								
M27K					IAML		03 28 54.0		
	comp=N,224nm,1.4s								
O17K	Koliganek Bris	3.94	247			Pn	03 27 34.5	+0.4	
KDAK	Kodiak Island	3.96	201	P		Pn	03 27 33.3	-1.2	
	comp=N,1.8nm,0.3s,baz=38,slow=3.9,SNR=33								
KDAK				S		Sn	03 28 17.2	-2.4	
	comp=N,51nm,0.4s,baz=64,slow=20,SNR=5.1								
	comp=N,5.4nm,0.3s								
KDAK	Kodiak Island	3.96	201		Pn	Pn	03 27 33.1	-1.4	
KDAK					IAML		03 28 38.6		
	comp=N,240nm,0.9s								
KAWH	Katmai	3.97	221			Pn	03 27 35.2	+0.5	
P17K	Kvichak River	3.98	238			Pn	03 27 35.2	+0.5	
BARN	Barnard Glacie	4.00	93			Pn	03 27 35.4	+0.2	
BARN	Barnard Glacie	4.00	93		IAML		03 28 41.1		
	comp=N,368nm,0.9s								
BARN					IAML		03 28 43.0		
	comp=E,432nm,0.6s								
GRNC	Granite Creek	4.02	97		Pn	Pn	03 27 35.5	0.0	
GRNC					IAML		03 28 44.4		
	comp=E,234nm,0.8s								
GRNC					IAML		03 28 47.7		
	comp=N,435nm,0.8s								
L17K	Donlin	4.04	283			Pn	03 27 35.9	+0.4	
BC01	Beaver Creek A	4.09	64			Pn	03 27 36.8	+0.6	
L27K	Beaver Creek,	4.09	64			Pn	03 27 36.9	+0.7	
L27K	Beaver Creek,	4.09	64		IAML		03 28 44.5		
	comp=N,177nm,1.4s								
BCAR	Beaver Creek A	4.11	64		Pn	Pn	03 27 37.0	+0.5	
MESA	MESA	4.11	105			Pn	03 27 36.3	-0.3	
KAKN	Katmai Knife C	4.13	221			Pn	03 27 37.0	+0.2	
K17K	Iditarod	4.14	291		Pn	Pn	03 27 37.3	+0.4	
K17K					IAML		03 28 53.5		
	comp=E,284nm,1.4s								
K17K					IAML		03 28 54.1		
	comp=N,246nm,0.9s								
CTGM	Chitina Glacie	4.17	93			Pn	03 27 37.7	+0.2	
CTGM	Chitina Glacie	4.17	93		IAML		03 28 46.8		
	comp=N,306nm,0.8s								
CTGM					IAML		03 28 48.2		
	comp=E,169nm,0.9s								
KABU	Katmai Buttres	4.22	222			Pn	03 27 38.6	+0.5	
ANCK	Angle Creek	4.34	223			Pn	03 27 40.1	+0.4	
RKAV	Rock Avalanche	4.34	102			Pn	03 27 39.9	+0.1	
LOGN	Logan Glacier	4.36	95		Pn	Pn	03 27 40.4	+0.3	
LOGN					IAML		03 28 56.9		
	comp=N,184nm,1.2s								
LOGN					IAML		03 28 57.8		
	comp=E,160nm,0.9s								
BVCY	Beaver Creek	4.37	74			Pn	03 27 41.0	+1.0	
H21K	Melozitna River	4.38	344			Pn	03 27 41.0	+0.8	
M16K	Timber Creek	4.40	268			Pn	03 27 40.9	+0.4	
M16K	Timber Creek	4.40	268		IAML		03 29 04.0		
	comp=N,125nm,1.2s								
CNTC	Contact Creek	4.42	226			Pn	03 27 41.2	+0.4	
N16K	Nishlik Lake	4.44	261			Pn	03 27 41.6	+0.6	
H24K	Noodor Dome	4.46	11			Pn	03 27 42.1	+0.9	
H24K	Noodor Dome	4.46	11		IAML		03 29 03.3		
	comp=E,142nm,1.0s								
H22K	Ishtalitna Cre	4.47	352			Pn	03 27 42.1	+0.7	
O16K	Kokwok River B	4.47	248		Pn	Pn	03 27 41.6	+0.1	
O16K					IAML		03 29 00.8		
	comp=N,126nm,1.2s								
PRP	Porcupine Dome	4.49	24			Pn	03 27 42.6	+0.8	
PRP	Porcupine Dome	4.49	24		IAML		03 28 57.7		
	comp=E,159nm,0.7s								
PRP					IAML		03 28 59.0		
	comp=N,169nm,0.5s								
YUK3	Moose Creek	4.51	82			Pn	03 27 42.6	+0.4	
GCSA	Galena City Sc	4.55	319			Pn	03 27 43.4	+1.0	
L16K	Owhat River	4.58	277		Pn	Pn	03 27 42.9	0.0	
L16K					IAML		03 29 16.0		
	comp=N,124nm,0.9s								
H20K	Anotleneega Mo	4.59	333			Pn	03 27 43.5	+0.4	
OHAK	Old Harbor	4.62	204		P	Pn	03 27 43.1	-0.4	
OHAK	Old Harbor	4.62	204			Pn	03 27 42.2	-1.2	
P16K	Nushagak River	4.72	242		Pn	Pn	03 27 45.4	+0.5	
O28M	Mount Upton	4.76	94			Pn	03 27 46.0	+0.4	
O28M	Mount Upton	4.76	94		IAML		03 29 01.7		
	comp=E,115nm,0.7s								
O28M					IAML		03 29 03.9		
	comp=N,152nm,0.7s								
IMAR	Indian Mountai	4.82	341		Pn	Pn	03 27 46.5	+0.2	
PCA	Pinnacle	4.93	102			Pn	03 27 47.6	-0.2	
PLK5	Peulik 5	4.97	228			Pn	03 27 49.1	+0.8	
PLK1	Peulik 1	5.03	226			Pn	03 27 49.5	+0.5	
N15K	Kwethluk River	5.16	260			Pn	03 27 51.6	+0.7	
N15K	Kwethluk River	5.16	260		IAML		03 29 25.9		
	comp=N,133nm,1.4s								
N15K					IAML		03 29 42.7		
	comp=E,135nm,0.7s								
G23K	Bananza Creek	5.24	359		Pn	Pn	03 27 53.0	+1.0	
G21K	Allakaket	5.29	344			Pn	03 27 53.6	+1.0	
G21K	Allakaket	5.29	344		IAML		03 28 55.1		
	comp=N,156nm,0.8s								
G21K					IAML		03 28 56.1		
	comp=E,144nm,0.7s								
H18K	Honhosa River	5.29	318			Pn	03 27 53.5	+0.8	
H18K	Honhosa River	5.29	318		IAML		03 28 54.9		
	comp=E,84nm,0.5s								
H18K					IAML		03 29 38.8		
	comp=N,67nm,1.2s								
J16K	Anvik River	5.29	295			Pn	03 27 52.9	+0.2	
J16K	Anvik River	5.29	295		IAML		03 29 24.7		
	comp=N,96nm,1.2s								
M15K	Kasigluk River	5.30	266			Pn	03 27 53.0	+0.2	
G24K	Hadweenzic Riv	5.34	10			Pn	03 27 54.4	+1.1	
G24K	Hadweenzic Riv	5.34	10		IAML		03 29 42.0		
	comp=N,89nm,1.1s								
O15K	Ungalikthiuk R	5.45	249		Pn	Pn	03 27 55.2	+0.4	
DAWY	Dawson	5.47	57			Pn	03 27 55.9	+0.8	
M29M	Somme Creek	5.48	75			Pn	03 27 55.7	+0.4	
I17K	Unalakleet	5.52	300		Pn	Pn	03 27 56.3	+0.5	
L15K	Ungalak Mounta	5.54	277			Pn	03 27 56.4	+0.3	
K15K	Wolf Creek Mou	5.56	283			Pn	03 27 56.9	+0.5	
G19K	Purcell Mounta	5.65	329			Pn	03 27 57.6	0.0	
O29M	Mount Kennedy	5.65	97		Pn	Pn	03 27 58.1	+0.3	
H17K	Granite Mounta	5.70	312			Pn	03 27 59.1	+0.9	
L29M	L29M	5.72	68			Pn	03 27 59.5	+0.8	
YUK5	Granite Creek	5.81	88			Pn	03 28 00.1	+0.1	
G18K	Tagagawik	5.89	322		Pn	Pn	03 28 01.3	+0.4	
M14K	Bethel	5.89	268			Pn	03 28 01.5	+0.6	
N14K	Kuskokwak Cree	6.00	260			Pn	03 28 03.2	+0.9	
HYT	Haines Junctio	6.04	91		Pn	Pn	03 28 02.8	-0.2	
O14K	Tigyukauivet M	6.07	253			Pn	03 28 04.0	+0.7	
G26K	Porcupine Rive	6.09	23			Pn	03 28 04.9	+1.3	
J29N	Klondike Camp	6.10	56		Pn	Pn	03 28 04.3	+0.6	
F20K	Avaraart Lake	6.13	338			Pn	03 28 05.1	+1.1	
N30M	Aishikik Lake	6.14	85			Pn	03 28 04.0	-0.4	
L14K	Kuka Creek	6.14	274			Pn	03 28 05.2	+0.9	
K29M	Barlow Dome	6.17	62			Pn	03 28 05.4	+0.6	
M30M	Minto, Yukon	6.26	74			Pn	03 28 06.5	+0.5	
G17K	Kiwalik Mounta	6.27	315			Pn	03 28 06.8	+0.7	
F19K	Shaleruckik Mo	6.37	331		Pn	Pn	03 28 07.2	-0.1	
BMAR	Burnt Mountain	6.39	19		Pn	Pn	03 28 08.8	+1.1	
F25K	Christian Rive	6.39	15			Pn	03 28 09.4	+1.6	
BM01	Burnt Mountain	6.42	19			Pn	03 28 09.3	+1.3	
H16K	Elim	6.43	305			Pn	03 28 09.2	+0.9	
P30M	Million Dollar	6.48	97			Pn	03 28 09.2	+0.1	

J14K	Nanvaranak Lak	6.53	287			Pn	03 28 10.3	+0.7	
M13K	Dall Lake	6.64	267			Pn	03 28 12.3	+1.2	
F18K	Selawik	6.67	324			Pn	03 28 12.3	+0.7	
F26K	Sheenjek River	6.70	19			Pn	03 28 13.1	+1.2	
O30N	Mendenhall	6.73	90			Pn	03 28 12.4	+0.1	
E19K	Redstone River	6.77	335		Pn	Pn	03 28 13.9	+1.0	
G16K	Koyuk River	6.82	310			Pn	03 28 14.1	+0.6	
E25K	Arctic Village	6.91	14			Pn	03 28 16.4	+1.6	
K13K	Kusilvak Mount	7.03	280			Pn	03 28 16.9	+0.4	
F17K	Baldwin Pennin	7.04	320		Pn	Pn	03 28 16.7	+0.2	
G15K	Niukluk	7.28	305			Pn	03 28 20.9	+1.1	
E20K	Nigu River	7.30	341			Pn	03 28 21.8	+1.6	
F28M	Old Crow	7.50	31			Pn	03 28 24.1	+1.2	
D22K	Ayikyak River	7.51	352		Pn	Pn	03 28 25.3	+2.3	
E18K	Tukpahlearik C	7.53	327			Pn	03 28 24.3	+1.0	
E27K	Coleen River	7.59	24			Pn	03 28 25.1	+1.0	
E17K	Hotham Inlet	7.63	322			Pn	03 28 25.5	+0.8	
ANM	Nome	7.68	300		Pn	Pn	03 28 25.9	+0.6	
D20K	Etivluk River	7.78	342			Pn	03 28 28.4	+1.7	
F15K	North Star Dit	7.81	309			Pn	03 28 27.9	+0.8	
D19K	Kuna River	7.84	337			Pn	03 28 29.2	+1.7	
M11K	Mekoryuk	8.02	269		Pn	Pn	03 28 30.5	+0.6	
N32M	Quiet Lake	8.10	85			Pn	03 28 31.0	-0.2	
P32M	Atlin	8.20	96			Pn	03 28 32.5	-0.1	
SDPT	Sand Point	8.28	227	P		Pn	03 28 32.7	-0.9	
SDPT	Sand Point	8.28	227	S		Sn	03 30 05.5	-0.2	
F14K	Arctic Creek	8.36	306			Pn	03 28 36.0	+1.4	
D17K	Noatak River	8.40	323			Pn	03 28 36.8	+1.5	
CHNA	Chernabura Isl	8.41	222	P		Pn	03 28 35.8	+0.4	
P33M	Teslin, Yukon	8.44	91			Pn	03 28 35.3	-0.5	
JIS	Juneau Island	8.44	106	P		Pn	03 28 35.7	0.0	
E29M	Blow River	8.58	31			Pn	03 28 38.8	+1.2	
C18K	Utukok River	8.61	331	Pn		Pn	03 28 38.1	0.0	
D27M	Malcolm River	8.62	22			Pn	03 28 40.0	+1.7	
C19K	Lookout Ridge	8.64	336			Pn	03 28 40.1	+1.6	
SIT	Sitka	8.68	114	P		Pn	03 28 39.6	+0.6	
C26K	Camden Bay	8.70	11			Pn	03 28 41.1	+1.8	
G31M	Satah River	8.71	45			Pn	03 28 40.5	+1.1	
DOL	Dolgoi Island	8.94	230			Pn	03 28 42.2	-0.4	
TNA	Tin City	9.01	305	Pn		Pn	03 28 44.5	+1.0	
B20K	Meade River	9.05	344			Pn	03 28 44.9	+0.9	
INK	Inuvik	9.72	38	P		Pn	03 28 55.0	+1.7	
	comp=N,0.4nm,0.3s,baz=236,slow=16,SNR=23								
INK				S		Sn	03 30 43.5	+2.7	
	comp=N,6.0nm,0.6s,baz=326,slow=15,SNR=4.6								
	comp=N,2.6nm,0.6s								
INK	Inuvik	9.72	38	Pn		Pn	03 28 55.6	+2.4	
GAMB	Gambell	10.28	292	Pn		Pn	03 29 01.9	+1.0	
DLBC	Dease Lake	10.41	98	P		Pn	03 29 02.5	-0.2	
	comp=N,0.3nm,0.3s,baz=208,slow=8.6,SNR=5.5								
	comp=N,0.9nm,0.3s								
C36M	Paulatuk	13.21	43	Pn		Pn	03 29 41.2	+0.3	
BBB	Bella Bella	15.06	118	P		Pn	03 30 06.5	+0.9	
	comp=N,0.1nm,0.3s,baz=338,slow=18,SNR=2.5								
	comp=N,5.9nm,1.0s								
YKA	Yellowknife Ar	16.48	71	P		Pn	03 30 22.9	-0.9	
	comp=N,0.5nm,0.3s,baz=285,slow=11,SNR=21								
	comp=N,1.4nm,0.7s								
YKA	Yellowknife Ar	16.48	71			P	03 30 25.6	-0.2	
YKAW1	Yellowknife Wh	16.54	71			P	03 30 25.6	-0.8	
CBB	Campbell River	17.82	119			P	03 30 41.5	+0.8	
LLLB	Lillooet	18.90	112			Pn	03 30 54.5	+1.0	
GNW	Green Mountain	20.79	120	P		Pn	03 31 14.7	-1.3	
EDM	Edmonton	21.12	96	P		P	03 31 17.3	+0.7	
EDM				IAmb		IAmb	03 31 21.2		
	comp=Z,14nm,0.9s								
B08A	Colville Reser	21.68	113	P		P	03 31 24.2	+1.6	
B08A				IAmb		IAmb	03 31 32.8		
	comp=Z,9.7nm,1.5s								
MXC	Moxie City	22.64	118	P		P	03 31 34.4	+1.5	
D08A	Wollman Farm,	22.85	115	IAmb		IAmb	03 31 38.9		
	comp=Z,7.7nm,1.4s								
HOOD	Mount Hood Mea	23.07	122	P		P	03 31 39.0	+1.4	
HOOD				IAmb		IAmb	03 31 40.3		
	comp=Z,17nm,1.3s								
F07A	Phinny Hill Vi	23.33	118	P		P	03 31 41.0	+1.1	
F07A				IAmb		IAmb	03 31 42.6		
	comp=Z,6.7nm,1.0s								
I05D	Terrebonne, OR	24.01	123	P		P	03 31 47.7	+1.4	
I05D				IAmb		IAmb	03 31 48.8		
	comp=Z,5.2nm,0.7s								
WIFE	Three Sisters-	24.05	124	IAmb		IAmb	03 31 49.6		
	comp=Z,6.8nm,0.8s								
BLKN	Baker Lake	24.09	60	P		P	03 31 47.2	+0.4	
BLKN				IAmb		IAmb	03 31 48.4		
	comp=Z,9.3nm,1.2s								
G08A	Pilot Rock	24.22	118	P		P	03 31 49.2	+0.9	
MFID	Camas Ranch	27.07	116	IAmb		IAmb	03 32 16.2		
	comp=Z,3.2nm,0.8s								
FCC	Fort Churchill	27.21	71	P		P	03 32 15.4	+0.4	
FCC				IAmb		IAmb	03 32 16.4		
	comp=Z,5.2nm,0.8s								
HVU	Hansel Valley	29.71	114	IAmb		IAmb	03 32 40.6		
	comp=Z,3.6nm,0.9s								
NVAR	Mina Array Bea	30.22	125	P		P	03 32 43.6	+1.4	
	comp=Z,1.9nm,0.8s,baz=302,slow=10,SNR=7.8								
NVAR				PcP		PcP	03 35 42.0	0.0	
	comp=Z,0.2nm,0.5s,baz=349,slow=4.7,SNR=1.9								
	comp=Z,1.9nm,0.8s								
NV11	Mina Array Sit	30.28	125	P		P	03 32 44.1	+1.4	
NV11				IAmb		IAmb	03 32 45.6		
	comp=Z,4.1nm,1.1s								
PDAR	Pinedale Array	30.36	109	P		P	03 32 44.9	+1.5	
	comp=Z,1.4nm,0.5s,baz=323,slow=5.0,SNR=18								
	comp=Z,1.4nm,0.5s								
PDAR	Pinedale Array	30.36	109	P		P	03 32 44.2	+0.8	
ULM	Lac du Bonnet	31.39	86	P		P	03 32 53.0	+0.8	
	comp=Z,5.3nm,0.6s,baz=315,slow=8.6,SNR=11								
	comp=Z,5.3nm,0.6s								
Q16A	Castle Valley	32.76	116	IAmb		IAmb	03 33 08.2		
	comp=Z,3.1nm,1.0s								
SRU	San Rafael Swe	32.88	115	P		P	03 33 07.0	+1.4	
CCUT	Cedar City	32.98	120	IAmb		IAmb	03 33 09.0		
	comp=Z,2.9nm,0.8s								
CCCA	Chr Cany lake	33.12	127	P		P	03 33 08.7	+1.2	
SPITS	Spitsbergen Ar	40.32	4	P		P	03 34 07.1	-1.1	
	comp=Z,8.0nm,0.9s,baz=309,slow=9.1,SNR=4.9								
	comp=Z,8.0nm,0.9s								
SCHQ	Schefferville	41.48	60	P		P	03 34 17.4	-0.7	
	comp=Z,2.4nm,0.9s,baz=216,slow=8.8,SNR=2.3								
	comp=Z,2.4nm,0.9s								
VHRN	Van Horn	42.33	116	IAmb		IAmb	03 34 40.8		
	comp=Z,5.2nm,1.2s								
U38A	Gravette	42.44	100	P		P	03 34 25.3	-0.8	
TXAR	Lajitas Array	44.16	115	P		P	03 34 40.7	+0.6	
	comp=Z,0.7nm,0.6s,baz=330,slow=7.2,SNR=7.1								
	comp=Z,0.7nm,0.6s								
TXAR	Lajitas Array	44.16	115	P		P	03 34 40.1	+0.1	
T50A	Nancy	46.53	91	P		P	03 34 58.6	-0.1	
KSRS	Korea Array	54.32	284	P		P	03 35 57.3	-0.1	
	comp=Z,1.7nm,0.6s,baz=42,slow=7.4,SNR=2.0								
	comp=Z,1.7nm,0.6s								
SONM	Songino Array	55.13	307	P		P	03 36 03.3	-0.1	
	comp=Z,1.2nm,0.9s,baz=46,slow=7.3,SNR=6.4								
	comp=Z,1.2nm,0.9s								
SONM	Songino Array	55.13	307	P		P	03 36 03.1	-0.2	
SONM				IAmb		IAmb	03 36 17.5		
	comp=Z,1.7nm,0.9s								
NOA	NORSAR Array B	56.94	11	P		P	03 36 14.8	-1.1	
	comp=Z,0.6nm,0.7s,baz=358,slow=3.1,SNR=1.8								
	comp=Z,0.6nm,0.7s								
ZALV	Zalesovo Beam	57.05	325	P		P	03 36 15.8	-1.0	
	comp=Z,0.5nm,0.3s,baz=32,slow=5.8,SNR=4.1								
	comp=Z,0.5nm,0.3s								
ZALV	Zalesovo Beam	57.05	325	P		P	03 36 18.1	+1.4	
FIA1	FINESS Array S	57.35	2	P		P	03 36 17.7	-1.0	
FINES	FINESS Array B	57.35	2	P		P	03 36 17.6	-1.2	
	comp=Z,2.2nm,0.8s,baz=359,slow=8.4,SNR=7.1								
	comp=Z,2.2nm,0.8s								
FINES	FINESS Array B	57.35	2	P		P	03 36 17.7	-1.0	
HFS	Hagfors	58.05	10	P		P	03 36 22.0	-1.6	
	comp=Z,2.6nm,0.9s,baz=22,slow=12,SNR=1.8								
	comp=Z,2.6nm,0.9s								
EKA	Eskdalemuir Ar	60.60	21	P		P	03 36 40.8	-0.6	
	comp=Z,0.9nm,0.5s,baz=327,slow=5.8,SNR=7.7								
	comp=Z,0.9nm,0.5s								
BVAR	Borovoye Array	61.43	334	P		P	03 36 46.2	-0.8	
	comp=Z,0.7nm,0.6s,baz=23,slow=8.0,SNR=3.8								
	comp=Z,0.7nm,0.6s								
KURK	Kurchatov	61.62	327	P		P	03 36 47.2	-1.2	
KURK				IAmb		IAmb	03 37 12.1		
	comp=Z,1.2nm,0.8s								
KURBB	Kurchatov Arra	61.73	327	P		P	03 36 47.7	-1.4	
	comp=Z,0.3nm,0.5s,baz=25,slow=7.2,SNR=4.3								
	comp=Z,0.3nm,0.5s								

MKAR	Makanchi Array	64.19	323	P		P	03 37 03.9	-1.6	
	comp=Z,0.2nm,0.5s,baz=39,slow=6.1,SNR=5.7								
	comp=Z,0.2nm,0.5s								
MKAR	Makanchi Array	64.19	323	P		P	03 37 03.7	-1.8	
AKASG	Malin Array Be	68.16	1	P		P	03 37 29.8	-1.0	
	comp=Z,2.6nm,0.5s,baz=3.3,slow=6.3,SNR=10								
	comp=Z,2.6nm,0.5s								
AKASG	Malin Array Be	68.16	1	P		P	03 37 29.6	-1.2	
AKASG				IAmb		IAmb	03 37 37.9		
	comp=Z,4.4nm,1.4s								
GERES	GERESS Array B	69.23	12	P		P	03 37 37.3	-0.3	
	comp=Z,0.6nm,0.8s,baz=20,slow=4.4,SNR=3.5								
	comp=Z,0.6nm,0.8s								
CONA	Conrad Observa	70.33	10	*i* P		P	03 37 45.0	+0.6	
	comp=Z,1.1nm,0.5s								
WATA	Walderalm	70.50	13	*i* P		P	03 37 45.9	+0.4	
	comp=Z,0.6nm,0.2s								
SQTA	Sankt Quirin	70.58	14	*i* P		P	03 37 46.5	+0.6	
	comp=Z,0.6nm,0.4s								
WTTA	Wattenberg	70.58	13	*i* P		P	03 37 46.5	+0.4	
	comp=Z,1.5nm,0.5s								
KBA	Koelnbreinsper	70.94	12	*i* P		P	03 37 48.9	+0.7	
	comp=Z,2.4nm,0.6s								
OBKA	Obir	71.62	11	*i* P		P	03 37 52.7	+0.4	
	comp=Z,4.1nm,0.6s								
KBZ	Khabaz	74.62	350	P		P	03 38 09.7	-0.2	
	comp=Z,1.3nm,0.9s,baz=45,slow=2.9,SNR=2.3								
	comp=Z,1.3nm,0.9s								
ESDC	Sonseca Array	75.45	27	P		P	03 38 14.5	-0.3	
	comp=Z,1.1nm,0.7s,baz=340,slow=6.0,SNR=9.0								
	comp=Z,1.1nm,0.7s								
ESDC	Sonseca Array	75.45	27	P		P	03 38 14.8	0.0	
BRTR	Keskin Array B	79.09	357	P		P	03 38 35.0	-0.3	
	comp=Z,0.5nm,0.8s,baz=20,slow=5.3,SNR=2.9								
	comp=Z,0.5nm,0.8s								
KEST	Kesra	81.66	17	P		P	03 38 48.2	-0.8	
	comp=Z,3.2nm,0.9s,baz=82,slow=15,SNR=2.0								
	comp=Z,3.2nm,0.9s								
KEST	Kesra	81.66	17	P		P	03 38 49.0	-0.1	
BOSA	Boshof	146.96	8	PKPbc		PKPbc	03 46 12.8	-0.2	
	comp=Z,5.6nm,1.1s,baz=63,slow=9.1,SNR=3.1								
BOSA	Boshof	146.96	8			PKPbc	03 46 13.1	+0.1	
QSPA	South Pole Qui	151.30	180	PKPbc		PKPbc	03 46 21.6	-1.1	
	comp=Z,2.7nm,0.7s,baz=103,slow=14,SNR=13								
QSPA	South Pole Qui	151.30	180	PKPbc		PKPbc	03 46 22.2	-0.5	

*IDC **09** 03:34:10.8±0.9, 31°.37N×141°.86E, h0km, mb3.8/11, mbtmp3.8/15, ML3.5/4, Error ellipse: s-maj=31.1km s-min=15.8km az=72.0*
*NEIC **09** 03:34:13.5±2.4, 31°.39N±0°.09×141°.8E±0°.2, h10km±1km, mb4.2/12, Error ellipse: s-maj=26.8km s-min=10.9km az=66.0*

ISC 09 03:34:16.2±0.7, 31°.30N±0°.08×141°.7E±0°.2, h35km, n39, σ0s.94/40, mb4.0/17, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ	Hachijo jima 2	2.43	319	Pn	Pn	03 34 53.8	+0.3
	17nm,0.3s,baz=130,slow=23,SNR=0.9						
	83nm,0.5s						
JCJ	Chichijima	4.21	174	Pn	Pn	03 35 18.8	+0.8
	16nm,0.3s,baz=285,slow=22,SNR=6.5						
JCJ				Sn	Sn	03 36 03.5	-2.4
	6.4nm,0.3s,baz=340,slow=23,SNR=1.1						
	37nm,0.3s						
JCJ	Chichijima	4.21	174		Pn	03 35 20.3

NUBE				*i*	S		**Sn**	03 36 33.0	-1.5
RTAL	**Retalhuleu**	**1.11**	**315**		P		**Pn**	03 36 18.6	-1.8
RTAL					S		**Sn**	03 36 33.1	-1.6
SLOZ	**Alcaldia de Sa**	**1.11**	**75**		P		**Pn**	03 36 20.4	-0.1
UNIC	**Universidad Ca**	**1.33**	**79**		P		**Pn**	03 36 22.8	-0.7
UNIC					S		**Sn**	03 36 41.0	+0.8
APG	**El Apazote**	**1.33**	**18**	*i*	P		**Pn**	03 36 23.2	-0.5
JAYA	**Jayaque - finc**	**1.40**	**93**		P		**Pn**	03 36 24.0	-0.6
JAYA					S		**Sn**	03 36 42.9	+0.6
JAYA	**Jayaque - finc**	**1.40**	**93**	*i*	S		**Sn**	03 36 23.7	-0.9
CEDA	**San Andres**	**1.46**	**87**		S		**Sn**	03 36 43.1	-0.2
PMON	**Piamonte**	**1.53**	**91**		P		**Pn**	03 36 26.4	0.0
PMON					S		**Sn**	03 36 46.0	+0.7
UES	**Universidad Ev**	**1.61**	**90**		P		**Pn**	03 36 27.2	-0.1
MTO3	**Montecristo**	**1.63**	**66**		P		**Pn**	03 36 28.6	+0.9
COEG	**Centro de Oper**	**1.96**	**93**		P		**Pn**	03 36 31.6	-0.6
TECO	**Alcaldia de Te**	**2.06**	**95**		P		**Pn**	03 36 34.1	+0.6
TECO					S		**Sn**	03 36 59.5	+1.2
P5NO	**Presa 5 de nov**	**2.09**	**83**		P		**Pn**	03 36 32.8	-1.1
SCLA	**Alcaldia de Sa**	**2.10**	**91**		P		**Pn**	03 36 34.1	-0.1
LCND	**La Caada**	**2.95**	**98**		P		**Pn**	03 36 46.0	+0.2

*UCR **09** 03:36:45.9±1.1,10°.98N×85°.96W,h50^{km}±6^{km},MW3.6, Presumed earthquake*
*CATAC **09** 03:36:46.5±0.3,11°.N±2°.×8°.6W±°,h38^{km}±2^{km},M3.4/28, MLv3.4/28,Error ellipse: s-maj=5.5km s-min=2.9km az=45.1,confirmed*

ISC 09 03:36:47.1±1.3,10°.98N±0°.03×85°.90W±0°.04,h58^{km}±8^{km}, n66,σ0.74/107,5C-13D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCRUZ	**La Cruz**	**0.28**	**69**	⇓*iP*	**Pn**	**03 36 56.1**	**-0.8**
LCRUZ				*eS*	**Sn**	**03 37 03.8**	**-0.2**
CARN	**Rivas**	**0.43**	**61**	P	**Pn**	**03 36 57.6**	**-0.6**
CARN				S	**Sn**	**03 37 06.6**	**+0.5**
CARN	**Rivas**	**0.43**	**61**	⇓*iP*	**Pn**	**03 36 57.6**	**-0.5**
CARN				*eS*	**Sn**	**03 37 06.4**	**+0.2**
ELI1	**Hacienda Flor**	**0.48**	**134**	P	**Pn**	**03 36 58.5**	**-0.1**
ELI1				S	**Sn**	**03 37 06.9**	**-0.1**
ELI1	**Hacienda Flor**	**0.48**	**134**	*eP*	**Pn**	**03 36 58.3**	**-0.3**
ELI1				*eS*	**Sn**	**03 37 07.8**	**+0.8**
LAPC	**Finca la Perla**	**0.51**	**114**	*eP*	**Pn**	**03 36 58.2**	**-0.8**
VRLE	**La Escondida,**	**0.56**	**110**	⇓*eP*	**Pn**	**03 36 59.2**	**-0.5**
VRLE				*eS*	**Sn**	**03 37 08.7**	**-0.1**
BUAI	**Buenos Aires**	**0.57**	**100**	⇓*eP*	**Pn**	**03 36 59.6**	**-0.1**
BUAI				*eS*	**Sn**	**03 37 10.0**	**+1.1**
GPS3	**Bodega del ICE**	**0.57**	**113**	*eP*	**Pn**	**03 37 00.5**	**+0.7**
GPS3				*eS*	**Sn**	**03 37 10.8**	**+1.9**
GPS2	**Hotel Rincn d**	**0.58**	**112**	*eP*	**Pn**	**03 36 59.3**	**-0.7**
OMEN	**Al SSO del Vol**	**0.59**	**27**	P	**Pn**	**03 36 59.2**	**-0.8**
MORN	**Al O del Volca**	**0.62**	**24**	P	**Pn**	**03 36 59.0**	**-1.3**
MORN				S	**Sn**	**03 37 10.8**	**+0.9**
DELF	**Filadelfia**	**0.63**	**147**	⇓*iP*	**Pn**	**03 37 00.0**	**-0.3**
DELF				*eS*	**Sn**	**03 37 10.8**	**+0.8**
MESS	**Mesas**	**0.73**	**109**	⇓*eP*	**Pn**	**03 37 01.4**	**-0.3**
MESS				*eS*	**Sn**	**03 37 12.9**	**+0.5**
CLARA	**Aguas Claras**	**0.74**	**105**	⇓*iP*	**Pn**	**03 37 01.5**	**-0.3**
CLARA				*eS*	**Sn**	**03 37 13.8**	**+1.3**
COLC	**Colonia**	**0.75**	**114**	*eP*	**Pn**	**03 37 01.5**	**-0.4**
COLC				*eS*	**Sn**	**03 37 13.1**	**+0.4**
HORNC	**Hornillas**	**0.76**	**110**	⇑*iP*	**Pn**	**03 37 01.8**	**-0.2**
BAGA	**Bagaces**	**0.77**	**125**	*eP*	**Pn**	**03 37 01.6**	**-0.5**
BAGA				*eS*	**Sn**	**03 37 13.9**	**+0.7**
ELVJ	**El Viejo (Barb**	**0.77**	**132**	⇑*iP*	**Pn**	**03 37 01.1**	**-1.0**
ELVJ				*eS*	**Sn**	**03 37 12.3**	**-0.8**
VMAR	**Armenia, Volca**	**0.79**	**102**	⇓*eP*	**Pn**	**03 37 02.0**	**-0.5**
VMAR				*eS*	**Sn**	**03 37 14.1**	**+0.4**
CUI	**Cuipilapa**	**0.79**	**114**	⇓*iP*	**Pn**	**03 37 02.1**	**-0.4**
CUI				*eS*	**Sn**	**03 37 14.0**	**+0.3**
PLVR	**Palo Verde**	**0.83**	**139**	⇑*iP*	**Pn**	**03 37 02.5**	**-0.5**
PLVR				*eS*	**Sn**	**03 37 15.9**	**+1.2**
JUD3	**Juan Diaz 3**	**0.88**	**156**	⇑*iP*	**Pn**	**03 37 02.8**	**-0.9**
JUD3				*eS*	**Sn**	**03 37 17.2**	**+1.5**
TENO	**El Achiote**	**0.95**	**107**	*eP*	**Pn**	**03 37 03.8**	**-0.7**
TENO				*eS*	**Sn**	**03 37 17.8**	**+0.5**
NICO	**Nicoya**	**0.95**	**152**	*eP*	**Pn**	**03 37 03.4**	**-1.0**
TIMP	**Tierras Morena**	**0.95**	**114**	*eP*	**Pn**	**03 37 03.9**	**-0.6**
TIMP				*eS*	**Sn**	**03 37 17.7**	**+0.3**
NANN	**Nandasmo**	**0.98**	**347**	P	**Pn**	**03 37 05.4**	**+0.5**
NANN				S	**Sn**	**03 37 18.2**	**+0.2**
SABN	**Sabanita**	**1.01**	**345**	P	**Pn**	**03 37 04.8**	**-0.4**
TILA	**Tilaran**	**1.05**	**119**	*eP*	**Pn**	**03 37 04.6**	**-1.1**
TILA				*eS*	**Sn**	**03 37 19.7**	**+0.2**
QUEB	**Quebradon, Cot**	**1.05**	**109**	⇓*iP*	**Pn**	**03 37 05.5**	**-0.3**
QUEB				*eS*	**Sn**	**03 37 21.0**	**+1.4**
CRUN	**El Crucero**	**1.07**	**339**	P	**Pn**	**03 37 05.2**	**-0.9**
MAS3	**Al N del Volca**	**1.07**	**346**	P	**Pn**	**03 37 05.8**	**-0.3**
UNAN	**Cigeo UNAN**	**1.18**	**342**	P	**Pn**	**03 37 07.0**	**-0.5**
UNAN				S	**Sn**	**03 37 22.8**	**+0.1**
ABCN	**Banco Central**	**1.21**	**341**	P	**Pn**	**03 37 07.6**	**-0.3**
ABCN				S	**Sn**	**03 37 23.3**	**0.0**
TABAC	**Tabacon**	**1.21**	**113**	*eP*	**Pn**	**03 37 07.9**	**-0.1**
TABAC				*eS*	**Sn**	**03 37 24.7**	**+1.2**
TISN	**Laguna Tiscapa**	**1.21**	**343**	P	**Pn**	**03 37 06.5**	**-1.4**
ACON	**Acoyapa**	**1.22**	**36**	P	**Pn**	**03 37 07.5**	**-0.5**
ACON				S	**Sn**	**03 37 23.0**	**-0.5**
CASO	**Castillo**	**1.27**	**115**	⇓*iP*	**Pn**	**03 37 08.5**	**-0.2**
CASO				*eS*	**Sn**	**03 37 25.5**	**+0.7**
ARE1	**Arenal 1**	**1.27**	**114**	⇓*iP*	**Pn**	**03 37 08.7**	**+0.1**
ARE1				*eS*	**Sn**	**03 37 25.8**	**+1.0**
VARE2	**V. Arenal**	**1.27**	**114**	⇓*iP*	**Pn**	**03 37 08.7**	**0.0**
VARE2				*eS*	**Sn**	**03 37 25.6**	**+0.7**
CEDE	**Laguna Cedeo**	**1.27**	**112**	*eP*	**Pn**	**03 37 08.7**	**-0.1**
CEDE				*eS*	**Sn**	**03 37 26.3**	**+1.3**
APQ2	**Apoyeque**	**1.28**	**341**	P	**Pn**	**03 37 08.6**	**-0.2**
APQ2				S	**Sn**	**03 37 25.4**	**+0.4**
VACR	**Volcan Arenal**	**1.30**	**112**	⇑*iP*	**Pn**	**03 37 09.1**	**0.0**
VACR				*eS*	**Sn**	**03 37 26.5**	**+0.9**
AMTN	**Mateare**	**1.35**	**338**	P	**Pn**	**03 37 09.5**	**-0.3**
AMTN				S	**Sn**	**03 37 27.5**	**+0.7**
COPN	**Copaltepe**	**1.37**	**331**	P	**Pn**	**03 37 09.1**	**-1.0**
COPN	**Copaltepe**	**1.37**	**331**	*eP*	**Pn**	**03 37 08.9**	**-1.1**
BOAB	**BOACO BROADBAN**	**1.48**	**9**	P	**Pn**	**03 37 10.9**	**-0.6**
BOAB				S	**Sn**	**03 37 29.9**	**0.0**
COVE	**Coope Vega, Sa**	**1.50**	**100**	P	**Pn**	**03 37 11.1**	**-0.6**
MOM2	**El Cardon**	**1.56**	**339**	P	**Pn**	**03 37 11.6**	**-1.0**
MOM2				S	**Sn**	**03 37 32.5**	**+0.8**
MAN	**El Madrono**	**1.66**	**333**	P	**Pn**	**03 37 12.1**	**-0.4**
MACN				S	**Sn**	**03 37 34.3**	**+1.0**
CNGA	**Al SSO del Vol**	**1.70**	**333**	P	**Pn**	**03 37 14.1**	**-0.4**
CNGA				S	**Sn**	**03 37 36.8**	**+1.6**
CNGN	**Cerro Negro**	**1.70**	**333**	P	**Pn**	**03 37 14.2**	**-0.4**
CNGN				S	**Sn**	**03 37 35.9**	**+0.6**
CNGN	**Cerro Negro**	**1.70**	**333**	*eP*	**Pn**	**03 37 14.0**	**-0.6**
HERN	**Volcan Telica**	**1.86**	**331**	P	**Pn**	**03 37 16.5**	**-0.2**
MATN	**Matagalpa**	**1.94**	**359**	P	**Pn**	**03 37 16.5**	**-1.4**
PKGN	**Cerro Pekin**	**1.98**	**328**	P	**Pn**	**03 37 18.5**	**+0.1**
PKGN				S	**Sn**	**03 37 42.9**	**+0.8**
CRIN	**San Cristobal**	**2.05**	**327**	P	**Pn**	**03 37 19.1**	**-0.2**
CRIN				S	**Sn**	**03 37 44.5**	**+0.8**
TRT2	**Tortugero**	**2.17**	**101**	P	**Pn**	**03 37 20.3**	**-0.5**
QUEP	**Quepos**	**2.30**	**132**	S	**Sn**	**03 37 48.5**	**-1.3**
ABRB	**Las Abras (San**	**2.36**	**114**	*eP*	Pn	03 37 28.2	+4.6
RCON	**San Juan de Ri**	**2.50**	**354**	P	**Pn**	**03 37 25.5**	**-0.1**
RCPN	**Sur Rio San Ju**	**2.54**	**356**	P	**Pn**	**03 37 26.3**	**+0.3**
CSGN	**Cosiguina Volc**	**2.56**	**321**	*eP*	**Pn**	**03 37 25.7**	**-0.6**
RCVN	**Varilla2**	**2.61**	**354**	P	**Pn**	**03 37 27.2**	**+0.3**
OCHAL	**Ojochal**	**2.90**	**130**	P	**Pn**	**03 37 29.5**	**-1.4**
YUSH	**Yuscaran**	**3.10**	**343**	P	**Pn**	**03 37 34.1**	**+0.5**

*NNC **09** 03:45:39.8±0.2,43°.30N×78°.39E,h6^{km}±2^{km},mb3.0, mpv2.7,Error ellipse: s-maj=2.5km s-min=1.7km az=171.0*
*KRNET **09** 03:45:40.1±0.1,43°.27N×78°.40E,h24^{km},mb2.8*
*SOME **09** 03:45:40.2,43°.30N×78°.33E,h10^{km}*

ISC 09 03:45:40.5±0.9,43°.30N±0°.02×78°.35E±0°.02,h11^{km}±7^{km}, n41,σ1.910/79,10C-2D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURS	**Kuram**	**0.23**	**325**	P	**Pg**	**03 45 46.0**	**+0.6**
	0.2nm,0.0s						
KURS				S	**Sg**	**03 45 50.0**	**+1.3**
	50nm,0.3s						
SATY	**Saty**	**0.24**	**171**	P	**Pg**	**03 45 45.7**	**0.0**
	28nm,0.2s						
SATY				S	**Sg**	**03 45 49.5**	**+0.4**
	448nm,0.1s						
KPKS	**Kokpek**	**0.29**	**55**	P	**Pg**	**03 45 46.3**	**-0.3**
	0.2nm,0.1s						
KPKS				S	**Sg**	**03 45 50.6**	**0.0**
	41nm,0.4s						
KPKS	**Kokpek**	**0.29**	**55**	*eP*	**Pg**	**03 45 46.3**	**-0.3**
	0.2nm,0.1s						
KPKS				*eS*	**Sg**	**03 45 50.6**	**0.0**
	41nm,0.4s						
UZB	**Uzynbulak**	**0.51**	**107**	P	**Pg**	**03 45 49.7**	**-0.9**
	3.1nm,0.1s						
UZB				S	**Sg**	**03 45 56.4**	**-1.0**
	50nm,0.1s						
UZB	**Uzynbulak**	**0.51**	**107**	*eP*	**Pg**	**03 45 49.7**	**-0.9**
UZB				*eS*	**Sg**	**03 45 56.4**	**-1.0**
UZB	**Uzynbulak**	**0.51**	**107**	*eP*	**Pg**	**03 45 49.7**	**-0.9**
	3.1nm,0.1s						
UZB				*eS*	**Sg**	**03 45 56.4**	**-1.0**
	50nm,0.1s						
ANVS	**Anan'yevo**	**0.72**	**225**	⇑*iP*	**Pg**	**03 45 54.0**	**-0.5**
ANVS				⇑*iS*	**Sg**	**03 46 03.7**	**-0.3**
SHLS	**Shalkode**	**0.82**	**100**	P	**Pn**	**03 46 00.7**	**+2.5**
	2.6nm,0.2s						
SHLS				S	**Sn**	**03 46 15.3**	**+4.9**
	6.9nm,0.3s						
SHLS	**Shalkode**	**0.82**	**100**	*eP*	**Pn**	**03 46 00.7**	**+2.5**
	3.8nm,0.2s						
SHLS				*eS*	**Sn**	**03 46 15.3**	**+4.9**
	6.9nm,0.3s						
KOTS	**Kotyrbulak**	**0.91**	**266**	P	**Pg**	**03 45 57.8**	**-0.3**
	14nm,0.2s						
KOTS				S	**Sg**	**03 46 10.6**	**+0.6**
	29nm,0.4s						
KOTS	**Kotyrbulak**	**0.91**	**266**	*eP*	**Pg**	**03 45 57.8**	**-0.3**
KOTS				*eS*	**Sg**	**03 46 10.6**	**+0.6**
KOTS	**Kotyrbulak**	**0.91**	**266**	*eP*	**Pg**	**03 45 57.8**	**-0.3**
	14nm,0.2s						
KOTS				*eS*	**Sg**	**03 46 10.6**	**+0.6**
	29nm,0.2s						
MDOK	**Medeo**	**0.96**	**262**	Pg	**Pg**	**03 45 58.4**	**-0.7**
	4.0nm,0.2s						
MDOK				Lg	Lg	03 46 11.8	
	8.9nm,0.3s						
ARXS	**Arharly**	**0.99**	**337**	P	**Pg**	**03 45 58.9**	**-0.7**
	1.8nm,0.2s						
ARXS				S	**Sg**	**03 46 12.1**	**-0.4**
	5.2nm,0.2s						
ARXS	**Arharly**	**0.99**	**337**	*eP*	**Pg**	**03 45 58.8**	**-0.7**
	1.8nm,0.1s						
ARXS				*eS*	**Sg**	**03 46 12.1**	**-0.4**
	5.2nm,0.2s						
TNSS	**Tian-Shan**	**1.06**	**256**	P	**Pg**	**03 46 00.3**	**-0.7**
	0.8nm,0.2s						
TNSS				S	**Sg**	**03 46 15.1**	**+0.2**
	1.7nm,0.3s						
TNSS	**Tian-Shan**	**1.06**	**256**	*eP*	**Pg**	**03 46 00.3**	**-0.7**
	0.8nm,0.2s						
TNSS				*eS*	**Sg**	**03 46 15.1**	**+0.2**
	1.7nm,0.3s						
KNOS	**Konyrlen**	**1.22**	**29**	P	**Pb**	**03 46 02.9**	**-0.7**
	1.1nm,0.1s						
KNOS				S	**Sb**	**03 46 18.9**	**-0.5**
	8.8nm,0.2s						
KTBS	**Karatobe**	**1.28**	**289**	P	**Pn**	**03 46 04.1**	**-0.4**
	1.0nm,0.2s						
KTBS				S	**Sb**	**03 46 21.1**	**-0.2**
	7.4nm,0.4s						
KTBS	**Karatobe**	**1.28**	**289**	*eP*	**Pn**	**03 46 04.1**	**-0.4**
	1.0nm,0.1s						
KTBS				*eS*	**Sb**	**03 46 21.1**	**-0.2**
	7.4nm,0.4s						
IZV	**Izvestkoviy**	**1.30**	**259**	P	**Pn**	**03 46 04.8**	**0.0**
	2.9nm,0.3s						
IZV				S	**Sg**	**03 46 22.8**	**+0.4**
	5.2nm,0.3s						
IZV	**Izvestkoviy**	**1.30**	**259**	*eP*	**Pn**	**03 46 04.8**	**0.0**
	2.7nm,0.2s						
IZV				*eS*	**Sn**	**03 46 22.6**	**+0.4**
	4.5nm,0.2s						
MTBS	**Maitube**	**1.42**	**264**	P	**Pn**	**03 46 06.7**	**+0.4**
	9.0nm,0.3s						
MTBS				S	**Sb**	**03 46 25.9**	**+0.7**
	8.1nm,0.3s						
MTBS	**Maitube**	**1.42**	**264**	*eP*	**Pn**	**03 46 06.7**	**+0.4**
	9.0nm,0.3s						
MTBS				*eS*	**Sb**	**03 46 25.9**	**+0.7**
	8.1nm,0.3s						
KDJ	**Kajisay**	**1.45**	**217**	⇑*iP*	**Pn**	**03 46 06.7**	**-0.2**
KDJ				⇑*iS*	**Sn**	**03 46 25.5**	**-0.6**
KTMS	**Ketmen**	**1.46**	**84**	P	**Pn**	**03 46 06.3**	**-0.7**
	2.0nm,0.2s						
KTMS				S	**Sn**	**03 46 25.4**	**-0.8**
	1.3nm,0.4s						
KTMS	**Ketmen**	**1.46**	**84**	*eP*	**Pn**	**03 46 06.3**	**-0.7**
	2.0nm,0.2s						
KTMS				*eS*	**Sn**	**03 46 25.4**	**-0.8**
	1.3nm,0.4s						
DJR	**Jarkent**	**1.47**	**45**	P	**Pn**	**03 46 06.7**	**-0.3**
	1.7nm,0.2s						
DJR				S	**Sb**	**03 46 26.0**	**-0.6**
	3.5nm,0.1s						
DJR	**Jarkent**	**1.47**	**45**	*eP*	**Pn**	**03 46 06.7**	**-0.3**
	1.7nm,0.1s						
DJR				*eS*	**Sb**	**03 46 26.0**	**-0.6**
	3.5nm,0.1s						
TARG	**Taragay, Kyrgy**	**1.62**	**195**	⇑*iP*	**Pn**	**03 46 09.2**	**-0.2**
TARG				⇑*iS*	**Sn**	**03 46 30.0**	**-0.5**
KST	**Kastek**	**1.77**	**262**	P	**Pb**	**03 46 12.7**	**-0.4**
	1.8nm,0.4s						
KST				S	**Sb**	**03 46 36.2**	**+1.0**
	3.8nm,0.8s						
KST	**Kastek**	**1.77**	**262**	*eP*	**Pb**	**03 46 12.7**	**-0.4**
	1.7nm,0.1s						
KST				*eS*	**Sb**	**03 46 36.2**	**+1.0**
	3.8nm,0.8s						
ULHL	**Ulahol**	**1.88**	**237**	⇓*iP*	**Pn**	**03 46 13.8**	**+1.0**
ULHL				⇓*iS*	**Sb**	**03 46 37.9**	**-0.6**
DGS	**Degeres**	**1.89**	**269**	P	**Pb**	**03 46 14.2**	**-0.9**
	5.3nm,0.4s						
DGS				S	**Sb**	**03 46 38.7**	**0.0**
	18nm,0.5s						
DGS	**Degeres**	**1.89**	**269**	*eP*	**Pb**	**03 46 14.3**	**-0.7**
	5.3nm,0.4s						
DGS				*eS*	**Sb**	**03 46 39.0**	**+0.4**
	18nm,0.5s						
BOOM	**Boomskoye usch**	**1.95**	**246**	⇑*iP*	**Pn**	**03 46 14.9**	**+1.2**
BOOM				⇑*iS*	**Sb**	**03 46 39.8**	**-0.7**
KRBS	**Karabastau**	**1.99**	**282**	Pg	**Pb**	**03 46 16.2**	**-0.6**
	1.1nm,0.2s						
KRBS				Lg	Lg	03 46 42.3	
	4.1nm,0.3s						
KRBS	**Karabastau**	**1.99**	**282**	*eP*	**Pb**	**03 46 16.2**	**-0.6**
	1.1nm,0.2s						
KRBS				*eS*	**Sb**	**03 46 42.4**	**+0.8**
	4.1nm,0.2s						
TKM2	**Tokmak 2**	**2.05**	**260**	⇑*iP*	**Pb**	**03 46 16.7**	**-1.3**
TKM2				⇑*iS*	**Sb**	**03 46 42.9**	**-0.7**
KAPS	**Kapalarasan**	**2.11**	**20**	Pg	**Pb**	**03 46 18.9**	**0.0**
	1.4nm,0.1s						
KAPS				Lg	Lg	03 46 46.6	
	27nm,0.2s						

*IDC **09** 03:47:59.6±1.1,19°.41S×177°.39W,h574^{km}±10^{km}, mb3.5/12,mbtmp4.3/15,Error ellipse: s-maj=20.9km s-min=10.3km az=147.0*
*NEIC **09** 03:48:00.1±2.1,19°.1S±0°.2×177°.6W±0°.1,h562^{km}±8^{km}, mb4.1/74,Error ellipse: s-maj=26.2km s-min=14.8km az=146.0*

ISC 09 03:48:01.9±0.5,19°.4S±0°.1×177°.53W±0°.08,h600^{km},n141, σ1.900/139,mb4.0/50,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.50**	**290**	P	**Pg**	**03 49 29.2**	**-1.8**
	7.1nm,0.3s,baz=138,slow=6.3,SNR=12						
MSVF				S	**Sg**	**03 50 42.0**	**-1.7**
	1.2nm,0.3s,baz=127,slow=20,SNR=1.1						
MSVF	**Nonsavu**	**4.50**	**290**		**P**	**03 49 29.0**	**-2.1**
NIUE	**Niue**	**7.19**	**89**	P	**P**	**03 49 50.4**	**-3.3**
AFI	**Afiamalu**	**7.73**	**46**	P	P	03 49 53.7	-5.2
	70nm,0.5s,baz=217,slow=5.1,SNR=9.5			S			
AFI					S	03 51 24.1	-10
	20nm,0.4s,baz=225,slow=2.9,SNR=1.7						
MARNC	**Mare, Loyalty**	**13.70**	**259**	P	**P**	**03 50 56.0**	**-1.8**
URZ	**Urewera**	**19.40**	**193**	P	**P**	**03 51 46.9**	**-3.2**
	7.3nm,0.6s,baz=345,slow=7.3,SNR=6.8						

MLZ	**Mavora Lakes**	**28.54**	**201**		P		**P**	**03 53 11.9**	**+1.1**
MLZ					IAmb		IAmb	03 53 29.5	
	comp=Z,5.5nm,0.9s								
WHZ	**Wether Hill Ro**	**29.05**	**201**		P		**P**	**03 53 17.2**	**+1.9**
ARMA	**Armidale**	**29.98**	**242**		P		**P**	**03 53 24.7**	**+1.1**
TOO	**Toolangi**	**36.93**	**233**		P		**P**	**03 54 23.1**	**+1.5**
TOO					IAmb		IAmb	03 54 23.9	
	comp=Z,5.0nm,0.8s								
COEN	**Coen**	**37.97**	**272**		P		**P**	**03 54 30.6**	**+0.3**
STKA	**Stephens Creek**	**38.69**	**243**		P		**P**	**03 54 37.3**	**+1.4**
	comp=Z,8.7nm,0.5s,baz=89,slow=9.9,SNR=27								
	comp=Z,8.7nm,0.5s								
STKA	**Stephens Creek**	**38.69**	**243**		P		**P**	**03 54 36.9**	**+0.9**
INKA	**Innaminka**	**39.00**	**250**		P		**P**	**03 54 39.8**	**+1.3**
INKA					IAmb		IAmb	03 54 40.8	
	comp=Z,3.6nm,0.6s								
BBOO	**Buckleboo**	**43.46**	**242**		P		**P**	**03 55 14.2**	**+0.6**
SPT	**South Point**	**43.72**	**31**		P		**P**	**03 55 15.9**	**+0.3**
WR8	**Warramunga Arr**	**45.06**	**261**		P		**P**	**03 55 25.8**	**-0.2**
WB0	**Warramunga Arr**	**45.18**	**261**		P		**P**	**03 55 27.1**	**+0.1**
WRA	**Warramunga Arr**	**45.21**	**261**		P		**P**	**03 55 27.1**	**-0.1**
	comp=Z,6.0nm,0.4s,baz=97,slow=8.1,SNR=136								
	comp=Z,6.0nm,0.4s								
WRA	**Warramunga Arr**	**45.21**	**261**		P		**P**	**03 55 27.1**	**-0.1**
AS31	**Alice Springs**	**45.22**	**256**		P		**P**	**03 55 28.0**	**+0.8**
ASAR	**Alice Springs**	**45.22**	**256**		P		**P**	**03 55 27.9**	**+0.6**
	comp=Z,16nm,0.7s,baz=87,slow=8.0,SNR=101								
ASAR					S		**S**	**04 01 25.4**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=93,slow=15,SNR=7.6								
	comp=Z,16nm,0.7s								
ASAR	**Alice Springs**	**45.22**	**256**		P		**P**	**03 55 27.5**	**+0.2**
MTN	**Manton Dam**	**49.61**	**269**		P		**P**	**03 55 59.8**	**-0.2**
FORT	**Forrest**	**50.16**	**246**		P		**P**	**03 56 04.1**	**+0.3**
FORT					IAmb		IAmb	03 56 11.5	
	comp=Z,7.7nm,0.8s								
KNRA	**Kununurra**	**51.19**	**265**		P		**P**	**03 56 11.8**	**+0.4**
PSA00	**Pilbara Seismi**	**58.37**	**256**		P		**P**	**03 57 02.0**	**+0.6**
PSA00					IAmb		IAmb	03 57 02.6	
	comp=Z,14nm,0.8s								
PSA00	**Pilbara Seismi**	**58.37**	**256**		P		**P**	**03 57 01.4**	**0.0**
PSA00					IAmb		IAmb	03 57 02.6	
	comp=Z,6.9nm,0.8s								
MBWA	**Marble Bar**	**58.54**	**257**		P		**P**	**03 57 03.0**	**+0.5**
MBWA					IAmb		IAmb	03 57 03.6	
	comp=Z,5.6nm,0.8s								
PETK	**Petropavlovsk-**	**75.29**	**345**		P		**P**	**03 58 43.4**	**-1.0**
	comp=Z,3.6nm,0.8s,baz=139,slow=7.3,SNR=2.5								
	comp=Z,3.6nm,0.8s								
PETK	**Petropavlovsk-**	**75.29**	**345**		P		**P**	**03 58 44.0**	**-0.4**
KSRS	**Korea Array**	**76.33**	**318**		P		**P**	**03 58 49.7**	**-0.7**
	comp=Z,2.0nm,0.7s,baz=170,slow=5.9,SNR=6.2								
	comp=Z,2.0nm,0.7s								
KSAR	**Wonju Array Be**	**76.35**	**318**		P		**P**	**03 58 49.6**	**-0.9**
KS19	**Wonju Array Si**	**76.40**	**318**		P		**P**	**03 58 50.2**	**-0.7**
KMRM	**Mail Ridge**	**77.59**	**39**		P		**P**	**03 58 59.2**	**+1.8**
KMRM					IAmb		IAmb	03 59 00.1	
	comp=Z,8.2nm,0.8s								
DPP	**Dos Picos Cty**	**77.82**	**48**		P		**P**	**03 58 60.0**	**+1.3**
DPP					IAmb		IAmb	03 59 00.4	
	comp=Z,3.3nm,0.7s								
USRK	**Ussuriysk Ar.**	**78.28**	**325**		P		**P**	**03 59 02.8**	**+2.0**
	comp=Z,1.7nm,0.7s,baz=92,slow=10,SNR=3.3								
	comp=Z,1.7nm,0.7s								
SLBS	**Sierra La Lagu**	**78.55**	**60**		P		**P**	**03 59 04.3**	**+1.4**
SLBS					IAmb		IAmb	03 59 05.1	
	comp=Z,4.0nm,0.8s								
OHAK	**Old Harbor**	**78.94**	**13**		P		**P**	**03 59 04.3**	**+0.3**
OHAK					IAmb		IAmb	03 59 11.5	
	comp=Z,15nm,1.2s								
YBH	**Yreka Blue Hor**

MCMT	McKenzie Canyo	86.80	40	P		P	03 59 45.3	+1.4
IMAR	Indian Mountai	86.96	10	P		P	03 59 43.7	-0.2
IL31		87.11	13	P		P	03 59 43.4	-1.0
ILAR	Eielson Array	87.11	13	P		P	03 59 43.8	-0.8
	comp=Z,0.9nm,0.7s,baz=234,slow=5.1,SNR=34							
	comp=Z,0.9nm,0.7s							
ILAR	Eielson Array	87.11	13	P		P	03 59 44.1	-0.4
M30M	Minto, Yukon	87.75	18	P		P	03 59 47.9	+0.2
M30M				IAmb		IAmb	03 59 48.4	
	comp=Z,2.6nm,0.8s							
PDAR	Pinedale Array	87.83	43	P		P	03 59 49.1	+0.3
	comp=Z,0.8nm,0.7s,baz=212,slow=3.5,SNR=8.8							
	comp=Z,0.8nm,0.7s							
PDAR	Pinedale Array	87.83	43	P		P	03 59 49.2	+0.5
BOZ	Bozeman (W)	87.93	40	P		P	03 59 50.7	+1.7
BOZ				IAmb		IAmb	03 59 52.5	
	comp=Z,2.4nm,1.1s							
PRP	Porcupine Dome	88.04	13	P		P	03 59 48.6	-0.5
DAWY	Dawson	88.25	16	P		P	03 59 49.5	-0.4
DAWY				IAmb		IAmb	03 59 51.1	
	comp=Z,1.8nm,0.7s							
HHC	Hu-ho-hao-te	88.88	314	*e*P		P	03 59 52.8	-0.7
HHC				pmax		pmax		
	comp=Z,6.0nm,0.6s							
E22K	Anaktuvuk Pass	89.25	9	P		P	03 59 54.1	-0.4
BMAR	Burnt Mountain	89.89	12	P		P	03 59 58.0	+0.5
PZH	PanZhiHua	90.57	298	P		P	04 00 01.4	-0.3
F28M	Old Crow	91.03	14	P		P	04 00 04.7	+1.9
G31M	Satah River	91.82	16	P		P	04 00 06.2	-0.1
LZH	Lanzhou	92.43	307	*e*P		P	04 00 12.7	+2.6
INK	Inuvik	93.06	15	P		P	04 00 10.9	-1.0
INK				IAmb		IAmb	04 00 18.8	
	comp=Z,1.6nm,1.1s							
SONM	Songino Array	95.19	319	P		P	04 00 21.9	-0.4
	comp=Z,0.1nm,0.4s,baz=126,slow=7.3,SNR=1.7							
	comp=Z,0.1nm,0.4s							
YKA	Yellowknife Ar	95.30	25	P		P	04 00 21.8	-0.4
	comp=Z,0.3nm,0.8s,baz=250,slow=4.8,SNR=4.1							
	comp=Z,0.3nm,0.8s							
MKAR	Makanchi Array	110.74	314	PKiKP		PKiKP	04 05 26.8	-0.7
	comp=Z,0.2nm,0.4s,baz=137,slow=1.7,SNR=4.2							
MKAR	Makanchi Array	110.74	314			PKiKP	04 05 26.2	-1.3
BVAR	Borovoye Array	118.49	320	PKP		PKPdf	04 05 41.5	-0.6
	comp=Z,0.5nm,0.3s,baz=65,slow=0.7,SNR=2.7							
KKAR	Karatay Array	118.88	309	PKPdf		PKiKP	04 05 43.7	+0.3
ARCES	ARCESS Array B	127.88	350	PKP		PKPdf	04 05 60.0	+0.3
	comp=Z,0.8nm,0.5s,baz=28,slow=2.9,SNR=6.7							
ARCES	ARCESS Array B	127.88	350	PKPdf		PKPdf	04 05 59.8	+0.1
HFS	Hagfors	138.49	352	PKhKP		PKPpre	04 06 10.6	
	comp=Z,1.8nm,0.8s,baz=90,slow=1.9,SNR=1.7							
AKASG	Malin Array Be	142.23	332	PKhKP		PKPpre	04 06 22.6	
	comp=Z,0.3nm,0.3s,baz=45,slow=3.5,SNR=4.2							
EKA	Eskdalemuir Ar	143.83	5	PKP		PKPbc	04 06 28.6	-0.1
	comp=Z,1.7nm,0.6s,baz=331,slow=2.9,SNR=6.5							
BUR08	Bucovina Ar. S	146.26	332	PKPbc		PKPbc	04 06 37.5	+1.1
BRTR	Keskin Array B	146.39	314	PKPbc		PKPbc	04 06 36.2	-0.8
	comp=Z,0.8nm,0.6s,baz=138,slow=4.6,SNR=6.4							
BRTR	Keskin Array B	146.39	314	PKPbc		PKPbc	04 06 36.9	-0.1
OSTC	Ostas	147.01	344	*e*PKP		PKiKP	04 06 39.9	0.0
CLL	Collm	147.05	348	*i* PKPbc		PKPbc	04 06 38.7	+0.5
	comp=Z,12nm,1.2s							
DPC	Dobruska-Polom	147.17	344	*e*PKP		PKiKP	04 06 39.8	-0.5
MMAI	Mount Meron Ar	147.62	301	PKPbc		PKiKP	04 06 41.7	-0.1
	comp=Z,1.4nm,0.5s,baz=110,slow=5.4,SNR=2.5							
MODS	Modra-Piesok	148.67	341	*e*PKP		PKiKP	04 06 44.3	+0.9
KHC	Kasperske Hory	148.98	346	PKPbc		PKPbc	04 06 43.3	+0.1
KHC	Kasperske Hory	148.98	346	*e*PKP		PKiKP	04 06 44.3	+0.2
CKRC	Cesky Krumlov	149.10	345	*e*PKP		PKiKP	04 06 44.6	+0.3
GERES	GERESS Array B	149.22	345	PKPbc		PKiKP	04 06 44.5	-0.2
	comp=Z,1.5nm,0.7s,baz=72,slow=4.3,SNR=9.3							
CONA	Conrad Observa	149.49	342	*i* PKiKP		PKiKP	04 06 45.4	+0.2
	comp=Z,3.1nm,0.7s							
RONA	Rosalia, Austr	149.57	341	*i* PKP		PKiKP	04 06 45.5	+0.2
	comp=Z,4.1nm,0.6s							
ARSA	Arzberg	150.21	342	*i* PKP		PKPbc	04 06 46.5	+0.4
	comp=Z,3.9nm,1.2s							
BIOA	Bad Ischl, Aus	150.31	345	*i* PKP		PKPbc	04 06 46.6	+0.2
	comp=Z,1.0nm,0.5s							
LESA	Schwarzleotal	150.79	346	*i* PKP		PKiKP	04 06 48.0	+0.1
	comp=Z,1.8nm,0.5s							
SOKA	Soboth	150.87	342	*i* PKP		PKPbc	04 06 47.7	0.0
	comp=Z,2.8nm,0.8s							
KBA	Koelnbreinsper	150.96	345	*i* PKP		PKiKP	04 06 48.6	+0.2
	comp=Z,2.4nm,0.5s							
WATA	Walderalm	151.12	347	*i* PKP		PKPbc	04 06 48.4	+0.1
	comp=Z,3.1nm,0.5s							
OBKA	Obir	151.16	343	*i* PKP		PKPbc	04 06 48.1	-0.3
	comp=Z,4.6nm,1.1s							
WTTA	Wattenberg	151.18	347	*i* PKP		PKPbc	04 06 48.9	+0.4
	comp=Z,5.6nm,0.5s							
MOTA	Moosalm	151.21	348	*i* PKP		PKPbc	04 06 48.8	+0.2
	comp=Z,3.1nm,0.9s							
SQTA	Sankt Quirin	151.31	348	*e*PKP		PKPbc	04 06 49.0	+0.3
	comp=Z,3.8nm,0.7s							
ABTA	Abfaltersbach	151.47	345	*i* PKP		PKPbc	04 06 49.2	+0.1
	comp=Z,3.6nm,0.5s							
FETA	Feichten	151.59	348	*i* PKP		PKiKP	04 06 49.9	+0.2
	comp=Z,4.7nm,1.1s							

IDC ***09*** *03:48:12.6±1.3, 15°.71S×166°.92E, h0km, mb3.9/4, mbtmp3.8/5, ML3.4/1, Error ellipse: s-maj=51.3km s-min=30.9km az=124.0*

ISC 09 03:48:17.9±1.1, 15°.9S±0°.1×167°.0E±0°.3, h35km, n5, σ1°53/6, mb3.7/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	6.16	185	Pn	Pn	03 49 46.2	-0.3
	0.9nm,0.3s,baz=3.5,slow=19,SNR=15						
DZM				Sn	Sn	03 50 55.4	-0.6
	baz=340,slow=23						
	2.7nm,0.4s						
ASAR	Alice Springs	32.00	251	P	P	03 54 41.4	+0.2
	0.9nm,0.8s,baz=72,slow=9.5,SNR=7.3						
	0.9nm,0.8s						
ILAR	Eielson Array	87.72	18	P	P	04 01 00.7	-1.9
	0.3nm,0.7s,baz=243,slow=4.0,SNR=4.1						
	0.3nm,0.7s						
NVAR	Mina Array Bea	88.25	49	P	P	04 01 07.1	+1.1
	0.1nm,0.4s,baz=267,slow=5.3,SNR=2.1						
	0.1nm,0.4s						
SNAA	Sanae	92.38	183	P	P	04 01 25.9	+1.3
	2.2nm,0.7s,baz=180,slow=17,SNR=3.6						
	2.2nm,0.7s						

SJA ***09*** *03:52:13.9±0.6, 21°.37S×66°.68W, h258km±6km, ML4.3, MW4.1*

IDC ***09*** *03:52:15.9±1.2, 21°.35S×66°.66W, h212km±13km, mb3.4/4, mbtmp4.1/11, Error ellipse: s-maj=17.6km s-min=11.5km az=89.0*

NEIC ***09*** *03:52:16.1±1.6, 21°.47S±0°.07×66°.59W±0°.09, h204km±8km, mb4.3/13, Error ellipse: s-maj=11.5km s-min=10.5km az=75.0*

SCB ***09*** *03:52:16.9±1.2, 21°.42S×66°.72W, h214km±8km, ML4.3/4, Error ellipse: s-maj=4.6km s-min=2.7km az=0.0*

VAO ***09*** *03:52:17.6±0.5, 21°.26S×66°.64W, h234km±5km, mb4.1, Presumed earthquake*

ISC 09 03:52:15.7±0.6, 21°.39S±0°.04×66°.71W±0°.04, h223km±6km, n145, σ1°54/167, mb3.8/4, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCB	Mochara	1.01	82	P	Pn	03 52 49.7	+1.2
MOCB				S	S	03 53 13.4	-0.4
MOCB				IAML		03 53 14.0	
	7μm,0.6s						
YJA	Yavi	1.36	125	P	Pn	03 52 51.5	+0.6
AOVT	TarijaAcel	1.87	95	P	Pn	03 52 55.9	+0.9
AF01	San Pedro de A	2.07	221		Pn	03 52 57.3	+0.4
HJA	Humahuaca	2.18	147	*e*P	Pn	03 53 00.2	+2.1
HJA				*e*S	S	03 53 33.7	+2.5
PB09	IPOC Station P	2.39	260		Pn	03 53 01.2	+1.1
PB09	IPOC Station P	2.39	260	P	Pn	03 53 01.5	+1.4
PB08	IPOC Station P	2.60	298	Pn	Pn	03 53 03.6	+1.1
PB08	IPOC Station P	2.60	298	*e*P	Pn	03 53 03.7	+1.1
PB08				*e*S	S	03 53 43.0	+4.0
PB08	IPOC Station P	2.60	298	P	Pn	03 53 04.4	+1.8
PB01	IPOC Station P	2.61	277	Pn	Pn	03 53 02.4	0.0
PB01	IPOC Station P	2.61	277	*e*P	Pn	03 53 03.5	+1.1
PB01				*e*S	S	03 53 40.3	+1.6
PB01				IAML		03 53 41.5	
	comp=Z,507nm,0.1s						

PB01	IPOC Station P	2.61	277	P		Pn	03 53 03.4	+1.0
PB01				S		S	03 53 38.9	+0.2
PB01				IAML			03 53 48.3	
	comp=Z,145nm,0.5s							
GO01	Chusmiza	2.89	306	Pn		Pn	03 53 07.0	+1.1
GO01	Chusmiza	2.89	306	*e*P		Pn	03 53 06.7	+0.8
GO01				*e*S		S	03 53 49.6	+4.7
GO01	Chusmiza	2.89	306	P		Pn	03 53 07.5	+1.6
PB03	IPOC Station P	2.90	256	Pn		Pn	03 53 06.1	+0.4
PB06	IPOC Station P	2.96	243	Pn		Pn	03 53 07.1	+0.8
PB06	IPOC Station P	2.96	243	*e*P		Pn	03 53 07.6	+1.3
PB06				*e*S		S	03 53 47.1	+1.4
PB06				IAML			03 53 53.3	
	comp=Z,186nm,0.1s							
PB06	IPOC Station P	2.96	243	P		Pn	03 53 08.0	+1.7
PB02	IPOC Station P	2.97	271	Pn		Pn	03 53 06.8	+0.4
PB02	IPOC Station P	2.97	271	*e*P		Pn	03 53 07.2	+0.8
PB02				*e*S		S	03 53 45.3	-0.6
PB02				IAML			03 53 49.3	
	comp=Z,1μm,0.2s							
PB02	IPOC Station P	2.97	271	P		Pn	03 53 07.7	+1.3
PB02				S		S	03 53 45.1	-0.7
PB02				IAML			03 53 50.8	
	comp=Z,788nm,0.4s							
PB07	IPOC Station P	2.97	263	Pn		Pn	03 53 07.3	+0.8
SOEO	Opoqueri	3.02	338	P		Pn	03 53 09.3	+1.9
PB11	IPOC Station P	3.20	300	Pn		Pn	03 53 09.4	+0.3
PB11	IPOC Station P	3.20	300	*e*P		Pn	03 53 09.9	+0.8
PB11				*e*S		S	03 53 51.4	+0.7
PB11				IAML			03 53 53.0	
	comp=Z,726nm,0.1s							
PB11	IPOC Station P	3.20	300	P		Pn	03 53 10.1	+1.0
PB11				S		S	03 53 50.3	-0.4
PB11				IAML			03 53 53.5	
	comp=Z,722nm,0.5s							
PATCX	Punta Patache	3.26	279	Pn		Pn	03 53 09.7	-0.1
PATCX	Punta Patache	3.26	279	*e*P		Pn	03 53 10.4	+0.7
PATCX				*e*S		S	03 53 51.3	-0.6
PATCX				IAML			03 53 53.2	
	comp=Z,264nm,0.2s							
SOET	ToroToro	3.36	15	P		Pn	03 53 12.5	+1.3
AOEA	Aiquile	3.48	24	P		Pn	03 53 13.4	+0.9
SLA	San Lorenzo	3.50	162	*e*P		Pn	03 53 14.8	+2.2
PB05	IPOC Station P	3.55	245	Pn		Pn	03 53 13.7	+0.6
PB05	IPOC Station P	3.55	245	*e*P		Pn	03 53 13.6	+0.6
PB05				*e*S		S	03 53 57.1	-1.0
PB05				IAML			03 54 04.0	
	comp=Z,166nm,0.4s							
PB16	IPOC Station P	4.02	319	Pn		Pn	03 53 20.7	+1.4
PB16	IPOC Station P	4.02	319	P		Pn	03 53 21.3	+2.1
PB12	IPOC Station P	4.38	308	Pn		Pn	03 53 22.1	-1.1
PB12	IPOC Station P	4.38	308	*e*P		Pn	03 53 22.6	-0.6
PB12				*e*S		S	03 54 13.7	-2.5
PB12				IAML			03 54 17.7	
	comp=Z,238nm,0.4s							
AP01	Chacalluta	4.55	311	*e*P		Pn	03 53 25.4	+0.3
AP01				*e*S		S	03 54 19.9	+0.1
AP01				IAML			03 54 26.0	
	comp=Z,448nm,0.3s							
PB18	Visviri	4.59	325	Pn		Pn	03 53 28.9	+2.7
BBOJ	La Paz, Jacaqu	4.61	342	P		Pn	03 53 29.0	+2.6
SOEJ	Jacaque	4.61	342	P		Pn	03 53 28.6	+2.2
PB14	IPOC Station P	4.69	226	Pn		Pn	03 53 27.1	0.0
PB14	IPOC Station P	4.69	226	*e*P		Pn	03 53 27.4	+0.3
PB14				*e*S		S	03 54 20.9	-2.5
PB14				IAML			03 54 25.0	
	comp=Z,133nm,0.2s							
PB14	IPOC Station P	4.69	226	P		Pn	03 53 27.7	+0.6
BBOE	La Paz, Chanca	4.71	345	P		Pn	03 53 29.7	+2.0
BBOD	La Paz, Gloria	5.05	339	P		Pn	03 53 33.9	+1.9
LPAZ	La Paz	5.25	345	P		Pn	03 53 36.0	+1.5
	comp=Z,16nm,0.4s,baz=139,slow=5.6,SNR=150							
LPAZ				S		S	03 54 35.8	-0.9
	comp=Z,90nm,1.1s,baz=195,slow=16,SNR=18							
LPAZ	La Paz	5.25	345	Pn		Pn	03 53 35.7	+1.2
LPAZ	La Paz	5.25	345	*e*P		Pn	03 53 36.2	+1.7
LPAZ				*e*S		S	03 54 33.1	-3.6
LPAZ				IAML			03 54 40.1	
	comp=Z,44nm,1.1s							
LPAZ	La Paz	5.25	345	*e*P		Pn	03 53 36.3	+1.8
LPAZ				*e*S		S	03 54 36.2	-0.5
LPAZ	La Paz	5.25	345	P		Pn	03 53 36.2	+1.7
BBOB	La Paz, Bander	5.39	345	P		Pn	03 53 37.5	+1.3
AC02	Maricunga	5.86	202	Pn		Pn	03 53 42.3	+0.3
AC01	Pan de Azucar	5.93	216	Pn		Pn	03 53 42.0	-0.5
AC06	Mina Casimiro	6.81	208	Pn		Pn	03 53 52.8	-0.8
GO03	Copiapo	6.96	207	Pn		Pn	03 53 54.4	-1.3
SIV	San Ignacio	7.57	46	P		Pn	03 54 02.7	-0.9
	comp=Z,44nm,0.4s,baz=274,slow=9.5							
SIV				S		S	03 55 25.5	-4.3
	baz=274,slow=11							
AC05	El Transito	8.09	203	Pn		Pn	03 54 08.6	-1.6
MURT	Porto Murtinho	8.48	93	*e*P		Pn	03 54 14.3	-0.8
CO01	Juntas del Tor	9.08	199	Pn		Pn	03 54 24.6	+1.5
PTLB	Pontes e Lacer	9.30	52	Pn		Pn	03 54 24.2	-1.6
PTLB	Pontes e Lacer	9.30	52	*e*P		Pn	03 54 24.7	-1.1
BDQN	Bodoquena, MS	9.36	86	*e*P		Pn	03 54 27.2	+0.7
CPUP	Villa Florida	9.89	122	P		Pn	03 54 32.9	-0.4
	comp=Z,3.6nm,0.7s,baz=319,slow=13,SNR=12							
CPUP	Villa Florida	9.89	122	Pn		Pn	03 54 32.6	-0.7
CO03	El Pedregal	10.07	200	Pn		Pn	03 54 33.8	-1.7
CFA	Coronel Fontan	10.27	187	P		Pn	03 54 37.2	-0.8
	comp=Z,2.7nm,0.3s,baz=339,slow=11,SNR=31							
CFA				S		S	03 56 25.6	-7.7
	comp=Z,4.2nm,0.3s,baz=70,slow=15,SNR=12							
ZON	Zonda	10.27	189	Pn		Pn	03 54 37.0	-1.1
AQDB	Aquidauana	10.33	87	Pn		Pn	03 54 38.7	-0.3
AQDB	Aquidauana	10.33	87	*e*P		Pn	03 54 40.0	+1.1
VILB	Vilhena	10.44	38	Pn		Pn	03 54 39.7	-0.7
VILB	Vilhena	10.44	38	*e*P		Pn	03 54 40.4	0.0
CO02	Combarbal	10.50	201	Pn		Pn	03 54 39.2	-2.0
AMBA	Amambai (Brazi	10.97	100	*e*P		Pn	03 54 48.3	+1.2
CO04	Los Peladeros	11.27	199	Pn		Pn	03 54 49.1	-2.0
PP1B	Ponte de Pedra	11.78	73	*e*P		Pn	03 54 56.8	-0.5
SALV	Santo Antonio	11.78	64	*e*P		Pn	03 54 57.5	+0.1
VA03	San Esteban	11.83	196	Pn		Pn	03 54 58.8	+0.8
VA06	Catapilco	11.85	199	Pn		Pn	03 54 57.8	-0.3
MT02	Curacav	12.46	197	Pn		Pn	03 55 05.6	-0.1
MT03	Universidad Ad	12.52	195	Pn		Pn	03 55 06.9	+0.3
MT13	San Alfonso	12.71	194	Pn		Pn	03 55 09.6	+0.6
MT09	Talagante	12.91	196	Pn		Pn	03 55 11.4	0.0
BO04	La Punta	13.02	195	Pn		Pn	03 55 12.4	-0.3
MT01	Popeta	13.06	197	Pn		Pn	03 55 12.7	-0.5
TRCB	Terra Rica	13.13	99	*e*P		P	03 55 15.7	-0.9
NNA	Nana	13.47	312	P		Pn	03 55 17.9	-0.5
	comp=Z,3.3nm,0.3s,baz=155,slow=8.2,SNR=6.3							
NNA				S		S	03 57 41.5	-6.1
	comp=Z,2.9nm,0.3s,baz=70,slow=12,SNR=1.7							
BO01	Tunca	13.52	196	Pn		Pn	03 55 18.6	-0.2
BO02	Sierra Bellavi	13.83	194	Pn		Pn	03 55 22.1	-0.6
PTGB	Pitanga	13.88	107	*e*P		P	03 55 25.1	+0.1
GO05	Hualane	14.32	198	Pn		Pn	03 55 27.7	-1.1
ITAB	Concordia	14.51	117			P	03 55 32.4	+0.6
LDASE	Londrina, Braz	14.56	101	*e*P		P	03 55 32.9	+0.4
ML02	Panimavida	14.90	195			Pn	03 55 35.3	-0.5
CPSB	Cacapava Do Su	14.93	130	*e*P		P	03 55 38.7	+2.3
ITRB	Iturama	15.41	87	*e*P		Pn	03 55 42.8	+0.7
PLTB	Pedras Altas	15.61	134	P		Pn	03 55 44.0	-0.4
PLTB				IAmb		IAmb	03 55 48.0	
	comp=Z,11nm,1.0s							
PLTB	Pedras Altas	15.61	134	*e*P		Pn	03 55 44.9	+0.5
BI02	San Fabin de	15.73	194	P		Pn	03 55 45.6	-0.3
BI02				IAmb		IAmb	03 55 49.8	
	comp=Z,13nm,0.8s							
FRTB	Fartura	15.98	100	*e*P		Pn	03 55 49.6	+0.7
CNLB	Canela	16.35	122	*e*P		Pn	03 55 53.8	+0.4
BB19B	Bebedouro	16.96	92	*e*P		P	03 55 59.0	+0.1
TRQA	Tornquist	17.11	167	P		P	03 55 59.5	-0.8
MAJ01	Sao Joao Batis	17.19	114	*e*P		Pn	03 56 03.1	0.0
SNDB	Serra Nova Dou	17.47	60	*e*P		P	03 56 04.6	+0.1
RCLB	Rio Claro- Sao	17.83	97	*e*P		P	03 56 09.4	+1.0
TEFE	Tefe	17.89	7	*e*P		P	03 56 08.0	-1.0
ATAH	Atahualpa	18.12	320	P		Pn	03 56 16.8	+2.2
	comp=Z,7.0nm,0.8s,baz=143,slow=11,SNR=5.5							
PET01	Itanhaem-SP	18.15	103	*e*P		Pn	03 56 13.2	-1.2
VAO	Valinhos	18.36	99	P		P	03 56 14.3	+0.2
VAO				IAmb		IAmb	03 56 15.7	
	comp=Z,21nm,1.0s							
VAO	Valinhos	18.36	99	*e*P		P	03 56 14.9	+0.8
GO06	Curarrehue	18.59	192	P		Pn	03 56 17.9	-1.7
GO06				IAmb		IAmb	03 56 19.1	
	comp=Z,18nm,0.8s							

BDFB	Brasilia	18.62	75	P		P	03 56 18.3	+1.2
	comp=Z,4.2nm,0.5s,baz=254,slow=6.7,SNR=17							
BDFB	Brasilia	18.62	75	P		P	03 56 17.3	+0.2
BDFB				IAmb		IAmb	03 56 21.1	
	comp=Z,4.8nm,0.5s							
MACA	Manacapuru-AM	19.04	19	P		P	03 56 20.6	-0.9
MACA	Manacapuru-AM	19.04	19	*e*P		P	03 56 21.2	-0.3
PMNB	Patos De Minas	19.27	85	*e*P		P	03 56 24.4	+0.5
LR04	Corral	19.30	196	P		Pn	03 56 25.6	-2.3
LR05	Currie	19.32	192	P		P	03 56 25.4	+1.2
PLCA	Paso Flores	19.56	189	P		P	03 56 28.1	+1.2
	comp=Z,2.2nm,0.5s,baz=2.2,slow=11,SNR=23							
PLCA	Paso Flores	19.56	189	P		P	03 56 27.6	+0.8
PLCA				IAmb		IAmb	03 56 32.0	
	comp=Z,5.9nm,0.8s							
PLCA	Paso Flores	19.56	189	*e*P		Pn	03 56 29.3	-1.7
ITTB	Itaituba	20.00	34	*e*P		P	03 56 31.1	-0.6
BSCB	Bom Sucesso	20.46	93	*e*P		P	03 56 38.0	+1.3
DIAM	Diamantina, MG	21.89	86	*e*P		P	03 56 51.6	+0.3
LL02	Futaleuf	22.16	190	P		P	03 56 54.6	+1.2
LL02				IAmb		IAmb	03 56 55.4	
	comp=Z,8.7nm,0.9s							
JANB	Januaria	22.18	77	*e*P		P	03 56 53.6	-0.3
SMTB	Santa Maria do	22.23	59	*e*P		P	03 56 54.5	+0.1
SDBA	SAO DESIDERIO	22.67	70	*e*P		P	03 56 58.5	+0.1
AY01	Puyuhuapi	23.49	191	P		P	03 57 06.2	+0.8
GUA01	Guaratinga, BA	25.87	84	*e*P		P	03 57 27.4	+0.1
QSPA	South Pole Qui	68.80	180	P		P	04 02 58.2	+2.5
	comp=Z,4.1nm,0.8s,baz=174,slow=1.4,SNR=13							
	comp=Z,4.1nm,0.8s							
QSPA	South Pole Qui	68.80	180	P		P	04 02 58.2	+2.5
PDAR	Pinedale Array	75.06	329	P		P	04 03 35.0	+1.8
	comp=Z,0.2nm,0.6s,baz=94,slow=4.9,SNR=2.1							
	comp=Z,0.2nm,0.6s							
TORD	Torodi Ar. Bea	75.39	69	P		P	04 03 35.8	+0.3
	comp=Z,1.1nm,0.4s,baz=259,slow=4.5,SNR=30							
	comp=Z,1.1nm,0.4s							
YKA	Yellowknife Ar	91.78	340	P		P	04 04 58.3	+0.6
	comp=Z,0.2nm,0.5s,baz=125,slow=3.8,SNR=6.9							
	comp=Z,0.2nm,0.5s							
ASAR	Alice Springs	130.92	205	PKP		PKPdf	04 11 02.5	+1.1
	comp=Z,0.3nm,0.4s,baz=146,slow=1.7,SNR=4.5							
ASAR	Alice Springs	130.92	205			PKiKP	04 11 02.7	+0.3
WRA	Warramunga Arr	134.05	208	PKP		PKiKP	04 11 08.7	0.0
	comp=Z,0.2nm,0.3s,baz=167,slow=1.6,SNR=1.9							
MKAR	Makanchi Array	144.32	37	PKP		PKPdf	04 11 25.9	+0.6
	comp=Z,0.9nm,0.6s,baz=317,slow=3.8,SNR=12							
HHC	Hu-ho-hao-te	160.54	4	*e*P		PKPdf	04 11 48.2	-0.9
LZH	Lanzhou	163.19	27	*e*PKP		PKPdf	04 11 51.7	-0.3
LZH				pPKP		pPKPdf	04 12 54.5	+3.5
LZH				sPKP		sPKPdf	04 13 19.2	+5.2
PZH	PanZhiHua	168.28	62	PKP		PKPdf	04 11 53.8	-2.6

MEX 09 04:25:47.4±0.8, 19°.23N×103°.71W, h26km±17km, MD3.8, Jalisco

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEGR	Campo Tres	0.21	318	*e*P	Pb	04 25 51.5	-2.0
CEGR				*i* S	Sb	04 25 56.1	-1.5
SOMAC	Volcano de Col	0.30	14	*e*P	Pb	04 25 53.3	-1.5
SOMAC				*e*S	Sb	04 25 58.7	-1.2
INCO	Volcan de Coli	0.31	18	*i* P	Pb	04 25 53.5	-

0.5nm,0.3s,baz=337,slow=13,SNR=1.2
1.4nm,0.4s
BNN Bunyan 12.35 305 Pn Pn 04 48 25.1 +3.6
BR131 Keskin Array S 14.28 305 Pn Pn 04 48 49.1 +1.3
BRTR Keskin Array B 14.28 305 Pn Pn 04 48 49.9 +2.0
0.1nm,0.3s,baz=125,slow=14,SNR=15
0.2nm,0.3s
BRTR Keskin Array B 14.28 305 P P 04 48 55.8 +0.6
BORA Eskisehir 16.59 302 Pn Pn 04 49 19.2 +1.0
AB31 Akbulak array 18.82 23 P P 04 49 45.7 +0.5
ABKAR Akbulak array 18.82 23 P Pn 04 49 46.0 +0.3
AKTO Aktyubinsk 19.29 18 P P 04 49 49.5 -0.9
0.2nm,0.3s,baz=204,slow=8.2,SNR=4.9
2.3nm,0.7s
BELG Belogornoye 20.02 358 P P 04 49 58.8 +0.6
5.5nm,0.5s,baz=161,slow=2.9,SNR=3.5
5.5nm,0.5s
ALN Alexandroupoli 20.10 301 P P 04 50 00.4 +1.1
ALN IAmb IAmb 04 50 01.8
comp=Z,16nm,0.9s
TPGR Topolog 20.15 314 ⇑P P 04 50 00.7 +0.9
CFR Carcaliu 20.49 315 ⇑P P 04 50 03.8 +0.3
RDO Rodhopi 20.54 302 P Pn 04 50 06.0 -0.2
RDO IAmb IAmb 04 50 10.1
comp=Z,17nm,1.1s
LOZB Loznitsa 20.62 308 ⇑P P 04 50 05.4 +0.6
ELND Elena 20.92 307 ⇑P P 04 50 10.0 +1.8
ISR Istrita 21.44 313 ⇓P P 04 50 15.8 +2.0
VRI Vrincioaia 21.69 315 ⇑P P 04 50 17.7 +1.3
PLOR Plostina 21.73 315 ⇑P P 04 50 17.8 +0.9
NEHR Nehoiu 21.74 313 ⇑P P 04 50 19.5 +2.5
MLR Muntele Rosu 21.98 313 P P 04 50 20.5 +0.7
comp=Z,1.8nm,0.4s,baz=108,slow=16,SNR=7.2
comp=Z,1.8nm,0.4s
MLR Muntele Rosu 21.98 313 ⇑P P 04 50 21.7 +2.0
MLR Muntele Rosu 21.98 313 P P 04 50 20.8 +1.1
MLR IAmb IAmb 04 50 36.6
comp=Z,5.9nm,0.8s
COVR Voineasa-Covas 22.00 314 ⇓P P 04 50 21.3 +1.5
SORM Soroca 22.06 321 ⇑P P 04 50 20.0 -0.4
TESR Tescani 22.08 316 ⇓P P 04 50 21.2 +0.7
ONER Baraj Valea Uz 22.13 316 ⇑P P 04 50 22.8 +1.6
OZUR 22.38 314 ⇑P P 04 50 24.2 +0.4
VOIR 22.52 312 ⇑P P 04 50 27.3 +1.9
ITM Ithomi 22.55 290 P P 04 50 26.1 +0.4
ITM IAmb IAmb 04 50 53.2
comp=Z,31nm,1.3s
DOPR Dopca 22.55 314 ⇑P P 04 50 27.3 +1.5
ARR Arges 22.75 312 ⇑P P 04 50 29.6 +1.8
AKASG Malin Array Be 23.32 327 P P 04 50 34.2 +0.6
comp=Z,0.3nm,0.3s,baz=129,slow=7.0,SNR=4.5
comp=Z,0.3nm,0.3s
AKASG Malin Array Be 23.32 327 P P 04 50 33.2 -0.4
AKBB Malin Array Si 23.32 327 P P 04 50 33.5 0.0
KIEV Kiev 23.32 327 P P 04 50 33.8 +0.2
BURAR Bucovina Array 23.49 317 ⇑P P 04 50 36.0 +0.6
BURAR Bucovina Array 23.49 317 P P 04 50 35.4 -0.1
BUR08 Bucovina Ar. S 23.52 317 P P 04 50 35.2 -0.5
BUR08 IAmb IAmb 04 50 49.5
comp=Z,7.2nm,1.4s
GZR Gura Zlata 23.94 310 ⇑P P 04 50 40.1 +0.3
MARR Marisel-Cluj 24.28 313 ⇑P P 04 50 43.9 +1.0
DRGR 24.58 313 ⇑P P 04 50 46.5 +0.9
BVAR Borovoye Array 25.85 31 P P 04 50 57.0 0.0
comp=Z,0.9nm,0.5s,baz=230,slow=8.7,SNR=3.8
comp=Z,0.9nm,0.5s
NACGM Naroch 27.36 332 eP P 04 51 11.2 +0.6
comp=E,11nm,0.9s
KURBB Kurchatov Arra 28.50 41 P P 04 51 21.1 +0.3
comp=E,1.1nm,0.8s,baz=246,slow=9.5,SNR=5.0
comp=E,1.1nm,0.8s
KURK Kurchatov 28.59 41 P P 04 51 22.4 +0.8
MKAR Makanchi Array 29.30 51 P P 04 51 28.3 +0.2
comp=E,0.7nm,0.6s,baz=248,slow=9.6,SNR=9.0
comp=E,0.7nm,0.6s
MKAR Makanchi Array 29.30 51 P P 04 51 29.5 +1.4
BIOA Bad Ischl, Aus 30.65 310 i P P 04 51 40.3 +0.3
comp=E,2.1nm,0.5s
KBA Koelnbreinsper 30.67 309 eP P 04 51 40.4 +0.1
comp=E,3.2nm,0.7s
GERES GERESS Array B 30.97 312 P P 04 51 42.3 -0.5
comp=E,0.4nm,0.6s,baz=97,slow=9.1,SNR=3.1
comp=E,0.4nm,0.6s
LESA Schwarzleotal 31.20 309 eP P 04 51 45.1 +0.2
comp=E,1.5nm,0.9s
WTTA Wattenberg 31.84 309 i P P 04 51 50.7 +0.1
comp=E,4.4nm,0.9s
SQTA Sankt Quirin 32.11 309 i P P 04 51 52.8 -0.2
comp=E,6.3nm,0.7s
MOTA Moosalm 32.21 309 i P P 04 51 53.9 0.0
comp=E,6.0nm,0.9s
FETA Feichten 32.39 308 eP P 04 51 55.2 -0.3
comp=E,6.0nm,1.1s
RETA Reutte 32.47 309 i P P 04 51 55.4 -0.6
comp=E,0.4nm,0.3s
FINES FINESS Array B 32.60 340 P P 04 51 57.1 +0.1
comp=E,0.8nm,0.3s,baz=139,slow=7.7,SNR=13
comp=E,0.8nm,0.3s
DAVA Damuels 33.01 308 i P P 04 52 00.6 -0.3
comp=E,7.5nm,0.8s
ZALV Zalesovo Beam 33.45 39 P P 04 52 04.3 -0.1
comp=E,1.0nm,0.5s,baz=243,slow=8.8,SNR=5.3
comp=E,1.0nm,0.5s
ZALV Zalesovo Beam 33.45 39 P P 04 52 04.5 +0.1
SENIN Lac Senin/Sane 34.58 306 P P 04 52 14.1 -0.5
SENIN IAmb IAmb 04 52 42.2
comp=Z,4.6nm,1.0s
BNI Bardonecchia 34.83 304 P P 04 52 16.6 -0.1
BNI IAmb IAmb 04 52 31.2
comp=Z,8.4nm,1.1s
HFS Hagfors 36.11 331 P P 04 52 27.4 +0.1
comp=Z,5.1nm,0.4s,baz=123,slow=10,SNR=7.1
comp=Z,5.1nm,0.4s
NC405 NORSAR Array S 37.47 331 P P 04 52 38.6 -0.3
NC405 IAmb IAmb 04 53 02.0
comp=Z,21nm,1.3s
NB201 NORSAR Array S 37.61 331 P P 04 52 39.4 -0.7
NB2 NORSAR Subarra 37.63 331 P P 04 52 39.8 -0.6
comp=Z,1.3nm,0.7s,baz=123,slow=8.6
NOA NORSAR Array B 37.63 331 P P 04 52 39.6 -0.8
comp=Z,2.0nm,0.7s,baz=122,slow=8.3,SNR=7.4
comp=Z,2.0nm,0.7s
NC303 NORSAR Array S 37.67 331 P P 04 52 39.0 -1.7
NBO00 NORSAR Array S 37.81 331 P P 04 52 40.7 -1.1
NC204 NORSAR Array S 37.95 331 P P 04 52 41.8 -1.2
ARCES ARCESS Array B 39.45 347 P P 04 52 55.3 -0.1
comp=Z,1.6nm,0.9s,baz=147,slow=8.5,SNR=5.0
comp=Z,1.6nm,0.9s
EKA Eskdalemuir Ar 42.66 318 P P 04 53 21.7 -0.4
comp=Z,0.4nm,0.5s,baz=97,slow=7.8,SNR=1.6
comp=Z,0.4nm,0.5s
ESDC Sonseca Array 42.77 295 P P 04 53 23.1 -0.1
comp=Z,1.2nm,0.9s,baz=96,slow=7.8,SNR=4.7
comp=Z,1.2nm,0.9s
SONM Songino Array 45.63 53 P P 04 53 46.0 -0.1
comp=Z,0.4nm,0.6s,baz=261,slow=8.6,SNR=2.1
comp=Z,0.4nm,0.6s
TORD Torodi Ar. Bea 47.04 257 P P 04 53 57.2 -0.2
comp=Z,1.3nm,0.7s,baz=48,slow=5.6,SNR=8.0
comp=Z,1.3nm,0.7s
SPB2 Spitsbergen Ar 48.02 351 P P 04 54 04.0 -0.3
SPITS Spitsbergen Ar 48.03 351 P P 04 54 04.6 +0.3
comp=Z,1.4nm,0.4s,baz=126,slow=7.3,SNR=17
comp=Z,1.4nm,0.4s
SUMG Summit 58.64 339 P P 04 55 23.0 +0.2
SUMG IAmb IAmb 04 55 24.2
comp=Z,5.8nm,1.0s
KSRS Korea Array 63.27 61 P P 04 55 53.4 -1.0
comp=Z,1.4nm,0.4s,baz=286,slow=6.7,SNR=5.7
comp=Z,1.4nm,0.4s
B20K Meade River 76.19 9 P P 04 57 13.7 +0.3
B20K IAmb IAmb 04 57 37.9
comp=Z,4.3nm,1.4s
C18K Utukok River 76.85 11 P P 04 57 16.6 -0.7
C18K IAmb IAmb 04 57 18.0
comp=Z,3.8nm,1.1s
B21K Ikpikpuk River 76.87 8 P P 04 57 15.8 -1.5
B21K IAmb IAmb 04 57 18.8
comp=Z,6.0nm,1.1s
D22K Ayikyak River 77.80 8 P P 04 57 21.7 -0.9
D22K IAmb IAmb 04 57 24.3
comp=Z,5.3nm,1.4s
D23K Nanushuk River 77.94 7 P P 04 57 22.8 -0.5
D23K IAmb IAmb 04 57 33.3
comp=Z,4.6nm,1.4s
E19K Redstone River 78.55 10 P P 04 57 25.5 -1.2
E19K IAmb IAmb 04 57 27.8
comp=Z,3.2nm,1.2s
G19K Purcell Mounta 79.79 10 P P 04 57 33.0 -0.6
G19K IAmb IAmb 04 57 34.2
comp=Z,3.8nm,1.1s
IMAR Indian Mountai 80.42 9 P P 04 57 36.1 -0.8
G31M Satah River 80.98 1 P P 04 57 38.8 -1.1
G31M IAmb IAmb 04 57 44.8
comp=Z,1.5nm,0.9s
ILAR Eielson Array 82.39 7 P P 04 57 45.9 -1.5
comp=Z,0.4nm,1.0s,baz=338,slow=7.1,SNR=4.2
comp=Z,0.4nm,1.0s
BCAR Beaver Creek A 84.51 5 P P 04 57 57.5 -0.8
YKA Yellowknife Ar 84.52 352 P P 04 57 57.3 -1.0
comp=Z,0.7nm,1.0s,baz=9.9,slow=5.3,SNR=9.0
comp=Z,0.7nm,1.0s
SLKM Skilak Lake 86.14 9 P P 04 58 05.7 -0.9

*MAN **09** 04:47:37.0, 11.88N×125.75E, h9km, MS3.1*
IDC 09 04:47:40.5±1.9, 10.78N×122.29E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=92.3km s-min=28.9km az=60.0, Panay

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	23.83	291	P	P	04 52 55.5	0.0
	1.3nm,0.3s,baz=106,slow=12,SNR=1.6						
	1.3nm,0.3s						
ASAR	Alice Springs	36.07	162	P	P	04 54 44.1	-0.1
	0.3nm,0.6s,baz=345,slow=9.3,SNR=1.5						
	0.3nm,0.6s						
MKAR	Makanchi Array	49.29	324	P	P	04 56 30.8	-0.5
	0.8nm,0.8s,baz=124,slow=7.2,SNR=5.7						
	0.8nm,0.8s						
KURBB	Kurchatov Arra	53.46	327	P	P	04 57 02.7	+0.2
	0.4nm,0.5s,baz=126,slow=7.3,SNR=6.2						
	0.4nm,0.5s						

*SDD **09** 04:54:52.4±0.7, 18.53N×71.47W, h43km±7km, MD2.5, ML1.6, MW2.3, Presumed earthquake*
*OSPL **09** 04:54:55.0±0.9, 18.70N×71.57W, h0km±126km, ML1.7, Presumed earthquake*
ISC 09 04:54:54.1±1.0, 18.65N±0.04×71.53W±0.06, h14km±7km, n7, σ0s51/13, 6C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LONE3	El Aguacate, B	0.08	127	*i* P	Pg	04 54 57.1	-0.1
LONE3				*e*S	Sg	04 54 59.4	+0.1
LONE3				IAML		04 55 00.1	
	comp=Z,82nm,0.2s						
NEDR	Neiba UASD	0.20	148	⇑*e*Pg	Sb	04 55 03.0	-0.2
NEDR				⇑*e*Sg		04 55 04.4	
	comp=N,62nm,0.3s			IAML			
LODU1	El Espartillar	0.30	170	*i* P	Pb	04 55 01.8	+0.5
LODU1				*e*S	Sb	04 55 06.5	+0.3
LODU1				IAML		04 55 09.9	
	comp=Z,93nm,2.1s						
JIDR	Jimani	0.35	242	*e*Pg	Pg	04 55 01.2	+0.1
JIDR				⇑*e*Sg	Sb	04 55 07.1	-0.2
JIDR				IAML		04 55 08.5	
	comp=N,48nm,0.3s						
SDDR	Presa de Saban	0.40	35	⇑*e*Pg	Pb	04 55 02.4	-0.6
SDDR				⇑*e*Sg	Sb	04 55 09.8	+0.8
SDDR				IAML		04 55 16.6	
	comp=N,10nm,0.8s						
REDR	Restauracion	0.53	14	⇑*e*Pg	Pb	04 55 05.5	+0.5
REDR				⇑*e*Sg	Sn	04 55 16.1	+0.2
REDR				IAML		04 55 24.5	
	comp=N,67nm,1.4s						
LOBH	Bahia de las A	0.80	188	*i* P	Pn	04 55 10.2	-0.7
LOBH				*e*S	Sb	04 55 20.7	+0.5
LOBH				IAML		04 55 24.0	
	comp=Z,57nm,3.8s						

*SDD **09** 05:00:07.8±0.5, 18.55N×71.47W, h37km±4km, MD3.0, ML2.0, MW3.0, Presumed earthquake*
*OSPL **09** 05:00:09.5±0.6, 18.73N×71.51W, h6km±16km, ML1.4, Presumed earthquake*
ISC 09 05:00:09.2±1.0, 18.66N±0.04×71.50W±0.06, h14km±7km, n8, σ0s84/14, 8C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LONE3	El Aguacate, B	0.07	146	*i* P	Pg	05 00 11.8	-0.4
LONE3				*e*S	Sg	05 00 14.1	0.0
LONE3				IAML		05 00 14.8	
	comp=Z,133nm,0.1s						
NEDR	Neiba UASD	0.19	157	⇑*e*Pg	Pg	05 00 13.3	-0.3
NEDR				⇑*e*Sg	Sg	05 00 17.7	+1.1
NEDR				IAML		05 00 19.2	
	comp=N,124nm,0.2s						
LODU1	El Espartillar	0.30	176	*i* P	Pb	05 00 16.0	-0.4
LODU1				*e*S	Sb	05 00 21.2	-0.1
LODU1				IAML		05 00 21.9	
	comp=Z,58nm,0.4s						
JIDR	Jimani	0.37	244	⇑*e*Pg	Pg	05 00 16.1	-0.7
JIDR				⇑*e*Sg	Sg	05 00 21.8	-0.1
JIDR				IAML		05 00 22.4	
	comp=N,115nm,0.1s						
SDDR	Presa de Saban	0.38	32	⇑*e*Pg	Pb	05 00 17.0	-0.7
SDDR				⇑*e*Sg	Sb	05 00 24.2	+0.7
SDDR				IAML		05 00 59.5	
	comp=N,49nm,2.7s						
SDDR	Presa de Saban	0.38	32	*i* P	Pg	05 00 15.6	-1.3
SDDR				IAML		05 00 23.7	
	comp=Z,40nm,1.6s						
REDR	Restauracion	0.51	11	⇑*e*Pg	Pb	05 00 21.4	+1.4
REDR				⇑*e*Sg	Sn	05 00 30.9	+0.2
REDR				IAML		05 01 16.4	
	comp=N,95nm,2.8s						
LOBH	Bahia de las A	0.80	190	*i* P	Pb	05 00 25.3	+0.4

*NEIC **09** 05:00:41.2±0.8, 36.1S±0.1×179.8W±0.1, h10km±2km, mb4.4/9, Error ellipse: s-maj=20.2km s-min=17.6km az=56.0*
*IDC **09** 05:00:43.1±1.7, 35.69S×179.55E, h0km, mb4.4/2, mbtmp4.4/3, ML4.1/1, Error ellipse: s-maj=42.5km s-min=41.9km az=156.0*
*WEL **09** 05:00:49.4±1.2, 36.5S±6.5×18.0E±1.1, h12km, M4.1/23, ML4.1/24, MLv4.1/23, Error ellipse: s-maj=13.8km s-min=7.9km az=86.7, confirmed*
*NOU **09** 05:00:50.3, 36.59S×179.80E, h100km, MLv4.4/12, Off E. Coast of N. Island, N.Z.*
ISC 09 05:00:46.5±2.6, 36.32S±0.07×179.86E±0.10, h29km±15km, n99, σ2s01/103, mb4.3/7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	1.76	225	P	Pn	05 01 16.9	+1.9
MXZ	Matakaoa Point	1.76	225	P	Sn	05 01 37.6	+1.2
MXZ	Matakaoa Point	1.76	225		Pn	05 01 16.9	+1.9
MXZ	Matakaoa Point	1.76	225	P	Pn	05 01 16.9	+1.9
MXZ				S	Sn	05 01 36.5	+0.1
WMGZ	Waiomatatini S	1.89	217	P	Pb	05 01 19.9	-0.4
WMGZ				S	Sb	05 01 43.3	-0.2
PKGZ	Pakihiroa	2.10	222	P	Pn	05 01 22.6	+2.9
PKGZ				S	Sn	05 01 47.0	+2.2
PUZ	Puketiti	2.17	216	P	Pn	05 01 23.2	+2.6
PUZ				S	Sn	05 01 48.0	+1.4
HAZ	Te Kaha	2.19	229	P	Pn	05 01 23.0	+2.0
HAZ				S	Sn	05 01 48.8	+1.6
TWGZ	Tauwhareparae	2.38	218	P	Pn	05 01 26.4	+2.7
TWGZ				S	Sn	05 01 53.8	+1.9
RUGZ	Raukumara Rang	2.40	226	P	Pn	05 01 26.5	+2.6
WIZ	White Island	2.46	240	P	Pn	05 01 25.9	+1.3
WSRZ	White Island S	2.46	240	P	Pn	05 01 26.3	+1.6
CNGZ	Carnagh Statio	2.53	211	P	Pn	05 01 28.9	+3.3
TKGZ	Te Karaka	2.65	217	P	Pn	05 01 29.7	+2.4
MWZ	Matawai	2.74	222	P	Pn	05 01 30.6	+2.1
RIGZ	Rimuhau	2.91	214	P	Pn	05 01 32.5	+1.7
RAGZ	Rawiri	2.92	221	P	Pn	05 01 33.0	+2.0
URZ	Urewera	2.92	228	Pn	Pn	05 01 33.0	+2.0
	21nm,0.3s,baz=19,slow=2.9,SNR=145						
URZ				Sn	Sn	05 02 03.4	-1.8
	69nm,0.3s,baz=97,slow=19,SNR=27						
	78nm,0.3s						
URZ	Urewera	2.92	228	P	Pn	05 01 32.6	+1.6
URZ	Urewera	2.92	228	S	Sn	05 02 05.3	+0.1
URZ	Urewera	2.92	228	P	Pn	05 01 32.6	+1.6
PRGZ	Paritu Road	3.04	211	P	Pn	05 01 34.6	+2.0
MARZ	Manawahe	3.04	236	P	Pn	05 01 34.7	+2.0
OPRZ	Ohinepanea	3.05	239	P	Pn	05 01 34.5	+1.8
MYRZ	Mayor Island	3.06	251	P	Pn	05 01 34.6	+1.7
EDRZ	Edgecumbe	3.06	233	P	Pn	05 01 35.2	+2.1
SNGZ	Shannon Statio	3.17	218	P	Pn	05 01 36.1	+1.6
TGRZ	Tauranga	3.20	243	P	Pn	05 01 36.7	+1.8
KNZ	Kokohu	3.21	212	P	Pn	05 01 36.3	+1.4
MHGZ	Mahia Peninsul	3.22	208	P	Pn	05 01 36.7	+1.6
RTZ	Ruatahuna	3.24	224		Pn	05 01 37.8	+2.4
RTZ	Ruatahuna	3.24	224	P	Pn	05 01 37.9	+2.4
MUGZ	Murupara	3.27	228	P	Pn	05 01 37.1	+1.3
TARZ	Mount Tarawera	3.29	233	P	Pn	05 01 38.4	+2.2
OMRZ	Omania	3.31	236	P	Pn	05 01 38.6	+2.3
KARZ	Kaharoa	3.35	238	P	Pn	05 01 38.8	+1.9
HLRZ	Highlands Stat	3.40	234	P	Pn	05 01 40.2	+2.6
RAHZ	Arahi	3.40	220	P	Pn	05 01 39.7	+2.1
WHHZ	Waihua	3.45	216	P	Pn	05 01 40.2	+1.9
KMRZ	Kaimai	3.48	243	P	Pn	05 01 40.4	+1.7
MTHZ	Maungataniwha	3.48	223	P	Pn	05 01 40.7	+1.9
PRRZ	Plateau Road	3.51	231	P	Pn	05 01 40.6	+1.5
GRZ	Great Barrier	3.56	270	P	Pn	05 01 42.4	+2.6
ALRZ	Allen Road	3.58	230	P	Pn	05 01 41.8	+1.7
NMHZ	Naumai	3.68	220	P	Pn	05 01 43.2	+1.7
ARHZ	Aropaoanui	3.71	217	P	Pn	05 01 43.0	+1.2
TOZ	Tahuroa Road	3.76	247		Pn	05 01 44.4	+1.9
TOZ	Tahuroa Road	3.76	247	P	Pn	05 01 44.4	+1.9
WIAZ	Waiheke Island	3.83	262	P	Pn	05 01 44.9	+1.3
MKAZ	Moumakai	3.85	257	P	Pn	05 01 45.8	+1.9
KUTZ	Kaahu Road	3.88	235	P	Pn	05 01 46.5	+2.3
BKZ	Black Stump Fm	3.90	222	P	Pn	05 01 45.2	+0.7
BKZ	Black Stump Fm	3.90	222	S	Sn	05 02 28.7	-0.6
BKZ	Black Stump Fm	3.90	222		Pn	05 01 46.0	+1.5
BKZ	Black Stump Fm	3.90	222	P	Pn	05 01 45.4	+1.0
MCHZ	McNeill Hill	4.00	218	P	Pn	05 01 46.8	+1.0
ETAZ	East Tamaki Re	4.02	259	P	Pn	05 01 48.7	+2.6
MBAZ	Motutapu North	4.02	262	P	Pn	05 01 49.4	+3.3
KWHZ	Kaweka Forest	4.12	220	P	Pn	05 01 48.2	+0.6
RATZ	Rangitukua	4.12	231	P	Pn	05 01 49.8	+2.3
RITZ	Rihia Road	4.14	229	P	Pn	05 01 49.9	+2.2
KAHZ	Kahuranaki	4.19	213	P	Pn	05 01 48.6	+0.1
WTAZ	Waiatarua	4.29	260	P	Pn	05 01 53.3	+3.4
KRHZ	Kereru	4.31	219	P	Pn	05 01 51.2	+1.0
NTVZ	North Tongarir	4.32	229	P	Pn	05 01 51.8	+1.4
ETVZ	East Tongariro	4.33	228	P	Pn	05 01 51.0	+0.5
KRVZ	Karewarewa	4.34	229	P	Pn	05 01 52.3	+1.6
PXZ	Pawanui	4.39	212	P	Pn	05 01 50.6	-0.6
SNVZ	South Ngauruho	4.40	228	P	Pn	05 01 52.0	+0.5
NGZ	Ngauruhoe	4.42	229	P	Pn	05 01 53.4	+1.6
TUVZ	Tukino	4.44	227	P	Pn	05 01 53.5	+1.4
HIZ	Hauiti	4.54	240	P	Pn	05 01 55.9	+2.6
HIZ	Hauiti	4.54	240	Pn	Pn	05 01 55.2	+1.9
BFZ	Birch Farm	5.20	212	P	Pn	05 02 01.9	-0.4
BFZ	Birch Farm	5.20	212	S	Sn	05 02 57.0	-4.2
OUZ	Omahuta	5.21	280	P	Pn	05 02 04.8	+2.3
OUZ	Omahuta	5.21	280	P	Pn	05 02 04.8	+2.3
MRZ	Mangatainoka R	5.48	216	Pn	Pn	05 02 05.2	-1.0
QRZ	Quartz Range	7.29	230	P	Pn	05 02 30.7	-0.4
KHZ	Kahutara	7.81	217	P	Pn	05 02 38.6	+0.5
CTZ	Chatham Island	7.88	161	P	Pn	05 02 43.4	+4.2
INKA	Innaminka	34.06	273	P	P	05 07 27.4	-0.8
INKA				IAmb	IAmb	05 07 29.3	
	comp=Z,2.9nm,0.7s						
AS31	Alice Springs	41.39	275	P	P	05 08 29.2	-1.2
ASAR	Alice Springs	41.39	275	P	P	05 08 29.0	-1.4
	comp=Z,5.5nm,0.7s,baz=120,slow=8.4,SNR=48						
	comp=Z,5.5nm,0.7s						
WR8	Warramunga Arr	42.79	280	P	P	05 08 40.6	-1.1
WR8				IAmb	IAmb	05 08 41.0	
	comp=Z,7.9nm,1.2s						
WRA	Warramunga Arr	42.92	280	P	P	05 08 41.2	-1.7
	comp=Z,2.1nm,0.4s,baz=120,slow=8.2,SNR=33						
	comp=Z,2.1nm,0.4s						
WRA	Warramunga Arr	42.92	280	P	P	05 08 41.1	-1.7
WB0	Warramunga Arr	42.97	280	P	P	05 08 41.7	-1.5
WB0				IAmb	IAmb	05 08 42.5	
	comp=Z,9.7nm,1.1s						
FORT	Forrest	43.10	262	P	P	05 08 42.8	-1.4
FORT				IAmb	IAmb	05 09 20.4	
	comp=Z,13nm,1.1s						
MORW	Morawa	53.35	258	P	P	05 10 01.2	-2.1
PSA00	Pilbara Seismi	53.75	269	P	P	05 10 04.5	-1.9
PSA00				IAmb	IAmb	05 10 13.4	
	comp=Z,2.1nm,1.1s						
SOEI	Soe	56.69	283	P	P	05 10 26.4	-1.4
H03N3	Juan Fernandez	78.92	123	T	T	06 39 42.0	
	baz=235,SNR=3.7						
H03N2	Juan Fernandez	78.92	123	T	T	06 39 37.3	
	baz=235						
H03N1	Juan Fernandez	78.93	123	T	T	06 39 34.4	
	baz=235						
KURBB	Kurchatov Arra	123.75	311	PKP	PKPdf	05 19 39.1	-1.7
	comp=Z,0.3nm,0.5s,baz=119,slow=2.3,SNR=3.1						
FINES	FINESS Array B	149.92	335	PKPbc	PKPdf	05 20 31.9	+3.8
	comp=Z,3.2nm,1.0s,baz=27,slow=3.4,SNR=4.5						
FINES	FINESS Array B	149.92	335	PKPdf	PKPdf	05 20 29.7	+1.5
TORD	Torodi Ar. Bea	156.87	185	PKPab	PKPab	05 21 14.4	+5.2
	comp=Z,0.3nm,0.4s,baz=188,slow=5.6,SNR=5.5						

*IDC **09** 05:19:56.0±7.6, 35.71N×22.42E, h0km, mb3.6/4, mbtmp3.6/6, ML3.1/2, MS3.4/1, Error ellipse: s-maj=149.0km s-min=44.8km az=17.0*
*THE **09** 05:20:02.7, 36°N±2°×2°3E±°, h6km±3km, M2.8/17, MLh2.8/17*
*ATH **09** 05:20:02.1, 36.19N×22.74E, h12km±1km, ML3.1/7, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
ISC 09 05:20:02.7±1.1, 36.20N±0.04×22.79E±0.04, h15km±7km, n48, σ0s83/57, mb3.8/4, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTHA	Kythira Island	0.23	74	P	Pg	05 20 07.8	0.0
KTHA	Kythira Island	0.23	74	P	Pg	05 20 07.8	0.0
NPS1	Neapolis Lacon	0.39	35	P	Pb	05 20 10.8	-0.5
NPS1				S	Sg	05 20 16.1	+0.2
VLI	Veliai	0.54	13	P	Pg	05 20 13.0	-0.3
VLI				S	Sg	05 20 20.5	0.0
VLI	Veliai	0.54	13	P	Pg	05 20 12.9	-0.4
VLI				S	Sg	05 20 19.9	-0.6
PYL	PYLOS	1.09	310	P	Pb	05 20 22.7	-0.7
PYL				S	Sn	05 20 38.9	+0.6
PYL	PYLOS	1.09	310	P	Pb	05 20 22.5	-0.8
PYL1	Pylos	1.14	310	P	Pb	05 20 23.5	-0.5
ITM	Ithomi	1.20	325	P	Pb	05 20 24.9	-0.3
ITM				S	Sg	05 20 42.9	+1.3
ITM	Ithomi	1.20	325	P	Pn	05 20 24.8	-0.2
CH01	Chania	1.21	124	P	Pn	05 20 25.1	-0.1
IMMV	Iera Moni Meta	1.22	127	P	Pb	05 20 25.1	-0.3
IMMV				S	Sg	05 20 42.2	+0.2
IMMV	Iera Moni Meta	1.22	127	P	Pb	05 20 25.1	-0.3
VLX	Vlachokerasia	1.22	345	P	Pb	05 20 25.4	-0.1
VLX				S	Sg	05 20 43.2	+1.0
VLX	Vlachokerasia	1.22	345	P	Pb	05 20 25.3	-0.2
CHAN	Chania	1.22	123	P	Pb	05 20 25.4	-0.1
VAM	Vamos	1.39	124	P	Pb	05 20 28.7	+0.3
VAM				S	Sg	05 20 46.6	-1.0
VAM	Vamos	1.39	124	P	Pb	05 20 28.7	+0.3
MHLO	Agia Marina, M	1.39	69	P	Pn	05 20 27.2	-0.4
MHLO				S	Sn	05 20 45.7	0.0
MHLO	Agia Marina, M	1.39	69	P	Pn	05 20 27.3	-0.4
MET1	Methana Town,	1.46	19	P	Pb	05 20 28.9	-0.6
MET6	Megalochori,Me	1.47	18	P	Pb	05 20 29.5	-0.2
MET5

ATAL	**Atalanti**	**2.50**	**4**	P		**Pn**	**05 20 44.4**	**+1.6**
NEO	**Neokhori**	**3.13**	**6**	P		**Pn**	**05 20 53.0**	**+1.5**
BRTR	**Keskin Array B**	**9.27**	**64**	Pn		**Pn**	**05 22 20.0**	**+4.1**
	0.1nm,0.3s,baz=251,slow=12,SNR=2.2							
	0.5nm,0.7s							
DAVOX	**Davos/Dischmat**	**14.31**	**322**	LR		LR	05 30 28.4	
	comp=Z,144nm,18.7s,baz=128,slow=44							
KBZ	**Khabaz**	**17.13**	**58**	P		**P**	**05 24 02.8**	**-0.2**
	0.1nm,0.3s,baz=238,slow=13,SNR=4.2							
	1.3nm,0.6s							
HFS	**Hagfors**	**24.66**	**349**	P		**P**	**05 25 22.3**	**-0.3**
	2.3nm,0.9s,baz=161,slow=9.2,SNR=1.4							
	2.3nm,0.9s							
KURBB	**Kurchatov Arra**	**41.99**	**52**	P		**P**	**05 27 52.7**	**-0.3**
	0.2nm,0.3s,baz=273,slow=8.5,SNR=2.6							
	0.2nm,0.3s							
MKAR	**Makanchi Array**	**44.83**	**57**	P		**P**	**05 28 16.2**	**+0.2**
	0.5nm,0.3s,baz=266,slow=8.1,SNR=12							
	0.5nm,0.3s							
ZALV	**Zalesovo Beam**	**45.70**	**47**	P		**P**	**05 28 21.7**	**-1.1**
	0.3nm,0.3s,baz=278,slow=10.0,SNR=1.6							
	0.3nm,0.3s							

*IDC **09** 05:45:31.1±1.6,5°.57S×147°.02E,h218^{km}±21^{km},mb3.0/5, mbtmp3.6/7,Error ellipse: s-maj=46.0km s-min=12.0km az=109.0*

ISC 09 05:45:29.9±1.0,5°.44S±0°.08×146°.9E±0°.2,h200^{km},n7, σ1°38/11,mb3.3/5,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.95**	**176**	P	**Pn**	**05 46 32.5**	**+1.3**
	13nm,0.2s,baz=17,slow=14,SNR=2.1						
PMG				S	**Sn**	**05 47 18.2**	**-1.1**
	37nm,0.4s,baz=11,slow=19,SNR=8.9						
WRA	**Warramunga Arr**	**18.87**	**219**	P	**P**	**05 49 36.6**	**+1.3**
	0.8nm,0.4s,baz=43,slow=10.0,SNR=12						
WRA				S	**S**	**05 52 57.8**	**-1.4**
	0.6nm,0.8s,baz=43,slow=23,SNR=4.7						
WRA				PcP	**PcP**	**05 53 53.0**	**-0.1**
	0.2nm,0.4s,baz=28,slow=1.8,SNR=1.9						
ASAR	**Alice Springs**	**22.00**	**213**	P	**P**	**05 50 09.7**	**+1.4**
	0.5nm,0.5s,baz=28,slow=7.2,SNR=6.6						
ASAR				S	**S**	**05 53 54.8**	**-1.8**
	0.2nm,0.5s,baz=32,slow=21,SNR=2.0						
	0.5nm,0.5s						
KSRS	**Korea Array**	**46.18**	**339**	P	**P**	**05 53 35.2**	**+0.5**
	0.8nm,0.4s,baz=156,slow=9.2,SNR=2.7						
	0.8nm,0.4s						
SONM	**Songino Array**	**63.85**	**331**	P	**P**	**05 55 41.8**	**+0.6**
	0.4nm,0.3s,baz=147,slow=6.4,SNR=2.2						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**76.98**	**320**	P	**P**	**05 56 60.0**	**-0.6**
	0.1nm,0.4s,baz=110,slow=5.4,SNR=4.2						
	0.1nm,0.4s						
ILAR	**Eielson Array**	**85.03**	**23**	P	**P**	**05 57 41.2**	**-1.4**
	0.2nm,0.7s,baz=256,slow=5.7,SNR=2.3						
	0.2nm,0.7s						

*IDC **09** 05:48:12.6±9.7,36°.77N×22°.31E,h0^{km},mb3.6/3, mbtmp3.6/5,ML3.1/2,MS3.5/1,Error ellipse: s-maj=285.3km s-min=91.8km az=175.0*

*ATH **09** 05:48:14.6,36°.18N×22°.74E,h11^{km}±1^{km},ML3.1/19, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*THE **09** 05:48:16.3,36°.N±2°×2°.3E°,h0^{km},3^{km},M2.8/26, MLh2.8/26*

ISC 09 05:48:14.4±1.3,36°.25N±0°.03×22°.76E±0°.03,h7^{km}±10^{km}, n72,σ1°01/81,mb3.8/3,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTHA	**Kythira Island**	**0.25**	**88**	P	**Pg**	**05 48 20.1**	**+0.8**
KTHA	**Kythira Island**	**0.25**	**88**	P	**Pg**	**05 48 20.3**	**+1.0**
NPS1	**Neapolis Lacon**	**0.36**	**43**	P	**Pb**	**05 48 23.1**	**-0.1**
NPS1				S	**Sb**	**05 48 28.6**	**-0.5**
VLI	**Veliai**	**0.49**	**17**	P	**Pb**	**05 48 25.5**	**0.0**
VLI				S	**Sb**	**05 48 31.6**	**-1.3**
VLI	**Veliai**	**0.49**	**17**	P	**Pb**	**05 48 25.3**	**-0.1**
VLI				S	**Sb**	**05 48 32.6**	**-0.3**
PYL	**PYLOS**	**1.04**	**309**	P	**Pn**	**05 48 34.9**	**+0.1**
PYL				S	**Sn**	**05 48 51.8**	**+1.5**
PYL	**PYLOS**	**1.04**	**309**	P	**Pb**	**05 48 34.9**	**+0.1**
PYL1	**Pylos**	**1.08**	**308**	P	**Pb**	**05 48 36.0**	**+0.5**
ITM	**Ithomi**	**1.15**	**325**	P	**Pn**	**05 48 37.9**	**+0.9**
ITM				S	**Sn**	**05 48 54.6**	**+1.7**
ITM	**Ithomi**	**1.15**	**325**	P	**Pn**	**05 48 37.4**	**+0.4**
VLX	**Vlachokerasia**	**1.16**	**345**	P	**Pn**	**05 48 38.0**	**+0.7**
VLX				S	**Sn**	**05 48 54.3**	**+0.9**
VLX	**Vlachokerasia**	**1.16**	**345**	P	**Pn**	**05 48 37.6**	**+0.4**
KNDR	**Palaiochora Ch**	**1.23**	**145**	P	**Pg**	**05 48 36.8**	**-1.3**
CH01	**Chania**	**1.26**	**125**	P	**Pg**	**05 48 37.6**	**-1.0**
IMMV	**Iera Moni Meta**	**1.27**	**128**	P	**Pg**	**05 48 37.5**	**-1.2**
IMMV				S	**Sb**	**05 48 57.6**	**+2.5**
IMMV	**Iera Moni Meta**	**1.27**	**128**	P	**Pg**	**05 48 37.4**	**-1.3**
CHAN	**Chania**	**1.27**	**124**	P	**Pg**	**05 48 37.9**	**-0.9**
MHLO	**Agia Marina, M**	**1.40**	**71**	P	**Pn**	**05 48 40.2**	**-0.2**
MHLO				S	**Sg**	**05 48 58.6**	**-0.7**
MHLO	**Agia Marina, M**	**1.40**	**71**	P	**Pn**	**05 48 40.0**	**-0.3**
MET1	**Methana Town,**	**1.42**	**21**	P	**Pn**	**05 48 40.9**	**+0.2**
MET6	**Megalochori,Me**	**1.43**	**19**	P	**Pb**	**05 48 41.8**	**+0.4**
MET2	**Kameni Chora,**	**1.44**	**18**	P	**Pb**	**05 48 42.0**	**+0.4**
VAM	**Vamos**	**1.44**	**125**	P	**Pn**	**05 48 41.0**	**0.0**
VAM				S	**Sg**	**05 49 00.9**	**+0.2**
VAM	**Vamos**	**1.44**	**125**	P	**Pn**	**05 48 41.0**	**0.0**
MET5	**Makryloggos,Me**	**1.45**	**19**	P	**Pb**	**05 48 42.1**	**+0.2**
AMT	**Artemida-Makis**	**1.53**	**327**	P	**Pb**	**05 48 44.1**	**+0.8**
AMT	**Artemida-Makis**	**1.53**	**327**	P	**Pb**	**05 48 44.0**	**+0.8**
GUR	**Goura**	**1.72**	**349**	P	**Pg**	**05 48 47.4**	**0.0**
GVD	**Gavdhos**	**1.77**	**142**	P	**Pn**	**05 48 47.5**	**+1.9**
GVD	**Gavdhos**	**1.77**	**142**	P	**Pn**	**05 48 45.8**	**+0.3**
LTK	**Loutraki**	**1.78**	**5**	P	**Pb**	**05 48 47.4**	**0.0**
LTK	**Loutraki**	**1.78**	**5**	P	**Pb**	**05 48 47.3**	**-0.1**
VLY	**Voula,Athens**	**1.80**	**27**	P	**Pn**	**05 48 46.2**	**+0.2**
VLY				S	**Sb**	**05 49 10.9**	**+0.3**
VLY	**Voula,Athens**	**1.80**	**27**	P	**Pn**	**05 48 46.4**	**+0.4**
KLV	**Kalavryta, Ach**	**1.86**	**345**	P	**Pg**	**05 48 49.4**	**-0.6**
KLV	**Kalavryta, Ach**	**1.86**	**345**	P	**Pb**	**05 48 49.0**	**+0.2**
ATH	**Athens Observa**	**1.89**	**24**	P	**Pb**	**05 48 49.5**	**+0.3**
DRO	**Drossia**	**1.90**	**334**	P	**Pg**	**05 48 50.3**	**-0.5**
ATHU	**Athens Univers**	**1.90**	**25**	P	**Pn**	**05 48 48.0**	**+0.7**
ATHU	**Athens Univers**	**1.90**	**25**	P	**Pn**	**05 48 47.8**	**+0.5**
VILL	**Villia**	**1.96**	**13**	P	**Pb**	**05 48 49.7**	**-0.9**
IDI	**Anoyia**	**1.98**	**118**	P	**Pn**	**05 48 50.7**	**+2.3**
IDI	**Anoyia**	**1.98**	**118**	P	**Pn**	**05 48 47.8**	**-0.6**
PTL	**Penteli**	**2.00**	**26**	P	**Pn**	**05 48 49.7**	**+0.9**
PTL	**Penteli**	**2.00**	**26**	P	**Pn**	**05 48 49.2**	**+0.4**
STFN	**Stefani**	**2.02**	**18**	P	**Pn**	**05 48 50.0**	**+1.0**
STFN	**Stefani**	**2.02**	**18**	P	**Pn**	**05 48 49.9**	**+0.8**
DION	**Dionisos Attik**	**2.05**	**27**	P	**Pn**	**05 48 50.4**	**+1.0**
DION	**Dionisos Attik**	**2.05**	**27**	P	**Pn**	**05 48 50.1**	**+0.6**
RLS	**Riolos of Patr**	**2.08**	**331**	P	**Pb**	**05 48 52.0**	**-0.5**
SAP3	**Santorini-Thir**	**2.10**	**84**	P	**Pn**	**05 48 51.6**	**+1.6**
LTHK	**Lithakia**	**2.12**	**314**	P	**Pb**	**05 48 53.0**	**-0.2**
SNT5	**Nea Kammeni, S**	**2.14**	**85**	P	**Pn**	**05 48 52.3**	**+1.8**
SNT5	**Nea Kammeni, S**	**2.14**	**85**	P	**Pb**	**05 48 50.3**	**-0.3**
THR3	**Thira Island,**	**2.14**	**85**	P	**Pn**	**05 48 52.4**	**+1.8**
KALE	**Kalithea**	**2.20**	**347**	P	**Pb**	**05 48 54.1**	**-0.4**
THERA	**Ancient Thera,**	**2.20**	**86**	P	**Pn**	**05 48 53.0**	**+1.6**
KARY	**Karystos**	**2.23**	**36**	P	**Pn**	**05 48 53.2**	**+1.4**
KARY	**Karystos**	**2.23**	**36**	P	**Pn**	**05 48 52.0**	**+0.2**
SERG	**Sergoula**	**2.23**	**346**	P	**Pn**	**05 48 53.5**	**+1.6**
EFP	**Efpalio**	**2.28**	**343**	P	**Pb**	**05 48 54.9**	**-1.0**
ORTH	**Orthonies,Zaky**	**2.30**	**315**	P	**Pb**	**05 48 55.9**	**-0.4**
LKR	**Lokris**	**2.41**	**5**	P	**Pn**	**05 48 56.2**	**+1.9**
ATAL	**Atalanti**	**2.45**	**5**	P	**Pb**	**05 48 57.2**	**-1.7**
NPS	**Neapolis**	**2.52**	**112**	P	**Pn**	**05 48 56.6**	**+0.7**
KYMI	**Kymi, Euboea I**	**2.61**	**24**	P	**Pn**	**05 48 57.9**	**+0.8**
BRTR	**Keskin Array B**	**9.27**	**65**	Pn	**Pn**	**05 50 30.9**	**+2.4**
	0.1nm,0.3s,baz=257,slow=13,SNR=2.8						
	0.2nm,0.4s						
KBZ	**Khabaz**	**17.12**	**58**	P	**Pn**	**05 52 14.1**	**-0.1**
	0.1nm,0.3s,baz=253,slow=11,SNR=6.7						
	3.1nm,0.9s						
FINES	**FINESS Array B**	**25.30**	**4**	LR	LR	06 03 53.1	
	comp=Z,100nm,18.6s,baz=53,slow=38						
KURBB	**Kurchatov Arra**	**41.98**	**52**	P	**P**	**05 56 04.2**	**-1.8**
	0.2nm,0.4s,baz=273,slow=8.9,SNR=2.0						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**44.82**	**57**	P	**P**	**05 56 28.3**	**-0.7**
	0.8nm,0.4s,baz=270,slow=7.8,SNR=22						
	0.8nm,0.4s						

ZALV	**Zalesovo Beam**	**45.68**	**47**	P		**P**	**05 56 34.2**	**-1.5**
	0.4nm,0.3s,baz=269,slow=8.6,SNR=2.0							
	0.4nm,0.3s							

*IDC **09** 06:13:20.3±2.8, 13°.52N×91°.67W,h0^{km},mb3.5/4, mbtmp3.5/6,ML3.6/2,MS4.1/1,Error ellipse: s-maj=52.2km s-min=16.6km az=145.0*

*CATAC **09** 06:13:23.1±0.3, 14°.N±2°×9°.2W±°,h10^{km},M4.0/27, MLv4.0/27,Error ellipse: s-maj=5.1km s-min=2.3km az=40.2,confirmed*

*SNET **09** 06:13:24.2±1.6, 13°.81N×91°.82W,h12^{km},ML3.8, Presumed earthquake*

*GCG **09** 06:13:25.5±1.4, 13°.81N×91°.75W,h13^{km}±17^{km},MD4.3, ML4.2,Presumed earthquake*

*NEIC **09** 06:13:27.8±1.1, 13°.84N±0°.06×91°.78W±0°.08,h35^{km}±2^{km}, mb4.3/10,Error ellipse: s-maj=13.4km s-min=9.0km az=70.0*

ISC 09 06:13:23.7±2.2,13°.79N±0°.05×91°.78W±0°.04,h9^{km}±13^{km}, n85,σ1°39/109,mb4.1/9,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.73**	**6**		**Pn**	**06 13 40.1**	**-0.2**
RTAL					**Sn**	**06 13 51.8**	**+0.2**
RTAL	**Retalhuleu**	**0.73**	**6**	P	**Pn**	**06 13 40.1**	**-0.2**
RTAL				S	**Sn**	**06 13 52.7**	**+1.1**
STG5	**El Palmar, Qui**	**0.74**	**35**	*i* P	**Pn**	**06 13 41.6**	**+1.2**
STG2	**El Palmar, Qui**	**0.75**	**31**	*i* P	**Pn**	**06 13 42.3**	**+1.6**
STG2				IAML		06 14 02.2	
	comp=E,13μm,0.3s						
STG8	**El Palmar, Qui**	**0.78**	**32**	*i* P	**Pn**	**06 13 42.7**	**+1.7**
SOKI	**Kika Raxquin**	**1.08**	**20**	*i* P	**Pb**	**06 13 45.0**	**+0.1**
ESSG	**Sabana Grande**	**1.09**	**57**	*i* P	**Pb**	**06 13 44.5**	**-0.3**
SMCA	**Catarina**	**1.10**	**345**	*i* P	**Pb**	**06 13 44.6**	**-0.2**
QUEO	**Labor Ovalle**	**1.10**	**13**	*i* P	**Pn**	**06 13 45.5**	**-0.2**
QUEO				*i* S	**Sn**	**06 14 00.8**	**-0.4**
QUEO				IAML		06 14 08.6	
	comp=N,4μm,0.6s						
FG8	**Yepocapa, Chim**	**1.27**	**68**	*i* P	**Pn**	**06 13 44.2**	**-3.6**
FG16	**Alotenango, Sa**	**1.32**	**69**	*i* P	**Pn**	**06 13 45.2**	**-3.4**
FG16				IAML		06 14 04.0	
	comp=N,11μm,0.2s						
PCG5	**San Vicente Pa**	**1.43**	**73**	*i* P	**Pn**	**06 13 47.6**	**-2.3**
PCG5				IAML		06 14 07.0	
	comp=N,2μm,0.5s						
HUEH	**Huehuetenango**	**1.54**	**10**		**Pb**	**06 13 52.6**	**+0.1**
HUEH				Sn	**Sn**	**06 14 09.6**	**-2.2**
HUEH	**Huehuetenango**	**1.54**	**10**	P	**Pb**	**06 13 52.7**	**+0.1**
HUEH				S	**Sg**	**06 14 15.5**	**+2.2**
HUEH	**Huehuetenango**	**1.54**	**10**	*i* P	**Pb**	**06 13 52.4**	**-0.2**
HUEH				IAML		06 14 30.6	
	comp=N,2μm,0.6s						
HUEH	**Huehuetenango**	**1.54**	**10**	*e*P	**Pn**	**06 13 52.0**	**+0.4**
HUEH				*e*S	**Sg**	**06 14 14.4**	**+1.1**
FAME	**Alcaldia de Sa**	**1.71**	**88**	P	**Pn**	**06 13 54.1**	**+0.3**
FAME				S	**Sg**	**06 14 18.4**	**-0.4**
APG	**El Apazote**	**1.75**	**46**	Pg	**Pb**	**06 13 55.7**	**-0.5**
	comp=N,4.4nm,0.3s,baz=218,slow=18,SNR=151						
APG				Lg	**Lg**	06 14 20.0	
	comp=N,4.2nm,0.3s,baz=193,slow=14,SNR=17						
APG	**El Apazote**	**1.75**	**46**	*i* P	**Pb**	**06 13 55.8**	**-0.5**
NUBE	**Las Nubes**	**1.94**	**87**	P	**Pn**	**06 13 57.2**	**+0.1**
NUBE				S	**Sg**	**06 14 25.9**	**-0.4**
NUBE	**Las Nubes**	**1.94**	**87**	*i* P	**Pn**	**06 13 57.7**	**+0.6**
SLOZ	**Alcaldia de Sa**	**1.95**	**83**	P	**Pn**	**06 13 59.1**	**+1.0**
SLOZ				S	**Sb**	**06 14 24.6**	**+0.6**
CEVE	**Cerro Verde**	**2.09**	**89**	P	**Pn**	**06 14 00.2**	**+1.0**
CEVE				S	**Sb**	**06 14 27.5**	**-0.8**
CEVE	**Cerro Verde**	**2.09**	**89**	*e*S	**Sb**	**06 14 27.1**	**-1.2**
AVCB	**Coban**	**2.13**	**38**	IAML		06 14 45.3	
	comp=N,3μm,0.5s						
UNIC	**Universidad Ca**	**2.17**	**85**	P	**Pn**	**06 14 00.9**	**+0.8**
UNIC				S	**Sb**	**06 14 30.4**	**0.0**
JAYA	**Jayaque - finc**	**2.27**	**93**	P	**Pn**	**06 14 02.0**	**+0.4**
JAYA				S	**Sb**	**06 14 32.3**	**-0.9**
JAYA	**Jayaque - finc**	**2.27**	**93**	*i* P	**Pn**	**06 14 01.3**	**-0.2**
JAYA	**Jayaque - finc**	**2.27**	**93**	*e*P	**Pn**	**06 14 01.3**	**-0.2**
CEDA	**San Andres**	**2.32**	**89**	P	**Pn**	**06 14 02.6**	**+0.5**
CEDA				S	**Sb**	**06 14 34.0**	**-0.5**
CEDA	**San Andres**	**2.32**	**89**	*e*S	**Sn**	**06 14 32.3**	**+1.6**
PMON	**Piamonte**	**2.40**	**92**	P	**Pn**	**06 14 03.6**	**+0.4**
PMON				S	**Sb**	**06 14 35.2**	**-1.7**
LALI	**Alcalda de L**	**2.41**	**97**	P	**Pn**	**06 14 03.4**	**+0.1**
LALI				S	**Sb**	**06 14 35.7**	**-1.4**
MTO3	**Montecristo**	**2.42**	**75**		**Pn**	**06 14 04.2**	**+0.4**
MTO3	**Montecristo**	**2.42**	**75**	P	**Pn**	**06 14 04.5**	**+0.8**
MTO3				S	**Sb**	**06 14 36.9**	**-0.8**
BOQS	**Boqueron**	**2.43**	**91**	*e*P	**Pn**	**06 14 05.5**	**+1.7**
UEES	**Universidad Ev**	**2.47**	**91**	P	**Pn**	**06 14 04.6**	**+0.4**
UEES				S	**Sb**	**06 14 36.9**	**-2.0**
ZAFR2	**Estanzuela, Za**	**2.48**	**71**	*i* P	**Pn**	**06 14 04.5**	**+0.1**
ESQI	**Esquipulas**	**2.48**	**72**		**Pn**	**06 14 05.3**	**+0.8**
ESQI	**Esquipulas**	**2.48**	**72**	P	**Pn**	**06 14 05.9**	**+1.4**
ESQI				S	**Sb**	**06 14 39.3**	**-0.1**
ESQI	**Esquipulas**	**2.48**	**72**	*e*P	**Pn**	**06 14 05.7**	**+1.2**
SEMO	**Seminario San**	**2.48**	**92**	S	**Sn**	**06 14 37.1**	**+2.1**
CCIG	**Comitan**	**2.50**	**352**	P	**Pb**	**06 14 07.1**	**-1.8**
CCIG				S	**Sb**	**06 14 37.0**	**-0.9**
UDBS	**Universidad Do**	**2.55**	**91**	P	**Pn**	**06 14 05.8**	**+0.5**
UDBS				S	**Sb**	**06 14 39.9**	**-1.4**
PAVA	**Las Pavas**	**2.76**	**91**	P	**Pn**	**06 14 09.1**	**+0.8**
PAVA				S	**Sn**	**06 14 44.7**	**+2.8**
COEG	**Centro de Oper**	**2.82**	**93**	P	**Pn**	**06 14 10.3**	**+1.2**
COEG				S	**Sb**	**06 14 46.4**	**-2.7**
TECO	**Alcaldia de Te**	**2.93**	**95**	P	**Pn**	**06 14 11.7**	**+1.2**
P5NO	**Presa 5 de nov**	**2.94**	**86**	P	**Pn**	**06 14 11.0**	**+0.3**
SCLA	**Alcaldia de Sa**	**2.97**	**91**	P	**Pn**	**06 14 11.8**	**+0.8**
SCLA				S	**Sn**	**06 14 49.6**	**+2.8**
SARH	**Santa Rosa de**	**3.09**	**71**	P	**Pn**	**06 14 13.9**	**+1.2**
SARH				S	**Sb**	**06 14 53.8**	**-2.9**
TGIG		**3.24**	**337**	*i* P	**Pn**	**06 14 15.6**	**+0.8**
PACA	**Pacayal**	**3.38**	**95**	P	**Pn**	**06 14 17.6**	**+0.8**
PACA				S	**Sn**	**06 15 00.4**	**+3.3**
RANC	**El Ranchito**	**3.41**	**96**	P	**Pn**	**06 14 18.4**	**+1.1**
RANC				S	**Sn**	**06 15 01.4**	**+3.4**
PETF	**Flores**	**3.61**	**30**	Pn	**Pn**	**06 14 20.2**	**+0.3**
PETF	**Flores**	**3.61**	**30**	P	**Pn**	**06 14 21.7**	**+1.8**
PETF				S	**Sb**	**06 15 07.9**	**-3.8**
PETF	**Flores**	**3.61**	**30**	*i* P	**Pn**	**06 14 21.7**	**+1.8**
PETF				IAML		06 15 27.0	
	comp=E,299nm,0.6s						
LCND	**La Caada**	**3.81**	**97**	P	**Pn**	**06 14 24.3**	**+1.6**
TGUH	**Tegucigalpa,Un**	**4.38**	**86**	Pn	**Pn**	**06 14 31.4**	**+0.7**
CMIG	**Matias Romero**	**4.44**	**318**	Pn	**Pn**	**06 14 31.0**	**-0.3**
	comp=E,2.1nm,0.3s,baz=117,slow=6.8,SNR=23						
CMIG				Sn	**Sn**	**06 15 24.7**	**+1.5**
	comp=E,6.4nm,0.3s,baz=56,slow=5.9,SNR=5.6						
	comp=E,4.8nm,0.3s						
SIUN	**Universidad Ur**	**6.81**	**90**	Pn	**Pn**	**06 15 04.9**	**+1.1**
JUD3	**Juan Diaz 3**	**7.09**	**120**	Pn	**Pn**	**06 15 09.2**	**+1.4**
TEIG	**Tepich**	**7.22**	**27**		**Pn**	**06 15 10.9**	**+1.4**
TLIG	**Tlapa**	**7.54**	**301**		**Pn**	**06 15 14.6**	**+0.7**
TX31	**Lajitas Ar. Si**	**18.99**	**326**	P	**P**	**06 17 45.3**	**-0.4**
TXAR	**Lajitas Array**	**18.99**	**326**	P	**Pn**	**06 17 47.7**	**+1.2**
	comp=E,0.1nm,0.3s,baz=140,slow=11,SNR=8.9						
	comp=E,1.0nm,0.8s						
TXAR	**Lajitas Array**	**18.99**	**326**	P	**P**	**06 17 45.2**	**-0.5**
VHRN	**Van Horn**	**20.83**	**326**	P	**P**	**06 18 05.8**	**-0.1**
GOGA	**Godfrey**	**20.95**	**20**	P	Pn	06 18 08.2	-1.3
GOGA				IAmb	IAmb	06 18 35.5	
	comp=Z,21nm,1.3s						
MNTX	**Cornudas Mount**	**21.75**	**327**	P	**P**	**06 18 15.5**	**-0.2**
MNTX				IAmb	IAmb	06 18 31.5	
	comp=Z,5.9nm,1.4s						
SMWD	**Samnorwood**	**22.55**	**342**	P	**P**	**06 18 23.7**	**-0.6**
SMWD				IAmb	IAmb	06 18 28.9	
	comp=Z,6.7nm,0.9s						
PDAR	**Pinedale Array**	**32.70**	**335**	P	**P**	**06 19 57.2**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=137,slow=7.3,SNR=1.5						
	comp=Z,0.1nm,0.3s						
NVAR	**Mina Array Bea**	**33.97**	**321**	P	**P**	**06 20 10.2**	**+2.3**
	comp=Z,1.2nm,0.7s,baz=126,slow=6.4,SNR=9.5						
	comp=Z,1.2nm,0.7s						
NVAR	**Mina Array Bea**	**33.97**	**321**	P	**P**	**06 20 09.1**	**+1.2**
YKA	**Yellowknife Ar**	**51.28**	**347**	P	**P**	**06 22 26.5**	**-1.2**
	comp=Z,0.3nm,0.9s,baz=152,slow=7.0,SNR=6.1						
	comp=Z,0.3nm,0.9s						
YKA	**Yellowknife Ar**	**51.28**	**347**	P	**P**	**06 22 28.3**	**+0.6**
DLBC	**Dease Lake**	**52.93**	**336**	LR	LR	06 45 12.6	
	comp=Z,184nm,21.3s,baz=144,slow=36						

IL31		**63.11**	**337**	P		**P**	**06 23 51.0**	**-0.4**
ILAR	**Eielson Array**	**63.11**	**337**	P		**P**	**06 23 51.0**	**-0.5**
	comp=Z,1.2nm,1.0s,baz=111,slow=6.7,SNR=9.4							
	comp=Z,1.2nm,1.0s							
ILAR	**Eielson Array**	**63.11**	**337**	P		**P**	**06 23 50.3**	**-1.1**
MLY	**Manley**	**64.71**	**336**	IAmb		IAmb	06 24 02.9	
	comp=Z,4.6nm,1.0s							
IMAR	**Indian Mountai**	**66.23**	**337**	P		**P**	**06 24 10.3**	**-1.6**
G21K	**Allakaket**	**66.33**	**337**	P		**P**	**06 24 12.0**	**-0.4**
G21K				IAmb		IAmb	06 24 12.9	
	comp=Z,1.8nm,0.8s							
E21K	**Killik River**	**67.19**	**339**	P		**P**	**06 24 17.9**	**-0.1**
E21K				IAmb		IAmb	06 24 43.1	
	comp=Z,4.9nm,1.5s							
CMAR	**Chiang Mai Arr**	**146.26**	**341**	PKPbc		**PKPdf**	**06 33 03.9**	**-0.8**
	comp=Z,0.7nm,0.3s,baz=16,slow=3.1,SNR=5.4							
CMAR	**Chiang Mai Arr**	**146.26**	**341**			**PKPdf**	**06 33 02.5**	**-2.2**

*OSPL **09** 06:16:34.4±1.8, 18°.67N×71°.54W,h7^{km}±8^{km},ML1.8, Presumed earthquake*

*SDD **09** 06:16:34.8±2.0, 18°.66N×71°.58W,h12^{km}±20^{km},MD2.5, ML2.1,MW2.4,Presumed earthquake*

ISC 09 06:16:34.2±1.0,18°.65N±0°.03×71°.55W±0°.03,h7^{km}±9^{km}, n12,σ0°89/24,10C-2D,Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LONE3	**El Aguacate, B**	**0.10**	**120**	*i* P	**Pg**	**06 16 36.0**	**-0.5**
LONE3				*e*S	**Sg**	**06 16 38.3**	**+0.2**
LONE3				IAML		06 16 39.1	
	comp=Z,411nm,0.1s						
NEDR	**Neiba UASD**	**0.21**	**144**	↑*e*Pg	**Pg**	**06 16 38.0**	**-0.3**
NEDR				↑*e*Sg	**Sg**	**06 16 41.9**	**+0.8**
NEDR				IAML		06 16 43.3	
	comp=N,419nm,0.3s						
LODU1	**El Espartillar**	**0.31**	**167**	*i* P	**Pg**	**06 16 40.0**	**-0.2**
LODU1				*e*S	**Sg**	**06 16 45.5**	**+1.2**
LODU1				IAML		06 16 48.6	
	comp=Z,136nm,0.4s						
JIDR	**Jimani**	**0.33**	**241**	↑*e*Pg	**Pg**	**06 16 40.1**	**-0.5**
JIDR				↑*e*Sg	**Sg**	**06 16 46.1**	**+1.1**
JIDR				IAML		06 16 47.4	
	comp=N,405nm,0.3s						
SDDR	**Presa de Saban**	**0.41**	**37**	↑*e*Pg	**Pg**	**06 16 41.8**	**-0.4**
SDDR				↓*e*Sg	**Sg**	**06 16 48.5**	**+0.9**
SDDR				IAML		06 16 54.0	
	comp=N,37nm,0.6s						
SDDR	**Presa de Saban**	**0.41**	**37**	*i* P	**Pg**	**06 16 41.7**	**-0.4**
SDDR				*e*S	**Sg**	**06 16 47.4**	**-0.2**
SDDR				IAML		06 16 51.3	
	comp=Z,34nm,0.3s						
REDR	**Restauracion**	**0.53**	**16**	↓*e*Pg	**Pb**	**06 16 45.7**	**-0.1**
REDR				↑*e*Sg	**Sb**	**06 16 55.2**	**+1.5**
REDR				IAML		06 16 59.2	
	comp=N,86nm,1.0s						
PAPH	**Port-au-Prince**	**0.72**	**260**	*

ISC 09 06:33:00.2±0.4,40°41N±0'.05×125°16W±0'.04,h13km, n601,σ1°43/403,mb4.8/182,MS4.1/73,2C,Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCTM	**Capetown**	**0.64**	**83**		**Pb**	**06 33 13.5**	**+0.3**
KCTM					**Sn**	**06 33 24.7**	**-0.2**
PETL	**Petrolia**	**0.64**	**100**		**Pg**	**06 33 12.7**	**+0.1**
PETL					**Sb**	**06 33 23.1**	**+1.2**
KMPM	**Mount Pierce**	**0.80**	**89**		**Pg**	**06 33 15.4**	**-0.2**
JCC	**Jacoby Creek,**	**0.95**	**64**		**Pg**	**06 33 17.2**	**-1.4**
BRIC	**Briceland Vine**	**1.01**	**106**		**Pb**	**06 33 18.5**	**-1.0**
KCRM	**Chalk Rock**	**1.03**	**88**		**Pb**	**06 33 19.0**	**-0.8**
KMRM	**Mail Ridge**	**1.13**	**99**		**Pb**	**06 33 20.8**	**-0.7**
KRPM	**Rodgers**	**1.15**	**49**		**Pb**	**06 33 20.1**	**-1.7**
DMOR	**Dinsmores, CA**	**1.15**	**74**		**Pb**	**06 33 20.9**	**-1.1**
KHMM	**Horse Mountain**	**1.19**	**66**		**Pb**	**06 33 21.1**	**-1.5**
KCPM	**Cahto Peak**	**1.41**	**120**		**Pn**	**06 33 24.2**	**-1.5**
KIPM	**Iron Peak**	**1.42**	**114**		**Pn**	**06 33 24.9**	**-1.0**
RVIT	**Round Valley I**	**1.46**	**109**		**Pn**	**06 33 25.0**	**-1.2**
KHBM	**Hayfork Bally**	**1.50**	**80**		**Pn**	**06 33 25.9**	**-1.1**
MNDO	**Woodland Fire**	**1.54**	**135**		**Pn**	**06 33 24.4**	**-2.9**
KBNM	**Bluenose Ridge**	**1.59**	**108**		**Pn**	**06 33 27.2**	**-1.0**
SIGP	**Signal Peak, C**	**1.68**	**29**		**Pn**	**06 33 26.7**	**-2.6**
GNAM	**Navarro Ridge**	**1.69**	**135**		**Pn**	**06 33 26.4**	**-3.0**
WEAV	**Weaverville**	**1.69**	**78**		**Pn**	**06 33 28.3**	**-1.2**
KRKM	**Rackout Spring**	**1.74**	**118**		**Pn**	**06 33 29.0**	**-1.2**
O02D	**Mt. Diablo Mer**	**1.83**	**96**		**Pn**	**06 33 30.7**	**-0.7**
GHOM	**Hamilton Openi**	**1.85**	**137**		**Pn**	**06 33 28.6**	**-3.0**
GWRM	**Wonder Ranch**	**1.87**	**129**		**Pn**	**06 33 29.5**	**-2.4**
KBO	**Bosley Butte**	**1.94**	**21**		**Pn**	**06 33 30.8**	**-2.1**
N02D	**Trinity Center**	**1.95**	**72**		**Pn**	**06 33 32.0**	**-1.0**
GROM	**Round Mountain**	**1.97**	**104**		**Pn**	**06 33 32.7**	**-0.7**
BONV	**Boonville, CA**	**1.99**	**135**		**Pn**	**06 33 30.7**	**-2.8**
M02C	**Callahan**	**2.01**	**60**		**Pn**	**06 33 32.5**	**-1.3**
GVV	**Valley View**	**2.01**	**107**		**Pn**	**06 33 33.0**	**-0.9**
LBKM	**Bonanza King**	**2.02**	**70**		**Pn**	**06 33 32.6**	**-1.4**
L02F	**Cave Junction**	**2.02**	**34**		**Pn**	**06 33 33.0**	**-2.0**
HOPS	**Hopland Field**	**2.14**	**131**		**Pn**	**06 33 34.4**	**-1.2**
GHGM	**Hogback Ridge**	**2.21**	**125**		**Pn**	**06 33 35.1**	**-1.4**
YBH	**Yreka Blue Hor**	**2.28**	**54**	Pn	**Pn**	**06 33 36.2**	**-1.4**
	9.3nm,0.3s,baz=234,slow=7.5,SNR=918						
YBH				Lg	Lg	06 34 05.1	
	7.5nm,0.3s,baz=182,slow=17,SNR=7.3						
YBH				LR	LR	06 34 23.8	
	comp=Z,183nm,18.9s,baz=118,slow=40						
YBH	**Yreka Blue Hor**	**2.28**	**54**		**Pn**	**06 33 36.5**	**-1.1**
GDXM	**Geysers**	**2.43**	**130**		**Pn**	**06 33 38.3**	**-1.3**
M03C	**McCloud**	**2.46**	**68**		**Pn**	**06 33 40.0**	**-0.2**
K02D	**Willamette Mer**	**2.55**	**26**		**Pn**	**06 33 40.0**	**-1.3**
O03E	**Paynes Creek**	**2.57**	**91**		**Pn**	**06 33 40.7**	**-0.9**
MNRC	**McLaughlin Min**	**2.60**	**125**		**Pn**	**06 33 40.8**	**-1.1**
L04D	**Klamath Falls**	**2.81**	**49**		**Pn**	**06 33 45.2**	**+0.2**
HATC	**Hat Creek Radi**	**2.85**	**81**		**Pn**	**06 33 45.1**	**-0.3**
J01E	**Myrtle Point**	**2.90**	**18**		**Pn**	**06 33 44.4**	**-1.6**
ORV	**Oroville**	**2.94**	**106**		**Pn**	**06 33 45.4**	**-1.2**
BBOR	**Butler Butte**	**3.10**	**36**		**Pn**	**06 33 48.2**	**-0.7**
COR	**Corvallis**	**4.40**	**18**		**Pn**	**06 34 06.5**	**-0.1**
NVAR	**Mina Array Bea**	**5.67**	**108**	Pn	**Pn**	**06 34 24.6**	**+0.3**
	13nm,0.3s,baz=292,slow=16,SNR=182						
NVAR				Lg	Lg	06 35 46.1	
	14nm,0.3s,baz=305,slow=30,SNR=4.9						
NVAR				LR	LR	06 36 53.2	
	comp=Z,2μm,18.9s,baz=284,slow=41 20nm,0.5s						
NVAR	**Mina Array Bea**	**5.67**	**108**		**Pn**	**06 34 24.8**	**+0.6**
ELK	**Elko**	**7.56**	**84**	Pn	**Pn**	**06 34 50.2**	**-0.1**
	0.8nm,0.3s,baz=278,slow=15,SNR=46						
ELK				Sn	**Sn**	**06 36 15.5**	**-0.5**
	0.9nm,0.3s,baz=205,slow=19,SNR=1.2						
ELK				Lg	Lg	06 36 48.8	
	1.9nm,0.3s,baz=204,slow=20,SNR=2.8 9.1nm,0.7s						
CBB	**Campbell River**	**9.63**	**359**				
PFO	**Pinyon Flats O**	**9.71**	**132**	Pn	**Pn**	**06 35 19.7**	**0.0**
	7.6nm,0.3s,baz=317,slow=13,SNR=74						
PFO				Sn	**Sn**	**06 37 04.7**	**-4.1**
	baz=288,slow=20						
PFO				LR	LR	06 39 15.1	
	comp=Z,1μm,18.8s,baz=281,slow=39 18nm,0.4s						
PFO	**Pinyon Flats O**	**9.71**	**132**		**Pn**	**06 35 19.5**	**-0.2**
NEW	**Newport**	**9.74**	**34**	Pn	**Pn**	**06 35 20.4**	**+0.5**
	2.4nm,0.3s,baz=218,slow=15,SNR=49						
NEW				LR	LR	06 39 20.2	
	comp=Z,2μm,18.0s,baz=224,slow=40 11nm,0.6s						
MCMT	**McKenzie Canyo**	**10.09**	**60**		**Pn**	**06 35 27.0**	**+2.0**
IRM	**Iron Mountain**	**10.12**	**125**		**Pn**	**06 35 25.2**	**-0.1**
BC3	**Big Chuckawall**	**10.27**	**128**		**Pn**	**06 35 27.4**	**0.0**
BAR	**Barrett**	**10.30**	**136**		**Pn**	**06 35 26.4**	**-1.2**
LLB	**Lillooet**	**10.46**	**12**		**Pn**	**06 35 29.8**	**+0.1**
PDAR	**Pinedale Array**	**11.92**	**74**	Pn	**Pn**	**06 35 52.0**	**+2.0**
	1.5nm,0.3s,baz=266,slow=13,SNR=47						
PDAR				LR	LR	06 41 11.9	
	comp=Z,378nm,20.1s,baz=248,slow=42 12nm,0.8s						
PDAR	**Pinedale Array**	**11.92**	**74**		**Pn**	**06 35 51.1**	**+1.1**
BBB	**Bella Bella**	**11.96**	**351**	Pn	**Pn**	**06 35 53.0**	**+2.8**
	0.3nm,0.3s,baz=160,slow=17,SNR=11						
BBB				LR	LR	06 39 18.0	
	comp=Z,514nm,20.2s,baz=176,slow=32						
BBB	**Bella Bella**	**11.96**	**351**		**Pn**	**06 35 53.6**	**+3.4**
RLMT	**Red Lodge**	**12.59**	**63**		**Pn**	**06 36 00.9**	**+1.8**
HG4B	**Hotspring**	**12.59**	**343**		**Pn**	**06 36 02.7**	**+3.8**
PV10	**Paradox Valley**	**12.64**	**94**		**Pn**	**06 36 02.6**	**+2.8**
214A	**Organ Pipe Nat**	**13.05**	**126**		**Pn**	**06 36 06.8**	**+1.5**
MVCO	**Mesa Verde**	**13.38**	**98**		**Pn**	**06 36 12.6**	**+2.6**
LAO	**LASA Array**	**15.09**	**59**	IAmb	IAmb	06 36 35.7	
	comp=Z,399nm,1.0s						
DUN6	**Lazy B Ranch**	**15.10**	**116**	IAmb	IAmb	06 36 39.2	
	comp=Z,51nm,1.0s						
EDM	**Edmonton**	**15.13**	**28**	IAmb	IAmb	06 36 32.6	
	comp=Z,42nm,0.8s						
Q24A	**Divide**	**15.48**	**89**	IAmb	IAmb	06 36 44.6	
	comp=Z,40nm,0.9s						
SDCO	**Great Sand Dun**	**15.50**	**94**	IAmb	IAmb	06 36 42.8	
	comp=Z,101nm,1.1s						
V35K	**Ketchikan**	**15.53**	**346**	P	**Pn**	**06 36 36.9**	**-1.8**
	baz=161						
ANMO	**Albuquerque**	**15.77**	**104**	Pn	**Pn**	**06 36 42.7**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=290,slow=15,SNR=26						
ANMO				LR	LR	06 42 27.9	
	comp=Z,399nm,21.7s,baz=288,slow=36 comp=Z,5.6nm,0.8s						
ANMO	**Albuquerque**	**15.77**	**104**	IAmb	IAmb	06 36 46.1	
	comp=Z,6.8nm,0.8s						
U35K	**Hyder**	**15.85**	**350**	P	**Pn**	**06 36 41.2**	**-1.6**
	baz=166						
CRAG	**Craig**	**15.97**	**343**	P	**Pn**	**06 36 42.8**	**-1.5**
	baz=157						
U33K	**Whale Pass**	**16.57**	**344**	P	**Pn**	**06 36 51.7**	**-0.2**
	baz=158						
WRAK	**Wrangell Islan**	**16.70**	**346**	P	**P**	**06 36 54.5**	**-1.5**
	baz=161						
SRIG	**Santa Rosalia**	**16.87**	**137**	IAmb	IAmb	06 37 02.4	
	comp=Z,110nm,1.2s						
T35M	**Bob Quinn**	**16.92**	**350**	P	**P**	**06 36 57.0**	**-1.4**
	baz=166						
KSCO	**Kaye Shedlock'**	**17.39**	**87**	IAmb	IAmb	06 37 06.8	
	comp=Z,87nm,0.8s						
OGNE	**Ogallala**	**17.55**	**81**	IAmb	IAmb	06 37 08.2	
	comp=Z,96nm,0.9s						
SIT	**Sitka**	**17.93**	**342**	P	**Pn**	**06 37 08.0**	**-0.9**
	baz=154						
S34M	**Telegraph Cree**	**17.94**	**350**	P	**Pn**	**06 37 08.1**	**-1.0**
	baz=165						
S32K	**Killisnoo**	**18.13**	**344**	P	**Pn**	**06 37 10.5**	**-0.9**
	baz=156						
MNTX	**Cornudas Mount**	**18.17**	**112**	P	**Pn**	**06 37 11.5**	**-0.7**
DLBC	**Dease Lake**	**18.31**	**352**	P	**P**	**06 37 14.8**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=167,slow=12,SNR=9.1 comp=Z,7.1nm,1.0s						
DLBC	**Dease Lake**	**18.31**	**352**	P	**Pn**	**06 37 11.5**	**-2.2**
	baz=168						
E28A	**Huff**	**18.75**	**63**	P	**P**	**06 37 17.2**	**-1.6**
E28A				IAmb	IAmb	06 37 20.6	
	comp=Z,70nm,1.0s						
R32K	**Eaglecrest**	**18.86**	**345**	P	**P**	**06 37 19.1**	**-0.7**
	baz=157						
S31K	**Pelican**	**18.96**	**342**	P	**P**	**06 37 20.0**	**-0.8**
	baz=153						
VHRN	**Van Horn**	**18.97**	**114**	P	**P**	**06 37 21.4**	**0.0**
Q32M	**Nakina River**	**19.11**	**349**	P	**P**	**06 37 20.4**	**-2.3**
	baz=163						
K30B	**Basset**	**19.24**	**75**	P	**P**	**06 37 23.1**	**-1.0**
R33M	**Jennings River**	**19.36**	**351**	P	**P**	**06 37 23.8**	**-1.5**
R33M	**Jennings River**	**19.36**	**351**	P	**P**	**06 37 24.6**	**-0.7**
	baz=166,SNR=6.0						
CBKS	**Cedar Bluff**	**19.64**	**86**	P	**P**	**06 37 29.0**	**+0.5**
SUSD	**Miller**	**19.73**	**70**	P	**P**	**06 37 26.9**	**-2.6**
SUSD				IAmb	IAmb	06 37 29.4	
	comp=Z,73nm,0.9s						
TPB06	**Permian Basin**	**19.75**	**109**	IAmb	IAmb	06 37 40.6	
	comp=Z,71nm,1.9s						
KOTAN	**Kotaneelee Air**	**19.76**	**2**	P	**P**	**06 37 29.4**	**-0.2**
	baz=182						
WTLY	**Watson Lake, Y**	**19.86**	**355**	P	**P**	**06 37 30.0**	**-0.7**
	baz=172						
P32M	**Atlin**	**19.94**	**347**	P	**Pn**	**06 37 36.5**	**+3.2**
P32M	**Atlin**	**19.94**	**347**	P	**P**	**06 37 31.0**	**-0.7**
	baz=161						
SKAG	**Skagway**	**20.12**	**345**	P	**P**	**06 37 33.4**	**-0.1**
	baz=157						
SMWD	**Samnorwood**	**20.37**	**97**	IAmb	IAmb	06 37 40.6	
	comp=Z,37nm,1.0s						
P33M	**Teslin, Yukon**	**20.39**	**349**	IAmb	IAmb	06 37 50.8	
	comp=Z,40nm,1.1s						
P33M	**Teslin, Yukon**	**20.39**	**349**	P	**P**	**06 37 36.8**	**+0.1**
	baz=163,SNR=11						
BGNE	**Belgrade**	**20.42**	**78**	IAmb	IAmb	06 37 40.0	
	comp=Z,87nm,1.1s						
LPIG	**La Paz**	**20.50**	**138**	P	Pn	06 37 40.4	+0.4
	comp=Z,32nm,1.0s,baz=319,slow=19,SNR=6.8						
LPIG				LR	LR	06 45 09.3	
	comp=Z,774nm,18.9s,baz=328,slow=36						
TX31	**Lajitas Ar. Si**	**20.76**	**115**	IAmb	IAmb	06 37 50.6	
	comp=Z,44nm,1.2s						
TXAR	**Lajitas Array**	**20.76**	**115**	P	Pn	06 37 43.2	0.0
	comp=Z,10nm,0.9s,baz=308,slow=9.6,SNR=78						
TXAR				PcP	**PcP**	**06 41 54.3**	**+4.4**
	comp=Z,0.7nm,1.0s,baz=324,slow=3.7,SNR=2.8						
TXAR				LR	LR	06 46 11.3	
	comp=Z,378nm,18.3s,baz=300,slow=38						
TXAR	**Lajitas Array**	**20.76**	**115**	P	**P**	**06 37 41.3**	**+0.5**
NOKA	**Waynoka**	**20.84**	**92**	IAmb	IAmb	06 37 46.1	
	comp=Z,64nm,0.9s						
HPIG		**21.01**	**124**	P	**P**	**06 37 46.4**	**+2.8**
SLBS	**Sierra La Lagu**	**21.03**	**138**	P	**P**	**06 37 46.7**	**+3.0**
OK038	**West end E0370**	**21.03**	**92**	IAmb	IAmb	06 37 48.5	
	comp=Z,57nm,0.8s						
P30M	**Million Dollar**	**21.07**	**343**	P	**P**	**06 37 43.3**	**-0.5**
	baz=154						
FFC	**Flin Flon**	**21.07**	**39**	P	**P**	**06 37 43.7**	**-0.2**
WHY	**Whitehorse**	**21.15**	**347**	IAmb	IAmb	06 37 55.5	
	comp=Z,45nm,1.1s						
WHY	**Whitehorse**	**21.15**	**347**	P	**P**	**06 37 44.0**	**-0.8**
	baz=159						
TGTN	**Hyland Airport**	**21.23**	**356**	P	**P**	**06 37 44.8**	**-0.9**
	baz=173,SNR=8.3						
N32M	**Quiet Lake**	**21.34**	**349**	IAmb	IAmb	06 37 56.9	
	comp=Z,34nm,1.1s						
N32M	**Quiet Lake**	**21.34**	**349**	P	**P**	**06 37 46.4**	**-0.3**
	baz=163						
KAN08	**Anthony NE Sta**	**21.39**	**90**	IAmb	IAmb	06 37 51.0	
	comp=Z,44nm,0.8s						
O30N	**Mendenhall**	**21.48**	**345**	IAmb	IAmb	06 37 59.1	
	comp=Z,53nm,1.2s						
O30N	**Mendenhall**	**21.48**	**345**	P	**P**	**06 37 46.4**	**-1.9**
	baz=157,SNR=5.5						
O29M	**Mount Kennedy**	**21.60**	**342**	IAmb	IAmb	06 38 00.7	
	comp=Z,32nm,1.0s						
O29M	**Mount Kennedy**	**21.60**	**342**	P	**P**	**06 37 47.1**	**-2.6**
	baz=151						
OZNA	**Ozona**	**21.64**	**108**	IAmb	IAmb	06 38 09.2	
	comp=Z,40nm,1.0s						
HYT	**Haines Junctio**	**21.82**	**344**	P	**P**	**06 37 48.3**	**-3.7**
	baz=154						
PINM	**Pinnacle**	**21.84**	**339**	P	**P**	**06 37 50.3**	**-2.0**
	baz=148						
ABTX	**Abilene, Hawle**	**21.88**	**103**	IAmb	IAmb	06 38 11.7	
	comp=Z,94nm,1.4s						
N31M	**Braeburn, Yuko**	**22.08**	**346**	IAmb	IAmb	06 37 59.5	
	comp=Z,30nm,1.1s						
N31M	**Braeburn, Yuko**	**22.08**	**346**	P	**P**	**06 37 52.7**	**-2.0**
	baz=158,SNR=6.0						
BLOK	**Blackwell**	**22.11**	**90**	IAmb	IAmb	06 38 00.6	
	comp=Z,53nm,1.1s						
YUK6	**Post Mounta**	**22.11**	**343**	P	**P**	**06 37 53.6**	**-1.7**
	baz=152						
WTFS	**Witchita Falls**	**22.26**	**99**	P	**P**	**06 37 56.1**	**-0.6**
WTFS				IAmb	IAmb	06 38 16.8	
	comp=Z,30nm,1.1s						
N30M	**Aishikik Lake**	**22.31**	**345**	P	**P**	**06 37 56.3**	**-0.9**
	baz=156						
MESA	**MESA**	**22.39**	**338**	P	**P**	**06 37 56.0**	**-2.2**
	baz=145						
O28M	**Mount Upton**	**22.40**	**340**	P	**P**	**06 37 56.3**	**-2.2**
	baz=149						
OK048	**Pawnee Station**	**22.43**	**91**	IAmb	IAmb	06 38 03.7	
	comp=Z,35nm,0.7s						
M31M	**Drury Creek, Y**	**22.53**	**349**	IAmb	IAmb	06 38 11.7	
	comp=Z,46nm,1.2s						
M31M	**Drury Creek, Y**	**22.53**	**349**	P	**P**	**06 37 58.5**	**-1.0**
	baz=161						
YUK4	**Talbot Arm**	**22.54**	**343**	P	**P**	**06 37 57.4**	**-2.4**
	baz=153						
T35A	**Soonr Cattle**	**22.60**	**90**	IAmb	IAmb	06 38 00.1	
	comp=Z,27nm,0.7s						
QUOK	**Quay**	**22.68**	**92**	IAmb	IAmb	06 38 12.7	
	comp=Z,30nm,0.9s						
ULM	**Lac du Bonnet**	**22.69**	**55**	P	**P**	**06 38 00.1**	**-1.2**
	comp=Z,98nm,1.0s,baz=256,slow=12,SNR=92						
ULM				LR	LR	06 46 56.4	
	comp=Z,554nm,21.5s,baz=254,slow=37 comp=Z,98nm,1.0s						
ULM	**Lac du Bonnet**	**22.69**	**55**	P	**P**	**06 38 00.3**	**-1.0**
BGLC	**Bering Glacier**	**22.74**	**336**	P	**P**	**06 37 58.1**	**-3.6**
	baz=142						
YUK8	**Steele Glacier**	**22.74**	**342**	P	**P**	**06 37 59.4**	**-2.7**
	baz=150						
GRNC	**Granite Creek**	**22.79**	**339**	IAmb	IAmb	06 38 10.4	
	comp=Z,58nm,1.2s						
JCT	**Junction City**	**22.84**	**108**	IAmb	IAmb	06 38 08.2	
	comp=Z,21nm,0.8s						
CTG	**Chitna Glacier**	**22.87**	**340**	P	**P**	**06 38 01.6**	**-1.6**
	baz=147						
WRGLY	**Wrigley**	**22.88**	**2**	IAmb	IAmb	06 38 20.9	
	comp=Z,45nm,1.1s						
WRGLY	**Wrigley**	**22.88**	**2**	P	**P**	**06 38 00.6**	**-2.5**
	baz=183						
W35A	**Tecumseh**	**22.91**	**94**	IAmb	IAmb	06 38 08.0	
	comp=Z,34nm,1.1s						
KAIM	**Kayak Island**	**22.95**	**335**	P	**P**	**06 38 05.0**	**+1.2**
	baz=140						
DEOK	**Depew**	**22.96**	**92**	IAmb	IAmb	06 38 07.6	
	comp=Z,48nm,1.2s						
BRDY	**Brady**	**23.01**	**105**	IAmb	IAmb	06 38 21.0	
	comp=Z,21nm,0.9s						
YKA	**Yellowknife Ar**	**23.02**	**13**	P	**P**	**06 38 04.1**	**-0.5**
	comp=Z,3.5nm,0.8s,baz=206,slow=8.5,SNR=44						
YKA				LR	LR	06 46 51.6	
	comp=Z,189nm,19.2s,baz=96,slow=36 comp=Z,3.5nm,0.8s						
YKA	**Yellowknife Ar**	**23.02**	**13**	P	**P**	**06 38 04.2**	**-0.3**
YKAW1	**Yellowknife Wh**	**23.02**	**13**	IAmb	IAmb	06 38 16.4	
	comp=Z,38nm,1.1s						
YKAW3	**Yellowknife Wh**	**23.08**	**12**	P	**P**	**06 38 05.4**	**+0.2**
YKAW3				IAmb	IAmb	06 38 15.6	
	comp=Z,28nm,1.0s						
CRQE	**Cirque**	**23.18**	**337**	P	**P**	**06 38 06.7**	**+0.2**
	baz=143						
M30M	**Minto, Yukon**	**23.28**	**346**	P	**P**	**06 38 07.0**	**-0.2**
	baz=157						
YUK3	**Moose Creek**	**23.34**	**342**	P	**P**	**06 38 05.6**	**-2.5**
	baz=150						
TUL3	**Leonard**	**23.47**	**92**	IAmb	IAmb	06 38 11.2	
	comp=Z,22nm,0.8s						
M29M	**Somme Creek**	**23.48**	**344**	P	**P**	**06 38 08.1**	**-1.2**
	baz=154						
MCARA	**McCarthy VSAT**	**23.68**	**338**	P	**P**	**06 38 10.9**	**-0.2**
	baz=144						
BMRM	**Bremner River**	**23.81**	**336**	P	**P**	**06 38 13.0**	**+0.5**
	baz=141						
WHTX	**Lake Whitney,**	**23.81**	**102**	IAmb	IAmb	06 38 14.9	
	comp=Z,32nm,0.9s						
EYAK	**Cordova Ski Ar**	**23.85**	**335**	P	**P**	**06 38 09.3**	**-3.5**
	baz=138						
EPLO	**Experimental L**	**23.92**	**57**	P	**P**	**06 38 12.8**	**-0.9**
BVCY	**Beaver Creek**	**23.98**	**342**	P	**P**	**06 38 12.0**	**-2.2**
	baz=150						
L29M	**L29M**	**24.02**	**345**	P	**P**	**06 38 14.8**	**+0.4**
	baz=155,SNR=5.7						
P38A	**Dawn**	**24.18**	**82**	IAmb	IAmb	06 38 20.2	
	comp=Z,35nm,1.0s						
M27K	**Edge Creek, AK**	**24.18**	**341**	IAmb	IAmb	06 38 31.5	
	comp=Z,26nm,1.3s						
M27K	**Edge Creek, AK**	**24.18**	**341**	P	**P**	**06 38 18.1**	**+1.9**
	baz=148						
N25K	**Chitina, Valde**	**24.31**	**337**	P	**P**	**06 38 18.0**	**+0.8**
	baz=142						
M26K	**Nabesna, AK**	**24.50**	**340**	P	**P**	**06 38 18.0**	**-1.0**
	baz=146						
GLI	**Glacier Island**	**24.54**	**334**	P	**P**	**06 38 19.3**	**0.0**
	baz=137						
K29M	**Barlow Dome**	**24.58**	**347**	IAmb	IAmb	06 38 33.2	
	comp=Z,17nm,1.1s						
K29M	**Barlow Dome**	**24.58**	**347**	P	**P**	**06 38 19.2**	**-0.5**
	baz=157						
KLU	**Klutina**	**24.62**	**336**	P	**P**	**06 38 20.4**	**+0.3**
	baz=140						
KDAK	**Kodiak Island**	**24.73**	**324**	LR	LR	06 45 33.5	
	comp=Z,702nm,21.1s,baz=123,slow=30						
KDAK	**Kodiak Island**	**24.73**	**324**	P	**P**	**06 38 18.2**	**-2.7**
	baz=123						
OHAK	**Old Harbor**	**24.75**	**322**	P	**P**	**06 38 21.2**	**+0.1**
	baz=121						
BCAR	**Beaver Creek A**	**24.76**	**342**	P	**P**	**06 38 20.4**	**-0.9**
L27K	**Beaver Creek,**	**24.77**	**342**	IAmb	IAmb	06 38 35.9	
	comp=Z,34nm,1.6s						
L27K	**Beaver Creek,**	**24.77**	**342**	P	**P**	**06 38 21.6**	**+0.2**
	baz=148,SNR=8.4						
S39A	**Bolivar**	**24.81**	**86**	IAmb	IAmb	06 38 24.6	
	comp=Z,17nm,0.8s						
SEW	**Seward**	**24.84**	**331**	P	**P**	**06 38 20.4**	**-1.5**
	baz=132						
SII	**Sitkinak Islan**	**24.86**	**320**	P	**P**	**06 38 21.0**	**-1.2**
	baz=118						
J30M	**Hart River**	**25.07**	**349**	IAmb	IAmb	06 38 37.7	
	comp=Z,27nm,1.3s						
J30M	**Hart River**	**25.07**	**349**	P	**P**	**06 38 24.5**	**+0.4**
	baz=160						
HARP	**HAARP**	**25.10**	**338**	P	**P**	**06 38 24.4**	**+0.2**
	baz=142						
Q20K	**Shuyak Island**	**25.10**	**326**	P	**P**	**06 38 23.7**	**-0.6**
	baz=125						
L26K	**Log Cabin Wild**	**25.11**	**340**	IAmb	IAmb	06 38 37.2	
	comp=Z,22nm,1.3s						
L26K	**Log Cabin Wild**	**25.11**	**340**	P	**P**	**06 38 25.0**	**+0.6**
	baz=146						
DAWY	**Dawson**	**25.12**	**345**	IAmb	IAmb	06 38 36.1	
	comp=Z,39nm,1.4s						
DAWY	**Dawson**	**25.12**	**345**	P	**P**	**06 38 24.9**	**+0.4**
	baz=154,SNR=12						
MENT	**Mentasta**	**25.14**	**340**	IAmb	IAmb	06 38 36.8	
	comp=Z,26nm,1.2s						
EYMN	**Ely**	**25.14**	**61**	P	**P**	**06 38 22.7**	**-2.1**
O22K	**Cooper Landing**	**25.19**	**331**	P	**P**	**06 38 23.6**	**-1.5**
	baz=132						
J29N	**Klondike Camp**	**25.26**	**347**	IAmb	IAmb	06 38 39.2	
	comp=Z,16nm,0.9s						
J29N	**Klondike Camp**	**25.26**	**347**	P	**P**	**06 38 25.8**	**0.0**
	baz=156,SNR=7.6						
SCM	**Sheep Creek Mo**	**25.32**	**335**	IAmb	IAmb	06 38 39.1	
	comp=Z,44nm,1.2s						
SCM	**Sheep Creek Mo**	**25.32**	**335**	P	**P**	**06 38 25.3**	**-1.1**
	baz=138						
KNK	**Knik Glacier**	**25.39**	**334**	IAmb	IAmb	06 38 39.5	
	comp=Z,38nm,1.2s						
KNK	**Knik Glacier**	**25.39**	**334**	P	**P**	**06 38 25.5**	**-1.5**
	baz=135						
SLKM	**Skilak Lake**	**25.39**	**331**	IAmb	IAmb	06 38 39.8	
	comp=Z,40nm,1.2s						
M23K	**Glacier View**	**25.42**	**335**	P	**P**	**06 38 25.8**	**-1.4**
	baz=137						
R40A	**Maddies Statio**	**25.45**	**84**	IAmb	IAmb	06 38 30.0	
	comp=Z,15nm,0.8s						
L40A	**Anamosa**	**25.48**	**75**	IAmb	IAmb	06 38 31.1	
	comp=Z,32nm,0.9s						
RC01	**Rabbit Creek A**	**25.61**	**332**	P	**P**	**06 38 29.3**	**+0.4**
	baz=133						
SML	**Sawmill**	**25.63**	**334**	IAmb	IAmb	06 38 41.7	
	comp=Z,30nm,1.2s						
SML	**Sawmill**	**25.63**	**334**	P	**P**	**06 38 27.6**	**-1.5**
	baz=136						
PAX	**Paxson**	**25.64**	**339**	P	**P**	**06 38 29.3**	**+0.1**
	baz=142						
I30M	**Mount Dempster**	**25.68**	**349**	P	**P**	**06 38 27.5**	**-2.2**
	baz=160						
PMR	**Palmer**	**25.74**	**333**	IAmb	IAmb	06 38 33.3	
	comp=Z,17nm,1.0s						
PMR	**Palmer**	**25.74**	**333**	P	**P**	**06 38 27.9**	**-2.2**

baz=123
Q16K **King Salmon** 27.04 323 P P 06 38 42.8 +1.0
baz=119
G31M **Satah River** 27.05 352 IAmb IAmb 06 38 58.8
comp=Z,23nm,1.2s
G31M **Satah River** 27.05 352 P P 06 38 43.7 +1.9
baz=165
HDA **Harding Lake** 27.18 339 P P 06 38 44.5 +1.5
baz=142
P17K **Kvichak River** 27.19 324 P P 06 38 44.0 +0.9
baz=120
P43A **Skaggs, Pawnee** 27.19 80 IAmb IAmb 06 38 53.6
comp=Z,21nm,0.9s
MCK **McKinley** 27.23 337 P P 06 38 42.9 -0.7
baz=138
N19K **Bonanza Creek** 27.23 328 IAmb IAmb 06 38 58.6
comp=Z,17nm,1.2s
N19K **Bonanza Creek** 27.23 328 P P 06 38 45.7 +1.9
baz=125
G30M **tAoh Zraii Nji** 27.33 351 P P 06 38 45.2 +0.8
baz=161
M20K **Styx River** 27.36 331 P P 06 38 45.4 +0.5
baz=129,SNR=5.3
TRF **Thorofare Moun** 27.44 336 P P 06 38 45.8 +0.2
baz=135
ILAR **Eielson Array** 27.45 340 P P 06 38 46.5 +1.0
comp=Z,3.1nm,0.8s,baz=136,slow=8.6,SNR=39
ILAR PcP PcP 06 42 04.0 +0.4
comp=Z,0.3nm,0.8s,baz=149,slow=1.9,SNR=2.4
ILAR LR LR 06 47 46.6
comp=Z,502nm,21.4s,baz=130,slow=32
comp=Z,3.1nm,0.8s
ILAR **Eielson Array** 27.45 340 P P 06 38 43.7 -1.8
H27K **Steamboat Moun** 27.47 346 P P 06 38 48.0 +2.3
baz=152,SNR=6.5
F31M **Tsiigehtchic** 27.50 353 IAmb IAmb 06 38 56.8
comp=Z,64nm,1.8s
F31M **Tsiigehtchic** 27.50 353 P P 06 38 47.8 +1.9
baz=166
PPLA **Purkeypile** 27.68 333 P P 06 38 47.9 +0.2
baz=132
PRP **Porcupine Dome** 27.71 342 P P 06 38 47.2 -0.8
PRP **Porcupine Dome** 27.71 342 P P 06 38 47.5 -0.5
baz=145
N18K **Kilae Creek** 27.73 327 P P 06 38 49.1 +1.0
baz=123
O17K **Koliganek Bris** 27.77 325 P P 06 38 49.4 +1.0
baz=120
P16K **Nushagak River** 27.82 323 P P 06 38 49.7 +1.0
baz=118
POKR **Poker Plat Res** 27.87 340 P P 06 38 50.7 +1.5
baz=142
F30M **Barrier River** 27.88 351 P P 06 38 50.9 +1.6
baz=162
NEA2 **Nenana** 27.91 338 IAmb IAmb 06 39 01.8
comp=Z,23nm,1.3s
NEA2 **Nenana** 27.91 338 P P 06 38 48.6 -1.0
baz=139
BPAW **Bear Paw Mtn.** 28.12 336 P P 06 38 53.0 +1.4
baz=135,SNR=6.2
O16K **Kokwok River B** 28.12 324 P P 06 38 53.5 +1.9
baz=118
M18K **Stony River** 28.16 329 P P 06 38 52.0 +0.2
baz=124
L19K **White Mountain** 28.19 331 P P 06 38 52.0 -0.2
baz=127,SNR=5.8
N17K **Nushagak Hills** 28.19 326 IAmb IAmb 06 39 07.7
comp=Z,23nm,1.4s
N17K **Nushagak Hills** 28.19 326 P P 06 38 52.3 +0.1
baz=121
INK **Inuvik** 28.32 353 LR LR 06 50 23.6
comp=Z,402nm,18.1s,baz=90,slow=37
INK **Inuvik** 28.32 353 IAmb IAmb 06 39 04.1
comp=Z,22nm,1.5s
INK **Inuvik** 28.32 353 P P 06 38 53.8 +0.6
baz=166
CHUM **Lake Minchumin** 28.39 335 P P 06 38 50.6 -3.3
baz=133
I23K **Minto, Yukon-K** 28.41 339 IAmb IAmb 06 39 05.7
comp=Z,55nm,1.9s
I23K **Minto, Yukon-K** 28.41 339 P P 06 38 51.6 -2.4
baz=139
F28M **Old Crow** 28.44 348 P P 06 38 53.6 -0.7
baz=156,SNR=5.7
FYU **Fort Yukon** 28.52 343 IAmb IAmb 06 38 58.2
comp=Z,14nm,0.9s
G26K **Porcupine Rive** 28.54 345 P P 06 38 55.5 +0.4
baz=149
H24K **Noodor Dome** 28.55 341 P P 06 38 55.1 -0.2
baz=142
K20K **Telida** 28.63 333 P P 06 38 54.9 -1.2
baz=130
MLY **Manley** 28.72 338 P P 06 38 57.3 +0.4
baz=137,SNR=9.5
O15K **Ungalikthiuk R** 28.73 322 P P 06 38 56.5 -0.4
baz=115
M17K **Holitna River** 28.76 328 P P 06 38 57.3 +0.2
baz=122
N16K **Nishlik Lake** 28.85 325 P P 06 38 58.0 0.0
baz=119
E29M **Blow River** 28.88 350 IAmb IAmb 06 39 10.2
comp=Z,21nm,1.7s
E29M **Blow River** 28.88 350 P P 06 38 59.0 +0.8
baz=160
L18K **Granite Mounta** 28.91 330 IAmb IAmb 06 39 01.0
comp=Z,14nm,1.2s
L18K **Granite Mounta** 28.91 330 P P 06 38 58.3 -0.2
baz=124,SNR=5.5
C36M **Paulatuk** 29.01 1 P P 06 39 00.5 +1.2
baz=182
BMAR **Burnt Mountain** 29.12 345 P P 06 38 59.5 -0.8
FALS **False Pass** 29.13 313 P P 06 38 59.1 -1.4
FALS **False Pass** 29.13 313 P P 06 39 00.2 -0.3
baz=104
G24K **Hadweenzic Riv** 29.14 342 IAmb IAmb 06 39 03.7
comp=Z,12nm,1.0s
G24K **Hadweenzic Riv** 29.14 342 P P 06 39 01.1 +0.6
baz=144,SNR=9.0
M16K **Timber Creek** 29.20 326 P P 06 39 01.2 +0.1
baz=120
E27K **Coleen River** 29.23 347 IAmb IAmb 06 39 12.7
comp=Z,16nm,1.1s
E27K **Coleen River** 29.23 347 P P 06 39 01.7 +0.3
baz=154,SNR=9.1
F26K **Sheenjek River** 29.26 345 P P 06 39 03.2 +1.6
baz=150
N15K **Kwethluk River** 29.29 324 IAmb IAmb 06 39 13.8
comp=Z,20nm,1.3s
N15K **Kwethluk River** 29.29 324 P P 06 39 01.9 0.0
baz=117
BLKN **Baker Lake** 29.34 26 IAmb IAmb 06 39 45.0
comp=Z,21nm,1.2s
O14K **Tigyukauivet M** 29.43 322 P P 06 39 02.2 -1.0
baz=114
F25K **Christian Rive** 29.47 344 P P 06 39 04.1 +0.6
baz=147
L17K **Donlin** 29.49 329 P P 06 39 02.4 -1.3
baz=122
H22K **Ishtalitna Cre** 29.53 338 P P 06 39 02.6 -1.4
baz=137
BLO **Bloomington** 29.56 80 IAmb IAmb 06 39 07.5
comp=Z,17nm,0.7s
J19K **Poorman** 29.57 333 IAmb IAmb 06 39 07.0
comp=Z,14nm,1.0s
J19K **Poorman** 29.57 333 P P 06 39 03.9 -0.4
baz=128,SNR=11
J18K **Innoko River** 29.64 332 P P 06 39 04.1 -0.9
baz=126
L16K **Owhat River** 29.75 327 IAmb IAmb 06 39 09.4
comp=Z,17nm,0.9s
L16K **Owhat River** 29.75 327 P P 06 39 05.0 -1.0
baz=120,SNR=13
H21K **Melozitna River** 29.77 337 P P 06 39 07.0 +0.8
baz=134,SNR=7.6
G23K **Bananza Creek** 29.78 340 P P 06 39 07.5 +1.2
baz=140,SNR=9.3
M15K **Kasigluk River** 29.79 325 P P 06 39 06.0 -0.3
baz=117
K17K **Iditarod** 29.81 330 P P 06 39 06.3 -0.2
baz=123,SNR=6.1
D28M **Stokes Point** 29.87 350 P P 06 39 08.7 +1.8
baz=159
N14K **Kuskokwak Cree** 29.90 323 P P 06 39 07.7 +0.4
baz=114
E25K **Arctic Village** 29.90 345 IAmb IAmb 06 39 19.6
comp=Z,42nm,1.9s
E25K **Arctic Village** 29.90 345 P P 06 39 10.3 +3.0
baz=148,SNR=5.6

WCI **Wyandotte Cave** 29.99 81 P P 06 39 07.2 -1.1
D27M **Malcolm River** 30.10 349 P P 06 39 09.4 +0.3
baz=156
COLD **Coldfoot** 30.22 341 P P 06 39 12.5 +2.4
baz=140
IMAR **Indian Mountai** 30.28 337 P P 06 39 09.5 -1.1
H20K **Anotleneega Mo** 30.29 336 P P 06 39 12.2 +1.5
baz=131
M14K **Bethel** 30.37 324 IAmb IAmb 06 39 14.2
comp=Z,11nm,0.9s
M14K **Bethel** 30.37 324 P P 06 39 11.9 +0.4
baz=115
GCSA **Galena City Sc** 30.47 334 P P 06 39 11.8 -0.4
baz=128,SNR=7.9
E24K **Your Creek** 30.48 343 P P 06 39 14.9 +2.4
baz=143
L15K **Ungalak Mounta** 30.58 326 P P 06 39 15.2 +1.9
baz=117
G21K **Allakaket** 30.58 338 P P 06 39 13.3 0.0
baz=135
UNV **Unalaska Valle** 30.70 310 P P 06 39 12.6 -1.9
UNV **Unalaska Valle** 30.70 310 P P 06 39 15.9 +1.5
baz=99
E23K **Chandalar** 30.73 342 IAmb IAmb 06 39 18.2
comp=Z,9.2nm,0.8s
E23K **Chandalar** 30.73 342 P P 06 39 15.9 +1.2
baz=142,SNR=11
M13K **Dall Lake** 30.86 323 P P 06 39 15.7 0.0
baz=113
C27K **Jago River** 30.87 347 P P 06 39 18.0 +2.2
baz=152,SNR=6.1
K15K **Wolf Creek Mou** 30.89 327 IAmb IAmb 06 39 27.3
comp=Z,25nm,1.5s
K15K **Wolf Creek Mou** 30.89 327 P P 06 39 17.9 +1.9
baz=118
N49A **Columbus Grove** 30.89 75 IAmb IAmb 06 39 18.5
comp=Z,23nm,1.1s
L14K **Kuka Creek** 30.95 325 IAmb IAmb 06 39 18.9
comp=Z,18nm,1.1s
L14K **Kuka Creek** 30.95 325 P P 06 39 17.3 +0.8
baz=115
O49A **Covington** 30.95 77 IAmb IAmb 06 39 34.2
comp=Z,20nm,1.0s
J16K **Anvik River** 31.00 329 IAmb IAmb 06 39 30.0
comp=Z,15nm,1.2s
J16K **Anvik River** 31.00 329 P P 06 39 19.9 +2.9
baz=121
F21K **Alatna River** 31.08 339 P P 06 39 19.9 +2.3
baz=136
D25K **Kavik River** 31.08 346 IAmb IAmb 06 39 21.2
comp=Z,9.9nm,0.8s
D25K **Kavik River** 31.08 346 P P 06 39 19.1 +1.3
baz=148
TOLK **Toolik Lake Re** 31.18 343 P P 06 39 19.1 +0.5
baz=142,SNR=11
H18K **Honhosa River** 31.22 333 P P 06 39 18.8 -0.1
baz=126,SNR=6.4
LRAL **Lakeview Retre** 31.28 91 IAmb IAmb 06 39 31.4
comp=Z,11nm,0.9s
E22K **Anaktuvuk Pass** 31.32 341 IAmb IAmb 06 39 22.9
comp=Z,12nm,0.9s
E22K **Anaktuvuk Pass** 31.32 341 P P 06 39 20.2 +0.4
baz=139,SNR=12
C26K **Camden Bay** 31.33 347 P P 06 39 19.8 0.0
baz=150
I17K **Unalakleet** 31.35 330 IAmb IAmb 06 39 22.9
comp=Z,13nm,0.9s
I17K **Unalakleet** 31.35 330 P P 06 39 20.6 +0.6
baz=122,SNR=9.5
G19K **Purcell Mounta** 31.41 336 IAmb IAmb 06 39 32.3
comp=Z,18nm,1.4s
G19K **Purcell Mounta** 31.41 336 P P 06 39 21.3 +0.7
baz=129,SNR=6.6
D24K **Happy Valley** 31.43 344 P P 06 39 21.3 +0.6
baz=144
F20K **Avaraart Lake** 31.59 338 P P 06 39 22.5 +0.4
baz=132
H17K **Granite Mounta** 31.63 332 P P 06 39 23.7 +1.1
baz=124
A36M **Sachs Harbour** 31.66 360 P P 06 39 23.7 +1.0
baz=180
D23K **Nanushuk River** 31.69 343 IAmb IAmb 06 39 26.9
comp=Z,15nm,0.8s
D23K **Nanushuk River** 31.69 343 P P 06 39 24.4 +1.4
baz=141
W50A **Signal Mountai** 31.72 86 IAmb IAmb 06 39 25.4
comp=Z,14nm,0.7s
G18K **Tagagawik** 31.76 334 IAmb IAmb 06 39 34.6
comp=Z,29nm,2.0s
G18K **Tagagawik** 31.76 334 P P 06 39 23.9 +0.2
baz=127
C24K **Franklin Bluff** 31.87 345 IAmb IAmb 06 39 27.6
comp=Z,10nm,0.8s
C24K **Franklin Bluff** 31.87 345 P P 06 39 24.4 -0.1
baz=145
J14K **Nanvaranak Lak** 31.93 327 IAmb IAmb 06 39 35.9
comp=Z,28nm,1.6s
J14K **Nanvaranak Lak** 31.93 327 P P 06 39 26.1 +1.0
baz=116
K13K **Kusilvak Mount** 32.05 325 P P 06 39 26.2 0.0
baz=114
F19K **Shaleruckik Mo** 32.06 336 P P 06 39 26.6 +0.3
baz=129
E21K **Killik River** 32.09 340 P P 06 39 26.9 +0.4
baz=136
D22K **Ayikyak River** 32.09 342 IAmb IAmb 06 39 29.9
comp=Z,14nm,1.4s
D22K **Ayikyak River** 32.09 342 P P 06 39 26.3 -0.3
baz=138,SNR=6.2
M11K **Mekoryuk** 32.17 322 P P 06 39 26.4 -0.8
baz=110
G17K **Kiwalik Mounta** 32.21 333 P P 06 39 26.7 -0.9
baz=124
CPCT **Cooper Cave** 32.23 86 IAmb IAmb 06 39 40.3
comp=Z,21nm,1.2s
E19K **Redstone River** 32.30 337 IAmb IAmb 06 39 31.3
comp=Z,12nm,1.0s
E19K **Redstone River** 32.30 337 P P 06 39 29.1 +0.7
baz=131
X51A **Calhoun** 32.30 87 IAmb IAmb 06 39 30.3
comp=Z,24nm,1.1s
H16K **Elim** 32.32 331 P P 06 39 30.3 +1.8
baz=121,SNR=7.1
C23K **Itkillik River** 32.36 344 IAmb IAmb 06 39 32.1
comp=Z,16nm,0.9s
C23K **Itkillik River** 32.36 344 P P 06 39 28.3 -0.6
baz=142
F18K **Selawik** 32.51 335 P P 06 39 30.8 +0.7
baz=126,SNR=12
E20K **Nigu River** 32.54 339 P P 06 39 30.9 +0.3
baz=133,SNR=18
TKL **Tuckaleechee C** 32.73 85 LR LR 06 52 50.4
comp=Z,499nm,21.1s,baz=290,slow=37
G16K **Koyuk River** 32.75 332 P P 06 39 33.4 +1.1
baz=122
C21K **Knifeblade Rid** 32.81 341 P P 06 39 35.5 +2.7
baz=136,SNR=10
F17K **Baldwin Pennin** 32.94 334 P P 06 39 33.8 -0.1
baz=124
D20K **Etivluk River** 32.97 340 P P 06 39 35.5 +1.3
baz=133,SNR=8.3
B21K **Ikpikpuk River** 33.10 342 P P 06 39 36.6 +1.2
baz=137
G15K **Niukluk** 33.16 331 P P 06 39 36.8 +0.9
baz=119,SNR=7.6
D19K **Kuna River** 33.23 339 IAmb IAmb 06 39 39.1
comp=Z,14nm,0.9s
D19K **Kuna River** 33.23 339 P P 06 39 38.2 +1.6
baz=131,SNR=18
O53A **New Philadelph** 33.25 76 IAmb IAmb 06 39 39.2
comp=Z,20nm,0.8s
E18K **Tukpahlearik C** 33.30 336 P P 06 39 37.3 +0.2
baz=126
B22K **Teshekpuk Lake** 33.36 343 IAmb IAmb 06 39 40.5
comp=Z,14nm,0.8s
B22K **Teshekpuk Lake** 33.36 343 P P 06 39 36.2 -1.3
baz=139
N53A **Lisbon** 33.38 75 IAmb IAmb 06 39 39.9
comp=Z,15nm,0.8s
ANM **Nome** 33.47 330 P P 06 39 38.3 -0.3
baz=117,SNR=7.7
E17K **Hotham Inlet** 33.49 335 P P 06 39 38.0 -0.7
baz=124
BG3 **Lake Jocassee** 33.61 86 IAmb IAmb 06 39 52.9
comp=Z,23nm,1.3s
F15K **North Star Dit** 33.73 332 P P 06 39 40.3 -0.7
baz=119,SNR=10
SADO **Sadowa** 33.81 67 LR LR 06 54 24.9

comp=Z,348nm,19.4s,baz=302,slow=38
Q54A **Coxs Mills** 33.87 78 IAmb IAmb 06 40 04.6
comp=Z,23nm,1.2s
PAMR **Moraine State** 33.90 74 IAmb IAmb 06 39 44.7
comp=Z,24nm,1.0s
B20K **Meade River** 34.00 341 IAmb IAmb 06 40 12.6
comp=Z,24nm,1.7s
B20K **Meade River** 34.00 341 P P 06 39 44.3 +1.2
baz=134
C19K **Lookout Ridge** 34.04 339 IAmb IAmb 06 39 46.3
comp=Z,8.4nm,1.0s
C19K **Lookout Ridge** 34.04 339 P P 06 39 43.1 -0.5
baz=130,SNR=6.3
A22K **Sinclair Lake** 34.20 343 P P 06 39 44.6 -0.3
baz=138,SNR=7.0
C18K **Utukok River** 34.21 337 IAmb IAmb 06 39 47.4
comp=Z,11nm,0.9s
C18K **Utukok River** 34.21 337 P P 06 39 46.2 +1.1
baz=127
D17K **Noatak River** 34.24 335 P P 06 39 44.5 -0.7
baz=124
F14K **Arctic Creek** 34.24 331 P P 06 39 41.6 -3.7
baz=117,SNR=7.1
RDOG **Red Dog Mine** 34.38 336 IAmb IAmb 06 39 57.8
comp=Z,38nm,1.6s
RDOG **Red Dog Mine** 34.38 336 P P 06 39 43.7 -2.8
baz=124
V55A **Taylorsville** 34.60 83 IAmb IAmb 06 40 00.2
comp=Z,15nm,1.0s
R55A **Marlinton** 34.62 79 IAmb IAmb 06 40 10.7
comp=Z,19nm,0.9s
C17K **DeLong Mountai** 34.70 336 P P 06 39 49.9 +0.6
baz=124,SNR=10
A21K **Barrow** 34.80 343 P P 06 39 51.3 +1.2
baz=136,SNR=7.5
TNA **Tin City** 34.88 330 P P 06 39 50.5 -0.3
baz=115
DELO **Deloro Mine** 34.92 67 IAmb IAmb 06 39 54.2
comp=Z,22nm,0.9s
CMIG **Matias Romero** 34.99 123 LR LR 06 53 27.2
comp=Z,275nm,20.8s,baz=262,slow=35
A19K **Wainwright** 35.14 340 P P 06 39 51.5 -1.5
baz=129
C16K **Lisburne Hills** 35.27 335 IAmb IAmb 06 39 56.9
comp=Z,21nm,1.0s
C16K **Lisburne Hills** 35.27 335 P P 06 39 53.2 -0.9
baz=122
PECO **Prince Edward** 35.48 68 IAmb IAmb 06 39 59.0
comp=Z,20nm,1.1s
SSPA **Standing Stone** 35.59 74 P P 06 39 56.2 -1.1
SSPA IAmb IAmb 06 39 59.7
comp=Z,22nm,0.8s
GAMB **Gambell** 35.73 326 IAmb IAmb 06 40 00.9
comp=Z,11nm,1.1s
GAMB **Gambell** 35.73 326 P P 06 39 55.8 -2.3
baz=108,SNR=9.9
W57A **Gilead** 35.78 84 IAmb IAmb 06 40 01.6
comp=Z,18nm,1.0s
P57A **Homestead Farm** 35.83 76 IAmb IAmb 06 40 02.0
comp=Z,16nm,1.0s
V58A **Windy Hill, Pi** 36.21 82 IAmb IAmb 06 40 13.7
comp=Z,19nm,0.9s
J57A **Williamstown** 36.29 69 IAmb IAmb 06 40 05.7
comp=Z,29nm,1.2s
X58A **Rowland** 36.51 84 IAmb IAmb 06 40 08.4
comp=Z,16nm,0.7s
PAGS **Pennsylvania G** 36.56 74 IAmb IAmb 06 40 07.9
comp=Z,23nm,0.8s
ILON **Igloolik, Nuna** 36.81 24 IAmb IAmb 06 40 09.4
comp=Z,24nm,0.8s
MVL **Millersville** 36.90 74 IAmb IAmb 06 40 11.2
comp=Z,29nm,1.3s
T59A **Double "B" Far** 36.97 80 IAmb IAmb 06 40 31.1
comp=Z,20nm,1.0s
RES **Resolute Bay** 37.09 13 LR LR 06 54 58.8
comp=Z,268nm,18.9s,baz=83,slow=36
RES **Resolute Bay** 37.09 13 IAmb IAmb 06 40 11.6
comp=Z,13nm,0.8s
J59A **Piesco** 37.34 68 IAmb IAmb 06 40 15.1
comp=Z,44nm,1.5s
WUPA **West Chester U** 37.47 74 IAmb IAmb 06 40 16.2
comp=Z,8.3nm,0.7s
VT1 **Waterbury** 38.38 66 IAmb IAmb 06 40 24.7
comp=Z,26nm,0.9s
KSCT **Kent School, K** 38.50 71 IAmb IAmb 06 40 25.1
comp=Z,22nm,0.8s
UCCT **U. Connecticut** 39.39 70 IAmb IAmb 06 40 33.3
comp=Z,37nm,0.9s
H62A **Milan** 39.44 66 IAmb IAmb 06 40 33.2
comp=Z,31nm,0.9s
I62A **Tamworth** 39.48 67 IAmb IAmb 06 40 33.9
comp=Z,25nm,0.9s
POIN **Pond Inlet** 39.53 20 IAmb IAmb 06 40 32.4
comp=Z,19nm,1.1s
KUQ **Kuujjuuaa** 39.70 44 IAmb IAmb 06 40 32.6
comp=Z,22nm,1.1s
G62A **West of Eustis** 39.72 64 IAmb IAmb 06 40 43.5
comp=Z,47nm,1.5s
FRB **Frobisher Bay** 40.08 35 LR LR 06 57 34.2
comp=Z,499nm,19.8s,baz=260,slow=37
E62A **Clinton Lake** 40.11 62 P P 06 40 37.1 +1.8
PKME **Peaks-Kenny Pk** 40.56 64 P P 06 40 42.0 +3.0
PKME IAmb IAmb 06 40 42.6
comp=Z,22nm,0.8s
SCHQ **Schefferville** 40.66 49 P P 06 40 39.6 -0.2
comp=Z,23nm,0.9s,baz=272,slow=12,SNR=22
SCHQ LR LR 06 57 48.5
comp=Z,682nm,18.1s,baz=276,slow=37
comp=Z,23nm,0.9s
ICQ **Pointe Anglais** 41.04 57 P P 06 40 40.9 -2.1
BATG **Bathurst New B** 42.28 60 P P 06 40 52.6 -0.6
BATG IAmb IAmb 06 40 56.5
comp=Z,22nm,0.7s
SHEM **Shemya Is, Ala** 42.31 308 LR LR 06 54 38.1
comp=Z,70nm,20.7s,baz=66,slow=31
TULEG **Thule** 43.38 16 P P 06 41 01.3 -0.4
TULEG IAmb IAmb 06 41 03.8
comp=Z,46nm,2.0s
TULEG **Thule** 43.38 16 *i* P P 06 41 02.8 +1.1
TULEG IAmb IAmb 06 41 03.5
comp=Z,63nm,2.1s
BILL **Bilibino** 45.31 330 P P 06 41 15.7 -1.6
BILL IAmb IAmb 06 41 27.8
comp=Z,17nm,1.3s
UPNV **Upernavik** 45.75 23 *i* P P 06 41 21.6 +1.0
UPNV IAmb IAmb 06 41 22.5
comp=Z,11nm,0.7s
GDH **Godhavn** 46.45 28 *i* P P 06 41 27.4 +1.3
GDH IAmb IAmb 06 41 28.4
comp=Z,13nm,1.0s
JTS **Las Juntas de** 46.49 119 LR LR 07 01 47.1
comp=Z,180nm,19.5s,baz=15,slow=37
SAATT **Saattut** 47.08 26 *i* P P 06 41 32.3 +1.1
SAATT IAmb IAmb 06 41 33.7
comp=Z,18nm,1.1s
NEEM **North Greenlan** 47.48 17 *i* P P 06 41 35.7 +1.1
NEEM IAmb IAmb 06 41 36.7
comp=Z,12nm,0.8s
SFJD **Kangerlussuaq** 47.65 31 LR LR 07 00 37.0
comp=Z,380nm,18.4s,baz=277,slow=35
SFJD **Kangerlussuaq** 47.65 31 *i* P P 06 41 36.4 +0.8
SFJD IAmb IAmb 06 41 37.9
comp=Z,20nm,1.0s
SUMG **Summit** 51.03 23 *i* P P 06 42 02.7 +0.8
SUMG IAmb IAmb 06 42 04.0
comp=Z,19nm,1.0s
PETK **Petropavlovsk-** 51.86 312 P P 06 42 08.8 +0.9
comp=Z,9.3nm,0.9s,baz=71,slow=10,SNR=6.9
PETK LR LR 07 01 01.6
comp=Z,77nm,20.4s,baz=82,slow=32
comp=Z,9.3nm,0.9s
MA2 **Magadan** 53.42 321 LR LR 07 04 18.2
comp=Z,55nm,18.8s,baz=75,slow=35
MA2 **Magadan** 53.42 321 P P 06 42 17.5 -1.8
MA2 IAmb IAmb 06 42 21.6
comp=Z,8.2nm,0.8s
MA2 **Magadan** 53.42 321 P P 06 42 20.2 +0.9
comp=Z,12nm,1.2s
DAG **Danmarks Havn** 54.66 16 *i* P P 06 42 28.0 -0.2
DAG IAmb IAmb 06 42 33.3
comp=Z,13nm,1.7s
SJG **San Juan** 55.01 96 LR LR 07 09 52.5
comp=Z,152nm,18.4s,baz=281,slow=40
TIXI **Tiksi** 56.91 339 LR LR 07 07 54.7
comp=Z,143nm,19.1s,baz=50,slow=37
TIXI **Tiksi** 56.91 339 P P 06 42 43.7 -0.6
SDV **Santo Domingo** 57.52 107 LR LR 07 12 07.3
comp=Z,93nm,18.3s,baz=313,slow=41

ROSC El Rosal 57.68 114 LR LR 07 10 21.6
comp=Z,48nm,20.4s,baz=55,slow=39
BORG Borgarnes 59.67 29 LR LR 07 09 20.2
comp=Z,434nm,19.0s,baz=296,slow=37
JMIC Jan Mayen 60.15 20 LR LR 07 09 09.9
comp=Z,259nm,19.4s,baz=38,slow=36
H11N3 WAKE ISLAND Hy 60.86 272 T T 07 50 31.7
baz=53,slow=75
H11N2 WAKE ISLAND Hy 60.87 272 T T 07 50 15.7
baz=53,slow=75
H11N1 WAKE ISLAND Hy 60.88 272 T T 07 50 31.4
baz=53,slow=75
YAK Yakutsk 61.62 329 LR LR 07 08 22.5
comp=Z,160nm,21.3s,baz=64,slow=34
H11S1 WAKE ISLAND Hy 61.73 271 T T 07 51 50.0
baz=54,slow=75
H11S2 WAKE ISLAND Hy 61.74 271 T T 07 51 50.5
baz=54,slow=75
H11S3 WAKE ISLAND Hy 61.75 271 T T 07 51 51.5
baz=54,slow=75
PPT Papeete 61.99 207 LR LR 07 03 53.4
comp=Z,113nm,20.1s,baz=16,slow=30
NRIK Noril'sk 67.94 348 P **P** **06 43 58.0 -0.1**
comp=Z,2.2nm,0.9s,baz=53,slow=5.1,SNR=4.0
NRIK LR LR 07 16 10.5
comp=Z,68nm,18.2s,baz=34,slow=38
comp=Z,2.2nm,0.9s
NRIK Noril'sk 67.94 348 IAmb IAmb 06 44 09.0
comp=Z,6.9nm,1.1s
KLR Kul'dur 68.02 316 LR LR 07 10 45.8
comp=Z,56nm,20.6s,baz=0.0,slow=33
ARCES ARCESS Array B 68.27 11 LR LR 07 15 01.5
comp=Z,155nm,18.5s,baz=344,slow=37
RPN Rapa Nui 68.78 165 LR LR 07 06 50.4
comp=Z,64nm,18.0s,baz=358,slow=30
RAR Rarotonga 69.26 215 LR LR 07 05 37.3
comp=Z,193nm,20.7s,baz=12,slow=28
HEH HeiHe 69.62 319 *eP* **P** **06 44 08.5 -0.4**
USRK Ussuriysk Ar. 70.95 312 P **P** **06 44 17.6 +0.5**
comp=Z,3.7nm,0.8s,baz=48,slow=4.3,SNR=5.8
comp=Z,3.7nm,0.8s
MJAR Matsushiro Arr 71.83 303 P **P** **06 44 22.6 -0.1**
MJAR LR LR 07 10 08.8
comp=Z,1.0nm,0.3s,baz=46,slow=5.2,SNR=4.5
comp=Z,68nm,21.7s,baz=47,slow=31
comp=Z,1.0nm,0.3s
MJAR Matsushiro Arr 71.83 303 P **P** **06 44 20.7 -2.0**
MJAR IAmb IAmb 06 44 28.6
comp=Z,16nm,1.5s
BNX BinXian 72.50 316 ⇑P **P** **06 44 26.7 +0.3**
BNX pmax pmax
comp=Z,7.0nm,1.0s
EKA Eskdalemuir Ar 72.62 31 LR LR 07 16 40.5
comp=Z,270nm,19.9s,baz=332,slow=36
NB2 NORSAR Subarra 72.84 21 P **P** **06 44 28.8 +0.5**
comp=Z,1.2nm,0.7s,baz=324,slow=6.2
NOA NORSAR Array B 72.84 21 P **P** **06 44 28.5 +0.3**
comp=Z,2.8nm,0.9s,baz=326,slow=6.0,SNR=5.5
NOA LR LR 07 14 31.3
comp=Z,193nm,21.6s,baz=315,slow=34
comp=Z,2.8nm,0.9s
MDP Montagnes des 73.41 98 LR LR 07 20 40.3
comp=Z,67nm,19.5s,baz=350,slow=39
HFS Hagfors 74.27 20 P **P** **06 44 37.3 +0.7**
comp=Z,10nm,0.9s,baz=337,slow=6.3,SNR=8.0
HFS LR LR 07 16 26.0
comp=Z,363nm,19.3s,baz=325,slow=35
comp=Z,10nm,0.9s
CN2 Changchun 74.82 315 P **P** **06 44 40.3 +0.2**
CN2 sP sP 06 44 45.2 0.0
JCJ Chichijima 74.87 293 LR LR 07 11 43.3
comp=Z,92nm,19.8s,baz=40,slow=31
FINES FINESS Array B 75.84 14 P **P** **06 44 46.3 +0.7**
comp=Z,4.4nm,0.9s,baz=319,slow=7.8,SNR=4.9
FINES LR LR 07 17 17.8
comp=Z,165nm,18.2s,baz=350,slow=35
comp=Z,4.4nm,0.9s
LPAZ La Paz 77.34 124 P **P** **06 44 56.1 +0.7**
comp=Z,1.4nm,0.7s,baz=325,slow=5.8,SNR=7.3
comp=Z,1.4nm,0.7s
LPAZ La Paz 77.34 124 P **P** **06 44 55.1 -0.4**
KSRS Korea Array 77.63 309 P **P** **06 44 57.0 +0.9**
comp=Z,0.9nm,0.4s,baz=39,slow=5.6,SNR=6.2
KSRS LR LR 07 14 18.1
comp=Z,34nm,21.6s,baz=55,slow=32
comp=Z,0.9nm,0.4s
KSAR Wonju Array Be 77.66 309 P **P** **06 44 55.6 -0.7**
MSVF Nonsavu 78.28 235 LR LR 07 10 26.1
comp=Z,189nm,20.3s,baz=71,slow=29
JNU Nakatsue 78.68 304 LR LR 07 14 37.3
comp=Z,52nm,20.2s,baz=67,slow=32
TLY Talaya 78.92 331 LR LR 07 19 52.7
comp=Z,125nm,18.3s,baz=30,slow=36
VILB Vilhena 80.14 116 P **P** **06 45 08.9 -1.3**
VILB IAmb IAmb 06 45 21.6
comp=Z,14nm,1.0s
SONM Songino Array 80.95 328 P **P** **06 45 15.3 +0.9**
comp=Z,1.2nm,0.7s,baz=46,slow=4.2,SNR=7.5
SONM LR LR 07 20 33.7
comp=Z,128nm,19.9s,baz=38,slow=35
comp=Z,1.2nm,0.7s
SONM Songino Array 80.95 328 P **P** **06 45 14.6 +0.2**
GUMO Guam 81.31 280 LR LR 07 12 03.9
comp=Z,74nm,21.7s,baz=74,slow=29
CLL Collm 81.63 25 *i* P **P** **06 45 19.2 +1.5**
CLL AMS AMS 07 19 00.0
comp=Z,7.0nm,1.2s
comp=Z,300nm,19.2s
SIV San Ignacio 81.71 119 P **P** **06 45 18.8 +0.2**
comp=Z,1.8nm,0.7s,baz=274,slow=3.7
SIV LR LR 07 23 52.6
comp=Z,80nm,18.2s,baz=300,slow=37
comp=Z,1.8nm,0.7s
ZALV Zalesovo Beam 82.54 343 P **P** **06 45 23.4 +1.0**
comp=Z,0.9nm,0.6s,baz=22,slow=12,SNR=5.2
ZALV LR LR 07 23 52.9
comp=Z,76nm,19.0s,baz=34,slow=37
comp=Z,0.9nm,0.6s
ZALV Zalesovo Beam 82.54 343 P **P** **06 45 22.0 -0.4**
PTLB Pontes e Lacer 82.63 117 P **P** **06 45 23.0 -0.3**
PTLB IAmb IAmb 06 45 33.7
comp=Z,5.7nm,1.2s
ARTI Arti 83.53 358 LR LR 07 25 32.4
comp=Z,36nm,20.0s,baz=8.0,slow=38
OBN Obninsk 83.58 10 LR LR 07 22 36.8
comp=Z,99nm,21.4s,baz=360,slow=36
ESDC Sonseca Array 83.96 42 P **P** **06 45 30.5 +0.4**
comp=Z,2.9nm,0.9s,baz=310,slow=5.0,SNR=12
ESDC LR LR 07 19 28.9
comp=Z,90nm,21.1s,baz=318,slow=33
comp=Z,2.9nm,0.9s
GERES GERESS Array B 83.98 26 P **P** **06 45 30.0 -0.1**
comp=Z,0.7nm,0.9s,baz=336,slow=2.2,SNR=5.6
GERES LR LR 07 24 03.3
comp=Z,141nm,18.7s,baz=320,slow=36
comp=Z,0.7nm,0.9s
HHC Hu-ho-hao-te 84.09 320 *eP* **P** **06 45 29.1 -1.7**
HHC pmax pmax
comp=Z,8.0nm,0.7s
HHC pmax pmax
comp=Z,50nm,7.6s
MORC Moravsky Berou 84.39 23 *eP* **P** **06 45 32.3 +0.2**
DAVOX Davos/Dischmat 84.39 29 LR LR 07 24 05.7
comp=Z,270nm,18.8s,baz=282,slow=36
VRAC Vranov 84.51 24 LR LR 07 24 18.3
comp=Z,243nm,18.0s,baz=326,slow=36
VRAC Vranov 84.51 24 *eP* **P** **06 45 33.1 +0.4**
KRUC Moravsky 84.67 24 *eP* **P** **06 45 33.7 +0.3**
FUORN Ofenpass-Fuorn 84.67 29 P **P** **06 45 34.1 +0.2**
RAO Raoul Island 84.84 224 LR LR 07 16 58.4
comp=Z,64nm,18.2s,baz=68,slow=31
HNS HongShan 85.11 316 ⇑P **P** **06 45 37.0 +1.2**
HNS pmax pmax
comp=Z,4.0nm,1.1s
RNPP9 Sopachiv 85.13 18 P **P** **06 45 36.2 +0.5**
RNPP8 Varash 85.19 18 P **P** **06 45 37.0 +1.0**
JAVC Velka Javorina 85.24 24 *eP* **P** **06 45 37.1 +0.7**
RNPP5 Staryi Chortor 85.30 18 P **P** **06 45 37.4 +0.9**
LANS Liptovska Anna 85.52 22 *eP* **P** **06 45 40.0 +2.3**
MODS Modra-Piesok 85.55 24 *eP* **P** **06 45 39.9 +2.0**
BVAR Borovoye Array 85.97 351 P **P** **06 45 40.4 +0.5**
comp=Z,1.3nm,0.8s,baz=35,slow=3.5,SNR=6.2
BVAR LR LR 07 27 26.3
comp=Z,54nm,18.1s,baz=8.7,slow=38
comp=Z,1.3nm,0.8s
KECS Kecovo 86.41 22 *eP* **P** **06 45 45.2 +3.1**
AKASG Malin Array Be 86.53 16 P **P** **06 45 41.4 -1.2**
comp=Z,3.7nm,1.0s,baz=347,slow=4.6,SNR=6.7
AKASG LR LR 07 25 44.5
comp=Z,196nm,18.2s,baz=334,slow=37
comp=Z,3.7nm,1.0s
NJ2 Nanjing 86.74 310 *eP* **P** **06 45 44.2 +0.2**
NJ2 pmax pmax
comp=Z,27nm,0.5s
KURK Kurchatov 86.89 345 P **P** **06 45 44.0 -0.4**
KURK IAmb IAmb 06 45 59.4
comp=Z,4.7nm,0.9s
KURBB Kurchatov Arra 87.00 345 P **P** **06 45 45.7 +0.8**
comp=Z,2.0nm,0.9s,baz=16,slow=4.5,SNR=11
KURBB LR LR 07 28 32.3
comp=Z,96nm,19.4s,baz=169,slow=38
comp=Z,2.0nm,0.9s
CFA Coronel Fontan 88.92 134 P **P** **06 45 54.3 +0.1**
comp=Z,1.3nm,0.8s,baz=328,slow=6.1,SNR=2.9
comp=Z,1.3nm,0.8s
AKTO Aktyubinsk 89.50 358 LR LR 07 27 56.6
comp=Z,113nm,20.6s,baz=16,slow=37
MKAR Makanchi Array 89.80 342 P **P** **06 45 58.3 -0.1**
comp=Z,0.6nm,0.9s,baz=20,slow=4.6,SNR=4.7
MKAR LR LR 07 27 27.2
comp=Z,88nm,21.6s,baz=332,slow=36
comp=Z,0.6nm,0.9s
MKAR Makanchi Array 89.80 342 P **P** **06 45 56.3 -2.0**
MAKZ Makanchi 89.86 342 P **P** **06 45 57.5 -1.1**
MAKZ IAmb IAmb 06 46 09.5
comp=Z,9.9nm,1.4s
BDFB Brasilia 90.54 110 P **P** **06 46 03.6 +1.3**
comp=Z,1.1nm,0.6s,baz=319,slow=20,SNR=2.2
BDFB LR LR 07 30 30.6
comp=Z,116nm,20.1s,baz=338,slow=38
comp=Z,1.1nm,0.6s
AB31 Akbulak array 90.61 357 P **P** **06 45 59.7 -2.3**
ABKAR Akbulak array 90.61 357 P **P** **06 45 59.6 -2.4**
MLR Muntele Rosu 90.65 20 LR LR 07 27 13.9
comp=Z,461nm,19.8s,baz=336,slow=36
WMQ Urumqi 91.08 337 *eP* **P** **06 46 05.7 +1.3**
WMQ pP pwP 06 46 10.7 -0.7
WMQ PP **PP** **06 49 46.0 +6.0**
WMQ pmax pmax
comp=Z,10.0nm,0.7s
WMQ LR LR
comp=Z,99nm,24.7s
CPUP Villa Florida 91.51 124 LR LR 07 27 12.9
comp=Z,51nm,21.9s,baz=346,slow=36
LZH Lanzhou 91.55 322 *eP* **P** **06 46 05.5 -1.4**
LR04 Corral 92.78 143 P **P** **06 46 10.4 -1.5**
KEST Kesra 93.45 36 LR LR 07 26 14.5
comp=Z,96nm,20.6s,baz=282,slow=34
VAE Valguarnera 94.09 31 LR LR 07 29 39.1
comp=Z,146nm,18.9s,baz=342,slow=36
URZ Urewera 94.43 222 LR LR 07 20 29.0
comp=Z,103nm,21.1s,baz=45,slow=30
JAY Jayapura 94.77 271 LR LR 07 21 44.1
comp=Z,81nm,19.7s,baz=330,slow=31
PLCA Paso Flores 94.80 142 LR LR 07 22 39.3
comp=Z,66nm,18.3s,baz=322,slow=32
AAK Ala-Archa 95.44 346 LR LR 07 33 57.2
comp=Z,79nm,18.9s,baz=20,slow=38
KBZ Khabaz 95.56 9 LR LR 07 32 23.5
comp=Z,62nm,19.4s,baz=338,slow=37
BRTR Keskin Array B 97.94 16 LR LR 07 33 40.1
comp=Z,102nm,19.3s,baz=331,slow=37
GNI Garni 99.30 8 LR LR 07 34 28.1
comp=Z,62nm,18.3s,baz=336,slow=37
DAV Davao City (W) 99.85 288 LR LR 07 24 01.9
comp=Z,73nm,21.2s,baz=190,slow=31
PZH PanZhiHua 100.42 318 P **Pdif** **06 46 45.7 -1.6**
QSPA South Pole Qui 130.22 180 PKP **PKiKP** **06 52 09.5 -0.2**
comp=Z,3.4nm,1.0s,baz=60,slow=1.7,SNR=3.5

*MAN **09** 06:57:22.0, 9.°16N×126.°69E, h6km, MS2.9*
*IDC **09** 06:58:20.3±2.5, 2.°57N×128.°86E, h0km, mb3.0/4, mbtmp3.1/4, Error ellipse: s-maj=135.3km s-min=28.2km az=72.0*
ISC 09 06:57:20.6±2.0, 9.°2N±0.°1×126.°75E±0.°09, h10km, n7, σ1$71/11, mb3.3/3, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TSSP	**Tandag City**	**0.55**	**257**	*i* P		**Pg**	**06 57 31.9**	**+0.5**
TSSP					*eS*	**Sg**	**06 57 37.5**	**-1.2**
BIPH	**Bislig**	**1.05**	**201**	*eP*		**Pg**	**06 57 40.0**	**-0.8**
BIPH					*eS*	**Sg**	**06 57 53.2**	**-1.2**
CGP	**Cagayan de Oro**	**2.15**	**251**	*eP*		**Pn**	**06 57 57.3**	**+0.8**
CGP					*eS*	**Sn**	**06 58 22.6**	**-0.7**
DDMP	**Don Marcelino,**	**3.21**	**199**	*eP*		**Pb**	**06 58 17.3**	**-0.5**
DDMP					*eS*	**Sn**	**06 58 53.6**	**+4.1**
FITZ	**Fitzroy Crossi**	**27.11**	**182**	P		**P**	**07 03 04.4**	**+0.4**
	0.6nm,0.4s,baz=1.5,slow=2.2,SNR=3.1							
	0.6nm,0.4s							
WRA	**Warramunga Arr**	**29.88**	**166**	P		**P**	**07 03 27.6**	**-1.0**
	0.2nm,0.6s,baz=344,slow=8.8,SNR=1.4							
	0.2nm,0.6s							
ASAR	**Alice Springs**	**33.37**	**168**	P		**P**	**07 03 58.8**	**-0.6**
	0.3nm,0.7s,baz=345,slow=8.0,SNR=4.8							
	0.3nm,0.7s							

*IDC **09** 06:58:36.7±0.9, 23.°41N×126.°57E, h0km, mb3.7/8, mbtmp3.8/10, ML3.8/2, Error ellipse: s-maj=33.7km s-min=17.5km az=84.0*
*NEIC **09** 06:58:39.4±0.9, 23.°5N±0.°1×126.°47E±0.°05, h10km±1km, mb4.1/10, Error ellipse: s-maj=18.8km s-min=3.5km az=158.0*
*JMA **09** 06:58:41.4±0.2, 24.°N±1.°×126.°3E±0.°8, h125km, MV3.5/31, NEAR MIYAKOJIMA ISLAND*
ISC 09 06:58:41.7±0.8, 23.°51N±0.°07×126.°48E±0.°04, h35km, n64, σ1$42/77, mb4.0/14, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JOGS	**Gusukube**	**1.58**	**322**	P		**Pn**	**06 59 07.3**	**+0.1**
JOGS					*eS*	**Sn**	**06 59 26.6**	**+0.2**
JMJ2	**Miyako jima3**	**1.61**	**320**	P		**Pn**	**06 59 07.5**	**-0.1**
JMJ2					*eS*	**Sn**	**06 59 26.8**	**-0.3**
JMJ	**Miyako jima 2**	**1.69**	**320**	P		**Pn**	**06 59 07.7**	**-0.9**
JIKM	**Ikemajima**	**1.80**	**322**	*eP*		**Pn**	**06 59 09.6**	**-0.5**
JIKM					*eS*	**Sn**	**06 59 31.3**	**-0.4**
JTJ	**Tarama**	**1.97**	**305**	*eP*		**Pn**	**06 59 11.6**	**-0.9**
JTJ					S	**Sn**	**06 59 34.8**	**-1.2**
JISG	**Ishigakijimahi**	**2.25**	**299**	*eP*		**Pn**	**06 59 15.8**	**-0.5**
JISG					*eS*	**Sn**	**06 59 41.6**	**-1.3**
JIJ	**Ishigaki jima**	**2.29**	**292**	P		**Pn**	**06 59 16.3**	**-0.7**
JIJ					*eS*	**Sn**	**06 59 42.0**	**-2.1**
JKRS	**Kuro-shima**	**2.37**	**288**	*eP*		**Pn**	**06 59 17.5**	**-0.5**
JKRS					*eS*	**Sn**	**06 59 44.3**	**-1.5**
HATJ	**Hateruma jima**	**2.50**	**283**	P		**Pn**	**06 59 19.0**	**-0.9**
HATJ					S	**Sn**	**06 59 46.5**	**-2.7**
IRIF	**Iriomote-Funau**	**2.64**	**289**	P		**Pn**	**06 59 21.3**	**-0.5**
IRIF					*eS*	**Sn**	**06 59 50.0**	**-2.6**
JKE	**Kume jima 2**	**2.81**	**6**	*i* P		**Pn**	**06 59 23.5**	**-0.7**
JJT3	**Tamagusuku3**	**2.88**	**24**	*eP*		**Pn**	**06 59 24.2**	**-0.8**
JJT3					*eS*	**Sn**	**06 59 56.5**	**-1.8**
JAGN	**Aguni-jima**	**3.14**	**13**	*eP*		**Pn**	**06 59 28.0**	**-0.6**
JNTH	**Nagotoyohara**	**3.30**	**25**	*eP*		**Pn**	**06 59 29.5**	**-1.4**
YOJ	**Yonaguni jima**	**3.31**	**287**	P		**Pn**	**06 59 30.6**	**-0.3**
YOJ	**Yonaguni jima**	**3.31**	**287**	S		**Sn**	**07 00 06.3**	**-2.7**
YOJ	**Yonaguni jima**	**3.31**	**287**	Pn		**Pn**	**06 59 31.1**	**+0.1**
YOJ	**Yonaguni jima**	**3.31**	**287**	*eP*		**Pn**	**06 59 30.3**	**-0.6**
JYNG	**Yonagunijimaku**	**3.36**	**287**	*eP*		**Pn**	**06 59 30.8**	**-0.9**
JOW	**Kunigami**	**3.68**	**26**	Pn		**Pn**	**06 59 35.2**	**-1.0**
	10.0nm,0.3s,baz=193,slow=12,SNR=20							
JOW						Sn	**Sn**	**07 00 14.8**	**-3.6**
	10nm,0.3s,baz=247,slow=7.7,SNR=4.5							
	19nm,0.3s							
JOW	**Kunigami**	**3.68**	**26**	P		**Pn**	**06 59 35.5**	**-0.6**
JOW	**Kunigami**	**3.68**	**26**	S		**Sn**	**07 00 16.9**	**-1.5**
JOW	**Kunigami**	**3.68**	**26**			**Pn**	**06 59 35.4**	**-0.8**
JOW	**Kunigami**	**3.68**	**26**	*eP*		**Pn**	**06 59 35.3**	**-0.8**
JOW					*eS*	**Sn**	**07 00 17.1**	**-1.3**
JIH	**Iheya**	**3.76**	**21**	*eP*		**Pn**	**06 59 36.3**	**-0.8**
JIH					*eS*	**Sn**	**07 00 16.9**	**-3.2**
JYRO	**Yoronjima**	**3.93**	**27**	*eP*		**Pn**	**06 59 38.9**	**-0.6**
JOKE	**Okinoerabujima**	**4.27**	**26**	*eP*		**Pn**	**06 59 43.4**	**-0.8**
NACB	**Ninganchiao**	**4.52**	**279**	P		**Pn**	**06 59 46.9**	**-0.7**
NACB	**Ninganchiao**	**4.52**	**279**	Pn		**Pn**	**06 59 46.9**	**-0.7**
YULB	**Yu-li**	**4.76**	**270**	P		**Pn**	**06 59 49.5**	**-1.4**
YULB	**Yu-li**	**4.76**	**270**	Pn		**Pn**	**06 59 49.4**	**-1.5**
YHNB	**Yeheng**	**4.80**	**285**	P		**Pn**	**06 59 51.6**	**0.0**
YHNB	**Yeheng**	**4.80**	**285**	S		**Sn**	**07 00 41.4**	**-4.6**
YHNB	**Yeheng**	**4.80**	**285**			**Pn**	**06 59 51.6**	**0.0**
JTK	**Tokunoshima**	**4.80**	**27**	*eP*		**Pn**	**06 59 50.5**	**-1.1**
JTK					*eS*	**Sn**	**07 00 42.0**	**-4.0**
JMZ	**Minamidaito 2**	**4.89**	**61**	Pn		**Pn**	**06 59 53.0**	**+0.3**
JKDJ	**Kitadaitoujima**	**5.01**	**60**	*eP*		**Pn**	**06 59 51.7**	**-2.6**
SSLB	**Suanglung**	**5.07**	**274**	Pn		**Pn**	**06 59 55.5**	**+0.3**
JAMN	**Amaminishikomi**	**5.30**	**27**	P		**Pn**	**06 59 57.9**	**-0.5**
TPUB	**Ta-pu**	**5.37**	**269**	Pn		**Pn**	**07 00 00.1**	**+0.7**
JAM	**Amami Oshima**	**5.63**	**29**	*eP*		**Pn**	**07 00 01.2**	**-1.7**
JNU	**Nakatsue**	**10.33**	**21**	Pn		**Pn**	**07 01 07.0**	**-0.4**
	0.8nm,0.3s,baz=188,slow=14,SNR=5.0							
	8.3nm,0.7s							
USRK	**Ussuriysk Ar.**	**21.12**	**11**	P		**P**	**07 03 25.8**	**+2.5**
	1.7nm,0.7s,baz=202,slow=3.1,SNR=4.3							
	1.7nm,0.7s							
MK31	**Makanchi Array**	**42.22**	**315**	P		**P**	**07 06 32.5**	**+1.2**
MKAR	**Makanchi Array**	**42.22**	**315**	P		P	07 08 26.9	
	0.1nm,0.4s,baz=134,slow=8.3,SNR=1.2							
MKAR	**Makanchi Array**	**42.22**	**315**	P		**P**	**07 06 32.3**	**+0.9**
	1.6nm,0.8s,baz=112,slow=9.2,SNR=5.4							
	1.6nm,0.8s							
MKAR	**Makanchi Array**	**42.22**	**315**					
	0.1nm,0.4s							
MAKZ	**Makanchi**	**42.43**	**314**	P		**P**	**07 06 33.7**	**+0.7**
MAKZ					IAmb	IAmb	07 06 35.7	
	comp=Z,3.3nm,0.8s							
ZAA0	**Zalesovo Array**	**43.50**	**325**	P		**P**	**07 06 41.9**	**+0.4**
ZAA0					IAmb	IAmb	07 06 43.2	
	comp=Z,2.2nm,0.8s							
ZALV	**Zalesovo Beam**	**43.50**	**325**	P		**P**	**07 06 42.7**	**+1.2**
	comp=Z,1.5nm,0.6s,baz=118,slow=9.1,SNR=6.8							
	comp=Z,1.5nm,0.6s							
ZALV	**Zalesovo Beam**	**43.50**	**325**	P		**P**	**07 06 42.2**	**+0.7**
WB0	**Warramunga Arr**	**43.71**	**169**	P		**P**	**07 06 43.4**	**-0.1**
WB0					IAmb	IAmb	07 07 08.9	
	comp=Z,5.8nm,1.1s							
WRA	**Warramunga Arr**	**43.87**	**169**	P		**P**	**07 06 44.3**	**-0.5**
	comp=Z,1.6nm,0.7s,baz=349,slow=8.2,SNR=11							
	comp=Z,1.6nm,0.7s							
WRA	**Warramunga Arr**	**43.87**	**169**	P		**P**	**07 06 45.2**	**+0.4**
WR8	**Warramunga Arr**	**43.91**	**169**	P		**P**	**07 06 45.2**	**+0.1**
KURK	**Kurchatov**	**45.75**	**319**	P		**P**	**07 07 00.3**	**+0.8**
KURK					IAmb	IAmb	07 07 05.2	
	comp=Z,2.8nm,1.1s							
KURBB	**Kurchatov Arra**	**45.77**	**319**	P		**P**	**07 07 01.0**	**+1.3**
	comp=Z,0.7nm,0.2s,baz=104,slow=7.4,SNR=2.4							
	comp=Z,0.7nm,0.2s							
ASAR	**Alice Springs**	**47.45**	**171**	P		**P**	**07 07 12.2**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=352,slow=8.1,SNR=5.1							
ASAR					PcP	**PcP**	**07 08 42.8**	**-0.4**
	comp=Z,0.5nm,0.9s,baz=349,slow=3.9,SNR=3.3							
	comp=Z,0.5nm,0.8s							
AB31	**Akbulak array**	**57.37**	**314**	P		**P**	**07 08 25.9**	**-0.5**
AB31					IAmb	IAmb	07 08 29.0	
	comp=Z,1.5nm,1.0s							
ABKAR	**Akbulak array**	**57.37**	**314**	P		**P**	**07 08 27.3**	**+0.9**
B21K	**Ikpikpuk River**	**64.31**	**22**	P		**P**	**07 09 14.5**	**+1.3**
B21K					IAmb	IAmb	07 09 29.8	
	comp=Z,3.1nm,1.5s							
RND	**Reindeer**	**66.88**	**29**	P		**P**	**07 09 31.2**	**+1.2**
ILAR	**Eielson Array**	**67.57**	**28**	P		**P**	**07 09 34.6**	**+0.3**
	comp=Z,0.2nm,0.7s,baz=276,slow=5.8,SNR=2.3							
	comp=Z,0.2nm,0.7s							
YKA	**Yellowknife Ar**	**81.65**	**24**	P		**P**	**07 10 56.7**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=299,slow=6.0,SNR=8.0							
	comp=Z,0.4nm,0.7s							

*SOME **09** 07:01:38.3, 49.°92N×78.°42E*
*NNC **09** 07:01:43.5±1.7, 49.°93N×78.°54E, h0km, mb2.8, mpv2.4, Error ellipse: s-maj=37.0km s-min=6.4km az=82.0, Suspected Mining explosion.*
*IDC **09** 07:01:46.0±1.0, 50.°08N×78.°72E, h0km, mbtmp2.4/2, ML1.9/2, Error ellipse: s-maj=13.2km s-min=6.6km az=67.0*
ISC 09 07:01:45.8±1.1, 50.°00N±0.°06×78.°7E±0.°1, h0km, n17, σ0$99/29, 22C-4D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.59**	**352**	⇓P		**Pg**	**07 01 56.1**	**-1.0**
KUR07				⇓S		**Sg**	**07 02 05.8**	**+1.1**
KUR06	**Kurchatov Arra**	**0.60**	**353**	⇑P		**Pg**	**07 01 56.3**	**-1.1**
KUR06				⇑S		**Sg**	**07 02 06.7**	**+1.5**
KUR14	**Kurchatov Arra**	**0.61**	**357**	⇑P		**Pg**	**07 01 56.2**	**-1.4**
KUR14				⇑S		**Sg**	**07 02 05.7**	**+0.2**
KUR15	**Kurchatov Arra**	**0.62**	**355**	⇑P		**Pg**	**07 01 56.4**	**-1.2**
KUR15				⇑S		**Sg**	**07 02 06.4**	**+0.7**
KURBB	**Kurchatov Arra**	**0.62**	**353**	Pg		**Pg**	**07 01 56.3**	**-1.5**
	1.1nm,0.3s,baz=166,slow=16,SNR=18							
KURBB					Lg	Lg	07 02 05.4	
	2.2nm,0.3s,baz=164,slow=32,SNR=14							
KURBB	**Kurchatov Arra**	**0.62**	**353**	⇑P		**Pg**	**07 01 56.5**	**-1.3**
	8.0nm,0.4s							
KURBB				⇑S		**Sb**	**07 02 08.4**	**-0.5**
	35nm,0.6s							
KUR16	**Kurchatov Arra**	**0.63**	**352**	⇓P		**Pg**	**07 01 56.9**	**-1.0**
KUR16				⇑S		**Sg**	**07 02 06.5**	**+0.4**
KUR17	**Kurchatov Arra**	**0.64**	**350**	⇑P		**Pg**	**07 01 57.2**	**-0.9**
KUR17				⇑S		**Sg**	**07 02 07.3**	**+0.9**
KUR05	**Kurchatov Arra**	**0.64**	**354**	⇑P		**Pg**	**07 01 56.9**	**-1.3**
KUR05				⇑S		**Sg**	**07 02 07.4**	**+0.9**
KUR04	**Kurchatov Arra**	**0.66**	**354**	⇓P		**Pg**	**07 01 57.4**	**-1.1**
KUR04				⇑S		**Sg**	**07 02 07.8**	**+0.7**
KURK	**Kurchatov**	**0.71**	**359**	⇑P		**Pg**	**07 01 58.0**	**-1.5**
	1.5nm,0.6s							
KURK				⇑S		**Sg**	**07 02 08.4**	**-0.3**
	11nm,1.1s							
MAKZ	**Makanchi**	**3.89**	**144**	⇑Pn		**Pn**	**07 02 47.6**	**+0.7**
	0.1nm,0.4s							
MAKZ				⇑Pg		**Pb**	**07 02 56.0**	**+0.7**
	2.6nm,0.8s							
MAKZ				⇑Lg		Lg	07 03 45.8	
	8.8nm,0.7s							
MK31	**Makanchi Array**	**4.03**	**142**	⇑Pn		**Pn**	**07 02 48.3**	**-0.5**
	0.1nm,0.2s,baz=320,slow=10,SNR=26							
MK31				⇑Pg		**Pb**	**07 02 57.3**	**-0.3**
	1.1nm,0.5s,baz=323,slow=16,SNR=9.0							
MK31				⇑Lg		Lg	07 03 53.0	
	6.8nm,0.6s,baz=322,slow=25,SNR=22							
MKAR	**Makanchi Array**	**4.03**	**142**	Pn		**Pn**	**07 02 48.9**	**+0.2**
	0.1nm,0.3s,baz=323,slow=9.7,SNR=18							
MKAR				Pg		**Pb**	**07 02 57.9**	**+0.3**
	0.4nm,0.3s,baz=325,slow=16,SNR=12							
MKAR				Lg		Lg	07 03 49.5	
	0.8nm,0.3s,baz=325,slow=25,SNR=11							
	0.2nm,0.7s							
I46RU	**ZALESOVO INFRA**	**5.49**	**42**	I		I	07 36 40.0	
	0.1nm,1.2s,baz=220,slow=321,SNR=6.4							
ZALV	**Zalesovo Beam**	**5.49**	**42**	Pn		**Pn**	**07 03 09.8**	**+1.0**
	0.1nm,0.3s,baz=228,slow=15,SNR=2.1							
ZALV				Lg		Lg	07 04 38.5	
	0.2nm,0.3s,baz=222,slow=25,SNR=5.9							
	0.5nm,0.2s							
BVAR	**Borovoye Array**	**5.98**	**304**	Sn		**Sn**	**07 04 25.0**	**+0.4**
	0.1

RTAL Retalhuleu 0.69 1 Pb 07 19 42.2 +1.1
RTAL Sn **Sn** 07 19 54.3 +1.4
RTAL Retalhuleu 0.69 1 P **Pb** 07 19 42.2 +1.1
RTAL S **Sn** 07 19 53.6 +0.8
STG8 El Palmar, Qui 0.71 29 *i* P **Pn** 07 19 44.8 +1.8
STG8 IAML 07 20 11.4
comp=N,7μm,0.5s
ESSG Sabana Grande 1.01 57 *i* P **Pb** 07 19 46.4 -0.2
ESSG *i* S **Sb** 07 20 00.9 +1.2
ESSG IAML 07 20 11.5
comp=E,3μm,0.3s
SOKI Kika Raxquin 1.03 16 *i* P **Pb** 07 19 47.0 -0.2
SOKI IAML 07 20 20.5
comp=E,6μm,0.8s
QUEO Labor Ovalle 1.05 10 *i* P **Pb** 07 19 47.6 +0.1
QUEO *i* S **Sb** 07 20 02.0 +1.0
QUEO IAML 07 20 11.7
comp=N,10μm,0.5s
SMCA Catarina 1.08 341 *i* P **Pb** 07 19 46.4 -1.4
SMCA IAML 07 20 05.9
comp=E,3μm,0.4s
FG8 Yepocapa, Chim 1.19 69 *i* P **Pn** 07 19 46.4 -3.1
FG8 *i* S **Sb** 07 20 00.0 -4.8
THIG 1.20 333 *i* P **Pn** 07 19 48.3 -1.2
FG16 Alotenango, Sa 1.24 69 *i* P **Pn** 07 19 47.3 -2.9
FG16 *i* S **Sb** 07 20 02.1 -4.3
FG16 IAML 07 20 09.8
comp=N,32μm,0.2s
PCG5 San Vicente Pa 1.34 73 *i* P **Pn** 07 19 49.2 -2.5
PCG5 IAML 07 20 25.6
comp=E,4μm,0.6s
GCG4 OSOP 1.36 56 *i* P **Pn** 07 19 53.1 +1.2
HUEH Huehuetenango 1.50 7 P **Pn** 07 19 54.4 +0.6
HUEH Sn **Sn** 07 20 11.2 -1.7
HUEH Huehuetenango 1.50 7 P **Pn** 07 19 54.4 +0.6
HUEH S **Sg** 07 20 16.2 +0.3
HUEH Huehuetenango 1.50 7 *i* P **Pn** 07 19 54.3 +0.6
HUEH IAML 07 20 22.4
comp=N,7μm,0.5s
HUEH Huehuetenango 1.50 7 *e*P **Pn** 07 19 54.6 +0.8
FAME Alcaldia de Sa 1.64 89 P **Pn** 07 19 55.5 -0.1
FAME S **Sb** 07 20 18.9 +1.2
APG El Apazote 1.68 46 P **Pn** 07 19 57.6 +1.4
comp=N,29nm,0.3s,baz=150,slow=9.9,SNR=318
APG S **Sg** 07 20 21.8 +0.1
comp=N,119nm,0.7s,baz=185,slow=11,SNR=15
APG El Apazote 1.68 46 *i* P **Pn** 07 19 57.9 +1.7
NUBE Las Nubes 1.87 87 P **Pn** 07 19 59.1 +0.3
NUBE S **Sb** 07 20 25.3 +0.8
NUBE Las Nubes 1.87 87 *i* P **Pn** 07 19 58.3 -0.5
SLOZ Alcaldia de Sa 1.88 84 P **Pn** 07 19 59.9 +1.1
SLOZ S **Sb** 07 20 25.8 +1.3
CEVE Cerro Verde 2.02 90 P **Pn** 07 20 01.9 +0.9
CEVE S **Sb** 07 20 28.7 -0.2
CEVE Cerro Verde 2.02 90 *e*P **Pn** 07 20 01.4 +0.5
AVCB Coban 2.06 37 IAML 07 20 35.2
comp=E,10μm,0.6s
UNIC Universidad Ca 2.10 86 P **Pn** 07 20 02.2 +0.3
UNIC S **Sb** 07 20 31.1 +0.1
JAYA Jayaque - finc 2.20 94 P **Pn** 07 20 03.6 +0.3
JAYA S **Sn** 07 20 32.2 +2.0
JAYA Jayaque - finc 2.20 94 *i* P **Pn** 07 20 02.9 -0.5
JAYA IAML 07 20 34.4
comp=N,4μm,0.3s
CEDA San Andres 2.24 90 P **Pn** 07 20 03.9 0.0
CEDA S **Sb** 07 20 34.4 -0.7
CEDA San Andres 2.24 90 *e*P **Pn** 07 20 02.7 -1.1
CEDA *e*S **Sn** 07 20 32.7 +1.5
PMON Piamonte 2.33 93 P **Pn** 07 20 06.1 +1.0
PMON S **Sn** 07 20 36.4 +3.1
LALI Alcalda de L 2.34 98 P **Pn** 07 20 05.2 0.0
LALI S **Sn** 07 20 36.1 +2.6
MTO3 Montecristo 2.34 76 **Pn** 07 20 06.1 +0.7
MTO3 Montecristo 2.34 76 P **Pn** 07 20 06.7 +1.3
MTO3 S **Sn** 07 20 36.9 +3.0
BOQS Boqueron 2.36 92 *e*P **Pn** 07 20 05.5 -0.1
UEES Universidad Ev 2.40 92 P **Pn** 07 20 06.7 +0.7
UEES S **Sn** 07 20 37.7 +2.7
ZAFR2 Estanzuela, Za 2.40 72 *i* P **Pn** 07 20 06.7 +0.7
ESQI Esquipulas 2.41 72 **Pn** 07 20 06.7 +0.6
ESQI Esquipulas 2.41 72 P **Pn** 07 20 07.3 +1.0
ESQI S **Sb** 07 20 39.5 -0.3
ESQI Esquipulas 2.41 72 *e*P **Pn** 07 20 06.0 -0.2
SEMO Seminario San 2.41 93 P **Pn** 07 20 07.0 +0.8
SEMO S **Sb** 07 20 38.9 -1.1
UTEC Universidad Te 2.44 93 P **Pn** 07 20 08.2 +1.6
UTEC S **Sn** 07 20 38.9 +2.9
PANCS Alcalda de 2.46 95 P **Pn** 07 20 08.4 +1.5
IGN Direccin Gen 2.46 92 S **Sn** 07 20 39.5 +2.8
CCIG Comitan 2.48 350 **Pb** 07 20 10.3 -1.4
CCIG Comitan 2.48 350 S **Sn** 07 20 40.1 +3.0
UDBS Universidad Do 2.48 92 P **Pn** 07 20 07.6 +0.4
UDBS S **Sn** 07 20 40.0 +3.0
PAVA Las Pavas 2.69 92 P **Pn** 07 20 10.6 +0.5
LLGN La Laguna 2.70 83 P **Pn** 07 20 10.7 +0.5
LLGN S **Sn** 07 20 46.6 +4.0
COEG Centro de Oper 2.75 94 P **Pn** 07 20 11.8 +0.9
COEG S **Sn** 07 20 47.2 +3.4
COEG Centro de Oper 2.75 94 *e*P **Pn** 07 20 11.6 +0.7
TECO Alcaldia de Te 2.86 95 P **Pn** 07 20 13.0 +0.7
TECO S **Sn** 07 20 49.8 +3.5
P5NO Presa 5 de nov 2.87 86 P **Pn** 07 20 12.5 +0.1
P5NO S **Sn** 07 20 49.0 +2.6
SARH Santa Rosa de 3.00 71 *i* P **Pn** 07 20 15.4 +1.0
TGIG 3.24 335 *i* P **Pn** 07 20 18.1 +0.6
PETF Flores 3.55 30 **Pn** 07 20 23.8 +2.1
PETF Flores 3.55 30 *i* P **Pn** 07 20 24.2 +2.4
PETF IAML 07 21 24.1
comp=N,908nm,0.6s
TGUH Tegucigalpa,Un 4.31 86 **Pn** 07 20 32.5 +0.2
CMIG Matias Romero 4.46 317 P **Pn** 07 20 32.8 -1.6
comp=N,8.0nm,0.3s,baz=160,slow=12,SNR=28
CMIG S **Sn** 07 21 29.1 +3.1
comp=N,159nm,0.6s,baz=78,slow=22,SNR=8.0
CRIN San Cristobal 4.67 103 Pn **Pn** 07 20 39.2 +1.9
HERN Volcan Telica 4.90 104 Pn **Pn** 07 20 41.5 +1.1
CNGN Cerro Negro 5.05 105 Pn **Pn** 07 20 43.8 +1.3
BOAB BOACO BROADBAN 5.04 102 **Pn** 07 20 55.9 -0.1
SIUN Universidad Ur 6.74 90 **Pn** 07 21 06.1 +0.5
JUD3 Juan Diaz 3 7.04 120 Pn **Pn** 07 21 11.2 +1.3
TEIG Tepich 7.16 27 **Pn** 07 21 12.9 +1.5
JTS Las Juntas de 7.48 117 P Pn 07 21 07.2 -8.7
comp=N,0.8nm,0.3s,baz=280,slow=18,SNR=1.8
JTS S Sn 07 22 30.0 -10
comp=N,4.6nm,0.6s,baz=134,slow=21,SNR=1.4
JTS Lg Lg 07 23 09.5
comp=N,0.2nm,0.3s,baz=5.9,slow=18,SNR=6.4
comp=N,2.3nm,0.4s
JTS Las Juntas de 7.48 117 Pn **Pn** 07 21 16.2 +0.3
TLIG Tlapa 7.58 300 **Pn** 07 21 19.4 +2.1
PIRO Carate, Puerto 9.82 122 Pn **Pn** 07 21 50.1 +2.2
BRU2 Volcan 10.15 119 Pn **Pn** 07 21 50.6 -2.1
MOIG Morelia 10.79 304 Pn **Pn** 07 22 03.1 +1.7
SOR Soroa 12.15 42 Pn **Pn** 07 22 20.9 +1.1
MTDJ Mount Denham 14.30 70 Pn **Pn** 07 22 48.8 -0.6
KVTX Kingsville 14.82 338 Pn **Pn** 07 22 57.8 +1.4
833A Chaparral WMA, 16.10 335 Pn **Pn** 07 23 14.1 +1.0
HNDO Hondo 17.13 337 Pn **Pn** 07 23 26.6 +0.5
553A Crawfordville 17.61 21 **Pn** 07 23 33.1 +1.0
656A Willston 17.64 27 **Pn** 07 23 32.2 -0.3
BRDY Brady 18.62 340 P **P** 07 23 44.3 +0.1
352A Blakely 18.64 18 P **P** 07 23 44.4 0.0
SAND Sanderson 18.72 331 P **Pn** 07 23 46.5 +0.7
250A Grady 18.74 15 P **P** 07 23 44.8 -0.7
250A IAmb IAmb 07 24 19.2
comp=Z,37nm,1.4s
TXAR Lajitas Array 19.00 326 P **Pn** 07 23 50.0 +0.8
comp=Z,0.2nm,0.3s,baz=157,slow=13,SNR=28
comp=Z,3.6nm,0.8s
TXAR Lajitas Array 19.00 326 **Pn** 07 23 50.2 +1.0
TX31 Lajitas Ar. Si 19.00 326 **Pn** 07 23 50.5 +1.3
OZNA Ozona 19.10 335 P **P** 07 23 49.9 +0.4
Z41A Richland Creek 19.37 357 P **P** 07 23 52.9 +0.5
Z41A IAmb IAmb 07 23 59.1
comp=Z,11nm,0.7s
Z47A Carrollton 19.57 9 P **P** 07 23 54.5 -0.1
Z47A IAmb IAmb 07 23 57.7
comp=Z,13nm,0.6s
LRAL Lakeview Retre 19.60 12 P **P** 07 23 53.7 -1.2
FW06 Azle 19.79 345 P **P** 07 23 57.5 +0.5
FW06 IAmb IAmb 07 24 23.6
comp=Z,24nm,0.8s

ALPN Alpine 19.81 328 P **P** 07 23 58.0 +0.6
152A Waverly Hall 19.81 18 P **P** 07 23 57.2 0.0
152A IAmb IAmb 07 24 03.5
comp=Z,11nm,0.6s
PLPT Palo Pinto 19.84 343 P **P** 07 23 57.8 +0.3
PLPT IAmb IAmb 07 24 01.3
comp=Z,9.5nm,0.7s
SLBS Sierra La Lagu 19.84 302 P **Pn** 07 23 59.1 -0.2
MNHN Monahans 20.17 332 P **P** 07 24 02.7 +1.5
LPIG La Paz 20.32 303 LR LR 07 32 27.1
comp=Z,88nm,18.3s,baz=167,slow=37
PECS Pecos 20.73 329 P **P** 07 24 08.8 +1.5
ODSA Odessa 20.74 333 P **P** 07 24 08.6 +1.2
ODSA IAmb IAmb 07 24 11.1
comp=Z,14nm,0.9s
VHRN Van Horn 20.84 326 **P** 07 24 09.6 +1.0
APMT Aspermont 20.87 340 **P** 07 24 08.6 -0.1
APMT IAmb IAmb 07 24 10.1
comp=Z,9.2nm,0.8s
GOGA Godfrey 20.89 20 P **P** 07 24 09.2 +0.3
GOGA IAmb IAmb 07 24 52.6
comp=Z,10nm,1.1s
BANI BANI 21.00 75 P **P** 07 24 09.3 -1.1
Y52A Lilburn 21.12 18 P **P** 07 24 11.6 +0.2
Y52A IAmb IAmb 07 24 15.2
comp=Z,8.6nm,0.7s
POST Post 21.13 337 **P** 07 24 12.0 +0.4
POST IAmb IAmb 07 24 14.9
comp=Z,8.8nm,0.7s
FPAL Fort Paine 21.35 14 P **P** 07 24 12.5 -1.4
FPAL IAmb IAmb 07 24 35.4
comp=Z,13nm,1.4s
WHAR Wooly Hollow 21.38 359 P **P** 07 24 14.2 +0.1
WHAR IAmb IAmb 07 24 42.0
comp=Z,15nm,1.3s
SDD Santo Domingo 21.43 75 P **P** 07 24 14.6 -0.3
DKNS Dickens 21.45 339 P **P** 07 24 14.8 -0.2
DKNS IAmb IAmb 07 24 20.4
comp=Z,6.0nm,0.6s
CLNB Carlsbad 21.47 331 P **P** 07 24 16.6 +1.3
GDL2 Guadalupe Moun 21.65 330 **P** 07 24 17.9 +0.7
W35A Tecumseh 21.74 348 P **P** 07 24 17.2 -0.9
W35A IAmb IAmb 07 24 51.3
comp=Z,18nm,1.3s
MNTX Cornudas Mount 21.77 327 **P** 07 24 18.9 +0.5
SWET Sewanee 21.92 13 P **P** 07 24 19.6 -0.5
HODGE Hodges 22.05 21 P **P** 07 24 22.0 +0.7
HODGE IAmb IAmb 07 24 47.1
comp=Z,14nm,1.2s
LCAR Lake Charles 22.15 1 P **P** 07 24 20.9 -1.6
PEBM Pemiscott Bayo 22.25 4 P **P** 07 24 23.9 +0.4
MSTX Muleshoe 22.43 335 P **P** 07 24 25.3 -0.3
MSTX IAmb IAmb 07 24 26.4
comp=Z,5.9nm,0.6s
WVT Waverly 22.48 8 P **P** 07 24 25.9 0.0
CPCT Cooper Cave 22.48 15 P **P** 07 24 25.3 -0.7
CPCT IAmb IAmb 07 24 35.1
comp=Z,12nm,1.1s
BG3 Lake Jocassee 22.51 19 P **P** 07 24 25.2 -1.2
BG3 IAmb IAmb 07 24 49.8
comp=Z,8.9nm,1.0s
SMWD Samnorwood 22.54 341 P **P** 07 24 26.3 -0.4
SMWD IAmb IAmb 07 24 31.0
comp=Z,13nm,0.6s
Y57A Sumter 22.57 25 P **P** 07 24 25.8 -1.2
PARMO Parma 22.81 4 P **P** 07 24 28.9 -0.6
AMTX Amarillo 22.82 338 P **P** 07 24 29.7 0.0
TKL Tuckaleechee C 22.88 17 P **P** 07 24 29.5 -0.7
comp=Z,2.5nm,0.5s,baz=176,slow=12,SNR=5.6
TKL LR LR 07 33 39.0
comp=Z,153nm,18.6s,baz=170,slow=37
comp=Z,2.5nm,0.5s
TKL Tuckaleechee C 22.88 17 P **P** 07 24 29.5 -0.7
TKL IAmb IAmb 07 25 05.0
comp=Z,8.1nm,1.0s
T42A Van Buren 23.11 1 P **P** 07 24 30.6 -2.0
T42A IAmb IAmb 07 24 37.5
comp=Z,10nm,1.4s
V53A Saluda 23.18 19 P **P** 07 24 32.7 -0.6
V53A IAmb IAmb 07 25 04.0
comp=Z,15nm,1.3s
KMSC Kings Mountain 23.20 22 P **P** 07 24 32.6 -0.8
KMSC IAmb IAmb 07 24 54.6
comp=Z,8.8nm,0.8s
U49A Red Boiling Sp 23.21 12 P **P** 07 24 33.0 -0.6
U49A IAmb IAmb 07 24 57.6
comp=Z,9.0nm,1.2s
T47A Sharon Grove 23.43 9 P **P** 07 24 34.8 -1.0
T47A IAmb IAmb 07 24 57.9
comp=Z,5.9nm,0.6s
121A Cookes Peak, D 23.72 324 P **P** 07 24 38.2 -0.6
W57A Gilead 23.72 24 P **P** 07 24 37.5 -1.1
W57A IAmb IAmb 07 25 12.2
comp=Z,14nm,1.3s
TZTN Tazewell 23.77 16 P **P** 07 24 38.4 -0.8
TZTN IAmb IAmb 07 25 12.8
comp=Z,20nm,1.4s
319A Douglas 23.78 320 P **P** 07 24 40.3 +0.9
319A IAmb IAmb 07 24 42.4
comp=Z,7.7nm,1.0s
S39A Bolivar 23.81 357 P **P** 07 24 38.5 -0.9
S44A Carbondale 23.87 5 P **P** 07 24 39.1 -0.9
S44A IAmb IAmb 07 25 00.4
comp=Z,27nm,1.5s
V55A Taylorsville 23.87 21 P **P** 07 24 38.8 -1.3
V55A IAmb IAmb 07 25 12.0
comp=Z,16nm,1.4s
SIUC Southern Illin 23.89 5 P **P** 07 24 39.1 -1.2
SIUC IAmb IAmb 07 25 01.3
comp=Z,13nm,1.1s
CCM Cathedral Cave 24.13 1 P **P** 07 24 41.0 -1.6
CCM IAmb IAmb 07 25 03.0
comp=Z,6.6nm,1.0s
CRNM Carthage 24.24 328 P **P** 07 24 44.0 +0.3
Y22A Socorro 24.34 328 P **P** 07 24 45.0 +0.3
R40A Maddies Statio 24.37 359 P **P** 07 24 43.4 -1.3
LENM Lemitar 24.53 328 P **P** 07 24 45.7 -0.7
RTBA Rita Blanca 24.59 338 P **P** 07 24 47.6 +0.8
RTBA IAmb IAmb 07 24 48.3
comp=Z,7.2nm,0.7s
V58A Windy Hill, Pi 24.63 25 P **P** 07 24 45.3 -1.8
V58A IAmb IAmb 07 25 08.4
comp=Z,9.8nm,1.1s
WCI Wyandotte Cave 24.77 10 P **P** 07 24 48.1 -0.3
WCI IAmb IAmb 07 25 14.1
comp=Z,5.7nm,0.8s
ANMO Albuquerque 24.89 330 **P** 07 24 50.9 +1.3
ANMO Albuquerque 24.89 330 P **P** 07 24 51.0 +1.3
ANMO IAmb IAmb 07 24 52.2
comp=Z,2.0nm,0.7s
SJG San Juan 24.93 77 LR LR 07 35 38.7
comp=Z,113nm,18.5s,baz=73,slow=39
TUC Tucson 25.35 320 P **P** 07 24 54.5 +0.7
BLA Blacksburg 25.37 21 P **P** 07 24 53.1 -0.7
BLA IAmb IAmb 07 25 06.5
comp=Z,19nm,1.2s
P40A Paris 25.61 359 P **P** 07 24 56.2 +0.3
P40A IAmb IAmb 07 24 58.6
comp=Z,8.4nm,1.2s
T25A Trinidad 25.84 336 P **P** 07 25 00.4 +2.1
T59A Double "B" Far 26.29 26 P **P** 07 25 01.2 -0.8
T59A IAmb IAmb 07 25 04.3
comp=Z,8.7nm,1.0s
Q54A Coxs Mills 26.84 19 P **P** 07 25 06.0 -1.0
X16A Lo Mia Camp, P 27.19 322 P **P** 07 25 11.7 +1.2
MVCO Mesa Verde 27.69 330 P **P** 07 25 16.4 +1.4
MVCO IAmb IAmb 07 25 26.6
comp=Z,8.6nm,1.5s
PV18 Skein Mesa, Pa 28.71 331 **P** 07 25 25.6 +1.5
PV18 IAmb IAmb 07 25 25.8
comp=Z,8.4nm,1.2s
PV12 Saucer Basin, 28.72 331 P **P** 07 25 25.4 +1.2
PV12 IAmb IAmb 07 25 42.0
comp=Z,11nm,1.3s
PV04 Paradox Valley 28.83 331 P **P** 07 25 26.5 +1.4
PV04 IAmb IAmb 07 25 54.2
comp=Z,6.9nm,1.4s
U15A North Rim 29.10 324 P **P** 07 25 29.5 +1.9
SSPA Standing Stone 29.32 22 P **P** 07 25 27.6 -1.5
SSPA IAmb IAmb 07 25 50.5
comp=Z,12nm,1.3s
KNB Kanab 29.81 325 P **P** 07 25 34.8 +1.0
KNB IAmb IAmb 07 25 39.0
comp=Z,2.9nm,0.8s

V12A Nelson 30.14 320 **P** 07 25 38.2 +1.6
V12A IAmb IAmb 07 25 43.1
comp=Z,3.7nm,0.8s
M57A Sunshine Farm, 30.21 22 P **P** 07 25 35.6 -1.4
M57A IAmb IAmb 07 25 42.0
comp=Z,13nm,1.3s
CCUT Cedar City 30.50 325 P **P** 07 25 40.0 +0.1
CCUT IAmb IAmb 07 25 43.7
comp=Z,4.5nm,1.3s
P17A Butcher Ranch, 30.56 330 P **P** 07 25 40.5 +0.2
L59A Walton 31.73 24 P **P** 07 25 50.0 -0.5
L59A IAmb IAmb 07 26 31.5
comp=Z,6.9nm,1.2s
J57A Williamstown 32.42 22 P **P** 07 25 55.2 -1.4
UCCT U. Connecticut 32.60 28 P **P** 07 25 57.4 -0.7
PDAR Pinedale Array 32.70 335 P **P** 07 25 58.5 -0.7
comp=Z,0.4nm,0.6s,baz=127,slow=11,SNR=5.9
PDAR LR LR 07 41 37.4
comp=Z,34nm,18.5s,baz=114,slow=40
comp=Z,0.4nm,0.6s
BGU Big Grassy Mou 32.79 329 P **P** 07 26 01.2 +1.2
BGU IAmb IAmb 07 26 15.9
comp=Z,4.1nm,1.3s
SNOW Snow King Moun 33.76 335 P **P** 07 26 08.8 +0.3
LOHW Long Hollow 33.82 335 P **P** 07 26 09.4 +0.3
NV11 Mina Array Sit 33.90 321 P **P** 07 26 10.9 +1.3
NV11 IAmb IAmb 07 26 16.1
comp=Z,2.7nm,0.8s
NVAR Mina Array Bea 33.98 321 P **P** 07 26 12.1 +1.6
comp=Z,3.9nm,0.7s,baz=126,slow=6.4,SNR=22
comp=Z,3.9nm,0.7s
NVAR Mina Array Bea 33.98 321 P **P** 07 26 11.8 +1.3
LHV Little Huntoon 34.00 321 P **P** 07 26 11.5 +1.1
LHV IAmb IAmb 07 26 15.7
comp=Z,4.6nm,0.7s
FXWY Fox Creek 34.02 335 P **P** 07 26 11.4 +0.6
FLWY Flagg Ranch 34.25 335 P **P** 07 26 13.3 +0.6
FLWY IAmb IAmb 07 26 33.1
comp=Z,7.9nm,1.4s
RLMT Red Lodge 34.58 338 P **P** 07 26 15.7 +0.2
YNE Yellowstone No 34.75 337 P **P** 07 26 18.1 +1.0
YNE IAmb IAmb 07 26 49.2
comp=Z,3.2nm,1.0s
YMR Madison River 34.84 336 P **P** 07 26 19.1 +1.3
YMR IAmb IAmb 07 26 36.4
comp=Z,3.0nm,1.2s
YHL Hebgen Lake 35.08 336 P **P** 07 26 22.2 +2.2
YHL IAmb IAmb 07 26 23.0
comp=Z,4.7nm,1.5s
MCMT McKenzie Canyo 35.75 334 P **P** 07 26 26.7 +1.0
BOZ Bozeman (W) 35.88 336 P **P** 07 26 27.8 +1.1
G62A West of Eustis 36.08 26 P **P** 07 26 27.9 -0.4
LRM Limekiln Ridge 36.39 335 P **P** 07 26 32.3 +1.2
ULM Lac du Bonnet 36.48 355 LR LR 07 42 58.4
comp=Z,7.2nm,20.1s,baz=188,slow=38
J08A Circle Bar Ran 37.34 327 P **P** 07 26 40.2 +1.1
PLID Pearl Lake 37.36 331 P **P** 07 26 39.8 +0.4
PLID IAmb IAmb 07 26 40.4
comp=Z,2.6nm,0.9s
F10A Beach Ranch, E 38.60 331 **P** 07 26 49.7 0.0
F10A IAmb IAmb 07 26 51.6
comp=Z,5.5nm,0.9s
YBH Yreka Blue Hor 38.68 322 P **P** 07 26 51.6 +1.1
PINE Pine Mountain 38.96 326 P **P** 07 26 54.3 +1.5
BBOR Butler Butte 39.36 323 P **P** 07 26 55.9 -0.3
BBOR IAmb IAmb 07 27 06.7
comp=Z,5.9nm,1.4s
K02D Willamette Mer 39.82 322 P **P** 07 27 01.4 +1.4
KBO Bosley Butte 39.87 321 P **P** 07 27 01.1 +0.7
H04A Detroit Lake 40.22 326 **P** 07 27 04.4 +1.2
H04A IAmb IAmb 07 27 05.4
comp=Z,3.3nm,0.6s
J01E Myrtle Point 40.26 323 P **P** 07 27 04.4 +1.0
NEW Newport 40.28 334 LR LR 07 47 16.4
comp=Z,64nm,18.4s,baz=114,slow=41
C09A Chrisman Ranch 40.44 332 P **P** 07 27 06.1 +1.2
C09A IAmb IAmb 07 27 06.2
comp=Z,3.4nm,0.7s
I02E Swisshome, OR 40.78 324 P **P** 07 27 09.3 +1.5
LTY Liberty 41.17 330 P **P** 07 27 12.1 +1.1
LON Longmire 41.39 329 P **P** 07 27 13.5 +0.7
EDM Edmonton 42.89 341 P **P** 07 27 25.1 +0.2
EDM IAmb IAmb 07 27 25.2
comp=Z,4.4nm,0.7s
SCHQ Schefferville 45.28 20 P **P** 07 27 41.0 -3.1
comp=Z,4.4nm,0.6s,baz=212,slow=6.7,SNR=11
SCHQ LR LR 07 47 10.1
comp=Z,97nm,18.7s,baz=212,slow=36
comp=Z,4.4nm,0.6s
SCHQ Schefferville 45.28 20 IAmb IAmb 07 27 41.9
comp=Z,6.7nm,0.8s
SCHQ P **P** 07 27 42.5 -1.6
KUQ Kuujjuuaa 47.55 17 P **P** 07 27 59.3 -2.5
H03N2 Juan Fernandez 48.56 166 T T 08 20 07.8
baz=347
H03N1 Juan Fernandez 48.56 166 T T 08 20 08.6
baz=347
H03N3 Juan Fernandez 48.57 166 T T 08 19 59.8
baz=347
CO03 El Pedregal 48.79 156 P **P** 07 28 12.7 +0.8
BLKN Baker Lake 50.52 358 P **P** 07 28 22.6 -1.9
BLKN IAmb IAmb 07 28 31.9
comp=Z,5.7nm,1.5s
YKA Yellowknife Ar 51.26 347 P **P** 07 28 28.6 -1.5
comp=Z,0.5nm,0.6s,baz=150,slow=7.1,SNR=16
YKA PcP **PcP** 07 29 43.1 -1.9
comp=Z,0.5nm,0.7s,baz=156,slow=2.9,SNR=5.9
comp=Z,0.5nm,0.6s
YKA Yellowknife Ar 51.26 347 P **P** 07 28 28.8 -1.2
YKA PcP **PcP** 07 29 44.2 -0.7
YKAW3 Yellowknife Wh 51.32 347 P **P** 07 28 29.6 -0.9
S34M Telegraph Cree 53.03 335 P **P** 07 28 44.8 +1.5
R33M Jennings River 53.92 336 P **P** 07 28 51.4 +1.4
Q32M Nakina River 54.16 335 P **P** 07 28 52.9 +1.0
ILON Igloolik, Nuna 55.86 4 P **P** 07 29 02.8 -0.9
ILON IAmb IAmb 07 29 19.0
comp=Z,3.9nm,1.4s
N32M Quiet Lake 55.86 337 P **P** 07 29 04.5 +0.6
O30N Mendenhall 56.80 336 P **P** 07 29 11.4 +0.8
O30N IAmb IAmb 07 29 53.6
comp=Z,7.4nm,1.2s
N31M Braeburn, Yuko 57.10 337 P **P** 07 29 13.3 +0.6
N30M Aishikik Lake 57.59 336 P **P** 07 29 16.9 +0.7
M30M Minto, Yukon 58.13 337 P **P** 07 29 21.2 +1.2
M30M IAmb IAmb 07 29 26.1
comp=Z,7.0nm,1.4s
M29M Somme Creek 58.69 337 P **P** 07 29 24.5 +0.6
L29M L29M 58.94 337 P **P** 07 29 26.0 +0.4
GRNC Granite Creek 59.11 334 P **P** 07 29 28.1 +1.0
K29M Barlow Dome 59.14 338 P **P** 07 29 27.6 +0.6
K29M IAmb IAmb 07 29 28.3
comp=Z,3.9nm,1.2s
I30M Mount Dempster 59.57 340 P **P** 07 29 29.3 -0.8
I30M IAmb IAmb 07 29 37.9
comp=Z,2.8nm,1.1s
SFJD Kangerlussuaq 59.59 17 LR LR 07 55 59.5
comp=Z,59nm,18.7s,baz=192,slow=36
SFJD Kangerlussuaq 59.59 17 P **P** 07 29 29.6 -0.4
DAWY Dawson 59.95 338 P **P** 07 29 32.4 -0.1
DAWY IAmb IAmb 07 30 09.0
comp=Z,3.9nm,1.2s
MCARA McCarthy VSAT 59.97 334 P **P** 07 29 34.2 +1.5
M27K Edge Creek, AK 59.98 336 P **P** 07 29 33.5 +0.5
BCAR Beaver Creek A 60.31 336 P **P** 07 29 35.0 0.0
L27K Beaver Creek, 60.33 336 P **P** 07 29 35.1 0.0
L27K IAmb IAmb 07 29 38.9
comp=Z,2.5nm,0.9s
M26K Nabesna, AK 60.46 335 P **P** 07 29 36.9 +0.8
N25K Chitina, Valde 60.74 334 P **P** 07 29 39.1 +1.0
F30M Barrier River 60.88 342 P **P** 07 29 38.0 -0.8
F30M IAmb IAmb 07 29 38.8
comp=Z,3.5nm,1.1s
I28M Miner Creek 60.91 339 P **P** 07 29 39.9 +0.7
I28M IAmb IAmb 07 29 47.2
comp=Z,7.0nm,1.5s
MENT Mentasta 61.01 336 P **P** 07 29 40.1 +0.2
MENT IAmb IAmb 07 30 12.4
comp=Z,4.4nm,1.3s
KLU Klutina 61.26 334 P **P** 07 29 42.3 +0.7
DOT Dot Lake 61.49 336 P **P** 07 29 43.2 +0.1
DOT IAmb IAmb 07 29 43.6
comp=Z,3.1nm,0.8s
I27K Kandik River 61.59 339 P **P** 07 29 43.9 +0.2
I27K IAmb IAmb 07 30 13.6

	comp=Z,3.2nm,1.2s						
M24K	**Tolsona, Glenn**	**61.64**	**334**	P	**P**	**07 29 45.2**	**+1.1**
PAX	**Paxson**	**61.73**	**335**	P	**P**	**07 29 44.5**	**-0.3**
E29M	**Blow River**	**61.99**	**342**	P	**P**	**07 29 45.7**	**-0.5**
SCM	**Sheep Creek Mo**	**62.01**	**334**	P	**P**	**07 29 47.1**	**+0.5**
F28M	**Old Crow**	**62.13**	**341**	P	**P**	**07 29 47.6**	**+0.4**
F28M				IAmb	IAmb	07 29 51.7	
	comp=Z,2.8nm,0.9s						
J25K	**Salcha River,**	**62.46**	**337**	P	**P**	**07 29 49.8**	**+0.2**
J25K				IAmb	IAmb	07 29 50.4	
	comp=Z,2.6nm,0.6s						
SLKM	**Skilak Lake**	**62.78**	**332**	P	**P**	**07 29 51.7**	**0.0**
PRP	**Porcupine Dome**	**62.95**	**338**	P	**P**	**07 29 52.6**	**-0.3**
PRP				IAmb	IAmb	07 29 53.5	
	comp=Z,2.2nm,0.7s						
KDAK	**Kodiak Island**	**63.01**	**328**	P	**P**	**07 29 53.3**	**0.0**
IL31		**63.11**	**337**	P	**P**	**07 29 53.4**	**-0.4**
IL31				IAmb	IAmb	07 29 54.4	
	comp=Z,4.8nm,1.1s						
ILAR	**Eielson Array**	**63.11**	**337**	P	**P**	**07 29 51.0**	**-2.8**
	comp=Z,2.8nm,0.9s,baz=110,slow=6.6,SNR=21						
	comp=Z,2.8nm,0.9s						
ILAR	**Eielson Array**	**63.11**	**337**	P	**P**	**07 29 53.1**	**-0.7**
RND	**Reindeer**	**63.31**	**335**	P	**P**	**07 29 55.6**	**+0.4**
BMAR	**Burnt Mountain**	**63.55**	**340**	P	**P**	**07 29 56.5**	**-0.2**
P19K	**Oil Pt**	**63.91**	**330**	P	**P**	**07 29 59.7**	**+0.4**
BPAW	**Bear Paw Mtn.**	**64.45**	**335**	P	**P**	**07 30 02.4**	**-0.4**
PPLA	**Purkeypile**	**64.51**	**334**	P	**P**	**07 30 03.0**	**-0.3**
IMAR	**Indian Mountai**	**66.23**	**337**	P	**P**	**07 30 12.8**	**-1.3**
SUMG	**Summit**	**66.33**	**15**	P	**P**	**07 30 14.0**	**-1.2**
SUMG				IAmb	IAmb	07 30 14.8	
	comp=Z,1.6nm,0.6s						
J14K	**Nanvaranak Lak**	**69.50**	**332**	P	**P**	**07 30 35.5**	**+0.7**
J14K				IAmb	IAmb	07 30 36.2	
	comp=Z,2.9nm,0.7s						
EKA	**Eskdalemuir Ar**	**77.94**	**36**	P	P	07 31 19.9	-4.6
	comp=Z,1.7nm,0.7s,baz=281,slow=4.7,SNR=2.5						
	comp=Z,1.7nm,0.7s						
ESDC	**Sonseca Array**	**79.60**	**52**	P	P	07 31 29.2	-4.8
	comp=Z,0.2nm,0.3s,baz=253,slow=4.3,SNR=2.1						
	comp=Z,0.2nm,0.3s						
ESDC	**Sonseca Array**	**79.60**	**52**	P	**P**	**07 31 32.5**	**-1.6**
ARCES	**ARCESS Array B**	**86.21**	**18**	LR	LR	08 09 52.3	
	comp=Z,25nm,21.8s,baz=252,slow=35						
BELA	**Belgrano 2**	**96.92**	**170**	P	**P**	**07 32 58.5**	**+1.3**
NRIK	**Noril'sk**	**97.05**	**0**	LR	LR	08 22 01.8	
	comp=Z,44nm,18.2s,baz=346,slow=38						
HHC	**Hu-ho-hao-te**	**121.48**	**339**	*e*P	**PKiKP**	**07 38 21.8**	**+1.2**
PZH	**PanZhiHua**	**137.83**	**342**	PKP	**PKPdf**	**07 38 51.1**	**-0.8**
CMAR	**Chiang Mai Arr**	**146.25**	**342**	PKPbc	**PKPdf**	**07 39 04.7**	**-2.2**
	comp=Z,2.7nm,0.7s,baz=359,slow=2.8,SNR=11						
CMAR	**Chiang Mai Arr**	**146.25**	**342**		**PKPdf**	**07 39 07.5**	**+0.6**

*IDC **09** 07:41:03.5±3.0, 6°.75S×129°.25E, h126km±33km, mb3.4/3, mbtmp3.9/6, Error ellipse: s-maj=56.0km s-min=19.0km az=83.0*
*NEIC **09** 07:41:04.4±1.9, 6°.69S±0°.06×129°.51E±0°.08, h146km±4km, mb4.2/15, Error ellipse: s-maj=11.5km s-min=9.2km az=79.0*

ISC 09 07:41:04.8±0.6, **6°.72S**±0°.05×**129°.60E**±0°.08, **h165**km, **n32,** σ2**s31**/36, **mb4.0**/10, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.10**	**127**	Pn	**Pn**	**07 41 43.0**	**+0.9**
SAUI				Sn	**Sn**	**07 42 10.9**	**0.0**
FAKI	**Fak Fak**	**4.60**	**35**	Pn	**Pn**	**07 42 12.8**	**-0.5**
FAKI				Sn	**Sn**	**07 43 03.6**	**-3.3**
SIJI	**Sorong**	**6.04**	**16**	P	**Pn**	**07 42 32.5**	**+0.3**
	5.0nm,0.3s,baz=57,slow=23,SNR=8.8						
SIJI				S	**Sn**	**07 43 36.7**	**-4.2**
	6.3nm,0.3s,baz=244,slow=23,SNR=6.2						
SOEI	**Soe**	**6.08**	**240**	Pn	**Pn**	**07 42 31.5**	**-1.3**
MTN	**Manton Dam**	**6.28**	**166**		**Pn**	**07 42 34.6**	**-0.7**
KNRA	**Kununurra**	**8.94**	**185**	Pn	**Pn**	**07 43 09.6**	**-1.1**
FITZ	**Fitzroy Crossi**	**11.96**	**198**	P	**Pn**	**07 43 48.4**	**-1.8**
	1.1nm,0.3s,baz=24,slow=9.2,SNR=14						
FITZ				S	Sn	07 45 51.6	-11
	2.0nm,0.4s,baz=143,slow=20,SNR=5.8						
WRAB	**Tennant Creek**	**13.93**	**161**	Pn	**Pn**	**07 44 16.2**	**+0.9**
WRA	**Warramunga Arr**	**13.93**	**161**	P	**Pn**	**07 44 11.3**	**-4.0**
	0.7nm,0.6s,baz=334,slow=13,SNR=8.8						
WRA				S	Sn	07 46 36.0	-14
	0.8nm,0.6s,baz=343,slow=20,SNR=7.7						
WRA	**Warramunga Arr**	**13.93**	**161**	Pn	**Pn**	**07 44 13.2**	**-2.1**
COEN	**Coen**	**15.16**	**119**		**P**	**07 44 31.9**	**-0.1**
COEN				IAmb	IAmb	07 44 57.8	
	comp=Z,17nm,1.4s						
AS31	**Alice Springs**	**17.36**	**167**	P	**Pn**	**07 44 57.2**	**0.0**
ASAR	**Alice Springs**	**17.36**	**167**	P	**Pn**	**07 44 56.7**	**-0.5**
	comp=Z,2.0nm,0.6s,baz=346,slow=10,SNR=35						
ASAR				S	**S**	**07 47 59.9**	**-8.6**
	comp=Z,0.3nm,0.5s,baz=348,slow=26,SNR=4.7						
SBUM	**Sibu**	**19.59**	**297**	P	**P**	**07 45 18.9**	**-1.6**
BBJI	**Bungbulang**	**21.79**	**267**	P	**P**	**07 45 43.1**	**-0.9**
BBJI				IAmb	IAmb	07 45 55.3	
	comp=Z,17nm,1.1s						
BBOO	**Buckleboo**	**26.65**	**168**	P	**P**	**07 46 27.5**	**-0.8**
STKA	**Stephens Creek**	**27.43**	**157**	P	**P**	**07 46 39.0**	**+3.8**
	comp=Z,0.6nm,0.5s,baz=315,slow=13,SNR=1.3						
	comp=Z,0.6nm,0.5s						
STKA	**Stephens Creek**	**27.43**	**157**	P	**P**	**07 46 35.9**	**+0.7**
STKA				IAmb	IAmb	07 46 37.5	
	comp=Z,10nm,1.0s						
TOZ	**Tahuroa Road**	**51.77**	**134**	P	**P**	**07 49 56.7**	**+1.0**
MK31	**Makanchi Array**	**67.77**	**327**	P	**P**	**07 51 46.5**	**+1.8**
MKAR	**Makanchi Array**	**67.77**	**327**	P	**P**	**07 51 46.9**	**+2.2**
	comp=Z,0.6nm,0.4s,baz=120,slow=8.0,SNR=13						
	comp=Z,0.6nm,0.4s						
MKAR	**Makanchi Array**	**67.77**	**327**	P	**P**	**07 51 46.6**	**+1.9**
MAKZ	**Makanchi**	**67.95**	**327**	P	**P**	**07 51 45.6**	**-0.3**
MAKZ				IAmb	IAmb	07 52 14.6	
	comp=Z,1.3nm,0.9s						
KDJ	**Kajisay**	**68.10**	**321**	P	**P**	**07 51 48.5**	**+1.4**
KDJ				IAmb	IAmb	07 52 13.1	
	comp=Z,2.1nm,1.0s						
AMKA	**Amchitka**	**71.81**	**30**	P	**P**	**07 52 10.4**	**+1.1**
KURBB	**Kurchatov Arra**	**72.06**	**329**	P	**P**	**07 52 12.4**	**+1.6**
	comp=Z,0.3nm,0.4s,baz=135,slow=5.2,SNR=3.2						
	comp=Z,0.3nm,0.4s						
KURK	**Kurchatov**	**72.07**	**329**	P	**P**	**07 52 11.6**	**+0.8**
KURK				IAmb	IAmb	07 52 24.2	
	comp=Z,1.5nm,1.1s						
SBA	**Scott Base**	**73.67**	**172**	P	**P**	**07 52 21.0**	**+1.2**
SBA				IAmb	IAmb	07 52 21.7	
	comp=Z,14nm,1.2s						
MAW	**Mawson**	**75.07**	**201**	P	**P**	**07 52 29.7**	**+1.7**
MAW				IAmb	IAmb	07 52 48.5	
	comp=Z,4.3nm,1.1s						
B21K	**Ikpikpuk River**	**91.34**	**20**	P	**P**	**07 53 52.6**	**+1.3**
B21K				IAmb	IAmb	07 54 20.9	
	comp=Z,3.8nm,1.4s						
TIRR	**Tirgusor**	**102.65**	**314**	Pdif	**Pdif**	**07 54 43.9**	**+0.8**
JTS	**Las Juntas de**	**145.66**	**82**	PKPbc	**PKPbc**	**08 00 25.7**	**+0.5**

*PRE **09** 07:41:55.6±0.8, 27°.01S×26°.55E, h2km, ML2.6, Presumed earthquake*
*BGSI **09** 07:41:59.1±1.3, 26°.94S×26°.63E, h0km±47km, ML2.9*

ISC 09 07:41:55.6±1.0, **26°.98S**±0°.04×**26°.52E**±0°.04, **h5**km, **n20,** σ1**s56**/39, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HRAO	**HartRAO**	**1.50**	**44**	*e*P	**Pn**	**07 42 24.1**	**+0.7**
HRAO				*e*S	**Sg**	**07 42 45.2**	**+1.2**
HRAO				IAML		07 42 45.8	
	comp=Z,111nm,0.2s						
BOSA	**Boshof**	**1.98**	**214**	*e*P	**Pn**	**07 42 31.4**	**+1.5**
BOSA				*e*S	**Sn**	**07 42 55.7**	**+0.6**
BOSA				IAML		07 43 00.2	
	comp=Z,63nm,0.5s						
CRLN	**Carolina, Mapu**	**3.29**	**73**	*e*P	**Pn**	**07 42 48.6**	**+0.7**
CRLN				*e*S	**Sn**	**07 43 28.3**	**+0.8**
CRLN				IAML		07 44 02.9	
	comp=Z,9.9nm,0.2s						
LPHEP	**Lephephe**	**3.65**	**350**	*i* P	**Pn**	**07 42 54.4**	**+1.5**
LPHEP				*i* S	**Sn**	**07 43 35.8**	**-0.6**
LPHEP				IAML		07 43 55.4	
	comp=E,34nm,0.3s						
HVD	**Gariep Dam**	**3.72**	**194**	*e*P	**Pn**	**07 42 54.7**	**+0.8**
HVD				*e*S	**Sn**	**07 43 37.3**	**-0.9**
KDWAN	**Kaudwane**	**3.96**	**334**	*i* P	**Pn**	**07 42 59.5**	**+2.4**
KDWAN				*i* S	**Sn**	**07 43 43.3**	**-0.8**
KDWAN				IAML		07 44 02.9	
	comp=E,130nm,0.3s						
KSTD	**Kokstad**	**4.37**	**147**	*e*P	**Pn**	**07 43 04.3**	**+1.5**
KSTD				*e*S	**Sn**	**07 43 53.5**	**-0.7**
KSTD				IAML		07 44 12.7	
	comp=Z,23nm,0.3s						
ALKP	**Alkanpan, Nort**	**4.78**	**231**	*e*P	**Pn**	**07 43 09.8**	**+1.4**
ALKP				*e*S	**Sn**	**07 44 03.5**	**-0.8**
ALKP				IAML		07 44 32.0	
	comp=Z,24nm,0.7s						
KEIM	**Keimoes**	**5.21**	**249**	*e*P	**Pn**	**07 43 15.8**	**+1.5**
KEIM				*e*S	**Sn**	**07 44 14.4**	**-0.4**
KEIM				IAML		07 44 44.4	
	comp=Z,18nm,0.6s						
BFON	**Badsfontein, M**	**5.40**	**207**	*e*P	**Pn**	**07 43 18.5**	**+1.5**
BFON				*e*S	**Sn**	**07 44 18.2**	**-1.4**
BFON				IAML		07 44 44.7	
	comp=Z,15nm,0.4s						
GRAF	**Camdeboo Natio**	**5.57**	**198**	*e*P	**Pn**	**07 43 20.4**	**+1.2**
GRAF				*e*S	**Sn**	**07 44 22.5**	**-1.1**
GRAF				IAML		07 44 56.5	
	comp=Z,19nm,0.5s						
KGCAE	**Kacgae**	**5.68**	**315**	*i* P	**Pn**	**07 43 22.4**	**+1.6**
KGCAE				*i* S	**Sn**	**07 44 25.7**	**-0.7**
BRAK	**Brakfontein**	**5.74**	**213**	*e*P	**Pn**	**07 43 22.9**	**+1.4**
BRAK				*e*S	**Sn**	**07 44 25.7**	**-2.1**
BRAK				IAML		07 44 59.6	
	comp=Z,13nm,0.4s						
BROLN	**Tlhalogang**	**5.90**	**7**	*i* P	**Pn**	**07 43 24.5**	**+0.7**
BROLN				*i* S	**Sn**	**07 44 28.3**	**-3.6**
ARMS	**Ukamas**	**6.12**	**259**	*e*P	**Pn**	**07 43 28.8**	**+2.0**
ARMS				*e*S	**Sn**	**07 44 36.7**	**-0.5**
GRHM	**Grahamstown, E**	**6.28**	**181**	*e*P	**Pn**	**07 43 29.9**	**+1.0**
GRHM				*e*S	**Sn**	**07 44 38.5**	**-2.6**
GRHM				IAML		07 45 18.0	
	comp=Z,5.0nm,0.9s						
SOOWA	**Sowa**	**6.40**	**357**	*i* P	**Pn**	**07 43 32.4**	**+1.8**
GRAN	**Grantham**	**6.52**	**215**	*e*P	**Pn**	**07 43 33.7**	**+1.5**
GRAN				*e*S	**Sn**	**07 44 45.1**	**-1.8**
GRAN				IAML		07 45 19.3	
	comp=Z,13nm,0.4s						
FRAZ	**Fraserburg**	**6.65**	**221**	*e*P	**Pn**	**07 43 35.1**	**+1.1**
FRAZ				*e*S	**Sn**	**07 44 48.2**	**-2.1**
FRAZ				IAML		07 45 24.2	
	comp=Z,8.1nm,0.6s						
CVNA	**Calvinia**	**7.42**	**231**	*e*P	**Pn**	**07 43 45.9**	**+1.3**
CVNA				*e*S	**Sn**	**07 45 06.8**	**-2.4**
CVNA				IAML		07 45 49.4	
	comp=Z,7.6nm,0.7s						

*IDC **09** 07:46:58.1±1.0, 15°.78N×119°.31E, h0km, mb3.6/6, mbtmp3.6/7, ML4.1/1, MS3.0/3, Error ellipse: s-maj=41.8km s-min=18.6km az=67.0*
*NEIC **09** 07:47:00.0±2.3, 15°.73N±0°.04×119°.2E±0°.2, h10km±1km, mb4.2/10, Error ellipse: s-maj=25.2km s-min=3.5km az=255.0*

ISC 09 07:47:02.6±0.7, **15°.70N**±0°.09×**119°.3E**±0°.1, **h35**km, **n28,** σ1**s03**/27, **mb3.8**/12, **Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWG	**Pinlang**	**7.28**	**13**	Pn	**Pn**	**07 48 46.9**	**+0.4**
TPUB	**Ta-pu**	**7.67**	**9**	Pn	**Pn**	**07 48 52.2**	**+0.4**
YOJ	**Yonaguni jima**	**9.40**	**21**	Pn	**Pn**	**07 49 13.4**	**-2.1**
-LUWI	**Luwuk**	**16.99**	**168**	Pn	**Pn**	**07 50 56.7**	**-1.0**
CMAR	**Chiang Mai Arr**	**19.62**	**281**	P	**Pn**	**07 51 29.3**	**-0.4**
	0.2nm,0.3s,baz=96,slow=12,SNR=4.7						
CMAR				LR	LR	07 58 15.4	
	comp=Z,18nm,19.1s,baz=260,slow=34						
	0.8nm,0.4s						
CMAR	**Chiang Mai Arr**	**19.62**	**281**	P	**P**	**07 51 27.4**	**-0.8**
KSRS	**Korea Array**	**22.98**	**18**	P	**P**	**07 52 03.8**	**-0.3**
	1.2nm,0.7s,baz=200,slow=10,SNR=4.1						
	1.2nm,0.7s						
BRDH	**Bariadhala**	**26.97**	**289**	LR	LR	08 03 18.2	
	comp=Z,89nm,19.6s,baz=232,slow=36						
SONM	**Songino Array**	**33.76**	**344**	P	**P**	**07 53 40.7**	**-0.4**
	0.4nm,0.6s,baz=152,slow=8.4,SNR=2.9						
	0.4nm,0.6s						
WB0	**Warramunga Arr**	**38.26**	**157**	P	**P**	**07 54 20.3**	**+0.6**
WB0				IAmb	IAmb	07 55 03.0	
	comp=Z,7.0nm,1.2s						
WRA	**Warramunga Arr**	**38.40**	**157**	P	**P**	**07 54 21.4**	**+0.6**
	comp=Z,0.9nm,0.7s,baz=336,slow=9.5,SNR=7.9						
	comp=Z,0.9nm,0.7s						
WRA	**Warramunga Arr**	**38.40**	**157**	P	**P**	**07 54 20.1**	**-0.8**
ASAR	**Alice Springs**	**41.66**	**160**	P	**P**	**07 54 49.2**	**+1.3**
	comp=Z,1.1nm,0.7s,baz=339,slow=7.2,SNR=18						
ASAR				LR	LR	08 13 50.6	
	comp=Z,18nm,18.6s,baz=200,slow=39						
	comp=Z,1.1nm,0.7s						
ASAR	**Alice Springs**	**41.66**	**160**	P	**P**	**07 54 47.8**	**-0.1**
MKAR	**Makanchi Array**	**43.61**	**323**	P	**P**	**07 55 03.6**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=146,slow=8.0,SNR=2.7						
	comp=Z,0.2nm,0.5s						
MKAR	**Makanchi Array**	**43.61**	**323**	P	**P**	**07 55 03.1**	**-0.4**
KURBB	**Kurchatov Arra**	**47.76**	**326**	P	**P**	**07 55 35.9**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=121,slow=9.0,SNR=3.6						
	comp=Z,0.6nm,0.7s						
KURK	**Kurchatov**	**47.77**	**326**	P	**P**	**07 55 35.5**	**-0.7**
KURK				IAmb	IAmb	07 55 36.9	
	comp=Z,1.9nm,0.8s						
AB31	**Akbulak array**	**58.32**	**319**	P	**P**	**07 56 54.5**	**+0.4**
AB31				IAmb	IAmb	07 57 28.7	
	comp=Z,3.1nm,1.5s						
ABKAR	**Akbulak array**	**58.32**	**319**	P	**P**	**07 56 54.6**	**+0.5**
D19K	**Kuna River**	**72.80**	**23**	P	**P**	**07 58 27.3**	**0.0**
D19K				IAmb	IAmb	07 58 38.0	
	comp=Z,5.1nm,1.4s						
B20K	**Meade River**	**73.16**	**21**	P	**P**	**07 58 31.1**	**+1.7**
IMAR	**Indian Mountai**	**74.56**	**25**	P	**P**	**07 58 37.1**	**-0.5**
BMAR	**Burnt Mountain**	**77.98**	**23**	P	**P**	**07 58 59.1**	**+2.0**
TIRR	**Tirgusor**	**79.78**	**313**	P	**P**	**07 59 06.2**	**-1.1**
BCAR	**Beaver Creek A**	**80.14**	**27**	P	**P**	**07 59 10.6**	**+1.6**
BURAR	**Bucovina Array**	**81.26**	**317**	P	**P**	**07 59 16.1**	**+0.8**
BURAR				IAmb	IAmb	07 59 16.2	
	comp=Z,0.9nm,0.8s						
MLR	**Muntele Rosu**	**81.26**	**315**	P	**P**	**07 59 17.0**	**+1.6**
MLR				IAmb	IAmb	07 59 51.9	
	comp=Z,6.4nm,1.3s						

*FUNV **09** 07:48:35.0, 6°.80N×73°.19W, h159km, MW3.3, Presumed earthquake*
*RSNC **09** 07:48:35.6±0.0, 7°.1N±1°×7°.3W±°, h148km±2km, M2.7, mb3.1, ML2.4*

ISC 09 07:48:33.8±1.3, **6°.82N**±0°.03×**73°.12W**±0°.04, **h157**km±8km, **n34,** σ1**s15**/60, **1C, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.24**	**195**	P	**Pn**	**07 48 55.6**	**+0.2**
BARC				S	**Sn**	**07 49 10.8**	**-1.1**
BRJC	**Barrancabermej**	**0.64**	**284**	P	**Pn**	**07 48 57.4**	**+0.7**
BRJC				S	**Sn**	**07 49 14.1**	**-0.1**
PAMC	**Pamplona, Colo**	**0.66**	**39**	P	**Pn**	**07 48 58.4**	**+0.9**
PAMC				S	**Sn**	**07 49 15.6**	**+0.1**
RUSC	**La Rusia**	**0.93**	**178**	P	**Pn**	**07 48 59.5**	**+0.1**
RUSC				S	**Sn**	**07 49 17.6**	**-1.2**
RUSC	**La Rusia**	**0.93**	**178**	*e*P	**Pn**	**07 48 59.4**	**+0.1**
RUSC				*e*S	**Sn**	**07 49 17.5**	**-1.4**
CAPV	**Capacho**	**1.31**	**38**	*i*P	**Pn**	**07 49 03.6**	**+1.3**
CAPV				*e*S	**Sn**	**07 49 25.3**	**+1.1**
PTBC	**PUERTO BERRIO,**	**1.36**	**258**	P	**Pn**	**07 49 02.2**	**-0.3**
PTBC				S	**Sn**	**07 49 23.4**	**-1.1**
OCAC	**Ocana**	**1.42**	**352**	P	**Pn**	**07 49 03.7**	**+0.4**
OCAC				S	**Sn**	**07 49 25.9**	**-0.1**
SPBC	**San Pablo de B**	**1.50**	**219**	P	**Pn**	**07 49 04.5**	**+0.4**
SPBC				S	**Sn**	**07 49 26.5**	**-0.8**
CHIC	**Chingaza**	**2.26**	**196**	P	**Pn**	**07 49 13.6**	**+0.7**
CHIC				S	**Sn**	**07 49 42.7**	**-0.4**
ROSC	**El Rosal**	**2.30**	**211**	P	**Pn**	**07 49 15.2**	**+1.8**
ROSC				S	**Sn**	**07 49 46.2**	**+2.3**
UREC	**San Jos de Ur**	**2.56**	**291**	P	**Pn**	**07 49 15.6**	**-0.5**
UREC				S	**Sn**	**07 49 47.9**	**-0.9**
SOCV	**Socops**	**2.67**	**57**	*e*P	**Pn**	**07 49 18.5**	**+1.0**
SOCV				*e*S	**Sn**	**07 49 50.0**	**-1.2**
GUY2C	**Guyana, Caldas**	**2.74**	**235**	P	**Pn**	**07 49 20.8**	**+2.1**
GUY2C				S	**Sn**	**07 49 53.8**	**+0.4**
VILC	**Villavicencio,**	**2.75**	**192**	P	**Pn**	**07 49 19.1**	**+0.5**
VILC				S	**Sn**	**07 49 52.5**	**-0.8**
CBOC	**Ciudad Bolivar**	**3.03**	**252**	P	**Pn**	**07 49 24.0**	**+2.0**
CBOC				S	**Sn**	**07 49 59.3**	**0.0**
DBBC	**Dabeiba**	**3.07**	**274**	P	**Pn**	**07 49 24.2**	**+1.7**
DBBC				S	**Sn**	**07 49 59.8**	**-0.4**
SDV	**Santo Domingo**	**3.21**	**50**	P	**Pn**	**07 49 25.0**	**+0.7**
SDV				S	**Sn**	**07 50 02.8**	**-0.6**
SDV	**Santo Domingo**	**3.21**	**50**	*e*P	**Pn**	**07 49 25.1**	**+0.9**
SDV				*e*S	**Sn**	**07 50 02.5**	**-0.9**
ARGC	**Ariguani, Magd**	**3.21**	**340**	P	**Pn**	**07 49 26.1**	**+1.9**
ARGC				S	**Sn**	**07 50 03.9**	**+0.5**
PRAC	**Prado**	**3.55**	**210**	P	**Pn**	**07 49 29.3**	**+0.7**
PRAC				S	**Sn**	**07 50 11.0**	**-0.2**
APAC	**Apartado, Choc**	**3.59**	**288**	P	**Pn**	**07 49 29.8**	**+0.7**
APAC				S	**Sn**	**07 50 11.5**	**-0.4**
SJCC	**San Jacinto, C**	**3.67**	**326**	P	**Pn**	**07 49 29.7**	**-0.4**
SJCC				S	**Sn**	**07 50 12.9**	**-1.0**
SJCC	**San Jacinto, C**	**3.67**	**326**	*e*P	**Pn**	**07 49 30.0**	**-0.1**
SJCC				*e*S	**Sn**	**07 50 10.4**	**-3.5**
PLMC	**San Jos del P**	**3.68**	**239**	P	**Pn**	**07 49 31.4**	**+1.2**
PLMC				S	**Sn**	**07 50 13.6**	**-0.4**
URMC	**La Uribe, Meta**	**3.77**	**199**	P	**Pn**	**07 49 32.4**	**+1.0**
URMC				S	**Sn**	**07 50 16.5**	**+0.3**
YOTC	**Yotoco, Valle**	**4.27**	**229**	P	**Pn**	**07 49 38.9**	**+0.9**
MACC	**Macarena, Meta**	**4.70**	**189**	P	**Pn**	**07 49 42.2**	**-1.4**
MACC				S	**Sn**	**07 50 34.6**	**-3.4**
URIC	**Uribia, Colomb**	**4.97**	**13**	P	**Pn**	**07 49 46.3**	**-0.8**
TEPV	**Terepaima**	**4.99**	**51**	*e*P	**Pn**	**07 49 47.0**	**-0.3**
MAPV	**Macapo**	**5.50**	**57**	*e*P	**Pn**	**07 49 54.1**	**+0.1**
FLOC	**Florencia**	**5.79**	**206**	P	**Pn**	**07 49 58.5**	**+0.6**
BENV	**Beln**	**6.29**	**60**	*e*P	**Pn**	**07 50 05.0**	**+0.4**
CACV	**CAICARA DEL OR**	**6.57**	**83**	*e*P	Pn	07 50 15.8	+7.5

*ASRS **09** 07:58:11.3±0.6, 48°.N±3°×9°.0E±°, h8km, MLh3.7/11, Error ellipse: s-maj=6.6km s-min=4.8km az=164.3, confirmed*

ISC 09 07:58:03.6±2.0, **47°.30N**±0°.09×**90°.89E**±0°.08, **h10**km, **n16,** σ2**s15**/35, **3C-1D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUR	**Chagan-Uzun**	**3.27**	**330**	Pg	**Pn**	**07 58 55.2**	**+0.1**
CUR				Sg	**Sn**	**07 59 34.4**	**+0.4**
DGZ	**Jazzator, Alta**	**3.32**	**318**	Pg	**Pn**	**07 58 57.2**	**+1.4**
DGZ				Sg	**Sn**	**07 59 34.4**	**-1.0**
AKAR	**Aktash**	**3.71**	**326**	Pg	**Pn**	**07 59 01.8**	**+0.7**
AKAR				Pg	**Pb**	**07 59 08.8**	**-0.5**
AKAR				Sg	**Sn**	**07 59 47.2**	**+2.2**
TEL	**Teeli**	**3.75**	**353**	Pn	**Pn**	**07 58 57.1**	**-4.5**
TEL				Pg	Pb	07 59 04.0	-5.9
TEL				Sg	**Sn**	**07 59 48.0**	**+2.2**
CHBI	**Chibit, Altay**	**3.75**	**325**	Pn	**Pn**	**07 58 58.5**	**-3.1**
CHBI				Pg	**Pb**	**07 59 07.7**	**-2.3**
CHBI				Sg	**Sn**	**07 59 48.7**	**+2.8**
ULGR	**Ulagan, Altay**	**3.84**	**331**	Pg	**Pn**	**07 59 03.0**	**+0.1**
ULGR				Sg	**Sn**	**07 59 50.4**	**+2.3**
YALR	**Yailyu, Altay**	**4.95**	**336**	Pn	**Pn**	**07 59 18.9**	**+0.8**
YALR				Pg	**Pb**	**07 59 30.9**	**+0.5**
YALR				Sg	**Sb**	**08 00 27.7**	**-2.3**
ARTR	**Artybash**	**5.08**	**334**	Pn	**Pn**	**07 59 19.1**	**-0.6**
ARTR				Pg	**Pb**	**07 59 34.5**	**+2.0**
ARTR				Sg	**Sb**	**08 00 29.5**	**-4.0**
UKR	**Ust'-Kan**	**5.42**	**314**	Pn	**Pn**	**07 59 25.8**	**+1.3**
UKR				Pg	**Pb**	**07 59 38.1**	**-0.3**
UKR				Sg	**Sb**	**08 00 42.7**	**-0.7**
DJO	**Djoy, Khakassi**	**5.49**	**2**	Pg	**Pb**	**07 59 39.5**	**-0.1**
DJO				Sg	**Sb**	**08 00 47.0**	**+1.6**
ARDR	**Aradan**	**5.53**	**16**	Pg	**Pb**	**07 59 41.8**	**+1.5**
ARDR				Sg	**Sb**	**08 00 49.0**	**+2.3**
MK31	**Makanchi Array**	**5.90**	**268**	⇑Pn	**Pn**	**07 59 30.8**	**-0.2**
	0.2nm,0.3s,baz=22,slow=64,SNR=11						
MK31				⇑Pg	**Pb**	**07 59 47.7**	**+1.1**
	1.9nm,0.5s,baz=84,slow=16,SNR=6.9						
MK31				Lg	Lg	08 01 01.6	
	21nm,1.2s,baz=86,slow=28,SNR=6.5						
VEH	**Verkhnya

FORT					IAmb	IAmb	08 15 31.0		
	comp=Z,15nm,1.1s								
TARG	**Taragay, Kyrgy**	**43.56**	**337**		**P**	**P**	**08 15 16.4**	**+1.3**	
TARG					IAmb	IAmb	08 15 17.0		
	comp=Z,4.2nm,0.5s								
NRN	**Naryn**	**44.05**	**335**	P	**P**		**08 15 19.9**	**+0.9**	
NRN					IAmb	IAmb	08 15 20.4		
	comp=Z,8.0nm,1.0s								
KDJ	**Kajisay**	**44.14**	**336**	P	**P**		**08 15 21.1**	**+1.5**	
KDJ					IAmb	IAmb	08 15 21.5		
	comp=Z,7.9nm,1.1s								
DRK	**Karamyk**	**44.46**	**330**	P	**P**		**08 15 23.7**	**+1.4**	
GAR	**Garm**	**44.88**	**328**	P	**P**		**08 15 26.6**	**+1.2**	
GAR					IAmb	IAmb	08 15 27.6		
	comp=Z,13nm,1.2s								
BOOM	**Boomskoye usch**	**44.95**	**336**	P	**P**		**08 15 26.9**	**+0.9**	
SHAA	**Shahritus**	**45.08**	**325**	P	**P**		**08 15 26.1**	**-0.9**	
SHAA					IAmb	IAmb	08 15 26.5		
	comp=Z,9.2nm,0.5s								
CHGR	**Chuyangaron**	**45.26**	**327**	P	**P**		**08 15 28.0**	**-0.3**	
CHGR					IAmb	IAmb	08 15 33.5		
	comp=Z,7.1nm,1.1s								
ARSB	**Arslanbob**	**45.31**	**332**	P	**P**		**08 15 29.8**	**+1.0**	
ARSB					IAmb	IAmb	08 15 30.5		
	comp=Z,11nm,0.9s								
SONM	**Songino Array**	**45.65**	**7**	P	**P**		**08 15 31.9**	**+0.6**	
	comp=Z,1.5nm,0.5s,baz=190,slow=9.9,SNR=9.9								
	comp=Z,1.5nm,0.5s								
SONM	**Songino Array**	**45.65**	**7**	P	**P**		**08 15 31.9**	**+0.6**	
AAK	**Ala-Archa**	**45.68**	**335**		**P**		**08 15 32.5**	**+0.8**	
MKAR	**Makanchi Array**	**46.55**	**344**	P	**P**		**08 15 38.4**	**+0.2**	
	comp=Z,2.3nm,0.5s,baz=155,slow=8.7,SNR=43								
	comp=Z,2.3nm,0.5s								
MKAR	**Makanchi Array**	**46.55**	**344**		**P**		**08 15 38.3**	**+0.1**	
MAKZ	**Makanchi**	**46.65**	**344**		**P**		**08 15 39.1**	**+0.1**	
MAKZ					IAmb	IAmb	08 15 39.8		
	comp=Z,3.2nm,0.6s								
KK31	**Karatay Array**	**47.84**	**332**		**P**		**08 15 48.2**	**-0.1**	
KKAR	**Karatay Array**	**47.84**	**332**	P	**P**		**08 15 49.2**	**+0.8**	
KURBB	**Kurchatov Array**	**51.07**	**343**	P	**P**		**08 16 12.7**	**+0.1**	
	comp=Z,1.7nm,0.4s,baz=164,slow=6.9,SNR=26								
	comp=Z,1.7nm,0.4s								
KURK	**Kurchatov**	**51.13**	**343**		**P**		**08 16 12.6**	**-0.4**	
ZAA0	**Zalesovo Array**	**52.67**	**349**	P	**P**		**08 16 24.5**	**+0.1**	
ZALV	**Zalesovo Beam**	**52.67**	**349**	P	**P**		**08 16 24.3**	**-0.1**	
	comp=Z,2.0nm,0.4s,baz=179,slow=6.4,SNR=13								
	comp=Z,2.0nm,0.4s								
BVAR	**Borovoye Array**	**55.74**	**339**	P	**P**		**08 16 46.5**	**-0.1**	
	comp=Z,3.6nm,0.5s,baz=141,slow=9.1,SNR=19								
	comp=Z,3.6nm,0.5s								
BORK	**Borovoye**	**55.79**	**339**		**P**		**08 16 46.9**	**0.0**	
BORK					IAmb	IAmb	08 16 47.3		
	comp=Z,4.3nm,0.6s								
AB31	**Akbulak array**	**57.36**	**331**		**P**		**08 16 58.1**	**-0.1**	
AB31					IAmb	IAmb	08 16 58.8		
	comp=Z,3.6nm,0.8s								
ABKAR	**Akbulak array**	**57.36**	**331**	P	**P**		**08 16 57.9**	**-0.3**	
ARTI	**Arti**	**62.86**	**336**	P	**P**		**08 17 35.3**	**-0.2**	
KBZ	**Khabaz**	**64.43**	**318**	P	**P**		**08 17 45.7**	**-0.3**	
	comp=Z,1.4nm,0.7s,baz=75,slow=6.9,SNR=4.4								
	comp=Z,1.4nm,0.7s								
BRTR	**Keskin Array B**	**69.73**	**312**	P	**P**		**08 18 19.5**	**-0.3**	
	comp=Z,1.1nm,0.8s,baz=120,slow=4.7,SNR=4.7								
	comp=Z,1.1nm,0.8s								
BRTR	**Keskin Array B**	**69.73**	**312**	P	**P**		**08 18 19.0**	**-0.7**	
TIXI	**Tiksi**	**71.64**	**10**	P	**P**		**08 18 29.8**	**-0.6**	
TIXI					IAmb	IAmb	08 18 31.7		
	comp=Z,3.1nm,0.8s								
KIEV	**Kiev**	**75.48**	**322**	P	**P**		**08 18 53.2**	**-0.1**	
KIEV					IAmb	IAmb	08 19 36.9		
	comp=Z,5.1nm,1.1s								
FINES	**FINESS Array B**	**79.80**	**332**	P	**P**		**08 19 16.8**	**-0.3**	
	comp=Z,0.9nm,0.5s,baz=94,slow=7.6,SNR=5.2								
	comp=Z,0.9nm,0.5s								
FINES	**FINESS Array B**	**79.80**	**332**	P	**P**		**08 19 17.1**	**0.0**	
ARCES	**ARCESS Array B**	**82.03**	**340**	P	**P**		**08 19 28.8**	**0.0**	
	comp=Z,1.8nm,0.9s,baz=76,slow=5.1,SNR=4.3								
	comp=Z,1.8nm,0.9s								
ARCES	**ARCESS Array B**	**82.03**	**340**	P	**P**		**08 19 28.8**	**0.0**	
ARCES					IAmb	IAmb	08 19 40.7		
	comp=Z,14nm,1.4s								
MXZ	**Matakaoa Point**	**82.91**	**128**	P	P		08 19 24.9	-9.0	
RAFF	**Raffo Rosso**	**84.37**	**307**	P	**P**		**08 19 40.9**	**-0.6**	
HFS	**Hagfors**	**85.62**	**330**	P	**P**		**08 19 46.8**	**-0.3**	
	comp=Z,3.1nm,0.8s,baz=80,slow=5.1,SNR=2.1								
	comp=Z,3.1nm,0.8s								
SPB2	**Spitsbergen Ar**	**86.13**	**348**	P	**P**		**08 19 49.2**	**-0.2**	
SPITS	**Spitsbergen Ar**	**86.14**	**348**	P	**P**		**08 19 49.2**	**-0.2**	
	comp=Z,5.4nm,0.9s,baz=125,slow=7.3,SNR=5.8								
	comp=Z,5.4nm,0.9s								
QSPA	**South Pole Qui**	**92.38**	**180**	P	**P**		**08 20 20.0**	**+0.9**	
	comp=Z,1.0nm,0.7s,baz=312,slow=6.5,SNR=1.8								
	comp=Z,1.0nm,0.7s								
QSPA	**South Pole Qui**	**92.38**	**180**	P	P		08 20 11.4	-7.7	
G21K	**Allakaket**	**94.62**	**23**	P	**P**		**08 20 27.3**	**-1.9**	
G21K					IAmb	IAmb	08 20 55.9		
	comp=Z,2.9nm,1.4s								
IMAR	**Indian Mountai**	**94.68**	**23**	P	**P**		**08 20 26.9**	**-2.6**	
ILAR	**Eielson Array**	**97.80**	**23**	P	Pdif		08 20 45.1	+1.4	
	comp=Z,0.3nm,0.9s,baz=286,slow=3.3,SNR=2.8								
	comp=Z,0.3nm,0.9s								
ILAR	**Eielson Array**	**97.80**	**23**	P	**P**		**08 20 39.7**	**-4.0**	
441A	**DeRidder**	**144.96**	**19**	PKPdf	PKPbc		08 26 41.1	-4.2	

*NEIC **09** 08:15:09.9±0.9, 27.04°S±0.05°×26.66°E±0.06°, h5km±1km, mb4.6/3, Error ellipse: s-maj=9.7km s-min=7.9km az=210.0*
*PRE **09** 08:15:09.2±1.0, 27.01°S×26.44°E, h2km, ML3.1, Presumed earthquake*
*IDC **09** 08:15:10.0±1.9, 26.98°S×26.47°E, h0km, mb3.9/1, mbtmp4.0/5, ML3.7/2, Error ellipse: s-maj=29.5km s-min=11.2km az=99.0*
*BGSI **09** 08:15:10.2±1.5, 27.32°S×26.39°E, h144km±81km, ML3.3*
ISC 09 08:15:09.2±0.6, **26.96°S**±0.04×**26.41°E**±0.04, **h5km, n47, σ2s 08/74, mb4.7/3, South Africa**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HRAO	**HartRAO**	**1.56**	**47**	*eP*		**Pg**	**08 15 38.9**	**-0.2**
HRAO				*eS*		**Sg**	**08 16 00.5**	**+1.2**
HRAO				IAML			08 16 00.7	
	comp=Z,314nm,0.2s							
BOSA	**Boshof**	**1.94**	**212**	Pn		**Pn**	**08 15 44.6**	**+1.6**
	comp=Z,44nm,0.3s,baz=41,slow=15,SNR=248							
BOSA				Lg		Lg	08 16 12.1	
	comp=Z,65nm,0.3s,baz=318,slow=19,SNR=25							
BOSA	**Boshof**	**1.94**	**212**	*eP*		**Pn**	**08 15 44.0**	**+1.1**
BOSA				*eS*		**Sn**	**08 16 08.7**	**+0.9**
BOSA				IAML			08 16 12.5	
	comp=Z,168nm,0.3s							
LBTB	**Lobatse**	**2.07**	**339**	Pn		**Pb**	**08 15 48.0**	**+0.7**
	comp=Z,18nm,0.3s,baz=153,slow=17,SNR=196							
LBTB				Lg		Lg	08 16 17.1	
	comp=Z,62nm,0.3s,baz=61,slow=21,SNR=63							
	comp=Z,40nm,0.3s							
LBTB	**Lobatse**	**2.07**	**339**			**Pb**	**08 15 48.0**	**+0.7**
LBTB	**Lobatse**	**2.07**	**339**	*eP*		**Pb**	**08 15 46.6**	**-0.7**
LBTB				*eS*		**Sb**	**08 16 13.8**	**+0.4**
LBTB				IAML			08 16 17.9	
	comp=Z,254nm,0.6s							
LEPH	**Lephalale, Lim**	**3.33**	**22**	*eP*		**Pn**	**08 16 02.9**	**+0.8**
LEPH				*eS*		**Sn**	**08 16 43.7**	**+1.6**
LEPH				IAML			08 16 54.9	
	comp=Z,104nm,0.6s							
CRLN	**Carolina, Mapu**	**3.38**	**74**	*eP*		**Pn**	**08 16 03.1**	**+0.3**
CRLN				*eS*		**Sn**	**08 16 44.2**	**+0.9**
CRLN				IAML			08 16 54.5	
	comp=Z,28nm,0.4s							
LPHEP	**Lephephe**	**3.61**	**352**	*i* P		**Pn**	**08 16 08.5**	**+2.6**
LPHEP				*i* S		**Sn**	**08 16 49.6**	**+0.5**
LPHEP				IAML			08 17 07.9	
	comp=E,78nm,0.4s							
HVD	**Gariep Dam**	**3.72**	**192**	*eP*		**Pn**	**08 16 09.0**	**+1.5**
HVD				*eS*		**Sn**	**08 16 50.6**	**-1.2**
KDWAN	**Kaudwane**	**3.90**	**336**	*i* P		**Pn**	**08 16 11.7**	**+1.8**
KDWAN				*i* S		**Sn**	**08 16 56.6**	**+0.4**
KDWAN				IAML			08 17 17.2	
	comp=E,263nm,0.5s							
KSTD	**Kokstad**	**4.45**	**146**	*eP*		**Pn**	**08 16 18.3**	**+0.9**
KSTD				*eS*		**Sn**	**08 17 08.8**	**-0.9**
KSTD				IAML			08 17 26.3	
	comp=Z,42nm,0.3s							
ALKP	**Alkanpan, Nort**	**4.72**	**230**	*eP*		**Pn**	**08 16 22.4**	**+1.2**
ALKP				*eS*		**Sn**	**08 17 15.3**	**-1.0**
ALKP				IAML			08 17 40.3	
	comp=Z,54nm,0.6s							
KHWEE	**KHWEE**	**5.07**	**350**	Pn		**Pn**	**08 16 28.2**	**+2.3**
KEIM	**Keimoes**	**5.12**	**249**	*eP*		**Pn**	**08 16 28.6**	**+1.9**
KEIM				*eS*		**Sn**	**08 17 25.7**	**-0.6**
KEIM				IAML			08 17 54.3	
	comp=Z,39nm,0.3s							
BFON	**Badsfontein, M**	**5.38**	**206**	*eP*		**Pn**	**08 16 31.5**	**+1.3**
BFON				*eS*		**Sn**	**08 17 30.7**	**-1.9**
BFON				IAML			08 17 58.3	
	comp=Z,35nm,0.4s							
LKGWB	**Lokgwabe**	**5.48**	**300**	*i* P		**Pn**	**08 16 28.9**	**-2.8**
LKGWB				*i* S		Sn	08 17 27.6	-7.5
LKGWB				IAML			08 17 54.1	
	comp=N,95nm,0.3s							
GRAF	**Camdeboo Natio**	**5.56**	**197**	*eP*		**Pn**	**08 16 34.1**	**+1.4**
GRAF				*eS*		**Sn**	**08 17 35.5**	**-1.5**
GRAF				IAML			08 18 09.7	
	comp=Z,34nm,0.8s							
KGCAE	**Kacgae**	**5.59**	**316**	*i* P		**Pn**	**08 16 32.4**	**-0.8**
KGCAE				*i* S		**Sn**	**08 17 33.0**	**-4.9**
KGCAE				IAML			08 18 13.2	
	comp=E,65nm,0.4s							
KGCAE	**Kacgae**	**5.59**	**316**			**Pn**	**08 16 36.4**	**+3.2**
BRAK	**Brakfontein**	**5.70**	**212**	*eP*		**Pn**	**08 16 36.5**	**+1.8**
BRAK				*eS*		**Sn**	**08 17 39.5**	**-1.1**
BRAK				IAML			08 18 09.1	
	comp=Z,26nm,0.3s							
BROLN	**Tlhalogang**	**5.89**	**8**	*i* P		**Pn**	**08 16 37.4**	**+0.1**
BROLN				*i* S		**Sn**	**08 17 41.7**	**-3.6**
BROLN				IAML			08 18 15.8	
	comp=E,38nm,0.5s							
ARMS	**Ukamas**	**6.02**	**258**	*eP*		**Pn**	**08 16 40.4**	**+1.3**
ARMS				*eS*		**Sn**	**08 17 47.3**	**-1.1**
GRHM	**Grahamstown, E**	**6.30**	**180**	Pn		**Pn**	**08 16 42.3**	**-0.5**
GRHM	**Grahamstown, E**	**6.30**	**180**	*eP*		**Pn**	**08 16 42.7**	**-0.1**
GRHM				*eS*		**Sn**	**08 17 52.1**	**-3.0**
GRHM				IAML			08 18 36.8	
	comp=Z,8.5nm,0.5s							
SOOWA	**Sowa**	**6.37**	**358**	*i* P		**Pn**	**08 16 42.6**	**-1.2**
GRAN	**Grantham**	**6.48**	**214**	*eP*		**Pn**	**08 16 46.6**	**+1.3**
GRAN				*eS*		**Sn**	**08 17 56.8**	**-2.9**
GRAN				IAML			08 18 32.9	
	comp=Z,28nm,0.4s							
FRAZ	**Fraserburg**	**6.60**	**220**	*eP*		**Pn**	**08 16 48.1**	**+1.1**
FRAZ				*eS*		**Sn**	**08 17 59.9**	**-2.8**
FRAZ				IAML			08 18 36.2	
	comp=Z,19nm,0.5s							
MERW	**Merweville**	**7.10**	**216**	*eP*		**Pn**	**08 16 55.7**	**+1.7**
MERW				*eS*		**Sn**	**08 18 11.4**	**-3.7**
MERW				IAML			08 18 17.9	
	comp=Z,19nm,0.4s							
SUR	**Sutherland**	**7.27**	**221**	Pn		**Pn**	**08 16 58.4**	**+2.1**
	comp=Z,1.6nm,0.3s,baz=47,slow=11,SNR=37							
SUR				Sn		**Sn**	**08 18 19.0**	**-0.5**
	comp=Z,2.8nm,0.3s,baz=334,slow=23,SNR=6.5							
SUR				Lg		Lg	08 18 59.6	
	comp=Z,4.1nm,0.3s,baz=319,slow=23,SNR=8.7							
	comp=Z,4.8nm,0.2s							
SUR	**Sutherland**	**7.27**	**221**			**Pn**	**08 16 58.2**	**+1.9**
KROM	**Kromhout**	**7.33**	**192**	*eP*		**Pn**	**08 16 57.4**	**+0.5**
KROM				*eS*		**Sn**	**08 18 16.1**	**-4.3**
KROM				IAML			08 18 38.5	
	comp=Z,47nm,0.8s							
CVNA	**Calvinia**	**7.35**	**231**	*eP*		**Pn**	**08 16 59.3**	**+2.0**
CVNA				*eS*		**Sn**	**08 18 18.1**	**-3.1**
CVNA				IAML			08 19 08.1	
	comp=Z,32nm,0.4s							
KOMG	**Komaggas**	**8.36**	**248**	*eP*		**Pn**	**08 17 13.1**	**+2.0**
KOMG				*eS*		**Sn**	**08 18 43.2**	**-2.6**
KOMG				IAML			08 19 36.1	
	comp=Z,15nm,0.6s							
KSANE	**Kasane**	**9.19**	**353**	Pn		**Pn**	**08 17 24.6**	**+2.0**
ELIM	**Elim**	**9.53**	**215**	*eP*		**Pn**	**08 17 27.8**	**+0.7**
ELIM				*eS*		**Sn**	**08 19 09.4**	**-5.2**
ELIM				IAML			08 19 42.1	
	comp=Z,5.4nm,0.4s							
TSUM	**Tsumeb**	**11.20**	**312**	Pn		**Pn**	**08 17 51.6**	**+1.4**
	comp=Z,0.8nm,0.3s,baz=165,slow=14,SNR=1.7							
TSUM				Lg		Lg	08 21 05.0	
	comp=Z,0.4nm,0.3s,baz=88,slow=10,SNR=3.9							
TSUM	**Tsumeb**	**11.20**	**312**	Pn		**Pn**	**08 17 53.4**	**+3.2**
LSZ	**Lusaka**	**11.74**	**8**	Pn		**Pn**	**08 17 57.0**	**-0.6**
	comp=Z,3.6nm,0.5s,baz=196,slow=12,SNR=8.4							
LSZ				Sn		**Sn**	**08 20 02.2**	**-6.9**
	comp=Z,0.7nm,0.3s,baz=72,slow=16,SNR=2.6							
LSZ	**Lusaka**	**11.74**	**8**			**Pn**	**08 17 57.7**	**+0.1**
TORD	**Torodi Ar. Bea**	**46.54**	**326**	P		**P**	**08 23 39.0**	**+1.1**
	comp=Z,1.0nm,0.6s,baz=148,slow=6.7,SNR=6.1							
	comp=Z,1.0nm,0.6s							
TORD	**Torodi Ar. Bea**	**46.54**	**326**	P		**P**	**08 23 39.9**	**+2.0**
TORD				IAmb	IAmb		08 24 05.2	
	comp=Z,8.9nm,0.9s							
TRQA	**Tornquist**	**72.75**	**236**	P		**P**	**08 26 39.2**	**+0.5**
SENIN	**Lac Senin/Sane**	**75.00**	**346**	P		**P**	**08 26 52.3**	**+0.7**
SENIN				IAmb	IAmb		08 26 55.7	
	comp=Z,9.9nm,1.3s							
PLCA	**Paso Flores**	**77.83**	**231**	P		**P**	**08 27 07.8**	**-0.1**
PLCA				IAmb	IAmb		08 27 37.0	
	comp=Z,3.1nm,1.5s							
SKT	**Skwentna**	**144.96**	**358**	PKPbc		**PKPdf**	**08 34 47.7**	**+0.7**
NVAR	**Mina Array Bea**	**148.36**	**300**	PKPbc		**PKiKP**	**08 34 59.3**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=62,slow=4.3,SNR=5.0							

*BUC **09** 08:16:58.5±0.1, 45.01°N×25.77°E, h11km, ml3.2/64, Error ellipse: s-maj=0.8km s-min=0.7km az=19.0*
*BEO **09** 08:16:58.9±0.5, 44.98°N×25.72°E, h19km±4km, ML3.3/19*
*SOF **09** 08:16:58.8, 44.91°N±0.06°×25.37°E±0.03, h10km±12km, MD3.6/4*
ISC 09 08:16:57.7±1.0, **45.01N**±0.01°×**25.75E**±0.01, **h11**km±8km, **n103, σ0s 88/159, 76C-44D, Romania**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PLAR	**PLOIESTI**	**0.22**	**116**	*i* P		**Pg**	**08 17 03.1**	**+0.8**
PLAR				*i* S		**Sg**	**08 17 06.7**	**+1.4**
SULR		**0.49**	**133**	*i* P		**Pb**	**08 17 07.7**	**-0.6**
SULR				*i* S		**Sb**	**08 17 15.0**	**-0.3**
MLR	**Muntele Rosu**	**0.50**	**16**	*i* P		**Pb**	**08 17 07.9**	**-0.7**
MLR				*i* S		**Sb**	**08 17 15.8**	**-0.2**
MLR	**Muntele Rosu**	**0.50**	**16**	*e*Pg		**Pb**	**08 17 08.0**	**-0.7**
MLR				*e*Sg		**Sb**	**08 17 19.2**	**+3.2**
MTUR	**Matau**	**0.54**	**294**	*i* P		**Pb**	**08 17 09.5**	**+0.4**
NEHR	**Nehoiu**	**0.57**	**42**	*i* P		**Pb**	**08 17 09.1**	**-0.7**
NEHR				*i* S		**Sb**	**08 17 17.9**	**0.0**
ISR	**Istrita**	**0.57**	**79**	*i* P		**Pb**	**08 17 09.8**	**0.0**
ISR				*i* S		**Sb**	**08 17 17.3**	**-0.6**
VOIR		**0.66**	**311**	*i* P		**Pb**	**08 17 10.9**	**-0.3**
VOIR				*i* S		**Sb**	**08 17 21.9**	**+1.4**
BUC1	**Bucharest**	**0.69**	**163**	*i* P		**Pb**	**08 17 11.6**	**-0.1**
BUC1				*i* S		**Sb**	**08 17 21.4**	**+0.2**
HUMR	**Humele**	**0.73**	**229**	*i* P		**Pb**	**08 17 12.5**	**0.0**
HUMR				*i* S		**Sn**	**08 17 24.0**	**-1.1**
SGRR	**Singureni**	**0.80**	**169**	*i* P		**Pb**	**08 17 13.4**	**-0.3**
SGRR				*i* S		**Sn**	**08 17 26.0**	**-0.8**
BISRR	**Bisoca**	**0.86**	**51**	*i* P		**Pb**	**08 17 15.0**	**+0.2**
BISRR				*i* S		**Sb**	**08 17 27.2**	**+0.7**
ARR	**Arges**	**0.87**	**295**	*i* P		**Pb**	**08 17 14.9**	**0.0**
ARR				*i* S		**Sn**	**08 17 28.4**	**-0.3**
COVR	**Voineasa-Covas**	**0.90**	**21**	*i* P		**Pb**	**08 17 15.3**	**0.0**
LEHL	**Lehliu**	**0.93**	**125**	*i* P		**Pb**	**08 17 15.7**	**-0.1**
LEHL				*i* S		**Sn**	**08 17 29.7**	**-0.2**
GRER		**0.94**	**66**	*i* P		**Pn**	**08 17 17.0**	**+0.1**
COPA	**Copaceanca**	**0.95**	**204**	*i* P		**Pb**	**08 17 16.3**	**+0.1**
COPA				*i* S		**Sb**	**08 17 29.7**	**+0.9**
DOPR	**Dopca**	**0.99**	**345**	*i* P		**Pb**	**08 17 17.0**	**+0.1**
DOPR				*i* S		**Sn**	**08 17 31.5**	**-0.1**
PLOR	**Plostina**	**1.05**	**37**	*i* P		**Pn**	**08 17 18.2**	**-0.3**
PLOR				*i* S		**Sb**	**08 17 32.2**	**+0.4**
TURR	**Turia**	**1.06**	**10**	*i* P		**Pn**	**08 17 18.2**	**-0.4**
TURR				*i* S		**Sn**	**08 17 34.1**	**+0.7**
BOSR	**Bodos**	**1.07**	**357**	*i* P		**Pn**	**08 17 18.5**	**-0.2**
BOSR				*i* S		**Sn**	**08 17 34.7**	**+1.1**
OZUR		**1.09**	**1**	*i* P		**Pn**	**08 17 18.9**	**0.0**
OZUR				*i* S		**Sn**	**08 17 35.1**	**+1.1**
VRI	**Vrincioaia**	**1.10**	**38**	*i* P		**Pn**	**08 17 18.9**	**-0.2**
VRI				*i* S		**Sn**	**08 17 35.3**	**+1.0**
ODBI	**Odobesti**	**1.19**	**50**	*i* S		**Sn**	**08 17 38.0**	**+1.6**
AMRR	**Amara**	**1.19**	**109**	*i* P		**Pb**	**08 17 20.1**	**-0.2**
AMRR				*i* S		**Sn**	**08 17 36.5**	**0.0**
TNR	**Turnu Rosu**	**1.23**	**302**	*i* P		**Pn**	**08 17 21.7**	**+0.8**
TNR				*i* S		**Sn**	**08 17 38.2**	**+0.8**
PANC	**Panciu**	**1.31**	**48**	*i* S		**Sn**	**08 17 40.0**	**+0.6**
ZIMR		**1.38**	**192**	*i* P		**Pb**	**08 17 23.2**	**-0.3**
ZIMR				*i* S		**Sn**	**08 17 43.1**	**+2.0**
VLAD	**Vladila**	**1.40**	**224**	*i* P		**Pg**	**08 17 24.3**	**-0.3**
VLAD				*i* S		**Sg**	**08 17 43.2**	**+0.6**
ONER	**Baraj Valea Uz**	**1.40**	**18**	*i* P		**Pg**	**08 17 23.9**	**-0.7**
LOT	**Lotru**	**1.47**	**288**	*i* P		**Pg**	**08 17 25.1**	**-0.8**
LOT				*i* S		**Sg**	**08 17 45.6**	**+0.6**
TUDR		**1.47**	**66**	*i* P		**Pb**	**08 17 24.6**	**-0.5**
TUDR				*i* S		**Sg**	**08 17 44.1**	**-1.1**
MDB	**Medias**	**1.49**	**320**	*i* P		**Pb**	**08 17 25.1**	**-0.3**
IZVR	**Izvoarele**	**1.52**	**69**	*i* P		**Pn**	**08 17 24.8**	**0.0**
IZVR				*i* S		**Sb**	**08 17 45.2**	**+0.1**
SCHLR	**Schela**	**1.54**	**72**	*i* P		**Pn**	**08 17 25.4**	**+0.4**
SCHLR				*i* S		**Sb**	**08 17 45.7**	**0.0**
SCHLR	**Schela**	**1.54**	**72**	*i* P		**Pn**	**08 17 25.4**	**+0.4**
RAZG	**Razgrad**	**1.54**	**159**	*i* P		**Pn**	**08 17 25.3**	**+0.1**
SCHL	**Schela**	**1.55**	**71**	*i* S		**Sn**	**08 17 45.6**	**+0.4**
GHRR		**1.57**	**47**	*i* P		**Pg**	**08 17 27.0**	**-0.8**
GHRR				*i* S		**Sg**	**08 17 47.4**	**-0.7**
NEGRR	**Negrea**	**1.59**	**70**	*i* P		**Pn**	**08 17 26.0**	**+0.3**
NEGRR				*i* S		**Sb**	**08 17 47.0**	**-0.2**
TESR	**Tescani**	**1.63**	**22**	*i* P		**Pn**	**08 17 26.6**	**+0.3**
TESR				*i* S		**Sg**	**08 17 49.0**	**-1.1**
CFR	**Carcaliu**	**1.70**	**83**	*i* P		**Pn**	**08 17 27.1**	**-0.1**
CFR				*i* S		**Sn**	**08 17 49.4**	**+0.5**
ICOR	**Ion Corvin**	**1.71**	**121**	*i* P		**Pn**	**08 17 28.0**	**+0.5**
ICOR				*i* S		**Sb**	**08 17 50.9**	**+0.2**
SCTR	**Scanteiesti**	**1.72**	**66**	*i* P		**Pb**	**08 17 28.3**	**-1.0**
SCTR				*i* S		**Sb**	**08 17 50.9**	**+0.1**
VARL	**Varlezi**	**1.72**	**58**	*i* S		**Sn**	**08 17 51.8**	**+0.5**
TATR	**Tataca**	**1.73**	**69**	*i* P		**Pn**	**08 17 27.9**	**-0.2**
TATR				*i* S		**Sb**	**08 17 50.8**	**-0.2**
SZH	**Strazhitsa**	**1.75**	**175**	*i* P		**Pb**	**08 17 29.2**	**-0.6**
SZH				*i* S		**Sg**	**08 17 53.0**	**-1.0**
CVDA	**Cernavoda**	**1.76**	**112**	*i* P		**Pn**	**08 17 28.8**	**+0.6**
CVDA				*i* S		**Sb**	**08 17 52.2**	**0.0**
PLVB	**Pleven**	**1.81**	**207**	*i* P		**Pb**	**08 17 30.3**	**-0.6**
PLVB				*i* S		**Sn**	**08 17 53.0**	**+1.1**
VLDR	**Vladesti**	**1.84**	**62**	*i* P		**Pb**	**08 17 30.4**	**-1.0**
VLDR				*i* S		**Sb**	**08 17 54.1**	**-0.3**
SRE	**Strehaia**	**1.84**	**260**	*i* S		**Sb**	**08 17 55.1**	**+0.5**
TPGR	**Topolog**	**1.90**	**94**	*i* P		**Pn**	**08 17 31.0**	**+1.0**
TPGR				*i* S		**Sb**	**08 17 55.3**	**-0.8**
PVL	**Pavlikeni**	**1.93**	**193**	*i* P		**Pn**	**08 17 31.5**	**+1.0**
PVL				*i* S		**Sb**	**08 17 57.0**	**0.0**
TIRR	**Tirgusor**	**1.97**	**105**	*i* P		**Pb**	**08 17 32.3**	**-1.3**
TIRR				*i* S		**Sb**	**08 17 57.9**	**-0.3**
MFTR	**Murfatlar**	**2.08**	**113**	*i* P		**Pn**	**08 17 33.4**	**+0.9**
MFTR				*i* S		**Sb**	**08 18 00.5**	**-0.7**
ELND	**Elena**	**2.08**	**178**	*i* P		**Pn**	**08 17 33.9**	**+1.3**
ELND				*i* S		**Sn**	**08 18 00.1**	**+1.6**
VALD	**Valchedram**	**2.12**	**232**	*i* P		**Pn**	**08 17 32.4**	**-0.7**
GZR	**G

comp=E,0.1nm,0.3s,baz=350,slow=11,SNR=5.8
comp=E,1.1nm,0.7s
TXAR Lajitas Array 63.83 325 P P 08 36 06.4 +17
comp=E,0.2nm,0.7s,baz=136,slow=8.4,SNR=2.7
comp=E,0.2nm,0.7s
TORD Torodi Ar. Bea 76.91 69 P **P 08 37 11.0 +2.6**
comp=E,0.4nm,0.8s,baz=258,slow=8.1,SNR=1.2
comp=E,0.4nm,0.8s

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*RSNC **09** 08:27:08.4±1.0, 10°N±4°×7°0W±°, h0km, M2.7, ML2.5*
*FUNV **09** 08:27:13.0, 10°.26N×70°.37W, h1km, MW2.7, Presumed earthquake*
ISC 09 08:27:11.6±1.7, 10°.30N±0°.05×70°.44W±0°.04, h12km±14km, n10, σ0s95/20, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEPV	**Terepaima**	**1.27**	**105**	*eP*	**Pn**	**08 27 35.1**	**-0.1**
TEPV				*eS*	**Sn**	**08 27 52.5**	**+0.3**
SDV	**Santo Domingo**	**1.42**	**188**	P	**Pn**	**08 27 37.7**	**+0.3**
SDV				S	**Sg**	**08 27 57.7**	**+0.3**
SDV	**Santo Domingo**	**1.42**	**188**	*eP*	**Pg**	**08 27 38.4**	**-0.5**
SDV				*eS*	**Sg**	**08 27 57.8**	**+0.5**
JACV	**Jacura**	**1.76**	**64**	*eP*	**Pb**	**08 27 43.9**	**+0.1**
JACV				*eS*	**Sb**	**08 28 05.8**	**-0.2**
MAPV	**Macapo**	**2.00**	**103**	*eP*	**Pn**	**08 27 46.1**	**+0.8**
MAPV				*eS*	**Sb**	**08 28 11.9**	**-1.0**
SOCV	**Socops**	**2.05**	**192**	*eP*	**Pb**	**08 27 48.3**	**-0.5**
SOCV				*eS*	**Sb**	**08 28 13.5**	**-0.7**
URIC	**Uribia, Colomb**	**2.07**	**312**	P	**Pn**	**08 27 45.3**	**-0.8**
URIC				S	**Sb**	**08 28 14.3**	**-0.4**
BENV	**Beln**	**2.81**	**97**	*eP*	**Pn**	**08 27 58.0**	**+1.6**
BENV				*eS*	**Sn**	**08 28 29.8**	**-0.6**
TACV	**Tcata**	**3.36**	**92**	*eP*	**Pn**	**08 28 05.5**	**+1.5**
TACV				*eS*	**Sn**	**08 28 43.0**	**-0.9**
ARGC	**Ariguani, Magd**	**3.78**	**264**	P	**Pn**	**08 28 11.8**	**+2.1**
ARGC				S	**Sb**	**08 29 04.1**	**+0.1**

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*IDC **09** 08:42:20.5±1.9, 5°.27N×61°.80E, h0km, mb3.8/8, mbtmp3.8/8, MS3.5/26, Error ellipse: s-maj=51.6km s-min=26.4km az=56.0*
*NEIC **09** 08:42:22.7±2.4, 5°.20N±0°.08×61°.75E±0°.09, h10km±1km, mb4.5/15, Error ellipse: s-maj=19.6km s-min=7.6km az=309.0*
ISC 09 08:42:22.5±0.7, 5°.15N±0°.09×61°.8E±0°.1, h16km, n55, σ0s91/32, mb4.0/14, MS3.5/25, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMDM	**Hanimaadhoo**	**11.46**	**81**	Pn	**Pn**	**08 45 04.5**	**-1.2**
MSEY	**Mahe Island**	**11.61**	**213**	Pn	**Pn**	**08 45 06.8**	**-0.9**
PALK	**Pallekele**	**18.94**	**83**	LR	LR	08 52 13.2	
	comp=Z,94nm,21.1s,baz=260,slow=31						
UOSS	**Minazif**	**20.40**	**345**	P	**P**	**08 46 58.9**	**0.0**
UOSS				IAmb	IAmb	08 47 36.0	
	comp=Z,29nm,1.3s						
FURI	**Furi**	**23.22**	**281**	LR	LR	08 54 15.0	
	comp=Z,24nm,21.9s,baz=140,slow=31						
ROCAM	**Rodrigues Isla**	**24.80**	**176**	P	**P**	**08 47 44.2**	**+0.3**
MBAR	**Mbarara**	**31.52**	**260**	LR	LR	09 01 51.4	
	comp=Z,51nm,18.2s,baz=76,slow=37						
BRDH	**Bariadhala**	**33.71**	**56**	LR	LR	09 03 26.3	
	comp=Z,135nm,18.6s,baz=306,slow=38						
EIL	**Elat**	**35.16**	**317**	LR	LR	09 02 53.3	
	comp=Z,79nm,18.4s,baz=206,slow=35						
ASF	**Jabal al Asfar**	**35.55**	**322**	LR	LR	09 02 43.5	
	comp=Z,46nm,20.3s,baz=196,slow=34						
GSI	**Gunungsitoli**	**35.94**	**95**	P	**P**	**08 49 22.9**	**+0.2**
MMAI	**Mount Meron Ar**	**37.05**	**322**	LR	LR	09 03 50.4	
	comp=Z,43nm,19.2s,baz=140,slow=35						
GEVA	**Gevas**	**37.14**	**335**	P	**P**	**08 49 32.3**	**-0.5**
GEVA				IAmb	IAmb	08 49 56.6	
	comp=Z,10nm,0.5s						
GNI	**Garni**	**38.07**	**339**	LR	LR	09 06 45.2	
	comp=Z,23nm,18.6s,baz=146,slow=39						
GNI	**Garni**	**38.07**	**339**	P	**P**	**08 49 41.4**	**+0.8**
GNI				IAmb	IAmb	08 49 57.5	
	comp=Z,11nm,0.5s						
KKAR	**Karatay Array**	**38.58**	**10**	P	**P**	**08 49 42.9**	**-1.8**
CMAR	**Chiang Mai Arr**	**38.61**	**67**	P	**P**	**08 49 46.3**	**+1.0**
	comp=Z,3.6nm,0.3s,baz=280,slow=9.0,SNR=5.5						
CMAR				LR	LR	09 04 21.1	
	comp=Z,14nm,21.2s,baz=260,slow=34						
	comp=Z,3.6nm,0.3s						
CMAR	**Chiang Mai Arr**	**38.61**	**67**	P	**P**	**08 49 45.4**	**+0.1**
LSZ	**Lusaka**	**38.97**	**238**	LR	LR	09 04 42.7	
	comp=Z,80nm,18.9s,baz=112,slow=34						
AAK	**Ala-Archa**	**39.00**	**15**	LR	LR	09 06 09.9	
	comp=Z,69nm,20.7s,baz=216,slow=37						
TARG	**Taragay, Kyrgy**	**39.14**	**19**	P	**P**	**08 49 50.5**	**+0.7**
BRTR	**Keskin Array B**	**42.76**	**328**	P	**P**	**08 50 19.9**	**+0.5**
	comp=Z,1.1nm,0.9s,baz=149,slow=6.7,SNR=5.1						
BRTR				LR	LR	09 08 42.2	
	comp=Z,47nm,18.6s,baz=110,slow=37						
	comp=Z,1.1nm,0.9s						
BRTR	**Keskin Array B**	**42.76**	**328**	P	**P**	**08 50 20.2**	**+0.8**
AB31	**Akbulak array**	**43.98**	**358**	P	**P**	**08 50 29.9**	**+1.0**
ABKAR	**Akbulak array**	**43.98**	**358**	P	**P**	**08 50 29.9**	**+1.0**
MKAR	**Makanchi Array**	**45.12**	**20**	P	**P**	**08 50 37.8**	**-0.3**
	comp=Z,0.5nm,0.9s,baz=208,slow=7.8,SNR=4.2						
MKAR				LR	LR	09 09 57.8	
	comp=Z,46nm,20.0s,baz=244,slow=37						
	comp=Z,0.5nm,0.9s						
MKAR	**Makanchi Array**	**45.12**	**20**	P	**P**	**08 50 38.3**	**+0.2**
LBTB	**Lobatse**	**46.21**	**228**	LR	LR	09 07 46.1	
	comp=Z,62nm,19.6s,baz=42,slow=33						
KURBB	**Kurchatov Arra**	**47.45**	**14**	P	**P**	**08 50 55.7**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=214,slow=7.9,SNR=4.0						
	comp=Z,0.3nm,0.4s						
KURK	**Kurchatov**	**47.56**	**14**	P	**P**	**08 50 57.0**	**-0.2**
KURK				IAmb	IAmb	08 51 02.9	
	comp=Z,1.5nm,1.1s						
BVAR	**Borovoye Array**	**48.25**	**7**	LR	LR	09 11 32.7	
	comp=Z,67nm,19.8s,baz=209,slow=36						
BOSA	**Boshof**	**48.60**	**224**	LR	LR	09 10 03.6	
	comp=Z,46nm,18.7s,baz=30,slow=34						
TSUM	**Tsumeb**	**49.77**	**240**	LR	LR	09 11 02.2	
	comp=Z,62nm,18.3s,baz=153,slow=34						
ENH	**Enshi**	**51.36**	**55**	P	**P**	**08 51 26.9**	**+0.3**
ENH				IAmb	IAmb	08 51 28.0	
	comp=Z,4.3nm,0.4s						
ZAA0	**Zalesovo Array**	**52.15**	**17**	P	**P**	**08 51 31.2**	**-0.8**
ZAA0				IAmb	IAmb	08 51 50.3	
	comp=Z,2.8nm,1.1s						
ZALV	**Zalesovo Beam**	**52.15**	**17**	P	**P**	**08 51 30.6**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=206,slow=6.3,SNR=5.8						
	comp=Z,0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**52.15**	**17**	P	**P**	**08 51 31.1**	**-0.9**
BURAR	**Bucovina Array**	**52.63**	**330**	P	**P**	**08 51 36.8**	**+0.9**
SUR	**Sutherland**	**53.92**	**223**	LR	LR	09 13 14.3	
	comp=Z,84nm,18.3s,baz=345,slow=34						
SONM	**Songino Array**	**57.08**	**34**	P	**P**	**08 52 07.4**	**-0.7**
	comp=Z,0.9nm,0.9s,baz=241,slow=7.4,SNR=5.5						
SONM				LR	LR	09 16 48.2	
	comp=Z,45nm,21.0s,baz=180,slow=36						
	comp=Z,0.9nm,0.9s						
SONM	**Songino Array**	**57.08**	**34**	P	**P**	**08 52 08.6**	**+0.4**
SONM				IAmb	IAmb	08 52 09.3	
	comp=Z,2.6nm,1.4s						
TLY	**Talaya**	**57.89**	**29**	LR	LR	09 16 25.3	
	comp=Z,39nm,21.6s,baz=218,slow=35						
VRAC	**Vranov**	**58.20**	**327**	LR	LR	09 20 03.9	
	comp=Z,68nm,18.4s,baz=326,slow=39						
HFS	**Hagfors**	**65.78**	**336**	LR	LR	09 22 37.9	
	comp=Z,54nm,19.4s,baz=344,slow=37						
NRIK	**Noril'sk**	**66.32**	**10**	LR	LR	09 24 30.8	
	comp=Z,61nm,18.1s,baz=164,slow=38						
KONO	**Kongsberg**	**67.23**	**334**	P	**P**	**08 53 15.1**	**-0.8**
JNU	**Nakatsue**	**69.72**	**57**	LR	LR	09 24 36.2	
	comp=Z,20nm,20.2s,baz=335,slow=36						
KLR	**Kul'dur**	**73.09**	**40**	LR	LR	09 26 56.4	
	comp=Z,48nm,20.0s,baz=269,slow=37						
YAK	**Yakutsk**	**75.21**	**27**	LR	LR	09 28 03.3	
	comp=Z,32nm,18.5s,baz=3.0,slow=36						
WRA	**Warramunga Arr**	**75.49**	**112**	P	**P**	**08 54 07.1**	**+0.5**
	comp=Z,1.9nm,1.1s,baz=277,slow=5.4,SNR=4.8						
	comp=Z,1.9nm,1.1s						
WRA	**Warramunga Arr**	**75.49**	**112**	P	**P**	**08 54 07.7**	**+1.0**
ASAR	**Alice Springs**	**75.84**	**116**	P	**P**	**08 54 09.4**	**+0.8**
	comp=Z,1.1nm,1.0s,baz=274,slow=5.5,SNR=5.1						
	comp=Z,1.1nm,1.0s						
ASAR	**Alice Springs**	**75.84**	**116**	P	**P**	**08 54 10.6**	**+2.0**
VNDA	**Vanda**	**97.18**	**168**	P	Pdif	08 55 55.1	+1.3
VNDA				IAmb	IAmb	08 56 12.2	
	comp=Z,4.6nm,1.1s						
C23K	**Itkillik River**	**102.01**	**11**	Pdif	**Pdif**	**08 56 14.6**	**-1.0**

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*IDC **09** 08:45:45.5±0.9, 35°.50N×26°.13E, h0km, mb3.8/7, mbtmp3.7/11, ML3.7/4, MS3.1/5, Error ellipse: s-maj=27.4km s-min=9.3km az=163.0*
*ATH **09** 08:45:46.8, 35°.40N×26°.11E, h7km±3km, ML3.6/10, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*ISK **09** 08:45:46.8, 35°.35N×26°.14E, h2km, ML3.5/17*
*THE **09** 08:45:47.4, 35°N±2°×2°6E±°, h3km±1km, M3.4/19, MLh3.4/19*
*NEIC **09** 08:45:47.1±1.4, 35°.36N±0°.08×26°.11E±0°.03, h10km±1km, mb4.2/8, Error ellipse: s-maj=12.9km s-min=3.2km az=170.0*
*AFAD **09** 08:45:48.7, 35°.52N×26°.40E, h4km±5km, ML2.9*
ISC 09 08:45:47.0±0.8, 35°.38N±0°.03×26°.14E±0°.02, h12km±6km, n124, σ1s43/168, mb3.8/8, MS3.5/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIT2	**Siteia**	**0.17**	**188**	P	**Pg**	**08 45 50.7**	**-0.2**
SIT2				S	**Sg**	**08 45 53.4**	**-0.2**
ZKR	**Zakros**	**0.27**	**166**	P	**Pg**	**08 45 52.7**	**0.0**
ZKR	**Zakros**	**0.27**	**166**	Pg	**Pg**	**08 45 52.7**	**0.0**
ZKR				Sg	**Sg**	**08 45 56.7**	**+0.3**
ZKR	**Zakros**	**0.27**	**166**	P	**Pg**	**08 45 52.6**	**0.0**
ZKR				S	**Sg**	**08 45 56.3**	**-0.1**
NPS	**Neapolis**	**0.44**	**255**	P	**Pg**	**08 45 55.8**	**0.0**
NPS				S	**Sg**	**08 46 01.6**	**-0.1**
NPS	**Neapolis**	**0.44**	**255**	P	**Pg**	**08 45 55.8**	**0.0**
NPS				S	**Sg**	**08 46 02.0**	**+0.3**
KARP	**Karpathos**	**0.85**	**78**		**Pg**	**08 46 03.7**	**+0.2**
KARP				Sg	**Sg**	**08 46 15.1**	**+0.4**
KARP	**Karpathos**	**0.85**	**78**	P	**Pg**	**08 46 03.6**	**+0.2**
KARP				S	**Sg**	**08 46 15.4**	**+0.7**
KARP	**Karpathos**	**0.85**	**78**	Pg	**Pg**	**08 46 03.7**	**+0.2**
KARP				Sg	**Sb**	**08 46 16.7**	**+1.4**
KARP	**Karpathos**	**0.85**	**78**	P	**Pg**	**08 46 03.6**	**0.0**
KARP				S	**Sb**	**08 46 15.6**	**+0.3**
IACM	**Heraklion**	**0.87**	**265**	P	**Pg**	**08 46 04.3**	**+0.4**
IACM				S	**Sg**	**08 46 15.4**	**+0.1**
IDI	**Anoyia**	**1.02**	**265**	Pg	**Pg**	**08 46 05.8**	**-1.0**
	70nm,0.3s,baz=108,slow=7.5,SNR=313						
IDI				Lg	Lg	08 46 19.8	
	284nm,0.3s,baz=332,slow=23,SNR=26						
IDI				LR	LR	08 46 34.4	
	comp=Z,229nm,20.2s,baz=98,slow=47						
IDI	**Anoyia**	**1.02**	**265**		**Pg**	**08 46 06.6**	**-0.1**
IDI				Sg	**Sg**	**08 46 19.0**	**-1.1**
IDI	**Anoyia**	**1.02**	**265**	P	**Pg**	**08 46 05.8**	**-1.0**
IDI				S	**Sg**	**08 46 20.0**	**0.0**
IDI	**Anoyia**	**1.02**	**265**	Pg	**Pg**	**08 46 06.9**	**+0.2**
IDI	**Anoyia**	**1.02**	**265**	P	**Pg**	**08 46 05.7**	**-1.0**
IDI				S	**Sg**	**08 46 19.4**	**-0.7**
THERA	**Ancient Thera,**	**1.12**	**332**	P	**Pg**	**08 46 07.8**	**-0.8**
THERA				S	**Sb**	**08 46 23.0**	**0.0**
THERA	**Ancient Thera,**	**1.12**	**332**	P	**Pg**	**08 46 08.2**	**-0.5**
THERA				S	**Sg**	**08 46 22.2**	**-1.0**
THR8	**Santorini-Mono**	**1.16**	**333**	P	**Pg**	**08 46 08.3**	**-0.9**
THR9	**Santorini-Faro**	**1.16**	**327**	P	**Pb**	**08 46 09.4**	**+0.3**
SNT5	**Nea Kammeni, S**	**1.19**	**330**	P	**Pg**	**08 46 09.1**	**-0.8**
SNT5				S	**Sb**	**08 46 25.8**	**+1.0**
SNT5	**Nea Kammeni, S**	**1.19**	**330**	P	**Pg**	**08 46 08.9**	**-0.9**
SNT5				S	**Sb**	**08 46 25.6**	**+0.8**
THR3	**Thira Island,**	**1.19**	**330**	P	**Pg**	**08 46 09.4**	**-0.5**
SAP3	**Santorini-Thir**	**1.23**	**329**	P	**Pg**	**08 46 09.9**	**-0.9**
SAP3				S	**Sb**	**08 46 26.8**	**+0.6**
VAM	**Vamos**	**1.58**	**272**	P	**Pn**	**08 46 15.6**	**+0.6**
VAM				S	**Sn**	**08 46 36.4**	**+1.1**
VAM	**Vamos**	**1.58**	**272**	P	**Pn**	**08 46 15.0**	**+0.1**
CHAN	**Chania**	**1.71**	**275**	P	**Pn**	**08 46 16.6**	**-0.2**
IMMV	**Iera Moni Meta**	**1.76**	**273**	P	**Pn**	**08 46 17.7**	**-0.3**
IMMV				S	**Sb**	**08 46 41.8**	**+0.5**
IMMV	**Iera Moni Meta**	**1.76**	**273**	Pn	**Pn**	**08 46 17.9**	**+0.5**
IMMV	**Iera Moni Meta**	**1.76**	**273**	P	**Pn**	**08 46 16.7**	**-0.7**
GVD	**Gavdhos**	**1.76**	**253**	P	**Pn**	**08 46 18.9**	**+1.5**
GVD				S	**Sb**	**08 46 42.3**	**+0.8**
GVD	**Gavdhos**	**1.76**	**253**	Pn	**Pb**	**08 46 19.4**	**+0.1**
DAT	**Datca**	**1.78**	**41**	P	**Pn**	**08 46 17.8**	**0.0**
DAT				S	**Sn**	**08 46 42.1**	**+1.6**
DAT	**Datca**	**1.78**	**41**	Pn	**Pb**	**08 46 20.0**	**+0.3**
ARG	**Arkhangelos**	**1.82**	**62**	Pn	**Pn**	**08 46 18.6**	**+0.3**
ARG				Sn	**Sn**	**08 46 42.1**	**+0.9**
ARG	**Arkhangelos**	**1.82**	**62**	P	**Pn**	**08 46 19.7**	**+1.4**
ARG				S	**Sn**	**08 46 42.8**	**+1.6**
ARG	**Arkhangelos**	**1.82**	**62**	Pn	**Pn**	**08 46 19.6**	**+1.4**
ARG	**Arkhangelos**	**1.82**	**62**	P	**Pn**	**08 46 19.2**	**+1.0**
MHLO	**Agia Marina, M**	**1.92**	**313**	P	**Pn**	**08 46 20.8**	**+1.3**
MHLO				S	**Sn**	**08 46 45.2**	**+1.6**
BODT	**Bodrum**	**1.93**	**29**	P	**Pb**	**08 46 21.5**	**-0.7**
BODT				S	**Sb**	**08 46 46.1**	**-0.2**
BODT	**Bodrum**	**1.93**	**29**	Pn	**Pb**	**08 46 22.2**	**0.0**
KNDR	**Palaiochora Ch**	**2.06**	**267**	Pn	**Pb**	**08 46 23.9**	**-0.4**
KNDR	**Palaiochora Ch**	**2.06**	**267**	P	**Pn**	**08 46 22.3**	**+0.9**
TURN	**Turunc**	**2.20**	**50**	Pn	**Pb**	**08 46 25.9**	**-0.9**
TURN	**Turunc**	**2.20**	**50**	P	**Pn**	**08 46 23.7**	**+0.2**
TURN				S	**Sn**	**08 46 49.9**	**-0.8**
TURN				IAML		08 46 58.0	
	comp=N,94nm,0.5s						
TURN				IAML		08 47 04.0	
	comp=E,121nm,0.4s						
MLSB	**Milas**	**2.33**	**34**	Pn	**Pb**	**08 46 27.7**	**-1.3**
SMG	**Samos**	**2.39**	**13**	P	**Pn**	**08 46 26.0**	**-0.1**
SMG				S	**Sn**	**08 46 57.5**	**+2.1**
SMG	**Samos**	**2.39**	**13**	P	**Pn**	**08 46 25.8**	**-0.3**
YER	**Yerkesik**	**2.47**	**44**	P	**Pn**	**08 46 28.4**	**+1.3**
YER				S	**Sn**	**08 46 59.5**	**+2.3**
YER	**Yerkesik**	**2.47**	**44**	Pn	**Pn**	**08 46 29.8**	**+2.6**
GCAM	**G?zelcaml?**	**2.48**	**21**	Pn	**Pb**	**08 46 30.2**	**-1.3**
DALY	**Dalyan (Mula)**	**2.49**	**54**	Pn	**Pn**	**08 46 30.0**	**+2.6**
KTHA	**Kythira Island**	**2.65**	**290**	P	**Pn**	**08 46 29.5**	**-0.1**
FETY	**Fethiye**	**2.70**	**61**	P	**Pn**	**08 46 32.4**	**+2.1**
FETY	**Fethiye**	**2.70**	**61**	Pn	**Pn**	**08 46 33.2**	**+2.9**
FETY	**Fethiye**	**2.70**	**61**	P	**Pb**	**08 46 34.0**	**-1.3**
FETY				S	**Sn**	**08 47 06.4**	**+3.5**
SABU	**Mula-Dalaman**	**2.71**	**57**	P	**Pn**	**08 46 33.4**	**+3.0**
SABU				S	**Sn**	**08 47 04.7**	**+1.5**
SABU				IAML		08 47 16.0	
	comp=E,90nm,0.6s						
SABU				IAML		08 47 17.0	
	comp=N,160nm,0.6s						
IZZE	**Mula-Seydike**	**2.72**	**66**	P	**Pn**	**08 46 33.6**	**+3.0**
IZZE				S	**Sn**	**08 47 04.5**	**+1.0**
IZZE				IAML		08 47 23.0	
	comp=N,278nm,0.5s						
VLI	**Veliai**	**2.92**	**298**	P	**Pn**	**08 46 32.9**	**-0.3**
VLI	**Veliai**	**2.92**	**298**	P	**Pn**	**08 46 32.9**	**-0.3**
AKAS	**Kas**	**2.95**	**72**	Pn	**Pn**	**08 46 33.4**	**-0.5**
AKAS	**Kas**	**2.95**	**72**	P	**Pn**	**08 46 35.3**	**+1.5**
AKAS				S	**Sn**	**08 47 08.4**	**-0.8**
AKAS				IAML		08 47 18.0	
	comp=N,172nm,0.6s						
AKAS				IAML		08 47 43.0	
	comp=E,64nm,0.9s						
KARY	**Karystos**	**2.98**	**333**	P	**Pn**	**08 46 34.7**	**+0.5**
KARY	**Karystos**	**2.98**	**333**	P	**Pn**	**08 46 34.5**	**+0.4**
ESEN	**Aydn-Nazilli**	**3.00**	**36**	P	**Pn**	**08 46 36.9**	**+2.5**
ESEN				S	**Sn**	**08 47 12.9**	**+2.6**
ESEN				IAML		08 47 16.0	
	comp=N,25nm,0.4s						
ESEN				IAML		08 47 32.0	
	comp=E,21nm,0.6s						
TAVA	**DENIZLI_Tavas**	**3.06**	**46**	P	**Pn**	**08 46 38.1**	**+2.8**
TAVA				S	**Sn**	**08 47 15.4**	**+3.5**
TAVA				IAML		08 47 18.0	
	comp=E,71nm,0.4s						
TAVA				IAML		08 47 29.0	
	comp=N,50nm,0.9s						
BLCB	**Balcova**	**3.09**	**13**	P	**Pn**	**08 46 35.8**	**+0.2**
NAZL	**Nazilli-Aydin**	**3.11**	**33**	Pn	**Pn**	**08 46 39.3**	**+3.3**
KNIK	**Mula-Seydike**	**3.14**	**61**	P	**Pn**	**08 46 38.9**	**+2.3**
KNIK				S	**Sn**	**08 47 15.3**	**+1.2**
KNIK				IAML		08 47 20.0	
	comp=E,46nm,0.4s						
KNIK				IAML		08 47 25.0	
	comp=N,47nm,0.6s						
MET5	**Makryloggos,Me**	**3.16**	**316**	P	**Pn**	**08 46 37.2**	**+0.5**
ATHU	**Athens Univers**	**3.20**	**324**	P	**Pn**	**08 46 37.9**	**+0.7**
DION	**Dionisos Attik**	**3.22**	**327**	P	**Pn**	**08 46 39.1**	**+1.6**
DION	**Dionisos Attik**	**3.22**	**327**	P	**Pn**	**08 46 38.5**	**+1.0**
DNIZ	**Denizli-Tavas-**	**3.24**	**45**	P	**Pn**	**08 46 39.8**	**+2.0**
DNIZ				S	**Sn**	**08 47 19.4**	**+3.0**
DNIZ				IAML		08 47 26.0	
	comp=E,150nm,0.3s						
DNIZ				IAML		08 47 33.0	
	comp=N,75nm,0.4s						
ODEM	**Odemis-Izmir**	**3.28**	**28**	Pn	**Pn**	**08 46 41.5**	**+3.1**
GOLH	**Golhisar**	**3.33**	**55**	P	**Pn**	**08 46 41.5**	**+2.4**
GOLH				S	**Sn**	**08 47 22.7**	**+4.0**
GOLH				IAML		08 47 28.0	
	comp=E,85nm,0.4s						
GOLH				IAML		08 47 41.0	
	comp=N,104nm,0.6s						
ELL	**Elmali**	**3.35**	**65**	Pn	**Pn**	**08 46 39.3**	**0.0**
SULTU	**Buldan**	**3.41**	**38**	P	**Pn**	**08 46 40.9**	**+0.8**
SULTU				S	**Sn**	**08 47 21.4**	**+0.9**
SULTU				IAML		08 47 26.0	
	comp=E,48nm,0.7s						
AKUM	**Antalya-Kumluc**	**3.54**	**73**	P	**Pn**	**08 46 43.4**	**+1.5**
AKUM				S	**Sn**	**08 47 24.8**	**+1.0**
AKUM				IAML		08 47 33.0	
	comp=E,36nm,0.6s						
AKUM				IAML		08 47 34.0	
	comp=N,30nm,0.7s						
INCE	**Denizli-Bozkur**	**3.62**	**49**	P	**Pn**	**08 46 44.1**	**+1.1**
INCE				S	**Sn**	**08 47 26.7**	**+1.0**
INCE				IAML		08 47 35.0	
	comp=N,45nm,0.4s						
INCE				IAML		08 47 43.0	
	comp=E,38nm,0.6s						
KYMI	**Kymi, Euboea I**	**3.63**	**334**	P	**Pn**	**08 46 43.3**	**+0.2**
VIL2	**Platees**	**3.65**	**322**	P	**Pn**	**08 46 43.2**	**-0.1**
MANT	**Manisa**	**3.66**	**31**		**Pn**	**08 46 44.7**	**+1.0**
MANT	**Manisa**	**3.66**	**31**	P	**Pn**	**08 46 44.7**	**+1.0**
MANT				S	**Sn**	**08 47 25.9**	**-1.1**
MANT				IAML		08 48 05.0	
	comp=N,5.6nm,0.6s						
MANT				IAML		08 48 24.0	
	comp=E,7.4nm,1.2s						
LTK	**Loutraki**	**3.67**	**317**	P	**Pn**	**08 46 45.1**	**+1.5**
KORT	**Korkueli**	**3.77**	**63**	P	**Pn**	**08 46 47.8**	**+2.6**
KORT				S	**Sn**	**08 47 31.4**	**+1.7**
KORT				IAML		08 47 37.0	
	comp=N,29nm,0.6s						
KORT				IAML		08 47 54.0	
	comp=E,44nm,0.5s						
ITM	**Ithomi**	**3.84**	**299**	Pn	**Pn**	**08 46 46.4**	**+0.3**
ITM	**Ithomi**	**3.84**	**299**	P	**Pn**	**08 46 48.1**	**+2.0**
KLV	**Kalavryta, Ach**	**4.16**	**311**	P	**Pn**	**08 46 52.0**	**+1.5**
ANX	**Ano Chora**	**4.66**	**315**	P	**Pn**	**08 46 59.0**	**+1.7**
ALN	**Alexandroupoli**	**5.51**	**359**	Pn	**Pn**	**08 47 07.4**	**-1.5**
KEK	**Kerkira**	**6.64**	**313**	Pn	**Pn**	**08 47 24.6**	**+0.2**
BRTR	**Keskin Array B**	**7.37**	**52**	Pn	**Pn**	**08 47 37.2**	**+2.6**
	0.2nm,0.3s,baz=229,slow=15,SNR=4.1						
BRTR				Sn	**Sn**	**08 48 55.9**	**-2.4**
	baz=340,slow=14						
	0.7nm,0.6s						
MMAI	**Mount Meron Ar**	**8.03**	**104**	Pn	**Pn**	**08 47 45.5**	**+1.8**
	2.0nm,0.3s,baz=283,slow=13,SNR=2.3						
MMAI				Sn	**Sn**	**08 49 10.3**	**-4.2**
	1.7nm,0.3s,baz=319,slow=22,SNR=1.5						
MMAI				LR	LR	08 52 41.0	
	comp=Z,33nm,18.1s,baz=266,slow=52						
	0.9nm,0.3s						
TIP	**Timpagrande**	**8.38**	**300**	Pn	**Pn**	**08 47 48.6**	**+0.2**
TIRR	**Tirgusor**	**9.23**	**10**	Pn	**Pn**	**08 48 01.0**	**+1.0**
EIL	**Elat**	**9.37**	**125**	Pn	**Pn**	**08 48 02.1**	**+0.2**
	0.9nm,0.3s,baz=316,slow=4.3,SNR=6.5						
EIL				Sn	**Sn**	**08 49 41.9**	**-5.4**
	0.8nm,0.3s,baz=304,slow=22,SNR=2.2						
EIL				LR	LR	08 53 11.6	
	comp=Z,28nm,18.2s,baz=210,slow=47						
	2.3nm,0.3s						
CUC	**Castrocuco**	**9.38**	**302**	Pn	**Pn**	**08 48 01.9**	**-0.3**
ACER	**Acerenza**	**9.68**	**307**	Pn	**Pn**	**08 48 05.8**	**-0.3**
RAFF	**Raffo Rosso**	**9.68**	**284**	Pn	**Pn**	**08 48 05.9**	**-0.3**
SGRT	**San Giovanni R**	**10.32**	**311**	Pn	**Pn**	**08 48 14.3**	**-0.8**
NRCA	**Norcia**	**12.55**	**310**	Pn	**Pn**	**08 48 46.6**	**+1.2**
KBZ	**Khabaz**	**15.37**	**52**	Pn	**P**	**08 49 28.7**	**+0.4**
	0.1nm,0.3s,baz=228,slow=11,SNR=3.8						
AKASG	**Malin Array Be**	**15.48**

ESQI	**Esquipulas**	**3.32**	**82**	P	**Pn**	**09 10 59.7**	**+0.4**
ESQI				S	**Sn**	**09 11 36.7**	**-1.3**
PMON	**Piamonte**	**3.35**	**97**	P	**Pn**	**09 11 00.5**	**+0.8**
PMON				S	**Sn**	**09 11 36.7**	**-2.1**
LALI	**Alcalda de L**	**3.38**	**100**	P	**Pn**	**09 10 59.3**	**-0.7**
UEES	**Universidad Ev**	**3.42**	**96**	P	**Pn**	**09 11 00.9**	**+0.3**
SEMO	**Seminario San**	**3.44**	**97**	P	**Pn**	**09 11 00.7**	**-0.2**
CMIG	**Matias Romero**	**3.60**	**325**	Pn	**Pn**	**09 11 01.9**	**-1.1**
	0.8nm,0.3s,baz=151,slow=12,SNR=17						
CMIG				Sn	**Sn**	**09 11 42.5**	**-2.1**
	3.6nm,0.3s,baz=267,slow=8.1,SNR=11						
	2.1nm,0.3s						
TXAR	**Lajitas Array**	**18.20**	**328**	P	**P**	**09 14 20.9**	**+0.9**
	baz=152,slow=8.9,SNR=4.9						
	0.4nm,0.9s						
NVAR	**Mina Array Bea**	**33.12**	**322**	P	**P**	**09 16 43.9**	**+0.7**
	0.5nm,0.8s,baz=105,slow=8.4,SNR=4.0						
	0.5nm,0.8s						
SCHQ	**Schefferville**	**45.35**	**21**	P	**P**	**09 18 24.8**	**0.0**
	1.1nm,0.3s,baz=235,slow=16,SNR=9.6						
	1.1nm,0.3s						
YKA	**Yellowknife Ar**	**50.74**	**347**	P	**P**	**09 19 06.2**	**-0.1**
	1.0nm,0.8s,baz=154,slow=6.9,SNR=14						
	1.0nm,0.8s						
ILAR	**Eielson Array**	**62.44**	**337**	P	**P**	**09 20 31.2**	**+1.8**
	0.6nm,0.8s,baz=114,slow=7.3,SNR=5.9						
	0.6nm,0.8s						

HEL 09 09:13:24.8±0.2, 63°20N×25°48E, h0km, ML1.1, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUF	**Sumiainen**	**0.57**	**147**	PG	Pg	09 13 35.2	-0.6
SUF				SG	Sg	09 13 41.7	-1.4
SUF				smax	smax	09 13 43.0	
	comp=Z,1.8nm,0.2s						
NIF	**Nilsia**	**1.07**	**79**	PG	Pg	09 13 43.9	-1.4
NIF				smax	smax	09 13 57.5	
	comp=Z,1.5nm,0.2s						
NIF				SB	Sg	09 13 58.8	-0.4
KEF	**Keuruu**	**1.07**	**195**	PG	Pg	09 13 44.3	-1.1
KEF				smax	smax	09 13 57.5	
	comp=Z,1.2nm,0.2s						
KEF				SG	Sg	09 13 58.5	-0.7
OUF	**Merijarvi**	**1.22**	**345**	PN	Pg	09 13 47.1	-1.0
OUF				smax	smax	09 14 01.6	
	comp=Z,0.8nm,0.2s						
OUF				SN	Sn	09 14 08.0	+1.8
VAF	**Ylistaro**	**1.28**	**264**	PG	Pg	09 13 48.0	-1.4
	baz=86						
VAF				smax	smax	09 14 03.7	
	comp=Z,1.6nm,0.2s						
VAF				SB	Sg	09 14 04.8	-1.2
OBF4	**Vikkela, Lumij**	**1.63**	**354**	PG	Pn	09 13 52.8	-1.9
OBF4				smax	smax	09 14 13.5	
	comp=Z,1.5nm,0.2s						
OBF4				SN	Sn	09 14 16.5	+0.1
FIA0	**FINESS Array S**	**1.78**	**171**	PG	Pn	09 13 56.8	0.0
	baz=350						
FIA0				smax	smax	09 14 17.9	
	comp=Z,1.8nm,0.2s						
FIA0				SN	Sb	09 14 21.6	+0.4
OUL	**Oulu**	**1.90**	**5**	PG	Pb	09 13 59.7	-0.6
OUL				SG	Sb	09 14 24.7	+0.1
KPF	**Kankaanpaa**	**2.09**	**231**	PG	Pn	09 14 01.8	+0.7
	baz=45						
KPF				smax	smax	09 14 26.7	
	comp=Z,1.3nm,0.2s						
KPF				SG	Sb	09 14 29.5	-0.5
RMF	**Romuvaara**	**2.23**	**61**	smax	smax	09 14 30.9	
	comp=Z,0.7nm,0.2s						
RMF				SG	Sb	09 14 33.1	-1.0
UMAU	**Umeaa**	**2.26**	**290**	SG	Sn	09 14 33.2	+1.4
BURU	**Burvik**	**2.29**	**309**	SG	Sb	09 14 35.4	-0.2
RUF	**Ruokolahti**	**2.41**	**136**	smax	smax	09 14 36.1	
	comp=Z,0.9nm,0.2s						
RUF				SG	Sb	09 14 38.7	-0.4
JOF	**Joensuu**	**2.67**	**93**	SG	Sb	09 14 45.8	-0.9
AAL	**Aland**	**4.00**	**223**	PG	Pb	09 14 35.9	-0.2
AAL				SB	Sb	09 15 20.1	-4.8

*IDC **09** 09:24:03.7±1.0, 5°31N×61°91E, h0km, mb3.8/12, mbtmp3.8/12, MS3.6/26, Error ellipse: s-maj=27.1km s-min=21.4km az=16.0*

ISC 09 09:24:05.2±1.1, 5°3N±0°2×61°9E±0°2, h10km, n33, σ0s57/12, mb3.9/11, MS3.5/25, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**18.77**	**83**	LR	LR	09 33 56.2	
	comp=Z,204nm,20.6s,baz=262,slow=32						
FURI	**Furi**	**23.33**	**280**	LR	LR	09 38 11.4	
	comp=Z,37nm,18.1s,baz=100,slow=36						
KMBO	**Kilima Mbogo**	**25.45**	**256**	LR	LR	09 37 38.3	
	comp=Z,78nm,20.5s,baz=98,slow=32						
MBAR	**Mbarara**	**31.69**	**260**	LR	LR	09 43 05.3	
	comp=Z,84nm,18.0s,baz=119,slow=36						
BRDH	**Bariadhala**	**33.49**	**56**	LR	LR	09 44 19.9	
	comp=Z,254nm,19.6s,baz=264,slow=36						
EIL	**Elat**	**35.15**	**317**	LR	LR	09 44 36.6	
	comp=Z,90nm,18.3s,baz=92,slow=35						
ASF	**Jabal al Asfar**	**35.52**	**322**	LR	LR	09 44 26.2	
	comp=Z,53nm,19.4s,baz=136,slow=34						
MMAI	**Mount Meron Ar**	**37.01**	**321**	LR	LR	09 45 01.3	
	comp=Z,58nm,20.2s,baz=131,slow=34						
GNI	**Garni**	**37.98**	**338**	LR	LR	09 48 13.5	
	comp=Z,31nm,18.3s,baz=206,slow=38						
CMAR	**Chiang Mai Arr**	**38.41**	**67**	LR	LR	09 45 53.8	
	comp=Z,366nm,21.5s,baz=255,slow=34						
AAK	**Ala-Archa**	**38.81**	**15**	LR	LR	09 49 17.7	
	comp=Z,79nm,18.4s,baz=224,slow=39						
LSZ	**Lusaka**	**39.18**	**238**	LR	LR	09 46 07.6	
	comp=Z,156nm,18.6s,baz=94,slow=34						
KBZ	**Khabaz**	**41.77**	**339**	LR	LR	09 50 22.0	
	comp=Z,50nm,18.2s,baz=170,slow=38						
BRTR	**Keskin Array B**	**42.71**	**327**	P	**P**	**09 32 03.3**	**+0.6**
	2.0nm,1.0s,baz=162,slow=10.0,SNR=8.7						
BRTR				LR	LR	09 50 14.5	
	comp=Z,56nm,18.2s,baz=126,slow=37						
	2.0nm,1.0s						
MKAR	**Makanchi Array**	**44.91**	**20**	P	**P**	**09 32 20.6**	**+0.4**
	1.4nm,1.0s,baz=210,slow=8.3,SNR=7.3						
MKAR				LR	LR	09 52 05.2	
	comp=Z,61nm,19.1s,baz=176,slow=37						
	1.4nm,1.0s						
AKTO	**Aktyubinsk**	**45.09**	**356**	LR	LR	09 52 11.2	
	comp=Z,82nm,18.2s,baz=18,slow=37						
LBTB	**Lobatse**	**46.43**	**228**	LR	LR	09 48 12.5	
	comp=Z,124nm,21.4s,baz=47,slow=31						
KURBB	**Kurchatov Arra**	**47.26**	**14**	P	**P**	**09 32 39.0**	**+0.4**
	0.5nm,0.9s,baz=210,slow=8.3,SNR=4.2						
KURBB				LR	LR	09 53 33.2	
	comp=Z,73nm,19.0s,baz=182,slow=37						
	0.5nm,0.9s						
BVAR	**Borovoye Array**	**48.07**	**7**	P	**P**	**09 32 45.0**	**+0.1**
	0.3nm,0.5s,baz=153,slow=9.7,SNR=2.2						
BVAR				LR	LR	09 53 27.9	
	comp=Z,77nm,21.0s,baz=176,slow=37						
	0.3nm,0.5s						
BOSA	**Boshof**	**48.82**	**224**	LR	LR	09 51 45.5	
	comp=Z,48nm,18.3s,baz=28,slow=34						
TSUM	**Tsumeb**	**49.98**	**240**	LR	LR	09 52 56.0	
	comp=Z,54nm,19.9s,baz=157,slow=35						
ARTI	**Arti**	**51.01**	**357**	LR	LR	09 55 24.1	
	comp=Z,46nm,18.4s,baz=188,slow=37						
ZALV	**Zalesovo Beam**	**51.95**	**17**	P	**P**	**09 33 13.5**	**-0.8**
	1.3nm,0.8s,baz=228,slow=7.8,SNR=6.3						
ZALV				LR	LR	09 55 42.8	
	comp=Z,73nm,19.4s,baz=358,slow=37						
	1.3nm,0.8s						
SUR	**Sutherland**	**54.14**	**223**	LR	LR	09 54 19.8	
	comp=Z,93nm,19.5s,baz=52,slow=34						
SONM	**Songino Array**	**56.86**	**34**	P	**P**	**09 33 50.6**	**+0.3**
	0.4nm,0.6s,baz=235,slow=10.0,SNR=3.7						
	0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**59.83**	**282**	P	**P**	**09 34 11.7**	**+0.2**
	0.8nm,0.9s,baz=104,slow=6.1,SNR=3.9						
	0.8nm,0.9s						
DBIC	**Dimbokro**	**66.38**	**275**	P	**P**	**09 34 54.7**	**-0.4**
	3.7nm,0.8s,baz=109,slow=8.0,SNR=3.1						
	3.7nm,0.8s						
NOA	**NORSAR Array B**	**67.22**	**336**	LR	LR	10 06 00.8	
	comp=Z,26nm,18.0s,baz=250,slow=37						
KSRS	**Korea Array**	**67.79**	**52**	P	**P**	**09 35 02.7**	**-0.9**
	1.1nm,0.6s,baz=265,slow=7.0,SNR=6.2						
	1.1nm,0.6s						
ESDC	**Sonseca Array**	**68.13**	**311**	P	**P**	**09 35 05.4**	**-0.4**
	1.3nm,1.0s,baz=92,slow=8.0,SNR=5.2						
	1.3nm,1.0s						
KLR	**Kul'dur**	**72.87**	**40**	LR	LR	10 08 48.7	
	comp=Z,296nm,18.6s,baz=180,slow=37						
WRA	**Warramunga Arr**	**75.42**	**112**	P	**P**	**09 35 50.5**	**+0.6**
	2.4nm,1.1s,baz=284,slow=4.6,SNR=5.7						
	2.4nm,1.1s						
ASAR	**Alice Springs**	**75.78**	**116**	P	**P**	**09 35 52.3**	**+0.3**
	1.1nm,0.9s,baz=285,slow=6.6,SNR=6.4						
	1.1nm,0.9s						

*CATAC **09** 09:32:19.1±0.4, 13°N±2°×8°9W±°, h14km±2km, M3.2/27, MLv3.2/27, Error ellipse: s-maj=5.0km s-min=3.1km az=18.9, confirmed*

*SNET **09** 09:32:19.3±1.6, 13°.03N×89°.41W, h30km, ML2.9, Presumed earthquake*

*GCG **09** 09:32:20.1±0.5, 13°.10N×89°.55W, h41km±15km, MD3.5, ML3.6, Presumed earthquake*

ISC 09 09:32:20.2±1.6, 13°.10N±0°.07×89°.48W±0°.04, h30km±11km, n40, σ0s83/67, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.41**	**22**	P	**Pb**	**09 32 29.2**	**0.0**
LALI				S	**Sn**	**09 32 36.4**	**-0.3**
LALI	**Alcalda de L**	**0.41**	**22**	*i* P	**Pn**	**09 32 30.0**	**-0.1**
JAYA	**Jayaque - finc**	**0.55**	**3**	P	**Pn**	**09 32 31.7**	**-0.4**
JAYA				S	**Sn**	**09 32 39.8**	**-0.6**
JAYA	**Jayaque - finc**	**0.55**	**3**	*i* P	**Pn**	**09 32 31.7**	**-0.4**
JAYA				*i* S	**Sn**	**09 32 40.4**	**0.0**
JAYA				IAML		09 32 42.6	
	comp=E,3µm,0.2s						
PANCS	**Alcalda de**	**0.58**	**30**	P	**Pn**	**09 32 31.9**	**-0.5**
PANCS				S	**Sb**	**09 32 40.3**	**+0.1**
PMON	**Piamonte**	**0.63**	**15**	P	**Pn**	**09 32 32.7**	**-0.5**
PMON				S	**Sn**	**09 32 41.9**	**-0.3**
SEMO	**Seminario San**	**0.65**	**22**	P	**Pb**	**09 32 32.7**	**-0.4**
SEMO				S	**Sn**	**09 32 42.8**	**+0.2**
UEES	**Universidad Ev**	**0.65**	**21**	P	**Pn**	**09 32 33.1**	**-0.3**
UEES				S	**Sn**	**09 32 42.9**	**+0.1**
UTEC	**Universidad Te**	**0.65**	**24**	P	**Pn**	**09 32 33.1**	**-0.4**
UTEC				S	**Sn**	**09 32 42.6**	**-0.2**
BOQS	**Boqueron**	**0.66**	**17**	*e*P	**Pn**	**09 32 33.5**	**-0.2**
IGN	**Direccin Gen**	**0.68**	**26**	P	**Pn**	**09 32 33.5**	**-0.3**
IGN				S	**Sn**	**09 32 43.5**	**+0.1**
UDBS	**Universidad Do**	**0.69**	**27**	P	**Pn**	**09 32 33.7**	**-0.2**
UDBS				S	**Sn**	**09 32 44.3**	**+0.7**
CEDA	**San Andres**	**0.70**	**7**	P	**Pn**	**09 32 34.0**	**-0.1**
CEDA				S	**Sn**	**09 32 44.2**	**+0.3**
CEVE	**Cerro Verde**	**0.73**	**349**	P	**Pn**	**09 32 34.8**	**+0.1**
CEVE				S	**Sn**	**09 32 45.2**	**+0.2**
COEG	**Centro de Oper**	**0.78**	**48**	P	**Pn**	**09 32 34.4**	**-0.7**
COEG	**Centro de Oper**	**0.78**	**48**	*e*P	**Pn**	**09 32 34.3**	**-0.9**
COEG				*e*S	**Sn**	**09 32 46.0**	**+0.2**
PAVA	**Las Pavas**	**0.80**	**41**	P	**Pn**	**09 32 35.2**	**-0.3**
PAVA				S	**Sn**	**09 32 47.5**	**+1.0**
TECO	**Alcaldia de Te**	**0.80**	**57**	P	**Pb**	**09 32 35.9**	**+0.2**
TECO				S	**Sn**	**09 32 47.0**	**+0.5**
NUBE	**Las Nubes**	**0.85**	**340**	P	**Pb**	**09 32 35.9**	**-0.6**
NUBE	**Las Nubes**	**0.85**	**340**	*i* P	**Pn**	**09 32 35.7**	**-0.5**
NUBE				*i* S	**Sn**	**09 32 48.1**	**+0.4**
UNIC	**Universidad Ca**	**0.88**	**356**	P	**Pb**	**09 32 37.0**	**0.0**
UNIC				S	**Sb**	**09 32 49.8**	**+1.5**
FAME	**Alcaldia de Sa**	**0.90**	**325**	P	**Pn**	**09 32 36.3**	**-0.6**
FAME				S	**Sb**	**09 32 48.9**	**-0.1**
SCLA	**Alcaldia de Sa**	**0.94**	**51**	P	**Pn**	**09 32 37.2**	**-0.2**
SCLA				S	**Sb**	**09 32 50.8**	**+0.6**
SLOZ	**Alcaldia de Sa**	**0.96**	**342**	P	**Pb**	**09 32 37.9**	**-0.5**
SLOZ				S	**Sb**	**09 32 52.0**	**+1.2**
PQSS	**Presa 15 de Se**	**1.03**	**60**	P	**Pb**	**09 32 39.3**	**-0.2**
P5NO	**Presa 5 de nov**	**1.12**	**38**	P	**Pn**	**09 32 39.4**	**-0.4**
LLGN	**La Laguna**	**1.17**	**26**	P	**Pn**	**09 32 40.8**	**+0.1**
PACA	**Pacayal**	**1.18**	**72**	P	**Pb**	**09 32 41.2**	**-0.9**
RANC	**El Ranchito**	**1.20**	**74**	P	**Pb**	**09 32 41.8**	**-0.7**
RANC				S	**Sb**	**09 32 58.1**	**+0.4**
MTO3	**Montecristo**	**1.29**	**5**	P	**Pn**	**09 32 42.6**	**+0.2**
MTO3	**Montecristo**	**1.29**	**5**	*i* P	**Pn**	**09 32 42.3**	**-0.1**
CNRM	**Centro Naciona**	**1.32**	**74**	P	**Pb**	**09 32 43.4**	**-1.0**
CNRM				S	**Sb**	**09 33 01.1**	**+0.1**
INTP	**Intipuca**	**1.39**	**86**	*e*P	**Pn**	**09 32 43.0**	**-0.5**
ESQI	**Esquipulas**	**1.45**	**5**	P	**Pn**	**09 32 45.0**	**+0.4**
ESQI	**Esquipulas**	**1.45**	**5**	*e*P	**Pn**	**09 32 44.9**	**+0.3**
LCND	**La Caada**	**1.56**	**82**	P	**Pb**	**09 32 46.6**	**-1.8**
LCND				S	**Sb**	**09 33 07.2**	**-0.6**
SARH	**Santa Rosa de**	**1.80**	**23**	P	**Pn**	**09 32 49.8**	**+0.5**
SARH				S	**Sb**	**09 33 14.4**	**-0.4**
TGUH	**Tegucigalpa,Un**	**2.34**	**66**	P	**Pn**	**09 32 57.9**	**+1.1**
TGUH				S	**Sb**	**09 33 27.5**	**-2.9**
HERN	**Volcan Telica**	**2.63**	**100**	P	**Pn**	**09 33 00.9**	**+0.3**
HERN				S	**Sn**	**09 33 34.0**	**+2.4**
YUSH	**Yuscaran**	**2.70**	**71**	P	**Pn**	**09 33 02.7**	**+1.1**
YUSH				S	**Sn**	**09 33 36.2**	**+2.8**

*IDC **09** 09:35:43.5±1.5, 4°79S×80°.08W, h84km±14km, mb4.2/17, mbtmp4.5/23, MS3.6/15, Error ellipse: s-maj=21.8km s-min=9.5km az=62.0*

*NEIC **09** 09:35:44.6±1.7, 4°.75S±0°.06×80°.0W±0°.1, h83km±6km, mb4.9/324, Error ellipse: s-maj=15.9km s-min=8.2km az=74.0*

*VAO **09** 09:35:47.0±0.8, 4°.64S×79°.47W, h78km±6km, mb5.0, Presumed earthquake*

ISC 09 09:35:43.0±0.4, 4.75S±0°.05×80°.00W±0°.07, h83km, n318, σ1s33/183, mb4.9/166, 3D, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COHC	**Cochancay**	**2.39**	**18**		**Pn**	**09 36 21.0**	**+0.8**
COHC	**Cochancay**	**2.39**	**18**	P	**Pn**	**09 36 20.6**	**+0.4**
ATAH	**Atahualpa**	**2.86**	**146**	P	**Pn**	**09 36 28.2**	**+1.4**
	467nm,0.4s,baz=350,slow=7.7,SNR=444						
ATAH				S	**Sn**	**09 37 01.9**	**+1.3**
	6µm,0.6s,baz=115,slow=15,SNR=19						
PPLP	**Puerto Lpez**	**3.27**	**346**	P	**Pn**	**09 36 30.4**	**-1.8**
SLOR	**San Lorenzo -**	**4.26**	**21**		**Pn**	**09 36 47.6**	**+1.5**
PAC1	**Pacto, Paraso**	**5.12**	**14**	P	**Pn**	**09 36 57.2**	**-0.3**
	12nm27µm1µm,0.5s						
OTAV	**Otavalo**	**5.19**	**17**		**Pn**	**09 36 59.4**	**+0.8**
OTAV	**Otavalo**	**5.19**	**17**	P	**Pn**	**09 36 59.7**	**+1.1**
	4.5nm2µm5µm469nm,0.9s						
OTAV	**Otavalo**	**5.19**	**17**	*e*P	**Pn**	**09 36 59.2**	**+0.6**
CUSE	**Cuicocha Este**	**5.27**	**18**	P	**Pn**	**09 37 00.9**	**+1.2**
CASC	**Dorado de Casc**	**5.53**	**29**	P	**Pn**	**09 37 03.4**	**+0.4**
	5µm577nm,0.8s						
TULM	**Tulcn-Chalpat**	**5.86**	**22**	P	**Pn**	**09 37 09.2**	**+1.4**
CMBC	**Cumbal**	**6.05**	**21**	P	**Pn**	**09 37 12.0**	**+1.6**
CRUC	**La Cruz**	**6.97**	**26**	P	**Pn**	**09 37 23.3**	**+0.4**
PTLC	**Puerto Leguiza**	**7.13**	**47**	P	Pn	09 37 20.0	-4.8
BBAC	**Balboa, Cauca**	**7.26**	**22**	P	**Pn**	**09 37 27.8**	**+1.1**
	2µm108nm,0.6s						
FLOC	**Florencia**	**7.64**	**35**	P	**Pn**	**09 37 32.9**	**+1.2**
	3µm147nm,0.9s						
NNA	**Nana**	**7.84**	**157**	P	**Pn**	**09 37 33.1**	**-1.3**
	87nm,0.5s,baz=330,slow=13,SNR=35						
NNA				S	**Sn**	**09 38 59.1**	**-2.6**
	365nm,0.5s,baz=238,slow=20,SNR=5.1						
NNA	**Nana**	**7.84**	**157**		**Pn**	**09 37 34.4**	**-0.1**
NNA	**Nana**	**7.84**	**157**	P	**Pn**	**09 37 33.5**	**-0.9**
	4µm376nm,1.0s						
GR1C	**Gorgona, Isla**	**7.91**	**13**	P	**Pn**	**09 37 34.2**	**-1.2**
POPC	**Popayan, Colom**	**7.96**	**25**	P	**Pn**	**09 37 35.5**	**-0.8**
	603nm39nm,1.0s						
GARC	**Garzon, Huila**	**8.23**	**33**	P	**Pn**	**09 37 39.9**	**0.0**
JAMC	**Jamundi, Valle**	**8.58**	**23**	P	**Pn**	**09 37 42.1**	**-2.6**
MACC	**Macarena, Meta**	**9.20**	**42**	P	**Pn**	**09 37 51.4**	**-1.6**
	2µm105nm,0.6s						
URMC	**La Uribe, Meta**	**9.73**	**35**	P	**Pn**	**09 37 59.8**	**-0.4**
	1µm73nm,0.7s						
PRAC	**Prado**	**9.84**	**31**	P	**Pn**	**09 38 02.0**	**+0.3**
	58nm,1.2s						
PLMC	**San Jos del P**	**10.28**	**21**	P	Pn	09 38 02.5	-5.3
VILC	**Villavicencio,**	**10.82**	**36**	P	**Pn**	**09 38 17.0**	**+1.8**
GUY2C	**Guyana, Caldas**	**10.93**	**25**	P	**Pn**	**09 38 16.3**	**-0.7**
	19nm,0.7s						
CVER	**Cruz Verde, Cu**	**10.95**	**33**	P	**Pn**	**09 38 17.0**	**-0.2**
ROSC	**El Rosal**	**11.09**	**31**	P	**Pn**	**09 38 22.3**	**+3.2**
	5.4nm,0.4s,baz=79,slow=21,SNR=1.7						
ROSC				LR	LR	09 43 10.4	
	comp=Z,530nm,20.9s,baz=234,slow=40						
ROSC	**El Rosal**	**11.09**	**31**	P	**Pn**	**09 38 21.4**	**+2.4**
CHIC	**Chingaza**	**11.22**	**34**	P	**Pn**	**09 38 22.9**	**+2.0**
CBOC	**Ciudad Bolivar**	**11.27**	**21**	P	Pn	09 38 17.9	-3.4
SPBC	**San Pablo de B**	**11.91**	**30**	P	**Pn**	**09 38 29.6**	**-0.3**
	21nm,1.1s						
PTAC	**Punta Ardita,**	**12.02**	**10**	P	**Pn**	**09 38 29.3**	**-2.0**
	1µm44nm,0.9s						
DBBC	**Dabeiba**	**12.28**	**18**	P	**Pn**	**09 38 35.2**	**+0.2**
PTBC	**PUERTO BERRIO,**	**12.50**	**26**	P	**Pn**	**09 38 36.6**	**-1.3**
	12nm,0.9s						
RUSC	**La Rusia**	**12.63**	**33**	P	**Pn**	**09 38 40.3**	**+0.3**
	691nm32nm,0.9s						
APAC	**Apartado, Choc**	**13.02**	**15**	P	**Pn**	**09 38 46.2**	**+1.4**
	53nm,0.5s						
BARC	**Barichara**	**13.16**	**31**	P	**Pn**	**09 38 45.7**	**-1.2**
	501nm29nm,0.8s						
UREC	**San Jos de Ur**	**13.19**	**20**	P	**Pn**	**09 38 47.1**	**0.0**
	8.8nm,0.6s						
PIRO	**Carate, Puerto**	**13.48**	**346**	Pn	**Pn**	**09 38 52.2**	**+1.3**
BRU2	**Volcan**	**13.72**	**349**	Pn	**Pn**	**09 38 55.4**	**+1.3**
SGC2	**Sao Gabriel da**	**13.79**	**71**	P	Pn	09 38 48.9	-6.0
PAMC	**Pamplona, Colo**	**14.04**	**31**	P	**Pn**	**09 39 01.8**	**+3.1**
OCAC	**Ocana**	**14.52**	**27**	P	Pn	09 39 00.0	-4.6
SJCC	**San Jacinto, C**	**15.32**	**18**	P	Pn	09 39 09.2	-5.5
TEFE	**Tefe**	**15.37**	**86**	*e*P	**Pn**	**09 39 11.6**	**-3.8**
JTS	**Las Juntas de**	**15.73**	**342**	P	**Pn**	**09 39 20.6**	**+0.6**
	32nm,1.1s,baz=144,slow=12,SNR=11						
JTS	**Las Juntas de**	**15.73**	**342**	P	**Pn**	**09 39 22.1**	**+2.2**
LPAZ	**La Paz**	**16.35**	**135**	P	**Pn**	**09 39 29.3**	**+1.2**
	14nm,0.5s,baz=306,slow=8.4,SNR=50						
LPAZ				S	**Sn**	**09 42 26.1**	**-3.3**
	13nm,1.0s,baz=84,slow=19,SNR=1.6						
LPAZ	**La Paz**	**16.35**	**135**	P	**Pn**	**09 39 27.5**	**-0.7**
LPAZ	**La Paz**	**16.35**	**135**	*e*P	**Pn**	**09 39 28.8**	**+0.7**
PB18	**Visviri**	**16.40**	**142**		**P**	**09 39 31.4**	**+1.3**
SDV	**Santo Domingo**	**16.45**	**35**	P	**Pn**	**09 39 31.1**	**+2.0**
	5.0nm,0.6s,baz=203,slow=11,SNR=9.2						
SDV				LR	LR	09 47 10.8	
	comp=Z,210nm,18.5s,baz=228,slow=42						
SDV	**Santo Domingo**	**16.45**	**35**		**Pn**	**09 39 30.9**	**+1.9**
SDV	**Santo Domingo**	**16.45**	**35**	*e*P	**Pn**	**09 39 28.6**	**-0.5**
PB12	**IPOC Station P**	**16.71**	**146**		**Pn**	**09 39 32.8**	**+0.6**
PB16	**IPOC Station P**	**16.96**	**144**		**Pn**	**09 39 37.5**	**+1.8**
PB11	**IPOC Station P**	**18.01**	**147**		**P**	**09 39 49.3**	**+1.8**
GO01	**Chusmiza**	**18.19**	**146**	P	**Pn**	**09 39 52.3**	**+1.7**
PB08	**IPOC Station P**	**18.59**	**146**	P	**P**	**09 39 53.6**	**-0.5**
PATCX	**Punta Patache**	**18.62**	**150**	P	**P**	**09 39 55.4**	**+1.2**
SIUN	**Universidad Ur**	**18.95**	**346**	P	**P**	**09 39 58.8**	**+1.2**
PB02	**IPOC Station P**	**19.17**	**150**	P	**P**	**09 40 01.5**	**+1.3**
MACA	**Manacapuru-AM**	**19.33**	**86**		**P**	**09 40 02.4**	**+0.5**
MACA	**Manacapuru-AM**	**19.33**	**86**	*e*P	**P**	**09 40 00.5**	**-1.4**
PB07	**IPOC Station P**	**19.52**	**151**	P	**P**	**09 40 05.7**	**+1.6**
PB03	**IPOC Station P**	**19.86**	**151**	P	**P**	**09 40 09.5**	**+1.8**
TGUH	**Tegucigalpa,Un**	**20.03**	**339**		**P**	**09 40 10.0**	**+0.4**
PB05	**IPOC Station P**	**20.34**	**153**	P	**P**	**09 40 14.8**	**+2.0**
BOAV	**Boa Vista**	**20.71**	**70**	P	**P**	**09 40 18.2**	**+1.3**
BOAV	**Boa Vista**	**20.71**	**70**	*e*P	**P**	**09 40 15.5**	**-1.4**
MTO3	**Montecristo**	**21.17**	**334**	P	**P**	**09 40 21.5**	**-0.4**
VILB	**Vilhena**	**21.18**	**114**	P	**P**	**09 40 23.1**	**+1.2**
VILB	**Vilhena**	**21.18**	**114**	*e*P	**P**	**09 40 21.5**	**-0.4**
SIV	**San Ignacio**	**21.69**	**122**	P	**P**	**09 40 27.7**	**+0.4**
	14nm,0.5s,baz=274,slow=11						
	14nm,0.5s						
PB14	**IPOC Station P**	**21.81**	**156**	P	**P**	**09 40 29.1**	**+0.2**
APG	**El Apazote**	**22.20**	**332**	P	**P**	**09 40 33.4**	**+0.5**
	1.0nm,0.8s,baz=178,slow=9.6,SNR=8.1						
PTLB	**Pontes e Lacer**	**23.10**	**119**	P	**P**	**09 40 42.6**	**+0.5**
PTLB	**Pontes e Lacer**	**23.10**	**119**	*e*P	**P**	**09 40 41.8**	**-0.3**
PDRB	**Porto dos Gac**	**24.01**	**108**	*e*P	**P**	**09 40 49.4**	**-0.9**
TRN	**Trinidad (W)**	**24.02**	**50**	*e*P	**P**	**09 40 54.0**	**+3.6**
ITTB	**Itaituba**	**24.19**	**90**	*e*P	**P**	**09 40 53.1**	**+1.1**
AC02	**Maricunga**	**24.30**	**156

MIAR	**Mount Ida**	**41.13 343**	IAmb	IAmb	09 43 20.8			
	comp=Z,14nm,0.9s							
CMC01	**Camacan, BA**	**41.15 108**	*e*P	**P**	**09 43 19.3**	**-0.2**		
PLPT	**Palo Pinto**	**41.20 336**	IAmb	IAmb	09 43 21.9			
	comp=Z,22nm,0.8s							
RIB01	**Linhares ES**	**41.22 114**	*e*P	**P**	**09 43 20.2**	**+0.1**		
WVT	**Waverly**	**41.32 350**	P	**P**	**09 43 19.9**	**-0.6**		
WVT			IAmb	IAmb	09 43 20.3			
	comp=Z,11nm,0.5s							
WVT	**Waverly**	**41.32 350**	P	**P**	**09 43 19.8**	**-0.7**		
WVT			pP	**pP**	**09 43 37.7**	**-2.9**		
WVT			sP	**sP**	**09 43 46.6**	**-3.6**		
U49A	**Red Boiling Sp**	**41.40 353**	IAmb	IAmb	09 43 21.6			
	comp=Z,10.0nm,0.7s							
ABTX	**Abilene, Hawle**	**41.59 335**	IAmb	IAmb	09 43 49.9			
	comp=Z,23nm,1.1s							
TMB01	**Midkiff**	**41.88 331**	IAmb	IAmb	09 43 27.2			
	comp=Z,11nm,0.8s							
TPB05	**Hovey Rd**	**41.89 329**	IAmb	IAmb	09 43 27.5			
	comp=Z,9.9nm,1.0s							
LCAR	**Lake Charles**	**41.93 346**	IAmb	IAmb	09 43 26.5			
	comp=Z,20nm,0.8s							
T47A	**Sharon Grove**	**42.05 351**	IAmb	IAmb	09 43 26.6			
	comp=Z,17nm,0.7s							
TPB01	**Permian Basin**	**42.14 329**	IAmb	IAmb	09 43 29.7			
	comp=Z,12nm,0.7s							
S51A	**Beattyville**	**42.30 356**	IAmb	IAmb	09 43 51.7			
	comp=Z,14nm,0.9s							
APMT	**Aspermont**	**42.39 335**	IAmb	IAmb	09 43 31.6			
	comp=Z,18nm,0.9s							
TPB06	**Permian Basin**	**42.42 330**	IAmb	IAmb	09 43 31.8			
	comp=Z,25nm,0.7s							
ODSA	**Odessa**	**42.48 331**	IAmb	IAmb	09 43 31.7			
	comp=Z,9.6nm,0.7s							
PECS	**Pecos**	**42.53 329**	IAmb	IAmb	09 43 32.6			
	comp=Z,8.9nm,0.6s							
129A	**Stewart Farms,**	**42.58 332**	IAmb	IAmb	09 43 57.4			
	comp=Z,8.6nm,1.0s							
CGM3	**Cape Girardeau**	**42.79 349**	IAmb	IAmb	09 43 33.1			
	comp=Z,16nm,0.7s							
T42A	**Van Buren**	**42.83 347**	IAmb	IAmb	09 43 33.5			
	comp=Z,16nm,0.8s							
DKNS	**Dickens**	**43.03 334**	IAmb	IAmb	09 43 36.7			
	comp=Z,18nm,0.7s							
U38A	**Gravette**	**43.13 343**	IAmb	IAmb	09 43 37.1			
	comp=Z,19nm,0.8s							
WCI	**Wyandotte Cave**	**43.16 353**	P	**P**	**09 43 34.8**	**-0.7**		
WCI			IAmb	IAmb	09 43 36.0			
	comp=Z,14nm,1.0s							
DEOK	**Depew**	**43.24 340**	IAmb	IAmb	09 43 37.5			
	comp=Z,14nm,0.7s							
CCM	**Cathedral Cave**	**43.85 347**	P	**P**	**09 43 41.3**	**+0.3**		
CCM			pP	**pP**	**09 43 59.7**	**-1.5**		
CCM			sP	**sP**	**09 44 07.8**	**-2.9**		
RCBR	**Riachuelo**	**43.91 93**	LR	LR	10 02 55.6			
	comp=Z,78nm,21.4s,baz=252,slow=37							
MSTX	**Muleshoe**	**44.11 332**	IAmb	IAmb	09 43 45.3			
	comp=Z,20nm,0.9s							
T35A	**Sooner Cattle**	**44.23 341**	IAmb	IAmb	09 44 19.2			
	comp=Z,31nm,1.2s							
AMTX	**Amarillo**	**44.39 334**	IAmb	IAmb	09 44 11.8			
	comp=Z,19nm,1.1s							
P43A	**Skaggs, Pawnee**	**45.03 350**	IAmb	IAmb	09 43 51.3			
	comp=Z,17nm,0.8s							
O48B	**Farmland**	**45.03 354**	IAmb	IAmb	09 43 50.3			
	comp=Z,27nm,1.2s							
319A	**Douglas**	**45.50 324**	IAmb	IAmb	09 43 56.8			
	comp=Z,16nm,0.9s							
P38A	**Dawn**	**45.88 345**	IAmb	IAmb	09 43 58.8			
	comp=Z,15nm,0.9s							
RTBA	**Rita Blanca**	**46.16 334**	IAmb	IAmb	09 44 02.4			
	comp=Z,15nm,0.8s							
KSU1	**Kansas State U**	**46.25 342**	IAmb	IAmb	09 44 01.4			
	comp=Z,16nm,0.8s							
ANMO	**Albuquerque**	**46.68 330**		**P**	**09 44 04.7**	**+0.9**		
ANMO			IAmb	IAmb	09 44 06.0			
	comp=Z,15nm,0.8s							
ANMO	**Albuquerque**	**46.68 330**	IAmb	IAmb	09 44 06.0			
	comp=Z,20nm,0.9s							
ANMO	**Albuquerque**	**46.68 330**	P	**P**	**09 44 05.1**	**+1.4**		
ANMO			pP	**pP**	**09 44 23.4**	**-0.7**		
ANMO			sP	**sP**	**09 44 31.5**	**-2.0**		
TUC	**Tucson**	**47.06 324**		**P**	**09 44 07.4**	**+0.8**		
TUC	**Tucson**	**47.06 324**	P	**P**	**09 44 07.8**	**+1.2**		
TUC			pP	**pP**	**09 44 26.4**	**-0.6**		
TUC			sP	**sP**	**09 44 34.5**	**-1.8**		
T25A	**Trinidad**	**47.48 333**	IAmb	IAmb	09 44 12.4			
	comp=Z,11nm,0.8s							
N35A	**Tabor**	**47.60 344**	IAmb	IAmb	09 44 36.6			
	comp=Z,18nm,0.9s							
X18A	**Snowflake**	**48.20 326**	IAmb	IAmb	09 44 17.9			
	comp=Z,10nm,0.8s							
SDCO	**Great Sand Dun**	**48.48 333**	IAmb	IAmb	09 44 19.9			
	comp=Z,11nm,0.8s							
W18A	**Petrified Fore**	**48.52 327**	IAmb	IAmb	09 44 20.5			
	comp=Z,15nm,0.9s							
SADO	**Sadowa**	**49.30 1**	LR	LR	10 05 02.8			
	comp=Z,36nm,21.7s,baz=230,slow=36							
ESJX	**Sierra Juarez**	**50.05 319**	P	**P**	**09 44 31.1**	**+1.4**		
PV01	**Paradox Valley**	**50.23 331**	IAmb	IAmb	09 44 33.3			
	comp=Z,7.7nm,0.8s							
PV05	**Paradox Valley**	**50.45 330**	IAmb	IAmb	09 44 34.4			
	comp=Z,13nm,1.0s							
PV03	**Paradox Valley**	**50.47 330**	IAmb	IAmb	09 44 34.7			
	comp=Z,13nm,0.9s							
PV07	**Paradox Valley**	**50.51 331**	IAmb	IAmb	09 44 35.3			
	comp=Z,11nm,0.9s							
PV11	**David Mesa, Pa**	**50.51 331**	IAmb	IAmb	09 44 35.0			
	comp=Z,14nm,0.9s							
ECSD	**EROS Data Cent**	**50.53 344**	IAmb	IAmb	09 44 33.6			
	comp=Z,9.5nm,0.7s							
PV17	**East Wray Mesa**	**50.54 330**	IAmb	IAmb	09 44 35.1			
	comp=Z,9.9nm,0.9s							
PV16	**Nyswonger Mesa**	**50.54 330**	IAmb	IAmb	09 45 05.8			
	comp=Z,10nm,1.0s							
PV19	**Morning Glory**	**50.58 330**	IAmb	IAmb	09 45 26.6			
	comp=Z,16nm,1.0s							
PV04	**Paradox Valley**	**50.60 331**	IAmb	IAmb	09 45 00.5			
	comp=Z,17nm,1.3s							
PV10	**Paradox Valley**	**50.65 330**	IAmb	IAmb	09 44 35.5			
	comp=Z,13nm,0.9s							
PV23	**Carpenter Ridg**	**50.70 331**	IAmb	IAmb	09 44 37.8			
	comp=Z,9.2nm,0.7s							
BC3	**Big Chuckawall**	**50.82 321**	IAmb	IAmb	09 44 37.5			
	comp=Z,9.3nm,1.1s							
BAR	**Barrett**	**50.95 320**	P	**P**	**09 44 36.5**	**+0.2**		
IRM	**Iron Mountain**	**50.96 322**	IAmb	IAmb	09 44 38.6			
	comp=Z,8.1nm,0.9s							
DPP	**Dos Picos Cty**	**51.33 320**	P	**P**	**09 44 39.6**	**+0.4**		
DPP			IAmb	IAmb	09 44 40.9			
	comp=Z,7.1nm,0.8s							
PFO	**Pinyon Flats O**	**51.42 321**	P	**P**	**09 44 40.5**	**+0.5**		
PFO	**Pinyon Flats O**	**51.42 321**	P	**P**	**09 44 41.2**	**+1.2**		
PFO			pP	**pP**	**09 45 00.1**	**-0.4**		
O20A	**White River Ci**	**51.66 332**	IAmb	IAmb	09 45 40.6			
	comp=Z,12nm,1.1s							
SZCU	**Shurtz Canyon**	**52.17 327**	IAmb	IAmb	09 45 12.8			
	comp=Z,13nm,1.3s							
CCUT	**Cedar City**	**52.29 326**	IAmb	IAmb	09 45 14.1			
	comp=Z,11nm,1.1s							
P17A	**Butcher Ranch,**	**52.34 330**	IAmb	IAmb	09 44 48.6			
	comp=Z,11nm,1.0s							
TCRU	**Three Creeks R**	**52.57 328**	IAmb	IAmb	09 45 14.9			
	comp=Z,7.1nm,0.9s							
RDMU	**Red Mountain**	**52.63 332**	IAmb	IAmb	09 45 21.1			
	comp=Z,12nm,1.1s							
GSC	**Goldstone, Bar**	**52.74 322**	IAmb	IAmb	09 45 18.8			
	comp=Z,12nm,1.2s							
SHOC	**Shoshone, Teco**	**52.82 323**	IAmb	IAmb	09 44 52.4			
	comp=Z,10nm,1.0s							
RSSD	**Black Hills**	**53.24 339**	P	**P**	**09 44 54.0**	**+0.7**		
RSSD			IAmb	IAmb	09 44 55.1			
	comp=Z,5.5nm,0.6s							
RSSD	**Black Hills**	**53.24 339**	P	**P**	**09 44 54.6**	**+1.3**		
RSSD			pP	**pP**	**09 45 13.4**	**-0.7**		
FURC	**Furnace Creek,**	**53.55 323**	IAmb	IAmb	09 44 57.8			
	comp=Z,11nm,0.8s							
WCT	**Wildcat Mounta**	**53.63 324**	IAmb	IAmb	09 44 58.8			
	comp=Z,9.9nm,1.1s							
S11A	**Rachel**	**53.70 325**	IAmb	IAmb	09 45 32.3			
	comp=Z,12nm,1.0s							
TCUT	**Toone Canyon**	**53.93 331**	IAmb	IAmb	09 45 46.5			
	comp=Z,9.9nm,0.8s							
DUG	**Dugway, Tooele**	**53.93 329**	IAmb	IAmb	09 45 25.0			
	comp=Z,8.3nm,1.1s							
PDAR	**Pinedale Array**	**54.36 333**	P	**P**	**09 45 01.7**	**+0.2**		
	comp=Z,3.0nm,0.7s,baz=126,slow=8.6,SNR=38							
	comp=Z,3.0nm,0.7s							
PDAR	**Pinedale Array**	**54.36 333**	P	**P**	**09 45 01.5**	**0.0**		
BGU	**Big Grassy Mou**	**54.59 330**	IAmb	IAmb	09 45 29.5			
	comp=Z,16nm,1.8s							
EPLO	**Experimental L**	**55.50 349**	IAmb	IAmb	09 45 10.2			
	comp=Z,10nm,0.8s							
ELK	**Elko**	**55.60 328**	IAmb	IAmb	09 45 37.0			
	comp=Z,14nm,1.4s							
NV11	**Mina Array Sit**	**55.63 324**	IAmb	IAmb	09 45 50.2			
	comp=Z,13nm,1.4s							
MOOW	**Moose Ponds**	**55.66 333**	IAmb	IAmb	09 45 38.1			
	comp=Z,18nm,1.9s							
LHV	**Little Huntoon**	**55.71 324**	IAmb	IAmb	09 45 41.8			
	comp=Z,14nm,1.3s							
NVAR	**Mina Array Bea**	**55.71 324**	P	**P**	**09 45 12.4**	**+1.1**		
	comp=Z,4.0nm,0.7s,baz=135,slow=7.5,SNR=38							
	comp=Z,4.0nm,0.7s							
NVAR	**Mina Array Bea**	**55.71 324**	P	**P**	**09 45 12.3**	**+0.9**		
FLWY	**Flagg Ranch**	**55.91 334**	IAmb	IAmb	09 45 42.3			
	comp=Z,8.1nm,0.9s							
RLMT	**Red Lodge**	**56.12 335**	IAmb	IAmb	09 46 22.6			
	comp=Z,20nm,1.9s							
YNE	**Yellowstone No**	**56.34 335**	IAmb	IAmb	09 45 17.5			
	comp=Z,6.8nm,0.7s							
ULM	**Lac du Bonnet**	**56.47 348**	P	**P**	**09 45 15.9**	**-0.3**		
	comp=Z,14nm,0.7s,baz=154,slow=7.9,SNR=29							
	comp=Z,14nm,0.7s							
YMR	**Madison River**	**56.48 334**	IAmb	IAmb	09 45 44.3			
	comp=Z,7.0nm,0.9s							
YHB	**Horse Butte**	**56.65 334**	IAmb	IAmb	09 45 20.2			
	comp=Z,6.9nm,0.7s							
HLID	**Hailey**	**57.23 331**	IAmb	IAmb	09 45 24.1			
	comp=Z,7.5nm,0.8s							
BOZ	**Bozeman (W)**	**57.51 334**	IAmb	IAmb	09 45 49.9			
	comp=Z,14nm,1.0s							
DLMT	**Dillon**	**57.75 333**	IAmb	IAmb	09 45 59.1			
	comp=Z,14nm,1.2s							
SUTB	**Sutter Butte**	**58.31 323**	IAmb	IAmb	09 45 31.0			
	comp=Z,8.2nm,0.8s							
ORV	**Oroville**	**58.34 323**	IAmb	IAmb	09 45 32.0			
	comp=Z,12nm,1.0s							
WVOR	**Wild Horse Val**	**58.60 327**	IAmb	IAmb	09 45 57.5			
	comp=Z,15nm,1.1s							
EGMT	**Eagleton**	**58.68 337**	IAmb	IAmb	09 45 33.3			
	comp=Z,9.9nm,0.8s							
O03E	**Paynes Creek**	**58.98 323**	IAmb	IAmb	09 46 05.1			
	comp=Z,8.1nm,0.9s							
J08A	**Circle Bar Ran**	**59.15 328**	IAmb	IAmb	09 45 36.7			
	comp=Z,4.4nm,0.7s							
M03C	**McCloud**	**59.79 324**	IAmb	IAmb	09 45 40.8			
	comp=Z,12nm,1.0s							
KHBM	**Hayfork Bally**	**60.06 323**		**P**	**09 45 42.7**	**+1.0**		
KHBM			IAmb	IAmb	09 45 43.2			
	comp=Z,6.6nm,0.9s							
I07A	**Izee**	**60.19 328**	IAmb	IAmb	09 46 13.2			
	comp=Z,7.5nm,1.1s							
F10A	**Beach Ranch, E**	**60.37 331**		**P**	**09 45 44.6**	**+1.1**		
F10A			IAmb	IAmb	09 45 47.9			
	comp=Z,8.2nm,0.7s							
SCHQ	**Schefferville**	**60.37 9**	P	**P**	**09 45 42.6**	**-0.7**		
	comp=Z,2.1nm,0.7s,baz=180,slow=9.1,SNR=2.2							
SCHQ			LR	LR	10 13 12.9			
	comp=Z,43nm,18.4s,baz=110,slow=37							
	comp=Z,2.1nm,0.7s							
SCHQ	**Schefferville**	**60.37 9**	IAmb	IAmb	09 46 05.9			
	comp=Z,16nm,1.4s							
YBH	**Yreka Blue Hor**	**60.42 324**		**P**	**09 45 43.8**	**-0.3**		
YBH			IAmb	IAmb	09 45 44.5			
	comp=Z,5.5nm,0.8s							
KHMM	**Horse Mountain**	**60.50 323**	IAmb	IAmb	09 46 21.0			
	comp=Z,9.5nm,1.0s							
G08A	**Pilot Rock**	**60.74 329**	IAmb	IAmb	09 46 12.5			
	comp=Z,10nm,1.0s							
PINE	**Pine Mountain**	**60.76 327**	IAmb	IAmb	09 46 13.4			
	comp=Z,10nm,1.0s							
LNOR	**Lincton Mounta**	**60.81 330**	IAmb	IAmb	09 46 21.8			
	comp=Z,7.0nm,0.9s							
J04A	**Umppqua Nationa**	**61.04 326**		**P**	**09 45 49.1**	**+0.8**		
BBOR	**Butler Butte**	**61.14 325**	IAmb	IAmb	09 46 09.7			
	comp=Z,20nm,1.8s							
L02F	**Cave Junction**	**61.17 324**	IAmb	IAmb	09 46 22.3			
	comp=Z,21nm,1.5s							
E09A	**Wood Farm, Sta**	**61.20 331**	IAmb	IAmb	09 46 15.2			
	comp=Z,9.9nm,1.0s							
I05D	**Terrebonne, OR**	**61.34 327**	IAmb	IAmb	09 45 52.3			
	comp=Z,11nm,0.8s							
WIFE	**Three Sisters-**	**61.41 327**	IAmb	IAmb	09 45 53.2			
	comp=Z,9.1nm,0.8s							
I04A	**Tendick Farm,**	**61.57 326**	IAmb	IAmb	09 46 38.5			
	comp=Z,9.7nm,1.3s							
NEW	**Newport**	**61.98 333**	IAmb	IAmb	09 46 20.3			
	comp=Z,18nm,1.4s							
E07A	**Sunnyside**	**62.07 330**	IAmb	IAmb	09 45 57.1			
	comp=Z,7.8nm,0.8s							
MXC	**Moxie City**	**62.30 330**	IAmb	IAmb	09 46 33.1			
	comp=Z,16nm,1.6s							
D05A	**Enumclaw**	**63.57 329**	IAmb	IAmb	09 46 31.1			
	comp=Z,12nm,0.7s							
FCC	**Fort Churchill**	**64.31 352**	IAmb	IAmb	09 46 34.0			
	comp=Z,14nm,1.0s							
YKA	**Yellowknife Ar**	**72.06 344**	P	**P**	**09 46 57.8**	**-0.1**		
	comp=Z,1.5nm,0.7s,baz=140,slow=4.7,SNR=34							
	comp=Z,1.5nm,0.7s							
DBIC	**Dimbokro**	**75.86 82**	P	**P**	**09 47 22.0**	**+1.0**		
	comp=Z,12nm,0.9s,baz=285,slow=5.7,SNR=13							
DBIC			LR	LR	10 18 20.1			
	comp=Z,59nm,21.8s,baz=318,slow=34							
	comp=Z,12nm,0.9s							
DBIC	**Dimbokro**	**75.86 82**	P	**P**	**09 47 22.4**	**+1.4**		
DBIC			IAmb	IAmb	09 47 23.2			
	comp=Z,11nm,0.8s							
BELA	**Belgrano 2**	**76.80 171**		**P**	**09 47 25.8**	**+0.6**		
SAQQ	**Saqqaq**	**76.98 10**	*i* P	**P**	**09 47 26.8**	**+0.6**		
SAQQ			IAmb	IAmb	09 47 27.8			
	comp=Z,15nm,0.7s							
VNA3	**Neumayer Olymp**	**79.26 162**	⇓P	**P**	**09 47 39.9**	**+1.0**		
	comp=Z,9.5nm,0.8s							
VNA2	**Neumayer--Watz**	**79.89 161**	⇓P	**P**	**09 47 43.0**	**+0.7**		
	comp=Z,7.7nm,0.9s,baz=310,slow=6.4							
M29M	**Somme Creek**	**80.23 336**	IAmb	IAmb	09 48 05.5			
	comp=Z,12nm,1.1s							
F31M	**Tsiigehtchic**	**81.28 342**	IAmb	IAmb	09 48 16.3			
	comp=Z,31nm,1.4s							
SNAA	**Sanae**	**81.48 162**	⇓P	**P**	**09 47 51.6**	**+0.6**		
	comp=Z,201nm,0.7s							
SNAA	**Sanae**	**81.48 162**	P	**P**	**09 47 51.3**	**+0.4**		
	comp=Z,6.9nm,0.7s,baz=281,slow=5.4,SNR=9.8							
	comp=Z,6.9nm,0.7s							
SNAA	**Sanae**	**81.48 162**	P	**P**	**09 47 51.4**	**+0.4**		
SNAA			IAmb	IAmb	09 48 22.8			
	comp=Z,8.6nm,0.7s							
SUMG	**Summit**	**81.59 12**	*i* P	**P**	**09 47 52.0**	**+0.2**		
SUMG			IAmb	IAmb	09 47 53.8			
	comp=Z,5.0nm,0.9s							
I28M	**Miner Creek**	**82.31 339**	IAmb	IAmb	09 48 15.3			
	comp=Z,11nm,0.9s							
ESDC	**Sonseca Array**	**82.34 49**	P	**P**	**09 47 57.7**	**+1.7**		
	comp=Z,1.2nm,0.8s,baz=266,slow=4.4,SNR=5.3							
	comp=Z,1.2nm,0.8s							
ESDC	**Sonseca Array**	**82.34 49**	IAmb	IAmb	09 49 37.4			
	comp=Z,15nm,0.7s							
TORD	**Torodi Ar. Bea**	**83.01 76**	P	**P**	**09 48 00.7**	**+0.8**		
	comp=Z,2.4nm,0.5s,baz=286,slow=6.1,SNR=43							
	comp=Z,2.4nm,0.5s							
E29M	**Blow River**	**83.12 342**	IAmb	IAmb	09 48 25.7			
	comp=Z,11nm,1.0s							
TROLL	**Troll, Antarti**	**83.20 162**	P	**P**	**09 48 00.9**	**+1.0**		
NEEM	**North Greenlan**	**83.65 6**	*i* P	**P**	**09 48 03.4**	**+1.1**		
NEEM			IAmb	IAmb	09 48 04.5			
	comp=Z,5.6nm,0.7s							
D27M	**Malcolm River**	**84.51 342**	IAmb	IAmb	09 48 34.0			
	comp=Z,16nm,1.1s							
ILAR	**Eielson Array**	**84.64 337**	P	**P**	**09 48 07.2**	**0.0**		
	comp=Z,1.3nm,0.9s,baz=152,slow=2.9,SNR=11							
	comp=Z,1.3nm,0.9s							
QSPA	**South Pole Qui**	**85.33 180**	P	**P**	**09 48 11.3**	**+0.5**		
	comp=Z,16nm,0.9s,baz=148,slow=1.7,SNR=34							
	comp=Z,16nm,0.9s							
QSPA	**South Pole Qui**	**85.33 180**		**P**	**09 48 11.9**	**+1.1**		
QSPA	**South Pole Qui**	**85.33 180**	P	**P**	**09 48 11.9**	**+1.1**		
QSPA			pP	**pP**	**09 48 30.9**	**-2.6**		
QSPA			sP	**sP**	**09 48 39.6**	**-2.9**		
QSPA			x	x	09 48 42.2			
QSPA			x	x	09 48 43.8			
C27K	**Jago River**	**85.55 342**	IAmb	IAmb	09 48 38.8			
	comp=Z,8.8nm,1.0s							
SKT	**Skwentna**	**85.61 333**	IAmb	IAmb	09 48 13.2			
	comp=Z,11nm,0.9s							
G24K	**Hadweenzic Riv**	**85.62 338**	IAmb	IAmb	09 48 32.8			
	comp=Z,7.0nm,0.8s							
I23K	**Minto, Yukon-K**	**85.76 337**	IAmb	IAmb	09 48 39.1			
	comp=Z,16nm,1.5s							
G23K	**Bananza Creek**	**86.56 338**	IAmb	IAmb	09 48 43.8			
	comp=Z,7.8nm,1.1s							
E23K	**Chandalar**	**86.89 339**	IAmb	IAmb	09 48 45.5			
	comp=Z,16nm,1.4s							
D23K	**Nanushuk River**	**87.57 340**	IAmb	IAmb	09 48 49.0			
	comp=Z,16nm,1.1s							
E22K	**Anaktuvuk Pass**	**87.69 339**	IAmb	IAmb	09 48 48.9			
	comp=Z,14nm,1.1s							
G21K	**Allakaket**	**87.82 337**	IAmb	IAmb	09 48 49.5			
	comp=Z,8.9nm,1.0s							
M17K	**Holitna River**	**88.15 332**	IAmb	IAmb	09 48 26.0			
	comp=Z,11nm,1.0s							
D22K	**Ayikyak River**	**88.23 340**	IAmb	IAmb	09 48 52.5			
	comp=Z,11nm,1.2s							
DAG	**Danmarks Havn**	**88.28 12**	*i* P	**P**	**09 48 25.0**	**+0.3**		
DAG			IAmb	IAmb	09 48 26.8			
	comp=Z,3.3nm,0.8s							
E21K	**Killik River**	**88.55 339**	IAmb	IAmb	09 48 55.8			
	comp=Z,11nm,0.9s							
G19K	**Purcell Mounta**	**89.11 337**	IAmb	IAmb	09 48 55.3			
	comp=Z,10nm,1.3s							
E19K	**Redstone River**	**89.48 338**	IAmb	IAmb	09 48 56.4			
	comp=Z,10nm,1.2s							
F19K	**Shaleruckik Mo**	**89.54 337**	IAmb	IAmb	09 48 57.5			
	comp=Z,7.3nm,1.0s							
G18K	**Tagagawik**	**89.68 336**	IAmb	IAmb	09 48 58.9			
	comp=Z,12nm,1.1s							
D19K	**Kuna River**	**90.04 339**	IAmb	IAmb	09 49 14.0			
	comp=Z,11nm,1.1s							
TSUM	**Tsumeb**	**95.59 110**	LR	LR	10 30 30.3			
	comp=Z,48nm,18.4s,baz=266,slow=34							
SPITS	**Spitsbergen Ar**	**95.93 12**	P	**P**	**09 49 01.9**	**+1.8**		
	comp=Z,3.7nm,0.9s,baz=307,slow=10.0,SNR=6.3							
	comp=Z,3.7nm,0.9s							
BVAR	**Borovoye Array**	**126.08 22**	PKP	**PKPdf**	**09 54 36.2**	**+0.5**		
	comp=Z,0.3nm,0.6s,baz=0.0,slow=1.4,SNR=2.1							
ZALV	**Zalesovo Beam**	**129.41 12**	PKP	**PKPdf**	**09 54 41.5**	**-0.5**		
	comp=Z,1.2nm,0.6s,baz=318,slow=1.9,SNR=6.4							
KURK	**Kurchatov**	**130.80 18**		**PKPdf**	**09 54 45.0**	**+0.3**		
KURBB	**Kurchatov Arra**	**130.85 18**	PKP	**PKPdf**	**09 54 45.0**	**+0.2**		
	comp=Z,0.7nm,0.7s,baz=322,slow=2.5,SNR=7.5							
MKAR	**Makanchi Array**	**135.40 17**	PKP	**PKPdf**	**09 54 53.8**	**+0.2**		
	comp=Z,0.6nm,0.9s,baz=349,slow=1.5,SNR=5.3							
ASAR	**Alice Springs**	**136.52 228**	PKP	**PKPdf**	**09 54 55.9**	**-0.5**		
	comp=Z,1.6nm,0.9s,baz=108,slow=1.8,SNR=2.6							
HHC	**Hu-ho-hao-te**	**142.59 346**	*e*P	**PKPdf**	**09 55 05.3**	**-1.7**		
NJ2	**Nanjing**	**147.60 329**	*e*P	**PKPdf**	**09 55 16.2**	**+0.5**		
NJ2			pmax	pmax				
	comp=Z,27nm,0.5s							
LZH	**Lanzhou**	**148.61 354**	*e*P	**PKPdf**	**09 55 16.4**	**-1.1**		
LZH			pP	pPKPbc	09 55 45.1	+0.5		
LZH			sP	sPKPbc	09 55 55.4	+2.0		
LZH			pmax	pmax				
	comp=Z,15nm,1.6s							
PZH	**PanZhiHua**	**158.30 356**	PKP	**PKPdf**	**09 55 31.2**	**-0.4**		

MOS ***09*** *09:45:44.2±1.0, 10.˚96N×138.˚67E, h40km, mb5.4/64, MS4.6/6, Error ellipse: s-maj=8.3km s-min=4.4km az=116.3*

GCMT ***09*** *09:45:46.1±0.2, 11.˚02N±0.˚02×138.˚53E±0.˚01, h25km, MW5.1/112, Moment Tensor Solution. s70,c97; s112,c179; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.71±.16; $M_{\theta\theta}$-1.37±.10; $M_{\phi\phi}$-3.34±.11; $M_{r\theta}$0.82±.23; $M_{\theta\phi}$-2.26±.07; $M_{r\phi}$0.43±.21; Best double couple: M_o4.85500×10^{16} NP1φ_s208.00000°, δ40.00000°, λ82.00000°. NP2φ_s39.00000°, δ50.00000°, λ97.00000°. Principal axes: T 4.8210, Plg83.0000°, Azm352.0000°; N 0.0690, Plg5.0000°, Azm214.0000°; P -4.8890, Plg5.0000°, Azm124.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BJI ***09*** *09:45:46.5, 11.˚27N×138.˚60E, h38km, mB5.2/39, mb5.1/77, Ms4.6/63, Ms7 4.4/60*

IDC ***09*** *09:45:46.9±1.7, 10.˚96N×138.˚75E, h49km±16km, mb4.7/27, mbtmp5.0/31, ML4.3/3, MS4.2/65, Error ellipse: s-maj=13.2km s-min=9.8km az=77.0*

NEIC ***09*** *09:45:48.1±2.5, 11.˚01N±0.˚07×138.˚62E±0.˚08, h48km±4km, mb5.3/428, Error ellipse: s-maj=11.4km s-min=9.7km az=114.0*

DJA ***09*** *09:45:48.4±0.5, 11˚N±3˚×13˚9E±˚, h45km±4km, M5.1/52, mb5.1/52, mB5.6/27, MLv5.1/1, Mw(mB)5.1/27, MwMwp5.0/2, Mwp5.3/2*

ISC 09 09:45:46.8±0.3,**10.93N**±0.˚03×**138.˚69E**±0.˚04,**h47**km±2

MYLDM **Lahad Datu** 20.79 256 P 09 50 25.0 +0.9
MYLDM **Lahad Datu** 20.79 256 P Pn 09 50 26.3 -0.7
comp=Z,3µmcomp=Z,4µmcomp=Z,280nm,1.6s
NACB **Ninganchiao** 20.93 311 P 09 50 25.6 0.0
TPUB **Ta-pu** 21.17 308 P 09 50 27.6 -0.7
TPUB IAmb IAmb 09 50 36.7
comp=Z,255nm,1.1s
SSLB **Suanglung** 21.19 309 P P 09 50 28.2 -0.2
SSLB IAmb IAmb 09 50 35.6
comp=Z,141nm,0.9s
YHNB **Yeheng** 21.38 312 P P 09 50 30.6 +0.1
YHNB IAmb IAmb 09 50 39.2
comp=Z,274nm,1.3s
MPSI **Mapaga** 21.43 242 P P 09 50 32.4 +1.3
JSU **Suzuyama** 21.85 341 P P 09 50 36.2 +0.7
PMG **Port Moresby** 21.88 157 P P 09 50 35.8 0.0
comp=Z,29nm,0.9s,baz=352,slow=5.1,SNR=4.2
comp=Z,29nm,0.9s
PMG **Port Moresby** 21.88 157 P 09 50 35.8 0.0
PMG **Port Moresby** 21.88 157⇑*i*P P 09 50 36.1 +0.2
PMG pmax pmax
comp=Z,95nm,1.3s
PMG **Port Moresby** 21.88 157 P P 09 50 45.9 +10
JHJ **Hachijo jima 2** 22.11 2 LR LR 09 57 18.6
comp=Z,1µm,19.7s,baz=194,slow=31
KKM **Kota Kinabalu** 22.75 260 P 09 50 43.3 -2.0
KKM **Kota Kinabalu** 22.75 260 P P 09 50 48.6 +3.3
comp=Z,1µmcomp=Z,63nm,1.2s
JMN **Monobe** 23.12 350 P 09 50 47.6 -1.3
JMN IAmb IAmb 09 50 56.0
comp=Z,159nm,1.1s
JNU **Nakatsue** 23.23 343 LR LR 09 59 27.9
comp=Z,520nm,18.4s,baz=148,slow=35
TTSI **Tana Toraja** 23.35 235 P P 09 50 51.7 +0.5
comp=Z,69nm,0.9s
QZH2 **Quanzhou** 23.61 309 P P 09 50 49.5 -4.1
QZH2 S S 09 55 05.0 +0.1
QZH2 pmax pmax
comp=Z,430nm,8.9s
QZH2 L L
comp=Z,710nm,14.8s
QZH2 L L
comp=Z,610nm,18.9s
QZH2 L L
comp=Z,1µm,16.8s
SPSI **Sidrap Palu** 23.95 233 P P 09 50 56.4 -0.4
KDU **Kakadu** 24.26 195 P P 09 50 59.0 -0.6
comp=Z,16nm,1.5s
INU **Inuyama** 24.36 357 P 09 50 59.4 -1.0
KAPI **Kappang** 24.62 231 P P 09 51 02.3 -0.7
KAPI **Kappang** 24.62 231*ce*P P 09 51 02.8 -0.2
KAPI pmax pmax
comp=Z,15nm,0.9s
MTN **Manton Dam** 24.78 198 P P 09 51 03.0 -1.3
SOEI **Soe** 25.06 215 P P 09 51 06.2 -0.8
SOEI IAmb IAmb 09 51 19.1
comp=Z,69nm,0.9s
SOEI **Soe** 25.06 215 P P 09 51 07.3 +0.3
comp=Z,82nm,1.1s
COEN **Coen** 25.12 170 P P 09 51 09.1 +1.7
comp=Z,20nm,1.5s
MMRI **Maumere** 25.41 221 P P 09 51 09.2 -0.9
MMRI IAmb IAmb 09 51 35.6
comp=Z,167nm,1.5s
MJAR **Matsushiro Arr** 25.51 359 P P 09 51 07.6 -3.2
comp=Z,11nm,0.9s,baz=178,slow=10,SNR=24
MJAR LR LR 09 59 35.2
comp=Z,552nm,19.5s,baz=154,slow=32
MJAR **Matsushiro Arr** 25.51 359 P P 09 51 09.2 -1.5
MJAR **Matsushiro Arr** 25.51 359 P P 09 51 09.3 -1.5
MJAR pmax pmax
comp=Z,15nm,1.5s
MAJO **Matsushiro** 25.51 359 P 09 51 08.5 -2.3
MAJO **Matsushiro** 25.51 359*c* *i*P P 09 51 09.0 -1.8
BATI **Baumata** 25.77 216 LR LR 10 01 00.3
comp=Z,358nm,18.7s,baz=42,slow=35
BATI **Baumata** 25.77 216 P P 09 51 12.6 -0.8
SSE **Sheshan** 25.81 324 P P 09 51 13.4 -0.2
SSE S S 09 55 41.1 +1.3
SSE pmax pmax
comp=Z,19nm,1.4s
SSE L L
comp=Z,310nm,15.3s
SSE L L
comp=Z,210nm,14.9s
EDFI **Ende, Flores** 25.85 222 P P 09 51 12.4 -1.8
SBUM **Sibu** 27.58 254 P 09 51 28.1 -1.7
SBUM **Sibu** 27.58 254 P P 09 51 31.6 +1.8
NJ2 **Nanjing** 27.88 322 *e*P P 09 51 33.6 +1.4
NJ2 pmax pmax
comp=Z,24nm,0.6s
NJ2 L L
comp=Z,2µm,18.9s
NJ2 L L
comp=Z,2µm,19.0s
H11S3 **WAKE ISLAND Hy** 28.07 71 T T 10 21 40.7
baz=254,slow=74
H11S1 **WAKE ISLAND Hy** 28.09 71 T T 10 21 40.7
baz=254
H11S2 **WAKE ISLAND Hy** 28.09 71 T T 10 21 36.4
baz=254,slow=74
KSRS **Korea Array** 28.14 342 P P 09 51 33.5 -0.9
comp=Z,6.6nm,0.7s,baz=167,slow=9.9,SNR=24
KSRS PcP PcP 09 54 48.2 +0.5
comp=Z,2.9nm,0.8s,baz=202,slow=2.6,SNR=9.3
KSRS LR LR 10 02 28.6
comp=Z,635nm,18.1s,baz=155,slow=36
comp=Z,6.6nm,0.7s
KSAR **Wonju Array Be** 28.14 342 P 09 51 33.3 -1.1
KSAR **Wonju Array Be** 28.14 342 P P 09 51 33.3 -1.1
KNRA **Kununurra** 28.20 201 P P 09 51 34.1 -1.1
comp=Z,26nm,1.0s
KNRA **Kununurra** 28.20 201 P 09 51 33.0 -2.2
H11N1 **WAKE ISLAND Hy** 28.53 69 T T 10 22 19.2
baz=254,slow=75,SNR=39
H11N2 **WAKE ISLAND Hy** 28.54 69 T T 10 22 07.3
baz=254,slow=75,SNR=41
H11N3 **WAKE ISLAND Hy** 28.55 69 T T 10 22 20.6
baz=254,slow=75,SNR=32
QIZ **Qiongzhong** 28.98 290 P P 09 51 45.0 +2.9
QIZ S S 09 56 31.6 +1.5
QIZ pmax pmax
comp=Z,270nm,9.8s
QIZ L L
comp=Z,230nm,12.9s
QIZ L L
comp=Z,440nm,14.7s
QIZ L L
comp=Z,550nm,16.6s
HNR **Honiara** 29.26 133 LR LR 10 02 33.6
comp=Z,15nm,20.2s,baz=36,slow=34
MTSU **Mount Surprise** 29.40 169 P P 09 51 47.7 +1.9
comp=Z,4.9nm,0.9s
WHN **Wuhan** 29.87 314 P P 09 51 50.5 +0.6
WHN pmax pmax
comp=Z,60nm,1.1s
GULI **GuiLin** 30.39 302 P P 09 51 54.8 +0.2
GULI S S 09 56 54.1 +1.9
GULI pmax pmax
comp=Z,22nm,1.4s
GULI L L
comp=Z,360nm,16.0s
GULI L L
comp=Z,340nm,16.0s
GULI L L
comp=Z,490nm,17.9s
WRAB **Tennant Creek** 30.96 188 P P 09 51 58.0 -1.6
WRAB **Tennant Creek** 30.96 188*de*P P 09 51 59.2 -0.4
WRAB pmax pmax
comp=Z,15nm,1.7s
WR8 **Warramunga Arr** 30.96 188 P P 09 51 57.5 -2.1
WRA **Warramunga Arr** 30.97 188 P P 09 51 58.9 -0.8
comp=Z,2.5nm,0.6s,baz=9.0,slow=9.4,SNR=15
WRA PcP PcP 09 54 55.8 +0.6
comp=Z,2.9nm,0.7s,baz=356,slow=2.7,SNR=6.8
comp=Z,2.5nm,0.6s
WRA **Warramunga Arr** 30.97 188 P P 09 51 58.0 -1.7
QIS **Mount Isa** 31.30 178 P P 09 52 03.1 +0.6
comp=Z,33nm,1.2s
FITZ **Fitzroy Crossi** 31.59 204 LR LR 10 05 05.8
comp=Z,291nm,21.5s,baz=28,slow=37
CTA **Charters Tower** 31.70 166 LR LR 10 04 40.4
comp=Z,486nm,18.9s,baz=347,slow=36
CTAO **Charters Tower** 31.70 166 P 09 52 04.8 -1.3
CTAO **Charters Tower** 31.70 166 P P 09 52 04.8 -1.3
CTAO pmax pmax
comp=Z,11nm,0.9s
DL2 **Dalian** 31.75 334 P P 09 52 06.7 +0.3
DL2 S S 09 57 17.1 +4.0
DL2 pmax pmax
comp=Z,54nm,1.5s
DL2 pmax pmax
comp=Z,530nm,6.8s
DL2 L L
comp=Z,670nm,14.2s
DL2 L L
comp=Z,380nm,11.8s
DL2 L L
comp=Z,850nm,14.9s
TIA **Tai'an** 31.85 326 P P 09 52 06.9 -0.5
TIA pmax pmax
comp=Z,17nm,1.1s
TIA L L
comp=Z,580nm,18.2s
TIA L L
comp=Z,470nm,17.6s
TIA L L
comp=Z,630nm,18.4s
PSTR **Posyet** 32.35 349*c* *i*P P 09 52 11.0 -0.6
ASAJ **Asahikawa** 33.24 5 LR LR 10 06 28.0
comp=Z,264nm,19.2s,baz=186,slow=37
ENH **Enshi** 33.27 310 P P 09 52 20.5 +0.6
ENH pP **pwP** 09 52 33.0 -2.1
ENH sP **sP** 09 52 38.1 +1.2
ENH x x 09 52 56.0
LYN **LuoYang** 33.54 319 P P 09 52 22.4 +0.3
LYN S S 09 57 46.0 +4.9
LYN pmax pmax
comp=Z,39nm,0.8s
LYN pmax pmax
comp=Z,430nm,4.5s
LYN L L
comp=Z,880nm,20.3s
LYN L L
comp=Z,520nm,19.6s
LYN L L
comp=Z,1µm,19.6s
USRK **Ussuriysk Ar.** 33.66 351 P P 09 52 22.4 -0.5
comp=Z,6.3nm,0.6s,baz=180,slow=9.3,SNR=12
comp=Z,6.3nm,0.6s
HNS **HongShan** 34.06 325 ⇑P P 09 52 26.3 -0.3
HNS sS **sS** 09 58 07.7 +0.2
HNS pmax pmax
comp=Z,42nm,1.0s
HNS L L
comp=Z,730nm,16.7s
HNS L L
comp=Z,370nm,16.9s
HNS L L
comp=Z,810nm,16.1s
ASAR **Alice Springs** 34.70 188 P P 09 52 32.2 0.0
comp=Z,4.7nm,0.5s,baz=16,slow=13,SNR=160
ASAR PcP **PcP** 09 55 06.3 +0.8
comp=Z,3.0nm,0.8s,baz=20,slow=2.1,SNR=6.0
ASAR LR LR 10 07 03.2
comp=Z,557nm,19.9s,baz=6.5,slow=37
comp=Z,4.7nm,0.5s
ASAR **Alice Springs** 34.70 188 P 09 52 32.0 -0.3
KPJI **Karang Pucung** 34.73 240 P P 09 52 33.8 +1.1
comp=Z,55nm,1.0s
BJI2 **Beijing** 35.19 329 P P 09 52 36.3 0.0
BJI2 pP **pP** 09 52 46.4 -1.8
BJI2 sP **pwP** 09 52 50.0 -0.9
BJI2 PcP **PcP** 09 55 07.5 +0.8
BJI2 S S 09 58 05.8 -0.5
BJI2 pmax pmax
comp=Z,33nm,1.0s
BJI2 L L
comp=Z,200nm,11.4s
BJI2 L L
comp=Z,120nm,16.1s
BJI2 L L
comp=Z,350nm,15.7s
BJT **Baijiatuao** 35.19 329 IAmb IAmb 09 52 37.4
comp=Z,62nm,1.0s
BJT **Baijiatuao** 35.19 329 P P 09 52 36.1 -0.2
BJT pP **pP** 09 52 48.3 +0.1
BJT x x 09 52 53.1
BJT x x 09 52 57.4
BJT x x 09 53 04.2
TIY **Taiyuan** 35.59 323 P P 09 52 47.2 +7.3
TIY S S 09 58 14.2 +1.4
TIY pmax pmax
comp=Z,240nm,5.1s
TIY LR LR
comp=N,590nm,17.2s
TIY LR LR
comp=E,430nm,18.5s
TIY LR LR
comp=Z,630nm,16.5s
LEM **Lembang** 35.60 242 LR LR 10 07 30.1
comp=Z,219nm,20.5s,baz=204,slow=36
XAN **Xi'an** 35.63 315 ⇑P P 09 52 40.2 -0.1
XAN pP pP 09 52 49.4 -2.9
XAN S S 09 58 14.9 +1.5
XAN pmax pmax
comp=Z,25nm,1.2s
XAN L L
comp=Z,520nm,18.8s
XAN L L
comp=Z,530nm,18.6s
XAN L L
comp=Z,810nm,19.2s
BBJI **Bungbulang** 35.89 241 IAmb IAmb 09 52 40.8
comp=Z,40nm,0.9s
BBJI **Bungbulang** 35.89 241 P P 09 52 40.2 -2.5
BNX **BinXian** 36.01 347 ⇑P P 09 52 42.7 -0.6
BNX S S 09 58 22.4 +3.6
BNX pmax pmax
comp=Z,60nm,0.9s
BNX pmax pmax
comp=Z,300nm,4.5s
BNX L L
comp=Z,320nm,19.7s
BNX L L
comp=Z,350nm,16.6s
BNX L L
comp=Z,470nm,18.4s
YSS **Yuzhno-Sakhali** 36.07 5 P 09 52 43.1 -0.7
YSS IAmb IAmb 09 52 44.7
comp=Z,40nm,1.3s
YSS **Yuzhno-Sakhali** 36.07 5 *e*P P 09 52 43.4 -0.4
YSS *e* 09 54 03.0
YSS *e*S S 09 58 19.0 -0.7
YSS pmax pmax
comp=Z,20nm,1.1s
YSS MLR MLR
comp=Z,100nm,17.0s
YSS MLR MLR
comp=N,200nm,16.0s
YSS MLR MLR
comp=E,100nm,17.0s
KMI2 **Kunming** 36.85 297 ⇑P P 09 52 52.2 +1.1
KMI2 pmax pmax
comp=E,25nm,0.7s
KMI2 pmax pmax
comp=E,180nm,9.1s
KMI2 L L
comp=E,200nm,16.5s
KMI2 L L
comp=E,600nm,18.5s
KMI2 L L
comp=E,760nm,13.8s
WRKA **Warakurna** 37.15 196 P P 09 52 52.8 -0.5
comp=Z,6.5nm,1.9s
PSAC2 **Pilbara Seismi** 37.19 210 P P 09 52 51.9 -1.7
comp=Z,32nm,1.2s
PSAC1 **Pilbara Seismi** 37.21 210 P P 09 52 52.0 -1.8
comp=Z,21nm,1.1s
PSA00 **Pilbara Seismi** 37.22 210 P P 09 52 52.2 -1.7
comp=Z,20nm,1.0s
PSA00 **Pilbara Seismi** 37.22 210 P 09 52 51.8 -2.1
PSA00 **Pilbara Seismi** 37.22 210 IAmb IAmb 09 52 52.6
comp=Z,18nm,0.9s
PSAB3 **Pilbara Seismi** 37.23 210 P P 09 52 52.3 -1.7
comp=Z,23nm,1.2s
QLP **Quilpie** 37.67 172 P P 09 52 57.6 +0.1
comp=Z,29nm,0.9s
CD2 **Chengdu** 37.98 307 P P 09 53 00.5 +0.2
CD2 S S 09 58 56.2 +6.9
CD2 pmax pmax
comp=Z,20nm,0.4s
CD2 pmax pmax
comp=Z,260nm,5.0s
CD2 L L
comp=Z,720nm,11.8s
CD2 L L
comp=Z,480nm,12.4s
PZH **PanZhiHua** 38.10 299 P P 09 53 02.2 +0.7
PZH S S 09 58 52.6 +1.1
PZH pmax pmax
comp=Z,30nm,0.6s
PZH pmax pmax
comp=Z,220nm,5.1s
PZH L L
comp=Z,220nm,17.5s
PZH L L
comp=Z,180nm,13.7s
PZH L L
comp=Z,330nm,17.6s
HHC **Hu-ho-hao-te** 38.21 326⇑*i*P P 09 53 02.5 +0.3
HHC PP **PnPn** 09 54 36.3 +4.1
HHC S **S** 09 58 52.9 +0.2
HHC sS sS 09 59 11.7 +0.3
HHC pmax pmax
comp=Z,20nm,0.8s
HHC pmax pmax
comp=Z,150nm,10.4s
HHC L L
comp=Z,470nm,17.6s
HHC L L
comp=Z,270nm,18.3s
HHC L L
comp=Z,500nm,18.6s
XLT **XiLinHaoTe** 38.23 333 *e*P P 09 53 02.0 -0.3
XLT pmax pmax
comp=Z,45nm,1.1s
XLT L L
comp=Z,36nm,16.7s
XLT L L
comp=Z,230nm,13.6s
XLT L L
comp=Z,360nm,18.2s
BTO2 **Baotou** 39.08 324 *e*P P 09 53 09.5 0.0
BTO2 pP **pP** 09 53 21.7 +0.1
BTO2 sP **sP** 09 53 27.3 +0.4
BTO2 S S 09 59 06.6 +0.7
BTO2 pmax pmax
comp=Z,68nm,1.4s
BTO2 pmax pmax
comp=Z,480nm,8.8s
BTO2 L L
comp=Z,880nm,17.7s
BTO2 L L
comp=Z,940nm,18.5s
BTO2 L L
comp=Z,1µm,17.6s
CM31 **Chiang Mai Arr** 39.11 286 P P 09 53 11.0 +1.1
SNR=18
CMAR **Chiang Mai Arr** 39.11 286 P P 09 53 10.8 +0.9
comp=Z,38nm,0.7s,baz=92,slow=6.7,SNR=169
CMAR PcP **PcP** 09 55 20.5 +1.4
comp=Z,4.1nm,0.6s,baz=97,slow=3.2,SNR=7.1
CMAR LR LR 10 09 31.9
comp=Z,211nm,18.9s,baz=110,slow=36
comp=Z,38nm,0.7s
CHTO **Chiang Mai** 39.14 286 P P 09 53 10.3 +0.1
CHTO **Chiang Mai** 39.14 286 P P 09 53 10.3 +0.1
CHTO pmax pmax
comp=Z,20nm,1.1s
CHTO **Chiang Mai** 39.14 286 P P 09 53 10.2 +0.1
CHTO **Chiang Mai** 39.14 286 P P 09 53 10.2 +0.1
comp=Z,21nm,1.0s
CHTO **Chiang Mai** 39.14 286 P P 09 53 10.2 +0.1
CHTO pP **pP** 09 53 22.4 +0.4
TYV **Tymovskoe** 39.95 4 *e*P P 09 53 17.1 +0.7
TYV *e*S S 09 59 18.4 +0.1
TYV pmax pmax
comp=Z,18nm,1.1s
TYV pmax pmax
comp=Z,200nm,2.9s
TYV smax smax
comp=N,300nm,7.6s
TYV smax smax
comp=E,100nm,7.6s
LZH **Lanzhou** 40.25 314 *e*P P 09 53 20.4 +1.1
LZH pP pP 09 53 29.9 -1.6
LZH S S 09 59 25.6 +2.1
LZH pmax pmax
comp=E,22nm,1.1s
LZH pmax pmax
comp=E,240nm,7.6s
LZH L L
comp=E,390nm,17.9s
LZH L L
comp=E,610nm,17.5s
LZH L L
comp=E,820nm,18.9s
LZDM **Lanzhou Array** 40.29 314 P P 09 53 20.1 +0.3
comp=E,1.5nm,0.3s,baz=101,slow=7.5,SNR=6.7
LZDM PcP **PcP** 09 55 23.9 +1.0
comp=E,1.8nm,0.3s,baz=127,slow=0.7,SNR=4.4
LZDM LR LR 10 09 32.3
comp=E,393nm,19.8s,baz=105,slow=35
comp=E,1.5nm,0.3s
HEH **HeiHe** 40.30 349 *e*P P 09 53 19.1 -0.2
HEH PcP **PcP** 09 55 22.0 -0.2
HEH S S 09 59 23.4 -0.1
HEH pmax pmax
comp=E,81nm,0.7s
HEH L L
comp=E,430nm,22.6s
HEH L L
comp=E,270nm,21.5s
HEH L L
comp=E,660nm,22.3s
TNCH **TengChong** 40.54 296 ⇑P P 09 53 22.1 +0.2
TNCH pP pP 09 53 31.0 -2.8
TNCH sP sP 09 53 39.5 +0.5
TNCH S S 09 59 26.4 -1.7
TNCH pmax pmax
comp=E,240nm,2.3s
TNCH L L
comp=E,880nm,17.1s
TNCH L L
comp=E,940nm,20.2s
TNCH L L
comp=E,580nm,17.6s
KCSI **Kotacane, Aceh** 41.22 263 P P 09 53 25.0 -2.4
SKR **Severo-Kuril's** 42.15 16‖*e*P P 09 53 35.0 +0.5
STKA **Stephens Creek** 42.65 176 P P 09 53 39.3 +0.6
comp=Z,115nm,0.9s
STKA **Stephens Creek** 42.65 176 P P 09 53 38.8 0.0
comp=Z,11nm,0.7s,baz=342,slow=7.9,SNR=17
STKA LR LR 10 12 47.7
comp=Z,985nm,18.3s,baz=10,slow=38
comp=Z,11nm,0.7s
STKA **Stephens Creek** 42.65 176 P P 09 53 38.9 +0.1
STKA **Stephens Creek** 42.65 176 P P 09 53 38.9 +0.1
STKA pmax pmax
comp=Z,92nm,0.9s
FORT **Forrest** 42.70 194 P P 09 53 39.6 +0.4
comp=Z,55nm,0.9s
FORT **Forrest** 42.70 194 P P 09 53 39.0 -0.2
FORT IAmb IAmb 09 53 49.0
comp=Z,42nm,0.8s
CMSA **Cobar Meteorol** 42.75 171 P P 09 53 41.0 +1.4
comp=Z,32nm,1.1s
BBOO **Buckleboo** 43.56 183 P P 09 53 46.7 +0.6
comp=Z,29nm,1.0s
BBOO **Buckleboo** 43.56 183 P P 09 53 46.4 +0.2
ZEA **Zeya** 43.67 350 *e*P P 09 53 46.9 +0.1
ZEA pmax pmax
comp=N,10.0nm,0.6s
ZEA pmax pmax
comp=E,10.0nm,0.6s
ZEA pmax pmax
comp=Z,40nm,0.8s
ZEA pmax pmax
comp=E,100nm,4.1s
ZEA pmax pmax
comp=Z,100nm,5.0s
PASG **PASIGHAT** 44.02 299 *e*P P 09 53 51.1 +1.1
HTT **Hallett** 44.11 180 P P 09 53 57.2 +6.7
IMP **Imphal** 44.57 294 *e*P P 09 53 53.6 -0.9
IMP IAmb IAmb 09 53 54.5
comp=Z,37nm,0.5s
GTA2 **Gaotai** 44.73 316 ⇑P P 09 53 56.2 +0.6

GTA2 pmax pmax
comp=Z,34nm,1.0s
GTA2 pmax pmax
comp=Z,230nm,6.3s
GTA2 L L
comp=Z,280nm,16.8s
GTA2 L L
comp=Z,340nm,15.8s
GTA2 L L
comp=Z,470nm,18.5s
PEA0B Petropavlovsk- 44.76 16 ⇓*i*P **P 09 53 55.4 -0.1**
PETK Petropavlovsk- 44.76 16 P **P 09 53 55.9 +0.4**
comp=Z,20nm,0.9s,baz=182,slow=7.2,SNR=13
PETK LR LR 10 13 13.9
comp=Z,121nm,18.8s,baz=203,slow=37
comp=Z,20nm,0.9s
PETK Petropavlovsk- 44.76 16 P **P 09 53 55.2 -0.3**
PETK Petropavlovsk- 44.76 16 P **P 09 53 55.2 -0.3**
PET Petropavlovsk 44.95 17 P **P 09 53 56.5 -0.5**
PET IAmb IAmb 09 53 58.5
comp=Z,117nm,1.5s
PET Petropavlovsk 44.95 17 *e*P **P 09 53 57.0 0.0**
PET *e*S **S 10 00 32.5 +0.7**
PET pmax pmax
comp=Z,40nm,0.7s
PET pmax pmax
comp=Z,100nm,8.0s
PET MLR MLR
comp=Z,200nm,17.0s
PET MLR MLR
comp=Z,300nm,15.0s
PET Petropavlovsk 44.95 17 P **P 09 53 56.8 -0.2**
comp=Z,47nm,1.2s
SAIH SAIHA 45.09 291 *e*P **P 09 53 58.7 -0.1**
SAIH IAmb IAmb 09 54 02.6
comp=Z,63nm,0.9s
MORW Morawa 45.38 208 P **P 09 54 00.2 -0.6**
comp=Z,12nm,1.2s
MORW Morawa 45.38 208 P **P 09 54 00.1 -0.6**
ULN Ulaanbaatar 45.39 330 P **P 09 54 01.4 +0.6**
ULN Ulaanbaatar 45.39 330*c i*P **P 09 54 01.4 +0.6**
ULN pmax pmax
comp=Z,52nm,1.5s
ULN Ulaanbaatar 45.39 330 P **P 09 54 01.6 +0.8**
ULN Ulaanbaatar 45.39 330 P **P 09 54 01.2 +0.4**
ULN Ulaanbaatar 45.39 330 P **P 09 54 01.5 +0.6**
ULN pP **pwP 09 54 13.9 -2.0**
SONM Songino Array 45.70 330 P **P 09 54 03.5 +0.3**
comp=Z,19nm,1.0s,baz=139,slow=8.2,SNR=82
SONM PcP **PcP 09 55 40.7 +0.1**
comp=Z,6.2nm,0.7s,baz=149,slow=4.4,SNR=6.7
SONM LR LR 10 15 02.3
comp=Z,346nm,18.3s,baz=149,slow=38
comp=Z,19nm,1.0s
SONM Songino Array 45.70 330 P **P 09 54 03.4 +0.3**
SONM IAmb IAmb 09 54 05.0
comp=Z,45nm,1.2s
SONM Songino Array 45.70 330 P **P 09 54 03.4 +0.3**
SONM pmax pmax
comp=Z,45nm,1.2s
CIT Chita 45.78 339 *e*P **P 09 54 02.9 -0.8**
CIT *e* 09 54 10.0
CIT *e* 09 55 40.8
CIT pmax pmax
comp=Z,100nm,2.0s
TEZP TEZPUR 45.91 296 *e*P **P 09 54 05.1 +0.1**
TEZP IAmb IAmb 09 54 06.0
comp=Z,38nm,0.9s
YNG Young 45.91 169 P **P 09 54 07.5 +2.6**
comp=Z,14nm,1.1s
BRDH Bariadhala 46.35 291 LR LR 10 14 54.7
comp=Z,206nm,18.7s,baz=111,slow=38
BLDU Ballidu 46.39 206 P **P 09 54 07.4 -1.2**
comp=Z,21nm,2.5s
SHL Shillong 46.53 295 P **P 09 54 09.8 -0.4**
SHL Shillong 46.53 295 P **P 09 54 09.8 -0.4**
SHL pmax pmax
comp=Z,26nm,1.0s
SHL Shillong 46.53 295 P **P 09 54 10.4 +0.3**
SNR=8.8
SHL Shillong 46.53 295 *e*P **P 09 54 09.8 -0.4**
GUWA GUWAHATI 46.81 296 *e*P **P 09 54 12.1 0.0**
GUWA IAmb IAmb 09 54 18.0
comp=Z,7.8nm,0.5s
GOMU GeErMu 46.90 310 P **P 09 54 13.3 +0.2**
GOMU S **S 10 01 02.0 +0.9**
GOMU pmax pmax
comp=Z,9.0nm,0.9s
GOMU L L
comp=Z,220nm,16.8s
GOMU L L
comp=Z,270nm,16.8s
GOMU L L
comp=Z,360nm,16.8s
CAN Canberra 47.02 168 P **P 09 54 15.4 +1.9**
comp=Z,29nm,1.6s
LSA Lhasa 47.96 300 P **P 09 54 19.7 -1.9**
LSA pmax pmax
comp=Z,16nm,1.0s
NWAO Narrogin (SRO) 48.17 204 LR LR 10 15 44.5
comp=Z,173nm,20.1s,baz=152,slow=37
MSVF Nonsavu 48.18 126 LR LR 10 11 44.5
comp=Z,507nm,21.7s,baz=310,slow=32
MSVF Nonsavu 48.18 126
MSVF IAmb IAmb 09 54 39.1
comp=Z,28nm,1.0s
MSVF Nonsavu 48.18 126⇑ *e*P **P 09 54 24.7 +1.8**
MSVF pmax pmax
comp=Z,41nm,1.1s
MSVF Nonsavu 48.18 126 P **P 09 54 25.0 +2.1**
TOO Toolangi 48.66 173 P P 09 54 33.9 +7.7
ZAK Zakamensk 48.92 331 *e*P **P 09 54 28.0 -0.2**
ZAK pmax pmax
comp=Z,46nm,1.3s
MA2 Magadan 49.39 8 P **P 09 54 31.4 -0.1**
MA2 IAmb IAmb 09 54 32.9
comp=Z,53nm,1.4s
MA2 Magadan 49.39 8*c i*P **P 09 54 31.4 -0.1**
MA2 pmax pmax
comp=Z,30nm,1.0s
MA2 Magadan 49.39 8 P **P 09 54 31.3 -0.2**
comp=Z,30nm,1.2s
TLY Talaya 49.61 332 LR LR 10 15 35.5
comp=Z,387nm,20.4s,baz=122,slow=36
TLY Talaya 49.61 332 **P 09 54 34.1 +0.7**
TLY Talaya 49.61 332*c i*P **P 09 54 34.1 +0.7**
TLY pmax pmax
comp=Z,41nm,1.7s
TLY Talaya 49.61 332 P **P 09 54 34.1 +0.7**
IRK Irkutsk 49.71 333 *e*P **P 09 54 33.6 -0.5**
IRK pmax pmax
comp=Z,69nm,1.8s
SHEM Shemya Is, Ala 50.48 27 LR LR 10 13 32.0
comp=Z,187nm,20.9s,baz=248,slow=33
MOY Mondy 50.85 331 *e*P **P 09 54 43.6 +0.7**
MOY pmax pmax
comp=Z,47nm,1.9s
EVN Everest 51.38 297 IAmb IAmb 09 54 48.8
comp=Z,18nm,0.6s
YAK Yakutsk 51.44 355 LR LR 10 15 51.8
comp=Z,185nm,19.1s,baz=164,slow=35
YAK Yakutsk 51.44 355 P **P 09 54 46.9 +0.1**
YAK Yakutsk 51.44 355*c i*P **P 09 54 46.5 -0.4**
YAK pmax pmax
comp=Z,125nm,1.0s
BOK Bokaro 51.73 292 *e*P **P 09 54 50.3 +0.5**
KNGR Kungurtug, Tuv 51.96 328⇑ *e*P **P 09 54 52.1 +0.9**
KNGR pmax pmax
comp=Z,31nm,1.0s
SEY Seymchan 52.85 8⇑ *i*P **P 09 54 58.6 +1.3**
SEY pmax pmax
comp=Z,41nm,0.8s
RAGD RAYAGADA 53.79 286 *e*P **P 09 55 05.6 +0.5**
RAGD IAmb IAmb 09 55 06.5
comp=Z,26nm,1.0s
WMQ Urumqi 54.74 316 *e*P **P 09 55 12.7 +1.1**
WMQ sP sP 09 55 28.8 -0.5
WMQ PcP **PcP 09 56 14.7 +0.9**
WMQ pmax pmax
comp=Z,35nm,1.1s
WMQ pmax pmax
comp=Z,260nm,4.7s
WMQ L L
comp=Z,350nm,12.3s
WMQ L L
comp=Z,200nm,20.9s

AFI Afiamalu 54.97 116 LR LR 10 14 20.9
comp=Z,312nm,21.4s,baz=304,slow=31
DGZ Jazzator, Alta 57.16 323*c i*P **P 09 55 29.7 +0.7**
DGZ pmax pmax
comp=Z,29nm,1.1s
PALK Pallekele 57.31 272 LR LR 10 19 22.8
comp=Z,122nm,20.5s,baz=76,slow=35
PTH Pithoragarh 57.34 298 *e*P **P 09 55 29.7 -0.9**
PTH IAmb IAmb 09 55 37.9
comp=Z,14nm,0.7s
ZSN Zaisan 57.88 320 *e*P **P 09 55 34.4 +0.5**
ZSN Zaisan 57.88 320 *e*P **P 09 55 34.5 +0.5**
HYB Hyderabad 58.48 284⇓ *e*P **P 09 55 38.0 -0.6**
HYB *e*pP **pwP 09 55 52.1 -2.4**
KLP Kalpa 59.22 300 *e*P **P 09 55 43.5 -0.4**
MK31 Makanchi Array 59.32 318*c i*P **P 09 55 44.5 +0.5**
MKAR Makanchi Array 59.32 318 P **P 09 55 44.6 +0.6**
comp=Z,28nm,0.7s,baz=98,slow=8.7,SNR=145
MKAR LR LR 10 22 57.4
comp=Z,200nm,18.6s,baz=86,slow=38
comp=Z,28nm,0.7s
MKAR Makanchi Array 59.32 318 **P 09 55 44.7 +0.7**
BHPL Bhopal 59.46 291 *e*P **P 09 55 44.5 -0.8**
BHPL IAmb IAmb 09 55 46.7
comp=Z,15nm,0.9s
MAKZ Makanchi 59.53 318 **P 09 55 46.1 +0.7**
MAKZ IAmb IAmb 09 55 46.6
comp=Z,31nm,0.8s
MAKZ Makanchi 59.53 318 P **P 09 55 46.1 +0.7**
MAKZ pmax pmax
comp=Z,31nm,0.8s
NRDN NARMADA NAGAR 59.69 290 *e*P **P 09 55 45.7 -1.2**
NRDN IAmb IAmb 09 55 52.1
comp=Z,38nm,1.0s
BILL Bilibino 59.87 12 **P 09 55 47.4 +0.1**
BILL Bilibino 59.87 12*ce*P **P 09 55 47.4 +0.1**
BILL pmax pmax
comp=Z,69nm,1.8s
BILL Bilibino 59.87 12 P **P 09 55 47.6 +0.2**
BILL x x 09 55 58.3
BILL pP **pP 09 56 00.7 +1.0**
BILL sP **pwP 09 56 06.0 +2.2**
KOD Kodaikanal 60.09 276 *e*P **P 09 55 49.7 -0.4**
KOD IAmb IAmb 09 55 55.5
comp=Z,11nm,0.9s
SMLA Simla 60.11 300 *e*P **P 09 55 49.5 -0.1**
SHLS Shalkode 60.26 314*c i*P **P 09 55 49.1 -1.5**
SHLS pmax pmax
comp=Z,11nm,0.8s
SHLS Shalkode 60.26 314⇑ *i*P **P 09 55 49.1 -1.5**
comp=Z,11nm,0.8s
PDGK Podgornoye 60.28 314 P **P 09 55 50.3 -0.5**
ZAA0 Zalesovo Array 60.39 327 IAmb IAmb 09 55 51.8
comp=Z,27nm,1.1s
ZALV Zalesovo Beam 60.39 327 P **P 09 55 50.6 -0.5**
comp=Z,15nm,0.6s,baz=107,slow=6.5,SNR=30
ZALV PcP **PcP 09 56 34.5 -1.2**
comp=Z,7.8nm,0.6s,baz=118,slow=3.6,SNR=6.1
ZALV LR LR 10 22 28.7
comp=Z,351nm,19.8s,baz=110,slow=36
comp=Z,15nm,0.6s
ZALV Zalesovo Beam 60.39 327 P **P 09 55 50.8 -0.3**
KUDL Kundal 60.48 296 *e*P **P 09 55 52.7 +0.5**
UZB Uzynbulak 60.58 314 *e*P **P 09 55 53.2 +0.4**
UZB pmax pmax
comp=Z,14nm,1.2s
UZB Uzynbulak 60.58 314 *e*P **P 09 55 53.3 +0.4**
comp=Z,14nm,1.2s
URZ Urewera 60.68 146 LR LR 10 19 32.7
comp=Z,128nm,20.8s,baz=302,slow=33
UNV Unalaska Valle 60.85 34 P **P 09 55 54.3 +0.1**
baz=247
DHRM DHARAMSHALA 60.95 301 *e*P **P 09 55 54.3 -1.3**
DHRM IAmb IAmb 09 55 58.3
comp=Z,27nm,0.8s
TIXI Tiksi 60.98 356 LR LR 10 21 44.9
comp=Z,198nm,20.1s,baz=190,slow=35
TIXI Tiksi 60.98 356 **P 09 55 54.5 -0.3**
TIXI IAmb IAmb 09 55 56.5
comp=Z,22nm,1.1s
TIXI Tiksi 60.98 356⇑ *i*P **P 09 55 54.4 -0.4**
TIXI pmax pmax
comp=Z,25nm,1.3s
SATY Saty 60.99 313*c i*P **P 09 55 56.1 +0.5**
SATY pmax pmax
comp=Z,20nm,1.0s
SATY Saty 60.99 313⇑ *i*P **P 09 55 56.2 +0.5**
comp=Z,20nm,1.0s
THN Thein Dam 61.42 301 *e*P **P 09 55 58.3 -0.3**
THN IAmb IAmb 09 56 03.9
comp=Z,40nm,1.2s
TDK Taldyqorghan 61.44 315 *e*P **P 09 55 59.3 +0.8**
TDK pmax pmax
comp=Z,18nm,0.8s
TDK Taldyqorghan 61.44 315 *e*P **P 09 55 59.3 +0.8**
comp=Z,18nm,0.8s
ARXS Arharly 61.66 314 *e*P **P 09 56 00.3 +0.3**
KDJ Kajisay 61.69 312 IAmb IAmb 09 56 02.3
comp=Z,39nm,1.1s
RPZ Rata Peaks 61.84 154 LR LR 10 20 40.0
comp=Z,144nm,20.1s,baz=134,slow=34
MDOK Medeo 61.99 313 *e*P **P 09 56 02.9 +0.6**
MDOK Medeo 61.99 313 *e*P **P 09 56 03.0 +0.6**
TNSS Tian-Shan 62.04 313 *e*P **P 09 56 03.1 +0.1**
TNSS Tian-Shan 62.04 313 *e*P **P 09 56 03.2 +0.1**
AAA Alma-Ata 62.09 313 *e*P **P 09 56 03.7 +0.8**
AAA pmax pmax
comp=Z,15nm,0.7s
AAA Alma-Ata 62.09 313 *e*P **P 09 56 03.8 +0.8**
comp=Z,15nm,0.7s
KSH2 Kashi 62.38 308 P **P 09 56 06.3 +1.2**
KSH2 pmax pmax
comp=Z,29nm,0.8s
ULHL Ulahol 62.39 312 P **P 09 56 06.1 +0.9**
SNR=9.5
NRN Naryn 62.42 311 IAmb IAmb 09 56 07.4
comp=Z,28nm,1.2s
KAD Kad 62.65 284 *e*P **P 09 56 06.4 -0.7**
BOOM Boomskoye usch 62.66 312 IAmb IAmb 09 56 08.9
comp=Z,56nm,1.6s
KURK Kurchatov 62.82 322 P **P 09 56 07.3 -0.2**
KURK Kurchatov 62.82 322*c i*P **P 09 56 07.6 +0.1**
KURK pmax pmax
comp=Z,81nm,0.8s
KURK Kurchatov 62.82 322 P **P 09 56 07.7 +0.2**
KURK Kurchatov 62.82 322 P **P 09 56 07.8 +0.2**
KURK x x 09 56 15.8
KURK pP **pP 09 56 20.7 +0.5**
KURK sP **sP 09 56 26.7 +1.4**
KURBB Kurchatov Arra 62.84 322 P **P 09 56 07.8 0.0**
comp=Z,46nm,0.9s,baz=118,slow=5.9,SNR=142
KURBB LR LR 10 25 10.9
comp=Z,256nm,18.2s,baz=162,slow=38
comp=Z,46nm,0.9s
UDPR Udaipur 62.87 292 *e*P **P 09 56 08.2 -0.3**
FALS False Pass 62.90 33 P **P 09 56 08.0 0.0**
baz=249,SNR=7.8
TKM2 Tokmak 2 62.99 313 P **P 09 56 09.6 +0.5**
SNR=11
GAMB Gambell 63.16 22 IAmb IAmb 09 56 11.7
comp=Z,42nm,1.3s
GAMB Gambell 63.16 22 P **P 09 56 10.6 +1.0**
baz=237,SNR=20
KBK Karagaybulak 63.41 312 P **P 09 56 12.8 +0.9**
SNR=8.2
CHMS Chumysh 63.61 313 P **P 09 56 13.5 +0.5**
SNR=10
NIL Nilore 63.62 302 **P 09 56 13.8 +0.5**
NIL Nilore 63.62 302 P **P 09 56 13.8 +0.5**
NIL pmax pmax
comp=Z,70nm,1.0s
NIL Nilore 63.62 302 P **P 09 56 14.1 +0.9**
UCH Uchtor 63.65 312 P **P 09 56 15.2 +1.4**
SNR=19
AAK Ala-Archa 63.73 312 LR LR 10 25 34.3
comp=Z,178nm,20.4s,baz=68,slow=37
AAK Ala-Archa 63.73 312 **P 09 56 14.3 +0.3**
AAK Ala-Archa 63.73 312*ce*P **P 09 56 14.7 +0.7**
AAK pmax pmax
comp=Z,9.0nm,0.9s
M11K Mekoryuk 63.74 27 P **P 09 56 14.6 +1.2**
baz=244
SGDS Sogindy 63.78 313 *e*P **P 09 56 14.9 +0.8**
USP Ospenovka 63.84 313 P **P 09 56 14.9 +0.4**
SNR=7.8

EKS2 Erkin-Say 64.26 312 P **P 09 56 17.9 +0.4**
SNR=8.8
SDPT Sand Point 64.66 33 P **P 09 56 19.7 +0.2**
baz=252,SNR=9.1
CHNA Chernabura Isl 64.99 34 P **P 09 56 22.1 +0.4**
baz=253
M13K Dall Lake 65.04 28 P **P 09 56 23.5 +1.6**
baz=247,SNR=12
K13K Kusilvak Mount 65.09 26 IAmb IAmb 09 56 24.6
comp=Z,38nm,0.9s
K13K Kusilvak Mount 65.09 26 P **P 09 56 23.5 +1.3**
baz=245
TNA Tin City 65.48 22 IAmb IAmb 09 56 26.9
comp=Z,39nm,1.0s
TNA Tin City 65.48 22 P **P 09 56 25.9 +1.2**
baz=240,SNR=45
O14K Tigyukauivet M 65.57 29 IAmb IAmb 09 56 27.4
comp=Z,30nm,1.1s
O14K Tigyukauivet M 65.57 29 P **P 09 56 26.2 +0.8**
baz=249,SNR=5.9
N14K Kuskokwak Cree 65.62 28 P **P 09 56 26.8 +1.1**
baz=249,SNR=9.9
L14K Kuka Creek 65.70 27 P **P 09 56 27.6 +1.5**
baz=247,SNR=29
M14K Bethel 65.80 28 P **P 09 56 28.0 +1.2**
baz=248,SNR=24
J14K Nanvaranak Lak 65.90 25 IAmb IAmb 09 56 29.8
comp=Z,55nm,1.5s
J14K Nanvaranak Lak 65.90 25 P **P 09 56 28.6 +1.2**
baz=246
ANM Nome 65.96 23 P **P 09 56 29.1 +1.3**
baz=243,SNR=24
F14K Arctic Creek 66.02 22 P **P 09 56 29.7 +1.5**
baz=242
DZA Taraz 66.08 312 *e*P **P 09 56 29.5 +0.5**
DZA Taraz 66.08 312 *e*P **P 09 56 29.6 +0.5**
O15K Ungalikthiuk R 66.24 30 IAmb IAmb 09 56 31.7
comp=Z,32nm,1.1s
O15K Ungalikthiuk R 66.24 30 P **P 09 56 30.7 +1.0**
baz=251,SNR=12
M15K Kasigluk River 66.36 28 P **P 09 56 31.3 +0.8**
baz=249,SNR=11
L15K Ungalak Mounta 66.36 27 P **P 09 56 31.2 +0.8**
baz=248,SNR=11
N15K Kwethluk River 66.45 29 IAmb IAmb 09 56 33.3
comp=Z,44nm,1.1s
N15K Kwethluk River 66.45 29 P **P 09 56 32.2 +1.1**
baz=250,SNR=17
K15K Wolf Creek Mou 66.58 26 IAmb IAmb 09 56 34.2
comp=Z,39nm,1.1s
K15K Wolf Creek Mou 66.58 26 P **P 09 56 33.2 +1.4**
baz=248,SNR=20
G15K Niukluk 66.66 23 P **P 09 56 33.3 +1.0**
baz=244
KK31 Karatay Array 66.70 312 IAmb IAmb 09 56 34.7
comp=Z,53nm,1.8s
KK31 Karatay Array 66.70 312 *i*P **P 09 56 32.6 -0.4**
KKAR Karatay Array 66.70 312 P **P 09 56 32.7 -0.3**
KKAR Karatay Array 66.70 312 P **P 09 56 32.7 -0.3**
F15K North Star Dit 66.75 22 P **P 09 56 34.3 +1.4**
baz=243,SNR=61
NRIK Noril'sk 66.75 342 P **P 09 56 32.6 -0.3**
comp=Z,17nm,0.7s,baz=118,slow=7.4,SNR=47
NRIK LR LR 10 25 56.3
comp=Z,298nm,18.7s,baz=125,slow=36
comp=Z,17nm,0.7s
NRIK Noril'sk 66.75 342 IAmb IAmb 09 56 33.7
comp=Z,27nm,0.9s
NRIK Noril'sk 66.75 342 *i*P **P 09 56 32.5 -0.3**
NRIK pmax pmax
comp=Z,50nm,1.4s
R16K Pilot Point 66.87 32 P **P 09 56 34.2 +0.5**
baz=253
IUG Iuzhnay 66.94 311 *e*P **P 09 56 35.3 +0.6**
IUG pmax pmax
comp=Z,22nm,1.1s
IUG Iuzhnay 66.94 311 *e*P **P 09 56 35.3 +0.6**
comp=Z,22nm,1.1s
P16K Nushagak River 67.09 30 P **P 09 56 36.4 +1.3**
baz=252,SNR=13
KBL Kabul 67.16 303 P **P 09 56 35.7 -0.6**
KBL Kabul 67.16 303 P **P 09 56 35.7 -0.6**
KBL pmax pmax
comp=Z,17nm,1.0s
KBL Kabul 67.16 303 P **P 09 56 36.2 -0.2**
SNR=5.5
N16K Nishlik Lake 67.17 28 P **P 09 56 36.9 +1.2**
baz=251,SNR=16
H16K Elim 67.21 24 P **P 09 56 36.7 +0.9**
baz=246,SNR=37
O16K Kokwok River B 67.22 30 IAmb IAmb 09 56 38.0
comp=Z,29nm,1.1s
O16K Kokwok River B 67.22 30 P **P 09 56 37.0 +1.1**
baz=252,SNR=13
L16K Owhat River 67.27 27 IAmb IAmb 09 56 38.3
comp=Z,52nm,1.4s
L16K Owhat River 67.27 27 P **P 09 56 37.2 +1.0**
baz=250,SNR=16
M16K Timber Creek 67.27 28 IAmb IAmb 09 56 38.5
comp=Z,48nm,1.2s
M16K Timber Creek 67.27 28 P **P 09 56 37.4 +1.2**
baz=251,SNR=12
CHM Chimkent 67.28 311 *e*P **P 09 56 37.4 +0.7**
CHM pmax pmax
comp=Z,9.0nm,0.6s
CHM Chimkent 67.28 311 *e*P **P 09 56 37.5 +0.7**
comp=Z,8.7nm,0.6s
CHGR Chuyangaron 67.29 307*c i*P **P 09 56 37.2 +0.2**
CHGR pmax pmax
comp=Z,51nm,0.8s
J16K Anvik River 67.35 25 P **P 09 56 38.3 +1.6**
baz=248,SNR=12
CHIR Chirikof Islan 67.44 34 P **P 09 56 38.6 +1.2**
baz=256
G16K Koyuk River 67.47 23 P **P 09 56 38.6 +1.1**
baz=246,SNR=12
I17K Unalakleet 67.53 25 IAmb IAmb 09 56 40.7
comp=Z,63nm,1.2s
I17K Unalakleet 67.53 25 P **P 09 56 39.3 +1.5**
baz=248,SNR=25
Q16K King Salmon 67.65 31 P **P 09 56 38.9 +0.3**
baz=254
C16K Lisburne Hills 67.70 19 IAmb IAmb 09 56 40.8
comp=Z,42nm,0.9s
C16K Lisburne Hills 67.70 19 P **P 09 56 39.6 +0.8**
baz=242,SNR=55
O17K Koliganek Bris 67.75 29 P **P 09 56 40.3 +0.9**
baz=253,SNR=24
P17K Kvichak River 67.91 30 P **P 09 56 40.5 +0.2**
baz=254
Q17K Contact Creek 67.93 31 P **P 09 56 40.2 -0.4**
baz=255
N17K Nushagak Hills 67.94 29 IAmb IAmb 09 56 43.2
comp=Z,36nm,1.2s
N17K Nushagak Hills 67.94 29 P **P 09 56 42.0 +1.5**
baz=252,SNR=12
L17K Donlin 67.94 27 P **P 09 56 41.8 +1.4**
baz=251,SNR=17
SHAA Shahritus 68.04 306 **P 09 56 42.5 +0.8**
SHAA IAmb IAmb 09 56 43.7
comp=Z,60nm,1.0s
M17K Holitna River 68.09 28 IAmb IAmb 09 56 44.1
comp=Z,50nm,1.0s
M17K Holitna River 68.09 28 P **P 09 56 43.1 +1.7**
baz=252,SNR=16
K17K Iditarod 68.13 26 P **P 09 56 43.3 +1.7**
baz=251,SNR=16
G17K Kiwalik Mounta 68.17 23 P **P 09 56 43.4 +1.5**
baz=247,SNR=59
D17K Noatak River 68.20 20 P **P 09 56 43.3 +1.4**
baz=244,SNR=42
H17K Granite Mounta 68.24 24 IAmb IAmb 09 56 44.9
comp=Z,37nm,0.9s
H17K Granite Mounta 68.24 24 P **P 09 56 43.9 +1.6**
baz=248,SNR=44
F17K Baldwin Pennin 68.32 22 P **P 09 56 44.3 +1.6**
baz=246,SNR=81
BVA0 Borovoye Array 68.32 323 *i*P **P 09 56 42.9 -0.2**
BVAR Borovoye Array 68.32 323 P **P 09 56 43.2 +0.2**
comp=Z,44nm,0.7s,baz=106,slow=7.9,SNR=183
BVAR LR LR 10 27 22.2
comp=Z,164nm,19.8s,baz=89,slow=36
comp=Z,44nm,0.7s
RAR Rarotonga 68.34 118 LR LR 10 19 15.2
comp=Z,197nm,21.6s,baz=305,slow=29
BORK Borovoye 68.37 323 P **P 09 56 43.5 +0.2**
BORK Borovoye 68.37 323*c i*P **P 09 56 43.5 +0.2**
BORK pmax pmax

comp=Z,60nm,0.7s
BORK Borovoye 68.37 323 P P 09 56 43.6 +0.2
BORK x x 09 56 51.8
E17K Hotham Inlet 68.37 21 P P 09 56 44.6 +1.5
baz=246,SNR=63
SII Sitkinak Islan 68.40 33 P P 09 56 44.6 +1.1
baz=257,SNR=5.1
RDOG Red Dog Mine 68.41 20 P P 09 56 44.6 +1.2
baz=244,SNR=19
Q18K Katmai Hardscr 68.47 31 P P 09 56 43.7 -0.4
baz=255
C17K DeLong Mountai 68.51 20 P P 09 56 45.1 +1.1
baz=244,SNR=23
P18K Big Mountain, 68.56 30 P P 09 56 44.7 +0.2
P18K IAmb IAmb 09 58 48.5
comp=Z,68nm,1.9s
P18K Big Mountain, 68.56 30 P P 09 56 44.6 +0.2
baz=255
N18K Kilae Creek 68.59 29 IAmb IAmb 09 56 47.2
comp=Z,33nm,1.2s
N18K Kilae Creek 68.59 29 P P 09 56 46.1 +1.5
baz=254
L18K Granite Mounta 68.68 27 IAmb IAmb 09 56 47.9
comp=Z,35nm,1.2s
L18K Granite Mounta 68.68 27 P P 09 56 46.8 +1.7
baz=252
O18K Koktuh Hills 68.69 30 P P 09 56 46.8 +1.5
O18K Koktuh Hills 68.69 30 P P 09 56 46.3 +1.0
baz=255,SNR=10.0
M18K Stony River 68.85 28 P P 09 56 47.8 +1.6
baz=253,SNR=15
H18K Honhosa River 68.94 24 P P 09 56 47.8 +1.1
baz=250,SNR=31
E18K Tukpahlearik C 68.94 21 P P 09 56 48.2 +1.6
baz=247,SNR=47
F18K Selawik 68.97 22 P P 09 56 48.0 +1.2
baz=248,SNR=24
OHAK Old Harbor 69.03 33 P P 09 56 48.3 +1.0
baz=257
J18K Innoko River 69.05 26 P P 09 56 48.5 +1.1
baz=252,SNR=11
G18K Tagagawik 69.08 23 IAmb IAmb 09 56 49.7
comp=Z,74nm,1.2s
G18K Tagagawik 69.08 23 P P 09 56 48.7 +1.1
baz=249
O19K Port Alsworth 69.21 29 IAmb IAmb 09 56 50.6
comp=Z,36nm,1.1s
O19K Port Alsworth 69.21 29 P P 09 56 49.2 +0.8
baz=255,SNR=10
Q19K Cape Douglas, 69.23 31 P P 09 56 48.3 -0.3
baz=256
C18K Utukok River 69.24 20 IAmb IAmb 09 56 50.4
comp=Z,25nm,0.8s
C18K Utukok River 69.24 20 P P 09 56 49.4 +0.9
baz=246,SNR=39
N19K Bonanza Creek 69.29 29 IAmb IAmb 09 56 51.1
comp=Z,25nm,0.8s
N19K Bonanza Creek 69.29 29 P P 09 56 50.4 +1.4
baz=255
GCSA Galena City Sc 69.39 24 P P 09 56 50.5 +1.1
baz=251,SNR=28
L19K White Mountain 69.49 27 IAmb IAmb 09 56 52.7
comp=Z,36nm,1.1s
L19K White Mountain 69.49 27 P P 09 56 51.5 +1.3
baz=254
KDAK Kodiak Island 69.52 32 P P 09 56 51.1 +0.8
baz=258
P19K Oil Pt 69.61 30 IAmb IAmb 09 56 52.4
comp=Z,39nm,1.0s
P19K Oil Pt 69.61 30 P P 09 56 51.3 +0.4
baz=256
J19K Poorman 69.68 25 IAmb IAmb 09 56 53.8
comp=Z,83nm,1.6s
J19K Poorman 69.68 25 P P 09 56 52.5 +1.2
baz=253
ILSW Iliamna Southw 69.73 30 P P 09 56 51.9 +0.1
F19K Shaleruckik Mo 69.75 22 P P 09 56 52.3 +0.6
baz=250,SNR=26
G19K Purcell Mounta 69.77 23 P P 09 56 53.1 +1.4
baz=251,SNR=120
Q20K Shuyak Island 69.79 31 P P 09 56 52.2 +0.2
baz=258
A19K Wainwright 69.93 18 P P 09 56 54.3 +1.7
baz=245,SNR=73
C19K Lookout Ridge 69.96 20 P P 09 56 54.6 +1.7
baz=247,SNR=94
RED Redoubt Volcan 70.01 29 IAmb IAmb 09 56 54.6
comp=Z,44nm,1.1s
K20K Telida 70.16 26 IAmb IAmb 09 56 57.1
comp=Z,45nm,1.1s
K20K Telida 70.16 26 P P 09 56 55.7 +1.5
baz=254,SNR=22
E19K Redstone River 70.17 22 IAmb IAmb 09 56 56.6
comp=Z,50nm,0.8s
E19K Redstone River 70.17 22 P P 09 56 55.7 +1.5
baz=250,SNR=69
M20K Styx River 70.20 28 P P 09 56 56.2 +1.6
baz=256
D19K Kuna River 70.22 20 P P 09 56 55.8 +1.2
baz=249,SNR=71
H20K Anotlenegga Mo 70.43 24 P P 09 56 57.2 +1.4
baz=253,SNR=37
N20K Mount Spurr 70.46 29 P P 09 56 56.6 +0.4
baz=257,SNR=6.7
SPCR Spurr Chakacha 70.46 29 P P 09 56 56.7 +0.5
baz=257
CNPM China Poot 70.57 31 P 09 56 57.5 +0.6
CNPM IAmb IAmb 09 56 58.2
comp=Z,65nm,1.0s
F20K Avaraart Lake 70.58 22 P P 09 56 58.3 +1.6
baz=252,SNR=37
BRLK Bradley Lake 70.79 30 IAmb IAmb 09 56 59.2
comp=Z,38nm,0.9s
E20K Nigu River 70.81 21 P P 09 56 59.5 +1.3
baz=251,SNR=75
D20K Etivluk River 70.82 20 P P 09 56 59.5 +1.3
baz=250,SNR=89
BRSE Bradley Lake S 70.86 30 P P 09 56 58.9 +0.4
baz=259,SNR=6.8
PPLA Purkeypile 70.87 27 IAmb IAmb 09 57 00.4
comp=Z,30nm,1.0s
PPLA Purkeypile 70.87 27 P P 09 56 59.8 +1.1
baz=256,SNR=9.1
CAPN Captain Cook N 70.87 29 P P 09 56 59.9 +1.3
baz=258
SKT Skwentna 70.95 28 P 09 56 59.1 0.0
SKT Skwentna 70.95 28 P P 09 56 59.2 0.0
baz=257,SNR=9.6
IMAR Indian Mountai 71.02 24 P P 09 57 00.7 +1.3
CHUM Lake Minchumin 71.05 26 P P 09 57 01.1 +1.5
baz=256,SNR=17
B20K Meade River 71.09 19 P P 09 57 01.1 +1.3
baz=249,SNR=44
G21K Allakaket 71.26 23 IAmb IAmb 09 57 02.9
comp=Z,25nm,0.8s
G21K Allakaket 71.26 23 P P 09 57 02.4 +1.5
baz=254,SNR=38
H21K Melozitna Rive 71.30 24 IAmb IAmb 09 57 03.8
comp=Z,66nm,1.2s
H21K Melozitna Rive 71.30 24 P P 09 57 02.7 +1.5
baz=255
F21K Alatna River 71.47 22 P P 09 57 03.1 +1.0
baz=254,SNR=12
O22K Cooper Landing 71.50 30 P P 09 57 02.8 +0.5
baz=259,SNR=8.4
I21K Tanana 71.51 25 P P 09 57 04.1 +1.7
baz=256
M22K Willow 71.56 28 P P 09 57 02.7 0.0
baz=259
SEW Seward 71.57 30 IAmb IAmb 09 57 04.5
comp=Z,44nm,1.0s
SEW Seward 71.57 30 P P 09 57 03.6 +0.8
baz=260,SNR=5.7
KTH Kantishna Hill 71.58 26 IAmb IAmb 09 57 04.7
comp=Z,44nm,1.0s
C21K Knifeblade Rid 71.59 20 P P 09 57 04.2 +1.5
baz=252,SNR=33
RC01 Rabbit Creek A 71.61 29 IAmb IAmb 09 57 04.4
comp=Z,51nm,1.2s
RC01 Rabbit Creek A 71.61 29 P P 09 57 03.3 +0.2
baz=259,SNR=7.0
CUT Chulitna 71.62 28 P P 09 57 03.1 0.0
baz=258
E21K Killik River 71.65 21 P P 09 57 04.3 +1.1
baz=253
BPAW Bear Paw Mtn. 71.67 26 P 09 57 04.5 +1.1
BPAW IAmb IAmb 09 57 05.5
comp=Z,57nm,1.0s
BPAW Bear Paw Mtn. 71.67 26 P P 09 57 04.7 +1.3
baz=257,SNR=49
A21K Barrow 71.73 18 P P 09 57 04.6 +1.1
baz=249,SNR=16
B21K Ikpikpuk River 71.79 20 IAmb IAmb 09 57 06.3
comp=L,71nm,1.2s
B21K Ikpikpuk River 71.79 20 P P 09 57 05.3 +1.3
baz=252,SNR=45
TRF Thorofare Moun 71.83 27 IAmb IAmb 09 57 05.9
comp=Z,31nm,0.8s
TRF Thorofare Moun 71.83 27 P P 09 57 04.9 +0.3
baz=258,SNR=17
H22K Ishtalitna Cre 71.93 24 P P 09 57 06.6 +1.6
baz=256
MLY Manley 71.99 25 P P 09 57 06.7 +1.3
baz=257,SNR=97
PMR Palmer 71.99 29 IAmb IAmb 09 57 06.5
comp=Z,44nm,1.0s
PMR Palmer 71.99 29 P P 09 57 05.4 +0.1
baz=260,SNR=17
A22K Sinclair Lake 72.12 18 P P 09 57 07.2 +1.3
baz=251
GHO Glory Hole Cre 72.12 28 P P 09 57 06.8 +0.5
GHO IAmb IAmb 09 57 07.7
comp=Z,36nm,0.9s
D22K Ayikyak River 72.23 21 IAmb IAmb 09 57 09.2
comp=Z,32nm,0.7s
D22K Ayikyak River 72.23 21 P P 09 57 08.2 +1.6
baz=254
KNK Knik Glacier 72.28 29 IAmb IAmb 09 57 08.9
comp=Z,52nm,1.0s
KNK Knik Glacier 72.28 29 P P 09 57 07.8 +0.7
baz=260,SNR=12
E22K Anaktuvuk Pass 72.33 22 IAmb IAmb 09 57 09.8
comp=Z,47nm,1.1s
E22K Anaktuvuk Pass 72.33 22 P P 09 57 08.8 +1.5
baz=255,SNR=45
B22K Teshekpuk Lake 72.40 19 P P 09 57 08.7 +1.1
baz=253
SML Sawmill 72.41 28 P 09 57 08.7 +0.8
SML Sawmill 72.41 28 P P 09 57 08.6 +0.8
baz=260,SNR=15
RND Reindeer 72.46 27 IAmb IAmb 09 57 09.5
comp=Z,38nm,0.9s
MCK McKinley 72.48 26 P P 09 57 08.5 +0.3
baz=255,SNR=34
WAT1 Susitna Watana 72.49 27 P P 09 57 08.6 +0.3
baz=260
P23K Montague Islan 72.56 30 P P 09 57 10.0 +1.2
baz=262
I23K Minto, Yukon-K 72.59 25 IAmb IAmb 09 57 11.2
comp=Z,45nm,0.8s
I23K Minto, Yukon-K 72.59 25 P P 09 57 10.0 +1.2
baz=258,SNR=45
NEA2 Nenana 72.59 26 IAmb IAmb 09 57 11.7
comp=Z,38nm,1.0s
NEA2 Nenana 72.59 26 P P 09 57 10.2 +1.3
baz=259,SNR=23
G23K Bananza Creek 72.66 23 IAmb IAmb 09 57 11.9
comp=Z,40nm,0.8s
G23K Bananza Creek 72.66 23 P P 09 57 10.9 +1.6
baz=257,SNR=70
M23K Glacier View 72.69 29 P P 09 57 10.2 +0.6
baz=261,SNR=10.0
COLD Coldfoot 72.71 23 IAmb IAmb 09 57 12.1
comp=Z,47nm,0.9s
COLD Coldfoot 72.71 23 P P 09 57 11.2 +1.7
baz=257,SNR=57
HRA Herat 72.77 303 IAmb IAmb 09 57 12.1
comp=Z,30nm,1.0s
WAT6 Susitna Watana 72.81 28 P P 09 57 11.2 +0.7
baz=260,SNR=25
GLI Glacier Island 72.85 30 P P 09 57 11.1 +0.7
baz=262
SCM Sheep Creek Mo 72.88 29 P P 09 57 11.9 +1.2
baz=261,SNR=16
D23K Nanushuk River 72.95 21 P P 09 57 12.6 +1.6
baz=256
WRH Wood River Hil 72.99 26 IAmb IAmb 09 57 12.5
comp=Z,55nm,1.2s
Q23K Middleton Isla 73.02 31 P P 09 57 13.0 +1.5
baz=263
DHY Denali Highway 73.06 27 IAmb IAmb 09 57 13.8
comp=Z,29nm,0.8s
DHY Denali Highway 73.06 27 P P 09 57 12.8 +0.9
baz=261,SNR=16
E23K Chandalar 73.11 22 P P 09 57 13.8 +1.8
baz=257,SNR=70
CCB Clear Creek Bu 73.14 26 IAmb IAmb 09 57 13.2
comp=Z,41nm,1.1s
COLA College 73.16 25 P P 09 57 12.2 0.0
COLA College 73.16 25 *c* **iP P 09 57 12.2 0.0**
COLA pmax pmax
comp=Z,21nm,0.8s
COLA College 73.16 25 P P 09 57 12.4 +0.2
baz=260
COLA College 73.16 25 P P 09 57 12.7 +0.5
COLA sP **pwP 09 57 31.4 -0.6**
C23K Itkillik River 73.19 20 P P 09 57 13.6 +1.3
baz=256,SNR=74
TOLK Toolik Lake Re 73.26 21 P P 09 57 14.4 +1.6
baz=257,SNR=65
H24K Noodor Dome 73.33 24 IAmb IAmb 09 57 15.9
comp=Z,116nm,1.8s
H24K Noodor Dome 73.33 24 P P 09 57 14.5 +1.2
baz=259
POKR Poker Plat Res 73.38 25 P P 09 57 15.2 +1.6
baz=260
EYAK Cordova Ski Ar 73.46 30 P P 09 57 15.2 +1.2
baz=263
M24K Tolsona, Glenn 73.46 28 P P 09 57 15.5 +1.4
baz=262,SNR=7.1
HDA Harding Lake 73.46 26 IAmb IAmb 09 57 15.8
comp=Z,31nm,1.0s
HDA Harding Lake 73.46 26 P P 09 57 13.8 -0.2
baz=261,SNR=23
KLU Klutina 73.50 29 IAmb IAmb 09 57 16.7
comp=Z,49nm,1.0s
KLU Klutina 73.50 29 P P 09 57 15.5 +1.2
baz=262,SNR=12
E24K Your Creek 73.53 22 P P 09 57 15.9 +1.5
baz=258,SNR=28
IL31 73.55 25 IAmb IAmb 09 57 15.0
comp=Z,28nm,0.8s
ILAR Eielson Array 73.55 25 P P 09 57 13.8 -0.7
comp=Z,20nm,0.7s,baz=249,slow=5.8,SNR=310
comp=Z,20nm,0.7s
ILAR Eielson Array 73.55 25 P 09 57 14.2 -0.4
ILAR Eielson Array 73.55 25 P P 09 57 14.2 -0.4
D24K Happy Valley 73.64 21 P P 09 57 16.5 +1.5
baz=263
G24K Hadweenzic Riv 73.65 23 IAmb IAmb 09 57 17.6
comp=Z,31nm,0.8s
G24K Hadweenzic Riv 73.65 23 P P 09 57 16.5 +1.4
baz=260
C24K Franklin Bluff 73.81 20 P P 09 57 17.0 +1.1
baz=258
K24K Donnelly Dome 73.88 27 P P 09 57 17.1 +0.5
baz=262
PAX Paxson 73.90 27 IAmb IAmb 09 57 18.2
comp=Z,33nm,0.6s
PAX Paxson 73.90 27 P P 09 57 17.7 +1.0
baz=262,SNR=20
HARP HAARP 73.97 28 P P 09 57 18.4 +1.3
baz=263,SNR=14
KAIM Kayak Island 74.05 31 P P 09 57 18.5 +1.0
baz=264
BMRM Bremner River 74.06 30 P P 09 57 18.8 +1.1
baz=264,SNR=12
N25K Chitina, Valde 74.14 29 IAmb IAmb 09 57 20.6
comp=Z,107nm,1.8s
N25K Chitina, Valde 74.14 29 P P 09 57 19.6 +1.5
baz=264,SNR=6.5
J25K Salcha River, 74.17 26 P P 09 57 17.8 -0.5
baz=262
PRP Porcupine Dome 74.23 25 P P 09 57 17.6 -1.1
baz=262,SNR=10
RIDG Independent Ri 74.28 27 P 09 57 19.7 +0.8
RIDG Independent Ri 74.28 27 P P 09 57 19.5 +0.6
baz=263,SNR=40
SVE Sverdlovsk 74.39 326 *de* **P P 09 57 19.8 +0.2**
SVE pmax pmax
comp=Z,49nm,1.1s
AB31 Akbulak array 74.47 318 IAmb IAmb 09 57 21.2
comp=Z,38nm,1.2s
AB31 Akbulak array 74.47 318 *i* **P P 09 57 19.6 -0.6**
ABKAR Akbulak array 74.47 318 P 09 57 20.3 +0.1
GLB Gilahina Butte 74.50 29 IAmb IAmb 09 57 22.4
comp=Z,56nm,0.9s
F25K Christian Rive 74.51 23 IAmb IAmb 09 57 22.9
comp=Z,26nm,0.8s
F25K Christian Rive 74.51 23 P P 09 57 21.9 +1.8
baz=261,SNR=45
D25K Kavik River 74.53 21 IAmb IAmb 09 57 22.4
comp=Z,37nm,0.8s
D25K Kavik River 74.53 21 P P 09 57 21.5 +1.2
baz=260,SNR=60
DOT Dot Lake 74.62 27 IAmb IAmb 09 57 22.5
comp=Z,50nm,0.8s
E25K Arctic Village 74.62 22 IAmb IAmb 09 57 23.6
comp=Z,60nm,1.1s
E25K Arctic Village 74.62 22 P P 09 57 22.4 +1.7
baz=261,SNR=66
VRDI Verde Repeater 74.65 29 P 09 57 22.4 +1.2
VRDI IAmb IAmb 09 57 23.2
comp=Z,36nm,0.8s
SCRK Sand Creek 74.69 26 IAmb IAmb 09 57 23.1
comp=Z,29nm,1.0s
SCRK Sand Creek 74.69 26 P P 09 57 21.9 +0.6
baz=264,SNR=21
MENT Mentasta 74.69 28 P P 09 57 22.6 +1.3
MENT IAmb IAmb 09 57 23.5
comp=Z,38nm,0.9s
CRQE Cirque 74.78 30 P P 09 57 23.1 +1.2
baz=265,SNR=8.0
MCARA McCarthy VSAT 74.87 29 IAmb IAmb 09 57 24.6
comp=Z,44nm,0.9s
MCARA McCarthy VSAT 74.87 29 P P 09 57 23.4 +1.1
baz=265,SNR=9.5
L26K Log Cabin Wild 74.87 28 IAmb IAmb 09 57 24.5
comp=Z,38nm,0.8s
L26K Log Cabin Wild 74.87 28 P P 09 57 23.5 +1.2
baz=264,SNR=27
BMAR Burnt Mountain 74.89 23 P 09 57 24.1 +1.8
TGL Tana Glacier 74.91 30 IAmb IAmb 09 57 25.0
comp=Z,54nm,1.0s
M26K Nabesna, AK 74.97 28 P P 09 57 23.7 +0.8
baz=265
F26K Sheenjek River 75.09 23 IAmb IAmb 09 57 26.4
comp=Z,51nm,0.8s
F26K Sheenjek River 75.09 23 P P 09 57 25.3 +1.8
baz=262,SNR=82
G26K Porcupine Rive 75.13 23 P P 09 57 25.4 +1.8
baz=263,SNR=22
C26K Camden Bay 75.14 20 P P 09 57 25.5 +1.9
baz=261,SNR=60
I26K Coal Creek Min 75.19 25 P P 09 57 24.2 +0.1
baz=264
MESA MESA 75.30 31 IAmb IAmb 09 57 27.3
comp=Z,42nm,0.8s
MESA MESA 75.30 31 P P 09 57 26.7 +1.7
baz=266
GRNC Granite Creek 75.43 30 IAmb IAmb 09 57 28.2
comp=Z,50nm,0.8s
M27K Edge Creek, AK 75.49 28 IAmb IAmb 09 57 28.4
comp=Z,49nm,0.9s
M27K Edge Creek, AK 75.49 28 P P 09 57 27.5 +1.5
baz=266,SNR=18
BARN Barnard Glacie 75.50 30 P P 09 57 27.4 +1.3
BARN IAmb IAmb 09 57 29.5
comp=Z,24nm,0.8s
C27K Jago River 75.51 21 IAmb IAmb 09 57 28.2
comp=Z,27nm,0.8s
C27K Jago River 75.51 21 P P 09 57 27.3 +1.5
baz=262,SNR=49
L27K Beaver Creek, 75.56 28 P P 09 57 27.6 +1.3
baz=266
BCAR Beaver Creek A 75.58 28 P 09 57 27.6 +1.2
ARTI Arti 75.61 326 LR LR 10 32 10.1
comp=Z,298nm,19.3s,baz=92,slow=37
ARTI Arti 75.61 326 P 09 57 26.1 -0.6
ARTI IAmb IAmb 09 57 26.9
comp=Z,64nm,1.3s
ARTI Arti 75.61 326 *c* **iP P 09 57 26.0 -0.6**
ARTI pmax pmax
comp=Z,48nm,1.2s
ARTI Arti 75.61 326 P P 09 57 26.1 -0.6
ARTI sP **sP 09 57 45.1 +0.7**
CTG Chitna Glacier 75.65 30 P P 09 57 28.7 +1.7
baz=267,SNR=11
AKTO Aktyubinsk 75.73 319 LR LR 10 32 59.1
comp=Z,198nm,18.0s,baz=19,slow=37
AKTO Aktyubinsk 75.73 319 P P 09 57 26.4 -1.0
I27K Kandik River 75.86 25 IAmb IAmb 09 57 30.1
comp=Z,55nm,0.9s
I27K Kandik River 75.86 25 P P 09 57 29.1 +1.1
baz=265,SNR=44
H27K Steamboat Moun 75.95 24 IAmb IAmb 09 57 31.2
comp=Z,50nm,1.0s
H27K Steamboat Moun 75.95 24 P P 09 57 30.0 +1.6
baz=265,SNR=47
BVCY Beaver Creek 75.96 28 P P 09 57 30.1 +1.5
baz=267,SNR=19
E27K Coleen River 76.10 22 IAmb IAmb 09 57 31.8
comp=Z,43nm,1.1s
E27K Coleen River 76.10 22 P P 09 57 30.7 +1.4
baz=265,SNR=45
YUK3 Moose Creek 76.12 29 P P 09 57 31.3 +1.6
baz=267,SNR=30
PCA Pinnacle 76.14 31 IAmb IAmb 09 57 32.2
comp=Z,58nm,1.0s
PINM Pinnacle 76.14 31 P P 09 57 31.3 +1.6
baz=268
O28M Mount Upton 76.20 30 IAmb IAmb 09 57 33.0
comp=Z,49nm,0.9s
O28M Mount Upton 76.20 30 P P 09 57 31.9 +1.7
baz=268,SNR=15
PPT Papeete 76.28 111 LR LR 10 25 01.8
comp=Z,187nm,18.2s,baz=282,slow=31
D27M Malcolm River 76.43 21 IAmb IAmb 09 57 33.6
comp=Z,27nm,0.9s
D27M Malcolm River 76.43 21 P P 09 57 32.6 +1.5
baz=265,SNR=36
YUK8 Steele Glacier 76.43 29 P P 09 57 33.4 +1.9
baz=268,SNR=11
WBK Wadi Bani Khal 76.47 291 P P 09 57 32.7 +0.4
I28M Miner Creek 76.55 25 IAmb IAmb 09 57 34.2
comp=Z,35nm,0.8s
I28M Miner Creek 76.55 25 P P 09 57 33.3 +1.4
baz=267,SNR=33
F28M Old Crow 76.70 23 P P 09 57 34.3 +1.6
baz=266,SNR=65
DAWY Dawson 76.71 27 P 09 57 34.3 +1.5
DAWY IAmb IAmb 09 57 35.2
comp=Z,41nm,0.9s
DAWY Dawson 76.71 27 P P 09 57 34.3 +1.5
baz=268,SNR=34
YUK4 Talbot Arm 76.97 29 P P 09 57 36.6 +2.1
baz=269,SNR=21
O29M Mount Kennedy 76.99 30 IAmb IAmb 09 57 37.1
comp=Z,32nm,0.8s
O29M Mount Kennedy 76.99 30 P P 09 57 36.4 +1.8
baz=269,SNR=11
M29M Somme Creek 77.08 28 IAmb IAmb 09 57 38.0
comp=Z,41nm,0.9s
M29M Somme Creek 77.08 28 P P 09 57 37.0 +2.0
baz=269,SNR=29
YUK6 Outpost Mounta 77.10 30 P P 09 57 37.1 +1.8
baz=269,SNR=7.7
JASK Jask - Hormozg 77.13 294 P P 09 57 37.5 +1.6
BIDO Bidbid 77.14 292 P P 09 57 35.7 -0.3
D28M Stokes Point 77.22 21 P P 09 57 36.7 +1.2
baz=267,SNR=8.2
I29M Ogilvie Camp, 77.22 25 P P 09 57 36.8 +1.2
baz=268,SNR=15
J29N Klondike Camp 77.24 26 IAmb IAmb 09 57 38.5
comp=Z,21nm,0.8s
J29N Klondike Camp 77.24 26 P P 09 57 37.5 +1.7
baz=269,SNR=14
L29M L29M 77.25 28 P P 09 57 37.9 +2.0
baz=269,SNR=38
JMDO Jabal Madar 77.30 291 P P 09 57 37.0 +0.1
E29M Blow River 77.49 22 P P 09 57 37.9 +0.9
baz=268,SNR=18
HYT Haines Junctio 77.52 30 P P 09 57 39.3 +1.8
baz=270,SNR=17
K29M Barlow Dome 77.53 27 IAmb IAmb 09 57 40.2
comp=Z,36nm,0.9s
K29M Barlow Dome 77.53 27 P P 09 57 39.2 +1.7
baz=269,SNR=27
MHTO MHTO 77.59 289 P P 09 57 38.6 +0.2
SNR=5.7
N30M Aishikik Lake 77.72 29 IAmb IAmb 09 57 41.4
comp=Z,41nm,1.1s
N30M Aishikik Lake 77.72 29 P P 09 57 40.4 +1.8
baz=270,SNR=14

P30M Million Dollar 77.79 31 P P 09 57 41.0 +2.0
baz=271
M30M Minto, Yukon 77.86 28 IAmb IAmb 09 57 41.5
comp=Z,22nm,0.8s
M30M Minto, Yukon 77.86 28 P P 09 57 40.9 +1.7
baz=270,SNR=15
HOQ Hoqain 77.88 292 P P 09 57 40.5 +0.4
EPYK Eagle Plains 77.90 24 IAmb IAmb 09 57 42.4
comp=Z,69nm,1.4s
EPYK Eagle Plains 77.90 24 P P 09 57 40.3 +0.9
baz=270,SNR=15
I30M Mount Dempster 78.03 25 IAmb IAmb 09 57 42.5
comp=Z,30nm,0.9s
I30M Mount Dempster 78.03 25 P P 09 57 41.5 +1.2
baz=270,SNR=29
J30M Hart River 78.06 26 P P 09 57 41.8 +1.4
baz=270,SNR=18
BSY Bisya 78.08 291 P P 09 57 41.5 +0.2
G30M tAoh Zraii Nji 78.10 24 IAmb IAmb 09 57 42.3
comp=Z,53nm,1.1s
G30M tAoh Zraii Nji 78.10 24 P P 09 57 41.2 +0.6
baz=270,SNR=39
O30N Mendenhall 78.21 30 P P 09 57 42.8 +1.5
baz=271,SNR=6.6
MAYO Mayo, Yukon 78.26 27 P P 09 57 43.2 +1.8
baz=271,SNR=15
F30M Barrier River 78.27 23 IAmb IAmb 09 57 43.5
comp=Z,32nm,0.8s
F30M Barrier River 78.27 23 P P 09 57 42.5 +1.1
baz=270,SNR=21
N31M Braeburn, Yuko 78.35 29 IAmb IAmb 09 57 44.8
comp=Z,43nm,0.9s
N31M Braeburn, Yuko 78.35 29 P P 09 57 43.9 +1.9
baz=272,SNR=13
SOHO SOHO 78.52 293 P P 09 57 43.7 +0.1
BANOM Banah 78.53 294 P P 09 57 44.9 +1.2
ARQ Araqi 78.63 292 P P 09 57 44.9 +0.6
SNR=5.2
SKAG Skagway 78.63 31 P P 09 57 45.3 +1.8
baz=272
SHME Shamm 78.65 295 P P 09 57 45.3 +0.9
MASF Masafi 78.72 294 P P 09 57 45.9 +1.2
SIT Sitka 78.74 34 P P 09 57 45.7 +1.6
baz=273
HATD Hatta, Dubai 78.80 293 P P 09 57 46.0 +0.8
WHY Whitehorse 78.81 30 P P 09 57 46.5 +1.8
baz=272,SNR=17
G31M Satah River 78.87 24 P P 09 57 45.3 +0.6
baz=272
H31M Peel River 78.87 25 IAmb IAmb 09 57 46.8
comp=Z,23nm,0.8s
H31M Peel River 78.87 25 P P 09 57 45.7 +0.9
baz=272,SNR=14
ASHO Ashiyiah 78.89 293 P P 09 57 45.8 +0.1
BESE Bessie Mountai 78.92 32 IAmb IAmb 09 57 48.1
comp=Z,71nm,1.4s
M31M Drury Creek, Y 78.98 28 P P 09 57 46.6 +1.2
baz=272,SNR=12
F31M Tsiigehtchic 79.06 23 P P 09 57 45.9 +0.2
baz=272,SNR=13
INK Inuvik 79.11 22 P 09 57 46.4 +0.4
INK IAmb IAmb 09 57 47.3
comp=Z,30nm,0.9s
INK Inuvik 79.11 22 P P 09 57 46.4 +0.4
INK pmax pmax
comp=Z,30nm,0.9s
INK Inuvik 79.11 22 P P 09 57 46.4 +0.4
baz=272,SNR=35
S32K Kiliisnoo 79.12 33 P P 09 57 47.6 +1.4
baz=273
ALNE Al Ain 79.24 293 P P 09 57 48.2 +0.5
SNR=6.6
P32M Atlin 79.45 31 P P 09 57 49.5 +1.4
baz=274
N32M Quiet Lake 79.66 30 P P 09 57 50.7 +1.5
baz=274,SNR=15
P33M Teslin, Yukon 79.86 30 P P 09 57 51.7 +1.4
baz=274,SNR=5.7
U33K Whale Pass 80.01 35 P P 09 57 52.7 +1.7
baz=275
SHAO Shalim 80.17 287 P P 09 57 53.2 +0.5
Q32M Nakina River 80.24 32 P P 09 57 54.1 +1.5
baz=275
KIRV Kirov 80.39 328 LR LR 10 36 55.9
comp=Z,359nm,18.0s,baz=88,slow=38
KIRV Kirov 80.39 328*c* *i*P P 09 57 53.2 +0.1
WRAK Wrangell Islan 80.42 34 P P 09 57 54.8 +1.5
baz=275
DMTO DMTO 80.85 286 P P 09 57 56.6 +0.2
R33M Jennings River 80.86 31 IAmb IAmb 09 57 58.6
comp=Z,27nm,0.9s
R33M Jennings River 80.86 31 P P 09 57 57.8 +2.0
baz=276,SNR=12
S34M Telegraph Cree 80.93 33 IAmb IAmb 09 57 59.0
comp=Z,29nm,0.9s
S34M Telegraph Cree 80.93 33 P P 09 57 57.9 +1.9
baz=276,SNR=7.4
MZR Muzera 81.45 292 P P 09 57 59.9 +0.4
DLBC Dease Lake 81.45 32 LR LR 10 29 02.2
comp=Z,95nm,21.4s,baz=286,slow=32
DLBC Dease Lake 81.45 32 P P 09 58 00.7 +1.9
baz=277,SNR=8.2
DOK Doka 81.49 287 P P 09 57 59.5 -0.3
SNR=5.1
T35M Bob Quinn 81.51 34 IAmb IAmb 09 58 02.0
comp=Z,40nm,1.1s
T35M Bob Quinn 81.51 34 P P 09 58 01.0 +1.8
baz=277,SNR=6.2
A36M Sachs Harbour 81.56 18 P P 09 57 59.8 +0.7
baz=279,SNR=67
RBK Rabkut 81.59 286 P P 09 58 00.2 -0.1
SNR=11
WTLY Watson Lake, Y 81.87 30 P P 09 58 02.6 +1.6
baz=278,SNR=28
WHFO Wadi Hawf 81.93 287 P P 09 58 01.4 -0.7
BELG Belogornoye 82.09 322*c* *i*P P 09 58 01.9 -0.3
BELG pmax pmax
comp=Z,23nm,1.0s
C36M Paulatuk 82.41 21 P 09 58 04.1 +0.6
C36M IAmb IAmb 09 58 04.4
comp=Z,24nm,0.7s
C36M Paulatuk 82.41 21 P P 09 58 03.9 +0.4
baz=281,SNR=25
BBB Bella Bella 83.42 38 LR LR 10 30 04.8
comp=Z,100nm,18.8s,baz=240,slow=32
MAK Makhachkala 83.52 312 *e*P P 09 58 07.8 -2.0
MAK *e* 10 01 24.6
MAK *e*PPP PPP 10 03 12.0
MAK *e*S S 10 08 24.0 -4.2
MAK *e*SSS SSS 10 17 24.0
MAK pmax pmax
comp=Z,91nm,0.9s
MAK MLR MLR
comp=Z,485nm,17.0s
AKT Akhty 83.58 311 *e*P P 09 58 09.6 -0.8
AKT *e**PP pP 09 58 22.1 -1.2
AKT pmax pmax
comp=Z,29nm,1.0s
HOLB Holberg 83.65 40 IAmb IAmb 09 58 13.1
comp=Z,28nm,1.0s
WRGLY Wrigley 83.85 27 P P 09 58 12.5 +1.4
baz=282,SNR=6.2
KOTAN Kotaneelee Air 84.21 30 P P 09 58 14.6 +1.6
baz=282,SNR=6.5
SPITS Spitsbergen Ar 85.64 350 P P 09 58 19.7 -0.3
comp=Z,6.8nm,0.7s,baz=84,slow=7.6,SNR=18
comp=Z,6.8nm,0.7s
VRH Novokhopyorsk 85.91 321 *e*P P 09 58 19.4 -2.3
VRH pmax pmax
comp=Z,30nm,0.8s
KBS Kingsbay 85.92 351 *i*P P 09 58 21.2 0.0
GNI Garni 86.04 310 LR LR 10 40 25.5
comp=Z,103nm,19.8s,baz=70,slow=38
GNI Garni 86.04 310*d* *i*P P 09 58 25.0 +2.1
GNI pmax pmax
comp=Z,28nm,1.4s
ALE Alert 86.20 3 P P 09 58 23.4 +0.8
ALE pP pwP 09 58 37.0 -4.0
ALE sP sP 09 58 42.4 +2.6
NCK Nalchik 86.24 313 ⇑*i*P P 09 58 24.3 +0.7
NCK pmax pmax
comp=Z,17nm,0.6s
CLRS Cowichan Lake 86.55 41 P 09 58 26.5 +1.6
CLRS IAmb IAmb 09 58 27.5
comp=Z,21nm,0.9s
KBZ Khabaz 86.69 314 P P 09 58 25.1 -0.6
comp=Z,10nm,0.9s,baz=127,slow=1.7,SNR=17
KBZ LR LR 10 42 27.4
comp=Z,157nm,18.1s,baz=44,slow=39
comp=Z,10nm,0.9s
KBZ Khabaz 86.69 314*c* *i*P P 09 58 26.3 +0.6
KBZ pmax pmax
comp=Z,14nm,1.0s
KVAR Kislovodsk Arr 86.78 314 LR LR 10 41 22.8
comp=Z,186nm,20.1s,baz=252,slow=38
KIV Kislovodsk 86.79 314 *e*P P 09 58 26.1 -0.3
KIV pmax pmax
comp=Z,11nm,1.1s
KIV MLR MLR
comp=Z,119nm,20.0s
NOR Nord 86.85 356 *i*P P 09 58 25.4 -0.4
SHA1 Shidzhatmaz 86.85 314⇓*e*P P 09 58 26.9 0.0
NEUR Neytrino 86.92 313⇓*i*P P 09 58 28.1 +1.0
NEUR pmax pmax
comp=Z,7.0nm,1.1s
PGC Sidney 87.02 41 P 09 58 28.9 +1.7
PGC IAmb IAmb 09 58 29.8
comp=Z,26nm,1.0s
MOS Moscow 87.21 326 *e*P P 09 58 25.2 -2.8
MOS pmax pmax
comp=Z,36nm,0.9s
LPSR Galich'ya Gora 87.27 323 *e*P P 09 58 26.2 -2.1
LPSR pmax pmax
comp=Z,20nm,0.8s
VORR Voronezh 87.33 322 *e*P P 09 58 26.7 -2.0
VORR pmax pmax
comp=Z,30nm,0.4s
VORD Divnogorie 87.45 321 *e*P P 09 58 27.4 -1.8
VORD pmax pmax
comp=Z,10.0nm,0.8s
VSR Storozhevoye 87.47 322 *e*P P 09 58 27.4 -1.9
VSR pmax pmax
comp=Z,10.0nm,0.8s
LLLB Lillooet 87.56 39 IAmb IAmb 09 58 37.7
comp=Z,29nm,1.1s
GNW Green Mountain 87.68 42 IAmb IAmb 09 58 33.4
comp=Z,28nm,1.0s
ARCES ARCESS Array B 87.69 341 P P 09 58 29.2 -0.9
comp=Z,9.1nm,0.7s,baz=74,slow=6.9,SNR=21
ARCES LR LR 10 41 42.5
comp=Z,180nm,19.7s,baz=60,slow=38
comp=Z,9.1nm,0.7s
ARCES ARCESS Array B 87.69 341 P 09 58 29.6 -0.5
ARCES ARCESS Array B 87.69 341 P P 09 58 29.6 -0.5
ARCES pmax pmax
comp=Z,75nm,1.8s
YKAW3 Yellowknife Wh 87.93 26 IAmb IAmb 09 58 33.3
comp=Z,27nm,0.9s
ERBR Yeremizino-Bor 87.93 316 *e*P P 09 58 30.8 -0.9
ERBR *e**PP pP 09 58 42.9 -1.9
ERBR *e*S SKSac 10 08 54.7 -1.7
ERBR pmax pmax
comp=Z,28nm,0.7s
KBO Bosley Butte 87.93 48 P 09 58 32.2 +0.3
J01E Myrtle Point 87.93 47 IAmb IAmb 09 58 34.6
comp=Z,30nm,1.0s
YKA Yellowknife Ar 87.95 26 P P 09 58 32.1 +0.7
comp=Z,14nm,0.9s,baz=296,slow=5.9,SNR=140
comp=Z,14nm,0.9s
OBN Obninsk 87.96 326 LR LR 10 38 55.2
comp=Z,223nm,20.9s,baz=14,slow=36
OBN Obninsk 87.96 326*c* *i*P P 09 58 30.2 -1.4
OBN *e**PP pP 09 58 43.3 -1.4
OBN *e**SP sP 09 58 48.0 -1.7
OBN *e* 10 01 57.0
OBN pmax pmax
comp=Z,51nm,1.3s
OBN MLR MLR
comp=Z,236nm,19.0s
OBN Obninsk 87.96 326 P P 09 58 30.1 -1.5
YKAW1 Yellowknife Wh 88.01 26 IAmb IAmb 09 58 33.8
comp=Z,29nm,1.0s
LABN Labinsk 88.01 315 *e*P P 09 58 29.6 -2.5
LABN *e**PP pP 09 58 43.0 -2.2
LABN *e*S SKSac 10 08 52.8 -4.1
LABN pmax pmax
comp=Z,22nm,0.6s
COR Corvallis 88.05 45 P P 09 58 33.2 +0.9
COR Corvallis 88.05 45 P P 09 58 33.2 +0.9
COR pmax pmax
comp=Z,87nm,1.6s
COR Corvallis 88.05 45 P P 09 58 34.5 +2.3
COR pP pwP 09 58 48.2 -3.8
COR x x 09 58 52.2
COR sP sP 09 58 53.6 +4.6
I03D Drain, OR 88.22 46 IAmb IAmb 09 58 36.0
comp=Z,34nm,1.3s
K02D Willamette Mer 88.23 47 IAmb IAmb 09 58 41.0
comp=Z,17nm,1.2s
KRPM Rodgers 88.31 49 IAmb IAmb 09 58 44.6
comp=Z,32nm,1.1s
D05A Enumclaw 88.32 42 IAmb IAmb 09 58 37.6
comp=Z,31nm,1.4s
KMPM Mount Pierce 88.41 49 IAmb IAmb 09 58 37.5
comp=Z,21nm,1.1s
GURO Guroymak-BITLI 88.42 309 IAmb IAmb 09 58 35.6
comp=Z,25nm,1.1s
H04D Lebanon 88.46 45 P P 09 58 32.5 -1.7
RES Resolute Bay 88.47 12 IAmb IAmb 09 58 34.8
comp=Z,18nm,0.8s
RAYN Ar Rayn 88.59 294 P 09 58 35.2 -0.1
RAYN IAmb IAmb 09 58 37.0
comp=Z,26nm,0.9s
RAYN Ar Rayn 88.59 294 P P 09 58 35.2 -0.1
RAYN pmax pmax
comp=Z,26nm,1.0s
RAYN Ar Rayn 88.59 294 P P 09 58 35.6 +0.3
RAYN pP pP 09 58 49.2 +0.7
RAYN sP sP 09 58 54.4 +1.0
KMRM Mail Ridge 88.76 49 IAmb IAmb 09 58 53.8
comp=Z,25nm,1.2s
VSLR Vesyoloye 88.78 314⇓*e*P P 09 58 35.0 -0.7
VSLR pmax pmax
comp=Z,31nm,1.2s
H04A Detroit Lake 88.80 45 IAmb IAmb 09 58 38.2
comp=Z,30nm,1.3s
I04A Tendick Farm, 88.86 46 IAmb IAmb 09 58 38.5
comp=Z,36nm,1.3s
SOC Sochi 88.97 314 *e*P P 09 58 34.4 -2.2
SOC *e*PPP PPP 10 04 00.7
SOC *e*S SKSac 10 09 02.9 +0.3
SOC *e*SS SS 10 15 14.7 +0.2
SOC *e*SSS SSS 10 18 43.4
SOC pmax pmax
comp=Z,6.0nm,0.6s
KCPM Cahto Peak 88.97 50 IAmb IAmb 09 58 39.4
comp=Z,16nm,0.7s
HOOD Mount Hood Mea 89.01 44 IAmb IAmb 09 58 39.6
comp=Z,26nm,1.2s
KHBM Hayfork Bally 89.02 49 IAmb IAmb 09 58 40.1
comp=Z,18nm,1.2s
M02C Callahan 89.12 48 IAmb IAmb 09 58 40.6
comp=Z,19nm,1.2s
YBH Yreka Blue Hor 89.14 48 IAmb IAmb 09 58 40.5
comp=Z,13nm,0.9s
LTY Liberty 89.18 42 IAmb IAmb 09 58 39.9
comp=Z,20nm,1.4s
WIFE Three Sisters- 89.21 45 P 09 58 39.0 +1.0
KOPT Kop Dagi 89.25 311 IAmb IAmb 09 58 48.3
comp=Z,20nm,1.1s
VNDA Vanda 89.28 175 LR LR 10 38 38.2
comp=Z,191nm,18.1s,baz=348,slow=36
L04D Klamath Falls 89.32 47 IAmb IAmb 09 58 41.0
comp=Z,32nm,1.3s
N02D Trinity Center 89.33 48 IAmb IAmb 09 58 41.7
comp=Z,36nm,1.6s
O02D Mt. Diablo Mer 89.45 49 IAmb IAmb 09 58 41.8
comp=Z,13nm,0.8s
I05D Terrebonne, OR 89.47 45 IAmb IAmb 09 58 41.7
comp=Z,24nm,1.2s
MXC Moxie City 89.61 43 IAmb IAmb 09 58 42.4
comp=Z,26nm,1.3s
MARD Mardin 89.67 308 IAmb IAmb 10 00 11.4
comp=Z,12nm,0.7s
GDXM Geysers 89.77 51 IAmb IAmb 09 58 49.7
comp=Z,16nm,1.3s
EPH Ephrata 89.86 42 IAmb IAmb 09 58 43.0
comp=Z,32nm,1.5s
PINE Pine Mountain 89.89 45 IAmb IAmb 09 58 44.0
comp=Z,21nm,1.0s
E07A Sunnyside 89.90 43 IAmb IAmb 09 58 43.8
comp=Z,30nm,1.5s
WAH2 Wahluke Slope 90.04 42 IAmb IAmb 09 58 44.1
comp=Z,22nm,1.4s
CVS Carmenet Viney 90.14 51 IAmb IAmb 09 58 44.8
comp=Z,29nm,1.1s
K05A Summer Lake 90.20 46 IAmb IAmb 09 58 51.2
comp=Z,20nm,1.0s
ANN Anapa 90.25 316 *e*P P 09 58 41.5 -1.0
ANN *e**PP pP 09 58 52.9 -2.8
ANN *e*S SKSac 10 09 08.3 -1.7
ANN pmax pmax
comp=Z,23nm,0.8s
HATC Hat Creek Radi 90.28 48 IAmb IAmb 09 58 45.7
comp=Z,19nm,1.0s
D08A Wollman Farm, 90.38 42 IAmb IAmb 09 58 45.7
comp=Z,20nm,1.5s
E08A Dider Farm, El 90.45 42 IAmb IAmb 09 58 46.2
comp=Z,20nm,1.3s
ORV Oroville 90.57 50 IAmb IAmb 09 58 46.5
comp=Z,14nm,1.2s
C09A Chrisman Ranch 90.59 41 IAmb IAmb 09 58 46.7
comp=Z,25nm,1.6s
YPT Yellepit 90.64 43 IAmb IAmb 09 58 47.1
comp=Z,23nm,1.2s
I07A Izee 90.82 45 IAmb IAmb 09 58 48.0
comp=Z,13nm,1.3s
FINES FINESS Array B 90.94 334 P P 09 58 43.8 -1.6
comp=Z,18nm,0.7s,baz=66,slow=5.6,SNR=56
FINES LR LR 10 41 40.4
comp=Z,186nm,20.8s,baz=62,slow=37
comp=Z,18nm,0.7s
FINES FINESS Array B 90.94 334 *i*P P 09 58 44.0 -1.4
FINES pmax pmax
comp=Z,18nm,0.8s
ARPR Arapgir-MALATY 91.10 310 IAmb IAmb 09 58 48.0
comp=Z,21nm,1.3s
AFDM Forest Hills D 91.12 50 IAmb IAmb 09 58 49.4
comp=Z,11nm,1.2s
NEW Newport 91.19 40 LR LR 10 33 52.2
comp=Z,119nm,19.4s,baz=292,slow=32
NEW Newport 91.19 40 IAmb IAmb 09 58 49.1
comp=Z,12nm,1.1s
TULEG Thule 91.20 6 *i*P P 09 58 46.0 -0.4
DAG Danmarks Havn 91.46 355 *i*P P 09 58 46.0 -1.6
NEEM North Greenlan 91.61 2 *i*P P 09 58 48.4 -0.3
J08A Circle Bar Ran 91.74 45 IAmb IAmb 09 58 52.2
comp=Z,16nm,1.1s
CMB Columbia Colle 91.80 51 IAmb IAmb 09 58 52.5
comp=Z,12nm,1.1s
F10A Beach Ranch, E 91.81 43 P 09 58 51.0 +1.0
VSU Vasula 91.88 331⇑*i*P P 09 58 47.9 -1.9
VSU pmax pmax
comp=Z,42nm,1.0s
WVOR Wild Horse Val 91.89 46 IAmb IAmb 09 58 52.9
comp=Z,13nm,1.0s
BMO Blue Mountains 92.10 44 IAmb IAmb 09 58 53.5
comp=Z,10nm,0.9s
MNK Minsk 92.90 327 *i*P P 09 58 54.7 +0.1
comp=E,10.0nm,0.7s
MNK *i*P P 09 58 54.7 +0.1
comp=N,17nm,1.1s
MNK *i*P P 09 58 54.7 +0.1
comp=Z,10.0nm,0.9s,baz=67
MNK *i*pP pP 09 59 05.9 -1.9
MNK *i*PP PP 10 02 35.9 -1.2
MNK *i*PPP PPP 10 04 38.4
MNK *i*S SKSac 10 09 24.9 +0.2
MNK *i*SS SS 10 16 12.7 +2.3
MNK *i*SSS SSS 10 19 53.1
MNK *i*LQ LQ 10 34 27.6
MNK *i*LR LR 10 40 39.9
MNK *i*LRM MLR 10 42 33.9
comp=Z,413nm,22.1s
MNK *i*LRM MLR 10 42 53.5
comp=E,238nm,18.3s
MNK *i*LRM MLR 10 43 25.9
comp=N,255nm,20.0s
MNK Minsk 92.90 327 *i*P P 09 58 54.7 +0.1
MNK *i**PP pP 09 59 05.9 -1.9
MNK *i* 10 02 35.9
MNK *i*PPP PPP 10 04 38.3
MNK *i*S SKSac 10 09 24.8 +0.2
MNK *i*SS SS 10 16 12.7 +2.3
MNK *i*SSS SSS 10 19 53.1
MNK pmax pmax
comp=E,10.0nm,0.7s
MNK pmax pmax
comp=N,17nm,1.1s
MNK pmax pmax
comp=Z,10.0nm,0.9s
MNK MLR MLR
comp=Z,413nm,22.0s
MNK MLR MLR
comp=E,238nm,18.0s
MNK MLR MLR
comp=N,255nm,20.0s
BNN Bunyan 93.03 310 IAmb IAmb 09 58 56.0
comp=Z,12nm,1.2s
NVAR Mina Array Bea 93.27 50 P P 09 58 58.5 +1.4
comp=Z,5.9nm,0.8s,baz=259,slow=5.9,SNR=47
NVAR LR LR 10 36 20.4
comp=Z,102nm,18.9s,baz=288,slow=32
comp=Z,5.9nm,0.8s
NVAR Mina Array Bea 93.27 50 P P 09 58 58.2 +1.2
AKASG Malin Array Be 93.60 323 P P 09 58 55.8 -2.2
comp=Z,1.1nm,0.6s,baz=57,slow=4.6,SNR=5.8
comp=Z,1.1nm,0.6s
AKASG Malin Array Be 93.60 323 IAmb IAmb 09 58 57.0
comp=Z,2.9nm,1.0s
AKBB Malin Array Si 93.60 323⇓*i*P P 09 58 56.0 -2.0
AKBB pmax pmax
comp=Z,29nm,4.0s
AK11 Malin Array Si 93.64 323 P P 09 58 56.6 -1.6
DBG Daneborg 93.91 354 *i*P P 09 58 55.9 -3.0
ISA Isabella, Lake 93.92 53 IAmb IAmb 09 59 01.8
comp=Z,14nm,1.5s
CWC Cottonwood Cre 94.00 52 IAmb IAmb 09 59 12.0
comp=Z,20nm,2.0s
ASF Jabal al Asfar 94.04 304 LR LR 10 46 32.3
comp=Z,56nm,19.4s,baz=23,slow=39
KULLO Kullorsuaq 94.09 4 *i*P P 09 58 59.5 -0.2
BR131 Keskin Array S 94.41 312⇑*i*P P 09 59 01.5 -0.6
BRTR Keskin Array B 94.41 312 P P 09 59 00.2 -1.9
comp=Z,2.8nm,1.0s,baz=104,slow=4.9,SNR=10
BRTR LR LR 10 46 07.7
comp=Z,47nm,21.3s,baz=104,slow=38
comp=Z,2.8nm,1.0s
BRTR Keskin Array B 94.41 312 P 09 59 00.8 -1.4
BRTR Keskin Array B 94.41 312 *i*P P 09 59 01.7 -0.4
BRTR pmax pmax
comp=Z,3.0nm,1.0s
BR104 Keskin Array S 94.41 312 P P 09 59 01.4 -0.7
comp=Z,3.2nm,1.2s
BR106 Keskin Array S 94.42 312 P P 09 59 01.4 -0.8
comp=Z,37nmcomp=Z,3.6nm,1.1s
HLID Hailey 94.48 44 IAmb IAmb 09 59 05.0
comp=Z,9.9nm,1.1s
MWC Mount Wilson 94.65 54 IAmb IAmb 09 59 12.0
comp=Z,21nm,1.5s
MAW Mawson 94.69 202 LR LR 10 41 37.1
comp=Z,82nm,18.8s,baz=64,slow=35
ELK Elko 94.83 47 LR LR 10 34 47.5
comp=Z,93nm,20.7s,baz=284,slow=31
FURC Furnace Creek, 94.94 52 IAmb IAmb 09 59 06.9
comp=Z,15nm,0.9s
MMAI Mount Meron Ar 95.02 305 LR LR 10 46 43.8
comp=Z,107nm,20.4s,baz=48,slow=38
ILON Igloolik, Nuna 95.08 13 P 09 59 03.5 -0.9
ILON IAmb IAmb 09 59 04.5
comp=Z,12nm,0.8s
DLMT Dillon 95.08 42 IAmb IAmb 09 59 07.3
comp=Z,19nm,1.1s
MCMT McKenzie Canyo 95.11 43 P P 09 59 06.2 +0.9
GWY Greenwater Val 95.17 52 IAmb IAmb 09 59 08.9
comp=Z,27nm,1.8s
S11A Rachel 95.43 50 IAmb IAmb 09 59 15.2
comp=Z,12nm,1.2s
SHOC Shoshone, Teco 95.56 52 IAmb IAmb 09 59 09.7
comp=Z,9.0nm,1.0s
BOZ Bozeman (W) 95.63 42 IAmb IAmb 09 59 09.8
comp=Z,14nm,1.4s
EGMT Eagleton 95.89 39 IAmb IAmb 09 59 10.5
comp=Z,15nm,1.2s
UPNV Upernavik 95.91 4 *i*P P 09 59 07.5 -0.6
PFO Pinyon Flats O 96.10 54 LR LR 10 35 58.3
comp=Z,68nm,20.3s,baz=234,slow=31
PFO Pinyon Flats O 96.10 54 P 09 59 10.6 +0.6
PFO Pinyon Flats O 96.10 54⇓*i*P P 09 59 11.2 +1.2
PFO pmax pmax

	comp=Z,80nm,5.8s						
PMD	**Palm Desert**	**96.16**	**54**	IAmb	IAmb	09 59 17.8	
	comp=Z,8.7nm,1.1s						
SHPR	**Sheep Range**	**96.23**	**51**		**P**	**09 59 11.9**	**+1.3**
EIL	**Elat**	**96.33**	**302**	LR	LR	10 47 27.6	
	comp=Z,111nm,19.2s,baz=50,slow=38						
YMR	**Madison River**	**96.41**	**42**	P	**P**	**09 59 13.5**	**+2.2**
YHH	**Holmes Hill**	**96.44**	**42**		**P**	**09 59 13.5**	**+2.0**
SUMG	**Summit**	**96.66**	**359**	*i* P	**P**	**09 59 12.1**	**+0.1**
V12A	**Nelson**	**96.71**	**52**		**P**	**09 59 13.9**	**+1.3**
DUG	**Dugway, Tooele**	**96.75**	**47**	IAmb	IAmb	09 59 14.9	
	comp=Z,11nm,1.4s						
FXWY	**Fox Creek**	**96.76**	**43**	P	**P**	**09 59 14.2**	**+1.3**
FXWY				IAmb	IAmb	09 59 23.1	
	comp=Z,19nm,1.7s						
H17A	**Grant Village**	**96.77**	**42**	P	**P**	**09 59 15.8**	**+2.8**
H17A				IAmb	IAmb	09 59 17.2	
	comp=Z,22nm,1.4s						
FLWY	**Flagg Ranch**	**96.81**	**43**	IAmb	IAmb	09 59 16.2	
	comp=Z,11nm,1.1s						
YUH	**Yuha Desert**	**96.82**	**55**	IAmb	IAmb	09 59 14.7	
	comp=Z,12nm,1.4s						
HFS	**Hagfors**	**96.83**	**336**	P	**P**	**09 59 10.2**	**-2.3**
	comp=Z,4.3nm,0.9s,baz=72,slow=4.8,SNR=4.8						
HFS				LR	LR	10 48 34.1	
	comp=Z,136nm,18.0s,baz=30,slow=39						
	comp=Z,4.3nm,0.9s						
BC3	**Big Chuckawall**	**96.89**	**54**	IAmb	IAmb	09 59 21.6	
	comp=Z,8.1nm,1.1s						
YMP	**Mirror Lake Pl**	**96.92**	**42**	P	**P**	**09 59 13.9**	**+0.2**
IRM	**Iron Mountain**	**96.98**	**53**	P	**P**	**09 59 14.7**	**+0.9**
FFC	**Flin Flon**	**97.22**	**31**		Pdif	09 59 14.8	+0.3
FFC	**Flin Flon**	**97.22**	**31**	P	Pdif	09 59 14.8	+0.3
FFC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BURAR	**Bucovina Array**	**97.24**	**321**	P	**P**	**09 59 12.9**	**-1.9**
CCUT	**Cedar City**	**97.25**	**50**	IAmb	IAmb	09 59 18.1	
	comp=Z,15nm,1.8s						
NOA	**NORSAR Array B**	**97.26**	**337**	P	**P**	**09 59 13.7**	**-0.8**
	comp=Z,1.3nm,0.9s,baz=59,slow=4.5,SNR=2.7						
NOA				LR	LR	10 46 09.3	
	comp=Z,149nm,20.8s,baz=70,slow=37						
	comp=Z,1.3nm,0.9s						
RLMT	**Red Lodge**	**97.35**	**41**	P	Pdif	09 59 17.0	+1.4
MLR	**Muntele Rosu**	**97.66**	**319**	LR	LR	10 47 08.6	
	comp=Z,157nm,19.4s,baz=54,slow=38						
FURI	**Furi**	**98.04**	**281**	LR	LR	10 40 30.5	
	comp=Z,43nm,21.0s,baz=96,slow=34						
PDAR	**Pinedale Array**	**98.08**	**44**	P	**P**	**09 59 18.8**	**0.0**
	comp=Z,0.6nm,0.7s,baz=266,slow=1.0,SNR=6.4						
PDAR				LR	LR	10 37 47.1	
	comp=Z,41nm,21.5s,baz=313,slow=32						
	comp=Z,0.6nm,0.7s						
QSPA	**South Pole Qui**	**100.78**	**180**	P	**Pdif**	**09 59 31.1**	**+1.0**
	comp=Z,1.5nm,0.9s,baz=190,slow=1.6,SNR=2.7						
NVL	**N'lazarevskaya**	**111.89**	**197**	*i* PKIKP	**PKiKP**	**10 04 12.1**	**-3.9**
NVL				*e*		10 04 55.9	
NVL				*e*PPP	PPP	10 07 17.7	
NVL				*e*		10 11 16.8	
NVL				*e*SS	SS	10 20 28.0	-4.5
NVL				*e*SSS	SSS	10 24 38.6	
NVL				pmax	pmax		
	comp=Z,13nm,1.0s						
NVL				MLR	MLR		
	comp=Z,499nm,23.0s						
MD01	**Midelt array s**	**124.21**	**323**		**PKiKP**	**10 04 41.6**	**+0.3**
MD31	**MD31**	**124.22**	**323**		**PKPdf**	**10 04 40.5**	**-0.5**
TORD	**Torodi Ar. Bea**	**131.08**	**298**	PKP	**PKPdf**	**10 04 54.0**	**-0.4**
	comp=Z,3.7nm,0.8s,baz=45,slow=0.6,SNR=14						
TORD				PP	**PP**	**10 07 08.1**	**-3.4**
	comp=Z,1.7nm,1.1s,baz=60,slow=3.4,SNR=4.7						
DBIC	**Dimbokro**	**139.73**	**294**	PKhKP	PKPpre	10 05 04.4	
	comp=Z,3.7nm,0.8s,baz=76,slow=4.2,SNR=1.9						
PLCA	**Paso Flores**	**140.68**	**144**	PKhKP	PKPpre	10 05 05.1	
	comp=Z,1.0nm,0.8s,baz=214,slow=3.7,SNR=5.2						
BI02	**San Fabin de**	**142.76**	**138**		**PKPdf**	**10 05 13.7**	**-1.8**
ROSC	**El Rosal**	**143.60**	**66**	PKhKP	PKPpre	10 05 10.4	
	comp=Z,5.9nm,0.3s,baz=37,slow=19,SNR=1.6						
BO02	**Sierra Bellavi**	**144.16**	**136**		**PKPdf**	**10 05 17.7**	**-0.3**
SDV	**Santo Domingo**	**144.81**	**57**		PKPbc	10 05 19.2	+0.3
NNA	**Nana**	**145.17**	**95**	PKPbc	**PKPbc**	**10 05 17.4**	**-2.5**
	comp=Z,14nm,0.8s,baz=248,slow=5.2,SNR=4.2						
NNA	**Nana**	**145.17**	**95**		**PKPdf**	**10 05 20.8**	**+0.5**
NNA	**Nana**	**145.17**	**95**	PKIKP	**PKPdf**	**10 05 20.8**	**+0.5**
CO03	**El Pedregal**	**146.32**	**130**		**PKPdf**	**10 05 23.0**	**+1.1**
AAGR	**Agrelo**	**146.46**	**135**	*i* P	**PKPbc**	**10 05 24.5**	**+1.0**
AAGR				*i* Pg	**PKPbc**	**10 05 24.5**	**+1.0**
ARCO	**CERRO ARCO**	**146.53**	**135**	*e*P	**PKPbc**	**10 05 24.5**	**+0.7**
AUSP	**Uspallata**	**146.55**	**134**‖	*e*P	**PKPbc**	**10 05 24.7**	**+0.7**
RTLS	**Leoncito**	**146.84**	**133**‖	*e*P	**PKPbc**	**10 05 25.1**	**+0.3**
LCO	**Las Campanas**	**147.18**	**128**		**PKPdf**	**10 05 25.1**	**+1.5**
LCO	**Las Campanas**	**147.18**	**128**	PKP2	**PKPdf**	**10 05 25.1**	**+1.5**
TRQA	**Tornquist**	**147.24**	**149**		**PKPbc**	**10 05 25.1**	**-0.3**
TRQA	**Tornquist**	**147.24**	**149**	PKP2	**PKPbc**	**10 05 25.1**	**-0.3**
AROD	**Rodeo**	**147.56**	**130**	*e*P	**PKPbc**	**10 05 28.1**	**+1.2**
ACCO	**Cerro Coronel**	**147.65**	**131**	*e*P	**PKPbc**	**10 05 27.9**	**+0.7**
BIM	**Bigot**	**148.02**	**38**		**PKPbc**	**10 05 28.4**	**+0.2**
ACAN	**Cantantal**	**148.06**	**136**‖	*e*P	**PKPdf**	**10 05 25.1**	**+0.5**
AVFE	**Valle Fertil**	**148.78**	**133**	*e*P	**PKPbc**	**10 05 30.4**	**+0.6**
ACHE	**Chepes**	**149.07**	**134**‖	*e*P	**PKPbc**	**10 05 31.1**	**+0.5**
PB08	**IPOC Station P**	**151.69**	**112**	PKPdf	**PKPdf**	**10 05 30.8**	**-0.4**
PB18	**Visviri**	**151.93**	**107**		**PKPdf**	**10 05 33.1**	**+1.4**
LPAZ	**La Paz**	**153.40**	**105**	PKP	**PKPdf**	**10 05 33.6**	**-0.5**
	comp=Z,3.3nm,0.9s,baz=19,slow=1.1,SNR=9.3						
LPAZ				PKPbc	**PKPbc**	**10 05 40.2**	**-1.5**
	comp=Z,5.0nm,0.9s,baz=259,slow=2.1,SNR=9.7						
LPAZ				PKPab	**PKPab**	**10 05 53.0**	**-0.9**
	comp=Z,2.6nm,0.6s,baz=292,slow=6.8,SNR=6.5						
CPUP	**Villa Florida**	**158.47**	**138**	PKP	**PKPdf**	**10 05 37.0**	**-2.7**
	comp=Z,0.5nm,0.4s,baz=307,slow=5.1,SNR=1.8						
CPUP				PKPab	**PKPab**	**10 06 14.4**	**-0.1**
	comp=Z,4.4nm,1.1s,baz=259,slow=3.2,SNR=3.9						

IDC 09 10:03:58.4±1.7, 0°33S×125°87E, h0km, mb3.3/4, mbtmp3.4/4, Error ellipse: s-maj=180.4km s-min=23.3km az=65.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.19**	**157**	P	P	10 08 45.2	-0.4
	0.7nm,0.4s,baz=336,slow=10,SNR=22						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**24.48**	**162**	P	P	10 09 19.6	+0.2
	0.4nm,0.4s,baz=343,slow=12,SNR=13						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**60.42**	**327**	P	P	10 14 10.1	+0.2
	0.1nm,0.4s,baz=135,slow=7.1,SNR=1.7						
	0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**64.71**	**329**	P	P	10 14 38.0	-0.3
	0.2nm,0.6s,baz=125,slow=6.7,SNR=2.9						
	0.2nm,0.6s						

*DJA **09** 10:04:12.9±0.4, 2°N±3°×12°7E±°, h30km±5km, M3.6/12, MLv3.6/12*
*IDC **09** 10:04:16.2±1.6, 0°30N×127°19E, h0km, mb3.6/4, mbtmp3.6/5, ML3.8/1, Error ellipse: s-maj=109.6km s-min=20.9km az=69.0*
ISC 09 10:04:16.9±0.9, 0°38N±0°10×127°01E±0°10, h10km, n9, σ1s91/9, mb3.7/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.53**	**42**	P	**Pn**	**10 04 28.3**	**-2.2**
TNTI				S	**Sn**	**10 04 40.2**	**+0.6**
MNI	**Manado**	**2.42**	**296**	P	Pn	10 04 48.7	-7.9
SANI	**Sanana**	**2.62**	**203**	P	**Pg**	**10 05 07.4**	**+0.2**
GTOI	**Gorontalo**	**4.01**	**274**	P	**Pn**	**10 05 16.2**	**-2.3**
FITZ	**Fitzroy Crossi**	**18.41**	**184**	P	**P**	**10 08 33.5**	**+1.1**
	0.2nm,0.3s,baz=8.8,slow=11,SNR=1.6						
	0.5nm,0.3s						
WRA	**Warramunga Arr**	**21.43**	**161**	P	**P**	**10 09 05.7**	**+0.3**
	2.1nm,0.4s,baz=340,slow=11,SNR=32						
	2.1nm,0.4s						
ASAR	**Alice Springs**	**24.82**	**165**	P	**P**	**10 09 38.0**	**-1.5**
	0.6nm,0.4s,baz=341,slow=8.0,SNR=20						
	0.6nm,0.4s						
MKAR	**Makanchi Array**	**60.47**	**326**	P	**P**	**10 14 29.1**	**+2.0**
	0.3nm,0.6s,baz=123,slow=7.9,SNR=4.0						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**64.71**	**328**	P	**P**	**10 14 57.1**	**+1.9**
	0.4nm,0.6s,baz=128,slow=5.9,SNR=5.7						
	0.4nm,0.6s						

*IDC **09** 10:09:02.0±1.8, 7°04S×129°83E, h127km±20km, mb3.3/3, mbtmp3.9/8, MS3.2/1, Error ellipse: s-maj=38.7km s-min=15.0km az=99.0*
ISC 09 10:09:00.4±0.8, 7°18S±0°06×129°9E±0°1, h104km, n9, σ2s83/12, mb3.4/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.42**	**13**	P	**Pn**	**10 10 34.5**	**+2.0**
	4.0nm,0.3s,baz=246,slow=23,SNR=13						
SIJI				S	**Sn**	**10 11 42.3**	**-2.1**
	9.2nm,0.2s,baz=222,slow=22,SNR=7.6						
BATI	**Baumata**	**6.83**	**243**	P	**Pn**	**10 10 40.6**	**+2.5**
	13nm,0.3s,baz=64,slow=7.7,SNR=2.0						
FITZ	**Fitzroy Crossi**	**11.61**	**200**	P	**Pn**	**10 11 44.0**	**+1.2**
	2.4nm,0.3s,baz=27,slow=12,SNR=29						
FITZ				S	**Sn**	**10 13 46.5**	**-4.0**
	6.1nm,0.2s,baz=115,slow=22,SNR=7.0						
WRA	**Warramunga Arr**	**13.40**	**162**	P	**Pn**	**10 12 08.1**	**+1.6**
	1.3nm,0.4s,baz=334,slow=13,SNR=37						
WRA				S	**Sn**	**10 14 31.2**	**-2.9**
	3.9nm,0.4s,baz=338,slow=21,SNR=11						
ASAR	**Alice Springs**	**16.84**	**167**	P	**P**	**10 12 53.5**	**+3.1**
	1.3nm,0.5s,baz=345,slow=9.8,SNR=21						
ASAR				S	**Sn**	**10 15 56.1**	**-1.1**
	1.4nm,0.7s,baz=348,slow=25,SNR=7.4						
ASAJ	**Asahikawa**	**52.34**	**12**	LR	LR	10 41 12.9	
	comp=Z,23nm,18.0s,baz=348,slow=37						
MKAR	**Makanchi Array**	**68.31**	**327**	P	**P**	**10 19 49.9**	**-0.4**
	0.6nm,0.4s,baz=119,slow=8.1,SNR=11						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**72.60**	**329**	P	**P**	**10 20 13.9**	**-2.4**
	0.5nm,0.7s,baz=131,slow=5.1,SNR=5.7						
	0.5nm,0.7s						
BVAR	**Bovoye Array**	**78.15**	**328**	P	**P**	**10 20 44.8**	**-3.3**
	0.2nm,0.4s,baz=123,slow=5.3,SNR=2.0						
	0.2nm,0.4s						

*IDC **09** 10:20:37.5±1.2, 40°93N×109°16E, h0km, mb3.4/6, mbtmp3.5/8, ML4.0/2, MS3.5/2, Error ellipse: s-maj=36.1km s-min=16.6km az=65.0*
ISC 09 10:20:42.8±1.3, 40°95N±0°08×109°0E±0°2, h35km, n10, σ0s99/9, mb3.6/4, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZDM	**Lanzhou Array**	**6.51**	**222**	Pn	**Pn**	**10 22 16.3**	**0.0**
	baz=36,slow=15						
	2.7nm,0.4s						
SONM	**Songino Array**	**7.14**	**346**	Pn	**Pn**	**10 22 25.5**	**+0.8**
	1.8nm,0.3s,baz=169,slow=14,SNR=35						
SONM				Sn	**Sn**	**10 23 43.2**	**-1.5**
	2.3nm,0.3s,baz=168,slow=21,SNR=5.4						
SONM				Lg	Lg	10 24 23.4	
	3.9nm,0.3s,baz=160,slow=31,SNR=7.6						
	2.9nm,0.3s						
MKAR	**Makanchi Array**	**20.10**	**296**	P	**P**	**10 25 13.1**	**-0.2**
	0.7nm,0.9s,baz=97,slow=12,SNR=5.6						
	0.7nm,0.9s						
ZALV	**Zalesovo Beam**	**20.78**	**317**	P	**P**	**10 25 22.2**	**+1.6**
	0.4nm,0.4s,baz=107,slow=4.8,SNR=2.1						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**23.22**	**305**	P	**P**	**10 25 46.0**	**-0.5**
	0.4nm,0.5s,baz=104,slow=9.9,SNR=3.2						
	0.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**24.03**	**204**	P	**P**	**10 25 54.5**	**0.0**
	1.3nm,0.4s,baz=8.6,slow=10.0,SNR=11						
	1.3nm,0.4s						
SEY	**Seymchan**	**33.64**	**35**	LR	LR	10 41 07.3	
	comp=Z,74nm,19.6s,baz=334,slow=37						
BATI	**Baumata**	**52.66**	**162**	LR	LR	10 52 19.2	
	comp=Z,55nm,21.1s,baz=141,slow=36						
WRA	**Warramunga Arr**	**64.98**	**154**	P	**P**	**10 31 19.0**	**-0.1**
	0.3nm,0.7s,baz=347,slow=7.8,SNR=10						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**68.31**	**155**	P	**P**	**10 31 39.8**	**-0.5**
	0.7nm,0.8s,baz=338,slow=5.9,SNR=9.2						
	0.7nm,0.8s						

*JMA **09** 10:27:43.3±0.6, 45°N±3°×149°9E±°, h30km, MV4.3/14, NEAR ETOROFU ISLAND*
*MOS **09** 10:27:43.2±1.4, 45°02N×149°04E, h81km, mb3.9/2, Error ellipse: s-maj=16.5km s-min=9.8km az=139.0*
*SKHL **09** 10:27:44.0±0.0, 45°00N×149°10E, h79km±8km, mb5.1/2*
*IDC **09** 10:27:47.0±3.1, 45°34N×148°85E, h108km±30km, mb2.9/7, mbtmp3.4/10, Error ellipse: s-maj=42.1km s-min=19.2km az=143.0*
ISC 09 10:27:44.0±0.7, 45°00N±0°07×149°09E±0°07, h81km, n45, σ1s65/61, mb3.2/8, 1C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.90**	**285**	*d* iPN	**Pn**	**10 27 59.1**	**-2.8**
KUR				*i* S	**Sn**	**10 28 11.7**	**-3.6**
KUR	**Kuril'sk**	**0.90**	**285**	*e*P	**Pn**	**10 28 01.0**	**-0.9**
KUR				AMB	AMB	10 28 03.3	
	360nm,0.2s						
KUR				*i* S	**Sn**	**10 28 13.8**	**-1.5**
KUR				A	A	10 28 14.6	
	7µm,0.5s						
KUR				A	A	10 28 14.6	
	6µm,0.5s						
SHO	**Shikotan**	**1.98**	**236**	*e*P	Pn	10 28 25.4	+10
SHO				AMB	AMB	10 28 30.3	
	100nm,0.2s						
SHO				*e*S	Sn	10 28 49.3	+10
SHO				A	A	10 28 57.2	
	430nm,0.2s						
SHO				A	A	10 28 57.2	
	530nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**2.51**	**248**	*e*PN	**Pn**	**10 28 22.6**	**-0.1**
YUK				*i* S	**Sn**	**10 28 54.1**	**+1.8**
YUK				pmax	pmax		
	comp=Z,319nm,0.2s						
YUK				pmax	pmax		
	comp=N,49nm,0.3s						
YUK				pmax	pmax		
	comp=E,64nm,0.2s						
YUK				smax	smax		
	comp=N,336nm,0.2s						
YUK				smax	smax		
	comp=E,1µm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.51**	**248**	*e*P	**Pn**	**10 28 22.6**	**-0.1**
YUK				AMB	AMB	10 28 25.4	
	comp=E,270nm,0.3s						
YUK				*e*S	**Sn**	**10 28 50.5**	**-1.8**
YUK				A	A	10 29 59.2	
	comp=E,740nm,0.4s						
YUK				A	A	10 29 59.2	
	comp=E,770nm,0.4s						
GLVR	**Golovnino**	**2.86**	**245**	*e*PN	**Pn**	**10 28 28.3**	**+0.9**
GLVR				*i* S	**Sn**	**10 29 02.6**	**+1.8**
GLVR				pmax	pmax		
	comp=Z,134nm,0.2s						
GLVR				pmax	pmax		
	comp=N,20nm,0.1s						
GLVR				pmax	pmax		
	comp=E,36nm,0.1s						
GLVR				smax	smax		
	comp=N,421nm,0.3s						
GLVR				smax	smax		
	comp=E,748nm,0.3s						
GLVR	**Golovnino**	**2.86**	**245**	*e*P	**Pn**	**10 28 28.3**	**+0.9**
GLVR				AMB	AMB	10 28 31.5	
	comp=E,130nm,0.2s						
GLVR				*i* S	**Sn**	**10 29 02.6**	**+1.8**
GLVR				A	A	10 29 12.0	
	comp=E,420nm,0.4s						
GLVR				A	A	10 29 12.0	
	comp=E,750nm,0.4s						
RUSJ	**Misakicho**	**2.89**	**253**	*e*PN	**Pn**	**10 28 28.0**	**+0.1**
RUSJ				*i* S	**Sn**	**10 29 02.8**	**+1.2**
NEM2	**Nemuro 2**	**2.91**	**237**	*e*P	**Pn**	**10 28 28.0**	**-0.1**
NEM2				*e*S	**Sn**	**10 29 00.3**	**-1.9**
NMR	**Nemuro--Hokkai**	**2.92**	**237**	*e*PN	**Pn**	**10 28 28.1**	**-0.2**
NMR				*i* S	**Sn**	**10 29 02.7**	**+0.4**
NMR	**Nemuro--Hokkai**	**2.92**	**237**	*e*P	**Pn**	**10 28 28.1**	**-0.2**
NMR				*e*S	**Sn**	**10 29 02.0**	**-0.3**
JRA	**Rausu**	**3.04**	**251**	P	**Pn**	**10 28 31.4**	**+1.6**
JRA				*e*S	**Sn**	**10 29 07.3**	**+2.2**
JNK	**Nakash**	**3.45**	**247**	P	**Pn**	**10 28 36.8**	**+1.4**
JNK				*e*S	**Sn**	**10 29 17.2**	**+2.1**
AKK	**Akkeshi**	**3.65**	**239**	*e*P	**Pn**	**10 28 38.3**	**+0.1**
JAK	**Akkeshi**	**3.75**	**239**	P	**Pn**	**10 28 39.6**	**0.0**
JAK				*e*S	**Sn**	**10 29 21.3**	**-1.3**
JTKR	**Abashiri--Toko**	**3.85**	**256**	*e*P	**Pn**	**10 28 42.1**	**+1.3**
JAR	**Ashorobuto**	**4.19**	**248**	*e*P	**Pn**	**10 28 47.1**	**+1.5**
JAR				*e*S	**Sn**	**10 29 36.3**	**+3.0**
JOB	**Onbets**	**4.34**	**243**	P	**Pn**	**10 28 48.5**	**+1.0**
JKK2	**Kamakawa 2**	**4.68**	**258**	*e*P	**Pn**	**10 28 54.0**	**+1.8**
JKA	**Kamikawa-asahi**	**4.72**	**261**	*e*P	**Pn**	**10 28 54.7**	**+1.9**
ASAJ	**Asahikawa**	**4.73**	**261**	P	**Pn**	**10 28 54.7**	**+1.9**
	comp=E,3.2nm,0.4s,baz=95,slow=21,SNR=8.4						
JCH	**Churui**	**4.79**	**242**	*e*P	**Pn**	**10 28 54.1**	**+0.5**
JCH				*e*S	**Sn**	**10 29 46.8**	**-0.9**
YSS	**Yuzhno-Sakhali**	**4.83**	**296**	*e*PN	**Pn**	**10 28 54.0**	**-0.2**
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS	**Yuzhno-Sakhali**	**4.83**	**296**	*e*P	**Pn**	**10 28 54.0**	**-0.2**
YSS				*e*S	**Sn**	**10 29 47.1**	**-1.7**
JNBK	**Urakawa-nobuka**	**5.35**	**242**	P	**Pn**	**10 29 00.8**	**-0.5**
JANG	**Nango**	**7.25**	**233**	*e*P	**Pn**	**10 29 26.4**	**-0.9**
JANG				*e*S	**Sn**	**10 30 42.0**	**-6.0**
TYV	**Tymovskoe**	**7.28**	**326**	*e*P	**Pn**	**10 29 28.6**	**+1.0**
SKR	**Severo-Kuril's**	**7.39**	**37**‖	*i* PN	**Pn**	**10 29 31.8**	**+2.8**
SKR	**Severo-Kuril's**	**7.39**	**37**	*e*P	**Pn**	**10 29 30.6**	**+1.6**
PAU	**Pauzhetka**	**8.27**	**36**	*e*P	**Pn**	**10 29 42.6**	**+1.6**
TEY	**Ternei**	**8.85**	**275**	*e*PN	**Pn**	**10 29 48.7**	**-0.3**
NKL	**Nikolayevsk**	**9.84**	**329**	*e*P	**Pn**	**10 30 02.8**	**+0.4**
PEA0B	**Petropavlovsk-**	**9.88**	**32**‖	*e*PN	Pn	10 30 07.3	+4.3
PETK	**Petropavlovsk-**	**9.88**	**32**	P	**Pn**	**10 30 02.4**	**-0.6**
	comp=Z,5.3nm,0.6s,baz=185,slow=8.5,SNR=6.5						
USRK	**Ussuriysk Ar.**	**12.22**	**272**	P	**Pn**	**10 30 36.2**	**+1.3**
	comp=Z,0.5nm,0.4s,baz=81,slow=13,SNR=1.8						
ILAR	**Eielson Array**	**39.65**	**37**	P	**P**	**10 35 06.2**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=268,slow=8.8,SNR=4.4						
	comp=Z,0.3nm,0.5s						
ILAR	**Eielson Array**	**39.65**	**37**	*e*P	**P**	**10 35 09.0**	**+1.5**
MKAR	**Makanchi Array**	**45.24**	**297**	P	**P**	**10 35 50.3**	**-2.8**
	comp=Z,0.2nm,0.6s,baz=68,slow=8.1,SNR=1.6						
	comp=Z,0.2nm,0.6s						
YKA	**Yellowknife Ar**	**53.98**	**35**	P	**P**	**10 36 58.0**	**-1.1**
	comp=Z,0.1nm,0.5s,baz=301,slow=7.9,SNR=4.6						
	comp=Z,0.1nm,0.5s						
OBN	**Obninsk**	**65.12**	**324**	*e*P	**P**	**10 38 17.1**	**+1.3**
OBN				*e**PP	**pP**	**10 38 36.6**	**+0.1**
OBN				*e*		10 38 48.8	
OBN				*e*		10 40 40.6	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
OBN	**Obninsk**	**65.12**	**324**	*e*P	**P**	**10 38 17.1**	**+1.3**
NVAR	**Mina Array Bea**	**65.74**	**59**	P	**P**	**10 38 20.6**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=307,slow=5.5,SNR=1.8						
	comp=Z,0.1nm,0.3s						
WRA	**Warramunga Arr**	**66.02**	**195**	P	**P**	**10 38 23.4**	**+1.5**
	comp=Z,0.4nm,0.9s,baz=7.5,slow=8.1,SNR=1.5						
	comp=Z,0.4nm,0.9s						
PDAR	**Pinedale Array**	**68.04**	**51**	P	**P**	**10 38 34.8**	**-0.1**
	comp=Z,0.2nm,0.7s,baz=314,slow=3.5,SNR=2.7						
	comp=Z,0.2nm,0.7s						
TXAR	**Lajitas Array**	**80.80**	**58**	P	**P**	**10 39 48.9**	**0.0**
	comp=Z,0.2nm,0.5s,baz=322,slow=5.8,SNR=5.2						
	comp=Z,0.2nm,0.5s						

IDC 09 10:28:30.9±616.0, 56°24N×0°74E, h0km, Error ellipse: s-maj=263.6km s-min=175.4km az=87.0, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**10.81**	**128**	I	I	11 30 44.9	
	0.1nm,0.8s,baz=320,slow=318,SNR=2.4						
I37NO	**I37NO**	**15.17**	**25**	I	I	12 00 55.0	
	baz=222,slow=308						
I43RU	**DUBNA INFRASON**	**20.00**	**73**	I	I	12 30 00.0	
	baz=287,slow=337,SNR=1.0						

*JMA **09** 10:34:08.1±0.2, 24°4N±0°8×122°3E±0°3, h67km±2km, MV2.6/14, TAIWAN REGION*
*TAP **09** 10:34:08.2, 24°48N×122°30E, h67km, ML3.5, C*
ISC 09 10:34:08.3±1.2, 24°46N±0°03×122°32E±0°02, h64km±7km, n121, σ1s105/224, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESAO	**Su ao**	**0.45**	**285**	*e*P	**Pn**	**10 34 20.4**	**+0.4**
TWC	**Suao**	**0.45**	**289**	*i* P	**Pn**	**10 34 20.0**	**-0.1**
TWC				*i* S	**Sn**	**10 34 28.4**	**-0.3**
EWUT	**Wuta**	**0.49**	**268**	P	**Pn**	**10 34 20.9**	**+0.4**
EWUT				*e*S	**Sn**	**10 34 29.4**	**0.0**
EGS		**0.52**	**317**	*e*P	**Pn**	**10 34 21.0**	**+0.3**
EGS				*e*S	**Sn**	**10 34 29.6**	**-0.2**
ENA	**Nanau**	**0.53**	**267**	*e*P	**Pn**	**10 34 21.5**	**+0.7**
ENA				*i* S	**Sn**	**10 34 30.6**	**+0.6**
EAHA	**Aohua**	**0.55**	**256**	*e*P	**Pn**	**10 34 21.3**	**+0.3**
EAHA				S	**Sn**	**10 34 31.1**	**+0.8**
EHP	**Heping Village**	**0.55**	**254**	*e*P	**Pn**	**10 34 21.3

ZUZH	**Zhuzihu**	**0.99**	**315**	*e*P	**Pn**	**10 34 26.1**	**-0.3**
ZUZH				*i* S	**Sn**	**10 34 38.9**	**-1.0**
FUSS	**Fushou**	**1.00**	**258**	*i* P	**Pn**	**10 34 27.1**	**+0.4**
FUSS				*i* S	**Sn**	**10 34 40.4**	**0.0**
WHF	**Hehuan Shan**	**1.01**	**252**	P	**Pn**	**10 34 27.1**	**0.0**
WHF				*e*S	**Sn**	**10 34 40.6**	**-0.3**
ESL	**Shilin**	**1.03**	**232**	*e*P	**Pn**	**10 34 26.4**	**-0.6**
ESL				S	**Sn**	**10 34 40.1**	**-0.7**
TWS1	**Kuangyinshan**	**1.04**	**308**	P	**Pn**	**10 34 27.1**	**+0.2**
TWS1				*e*S	**Sn**	**10 34 41.0**	**+0.2**
TWY	**Chenhua**	**1.04**	**321**	*e*P	**Pn**	**10 34 27.0**	**0.0**
TWY				*e*S	**Sn**	**10 34 41.3**	**+0.4**
NTST	**Danshui**	**1.06**	**312**	*e*P	**Pn**	**10 34 27.3**	**+0.1**
TWT	**Tachien**	**1.06**	**259**	*e*P	**Pn**	**10 34 28.3**	**+0.8**
TWT				*i* S	**Sn**	**10 34 42.2**	**+0.5**
TDCB	**Techi**	**1.08**	**259**	*i* P	**Pn**	**10 34 28.3**	**+0.7**
TDCB				*i* S	**Sn**	**10 34 42.1**	**+0.1**
KSHI	**Guanxi Townshi**	**1.09**	**287**	*e*P	**Pn**	**10 34 28.5**	**+0.9**
KSHI				*e*S	**Sn**	**10 34 44.7**	**+2.7**
NFF	**Wufeng Townshi**	**1.11**	**279**	P	**Pn**	**10 34 28.6**	**+0.7**
NFF				*e*S	**Sn**	**10 34 43.2**	**+0.7**
WARBT	**Fenglin Townsh**	**1.13**	**229**	*e*P	**Pn**	**10 34 27.7**	**-0.5**
WARBT				*e*S	**Sn**	**10 34 41.1**	**-1.9**
NCU	**National Centr**	**1.15**	**296**	*e*P	**Pn**	**10 34 26.6**	**-1.8**
NCU				*e*S	**Sn**	**10 34 41.2**	**-2.2**
NCUH	**Zhongli**	**1.15**	**296**	*e*P	**Pn**	**10 34 28.8**	**+0.4**
NCUH				S	**Sn**	**10 34 43.3**	**-0.1**
OWD	**Renai**	**1.16**	**244**	P	**Pn**	**10 34 28.7**	**+0.1**
OWD				*i* S	**Sn**	**10 34 42.9**	**-1.0**
PCYT	**Pengchaiyu**	**1.19**	**349**	*e*P	**Pn**	**10 34 29.3**	**+0.4**
WUSB	**Renai**	**1.19**	**247**	*i* P	**Pn**	**10 34 29.6**	**+0.5**
WUSB				*e*S	**Sn**	**10 34 44.1**	**-0.6**
LIOB	**Emei**	**1.20**	**279**	*i* P	**Pn**	**10 34 29.8**	**+0.7**
LIOB				*e*S	**Sn**	**10 34 45.9**	**+1.2**
NSTT	**Nanjuang**	**1.21**	**278**	*e*P	**Pn**	**10 34 29.7**	**+0.5**
HGSD	**Ruisui**	**1.27**	**221**	*e*P	**Pn**	**10 34 30.1**	**+0.1**
HGSD				*i* S	**Sn**	**10 34 47.3**	**+1.2**
WHP	**Taichung City**	**1.27**	**262**	*e*P	**Pn**	**10 34 31.3**	**+1.3**
WHP				*i* S	**Sn**	**10 34 47.2**	**+0.9**
VWDT	**VWDT**	**1.29**	**237**	*e*P	**Pn**	**10 34 30.5**	**+0.3**
VWDT				*e*S	**Sn**	**10 34 46.2**	**-0.4**
IRIF	**Iriomote-Funau**	**1.29**	**95**	P	**Pn**	**10 34 30.6**	**+0.3**
IRIF				S	**Sn**	**10 34 47.4**	**+0.6**
EHYH	**Wanrong**	**1.31**	**223**	*e*P	**Pn**	**10 34 30.5**	**-0.1**
EHYH				*e*S	**Sn**	**10 34 46.0**	**-1.3**
EHY	**Hungye**	**1.32**	**224**	*e*P	**Pn**	**10 34 29.8**	**-0.9**
ECBN	**Changbin**	**1.39**	**215**	*e*P	**Pn**	**10 34 30.6**	**-1.0**
ECBN				*e*S	**Sn**	**10 34 47.2**	**-1.8**
NMLH	**Miaoli**	**1.39**	**273**	*e*P	**Pn**	**10 34 31.5**	**-0.2**
HATJ	**Hateruma jima**	**1.41**	**106**	*e*P	**Pn**	**10 34 32.6**	**+0.7**
TWQ1	**Liyutan**	**1.41**	**266**	*e*P	**Pn**	**10 34 33.1**	**+1.2**
TWQ1				*e*S	**Sn**	**10 34 50.9**	**+1.2**
SSLB	**Suanglung**	**1.42**	**242**	*e*P	**Pn**	**10 34 32.1**	**+0.1**
SSLB				*e*S	**Sn**	**10 34 48.7**	**-1.1**
YULB	**Yu-li**	**1.42**	**222**	*e*P	**Pn**	**10 34 31.2**	**-0.8**
YULB				*e*S	**Sn**	**10 34 48.0**	**-1.7**
SMLT	**Sun Moon Lake**	**1.42**	**246**	*e*P	**Pn**	**10 34 33.1**	**+1.1**
SMLT				S	**Sn**	**10 34 50.9**	**+0.9**
EYUL	**Yuli**	**1.44**	**220**	*e*P	**Pn**	**10 34 32.6**	**+0.4**
EYUL				*e*S	**Sn**	**10 34 50.3**	**+0.1**
TYC	**Yuchr**	**1.45**	**248**	*e*P	**Pn**	**10 34 33.5**	**+1.1**
TYC				*e*S	**Sn**	**10 34 51.6**	**+1.2**
TWF1	**Yuli**	**1.45**	**220**	*e*P	**Pn**	**10 34 31.8**	**-0.6**
TWF1				*e*S	**Sn**	**10 34 49.0**	**-1.5**
CHKH	**Chenggong**	**1.52**	**214**	*e*P	**Pn**	**10 34 32.3**	**-1.0**
CHKH				*e*S	**Sn**	**10 34 49.5**	**-2.7**
WHYT	**Xinyi Township**	**1.54**	**241**	*e*P	**Pn**	**10 34 34.9**	**+1.2**
WHYT				*e*S	**Sn**	**10 34 54.6**	**+1.8**
JKRS	**Kuro-shima**	**1.56**	**98**	P	**Pn**	**10 34 34.4**	**+0.6**
JKRS				S	**Sn**	**10 34 54.0**	**+0.9**
FULB	**Fuli**	**1.57**	**217**	*e*P	**Pn**	**10 34 33.8**	**-0.3**
FULB				*e*S	**Sn**	**10 34 51.8**	**-1.6**
YUS	**Yu-Shan**	**1.58**	**233**	*e*S	**Sn**	**10 34 54.0**	**-0.4**
WJS	**Zhushan**	**1.59**	**247**	*i* P	**Pn**	**10 34 36.1**	**+1.9**
WJS				*e*S	**Sn**	**10 34 55.9**	**+2.0**
WNT	**Mingjian**	**1.60**	**249**	*i* P	**Pn**	**10 34 36.1**	**+1.7**
WNT				S	**Sn**	**10 34 56.4**	**+2.3**
WCHH	**Zhanghua**	**1.65**	**257**	*e*P	**Pn**	**10 34 35.5**	**+0.5**
WCHH				*e*S	**Sn**	**10 34 56.5**	**+1.1**
EHD	**Haiduan**	**1.66**	**218**	*e*P	**Pn**	**10 34 34.4**	**-0.8**
EHD				*e*S	**Sn**	**10 34 53.8**	**-1.7**
JIJ	**Ishigaki jima**	**1.67**	**93**	P	**Pn**	**10 34 35.4**	**+0.1**
JIJ				S	**Sn**	**10 34 55.6**	**0.0**
ALS	**Alishan**	**1.68**	**236**	P	**Pn**	**10 34 37.0**	**+1.3**
ALS				S	**Sn**	**10 34 58.3**	**+1.6**
ECS	**Chishang**	**1.69**	**217**	*e*P	**Pn**	**10 34 37.3**	**+1.6**
CHN5	**Tsauling**	**1.73**	**241**	*e*P	**Pn**	**10 34 37.8**	**+1.5**
CHN5				S	**Sn**	**10 34 59.1**	**+1.7**
ELDTW	**Lidau**	**1.74**	**224**	*e*P	**Pn**	**10 34 36.0**	**-0.4**
ELDTW				S	**Sn**	**10 34 56.2**	**-1.5**
WDLH	**Douliu**	**1.80**	**245**	*e*P	**Pn**	**10 34 38.2**	**+1.1**
WDLH				*e*S	**Sn**	**10 35 01.4**	**+2.4**
JISG	**Ishigakijimahi**	**1.82**	**86**	P	**Pn**	**10 34 37.7**	**+0.4**
JISG				S	**Sn**	**10 34 59.6**	**+0.2**
WRL	**Guolierlin Hig**	**1.86**	**253**	*e*P	**Pn**	**10 34 38.2**	**+0.3**
WRL				*e*S	**Sn**	**10 35 00.9**	**+0.5**
WCKO	**Fanlu**	**1.87**	**237**	*e*P	**Pn**	**10 34 39.8**	**+1.7**
WCKO				S	**Sn**	**10 35 02.2**	**+1.6**
RLNB	**Erlin**	**1.88**	**253**	*e*P	**Pn**	**10 34 38.4**	**+0.3**
RLNB				*e*S	**Sn**	**10 35 03.6**	**+2.8**
STYH	**Taoyuan**	**1.91**	**228**	*e*P	**Pn**	**10 34 40.0**	**+1.4**
STYH				S	**Sn**	**10 35 02.0**	**+0.4**
CHN4	**Tsaushan**	**1.93**	**235**	*e*P	**Pn**	**10 34 40.6**	**+1.8**
CHN4				*e*S	**Sn**	**10 35 04.9**	**+2.8**
TPUB	**Ta-pu**	**1.93**	**234**	*e*P	**Pn**	**10 34 40.2**	**+1.3**
TPUB				*e*S	**Sn**	**10 35 03.9**	**+1.8**
WTP	**Ta-pu**	**1.98**	**233**	P	**Pn**	**10 34 40.9**	**+1.3**
WTP				S	**Sn**	**10 35 05.5**	**+2.2**
CHY	**Chiayi**	**1.98**	**241**	*e*P	**Pn**	**10 34 40.0**	**+0.5**
CHY				*e*S	**Sn**	**10 35 05.2**	**+1.9**
TWGBT	**Beinan**	**1.99**	**215**	*e*P	**Pn**	**10 34 39.4**	**-0.3**
TWGBT				*e*S	**Sn**	**10 35 01.2**	**-2.5**
TWG	**Pinlang**	**1.99**	**215**	*e*P	**Pn**	**10 34 39.1**	**-0.6**
TWG				*e*S	**Sn**	**10 35 01.2**	**-2.5**
TWK	**Hsinying**	**2.06**	**235**	*e*P	**Pn**	**10 34 42.3**	**+1.7**
TWK				*e*S	**Sn**	**10 35 07.1**	**+1.9**
CHN1	**Nanshi**	**2.08**	**233**	P	**Pn**	**10 34 42.8**	**+1.9**
CHN1				*e*S	**Sn**	**10 35 06.6**	**+0.9**
SGST	**Jiashian**	**2.10**	**230**	P	**Pn**	**10 34 42.1**	**+0.9**
SGST				S	**Sn**	**10 35 05.9**	**+1.4**
WSL	**Shuilin Townsh**	**2.13**	**244**	*e*P	**Pn**	**10 34 42.5**	**+1.0**
WSL				*e*S	**Sn**	**10 35 09.1**	**+2.2**
ECL	**Taimali**	**2.24**	**214**	*e*P	**Pn**	**10 34 41.8**	**-1.2**
ECL				*e*S	**Sn**	**10 35 07.8**	**-1.9**
SSD	**Sandimen**	**2.31**	**223**	*e*P	**Pn**	**10 34 46.0**	**+2.0**
SSD				S	**Sn**	**10 35 13.2**	**+2.0**
MASBT	**Mashibuluo**	**2.41**	**220**	*e*P	**Pn**	**10 34 46.2**	**+0.9**
MASBT				*e*S	**Sn**	**10 35 14.8**	**+1.1**
EAST	**Anshuo**	**2.47**	**213**	*e*P	**Pn**	**10 34 46.3**	**0.0**
EAST				*e*S	**Sn**	**10 35 13.8**	**-1.5**
SLIU	**Shizi**	**2.64**	**212**	*e*P	**Pn**	**10 34 48.3**	**-0.2**
VWUC	**VWUC**	**2.66**	**282**	*i* P	**Pn**	**10 34 48.4**	**-0.4**
PNG	**Penghu**	**2.68**	**251**	*e*P	**Pn**	**10 34 46.6**	**-2.4**
WDGT	**Dungji**	**2.71**	**244**	*e*P	**Pn**	**10 34 49.4**	**-0.1**
MATB	**Ma-tsu**	**2.73**	**309**	P	**Pn**	**10 34 49.7**	**0.0**
MATB				*e*S	**Sn**	**10 35 20.4**	**-1.1**
SMST	**Manzhou Townsh**	**2.79**	**210**	*e*P	**Pn**	**10 34 50.8**	**+0.3**
SMST				*e*S	**Sn**	**10 35 20.8**	**-2.2**
PTMZ	**Houxiangcun**	**2.96**	**282**	*e*P	**Pn**	**10 34 52.6**	**-0.3**
PTMZ				*e*S	**Sn**	**10 35 25.7**	**-1.6**
LYJJ	**Jianjiangzhen**	**3.11**	**313**	*e*P	**Pn**	**10 34 54.9**	**0.0**
XPSS	**Dashiqiu**	**3.12**	**322**	*e*P	**Pn**	**10 34 54.0**	**-1.0**
MHZQ	**Yeshan**	**3.40**	**299**	*e*P	**Pn**	**10 34 58.1**	**-0.7**
KNMB	**Chin-men Tao**	**3.58**	**271**	*e*P	**Pn**	**10 35 00.2**	**-1.1**
AXDP	**Jialang**	**3.98**	**277**	*e*P	**Pn**	**10 35 06.4**	**-0.4**

IDC 09 10:41:31.9±659.0, 56°46'N×0°12'E, h0km, Error ellipse: s-maj=288.7km s-min=182.5km az=80.0, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**11.22**	**127**	I	I	11 46 00.5	
	0.1nm,0.7s,baz=320,slow=320,SNR=2.6						
I37NO	**I37NO**	**15.12**	**26**	I	I	12 13 00.0	
	baz=224,slow=309,SNR=0.8						
I43RU	**DUBNA INFRASON**	**20.27**	**74**	I	I	12 45 35.0	
	baz=286,slow=334						

*IDC **09** 10:43:20.2±1.4,3°.02N×126°.97E,h0km,mb4.0/6, mbtmp4.0/6,Error ellipse: s-maj=102.3km s-min=15.5km az=69.0*

*NEIC **09** 10:43:21.4±1.8,3°.1N±0°.1×126°.79E±0°.09,h10km±2km, mb4.4/15,Error ellipse: s-maj=22.3km s-min=6.2km az=38.0*

*DJA **09** 10:43:27.2±0.2,3°N±2°×12°7E±°, h10km,M4.4/14,mB5.0/3, mb5.1/3,MLv4.1/14,Mw(mB)4.3/3*

*MAN **09** 10:43:29.0,2°.74N×126°.14E,h54km,MS3.8*

ISC 09 10:43:26.5±0.7,2°.85N±0°.05×126°.66E±0°.08,h35km,n38, σ1§79/38,mb4.2/13,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.40**	**306**	P	**Pn**	**10 43 51.0**	**+1.5**
SGSI				S	**Sn**	**10 44 07.5**	**+0.7**
TNTI	**Ternate**	**2.18**	**161**	Pn	**Pn**	**10 44 00.9**	**+0.6**
TNTI	**Ternate**	**2.18**	**161**	P	**Pn**	**10 44 03.8**	**+3.5**
MNI	**Manado**	**2.29**	**232**	P	**Pn**	**10 44 04.3**	**+2.5**
DDMP	**Don Marcelino,**	**3.37**	**344**	*e*P	**Pn**	**10 44 19.8**	**+3.2**
DDMP				*e*S	**Sn**	**10 44 56.9**	**+1.5**
GTOI	**Gorontalo**	**4.26**	**239**	P	**Pn**	**10 44 30.8**	**+2.0**
SANI	**Sanana**	**4.91**	**188**	P	**Pn**	**10 44 38.1**	**+0.2**
CTBH	**Cotabato--PC H**	**4.96**	**331**	*i* P	**Pn**	**10 44 39.3**	**+0.8**
MRSI	**Marisa**	**5.27**	**244**	P	**Pn**	**10 44 45.3**	**+2.5**
	0.8nm2μm177nm,0.5s						
BIPH	**Bislig**	**5.31**	**357**	*e*P	**Pn**	**10 44 44.9**	**+1.7**
BIPH				*e*S	**Sn**	**10 45 40.6**	**-2.6**
LUWI	**Luwuk**	**5.48**	**225**	Pn	**Pn**	**10 44 47.4**	**+1.7**
LUWI	**Luwuk**	**5.48**	**225**	P	Pn	10 44 52.6	+6.9
TOLI2	**Tolitoli**	**6.12**	**254**		**Pn**	**10 44 55.1**	**+0.6**
FAKI	**Fak Fak**	**8.01**	**136**	Pn	**Pn**	**10 45 19.6**	**-0.8**
KAPI	**Kappang**	**10.42**	**221**		**Pn**	**10 45 53.7**	**+0.2**
SBUM	**Sibu**	**14.43**	**269**		**Pn**	**10 46 47.0**	**-1.3**
MTN	**Manton Dam**	**16.21**	**164**	Pn	**Pn**	**10 47 10.6**	**-1.1**
KNRA	**Kununurra**	**18.53**	**174**	P	**P**	**10 47 39.3**	**-0.8**
KNRA				IAmb	IAmb	10 48 15.6	
	comp=Z,19nm,0.9s						
FITZ	**Fitzroy Crossi**	**20.84**	**183**	P	**P**	**10 48 04.5**	**-0.8**
	comp=Z,3.8nm,0.6s,baz=15,slow=8.4,SNR=9.1						
	comp=Z,3.8nm,0.6s						
COEN	**Coen**	**23.39**	**136**	P	P	10 48 21.8	-11
COEN				IAmb	IAmb	10 48 41.7	
	comp=Z,17nm,1.4s						
WB0	**Warramunga Arr**	**23.73**	**162**	P	**P**	**10 48 34.8**	**-0.7**
WB0				IAmb	IAmb	10 48 35.8	
	comp=Z,8.9nm,0.7s						
WRAB	**Tennant Creek**	**23.87**	**162**	P	**P**	**10 48 36.1**	**-0.7**
WRAB				IAmb	IAmb	10 48 37.0	
	comp=Z,5.7nm,0.7s						
WRA	**Warramunga Arr**	**23.88**	**162**	P	**P**	**10 48 35.1**	**-1.8**
	comp=Z,4.8nm,0.6s,baz=342,slow=11,SNR=27						
	comp=Z,4.8nm,0.6s						
WB2	**Warramunga Arr**	**23.88**	**162**	P	**P**	**10 48 36.8**	**-0.2**
WB2				IAmb	IAmb	10 48 39.1	
	comp=Z,8.7nm,0.8s						
WR8	**Warramunga Arr**	**23.94**	**162**		**P**	**10 48 36.5**	**-1.1**
WR0	**Warramunga Arr**	**23.95**	**161**	P	**P**	**10 48 37.0**	**-0.6**
AS31	**Alice Springs**	**27.29**	**165**	P	**P**	**10 49 08.1**	**+0.2**
ASAR	**Alice Springs**	**27.29**	**165**	P	**P**	**10 49 07.7**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=347,slow=12,SNR=12						
ASAR				S	**S**	**10 53 51.5**	**+6.3**
	comp=Z,0.9nm,0.9s,baz=346,slow=19,SNR=4.4						
	comp=Z,0.9nm,0.7s						
FORT	**Forrest**	**33.47**	**178**	P	**P**	**10 50 01.5**	**-0.9**
FORT				IAmb	IAmb	10 50 10.1	
	comp=Z,11nm,1.1s						
BBOO	**Buckleboo**	**36.57**	**167**	P	**P**	**10 50 28.8**	**-0.3**
BBOO				IAmb	IAmb	10 50 36.4	
	comp=Z,14nm,1.1s						
STKA	**Stephens Creek**	**37.34**	**159**	P	**P**	**10 50 34.6**	**-1.1**
	comp=Z,2.0nm,0.7s,baz=354,slow=10,SNR=4.0						
	comp=Z,2.0nm,0.7s						
STKA	**Stephens Creek**	**37.34**	**159**	IAmb	IAmb	10 50 43.3	
	comp=Z,36nm,1.4s						
ARMA	**Armidale**	**40.78**	**146**	P	**P**	**10 51 05.3**	**+0.7**
EVN	**Everest**	**45.46**	**307**	P	**P**	**10 51 42.2**	**-0.9**
EVN				IAmb	IAmb	10 51 44.8	
	comp=Z,3.0nm,0.8s						
MKAR	**Makanchi Array**	**58.23**	**326**	P	**P**	**10 53 16.5**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=117,slow=7.8,SNR=18						
	comp=Z,0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**62.44**	**328**	P	**P**	**10 53 45.7**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=129,slow=6.0,SNR=4.2						
	comp=Z,0.7nm,0.5s						
KURK	**Kurchatov**	**62.44**	**328**	P	**P**	**10 53 45.7**	**-0.3**
KURK	**Kurchatov**	**62.44**	**328**	IAmb	IAmb	10 53 46.5	
	comp=Z,1.8nm,0.5s						

*NEIC **09** 11:04:43.6±2.3,40°.56N±0°.05×125°.24W±0°.05,h10km±2km, mb3.8/5,ML3.1/90,Mwr3.7/3(NCEDC),Error ellipse: s-maj=8.7km s-min=5.9km az=208.0*

*NCEDC **09** 11:04:45.9±3.9,40°.57N±0°.03×125°.00W±0°.05,h6km±6km, Error ellipse: s-maj=5.3km s-min=3.7km az=77.0*

*IDC **09** 11:04:47.6±4.3,41°.06N×124°.31W,h0km,mb2.5/2, mbtmp2.8/4,ML3.4/2,MS2.6/1,Error ellipse: s-maj=63.9km s-min=23.4km az=63.0*

ISC 09 11:04:43.3±1.0,40°.56N±0°.05×125°.21W±0°.07,h13km, n115,σ1§43/112,mb3.6/4,Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCTM	**Capetown**	**0.67**	**96**		**Pn**	**11 04 58.2**	**-0.3**
KCTM					**Sn**	**11 05 07.0**	**-1.8**
KCTM					**Sb**	**11 05 07.2**	**+1.1**
PETL	**Petrolia**	**0.71**	**112**		**Pn**	**11 04 58.3**	**-0.7**
PETL					**Sb**	**11 05 06.8**	**-0.4**
KMPM	**Mount Pierce**	**0.84**	**99**	Pg	**Pn**	**11 05 00.3**	**-0.6**
JCC	**Jacoby Creek,**	**0.93**	**73**		**Pg**	**11 05 01.0**	**-0.4**
JCC				IAML		11 05 12.1	
	comp=N,431nm,0.8s						
JCC				IAML		11 05 12.1	
	comp=E,560nm,0.8s						
KRPM	**Rodgers**	**1.08**	**56**		**Pb**	**11 05 03.1**	**-0.8**
KRPM					**Sb**	**11 05 15.6**	**-2.4**
BRIC	**Briceland Vine**	**1.10**	**113**		**Pn**	**11 05 04.2**	**-0.1**
DMOR	**Dinsmores, CA**	**1.16**	**82**		**Pb**	**11 05 04.8**	**-0.4**
KHMM	**Horse Mountain**	**1.17**	**74**		**Pb**	**11 05 04.7**	**-0.7**
KHMM				IAML		11 05 19.0	
	comp=N,621nm,0.6s						
KHMM				IAML		11 05 19.4	
	comp=E,347nm,0.6s						
KMRM	**Mail Ridge**	**1.19**	**106**		**Pg**	**11 05 05.8**	**-0.4**
KOMM	**Orleans Mounta**	**1.51**	**61**		**Pn**	**11 05 09.4**	**-0.9**
KHBM	**Hayfork Bally**	**1.52**	**85**		**Pn**	**11 05 09.8**	**-0.5**
KHBM				IAML		11 05 27.5	
	comp=E,258nm,0.5s						
KHBM				IAML		11 05 30.4	
	comp=N,254nm,0.5s						
KIPM	**Iron Peak**	**1.52**	**119**		**Pn**	**11 05 10.6**	**+0.3**
KCPM	**Cahto Peak**	**1.52**	**124**	Pn	**Pn**	**11 05 10.4**	**+0.1**
RVIT	**Round Valley I**	**1.54**	**114**		**Pn**	**11 05 10.7**	**+0.1**
SIGP	**Signal Peak, C**	**1.57**	**33**		**Pn**	**11 05 10.0**	**-0.9**
MNDO	**Woodland Fire**	**1.67**	**137**		**Pn**	**11 05 12.1**	**-0.2**
KBNM	**Bluenose Ridge**	**1.68**	**113**		**Pn**	**11 05 12.9**	**+0.4**
WEAV	**Weaverville**	**1.70**	**83**		**Pn**	**11 05 12.2**	**-0.6**
KBO	**Bosley Butte**	**1.81**	**24**		**Pn**	**11 05 14.1**	**-0.2**
GNAM	**Navarro Ridge**	**1.82**	**138**		**Pn**	**11 05 14.1**	**-0.2**
KRKM	**Rackout Spring**	**1.84**	**122**		**Pn**	**11 05 14.9**	**+0.1**
O02D	**Mt. Diablo Mer**	**1.89**	**101**		**Pn**	**11 05 15.4**	**+0.1**
N02D	**Trinity Center**	**1.95**	**77**		**Pn**	**11 05 15.4**	**-0.7**
N02D	**Trinity Center**	**1.95**	**77**	IAML		11 05 42.8	
	comp=E,175nm,0.3s						
N02D				IAML		11 05 46.9	
	comp=N,152nm,0.5s						
M02C	**Callahan**	**1.97**	**64**		**Pn**	**11 05 15.7**	**-0.7**
GHOM	**Hamilton Openi**	**1.98**	**139**		**Pn**	**11 05 16.4**	**-0.2**
GWRM	**Wonder Ranch**	**1.99**	**132**		**Pn**	**11 05 16.8**	**+0.1**
L02F	**Cave Junction**	**1.99**	**38**		**Pn**	**11 05 17.0**	**+0.3**
L02F				IAML		11 05 39.5	
	comp=N,140nm,0.8s						
L02F				IAML		11 05 46.7	
	comp=E,163nm,0.5s						
LBKM	**Bonanza King**	**2.00**	**74**		**Pn**	**11 05 16.3**	**-0.7**
GROM	**Round Mountain**	**2.04**	**107**		**Pn**	**11 05 18.0**	**+0.5**
GVV	**Valley View**	**2.09**	**111**		**Pn**	**11 05 18.8**	**+0.6**
BONV	**Boonville, CA**	**2.12**	**137**		**Pn**	**11 05 18.4**	**-0.1**
YBH	**Yreka Blue Hor**	**2.22**	**57**		**Pn**	**11 05 19.7**	**-0.3**
YBH				IAML		11 05 46.8	
	comp=N,107nm,0.3s						

HOPS	**Hopland Field**	**2.27**	**133**	Pn	**Pn**	**11 05 20.8**	**+0.3**
LCSM	**College of the**	**2.30**	**67**		**Pn**	**11 05 21.2**	**+0.2**
GHGM	**Hogback Ridge**	**2.32**	**127**		**Pn**	**11 05 21.4**	**+0.1**
GCK	**Clark Valley**	**2.35**	**115**		**Pn**	**11 05 23.2**	**+1.5**
LGBM	**Gray Butte**	**2.42**	**70**		**Pn**	**11 05 23.2**	**+0.5**
LSHM	**Sage Hen Hill**	**2.42**	**83**		**Pn**	**11 05 22.6**	**0.0**
K02D	**Willamette Mer**	**2.43**	**28**		**Pn**	**11 05 23.3**	**+0.4**
K02D				IAML		11 05 51.3	
	comp=E,99nm,0.4s						
K02D				IAML		11 05 51.8	
	comp=N,75nm,0.3s						
GPMM	**Pine Mountain**	**2.44**	**134**		**Pn**	**11 05 23.2**	**+0.3**
M03C	**McCloud**	**2.45**	**72**		**Pn**	**11 05 23.5**	**+0.5**
M03C				IAML		11 05 54.0	
	comp=N,124nm,0.8s						
M03C				IAML		11 06 02.8	
	comp=E,103nm,0.8s						
B040	**Montague**	**2.46**	**58**		**Pn**	**11 05 23.3**	**+0.1**
B040	**Montague**	**2.46**	**58**		**Pn**	**11 05 23.2**	**+0.1**
LMPM	**Military Pass**	**2.49**	**67**		**Pn**	**11 05 24.4**	**+0.8**
LHEM	**Herd Peak**	**2.50**	**64**		**Pn**	**11 05 24.6**	**+0.7**
GRTM	**Round Top Moun**	**2.54**	**129**		**Pn**	**11 05 25.1**	**+0.9**
GDXM	**Geysers**	**2.55**	**132**	Pn	**Pn**	**11 05 25.6**	**+1.1**
GGPM	**Geyser Peak**	**2.55**	**134**		**Pn**	**11 05 24.6**	**+0.1**
GFC	**Funks Creek**	**2.56**	**118**		**Pn**	**11 05 25.9**	**+1.5**
LDBM	**Digger Butte**	**2.61**	**92**		**Pn**	**11 05 25.0**	**-0.3**
O03E	**Paynes Creek**	**2.61**	**95**	Pn	**Pn**	**11 05 24.9**	**-0.3**
O03E				IAML		11 05 55.3	
	comp=E,95nm,0.5s						
O03E				IAML		11 05 56.6	
	comp=N,69nm,0.3s						
LBFM	**Black Fox Moun**	**2.63**	**71**		**Pn**	**11 05 26.4**	**+0.7**
MNRC	**McLaughlin Min**	**2.71**	**127**	Pn	**Pn**	**11 05 28.0**	**+1.4**
L04D	**Klamath Falls**	**2.74**	**52**		**Pn**	**11 05 26.9**	**-0.3**
NMTM	**Middletown**	**2.76**	**128**		**Pn**	**11 05 28.6**	**+1.4**
LMEM	**Manzanita Entr**	**2.77**	**89**		**Pn**	**11 05 28.3**	**+0.7**
J01E	**Myrtle Point**	**2.77**	**20**		**Pn**	**11 05 27.8**	**+0.4**
J01E				IAML		11 06 02.0	
	comp=N,99nm,0.3s						
J01E				IAML		11 06 04.0	
	comp=E,96nm,0.3s						
LAS	**Mount Lassen**	**2.82**	**90**		**Pn**	**11 05 28.3**	**-0.1**
M04C	**Macdoel**	**2.82**	**63**		**Pn**	**11 05 28.8**	**+0.5**
LCMM	**Colby Mountain**	**2.85**	**97**		**Pn**	**11 05 28.7**	**+0.1**
HATC	**Hat Creek Radi**	**2.86**	**84**		**Pn**	**11 05 29.8**	**+1.1**
HATC				IAML		11 06 05.9	
	comp=N,63nm,0.8s						
HATC				IAML		11 06 08.1	
	comp=E,67nm,2.4s						
SUTB	**Sutter Butte**	**2.95**	**116**	Pn	**Pn**	**11 05 29.2**	**-0.6**
SUTB				IAML		11 06 06.7	
	comp=E,67nm,0.5s						
SUTB				IAML		11 06 15.6	
	comp=N,68nm,0.4s						
BBOR	**Butler Butte**	**3.00**	**38**	Pn	**Pn**	**11 05 32.3**	**+1.6**
BBOR				IAML		11 06 07.7	
	comp=N,49nm,1.0s						
BBOR				IAML		11 06 09.8	
	comp=E,55nm,0.6s						
MCCM	**Marconi Confer**	**3.01**	**142**	Pn	**Pn**	**11 05 31.4**	**+0.8**
MCCM				IAML		11 06 07.6	
	comp=N,59nm,1.4s						
MCC

*NCEDC **09** 11:14:54.8±1.4, 40°59'N±0°04'×125°14'W±0°07, h24km±8km, Error ellipse: s-maj=8.2km s-min=5.2km az=86.0*

NEIC 09 11:14:51.2±1.5, 40°57'N±0°03'×125°27'W±0°05, h10km±2km, ML3.1/106, Mwr3.6/3(NCEDC), Error ellipse: s-maj=6.4km s-min=4.7km az=259.0, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCTM	**Capetown**	**0.72**	**97**		**Pb**	11 15 06.5	+0.8
KCTM					**Sb**	11 15 15.2	-0.4
PETL	**Petrolia**	**0.76**	**112**		**Pb**	11 15 06.8	+0.3
PETL					**Sg**	11 15 15.3	-0.4
KMPM	**Mount Pierce**	**0.89**	**100**		**Pb**	11 15 08.7	0.0
JCC	**Jacoby Creek,**	**0.97**	**75**		**Pg**	11 15 09.3	-0.5
KRPM	**Rodgers**	**1.11**	**58**		**Pb**	11 15 11.5	-1.0
BRIC	**Briceland Vine**	**1.14**	**113**		**Pb**	11 15 12.7	-0.3
DMOR	**Dinsmores, CA**	**1.20**	**83**		**Pb**	11 15 13.2	-0.8
KHMM	**Horse Mountain**	**1.21**	**75**		**Pb**	11 15 13.2	-1.0
KHMM				IAML		11 15 27.3	
	comp=N,433nm,0.3s						
KHMM				IAML		11 15 27.4	
	comp=E,263nm,0.3s						
KMRM	**Mail Ridge**	**1.24**	**106**		Pn	11 15 14.3	-0.4
KOMM	**Orleans Mounta**	**1.54**	**62**		Pn	11 15 17.8	-1.1
KHBM	**Hayfork Bally**	**1.56**	**86**		Pn	11 15 18.2	-0.9
KHBM				IAML		11 15 37.9	
	comp=E,371nm,0.4s						
KHBM				IAML		11 15 38.8	
	comp=N,400nm,0.5s						
KCPM	**Cahto Peak**	**1.56**	**124**		Pn	11 15 18.8	-0.4
KIPM	**Iron Peak**	**1.57**	**119**		Pn	11 15 19.1	-0.1
SIGP	**Signal Peak, C**	**1.58**	**34**		Pn	11 15 18.4	-0.9
RVIT	**Round Valley I**	**1.59**	**114**		Pn	11 15 19.1	-0.4
MNDO	**Woodland Fire**	**1.72**	**137**		Pn	11 15 20.5	-0.6
KBNM	**Bluenose Ridge**	**1.73**	**113**		Pn	11 15 21.6	+0.2
WEAV	**Weaverville**	**1.75**	**84**		Pn	11 15 20.6	-1.0
KBO	**Bosley Butte**	**1.81**	**25**		Pn	11 15 22.4	-0.1
KBO				IAML		11 15 43.8	
	comp=E,239nm,0.3s						
GNAM	**Navarro Ridge**	**1.86**	**137**		Pn	11 15 22.5	-0.6
KRKM	**Rackout Spring**	**1.89**	**122**		Pn	11 15 23.4	-0.3
O02D	**Mt. Diablo Mer**	**1.93**	**101**	Pn	Pn	11 15 23.7	-0.5
N02D	**Trinity Center**	**1.99**	**78**		Pn	11 15 23.9	-1.0
N02D				IAML		11 15 52.6	
	comp=N,228nm,0.2s						
M02C	**Callahan**	**2.00**	**65**		Pn	11 15 24.2	-1.0
L02F	**Cave Junction**	**2.00**	**39**		Pn	11 15 24.5	-0.6
L02F				IAML		11 15 47.5	
	comp=N,118nm,0.7s						
L02F				IAML		11 15 50.9	
	comp=E,125nm,0.8s						
GHOM	**Hamilton Openi**	**2.02**	**138**		Pn	11 15 24.9	-0.5
GWRM	**Wonder Ranch**	**2.04**	**131**		Pn	11 15 25.2	-0.3
LBKM	**Bonanza King**	**2.04**	**75**		Pn	11 15 24.6	-1.0
GROM	**Round Mountain**	**2.09**	**107**		Pn	11 15 26.4	0.0
GVV	**Valley View**	**2.14**	**111**		Pn	11 15 27.1	0.0
BONV	**Boonville, CA**	**2.17**	**136**		Pn	11 15 26.8	-0.5
YBH	**Yreka Blue Hor**	**2.25**	**58**	Pn	Pn	11 15 28.3	-0.2
YBH				IAML		11 15 55.3	
	comp=N,84nm,0.3s						
HOPS	**Hopland Field**	**2.31**	**132**		Pn	11 15 29.1	-0.2
LCSM	**College of the**	**2.33**	**68**		Pn	11 15 29.2	-0.5
GHGM	**Hogback Ridge**	**2.37**	**127**		Pn	11 15 30.1	-0.1
GCK	**Clark Valley**	**2.40**	**114**		Pn	11 15 31.5	+1.0
LTCM	**Tuscan Springs**	**2.43**	**98**		Pn	11 15 30.7	-0.2
K02D	**Willamette Mer**	**2.44**	**29**		Pn	11 15 31.8	+0.7
K02D				IAML		11 15 59.6	
	comp=E,95nm,0.4s						
LGBM	**Gray Butte**	**2.45**	**71**		Pn	11 15 31.6	+0.1
LSHM	**Sage Hen Hill**	**2.46**	**84**		Pn	11 15 31.0	-0.5
M03C	**McCloud**	**2.48**	**73**		Pn	11 15 31.9	+0.2
M03C				IAML		11 16 02.0	
	comp=N,106nm,0.6s						
M03C				IAML		11 16 11.2	
	comp=E,78nm,0.6s						
GPMM	**Pine Mountain**	**2.48**	**133**		Pn	11 15 31.7	0.0
B040	**Montague**	**2.49**	**59**		Pn	11 15 32.1	+0.3
B040	**Montague**	**2.49**	**59**		Pn	11 15 31.6	-0.2
LMPM	**Military Pass**	**2.52**	**68**		Pn	11 15 32.8	+0.5
LHEM	**Herd Peak**	**2.53**	**64**		Pn	11 15 32.8	+0.3
GRTM	**Round Top Moun**	**2.58**	**128**		Pn	11 15 33.1	+0.1
GGPM	**Geyser Peak**	**2.60**	**133**		Pn	11 15 33.0	-0.4
GFC	**Funks Creek**	**2.60**	**118**		Pn	11 15 33.3	0.0
LDBM	**Digger Butte**	**2.66**	**92**		Pn	11 15 33.4	-0.8
O03E	**Paynes Creek**	**2.66**	**95**		Pn	11 15 33.3	-0.9
O03E				IAML		11 16 05.0	
	comp=N,96nm,0.2s						
LBFM	**Black Fox Moun**	**2.67**	**72**		Pn	11 15 34.8	+0.4
MNRC	**McLaughlin Min**	**2.76**	**127**	Pn	Pn	11 15 36.0	+0.5
L04J	**Klamath Falls**	**2.77**	**53**		Pn	11 15 36.8	+1.1
J01E	**Myrtle Point**	**2.77**	**21**	Pn	Pn	11 15 36.4	+0.8
J01E				IAML		11 16 10.2	
	comp=N,69nm,0.3s						
J01E				IAML		11 16 11.6	
	comp=E,68nm,0.2s						
LMEM	**Manzanita Entr**	**2.82**	**90**		Pn	11 15 36.9	+0.5
LAS	**Mount Lassen**	**2.87**	**91**		Pn	11 15 37.4	+0.1
LCMM	**Colby Mountain**	**2.89**	**97**		Pn	11 15 37.2	-0.3
HATC	**Hat Creek Radi**	**2.90**	**84**		Pn	11 15 37.7	+0.2
HATC				IAML		11 16 14.0	
	comp=N,72nm,0.8s						
HATC				IAML		11 16 16.4	
	comp=E,63nm,0.5s						
LRDM	**Redding Peak**	**2.90**	**91**		Pn	11 15 37.9	+0.4
OSUM	**Sutter Buttes**	**2.93**	**115**		Pn	11 15 37.3	-0.5
SIFF	**Sifford Mounta**	**2.94**	**92**		Pn	11 15 37.9	-0.2
OGOM	**Van Goodin Ran**	**2.95**	**107**		Pn	11 15 37.3	-0.8
NTYM	**Taylor**	**2.97**	**136**		Pn	11 15 39.3	+1.0
LBCM	**Butte Creek Ri**	**2.99**	**84**		Pn	11 15 39.0	+0.3
SUTB	**Sutter Butte**	**2.99**	**116**		Pn	11 15 37.8	-0.9
SUTB				IAML		11 16 25.7	
	comp=N,79nm,0.3s						
BBOR	**Butler Butte**	**3.02**	**39**		Pn	11 15 40.0	+0.9
BBOR				IAML		11 16 18.1	
	comp=E,36nm,0.6s						
MCCM	**Marconi Confer**	**3.05**	**142**	Pn	Pn	11 15 39.1	-0.3
MCCM				IAML		11 16 14.0	
	comp=N,43nm,2.0s						
MCCM				IAML		11 16 16.6	
	comp=E,43nm,0.6s						
ORV	**Oroville**	**3.06**	**108**		Pn	11 15 38.8	-0.9
ORV				IAML		11 16 13.8	
	comp=N,39nm,0.2s						
ORV				IAML		11 16 14.6	
	comp=E,48nm,0.3s						
OSTM	**Stimpson Lane**	**3.06**	**112**		Pn	11 15 39.0	-0.7
CVS	**Carmenet Viney**	**3.11**	**135**	Pn	Pn	11 15 39.0	-1.2
OHCM	**Honcut**	**3.16**	**112**		Pn	11 15 40.2	-0.7
NOLM	**Olema**	**3.17**	**142**		Pn	11 15 41.2	+0.1
SVIN	**Saint Vincent'**	**3.31**	**139**		Pn	11 15 42.3	-0.7
K04D	**Chiloquin, OR**	**3.34**	**51**	Pn	Pn	11 15 43.1	-0.4
FARB	**Farallon Islan**	**3.37**	**148**	Pn	Pn	11 15 42.9	-0.9
FARB				IAML		11 16 21.9	
	comp=E,38nm,0.3s						
FARB				IAML		11 16 39.0	
	comp=N,30nm,2.5s						
I03D	**Drain, OR**	**3.43**	**24**	Pn	Pn	11 15 46.1	+1.4
J04A	**Umpqua Nationa**	**3.56**	**40**	Pn	Pn	11 15 48.5	+1.9
AFDM	**Forest Hills D**	**3.69**	**115**		Pn	11 15 48.1	-0.1
I02E	**Swisshome, OR**	**3.69**	**16**	Pn	Pn	11 15 49.5	+1.3
I02E				IAML		11 16 36.3	
	comp=N,26nm,2.3s						
I02E				IAML		11 18 10.3	
	comp=E,27nm,4.8s						
BEKR	**Beckworth**	**3.82**	**99**	Pn	Pn	11 15 50.2	0.0
I04A	**Tendick Farm,**	**3.85**	**32**	Pn	Pn	11 15 52.3	+1.8
I04A				IAML		11 16 39.4	
	comp=E,22nm,0.3s						
I04A				IAML		11 16 39.6	
	comp=N,20nm,0.5s						
K05A	**Summer Lake**	**3.92**	**55**		Pn	11 15 52.9	+1.3
K05A				IAML		11 16 36.7	
	comp=E,31nm,1.8s						
JRSC	**Jasper Ridge**	**3.95**	**142**	Pn	Pn	11 15 51.6	-0.1
JRSC				IAML		11 16 42.1	
	comp=E,41nm,2.0s						
JRSC				IAML		11 18 09.4	
	comp=N,40nm,2.4s						
BUCK	**Buck Mountain**	**4.00**	**24**	Pn	Pn	11 15 55.0	+2.5
BUCK				IAML		11 17 19.3	
	comp=E,25nm,4.4s						
BUCK				IAML		11 17 22.9	
	comp=N,30nm,4.6s						
MPK	**Martis Peak**	**4.22**	**106**	Pn	Pn	11 15 57.1	+1.2
MPK				IAML		11 17 05.8	
	comp=E,34nm,0.9s						
COR	**Corvallis**	**4.26**	**19**	Pn	Pn	11 15 58.6	+2.4
COR				IAML		11 16 54.1	
	comp=E,19nm,4.5s						
COR				IAML		11 18 25.4	
	comp=E,22nm,4.2s						
MHC	**Mount Hamilton**	**4.29**	**138**	Pn	Pn	11 15 56.8	+0.2
MHC				IAML		11 16 47.4	
	comp=E,15nm,0.7s						
MHC				IAML		11 16 48.2	
	comp=N,23nm,2.8s						
WIFE	**Three Sisters-**	**4.32**	**35**	Pn	Pn	11 15 59.4	+2.2
WIFE				IAML		11 16 46.9	
	comp=E,21nm,4.8s						
WIFE				IAML		11 17 20.6	
	comp=N,16nm,4.7s						
H04D	**Lebanon**	**4.37**	**24**	Pn	Pn	11 16 00.5	+2.9
H04D				IAML		11 16 40.3	
	comp=N,16nm,3.0s						
H04D				IAML		11 16 50.4	
	comp=E,20nm,0.3s						
PINE	**Pine Mountain**	**4.55**	**44**		Pn	11 16 02.2	+1.9
PINE				IAML		11 17 28.2	
	comp=N,11nm,4.7s						
PINE				IAML		11 17 43.1	
	comp=E,12nm,4.5s						
CMB	**Columbia Colle**	**4.55**	**122**	Pn	Pn	11 16 02.0	+1.8
PAHR	**Pah Rah Range**	**4.59**	**99**		Pn	11 16 00.6	-0.2
PAHR				IAML		11 17 02.4	
	comp=E,11nm,4.0s						
PNTR	**Pine Nut**	**4.61**	**107**	Pn	Pn	11 16 02.2	+1.1
PNTR				IAML		11 17 05.1	
	comp=E,17nm,2.0s						
PNTR				IAML		11 17 13.2	
	comp=N,16nm,1.4s						
H04A	**Detroit Lake**	**4.70**	**28**		Pn	11 16 04.4	+2.3
H04A				IAML		11 16 59.3	
	comp=N,15nm,0.4s						
H04A				IAML		11 16 59.6	
	comp=E,20nm,0.4s						
FORD	**Fort Ord Natur**	**4.74**	**144**	Pn	Pn	11 16 02.7	0.0
SAO	**San Andreas Ge**	**4.84**	**141**	Pn	Pn	11 16 03.3	-0.7
BBGB	**Big Mountain B**	**5.18**	**139**	Pn	Pn	11 16 09.3	+0.4
PMPB	**Monarch Peak**	**5.59**	**140**	Pn	Pn	11 16 15.0	+0.6
NVAR	**Mina Array Bea**	**5.79**	**109**	Pn	Pn	11 16 18.2	+0.8
PKD	**Bear Valley Ra**	**5.93**	**140**	Pn	Pn	11 16 18.9	-0.1
CLRS	**Cowichan Lake**	**8.29**	**5**	Pn	Pn	11 16 52.3	+1.0
GSC	**Goldstone, Bar**	**8.50**	**126**	Pn	Pn	11 16 53.7	-0.7

*NEIC **09** 11:41:11.1±1.6, 19°18N±0°07×145°40E±0°03, h174km±5km, mb4.7/345, Error ellipse: s-maj=10.3km s-min=2.9km az=161.0*

*IDC **09** 11:41:11.2±2.4, 19°17N×145°44E, h185km±22km, mb4.1/26, mbtmp4.5/28, MS2.7/3, Error ellipse: s-maj=14.4km s-min=9.0km az=81.0*

ISC 09 11:41:12.9±0.3, 19°15N±0°04×145°46E±0°07, h200km, n578, d085/485, mb4.6/198, 1C-1D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.56**	**186**	P	**Pn**	**11 42 31.9**	**-2.6**
	74nm,0.3s,baz=67,slow=3.1,SNR=10						
GUMO				S	**Sn**	**11 43 40.2**	**+1.2**
	71nm,0.3s,baz=219,slow=22,SNR=4.5						
GUMO	**Guam**	**5.56**	**186**	P	**Pn**	**11 42 33.5**	**-1.0**
GUMO	**Guam**	**5.56**	**186**	S	**Sn**	**11 43 38.2**	**-0.8**
GUMO	**Guam**	**5.56**	**186**	Pn	**Pn**	**11 42 32.2**	**-2.4**
GUMO				Sn	**Sn**	**11 43 35.8**	**-3.2**
JCJ	**Chichijima**	**8.46**	**340**	Pn	**Pn**	**11 43 09.0**	**-3.2**
PATS	**Pohnpei**	**17.50**	**133**	P	**P**	**11 45 03.0**	**-0.4**
JYT	**Yasato**	**17.64**	**346**	P	**P**	**11 45 02.2**	**-2.5**
INU	**Inuyama**	**17.78**	**337**	P	**P**	**11 45 05.0**	**-1.3**
JMN	**Monobe**	**17.82**	**327**	P	**Pn**	**11 45 09.2**	**+0.4**
JMN	**Monobe**	**17.82**	**327**	P	**P**	**11 45 06.4**	**-0.4**
JMN				IAmb	IAmb	11 45 22.1	
	comp=Z,30nm,1.4s						
JGF	**Kuroka**	**17.88**	**338**	P	**P**	**11 45 08.1**	**+0.6**
JGF	**Kuroka**	**17.88**	**338**	P	**P**	**11 45 07.3**	**-0.1**
JGF				IAmb	IAmb	11 45 09.1	
	comp=Z,16nm,0.6s						
MJAR	**Matsushiro Arr**	**18.46**	**341**	P	**P**	**11 45 12.6**	**-1.2**
	comp=Z,4.0nm,0.5s,baz=163,slow=9.5,SNR=28						
MJAR				S	**S**	**11 48 33.9**	**0.0**
	comp=Z,1.8nm,0.5s,baz=120,slow=14,SNR=4.7						
MJAR	**Matsushiro Arr**	**18.46**	**341**		**P**	**11 45 12.2**	**-1.5**
MAJO	**Matsushiro**	**18.46**	**341**	P	**P**	**11 45 14.2**	**+0.5**
MAJO	**Matsushiro**	**18.46**	**341**		**P**	**11 45 12.3**	**-1.4**
MAJO				IAmb	IAmb	11 45 18.8	
	comp=Z,17nm,0.6s						
MJB9	**Matsu-Tunnel**	**18.47**	**341**	P	**P**	**11 45 13.0**	**-0.8**
MJB9				IAmb	IAmb	11 45 19.7	
	comp=Z,16nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**20.11**	**88**	T	T	12 06 26.8	
	baz=275,slow=74,SNR=5.0						
H11S1	**WAKE ISLAND Hy**	**20.12**	**88**	T	T	12 06 28.1	
	baz=275,slow=74,SNR=4.2						
H11S2	**WAKE ISLAND Hy**	**20.13**	**88**	T	T	12 06 28.6	
	baz=275,slow=74,SNR=5.3						
H11N1	**WAKE ISLAND Hy**	**20.23**	**85**	T	T	12 06 45.7	
	baz=265						
H11N2	**WAKE ISLAND Hy**	**20.23**	**85**	T	T	12 06 43.0	
	baz=265						
H11N3	**WAKE ISLAND Hy**	**20.24**	**85**	T	T	12 06 40.2	
	baz=265						
MANU	**Manus Island**	**21.14**	**175**		**P**	**11 45 41.2**	**-1.4**
JAY	**Jayapura**	**22.03**	**193**	P	**P**	**11 45 50.6**	**-0.9**
	comp=Z,38nm,1.0s,baz=4.6,slow=6.6,SNR=5.0						
	comp=Z,38nm,1.0s						
NACB	**Ninganchiao**	**22.72**	**287**	P	**P**	**11 46 00.4**	**+2.5**
YULB	**Yu-li**	**22.89**	**285**	P	**P**	**11 46 02.6**	**+3.1**
YHNB	**Yeheng**	**22.99**	**288**	P	**P**	**11 46 00.5**	**+0.1**
YHNB				IAmb	IAmb	11 46 02.9	
	comp=Z,33nm,0.9s						
SSLB	**Suanglung**	**23.25**	**286**	P	**P**	**11 46 05.4**	**+2.7**
SSLB	**Suanglung**	**23.25**	**286**	P	**P**	**11 46 03.5**	**+0.8**
SSLB				IAmb	IAmb	11 46 11.7	
	comp=Z,33nm,1.1s						
TPUB	**Ta-pu**	**23.50**	**284**	P	**P**	**11 46 08.6**	**+3.7**
TPUB	**Ta-pu**	**23.50**	**284**	P	**P**	**11 46 04.5**	**-0.4**
KSRS	**Korea Array**	**23.82**	**324**	P	**P**	**11 46 06.7**	**-1.0**
	comp=Z,10nm,0.8s,baz=146,slow=9.2,SNR=36						
	comp=Z,10nm,0.8s						
KSAR	**Wonju Array Be**	**23.83**	**324**		**P**	**11 46 07.6**	**-0.2**
KS19	**Wonju Array Si**	**23.89**	**324**		**P**	**11 46 08.1**	**-0.2**
KS19				IAmb	IAmb	11 46 08.8	
	comp=Z,13nm,0.9s						
JKA	**Kamikawa-asahi**	**25.01**	**355**	P	**P**	**11 46 19.6**	**+1.2**
JKA				IAmb	IAmb	11 46 20.2	
	comp=Z,13nm,0.8s						
ASAJ	**Asahikawa**	**25.01**	**355**	LR	LR	11 56 12.9	
	comp=Z,16nm,20.3s,baz=228,slow=36						
FAKI	**Fak Fak**	**25.49**	**212**	P	**P**	**11 46 24.3**	**+1.3**
FAKI	**Fak Fak**	**25.49**	**212**	P	**P**	**11 46 23.7**	**+0.7**
FAKI				IAmb	IAmb	11 46 30.2	
	comp=Z,28nm,1.5s						
NJ2	**Nanjing**	**27.13**	**304**	*e*P	**P**	**11 46 38.7**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,21nm,0.5s						
USRK	**Ussuriysk Ar.**	**27.41**	**339**	P	**P**	**11 46 39.0**	**-0.8**
	comp=Z,2.4nm,0.7s,baz=157,slow=9.7,SNR=4.8						
	comp=Z,2.4nm,0.7s						
YSS	**Yuzhno-Sakhali**	**27.82**	**356**	P	**P**	**11 46 43.3**	**-0.2**
PMG	**Port Moresby**	**28.42**	**176**	P	**P**	**11 46 49.1**	**0.0**
	comp=Z,4.9nm,0.3s,baz=300,slow=8.3,SNR=5.9						
	comp=Z,4.9nm,0.3s						
PMG	**Port Moresby**	**28.42**	**176**	P	**P**	**11 46 48.5**	**-0.6**
PMG				IAmb	IAmb	11 47 07.4	
	comp=Z,19nm,1.0s						
TOLI2	**Tolitoli**	**30.10**	**236**	P	**P**	**11 47 06.1**	**+2.1**
BNX	**BinXian**	**30.43**	**335**	⇓P	**P**	**11 47 06.1**	**-0.5**
BNX				pmax	pmax		
	comp=Z,6.0nm,1.4s						
HNS	**HongShan**	**32.41**	**311**	⇑P	**P**	**11 47 25.9**	**+1.9**
HNS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BJI2	**Beijing**	**32.64**	**316**	P	**P**	**11 47 25.7**	**-0.3**
BJI2				pP	**pP**	**11 48 02.2**	**-3.8**
BJI2				pmax	pmax		
	comp=Z,2.0nm,1.2s						
COEN	**Coen**	**32.97**	**184**	P	**P**	**11 47 28.2**	**-0.9**
COEN	**Coen**	**32.97**	**184**	P	**P**	**11 47 28.4**	**-0.7**
COEN				IAmb	IAmb	11 48 00.4	
	comp=Z,22nm,1.4s						
NGOA	**Tingoa Renbel**	**33.74**	**154**	P	**P**	**11 47 34.4**	**-1.2**
HEH	**HeiHe**	**34.21**	**339**	*e*P	**P**	**11 47 39.2**	**-0.1**
HEH				pmax	pmax		
	comp=Z,14nm,1.0s						
MTN	**Manton Dam**	**34.78**	**205**		**P**	**11 47 44.5**	**-0.2**
MTN				IAmb	IAmb	11 47 45.2	
	comp=Z,11nm,0.8s						
XLT	**XiLinHaoTe**	**34.83**	**322**	*e*P	**P**	**11 47 45.7**	**+0.8**
XLT				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PEA0B	**Petropavlovsk-**	**35.20**	**13**	P	**P**	**11 47 48.6**	**+0.7**
PETK	**Petropavlovsk-**	**35.20**	**13**	P	**P**	**11 47 48.6**	**+0.8**
	comp=Z,5.0nm,0.9s,baz=150,slow=6.2,SNR=15						
PETK				LR	LR	12 05 04.1	
	comp=Z,8.2nm,19.1s,baz=190,slow=41						
	comp=Z,5.0nm,0.9s						
PETK	**Petropavlovsk-**	**35.20**	**13**	P	**P**	**11 47 48.5**	**+0.6**
SOEI	**Soe**	**35.51**	**218**	P	**P**	**11 47 50.4**	**-0.7**
SOEI				IAmb	IAmb	11 47 57.4	
	comp=Z,20nm,0.9s						
HHC	**Hu-ho-hao-te**	**36.12**	**314**	*e*P	**P**	**11 47 58.5**	**+2.5**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SBUM	**Sibu**	**36.50**	**247**		**P**	**11 47 59.6**	**+0.2**
MTSU	**Mount Surprise**	**37.07**	**182**	P	**P**	**11 48 03.6**	**-0.4**
KNRA	**Kununurra**	**38.31**	**207**	P	**P**	**11 48 14.6**	**+0.2**
KNRA				IAmb	IAmb	11 48 16.6	
	comp=Z,13nm,0.6s						
PLAI	**Plampang**	**38.95**	**227**	P	**P**	**11 48 21.8**	**+2.0**
CTA	**Charters Tower**	**39.00**	**179**	P	**P**	**11 48 19.9**	**-0.3**
CTAO	**Charters Tower**	**39.00**	**179**	P	**P**	**11 48 19.9**	**-0.3**
CTAO	**Charters Tower**	**39.00**	**179**	P	**P**	**11 48 19.6**	**-0.6**
QIS	**Mount Isa**	**39.88**	**189**	P	**P**	**11 48 27.6**	**+0.2**
WB0	**Warramunga Arr**	**40.17**	**196**		**P**	**11 48 30.1**	**+0.3**
SMY	**Shemya**	**40.24**	**27**	P	**P**	**11 48 28.9**	**-1.0**
WR8	**Warramunga Arr**	**40.32**	**196**		**P**	**11 48 31.4**	**+0.4**
WRAB	**Tennant Creek**	**40.34**	**196**	P	**P**	**11 48 31.1**	**-0.1**
WRA	**Warramunga Arr**	**40.35**	**196**	P	**P**	**11 48 31.4**	**+0.1**
	comp=Z,27nm,0.6s,baz=24,slow=8.8,SNR=189						
WRA				S	**S**	**11 54 25.7**	**+1.6**
	comp=Z,0.9nm,0.8s,baz=20,slow=15,SNR=5.0						
	comp=Z,7nm,0.6s						
WRA	**Warramunga Arr**	**40.35**	**196**		**P**	**11 48 30.3**	**-1.0**
SANVU	**Saraoutou**	**40.50**	**147**	P	**P**	**11 48 31.8**	**-0.7**
MA2	**Magadan**	**40.56**	**4**	LR	LR	12 08 31.0	
	comp=Z,12nm,18.2s,baz=82,slow=40						
MA2	**Magadan**	**40.56**	**4**		**P**	**11 48 32.8**	**+0.3**
MA2				IAmb	IAmb	11 48 34.1	
	comp=Z,14nm,1.0s						
PZH	**PanZhiHua**	**40.80**	**289**	P	**P**	**11 48 36.4**	**+1.3**
ULN	**Ulaanbaatar**	**42.28**	**322**	P	**P**	**11 48 47.1**	**+0.2**
SONM	**Songino Array**	**42.65**	**321**	P	**P**	**11 48 49.5**	**-0.3**
	comp=Z,2.8nm,0.6s,baz=139,slow=8.9,SNR=28						
	comp=Z,2.8nm,0.6s						
SONM	**Songino Array**	**42.65**	**321**	P	**P**	**11 48 50.2**	**+0.3**
CMAR	**Chiang Mai Arr**	**43.93**	**277**	P	**P**	**11 49 01.4**	**+1.1**
	comp=Z,2.0nm,0.8s,baz=69,slow=6.8,SNR=13						
	comp=Z,2.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**43.93**	**277**	P	**P**	**11 49 00.3**	**-0.1**
AS31	**Alice Springs**	**44.02**	**195**		**P**	**11 49 01.2**	**+0.3**
ASAR	**Alice Springs**	**44.02**	**195**	P	**P**	**11 49 00.6**	**-0.4**
	comp=Z,1.5nm,0.3s,baz=9.5,slow=5.9,SNR=92						
ASAR				S	**S**	**11 55 20.1**	**+2.2**
	comp=Z,1.0nm,1.0s,baz=15,slow=20,SNR=5.2						
	comp=Z,1.5nm,0.3s						
ASAR	**Alice Springs**	**44.02**	**195**		**P**	**11 49 00.8**	**-0.1**
EIDS	**Eidsvold**	**44.59**	**173**	P	**P**	**11 49 06.8**	**+1.5**
EIDS				IAmb	IAmb	11 49 34.7	
	comp=Z,19nm,1.3s						
ONTNC	**Ouen Toro**	**46.03**	**153**	P	**P**	**11 49 17.1**	**+0.4**
ONTNC				IAmb	IAmb	11 49 33.1	
	comp=Z,24nm,1.1s						
INKA	**Innaminka**	**46.84**	**186**	P	**P**	**11 49 22.0**	**-0.9**
MBWA	**Marble Bar**	**47.32**	**213**	P	**P**	**11 49 26.1**	**-0.6**
PSA00	**Pilbara Seismi**	**47.60**	**213**	P	**P**	**11 49 28.4**	**-0.5**
ARMA	**Armidale**	**49.64**	**173**	P	**P**	**11 49 42.6**	**-1.8**
UNV	**Unalaska Valle**	**50.42**	**35**	P	**P**	**11 49 49.7**	**-0.1**
UNV	**Unalaska Valle**	**50.42**	**35**	P	**P**	**11 49 49.6**	**-0.2**
	baz=246						
BILL	**Bilibino**	**50.62**	**10**	P	**P**	**11 49 51.6**	**+0.5**
BILL				IAmb	IAmb	11 49 52.7	
	comp=Z,25nm,0.9s						
LVA	**Lava Point**	**50.80**	**35**	P	**P**	**11 49 52.5**	**-0.2**
STKA	**Stephens Creek**	**50.87**	**184**	P	**P**	**11 49 52.4**	**-1.1**
	comp=Z,1.4nm,0.4s,baz=3.5,slow=8.8,SNR=6.0						
	comp=Z,1.4nm,0.4s						
STKA	**Stephens Creek**	**50.87**	**184**	P	**P**	**11 49 52.8**	**-0.6**
STKA				IAmb	IAmb	11 49 53.4	

O16K	Kokwok River B	56.88	30	P	P	11 50 37.3	+0.7
	baz=250,SNR=7.5						
M16K	Timber Creek	56.98	29	IAmb	IAmb	11 50 39.0	
	comp=Z,12nm,0.8s						
M16K	Timber Creek	56.98	29	P	P	11 50 38.0	+0.7
	baz=248						
CHIR	Chirikof Islan	57.01	35	P	P	11 50 38.1	+0.6
	baz=255						
L16K	Owhat River	57.01	28		P	11 50 38.1	+0.6
L16K				IAmb	IAmb	11 50 38.4	
	comp=Z,7.3nm,0.6s						
L16K	Owhat River	57.01	28	P	P	11 50 38.1	+0.6
	baz=248,SNR=5.8						
H16K	Elim	57.10	24	P	P	11 50 38.5	+0.4
	baz=243,SNR=7.8						
R17L	Mt. Peulik Vol	57.12	33	P	P	11 50 38.6	+0.2
	baz=253						
J16K	Anvik River	57.16	26	IAmb	IAmb	11 50 40.6	
	comp=Z,12nm,0.7s						
J16K	Anvik River	57.16	26	P	P	11 50 39.7	+1.2
	baz=245,SNR=17						
Q16K	King Salmon	57.28	32	P	P	11 50 38.7	-0.7
	baz=252						
I17K	Unalakleet	57.37	25		P	11 50 41.2	+1.2
I17K				IAmb	IAmb	11 50 42.1	
	comp=Z,13nm,0.8s						
I17K	Unalakleet	57.37	25	P	P	11 50 41.2	+1.2
	baz=245,SNR=9.7						
G16K	Koyuk River	57.40	23	P	P	11 50 40.5	+0.3
	baz=242						
O17K	Koliganek Bris	57.41	30	P	P	11 50 41.1	+0.7
	baz=251,SNR=12						
ZALV	Zalesovo Beam	57.52	322	P	P	11 50 39.8	-1.4
	comp=Z,1.3nm,0.4s,baz=104,slow=6.9,SNR=9.2						
	comp=Z,1.3nm,0.4s						
ZALV	Zalesovo Beam	57.52	322	P	P	11 50 40.6	-0.6
Q17K	Contact Creek	57.54	32	P	P	11 50 41.0	-0.4
	baz=253						
P17K	Kvichak River	57.55	31	P	P	11 50 41.0	-0.3
	baz=252						
N17K	Nushagak Hills	57.62	30	IAmb	IAmb	11 50 43.9	
	comp=Z,12nm,0.8s						
N17K	Nushagak Hills	57.62	30	P	P	11 50 43.0	+1.2
	baz=250,SNR=8.7						
L17K	Donlin	57.68	28	P	P	11 50 43.3	+1.1
	baz=248,SNR=7.4						
M17K	Holitna River	57.80	29	IAmb	IAmb	11 50 45.2	
	comp=Z,16nm,1.1s						
M17K	Holitna River	57.80	29	P	P	11 50 44.3	+1.2
	baz=250,SNR=5.6						
C16K	Lisburne Hills	57.82	19	IAmb	IAmb	11 50 44.4	
	comp=Z,12nm,0.9s						
C16K	Lisburne Hills	57.82	19	P	P	11 50 43.5	+0.4
	baz=238,SNR=17						
K17K	Iditarod	57.90	27	P	P	11 50 45.1	+1.4
	baz=248,SNR=20						
SII	Sitkinak Islan	57.97	35	P	P	11 50 45.4	+1.0
SII	Sitkinak Islan	57.97	35	P	P	11 50 45.0	+0.6
	baz=256						
MKAR	Makanchi Array	57.99	314	P	P	11 50 44.4	-0.3
	comp=Z,0.8nm,0.3s,baz=90,slow=9.2,SNR=21						
MKAR				PcP	pwP	11 51 34.3	+0.6
	comp=Z,1.0nm,0.5s,baz=76,slow=4.3,SNR=6.5						
	comp=Z,0.8nm,0.3s						
G17K	Kiwalik Mounta	58.09	23	P	P	11 50 45.9	+0.9
	baz=244,SNR=12						
Q18K	Katmai Hardscr	58.09	32	P	P	11 50 44.5	-0.7
	baz=254						
H17K	Granite Mounta	58.12	24	P	P	11 50 46.2	+1.0
	baz=245,SNR=16						
P18K	Big Mountain,	58.20	31	P	P	11 50 45.5	-0.4
	baz=253						
MAKZ	Makanchi	58.20	314		P	11 50 46.5	+0.3
D17K	Noatak River	58.25	21	P	P	11 50 47.1	+1.0
	baz=240,SNR=16						
N18K	Kilae Creek	58.27	30	IAmb	IAmb	11 50 48.3	
	comp=Z,11nm,0.8s						
N18K	Kilae Creek	58.27	30	P	P	11 50 47.5	+1.1
	baz=252,SNR=7.2						
F17K	Baldwin Pennin	58.29	22	IAmb	IAmb	11 50 48.1	
	comp=Z,11nm,0.7s						
F17K	Baldwin Pennin	58.29	22	P	P	11 50 47.3	+1.0
	baz=243,SNR=18						
O18K	Koktuh Hills	58.34	31		P	11 50 48.2	+1.3
O18K	Koktuh Hills	58.34	31	P	P	11 50 47.7	+0.8
	baz=253,SNR=9.9						
E17K	Hotham Inlet	58.38	21	P	P	11 50 47.9	+0.9
	baz=242,SNR=12						
L18K	Granite Mounta	58.42	28	IAmb	IAmb	11 50 49.7	
	comp=Z,14nm,1.3s						
L18K	Granite Mounta	58.42	28	P	P	11 50 48.5	+1.1
	baz=250						
RDOG	Red Dog Mine	58.49	20	P	P	11 50 48.5	+0.8
	baz=240						
M18K	Stony River	58.56	29	P	P	11 50 49.6	+1.3
	baz=251,SNR=9.0						
OHAK	Old Harbor	58.61	34	P	P	11 50 49.3	+0.6
	baz=256						
C17K	DeLong Mountai	58.61	20	P	P	11 50 49.5	+0.9
	baz=240,SNR=12						
H18K	Honhosa River	58.81	24	P	P	11 50 50.5	+0.4
	baz=247,SNR=17						
J18K	Innoko River	58.84	26	P	P	11 50 50.7	+0.5
	baz=249						
Q19K	Cape Douglas,	58.85	32	P	P	11 50 50.0	-0.4
	baz=255						
O19K	Port Alsworth	58.87	30	P	P	11 50 51.1	+0.6
	baz=253,SNR=13						
F18K	Selawik	58.93	22	P	P	11 50 51.3	+0.6
	baz=244,SNR=7.2						
E18K	Tukpahlearik C	58.96	21	IAmb	IAmb	11 50 53.0	
	comp=Z,19nm,1.3s						
E18K	Tukpahlearik C	58.96	21	P	P	11 50 51.9	+1.0
	baz=243,SNR=11						
N19K	Bonanza Creek	58.97	30	P	P	11 50 52.3	+1.0
	baz=253,SNR=12						
G18K	Tagagawik	59.00	23	IAmb	IAmb	11 50 52.7	
	comp=Z,11nm,0.9s						
G18K	Tagagawik	59.00	23	P	P	11 50 52.0	+0.6
	baz=246,SNR=17						
KDAK	Kodiak Island	59.11	33	P	P	11 50 52.5	+0.4
	baz=256						
L19K	White Mountain	59.22	28	IAmb	IAmb	11 50 54.7	
	comp=Z,16nm,1.2s						
L19K	White Mountain	59.22	28	P	P	11 50 53.6	+0.7
	baz=252,SNR=5.8						
GCSA	Galena City Sc	59.24	25	P	P	11 50 53.1	+0.2
	baz=248						
P19K	Oil Pt	59.25	31	P	P	11 50 53.2	+0.1
	baz=255						
C18K	Utukok River	59.33	20	IAmb	IAmb	11 50 54.5	
	comp=Z,7.9nm,0.6s						
C18K	Utukok River	59.33	20	P	P	11 50 54.2	+0.6
	baz=242,SNR=12						
ILSW	Iliamna Southw	59.38	31	IAmb	IAmb	11 51 30.3	
	comp=Z,19nm,1.5s						
Q20K	Shuyak Island	59.41	33	P	P	11 50 54.1	-0.1
	baz=256						
J19K	Poorman	59.48	26	IAmb	IAmb	11 50 56.3	
	comp=Z,11nm,0.8s						
J19K	Poorman	59.48	26	P	P	11 50 55.5	+0.9
	baz=250,SNR=14						
G19K	Purcell Mounta	59.69	23	P	P	11 50 56.6	+0.6
	baz=247,SNR=11						
F19K	Shaleruckik Mo	59.71	23	P	P	11 50 56.0	0.0
	baz=246						
M20K	Styx River	59.91	29	IAmb	IAmb	11 50 59.7	
	comp=Z,9.0nm,0.7s						
M20K	Styx River	59.91	29	P	P	11 50 58.6	+0.9
	baz=254						
K20K	Telida	59.93	27	IAmb	IAmb	11 50 59.8	
	comp=Z,12nm,0.9s						
K20K	Telida	59.93	27	P	P	11 50 58.7	+1.0
	baz=252						
HOM	Homer	60.03	31	P	P	11 50 58.5	+0.1
	baz=256						
C19K	Lookout Ridge	60.06	20	P	P	11 50 59.6	+1.1
	baz=243,SNR=32						
A19K	Wainwright	60.12	18	P	P	11 51 00.0	+1.2
	baz=241,SNR=14						
N20K	Mount Spurr	60.15	30	P	P	11 50 59.3	0.0
	baz=255						
SPCR	Spurr Chakacha	60.15	30	P	P	11 50 59.1	-0.2
	baz=255						
E19K	Redstone River	60.15	22	IAmb	IAmb	11 51 01.7	
	comp=Z,11nm,1.2s						
E19K	Redstone River	60.15	22	P	P	11 50 59.8	+0.7
	baz=246,SNR=11						
CNPM	China Poot	60.20	32		P	11 50 59.7	+0.1
D19K	Kuna River	60.28	21	IAmb	IAmb	11 51 01.5	
	comp=Z,10.0nm,0.8s						
D19K	Kuna River	60.28	21	P	P	11 51 00.6	+0.6
	baz=245,SNR=17						
H20K	Anotleneega Mo	60.30	24	P	P	11 51 01.1	+0.9
	baz=250,SNR=10						
BRSE	Bradley Lake S	60.49	31	P	P	11 51 01.4	-0.2
	baz=257						
F20K	Avaraart Lake	60.54	23	P	P	11 51 02.6	+0.9
	baz=248						
PPLA	Purkeypile	60.61	28	P	P	11 51 03.0	+0.5
PPLA				IAmb	IAmb	11 51 07.8	
	comp=Z,8.4nm,0.7s						
PPLA	Purkeypile	60.61	28	P	P	11 51 02.8	+0.4
	baz=254						
SKT	Skwentna	60.66	29	IAmb	IAmb	11 51 03.1	
	comp=Z,16nm,1.0s						
SKT	Skwentna	60.66	29	P	P	11 51 02.5	-0.1
	baz=255,SNR=11						
KURK	Kurchatov	60.78	318		P	11 51 03.4	-0.2
KURK				PcP	PcP	11 51 45.7	+0.2
E20K	Nigu River	60.83	21	P	P	11 51 04.6	+0.8
	baz=247,SNR=26						
KURBB	Kurchatov Arra	60.83	318	P	P	11 51 03.7	-0.3
	comp=Z,3.0nm,0.4s,baz=92,slow=7.5,SNR=94						
KURBB				PcP	PcP	11 51 46.2	+0.5
	comp=Z,1.6nm,0.7s,baz=96,slow=7.8,SNR=5.6						
	comp=Z,3.0nm,0.4s						
CHUM	Lake Minchumin	60.84	27	P	P	11 51 05.0	+1.2
	baz=253,SNR=14						
D20K	Etivluk River	60.87	21	P	P	11 51 04.7	+0.7
	baz=246,SNR=37						
IMAR	Indian Mountai	60.90	24	P	P	11 51 05.4	+1.2
SLKM	Skilak Lake	60.92	31		P	11 51 04.4	-0.1
SLKM				IAmb	IAmb	11 51 04.8	
	comp=Z,9.7nm,0.6s						
NRIK	Noril'sk	61.11	340	P	P	11 51 05.2	-0.2
	comp=Z,6.5nm,0.4s,baz=108,slow=8.7,SNR=20						
	comp=Z,6.5nm,0.4s						
NRIK	Noril'sk	61.11	340		P	11 51 05.3	-0.2
NRIK				IAmb	IAmb	11 51 05.9	
	comp=Z,8.0nm,0.7s						
L22K	Petersville	61.14	28		P	11 51 05.5	-0.4
O22K	Cooper Landing	61.16	31	P	P	11 51 06.0	+0.1
	baz=258,SNR=13						
H21K	Melozitna Rive	61.17	25	IAmb	IAmb	11 51 07.5	
	comp=Z,12nm,0.6s						
H21K	Melozitna Rive	61.17	25	P	P	11 51 07.0	+1.0
	baz=252,SNR=14						
G21K	Allakaket	61.17	24	IAmb	IAmb	11 51 07.9	
	comp=Z,7.0nm,0.8s						
G21K	Allakaket	61.17	24	P	P	11 51 06.9	+0.8
	baz=251,SNR=8.8						
SEW	Seward	61.21	31	P	P	11 51 06.5	+0.1
SEW	Seward	61.21	31	P	P	11 51 06.1	-0.2
	baz=258						
M22K	Willow	61.25	29	P	P	11 51 06.4	-0.2
	baz=257						
RC01	Rabbit Creek A	61.28	30		P	11 51 06.9	0.0
RC01	Rabbit Creek A	61.28	30	P	P	11 51 06.8	-0.1
	baz=257,SNR=10						
CUT	Chulitna	61.34	29	P	P	11 51 07.0	-0.1
CUT	Chulitna	61.34	29	P	P	11 51 06.8	-0.4
	baz=256						
F21K	Alatna River	61.42	23	P	P	11 51 08.1	+0.4
	baz=250						
BPAW	Bear Paw Mtn.	61.46	27	P	P	11 51 08.6	+0.6
	baz=254,SNR=22						
TRF	Thorofare Moun	61.59	27	P	P	11 51 09.0	-0.1
	baz=256,SNR=9.1						
C21K	Knifeblade Rid	61.65	21	P	P	11 51 10.0	+0.8
	baz=248,SNR=6.2						
E21K	Killik River	61.66	21	P	P	11 51 09.9	+0.6
	baz=249						
PMR	Palmer	61.68	30		P	11 51 09.2	-0.3
PMR				IAmb	IAmb	11 51 09.9	
	comp=Z,12nm,0.8s						
PMR	Palmer	61.68	30	P	P	11 51 09.1	-0.3
	baz=258,SNR=7.5						
H22K	Ishtalitna Cre	61.80	25	P	P	11 51 11.0	+0.7
	baz=253,SNR=6.2						
GHO	Glory Hole Cre	61.81	29	P	P	11 51 10.4	-0.1
MLY	Manley	61.81	26	P	P	11 51 11.1	+0.7
	baz=254,SNR=18						
B21K	Ikpikpuk River	61.88	20	IAmb	IAmb	11 51 12.4	
	comp=Z,12nm,1.0s						
B21K	Ikpikpuk River	61.88	20	P	P	11 51 11.4	+0.8
	baz=248,SNR=11						
A21K	Barrow	61.94	18	P	P	11 51 11.8	+0.8
	baz=245,SNR=8.9						
KNK	Knik Glacier	61.95	30	P	P	11 51 11.9	+0.5
KNK	Knik Glacier	61.95	30	P	P	11 51 11.6	+0.2
	baz=258,SNR=6.1						
SML	Sawmill	62.09	29	P	P	11 51 12.5	+0.1
	baz=258,SNR=15						
P23K	Montague Islan	62.20	32	P	P	11 51 13.4	+0.4
	baz=260						
RND	Reindeer	62.20	28	IAmb	IAmb	11 51 14.1	
	comp=Z,11nm,0.8s						
WAT1	Susitna Watana	62.21	28	P	P	11 51 12.9	-0.2
	baz=258						
MCK	McKinley	62.24	27	IAmb	IAmb	11 51 13.9	
	comp=Z,11nm,1.1s						
MCK	McKinley	62.24	27	P	P	11 51 13.8	+0.6
	baz=257,SNR=7.4						
D22K	Ayikyak River	62.26	21	P	P	11 51 14.4	+1.1
	baz=250,SNR=22						
E22K	Anaktuvuk Pass	62.32	22		P	11 51 14.8	+1.1
E22K				IAmb	IAmb	11 51 15.2	
	comp=Z,9.0nm,0.6s						
E22K	Anaktuvuk Pass	62.32	22	P	P	11 51 14.8	+1.1
	baz=252,SNR=12						
M23K	Glacier View	62.37	30	P	P	11 51 14.3	+0.2
	baz=259,SNR=6.3						
NEA2	Nenana	62.39	26	IAmb	IAmb	11 51 15.5	
	comp=Z,11nm,0.9s						
NEA2	Nenana	62.39	26	P	P	11 51 14.8	+0.6
	baz=256,SNR=7.8						
I23K	Minto, Yukon-K	62.41	26	P	P	11 51 14.9	+0.7
I23K	Minto, Yukon-K	62.41	26	P	P	11 51 15.4	+1.1
	baz=256,SNR=19						
GLI	Glacier Island	62.50	31	P	P	11 51 15.1	+0.1
	baz=260						
WAT6	Susitna Watana	62.52	29	P	P	11 51 15.4	+0.1
	baz=258,SNR=10						
B22K	Teshekpuk Lake	62.53	20	IAmb	IAmb	11 51 16.4	
	comp=Z,10nm,0.7s						
B22K	Teshekpuk Lake	62.53	20	P	P	11 51 15.7	+0.8
	baz=249,SNR=13						
G23K	Bananza Creek	62.56	24	IAmb	IAmb	11 51 17.3	
	comp=Z,16nm,1.5s						
G23K	Bananza Creek	62.56	24	P	P	11 51 16.3	+1.0
	baz=254,SNR=6.7						
SCM	Sheep Creek Mo	62.57	30	P	P	11 51 16.0	+0.5
	baz=259,SNR=8.7						
Q23K	Middleton Isla	62.63	32	P	P	11 51 16.4	+0.6
	baz=261						
COLD	Coldfoot	62.63	23	IAmb	IAmb	11 51 17.7	
	comp=Z,7.6nm,1.0s						
COLD	Coldfoot	62.63	23	P	P	11 51 16.7	+0.9
	baz=254,SNR=8.6						
DHY	Denali Highway	62.79	28	IAmb	IAmb	11 51 18.0	
	comp=Z,2nm,0.6s						
DHY	Denali Highway	62.79	28	P	P	11 51 17.0	0.0
	baz=258,SNR=7.0						
COLA	College	62.97	26	P	P	11 51 17.9	0.0
COLA				IAmb	IAmb	11 51 20.5	
	comp=Z,8.4nm,0.7s						
COLA	College	62.97	26	P	P	11 51 18.1	+0.1
	baz=257						
D23K	Nanushuk River	62.97	21	IAmb	IAmb	11 51 19.9	
	comp=Z,8.9nm,0.7s						
D23K	Nanushuk River	62.97	21	P	P	11 51 19.4	+1.4
	baz=252						
E23K	Chandalar	63.08	22	P	P	11 51 20.1	+1.3
	baz=254,SNR=21						
EYAK	Cordova Ski Ar	63.10	31	P	P	11 51 19.6	+0.7
	baz=261						
M24K	Tolsona, Glenn	63.15	29	P	P	11 51 19.9	+0.6
	baz=260						
KLU	Klutina	63.17	30	P	P	11 51 19.9	+0.5
KLU	Klutina	63.17	30	P	P	11 51 20.0	+0.5
	baz=261,SNR=7.6						
H24K	Noodor Dome	63.17	25	IAmb	IAmb	11 51 20.8	
	comp=Z,10.0nm,0.6s						
H24K	Noodor Dome	63.17	25	P	P	11 51 20.1	+0.7
	baz=257,SNR=18						
POKR	Poker Plat Res	63.19	26	P	P	11 51 19.0	-0.5
	baz=257						
HDA	Harding Lake	63.24	27	IAmb	IAmb	11 51 19.7	
	comp=Z,11nm,0.8s						
HDA	Harding Lake	63.24	27	P	P	11 51 18.9	-0.9
	baz=256,SNR=12						
TOLK	Toolik Lake Re	63.26	22	P	P	11 51 21.0	+1.1
	baz=254,SNR=22						
C23K	Itkillik River	63.27	20	P	P	11 51 20.9	+1.0
	baz=252,SNR=21						
IL31		63.35	26	P	P	11 51 19.5	-0.9
ILAR	Eielson Array	63.35	26	P	P	11 51 19.4	-1.0
	comp=Z,6.7nm,0.4s,baz=259,slow=5.8,SNR=212						
	comp=Z,6.7nm,0.4s						
E24K	Your Creek	63.50	23	IAmb	IAmb	11 51 23.3	
	comp=Z,9.2nm,0.7s						
E24K	Your Creek	63.50	23	P	P	11 51 22.5	+1.1
	baz=255						
G24K	Hadweenzic Riv	63.53	24	IAmb	IAmb	11 51 23.6	
	comp=Z,8.4nm,0.8s						
G24K	Hadweenzic Riv	63.53	24	P	P	11 51 22.6	+0.9
	baz=257,SNR=8.8						
PAX	Paxson	63.62	28	P	P	11 51 22.6	+0.2
PAX	Paxson	63.62	28	P	P	11 51 22.6	+0.2
	baz=260,SNR=13						
K24K	Donnelly Dome	63.63	28	IAmb	IAmb	11 51 27.2	
	comp=Z,7.0nm,0.6s						
K24K	Donnelly Dome	63.63	28	P	P	11 51 22.4	0.0
	baz=260,SNR=6.4						
D24K	Happy Valley	63.67	21	P	P	11 51 23.8	+1.3
	baz=254						
KAIM	Kayak Island	63.67	32	P	P	11 51 23.8	+1.1
	baz=263						
HARP	HAARP	63.67	29	P	P	11 51 23.4	+0.8
	baz=261,SNR=6.2						
BMRM	Bremner River	63.72	31	P	P	11 51 23.5	+0.5
	baz=262,SNR=5.4						
N25K	Chitina, Valde	63.81	30	IAmb	IAmb	11 51 24.9	
	comp=Z,8.8nm,0.6s						
N25K	Chitina, Valde	63.81	30	P	P	11 51 24.4	+0.8
	baz=262						
C24K	Franklin Bluff	63.87	21	IAmb	IAmb	11 51 25.5	
	comp=Z,8.2nm,0.7s						
C24K	Franklin Bluff	63.87	21	P	P	11 51 24.6	+0.8
	baz=254						
J25K	Salcha River,	63.95	27	IAmb	IAmb	11 51 24.3	
	comp=Z,6.6nm,0.5s						
J25K	Salcha River,	63.95	27	P	P	11 51 23.6	-0.9
	baz=260,SNR=12						
RIDG	Independent Ri	64.03	28		P	11 51 25.1	+0.1
RIDG	Independent Ri	64.03	28	P	P	11 51 25.0	0.0
	baz=260,SNR=15						
PRP	Porcupine Dome	64.06	26	P	P	11 51 24.9	-0.4
	baz=259						
GLB	Gilahina Butte	64.16	30	P	P	11 51 26.1	+0.2
GLB				IAmb	IAmb	11 51 28.1	
	comp=Z,12nm,0.8s						
MENT	Mentasta	64.41	29	IAmb	IAmb	11 51 33.8	
	comp=Z,4.7nm,0.6s						
CRQE	Cirque	64.42	31	P	P	11 51 28.3	+0.6
	baz=264						
F25K	Christian Rive	64.43	23	IAmb	IAmb	11 51 29.9	
	comp=Z,9.5nm,0.8s						
F25K	Christian Rive	64.43	23	P	P	11 51 28.9	+1.3
	baz=258,SNR=16						
SCRK	Sand Creek	64.44	27	IAmb	IAmb	11 51 28.8	
	comp=Z,15nm,0.9s						
SCRK	Sand Creek	64.44	27	P	P	11 51 27.8	0.0
	baz=261,SNR=16						
MCARA	McCarthy VSAT	64.53	30	P	P	11 51 29.1	+0.9
MCARA	McCarthy VSAT	64.53	30	P	P	11 51 28.8	+0.6
	baz=263						
D25K	Kavik River	64.55	21	P	P	11 51 29.3	+0.9
	baz=256						
E25K	Arctic Village	64.57	23		P	11 51 29.8	+1.3
E25K				IAmb	IAmb	11 51 30.7	
	comp=Z,12nm,1.1s						
E25K	Arctic Village	64.57	23	P	P	11 51 29.7	+1.3
	baz=258,SNR=12						
L26K	Log Cabin Wild	64.59	29	P	P	11 51 29.3	+0.7
L26K				IAmb	IAmb	11 51 30.0	
	comp=Z,13nm,1.2s						
L26K	Log Cabin Wild	64.59	29	P	P	11 51 29.3	+0.7
	baz=262,SNR=7.8						
M26K	Nabesna, AK	64.67	29	P	P	11 51 29.9	+0.7
	baz=263						
BMAR	Burnt Mountain	64.80	24		P	11 51 31.1	+1.2
MESA	MESA	64.93	32	P	P	11 51 32.0	+0.9
	baz=265						
I26K	Coal Creek Min	65.00	26	P	P	11 51 30.8	-0.4
	baz=261						
F26K	Sheenjek River	65.01	23	IAmb	IAmb	11 51 33.6	
	comp=Z,12nm,0.8s						
F26K	Sheenjek River	65.01	23	P	P	11 51 32.8	+1.4
	baz=258,SNR=19						
G26K	Porcupine Rive	65.02	24	IAmb	IAmb	11 51 33.4	
	comp=Z,11nm,0.8s						
G26K	Porcupine Rive	65.02	24	P	P	11 51 32.5	+1.2
	baz=260,SNR=15						
M27K	Edge Creek, AK	65.18	29	P	P	11 51 33.2	+0.6
	baz=264						
C26K	Camden Bay	65.19	21	P	P	11 51 34.0	+1.6
	baz=258						
L27K	Beaver Creek,	65.28	29	IAmb	IAmb	11 51 34.0	
	comp=Z,7.5nm,0.6s						
L27K	Beaver Creek,	65.28	29	P	P	11 51 33.6	+0.5
	baz=264						
CTG	Chitna Glacier	65.30	31	P	P	11 51 34.3	+0.9
	baz=265						
BCAR	Beaver Creek A	65.30	29		P	11 51 33.8	+0.5
LOGN	Logan Glacier	65.45	31	P	P	11 51 35.1	+0.7
C27K	Jago River	65.54	21	IAmb	IAmb	11 51 36.1	
	comp=Z,7.2nm,0.6s						
C27K	Jago River	65.54	21	P	P	11 51 35.6	+1.0
	baz=259						
BVCY	Beaver Creek	65.66	29	P	P	11 51 36.0	+0.4
	baz=265						
I27K	Kandik River	65.68	26	P	P	11 51 35.6	0.0
	baz=263						
PINM	Pinnacle	65.77	32	P	P	11 51 37.1	+0.8
	baz=266						
YUK3	Moose Creek	65.79	30	P	P	11 51 37.2	+0.6
	baz=265,SNR=5.3						
H27K	Steamboat Moun	65.80	25	IAmb	IAmb	11 51 38.1	
	comp=Z,14nm,0.8s						
H27K	Steamboat Moun	65.80	25	P	P	11 51 37.2	+0.9
	baz=262,SNR=21						
O28M	Mount Upton	65.84	31	P	P	11 51 38.0	+1.0
	baz=266,SNR=7.1						
BVAR	Borovoye Array	65.98	320	P	P	11 51 37.5	-0.3
	comp=Z,3.7nm,0.4s,baz=98,slow=7.4,SNR=24						
	comp=Z,3.7nm,0.4s						
BORK	Borovoye	66.03	320	P	P	11 51 37.7	-0.3
E27K	Coleen River	66.05	23	IAmb	IAmb	11 51 39.8	
	comp=Z,5.8nm,0.8s						
E27K	Coleen River	66.05	23	P	P	11 51 39.0	+1.1
	baz=262						
YUK8	Steele Glacier	66.09	31	P	P	11 51 39.8	+1.2
	baz=266						
KK31	Karatay Array	66.31	309	P	P	11 51 40.5	+0.5
KKAR	Karatay Array	66.31	309	P	P	11 51 40.2	+0.1
I28M	Miner Creek	66.36	26	IAmb	IAmb	11 51 41.2	
	comp=Z,7.8nm,0.8s						
I28M	Miner Creek	66.36	26	P	P	11 51 40.5	+0.5
	baz=264						
D27M	Malcol

comp=Z,12nm,0.9s
M29M Somme Creek 66.77 29 P P 11 51 44.0 +1.3
baz=267
L29M L29M 66.96 29 P P 11 51 45.2 +1.3
baz=267
J29N Klondike Camp 67.00 27 P P 11 51 45.2 +1.2
J29N IAmb IAmb 11 51 45.9
comp=Z,7.1nm,0.6s
J29N Klondike Camp 67.00 27 P P 11 51 45.1 +1.0
baz=266,SNR=5.8
I29M Ogilvie Camp, 67.03 26 P P 11 51 44.8 +0.6
baz=266,SNR=6.4
HYT Haines Junctio 67.16 31 IAmb IAmb 11 51 47.5
comp=Z,11nm,0.7s
HYT Haines Junctio 67.16 31 P P 11 51 46.6 +1.4
baz=268
D28M Stokes Point 67.23 22 P P 11 51 46.1 +0.9
baz=264,SNR=7.9
K29M Barlow Dome 67.27 28 IAmb IAmb 11 51 47.7
comp=Z,12nm,0.8s
K29M Barlow Dome 67.27 28 P P 11 51 46.8 +1.0
baz=267,SNR=9.6
N30M Aishikik Lake 67.38 31 P P 11 51 47.7 +1.2
baz=269
P30M Million Dollar 67.42 32 P P 11 51 48.2 +1.4
baz=269
E29M Blow River 67.44 23 P P 11 51 47.8 +1.2
baz=265
M30M Minto, Yukon 67.55 29 IAmb IAmb 11 51 49.0
comp=Z,6.2nm,0.5s
M30M Minto, Yukon 67.55 29 P P 11 51 48.5 +1.0
baz=268
EPYK Eagle Plains 67.74 25 IAmb IAmb 11 51 49.9
comp=Z,8.4nm,0.7s
EPYK Eagle Plains 67.74 25 P P 11 51 49.3 +0.7
baz=267,SNR=8.7
CHGR Chuyangaron 67.78 305 P P 11 51 50.0 +0.5
CHGR IAmb IAmb 11 51 50.7
comp=Z,8.8nm,0.6s
J30M Hart River 67.82 27 IAmb IAmb 11 51 51.0
comp=Z,8.8nm,1.0s
J30M Hart River 67.82 27 P P 11 51 50.0 +0.7
baz=268
I30M Mount Dempster 67.83 26 P P 11 51 49.7 +0.4
baz=268
O30N Mendenhall 67.86 31 P P 11 51 49.9 +0.4
baz=270
G30M tAoh Zraii Nji 67.97 25 P P 11 51 50.6 +0.5
baz=267
MAYO Mayo, Yukon 67.99 28 P P 11 51 51.3 +1.1
MAYO Mayo, Yukon 67.99 28 P P 11 51 51.5 +1.3
baz=269,SNR=5.9
N31M Braeburn, Yuko 68.01 31 P P 11 51 51.5 +1.1
baz=270
F30M Barrier River 68.17 24 IAmb IAmb 11 51 52.6
comp=Z,13nm,0.7s
F30M Barrier River 68.17 24 P P 11 51 52.5 +1.2
baz=267
SKAG Skagway 68.24 33 P P 11 51 53.0 +1.2
baz=271
SIT Sitka 68.30 35 P P 11 51 53.3 +1.1
baz=272
WHY Whitehorse 68.45 31 P P 11 51 54.2 +1.0
baz=271
M31M Drury Creek, Y 68.67 30 IAmb IAmb 11 51 55.5
comp=Z,6.2nm,0.5s
M31M Drury Creek, Y 68.67 30 P P 11 51 55.1 +0.7
baz=271
H31M Peel River 68.69 26 IAmb IAmb 11 51 56.1
comp=Z,12nm,0.8s
H31M Peel River 68.69 26 P P 11 51 55.3 +0.8
baz=269
R32K Eaglecrest 68.69 34 P P 11 51 55.2 +0.6
baz=272
S32K Killisnoo 68.69 35 P P 11 51 55.1 +0.5
baz=272
G31M Satah River 68.74 25 P P 11 51 55.1 +0.4
baz=269
F31M Tsiigehtchic 68.95 24 IAmb IAmb 11 51 56.8
comp=Z,21nm,1.4s
F31M Tsiigehtchic 68.95 24 P P 11 51 56.0 0.0
baz=269,SNR=6.9
INK Inuvik 69.05 23 P P 11 51 56.8 +0.1
INK IAmb IAmb 11 51 57.5
comp=Z,7.9nm,0.8s
INK Inuvik 69.05 23 P P 11 51 56.7 +0.1
baz=269,SNR=12
P32M Atlin 69.06 33 P P 11 51 57.7 +0.7
baz=272
N32M Quiet Lake 69.32 31 P P 11 51 59.0 +0.5
baz=272
P33M Teslin, Yukon 69.49 32 P P 11 52 00.4 +0.8
baz=273
U33K Whale Pass 69.57 36 P P 11 52 00.8 +0.8
baz=274
CRAG Craig 69.61 37 P P 11 52 01.4 +1.1
baz=274
Q32M Nakina River 69.84 33 P P 11 52 02.8 +0.9
baz=274
WRAK Wrangell Islan 69.98 36 P P 11 52 03.7 +1.2
baz=275
R33M Jennings River 70.47 33 P P 11 52 06.6 +0.9
baz=275
V35K Ketchikan 70.48 37 P P 11 52 06.5 +0.9
baz=276
S34M Telegraph Cree 70.51 34 P P 11 52 06.8 +1.1
baz=275
DLBC Dease Lake 71.05 34 P P 11 52 10.3 +1.2
baz=276
T35M Bob Quinn 71.08 35 P P 11 52 10.4 +1.2
baz=276
WTLY Watson Lake, Y 71.50 32 P P 11 52 12.8 +1.1
baz=276
A36M Sachs Harbour 71.73 19 P P 11 52 13.2 +0.4
baz=276
C36M Paulatuk 72.42 22 P P 11 52 17.3 +0.4
baz=277
ARTI Arti 72.67 324 P P 11 52 18.2 -0.4
AB31 Akbulak array 72.86 317 P P 11 52 19.5 -0.4
ABKAR Akbulak array 72.86 317 P 11 52 19.5 -0.3
HOLB Holberg 73.20 42 P P 11 52 06.6 +0.9
WRGLY Wrigley 73.59 28 P P 11 52 24.9 +1.0
WRGLY IAmb IAmb 11 52 25.6
comp=Z,13nm,0.8s
WRGLY Wrigley 73.59 28 P P 11 52 24.7 +0.8
baz=280,SNR=7.8
KOTAN Kotaneelee Air 73.85 31 P P 11 52 26.2 +0.7
baz=280
LLLB Lillooet 77.10 41 P 11 52 45.5 +1.4
GNW Green Mountain 77.25 44 P 11 52 46.8 +1.8
GNW IAmb IAmb 11 52 47.4
comp=Z,8.8nm,0.8s
J01E Myrtle Point 77.59 49 P P 11 52 48.1 +1.1
J01E IAmb IAmb 11 52 49.3
comp=Z,13nm,0.9s
YKAW3 Yellowknife Wh 77.68 28 P 11 52 47.1 +0.1
YKAW3 IAmb IAmb 11 52 48.0
comp=Z,8.8nm,0.6s
YKA Yellowknife Ar 77.70 28 P P 11 52 47.1 -0.1
comp=Z,3.3nm,0.5s,baz=295,slow=5.9,SNR=93
comp=Z,3.3nm,0.5s
YKA Yellowknife Ar 77.70 28 P P 11 52 47.5 +0.3
YKAW1 Yellowknife Wh 77.76 28 P 11 52 47.6 +0.1
YKAW1 IAmb IAmb 11 52 48.4
comp=Z,7.7nm,0.7s
D05A Enumclaw 77.90 44 P P 11 52 48.7 +0.1
D05A IAmb IAmb 11 52 51.0
comp=Z,9.5nm,0.6s
BUCK Buck Mountain 77.99 47 IAmb IAmb 11 52 51.7
comp=Z,15nm,0.8s
LON Longmire 78.13 45 P P 11 52 50.8 +0.8
KMPM Mount Pierce 78.16 51 IAmb IAmb 11 52 53.2
comp=Z,12nm,0.9s
KHMM Horse Mountain 78.33 51 P P 11 52 52.9 +1.6
KHMM IAmb IAmb 11 52 53.8
comp=Z,7.8nm,0.8s
I04A Tendick Farm, 78.50 48 IAmb IAmb 11 52 53.2
comp=Z,8.0nm,0.8s
BBOR Butler Butte 78.55 49 P P 11 52 53.8 +1.2
HOOD Mount Hood Mea 78.61 46 IAmb IAmb 11 52 55.1
comp=Z,8.6nm,0.9s
SPA0 Spitsbergen Ar 78.69 351 eP P 11 52 52.1 -0.3
LTY Liberty 78.74 44 P P 11 52 54.2 +0.8
LTY IAmb IAmb 11 52 54.3
comp=Z,6.0nm,0.6s
YBH Yreka Blue Hor 78.84 50 P 11 52 55.3 +1.2
WIFE Three Sisters- 78.84 47 P 11 52 55.2 +1.1
WIFE IAmb IAmb 11 52 56.0
comp=Z,10nm,0.8s
L04D Klamath Falls 79.00 49 P P 11 52 56.1 +1.1
L04D IAmb IAmb 11 52 56.2
comp=Z,9.4nm,0.8s
RES Resolute Bay 79.04 14 P 11 52 54.8 +0.4
MXC Moxie City 79.18 44 IAmb IAmb 11 52 57.6
comp=Z,11nm,1.2s
B08A Colville Reser 79.30 43 P P 11 52 55.9 -0.5
M03C McCloud 79.39 50 P P 11 52 58.3 +1.3
M03C IAmb IAmb 11 52 58.8
comp=Z,17nm,0.9s
EPH Ephrata 79.42 44 P 11 52 57.5 +0.5
EPH IAmb IAmb 11 52 57.8
comp=Z,8.7nm,0.6s
E07A Sunnyside 79.48 44 IAmb IAmb 11 52 59.1
comp=Z,7.7nm,0.7s
PINE Pine Mountain 79.53 47 P 11 52 59.1 +1.3
WAH2 Wahluke Slope 79.61 44 IAmb IAmb 11 52 59.6
comp=Z,14nm,0.6s
HSPB Hornsund (broa 79.61 350 eP P 11 52 58.0 +0.6
HAWA Hanford 79.74 44 P 11 52 59.5 +0.8
HAWA IAmb IAmb 11 52 60.0
comp=Z,6.4nm,0.6s
K05A Summer Lake 79.86 48 P 11 53 00.8 +1.1
K05A IAmb IAmb 11 53 01.7
comp=Z,16nm,0.9s
O03E Paynes Creek 79.90 51 IAmb IAmb 11 53 01.1
comp=Z,13nm,1.1s
D08A Wollman Farm, 79.94 44 IAmb IAmb 11 53 00.9
comp=Z,5.9nm,0.6s
HATC Hat Creek Radi 80.00 50 IAmb IAmb 11 53 02.1
comp=Z,11nm,0.8s
C09A Chrisman Ranch 80.14 43 P P 11 53 01.4 +0.6
C09A IAmb IAmb 11 53 01.8
comp=Z,6.9nm,0.6s
ORV Oroville 80.33 52 P P 11 53 02.6 +0.6
E09A Wood Farm, Sta 80.62 44 IAmb IAmb 11 53 05.0
comp=Z,8.2nm,0.7s
NEW Newport 80.74 42 P 11 53 04.5 +0.5
BEKR Beckworth 81.08 51 P P 11 53 06.8 +0.6
EDM Edmonton 81.36 37 IAmb IAmb 11 53 08.7
comp=Z,17nm,1.4s
WVOR Wild Horse Val 81.54 48 P P 11 53 09.2 +0.7
HAMF Hammerfest 81.87 343 eP P 11 53 09.0 -0.4
PNTR Pine Nut 81.88 52 P 11 53 11.7 +1.3
PNTR IAmb IAmb 11 53 12.2
comp=Z,11nm,0.9s
ARA0 ARCESS Array S 82.00 342 eP P 11 53 09.8 -0.3
ARA0 IAmb IAmb 11 53 10.5
comp=Z,6.3nm,0.6s
ARCES ARCESS Array B 82.00 342 P P 11 53 09.9 -0.3
comp=Z,5.6nm,0.5s,baz=76,slow=7.8,SNR=50
comp=Z,5.6nm,0.5s
ARCES ARCESS Array B 82.00 342 P P 11 53 10.3 +0.1
ARCES IAmb IAmb 11 53 43.1
comp=Z,16nm,1.5s
TULEG Thule 82.30 8 P 11 53 11.8 +0.2
PLID Pearl Lake 82.49 45 P 11 53 13.3 -0.2
KTK1 Kautokeino 82.96 342 eP P 11 53 14.2 -1.0
KTK1 IAmb IAmb 11 53 15.2
comp=Z,7.3nm,0.9s
NVAR Mina Array Bea 83.04 52 P P 11 53 17.3 +0.8
comp=Z,7.9nm,0.7s,baz=267,slow=6.0,SNR=70
comp=Z,7.9nm,0.7s
NV11 Mina Array Sit 83.15 52 P P 11 53 17.6 +0.7
MFID Camas Ranch 83.17 47 P P 11 53 17.9 +1.0
MFID IAmb IAmb 11 53 18.5
comp=Z,7.0nm,0.8s
JETT Jettan, Norway 83.42 343 eP P 11 53 17.1 -0.4
TIN Tinemaha, Big 83.54 53 P P 11 53 20.3 +1.4
TIN IAmb IAmb 11 53 20.7
comp=Z,9.4nm,0.6s
TRO Tromso 83.78 344 eP P 11 53 18.7 -0.6
TRO IAmb IAmb 11 53 20.6
comp=Z,31nm,1.1s
HLID Hailey 84.09 46 P 11 53 22.1 +0.5
LYMT Lyon Mountain 84.25 42 P P 11 53 22.7 +0.3
LRM Limekiln Ridge 84.57 43 P P 11 53 24.5 +0.4
MCMT McKenzie Canyo 84.68 44 P P 11 53 25.3 +0.6
CCCA Chr Cany lake 84.71 54 P P 11 53 25.4 +0.6
WCT Wildcat Mounta 84.84 53 P P 11 53 26.3 +0.9
WCT IAmb IAmb 11 53 26.8
comp=Z,5.9nm,0.7s
TPNV Topopah Spring 85.07 53 P P 11 53 27.6 +0.9
TPNV IAmb IAmb 11 53 28.0
comp=Z,7.8nm,0.6s
BOZ Bozeman (W) 85.19 43 IAmb IAmb 11 53 28.3
comp=Z,5.4nm,0.6s
S11A Rachel 85.21 52 IAmb IAmb 11 53 32.1
comp=Z,16nm,1.5s
GSC Goldstone, Bar 85.21 54 P P 11 53 27.4 +0.1
GSC IAmb IAmb 11 53 28.8
comp=Z,12nm,1.4s
ILON Igloolik, Nuna 85.55 15 P 11 53 28.0 -0.1
QLMT Earthquake Lak 85.61 44 P P 11 53 30.6 +1.3
YHB Horse Butte 85.80 44 IAmb IAmb 11 53 32.3
comp=Z,11nm,0.7s
HVU Hansel Valley 85.86 47 P P 11 53 31.6 +1.2
HVU IAmb IAmb 11 53 32.2
comp=Z,10.0nm,1.3s
STEI Steigen 85.92 343 eP P 11 53 29.3 -0.6
STEI IAmb IAmb 11 53 30.2
comp=Z,34nm,0.9s
YHH Holmes Hill 86.01 44 P 11 53 32.8 +1.5
YNR Norris Junctio 86.15 44 IAmb IAmb 11 53 35.4
comp=Z,9.9nm,0.9s
FAUS Fauske 86.28 343 eP P 11 53 30.9 -0.8
FAUS IAmb IAmb 11 53 32.6
comp=Z,152nm,2.0s
FXWY Fox Creek 86.34 45 P P 11 53 34.0 +1.1
FIA1 FINESS Array S 86.38 335 P P 11 53 30.9 -1.5
FINES FINESS Array B 86.38 335 P P 11 53 30.7 -1.7
comp=Z,5.2nm,0.3s,baz=71,slow=4.6,SNR=87
comp=Z,5.2nm,0.3s
FINES FINESS Array B 86.38 335 P P 11 53 30.8 -1.6
FLWY Flagg Ranch 86.39 45 P P 11 53 32.5 -0.6
FLWY IAmb IAmb 11 53 35.3
comp=Z,7.8nm,0.8s
DUG Dugway, Tooele 86.42 49 P 11 53 33.8 +0.6
DUG IAmb IAmb 11 53 34.7
comp=Z,6.6nm,0.7s
YMP Mirror Lake Pl 86.48 44 IAmb IAmb 11 53 36.1
comp=Z,8.3nm,0.8s
MOOW Moose Ponds 86.49 45 P 11 53 34.6 +1.0
V12A Nelson 86.56 53 P 11 53 35.0 +1.1
V12A IAmb IAmb 11 53 35.5
comp=Z,6.0nm,0.8s
AHID Auburn Hatcher 86.63 46 IAmb IAmb 11 53 35.6
comp=Z,5.2nm,0.5s
HWUT Hardware Ranch 86.76 47 IAmb IAmb 11 53 36.2
comp=Z,8.3nm,0.8s
FFC Flin Flon 86.84 32 P P 11 53 34.8 +0.1
FFC IAmb IAmb 11 53 35.8
comp=Z,6.6nm,0.9s
CCUT Cedar City 87.01 51 P 11 53 36.8 +0.5
TCUT Toone Canyon 87.06 47 P P 11 53 37.1 +0.7
TCUT IAmb IAmb 11 53 37.5
comp=Z,7.7nm,0.6s
KNB Kanab 87.61 52 IAmb IAmb 11 53 41.1
comp=Z,9.2nm,1.0s
PD31 Pinedale Array 87.67 45 P 11 53 39.1 -0.3
PDAR Pinedale Array 87.67 45 P P 11 53 39.2 -0.1
comp=Z,0.8nm,0.5s,baz=179,slow=1.3,SNR=17
comp=Z,0.8nm,0.5s
PDAR Pinedale Array 87.67 45 P P 11 53 39.3 0.0
Q16A Castle Valley 88.08 49 IAmb IAmb 11 53 43.0
comp=Z,6.1nm,1.0s
P17A Butcher Ranch, 88.17 49 P P 11 53 42.4 +0.8
P17A IAmb IAmb 11 53 43.2
comp=Z,7.9nm,1.2s
FCC Fort Churchill 88.36 27 P 11 53 41.5 -0.3
FCC IAmb IAmb 11 53 42.4
comp=Z,10nm,1.3s
Y14A Wickenburg 88.63 55 P 11 53 44.2 +0.5
Y14A IAmb IAmb 11 53 45.3
comp=Z,8.7nm,0.7s
WUAZ Wupatki 89.26 53 P 11 53 48.0 +1.2
WUAZ IAmb IAmb 11 53 49.3
comp=Z,7.3nm,0.8s
PV21 Cone Mtn., Par 89.80 49 IAmb IAmb 11 53 50.2
comp=Z,5.7nm,0.6s
PV23 Carpenter Ridg 89.82 49 P P 11 53 50.3 +0.8
PV04 Paradox Valley 89.92 49 IAmb IAmb 11 53 51.2
comp=Z,5.9nm,1.0s
PV17 East Wray Mesa 89.93 49 IAmb IAmb 11 53 51.1
comp=Z,6.5nm,0.7s
PV16 Nyswonger Mesa 89.95 49 IAmb IAmb 11 53 51.2
comp=Z,6.3nm,0.7s
PV03 Paradox Valley 90.02 49 IAmb IAmb 11 53 51.4
comp=Z,7.6nm,1.1s
PV12 Saucer Basin, 90.03 49 IAmb IAmb 11 53 52.2
comp=Z,10nm,1.0s
PV13 Radium Mtn., P 90.08 49 IAmb IAmb 11 53 51.6
comp=Z,5.4nm,0.7s
HAYD Hayden 90.18 47 P P 11 53 52.1 +1.0
HAYD IAmb IAmb 11 53 52.5
comp=Z,3.8nm,0.7s
PV01 Paradox Valley 90.27 49 P P 11 53 51.8 +0.3
PV01 IAmb IAmb 11 53 52.5
comp=Z,4.9nm,0.7s
E28A Huff 91.58 39 P P 11 53 57.4 +0.2
E28A IAmb IAmb 11 53 58.5
comp=Z,9.4nm,1.0s
HFS Hagfors 91.88 338 P P 11 53 56.4 -1.8
comp=Z,1.3nm,0.3s,baz=104,slow=4.6,SNR=9.1
comp=Z,1.3nm,0.3s
NOA NORSAR Array B 92.07 340 P P 11 53 57.7 -1.5
comp=Z,0.4nm,0.5s,baz=25,slow=7.3,SNR=1.5
comp=Z,0.4nm,0.5s
ULM Lac du Bonnet 92.36 34 P P 11 53 58.9 -1.8
comp=Z,1.9nm,0.8s,baz=354,slow=5.0,SNR=3.7
comp=Z,1.9nm,0.8s
SDCO Great Sand Dun 92.62 49 P P 11 54 02.1 -0.4
SBM South Baldy 93.04 53 P P 11 54 03.2 -1.4
PTCN Pitcairn Islan 93.12 115 P P 11 54 06.5 +1.9
ANMO Albuquerque 93.16 51 P P 11 54 05.6 +0.7
BRTR Keskin Array B 93.64 314 P P 11 54 05.2 -1.8
comp=Z,0.7nm,0.7s,baz=122,slow=1.6,SNR=4.1
comp=Z,0.7nm,0.7s
BRTR Keskin Array B 93.64 314 P P 11 54 05.8 -1.1
F33A 5 Mile Ranch, 94.57 38 P P 11 54 11.9 +1.0
MNTX Cornudas Mount 95.39 54 P P 11 54 15.2 +0.2
TXAR Lajitas Array 97.77 55 P P 11 54 25.8 -0.2
comp=Z,0.1nm,0.4s,baz=286,slow=3.6,SNR=4.4
comp=Z,0.1nm,0.4s
TXAR Lajitas Array 97.77 55 P P 11 54 26.3 +0.4
LCO Las Campanas 145.68 114 PKPbc PKPbc 12 00 29.4 +0.4
BOAV Boa Vista 146.68 53 PKPbc PKPbc 12 00 32.2 +0.2
PB08 IPOC Station P 147.42 98 PKPbc 12 00 35.9 +1.4
LPAZ La Paz 147.91 90 PKPbc PKPbc 12 00 36.7 +0.6
comp=Z,2.3nm,0.6s,baz=275,slow=3.5,SNR=9.1
LPAZ La Paz 147.91 90 PKPab PKPbc 12 00 37.1 +1.0
MACA Manacapuru-AM 149.91 61 PKPbc PKPbc 12 00 40.4 0.0

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*IDC **09** 11:54:42.3±1.1, 11°.28S×164°.12E, h0km, mb3.9/6, mbtmp4.0/8, ML4.0/3, MS3.1/10, Error ellipse: s-maj=30.1km s-min=23.0km az=144.0*
*NEIC **09** 11:54:44.3±2.0, 11°.25S±0°.05×164°.17E±0°.08, h10km±1km, mb4.6/25, Error ellipse: s-maj=14.1km s-min=8.8km az=81.0*

ISC 09 11:54:47.3±0.6, 11°.36S±0°.09×164°.15E±0°.07, h35km, n55, σ0998/42, mb4.5/18, MS3.1/8, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.56**	**294**	Pn	**Pn**	**11 55 53.1**	**-0.7**
	1.4nm,0.3s,baz=268,slow=8.2,SNR=7.3						
HNR				Sn	**Sn**	**11 56 45.6**	**0.0**
	0.7nm,0.3s,baz=268,slow=22,SNR=6.3						
HNR	**Honiara**	**4.56**	**294**		**Pn**	**11 55 51.0**	**-2.8**
HNR				Sn	**Sn**	**11 56 45.2**	**-0.4**
SANVU	**Saraoutou**	**5.03**	**144**		**Pn**	**11 56 00.6**	**+0.3**
MARNC	**Mare, Loyalty**	**10.73**	**160**	Pn	**Pn**	**11 57 17.0**	**-1.5**
DZM	**Mont Dzumac**	**10.87**	**169**	Pn	**Pn**	**11 57 21.8**	**+1.2**
	0.9nm,0.3s,baz=9.9,slow=6.9,SNR=26						
DZM				LR	LR	12 00 37.5	
	comp=Z,105nm,21.6s,baz=56,slow=32						
	3.0nm,0.5s						
ONTNC	**Quen Toro**	**11.10**	**169**	Pn	**Pn**	**11 57 22.5**	**-1.2**
MSVF	**Nonsavu**	**14.87**	**117**	LR	LR	12 03 18.4	
	comp=Z,96nm,19.7s,baz=318,slow=35						
CTA	**Charters Tower**	**19.27**	**241**	P	**Pn**	**11 59 10.9**	**+0.5**
	1.1nm,0.3s,baz=64,slow=11,SNR=35						
	20nm,0.7s						
CTAO	**Charters Tower**	**19.27**	**241**	P	**Pn**	**11 59 11.4**	**+1.1**
CTAO				IAmb	IAmb	11 59 12.4	
	comp=Z,22nm,0.8s						
COEN	**Coen**	**20.63**	**261**	P	Pn	11 59 25.5	-0.9
RAO	**Raoul Island**	**24.42**	**139**	LR	LR	12 07 42.9	
	comp=Z,80nm,21.2s,baz=58,slow=32						
INKA	**Innaminka**	**27.34**	**230**	P	**P**	**12 00 29.5**	**+0.4**
INKA				IAmb	IAmb	12 00 35.0	
	comp=Z,7.7nm,1.1s						
URZ	**Urewera**	**29.18**	**159**	LR	LR	12 10 56.4	
	comp=Z,38nm,21.0s,baz=256,slow=33						
WR8	**Warramunga Arr**	**29.76**	**250**	P	**P**	**12 00 50.8**	**0.0**
WR8				IAmb	IAmb	12 00 53.2	
	comp=Z,8.2nm,0.9s						
H11S2	**WAKE ISLAND Hy**	**29.77**	**5**	T	T	12 32 07.5	
	baz=189,slow=78,SNR=6.3						
H11S3	**WAKE ISLAND Hy**	**29.77**	**5**	T	T	12 32 10.7	
	baz=189,slow=78,SNR=6.2						
H11S1	**WAKE ISLAND Hy**	**29.79**	**5**	T	T	12 32 02.1	
	baz=189,slow=78,SNR=6.0						
WB0	**Warramunga Arr**	**29.82**	**250**	P	**P**	**12 00 51.3**	**0.0**
WB0				IAmb	IAmb	12 00 51.9	
	comp=Z,10nm,0.8s						
WRAB	**Tennant Creek**	**29.89**	**250**	P	**P**	**12 00 51.8**	**-0.2**
WRAB				IAmb	IAmb	12 00 52.0	
	comp=Z,11nm,1.2s						
WRA	**Warramunga Arr**	**29.91**	**250**	P	**P**	**12 00 51.5**	**-0.6**
	comp=Z,6.7nm,0.8s,baz=79,slow=9.2,SNR=46						
	comp=Z,6.7nm,0.8s						
WRA	**Warramunga Arr**	**29.91**	**250**	P	**P**	**12 00 50.9**	**-1.2**
H11N1	**WAKE ISLAND Hy**	**31.00**	**5**	T	T	12 33 38.0	
	baz=184,slow=76,SNR=4.8						
H11N3	**WAKE ISLAND Hy**	**31.00**	**5**	T	T	12 33 38.1	
	baz=184,slow=76,SNR=5.6						
H11N2	**WAKE ISLAND Hy**	**31.02**	**5**	T	T	12 33 42.0	
	baz=184,slow=76,SNR=5.5						
AS31	**Alice Springs**	**31.25**	**243**	P	**P**	**12 01 04.4**	**+0.4**
ASAR	**Alice Springs**	**31.25**	**243**	P	**P**	**12 01 03.1**	**-0.9**
	comp=Z,1.2nm,0.6s,baz=62,slow=10,SNR=18						
ASAR				PcP	**PcP**	**12 03 58.6**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=67,slow=3.1,SNR=4.4						
	comp=Z,1.2nm,0.6s						
ASAR	**Alice Springs**	**31.25**	**243**	P	**P**	**12 01 01.6**	**-2.4**
GUMO	**Guam**	**31.31**	**322**	LR	LR	12 12 31.7	
	comp=Z,53nm,21.7s,baz=140,slow=34						
SIJI	**Sorong**	**34.27**	**285**	LR	LR	12 17 03.2	
	comp=Z,46nm,18.3s,baz=104,slow=39						
KNRA	**Kununurra**	**34.65**	**259**	P	**P**	**12 01 33.1**	**-0.5**
KNRA				IAmb	IAmb	12 01 37.1	
	comp=Z,6.8nm,0.8s						
XMAS	**Kiritimati**	**40.44**	**73**	P	**P**	**12 02 20.8**	**-1.9**
PSA00	**Pilbara Seismi**	**43.55**	**251**	P	**P**	**12 02 49.1**	**+1.0**
MORW	**Morawa**	**48.10**	**241**	P	**P**	**12 03 24.4**	**+0.4**
MORW				IAmb	IAmb	12 03 25.4	
	comp=Z,14nm,1.0s						
JMN	**Monobe**	**53.30**	**328**	P	**P**	**12 04 03.6**	**+0.6**
JNU	**Nakatsue**	**54.44**	**326**	LR	LR	12 24 37.2	
	comp=Z,11nm,21.6s,baz=30,slow=33						
JKA	**Kamikawa-asahi**	**58.59**	**342**	P	**P**	**12 04 41.3**	**+0.7**
JKA				IAmb	IAmb	12 04 51.5	
	comp=Z,11nm,1.0s						
KSRS	**Korea Array**	**59.27**	**327**	LR	LR	12 28 27.8	
	comp=Z,8.3nm,20.4s,baz=270,slow=34						
CMAR	**Chiang Mai Arr**	**70.81**	**294**	LR	LR	12 38 53.7	
	comp=Z,4.1nm,18.2s,baz=80,slow=38						
ACHA	**Angle Creek He**	**76.79**	**21**	P	**P**	**12 06 34.3**	**-0.8**
ACHA				IAmb	IAmb	12 06 35.2	
	comp=Z,13nm,1.4s						
Q19K	**Cape Douglas,**	**77.91**	**21**	P	**P**	**12 06 42.2**	**+0.8**
SONM	**Songino Array**	**78.00**	**324**	P	**P**	**12 06 43.1**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=127,slow=7.3,SNR=3.6						
	comp=Z,0.6nm,0.7s						
K15K	**Wolf Creek Mou**	**78.14**	**16**	P	**P**	**12 06 42.5**	**-0.1**
K15K				IAmb	IAmb	12 07 20.3	
	comp=Z,15nm,1.5s						
N18K	**Kilae Creek**	**78.49**	**19**	P	**P**	**12 06 45.6**	**+1.1**
N18K				IAmb	IAmb	12 07 09.5	
	comp=Z,3.4nm,1.1s						
QSPA	**South Pole Qui**	**78.64**	**180**	P	**P**	**12 06 45.8**	**+0.2**
QSPA				IAmb	IAmb	12 06 55.9	
	comp=Z,4.8nm,1.4s						
L19K	**White Mountain**	**79.96**	**18**	P	**P**	**12 06 53.2**	**+0.7**
MESA	**MESA**	**83.15**	**24**	P	**P**	**12 07 10.8**	**+1.1**
ILAR	**Eielson Array**	**84.31**	**19**	P	**P**	**12 07 15.5**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=245,slow=5.5,SNR=6.1						

comp=Z,0.3nm,0.6s
ILAR Eielson Array 84.31 19 P **P** 12 07 15.8 **+0.5**
D20K Etivluk River 84.54 13 P **P** 12 07 17.1 **+0.7**
HOLB Holberg 85.08 36 P **P** 12 07 20.1 **+0.6**
HYT Haines Junctio 85.32 25 P **P** 12 07 20.6 **0.0**
HYT IAmb IAmb 12 07 40.3
comp=Z,12nm,1.5s
TJX Tijuana 86.77 56 P **P** 12 07 27.5 **-0.8**
NVAR Mina Array Bea 87.42 50 P **P** 12 07 31.7 **+0.1**
comp=Z,0.4nm,0.9s,baz=257,slow=5.2,SNR=2.1
comp=Z,0.4nm,0.9s
MKAR Makanchi Array 92.69 317 P **P** 12 07 55.6 **-0.2**
comp=Z,0.1nm,0.4s,baz=123,slow=4.3,SNR=2.6
comp=Z,0.1nm,0.4s
TXAR Lajitas Array 97.35 62 LR LR 12 42 52.3
comp=Z,16nm,20.8s,baz=84,slow=30

NEIC ***09*** *11:56:02.0±1.6, 36°.23N±0°.07×139°.64E±0°.07, h118km±3km, mb4.4/12, Error ellipse: s-maj=9.9km s-min=8.1km az=151.0*
IDC ***09*** *11:56:02.1±1.4, 36°.14N×139°.51E, h119km±9km, mb3.4/6, mbtmp3.8/8, Error ellipse: s-maj=28.0km s-min=14.9km az=65.0*
JMA ***09*** *11:56:03.5±0.1, 36°.2N±0°.4×139°.5E±0°.6, h113km±1km, MV3.3/40, EASTERN SAITAMA PREF*
ISC 09 11:56:02.0±0.7, 36°.18N±0°.05×139°.47E±0°.05, h121km±6km, n52, σ1§15/62, mb4.0/14, 2C-2D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAG	**Ashikaga**	**0.25**	**357**	*i* P	**Pn**	**11 56 19.6**	**+0.7**
JAG				S	**Sn**	**11 56 31.7**	**+0.1**
JRY	**Ryogami san**	**0.49**	**251**	*i* P	**Pn**	**11 56 20.8**	**+0.9**
JRY				S	**Sn**	**11 56 33.9**	**+0.4**
JYT	**Yasato**	**0.59**	**85**	Pn	**Pn**	**11 56 19.1**	**-1.4**
JKT	**Katashina**	**0.61**	**343**	*i* P	**Pn**	**11 56 21.8**	**+0.9**
JKT				S	**Sn**	**11 56 35.7**	**+0.6**
JOD2	**Odawara 2**	**0.96**	**199**	*i* P	**Pn**	**11 56 24.1**	**+0.3**
JOD2				S	**Sn**	**11 56 39.6**	**-0.6**
JYN	**Shimob**	**1.01**	**228**	*i* P	**Pn**	**11 56 24.8**	**+0.5**
JYN				S	**Sn**	**11 56 41.3**	**+0.2**
MJAR	**Matsushiro Arr**	**1.08**	**290**	P	**Pn**	**11 56 24.9**	**0.0**
	165nm,0.3s,baz=144,slow=10,SNR=763						
MJAR				S	**Sn**	**11 56 42.5**	**+0.3**
	57nm,0.5s,baz=140,slow=18,SNR=9.2						
MJAR	**Matsushiro Arr**	**1.08**	**290**		**Pn**	**11 56 25.6**	**+0.7**
MAJO	**Matsushiro**	**1.08**	**290**	P	**Pn**	**11 56 25.6**	**+0.7**
MAJO	**Matsushiro**	**1.08**	**290**	S	**Sn**	**11 56 42.4**	**+0.1**
MAJO	**Matsushiro**	**1.08**	**290**		**Pn**	**11 56 25.6**	**+0.7**
MAT	**Matsushiro**	**1.08**	**290**	P	**Pn**	**11 56 25.4**	**+0.5**
MAT				S	**Sn**	**11 56 41.8**	**-0.4**
MJB9	**Matsu-Tunnel**	**1.09**	**290**		**Pn**	**11 56 26.5**	**+1.6**
JOTO	**OTAMA OYAMA**	**1.54**	**26**	P	**Pn**	**11 56 32.1**	**+2.1**
JOTO				S	**Sn**	**11 56 53.7**	**+2.4**
JNS	**Sasagawa**	**1.64**	**356**	P	**Pn**	**11 56 32.6**	**+1.5**
JNS				S	**Sn**	**11 56 55.0**	**+1.7**
JGF	**Kuroka**	**1.81**	**252**	P	**Pn**	**11 56 34.0**	**+0.9**
JGF	**Kuroka**	**1.81**	**252**		**Pn**	**11 56 33.6**	**+0.5**
JSG	**Sagara**	**1.83**	**215**	P	**Pn**	**11 56 35.8**	**+2.4**
JSG	**Sagara**	**1.83**	**215**	Pn	**Pn**	**11 56 35.4**	**+2.1**
BSO1	**Boso 1**	**1.96**	**141**	P	**Pn**	**11 56 35.6**	**+1.2**
BSO1				S	**Sn**	**11 57 00.6**	**+1.4**
INU	**Inuyama**	**2.16**	**248**	P	**Pn**	**11 56 38.3**	**+0.9**
INU	**Inuyama**	**2.16**	**248**		**Pn**	**11 56 38.0**	**+0.6**
JHJ	**Hachijo jima 2**	**3.06**	**175**	P	**Pn**	**11 56 49.1**	**0.0**
	270nm,0.3s,baz=307,slow=22,SNR=13						
JHJ2	**Mitsune**	**3.07**	**175**	P	**Pn**	**11 56 51.6**	**+2.4**
JHJ2	**Mitsune**	**3.07**	**175**	Pn	**Pn**	**11 56 49.9**	**+0.6**
JMN	**Monobe**	**5.20**	**244**	P	**Pn**	**11 57 18.7**	**+1.1**
JMN	**Monobe**	**5.20**	**244**	Pn	**Pn**	**11 57 18.9**	**+1.3**
ASAJ	**Asahikawa**	**8.28**	**16**	P	**Pn**	**11 57 58.0**	**-1.1**
	1.2nm,0.4s,baz=186,slow=14,SNR=6.6						
ASAJ				S	**Sn**	**11 59 29.4**	**-1.5**
	3.0nm,0.9s,baz=54,slow=24,SNR=1.6						
JKA	**Kamikawa-asahi**	**8.28**	**16**		**Pn**	**11 57 57.8**	**-1.4**
ZAA0	**Zalesovo Array**	**41.35**	**313**	P	**P**	**12 03 36.6**	**+0.9**
ZAA0				IAmb	IAmb	12 03 37.1	
	comp=Z,3.8nm,1.2s						
ZALV	**Zalesovo Beam**	**41.35**	**313**	P	**P**	**12 03 36.5**	**+0.9**
	comp=Z,1.8nm,0.5s,baz=97,slow=7.7,SNR=6.7						
	comp=Z,1.8nm,0.5s						
MK31	**Makanchi Array**	**43.25**	**303**	⇑Pg	**P**	**12 03 48.8**	**-2.4**
	comp=Z,0.2nm,0.3s,baz=207,slow=15						
MK31				⇓Lg	Lg	12 04 23.4	
	comp=Z,0.1nm,0.4s,baz=209,slow=29,SNR=4.9						
MKAR	**Makanchi Array**	**43.25**	**303**	P	**P**	**12 03 51.6**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=79,slow=11,SNR=8.1						
	comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**43.25**	**303**	P	**P**	**12 03 51.8**	**+0.5**
MAKZ	**Makanchi**	**43.47**	**303**	⇑Pg	P	12 03 47.7	-5.3
	comp=Z,0.4nm,0.7s						
MAKZ				⇓Lg	Lg	12 04 20.6	
	comp=Z,0.5nm,0.7s						
KURK	**Kurchatov**	**45.23**	**309**	P	**P**	**12 04 07.2**	**+0.3**
KURK				IAmb	IAmb	12 04 08.2	
	comp=Z,4.2nm,0.6s						
KURBB	**Kurchatov Arra**	**45.30**	**308**	P	**P**	**12 04 08.0**	**+0.5**
	comp=Z,3.0nm,0.6s,baz=85,slow=7.7,SNR=45						
	comp=Z,3.0nm,0.6s						
KDJ	**Kajisay**	**47.73**	**297**	P	**P**	**12 04 25.4**	**-1.4**
KDJ				IAmb	IAmb	12 04 26.3	
	comp=Z,2.2nm,0.7s						
D22K	**Ayikyak River**	**48.83**	**26**	P	**P**	**12 04 33.4**	**-1.2**
CNPM	**China Poot**	**49.35**	**39**	P	**P**	**12 04 36.9**	**-1.8**
WB0	**Warramunga Arr**	**55.85**	**186**	P	**P**	**12 05 27.6**	**+0.8**
WB0				IAmb	IAmb	12 06 00.8	
	comp=Z,8.3nm,1.4s						
WR8	**Warramunga Arr**	**56.02**	**186**	P	**P**	**12 05 29.0**	**+0.9**
WR8				IAmb	IAmb	12 05 49.8	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**56.02**	**186**	P	**P**	**12 05 27.9**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=1.6,slow=7.5,SNR=14						
	comp=Z,0.2nm,0.3s						
WRA	**Warramunga Arr**	**56.02**	**186**	P	**P**	**12 05 27.9**	**-0.3**
ARTI	**Arti**	**56.07**	**319**	P	**P**	**12 05 28.7**	**+0.5**
ARTI				IAmb	IAmb	12 05 48.0	
	comp=Z,7.0nm,1.1s						
AB31	**Akbulak array**	**57.29**	**310**	P	**P**	**12 05 37.6**	**+0.8**
ABKAR	**Akbulak array**	**57.29**	**310**	P	**P**	**12 05 37.7**	**+0.8**
ASAR	**Alice Springs**	**59.75**	**186**	P	**P**	**12 05 53.9**	**-0.2**
	comp=Z,0.2nm,0.8s,baz=9.3,slow=7.2,SNR=2.0						
	comp=Z,0.2nm,0.8s						
ASAR	**Alice Springs**	**59.75**	**186**	P	**P**	**12 05 53.7**	**-0.5**
ARMA	**Armidale**	**67.22**	**169**	P	**P**	**12 06 42.4**	**-0.9**
SN07	**Snyder 07**	**90.95**	**47**	P	**P**	**12 08 52.0**	**-0.4**
TXAR	**Lajitas Array**	**91.88**	**51**	P	**P**	**12 08 58.4**	**+1.5**
	comp=Z,0.1nm,0.5s,baz=310,slow=3.4,SNR=5.1						
	comp=Z,0.1nm,0.5s						

BGSI ***09*** *12:15:46.8±1.1, 26°.13S×29°.69E, h194km±82km, ML2.7*
PRE ***09*** *12:15:47.9±1.1, 25°.87S×29°.30E, h0km, ML2.5, Suspected explosion*
ISC 09 12:15:48.4±1.1, 25°.90S±0°.04×29°.28E±0°.04, h0km, n28, σ1§68/54, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HRAO	**HartRAO**	**1.43**	**270**	*e*P	**Pg**	**12 16 15.9**	**0.0**
HRAO				*e*S	**Sn**	**12 16 36.5**	**+1.1**
HRAO				IAML		12 16 37.0	
	comp=Z,89nm,0.3s						
HRAO	**HartRAO**	**1.43**	**270**	*e*P	**Pn**	**12 16 15.5**	**-0.3**
HRAO				*e*S	**Sn**	**12 16 35.5**	**+0.1**
HRAO				IAML		12 16 36.1	
	comp=Z,89nm,0.3s						
PILG	**Pilgrimsrest,**	**1.61**	**54**	*e*P	**Pn**	**12 16 18.2**	**-0.2**
PILG				*e*S	**Sn**	**12 16 39.4**	**-0.6**
PILG				IAML		12 16 40.5	
	comp=Z,124nm,0.4s						
PILG	**Pilgrimsrest,**	**1.61**	**54**	*e*P	**Pn**	**12 16 17.3**	**-1.0**
PILG				*e*S	**Sn**	**12 16 39.4**	**-0.6**
PILG				IAML		12 16 40.5	
	comp=Z,124nm,0.4s						
WDLM	**Western Deep L**	**1.75**	**252**	*e*P	**Pn**	**12 16 18.0**	**-2.2**
WDLM				*e*S	**Sn**	**12 16 38.2**	**-5.0**
WDLM				IAML		12 16 42.0	
	comp=Z,104nm,0.4s						
PRYS	**Parys**	**2.00**	**239**	*e*P	**Pn**	**12 16 23.9**	**+0.3**
PRYS				*e*S	**Sn**	**12 16 49.9**	**+0.5**
PRYS				IAML		12 16 50.5	
	comp=Z,92nm,0.5s						
LEPH	**Lephalale, Lim**	**2.44**	**326**	*e*P	**Pn**	**12 16 30.4**	**+0.9**
LEPH				*e*S	**Sn**	**12 17 00.8**	**+0.7**
LEPH				IAML		12 17 08.8	
	comp=Z,24nm,0.5s						
LEPH	**Lephalale, Lim**	**2.44**	**326**	*e*P	**Pn**	**12 16 30.4**	**+0.9**
LEPH				*e*S	**Sn**	**12 17 00.1**	**0.0**
LEPH				IAML		12 17 08.8	
	comp=Z,24nm,0.5s						
SNKL	**Senekal, Frees**	**2.72**	**209**	*e*P	**Pn**	**12 16 31.6**	**-1.9**
SNKL				*e*S	**Sn**	**12 17 02.3**	**-4.9**
SNKL				IAML		12 17 19.6	
	comp=Z,15nm,0.3s						
SNKL	**Senekal, Frees**	**2.72**	**209**	*e*P	**Pn**	**12 16 34.2**	**+0.6**
SNKL				IAML		12 17 06.8	
	comp=Z,40nm,0.5s						
SNKL				*e*S	**Sn**	**12 17 08.4**	**+1.2**
SNKL	**Senekal, Frees**	**2.72**	**209**	*e*P	**Pn**	**12 16 34.0**	**+0.4**
SNKL				*e*S	**Sn**	**12 17 08.0**	**+0.8**
SNKL				IAML		12 17 08.8	
	comp=Z,40nm,0.5s						
LBTB	**Lobatse**	**3.44**	**284**	*e*P	**Pn**	**12 16 45.0**	**+1.6**
LBTB				*e*S	**Sn**	**12 17 25.4**	**+0.5**
LBTB				IAML		12 17 36.7	
	comp=Z,33nm,0.6s						
LBTB	**Lobatse**	**3.44**	**284**	*e*P	**Pn**	**12 16 44.2**	**+0.8**
LBTB				*e*S	**Sn**	**12 17 24.9**	**0.0**
LBTB				IAML		12 17 36.7	
	comp=Z,33nm,0.6s						
MUSN	**Musina, Limpop**	**3.63**	**9**	*e*P	**Pn**	**12 16 45.9**	**-0.2**
MUSN				*e*S	**Sn**	**12 17 28.2**	**-1.4**
MUSN				IAML		12 17 45.5	
	comp=Z,16nm,0.5s						
SWZ	**Schweizer**	**3.76**	**249**	*e*P	**Pn**	**12 16 50.0**	**+2.2**
SWZ				*e*S	**Sn**	**12 17 34.3**	**+1.5**
SWZ				IAML		12 17 43.8	
	comp=Z,42nm,0.4s						
SWZ	**Schweizer**	**3.76**	**249**	*e*P	**Pn**	**12 16 49.4**	**+1.6**
SWZ				*e*S	**Sn**	**12 17 32.8**	**0.0**
SWZ				IAML		12 17 43.8	
	comp=Z,42nm,0.4s						
PMBG	**Pietermaritzbu**	**3.76**	**163**	*e*P	**Pn**	**12 16 49.9**	**+2.1**
PMBG				*e*S	**Sn**	**12 17 34.0**	**+1.2**
PMBG				IAML		12 17 41.9	
	comp=Z,19nm,0.4s						
PMBG	**Pietermaritzbu**	**3.76**	**163**	*e*P	**Pn**	**12 16 48.9**	**+1.1**
PMBG				*e*S	**Sn**	**12 17 32.7**	**-0.1**
PMBG				IAML		12 17 39.2	
	comp=Z,23nm,0.4s						
LPHEP	**Lephephe**	**4.00**	**308**	*i* P	**Pn**	**12 16 52.6**	**+1.4**
LPHEP				*i* S	**Sn**	**12 17 40.2**	**+1.4**
LPHEP				IAML		12 18 01.8	
	comp=N,14nm,0.6s						
BOSA	**Boshof**	**4.48**	**232**	*e*P	**Pn**	**12 16 59.9**	**+2.1**
BOSA				*e*S	**Sn**	**12 17 52.2**	**+1.5**
BOSA				IAML		12 18 04.5	
	comp=Z,16nm,0.6s						
BOSA	**Boshof**	**4.48**	**232**	*e*P	**Pn**	**12 16 58.6**	**+0.8**
BOSA				*e*S	**Sn**	**12 17 50.7**	**0.0**
BOSA				IAML		12 18 04.5	
	comp=Z,16nm,0.6s						
KSTD	**Kokstad**	**4.70**	**180**	*e*P	**Pn**	**12 17 02.9**	**+2.1**
KSTD				*e*S	**Sn**	**12 17 55.4**	**-0.8**
KSTD				IAML		12 18 08.3	
	comp=Z,5.7nm,0.5s						
KSTD	**Kokstad**	**4.70**	**180**	*e*P	**Pn**	**12 17 02.3**	**+1.5**
KSTD				*e*S	**Sn**	**12 17 56.2**	**0.0**
KSTD				IAML		12 18 08.3	
	comp=Z,5.7nm,0.5s						
KDWAN	**Kaudwane**	**4.89**	**300**	*i* P	**Pn**	**12 17 02.4**	**-0.9**
KDWAN				IAML		12 18 28.3	
	comp=N,24nm,0.6s						
BROLN	**Tlhalogang**	**5.10**	**339**	*i* P	**Pn**	**12 17 04.7**	**-1.5**
BROLN				*i* S	**Sn**	**12 18 02.5**	**-3.4**
BROLN				IAML		12 18 37.4	
	comp=E,11nm,0.6s						
KGCAE	**Kacgae**	**7.12**	**294**	*i* P	**Pn**	**12 17 32.0**	**-2.0**
KGCAE				IAML		12 19 43.7	
	comp=N,16nm,0.7s						
BRAK	**Brakfontein**	**8.10**	**222**	*e*P	**Pn**	**12 17 48.9**	**+1.5**
BRAK				*e*S	**Sn**	**12 19 17.9**	**-1.9**
BRAK				IAML		12 19 18.6	
	comp=Z,2.0nm,0.7s						
BRAK	**Brakfontein**	**8.10**	**222**	*e*P	**Pn**	**12 17 48.0**	**+0.6**
BRAK				*e*S	**Sn**	**12 19 16.4**	**-3.4**
BRAK				IAML		12 19 16.6	
	comp=Z,2.0nm,0.7s						

KRSC 09 13:23:53.8±2.1, 48°.67N×156°.69E, h18km±33km, Ml3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.05**	**350**	*e*P	Pn	13 24 27.3	-0.2
SKR				*e*S	Sn	13 24 52.1	-0.5
PAU	**Pauzhetka**	**2.80**	**2**	*e*P	Pb	13 24 41.2	-2.2
PAU				*e*S	Sb	13 25 14.3	-3.1
KDTR	**Khodutka, Kamc**	**3.27**	**15**	*e*P	Pb	13 24 47.8	-3.5
KDTR				*e*S	Sb	13 25 28.3	-2.4
ASAK	**Asacha**	**3.80**	**11**	*e*P	Pn	13 24 55.8	+4.3
MTVR	**Mutnovka**	**3.94**	**13**	*e*P	Pn	13 24 57.8	+4.3
MTVR				*e*S	Sn	13 25 44.4	+5.1
RUS	**Russkaya**	**3.94**	**16**	*e*P	Pn	13 24 57.2	+3.8
GRL	**Gorelyy**	**3.99**	**12**	*e*P	Pn	13 24 58.2	+4.1
KRMR	**Karymshinskiy**	**4.27**	**12**	*e*P	Pn	13 25 02.6	+4.7
APC	**Apacha**	**4.27**	**4**	*e*P	Pn	13 25 01.9	+3.9
PET	**Petropavlovsk**	**4.54**	**15**	*e*S	Sn	13 25 59.3	+5.5
DALK	**Dalny**	**4.56**	**16**	*e*P	Pn	13 25 06.0	+4.1
DALK				*e*S	Sn	13 26 00.3	+5.8
UGLR	**Uglovaya**	**4.74**	**16**	*e*P	Pn	13 25 09.3	+4.7
KOK	**Koryaka**	**4.79**	**14**	*e*P	Pn	13 25 10.6	+5.4
SMAR	**Somma**	**4.79**	**15**	*e*P	Pn	13 25 10.9	+5.6
SDLR	**Sedlovina**	**4.82**	**16**	*e*P	Pn	13 25 09.7	+4.1
KRER	**Koryakskii**	**4.82**	**15**	*e*P	Pn	13 25 10.5	+4.8
KRX	**Arik**	**4.86**	**14**	*e*P	Pn	13 25 11.1	+5.0
GNL	**Ganaly**	**5.10**	**8**	*e*P	Pn	13 25 13.4	+4.0
MKZ	**Mys Kozlova**	**6.68**	**26**	*e*P	Pn	13 25 34.5	+3.5

IDC 09 13:42:27.3±2.0, 11°.85S×119°.01E, h0km, mb3.4/1, mbtmp3.3/4, ML3.4/3, Error ellipse: s-maj=50.5km s-min=27.4km az=31.0, South of Sumba

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**4.85**	**71**	Pn	Pn	13 43 41.5	-0.1
	3.3nm,0.3s,baz=293,slow=7.7,SNR=2.3						
BATI				Sn	Sn	13 44 40.8	+2.3
	4.2nm,0.3s,baz=346,slow=19,SNR=4.3						
	5.7nm,0.3s						
WRA	**Warramunga Arr**	**16.79**	**121**	Pn	Pn	13 46 22.6	-1.4
	0.1nm,0.3s,baz=294,slow=13,SNR=6.1						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**18.40**	**132**	P	P	13 46 44.5	+0.4
	0.1nm,0.3s,baz=313,slow=11,SNR=17						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**66.99**	**333**	P	P	13 53 21.9	0.0
	0.2nm,0.4s,baz=152,slow=8.2,SNR=6.7						
	0.2nm,0.4s						

SJA ***09*** *13:44:23.7±1.0, 24°.88S×69°.10W, h115km, ML4.0, MW3.9*
GUC ***09*** *13:44:24.1±0.8, 24°.89S×69°.15W, h130km±5km, ML4.1*
NEIC ***09*** *13:44:24.1±1.4, 24°.89S±0°.06×69°.2W±0°.1, h130km±11km, mb4.3/2, ML4.1(GUC), Error ellipse: s-maj=15.0km s-min=8.0km az=94.0*
IDC ***09*** *13:44:25.7±0.8, 24°.92S×68°.80W, h111km±5km, mb3.7/5, mbtmp3.9/8, Error ellipse: s-maj=26.9km s-min=21.0km az=106.0*
ISC 09 13:44:23.4±0.6, 24°.90S±0°.03×69°.11W±0°.04, h125km±5km, n90, σ1§68/103, mb3.8/4, 5C-4D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB14	**IPOC Station P**	**1.21**	**283**		**Pn**	**13 44 49.6**	**+1.4**
PB14	**IPOC Station P**	**1.21**	**283**	⇑*e*P	**Pn**	**13 44 49.8**	**+1.6**
PB14				*e*S	**Sn**	**13 45 07.8**	**+0.8**
PB14				IAML		13 45 09.7	
	comp=N,2μm,0.1s						
PB14	**IPOC Station P**	**1.21**	**283**	*e*P	**Pn**	**13 44 49.1**	**+0.9**
PB14				*e*S	**Sn**	**13 45 08.1**	**+1.1**
PB14				IAML		13 45 10.5	
	comp=Z,3μm,1.4s						
AC01	**Pan de Azucar**	**1.83**	**227**		**Pn**	**13 44 56.2**	**+1.2**
AC01	**Pan de Azucar**	**1.83**	**227**	⇑*e*P	**Pn**	**13 44 56.2**	**+1.2**
AC01				*e*S	**Sn**	**13 45 20.0**	**+0.9**
AC01				IAML		13 45 21.9	
	comp=E,978nm,0.6s						
AC01	**Pan de Azucar**	**1.83**	**227**	*e*P	**Pn**	**13 44 56.2**	**+1.2**
AC01				*e*S	**Sn**	**13 45 19.8**	**+0.7**
AC01				IAML		13 45 20.5	
	comp=Z,472nm,0.2s						
AC02	**Maricunga**	**1.92**	**180**		**Pn**	**13 44 58.4**	**+1.8**
AC02	**Maricunga**	**1.92**	**180**	⇑*e*P	**Pn**	**13 44 58.6**	**+1.9**
AC02				*e*S	**Sn**	**13 45 23.4**	**+1.4**
AC02				IAML		13 45 31.2	
	comp=E,773nm,0.1s						
AC02	**Maricunga**	**1.92**	**180**	*e*P	**Pn**	**13 44 58.6**	**+1.9**
AC02				*e*S	**Sn**	**13 45 23.3**	**+1.3**
AF01	**San Pedro de A**	**2.12**	**24**		**Pn**	**13 44 60.0**	**+1.1**
AF01	**San Pedro de A**	**2.12**	**24**	*e*P	**Pn**	**13 45 00.3**	**+1.4**
AF01				*e*S	**Sn**	**13 45 27.0**	**+0.9**
AF01	**San Pedro de A**	**2.12**	**24**	*e*P	**Pn**	**13 44 59.4**	**+0.5**
AF01				*e*S	**Sn**	**13 45 26.3**	**+0.3**
AF01				IAML		13 45 30.2	
	comp=Z,1μm,0.4s						
PB06	**IPOC Station P**	**2.23**	**349**		**Pn**	**13 45 01.3**	**+1.2**
PB06	**IPOC Station P**	**2.23**	**349**	⇓*e*P	**Pn**	**13 45 01.4**	**+1.2**
PB06				*e*S	**Sn**	**13 45 28.7**	**+0.5**
PB06				IAML		13 45 30.5	
	comp=N,2μm,0.5s						
PB06	**IPOC Station P**	**2.23**	**349**	*e*P	**Pn**	**13 45 00.9**	**+0.8**
PB06				*e*S	**Sn**	**13 45 28.2**	**0.0**
PB06				IAML		13 45 34.9	
	comp=Z,812nm,0.3s						
PB05	**IPOC Station P**	**2.27**	**334**		**Pn**	**13 45 01.7**	**+1.1**
PB05	**IPOC Station P**	**2.27**	**334**	*e*P	**Pn**	**13 45 01.9**	**+1.3**
PB05				*e*S	**Sn**	**13 45 29.3**	**+0.2**
PB05				IAML		13 45 34.9	
	comp=E,2μm,0.4s						
PB05	**IPOC Station P**	**2.27**	**334**	*e*P	**Pn**	**13 45 02.0**	**+1.4**
PB05				IAML		13 45 33.5	
	comp=Z,807nm,0.4s						
AC06	**Mina Casimiro**	**2.69**	**204**		**Pn**	**13 45 06.3**	**+0.5**
AC06	**Mina Casimiro**	**2.69**	**204**	*e*P	**Pn**	**13 45 06.6**	**+0.8**
AC06				*e*S	**Sn**	**13 45 39.5**	**+1.1**
AC06				IAML		13 45 47.8	
	comp=E,356nm,0.5s						
GO03	**Copiapo**	**2.86**	**200**		**Pn**	**13 45 08.8**	**+0.7**
GO03	**Copiapo**	**2.86**	**200**	⇑*e*P	**Pn**	**13 45 09.1**	**+1.0**
GO03				*e*S	**Sn**	**13 45 43.8**	**+1.2**
GO03				IAML		13 45 48.2	
	comp=N,437nm,0.3s						
GO03	**Copiapo**	**2.86**	**200**	*e*P	**Pn**	**13 45 09.2**	**+1.1**
GO03				*e*S	**Sn**	**13 45 43.6**	**+1.1**
GO03				IAML		13 45 45.4	
	comp=Z,405nm,0.3s						
PB03	**IPOC Station P**	**2.90**	**348**		**Pn**	**13 45 09.4**	**+0.7**
PB03	**IPOC Station P**	**2.90**	**348**	⇓*e*P	**Pn**	**13 45 09.6**	**+0.8**
PB03				*e*S	**Sn**	**13 45 43.9**	**+0.3**
PB03				IAML		13 45 44.7	
	comp=N,640nm,0.4s						
PB03	**IPOC Station P**	**2.90**	**348**	*e*P	**Pn**	**13 45 09.6**	**+0.8**
PB03				IAML		13 45 48.4	
	comp=Z,715nm,0.6s						
FSA	**Cafayete**	**3.08**	**114**	*e*P	**Pn**	**13 45 12.1**	**+1.1**
PB09	**IPOC Station P**	**3.10**	**358**	*e*P	**Pn**	**13 45 12.8**	**+1.5**
PB09				IAML		13 45 45.8	
	comp=E,423nm,0.6s						
PB09	**IPOC Station P**	**3.10**	**358**	*e*P	**Pn**	**13 45 12.3**	**+1.1**
PB09				IAML		13 46 04.1	
	comp=Z,384nm,0.5s						
PB07	**IPOC Station P**	**3.24**	**347**		**Pn**	**13 45 13.4**	**+0.2**
PB07	**IPOC Station P**	**3.24**	**347**	⇓*e*P	**Pn**	**13 45 13.7**	**+0.5**
PB07				IAML		13 46 20.0	
	comp=E,458nm,0.4s						
PB07	**IPOC Station P**	**3.24**	**347**	*e*P	**Pn**	**13 45 13.6**	**+0.4**
PB07				IAML		13 46 18.9	
	comp=Z,484nm,0.5s						
SLA	**San Lorenzo**	**3.28**	**88**	*e*P	**Pn**	**13 45 15.1**	**+1.4**
SLA	**San Lorenzo**	**3.28**	**88**	*e*P	**Pn**	**13 45 15.6**	**+1.9**
TINO	**Tinogasta**	**3.44**	**157**	*e*P	**Pn**	**13 45 17.2**	**+1.5**
TINO				*e*S	**Sn**	**13 45 51.5**	**-4.6**
PB02	**IPOC Station P**	**3.64**	**348**		**Pn**	**13 45 18.6**	**+0.2**
PB02	**IPOC Station P**	**3.64**	**348**	*e*P	**Pn**	**13 45 18.7**	**+0.4**
PB02	**IPOC Station P**	**3.64**	**348**	*e*P	**Pn**	**13 45 18.8**	**+0.5**
PB02				*e*S	Sn	13 45 44.6	-16
PB02				IAML		13 46 27.3	
	comp=Z,652nm,0.3s						
AC04	**Llanos de Chal**	**3.73**	**208**		**Pn**	**13 45 18.7**	**-0.7**
HJA	**Humahuaca**	**3.78**	**64**	*e*P	**Pn**	**13 45 22.6**	**+2.1**
PB01	**IPOC Station P**	**3.86**	**355**		**Pn**	**13 45 21.4**	**+0.2**
PB01	**IPOC Station P**	**3.86**	**355**	⇓*e*P	**Pn**	**13 45 21.5**	**+0.3**
PB01	**IPOC Station P**	**3.86**	**355**	*e*P	**Pn**	**13 45 21.6**	**+0.3**
PB01				*e*S	Sn	13 45 51.0	-15
PB01				IAML		13 46 29.3	
	comp=Z,217nm,0.3s						
VCA	**Vinchina**	**3.90**	**168**	*e

comp=Z,0.2nm,0.7s
ASAR Alice Springs 126.81 207 PKP **PKiKP 14 03 16.6 +3.1**
comp=Z,0.5nm,0.4s,baz=133,slow=1.7,SNR=20
ASAR pPKP **pPKPdf 14 03 46.2 -1.7**
comp=Z,0.3nm,0.6s,baz=160,slow=2.1,SNR=1.9
H11S2 WAKE ISLAND Hyl 28.04 275 T T 16 23 40.2
baz=108,slow=75,SNR=6.7
H11S1 WAKE ISLAND Hyl 28.05 275 T T 16 23 37.7
baz=108,slow=75,SNR=11
H11S3 WAKE ISLAND Hyl 28.06 275 T T 16 23 41.7
baz=108,slow=75,SNR=11
WRA Warramunga Arr 129.92 209 PKP **PKiKP 14 03 22.9 +3.1**
comp=Z,0.3nm,0.5s,baz=152,slow=1.8,SNR=8.9
KURK Kurchatov 144.23 35 PKiKP 14 03 47.1 -0.7
KURBB Kurchatov Arra 144.24 36 PKP **PKiKP 14 03 47.1 -0.7**
comp=Z,1.1nm,0.6s,baz=303,slow=3.6,SNR=12
ZALV Zalesovo Beam 145.08 27 PKiKP 14 03 49.6 +0.2
comp=Z,3.6nm,0.5s,baz=317,slow=4.0,SNR=17
ZALV pPKP pPKPab 14 04 18.5 -0.6
comp=Z,2.7nm,0.7s,baz=306,slow=4.5,SNR=5.0
ZALV Zalesovo Beam 145.08 27 PKiKP 14 03 49.4 0.0
MKAR Makanchi Array 148.44 39 PKPbc **PKPab 14 03 59.2 +0.3**
comp=Z,1.7nm,0.6s,baz=310,slow=2.9,SNR=25
MKAR pPKPbc **pPKPbc 14 04 29.4 -0.2**
comp=Z,0.8nm,0.6s,baz=313,slow=2.5,SNR=5.3
HHC Hu-ho-hao-te 164.09 358 *eP* **PKPdf 14 04 05.5 -6.5**
PZH PanZhiHua 171.60 77 PKP **PKPdf 14 04 10.9 -6.8**

*IDC **09** 13:46:37.1±0.8,38°.43N×21°.97E,h0km,mb3.9/18, mbtmp3.9/21,ML3.5/2,MS3.2/12,Error ellipse: s-maj=19.0km s-min=16.0km az=170.0*
*NAO **09** 13:46:38.2,38°.37N×21°.94E,h10km,MB3.8*
*THE **09** 13:46:38.1,38°.4N±0°.5×21°.9E±0°.6,h7km±1km,M3.7/20, MLh3.7/20*
*ATH **09** 13:46:38.2,38°.38N×21°.94E,h8km,ML3.6/42,Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
*NEIC **09** 13:46:39.8±1.4,38°.26N±0°.05×21°.99E±0°.06,h18km±5km, mb4.4/12,Error ellipse: s-maj=7.8km s-min=6.8km az=48.0*

ISC 09 13:46:38.4±0.6,38°.37N±0°.01×21°.94E±0°.01,h9km±3km, n209,σ1§19/259,mb4.1/20,MS3.3/5,15C-7D,Greece

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MG00	**Magoula, Dorid**	**0.04**	**9**	P		**Pg**	**13 46 39.8**	**-0.4**
MG00				S		**Sg**	**13 46 41.2**	**-0.2**
MALA	**Malamata, Dori**	**0.06**	**290**	P		**Pg**	**13 46 39.8**	**-0.5**
MALA				S		**Sg**	**13 46 41.2**	**-0.5**
EFP	**Efpalio**	**0.06**	**334**	P		**Pg**	**13 46 40.0**	**-0.3**
EFP				S		**Sg**	**13 46 41.3**	**-0.4**
EFP	**Efpalio**	**0.06**	**334**	P		**Pg**	**13 46 40.0**	**-0.3**
EFP				S		**Sg**	**13 46 41.4**	**-0.4**
ZIRI	**Ziria, Aigiali**	**0.07**	**174**	P		**Pg**	**13 46 40.1**	**-0.4**
ZIRI				S		**Sg**	**13 46 41.6**	**-0.4**
SERG	**Sergoula**	**0.10**	**67**	P		**Pg**	**13 46 40.8**	**-0.2**
SERG				S		**Sg**	**13 46 42.6**	**-0.1**
SERG	**Sergoula**	**0.10**	**67**	P		**Pg**	**13 46 40.8**	**-0.2**
SERG				S		**Sg**	**13 46 42.7**	**-0.1**
TRIZ	**Trizonia**	**0.11**	**95**	P		**Pg**	**13 46 40.8**	**-0.1**
TRIZ				S		**Sg**	**13 46 43.1**	**+0.4**
RIOA	**Rio**	**0.14**	**236**	P		**Pg**	**13 46 41.3**	**-0.2**
RIOA				S		**Sg**	**13 46 43.5**	**-0.1**
AGEO	**AgiosGiorgios,**	**0.15**	**138**	P		**Pg**	**13 46 41.5**	**-0.1**
AGEO				S		**Sg**	**13 46 43.9**	**+0.2**
UPR	**University Cam**	**0.15**	**233**	P		**Pg**	**13 46 41.4**	**-0.3**
UPR				S		**Sg**	**13 46 43.6**	**-0.3**
UPR	**University Cam**	**0.15**	**233**	P		**Pg**	**13 46 41.5**	**-0.1**
UPR				S		**Sg**	**13 46 44.1**	**+0.2**
KALE	**Kalithea**	**0.16**	**84**	P		**Pg**	**13 46 41.6**	**-0.2**
KALE				S		**Sg**	**13 46 44.1**	**-0.1**
KALE	**Kalithea**	**0.16**	**84**	P		**Pg**	**13 46 41.7**	**-0.2**
KALE				S		**Sg**	**13 46 44.5**	**+0.3**
AGRP	**Agrapidokambos**	**0.17**	**277**	S		**Pg**	**13 46 41.7**	**-0.3**
AGRP				S		**Sg**	**13 46 44.4**	**-0.1**
PATC	**Patra C**	**0.17**	**233**	P		**Pg**	**13 46 42.0**	**-0.1**
PATC				S		**Sg**	**13 46 45.1**	**+0.5**
PATG	**Patra B**	**0.21**	**231**	P		**Pg**	**13 46 42.9**	**+0.1**
PATG				S		**Sg**	**13 46 46.3**	**+0.5**
ANX	**Ano Chora**	**0.22**	**356**	P		**Pg**	**13 46 42.8**	**-0.2**
ANX				S		**Sg**	**13 46 46.2**	**+0.2**
ANX	**Ano Chora**	**0.22**	**356**	P		**Pg**	**13 46 42.8**	**-0.2**
ANX				S		**Sg**	**13 46 46.6**	**+0.5**
KLV1	**Kalavrita**	**0.37**	**159**	P		**Pg**	**13 46 45.2**	**-0.5**
KLV1				S		**Sg**	**13 46 49.8**	**-0.7**
KLV	**Kalavryta, Ach**	**0.37**	**153**	P		**Pg**	**13 46 45.1**	**-0.6**
KLV	**Kalavryta, Ach**	**0.37**	**153**	P		**Pg**	**13 46 45.2**	**-0.6**
KLV				S		**Sg**	**13 46 50.6**	**0.0**
MSL1	**Messolongi**	**0.40**	**270**	P		**Pg**	**13 46 45.9**	**-0.4**
MSL1				S		**Sg**	**13 46 50.8**	**-0.9**
PVO	**Paravola**	**0.40**	**307**	P		**Pg**	**13 46 46.1**	**-0.3**
PVO				S		**Sg**	**13 46 52.3**	**+0.6**
PVO	**Paravola**	**0.40**	**307**	P		**Pg**	**13 46 46.1**	**-0.3**
PVO				S		**Sg**	**13 46 50.5**	**-1.2**
DLFA	**Delphi**	**0.45**	**76**	P		**Pg**	**13 46 46.6**	**-0.6**
DLFA				S		**Sg**	**13 46 53.2**	**+0.1**
DRO	**Drossia**	**0.46**	**203**	P		**Pg**	**13 46 46.8**	**-0.6**
DRO				S		**Sg**	**13 46 53.2**	**-0.1**
DRO	**Drossia**	**0.46**	**203**	P		**Pg**	**13 46 46.9**	**-0.4**
DRO				S		**Sg**	**13 46 53.4**	**0.0**
AXS	**Araxos**	**0.48**	**248**	P		**Pg**	**13 46 47.2**	**-0.5**
AXS				S		**Sg**	**13 46 54.4**	**+0.4**
AXS	**Araxos**	**0.48**	**248**	P		**Pg**	**13 46 47.4**	**-0.3**
AXS				S		**Sg**	**13 46 54.2**	**+0.3**
RLS	**Riolos of Patr**	**0.49**	**230**	P		**Pg**	**13 46 47.5**	**-0.4**
RLS				S		**Sg**	**13 46 54.5**	**+0.2**
RLS	**Riolos of Patr**	**0.49**	**230**	P		**Pg**	**13 46 47.6**	**-0.3**
RLS				S		**Sg**	**13 46 54.4**	**+0.2**
GUR	**Goura**	**0.54**	**144**	P		**Pg**	**13 46 47.9**	**-1.0**
GUR				S		**Sg**	**13 46 55.9**	**-0.1**
GUR	**Goura**	**0.54**	**144**	P		**Pg**	**13 46 48.1**	**-0.8**
GUR				S		**Sg**	**13 46 55.8**	**-0.2**
EVR	**Evrytania**	**0.55**	**349**	P		**Pg**	**13 46 48.6**	**-0.6**
EVR				S		**Sg**	**13 46 56.5**	**0.0**
EVR	**Evrytania**	**0.55**	**349**	P		**Pg**	**13 46 48.8**	**-0.4**
EVR				S		**Sg**	**13 46 56.4**	**0.0**
LAM2	**Lamia**	**0.65**	**36**	P		**Pg**	**13 46 50.1**	**-0.9**
LAM2				S		**Sg**	**13 46 59.6**	**-0.1**
MAKR	**Makrakomi, Fth**	**0.66**	**13**	P		**Pg**	**13 46 50.7**	**-0.4**
MAKR	**Makrakomi, Fth**	**0.66**	**13**	P		**Pg**	**13 46 51.1**	**0.0**
MAKR				S		**Sg**	**13 46 59.2**	**-0.5**
AST1	**Astakos**	**0.69**	**284**	P		**Pg**	**13 46 51.2**	**-0.5**
AXAR	**Agios Charalam**	**0.69**	**55**	P		**Pg**	**13 46 50.7**	**-1.0**
AXAR	**Agios Charalam**	**0.69**	**55**	P		**Pg**	**13 46 50.9**	**-0.8**
AXAR				S		**Sg**	**13 47 01.0**	**+0.3**
LCHA	**Lechaina**	**0.69**	**231**	P		**Pg**	**13 46 51.8**	**+0.1**
LCHA				S		**Sg**	**13 47 00.6**	**-0.1**
AGG	**Agios Georgios**	**0.72**	**25**	P		**Pg**	**13 46 50.8**	**-1.5**
AGG				S		**Sb**	**13 47 02.7**	**-0.4**
AGG	**Agios Georgios**	**0.72**	**25**	P		**Pg**	**13 46 51.0**	**-1.3**
KIAA	**Kiato**	**0.73**	**119**	P		**Pg**	**13 46 52.9**	**+0.4**
AMPL	**Ampelaki**	**0.79**	**314**	P		**Pg**	**13 46 53.0**	**-0.6**
AMPL				S		**Sg**	**13 47 04.2**	**+0.3**
CLEM	**Kyllini,Ilia,G**	**0.80**	**233**	P		**Pg**	**13 46 53.8**	**0.0**
CLEM				S		**Sb**	**13 47 05.1**	**-0.3**
AMT	**Artemida-Makis**	**0.86**	**192**	P		**Pg**	**13 46 53.8**	**-1.2**
AMT	**Artemida-Makis**	**0.86**	**192**	P		**Pg**	**13 46 54.2**	**-0.7**
AMT				S		**Sg**	**13 47 06.5**	**+0.4**
LKR	**Lokris**	**0.88**	**71**	P		**Pg**	**13 46 54.2**	**-1.1**
LKR				S		**Sg**	**13 47 07.1**	**+0.4**
LTK	**Loutraki**	**0.88**	**113**	P		**Pg**	**13 46 54.8**	**-0.6**
LTK	**Loutraki**	**0.88**	**113**	P		**Pg**	**13 46 55.4**	**0.0**
LTK				S		**Sg**	**13 47 06.8**	**-0.1**
ATAL	**Atalanti**	**0.91**	**69**	P		**Pg**	**13 46 54.0**	**-1.8**
ATAL	**Atalanti**	**0.91**	**69**	P		**Pg**	**13 46 54.3**	**-1.6**
ATAL				S		**Sg**	**13 47 07.5**	**-0.1**
ZARO	**Zacharo**	**0.92**	**195**	P		**Pg**	**13 46 55.4**	**-0.6**
ZARO				S		**Sg**	**13 47 07.5**	**-0.5**
RTZL	**Ratzakli, Kefa**	**0.97**	**252**	P		**Pg**	**13 46 56.4**	**-0.7**
RTZL	**Ratzakli, Kefa**	**0.97**	**252**	P		**Pg**	**13 46 56.3**	**-0.7**
RTZL				S		**Sg**	**13 47 08.5**	**-1.0**
ARS1	**Argos**	**0.97**	**140**	P		**Pg**	**13 46 56.6**	**-0.4**
SOFA	**Sofades**	**0.97**	**7**	P		**Pg**	**13 46 57.0**	**-0.1**
SOFA				S		**Sg**	**13 47 09.8**	**+0.1**
AIDA	**Aidipsos**	**0.99**	**61**	P		**Pg**	**13 46 56.4**	**-1.2**
AIDA				S		**Sg**	**13 47 10.3**	**-0.2**
ZAK2	**Zakynthos**	**1.01**	**235**	P		**Pg**	**13 46 57.7**	**-0.1**
NYDR	**Nydri-Lefkada**	**1.03**	**290**	P		**Pg**	**13 46 57.3**	**-0.9**
NYDR	**Nydri-Lefkada**	**1.03**	**290**	P		**Pg**	**13 46 57.5**	**-0.7**
NYDR				S		**Sg**	**13 47 11.5**	**-0.1**
EVGI	**Lefkada island**	**1.04**	**284**	P		**Pg**	**13 46 57.0**	**-1.4**
EVGI	**Lefkada island**	**1.04**	**284**	P		**Pg**	**13 46 57.3**	**-1.1**
KYPS	**Kipseli, Zakin**	**1.04**	**238**	P		**Pg**	**13 46 58.0**	**-0.4**
KYPS				S		**Sb**	**13 47 13.1**	**+0.8**
VIL2	**Platees**	**1.06**	**98**	P		**Pn**	**13 46 59.5**	**0.0**
VIL2				S		**Sb**	**13 47 13.0**	**+0.1**
VLX	**Vlachokerasia**	**1.06**	**161**	P		**Pg**	**13 46 57.0**	**-1.8**
ART2	**Arta**	**1.07**	**317**	P		**Pg**	**13 46 58.7**	**-0.3**
VLS	**Valsamata**	**1.08**	**260**	P		**Pg**	**13 46 57.6**	**-1.5**
VLS	**Valsamata**	**1.08**	**260**	P		**Pg**	**13 46 57.6**	**-1.5**
VLS				S		**Sg**	**13 47 13.5**	**+0.3**
FSK	**Fiskardo**	**1.08**	**275**	P		**Pg**	**13 46 58.0**	**-1.3**
FSK				S		**Sg**	**13 47 13.3**	**0.0**
LKD2	**Lefkada island**	**1.09**	**293**	P		**Pg**	**13 46 58.5**	**-0.8**
LKD2	**Lefkada island**	**1.09**	**293**	P		**Pg**	**13 46 58.3**	**-1.0**
LTHK	**Lithakia**	**1.09**	**233**	P		**Pg**	**13 46 58.0**	**-1.4**
LTHK				S		**Sg**	**13 47 13.7**	**+0.1**
TETR	**Tetrakomo, Epi**	**1.10**	**332**	P		**Pg**	**13 46 59.5**	**-0.1**
TSLK	**Tsoukalades, L**	**1.10**	**295**	P		**Pg**	**13 46 59.0**	**-0.6**
ORTH	**Orthonies,Zaky**	**1.11**	**242**	P		**Pg**	**13 46 59.5**	**-0.3**
ORTH				S		**Sg**	**13 47 14.3**	**+0.1**
DRAG	**Dragano-Lefkad**	**1.11**	**287**	P		**Pg**	**13 46 59.2**	**-0.6**
KFL1	**Kefalonia,Entr**	**1.15**	**260**	P		**Pb**	**13 46 58.8**	**-1.7**
KFL1				S		**Sb**	**13 47 15.9**	**+0.3**
ARG2	**Argostoli**	**1.16**	**261**	P		**Pb**	**13 46 58.4**	**-2.2**
ARG2				S		**Sg**	**13 47 14.4**	**-1.3**
THL	**Klokotos Trika**	**1.19**	**3**	P		**Pb**	**13 47 00.4**	**-0.7**
THL				S		**Sb**	**13 47 16.2**	**-0.5**
ITM	**Ithomi**	**1.19**	**180**	Pn		**Pb**	**13 46 59.6**	**-1.6**
ITM	**Ithomi**	**1.19**	**180**	P		**Pb**	**13 46 59.6**	**-1.6**
ITM				S		**Sn**	**13 47 17.7**	**+0.1**
DMLN	**Damoulianata-K**	**1.24**	**264**	P		**Pg**	**13 47 02.4**	**+0.2**
MAGU	**Magoula**	**1.27**	**103**	P		**Pn**	**13 47 02.3**	**-0.2**
MAGU				S		**Sn**	**13 47 19.8**	**+0.2**
STFN	**Stefani**	**1.28**	**98**	P		**Pn**	**13 47 02.3**	**-0.3**
STFN				S		**Sg**	**13 47 19.6**	**0.0**
PRMD	**Pramanda**	**1.33**	**331**	P		**Pn**	**13 47 03.4**	**+0.1**
MET2	**Kameni Chora,**	**1.34**	**124**	P		**Pn**	**13 47 03.0**	**-0.3**
MET5	**Makryloggos,Me**	**1.35**	**123**	P		**Pb**	**13 47 04.0**	**+0.1**
MET6	**Megalochori,Me**	**1.37**	**124**	P		**Pg**	**13 47 04.5**	**-0.1**
NEO	**Neokhori**	**1.37**	**47**	P		**Pn**	**13 47 03.8**	**0.0**
MET4	**Agioi Theodoro**	**1.38**	**123**	P		**Pb**	**13 47 04.4**	**+0.1**
MET1	**Methana Town,**	**1.39**	**124**	P		**Pb**	**13 47 04.6**	**0.0**
ATH	**Athens Observa**	**1.46**	**105**	P		**Pn**	**13 47 05.0**	**+0.1**
NOAC	**Athens-Thissio**	**1.46**	**105**	P		**Pn**	**13 47 05.0**	**0.0**
PYL1	**Pylos**	**1.47**	**188**	P		**Pn**	**13 47 04.9**	**-0.2**
PYL	**PYLOS**	**1.48**	**186**	P		**Pn**	**13 47 05.0**	**-0.3**
ATHU	**Athens Univers**	**1.51**	**105**	P		**Pn**	**13 47 05.3**	**-0.4**
JAN	**Janina**	**1.52**	**327**	P		**Pb**	**13 47 07.0**	**-0.1**
PTL	**Penteli**	**1.55**	**101**	P		**Pn**	**13 47 06.1**	**-0.1**
VLY	**Voula,Athens**	**1.55**	**109**	P		**Pn**	**13 47 06.1**	**-0.2**
DION	**Dionisos Attik**	**1.60**	**100**	P		**Pn**	**13 47 07.2**	**+0.2**
KPRO	**Kipourio**	**1.64**	**344**	P		**Pn**	**13 47 08.3**	**+0.7**
AOS2	**Alonissos-2**	**1.68**	**62**	P		**Pn**	**13 47 07.4**	**-0.6**
IGT	**Igoumenitsa**	**1.71**	**313**	P		**Pn**	**13 47 08.4**	**+0.1**
KYMI	**Kymi, Euboea I**	**1.71**	**81**	P		**Pn**	**13 47 08.5**	**0.0**
VLI	**Veliai**	**1.83**	**154**	P		**Pn**	**13 47 10.7**	**+0.5**
KZN	**Kozani**	**1.93**	**356**	P		**Pn**	**13 47 11.2**	**-0.4**
KARY	**Karystos**	**2.00**	**99**	P		**Pn**	**13 47 12.5**	**+0.1**
KEK	**Kerkira**	**2.14**	**309**			**Pb**	**13 47 16.2**	**-1.2**
KEK	**Kerkira**	**2.14**	**309**	P		**Pn**	**13 47 14.7**	**+0.4**
NEST	**Nestorio**	**2.15**	**342**	P		**Pn**	**13 47 15.8**	**+1.2**
KTHA	**Kythira Island**	**2.30**	**157**	P		**Pn**	**13 47 17.6**	**+1.1**
PLG	**Polygyros**	**2.31**	**30**	P		**Pn**	**13 47 16.5**	**-0.2**
HORT	**Hortiatis**	**2.40**	**22**	P		**Pn**	**13 47 17.8**	**-0.2**
OUR	**Ouranopolis**	**2.52**	**38**	P		**Pn**	**13 47 19.7**	**+0.1**
SOH	**Sokhos**	**2.68**	**24**	P		**Pn**	**13 47 22.4**	**+0.6**
OHR	**Ohrid**	**2.87**	**343**	*i* Pn		**Pb**	**13 47 27.8**	**-2.1**
OHR				*i* Sn		**Sg**	**13 48 08.3**	**-2.3**
KNT	**Kendrikon**	**2.88**	**15**	P		**Pn**	**13 47 24.6**	**+0.1**
LIA	**Limnos Island**	**2.95**	**58**	P		**Pn**	**13 47 24.3**	**-1.1**
SCTE	**Santa Cesarea**	**3.19**	**303**	Pn		**Pn**	**13 47 29.7**	**+1.0**
IDI	**Anoyia**	**3.88**	**142**	Pn		**Pn**	**13 47 39.7**	**+1.3**
	5.5nm,0.5s,baz=314,slow=14,SNR=9.9							
IDI						Sn	**Sn**	**13 48 26.1**	**+2.0**
	3.7nm,0.3s,baz=263,slow=17,SNR=4.1							
IDI	**Anoyia**	**3.88**	**142**			**Pn**	**13 47 38.0**	**-0.4**
RDO	**Rodhopi**	**3.92**	**44**			**Pn**	**13 47 38.7**	**-0.1**
CAVK	**Edirne/Enez-Ca**	**4.01**	**53**	⇓P		**Pn**	**13 47 38.4**	**-1.6**
ALN	**Alexandroupoli**	**4.05**	**50**			**Pn**	**13 47 40.6**	**0.0**
TIP	**Timpagrande**	**4.13**	**283**	⇑P		**Pn**	**13 47 38.8**	**+1.1**
TIP	**Timpagrande**	**4.13**	**283**			**Pn**	**13 47 42.4**	**+0.7**
PDG	**Podgorica**	**4.54**	**334**	⇓P		**Pn**	**13 47 51.9**	**+4.6**
PDG	**Podgorica**	**4.54**	**334**			**Pn**	**13 47 49.9**	**+2.6**
MATE	**Matera**	**4.64**	**301**	⇑P		**Pn**	**13 47 51.6**	**+2.9**
CEL	**Celeste**	**4.75**	**270**	Pn		**Pn**	**13 47 51.1**	**+0.8**
CUC	**Castrocucco**	**5.03**	**291**			**Pn**	**13 47 55.6**	**+1.6**
MANT	**Manisa**	**5.20**	**87**			**Pn**	**13 47 56.5**	**-0.1**
PLVB	**Pleven**	**5.40**	**21**	⇑P		**Pn**	**13 48 01.9**	**+2.7**
ELND	**Elena**	**5.45**	**32**	⇑P		**Pn**	**13 48 00.8**	**+1.0**
SGRT	**San Giovanni R**	**5.83**	**307**			**Pn**	**13 48 05.9**	**+0.8**
VAE	**Valguarnera**	**6.02**	**264**	Sn		**Sn**	**13 49 20.2**	**+3.5**
	1.1nm,0.3s,baz=70,slow=3.4,SNR=3.8							
PAOL	**Paolisi**	**6.27**	**297**			**Pn**	**13 48 12.3**	**+1.1**
MDVR	**Moldovita**	**6.40**	**359**	⇑P		**Pn**	**13 48 16.9**	**+4.0**
HERR	**Herculane**	**6.51**	**3**	⇓P		**Pn**	**13 48 18.3**	**+3.9**
OZZR	**Gura Zlata**	**7.04**	**5**	⇑P		**Pn**	**13 48 25.5**	**+3.8**
INTR	**Introdacqua**	**7.14**	**303**			**Pn**	**13 48 25.3**	**+2.1**
BZS	**Buzias**	**7.24**	**358**	⇑P		**Pn**	**13 48 28.4**	**+4.0**
ARR	**Arges**	**7.27**	**15**	⇑P		**Pn**	**13 48 28.2**	**+3.3**
VOIR		**7.43**	**17**	⇓P		**Pn**	**13 48 29.6**	**+2.6**
ISR	**Istrita**	**7.57**	**26**	⇑P		**Pn**	**13 48 31.3**	**+2.3**
MLR	**Muntele Rosu**	**7.71**	**21**	Pn		**Pn**	**13 48 32.0**	**+1.0**
	0.3nm,0.3s,baz=190,slow=9.0,SNR=3.1							
MLR						LR	LR	13 51 52.5
	comp=Z,142nm,20.2s,baz=209,slow=41 2.3nm,0.6s							
MLR	**Muntele Rosu**	**7.71**	**21**	⇓P		**Pn**	**13 48 33.8**	**+2.8**
MLR	**Muntele Rosu**	**7.71**	**21**			**Pn**	**13 48 33.1**	**+2.1**
CAMP	**Campotosto**	**7.72**	**305**			**Pn**	**13 48 32.9**	**+1.9**
NEHR	**Nehoiu**	**7.76**	**23**	⇓P		**Pn**	**13 48 34.0**	**+2.4**
DOPR	**Dopca**	**8.01**	**18**	⇑P		**Pn**	**13 48 37.4**	**+2.4**
NRCA	**Norcia**	**8.05**	**306**			**Pn**	**13 48 37.3**	**+1.6**
COVR	**Voineasa-Covas**	**8.11**	**22**	⇓P		**Pn**	**13 48 38.7**	**+2.4**
FDMO	**Fiordimonte**	**8.18**	**308**			**Pn**	**13 48 38.8**	**+1.5**
OZUR		**8.23**	**19**	⇑P		**Pn**	**13 48 41.1**	**+3.2**
TURR	**Turia**	**8.25**	**20**	⇑P		**Pn**	**13 48 41.1**	**+2.8**
VRI	**Vrincioaia**	**8.29**	**24**	⇑P		**Pn**	**13 48 41.0**	**+2.2**
DRGR		**8.43**	**4**	⇑P		**Pn**	**13 48 43.9**	**+3.0**
BRTR	**Keskin Array B**	**9.20**	**78**	Pn		**Pn**	**13 48 52.6**	**+1.1**
	0.2nm,0.3s,baz=257,slow=12,SNR=6.6							
BRTR						LR	LR	13 52 30.9
	comp=Z,38nm,20.1s,baz=256,slow=39 1.0nm,0.5s							
PSZ	**Piszkesteto**	**9.66**	**352**	⇑P		**Pn**	**13 49 02.0**	**+4.5**
PSZ	**Piszkesteto**	**9.66**	**352**			**Pn**	**13 49 00.1**	**+2.5**
VRAC	**Vranov**	**11.59**	**342**	LR		LR	13 53 59.0	
	comp=Z,78nm,18.2s,baz=174,slow=38							
GERES	**GERESS Array B**	**12.04**	**333**	LR		LR	13 55 05.1	
	comp=Z,133nm,19.6s,baz=139,slow=42							
AKASG	**Malin Array Be**	**13.37**	**20**	LR		LR	13 55 56.9	
	comp=Z,67nm,18.4s,baz=196,slow=42							
CLL	**Collm**	**14.39**	**337**	*i* Px		Px	13 50 12.8	
KBZ	**Khabaz**	**16.68**	**65**	LR		LR	13 59 05.2	
	comp=Z,36nm,18.5s,baz=72,slow=45							
PABE	**Paberze**	**17.19**	**4**			**P**	**13 50 40.4**	**+0.1**
PABE						IAmb	IAmb	13 50 43.4
	comp=Z,31nm,1.2s							
GNI	**Garni**	**17.74**	**77**	LR		LR	13 57 10.7	
	comp=Z,29nm,18.5s,baz=296,slow=36							
ESDC	**Sonseca Array**	**20.15**	**282**	P		Pn	13 51 14.3	-0.5
	comp=Z,1.3nm,0.7s,baz=77,slow=10,SNR=10 comp=Z,1.3nm,0.7s							
ESDC	**Sonseca Array**	**20.15**	**282**	P		**P**	**13 51 12.9**	**-0.1**
HFS	**Hagfors**	**22.40**	**349**	P		**P**	**13 51 36.1**	**-0.9**
	comp=Z,4.2nm,0.5s,baz=156,slow=11,SNR=14							
HFS						LR	LR	14 02 32.1
	comp=Z,114nm,18.4s,baz=307,slow=43 comp=Z,4.2nm,0.5s							
FINES	**FINESS Array B**	**23.24**	**5**	P		**P**	**13 51 44.0**	**-1.7**
	comp=Z,2.9nm,0.9s,baz=158,slow=6.2,SNR=5.9							
FINES						PcP	**PcP**	**13 55 33.7**	**+0.6**
	comp=Z,3.0nm,0.9s,baz=142,slow=4.9,SNR=2.3 comp=Z,2.9nm,0.9s							
FINES	**FINESS Array B**	**23.24**	**5**	P		**P**	**13 51 44.6**	**-1.1**
NC405	**NORSAR Array S**	**23.64**	**348**	IAmb		IAmb	13 51 52.4	
	comp=Z,10nm,1.0s							
NB2	**NORSAR Subarra**	**23.66**	**347**	P		**P**	**13 51 49.4**	**-0.6**
	comp=Z,0.9nm,0.4s,baz=159,slow=9.3							
NOA	**NORSAR Array B**	**23.66**	**347**	P		**P**	**13 51 48.9**	**-1.1**
	comp=Z,1.2nm,0.6s,baz=157,slow=12,SNR=9.6							
NOA						LR	LR	14 03 06.7
	comp=Z,44nm,18.8s,baz=240,slow=42 comp=Z,1.2nm,0.6s							
EKA	**Eskdalemuir Ar**	**23.93**	**323**	P		**P**	**13 51 52.1**	**-0.4**
	comp=Z,3.2nm,0.6s,baz=123,slow=10,SNR=8.6 comp=Z,3.2nm,0.6s							
AKTO	**Aktyubinsk**	**28.17**	**53**	LR		LR	14 08 14.4	
	comp=Z,35nm,19.1s,baz=300,slow=46							
TORD	**Torodi Ar. Bea**	**30.90**	**221**	P		**P**	**13 52 55.2**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=22,slow=6.8,SNR=7.0 comp=Z,1.2nm,0.7s							
TORD	**Torodi Ar. Bea**	**30.90**	**221**	IAmb		IAmb	13 53 04.8	
	comp=Z,10.0nm,0.7s							
ARCES	**ARCESS Array B**	**31.28**	**2**	P		**P**	**13 52 57.9**	**-0.5**
	comp=Z,1.9nm,0.8s,baz=194,slow=9.7,SNR=4.0 comp=Z,1.9nm,0.8s							
ARCES	**ARCESS Array B**	**31.28**	**2**	IAmb		IAmb	13 53 14.8	
	comp=Z,16nm,1.4s							
BVAR	**Borovoye Array**	**36.14**	**50**	P		**P**	**13 53 41.2**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=286,slow=16,SNR=2.6 comp=Z,0.4nm,0.5s							
KK31	**Karatay Array**	**36.69**	**67**	P		**P**	**13 53 45.3**	**-0.3**
KK31						IAmb	IAmb	13 53 48.1
	comp=Z,2.2nm,0.6s							
KKAR	**Karatay Array**	**36.69**	**67**	P		**P**	**13 53 45.6**	**-0.1**
KURBB	**Kurchatov Arra**	**41.22**	**54**	P		**P**	**13 54 23.4**	**0.0**
	comp=Z,1.1nm,0.7s,baz=282,slow=8.8,SNR=12 comp=Z,1.1nm,0.7s							
KURK	**Kurchatov**	**41.26**	**54**	P		**P**	**13 54 24.2**	**+0.4**
MAKZ	**Makanchi**	**44.03**	**59**			**P**	**13 54 45.6**	**-0.8**
MAKZ						IAmb	IAmb	13 54 54.9
	comp=Z,4.9nm,1.4s							
MKAR	**Makanchi Array**	**44.25**	**59**	P		**P**	**13 54 47.7**	**-0.4**
	comp=Z,3.7nm,0.5s,baz=277,slow=6.7,SNR=69 comp=Z,3.7nm,0.5s							
MKAR	**Makanchi Array**	**44.25**	**59**			**P**	**13 54 47.6**	**-0.5**
ZALV	**Zalesovo Beam**	**44.73**	**48**	P		**P**	**13 54 51.3**	**-0.5**
	comp=Z,1.6nm,0.5s,baz=270,slow=8.9,SNR=7.3 comp=Z,1.6nm,0.5s							
NRIK	**Noril'sk**

COEN	**Coen**	**36.26**	**281**	P	**P**	**14 06 51.9**	**-0.5**
COEN				IAmb	IAmb	14 06 53.9	
	comp=Z,9.5nm,0.9s						
BBOO	**Buckleboo**	**39.02**	**248**	P	**P**	**14 07 14.0**	**-0.6**
BBOO				IAmb	IAmb	14 07 39.9	
	comp=Z,17nm,1.3s						
AS31	**Alice Springs**	**41.84**	**262**	P	**P**	**14 07 37.1**	**-0.4**
ASAR	**Alice Springs**	**41.84**	**262**	P	**P**	**14 07 37.3**	**-0.2**
	comp=Z,2.0nm,0.3s,baz=93,slow=7.3,SNR=130						
	comp=Z,2.0nm,0.3s						
ASAR	**Alice Springs**	**41.84**	**262**	P	**P**	**14 07 36.6**	**-0.9**
WR8	**Warramunga Arr**	**42.17**	**267**	P	**P**	**14 07 39.3**	**-0.8**
WRAB	**Tennant Creek**	**42.31**	**267**	P	**P**	**14 07 40.4**	**-0.8**
WRAB				IAmb	IAmb	14 07 40.8	
	comp=Z,6.1nm,0.5s						
WB0	**Warramunga Arr**	**42.31**	**268**	P	**P**	**14 07 40.5**	**-0.7**
WB0				IAmb	IAmb	14 07 41.5	
	comp=Z,7.6nm,0.7s						
WRA	**Warramunga Arr**	**42.32**	**267**	P	**P**	**14 07 40.5**	**-0.7**
	comp=Z,5.8nm,0.5s,baz=99,slow=6.7,SNR=150						
WRA				ScP	**ScP**	**14 12 29.3**	**+3.0**
	comp=Z,1.5nm,0.9s,baz=98,slow=3.9,SNR=7.1						
	comp=Z,5.8nm,0.5s						
WRA	**Warramunga Arr**	**42.32**	**267**	P	**P**	**14 07 40.5**	**-0.7**
FORT	**Forrest**	**45.93**	**251**	P	**P**	**14 08 08.3**	**-0.8**
FORT				IAmb	IAmb	14 08 08.9	
	comp=Z,7.9nm,0.7s						
KNRA	**Kununurra**	**48.66**	**271**	P	**P**	**14 08 29.5**	**-0.3**
KNRA				IAmb	IAmb	14 08 30.3	
	comp=Z,10.0nm,0.7s						
FITZ	**Fitzroy Crossi**	**50.73**	**266**	P	**P**	**14 08 45.1**	**+0.1**
	comp=Z,10nm,0.9s,baz=112,slow=8.9,SNR=19						
	comp=Z,10nm,0.9s						
SIJI	**Sorong**	**52.74**	**289**	P	**P**	**14 08 59.4**	**-0.4**
	comp=Z,12nm,0.4s,baz=149,slow=7.3,SNR=13						
	comp=Z,12nm,0.4s						
PSA00	**Pilbara Seismi**	**54.95**	**260**	P	**P**	**14 09 14.4**	**-0.9**
MBWA	**Marble Bar**	**55.17**	**261**	P	**P**	**14 09 15.9**	**-0.9**
BATI	**Baumata**	**55.28**	**275**	P	**P**	**14 09 18.9**	**+1.2**
	comp=Z,8.4nm,0.6s,baz=218,slow=0.5,SNR=4.0						
	comp=Z,8.4nm,0.6s						
MORW	**Morawa**	**56.49**	**251**	P	**P**	**14 09 24.9**	**-1.0**
MORW				IAmb	IAmb	14 10 03.2	
	comp=Z,19nm,1.4s						
CASY	**Casey**	**59.16**	**206**	P	**P**	**14 09 44.0**	**+0.7**
CASY				IAmb	IAmb	14 09 51.4	
	comp=Z,14nm,1.2s						
GIRL	**Giralia**	**59.65**	**257**	P	**P**	**14 09 48.1**	**+0.6**
TOLI2	**Tolitoli**	**62.82**	**285**	P	**P**	**14 10 08.8**	**+0.4**
TOLI2				IAmb	IAmb	14 10 09.4	
	comp=Z,4.9nm,0.6s						
UGM	**Wanagama**	**68.09**	**271**	P	**P**	**14 10 41.3**	**-0.2**
CMAR	**Chiang Mai Arr**	**89.86**	**290**	P	**P**	**14 12 38.6**	**+1.4**
	comp=Z,0.7nm,0.8s,baz=122,slow=5.5,SNR=4.5						
	comp=Z,0.7nm,0.8s						
TXAR	**Lajitas Array**	**91.01**	**58**	P	**P**	**14 12 43.5**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=213,slow=6.0,SNR=5.0						
	comp=Z,0.4nm,0.7s						
F28M	**Old Crow**	**96.99**	**14**	P	**P**	**14 13 10.6**	**+2.0**
F28M				IAmb	IAmb	14 13 54.8	
	comp=Z,3.1nm,1.5s						
HFS	**Hagfors**	**143.56**	**348**	PKP	PKPbc	14 19 06.6	-0.5
	comp=Z,2.5nm,0.9s,baz=50,slow=2.3,SNR=5.1						
BRTR	**Keskin Array B**	**148.17**	**306**	PKPbc	**PKiKP**	**14 19 22.8**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=108,slow=2.6,SNR=1.8						

*BJI **09** 14:13:02.0,24.78N×142.97E,h17km,mB4.8/11,mb4.5/47, Ms4.2/22,Ms7 4.0/26*
*NEIC **09** 14:13:05.5±1.6,24.93N±0.04×142.7E±0.1,h10km±1km, mb4.7/93,Error ellipse: s-maj=16.5km s-min=5.6km az=81.0*
*JMA **09** 14:13:06.2±0.2,24.8N±0.5×14.3E±,h112km,MV4.5/26, IOTO ISLANDS REGION*
*IDC **09** 14:13:10.2±1.7,24.87N×142.56E,h48km±14km,mb4.1/26, mbtmp4.4/31,ML4.0/5,MS3.8/37,Error ellipse: s-maj=16.2km s-min=10.7km az=98.0*

ISC 09 14:13:08.2±0.4,**24.84N**±0.05×**142.76E**±0.07,**h35**km,**n187,** σ1**s15**/154,**mb4.6**/87,**MS3.9**/41,**2C,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	**1.86**	**344**	P	**Pn**	**14 13 39.1**	**+1.5**
JHH2				A	A	14 13 39.1	
	comp=N,12nm,0.5s,comp=E,13nm,1.6s						
JHH2				*e*S	**Sn**	**14 14 03.8**	**+3.8**
JCJ	**Chichijima**	**2.31**	**347**	P	**Pn**	**14 13 43.9**	**+0.2**
	comp=E,82nm,0.3s,baz=202,slow=1.7,SNR=18						
JCJ				S	**Sn**	**14 14 12.5**	**+1.6**
	comp=E,806nm,0.4s,baz=277,slow=23,SNR=15						
	comp=E,271nm,0.3s						
JCJ	**Chichijima**	**2.31**	**347**		**Pn**	**14 13 43.2**	**-0.5**
CBIJ	**Chichi`jima**	**2.31**	**347**	P	**Pn**	**14 13 44.7**	**+1.0**
CBIJ				*e*S	**Sn**	**14 14 13.7**	**+2.8**
JHJ	**Hachijo jima 2**	**8.65**	**343**	LR	LR	14 18 25.2	
	comp=E,650nm,18.1s,baz=214,slow=37						
BSO3	**Boso 3**	**10.12**	**349**	*e*P	**Pn**	**14 15 30.2**	**-0.5**
JNY	**Yasuok**	**11.31**	**339**	*e*P	**Pn**	**14 15 48.2**	**+0.9**
GUMO	**Guam**	**11.36**	**170**	LR	LR	14 19 02.2	
	comp=E,257nm,20.9s,baz=349,slow=31						
JAO	**Obara**	**11.43**	**337**	*e*P	**Pn**	**14 15 50.2**	**+1.2**
JYT	**Yasato**	**11.57**	**350**	*e*P	**Pn**	**14 15 50.4**	**-0.4**
INU	**Inuyama**	**11.59**	**336**		**Pn**	**14 15 50.3**	**-0.8**
JGF	**Kuroka**	**11.70**	**338**		**Pn**	**14 15 51.4**	**-1.3**
JHO	**Hitachi**	**11.89**	**351**	P	**Pn**	**14 15 53.4**	**-1.8**
JAG	**Ashikaga**	**11.89**	**347**	P	**Pn**	**14 15 52.9**	**-2.4**
MJAR	**Matsushiro Arr**	**12.30**	**343**	P	**Pn**	**14 15 59.7**	**-1.2**
	comp=E,0.8nm,0.3s,baz=160,slow=10,SNR=40						
	comp=E,5.0nm,0.4s						
MJAR	**Matsushiro Arr**	**12.30**	**343**		**Pn**	**14 16 00.4**	**-0.5**
MAJO	**Matsushiro**	**12.31**	**343**		**Pn**	**14 16 00.4**	**-0.6**
MJB9	**Matsu-Tunnel**	**12.31**	**343**		**Pn**	**14 15 59.8**	**-1.2**
JOW	**Kunigami**	**13.20**	**282**	LR	LR	14 20 48.9	
	comp=E,579nm,20.9s,baz=262,slow=35						
JNU	**Nakatsue**	**13.27**	**311**	P	**Pn**	**14 16 14.8**	**+0.7**
	comp=E,0.4nm,0.3s,baz=112,slow=12,SNR=3.9						
JNU				LR	LR	14 20 55.5	
	comp=E,241nm,19.2s,baz=117,slow=36						
	comp=E,9.6nm,1.0s						
KSRS	**Korea Array**	**17.85**	**318**	P	**P**	**14 17 13.7**	**-0.5**
	comp=E,0.4nm,0.3s,baz=126,slow=12,SNR=32						
KSRS				LR	LR	14 23 56.8	
	comp=E,400nm,18.3s,baz=130,slow=36						
	comp=E,14nm,0.9s						
KSAR	**Wonju Array Be**	**17.86**	**318**	P	**P**	**14 17 14.5**	**+0.2**
KS19	**Wonju Array Si**	**17.91**	**318**		**P**	**14 17 14.7**	**-0.2**
JKA	**Kamikawa-asahi**	**19.23**	**360**	P	**Pn**	**14 17 29.8**	**-0.7**
ASAJ	**Asahikawa**	**19.23**	**360**	P	**Pn**	**14 17 30.7**	**+0.2**
	comp=E,0.9nm,0.3s,baz=153,slow=9.9,SNR=12						
	comp=E,5.0nm,0.9s						
YHNB	**Yeheng**	**19.43**	**274**	Pn	**Pn**	**14 17 32.2**	**-0.8**
YHNB				IAmb	IAmb	14 18 00.3	
	comp=Z,78nm,1.4s						
USRK	**Ussuriysk Ar.**	**21.22**	**338**	P	**P**	**14 17 51.4**	**+0.5**
	comp=Z,7.4nm,0.6s,baz=163,slow=11,SNR=10						
	comp=Z,7.4nm,0.6s						
YSS	**Yuzhno-Sakhali**	**22.07**	**360**		**P**	**14 18 00.1**	**+0.2**
YSS				IAmb	IAmb	14 18 11.8	
	comp=Z,23nm,1.0s						
NJ2	**Nanjing**	**22.19**	**294**	*e*P	**P**	**14 18 00.9**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,16nm,0.6s						
MDJ	**Mudanjiang**	**22.45**	**335**	P	**P**	**14 18 05.6**	**+1.5**
MDJ				pmax	pmax		
	comp=Z,19nm,1.0s						
DAV	**Davao City (W)**	**24.14**	**226**	LR	LR	14 29 33.8	
	comp=Z,95nm,18.2s,baz=44,slow=41						
BNX	**BinXian**	**24.25**	**333**	⇑P	**P**	**14 18 20.5**	**-1.3**
BNX				pmax	pmax		
	comp=Z,10.0nm,1.3s						
TIA	**Tai'an**	**24.75**	**303**	P	**P**	**14 18 25.7**	**-0.8**
TIA				pmax	pmax		
	comp=Z,44nm,0.7s						
TIA				pmax	pmax		
	comp=Z,140nm,3.8s						
TIA				L	L		
	comp=Z,280nm,13.2s						
TIA				L	L		
	comp=Z,400nm,14.7s						
TIA				L	L		
	comp=Z,390nm,14.8s						
BJI2	**Beijing**	**26.94**	**311**	P	**P**	**14 18 44.6**	**-1.7**
BJI2				PP	**PnPn**	**14 19 29.2**	**0.0**
BJI2				S	**S**	**14 23 19.2**	**-1.8**
BJI2				L	L		
	comp=Z,70nm,9.5s						
BJI2				L	L		
	comp=Z,130nm,15.2s						
BJI2				L	L		
	comp=Z,160nm,14.1s						
HNS	**HongShan**	**26.98**	**304**	⇑P	**P**	**14 18 45.2**	**-1.4**
HNS				pmax	pmax		
	comp=Z,19nm,0.8s						
HNS				L	L		
	comp=Z,310nm,15.9s						
HNS				L	L		
	comp=Z,200nm,15.2s						
HNS				L	L		
	comp=Z,310nm,16.0s						
JAY	**Jayapura**	**27.26**	**184**	LR	LR	14 28 57.0	
	comp=Z,88nm,19.4s,baz=4.0,slow=35						
SIJI	**Sorong**	**27.88**	**205**	LR	LR	14 28 47.8	
	comp=Z,116nm,18.1s,baz=318,slow=34						
HEH	**HeiHe**	**28.03**	**339**	*e*P	**P**	**14 18 56.0**	**+0.1**
HEH				pmax	pmax		
	comp=Z,28nm,1.0s						
HEH				L	L		
	comp=Z,170nm,19.8s						
HEH				L	L		
	comp=Z,300nm,18.8s						
HEH				L	L		
	comp=Z,460nm,19.8s						
PETK	**Petropavlovsk-**	**30.40**	**18**	P	**P**	**14 19 18.4**	**+1.6**
	comp=Z,5.5nm,0.9s,baz=141,slow=5.0,SNR=3.8						
	comp=Z,5.5nm,0.9s						
HHC	**Hu-ho-hao-te**	**30.49**	**309**	*e*P	**P**	**14 19 19.0**	**+1.0**
HHC				pmax	pmax		
	comp=Z,18nm,0.6s						
QIZ	**Qiongzhong**	**31.03**	**266**	P	**P**	**14 19 22.2**	**-0.6**
QIZ				S	**S**	**14 24 27.5**	**+1.8**
QIZ				L	L		
	comp=Z,170nm,12.0s						
QIZ				L	L		
	comp=Z,160nm,16.1s						
QIZ				L	L		
	comp=Z,210nm,19.8s						
LZH	**Lanzhou**	**35.16**	**298**	*e*P	**P**	**14 19 58.9**	**0.0**
LZH				pP	pP	14 20 05.7	-2.5
LZH				pmax	pmax		
	comp=Z,14nm,1.5s						
LZH				L	L		
	comp=Z,230nm,17.9s						
LZH				L	L		
	comp=Z,220nm,16.8s						
LZH				L	L		
	comp=Z,210nm,20.6s						
MA2	**Magadan**	**35.17**	**7**	LR	LR	14 36 18.6	
	comp=Z,32nm,18.6s,baz=164,slow=40						
MA2	**Magadan**	**35.17**	**7**	P	**P**	**14 19 58.7**	**+0.3**
MA2	**Magadan**	**35.17**	**7**	P	**P**	**14 19 59.0**	**+0.5**
	comp=Z,6.1nm,1.0s						
MA2				pP	**pP**	**14 20 02.2**	**-5.4**
	comp=Z,6.1nm,1.0s						
LZDM	**Lanzhou Array**	**35.26**	**298**	P	**P**	**14 19 59.6**	**-0.3**
	comp=Z,1.3nm,0.3s,baz=121,slow=7.6,SNR=6.2						
	comp=Z,1.3nm,0.3s						
SONM	**Songino Array**	**36.72**	**318**	P	**P**	**14 20 10.2**	**-1.9**
	comp=Z,0.9nm,0.5s,baz=126,slow=7.7,SNR=1.8						
SONM				PcP	**PcP**	**14 22 34.1**	**0.0**
	comp=Z,1.2nm,0.8s,baz=148,slow=4.0,SNR=3.7						
SONM				LR	LR	14 35 49.3	
	comp=Z,224nm,18.8s,baz=150,slow=37						
	comp=Z,0.9nm,0.5s						
SONM	**Songino Array**	**36.72**	**318**	P	**P**	**14 20 12.1**	**0.0**
PZH	**PanZhiHua**	**36.90**	**282**	P	**P**	**14 20 14.1**	**+0.2**
PZH				S	**S**	**14 26 03.2**	**+6.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				L	L		
	comp=Z,120nm,19.1s						
PZH				L	L		
	comp=Z,200nm,18.6s						
PZH				L	L		
	comp=Z,250nm,19.0s						
YAK	**Yakutsk**	**38.22**	**350**	LR	LR	14 36 35.7	
	comp=Z,165nm,18.5s,baz=140,slow=37						
COEN	**Coen**	**38.56**	**179**	P	**P**	**14 20 28.7**	**+1.0**
SOEI	**Soe**	**38.83**	**210**	P	**P**	**14 20 29.8**	**-0.4**
SOEI				IAmb	IAmb	14 20 52.5	
	comp=Z,14nm,0.8s						
GTA2	**Gaotai**	**38.85**	**303**	*e*P	**P**	**14 20 29.3**	**-0.9**
GTA2				pP	pP	14 20 33.1	-6.5
GTA2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA2				L	L		
	comp=Z,250nm,13.7s						
GTA2				L	L		
	comp=Z,180nm,15.5s						
GTA2				L	L		
	comp=Z,180nm,14.8s						
MTN	**Manton Dam**	**39.13**	**198**	P	**P**	**14 20 32.3**	**-0.2**
CMAR	**Chiang Mai Arr**	**41.09**	**270**	P	**P**	**14 20 48.5**	**-0.4**
	comp=Z,1.6nm,0.8s,baz=64,slow=8.0,SNR=13						
CMAR				PcP	**PcP**	**14 22 49.3**	**+1.1**
	comp=Z,0.2nm,0.4s,baz=41,slow=1.2,SNR=4.9						
CMAR				LR	LR	14 37 17.3	
	comp=Z,124nm,20.1s,baz=75,slow=35						
	comp=Z,1.6nm,0.8s						
KNRA	**Kununurra**	**42.52**	**200**	P	**P**	**14 21 01.2**	**+0.8**
KNRA				IAmb	IAmb	14 21 41.4	
	comp=Z,16nm,1.2s						
JAGI	**Jajag, Banyuwa**	**43.29**	**224**	P	**P**	**14 21 07.6**	**+0.8**
CTA	**Charters Tower**	**44.78**	**175**	LR	LR	14 42 34.4	
	comp=Z,44nm,18.1s,baz=354,slow=39						
CTAO	**Charters Tower**	**44.78**	**175**	P	**P**	**14 21 19.6**	**+1.0**
CTAO				IAmb	IAmb	14 21 24.0	
	comp=Z,7.6nm,1.1s						
KULM	**Kulim**	**44.81**	**251**	P	**P**	**14 21 19.1**	**+0.1**
KULM				IAmb	IAmb	14 21 24.1	
	comp=Z,9.6nm,1.1s						
WR8	**Warramunga Arr**	**45.24**	**191**	P	**P**	**14 21 22.2**	**-0.1**
WR8				IAmb	IAmb	14 21 28.5	
	comp=Z,10nm,1.1s						
WRAB	**Tennant Creek**	**45.25**	**191**	P	**P**	**14 21 22.1**	**-0.2**
WRAB				IAmb	IAmb	14 21 37.6	
	comp=Z,19nm,1.3s						
WRA	**Warramunga Arr**	**45.26**	**191**	P	**P**	**14 21 22.7**	**+0.3**
	comp=Z,3.2nm,0.6s,baz=11,slow=8.7,SNR=25						
	comp=Z,3.2nm,0.6s						
WRA	**Warramunga Arr**	**45.26**	**191**	P	**P**	**14 21 22.6**	**+0.2**
BILL	**Bilibino**	**45.54**	**12**		**P**	**14 21 24.6**	**+0.5**
FITZ	**Fitzroy Crossi**	**45.82**	**203**	P	**P**	**14 21 26.9**	**+0.1**
	comp=Z,3.2nm,0.9s,baz=25,slow=10,SNR=7.6						
	comp=Z,3.2nm,0.9s						
LSA	**Lhasa**	**45.83**	**288**	P	**P**	**14 21 25.4**	**-2.1**
LSA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LEM	**Lembang**	**46.49**	**232**	P	**P**	**14 21 32.1**	**-0.4**
	comp=Z,72nm,0.8s,baz=301,slow=22,SNR=12						
BRDH	**Bariadhala**	**46.62**	**278**	LR	LR	14 44 05.0	
	comp=Z,120nm,18.1s,baz=82,slow=40						
BBJI	**Bungbulang**	**46.91**	**231**	P	**P**	**14 21 34.1**	**-1.6**
TIXI	**Tiksi**	**47.50**	**354**	LR	LR	14 42 55.3	
	comp=Z,79nm,18.9s,baz=191,slow=38						
TIXI	**Tiksi**	**47.50**	**354**		**P**	**14 21 38.7**	**-0.7**
TIXI				IAmb	IAmb	14 22 10.1	
	comp=Z,4.5nm,0.8s						
WMQ	**Urumqi**	**48.33**	**307**	*e*P	**P**	**14 21 47.2**	**+0.8**
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WMQ				L	L		
	comp=Z,120nm,21.5s						
AS31	**Alice Springs**	**48.97**	**191**	P	**P**	**14 21 51.4**	**0.0**
ASAR	**Alice Springs**	**48.98**	**191**	P	**P**	**14 21 51.3**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=14,slow=7.0,SNR=17						
ASAR				PcP	**PcP**	**14 23 15.8**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=20,slow=4.0,SNR=4.2						
	comp=Z,0.8nm,0.6s						
EVN	**Everest**	**49.84**	**286**	P	**P**	**14 21 57.9**	**-1.0**
EVN				IAmb	IAmb	14 22 02.0	
	comp=Z,5.1nm,0.6s						
PSA00	**Pilbara Seismi**	**51.23**	**208**	P	**P**	**14 22 09.3**	**+0.8**
ZALV	**Zalesovo Beam**	**51.54**	**320**	P	**P**	**14 22 08.7**	**-1.7**
	comp=Z,4.6nm,0.7s,baz=100,slow=7.0,SNR=17						
ZALV				PcP	**PcP**	**14 23 24.2**	**0.0**
	comp=Z,1.3nm,0.5s,baz=127,slow=3.8,SNR=6.5						
ZALV				LR	LR	14 44 25.0	
	comp=Z,102nm,19.0s,baz=100,slow=36						
	comp=Z,4.6nm,0.7s						
ZALV	**Zalesovo Beam**	**51.54**	**320**	P	**P**	**14 22 08.3**	**-2.2**
ANM	**Nome**	**51.75**	**26**	P	**P**	**14 22 11.8**	**-0.1**
DZM	**Mont Dzumac**	**51.99**	**152**	*e*LR	LR	14 37 11.4	
	comp=Z,106nm,23.2s						
INKA	**Innaminka**	**52.31**	**182**	P	**P**	**14 22 16.4**	**0.0**
MKAR	**Makanchi Array**	**52.33**	**311**	P	**P**	**14 22 15.9**	**-0.6**
	comp=Z,2.7nm,0.8s,baz=92,slow=9.4,SNR=25						
MKAR				PcP	**PcP**	**14 23 27.9**	**+0.5**
	comp=Z,2.4nm,0.7s,baz=88,slow=5.5,SNR=11						
MKAR				LR	LR	14 45 45.5	
	comp=Z,98nm,18.1s,baz=86,slow=38						
	comp=Z,2.7nm,0.8s						
MAKZ	**Makanchi**	**52.54**	**311**	P	**P**	**14 22 16.2**	**-1.9**
NRIK	**Noril'sk**	**54.93**	**339**	P	**P**	**14 22 34.7**	**-0.5**
	comp=Z,7.0nm,0.7s,baz=104,slow=10,SNR=13						
NRIK				LR	LR	14 46 50.1	
	comp=Z,216nm,18.7s,baz=108,slow=37						
	comp=Z,7.0nm,0.7s						
KURK	**Kurchatov**	**54.95**	**316**	P	**P**	**14 22 34.3**	**-1.3**
KURK				IAmb	IAmb	14 22 36.0	
	comp=Z,7.8nm,0.8s						
KURBB	**Kurchatov Arra**	**55.00**	**316**	P	**P**	**14 22 35.2**	**-0.8**
	comp=Z,9.3nm,0.7s,baz=92,slow=7.8,SNR=122						
	comp=Z,9.3nm,0.7s						
TARG	**Taragay, Kyrgy**	**55.61**	**305**	P	**P**	**14 22 40.4**	**-0.7**
TARG				IAmb	IAmb	14 22 42.4	
	comp=Z,8.8nm,1.1s						
KDJ	**Kajisay**	**56.04**	**305**	IAmb	IAmb	14 22 46.8	
	comp=Z,9.1nm,1.3s						
K20K	**Telida**	**56.10**	**29**	IAmb	IAmb	14 22 46.2	
	comp=Z,6.7nm,1.0s						
RED	**Redoubt Volcan**	**56.15**	**33**	P	**P**	**14 22 44.4**	**+0.2**
RED				IAmb	IAmb	14 23 10.0	
	comp=Z,10nm,1.2s						
STKA	**Stephens Creek**	**56.41**	**181**	P	**P**	**14 22 46.4**	**+0.2**
	comp=Z,3.3nm,0.9s,baz=269,slow=3.9,SNR=3.5						
	comp=Z,3.3nm,0.9s						
IMAR	**Indian Mountai**	**56.83**	**26**	P	**P**	**14 22 49.9**	**+1.1**
BOOM	**Boomskoye usch**	**56.93**	**306**	P	**P**	**14 22 50.1**	**-0.1**
BOOM				IAmb	IAmb	14 22 51.7	
	comp=Z,5.0nm,0.6s						
KSH2	**Kashi**	**57.56**	**302**	P	**P**	**14 22 55.1**	**+0.5**
KSH2				pP	pP	14 23 00.2	-4.2
KSH2				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TRF	**Thorofare Moun**	**57.79**	**29**	P	**P**	**14 22 56.5**	**+0.7**
TRF				IAmb	IAmb	14 22 58.8	
	comp=Z,4.8nm,0.9s						
AAK	**Ala-Archa**	**57.98**	**306**	LR	LR	14 50 09.8	
	comp=Z,49nm,18.8s,baz=56,slow=38						
AAK	**Ala-Archa**	**57.98**	**306**	P	**P**	**14 22 57.7**	**+0.1**
RND	**Reindeer**	**58.42**	**29**	P	**P**	**14 22 59.9**	**-0.3**
RND				IAmb	IAmb	14 23 02.0	
	comp=Z,5.3nm,1.0s						
SML	**Sawmill**	**58.47**	**31**	P	**P**	**14 23 01.4**	**+0.9**
SML				IAmb	IAmb	14 23 44.8	
	comp=Z,10nm,1.0s						
D24K	**Happy Valley**	**59.36**	**23**	IAmb	IAmb	14 23 33.1	
	comp=Z,7.8nm,1.1s						
ILAR	**Eielson Array**	**59.45**	**28**	P	**P**	**14 23 06.9**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=260,slow=5.8,SNR=20						
	comp=Z,1.6nm,0.8s						
BVAR	**Borovoye Array**	**60.06**	**318**	P	**P**	**14 23 11.3**	**-0.3**
	comp=Z,7.0nm,0.5s,baz=91,slow=7.7,SNR=41						
BVAR				LR	LR	14 50 02.7	
	comp=Z,124nm,18.9s,baz=77,slow=37						
	comp=Z,7.0nm,0.5s						
BORK	**Borovoye**	**60.10**	**318**	P	**P**	**14 23 11.8**	**-0.1**
NIL	**Nilore**	**60.29**	**296**	P	**P**	**14 23 13.7**	**+0.2**
E25K	**Arctic Village**	**60.37**	**24**	IAmb	IAmb	14 23 31.3	
	comp=Z,4.4nm,0.8s						
SCRK	**Sand Creek**	**60.63**	**29**	P	**P**	**14 23 15.9**	**+0.4**
SCRK				IAmb	IAmb	14 23 16.7	
	comp=Z,4.0nm,0.8s						
KK31	**Karatay Array**	**60.84**	**307**	IAmb	IAmb	14 23 17.8	
	comp=Z,9.8nm,0.8s						
KKAR	**Karatay Array**	**60.84**	**307**	P	**P**	**14 23 16.7**	**-0.4**
PALK	**Pallekele**	**61.65**	**265**	LR	LR	14 51 04.6	
	comp=Z,39nm,18.4s,baz=56,slow=37						
KBL	**Kabul**	**63.51**	**298**	P	**P**	**14 23 34.8**	**-0.6**
SHAA	**Shahritus**	**63.59**	**301**	P	**P**	**14 23 35.5**	**-0.1**
SHAA				IAmb	IAmb	14 23 37.0	
	comp=Z,22nm,0.9s						
EPYK	**Eagle Plains**	**63.73**	**26**	IAmb	IAmb	14 23 38.7	
	comp=Z,7.7nm,0.9s						
F31M	**Tsiigehtchic**	**64.84**	**25**	IAmb	IAmb	14 23 45.4	
	comp=Z,3.5nm,0.8s						
INK	**Inuvik**	**64.86**	**24**	P	**P**	**14 23 44.0**	**+0.6**
INK				IAmb	IAmb	14 23 44.8	
	comp=Z,4.7nm,0.8s						
ARTI	**Arti**	**66.63**	**323**	LR	LR	14 55 27.9	
	comp=Z,71nm,18.5s,baz=84,slow=38						
ARTI	**Arti**	**66.63**	**323**	P	**P**	**14 23 54.8**	**-0.2**
AB31	**Akbulak array**	**67.05**	**315**	P	**P**	**14 23 57.2**	**-0.5**
ABKAR	**Akbulak array**	**67.05**	**315**	P	**P**	**14 23 56.9**	**-0.8**
A36M	**Sachs Harbour**	**67.22**	**20**	IAmb	IAmb	14 24 00.8	
	comp=Z,6.7nm,0.9s						
AKTO	**Aktyubinsk**	**68.02**	**317**	LR	LR	14 54 39.5	
	comp=Z,110nm,18.6s,baz=358,slow=37						
C36M	**Paulatuk**	**68.11**	**22**	P	**P**	**14 24 04.7**	**+0.6**
C36M				IAmb	IAmb	14 24 05.5	
	comp=Z,7.0nm,0.8s						
HRA	**Herat**	**68.98**	**299**	IAmb	IAmb	14 24 11.7	
	comp=Z,5.7nm,0.8s						
KIRV	**Kirov**	**70.85**	**326**	LR	LR	14 57 03.5	
	comp=Z,140nm,18.4s,baz=59,slow=37						
RAR	**Rarotonga**	**72.20**	**124**	LR	LR	14 50 12.4	
	comp=Z,37nm,19.5s,baz=255,slow=31						
YKA	**Yellowknife Ar**	**73.88**	**28**	P	**P**

comp=Z,2.4nm,0.7s,baz=45,slow=5.0,SNR=11
AKASG LR LR 15 06 03.1
comp=Z,85nm,18.3s,baz=12,slow=38
comp=Z,2.4nm,0.7s
AKASG Malin Array Be 84.74 324 IAmb IAmb 14 25 39.5
comp=Z,5.3nm,1.2s
AKBB Malin Array Si 84.74 324 P **P** **14 25 38.4 -0.2**
AKBB IAmb IAmb 14 26 15.6
comp=Z,6.9nm,0.9s
AKBB Malin Array Si 84.74 324 P **P** **14 25 38.1 -0.6**
AK01 Malin Array Si 84.75 324 P **P** **14 25 37.9 -0.8**
KIEV Kiev 84.75 324 P **P** **14 25 38.5 -0.2**
KIEV IAmb IAmb 14 26 15.6
comp=Z,6.2nm,0.9s
KIEV Kiev 84.75 324 P **P** **14 25 38.1 -0.6**
AK04 Malin Array Si 84.76 324 P **P** **14 25 38.7 0.0**
PFO Pinyon Flats O 84.93 55 LR LR 14 54 39.2
comp=Z,39nm,21.3s,baz=260,slow=29
PDAR Pinedale Array 85.44 45 P **P** **14 25 43.7 +1.0**
comp=Z,0.5nm,0.8s,baz=283,slow=2.6,SNR=4.7
comp=Z,0.5nm,0.8s
LAO LASA Array 85.49 40 IAmb IAmb 14 25 45.5
comp=Z,12nm,1.2s
NC405 NORSAR Array S 85.67 338 P **P** **14 25 42.5 -0.7**
HFS Hagfors 85.70 337 P **P** **14 25 42.8 -0.4**
comp=Z,12nm,0.7s,baz=71,slow=6.4,SNR=22
HFS LR LR 15 04 43.3
comp=Z,74nm,18.3s,baz=347,slow=36
comp=Z,12nm,0.7s
NB201 NORSAR Array S 85.86 339 P **P** **14 25 44.0 -0.1**
NB2 NORSAR Subarra 85.89 339 P **P** **14 25 43.7 -0.6**
comp=Z,4.4nm,0.6s,baz=45,slow=4.6
NB2 NORSAR Subarra 85.89 339 P **P** **14 25 43.7 -0.6**
NOA NORSAR Array B 85.89 339 P **P** **14 25 43.5 -0.8**
comp=Z,6.5nm,0.6s,baz=46,slow=4.7,SNR=24
NOA LR LR 15 08 04.3
comp=Z,60nm,18.1s,baz=30,slow=38
comp=Z,6.5nm,0.6s
KNB Kanab 86.02 51 IAmb IAmb 14 25 48.5
comp=Z,6.4nm,1.0s
RDMU Red Mountain 86.53 47 IAmb IAmb 14 25 50.0
comp=Z,4.3nm,1.0s
BRTR Keskin Array B 87.92 313 P **P** **14 25 53.9 -0.9**
comp=Z,1.1nm,0.6s,baz=92,slow=3.5,SNR=6.5
BRTR LR LR 15 09 23.3
comp=Z,29nm,18.7s,baz=96,slow=38
comp=Z,1.1nm,0.6s
BRTR Keskin Array B 87.92 313 P **P** **14 25 54.4 -0.3**
MLR Muntele Rosu 89.51 321 LR LR 15 07 05.7
comp=Z,77nm,18.5s,baz=56,slow=36
MORC Moravsky Berou 91.24 328 *e*P **P** **14 26 10.1 +0.2**
JAVC Velka Javorina 91.79 327 *e*P **P** **14 26 13.7 +1.2**
VRAC Vranov 92.01 328 LR LR 15 12 28.7
comp=Z,93nm,18.4s,baz=32,slow=39
VRAC Vranov 92.01 328 *e*P **P** **14 26 13.6 +0.1**
EIL Elat 92.07 304 LR LR 15 13 18.8
comp=Z,38nm,18.3s,baz=78,slow=39
CLL Collm 92.27 331 *e*P **P** **14 26 14.0 -0.6**
comp=Z,3.0nm,1.0s
KRUC Moravsky 92.28 328 *e*P **P** **14 26 14.8 +0.1**
GERES GERESS Array B 93.70 329 P **P** **14 26 19.9 -1.4**
comp=Z,1.1nm,0.8s,baz=61,slow=6.3,SNR=5.8
comp=Z,1.1nm,0.8s
LPIG La Paz 94.14 61 LR LR 14 59 21.8
comp=Z,25nm,21.9s,baz=216,slow=29
DAVOX Davos/Dischmat 96.98 330 LR LR 15 12 14.9
comp=Z,29nm,20.2s,baz=72,slow=37
TORD Torodi Ar. Bea 126.45 310 PKP **PKPdf** **14 32 07.6 -0.7**
comp=Z,0.8nm,0.8s,baz=139,slow=3.7,SNR=4.0
PLCA Paso Flores 148.05 128 PKPbc **PKiKP** **14 32 52.0 -0.1**
comp=Z,2.9nm,0.7s,baz=232,slow=2.0,SNR=19
LPAZ La Paz 149.91 80 PKP **PKPdf** **14 32 52.6 +1.2**
comp=Z,4.0nm,0.8s,baz=218,slow=3.1,SNR=4.2
LPAZ PKPbc **PKiKP** **14 32 57.3 +0.1**
comp=Z,3.2nm,0.7s,baz=232,slow=2.4,SNR=11
LPAZ La Paz 149.91 80 **PKPbc** **14 32 55.5 -0.8**

IDC 09 14:23:06.4±3.3, 24°81N×142°04E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=144.6km s-min=34.4km az=77.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.11**	**190**	P	P	14 31 24.5	-0.1
	0.2nm,0.5s,baz=10,slow=8.2,SNR=1.8						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**51.85**	**311**	P	P	14 32 16.0	-0.4
	0.1nm,0.7s,baz=99,slow=8.9,SNR=1.9						
	0.1nm,0.7s						
KURBB	**Kurchatov Arra**	**54.56**	**316**	P	P	14 32 36.5	+0.3
	0.3nm,0.6s,baz=91,slow=8.2,SNR=4.7						
	0.3nm,0.6s						
FINES	**FINESS Array B**	**79.94**	**334**	P	P	14 35 17.0	-0.1
	5.7nm,1.1s,baz=66,slow=4.8,SNR=4.6						

*IDC **09** 14:23:46.5±1.2, 4°44S×129°13E, h0km, mb3.8/5, mbtmp3.9/11, ML3.8/6, MS3.0/1, Error ellipse: s-maj=32.2km s-min=20.1km az=88.0*
*NEIC **09** 14:23:48.6±1.6, 4°46S±0°07×129°14E±0°05, h10km±1km, mb4.1/14, Error ellipse: s-maj=12.0km s-min=7.0km az=202.0*
*DJA **09** 14:23:50.2±0.3, 4°S±3°×129°9E±°, h10km, M4.2/17, mb4.8/2, MLv3.9/17*

ISC 09 14:23:48.2±0.6, 4°47S±0°06×129°07E±0°07, h10km, n42, σ1s48/42, mb4.0/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**0.84**	**94**	P	**Pn**	**14 24 07.0**	**+0.9**
MSAI	**Masohi**	**1.12**	**353**	P	**Pb**	**14 24 09.3**	**-0.5**
AAI	**Ambon**	**1.17**	**312**	P	**Pb**	**14 24 09.0**	**-1.5**
KRAI	**Karang Ratu**	**1.32**	**330**	P	**Pn**	**14 24 11.9**	**-0.9**
NLAI	**Namlea**	**2.31**	**302**	P	**Pn**	**14 24 27.9**	**+1.6**
SANI	**Sanana**	**3.90**	**308**	P	**Pn**	**14 24 49.5**	**+1.3**
SIJI	**Sorong**	**4.20**	**32**	Pn	**Pn**	**14 24 52.1**	**-0.2**
	8.2nm,0.3s,baz=251,slow=23,SNR=58						
SIJI				Sn	**Sn**	**14 25 42.6**	**+1.1**
	10nm,0.3s,baz=338,slow=22,SNR=9.1						
	14nm,0.3s						
SIJI	**Sorong**	**4.20**	**32**	P	**Pn**	**14 24 54.5**	**+2.2**
SWI	**Sorong**	**4.20**	**32**	P	**Pn**	**14 24 54.8**	**+2.4**
RKPI	**Ransiki, Papua**	**5.89**	**60**	P	**Pn**	**14 25 18.8**	**+3.2**
	88nm,0.6s						
SOEI	**Soe**	**7.09**	**222**	Pn	**Pn**	**14 25 33.0**	**+0.8**
BATI	**Baumata**	**7.82**	**223**	Pn	**Pn**	**14 25 44.2**	**+2.0**
	4.4nm,0.3s,baz=79,slow=0.9,SNR=10						
BATI				LR	LR	14 29 03.6	
	comp=Z,96nm,20.0s,baz=46,slow=40						
	20nm,0.5s						
BATI	**Baumata**	**7.82**	**223**	P	**Pn**	**14 25 44.5**	**+2.3**
MTN	**Manton Dam**	**8.57**	**166**	Pn	**Pn**	**14 25 52.4**	**0.0**
KAPI	**Kappang**	**9.30**	**266**	Pn	**Pn**	**14 26 04.0**	**+1.5**
	1.6nm,0.3s,baz=90,slow=15,SNR=4.8						
	6.6nm,0.5s						
KAPI	**Kappang**	**9.30**	**266**		**Pn**	**14 26 04.2**	**+1.8**
KNRA	**Kununurra**	**11.14**	**182**		**Pn**	**14 26 27.0**	**-0.7**
FITZ	**Fitzroy Crossi**	**13.96**	**194**	Pn	**Pn**	**14 27 05.0**	**-1.1**
	0.2nm,0.3s,baz=31,slow=14,SNR=5.4						
	0.9nm,0.4s						
JAGI	**Jajag, Banyuwa**	**15.34**	**254**	Pn	**Pn**	**14 27 26.6**	**+1.6**
WB0	**Warramunga Arr**	**16.07**	**162**	Pn	**Pn**	**14 27 32.1**	**-2.3**
WB0				IAmb	IAmb	14 27 35.9	
	comp=Z,13nm,1.5s						
WRAB	**Tennant Creek**	**16.21**	**162**	Pn	**Pn**	**14 27 33.8**	**-2.5**
WRAB				IAmb	IAmb	14 28 02.2	
	comp=Z,10nm,1.4s						
WRA	**Warramunga Arr**	**16.22**	**162**	Pn	**Pn**	**14 27 33.9**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=338,slow=13,SNR=12						
	comp=Z,1.8nm,0.8s						
WRA	**Warramunga Arr**	**16.22**	**162**		**Pn**	**14 27 33.7**	**-2.6**
WR8	**Warramunga Arr**	**16.28**	**161**	Pn	**Pn**	**14 27 34.5**	**-2.6**
COEN	**Coen**	**16.81**	**125**	P	**P**	**14 27 45.0**	**-1.1**
COEN				IAmb	IAmb	14 27 54.9	
	comp=Z,26nm,1.4s						
AS31	**Alice Springs**	**19.65**	**167**	Pn	**Pn**	**14 28 18.4**	**-0.3**
ASAR	**Alice Springs**	**19.65**	**167**	P	**Pn**	**14 28 18.1**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=346,slow=11,SNR=61						
	comp=Z,2.7nm,0.6s						
BBOO	**Buckleboo**	**28.95**	**168**	P	**P**	**14 29 48.0**	**+0.1**
CMAR	**Chiang Mai Arr**	**37.42**	**308**	P	**P**	**14 31 02.4**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=134,slow=6.5,SNR=6.2						
	comp=Z,0.7nm,0.6s						
EVN	**Everest**	**51.92**	**311**	P	**P**	**14 32 58.0**	**-0.3**
EVN				IAmb	IAmb	14 33 10.9	
	comp=Z,2.2nm,0.9s						
NIL	**Nilore**	**64.87**	**310**	P	**P**	**14 34 27.8**	**-0.2**
TARG	**Taragay, Kyrgy**	**65.44**	**320**	P	**P**	**14 34 31.9**	**0.0**
TARG				IAmb	IAmb	14 35 00.5	
	comp=Z,1.6nm,0.8s						
MKAR	**Makanchi Array**	**65.61**	**327**	P	**P**	**14 34 32.2**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=111,slow=8.4,SNR=16						
	comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**65.61**	**327**	P	**P**	**14 34 32.1**	**-0.4**
MAKZ	**Makanchi**	**65.79**	**327**	P	**P**	**14 34 33.2**	**-0.5**
MAKZ				IAmb	IAmb	14 34 35.6	
	comp=Z,2.2nm,1.3s						
ZALV	**Zalesovo Beam**	**68.92**	**334**	P	**P**	**14 34 52.8**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=116,slow=3.4,SNR=1.7						
	comp=Z,0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**69.88**	**328**	P	**P**	**14 34 58.9**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=131,slow=5.5,SNR=8.9						
	comp=Z,0.7nm,0.7s						
KURK	**Kurchatov**	**69.89**	**329**	P	**P**	**14 34 58.9**	**-0.5**
KURK	**Kurchatov**	**69.89**	**329**	IAmb	IAmb	14 35 01.1	
	comp=Z,1.7nm,0.8s						
BVAR	**Borovoye Array**	**75.44**	**328**	P	**P**	**14 35 32.4**	**0.0**
	comp=Z,0.8nm,0.8s,baz=127,slow=2.2,SNR=3.8						
	comp=Z,0.8nm,0.8s						
AB31	**Akbulak array**	**79.96**	**322**	P	**P**	**14 35 56.9**	**-0.7**
AB31				IAmb	IAmb	14 36 35.0	
	comp=Z,1.8nm,1.2s						
ABKAR	**Akbulak array**	**79.96**	**322**	P	**P**	**14 35 56.7**	**-0.9**

IGQ 09 14:28:26.1±0.3, 4°S±2°×8°0W±°, h41km±3km, M4.0/22, mb4.4/1, Mjma3.8/21, ML4.0/16, MLv3.7/22, Ms(BB)4.0/13, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAMO	**ALAMOR**	**0.22**	**127**	P	Pn	14 28 35.6	+1.7
LAMO				S	Sn	14 28 42.7	+3.3
ARNL	**Arenillas**	**0.36**	**21**	P	Pn	14 28 36.0	+0.8
ARNL				S	Sn	14 28 43.7	+2.2
AMCR	**Ecuador-Macara**	**0.54**	**154**	P	Pn	14 28 38.0	+0.5
AMCR				S	Sn	14 28 47.3	+1.7
MCRA	**Macar, Loja**	**0.54**	**154**	P	Pn	14 28 38.0	+0.4
MCRA				S	Sn	14 28 47.1	+1.6
ACH2	**Ecuador-Machal**	**0.72**	**32**	P	Pn	14 28 40.7	+0.8
ACH2				S	Sn	14 28 51.6	+1.6
GONZ	**Gonzanam**	**0.87**	**114**	P	Pn	14 28 42.4	+0.1
GONZ				S	Sn	14 28 54.5	+0.4
ISPG	**Isla Puna-Puer**	**0.91**	**1**	P	Pn	14 28 44.1	+1.6
PCRA	**Pucara 2**	**0.96**	**46**	P	Pn	14 28 42.5	-1.2
PCRA				S	Sn	14 28 55.7	-0.7
ALJ1	**Ecuador-Loja-U**	**1.00**	**96**	P	Pn	14 28 44.8	+0.9
MORR	**Playas El Morr**	**1.24**	**353**	P	Pn	14 28 47.4	+0.3
ZUMB	**Zumba**	**1.43**	**133**	P	Pn	14 28 50.9	+1.1
ACUE	**Ecuador-Cuenca**	**1.57**	**52**	P	Pn	14 28 53.6	+1.8
COHC	**Cochancay**	**1.69**	**34**	P	Pn	14 28 53.2	0.0
MILO	**Milagro-Astudi**	**1.72**	**22**	P	Pn	14 28 54.4	+0.9
AC07	**Ecuador-Guayaq**	**1.73**	**7**	P	Pn	14 28 53.9	0.0
AGUAY	**Guayaquil**	**1.83**	**8**	P	Pn	14 28 54.0	-1.1
AMIL	**Milagro (Trans**	**1.84**	**19**	P	Pn	14 28 54.5	-0.7
SALI	**Salinas**	**1.86**	**335**	P	Pn	14 28 55.8	+0.2
CSOL	**CASCOL**	**2.22**	**353**	P	Pn	14 28 59.6	-0.9
PPLP	**Puerto Lpez**	**2.39**	**346**	P	Pn	14 29 02.6	-0.3
JSCH	**Cashca Tororas**	**2.47**	**29**	P	Pn	14 29 02.9	-1.4
JIPI	**JIPIJAPA**	**2.53**	**352**	P	Pn	14 29 04.2	-0.6
CHSH	**Refugio Sur-Vo**	**2.72**	**29**	P	Pn	14 29 06.8	-1.1
TAMH	**Tambohuasha Ch**	**2.72**	**31**	P	Pn	14 29 07.4	-0.4
ISPT	**Isla de la Pla**	**2.75**	**341**	P	Pn	14 29 07.3	-0.5
IGUA	**Igualata**	**2.84**	**33**	P	Pn	14 29 09.5	0.0
BMAS	**Trigal station**	**2.92**	**36**	P	Pn	14 29 08.9	-1.6
BPAT	**Tungurahua Vol**	**2.95**	**37**	P	Pn	14 29 11.2	+0.3
BBIL	**Ulba Tungurahu**	**2.96**	**35**	P	Pn	14 29 12.3	+1.3
TAIS	**Taisha**	**3.08**	**61**	P	Pn	14 29 11.9	-0.4
PECV	**Mancha de Ca P**	**3.09**	**3**	P	Pn	14 29 12.3	-0.2
ILLI	**Illinizas Sur**	**3.47**	**25**	P	Pn	14 29 23.3	+5.1
VCES	**Cotopaxi**	**3.55**	**30**	P	Pn	14 29 23.7	+4.4
SLOR	**San Lorenzo -**	**3.56**	**28**	P	Pn	14 29 23.7	+4.3
BMOR	**Cotopaxi Volca**	**3.58**	**29**	P	Pn	14 29 23.7	+4.0
TAMB	**Tambo**	**3.66**	**30**	P	Pn	14 29 25.4	+4.7
BVC2	**Cotopaxi Volca**	**3.67**	**29**	P	Pn	14 29 25.4	+4.5
VC1	**Cotopaxi 1**	**3.68**	**29**	P	Pn	14 29 26.5	+5.4
ANTS	**Antisana-Sarah**	**3.92**	**31**	P	Pn	14 29 30.8	+6.3
GGPT	**Toaza - Volcan**	**3.96**	**23**	P	Pn	14 29 30.5	+5.7
ANTI	**Antisana**	**3.97**	**31**	P	Pn	14 29 30.8	+5.7
JUA2	**San Juan 2**	**3.98**	**24**	P	Pn	14 29 28.2	+3.1
TERV	**Terraza Guagua**	**4.01**	**23**	P	Pn	14 29 27.3	+1.7
YANA	**Yana**	**4.08**	**23**	P	Pn	14 29 30.0	+3.5
PAC1	**Pacto, Paraso**	**4.35**	**19**	P	Pn	14 29 29.4	-0.6
CAYR	**Refugio Cayamb**	**4.45**	**29**	P	Pn	14 29 40.1	+8.4
URCU	**Urcuqui**	**4.71**	**24**	P	Pn	14 29 30.6	-4.5
RVRD	**Rio Verde**	**4.98**	**9**	P	Pn	14 29 38.2	-0.3
LITE1	**Lita**	**4.99**	**22**	P	Pn	14 29 39.3	+0.5
CHL1	**Volcn Chiles**	**5.16**	**26**	P	Pn	14 29 46.5	+5.1

PRE 09 14:33:03.8±1.1, 25°88S×29°90E, h0km, ML2.2, Suspected explosion, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PILG	**Pilgrimsrest,**	**1.20**	**38**	*e*P	Pg	14 33 26.8	+0.1
PILG				*e*S	Sb	14 33 43.6	+0.1
PILG				IAML		14 33 52.2	
	comp=Z,43nm,0.9s						
HOED	**Hoedspruit, Li**	**1.74**	**33**	*e*P	Pn	14 33 35.1	-0.2
HOED				*e*S	Sn	14 33 56.6	-1.6
HOED				IAML		14 34 04.4	
	comp=Z,29nm,0.4s						
HOED	**Hoedspruit, Li**	**1.74**	**33**	*e*P	Pn	14 33 35.3	0.0
HOED				*e*S	Sb	14 33 59.2	+0.2
HOED				IAML		14 34 04.4	
	comp=Z,29nm,0.4s						
HRAO	**HartRAO**	**1.99**	**269**	*e*P	Pn	14 33 39.4	+0.5
HRAO				*e*S	Sn	14 34 05.4	+0.8
HRAO				IAML		14 34 05.7	
	comp=Z,30nm,0.4s						
PRYS	**Parys**	**2.50**	**245**	*e*P	Pn	14 33 45.7	-0.2
PRYS				*e*S	Sn	14 34 17.2	-0.1
PRYS				IAML		14 34 27.5	
	comp=Z,9.7nm,0.5s						
LEPH	**Lephalale, Lim**	**2.77**	**316**	*e*P	Pn	14 33 50.4	+0.8
LEPH				*e*S	Sn	14 34 23.5	-0.3
LEPH				IAML		14 34 27.9	
	comp=Z,32nm,0.4s						
SNKL	**Senekal, Frees**	**3.05**	**218**	*e*P	Pn	14 33 55.0	+1.5
SNKL				*e*S	Sn	14 34 31.2	+0.5
SNKL				IAML		14 34 44.3	
	comp=Z,7.4nm,0.5s						
MUSN	**Musina, Limpop**	**3.57**	**359**	*e*P	Pn	14 34 02.2	+1.6
MUSN				*e*S	Sn	14 34 44.3	+0.7
MUSN				IAML		14 34 54.4	
	comp=Z,11nm,0.3s						
LBTB	**Lobatse**	**3.98**	**282**	*e*P	Pn	14 34 09.2	+3.0
LBTB				*e*S	Sn	14 34 56.8	+3.2
LBTB				IAML		14 35 08.1	
	comp=Z,11nm,0.5s						
LBTB	**Lobatse**	**3.98**	**282**	*e*P	Pn	14 34 07.2	+0.9
LBTB				*e*S	Sn	14 34 54.1	+0.5
LBTB				IAML		14 35 08.0	
	comp=Z,11nm,0.5s						
BOSA	**Boshof**	**4.95**	**236**	*e*P	Pn	14 34 23.3	+3.8
BOSA				*e*S	Sn	14 35 21.4	+3.9
BOSA				IAML		14 35 38.8	
	comp=Z,2.7nm,0.4s						
BOSA	**Boshof**	**4.95**	**236**	*e*P	Pn	14 34 20.9	+1.3
BOSA				*e*S	Sn	14 35 16.8	-0.7
BOSA				IAML		14 35 38.8	
	comp=Z,2.7nm,0.4s						
GRAF	**Camdeboo Natio**	**7.94**	**215**	*e*P	Pn	14 35 01.2	+0.7
GRAF				*e*S	Sn	14 36 28.1	-3.1
GRAF				IAML		14 36 56.4	
	comp=Z,1.6nm,0.6s						
FRAZ	**Fraserburg**	**9.57**	**229**	*e*P	Pn	14 35 27.2	+4.2
FRAZ				*e*S	Sn	14 37 11.9	+0.5
FRAZ				IAML		14 37 12.6	
	comp=Z,1.5nm,0.5s						
FRAZ	**Fraserburg**	**9.57**	**229**	*e*P	Pn	14 35 23.9	+0.8
FRAZ				*e*S	Sn	14 37 07.3	-4.1
FRAZ				IAML		14 37 11.7	
	comp=Z,1.5nm,0.5s						

JMA 09 14:36:27.0±0.5, 25°N±2°×123°8E±1°0, h14km, MV1.2/6,

NW OFF ISHIGAKIJIMA IS, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.52**	**185**	P	Pg	14 36 37.1	-0.1
JISG	**Ishigakijimahi**	**0.55**	**119**	P	Pg	14 36 37.8	0.0
JISG				*e*S	Sb	14 36 45.8	-0.3
JIJ	**Ishigaki jima**	**0.59**	**146**	P	Pg	14 36 37.9	-0.6
JIJ				*e*S	Sg	14 36 45.6	-0.7
JKRS	**Kuro-shima**	**0.65**	**161**	P	Pg	14 36 39.6	0.0
JKRS				*e*S	Sb	14 36 48.7	-0.2
HATJ	**Hateruma jima**	**0.79**	**178**	*e*P	Pg	14 36 41.7	-0.7
HATJ				*e*S	Sb	14 36 53.0	-0.1

TAP 09 14:37:21.7, 25°19N×122°77E, h166km, ML3.5, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.73**	**256**	*i* P	Pn	14 37 46.5	+0.4
YOJ	**Yonaguni jima**	**0.76**	**163**	*e*P	Pn	14 37 46.2	-0.1
YOJ				*e*S	Sn	14 38 06.1	+0.9
PCYT	**Pengchaiyu**	**0.77**	**305**	*e*P	Pn	14 37 46.2	-0.1
SXI1	**Grass Mountain**	**0.82**	**264**	*i* P	Pn	14 37 47.0	+0.3
TIPB	**Shuangxi**	**0.88**	**256**	*i* P	Pn	14 37 47.6	+0.4
NWF	**Wu-fen Shan**	**0.90**	**263**	*e*S	Sn	14 38 07.4	+0.3
TNOU	**National Taiwa**	**0.90**	**268**	*e*P	Pn	14 37 47.2	-0.1
WFSB	**Wu-fen Shan**	**0.90**	**263**	*e*S	Sn	14 38 07.0	+0.1
NTC	**Toucheng**	**0.92**	**249**	*e*S	Sn	14 38 06.4	-0.6
TWC	**Suao**	**1.01**	**236**	*e*P	Pn	14 37 46.8	-1.4
TWC				*e*S	Sn	14 38 07.4	-1.0
ESAO	**Su ao**	**1.04**	**234**	*e*P	Pn	14 37 48.4	0.0
ESAO				*e*S	Sn	14 38 08.0	-0.8
TWY	**Chenhua**	**1.06**	**275**	P	Pn	14 37 49.1	+0.6
TWY				S	Sn	14 38 08.7	-0.4
YM01	**YM01**	**1.09**	**268**	P	Pn	14 37 49.3	+0.5
TWA	**Mucha**	**1.09**	**259**	P	Pn	14 37 49.2	+0.4
TWA				S	Sn	14 38 09.0	-0.6
NHY	**Taipei**	**1.10**	**263**	*e*P	Pn	14 37 48.7	-0.1
TWE	**Neicheng**	**1.10**	**245**	*i* P	Pn	14 37 49.0	+0.2
TWE				*e*S	Sn	14 38 09.0	-0.7
NDS	**Dongshan**	**1.10**	**240**	P	Pn	14 37 48.7	-0.2
NDS				*e*S	Sn	14 38 09.5	-0.2
ZUZH	**Zhuzihu**	**1.11**	**269**	P	Pn	14 37 49.6	+0.7
ZUZH				*e*S	Sn	14 38 06.7	-3.2
FUSB	**Fushanzhiwuyua**	**1.15**	**249**	*i* P	Pn	14 37 49.3	-0.1
FUSB				S	Sn	14 38 10.1	-0.5
EWUT	**Wuta**	**1.17**	**231**	*e*P	Pn	14 37 49.4	0.0
EWUT				*i* S	Sn	14 38 09.8	-0.9
NTST	**Danshui**	**1.20**	**269**	*e*P	Pn	14 37 50.2	+0.6
NTST				*e*S	Sn	14 38 11.7	+0.6
ENA	**Nanau**	**1.20**	**231**	P	Pn	14 37 50.4	+0.7
ENA				S	Sn	14 38 11.1	-0.1
NWLT	**Wulai**	**1.22**	**251**	*i* P	Pn	14 37 49.5	-0.4
NWLT				*e*S	Sn	14 38 11.4	-0.2
ENTT	**Nioudou**	**1.22**	**244**	*i* P	Pn	14 37 50.1	+0.1
ENTT				*e*S	Sn	14 38 11.3	-0.2
TWS1	**Kuangyinshan**	**1.23**	**266**	*e*S	Sn	14 38 09.6	-2.0
EAHA	**Aohua**	**1.27**	**228**	*e*S	Sn	14 38 10.4	-1.9
NDT	**Datong Townshi**	**1.28**	**243**	*i* P	Pn	14 37 50.9	+0.4
NDT				*e*S	Sn	14 38 12.4	-0.1
LATG	**Datong**	**1.30**	**240**	*i* P	Pn	14 37 51.2	+0.5
LATG				S	Sn	14 38 13.2	+0.1
YHNB	**Yeheng**	**1.37**	**248**	P	Pn	14 37 51.2	-0.1
YHNB	**Yeheng**	**1.37**	**248**	S	Sn	14 38 12.8	-1.3
YHNB	**Yeheng**	**1.37**	**248**	*i* P	Pn	14 37 51.2	-0.1
YHNB				S	Sn	14 38 12.7	-1.4
NSK	**Sanguang**	**1.38**	**249**	*i* P	Pn	14 37 51.2	-0.2
NSK				S	Sn	14 38 13.4	-0.8
NCU	**National Centr**	**1.45**	**262**	P	Pn	14 37 52.8	+0.8
NCUH	**Zhongli**	**1.45**	**262**	*e*P	Pn	14 37 51.7	-0.4
ETL	**Fush Village**	**1.46**	**226**	*e*P	Pn	14 37 51.3	-0.9
ETL				*e*S	Sn	14 38 13.4	-2.2
NACB	**Ninganchiao**	**1.47**	**227**	P	Pn	14 37 51.7	-0.5
NACB	**Ninganchiao**	**1.47**	**227**	P	Pn	14 37 51.8	-0.5
NACB				S	Sn	14 38 14.4	-1.3
NNSB	**Datong**	**1.47**	**239**	P	Pn	14 37 52.6	+0.2
NNSB				*e*S	Sn	14 38 15.1	-0.8
NNS	**Nan Shan**	**1.47**	**240**	P	Pn	14 37 52.6	+0.2
NNS				*e*S	Sn	14 38 15.2	-0.8
KSHI	**Guanxi Townshi**	**1.50**	**255**	P	Pn	14 37 53.0	+0.5
KSHI				*e*S	Sn	14 38 16.6	+0.4
ETLH	**Xiulin Townshi**	**1.52**	**230**	P	Pn	14 37 52.6	-0.2
ETLH				*i* S	Sn	14 38 15.6	-1.2
TWD	**Chiawan**	**1.54**	**224**	P	Pn	14 37 52.2	-0.6
TWD				*i* S	Sn	14 38 15.4	-1.4
NFF	**Wufeng Townshi**	**1.60**	**250**	*e*P	Pn	14 37 53.4	-0.2
NFF				*e*S	Sn	14 38 16.6	-1.6
HWA	**Hwalien**	**1.60**	**222**	*e*P	Pn	14 37 53.4	-0.2
HWA				*e*S	Sn	14 38 16.3	-1.8
LIOB	**Emei**	**1.68**	**252**	P	Pn	14 37 54.2	-0.2
LIOB				*e*S	Sn	14 38 18.6	-1.0
ETM	**Tongmen**	**1.68**	**224**	*e*P	Pn	14 37 53.7	-0.7
ETM				S	Sn	14

CHN4				eS	Sn	14 38 39.0	-1.5	
TPUB	**Ta-pu**	**2.71**	**227**	eP	Pn	14 38 06.3	+0.1	
TPUB				eS	Sn	14 38 39.6	-1.1	
STYH	**Taoyuan**	**2.71**	**223**	eP	Pn	14 38 06.8	+0.6	
CHY	**Chiayi**	**2.72**	**232**	eP	Pn	14 38 06.6	+0.3	
CHY				S	Sn	14 38 39.5	-1.3	
WTP	**Ta-pu**	**2.76**	**226**	S	Sn	14 38 40.0	-1.8	
TWGBT	**Beinan**	**2.82**	**214**	eP	Pn	14 38 06.3	-1.2	
TWG	**Pinlang**	**2.82**	**214**	P	Pn	14 38 06.5	-1.1	
TWK	**Hsinying**	**2.83**	**228**	P	Pn	14 38 07.7	0.0	
TWK				eS	Sn	14 38 40.9	-2.4	
TTN	**Taitung**	**2.84**	**212**	eP	Pn	14 38 06.8	-1.0	
TTN				eS	Sn	14 38 40.6	-2.9	
CHN1	**Nanshi**	**2.86**	**226**	eP	Pn	14 38 07.8	-0.3	
SGST	**Jiashian**	**2.90**	**224**	eP	Pn	14 38 07.5	-0.9	
XPSS	**Dashiqiu**	**2.90**	**307**	eP	Pn	14 38 09.7	+1.2	
VWUC	**VWUC**	**3.02**	**267**	eP	Pn	14 38 11.5	+1.6	
VWUC				eS	Sn	14 38 47.9	+0.6	
SSD	**Sandimen**	**3.12**	**219**	eS	Sn	14 38 48.6	-1.2	
PTMZ	**Houxiangcun**	**3.31**	**268**	eP	Pn	14 38 13.8	+0.2	
PTMZ				eS	Sn	14 38 54.5	+0.5	
KNM	**Kinmen**	**4.01**	**260**	eP	Pn	14 38 25.7	+3.1	
AXDP	**Jialang**	**4.36**	**267**	eP	Pn	14 38 27.9	+0.8	
AXDP				eS	Sn	14 39 17.8	-0.3	

IDC ***09*** *14:42:50.4±1.1, 53°.92N×163°.39W, h0km, mb3.8/15, mbtmp3.8/17, ML3.1/2, MS3.1/3, Error ellipse: s-maj=29.4km s-min=15.0km az=173.0*
AEIC ***09*** *14:42:53.0±2.1, 53°.85N±0°.04×163°.15W±0°.06, h5km±4km, Error ellipse: s-maj=5.9km s-min=4.7km az=160.0*
NEIC ***09*** *14:42:54.8±1.1, 53°.87N±0°.04×163°.10W±0°.07, h32km±6km, mb4.1/7, ML3.8/14, ML3.6(AEIC), Error ellipse: s-maj=6.0km s-min=5.1km az=120.0*

ISC 09 14:42:55.9±1.5,**53°.87N**±0°.08×**163°.12W**±0°.04, **h42**km±13km,**n90**,σ1§**28**/81,**mb4.1**/19,**Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FALS	**False Pass**	**1.01**	**350**		**Sn**	**14 43 25.9**	**-0.5**
FALS	**False Pass**	**1.01**	**350**		**Pn**	**14 43 12.4**	**-1.1**
ISNN	**Isanotski Nort**	**1.04**	**339**		**Pn**	**14 43 13.6**	**-0.4**
ISNN					**Sn**	**14 43 28.1**	**+0.7**
SSLN	**Shishaldin Nor**	**1.08**	**332**		**Pn**	**14 43 14.1**	**-0.4**
SSBA	**Shishaldin**	**1.08**	**328**		**Pn**	**14 43 13.6**	**-1.0**
DT1	**Dutton Round H**	**1.34**	**21**		**Pn**	**14 43 17.1**	**-0.9**
DT1					**Sn**	**14 43 35.4**	**+0.8**
DTNA	**Dutton South F**	**1.38**	**21**		**Pn**	**14 43 18.0**	**-0.7**
DTNA					**Sn**	**14 43 36.8**	**+1.0**
AKSA	**Akutan Strait**	**1.54**	**281**		**Pn**	**14 43 19.9**	**-0.9**
AKSA					**Sn**	**14 43 40.0**	**+0.4**
AKUT	**Akutan**	**1.59**	**281**		**Sn**	**14 43 41.5**	**+0.8**
AKUT	**Akutan**	**1.59**	**281**		**Pn**	**14 43 20.6**	**-0.8**
AKUT	comp=N,1μm,0.5s			IAML		14 43 47.0	
AKUT	comp=E,953nm,0.5s			IAML		14 43 52.0	
AHB	**Akutan Harbor**	**1.61**	**280**		**Pn**	**14 43 21.1**	**-0.7**
HAG	**Hague Volcano**	**1.62**	**26**		**Pn**	**14 43 22.1**	**+0.2**
PS4A	**Pavlof South-4**	**1.66**	**26**		**Pn**	**14 43 22.6**	**+0.2**
AKBBA	**Akutan Broad B**	**1.67**	**279**		**Pn**	**14 43 21.9**	**-0.7**
AKV	**Akutan Volcano**	**1.70**	**280**		**Pn**	**14 43 22.6**	**-0.4**
AKV					**Sn**	**14 43 46.7**	**+3.2**
AKLV	**Akutan Long Va**	**1.70**	**281**		**Pn**	**14 43 22.2**	**-0.8**
PN7A	**Pavlof North-7**	**1.70**	**22**		**Pn**	**14 43 23.9**	**+0.8**
ZRO	**Akutan Zero**	**1.70**	**279**		**Pn**	**14 43 22.2**	**-0.8**
LVA	**Lava Point**	**1.74**	**281**		**Pn**	**14 43 23.0**	**-0.6**
LVA	comp=E,855nm,0.8s			IAML		14 44 02.1	
UNV	**Unalaska Valle**	**2.00**	**271**		**Pn**	**14 43 26.1**	**-1.0**
UNV	comp=N,367nm,0.9s			IAML		14 43 59.2	
MNAT	**Makushin Natee**	**2.11**	**272**		**Pn**	**14 43 27.8**	**-0.8**
SDPT	**Sand Point**	**2.14**	**45**		**Pn**	**14 43 29.8**	**+0.7**
SDPT	**Sand Point**	**2.14**	**45**	IAML		14 43 58.2	
SDPT	comp=N,1μm,0.6s			IAML		14 43 59.1	
MGOD	**Makushin Gods**	**2.22**	**270**		**Pn**	**14 43 29.8**	**-0.4**
MAPS	**Pakushin South**	**2.26**	**270**		**Pn**	**14 43 30.4**	**-0.4**
CNBA	**Chernabura Isl**	**2.28**	**64**	Pn	**Pn**	**14 43 30.2**	**-0.7**
OKNC	**Okmok New Cone**	**3.00**	**264**		**Pn**	**14 43 41.7**	**+0.8**
VNKR	**Veniaminof 5**	**3.07**	**43**		**Pn**	**14 43 44.6**	**+2.8**
VNSS	**Veniaminof 8**	**3.17**	**40**		**Pn**	**14 43 47.0**	**+3.7**
CHIR	**Chirikof Islan**	**4.76**	**63**	Pn	**Pn**	**14 44 04.3**	**-0.6**
CHIR	comp=E,58nm,1.0s			IAML		14 45 32.8	
CHIR	comp=N,64nm,1.0s			IAML		14 45 33.1	
SII	**Sitkinak Islan**	**5.79**	**59**		**Pn**	**14 44 18.9**	**-0.2**
P16K	**Nushagak River**	**5.91**	**27**		**Pn**	**14 44 19.9**	**-0.7**
CNTC	**Contact Creek**	**5.99**	**40**		**Pn**	**14 44 22.7**	**+0.8**
ANCK	**Angle Creek**	**6.09**	**41**		**Pn**	**14 44 24.2**	**+0.9**
N14K	**Kuskokwak Cree**	**6.12**	**7**		**Pn**	**14 44 24.7**	**+1.1**
OHAK	**Old Harbor**	**6.52**	**55**	Pn	**Pn**	**14 44 27.9**	**-1.1**
N15K	**Kwethluk River**	**6.53**	**13**		**Pn**	**14 44 30.3**	**+1.0**
O17K	**Koliganek Bris**	**6.78**	**27**		**Pn**	**14 44 35.0**	**+2.3**
M14K	**Bethel**	**6.93**	**5**	Pn	**Pn**	**14 44 33.9**	**-0.9**
M15K	**Kasigluk River**	**6.97**	**10**		**Pn**	**14 44 35.7**	**+0.4**
KDAK	**Kodiak Island**	**7.12**	**52**	Pn	**Pn**	**14 44 36.5**	**-0.7**
KDAK	comp=N,0.5nm,0.3s,baz=87,slow=1.2,SNR=33			Sn	**Sn**	**14 45 53.1**	**-3.5**
	comp=N,0.1nm,0.3s,baz=144,slow=14,SNR=1.3 comp=N,2.1nm,0.3s						
KDAK	**Kodiak Island**	**7.12**	**52**	Pn	**Pn**	**14 44 36.1**	**-1.2**
RDT	**Redoubt**	**8.88**	**37**		**Pn**	**14 45 03.9**	**+2.4**
L18K	**Granite Mounta**	**9.04**	**20**		**Pn**	**14 45 03.6**	**0.0**
GAMB	**Gambell**	**10.87**	**339**		**Pn**	**14 45 28.4**	**-0.2**
F15K	**North Star Dit**	**11.90**	**357**		**Pn**	**14 45 45.2**	**+2.5**
KLU	**Klutina**	**11.93**	**43**		**Pn**	**14 45 41.8**	**-1.4**
TNA	**Tin City**	**11.97**	**350**		**Pn**	**14 45 43.5**	**-0.2**
SHEM	**Shemya Is, Ala**	**13.66**	**274**	LR	LR	14 50 29.8	
ILAR	comp=N,64nm,21.3s,baz=115,slow=34 **Eielson Array** comp=N,0.1nm,0.3s,baz=217,slow=12,SNR=4.2 comp=N,0.3nm,0.8s	**13.66**	**30**	Pn	**Pn**	**14 46 04.4**	**-2.3**
SCRK	**Sand Creek**	**14.09**	**36**	Pn	**Pn**	**14 46 11.2**	**-1.4**
COLD	**Coldfoot**	**14.78**	**20**	Pn	**Pn**	**14 46 21.3**	**-0.4**
E22K	**Anaktuvuk Pass**	**15.28**	**16**	Pn	**Pn**	**14 46 28.2**	**-0.2**
INK	**Inuvik** comp=N,0.6nm,0.6s,baz=214,slow=8.6,SNR=3.0 comp=N,0.6nm,0.6s	**20.04**	**32**	P	**P**	**14 47 23.6**	**-1.3**
INK	**Inuvik** comp=Z,4.2nm,1.4s	**20.04**	**32**	IAmb	IAmb	14 47 44.7	
PETK	**Petropavlovsk-** comp=Z,1.7nm,0.4s,baz=81,slow=14,SNR=21 comp=Z,1.7nm,0.4s	**23.13**	**284**	P	**P**	**14 47 56.1**	**-1.8**
A36M	**Sachs Harbour**	**24.33**	**28**		**P**	**14 48 06.5**	**-2.5**
A36M	comp=Z,5.3nm,0.9s			IAmb	IAmb	14 48 11.8	
YKA	**Yellowknife Ar** comp=Z,0.2nm,0.6s,baz=277,slow=10,SNR=4.4 comp=Z,0.2nm,0.6s	**26.39**	**51**	P	**P**	**14 48 30.4**	**+2.6**
TIXI	**Tiksi** comp=Z,55nm,18.4s,baz=10.0,slow=38	**33.44**	**328**	LR	LR	15 04 10.4	
NVAR	**Mina Array Bea** comp=Z,0.4nm,0.6s,baz=309,slow=8.3,SNR=2.7 comp=Z,0.4nm,0.6s	**34.03**	**98**	P	**P**	**14 49 38.0**	**+2.1**
KLR	**Kul'dur** comp=Z,17nm,20.2s,baz=42,slow=36	**39.49**	**291**	LR	LR	15 06 12.9	
H11N2	**WAKE ISLAND Hy** baz=26,slow=76,SNR=118	**41.09**	**226**	T	T	15 34 29.9	
H11N3	**WAKE ISLAND Hy** baz=26,slow=76,SNR=116	**41.10**	**226**	T	T	15 34 33.6	
H11N1	**WAKE ISLAND Hy** baz=26,slow=76,SNR=81	**41.11**	**226**	T	T	15 34 30.8	
H11S1	**WAKE ISLAND Hy** baz=26,slow=76,SNR=111	**42.26**	**225**	T	T	15 35 59.8	
H11S2	**WAKE ISLAND Hy** baz=26,slow=76,SNR=63	**42.28**	**225**	T	T	15 36 04.5	
H11S3	**WAKE ISLAND Hy** baz=26,slow=76,SNR=57	**42.28**	**225**	T	T	15 36 01.0	
KSRS	**Korea Array** comp=Z,1.6nm,0.8s,baz=53,slow=6.7,SNR=5.1 comp=Z,1.6nm,0.8s	**48.91**	**280**	P	**P**	**14 51 36.5**	**-0.9**
TXAR	**Lajitas Array** comp=Z,0.3nm,0.4s,baz=299,slow=5.6,SNR=6.5 comp=Z,0.3nm,0.4s	**49.04**	**95**	P	**P**	**14 51 39.5**	**+1.0**
TXAR	**Lajitas Array**	**49.04**	**95**	P	**P**	**14 51 37.4**	**-1.2**
SONM	**Songino Array** comp=Z,0.7nm,0.6s,baz=60,slow=7.0,SNR=5.9 comp=Z,0.7nm,0.6s	**53.70**	**303**	P	**P**	**14 52 13.4**	**+0.2**

HHC	**Hu-ho-hao-te**	**55.83**	**294**	*eP*	**P**	**14 52 29.9**	**+1.2**
HHC	comp=Z,5.0nm,0.6s			pmax	pmax		
ZALV	**Zalesovo Beam** comp=Z,0.4nm,0.3s,baz=316,slow=46,SNR=1.8 comp=Z,0.4nm,0.3s	**58.77**	**320**	P	**P**	**14 52 48.0**	**-1.1**
KURK	**Kurchatov**	**63.66**	**321**	P	**P**	**14 53 22.7**	**+0.5**
KURK	**Kurchatov** comp=Z,1.5nm,0.6s	**63.66**	**321**	IAmb	IAmb	14 53 23.5	
KURBB	**Kurchatov Arra** comp=Z,0.7nm,0.3s,baz=30,slow=7.3,SNR=12 comp=Z,0.7nm,0.3s	**63.77**	**321**	P	**P**	**14 53 22.7**	**-0.2**
BVAR	**Borovoye Array** comp=Z,2.7nm,0.6s,baz=42,slow=6.2,SNR=18 comp=Z,2.7nm,0.6s	**64.57**	**327**	P	**P**	**14 53 28.6**	**+0.4**
FINES	**FINESS Array B** comp=Z,2.9nm,0.6s,baz=17,slow=8.0,SNR=12 comp=Z,2.9nm,0.6s	**64.80**	**355**	P	**P**	**14 53 29.1**	**-0.4**
NOA	**NORSAR Array B** comp=Z,0.4nm,0.6s,baz=358,slow=3.1,SNR=1.2 comp=Z,0.4nm,0.6s	**65.35**	**3**	P	**P**	**14 53 32.3**	**-1.0**
MKAR	**Makanchi Array** comp=Z,0.8nm,0.7s,baz=43,slow=6.1,SNR=12 comp=Z,0.8nm,0.7s	**65.41**	**317**	P	**P**	**14 53 33.3**	**-0.5**
HFS	**Hagfors** comp=Z,3.7nm,0.8s,baz=11,slow=3.2,SNR=11 comp=Z,3.7nm,0.8s	**66.32**	**2**	P	**P**	**14 53 39.2**	**-0.1**
AB31	**Akbulak array**	**71.02**	**332**	P	**P**	**14 54 09.0**	**+0.2**
PZH	**PanZhiHua**	**71.93**	**290**	P	**P**	**14 54 15.2**	**+0.4**
AAK	**Ala-Archa**	**71.96**	**319**	P	**P**	**14 54 15.2**	**+0.3**
AAK	comp=Z,3.0nm,0.8s			IAmb	IAmb	14 54 16.4	
KSH2	**Kashi**	**74.50**	**316**	P	**P**	**14 54 31.0**	**+1.2**
KSH2	comp=Z,4.0nm,1.0s			pmax	pmax		
CHGR	**Chuyangaron**	**77.43**	**321**	P	**P**	**14 54 46.5**	**0.0**
CMAR	**Chiang Mai Arr** comp=Z,0.6nm,0.4s,baz=25,slow=5.2,SNR=4.9 comp=Z,0.6nm,0.4s	**79.86**	**287**	P	**P**	**14 55 00.5**	**+0.4**
H03N2	**Juan Fernandez** baz=322,slow=77,SNR=11	**113.07**	**115**	T	T	17 04 42.5	
H03N1	**Juan Fernandez** baz=322,slow=77,SNR=14	**113.08**	**115**	T	T	17 04 43.8	
H03N3	**Juan Fernandez** baz=322,slow=77,SNR=14	**113.08**	**115**	T	T	17 04 37.9	

SJA ***09*** *15:29:12.9±0.7, 30°.37S×72°.55W, h15km, ML4.1, MW4.4*
NEIC ***09*** *15:29:16.0±1.2, 30°.42S±0°.05×72°.22W±0°.07, h9km±6km, mb4.3/3, ML4.0(GUC), Error ellipse: s-maj=8.5km s-min=7.0km az=104.0*
IDC ***09*** *15:29:16.9±0.9, 30°.55S×71°.73W, h0km, mb3.9/5, mbtmp3.9/8, ML3.6/3, MS3.2/1, Error ellipse: s-maj=28.0km s-min=16.1km az=34.0*
GUC ***09*** *15:29:17.4±0.6, 30°.47S×72°.16W, h33km±2km, ML4.0*

ISC 09 15:29:17.2±0.6,**30°.45S**±0°.03×**72°.05W**±0°.04,**h10**km,**n85,** σ1§**86**/104,**mb3.9**/4,**8D**,**Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.42**	**122**	Pg	**Pb**	**15 29 27.4**	**+0.7**
CO05	**La Serena**	**0.88**	**53**		**Pn**	**15 29 34.9**	**-0.6**
CO05	**La Serena**	**0.88**	**53**	*eP*	**Pn**	**15 29 35.0**	**-0.6**
CO05				*i* S	**Sn**	**15 29 48.2**	**-0.2**
CO05	comp=N,7μm,0.7s			IAML		15 29 50.5	
GO04	**Tololo Observa**	**1.11**	**76**		**Pn**	**15 29 39.1**	**0.0**
GO04	**Tololo Observa**	**1.11**	**76**	*eP*	**Pn**	**15 29 39.1**	**0.0**
GO04				*i* S	**Sn**	**15 29 56.1**	**+1.5**
GO04	comp=N,8μm,0.4s			IAML		15 30 01.2	
CO02	**Combarbal**	**1.17**	**130**		**Pb**	**15 29 39.6**	**-0.1**
CO02	**Combarbal**	**1.17**	**130**	*eP*	**Pb**	**15 29 39.5**	**-0.2**
CO02				*i* S	**Sn**	**15 29 55.8**	**-0.1**
CO02	comp=N,8μm,0.3s			IAML		15 29 59.4	
CO03	**El Pedregal**	**1.23**	**109**		**Pb**	**15 29 40.7**	**0.0**
CO03	**El Pedregal**	**1.23**	**109**	*eP*	**Pb**	**15 29 40.7**	**0.0**
CO03				*i* S	**Sn**	**15 29 58.2**	**+0.8**
CO03	comp=N,2μm,0.4s			IAML		15 30 03.4	
CO01	**Juntas del Tor**	**1.76**	**75**		**Pb**	**15 29 49.1**	**-0.5**
CO01	**Juntas del Tor**	**1.76**	**75**	*eP*	**Pb**	**15 29 49.4**	**-0.2**
CO01				*eS*	**Sg**	**15 30 13.0**	**-0.6**
CO01	comp=N,1μm,0.5s			IAML		15 30 17.6	
CO04	**Los Peladeros**	**1.84**	**150**		**Pn**	**15 29 49.2**	**+0.2**
CO04	**Los Peladeros**	**1.84**	**150**	*eP*	**Pn**	**15 29 49.0**	**-0.1**
CO04				*i* S	**Sn**	**15 30 12.9**	**+0.4**
CO04	comp=N,2μm,0.7s			IAML		15 30 21.8	
LCO	**Las Campanas**	**1.85**	**40**		**Pn**	**15 29 49.5**	**+0.3**
LCO	**Las Campanas**	**1.85**	**40**	*eP*	**Pn**	**15 29 49.6**	**+0.3**
VA06	**Catapilco**	**2.20**	**163**		**Pn**	**15 29 53.5**	**-0.3**
VA06	**Catapilco**	**2.20**	**163**	*eP*	**Pn**	**15 29 53.4**	**-0.4**
VA06	comp=E,2μm,0.1s			IAML		15 30 39.4	
AC05	**El Transito**	**2.23**	**44**		**Pn**	**15 29 53.9**	**-0.4**
AC05	**El Transito**	**2.23**	**44**	*eP*	**Pn**	**15 29 54.7**	**+0.4**
AC05				*eS*	**Sb**	**15 30 23.7**	**-1.6**
AC05	comp=E,749nm,0.4s			IAML		15 30 38.2	
AROD	**Rodeo**	**2.24**	**83**	*eP*	**Pb**	**15 29 58.4**	**+0.4**
AROD				*eS*	**Sg**	**15 30 32.7**	**+3.4**
AC04	**Llanos de Chal**	**2.39**	**21**		**Pn**	**15 29 55.6**	**-0.9**
AC04	**Llanos de Chal**	**2.39**	**21**	*eP*	**Pn**	**15 29 55.7**	**-0.8**
AC04				*i* S	**Sn**	**15 30 26.4**	**+0.6**
ACDV	**Cuesta del Vie**	**2.55**	**84**	*eP*	**Pb**	**15 30 04.1**	**+1.0**
ACDV				*eS*	**Sg**	**15 30 41.1**	**+2.0**
ACDV	comp=Z,397nm,0.5s			IAML		15 30 47.0	
ACCO	**Cerro Coronel**	**2.58**	**94**	*eP*	**Pb**	**15 30 03.8**	**+0.1**
ACCO				*eP*	**Pg**	**15 30 04.1**	**-2.5**
ACCO				*eS*	**Sg**	**15 30 42.5**	**+2.4**
VA03	**San Esteban**	**2.64**	**151**		**Pn**	**15 29 59.7**	**-0.2**
VA03	**San Esteban**	**2.64**	**151**	*eP*	**Pn**	**15 30 01.0**	**+1.1**
VA03	comp=E,1μm,0.5s			IAML		15 30 43.9	
VA03	**San Esteban**	**2.64**	**151**	*eP*	**Pn**	**15 30 01.4**	**+1.5**
VA03				*eS*	**Sb**	**15 30 37.4**	**+0.3**
VA03	comp=Z,613nm,0.6s			IAML		15 30 52.3	
RTLS	**Leoncito**	**2.72**	**120**	*eP*	**Pb**	**15 30 05.4**	**-0.7**
RTLS				*eS*	**Sb**	**15 30 40.1**	**+0.5**
RTLS	comp=Z,1μm,0.6s			IAML		15 30 48.8	
AUSP	**Uspallata**	**2.88**	**129**	*eP*	**Pb**	**15 30 07.6**	**-1.3**
AUSP				*eS*	**Sb**	**15 30 46.1**	**+1.7**
MT02	**Curacav**	**2.91**	**165**		**Pn**	**15 30 03.1**	**-0.5**
MT02	**Curacav**	**2.91**	**165**	*i* S	**Sn**	**15 30 38.1**	**-0.4**
MT02	comp=E,323nm,0.7s			IAML		15 30 52.3	
PEL	**Peldehue**	**2.93**	**157**		**Pn**	**15 30 03.4**	**-0.4**
ZON	**Zonda**	**3.09**	**112**		**Pn**	**15 30 06.1**	**0.0**
ZON	**Zonda**	**3.09**	**112**	*eP*	**Pb**	**15 30 10.7**	**-1.7**
ZON				*eS*	**Sb**	**15 30 52.6**	**+2.4**
ZON	comp=Z,284nm,2.8s			IAML		15 31 01.7	
MT05	**Renca**	**3.14**	**160**	Pn	**Pn**	**15 30 06.8**	**0.0**
RTLL	**Cerro Villicun**	**3.19**	**107**	*eP*	**Pn**	**15 30 07.6**	**+0.1**
RTLL				*eP*	Pb	15 30 07.6	-6.5
RTLL				*eP*	Pg	15 30 11.9	-6.5
RTLL				*eP*		15 30 15.6	
RTLL				*eS*	**Sb**	**15 30 52.6**	**-0.5**
RTLL				*eS*	**Sg**	**15 30 55.1**	**-4.7**
RTLL	comp=Z,388nm,0.7s			IAML		15 31 09.1	
MT16	**CCHEN**	**3.24**	**157**		**Pn**	**15 30 08.3**	**+0.1**
GO03	**Copiapo**	**3.26**	**30**		**Pn**	**15 30 07.7**	**-0.7**
GO03	**Copiapo**	**3.26**	**30**	*eP*	**Pn**	**15 30 08.3**	**-0.1**
GO03	comp=E,230nm,0.4s			IAML		15 31 11.6	
MT04	**Ro Olivares**	**3.37**	**152**	*eP*	**Pn**	**15 30 12.0**	**+1.9**
MT04				*i* S	**Sn**	**15 30 50.5**	**+0.4**
MT04	comp=E,215nm,0.6s			IAML		15 31 11.9	
AC06	**Mina Casimiro**	**3.42**	**26**		**Pn**	**15 30 10.2**	**-0.3**
AC06	**Mina Casimiro**	**3.42**	**26**	*eP*	**Pn**	**15 30 10.6**	**-0.1**
AC06	comp=N,312nm,0.6s			IAML		15 31 13.2	
MT09	**Talagante**	**3.44**	**165**		**Pn**	**15 30 11.1**	**+0.2**
CFA	**Coronel Fontan** comp=N,4.9nm,0.3s,baz=298,slow=14,SNR=44	**3.47**	**110**	Pn	**Pn**	**15 30 06.8**	**-4.5**
CFA				Pg	**Pb**	**15 30 14.6**	**-4.2**
CFA	comp=N,4.9nm,0.3s,baz=296,slow=15,SNR=24			Lg	Lg	15 30 59.4	
MT01	comp=N,15nm,0.3s,baz=96,slow=18,SNR=7.2 **Popeta**	**3.47**	**169**		**Pn**	**15 30 10.7**	**-0.6**
ASAL	**Salagasta**	**3.48**	**129**	*eP*	**Pb**	**15 30 16.2**	**-2.7**
ASAL				*eS*	**Sb**	**15 31 02.6**	**+1.3**
ARCO	**CERRO ARCO**	**3.57**	**133**	*eP*	Pn	15 30 02.5	-10
ARCO				*eS*	**Sb**	**15 31 07.6**	**+3.6**
ARCO	comp=Z,210nm,1.3s			IAML		15 31 15.3	
MT13	**San Alfonso**	**3.61**	**156**		**Pn**	**15 30 13.1**	**-0.2**
LMEL	**Las Melosas**	**3.73**	**156**	*eP*	**Pn**	**15 30 16.3**	**+1.3**
LMEL				*i* S	**Sn**	**15 30 59.0**	**-0.1**
BO04	**La Punta**	**3.73**	**161**	*eP*	**Pn**	**15 30 15.8**	**+0.9**
VCA	**Vinchina**	**3.76**	**64**	*eP*	**Pb**	**15 30 20.2**	**-3.6**
VCA				*eP*	Pn	15 30 20.6	+5.2
VCA				*eS*	**Sg**	**15 31 15.6**	**-2.3**
VCA				*eS*	**Sb**	**15 31 16.6**	**+7.2**
VCA	comp=Z,394nm,0.7s			IAML		15 31 21.7	
AAGR	**Agrelo**	**3.80**	**135**	*eP*	**Pn**	**15 30 15.6**	**-0.3**
AAGR				*eS*	**Sg**	**15 31 18.6**	**-0.6**
AAGR	comp=Z,265nm,1.1s			IAML		15 31 42.0	
AVFE	**Valle Fertil**	**3.97**	**94**	*eP*	**Pn**	**15 30 21.4**	**+3.2**
AVFE				*eS*	**Sb**	**15 31 13.1**	**-2.3**
AVFE	comp=Z,243nm,0.8s			IAML		15 31 25.4	
AC02	**Maricunga**	**4.42**	**36**	*eP*	**Pn**	**15 30 20.6**	**-4.2**
AC02	comp=Z,118nm,0.8s			IAML		15 31 45.1	
AC01	**Pan de Azucar**	**4.47**	**17**		**Pn**	**15 30 23.2**	**-1.9**
ACLC	**CERRO LA CRUZ**	**4.54**	**78**	*eP*	**Pn**	**15 30 29.5**	**+3.3**
ACLC				*eS*	**Sb**	**15 31 27.6**	**-4.3**
ACLC	comp=Z,109nm,1.0s			IAML		15 31 41.0	
TINO	**Tinogasta**	**4.58**	**60**	*eP*	**Pn**	**15 30 29.7**	**+3.0**
ACHE	**Chepes**	**4.69**	**100**	*eP*	Pn	15 30 21.7	-6.5
ACHE				*eS*	**Sb**	**15 31 33.1**	**-3.0**
BI02	**San Fabin de**	**6.23**	**174**		**Pn**	**15 30 48.8**	**-0.5**
H03N1	**Juan Fernandez** baz=71,slow=72,SNR=1046	**6.55**	**241**	T	T	15 37 53.2	
H03N2	**Juan Fernandez** baz=71,slow=72,SNR=942	**6.57**	**241**	T	T	15 37 52.5	
H03N3	**Juan Fernandez** baz=71,slow=72,SNR=712	**6.57**	**241**	T	T	15 37 51.1	
PLCA	**Paso Flores** comp=Z,0.1nm,0.3s,baz=337,slow=8.8,SNR=3.1 comp=Z,1.1nm,0.7s	**10.33**	**174**	Pn	**Pn**	**15 31 45.9**	**+0.4**
CPUP	**Villa Florida** comp=Z,101nm,19.0s,baz=264,slow=40	**13.59**	**76**	LR	LR	15 38 06.3	
LPAZ	**La Paz** comp=Z,0.2nm,0.3s,baz=165,slow=5.1,SNR=3.8 comp=Z,0.8nm,0.4s	**14.54**	**15**	Pn	**Pn**	**15 32 45.9**	**+2.2**
LPAZ	**La Paz**	**14.54**	**15**	Pn	**Pn**	**15 32 43.0**	**-0.7**
PLTB	**Pedras Altas**	**15.86**	**99**	P	**P**	**15 33 04.7**	**+0.4**
PLTB	comp=Z,15nm,1.3s			IAmb	IAmb	15 33 46.0	
SIV	**San Ignacio** comp=Z,5.5nm,0.8s,baz=274,slow=8.1	**17.55**	**37**	P	**P**	**15 33 23.1**	**-0.2**
BDFB	**Brasilia** comp=Z,3.4nm,0.7s,baz=239,slow=9.6,SNR=3.9 comp=Z,3.4nm,0.7s	**26.50**	**62**	P	**P**	**15 34 54.3**	**-0.7**
BDFB	**Brasilia** comp=Z,8.3nm,1.4s	**26.50**	**62**	IAmb	IAmb	15 35 09.6	
SNAA	**Sanae** comp=Z,1.7nm,0.5s,baz=291,slow=8.6,SNR=2.3 comp=Z,1.7nm,0.5s	**54.88**	**159**	P	**P**	**15 38 47.4**	**0.0**
SNAA	**Sanae** comp=Z,7.7nm,1.2s	**54.88**	**159**	IAmb	IAmb	15 39 15.2	
TXAR	**Lajitas Array** comp=Z,0.1nm,0.6s,baz=152,slow=8.8,SNR=6.0 comp=Z,0.1nm,0.6s	**66.65**	**330**	P	**P**	**15 40 11.5**	**+3.3**
NVAR	**Mina Array Bea** comp=Z,0.3nm,0.6s,baz=148,slow=3.6,SNR=2.2 comp=Z,0.3nm,0.6s	**80.98**	**325**	P	**P**	**15 41 35.1**	**+3.0**
TORD	**Torodi Ar. Bea** comp=Z,1.8nm,0.8s,baz=244,slow=7.1,SNR=8.1 comp=Z,1.8nm,0.8s	**83.02**	**70**	P	**P**	**15 41 43.1**	**0.0**
H11S2	**WAKE ISLAND Hy** baz=115,slow=75,SNR=12	**125.74**	**272**	T	T	18 07 06.7	
H11S1	**WAKE ISLAND Hy** baz=115,slow=75,SNR=11	**125.75**	**272**	T	T	18 07 03.5	
H11S3	**WAKE ISLAND Hy** baz=115,slow=75,SNR=8.6	**125.75**	**272**	T	T	18 07 04.1	
BVAR	**Borovoye Array** comp=Z,0.7nm,0.7s,baz=282,slow=4.6,SNR=4.3	**144.62**	**39**	PKP	**PKPdf**	**15 48 53.7**	**+0.1**
KURBB	**Kurchatov Arra** comp=Z,1.0nm,0.2s,baz=302,slow=3.3,SNR=6.5	**150.21**	**39**	PKPbc	**PKiKP**	**15 49 08.9**	**+0.1**
KURK	**Kurchatov**	**150.21**	**39**		**PKiKP**	**15 49 08.9**	**+0.1**
ZALV	**Zalesovo Beam** comp=Z,3.4nm,0.5s,baz=305,slow=3.9,SNR=17	**151.18**	**29**	PKPbc	**PKiKP**	**15 49 10.9**	**+0.2**
MKAR	**Makanchi Array** comp=Z,0.1nm,0.4s,baz=301,slow=0.8,SNR=5.2	**154.31**	**43**	PKP	**PKPdf**	**15 49 09.0**	**-0

H08S3	**Diego Garcia H**	**28.37**	**257**	T		T		16 37 27.8	
	baz=80,slow=75,SNR=32								
H08S1	**Diego Garcia H**	**28.38**	**257**	T		T		16 37 28.2	
	baz=80,slow=75,SNR=21								
KNRA	**Kununurra**	**31.27**	**118**	P		**P**		**16 08 44.8**	**-2.9**
KNRA				IAmb		IAmb		16 09 18.4	
	comp=Z,8.4nm,1.1s								
SAUI	**Saumlaki**	**31.45**	**102**	P		**P**		**16 08 46.7**	**-2.6**
EVN	**Everest**	**32.23**	**337**			**P**		**16 08 56.0**	**-0.7**
EVN				IAmb		IAmb		16 08 58.7	
	comp=Z,6.7nm,1.4s								
LZH	**Lanzhou**	**37.73**	**5**	*eP*		**P**		**16 09 46.1**	**+2.6**
WRA	**Warramunga Arr**	**37.85**	**121**	P		**P**		**16 09 43.0**	**-1.5**
	comp=Z,0.6nm,0.3s,baz=303,slow=9.1,SNR=47								
WRA				PcP		**PcP**		**16 11 59.5**	**-0.6**
	comp=Z,0.6nm,0.9s,baz=313,slow=2.6,SNR=6.6								
	comp=Z,0.6nm,0.3s								
WRAB	**Tennant Creek**	**37.85**	**121**	P		**P**		**16 09 42.8**	**-1.8**
WRAB				IAmb		IAmb		16 09 44.4	
	comp=Z,7.0nm,1.4s								
NJ2	**Nanjing**	**37.88**	**26**	*eP*		**P**		**16 09 45.4**	**+0.9**
NJ2				pmax		pmax			
	comp=Z,9.0nm,0.5s								
ASAR	**Alice Springs**	**39.15**	**127**	P		**P**		**16 09 54.7**	**-0.7**
	comp=Z,1.5nm,0.5s,baz=306,slow=8.0,SNR=70								
ASAR				PcP		**PcP**		**16 12 04.2**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=310,slow=2.8,SNR=6.1								
	comp=Z,1.5nm,0.5s								
AS31	**Alice Springs**	**39.15**	**127**	P		**P**		**16 09 53.1**	**-2.4**
HHC	**Hu-ho-hao-te**	**43.57**	**12**	*eP*		**P**		**16 10 34.6**	**+3.2**
HHC				pmax		pmax			
	comp=Z,4.0nm,0.6s								
INKA	**Innaminka**	**46.50**	**128**	P		**P**		**16 10 54.4**	**-0.5**
KSH2	**Kashi**	**46.59**	**333**	P		**P**		**16 10 55.7**	**+0.2**
KSH2				pmax		pmax			
	comp=Z,2.0nm,0.8s								
WMQ	**Urumqi**	**46.72**	**347**	*eP*		**P**		**16 10 58.2**	**+1.9**
WMQ				pmax		pmax			
	comp=Z,14nm,0.9s								
WUS	**Wushi**	**46.82**	**338**	IAmb		IAmb		16 10 58.8	
	comp=Z,6.5nm,0.7s								
KDJ	**Kajisay**	**48.40**	**337**	P		**P**		**16 11 09.8**	**+0.2**
KDJ				IAmb		IAmb		16 11 12.2	
	comp=Z,5.8nm,0.7s								
SHAA	**Shahritus**	**49.15**	**326**	P		**P**		**16 11 14.5**	**-0.8**
SHAA				IAmb		IAmb		16 11 19.3	
	comp=Z,11nm,1.1s								
BOOM	**Boomskoye usch**	**49.20**	**336**	P		**P**		**16 11 15.6**	**-0.1**
BOOM				IAmb		IAmb		16 11 17.2	
	comp=Z,3.3nm,0.7s								
AAK	**Ala-Archa**	**49.92**	**335**			**P**		**16 11 21.5**	**+0.4**
MKAR	**Makanchi Array**	**50.84**	**344**	P		**P**		**16 11 27.9**	**+0.1**
	comp=Z,4.5nm,0.6s,baz=150,slow=7.8,SNR=74								
	comp=Z,4.5nm,0.6s								
MAKZ	**Makanchi**	**50.94**	**344**			**P**		**16 11 28.5**	**0.0**
MAKZ				IAmb		IAmb		16 11 29.4	
	comp=Z,2.8nm,0.8s								
KKAR	**Karatay Array**	**52.05**	**332**	P		**P**		**16 11 36.6**	**-0.4**
USRK	**Ussuriysk Ar.**	**53.73**	**28**	P		**P**		**16 11 49.0**	**-0.3**
	comp=Z,2.7nm,0.6s,baz=220,slow=6.6,SNR=5.0								
	comp=Z,2.7nm,0.6s								
KURBB	**Kurchatov Arra**	**55.36**	**343**	P		**P**		**16 12 00.7**	**-0.2**
	comp=Z,3.7nm,0.7s,baz=163,slow=7.1,SNR=32								
	comp=Z,3.7nm,0.7s								
KURK	**Kurchatov**	**55.42**	**343**			**P**		**16 12 01.3**	**-0.1**
KURK				IAmb		IAmb		16 12 02.1	
	comp=Z,5.0nm,0.7s								
ZAA0	**Zalesovo Array**	**56.94**	**349**	IAmb		IAmb		16 12 13.0	
	comp=Z,7.5nm,0.9s								
ZALV	**Zalesovo Beam**	**56.94**	**349**	P		**P**		**16 12 11.7**	**-0.5**
	comp=Z,6.7nm,0.7s,baz=176,slow=5.5,SNR=29								
	comp=Z,6.7nm,0.7s								
BORK	**Borovoye**	**60.07**	**340**	P		**P**		**16 12 33.2**	**-0.8**
BORK				IAmb		IAmb		16 12 34.0	
	comp=Z,2.4nm,0.8s								
H04N2	**CROZET ISLANDS**	**61.24**	**216**	T		T		17 18 25.6	
	baz=59,slow=75,SNR=125								
H04N1	**CROZET ISLANDS**	**61.25**	**216**	T		T		17 18 27.1	
	baz=59,slow=75,SNR=109								
H04N3	**CROZET ISLANDS**	**61.26**	**216**	T		T		17 18 16.2	
	baz=59,slow=75,SNR=85								
H04S1	**CROZET ISLANDS**	**61.53**	**216**	T		T		17 18 39.2	
	baz=58,slow=75,SNR=6.1								
H04S3	**CROZET ISLANDS**	**61.54**	**216**	T		T		17 18 42.5	
	baz=58,slow=75,SNR=12								
AB31	**Akbulak array**	**61.55**	**331**			**P**		**16 12 43.4**	**-0.7**
ABKAR	**Akbulak array**	**61.55**	**331**	P		**P**		**16 12 43.5**	**-0.6**
H04S2	**CROZET ISLANDS**	**61.55**	**216**	T		T		17 18 38.9	
	baz=58,slow=75,SNR=6.8								
ARTI	**Arti**	**67.11**	**336**	P		**P**		**16 13 19.7**	**-0.7**
KBZ	**Khabaz**	**68.31**	**319**	P		**P**		**16 13 28.4**	**+0.2**
	comp=Z,2.7nm,0.8s,baz=115,slow=5.0,SNR=7.2								
	comp=Z,2.7nm,0.8s								
NRIK	**Noril'sk**	**71.43**	**355**	P		**P**		**16 13 46.0**	**-0.9**
	comp=Z,2.0nm,0.5s,baz=165,slow=7.4,SNR=6.0								
	comp=Z,2.0nm,0.5s								
BR131	**Keskin Array S**	**73.38**	**312**	P		**P**		**16 13 58.2**	**-1.0**
BRTR	**Keskin Array B**	**73.38**	**312**	P		**P**		**16 13 58.2**	**-1.0**
	comp=Z,1.0nm,0.7s,baz=144,slow=6.1,SNR=5.5								
	comp=Z,1.0nm,0.7s								
TIXI	**Tiksi**	**75.51**	**9**	P		**P**		**16 14 09.5**	**-1.3**
TIXI				IAmb		IAmb		16 14 10.9	
	comp=Z,5.3nm,0.5s								
BURAR	**Bucovina Array**	**81.26**	**319**	P		**P**		**16 14 44.0**	**+0.8**
BUR08	**Bucovina Ar. S**	**81.28**	**319**	P		**P**		**16 14 44.1**	**+0.8**
FIA1	**FINESS Array S**	**84.01**	**332**	P		**P**		**16 14 57.0**	**0.0**
FINES	**FINESS Array B**	**84.01**	**332**	P		**P**		**16 14 57.1**	**+0.2**
	comp=Z,1.1nm,0.4s,baz=108,slow=6.5,SNR=12								
	comp=Z,1.1nm,0.4s								
FINES	**FINESS Array B**	**84.01**	**332**	P		**P**		**16 14 57.0**	**0.0**
ARCES	**ARCESS Array B**	**86.31**	**340**	P		**P**		**16 15 08.3**	**-0.1**
	comp=Z,2.2nm,0.8s,baz=90,slow=4.2,SNR=5.7								
	comp=Z,2.2nm,0.8s								
ARCES	**ARCESS Array B**	**86.31**	**340**	P		**P**		**16 15 08.3**	**-0.1**
HFS	**Hagfors**	**89.79**	**330**	P		**P**		**16 15 25.6**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=197,slow=4.6,SNR=6.6								
	comp=Z,0.5nm,0.4s								
TXAR	**Lajitas Array**	**144.26**	**37**	PKP		PKPbc		16 22 02.1	+0.4
	comp=Z,1.3nm,0.6s,baz=250,slow=0.7,SNR=18								
TXAR	**Lajitas Array**	**144.26**	**37**			**PKPab**		**16 22 01.8**	**+0.5**

*MDD **09** 16:04:29.6±0.3,33.75N×14.77W,h30km,Mb4.9/32, M_mb4.4/34,Error ellipse: s-maj=5.0km s-min=1.3km az=124.0*
*IGIL **09** 16:04:31.3,33.73N×14.66W,h18km,ML2.8*
*CNRM **09** 16:04:31.9,33.74N×14.64W,h54km,ML3.9*
*INMG **09** 16:04:34.5±2.0,33.73N×14.66W,h10km,ML3.3,Error ellipse: s-maj=4.5km s-min=1.8km az=123.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NE Porto Santo (Madeira)*

ISC 09 16:04:25.1±0.7,33.71N±0.05×14.81W±0.03,h10km,n138, σ2251/180,37C,Madeira Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMPST	**Porto Santo, M**	**1.43**	**244**	⇑*iP*		**Pg**		**16 04 56.0**	**+3.6**
PMPST				*eS*		**Sg**		**16 05 12.4**	**+1.5**
PMPST				*i*	IAML			16 05 13.8	
PMPST				*i*	IAML			16 05 14.1	
PMPST				*i*	IAML			16 05 17.1	
PMPS	**Porto Santo**	**1.43**	**243**	⇑*iP*		**Pg**		**16 04 56.1**	**+3.5**
PMPS				*eS*		**Sg**		**16 05 13.0**	**+1.8**
PMAR	**Madeira**	**2.02**	**241**	*eP*		**Pg**		**16 05 04.3**	**+0.5**
PMAR				*eS*		**Sg**		**16 05 27.9**	**-2.2**
PMAR				*i*	IAML			16 05 29.9	
PMAR				*i*	IAML			16 05 30.1	
PMAR				*i*	IAML			16 05 30.9	
PMAR	**Madeira**	**2.02**	**241**	P		**Pg**		**16 05 04.6**	**+0.7**
PMAR				S		**Sg**		**16 05 32.3**	**+2.2**
FUL	**Funchal**	**2.04**	**239**	⇑*iP*		**Pg**		**16 05 04.6**	**+0.3**
FUL				*eS*		**Sg**		**16 05 27.5**	**-3.4**
FUL				*i*	IAML			16 05 28.5	
FUL				*i*	IAML			16 05 29.0	
FUL				*i*	IAML			16 05 29.0	
PMOZ	**Porto Moniz, M**	**2.19**	**247**	Pn		**Pg**		**16 05 06.6**	**-0.4**
PMOZ				Sn		**Sg**		**16 05 33.1**	**-2.4**
PMOZ	**Porto Moniz, M**	**2.19**	**247**	⇑*eP*		**Pg**		**16 05 06.7**	**-0.4**
PMOZ				*eS*		**Sb**		**16 05 31.1**	**-0.9**
PMOZ				*i*	IAML			16 05 40.5	
PMOZ				*i*	IAML			16 05 43.0	
PMOZ				*i*	IAML			16 05 44.7	
PMOZ	**Porto Moniz, M**	**2.19**	**247**	P		**Pg**		**16 05 06.7**	**-0.4**
PMOZ				S		**Sg**		**16 05 34.7**	**-0.8**

CDLV	**Cueva Verdes**	**4.68**	**165**	Pn		**Pn**		**16 05 39.8**	**+4.0**
CDLV				⇑*i*IVmb_VC				16 05 44.3	
	1μm,SNR=1.4								
CDLV				Sn		**Sn**		**16 06 27.5**	**-2.6**
EFAM	**Famara**	**4.70**	**166**	Pn		**Pn**		**16 05 39.5**	**+3.5**
EFAM				⇑*i*IVmb_VC				16 05 41.0	
	1μm,SNR=1.9								
EFAM				Sn		**Sn**		**16 06 27.5**	**-3.1**
EAH	**EAH**	**4.86**	**114**	P		**Pn**		**16 05 40.9**	**+2.7**
EAH				S		**Sn**		**16 06 34.9**	**+0.4**
CFUE	**Fuerteventura**	**5.10**	**171**	Pn		**Pn**		**16 05 44.9**	**+3.3**
CFUE				⇑*i*IVmb_VC				16 05 48.3	
	938nm,SNR=3.9								
CFUE				Sn		**Sn**		**16 06 36.5**	**-4.1**
CFTV	**Fuerteventura**	**5.32**	**173**	Pn		**Pn**		**16 05 44.6**	**+0.1**
CFTV				⇑*i*IVmb_VC				16 05 54.0	
	608nm,SNR=1.7								
CFTV				Sn		**Sn**		**16 06 42.5**	**-3.4**
CGIN	**Giniginamar, F**	**5.52**	**173**	Pn		**Pn**		**16 05 48.8**	**+1.5**
CGIN				Sn		**Sn**		**16 06 47.5**	**-3.4**
CGUI	**Guimar, Teneri**	**5.55**	**195**	⇑*i*IVmb_VC				16 05 52.6	
	897nm,SNR=1.3								
CGUI				Sn		**Sn**		**16 06 49.9**	**-1.8**
CREA	**Los Realejos,**	**5.55**	**196**	⇑*i*IVmb_VC				16 05 51.9	
	811nm,SNR=1.2								
CREA				Sn		**Sn**		**16 06 48.4**	**-3.4**
CFOR	**Fortaleza, Los**	**5.59**	**196**	Sn		**Sn**		**16 06 49.6**	**-3.5**
CROM	**Garafia, La Pa**	**5.59**	**209**	Pn		**Pn**		**16 05 49.4**	**+0.8**
CROM				⇑*i*IVmb_VC				16 05 49.7	
	1μm,SNR=1.9								
CROM				Sn		**Sn**		**16 06 48.8**	**-4.2**
CNOR	**Icod de los Vi**	**5.61**	**197**	Sn		**Sn**		**16 06 52.0**	**-1.4**
CDIE	**La Orotava (Te**	**5.61**	**196**	Sn		**Sn**		**16 06 50.4**	**-3.1**
GGC	**Guia, Gran Can**	**5.62**	**188**	⇑*i*IVmb_VC				16 05 54.8	
	1μm,SNR=1.7								
GGC				Sn		**Sn**		**16 06 49.9**	**-3.5**
CGOR	**Puntagorda, La**	**5.62**	**210**	Pn		**Pn**		**16 05 52.0**	**+3.2**
CGOR				⇑*i*IVmb_VC				16 05 56.5	
	1μm,SNR=1.2								
CGOR				Sn		**Sn**		**16 06 49.3**	**-4.1**
MACI	**Morro de la Ar**	**5.63**	**195**	Pn		Pn		16 05 54.1	+5.1
MACI				Sn		**Sn**		**16 06 52.7**	**-1.3**
CMIR	**El Paso, La Pa**	**5.64**	**208**	Sn		**Sn**		**16 06 50.0**	**-4.0**
CRAJ	**Montana Rajada**	**5.64**	**196**	⇑*i*IVmb_VC				16 05 54.9	
	1μm,SNR=1.5								
CRAJ				Sn		**Sn**		**16 06 51.4**	**-2.8**
CDOS	**Garachico, Isl**	**5.65**	**198**	Pn		**Pn**		**16 05 50.1**	**+0.8**
CDOS				Sn		**Sn**		**16 06 51.7**	**-2.6**
CPVI	**La Orotava (Te**	**5.66**	**197**	Pn		Pn		16 05 54.4	+4.8
CPVI				Sn		**Sn**		**16 06 54.1**	**-0.8**
TBT	**Taburiente**	**5.68**	**209**	Pn		**Pn**		**16 05 50.4**	**+0.9**
TBT				⇑*i*IVmb_VC				16 05 55.4	
	489nm,SNR=1.3								
TBT				Sn		**Sn**		**16 06 49.4**	**-5.4**
CCAN	**Las Canadas**	**5.68**	**196**	Pn		**Pn**		**16 05 51.0**	**+1.2**
CCAN				⇑*i*IVmb_VC				16 05 59.2	
	568nm,SNR=1.4								
CCAN				Sn		**Sn**		**16 06 50.4**	**-4.9**
GUIA	**Guia de Isora,**	**5.69**	**197**	Pn		**Pn**		**16 05 53.6**	**+3.8**
GUIA				⇑*i*IVmb_VC				16 06 01.9	
	1μm,SNR=1.4								
GUIA				Sn		**Sn**		**16 06 53.3**	**-2.0**
CCHO	**La Orotava (Te**	**5.70**	**197**	Sn		**Sn**		**16 06 52.6**	**-3.0**
CVIL	**Vilaflor**	**5.75**	**196**	Sn		**Sn**		**16 06 54.6**	**-2.3**
CLAJ	**Vilaflor (Tene**	**5.76**	**197**	Pn		**Pn**		**16 05 52.8**	**+1.9**
CLAJ				Sn		**Sn**		**16 06 52.6**	**-4.5**
CADE	**Adeje, Tenerif**	**5.78**	**197**	⇑*i*IVmb_VC				16 05 56.4	
	436nm,SNR=0.6								
CADE				Sn		**Sn**		**16 06 52.5**	**-4.8**
CGRA	**Granadilla de**	**5.78**	**195**	Sn		**Sn**		**16 06 55.1**	**-2.2**
CTFS	**San Miguel de**	**5.82**	**196**	⇑*i*IVmb_VC				16 05 52.9	
	592nm,SNR=0.9								
CTFS				Sn		**Sn**		**16 06 55.7**	**-2.7**
CLUM	**San Bartolome**	**5.92**	**187**	Pn		**Pn**		**16 05 54.1**	**+1.3**
CLUM				⇑*i*IVmb_VC				16 05 56.7	
	477nm,SNR=0.8								
CLUM				Sn		**Sn**		**16 06 56.5**	**-4.2**
SRHM	**Skhour des Reh**	**5.93**	**100**	P		**Pn**		**16 05 54.9**	**+1.9**
SRHM				S		**Sn**		**16 07 00.4**	**-0.6**
PFVI	**Vila Bisbo**	**5.96**	**53**	Pn		**Pn**		**16 05 55.1**	**+1.8**
PFVI				Sn		Sn		16 06 56.1	-5.5
PFVI	**Vila Bisbo**	**5.96**	**53**	*eP*		**Pn**		**16 05 55.1**	**+1.8**
PFVI				*eS*		Sn		16 06 52.9	-8.7
PFVI	**Vila Bisbo**	**5.96**	**53**	P		**Pn**		**16 05 55.2**	**+1.8**
PFVI				S		**Sn**		**16 06 59.8**	**-1.8**
TANT	**Tantan**	**6.11**	**149**	P		**Pn**		**16 05 59.1**	**+3.7**
TANT				S		**Sn**		**16 07 08.1**	**+2.7**
MORF	**Marmelete**	**6.17**	**53**	*eP*		**Pn**		**16 05 58.0**	**+1.7**
MORF	**Marmelete**	**6.17**	**53**	⇑*eP*		**Pn**		**16 05 57.9**	**+1.7**
MORF				*eS*		Sn		16 06 59.9	-6.9
AVE	**Averroes**	**6.19**	**92**	Pn		Pn		16 06 01.9	+5.4
AVE				Sn		**Sn**		**16 07 04.9**	**-2.4**
AVE	**Averroes**	**6.19**	**92**	P		Pn		16 06 01.9	+5.4
AVE				S		**Sn**		**16 07 07.3**	**0.0**
TTIG	**Tnine Tigouga,**	**6.25**	**119**	P		**Pn**		**16 05 59.3**	**+1.8**
TTIG				S		**Sn**		**16 07 09.1**	**0.0**
PTEO	**Sao Teotonio**	**6.26**	**51**	*eP*		**Pn**		**16 05 59.0**	**+1.6**
PTEO				*eS*		Sn		16 07 02.4	-6.6
OUK	**Oukaimeden**	**6.37**	**111**	P		**Pn**		**16 06 02.4**	**+3.0**
OUK				S		**Sn**		**16 07 12.3**	**0.0**
CTIG	**El Hierro**	**6.48**	**205**	Pn		**Pn**		**16 06 01.6**	**+1.1**
CTIG				⇑*i*IVmb_VC				16 06 06.1	
	927nm,SNR=1.0								
CTIG				Sn		**Sn**		**16 07 10.4**	**-4.2**
CCUM	**Cumbre, El Hie**	**6.56**	**206**	Sn		**Sn**		**16 07 13.0**	**-3.5**
CMCL	**Mercadel, El H**	**6.59**	**206**	Sn		**Sn**		**16 07 14.1**	**-3.2**
RTC	**Rabat Centre**	**6.62**	**85**	Sn		**Sn**		**16 07 14.7**	**-3.3**
PBDV	**Barranco-do-Ve**	**6.62**	**56**	Pn		**Pn**		**16 06 04.6**	**+2.0**
PBDV				Sn		**Sn**		**16 07 13.6**	**-4.4**
PBDV	**Barranco-do-Ve**	**6.62**	**56**	*eP*		**Pn**		**16 06 04.5**	**+2.0**
PBDV				*eS*		Sn		16 07 10.7	-7.4
CCAL	**Punta Orchilla**	**6.63**	**207**	Sn		**Sn**		**16 07 15.7**	**-2.6**
MESJ	**Messejana**	**6.75**	**51**	*eP*		**Pn**		**16 06 05.7**	**+1.4**
MESJ				*eS*		Sn		16 07 14.4	-6.9
MESJ				IAML				16 07 19.1	
	comp=N,7.9nm,0.1s								
MESJ	**Messejana**	**6.75**	**51**	*eP*		**Pn**		**16 06 06.4**	**+2.1**
MESJ				*eS*		Sn		16 07 12.2	-9.1
PCVE	**Castro Verde**	**6.75**	**53**	Pn		**Pn**		**16 06 06.5**	**+2.2**
PCVE				Sn		Sn		16 07 13.2	-8.1
PCVE	**Castro Verde**	**6.75**	**53**	⇑*eP*		**Pn**		**16 06 06.5**	**+2.2**
PCVE				*eS*		Sn		16 07 13.3	-7.9
PMAFR	**Mafra**	**6.87**	**39**	Pn		Sn		**16 06 07.7**	**+1.8**
PMAFR				Sn		Sn		16 07 15.1	-9.1
PMAFR	**Mafra**	**6.87**	**39**	*eP*		**Pn**		**16 06 07.8**	**+1.8**
PMAFR				*eS*		Sn		16 07 12.1	-12
TIO	**Tiouine**	**6.96**	**111**	Pn		Pn		16 06 13.0	+5.7
TIO				Sn		**Sn**		**16 07 25.2**	**-1.4**
TIO	**Tiouine**	**6.96**	**111**	P		**Pn**		**16 06 09.4**	**+2.1**
TIO				S		**Sn**		**16 07 26.9**	**+0.3**
EGRO	**El Granado**	**7.08**	**55**	Pn		**Pn**		**16 06 10.8**	**+2.1**
EGRO				Sn		Sn		16 07 21.6	-7.6
EGRO	**El Granado**	**7.08**	**55**	Pn		**Pn**		**16 06 11.0**	**+2.3**
EGRO				Sn		Sn		16 07 21.2	-8.0
PBEJ	**Beja**	**7.09**	**51**	*eP*		**Pn**		**16 06 10.8**	**+1.9**
PBEJ				*eS*		Sn		16 07 19.7	-10
MOE	**Montemor**	**7.09**	**46**	*eP*		**Pn**		**16 06 10.9**	**+1.9**
MOE				*eS*		Sn		16 07 20.8	-8.8
EVO	**Evora**	**7.30**	**47**	Pn		Pn		**16 06 14.7**	**+2.8**
EVO				Sn		Sn		16 07 26.2	-8.5
EVO	**Evora**	**7.30**	**47**	*eP*		**Pn**		**16 06 14.6**	**+2.8**
EVO				*eS*		Sn		16 07 26.3	-8.5
TISM	**Timmit**	**7.32**	**103**	P		**Pn**		**16 06 14.4**	**+2.3**
TISM				S		**Sn**		**16 07 35.1**	**-0.2**
OUZM	**OUZ**	**7.36**	**110**	P		**Pn**		**16 06 14.7**	**+2.0**
OUZM				S		**Sn**		**16 07 34.3**	**-2.1**
PARRA	**Arraiolos**	**7.47**	**45**	*eP*		**Pn**		**16 06 16.2**	**+2.1**
PARRA				*eS*		Sn		16 07 31.0	-7.9
RSA	**Sarsar**	**7.53**	**79**	P		**Pn**		**16 06 16.8**	**+1.8**
RSA				S		**Sn**		**16 07 39.7**	**-0.6**
PMTG	**Montargil**	**7.53**	**43**	*eP*		**Pn**		**16 06 16.9**	**+1.9**
PMTG				*eS*		Sn		16 07 31.9	-8.4
PSBE	**So Bento**	**7.54**	**38**	*eP*		**Pn**		**16 06 18.0**	**+2.9**
PSBE				*eS*		Sn		16 07 35.3	-5.4
CNIL	**Conil**	**7.65**	**67**	Pn		**Pn**		**16 06 20.3**	**+3.7**
PBAR	**Barrancos**	**7.71**	**53**	Pn		**Pn**		**16 06 19.2**	**+1.8**
PBAR				Sn		Sn		16 07 36.9	-8.0
PBAR	**Barrancos**	**7.71**	**53**	*eP*		**Pn**		**16 06 19.7**	**+2.3**
PBAR				*eS*		Sn		16 07 36.9	-8.0
EMIN	**Mina Concepcio**	**7.75**	**56**	Pn		**Pn**		**16 06 20.3**	**+2.3**
EMIN				Sn		Sn		16 07 38.9	-6.9

EMIN	**Mina Concepcio**	**7.75**	**56**	Pn		**Pn**		**16 06 17.6**	**-0.4**
EMIN				⇑*i*IVmb_VC				16 06 22.1	
	comp=N,251nm,SNR=3.0								
EMIN				Sn		Sn		16 07 37.6	-8.2
PESTR	**Estremoz**	**7.77**	**46**	Pn		**Pn**		**16 06 20.1**	**+1.8**
PESTR				Sn		Sn		16 07 38.1	-8.3
PESTR	**Estremoz**	**7.77**	**46**	*eP*		**Pn**		**16 06 20.5**	**+2.2**
PESTR				*eS*		Sn		16 07 39.9	-6.4
PESTR	**Estremoz**	**7.77**	**46**	P		**Pn**		**16 06 21.2**	**+2.9**
PESTR				S		**Sn**		**16 07 47.1**	**+0.8**
SICH	**Sidi Chahed**	**7.90**	**85**	P		**Pn**		**16 06 22.3**	**+2.3**
SICH				S		**Sn**		**16 07 49.1**	**-0.4**
PSARD	**Sardoal**	**7.94**	**40**	*eS*		Sn		16 07 41.6	-8.8
ESPR	**Espera**	**7.97**	**64**	Pn		**Pn**		**16 06 23.2**	**+2.4**
ESPR				Sn		Sn		16 07 42.9	-8.1
ESPR	**Espera**	**7.97**	**64**	Pn		**Pn**		**16 06 22.5**	**+1.7**
ESPR				⇑*i*IVmb_VC				16 06 25.3	
	comp=N,761nm,SNR=8.9								
ESPR				Sn		Sn		16 07 43.9	-7.2
SMIR	**Smir Dam**	**8.01**	**73**	P		**Pn**		**16 06 23.2**	**+1.8**
SMIR				S		**Sn**		**16 07 52.6**	**+0.5**
ECEU	**Ceuta**	**8.06**	**72**	Pn		**Pn**		**16 06 26.5**	**+4.4**
CEU	**Ceuta**	**8.06**	**72**	Pn		**Pn**		**16 06 26.7**	**+4.6**
CEU				Sn		Sn		16 07 46.8	-6.6
IFR	**Ifrane**	**8.08**	**89**	Pn		**Pn**		**16 06 26.3**	**+3.7**
IFR				Sn		Sn		16 07 46.1	-8.0
PCAS	**Casmilo, Conde**	**8.10**	**37**	*eP*		**Pn**		**16 06 24.6**	**+1.9**
PCAS				*eS*		Sn		16 07 43.7	-11
EJIF	**Jimena Fronter**	**8.13**	**68**	Pn		**Pn**		**16 06 25.2**	**+2.1**
EJIF				Sn		**Sn**		**16 07 50.1**	**-5.0**
PMRV	**Marv??o**	**8.25**	**44**	*eP*		**Pn**		**16 06 26.3**	**+1.4**
PMRV				*eS*		Sn		16 07 48.2	-10
TZRR	**Tazzarine**	**8.35**	**108**	P		**Pn**		**16 06 29.2**	**+2.9**
TZRR				S		**Sn**		**16 08 00.8**	**+0.2**
MD31	**MD31**	**8.45**	**93**	P		**Pn**		**16 06 30.1**	**+2.4**
MD31				S		**Sn**		**16 08 01.8**	**-1.4**
PCBR	**Castelo Branco**	**8.48**	**42**	*eP*		**Pn**		**16 06 30.1**	**+2.2**
PCBR				*eS*		Sn		16 07 55.6	-8.1
E1302	**La Puebla de C**	**8.52**	**64**	Pn		**Pn**		**16 06 31.6**	**+3.1**
E1302				⇑*i*IVmb_VC				16 06 33.7	
	comp=N,541nm,SNR=3.3								
E1302				Sn		**Sn**		**16 07 59.7**	**-5.0**
MDT	**Midelt**	**8.59**	**93**	P		Pn		16 06 34.2	+4.7
MDT				S		**Sn**		**16 08 06.0**	**-0.6**
ZGR	**Zagora**	**8.59**	**112**	P		**Pn**		**16 06 32.4**	**+2.8**
ZGR				S		**Sn**		**16 08 07.3**	**+0.8**

	1.9nm,0.5s									
TNSS	**Tian-Shan**	**2.40**	**346**	*e*P		**Pg**		**16 13 52.9**	**+0.2**
	2.0nm,0.4s									
TNSS				*e*S		**Sg**		**16 14 24.9**	**+1.1**
	3.5nm,0.6s									
SATY	**Saty**	**2.40**	**12**	Pg		**Pb**		**16 13 52.0**	**+1.1**
	1.4nm,0.6s									
SATY				Lg		Lg		16 14 23.4		
	7.9nm,1.0s									
IZV	**Izvestkoviy**	**2.47**	**341**	Pg		**Pg**		**16 13 53.8**	**-0.3**
	2.8nm,0.3s									
IZV				Lg		Lg		16 14 26.5		
	7.5nm,0.7s									
MDOK	**Medeo**	**2.51**	**349**	Pg		**Pg**		**16 13 54.6**	**-0.1**
	11nm,0.6s									
MDOK				Lg		Lg		16 14 27.6		
	10nm,0.9s									
KOTS	**Kotyrbulak**	**2.57**	**350**	Pg		**Pb**		**16 13 55.0**	**+1.3**
	3.5nm,0.5s									
KOTS				Lg		Lg		16 14 28.8		
	13nm,0.7s									
KOTS	**Kotyrbulak**	**2.57**	**350**	*e*P		**Pb**		**16 13 55.0**	**+1.3**
	3.5nm,0.5s									
KOTS				*e*S		**Sg**		**16 14 28.8**	**-0.3**
	13nm,0.2s									
MTBS	**Maitube**	**2.61**	**339**	Pg		**Pg**		**16 13 56.2**	**-0.4**
	4.2nm,0.5s									
MTBS				Lg		Lg		16 14 30.5		
	2.5nm,0.3s									
MTBS	**Maitube**	**2.61**	**339**	*e*P		**Pg**		**16 13 56.2**	**-0.4**
	4.2nm,0.5s									
MTBS				*e*S		**Sg**		**16 14 30.5**	**0.0**
	2.5nm,0.3s									
UZB	**Uzynbulak**	**2.62**	**21**	Pg		**Pb**		**16 13 55.1**	**+0.5**
	3.1nm,0.5s									
UZB				Lg		Lg		16 14 28.6		
	1.7nm,0.5s									
UZB	**Uzynbulak**	**2.62**	**21**	*e*P		**Pb**		**16 13 55.1**	**+0.5**
	3.1nm,0.3s									
UZB				*e*S		**Sb**		**16 14 28.6**	**+1.2**
	1.7nm,0.5s									
KST	**Kastek**	**2.68**	**331**	Pg		**Pb**		**16 13 57.1**	**+1.5**
	2.1nm,0.4s									
KST				Lg		Lg		16 14 32.0		
	3.6nm,0.4s									
KST	**Kastek**	**2.68**	**331**	*e*P		**Pb**		**16 13 57.1**	**+1.5**
	2.1nm,0.4s									
KST				*e*S		**Sg**		**16 14 32.0**	**-0.8**
	3.6nm,0.4s									
TKM2	**Tokmak 2**	**2.73**	**325**⇑	*e*P		**Pn**		**16 13 52.6**	**+0.7**
TKM2			⇑	*e*S		**Sn**		**16 14 24.3**	**-1.3**
KURS	**Kuram**	**2.80**	**7**	Pg		**Pb**		**16 13 58.0**	**+0.5**
	0.7nm,0.5s									
KURS				Lg		Lg		16 14 33.6		
	2.2nm,0.8s									
ARLS	**Aral**	**2.81**	**295**⇑	*e*P		**Pn**		**16 13 53.4**	**+0.4**
ARLS			⇑	*e*S		**Sn**		**16 14 25.7**	**-2.0**
KPKS	**Kokpek**	**2.85**	**14**	Pg		**Pb**		**16 13 59.0**	**+0.5**
	0.5nm,0.4s									
KPKS				Lg		Lg		16 14 35.3		
	2.8nm,1.1s									
KPKS	**Kokpek**	**2.85**	**14**	*e*P		**Pb**		**16 13 59.0**	**+0.5**
	0.5nm,0.4s									
KPKS				*e*S		**Sb**		**16 14 35.3**	**+1.5**
	2.8nm,1.1s									
KBK	**Karagaybulak**	**2.85**	**314**⇑	*e*P		**Pn**		**16 13 54.2**	**+0.6**
KBK			⇑	*e*S		**Sn**		**16 14 27.1**	**-1.6**
DGS	**Degeres**	**2.92**	**331**	Pg		**Pb**		**16 14 01.2**	**+1.5**
	2.4nm,1.1s									
DGS				Lg		Lg		16 14 39.5		
	8.2nm,1.0s									
DGS	**Degeres**	**2.92**	**331**	*e*P		**Pb**		**16 14 01.2**	**+1.5**
	2.3nm,0.4s									
DGS				*e*S		**Sg**		**16 14 39.5**	**-1.1**
	8.2nm,1.0s									
PDGK	**Podgornoye**	**2.93**	**26**	⇓Pg		**Pg**		**16 14 02.1**	**-0.7**
	2.1nm,0.7s									
PDGK				⇓Lg		Lg		16 14 42.0		
	5.1nm,0.7s									
AAK	**Ala-Archa**	**3.10**	**310**	⇑Pg		**Pb**		**16 14 03.4**	**+0.7**
	0.4nm,0.5s									
AAK				⇑Lg		Lg		16 14 43.3		
	4.5nm,0.9s									
KTBS	**Karatobe**	**3.10**	**346**	Pg		**Pb**		**16 14 04.6**	**+1.8**
	1.7nm,0.5s									
KTBS				Lg		Lg		16 14 45.3		
	2.8nm,1.1s									
KTBS	**Karatobe**	**3.10**	**346**	*e*P		**Pb**		**16 14 04.5**	**+1.8**
	1.7nm,0.5s									
KTBS				*e*S		**Sg**		**16 14 45.3**	**-1.0**
	2.8nm,1.1s									
KRBS	**Karabastau**	**3.35**	**334**	Pg		**Pb**		**16 14 08.8**	**+1.8**
	1.4nm,0.4s									
KRBS				Lg		Lg		16 14 52.3		
	0.5nm,0.8s									
BLB	**Baldybastay**	**3.43**	**9**	Pg		**Pb**		**16 14 09.9**	**+1.5**
	1.3nm,0.6s									
BLB				Lg		Lg		16 14 54.5		
	2.3nm,0.5s									
ARXS	**Arharly**	**3.50**	**1**	Pg		**Pg**		**16 14 12.4**	**-1.4**
	1.0nm,0.5s									
ARXS				Lg		Lg		16 14 58.5		
	3.5nm,0.6s									
ARXS	**Arharly**	**3.50**	**1**	*e*P		**Pg**		**16 14 12.4**	**-1.4**
	1.0nm,0.5s									
ARXS				*e*S		**Sg**		**16 14 58.5**	**-0.8**
	3.5nm,0.6s									
DJR	**Jarkent**	**3.93**	**22**	Pg		**Pb**		**16 14 19.4**	**+2.5**
	0.5nm,0.3s									
DJR				Lg		Lg		16 15 10.3		
	0.5nm,0.4s									
DJR	**Jarkent**	**3.93**	**22**	*e*P		**Pb**		**16 14 19.4**	**+2.5**
	0.5nm,0.1s									
DJR				*e*S		**Sg**		**16 15 10.3**	**-2.6**
	0.5nm,0.4s									

*NEIC **09** 16:28:37.6±1.4, 22°.92S±0°.08×171°.24E±0°.06, h10km±1km, mb4.6/22, Error ellipse: s-maj=14.9km s-min=8.5km az=159.0*

*IDC **09** 16:28:41.0±2.8, 22°.89S×171°.26E, h43km±24km, mb4.1/8, mbtmp4.3/10, ML4.9/2, MS3.6/30, Error ellipse: s-maj=31.6km s-min=17.9km az=175.0*

ISC 09 16:28:39.9±0.6, **22°.90S**±0°.10×**171°.27E**±0°.07, **h35**km, **n97**, σ0**83**/70, **mb4.5**/14, **MS3.7**/27, **Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**3.31**	**295**	Pn	**Pn**	**16 29 29.2**	**-0.1**
ONTNC	**Ouen Toro**	**4.49**	**277**		**Pn**	**16 29 45.3**	**-0.1**
DZM	**Mont Dzumac**	**4.54**	**280**	*e*Pn	**Pn**	**16 29 46.2**	**0.0**
	64nm,0.9s						
DZM				*e*Sn	**Sn**	**16 30 37.7**	**-0.1**
	196nm,1.0s						
DZM	**Mont Dzumac**	**4.54**	**280**	P	**Pn**	**16 29 46.4**	**+0.2**
	7.4nm,0.3s,baz=116,slow=16,SNR=68						
DZM				S	**Sn**	**16 30 38.8**	**+1.0**
	65nm,0.6s,baz=286,slow=22,SNR=3.4						
DZM				LR	LR	16 31 35.4	
	comp=Z,394nm,18.1s,baz=154,slow=39						
	19nm,0.3s						
MSVF	**Nonsavu**	**8.18**	**52**	P	**Pn**	**16 30 38.1**	**+1.7**
	1.5nm,0.3s,baz=234,slow=11,SNR=17						
	24nm,0.8s						
MSVF	**Nonsavu**	**8.18**	**52**		**Pn**	**16 30 37.0**	**+0.7**
RAO	**Raoul Island**	**11.59**	**125**	LR	LR	16 34 55.2	
	comp=Z,329nm,18.8s,baz=302,slow=32						
URZ	**Urewera**	**16.11**	**163**	LR	LR	16 37 13.1	
	comp=Z,353nm,21.5s,baz=343,slow=32						
AFI	**Afiamalu**	**18.39**	**64**	LR	LR	16 38 05.5	
	comp=Z,144nm,18.4s,baz=230,slow=31						
TCW	**Tory Channel**	**18.43**	**173**	P	**Pn**	**16 32 53.0**	**+0.5**
MSWZ	**Moikau Station**	**18.76**	**171**	P	**P**	**16 32 55.6**	**-0.3**
LTZ	**Lake Taylor**	**19.84**	**178**	Pn	**Pn**	**16 33 09.8**	**+0.3**
LTZ				IAmb	IAmb	16 33 11.6	
	comp=Z,31nm,1.0s						
RPZ	**Rata Peaks**	**20.76**	**180**	LR	LR	16 40 09.5	
	comp=Z,154nm,20.8s,baz=194,slow=33						
CTA	**Charters Tower**	**23.43**	**272**	LR	LR	16 42 17.4	
	comp=Z,67nm,18.7s,baz=180,slow=35						
CTAO	**Charters Tower**	**23.43**	**272**	P	**P**	**16 33 46.7**	**+0.6**
RABL	**Rabaul**	**26.22**	**312**	P	**P**	**16 34 12.4**	**+0.7**
PMG	**Port Moresby**	**26.70**	**296**	P	**P**	**16 34 17.4**	**+1.3**
	comp=Z,8.3nm,0.8s,baz=107,slow=11,SNR=2.6						
	comp=Z,8.3nm,0.8s						
PMG	**Port Moresby**	**26.70**	**296**	P	**P**	**16 34 16.6**	**+0.5**
RAR	**Rarotonga**	**26.88**	**92**	LR	LR	16 44 53.2	
	comp=Z,41nm,18.0s,baz=244,slow=36						
STKA	**Stephens Creek**	**27.75**	**245**	LR	LR	16 44 19.9	
	comp=Z,96nm,21.8s,baz=44,slow=34						
STKA	**Stephens Creek**	**27.75**	**245**	P	**P**	**16 34 25.4**	**+0.1**
MGBR	**Mount Gambier**	**30.17**	**234**	P	**P**	**16 34 47.1**	**+0.3**
AS31	**Alice Springs**	**34.26**	**261**	P	**P**	**16 35 23.2**	**+0.2**
ASAR	**Alice Springs**	**34.26**	**261**	P	**P**	**16 35 23.4**	**+0.5**
	comp=Z,1.8nm,0.8s,baz=93,slow=8.4,SNR=21						
ASAR				LR	LR	16 49 19.7	
	comp=Z,75nm,19.6s,baz=102,slow=36						
	comp=Z,1.8nm,0.8s						
ASAR	**Alice Springs**	**34.26**	**261**	P	**P**	**16 35 22.7**	**-0.2**
WR8	**Warramunga Arr**	**34.29**	**268**	P	**P**	**16 35 22.5**	**-0.7**
WB0	**Warramunga Arr**	**34.43**	**268**	P	**P**	**16 35 24.3**	**-0.1**
WRA	**Warramunga Arr**	**34.45**	**268**	P	**P**	**16 35 23.4**	**-1.1**
	comp=Z,0.6nm,0.5s,baz=105,slow=7.8,SNR=2.3						
	comp=Z,0.6nm,0.5s						
TBI	**Tubuai**	**36.05**	**99**	*e*LR	LR	16 44 58.4	
	comp=Z,713nm,40.5s						
PPT2	**Papeete2**	**37.04**	**89**	*e*LR	LR	16 45 45.9	
	comp=Z,53nm,22.5s						
MTN	**Manton Dam**	**39.37**	**278**	P	**P**	**16 36 06.5**	**+0.1**
KNRA	**Kununurra**	**40.65**	**272**	P	**P**	**16 36 17.1**	**+0.1**
KNRA				IAmb	IAmb	16 36 28.8	
	comp=Z,14nm,1.3s						
GUMO	**Guam**	**44.54**	**322**	LR	LR	16 56 01.5	
	comp=Z,60nm,19.0s,baz=118,slow=37						
SIJI	**Sorong**	**44.59**	**294**	P	**P**	**16 36 48.2**	**-0.9**
	comp=Z,8.3nm,0.7s,baz=102,slow=9.3,SNR=5.2						
SIJI				LR	LR	16 56 19.4	
	comp=Z,79nm,18.2s,baz=70,slow=37						
	comp=Z,8.3nm,0.7s						
MBWA	**Marble Bar**	**47.60**	**262**	P	**P**	**16 37 13.0**	**+0.2**
TAOE	**Nuku Hiva Isla**	**48.55**	**81**	*e*LR	LR	16 51 07.0	
	comp=Z,45nm,23.5s						
KAPI	**Kappang**	**52.75**	**282**	LR	LR	17 00 54.9	
	comp=Z,36nm,18.8s,baz=127,slow=37						
VNDA	**Vanda**	**54.86**	**182**	LR	LR	16 58 19.5	
	comp=Z,66nm,18.8s,baz=356,slow=32						
MJAR	**Matsushiro Arr**	**66.86**	**331**	LR	LR	17 08 48.0	
	comp=Z,17nm,19.3s,baz=152,slow=36						
QSPA	**South Pole Qui**	**67.17**	**180**	P	**P**	**16 39 30.5**	**+0.4**
	comp=Z,4.0nm,1.0s,baz=353,slow=2.4,SNR=5.7						
QSPA				LR	LR	17 06 39.8	
	comp=Z,49nm,19.3s,baz=50,slow=34						
	comp=Z,4.0nm,1.0s						
QSPA	**South Pole Qui**	**67.17**	**180**	P	**P**	**16 39 30.8**	**+0.6**
ASAJ	**Asahikawa**	**71.68**	**339**	LR	LR	17 04 59.3	
	comp=Z,51nm,20.9s,baz=162,slow=30						
SHEM	**Shemya Is, Ala**	**75.35**	**2**	LR	LR	17 11 10.7	
	comp=Z,18nm,18.4s,baz=297,slow=34						
PETK	**Petropavlovsk-**	**76.61**	**352**	LR	LR	17 10 06.8	
	comp=Z,35nm,19.0s,baz=128,slow=32						
KLR	**Kul'dur**	**79.97**	**335**	LR	LR	17 12 42.2	
	comp=Z,24nm,20.2s,baz=156,slow=33						
CMAR	**Chiang Mai Arr**	**81.72**	**294**	P	**P**	**16 40 57.1**	**+1.7**
	comp=Z,2.8nm,0.9s,baz=138,slow=4.3,SNR=18						
	comp=Z,2.8nm,0.9s						
CMAR	**Chiang Mai Arr**	**81.72**	**294**		**P**	**16 40 55.5**	**+0.2**
MA2	**Magadan**	**83.89**	**350**	LR	LR	17 15 44.7	
	comp=Z,35nm,18.1s,baz=188,slow=34						
SNAA	**Sanae**	**85.59**	**182**	LR	LR	17 17 02.3	
	comp=Z,65nm,18.7s,baz=204,slow=34						
KDAK	**Kodiak Island**	**85.87**	**18**	LR	LR	17 12 45.1	
	comp=Z,43nm,20.0s,baz=195,slow=31						
USHA	**Ushuaia**	**87.34**	**150**	LR	LR	17 13 25.2	
	comp=Z,348nm,18.9s,baz=28,slow=31						
KHBM	**Hayfork Bally**	**87.73**	**44**	P	**P**	**16 41 25.2**	**-0.3**
KHBM				IAmb	IAmb	16 41 44.3	
	comp=Z,5.9nm,1.3s						
O02D	**Mt. Diablo Mer**	**87.75**	**44**	P	**P**	**16 41 25.1**	**-0.3**
O02D				IAmb	IAmb	16 41 25.9	
	comp=Z,3.1nm,0.8s						
M02C	**Callahan**	**88.36**	**43**		**P**	**16 41 28.2**	**0.0**
M02C				IAmb	IAmb	16 41 28.4	
	comp=Z,3.9nm,1.0s						
PFO	**Pinyon Flats O**	**88.79**	**53**	LR	LR	17 13 15.6	
	comp=Z,27nm,18.9s,baz=202,slow=30						
NVAR	**Mina Array Bea**	**89.83**	**48**	P	**P**	**16 41 34.6**	**-0.8**
	comp=Z,1.7nm,0.8s,baz=230,slow=8.1,SNR=6.7						
NVAR				LR	LR	17 13 18.8	
	comp=Z,54nm,20.4s,baz=200,slow=30						
	comp=Z,1.7nm,0.8s						
NV11	**Mina Array Sit**	**89.93**	**48**	P	**P**	**16 41 34.9**	**-0.9**
NV11				IAmb	IAmb	16 41 35.6	
	comp=Z,4.3nm,0.9s						
K05A	**Summer Lake**	**90.31**	**43**	P	**P**	**16 41 36.9**	**-0.6**
ULN	**Ulaanbaatar**	**90.92**	**323**	P	**P**	**16 41 40.0**	**-0.2**
ULN				IAmb	IAmb	16 42 13.5	
	comp=Z,6.2nm,1.4s						
SONM	**Songino Array**	**91.27**	**322**	P	**P**	**16 41 40.6**	**-1.2**
	comp=Z,1.4nm,0.9s,baz=143,slow=4.5,SNR=7.2						
SONM				LR	LR	17 24 12.3	
	comp=Z,23nm,18.1s,baz=226,slow=36						
	comp=Z,1.4nm,0.9s						
SONM	**Songino Array**	**91.27**	**322**	IAmb	IAmb	16 41 42.8	
	comp=Z,3.9nm,1.3s						
BBB	**Bella Bella**	**91.51**	**32**	LR	LR	17 16 26.8	
	comp=Z,28nm,18.6s,baz=210,slow=31						
ELK	**Elko**	**93.01**	**47**	LR	LR	17 17 24.5	
	comp=Z,38nm,18.4s,baz=125,slow=31						
DLBC	**Dease Lake**	**94.43**	**27**	LR	LR	17 25 16.9	
	comp=Z,32nm,18.3s,baz=118,slow=36						
TLY	**Talaya**	**94.83**	**325**	LR	LR	17 25 00.2	
	comp=Z,14nm,18.2s,baz=69,slow=36						
TXAR	**Lajitas Array**	**96.86**	**61**	LR	LR	17 17 56.5	
	comp=Z,32nm,19.6s,baz=292,slow=30						
MORC	**Moravsky Berou**	**146.17**	**329**	*e*PKP	**PKPbc**	**16 48 16.0**	**-0.4**
OSTC	**Ostas**	**146.23**	**331**	*e*PKP	**PKPbc**	**16 48 16.2**	**-0.4**
CHVC	**Chvalec**	**146.28**	**331**	*e*PKP	**PKPbc**	**16 48 16.4**	**-0.3**
KRLC	**Kraliky**	**146.32**	**330**	*e*PKP	**PKPbc**	**16 48 16.4**	**-0.5**
DPC	**Dobruska-Polom**	**146.33**	**331**	*e*PKP	**PKPbc**	**16 48 16.6**	**-0.3**
JAVC	**Velka Javorina**	**146.72**	**328**	*e*PKP	**PKPab**	**16 48 18.3**	**-1.0**
VRAC	**Vranov**	**146.94**	**329**	*e*PKP	**PKPbc**	**16 48 17.6**	**-1.0**
CLL	**Collm**	**147.02**	**335**	*i* P	**PKPbc**	**16 48 17.7**	**-1.1**
	comp=Z,7.0nm,1.0s						
KRUC	**Moravsky**	**147.20**	**329**	*e*PKP	**PKPbc**	**16 48 18.5**	**-0.9**
PRU	**Pruhonice**	**147.38**	**332**	*e*PKP	**PKPbc**	**16 48 19.7**	**-0.1**
HSKC	**Hora Svate Kat**	**147.39**	**334**	*e*PKP	**PKPbc**	**16 48 19.6**	**-0.3**
ZVC	**Zvikov**	**147.94**	**331**	*e*PKP	**PKPbc**	**16 48 21.0**	**-0.4**
WINA	**Alland / Wiene**	**148.01**	**328**	*i* PKP	**PKPbc**	**16 48 21.4**	**-0.2**
	comp=Z,7.0nm,1.2s						
NKC	**Novy Kostel**	**148.08**	**334**	*e*PKP	**PKPbc**	**16 48 20.8**	**-0.9**
RONA	**Rosalia, Austr**	**148.18**	**327**	*i* PKP	**PKPbc**	**16 48 21.7**	**-0.5**
	comp=Z,5.0nm,0.6s						
CONA	**Conrad Observa**	**148.24**	**328**	*i* PKP	**PKPbc**	**16 48 21.7**	**-0.6**
	comp=Z,3.9nm,0.8s						
CKRC	**Cesky Krumlov**	**148.34**	**330**	*e*PKP	**PKPbc**	**16 48 22.1**	**-0.4**
KHC	**Kasperske Hory**	**148.44**	**332**	*e*PKP	**PKPbc**	**16 48 22.3**	**-0.4**
GERES	**GERESS Array B**	**148.60**	**331**	PKPbc	**PKPbc**	**16 48 22.5**	**-0.8**
	comp=Z,2.0nm,0.7s,baz=66,slow=3.3,SNR=15						
MOA	**Molln**	**149.06**	**329**	*i* PKP	**PKPbc**	**16 48 23.1**	**-1.3**
	comp=Z,1.7nm,0.6s						
SOKA	**Soboth**	**149.51**	**327**	*i* PKP	**PKPbc**	**16 48 24.2**	**-1.3**
	comp=Z,3.0nm,0.6s						
KBA	**Koelnbreinsper**	**150.05**	**329**	*i* PKP	**PKPbc**	**16 48 25.3**	**-1.8**
	comp=Z,7.1nm,1.1s						
LESA	**Schwarzleotal**	**150.11**	**330**	*i* PKP	**PKPbc**	**16 48 25.5**	**-1.6**
	comp=Z,4.4nm,0.8s						
MYKA	**Terra Mystica**	**150.23**	**328**	*i* PKP	**PKPbc**	**16 48 25.6**	**-1.7**
	comp=Z,3.1nm,0.5s						
WATA	**Walderalm**	**150.67**	**331**	*i* PKP	**PKPbc**	**16 48 27.2**	**-1.3**
	comp=Z,3.5nm,0.6s						
ABTA	**Abfaltersbach**	**150.68**	**329**	*i* PKP	**PKPbc**	**16 48 26.5**	**-1.9**
	comp=Z,4.2nm,0.6s						
WTTA	**Wattenberg**	**150.70**	**331**	*i* PKP	**PKPbc**	**16 48 27.4**	**-1.2**
	comp=Z,1.9nm,0.7s						
MOTA	**Moosalm**	**150.88**	**332**	*i* PKP	**PKPbc**	**16 48 27.7**	**-1.3**
	comp=Z,6.5nm,0.9s						
SQTA	**Sankt Quirin**	**150.93**	**331**	*i* PKP	**PKPbc**	**16 48 28.0**	**-1.0**
	comp=Z,10nm,1.2s						
FETA	**Feichten**	**151.29**	**332**	*i* PKP	**PKPbc**	**16 48 29.5**	**-0.4**
	comp=Z,8.4nm,1.1s						
TORD	**Torodi Ar. Bea**	**166.13**	**227**	PKP	**PKPdf**	**16 48 41.5**	**-0.7**
	comp=Z,0.9nm,1.0s,baz=279,slow=2.8,SNR=3.3						

*IDC **09** 17:02:19.6±2.5, 4°.33S×104°.18E, h248km±20km, mb3.2/11, mbtmp3.8/12, Error ellipse: s-maj=59.7km s-min=10.7km az=55.0*

*DJA **09** 17:02:19.1±0.2, 4°.5±5°×10°4E±°, h252km±3km, M4.1/41, mB4.8/6, mb4.4/11, MLv4.1/41, Mw(mB)4.0/6*

ISC 09 17:02:19.8±0.6, **4°.31S**±0°.08×**104°.37E**±0°.08, **h250**km, **n41**, σ1**96**/49, **mb3.4**/11, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDSI	**Maura Dua**	**0.26**	**227**	P	**Pn**	**17 02 51.6**	**-0.6**
KLSI		**0.53**	**137**	P	**Pn**	**17 02 52.5**	**-0.3**
KLI	**Kotabumi**	**0.74**	**139**	P	**Pn**	**17 02 53.2**	**-0.4**
LWLI	**Liwa**	**0.77**	**204**	P	**Pn**	**17 02 54.3**	**+0.4**
LWLI				S	**S**	**17 03 20.7**	**0.0**
KASI	**Kota Agung**	**1.22**	**174**	P	**Pn**	**17 02 55.9**	**-0.3**
BLSI	**Bandar Lampung**	**1.37**	**140**	P	**Pn**	**17 02 57.0**	**-0.2**
MNAI	**Manna**	**1.41**	**268**	P	**Pn**	**17 02 58.5**	**+1.0**
MNAI	**Manna**	**1.41**	**268**	P	**Pn**	**17 02 59.0**	**+1.5**
MNAI				S	**S**	**17 03 27.1**	**0.0**
KSI	**Kapahiang**	**1.89**	**290**	P	**Pn**	**17 03 00.5**	**-0.9**
UBSI	**University, Be**	**2.16**	**284**	P	**Pn**	**17 03 03.5**	**-0.3**
UBSI				S	**S**	**17 03 38.1**	**-0.4**
MASI	**Maura Aman, Be**	**2.42**	**298**	P	**Pn**	**17 03 08.1**	**+1.7**
MASI				S	**S**	**17 03 43.4**	**+0.3**
SBJI	**Serang**	**2.52**	**136**	P	**Pn**	**17 03 06.6**	**-0.7**
CGJI	**Cibinong**	**2.64**	**150**	P	**Pn**	**17 03 06.9**	**-1.7**
DBJI	**Dramaga**	**3.26**	**133**	P	**Pn**	**17 03 15.1**	**-0.1**
TPI	**Tanjungpandan**	**3.62**	**65**	P	**Pn**	**17 03 18.5**	**-0.8**
KRJI	**Kerinci**	**3.64**	**307**	P	**Pn**	**17 03 21.3**	**+1.7**
KRJI				S	**S**	**17 04 07.1**	**+0.1**
LEM	**Lembang**	**4.09**	**128**	P	**Pn**	**17 03 25.5**	**+0.6**
	24nm,0.4s,baz=308,slow=18,SNR=9.1						
LEM	**Lembang**	**4.09**	**128**	P	**Pn**	**17 03 25.1**	**+0.2**
BBJI	**Bungbulang**	**4.53**	**134**	P	**Pn**	**17 03 27.8**	**-2.2**
BBJI	**Bungbulang**	**4.53**	**134**	P	**Pn**	**17 03 27.9**	**-2.1**
PPSI	**Pulau Pagai**	**4.61**	**289**	P	**Pn**	**17 03 31.4**	**+0.4**
PDSI	**Padang**	**5.16**	**311**	P	**Pn**	**17 03 37.4**	**-0.2**
KPJI	**Karang Pucung**	**5.44**	**124**	P	**Pn**	**17 03 40.3**	**-0.8**
UGM	**Wanagama**	**7.09**	**121**	P	**Pn**	**17 04 00.9**	**-0.9**
PBSI	**Pulau Batu**	**7.41**	**305**	P	**Pn**	**17 04 04.6**	**-1.1**
	71nm,1.0s						
GSI	**Gunungsitoli**	**8.78**	**309**	P	**Pn**	**17 04 22.2**	**-0.9**
GSI	**Gunungsitoli**	**8.78**	**309**	P	**Pn**	**17 04 22.3**	**-0.9**
	16nm,0.4s						
KULM	**Kulim**	**10.23**	**339**	P	**Pn**	**17 04 41.8**	**+0.4**
JAGI	**Jajag, Banyuwa**	**10.56**	**114**	P	**Pn**	**17 04 44.2**	**-1.4**
PLAI	**Plampang**	**14.05**	**109**	P	**Pn**	**17 05 27.3**	**-1.5**
CMAR	**Chiang Mai Arr**	**23.24**	**347**	P	**P**	**17 07 05.2**	**-0.1**
	0.8nm,0.7s,baz=181,slow=9.5,SNR=9.3						
	0.8nm,0.7s						
FITZ	**Fitzroy Crossi**	**24.92**	**125**	P	**P**	**17 07 22.2**	**+1.7**
	0.9nm,0.6s,baz=315,slow=7.1,SNR=1.7						
	0.9nm,0.6s						
WRA	**Warramunga Arr**	**33.07**	**121**	P	**P**	**17 08 32.9**	**+0.4**
	0.2nm,0.5s,baz=294,slow=8.1,SNR=5.1						
WRA				PcP	**PcP**	**17 11 10.8**	**+0.9**
	0.4nm,0.7s,baz=320,slow=1.9,SNR=5.1						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**34.38**	**127**	P	**P**	**17 08 44.3**	**+0.5**
	0.9nm,0.8s,baz=301,slow=7.7,SNR=22						
ASAR				PcP	**PcP**	**17 11 15.1**	**+1.5**
	0.3nm,0.7s,baz=300,slow=2.5,SNR=4.7						
ASAR				ScP	**ScP**	**17 14 32.7**	**-2.1**
	0.4nm,0.9s,baz=315,slow=4.6,SNR=4.1						
	0.9nm,0.8s						
STKA	**Stephens Creek**	**44.38**	**133**	P	**P**	**17 10 07.8**	**+1.8**
	1.2nm,0.5s,baz=308,slow=12,SNR=2.4						
	1.2nm,0.5s						
SONM	**Songino Array**	**51.95**	**2**	P	**P**	**17 11 04.4**	**+0.9**
	1.1nm,0.8s,baz=175,slow=9.6,SNR=7.3						
	1.1nm,0.8s						
MKAR	**Makanchi Array**	**54.50**	**342**	P	**P**	**17 11 21.5**	**-0.4**
	0.9nm,0.7s,baz=147,slow=8.0,SNR=11						
	0.9nm,0.7s						
KURBB	**Kurchatov Arra**	**59.06**	**341**	P	**P**	**17 11 52.6**	**-1.1**
	0.8nm,0.8s,baz=159,slow=6.2,SNR=6.4						
	0.8nm,0.8s						
ZALV	**Zalesovo Beam**	**60.31**	**347**	P	**P**	**17 12 01.

MJAR Matsushiro Arr 8.05 197 P **Pn** 17 04 16.9 +0.3
0.5nm,0.3s,baz=4.9,slow=12,SNR=2.5
KSRS Korea Array 12.11 240 P **Pn** 17 05 07.2 -0.8
2.1nm,0.9s,baz=45,slow=15,SNR=5.2
PETK Petropavlovsk- 14.02 45 P **P** 17 05 32.6 -0.1
3.1nm,0.6s,baz=224,slow=8.4,SNR=9.6
MA2 Magadan 16.40 18 P **P** 17 05 58.0 -0.8
1.7nm,0.4s,baz=188,slow=7.5,SNR=6.1
SEY Seymchan 19.79 15 P **P** 17 06 33.9 -1.4
1.0nm,0.4s,baz=201,slow=8.0,SNR=7.4
SONM Songino Array 24.25 291 P **P** 17 07 19.0 +0.2
0.3nm,0.5s,baz=87,slow=9.3,SNR=3.2
0.3nm,0.5s
MKAR Makanchi Array 40.47 295 P **P** 17 09 39.1 +0.3
0.3nm,0.8s,baz=77,slow=7.6,SNR=2.5
0.3nm,0.8s
KURBB Kurchatov Arra 41.69 302 P **P** 17 09 48.7 +0.1
0.2nm,0.6s,baz=72,slow=9.3,SNR=2.5
0.2nm,0.6s
ILAR Eielson Array 43.62 36 P **P** 17 10 03.1 -0.7
0.2nm,0.5s,baz=277,slow=8.4,SNR=5.0
0.2nm,0.5s
YKA Yellowknife Ar 57.71 32 P **P** 17 11 48.4 -0.4
0.1nm,0.5s,baz=307,slow=8.0,SNR=2.4
0.1nm,0.5s
WRA Warramunga Arr 64.21 187 P **P** 17 12 32.9 0.0
0.3nm,0.5s,baz=3.4,slow=6.4,SNR=9.1
0.3nm,0.5s
ASAR Alice Springs 67.94 187 P **P** 17 12 57.7 +1.2
0.3nm,0.4s,baz=5.5,slow=8.6,SNR=10
0.3nm,0.4s

IDC 09 17:22:33.6±3.3, 47°58N×92°62W, h0km, mbtmp2.6/2, ML1.2/1, Error ellipse: s-maj=36.3km s-min=17.6km az=82.0, Minnesota

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULM	**Lac du Bonnet**	**3.43**	**322**	Pn	Pn	17 23 27.3	-0.9
	0.4nm,0.3s,baz=142,slow=15,SNR=7.7						
ULM				Pg	Pb	17 23 34.7	-0.5
	0.4nm,0.3s,baz=141,slow=16,SNR=2.7						
ULM				Sn	Sn	17 24 07.0	-2.6
	0.5nm,0.3s,baz=128,slow=19,SNR=3.0						
ULM				Lg	Lg	17 24 19.4	
	5.9nm,0.3s,baz=234,slow=22,SNR=29						
	0.7nm,0.5s						
I10CA	**LAC DU BONNET**	**3.46**	**321**	I	I	17 44 30.0	
	baz=132,slow=345,SNR=0.4						
PDAR	**Pinedale Array**	**12.88**	**254**	Pn	Pn	17 25 35.1	-3.0
	0.1nm,0.5s,baz=66,slow=12,SNR=2.2						
PDAR				Lg	Lg	17 29 11.6	
	0.1nm,0.3s,baz=64,slow=30,SNR=4.1						

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*AZER **09** 17:24:35.7, 38°44N×44°47E, h2km, ml2.7*
*AFAD **09** 17:24:37.5, 38°51N×44°53E, h7km±1km, ML2.5*
*TEH **09** 17:24:38.1, 38°43N×44°43E, h18km±681km, ML2.7, Presumed earthquake*
*ISK **09** 17:24:41.6, 38°57N×44°30E, h9km, ML2.7/5*
ISC 09 17:24:39.0±1.1, 38°49N±0°02×44°46E±0°02, h11km±9km, n31, σ1ᵖ87/57, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.41**	**296**	P	**Pg**	**17 24 46.3**	**-0.8**
OZAP				S	**Sb**	**17 24 53.3**	**-1.4**
TVAN	**Van**	**0.83**	**273**	P	**Pg**	**17 24 53.6**	**-1.4**
TVAN				S	**Sn**	**17 25 09.0**	**-0.2**
VANB	**Van**	**0.85**	**278**	Pg	**Pb**	**17 24 55.6**	**-0.2**
VMUR	**Van-Muradiye**	**0.86**	**306**	P	**Pb**	**17 24 54.8**	**-1.2**
VMUR				S	**Sn**	**17 25 08.6**	**-1.3**
VMUR				IAML		17 25 11.0	
	comp=E,146nm,0.5s						
VMUR				IAML		17 25 13.0	
	comp=N,166nm,0.5s						
MAKU	**Maku**	**0.89**	**11**	Pg	**Pb**	**17 24 55.5**	**-0.9**
YOVA	**Hakkari_Yksek**	**0.91**	**189**	P	**Pg**	**17 24 55.9**	**-0.6**
YOVA				S	**Sn**	**17 25 11.4**	**+0.3**
YOVA				IAML		17 25 12.0	
	comp=E,87nm,0.4s						
YOVA				IAML		17 25 15.0	
	comp=N,130nm,0.5s						
ISHB	**Shabestar**	**0.93**	**102**	Pg	**Pg**	**17 24 56.0**	**-0.9**
IMRD	**Marand**	**1.00**	**76**	Pg	**Pn**	**17 24 58.5**	**-0.6**
IMRD				Sg	**Sn**	**17 25 13.0**	**-0.3**
NAX	**Nakhchivan**	**1.06**	**49**	P	**Pn**	**17 25 00.0**	**+0.1**
NAX				S	**Sn**	**17 25 16.7**	**+2.0**
HAKT	**HAKKARI**	**1.10**	**213**	P	**Pg**	**17 24 58.7**	**-1.5**
HAKT				S	**Sn**	**17 25 16.1**	**+0.2**
HAKT				IAML		17 25 21.0	
	comp=N,98nm,0.6s						
HAKT				IAML		17 25 21.0	
	comp=E,129nm,0.6s						
HAKT	**HAKKARI**	**1.10**	**213**	P	**Pg**	**17 24 58.8**	**-1.3**
HAKT				S	**Sn**	**17 25 16.8**	**+0.9**
GEVA	**Gevas**	**1.12**	**262**	P	**Pg**	**17 24 58.1**	**-2.3**
GEVA				S	**Sb**	**17 25 15.2**	**+0.2**
DYDN	**Diyadin**	**1.22**	**331**	P	**Pb**	**17 25 00.9**	**-1.3**
DYDN				S	**Sn**	**17 25 17.8**	**-1.0**
DYDN				IAML		17 25 25.0	
	comp=N,156nm,0.9s						
DYDN				IAML		17 25 26.0	
	comp=E,121nm,0.7s						
SBZ	**Shahbuz**	**1.25**	**43**	P	**Pg**	**17 25 03.0**	**+0.1**
SBZ				S	**Sn**	**17 25 22.2**	**+2.9**
HYR	**Heyderabad**	**1.27**	**14**	P	**Pg**	**17 25 03.7**	**+0.3**
HYR				S	**Sn**	**17 25 22.9**	**+3.1**
ORD	**Ordubad**	**1.28**	**69**	P	**Pg**	**17 25 03.5**	**0.0**
ORD				S	**Sn**	**17 25 23.2**	**+3.2**
ADCV	**BITLIS_Adilcev**	**1.40**	**284**	P	**Pb**	**17 25 04.4**	**-0.8**
ADCV				S	**Sg**	**17 25 27.4**	**+3.3**
ADCV				IAML		17 25 30.0	
	comp=N,74nm,0.7s						
ADCV				IAML		17 25 31.0	
	comp=E,42nm,0.6s						
CUKT	**Cukurca**	**1.41**	**209**	Pn	**Pg**	**17 25 08.1**	**+2.1**
CUKT				Sn	**Sg**	**17 25 27.7**	**+3.4**
IGDI	**IGDIR**	**1.41**	**348**	P	**Pg**	**17 25 06.6**	**+0.5**
IGDI				S	**Sg**	**17 25 29.5**	**+5.0**
IGDI	**IGDIR**	**1.41**	**348**	P	**Pg**	**17 25 06.4**	**+0.3**
IGDI				S	**Sg**	**17 25 29.6**	**+5.1**
AGRB	**Hanur-Agry**	**1.58**	**314**	Pn	**Pg**	**17 25 08.2**	**-1.1**
AGRB				Sn	**Sg**	**17 25 27.9**	**-1.9**
DORK	**Agr/Tutak/Do**	**1.59**	**305**	P	**Pg**	**17 25 09.5**	**0.0**
DORK				S	**Sg**	**17 25 31.3**	**+1.1**
KOTA	**Agri, Merkez-K**	**1.64**	**324**	P	**Pg**	**17 25 09.1**	**-1.4**
KOTA				S	**Sg**	**17 25 32.0**	**+0.3**
GNI	**Garni**	**1.68**	**7**	Pn	**Pg**	**17 25 11.0**	**-0.1**
GNI				Sn	**Sg**	**17 25 32.6**	**-0.3**
GURO	**Guroymak-BITLI**	**1.91**	**273**	Pn	**Pb**	**17 25 13.5**	**-0.4**
IHRS	**Heris**	**2.03**	**94**	Pn	**Pg**	**17 25 16.4**	**-1.6**
GDB	**GEDABAY**	**2.44**	**24**	P	**Pb**	**17 25 23.2**	**+0.2**
GDB				S	**Sg**	**17 25 55.5**	**-2.0**
GANJ	**Ganja**	**2.59**	**33**	P	**Pb**	**17 25 22.4**	**-3.1**
GANJ				S	**Sb**	**17 25 56.7**	**-0.7**
QZX	**Qazax, Azerbai**	**2.66**	**15**	P	**Pb**	**17 25 23.5**	**-3.2**
QZX				S	**Sb**	**17 25 59.6**	**+0.2**
YRD	**Yardimli**	**2.99**	**81**	P	**Pb**	**17 25 30.6**	**-1.7**
YRD				S	**Sb**	**17 26 07.5**	**-1.4**
LRK	**Lerik**	**3.04**	**86**	P	**Pn**	**17 25 29.3**	**+2.1**
LRK				S	**Sb**	**17 26 08.3**	**-2.2**

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*IDC **09** 17:28:13.5±1.9, 6°16S×154°15E, h0km, mb4.0/13, mbtmp4.0/14, ML2.3/1, MS3.1/6, Error ellipse: s-maj=58.3km s-min=20.5km az=119.0*
*NEIC **09** 17:28:18.0±2.5, 5°87S±0°08×153°7E±0°1, h10km±1km, mb4.3/14, Error ellipse: s-maj=17.6km s-min=13.2km az=101.0*
ISC 09 17:28:20.8±0.7, 5°94S±0°08×153°7E±0°1, h35km, n43, σ1ᵖ05/40, mb4.2/19, MS2.8/4, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**2.31**	**319**	Pn	**Pn**	**17 28 54.1**	**-2.2**
PMG	**Port Moresby**	**7.33**	**242**	Pn	**Pn**	**17 30 05.8**	**+0.4**
	2.4nm,0.3s,baz=36,slow=6.2,SNR=10						
PMG				Sn	**Sn**	**17 31 27.2**	**-0.3**
	3.1nm,0.3s,baz=176,slow=18,SNR=8.0						
	5.9nm,0.4s						
PMG	**Port Moresby**	**7.33**	**242**		**Pn**	**17 30 03.5**	**-1.9**
PMG					**Sn**	**17 31 26.3**	**-1.2**
JAY	**Jayapura**	**13.39**	**284**	LR	LR	17 37 09.5	
	comp=Z,86nm,20.1s,baz=280,slow=39						
PATS	**Pohnpei**	**13.50**	**20**	Pn	**Pn**	**17 31 29.3**	**-0.6**
CTA	**Charters Tower**	**15.81**	**207**	LR	LR	17 38 19.0	
	comp=Z,102nm,18.1s,baz=33,slow=38						
CTAO	**Charters Tower**	**15.81**	**207**	P	**P**	**17 32 04.5**	**+0.1**
EIDS	**Eidsvold**	**19.48**	**187**	P	**P**	**17 32 44.2**	**-0.6**
EIDS				IAmb	IAmb	17 33 10.5	
	comp=Z,28nm,1.4s						
GUMO	**Guam**	**21.28**	**336**	LR	LR	17 41 20.7	
	comp=Z,21nm,18.5s,baz=134,slow=36						
MTN	**Manton Dam**	**23.27**	**251**	P	**P**	**17 33 26.3**	**+0.8**
MTN				IAmb	IAmb	17 33 27.7	
	comp=Z,15nm,1.4s						
WR8	**Warramunga Arr**	**23.28**	**231**	P	**P**	**17 33 24.7**	**-0.8**
WR8				IAmb	IAmb	17 33 30.9	
	comp=Z,8.7nm,1.4s						
WRA	**Warramunga Arr**	**23.40**	**232**	P	**P**	**17 33 26.8**	**+0.1**
	comp=Z,1.0nm,0.9s,baz=55,slow=9.2,SNR=5.4						
	comp=Z,1.0nm,0.9s						
INKA	**Innaminka**	**24.93**	**208**		**P**	**17 33 40.5**	**-0.2**
INKA				IAmb	IAmb	17 33 55.9	
	comp=Z,5.2nm,0.8s						
AS31	**Alice Springs**	**25.94**	**225**	P	**P**	**17 33 49.0**	**-1.1**
ASAR	**Alice Springs**	**25.95**	**225**	P	**P**	**17 33 49.4**	**-0.8**
	comp=Z,1.3nm,0.8s,baz=58,slow=9.3,SNR=11						
ASAR				LR	LR	17 43 16.4	
	comp=Z,49nm,19.7s,baz=63,slow=35						
	comp=Z,1.3nm,0.8s						
ASAR	**Alice Springs**	**25.95**	**225**	P	**P**	**17 33 49.1**	**-1.0**
KNRA	**Kununurra**	**26.30**	**246**	P	**P**	**17 33 54.2**	**+0.9**
KNRA				IAmb	IAmb	17 34 17.9	
	comp=Z,14nm,1.2s						
STKA	**Stephens Creek**	**28.18**	**202**	LR	LR	17 46 20.7	
	comp=Z,96nm,18.2s,baz=27,slow=39						
BATI	**Baumata**	**30.02**	**260**	LR	LR	17 49 41.4	
	comp=Z,7.7nm,19.1s,baz=76,slow=42						
QRZ	**Quartz Range**	**38.62**	**157**	P	**P**	**17 35 40.5**	**-0.2**
KSRS	**Korea Array**	**49.41**	**333**	P	**P**	**17 37 07.6**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=149,slow=7.7,SNR=2.8						
	comp=Z,0.9nm,0.7s						
USRK	**Ussuriysk Ar.**	**53.60**	**341**	P	**P**	**17 37 39.0**	**+0.5**
	comp=Z,1.3nm,0.5s,baz=153,slow=5.6,SNR=2.3						
	comp=Z,1.3nm,0.5s						
PETK	**Petropavlovsk-**	**58.92**	**3**	P	**P**	**17 38 16.4**	**+0.1**
	comp=Z,6.3nm,1.1s,baz=165,slow=8.6,SNR=4.3						
	comp=Z,6.3nm,1.1s						
CMAR	**Chiang Mai Arr**	**59.16**	**295**	P	**P**	**17 38 21.7**	**+3.1**
	comp=Z,0.3nm,0.6s,baz=103,slow=6.5,SNR=2.6						
	comp=Z,0.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**59.16**	**295**	P	**P**	**17 38 18.9**	**+0.3**
SONM	**Songino Array**	**67.75**	**328**	P	**P**	**17 39 16.1**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=144,slow=6.8,SNR=4.6						
	comp=Z,0.4nm,0.6s						
IMAR	**Indian Mountai**	**81.16**	**19**	P	**P**	**17 40 33.3**	**+0.9**
MK31	**Makanchi Array**	**81.76**	**319**	P	**P**	**17 40 36.5**	**+0.4**
MKAR	**Makanchi Array**	**81.76**	**319**	P	**P**	**17 40 36.1**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=100,slow=5.4,SNR=9.7						
	comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**81.76**	**319**	P	**P**	**17 40 36.5**	**+0.4**
ZAA0	**Zalesovo Array**	**82.58**	**326**	P	**P**	**17 40 41.8**	**+1.6**
ZAA0				IAmb	IAmb	17 41 13.1	
	comp=Z,1.4nm,0.7s						
ZALV	**Zalesovo Beam**	**82.58**	**326**	P	**P**	**17 40 40.2**	**+0.1**
	comp=Z,1.5nm,0.4s,baz=112,slow=5.5,SNR=8.1						
	comp=Z,1.5nm,0.4s						
ILAR	**Eielson Array**	**82.88**	**22**	P	**P**	**17 40 39.7**	**-1.7**
	comp=Z,0.3nm,0.8s,baz=251,slow=4.8,SNR=2.3						
	comp=Z,0.3nm,0.8s						
D24K	**Happy Valley**	**84.52**	**18**	P	**P**	**17 40 49.1**	**-0.7**
D24K				IAmb	IAmb	17 40 52.3	
	comp=Z,2.8nm,1.1s						
KURK	**Kurchatov**	**85.20**	**322**	P	**P**	**17 40 54.2**	**+0.6**
KURBB	**Kurchatov Arra**	**85.23**	**322**	P	**P**	**17 40 54.2**	**+0.4**
	comp=Z,1.2nm,0.7s,baz=106,slow=3.9,SNR=15						
	comp=Z,1.2nm,0.7s						
NRIK	**Noril'sk**	**87.32**	**341**	P	**P**	**17 41 04.2**	**+0.6**
	comp=Z,2.0nm,0.8s,baz=90,slow=5.4,SNR=3.6						
	comp=Z,2.0nm,0.8s						
NRIK	**Noril'sk**	**87.32**	**341**	P	**P**	**17 41 03.4**	**-0.2**
NRIK				IAmb	IAmb	17 41 23.2	
	comp=Z,1.7nm,0.7s						
KKAR	**Karatay Array**	**89.05**	**313**	P	**P**	**17 41 13.4**	**+0.9**
BVAR	**Borovoye Array**	**90.67**	**323**	P	**P**	**17 41 19.9**	**+0.1**
	comp=Z,2.6nm,0.9s,baz=104,slow=4.9,SNR=10.0						
	comp=Z,2.6nm,0.9s						
BORK	**Borovoye**	**90.72**	**323**	P	**P**	**17 41 18.9**	**-1.1**
TORD	**Torodi Ar. Bea**	**151.49**	**287**	PKPbc	**PKPbc**	**17 48 12.1**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=176,slow=1.3,SNR=4.1						
TORD	**Torodi Ar. Bea**	**151.49**	**287**		**PKPdf**	**17 48 04.2**	**-1.8**

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*SOME **09** 17:30:54.9, 42°18N×79°35E, h10km*
*KRNET **09** 17:30:54.8±0.1, 42°20N×79°38E, h13km, mb2.9*
*NNC **09** 17:30:55.5±0.7, 42°24N×79°39E, h0km, mpv3.2, Error ellipse: s-maj=4.5km s-min=3.0km az=161.0*
ISC 09 17:30:53.5±2.1, 42°15N±0°06×79°41E±0°06, h7km±11km, n32, σ1ᵖ00/56, 10C-2D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.82**	**294**	⇑eP	**Pg**	**17 31 10.1**	**+0.9**
PRZ				⇑eS	**Sg**	**17 31 20.5**	**+0.6**
SHLS	**Shalkode**	**1.01**	**2**	P	**Pn**	**17 31 14.3**	**+0.1**
	15nm,0.1s						
SHLS				S	**Sn**	**17 31 28.2**	**-0.5**
	8.3nm,0.1s						
SHLS	**Shalkode**	**1.01**	**2**	*eP*	**Pn**	**17 31 14.3**	**+0.1**
	15nm,0.1s						
SHLS				*eS*	**Sn**	**17 31 28.2**	**-0.5**
	8.3nm,0.1s						
UZB	**Uzunbulak**	**1.03**	**344**	P	**Pg**	**17 31 13.4**	**0.0**
	5.1nm,0.1s						
UZB				S	**Sg**	**17 31 26.7**	**-0.2**
	14nm,0.1s						
UZB	**Uzunbulak**	**1.03**	**344**	*eP*	**Pg**	**17 31 13.4**	**0.0**
UZB				*eS*	**Sg**	**17 31 26.7**	**-0.2**
UZB	**Uzunbulak**	**1.03**	**344**	*eP*	**Pg**	**17 31 13.4**	**0.0**
	5.1nm,0.1s						
UZB				*eS*	**Sg**	**17 31 26.7**	**-0.2**
	14nm,0.1s						
SATY	**Saty**	**1.17**	**321**	P	**Pg**	**17 31 16.0**	**+0.1**
	3.0nm,0.1s						
SATY				S	**Sb**	**17 31 31.3**	**-0.2**
	14nm,0.1s						
TARG	**Taragay, Kyrgy**	**1.27**	**251**	⇓*eP*	**Pn**	**17 31 18.2**	**+0.2**
TARG				⇓*eS*	**Sn**	**17 31 36.0**	**+0.6**
KPKS	**Kokpek**	**1.42**	**338**	P	**Pb**	**17 31 20.5**	**+0.2**
	0.3nm,0.1s						
KPKS				S	**Sg**	**17 31 38.9**	**-0.2**
	12nm,0.3s						
KPKS	**Kokpek**	**1.42**	**338**	*eP*	**Pb**	**17 31 20.5**	**+0.2**
	0.3nm,0.1s						
KPKS				*eS*	**Sg**	**17 31 38.9**	**-0.2**
	12nm,0.3s						
KURS	**Kuram**	**1.62**	**326**	P	**Pb**	**17 31 24.2**	**+0.5**
	2.5nm,0.1s						
KURS				S	**Sg**	**17 31 45.4**	**-0.1**
	3.6nm,0.3s						
KDJ	**Kajisay**	**1.66**	**270**	⇑*eP*	**Pb**	**17 31 24.9**	**+0.5**
KDJ				⇑*eS*	**Sg**	**17 31 46.9**	**+0.2**
KOTS	**Kotyrbulak**	**2.01**	**303**	Pg	**Pb**	**17 31 31.3**	**+0.9**
	3.3nm,0.1s						
KOTS				Lg	Lg	17 31 57.5	
	3.6nm,0.2s						
KOTS	**Kotyrbulak**	**2.01**	**303**	*eP*	**Pb**	**17 31 31.4**	**+0.9**
	3.3nm,0.1s						
KOTS				*eS*	**Sg**	**17 31 57.5**	**-0.5**
	3.6nm,0.2s						
MDOK	**Medeo**	**2.01**	**301**	Pg	**Pb**	**17 31 31.2**	**+0.8**
	8.5nm,0.2s						
MDOK				Lg	Lg	17 31 57.6	
	7.2nm,0.4s						
TNSS	**Tian-Shan**	**2.02**	**297**	*eP*	**Pb**	**17 31 31.6**	**+0.8**
	2.3nm,0.4s						
TNSS				*eS*	**Sg**	**17 31 58.1**	**-0.3**
	1.8nm,0.4s						
BLB	**Baldybastay**	**2.06**	**341**	Pg	**Pg**	**17 31 32.5**	**-0.5**
	0.3nm,0.1s						
BLB				Lg	Lg	17 31 59.5	
	56nm,0.2s						
DJR	**Jarkent**	**2.20**	**7**	Pg	**Pb**	**17 31 34.5**	**+0.9**
	1.4nm,0.1s						
DJR				Lg	Lg	17 32 03.0	
	6.2nm,0.3s						
DJR	**Jarkent**	**2.20**	**7**	*eP*	**Pb**	**17 31 34.5**	**+0.9**
	1.4nm,0.1s						
DJR				*eS*	**Sg**	**17 32 03.0**	**-1.2**
	6.2nm,0.3s						
KNOS	**Konyrlen**	**2.21**	**356**	Pg	**Pb**	**17 31 34.6**	**+0.6**
	2.0nm,0.1s						
KNOS				Lg	Lg	17 32 03.3	
	21nm,0.2s						
IZV	**Izvestkoviy**	**2.24**	**294**	*eP*	**Pb**	**17 31 34.3**	**-0.1**
	3.5nm,0.1s						
IZV				*eS*	**Sb**	**17 32 02.9**	**+0.5**
	6.4nm,0.2s						
ULHL	**Ulahol**	**2.35**	**273**	⇑*eP*	**Pb**	**17 31 36.3**	**0.0**
ULHL				⇑*eS*	**Sb**	**17 32 06.4**	**+0.8**
ARXS	**Arharly**	**2.36**	**331**	Pg	**Pb**	**17 31 37.6**	**+1.2**
	1.2nm,0.1s						
ARXS				Lg	Lg	17 32 08.1	
	20nm,0.3s						
ARXS	**Arharly**	**2.36**	**331**	*eP*	**Pb**	**17 31 37.6**	**+1.2**
	1.2nm,0.1s						
ARXS				*eS*	**Sg**	**17 32 08.1**	**-1.3**
	20nm,0.3s						
KTBS	**Karatobe**	**2.54**	**309**	Pg	**Pb**	**17 31 40.7**	**+1.3**
	6.1nm,0.2s						
KTBS				Lg	Lg	17 32 13.3	
	3.5nm,0.3s						
KTBS	**Karatobe**	**2.54**	**309**	*eP*	**Pb**	**17 31 40.7**	**+1.3**
	6.1nm,0.2s						
KTBS				*eS*	**Sg**	**17 32 13.3**	**-1.7**
	3.5nm,0.3s						
NRN	**Naryn**	**2.65**	**255**	⇑*eP*	**Pb**	**17 31 40.8**	**-0.6**
NRN				⇑*eS*	**Sb**	**17 32 13.9**	**-0.3**
KST	**Kastek**	**2.69**	**290**	*eP*	**Pb**	**17 31 43.6**	**+1.5**
	1.9nm,0.1s						
KST				*eS*	**Sg**	**17 32 18.6**	**-1.4**
	3.7nm,0.5s						
DGS	**Degeres**	**2.89**	**293**	*eP*	**Pb**	**17 31 47.6**	**+2.1**
	2.4nm,0.3s						
DGS				*eS*	**Sg**	**17 32 25.2**	**-1.2**
	3.1nm,0.4s						
TKM2	**Tokmak 2**	**2.92**	**287**	⇑*eP*	**Pb**	**17 31 44.3**	**-1.7**
TKM2				⇑*eS*	**Sb**	**17 32 19.6**	**-2.3**
KRBS	**Karabastau**	**3.15**	**301**	Pg	**Pb**	**17 31 51.6**	**+1.9**
	0.8nm,0.3s						
KRBS				Lg	Lg	17 32 32.4	
	0.9nm,0.4s						
KRBS	**Karabastau**	**3.15**	**301**	*eP*	**Pb**	**17 31 51.6**	**+1.9**
	0.8nm,0.3s						
KRBS				*eS*	**Sg**	**17 32 32.4**	**-2.1**
	0.9nm,0.4s						

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*IDC **09** 17:54:20.1±4.8, 17°95S×173°88W, h61km±48km, mb3.6/4, mbtmp4.0/5, ML4.1/1, Error ellipse: s-maj=44.6km s-min=28.7km az=151.0*
*NEIC **09** 17:54:24.8±1.6, 17°25S±0°08×174°22W±0°09, h91km±11km, mb4.3/4, Error ellipse: s-maj=14.7km s-min=8.3km az=49.0*
ISC 09 17:54:24.3±0.8, 17°32S±0°08×174°12W±0°08, h108km, n13, σ2ᵖ28/15, mb4.2/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.07**	**34**	P	**Pn**	**17 55 25.8**	**+1.1**
	9.8nm,0.3s,baz=213,slow=2.8,SNR=10.0						
AFI				S	**Sn**	**17 56 08.3**	**-3.2**
	126nm,0.5s,baz=44,slow=22,SNR=13						
	29nm,0.3s						
NIUE	**Niue**	**4.35**	**114**	Pn	**Pn**	**17 55 30.4**	**+2.0**
NIUE				Sn	**Sn**	**17 56 14.6**	**-3.5**
FUTU	**Fugatoga**	**4.88**	**307**	Pn	**Pn**	**17 55 33.9**	**-1.7**
RTZ	**Ruatahuna**	**22.60**	**198**	P	**P**	**17 59 17.1**	**+1.1**
RTZ				IAmb	IAmb	17 59 38.6	
	comp=Z,18nm,0.9s						
BKZ	**Black Stump Fm**	**23.26**	**199**	P	**P**	**17 59 23.6**	**+1.3**
WRA	**Warramunga Arr**	**48.76**	**258**	P	**P**	**18 02 59.6**	**+1.0**
	comp=Z,0.5nm,0.5s,baz=97,slow=6.8,SNR=17						
	comp=Z,0.5nm,0.5s						
AS31	**Alice Springs**	**48.88**	**253**	P	**P**	**18 03 00.7**	**+1.1**
ASAR	**Alice Springs**	**48.88**	**253**	P	**P**	**18 03 00.7**	**+1.1**
	comp=Z,2.7nm,0.7s,baz=91,slow=7.7,SNR=71						
	comp=Z,2.7nm,0.7s						
ASAR	**Alice Springs**	**48.88**	**253**	P	**P**	**18 03 00.1**	**+0.6**
VNDA	**Vanda**	**61.41**	**186**	P	**P**	**18 04 25.4**	**-3.2**
	comp=Z,1.1nm,0.5s,baz=337,slow=4.9,SNR=6.9						
	comp=Z,1.1nm,0.5s						
J05D	**Fort Rock, OR**	**77.36**	**37**		**P**	**18 06 08.7**	**+1.2**
J05D				IAmb	IAmb	18 06 29.4	
	comp=Z,5.0nm,1.2s						
PDAR	**Pinedale Array**	**84.15**	**42**	P	**P**	**18 06 46.5**	**+2.8**
	comp=Z,0.4nm,0.6s,baz=226,slow=6.0,SNR=4.1						
	comp=Z,0.4nm,0.6s						
PDAR	**Pinedale Array**	**84.15**	**42**	P	**P**	**18 06 46.2**	**+2.4**

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*IDC **09** 18:12:07.3±0.5, 32°65N×85°49E, h0km, mb4.5/29, mbtmp4.5/33, ML3.9/4, MS4.6/74, Error ellipse: s-maj=13.6km s-min=11.0km az=37.0*
*MOS **09** 18:12:08.6±1.1, 32°79N×85°54E, h15km, mb5.0/63, MS4.9/28, Error ellipse: s-maj=6.4km s-min=3.1km az=119.2*
*BJI **09** 18:12:09.1, 32°83N×85°57E, h10km, mB5.1/40, mb4.7/78, Ms5.1/83, Ms7 5.0/79*
*NEIC **09** 18:12:09.4, 32°81N×85°61E, h12km*
*NEIC **09** 18:12:09.4, 32°81N×85°37E, h12km, Moment Tensor Solution. Duration: 2ˢ0 Moment tensor: Scale 10¹⁶Nm; M_{rr}0.85; $M_{\theta\theta}$-6.68; $M_{\phi\phi}$5.82; $M_{r\theta}$3.06; $M_{\theta\phi}$2.34; $M_{\phi r}$0.33; Fault plane solution: $M_0$7.39000×10¹⁶ NP1: ϕ_s326.92000°, δ69.73000°, λ-173.91000°. NP2: ϕ_s234.81000°, δ84.29000°, λ-20.37000°. Principal axes: T 6.4023, Plg10.0000°, Azm282.0000°; N 1.6782, Plg69.0000°, Azm40.0000°; P -8.0805, Plg18.0000°, Azm189.0000°;*
*NEIC **09** 18:12:09.4±1.6, 32°80N±0°07×85°55E±0°07, h10km±1km, mb5.0/196, Mww5.2/8 Error ellipse: s-maj=13.5km s-min=7.1km az=216.0*
*GFZ **09** 18:12:10.7, 32°79N×85°43E, h10km, MW5.2, Moment

LGTI					*e*S	**Sn**	**18 14 44.7**	**+5.4**
LGTI					IAML		18 14 51.9	
	comp=N,464nm,0.6s							
LSA	**Lhasa**	**5.73**	**120**	Pn	**Pn**		**18 13 39.0**	**+4.0**
LSA	**Lhasa**	**5.73**	**120**	P	**Pn**		**18 13 39.1**	**+4.0**
LSA	**Lhasa**	**5.73**	**120**	P	**Pn**		**18 13 39.8**	**+4.8**
LSA	**Lhasa**	**5.73**	**120**	Pn	**Pn**		**18 13 36.6**	**+1.6**
LSA				Sn	**Sn**		**18 14 47.2**	**+6.2**
LSA				L	L			
	comp=N,22µm,12.4s							
STMR	**SITAMARHI**	**5.95**	**182**	*e*P	**Pn**		**18 13 41.4**	**+3.8**
STMR				IAML			18 15 02.2	
	comp=E,533nm,0.4s							
STMR				IAML			18 15 03.0	
	comp=N,564nm,0.9s							
GTK	**Tadong**	**6.04**	**152**	*e*P	**Pn**		**18 13 42.3**	**+3.3**
GTK				*e*S	**Sn**		**18 14 48.6**	**+0.5**
GTK				IAML			18 15 02.2	
	comp=N,309nm,1.3s							
GTK				IAML			18 15 02.2	
	comp=Z,219nm,0.9s							
KLP	**Kalpa**	**6.23**	**261**	*e*P	**Pn**		**18 13 44.9**	**+3.1**
KLP				*e*S	**Sn**		**18 14 54.8**	**+1.7**
KLP				IAML			18 15 06.6	
	comp=N,371nm,1.0s							
KLP				IAML			18 15 16.2	
	comp=E,348nm,1.0s							
DDI	**Dehra Dun**	**6.76**	**251**	*e*P	**Pn**		**18 13 52.3**	**+3.5**
DDI				*e*S	**Sn**		**18 15 09.0**	**+3.2**
ALCI	**Alchi Leh**	**7.07**	**284**	*e*P	**Pn**		**18 13 56.0**	**+2.6**
ALCI				*e*S	**Sn**		**18 15 12.5**	**-1.4**
ALCI				IAML			18 15 28.1	
	comp=N,256nm,0.7s							
ALCI				IAML			18 15 28.6	
	comp=E,237nm,0.7s							
LKN	**LUCKNOW**	**7.15**	**215**	*e*S	**Sn**		**18 15 18.8**	**+3.6**
SMLA	**Simla**	**7.23**	**259**	*e*P	**Pn**		**18 13 58.6**	**+3.4**
SMLA				*e*S	**Sn**		**18 15 18.8**	**+1.7**
SMLA				IAML			18 15 25.2	
	comp=E,594nm,0.9s							
SMLA				IAML			18 15 27.3	
	comp=N,426nm,0.8s							
TAWA	**Tawang**	**7.54**	**131**	*e*P	**Pn**		**18 14 00.2**	**+0.4**
MERT	**Meerut**	**7.62**	**243**	*e*P	**Pn**		**18 14 04.6**	**+4.0**
SHBG	**Sahibganj**	**7.70**	**165**	*e*P	**Pn**		**18 14 04.4**	**+2.7**
SHBG				*e*S	**Sn**		**18 15 27.7**	**-1.2**
SHBG				IAML			18 15 35.2	
	comp=N,207nm,1.4s							
SHBG				IAML			18 15 43.0	
	comp=E,367nm,1.1s							
VAR	**Varanasi**	**7.74**	**197**	*e*P	**Pn**		**18 14 03.8**	**+1.6**
DHRM	**DHARAMSHALA**	**7.75**	**269**	*e*P	**Pn**		**18 14 03.5**	**+0.9**
DHRM				*e*S	**Sn**		**18 15 30.9**	**+0.5**
DHRM				IAML			18 15 52.3	
	comp=N,300nm,1.2s							
DHRM				IAML			18 15 52.6	
	comp=E,272nm,0.8s							
DHUB	**DHUBRI**	**7.76**	**148**	*e*P	**Pn**		**18 14 04.4**	**+1.9**
DHUB				*e*S	**Sn**		**18 15 29.9**	**-0.5**
DHUB				IAML			18 15 40.3	
	comp=E,394nm,1.0s							
DHUB				IAML			18 15 43.1	
	comp=N,350nm,0.8s							
BHK	**Bhakra**	**7.82**	**263**	*e*P	**Pn**		**18 14 01.4**	**-1.9**
BHK				*e*S	Sn		18 15 22.6	-9.2
BHK				IAML			18 15 38.8	
	comp=N,361nm,0.7s							
BHK				IAML			18 15 45.6	
	comp=E,314nm,0.8s							
TSSA	**Tissa**	**7.84**	**273**	*e*P	**Pn**		**18 14 05.6**	**+1.8**
TSSA				*e*S	**Sn**		**18 15 31.3**	**-1.3**
TSSA				IAML			18 15 46.1	
	comp=N,282nm,1.0s							
TSSA				IAML			18 15 52.9	
	comp=E,424nm,0.9s							
GAYA	**Gaya**	**7.90**	**182**	*e*P	**Pn**		**18 14 06.7**	**+2.4**
GAYA				*e*S	**Sn**		**18 15 33.9**	**+0.3**
ALBI	**Allahabad**	**8.05**	**204**	*e*P	**Pn**		**18 14 08.0**	**+1.6**
ALBI				*e*S	**Sn**		**18 15 36.3**	**-1.1**
ALBI				IAML			18 15 44.7	
	comp=E,185nm,1.4s							
ALBI				IAML			18 15 52.1	
	comp=N,202nm,1.1s							
NDI	**New Delhi**	**8.16**	**243**	*e*P	**Pn**		**18 14 12.4**	**+4.5**
NDI				*e*S	**Sn**		**18 15 41.9**	**+1.8**
NDI				IAML			18 15 49.7	
	comp=E,312nm,0.8s							
NDI				IAML			18 15 54.1	
	comp=N,232nm,1.2s							
THN	**Thein Dam**	**8.19**	**271**	*e*P	**Pn**		**18 14 12.5**	**+4.0**
THN				*e*S	**Sn**		**18 15 40.8**	**-0.2**
THN				IAML			18 15 51.7	
	comp=N,137nm,0.8s							
THN				IAML			18 15 55.8	
	comp=E,231nm,0.8s							
NRLA	**Narela**	**8.20**	**244**	*e*P	**Pn**		**18 14 13.0**	**+4.5**
LDR	**Lodi Road**	**8.21**	**242**	*e*P	**Pn**		**18 14 13.0**	**+4.3**
NPLP	**NPLP New Delhi**	**8.22**	**242**	*e*P	**Pn**		**18 14 11.9**	**+3.1**
NPLP				*e*S	**Sn**		**18 15 42.4**	**+0.8**
BHGR	**Bahadurgarh**	**8.37**	**243**	*e*S	**Sn**		**18 15 46.2**	**+1.0**
GOMU	**GeErMu**	**8.46**	**63**	P	**Pn**		**18 14 14.4**	**+1.9**
GOMU				S	**Sn**		**18 15 50.1**	**+2.0**
GOMU				pmax	pmax			
	comp=E,42nm,1.0s							
GOMU				L	L			
	comp=E,7µm,11.2s							
GOMU				L	L			
	comp=E,3µm,11.8s							
GUWA	**GUWAHATI**	**8.47**	**139**	*e*P	**Pn**		**18 14 13.6**	**+1.3**
GUWA				*e*S	**Sn**		**18 15 46.4**	**-1.5**
SONA	**Sohna**	**8.51**	**241**	*e*P	Pn		18 14 17.8	+5.0
SONA				*e*S	**Sn**		**18 15 50.5**	**+1.8**
SONA				IAML			18 15 58.1	
	comp=E,239nm,0.7s							
SONA				IAML			18 16 11.4	
	comp=N,298nm,1.0s							
RTK	**Rohtak**	**8.60**	**247**	*e*P	**Pn**		**18 14 15.0**	**+1.0**
TEZP	**TEZPUR**	**8.82**	**132**	*e*P	**Pn**		**18 14 16.9**	**0.0**
TEZP				*e*S	**Sn**		**18 15 52.0**	**-4.3**
BOK	**Bokaro**	**8.90**	**177**	*e*P	**Pn**		**18 14 19.1**	**+0.9**
BOK				*e*S	**Sn**		**18 15 59.0**	**+0.5**
ZIRO	**ZIRO**	**8.92**	**123**	*e*P	**Pn**		**18 14 20.1**	**+1.5**
JMU	**Jammu**	**8.95**	**273**	*e*P	**Pn**		**18 14 22.0**	**+3.2**
JMU				*e*S	**Sn**		**18 15 58.5**	**-1.2**
JMU				IAML			18 16 10.9	
	comp=N,286nm,0.8s							
JMU				IAML			18 16 14.0	
	comp=E,235nm,0.8s							
KUDL	**Kundal**	**8.99**	**242**	*e*P	**Pn**		**18 14 21.2**	**+1.9**
KUDL				*e*S	**Sn**		**18 15 58.9**	**-1.6**
KUDL				IAML			18 16 11.2	
	comp=N,270nm,1.0s							
KUDL				IAML			18 16 12.6	
	comp=E,264nm,0.9s							
ITAN	**ITANAGAR**	**9.07**	**126**	*e*P	**Pn**		**18 14 22.4**	**+2.0**
SHL	**Shillong**	**9.07**	**140**		**Pn**		**18 14 20.6**	**-0.1**
SHL	**Shillong**	**9.07**	**140**	P	**Pn**		**18 14 20.6**	**-0.1**
SHL	**Shillong** SNR=38	**9.07**	**140**	P	**Pn**		**18 14 20.3**	**-0.4**
SHL				S	**Sn**		**18 16 03.0**	**+0.1**
SHL	**Shillong**	**9.07**	**140**	*e*P	**Pn**		**18 14 21.4**	**+0.7**
SHL				*e*S	**Sn**		**18 15 58.7**	**-4.2**
JHNI	**Jhansi**	**9.40**	**221**	*e*P	**Pn**		**18 14 26.6**	**+1.6**
JHNI				*e*S	**Sn**		**18 16 08.6**	**-2.0**
JHNI				IAML			18 16 12.5	
	comp=N,224nm,0.9s							
JHNI				IAML			18 16 18.8	
	comp=E,308nm,0.7s							
PASG	**PASIGHAT**	**9.70**	**116**	*e*P	**Pn**		**18 14 29.7**	**+0.6**
WUS	**Wushi**	**9.82**	**331**		**Pn**		**18 14 30.7**	**-0.1**
MOKO	**MOKOCHONG**	**10.14**	**127**	*e*P	**Pn**		**18 14 36.1**	**+0.8**
MOKO				*e*S	**Sn**		**18 16 23.8**	**-5.3**
MOKO				IAML			18 16 54.9	
	comp=N,214nm,1.4s							
MOKO				IAML			18 16 59.3	
	comp=E,207nm,1.5s							
AGT	**Agartala**	**10.17**	**148**	*e*P	**Pn**		**18 14 35.8**	**+0.2**
AGT				*e*S	**Sn**		**18 16 25.2**	**-4.3**
KSH2	**Kashi**	**10.26**	**311**	P	**Pn**		**18 14 37.5**	**+0.6**
KSH2				sP			18 14 42.7	
KSH2				S	**Sn**		**18 16 28.0**	**-3.9**
KSH2				pmax	pmax			
	comp=E,33nm,1.5s							
KSH2				L	L			
	comp=E,14µm,17.5s							
KSH2				L	L			
	comp=E,5µm,15.5s							
NIL	**Nilore**	**10.27**	**278**		**Pn**		**18 14 36.0**	**-1.0**
NIL	**Nilore**	**10.27**	**278**	P	**Pn**		**18 14 36.0**	**-1.0**
NIL	**Nilore**	**10.27**	**278**	P	**Pn**		**18 14 36.7**	**-0.2**
NIL				S	**Sn**		**18 16 32.6**	**+0.5**
KOHI	**KOHIMA**	**10.28**	**131**	*e*P	**Pn**		**18 14 37.5**	**+0.3**
KOHI				*e*S	**Sn**		**18 16 24.6**	**-7.9**
KOHI				IAML			18 16 48.2	
	comp=N,281nm,1.3s							
KOHI				IAML			18 17 07.2	
	comp=E,227nm,1.0s							
SRGN	**SRI GANGA NAGA**	**10.29**	**257**	*e*P	**Pn**		**18 14 37.7**	**+0.6**
SRGN				*e*S	**Sn**		**18 16 30.2**	**-2.1**
SRGN				IAML			18 16 35.9	
	comp=N,1µm,0.6s							
GUNA	**GUNA**	**10.75**	**224**	*e*P	**Pn**		**18 14 46.0**	**+2.5**
GUNA				IAML			18 16 47.1	
	comp=N,252nm,1.0s							
GUNA				IAML			18 16 47.2	
	comp=E,204nm,0.8s							
BELO	**BELONIA**	**10.82**	**149**	*e*P	**Pn**		**18 14 44.0**	**-0.4**
BELO				*e*S	**Sn**		**18 16 40.5**	**-5.0**
IMP	**Imphal**	**10.82**	**134**	*e*P	**Pn**		**18 14 43.5**	**-1.1**
IMP				*e*S	**Sn**		**18 16 40.3**	**-5.5**
TARG	**Taragay, Kyrgy**	**10.86**	**328**		**Pn**		**18 14 46.0**	**+0.7**
TARG	**Taragay, Kyrgy**	**10.86**	**328**	P	**Pn**		**18 14 46.0**	**+0.7**
BLSP	**Bilaspur**	**10.98**	**196**	*e*P	**Pn**		**18 14 49.0**	**+2.4**
WMQ	**Urumqi**	**11.22**	**8**	⇑P	**Pn**		**18 14 51.0**	**+1.1**
WMQ				S	**Sn**		**18 16 52.0**	**-3.2**
WMQ				pmax	pmax			
	comp=E,27nm,1.7s							
WMQ				pmax	pmax			
	comp=E,540nm,4.3s							
WMQ				L	L			
	comp=E,5µm,16.1s							
WMQ				L	L			
	comp=E,4µm,17.9s							
WMQ				L	L			
	comp=E,5µm,24.2s							
PRZ	**Przheval'sk**	**11.23**	**332**		**Pn**		**18 14 50.5**	**+0.3**
PRZ	**Przheval'sk**	**11.23**	**332**	P	**Pn**		**18 14 50.5**	**+0.3**
AJM	**Ajmer**	**11.32**	**239**	*e*P	**Pn**		**18 14 52.5**	**+1.2**
AJM				IAmb	IAmb		18 15 00.7	
	comp=E,66nm,1.1s							
AJM				*e*S	**Sn**		**18 16 54.1**	**-3.8**
BRDH	**Bariadhala**	**11.41**	**150**	LR	LR		18 20 18.3	
	comp=Z,2µm,20.0s,baz=342,slow=43							
SHLS	**Shalkode**	**11.44**	**337**	*e*P	**Pn**		**18 14 51.4**	**-1.5**
SHLS				*e*S	**Sn**		**18 16 58.1**	**-2.6**
SHLS	**Shalkode**	**11.44**	**337**	*e*P	**Pn**		**18 14 51.4**	**-1.5**
SHLS				*e*S	**Sn**		**18 16 58.1**	**-2.6**
SHLS				*e*LQ	LQ		18 18 07.6	
KDJ	**Kajisay**	**11.46**	**327**		**Pn**		**18 14 53.7**	**+0.4**
KDJ	**Kajisay**	**11.46**	**327**	P	**Pn**		**18 14 53.7**	**+0.4**
MORE	**Moreh**	**11.48**	**135**		**Pn**		**18 14 52.5**	**-1.1**
NRN	**Naryn**	**11.51**	**322**		**Pn**		**18 14 54.6**	**+0.5**
NRN	**Naryn**	**11.51**	**322**	P	**Pn**		**18 14 54.6**	**+0.5**
BKNR	**BIKANER**	**11.52**	**249**	*e*S	**Sn**		**18 17 00.1**	**-2.5**
UZB	**Uzynbulak**	**11.57**	**336**	*e*P	**Pn**		**18 14 55.3**	**+0.5**
UZB				*e*S	**Sn**		**18 17 05.2**	**+1.1**
UZB	**Uzynbulak**	**11.57**	**336**	*e*P	**Pn**		**18 14 55.3**	**+0.5**
UZB				*e*S	**Sn**		**18 17 05.2**	**+1.1**
UZB				*e*LQ	LQ		18 18 16.6	
SATY	**Saty**	**11.72**	**334**	*e*P	**Pn**		**18 14 57.2**	**+0.4**
SATY				*e*S	**Sn**		**18 17 08.3**	**+0.7**
SATY	**Saty**	**11.72**	**334**	*e*P	**Pn**		**18 14 57.3**	**+0.4**
SATY				*e*S	**Sn**		**18 17 08.3**	**+0.7**
SATY				*e*LQ	LQ		18 18 20.9	
BHPL	**Bhopal**	**11.81**	**219**	*e*P	**Pn**		**18 14 59.0**	**+0.9**
BHPL				IAmb	IAmb		18 15 16.7	
	comp=Z,46nm,0.5s							
BHPL				*e*S	**Sn**		**18 17 06.0**	**-3.9**
KPKS	**Kokpek**	**11.97**	**336**	*e*P	**Pn**		**18 15 00.5**	**+0.3**
KPKS				*e*S	**Sn**		**18 17 13.8**	**+0.1**
KPKS	**Kokpek**	**11.97**	**336**	*e*P	**Pn**		**18 15 00.5**	**+0.3**
KPKS				*e*S	**Sn**		**18 17 13.9**	**+0.1**
KPKS				*e*LQ	LQ		18 18 28.5	
ULHL	**Ulahol** SNR=10.0	**11.99**	**325**	P	**Pn**		**18 15 03.6**	**+3.1**
SAIH	**SAIHA**	**12.18**	**145**	*e*P	**Pn**		**18 15 01.7**	**-1.5**
SAIH				IAML			18 17 29.5	
	comp=N,325nm,1.3s							
SAIH				IAML			18 17 32.8	
	comp=E,339nm,1.4s							
TNSS	**Tian-Shan**	**12.29**	**329**	*e*P	**Pn**		**18 15 05.3**	**+0.5**
TNSS	**Tian-Shan**	**12.29**	**329**	*e*P	**Pn**		**18 15 05.3**	**+0.5**
BOOM	**Boomskoye usch**	**12.32**	**325**		**Pn**		**18 15 05.5**	**+0.5**
BOOM	**Boomskoye usch**	**12.32**	**325**	P	**Pn**		**18 15 05.5**	**+0.5**
MDOK	**Medeo**	**12.35**	**330**	*e*P	**Pn**		**18 15 06.0**	**+0.6**
MDOK	**Medeo**	**12.35**	**330**	*e*P	**Pn**		**18 15 06.1**	**+0.6**
MDOK				*e*LQ	LQ		18 18 41.6	
NRDN	**NARMADA NAGAR**	**12.38**	**218**	IAML			18 18 00.1	
	comp=E,229nm,1.0s							
NRDN				IAML			18 18 13.6	
	comp=N,302nm,1.3s							
AAA	**Alma-Ata**	**12.44**	**330**	*e*P	**Pn**		**18 15 07.3**	**+0.7**
AAA	**Alma-Ata**	**12.44**	**330**	*e*P	**Pn**		**18 15 07.3**	**+0.7**
TKM2	**Tokmak 2** SNR=17	**12.81**	**325**	P	**Pn**		**18 15 12.4**	**+0.6**
UCH	**Uchtor** SNR=40	**12.86**	**321**	P	**Pn**		**18 15 14.5**	**+1.9**
ARXS	**Arharly**	**12.93**	**335**	*e*P	**Pn**		**18 15 12.7**	**-0.6**
DRK	**Karamyk**	**12.93**	**305**		**Pn**		**18 15 12.3**	**-1.3**
DRK	**Karamyk**	**12.93**	**305**	P	**Pn**		**18 15 12.3**	**-1.3**
KBK	**Karagaybulak** SNR=11	**12.93**	**323**	P	**Pn**		**18 15 15.6**	**+2.1**
UDPR	**Udaipur**	**13.12**	**235**	*e*P	**Pn**		**18 15 17.8**	**+1.9**
UDPR				*e*S	**Sn**		**18 17 36.1**	**-5.7**
UDPR				IAML			18 17 49.9	
	comp=N,268nm,0.9s							
UDPR				IAML			18 17 50.1	
	comp=E,202nm,0.8s							
ARSB	**Arslanbob**	**13.14**	**314**		**Pn**		**18 15 15.5**	**-0.8**
ARSB	**Arslanbob**	**13.14**	**314**	P	**Pn**		**18 15 15.5**	**-0.8**
AAK	**Ala-Archa**	**13.15**	**322**	Pn	**Pn**		**18 15 17.3**	**+0.9**
	comp=E,0.1nm,0.3s,baz=153,slow=13,SNR=19							
AAK				LR	LR		18 19 56.4	
	comp=E,716nm,19.2s,baz=138,slow=35							
	comp=E,6.0nm,0.9s							
AAK	**Ala-Archa**	**13.15**	**322**		**Pn**		**18 15 16.9**	**+0.4**
AAK	**Ala-Archa** SNR=9.9	**13.15**	**322**	P	**Pn**		**18 15 18.3**	**+1.8**
AAK	**Ala-Archa**	**13.15**	**322**	*c i*P	**Pn**		**18 15 17.6**	**+1.2**
AAK				pmax	pmax			
	comp=Z,10.0nm,1.0s							
AAK	**Ala-Archa**	**13.15**	**322**	P	**Pn**		**18 15 17.9**	**+1.5**
FRU1	**Bishkek**	**13.21**	**323**		**Pn**		**18 15 16.9**	**-0.2**
FRU1	**Bishkek**	**13.21**	**323**	P	**Pn**		**18 15 16.9**	**-0.2**
KUU	**Kurty**	**13.24**	**330**	*e*P	**Pn**		**18 15 18.2**	**+0.7**
KUU	**Kurty**	**13.24**	**330**	*e*P	**Pn**		**18 15 18.2**	**+0.7**
GTA2	**Gaotai**	**13.38**	**56**	P	**Pn**		**18 15 18.5**	**-1.0**
GTA2				pP	P		18 15 21.5	-7.6
GTA2				S	**Sn**		**18 17 44.6**	**-3.6**
GTA2				pmax	pmax			
	comp=Z,15nm,1.9s							
GTA2				L	L			
	comp=Z,8µm,12.7s							
GTA2				L	L			
	comp=Z,6µm,12.7s							
TDK	**Taldyqorghan**	**13.43**	**338**	*e*P	**Pn**		**18 15 20.5**	**+0.5**
TDK	**Taldyqorghan**	**13.43**	**338**	*e*P	**Pn**		**18 15 20.6**	**+0.5**
RAGD	**RAYAGADA**	**13.54**	**188**	*e*P	**Pn**		**18 15 23.0**	**+1.3**
RAGD				IAmb	IAmb		18 15 30.1	
	comp=Z,30nm,0.7s							
RAGD				*e*S	**Sn**		**18 17 48.3**	**-3.9**
EKS2	**Erkin-Say** SNR=36	**13.55**	**320**	P	**P**		**18 15 27.2**	**-3.8**
SGDS	**Sogindy**	**13.68**	**325**	*e*P	**Pn**		**18 15 24.3**	**+0.8**
SGDS				*e*LQ	LQ		18 19 23.9	
TNCH	**TengChong**	**13.77**	**121**	⇑P	**Pn**		**18 15 23.5**	**-1.4**
TNCH				pP	P		18 15 28.3	-5.2
TNCH				sP			18 15 30.3	
TNCH				PP	**PnPn**		**18 15 35.0**	**+2.2**
TNCH				S	**Sn**		**18 17 55.1**	**-2.7**
TNCH				SS	**SnSn**		**18 18 15.0**	**+4.8**
TNCH				pmax	pmax			
	comp=Z,33nm,1.2s							
TNCH				pmax	pmax			
	comp=Z,190nm,3.5s							
TNCH				L	L			
	comp=Z,9µm,17.2s							
TNCH				L	L			
	comp=Z,8µm,13.2s							
KBL	**Kabul**	**13.80**	**282**		**Pn**		**18 15 22.4**	**-3.0**
KBL	**Kabul**	**13.80**	**282**	P	**Pn**		**18 15 22.4**	**-3.0**
KBL	**Kabul** SNR=21	**13.80**	**282**	P	**Pn**		**18 15 22.4**	**-3.0**
BTK	**Batken**	**13.87**	**306**		**Pn**		**18 15 22.8**	**-3.4**
BTK	**Batken**	**13.87**	**306**	P	**Pn**		**18 15 22.8**	**-3.4**
JASL	**Jaisalmer**	**13.89**	**249**	*e*P	**Pn**		**18 15 29.5**	**+3.1**
JASL				*e*S	**Sn**		**18 17 56.8**	**-3.9**
JASL				IAML			18 18 17.1	
	comp=E,273nm,1.2s							
JASL				IAML			18 18 21.1	
	comp=N,224nm,1.1s							
AKL	**Akola**	**14.14**	**214**	*e*P	**Pn**		**18 15 33.5**	**+3.6**
AKL				*e*S	**Sn**		**18 18 01.3**	**-5.6**
AKL				IAML			18 18 12.5	
	comp=N,235nm,1.0s							
AKL				IAML			18 18 13.3	
	comp=E,200nm,1.0s							
MK31	**Makanchi Array**	**14.26**	**351**	Pn	**Pn**		**18 15 29.7**	**-1.7**
MK31	**Makanchi Array**	**14.26**	**351**	*c i*P	**Pn**		**18 15 30.4**	**-1.0**
MKAR	**Makanchi Array**	**14.26**	**351**	Pn	**Pn**		**18 15 30.7**	**-0.7**
	comp=E,0.6nm,0.3s,baz=163,slow=13,SNR=79							
MKAR				LR	LR		18 22 04.4	
	comp=E,2µm,21.1s,baz=162,slow=42							
	comp=E,9.6nm,0.9s							
MKAR	**Makanchi Array**	**14.26**	**351**		**Pn**		**18 15 29.9**	**-1.5**
MAKZ	**Makanchi**	**14.32**	**350**		**Pn**		**18 15 30.6**	**-1.6**
MAKZ	**Makanchi**	**14.32**	**350**	P	**Pn**		**18 15 30.6**	**-1.6**
CHGR	**Chuyangaron**	**14.50**	**299**		Pn		18 15 29.9	-4.9
CHGR	**Chuyangaron**	**14.50**	**299**	*e*P	Pn		18 15 29.6	-5.2
SHAA	**Shahritus**	**14.98**	**294**		**Pn**		**18 15 36.5**	**-4.8**
SHAA				IAmb	IAmb		18 15 47.9	
	comp=Z,110nm,0.7s							
LZDM	**Lanzhou Array** baz=258,slow=10	**15.40**	**73**	Pn	**P**		**18 15 52.3**	**+0.5**
LZDM				LR	LR		18 22 28.5	
	comp=Z,2µm,21.0s,baz=240,slow=40							
IUG	**luzhnay**	**15.43**	**312**	P	**Pn**		**18 15 45.7**	**-1.5**
PZH	**PanZhiHua**	**15.45**	**109**	P	**Pn**		**18 15 46.6**	**-1.1**
PZH				S	**Sn**		**18 18 42.5**	**+3.7**
PZH				pmax	pmax			
	comp=Z,30nm,1.2s							
PZH				pmax	pmax			
	comp=Z,250nm,3.9s							
PZH				L	L			
	comp=Z,3µm,11.6s							
PZH				L	L			
	comp=Z,3µm,12.5s							
PZH				L	L			
	comp=Z,3µm,12.2s							
LZH	**Lanzhou**	**15.54**	**72**	*e*P	**Pn**		**18 15 47.5**	**-1.3**
LZH				pP	P		18 15 53.4	+0.3
LZH				PP	**sP**		**18 16 02.8**	**+2.7**
LZH				S	**Sn**		**18 18 40.1**	**-0.9**
LZH				pmax	pmax			
	comp=Z,15nm,1.0s							
LZH				pmax	pmax			
	comp=Z,350nm,5.2s							
LZH				L	L			
	comp=Z,2µm,14.1s							
LZH				L	L			
	comp=Z,5µm,14.4s							
CD2	**Chengdu**	**15.66**	**92**	P	**Pn**		**18 15 49.6**	**-0.7**
CD2				S	**Sn**		**18 18 50.8**	**+7.0**
CD2				pmax	pmax			
	comp=Z,70nm,0.9s							
CD2				pmax	pmax			
	comp=Z,350nm,4.2s							
CD2				L	L			
	comp=Z,18µm,11.0s							
CD2				L	L			
	comp=Z,11µm,10.0s							
CD2				L	L			
	comp=Z,11µm,10.1s							
KK31	**Karatay Array**	**15.68**	**316**		**Pn**		**18 15 50.0**	**-0.4**
KK31	**Karatay Array**	**15.68**	**316**	P	**Pn**		**18 15 50.0**	**-0.4**
KK31				pmax	pmax			
	comp=Z,29nm,0.9s							
KKAR	**Karatay Array**	**15.68**	**316**		**Pn**		**18 15 48.7**	**-1.7**
KKAR	**Karatay Array**	**15.68**	**316**	P	**Pn**		**18 15 48.7**	**-1.7**
HYB	**Hyderabad**	**16.47**	**204**	*e*P	**P**		**18 16 04.3**	**+1.0**
VJD	**Vijayawada**	**16.72**	**196**	*e*P	**P**		**18 16 06.3**	**+0.3**
KMI2	**Kunming**	**16.90**	**112**	⇑P	**Pn**		**18 16 05.9**	**-0.4**
KMI2				S	**Sn**		**18 19 15.9**	**+1.7**
KMI2				pmax	pmax			
	comp=Z,56nm,1.1s							
KMI2				pmax	pmax			
	comp=Z,420nm,3.1s							
KMI2				L	L			
	comp=Z,2µm,12.2s							
KMI2				L	L			
	comp=Z,4µm,12.2s							
DGZ	**Jazzator, Alta**	**17.02**	**4**	*de*P	**Pn**		**18 16 06.4**	**-1.3**
CHTO	**Chiang Mai**	**18.39**	**136**		**P**		**18 16 23.7**	**-1.0**
CHTO	**Chiang Mai**	**18.39**	**136**	P	**P**		**18 16 23.7**	**-1.0**
CHTO				pmax	pmax			
	comp=Z,32nm,1.2s							
CHTO	**Chiang Mai**	**18.39**	**136**	P	**P**		**18 16 23.7**	**-1.0**
CHTO				S	**S**		**18 19 54.6**	**-0.2**
CHTO	**Chiang Mai**	**18.39**	**136**	P	**P**		**18 16 24.5**	**-0.2**
	comp=Z,36nm,1.0s							
KAD	**Karad**	**18.42**	**216**	*e*P	**Pn**		**18 16 29.4**	**+4.4**
KURBB	**Kurchatov Arra**	**18.60**	**346**	P	**P**		**18 16 25.8**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=166,slow=11,SNR=57							
KURBB				LR	LR		18 24 24.3	
	comp=Z,2µm,21.3s,baz=166,slow=39							
	comp=Z,18nm,0.8s							
KURK	**Kurchatov**	**18.67**

BTO2 sS Sn 18 20 53.0 -2.2
BTO2 SS **SnSn** **18 21 16.5 +6.4**
BTO2 pmax pmax
comp=Z,73nm,0.8s
BTO2 pmax pmax
comp=Z,830nm,11.4s
BTO2 L L
comp=Z,10µm,18.7s
BTO2 L L
comp=Z,13µm,16.2s
ZAA0 Zalesovo Array 21.22 359 P P 18 16 54.4 -0.7
ZALV Zalesovo Beam 21.22 359 P **P 18 16 55.1 -0.1**
comp=Z,24nm,0.8s,baz=179,slow=11,SNR=54
comp=Z,24nm,0.8s
ZALV Zalesovo Beam 21.22 359 P P 18 16 54.6 -0.6
ZALV Zalesovo Beam 21.22 359 *i* P **P 18 16 55.0 -0.2**
ZALV pmax pmax
comp=Z,24nm,0.8s
SONM Songino Array 21.87 40 P **P 18 17 02.6 +0.2**
comp=Z,9.5nm,0.8s,baz=228,slow=11,SNR=35
SONM PcP **PcP** **18 21 00.4 -1.2**
comp=Z,0.7nm,0.7s,baz=208,slow=2.7,SNR=3.6
SONM LR LR 18 26 20.4
comp=Z,1µm,21.4s,baz=235,slow=39
comp=Z,9.5nm,0.8s
SONM Songino Array 21.87 40 P 18 17 02.0 -0.4
SONM IAmb IAmb 18 17 11.6
comp=Z,145nm,1.7s
SONM Songino Array 21.87 40 P **P 18 17 02.0 -0.4**
SONM pmax pmax
comp=Z,145nm,1.7s
PBA Port Blair 22.01 161 P P 18 17 05.1 +1.1
PBA IAmb IAmb 18 17 17.0
comp=Z,75nm,1.0s
ZAK Zakamensk 22.02 32 *e*P **P 18 17 04.2 +0.3**
ZAK pmax pmax
comp=Z,117nm,1.9s
MOY Mondy 22.07 26 *e*P **P 18 17 07.0 +2.5**
MOY pmax pmax
comp=Z,121nm,2.8s
ULN Ulaanbaatar 22.25 41 P P 18 17 05.3 -1.2
ULN Ulaanbaatar 22.25 41 *c i*P **P 18 17 06.6 +0.1**
ULN pmax pmax
comp=Z,45nm,1.4s
ULN Ulaanbaatar 22.25 41 P P 18 17 06.7 +0.2
ULN S **S** **18 21 13.1 +1.8**
ULN Ulaanbaatar 22.25 41 P **P 18 17 07.0 +0.5**
comp=Z,2µmcomp=Z,122nm,1.1s
HHC Hu-ho-hao-te 22.36 61⇑ *i*P **P 18 17 07.4 -0.4**
HHC pP pP 18 17 12.2 -0.4
HHC sP sP 18 17 17.0 +2.2
HHC S **S** **18 21 10.6 -2.8**
HHC sS pS 18 21 15.6 -4.3
HHC pmax pmax
comp=Z,28nm,1.3s
HHC L L
comp=Z,5µm,13.6s
HHC L L
comp=Z,4µm,15.5s
LYN LuoYang 22.54 78 P **P 18 17 09.7 +0.2**
LYN S **S** **18 21 15.6 -0.9**
LYN SS **SnSn** **18 21 55.6 +10**
LYN pmax pmax
comp=Z,43nm,0.8s
LYN pmax pmax
comp=Z,420nm,3.5s
LYN L L
comp=Z,22µm,16.1s
LYN L L
comp=Z,5µm,14.4s
LYN L L
comp=Z,8µm,16.1s
TIY Taiyuan 22.56 70 P **P 18 17 10.2 +0.4**
TIY S **S** **18 21 10.4 -6.5**
TIY L L
comp=Z,2µm,17.2s
TIY L L
comp=Z,2µm,15.8s
GULI GuiLin 22.97 102 P **P 18 17 15.6 +1.4**
GULI S **S** **18 21 24.8 +0.4**
GULI pmax pmax
comp=Z,61nm,1.6s
GULI L L
comp=Z,3µm,14.6s
GULI L L
comp=Z,3µm,16.3s
GULI L L
comp=Z,6µm,18.4s
BVAR Borovoye Array 23.01 336 P **P 18 17 15.1 +0.8**
comp=Z,13nm,1.0s,baz=145,slow=10,SNR=33
BVAR LR LR 18 26 27.7
comp=Z,2µm,21.9s,baz=146,slow=37
comp=Z,13nm,1.0s
BORK Borovoye 23.05 336 P 18 17 14.4 -0.3
BORK Borovoye 23.05 336 *d i*P **P 18 17 14.8 +0.1**
BORK pmax pmax
comp=Z,24nm,1.1s
TLY Talaya 23.13 30 P **P 18 17 16.6 +1.0**
comp=Z,1.5nm,0.2s,baz=222,slow=12
TLY LR LR 18 26 33.0
comp=Z,894nm,19.3s,baz=220,slow=37
comp=Z,1.5nm,0.2s
TLY Talaya 23.13 30 P P 18 17 15.2 -0.4
TLY IAmb IAmb 18 17 22.9
comp=Z,81nm,1.9s
TLY Talaya 23.13 30⇑ *e*P **P 18 17 17.3 +1.7**
TLY pmax pmax
comp=Z,34nm,1.5s
TLY Talaya 23.13 30 P **P 18 17 17.7 +2.2**
IRK Irkutsk 23.81 29 *e*P **P 18 17 22.9 +0.6**
IRK pmax pmax
comp=Z,273nm,2.3s
CNSH ChangSha 24.08 94 P **P 18 17 25.6 +0.5**
CNSH S **S** **18 21 46.2 +3.9**
CNSH L L
comp=Z,2µm,11.0s
CNSH L L
comp=Z,2µm,13.3s
HNS HongShan 24.34 71⇑ P **P 18 17 27.8 +0.4**
HNS S **S** **18 21 51.1 +4.7**
HNS pmax pmax
comp=Z,27nm,1.2s
HNS L L
comp=Z,8µm,17.1s
HNS L L
comp=Z,3µm,13.1s
WHN Wuhan 24.66 87 P **P 18 17 30.2 -0.2**
WHN S **S** **18 21 56.8 +5.1**
WHN L L
comp=Z,9µm,8.2s
WHN L L
comp=Z,4µm,8.1s
WHN L L
comp=Z,9µm,11.9s
AB31 Akbulak array 25.19 318 P 18 17 35.7 +0.7
ABKAR Akbulak array 25.19 318 P 18 17 35.7 +0.7
JLN Jalan Bani Buh 25.34 252 P **P 18 17 37.8 +1.3**
JLN P **P** **18 17 37.8 +1.3**
WSAR Wadi Sarin 25.45 255 LR LR 18 28 17.3
comp=Z,7.7nm,18.8s,baz=94,slow=38
WSAR Wadi Sarin 25.45 255 P **P 18 17 39.5 +2.0**
WBK Wadi Bani Khal 25.47 253 P **P 18 17 39.8 +2.0**
BJT Baijiatuau 25.69 65 P 18 17 38.7 -0.9
BJT IAmb IAmb 18 17 43.0
comp=Z,34nm,1.3s
BJT Baijiatuau 25.69 65 P **P 18 17 38.7 -0.9**
BJT pmax pmax
comp=Z,34nm,1.3s
BJI2 Beijing 25.69 65 P **P 18 17 39.9 +0.3**
BJI2 sP **sP** **18 17 46.8 0.0**
BJI2 S **S** **18 22 03.6 -4.4**
BJI2 pmax pmax
comp=Z,11nm,1.2s
BJI2 pmax pmax
comp=Z,120nm,4.3s
BJI2 L L
comp=Z,1µm,15.4s
BJI2 L L
comp=Z,1µm,15.1s
PALK Pallekele 25.71 191 LR LR 18 28 26.9
comp=Z,1µm,19.0s,baz=354,slow=38
PALK Pallekele 25.71 191 P 18 17 39.7 -0.3
PALK IAmb IAmb 18 17 44.8
comp=Z,71nm,1.4s
PALK Pallekele 25.71 191 *d i*P **P 18 17 40.5 +0.5**
PALK pmax pmax
comp=Z,66nm,1.4s
PALK Pallekele 25.71 191 P P 18 17 41.5 +1.6
PALK Pallekele 25.71 191 P P 18 17 40.4 +0.5
QIZ Qiongzhong 25.75 116 P P 18 17 40.0 -0.3
QIZ S **S** **18 22 08.8 -0.5**
QIZ L L
comp=Z,2µm,15.3s
QIZ L L
comp=Z,1µm,14.9s
QIZ L L
comp=Z,2µm,12.1s
SMDO Samad 26.01 255 P P 18 17 45.4 +2.6
SMDO P **P** **18 17 45.4 +2.6**
TIA Tai'an 26.27 74 P P 18 17 44.1 -0.8
TIA S **S** **18 22 20.8 +3.5**
TIA pmax pmax
comp=Z,12nm,1.4s
TIA L L
comp=Z,3µm,12.1s
TIA L L
comp=Z,2µm,13.4s
TIA L L
comp=Z,3µm,13.2s
JMDO Jabal Madar 26.29 254 P P 18 17 48.4 +3.3
JMDO P **P** **18 17 48.4 +3.3**
XLT XiLinHaoTe 26.34 56 *e*P **P 18 17 46.3 +0.7**
XLT S **S** **18 22 22.8 +4.3**
XLT pmax pmax
comp=Z,22nm,0.8s
XLT pmax pmax
comp=Z,190nm,4.1s
XLT L L
comp=Z,770nm,13.4s
XLT L L
comp=Z,2µm,14.5s
XLT L L
comp=Z,1µm,15.3s
BSY Bisya 26.85 255 P P 18 17 53.7 +3.5
AKTO Aktyubinsk 26.87 319 LR LR 18 29 14.3
comp=Z,3µm,18.7s,baz=107,slow=38
ASHO Ashiyiah 26.94 260 P P 18 17 54.0 +2.9
MHTO MHTO 27.09 251 P P 18 17 54.4 +2.0
ARQ Araqi 27.13 257 P P 18 17 55.0 +2.2
ARQ P **P** **18 17 55.0 +2.2**
NAZ Nazwa, Dubai 27.15 261 P P 18 17 55.0 +2.1
NAZ P **P** **18 17 55.0 +2.1**
ALNE Al Ain 27.46 259 P P 18 17 58.0 +2.3
AJN Ajban 27.88 261 P P 18 18 01.8 +2.3
AJN P **P** **18 18 01.8 +2.3**
NJ2 Nanjing 28.14 82 *e*P **P 18 17 59.3 -2.5**
NJ2 S **S** **18 22 49.5 +2.7**
NJ2 pmax pmax
comp=Z,15nm,0.6s
NJ2 L L
comp=Z,11µm,11.4s
NJ2 L L
comp=Z,8µm,10.9s
NJ2 L L
comp=Z,9µm,14.7s
UMZA Um Al Zommool 28.53 257 P P 18 18 06.7 +1.4
UMZA P **P** **18 18 06.7 +1.4**
MZWR Madinat Zayed 29.13 260 P P 18 18 12.8 +2.1
MZWR P **P** **18 18 12.8 +2.1**
LHMI Lhok Sumawe 29.38 156 P P 18 18 12.3 -0.6
SVE Sverdlovsk 29.54 332 *e*P **P 18 18 15.1 +1.2**
SVE *e*S **S** **18 23 13.6 +5.3**
SVE pmax pmax
comp=Z,14nm,1.1s
SVE MLR MLR
comp=Z,1µm,12.0s
MZR Muzera 29.79 259 P P 18 18 18.2 +1.7
DL2 Dalian 29.83 68 *e*P **P 18 18 17.8 +1.1**
DL2 *e*S **S** **18 23 13.4 +0.1**
DL2 pmax pmax
comp=Z,12nm,1.6s
DL2 pmax pmax
comp=Z,180nm,4.2s
DL2 L L
comp=Z,6µm,18.9s
DL2 L L
comp=Z,2µm,17.0s
DL2 L L
comp=Z,3µm,12.7s
GHWR Ruwais 29.88 261 P P 18 18 19.0 +1.7
ARTI Arti 30.17 330 LR LR 18 30 22.5
comp=Z,1µm,19.6s,baz=131,slow=36
ARTI Arti 30.17 330 P 18 18 18.5 -0.9
ARTI Arti 30.17 330 *d i*P **P 18 18 20.6 +1.1**
ARTI 18 19 14.0
ARTI S **S** **18 23 19.6 +1.5**
ARTI pmax pmax
comp=Z,5.0nm,0.9s
SSE Sheshan 30.29 83 P P 18 19.4 -1.4
SSE S **S** **18 23 21.1 +0.6**
SSE L L
comp=Z,1µm,11.3s
SSE L L
comp=Z,1µm,12.9s
SHAO Shalim 30.55 249 P P 18 18 25.4 +2.2
SHAO P **P** **18 18 25.4 +2.2**
KULM Kulim 30.76 149 P 18 18 25.3 +0.2
KULM IAmb IAmb 18 18 29.6
comp=Z,31nm,1.1s
KULM Kulim 30.76 149 P **P 18 18 26.7 +1.7**
comp=Z,356nmcomp=Z,28nm,1.3s
TRNA Turayna 30.97 264 P **P 18 18 28.1 +1.2**
AKT Akhty 31.14 297 *e*P **P 18 18 28.3 0.0**
AKT *e*PPP PPP 18 19 39.1
AKT *e* 18 21 24.4
AKT pmax pmax
comp=Z,20nm,0.7s
AKT MLR MLR
comp=Z,1µm,14.0s
DMTO DMTO 31.25 249 P P 18 18 30.4 +1.0
DMTO P **P** **18 18 30.4 +1.0**
SMRA Abu-Samra 31.29 264 P P 18 18 31.2 +1.5
DOK Doka 31.40 251 P P 18 18 31.8 +1.0
DOK P **P** **18 18 31.8 +1.0**
MAK Makhachkala 31.43 300 *c i*P **P 18 18 27.7 -3.1**
MAK *e*S **S** **18 23 34.3 -3.9**
MAK pmax pmax
comp=Z,230nm,1.2s
MAK MLR MLR
comp=Z,3µm,12.0s
SNY Shenyang 31.45 62 P P 18 18 28.0 -2.9
SNY S **S** **18 23 41.7 +3.2**
SNY pmax pmax
comp=Z,11nm,2.3s
SNY pmax pmax
comp=Z,72nm,3.5s
SNY L L
comp=Z,7µm,19.4s
SNY L L
comp=Z,2µm,16.7s
RBK Rabkut 31.95 249 P P 18 18 37.4 +1.8
SNR=5.0
RBK P **P** **18 18 37.4 +1.8**
SNR=5.0
WHFO Wadi Hawf 32.07 250 P P 18 18 37.3 +0.6
WHFO P **P** **18 18 37.3 +0.6**
CN2 Changchun 32.99 59 P P 18 18 43.7 -0.8
CN2 ScP **ScP** **18 25 12.8 +0.6**
CN2 SS **SnSn** **18 25 57.9 -2.4**
CN2 pmax pmax
comp=Z,10.0nm,1.2s
CN2 L L
comp=Z,850nm,13.0s
CN2 L L
comp=Z,4µm,13.0s
CN2 L L
comp=Z,5µm,12.0s
GSI Gunungsitoli 33.27 158 P P 18 18 46.5 -0.6
GSI Gunungsitoli 33.27 158 P **P 18 18 50.5 +3.4**
comp=Z,840nmcomp=Z,58nm,1.5s
GNI Garni 33.36 295 LR LR 18 34 21.6
comp=Z,1µm,19.5s,baz=96,slow=40
GNI Garni 33.36 295 P 18 18 48.5 +0.5
GNI Garni 33.36 295 *c i*P **P 18 18 50.4 +2.5**
GNI pmax pmax
comp=Z,28nm,1.3s
GNI Garni 33.36 295 P P 18 18 50.0 +2.1
GNI P **P** **18 18 50.0 +2.1**
GNI Garni 33.36 295 P **P 18 18 48.7 +0.8**
comp=Z,37nm,1.4s
BELG Belogornoye 33.58 317 LR LR 18 33 40.1
comp=Z,2µm,18.3s,baz=105,slow=38
BELG Belogornoye 33.58 317⇑ *e*P **P 18 18 52.3 +2.9**
BELG pmax pmax
comp=Z,2.0nm,0.9s
INCN Inchon 33.82 70 P **P 18 18 49.3 -2.5**
INCN Inchon 33.82 70 P **P 18 18 49.3 -2.5**
INCN pmax pmax
comp=Z,81nm,1.5s
NCK Nalchik 34.33 301⇓ *i*P **P 18 18 57.4 +1.3**
NCK pmax pmax
comp=Z,42nm,1.5s
MNSI Mandailing Nat 34.43 154 P P 18 18 59.8 +2.6
comp=Z,644nmcomp=Z,29nm,1.1s
BNX BinXian 34.60 56⇓ P **P 18 18 58.6 +0.2**
BNX S **S** **18 24 25.4 -2.0**
BNX pmax pmax
comp=Z,10.0nm,1.4s
BNX pmax pmax
comp=Z,120nm,4.0s
BNX L L
comp=Z,2µm,10.6s
BNX L L
comp=Z,2µm,11.8s
KARS Kars 34.63 295 P P 18 18 58.4 -0.5
KARS Kars 34.63 295 P P 18 18 58.4 -0.5
KARS pmax pmax
comp=Z,99nm,2.0s
GEVA Gevas 34.73 291 P P 18 19 00.3 +0.4
GEVA IAmb IAmb 18 19 07.5
comp=Z,18nm,1.2s
KSAR Wonju Array Be 34.82 70 P P 18 18 56.6 -3.8
KSAR Wonju Array Be 34.82 70 P P 18 18 56.6 -3.8
KBZ Khabaz 34.85 301 P P 18 19 02.0 +1.4
comp=Z,3.5nm,0.8s,baz=122,slow=7.7,SNR=7.4
KBZ LR LR 18 35 21.8
comp=Z,1µm,20.0s,baz=86,slow=40
comp=Z,3.5nm,0.8s
KBZ Khabaz 34.85 301⇓ *e*P **P 18 19 03.2 +2.7**
KBZ pmax pmax
comp=Z,6.0nm,0.9s
KSRS Korea Array 34.85 70 P P 18 19 00.6 -0.1
comp=Z,2.7nm,0.7s,baz=277,slow=9.0,SNR=10
KSRS LR LR 18 34 17.9
comp=Z,1µm,18.2s,baz=285,slow=38
comp=Z,2.7nm,0.7s
GOF Gofitskoye 34.85 303 *c e*P **P 18 19 02.5 +1.9**
NEUR Neytrino 34.96 300⇑ *e*P **P 18 19 04.4 +2.6**
NEUR pmax pmax
comp=Z,16nm,1.6s
KIV Kislovodsk 35.02 301 P P 18 19 00.6 -1.5
KIV Kislovodsk 35.02 301 *e*P **P 18 19 01.0 -1.2**
KIV pmax pmax
comp=Z,6.0nm,1.0s
KIV MLR MLR
comp=Z,844nm,16.0s
SHA1 Shidzhatmaz 35.02 301⇓ *e*P **P 18 19 03.9 +1.5**
MYKOM Kota Tinggi 35.30 147 P **P 18 19 04.1 -0.6**
MYKOM IAmb IAmb 18 19 09.2
comp=Z,19nm,1.0s
MYKOM Kota Tinggi 35.30 147 P **P 18 19 06.4 +1.7**
comp=Z,22nm,1.2s
KIRV Kirov 35.38 328 LR LR 18 35 50.4
comp=Z,488nm,21.2s,baz=123,slow=40
KIRV Kirov 35.38 328⇑ *i*P **P 18 19 06.5 +1.5**
BKNI Bangkinang 35.41 152 P **P 18 19 06.7 +1.0**
HEH HeiHe 35.42 48 *e*P **P 18 19 06.0 +0.6**
HEH S **S** **18 24 43.8 +3.9**
HEH ScP **ScP** **18 25 20.8 +0.1**
HEH pmax pmax
comp=Z,6.0nm,0.7s
HEH L L
comp=Z,10µm,16.9s
HEH L L
comp=Z,3µm,16.7s
HEH L L
comp=Z,5µm,15.4s
GURO Guroymak-BITLI 35.52 292 P P 18 19 07.8 +1.2
GURO IAmb IAmb 18 19 13.6
comp=Z,37nm,1.4s
PPI Padang Panjang 35.89 154 P P 18 19 13.5 +3.8
comp=Z,1µmcomp=Z,27nm,1.1s
RAYN Ar Rayn 36.24 266 P 18 19 13.0 +0.2
RAYN Ar Rayn 36.24 266 P **P 18 19 13.0 +0.2**
RAYN pmax pmax
comp=Z,11nm,0.8s
RAYN Ar Rayn 36.24 266 P P 18 19 13.6 +0.8
ZEA Zeya 36.28 42 *e*P **P 18 19 13.7 +1.0**
ZEA pmax pmax
comp=Z,10.0nm,1.2s
ZEA MLR MLR
comp=E,2µm,10.0s
ZEA MLR MLR
comp=N,400nm,11.0s
ZEA MLR MLR
comp=Z,2µm,10.0s
PDSI Padang 36.33 154 P P 18 19 14.2 +0.6
comp=Z,28nm,1.6s
LABN Labinsk 36.47 302 *e*P **P 18 19 15.1 +0.6**
LABN *e**PP **pP** **18 19 17.9 -1.8**
LABN *e*S **S** **18 24 57.8 +1.7**
LABN pmax pmax
comp=Z,12nm,0.7s
LABN MLR MLR
comp=N,1µm,11.0s
LABN MLR MLR
comp=E,3µm,14.0s
LABN MLR MLR
comp=Z,1µm,13.0s
KOPT Kop Dagi 36.62 295 P **P 18 19 17.2 +1.0**
KOPT IAmb IAmb 18 19 31.6
comp=Z,37nm,1.5s
NRIK Noril'sk 36.68 1 P **P 18 19 16.6 +0.6**
comp=Z,12nm,0.8s,baz=168,slow=7.3,SNR=16
NRIK LR LR 18 36 11.2
comp=Z,3µm,19.5s,baz=186,slow=39
comp=Z,12nm,0.8s
NRIK Noril'sk 36.68 1 P **P 18 19 16.7 +0.7**
NRIK IAmb IAmb 18 19 21.5
comp=Z,46nm,1.4s
NRIK Noril'sk 36.68 1 P **P 18 19 16.7 +0.7**
NRIK pmax pmax
comp=Z,46nm,1.5s
ERBR Yeremizino-Bor 36.71 304 *e*P **P 18 19 17.0 +0.5**
ERBR *e**PP **pP** **18 19 20.2 -1.6**
ERBR *e*S **S** **18 25 00.7 +0.9**
ERBR pmax pmax
comp=Z,4.0nm,0.6s
ERBR MLR MLR
comp=E,3µm,12.0s
ERBR MLR MLR
comp=Z,2µm,14.0s
ERBR MLR MLR
comp=N,3µm,13.0s
VRH Novokhopyorsk 36.74 313 *e*P **P 18 19 18.1 +1.4**
VRH pmax pmax
comp=Z,8.0nm,0.7s
VRH MLR MLR
comp=Z,1µm,15.0s
PSTR Posyet 36.84 61⇑ *e*P **P 18 19 18.7 +1.0**
VSLR Vesyoloye 36.91 300⇑ *e*P **P 18 19 20.2 +1.9**
VSLR pmax pmax
comp=Z,11nm,0.8s
SOC Sochi 37.15 300 *e*P **P 18 19 19.8 -0.5**
SOC *e* 18 20 44.8
SOC *e*S **S** **18 25 07.5 +1.0**
SOC *e*SS **SnSn** **18 27 39.1 -1.8**
SOC pmax pmax
comp=Z,7.0nm,0.7s
SOC MLR MLR
comp=Z,1µm,19.0s
TGY Tagaytay City 37.22 111 LR LR 18 34 25.3
comp=Z,905nm,20.7s,baz=306,slow=36
JOW Kunigami 37.43 88 LR LR 18 35 09.4
comp=Z,1µm,19.0s,baz=293,slow=37
DSRI Dabo 37.63 148 P P 18 19 31.9 +7.3
USRK Ussuriysk Ar. 37.73 59 P **P 18 19 25.5 +0.3**
comp=Z,2.1nm,0.6s,baz=263,slow=9.6,SNR=5.4
comp=Z,2.1nm,0.6s
KRJI Kerinci 37.79 153 P **P 18 19 29.1 +3.0**
JNU Nakatsue 37.90 77 LR LR 18 36 28.2
comp=Z,859nm,18.5s,baz=290,slow=39
KLR Kul'dur 37.99 50 *c i*P **P 18 19 27.4 +0.1**
KLR pmax pmax
comp=Z,15nm,1.1s
VORD Divnogorie 38.19 312 *e*P **P 18 19 28.5 -0.5**
VORD pmax pmax

comp=Z,6.0nm,0.6s
VSR Storozhevoye 38.32 313 *e*P **P** **18 19 30.6 +0.5**
VSR pmax pmax
comp=Z,30nm,2.6s
VSR MLR MLR
comp=Z,1μm,12.0s
ARPR Arapgir-MALATY 38.35 293 P **P** **18 19 32.2 +1.5**
VORR Voronezh 38.38 314 *e*P **P** **18 19 31.0 +0.4**
VORR pmax pmax
comp=Z,30nm,0.4s
LPSR Galich'ya Gora 38.73 315 *e*P **P** **18 19 35.5 +2.0**
LPSR pmax pmax
comp=Z,7.0nm,0.6s
LPSR MLR MLR
comp=Z,820nm,14.0s
ANN Anapa 38.81 302 *e*P **P** **18 19 34.7 +0.4**
ANN *e**PP **pP** **18 19 38.2 -1.4**
ANN *e* 18 21 03.7
ANN *e*S **S** **18 25 32.4 +0.7**
ANN pmax pmax
comp=Z,8.0nm,0.8s
ANN MLR MLR
comp=Z,1μm,13.0s
ANN MLR MLR
comp=E,1μm,13.0s
ANN MLR MLR
comp=N,163nm,11.0s
KKM Kota Kinabalu 39.04 126 P **P** **18 19 37.4 +0.8**
KKM IAmb IAmb 18 19 42.1
comp=Z,33nm,1.1s
KKM Kota Kinabalu 39.04 126 P **P** **18 19 39.0 +2.4**
comp=Z,487nmcomp=Z,26nm,1.0s
SBUM Sibu 39.21 135 P **P** **18 19 37.9 -0.1**
SBUM Sibu 39.21 135 P **P** **18 19 39.4 +1.5**
GAZ Gaziantep 39.46 290 P **P** **18 19 40.5 +0.6**
GAZ IAmb IAmb 18 19 46.4
comp=Z,43nm,1.2s
KSI Kapahiang 39.66 153 P **P** **18 19 45.4 +3.7**
TOKA Tokat 39.67 295 P **P** **18 19 43.1 +1.4**
TOKA IAmb IAmb 18 21 10.3
comp=Z,13nm,0.5s
MOS Moscow 40.21 320 *e*P **P** **18 19 48.1 +2.3**
MOS pmax pmax
comp=Z,31nm,0.6s
MOS MLR MLR
comp=N,1μm,17.0s
MOS MLR MLR
comp=E,1μm,17.0s
MOS MLR MLR
comp=Z,2μm,17.0s
BNN Bunyan 40.31 293 P **P** **18 19 47.4 +0.3**
YAK Yakutsk 40.60 30 LR LR 18 35 55.3
comp=Z,820nm,18.7s,baz=240,slow=35
YAK Yakutsk 40.60 30 P **P** **18 19 48.6 -0.4**
YAK IAmb IAmb 18 20 00.7
comp=Z,18nm,0.8s
YAK Yakutsk 40.60 30 *e*P **P** **18 19 48.2 -0.7**
YAK *e**PP **sP** **18 19 58.6 +2.3**
YAK *e* 18 21 20.7
YAK *e* 18 21 52.2
YAK *e*S **S** **18 25 53.6 -4.4**
YAK *e*SS **SS** **18 28 57.7 0.0**
YAK pmax pmax
comp=Z,14nm,1.1s
YAK pmax pmax
comp=N,2.0nm,0.9s
YAK pmax pmax
comp=E,7.0nm,1.4s
YAK pmax pmax
comp=Z,113nm,4.1s
YAK pmax pmax
comp=N,72nm,4.8s
YAK pmax pmax
comp=E,86nm,4.2s
YAK smax smax
comp=E,110nm,4.6s
YAK smax smax
comp=N,43nm,3.9s
YAK MLR MLR
comp=Z,807nm,15.0s
YAK MLR MLR
comp=N,466nm,19.0s
YAK MLR MLR
comp=E,425nm,18.0s
OBN Obninsk 40.64 318 LR LR 18 37 48.7
comp=E,1μm,19.9s,baz=114,slow=38
OBN Obninsk 40.64 318⇑ *e*P **P** **18 19 50.4 +1.0**
OBN *e* 18 21 24.1
OBN *e*PPP PPP 18 21 47.5
OBN *e* 18 21 52.7
OBN pmax pmax
comp=Z,6.0nm,0.9s
ASF Jabal al Asfar 40.70 283 LR LR 18 39 42.6
comp=Z,1μm,19.0s,baz=65,slow=41
SIM Simferopol' 41.17 303 *e*P **P** **18 19 56.4 +2.5**
SIM S **S** **18 26 13.0 +6.0**
SIM pmax pmax
comp=Z,31nm,0.9s
SIM smax smax
comp=N,100nm,9.5s
SIM MLR MLR
comp=Z,1μm,21.0s
MYLDM Lahad Datu 41.23 125 P **P** **18 19 55.1 +0.4**
MYLDM IAmb IAmb 18 20 00.8
comp=Z,28nm,1.1s
MYLDM Lahad Datu 41.23 125 P **P** **18 19 58.0 +3.3**
comp=Z,28nm,1.4s
KLSI 41.46 150 P P 18 20 01.4 +4.8
ILGA Ilgaz 41.69 297 P **P** **18 19 59.0 +0.5**
ILGA IAmb IAmb 18 20 04.7
comp=Z,22nm,1.0s
MMAI Mount Meron Ar 41.72 285 LR LR 18 39 48.3
comp=Z,1000nm,21.2s,baz=74,slow=40
KIRS Kirsehir-Merke 41.76 294⇑ P **P** **18 20 01.0 +2.0**
BR131 Keskin Array S 41.90 295 P **P** **18 19 59.9 -0.3**
BR131 IAmb IAmb 18 20 06.0
comp=Z,60nm,1.9s
BR131 Keskin Array S 41.90 295⇑ *e*P **P** **18 20 00.6 +0.5**
BR131 Keskin Array S 41.90 295 P **P** **18 20 01.2 +1.1**
SNR=5.8
BRTR Keskin Array B 41.90 295 P **P** **18 20 00.2 0.0**
comp=Z,2.3nm,0.7s,baz=114,slow=8.9,SNR=12
BRTR LR LR 18 40 38.3
comp=Z,651nm,21.9s,baz=115,slow=41
comp=Z,2.3nm,0.7s
BRTR Keskin Array B 41.90 295 P **P** **18 19 59.6 -0.6**
BRTR Keskin Array B 41.90 295 *i* P **P** **18 20 03.5 +3.3**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
BR104 Keskin Array S 41.90 295 P **P** **18 20 00.8 +0.7**
comp=Z,83nmcomp=Z,5.4nm,1.6s
BR104 pP **pP** **18 20 03.6 -1.8**
comp=Z,83nmcomp=Z,5.4nm,1.6s
BR106 Keskin Array S 41.91 295 P **P** **18 20 00.5 +0.2**
comp=Z,78nmcomp=Z,6.3nm,1.0s
BR105 Keskin Array S 41.92 295 P **P** **18 20 00.7 +0.4**
comp=Z,91nmcomp=Z,6.8nm,1.1s
GHAJ Ghor Haditha 42.01 282 P **P** **18 20 01.8 +0.9**
EIL Elat 42.99 280 LR LR 18 40 42.5
comp=Z,3μm,20.6s,baz=78,slow=40
MAJO Matsushiro 43.12 70⇓ *e*P **P** **18 20 09.1 -0.9**
MAJO pmax pmax
comp=Z,9.0nm,0.9s
MJAR Matsushiro Arr 43.12 70 P **P** **18 20 09.4 -0.6**
comp=Z,4.3nm,0.7s,baz=281,slow=9.2,SNR=12
MJAR LR LR 18 39 09.7
comp=Z,330nm,18.1s,baz=277,slow=38
comp=Z,4.3nm,0.7s
MJAR Matsushiro Arr 43.12 70 P **P** **18 20 08.8 -1.2**
MJAR Matsushiro Arr 43.12 70 P **P** **18 20 08.8 -1.2**
MJAR pmax pmax
comp=Z,10.0nm,1.5s
JSG Sagara 43.49 72 P **P** **18 20 11.1 -1.8**
BORA Eskisehir 44.31 296 P **P** **18 20 19.1 -0.5**
BORA IAmb IAmb 18 20 29.3
comp=Z,46nm,1.8s
ATD Arta Tunnel 44.37 252 P **P** **18 20 18.9 -1.3**
AK09 Malin Array Si 44.47 311 P **P** **18 20 20.9 +0.3**
AK08 Malin Array Si 44.49 311 P **P** **18 20 21.0 +0.3**
AK10 Malin Array Si 44.49 311 P **P** **18 20 21.2 +0.5**
AKASG Malin Array Be 44.51 311 P **P** **18 20 21.2 +0.3**
AKASG LR LR 18 40 07.8
comp=Z,3.4nm,0.7s,baz=83,slow=7.3,SNR=12
comp=Z,2μm,21.6s,baz=80,slow=38
comp=Z,3.4nm,0.7s
AKASG Malin Array Be 44.51 311 P **P** **18 20 21.6 +0.7**
AKASG pmax pmax
comp=Z,11nm,1.6s
AKBB Malin Array Si 44.51 311 P **P** **18 20 19.6 -1.3**
AKBB Malin Array Si 44.51 311⇓ *e*P **P** **18 20 21.2 +0.3**
AKBB pmax pmax
comp=Z,36nm,3.3s
AKBB Malin Array Si 44.51 311 P **P** **18 20 21.1 +0.2**
AK01 Malin Array Si 44.52 311 P **P** **18 20 20.4 -0.5**
KIEV Kiev 44.52 311 P **P** **18 20 19.9 -1.1**
KIEV Kiev 44.52 311 P **P** **18 20 19.9 -1.1**
KIEV pmax pmax
comp=Z,12nm,1.3s
KIEV Kiev 44.52 311 P **P** **18 20 21.1 +0.1**
comp=Z,43nm,1.1s
ISP Isparta 44.60 293 P **P** **18 20 20.6 -1.4**
ISP IAmb IAmb 18 20 38.6
comp=Z,20nm,0.7s
ISP Isparta 44.60 293 P **P** **18 20 20.6 -1.4**
ISP pmax pmax
comp=Z,20nm,0.7s
LEM Lembang 44.63 148 LR LR 18 44 00.6
comp=Z,1μm,18.7s,baz=326,slow=43
SORM Soroca 45.08 307⇑ P **P** **18 20 26.2 +0.7**
SORM Soroca 45.08 307 P **P** **18 20 26.1 +0.7**
SORM Soroca 45.08 307 P **P** **18 20 26.0 +0.5**
comp=Z,12nm,1.5s
TYV Tymovskoe 45.12 49 *e*P **P** **18 20 26.3 +0.5**
TYV *e*S **S** **18 27 06.0 +1.3**
TYV pmax pmax
comp=Z,9.0nm,1.0s
TYV pmax pmax
comp=Z,100nm,6.3s
TYV smax smax
comp=N,100nm,6.4s
TYV smax smax
comp=E,200nm,6.4s
DAV Davao City (W) 45.13 116 LR LR 18 42 17.2
comp=E,623nm,18.1s,baz=297,slow=40
TPGR Topolog 45.22 303⇑ P **P** **18 20 28.2 +1.5**
TIXI Tiksi 45.23 18 LR LR 18 39 40.4
comp=E,1μm,19.4s,baz=242,slow=36
TIXI Tiksi 45.23 18 P **P** **18 20 25.3 -1.0**
TIXI Tiksi 45.23 18⇓ *i* P **P** **18 20 26.0 -0.3**
TIXI pmax pmax
comp=Z,55nm,1.7s
YSS Yuzhno-Sakhali 45.25 54 P **P** **18 20 25.4 -1.5**
YSS IAmb IAmb 18 20 49.0
comp=Z,19nm,1.3s
YSS Yuzhno-Sakhali 45.25 54 *e*P **P** **18 20 26.9 0.0**
YSS *e*S **S** **18 27 06.2 -0.6**
YSS pmax pmax
comp=Z,10.0nm,1.2s
YSS MLR MLR
comp=Z,1μm,15.0s
YSS MLR MLR
comp=E,2μm,14.0s
ELL Elmali 45.29 291 P **P** **18 20 28.9 +1.4**
ELL Elmali 45.29 291 P **P** **18 20 28.9 +1.4**
ELL pmax pmax
comp=Z,56nm,0.8s
ASAJ Asahikawa 45.36 58 LR LR 18 39 10.9
comp=Z,1μm,19.8s,baz=279,slow=36
CFR Carcaliu 45.39 303⇓ P **P** **18 20 28.6 +0.5**
CFR Carcaliu 45.39 303 P **P** **18 20 28.5 +0.5**
LUBAR Lubar, Ukraine 45.44 310 P **P** **18 20 28.8 +0.5**
MI28 Mi28,Pidlybu 45.50 311 P **P** **18 20 29.0 +0.2**
MNK Minsk 45.52 316 *i* P **P** **18 20 29.7 +0.8**
comp=E,13nm,1.0s
MNK *i* P **P** **18 20 29.7 +0.8**
comp=N,12nm,0.9s
MNK *i* P **P** **18 20 29.7 +0.8**
comp=Z,10.0nm,0.8s,baz=94
MNK *i* PP **PP** **18 22 15.2 -0.1**
MNK *i* PPP PPP 18 22 57.3
MNK *i* S **S** **18 27 12.6 +2.1**
MNK *i* SS **SS** **18 30 38.2 +4.4**
MNK *i* SSS SSS 18 31 25.5
MNK *i* LQ LQ 18 36 33.5
MNK *i* LR LR 18 39 36.7
MNK *i* LRM MLR 18 41 23.8
comp=Z,819nm,17.8s
MNK *i* LRM MLR 18 42 32.2
comp=N,709nm,18.8s
MNK Minsk 45.52 316 *i* P **P** **18 20 29.7 +0.8**
MNK *i* 18 22 15.1
MNK *i* PPP PPP 18 22 57.3
MNK *i* S S **18 27 12.5 +2.1**
MNK *i* SSS SSS 18 31 25.4
MNK pmax pmax
comp=N,12nm,0.9s
MNK pmax pmax
comp=E,13nm,1.0s
MNK pmax pmax
comp=Z,10.0nm,0.8s
MNK MLR MLR
comp=Z,819nm,18.0s
MNK MLR MLR
comp=N,709nm,19.0s
LVZ Lovozero 45.61 336 P **P** **18 20 29.4 -0.1**
LVZ Lovozero 45.61 336⇑ *e*P **P** **18 20 30.1 +0.7**
LVZ pmax pmax
comp=Z,53nm,1.2s
MPSI Mapaga 45.71 128 P **P** **18 20 31.9 +1.1**
TOLI2 Tolitoli 45.73 126 P **P** **18 20 31.0 0.0**
NACGM Naroch 46.19 317 *e*P **P** **18 20 34.6 +0.5**
comp=Z,11nm,0.9s,baz=94
VRI Vrincioaia 46.32 304⇑ P **P** **18 20 37.3 +1.9**
VRI Vrincioaia 46.32 304 P **P** **18 20 37.2 +1.9**
VRI Vrincioaia 46.32 304 P **P** **18 20 35.8 +0.4**
comp=Z,19nm,1.0s
TESR Tescani 46.32 305⇓ P **P** **18 20 36.6 +1.3**
PLOR Plostina 46.38 304⇑ P **P** **18 20 37.9 +2.0**
PLOR Plostina 46.38 304 P **P** **18 20 37.8 +2.0**
GIRR Girov 46.39 306⇓ P **P** **18 20 37.4 +1.5**
ONER Baraj Valea Uz 46.51 305⇓ P **P** **18 20 39.0 +2.1**
VSU Vasula 46.55 322⇓ *e*P **P** **18 20 39.4 +2.5**
VSU pmax pmax
comp=Z,25nm,1.2s
PCI Palu 46.59 129 P **P** **18 20 42.0 +4.2**
comp=Z,21nm,1.0s
RNPP9 Sopachiv 46.62 312 P **P** **18 20 38.1 +0.5**
RNPP5 Staryi Chortor 46.62 312 P **P** **18 20 38.0 +0.4**
COVE Voineasa-Covas 46.69 304⇑ P **P** **18 20 40.6 +2.3**
TURR Turia 46.80 305⇑ P **P** **18 20 41.0 +1.9**
MLR Muntele Rosu 46.90 304 LR LR 18 43 03.6
comp=Z,2μm,20.9s,baz=72,slow=40
MLR Muntele Rosu 46.90 304⇓ P **P** **18 20 42.1 +2.0**
MLR Muntele Rosu 46.90 304 P **P** **18 20 40.8 +0.7**
MLR Muntele Rosu 46.90 304 P **P** **18 20 40.8 +0.7**
MLR pmax pmax
comp=Z,25nm,0.8s
MLR Muntele Rosu 46.90 304 P **P** **18 20 40.7 +0.7**
comp=Z,33nm,1.0s
BURAR Bucovina Array 47.22 307⇑ P **P** **18 20 43.4 +1.0**
BURAR Bucovina Array 47.22 307 P **P** **18 20 42.3 -0.2**
BURAR Bucovina Array 47.22 307 P **P** **18 20 43.4 +1.0**
BUR08 Bucovina Ar. S 47.22 307 P **P** **18 20 43.0 +0.4**
BUR08 IAmb IAmb 18 20 56.6
comp=Z,33nm,1.9s
DOPR Dopca 47.24 305⇑ P **P** **18 20 44.6 +2.0**
KSV Kosov 47.27 308 P **P** **18 20 43.4 +0.7**
ELND Elena 47.27 300⇑ P **P** **18 20 44.6 +1.7**
FINES FINESS Array B 47.30 326 P **P** **18 20 43.5 +0.8**
comp=Z,9.8nm,0.8s,baz=96,slow=12,SNR=23
FINES LR LR 18 41 13.5
comp=Z,871nm,19.6s,baz=98,slow=37
comp=Z,9.8nm,0.8s
FINES FINESS Array B 47.30 326 P **P** **18 20 42.0 -0.8**
MMSI Mamuju 47.35 132 P **P** **18 20 44.5 +0.7**
comp=Z,56nm,0.8s
VOIR 47.54 304⇑ P **P** **18 20 46.3 +1.4**
VOIR 47.54 304 P **P** **18 20 46.3 +1.4**
VOIR 47.54 304 P **P** **18 20 45.5 +0.5**
PABE Paberze 47.83 318 P **P** **18 20 46.5 -0.4**
PMSI Majene 47.98 132 P **P** **18 20 50.4 +1.7**
comp=Z,61nm,1.2s
MORS Morshin 47.98 309 P **P** **18 20 48.7 +0.4**
TTSI Tana Toraja 48.20 131 P **P** **18 20 52.8 +2.5**
comp=Z,36nm,0.8s
VADS Vadso 48.21 338 *e*P **P** **18 20 50.1 +0.4**
VADS IAmb IAmb 18 20 52.1
comp=Z,28nm,0.8s
SUW Suwalki 48.26 316 P **P** **18 20 48.0 -2.3**
SUW Suwalki 48.26 316 P **P** **18 20 48.0 -2.3**
SHIU Shidnytsya 48.33 309 P **P** **18 20 52.5 +1.5**
KWP Kalwaria Pacla 48.72 310 *e*P P 18 21 03.0 +9.0
KWP Kalwaria Pacla 48.72 310 P **P** **18 20 54.8 +0.8**
comp=Z,22nm,2.9s
MARR Marisel-Cluj 48.73 306⇑ P **P** **18 20 56.4 +2.2**
SPSI Sidrap Palu 48.88 132 P P 18 21 02.9 +7.4
DRGR 49.00 306⇓ P **P** **18 20 57.5 +1.3**
DRGR 49.00 306 P **P** **18 20 57.5 +1.3**
JCJ Chichijima 49.00 81 LR LR 18 42 57.0
comp=Z,431nm,19.3s,baz=318,slow=38
HOLU Holmets 49.03 308 P **P** **18 20 56.8 +0.5**
GZR Gura Zlata 49.13 304⇑ P **P** **18 20 58.7 +1.5**
GZR Gura Zlata 49.13 304 P **P** **18 20 58.7 +1.5**
FURI Furi 49.23 252 LR LR 18 43 42.9
comp=Z,505nm,18.4s,baz=56,slow=38
ARA0 ARCESS Array S 49.30 336 *e*P **P** **18 20 59.0 +0.9**
ARA0 IAmb IAmb 18 21 00.5
comp=Z,30nm,1.0s
ARCES ARCESS Array B 49.30 336 P **P** **18 20 58.4 +0.3**
comp=Z,19nm,0.9s,baz=101,slow=6.5,SNR=18
ARCES LR LR 18 43 21.6
comp=Z,2μm,18.4s,baz=106,slow=38
comp=Z,19nm,0.9s
ARCES ARCESS Array B 49.30 336 P **P** **18 20 57.0 -1.1**
ARCES ARCESS Array B 49.30 336 P **P** **18 20 57.0 -1.1**
ARCES pmax pmax
comp=Z,37nm,1.2s
KAPI Kappang 49.68 133 LR LR 18 45 14.5
comp=Z,359nm,19.5s,baz=300,slow=40
BZS Buzias 49.91 305⇑ P **P** **18 21 04.7 +1.6**
BZS Buzias 49.91 305 P **P** **18 21 04.7 +1.6**
KTK1 Kautokeino 49.95 335 *e*P **P** **18 21 03.5 +0.5**
KTK1 IAmb IAmb 18 21 08.9
comp=Z,46nm,1.1s
MDVR Moldovita 49.97 303⇓ P **P** **18 21 05.9 +2.3**
MA2 Magadan 50.03 37 LR LR 18 43 21.7
comp=Z,709nm,18.4s,baz=267,slow=37
MA2 Magadan 50.03 37⇓ *e*P **P** **18 21 04.2 +0.4**
MA2 pmax pmax
comp=Z,14nm,1.3s
MA2 Magadan 50.03 37 P **P** **18 21 03.5 -0.3**
comp=Z,13nm,1.4s
NIE Niedzica 50.30 310 *e*P P 18 21 11.2 +5.1
SEY Seymchan 50.98 33 LR LR 18 44 19.8
comp=Z,1μm,18.1s,baz=271,slow=38
SEY Seymchan 50.98 33⇑ *e*P **P** **18 21 11.2 +0.3**
SEY pmax pmax
comp=Z,11nm,1.4s
JETT Jettan, Norway 51.05 336 *e*P **P** **18 21 12.4 +1.1**
JETT IAmb IAmb 18 21 18.1
comp=Z,928nm,3.2s
TRO Tromso 51.57 336 *e*P **P** **18 21 15.9 +0.7**
TRO IAmb IAmb 18 21 21.9
comp=Z,118nm,1.4s
OKC Ostrava-Krasne 51.65 310 AMS AMS 18 44 50.0
comp=Z,1μm,20.8s
MORC Moravsky Berou 52.04 310⇓ P **P** **18 21 21.3 +2.2**
MORC Moravsky Berou 52.04 310 P **P** **18 21 19.2 0.0**
MORC Moravsky Berou 52.04 310 P **P** **18 21 19.2 0.0**
MORC pmax pmax
comp=Z,7.0nm,0.9s
MORC Moravsky Berou 52.04 310 *e*P **P** **18 21 19.6 +0.5**
JAVC Velka Javorina 52.09 309 *e*P **P** **18 21 20.5 +1.0**
KRLC Kraliky 52.49 311 *e*P **P** **18 21 24.5 +2.1**
KRLC MLR MLR
comp=Z,1μm,20.3s
KRLC Kraliky 52.49 311 *e*P **P** **18 21 24.5 +2.1**
KRLC AMS AMS 18 43 30.0
comp=Z,1μm,20.3s
FAUS Fauske 52.65 333 *e*P **P** **18 21 24.4 +1.2**
FAUS IAmb IAmb 18 21 36.1
comp=Z,2μm,3.6s
KSP Ksiaz 52.69 312 *e*P **P** **18 21 25.5 +1.6**
STEI Steigen 52.70 333 *e*P **P** **18 21 25.1 +1.4**
STEI IAmb IAmb 18 21 39.6
comp=Z,325nm,2.1s
VRAC Vranov 52.72 310 LR LR 18 44 50.8
comp=Z,803nm,20.3s,baz=80,slow=37
VRAC Vranov 52.72 310⇑ P **P** **18 21 25.4 +1.2**
VRAC Vranov 52.72 310 P **P** **18 21 25.4 +1.2**
VRAC Vranov 52.72 310 *e*P **P** **18 21 25.3 +1.1**
DPC Dobruska-Polom 52.74 311 *e*P **P** **18 21 25.2 +0.9**
DPC MLR MLR
comp=Z,1μm,20.0s
DPC Dobruska-Polom 52.74 311 *e*P **P** **18 21 25.2 +0.9**
DPC AMS AMS 18 44 30.0
comp=Z,1μm,20.0s
OSTC Ostas 52.78 311 *e*P **P** **18 21 26.7 +2.1**
OSTC MLR MLR
comp=Z,1μm,17.7s
OSTC Ostas 52.78 311 *e*P **P** **18 21 26.7 +2.1**
OSTC AMS AMS 18 44 30.0
comp=Z,1μm,17.7s
CHVC Chvalec 52.88 312 *e*P **P** **18 21 27.6 +2.3**
CHVC MLR MLR
comp=Z,1μm,19.8s
CHVC Chvalec 52.88 312 *e*P **P** **18 21 27.6 +2.3**
CHVC AMS AMS 18 44 40.0
comp=Z,1μm,19.8s
KRUC Moravsky 52.89 310 *e*P **P** **18 21 26.3 +0.9**
MOR8 Moi Rana 52.91 331 *e*P **P** **18 21 25.1 -0.2**
MOR8 IAmb IAmb 18 21 26.5
comp=Z,31nm,1.0s
UPC Upice 52.91 311 *e*P **P** **18 21 27.0 +1.5**
UPC MLR MLR
comp=Z,1μm,15.5s
UPC Upice 52.91 311 *e*P **P** **18 21 27.0 +1.5**
UPC AMS AMS 18 44 30.0
comp=Z,1μm,15.5s
RAUS Rausandaksla 53.09 332 *e*P **P** **18 21 27.2 +0.6**
RAUS IAmb IAmb 18 21 28.7
comp=Z,72nm,1.4s
RONA Rosalia, Austr 53.18 308 P **P** **18 21 27.8 +0.2**
comp=Z,6.5nm,1.3s
HFS Hagfors 53.29 324 P **P** **18 21 28.5 +0.4**
comp=Z,8.2nm,0.8s,baz=86,slow=7.6,SNR=14
HFS LR LR 18 44 57.4
comp=Z,895nm,19.6s,baz=90,slow=37
comp=Z,8.2nm,0.8s
CONA Conrad Observa 53.43 308 *e*pP **P** **18 21 30.8 +1.3**
comp=Z,10nm,1.1s
TREC Trest 53.44 310 AMS AMS 18 44 40.0
comp=Z,1μm,18.8s
LEIR Leirfjorden 53.45 331 *e*P **P** **18 21 29.8 +0.6**
LEIR IAmb IAmb 18 21 31.3
comp=Z,67nm,1.1s
DEL Delary 53.47 319 *i* P **P** **18 21 31.0 +1.6**
PVCC Panska Ves 53.82 312 AMS AMS 18 45 10.0
comp=Z,1μm,18.7s
PRU Pruhonice 53.93 311 *e*P **P** **18 21 34.1 +1.1**
PRU MLR MLR
comp=Z,1μm,17.4s
PRU Pruhonice 53.93 311 *e*P **P** **18 21 34.1 +1.1**
PRU AMS AMS 18 46 10.0
comp=Z,1μm,17.4s
NSS Namsos 53.94 329 *e*P **P** **18 21 32.6 -0.1**
NSS IAmb IAmb 18 21 35.5
comp=Z,29nm,1.1s
SPA0 Spitsbergen Ar 53.95 346 *e*P **P** **18 21 34.1 +1.3**
SPITS Spitsbergen Ar 53.95 346 P **P** **18 21 31.9 -0.9**
comp=Z,9.1nm,1.0s,baz=82,slow=11,SNR=2.3
SPITS LR LR 18 48 33.7
comp=Z,794nm,19.6s,baz=139,slow=40
BORU Boraas 53.95 321 *i* P **P** **18 21 33.5 +0.5**
FABU Falkenberg 54.04 320 *i* P **P** **18 21 34.1 +0.5**
BRG Berggiesshubel 54.16 312 *e*P **P** **18 21 36.1 +1.4**
comp=Z,5.6nm,0.8s,baz=79,slow=7.3
NC405 NORSAR Array S 54.20 325 P **P** **18 21 34.6 -0.2**
SOKA Soboth 54.22 307 *e*P **P** **18 21 35.3 0.0**
comp=Z,11nm,1.2s
PETK Petropavlovsk- 54.25 45 P **P** **18 21 33.8 -1.5**
comp=Z,3.5nm,0.8s,baz=336,slow=5.2,SNR=5.4
PETK LR LR 18 45 41.1
comp=Z,749nm,21.3s,baz=283,slow=37
comp=Z,3.5nm,0.8s
ZVC Zvikov 54.25 310 *e*P **P** **18 21 37.2 +1.9**
ZVC AMS AMS 18 45 30.0
comp=Z,1μm,17.2s
NC602 NORSAR Array S 54.31 324 P **P** **18 21 35.6 -0.1**
NC602 NORSAR Array S 54.31 324 *e*P **P** **18 21 36.1 +0.5**
NC602 IAmb IAmb 18 21 38.4
comp=Z,27nm,1.0s
NC303 NORSAR Array S 54.36 325 P **P** **18 21 35.9 -0.1**
NC303 NORSAR Array S 54.36 325 *e*P **P** **18 21 37.1 +1.2**

NB2 NORSAR Subarra 54.45 325 P **P** **18 21 37.1 +0.4**
comp=Z,6.0nm,0.7s,baz=85,slow=7.4
NB2 NORSAR Subarra 54.45 325 P **P** **18 21 37.1 +0.4**
NOA NORSAR Array B 54.45 325 P **P** **18 21 36.7 0.0**
comp=Z,14nm,0.9s,baz=85,slow=7.1,SNR=36
NOA LR LR 18 45 43.1
comp=Z,954nm,18.5s,baz=100,slow=37
comp=Z,14nm,0.9s
MOA Mollin 54.50 308 *e*P **P** **18 21 37.9 +0.7**
comp=Z,8.3nm,0.9s
HSKC Hora Svate Kat 54.52 312 AMS AMS 18 45 40.0
comp=Z,1μm,17.3s
SIJI Sorong 54.59 118 LR LR 18 47 08.2
comp=Z,155nm,20.8s,baz=290,slow=38
NAO01 NORSAR Array S 54.63 325 P **P** **18 21 37.8 -0.1**
NAO01 IAmb IAmb 18 21 39.6
comp=Z,22nm,1.0s
STRU Stroemstad 54.65 322 *i* P **P** **18 21 38.6 +0.6**
NC204 NORSAR Array S 54.65 325 P **P** **18 21 38.3 +0.1**
CLL Collm 54.67 313 P **P** **18 21 38.4 +0.1**
CLL Collm 54.67 313 *i* P **P** **18 21 41.3 +3.0**
CLL *e*S **S** **18 29 19.0 +1.0**
CLL pmax pmax
comp=Z,4.0nm,0.8s
CLL MLR MLR
comp=Z,900nm,19.6s
CLL Collm 54.67 313 *i* P **P** **18 21 41.3 +3.0**
comp=Z,4.0nm,0.8s
CLL *e*S **S** **18 29 19.0 +1.0**
CLL AMS AMS 18 47 00.0
comp=Z,900nm,19.6s
GEC2 GERESS Array S 54.67 310 P **P** **18 21 38.7 +0.1**
GEC2 IAmb IAmb 18 21 47.6
comp=Z,16nm,1.4s
GEC2 GERESS Array S 54.67 310 *e*P **P** **18 21 39.6 +1.0**
comp=Z,3.7nm,0.8s,baz=79,slow=7.3
GERES GERESS Array B 54.67 310 P **P** **18 21 38.0 -0.6**
comp=Z,3.0nm,0.8s,baz=76,slow=7.0,SNR=17
GERES LR LR 18 46 00.6
comp=Z,833nm,19.9s,baz=80,slow=37
comp=Z,3.0nm,0.8s
GERES GERESS Array B 54.67 310 P **P** **18 21 38.0 -0.6**
KHC Kasperske Hory 54.70 310 P **P** **18 21 38.1 -0.6**
KHC Kasperske Hory 54.70 310 *e*P **P** **18 21 40.4 +1.7**
KHC MLR MLR
comp=Z,1μm,23.8s
KHC Kasperske Hory 54.70 310 *e*P **P** **18 21 40.4 +1.7**
KHC AMS AMS 18 45 40.0
comp=Z,1μm,23.8s
PET Petropavlovsk 54.83 45 *e*P P 18 21 46.7 +7.2
PET *e*S **S** **18 29 19.1 -1.0**
PET MLR MLR
comp=Z,1μm,15.0s
PET MLR MLR
comp=Z,1μm,14.0s
BIOA Bad Ischl, Aus 54.95 308 *ep*P **P** **18 21 41.5 +1.0**
comp=Z,8.6nm,1.3s
LODK Lodwar 55.13 249 P **P** **18 21 43.2 +1.0**
LODK Lodwar 55.13 249 P **P** **18 21 44.2 +1.9**
SNR=12
WET Wettzell 55.15 310 *e*P **P** **18 21 43.6 +1.6**
comp=Z,2.3nm,0.8s,baz=79,slow=7.3
TANN Tannenbergstha 55.17 312 *e*P **P** **18 21 43.3 +1.2**
comp=Z,2.6nm,0.8s,baz=79,slow=7.3
NKC Novy Kostel 55.21 312 AMS AMS 18 46 00.0
comp=Z,2μm,9.7s
DOMB Dombas 55.39 326 *e*P **P** **18 21 43.5 0.0**
DOMB IAmb IAmb 18 21 48.0
comp=Z,22nm,0.8s
ROTZ Rotzenmuhle 55.45 311 *e*P **P** **18 21 45.9 +1.8**
comp=Z,0.8nm,0.8s,baz=79,slow=7.3
MANZ Manzenberg 55.47 311 *e*P **P** **18 21 45.9 +1.7**
comp=Z,0.6nm,0.8s,baz=79,slow=7.3
FLTG Flechtingen 55.57 314 *e*P **P** **18 21 46.4 +1.6**
comp=Z,9.5nm,0.8s,baz=79,slow=7.3
LESA Schwarzleotal 55.64 308 *ep*P **P** **18 21 46.4 +0.9**
comp=Z,5.3nm,0.9s
MOX Moxa 55.65 312 *e*P **P** **18 21 47.0 +1.5**
comp=Z,2.3nm,0.8s,baz=79,slow=7.3
BSEG Bad Segeberg 55.83 316 *e*P **P** **18 21 48.0 +1.4**
comp=Z,4.1nm,0.8s,baz=79,slow=7.3
GRF Grafenberg Arr 56.09 311 *e*P **P** **18 21 50.4 +1.8**
comp=Z,6.1nm,0.9s,baz=79,slow=7.3
SOEI Soe 56.16 132 P **P** **18 21 48.4 -1.2**
CLZ Clausthal 56.18 314 *e*P **P** **18 21 50.7 +1.4**
comp=Z,9.4nm,0.8s,baz=79,slow=7.3
AKN Aaknes 56.34 326 *e*P **P** **18 21 50.6 +0.4**
AKN IAmb IAmb 18 21 56.1
comp=Z,27nm,0.9s
WTTA Wattenberg 56.37 308 *ep*P **P** **18 21 51.6 +0.7**
comp=Z,7.9nm,1.1s
FDMO Fiordimonte 56.42 303 P **P** **18 21 51.2 0.0**
FDMO IAmb IAmb 18 22 09.8
comp=Z,15nm,1.2s
GTTG Gottingen 56.49 314 *e*P **P** **18 21 53.5 +2.0**
comp=Z,13nm,1.0s,baz=79,slow=7.3
KMBO Kilima Mbogo 56.56 243 LR LR 18 45 05.2
comp=Z,406nm,21.3s,baz=88,slow=35
SQTA Sankt Quirin 56.66 308 *e*P **P** **18 21 53.4 +0.5**
comp=Z,6.7nm,1.0s
BILL Bilibino 56.69 26 P **P** **18 21 51.6 -1.0**
BILL IAmb IAmb 18 22 07.7
comp=Z,15nm,1.3s
BILL Bilibino 56.69 26⇑ *i*P **P** **18 21 53.1 +0.5**
BILL pmax pmax
comp=Z,12nm,1.3s
BILL Bilibino 56.69 26 *e* **P** **18 21 53.5 +0.9**
MOTA Moosalm 56.70 308 *e*P **P** **18 21 53.7 +0.5**
comp=Z,6.0nm,0.8s
KIBK Kibwezi 56.76 242 P **P** **18 21 54.4 +0.5**
SNART Snartemo 56.80 322 *e*P **P** **18 21 53.8 +0.3**
SNART IAmb IAmb 18 21 56.2
comp=Z,90nm,1.2s
SNART Snartemo 56.80 322 *i* P **P** **18 21 50.9 -2.6**
RETA Reutte 56.89 309 *ep*P **P** **18 21 55.2 +0.8**
comp=Z,7.0nm,1.1s
FETA Feichten 57.02 308 *e*P **P** **18 21 55.7 +0.2**
comp=Z,11nm,1.3s
VAE Valguarnera 57.06 296 LR LR 18 51 49.3
comp=Z,328nm,18.7s,baz=92,slow=42
GUMO Guam 57.13 95 LR LR 18 46 10.3
comp=Z,392nm,21.7s,baz=277,slow=36
DAVA Damuels 57.52 309 *i* pP **P** **18 21 60.0 +0.9**
comp=Z,20nm,1.7s
DAVOX Davos/Dischmat 57.65 308 LR LR 18 48 58.8
comp=Z,610nm,19.2s,baz=62,slow=38
BTNL Ternell 59.07 313 *d*P **P** **18 22 11.0 +1.4**
WLF Walferdange 59.30 312 *d*P **P** **18 22 11.8 +0.6**
NOR Nord 59.59 350 *i* P **P** **18 22 13.9 +1.1**
NOR IAmb IAmb 18 22 18.7
comp=Z,15nm,1.4s
DOU Dourbes 60.15 313 *d*P **P** **18 22 20.8 +3.8**
MBAR Mbarara 61.24 249 LR LR 18 49 15.1
comp=Z,297nm,19.2s,baz=53,slow=36
MBAR Mbarara 61.24 249 P **P** **18 22 25.7 +0.6**
MBAR Mbarara 61.24 249 P **P** **18 22 25.7 +0.6**
MBAR pmax pmax
comp=Z,30nm,1.3s
MBAR Mbarara 61.24 249 P **P** **18 22 26.5 +1.3**
KEST Kesra 61.48 296 LR LR 18 52 51.2
comp=Z,219nm,19.5s,baz=42,slow=40
DAG Danmarks Havn 61.56 345 *i* P **P** **18 22 27.0 +0.8**
DAG IAmb IAmb 18 22 30.2
comp=Z,53nm,1.7s
JAY Jayapura 62.83 113 LR LR 18 49 45.0
comp=Z,130nm,21.6s,baz=319,slow=36
DBG Daneborg 62.89 343 *i* P **P** **18 22 35.9 +0.7**
DBG IAmb IAmb 18 22 37.8
comp=Z,5.3nm,0.9s
EKA Eskdalemuir Ar 63.05 320 P **P** **18 22 36.4 -0.2**
comp=Z,8.4nm,0.8s,baz=80,slow=7.2,SNR=8.9
EKA LR LR 18 51 56.0
comp=Z,843nm,18.0s,baz=69,slow=38
comp=Z,8.4nm,0.8s
PSA00 Pilbara Seismi 63.20 144 P **P** **18 22 34.5 -3.4**
PSA00 Pilbara Seismi 63.20 144 P **P** **18 22 36.8 -1.1**
PSA00 IAmb IAmb 18 22 41.3
comp=Z,18nm,1.2s
FITZ Fitzroy Crossi 63.49 137 LR LR 18 54 57.3
comp=Z,248nm,18.1s,baz=314,slow=40
KNRA Kununurra 63.49 132 P **P** **18 22 39.2 -0.6**
KNRA IAmb IAmb 18 22 46.7
comp=Z,12nm,0.9s
NEEM North Greenlan 66.97 351 *i* P **P** **18 23 03.1 +1.0**
NEEM IAmb IAmb 18 23 07.0
comp=Z,29nm,1.3s

RDOG Red Dog Mine 67.56 22 P **P** **18 23 07.6 +2.1**
RDOG IAmb IAmb 18 23 36.5
comp=Z,6.7nm,0.7s
BORG Borgarnes 67.57 334 LR LR 18 51 54.4
comp=Z,262nm,19.0s,baz=59,slow=35
B20K Meade River 68.17 19 IAmb IAmb 18 23 18.9
comp=Z,9.7nm,1.0s
SUMG Summit 68.20 344 P **P** **18 23 10.4 +0.4**
SUMG Summit 68.20 344 P **P** **18 23 10.4 +0.4**
SUMG Summit 68.20 344 *i* P **P** **18 23 12.0 +2.0**
SUMG IAmb IAmb 18 23 16.3
comp=Z,76nm,1.7s
E18K Tukpahlearik C 68.64 22 IAmb IAmb 18 23 18.4
comp=Z,11nm,1.1s
D19K Kuna River 68.79 21 IAmb IAmb 18 23 19.1
comp=Z,7.9nm,0.9s
B22K Teshekpuk Lake 68.97 18 IAmb IAmb 18 23 23.8
comp=Z,20nm,1.2s
D20K Ettivluk River 69.10 20 IAmb IAmb 18 23 23.6
comp=Z,9.2nm,1.0s
ESDC Sonseca Array 69.59 305 P **P** **18 23 19.1 +0.3**
comp=Z,1.8nm,1.1s,baz=52,slow=9.7,SNR=5.9
ESDC LR LR 18 57 22.8
comp=Z,364nm,19.2s,baz=53,slow=39
comp=Z,1.8nm,1.1s
TULEG Thule 69.81 354 P **P** **18 23 19.3 -0.1**
TULEG Thule 69.81 354 *i* P **P** **18 23 19.6 +0.1**
TULEG IAmb IAmb 18 23 24.1
comp=Z,13nm,1.4s
TAM Tamanrasset 69.93 285 P **P** **18 23 22.2 +0.9**
TAM Tamanrasset 69.93 285 P **P** **18 23 22.2 +0.9**
TAM pmax pmax
comp=Z,58nm,0.2s
WB0 Warramunga Arr 70.08 131 P **P** **18 23 20.9 -1.1**
WB0 IAmb IAmb 18 23 28.2
comp=Z,17nm,1.0s
D22K Ayikyak River 70.11 19 IAmb IAmb 18 23 30.5
comp=Z,16nm,1.2s
WRA Warramunga Arr 70.18 131 P **P** **18 23 22.1 -0.4**
comp=Z,5.1nm,0.4s,baz=326,slow=6.4,SNR=185
comp=Z,5.1nm,0.4s
WRA Warramunga Arr 70.18 131 *i* P **P** **18 23 22.3 -0.2**
WRA pmax pmax
comp=Z,6.0nm,0.4s
WRAB Tennant Creek 70.18 131 P **P** **18 23 21.8 -0.7**
WRAB IAmb IAmb 18 23 28.9
comp=Z,10nm,0.9s
WRAB Tennant Creek 70.18 131⇑ *i*P **P** **18 23 22.2 -0.3**
WRAB pmax pmax
comp=Z,14nm,0.9s
WR8 Warramunga Arr 70.29 131 P **P** **18 23 22.4 -0.8**
WR8 IAmb IAmb 18 23 32.3
comp=Z,13nm,1.1s
F20K Avaraart Lake 70.39 21 IAmb IAmb 18 23 30.1
comp=Z,16nm,1.8s
D23K Nanushuk River 70.60 19 IAmb IAmb 18 23 32.7
comp=Z,15nm,1.3s
E22K Anaktuvuk Pass 70.84 19 P **P** **18 23 25.3 -0.7**
F21K Alatna River 70.96 21 IAmb IAmb 18 23 35.7
comp=Z,27nm,1.6s
D24K Happy Valley 70.96 18 P **P** **18 23 25.1 -1.5**
J16K Anvik River 71.01 26 IAmb IAmb 18 23 35.3
comp=Z,20nm,1.4s
IMAR Indian Mountai 71.68 22 P **P** **18 23 29.8 -1.3**
E24K Your Creek 71.80 19 IAmb IAmb 18 23 41.2
comp=Z,12nm,1.1s
NWAO Narrogin (SRO) 71.84 152 LR LR 18 57 53.3
comp=Z,203nm,21.1s,baz=300,slow=38
C27K Jago River 71.88 16 IAmb IAmb 18 23 41.4
comp=Z,15nm,1.3s
M14K Bethel 71.96 28 P **P** **18 23 31.8 -0.9**
M14K IAmb IAmb 18 23 39.0
comp=Z,8.9nm,0.8s
PMG Port Moresby 72.12 114 **P** **18 23 33.4 -1.0**
PMG Port Moresby 72.12 114 P **P** **18 23 33.4 -1.0**
PMG pmax pmax
comp=Z,29nm,1.3s
H21K Melozitna River 72.19 22 P **P** **18 23 34.3 +0.2**
H21K IAmb IAmb 18 23 42.4
comp=Z,19nm,1.6s
K17K Iditarod 72.20 26 IAmb IAmb 18 23 43.9
comp=Z,27nm,1.1s
J18K Innoko River 72.30 25 IAmb IAmb 18 23 40.8
comp=Z,11nm,1.1s
J19K Poorman 72.35 24 P **P** **18 23 34.8 -0.3**
J19K IAmb IAmb 18 23 41.6
comp=Z,11nm,1.2s
E25K Arctic Village 72.54 18 P **P** **18 23 35.0 -1.1**
LSZ Lusaka 72.61 238 LR LR 18 53 55.4
comp=Z,171nm,21.8s,baz=50,slow=35
LSZ Lusaka 72.61 238 P **P** **18 23 38.1 +0.7**
AS31 Alice Springs 72.67 134 P **P** **18 23 36.3 -1.2**
ASAR Alice Springs 72.67 134 P **P** **18 23 37.5 0.0**
comp=Z,7.6nm,1.0s,baz=319,slow=5.7,SNR=82
ASAR LR LR 19 00 51.8
comp=Z,169nm,18.5s,baz=313,slow=40
comp=Z,7.6nm,1.0s
ASAR Alice Springs 72.67 134 P **P** **18 23 36.9 -0.6**
RES Resolute Bay 72.86 0 LR LR 18 57 59.3
comp=Z,467nm,18.9s,baz=3.0,slow=38
RES Resolute Bay 72.86 0 P **P** **18 23 37.4 -0.5**
RES Resolute Bay 72.86 0 P **P** **18 23 37.4 -0.5**
RES pmax pmax
comp=Z,15nm,1.9s
G24K Hadweenzic Riv 73.05 19 IAmb IAmb 18 23 48.4
comp=Z,15nm,1.4s
MLY Manley 73.25 22 P **P** **18 23 39.6 -0.8**
MLY IAmb IAmb 18 23 46.7
comp=Z,23nm,1.8s
K20K Telida 73.29 24 P **P** **18 23 40.1 -0.6**
K20K IAmb IAmb 18 23 48.7
comp=Z,20nm,1.5s
BMAR Burnt Mountain 73.30 18 P **P** **18 23 39.9 -0.8**
M17K Holitna River 73.33 27 IAmb IAmb 18 23 54.1
comp=Z,8.3nm,0.8s
A36M Sachs Harbour 73.39 10 P **P** **18 23 40.2 -0.9**
A36M IAmb IAmb 18 24 03.2
comp=Z,9.8nm,0.9s
H24K Noodor Dome 73.55 20 P **P** **18 23 42.1 -0.1**
I23K Minto, Yukon-K 73.60 21 P **P** **18 23 42.0 -0.3**
L19K White Mountain 73.78 25 P **P** **18 23 43.2 -0.3**
L19K IAmb IAmb 18 23 56.7
comp=Z,15nm,1.0s
BPAW Bear Paw Mtn. 73.81 22 P **P** **18 23 43.3 -0.4**
BPAW IAmb IAmb 18 25 43.2
comp=Z,20nm,1.7s
NEA2 Nenana 74.08 21 P **P** **18 23 44.1 -1.1**
E29M Blow River 74.17 15 IAmb IAmb 18 23 54.2
comp=Z,11nm,0.8s
O16K Kokwok River B 74.20 28 IAmb IAmb 18 23 58.3
comp=Z,17nm,1.2s
POIN Pond Inlet 74.23 355 P **P** **18 23 44.7 -1.3**
POIN IAmb IAmb 18 23 50.1
comp=Z,26nm,1.8s
COLA College 74.25 21⇓ *i*P **P** **18 23 45.5 -0.7**
COLA pmax pmax
comp=Z,13nm,1.0s
F28M Old Crow 74.33 16 P **P** **18 23 46.5 -0.2**
F28M IAmb IAmb 18 23 55.7
comp=Z,18nm,1.4s
PRP Porcupine Dome 74.46 20 P **P** **18 23 46.6 -1.0**
PRP IAmb IAmb 18 23 53.7
comp=Z,24nm,1.6s
M20K Styx River 74.59 25 P **P** **18 23 49.0 +0.6**
M20K IAmb IAmb 18 24 24.8
comp=Z,33nm,1.8s
IL31 74.61 21 P **P** **18 23 47.5 -0.7**
IL31 IAmb IAmb 18 23 55.5
comp=Z,19nm,1.7s
ILAR Eielson Array 74.61 21 P **P** **18 23 47.8 -0.5**
comp=Z,1.4nm,0.8s,baz=310,slow=4.9,SNR=20
ILAR PP **PP** **18 26 32.8 -1.7**
comp=Z,1.6nm,0.9s,baz=308,slow=7.6,SNR=5.0
ILAR LR LR 18 59 59.1
comp=Z,591nm,18.5s,baz=314,slow=38
comp=Z,1.4nm,0.8s
ILAR Eielson Array 74.61 21 P **P** **18 23 47.2 -1.1**
ILAR Eielson Array 74.61 21 P **P** **18 23 47.2 -1.1**
SKT Skwentna 75.08 24 P **P** **18 23 49.6 -1.5**
SKT IAmb IAmb 18 24 00.2
comp=Z,15nm,1.0s
SFJD Kangerlussuaq 75.16 344 LR LR 19 00 47.8
comp=Z,322nm,21.0s,baz=39,slow=39
O18K Koktuh Hills 75.16 27 P **P** **18 23 49.1 -2.5**
INK Inuvik 75.17 14 LR LR 19 01 52.1
comp=Z,188nm,18.7s,baz=341,slow=40

INK Inuvik 75.17 14 P **P** **18 23 51.0 -0.5**
INK Inuvik 75.17 14 P **P** **18 23 51.0 -0.5**
INK pmax pmax
comp=Z,13nm,1.2s
F30M Barrier River 75.27 15 IAmb IAmb 18 24 00.6
comp=Z,16nm,0.8s
I26K Coal Creek Min 75.28 19 IAmb IAmb 18 24 01.4
comp=Z,35nm,1.7s
STLK Strandline Lak 75.31 25 IAmb IAmb 18 24 01.3
comp=Z,22nm,1.8s
I27K Kandik River 75.46 18 P **P** **18 23 52.5 -0.8**
EDA Edea 75.61 265 P **P** **18 23 54.2 -0.7**
EDA IAmb IAmb 18 23 59.3
comp=Z,25nm,1.3s
K24K Donnelly Dome 75.65 21 P **P** **18 23 53.5 -0.9**
K24K IAmb IAmb 18 24 01.6
comp=Z,16nm,0.9s
G30M tAoh Zraii Nji 75.69 16 IAmb IAmb 18 24 00.5
comp=Z,14nm,1.1s
F31M Tsiigehtchic 75.86 15 P **P** **18 23 54.8 -0.7**
F31M IAmb IAmb 18 24 00.7
comp=Z,19nm,1.2s
C36M Paulatuk 75.95 10 P **P** **18 23 55.0 -0.9**
C36M IAmb IAmb 18 24 00.6
comp=Z,11nm,1.1s
RIDG Independent Ri 75.97 21 P **P** **18 23 54.7 -1.6**
RIDG IAmb IAmb 18 24 07.4
comp=Z,15nm,1.1s
I28M Miner Creek 76.02 18 IAmb IAmb 18 24 09.6
comp=Z,32nm,1.9s
SCRK Sand Creek 76.05 20 P **P** **18 23 55.6 -1.2**
SCRK IAmb IAmb 18 24 05.2
comp=Z,18nm,1.4s
EPYK Eagle Plains 76.08 16 P **P** **18 23 55.8 -1.0**
EPYK IAmb IAmb 18 24 05.0
comp=Z,19nm,1.4s
G31M Satah River 76.18 15 P **P** **18 23 56.5 -0.7**
G31M IAmb IAmb 18 24 02.4
comp=Z,14nm,1.0s
DOT Dot Lake 76.27 20 P **P** **18 23 56.7 -1.2**
DOT IAmb IAmb 18 24 00.8
comp=Z,12nm,1.2s
SML Sawmill 76.29 23 P **P** **18 23 57.1 -1.0**
RC01 Rabbit Creek A 76.32 24 P **P** **18 23 56.4 -1.8**
RC01 IAmb IAmb 18 24 07.3
comp=Z,13nm,1.1s
KSANE Kasane 76.44 238 P **P** **18 23 59.3 -0.3**
I29M Ogilvie Camp, 76.51 17 P **P** **18 23 57.5 -1.7**
I30M Mount Dempster 77.10 17 IAmb IAmb 18 24 07.8
comp=Z,11nm,1.1s
L27K Beaver Creek, 77.37 20 IAmb IAmb 18 24 13.7
comp=Z,14nm,1.2s
BCAR Beaver Creek A 77.38 20 P **P** **18 24 04.0 -0.3**
KDAK Kodiak Island 77.56 28 LR LR 19 01 33.2
comp=Z,992nm,18.6s,baz=297,slow=38
KDAK Kodiak Island 77.56 28⇓ *e*P **P** **18 24 07.2 +1.9**
KDAK pmax pmax
comp=Z,61nm,1.5s
N25K Chitina, Valde 77.65 22 P **P** **18 24 05.0 -0.8**
ILON Igloolik, Nuna 77.78 355 P **P** **18 24 05.8 -0.4**
TORD Torodi Ar. Bea 77.83 278 P **P** **18 24 07.6 +0.1**
comp=Z,4.8nm,0.7s,baz=40,slow=2.2,SNR=20
comp=Z,4.8nm,0.7s
TORD Torodi Ar. Bea 77.83 278 P **P** **18 24 06.8 -0.7**
TORD IAmb IAmb 18 24 10.8
comp=Z,26nm,1.8s
CTA Charters Tower 78.29 123 LR LR 19 04 06.3
comp=Z,89nm,19.0s,baz=271,slow=40
CTAO Charters Tower 78.29 123 P **P** **18 24 08.6 -1.3**
CTAO IAmb IAmb 18 24 17.2
comp=Z,20nm,0.9s
CTAO Charters Tower 78.29 123 P **P** **18 24 08.6 -1.3**
CTAO pmax pmax
comp=Z,19nm,1.0s
MCARA McCarthy VSAT 78.31 22 P **P** **18 24 09.2 -0.2**
MCARA IAmb IAmb 18 24 22.1
comp=Z,18nm,0.9s
M29M Somme Creek 78.82 19 IAmb IAmb 18 24 21.6
comp=Z,18nm,1.4s
BARN Barnard Glacie 78.98 21 P **P** **18 24 12.2 -1.2**
INKA Innaminka 79.84 132 P **P** **18 24 17.6 -0.5**
M31M Drury Creek, Y 80.10 18 P **P** **18 24 19.2 0.0**
N31M Braeburn, Yuko 80.33 19 P **P** **18 24 18.1 -2.4**
N31M IAmb IAmb 18 24 26.9
comp=Z,21nm,1.1s
HYT Haines Junctio 80.40 20 P **P** **18 24 21.4 +0.5**
LBTB Lobatse 80.93 233 P **P** **18 24 24.1 -0.1**
comp=Z,7.7nm,0.8s,baz=71,slow=6.2,SNR=8.0
comp=Z,7.7nm,0.8s
LBTB Lobatse 80.93 233 P **P** **18 24 22.6 -1.6**
LBTB IAmb IAmb 18 24 27.7
comp=Z,16nm,0.9s
LBTB Lobatse 80.93 233 P **P** **18 24 22.6 -1.6**
LBTB pmax pmax
comp=Z,16nm,1.0s
P33M Teslin, Yukon 82.20 18 P **P** **18 24 29.9 -0.6**
P33M IAmb IAmb 18 24 56.0
comp=Z,31nm,1.6s
HNR Honiara 82.25 106 LR LR 18 58 44.3
comp=Z,9.4nm,21.5s,baz=24,slow=34
BLKN Baker Lake 83.28 1 P **P** **18 24 35.2 -0.6**
BLKN IAmb IAmb 18 24 39.3
comp=Z,26nm,1.9s
STKA Stephens Creek 83.29 135 P **P** **18 24 33.9 -2.4**
comp=Z,6.8nm,1.1s,baz=280,slow=6.7,SNR=4.9
STKA LR LR 19 07 17.1
comp=Z,266nm,18.2s,baz=313,slow=40
comp=Z,6.8nm,1.1s
STKA Stephens Creek 83.29 135 P **P** **18 24 35.0 -1.3**
STKA Stephens Creek 83.29 135 P **P** **18 24 35.0 -1.3**
STKA pmax pmax
comp=Z,62nm,1.1s
BOSA Boshof 83.57 230 P **P** **18 24 36.7 -1.3**
comp=Z,4.6nm,0.5s,baz=41,slow=2.6,SNR=14
BOSA LR LR 18 58 33.0
comp=Z,258nm,21.6s,baz=48,slow=33
comp=Z,4.6nm,0.5s
BOSA Boshof 83.57 230 P **P** **18 24 36.9 -1.1**
BOSA Boshof 83.57 230 P **P** **18 24 36.9 -1.1**
BOSA pmax pmax
comp=Z,38nm,1.4s
YKAW3 Yellowknife Wh 83.68 9 P **P** **18 24 36.6 -1.3**
YKAW3 IAmb IAmb 18 24 43.3
comp=Z,8.9nm,0.8s
YKA Yellowknife Ar 83.75 9 P **P** **18 24 36.9 -1.4**
comp=Z,1.8nm,0.7s,baz=339,slow=5.6,SNR=21
comp=Z,1.8nm,0.7s
YKA Yellowknife Ar 83.75 9 P **P** **18 24 37.1 -1.2**
YKA Yellowknife Ar 83.75 9 P **P** **18 24 37.1 -1.2**
YKAW1 Yellowknife Wh 83.77 9 P **P** **18 24 37.0 -1.5**
YKAW1 IAmb IAmb 18 24 44.3
comp=Z,15nm,0.9s
DBIC Dimbokro 86.71 276 P **P** **18 24 53.3 -0.7**
comp=Z,7.7nm,1.0s,baz=80,slow=5.2,SNR=3.7
DBIC LR LR 19 08 16.5
comp=Z,662nm,18.6s,baz=67,slow=39
comp=Z,7.7nm,1.0s
FCC Fort Churchill 88.86 360 P **P** **18 25 02.9 -0.5**
FCC IAmb IAmb 18 25 08.5
comp=Z,10nm,1.2s
FCC Fort Churchill 88.86 360 P **P** **18 25 02.9 -0.5**
FCC pmax pmax
comp=Z,10.0nm,1.2s
SCHQ Schefferville 89.59 344 LR LR 19 09 18.5
comp=Z,233nm,21.4s,baz=18,slow=38
FFC Flin Flon 92.67 4 P **P** **18 25 20.2 -1.1**
FFC Flin Flon 92.67 4 P **P** **18 25 20.2 -1.1**
FFC pmax pmax
comp=Z,17nm,1.1s
EDM Edmonton 92.86 11 P **P** **18 25 20.7 -1.6**
EDM Edmonton 92.86 11 P **P** **18 25 20.7 -1.6**
EDM pmax pmax
comp=Z,12nm,0.9s
CBB Campbell River 93.19 19 P **P** **18 25 22.3 -1.5**
LLLB Lillooet 93.58 17 P **P** **18 25 23.0 -2.7**
DZM Mont Dzumac 94.50 113 *e*LR LR 18 56 04.4
comp=Z,512nm,24.0s
B08A Colville Reser 96.29 16 P **P** **18 25 36.2 -1.8**
NEW Newport 96.88 15 LR LR 19 17 33.5
comp=Z,166nm,18.3s,baz=342,slow=40
ULM Lac du Bonnet 97.38 1 P **P** **18 25 42.7 -0.2**
comp=Z,1.9nm,0.8s,baz=0.0,slow=6.1,SNR=3.4
ULM LR LR 19 15 23.0
comp=Z,205nm,18.2s,baz=6.0,slow=39
comp=Z,1.9nm,0.8s
PDAR Pinedale Array 103.62 11 PP **PKiKP** **18 30 27.9 -1.7**

comp=Z,0.3nm,0.8s,baz=332,slow=6.8,SNR=1.5
NVL N'lazarevskaya 115.40 201 *e*PKIKP **PKiKP** **18 30 49.8 -0.5**
NVL *e* 18 31 51.6
NVL *e*PPP PPP 18 34 17.8
NVL *e* 18 38 01.9
NVL *e*SS SS 18 47 52.5 +2.5
NVL *e*SSS SSS 18 52 09.4
NVL pmax pmax
comp=Z,12nm,1.0s
NVL MLR MLR
comp=Z,841nm,22.0s
TXAR Lajitas Array 117.68 9 PKP **PKPdf** **18 30 55.7 -0.6**
comp=Z,0.3nm,0.6s,baz=149,slow=2.6,SNR=4.5
TXAR Lajitas Array 117.68 9 **PKPdf** **18 30 54.8 -1.5**
TXAR Lajitas Array 117.68 9 PKIKP **PKPdf** **18 30 54.8 -1.5**
QSPA South Pole Qui 122.51 180 PKP **PKPdf** **18 31 03.1 -1.1**
comp=Z,1.4nm,0.8s,baz=298,slow=3.4,SNR=3.8
BELA Belgrano 2 127.97 193 PKPpre 18 31 03.9
BELA PKPdf **PKPdf** **18 31 13.3 -1.0**
PPT2 Papeete2 128.49 87 *e*LR LR 19 11 29.4
comp=Z,283nm,24.8s
PPT2 *e*LR LR 19 11 40.3
comp=Z,296nm,36.0s
TBI Tubuai 131.09 94 *e*LR LR 19 12 51.2
comp=Z,686nm,27.0s
TAOE Nuku Hiva Isla 131.68 71 *e*LR LR 19 13 09.4
comp=Z,332nm,23.2s
SIV San Ignacio 145.45 291 PKPbc **PKPbc** **18 31 47.8 -0.4**
baz=94,slow=2.0
PLTB Pedras Altas 145.51 260 PKPdf **PKPdf** **18 31 46.7 -1.3**
CPUP Villa Florida 147.12 271 PKPbc **PKPdf** **18 31 51.2 +0.5**
comp=Z,2.5nm,0.7s,baz=58,slow=7.0,SNR=4.4
ATAH Atahualpa 150.44 326 PKPbc **PKPbc** **18 32 02.0 -0.3**
comp=Z,4.7nm,0.8s,baz=14,slow=4.2,SNR=3.7
LPAZ La Paz 151.05 298 PKPbc **PKPbc** **18 32 03.0 -0.9**
comp=Z,1.3nm,0.6s,baz=18,slow=3.2,SNR=4.7

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*VAO **09** 18:13:35.5±4.5, 14°.95S×74°.61W, h22km±26km, mb4.4, Presumed earthquake*
*IDC **09** 18:14:07.4±1.4, 14°.99S×72°.25W, h126km±16km, mb3.7/3, mbtmp4.0/5, Error ellipse: s-maj=32.2km s-min=11.8km az=26.0*
ISC 09 18:14:05.9±0.9, **15°.1S**±0°.2×**72°.28W**±0°.10, **h100**km, **n21,** σ1s**98**/22, **Southern Peru**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LPAZ	**La Paz**	**4.17**	**107**	P		**Pn**	**18 15 10.0**	**+2.0**
	8.0nm,0.5s,baz=285,slow=8.6,SNR=35							
LPAZ				S		**Sn**	**18 15 59.1**	**+3.1**
	3.8nm,0.6s,baz=178,slow=24,SNR=1.2							
LPAZ	**La Paz**	**4.17**	**107**	*e*P		**Pn**	**18 15 08.9**	**+0.9**
NNA	**Nana**	**5.40**	**304**	P		**Pn**	**18 15 24.6**	**+0.5**
	27nm,0.3s,baz=134,slow=14,SNR=12							
NNA				S		**Sn**	**18 16 27.4**	**+2.4**
	30nm,0.3s,baz=279,slow=18,SNR=6.7							
PDRB	**Porto dos Gac**	**15.51**	**79**	*e*P		**Pn**	**18 17 41.4**	**+2.1**
SALV	**Santo Antonio**	**16.00**	**95**	*e*P		**Pn**	**18 17 46.4**	**+1.0**
PP1B	**Ponte de Pedra**	**16.88**	**101**	*e*P		**Pn**	**18 17 55.8**	**-0.5**
AMBA	**Amambai (Brazi**	**18.10**	**118**	*e*P		**P**	**18 18 09.1**	**-0.9**
NPGB	**Novo Progresso**	**18.41**	**66**	*e*P		**P**	**18 18 11.9**	**-1.5**
C2SB	**Chapadao do Su**	**18.95**	**104**	*e*P		**P**	**18 18 20.4**	**+1.0**
ITTB	**Itaituba**	**19.45**	**58**	*e*P		**P**	**18 18 21.8**	**-3.0**
SNDB	**Serra Nova Dou**	**20.63**	**84**	*e*P		**P**	**18 18 38.1**	**+0.6**
PTGB	**Pitanga**	**21.26**	**120**	*e*P		**P**	**18 18 42.8**	**-1.6**
ITRB	**Iturama**	**21.41**	**106**	*e*P		**P**	**18 18 45.8**	**-0.2**
LDASE	**Londrina, Braz**	**21.60**	**116**	*e*P		**P**	**18 18 46.3**	**-1.6**
FRTB	**Fartura**	**22.95**	**114**	*e*P		**P**	**18 18 58.5**	**-3.4**
IPMB	**Ipameri, GO**	**23.25**	**100**	*e*P		**P**	**18 19 02.4**	**-2.4**
BB19B	**Bebedouro**	**23.34**	**108**	*e*P		**P**	**18 19 03.0**	**-2.6**
BDFB	**Brasilia**	**23.40**	**95**	P		**P**	**18 19 04.8**	**-1.5**
	2.0nm,0.5s,baz=240,slow=8.1,SNR=3.3							
	2.0nm,0.5s							
PLCA	**Paso Flores**	**25.61**	**177**	P		**P**	**18 19 26.0**	**0.0**
	1.1nm,0.8s,baz=350,slow=11,SNR=5.3							
	1.1nm,0.8s							
NBPV	**Pedro Velho**	**37.29**	**81**	*e*P		P	18 21 04.0	-4.5
TORD	**Torodi Ar. Bea**	**78.38**	**73**	P		**P**	**18 25 54.5**	**-1.6**
	2.6nm,0.8s,baz=255,slow=7.2,SNR=8.0							
	2.6nm,0.8s							

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*NDI **09** 18:19:53.5±2.8, 33°.58N×86°.10E, h10km, ML3.4, Presumed earthquake*
*IDC **09** 18:19:55.1±0.9, 32°.65N×85°.52E, h0km, mb3.7/11, mbtmp3.8/14, ML3.4/3, Error ellipse: s-maj=33.2km s-min=16.2km az=59.0*
ISC 09 18:20:01.5±0.6, **32°.90N**±0°.06×**85°.68E**±0°.06, **h35**km, **n25,** σ2s**19**/30, **mb3.7**/10, **Xizang**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JOSI	**Joshimath**	**5.71**	**248**	*e*P		**Pn**	**18 21 26.0**	**+1.9**
JOSI				*e*S		**Sn**	**18 22 32.7**	**+4.2**
JOSI				IAML			18 22 41.4	
	comp=N,39nm,0.8s							
JOSI				IAML			18 22 41.4	
	comp=E,43nm,1.1s							
GTK	**Tadong**	**6.11**	**155**	*e*P		**Pn**	**18 21 30.1**	**+0.6**
GTK				*e*S		**Sn**	**18 22 42.2**	**+4.0**
GTK				IAML			18 22 51.6	
	comp=N,26nm,0.9s							
KLP	**Kalpa**	**6.44**	**260**	*e*S		**Sn**	**18 22 49.5**	**+2.9**
SMLA	**Simla**	**7.44**	**259**	*e*P		**Pn**	**18 21 46.9**	**-0.6**
SMLA				*e*S		**Sn**	**18 23 10.8**	**+0.2**
SMLA				IAML			18 23 16.1	
	comp=N,24nm,0.7s							
SMLA				IAML			18 23 17.6	
	comp=E,30nm,0.8s							
DHUB	**DHUBRI**	**7.82**	**150**	*e*P		**Pn**	**18 21 51.7**	**-1.1**
DHUB				*e*S		**Sn**	**18 23 19.7**	**-0.3**
DHRM	**DHARAMSHALA**	**7.94**	**268**	*e*S		**Sn**	**18 23 23.8**	**+0.4**
DHRM				IAML			18 23 30.8	
	comp=E,36nm,2.3s							
DHRM				IAML			18 23 31.7	
	comp=N,26nm,1.9s							
TSSA	**Tissa**	**8.02**	**272**	*e*P		**Pn**	**18 21 53.9**	**-1.8**
TSSA				*e*S		**Sn**	**18 23 23.5**	**-1.7**
KOHI	**KOHIMA**	**10.26**	**132**	*e*P		**Pn**	**18 22 24.6**	**-1.8**
SAIH	**SAIHA**	**12.22**	**146**	*e*P		**Pn**	**18 22 50.3**	**-2.9**
MKAR	**Makanchi Array**	**14.12**	**350**	Pn		**Pn**	**18 23 17.1**	**-1.9**
	comp=N,0.1nm,0.3s,baz=174,slow=13,SNR=6.6							
	comp=N,1.5nm,0.9s							
KURBB	**Kurchatov Arra**	**18.48**	**346**	P		**P**	**18 24 14.0**	**-0.3**
	comp=N,0.1nm,0.3s,baz=157,slow=11,SNR=7.4							
	comp=N,2.5nm,0.2s							
CMAR	**Chiang Mai Arr**	**18.67**	**137**	P		**P**	**18 24 12.9**	**-3.8**
	comp=N,0.1nm,0.3s,baz=315,slow=12,SNR=12							
	comp=N,2.1nm,0.9s							
ZALV	**Zalesovo Beam**	**21.05**	**359**	P		**P**	**18 24 42.4**	**+0.2**
	comp=N,2.6nm,0.8s,baz=181,slow=13,SNR=3.6							
	comp=N,2.6nm,0.8s							
SONM	**Songino Array**	**21.62**	**40**	P		**P**	**18 24 50.0**	**+1.3**
	comp=N,1.2nm,0.8s,baz=231,slow=11,SNR=10							
	comp=N,1.2nm,0.8s							
BVAR	**Borovoye Array**	**22.93**	**336**	P		**P**	**18 25 01.8**	**-0.5**
	comp=N,1.0nm,0.8s,baz=150,slow=12,SNR=2.5							
	comp=N,1.0nm,0.8s							
CN2	**Changchun**	**32.75**	**59**	P		**P**	**18 26 35.5**	**+4.5**
FINES	**FINESS Array B**	**47.26**	**326**	P		**P**	**18 28 30.1**	**-0.8**
	comp=N,2.1nm,1.0s,baz=100,slow=7.8,SNR=4.5							
	comp=N,2.1nm,1.0s							
ARCES	**ARCESS Array B**	**49.22**	**336**	P		**P**	**18 28 45.6**	**-0.4**
	comp=N,3.7nm,0.9s,baz=102,slow=6.9,SNR=2.3							
	comp=N,3.7nm,0.9s							
NB2	**NORSAR Subarra**	**54.42**	**325**	P		**P**	**18 29 23.4**	**-1.5**
	comp=Z,2.2nm,0.9s,baz=86,slow=7.4							
NOA	**NORSAR Array B**	**54.42**	**325**	P		**P**	**18 29 22.9**	**-1.9**
	comp=Z,0.7nm,0.8s,baz=86,slow=7.3,SNR=3.8							
	comp=Z,0.7nm,0.8s							
WRA	**Warramunga Arr**	**70.15**	**131**	P		**P**	**18 31 08.9**	**-1.8**
	comp=Z,0.6nm,0.7s,baz=325,slow=6.3,SNR=10							
	comp=Z,0.6nm,0.7s							
ASAR	**Alice Springs**	**72.66**	**134**	P		**P**	**18 31 24.1**	**-1.7**
	comp=Z,0.7nm,0.7s,baz=315,slow=5.3,SNR=9.5							
	comp=Z,0.7nm,0.7s							
ILAR	**Eielson Array**	**74.38**	**21**	P		**P**	**18 31 37.5**	**+2.1**
	comp=Z,0.7nm,1.1s,baz=317,slow=6.4,SNR=4.7							
	comp=Z,0.7nm,1.1s							
TORD	**Torodi Ar. Bea**	**77.99**	**278**	P		**P**	**18 31 57.0**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=48,slow=2.7,SNR=3.1							
	comp=Z,0.4nm,0.6s							
YKA	**Yellowknife Ar**	**83.55**	**9**	P		**P**	**18 32 27.9**	**+2.4**
	comp=Z,0.4nm,0.7s,baz=337,slow=5.8,SNR=6.2							
	comp=Z,0.4nm,0.7s							

NERS 09 18:20:27.3, 65°.70N×172°.91W, h33km, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PVDR	**Provideniya**	**1.28**	**186**	*e*Pg		Pb	18 20 52.3	+1.5
PVDR				Pgmax			18 20 54.6	
	150nm,0.4s							
PVDR				*e*Sg		Sb	18 21 08.1	+1.1
PVDR				Sgmax			18 21 10.5	
	330nm,0.6s							
PVDR				Sgmax			18 21 10.5	
	1μm,0.4s							
ANDR	**Anadyr'**	**4.16**	**261**	*e*Pg		Pb	18 21 43.8	+4.2
ANDR				*e*Sg		Sb	18 22 40.1	+11
ANDR				Sgmax			18 22 40.5	
	80nm,0.6s							
BILL	**Bilibino**	**8.51**	**295**	*e*Sg		Sn	18 24 54.7	+52
BILL				Sgmax			18 25 06.8	
	10.0nm,1.0s							

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*NDI **09** 18:24:18.6±3.7, 33°.44N×85°.96E, h10km, ML3.7, MW3.7, Presumed earthquake*
*IDC **09** 18:24:18.1±0.7, 32°.65N×85°.48E, h0km, mb3.9/16, mbtmp3.9/20, ML3.7/4, Error ellipse: s-maj=22.6km s-min=14.2km az=58.0*
ISC 09 18:24:24.4±0.5, **32°.92N**±0°.06×**85°.66E**±0°.06, **h35**km, **n30,** σ1s**84**/37, **mb3.8**/15, **Xizang**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JOSI	**Joshimath**	**5.71**	**247**	*e*P		**Pn**	**18 25 48.7**	**+1.8**
JOSI				*e*S		**Sn**	**18 26 56.4**	**+5.1**
JOSI				IAML			18 26 60.0	
	comp=E,275nm,0.6s							
JOSI				IAML			18 27 08.3	
	comp=N,217nm,0.4s							
LGTI	**Lohaghat**	**5.92**	**235**	*e*P		**Pn**	**18 25 50.3**	**+0.5**
LGTI				*e*S		**Sn**	**18 27 00.3**	**+3.6**
LGTI				IAML			18 27 02.9	
	comp=E,88nm,0.4s							
LGTI				IAML			18 27 06.0	
	comp=N,120nm,0.7s							
GTK	**Tadong**	**6.13**	**155**	*e*P		**Pn**	**18 25 53.6**	**+1.0**
GTK				*e*S		**Sn**	**18 27 06.1**	**+4.5**
GTK				IAML			18 27 17.3	
	comp=N,237nm,0.6s							
KLP	**Kalpa**	**6.43**	**260**	*e*P		**Pn**	**18 25 56.5**	**-0.4**
KLP				*e*S		**Sn**	**18 27 11.8**	**+2.5**
KLP				IAML			18 27 25.8	
	comp=E,27nm,0.9s							
KLP				IAML			18 27 30.7	
	comp=N,16nm,0.8s							
SMLA	**Simla**	**7.43**	**258**	*e*P		**Pn**	**18 26 09.3**	**-1.0**
SMLA				*e*S		**Sn**	**18 27 32.7**	**-0.7**
SMLA				IAML			18 27 39.0	
	comp=N,36nm,0.9s							
SMLA				IAML			18 27 40.6	
	comp=E,48nm,1.3s							
DHUB	**DHUBRI**	**7.84**	**150**	*e*S		**Sn**	**18 27 43.3**	**-0.2**
DHRM	**DHARAMSHALA**	**7.93**	**268**	*e*P		**Pn**	**18 26 19.2**	**+1.7**
DHRM				*e*S		**Sn**	**18 27 44.0**	**-2.0**
DHRM				IAML			18 27 49.3	
	comp=N,25nm,1.3s							
DHRM				IAML			18 27 54.4	
	comp=E,27nm,0.7s							
TSSA	**Tissa**	**8.00**	**272**	*e*P		**Pn**	**18 26 17.6**	**-0.8**
TSSA				*e*S		**Sn**	**18 27 46.8**	**-0.9**
TSSA				IAML			18 27 53.9	
	comp=N,38nm,0.9s							
TSSA				IAML			18 27 54.5	
	comp=E,31nm,1.0s							
KSH2	**Kashi**	**10.27**	**310**	P		**Pn**	**18 26 50.3**	**+1.0**
MKAR	**Makanchi Array**	**14.10**	**350**	Pn		**Pn**	**18 27 41.5**	**-0.1**
	comp=E,0.1nm,0.3s,baz=165,slow=13,SNR=9.5							
	comp=E,1.0nm,0.8s							
LZDM	**Lanzhou Array**	**15.19**	**73**	Pn		**Pn**	**18 27 57.0**	**+0.5**
	baz=276,slow=14							
	comp=E,1.1nm,0.3s							
KURBB	**Kurchatov Arra**	**18.46**	**346**	P		**Pn**	**18 28 37.6**	**+0.3**
	comp=E,0.1nm,0.3s,baz=164,slow=11,SNR=7.8							
	comp=E,0.9nm,0.3s							
CMAR	**Chiang Mai Arr**	**18.69**	**137**	P		**P**	**18 28 36.9**	**-2.9**
	comp=E,0.1nm,0.3s,baz=318,slow=13,SNR=12							
	comp=E,2.2nm,0.9s							
ZALV	**Zalesovo Beam**	**21.03**	**359**	P		**P**	**18 29 05.5**	**+0.6**
	comp=E,1.2nm,0.6s,baz=186,slow=12,SNR=6.0							
	comp=E,1.2nm,0.6s							
SONM	**Songino Array**	**21.62**	**40**	P		**P**	**18 29 13.5**	**+2.1**
	comp=E,1.4nm,0.7s,baz=231,slow=11,SNR=8.2							
	comp=E,1.4nm,0.7s							
BVAR	**Borovoye Array**	**22.91**	**336**	P		**P**	**18 29 25.1**	**+0.1**
	comp=E,0.6nm,0.7s,baz=142,slow=7.5,SNR=3.8							
	comp=E,0.6nm,0.7s							
NRIK	**Noril'sk**	**36.49**	**1**	P		**P**	**18 31 27.4**	**+1.6**
	comp=E,1.1nm,0.3s,baz=188,slow=7.1,SNR=2.2							
	comp=E,1.1nm,0.3s							
FINES	**FINESS Array B**	**47.24**	**326**	P		**P**	**18 32 53.7**	**0.0**
	comp=E,3.1nm,0.8s,baz=108,slow=6.2,SNR=6.7							
	comp=E,3.1nm,0.8s							
ARCES	**ARCESS Array B**	**49.20**	**336**	P		**P**	**18 33 09.2**	**+0.5**
	comp=E,2.4nm,0.8s,baz=104,slow=10,SNR=6.1							
	comp=E,2.4nm,0.8s							
PETK	**Petropavlovsk-**	**53.99**	**45**	P		**P**	**18 33 46.0**	**+1.2**
	comp=E,3.8nm,0.9s,baz=263,slow=12,SNR=2.3							
	comp=E,3.8nm,0.9s							
NB2	**NORSAR Subarra**	**54.39**	**325**	P		**P**	**18 33 47.1**	**-0.5**
	comp=Z,1.3nm,0.6s,baz=84,slow=7.4							
NOA	**NORSAR Array B**	**54.39**	**325**	P		**P**	**18 33 47.4**	**-0.2**
	comp=Z,1.5nm,0.6s,baz=86,slow=7.2,SNR=7.0							
	comp=Z,1.5nm,0.6s							
GERES	**GERESS Array B**	**54.68**	**310**	P		**P**	**18 33 49.3**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=60,slow=6.3,SNR=5.2							
	comp=Z,0.5nm,0.5s							
WRA	**Warramunga Arr**	**70.18**	**131**	P		**P**	**18 35 32.9**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=325,slow=6.5,SNR=14							
	comp=Z,0.6nm,0.6s							
ASAR	**Alice Springs**	**72.68**	**134**	P		**P**	**18 35 48.0**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=316,slow=6.2,SNR=9.9							
	comp=Z,0.7nm,0.8s							
ILAR	**Eielson Array**	**74.37**	**21**	P		**P**	**18 35 59.0**	**+0.8**
	comp=Z,0.4nm,0.9s,baz=306,slow=3.2,SNR=3.6							
	comp=Z,0.4nm,0.9s							
TORD	**Torodi Ar. Bea**	**77.97**	**278**	P		**P**	**18 36 17.8**	**-1.7**
	comp=Z,0.9nm,0.7s,baz=71,slow=2.4,SNR=4.8							
	comp=Z,0.9nm,0.7s							
CTA	**Charters Tower**	**78.26**	**123**	P		**P**	**18 36 18.4**	**-2.5**
	comp=Z,1.8nm,0.8s,baz=326,slow=7.3,SNR=2.6							
	comp=Z,1.8nm,0.8s							
YKA	**Yellowknife Ar**	**83.53**	**9**	P		**P**	**18 36 48.3**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=340,slow=5.4,SNR=6.0							
	comp=Z,0.3nm,0.7s							
BOSA	**Boshof**	**83.83**	**230**	P		**P**	**18 36 48.4**	**-2.1**
	comp=Z,2.6nm,0.7s,baz=67,slow=3.4,SNR=6.0							
	comp=Z,2.6nm,0.7s							

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*NEIC **09** 18:30:03.7±1.9, 32°.33S±0°.05×67°.7W±0°.1, h126km±7km, mb4.2/3, Error ellipse: s-maj=13.9km s-min=6.8km az=95.0*
*SJA **09** 18:30:03.4±0.8, 32°.27S×67°.66W, h133km±3km, ML3.8, MW3.9*
*IDC **09** 18:30:03.4±1.1, 32°.22S×67°.48W, h125km±10km, mb3.5/3, mbtmp3.8/6, MS3.7/1, Error ellipse: s-maj=33.9km s-min=19.3km az=85.0*
ISC 09 18:30:02.9±0.7, **32°.24S**±0°.03×**67°.66W**±0°.04, **h140**km±5km, **n95,** σ1s**70**/132, **mb4.1/3, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ACAN	**Cantantal**	**0.40**	**94**	*e*P		**Pn**	**18 30 23.1**	**+0.4**
ACAN				IAML			18 30 40.3	
	comp=Z,7μm,0.5s							
CFA	**Coronel Fontan**	**0.81**	**322**	P		**Pn**	**18 30 25.7**	**+0.6**
	comp=Z,485nm,0.4s,baz=188,slow=4.6,SNR=4365							
CFA				S		**Sn**	**18 30 41.3**	**-0.7**
	comp=Z,284nm,0.4s,baz=182,slow=14,SNR=6.4							
CFA	**Coronel Fontan**	**0.81**	**322**	*e*P		**Pn**	**18 30 25.7**	**+0.6**
CFA				*e*S		**Sn**	**18 30 41.9**	**-0.1**
CFA				IAML			18 30 42.6	
	comp=Z,2μm,0.1s							
SJA	**San Juan**	**1.05**	**313**	*e*P		**Pn**	**18 30 28.2**	**+1.0**
SJA				IAML			18 30 48.1	
	comp=Z,808nm,0.2s							
ASAL	**Salagasta**	**1.05**	**251**	*e*P		**Pn**	**18 30 28.1**	**+0.8**
ASAL				*e*S		**Sn**	**18 30 46.8**	**+1.0**
ASAL				IAML			18 30 46.8	
	comp=Z,0.6nm,0.3s							
ZON	**Zonda**	**1.11**	**308**			**Pn**	**18 30 28.3**	**+0.5**
ZON						Sn	**18 30 45.9**	**-0.8**
ZON	**Zonda**	**1.11**	**308**	*e*P		**Pn**	**18 30 28.4**	**+0.5**
ZON				*e*S		**Sn**	**18 30 46.8**	**+0.1**
ZON				IAML			18 30 47.4	
	comp=Z,1μm,0.6s							
RTLL	**Cerro Villicun**	**1.15**	**322**	*e*P		**Pn**	**18 30 28.8**	**+0.6**
RTLL				*e*S		**Sn**	**18 30 47.7**	**+0.4**
RTLL				IAML			18 30 49.5	
	comp=Z,1μm,0.3s							
ARCO	**CERRO ARCO**	**1.23**	**241**	*e*P		**Pn**	**18 30 29.8**	**+0.7**
ARCO				*e*S		**Sn**	**18 30 47.8**	**-1.1**
ARCO				IAML			18 30 50.2	
	comp=Z,1μm,0.2s							
ARCO				IAML			18 30 50.3	
	comp=Z,1μm,0.2s							
AAGR	**Agrelo**	**1.29**	**229**	*e*P		**Pn**	**18 30 30.7**	**+1.0**
AAGR				*e*S		**Sn**	**18 30 51.7**	**+1.6**
AAGR				IAML			18 30 52.4	
	comp=Z,374nm,0.2s							
AAGR				IAML			18 30 52.5	
	comp=Z,376nm,0.2s							
ACHE	**Chepes**	**1.37**	**38**	*e*P		**Pn**	**18 30 31.9**	**+1.4**
AVIZ	**Vizcacheras**	**1.42**	**210**	*e*P		**Pn**	**18 30 32.4**	**+1.4**
RTLS	**Leoncito**	**1.46**	**287**	*e*P		**Pn**	**18 30 32.6**	**+1.1**
RTLS				*e*S		**Sn**	**18 30 54.1**	**+0.8**
AVFE	**Valle Fertil**	**1.59**	**6**	*e*P		**Pn**	**18 30 34.1**	**+1.3**
AVFE				*e*S		**Sn**	**18 30 56.1**	**+0.5**
AVFE				IAML			18 30 57.5	
	comp=Z,2μm,0.3s							
MRA	**San Martin**	**1.65**	**97**	*e*P		**Pn**	**18 30 33.9**	**+0.5**
MRA				IAML			18 31 07.7	
	comp=Z,205nm,0.2s							
ACCO	**Cerro Coronel**	**2.04**	**324**	*e*P		**Pn**	**18 30 40.1**	**+1.9**
ACCO				*e*S		**Sn**	**18 31 08.0**	**+2.7**
MT08	**Bocatoma Ro**	**2.32**	**238**			**Pn**	**18 30 42.8**	**+1.3**
MT08						Sn	**18 31 10.8**	**-0.3**
MT08	**Bocatoma Ro**	**2.32**	**238**	*e*P		**Pn**	**18 30 42.5**	**+1.0**
MT08				*e*S		**Sn**	**18 31 12.7**	**+1.5**
MT04	**Ro Olivares**	**2.39**	**240**	*e*P		**Pn**	**18 30 43.0**	**+0.7**
MT04				*e*S		**Sn**	**18 31 14.9**	**+2.3**
MT04				IAML			**18 31 15.1**	**+2.4**
ACDV	**Cuesta del Vie**	**2.42**	**328**	*e*P		**Pn**	**18 30 43.9**	**+1.2**
ACDV				*e*S		**Sn**	**18 31 15.1**	**+1.8**
ACDV				IAML			18 31 15.2	
	comp=Z,430nm,0.4s							
VA03	**San Esteban**	**2.50**	**257**			**Pn**	**18 30 44.2**	**+0.6**
VA03	**San Esteban**	**2.50**	**257**	*e*P		**Pn**	**18 30 44.6**	**+1.0**
VA03				*e*S		**Sn**	**18 31 12.4**	**-2.4**
VA03				IAML			18 31 22.3	
	comp=Z,396nm,0.6s							
AROD	**Rodeo**	**2.59**	**323**	*e*P		**Pn**	**18 30 46.9**	**+2.0**
AROD				*e*S		**Sn**	**18 31 19.3**	**+2.0**
RFA	**San Rafael**	**2.61**	**195**	*e*P		**Pn**	**18 30 45.8**	**+0.8**
RFA				*e*S		**Sn**	**18 31 16.8**	**-0.6**
RFA				IAML			18 31 44.3	
	comp=Z,170nm,0.7s							
MT13	**San Alfonso**	**2.67**	**235**			**Pn**	**18 30 46.3**	**+0.6**
MT13	**San Alfonso**	**2.67**	**235**	*e*P		**Pn**	**18 30 47.1**	**+1.4**
MT13				*e*S		**Sn**	**18 31 21.3**	**+2.6**
MT13				IAML			18 31 28.9	
	comp=Z,132nm,0.7s							
MT16	**CCHEN**	**2.69**	**243**			**Pn**	**18 30 46.6**	**+0.8**
MT03	**Universidad Ad**	**2.70**	**242**			**Pn**	**18 30 46.5**	**+0.4**
MT03	**Universidad Ad**	**2.70**	**242**	*e*P		**Pn**	**18 30 47.0**	**+0.8**
MT03				*e*S		**Sn**	**18 31 18.5**	**-1.0**
MT03				IAML			18 31 32.4	
	comp=Z,260nm,0.6s							
PEL	**Peldehue**	**2.71**	**250**			**Pn**	**18 30 46.0**	**-0.1**
PEL	**Peldehue**	**2.71**	**250**	*e*P		**Pn**	**18 30 47.2**	**+1.1**
PEL				*e*S		**Sn**	**18 31 21.4**	**+2.0**
PEL				IAML			18 31 25.8	
	comp=Z,142nm,1.3s							
TCA	**Tanti**	**2.76**	**72**	*e*P		**Pn**	**18 30 48.1**	**+1.2**
TCA				*e*S		**Sn**	**18 31 21.5**	**+0.7**
TCA				IAML			18 31 24.0	
	comp=Z,254nm,0.4s							
CO04	**Los Peladeros**	**2.82**	**273**			**Pn**	**18 30 48.1**	**+0.3**
MT05	**Renca**	**2.83**	**245**			**Pn**	**18 30 48.2**	**+0.4**
MT05	**Renca**	**2.83**	**245**	*e*P		**Pn**	**18 30 49.1**	**+1.4**
MT05				*e*S		**Sn**	**18 31 20.3**	**-2.1**
MT05				IAML			18 31 26.2	
	comp=Z,276nm,0.5s							
ACLC	**CERRO LA CRUZ**	**2.88**	**12**	*e*P		**Pn**	**18 30 49.6**	**+1.1**
ACLC				*e*S		**Sn**	**18 31 23.3**	**-0.3**
ACLC				IAML			18 31 23.8	
	comp=Z,347nm,0.2s							
CO03	**El Pedregal**	**2.94**	**298**			**Pn**	**18 30 50.9**	**+1.6**
CO03	**El Pedregal**	**2.94**	**298**	*e*P		**Pn**	**18 31 51.0**	**+1.8**
CO03				*e*S		**Sn**	**18 31 25.6**	**+0.7**
CO03				IAML			18 31 27.9	
	comp=Z,691nm,0.8s							
CO02	**Combarbal**	**3.03**	**289**			**Pn**	**18 30 51.4**	**+1.0**
CO02

PLCA	**Paso Flores**	**8.79**	**195**	P	**Pn**	**18 32 07.5**	**+0.6**
	comp=Z,1.7nm,0.6s,baz=4.6,slow=12,SNR=12						
PB03	**IPOC Station P**	**10.32**	**349**		**Pn**	**18 32 25.7**	**-1.9**
PB09	**IPOC Station P**	**10.50**	**352**		**Pn**	**18 32 29.2**	**-0.7**
PB07	**IPOC Station P**	**10.66**	**349**	Pn	**Pn**	**18 32 29.7**	**-2.4**
CPUP	**Villa Florida**	**10.77**	**59**	P	**Pn**	**18 32 30.7**	**-2.6**
	comp=Z,1.1nm,0.4s,baz=214,slow=15,SNR=3.5						
PB02	**IPOC Station P**	**11.06**	**349**		**Pn**	**18 32 34.4**	**-2.9**
PB01	**IPOC Station P**	**11.28**	**351**	Pn	**Pn**	**18 32 37.5**	**-2.6**
HMBC	**Humberstone**	**12.08**	**350**	Pn	**Pn**	**18 32 48.1**	**-2.6**
PB08	**IPOC Station P**	**12.13**	**353**	Pn	**Pn**	**18 32 49.7**	**-1.8**
PB11	**IPOC Station P**	**12.56**	**351**	Pn	**Pn**	**18 32 54.7**	**-2.3**
GO01	**Chusmiza**	**12.60**	**353**	Pn	**Pn**	**18 32 55.1**	**-2.7**
PB12	**IPOC Station P**	**13.78**	**349**	Pn	**Pn**	**18 33 10.6**	**-2.0**
LPAZ	**La Paz**	**15.89**	**358**	P	**P**	**18 33 41.3**	**+0.9**
	comp=Z,1.4nm,0.5s,baz=207,slow=11,SNR=5.0						
LPAZ	**La Paz**	**15.89**	**358**	IAmb	IAmb	18 34 08.5	
	comp=Z,2.8nm,0.8s						
JTS	**Las Juntas de**	**45.41**	**336**	LR	LR	18 56 07.5	
	comp=Z,75nm,18.0s,baz=35,slow=34						
SNAA	**Sanae**	**51.85**	**159**	P	**P**	**18 38 58.3**	**+1.9**
	comp=Z,2.2nm,0.4s,baz=279,slow=6.0,SNR=5.1						
	comp=Z,2.2nm,0.4s						
SNAA	**Sanae**	**51.85**	**159**	P	**P**	**18 38 57.7**	**+1.3**
SNAA				IAmb	IAmb	18 39 01.8	
	comp=Z,8.4nm,1.3s						
QSPA	**South Pole Qui**	**57.99**	**180**	P	**P**	**18 39 43.2**	**+2.6**
	comp=Z,0.8nm,0.6s,baz=142,slow=2.1,SNR=5.9						
	comp=Z,0.8nm,0.6s						
QSPA	**South Pole Qui**	**57.99**	**180**	P	**P**	**18 39 43.0**	**+2.3**
QSPA				IAmb	IAmb	18 39 49.9	
	comp=Z,5.6nm,1.4s						
TXAR	**Lajitas Array**	**70.14**	**327**	P	**P**	**18 41 02.6**	**+2.4**
	comp=Z,0.1nm,0.3s,baz=158,slow=7.4,SNR=4.2						
	comp=Z,0.1nm,0.3s						
WRA	**Warramunga Arr**	**124.00**	**205**	PKP	**PKiKP**	**18 48 46.1**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=162,slow=1.6,SNR=7.3						
ZALV	**Zalesovo Beam**	**150.75**	**34**	PKPbc	**PKiKP**	**18 49 40.5**	**+1.8**
	comp=Z,1.1nm,0.5s,baz=310,slow=3.6,SNR=6.0						
ZALV	**Zalesovo Beam**	**150.75**	**34**		**PKiKP**	**18 49 40.4**	**+1.7**
PZH	**PanZhiHua**	**169.13**	**119**	PKP	**PKPdf**	**18 49 48.2**	**-5.7**
HHC	**Hu-ho-hao-te**	**171.39**	**4**	*eP*	**PKPdf**	**18 49 50.7**	**-4.0**

*IDC **09** 18:38:47.7±0.8, 32.°58N×85.°35E, h0km, mb3.8/14, mbtmp3.9/18, ML3.7/4, MS3.5/1, Error ellipse: s-maj=23.5km s-min=15.4km az=62.0*
*BJI **09** 18:38:50.7, 32.°76N×85.°57E, h7km, mB4.3/1, mb4.1/22, Ms3.8/2, Ms7 3.7/3*
*NEIC **09** 18:38:51.1±1.6, 32.°79N±0.°07×85.°5E±0.°1, h10km±1km, mb4.2/21, Error ellipse: s-maj=15.5km s-min=11.2km az=236.0*
*NDI **09** 18:38:52.0±3.4, 32.°71N×85.°89E, h10km, ML4.0, MW3.8, Presumed earthquake*

ISC 09 18:38:50.5±0.4, 32.°68N±0.°05×85.°56E±0.°05, h10km, n79, σ2s27/85, mb3.9/20, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EVN	**Everest**	**4.83**	**167**			**Pn**	**18 40 07.6**	**+3.8**
PTH	**Pithoragarh**	**5.53**	**238**	*eP*		**Pn**	**18 40 15.9**	**+2.8**
PTH				*eS*		**Sn**	**18 41 20.3**	**+3.6**
PTH				IAML			18 41 23.1	
	comp=E,142nm,0.9s							
PTH				IAML			18 41 23.5	
	comp=N,151nm,0.7s							
JOSI	**Joshimath**	**5.54**	**249**	*eP*		Pn	18 40 18.4	+5.2
JOSI				*eS*		**Sn**	**18 41 22.3**	**+5.2**
JOSI				IAML			18 41 32.3	
	comp=E,159nm,0.7s							
JOSI				IAML			18 41 34.4	
	comp=N,156nm,0.9s							
LSA	**Lhasa**	**5.63**	**120**			**Pn**	**18 40 16.6**	**+1.9**
LSA	**Lhasa**	**5.63**	**120**	Pn		**Pn**	**18 40 17.7**	**+2.9**
LGTI	**Lohaghat**	**5.72**	**237**	*eP*		**Pn**	**18 40 19.0**	**+3.3**
LGTI				*eS*		**Sn**	**18 41 25.4**	**+3.9**
LGTI				IAML			18 41 27.1	
	comp=N,140nm,0.6s							
LGTI				IAML			18 41 28.5	
	comp=E,152nm,0.5s							
GTK	**Tadong**	**5.96**	**153**	*eP*		**Pn**	**18 40 20.2**	**+1.3**
GTK				*ex*		x	18 41 40.8	
KLP	**Kalpa**	**6.30**	**262**	*eS*		**Sn**	**18 41 41.2**	**+5.1**
ALCI	**Alchi Leh**	**7.17**	**285**	*eP*		**Pn**	**18 40 38.3**	**+2.6**
SMLA	**Simla**	**7.30**	**260**	*eP*		**Pn**	**18 40 40.3**	**+3.2**
SMLA				*eS*		**Sn**	**18 42 02.2**	**+2.1**
SMLA				IAML			18 42 06.8	
	comp=N,90nm,1.0s							
SMLA				IAML			18 42 10.0	
	comp=E,95nm,1.0s							
DHRM	**DHARAMSHALA**	**7.84**	**269**	*eP*		**Pn**	**18 40 48.1**	**+3.4**
DHRM				*eS*		**Sn**	**18 42 14.2**	**+0.5**
DHRM				IAML			18 42 20.3	
	comp=N,76nm,0.5s							
DHRM				IAML			18 42 23.5	
	comp=E,81nm,1.0s							
GAYA	**Gaya**	**7.85**	**182**	*eP*		**Pn**	**18 40 47.6**	**+2.8**
GAYA				*eS*		**Sn**	**18 42 08.7**	**-5.0**
BHK	**Bhakra**	**7.90**	**263**	*eS*		Sn	18 42 07.0	-7.8
TSSA	**Tissa**	**7.93**	**274**	*eP*		**Pn**	**18 40 50.3**	**+4.3**
TSSA				*eS*		**Sn**	**18 42 18.8**	**+2.9**
TSSA				IAML			18 42 22.0	
	comp=N,131nm,0.8s							
TSSA				IAML			18 42 33.2	
	comp=E,130nm,1.0s							
GOMU	**GeErMu**	**8.41**	**63**	P		**Pn**	**18 40 55.4**	**+2.6**
GOMU				pmax		pmax		
	comp=E,7.0nm,0.9s							
KUDL	**Kundal**	**9.04**	**242**	*eP*		**Pn**	**18 41 04.4**	**+3.3**
KUDL				*eS*		**Sn**	**18 42 42.4**	**-0.5**
KUDL				IAML			18 42 54.9	
	comp=E,86nm,0.6s							
KUDL				IAML			18 42 56.9	
	comp=N,96nm,0.7s							
WUS	**Wushi**	**9.90**	**331**			**Pn**	**18 41 13.1**	**+0.1**
MOKO	**MOKOCHONG**	**10.05**	**127**	*eP*		**Pn**	**18 41 15.0**	**0.0**
MOKO				*eS*		Sn	18 42 53.3	-15
KOHI	**KOHIMA**	**10.19**	**131**	*eP*		**Pn**	**18 41 15.8**	**-1.2**
KOHI				*eS*		Sn	18 43 00.8	-11
KSH2	**Kashi**	**10.36**	**311**	P		**Pn**	**18 41 22.6**	**+3.4**
KSH2				pmax		pmax		
	comp=N,2.0nm,1.1s							
NIL	**Nilore**	**10.36**	**279**			**Pn**	**18 41 19.3**	**+0.1**
TARG	**Taragay, Kyrgy**	**10.94**	**328**			**Pn**	**18 41 26.8**	**-0.7**
WMQ	**Urumqi**	**11.25**	**8**	*eP*		**Pn**	**18 41 33.8**	**+2.4**
WMQ				pmax		pmax		
	comp=N,12nm,1.1s							
AJM	**Ajmer**	**11.37**	**240**	*eP*		**Pn**	**18 41 34.6**	**+1.5**
AJM				*eS*		**Sn**	**18 43 38.3**	**-1.9**
MORE	**Moreh**	**11.39**	**135**	Pn		**Pn**	**18 41 34.0**	**+0.6**
KDJ	**Kajisay**	**11.54**	**327**			**Pn**	**18 41 35.4**	**-0.1**
BHPL	**Bhopal**	**11.83**	**219**	*eS*		**Sn**	**18 43 45.7**	**-5.8**
BHPL				IAML			18 43 48.3	
	comp=E,43nm,0.7s							
BHPL				IAML			18 43 51.4	
	comp=N,20nm,0.7s							
BOOM	**Boomskoye usch**	**12.41**	**325**	Pn		**Pn**	**18 41 45.6**	**-1.6**
ARSB	**Arslanbob**	**13.24**	**314**			**Pn**	**18 41 57.0**	**-1.6**
TNCH	**TengChong**	**13.67**	**121**	P		**Pn**	**18 42 06.5**	**+1.9**
TNCH				sP		P	18 42 11.5	-2.0
TNCH				PP		**PnPn**	**18 42 18.5**	**+6.0**
TNCH				S		**Sn**	**18 44 34.2**	**-2.5**
TNCH				sS		S	18 44 44.9	-15
TNCH				L		L		
	comp=N,360nm,14.8s							
BTK	**Batken**	**13.96**	**306**	Pn		**Pn**	**18 42 05.9**	**-2.6**
MKAR	**Makanchi Array**	**14.32**	**351**	Pn		**Pn**	**18 42 12.6**	**-0.6**
	comp=N,0.1nm,0.3s,baz=168,slow=12,SNR=28							
MKAR				LR		LR	18 48 33.6	
	comp=N,174nm,18.6s,baz=318,slow=41							
	comp=N,2.8nm,0.8s							
MKAR	**Makanchi Array**	**14.32**	**351**			**Pn**	**18 42 11.9**	**-1.3**
MAKZ	**Makanchi**	**14.38**	**350**			**Pn**	**18 42 12.2**	**-1.9**
CHGR	**Chuyangaron**	**14.60**	**299**	Pn		**Pn**	**18 42 15.9**	**-1.3**
LZDM	**Lanzhou Array**	**15.34**	**73**	Pn		**Pn**	**18 42 29.1**	**+1.7**
	baz=262,slow=11							
	comp=N,9.7nm,0.6s							
PZH	**PanZhiHua**	**15.36**	**109**	P		**Pn**	**18 42 29.3**	**+1.8**
LZH	**Lanzhou**	**15.48**	**72**	*eP*		**Pn**	**18 42 29.0**	**0.0**
LZH				pP		P	18 42 34.0	+0.5
LZH				pmax		pmax		
	comp=N,13nm,1.5s							
KK31	**Karatay Array**	**15.77**	**316**			**Pn**	**18 42 30.8**	**-1.8**
KKAR	**Karatay Array**	**15.77**	**316**	Pn		**Pn**	**18 42 31.7**	**-0.9**
CHTO	**Chiang Mai**	**18.30**	**136**			**Pn**	**18 43 03.6**	**-1.0**
CMAR	**Chiang Mai Arr**	**18.58**	**136**	P		**P**	**18 43 08.0**	**+0.2**
	comp=N,0.1nm,0.3s,baz=314,slow=11,SNR=15							
	comp=N,3.2nm,0.9s							
CMAR	**Chiang Mai Arr**	**18.58**	**136**	P		**Pn**	**18 43 09.4**	**+1.4**
KURBB	**Kurchatov Arra**	**18.67**	**346**	P		**P**	**18 43 07.6**	**-1.0**
	comp=N,0.1nm,0.3s,baz=160,slow=11,SNR=8.5							
	comp=N,3.0nm,0.7s							
KURK	**Kurchatov**	**18.74**	**346**			**P**	**18 43 08.3**	**-1.0**
ENH	**Enshi**	**20.54**	**90**			Pn	18 43 31.5	+0.1
ENH					IAmb	IAmb	18 43 32.7	
	comp=Z,13nm,1.0s							
ZAA0	**Zalesovo Array**	**21.27**	**359**			**P**	**18 43 36.0**	**-0.8**
ZAA0					IAmb	IAmb	18 43 39.4	
	comp=Z,3.7nm,0.8s							
ZALV	**Zalesovo Beam**	**21.27**	**359**	P		**P**	**18 43 36.2**	**-0.6**
	comp=Z,2.2nm,0.6s,baz=176,slow=10,SNR=12							
	comp=Z,2.2nm,0.6s							
ZALV	**Zalesovo Beam**	**21.27**	**359**			**P**	**18 43 35.8**	**-1.0**
SONM	**Songino Array**	**21.86**	**40**	P		**P**	**18 43 43.7**	**+0.4**
	comp=Z,3.1nm,0.8s,baz=231,slow=10,SNR=21							
	comp=Z,3.1nm,0.8s							
SONM	**Songino Array**	**21.86**	**40**	P		**P**	**18 43 45.0**	**+1.7**
SONM					IAmb	IAmb	18 43 47.2	
	comp=Z,3.7nm,1.0s							
PBA	**Port Blair**	**21.94**	**161**	P		**P**	**18 43 46.4**	**+2.1**
PBA					IAmb	IAmb	18 44 08.2	
	comp=Z,32nm,1.0s							
HHC	**Hu-ho-hao-te**	**22.32**	**61**	*eP*		**P**	**18 43 48.5**	**+0.2**
HHC					pmax	pmax		
	comp=Z,5.0nm,0.6s							
BVAR	**Borovoye Array**	**23.09**	**336**	P		**P**	**18 43 55.4**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=149,slow=11,SNR=4.9							
	comp=Z,0.6nm,0.7s							
AB31	**Akbulak array**	**25.29**	**318**			**P**	**18 44 16.9**	**0.0**
AB31					IAmb	IAmb	18 44 22.9	
	comp=Z,3.0nm,0.9s							
ABKAR	**Akbulak array**	**25.29**	**318**	P		**P**	**18 44 16.8**	**-0.1**
NRIK	**Noril'sk**	**36.73**	**1**	P		**P**	**18 45 57.4**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=174,slow=10,SNR=2.0							
	comp=Z,1.4nm,0.7s							
NRIK	**Noril'sk**	**36.73**	**1**	IAmb		IAmb	18 45 59.8	
	comp=Z,2.3nm,0.9s							
KLR	**Kul'dur**	**37.95**	**50**	P		**P**	**18 46 08.0**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=263,slow=10,SNR=5.2							
	comp=Z,1.4nm,0.8s							
TIXI	**Tiksi**	**45.25**	**18**	P		**P**	**18 47 07.0**	**-0.6**
TIXI					IAmb	IAmb	18 47 27.5	
	comp=Z,3.2nm,1.1s							
FIA1	**FINESS Array S**	**47.39**	**326**	P		**P**	**18 47 23.0**	**-1.6**
FINES	**FINESS Array B**	**47.39**	**326**	P		**P**	**18 47 24.6**	**+0.1**
	comp=Z,5.1nm,1.0s,baz=104,slow=8.0,SNR=5.4							
	comp=Z,5.1nm,1.0s							
FINES	**FINESS Array B**	**47.39**	**326**	P		**P**	**18 47 22.9**	**-1.7**
ARCES	**ARCESS Array B**	**49.38**	**336**	P		**P**	**18 47 40.0**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=60,slow=6.1,SNR=1.6							
	comp=Z,1.0nm,0.6s							
ARCES	**ARCESS Array B**	**49.38**	**336**		IAmb	IAmb	18 47 53.6	
	comp=Z,12nm,1.3s							
NC303	**NORSAR Array S**	**54.45**	**325**	P		**P**	**18 48 18.0**	**+0.2**
NOA	**NORSAR Array B**	**54.54**	**325**	P		**P**	**18 48 17.5**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=85,slow=7.3,SNR=2.5							
	comp=Z,0.6nm,0.6s							
SOEI	**Soe**	**56.06**	**132**	P		**P**	**18 48 31.5**	**+1.5**
WB0	**Warramunga Arr**	**69.99**	**131**	P		**P**	**18 50 02.8**	**+0.3**
WB0					IAmb	IAmb	18 50 20.6	
	comp=Z,8.1nm,1.4s							
WRA	**Warramunga Arr**	**70.08**	**131**	P		**P**	**18 50 02.8**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=324,slow=6.4,SNR=12							
	comp=Z,0.4nm,0.5s							
WRA	**Warramunga Arr**	**70.08**	**131**	P		**P**	**18 50 03.0**	**0.0**
ASAR	**Alice Springs**	**72.57**	**134**	P		**P**	**18 50 17.4**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=318,slow=5.7,SNR=8.6							
	comp=Z,0.4nm,0.8s							
ILAR	**Eielson Array**	**74.62**	**21**	P		**P**	**18 50 27.9**	**-1.6**
	comp=Z,0.4nm,0.8s,baz=301,slow=5.6,SNR=5.0							
	comp=Z,0.4nm,0.8s							
SKT	**Skwentna**	**75.09**	**24**	P		**P**	**18 50 32.8**	**+0.4**
SKT					IAmb	IAmb	18 50 41.3	
	comp=Z,5.2nm,1.2s							
Q19K	**Cape Douglas,**	**76.38**	**27**	P		**P**	**18 50 39.6**	**-0.2**
TORD	**Torodi Ar. Bea**	**77.92**	**278**	P		**P**	**18 50 45.6**	**-3.5**
	comp=Z,0.3nm,0.5s,baz=50,slow=2.9,SNR=3.8							
	comp=Z,0.3nm,0.5s							
TGL	**Tana Glacier**	**78.87**	**22**	P		**P**	**18 50 53.4**	**-0.3**
BOSA	**Boshof**	**83.61**	**230**	P		**P**	**18 51 16.7**	**-2.6**
	comp=Z,3.3nm,1.1s,baz=0.0,slow=7.1,SNR=2.1							
	comp=Z,3.3nm,1.1s							
YKA	**Yellowknife Ar**	**83.78**	**9**	P		**P**	**18 51 18.6**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=337,slow=5.7,SNR=4.1							
	comp=Z,0.3nm,0.7s							

*SJA **09** 19:01:49.7±0.7, 31.°76S×68.°26W, h107km±2km, ML3.5, MW3.7*
*IDC **09** 19:01:49.8±0.6, 31.°73S×68.°31W, h102km±4km, mb3.6/3, mbtmp3.7/6, MS3.8/2, Error ellipse: s-maj=48.7km s-min=16.6km az=102.0*
*NEIC **09** 19:01:50.6±1.8, 31.°76S±0.°06×68.°3W±0.°1, h102km±4km, mb4.5/6, Error ellipse: s-maj=14.2km s-min=8.4km az=107.0*

ISC 09 19:01:50.0±0.6, 31.°74S±0.°03×68.°19W±0.°03, h109km±4km, n85, σ1s59/116, mb4.2/4, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CFA	**Coronel Fontan**	**0.14**	**345**	P		**Pn**	**19 02 05.3**	**+0.1**
	1µm,0.3s,baz=194,slow=3.4,SNR=7249							
CFA				S		**Sn**	**19 02 15.9**	**-0.7**
	423nm,0.3s,baz=210,slow=20,SNR=55							
CFA	**Coronel Fontan**	**0.14**	**345**	*eP*		**Pn**	**19 02 05.3**	**+0.1**
CFA				*eS*		**Sn**	**19 02 17.0**	**+0.4**
CFA				IAML			19 02 18.4	
	comp=Z,1µm,0.3s							
SJA	**San Juan**	**0.38**	**304**	*eP*		**Pn**	**19 02 06.1**	**0.0**
SJA				*eS*		**Sn**	**19 02 18.5**	**+0.4**
SJA				IAML			19 02 18.9	
	comp=Z,1µm,0.2s							
ZON	**Zonda**	**0.46**	**295**			**Pn**	**19 02 06.0**	**-0.5**
ZON				Sn		**Sn**	**19 02 16.7**	**-2.2**
ZON	**Zonda**	**0.46**	**295**	*eP*		**Pn**	**19 02 06.1**	**-0.4**
ZON				*eS*		**Sn**	**19 02 18.0**	**-1.0**
ZON				IAML			19 02 18.4	
	comp=Z,4µm,0.2s							
ZON				AMP			19 02 18.5	
	comp=Z,89µm,0.1s							
RTLL	**Cerro Villicun**	**0.47**	**330**	*eP*		**Pn**	**19 02 06.6**	**-0.1**
RTLL				*eS*		**Sn**	**19 02 19.0**	**-0.1**
RTLL				IAML			19 02 21.1	
	comp=Z,2µm,0.3s							
RTLS	**Leoncito**	**0.94**	**266**	*eP*		**Pn**	**19 02 10.4**	**-0.4**
RTLS				IAML			19 02 28.8	
	comp=Z,2µm,0.3s							
ACAN	**Cantantal**	**1.01**	**122**	*eP*		**Pn**	**19 02 12.2**	**+1.0**
ASAL	**Salagasta**	**1.01**	**212**	*eP*		**Pn**	**19 02 11.3**	**0.0**
ASAL				*eS*		**Sn**	**19 02 27.4**	**0.0**
AVFE	**Valle Fertil**	**1.25**	**31**	*eP*		**Pn**	**19 02 15.0**	**+1.0**
AVFE				*eS*		**Sn**	**19 02 34.0**	**+2.0**
AVFE				IAML			19 02 34.8	
	comp=Z,648nm,1.2s							
ARCO	**CERRO ARCO**	**1.27**	**209**	*eP*		**Pn**	**19 02 14.1**	**-0.1**
ARCO				*eS*		**Sn**	**19 02 32.3**	**-0.1**
ARCO				IAML			19 02 33.1	
	comp=Z,2µm,0.3s							
ACCO	**Cerro Coronel**	**1.37**	**327**	*eP*		**Pn**	**19 02 16.3**	**+0.7**
ACCO				*eS*		**Sn**	**19 02 33.4**	**-1.5**
ACHE	**Chepes**	**1.43**	**67**	*eP*		**Pn**	**19 02 17.9**	**+1.9**
AAGR	**Agrelo**	**1.45**	**202**	*eP*		**Pn**	**19 02 16.5**	**+0.2**
AAGR				IAML			19 02 37.7	
	comp=Z,901nm,0.7s							
AAGR				*eS*		**Sn**	**19 02 37.9**	**+1.8**
AVIZ	**Vizcacheras**	**1.75**	**189**	*eP*		**Pn**	**19 02 20.4**	**+0.5**
AVIZ				*eS*		**Sn**	**19 02 37.5**	**-5.2**
AVIZ				*eS*			19 02 38.0	
ACDV	**Cuesta del Vie**	**1.75**	**333**	*eP*		**Pn**	**19 02 21.1**	**+1.1**
ACDV				*eS*		Sn	19 02 35.0	-7.9
ACDV				IAML			19 02 47.5	
	comp=Z,160nm,0.4s							
AROD	**Rodeo**	**1.91**	**325**	*eP*		**Pn**	**19 02 23.1**	**+0.9**
AROD				*eS*		**Sn**	**19 02 47.7**	**+1.1**
MRA	**San Martin**	**2.21**	**109**	*eP*		**Pn**	**19 02 26.6**	**+0.9**
MRA				*eS*		**Sn**	**19 02 45.9**	**-7.2**
MRA				IAML			19 02 55.4	
	comp=Z,524nm,0.4s							

VA03	**San Esteban**	**2.24**	**242**			**Pn**	**19 02 25.4**	**-0.7**
VA03	**San Esteban**	**2.24**	**242**	*eP*		**Pn**	**19 02 26.4**	**+0.2**
VA03				IAML			19 02 59.0	
	comp=Z,110nm,0.2s							
MT08	**Bocatoma Ro**	**2.29**	**222**			**Pn**	**19 02 27.0**	**+0.1**
MT08	**Bocatoma Ro**	**2.29**	**222**	*eP*		**Pn**	**19 02 27.3**	**+0.3**
MT08				*eS*		**Sn**	**19 02 56.4**	**+1.2**
MT08				IAML			19 02 57.0	
	comp=Z,216nm,0.3s							
CO03	**El Pedregal**	**2.32**	**292**			**Pn**	**19 02 27.2**	**+0.1**
CO03	**El Pedregal**	**2.32**	**292**	*eP*		**Pn**	**19 02 27.4**	**+0.3**
CO03				*eS*		**Sn**	**19 02 55.9**	**+0.4**
CO03				IAML			19 02 56.7	
	comp=Z,291nm,0.6s							
MT04	**Ro Olivares**	**2.33**	**224**	*eP*		**Pn**	**19 02 27.7**	**+0.3**
MT04				*eS*		**Sn**	**19 02 57.9**	**+1.8**
CO04	**Los Peladeros**	**2.38**	**262**			**Pn**	**19 02 26.8**	**-1.4**
CO01	**Juntas del Tor**	**2.40**	**317**			**Pn**	**19 02 29.4**	**+1.1**
CO01	**Juntas del Tor**	**2.40**	**317**	*eS*		**Sn**	**19 02 58.9**	**+1.2**
CO01				IAML			19 03 03.8	
	comp=Z,80nm,0.2s							
CO02	**Combarbal**	**2.46**	**282**			**Pn**	**19 02 28.2**	**-0.7**
CO02	**Combarbal**	**2.46**	**282**	*eP*		**Pn**	**19 02 28.0**	**-0.9**
CO02				*eS*		**Sn**	**19 02 59.2**	**+0.4**
CO02				IAML			19 03 01.6	
	comp=Z,315nm,0.3s							
PEL	**Peldehue**	**2.53**	**236**			**Pn**	**19 02 28.6**	**-1.2**
PEL	**Peldehue**	**2.53**	**236**	*eP*		Pn	19 02 24.2	-5.6
PEL				*eS*		**Sn**	**19 03 01.8**	**+1.4**
PEL				IAML			19 03 04.5	
	comp=Z,99nm,0.4s							
ACLC	**CERRO LA CRUZ**	**2.54**	**25**	*eP*		**Pn**	**19 02 31.3**	**+1.2**
ACLC				*eS*		**Sn**	**19 02 59.4**	**-1.6**
ACLC				IAML			19 03 05.4	
	comp=Z,106nm,0.4s							
MT16	**CCHEN**	**2.59**	**229**			**Pn**	**19 02 30.5**	**-0.1**
MT03	**Universidad Ad**	**2.62**	**228**			**Pn**	**19 02 30.7**	**-0.4**
MT03	**Universidad Ad**	**2.62**	**228**	*eP*		**Pn**	**19 02 31.4**	**+0.3**
MT03				*eS*		**Sn**	**19 03 04.0**	**+1.3**
MT03				IAML			19 03 10.3	
	comp=Z,124nm,0.5s							
MT13	**San Alfonso**	**2.67**	**221**			**Pn**	**19 02 31.5**	**-0.1**
MT13	**San Alfonso**	**2.67**	**221**	*eP*		**Pn**	**19 02 32.1**	**+0.4**
MT13				*eS*		**Sn**	**19 03 08.6**	**+4.9**
MT13				IAML			19 03 11.8	
	comp=Z,63nm,0.8s							
MT05	**Renca**	**2.71**	**232**			**Pn**	**19 02 31.2**	**-0.9**
MT05	**Renca**	**2.71**	**232**	*eP*		**Pn**	**19 02 32.2**	**+0.1**
MT05				*eS*		**Sn**	**19 03 04.9**	**+0.3**
MT05				IAML			19 03 06.0	
	comp=Z,119nm,0.2s							
GO04	**Tololo Observa**	**2.73**	**304**			**Pn**	**19 02 32.0**	**-0.7**
GO04	**Tololo Observa**	**2.73**	**304**	*eP*		**Pn**	**19 02 33.2**	**+0.6**
GO04				*eS*		**Sn**	**19 03 04.8**	**-0.5**
GO04				IAML			19 03 14.6	
	comp=Z,289nm,0.5s							
VA06	**Catapilco**	**2.76**	**252**			**Pn**	**19 02 30.8**	**-1.9**
MT02	**Curacav**	**2.91**	**238**			**Pn**	**19 02 32.9**	**-2.0**
MT02	**Curacav**	**2.91**	**238**	*eP*		**Pn**	**19 02 33.4**	**-1.4**
MT02				*eS*		Sn	19 02 58.0	-11
MT02				IAML			19 03 34.5	
	comp=Z,54nm,0.5s							
VCA	**Vinchina**	**2.99**	**360**	*eP*		**Pn**	**19 02 37.5**	**+1.4**
VCA				*eS*		**Sn**	**19 03 12.4**	**+0.9**
VCA				IAML			19 03 22.9	
	comp=Z,174nm,0.7s							
BO04	**La Punta**	**3.03**	**222**			**Pn**	**19 02 35.6**	**-0.8**
RFA	**San Rafael**	**3.03**	**184**	*eP*		**Pn**	**19 02 36.1**	**-0.4**
RFA				*eS*		Sn	19 03 01.2	-11
RFA				IAML			19 03 06.1	
	comp=Z,264nm,0.3s							
TCA	**Tanti**	**3.10**	**84**	*eP*		**Pn**	**19 02 38.7**	**+1.3**
TCA				*eS*		Sn	19 03 02.6	-11
TCA				IAML			19 03 40.9	
	comp=Z,169nm,0.6s							
MT09	**Talagante**	**3.11**	**228**			**Pn**	**19 02 36.0**	**-1.5**
CO06	**Fray Jorge

MKAR pPKPab **pPKPab** 19 22 13.4 -1.4
comp=Z,0.3nm,0.7s,baz=273,slow=2.7,SNR=2.7

*IDC **09** 19:03:54.0±1.7,6.69S×129.28E,h0km,mb3.6/1, mbtmp4.0/4,ML4.1/3,Error ellipse: s-maj=61.5km s-min=28.2km az=79.0*
*DJA **09** 19:04:04.8±0.4,7.5S±3.1×13.0E±.1°,h163km±7.7km,M4.1/19, mB4.8/6,mb3.9/8,MLv4.2/19,Mw(mB)4.1/6*
ISC 09 19:04:05.1±0.9,**6.66S**±0.06×**130.42E**±0.07,**h150**km,**n15,** σ2s**78**/19,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.58**	**147**	P	**Pn**	**19 04 35.4**	**-0.1**
SAUI				S	**Sn**	**19 05 02.9**	**+4.1**
BNDI	**Bandanaira**	**2.18**	**346**	P	**Pn**	**19 04 41.0**	**-1.4**
KRAI	**Karang Ratu**	**3.88**	**329**	P	**Pn**	**19 05 03.1**	**-0.8**
KMPI	**Kaimana, Papua**	**4.42**	**48**	P	**Pn**	**19 05 10.1**	**-0.8**
SIJI	**Sorong**	**5.81**	**8**	Pn	**Pn**	**19 05 26.6**	**-2.7**
	8.5nm,0.3s,baz=182,slow=22,SNR=65						
	23nm,0.2s						
SIJI	**Sorong**	**5.81**	**8**	P	**Pn**	**19 05 26.7**	**-2.6**
SWI	**Sorong**	**5.82**	**8**	P	**Pn**	**19 05 26.7**	**-2.7**
	0.2nm2µm21nm,0.6s						
RKPI	**Ransiki, Papua**	**6.34**	**36**	P	**Pn**	**19 05 35.2**	**-1.1**
	0.3nm1µm33nm,0.5s						
SANI	**Sanana**	**6.36**	**316**	P	**Pn**	**19 05 35.2**	**-1.5**
MWPI	**Manokwari, Pap**	**6.74**	**33**	P	**Pn**	**19 05 41.0**	**-0.7**
	57nm,1.3s						
SOEI	**Soe**	**6.83**	**243**	P	**Pn**	**19 05 42.4**	**-0.6**
	0.1nm12nm,1.2s						
SOEI				S	**Sn**	**19 07 00.7**	**+1.0**
	0.1nm12nm,1.2s						
BATI	**Baumata**	**7.56**	**242**	P	**Pn**	**19 05 55.1**	**+2.4**
WRA	**Warramunga Arr**	**13.74**	**164**	Pn	**Pn**	**19 07 13.4**	**-0.4**
	0.8nm,0.3s,baz=340,slow=14,SNR=24						
WRA				Sn	**Sn**	**19 09 41.0**	**-5.2**
	1.1nm,0.3s,baz=350,slow=21,SNR=10						
	0.8nm,0.3s						
ASAR	**Alice Springs**	**17.24**	**169**	P	**Pn**	**19 08 00.3**	**+3.4**
	0.6nm,0.3s,baz=346,slow=11,SNR=58						
ASAR				S	**S**	**19 11 03.5**	**-4.8**
	0.5nm,0.5s,baz=346,slow=25,SNR=4.8						
	2.0nm,0.5s						
MKAR	**Makanchi Array**	**68.17**	**327**	P	**P**	**19 14 52.3**	**+3.1**
	0.3nm,0.4s,baz=125,slow=7.2,SNR=10						
	0.3nm,0.4s						

*IDC **09** 19:31:09.0±3.1,42.98N×104.99W,h0km,mbtmp3.6/2, ML3.5/2,Error ellipse: s-maj=61.0km s-min=10.5km az=156.0*
*NEIC **09** 19:31:11.1±1.4,43.57N±0.05×105.1W±0.1,h0km±1km, ML3.3/62,Error ellipse: s-maj=17.3km s-min=8.8km az=276.0*
ISC 09 19:31:10.9±1.0,**43.80N**±0.06×**105.54W**±0.07,**h0**km,**n26,** σ1s**05**/14,**Wyoming**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**1.14**	**73**		**Pg**	**19 31 31.5**	**-1.2**
K22A	**Casper**	**1.35**	**212**		**Pb**	**19 31 37.1**	**-0.2**
K22A				IAML		19 32 01.6	
	341nm,0.3s						
LAO	**LASA Array**	**2.93**	**351**		**Pb**	**19 32 03.5**	**-0.5**
LAO				IAML		19 33 06.0	
	112nm,1.0s						
RLMT	**Red Lodge**	**2.98**	**298**		**Pb**	**19 32 05.4**	**+0.5**
RLMT				IAML		19 33 08.8	
	53nm,0.4s						
BW06	**Boulder Array**	**3.11**	**252**		**Pb**	**19 32 06.4**	**-0.8**
BW06				IAML		19 33 10.9	
	45nm,0.8s						
PD31	**Pinedale Array**	**3.11**	**252**		**Pb**	**19 32 06.5**	**-0.7**
PDAR	**Pinedale Array**	**3.11**	**252**	Pn	**Pb**	**19 32 06.0**	**-1.1**
	5.2nm,0.3s,baz=69,slow=14,SNR=61						
PDAR				Lg	Lg	19 32 54.3	
	22nm,0.3s,baz=72,slow=38,SNR=3.3						
	4.9nm,0.3s						
PDAR	**Pinedale Array**	**3.11**	**252**		**Pb**	**19 32 05.8**	**-1.4**
YNE	**Yellowstone No**	**3.42**	**292**		**Pb**	**19 32 12.2**	**-0.3**
YNE				IAML		19 33 17.4	
	comp=N,62nm,0.4s						
YMP	**Mirror Lake Pl**	**3.44**	**287**	Pn	**Pb**	**19 32 13.1**	**+0.2**
HAYD	**Hayden**	**3.52**	**202**		**Pn**	**19 32 08.2**	**+1.1**
HAYD				IAML		19 33 14.3	
	comp=E,68nm,0.9s						
HAYD				IAML		19 33 14.9	
	comp=N,84nm,1.1s						
H17A	**Grant Village**	**3.67**	**281**	IAML		19 33 24.3	
	comp=N,55nm,1.1s						
H17A				IAML		19 33 24.5	
	comp=E,46nm,1.2s						
LOHW	**Long Hollow**	**3.67**	**269**		**Pb**	**19 32 15.2**	**-1.6**
LOHW				IAML		19 33 28.4	
	comp=E,28nm,0.8s						
LOHW				IAML		19 33 47.5	
	comp=E,27nm,2.4s						
YPP	**Pitchstone Pla**	**3.82**	**279**	IAML		19 33 28.9	
	comp=E,26nm,1.4s						
YFT	**Old Faithful**	**3.87**	**282**	IAML		19 33 35.1	
	comp=E,37nm,0.9s						
YFT				IAML		19 33 35.4	
	comp=N,36nm,1.2s						
YMR	**Madison River**	**3.99**	**284**	IAML		19 34 17.0	
	comp=N,43nm,1.1s						
YMR				IAML		19 34 18.1	
	comp=E,40nm,1.1s						
ISCO	**Idaho Springs**	**4.00**	**181**		**Pn**	**19 32 14.9**	**+1.2**
ISCO				IAML		19 33 22.6	
	comp=E,38nm,0.8s						
YHL	**Hebgen Lake**	**4.18**	**287**	IAML		19 33 46.6	
	comp=N,36nm,1.3s						
YHL				IAML		19 33 55.0	
	comp=E,44nm,1.2s						
AHID	**Auburn Hatcher**	**4.19**	**258**	IAML		19 33 39.5	
	comp=E,45nm,1.1s						
AHID				IAML		19 34 11.4	
	comp=E,35nm,0.8s						
RDMU	**Red Mountain**	**4.40**	**224**	IAML		19 33 45.3	
	comp=N,29nm,1.6s						
BOZ	**Bozeman (W)**	**4.70**	**295**	IAML		19 33 54.0	
BOZ	comp=N,20nm,3.0s			IAML		19 34 06.5	
	comp=N,15nm,1.7s						
Q24A	**Divide**	**4.84**	**176**	IAML		19 33 41.1	
	comp=E,33nm,1.1s						
Q24A				IAML		19 33 48.9	
	comp=N,22nm,1.3s						
HWUT	**Hardware Ranch**	**4.95**	**246**	IAML		19 34 18.0	
	comp=N,22nm,0.9s						
BSUT	**Blindstream Ca**	**5.07**	**232**	IAML		19 34 17.4	
	comp=E,20nm,2.7s						
BSUT				IAML		19 35 38.3	
	comp=N,17nm,4.6s						
I10CA	**LAC DU BONNET**	**9.12**	**42**	I	I	20 23 10.0	
	comp=N,0.1nm,1.6s,baz=222,slow=246,SNR=2.2						
ULM	**Lac du Bonnet**	**9.23**	**42**	Pn	**Pn**	**19 33 25.8**	**+0.6**
	comp=N,0.9nm,0.3s,baz=222,slow=16,SNR=6.4						
ULM				Pg		19 33 59.1	
	comp=N,0.5nm,0.3s,baz=217,slow=18,SNR=1.9						
ULM				Lg	Lg	19 36 03.4	
	comp=N,0.5nm,0.3s,baz=299,slow=22,SNR=3.4						
	comp=N,1.8nm,0.4s						

*IDC **09** 19:31:29.8±2.2,30.0Nx7.74W,h0km,mb3.6/2, mbtmp3.5/5,ML3.6/3,MS3.0/2,Error ellipse: s-maj=59.5km s-min=17.8km az=112.0*
*CNRM **09** 19:31:31.8,30.11Nx7.80W,h5km*
*INMG **09** 19:31:34.9±2.6,30.42Nx7.99W,h18km,ML3.0,Error ellipse: s-maj=12.3km s-min=10.2km az=66.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Morocco*
ISC 09 19:31:34.8±1.2,**30.51N**±0.05×**7.71W**±0.03,**h15**km±8km, **n59,** σ2s**24**/92,**Morocco**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIO	**Tiouine**	**0.57**	**43**	Pn	**Pn**	**19 31 49.2**	**+0.7**
TIO				Sn	**Sn**	**19 32 01.0**	**+3.3**
TIO	**Tiouine**	**0.57**	**43**	P	**Pn**	**19 31 49.2**	**+0.7**
TIO				S	**Sn**	**19 32 02.4**	**+4.7**
TTIG	**Tnine Tigouga,**	**0.63**	**274**	P	**Pg**	**19 31 46.1**	**-1.1**
TTIG				S	**Sg**	**19 31 55.3**	**-0.3**
OUK	**Oukaimeden**	**0.71**	**349**	P	**Pb**	**19 31 50.6**	**+1.6**
OUK				S	**Sn**	**19 32 07.5**	**+6.1**
OUZM	**OUZ**	**0.91**	**64**	P	**Pg**	**19 31 51.0**	**-1.6**
OUZM				S	**Sn**	**19 32 05.0**	**-1.1**
TISM	**Timmit**	**1.63**	**42**	P	**Pg**	**19 32 06.5**	**+0.3**
TISM				S	**Sg**	**19 32 32.4**	**+5.1**
ZGR	**Zagora**	**1.85**	**102**	P	**Pn**	**19 32 03.8**	**-2.3**
ZGR				S	**Sb**	**19 32 30.5**	**-1.0**
TZRR	**Tazzarine**	**1.87**	**81**	P	**Pn**	**19 32 05.9**	**-0.4**
TZRR				S	**Sg**	**19 32 34.1**	**-0.9**
CGR	**Cap Guir**	**1.87**	**274**	P	**Pn**	**19 32 08.1**	**+1.8**
CGR				S	**Sn**	**19 32 30.1**	**+0.5**
SRHM	**Skhour des Reh**	**1.96**	**355**	P	**Pn**	**19 32 08.4**	**+0.9**
SRHM				S	**Sb**	**19 32 36.4**	**+1.8**
EAH	**EAH**	**1.96**	**306**	P	**Pn**	**19 32 08.8**	**+1.2**
EAH				S	**Sb**	**19 32 37.7**	**+3.1**
GOLM	**Goulmima**	**2.65**	**63**	P	**Pn**	**19 32 17.9**	**+0.8**
GOLM				S	**Sb**	**19 32 54.8**	**+0.4**
AVE	**Averroes**	**2.79**	**5**	Pn	**Pb**	**19 32 22.7**	**-1.7**
AVE				Sn	**Sb**	**19 32 58.7**	**+0.4**
AVE	**Averroes**	**2.79**	**5**	P	**Pb**	**19 32 23.1**	**-1.3**
AVE				S	**Sg**	**19 33 02.6**	**-1.9**
ARF	**Arif**	**3.14**	**72**	P	**Pn**	**19 32 24.8**	**+1.0**
ARF				S	**Sb**	**19 33 06.8**	**-1.7**
MD31	**MD31**	**3.44**	**46**	P	**Pn**	**19 32 30.7**	**+2.7**
MD31				S	**Sb**	**19 33 17.2**	**0.0**
MDT	**Midelt**	**3.51**	**48**	Pn	**Pn**	**19 32 31.5**	**+2.7**
	1.3nm,0.3s,baz=222,slow=12,SNR=62						
MDT				Pg	**Pb**	**19 32 38.5**	**+1.8**
	4.0nm,0.3s,baz=221,slow=13,SNR=15						
MDT				Lg	Lg	19 33 31.4	
	8.9nm,0.3s,baz=230,slow=7.9,SNR=10						
MDT				LR	LR	19 34 09.6	
	comp=Z,84nm,18.3s,baz=30,slow=42						
	4.1nm,0.2s						
MDT	**Midelt**	**3.51**	**48**	P	**Pn**	**19 32 31.7**	**+2.9**
MDT				S	**Sb**	**19 33 18.5**	**-0.5**
IFR	**Ifrane**	**3.72**	**36**	Pn	**Pn**	**19 32 33.6**	**+1.8**
IFR				Sn	**Sb**	**19 33 21.3**	**-3.9**
AKLM	**AKL**	**5.15**	**38**	P	**Pn**	**19 32 54.1**	**+2.7**
AKLM				S	**Sb**	**19 33 30.3**	**-5.9**
FIGM	**Figuig**	**5.75**	**72**	P	**Pn**	**19 33 00.8**	**+1.0**
FIGM				S	**Sn**	**19 34 10.5**	**+5.0**
JBK	**JBK**	**5.79**	**47**	P	**Pn**	**19 33 01.4**	**+1.1**
JBK				S	**Sn**	**19 34 12.2**	**+5.7**
TAF	**Taforalt**	**6.20**	**45**	P	**Pn**	**19 33 08.6**	**+2.8**
TAF				S	Sn	19 34 25.3	+8.9
ESPR	**Espera**	**6.53**	**13**	Pn	**Pn**	**19 33 11.2**	**+1.0**
ESPR				Sn	**Sn**	**19 34 26.9**	**+2.5**
PFVI	**Vila Bisbo**	**6.67**	**352**	Pn	**Pn**	**19 33 13.1**	**+0.9**
PFVI				Sn	**Sn**	**19 34 26.7**	**-1.3**
PFVI	**Vila Bisbo**	**6.67**	**352**	*e*Pn	**Pn**	**19 33 13.0**	**+0.8**
PFVI				*e*Sn	**Sn**	**19 34 26.0**	**-1.9**
PFVI				*i* IAML		19 34 40.5	
PFVI				*i* IAML		19 34 40.9	
PFVI				*i* IAML		19 34 44.9	
PBDV	**Barranco-do-Ve**	**6.72**	**359**	Pn	**Pn**	**19 33 14.0**	**+1.1**
PBDV				Sn	**Sn**	**19 34 28.9**	**-0.3**
PBDV	**Barranco-do-Ve**	**6.72**	**359**	*e*Pn	**Pn**	**19 33 14.3**	**+1.4**
PBDV				*e*Sn	**Sn**	**19 34 29.2**	**0.0**
PBDV				*i* IAML		19 34 33.5	
PBDV				*i* IAML		19 34 41.3	
PBDV				*i* IAML		19 34 44.6	
MORF	**Marmelete**	**6.82**	**354**	*e*Pn	**Pn**	**19 33 15.2**	**+0.9**
MORF				*e*Sn	**Sn**	**19 34 31.0**	**-0.8**
MORF				*i* IAML		19 34 34.3	
MORF				*i* IAML		19 34 36.5	
MORF				*i* IAML		19 34 50.3	
EGRO	**El Granado**	**7.01**	**2**	Pn	**Pn**	**19 33 17.6**	**+0.8**
EGRO				Sn	**Sn**	**19 34 33.9**	**-2.4**
PTEO	**Sao Teotonio**	**7.07**	**353**	*e*Pn	**Pn**	**19 33 18.9**	**+1.2**
PTEO				*e*Sn	**Sn**	**19 34 36.0**	**-1.7**
PTEO				*i* IAML		19 34 46.5	
PTEO				*i* IAML		19 34 48.8	
PTEO				*i* IAML		19 34 51.8	
PCVE	**Castro Verde**	**7.11**	**358**	Pn	**Pn**	**19 33 18.6**	**+0.3**
PCVE	**Castro Verde**	**7.11**	**358**	*e*Pn	**Pn**	**19 33 18.7**	**+0.5**
ELGU	**Los Guajares,**	**7.20**	**27**	Pn	**Pn**	**19 33 20.0**	**+0.4**
EGOR	**Sierra Gorda,**	**7.23**	**24**	Pn	**Pn**	**19 33 21.2**	**+1.1**
EMIN	**Mina Concepcio**	**7.29**	**7**	Pn	**Pn**	**19 33 20.8**	**0.0**
EMIN				Sn	**Sn**	**19 34 42.0**	**-1.2**
MESJ	**Messejana**	**7.32**	**357**	*e*Pn	**Pn**	**19 33 19.7**	**-1.5**
PBEJ	**Beja**	**7.50**	**359**	*e*Sn	**Sn**	**19 34 49.0**	**+0.6**
PBEJ				*i* IAML		19 34 51.7	
PBEJ				*i* IAML		19 35 04.9	
PBEJ				*i* IAML		19 35 05.0	
EBER	**Berja**	**7.53**	**31**	Pn	**Pn**	**19 33 24.7**	**+0.4**
PBAR	**Barrancos**	**7.67**	**4**	Pn	**Pn**	**19 33 26.1**	**+0.2**
PBAR				Sn	**Sn**	**19 34 51.7**	**-0.8**
PBAR	**Barrancos**	**7.67**	**4**	*e*Pn	**Pn**	**19 33 26.5**	**+0.6**
PBAR				*e*Sn	**Sn**	**19 34 51.6**	**-0.8**
PBAR				*i* IAML		19 35 01.9	
PBAR				*i* IAML		19 35 02.6	
PBAR				*i* IAML		19 35 03.0	
EVO	**Evora**	**8.01**	**358**	*e*Pn	**Pn**	**19 33 31.7**	**+1.1**
MOE	**Montemor**	**8.01**	**356**	*e*Sn	**Sn**	**19 34 58.2**	**-2.7**
PARRA	**Arraiolos**	**8.29**	**358**	*e*Pn	**Pn**	**19 33 35.3**	**+0.8**
PARRA				*e*Sn	**Sn**	**19 35 04.7**	**-3.0**
PARRA				*i* IAML		19 35 09.0	
PARRA				*i* IAML		19 35 09.3	
PARRA				*i* IAML		19 35 13.9	
PESTR	**Estremoz**	**8.34**	**1**	*e*Sn	**Sn**	**19 35 07.2**	**-1.8**
PESTR	**Estremoz**	**8.34**	**1**	P	**Pn**	**19 33 39.1**	**+3.9**
PESTR				S	Sn	19 35 20.2	+11
PMTG	**Montargil**	**8.55**	**357**	*e*Pn	**Pn**	**19 33 38.3**	**+0.3**
PMTG				*e*Sn	**Sn**	**19 35 11.4**	**-2.7**
PMTG				*i* IAML		19 35 29.2	
PMTG				*i* IAML		19 35 34.1	
PMTG				*i* IAML		19 35 39.7	
PMRV	**Marv??o**	**8.90**	**2**	*e*Pn	**Pn**	**19 33 43.8**	**+0.9**
PMRV				*e*Sn	**Sn**	**19 35 20.6**	**-2.3**
PMRV				*i* IAML		19 35 30.4	
PMRV				*i* IAML		19 35 41.0	
PMRV				*i* IAML		19 35 51.0	
PSARD	**Sardoal**	**9.08**	**358**	*e*Pn	**Pn**	**19 33 46.8**	**+1.5**
PSARD				*e*Sn	**Sn**	**19 35 24.9**	**-2.3**
PSARD				*i* IAML		19 35 30.1	
PSARD				*i* IAML		19 35 43.0	
PSARD				*i* IAML		19 35 46.7	
PCBR	**Castelo Branco**	**9.31**	**1**	*e*Pn	**Pn**	**19 33 51.8**	**+3.4**
PCAS	**Casmilo, Conde**	**9.54**	**356**	*e*Pn	Pn	19 33 57.1	+5.5
ESDC	**Sonseca Array**	**9.64**	**18**	Pn	**Pn**	**19 33 54.0**	**+0.9**
	0.2nm,0.3s,baz=200,slow=12,SNR=7.5						
ESDC				Sn	**Sn**	**19 35 35.8**	**-5.4**
	0.5nm,0.3s,baz=202,slow=23,SNR=6.8						
	0.4nm,0.3s						
MVO	**Moncorvo**	**10.65**	**3**	*e*Pn	Pn	19 34 14.4	+7.6
MVO				*e*Sn	**Sn**	**19 36 04.4**	**-1.4**
MVO				*i* IAML		19 36 15.8	
MVO				*i* IAML		19 36 19.7	
MVO				*i* IAML		19 36 21.4	
TORD	**Torodi Ar. Bea**	**19.34**	**151**	P	P	19 35 52.8	-7.0
	0.2nm,0.3s,baz=331,slow=12,SNR=7.6						
	0.4nm,0.5s						
DBIC	**Dimbokro**	**23.87**	**173**	P	P	19 36 39.7	-8.0
	1.9nm,0.5s,baz=0.0,slow=11,SNR=6.1						
	1.9nm,0.5s						
CLL	**Collm**	**25.85**	**31**	*e*Px	Px	19 37 11.0	
	comp=Z,3.0nm,0.6s						
KURBB	**Kurchatov Arra**	**64.82**	**45**	P	**P**	**19 42 12.8**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=291,slow=7.6,SNR=2.9						
	comp=Z,0.4nm,0.8s						
TXAR	**Lajitas Array**	**80.33**	**298**	LR	LR	20 20 06.5	
	comp=Z,16nm,18.0s,baz=144,slow=36						
ASAR	**Alice Springs**	**145.28**	**88**	PKPbc	**PKPbc**	**19 51 10.0**	**-2.2**
	comp=Z,0.7nm,0.7s,baz=301,slow=3.1,SNR=5.2						

*NEIC **09** 19:35:02.8±2.6,23.3S±0.1×179.7E±0.1,h529km±7km, mb4.8/48,Error ellipse: s-maj=21.9km s-min=14.8km az=148.0*
*IDC **09** 19:35:03.8±1.4,23.42S×179.42E,h526km±14km,mb3.6/9, mbtmp4.5/13,Error ellipse: s-maj=19.3km s-min=13.7km az=95.0*
*NOU **09** 19:35:04.2,23.27S×179.82E,h576km,mb4.4/29,South of Fiji Islands*
ISC 09 19:35:03.7±0.4,**23.33S**±0.06×**179.65E**±0.07,**h548**km, **n169,** σ1s**45**/169,**4.3**/31,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.76**	**345**	P	**P**	**19 36 41.2**	**+0.9**
	12nm,0.4s,baz=158,slow=10,SNR=18						
GLKZ	**Green Lake**	**6.30**	**160**	P	**P**	**19 36 48.2**	**+3.5**
GLKZ				S	**S**	**19 38 10.1**	**+2.4**
FUTU	**Fugatoga**	**9.22**	**14**	P	**P**	**19 37 14.5**	**+0.8**
NIUE	**Niue**	**10.61**	**68**	P	**P**	**19 37 27.2**	**-0.6**
DZM	**Mont Dzumac**	**12.25**	**273**	P	**P**	**19 37 44.1**	**-0.9**
	4.1nm,0.6s,baz=87,slow=18,SNR=7.2						
AFI	**Afiamalu**	**12.40**	**42**	P	**P**	**19 37 47.1**	**+0.5**
	7.8nm,0.3s,baz=248,slow=19,SNR=2.7						
AFI				S	**S**	**19 39 56.1**	**-4.4**
	7.4nm,0.4s,baz=156,slow=20,SNR=1.8						
OUZ	**Omahuta**	**12.97**	**203**	P	**P**	**19 37 54.3**	**+2.3**
OUZ	**Omahuta**	**12.97**	**203**	P	**P**	**19 37 54.4**	**+2.3**
SANVU	**Saraoutou**	**14.11**	**302**	P	**P**	**19 38 01.7**	**-2.4**
MXZ	**Matakaoa Point**	**14.23**	**184**	P	**P**	**19 38 06.6**	**+1.5**
MXZ	**Matakaoa Point**	**14.23**	**184**	P	**P**	**19 38 02.8**	**-2.3**
MXZ	**Matakaoa Point**	**14.23**	**184**	P	**P**	**19 38 06.8**	**+1.7**
MKAZ	**Moumakai**	**14.26**	**195**	P	**P**	**19 38 07.4**	**+2.1**
HAZ	**Te Kaha**	**14.47**	**186**	P	**P**	**19 38 08.8**	**+1.3**
PKGZ	**Pakihiroa**	**14.55**	**185**	P	**P**	**19 38 09.5**	**+1.1**
RUGZ	**Raukumara Rang**	**14.69**	**186**	P	**P**	**19 38 10.2**	**+0.3**
RUGZ				S	**S**	**19 40 39.9**	**-3.4**
PUZ	**Puketiti**	**14.74**	**184**	P	**P**	**19 38 12.0**	**+1.6**
PUZ				S	**S**	**19 40 41.2**	**-3.0**
TOZ	**Tahuroa Road**	**14.79**	**193**	P	**P**	**19 38 10.2**	**-0.6**
TOZ	**Tahuroa Road**	**14.79**	**193**	P	**P**	**19 38 12.6**	**+1.8**
TWGZ	**Tauwhareparae**	**14.87**	**185**	P	**P**	**19 38 13.5**	**+1.9**
URZ	**Urewera**	**15.04**	**188**	P	**P**	**19 38 10.6**	**-2.7**
	24nm,0.5s,baz=14,slow=0.9,SNR=19						
URZ				S	**S**	**19 40 46.7**	**-2.9**
	12nm,0.8s,baz=214,slow=24,SNR=7.3						
URZ	**Urewera**	**15.04**	**188**	P	**P**	**19 38 12.3**	**-1.1**
URZ	**Urewera**	**15.04**	**188**	P	**P**	**19 38 12.3**	**-1.1**
URZ				S	**S**	**19 40 44.1**	**-5.5**
MWZ	**Matawai**	**15.07**	**186**	P	**P**	**19 38 12.8**	**-0.9**
MWZ				S	**S**	**19 40 45.5**	**-4.7**
MUGZ	**Murupara**	**15.30**	**189**	P	**P**	**19 38 14.5**	**-1.5**
RTZ	**Ruatahuna**	**15.41**	**188**	P	**P**	**19 38 15.5**	**-1.7**
RTZ				IAmb	IAmb	19 38 17.8	
	comp=Z,12nm,0.7s						
RTZ	**Ruatahuna**	**15.41**	**188**	P	**P**	**19 38 17.2**	**-0.1**
SNGZ	**Shannon Statio**	**15.53**	**187**	P	**P**	**19 38 17.9**	**-0.5**
HIZ	**Hauiti**	**15.68**	**194**	P	**P**	**19 38 21.9**	**+2.0**
HIZ	**Hauiti**	**15.68**	**194**	P	**P**	**19 38 20.1**	**+0.2**
HIZ	**Hauiti**	**15.68**	**194**	P	**P**	**19 38 22.6**	**+2.7**
BKZ	**Black Stump Fm**	**16.01**	**189**	P	**P**	**19 38 22.0**	**-1.3**
BKZ	**Black Stump Fm**	**16.01**	**189**		**P**	**19 38 19.8**	**-3.4**
BKZ				IAmb	IAmb	19 38 26.6	
	comp=Z,10.0nm,0.8s						
BKZ	**Black Stump Fm**	**16.01**	**189**	P	**P**	**19 38 20.7**	**-2.6**
TMVZ	**Te Maari**	**16.09**	**191**	P	**P**	**19 38 24.1**	**0.0**
ETVZ	**East Tongariro**	**16.11**	**191**	P	**P**	**19 38 23.6**	**-0.7**
NGZ	**Ngauruhoe**	**16.17**	**191**	P	**P**	**19 38 24.9**	**+0.1**
VRZ	**Vera Road**	**16.29**	**194**	P	**P**	**19 38 27.7**	**+1.9**
TSZ	**Takapari Road**	**16.97**	**190**	P	**P**	**19 38 31.2**	**-0.9**
BFZ	**Birch Farm**	**17.54**	**189**	P	**P**	**19 38 35.9**	**-1.3**
BFZ	**Birch Farm**	**17.54**	**189**	P	**P**	**19 38 35.2**	**-1.9**
BFZ				IAmb	IAmb	19 38 37.7	
	comp=Z,44nm,1.2s						
BFZ	**Birch Farm**	**17.54**	**189**	P	**P**	**19 38 35.6**	**-1.6**
MRZ	**Mangatainoka R**	**17.62**	**190**		**P**	**19 38 35.0**	**-2.9**
TCW	**Tory Channel**	**18.39**	**193**	P	**P**	**19 38 43.8**	**-1.2**
SNZO	**South Karori**	**18.40**	**192**	P	**P**	**19 38 45.0**	**-0.1**
SNZO	**South Karori**	**18.40**	**192**	P	**P**	**19 38 44.5**	**-0.6**
MSWZ	**Moikau Station**	**18.41**	**191**	P	**P**	**19 38 44.2**	**-1.0**
QRZ	**Quartz Range**	**18.45**	**197**	P	**P**	**19 38 46.8**	**+1.3**
QRZ	**Quartz Range**	**18.45**	**197**	P	**P**	**19 38 46.4**	**+0.9**
QRZ	**Quartz Range**	**18.45**	**197**	P	**P**	**19 38 46.6**	**+1.1**
BHW	**Baring Head**	**18.47**	**191**	P	**P**	**19 38 43.7**	**-2.0**
BHW				IAmb	IAmb	19 38 46.1	
	comp=Z,62nm,1.3s						
PLWZ	**Palliser**	**18.56**	**190**	P	**P**	**19 38 45.2**	**-1.4**
NNZ	**Nelson**	**18.60**	**195**	P	**P**	**19 38 47.1**	**+0.2**
TUWZ	**Tuamarina**	**18.67**	**194**	P	**P**	**19 38 46.9**	**-0.6**
THZ	**Tophouse**	**19.23**	**195**	P	**P**	**19 38 52.5**	**-0.2**
THZ				IAmb	IAmb	19 38 55.6	
	comp=Z,20nm,0.7s						
THZ	**Tophouse**	**19.23**	**195**	P	**P**	**19 38 53.2**	**+0.5**
DSZ	**Denniston Nort**	**19.50**	**198**	P	**P**	**19 38 55.7**	**+0.5**
KHZ	**Kahutara**	**19.70**	**194**	P	**P**	**19 38 56.0**	**-0.9**
KHZ	**Kahutara**	**19.70**	**194**	P	**P**	**19 38 55.9**	**-0.9**
GVZ	**Greta Valley S**	**20.34**	**194**	P	**P**	**19 39 01.8**	**-0.9**
LTZ	**Lake Taylor**	**20.34**	**196**		**P**	**19 39 01.5**	**-1.3**
LTZ				IAmb	IAmb	19 39 09.2	
	comp=Z,50nm,1.2s						
LTZ	**Lake Taylor**	**20.34**	**196**	P	**P**	**19 39 02.0**	**-0.8**
INZ	**Inchbonnie**	**20.51**	**197**		**P**	**19 39 03.4**	**-0.8**
OXZ	**Oxford**	**20.91**	**196**	P	**P**	**19 39 06.6**	**-1.3**
OXZ				IAmb	IAmb	19 39 07.3	
	comp=Z,28nm,0.6s						
RPZ	**Rata Peaks**	**21.53

FORT Forrest 46.21 249 IAmb IAmb 19 42 39.5
comp=Z,19nm,0.6s
KNRA Kununurra 48.37 269 IAmb IAmb 19 42 56.0
comp=Z,22nm,0.5s
KPA Kalaupapa 49.76 29 P **P** **19 43 05.1 -1.2**
SIJI Sorong 51.95 288 P **P** **19 43 21.5 -0.9**
comp=Z,31nm,0.8s
SWI Sorong 51.96 288 P **P** **19 43 21.4 -1.1**
comp=Z,49nm,1.0s
KRAI Karang Ratu 53.34 284 P **P** **19 43 31.6 -0.8**
comp=Z,2μmcomp=Z,15nm,0.8s
SOEI Soe 54.47 275 P **P** **19 43 41.5 +1.0**
SOEI Soe 54.47 275 P **P** **19 43 41.0 +0.4**
SOEI IAmb IAmb 19 43 42.4
comp=Z,33nm,1.0s
SOEI Soe 54.47 275 P **P** **19 43 40.8 +0.3**
comp=Z,35nm,1.0s
PSA00 Pilbara Seismi 54.95 259 P **P** **19 43 42.6 -1.0**
MBWA Marble Bar 55.15 260 P **P** **19 43 44.0 -1.0**
MBWA Marble Bar 55.15 260 P **P** **19 43 44.0 -1.0**
NWAO Narrogin (SRO) 55.18 245 P **P** **19 43 44.2 -0.8**
NWAO Narrogin (SRO) 55.18 245 P **P** **19 43 44.5 -0.5**
MMRI Maumere 56.75 275 P **P** **19 43 55.9 -0.3**
MMRI Maumere 56.75 275 P **P** **19 43 55.7 -0.4**
MMRI IAmb IAmb 19 43 56.2
comp=Z,24nm,1.0s
MORW Morawa 56.77 250 P **P** **19 43 55.4 -0.7**
EDFI Ende, Flores 57.21 275 P **P** **19 43 58.4 -1.0**
comp=Z,27nm,0.6s
LBFI Labuhan Bajo, 58.96 274 P **P** **19 44 10.8 -0.3**
GIRL Giralia 59.73 257 P **P** **19 44 16.8 +0.7**
GIRL IAmb IAmb 19 44 33.5
comp=Z,50nm,1.1s
DBNI Kabupaten Domp 60.40 273 P **P** **19 44 19.7 -1.0**
comp=Z,18nm,0.6s
PLAI Plampang 60.77 273 P **P** **19 44 22.1 -1.1**
MPSI Mapaga 62.56 283 P **P** **19 44 33.8 -1.0**
QSPA South Pole Qui 66.75 180 P **P** **19 45 02.6 +2.0**
comp=Z,3.6nm,0.8s,baz=39,slow=1.8,SNR=15
comp=Z,3.6nm,0.8s
QSPA South Pole Qui 66.75 180 P **P** **19 45 02.4 +1.8**
UGM Wanagama 67.77 271 P **P** **19 45 07.5 -0.1**
KKM Kota Kinabalu 68.43 287 P **P** **19 45 11.8 +0.2**
KKM Kota Kinabalu 68.43 287 P **P** **19 45 11.5 -0.1**
BBJI Bungbulang 70.58 270 P **P** **19 45 23.7 -0.8**
MJAR Matsushiro Arr 71.25 326 P **P** **19 45 28.5 +0.7**
comp=Z,1.6nm,0.8s,baz=142,slow=6.7,SNR=6.3
comp=Z,1.6nm,0.8s
MJAR Matsushiro Arr 71.25 326 IAmb IAmb 19 45 36.8
comp=Z,2.0nm,1.2s
KSRS Korea Array 77.60 320 P **P** **19 46 05.8 +2.3**
comp=Z,1.5nm,0.8s,baz=124,slow=6.2,SNR=1.4
comp=Z,1.5nm,0.8s
PETK Petropavlovsk- 78.47 347 P **P** **19 46 09.1 +1.3**
comp=Z,4.5nm,0.9s,baz=136,slow=11,SNR=2.2
comp=Z,4.5nm,0.9s
VTX Valle De La Tr 82.33 51 P **P** **19 46 28.6 0.0**
VTX IAmb IAmb 19 47 00.3
comp=Z,39nm,1.2s
GSC Goldstone, Bar 83.78 47 IAmb IAmb 19 46 44.0
comp=Z,9.0nm,0.2s
LHV Little Huntoon 84.34 44 P **P** **19 46 38.4 +0.2**
LHV IAmb IAmb 19 47 19.0
comp=Z,6.4nm,0.6s
CMAR Chiang Mai Arr 89.03 290 P **P** **19 47 02.8 +1.9**
comp=Z,1.0nm,0.9s,baz=140,slow=4.1,SNR=6.2
comp=Z,1.0nm,0.9s
ODSA Odessa 92.50 56 P **P** **19 47 15.3 -1.5**
ARCES ARCESS Array B 131.26 348 PKP **PKiKP** **19 53 13.9 0.0**
comp=Z,2.0nm,0.9s,baz=32,slow=3.4,SNR=4.7
ARCES ARCESS Array B 131.26 348 **PKiKP** **19 53 13.8 -0.2**
FINES FINESS Array B 137.81 341 PKhKP PKPpre 19 53 23.2
comp=Z,2.3nm,0.9s,baz=48,slow=2.1,SNR=3.5
FINES SKPbc **SKPbc** **19 56 09.1 +1.3**
comp=Z,1.1nm,0.8s,baz=42,slow=2.3,SNR=3.8
NOA NORSAR Array B 141.47 351 PKhKP PKPpre 19 53 29.1
comp=Z,0.4nm,0.7s,baz=31,slow=4.4,SNR=1.5
HFS Hagfors 141.93 349 PKhKP PKPpre 19 53 30.0
comp=Z,1.3nm,0.4s,baz=22,slow=1.8,SNR=19
ARPR Arapgir-MALATY 143.67 305 **PKPdf** **19 53 37.3 +0.6**
AK03 Malin Array Si 144.30 327 PKP PKPbc 19 53 37.2 +0.1
AKASG Malin Array Be 144.32 327 PKP PKPbc 19 53 37.0 -0.1
comp=Z,1.8nm,0.4s,baz=47,slow=4.0,SNR=12
AKBB Malin Array Si 144.32 327 PKP PKPbc 19 53 37.3 +0.2
AK01 Malin Array Si 144.33 327 PKP **PKPdf** **19 53 37.6 +0.3**
KIEV Kiev 144.33 327 PKP **PKPab** **19 53 37.7 +0.1**
AK09 Malin Array Si 144.34 327 PKP **PKPdf** **19 53 37.7 +0.4**
AK11 Malin Array Si 144.36 327 PKP **PKPab** **19 53 37.9 +0.2**
AK16 Malin Array Si 144.40 327 PKP **PKPab** **19 53 37.9 +0.1**
MI28 Mi28,Pidlybu 144.93 329 PKP **PKPab** **19 53 39.8 0.0**
LUBAR Lubar, Ukraine 145.54 327 PKP **PKPbc** **19 53 40.8 0.0**
BR131 Keskin Array S 146.97 308 **PKPdf** **19 53 43.7 +1.3**
BRTR Keskin Array B 146.97 308 PKP **PKPbc** **19 53 45.9 +0.6**
comp=Z,1.3nm,0.6s,baz=128,slow=2.4,SNR=8.4
BRTR PKPbc **PKPab** **19 53 49.0 +0.4**
comp=Z,1.5nm,0.6s,baz=134,slow=4.2,SNR=4.4
BRTR Keskin Array B 146.97 308 **PKPbc** **19 53 45.7 +0.3**
MMAI Mount Meron Ar 147.17 295 PKPbc **PKiKP** **19 53 47.8 +0.1**
comp=Z,0.6nm,0.4s,baz=60,slow=6.8,SNR=8.1
EKA Eskdalemuir Ar 147.97 3 PKPbc **PKiKP** **19 53 48.6 +0.1**
comp=Z,1.7nm,0.8s,baz=20,slow=4.7,SNR=1.9
OKC Ostrava-Krasne 149.83 336 *e*PKP **PKiKP** **19 53 53.9 +1.4**
OSTC Ostas 149.91 339 *e*PKP **PKiKP** **19 53 54.6 +1.9**
DPC Dobruska-Polom 150.05 338 *e*PKP **PKiKP** **19 53 54.6 +1.5**
KRLC Kraliky 150.12 338 *e*PKP **PKiKP** **19 53 54.4 +1.2**
CLL Colm 150.22 343 *i* Px Px 19 53 54.4
PVCC Panska Ves 150.46 341 *e*PKP **PKiKP** **19 53 55.5 +1.7**
KHC Kasperske Hory 152.00 340 *e*PKP **PKiKP** **19 53 58.5 +1.4**
GERES GERESS Array B 152.21 340 PKPbc **PKiKP** **19 53 58.9 +1.3**
comp=Z,0.2nm,0.3s,baz=50,slow=4.7,SNR=2.6
TORD Torodi Ar. Bea 169.69 191 PKPab **PKPab** **19 55 28.2 +1.4**
comp=Z,0.2nm,0.4s,baz=155,slow=37,SNR=2.2

*IDC **09** 19:49:13.6±2.7, 43.79N×87.23E, h0km, mb3.1/1, mbtmp3.3/7, ML2.8/6, Error ellipse: s-maj=29.5km s-min=24.2km az=16.0*
*NNC **09** 19:49:16.6±3.9, 43.90N×87.07E, h7km±18km, mb3.8, mpv3.5, Error ellipse: s-maj=28.9km s-min=17.3km az=74.0*
ISC 09 19:49:14.6±1.5, **43.8N**±0.1×**87.15E**±0.0**9, h10**km**, n13, σ1s51**/18**, 7C-7D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MK31	**Makanchi Array**	**4.56**	**313**	⇓Pn		**Pn**	**19 50 25.0**	**+1.3**
	2.6nm,0.6s,baz=125,slow=14,SNR=77							
MK31				⇓Lg		Lg	19 51 38.2	
	14nm,0.6s,baz=134,slow=30,SNR=5.2							
MKAR	**Makanchi Array**	**4.56**	**313**	Pn		**Pn**	**19 50 25.2**	**+1.6**
	1.1nm,0.3s,baz=124,slow=14,SNR=60							
MKAR				Pg		**Pg**	**19 50 40.3**	**-1.6**
	1.3nm,0.3s,baz=134,slow=17,SNR=6.7							
MKAR				Sn		**Sn**	**19 51 17.4**	**+0.7**
	1.8nm,0.3s,baz=134,slow=24,SNR=6.5							
MKAR				Lg		Lg	19 51 40.6	
	2.5nm,0.3s,baz=126,slow=25,SNR=5.6							
	3.0nm,0.5s							
MAKZ	**Makanchi**	**4.74**	**311**	⇑Pn		**Pn**	**19 50 27.5**	**+1.4**
	4.8nm,0.5s							
MAKZ				⇓Lg		Lg	19 51 41.6	
	18nm,1.1s							
PDGK	**Podgornoye**	**5.58**	**268**	⇑Pg		**Pg**	**19 50 59.6**	**-2.0**
	8.9nm,0.7s							
PDGK				⇓Lg		Lg	19 52 09.4	
	26nm,0.8s							
KURBB	**Kurchatov Arra**	**9.01**	**322**	Pn		**Pn**	**19 51 23.8**	**-0.8**
	0.2nm,0.3s,baz=136,slow=12,SNR=15							
KURBB				Sn		**Sn**	**19 53 07.2**	**+1.2**
	0.1nm,0.3s,baz=124,slow=19,SNR=4.4							
KURBB				Lg		Lg	19 54 01.2	
	0.1nm,0.3s,baz=137,slow=33,SNR=6.3							
	0.9nm,0.4s							
KURBB	**Kurchatov Arra**	**9.01**	**322**	⇓Pn		**Pn**	**19 51 24.1**	**-0.5**
	2.5nm,0.7s							
KURBB				⇑Sn		**Sn**	**19 53 07.6**	**+1.6**
	5.9nm,0.7s							
KURBB				⇑Lg		Lg	19 54 00.4	
	17nm,0.7s							
KURK	**Kurchatov**	**9.03**	**323**	⇓Pn		**Pn**	**19 51 23.3**	**-1.6**
	0.4nm,0.5s							
KURK				⇑Sn		**Sn**	**19 53 07.6**	**+0.9**
	2.9nm,0.8s							
KURK				⇓Lg		Lg	19 54 02.7	
	6.9nm,1.1s							
AAK	**Ala-Archa**	**9.31**	**267**	Pn		**Pn**	**19 51 31.9**	**+2.9**
	0.1nm,0.3s,baz=71,slow=14,SNR=2.3							
AAK				Lg		Lg	19 54 09.8	
	0.1nm,0.3s,baz=20,slow=18,SNR=3.7							
	0.3nm,0.4s							
AAK	**Ala-Archa**	**9.31**	**267**	⇑Pn		**Pn**	**19 51 30.4**	**+1.4**
	1.3nm,0.9s							
AAK				⇑Lg		Lg	19 54 08.5	
	5.8nm,1.1s							
ZALV	**Zalesovo Beam**	**10.29**	**352**	Pn		**Pn**	**19 51 41.1**	**-1.0**
	0.3nm,0.3s,baz=174,slow=14,SNR=9.0							
	1.3nm,0.6s							
SONM	**Songino Array**	**14.02**	**66**	Pn		**Pn**	**19 52 33.4**	**+0.1**
	baz=260,slow=12,SNR=1.5							
SONM				Lg		Lg	19 56 32.8	
	0.1nm,0.3s,baz=264,slow=28,SNR=4.1							
	0.1nm,0.5s							
BVAR	**Borovoye Array**	**14.44**	**316**	Pn		**Pn**	**19 52 38.6**	**-0.3**
	baz=107,slow=10,SNR=4.5							
	0.7nm,0.7s							
AKTO	**Aktyubinsk**	**20.82**	**299**	P		**P**	**19 53 57.3**	**+1.2**
	0.4nm,0.4s,baz=95,slow=11,SNR=2.0							
	0.4nm,0.4s							

*IDC **09** 20:12:02.1±2.5, 38.65N×68.20E, h0km, mb3.7/5, mbtmp3.7/8, ML3.2/3, MS2.8/2, Error ellipse: s-maj=56.7km s-min=13.1km az=157.0*
*NNC **09** 20:12:05.1±6.0, 38.88N×67.88E, h6km±30km, mb3.5, mpv2.8, Error ellipse: s-maj=42.3km s-min=18.0km az=10.0*
*ISU **09** 20:12:09, 38.69N×68.31E, h11km*
ISC 09 20:12:05.3±1.3, **38.9N**±0.1×**68.17E**±0.0**5, h10**km**, n21, σ2s89/26, mb3.7/4, 6C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AGL	**Agalyk**	**1.18**	**302**	P		**Pn**	**20 12 30.5**	**+2.6**
AGL				S		**Sn**	**20 12 49.3**	**+5.3**
CHMG	**Chimgan**	**3.00**	**27**	P		**Pn**	**20 12 55.2**	**+2.1**
CHRV	**Charvak**	**3.06**	**26**	P		**Pn**	**20 12 56.0**	**+2.2**
GZLY	**Gazly**	**3.85**	**290**	S		**Sn**	**20 13 53.8**	**+3.9**
KK31	**Karatay Array**	**4.56**	**22**	⇑Pn		**Pn**	**20 13 16.7**	**+2.4**
	0.4nm,0.3s,baz=200,slow=13							
KK31				⇑Lg		Lg	20 14 31.8	
	18nm,0.6s,baz=205,slow=30							
AAK	**Ala-Archa**	**6.09**	**50**	Pn		**Pn**	**20 13 36.6**	**+1.1**
	0.7nm,0.3s,baz=170,slow=3.6,SNR=13							
AAK				Sn		**Sn**	**20 14 47.9**	**+2.7**
	0.7nm,0.3s,baz=276,slow=11,SNR=1.8							
AAK				Lg		Lg	20 15 18.2	
	0.4nm,0.3s,baz=225,slow=22,SNR=1.3							
AAK				LR		LR	20 16 25.4	
	comp=Z,41nm,19.1s,baz=230,slow=42							
	1.3nm,0.4s							
AAK	**Ala-Archa**	**6.09**	**50**	⇓Pn		**Pn**	**20 13 37.8**	**+2.4**
	0.6nm,0.5s							
AAK				⇑Sn		**Sn**	**20 14 52.0**	**+6.8**
	6.3nm,1.1s							
AB31	**Akbulak array**	**11.92**	**333**	⇑Pn		**Pn**	**20 14 55.2**	**+0.1**
	1.4nm,0.6s,baz=155,slow=13,SNR=36							
AB31				⇑Sn		**Sn**	**20 17 07.1**	**-1.0**
	1.3nm,0.5s,baz=152,slow=24,SNR=5.7							
MKAR	**Makanchi Array**	**13.01**	**48**	Pn		**Pn**	**20 15 09.0**	**-1.2**
	0.1nm,0.3s,baz=232,slow=13,SNR=6.5							
MKAR				Lg		Lg	20 18 59.4	
	baz=232,slow=33,SNR=2.8							
	0.7nm,0.7s							
AKTO	**Aktyubinsk**	**13.60**	**331**	Pn		Pn	20 15 12.2	-5.8
	0.1nm,0.3s,baz=271,slow=3.3,SNR=3.9							
AKTO				Sn		**Sn**	**20 17 44.8**	**-4.3**
	0.1nm,0.3s,baz=186,slow=19,SNR=1.2							
AKTO				Lg		Lg	20 19 22.7	
	0.2nm,0.3s,baz=235,slow=16,SNR=1.4							
AKTO	**Aktyubinsk**	**13.60**	**331**	⇓Pn		**Pn**	**20 15 16.2**	**-1.8**
	0.6nm,0.6s							
AKTO				⇑Sn		**Sn**	**20 17 44.9**	**-4.2**
	3.2nm,1.2s							
KURBB	**Kurchatov Arra**	**13.83**	**29**	Pn		**P**	**20 15 26.4**	**-3.2**
	baz=227,slow=14,SNR=4.6							
KURBB				Lg		Lg	20 19 28.5	
	baz=214,slow=26,SNR=4.3							
BVAR	**Borovoye Array**	**14.22**	**5**	Pn		**P**	**20 15 34.6**	**+0.6**
	0.1nm,0.3s,baz=192,slow=13,SNR=15							
BVAR				Sn		**Sn**	**20 18 01.3**	**-2.9**
	baz=183,slow=24,SNR=3.4							
ZALV	**Zalesovo Beam**	**18.86**	**32**	P		**P**	**20 16 24.0**	**-1.3**
	0.4nm,0.3s,baz=217,slow=10,SNR=6.8							
	1.0nm,0.3s							
FINES	**FINESS Array B**	**34.24**	**325**	P		**P**	**20 18 51.5**	**+0.6**
	3.5nm,1.1s,baz=111,slow=9.0,SNR=1.9							
	3.5nm,1.1s							
HFS	**Hagfors**	**39.80**	**320**	P		**P**	**20 19 38.6**	**+0.5**
	1.3nm,0.4s,baz=108,slow=9.3,SNR=13							
	1.3nm,0.4s							
NB2	**NORSAR Subarra**	**41.11**	**322**	P		**P**	**20 19 49.1**	**0.0**
	comp=Z,0.4nm,0.4s,baz=97,slow=8.6							
NOA	**NORSAR Array B**	**41.11**	**322**	P		**P**	**20 19 49.1**	**0.0**
	comp=Z,0.3nm,0.4s,baz=96,slow=8.2,SNR=3.3							
	comp=Z,0.3nm,0.4s							
DAV	**Davao City (W)**	**60.42**	**106**	LR		LR	20 48 28.1	
	comp=Z,15nm,18.5s,baz=66,slow=36							
TORD	**Torodi Ar. Bea**	**63.59**	**266**	P		**P**	**20 22 34.8**	**-1.7**
	comp=Z,0.3nm,0.7s,baz=43,slow=8.2,SNR=1.7							
	comp=Z,0.3nm,0.7s							
YKA	**Yellowknife Ar**	**78.93**	**1**	P		**P**	**20 24 08.0**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=352,slow=5.9,SNR=4.1							
	comp=Z,0.2nm,0.4s							

*IDC **09** 20:28:36.9±1.3, 7.07S×127.26E, h318km±17km, mb3.0/4, mbtmp4.2/11, Error ellipse: s-maj=18.7km s-min=13.2km az=65.0*
*NEIC **09** 20:28:36.8±1.1, 7.07S±0.08×127.22E±0.08, h320km±9km, mb4.3/15, Error ellipse: s-maj=12.1km s-min=11.1km az=177.0*
*DJA **09** 20:28:37.8±0.5, 7°S×3°×12°7E±°, h322km±9km, M4.2/23, mB4.5/6, mb4.5/9, MLv4.5/23, Mw(mB)3.7/6*
ISC 09 20:28:36.1±0.5, **7.10S**±0.05×**127.31E**±0.0**5, h315**km**, n71, σ1s75/79, mb4.0/9, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AAI	**Ambon**	**3.50**	**15**	P		**Pn**	**20 29 49.8**	**+2.8**
BNDI	**Bandanaira**	**3.64**	**45**	P		**Pn**	**20 29 43.1**	**+3.7**
BNDI	**Bandanaira**	**3.64**	**45**	P		**Pn**	**20 29 42.1**	**+2.7**
NLAI	**Namlea**	**3.84**	**357**	P		**Pn**	**20 29 45.0**	**+3.5**
KRAI	**Karang Ratu**	**3.91**	**16**	P		**Pn**	**20 29 45.4**	**+3.1**
SOEI	**Soe**	**4.00**	**229**	P		**Pn**	**20 29 44.9**	**+1.6**
SOEI	**Soe**	**4.00**	**229**			**Pn**	**20 29 44.9**	**+1.6**
SOEI	**Soe**	**4.00**	**229**	P		**Pn**	**20 29 44.9**	**+1.6**
SAUI	**Saumlaki**	**4.05**	**103**	Pn		**Pn**	**20 29 45.4**	**+1.7**
SAUI						**S**	**20 30 34.6**	**-3.4**
SAUI	**Saumlaki**	**4.05**	**103**	P		**Pn**	**20 29 46.3**	**+2.6**
SAUI				S		**S**	**20 30 41.6**	**+3.6**
BATI	**Baumata**	**4.75**	**229**	P		**Pn**	**20 29 52.7**	**+1.3**
	338nm,0.4s,baz=89,slow=2.3,SNR=116							
BATI				S		**S**	**20 30 50.0**	**-2.0**
	332nm,0.6s,baz=19,slow=3.4,SNR=7.7							
BATI	**Baumata**	**4.75**	**229**	P		**Pn**	**20 29 53.3**	**+1.9**
BATI				S		**S**	**20 30 54.1**	**+2.1**
SANI	**Sanana**	**5.19**	**345**	P		**Pn**	**20 29 58.9**	**+2.5**
SANI	**Sanana**	**5.19**	**345**	P		**Pn**	**20 29 59.0**	**+2.5**
	0.4nm1μm90nm,1.0s							
MMRI	**Maumere**	**5.25**	**253**	P		**Pn**	**20 29 57.9**	**+0.7**
MMRI	**Maumere**	**5.25**	**253**	S		**S**	**20 31 02.4**	**-0.1**
MMRI	**Maumere**	**5.25**	**253**			**Pn**	**20 29 57.2**	**0.0**
MMRI	**Maumere**	**5.25**	**253**	P		**Pn**	**20 29 58.6**	**+1.4**
	0.3nm955nm26nm,0.5s							
MMRI				S		**S**	**20 31 04.7**	**+2.2**
	0.3nm955nm26nm,0.5s							
EDFI	**Ende, Flores**	**5.80**	**253**	P		**Pn**	**20 30 04.7**	**+1.0**
	0.2nm636nm24nm,0.4s							
EDFI				S		**S**	**20 31 17.0**	**+2.7**
	0.2nm636nm24nm,0.4s							
DRS	**Darwin Rock St**	**6.37**	**147**	P		**Pn**	**20 30 12.0**	**+1.7**
MTN	**Manton Dam**	**6.83**	**147**			**Pn**	**20 30 17.0**	**+1.1**
BSSI	**Bau Bau, Buton**	**6.84**	**278**	P		**Pn**	**20 30 18.4**	**+2.4**
SIJI	**Sorong**	**7.34**	**33**	P		**Pn**	**20 30 22.4**	**+0.5**
	9.0nm,0.3s,baz=242,slow=15,SNR=20							
SIJI				S		**S**	**20 31 43.3**	**-4.5**
	23nm,0.5s,baz=249,slow=23,SNR=16							
WSI	**Waingapu**	**7.39**	**249**	P		**Pn**	**20 30 21.6**	**-1.0**
LUWI	**Luwuk**	**7.53**	**323**	Pn		**Pn**	**20 30 23.6**	**-0.7**
KAPI	**Kappang**	**7.80**	**285**	P		**Pn**	**20 30 27.3**	**-0.2**
	4.6nm,0.5s,baz=92,slow=9.7,SNR=4.2							
KAPI	**Kappang**	**7.80**	**285**			**Pn**	**20 30 24.0**	**-3.5**
KNRA	**Kununurra**	**8.64**	**171**			**Pn**	**20 30 37.9**	**+0.2**
PLAI	**Plampang**	**9.60**	**259**	P		**Pn**	**20 30 48.4**	**-1.0**
TOLI2	**Tolitoli**	**10.44**	**321**	Pn		**Pn**	**20 30 57.9**	**-1.7**
FITZ	**Fitzroy Crossi**	**11.05**	**188**	P		**Pn**	**20 31 07.3**	**+0.3**
	14nm,0.3s,baz=11,slow=6.8,SNR=82							
FITZ				S		**S**	**20 33 11.3**	**+0.5**
	1.5nm,0.3s,baz=108,slow=20,SNR=1.5							
JAY	**Jayapura**	**14.10**	**72**	P		**P**	**20 31 44.4**	**+1.6**
	11nm,0.8s,baz=271,slow=6.1,SNR=2.1							
WB0	**Warramunga Arr**	**14.35**	**152**			**P**	**20 31 45.1**	**-0.2**
WRAB	**Tennant Creek**	**14.47**	**153**	P		**P**	**20 31 47.6**	**+0.9**
WRAB	**Tennant Creek**	**14.47**	**153**	P		**P**	**20 31 46.6**	**-0.1**
WRA	**Warramunga Arr**	**14.47**	**153**	P		**P**	**20 31 47.6**	**+0.9**
	13nm,0.6s,baz=326,slow=12,SNR=115							
WRA				S		**S**	**20 34 21.9**	**-3.2**
	7.4nm,0.8s,baz=327,slow=22,SNR=15							
WRA	**Warramunga Arr**	**14.47**	**153**			**P**	**20 31 46.4**	**-0.4**
WR8	**Warramunga Arr**	**14.56**	**152**			**P**	**20 31 48.1**	**+0.4**
MBWA	**Marble Bar**	**15.78**	**207**	P		**P**	**20 32 01.3**	**+0.3**
MBWA	**Marble Bar**	**15.78**	**207**	P		**P**	**20 32 00.8**	**-0.2**
PSA00	**Pilbara Seismi**	**16.09**	**206**	P		**P**	**20 32 03.8**	**-0.7**
PSA00	**Pilbara Seismi**	**16.09**	**206**	P		**P**	**20 32 02.9**	**-1.6**
PSA00	**Pilbara Seismi**	**16.09**	**206**	P		**P**	**20 32 04.4**	**0.0**
PSA00				IAmb		IAmb	20 32 06.2	
	comp=Z,11nm,0.8s							
COEN	**Coen**	**17.01**	**115**	P		**P**	**20 32 15.9**	**+1.4**
COEN	**Coen**	**17.01**	**115**	P		**P**	**20 32 15.5**	**+1.0**
COEN				IAmb		IAmb	20 32 16.5	
	comp=Z,18nm,0.8s							
ASAR	**Alice Springs**	**17.65**	**160**	P		**P**	**20 32 22.8**	**+1.5**
	comp=Z,19nm,0.6s,baz=341,slow=12,SNR=203							
ASAR				S		**S**	**20 35 25.3**	**-2.8**
	comp=Z,2.4nm,0.6s,baz=342,slow=21,SNR=10							
QIS	**Mount Isa**	**17.91**	**140**	P		**P**	**20 32 26.1**	**+2.0**
BBJI	**Bungbulang**	**19.51**	**268**	P		**P**	**20 32 40.4**	**-0.9**
BBJI				IAmb		IAmb	20 33 20.7	
	comp=Z,11nm,1.2s							
PMG	**Port Moresby**	**19.77**	**98**	P		**P**	**20 32 44.8**	**+0.8**
	comp=Z,11nm,0.8s,baz=326,slow=5.0,SNR=3.8							
PMG	**Port Moresby**	**19.77**	**98**	IAmb		IAmb	20 32 47.1	
	comp=Z,14nm,0.9s							
MEEK	**Meekatharra**	**21.12**	**202**	P		**P**	**20 32 57.3**	**+0.2**
CTAO	**Charters Tower**	**22.45**	**127**	P		**P**	**20 33 10.2**	**+1.0**
CTAO				IAmb		IAmb	20 33 14.9	
	comp=Z,9.5nm,1.3s							
FORT	**Forrest**	**23.57**	**178**	P		**P**	**20 33 19.4**	**+0.1**
FORT				IAmb		IAmb	20 33 20.3	
	comp=Z,10nm,0.6s							
BLDU	**Ballidu**	**25.42**	**202**	P		**P**	**20 33 36.3**	**+0.4**
BBOO	**Buckleboo**	**26.84**	**164**	P		**P**	**20 33 49.3**	**+0.7**
NWAO	**Narrogin (SRO)**	**27.35**	**199**	P		**P**	**20 33 52.9**	**-0.1**
STKA	**Stephens Creek**	**28.02**	**153**	P		**P**	**20 33 60.0**	**+0.9**
	comp=Z,1.1nm,0.4s,baz=340,slow=9.4,SNR=6.6							
	comp=Z,1.1nm,0.4s							
STKA	**Stephens Creek**	**28.02**	**153**	P		**P**	**20 33 59.9**	**+0.9**
STKA	**Stephens Creek**	**28.02**	**153**	P		**P**	**20 33 59.3**	**+0.3**
STKA				IAmb		IAmb	20 34 27.4	
	comp=Z,28nm,1.2s							
HTT	**Hallett**	**28.32**	**159**	P		**P**	**20 34 02.4**	**+0.7**
SONM	**Songino Array**	**57.73**	**343**	P		**P**	**20 37 55.8**	**+1.0**
	comp=Z,0.4nm,0.8s,baz=143,slow=5.0,SNR=2.6							
	comp=Z,0.4nm,0.8s							
MKAR	**Makanchi Array**	**66.87**	**328**	P		**P**	**20 38 55.1**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=110,slow=10,SNR=4.8							
ZALV	**Zalesovo Beam**	**70.52**	**335**	P		**P**	**20 39 16.6**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=123,slow=5.5,SNR=2.3							
	comp=Z,0.4nm,0.4s							
KURBB	**Kurchatov Arra**	**71.22**	**330**	P		**P**	**20 39 21.1**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=126,slow=4.9,SNR=2.3							
	comp=Z,0.2nm,0.6s							
KURK	**Kurchatov**	**71.23**	**330**	P		P	20 39 17.6	-3.8
TIXI	**Tiksi**	**78.59**	**1**	P		**P**	**20 40 03.1**	**+0.3**
TIXI				IAmb		IAmb	20 40 03.5	
	comp=Z,2.2nm,0.5s							
C19K	**Lookout Ridge**	**90.64**	**20**	P		**P**	**20 41 03.4**	**+0.5**
D19K	**Kuna River**	**90.96**	**21**	P		**P**	**20 41 04.5**	**+0.1**
D19K				IAmb		IAmb	20 41 24.6	
	comp=Z,4.8nm,1.5s							
BMAR	**Burnt Mountain**	**95.78**	**23**	P		**P**	**20 41 25.5**	**-1.0**
WMOK	**Wichita Mounta**	**129.53**	**50**			**PKPdf**	**20 47 07.1**	**-1.1**
BLOK	**Blackwell**	**129.90**	**47**			**PKPdf**	**20 47 06.1**	**-2.7**

*NEIC **09** 20:40:14.7±1.7, 17.85N±0.03×66.80W±0.02, h10km±2km, ML4.0/39, ML3.6/4(RSPR), Error ellipse: s-maj=5.4km s-min=2.7km az=11.0*
*OSPL **09** 20:40:15.5±0.4, 17.86N×66.82W, h10km±4km, ML3.6, Presumed earthquake*
ISC 09 20:40:15.3±1.0, **17.98N**±0.05×**66.81W**±0.02, **h18**km±2km, **n27**, σ0s60/34, **Puerto Rico region**

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

ellipse: s-maj=5.5km s-min=2.9km az=70.0
*SOME **09** 21:07:41.5, 41.°05N×73.°35E, h10km*
*NNC **09** 21:07:42.0±1.0, 41.°03N×73.°35E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=8.0km s-min=4.6km az=173.0*
*ISU **09** 21:07:45, 40.°91N×73.°32E, h5km*

ISC 09 21:07:39.1±1.1, **40.°86N**±0.°02×**73.°27E**±0.°02, **h1**km±10km, **n74**, σ1§52/125, **50C-24D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALK	**Salom-Alik**	**0.42**	**87**	⇑*i*P	**Pg**	**21 07 45.6**	**-1.6**
SALK				⇑*i*S	**Sg**	**21 07 50.5**	**-2.2**
OHH	**Osh**	**0.50**	**227**	⇑*i*P	**Pb**	**21 07 49.8**	**-0.8**
OHH				⇑*i*S	**Sb**	**21 07 57.8**	**-0.6**
ARSB	**Arslanbob**	**0.51**	**335**	⇑*i*P	**Pg**	**21 07 49.3**	**+0.4**
ARSB				⇑*i*S	**Sb**	**21 07 56.8**	**-2.1**
TSTA	**Tashata**	**0.66**	**245**	P	**Pn**	**21 07 54.7**	**-0.9**
TSTA				S	**Sn**	**21 08 05.5**	**-1.2**
SFK	**Sufi-Kurgan**	**0.87**	**168**	⇑*i*P	**Pg**	**21 07 55.5**	**-0.2**
SFK				⇑*i*S	**Sg**	**21 08 07.4**	**+0.5**
FRG	**Fergana**	**1.23**	**247**	P	**Pn**	**21 08 05.3**	**+1.9**
FRG				S	**Sn**	**21 08 23.8**	**+3.2**
ARLS	**Aral**	**1.28**	**38**	⇑*i*P	**Pn**	**21 08 01.3**	**-2.9**
ARLS				⇑*i*S	**Sb**	**21 08 17.3**	**-3.7**
ARK	**Arkit**	**1.35**	**314**	⇑*i*P	**Pg**	**21 08 04.9**	**-0.2**
ARK				⇑*e*S	**Sn**	**21 08 23.9**	**0.0**
UCH	**Uchtor**	**1.66**	**34**	⇑P	**Pn**	**21 08 08.6**	**-1.0**
	13nm,0.2s,SNR=29						
UCH				⇓S	**Sn**	**21 08 29.4**	**-2.4**
	176nm,0.4s						
UCH	**Uchtor**	**1.66**	**34**	⇓*e*P	**Pn**	**21 08 08.4**	**-1.3**
UCH				⇓*i*S	**Sn**	**21 08 29.4**	**-2.4**
MNAS	**Manas**	**1.72**	**341**	⇓*i*P	**Pb**	**21 08 10.8**	**-0.8**
MNAS				⇓*i*S	**Sg**	**21 08 34.0**	**-0.4**
TRKS	**Terek-Say**	**1.74**	**293**	⇓*i*P	**Pb**	**21 08 11.3**	**-0.5**
TRKS				⇓*i*S	**Sg**	**21 08 34.8**	**-0.1**
DRK	**Karamyk**	**1.78**	**220**	⇑*e*P	**Pg**	**21 08 12.6**	**-0.6**
DRK				⇑*i*S	**Sg**	**21 08 37.3**	**+1.1**
JNKS	**Jany-Kuch**	**1.80**	**83**	⇑*e*P	**Pn**	**21 08 10.6**	**-0.8**
JNKS				⇑*i*S	**Sn**	**21 08 33.7**	**-1.3**
EKS2	**Erkin-Say**	**1.84**	**12**	⇑P	**Pn**	**21 08 12.1**	**+0.2**
	28nm,0.5s,SNR=40						
EKS2				⇑S	**Sn**	**21 08 34.4**	**-1.4**
	99nm,0.5s						
EKS2	**Erkin-Say**	**1.84**	**12**	⇓*i*P	**Pn**	**21 08 12.0**	**+0.1**
EKS2				⇓*i*S	**Sb**	**21 08 35.9**	**-1.2**
MRKS	**Merke**	**1.88**	**359**	P	**Pb**	**21 08 13.2**	**-1.1**
	26nm,0.4s						
MRKS				S	**Sn**	**21 08 36.4**	**-0.5**
	202nm,0.3s						
MRKS	**Merke**	**1.88**	**359**	*e*P	**Pb**	**21 08 13.2**	**-1.1**
	26nm,0.4s						
MRKS				*e*S	**Sn**	**21 08 36.4**	**-0.5**
	202nm,0.3s						
AAK	**Ala-Archa**	**2.00**	**27**	⇓P	**Pn**	**21 08 14.4**	**+0.3**
	44nm,0.3s,SNR=69						
AAK				⇓S	**Sn**	**21 08 39.7**	**-0.1**
	134nm,0.3s						
AAK	**Ala-Archa**	**2.00**	**27**	⇓Pn	**Pn**	**21 08 14.5**	**+0.3**
	4.1nm,0.3s						
AAK				⇑Sn	**Sn**	**21 08 40.3**	**+0.4**
	11nm,0.3s						
AAK	**Ala-Archa**	**2.00**	**27**	⇑*e*P	**Pn**	**21 08 13.9**	**-0.2**
AAK				⇑*i*S	**Sn**	**21 08 39.5**	**-0.3**
BTK	**Batken**	**2.03**	**248**	⇑*e*P	**Pb**	**21 08 15.9**	**-0.9**
BTK				⇑*i*S	**Sg**	**21 08 43.5**	**-0.9**
NRN	**Naryn**	**2.14**	**74**	⇓*i*P	**Pn**	**21 08 15.0**	**-1.2**
NRN				⇓*i*S	**Sn**	**21 08 41.8**	**-1.8**
KBK	**Karagaybulak**	**2.19**	**35**	⇓P	**Pn**	**21 08 17.4**	**+0.7**
	9.3nm,0.2s,SNR=16						
KBK				⇑S	**Sn**	**21 08 45.3**	**+0.7**
	254nm,0.5s						
KBK	**Karagaybulak**	**2.19**	**35**	⇑*e*P	**Pn**	**21 08 16.6**	**-0.2**
KBK				⇑*i*S	**Sn**	**21 08 44.1**	**-0.5**
FRU1	**Bishkek**	**2.20**	**27**	⇑*i*P	**Pn**	**21 08 17.0**	**+0.2**
FRU1				⇑*i*S	**Sn**	**21 08 44.7**	**+0.1**
CHMS	**Chumysh**	**2.41**	**27**	⇑P	**Pn**	**21 08 20.1**	**+0.5**
	12nm,0.4s,SNR=19						
CHMS				⇓S	**Sn**	**21 08 50.4**	**+0.7**
	70nm,0.4s						
CHMS	**Chumysh**	**2.41**	**27**	⇑*i*P	**Pn**	**21 08 19.6**	**0.0**
CHMS				⇑*i*S	**Sn**	**21 08 49.2**	**-0.5**
CHMG	**Chimgan**	**2.55**	**287**	P	**Pb**	**21 08 24.2**	**-1.5**
USP	**Ospenovka**	**2.57**	**21**	⇑P	**Pn**	**21 08 22.1**	**+0.2**
	7.8nm,0.2s						
USP				⇑S	**Sb**	**21 08 55.5**	**-2.7**
	25nm,0.3s						
USP	**Ospenovka**	**2.57**	**21**	⇓*i*P	**Pn**	**21 08 22.1**	**+0.2**
USP				⇓*i*S	**Sn**	**21 08 53.4**	**-0.4**
BOOM	**Boomskoye usch**	**2.58**	**50**	⇓*i*P	**Pn**	**21 08 22.0**	**-0.1**
BOOM				⇓*i*S	**Sn**	**21 08 53.2**	**-1.0**
CHRV	**Charvak**	**2.62**	**288**	P	**Pb**	**21 08 24.4**	**-2.4**
ULHL	**Ulahol**	**2.63**	**57**	⇑P	**Pn**	**21 08 23.1**	**+0.3**
	3.9nm,0.2s						
ULHL				⇑S	**Sn**	**21 08 56.0**	**+0.6**
	13nm,0.2s						
ULHL	**Ulahol**	**2.63**	**57**	⇓*i*P	**Pn**	**21 08 22.4**	**-0.4**
ULHL				⇓*i*S	**Sn**	**21 08 54.2**	**-1.2**
TKM2	**Tokmak 2**	**2.69**	**39**	⇑P	**Pn**	**21 08 24.0**	**+0.2**
	7.2nm,0.2s,SNR=9.4						
TKM2				⇑S	**Sn**	**21 08 58.0**	**+0.9**
	22nm,0.3s						
TKM2	**Tokmak 2**	**2.69**	**39**	⇑*e*P	**Pn**	**21 08 23.4**	**-0.3**
TKM2				⇑*i*S	**Sn**	**21 08 56.0**	**-1.1**
IUG	**Iuzhnay**	**2.75**	**299**	Pg	**Pg**	**21 08 31.7**	**0.0**
	12nm,0.1s						
IUG				Lg	Lg	21 09 07.8	
	252nm,0.4s						
IUG	**Iuzhnay**	**2.75**	**299**	*e*P	**Pg**	**21 08 31.7**	**0.0**
	12nm,0.1s						
IUG				*e*S	**Sg**	**21 09 07.8**	**+0.5**
	252nm,0.4s						
SGDS	**Sogindy**	**2.78**	**21**	Pg	**Pb**	**21 08 29.4**	**-0.2**
	1.0nm,0.2s						
SGDS				Lg	Lg	21 09 03.9	
	31nm,0.4s						
TVKS	**Tavaksay**	**2.82**	**286**	P	**Pb**	**21 08 26.9**	**-3.3**
KST	**Kastek**	**2.97**	**42**	Pg	**Pb**	**21 08 32.8**	**0.0**
	3.0nm,0.3s						
KST				Lg	Lg	21 09 09.5	
	22nm,0.4s						
KST	**Kastek**	**2.97**	**42**	*e*P	**Pb**	**21 08 30.9**	**-1.8**
	3.0nm,0.3s						
KST				*e*S	**Sb**	**21 09 06.5**	**-3.0**
	22nm,0.4s						
DGS	**Degeres**	**3.02**	**37**	Pg	**Pb**	**21 08 33.5**	**-0.2**
	2.4nm,0.3s						
DGS				Lg	Lg	21 09 10.6	
	15nm,0.4s						
DGS	**Degeres**	**3.02**	**37**	*e*P	**Pb**	**21 08 33.5**	**-0.2**
	2.4nm,0.3s						
DGS				*e*S	**Sb**	**21 09 10.6**	**-0.6**
	15nm,0.4s						
KK31	**Karatay Array**	**3.04**	**318**	⇑Pn	**Pn**	**21 08 29.5**	**+1.3**
	1.8nm,0.4s,baz=126,slow=12,SNR=79						
KK31				⇑Lg	Lg	21 09 15.5	
	15nm,0.3s,baz=134,slow=29,SNR=13						
NZBK	**Nazarbek**	**3.16**	**278**	S	**Sg**	**21 09 24.5**	**+4.0**
KDJ	**Kajisay**	**3.20**	**65**	⇑*i*P	**Pn**	**21 08 30.5**	**-0.2**
KDJ				⇑*i*S	**Sn**	**21 09 07.8**	**-1.7**
MTBS	**Maitube**	**3.27**	**45**	Pg	**Pb**	**21 08 39.2**	**+1.2**
	7.0nm,0.2s						
MTBS				Lg	Lg	21 09 20.7	
	15nm,0.3s						
MTBS	**Maitube**	**3.27**	**45**	*e*P	**Pb**	**21 08 39.2**	**+1.2**
	7.0nm,0.2s						
MTBS				*e*S	**Sb**	**21 09 20.6**	**+2.4**
	15nm,0.3s						
KRBS	**Karabastau**	**3.35**	**31**	Pg	**Pb**	**21 08 39.1**	**-0.2**
	1.1nm,0.2s						
KRBS				Lg	Lg	21 09 20.7	
	4.0nm,0.2s						
KRBS	**Karabastau**	**3.35**	**31**	*e*P	**Pb**	**21 08 39.1**	**-0.2**
	1.1nm,0.2s						
KRBS				*e*S	**Sb**	**21 09 20.7**	**+0.2**
	4.0nm,0.2s						
TNSS	**Tian-Shan**	**3.50**	**50**	Pg	**Pb**	**21 08 42.8**	**+0.7**
	1.4nm,0.3s						
TNSS				Lg	Lg	21 09 26.6	
	3.5nm,0.4s						
TNSS	**Tian-Shan**	**3.50**	**50**	*e*P	**Pb**	**21 08 42.8**	**+0.7**
	1.4nm,0.3s						
TNSS				*e*S	**Sb**	**21 09 26.6**	**+1.4**
	3.5nm,0.4s						
TARG	**Taragay, Kyrgy**	**3.53**	**74**	⇑*i*P	**Pn**	**21 08 34.8**	**-0.6**
TARG				⇑*i*S	**Sn**	**21 09 15.6**	**-2.3**
KNDC	**Almaty**	**3.62**	**48**	⇑Pg	**Pg**	**21 08 48.0**	**-0.5**
	7.6nm,0.4s						
KNDC				⇓Lg	Lg	21 09 30.5	
	29nm,0.5s						
MDOK	**Medeo**	**3.64**	**50**	Pg	**Pb**	**21 08 45.4**	**+1.2**
	2.7nm,0.3s						
MDOK				Lg	Lg	21 09 31.4	
	14nm,0.4s						
KOTS	**Kotyrbulak**	**3.72**	**49**	Pg	**Pb**	**21 08 46.8**	**+1.2**
	5.2nm,0.3s						
KOTS				Lg	Lg	21 09 34.0	
	23nm,0.5s						
KOTS	**Kotyrbulak**	**3.72**	**49**	*e*P	**Pb**	**21 08 46.8**	**+1.2**
	5.2nm,0.3s						
KOTS				*e*S	**Sb**	**21 09 34.0**	**+2.8**
	23nm,0.5s						
ANVS	**Anan'yevo**	**3.81**	**58**	⇑*i*P	**Pn**	**21 08 38.9**	**-0.1**
ANVS				⇑*i*S	**Sn**	**21 09 22.6**	**-1.9**
KTBS	**Karatobe**	**3.81**	**41**	Pg	**Pb**	**21 08 47.7**	**+0.6**
	1.0nm,0.4s						
KTBS				Lg	Lg	21 09 35.2	
	6.3nm,0.3s						
KTBS	**Karatobe**	**3.81**	**41**	*e*P	**Pb**	**21 08 47.7**	**+0.6**
	1.0nm,0.4s						
KTBS				*e*S	**Sb**	**21 09 35.2**	**+1.4**
	6.3nm,0.3s						
BTLS	**Baital**	**4.22**	**8**	Pg	**Pb**	**21 08 55.2**	**+1.2**
	2.1nm,0.4s						
BTLS				Lg	Lg	21 09 47.9	
	11nm,0.3s						
BTLS	**Baital**	**4.22**	**8**	*e*P	**Pb**	**21 08 55.2**	**+1.2**
	2.1nm,0.4s						
BTLS				*e*S	**Sb**	**21 09 47.9**	**+2.5**
	11nm,0.3s						
SATY	**Saty**	**4.42**	**59**	Pg	**Pb**	**21 09 00.6**	**+3.1**
	0.7nm,0.1s						
SATY				Lg	Lg	21 09 57.2	
	12nm,0.3s						
ARXS	**Arharly**	**4.75**	**44**	Pg	**Pb**	**21 09 04.5**	**+1.3**
	0.6nm,0.4s						
ARXS				Lg	Lg	21 10 03.8	
	9.5nm,0.4s						
ARXS	**Arharly**	**4.75**	**44**	*e*P	**Pb**	**21 09 04.5**	**+1.3**
	0.6nm,0.4s						
ARXS				*e*S	**Sb**	**21 10 03.8**	**+3.0**
	9.5nm,0.4s						
KPKS	**Kokpek**	**4.79**	**55**	Pg	**Pb**	**21 09 06.2**	**+2.3**
	0.2nm,0.1s						
KPKS				Lg	Lg	21 10 06.8	
	4.2nm,0.5s						
KPKS	**Kokpek**	**4.79**	**55**	*e*P	**Pb**	**21 09 06.2**	**+2.3**
	0.2nm,0.1s						
KPKS				*e*S	**Sb**	**21 10 06.8**	**+4.7**
	4.2nm,0.5s						
UZB	**Uzynbulak**	**4.86**	**60**	Pg	**Pb**	**21 09 07.0**	**+2.0**
	1.3nm,0.1s						
UZB				Lg	Lg	21 10 08.4	
	11nm,0.4s						
UZB	**Uzynbulak**	**4.86**	**60**	*e*P	**Pb**	**21 09 07.0**	**+2.0**
	1.3nm,0.1s						
UZB				*e*S	**Sb**	**21 10 08.4**	**+4.4**
	11nm,0.4s						
SHLS	**Shalkode**	**5.16**	**62**	Pg	**Pg**	**21 09 17.4**	**-0.5**
	0.8nm,0.1s						
SHLS				Lg	Lg	21 10 25.8	
	26nm,0.6s						
SHLS	**Shalkode**	**5.16**	**62**	*e*P	**Pg**	**21 09 17.4**	**-0.5**
	0.8nm,0.1s						
SHLS				*e*S	**Sg**	**21 10 25.8**	**+1.2**
	26nm,0.6s						
PDGK	**Podgornoye**	**5.25**	**60**	⇑Pg	**Pg**	**21 09 18.7**	**-0.9**
	2.3nm,0.7s						
PDGK				⇓Lg	Lg	21 10 25.0	
	9.5nm,0.8s						

*SNET **09** 21:22:53.9±0.9, 12.°63N×88.°18W, h52km, ML4.0, Presumed earthquake*
*CATAC **09** 21:22:55.0, 12.°6N±0.°8×88.°2W±0.°8, h28km±2km, M4.2/50, mb4.0/5, MLv4.2/50, confirmed*
*NEIC **09** 21:22:55.4±1.9, 12.°9N±0.°1×88.°00W±0.°09, h72km±11km, mb4.3/26, Error ellipse: s-maj=20.2km s-min=7.2km az=212.0*
*GCG **09** 21:22:57.3±0.7, 12.°92N×88.°33W, h18km±6km, MD4.1, ML3.8, Presumed earthquake*
*IDC **09** 21:22:57.6±2.5, 13.°58N×87.°56W, h76km±33km, mb3.5/6, mbtmp3.8/8, MS2.9/1, Error ellipse: s-maj=70.2km s-min=23.0km az=42.0*

ISC 09 21:22:53.5±0.8, **12.°66N**±0.°05×**88.°18W**±0.°03, **h69**km±6km, **n130**, σ1§**26**/156, **mb4.2**/18, **2C-15D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INTP	**Intipuca**	**0.55**	**13**	*e*P	**Pn**	**21 23 06.4**	**-0.4**
INTP				*e*S	**Sn**	**21 23 16.1**	**-0.4**
CSGN	**Cosiguina Volc**	**0.68**	**62**	P	**Pn**	**21 23 08.4**	**+0.2**
CNCH	**Conchagua**	**0.70**	**28**	⇓P	**Pn**	**21 23 08.5**	**0.0**
CNCH	**Conchagua**	**0.70**	**28**	*e*P	**Pn**	**21 23 08.5**	**0.0**
CNCH				*e*S	**Sn**	**21 23 19.7**	**+0.1**
LCND	**La Caada**	**0.70**	**23**	⇓P	**Pn**	**21 23 08.5**	**0.0**
LCY	**Lacayo**	**0.77**	**351**	*i*P	**Pn**	**21 23 09.4**	**+0.1**
RANC	**El Ranchito**	**0.78**	**352**	⇑P	**Pn**	**21 23 09.6**	**+0.1**
BLLM	**Bellamira**	**0.78**	**356**	*e*P	**Pn**	**21 23 09.5**	**+0.1**
CNRM	**Centro Naciona**	**0.81**	**0**	P	**Pn**	**21 23 10.1**	**+0.4**
CNRM				S	**Sn**	**21 23 22.8**	**+1.1**
PACA	**Pacayal**	**0.82**	**350**	⇓P	**Pn**	**21 23 10.1**	**+0.2**
PACA	**Pacayal**	**0.82**	**350**	*e*P	**Pn**	**21 23 10.1**	**+0.2**
PACA				*e*S	**Sn**	**21 23 22.4**	**+0.4**
TECO	**Alcaldia de Te**	**1.05**	**326**	P	**Pn**	**21 23 12.6**	**-0.1**
TECO				S	**Sn**	**21 23 26.6**	**-0.4**
CRIN	**San Cristobal**	**1.10**	**88**	Pn	**Pn**	**21 23 13.8**	**+0.5**
CRIN	**San Cristobal**	**1.10**	**88**	⇓P	**Pn**	**21 23 14.1**	**+0.8**
CRIN				S	**Sn**	**21 23 29.1**	**+1.0**
SCLA	**Alcaldia de Sa**	**1.17**	**333**	⇓P	**Pn**	**21 23 14.8**	**+0.6**
SCLA				S	**Sn**	**21 23 30.6**	**+1.0**
PKGN	**Cerro Pekin**	**1.17**	**89**	⇓P	**Pn**	**21 23 14.7**	**+0.5**
PKGN				S	**Sn**	**21 23 30.0**	**+0.4**
COEG	**Centro de Oper**	**1.18**	**324**	P	**Pn**	**21 23 14.8**	**+0.5**
COEG				S	**Sn**	**21 23 29.8**	**-0.1**
PAVA	**Las Pavas**	**1.28**	**325**	P	**Pn**	**21 23 16.8**	**+1.0**
PAVA	**Las Pavas**	**1.28**	**325**	*e*P	**Pn**	**21 23 16.9**	**+1.1**
PAVA				*e*S	**Sn**	**21 23 33.4**	**+0.9**
QUEN	**Al S del Volca**	**1.29**	**93**	P	**Pn**	**21 23 16.5**	**+0.7**
TEL3	**Telica 3**	**1.30**	**94**	⇓P	**Pn**	**21 23 16.4**	**+0.5**
HERN	**Volcan Telica**	**1.31**	**92**	Pn	**Pn**	**21 23 16.3**	**+0.2**
HERN	**Volcan Telica**	**1.31**	**92**	⇓P	**Pn**	**21 23 16.4**	**+0.2**
HERN				S	**Sn**	**21 23 33.4**	**+0.4**
HOYN	**Al Sur del Vol**	**1.32**	**92**	P	**Pn**	**21 23 17.2**	**+1.0**
POLN	**Al Sur del Vol**	**1.33**	**90**	P	**Pn**	**21 23 17.1**	**+0.9**
PACN	**Al O del Volca**	**1.36**	**96**	P	**Pn**	**21 23 17.3**	**+0.6**
PANCS	**Alcalda de**	**1.36**	**314**	P	**Pn**	**21 23 17.7**	**+1.0**
LOMA	**Loma Larga**	**1.38**	**315**	*e*P	**Pn**	**21 23 17.7**	**+0.7**
LALI	**Alcalda de L**	**1.39**	**307**	P	**Pn**	**21 23 17.5**	**+0.5**
LALI	**Alcalda de L**	**1.39**	**307**	*i*P	**Pn**	**21 23 17.3**	**+0.3**
LALI				*i*S	**Sn**	**21 23 31.7**	**-2.9**
LALI				IAML		21 23 36.3	
	comp=N,497nm,0.3s						
ROCN	**Rota Cerro Neg**	**1.41**	**95**	⇓P	**Pn**	**21 23 18.0**	**+0.8**
IGN	**Direccin Gen**	**1.43**	**317**	P	**Pn**	**21 23 19.1**	**+1.5**
P5NO	**Presa 5 de nov**	**1.44**	**337**	P	**Pn**	**21 23 17.9**	**+0.2**
ILCN	**San Idelfonso**	**1.44**	**93**	P	**Pn**	**21 23 16.0**	**-1.7**
CNGA	**Al SSO del Vol**	**1.45**	**96**	P	**Pn**	**21 23 18.5**	**+0.6**
CNGN	**Cerro Negro**	**1.45**	**96**	Pn	**Pn**	**21 23 17.6**	**-0.3**
CNGN	**Cerro Negro**	**1.45**	**96**	⇓P	**Pn**	**21 23 18.1**	**+0.2**
UEES	**Universidad Ev**	**1.48**	**316**	P	**Pn**	**21 23 19.4**	**+1.1**
UEES				S	**Sn**	**21 23 36.9**	**0.0**
MACN	**El Madrono**	**1.48**	**97**	P	**Pn**	**21 23 18.7**	**+0.4**
BOQS	**Boqueron**	**1.52**	**315**	*e*P	**Pn**	**21 23 19.9**	**+1.0**
PMON	**Piamonte**	**1.53**	**314**	P	**Pn**	**21 23 19.8**	**+0.8**
JAYA	**Jayaque - finc**	**1.59**	**309**	P	**Pn**	**21 23 20.1**	**+0.4**
JAYA	**Jayaque - finc**	**1.59**	**309**	*i*P	**Pn**	**21 23 20.2**	**+0.4**
JAYA				*i*S	**Sn**	**21 23 38.6**	**-1.0**
JAYA				IAML		21 23 43.2	
	comp=N,6μm,0.2s						
JAYA	**Jayaque - finc**	**1.59**	**309**	*e*P	**Pn**	**21 23 20.4**	**+0.6**
JAYA				*e*S	**Sn**	**21 23 39.1**	**-0.5**
MOMN	**Momotombo**	**1.62**	**99**	P	**Pn**	**21 23 20.6**	**+0.5**
COPN	**Copaltepe**	**1.62**	**107**	⇓P	**Pn**	**21 23 20.3**	**+0.2**
TGUH	**Tegucigalpa,Un**	**1.65**	**32**	Pn	**Pn**	**21 23 21.2**	**+0.6**
TGUH	**Tegucigalpa,Un**	**1.65**	**32**	⇓P	**Pn**	**21 23 21.4**	**+0.8**
TGUH				S	**Sn**	**21 23 41.6**	**+0.6**
MOM2	**El Cardon**	**1.67**	**97**	⇓P	**Pn**	**21 23 21.3**	**+0.6**
LLGN	**La Laguna**	**1.67**	**334**	P	**Pn**	**21 23 22.5**	**+1.6**
SAPS	**Ciudad Sandino**	**1.80**	**105**	P	**Pn**	**21 23 23.0**	**+0.6**
APQ3	**Volcan Apoyequ**	**1.81**	**102**	P	**Pn**	**21 23 23.4**	**+0.8**
LIMN	**Finca el Limon**	**1.81**	**77**	P	**Pn**	**21 23 23.5**	**+0.8**
CEVE	**Cerro Verde**	**1.83**	**310**	P	**Pn**	**21 23 24.7**	**+1.6**
YUSH	**Yuscaran**	**1.83**	**45**	⇓P	**Pn**	**21 23 23.6**	**+0.6**
APYN	**Apoyeque**	**1.83**	**103**	P	**Pn**	**21 23 24.2**	**+1.3**
ABCN	**Banco Central**	**1.90**	**106**	P	**Pn**	**21 23 24.7**	**+0.8**
ABCN				S	**Sn**	**21 23 48.1**	**+1.2**
TISN	**Laguna Tiscapa**	**1.93**	**105**	P	**Pn**	**21 23 25.1**	**+0.8**
UNAN	**Cigeo UNAN**	**1.94**	**106**	P	**Pn**	**21 23 25.5**	**+1.1**
UNAN				S	**Sn**	**21 23 48.1**	**+0.2**
NUBE	**Las Nubes**	**1.99**	**309**	P	**Pn**	**21 23 26.4**	**+1.2**
NUBE	**Las Nubes**	**1.99**	**309**	*i*P	**Pn**	**21 23 26.4**	**+1.2**
NUBE				*i*S	**Sn**	**21 23 49.5**	**+0.2**
NUBE				IAML		21 23 51.2	
	comp=N,980nm,0.2s						
AERN	**Aeropuerto Man**	**2.03**	**104**	P	**Pn**	**21 23 26.5**	**+1.0**
AERN				S	**Sn**	**21 23 50.5**	**+0.6**
MAS3	**Al N del Volca**	**2.05**	**108**	P	**Pn**	**21 23 26.5**	**+0.5**
MAS3				S	**Sn**	**21 23 50.1**	**-0.6**
SLOZ	**Alcaldia de Sa**	**2.07**	**311**	P	**Pn**	**21 23 27.5**	**+1.3**
MTO3	**Montecristo**	**2.08**	**327**	Pn	**Pn**	**21 23 26.9**	**+0.5**
MTO3	**Montecristo**	**2.08**	**327**	P	**Pn**	**21 23 27.3**	**+0.9**
MTO3	**Montecristo**	**2.08**	**327**	*i*P	**Pn**	**21 23 27.4**	**+0.9**
MASN	**Masaya**	**2.09**	**108**	P	**Pn**	**21 23 27.5**	**+1.1**
MASN				S	**Sn**	**21 23 51.9**	**+0.5**
SABN	**Sabanita**	**2.09**	**109**	P	**Pn**	**21 23 26.5**	**+0.1**
NANN	**Nandasmo**	**2.13**	**109**	P	**Pn**	**21 23 28.4**	**+1.4**
RCON	**San Juan de Ri**	**2.13**	**67**	P	**Pn**	**21 23 29.0**	**+1.8**
RCON				S	**Sn**	**21 23 55.3**	**+2.5**
RCVN	**Varillal2**	**2.14**	**64**	⇑P	**Pn**	**21 23 27.8**	**+0.6**
RCVN				S	**Sn**	**21 23 54.3**	**+1.4**
FAME	**Alcaldia de Sa**	**2.14**	**304**	P	**Pn**	**21 23 28.0**	**+0.9**
SARH	**Santa Rosa de**	**2.18**	**345**	P	**Pn**	**21 23 29.3**	**+1.5**
SARH	**Santa Rosa de**	**2.18**	**345**	*i*P	**Pn**	**21 23 28.7**	**+1.0**
ESQI	**Esquipulas**	**2.20**	**329**	Pn	**Pn**	**21 23 29.1**	**+1.0**
ESQI	**Esquipulas**	**2.20**	**329**	P	**Pn**	**21 23 29.5**	**+1.5**
ESQI				S	**Sn**	**21 23 55.1**	**+0.7**
RCPN	**Sur Rio San Ju**	**2.21**	**67**	P	**Pn**	**21 23 29.2**	**+1.1**
MATN	**Matagalpa**	**2.21**	**83**	⇓P	**Pn**	**21 23 27.6**	**-0.5**
BOAB	**BOACO BROADBAN**	**2.46**	**95**			**21 23 31.4**	**0.0**
ACON	**Acoyapa**	**3.01**	**103**	P	**Pn**	**21 23 40.1**	**+1.2**
IZABA	**Izabal, Puerto**	**3.08**	**353**	P	**Pn**	**21 23 40.6**	**+0.8**
APG	**El Apazote**	**3.22**	**317**	P	**Pn**	**21 23 44.0**	**+2.0**
	comp=N,0.9nm,0.5s,baz=135,slow=9.9,SNR=9.7						
APG				S	**Sn**	**21 24 25.2**	**+5.8**
	comp=N,1.0nm,0.4s,baz=76,slow=20,SNR=1.6						
APG	**El Apazote**	**3.22**	**317**	*i*P	**Pn**	**21 23 43.8**	**+1.8**
SIUN	**Universidad Ur**	**3.48**	**72**	Pn	**Pn**	**21 23 45.7**	**+0.4**
JTS	**Las Juntas de**	**3.94**	**126**	P	**Pn**	21 23 59.3	+7.7
	comp=N,55nm,0.4s,baz=329,slow=7.4,SNR=26						
JTS				S	Sn	21 24 49.3	+13
	comp=N,96nm,0.8s,baz=128,slow=23,SNR=9.4						
JTS	**Las Juntas de**	**3.94**	**126**	Pn	**Pn**	21 23 59.9	+8.3
PETF	**Flores**	**4.54**	**339**	Pn	**Pn**	**21 24 01.9**	**+2.2**
LCR2	**La Lucha 2**	**5.01**	**125**	P	**Pn**	**21 24 09.0**	**+2.5**
PIRO	**Carate, Puerto**	**6.37**	**131**	Pn	**Pn**	**21 24 28.2**	**+3.4**
PIRO	**Carate, Puerto**	**6.37**	**131**	P	**Pn**	**21 24 28.2**	**+3.4**
TEIG	**Tepich**	**7.53**	**359**	P	**Pn**	**21 24 43.1**	**+2.5**
CMIG	**Matias Romero**	**7.84**	**305**	P	**Pn**	**21 24 48.2**	**+3.3**
	comp=N,1.7nm,0.3s,baz=163,slow=12,SNR=9.2						
CMIG				S	**Sn**	**21 26 12.9**	**+0.7**
	comp=N,1.6nm,0.3s,baz=329,slow=14,SNR=2.1						
TXAR	**Lajitas Array**	**21.97**	**321**	P	**P**	**21 27 43.5**	**+1.6**
	comp=N,2.5nm,0.5s,baz

az=145.0

ISC 09 21:44:27.3±0.4,**36°13N**±0°04×**80°22E**±0°05,**h9**km,**n148,**
σ1ᵗ**90**/164,**mb4.2**/27,**MS3.3**/9,**17C-9D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ALCI	**Alchi Leh**	**3.13**	**233**	*eP*		**Pn**	**21 45 21.0**	**+3.8**
ALCI				*eS*		**Sb**	**21 46 02.1**	**+0.2**
ALCI				IAML			21 46 10.9	
	comp=E,226nm,0.5s							
ALCI				IAML			21 46 15.1	
	comp=N,235nm,1.0s							
TSSA	**Tissa**	**4.70**	**227**	*eP*		**Pn**	**21 45 41.4**	**+2.8**
TSSA				*eS*		**Sn**	**21 46 38.0**	**+4.8**
TSSA				IAML			21 46 42.7	
	comp=N,205nm,0.5s							
TSSA				IAML			21 46 43.0	
	comp=E,227nm,0.6s							
KSH2	**Kashi**	**4.76**	**311**	Pn		**Pn**	**21 45 40.8**	**+1.4**
KSH2				Sn		**Sn**	**21 46 36.4**	**+1.6**
KSH2				SMN				
	comp=E,420nm,0.5s							
KSH2				SME				
	comp=E,340nm,0.8s							
KLP	**Kalpa**	**4.87**	**200**	*eP*		**Pn**	**21 45 44.3**	**+3.2**
KLP				*eS*		**Sn**	**21 46 41.6**	**+3.9**
KLP				IAML			21 46 44.5	
	comp=N,234nm,0.7s							
KLP				IAML			21 46 50.5	
	comp=E,141nm,0.6s							
DHRM	**DHARAMSHALA**	**5.05**	**221**	*eP*		**Pn**	**21 45 45.9**	**+2.4**
DHRM				*eS*		**Sn**	**21 46 47.9**	**+5.8**
DHRM				IAML			21 46 58.2	
	comp=E,282nm,0.7s							
DHRM				IAML			21 47 10.3	
	comp=N,174nm,0.6s							
WUS	**Wushi**	**5.12**	**352**			**Pn**	**21 45 44.3**	**0.0**
THN	**Thein Dam**	**5.21**	**226**	*eP*		**Pn**	**21 45 48.2**	**+2.7**
THN				*eS*		**Sn**	**21 45 49.9**	**+4.1**
THN				IAML			21 47 16.7	
	comp=N,288nm,1.4s							
THN				IAML			21 47 21.5	
	comp=E,208nm,1.4s							
TLWR	**Talawar**	**5.46**	**222**	*eP*		**Pn**	**21 45 51.2**	**+2.2**
JMU	**Jammu**	**5.56**	**235**	*eP*		**Pn**	**21 45 52.6**	**+2.3**
JMU				*eS*		**Sn**	**21 46 58.9**	**+4.5**
JMU				IAML			21 47 04.1	
	comp=N,170nm,0.4s							
JMU				IAML			21 47 20.2	
	comp=E,159nm,0.8s							
JOSI	**Joshimath**	**5.59**	**186**	*eP*		**Pn**	**21 45 55.0**	**+4.2**
SMLA	**Simla**	**5.60**	**208**	*eP*		**Pn**	**21 45 53.0**	**+2.3**
SMLA				*eS*		**Sn**	**21 46 57.0**	**+1.8**
SMLA				IAML			21 47 00.8	
	comp=E,160nm,0.8s							
SMLA				IAML			21 47 06.9	
	comp=N,134nm,0.6s							
BHK	**Bhakra**	**5.70**	**215**	*eP*		**Pn**	**21 45 54.0**	**+1.8**
BHK				IAML			21 47 02.3	
	comp=E,176nm,0.7s							
BHK				IAML			21 47 03.5	
	comp=N,140nm,0.5s							
TARG	**Taragay, Kyrgy**	**5.90**	**342**			**Pn**	**21 45 55.4**	**+0.2**
TARG	**Taragay, Kyrgy**	**5.90**	**342**	P		**Pn**	**21 45 55.4**	**+0.2**
DDI	**Dehra Dun**	**6.07**	**198**	*eP*		**Pn**	**21 45 59.8**	**+2.5**
DDI				*eS*		**Sn**	**21 47 06.8**	**-0.1**
NIL	**Nilore**	**6.24**	**249**			**Pn**	**21 45 59.9**	**+0.3**
NIL	**Nilore**	**6.24**	**249**	P		**Pn**	**21 45 59.9**	**+0.3**
NRN	**Naryn**	**6.24**	**329**	Pn		**Pn**	**21 46 00.9**	**+1.1**
NRN	**Naryn**	**6.24**	**329**	P		**Pn**	**21 46 00.9**	**+1.1**
KDJ	**Kajisay**	**6.44**	**339**	Pn		**Pn**	**21 46 02.8**	**+0.3**
KDJ	**Kajisay**	**6.44**	**339**	P		**Pn**	**21 46 02.8**	**+0.3**
PRZ	**Przheval'sk**	**6.50**	**348**	Pn		**Pn**	**21 46 04.1**	**+0.8**
PRZ	**Przheval'sk**	**6.50**	**348**	P		**Pn**	**21 46 04.1**	**+0.8**
PTH	**Pithoragarh**	**6.53**	**180**	*eP*		**Pn**	**21 46 04.4**	**+0.7**
BOOM	**Boomskoye usch**	**7.16**	**334**	Pn		**Pn**	**21 46 13.7**	**+1.3**
BOOM	**Boomskoye usch**	**7.16**	**334**	P		**Pn**	**21 46 13.7**	**+1.3**
PDGK	**Podgornoye**	**7.21**	**356**	⇓Pn		**Pn**	**21 46 14.3**	**+1.2**
	comp=N,19nm,0.6s							
PDGK				⇓Pg		Pb	21 46 38.5	+5.8
	comp=N,54nm,1.0s							
PDGK				⇑Sn		**Sn**	**21 47 33.9**	**-1.2**
	comp=N,102nm,0.6s							
PDGK				⇑Lg		Lg	21 48 12.2	
	comp=N,277nm,0.9s							
DRK	**Karamyk**	**7.46**	**299**	Pn		**Pn**	**21 46 15.1**	**-1.4**
DRK	**Karamyk**	**7.46**	**299**	P		**Pn**	**21 46 15.1**	**-1.4**
KNDC	**Almaty**	**7.51**	**342**	⇓Pg		**Pb**	**21 46 41.3**	**+3.5**
	comp=N,49nm,0.7s							
KNDC				⇑Lg		Lg	21 48 19.1	
	comp=N,286nm,0.8s							
UCH	**Uchtor**	**7.53**	**326**	P		**Pn**	**21 46 19.6**	**+2.0**
	SNR=13							
TKM2	**Tokmak 2**	**7.66**	**334**	P		**Pn**	**21 46 23.1**	**+3.8**
	SNR=9.6							
ARSB	**Arslanbob**	**7.67**	**315**	Pn		**Pn**	**21 46 18.6**	**-0.7**
ARSB	**Arslanbob**	**7.67**	**315**	P		**Pn**	**21 46 18.6**	**-0.7**
KBK	**Karagaybulak**	**7.69**	**330**	P		**Pn**	**21 46 22.9**	**+3.3**
	SNR=8.1							
AAK	**Ala-Archa**	**7.86**	**327**	Pn		**Pn**	**21 46 24.0**	**+2.0**
	comp=N,0.5nm,0.3s,baz=148,slow=9.2,SNR=12							
AAK				Pg		**Pb**	**21 46 46.1**	**+2.3**
	comp=N,1.8nm,0.3s,baz=262,slow=19,SNR=7.3							
AAK				Lg		Lg	21 48 27.7	
	comp=N,3.8nm,0.3s,baz=338,slow=22,SNR=5.8							
AAK				LR		LR	21 49 43.6	
	comp=N,108nm,18.0s,baz=152,slow=40							
	comp=N,1.9nm,0.4s							
AAK	**Ala-Archa**	**7.86**	**327**	Pn		**Pn**	**21 46 22.9**	**+0.8**
AAK	**Ala-Archa**	**7.86**	**327**	⇑Pn		**Pn**	**21 46 23.6**	**+1.6**
	comp=N,39nm,0.6s							
AAK				⇑Pg		**Pb**	**21 46 47.8**	**+3.9**
	comp=N,74nm,0.6s							
AAK				⇑Lg		Lg	21 48 29.3	
	comp=N,2μm,1.5s							
FRU1	**Bishkek**	**7.95**	**329**	Pn		**Pn**	**21 46 22.9**	**-0.2**
FRU1	**Bishkek**	**7.95**	**329**	P		**Pn**	**21 46 22.9**	**-0.2**
CHMS	**Chumysh**	**8.05**	**330**	P		**Pn**	**21 46 26.5**	**+2.0**
	SNR=12							
EKS2	**Erkin-Say**	**8.21**	**325**	P		**Pn**	**21 46 29.3**	**+2.6**
	SNR=9.2							
BTK	**Batken**	**8.38**	**301**	Pn		**Pn**	**21 46 29.0**	**-0.1**
BTK	**Batken**	**8.38**	**301**	P		**Pn**	**21 46 29.0**	**-0.1**
KUDL	**Kundal**	**8.56**	**203**	*eP*		**Pn**	**21 46 31.6**	**+0.1**
KUDL				*eS*		**Sn**	**21 48 05.1**	**-3.2**
KUDL				IAML			21 48 09.6	
	comp=N,111nm,0.7s							
KUDL				IAML			21 48 11.2	
	comp=E,113nm,0.8s							
CHGR	**Chuyangaron**	**9.15**	**289**	Pn		**Pn**	**21 46 38.1**	**-1.6**
CHGR	**Chuyangaron**	**9.15**	**289**	*de*P		**Pn**	**21 46 40.1**	**+0.4**
KBL	**Kabul**	**9.27**	**263**	Pn		**Pn**	**21 46 39.9**	**-1.4**
KBL	**Kabul**	**9.27**	**263**	P		**Pn**	**21 46 39.9**	**-1.4**
WMQ	**Urumqi**	**9.59**	**34**	P		**Pn**	**21 46 48.0**	**+2.5**
WMQ				S		**Sn**	**21 48 33.1**	**-0.2**
WMQ				SMN				
	comp=E,71nm,1.5s							
WMQ				SME				
	comp=E,44nm,1.3s							
SHAA	**Shahritus**	**9.80**	**282**	Pn		**Pn**	**21 46 46.8**	**-1.6**
EVN	**Everest**	**9.88**	**144**	Pn		**Pn**	**21 46 50.4**	**+0.2**
KK31	**Karatay Array**	**10.22**	**316**	Pn		**Pn**	**21 46 52.4**	**-1.8**
KK31	**Karatay Array**	**10.22**	**316**	⇑Pn		**Pn**	**21 46 52.7**	**-1.4**
	comp=E,1.2nm,0.3s,baz=132,slow=11,SNR=20							
KK31				⇑Sn		**Sn**	**21 48 45.1**	**-3.7**
	comp=E,4.3nm,0.5s,baz=328,slow=63,SNR=5.6							
KK31	**Karatay Array**	**10.22**	**316**	P		**Pn**	**21 46 52.4**	**-1.8**
KKAR	**Karatay Array**	**10.22**	**316**	Pn		**Pn**	**21 46 52.4**	**-1.8**
KKAR	**Karatay Array**	**10.22**	**316**	P		**Pn**	**21 46 52.4**	**-1.8**
JHNI	**Jhansi**	**10.73**	**188**	*eP*		Pn	21 46 59.1	-2.1
MAKZ	**Makanchi**	**10.75**	**6**	Pn		**Pn**	**21 47 01.5**	**+0.1**
MAKZ	**Makanchi**	**10.75**	**6**	⇑Pn		**Pn**	**21 47 01.6**	**+0.2**
	comp=E,30nm,0.8s							
MAKZ				⇑Sn		**Sn**	**21 48 56.7**	**-5.2**
	comp=E,22nm,1.2s							
MAKZ	**Makanchi**	**10.75**	**6**	P		**Pn**	**21 47 01.5**	**+0.1**
MK31	**Makanchi Array**	**10.77**	**8**	⇑Pn		**Pn**	**21 47 01.1**	**-0.5**
	comp=E,4.5nm,0.5s,baz=185,slow=13,SNR=93							
MK31				⇑Sn		**Sn**	**21 48 57.6**	**-4.6**
	comp=E,18nm,0.8s,baz=189,slow=24,SNR=9.2							
MK31	**Makanchi Array**	**10.77**	**8**	*ce*P		**Pn**	**21 47 01.5**	**-0.2**
MKAR	**Makanchi Array**	**10.77**	**8**	Pn		**Pn**	**21 47 01.8**	**+0.2**
	comp=E,1.7nm,0.3s,baz=183,slow=12,SNR=57							
MKAR				Sn		**Sn**	**21 48 59.1**	**-3.2**
	comp=E,2.4nm,0.3s,baz=191,slow=24,SNR=8.0							
MKAR				LR		LR	21 52 09.0	
	comp=E,80nm,20.2s,baz=174,slow=43							
	comp=E,5.7nm,0.5s							
MKAR	**Makanchi Array**	**10.77**	**8**	Pn		**Pn**	**21 47 01.1**	**-0.5**
MKAR	**Makanchi Array**	**10.77**	**8**	P		**Pn**	**21 47 01.1**	**-0.5**
AJM	**Ajmer**	**10.79**	**208**	*eP*		**Pn**	**21 47 01.2**	**-0.8**
AJM				*eS*		**Sn**	**21 48 57.0**	**-6.0**
AJM				IAML			21 49 05.8	
	comp=E,113nm,0.7s							
AJM				IAML			21 49 06.4	
	comp=N,111nm,1.0s							
BHPL	**Bhopal**	**13.07**	**191**	*eP*		**Pn**	**21 47 31.7**	**-1.6**
KURBB	**Kurchatov Arra**	**14.54**	**356**	Pn		**Pn**	**21 47 50.9**	**-2.2**
	baz=180,slow=12,SNR=15							
KURBB				Lg		Lg	21 52 07.5	
	comp=N,0.1nm,0.3s,baz=181,slow=25,SNR=4.1							
	comp=N,1.2nm,0.9s							
DGZ	**Jazzator, Alta**	**14.55**	**19**	*i*eP		**Pn**	**21 47 52.8**	**-0.6**
KURK	**Kurchatov**	**14.63**	**356**	Pn		**Pn**	**21 47 51.5**	**-2.8**
KURK	**Kurchatov**	**14.63**	**356**	⇑eP		**Pn**	**21 47 51.9**	**-2.4**
KURK				pmax		pmax		
	comp=E,9.0nm,1.3s							
HRA	**Herat**	**14.79**	**269**	Pn		**Pn**	**21 47 54.2**	**-2.6**
GTA2	**Gaotai**	**15.80**	**72**	*eP*		Pn	21 48 01.9	-8.3
GTA2				pP		P	21 48 06.2	-7.9
GTA2				pmax		pmax		
	comp=E,1.0nm,2.5s							
ZAA0	**Zalesovo Array**	**18.11**	**9**			**Pn**	**21 48 38.4**	**-0.5**
ZALV	**Zalesovo Beam**	**18.11**	**9**	P		**Pn**	**21 48 37.9**	**-1.0**
	comp=E,0.5nm,0.3s,baz=196,slow=11,SNR=30							
ZALV				LR		LR	21 56 19.1	
	comp=Z,39nm,19.9s,baz=93,slow=39							
	comp=Z,7.0nm,0.6s							
ZALV	**Zalesovo Beam**	**18.11**	**9**			**Pn**	**21 48 38.7**	**-0.1**
ZALV	**Zalesovo Beam**	**18.11**	**9**	*i* P		**P**	**21 48 41.7**	**+2.5**
ZALV				pmax		pmax		
	comp=E,7.0nm,0.6s							
BVAR	**Borovoye Array**	**18.25**	**341**	P		**Pn**	**21 48 41.1**	**+0.3**
	comp=E,0.2nm,0.3s,baz=146,slow=11,SNR=24							
BVAR				Lg		Lg	21 54 08.2	
	baz=154,slow=27,SNR=5.0							
BVAR				LR		LR	21 55 07.5	
	comp=E,26nm,19.9s,baz=291,slow=35							
	comp=E,6.7nm,0.6s							
BORK	**Borovoye**	**18.29**	**341**			**Pn**	**21 48 40.7**	**-0.5**
BORK				IAmb		IAmb	21 48 47.8	
	comp=E,9.7nm,0.7s							
BORK	**Borovoye**	**18.29**	**341**	*d i* P		**Pn**	**21 48 41.7**	**+0.5**
BORK				pmax		pmax		
	comp=Z,15nm,0.9s							
KNGR	**Kungurtug, Tuv**	**19.10**	**35**	⇓eP		**Pn**	**21 48 54.0**	**+2.8**
KNGR				pmax		pmax		
	comp=Z,10.0nm,0.9s							
AB31	**Akbulak array**	**19.77**	**318**	P		**P**	**21 48 56.8**	**-0.8**
ABKAR	**Akbulak array**	**19.77**	**318**	P		**P**	**21 48 56.9**	**-0.7**
PZH	**PanZhiHua**	**20.71**	**112**	P		**P**	**21 49 10.9**	**+2.9**
AKTO	**Aktyubinsk**	**21.46**	**319**	P		**P**	**21 49 14.2**	**-1.7**
	comp=Z,5.0nm,0.7s,baz=114,slow=7.8,SNR=11							
	comp=Z,5.0nm,0.7s							
SONM	**Songino Array**	**22.59**	**51**	P		**P**	**21 49 29.4**	**+1.3**
	comp=Z,1.5nm,0.7s,baz=242,slow=11,SNR=12							
SONM				LR		LR	21 59 23.5	
	comp=Z,46nm,19.8s,baz=247,slow=40							
	comp=Z,1.5nm,0.7s							
SONM	**Songino Array**	**22.59**	**51**	P		**P**	**21 49 29.6**	**+1.5**
SONM	**Songino Array**	**22.59**	**51**	P		**P**	**21 49 29.6**	**+1.5**
SONM				pmax		pmax		
	comp=Z,2.0nm,0.9s							
TLY	**Talaya**	**22.80**	**40**	LR		LR	21 59 30.5	
	comp=Z,61nm,19.7s,baz=246,slow=40							
ULN	**Ulaanbaatar**	**23.01**	**51**	⇑eP		**P**	**21 49 35.7**	**+3.1**
ULN				pmax		pmax		
	comp=Z,14nm,3.6s							
CMAR	**Chiang Mai Arr**	**24.15**	**132**	P		**P**	**21 49 42.6**	**-1.2**
	comp=Z,0.8nm,0.4s,baz=324,slow=9.5,SNR=4.6							
	comp=Z,0.8nm,0.4s							
CMAR	**Chiang Mai Arr**	**24.15**	**132**	P		**P**	**21 49 43.5**	**-0.3**
CMAR	**Chiang Mai Arr**	**24.15**	**132**	P		**P**	**21 49 43.5**	**-0.3**
HHC	**Hu-ho-hao-te**	**24.91**	**70**	*eP*		**P**	**21 49 49.8**	**-0.9**
HHC				pmax		pmax		
	comp=Z,4.0nm,0.6s							
ARTI	**Arti**	**25.07**	**331**	LR		LR	22 00 33.9	
	comp=Z,54nm,19.8s,baz=102,slow=39							
ARTI	**Arti**	**25.07**	**331**	P		**P**	**21 49 50.9**	**-1.0**
ARTI				IAmb		IAmb	21 49 54.7	
	comp=Z,15nm,1.2s							
ARTI	**Arti**	**25.07**	**331**	*d i* P		**P**	**21 49 52.4**	**+0.6**
ARTI							21 50 23.1	
ARTI				S		**S**	**21 54 18.7**	**+2.6**
ARTI				SS		**SnSn**	**21 55 05.4**	**+0.4**
ARTI				pmax		pmax		
	comp=Z,11nm,1.1s							
PALK	**Pallekele**	**28.73**	**179**	LR		LR	22 00 53.2	
	comp=Z,33nm,18.7s,baz=222,slow=34							
SOC	**Sochi**	**31.72**	**296**	*eP*		**P**	**21 50 53.0**	**+1.6**
SOC				*e*			21 51 56.4	
SOC				*eS*		**S**	**21 56 01.6**	**+0.5**
SOC				*eSS*		**SnSn**	**21 57 47.0**	**-0.4**
SOC				MLR		MLR		
	comp=Z,916nm,31.0s							
NRIK	**Noril'sk**	**33.51**	**5**	P		**P**	**21 51 08.2**	**+1.5**
	comp=Z,2.6nm,0.8s,baz=177,slow=10.0,SNR=4.3							
	comp=Z,2.6nm,0.8s							
NRIK	**Noril'sk**	**33.51**	**5**	P		**P**	**21 51 07.1**	**+0.4**
NRIK				IAmb		IAmb	21 51 10.4	
	comp=Z,7.6nm,1.3s							
NRIK	**Noril'sk**	**33.51**	**5**	⇑eP		**P**	**21 51 07.9**	**+1.2**
NRIK				pmax		pmax		
	comp=Z,9.0nm,1.6s							
OBN	**Obninsk**	**35.21**	**317**	*eP*		**P**	**21 51 21.4**	**-0.2**
OBN				*e*			21 52 39.9	
OBN				*e*PPP		PPP	21 52 51.7	
OBN				*e*			21 53 48.5	
OBN				pmax		pmax		
	comp=Z,2.0nm,0.9s							
BR131	**Keskin Array S**	**36.60**	**290**	⇓eP		**P**	**21 51 33.7**	**-0.2**
BRTR	**Keskin Array B**	**36.60**	**290**	P		**P**	**21 51 33.3**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=113,slow=8.1,SNR=5.5							
	comp=Z,0.5nm,0.6s							
BRTR	**Keskin Array B**	**36.60**	**290**	P		**P**	**21 51 33.6**	**-0.3**
BRTR	**Keskin Array B**	**36.60**	**290**	P		**P**	**21 51 33.6**	**-0.3**
GSI	**Gunungsitoli**	**38.21**	**151**	P		**P**	**21 51 45.8**	**-1.8**
GSI				IAmb		IAmb	21 52 01.0	
	comp=Z,14nm,1.1s							
YAK	**Yakutsk**	**40.03**	**34**	LR		LR	22 10 35.1	
	comp=Z,42nm,18.5s,baz=286,slow=39							
MLR	**Muntele Rosu**	**41.43**	**300**	P		**P**	**21 52 12.6**	**-1.6**
MLR				IAmb		IAmb	21 52 37.1	
	comp=Z,3.9nm,1.0s							
MLR	**Muntele Rosu**	**41.43**	**300**	P		**P**	**21 52 12.6**	**-1.6**
MLR				pmax		pmax		
	comp=Z,4.0nm,1.0s							
FIA1	**FINESS Array S**	**42.04**	**324**	P		**P**	**21 52 17.0**	**-1.8**
FINES	**FINESS Array B**	**42.04**	**324**	P		**P**	**21 52 17.9**	**-0.9**
	comp=Z,1.8nm,0.6s,baz=97,slow=9.4,SNR=8.0							
	comp=Z,1.8nm,0.6s							
FINES	**FINESS Array B**	**42.04**	**324**	P		**P**	**21 52 18.0**	**-0.9**
ARCES	**ARCESS Array B**	**44.44**	**336**	P		**P**	**21 52 36.0**	**-2.2**
	comp=Z,0.9nm,0.5s,baz=116,slow=8.6,SNR=5.8							
ARCES				LR		LR	22 13 43.2	
	comp=Z,58nm,18.1s,baz=218,slow=40							
	comp=Z,0.9nm,0.5s							
ARCES	**ARCESS Array B**	**44.44**	**336**	P		**P**	**21 52 37.3**	**-0.9**
ARCES				IAmb		IAmb	21 53 02.0	
	comp=Z,7.6nm,1.1s							
ARCES	**ARCESS Array B**	**44.44**	**336**	P		**P**	**21 52 37.3**	**-0.9**
ARCES				pmax		pmax		
	comp=Z,8.0nm,1.2s							
HFS	**Hagfors**	**47.96**	**322**	P		**P**	**21 53 05.8**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=104,slow=6.1,SNR=2.0							
	comp=Z,1.9nm,0.8s							
NC602	**NORSAR Array S**	**49.01**	**323**	P		**P**	**21 53 13.8**	**-0.2**
NC303	**NORSAR Array S**	**49.07**	**323**	P		**P**	**21 53 14.0**	**-0.6**
NB2	**NORSAR Subarra**	**49.16**	**323**	P		**P**	**21 53 15.0**	**-0.2**
	comp=Z,6.3nm,1.1s,baz=87,slow=7.9							
NOA	**NORSAR Array B**	**49.16**	**323**	P		**P**	**21 53 15.2**	**0.0**
	comp=Z,0.9nm,0.7s,baz=89,slow=7.5,SNR=4.6							
NOA				LR		LR	22 14 49.3	
	comp=Z,32nm,18.9s,baz=250,slow=37							
	comp=Z,0.9nm,0.7s							
GERES	**GERESS Array B**	**49.17**	**307**	P		**P**	**21 53 14.2**	**-1.4**
	comp=Z,0.6nm,0.8s,baz=70,slow=12,SNR=4.4							
	comp=Z,0.6nm,0.8s							
MA2	**Magadan**	**50.02**	**39**	⇑eP		**P**	**21 53 22.7**	**+0.9**
MA2				pmax		pmax		
	comp=Z,8.0nm,1.3s							
LODK	**Lodwar**	**52.58**	**242**	P		**P**	**21 53 42.0**	**+0.4**
LODK				IAmb		IAmb	21 53 46.5	
	comp=Z,4.2nm,0.9s							
EKA	**Eskdalemuir Ar**	**57.65**	**318**	P		**P**	**21 54 17.0**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=74,slow=7.2,SNR=2.0							
	comp=Z,1.1nm,0.6s							
EKA	**Eskdalemuir Ar**	**57.65**	**318**	P		**P**	**21 54 17.0**	**-0.6**
EKA	**Eskdalemuir Ar**	**57.65**	**318**	P		**P**	**21 54 17.0**	**-0.6**
ESDC	**Sonseca Array**	**64.11**	**301**	P		**P**	**21 55 01.0**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=74,slow=5.1,SNR=4.3							
	comp=Z,0.5nm,0.7s							
SHEM	**Shemya Is, Ala**	**64.36**	**42**	LR		LR	22 24 58.4	
	comp=Z,30nm,20.9s,baz=216,slow=38							
TULEG	**Thule**	**65.92**	**352**	P		**P**	**21 55 11.1**	**-2.0**
TULEG				IAmb		IAmb	21 55 21.5	
	comp=Z,2.9nm,1.0s							
C19K	**Lookout Ridge**	**66.30**	**20**	P		**P**	**21 55 15.4**	**-0.3**
C19K				IAmb		IAmb	21 55 55.0	
	comp=Z,2.2nm,1.2s							
IMAR	**Indian Mountai**	**70.08**	**21**	P		**P**	**21 55 38.4**	**-1.0**
BMAR	**Burnt Mountain**	**71.35**	**17**	P		**P**	**21 55 46.2**	**-0.9**
ILAR	**Eielson Array**	**72.89**	**19**	P		**P**	**21 55 55.9**	**-0.4**
	comp=Z,0.6nm,0.9s,baz=302,slow=6.1,SNR=5.5							
	comp=Z,0.6nm,0.9s							
ILAR	**Eielson Array**	**72.89**	**19**	P		**P**	**21 55 56.1**	**-0.2**
ILAR	**Eielson Array**	**72.89**	**19**	P		**P**	**21 55 56.1**	**-0.2**
TORD	**Torodi Ar. Bea**	**73.17**	**274**	P		**P**	**21 55 57.0**	**-1.8**
	comp=Z,1.2nm,0.4s,baz=46,slow=3.0,SNR=24							
	comp=Z,1.2nm,0.4s							
RND	**Reindeer**	**73.41**	**21**	P		**P**	**21 56 00.3**	**+0.8**
RND	**Reindeer**	**73.41**	**21**	P		**P**	**21 56 00.3**	**+0.8**
RND				pmax		pmax		
	comp=Z,15nm,1.5s							
WB0	**Warramunga Arr**	**75.59**	**128**	P		**P**	**21 56 12.1**	**-0.5**
WB0				IAmb		IAmb	21 56 15.0	
	comp=Z,4.6nm,0.8s							
WRA	**Warramunga Arr**	**75.68**	**128**	P		**P**	**21 56 12.4**	**-0.8**
	comp=Z,2.6nm,0.9s,baz=324,slow=5.6,SNR=16							
	comp=Z,2.6nm,0.9s							
WRA	**Warramunga Arr**	**75.68**	**128**	P		**P**	**21 56 12.2**	**-1.0**
WRA	**Warramunga Arr**	**75.68**	**128**	P		**P**	**21 56 12.2**	**-1.0**
ASAR	**Alice Springs**	**78.16**	**131**	P		**P**	**21 56 26.3**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=316,slow=5.3,SNR=12							
	comp=Z,1.2nm,0.8s							
YKA	**Yellowknife Ar**	**80.99**	**7**	P		**P**	**21 56 41.5**	**-0.5**
	comp=Z,0.2nm,0.7s,baz=342,slow=6.1,SNR=3.9							
	comp=Z,0.2nm,0.7s							
YKA	**Yellowknife Ar**	**80.99**	**7**	*i* P		**P**	**21 56 42.7**	**+0.7**

*BGR **09** 22:18:12.7,30.°10N×22.°96E,h10km,mb4.2*
*IDC **09** 22:19:28.9±0.7,37.°79N×21.°43E,h0km,mb4.1/18,*
mbtmp4.0/32,ML3.6/12,MS3.2/14, Error ellipse:
s-maj=13.5km s-min=11.7km az=9.0
*MOS **09** 22:19:28.4±1.2,37.°72N×21.°33E,h13km,mb4.5/23, Error*
ellipse: s-maj=7.9km s-min=3.8km az=76.4
*MCSM **09** 22:19:29.6±0.4,38.°N±4.°×2.°1E±.°,h10km,mb4.1,mB4.5,*
MLv4.2,Mw(mB)3.6
*NAO **09** 22:19:29.4,38.°26N×24.°70E,h10km, MB4.4*
*NEIC **09** 22:19:30.3±1.5,37.°75N±0.°06×21.°46E±0.°09,h10km±1km,*
mb4.4/33, Error ellipse: s-maj=14.5km s-min=5.9km
az=233.0
*THE **09** 22:19:31.6,37.°7N±0.°8×21.°4E±0.°8,h0km±1km,M3.9/35,*
MLh3.9/35
*ATH **09** 22:19:31.1,37.°68N×21.°38E,h20km,Mw4.0,Moment*
Tensor Solution. s8 Moment tensor: Mrr1.26; Mθθ5.74;
Mϕϕ-7.00; Mrθ6.15; Mrϕ1.73; Mθϕ6.05; Fault plane solution:
NP1:ϕ=37.00000°,δ86.00000°,λ128.00000°. NP2:
ϕ=132.00000°,δ38.00000°,λ7.00000°.
*PDG **09** 22:19:32.3±0.4,37.°95N×21.°29E,h10km±4km,ML4.2/13*
Error ellipse: s-maj=4.0km s-min=2.6km az=90.0
*BEO **09** 22:19:36.4±2.8,37.°83N×21.°04E,h51km±9km,ML3.5/9*

ISC 09 22:19:31.5±0.7,**37.°72N**±0.°02×**21.°41E**±0.°02,**h22**km±5km,
n416,σ1ᵗ**78**/476,**mb4.3**/46,**MS3.3**/6,**34C-31D,Southern**
Greece

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

TSLK Tsoukalades, L 1.26 332 P Pb 22 19 55.4 +0.8
TSLK Tsoukalades, L 1.26 332 P Pb 22 19 54.5 0.0
LTK Loutraki 1.27 76 P Pb 22 19 56.3 +1.5
LTK Loutraki 1.27 76 P Pb 22 19 55.1 +0.4
MAKR Makrakomi, Fth 1.42 23 P Pb 22 19 57.8 +0.6
AXAR Agios Charalam 1.44 43 P Pb 22 19 58.3 +0.7
AXAR Agios Charalam 1.44 43 P Pb 22 19 58.5 +0.9
MET3 Ano Fanari,Met 1.45 95 P Pb 22 19 58.3 +0.5
ART2 Arta 1.47 347 P Pb 22 19 58.1 0.0
AGG Agios Georgios 1.49 29 P Pb 22 19 59.3 +0.8
MET2 Kameni Chora, 1.53 93 P Pb 22 19 59.6 +0.5
MET5 Makryloggos,Me 1.55 93 P Pb 22 20 00.1 +0.6
MET6 Megalochori,Me 1.55 94 P Pb 22 20 00.1 +0.6
VIL2 Platees 1.55 71 P Pb 22 19 59.6 +0.1
LKR Lokris 1.56 53 P Pb 22 20 00.2 +0.5
LKR Lokris 1.56 53 P Pb 22 19 59.4 -0.3
VLI Veliai 1.57 129 P Pb 22 20 00.5 +0.6
MET1 Methana Town, 1.57 94 P Pb 22 20 00.6 +0.7
MET4 Agioi Theodoro 1.58 93 P Pb 22 20 00.8 +0.8
ATAL Atalanti 1.60 52 P Pb 22 20 00.5 +0.1
ATAL Atalanti 1.60 52 P Pb 22 20 00.3 -0.1
TETR Tetrakomo, Epi 1.63 356 P Pb 22 20 01.1 +0.2
MAGU Magoula 1.70 77 P Pb 22 20 01.7 -0.4
STFN Stefani 1.75 74 P Pb 22 20 02.6 -0.3
PRMD Pramanda 1.83 352 P Pb 22 20 05.2 +0.9
ATH Athens Observa 1.84 81 P Pb 22 20 03.7 -0.8
VLY Voula,Athens 1.89 85 P Pb 22 20 04.5 -0.9
THL Klokotos Trika 1.91 14 P Pb 22 20 05.6 +0.1
PTL Penteli 1.97 80 P Pb 22 20 05.3 -1.4
DION Dionisos Attik 2.03 79 P Pb 22 20 06.3 -1.4
KEK Kerkira 2.36 328 Pn Pn 22 20 10.0 +1.1
OHR Ohrid 3.42 352 *i* Pn Pn 22 20 27.2 +3.6
IDI Anoyia 3.71 130 Pn Pn 22 20 29.4 +1.9
15nm,0.8s,baz=283,slow=4.9,SNR=14
IDI Sn **Sn 22 21 13.6 +3.1**
13nm,0.3s,baz=338,slow=18,SNR=5.6
IDI LR LR 22 21 57.8
comp=Z,182nm,20.3s,baz=154,slow=40
VAY Valandovo 3.71 14 *i* Pn Pn 22 20 30.4 +3.0
SRS Serrai 3.79 26 *e*Pn Pn 22 20 31.5 +2.9
SRS *e*Sn **Sn 22 21 13.0 +0.5**
TIP Timpagrande 3.93 293 ⇓P Pn 22 20 31.7 +1.2
TIP ⇓S **Sn 22 21 16.7 +0.7**
TIP Timpagrande 3.93 293 Pn Pn 22 20 30.9 +0.3
TIP Timpagrande 3.93 293 Pn Pn 22 20 31.1 +0.5
MMB Musomishta 4.23 25 *i* P Pn 22 20 37.8 +3.2
MMB S **Sn 22 21 27.8 +4.4**
KKB Krupnik 4.33 17 *i* P Pn 22 20 39.2 +3.2
KKB S **Sn 22 21 28.8 +3.1**
EZN Ezine 4.38 60 Pn Pn 22 20 35.9 -0.7
CEL Celeste 4.39 279 Pn Pn 22 20 36.6 -0.3
CEL Celeste 4.39 279 Pn Pn 22 20 36.3 -0.6
CEL Sn **Sn 22 21 26.4 -0.9**
ULC Ulcinj 4.56 339 ⇑*i*Pn Pn 22 20 39.3 +0.2
ULC *i* Sn **Sn 22 21 29.4 -2.0**
MATE Matera 4.69 310 ⇓P Pn 22 20 41.8 +1.0
RDO Rodhopi 4.69 42 Pn Pn 22 20 43.2 +2.4
RZN Rozhen 4.73 32 P Pn 22 20 44.4 +2.8
DRME Dracevica, Mon 4.78 340 ⇑*i*Pn Pn 22 20 43.4 +1.2
DRME *i* Sn **Sn 22 21 34.6 -2.3**
ALN Alexandroupoli 4.80 47 Pn Pn 22 20 45.2 +2.8
ALN Alexandroupoli 4.80 47 P Pn 22 20 45.2 +2.8
BOSS Bosilegrad 4.84 9 *e*Pn Pn 22 20 45.6 +2.6
CUC Castrocucco 4.92 299 Pn Pn 22 20 46.6 +2.5
BUM Brajici-Budva 4.97 338 *e*Pn Pn 22 20 44.9 +0.1
BUM *i* Sn **Sn 22 21 39.8 -1.8**
PDG Podgorica 4.99 341 ⇓P Pn 22 20 46.0 +1.0
PDG ⇓S **Sn 22 21 40.6 -1.4**
PDG Podgorica 4.99 341 Pn Pn 22 20 45.2 +0.2
PDG Podgorica 4.99 341 ⇑*i*Pn Pn 22 20 45.6 +0.6
PDG *i* Sn **Sn 22 21 40.3 -1.7**
PDG Podgorica 4.99 341 *e*Pn Pn 22 20 45.2 +0.2
PVY Plav 5.00 348 ⇓*i*Pn Pn 22 20 46.4 +1.1
PVY *i* Sn **Sn 22 21 40.6 -1.8**
PLNA Plana 5.00 17 P Pn 22 20 49.0 +3.7
VTS Vitosha 5.09 15 P Pn 22 20 49.8 +3.2
VTS Vitosha 5.09 15 *e*Pn Pn 22 20 49.5 +2.9
VTS *e*Sn **Sn 22 21 41.7 -3.0**
BARS Barje 5.11 3 *e*Pn Pn 22 20 48.5 +1.9
BARS *e*Sn **Sn 22 20 40.4 -4.4**
PLD Plovdiv 5.12 29 *e*Pn Pn 22 20 49.7 +3.0
CEME Cevo 5.19 339 ⇑*i*Pn Pn 22 20 48.3 +0.5
CEME *i* Sn **Sn 22 21 44.6 -2.4**
HCY Herceg Novi 5.23 336 ⇑*i*Pn Pn 22 20 49.0 +0.7
HCY *i* Sn **Sn 22 21 45.4 -2.5**
HCY Herceg Novi 5.23 336 *e*Pn Pn 22 20 48.9 +0.7
ACER Acerenza 5.24 308 Pn Pn 22 20 48.8 +0.3
IVA Berane 5.28 348 ⇓*i*Pn Pn 22 20 50.5 +1.4
IVA *i* Sn **Sn 22 21 47.2 -2.1**
KOME Kolasin 5.33 345 ⇑*i*Pn Pn 22 20 50.9 +1.1
KOME *i* Sn **Sn 22 21 48.3 -2.2**
NKME Niksic 5.38 340 ⇑*i*Pn Pn 22 20 51.0 +0.5
NKME *i* Sn **Sn 22 21 50.1 -1.7**
BALB Balikesir 5.42 67 Pn Pn 22 20 54.0 +3.2
SELS Selova 5.50 358 *e*Pn Pn 22 20 53.0 +0.9
SELS *e*Sn **Sn 22 21 50.2 -4.5**
TREB Trebinje 5.52 336 *e*Pn Pn 22 20 52.0 -0.3
VAE Valguarnera 5.56 270 Pn Pn 22 20 55.1 +2.2
3.5nm,0.3s,baz=359,slow=22,SNR=10
VAE Sn **Sn 22 21 56.8 +0.6**
11nm,0.3s,baz=220,slow=9.2,SNR=7.1
BRY Bratogost 5.63 338 ⇓*i*Pn Pn 22 20 54.1 +0.2
BRY *i* Sn **Sn 22 21 54.7 -3.2**
BRY Bratogost 5.63 338 *e*Pn Pn 22 20 53.9 0.0
RAFF Raffo Rosso 5.63 267 Pn Pn 22 20 53.1 -0.7
ZAPS Zavoj 5.63 9 *e*Pn Pn 22 20 55.9 +2.1
SJES Sjenica 5.65 349 *e*Pn Pn 22 20 55.7 +1.6
SJES *e*Sn **Sn 22 21 51.9 -6.4**
SJES Sjenica 5.65 349 *e*Pn Pn 22 20 55.5 +1.4
MANT Manisa 5.69 80 Pn Pn 22 20 56.6 +1.8
UPM Unac-Piva 5.80 342 ⇓*i*Pn Pn 22 20 56.4 0.0
UPM *i* Sn **Sn 22 21 59.4 -2.9**
UPM Unac-Piva 5.80 342 *e*Pn Pn 22 20 57.1 +0.7
PLE Pljevlja 5.82 345 ⇑*i*Pn Pn 22 20 57.4 +0.9
PLE *i* Sn **Sn 22 22 00.2 -2.3**
WDD Wied Dalam 5.84 253 Pn Pn 22 20 56.7 +0.1
GOCS Kraljevo Serbi 5.86 356 *e*Pn Pn 22 20 58.5 +1.5
GOCS *e*Sn **Sn 22 21 58.0 -5.5**
KLINJ Klinje 5.86 339 *e*Pn Pn 22 20 57.0 0.0
MPEP Malo Peshtene 5.91 17 P Pn 22 21 01.8 +4.2
IVAS Ivanjica 5.93 351 *e*Pn Pn 22 20 58.1 +0.1
IVAS *e*Sn **Sn 22 22 00.1 -5.2**
SGRT San Giovanni R 5.95 314 Pn Pn 22 20 58.4 +0.2
BLKB Belogradchik 5.98 9 *e*Pn Pn 22 21 01.3 +2.7
RUDO Rudo 6.10 346 *e*Pn Pn 22 21 00.2 0.0
ZAGS Zajecar 6.12 6 *e*Pn Pn 22 21 02.2 +1.6
PLVB Pleven 6.17 22 ⇑P Pn 22 21 03.7 +2.5
GRUS Gruza 6.19 355 *e*Pn Pn 22 21 02.6 +1.1
ELND Elena 6.22 32 ⇓P Pn 22 21 05.0 +3.0
PAOL Paolisi 6.25 304 Pn Pn 22 21 04.5 +2.1
BBLS Lazi&#263i 6.33 347 *e*Pn Pn 22 21 04.0 +0.5
BBLS *e*Sn **Sn 22 22 07.9 -7.2**
BBLS Lazi&#263i 6.33 347 *e*Pn Pn 22 21 04.0 +0.5
DIVS Divibare 6.47 351 *e*Pn Pn 22 21 05.9 +0.5
DIVS *e*Sn **Sn 22 22 12.6 -5.9**
CTYL Yalikoy Yolu 6.50 53 Pn Pn 22 21 06.4 +0.6
0.1nm28nm,0.8s
TRUS Trudelj 6.55 354 *e*Pn Pn 22 21 06.8 +0.4
TRUS *e*Sn **Sn 22 22 14.7 -5.6**
VLAD Vladila 6.67 19 ⇑P Pn 22 21 11.3 +3.2
KUBS Kucevo 6.69 2 *e*Pn Pn 22 21 08.3 -0.1
TEKS Tekeris 6.97 349 *e*Pn Pn 22 21 11.8 -0.5
AVAS Avala Beograd 7.01 355 *e*Pn Pn 22 21 12.5 -0.2
MDVR Moldovita 7.06 2 ⇑P Pn 22 21 14.6 +1.1
NEF NEVSHA 7.12 37 P Pn 22 21 17.2 +2.9
INTR Introdacqua 7.19 309 Pn Pn 22 21 17.3 +2.0
HERR Herculane 7.20 6 ⇑P Pn 22 21 16.7 +1.4
HUMR Humele 7.32 20 ⇑P Pn 22 21 18.7 +1.7
VRSS Vrsac 7.40 360 *e*Pn Pn 22 21 17.7 -0.4
FRGS Fruska Gora 7.53 351 *e*Pn Pn 22 21 19.8 -0.1
FRGS Fruska Gora 7.53 351 *e*Pn Pn 22 21 19.5 -0.4
AQU L'Aquila 7.69 310 *e*Pn Pn 22 21 25.5 +3.3
BLY Banja Luka 7.71 337 ⇓P Pn 22 21 22.8 +0.4
BLY Banja Luka 7.71 337 *e*Pn Pn 22 21 22.2 -0.2
GZR Gura Zlata 7.74 7 ⇓P Pn 22 21 24.6 +1.8
GZR Gura Zlata 7.74 7 P Pn 22 21 24.6 +1.8
CAMP Campotosto 7.79 311 Pn Pn 22 21 25.7 +2.1
BZS Buzias 7.90 1 ⇑P Pn 22 21 26.9 +2.0
BZS Buzias 7.90 1 P Pn 22 21 26.9 +2.0
LOT Lotru 7.93 12 ⇓P Pn 22 21 27.1 +1.7

ICOR Ion Corvin 8.02 35 ⇓P Pn 22 21 30.4 +3.9
ARR Arges 8.02 17 ⇓P Pn 22 21 29.3 +2.7
NRCA Norcia 8.14 311 Pn Pn 22 21 29.9 +1.6
VOIR 8.18 18 ⇑P Pn 22 21 31.4 +2.5
VOIR 8.18 18 P Pn 22 21 31.4 +2.5
FDMO Fiordimonte 8.28 313 Pn Pn 22 21 32.6 +2.4
ISR Istrita 8.34 26 ⇓P Pn 22 21 32.8 +1.8
ISR Istrita 8.34 26 P Pn 22 21 32.8 +1.8
MLR Muntele Rosu 8.48 22 Pn Pn 22 21 34.3 +1.3
0.7nm,0.3s,baz=134,slow=11,SNR=14
MLR LR LR 22 25 40.8
comp=Z,160nm,18.5s,baz=206,slow=44
3.2nm,0.7s
MLR Muntele Rosu 8.48 22 ⇑P Pn 22 21 35.5 +2.5
MLR Muntele Rosu 8.48 22 Pn Pn 22 21 36.4 +3.4
MLR Muntele Rosu 8.48 22 P Pn 22 21 36.4 +3.4
NEHR Nehoiu 8.53 24 ⇑P Pn 22 21 36.1 +2.5
MORH Mrgy, Hungar 8.74 347 ⇑P Pn 22 21 36.3 -0.1
MORH Mrgy, Hungar 8.74 347 Pn Pn 22 21 35.2 -1.2
3.4nm,1.1s
MORH Mrgy, Hungar 8.74 347 *e*Pn Pn 22 21 35.3 -1.2
DOPR Dopca 8.76 19 ⇑P Pn 22 21 39.4 +2.6
COVR Voineasa-Covas 8.88 22 ⇑P Pn 22 21 41.2 +2.9
BOSR Bodos 8.93 19 ⇑P Pn 22 21 41.4 +2.3
OZUR 8.98 20 ⇓P Pn 22 21 42.4 +2.5
TURR Turia 9.01 21 ⇑P Pn 22 21 43.3 +3.0
PLOR Plostina 9.02 24 ⇑P Pn 22 21 42.9 +2.5
PLOR Plostina 9.02 24 P Pn 22 21 42.8 +2.5
MARR Marisel-Cluj 9.04 8 ⇑P Pn 22 21 42.7 +1.9
VRI Vrincioaia 9.06 24 ⇑P Pn 22 21 43.9 +3.0
VRI Vrincioaia 9.06 24 P Pn 22 21 43.8 +3.0
VRI Vrincioaia 9.06 24 Pn Pn 22 21 41.1 +0.3
24nm,0.7s
DRGR 9.12 6 ⇑P Pn 22 21 43.7 +2.0
DRGR 9.12 6 P Pn 22 21 43.7 +2.0
CRES Cresnjevec Ost 9.24 333 *i* Pn Pn 22 21 42.9 -0.5
CEY Cerknica 9.56 329 *e*Pn Pn 22 21 48.0 +0.2
BR105 Keskin Array S 9.75 74 Pn Pn 22 21 51.9 +1.4
3.7nm,0.9s
BR104 Keskin Array S 9.77 74 Pn Pn 22 21 50.7 0.0
BR131 Keskin Array S 9.77 74 ⇓*e*P Pn 22 21 51.2 +0.5
BRTR Keskin Array B 9.77 74 Pn Pn 22 21 53.6 +2.9
0.2nm,0.3s,baz=256,slow=13,SNR=10
1.5nm,0.7s
BRTR Keskin Array B 9.77 74 Pn 22 21 55.4 +4.7
BRTR Keskin Array B 9.77 74 P Pn 22 21 55.4 +4.7
TRI Trieste 9.82 327 Pn Pn 22 21 49.4 -1.8
TRI Trieste 9.82 327 P Pn 22 21 49.4 -1.8
MPLH Magyarpolny 9.87 344 Pn Pn 22 21 51.8 -0.2
26nm,2.5s
KEST Kesra 9.89 262 Pn Pn 22 21 54.0 +1.7
0.3nm,0.3s,baz=340,slow=8.4,SNR=1.8
5.3nm,0.9s
SABO M.te Sabotino 10.10 327 Pn Pn 22 21 53.9 -1.2
SOKA Soboth 10.12 334 *e*Pn Pn 22 21 55.2 -0.3
1.9nm,0.3s
SOKA *i* Sn **Sn 22 23 43.7 -4.7**
3.9nm,0.8s
OBKA Obir 10.15 332 *e*Pn Pn 22 21 57.0 +1.1
2.2nm,0.5s
OBKA *e*Sn **Sn 22 23 46.6 -2.5**
20nm,0.8s
PSZ Piszkesteto 10.26 354 ⇑P Pn 22 21 58.6 +1.2
PSZ Piszkesteto 10.26 354 Pn Pn 22 21 57.7 +0.4
PSZ Piszkesteto 10.26 354 P Pn 22 21 58.5 +1.2
BURAR Bucovina Array 10.28 15 ⇑P Pn 22 22 00.8 +3.1
BURAR Bucovina Array 10.28 15 P Pn 22 22 00.8 +3.1
SRO Srobarova 10.35 348 *e*P Pn 22 22 00.9 +2.5
SRO Srobarova 10.35 348 *e*PN Pn 22 22 00.9 +2.5
ARSA Arzberg 10.47 337 Pn Pn 22 22 00.2 0.0
ARSA Arzberg 10.47 337 *i* Pn Pn 22 22 00.2 0.0
1.8nm,0.4s
ARSA *i* Sn **Sn 22 23 54.7 -2.0**
1.2nm,0.4s
KECS Kecovo 10.78 357 *e*P Pn 22 22 05.5 +1.0
KECS Kecovo 10.78 357 *e*PN Pn 22 22 05.5 +1.0
CTI Castel Tesino 11.05 322 Pn Pn 22 22 07.5 -0.7
CTI Castel Tesino 11.05 322 P Pn 22 22 07.5 -0.7
MODS Modra-Piesok 11.07 346 *e*P Pn 22 22 08.8 +0.4
MODS Modra-Piesok 11.07 346 *e*PN Pn 22 22 08.8 +0.4
KBA Koelnbreinsper 11.09 330 *i* Pn Pn 22 22 09.4 +0.6
2.3nm,0.6s
KBA *e*Sn **Sn 22 24 08.0 -4.1**
1.8nm,0.5s
ABTA Abfaltersbach 11.17 327 *e*Pn Pn 22 22 10.6 +0.7
3.0nm,0.6s
ABTA *e*Sn **Sn 22 24 09.4 -4.6**
12nm,1.1s
MOA Molln 11.40 335 *i* Pn Pn 22 22 13.2 +0.3
1.7nm,0.3s
MOA *e*Sn **Sn 22 24 14.8 -4.8**
2.5nm,0.5s
BIOA Bad Ischl, Aus 11.49 333 *i* Pn Pn 22 22 14.0 -0.1
4.2nm,0.6s
BIOA *e*Sn **Sn 22 24 18.0 -3.7**
3.9nm,0.5s
LESA Schwarzleotal 11.64 329 *i* Pn Pn 22 22 16.5 +0.3
3.0nm,0.4s
LESA *e*Sn **Sn 22 24 21.3 -4.1**
3.0nm,0.4s
WTTA Wattenberg 11.95 326 *i* Pn Pn 22 22 22.1 +1.5
1.6nm,0.3s
WTTA *i* Sn **Sn 22 24 28.4 -4.8**
6.2nm,0.5s
WATA Walderalm 12.03 326 *e*Pn Pn 22 22 22.5 +0.8
2.4nm,0.4s
WATA *e*Sn **Sn 22 24 30.4 -4.8**
4.5nm,0.5s
VRAC Vranov 12.10 345 Pn Pn 22 22 22.7 +0.3
0.2nm,0.3s,baz=201,slow=17,SNR=2.4
VRAC LR LR 22 28 28.1
comp=Z,227nm,19.8s,baz=168,slow=45
1.9nm,0.7s
SQTA Sankt Quirin 12.11 325 *i* Pn Pn 22 22 24.0 +1.3
1.4nm,0.4s
SQTA *i* Sn **Sn 22 24 29.9 -7.2**
2.1nm,0.3s
FETA Feichten 12.19 323 *e*Pn Pn 22 22 23.9 +0.1
1.8nm,0.6s
FETA *e*Sn **Sn 22 24 34.5 -4.5**
1.5nm,0.4s
MOTA Moosalm 12.25 325 *i* Pn Pn 22 22 25.7 +1.1
1.4nm,0.3s
MOTA *i* Sn **Sn 22 24 37.6 -2.9**
4.1nm,0.6s
MMAI Mount Meron Ar 12.34 108 Pn Pn 22 22 26.1 +0.2
0.8nm,0.3s,baz=292,slow=13,SNR=3.5
MMAI Sn **Sn 22 24 38.4 -4.5**
0.7nm,0.3s,baz=312,slow=29,SNR=1.6
MMAI LR LR 22 28 36.1
comp=Z,54nm,19.7s,baz=267,slow=44
0.3nm,0.3s
DAVOX Davos/Dischmat 12.44 320 Pn Pn 22 22 27.6 +0.3
0.2nm,0.3s,baz=326,slow=20,SNR=1.6
DAVOX Sn Sn 22 24 31.7 -13
0.3nm,0.3s,baz=116,slow=14,SNR=3.0
DAVOX LR LR 22 29 12.9
comp=Z,105nm,18.5s,baz=79,slow=47
0.5nm,0.3s
GEC2 GERESS Array S 12.45 336 Pn Pn 22 22 27.8 +0.4
GERES GERESS Array B 12.45 336 Pn Pn 22 22 27.0 -0.4
baz=146,slow=13,SNR=15
GERES Sn **Sn 22 24 39.3 -6.0**
baz=155,slow=24,SNR=2.6
GERES LR LR 22 27 27.8
comp=Z,72nm,18.4s,baz=200,slow=39
2.0nm,0.6s
TUE Stuetta 12.51 318 Pn Pn 22 22 29.7 +1.5
RETA Reutte 12.51 325 *e*Pn Pn 22 22 29.9 +1.7
2.4nm,0.4s
RETA *i* Sn **Sn 22 24 43.5 -3.4**
3.0nm,0.6s
KHC Kasperske Hory 12.74 336 Pn Pn 22 22 31.4 +0.1
KHC Kasperske Hory 12.74 336 *e*P Pn 22 22 33.9 +2.6
KHC *e* 22 24 48.7
KHC smax smax
comp=N,3.0nm,0.7s
KHC Kasperske Hory 12.74 336 *e*PN Pn 22 22 33.9 +2.6
KHC *e*SN **Sn 22 24 48.7 -3.7**
DAVA Damuels 12.79 322 *e*Pn Pn 22 22 36.1 +4.1
comp=N,2.1nm,0.5s
DAVA *i* Sn **Sn 22 24 49.0 -4.7**
comp=N,5.2nm,0.5s
LUBAR Lubar, Ukraine 13.03 18 Pn Pn 22 22 34.4 -0.7
SENIN Lac Senin/Sane 13.57 314 Pn Pn 22 22 40.1 -2.6

EIL Elat 13.83 121 Pn Pn 22 22 45.0 -1.1
comp=N,0.3nm,0.3s,baz=330,slow=14,SNR=1.8
EIL Sn Sn 22 25 08.0 -11
comp=N,0.6nm,0.3s,baz=336,slow=13,SNR=3.6
comp=N,1.4nm,0.4s
ASF Jabal al Asfar 13.85 109 LR LR 22 29 43.0
comp=N,33nm,18.9s,baz=223,slow=44
MI28 Mi28,Pidlybu 13.94 17 Pn Pn 22 22 46.8 -0.8
AK07 Malin Array Si 13.99 21 Pn Pn 22 22 47.2 -1.0
AK13 Malin Array Si 14.00 21 Pn Pn 22 22 47.3 -1.1
AK06 Malin Array Si 14.02 21 Pn Pn 22 22 47.6 -1.0
GRF Grafenberg Arr 14.04 332 *e*P P 22 22 59.3 +2.7
comp=N,7.9nm,0.7s,baz=153,slow=11
AK10 Malin Array Si 14.04 21 Pn Pn 22 22 48.0 -1.0
AK05 Malin Array Si 14.05 21 Pn Pn 22 22 48.0 -1.0
AK12 Malin Array Si 14.06 21 Pn Pn 22 22 48.4 -0.7
KIEV Kiev 14.12 21 Pn Pn 22 22 49.5 -0.4
KIEV Kiev 14.12 21 P Pn 22 22 49.5 -0.4
KIEV Kiev 14.12 21 Pn Pn 22 22 49.1 -0.9
AKASG Malin Array Be 14.13 21 Pn Pn 22 22 50.0 -0.2
comp=N,0.4nm,0.3s,baz=211,slow=12,SNR=5.3
AKASG LR LR 22 28 45.2
comp=N,95nm,18.5s,baz=194,slow=40
comp=N,1.7nm,0.8s
AKASG Malin Array Be 14.13 21 Pn 22 22 49.4 -0.7
AKASG Malin Array Be 14.13 21 P Pn 22 22 49.4 -0.7
AKBB Malin Array Si 14.13 21 Pn Pn 22 22 49.6 -0.5
AKBB Malin Array Si 14.13 21 ⇓*e*P Pn 22 22 48.7 -1.4
AKBB pmax pmax
comp=Z,20nm,2.0s
AK22 Malin Array Si 14.14 20 Pn Pn 22 22 49.4 -0.9
CLL Collm 14.84 339 *i* P P 22 23 07.9 +2.5
CLL pmax pmax
comp=Z,7.0nm,1.1s
CLL Collm 14.84 339 *i* P P 22 23 07.9 +2.5
comp=Z,7.0nm,1.1s
GURO Guroymak-BITLI 16.25 81 P 22 23 20.5 -0.8
SUW Suwalki 16.35 4 Pn Pn 22 23 19.6 +0.2
SUW Suwalki 16.35 4 P Pn 22 23 19.6 +0.2
SHA1 Shidzhatmaz 17.17 63 ⇑*e*P P 22 23 32.8 +1.2
KBZ Khabaz 17.34 63 P P 22 23 33.8 +0.6
comp=Z,0.1nm,0.3s,baz=268,slow=10,SNR=5.0
comp=Z,1.0nm,0.8s
MNK Minsk 17.37 13 *i* P Pn 22 23 30.2 -2.0
comp=E,13nm,1.1s
MNK *i* P **Pn 22 23 30.2 -2.0**
comp=N,17nm,1.1s
MNK *i* P **Pn 22 23 30.2 -2.0**
comp=Z,18nm,0.8s,baz=197
MNK *i* PP **pP 22 23 40.5 +0.9**
MNK *i* PPP PPP 22 23 48.1
MNK *i* S **Sn 22 26 42.5 -2.1**
MNK *i* SS **SnSn 22 26 57.3 -0.8**
MNK *i* SSS SSS 22 27 10.2
MNK *i* LQ LQ 22 28 37.1
MNK *i* LR LR 22 29 58.1
MNK *i* LRM MLR 22 31 22.6
comp=N,49nm,16.2s
MNK Minsk 17.37 13 *i* P Pn 22 23 30.2 -2.0
MNK *i* S **Sn 22 26 42.5 -2.1**
MNK pmax pmax
comp=E,13nm,1.1s
MNK pmax pmax
comp=N,17nm,1.1s
MNK pmax pmax
comp=Z,18nm,0.8s
MNK MLR MLR
comp=N,49nm,16.0s
NACGM Naroch 17.58 10 *e*P Pn 22 23 33.4 -1.5
comp=Z,36nm,0.9s,baz=194
NCK Nalchik 17.79 64 ⇓*e*P P 22 23 39.9 +1.7
NCK pmax pmax
comp=Z,7.0nm,1.2s
PABE Paberze 17.88 5 Pn 22 23 38.0 -0.5
BSD Bornholm Skovb 17.96 348 *i* P P 22 23 40.0 +0.1
HAMD Hammershus, De 18.13 348 *i* P P 22 23 42.5 +0.7
GNI Garni 18.30 75 P P 22 23 45.1 +1.0
comp=Z,0.2nm,0.3s,baz=121,slow=1.7,SNR=3.8
GNI LR LR 22 31 33.1
comp=Z,78nm,20.8s,baz=280,slow=40
comp=Z,2.8nm,0.7s
GNI Garni 18.30 75 P 22 23 43.2 -0.8
GNI Garni 18.30 75 ⇓*e*P Pn 22 23 42.3 -1.8
GNI pmax pmax
comp=Z,13nm,1.9s
VSR Storozhevoye 18.45 37 *e*P Pn 22 23 45.5 0.0
VSR pmax pmax
comp=Z,6.0nm,0.5s
VORR Voronezh 18.77 36 *e*P Pn 22 23 49.9 +0.5
VORR pmax pmax
comp=Z,10.0nm,0.3s
BLEU Blekinge 18.97 350 *i* P P 22 23 50.7 -0.3
LPSR Galich'ya Gora 19.27 34 *e*P P 22 23 54.5 +0.2
LPSR pmax pmax
comp=Z,10.0nm,0.8s
DEL Delary 19.43 347 *i* P Pn 22 23 57.6 +0.3
VRH Novokhopyorsk 19.71 40 *e*P P 22 23 58.0 -1.2
VRH pmax pmax
comp=Z,10.0nm,0.7s
ESDC Sonseca Array 19.89 284 P Pn 22 24 02.8 -0.2
comp=Z,0.1nm,0.3s,baz=78,slow=10,SNR=9.8
comp=Z,1.2nm,0.8s
ESDC Sonseca Array 19.89 284 P P 22 24 01.8 +0.5
FABU Falkenberg 20.14 346 *i* P Pn 22 24 05.0 -0.7
OBN Obninsk 20.22 26 P P 22 24 03.7 -1.0
comp=Z,7.2nm,0.4s,baz=10,slow=15,SNR=4.4
comp=Z,7.2nm,0.4s
OBN Obninsk 20.22 26 P P 22 24 03.2 -1.5
OBN IAmb IAmb 22 24 12.1
comp=Z,19nm,0.6s
OBN Obninsk 20.22 26 *e*P P 22 24 03.1 -1.6
OBN *e*PPP PPP 22 24 25.2
OBN *e* 22 28 16.4
OBN pmax pmax
comp=Z,10.0nm,0.7s
OBN MLR MLR
comp=Z,86nm,15.0s
AKT Akhty 20.60 71 *e*P Pn 22 24 16.4 +5.0
AKT pmax pmax
comp=Z,8.0nm,0.8s
BORU Boraas 20.73 347 *i* P P 22 24 10.8 +0.7
VSU Vasula 21.05 8*d* *i*P P 22 24 13.5 -0.1
VSU pmax pmax
comp=Z,84nm,0.6s
STRU Stroemstad 22.34 346 *i* P P 22 24 27.7 +0.2
HFS Hagfors 22.97 350 P P 22 24 33.5 -0.6
comp=Z,7.3nm,0.6s,baz=162,slow=10,SNR=42
HFS LR LR 22 35 27.2
comp=Z,148nm,18.2s,baz=184,slow=42
comp=Z,7.3nm,0.6s
OSL Oslo 23.27 346 *e*P P 22 24 36.8 -0.3
BELG Belogornoye 23.45 43 P P 22 24 39.2 +0.1
comp=Z,12nm,0.5s,baz=317,slow=1.9,SNR=18
comp=Z,12nm,0.5s
BELG Belogornoye 23.45 43*c* *i*P P 22 24 38.9 -0.2
BELG pmax pmax
comp=Z,3.0nm,0.8s
BLS5 Blasjo 23.76 341 *e*P P 22 24 42.5 +0.5
NC602 NORSAR Array S 23.87 348 P P 22 24 42.5 -0.6
NC602 NORSAR Array S 23.87 348 *e*P P 22 24 42.9 -0.1
FINES FINESS Array B 23.93 6 P P 22 24 43.1 -0.4
comp=Z,6.3nm,0.6s,baz=176,slow=9.7,SNR=54
FINES LR LR 22 36 44.7
comp=Z,95nm,19.9s,baz=232,slow=43
comp=Z,6.3nm,0.6s
FINES FINESS Array B 23.93 6 P P 22 24 42.4 -1.2
FINES FINESS Array B 23.93 6 P P 22 24 42.4 -1.2
NAO01 NORSAR Array S 24.09 347 P P 22 24 44.3 -0.7
NC405 NORSAR Array S 24.20 348 P P 22 24 45.2 -0.9
EKA Eskdalemuir Ar 24.21 325 P P 22 24 46.8 +0.6
comp=Z,7.8nm,0.7s,baz=128,slow=9.5,SNR=11
comp=Z,7.8nm,0.7s
NB2 NORSAR Subarra 24.21 348 P P 22 24 46.0 -0.3
comp=Z,12nm,1.0s,baz=154,slow=10
NB2 NORSAR Subarra 24.21 348 P P 22 24 46.0 -0.3
NOA NORSAR Array B 24.21 348 P P 22 24 46.1 -0.2
comp=Z,2.8nm,0.8s,baz=154,slow=9.4,SNR=22
NOA LR LR 22 36 10.7
comp=Z,92nm,18.0s,baz=170,slow=42
comp=Z,2.8nm,0.8s
NC204 NORSAR Array S 24.51 348 P P 22 24 48.6 -0.4
NC204 IAmb IAmb 22 24 50.8
comp=Z,15nm,1.1s
AB31 Akbulak array 29.93 55 P P 22 25 38.0 +0.3
ABKAR Akbulak array 29.93 55 P P 22 25 38.3 +0.7

TORD Torodi Ar. Bea 30.13 221 P P 22 25 40.3 +0.7
comp=Z,0.7nm,0.7s,baz=14,slow=6.1,SNR=5.0
comp=Z,0.7nm,0.7s
ARTI Arti 30.84 41 P P 22 25 44.7 -0.9
ARTI Arti 30.84 41 *d iP* P 22 25 44.6 -1.0
ARTI S S 22 30 46.7 -1.1
ARTI pmax pmax
comp=Z,7.0nm,0.8s
KTK1 Kautokeino 31.37 1 *eP* P 22 25 50.7 +0.6
ARA0 ARCESS Array S 31.96 3 *eP* P 22 25 55.5 +0.2
ARCES ARCESS Array B 31.96 3 P P 22 25 55.1 -0.2
comp=Z,1.2nm,0.5s,baz=165,slow=5.0,SNR=10
comp=Z,1.2nm,0.5s
ARCES ARCESS Array B 31.96 3 P P 22 25 55.1 -0.2
ARCES IAmb IAmb 22 26 36.9
comp=Z,9.7nm,1.2s
TRO Tromso 32.01 358 *eP* P 22 25 56.3 +0.6
SVE Sverdlovsk 32.16 41 *eP* P 22 25 57.7 +0.5
SVE pmax pmax
comp=Z,12nm,0.8s
FURI Furi 32.66 147 LR LR 22 40 58.9
comp=Z,28nm,18.5s,baz=318,slow=39
BORK Borovoye 36.84 49 *eP* P 22 26 38.0 +0.2
BORK pmax pmax
comp=Z,4.0nm,0.9s
BVAR Borovoye Array 36.88 49 P P 22 26 39.1 +1.0
comp=Z,0.9nm,0.5s,baz=269,slow=7.4,SNR=6.1
comp=Z,0.9nm,0.5s
CHGR Chuyangaron 37.21 73 *eP* P 22 26 41.2 0.0
CHGR pmax pmax
comp=Z,5.0nm,0.9s
KK31 Karatay Array 37.34 66 P P 22 26 42.2 +0.1
KK31 Karatay Array 37.34 66 P P 22 26 42.3 +0.1
KK31 pmax pmax
comp=Z,2.0nm,0.9s
KKAR Karatay Array 37.34 66 P P 22 26 42.1 -0.1
KKAR Karatay Array 37.34 66 P P 22 26 42.1 -0.1
DBIC Dimbokro 39.04 224 P P 22 26 58.5 +1.8
comp=Z,1.7nm,0.6s,baz=31,slow=5.7,SNR=1.2
comp=Z,1.7nm,0.6s
DBIC Dimbokro 39.04 224 P P 22 26 58.4 +1.8
DBIC IAmb IAmb 22 27 21.6
comp=Z,11nm,1.2s
DBIC Dimbokro 39.04 224 P P 22 26 58.4 +1.8
DBIC pmax pmax
comp=Z,11nm,1.2s
AAK Ala-Archa 40.30 66 P P 22 27 08.2 +1.1
AAK Ala-Archa 40.30 66 *eP* P 22 27 08.5 +1.3
AAK pmax pmax
comp=Z,3.0nm,1.2s
SPITS Spitsbergen Ar 40.63 358 P P 22 27 09.9 +0.7
comp=Z,13nm,1.0s,baz=164,slow=7.3,SNR=2.3
BOOM Boomskoye usch 41.38 66 P P 22 27 16.9 +0.8
BOOM Boomskoye usch 41.38 66 P P 22 27 16.9 +0.8
BOOM pmax pmax
comp=Z,1.0nm,0.6s
KSH2 Kashi 41.92 71 P P 22 27 22.1 +1.6
KURBB Kurchatov Arra 41.94 53 P P 22 27 20.3 -0.1
comp=Z,2.2nm,0.5s,baz=278,slow=8.7,SNR=33
comp=Z,2.2nm,0.5s
KURK Kurchatov 41.99 53 P P 22 27 20.1 -0.6
KURK IAmb IAmb 22 27 29.5
comp=Z,5.4nm,1.1s
KURK Kurchatov 41.99 53 *eP* P 22 27 20.6 -0.1
KURK pmax pmax
comp=Z,22nm,3.7s
MAKZ Makanchi 44.73 58 P P 22 27 42.7 -0.2
MAKZ Makanchi 44.73 58 P P 22 27 42.7 -0.2
MAKZ pmax pmax
comp=Z,2.0nm,0.7s
MK31 Makanchi Array 44.95 58 *d iP* P 22 27 44.3 -0.4
MKAR Makanchi Array 44.95 58 P P 22 27 44.2 -0.5
comp=Z,2.3nm,0.7s,baz=282,slow=6.8,SNR=25
comp=Z,2.3nm,0.7s
ZAA0 Zalesovo Array 45.48 48 P P 22 27 48.2 -0.6
ZAA0 IAmb IAmb 22 27 53.8
comp=Z,4.0nm,0.6s
ZALV Zalesovo Beam 45.48 48 P P 22 27 49.0 +0.3
comp=Z,4.0nm,0.5s,baz=274,slow=8.4,SNR=14
comp=Z,4.0nm,0.5s
ZALV Zalesovo Beam 45.48 48 P P 22 27 48.6 -0.1
NRIK Noril'sk 46.90 26 *eP* P 22 28 00.3 +0.7
NRIK pmax pmax
comp=Z,11nm,3.1s
DGZ Jazzator, Alta 47.74 53 *iP* P 22 28 06.8 +0.1
DGZ pmax pmax
comp=Z,11nm,2.9s
EVN Everest 54.83 80 P P 22 28 59.1 -1.6
EVN IAmb IAmb 22 29 07.7
comp=Z,3.0nm,0.7s
SCHQ Schefferville 59.27 318 P P 22 29 31.3 +0.2
comp=Z,2.4nm,0.6s,baz=88,slow=5.3,SNR=5.8
comp=Z,2.4nm,0.6s
SCHQ Schefferville 59.27 318 P P 22 29 31.3 +0.2
ILON Igloolik, Nuna 59.65 336 P P 22 29 33.8 +0.4
ILON IAmb IAmb 22 29 35.0
comp=Z,2.6nm,0.7s
TIXI Tiksi 59.84 20 *eP* P 22 29 33.8 -0.8
TIXI pmax pmax
comp=Z,5.0nm,1.8s
SONM Songino Array 60.21 51 P P 22 29 39.1 +1.3
comp=Z,0.3nm,0.5s,baz=283,slow=7.4,SNR=5.0
comp=Z,0.3nm,0.5s
SONM Songino Array 60.21 51 P P 22 29 37.4 -0.4
SONM IAmb IAmb 22 29 45.8
comp=Z,1.7nm,1.1s
SONM Songino Array 60.21 51 P P 22 29 37.4 -0.4
SONM pmax pmax
comp=Z,2.0nm,1.1s
HHC Hu-ho-hao-te 66.72 56 *eP* P 22 30 20.9 0.0
HHC pmax pmax
comp=Z,7.0nm,0.8s
PZH PanZhiHua 67.06 74 P P 22 30 22.3 -1.0
CMAR Chiang Mai Arr 69.25 82 P P 22 30 36.5 -0.5
comp=Z,1.9nm,0.3s,baz=311,slow=7.6,SNR=6.6
comp=Z,1.9nm,0.3s
CMAR Chiang Mai Arr 69.25 82 *i* P P 22 30 37.5 +0.5
CMAR pmax pmax
comp=Z,2.0nm,0.3s
FCC Fort Churchill 70.00 330 P P 22 30 41.9 +1.0
FCC IAmb IAmb 22 30 42.4
comp=Z,2.2nm,0.8s
FCC Fort Churchill 70.00 330 P P 22 30 41.9 +1.0
FCC pmax pmax
comp=Z,2.0nm,0.8s
BILL Bilibino 71.31 13 *eP* P 22 30 48.7 -0.1
BILL pmax pmax
comp=Z,2.0nm,0.5s
SEY Seymchan 72.31 21 *iP* P 22 30 55.9 +1.0
SEY pmax pmax
comp=Z,3.0nm,0.9s
KLR Kul'dur 73.78 40 LR LR 23 08 36.7
comp=Z,27nm,18.1s,baz=8.5,slow=40
F28M Old Crow 74.04 353 P P 22 31 05.9 +0.9
F28M IAmb IAmb 22 31 06.3
comp=Z,4.8nm,1.5s
YKA Yellowknife Ar 74.06 340 P P 22 31 05.3 +0.1
comp=Z,0.3nm,0.7s,baz=29,slow=5.5,SNR=6.4
comp=Z,0.3nm,0.7s
YKA Yellowknife Ar 74.06 340 P P 22 31 05.5 +0.2
YKA Yellowknife Ar 74.06 340 *i* P P 22 31 06.0 +0.8
MA2 Magadan 74.43 24 *eP* P 22 31 08.8 +1.4
MA2 pmax pmax
comp=Z,7.0nm,0.8s
BMAR Burnt Mountain 74.64 354 P P 22 31 10.0 +1.4
ILAR Eielson Array 77.43 355 P P 22 31 25.6 +1.1
comp=Z,0.2nm,0.6s,baz=323,slow=2.6,SNR=4.1
comp=Z,0.2nm,0.6s
ILAR Eielson Array 77.43 355 P P 22 31 24.8 +0.3
WRH Wood River Hil 77.81 355 P P 22 31 27.8 +1.2
WRH IAmb IAmb 22 31 38.4
comp=Z,2.1nm,1.0s
JSC Jenkinsville 78.61 305 P P 22 31 30.9 -0.6
JSC Jenkinsville 78.61 305 P P 22 31 30.9 -0.6
JSC pmax pmax
comp=Z,8.0nm,1.0s
M29M Somme Creek 78.87 351 P P 22 31 33.2 +0.6
M29M IAmb IAmb 22 31 59.0
comp=Z,7.3nm,1.4s
DHY Denali Highway 79.15 355 P P 22 31 34.6 +0.4
DHY IAmb IAmb 22 31 50.3
comp=Z,7.1nm,1.4s
PPLA Purkeypile 79.60 357 P P 22 31 37.4 +0.8
PPLA IAmb IAmb 22 31 37.8
comp=Z,5.5nm,1.1s
YSS Yuzhno-Sakhali 80.72 36 *eP* P 22 31 46.4 +3.6
YSS pmax pmax
comp=Z,20nm,1.4s
STLK Strandline Lak 80.98 357 P P 22 31 43.9 -0.1
STLK IAmb IAmb 22 31 58.1
comp=Z,4.9nm,1.5s

*IDC **09** 22:45:23.5±4.4, 57°.85N×155°.54W, h70km±36km, mb3.0/3, mbtmp3.2/4, Error ellipse: s-maj=62.4km s-min=33.4km az=18.0*
*NEIC **09** 22:45:25.4±0.7, 57°.76N±0°.04×155°.51W±0°.05, h79km±6km, ML2.9/87, ML2.8(AEIC), Error ellipse: s-maj=5.6km s-min=3.1km az=159.0*
*AEIC **09** 22:45:25.9±1.3, 57°.68N±0°.03×155°.42W±0°.06, h71km±4km, Error ellipse: s-maj=5.3km s-min=4.2km az=129.0*
ISC 09 22:45:24.5±0.9, **57.73N**±0°.05×**155.42W**±0°.04, **h86**km±6km, **n98**,σ1**s15**/110, **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLK3	**Peulik 3**	**0.46**	**265**		**Pn**	**22 45 38.2**	**-0.3**
PLK3					**Sn**	**22 45 48.5**	**-0.3**
ANCK	**Angle Creek**	**0.47**	**355**		**Pn**	**22 45 38.5**	**-0.1**
ACHA	**Angle Creek He**	**0.48**	**6**		**Pn**	**22 45 38.7**	**-0.1**
ACHA				Sn	**Sn**	**22 45 47.9**	**-1.4**
PLK4	**Peulik 4**	**0.51**	**259**	Pn	**Pn**	**22 45 38.5**	**-0.5**
PLK4				Sn	**Sn**	**22 45 48.7**	**-1.0**
KCE	**Katmai Mt Cerb**	**0.53**	**14**		**Pn**	**22 45 39.3**	**+0.3**
KABU	**Katmai Buttres**	**0.54**	**8**		**Pn**	**22 45 39.5**	**+0.3**
KABU					**Sn**	**22 45 51.1**	**+0.9**
KBM	**Katmai Bkd Mtn**	**0.56**	**12**		**Pn**	**22 45 39.3**	**0.0**
CNTC	**Contact Creek**	**0.59**	**335**		**Pn**	**22 45 39.5**	**-0.2**
CNTC					**Sn**	**22 45 50.5**	**-0.4**
KAKN	**Katmai Knife C**	**0.60**	**19**		**Pn**	**22 45 39.8**	**+0.1**
KAKN					**Sn**	**22 45 51.2**	**+0.2**
PLK1	**Peulik 1**	**0.64**	**277**		**Pn**	**22 45 39.8**	**-0.2**
KVTA	**Katmai Vly 10**	**0.65**	**6**		**Pn**	**22 45 40.2**	**+0.1**
KELA	**Mount Kelaz**	**0.73**	**347**		**Pn**	**22 45 40.8**	**-0.2**
KAWH	**Katmai**	**0.73**	**27**		**Pn**	**22 45 41.0**	**0.0**
KAWH					**Sn**	**22 45 53.3**	**+0.1**
PLBL	**Peulik Blue Cr**	**0.75**	**268**		**Pn**	**22 45 41.0**	**-0.2**
PLBL					**Sn**	**22 45 53.2**	**-0.3**
KARR	**Katmai Rainbow**	**0.86**	**26**		**Pn**	**22 45 42.6**	**+0.4**
KAHG	**Katmai Hook Gl**	**0.89**	**31**		**Pn**	**22 45 43.3**	**+0.5**
KAHC	**Katmai Hardscr**	**0.94**	**13**		**Pn**	**22 45 43.5**	**+0.2**
Q16K	**King Salmon**	**1.15**	**326**		**Pn**	**22 45 45.8**	**+0.2**
R16K	**Pilot Point**	**1.17**	**263**	Pn	**Pn**	**22 45 45.5**	**-0.3**
R16K				Sn	**Sn**	**22 46 00.8**	**-1.1**
R16K				IAML		22 46 01.8	
	comp=E,177nm,0.6s						
R16K				IAML		22 46 02.7	
	comp=N,236nm,1.0s						
OHAK	**Old Harbor**	**1.26**	**113**	Pn	**Pn**	**22 45 48.4**	**+1.4**
OHAK				Sn	**Sn**	**22 46 02.2**	**-1.7**
OHAK				IAML		22 46 04.2	
	comp=N,180nm,0.3s						
OHAK				IAML		22 46 04.2	
	comp=E,143nm,0.2s						
SII	**Sitkinak Islan**	**1.36**	**150**	Pn	**Pn**	**22 45 50.6**	**+2.4**
KDAK	**Kodiak Island**	**1.52**	**87**	P	**Pn**	**22 45 50.4**	**+0.1**
	comp=E,38nm,0.3s,baz=267,slow=11,SNR=177						
KDAK				S	**Sn**	**22 46 09.0**	**-0.7**
	comp=E,27nm,0.3s,baz=40,slow=1.8,SNR=18						
KDAK	**Kodiak Island**	**1.52**	**87**	Pn	**Pn**	**22 45 51.6**	**+1.4**
KDAK				IAML		22 46 16.0	
	comp=E,160nm,0.5s						
KDAK				IAML		22 46 16.1	
	comp=E,139nm,0.5s						
P17K	**Kvichak River**	**1.56**	**340**	Pn	**Pn**	**22 45 51.1**	**+0.4**
P18K	**Big Mountain,**	**1.67**	**3**	Pn	**Pn**	**22 45 52.4**	**+0.3**
P18K				IAML		22 46 14.4	
	comp=N,88nm,0.8s						
P16K	**Nushagak River**	**1.88**	**315**	Pn	**Pn**	**22 45 55.1**	**+0.2**
CHIR	**Chirikof Islan**	**1.92**	**183**	Pn	**Pn**	**22 45 57.3**	**+1.8**
AUJK	**Augustine Jueg**	**1.94**	**32**		**Pn**	**22 45 57.0**	**+1.4**
AGU	**Augustine-Summ**	**1.94**	**32**		**Pn**	**22 45 57.2**	**+1.4**
O18K	**Koktuh Hills**	**2.13**	**3**	Pn	**Pn**	**22 45 58.4**	**+0.2**
O18K				IAML		22 46 26.8	
	comp=N,46nm,0.9s						
O16K	**Kokwok River B**	**2.33**	**324**	Pn	**Pn**	**22 46 01.2**	**+0.4**
O16K				IAML		22 46 30.0	
	comp=E,56nm,0.5s						
O16K				IAML		22 46 30.1	
	comp=N,58nm,0.9s						
O19K	**Port Alsworth**	**2.53**	**13**	Pn	**Pn**	**22 46 04.3**	**+0.8**
ILS	**Iliamna Low So**	**2.54**	**28**		**Pn**	**22 46 05.1**	**+1.3**
ILSW	**Iliamna Southw**	**2.55**	**27**	Pn	**Pn**	**22 46 05.0**	**+1.1**
O15K	**Ungalikthiuk R**	**2.73**	**304**	Pn	**Pn**	**22 46 06.9**	**+0.7**
VNKR	**Veniaminof 5**	**2.76**	**233**		**Pn**	**22 46 06.9**	**+0.2**
CNPM	**China Poot**	**2.83**	**49**	Pn	**Pn**	**22 46 08.2**	**+0.6**
CNPM				IAML		22 46 48.2	
	comp=N,44nm,0.6s						
CNPM				IAML		22 46 49.4	
	comp=E,48nm,0.8s						
N17K	**Nushagak Hills**	**2.94**	**343**	Pn	**Pn**	**22 46 09.3**	**+0.2**
N17K				IAML		22 46 57.1	
	comp=E,23nm,0.6s						
N17K				IAML		22 46 57.8	
	comp=N,23nm,0.5s						
N18K	**Kilae Creek**	**2.96**	**356**	Pn	**Pn**	**22 46 09.5**	**+0.1**
N18K				IAML		22 46 58.7	
	comp=E,19nm,0.7s						
RED	**Redoubt Volcan**	**3.02**	**26**	Pn	**Pn**	**22 46 11.8**	**+1.6**
BRLK	**Bradley Lake**	**3.12**	**47**	Pn	**Pn**	**22 46 12.2**	**+0.6**
BRLK				IAML		22 46 47.4	
	comp=E,49nm,0.2s						
BRLK				IAML		22 46 47.4	
	comp=N,46nm,0.4s						
N19K	**Bonanza Creek**	**3.13**	**8**	Pn	**Pn**	**22 46 12.9**	**+1.3**
N19K				IAML		22 47 04.3	
	comp=E,19nm,0.6s						
DFR	**Drift River**	**3.19**	**25**		**Pn**	**22 46 13.9**	**+1.4**
O14K	**Tigyukauivet M**	**3.42**	**299**	Pn	**Pn**	**22 46 16.3**	**+0.8**
N15K	**Kwethluk River**	**3.44**	**317**	Pn	**Pn**	**22 46 16.9**	**+1.1**
N15K				IAML		22 46 57.4	
	comp=E,18nm,0.9s						
N15K				IAML		22 47 28.9	
	comp=N,15nm,1.2s						
SDPT	**Sand Point**	**3.68**	**232**	Pn	**Pn**	**22 46 19.2**	**+0.2**
CNBA	**Chernabura Isl**	**3.73**	**220**	Pn	**Pn**	**22 46 19.6**	**-0.2**
CNBA				IAML		22 47 06.4	
	comp=N,18nm,0.7s						
CNBA				IAML		22 47 22.2	
	comp=E,22nm,1.1s						
M16K	**Timber Creek**	**3.76**	**333**	Pn	**Pn**	**22 46 21.8**	**+1.7**
M16K				IAML		22 47 05.3	
	comp=E,22nm,0.8s						
M16K				IAML		22 47 05.9	
	comp=N,12nm,1.2s						
CKL	**Chakachamna La**	**3.81**	**23**		**Pn**	**22 46 21.6**	**+0.6**
M17K	**Holitna River**	**3.82**	**345**	Pn	**Pn**	**22 46 22.1**	**+1.2**
M17K				IAML		22 47 09.1	
	comp=E,27nm,0.8s						
M17K				IAML		22 47 28.7	
	comp=N,22nm,0.8s						
SPU	**Mount Spurr**	**3.86**	**25**	Pn	**Pn**	**22 46 22.6**	**+1.0**
SLKM	**Skilak Lake**	**3.86**	**42**	Pn	**Pn**	**22 46 23.2**	**+1.6**
SLKM				IAML		22 47 06.8	
	comp=N,20nm,0.4s						
SLKM				IAML		22 47 13.7	
	comp=E,25nm,0.2s						
SPNN	**North Nagishla**	**3.90**	**20**		**Pn**	**22 46 23.0**	**+0.8**
SEW	**Seward**	**3.90**	**50**	Pn	**Pn**	**22 46 23.8**	**+1.8**
SEW				IAML		22 47 05.0	
	comp=N,11nm,0.7s						
SEW				IAML		22 47 21.6	
	comp=E,20nm,1.2s						
N14K	**Kuskokwak Cree**	**3.93**	**307**	Pn	**Pn**	**22 46 23.5**	**+1.1**
N14K				IAML		22 47 41.7	
	comp=E,15nm,1.1s						
N14K				IAML		22 47 50.6	
	comp=N,10nm,0.8s						
M19K	**Big River Lodg**	**4.21**	**7**	Pn	**Pn**	**22 46 27.4**	**+1.1**
M19K				IAML		22 47 41.3	
	comp=E,8.1nm,0.9s						
PS4A	**Pavlof South-4**	**4.29**	**239**		**Pn**	**22 46 27.4**	**+0.1**
PN7A	**Pavlof North-7**	**4.30**	**240**		**Pn**	**22 46 27.9**	**+0.3**
M20K	**Styx River**	**4.32**	**15**	Pn	**Pn**	**22 46 30.1**	**+2.3**
M20K				IAML		22 47 21.7	
	comp=N,12nm,0.7s						
M20K				IAML		22 47 51.4	
	comp=E,6.8nm,1.1s						
HAG	**Hague Volcano**	**4.33**	**239**		**Pn**	**22 46 27.9**	**0.0**
RC01	**Rabbit Creek A**	**4.45**	**38**	Pn	**Pn**	**22 46 29.9**	**+0.5**
RC01				IAML		22 47 22.8	
	comp=N,16nm,0.3s						
RC01				IAML		22 47 24.7	
	comp=E,14nm,1.1s						
L19K	**White Mountain**	**4.47**	**3**	Pn	**Pn**	**22 46 31.0**	**+1.2**
L19K				IAML		22 47 23.2	
	comp=N,17nm,0.7s						
L19K				IAML		22 48 13.2	
	comp=E,9.7nm,1.2s						
L16K	**Owhat River**	**4.49**	**335**	Pn	**Pn**	**22 46 30.6**	**+0.7**
L16K				IAML		22 47 47.4	
	comp=E,7.5nm,1.2s						
M14K	**Bethel**	**4.52**	**315**	Pn	**Pn**	**22 46 31.4**	**+1.1**
L18K	**Granite Mounta**	**4.54**	**352**	Pn	**Pn**	**22 46 31.7**	**+0.9**
L18K				IAML		22 47 23.0	
	comp=N,8.6nm,0.9s						
SKT	**Skwentna**	**4.69**	**23**	Pn	**Pn**	**22 46 34.3**	**+1.5**
SKT				IAML		22 47 36.0	
	comp=E,6.3nm,1.2s						
M13K	**Dall Lake**	**4.89**	**307**	Pn	**Pn**	**22 46 36.5**	**+1.0**
L14K	**Kuka Creek**	**5.17**	**317**	Pn	**Pn**	**22 46 39.9**	**+0.7**
L14K				IAML		22 47 54.0	
	comp=N,8.3nm,1.1s						
L14K				IAML		22 48 16.4	
	comp=E,4.5nm,0.8s						
K17K	**Iditarod**	**5.20**	**345**	Pn	**Pn**	**22 46 40.6**	**+0.9**
GHO	**Glory Hole Cre**	**5.21**	**36**	Pn	**Pn**	**22 46 39.4**	**-0.5**
GHO				IAML		22 47 41.5	
	comp=E,10nm,0.7s						
HIN	**Hinchinbrook I**	**5.32**	**56**	Pn	**Pn**	**22 46 41.1**	**-0.3**
K15K	**Wolf Creek Mou**	**5.50**	**329**	Pn	**Pn**	**22 46 45.2**	**+1.4**
K20K	**Telida**	**5.68**	**6**	Pn	**Pn**	**22 46 47.7**	**+1.5**
J18K	**Innoko River**	**5.79**	**354**	Pn	**Pn**	**22 46 48.4**	**+0.7**
KLU	**Klutina**	**6.12**	**48**	Pn	**Pn**	**22 46 52.9**	**+0.6**
J16K	**Anvik River**	**6.13**	**338**	Pn	**Pn**	**22 46 52.6**	**+0.4**
BMRM	**Bremner River**	**6.41**	**55**	Pn	**Pn**	**22 46 55.8**	**-0.5**
N25K	**Chitina, Valde**	**6.71**	**50**	Pn	**Pn**	**22 47 00.8**	**+0.5**
GLB	**Gilahina Butte**	**6.97**	**53**	Pn	**Pn**	**22 47 03.9**	**+0.1**
CRQM	**Cirque**	**6.99**	**59**	Pn	**Pn**	**22 47 04.0**	**-0.3**
VRDI	**Verde Repeater**	**7.03**	**55**	Pn	**Pn**	**22 47 04.6**	**-0.2**
TGL	**Tana Glacier**	**7.13**	**60**	Pn	**Pn**	**22 47 06.3**	**+0.2**
GRNC	**Granite Creek**	**7.63**	**61**	Pn	**Pn**	**22 47 13.4**	**+0.5**
BARN	**Barnard Glacie**	**7.77**	**59**	Pn	**Pn**	**22 47 15.1**	**+0.2**
M26K	**Nabesna, AK**	**7.77**	**48**	Pn	**Pn**	**22 47 15.9**	**+1.1**
CTGM	**Chitina Glacie**	**7.89**	**60**	Pn	**Pn**	**22 47 16.8**	**+0.3**
LOGN	**Logan Glacier**	**8.01**	**61**	Pn	**Pn**	**22 47 19.2**	**+1.1**
ILAR	**Eielson Array**	**8.16**	**27**	P	**Pn**	**22 47 18.3**	**-1.7**
	comp=E,0.4nm,0.4s,baz=217,slow=12,SNR=1.5						
ILAR				S	**Sn**	**22 48 44.3**	**-6.2**
	comp=E,0.5nm,0.5s,baz=209,slow=27,SNR=4.1						
PCA	**Pinnacle**	**8.20**	**67**	Pn	**Pn**	**22 47 20.1**	**-0.4**
G18K	**Tagagawik**	**8.33**	**351**	Pn	**Pn**	**22 47 24.4**	**+2.1**
O28M	**Mount Upton**	**8.38**	**62**	Pn	**Pn**	**22 47 23.8**	**+0.6**
O29M	**Mount Kennedy**	**9.06**	**66**	Pn	**Pn**	**22 47 32.8**	**+0.4**
F17K	**Baldwin Pennin**	**9.15**	**345**	Pn	**Pn**	**22 47 36.4**	**+3.0**
F20K	**Avaraart Lake**	**9.35**	**359**	Pn	**Pn**	**22 47 38.2**	**+2.1**
N30M	**Aishikik Lake**	**10.00**	**60**	Pn	**Pn**	**22 47 44.7**	**-0.5**
YKA	**Yellowknife Ar**	**20.62**	**60**	P	**P**	**22 49 57.7**	**+1.2**
	comp=E,0.3nm,0.7s,baz=278,slow=11,SNR=6.7						
	comp=E,0.3nm,0.7s						
MKAR	**Makanchi Array**	**65.39**	**320**	P	**P**	**22 55 56.8**	**-0.8**
	comp=E,0.1nm,0.6s,baz=38,slow=8.2,SNR=1.8						
	comp=E,0.1nm,0.6s						
ESDC	**Sonseca Array**	**80.04**	**22**	P	**P**	**22 57 24.7**	**+0.3**
	comp=E,0.7nm,0.7s,baz=351,slow=5.5,SNR=2.4						
	comp=E,0.7nm,0.7s						

*CATAC **09** 22:46:53.6, 14°.N±3°×9°.1W±°, h52km±6km, M3.2/14, MLv3.2/14, confirmed*
*GCG **09** 22:46:54.1±0.5, 13°.67N×90°.56W, h37km±106km, MD3.3, ML3.4, Presumed earthquake*
ISC 09 22:46:51.9±2.0, **13°.5N**±0°.1×**90°.63W**±0°.07, **h69**km±21km, **n21**,σ1**s22**/35, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAME	**Alcaldia de Sa**	**0.68**	**61**	P	**Pn**	**22 47 05.9**	**-0.6**
FAME				S	**Sn**	**22 47 15.2**	**-2.1**
PCG5	**San Vicente Pa**	**0.74**	**19**	*i* P	**Pn**	**22 47 08.0**	**+0.6**
PCG5				*i* S	**Sn**	**22 47 18.9**	**+0.2**
PCG5				IAML		22 47 21.2	
	comp=N,697nm,0.4s						
FG8	**Yepocapa, Chim**	**0.74**	**5**	*i* P	**Pn**	**22 47 09.9**	**+2.6**
FG16	**Alotenango, Sa**	**0.76**	**9**	*i* P	**Pn**	**22 47 09.8**	**+2.1**
FG16				*i* S	**Sn**	**22 47 22.2**	**+2.9**
ESSG	**Sabana Grande**	**0.88**	**347**	*i* P	**Pn**	**22 47 08.5**	**-0.6**
ESSG				*i* S	**Sn**	**22 47 19.3**	**-2.4**
NUBE	**Las Nubes**	**0.91**	**65**	P	**Pn**	**22 47 09.1**	**-0.2**
NUBE				S	**Sn**	**22 47 21.1**	**-1.2**
NUBE	**Las Nubes**	**0.91**	**65**	*i* P	**Pn**	**22 47 09.2**	**-0.2**
NUBE				*i* S	**Sn**	**22 47 20.9**	**-1.4**
SLOZ	**Alcaldia de Sa**	**0.96**	**58**	P	**Pn**	**22 47 09.8**	**-0.1**
CEVE	**Cerro Verde**	**1.02**	**72**	P	**Pn**	**22 47 11.5**	**+0.6**
CEVE				S	**Sn**	**22 47 24.7**	**-0.3**
UNIC	**Universidad Ca**	**1.15**	**66**	P	**Pn**	**22 47 12.3**	**0.0**
UNIC				S	**Sn**	**22 47 26.8**	**-0.7**
JAYA	**Jayaque - finc**	**1.15**	**83**	P	**Pn**	**22 47 12.8**	**+0.3**
JAYA				S	**Sn**	**22 47 26.3**	**-1.5**
JAYA	**Jayaque - finc**	**1.15**	**83**	*i* P	**Pn**	**22 47 12.7**	**+0.2**
JAYA				IAML		22 47 30.0	
	comp=N,1μm,0.2s						
LALI	**Alcalda de L**	**1.27**	**91**	P	**Pn**	**22 47 14.9**	**+1.1**
LALI				S	**Sn**	**22 47 30.8**	**+0.5**
PMON	**Piamonte**	**1.29**	**81**	P	**Pn**	**22 47 15.1**	**+0.9**
PMON				S	**Sn**	**22 47 31.6**	**+0.7**
PANCS	**Alcalda de**	**1.41**	**86**	P	**Pn**	**22 47 16.8**	**+1.0**
PANCS				S	**Sn**	**22 47 32.6**	**-1.0**
RTAL	**Retalhuleu**	**1.44**	**314**	P	**Pn**	**22 47 16.3**	**+0.2**
RTAL				S	**Sn**	**22 47 33.0**	**-1.3**
APG	**El Apazote**	**1.49**	**6**	*i* P	**Pn**	**22 47 17.2**	**+0.3**
MTO3	**Montecristo**	**1.51**	**54**	P	**Pn**	**22 47 17.0**	**-0.3**
COEG	**Centro de Oper**	**1.70**	**86**	P	**Pn**	**22 47 20.6**	**+0.9**
COEG				S	**Sn**	**22 47 41.5**	**+0.8**
LLGN	**La Laguna**	**1.76**	**68**	P	**Pn**	**22 47 20.8**	**+0.4**
P5NO	**Presa 5 de nov**	**1.88**	**75**	P	**Pn**	**22 47 21.7**	**-0.2**

*LDG **09** 23:25:00.4±0.1, 41°.85N×2°.77E, h2km, Ml2.7/25, Error ellipse: s-maj=2.1km s-min=1.3km az=134.0*
*MRB **09** 23:25:00.0±0.3, 41°.84N×2°.78E, h8km±1km, ML2.4/33, Error ellipse: s-maj=1.0km s-min=0.4km az=100.0*
*MDD **09** 23:25:00.2±0.3, 41°.85N×2°.75E, h4km±2km, mb_Lg2.9/30, Error ellipse: s-maj=2.1km s-min=1.6km az=111.0*
ISC 09 23:24:59.8±0.8, **41°.84N**±0°.02×**2°.81E**±0°.02, **h17**km±4km, **n84**,σ1**s62**/177, **Spain**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CCAS	**Cassa de la Se**	**0.09**	**57**	P	**Pg**	**23 25 02.4**	**-0.9**
CCAS				S	**Sg**	**23 25 04.2**	**-1.4**
	329nm,0.1s						
CGIS	**Girona - Santa**	**0.14**	**5**	Pg	**Pg**	**23 25 03.2**	**-0.7**
CGIS				Sg	**Sg**	**23 25 05.1**	**-1.6**
CGIR	**Ginora - Unive**	**0.15**	**6**	Pg	**Pg**	**23 25 03.3**	**-0.8**
CGIR				Sg	**Sg**	**23 25 05.8**	**-1.1**
CGIR	**Ginora - Unive**	**0.15**	**6**	P	**Pg**	**23 25 03.2**	**-0.8**
CGIR

EJON *i* IVmb_Lg 23 25 21.1
AVIN Avinyo 0.63 271 Pg **Pg** **23 25 11.4 -0.8**
AVIN Sg **Sg** **23 25 19.4 -1.2**
BAIN Barcelona - Pl 0.65 227 Pg **Pg** **23 25 11.9 -0.7**
BAIN Sg **Sg** **23 25 20.5 -0.7**
CBRU Bruguera 0.65 314 P **Pg** **23 25 11.9 -0.7**
CBRU S **Sg** **23 25 20.6 -0.7**
55nm,0.2s
SJAF Saint Jean de 0.65 5 P **Pg** **23 25 12.2 -0.5**
SJAF S **Sg** **23 25 20.9 -0.4**
53nm,0.1s
BAJU Barcelona - Ci 0.65 227 Pg **Pg** **23 25 12.0 -0.7**
BAJU Sg **Sg** **23 25 20.7 -0.7**
FBR Fabra 0.66 231 Pg **Pg** **23 25 12.0 -0.8**
FBR Sg **Sg** **23 25 20.7 -0.9**
FBR Fabra 0.66 231 P **Pg** **23 25 12.1 -0.8**
FBR S **Sg** **23 25 21.1 -0.6**
123nm,0.1s
MTJR Montjuic 0.67 226 Pg **Pg** **23 25 11.9 -1.1**
MTJR Sg **Sg** **23 25 21.4 -0.7**
MTJR Montjuic 0.67 226 P **Pg** **23 25 12.4 -0.7**
MTJR S **Sg** **23 25 21.6 -0.4**
358nm,0.2s
EXQUE Queralbs 0.70 317 Pg **Pg** **23 25 12.9 -0.8**
EXQUE Sg **Sg** **23 25 21.6 -1.4**
EXQUE Queralbs 0.70 317 P **Pg** **23 25 12.8 -0.8**
EXQUE S **Sg** **23 25 22.5 -0.4**
150nm,0.2s
FILF Fillols 0.75 346 P **Pg** **23 25 14.4 0.0**
FILF S **Sg** **23 25 24.7 +0.4**
114nm,0.1s
CMON Montserrat 0.77 252 P **Pg** **23 25 13.9 -0.9**
CMON S **Sg** **23 25 24.1 -0.8**
38nm,0.2s
CGAR Garraf 0.86 231 P **Pg** **23 25 15.8 -0.8**
CGAR S **Sg** **23 25 27.1 -0.9**
44nm,0.3s
LLIS Llivia - Polie 0.88 316 Pg **Pg** **23 25 15.9 -1.0**
LLIS Sg **Sg** **23 25 27.3 -1.3**
CLLI Llivia 0.89 316 P **Pg** **23 25 16.3 -0.9**
CLLI S **Sg** **23 25 28.1 -0.9**
59nm,0.2s
EMIR Miracle 0.96 275 Pg **Pg** **23 25 17.7 -0.8**
EMIR Sg **Sg** **23 25 29.8 -1.3**
EMIR *i* IVmb_Lg 23 25 31.3
EMIR Miracle 0.96 275 P **Pg** **23 25 17.1 -1.4**
EMIR S **Sg** **23 25 30.0 -1.1**
136nm,0.2s
ARBS La Rabassa 1.12 304 P **Pg** **23 25 20.2 -1.3**
ARBS S **Sg** **23 25 34.9 -1.2**
70nm,0.3s
PAND Andorre 1.16 307 P **Pg** **23 25 20.7 -1.6**
PAND S **Sg** **23 25 36.5 -1.0**
101nm,0.2s
CORG Organya 1.18 290 P **Pg** **23 25 21.0 -1.6**
CORG S **Sg** **23 25 36.9 -1.1**
48nm,0.1s
FNEB Nbias 1.19 334 P **Pg** **23 25 21.2 -1.6**
FNEB S **Sg** **23 25 37.2 -1.1**
43nm,0.2s
CSOR Sort 1.36 294 P **Pg** **23 25 24.1 -1.9**
CSOR S **Sg** **23 25 41.7 -2.0**
60nm,0.3s
CEST Esterri de Car 1.38 304 P **Pn** **23 25 24.4 0.0**
CEST S **Sg** **23 25 42.7 -1.8**
41nm,0.2s
EPOB Poblet 1.38 250 Pn **Pn** **23 25 24.6 +0.2**
EPOB Sn **Sg** **23 25 42.7 -1.8**
EPOB *i* IVmb_Lg 23 25 44.0
EPOB Poblet 1.38 250 P **Pn** **23 25 24.2 -0.2**
EPOB S **Sg** **23 25 43.1 -1.4**
33nm,0.2s
CAVN Les Avellanes 1.54 272 P **Pn** **23 25 26.6 +0.1**
CAVN S **Sn** **23 25 46.9 +0.9**
126nm,0.2s
MTLF Montolieu 1.56 344 *e*Pn **Pn** **23 25 28.1 +1.2**
MTLF *e*Pg **Pg** **23 25 30.0 0.0**
MTLF *e*Sg **Sn** **23 25 48.3 +1.6**
30nm,0.2s
CTRE Tremp 1.59 289 P **Pn** **23 25 27.7 +0.4**
CTRE S **Sn** **23 25 48.2 +0.8**
30nm,0.2s
MLS Moulis 1.69 312 P **Pn** **23 25 28.9 +0.3**
MLS S **Sn** **23 25 50.6 +0.7**
59nm,0.4s
VIER Vielha - Casau 1.73 301 S **Sn** **23 25 52.2 +1.2**
30nm,0.1s
CBUD Illa de Buda 1.87 233 S **Sn** **23 25 55.3 +1.1**
414nm,1.2s
EBR Ebro Roquetas 2.02 241 P **Pn** **23 25 33.6 +0.6**
EBR S **Sn** **23 25 58.9 +1.2**
43nm,0.5s
ERTA Horta de San J 2.06 246 Pn **Pn** **23 25 33.8 +0.2**
ERTA Sn **Sn** **23 25 59.6 +0.7**
ERTA *i* IVmb_Lg 23 26 08.0
ERTA Horta de San J 2.06 246 P **Pn** **23 25 34.2 +0.6**
ERTA S **Sn** **23 26 00.0 +1.1**
ETOS Mallorca 2.07 180 Pn **Pn** **23 25 32.8 -0.9**
ETOS Sn **Sn** **23 25 54.9 -4.2**
ETOS *i* IVmb_Lg 23 26 02.5
ECHI Chisagues Biel 2.11 294 Pn **Pn** **23 25 34.5 +0.1**
ECHI Sn **Sn** **23 26 00.5 +0.2**
ECHI *i* IVmb_Lg 23 26 06.8
ECHI Chisagues Biel 2.11 294 P **Pn** **23 25 35.2 +0.7**
ECHI S **Sn** **23 26 01.5 +1.2**
24nm,0.1s
CMAS Mas de Barbera 2.18 240 P **Pn** **23 25 35.8 +0.5**
CMAS S **Sn** **23 26 02.9 +0.9**
18nm,0.2s
EPF Esparros 2.18 304 *e*Pn **Pn** **23 25 36.6 +1.2**
EPF *e*Pg **Pg** **23 25 40.6 -1.1**
EPF *e*Sg **Sb** **23 26 06.5 +0.9**
12nm,0.2s
VIEF Viey 2.31 298 P **Pn** **23 25 37.8 +0.6**
VIEF S **Sn** **23 26 06.4 +1.1**
LASF Ste Croix 2.37 19 *e*Pn **Pn** **23 25 39.5 +1.6**
LASF *e*Pg **Pg** **23 25 45.2 -0.1**
LASF *e*Sg **Sb** **23 26 13.9 +3.0**
3.6nm,0.1s
ESAC San Caprasio 2.45 268 Pg **Pg** **23 25 45.7 -1.2**
ESAC Sg **Sb** **23 26 15.5 +2.1**
ESAC *i* IVmb_Lg 23 26 20.5
PYLO Lourdes 2.46 302 S **Sn** **23 26 09.3 +0.6**
14nm,0.3s
ETSF Etsaut 2.71 294 *e*Pn **Pn** **23 25 43.2 +0.6**
ETSF *e*Pg **Pg** **23 25 50.3 -1.5**
ETSF *e*Sg **Sg** **23 26 24.1 -2.8**
30nm,0.5s
ATE Arette 2.88 297 P **Pn** **23 25 45.5 +0.6**
ATE S **Sn** **23 26 19.4 +0.3**
16nm,0.4s
EMOS Mosqueruela 2.88 240 Pn **Pn** **23 25 45.3 +0.2**
EMOS Sn **Sn** **23 26 19.3 -0.2**
EMOS *i* IVmb_Lg 23 26 35.9
EMOS Mosqueruela 2.88 240 P **Pn** **23 25 45.6 +0.5**
EMOS S **Sn** **23 26 20.3 +0.9**
SMRF Simiane la Rot 2.95 43 *e*Pn **Pn** **23 25 47.0 +1.1**
SMRF *e*Pg **Pg** **23 25 58.4 +2.0**
SMRF *e*Sg **Sg** **23 26 35.2 +0.5**
4.4nm,0.4s
EIBI Ibiza 3.02 202 Pn **Pn** **23 25 45.4 -1.4**
EIBI Sn **Sn** **23 26 18.0 -4.6**
EIBI *i* IVmb_Lg 23 26 34.0
LMR La Mourre 3.12 60 *e*Pn **Pn** **23 25 48.6 +0.4**
LMR *e*Sn **Sn** **23 26 23.1 -1.9**
1.0nm,0.2s
CAF Calviac 3.13 350 *e*Pn **Pn** **23 25 49.2 +0.7**
CAF *e*Pg **Pb** **23 25 57.9 +2.8**
CAF *e*Sn **Sn** **23 26 24.0 -1.5**
CAF *e*Sg **Sg** **23 26 37.7 -2.8**
5.1nm,0.3s
EORO Oroz-Betelu 3.23 290 Pn **Pn** **23 25 50.4 +0.7**
EORO Sn **Sn** **23 26 25.8 -2.0**
EORO Sg **Sg** **23 26 42.3 -1.2**
EORO *i* IVmb_Lg 23 26 46.1
SJPF Ste Jean 3.24 295 *e*Pn **Pn** **23 25 50.6 +0.7**
SJPF *e*Pg **Pg** **23 26 00.7 -1.3**
SJPF *e*Sg **Sg** **23 26 41.0 -3.0**
10nm,0.2s
E0901 Celadas (Terue 3.26 247 Pn **Pn** **23 25 50.2 -0.1**
E0901 Sn **Sn** **23 26 28.2 -0.6**
E0901 Sg **Sg** **23 26 43.2 -1.5**
E0901 *i* IVmb_Lg 23 26 56.1

VIVF Saint-Julien-l 3.31 24 *e*Pn **Pn** **23 25 53.0 +2.1**
VIVF *e*Pg **Sg** **23 26 02.5 -0.8**
VIVF *e*Sg **Sg** **23 26 43.9 -2.3**
2.3nm,0.3s
OSSF Osses 3.32 297 P **Pn** **23 25 51.7 +0.7**
OSSF S **Sn** **23 26 30.6 +0.5**
LFF La Frestale 3.45 335 *e*Pn **Pn** **23 25 54.4 +1.7**
LFF *e*Pg **Pb** **23 26 03.5 +3.1**
LFF *e*Sn **Sn** **23 26 32.5 -0.6**
LFF *e*Sg **Sg** **23 26 48.0 -2.5**
6.8nm,0.3s
RJF Les Rejaudoux 3.59 345 *e*Pg **Pg** **23 26 07.6 -1.0**
RJF *e*Sg **Sg** **23 26 52.6 -2.5**
2.9nm,0.2s
ETOR Torete 3.80 256 Pn **Pn** **23 25 58.2 +0.6**
ETOR Sn **Sn** **23 26 41.5 -0.4**
ETOR *i* IVmb_Lg 23 27 04.2
SBF Sospel 3.96 58 *e*Pn **Pn** **23 26 01.8 +2.0**
SBF *e*Sn **Sn** **23 26 45.2 -0.7**
2.2nm,0.3s
TCF Toulx Ste Croi 4.47 355 *e*Pg **Pg** **23 26 23.1 -2.3**
TCF *e*Sg **Sg** **23 27 20.5 -2.8**
2.5nm,0.3s
PGF Pioggiola 4.66 79 *e*Pn **Pn** **23 26 08.4 -1.0**
PGF *e*Sn **Sn** **23 26 59.5 -3.6**
1.7nm,0.2s
BGF Bois d'Agland 4.72 0 *e*Pn **Pn** **23 26 10.6 +0.4**
BGF *e*Pg **Pg** **23 26 28.5 -1.7**
BGF *e*Sg **Sg** **23 27 26.9 -4.4**
6.3nm,0.5s
SMF Signal de Mont 4.87 8 *e*Pg **Pg** **23 26 31.3 -1.7**
SMF *e*Sg **Sg** **23 27 31.3 -4.6**
2.6nm,0.3s
AVF Avril sur Loir 4.97 4 *e*Pn **Pn** **23 26 13.0 -0.6**
AVF *e*Pg **Pg** **23 26 32.8 -2.1**
AVF *e*Sg **Sg** **23 27 34.8 -4.5**
0.8nm,0.3s
MFF Saint Martin d 5.21 337 *e*Pg **Pg** **23 26 35.7 -4.0**
MFF Saint Martin d 5.21 337 *e*Pg **Pg** **23 26 36.6 -3.0**
MFF *e*Sg **Sg** **23 27 42.8 -4.3**
1.4nm,0.3s
MFF *e*Sg **Sg** **23 27 43.0 -4.2**
0.1nm,0.1s
SSF Saint Saulge 5.25 5 *e*Sg **Sg** **23 27 42.9 -5.3**
1.3nm,0.3s
LOR Lormes 5.48 8 *e*Sg **Sg** **23 27 54.0 -1.7**
0.5nm,0.2s
GRR Gorron 7.04 340 *e*Pn **Pn** **23 26 42.5 +0.4**

*CRAAG **09** 23:33:17.3, 35°.51N×5°.09E, MI3.5, Algrie 10km SE Magra MDD **09** 23:33:31.6±0.9, 36°.04N×4°.37E, h19km, Mb4.4/24, M_mb3.8/24, Error ellipse: s-maj=7.1km s-min=4.2km az=134.0*

ISC 09 23:33:17.7±0.9, 35°58N±0°.04×5°00E±0°.03, h10km, n38, σ3°54/46, 10C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAZD	**Ain Tagrout**	**0.61**	**12**	P	**Pb**	**23 33 31.4**	**+0.9**
ABSD	**Ouled Sidi Bra**	**0.67**	**258**	P	**Pn**	**23 33 33.0**	**-0.3**
SET	**Setif**	**0.70**	**27**	P	**Pg**	**23 33 30.0**	**-1.3**
CJSR	**Ain Djasser**	**0.82**	**69**	P	**Pg**	**23 33 32.9**	**-0.6**
CTCHA	**Tamokra**	**0.90**	**342**	P	**Pn**	**23 33 37.8**	**+1.4**
AFRS	**Ain Fares**	**0.96**	**208**	P	**Pg**	**23 33 37.2**	**+1.0**
AKET	**Djebel Ketaf**	**1.02**	**298**	P	**Pn**	**23 33 40.8**	**+2.5**
DFRA	**Djebel Bou Aff**	**1.20**	**36**	P	**Pg**	**23 33 44.0**	**+3.3**
COAT	**Oued Athmania**	**1.23**	**57**	P	**Pb**	**23 33 41.9**	**+0.8**
CTEI	**Djebel Teioual**	**1.24**	**66**	P	**Pn**	**23 33 42.0**	**+0.8**
CTGD	**Timgad**	**1.25**	**92**	P	**Pn**	**23 33 41.3**	**0.0**
ATKB	**Taksebt**	**1.31**	**327**	P	**Pg**	**23 33 44.9**	**+2.1**
CBHR	**Beni Haroun da**	**1.43**	**46**	P	**Pb**	**23 33 45.0**	**+0.6**
ADCK	**Dar Chioukh**	**1.44**	**243**	P	**Pg**	**23 33 47.3**	**+2.1**
CSGS	**Sigus**	**1.50**	**68**	P	**Pg**	**23 33 47.9**	**+1.5**
ABRIN	**Birine**	**1.53**	**272**	P	**Pg**	**23 33 48.0**	**+0.9**
AKED	**El Kharrouba**	**1.68**	**310**	P	**Pg**	**23 33 50.8**	**+1.0**
ABMS	**Boumerdes**	**1.70**	**314**	P	**Pg**	**23 33 49.9**	**-0.4**
CBBAR	**Babar**	**1.84**	**103**	P	**Pb**	**23 33 52.2**	**+0.7**
AFDJ	**Sidi Ladjel**	**1.99**	**266**	P	**Pg**	**23 33 55.5**	**-0.3**
CRHA	**Rehia**	**2.16**	**84**	P	**Pb**	**23 33 58.2**	**+1.3**
EDDR	**Deurdeur**	**2.31**	**281**	P	**Pb**	**23 33 59.2**	**-0.2**
EBGR	**Bougara**	**2.50**	**271**	P	**Pb**	**23 34 03.9**	**+1.2**
EIBI	**Ibiza**	**4.51**	**321**	Pn	**Pn**	**23 34 29.7**	**+3.6**
EIBI				Sn	**Sn**	**23 35 20.1**	**+1.5**
EIBI	**Ibiza**	**4.51**	**321**	Pn	**Pn**	**23 34 30.1**	**+4.0**
EIBI				⇑*i*VmB_VC		23 34 34.4	
	742nm,SNR=1.5						
EIBI				Sn	**Sn**	**23 35 11.7**	**-7.0**
ETOS	**Mallorca**	**4.53**	**338**	Pn	**Pn**	**23 34 30.0**	**+3.7**
ETOS				Sn	**Sn**	**23 35 19.8**	**+0.7**
ETOS	**Mallorca**	**4.53**	**338**	Pn	**Pn**	**23 34 28.7**	**+2.4**
ETOS				⇑*i*VmB_VC		23 34 32.7	
	585nm,SNR=0.7						
ETOS				Sn	**Sn**	**23 35 10.9**	**-8.1**
EBEN2	**Beniarda presa**	**5.18**	**308**	Pn	**Pn**	**23 34 38.2**	**+3.0**
EBEN2				⇑*i*VmB_VC		23 34 38.7	
	327nm,SNR=1.3						
EBEN2				Sn	**Sn**	**23 35 28.0**	**-6.9**
CART	**Cartagena**	**5.23**	**294**	Pn	**Pn**	**23 34 38.5**	**+2.6**
CART				Sn	**Sn**	**23 35 38.4**	**+2.1**
EMUR	**La Murta**	**5.50**	**296**	Pn	**Pn**	**23 34 42.3**	**+2.6**
EMUR	**La Murta**	**5.50**	**296**	Pn	**Pn**	**23 34 42.0**	**+2.3**
EMUR				⇑*i*VmB_VC		23 34 46.9	
	143nm,SNR=1.6						
EMUR				Sn	Sn	23 35 33.0	-10
ETOB	**Tobarra**	**6.07**	**302**	Pn	**Pn**	**23 34 49.9**	**+2.4**
ETOB	**Tobarra**	**6.07**	**302**	Pn	**Pn**	**23 34 49.8**	**+2.4**
ETOB				⇑*i*VmB_VC		23 34 53.8	
	169nm,SNR=1.1						
ETOB				Sn	**Sn**	**23 35 48.5**	**-8.4**
EVIV	**Cofrentes, Val**	**6.11**	**309**	Pn	**Pn**	**23 34 51.0**	**+2.9**
EVIV				⇑*i*VmB_VC		23 34 53.9	
	194nm,SNR=1.4						
EVIV				Sn	Sn	23 35 47.9	-10
EMOS	**Mosqueruela**	**6.45**	**320**	Pn	**Pn**	**23 34 56.4**	**+3.6**
EMOS				⇑*i*VmB_VC		23 34 57.3	
	225nm,SNR=0.9						
EMOS				Sn	Sn	23 35 55.0	-11
EBER	**Berja**	**6.51**	**284**	Pn	Pn	23 34 59.0	+5.3
EBER				⇑*i*VmB_VC		23 35 02.2	
	140nm,SNR=1.4						
EBER				Sn	Sn	23 35 58.7	-9.5
EPOB	**Poblet**	**6.54**	**333**	Pn	**Pn**	**23 34 57.1**	**+3.1**
EPOB				⇑*i*VmB_VC		23 35 04.2	
	246nm,SNR=0.6						
EPOB				Sn	**Sn**	**23 36 00.8**	**-7.8**
EQES	**Quesada**	**6.86**	**291**	Pn	**Pn**	**23 35 01.7**	**+3.3**
EQES				⇑*i*VmB_VC		23 35 07.1	
	157nm,SNR=1.8						
EQES				Sn	**Sn**	**23 36 08.4**	**-8.2**

*IDC **09** 23:38:32.6±1.6, 32°.47N×84°.91E, h0km, mb3.2/5, mbtmp3.4/10, ML3.5/5, MS3.1/10, Error ellipse: s-maj=43.2km s-min=20.5km az=55.0*

ISC 09 23:38:35.0±1.2, 32°.5N±0°.1×84°.9E±0°.2, h16km, n17, σ0°38/10, mb3.4/5, MS3.0/9, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**13.06**	**324**	Pn	**Pn**	**23 41 40.0**	**-0.1**
	0.1nm,0.3s,baz=150,slow=15,SNR=2.2						
AAK				LR	LR	23 46 18.1	
	comp=Z,17nm,18.9s,baz=169,slow=36						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**14.42**	**353**	Pn	**Pn**	**23 41 58.1**	**-0.4**
	baz=168,slow=14,SNR=12						
	0.8nm,0.8s						
LZDM	**Lanzhou Array**	**15.91**	**72**	Pn	**Pn**	**23 42 19.1**	**+0.5**
	baz=273,slow=13						
	0.7nm,0.3s						
KURBB	**Kurchatov Arra**	**18.72**	**347**	P	**Pn**	**23 42 53.4**	**+0.2**
	baz=161,slow=11,SNR=11						
	1.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**18.83**	**135**	P	**Pn**	**23 42 54.7**	**-0.1**
	0.4nm,0.3s,baz=324,slow=13,SNR=5.0						
	1.2nm,0.4s						
ZALV	**Zalesovo Beam**	**21.44**	**360**	P	**P**	**23 43 22.7**	**+0.3**
	1.2nm,0.7s,baz=185,slow=10,SNR=5.2						
ZALV				LR	LR	23 53 09.6	
	comp=Z,49nm,18.8s,baz=94,slow=41						
	1.2nm,0.7s						
SONM	**Songino Array**	**22.34**	**40**	P	**P**	**23 43 31.7**	**-0.5**
	0.6nm,0.8s,baz=231,slow=10,SNR=3.7						
SONM				LR	LR	23 52 35.4	
	comp=Z,62nm,19.0s,baz=265,slow=38						
	0.6nm,0.8s						
BVAR	**Borovoye Array**	**23.04**	**337**	P	**P**	**23 43 39.3**	**-0.1**
	0.2nm,0.4s,baz=144,slow=12,SNR=2.4						
	0.2nm,0.4s						
TLY	**Talaya**	**23.55**	**30**	LR	LR	23 52 41.8	
	comp=Z,42nm,19.2s,baz=256,slow=36						
PALK	**Pallekele**	**25.40**	**190**	LR	LR	23 54 34.6	
	comp=Z,23nm,18.1s,baz=8.5,slow=38						
AKTO	**Aktyubinsk**	**26.75**	**320**	LR	LR	23 55 10.3	
	comp=Z,42nm,20.5s,baz=168,slow=37						
GNI	**Garni**	**33.04**	**295**	LR	LR	00 02 30.8	
	comp=Z,38nm,19.6s,baz=50,slow=44						
KSRS	**Korea Array**	**35.35**	**70**	LR	LR	00 00 24.6	
	comp=Z,25nm,18.7s,baz=305,slow=37						
NRIK	**Noril'sk**	**36.92**	**2**	LR	LR	00 02 26.1	
	comp=Z,57nm,20.4s,baz=142,slow=39						
EIL	**Elat**	**42.58**	**280**	LR	LR	00 07 08.2	
	comp=Z,78nm,18.9s,baz=64,slow=40						
NOA	**NORSAR Array B**	**54.38**	**325**	P	**P**	**23 48 01.1**	**+0.3**
	0.7nm,0.8s,baz=87,slow=7.1,SNR=3.7						
	0.7nm,0.8s						
WRA	**Warramunga Arr**	**70.37**	**131**	P	**P**	**23 49 48.2**	**-0.2**
	0.1nm,0.3s,baz=321,slow=6.0,SNR=1.5						
	0.1nm,0.3s						

*NEIC **09** 23:47:01.7±1.5, 19°.9S×177°.49W±0°.09, h545km±9km, mb4.3/22, Error ellipse: s-maj=21.7km s-min=12.1km az=177.0*

*IDC **09** 23:47:03.5±1.6, 19°.79S×177°.62W, h571km±17km, mb3.5/9, mbtmp4.4/11, Error ellipse: s-maj=25.2km s-min=12.5km az=159.0*

ISC 09 23:47:01.3±0.5, 19°.8S±0°.1×177°.45W±0°.08, h550km, n46, σ1°46/50, mb4.4/22, 2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.72**	**295**	P	**P**	**23 48 31.0**	**+2.0**
	11nm,0.5s,baz=119,slow=8.4,SNR=16						
MSVF	**Nonsavu**	**4.72**	**295**	P	**P**	**23 48 30.2**	**+1.1**
FUTU	**Fugatoga**	**5.48**	**353**	P	**P**	**23 48 36.0**	**+0.6**
NIUE	**Niue**	**7.14**	**86**	P	**P**	**23 48 50.0**	**-0.6**
AFI	**Afiamalu**	**7.97**	**44**	P	**P**	**23 48 57.4**	**-1.6**
	36nm,0.7s,baz=233,slow=15,SNR=4.5						
AFI				S	**S**	**23 50 30.0**	**-5.4**
	35nm,0.7s,baz=204,slow=23,SNR=3.7						
DZM	**Mont Dzumac**	**15.22**	**259**	P	**P**	**23 50 13.9**	**+0.8**
	9.2nm,0.7s,baz=82,slow=18,SNR=7.7						
WHZ	**Wether Hill Ro**	**28.69**	**202**	P	**P**	**23 52 14.3**	**+0.1**
ARMA	**Armidale**	**29.85**	**243**	P	**P**	**23 52 24.6**	**0.0**
CTAO	**Charters Tower**	**34.08**	**263**	P	**P**	**23 53 00.4**	**-0.2**
TOO	**Toolangi**	**36.73**	**233**	P	**P**	**23 53 22.3**	**-0.1**
COEN	**Coen**	**38.06**	**272**	P	**P**	**23 53 33.5**	**0.0**
COEN				IAmb	IAmb	23 53 34.6	
	comp=Z,8.9nm,0.9s						
STKA	**Stephens Creek**	**38.56**	**243**	P	**P**	**23 53 37.2**	**-0.2**
	comp=Z,6.2nm,0.5s,baz=96,slow=11,SNR=12						
	comp=Z,6.2nm,0.5s						
STKA	**Stephens Creek**	**38.56**	**243**	P	**P**	**23 53 36.9**	**-0.6**
INKA	**Innaminka**	**38.92**	**250**	P	**P**	**23 53 40.5**	**+0.2**
INKA				IAmb	IAmb	23 53 41.4	
	comp=Z,3.9nm,0.8s						
BBOO	**Buckleboo**	**43.33**	**243**	P	**P**	**23 54 14.3**	**-1.0**
WR8	**Warramunga Arr**	**45.06**	**261**	P	**P**	**23 54 27.8**	**-1.0**
WR8				IAmb	IAmb	23 54 28.1	
	comp=Z,22nm,1.5s						
AS31	**Alice Springs**	**45.19**	**256**	P	**P**	**23 54 29.3**	**-0.5**
AS31				IAmb	IAmb	23 54 30.9	
	comp=Z,5.5nm,0.5s						
ASAR	**Alice Springs**	**45.19**	**256**	P	**P**	**23 54 29.3**	**-0.5**
	comp=Z,18nm,0.7s,baz=90,slow=7.9,SNR=177						
ASAR				PcP	**PcP**	**23 55 58.1**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=95,slow=3.6,SNR=2.8						
ASAR				S	**S**	**00 00 27.4**	**-2.5**
	comp=Z,1.2nm,0.9s,baz=95,slow=14,SNR=6.6						
	comp=Z,18nm,0.7s						
WB0	**Warramunga Arr**	**45.19**	**261**	P	**P**	**23 54 28.6**	**-1.2**
WB0				IAmb	IAmb	23 54 29.5	
	comp=Z,23nm,1.2s						
WRA	**Warramunga Arr**	**45.21**	**261**	P	**P**	**23 54 28.9**	**-1.0**
	comp=Z,8.0nm,0.5s,baz=98,slow=8.3,SNR=159						
WRA				S	**S**	**00 00 27.9**	**-2.4**
	comp=Z,0.6nm,0.7s,baz=96,slow=14,SNR=4.6						
	comp=Z,8.0nm,0.5s						
WRA	**Warramunga Arr**	**45.21**	**261**	P	**P**	**23 54 28.7**	**-1.3**
MTN	**Manton Dam**	**49.67**	**270**	P	**P**	**23 55 02.9**	**-0.5**
MTN				IAmb	IAmb	23 55 03.5	
	comp=Z,9.7nm,0.7s						
KNRA	**Kununurra**	**51.22**	**265**	P	**P**	**23 55 13.9**	**-0.8**
KNRA				IAmb	IAmb	23 55 14.9	
	comp=Z,7.3nm,0.7s						
SIJI	**Sorong**	**53.56**	**284**	P	**P**	**23 55 31.2**	**-0.2**
	comp=Z,13nm,0.6s,baz=80,slow=12,SNR=5.0						
	comp=Z,13nm,0.6s						
SOEI	**Soe**	**57.00**	**271**	P	**P**	**23 55 55.2**	**-0.3**
SOEI				IAmb	IAmb	23 55 57.5	
	comp=Z,22nm,0.7s						
PSA00	**Pilbara Seismi**	**58.33**	**256**	P	**P**	**23 56 02.3**	**-2.1**
MBWA	**Marble Bar**	**58.51**	**257**	P	**P**	**23 56 04.6**	**-1.0**
MBWA				IAmb	IAmb	23 56 31.6	
	comp=Z,10nm,1.0s						
QSPA	**South Pole Qui**	**70.28**	**180**	P	**P**	**23 57 19.7**	**+0.3**
	comp=Z,3.6nm,0.8s,baz=354,slow=2.1,SNR=8.9						
	comp=Z,3.6nm,0.8s						
QSPA	**South Pole Qui**	**70.28**	**180**	P	**P**	**23 57 19.7**	**+0.3**
NVAR	**Mina Array Bea**	**80.15**	**43**	P	**P**	**23 58 16.8**	**+1.9**
	comp=Z,0.9nm,0.8s,baz=228,slow=9.1,SNR=4.3						
	comp=Z,0.9nm,0.8s						
K05A	**Summer Lake**	**81.08**	**38**	P	**P**	**23 58 21.3**	**+1.7**
K05A				IAmb	IAmb	23 58 23.0	
	comp=Z,9.4nm,1.3s						
PINE	**Pine Mountain**	**81.70**	**38**	P	**P**	**23 58 25.4**	**+2.7**
TRF	**Thorofare Moun**	**85.64**	**12**	P	**P**	**23 58 41.5**	**-0.2**
TRF				IAmb	IAmb	23 58 42.6	
	comp=Z,3.7nm,0.9s						
TXAR	**Lajitas Array**	**86.24**	**57**	P	**P**	**23 58 46.3**	**+1.0**
	comp=Z,0.4nm,0.8s,baz=208,slow=6.2,SNR=5.6						
	comp=Z,0.4nm,0.8s						
TXAR	**Lajitas Array**	**86.24**	**57**	P	**P**	**23 58 47.4**	**+2.0**
ELIB	**Princess Elisa**	**87.41**	**186**	*d*P	**P**	**23 58 49.8**	**-0.3**
ILAR	**Eielson Array**	**87.50**	**13**	P	**P**	**23 58 49.7**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=206,slow=4.6,SNR=5.0						
	comp=Z,0.5nm,0.6s						
PDAR	**Pinedale Array**	**88.09**	**43**	P	**P**	**23 58 53.6**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=199,slow=4.1,SNR=5.3						
	comp=Z,0.5nm,0.7s						
PDAR	**Pinedale Array**	**88.09**	**43**	P	**P**	**23 58 55.0**	**+1.1**
M30M	**Minto, Yukon**	**88.13**	**18**	P	**P**	**23 58 54.3**	**+0.9**
M30M				IAmb	IAmb	23 59 33.0	
	comp=Z,9.0nm,1.4s						
HHC	**Hu-ho-hao-te**	**89.22**	**314**	*e*P	**P**	**23 59 02.0**	**+3.0**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.5s						
PZH	**PanZhiHua**	**90.83**	**298**	P	**P**	**23 59 07.7**	**+0.9**
MKAR	**Makanchi Array**	**111.08**	**314**	PKiKP	**PKiKP**	**00 04 31.8**	**-0.7**
	comp=Z,0.1nm,0.5s,baz=97,slow=0.8,SNR=1.5						
BRTR	**Keskin Array B**	**146.73**	**313**	PKPbc	**PKPbc**	**00 05 42.0**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=156,slow=6.7,SNR=3.8						
CLL	**Collm**	**147.48**	**348**	*e*PKPbc	**PKPbc**	**00 05 43.0**	**-0.6**
	comp=Z,4.0nm,1.3s						
CLL				AMS	AMS	00 51 00.0	
	comp=Z,100nm,19.4s						
CLL				L	L	00 52 00.0	
	comp=Z,100nm,19.3s						
WLF	**Walferdange**	**150.05**	**355**	*d*PKP	**PKPdf**	**00 05 46.4**	**+2.1**

*NE

ANIG				*eS*		**Sg**	**23 50 27.2**	**-1.6**
INCO	**Volcan de Coli**	**1.18**	**189**	*eP*		**Pb**	**23 50 15.6**	**-0.2**
INCO				*i* S		**Sg**	**23 50 30.6**	**-1.1**
SOMAC	**Volcano de Col**	**1.18**	**190**	*eP*		**Pb**	**23 50 15.2**	**-0.8**
SOMAC				*eS*		**Sg**	**23 50 31.9**	**0.0**
CEGR	**Campo Tres**	**1.36**	**198**	*eP*		**Pn**	**23 50 18.4**	**+0.1**
CEGR				*eS*		**Sb**	**23 50 36.7**	**+0.5**
COMA	**Comala**	**1.40**	**193**			**Pn**	**23 50 18.4**	**-0.3**
COMA						**Sn**	**23 50 38.0**	**+1.1**
COMA	**Comala**	**1.40**	**193**	*eP*		**Pn**	**23 50 18.4**	**-0.3**
COMA				*eS*		**Sn**	**23 50 38.0**	**+1.1**
AAIG	**Aguscalientes**	**1.59**	**37**			**Pn**	**23 50 22.7**	**+1.2**
AAIG						**Sg**	**23 50 44.2**	**-0.7**
AAIG	**Aguscalientes**	**1.59**	**37**	*eP*		**Pn**	**23 50 22.7**	**+1.2**
AAIG				*eS*		**Sg**	**23 50 44.2**	**-0.7**
URUA	**Uruapan**	**1.79**	**135**			**Pn**	**23 50 23.6**	**-0.5**
URUA	**Uruapan**	**1.79**	**135**	*i* P		**Pn**	**23 50 23.6**	**-0.5**
URUA				*i* S		**Sn**	**23 50 44.9**	**-1.9**
CDAR	**Ciudad de Arme**	**1.83**	**198**	*eP*		**Pn**	**23 50 26.4**	**+1.8**
CDAR				*eS*		**Sn**	**23 50 47.9**	**+0.3**
CJM	**Chamela**	**1.94**	**232**	*eP*		**Pn**	**23 50 26.2**	**+0.2**
CJM				*eS*		**Sn**	**23 50 52.0**	**+1.8**
IGIG	**Irapuato, Guan**	**1.96**	**88**			**Pb**	**23 50 29.4**	**+0.4**
IGIG						**Sg**	**23 50 55.4**	**-1.1**
IGIG	**Irapuato, Guan**	**1.96**	**88**	*eP*		**Pb**	**23 50 29.4**	**+0.4**
IGIG				*eS*		**Sg**	**23 50 55.4**	**-1.1**
ZAIG	**Zacatecas**	**2.21**	**21**	Pn		**Pb**	**23 50 32.7**	**-0.7**
ZAIG				Sn		**Sb**	**23 51 00.9**	**+0.1**
ZAIG				IAML			23 51 03.9	
	comp=N,167nm,0.4s							
ZAIG	**Zacatecas**	**2.21**	**21**	*eP*		**Pb**	**23 50 32.8**	**-0.7**
ZAIG				*eS*		**Sb**	**23 51 01.2**	**+0.4**
MOIG	**Morelia**	**2.33**	**115**	Pn		**Pn**	**23 50 32.9**	**+1.3**
MOIG				Sn		**Sn**	**23 51 01.8**	**+1.7**
MOIG				IAML			23 51 11.9	
	comp=E,154nm,1.0s							
MOIG	**Morelia**	**2.33**	**115**	*eP*		**Pn**	**23 50 32.2**	**+0.6**
MOIG				*eS*		**Sb**	**23 51 06.0**	**+2.0**
MMIG	**Aquila**	**2.40**	**178**			**Pb**	**23 50 36.4**	**+0.1**
MMIG						**Sb**	**23 51 07.3**	**+1.5**
MMIG	**Aquila**	**2.40**	**178**	*eP*		**Pb**	**23 50 36.4**	**+0.1**
MMIG				*eS*		**Sb**	**23 51 07.3**	**+1.5**
RPIG	**Rio Verde**	**3.42**	**69**	*eS*		**Sn**	**23 51 29.0**	**+2.2**
ZIIG	**Zihuatanejo**	**3.58**	**149**	*eP*		**Pn**	**23 50 47.6**	**-1.0**
ZIIG				*eS*		**Sn**	**23 51 32.7**	**+1.9**
ARIG	**Puente Sto Nin**	**3.76**	**129**	*eP*		**Pn**	**23 50 51.7**	**+0.6**
ARIG				*eS*		**Sn**	**23 51 31.7**	**-3.6**
PLIG	**Platanillo**	**4.35**	**121**	*eS*		**Sn**	**23 51 42.3**	**-7.5**
GTIG	**Gomez Farias**	**4.60**	**58**	*eP*		**Pn**	**23 51 01.3**	**-1.3**
GTIG				*eS*		**Sn**	**23 51 54.4**	**-1.5**
PDIG	**Papasquiaro**	**4.69**	**338**	*eP*		**Pn**	**23 51 04.8**	**+0.7**
PDIG				*eS*		**Sn**	**23 51 59.8**	**+1.3**
LNIG	**Linares**	**5.55**	**40**	*eP*		**Pn**	**23 51 15.7**	**0.0**
LNIG				*eS*		**Sn**	**23 52 21.7**	**+2.4**
HPIG		**6.54**	**342**	Pn		**Pn**	**23 51 31.3**	**+1.8**
TX31	**Lajitas Ar. Si**	**8.60**	**359**	Pn		**Pn**	**23 51 58.2**	**+0.4**
TXAR	**Lajitas Array**	**8.60**	**359**	Pn		**Pn**	**23 51 59.0**	**+1.3**

*NEIC **09** 23:50:05.8±2.2, 14.°54N±0.°07×146.°30E±0.°09, h48km±6km, mb4.3/30, Error ellipse: s-maj=12.6km s-min=9.9km az=80.0*
*IDC **09** 23:50:06.8±4.4, 14.°50N×146.°18E, h50km±37km, mb3.4/9, mbtmp3.7/9, Error ellipse: s-maj=32.6km s-min=18.5km az=88.0*

ISC 09 23:50:05.6±0.6,**14.°51N**±0.°08×**146.°31E**±0.°08,**h50**km,**n55,** σ1**§25**/52,**mb4.1**/24,**Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.67**	**237**	P		**P**	**Pn**	**23 50 32.5**	**+0.2**
	500nm,0.3s,baz=28,slow=2.5,SNR=14								
GUMO				S		**Sn**	**Sn**	**23 50 51.4**	**-1.2**
	604nm,0.4s,baz=256,slow=22,SNR=5.2								
GUMO				LR		LR	LR	23 51 20.5	
	comp=Z,185nm,18.8s,baz=119,slow=47								
GUMO	**Guam**	**1.67**	**237**				**Pn**	**23 50 32.6**	**+0.2**
GUMO				Sn			**Sn**	**23 50 51.8**	**-0.8**
JCJ	**Chichijima**	**13.10**	**344**	Pn			**Pn**	**23 53 07.8**	**-1.2**
PATS	**Pohnpei**	**14.04**	**122**	Pn			**Pn**	**23 53 20.1**	**-1.7**
H11S3	**WAKE ISLAND Hy**	**19.94**	**76**	T		T	T	00 16 02.4	
	baz=263,slow=74,SNR=11								
H11S1	**WAKE ISLAND Hy**	**19.95**	**76**	T		T	T	00 16 02.0	
	baz=263,slow=74,SNR=6.8								
H11S2	**WAKE ISLAND Hy**	**19.95**	**76**	T		T	T	00 16 06.2	
	baz=263,slow=74,SNR=5.2								
H11N1	**WAKE ISLAND Hy**	**20.34**	**72**	T		T	T	00 16 28.6	
	baz=259								
H11N2	**WAKE ISLAND Hy**	**20.35**	**72**	T		T	T	00 16 27.5	
	baz=258								
H11N3	**WAKE ISLAND Hy**	**20.36**	**72**	T		T	T	00 16 29.2	
	baz=258								
WB0	**Warramunga Arr**	**36.02**	**199**	P		**P**	**P**	**23 57 02.8**	**+0.6**
WB0				IAmb		IAmb	IAmb	23 57 03.0	
	comp=Z,3.3nm,0.7s								
WRA	**Warramunga Arr**	**36.20**	**199**	P		**P**	**P**	**23 57 04.0**	**+0.3**
	comp=Z,2.8nm,0.8s,baz=22,slow=9.3,SNR=12								
WRA				PcP		**PcP**	**PcP**	**23 59 30.3**	**+1.8**
	comp=Z,0.5nm,0.8s,baz=14,slow=3.1,SNR=2.8								
	comp=Z,2.8nm,0.8s								
WRA	**Warramunga Arr**	**36.20**	**199**	P		**P**	**P**	**23 57 03.3**	**-0.4**
ENH	**Enshi**	**37.29**	**301**	P		**P**	**P**	**23 57 13.6**	**+0.6**
ENH				IAmb		IAmb	IAmb	23 57 32.9	
	comp=Z,4.0nm,1.0s								
AS31	**Alice Springs**	**39.83**	**198**	P		**P**	**P**	**23 57 35.0**	**+0.7**
AS31				IAmb		IAmb	IAmb	23 57 36.5	
	comp=Z,1.6nm,0.4s								
ASAR	**Alice Springs**	**39.83**	**198**	P		**P**	**P**	**23 57 35.1**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=16,slow=13,SNR=15								
	comp=Z,2.1nm,0.7s								
ASAR	**Alice Springs**	**39.83**	**198**	P		**P**	**P**	**23 57 35.0**	**+0.7**
SONM	**Songino Array**	**46.81**	**324**	P		**P**	**P**	**23 58 31.5**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=123,slow=6.4,SNR=2.3								
	comp=Z,0.3nm,0.6s								
BBOO	**Buckleboo**	**48.06**	**192**	P		**P**	**P**	**23 58 40.5**	**+0.4**
BBOO				IAmb		IAmb	IAmb	23 59 01.0	
	comp=Z,9.8nm,1.1s								
MRZ	**Mangatainoka R**	**61.24**	**155**	P		**P**	**P**	**00 00 15.8**	**+0.3**
N17K	**Nushagak Hills**	**61.27**	**28**	P		**P**	**P**	**00 00 15.9**	**+0.4**
N17K				IAmb		IAmb	IAmb	00 00 26.8	
	comp=Z,3.5nm,1.1s								
ZALV	**Zalesovo Beam**	**61.70**	**324**	P		**P**	**P**	**00 00 18.1**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=108,slow=9.3,SNR=1.9								
	comp=Z,0.3nm,0.3s								
MKAR	**Makanchi Array**	**61.81**	**316**	P		**P**	**P**	**00 00 20.7**	**+1.3**
	comp=Z,0.3nm,0.4s,baz=90,slow=8.6,SNR=11								
	comp=Z,0.3nm,0.4s								
MKAR	**Makanchi Array**	**61.81**	**316**	P		**P**	**P**	**00 00 19.8**	**+0.4**
E19K	**Redstone River**	**64.15**	**21**	P		**P**	**P**	**00 00 35.3**	**+0.7**
E19K				IAmb		IAmb	IAmb	00 01 06.8	
	comp=Z,1.8nm,1.1s								
KURK	**Kurchatov**	**64.79**	**319**	P		**P**	**P**	**00 00 38.2**	**-0.8**
KURK				IAmb		IAmb	IAmb	00 00 58.1	
	comp=Z,1.3nm,0.8s								
KURBB	**Kurchatov Arra**	**64.83**	**319**	P		**P**	**P**	**00 00 40.0**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=100,slow=6.8,SNR=11								
	comp=Z,0.7nm,0.5s								
MLY	**Manley**	**65.65**	**25**	P		**P**	**P**	**00 00 43.7**	**-0.7**
D22K	**Ayikyak River**	**66.29**	**20**	P		**P**	**P**	**00 00 48.4**	**0.0**
D22K				IAmb		IAmb	IAmb	00 01 15.2	
	comp=Z,2.3nm,1.1s								
B22K	**Teshekpuk Lake**	**66.62**	**19**	P		**P**	**P**	**00 00 51.0**	**+0.6**
B22K				IAmb		IAmb	IAmb	00 01 01.7	
	comp=Z,2.8nm,1.1s								
ILAR	**Eielson Array**	**67.15**	**25**	P		**P**	**P**	**00 00 54.7**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=249,slow=6.0,SNR=5.6								
	comp=Z,0.2nm,0.5s								
J25K	**Salcha River,**	**67.74**	**26**	P		**P**	**P**	**00 00 58.2**	**+0.5**
GLB	**Gilahina Butte**	**67.77**	**29**	P		**P**	**P**	**00 00 55.9**	**-2.1**
VRDI	**Verde Repeater**	**67.90**	**29**	P		**P**	**P**	**00 01 00.3**	**+1.3**
C24K	**Franklin Bluff**	**67.91**	**20**	P		**P**	**P**	**00 01 00.1**	**+1.5**
C24K				IAmb		IAmb	IAmb	00 01 12.0	
	comp=Z,4.2nm,1.1s								
TGL	**Tana Glacier**	**68.11**	**30**	P		**P**	**P**	**00 00 59.7**	**-0.6**
MCARA	**McCarthy VSAT**	**68.13**	**29**	P		**P**	**P**	**00 00 59.0**	**-1.2**
D25K	**Kavik River**	**68.57**	**21**	P		**P**	**P**	**00 01 02.5**	**-0.3**
D25K				IAmb		IAmb	IAmb	00 01 42.8	
	comp=Z,2.3nm,1.1s								
GRNC	**Granite Creek**	**68.63**	**30**	P		**P**	**P**	**00 01 05.0**	**+1.4**
GRNC				IAmb		IAmb	IAmb	00 01 40.1	
	comp=Z,6.2nm,0.9s								
BMAR	**Burnt Mountain**	**68.72**	**23**	P		**P**	**P**	**00 01 04.7**	**+0.9**
M27K	**Edge Creek, AK**	**68.83**	**28**	P		**P**	**P**	**00 01 05.4**	**+0.7**
M27K				IAmb		IAmb	IAmb	00 01 40.3	
	comp=Z,5.8nm,0.8s								
L27K	**Beaver Creek,**	**68.97**	**28**	P		**P**	**P**	**00 01 02.5**	**-3.0**
L27K				IAmb		IAmb	IAmb	00 01 39.9	
	comp=Z,4.1nm,0.8s								
BCAR	**Beaver Creek A**	**68.99**	**28**	P		**P**	**P**	**00 01 02.7**	**-2.8**
KK31	**Karatay Array**	**69.91**	**311**	P		**P**	**P**	**00 01 10.7**	**-0.8**
KKAR	**Karatay Array**	**69.91**	**311**	P		**P**	**P**	**00 01 08.9**	**-2.7**
E27K	**Coleen River**	**69.99**	**22**	P		**P**	**P**	**00 01 10.3**	**-1.3**
BVAR	**Borovoye Array**	**70.08**	**321**	P		**P**	**P**	**00 01 13.1**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=100,slow=8.8,SNR=9.3								
	comp=Z,0.4nm,0.3s								
BORK	**Borovoye**	**70.12**	**321**	P		**P**	**P**	**00 01 12.8**	**+0.1**
I28M	**Miner Creek**	**70.16**	**25**	P		**P**	**P**	**00 01 13.7**	**+0.9**
GAR	**Garm**	**70.20**	**307**	P		**P**	**P**	**00 01 12.7**	**-0.9**
GAR				IAmb		IAmb	IAmb	00 01 35.1	
	comp=Z,2.0nm,0.8s								
AB31	**Akbulak array**	**76.80**	**318**	P		**P**	**P**	**00 01 50.0**	**-2.0**
ABKAR	**Akbulak array**	**76.80**	**318**	P		**P**	**P**	**00 01 51.0**	**-1.0**
C03A	**Quillayute Air**	**78.80**	**43**	P		**P**	**P**	**00 02 01.6**	**-1.5**
RADR	**Rader Ridge**	**79.57**	**45**	P		**P**	**P**	**00 02 08.0**	**+0.6**
YKA	**Yellowknife Ar**	**81.41**	**28**	P		**P**	**P**	**00 02 19.6**	**+2.8**
	comp=Z,0.1nm,0.4s,baz=293,slow=5.8,SNR=1.4								
	comp=Z,0.1nm,0.4s								

*NEIC **10** 00:03:20.1±1.4, 17.°81N±0.°03×66.°871W±0.°006, h10km±1km, ML3.1/35, Md3.0/5(RSPR), Error ellipse: s-maj=5.8km s-min=3.0km az=354.0*
*SDD **10** 00:03:20.5±0.4, 17.°82N×66.°89W, h18km±2km, MD3.5, ML2.9, MW3.1, Presumed earthquake*
*OSPL **10** 00:03:20.5±0.4, 17.°79N×66.°88W, h8km±5km, ML2.9, Presumed earthquake*

ISC 10 00:03:20.9±1.2,**17.°86N**±0.°06×**66.°86W**±0.°02,**h16**km±7km, **n29,** σ0**§90**/52,**10C-3D,Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.12**	**351**				**Pg**	**00 03 24.2**	**-0.3**
GBPR							**Sg**	**00 03 27.0**	**0.0**
MLPR	**Magueyes Islan**	**0.21**	**303**				**Pg**	**00 03 25.1**	**-0.7**
MLPR				Sg			**Sg**	**00 03 28.8**	**-0.3**
MLPR				IAML				00 03 29.2	
	3µm,0.3s								
MLPR				IAML				00 03 29.2	
	4µm,0.2s								
MLPR	**Magueyes Islan**	**0.21**	**303**	↑*e*Pg			**Pg**	**00 03 25.2**	**-0.6**
MLPR				↑*e*Sg			**Sg**	**00 03 28.6**	**-0.5**
MLPR				IAML				00 03 29.0	
	comp=N,1µm,0.1s								
CRPR	**Cabo Rojo, PR**	**0.28**	**302**	Pg			**Pg**	**00 03 26.2**	**-0.7**
CRPR				Sg			**Sg**	**00 03 30.2**	**-0.9**
CRPR				IAML				00 03 30.8	
	comp=N,2µm,0.4s								
CRPR	**Cabo Rojo, PR**	**0.28**	**302**	*i* P			**Pg**	**00 03 26.3**	**-0.7**
CRPR				*e*S			**Sg**	**00 03 30.2**	**-0.9**
CRPR				IAML				00 03 31.0	
	comp=Z,2µm,0.5s								
OBIP	**Obispado Ponce**	**0.30**	**53**				**Pg**	**00 03 27.0**	**-0.4**
OBIP							**Sg**	**00 03 32.3**	**+0.5**
OBIP	**Obispado Ponce**	**0.30**	**53**	*i* P			**Pg**	**00 03 27.1**	**-0.2**
OBIP				IAML				00 03 33.5	
	comp=Z,282nm,0.1s								
CELP	**Cerrillos**	**0.34**	**51**				**Pg**	**00 03 27.8**	**-0.3**
CELP				Sg			**Sg**	**00 03 33.6**	**+0.6**
CELP	**Cerrillos**	**0.34**	**51**	↓*e*Pg			**Pg**	**00 03 27.8**	**-0.3**
CELP				↑*e*Sg			**Sg**	**00 03 33.6**	**+0.6**
CELP				IAML				00 03 34.3	
	comp=N,317nm,0.1s								
LSP	**Las Mesas**	**0.38**	**326**				**Pg**	**00 03 28.3**	**-0.5**
LSP							**Sg**	**00 03 34.3**	**+0.2**
UUPR	**Utuado, UPR, P**	**0.42**	**19**				**Pg**	**00 03 28.8**	**-0.6**
UUPR				Sg			**Sg**	**00 03 34.8**	**-0.3**
PRSN	**Puerto Rico Se**	**0.45**	**323**				**Pg**	**00 03 29.1**	**-0.9**
PRSN				Sg			**Sg**	**00 03 35.5**	**-0.6**
PRSN	**Puerto Rico Se**	**0.45**	**323**	↑*e*Pg			**Pg**	**00 03 29.2**	**-0.8**
PRSN				↑*e*Sg			**Sg**	**00 03 35.5**	**-0.6**
PRSN				IAML				00 03 38.8	
	comp=N,2µm,0.3s								
AOPR	**Arecibo Observ**	**0.50**	**12**				**Pg**	**00 03 30.1**	**-0.7**
AOPR				Sg			**Sg**	**00 03 37.2**	**-0.4**
AOPR	**Arecibo Observ**	**0.50**	**12**	↓*e*Pg			**Pg**	**00 03 30.1**	**-0.7**
AOPR				↑*e*Sg			**Sg**	**00 03 37.5**	**-0.1**
AOPR				IAML				00 03 39.5	
	comp=N,2µm,0.2s								
AGPR	**Aguadilla, PR**	**0.65**	**339**				**Pg**	**00 03 32.6**	**-1.1**
AGPR				Pn			**Pg**	**00 03 32.8**	**-1.0**
AGPR							**Sg**	**00 03 41.6**	**-0.8**
AGPR				IAML				00 03 42.2	
	comp=N,755nm,0.3s								
AGPR	**Aguadilla, PR**	**0.65**	**339**	↑*e*Pg			**Pg**	**00 03 32.8**	**-1.0**
AGPR				↑*e*Sg			**Sg**	**00 03 41.8**	**-0.7**
AGPR				IAML				00 03 42.1	
	comp=N,559nm,0.3s								
ECPR	**Experimental S**	**0.66**	**46**				**Pg**	**00 03 32.8**	**-1.0**
ECPR							**Sg**	**00 03 42.2**	**-0.4**
ECPR				IAML				00 03 46.6	
	comp=N,706nm,0.2s								
ECPR				IAML				00 03 47.9	
	comp=N,834nm,0.2s								
EMPR	**Esperanza - Ma**	**0.69**	**27**				**Pg**	**00 03 34.0**	**-0.4**
EMPR							**Sg**	**00 03 43.6**	**-0.1**
SJG	**San Juan**	**0.72**	**69**				**Pg**	**00 03 33.9**	**-1.1**
SJG				IAML				00 03 47.2	
	comp=N,532nm,0.4s								
SJG				IAML				00 03 47.2	
	comp=N,1µm,0.5s								
SJG	**San Juan**	**0.72**	**69**	↓*e*Pg			**Pg**	**00 03 34.1**	**-0.9**
SJG				↑*e*Sg			**Sg**	**00 03 44.2**	**-0.4**
SJG	**San Juan**	**0.72**	**69**	*i* P			**Pg**	**00 03 34.1**	**-0.9**
SJG				*e*S			**Sg**	**00 03 44.5**	**0.0**
SJG				IAML				00 03 47.2	
	comp=Z,502nm,0.3s								
IDE	**Isla Desecheo**	**0.79**	**312**				**Pg**	**00 03 34.8**	**-1.4**
IDE							**Sg**	**00 03 45.6**	**-1.0**
PDPR	**Patillas Dam,**	**0.81**	**78**				**Pg**	**00 03 35.8**	**-1.0**
PDPR				IAML				00 03 50.4	
	comp=Z,443nm,0.4s								
HUMP	**Col San Antoni**	**1.00**	**73**				**Pg**	**00 03 38.7**	**-1.6**
HUMP							**Sg**	**00 03 53.0**	**-0.5**
HUMP	**Col San Antoni**	**1.00**	**73**				**Pg**	**00 03 38.4**	**-1.9**
HUMP				IAML				00 03 55.2	
	comp=Z,389nm,0.6s								
HUMP				IAML				00 03 56.2	
	comp=Z,286nm,0.2s								
CUPR	**Culebra, Puert**	**1.57**	**73**	Pn			**Pn**	**00 03 48.0**	**+0.1**
DR12	**Loma Pena Alta**	**2.57**	**292**	Pn			**Pn**	**00 04 03.9**	**+2.1**
HATOM	**Hato Mayor del**	**2.57**	**292**	↑*e*Pg			**Pn**	**00 04 04.2**	**+2.4**
HATOM				IAML				00 05 25.1	
	comp=N,60nm,3.9s								

*NIED **10** 00:13:31.0, 38.°33N×142.°13E, h37km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr=0.06; Mθθ=0.36; Mφφ=-0.31; Mrθ=0.20; Mφθ=-0.29; Mrφ=0.98; Fault plane solution: M0=1.03000×10^15^ NP1: φs=259.00000°, δ13.00000°, λ164.00000°. NP2:φs=4.00000°, δ86.00000°, λ77.00000°.*
*JMA **10** 00:13:31.0±0.1, 38.°3N±0.°4×142.°1E±0.°8, h37km±1km, MV4.1/40, E OFF MIYAGI PREF*
JMA Felt I J1 at E OFF MIYAGI PREF
*IDC **10** 00:13:33.4±2.1, 38.°38N×142.°04E, h47km±17km, mb3.8/13, mbtmp4.0/16, ML3.2/3, MS2.9/5, Error ellipse: s-maj=22.2km s-min=12.0km az=130.0*
*NEIC **10** 00:13:34.0±1.1, 38.°4N±0.°1×142.°0E±0.°1, h49km±9km, mb4.3/11, Error ellipse: s-maj=19.3km s-min=10.8km az=131.0*

ISC 10 00:13:30.9±1.7,**38.°33N**±0.°05×**142.°15E**±0.°07,**h29**km±10km, **n64,** σ1**§04**/68,**mb4.2**/20,**19D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.54**	**268**	↓P			**Pb**	**00 13 41.7**	**-0.1**
JIKH				↓S			**Sb**	**00 13 49.1**	**-0.2**
JIO	**Ouri**	**0.64**	**281**	↓*i*P			**Pb**	**00 13 43.4**	**-0.2**
JIO				↓S			**Sb**	**00 13 52.0**	**-0.2**
JKMT	**Kesennumamotoy**	**0.71**	**313**	↓*i*P			**Pb**	**00 13 44.6**	**-0.2**
JKMT				↓S			**Sb**	**00 13 54.1**	**-0.2**
OFUJ	**Ofunato**	**0.84**	**334**	↓*i*P			**Pn**	**00 13 46.2**	**-0.5**
OFUJ				↓*e*S			**Sb**	**00 13 57.1**	**-0.7**
JMK	**Ichinoseki**	**0.95**	**311**	↓*i*P			**Pn**	**00 13 48.1**	**-0.2**
JMK				↓*e*S			**Sn**	**00 13 59.9**	**-0.9**
JMM	**Marumori**	**1.16**	**247**	↓*i*P			**Pn**	**00 13 50.3**	**-0.8**
JMM				↓S			**Sn**	**00 14 04.8**	**-1.2**
JOU	**Okura**	**1.17**	**272**	↓*i*P			**Pn**	**00 13 51.3**	**+0.1**
JOU				A			A	00 13 51.3	
	comp=N,8.0nm,0.6s,comp=E,9.0nm,0.5s								
JOU				↓S			**Sn**	**00 14 06.2**	**+0.1**
JOM	**Ohasama**	**1.32**	**330**	↓*i*P			**Pn**	**00 13 53.6**	**+0.3**
JOM				↓S			**Sn**	**00 14 10.3**	**+0.3**
JFK	**Kawauchi**	**1.39**	**227**	↓*i*P			**Pn**	**00 13 53.1**	**-1.3**
JFK				↓S			**Sn**	**00 14 09.1**	**-2.7**
JYK	**Kaneyama**	**1.52**	**293**	↓*i*P			**Pn**	**00 13 56.4**	**+0.3**
JRG	**Rokugo**	**1.59**	**313**	P			**Pn**	**00 13 57.8**	**+0.8**
JOTO	**OTAMA OYAMA**	**1.63**	**242**	P			**Pn**	**00 13 57.7**	**+0.2**
JOTO				S			**Sn**	**00 14 17.7**	**+0.2**
JYS	**Shirataka**	**1.64**	**267**	P			**Pn**	**00 13 58.0**	**+0.3**
JYS				S			**Sn**	**00 14 18.1**	**+0.2**
MJAR	**Matsushiro Arr**	**3.61**	**242**	P			**Pn**	**00 14 27.3**	**+2.5**
	comp=E,0.5nm,0.3s,baz=68,slow=9.8,SNR=32								
MJAR				S			**Sn**	**00 15 06.2**	**-0.1**
	comp=E,12nm,0.8s,baz=314,slow=17,SNR=5.4								
MJAR				LR			LR	00 16 05.8	
	comp=E,255nm,21.5s,baz=104,slow=43								
	comp=E,13nm,0.8s								
MJAR	**Matsushiro Arr**	**3.61**	**242**				**Pn**	**00 14 26.8**	**+2.1**
MAJO	**Matsushiro**	**3.61**	**242**				**Pn**	**00 14 27.4**	**+2.6**
MJB9	**Matsu-Tunnel**	**3.61**	**242**				**Pn**	**00 14 27.7**	**+2.9**
JGF	**Kuroka**	**4.70**	**236**				**Pn**	**00 14 42.8**	**+2.9**
INU	**Inuyama**	**5.08**	**236**				**Pn**	**00 14 47.6**	**+2.7**
ASAJ	**Asahikawa**	**5.79**	**3**	P			**Pn**	**00 14 55.5**	**+0.7**
	comp=E,0.8nm,0.3s,baz=208,slow=15,SNR=1.9								
ASAJ				S			**Sn**	**00 16 01.2**	**+1.1**
	comp=E,6.0nm,0.4s,baz=242,slow=25,SNR=1.6								
	comp=E,3.4nm,0.3s								
JKA	**Kamikawa-asahi**	**5.79**	**3**				**Pn**	**00 14 55.3**	**+0.6**
JMN	**Monobe**	**8.12**	**238**	Pn			**Pn**	**00 15 27.7**	**+0.9**
USRK	**Ussuriysk Ar.**	**9.63**	**311**	P			**Pn**	**00 15 49.5**	**+2.1**
	comp=E,0.4nm,0.3s,baz=55,slow=26,SNR=7.8								
USRK				S			**Sn**	**00 17 34.9**	**+0.3**
	comp=E,5.1nm,0.6s,baz=99,slow=8.4,SNR=5.1								
	comp=E,3.0nm,0.5s								
JNU	**Nakatsue**	**10.53**	**244**	LR			LR	00 20 24.9	
	comp=E,133nm,18.7s,baz=22,slow=39								
KSRS	**Korea Array**	**11.28**	**270**	LR			LR	00 20 11.0	
	comp=E,64nm,19.6s,baz=85,slow=35								
KLR	**Kul'dur**	**13.22**	**329**	LR			LR	00 21 16.4	
	comp=E,73nm,20.6s,baz=155,slow=35								
PETK	**Petropavlovsk-**	**18.28**	**31**	LR			LR	00 24 27.0	
	comp=E,13nm,19.4s,baz=173,slow=36								
SONM	**Songino Array**	**27.57**	**302**	P			**P**	**00 19 15.3**	**0.0**
	comp=E,0.4nm,0.4s,baz=116,slow=8.8,SNR=6.0								
	comp=E,0.4nm,0.4s								
SONM	**Songino Array**	**27.57**	**302**	P			**P**	**00 19 15.0**	**-0.3**
ENH	**Enshi**	**28.04**	**263**	P			**P**	**00 19 18.9**	**-0.7**
ENH				IAmb			IAmb	00 19 20.2	
	comp=Z,9.8nm,1.0s								
H11N2	**WAKE ISLAND Hy**	**28.35**	**124**	T			T	00 49 50.6	
	baz=317,slow=75,SNR=238								
H11N1	**WAKE ISLAND

ARMA	**Armidale**	**29.67**	**239**	P		**P**	**00 21 22.1**	**+0.7**
CTAO	**Charters Tower**	**33.06**	**260**	P		**P**	**00 21 50.1**	**-0.2**
CTAO				IAmb		IAmb	00 21 50.5	
	comp=Z,7.4nm,0.8s							
CAN	**Canberra**	**33.49**	**232**	P		**P**	**00 21 54.2**	**+0.4**
CAN				IAmb		IAmb	00 22 29.7	
	comp=Z,20nm,1.5s							
COEN	**Coen**	**36.68**	**270**	P		**P**	**00 22 20.6**	**0.0**
COEN				IAmb		IAmb	00 22 34.5	
	comp=Z,16nm,1.4s							
TOO	**Toolangi**	**36.97**	**230**			**P**	**00 22 23.3**	**+0.7**
TOO				IAmb		IAmb	00 22 24.2	
	comp=Z,7.4nm,0.9s							
STKA	**Stephens Creek**	**38.35**	**241**			**P**	**00 22 34.4**	**+0.4**
INKA	**Innaminka**	**38.43**	**248**			**P**	**00 22 35.4**	**+0.8**
INKA				IAmb		IAmb	00 22 35.9	
	comp=Z,4.7nm,0.5s							
BBOO	**Buckleboo**	**43.13**	**241**	P		**P**	**00 23 12.0**	**0.0**
WR8	**Warramunga Arr**	**44.10**	**259**	P		**P**	**00 23 18.4**	**-1.3**
WR8				IAmb		IAmb	00 23 38.6	
	comp=Z,6.9nm,1.2s							
WB0	**Warramunga Arr**	**44.22**	**260**			**P**	**00 23 19.5**	**-1.2**
WRA	**Warramunga Arr**	**44.25**	**259**	P		**P**	**00 23 19.7**	**-1.3**
	comp=Z,3.4nm,0.7s,baz=94,slow=7.1,SNR=51							
WRA				PcP		**PcP**	**00 24 53.4**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=96,slow=3.1,SNR=2.5							
	comp=Z,3.4nm,0.7s							
WRA	**Warramunga Arr**	**44.25**	**259**	P		**P**	**00 23 19.6**	**-1.3**
AS31	**Alice Springs**	**44.44**	**254**			**P**	**00 23 22.1**	**-0.3**
ASAR	**Alice Springs**	**44.44**	**254**	P		**P**	**00 23 22.0**	**-0.4**
	comp=Z,33nm,0.5s,baz=88,slow=8.1,SNR=510							
ASAR				PcP		**PcP**	**00 24 53.7**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=91,slow=3.6,SNR=2.2							
ASAR				S		**S**	**00 29 15.3**	**-2.9**
	comp=Z,0.7nm,0.9s,baz=85,slow=17,SNR=4.8							
ASAR	**Alice Springs**	**44.44**	**254**			**P**	**00 23 22.1**	**-0.2**
MTN	**Manton Dam**	**48.38**	**268**	P		**P**	**00 23 51.5**	**-0.7**
MTN				IAmb		IAmb	00 23 52.0	
	comp=Z,4.6nm,0.8s							
FORT	**Forrest**	**49.71**	**244**			**P**	**00 24 01.2**	**-0.7**
KNRA	**Kununurra**	**50.09**	**264**	P		**P**	**00 24 04.2**	**-0.6**
KNRA				IAmb		IAmb	00 24 05.0	
	comp=Z,8.0nm,0.7s							
PSA00	**Pilbara Seismi**	**57.55**	**255**	P		**P**	**00 24 56.7**	**-0.8**
MBWA	**Marble Bar**	**57.71**	**256**	P		**P**	**00 24 57.6**	**-1.0**
MBWA				IAmb		IAmb	00 25 12.7	
	comp=Z,11nm,1.2s							
MORW	**Morawa**	**60.17**	**246**	P		**P**	**00 25 13.5**	**-1.6**
MORW				IAmb		IAmb	00 25 38.1	
	comp=Z,27nm,1.5s							
GIRL	**Giralia**	**62.55**	**253**	P		**P**	**00 25 30.2**	**-0.4**
MJAR	**Matsushiro Arr**	**67.50**	**324**	P		**P**	**00 26 00.7**	**-0.8**
	comp=Z,1.3nm,0.3s,baz=146,slow=5.7,SNR=5.3							
	comp=Z,1.3nm,0.3s							
QSPA	**South Pole Qui**	**72.34**	**180**	P		**P**	**00 26 30.1**	**+0.2**
	comp=Z,3.0nm,0.8s,baz=338,slow=0.8,SNR=8.1							
	comp=Z,3.0nm,0.8s							
QSPA	**South Pole Qui**	**72.34**	**180**	P		**P**	**00 26 30.1**	**+0.2**
PETK	**Petropavlovsk-**	**73.39**	**346**	P		**P**	**00 26 35.8**	**-0.1**
	comp=Z,2.6nm,0.5s,baz=159,slow=4.9,SNR=3.6							
	comp=Z,2.6nm,0.5s							
NVAR	**Mina Argay Baa**	**79.58**	**44**	P		**P**	**00 27 10.9**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=238,slow=9.7,SNR=4.5							
	comp=Z,0.7nm,0.7s							
O18K	**Koktuh Hills**	**79.65**	**12**	P		**P**	**00 27 09.4**	**-0.7**
O18K				IAmb		IAmb	00 27 09.9	
	comp=Z,12nm,1.0s							
L14K	**Kuka Creek**	**79.84**	**8**	P		**P**	**00 27 11.3**	**+0.3**
M16K	**Timber Creek**	**80.08**	**10**	P		**P**	**00 27 12.3**	**0.0**
M16K				IAmb		IAmb	00 27 37.4	
	comp=Z,16nm,1.5s							
K13K	**Kusilvak Mount**	**80.18**	**7**	P		**P**	**00 27 08.9**	**-3.9**
ILSW	**Iliamna Southw**	**80.19**	**13**	P		**P**	**00 27 12.0**	**-1.1**
ILSW				IAmb		IAmb	00 27 12.5	
	comp=Z,5.2nm,0.8s							
TNA	**Tin City**	**83.44**	**5**	P		**P**	**00 27 28.9**	**-0.3**
TRF	**Thorofare Moun**	**83.91**	**12**	P		**P**	**00 27 30.4**	**-1.5**
TRF				IAmb		IAmb	00 27 32.3	
	comp=Z,9.6nm,1.1s							
LOGN	**Logan Glacier**	**83.97**	**18**	P		**P**	**00 27 31.4**	**-0.9**
LOGN				IAmb		IAmb	00 27 52.8	
	comp=Z,14nm,1.4s							
BARN	**Barnard Glacie**	**83.97**	**17**	P		**P**	**00 27 31.6**	**-0.7**
BARN				IAmb		IAmb	00 27 33.1	
	comp=Z,15nm,1.5s							
SRU	**San Rafael Swe**	**85.19**	**47**	P		**P**	**00 27 36.7**	**-2.1**
SRU				IAmb		IAmb	00 27 42.1	
	comp=Z,3.6nm,0.7s							
WRH	**Wood River Hil**	**85.28**	**13**	P		**P**	**00 27 36.9**	**-1.4**
WRH				IAmb		IAmb	00 27 38.4	
	comp=Z,4.1nm,1.0s							
Q32M	**Nakina River**	**85.37**	**22**	P		**P**	**00 27 39.0**	**-0.2**
Q32M				IAmb		IAmb	00 27 58.0	
	comp=Z,15nm,1.4s							
RIDG	**Independent Ri**	**85.38**	**14**	P		**P**	**00 27 38.3**	**-0.6**
RIDG				IAmb		IAmb	00 27 58.4	
	comp=Z,5.9nm,1.5s							
H21K	**Melozitna Rive**	**85.43**	**11**	P		**P**	**00 27 38.8**	**-0.3**
HDA	**Harding Lake**	**85.47**	**13**	P		**P**	**00 27 38.6**	**-0.7**
HDA				IAmb		IAmb	00 27 40.0	
	comp=Z,4.7nm,1.3s							
ILAR	**Eielson Array**	**85.80**	**13**	P		**P**	**00 27 39.2**	**-1.6**
	comp=Z,0.6nm,0.4s,baz=226,slow=5.0,SNR=22							
	comp=Z,0.6nm,0.4s							
ILAR	**Eielson Array**	**85.80**	**13**	P		**P**	**00 27 39.4**	**-1.4**
PV02	**Paradox Valley**	**86.04**	**48**	P		**P**	**00 27 43.0**	**+0.1**
PV02				IAmb		IAmb	00 27 51.1	
	comp=Z,5.8nm,0.8s							
G21K	**Allakaket**	**86.09**	**10**	P		**P**	**00 27 41.4**	**-0.9**
F20K	**Avaraart Lake**	**86.24**	**9**	P		**P**	**00 27 42.2**	**-0.7**
TXAR	**Lajitas Array**	**86.25**	**58**	P		**P**	**00 27 45.1**	**+1.1**
	comp=Z,0.6nm,0.8s,baz=197,slow=7.2,SNR=5.4							
	comp=Z,0.6nm,0.8s							
TXAR	**Lajitas Array**	**86.25**	**58**	P		**P**	**00 27 45.4**	**+1.5**
E19K	**Redstone River**	**86.41**	**8**	P		**P**	**00 27 42.9**	**-0.8**
M30M	**Minto, Yukon**	**86.58**	**18**	P		**P**	**00 27 44.1**	**-0.5**
M30M				IAmb		IAmb	00 28 04.1	
	comp=Z,4.8nm,1.4s							
L29M	**L29M**	**86.61**	**17**	P		**P**	**00 27 45.2**	**+0.4**
L29M				IAmb		IAmb	00 27 48.6	
	comp=Z,3.8nm,1.2s							
PRP	**Porcupine Dome**	**86.73**	**13**	P		**P**	**00 27 44.3**	**-1.1**
PRP				IAmb		IAmb	00 28 00.5	
	comp=Z,5.4nm,1.5s							
PD31	**Pinedale Array**	**87.50**	**44**	P		**P**	**00 27 49.2**	**-0.5**
PDAR	**Pinedale Array**	**87.50**	**44**	P		**P**	**00 27 49.5**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=200,slow=2.4,SNR=7.2							
	comp=Z,0.6nm,0.6s							
D22K	**Ayikyak River**	**88.39**	**9**	P		**P**	**00 27 52.6**	**-0.4**
D22K				IAmb		IAmb	00 27 53.2	
	comp=Z,3.4nm,0.8s							
LODK	**Lodwar**	**143.59**	**251**			**PKPdf**	**00 34 32.2**	**-1.3**
BUR08	**Bucovina Ar. S**	**144.23**	**332**			**PKPdf**	**00 34 33.2**	**-0.5**
BURAR	**Bucovina Array**	**144.25**	**332**			**PKPdf**	**00 34 33.1**	**-0.6**
BRTR	**Keskin Array B**	**144.35**	**315**	PKP		**PKPdf**	**00 34 33.3**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=87,slow=3.4,SNR=4.7							
GERES	**GERESS Array B**	**147.32**	**345**	PKPbc		**PKPbc**	**00 34 41.6**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=46,slow=5.8,SNR=5.2							
LESA	**Schwarzleotal**	**148.89**	**345**	*e*PKP		**PKPbc**	**00 34 45.5**	**-0.6**
	comp=Z,1.1nm,0.3s							
WTTA	**Wattenberg**	**149.29**	**346**	*i* PKP		**PKPbc**	**00 34 46.6**	**-0.6**
	comp=Z,1.6nm,0.3s							
ABTA	**Abfaltersbach**	**149.56**	**344**	*i* PKP		**PKPbc**	**00 34 46.6**	**-1.2**
	comp=Z,1.1nm,0.5s							

RSNC ***10*** *00:19:26.4±0.0, 7.°N±1.×7.°3W±.°, h146km±1km, M2.6, mb3.6, ML2.2, MLv2.9*

FUNV ***10*** *00:19:29.4, 7.°04N×73.°23W, h20km, MW3.0, Presumed earthquake*

ISC 10 00:19:23.6±1.4, 6.°85N±0.°03×73.°09W±0.°04, h157km±8km, n29,σ1°71/56, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**201**	P	**Pn**	**00 19 46.1**	**+0.8**
BARC				S	**Sn**	**00 20 01.2**	**-0.6**
PAMC	**Pamplona, Colo**	**0.62**	**38**	P	**Pn**	**00 19 48.9**	**+1.8**
PAMC				S	**Sn**	**00 20 05.9**	**+0.9**
BRJC	**Barrancabermej**	**0.67**	**281**	P	**Pn**	**00 19 47.9**	**+1.2**
BRJC				S	**Sn**	**00 20 04.7**	**+0.4**
RUSC	**La Rusia**	**0.95**	**180**	P	**Pn**	**00 19 49.9**	**+0.6**
RUSC				S	**Sn**	**00 20 08.2**	**-0.7**
RUSC	**La Rusia**	**0.95**	**180**	*e*P	**Pn**	**00 19 50.1**	**+0.9**
RUSC				*e*S	**Sn**	**00 20 05.3**	**-3.6**
CAPV	**Capacho**	**1.27**	**37**	*e*P	**Pn**	**00 19 51.9**	**+0.1**
CAPV				*e*S	**Sn**	**00 20 08.3**	**-5.0**
PTBC	**PUERTO BERRIO,**	**1.39**	**258**	P	**Pn**	**00 19 52.7**	**0.0**
PTBC				S	**Sn**	**00 20 13.1**	**-1.9**
OCAC	**Ocana**	**1.40**	**351**	P	**Pn**	**00 19 54.4**	**+1.4**
OCAC				S	**Sn**	**00 20 16.5**	**+0.9**
SPBC	**San Pablo de B**	**1.54**	**220**	P	**Pn**	**00 19 55.1**	**+0.8**
SPBC				S	**Sn**	**00 20 16.1**	**-1.7**
NORC	**Norcasia**	**2.18**	**234**	P	**Pn**	**00 20 02.1**	**+0.7**
NORC				S	**Sn**	**00 20 30.2**	**-0.3**
CHIC	**Chingaza**	**2.29**	**196**	P	**Pn**	**00 20 04.1**	**+1.0**
CHIC				S	**Sn**	**00 20 33.5**	**0.0**
ROSC	**El Rosal**	**2.34**	**212**	P	**Pn**	**00 20 05.9**	**+2.3**
ROSC				S	**Sn**	**00 20 32.1**	**-2.3**
CVER	**Cruz Verde, Cu**	**2.51**	**203**	P	**Pn**	**00 20 07.4**	**+1.7**
CVER				S	**Sn**	**00 20 37.8**	**-0.4**
HELC	**Santa Helena**	**2.51**	**255**	P	**Pn**	**00 20 07.4**	**+1.8**
HELC				S	**Sn**	**00 20 38.9**	**+0.9**
HELC	**Santa Helena**	**2.51**	**255**	*e*P	**Pn**	**00 20 08.1**	**+2.4**
HELC				*e*S	**Sn**	**00 20 36.2**	**-1.8**
UREC	**San Jos de Ur**	**2.59**	**291**	P	**Pn**	**00 20 06.6**	**+0.4**
UREC				S	**Sn**	**00 20 37.8**	**-1.3**
SOCV	**Socops**	**2.63**	**57**	*e*P	**Pn**	**00 20 09.2**	**+2.4**
SOCV				*e*S	**Sn**	**00 20 40.5**	**+0.4**
GUY2C	**Guyana, Caldas**	**2.78**	**235**	P	**Pn**	**00 20 10.5**	**+1.5**
GUY2C				S	**Sn**	**00 20 41.9**	**-2.2**
VILC	**Villavicencio,**	**2.78**	**193**	P	**Pn**	**00 20 09.0**	**+0.3**
VILC				S	**Sn**	**00 20 44.5**	**+0.8**
CBOC	**Ciudad Bolivar**	**3.07**	**252**	P	**Pn**	**00 20 14.6**	**+2.3**
CBOC				S	**Sn**	**00 20 51.7**	**+1.7**
DBBC	**Dabeiba**	**3.11**	**273**	P	**Pn**	**00 20 13.6**	**+0.9**
DBBC				S	**Sn**	**00 20 49.0**	**-1.7**
PRAC	**Prado**	**3.59**	**210**	P	**Pn**	**00 20 19.4**	**+0.5**
PRAC				S	**Sn**	**00 21 00.7**	**-1.1**
ORTC	**Ortega, Tolima**	**3.62**	**217**	P	**Pn**	**00 20 20.0**	**+0.7**
ORTC				S	**Sn**	**00 21 03.4**	**+0.8**
SJCC	**San Jacinto, C**	**3.67**	**326**	*e*P	**Pn**	**00 20 21.0**	**+1.1**
SJCC				*e*S	**Sn**	**00 20 58.9**	**-4.8**
PLMC	**San Jos del P**	**3.72**	**239**	P	**Pn**	**00 20 21.7**	**+1.2**
PLMC				S	**Sn**	**00 21 04.3**	**-0.5**
URMC	**La Uribe, Meta**	**3.80**	**200**	P	**Pn**	**00 20 23.1**	**+1.5**
URMC				S	**Sn**	**00 21 06.9**	**+0.2**
YOTC	**Yotoco, Valle**	**4.31**	**229**	P	**Pn**	**00 20 28.8**	**+0.5**
MACC	**Macarena, Meta**	**4.73**	**189**	P	**Pn**	**00 20 32.5**	**-1.2**
MACC				S	**Sn**	**00 21 25.6**	**-2.8**
FLOC	**Florencia**	**5.82**	**206**	P	**Pn**	**00 20 48.4**	**+0.3**

IDC ***10*** *00:20:10.7±0.7, 32.°62N×85.°38E, h0km, mb4.0/18, mbtmp4.0/22, ML3.6/4, MS3.7/58, Error ellipse: s-maj=22.4km s-min=14.9km az=52.0*

BJI ***10*** *00:20:13.4, 32.°66N×85.°62E, h6km, mb4.2/22, Ms4.0/23, Ms7 3.9/23*

NEIC ***10*** *00:20:14.4±1.3, 32.°87N±0.°08×85.°39E±0.°09, h10km±1km, mb4.1/20, Error ellipse: s-maj=14.9km s-min=10.5km az=47.0*

ISC 10 00:20:13.8±0.4, 32.°74N±0.°05×85.°35E±0.°05, h10km, n132, σ1°64/100, mb4.1/29, MS3.7/56, 1C-6D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVN	**Everest**	**4.93**	**165**	Pn	**Pn**	**00 21 30.2**	**+1.7**
LSA	**Lhasa**	**5.82**	**120**	Pn	**Pn**	**00 21 41.3**	**+0.7**
GOMU	**GeErMu**	**8.54**	**64**	P	**Pn**	**00 22 17.4**	**-0.5**
GOMU				pP		00 22 20.7	
GOMU				sP		00 22 25.2	
GOMU				S	**Sn**	**00 23 52.5**	**-2.0**
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GOMU				L	L		
	comp=E,500nm,10.4s						
GOMU				L	L		
	comp=Z,220nm,10.5s						
SHL	**Shillong**	**9.14**	**140**	Pn	**Pn**	**00 22 28.5**	**+2.5**
WUS	**Wushi**	**9.76**	**332**		**Pn**	**00 22 33.6**	**-0.8**
NIL	**Nilore**	**10.18**	**278**		**Pn**	**00 22 39.5**	**-0.5**
KSH2	**Kashi**	**10.18**	**312**	P	**Pn**	**00 22 42.3**	**+2.2**
KSH2				L	L		
	comp=N,750nm,7.4s						
KSH2				L	L		
	comp=E,960nm,8.1s						
KSH2				L	L		
	comp=Z,920nm,7.2s						
TARG	**Taragay, Kyrgy**	**10.80**	**328**		**Pn**	**00 22 47.9**	**-0.9**
PRZ	**Przheval'sk**	**11.18**	**332**		**Pn**	**00 22 50.8**	**-3.0**
WMQ	**Urumqi**	**11.22**	**9**	*e*P	**Pn**	**00 22 55.2**	**+1.0**
WMQ				PP	**PnPn**	**00 23 07.1**	**+5.1**
WMQ				S	**Sn**	**00 25 05.0**	**+5.3**
WMQ				pmax	pmax		
	comp=Z,21nm,1.3s						
WMQ				L	L		
	comp=E,510nm,18.3s						
WMQ				L	L		
	comp=Z,390nm,17.5s						
KDJ	**Kajisay**	**11.40**	**328**		**Pn**	**00 22 55.4**	**-1.4**
NRN	**Naryn**	**11.44**	**322**		**Pn**	**00 22 56.8**	**-0.7**
BRDH	**Bariadhala**	**11.46**	**149**	LR	LR	00 28 56.9	
	comp=Z,247nm,21.4s,baz=338,slow=46						
BOOM	**Boomskoye usch**	**12.26**	**325**		**Pn**	**00 23 07.8**	**-0.8**
ARSB	**Arslanbob**	**13.07**	**314**	Pn	**Pn**	**00 23 19.5**	**-0.1**
AAK	**Ala-Archa**	**13.09**	**322**	Pn	**Pn**	**00 23 20.5**	**+0.7**
	0.1nm,0.3s,baz=176,slow=14,SNR=6.0						
AAK				LR	LR	00 28 36.5	
	comp=Z,254nm,18.3s,baz=138,slow=38						
	1.8nm,0.8s						
AAK	**Ala-Archa**	**13.09**	**322**		**Pn**	**00 23 19.6**	**-0.2**
GAR	**Garm**	**13.69**	**301**		**Pn**	**00 23 25.8**	**-2.3**
KBL	**Kabul**	**13.71**	**282**	Pn	**Pn**	**00 23 26.8**	**-1.6**
BTK	**Batken**	**13.79**	**306**		**Pn**	**00 23 28.2**	**-1.2**
TNCH	**TengChong**	**13.85**	**120**	*e*P	**Pn**	**00 23 33.3**	**+2.9**
TNCH				S	**Sn**	**00 26 06.4**	**+2.0**
TNCH				L	L		
	comp=N,550nm,10.4s						
TNCH				L	L		
	comp=Z,630nm,14.6s						
MKAR	**Makanchi Array**	**14.23**	**351**	Pn	**Pn**	**00 23 34.3**	**-1.1**
	0.2nm,0.3s,baz=163,slow=14,SNR=25						
MKAR				LR	LR	00 30 05.1	
	comp=Z,228nm,19.6s,baz=161,slow=41						
	3.7nm,0.7s						
MKAR	**Makanchi Array**	**14.23**	**351**		**Pn**	**00 23 34.1**	**-1.3**
MAKZ	**Makanchi**	**14.29**	**351**		**Pn**	**00 23 33.0**	**-3.1**
CHGR	**Chuyangaron**	**14.41**	**299**		**Pn**	**00 23 37.7**	**-0.3**
SHAA	**Shahritus**	**14.89**	**294**		**Pn**	**00 23 41.6**	**-2.7**
LZDM	**Lanzhou Array**	**15.49**	**73**	Pn	**Pn**	**00 23 54.4**	**+1.7**
	baz=264,slow=12						
PZH	**PanZhiHua**	**15.54**	**109**	P	**P**	**00 23 57.1**	**-0.5**
KK31	**Karatay Array**	**15.60**	**316**		**Pn**	**00 23 51.5**	**-2.2**
KKAR	**Karatay Array**	**15.60**	**316**		**Pn**	**00 23 53.1**	**-0.6**
LZH	**Lanzhou**	**15.63**	**73**	*e*P	**P**	**00 23 57.7**	**-0.8**
LZH				pP	pP	00 24 01.9	-0.8
LZH				sP	sP	00 24 04.0	-0.6
LZH				pmax	pmax		
	comp=Z,13nm,1.2s						
LZH				L	L		
	comp=E,230nm,14.8s						
LZH				L	L		
	comp=Z,370nm,16.5s						
KMI2	**Kunming**	**16.99**	**112**	P	**Pn**	**00 24 11.0**	**-0.8**
KMI2				pmax	pmax		
	comp=Z,12nm,1.5s						
KMI2				L	L		
	comp=E,280nm,8.9s						
KMI2				L	L		
	comp=Z,290nm,10.6s						
CHTO	**Chiang Mai**	**18.47**	**135**	P	**P**	**00 24 30.3**	**+0.4**
KURBB	**Kurchatov Arra**	**18.57**	**346**	P	**P**	**00 24 29.8**	**-0.9**
	0.1nm,0.3s,baz=162,slow=11,SNR=32						
KURBB				LR	LR	00 32 26.1	
	comp=Z,167nm,21.4s,baz=182,slow=39						
	4.5nm,0.8s						
KURK	**Kurchatov**	**18.64**	**347**		**P**	**00 24 30.2**	**-1.2**
KURK				IAmb	IAmb	00 24 34.1	
	comp=Z,15nm,1.1s						
CMAR	**Chiang Mai Arr**	**18.75**	**136**	P	**P**	**00 24 31.0**	**-1.9**
	comp=Z,0.5nm,0.3s,baz=318,slow=12,SNR=13						
CMAR				LR	LR	00 32 25.9	
	comp=Z,117nm,18.4s,baz=325,slow=39						
	comp=Z,1.8nm,0.4s						
CMAR	**Chiang Mai Arr**	**18.75**	**136**		**P**	**00 24 33.2**	**+0.3**
HRA	**Herat**	**19.32**	**281**		**P**	**00 24 38.9**	**-0.5**
XAN	**Xi'an**	**19.72**	**80**	⇓P	**Pn**	**00 24 45.4**	**+0.4**
XAN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
XAN				L	L		
	comp=Z,370nm,8.3s						
XAN				L	L		
	comp=Z,610nm,12.4s						
XAN				L	L		
	comp=Z,730nm,11.3s						
ENH	**Enshi**	**20.72**	**90**	P	**P**	**00 24 53.1**	**-1.4**
ZAA0	**Zalesovo Array**	**21.20**	**359**		**P**	**00 24 58.3**	**-1.1**
ZAA0				IAmb	IAmb	00 25 07.8	
	comp=Z,15nm,1.1s						
ZALV	**Zalesovo Beam**	**21.20**	**359**	P	**P**	**00 24 58.6**	**-0.8**
	comp=Z,5.2nm,0.8s,baz=179,slow=10,SNR=23						
ZALV				LR	LR	00 34 12.8	
	comp=Z,133nm,19.8s,baz=186,slow=40						
	comp=Z,5.2nm,0.8s						
SONM	**Songino Array**	**21.92**	**40**	P	**P**	**00 25 08.0**	**+0.6**
	comp=Z,1.7nm,0.7s,baz=231,slow=11,SNR=13						
SONM				LR	LR	00 34 23.0	
	comp=Z,149nm,21.9s,baz=207,slow=39						
	comp=Z,1.7nm,0.7s						
SONM	**Songino Array**	**21.92**	**40**	P	**P**	**00 25 07.0**	**-0.4**
SONM				IAmb	IAmb	00 25 14.4	
	comp=Z,7.4nm,1.2s						
ULN	**Ulaanbaatar**	**22.30**	**41**		**P**	**00 25 10.0**	**-1.4**
ULN				IAmb	IAmb	00 25 14.3	
	comp=Z,6.3nm,1.1s						
HHC	**Hu-ho-hao-te**	**22.44**	**61**	*e*P	**P**	**00 25 12.8**	**-0.1**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HHC				L	L		
	comp=Z,390nm,15.0s						
HHC				L	L		
	comp=Z,260nm,16.5s						
BVAR	**Borovoye Array**	**22.96**	**336**	P	**P**	**00 25 17.3**	**-0.9**
	comp=Z,2.5nm,1.0s,baz=141,slow=9.6,SNR=8.7						
BVAR				LR	LR	00 35 00.5	
	comp=Z,126nm,18.9s,baz=145,slow=39						
	comp=Z,2.5nm,1.0s						
BORK	**Borovoye**	**23.00**	**336**		**P**	**00 25 18.1**	**-0.5**
BORK				IAmb	IAmb	00 25 22.2	
	comp=Z,3.7nm,0.8s						
TLY	**Talaya**	**23.16**	**30**	LR	LR	00 34 34.6	
	comp=Z,114nm,18.0s,baz=216,slow=37						
TLY	**Talaya**	**23.16**	**30**	P	**P**	**00 25 19.3**	**-1.0**
TLY				IAmb	IAmb	00 25 27.0	
	comp=Z,3.3nm,0.9s						
AB31	**Akbulak array**	**25.12**	**319**		**P**	**00 25 37.8**	**-1.0**
AB31				IAmb	IAmb	00 25 48.3	
	comp=Z,6.6nm,1.0s						
ABKAR	**Akbulak array**	**25.12**	**319**		**P**	**00 25 38.8**	**0.0**
PALK	**Pallekele**	**25.70**	**191**	LR	LR	00 36 28.6	
	comp=Z,137nm,18.3s,baz=359,slow=38						
QIZ	**Qiongzhong**	**25.84**	**116**	P	**P**	**00 25 45.6**	**+0.1**
QIZ				S	**S**	**00 30 18.3**	**+3.0**
QIZ				L	L		
	comp=Z,190nm,8.0s						
QIZ				L	L		
	comp=Z,280nm,10.8s						
AKTO	**Aktyubinsk**	**26.80**	**319**	LR	LR	00 37 16.2	
	comp=Z,213nm,19.2s,baz=44,slow=38						
ARTI	**Arti**	**30.11**	**330**	LR	LR	00 38 24.9	
	comp=Z,120nm,18.9s,baz=128,slow=36						
GNI	**Garni**	**33.27**	**295**	LR	LR	00 42 24.1	
	comp=Z,107nm,19.3s,baz=90,slow=40						
KBZ	**Khabaz**	**34.76**	**301**	LR	LR	00 42 26.8	
	comp=Z,88nm,18.2s,baz=82,slow=38						
KSRS	**Korea Array**	**34.93**	**70**	LR	LR	00 42 20.9	
	comp=Z,78nm,20.0s,baz=290,slow=38						
MYKOM	**Kota Tinggi**	**35.36**	**147**	P	**P**	**00 27 10.5**	**+0.9**
GURO	**Guroymak-BITLI**	**35.43**	**292**		**P**	**00 27 10.6**	**+0.4**
GURO				IAmb	IAmb	00 27 15.8	
	comp=Z,4.8nm,1.2s						
RAYN	**Ar Rayn**	**36.14**	**266**		**P**	**00 27 17.4**	**+1.0**
RAYN				IAmb	IAmb	00 27 20.3	
	comp=Z,3.4nm,1.0s						
NRIK	**Noril'sk**	**36.67**	**1**	P	**P**	**00 27 20.6**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=172,slow=8.8,SNR=5.2						
NRIK				LR	LR	00 44 03.5	
	comp=Z,272nm,19.4s,baz=187,slow=39						
	comp=Z,1.7nm,0.6s						
NRIK	**Noril'sk**	**36.67**	**1**		**P**	**00 27 20.6**	**+0.3**
NRIK				IAmb	IAmb	00 27 21.5	
	comp=Z,2.8nm,0.8s						
JNU	**Nakatsue**	**37.98**	**77**	LR	LR	00 43 25.4	
	comp=Z,102nm,18.8s,baz=329,slow=37						
ARPR	**Arapgir-MALATY**	**38.26**	**293**		**P**	**00 27 35.5**	**+1.1**
ARPR				IAmb	IAmb	00 27 51.8	
	comp=Z,7.2nm,1.1s						
ASF	**Jabal al Asfar**	**40.60**	**283**	LR	LR	00 48 05.2	
	comp=Z,120nm,18.9s,baz=41,slow=41						
MMAI	**Mount Meron Ar**	**41.62**	**284**	LR	LR	00 49

FURI	**Furi**	**49.15**	**252**	LR	LR	00 51 55.1		
	comp=N,62nm,18.3s,baz=47,slow=39							
ARCES	**ARCESS Array B**	**49.25**	**336**	P	**P**	**00 29 01.3**	**-0.8**	
	comp=N,2.4nm,0.9s,baz=90,slow=4.9,SNR=4.3							
	comp=N,2.4nm,0.9s							
IDI	**Anoyia**	**49.50**	**291**	P	**P**	**00 29 05.2**	**+0.6**	
KAPI	**Kappang**	**49.76**	**132**	LR	LR	00 52 55.0		
	comp=N,53nm,19.1s,baz=300,slow=40							
MA2	**Magadan**	**50.08**	**37**	LR	LR	00 52 15.7		
	comp=N,59nm,18.2s,baz=273,slow=38							
VRAC	**Vranov**	**52.64**	**310**	LR	LR	00 55 48.9		
	comp=N,78nm,18.3s,baz=82,slow=40							
HFS	**Hagfors**	**53.22**	**324**	P	**P**	**00 29 30.7**	**-1.3**	
	comp=N,1.8nm,0.7s,baz=63,slow=9.9,SNR=2.3							
HFS				LR	LR	00 52 13.7		
	comp=N,136nm,19.6s,baz=87,slow=36							
	comp=N,1.8nm,0.7s							
PETK	**Petropavlovsk-**	**54.30**	**45**	LR	LR	00 53 53.1		
	comp=N,70nm,18.9s,baz=326,slow=37							
NB2	**NORSAR Subarra**	**54.39**	**325**	P	**P**	**00 29 39.5**	**-1.1**	
	comp=Z,1.2nm,0.7s,baz=85,slow=7.4							
NOA	**NORSAR Array B**	**54.39**	**325**	P	**P**	**00 29 37.9**	**-2.8**	
	comp=Z,1.6nm,0.6s,baz=86,slow=7.3,SNR=9.5							
NOA				LR	LR	00 53 45.7		
	comp=Z,56nm,18.9s,baz=290,slow=37							
	comp=Z,1.6nm,0.6s							
GERES	**GERESS Array B**	**54.59**	**310**	LR	LR	00 53 43.4		
	comp=Z,56nm,18.2s,baz=56,slow=37							
GUMO	**Guam**	**57.22**	**95**	LR	LR	00 55 34.8		
	comp=Z,39nm,20.0s,baz=102,slow=37							
DAVOX	**Davos/Dischmat**	**57.57**	**308**	LR	LR	00 56 50.1		
	comp=Z,108nm,18.5s,baz=69,slow=38							
MBAR	**Mbarara**	**61.16**	**249**	LR	LR	01 00 13.5		
	comp=Z,35nm,19.7s,baz=63,slow=39							
EKA	**Eskdalemuir Ar**	**62.98**	**320**	LR	LR	01 01 38.1		
	comp=Z,114nm,18.5s,baz=354,slow=39							
BORG	**Borgarnes**	**67.51**	**334**	LR	LR	01 01 33.8		
	comp=Z,24nm,21.8s,baz=56,slow=37							
ESDC	**Sonseca Array**	**69.51**	**305**	P	**P**	**00 31 22.4**	**-0.3**	
	comp=Z,0.2nm,0.4s,baz=88,slow=7.0,SNR=2.1							
ESDC				LR	LR	01 07 21.7		
	comp=Z,72nm,18.0s,baz=52,slow=41							
	comp=Z,0.2nm,0.4s							
ESDC	**Sonseca Array**	**69.51**	**305**	IAmb	IAmb	00 31 29.8		
	comp=Z,0.3nm,0.9s							
WRA	**Warramunga Arr**	**70.26**	**131**	P	**P**	**00 31 24.8**	**-2.6**	
	comp=Z,0.7nm,0.7s,baz=326,slow=6.5,SNR=9.0							
	comp=Z,0.7nm,0.7s							
WRA	**Warramunga Arr**	**70.26**	**131**	IAmb	IAmb	00 31 30.2		
	comp=Z,0.2nm,1.1s							
LSZ	**Lusaka**	**72.53**	**238**	LR	LR	01 02 06.5		
	comp=Z,34nm,20.2s,baz=148,slow=35							
ASAR	**Alice Springs**	**72.74**	**134**	P	**P**	**00 31 40.5**	**-1.9**	
	comp=Z,0.4nm,0.6s,baz=321,slow=5.1,SNR=6.4							
	comp=Z,0.4nm,0.6s							
RES	**Resolute Bay**	**72.85**	**0**	LR	LR	01 05 53.2		
	comp=Z,73nm,18.2s,baz=359,slow=38							
MDT	**Midelt**	**73.09**	**298**	LR	LR	01 09 01.6		
	comp=Z,35nm,18.9s,baz=46,slow=40							
ILAR	**Eielson Array**	**74.63**	**21**	P	**P**	**00 31 51.2**	**-1.7**	
	comp=Z,0.6nm,0.8s,baz=317,slow=4.2,SNR=6.9							
ILAR				LR	LR	01 08 09.0		
	comp=Z,60nm,18.4s,baz=29,slow=38							
	comp=Z,0.6nm,0.8s							
SFJD	**Kangerlussuaq**	**75.12**	**344**	LR	LR	01 09 56.0		
	comp=Z,46nm,19.3s,baz=158,slow=40							
INK	**Inuvik**	**75.19**	**14**	LR	LR	01 10 35.0		
	comp=Z,36nm,18.4s,baz=333,slow=40							
KDAK	**Kodiak Island**	**77.60**	**28**	LR	LR	01 09 54.6		
	comp=Z,79nm,19.4s,baz=308,slow=38							
TORD	**Torodi Ar. Bea**	**77.74**	**278**	P	**P**	**00 32 10.2**	**-1.2**	
	comp=Z,1.7nm,0.7s,baz=42,slow=2.5,SNR=10							
	comp=Z,1.7nm,0.7s							
TORD	**Torodi Ar. Bea**	**77.74**	**278**	IAmb	IAmb	00 32 13.2		
	comp=Z,1.3nm,0.7s							
CTA	**Charters Tower**	**78.38**	**123**	LR	LR	01 09 28.8		
	comp=Z,24nm,20.7s,baz=226,slow=38							
FRB	**Frobisher Bay**	**81.64**	**349**	LR	LR	01 13 03.2		
	comp=Z,75nm,18.7s,baz=86,slow=39							
TSUM	**Tsumeb**	**82.80**	**242**	LR	LR	01 07 52.5		
	comp=Z,57nm,18.1s,baz=79,slow=35							
STKA	**Stephens Creek**	**83.36**	**135**	LR	LR	01 14 49.2		
	comp=Z,42nm,18.8s,baz=225,slow=39							
YKA	**Yellowknife Ar**	**83.75**	**9**	P	**P**	**00 32 41.8**	**-0.9**	
	comp=Z,0.6nm,0.8s,baz=338,slow=5.8,SNR=10.0							
YKA				LR	LR	01 14 52.4		
	comp=Z,30nm,18.2s,baz=301,slow=39							
	comp=Z,0.6nm,0.8s							
DBIC	**Dimbokro**	**86.61**	**276**	LR	LR	01 16 29.9		
	comp=Z,65nm,20.0s,baz=90,slow=39							
SCHQ	**Schefferville**	**89.56**	**344**	P	**P**	**00 33 09.9**	**-1.4**	
	comp=Z,1.4nm,0.3s,baz=41,slow=16,SNR=14							
SCHQ				LR	LR	01 17 08.0		
	comp=Z,16nm,21.6s,baz=28,slow=38							
	comp=Z,1.4nm,0.3s							
NEW	**Newport**	**96.89**	**15**	LR	LR	01 24 13.6		
	comp=Z,35nm,18.0s,baz=27,slow=40							
ULM	**Lac du Bonnet**	**97.37**	**1**	LR	LR	01 20 32.2		
	comp=Z,39nm,20.0s,baz=19,slow=37							

*NDI **10** 00:42:11.9±3.3, 32.89N×86.25E, h10km, ML3.4, MW3.4, Presumed earthquake*
*IDC **10** 00:42:13.4±0.7, 32.69N×85.42E, h0km, mb3.9/15, mbtmp3.8/19, ML3.2/4, MS3.2/6, Error ellipse: s-maj=25.2km s-min=15.1km az=60.0*
ISC 10 00:42:16.0±0.5, 32.83N±0.06×85.64E±0.05, h10km, n36, σ28.07/40, mb3.9/14, MS3.1/5, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**5.65**	**122**	P	**Pn**	**00 43 43.3**	**+2.8**
LSA				S	**Sn**	**00 44 49.7**	**+4.0**
LSA				pmax	pmax		
	comp=Z,13nm,0.9s						
LSA				LR	LR		
	comp=N,530nm,11.9s						
LSA				LR	LR		
	comp=E,330nm,10.2s						
JOSI	**Joshimath**	**5.66**	**248**	*e*P	**Pn**	**00 43 44.5**	**+4.1**
JOSI				*e*S	**Sn**	**00 44 51.0**	**+5.4**
JOSI				IAML		00 45 01.2	
	comp=N,32nm,1.1s						
JOSI				IAML		00 45 10.8	
	comp=E,23nm,0.8s						
KLP	**Kalpa**	**6.40**	**260**	*e*P	**Pn**	**00 43 53.7**	**+3.1**
KLP				*e*S	**Sn**	**00 45 08.0**	**+4.0**
KLP				IAML		00 45 17.8	
	comp=E,12nm,0.6s						
KLP				IAML		00 45 24.3	
	comp=N,12nm,0.9s						
ALCI	**Alchi Leh**	**7.20**	**283**	*e*P	**Pn**	**00 44 03.1**	**+1.4**
ALCI				*e*S	**Sn**	**00 45 26.6**	**+2.9**
ALCI				IAML		00 45 34.8	
	comp=E,50nm,0.2s						
ALCI				IAML		00 45 35.6	
	comp=N,46nm,0.2s						
SMLA	**Simla**	**7.40**	**259**	*e*P	**Pn**	**00 44 04.5**	**+0.5**
SMLA				*e*S	**Sn**	**00 45 28.3**	**+0.3**
SMLA				IAML		00 45 33.2	
	comp=E,26nm,1.1s						
SMLA				IAML		00 45 33.8	
	comp=N,24nm,0.8s						
DHRM	**DHARAMSHALA**	**7.91**	**268**	*e*P	**Pn**	**00 44 12.4**	**+1.1**
DHRM				*e*S	**Sn**	**00 45 40.9**	**-0.1**
DHRM				IAML		00 45 50.9	
	comp=N,24nm,0.9s						
DHRM				IAML		00 45 54.9	
	comp=E,22nm,0.9s						
TSSA	**Tissa**	**7.99**	**273**	*e*P	**Pn**	**00 44 14.3**	**+1.9**
TSSA				*e*S	**Sn**	**00 45 42.2**	**-0.7**
TSSA				IAML		00 45 47.7	
	comp=N,24nm,1.0s						
TSSA				IAML		00 45 53.1	
	comp=E,21nm,0.5s						
ALBI	**Allahabad**	**8.21**	**205**	*e*P	**Pn**	**00 44 15.1**	**0.0**
ALBI				*e*S	**Sn**	**00 45 44.3**	**-3.6**
ALBI				IAML		00 45 52.6	
	comp=N,17nm,1.1s						
ALBI				IAML		00 45 52.6	
	comp=E,16nm,1.1s						
JHNI	**Jhansi**	**9.57**	**222**	*e*P	**Pn**	**00 44 32.1**	**-1.8**
KSH2	**Kashi**	**10.31**	**311**	P	**Pn**	**00 44 45.8**	**+1.6**
KSH2				pmax	pmax		
	comp=Z,2.0nm,1.6s						
BHPL	**Bhopal**	**11.99**	**219**	*e*P	**Pn**	**00 45 08.6**	**+1.5**
BHPL				*e*S	Sn	00 47 13.3	-7.6
AAK	**Ala-Archa**	**13.17**	**321**	Pn	**Pn**	**00 45 24.0**	**+0.8**
	baz=142,slow=16,SNR=1.6						
AAK				LR	LR	00 51 08.1	
	comp=Z,72nm,20.8s,baz=140,slow=41						
	comp=Z,0.2nm,0.4s						
MKAR	**Makanchi Array**	**14.19**	**351**	Pn	**Pn**	**00 45 36.8**	**-0.1**
	baz=169,slow=14,SNR=9.9						
	comp=Z,0.7nm,0.7s						
LZDM	**Lanzhou Array**	**15.23**	**73**	Pn	**P**	**00 45 56.8**	**+0.3**
	baz=262,slow=8.8						
KURBB	**Kurchatov Arra**	**18.54**	**346**	P	**P**	**00 46 31.2**	**-1.4**
	baz=169,slow=11,SNR=7.4						
	comp=Z,1.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**18.64**	**137**	P	**Pn**	**00 46 34.3**	**0.0**
	comp=Z,0.2nm,0.3s,baz=320,slow=13,SNR=10						
	comp=Z,1.3nm,0.4s						
ZALV	**Zalesovo Beam**	**21.12**	**359**	P	**P**	**00 47 01.1**	**+0.3**
	comp=Z,2.5nm,0.8s,baz=180,slow=11,SNR=10						
	comp=Z,2.5nm,0.8s						
SONM	**Songino Array**	**21.70**	**40**	P	**P**	**00 47 09.1**	**+2.0**
	comp=Z,0.7nm,0.8s,baz=230,slow=9.8,SNR=5.2						
	comp=Z,0.7nm,0.8s						
BVAR	**Borovoye Array**	**22.98**	**336**	P	**P**	**00 47 20.1**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=144,slow=10,SNR=6.1						
BVAR				LR	LR	00 56 33.5	
	comp=Z,51nm,18.9s,baz=129,slow=37						
	comp=Z,0.8nm,0.7s						
ARTI	**Arti**	**30.16**	**330**	LR	LR	01 01 59.4	
	comp=Z,52nm,20.4s,baz=194,slow=39						
NRIK	**Noril'sk**	**36.58**	**1**	P	**P**	**00 49 22.0**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=187,slow=8.1,SNR=4.7						
	comp=Z,1.2nm,0.6s						
MMAI	**Mount Meron Ar**	**41.84**	**284**	LR	LR	01 08 27.7	
	comp=Z,28nm,20.0s,baz=3.5,slow=38						
BRTR	**Keskin Array B**	**42.00**	**295**	LR	LR	01 11 21.1	
	comp=Z,20nm,19.6s,baz=294,slow=42						
FINES	**FINESS Array B**	**47.31**	**326**	P	**P**	**00 50 49.0**	**-0.5**
	comp=Z,3.5nm,0.8s,baz=104,slow=8.9,SNR=14						
	comp=Z,3.5nm,0.8s						
ARCES	**ARCESS Array B**	**49.27**	**336**	P	**P**	**00 51 04.0**	**-0.6**
	comp=Z,5.2nm,1.0s,baz=91,slow=4.9,SNR=5.2						
	comp=Z,5.2nm,1.0s						
HFS	**Hagfors**	**53.30**	**324**	P	**P**	**00 51 34.1**	**-0.8**
	comp=Z,1.5nm,0.6s,baz=82,slow=12,SNR=2.5						
	comp=Z,1.5nm,0.6s						
NB2	**NORSAR Subarra**	**54.46**	**325**	P	**P**	**00 51 42.6**	**-0.8**
	comp=Z,1.7nm,0.7s,baz=85,slow=7.4						
NOA	**NORSAR Array B**	**54.46**	**325**	P	**P**	**00 51 42.5**	**-0.9**
	comp=Z,2.5nm,0.7s,baz=85,slow=7.2,SNR=10						
	comp=Z,2.5nm,0.7s						
GERES	**GERESS Array B**	**54.73**	**310**	P	**P**	**00 51 44.6**	**-1.1**
	comp=Z,0.9nm,0.8s,baz=78,slow=5.7,SNR=4.8						
	comp=Z,0.9nm,0.8s						
WRA	**Warramunga Arr**	**70.13**	**131**	P	**P**	**00 53 28.6**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=323,slow=6.4,SNR=10						
	comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**72.63**	**134**	P	**P**	**00 53 42.9**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=337,slow=6.0,SNR=4.3						
	comp=Z,0.4nm,0.5s						
ILAR	**Eielson Array**	**74.46**	**21**	P	**P**	**00 53 53.4**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=298,slow=5.3,SNR=3.1						
	comp=Z,0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**77.97**	**278**	P	**P**	**00 54 12.8**	**-2.2**
	comp=Z,1.0nm,0.7s,baz=57,slow=2.7,SNR=7.7						
	comp=Z,1.0nm,0.7s						
TSUM	**Tsumeb**	**83.05**	**242**	LR	LR	01 30 24.7	
	comp=Z,34nm,18.6s,baz=114,slow=35						
YKA	**Yellowknife Ar**	**83.62**	**9**	P	**P**	**00 54 43.2**	**-1.1**
	comp=Z,0.7nm,0.9s,baz=337,slow=5.5,SNR=6.0						
	comp=Z,0.7nm,0.9s						
BOSA	**Boshof**	**83.76**	**230**	P	**P**	**00 54 43.0**	**-2.6**
	comp=Z,3.0nm,0.9s,baz=31,slow=12,SNR=3.8						
	comp=Z,3.0nm,0.9s						

*NNC **10** 00:56:44.3±1.5, 45.42N×84.71E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=12.0km s-min=4.7km az=113.0*
*SOME **10** 00:56:44.3, 45.58N×84.67E, h10km*
ISC 10 00:56:42.6±1.8, 45.09N±0.06×84.81E±0.09, h10km, n26, σ1.94/35, 3C-4D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZSN	**Zaisan**	**2.36**	**1**	Pg	**Pn**	**00 57 21.1**	**-0.4**
	34nm,0.5s						
ZSN				Lg	Lg	00 57 48.4	
	54nm,0.3s						
ZSN	**Zaisan**	**2.36**	**1**	*e*P	**Pn**	**00 57 21.1**	**-0.4**
	34nm,0.5s						
ZSN				*e*S	**Sn**	**00 57 48.5**	**-2.0**
	54nm,0.3s						
MK31	**Makanchi Array**	**2.45**	**315**	⇑Pg	**Pn**	**00 57 23.7**	**+1.1**
	4.4nm,0.3s,baz=118,slow=14,SNR=808						
MK31				Lg	Lg	00 57 53.4	
	36nm,0.2s,baz=121,slow=30,SNR=48						
KTMS	**Ketmen**	**3.60**	**244**	Pg	**Pg**	**00 57 51.0**	**-0.6**
	2.7nm,0.2s						
KTMS				Lg	Lg	00 58 38.8	
	23nm,0.3s						
KTMS	**Ketmen**	**3.60**	**244**	*e*P	**Pg**	**00 57 51.0**	**-0.6**
	2.7nm,0.2s						
KTMS				*e*S	**Sg**	**00 58 38.8**	**+0.7**
	23nm,0.3s						
DJR	**Jarkent**	**3.66**	**260**	Pg	**Pg**	**00 57 51.4**	**-1.2**
	7.6nm,0.4s						
DJR				Lg	Lg	00 58 40.0	
	6.9nm,0.4s						
DJR	**Jarkent**	**3.66**	**260**	*e*P	**Pg**	**00 57 51.4**	**-1.2**
	7.6nm,0.4s						
DJR				*e*S	**Sg**	**00 58 40.0**	**0.0**
	6.9nm,0.4s						
KAPS	**Kapalarasan**	**3.86**	**275**	Pg	**Pg**	**00 57 54.5**	**-1.9**
	6.5nm,0.2s						
KAPS				Lg	Lg	00 58 44.7	
	38nm,0.3s						
KNOS	**Konyrlen**	**4.08**	**262**	Pg	**Pg**	**00 57 60.0**	**-0.7**
	4.8nm,0.3s						
KNOS				Lg	Lg	00 58 54.4	
	30nm,0.5s						
PDGK	**Podgornoye**	**4.21**	**247**	⇓Pg	**Pg**	**00 58 03.3**	**+0.1**
	2.6nm,0.5s						
PDGK				⇑Lg	Lg	00 58 58.1	
	14nm,0.5s						
SHLS	**Shalkode**	**4.31**	**245**	Pg	**Pb**	**00 58 01.1**	**+2.6**
	8.1nm,0.2s						
SHLS				Lg	Lg	00 58 56.0	
	29nm,0.3s						
SHLS	**Shalkode**	**4.31**	**245**	*e*P	**Pb**	**00 58 01.1**	**+2.6**
	8.1nm,0.2s						
SHLS				*e*S	**Sg**	**00 58 56.0**	**-4.9**
	29nm,0.3s						
TDK	**Taldyqorghan**	**4.54**	**271**	Pg	**Pg**	**00 58 08.4**	**-1.1**
	21nm,0.3s						
TDK				Lg	Lg	00 59 08.5	
	42nm,0.5s						
TDK	**Taldyqorghan**	**4.54**	**271**	*e*P	**Pg**	**00 58 08.4**	**-1.1**
	21nm,0.3s						
TDK				*e*S	**Sg**	**00 59 08.5**	**+0.2**
	42nm,0.5s						
UZB	**Uzynbulak**	**4.60**	**247**	Pg	**Pg**	**00 58 09.3**	**-1.3**
	2.9nm,0.3s						
UZB				Lg	Lg	00 59 10.0	
	12nm,0.5s						
UZB	**Uzynbulak**	**4.60**	**247**	*e*P	**Pg**	**00 58 09.3**	**-1.3**
	2.9nm,0.3s						
UZB				*e*S	**Sg**	**00 59 10.0**	**-0.1**
	12nm,0.5s						
BLB	**Baldybastay**	**4.63**	**260**	Pg	**Pg**	**00 58 09.6**	**-1.6**
	12nm,0.3s						
BLB				Lg	Lg	00 59 11.2	
	18nm,0.5s						
KPKS	**Kokpek**	**4.69**	**252**	Pg	**Pg**	**00 58 10.2**	**-2.1**
	0.4nm,0.2s						
KPKS				Lg	Lg	00 59 12.0	
	18nm,0.4s						
KPKS	**Kokpek**	**4.69**	**252**	*e*P	**Pg**	**00 58 10.2**	**-2.1**
	0.4nm,0.2s						
KPKS				*e*S	**Sg**	**00 59 12.0**	**-1.1**
	18nm,0.4s						
SATY	**Saty**	**5.04**	**248**	Pg	**Pg**	**00 58 16.9**	**-2.2**
	3.8nm,0.3s						
SATY				Lg	Lg	00 59 23.3	
	20nm,0.3s						
ARXS	**Arharly**	**5.06**	**262**	Pg	**Pg**	**00 58 16.7**	**-2.7**
	3.1nm,0.5s						
ARXS				Lg	Lg	00 59 23.7	
	20nm,0.4s						
ARXS	**Arharly**	**5.06**	**262**	*e*P	**Pg**	**00 58 16.7**	**-2.7**
	3.1nm,0.5s						
ARXS				*e*S	**Sg**	**00 59 23.7**	**-1.2**
	20nm,0.4s						
SEM	**Semipalatinsk**	**6.14**	**332**	Pg	**Pb**	**00 58 31.1**	**+1.3**
	2.6nm,0.3s						
SEM				Lg	Lg	00 59 47.5	
	9.8nm,0.4s						
SEM	**Semipalatinsk**	**6.14**	**332**	*e*P	**Pb**	**00 58 31.1**	**+1.3**
	2.6nm,0.3s						
SEM				*e*S	**Sb**	**00 59 47.5**	**+4.1**
	9.8nm,0.4s						
KURBB	**Kurchatov Arra**	**6.96**	**325**	⇓Sn	**Sn**	**00 59 43.5**	**-0.1**
	4.5nm,0.6s						
KURBB				⇓Lg	Lg	01 00 15.5	
	53nm,0.7s						
KURK	**Kurchatov**	**7.00**	**326**	⇓Sn	**Sn**	**00 59 41.5**	**-3.1**
	0.5nm,0.3s						
KURK				⇑Lg	Lg	01 00 14.6	
	5.3nm,0.6s						

*UPA **10** 00:57:51.3±1.0, 8.75N×83.32W, h21km±9km, ML2.9, MW3.9, Presumed earthquake*
*UCR **10** 00:57:52.3±0.7, 8.66N×83.25W, h23km±1km, MW3.8, Presumed earthquake*
ISC 10 00:57:51.6±0.9, 8.71N±0.02×83.26W±0.03, h18km±3km, n57, σ0.76/66, 1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDAD	**Golfito**	**0.11**	**122**	*e*P	**Pg**	**00 57 55.8**	**+0.4**
EDAD				*e*S	**Sg**	**00 57 58.7**	**+0.6**
PTJ1	**Puerto Jimnez**	**0.18**	**194**	*e*P	**Pg**	**00 57 56.7**	**+0.5**
PTJ1	**Puerto Jimnez**	**0.18**	**194**	*e*P	**Pg**	**00 57 56.6**	**+0.3**
PTJ1				*e*S	**Sg**	**00 58 00.9**	**+1.5**
JIME	**Puerto Jimenez**	**0.18**	**201**	*e*P	**Pg**	**00 57 56.6**	**+0.2**
JIME				*e*S	**Sg**	**00 58 00.9**	**+1.4**
FIMO	**Fila Mora**	**0.29**	**342**	*e*P	**Pn**	**00 58 00.4**	**-0.7**
VITO	**San Vito**	**0.31**	**69**	*e*P	**Pb**	**00 57 59.9**	**+1.3**
VITO				*e*S	**Sn**	**00 58 06.3**	**-1.1**
PIRO	**Carate, Puerto**	**0.31**	**194**	*e*P	**Pb**	**00 57 58.4**	**-0.3**
PIRO	**Carate, Puerto**	**0.31**	**194**	*e*P	**Pg**	**00 57 58.3**	**-0.1**
NELY	**Ciudad Neily**	**0.32**	**101**	*e*P	**Pb**	**00 57 59.1**	**+0.4**
NELY				*e*S	**Sb**	**00 58 04.8**	**+1.3**
EDP2	**Potrero Grande**	**0.32**	**15**	*e*P	**Pb**	**00 58 00.2**	**+1.4**
PANP	**Palmar Norte**	**0.32**	**322**	*e*P	**Pb**	**00 57 59.6**	**+0.8**
RSRNO	**Rio Sereno**	**0.41**	**75**	*e*P	**Pb**	**00 58 01.5**	**+1.1**
MLIR3	**Monte Lirio, C**	**0.44**	**79**	*e*P	**Pb**	**00 58 01.9**	**+1.0**
MLIR3				*e*S	**Sn**	**00 58 09.5**	**-1.1**
BURE	**Buenos Aires**	**0.47**	**350**	*e*P	**Pn**	**00 58 02.6**	**-0.8**
ALCO	**Alturas Coton,**	**0.48**	**60**	*e*P	**Pb**	**00 58 02.3**	**+0.6**
SCLRA	**Santa Clara, W**	**0.49**	**75**	*e*P	**Pb**	**00 58 02.8**	**+1.1**
EDPE	**Pejibaye, P**	**0.54**	**325**	*e*P	**Pb**	**00 58 03.3**	**+0.7**
DRK0	**Durika**	**0.55**	**1**	*e*P	**Pg**	**00 58 01.5**	**-1.3**
DRK0	**Durika**	**0.55**	**1**	*e*P	**Pg**	**00 58 01.4**	**-1.4**
BRU2	**Volcan**	**0.57**	**81**	⇓*e*P	**Pb**	**00 58 03.5**	**+0.5**
BRU2				*e*S	**Sb**	**00 58 11.9**	**+1.1**
BRU2	**Volcan**	**0.57**	**81**	*e*P	**Pb**	**00 58 03.5**	**+0.5**
PTPM	**Petroterminale**	**0.63**	**143**	*e*P	**Pg**	**00 58 04.2**	**+0.2**
PTPA	**Petro Terminal**	**0.64**	**143**	*e*P	**Pb**	**00 58 04.0**	**-0.1**
CLLRA	**Cordillera,**	**0.64**	**87**	*i* P	**Pg**	**00 58 04.6**	**+0.3**
CLLRA	**Cordillera,**	**0.64**	**87**	*e*P	**Pg**	**00 58 04.7**	**+0.3**
SAJE	**San Jernim**	**0.68**	**339**	*e*P	**Pg**	**00 58 05.6**	**+0.5**
JEFFS	**S de V. Baru**	**0.72**	**93**	*i* P	**Pb**	**00 58 05.6**	**0.0**
JEFFS	**S de V. Baru**	**0.72**	**93**	*e*P	**Pb**	**00 58 05.6**	**0.0**
LIMO3	**Limones**	**0.72**	**147**	*e*P	**Pn**	**00 58 06.4**	**-0.4**
LMNES	**Limones**	**0.72**	**147**	*e*P	**Pb**	**00 58 06.4**	**-0.2**
PTAR3	**Potrerillos Ar**	**0.76**	**91**	*e*P	**Pb**	**00 58 06.6**	**+0.3**
BQTLY	**Boquete Panama**	**0.79**	**86**	*e*P	**Pb**	**00 58 06.7**	**-0.2**
LNBQ3	**Los Naranjos,**	**0.81**	**84**	*e*P	**Pb**	**00 58 07.1**	**-0.2**
BUS1	**Rivas**	**0.97**	**330**	*e*P	**Pb**	**00 58 09.9**	**-0.2**
CHIR3	**Chiriqui UPA,**	**0.97**	**109**	*e*P	**Pb**	**00 58 09.9**	**0.0**
BRIBI	**Bribri**	**1.00**	**26**	*e*P	**Pg**	**00 58 12.3**	**+1.1**
LAES	**El Progreso Va**	**1.07**	**11**	*e*P	**Pg**	**00 58 12.8**	**+0.5**
PBNVO	**Pueblo Nuevo,**	**1.07**	**80**	*i* P	**Pb**	**00 58 10.2**	**-1.4**
PBNVO				*e*S	**Sb**	**00 58 24.6**	**-0.7**
PBNVO	**Pueblo Nuevo,**	**1.07**	**80**	*e*P	**Pb**	**00 58 10.6**	**-1.0**
RBALA	**Bur**	**1.11**	**81**	*i* P	**Pn**	**00 58 11.0**	**-1.2**
RBALA				*e*S	**Sb**	**00 58 25.9**	**-0.4**
RBALA				IAML		00 58 26.7	
	comp=Z,219nm,0.3s						
RBALA	**Bur**	**1.11**	**81**	*e*P	**Pn**	**00 58 11.3**	**-0.9**
CHGR2	**Aguacate**	**1.12**	**78**	*e*P	**Pn**	**00 58 11.9**	**-0.5**
PIEC	**Cerro El Cedra**	**1.14**	**323**	*e*P	**Pg**	**00 58 13.6**	**-0.2**
VERH	**Veragua Rainfo**	**1.21**	**3**	*e*P	**Pg**	**00 58 14.7**	**-0.4**
VTCV	**VTCV, Calle Va**	**1.35**	**340**	*e*P	**Pb**	**00 58 16.7**	**+0.2**
RAFA	**San Farael, Vo**	**1.35**	**336**	*e*P	**Pb**	**00 58 17.1**	**+0.5**
ABRB	**Las Abras (San**	**1.36**	**341**	*e*P	**Pg**	**00 58 17.6**	**-0.5**
RESJ	**San Isidro (Tu**	**1.37**

PLMC				S	Sn	01 29 26.5	+0.7	
URMC	**La Uribe, Meta**	**3.84**	**199**	P	Pn	01 28 43.9	+0.7	
URMC				S	Sn	01 29 28.1	-0.5	
YOTC	**Yotoco, Valle**	**4.32**	**228**	P	Pn	01 28 49.7	+0.1	
YOTC				S	Sn	01 29 39.3	-0.7	
URIC	**Uribia, Colomb**	**4.90**	**13**	P	Pn	01 28 56.9	-0.2	
URIC				S	Sn	01 29 53.5	0.0	
JAMC	**Jamundi, Valle**	**5.09**	**224**	P	Pn	01 28 59.7	-0.1	
	0.0nm3.0nm,1.0s							
JAMC				S	Sn	01 29 57.7	-0.6	
	0.0nm3.0nm,1.0s							
GARC	**Garzon, Huila**	**5.24**	**207**	P	Pn	01 29 01.2	-0.7	
GARC				S	Sn	01 30 01.9	0.0	
POPC	**Popayan, Colom**	**5.59**	**220**	P	Pn	01 29 07.3	+0.8	
	2.8nm,1.2s							
POPC				S	Sn	01 30 09.0	-1.3	
	2.8nm,1.2s							
FLOC	**Florencia**	**5.85**	**206**	P	Pn	01 29 09.5	-0.3	
	5.8nm,1.6s							

IDC 10 01:59:06.0±2.3, 6°31S×129°59E, h0km, mb3.3/1, mbtmp3.4/4, ML3.5/3, MS2.8/1, Error ellipse: s-maj=84.9km s-min=30.0km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.66**	**17**	LR	LR	02 03 31.1	
	comp=Z,82nm,20.0s,baz=192,slow=47						
FITZ	**Fitzroy Crossi**	**12.33**	**198**	Pn	Pn	02 02 04.5	+1.5
	0.3nm,0.3s,baz=16,slow=15,SNR=12						
FITZ				Sn	Sn	02 04 11.7	-10
	0.4nm,0.3s,baz=266,slow=22,SNR=6.0						
	0.4nm,0.3s						
WRA	**Warramunga Arr**	**14.31**	**162**	Pn	Pn	02 02 29.4	-0.7
	0.2nm,0.3s,baz=339,slow=13,SNR=6.6						
WRA				Sn	Sn	02 04 57.2	-12
	0.3nm,0.3s,baz=341,slow=23,SNR=7.6						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**17.74**	**167**	P	Pn	02 03 14.1	-0.7
	0.3nm,0.3s,baz=347,slow=9.9,SNR=16						
ASAR				S	Sn	02 06 21.3	-12
	0.2nm,0.4s,baz=352,slow=19,SNR=1.7						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**67.44**	**327**	P	P	02 10 03.6	0.0
	0.1nm,0.3s,baz=127,slow=7.5,SNR=2.5						
	0.1nm,0.3s						

*ISK **10** 02:12:24.9, 35°35N×32°57E, h12km, ML2.9/8*
*GRAL **10** 02:12:25.4±0.3, 35°17N×32°64E, h0km±129km, MD3.5*
*NIC **10** 02:12:25.4, 35°35N×32°50E, h38km±3km, Ml2.7/10*
*AFAD **10** 02:12:25.8, 35°39N×32°65E, h6km±1km, ML2.2*
*GII **10** 02:12:25.8±0.0, 35°095N±0°001×32°559E±0°001, h0km, Mws2.7, confirmed*
*HLW **10** 02:12:26.7, 35°09N×32°39E, h24km±10km, Ml3.4*

ISC 10 02:12:26.7±1.9, 35°24N±0°03×32°52E±0°05, h35km±2km, n59, σ1°926/58, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALFC	**Alefka**	**0.10**	**142**	P	Pn	02 12 32.8	-3.1
ALFC				S	Sn	02 12 38.1	-5.9
ALFC				AML	AML	02 12 38.3	
	5.8nm,0.3s						
ALFC				AML	AML	02 12 38.7	
	3.6nm,0.2s						
AKMS	**Akamas**	**0.27**	**215**	P	Pn	02 12 34.3	-0.3
AKMS				S	Sn	02 12 41.3	+0.6
AKMS				AML	AML	02 12 42.0	
	1.8nm,0.3s						
AKMS				AML	AML	02 12 44.7	
	1.8nm,0.3s						
TROD	**Troodos**	**0.41**	**136**	P	Pn	02 12 36.0	-0.1
TROD				S	Sn	02 12 43.2	+0.3
TROD				AML	AML	02 12 46.1	
	0.7nm,0.3s						
TROD				AML	AML	02 12 53.0	
	1.0nm,0.3s						
NATA	**Nata**	**0.46**	**175**	P	Pn	02 12 37.2	+0.5
NATA				S	Sn	02 12 45.3	+1.5
NATA				AML	AML	02 12 54.4	
	2.3nm,0.5s						
NATA				AML	AML	02 12 55.1	
	3.1nm,0.5s						
XYLS	**Xyliatos**	**0.49**	**117**	P	Pn	02 12 36.5	-0.6
XYLS				S	Sn	02 12 44.9	+0.4
XYLS				AML	AML	02 12 48.5	
	1.9nm,0.2s						
XYLS				AML	AML	02 12 48.9	
	2.5nm,0.3s						
APOL	**The Sanctuary**	**0.63**	**154**	P	Pn	02 12 39.3	+0.1
APOL				S	Sn	02 12 50.6	+2.6
APOL				AML	AML	02 12 51.6	
	2.7nm,0.3s						
APOL				AML	AML	02 12 51.7	
	1.6nm,0.2s						
CSS	**Mathiatis**	**0.72**	**112**	Pg	Pn	02 12 39.6	-0.8
CSS	**Mathiatis**	**0.72**	**112**	P	Pn	02 12 39.4	-1.0
CSS				S	Sn	02 12 51.6	+1.5
CSS				AML	AML	02 12 55.7	
	1.1nm,0.5s						
CSS				AML	AML	02 12 57.0	
	0.9nm,0.4s						
CSS	**Mathiatis**	**0.72**	**112**	P	Pn	02 12 39.1	-1.3
CSS				S	Sn	02 12 48.0	-2.2
ATHAL	**Athalassa**	**0.72**	**98**	P	Pn	02 12 40.0	-0.4
ATHAL				AML	AML	02 12 57.0	
	1.5nm,0.5s						
ATHAL				AML	AML	02 12 57.6	
	1.9nm,0.6s						
ASGA	**Asgata**	**0.75**	**127**	P	Pn	02 12 40.9	+0.2
ASGA				S	Sn	02 12 53.1	+2.3
ASGA				AML	AML	02 12 54.0	
	1.3nm,0.3s						
ASGA				AML	AML	02 12 55.1	
	1.6nm,0.5s						
LFK	**Lefkose**	**0.83**	**87**	Pg	Pn	02 12 40.6	-1.3
MVOU	**Mavrovouni**	**0.94**	**103**	P	Pn	02 12 42.3	-1.0
MVOU				S	Sn	02 12 56.1	+0.6
MVOU				AML	AML	02 12 59.2	
	0.4nm,0.4s						
MVOU				AML	AML	02 13 03.1	
	0.5nm,0.3s						
BOZY	**Bozyazi-Mersin**	**0.94**	**23**	Pg	Pn	02 12 41.2	-2.2
BOZY				Sg	Sn	02 12 53.2	-2.4
GAZI	**Gazipasa**	**1.01**	**351**	Pg	Pn	02 12 42.6	-1.7
GAZI				Sg	Sn	02 12 55.9	-1.3
GAZI	**Gazipasa**	**1.01**	**351**	P	Pn	02 12 42.8	-1.5
GAZI				S	Sn	02 12 56.0	-1.3
GAZI				IAML		02 12 59.0	
	comp=N,71nm,0.3s						
GAZI				IAML		02 13 12.0	
	comp=E,58nm,0.8s						
TEKE	**Tekeli-Mersin**	**1.02**	**28**	Pg	Pn	02 12 42.8	-1.7
YORU	**Yoruktepe-Mers**	**1.16**	**38**	Pg	Pn	02 12 45.4	-1.1
GULN	**MERSIN_Gulnar**	**1.26**	**41**	P	Pn	02 12 46.2	-1.5
GULN				S	Sn	02 13 01.9	-1.5
GULN				IAML		02 13 05.0	
	comp=N,39nm,0.7s						
GULN				IAML		02 13 07.0	
	comp=E,56nm,0.4s						
PARAL	**Paralimni**	**1.27**	**101**	P	Pn	02 12 49.8	+1.9
PARAL				S	Sn	02 13 07.8	+4.2
TISA	**Tisan-Mersin**	**1.32**	**45**	Pn	Pn	02 12 48.2	-0.3
YESI	**Yesilovacik-Me**	**1.32**	**43**	Pn	Pn	02 12 48.2	-0.4
KARG	**Kargicak-Mersi**	**1.36**	**45**	Pn	Pn	02 12 48.7	-0.5
KARG				Sn	Sn	02 13 06.1	+0.1
ERMK	**Ermenek**	**1.44**	**13**	P	Pn	02 12 50.1	-0.3
ERMK				S	Sn	02 13 10.2	+2.1
ERMK				IAML		02 13 11.0	
	comp=N,76nm,0.4s						
ERMK				IAML		02 13 24.0	
	comp=E,60nm,0.3s						
KKBE	**Karaman, Kazim**	**2.00**	**10**	P	Pn	02 12 59.1	+1.0
KKBE				S	Sn	02 13 25.5	+3.4
SEYD	**Seydisehir-KON**	**2.23**	**346**	Pn	Pn	02 13 01.9	+0.7
KONT	**Konya--Tatoy**	**2.70**	**357**	Pn	Pn	02 13 07.9	+0.2
DQRL	**Deir Qamar**	**2.95**	**120**	*e*P	Pn	02 13 10.6	-0.5
HWQ	**Hawqa**	**2.98**	**108**	*e*P	Pn	02 13 11.2	-0.3
HWQ					eS	Sn	02 13 44.9	-1.1
HNTI	**Hanita**	**3.08**	**134**	P	Pn	02 13 12.2	-0.5
HNTI				S	Sn	02 13 47.8	-0.5
BEIL	**Beino**	**3.09**	**102**	*e*P	Pn	02 13 12.7	-0.3
BEIL				*e*S	Sn	02 13 47.7	-1.0
ZAHL	**Zahle**	**3.10**	**115**	*e*P	Pn	02 13 12.7	-0.5
QRWL	**Qaraoun**	**3.11**	**122**	*e*P	Pn	02 13 12.9	-0.4
RCY	**Rachaya**	**3.25**	**121**	*e*P	Pn	02 13 14.8	-0.4
MMC7	**Mount Meron ar**	**3.25**	**132**	P	Pn	02 13 14.8	-0.4
MMA0B	**Mount Meron ar**	**3.26**	**132**	P	Pn	02 13 15.0	-0.4
MMA0B				S	Sn	02 13 52.7	-0.3
GEM	**Giv'at Ha'Em**	**3.30**	**127**	P	Pn	02 13 15.6	-0.2
NATI	**Neve Ativ**	**3.31**	**126**	P	Pn	02 13 16.0	0.0
NATI				S	Sn	02 13 53.4	-0.7
OFRI	**ʿOfer**	**3.32**	**141**	P	Pn	02 13 15.6	-0.5
OFRI				S	Sn	02 13 53.4	-0.9
KSHT	**Keshet**	**3.54**	**129**	P	Pn	02 13 19.2	0.0
KSHT				S	Sn	02 13 59.6	-0.2
SLTI	**Sal'it**	**3.65**	**144**	P	Pn	02 13 20.4	-0.3
SLTI				S	Sn	02 14 01.9	-0.7
MMLI	**Mount Malkishu**	**3.69**	**138**	P	Pn	02 13 20.9	-0.3
MMLI				S	Sn	02 14 02.8	-0.8
HMDT	**Nahal Hemdat**	**3.89**	**139**	P	Pn	02 13 23.8	-0.2
HMDT				S	Sn	02 14 07.8	-0.5
UJAP	**Al Uja**	**4.10**	**142**	P	Pn	02 13 26.3	-0.5
UJAP				S	Sn	02 14 12.8	-0.6
AMAZ	**Amatzia**	**4.20**	**151**	P	Pn	02 13 27.8	-0.5
AMAZ				S	Sn	02 14 15.3	-0.8
DSI	**Dead Sea**	**4.37**	**146**	P	Pn	02 13 29.9	-0.6
DSI				S	Sn	02 14 19.1	-1.1
YTIR	**Yattir**	**4.43**	**150**	P	Pn	02 13 31.3	-0.2
YTIR				S	Sn	02 14 21.5	-0.4
MSBI	**Mazada**	**4.58**	**148**	P	Pn	02 13 32.8	-0.5
MSBI				S	Sn	02 14 24.5	-0.8
KZIT	**Kziot**	**4.60**	**159**	P	Pn	02 13 32.8	-0.9
KZIT				S	Sn	02 14 24.9	-1.0
GHAJ	**Ghor Haditha**	**4.68**	**146**	P	Pn	02 13 34.4	-0.3
GHAJ				S	Sn	02 14 27.1	-0.7
RMNI	**Mount Ramon**	**5.00**	**157**	P	Pn	02 13 38.8	-0.4
RMNI				S	Sn	02 14 35.3	-0.6
PRNI	**Paran**	**5.30**	**156**	P	Pn	02 13 42.9	-0.5
PRNI				S	Sn	02 14 42.5	-0.7
KRMI	**Paran Flat**	**5.43**	**159**	P	Pn	02 13 44.6	-0.6
KRMI				S	Sn	02 14 46.0	-0.6
HRFI	**Mount Harif**	**5.61**	**157**	P	Pn	02 13 47.3	-0.3
HRFI				S	Sn	02 14 49.8	-0.9
EIL	**Elat**	**5.92**	**159**	P	Pn	02 13 51.6	-0.3
RYAN	**Fayoum**	**6.43**	**198**	P	Pn	02 13 58.0	-0.8
HKAT	**Jabal Katrina**	**6.81**	**169**	P	Pn	02 14 03.4	-0.9
TR2	**Tor 2**	**6.91**	**171**	P	Pn	02 14 04.2	-1.2
SWA2		**8.46**	**227**	P	Pn	02 14 24.2	-2.5
SWA2				S	Sn	02 15 52.4	-8.4

*NEIC **10** 02:19:23.5±1.2, 17°82N±0°03×66°86W±0°01, h10km±2km, ML3.2/29, Md3.1/5(RSPR), Error ellipse: s-maj=6.0km s-min=2.9km az=14.0*
*OSPL **10** 02:19:23.7±0.4, 17°78N×66°88W, h9km±5km, ML2.9, Presumed earthquake*
*SDD **10** 02:19:24.3±1.3, 17°87N×66°86W, h12km±14km, MD3.3, ML3.0, MW3.0, Presumed earthquake*

ISC 10 02:19:23.8±1.1, 17°87N±0°06×66°86W±0°02, h17km±6km, n29, σ0°74/49, 10C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.11**	**351**		**Pg**	**02 19 27.5**	**+0.1**
GBPR					**Sg**	**02 19 30.2**	**+0.4**
MLPR	**Magueyes Islan**	**0.20**	**301**	Pg	**Pg**	**02 19 28.4**	**-0.3**
MLPR				Sg	**Sg**	**02 19 31.6**	**-0.4**
MLPR				IAML		02 19 32.5	
	3μm,0.6s						
MLPR				IAML		02 19 32.5	
	4μm,0.5s						
MLPR	**Magueyes Islan**	**0.20**	**301**	⇑*e*Pg	**Pg**	**02 19 28.5**	**-0.3**
MLPR				⇑*e*Sg	**Sg**	**02 19 30.9**	**-1.1**
MLPR				IAML		02 19 32.3	
	comp=N,1μm,0.5s						
CRPR	**Cabo Rojo, PR**	**0.28**	**301**		**Pg**	**02 19 29.5**	**-0.3**
CRPR					**Sg**	**02 19 33.9**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.28**	**301**	IAML		02 19 34.1	
	comp=N,3μm,0.4s						
CRPR				IAML		02 19 35.0	
	comp=N,2μm,0.5s						
CRPR	**Cabo Rojo, PR**	**0.28**	**301**	*i* P	**Pg**	**02 19 29.5**	**-0.3**
CRPR				*e*S	**Sg**	**02 19 33.6**	**-0.4**
CRPR				IAML		02 19 34.3	
	comp=Z,2μm,0.6s						
OBIP	**Obispado Ponce**	**0.30**	**54**		**Pg**	**02 19 30.3**	**0.0**
OBIP					**Sg**	**02 19 35.2**	**+0.6**
OBIP	**Obispado Ponce**	**0.30**	**54**	*i* P	**Pg**	**02 19 30.5**	**+0.2**
OBIP				IAML		02 19 36.9	
	comp=Z,457nm,0.2s						
CELP	**Cerrillos**	**0.34**	**52**	Pg	**Pg**	**02 19 31.1**	**+0.2**
CELP				Sg	**Sg**	**02 19 36.8**	**+1.0**
CELP	**Cerrillos**	**0.34**	**52**	⇓*e*Pg	**Pg**	**02 19 31.2**	**+0.2**
CELP				⇑*e*Sg	**Sg**	**02 19 34.2**	**-1.8**
CELP				IAML		02 19 37.3	
	comp=N,578nm,0.2s						
LSP	**Las Mesas**	**0.38**	**325**		**Pg**	**02 19 31.5**	**-0.1**
LSP					**Sg**	**02 19 37.5**	**+0.6**
UUPR	**Utuado, UPR, P**	**0.41**	**19**	Pg	**Pg**	**02 19 32.0**	**-0.1**
UUPR				Sg	**Sg**	**02 19 37.9**	**0.0**
PRSN	**Puerto Rico Se**	**0.44**	**322**		**Pg**	**02 19 32.4**	**-0.4**
PRSN				Sg	**Sg**	**02 19 38.7**	**-0.2**
PRSN	**Puerto Rico Se**	**0.44**	**322**	⇑*e*Pg	**Pg**	**02 19 32.5**	**-0.3**
PRSN				⇑*e*Sg	**Sg**	**02 19 38.1**	**-0.8**
PRSN				IAML		02 19 42.2	
	comp=N,2μm,0.2s						
AOPR	**Arecibo Observ**	**0.49**	**12**	Pg	**Pg**	**02 19 33.3**	**-0.4**
AOPR				Sg	**Sg**	**02 19 40.2**	**-0.1**
AOPR	**Arecibo Observ**	**0.49**	**12**	⇓*e*Pg	**Pg**	**02 19 33.5**	**-0.2**
AOPR				⇑*e*Sg	**Sg**	**02 19 40.1**	**-0.3**
AOPR				IAML		02 19 42.8	
	comp=N,3μm,0.2s						
AGPR	**Aguadilla, PR**	**0.65**	**338**	Pg	**Pg**	**02 19 35.8**	**-0.8**
AGPR				Sg	**Sg**	**02 19 44.6**	**-0.6**
AGPR				IAML		02 19 45.6	
	comp=N,1μm,0.5s						
AGPR	**Aguadilla, PR**	**0.65**	**338**	⇑*e*Pg	**Pg**	**02 19 36.0**	**-0.5**
AGPR				⇑*e*Sg	**Sg**	**02 19 44.5**	**-0.6**
AGPR				IAML		02 19 45.5	
	comp=N,987nm,0.3s						
ECPR	**Experimental S**	**0.65**	**46**	Pg	**Pg**	**02 19 35.9**	**-0.8**
ECPR				Sg	**Sg**	**02 19 44.8**	**-0.7**
ECPR				IAML		02 19 49.9	
	comp=N,971nm,0.2s						
ECPR				IAML		02 19 51.2	
	comp=N,2μm,0.2s						
SJG	**San Juan**	**0.72**	**70**	Pg	**Pg**	**02 19 37.2**	**-0.7**
SJG				Sg	**Sg**	**02 19 47.6**	**+0.2**
SJG				IAML		02 19 50.5	
	comp=N,683nm,0.4s						
SJG	**San Juan**	**0.72**	**70**	*i* P	**Pg**	**02 19 37.4**	**-0.5**
SJG				*e*S	**Sg**	**02 19 47.8**	**+0.4**
SJG				IAML		02 19 50.5	
	comp=Z,804nm,0.3s						
IDE	**Isla Desecheo**	**0.78**	**312**		**Pg**	**02 19 38.1**	**-1.0**
IDE					**Sg**	**02 19 49.4**	**-0.1**
PDPR	**Patillas Dam,**	**0.81**	**79**	Pg	**Pg**	**02 19 38.9**	**-0.8**
PDPR				IAML		02 19 53.7	
	comp=Z,643nm,0.5s						
HUMP	**Col San Antoni**	**1.00**	**74**		**Pg**	**02 19 42.1**	**-1.1**
HUMP					**Sg**	**02 19 55.9**	**-0.5**
HUMP	**Col San Antoni**	**1.00**	**74**	IAML		02 19 58.5	
	comp=Z,646nm,0.3s						
HUMP				IAML		02 20 01.7	
	comp=Z,470nm,0.2s						
CUPR	**Culebra, Puert**	**1.56**	**73**		**Pn**	**02 19 51.5**	**+0.6**
HIDR	**Higuey Centro**	**1.91**	**293**	⇑*e*Pg	**Pn**	**02 19 57.5**	**+1.9**
HIDR				⇓*e*Sg	**Sn**	**02 20 21.1**	**+1.8**
HIDR				IAML		02 20 37.4	
	comp=N,86nm,1.4s						
DR12	**Loma Pena Alta**	**2.56**	**291**	Pn	**Pn**	**02 20 05.3**	**+0.6**
HATOM	**Hato Mayor del**	**2.56**	**291**	⇑*e*Pg	**Pb**	**02 20 08.1**	**-1.3**
HATOM				IAML		02 20 52.3	
	comp=N,61nm,3.0s						

*IDC **10** 02:38:38.2±2.2, 13°23S×66°86E, h0km, mb3.7/7, mbtmp3.7/7, MS3.4/4, Error ellipse: s-maj=79.4km s-min=30.4km az=54.0*

ISC 10 02:38:39.0±2.3, 13°45S±0°4×66°7E±0°5, h10km, n17, σ0°92/8, mb3.8/7, MS3.5/4, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Garcia H**	**8.07**	**45**	T	T	02 48 51.3	
	baz=225,slow=75,SNR=77						
H08S2	**Diego Garcia H**	**8.08**	**46**	T	T	02 48 50.6	
	baz=225,slow=75,SNR=97						
H08S3	**Diego Garcia H**	**8.09**	**45**	T	T	02 48 51.8	
	baz=225,slow=75,SNR=106						
H04N2	**CROZET ISLANDS**	**34.99**	**198**	T	T	03 22 43.2	
	baz=27,slow=75,SNR=17						
H04N1	**CROZET ISLANDS**	**35.00**	**198**	T	T	03 22 44.2	
	baz=27,slow=75,SNR=16						
H04N3	**CROZET ISLANDS**	**35.01**	**198**	T	T	03 22 36.6	
	baz=27,slow=75,SNR=16						
CMAR	**Chiang Mai Arr**	**44.88**	**46**	LR	LR	03 03 14.3	
	comp=Z,16nm,19.9s,baz=260,slow=33						
AAK	**Ala-Archa**	**56.22**	**7**	LR	LR	03 09 42.3	
	comp=Z,37nm,18.8s,baz=254,slow=33						
MKAR	**Makanchi Array**	**61.53**	**12**	P	**P**	**02 48 55.7**	**-0.5**
	0.4nm,0.7s,baz=180,slow=5.8,SNR=4.9						
MKAR				LR	LR	03 13 32.4	
	comp=Z,35nm,18.2s,baz=259,slow=34						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**64.06**	**110**	P	**P**	**02 49 12.9**	**-0.8**
	0.5nm,0.9s,baz=265,slow=7.6,SNR=3.0						
	0.5nm,0.9s						
KURBB	**Kurchatov Arra**	**64.59**	**8**	P	**P**	**02 49 15.7**	**-0.7**
	0.5nm,0.7s,baz=207,slow=7.0,SNR=5.4						
	0.5nm,0.7s						
WRA	**Warramunga Arr**	**64.78**	**106**	P	**P**	**02 49 19.0**	**+0.7**
	0.7nm,0.9s,baz=267,slow=5.7,SNR=4.1						
	0.7nm,0.9s						
ZALV	**Zalesovo Beam**	**68.84**	**11**	P	**P**	**02 49 42.2**	**-1.2**
	1.0nm,0.7s,baz=193,slow=4.4,SNR=4.4						
	1.0nm,0.7s						
SONM	**Songino Array**	**70.48**	**27**	P	**P**	**02 49 54.8**	**+0.9**
	0.4nm,0.5s,baz=212,slow=5.1,SNR=2.6						
	0.4nm,0.5s						
HFS	**Hagfors**	**84.62**	**336**	P	**P**	**02 51 12.8**	**+0.4**
	0.7nm,0.6s,baz=136,slow=5.9,SNR=1.1						
	0.7nm,0.6s						
MA2	**Magadan**	**98.46**	**31**	LR	LR	03 38 07.5	
	comp=Z,34nm,18.8s,baz=45,slow=36						
PDAR	**Pinedale Array**	**150.56**	**354**	PKPbc	**PKiKP**	**02 58 32.5**	**0.0**
	0.9nm,0.7s,baz=351,slow=3.3,SNR=9.2						

*IDC **10** 02:39:20.5±5.0, 36°34N×71°11E, h165km±40km, mb3.5/7, mbtmp3.9/12, MS3.0/2, Error ellipse: s-maj=45.7km s-min=31.4km az=150.0*
*NNC **10** 02:39:29.3±6.0, 36°99N×70°92E, h189km±83km, mb2.9, mpv4.0, Error ellipse: s-maj=61.4km s-min=38.9km az=22.0*

ISC 10 02:39:23.4±0.8, 36°54N±0°06×71°08E±0°08, h188km, n35, σ2°30/45, mb4.0/5, 1C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALCI	**Alchi Leh**	**5.50**	**113**	*e*P	**Pn**	**02 40 46.5**	**+2.2**
ALCI				*e*S	**Sn**	**02 41 48.2**	**+0.2**
ALCI				IAML		02 41 50.4	
	comp=E,108nm,0.5s						
ALCI				IAML		02 41 51.4	
	comp=N,150nm,0.2s						
TSSA	**Tissa**	**5.58**	**130**	*e*P	**Pn**	**02 40 47.9**	**+2.7**
TSSA				*e*S	**Sn**	**02 41 49.6**	**0.0**
TSSA				IAML		02 41 52.1	
	comp=N,200nm,0.3s						
TSSA				IAML		02 41 52.9	
	comp=E,162nm,0.3s						
THN	**Thein Dam**	**5.62**	**135**	*e*P	**Pn**	**02 40 48.9**	**+3.2**
THN				*e*S	**Sn**	**02 41 51.8**	**+1.3**
THN				IAML		02 41 56.1	
	comp=E,122nm,0.4s						
THN				IAML		02 41 56.4	
	comp=N,100nm,0.4s						
DHRM	**DHARAMSHALA**	**6.08**	**133**	*e*P	**Pn**	**02 40 55.0**	**+3.3**
DHRM				*e*S	**Sn**	**02 42 01.6**	**+0.2**
DHRM				IAML		02 42 03.6	
	comp=E,135nm,0.3s						
DHRM				IAML		02 42 04.1	
	comp=N,195nm,0.3s						
UCH	**Uchtor**	**6.27**	**24**	P	**Pn**	**02 40 55.4**	**+1.0**
	SNR=39						
EKS2	**Erkin-Say**	**6.46**	**18**	P	**Pn**	**02 40 57.7**	**+1.2**
	SNR=11						
KK31	**Karatay Array**	**6.57**	**356**	⇓P	**Pn**	**02 40 58.5**	**+0.7**
	comp=N,7.9nm,0.3s,baz=182,slow=13,SNR=438						
KK31				⇓S	**Sn**	**02 42 07.9**	**-4.7**
	comp=N,8.5nm,0.3s,baz=150,slow=15,SNR=18						
AAK	**Ala-Archa**	**6.64**	**22**	P	**Pn**	**02 40 59.6**	**+0.8**
	comp=N,8.6nm,0.4s,baz=204,slow=5.9,SNR=36						
AAK				S	**Sn**	**02 42 12.6**	**-1.8**
	comp=N,4.2nm,0.3s,baz=323,slow=23,SNR=14						
AAK	**Ala-Archa**	**6.64**	**22**	P	**Pn**	**02 41 00.1**	**+1.2**
	SNR=19						
AAK	**Ala-Archa**	**6.64**	**22**	⇓P	**Pn**	**02 40 59.3**	**+0.4**
	comp=N,3.7nm,0.6s						
AAK				⇓S	**Sn**	**02 42 12.3**	**-2.0**
	comp=N,6.9nm,0.7s						
BHK	**Bhakra**	**6.76**	**138**	*e*S	**Sn**	**02 42 20.1**	**+2.9**
KBK	**Karagaybulak**	**6.80**	**25**	P	**Pn**	**02 41 02.7**	**+1.7**
	SNR=12						
CHMS	**Chumysh**	**7.04**	**23**	P	**Pn**	**02 41 05.3**	**+1.3**
	SNR=6.0						
USP	**Ospenovka**	**7.21**	**20**	P	**Pn**	**02 41 06.0**	**-0.3**
	SNR=6.5						
TKM2	**Tokmak 2**	**7.26**	**27**	P	**Pn**	**02 41 08.0**	**+0.9**
	SNR=33						
SMLA	**Simla**	**7.40**	**135**	*e*P	**Pn**	**02 41 11.1**	**+2.3**
SMLA				*e*S	**Sn**	**02 42 30.6**	**-1.7**
SMLA				IAML		02 42 34.0	
	comp=E,94nm,0.2s						
SMLA				IAML		02 42 35.8	
	comp=N,60nm,0.3s						
HNLY	**HANLEY**	**7.51**	**118**	*e*P	**Pn**	**02 41 13.6**	**+2.8**
HNLY				*e*S	**Sn**	**02 42 29.7**	**-6.0**
HNLY				IAML		02 42 37.7	
	comp=N,30nm,0.2s						
HNLY				IAML		02 42 40.7	
	comp=E,28nm,0.5s						
KLP	**Kalpa**	**7.77**	**128**	*e*P	**Pn**	**02 41 16.2**	**+2.2**
KLP				*e*S	**Sn**	**02 42 38.4**	**-3.2**
KLP				*e*S		02 42 38.5	
KLP				IAML		02 42 43.3	

VAE Valguarnera 44.66 289 LR LR 03 09 27.8
comp=Z,48nm,21.7s,baz=294,slow=40
TORD Torodi Ar. Bea 65.78 269 P **P** **02 49 47.6 -1.0**
comp=Z,0.4nm,0.7s,baz=60,slow=3.3,SNR=6.5
comp=Z,0.4nm,0.7s
YKA Yellowknife Ar 81.20 3 P **P** **02 51 18.4 +0.7**
comp=Z,0.3nm,0.6s,baz=349,slow=5.8,SNR=4.9
comp=Z,0.3nm,0.6s

AZER ***10*** *02:53:46.4,38˚.42N×44˚.50E,h2km,ml4.2*
NSSP ***10*** *02:53:47.1,38˚.43N×44˚.50E,h10km,Ms4.1*
MCSM ***10*** *02:53:47.6±0.6,38˚.N±˚×4˚.4E±˚,h10km,mb3.8,MLv4.2*
AFAD ***10*** *02:53:48.2,38˚.45N×44˚.50E,h7km±4km,MW3.9*
TIF ***10*** *02:53:48.4,38˚.46N×44˚.45E,h9km±2km*
TEH ***10*** *02:53:48.6,38˚.42N×44˚.49E,h5km,ML4.0,Presumed earthquake*
ISK ***10*** *02:53:49.7,38˚.45N×44˚.42E,h5km,ML3.9/19*
IDC ***10*** *02:53:49.8±0.9,38˚.46N×44˚.45E,h0km,mb3.9/15, mbtmp3.9/20,ML3.4/5,MS3.3/19,Error ellipse: s-maj=17.7km s-min=11.4km az=160.0*
NEIC ***10*** *02:53:50.8±1.5,38˚.44N±0˚.05×44˚.39E±0˚.05,h10km±1km, mb4.1/29,Error ellipse: s-maj=8.7km s-min=6.8km az=168.0*
ISC 10 02:53:47.1±0.5,38˚.40N±0˚.02×44˚.56E±0˚.01,h8km±2km, n212,σ2§41/221,mb4.1/32,MS3.2/12,10C-6D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
OZAP	**Van, Ozalp-Mer**	**0.52**	**301**	P		**Pb**	**02 53 57.1**	**-1.4**
OZAP				S		**Sb**	**02 54 04.8**	**-1.5**
OZAP				IAML			02 54 12.0	
	comp=N,1μm,0.9s							
OZAP	**Van, Ozalp-Mer**	**0.52**	**301**	Pg		**Pb**	**02 53 57.1**	**-1.4**
YOVA	**Hakkari_Yksek**	**0.83**	**195**	P		**Pn**	**02 54 04.8**	**-0.5**
YOVA				S		**Sn**	**02 54 18.6**	**+0.8**
YOVA				IAML			02 54 23.0	
	comp=N,2μm,0.8s							
YOVA				IAML			02 54 24.0	
	comp=E,2μm,0.4s							
YOVA	**Hakkari_Yksek**	**0.83**	**195**	Pg		**Pn**	**02 54 04.8**	**-0.5**
ISHB	**Shabestar**	**0.84**	**97**	Pg		**Pn**	**02 54 05.0**	**-0.4**
TVAN	**Van**	**0.91**	**279**	P		**Pb**	**02 54 04.1**	**-1.2**
TVAN				S		**Sn**	**02 54 16.9**	**-3.0**
TVAN				IAML			02 54 32.0	
	comp=N,4μm,0.7s							
TVAN				IAML			02 54 33.0	
	comp=E,5μm,0.8s							
VANB	**Van**	**0.94**	**283**	Pg		**Pn**	**02 54 06.3**	**-0.4**
VANB				Sg		**Sn**	**02 54 18.4**	**-1.9**
VANB	**Van**	**0.94**	**283**	Pg		**Pn**	**02 54 06.1**	**-0.6**
IMRD	**Marand**	**0.95**	**70**	Pg		**Pn**	**02 54 07.9**	**+1.0**
MAKU	**Maku**	**0.96**	**6**	Pg		**Pn**	**02 54 06.6**	**-0.5**
VMUR	**Van-Muradiye**	**0.97**	**308**	P		**Pn**	**02 54 05.9**	**-1.3**
VMUR				S		**Sn**	**02 54 21.6**	**+0.3**
VMUR				IAML			02 54 28.0	
	comp=E,2μm,0.8s							
VMUR				IAML			02 54 31.0	
	comp=N,3μm,0.7s							
VMUR	**Van-Muradiye**	**0.97**	**308**	Pg		**Pn**	**02 54 05.9**	**-1.3**
NAX	**Nakhchivan**	**1.07**	**43**	P		**Pn**	**02 54 09.8**	**+1.3**
NAX				S		**Sn**	**02 54 25.9**	**+2.4**
HAKT	**HAKKARI**	**1.07**	**219**	P		**Pn**	**02 54 08.1**	**-0.5**
HAKT				S		**Sn**	**02 54 25.2**	**+1.4**
HAKT	**HAKKARI**	**1.07**	**219**	Pg		**Pn**	**02 54 07.8**	**-0.8**
HAKT	**HAKKARI**	**1.07**	**219**	P		**Pn**	**02 54 07.9**	**-0.8**
HAKT				S		**Sn**	**02 54 26.9**	**+3.1**
ERCV	**ERCIS-VAN**	**1.14**	**304**	Pg		**Pn**	**02 54 09.4**	**-0.1**
GEVA	**Gevas**	**1.18**	**266**	Pn		**Pg**	**02 54 08.3**	**-1.4**
GEVA				Sg		**Sn**	**02 54 24.8**	**-1.7**
GEVA	**Gevas**	**1.18**	**266**	P		**Pn**	**02 54 08.6**	**-1.4**
GEVA				S		**Sn**	**02 54 26.0**	**-0.4**
ORD	**Ordubad**	**1.24**	**64**	P		**Pg**	**02 54 13.0**	**+2.0**
ORD				S		**Sn**	**02 54 31.9**	**+4.1**
ITBZ	**Tabriz**	**1.26**	**97**	Pg		**Pg**	**02 54 12.5**	**+1.2**
SBZ	**Shahbuz**	**1.27**	**38**	P		**Pg**	**02 54 13.0**	**+1.6**
SBZ				S		**Sn**	**02 54 32.9**	**+4.4**
DYDN	**Diyadin**	**1.33**	**330**	P		**Pg**	**02 54 11.9**	**-0.7**
DYDN				S		**Sn**	**02 54 30.0**	**-0.2**
DYDN				IAML			02 54 35.0	
	comp=E,2μm,0.8s							
DYDN				IAML			02 54 38.0	
	comp=N,2μm,0.7s							
IAZR	**Azarshahr**	**1.33**	**122**	Pg		**Pg**	**02 54 15.3**	**+2.6**
HYR	**Heyderabad**	**1.34**	**10**	P		**Pg**	**02 54 14.1**	**+1.3**
HYR				S		**Sg**	**02 54 35.3**	**+5.1**
CUKT	**Cukurca**	**1.37**	**214**	Pn		**Pg**	**02 54 16.9**	**+3.5**
CUKT				Sn		**Sg**	**02 54 36.7**	**+5.5**
VAYK	**Vayk**	**1.46**	**27**	⇓*eP*		**Pg**	**02 54 16.1**	**+1.0**
VAYK				⇓*eS*		**Sg**	**02 54 37.1**	**+2.9**
ADCV	**BITLIS_Adilcev**	**1.50**	**287**	P		**Pg**	**02 54 14.9**	**-0.9**
ADCV				S		**Sg**	**02 54 38.5**	**+3.3**
ADCV				IAML			02 54 41.0	
	comp=E,1μm,0.5s							
ADCV				IAML			02 54 42.0	
	comp=N,1μm,0.6s							
IGDI	**IGDIR**	**1.52**	**346**	P		**Pg**	**02 54 16.4**	**+0.2**
IGDI				S		**Sg**	**02 54 41.3**	**+5.4**
AGRB	**Hanur-Agry**	**1.70**	**314**	Pn		**Pg**	**02 54 19.8**	**+0.2**
DORK	**Agr/Tutak/Do**	**1.71**	**306**	P		**Pg**	**02 54 18.7**	**-1.1**
DORK				S		**Sg**	**02 54 44.7**	**+2.8**
DORK				IAML			02 54 49.0	
	comp=E,1μm,1.0s							
DORK				IAML			02 54 52.0	
	comp=N,1μm,0.8s							
MLAZ	**Malazgirt-MUS**	**1.74**	**296**	Pn		**Pg**	**02 54 20.5**	**+0.1**
EGVZ	**Egvard**	**1.76**	**61**	*eP*		**Pg**	**02 54 21.4**	**+0.6**
EGVZ				*eS*		**Sg**	**02 54 44.9**	**+1.3**
GNI	**Garni**	**1.76**	**5**	Pn		**Pg**	**02 54 21.8**	**+1.0**
	56nm,0.3s,baz=247,slow=1.9,SNR=279							
GNI				LR		LR	02 55 16.1	
	comp=Z,583nm,20.1s,baz=167,slow=51							
GNI	**Garni**	**1.76**	**5**			**Pg**	**02 54 20.9**	**+0.1**
GNI	**Garni**	**1.76**	**5**	Pn		**Pg**	**02 54 22.1**	**+1.3**
GNI	**Garni**	**1.76**	**5**	⇑*iP*		**Pg**	**02 54 21.6**	**+0.8**
GNI				⇑*iS*		**Sg**	**02 54 43.2**	**-0.4**
GNI	**Garni**	**1.76**	**5**	Pn		**Pg**	**02 54 19.6**	**-1.2**
VNNZ	**Vanand**	**1.80**	**342**	*eP*		**Pg**	**02 54 21.9**	**+0.3**
VNNZ				*eS*		**Sg**	**02 54 45.9**	**+1.0**
MAHB	**Mahabad**	**1.86**	**150**	Pn		**Pg**	**02 54 24.0**	**+1.1**
ARUZ	**Aruch**	**1.92**	**349**	*eP*		**Pg**	**02 54 23.2**	**-0.7**
ARUZ				*eS*		**Sg**	**02 54 48.8**	**0.0**
KAPZ	**Kaputan**	**1.93**	**3**	*eP*		**Pg**	**02 54 23.7**	**-0.4**
KAPZ				*eS*		**Sg**	**02 54 49.7**	**+0.7**
IHRS	**Heris**	**1.95**	**91**	Pn		**Pg**	**02 54 25.4**	**+0.9**
AYRK	**Ayrk**	**1.96**	**29**	*eP*		**Pg**	**02 54 24.8**	**0.0**
AYRK				*eS*		**Sg**	**02 54 51.2**	**+0.9**
GURO	**Guroymak-BITLI**	**1.99**	**275**	Pn		**Pb**	**02 54 22.7**	**-0.9**
GURO	**Guroymak-BITLI**	**1.99**	**275**	Pn		**Pg**	**02 54 24.3**	**-0.9**
AMBZ	**Amberd**	**2.00**	**353**	*eP*		**Pg**	**02 54 24.8**	**-0.8**
AMBZ				*eS*		**Sg**	**02 54 51.2**	**-0.3**
IHSH	**Hashtrud**	**2.40**	**116**	Pn		**Pb**	**02 54 32.0**	**+1.3**
QRD	**Qoradiz**	**2.40**	**63**	P		**Pb**	**02 54 31.1**	**+0.6**
QRD				S		**Sg**	**02 55 02.8**	**-1.5**
GDB	**GEDABAY**	**2.50**	**21**	P		**Pb**	**02 54 32.3**	**0.0**
GDB				S		**Sb**	**02 55 03.9**	**+0.6**
KARS	**Kars**	**2.51**	**333**			**Pb**	**02 54 30.1**	**-2.3**
KARS	**Kars**	**2.51**	**333**	Pn		**Pb**	**02 54 31.8**	**-0.6**
VRTB	**Varto-Mus**	**2.54**	**288**	Pn		**Pb**	**02 54 32.1**	**-0.9**
LSVT	**Lusahovit**	**2.56**	**11**	*eP*		**Pb**	**02 54 33.1**	**-0.3**
LSVT				*eS*		**Sg**	**02 55 11.6**	**+2.1**
AGDM	**Agdam**	**2.62**	**48**	P		**Pb**	**02 54 34.0**	**-0.2**
AGDM				S		**Sb**	**02 55 06.6**	**0.0**
GANJ	**Ganja**	**2.63**	**31**	P		**Pb**	**02 54 33.2**	**-1.2**
GANJ				S		**Sb**	**02 55 07.4**	**+0.5**
GRMI	**Germi**	**2.65**	**80**	Pn		**Pb**	**02 54 34.7**	**-0.1**
SVAN	**Silvan-Diyarba**	**2.66**	**266**	Pn		**Pb**	**02 54 33.7**	**-1.2**
SRTK	**Saratovka**	**2.67**	**356**	*eP*		**Pb**	**02 54 35.4**	**+0.1**
SRTK				*eS*		**Sg**	**02 55 13.7**	**+0.7**
BLQ	**Beylaqan**	**2.69**	**60**	P		**Pb**	**02 54 34.0**	**-1.4**
BLQ				S		**Sb**	**02 55 07.7**	**-0.8**
QZX	**Qazax, Azerbai**	**2.73**	**13**	P		**Pb**	**02 54 34.3**	**-1.9**
QZX				S		**Sb**	**02 55 10.1**	**+0.2**
SENK	**Senkaya-Erzuru**	**2.76**	**322**	Pn		**Pb**	**02 54 35.6**	**-1.1**
BRDA	**Brd**	**2.76**	**47**	P		**Pb**	**02 54 35.0**	**-1.6**
BRDA				S		**Sb**	**02 55 11.0**	**+0.4**
KARO	**Karliova-Bingo**	**2.89**	**290**	Pn		**Pb**	**02 54 37.0**	**-1.9**
YRD	**Yardimli**	**2.93**	**79**	P		**Pb**	**02 54 37.6**	**-2.0**
YRD				S		**Sb**	**02 55 15.2**	**-0.5**
BGD	**Bogdanovka**	**2.96**	**346**	P		**Pg**	**02 54 43.7**	**-0.1**
LRK	**Lerik**	**2.98**	**84**	P		**Pb**	**02 54 38.2**	**-2.2**
LRK				S		**Sb**	**02 55 17.7**	**+0.7**
KZRT	**Kazreti**	**2.99**	**358**	P		**Pg**	**02 54 42.9**	**-1.5**
ZRD	**Zardab**	**3.07**	**51**	P		**Pb**	**02 54 39.2**	**-2.7**
ZRD				S		**Sb**	**02 55 20.3**	**+0.8**
MNGR	**Mingechevir, A**	**3.07**	**39**	P		**Pb**	**02 54 39.2**	**-2.8**
MNGR				S		**Sb**	**02 55 20.4**	**+0.8**
BNGB	**Bingl**	**3.09**	**282**	Pn		**Pb**	**02 54 40.1**	**-2.3**
GLBA	**Cililabad**	**3.11**	**73**	P		**Pb**	**02 54 40.1**	**-2.6**
GLBA				S		**Sb**	**02 55 21.6**	**+0.9**
DGRG	**David-gareji**	**3.12**	**11**	P		**Pb**	**02 54 40.1**	**-2.6**
AKH	**Akhalkalaki**	**3.12**	**345**	P		**Pg**	**02 54 46.7**	**-0.2**
TRLG	**Trialeti**	**3.16**	**354**	P		**Pg**	**02 54 45.5**	**-2.2**
VSHL	**Vashlovani**	**3.17**	**26**	P		**Pg**	**02 54 43.1**	**-0.6**
VSHL				S		**Sg**	**02 55 33.2**	**+4.4**
DDFL	**Dedoflistskaro**	**3.27**	**21**	P		**Pb**	**02 54 43.6**	**-1.9**
YEDI	**Yedisu-Bingol**	**3.30**	**290**	Pn		**Pb**	**02 54 43.1**	**-2.8**
LKRN	**Lenkeran, Azer**	**3.32**	**83**	P		Pb	02 54 43.1	-3.1
LKRN				S		**Sb**	**02 55 27.1**	**+0.2**
ASTR	**Astara**	**3.33**	**86**	P		Pb	02 54 43.1	-3.2
ASTR				S		**Sb**	**02 55 27.7**	**+0.8**
TBLG	**Delisi**	**3.33**	**2**	Pn		**Pb**	**02 54 44.3**	**-2.2**
TBLG	**Delisi**	**3.33**	**2**	P		**Pg**	**02 54 51.9**	**+0.9**
SAAT	**Saatly**	**3.34**	**63**	P		Pb	02 54 43.5	-3.1
SAAT				S		**Sb**	**02 55 25.2**	**-2.2**
KDMR	**Kurdemir**	**3.44**	**54**	P		Pb	02 54 45.0	-3.1
KDMR				S		**Sb**	**02 55 30.7**	**+0.7**
SEKA	**Sheki**	**3.47**	**35**	P		**Pb**	**02 54 46.3**	**-2.4**
SEKA				S		**Sb**	**02 55 29.4**	**-1.7**
DYBB	**Diyarbakir**	**3.51**	**264**	Pn		Pb	02 54 44.9	-4.6
KOPT	**Kop Dagi**	**3.55**	**298**	Pn		**Pb**	**02 54 44.3**	**+1.6**
QBL	**Gabala**	**3.59**	**44**	P		**Pb**	**02 54 47.9**	**-3.0**
QBL				S		**Sb**	**02 55 34.0**	**-0.5**
ZKTA	**Zakatala**	**3.61**	**25**	P		Pb	02 54 47.1	-4.0
ZKTA				S		**Sb**	**02 55 32.8**	**-2.2**
LGD	**Lagodekhi**	**3.67**	**20**	P		Pb	02 54 48.5	-3.6
IML	**Ismayilli**	**3.68**	**48**	P		Pb	02 54 48.9	-3.5
IML				S		**Sb**	**02 55 36.9**	**-0.3**
ALIG	**Mtskhetisjvari**	**3.77**	**350**	P		**Pg**	**02 54 58.5**	**-0.8**
ALIB	**&Aumlli-Bayram**	**3.79**	**64**	P		Pb	02 54 50.7	-3.5
ALIB				S		**Sb**	**02 55 37.9**	**-2.4**
XNQ	**Khinaliq**	**3.91**	**44**	P		Pb	02 54 52.3	-4.1
XNQ				S		**Sb**	**02 55 42.5**	**-1.5**
PQL	**Pirkuli**	**3.93**	**51**	P		Pb	02 54 52.5	-4.1
PQL				S		**Sb**	**02 55 40.8**	**-3.6**
CHRG	**Chargali**	**3.94**	**4**	P		**Pg**	**02 55 00.6**	**-2.0**
ERZN	**Erzincan**	**3.95**	**289**	Pn		Pb	02 54 52.1	-4.9
BAYT	**Aydintepe-Bayb**	**3.96**	**302**	Pn		Pb	02 54 52.3	-4.9
CHOM	**Cayeli-Rize**	**3.98**	**314**	Pn		Pb	02 54 52.6	-4.9
GBS	**Qobustan**	**4.01**	**56**	P		Pb	02 54 53.7	-4.9
GBS				S		**Sb**	**02 55 44.1**	**-2.6**
ATGJ	**Altiaghaj**	**4.18**	**53**	P		Pb	02 54 56.3	-4.7
ATGJ				S		**Sb**	**02 55 46.9**	**-4.8**
QSAR	**Qusar**	**4.22**	**41**	P		Pb	02 54 56.5	-5.1
QSAR				S		**Sb**	**02 55 48.4**	**-4.3**
QUBA	**Quba, Azerbaij**	**4.23**	**44**	P		Pb	02 54 56.6	-5.1
QUBA				S		**Sb**	**02 55 49.6**	**-3.4**
SHTL	**Shatili**	**4.28**	**6**	P		Pb	02 54 57.5	-5.2
SHTL				S		**Sg**	**02 56 09.1**	**+4.6**
SIZA	**Siyzn**	**4.29**	**50**	P		Pb	02 54 57.5	-5.2
SIZA				S		**Sb**	**02 55 49.9**	**-4.7**
KBZ	**Khabaz**	**5.47**	**347**	Pn		Pb	02 55 17.4	-5.5
	0.1nm,0.3s,baz=148,slow=9.9,SNR=5.2							
KBZ				LR		LR	02 57 43.8	
	comp=Z,233nm,21.6s,baz=166,slow=43							
KVAR	**Kislovodsk Arr**	**5.73**	**346**	LR		LR	02 57 58.0	
	comp=Z,158nm,18.1s,baz=84,slow=44							
KIV	**Kislovodsk**	**5.73**	**346**	Pn		**Pn**	**02 55 15.4**	**+2.9**
	0.1nm9.7nm,1.0s							
GAZ	**Gaziantep**	**5.95**	**260**			**Pn**	**02 55 15.9**	**+0.5**
BRTR	**Keskin Array B**	**8.60**	**282**	Pn		Pn	02 55 58.1	+6.2
	0.1nm,0.3s,baz=113,slow=13,SNR=4.7							
BRTR				LR		LR	02 59 37.4	
	comp=Z,126nm,20.4s,baz=90,slow=41							
	0.8nm,0.8s							
ASF	**Jabal al Asfar**	**8.82**	**228**	Pn		**Pn**	**02 55 57.7**	**+2.8**
	0.6nm,0.3s,baz=20,slow=9.1,SNR=3.0							
ASF				LR		LR	02 59 45.6	
	comp=Z,119nm,21.6s,baz=39,slow=40							
	2.4nm,0.5s							
MMAI	**Mount Meron Ar**	**9.18**	**237**	Pn		Pn	02 56 03.9	+4.1
	0.8nm,0.3s,baz=56,slow=15,SNR=3.1							
MMAI				LR		LR	02 59 48.2	
	comp=Z,291nm,18.6s,baz=50,slow=39							
	3.0nm,0.7s							
EIL	**Elat**	**11.79**	**225**	Pn		Pn	02 56 43.5	+7.9
	0.1nm,0.3s,baz=45,slow=14,SNR=0.9							
EIL				LR		LR	03 01 40.2	
	comp=Z,113nm,21.2s,baz=60,slow=40							
SORM	**Soroca**	**15.27**	**315**	P		**Pn**	**02 57 23.1**	**+0.2**
AKTO	**Aktyubinsk**	**15.38**	**34**	Pn		**P**	**02 57 26.8**	**-2.2**
	0.3nm,0.3s,baz=228,slow=10.0,SNR=3.9							
	4.0nm,0.9s							
AB31	**Akbulak array**	**15.50**	**41**			**P**	**02 57 28.4**	**-1.9**
ABKAR	**Akbulak array**	**15.50**	**41**	Pn		**P**	**02 57 28.1**	**-2.2**
MLR	**Muntele Rosu**	**15.54**	**303**	Pn		**P**	**02 57 33.7**	**+2.7**
	0.1nm,0.3s,baz=120,slow=20,SNR=2.2							
MLR	**Muntele Rosu**	**15.54**	**303**	⇑P		**P**	**02 57 34.6**	**+3.6**
MLR	**Muntele Rosu**	**15.54**	**303**	IAmb		IAmb	02 57 51.0	
	comp=Z,14nm,1.5s							
ONER	**Baraj Valea Uz**	**15.57**	**306**	⇓P		**P**	**02 57 34.4**	**+3.2**
DOPR	**Dopca**	**16.07**	**304**	⇑P		**P**	**02 57 41.4**	**+4.7**
VOIR		**16.11**	**302**	⇑P		**P**	**02 57 42.7**	**+5.4**
VOIR		**16.11**	**302**	P		**Pn**	**02 57 33.9**	**0.0**
	comp=Z,8.9nm,1.5s							
PRAR	**RASCA**	**16.12**	**310**	⇑P		**P**	**02 57 38.2**	**+1.0**
AK07	**Malin Array Si**	**16.32**	**323**	P		**P**	**02 57 36.7**	**-2.7**
AK09	**Malin Array Si**	**16.33**	**323**	P		**P**	**02 57 36.6**	**-2.9**
AK06	**Malin Array Si**	**16.35**	**323**	P		**P**	**02 57 37.1**	**-2.6**
ARR	**Arges**	**16.37**	**302**	⇓P		**P**	**02 57 45.3**	**+5.2**
AK01	**Malin Array Si**	**16.41**	**323**	P		**P**	**02 57 37.7**	**-2.7**
AKASG	**Malin Array Be**	**16.41**	**323**	Pn		**P**	**02 57 40.5**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=134,slow=12,SNR=7.4							
AKASG				LR		LR	03 05 57.7	
	comp=Z,30nm,18.2s,baz=110,slow=45							
	comp=Z,2.1nm,0.7s							
AKASG	**Malin Array Be**	**16.41**	**323**			**P**	**02 57 41.5**	**+1.0**
AKBB	**Malin Array Si**	**16.41**	**323**	Pn		**P**	**02 57 38.5**	**-1.9**
AKBB	**Malin Array Si**	**16.41**	**323**	P		**P**	**02 57 38.9**	**-1.5**
KIEV	**Kiev**	**16.42**	**323**	⇑P		**P**	**02 57 40.2**	**-0.3**
KIEV	**Kiev**	**16.42**	**323**	Pn		**P**	**02 57 39.0**	**-1.5**
KIEV	**Kiev**	**16.42**	**323**	P		**P**	**02 57 38.9**	**-1.5**
	comp=Z,23nm,0.9s							
AK13	**Malin Array Si**	**16.43**	**323**	P		**P**	**02 57 38.0**	**-2.6**
AK17	**Malin Array Si**	**16.48**	**323**	P		**P**	**02 57 38.9**	**-2.3**
LUBAR	**Lubar, Ukraine**	**16.63**	**319**	P		**P**	**02 57 40.6**	**-2.3**
BURAR	**Bucovina Array**	**16.84**	**309**	⇑P		**P**	**02 57 49.7**	**+4.3**
BURAR	**Bucovina Array**	**16.84**	**309**			**P**	**02 57 46.2**	**+0.8**
BUR08	**Bucovina Ar. S**	**16.87**	**309**			**P**	**02 57 47.0**	**+1.3**
MI30	**MI30,Zelenitsa**	**16.94**	**322**	P		**P**	**02 57 44.7**	**-1.5**
	comp=Z,14nm,2.7s							
LOT	**Lotru**	**16.98**	**301**	⇑P		**P**	**02 57 50.9**	**+4.0**
MI28	**Mi28,Pidlybu**	**17.31**	**322**	P		**P**	**02 57 49.3**	**-1.0**
GZR	**Gura Zlata**	**17.63**	**300**	⇓P		**P**	**02 57 57.9**	**+3.9**
MARR	**Marisel-Cluj**	**17.80**	**305**	⇑P		**P**	02 58 05.2	+9.4
DRGR		**18.10**	**305**	⇓P		**P**	**02 58 04.6**	**+5.4**
MEZ	**Mezhgor'ye**	**18.27**	**310**	P		**P**	**02 58 00.7**	**-0.3**
KORU	**Korolevo**	**18.34**	**309**	P		**P**	**02 58 00.3**	**-1.5**
BRIU	**Brid**	**18.49**	**309**	P		**Pn**	**02 58 03.3**	**-0.2**
SHAA	**Shahritus**	**18.59**	**85**			**Pn**	**02 58 09.5**	**+4.6**
SHAA				IAmb		IAmb	02 58 13.0	
	comp=Z,20nm,1.2s							
BERU	**Beregovo**	**18.67**	**309**	P		**Pn**	**02 58 06.9**	**+1.2**
MNK	**Minsk**	**19.70**	**330**	*iP*		**Pn**	**02 58 21.6**	**+3.5**
	comp=E,9.0nm,0.8s							
MNK				*iP*		**Pn**	**02 58 21.6**	**+3.5**
	comp=N,10.0nm,0.8s							
MNK				*iP*		**Pn**	**02 58 21.6**	**+3.5**
	comp=Z,7.0nm,0.7s,baz=137							
MNK				*iPP*		**PnPn**	**02 58 36.3**	**+4.7**
MNK				*iPPP*		PPP	02 58 44.1	
MNK				*iS*		**Sn**	**03 02 02.7**	**+3.4**
MNK				*iSS*		**SnSn**	**03 02 19.1**	**+5.6**
MNK				*iSSS*		SSS	03 02 32.1	
MNK				*iLQ*		LQ	03 05 21.0	
MNK				*iLR*		LR	03 07 32.1	
MNK				*iLRM*		MLR	03 08 21.5	
	comp=Z,63nm,16.1s							
MNK				*iLRM*		MLR	03 08 30.4	
	comp=E,105nm,15.3s							
MNK				*iLRM*		MLR	03 08 58.2	
	comp=N,100nm,18.7s							
GAR	**Garm**	**20.10**	**80**			Pn	02 58 25.1	+2.1
KK31	**Karatay Array**	**20.18**	**68**	P		Pn	02 58 25.9	+2.0
KK31				IAmb		IAmb	02 58 31.5	
	comp=Z,12nm,1.2s							
KKAR	**Karatay Array**	**20.18**	**68**			Pn	02 58 26.5	+2.6
ARTI	**Arti**	**20.22**	**23**	P		Pn	02 58 25.9	+1.8
	comp=Z,9.0nm,0.7s,baz=211,slow=7.7,SNR=21							
ARTI				LR		LR	03 08 38.2	
	comp=Z,92nm,18.8s,baz=212,slow=44							
	comp=Z,9.0nm,0.7s							
ARTI	**Arti**	**20.22**	**23**			Pn	02 58 26.6	+2.5
KIRV	**Kirov**	**20.45**	**7**	LR		LR	03 06 26.9	
	comp=Z,40nm,20.9s,baz=219,slow=37							
NIE	**Niedzica**	**20.57**	**310**	P		Pn	02 58 26.7	-1.7
	comp=Z,3.6nm,1.2s							
MORH	**Mrgy, Hungar**	**20.63**	**301**	P		Pn	02 58 27.2	-1.9
DRK	**Karamyk**	**21.19**	**79**	P		**P**	**02 58 37.5**	**+4.3**
DRK				IAmb		IAmb	02 58 39.8	
	comp=Z,8.7nm,0.8s							
TIP	**Timpagrande**	**21.66**	**281**	P		**P**	**02 58 39.8**	**+1.8**
TIP				IAmb		IAmb	02 59 13.1	
	comp=Z,10nm,1.3s							
ARSB	**Arslanbob**	**21.97**	**73**	P		**P**	**02 58 45.5**	**+4.0**
PABE	**Paberze**	**22.01**	**328**	P		**P**	**02 58 43.5**	**+2.1**
BORK	**Borovoye**	**23.03**	**42**			**P**	**02 58 57.0**	**+4.6**
BORK				IAmb		IAmb	02 59 02.0	
	comp=Z,4.5nm,0.8s							
BVAR	**Borovoye Array**	**23.05**	**42**	P		**P**	**02 58 56.5**	**+3.8**
	comp=Z,2.5nm,0.6s,baz=255,slow=8.9,SNR=11							
BVAR				LR		LR	03 09 18.1	
	comp=Z,50nm,20.2s,baz=242,slow=40							
	comp=Z,2.5nm,0.6s							
AAK	**Ala-Archa**	**23.09**	**70**			**P**	**02 58 56.5**	**+3.1**
KSH2	**Kashi**	**24.13**	**78**	P		**P**	**02 59 07.8**	**+4.2**
KSH2				pmax		pmax		
	comp=Z,3.0nm,0.7s							
BOOM	**Boomskoye usch**	**24.16**	**70**			**P**	**02 59 07.3**	**+3.5**
BOOM				IAmb		IAmb	02 59 31.8	
	comp=Z,6.9nm,1.1s							
NRN	**Naryn**	**24.24**	**73**			**P**	**02 59 07.2**	**+2.5**
NRN				IAmb		IAmb	02 59 13.0	
	comp=Z,6.5nm,1.0s							
GERES	**GERESS Array B**	**24.50**	**305**	P		**P**	**02 59 09.8**	**+3.0**
	comp=Z,0.9nm,0.7s,baz=100,slow=11,SNR=3.2							
	comp=Z,0.9nm,0.7s							
LESA	**Schwarzleotal**	**24.89**	**302**	*eP*		**P**	**02 59 14.4**	**+4.2**
	comp=Z,5.6nm,1.4s							
KDJ	**Kajisay**	**25.09**	**71**			**P**	**02 59 16.6**	**+4.3**
TARG	**Taragay, Kyrgy**	**25.57**	**72**			**P**	**02 59 20.4**	**+3.5**
TARG				IAmb		IAmb	02 59 28.7	
	comp=Z,4.6nm,1.1s							
CLL	**Collm**	**25.61**	**311**	*i* P		**P**	**02 59 14.0**	**-2.6**
	comp=Z,4.0nm,0.9s							
WATA	**Walderalm**	**25.61**	**301**	*eP*		**P**	**02 59 18.8**	**+1.9**
	comp=Z

	comp=N,385nm,0.2s							
CNGT				IAML		02 55 17.0		
	comp=E,301nm,0.3s							
SVRC	**Sivrice-ELAZID**	**0.38**	**76**	Pg	**Pg**	02 55 10.4	**-0.2**	
ESIJ	**Sivrice-Elazig**	**0.40**	**66**	Pg	**Pg**	02 55 11.0	**0.0**	
NARI	**Adyaman-Kaht**	**0.41**	**189**	P	**Pb**	02 55 12.9	**+1.1**	
NARI				S	**Sb**	02 55 19.1	**+1.2**	
ELZ	**Elazig**	**0.49**	**35**	P	**Pg**	02 55 12.8	**+0.1**	
ELZ				S	**Sg**	02 55 19.7	**+0.3**	
ELZ				IAML		02 55 20.0		
	comp=N,303nm,0.4s							
ELZ				IAML		02 55 20.0		
	comp=E,192nm,0.2s							
MCKZ	**Bingol**	**0.84**	**7**	P	**Pg**	02 55 19.0	**-0.2**	
MCKZ				S	**Sb**	02 55 30.8	**+0.4**	
MCKZ				IAML		02 55 31.0		
	comp=E,109nm,0.3s							
ARPR	**Arapgir-MALATY**	**0.90**	**334**	Pg	**Pb**	02 55 20.6	**+0.3**	
ARPR				Sg	**Sn**	02 55 34.0	**0.0**	
ILIC	**ilic-Erzincan**	**1.18**	**350**	Pn	**Pn**	02 55 24.9	**-0.2**	
ILIC				Sn	**Sn**	02 55 41.9	**+0.9**	
GAZ	**Gaziantep**	**1.71**	**230**	Pn	**Pn**	02 55 30.9	**-1.3**	
KMRS	**Kahramanmaras**	**1.72**	**244**	Pn	**Pn**	02 55 31.3	**-1.1**	
SARI	**SarD1z-Kayseri**	**1.91**	**274**	Pn	**Pn**	02 55 34.4	**-0.7**	

*THE **10** 03:02:01.9,39˚N±1˚×2˚6E±˚, h9km±1km, M3.0/9, MLh3.0/9*
*ATH **10** 03:02:01.5,38˚.90N×26˚.43E, h15km±1km, ML2.9/7,*
Latitude uncertainty: 0 km; Longitude uncertainty: 1 km
*ISK **10** 03:02:01.2,38˚.91N×26˚.43E, h11km, ML3.2/14*
*AFAD **10** 03:02:03.0,38˚.87N×26˚.52E, h7km±2km, ML2.8*
ISC 10 03:02:01.8±0.9, 38˚.91N±0˚.02×26˚.42E±0˚.02, h12km±8km, n44, σ0°38/67, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOCM	**Foa**	**0.31**	**129**	Pg	**Pg**	**03 02 07.6**	**-0.6**
KRBN	**Karaburun**	**0.33**	**161**	Pg	**Pg**	**03 02 08.5**	**0.0**
PRK	**Paraskevi**	**0.36**	**341**	P	**Pg**	**03 02 08.7**	**-0.3**
PRK				S	**Sg**	**03 02 14.0**	**+0.2**
PRK	**Paraskevi**	**0.36**	**341**	P	**Pg**	**03 02 08.6**	**-0.4**
PRK				S	**Sg**	**03 02 14.3**	**+0.5**
DKL	**Dikili**	**0.41**	**67**	Pg	**Pg**	**03 02 09.9**	**-0.1**
DKL				Sg	**Sg**	**03 02 15.8**	**+0.3**
EAG2	**Marmaro, Chios**	**0.44**	**214**	P	**Pg**	**03 02 10.3**	**-0.1**
EAG2				S	**Sg**	**03 02 16.0**	**-0.3**
SIGR	**SIGRI**	**0.53**	**305**	P	**Pg**	**03 02 12.4**	**+0.1**
SIGR				S	**Sg**	**03 02 20.0**	**+0.6**
SIGR	**SIGRI**	**0.53**	**305**	Pg	**Pg**	**03 02 12.4**	**+0.1**
SIGR				Sg	**Sg**	**03 02 19.9**	**+0.6**
SIGR	**SIGRI**	**0.53**	**305**	P	**Pg**	**03 02 12.3**	**0.0**
SIGR				S	**Sg**	**03 02 19.7**	**+0.3**
GPNR	**Gulpinar-Canak**	**0.59**	**338**	Pg	**Pg**	**03 02 13.1**	**-0.3**
GPNR				Sg	**Sg**	**03 02 21.8**	**+0.6**
CHOS	**Chios island**	**0.59**	**209**	P	**Pg**	**03 02 13.5**	**+0.1**
CHOS	**Chios island**	**0.59**	**209**	Pg	**Pg**	**03 02 13.5**	**+0.1**
CHOS	**Chios island**	**0.59**	**209**	P	**Pg**	**03 02 13.2**	**-0.2**
CHOS				S	**Sg**	**03 02 21.9**	**+0.6**
BLCB	**Balcova**	**0.71**	**137**	P	**Pg**	**03 02 15.5**	**-0.2**
BLCB				S	**Sb**	**03 02 26.0**	**+0.1**
BLCB	**Balcova**	**0.71**	**137**	Pg	**Pg**	**03 02 15.5**	**-0.2**
CAMT	**Merkez**	**0.72**	**103**	P	**Pg**	**03 02 15.5**	**-0.2**
CAMT				IAML		03 02 29.0		
	comp=E,549nm,0.4s							
CAMT				S	**Sn**	**03 02 29.3**	**+0.6**
CAMT				IAML		03 02 34.0		
	comp=N,464nm,0.6s							
EZNE	**Ezine-Canakkal**	**0.85**	**357**	Pg	**Pg**	**03 02 17.9**	**-0.3**
SOMA	**Soma-Manisa**	**0.90**	**74**	Pg	**Pg**	**03 02 18.9**	**-0.4**
EZN	**Ezine**	**0.92**	**355**	P	**Pg**	**03 02 18.8**	**-0.8**
EZN				S	**Sb**	**03 02 32.6**	**+0.8**
EZN	**Ezine**	**0.92**	**355**	Pg	**Pg**	**03 02 18.2**	**-0.4**
AKHS	**Akhisar**	**1.09**	**91**	P	**Pb**	**03 02 22.3**	**-0.3**
AKHS				S	**Sn**	**03 02 37.7**	**-0.2**
AKHS				IAML		03 02 40.0		
	comp=E,220nm,0.3s							
STEP	**BALIKESIR_Sava**	**1.11**	**65**	P	**Pb**	**03 02 23.0**	**0.0**
STEP				S	**Sn**	**03 02 38.4**	**-0.1**
STEP				IAML		03 02 40.0		
	comp=E,625nm,0.4s							
STEP				IAML		03 02 43.0		
	comp=N,932nm,0.6s							
GOMA	**Golmarmara-Man**	**1.19**	**99**	Pn	**Pb**	**03 02 24.1**	**-0.2**
CANM	**Can-anakkale**	**1.21**	**24**	Pn	**Pn**	**03 02 24.4**	**-0.1**
YENI	**Yenice-Canakka**	**1.21**	**32**	Pn	**Pn**	**03 02 24.4**	**-0.2**
SMG	**Samos**	**1.24**	**165**	P	**Pn**	**03 02 24.5**	**-0.5**
SMG				S	**Sn**	**03 02 42.0**	**+0.3**
SMG	**Samos**	**1.24**	**165**	P	**Pn**	**03 02 24.2**	**-0.8**
SMG				S	**Sb**	**03 02 41.2**	**+0.1**
KTTT	**Salihli**	**1.33**	**99**	P	**Pn**	**03 02 26.2**	**0.0**
KTTT				S	**Sn**	**03 02 44.0**	**+0.2**
KTTT				IAML		03 02 49.0		
	comp=N,77nm,0.5s							
GADA	**Gvkgeada**	**1.34**	**343**	P	**Pn**	**03 02 26.2**	**-0.2**
GADA				S	**Sn**	**03 02 44.5**	**+0.3**
BALB	**Balikesir**	**1.35**	**57**	Pn	**Pn**	**03 02 26.5**	**0.0**
BALB				Sn	**Sn**	**03 02 44.7**	**+0.4**
GCAM	**G?zelcaml?**	**1.36**	**152**	Pn	**Pn**	**03 02 26.8**	**+0.1**
GORD	**Gordes-Manisa**	**1.37**	**89**	Pn	**Pn**	**03 02 26.8**	**0.0**
LIA	**Limnos Island**	**1.38**	**316**	P	**Pn**	**03 02 26.7**	**-0.1**
LIA				S	**Sn**	**03 02 45.0**	**+0.1**
LIA	**Limnos Island**	**1.38**	**316**	P	**Pn**	**03 02 26.4**	**-0.5**
LIA				S	**Sn**	**03 02 44.3**	**-0.7**
ODEM	**Odemis-Izmir**	**1.44**	**115**	Pn	**Pn**	**03 02 27.8**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**1.50**	**129**	Pn	**Pn**	**03 02 28.7**	**0.0**
SMTH	**Samothraki Isl**	**1.71**	**337**	P	**Pn**	**03 02 31.5**	**+0.1**
SMTH				S	**Sn**	**03 02 53.6**	**+0.5**
SMTH	**Samothraki Isl**	**1.71**	**337**	P	**Pn**	**03 02 30.8**	**-0.6**
SMTH				S	**Sn**	**03 02 52.6**	**-0.5**
KARY	**Karystos**	**1.79**	**241**	P	**Pn**	**03 02 31.7**	**-0.8**
KYMI	**Kymi, Euboea I**	**1.83**	**262**	P	**Pn**	**03 02 33.2**	**+0.1**
ENEZ	**Enez**	**1.84**	**354**	P	**Pn**	**03 02 33.1**	**0.0**
ALN	**Alexandroupoli**	**2.01**	**352**	P	**Pn**	**03 02 35.4**	**-0.1**
ALN	**Alexandroupoli**	**2.01**	**352**	P	**Pn**	**03 02 35.0**	**-0.5**
THAS	**Thassos island**	**2.14**	**323**	P	**Pn**	**03 02 36.9**	**-0.5**

*GCG **10** 03:24:08.2±0.6, 14˚.77N×92˚.08W, h84km±4km, MD3.4,*
ML3.6, Presumed earthquake
*MEX **10** 03:24:08.8±0.8, 14˚.72N×92˚.12W, h94km±8km, MD3.6*
ISC 10 03:24:05.6±2.5, 14˚.5N±0˚.1×92˚.11W±0˚.09, h93km±13km, n12, σ1°41/23, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMCA	**Catarina**	**0.32**	**6**	*i* P	**Pn**	**03 24 20.3**	**+0.7**
SMCA				*i* S	**Sn**	**03 24 29.6**	**-0.4**
THIG		**0.40**	**338**	*i* P	**Pn**	**03 24 20.6**	**+0.6**
THIG				*i* S	**Sn**	**03 24 31.5**	**+0.8**
RTAL	**Retalhuleu**	**0.40**	**92**	*eP*	**Pn**	**03 24 22.5**	**+2.4**
RTAL				*eS*	**Sn**	**03 24 33.5**	**+2.7**
CHUJ	**Union Juarez**	**0.55**	**0**	*eP*	**Pn**	**03 24 21.7**	**+0.2**
CHUJ				*eS*	**Sn**	**03 24 32.1**	**-1.1**
PATR	**El Naranjo**	**0.59**	**348**	*eP*	**Pn**	**03 24 21.7**	**-0.1**
PATR				*eS*	**Sn**	**03 24 32.1**	**-1.6**
PAVE	**Pavencul**	**0.66**	**355**	*eP*	**Pn**	**03 24 22.4**	**+0.1**
PAVE				*eS*	**Sn**	**03 24 34.0**	**-0.8**
STG2	**El Palmar, Qui**	**0.72**	**98**	*i* P	**Pn**	**03 24 22.1**	**-0.6**
STG2				*i* S	**Sn**	**03 24 33.4**	**-2.2**
STG2				IAML		03 24 35.2		
	comp=N,3μm,0.1s							
STG8	**El Palmar, Qui**	**0.74**	**97**	*i* P	**Pn**	**03 24 22.7**	**-0.4**
STG8				*i* S	**Sn**	**03 24 34.9**	**-1.3**
STG8				IAML		03 24 39.1		
	comp=E,1μm,0.1s							
STG5	**El Palmar, Qui**	**0.75**	**100**	*i* P	**Pn**	**03 24 22.4**	**-0.6**
STG5				*i* S	**Sn**	**03 24 33.8**	**-2.3**
PCIG		**1.58**	**318**	*eP*	**Pn**	**03 24 32.9**	**+0.3**
PCIG				*eS*	**Sn**	**03 24 52.4**	**-0.6**
APG	**El Apazote**	**1.66**	**74**	*i* P	**Pn**	**03 24 36.0**	**+2.2**
CCIG	**Comitan**	**1.74**	**359**	*eP*	**Pn**	**03 24 35.4**	**+0.6**
CCIG				*i* S	**Sn**	**03 24 56.2**	**-0.6**

IDC 10 03:34:54.7±4.8, 5˚.69S×131˚.87E, h0km, mb3.3/1, mbtmp3.3/3, ML3.3/2, Error ellipse: s-maj=325.4km s-min=33.6km az=74.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.37**	**171**	Pn	Pn	03 38 18.6	-1.0
	0.2nm,0.3s,baz=351,slow=13,SNR=5.3						
WRA				Sn	Sn	03 40 46.6	-13
	0.4nm,0.3s,baz=340,slow=20,SNR=12						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**17.98**	**174**	P	P	03 39 06.6	-0.3
	0.1nm,0.3s,baz=347,slow=10,SNR=6.4						
ASAR				S	Sn	03 42 13.3	-14
	0.5nm,0.7s,baz=355,slow=26,SNR=3.5						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**68.18**	**326**	P	P	03 45 57.1	+0.1
	0.2nm,0.5s,baz=126,slow=7.3,SNR=2.3						
	0.2nm,0.5s						

*ASRS **10** 04:00:38.0±1.2, 55˚.70N×86˚.08E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 10 04:00:40.5±3.1, 55˚.57N×86˚.25E, h0km, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=24.1km s-min=22.4km az=45.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.83**	**208**	I	I	04 12 40.0	
	0.2nm,0.9s,baz=28,slow=339,SNR=5.4						
ZALV	**Zalesovo Beam**	**1.83**	**208**	Pn	Pn	04 01 13.1	0.0
	2.5nm,0.3s,baz=23,slow=16,SNR=29						
ZALV				Lg	Lg	04 01 38.9	
	1.5nm,0.3s,baz=27,slow=29,SNR=3.6						
KURBB	**Kurchatov Arra**	**6.80**	**226**	Pn	Pn	04 02 21.1	-0.2
	0.1nm,0.3s,baz=44,slow=14,SNR=7.8						
KURBB				Sn	Sn	04 03 37.3	-2.0
	baz=34,slow=28,SNR=2.1						
KURBB				Lg	Lg	04 04 16.9	
	baz=44,slow=33,SNR=5.5						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**9.13**	**197**	Pn	Pn	04 02 53.9	+0.5
	baz=18,slow=16,SNR=3.5						
MKAR				Sn	Sn	04 04 34.6	-2.3
	baz=9.6,slow=36,SNR=2.3						
MKAR				Lg	Lg	04 05 31.4	
	baz=20,slow=31,SNR=3.7						
	0.3nm,0.7s						

*IDC **10** 04:04:50.0±4.6, 58˚.12N×156˚.16W, h100km±27km, mb3.2/5, mbtmp3.5/7, MS3.0/1, Error ellipse: s-maj=46.9km s-min=18.4km az=65.0*
*NEIC **10** 04:04:50.0±0.7, 57˚.86N±0˚.04×156˚.09W±0˚.02, h123km±5km, ML2.8/88, ML3.0(AEIC), Error ellipse: s-maj=5.6km s-min=1.6km az=180.0*
*AEIC **10** 04:04:51.8±1.1, 57˚.88N±0˚.04×156˚.07W±0˚.06, h113km±5km, Error ellipse: s-maj=6.1km s-min=2.9km az=142.0*
ISC 10 04:04:50.3±0.8, 57˚.88N±0˚.04×156˚.08W±0˚.04, h120km±5km, n128, σ0°93/148, mb3.2/4, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLK3	**Peulik 3**	**0.22**	**208**		**Pn**	**04 05 07.1**	**+0.2**
PLK3					**Sn**	**04 05 19.5**	**+0.1**
PLK4	**Peulik 4**	**0.29**	**211**		**Pn**	**04 05 07.3**	**+0.1**
PLK4				Sn	**Sn**	**04 05 19.4**	**-0.5**
PLK1	**Peulik 1**	**0.29**	**255**		**Pn**	**04 05 07.0**	**-0.1**
PLK1					**Sn**	**04 05 20.0**	**+0.3**
CNTC	**Contact Creek**	**0.40**	**15**		**Pn**	**04 05 07.7**	**0.0**
CNTC					**Sn**	**04 05 20.2**	**-0.7**
PLBL	**Peulik Blue Cr**	**0.44**	**246**		**Pn**	**04 05 07.9**	**+0.1**
PLBL					**Sn**	**04 05 21.1**	**+0.1**
PLK5	**Peulik 5**	**0.44**	**286**		**Pn**	**04 05 08.0**	**+0.3**
PLK5					**Sn**	**04 05 21.3**	**+0.3**
ANCK	**Angle Creek**	**0.45**	**44**		**Pn**	**04 05 08.2**	**+0.3**
ACHA	**Angle Creek He**	**0.52**	**50**		**Pn**	**04 05 08.4**	**+0.1**
ACHA				Sn	**Sn**	**04 05 22.0**	**0.0**
KABU	**Katmai Buttres**	**0.58**	**47**		**Pn**	**04 05 09.2**	**+0.5**
KABU					**Sn**	**04 05 23.0**	**+0.3**
KAKN	**Katmai Knife C**	**0.68**	**52**		**Pn**	**04 05 09.9**	**+0.4**
KAKN					**Sn**	**04 05 24.4**	**+0.4**
KAWH	**Katmai**	**0.85**	**53**		**Pn**	**04 05 11.1**	**+0.3**
KAWH					**Sn**	**04 05 26.7**	**+0.4**
Q16K	**King Salmon**	**0.86**	**339**		**Pn**	**04 05 11.1**	**+0.2**
Q16K					**Sn**	**04 05 26.2**	**-0.2**
R16K	**Pilot Point**	**0.86**	**249**		**Pn**	**04 05 10.7**	**-0.2**
R16K				Sn	**Sn**	**04 05 25.9**	**-0.6**
R16K				IAML		04 05 27.4	
	comp=E,209nm,1.0s						
KAHC	**Katmai Hardscr**	**0.96**	**36**		**Pn**	**04 05 12.2**	**+0.3**
KAHC					**Sn**	**04 05 28.1**	**-0.2**
KARR	**Katmai Rainbow**	**0.96**	**49**		**Pn**	**04 05 12.4**	**+0.6**
KAHG	**Katmai Hook Gl**	**1.02**	**52**		**Pn**	**04 05 13.1**	**+0.6**
P17K	**Kvichak River**	**1.33**	**352**		**Pn**	**04 05 16.4**	**+0.7**
P17K				Sn	**Sn**	**04 05 35.0**	**0.0**
P17K				IAML		04 05 44.2	
	comp=N,190nm,0.9s						
ANNE	**Aniakchak Nort**	**1.45**	**229**		**Pn**	**04 05 17.2**	**+0.2**
ANNW	**Aniakchak Nort**	**1.48**	**233**		**Pn**	**04 05 18.4**	**+1.0**
P16K	**Nushagak River**	**1.53**	**320**		**Pn**	**04 05 18.1**	**+0.2**
P16K				Sn	**Sn**	**04 05 39.2**	**+0.1**
P16K				IAML		04 05 40.2	
	comp=N,185nm,0.8s						
P16K				IAML		04 05 40.4	
	comp=E,121nm,0.8s						
P18K	**Big Mountain,**	**1.58**	**16**		**Pn**	**04 05 19.1**	**+0.6**
P18K				Sn	**Sn**	**04 05 41.0**	**+0.8**
OHAK	**Old Harbor**	**1.64**	**112**		**Pn**	**04 05 19.1**	**-0.1**
OHAK				Sn	**Sn**	**04 05 40.0**	**-1.3**
OHAK				IAML		04 05 41.6	
	comp=E,134nm,0.2s						
OHAK				IAML		04 05 41.6	
	comp=N,143nm,0.3s						
SII	**Sitkinak Islan**	**1.68**	**141**		**Pn**	**04 05 19.6**	**-0.1**
SII				Sn	**Sn**	**04 05 41.5**	**-0.7**
KDAK	**Kodiak Island**	**1.87**	**91**	P	**Pn**	**04 05 21.9**	**-0.1**
	comp=N,36nm,0.3s,baz=71,slow=1.8,SNR=899						
KDAK				S	**Sn**	**04 05 46.1**	**-0.3**
	comp=N,78nm,0.3s,baz=14,slow=21,SNR=26						
KDAK				LR	LR	04 06 18.5	
	comp=N,45nm,21.6s,baz=42,slow=46						
KDAK	**Kodiak Island**	**1.87**	**91**		**Pn**	**04 05 22.3**	**+0.3**
KDAK				Sn	**Sn**	**04 05 46.0**	**-0.3**
O17K	**Koliganek Bris**	**1.97**	**345**		**Pn**	**04 05 23.3**	**0.0**
O16K	**Kokwok River B**	**2.02**	**329**		**Pn**	**04 05 23.9**	**+0.1**
O16K				IAML		04 05 49.6	
	comp=N,69nm,0.7s						
O16K				IAML		04 05 50.3	
	comp=E,100nm,1.1s						
O16K	**Kokwok River B**	**2.02**	**329**		**Sn**	**04 05 48.8**	**-0.7**
O18K	**Koktuh Hills**	**2.03**	**12**	Pn	**Pn**	**04 05 24.1**	**0.0**
O18K				IAML		04 06 10.4	
	comp=N,25nm,1.2s						
CHIR	**Chirikof Islan**	**2.08**	**173**	Pn	**Pn**	**04 05 23.7**	**-1.0**
CHIR				IAML		04 06 01.4	
	comp=E,88nm,1.0s						
CHIR	**Chirikof Islan**	**2.08**	**173**		**Sn**	**04 05 49.0**	**-1.9**
O15K	**Ungalikthiuk R**	**2.36**	**305**		**Pn**	**04 05 28.1**	**0.0**
O15K				IAML		04 05 58.4	
	comp=E,50nm,1.1s						
O15K				IAML		04 05 58.5	
	comp=N,38nm,1.0s						
VNSG	**Veniaminof 6**	**2.41**	**224**		**Pn**	**04 05 29.2**	**+0.3**
O19K	**Port Alsworth**	**2.49**	**21**	Pn	**Pn**	**04 05 31.4**	**+1.6**
O19K				IAML		04 06 29.0	
	comp=E,62nm,0.4s						
O19K				IAML		04 06 30.8	
	comp=N,37nm,0.4s						
VNKR	**Veniaminof 5**	**2.58**	**226**		**Pn**	**04 05 31.7**	**+0.6**
ILSW	**Iliamna Southw**	**2.60**	**35**		**Pn**	**04 05 32.1**	**+0.7**
ILSW				IAML		04 06 04.2	
	comp=E,31nm,0.8s						
ILSW				IAML		04 06 04.2	
	comp=N,26nm,0.7s						
ILS	**Iliamna Low So**	**2.60**	**36**		**Pn**	**04 05 32.3**	**+0.9**
N17K	**Nushagak Hills**	**2.72**	**348**		**Pn**	**04 05 32.8**	**+0.1**
N17K				IAML		04 06 05.6	
	comp=E,15nm,0.9s						
N17K	**Nushagak Hills**	**2.72**	**348**		**Sn**	**04 06 04.7**	**-0.8**
N18K	**Kilae Creek**	**2.81**	**2**		**Pn**	**04 05 34.3**	**+0.3**
N16K	**Nishlik Lake**	**2.95**	**333**		**Pn**	**04 05 36.0**	**+0.3**
CNPM	**China Poot**	**3.02**	**55**	Pn	**Pn**	**04 05 37.7**	**+1.0**
CNPM				IAML		04 06 13.3	
	comp=E,39nm,1.2s						
CNPM				IAML		04 06 14.8	
	comp=N,38nm,0.3s						
O14K	**Tigyukauivet M**	**3.05**	**299**		**Pn**	**04 05 37.3**	**+0.2**
O14K				IAML		04 06 29.1	
	comp=N,14nm,1.2s						
N19K	**Bonanza Creek**	**3.05**	**15**		**Pn**	**04 05 38.3**	**+1.1**
N15K	**Kwethluk River**	**3.10**	**320**		**Pn**	**04 05 38.2**	**+0.5**
N15K				IAML		04 06 15.4	
	comp=N,15nm,0.9s						
N15K				IAML		04 06 38.8	
	comp=E,15nm,1.1s						
BRLK	**Bradley Lake**	**3.29**	**53**	Pn	**Pn**	**04 05 40.8**	**+0.4**
BRLK				IAML		04 06 19.2	
	comp=E,32nm,0.3s						
BRSE	**Bradley Lake S**	**3.34**	**54**		**Pn**	**04 05 41.2**	**+0.2**
M16K	**Timber Creek**	**3.48**	**336**		**Pn**	**04 05 42.9**	**+0.2**
N14K	**Kuskokwak Cree**	**3.56**	**308**		**Pn**	**04 05 44.2**	**+0.5**
N14K				IAML		04 07 05.4	
	comp=N,14nm,0.9s						
N14K				IAML		04 07 07.0	
	comp=E,15nm,1.1s						
M17K	**Holitna River**	**3.60**	**350**	Pn	**Pn**	**04 05 44.9**	**+0.6**
M17K				IAML		04 06 40.4	
	comp=N,22nm,0.9s						
M17K				IAML		04 06 41.0	
	comp=E,28nm,0.9s						
CNBA	**Chernabura Isl**	**3.64**	**214**	Pn	**Pn**	**04 05 45.6**	**+0.7**
CNBA				IAML		04 06 27.9	
	comp=N,30nm,0.7s						
CNBA				IAML		04 06 39.2	
	comp=E,29nm,0.8s						
M15K	**Kasigluk River**	**3.68**	**322**		**Pn**	**04 05 45.3**	**-0.1**
SPCR	**Spurr Chakacha**	**3.87**	**29**		**Pn**	**04 05 49.5**	**+1.5**
SPU	**Mount Spurr**	**3.89**	**30**	Pn	**Pn**	**04 05 49.3**	**+1.0**
SPCG	**Spurr Capps Gl**	**4.00**	**29**		**Pn**	**04 05 50.6**	**+0.9**
SLKM	**Skilak Lake**	**4.00**	**46**	Pn	**Pn**	**04 05 50.2**	**+0.5**
SLKM				IAML		04 06 40.5	
	comp=E,22nm,0.2s						
PS4A	**Pavlof South-4**	**4.08**	**234**		**Pn**	**04 05 51.6**	**+0.8**
SEW	**Seward**	**4.09**	**54**	Pn	**Pn**	**04 05 51.7**	**+0.8**
SEW				IAML		04 06 40.9	
	comp=N,18nm,0.6s						
M19K	**Big River Lodg**	**4.13**	**11**	Pn	**Pn**	**04 05 52.4**	**+1.1**
M14K	**Bethel**	**4.17**	**316**		**Pn**	**04 05 52.4**	**+0.5**
M14K				IAML		04 06 55.5	
	comp=N,11nm,1.0s						
M14K				IAML		04 06 56.0	
	comp=E,6.7nm,1.2s						
O22K	**Cooper Landing**	**4.18**	**49**		**Pn**	**04 05 53.5**	**+1.5**
L16K	**Owhat River**	**4.21**	**337**	Pn	**Pn**	**04 05 52.3**	**-0.2**
L16K				IAML		04 06 56.4	
	comp=E,5.1nm,1.1s						
M20K	**Styx River**	**4.28**	**19**		**Pn**	**04 05 55.1**	**+1.6**
L19K	**White Mountain**	**4.36**	**8**		**Pn**	**04 05 55.7**	**+1.2**
L19K				IAML		04 06 47.1	
	comp=E,4.6nm,0.9s						
L19K				IAML		04 07 12.0	
	comp=N,5.3nm,1.2s						
L18K	**Granite Mounta**	**4.37**	**356**	Pn	**Pn**	**04 05 54.8**	**+0.3**
L18K				IAML		04 07 23.8	
	comp=N,7.6nm,1.1s						
L17K	**Donlin**	**4.41**	**346**		**Pn**	**04 05 55.2**	**0.0**
M13K	**Dall Lake**	**4.53**	**307**		**Pn**	**04 05 56.7**	**0.0**
M13K				IAML		04 07 29.8	
	comp=E,5.2nm,0.9s						
RC01	**Rabbit Creek A**	**4.56**	**42**		**Pn**	**04 05 57.6**	**+0.4**
SKT	**Skwentna**	**4.71**	**27**	Pn	**Pn**	**04 06 00.2**	**+1.1**
SKT				IAML		04 06 56.3	
	comp=E,6.4nm,0.3s						
SKT				IAML		04 06 59.1	
	comp=N,6.1nm,0.2s						
L14K	**Kuka Creek**	**4.83**	**319**		**Pn**	**04 06 00.8**	**+0.1**
L14K				IAML		04 07 33.4	
	comp=N,6.5nm,0.9s						
L14K				IAML		04 07 35.9	
	comp=E,5.9nm,1.1s						
M22K	**Willow**	**4.91**	**35**	Pn	**Pn**	**04 06 02.9**	**+1.1**
P23K	**Montague Islan**	**4.97**	**61**	Pn	**Pn**	**04 06 03.4**	**+0.8**
K17K	**Iditarod**	**4.98**	**348**		**Pn**	**04 06 03.4**	**+0.7**
K17K				IAML		04 07 35.9	
	comp=E,4.1nm,1.0s						
K17K				IAML		04 08 05.2	
	comp=N,3.5nm,1.1s						
K15K	**Wolf Creek Mou**	**5.20**	**331**		**Pn**	**04 06 06.5**	**+0.7**
GHO	**Glory Hole Cre**	**5.32**	**40**		**Pn**	**04 06 06.4**	**-0.9**
GLI	**Glacier Island**	**5.49**	**53**		**Pn**	**04 06 09.1**	**-0.6**
HIN	**Hinchinbrook I**	**5.54**	**59**		**Pn**	**04 06 10.5**	**+0.2**
SML	**Sawmill**	**5.54**	**41**		**Pn**	**04 06 09.5**	**-1.0**
SCM	**Sheep Creek Mo**	**5.93**	**44**		**Pn**	**04 06 15.3**	**-0.3**
DIV	**Divide**	**6.17**	**54**		**Pn**	**04 06 17.9**	**-1.0**
KTH	**Kantishna Hill**	**6.23**	**22**		**Pn**	**04 06 19.5**	**-0.1**
TRF	**Thorofare Moun**	**6.27**	**25**		**Pn**	**04 06 20.2**	**-0.1**
KLU	**Klutina**	**6.29**	**51**		**Pn**	**04 06 20.4**	**0.0**
RAGM	**Ragged Mountai**	**6.38**	**62**		**Pn**	**04 06 22.0**	**+0.2**
M24K	**Tolsona, Glenn**	**6.53**	**45**		**Pn**	**04 06 23.9**	**+0.2**
RND	**Reindeer Rnch**	**6.58**	**30**		**Pn**	**04 06 23.9**	**-0.5**
BMRM	**Bremner River**	**6.62**	**57**		**Pn**	**04 06 24.9**	**0.0**
BPAW	**Bear Paw Mtn.**	**6.71**	**19**		**Pn**	**04 06 25.9**	**-0.2**
N25K	**

comp=E,513nm,0.2s
ANDN Andirin 0.33 351 P **Pg** **04 27 35.4 -0.2**
ANDN IAML 04 27 42.0
comp=N,523nm,0.3s
ANDN IAML 04 27 43.0
comp=E,285nm,0.2s
KHMR Kahramanmara 0.41 76 P **Pg** **04 27 37.0 0.0**
KHMR IAML 04 27 43.0
comp=N,295nm,0.4s
KHMR IAML 04 27 43.0
comp=E,235nm,0.7s
KHMR S **Sb** **04 27 43.3 -0.8**
KMRS Kahramanmaras 0.47 57 Pg **Pg** **04 27 37.9 -0.1**
KMRS Sg **Sg** **04 27 44.8 +0.6**
HASA Hatay-Hassa-Ha 0.50 173 P **Pg** **04 27 38.6 -0.1**
HASA S **Sg** **04 27 45.6 +0.3**
KOZT Kozan 0.52 297 Pg **Pg** **04 27 38.8 -0.2**
KHMN Narli-Kahraman 0.61 76 Pg **Pg** **04 27 40.6 -0.1**
GAZ Gaziantep 0.64 97 Pg **Pg** **04 27 41.1 -0.2**
TAHT Tahtakopru-Hat 0.89 192 Pg **Pg** **04 27 45.3 -0.7**
TAHT Sg **Sb** **04 27 58.7 +0.8**
SARI SarD1z-Kayseri 1.16 0 Pn **Pb** **04 27 50.8 0.0**
CMRD Camardi-Nigde 1.20 290 Pn **Pn** **04 27 51.6 +0.1**

IDC 10 04:34:11.7±2.3, 51°.72N×86°.28E, h0km, mbtmp2.2/3, ML1.8/3, Error ellipse: s-maj=26.0km s-min=15.1km az=91.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**2.40**	**339**	Pn	Pn	04 34 51.6	-0.7
	0.2nm,0.3s,baz=158,slow=15,SNR=5.1						
ZALV				Lg	Lg	04 35 28.3	
	0.6nm,0.3s,baz=161,slow=30,SNR=5.5						
	0.4nm,0.3s						
I46RU	**ZALESOVO INFRA**	**2.40**	**339**	I	I	04 51 20.0	
	baz=154,slow=332,SNR=3.3						
KURBB	**Kurchatov Arra**	**5.00**	**260**	Pn	Pn	04 35 28.4	+0.4
	baz=79,slow=15,SNR=4.0						
KURBB				Lg	Lg	04 36 49.2	
	0.1nm,0.3s,baz=79,slow=34,SNR=5.6						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**5.58**	**209**	Pn	Pn	04 35 37.5	+1.5
	0.1nm,0.3s,baz=27,slow=14,SNR=6.2						
	0.2nm,0.3s						

*NEIC **10** 04:39:10.6±0.9, 17°.9S±0°.1×178°.3W±0°.1, h598km±8km, mb4.3/23, Error ellipse: s-maj=23.0km s-min=9.4km az=127.0*
*IDC **10** 04:39:11.3±1.9, 17°.82S×178°.44W, h604km±13km, mb3.1/9, mbtmp4.0/10, Error ellipse: s-maj=64.9km s-min=16.1km az=147.0*
ISC 10 04:39:10.3±0.6, 18°.0S±0°.1×178°.28W±0°.10, h600km, n42, σ0§82/46, mb4.2/21, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.50**	**273**	P	**P**	**04 40 31.7**	**-0.9**
	132nm,0.6s,baz=76,slow=4.2,SNR=103						
MSVF				S	**S**	**04 41 40.4**	**+0.8**
	36nm,1.1s,baz=136,slow=21,SNR=9.0						
MSVF	**Nonsavu**	**3.50**	**273**	P	**P**	**04 40 31.9**	**-0.7**
MSVF					**S**	**04 41 41.8**	**+2.2**
FUTU	**Fugatoga**	**3.65**	**2**	P	**P**	**04 40 32.2**	**-1.3**
NIUE	**Niue**	**8.00**	**99**	P	**P**	**04 41 09.6**	**0.0**
EIDS	**Eidsvold**	**29.36**	**250**	P	**P**	**04 44 26.5**	**-0.1**
EIDS				IAmb	IAmb	04 44 51.6	
	comp=Z,21nm,1.3s						
ARMA	**Armidale**	**30.01**	**240**	P	**P**	**04 44 32.2**	**-0.1**
TOO	**Toolangi**	**37.22**	**231**	P	**P**	**04 45 32.4**	**0.0**
COEN	**Coen**	**37.23**	**270**	P	**P**	**04 45 33.6**	**+0.9**
COEN				IAmb	IAmb	04 46 05.4	
	comp=Z,17nm,1.3s						
STKA	**Stephens Creek**	**38.70**	**241**	P	**P**	**04 45 45.0**	**+0.6**
	comp=Z,0.9nm,0.3s,baz=88,slow=6.5,SNR=3.1						
	comp=Z,0.9nm,0.3s						
STKA	**Stephens Creek**	**38.70**	**241**	P	**P**	**04 45 44.4**	**0.0**
STKA				IAmb	IAmb	04 46 15.5	
	comp=Z,19nm,1.1s						
BBOO	**Buckleboo**	**43.48**	**241**	P	**P**	**04 46 21.7**	**-0.4**
BBOO				IAmb	IAmb	04 46 44.7	
	comp=Z,18nm,1.2s						
WR8	**Warramunga Arr**	**44.59**	**260**	P	**P**	**04 46 30.1**	**-0.7**
WR8				IAmb	IAmb	04 46 44.0	
	comp=Z,9.9nm,1.4s						
WB0	**Warramunga Arr**	**44.71**	**260**	P	**P**	**04 46 31.3**	**-0.4**
WB0				IAmb	IAmb	04 46 42.2	
	comp=Z,9.0nm,1.3s						
WRA	**Warramunga Arr**	**44.74**	**260**	P	**P**	**04 46 31.4**	**-0.6**
	comp=Z,1.0nm,0.5s,baz=96,slow=7.2,SNR=24						
WRA				PcP	**PcP**	**04 48 00.7**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=88,slow=3.2,SNR=1.8						
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**44.74**	**260**	P	**P**	**04 46 31.0**	**-1.0**
WRA					**PcP**	**04 48 00.3**	**-0.7**
AS31	**Alice Springs**	**44.89**	**254**	P	**P**	**04 46 32.7**	**-0.4**
ASAR	**Alice Springs**	**44.89**	**254**	P	**P**	**04 46 33.0**	**-0.1**
	comp=Z,6.3nm,0.8s,baz=85,slow=8.8,SNR=55						
	comp=Z,6.3nm,0.8s						
KNRA	**Kununurra**	**50.60**	**264**	P	**P**	**04 47 15.2**	**-0.4**
CASY	**Casey**	**66.13**	**205**	P	**P**	**04 48 59.2**	**+0.2**
ADK	**Adak**	**69.57**	**1**	P	**P**	**04 49 20.3**	**+0.4**
SHEM	**Shemya Is, Ala**	**70.71**	**355**	P	**P**	**04 49 25.4**	**-1.2**
UNV	**Unalaska Valle**	**72.23**	**7**	P	**P**	**04 49 35.5**	**+0.1**
SSLB	**Suanglung**	**72.37**	**303**	P	**P**	**04 49 36.5**	**-0.5**
SSLB				IAmb	IAmb	04 50 13.3	
	comp=Z,33nm,1.3s						
NVAR	**Mina Array Bea**	**79.39**	**44**	P	**P**	**04 50 16.5**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=232,slow=9.4,SNR=5.3						
	comp=Z,0.8nm,0.7s						
NVAR	**Mina Array Bea**	**79.39**	**44**	P	**P**	**04 50 16.7**	**+1.1**
K15K	**Wolf Creek Mou**	**81.09**	**8**	P	**P**	**04 50 25.1**	**+1.5**
K15K				IAmb	IAmb	04 50 25.9	
	comp=Z,8.9nm,0.9s						
SPU	**Mount Spurr**	**81.64**	**12**	P	**P**	**04 50 27.7**	**+1.3**
SPU				IAmb	IAmb	04 50 30.1	
	comp=Z,4.0nm,0.7s						
J18K	**Innoko River**	**82.90**	**10**	P	**P**	**04 50 33.4**	**+0.7**
W18A	**Petrified Fore**	**83.70**	**50**	P	**P**	**04 50 36.9**	**-0.7**
W18A				IAmb	IAmb	04 50 40.2	
	comp=Z,5.0nm,0.8s						
SEY	**Seymchan**	**83.86**	**347**	P	**P**	**04 50 37.8**	**+0.4**
	comp=Z,2.2nm,0.6s,baz=180,slow=20,SNR=1.5						
	comp=Z,2.2nm,0.6s						
TRF	**Thorofare Moun**	**84.05**	**12**	P	**P**	**04 50 38.0**	**-0.5**
TRF				IAmb	IAmb	04 50 39.4	
	comp=Z,4.8nm,0.6s						
RND	**Reindeer**	**84.30**	**13**	P	**P**	**04 50 40.1**	**+0.4**
RND				IAmb	IAmb	04 50 40.6	
	comp=Z,5.3nm,0.8s						
IL31		**85.92**	**13**	P	**P**	**04 50 47.2**	**-0.1**
IL31				IAmb	IAmb	04 50 48.3	
	comp=Z,5.0nm,1.4s						
ILAR	**Eielson Array**	**85.92**	**13**	P	**P**	**04 50 46.8**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=221,slow=5.0,SNR=34						
	comp=Z,0.8nm,0.4s						
ILAR	**Eielson Array**	**85.92**	**13**	P	**P**	**04 50 47.5**	**+0.2**
TXAR	**Lajitas Array**	**85.93**	**58**	P	**P**	**04 50 49.4**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=221,slow=5.6,SNR=6.5						
	comp=Z,0.4nm,0.7s						
TXAR	**Lajitas Array**	**85.93**	**58**	P	**P**	**04 50 50.0**	**+1.7**
PDAR	**Pinedale Array**	**87.31**	**43**	P	**P**	**04 50 55.1**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=222,slow=2.0,SNR=4.1						
	comp=Z,0.3nm,0.5s						
PDAR	**Pinedale Array**	**87.31**	**43**	P	**P**	**04 50 55.2**	**+0.5**
YKA	**Yellowknife Ar**	**94.34**	**25**	P	**P**	**04 51 26.1**	**-0.2**
	comp=Z,0.1nm,0.5s,baz=247,slow=4.5,SNR=3.7						
	comp=Z,0.1nm,0.5s						
ARSB	**Arslanbob**	**115.59**	**308**		**PKiKP**	**04 56 45.7**	**+0.1**
GERES	**GERESS Array B**	**147.70**	**345**	PKPbc	**PKiKP**	**04 57 48.7**	**-1.3**
	comp=Z,0.8nm,0.6s,baz=34,slow=5.6,SNR=3.6						

*FUNV **10** 04:47:41.5, 10°.17N×69°.89W, h5km, MW3.1, Presumed earthquake*
*RSNC **10** 04:47:43.2±1.0, 10°N±6°×7°0W±°, h68km±21km, M2.9, mb3.5, ML2.7*
ISC 10 04:47:39.0±1.3, 10°.26N±0°.04×69°.97W±0°.03, h13km±11km, n20, σ1§60/32, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEPV	**Terepaima**	**0.82**	**111**	*e*P	**Pb**	**04 47 55.2**	**0.0**
TEPV				*e*S	**Sg**	**04 48 04.9**	**-0.8**
JACV	**Jacura**	**1.39**	**54**	*e*P	**Pg**	**04 48 05.9**	**+0.1**
JACV				*e*S	**Sg**	**04 48 26.4**	**+2.6**
SDV	**Santo Domingo**	**1.52**	**206**	P	**Pb**	**04 48 07.2**	**0.0**
SDV				S	**Sg**	**04 48 28.5**	**+0.5**
SDV	**Santo Domingo**	**1.52**	**206**	*e*P	**Pb**	**04 48 07.8**	**+0.6**
SDV				*e*S	**Sg**	**04 48 27.9**	**0.0**
MAPV	**Macapo**	**1.55**	**106**	*e*P	**Pb**	**04 48 07.5**	**-0.1**
MAPV				*e*S	**Sb**	**04 48 27.5**	**+0.4**
TURV	**Turiamo**	**2.10**	**85**	*e*P	**Pb**	**04 48 15.7**	**-1.3**
TURV				*e*S	**Sn**	**04 48 40.9**	**+0.8**
SOCV	**Socops**	**2.15**	**204**	*e*P	**Pb**	**04 48 17.7**	**-0.2**
SOCV				*e*S	**Sb**	**04 48 43.9**	**-0.7**
BENV	**Beln**	**2.35**	**97**	*e*P	**Pn**	**04 48 19.1**	**+1.6**
BENV				*e*S	**Sn**	**04 48 47.0**	**+0.7**
URIC	**Uribia, Colomb**	**2.45**	**306**	P	**Pn**	**04 48 18.4**	**-0.4**
MCQV	**Machiques**	**2.54**	**265**	*e*P	**Pb**	**04 48 22.6**	**-1.8**
MCQV				*e*S	**Sb**	**04 48 55.4**	**-0.3**
TACV	**Tcata**	**2.90**	**92**	*e*P	**Pn**	**04 48 26.1**	**+1.1**
TACV				*e*S	**Sn**	**04 49 00.7**	**+1.0**
OCAC	**Ocana**	**3.87**	**239**	P	**Pn**	**04 48 39.8**	**+1.3**
PAMC	**Pamplona, Colo**	**3.96**	**223**	P	**Pn**	**04 48 42.4**	**+2.3**
ARGC	**Ariguani, Magd**	**4.23**	**265**	P	**Pn**	**04 48 43.7**	**+0.4**
ARGC				S	**Sn**	**04 49 32.1**	**-0.6**
CACV	**CAICARA DEL OR**	**4.32**	**128**	*e*P	**Pb**	**04 48 50.7**	**-4.1**
CACV				*e*S	**Sb**	**04 49 42.8**	**-4.2**
SJCC	**San Jacinto, C**	**5.15**	**266**	P	**Pn**	**04 48 56.6**	**+0.7**
	26nm,1.6s						
RUSC	**La Rusia**	**5.33**	**216**	P	**Pn**	**04 49 01.0**	**+2.2**
	4.6nm,1.0s						
PTBC	**PUERTO BERRIO,**	**5.78**	**231**	P	**Pn**	**04 49 05.2**	**+0.6**
	4.3nm,1.3s						
UREC	**San Jos de Ur**	**6.04**	**246**	P	**Pn**	**04 49 09.6**	**+1.5**
	5.0nm,0.8s						
CHIC	**Chingaza**	**6.73**	**214**	P	**Pn**	**04 49 19.2**	**+1.2**

*DJA **10** 04:55:06.0±0.7, 0°.S±8°×13°.7E±°, h10km, M4.1/8, mB5.1/2, mb4.3/3, MLv4.0/8, Mw(mB)4.4/2*
*IDC **10** 04:55:13.1±1.7, 1°.24S×137°.43E, h0km, mb3.3/2, mbtmp3.7/5, ML3.7/3, Error ellipse: s-maj=34.1km s-min=25.8km az=37.0*
ISC 10 04:55:11.1±2.2, 0°.8S±0°.2×137°.29E±0°.05, h26km, n11, σ1§96/13, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAKI	**Biak**	**1.25**	**250**	P	**Pn**	**04 55 32.4**	**-0.6**
BAKI				S	**Sb**	**04 55 49.6**	**-0.3**
SMPI	**Sarmi**	**1.87**	**131**	P	**Pn**	**04 55 41.3**	**-0.2**
SMPI				S	**Sb**	**04 56 07.9**	**+0.2**
RKPI	**Ransiki, Papua**	**3.20**	**257**	P	**Pn**	**04 55 56.9**	**-2.8**
GENI	**Genyem**	**3.41**	**122**	P	**Pb**	**04 56 10.6**	**-0.2**
JAY	**Jayapura**	**3.83**	**117**	Pn	**Pn**	**04 56 07.5**	**-1.0**
	1.2nm,0.3s,baz=252,slow=6.4,SNR=3.2						
JAY				Sn	**Sn**	**04 56 50.2**	**-2.6**
	4.2nm,0.3s,baz=118,slow=18,SNR=12						
	32nm,1.1s						
JAY	**Jayapura**	**3.83**	**117**	P	**Pn**	**04 56 07.7**	**-0.8**
FAKI	**Fak Fak**	**5.47**	**247**	P	**Pn**	**04 56 29.5**	**-1.5**
KAPI	**Kappang**	**18.01**	**256**	P	**P**	**04 59 24.4**	**+4.3**
	1.5nm,0.3s,baz=83,slow=9.0,SNR=2.4						
	3.0nm,0.3s						
WRA	**Warramunga Arr**	**19.28**	**188**	P	**Pn**	**04 59 35.2**	**+0.1**
	0.2nm,0.3s,baz=8.3,slow=11,SNR=6.5						
	1.9nm,0.7s						
ASAR	**Alice Springs**	**23.00**	**188**	P	**P**	**05 00 15.1**	**+0.9**
	0.7nm,0.5s,baz=19,slow=11,SNR=13						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**67.39**	**322**	P	P	05 06 13.9	+10
	0.2nm,0.6s,baz=102,slow=6.6,SNR=2.3						
	0.2nm,0.6s						

*IDC **10** 05:09:57.0±2.0, 36°.13N×80°.23E, h0km, mb3.5/2, mbtmp3.6/5, ML3.3/3, Error ellipse: s-maj=54.5km s-min=26.9km az=70.0*
ISC 10 05:09:59.8±1.7, 36°.1N±0°.1×80°.4E±0°.3, h15km, n7, σ1§83/7, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**7.92**	**327**	Lg	Lg	05 13 59.9	
	0.3nm,0.3s,baz=346,slow=17,SNR=2.7						
MKAR	**Makanchi Array**	**10.74**	**7**	Pn	**Pn**	**05 12 33.6**	**+0.6**
	0.5nm,0.3s,baz=186,slow=12,SNR=22						
MKAR				Sn	**Sn**	**05 14 32.0**	**-1.0**
	0.8nm,0.3s,baz=189,slow=24,SNR=6.9						
	1.1nm,0.4s						
KURBB	**Kurchatov Arra**	**14.54**	**355**	Pn	**Pn**	**05 13 27.5**	**+2.6**
	baz=182,slow=9.9						
ZALV	**Zalesovo Beam**	**18.08**	**9**	P	**Pn**	**05 14 09.1**	**-1.2**
	0.3nm,0.3s,baz=191,slow=12,SNR=5.4						
	0.3nm,0.3s						
BVAR	**Borovoye Array**	**18.28**	**341**	P	**P**	**05 14 12.7**	**-0.2**
	0.1nm,0.3s,baz=150,slow=12,SNR=8.2						
	1.7nm,0.5s						
AKTO	**Aktyubinsk**	**21.53**	**319**	P	**P**	**05 14 46.4**	**-1.9**
	1.1nm,0.6s,baz=107,slow=7.4,SNR=5.1						
	1.1nm,0.6s						
WRA	**Warramunga Arr**	**75.60**	**128**	P	**P**	**05 21 44.4**	**+0.2**
	0.4nm,0.9s,baz=316,slow=6.4,SNR=2.0						
	0.4nm,0.9s						

*CATAC **10** 05:15:12.8±0.5, 14°N±2°×9°4W±°, h1km, M4.4/18, MLv4.4/18, Error ellipse: s-maj=6.6km s-min=4.3km az=51.5, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.65; $M_{\theta\theta}$-1.10; $M_{\phi\phi}$-0.56; $M_{r\theta}$1.99; $M_{r\phi}$ 1.45; $M_{\theta\phi}$-0.98; Fault plane solution: $M_0$3.02788×10^{15} NP1: ϕ_s117.52255°, δ69.78116°, λ78.57507°. NP2: ϕ_s327.83885°, δ23.10525°, λ118.27271°. Principal axes: T 2.7140, Plg63.4786°, Azm9.2417°; N 0.5518, Plg10.7123°, Azm121.5178°; P -3.2658, Plg23.9542°, Azm216.3389°; confirmed*
*MEX **10** 05:15:12.9±0.6, 14°.16N×93°.91W, h15km, MD4.3*
*GCG **10** 05:15:13.8±1.6, 14°.29N×93°.86W, h35km±38km, MD4.3, ML4.4, Presumed earthquake*
*IDC **10** 05:15:18.1±1.9, 15°.34N×93°.34W, h0km, mb4.0/6, mbtmp4.0/7, ML2.9/2, MS3.4/18, Error ellipse: s-maj=75.7km s-min=17.0km az=40.0*
ISC 10 05:15:16.1±4.6, 14°.52N±0°.06×93°.77W±0°.03, h10km±29km, n89, σ1§98/68, mb4.0/6, MS3.4/16, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.29**	**24**	*e*P	Pn	05 15 37.5	-2.7
PCIG				*e*S	**Sb**	**05 15 55.4**	**-1.8**
THIG		**1.50**	**75**	*e*P	Pn	05 15 40.2	-2.9
THIG				*e*S	**Sn**	**05 15 59.8**	**-3.1**
THIG		**1.50**	**75**	*i* P	Pn	05 15 40.3	-2.9
PATR	**El Naranjo**	**1.60**	**68**	*e*P	Pn	05 15 41.1	-3.6
PATR				*e*S	**Sn**	**05 16 03.3**	**-2.2**
SMCA	**Catarina**	**1.67**	**78**	*i* P	Pn	05 15 42.1	-3.4
SMCA				IAML		05 16 11.8	
	comp=N,1μm,0.5s						
PAVE	**Pavencul**	**1.68**	**66**	*e*P	Pn	05 15 42.6	-3.1
PAVE				*e*S	**Sn**	**05 16 05.0**	**-2.4**
CHUJ	**Union Juarez**	**1.70**	**70**	*e*P	Pn	05 15 42.8	-3.3
CHUJ				*e*S	**Sn**	**05 16 05.9**	**-2.2**
RTAL	**Retalhuleu**	**2.00**	**90**	P	Pn	05 15 46.0	-4.1
RTAL				S	**Sn**	**05 16 13.1**	**-2.2**
QUEO	**Labor Ovalle**	**2.21**	**81**	*i* P	Pn	05 15 50.5	-2.6
QUEO				IAML		05 16 31.0	
	comp=E,3μm,0.6s						
SOKI	**Kika Raxquin**	**2.31**	**82**	IAML		05 16 37.2	
	comp=N,1μm,0.6s						
STG2	**El Palmar, Qui**	**2.32**	**92**	*i* P	Pn	05 15 47.6	-6.9
STG2				IAML		05 16 19.1	
	comp=E,5μm,0.3s						
HUEH	**Huehuetenango**	**2.33**	**70**	P	**Pn**	**05 15 53.9**	**-0.9**
HUEH				S	**Sn**	**05 16 22.6**	**-1.0**
HUEH	**Huehuetenango**	**2.33**	**70**	*i* P	**Pn**	**05 15 53.5**	**-1.2**
HUEH				*i* S	**Sn**	**05 16 23.3**	**-0.3**
HUEH				IAML		05 16 37.0	
	comp=E,5μm,0.8s						
TGIG		**2.33**	**15**	*e*P	**Pn**	**05 15 53.9**	**-0.7**
TGIG				*i* S	**Sn**	**05 16 24.7**	**+1.2**
TGIG		**2.33**	**15**	*i* P	**Pn**	**05 15 53.7**	**-0.9**
TGIG				*i* S	**Sn**	**05 16 23.1**	**-0.3**
TGIG				IAML		05 16 26.7	
	comp=E,1μm,0.9s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG5	**El Palmar, Qui**	**2.34**	**92**	*i* P	Pn	05 15 48.1	-6.8
CCIG	**Comitan**	**2.35**	**42**	*e*P	**Pn**	**05 15 54.9**	**-0.2**
CCIG				*i* S	**Sn**	**05 16 26.1**	**+2.0**
CCIG	**Comitan**	**2.35**	**42**	P	**Pn**	**05 15 54.7**	**-0.4**
CCIG				S	**Sn**	**05 16 25.0**	**+0.8**
CCIG	**Comitan**	**2.35**	**42**	*i* P	**Pn**	**05 15 55.0**	**0.0**
CCIG				*i* S	**Sn**	**05 16 26.2**	**+2.0**
CCIG				IAML		05 16 31.9	
	comp=N,1μm,0.5s						
HUIG	**Huatulco**	**2.58**	**299**	*e*P	Pn	05 15 53.9	-4.1
HUIG				*i* S	Sn	05 16 21.5	-8.0
HUIG	**Huatulco**	**2.58**	**299**	*i* P	Pn	05 15 53.7	-4.3
CMIG	**Matias Romero**	**2.78**	**337**	Pn	Pn	05 15 58.5	-2.2
	comp=N,10nm,0.3s,baz=171,slow=15,SNR=105						
CMIG				Sn	Sn	05 16 26.0	-8.3
	comp=N,16nm,0.3s,baz=137,slow=15,SNR=6.1						
CMIG				LR	LR	05 17 07.1	
	comp=N,246nm,21.9s,baz=172,slow=48						
	comp=N,20nm,0.3s						
CMIG	**Matias Romero**	**2.78**	**337**	*e*P	Pn	05 15 58.6	-2.1
CMIG				*i* S	**Sn**	**05 16 31.6**	**-2.7**
APG	**El Apazote**	**3.23**	**81**	Pn	Pn	05 16 04.8	-2.3
	comp=N,0.7nm,0.3s,baz=178,slow=11,SNR=18						
APG	**El Apazote**	**3.23**	**81**	*i* P	Pn	05 16 05.0	-2.1
PEIG	**Puerto Escondi**	**3.58**	**295**	*e*P	Pn	05 16 07.8	-4.0
PEIG				*i* S	Sn	05 16 41.5	-13
FAME	**Alcaldia de Sa**	**3.70**	**100**	P	Pn	05 16 09.8	-3.6
FAME				S	**Sn**	**05 16 54.7**	**-2.5**
NEUV	**Arroyo Zacate**	**3.73**	**329**	*e*P	**Pn**	**05 16 11.8**	**-2.0**
NEUV				*i* S	**Sn**	**05 16 59.8**	**+1.9**
VHO	**Vista Hermosa**	**3.82**	**312**	*e*P	**Pn**	**05 16 14.8**	**-0.5**
VHO				*i* S	**Sn**	**05 16 57.5**	**-2.9**
SLOZ	**Alcaldia de Sa**	**3.89**	**97**	P	Pn	05 16 12.7	-3.4
NUBE	**Las Nubes**	**3.91**	**99**	P	Pn	05 16 12.9	-3.6
NUBE				S	**Sn**	**05 16 58.3**	**-4.3**
NUBE	**Las Nubes**	**3.91**	**99**	*i* P	Pn	05 16 13.7	-2.8
UNIC	**Universidad Ca**	**4.12**	**97**	P	Pn	05 16 15.3	-4.0
UNIC				S	**Sn**	**05 17 06.1**	**-1.6**
PMUV	**Sontecomapan**	**4.21**	**342**	*e*P	Pn	05 16 18.4	-2.1
PMUV				*i* S	**Sn**	**05 17 10.0**	**-0.2**
MTO3	**Montecristo**	**4.27**	**91**	P	Pn	05 16 18.6	-2.8
JAYA	**Jayaque - finc**	**4.28**	**101**	P	Pn	05 16 17.7	-3.7
JAYA				S	**Sn**	**05 17 08.8**	**-2.8**
ESQI	**Esquipulas**	**4.29**	**89**	P	**Pn**	**05 16 20.5**	**-1.1**
YOIG	**Yosondua**	**4.32**	**303**	*e*P	**Pn**	**05 16 21.7**	**-0.5**
YOIG				*i* S	**Sn**	**05 17 10.9**	**-2.0**
PMON	**Piamonte**	**4.39**	**100**	P	Pn	05 16 20.5	-2.5
PMON				S	**Sn**	**05 17 11.9**	**-2.5**
LALI	**Alcalda de L**	**4.43**	**103**	S	**Sn**	**05 17 14.9**	**-0.4**
PETF	**Flores**	**4.45**	**57**	P	**Pn**	**05 16 23.1**	**-0.6**
PETF				S	**Sn**	**05 17 14.3**	**-1.2**
PETF	**Flores**	**4.45**	**57**	*i* P	**Pn**	**05 16 22.8**	**-0.9**
PETF				IAML		05 17 36.7	
	comp=N,366nm,0.6s						
PNIG	**Pinotepa**	**4.60**	**294**	*e*P	Pn	05 16 22.9	-2.9
TXIG	**Tlaxiaco**	**4.71**	**306**	*e*P	**Pn**	**05 16 27.3**	**-0.4**
TXIG				*i* S	**Sn**	**05 17 23.7**	**+1.1**
PAVA	**Las Pavas**	**4.75**	**99**	P	Pn	05 16 25.2	-2.8
TOIG	**Toxpalan**	**4.76**	**319**	*e*P	**Pn**	**05 16 29.6**	**+1.4**
COEG	**Centro de Oper**	**4.82**	**100**	P	**Pn**	**05 16 26.7**	**-2.2**
COEG				S	**Sn**	**05 17 24.0**	**-1.0**
SARH	**Santa Rosa de**	**4.85**	**86**	P	Pn	05 16 27.1	-2.3
SCLA	**Alcaldia de Sa**	**4.95**	**99**	P	**Pn**	**05 16 28.4**	**-2.3**
SCIG	**Sabancuy**	**5.07**	**29**	*e*P	**Pn**	**05 16 31.3**	**-0.9**
SCIG				*i* S	Sn	05 17 25.6	-5.3
HLIG	**Huajuapan de L**	**5.09**	**311**	*e*P	**Pn**	**05 16 32.6**	**-0.1**
FTIG	**Fresnillo de T**	**5.38**	**309**	*e*P	**Pn**	**05 16 36.6**	**0.0**
FTIG				*i* S	**Sn**	**05 17 32.3**	**-6.5**
MGIG	**Malinaltepec**	**5.41**	**301**	*e*P	**Pn**	**05 16 36.2**	**-0.8**
MGIG				*i* S	Sn	05 17 31.3	-8.2
TLIG	**Tlapa**	**5.52**	**304**	*e*P	**Pn**	**05 16 37.8**	**-0.8**
JAUV	**Jalcomulco**	**5.63**	**329**	*e*P	Pn	05 16 36.5	-3.5
JAUV				*i* S	**Sn**	**05 17 43.2**	**-1.6**
PPCL	**Tochimilco**	**6.38**	**314**	*e*P	**Pn**	**05 16 49.5**	**-1.0**
PPCL				*i* S	**Sn**	**05 18 01.4**	**-2.2**
PBCV	**Popocatepetl**	**6.39**	**315**	*e*P	**Pn**	**05 16 48.1**	**-2.6**
PPPT	**Popocatepetl**	**6.42**	**314**	*e*P	**Pn**	**05 16 52.1**	**+0.8**
PPCU	**Popocatapetl**	**6.44**	**314**	*e*P	Pn	05 16 46.8	-4.8
PBXN	**Popocatepetl**	**6.47**	**314**	*e*P	Pn	05 16 45.6	-6.4
PBXN				*e*P	**Pn**	**05 16 53.7**	**+1.7**
YAIG	**Yautepec**	**6.67**	**311**	*e*P	**Pn**	**05 16 55.6**	**+1.2**
CXUV	**Coxquihui**	**6.71**	**328**	*e*P	**Pn**	**05 16 53.2**	**-1.5**
CXUV				*i* S	**Sn**	**05 18 09.4**	**-1.9**
PLIG	**Platanillo**	**6.72**	**306**	*e*P	**Pn**	**05 16 55.4**	**+0.4**
ARIG	**Puente Sto Nin**	**7.34**	**302**	*e*P	**Pn**	**05 17 03.2**	**-0.3**
TXAR	**Lajitas Array**	**17.36**	**330**	Pn	**Pn**	**05 19 19.7**	**+1.0**
	comp=N,0.1nm,0.3s,baz=145,slow=4.6,SNR=8.1						
LPIG	**La Paz**	**18.28**	**304**	LR	LR	05 26 53.3	

ALCI					IAML			05 24 39.5	
	comp=E,65nm,0.1s								
TSSA	**Tissa**	**5.64**	**135**	*e*P		Pn		05 23 40.8	+5.3
TSSA				*e*S		**Sn**		**05 24 37.0**	**-2.2**
TSSA					IAML			05 24 44.2	
	comp=E,190nm,0.2s								
TSSA					IAML			05 24 44.7	
	comp=N,248nm,0.2s								
THN	**Thein Dam**	**5.73**	**140**	*e*P		**Pn**		**05 23 40.0**	**+3.4**
THN				*e*S		**Sn**		**05 24 40.9**	**-0.3**
THN					IAML			05 24 45.0	
	comp=N,109nm,0.2s								
THN					IAML			05 24 45.8	
	comp=E,142nm,0.3s								
UCH	**Uchtor**	**5.82**	**23**	P		**Pn**		**05 23 39.5**	**+1.3**
	SNR=11								
EKS2	**Erkin-Say**	**6.02**	**17**	P		**Pn**		**05 23 42.3**	**+1.8**
	SNR=18								
DHRM	**DHARAMSHALA**	**6.17**	**138**	*e*P		**Pn**		**05 23 45.9**	**+3.2**
DHRM				*e*S		**Sn**		**05 24 50.4**	**-1.6**
DHRM					IAML			05 24 54.6	
	comp=E,321nm,0.3s								
DHRM					IAML			05 24 56.1	
	comp=Z,109nm,0.3s								
DHRM					IAML			05 24 56.5	
	comp=N,286nm,0.3s								
AAK	**Ala-Archa**	**6.19**	**22**	Sn		**Sn**		**05 24 50.6**	**-1.6**
	comp=N,0.8nm,0.3s,baz=322,slow=19,SNR=1.9								
AAK	**Ala-Archa**	**6.19**	**22**	P		**Pn**		**05 23 44.7**	**+1.8**
	SNR=32								
AAK	**Ala-Archa**	**6.19**	**22**	⇑P		**Pn**		**05 23 44.3**	**+1.4**
	comp=N,3.2nm,0.4s								
AAK				⇓S		**Sn**		**05 24 50.8**	**-1.4**
	comp=N,3.6nm,0.5s								
KK31	**Karatay Array**	**6.21**	**354**	⇓P		**Pn**		**05 23 43.9**	**+0.8**
	comp=N,22nm,0.3s,baz=180,slow=13,SNR=217								
KK31				⇓S		**Sn**		**05 24 49.6**	**-3.1**
	comp=N,5.7nm,0.3s,baz=175,slow=23,SNR=6.9								
KBK	**Karagaybulak**	**6.34**	**24**	P		**Pn**		**05 23 48.0**	**+3.0**
	SNR=5.5								
CHMS	**Chumysh**	**6.59**	**22**	P		**Pn**		**05 23 49.9**	**+1.6**
	SNR=7.8								
USP	**Ospenovka**	**6.77**	**20**	P		**Pn**		**05 23 51.6**	**+1.0**
	SNR=13								
TKM2	**Tokmak 2**	**6.80**	**27**	P		**Pn**		**05 23 52.7**	**+1.4**
	SNR=14								
BHK	**Bhakra**	**6.88**	**142**	*e*S		**Sn**		**05 25 09.8**	**+0.6**
BHK					IAML			05 25 13.5	
	comp=N,91nm,0.1s								
BHK					IAML			05 25 13.8	
	comp=E,72nm,0.2s								
HNLY	**HANLEY**	**7.47**	**121**	*e*P		**Pn**		**05 24 04.2**	**+3.5**
HNLY				*e*S		**Sn**		**05 25 21.1**	**-3.0**
HNLY					IAML			05 25 25.6	
	comp=E,6.7nm,0.7s								
HNLY					IAML			05 25 26.4	
	comp=N,5.5nm,1.3s								
SMLA	**Simla**	**7.50**	**139**	*e*P		**Pn**		**05 24 02.8**	**+2.2**
SMLA					IAML			05 25 26.0	
	comp=N,88nm,0.4s								
SMLA					IAML			05 25 26.0	
	comp=E,125nm,0.5s								
KLP	**Kalpa**	**7.81**	**131**	*e*S		**Sn**		**05 25 26.5**	**-5.6**
KLP					IAML			05 25 35.2	
	comp=N,48nm,0.3s								
KLP					IAML			05 25 36.0	
	comp=E,65nm,0.4s								
JOSI	**Joshimath**	**9.29**	**131**	*e*S		Sn		05 26 00.3	-7.7
KUDL	**Kundal**	**9.74**	**152**	*e*P		**Pn**		**05 24 32.3**	**+1.2**
KUDL				*e*S		Sn		05 26 10.6	-8.1
KUDL					IAML			05 26 18.0	
	comp=E,14nm,0.5s								
KUDL					IAML			05 26 18.1	
	comp=N,10.0nm,0.5s								
AJM	**Ajmer**	**10.82**	**164**	*e*S		Sn		05 26 35.6	-9.2
MKAR	**Makanchi Array**	**12.76**	**36**	Pn		Pn		05 25 08.0	-3.4
	comp=N,0.1nm,0.3s,baz=212,slow=14,SNR=4.7								
	comp=N,0.4nm,0.7s								
KURBB	**Kurchatov Arra**	**14.62**	**18**	Pn		**Pn**		**05 25 36.4**	**+1.0**
	comp=N,0.1nm,0.3s,baz=212,slow=12,SNR=13								
AB31	**Akbulak array**	**14.88**	**330**	⇓P		**Pn**		**05 25 37.9**	**-0.8**
	comp=N,0.5nm,0.3s,baz=150,slow=11,SNR=36								
AKTO	**Aktyubinsk**	**16.58**	**329**	P		**Pn**		**05 25 60.0**	**+0.1**
	comp=N,0.4nm,0.3s,baz=131,slow=13,SNR=7.9								
	comp=N,2.3nm,0.5s								
AKTO	**Aktyubinsk**	**16.58**	**329**	⇑P		**P**		**05 26 02.0**	**+1.4**
	comp=N,1.2nm,0.6s								
ARCES	**ARCESS Array B**	**40.88**	**337**	LR		LR		05 47 03.4	
	comp=N,63nm,18.9s,baz=146,slow=36								
MJAR	**Matsushiro Arr**	**52.50**	**69**	LR		LR		05 55 13.9	
	comp=N,61nm,19.0s,baz=192,slow=38								
WRA	**Warramunga Arr**	**81.94**	**122**	P		**P**		**05 34 20.7**	**-1.3**
	comp=N,0.2nm,0.4s,baz=316,slow=4.9,SNR=2.0								
	comp=N,0.2nm,0.4s								
ASAR	**Alice Springs**	**84.23**	**125**	P		**P**		**05 34 31.7**	**-2.1**
	comp=N,0.2nm,0.5s,baz=305,slow=5.5,SNR=3.8								
	comp=N,0.2nm,0.5s								

IDC ***10*** *05:27:45.5±2.7,36°.84N×139°.45E, h138*$^{km}_{\pm}$*16, mb3.6/9, mbtmp4.0/10, Error ellipse: s-maj=56.1km s-min=12.4km az=63.0*

JMA ***10*** *05:27:47.0±0.2,36°.8N±0°.6×139°.3E±0°.7, h136*$^{km}_{\pm}$*1km, MV2.9/37, NW GUNMA PREF*

ISC 10 05:27:46.4±0.8,**36°.83N**±0°.04×**139°.29E**±0°.06,**h140**$^{km}_{\pm}$**5km, n29,** σ**0**^{s}**71**/39,**mb3.8**/9,**Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKT	**Katashina**	**0.07**	**207**	P	**Pn**	**05 28 05.5**	**+0.1**
JKT				S	**Sn**	**05 28 19.4**	**-0.4**
JUON	**Uonuma**	**0.42**	**334**	P	**Pn**	**05 28 05.9**	**-0.3**
JUON				S	**Sn**	**05 28 20.8**	**-0.6**
JAG	**Ashikaga**	**0.42**	**162**	P	**Pn**	**05 28 06.5**	**+0.2**
JFY	**Yanaizu**	**0.67**	**30**	P	**Pn**	**05 28 08.0**	**+0.4**
JFY				S	**Sn**	**05 28 23.7**	**-0.1**
JRY	**Ryogami san**	**0.87**	**201**	*i* P	**Pn**	**05 28 09.9**	**+0.7**
JRY				S	**Sn**	**05 28 27.1**	**+0.7**
MJAR	**Matsushiro Arr**	**0.91**	**252**	P	**Pn**	**05 28 09.5**	**0.0**
	151nm,0.4s,baz=57,slow=6.9,SNR=300						
MJAR				S	**Sn**	**05 28 27.8**	**+0.7**
	18nm,0.6s,baz=132,slow=2.2,SNR=5.9						
MAJO	**Matsushiro**	**0.91**	**252**	P	**Pn**	**05 28 09.5**	**0.0**
MAT	**Matsushiro**	**0.91**	**252**	*i* P	**Pn**	**05 28 09.6**	**+0.1**
MAT				S	**Sn**	**05 28 28.8**	**-0.3**
JNS	**Sasagawa**	**0.99**	**1**	S	**Sn**	**05 28 27.8**	**-0.5**
JOTO	**OTAMA OYAMA**	**1.11**	**49**	*i* P	**Pn**	**05 28 12.1**	**+0.9**
JOTO				*e*S	**Sn**	**05 28 31.2**	**+1.0**
JYN	**Shimob**	**1.46**	**205**	*i* P	**Pn**	**05 28 15.4**	**+0.6**
JYN				*e*S	**Sn**	**05 28 37.2**	**+0.7**
JOD2	**Odawara 2**	**1.57**	**186**	P	**Pn**	**05 28 15.8**	**-0.3**
JOD2				S	**Sn**	**05 28 38.1**	**-0.5**
JAW	**Awa shima**	**1.62**	**359**	P	**Pn**	**05 28 17.2**	**+0.6**
JSZ	**Suzu**	**1.66**	**292**	*i* P	**Pn**	**05 28 16.9**	**0.0**
JGF	**Kuroka**	**1.98**	**232**	P	**Pn**	**05 28 21.5**	**+0.7**
INU	**Inuyama**	**2.36**	**232**	P	**Pn**	**05 28 25.8**	**+0.5**
INU	**Inuyama**	**2.36**	**232**	S	**Sn**	**05 28 55.4**	**+0.2**
JHJ	**Hachijo jima 2**	**3.72**	**174**	P	**Pn**	**05 28 42.2**	**-0.5**
	99nm,0.3s,baz=112,slow=20,SNR=5.7						
JHJ				S	**Sn**	**05 29 24.3**	**-2.1**
	54nm,0.3s,baz=73,slow=19,SNR=1.2						
JHJ2	**Mitsune**	**3.73**	**173**	P	**Pn**	**05 28 44.6**	**+1.7**
JMN	**Monobe**	**5.40**	**237**	P	**Pn**	**05 29 06.0**	**+1.0**
SONM	**Songino Array**	**26.50**	**305**	P	**P**	**05 33 09.9**	**-0.8**
	0.6nm,0.5s,baz=118,slow=8.3,SNR=4.2						
	0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**40.80**	**313**	P	**P**	**05 35 13.3**	**-0.3**
	1.0nm,0.5s,baz=41,slow=4.7,SNR=4.0						
	1.0nm,0.5s						
MKAR	**Makanchi Array**	**42.78**	**302**	P	**P**	**05 35 30.3**	**+0.4**
	1.6nm,0.6s,baz=93,slow=8.9,SNR=6.7						
	1.6nm,0.6s						
KURBB	**Kurchatov Arra**	**44.78**	**308**	P	**P**	**05 35 45.9**	**+0.1**
	3.7nm,0.6s,baz=85,slow=7.9,SNR=40						
	3.7nm,0.6s						
BVAR	**Borovoye Array**	**49.45**	**312**	P	**P**	**05 36 21.4**	**-0.5**
	0.8nm,0.4s,baz=97,slow=8.2,SNR=7.0						
	0.8nm,0.4s						
ARTI	**Arti**	**55.49**	**318**	P	**P**	**05 37 05.9**	**-0.4**
	3.5nm,0.4s,baz=64,slow=3.4,SNR=8.5						
	3.5nm,0.4s						
WRA	**Warramunga Arr**	**56.66**	**186**	P	**P**	**05 37 15.5**	**+0.5**
	0.1nm,0.3s,baz=0.9,slow=7.5,SNR=6.0						
	0.1nm,0.3s						
FINES	**FINESS Array B**	**68.19**	**332**	P	**P**	**05 38 30.3**	**-0.9**
	2.5nm,1.1s,baz=82,slow=10.0,SNR=3.7						
	2.5nm,1.1s						
NOA	**NORSAR Array B**	**73.70**	**336**	P	**P**	**05 39 04.9**	**+0.4**
	0.7nm,0.7s,baz=42,slow=5.9,SNR=1.9						
	0.7nm,0.7s						

NEIC ***10*** *05:29:51.9±0.9, 17°.88N±0°.09×66°.93W±0°.02, h14*$^{km}_{\pm}$*8km, ML3.9/33, Md3.6/4(RSPR), Error ellipse: s-maj=12.7km s-min=1.8km az=189.0*

SDD ***10*** *05:29:52.9±1.7, 17°.93N×66°.93W, h13*$^{km}_{\pm}$*9km, MD3.2, ML3.6, MW3.5, Presumed earthquake*

OSPL ***10*** *05:29:53.3±0.5, 17°.95N×66°.92W, h8*$^{km}_{\pm}$*47km, ML3.1, Presumed earthquake*

ISC 10 05:29:52.1±0.9,**17°.91N**±0°.06×**66°.93W**±0°.02,**h14**$^{km}_{\pm}$**6km, n33,** σ**0**^{s}**95**/46,**11C-3D,Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.08**	**35**		**Pg**	**05 29 55.1**	**0.0**
MLPR	**Magueyes Islan**	**0.13**	**298**		**Pg**	**05 29 55.7**	**+0.1**
MLPR				IAML		05 29 58.7	
	24μm,0.4s						
MLPR	**Magueyes Islan**	**0.13**	**298**	⇓*e*Pg	**Pg**	**05 29 55.7**	**+0.1**
MLPR				⇑*e*Sg	**Sg**	**05 29 58.0**	**+0.1**
MLPR				IAML		05 29 58.4	
	comp=N,27μm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.20**	**299**		**Pg**	**05 29 56.9**	**+0.3**
CRPR				IAML		05 30 00.3	
	comp=N,17μm,0.5s						
CRPR	**Cabo Rojo, PR**	**0.20**	**299**	*i* P	**Pg**	**05 29 56.9**	**+0.3**
CRPR				*e*S	**Sg**	**05 29 59.8**	**+0.1**
CRPR				IAML		05 30 00.1	
	comp=Z,27μm,0.2s						
LSP	**Las Mesas**	**0.30**	**330**		**Pg**	**05 29 58.6**	**+0.1**
OBIP	**Obispado Ponce**	**0.33**	**67**		**Pg**	**05 29 59.3**	**+0.4**
OBIP					**Sg**	**05 30 04.8**	**+1.2**
OBIP	**Obispado Ponce**	**0.33**	**67**	IAML		05 30 04.9	
	comp=N,1μm,0.4s						
OBIP	**Obispado Ponce**	**0.33**	**67**	*i* P	**Pg**	**05 29 59.3**	**+0.4**
OBIP				*e*S	**Sg**	**05 30 03.1**	**-0.4**
OBIP				IAML		05 30 04.8	
	comp=Z,3μm,0.8s						
CELP	**Cerrillos**	**0.37**	**64**		**Pg**	**05 29 59.9**	**+0.4**
CELP				IAML		05 30 06.1	
	comp=Z,5μm,0.4s						
CELP	**Cerrillos**	**0.37**	**64**	⇓*e*Pg	**Pg**	**05 29 60.0**	**+0.4**
CELP				⇑*e*Sg	**Sg**	**05 30 04.4**	**-0.3**
CELP				IAML		05 30 06.0	
	comp=N,2μm,0.4s						
PRSN	**Puerto Rico Se**	**0.37**	**326**		**Pg**	**05 29 59.6**	**0.0**
PRSN				IAML		05 30 08.0	
	comp=N,17μm,0.4s						
PRSN	**Puerto Rico Se**	**0.37**	**326**	⇑*e*Pg	**Pg**	**05 29 59.8**	**+0.2**
PRSN				⇑*e*Sg	**Sg**	**05 30 02.8**	**-1.9**
PRSN				IAML		05 30 08.2	
	comp=N,14μm,0.4s						
UUPR	**Utuado, UPR, P**	**0.39**	**30**		**Pg**	**05 30 00.0**	**0.0**
AOPR	**Arecibo Observ**	**0.46**	**21**		**Pg**	**05 30 01.3**	**-0.1**
AOPR				IAML		05 30 09.0	
	comp=N,15μm,0.3s						
AOPR	**Arecibo Observ**	**0.46**	**21**	⇑*e*Pg	**Pg**	**05 30 01.2**	**-0.1**
AOPR				⇑*e*Sg	**Sg**	**05 30 07.6**	**0.0**
AOPR				IAML		05 30 09.0	
	comp=N,13μm,0.3s						
AGPR	**Aguadilla, PR**	**0.58**	**342**		**Pg**	**05 30 03.4**	**-0.1**
AGPR				IAML		05 30 11.5	
	comp=N,6μm,0.4s						
AGPR				IAML		05 30 13.8	
	comp=N,4μm,0.3s						
AGPR	**Aguadilla, PR**	**0.58**	**342**	⇑*e*Pg	**Pg**	**05 30 03.4**	**-0.1**
AGPR				⇓*e*Sg	**Sg**	**05 30 10.9**	**-0.4**
AGPR				IAML		05 30 11.5	
	comp=N,4μm,0.3s						
ECPR	**Experimental S**	**0.67**	**53**		**Pg**	**05 30 04.9**	**-0.4**
ECPR				IAML		05 30 16.6	
	comp=N,10μm,0.2s						
IDE	**Isla Desecheo**	**0.70**	**312**		**Pg**	**05 30 05.7**	**-0.1**
IDE					**Sg**	**05 30 15.2**	**+0.1**
SJG	**San Juan**	**0.77**	**75**		**Pg**	**05 30 06.6**	**-0.4**
SJG	**San Juan**	**0.77**	**75**	*i* P	**Pg**	**05 30 06.7**	**-0.3**
SJG				*e*S	**Sg**	**05 30 16.9**	**-0.2**
SJG				IAML		05 30 19.1	
	comp=Z,691nm,0.2s						
PDPR	**Patillas Dam,**	**0.87**	**83**		**Pg**	**05 30 08.5**	**-0.4**
HUMP	**Col San Antoni**	**1.05**	**77**		**Pb**	**05 30 11.4**	**-0.6**
HUMP					**Sb**	**05 30 25.6**	**-0.1**
CUPR	**Culebra, Puert**	**1.61**	**76**		**Pn**	**05 30 20.8**	**+0.6**
HIDR	**Higuey Centro**	**1.83**	**292**	⇑*e*Pg	**Pn**	**05 30 23.8**	**+0.6**
HIDR				⇑*e*Sg	**Sn**	**05 30 46.8**	**+0.6**
HIDR				IAML		05 31 00.4	
	comp=N,323nm,0.2s						
DR12	**Loma Pena Alta**	**2.49**	**291**		**Pn**	**05 30 33.9**	**+1.7**
HATOM	**Hato Mayor del**	**2.49**	**291**	⇑*e*Pg	**Pn**	**05 30 34.7**	**+2.5**
HATOM				⇑*e*Sg	**Sb**	**05 31 08.0**	**+0.8**
HATOM				IAML		05 31 13.9	
	comp=N,134nm,0.7s						
SMDR	**Samana, DR**	**2.55**	**303**		**Pb**	**05 30 36.7**	**-0.9**
SMDR					**Sb**	**05 31 08.9**	**+0.1**
SMRT	**St. Maarten**	**3.67**	**87**		**Pn**	**05 30 48.9**	**+0.4**
SC01	**Santiago de lo**	**3.91**	**293**	Pn	**Pn**	**05 30 54.8**	**+3.1**
SDDR	**Presa de Saban**	**4.28**	**285**		**Pb**	**05 31 04.0**	**-3.1**
BIM	**Bigot**	**6.56**	**120**	Pn	**Pn**	**05 31 28.0**	**-0.2**

IDC ***10*** *05:45:05.5±0.6, 17°.51S×176°.73W, h0*^{km}*, mb4.3/13, mbtmp4.3/15, ML4.4/2, MS4.5/54, Error ellipse: s-maj=24.1km s-min=15.8km az=147.0*

NEIC ***10*** *05:45:07.7±2.0, 17°.44S±0°.07×176°.63W±0°.07, h10*$^{km}_{\pm}$*1km, mb4.9/76, Error ellipse: s-maj=13.0km s-min=10.1km az=324.0*

BJI ***10*** *05:45:07.0, 17°.08S×176°.35W, h13km, mB5.4/5, mb4.8/18, Ms4.8/4, Ms7 4.6/5*

GCMT ***10*** *05:45:10.7±0.1, 17°.48S±0°.01×176°.61W±0°.01, h14km, MW5.3/142, Moment Tensor Solution. s97,c152; s142,c243; Duration: 1§1 Moment tensor: Scale 10*^{17} *Nm; Mrr=0.05±.01; Mθθ=0.90±.01; Mφφ 0.95±.02; Mrθ 0.09±.03; Mrφ 0.34±.01; Mθφ 0.23±.03; Best double couple: Mo 1.01500×10*^{17} *NP1:*ϑ*s 324.00000°,*δ*79.00000°,* λ*174.00000°. NP2:*ϑ*s 56.00000°,*δ*84.00000°,*λ*11.00000°. Principal axes: T 1.0650, Plg12.0000°, Azm280.0000°; N -0.1000, Plg78.0000°, Azm85.0000°; P -0.9650, Plg3.0000°, Azm190.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***10*** *05:45:15.1, 17°.55S×176°.15W, h33km*

ISC 10 05:45:09.2±0.4,**17°.54S**±0°.08×**176°.63W**±0°.06,**h24**$^{km}_{\pm}$**km, n203,** σ**1**^{s}**26**/139,**mb4.9**/60,**MS4.6**/54,**2C-6D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUTU	**Fugatoga**	**3.52**	**336**		**Pn**	**05 46 00.4**	**-2.0**
MSVF	**Nonsavu**	**5.07**	**267**	Pn	**Pn**	**05 46 23.7**	**-0.2**
	1.8nm,0.3s,baz=246,slow=11,SNR=4.5						
MSVF				Sn	**Sn**	**05 47 20.3**	**-1.5**
	2.8nm,0.3s,baz=173,slow=22,SNR=4.3						
MSVF				LR	LR	05 48 03.7	
	comp=Z,20μm,20.9s,baz=114,slow=36						
	34nm,0.7s						
MSVF	**Nonsavu**	**5.07**	**267**		**Pn**	**05 46 23.9**	**0.0**
AFI	**Afiamalu**	**5.91**	**53**	Pn	**Pn**	**05 46 31.3**	**-4.0**
	2.5nm,0.3s,baz=342,slow=15,SNR=5.8						
AFI				LR	LR	05 48 07.3	
	comp=Z,2μm,18.2s,baz=226,slow=30						
NIUE	**Niue**	**6.55**	**104**	Pn	**Pn**	**05 46 42.8**	**-1.3**
RAO	**Raoul Island**	**11.71**	**186**	LR	LR	05 51 46.8	
	comp=Z,8μm,20.4s,baz=28,slow=34						
SANVU	**Saraoutou**	**15.64**	**275**		**Pn**	**05 48 49.9**	**+1.8**
RAR	**Rarotonga**	**16.32**	**106**	LR	LR	05 53 45.4	
	comp=Z,2μm,20.1s,baz=270,slow=32						
DZM	**Mont Dzumac**	**16.55**	**251**	Pn	**Pn**	**05 48 59.7**	**-0.1**
	0.2nm,0.3s,baz=95,slow=21,SNR=3.6						
DZM				LR	LR	05 54 09.6	
	comp=Z,6μm,20.5s,baz=82,slow=33						
	10nm,1.1s						
ONTNC	**Ouen Toro**	**16.59**	**251**	Pn	**Pn**	**05 48 58.4**	**-1.9**
URZ	**Urewera**	**21.36**	**194**	P	**P**	**05 49 52.6**	**-2.0**
	13nm,0.9s,baz=268,slow=2.6,SNR=4.0						
	13nm,0.9s						
HNR	**Honiara**	**24.14**	**286**	LR	LR	05 58 21.4	
	comp=Z,142nm,19.2s,baz=198,slow=33						

PPT	**Papeete**	**25.79**	**94**	LR		LR		05 58 05.7	
	comp=Z,2μm,19.8s,baz=254,slow=30								
EIDS	**Eidsvold**	**30.98**	**250**	P		**P**		**05 51 25.4**	**+0.6**
EIDS				IAmb		IAmb		05 51 29.5	
	comp=Z,29nm,1.1s								
CTA	**Charters Tower**	**35.18**	**260**	P		**P**		**05 52 00.9**	**-0.6**
	comp=Z,6.9nm,0.9s,baz=95,slow=8.2,SNR=6.4								
CTA				LR		LR		06 04 59.2	
	comp=Z,1μm,18.2s,baz=84,slow=34								
	comp=Z,6.9nm,0.9s								
CTAO	**Charters Tower**	**35.18**	**260**			**P**		**05 52 01.8**	**+0.2**
CTAO				IAmb		IAmb		05 52 10.3	
	comp=Z,34nm,1.2s								
PMG	**Port Moresby**	**36.08**	**278**	LR		LR		06 05 59.8	
	comp=Z,1μm,18.0s,baz=108,slow=35								
TOO	**Toolangi**	**38.72**	**231**			**P**		**05 52 31.0**	**-0.5**
STKA	**Stephens Creek**	**40.29**	**241**	P		**P**		**05 52 44.6**	**0.0**
	comp=Z,2.5nm,0.7s,baz=73,slow=11,SNR=4.4								
	comp=Z,2.5nm,0.7s								
STKA	**Stephens Creek**	**40.29**	**241**			**P**		**05 52 42.8**	**-1.8**
STKA				IAmb		IAmb		05 52 56.0	
	comp=Z,55nm,1.3s								
INKA	**Innaminka**	**40.45**	**248**			**P**		**05 52 46.5**	**+0.5**
JAY	**Jayapura**	**44.44**	**285**	LR		LR		06 10 32.5	
	comp=Z,820nm,21.9s,baz=342,slow=34								
WR8	**Warramunga Arr**	**46.21**	**259**	P		**P**		**05 53 31.4**	**-1.3**
WR8				IAmb		IAmb		05 53 35.9	
	comp=Z,14nm,1.2s								
WB0	**Warramunga Arr**	**46.33**	**259**	P		**P**		**05 53 33.3**	**-0.3**
WB0				IAmb		IAmb		05 53 41.1	
	comp=Z,11nm,1.1s								
WRA	**Warramunga Arr**	**46.36**	**259**	P		**P**		**05 53 32.5**	**-1.4**
	comp=Z,4.1nm,0.9s,baz=91,slow=7.5,SNR=14								
	comp=Z,4.1nm,0.9s								
WRA	**Warramunga Arr**	**46.36**	**259**			**P**		**05 53 32.8**	**-1.0**
AS31	**Alice Springs**	**46.52**	**254**			**P**		**05 53 34.5**	**-0.6**
ASAR	**Alice Springs**	**46.52**	**254**	P		**P**		**05 53 33.8**	**-1.3**
	comp=Z,15nm,0.8s,baz=86,slow=8.1,SNR=37								
ASAR				LR		LR		06 12 29.1	
	comp=Z,656nm,18.3s,baz=94,slow=35								
	comp=Z,15nm,0.8s								
ASAR	**Alice Springs**	**46.52**	**254**			**P**		**05 53 33.9**	**-1.2**
KNRA	**Kununurra**	**52.21**	**264**			**P**		**05 54 18.6**	**0.0**
KNRA				IAmb		IAmb		05 54 24.9	
	comp=Z,12nm,0.9s								
SIJI	**Sorong**	**53.81**	**282**	LR		LR		06 16 13.8	
	comp=Z,650nm,21.8s,baz=102,slow=35								
FITZ	**Fitzroy Crossi**	**54.76**	**260**	LR		LR		06 17 15.7	
	comp=Z,1μm,18.8s,baz=104,slow=35								
SOEI	**Soe**	**57.77**	**269**			**P**		**05 54 59.0**	**+0.1**
BATI	**Baumata**	**58.23**	**269**	LR		LR		06 17 47.0	
	comp=Z,622nm,21.9s,baz=150,slow=34								
PSA00	**Pilbara Seismi**	**59.64**	**255**	P		**P**		**05 55 10.7**	**-1.1**
PSA00	**Pilbara Seismi**	**59.64**	**255**	P		**P**		**05 55 10.2**	**-1.6**
PSA00				IAmb		IAmb		05 55 20.2	
	comp=Z,12nm,1.1s								
MBWA	**Marble Bar**	**59.80**	**255**			**P**		**05 55 12.3**	**-0.6**
VNDA	**Vanda**	**60.95**	**185**	LR		LR		06 20 08.0	
	comp=Z,247nm,18.3s,baz=19,slow=34								
DAV	**Davao City (W)**	**62.09**	**288**	LR		LR		06 21 17.7	
	comp=Z,154nm,18.3s,baz=162,slow=35								
RPN	**Rapa Nui**	**62.35**	**112**	LR		LR		06 15 45.6	
	comp=Z,819nm,20.5s,baz=262,slow=30								
KAPI	**Kappang**	**63.36**	**273**	LR		LR		06 21 16.3	
	comp=Z,243nm,20.1s,baz=98,slow=34								
MYLDM	**Lahad Datu**	**67.87**	**283**	P		**P**		**05 56 06.3**	**+0.2**
MJAR	**Matsushiro Arr**	**68.64**	**322**	P		**P**		**05 56 10.2**	**-0.3**
	comp=Z,3.5nm,0.9s,baz=157,slow=6.4,SNR=6.0								
	comp=Z,3.5nm,0.9s								
TGY	**Tagaytay City**	**69.15**	**293**	LR		LR		06 22 35.1	
	comp=Z,379nm,21.5s,baz=88,slow=33								
SHEM	**Shemya Is, Ala**	**70.44**	**354**	LR		LR		06 20 45.7	
	comp=Z,621nm,21.4s,baz=124,slow=30								
ASAJ	**Asahikawa**	**71.78**	**330**	LR		LR		06 23 56.7	
	comp=Z,285nm,19.9s,baz=176,slow=32								
QSPA	**South Pole Qui**	**72.51**	**180**	P		**P**		**05 56 34.4**	**+0.5**
	comp=Z,6.2nm,0.8s,baz=343,slow=0.4,SNR=13								
QSPA				LR		LR		06 27 19.2	
	comp=Z,210nm,18.2s,baz=39,slow=35								
	comp=Z,6.2nm,0.8s								
QSPA	**South Pole Qui**	**72.51**	**180**			**P**		**05 56 35.2**	**+1.3**
LEM	**Lembang**	**74.42**	**268**	LR		LR		06 29 18.4	
	comp=Z,306nm,20.4s,baz=167,slow=36								
KSRS

ANMO	**Albuquerque**	**84.55**	**51**	LR	LR	06 29 19.1		
	comp=Z,348nm,18.3s,baz=242,slow=31							
ANMO	**Albuquerque**	**84.55**	**51**		**P**	**05 57 41.4**	**+0.6**	
NEA2	**Nenana**	**84.57**	**12**	P	**P**	**05 57 41.0**	**+1.0**	
NEA2				IAmb	IAmb	05 57 48.3		
	comp=Z,8.4nm,1.2s							
MLY	**Manley**	**84.66**	**11**	IAmb	IAmb	05 57 44.7		
	comp=Z,14nm,1.3s							
RIDG	**Independent Ri**	**84.70**	**14**	P	**P**	**05 57 41.1**	**+0.4**	
RIDG				IAmb	IAmb	05 57 52.7		
	comp=Z,10nm,1.1s							
BJI2	**Beijing**	**84.72**	**315**	P	**P**	**05 57 42.7**	**+1.4**	
BJI2				pP	**pP**	**05 57 47.2**	**-1.1**	
BJI2				sP	**sP**	**05 57 49.4**	**-1.4**	
BJI2				SKS	**SKSac**	**06 08 03.6**	**-0.4**	
BJI2				pmax	pmax			
	comp=Z,4.0nm,1.6s							
BJI2				pmax	pmax			
	comp=Z,70nm,7.6s							
BJI2				L	L			
	comp=Z,130nm,18.3s							
BJI2				L	L			
	comp=Z,100nm,16.2s							
BJI2				L	L			
	comp=Z,120nm,23.7s							
G19K	**Purcell Mounta**	**84.72**	**8**	IAmb	IAmb	05 57 46.1		
	comp=Z,13nm,1.1s							
MAW	**Mawson**	**84.77**	**199**	LR	LR	06 33 02.0		
	comp=Z,620nm,20.1s,baz=105,slow=34							
HDA	**Harding Lake**	**84.83**	**12**	IAmb	IAmb	05 57 50.1		
	comp=Z,6.1nm,0.8s							
DLBC	**Dease Lake**	**84.84**	**23**	LR	LR	06 27 30.4		
	comp=Z,682nm,21.2s,baz=156,slow=30							
BCAR	**Beaver Creek A**	**84.84**	**15**	P	**P**	**05 57 41.3**	**-0.1**	
CCB	**Clear Creek Bu**	**84.87**	**12**		**P**	**05 57 40.4**	**-1.0**	
GDL2	**Guadalupe Moun**	**84.98**	**54**	P	**P**	**05 57 43.9**	**+1.0**	
I23K	**Minto, Yukon-K**	**85.02**	**11**	IAmb	IAmb	05 57 50.3		
	comp=Z,14nm,1.4s							
IMAR	**Indian Mountai**	**85.04**	**9**	P	**P**	**05 57 42.2**	**-0.1**	
COLA	**College**	**85.06**	**12**	P	**P**	**05 57 42.7**	**+0.3**	
SCRK	**Sand Creek**	**85.09**	**14**	P	**P**	**05 57 42.2**	**-0.5**	
SCRK				IAmb	IAmb	05 57 50.8		
	comp=Z,8.9nm,1.3s							
IL31		**85.16**	**12**	IAmb	IAmb	05 57 48.2		
	comp=Z,14nm,1.2s							
ILAR	**Eielson Array**	**85.16**	**12**	P	**P**	**05 57 42.2**	**-0.7**	
	comp=Z,6.5nm,1.1s,baz=221,slow=5.9,SNR=24							
ILAR				LR	LR	06 28 16.6		
	comp=Z,362nm,21.0s,baz=220,slow=30							
	comp=Z,6.5nm,1.1s							
ILAR	**Eielson Array**	**85.16**	**12**	P	**P**	**05 57 42.6**	**-0.4**	
ENH	**Enshi**	**85.47**	**304**		**P**	**05 57 46.2**	**+0.9**	
G21K	**Allakaket**	**85.58**	**9**	IAmb	IAmb	05 57 46.6		
	comp=Z,6.8nm,1.2s							
M30M	**Minto, Yukon**	**85.78**	**17**	IAmb	IAmb	05 58 15.5		
	comp=Z,11nm,1.4s							
PDAR	**Pinedale Array**	**85.93**	**43**	P	**P**	**05 57 48.9**	**+1.3**	
	comp=Z,0.7nm,0.8s,baz=214,slow=2.1,SNR=6.1							
PDAR				LR	LR	06 29 17.7		
	comp=Z,118nm,19.8s,baz=234,slow=31							
	comp=Z,0.7nm,0.8s							
E19K	**Redstone River**	**85.95**	**7**	IAmb	IAmb	05 57 52.1		
	comp=Z,16nm,1.4s							
PRP	**Porcupine Dome**	**86.10**	**12**	P	**P**	**05 57 48.8**	**+1.0**	
PRP				IAmb	IAmb	05 57 53.2		
	comp=Z,13nm,1.4s							
BILL	**Bilibino**	**86.25**	**354**		**P**	**05 57 48.4**	**+0.2**	
BILL				IAmb	IAmb	05 57 53.3		
	comp=Z,14nm,1.1s							
DAWY	**Dawson**	**86.28**	**15**		**P**	**05 57 49.1**	**+0.5**	
DAWY				IAmb	IAmb	05 57 57.2		
	comp=Z,7.3nm,1.1s							
G23K	**Bananza Creek**	**86.31**	**10**	IAmb	IAmb	05 57 53.9		
	comp=Z,7.3nm,1.2s							
K29M	**Barlow Dome**	**86.59**	**16**	IAmb	IAmb	05 57 55.6		
	comp=Z,12nm,1.4s							
E22K	**Anaktuvuk Pass**	**87.33**	**9**	P	**P**	**05 57 54.3**	**+0.7**	
XAN	**Xi'an**	**87.39**	**307**	⇓P	**P**	**05 57 55.9**	**+1.2**	
XAN				pP	pP	05 58 00.5	-1.2	
XAN				pmax	pmax			
	comp=Z,9.0nm,1.0s							
CMIG	**Matias Romero**	**87.51**	**71**	LR	LR	06 28 09.3		
	comp=Z,393nm,20.2s,baz=252,slow=30							
BMAR	**Burnt Mountain**	**87.95**	**12**	P	**P**	**05 57 57.2**	**+0.7**	
HHC	**Hu-ho-hao-te**	**88.23**	**314**	*e*P	**P**	**05 57 59.4**	**+0.8**	
HHC				pmax	pmax			
	comp=Z,4.0nm,0.6s							
HHC				pmax	pmax			
	comp=Z,130nm,4.5s							
KMI2	**Kunming**	**89.18**	**297**	P	**P**	**05 58 06.6**	**+3.0**	
KMI2				pmax	pmax			
	comp=Z,10.0nm,1.1s							
KMI2				L	L			
	comp=Z,260nm,16.5s							
KMI2				L	L			
	comp=Z,320nm,23.4s							
ELIB	**Princess Elisa**	**89.71**	**186**	*d*P	**P**	**05 58 06.0**	**+0.8**	
	comp=Z,4.4nm,1.4s							
YAK	**Yakutsk**	**89.88**	**338**	LR	LR	06 39 41.5		
	comp=Z,68nm,18.0s,baz=112,slow=36							
PLCA	**Paso Flores**	**90.35**	**133**	LR	LR	06 33 17.8		
	comp=Z,151nm,18.0s,baz=246,slow=32							
CMAR	**Chiang Mai Arr**	**90.36**	**289**	P	**P**	**05 58 10.2**	**+1.2**	
	comp=Z,1.0nm,0.3s,baz=112,slow=3.4,SNR=11							
CMAR				LR	LR	06 34 53.4		
	comp=Z,82nm,21.7s,baz=110,slow=33							
	comp=Z,1.0nm,0.3s							
F31M	**Tsiigehtchic**	**90.38**	**15**	P	**P**	**05 58 07.8**	**-0.1**	
F31M				IAmb	IAmb	05 58 15.2		
	comp=Z,9.1nm,1.2s							
PZH	**PanZhiHua**	**90.48**	**298**	P	**P**	**05 58 10.3**	**+0.8**	
TROLL	**Troll, Antarti**	**90.67**	**180**	P	**P**	**05 58 09.9**	**+0.2**	
APG	**El Apazote**	**90.89**	**75**	LR	LR	06 33 31.9		
	comp=Z,11nm,18.5s,baz=310,slow=32							
SNAA	**Sanae**	**90.91**	**178**	LR	LR	06 36 52.3		
	comp=Z,262nm,19.0s,baz=154,slow=34							
VNA3	**Neumayer Olymp**	**90.99**	**176**	⇓P	**P**	**05 58 11.1**	**+0.1**	
	comp=Z,6.6nm,0.9s							
VNA3				⇓PP	**PP**	**06 01 45.9**	**-0.7**	
INK	**Inuvik**	**91.10**	**15**	LR	LR	06 31 49.9		
	comp=Z,274nm,21.3s,baz=238,slow=31							
VNA2	**Neumayer--Watz**	**91.44**	**176**	⇓P	**P**	**05 58 12.1**	**-0.9**	
	comp=Z,5.0nm,0.6s,baz=210,slow=4.7							
VNA1	**Neumayer--Stat**	**91.66**	**176**	⇓PP	PP	06 01 50.1	-1.7	
LZH	**Lanzhou**	**92.02**	**307**	*e*P	**P**	**05 58 13.7**	**-2.8**	
LZH				sP	sP	05 58 24.7	-1.4	
LZH				pmax	pmax			
	comp=Z,13nm,1.2s							
YKA	**Yellowknife Ar**	**93.30**	**24**	P	**P**	**05 58 21.2**	**-0.3**	
	comp=Z,0.6nm,1.0s,baz=252,slow=4.7,SNR=5.5							
YKA				LR	LR	06 32 36.4		
	comp=Z,396nm,21.8s,baz=244,slow=30							
	comp=Z,0.6nm,1.0s							
JTS	**Las Juntas de**	**94.63**	**81**	LR	LR	06 30 40.2		
	comp=Z,245nm,20.5s,baz=261,slow=29							
NNA	**Nana**	**95.56**	**104**	LR	LR	06 32 00.9		
	comp=Z,235nm,21.0s,baz=252,slow=29							
ATAH	**Atahualpa**	**95.66**	**99**	LR	LR	06 31 14.1		
	comp=Z,430nm,21.4s,baz=244,slow=29							
TIXI	**Tiksi**	**96.24**	**345**	LR	LR	06 36 15.4		
	comp=Z,308nm,21.9s,baz=176,slow=32							
TLY	**Talaya**	**97.38**	**322**	LR	LR	06 38 44.4		
	comp=Z,107nm,19.3s,baz=104,slow=33							
ULM	**Lac du Bonnet**	**97.55**	**40**	LR	LR	06 37 11.6		
	comp=Z,443nm,19.8s,baz=238,slow=32							
BRDH	**Bariadhala**	**98.13**	**291**	LR	LR	06 39 50.5		
	comp=Z,129nm,21.6s,baz=154,slow=34							
WMQ	**Urumqi**	**105.96**	**311**	Pdif	**Pdif**	**05 59 19.9**	**+0.9**	
WMQ				L	L			
	comp=Z,140nm,24.3s							
BNN	**Bunyan**	**144.65**	**314**		**PKPab**	**06 04 41.9**	**-1.1**	
OJC	**Ojcow**	**144.83**	**342**	*e*PKP	**PKiKP**	**06 04 47.2**	**-0.6**	
STHS	**Stebnicka Huta**	**145.07**	**340**	*e*PKP	**PKPdf**	**06 04 45.3**	**+0.8**	
KSP	**Ksiaz**	**145.21**	**346**	*e*PKP	**PKPab**	**06 04 46.8**	**+0.7**	
NIE	**Niedzica**	**145.38**	**340**	*e*PKP	**PKiKP**	**06 04 48.0**	**-1.0**	
CLL	**Collm**	**145.45**	**349**	*i* PKPbc	**PKiKP**	**06 04 49.2**	**+0.2**	
	comp=Z,14nm,1.0s							
CLL	**Collm**	**145.45**	**349**	*e*PKPbc	**PKiKP**	**06 04 49.5**	**+0.5**	
	baz=13,slow=2.9							
CHVC	**Chvalec**	**145.50**	**346**	*e*PKP	**PKPab**	**06 04 46.5**	**+1.0**	
LODK	**Lodwar**	**145.64**	**250**		**PKPab**	**06 04 47.3**	**+0.1**	
DPC	**Dobruska-Polom**	**145.66**	**345**	*e*PKP	**PKPab**	**06 04 46.8**	**+0.7**	
GTTG	**Gottingen**	**145.67**	**353**	*e*PKPbc	**PKiKP**	**06 04 50.1**	**+0.7**	
	baz=13,slow=2.9							
BRG	**Berggiesshubel**	**145.69**	**348**	*e*PKPbc	**PKiKP**	**06 04 50.6**	**+1.1**	
	baz=13,slow=2.9							

BR131	**Keskin Array S**	**145.71**	**316**		**PKPbc**	**06 04 46.2**	**-0.3**	
BRTR	**Keskin Array B**	**145.71**	**316**	PKPbc	**PKPab**	**06 04 46.4**	**-0.5**	
	comp=Z,10nm,1.0s,baz=174,slow=2.4,SNR=8.2							
BRTR	**Keskin Array B**	**145.71**	**316**		**PKPbc**	**06 04 46.2**	**-0.3**	
KRLC	**Kraliky**	**145.80**	**345**	*e*PKP	**PKiKP**	**06 04 47.9**	**-2.0**	
MORC	**Moravsky Berou**	**145.87**	**344**		**PKPab**	**06 04 47.6**	**+0.6**	
MORC	**Moravsky Berou**	**145.87**	**344**	*e*PKP	**PKPab**	**06 04 47.7**	**+0.8**	
LANS	**Liptovska Anna**	**145.88**	**341**	*e*PKP	**PKiKP**	**06 04 52.7**	**+2.6**	
BUG	**Bochum--Univer**	**146.04**	**356**	*e*PKPbc	**PKiKP**	**06 04 51.8**	**+1.5**	
	baz=13,slow=2.9							
KASTN	**Kahler Asten**	**146.18**	**354**	*e*PKPbc	**PKiKP**	**06 04 51.9**	**+1.3**	
	baz=13,slow=2.9							
MOX	**Moxa**	**146.32**	**351**	*e*PKPbc	**PKiKP**	**06 04 52.2**	**+1.3**	
	baz=13,slow=2.9							
UBBA	**Unterbreizbach**	**146.38**	**352**	*e*PKPbc	**PKiKP**	**06 04 52.4**	**+1.6**	
	baz=13,slow=2.9							
TANN	**Tannenbergstha**	**146.40**	**349**	*e*PKPbc	**PKiKP**	**06 04 52.6**	**+1.5**	
	baz=13,slow=2.9							
VRAC	**Vranov**	**146.55**	**344**	*e*PKP	**PKPab**	**06 04 49.8**	**+0.3**	
JAVC	**Velka Javorina**	**146.67**	**343**	*e*PKP	**PKPab**	**06 04 49.9**	**-0.1**	
KRUC	**Moravsky**	**146.83**	**344**	*e*PKP	**PKPab**	**06 04 50.1**	**-0.5**	
MANZ	**Manzenberg**	**146.88**	**350**	*e*PKPbc	**PKiKP**	**06 04 54.1**	**+2.0**	
	baz=13,slow=2.9							
ZVC	**Zvikov**	**147.00**	**347**	*e*PKP	**PKiKP**	**06 04 52.1**	**-0.2**	
ROTZ	**Rotzenmuhle**	**147.07**	**349**	*e*PKPbc	**PKiKP**	**06 04 54.6**	**+2.1**	
	baz=13,slow=2.9							
TNS	**Taunus Mts**	**147.14**	**354**	*e*PKPbc	**PKiKP**	**06 04 55.0**	**+2.4**	
	baz=13,slow=2.9							
MODS	**Modra-Piesok**	**147.22**	**343**	*e*PKP	**PKiKP**	**06 04 55.9**	**+3.1**	
KHC	**Kasperske Hory**	**147.42**	**348**	*e*PKP	**PKiKP**	**06 04 54.8**	**+1.6**	
WET	**Wettzell**	**147.55**	**348**	*e*PKPbc	**PKiKP**	**06 04 56.2**	**+2.7**	
	baz=13,slow=2.9							
GEC2	**GERESS Array S**	**147.67**	**347**	*e*PKPbc	**PKPab**	**06 04 56.5**	**+2.5**	
	baz=13,slow=2.9							
GERES	**GERESS Array B**	**147.67**	**347**	PKPbc	**PKPdf**	**06 04 49.6**	**+0.6**	
	comp=Z,5.6nm,1.2s,baz=355,slow=6.4,SNR=8.0							
WLF	**Walferdange**	**147.88**	**357**	*e*PKPbc	**PKPab**	**06 04 57.4**	**+2.7**	
	baz=13,slow=2.9							
CONA	**Conrad Observa**	**148.01**	**344**	*e*pPKP	pPKPdf	06 04 56.8	-0.2	
	comp=Z,17nm,1.6s							
RONA	**Rosalia, Austr**	**148.11**	**343**	*e*pPKiKP	**PKPab**	**06 04 57.1**	**+1.4**	
	comp=Z,6.1nm,0.9s							
MOA	**Molln**	**148.48**	**346**	*e*PKiKP	**PKiKP**	**06 04 54.7**	**-0.8**	
	comp=Z,5.9nm,1.0s							
ARSA	**Arzberg**	**148.73**	**344**	*i* pPKP	pPKPdf	06 05 01.3	+3.3	
	comp=Z,6.5nm,1.1s							
BIOA	**Bad Ischl, Aus**	**148.77**	**347**	*i* pPKiKP	**PKPab**	**06 04 59.1**	**+0.7**	
	comp=Z,6.7nm,0.9s							
BFO	**Black Forest**	**149.03**	**354**	*e*PKPbc	**PKPab**	**06 04 60.0**	**+0.6**	
	baz=13,slow=2.9							
LESA	**Schwarzleotal**	**149.23**	**348**	*e*pPKiKP	**PKPab**	**06 05 00.8**	**+0.5**	
	comp=Z,11nm,1.2s							
SOKA	**Soboth**	**149.38**	**344**	*i* pPKiKP	**PKPab**	**06 05 00.9**	**0.0**	
	comp=Z,14nm,1.5s							
KBA	**Koelnbreinsper**	**149.42**	**347**	*i* pPKiKP	**PKPab**	**06 05 00.6**	**-0.6**	
	comp=Z,11nm,1.2s							
UBR	**Ueberruh**	**149.44**	**351**	*e*PKPbc	**PKPab**	**06 05 00.6**	**-0.5**	
	baz=13,slow=2.9							
RETA	**Reutte**	**149.52**	**350**	*e*PKP	**PKPab**	**06 05 00.7**	**-0.8**	
	comp=Z,3.0nm,0.6s							
WATA	**Walderalm**	**149.53**	**349**	*e*PKP	**PKPab**	**06 05 00.6**	**-1.0**	
	comp=Z,14nm,1.4s							
WTTA	**Wattenberg**	**149.59**	**349**	*e*pPKiKP	**PKPab**	**06 05 01.6**	**-0.3**	
	comp=Z,14nm,1.3s							
MOTA	**Moosalm**	**149.60**	**350**	*i* pPKiKP	**PKPab**	**06 05 01.7**	**-0.2**	
	comp=Z,19nm,1.6s							
OBKA	**Obir**	**149.66**	**345**	*i* pPKP	**PKPab**	**06 05 03.3**	**+1.2**	
	comp=Z,9.6nm,1.6s							
SQTA	**Sankt Quirin**	**149.71**	**349**	*e*pPKiKP	**PKPab**	**06 05 02.3**	**0.0**	
	comp=Z,12nm,1.3s							
MYKA	**Terra Mystica**	**149.77**	**346**	*e*PKP	**PKPab**	**06 05 02.0**	**-0.5**	
	comp=Z,13nm,1.5s							
DAVA	**Damuels**	**149.86**	**351**	*i* pPKiKP	**PKPab**	**06 05 01.9**	**-1.1**	
	comp=Z,7.3nm,1.0s							
ABTA	**Abfaltersbach**	**149.91**	**347**	*i* PKiKP	**PKiKP**	**06 04 59.5**	**+0.9**	
	comp=Z,13nm,1.2s							
FETA	**Feichten**	**149.98**	**350**	*i* pPKP	pPKPdf	06 05 01.3	+1.1	
	comp=Z,12nm,1.1s							
FUORN	**Ofenpass-Fuorn**	**150.45**	**350**		**PKiKP**	**06 04 59.8**	**0.0**	
TORD	**Torodi Ar. Bea**	**175.34**	**159**	PKPab	**PKPab**	**06 06 55.9**	**+1.7**	
	comp=Z,1.5nm,0.9s,baz=200,slow=3.8,SNR=5.4							

ASRS ***10*** *06:03:24.0±0.7,54.˚63N×83.˚68E,h0km,M2.4(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 10 06:03:26.5±2.1,54.˚56N×83.˚74E,h0km,mbtmp2.7/2, ML2.3/2,Error ellipse: s-maj=16.8km s-min=10.2km az=166.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.88**	**134**	I	I	06 08 52.2	
	baz=316,slow=325,SNR=5.3						
ZALV	**Zalesovo Beam**	**0.88**	**134**	Pg	Pg	06 03 43.6	+0.2
	1.2nm,0.3s,baz=315,slow=16,SNR=19						
ZALV				Lg	Lg	06 03 56.3	
	6.9nm,0.3s,baz=316,slow=30,SNR=46						
KURBB	**Kurchatov Arra**	**5.07**	**221**	Pn	Pn	06 04 44.3	+0.6
	0.1nm,0.3s,baz=39,slow=13,SNR=6.7						
KURBB				Lg	Lg	06 06 06.5	
	0.1nm,0.3s,baz=39,slow=30,SNR=4.4						
	0.5nm,0.2s						
MKAR	**Makanchi Array**	**7.83**	**187**	Pn	Pn	06 05 20.9	-0.8
	0.1nm,0.3s,baz=11,slow=16,SNR=2.2						
MKAR				Lg	Lg	06 07 32.0	
	baz=10,slow=28						
	0.2nm,0.6s						

IDC ***10*** *06:30:26.1±2.4,32.˚10N×141.˚65E,h0km,mb3.9/5, mbtmp3.8/7, ML3.4/2, Error ellipse: s-maj=78.9km s-min=17.5km az=63.0*
JMA ***10*** *06:30:27.8±0.3,32.˚3N±0.˚9×14˚2E±˚,h67km,MV3.3/12,E OFF HACHIJOJIMA ISLAND*
ISC 10 06:30:28.4±1.1,32.˚19N±0.˚06×141.˚9E±0.˚1,h29km,n14, σ1§16/18,mb3.9/5,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**2.02**	**298**	*e*P	**Pn**	**06 31 00.1**	**-0.3**
JHJ2				*e*S	**Sn**	**06 31 24.5**	**-0.2**
JHJ	**Hachijo jima 2**	**2.04**	**298**	Pn	**Pn**	**06 31 00.3**	**-0.5**
	20nm,0.3s,baz=170,slow=17,SNR=1.5						
JHJ				Sn	**Sn**	**06 31 23.9**	**-1.4**
	31nm,0.3s,baz=75,slow=20,SNR=2.7						
BSO1	**Boso 1**	**2.59**	**342**	*e*P	**Pn**	**06 31 07.3**	**-0.5**
BSO1				*e*S	**Sn**	**06 31 37.4**	**-0.7**
BSO3	**Boso 3**	**2.87**	**336**	*e*P	**Pn**	**06 31 11.5**	**-0.4**
JOD2	**Odawara 2**	**3.88**	**323**	*e*S	**Sn**	**06 32 09.2**	**-1.5**
JRY	**Ryogami san**	**4.58**	**327**	*e*P	**Pn**	**06 31 35.7**	**+0.1**
JAG	**Ashikaga**	**4.70**	**335**	*e*S	**Sn**	**06 32 28.7**	**-2.2**
JCJ	**Chichijima**	**5.08**	**178**	Pn	**Pn**	**06 31 41.4**	**-1.2**
	8.3nm,0.3s,baz=131,slow=19,SNR=1.0						
JCJ				Sn	**Sn**	**06 32 38.5**	**-1.7**
	8.4nm,0.3s,baz=288,slow=20,SNR=2.2						
	19nm,0.3s						
MJAR	**Matsushiro Arr**	**5.33**	**326**	Pn	**Pn**	**06 31 46.4**	**+0.4**
	0.2nm,0.3s,baz=151,slow=11,SNR=3.3						
	1.6nm,0.3s						
ZALV	**Zalesovo Beam**	**45.60**	**316**	P	**P**	**06 38 46.1**	**+0.4**
	0.6nm,0.4s,baz=82,slow=8.2,SNR=2.3						
	0.6nm,0.4s						
MKAR	**Makanchi Array**	**47.19**	**306**	P	**P**	**06 38 59.2**	**+0.8**
	1.1nm,0.7s,baz=90,slow=9.1,SNR=12						
	1.1nm,0.7s						
KURBB	**Kurchatov Arra**	**49.43**	**311**	P	**P**	**06 39 16.0**	**+0.5**
	1.0nm,0.2s,baz=83,slow=8.2,SNR=4.0						
	1.0nm,0.2s						
WRA	**Warramunga Arr**	**52.34**	**189**	P	**P**	**06 39 38.8**	**+1.1**
	0.6nm,0.4s,baz=4.6,slow=7.5,SNR=8.0						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**56.07**	**189**	P	**P**	**06 40 06.5**	**+1.7**
	0.3nm,0.5s,baz=3.6,slow=6.4,SNR=5.3						
	0.3nm,0.5s						

AFAD ***10*** *06:36:47.6,38.˚32N×44.˚68E,h6km±2km,ML2.4*
AZER ***10*** *06:36:50.1,38.˚45N×44.˚58E,h7km,ml2.6*
TEH ***10*** *06:36:51.5,38.˚42N×44.˚45E,h6km±84km,ML2.7, Presumed earthquake*
ISC 10 06:36:51.5±1.3,38.˚41N±0.˚03×44.˚57E±0.˚02,h3km±11km, n22,σ1§32/37,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.52**	**299**	P	**Pg**	**06 37 00.6**	**-0.9**
OZAP				S	**Sb**	**06 37 09.5**	**-1.9**
OZAP				IAML		06 37 11.0	
	comp=N,403nm,1.0s						
ISHB	**Shabestar**	**0.83**	**98**	Pg	**Pb**	**06 37 08.6**	**-0.2**
TVAN	**Van**	**0.92**	**278**	P	**Pg**	**06 37 07.1**	**-2.1**
TVAN				IAML		06 37 33.0	
	comp=N,167nm,0.5s						
TVAN				IAML		06 37 36.0	
	comp=E,132nm,0.8s						
IMRD	**Marand**	**0.94**	**71**	Pg	**Pn**	**06 37 10.8**	**-1.0**
IMRD				Sg	**Sn**	**06 37 25.4**	**-0.4**
MAKU	**Maku**	**0.95**	**5**	Pg	**Pg**	**06 37 09.6**	**-0.2**
VMUR	**Van-Muradiye**	**0.97**	**307**	P	**Pg**	**06 37 08.8**	**-1.4**
VMUR				S	**Sb**	**06 37 24.3**	**-0.2**
VMUR				IAML		06 37 26.0	
	comp=N,98nm,0.5s						
VMUR				IAML		06 37 29.0	
	comp=E,79nm,0.7s						
NAX	**Nakhchivan**	**1.05**	**43**	P	**Pn**	**06 37 12.4**	**-0.9**
NAX				S	**Sn**	**06 37 27.6**	**-0.8**
HAKT	**HAKKARI**	**1.09**	**219**	P	**Pb**	**06 37 12.9**	**-0.2**
HAKT				S	**Sn**	**06 37 31.7**	**+2.1**
GEVA	**Gevas**	**1.19**	**266**	P	**Pg**	**06 37 11.8**	**-2.6**
GEVA				S	**Sb**	**06 37 30.6**	**-0.2**
GEVA				IAML		06 37 37.0	
	comp=E,52nm,0.6s						
GEVA				IAML		06 37 40.0	
	comp=N,64nm,0.3s						
ORD	**Ordubad**	**1.23**	**65**	P	**Pn**	**06 37 15.7**	**0.0**
ORD				S	**Sn**	**06 37 33.7**	**+0.9**
SBZ	**Shahbuz**	**1.25**	**38**	P	**Pn**	**06 37 15.6**	**-0.4**
SBZ				S	**Sn**	**06 37 34.8**	**+1.4**
ITBZ	**Tabriz**	**1.25**	**98**	Pg	**Pn**	**06 37 17.5**	**+1.4**
HYR	**Heyderabad**	**1.33**	**9**	P	**Pg**	**06 37 17.2**	**+0.2**
HYR				S	**Sn**	**06 37 36.0**	**+0.7**
ADCV	**BITLIS_Adilcev**	**1.50**	**286**	P	**Pg**	**06 37 20.2**	**-0.1**
ADCV				S	**Sg**	**06 37 42.9**	**+3.2**
ADCV				IAML		06 37 45.0	
	comp=N,30nm,0.6s						
ADCV				IAML		06 37 45.0	
	comp=E,48nm,0.5s						
IGDI	**IGDIR**	**1.51**	**345**	P	**Pg**	**06 37 20.1**	**-0.4**
IGDI				S	**Sg**	**06 37 42.6**	**+2.7**
PERV	**Siirt/Pervari-**	**1.66**	**255**	P	**Pg**	**06 37 24.3**	**+0.9**
PERV				IAML		06 37 54.0	
	comp=E,88nm,0.4s						
PERV				IAML		06 37 55.0	
	comp=N,109nm,0.7s						
DORK	**Agr/Tutak/Do**	**1.71**	**306**	P	**Pn**	**06 37 21.7**	**-0.6**
DORK				S	**Sg**	**06 37 47.5**	**+1.2**
DORK				IAML		06 37 48.0	
	comp=N,25nm,0.5s						
DORK				IAML		06 38 05.0	
	comp=E,17nm,1.1s						
KOTA	**Agri, Merkez-K**	**1.75**	**323**	P	**Pb**	**06 37 23.6**	**-0.8**
KOTA				S	**Sg**	**06 37 49.4**	**+1.6**
IHRS	**Heris**	**1.94**	**92**	Pn	**Pg**	**06 37 28.9**	**+0.1**
GDB	**GEDABAY**	**2.48**	**21**	P	**Pb**	**06 37 36.8**	**-0.1**
GDB				S	**Sb**	**06 38 08.7**	**+0.7**
GRMI	**Germi**	**2.63**	**80**	Pn	**Pb**	**06 37 38.1**	**-1.4**
YRD	**Yardimli**	**2.92**	**79**	P	**Pb**	**06 37 43.4**	**-0.9**
YRD				S	**Sg**	**06 38 24.1**	**-1.2**

IDC ***10*** *06:39:52.1±0.7,31.˚83N×141.˚64E,h0km,mb3.9/12, mbtmp3.9/15,ML3.3/3,MS3.3/3, Error ellipse: s-maj=21.8km s-min=16.4km az=74.0*
JMA ***10*** *06:39:54.0±0.3,32.˚0N±1.˚0×14˚2E±˚,h82km,MV3.2/12, NEAR TORISHIMA IS*
NEIC ***10*** *06:39:54.4±1.6,31.˚80N±0.˚08×141.˚6E±0.˚2,h10km±1km, mb4.5/19, Error ellipse: s-maj=26.3km s-min=12.2km az=256.0*
ISC 10 06:39:55.7±0.6,31.˚80N±0.˚07×141.˚6E±0.˚1,h26km,n47, σ1§14/42,mb4.3/23,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res

comp=Z,2.7nm,0.8s
AB31 Akbulak array 61.49 312 P **P** 06 50 09.7 -0.3
AB31 IAmb IAmb 06 50 11.8
comp=Z,3.4nm,1.2s
YKA Yellowknife Ar 68.29 29 P **P** 06 50 52.7 -1.4
comp=Z,0.4nm,0.9s,baz=297,slow=6.6,SNR=5.3
comp=Z,0.4nm,0.9s
NVAR Mina Array Bea 78.05 52 P **P** 06 51 53.6 +1.1
comp=Z,0.7nm,0.7s,baz=283,slow=5.9,SNR=5.9
comp=Z,0.7nm,0.7s
PDAR Pinedale Array 81.26 45 P **P** 06 52 10.6 +0.7
comp=Z,0.3nm,0.7s,baz=270,slow=3.0,SNR=4.4
comp=Z,0.3nm,0.7s
TXAR Lajitas Array 93.20 53 P **P** 06 53 08.6 +0.4
comp=Z,0.8nm,0.7s,baz=302,slow=2.8,SNR=11
comp=Z,0.8nm,0.7s

IDC 10 06:55:00.8±3.4, 32°.63S×178°.08W, h0km, mb3.9/2, mbtmp3.9/3, ML3.7/1, Error ellipse: s-maj=75.3km s-min=37.3km az=113.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.85**	**214**	Pn	Pn	06 56 42.3	-0.2
	1.5nm,0.3s,baz=256,slow=3.6,SNR=16						
URZ				Sn	Sn	06 58 00.6	-0.5
	3.7nm,0.3s,baz=63,slow=21,SNR=9.7						
	5.1nm,0.5s						
ASAR	**Alice Springs**	**42.97**	**269**	P	P	07 03 02.0	+0.2
	0.7nm,0.5s,baz=111,slow=7.9,SNR=14						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**44.16**	**274**	P	P	07 03 11.2	-0.2
	1.5nm,0.6s,baz=114,slow=7.9,SNR=18						
	1.5nm,0.6s						
FINES	**FINES Array B**	**147.20**	**339**	PKPbc	PKPbc	07 14 44.1	-1.0
	0.7nm,0.5s,baz=46,slow=4.0,SNR=1.6						

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*SOME **10** 07:04:43.2, 40°.38N×72°.60E, h5km*
*KRNET **10** 07:04:45.2±0.1, 40°.60N×72°.68E, h14km, mb2.7*
*ISU **10** 07:04:46, 40°.48N×72°.61E, h11km*
*NNC **10** 07:04:49.3±9.3, 40°.67N×72°.68E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=71.6km s-min=28.7km az=163.0*

ISC 10 07:04:45.2±1.0, 40°.54N±0°.04×72°.70E±0°.03, h10km, n16, σ1§36/25, 11C-3D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSTA	**Tashata**	**0.17**	**284**	P	**Pg**	**07 04 47.2**	**-1.8**
TSTA				S	**Sg**	**07 04 49.9**	**-1.7**
FRG	**Fergana**	**0.71**	**257**	S	**Sg**	**07 05 08.2**	**-0.2**
SFK	**Sufi-Kurgan**	**0.81**	**130**	⇑*i*P	**Pb**	**07 05 01.6**	**+0.1**
SFK				⇑*i*S	**Sb**	**07 05 13.7**	**+1.1**
BTK	**Batken**	**1.51**	**252**	⇑*i*P	**Pg**	**07 05 14.0**	**-0.3**
BTK				⇑*i*S	**Sg**	**07 05 34.9**	**+1.0**
ARLS	**Aral**	**1.81**	**42**	⇑*i*P	**Pb**	**07 05 18.2**	**-0.3**
ARLS				⇑*i*S	**Sg**	**07 05 42.2**	**-1.1**
MNAS	**Manas**	**1.96**	**356**	⇑*i*P	**Pb**	**07 05 20.4**	**-0.6**
MNAS				⇑*i*S	**Sg**	**07 05 46.2**	**-1.9**
MRKS	**Merke**	**2.24**	**10**	Pg	**Pg**	**07 05 27.5**	**-0.7**
	8.8nm,0.4s						
MRKS				Lg	Lg	07 06 00.5	
	30nm,0.4s						
MRKS	**Merke**	**2.24**	**10**	*e*P	**Pg**	**07 05 27.5**	**-0.7**
	8.8nm,0.4s						
MRKS				*e*S	**Sg**	**07 06 00.5**	**+3.1**
	30nm,0.4s						
CHMG	**Chimgan**	**2.27**	**297**	P	**Pg**	**07 05 28.7**	**-0.1**
EKS2	**Erkin-Say**	**2.27**	**21**	⇓*e*P	**Pb**	**07 05 25.4**	**-1.1**
EKS2				⇓*i*S	**Sb**	**07 05 54.7**	**0.0**
AAK	**Ala-Archa**	**2.50**	**32**	⇑⇑Pg	**Pg**	**07 05 33.1**	**0.0**
	2.3nm,0.6s						
AAK				⇑Lg	Lg	07 06 08.1	
	2.2nm,0.5s						
IUG	**Iuzhnay**	**2.57**	**310**	Pg	**Pb**	**07 05 31.7**	**+0.2**
	5.1nm,0.3s						
IUG				Lg	Lg	07 06 07.4	
	14nm,0.5s						
IUG	**Iuzhnay**	**2.57**	**310**	*e*P	**Pb**	**07 05 31.7**	**+0.2**
	5.1nm,0.3s						
IUG				*e*S	**Sg**	**07 06 07.4**	**-0.5**
	14nm,0.5s						
KK31	**Karatay Array**	**3.04**	**328**	⇓Pg	**Pg**	**07 05 46.3**	**+2.8**
	0.5nm,0.3s,baz=143,slow=13						
KK31				⇑Lg	Lg	07 06 23.4	
	1.1nm,0.3s,baz=136,slow=29,SNR=4.7						
BRLS	**Borolday**	**3.28**	**320**	Pg	**Pb**	**07 05 42.5**	**-1.1**
	0.7nm,0.3s						
BRLS				Lg	Lg	07 06 25.8	
	3.7nm,0.1s						
BRLS	**Borolday**	**3.28**	**320**	*e*P	**Pb**	**07 05 42.5**	**-1.1**
	0.7nm,0.3s						
BRLS				*e*S	**Sb**	**07 06 25.8**	**+2.1**
	3.7nm,0.1s						

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*IDC **10** 07:20:56.3±0.5, 0°.57S×20°.66W, h0km, mb4.5/23, mbtmp4.5/24, ML4.7/1, MS4.2/75, Error ellipse: s-maj=20.4km s-min=13.1km az=129.0*
*GFZ **10** 07:20:57.1, 0°.69S×20°.90W, h16km, MW5.1, Moment Tensor Solution. s63 Moment tensor: Mrr=2.98; Mθθ=4.79; Mφφ=1.82; Mrθ=0.18; Mrφ=1.26; Mθφ=1.83; Fault plane solution: NP1:φs=48.00000°, δ59.00000°, λ=-134.00000°. NP2:φs=291.00000°, δ52.00000°, λ=-40.00000°. Principal axes: T 5.0600, Plg3.0000°, Azm168.0000°; N -0.7100, Plg37.0000°, Azm75.0000°; P -4.3600, Plg52.0000°, Azm263.0000°;*
*NEIC **10** 07:20:58.7±2.2, 0°.60S±0°.06×20°.72W±0°.07, h10km±1km, mb5.0/94 Error ellipse: s-maj=14.3km s-min=4.8km az=312.0*
*GCMT **10** 07:20:59.7±0.2, 0°.62S±0°.01×20°.67W±0°.01, h12km±1km, MW5.1/122, Moment Tensor Solution. s53,c69; s122,c194; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=2.54±.17; Mθθ5.91±.14; Mφφ=3.37±.12; Mrθ=0.95±.29; Mθφ0.77±.09; Mφr=1.24±.40; Best double couple: M=5.18300×10^16 NP1:φs306.00000°, δ60.00000°, λ=-22.00000°. NP2:φs47.00000°, δ71.00000°, λ=-148.00000°. Principal axes: T 6.1030, Plg7.0000°, Azm174.0000°; N -1.8400, Plg54.0000°, Azm75.0000°; P -4.2630, Plg36.0000°, Azm270.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*INMG **10** 07:21:00.0±1.8, 0°.51S×20°.87W, h10km, mb5.0, #DIST_RANGE: DISTANT*

ISC 10 07:20:57.6±0.3, 0°.62S±0°.07×20°.82W±0°.06, h10km, n291, σ1§29/208, mb4.9/105, MS4.3/73, 16C-11D, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**9.54**	**139**	Pn	**Pn**	**07 23 14.0**	**-1.0**
	baz=318,slow=13						
H10N2				T	T	07 32 54.2	
	baz=319,slow=74,SNR=472						
H10N3	**ASCENSION HYDR**	**9.54**	**139**	Pn	**Pn**	**07 23 14.0**	**-1.0**
	baz=318,slow=13						
H10N3				T	T	07 32 57.5	
	baz=319,slow=74,SNR=1519						
H10N1	**ASCENSION HYDR**	**9.56**	**139**	Pn	**Pn**	**07 23 13.8**	**-1.4**
	baz=318,slow=13						
H10N1				T	T	07 32 59.2	
	baz=319,slow=74,SNR=686						
ASCN	**Ascension**	**9.71**	**139**		**Pn**	**07 23 15.9**	**-1.5**
H10S3	**ASCENSION HYDR**	**10.30**	**144**	Pn	**Pn**	**07 23 24.2**	**-1.2**
H10S3				T	T	07 34 01.1	
	baz=258,slow=74,SNR=618						
H10S2	**ASCENSION HYDR**	**10.32**	**144**	Pn	**Pn**	**07 23 24.7**	**-0.9**
H10S2				T	T	07 33 52.7	
	baz=322,slow=74,SNR=943						
NBPV	**Pedro Velho**	**15.55**	**248**	*e*P	**Pn**	**07 24 33.6**	**-3.5**
SACV	**Santiago Islan**	**15.73**	**350**	Pn	**Pn**	**07 24 35.9**	**-3.6**
RCBR	**Riachuelo**	**15.92**	**251**	Pn	**Pn**	**07 24 39.5**	**-2.5**
	5.8nm,0.3s,baz=80,slow=17,SNR=92						
RCBR				Sn	Sn	07 27 20.5	-18
	0.6nm,0.3s,baz=185,slow=19,SNR=4.6						
RCBR				LR	LR	07 29 40.4	
	comp=Z,176nm,18.5s,baz=78,slow=33						
RCBR	**Riachuelo**	**15.92**	**251**		**Pn**	**07 24 40.0**	**-2.0**
RCBR				IAmb	IAmb	07 24 42.4	
	comp=Z,34nm,0.4s						
RCBR	**Riachuelo**	**15.92**	**251**	*e*P	**Pn**	**07 24 39.2**	**-2.8**

NBPA	**Parau_RN**	**17.05**	**252**	*e*P	**Pn**	**07 24 55.2**	**-1.1**
DBIC	**Dimbokro**	**17.49**	**65**	P	**Pn**	**07 25 00.9**	**-1.0**
	comp=Z,2.7nm,0.3s,baz=273,slow=13,SNR=28						
DBIC				S	Sn	07 27 60.0	-17
	comp=Z,5.0nm,0.3s,baz=177,slow=11,SNR=4.1						
DBIC				LR	LR	07 30 16.9	
	comp=Z,688nm,21.0s,baz=262,slow=32						
	comp=Z,8.8nm,0.4s						
DBIC	**Dimbokro**	**17.49**	**65**		**Pn**	**07 25 01.8**	**-0.1**
NBMO	**Morrinhos-CE**	**19.40**	**262**	*e*P	**P**	**07 25 23.3**	**-0.8**
NBPS	**Pedro II - PI**	**20.95**	**259**	*e*P	**P**	**07 25 40.4**	**-0.6**
TORD	**Torodi Ar. Bea**	**26.18**	**58**	P	**P**	**07 26 30.9**	**-1.7**
	comp=Z,24nm,0.9s,baz=241,slow=10,SNR=45						
	comp=Z,24nm,0.9s						
TORD	**Torodi Ar. Bea**	**26.18**	**58**		**P**	**07 26 33.4**	**+0.8**
BDFB	**Brasilia**	**30.71**	**240**	LR	LR	07 38 44.8	
	comp=Z,454nm,18.3s,baz=79,slow=35						
MDP	**Montagnes des**	**32.29**	**281**	LR	LR	07 37 56.6	
	comp=Z,205nm,21.6s,baz=92,slow=32						
PMAR	**Madeira**	**33.37**	**6**	*e*P	**P**	**07 27 38.1**	**+1.7**
PMAR				*i* IAmb	IAmb	07 27 52.6	
	comp=Z,107nm,2.3s						
TAM	**Tamanrasset**	**34.63**	**46**		**P**	**07 27 47.6**	**+0.2**
NPGB	**Novo Progresso**	**35.03**	**259**	*e*P	**P**	**07 27 49.5**	**-1.4**
ITTB	**Itaituba**	**35.08**	**263**	*e*P	**P**	**07 27 50.5**	**-0.8**
MD31	**MD31**	**36.59**	**23**		**P**	**07 28 03.3**	**-0.8**
MD01	**Midelt array s**	**36.59**	**23**	P	**P**	**07 28 03.6**	**-0.6**
MDT	**Midelt**	**36.60**	**23**	LR	LR	07 43 22.9	
	comp=Z,1μm,18.2s,baz=220,slow=37						
SALV	**Santo Antonio**	**37.60**	**244**	*e*P	**P**	**07 28 12.3**	**-0.6**
PBDV	**Barranco-do-Ve**	**39.52**	**16**	*e*P	**P**	**07 28 30.4**	**+1.7**
PTEO	**Sao Teotonio**	**39.59**	**15**	*e*P	**P**	**07 28 30.8**	**+1.6**
BOAV	**Boa Vista**	**39.81**	**274**	P	**P**	**07 28 32.8**	**+1.3**
BOAV	**Boa Vista**	**39.81**	**274**	*e*P	**P**	**07 28 31.3**	**-0.2**
PCVE	**Castro Verde**	**39.85**	**16**	*e*P	**P**	**07 28 33.3**	**+1.9**
PCVE				*i* IAmb	IAmb	07 28 34.3	
	comp=Z,48nm,1.0s						
AMBA	**Amambai (Brazi**	**39.93**	**234**	*e*P	**P**	**07 28 30.6**	**-1.8**
MESJ	**Messejana**	**39.99**	**16**	*e*P	**P**	**07 28 34.0**	**+1.4**
MESJ				IAmb	IAmb	07 28 35.5	
	comp=Z,34nm,1.0s						
MESJ	**Messejana**	**39.99**	**16**		**P**	**07 28 33.6**	**+1.0**
MESJ				IAmb	IAmb	07 28 35.3	
	comp=Z,36nm,1.0s						
MESJ	**Messejana**	**39.99**	**16**	*e*P	**P**	**07 28 34.4**	**+1.7**
MESJ				*i* IAmb	IAmb	07 28 34.9	
	comp=Z,44nm,1.1s						
ITAB	**Concordia**	**40.05**	**226**	P	**P**	**07 28 34.8**	**+1.6**
ITAB				IAmb	IAmb	07 29 04.1	
	comp=Z,53nm,1.6s						
PBEJ	**Beja**	**40.27**	**16**	*e*P	**P**	**07 28 36.8**	**+1.9**
PBEJ				*i* IAmb	IAmb	07 28 46.6	
	comp=Z,34nm,1.5s						
BDQN	**Bodoquena, MS**	**40.27**	**238**	*e*P	**P**	**07 28 34.3**	**-0.9**
PTLB	**Pontes e Lacer**	**40.59**	**247**		**P**	**07 28 39.1**	**+1.2**
PTLB	**Pontes e Lacer**	**40.59**	**247**	*e*P	**P**	**07 28 36.8**	**-1.1**
MOE	**Montemor**	**40.60**	**15**	*e*P	**P**	**07 28 39.9**	**+2.2**
PBAR	**Barrancos**	**40.64**	**17**	*e*P	**P**	**07 28 39.6**	**+1.7**
PBAR				*i* IAmb	IAmb	07 28 40.4	
	comp=Z,24nm,1.1s						
EVO	**Evora**	**40.70**	**15**	*e*P	**P**	**07 28 40.1**	**+1.6**
EVO				*i* IAmb	IAmb	07 28 53.2	
	comp=Z,27nm,1.9s						
PARRA	**Arraiolos**	**40.96**	**15**	*e*P	**P**	**07 28 42.5**	**+1.8**
PESTR	**Estremoz**	**41.13**	**16**	*e*P	**P**	**07 28 44.3**	**+2.3**
PMTG	**Montargil**	**41.15**	**15**	*e*P	**P**	**07 28 43.8**	**+1.7**
PMTG				*i* IAmb	IAmb	07 29 31.5	
	comp=Z,26nm,2.0s						
MURT	**Porto Murtinho**	**41.51**	**237**	*e*P	**P**	**07 28 44.2**	**-1.2**
PSARD	**Sardoal**	**41.67**	**15**	*e*P	**P**	**07 28 48.3**	**+1.9**
PSARD				*i* IAmb	IAmb	07 28 50.0	
	comp=Z,45nm,1.3s						
PMRV	**Marv??o**	**41.71**	**16**	*e*P	**P**	**07 28 48.8**	**+2.0**
PMRV				*i* IAmb	IAmb	07 28 49.9	
	comp=Z,40nm,1.2s						
TSUM	**Tsumeb**	**41.92**	**119**	LR	LR	07 43 57.0	
	comp=Z,310nm,18.6s,baz=331,slow=33						
PCAS	**Casmilo, Conde**	**42.01**	**14**	*e*P	**P**	**07 28 51.5**	**+2.2**
PCAS				*i* IAmb	IAmb	07 28 54.2	
	comp=Z,43nm,1.6s						
PCBR	**Castelo Branco**	**42.07**	**15**	*e*P	**P**	**07 28 52.0**	**+2.3**
MTE	**Manteigas**	**42.58**	**15**	*e*P	**P**	**07 28 55.5**	**+1.5**
PVIS	**Viseu**	**42.79**	**14**	*e*P	**P**	**07 28 57.3**	**+1.7**
ESDC	**Sonseca Array**	**42.96**	**19**	P	**P**	**07 28 58.2**	**+1.2**
	comp=Z,7.4nm,0.9s,baz=205,slow=8.8,SNR=38						
ESDC				PP	**PP**	**07 30 35.4**	**-1.5**
	comp=Z,4.2nm,1.0s,baz=211,slow=9.2,SNR=7.1						
ESDC				LR	LR	07 47 27.1	
	comp=Z,176nm,19.1s,baz=206,slow=37						
	comp=Z,4.4nm,0.9s						
ESDC	**Sonseca Array**	**42.96**	**19**	P	**P**	**07 28 58.0**	**+1.0**
ESBB	**Sonseca Array**	**42.96**	**19**	P	**P**	**07 28 57.8**	**+0.7**
MVO	**Moncorvo**	**43.43**	**15**	*e*P	**P**	**07 29 02.4**	**+1.6**
MVO				*i* IAmb	IAmb	07 29 03.2	
	comp=Z,43nm,1.2s						
CPUP	**Villa Florida**	**43.45**	**231**	P	**P**	**07 29 02.3**	**+1.2**
	comp=Z,2.4nm,0.9s,baz=69,slow=13,SNR=5.5						
CPUP				LR	LR	07 46 25.2	
	comp=Z,133nm,19.0s,baz=69,slow=35						
	comp=Z,2.4nm,0.9s						
CPUP	**Villa Florida**	**43.45**	**231**		**P**	**07 29 02.5**	**+1.3**
TEFE	**Tefe**	**43.88**	**266**	*e*P	**P**	**07 29 04.0**	**-0.8**
PBRG	**Braganca**	**44.10**	**15**	*e*P	**P**	**07 29 07.1**	**+0.8**
KEST	**Kesra**	**45.80**	**35**	P	**P**	**07 29 19.0**	**-0.9**
	comp=Z,18nm,0.9s,baz=326,slow=7.2,SNR=7.6						
KEST				LR	LR	07 49 32.5	
	comp=Z,2μm,19.3s,baz=227,slow=38						
	comp=Z,18nm,0.9s						
KEST	**Kesra**	**45.80**	**35**	P	**P**	**07 29 21.0**	**+1.1**
SJG	**San Juan**	**48.30**	**295**	LR	LR	07 45 51.0	
	comp=Z,158nm,21.2s,baz=86,slow=31						
LPAZ	**La Paz**	**49.15**	**249**	P	**P**	**07 29 47.4**	**+0.5**
	comp=Z,6.3nm,0.6s,baz=88,slow=3.5,SNR=42						
LPAZ				LR	LR	07 50 19.8	
	comp=Z,294nm,18.1s,baz=88,slow=36						
	comp=Z,6.3nm,0.6s						
LPAZ	**La Paz**	**49.15**	**249**		**P**	**07 29 47.8**	**+0.9**
LPAZ				IAmb	IAmb	07 29 51.6	
	comp=Z,8.0nm,0.8s						
LPAZ	**La Paz**	**49.15**	**249**	*e*P	**P**	**07 29 45.0**	**-1.9**
KHWEE	**KHWEE**	**49.77**	**119**	P	**P**	**07 29 51.0**	**0.0**
VAE	**Valguarnera**	**49.96**	**37**	LR	LR	07 52 30.5	
	comp=Z,749nm,18.2s,baz=335,slow=38						
SUR	**Sutherland**	**50.35**	**133**	LR	LR	07 46 31.9	
	comp=Z,271nm,22.0s,baz=300,slow=30						
SDV	**Santo Domingo**	**50.51**	**282**	LR	LR	07 50 14.9	
	comp=Z,107nm,18.2s,baz=77,slow=35						
PB16	**IPOC Station P**	**50.93**	**247**	P	**P**	**07 29 59.5**	**-0.8**
PB16				IAmb	IAmb	07 31 01.9	
	comp=Z,27nm,2.0s						
LBTB	**Lobatse**	**50.95**	**122**	LR	LR	07 49 38.4	
	comp=Z,172nm,18.1s,baz=290,slow=34						
LBTB	**Lobatse**	**50.95**	**122**	P	**P**	**07 29 59.3**	**-0.5**
CEL	**Celeste**	**51.36**	**37**	P	**P**	**07 30 02.7**	**+0.1**
CEL				IAmb	IAmb	07 30 04.9	
	comp=Z,25nm,0.9s						
CEL	**Celeste**	**51.36**	**37**	P	**P**	**07 30 03.9**	**+1.3**
	comp=Z,30nm,1.1s						
PB11	**IPOC Station P**	**51.43**	**245**	P	**P**	**07 30 03.8**	**+0.2**
PB11				IAmb	IAmb	07 30 24.6	
	comp=Z,15nm,1.1s						
MBAR	**Mbarara**	**51.55**	**90**	LR	LR	07 49 59.0	
	comp=Z,484nm,18.0s,baz=268,slow=34						
BNI	**Bardonecchia**	**51.60**	**25**		**P**	**07 30 06.5**	**+2.1**
BNI				IAmb	IAmb	07 30 11.3	
	comp=Z,21nm,1.0s						
PB09	**IPOC Station P**	**51.64**	**242**	P	**P**	**07 30 06.2**	**+1.1**
PB09				IAmb	IAmb	07 30 09.9	
	comp=Z,21nm,1.2s						
BOSA	**Boshof**	**52.05**	**127**	P	**P**	**07 30 06.8**	**-1.2**
	comp=Z,6.4nm,0.7s,baz=302,slow=8.8,SNR=14						
BOSA				LR	LR	07 49 02.6	
	comp=Z,122nm,20.0s,baz=309,slow=32						
	comp=Z,6.4nm,0.7s						
BOSA	**Boshof**	**52.05**	**127**	P	**P**	**07 30 07.3**	**-0.8**
BOSA				IAmb	IAmb	07 30 19.4	
	comp=Z,22nm,1.1s						
PB02	**IPOC Station P**	**52.08**	**243**	P	**P**	**07 30 09.3**	**+0.9**
PB02				IAmb	IAmb	07 30 24.6	
	comp=Z,13nm,0.7s						
PB07	**IPOC Station P**	**52.19**	**243**	IAmb	IAmb	07 30 12.3	
	comp=Z,26nm,1.3s						
PB06	**IPOC Station P**	**52.20**	**241**	IAmb	IAmb	07 30 09.5	
	comp=Z,15nm,0.8s						
TIP	**Timpagrande**	**52.46**	**37**	⇑P	**P**	**07 30 12.3**	**+1.5**

SENIN	**Lac Senin/Sane**	**52.91**	**24**	IAmb	IAmb	07 30 16.4	
	comp=Z,13nm,0.8s						
TRQA	**Tornquist**	**53.07**	**221**	P	**P**	**07 30 17.9**	**+2.6**
TRQA				IAmb	IAmb	07 30 42.1	
	comp=Z,46nm,1.8s						
ROSC	**El Rosal**	**53.72**	**276**	LR	LR	07 50 44.3	
	comp=Z,372nm,21.7s,baz=71,slow=33						
TUE	**Stuetta**	**53.86**	**25**	IAmb	IAmb	07 30 23.1	
	comp=Z,12nm,0.9s						
TUE	**Stuetta**	**53.86**	**25**	P	**P**	**07 30 22.1**	**+0.9**
	comp=Z,63nm,0.9s						
AC01	**Pan de Azucar**	**54.20**	**238**	P	**P**	**07 30 22.5**	**-1.3**
DAVOX	**Davos/Dischmat**	**54.33**	**26**	LR	LR	07 52 19.0	
	comp=Z,299nm,21.0s,baz=214,slow=35						
ECH	**Echery**	**54.36**	**23**	IAmb	IAmb	07 30 26.2	
	comp=Z,14nm,1.0s						
FUORN	**Ofenpass-Fuorn**	**54.37**	**26**	IAmb	IAmb	07 30 33.7	
	comp=Z,15nm,0.9s						
AC06	**Mina Casimiro**	**54.41**	**236**	P	**P**	**07 30 25.4**	**0.0**
CTI	**Castel Tesino**	**54.55**	**27**	IAmb	IAmb	07 30 27.4	
	comp=Z,19nm,0.8s						
DAVA	**Damuels**	**54.72**	**25**	*i* P	**P**	**07 30 27.2**	**-0.2**
	comp=Z,46nm,1.0s,SNR=17						
FETA	**Feichten**	**54.88**	**26**	*i* P	**P**	**07 30 28.4**	**-0.2**
	comp=Z,36nm,0.9s,SNR=12						
BFO	**Black Forest**	**54.91**	**23**	P	**P**		
BFO				IAmb	IAmb	07 30 30.0	
	comp=Z,19nm,0.9s						
WLF	**Walferdange**	**55.18**	**21**	*d*P	**P**	**07 30 30.8**	**+0.3**
STAL	**STALIGIAL**	**55.20**	**28**	IAmb	IAmb	07 30 35.6	
	comp=Z,17nm,1.0s						
BMRD	**Maredsous**	**55.24**	**20**	*d*P	**P**	**07 30 31.3**	**+0.4**
	comp=Z,8.9nm,1.0s						
BMRD				*d*PcP	**PcP**	**07 31 33.3**	**+1.6**
SQTA	**Sankt Quirin**	**55.25**	**26**	*i* P	**P**	**07 30 31.3**	**+0.2**
	comp=Z,41nm,0.9s,SNR=11						
RETA	**Reutte**	**55.26**	**26**	*i* P	**P**	**07 30 31.3**	**+0.2**
	comp=Z,24nm,1.1s						
RCHB	**Rochefort**	**55.27**	**20**	*d*P	**P**	**07 30 31.2**	**+0.1**
	comp=Z,14nm,0.9s						
MOTA	**Moosalm**	**55.30**	**26**	*i* P	**P**	**07 30 31.4**	**-0.1**
	comp=Z,15nm,0.9s,SNR=4.6						
SKDS	**Skadanscina**	**55.30**	**29**	*i* P	**P**	**07 30 31.6**	**+0.1**
WTTA	**Wattenberg**	**55.47**	**26**	*i* P	**P**	**07 30 32.7**	**-0.1**
	comp=Z,18nm,1.0s,SNR=7.5						
ABTA	**Abfaltersbach**	**55.47**	**27**	*i* P	**P**	**07 30 33.6**	**+0.9**
	comp=Z,26nm,0.8s,SNR=8.2						
WATA	**Walderalm**	**55.50**	**26**	*i* P	**P**	**07 30 33.0**	**+0.1**
	comp=Z,10nm,0.8s						
CADS	**Cadrg**	**55.66**	**28**	*i* P	**P**	**07 30 34.6**	**+0.5**
PRED	**Cave del Predi**	**55.74**	**28**	P	**P**	**07 30 35.1**	**+0.4**
BOJS	**Bojanci**	**55.89**	**30**	*i* P	**P**	**07 30 36.5**	**+0.9**
MYKA	**Terra Mystica**	**55.91**	**28**	*e*P	**P**	**07 30 37.9**	**+2.1**
	comp=Z,12nm,1.0s						
BTNL	**Ternell**	**55.94**	**20**	*d*P	**P**	**07 30 37.2**	**+1.3**
	comp=Z,13nm,0.9s						
PDG	**Podgorica**	**55.99**	**35**	⇓P	**P**	**07 30 37.9**	**+1.5**
LESA	**Schwarzleotal**	**56.05**	**27**	*i* P	**P**	**07 30 37.0**	**0.0**
	comp=Z,24nm,0.9s,SNR=10						
KBA	**Koelnbreinsper**	**56.10**	**28**	*e*P	**P**	**07 30 37.5**	**+0.1**
	comp=Z,10nm,1.0s						
OBKA	**Obir**	**56.26**	**29**	*i* P	**P**	**07 30 39.3**	**+0.9**
	comp=Z,13nm,1.1s						
LODK	**Lodwar**	**56.29**	**86**	P	**P**	**07 30 39.7**	**+0.5**
SOKA	**Soboth**	**56.61**	**29**	*i* P	**P**	**07 30 41.7**	**+0.8**
	comp=Z,14nm,0.9s						
BIOA	**Bad Ischl, Aus**	**56.69**	**27**	*i* P	**P**	**07 30 40.4**	**-0.9**
	comp=Z,6.0nm,0.8s						
NNA	**Nana**	**56.70**	**256**	LR	LR	07 54 13.4	
	comp=Z,372nm,18.5s,baz=72,slow=35						
MOA	**Molln**	**57.09**	**27**	*i* P	**P**	**07 30 43.9**	**-0.3**
	comp=Z,9.4nm,0.9s						
ARSA	**Arzberg**	**57.25**	**29**	*e*P	**P**	**07 30 45.3**	**-0.1**
	comp=Z,8.1nm,1.2s						
GEC2	**GERESS Array S**	**57.57**	**26**	P	**P**	**07 30 47.3**	**-0.4**
GEC2				IAmb	IAmb	07 30 48.8	
	comp=Z,11nm,0.9s						
GERES	**GERESS Array B**	**57.57**	**26**	P	**P**	**07 30 47.7**	**0.0**
	comp=Z,8.0nm,0.9s,baz=225,slow=9.2,SNR=20						
GERES				PP	**PP**	**07 32 52.6**	**-2.9**
	comp=Z,1.9nm,0.8s,baz=212,slow=9.4,SNR=4.7						
GERES				LR	LR	07 54 37.1	
	comp=Z,239nm,20.5s,baz=259,slow=35						
	comp=Z,8.0nm,0.9s						
EKA	**Eskdalemuir Ar**	**57.61**	**12**	P	**P**	**07 30 47.4**	**-0.3**
	comp=Z,1.8nm,0.7s,baz=198,slow=6.6,SNR=4.7						
EKA				LR	LR	07 50 48.8	
	comp=Z,203nm,21.4s,baz=188,slow=31						
	comp=Z,1.8nm,0.7s						
KHC	**Kasperske Hory**	**57.73**	**26**	IAmb	IAmb	07 30 49.9	
	comp=Z,13nm,1.1s						
KHC	**Kasperske Hory**	**57.73**	**26**	*e*P	**P**	**07 30 48.7**	**0.0**
ATAH	**Atahualpa**	**57.77**	**262**	LR	LR	07 55 42.3	
	comp=Z,340nm,18.2s,baz=91,slow=36						
CONA	**Conrad Observa**

comp=Z,3.1nm,0.8s
BRTR Keskin Array B 63.80 44 P P 07 31 29.3 -1.1
JTS Las Juntas de 64.70 282 LR LR 07 59 13.6
comp=Z,54nm,19.1s,baz=38,slow=35
RNPP5 Staryi Chortor 64.98 30 P **P 07 31 39.5 +1.8**
RNPP9 Sopachiv 65.09 30 P **P 07 31 36.6 -1.8**
LUBAR Lubar, Ukraine 65.20 32 P **P 07 31 37.2 -1.9**
BORG Borgarnes 65.21 360 LR LR 07 52 00.5
comp=Z,568nm,19.2s,baz=151,slow=29
SUW Suwalki 65.42 27 *eP* **P 07 31 41.3 +0.8**
MI28 MI28,Pidlybu 65.72 31 P **P 07 31 43.0 +0.5**
NB2 NORSAR Subarra 66.22 16 P **P 07 31 45.9 +0.3**
comp=Z,8.7nm,1.0s,baz=214,slow=6.9
NOA NORSAR Array B 66.22 16 P **P 07 31 45.2 -0.3**
comp=Z,6.6nm,0.9s,baz=214,slow=6.5,SNR=14
NOA LR LR 08 01 26.2
comp=Z,226nm,20.5s,baz=225,slow=37
comp=Z,6.6nm,0.9s
HFS Hagfors 66.22 18 P **P 07 31 44.6 -1.0**
comp=Z,8.3nm,0.8s,baz=202,slow=7.4,SNR=9.1
HFS LR LR 08 00 56.2
comp=Z,342nm,20.7s,baz=210,slow=36
comp=Z,8.3nm,0.8s
AK19 Malin Array Si 66.31 32 P **P 07 31 45.7 -0.6**
AK17 Malin Array Si 66.31 32 P **P 07 31 45.3 -1.0**
AK18 Malin Array Si 66.34 32 P **P 07 31 45.7 -0.8**
KIEV Kiev 66.40 32 ⇑P P 07 31 44.4 -2.5
KIEV Kiev 66.40 32 P **P 07 31 46.5 -0.3**
KIEV IAmb IAmb 07 31 50.4
comp=Z,14nm,1.0s
KIEV Kiev 66.40 32 P **P 07 31 46.4 -0.5**
comp=Z,75nm,1.0s
AKASG Malin Array Be 66.41 32 P **P 07 31 45.8 -1.2**
comp=Z,7.8nm,0.9s,baz=237,slow=6.9,SNR=14
AKASG LR LR 08 01 35.1
comp=Z,132nm,18.2s,baz=234,slow=37
comp=Z,7.8nm,0.9s
AKASG Malin Array Be 66.41 32 P **P 07 31 46.5 -0.5**
AKBB Malin Array Si 66.41 32 IAmb IAmb 07 31 50.4
comp=Z,15nm,0.9s
AKBB Malin Array Si 66.41 32 P **P 07 31 45.8 -1.1**
SCHQ Schefferville 66.86 333 P **P 07 31 49.8 0.0**
comp=Z,6.9nm,1.0s,baz=152,slow=6.4,SNR=7.5
SCHQ LR LR 07 55 48.1
comp=Z,284nm,21.9s,baz=130,slow=31
comp=Z,6.9nm,1.0s
SCHQ Schefferville 66.86 333 IAmb IAmb 07 31 56.1
comp=Z,20nm,1.5s
SADO Sadowa 68.50 319 LR LR 07 55 38.5
comp=Z,197nm,19.1s,baz=130,slow=30
TKL Tuckaleechee C 68.65 309 LR LR 07 56 27.9
comp=Z,144nm,21.3s,baz=105,slow=31
W50A Signal Mountai 69.73 308 IAmb IAmb 07 32 11.0
comp=Z,11nm,0.8s
VNA1 Neumayer--Stat 70.40 176 ⇑P P 07 32 07.9 -3.7
comp=Z,11nm,0.9s
U49A Red Boiling Sp 70.45 309 IAmb IAmb 07 32 15.2
comp=Z,14nm,0.9s
SFJD Kangerlussuaq 70.66 348 LR LR 07 55 58.0
comp=Z,422nm,21.9s,baz=156,slow=30
VNA2 Neumayer--Watz 70.74 175 ⇑P **P 07 32 15.3 +1.7**
comp=Z,4.7nm,0.8s,baz=336,slow=5.3
VNA3 Neumayer Olymp 70.88 176 ⇑P **P 07 32 12.8 -1.8**
comp=Z,2.3nm,0.7s
V48A Smith Brothers 71.06 308 IAmb IAmb 07 32 18.5
comp=Z,9.3nm,0.8s
PMSA Palmer Station 71.22 198 LR LR 07 58 23.3
comp=Z,265nm,20.6s,baz=68,slow=32
FINES FINESS Array B 71.40 22 P **P 07 32 17.2 -0.5**
comp=Z,4.4nm,0.7s,baz=211,slow=2.2,SNR=11
FINES LR LR 08 02 50.0
comp=Z,193nm,20.4s,baz=232,slow=35
comp=Z,4.4nm,0.7s
KBZ Khabaz 71.72 43 P **P 07 32 20.1 +0.1**
comp=Z,8.4nm,0.9s,baz=248,slow=8.3,SNR=10
KBZ LR LR 08 05 37.6
comp=Z,66nm,20.4s,baz=266,slow=38
comp=Z,8.4nm,0.9s
SNAA Sanae 71.88 174 LR LR 07 56 03.1
comp=Z,165nm,19.4s,baz=1.5,slow=29
GNI Garni 71.92 47 LR LR 08 08 10.6
comp=Z,43nm,18.2s,baz=280,slow=40
OBN Obninsk 72.49 30 LR LR 08 05 52.0
comp=Z,157nm,19.4s,baz=180,slow=37
TROLL Troll, Antarti 72.81 173 P **P 07 32 28.1 +1.8**
FRB Frobisher Bay 73.17 340 LR LR 07 59 33.0
comp=Z,93nm,18.8s,baz=112,slow=32
SUMG Summit 73.92 355 *i* P **P 07 32 34.8 +1.6**
CMIG Matias Romero 74.97 288 LR LR 08 03 21.9
comp=Z,59nm,20.4s,baz=94,slow=34
ARCES ARCESS Array B 76.53 15 P **P 07 32 48.3 +0.6**
comp=Z,5.2nm,0.8s,baz=225,slow=4.5,SNR=7.4
ARCES LR LR 08 06 51.9
comp=Z,152nm,20.9s,baz=216,slow=36
comp=Z,5.2nm,0.8s
UPNV Upernavik 76.54 350 *i* P **P 07 32 50.2 +2.6**
UPNV IAmb IAmb 07 32 52.7
comp=Z,15nm,1.2s
S39A Bolivar 76.59 309 IAmb IAmb 07 35 12.3
comp=Z,38nm,2.0s
DAG Danmarks Havn 77.31 1 *i* P **P 07 32 53.3 +1.4**
DAG IAmb IAmb 07 32 58.1
comp=Z,8.9nm,1.0s
NEEM North Greenlan 79.72 354 *i* P **P 07 33 07.1 +1.5**
NEEM IAmb IAmb 07 33 09.6
comp=Z,12nm,0.9s
ECSD EROS Data Cent 80.19 315 IAmb IAmb 07 33 10.1
comp=Z,7.2nm,0.7s
BRDY Brady 80.22 302 IAmb IAmb 07 33 20.4
comp=Z,23nm,1.9s
KIRV Kirov 80.33 30 LR LR 08 10 36.2
comp=Z,164nm,19.8s,baz=257,slow=37
ULM Lac du Bonnet 80.95 321 LR LR 08 04 40.6
comp=Z,196nm,19.7s,baz=62,slow=32
SPITS Spitsbergen Ar 81.15 7 LR LR 08 01 47.8
comp=Z,122nm,22.0s,baz=207,slow=30
KBS Kingsbay 81.25 6 *i* P P 07 33 08.9 -4.5
TULEG Thule 81.58 350 *i* P **P 07 33 16.3 +1.1**
TULEG IAmb IAmb 07 33 17.6
comp=Z,6.7nm,1.0s
FCC Fort Churchill 81.90 330 P **P 07 33 18.6 +1.4**
OZNA Ozona 82.00 301 IAmb IAmb 07 33 29.4
comp=Z,16nm,1.3s
AKTO Aktyubinsk 83.36 39 LR LR 08 13 04.9
comp=Z,120nm,21.8s,baz=246,slow=38
TXAR Lajitas Array 84.06 299 P **P 07 33 30.1 +0.8**
comp=Z,1.7nm,1.0s,baz=119,slow=6.8,SNR=8.7
TXAR LR LR 08 07 28.2
comp=Z,41nm,18.8s,baz=72,slow=33
comp=Z,1.7nm,1.0s
BLKN Baker Lake 84.16 335 IAmb IAmb 07 33 31.6
comp=Z,5.5nm,0.8s
ARTI Arti 84.53 33 LR LR 08 13 46.0
comp=Z,100nm,18.4s,baz=248,slow=38
VHRN Van Horn 85.30 301 P **P 07 33 36.0 +0.4**
VHRN IAmb IAmb 07 33 56.3
comp=Z,9.7nm,1.1s
RES Resolute Bay 86.41 345 LR LR 08 05 06.6
comp=Z,128nm,19.8s,baz=29,slow=31
ANMO Albuquerque 86.77 305 LR LR 08 05 47.8
comp=Z,58nm,21.8s,baz=82,slow=31
ANMO Albuquerque 86.77 305 P **P 07 33 43.9 +1.1**
MAW Mawson 87.02 158 LR LR 08 03 26.9
comp=Z,264nm,21.4s,baz=292,slow=29
LAO LASA Array 87.28 317 IAmb IAmb 07 34 07.7
comp=Z,15nm,1.2s
RPN Rapa Nui 88.40 243 LR LR 08 11 29.2
comp=Z,49nm,18.3s,baz=90,slow=34
PV02 Paradox Valley 88.74 308 IAmb IAmb 07 34 13.3
comp=Z,9.6nm,0.9s
PV13 Radium Mtn., P 88.80 308 IAmb IAmb 07 34 13.6
comp=Z,9.5nm,1.0s
PV18 Skein Mesa, Pa 88.88 308 IAmb IAmb 07 34 30.1
comp=Z,14nm,1.1s
PV16 Nyswonger Mesa 88.88 308 IAmb IAmb 07 34 13.9
comp=Z,5.7nm,1.0s
PV20 West Nyswonger 88.92 308 IAmb IAmb 07 34 08.4
comp=Z,8.5nm,0.9s
QSPA South Pole Qui 89.46 180 P **P 07 33 55.5 +0.7**
comp=Z,3.1nm,0.7s,baz=252,slow=0.7,SNR=8.3
QSPA LR LR 08 08 42.2
comp=Z,184nm,19.2s,baz=212,slow=32
comp=Z,3.1nm,0.7s
QSPA South Pole Qui 89.46 180 P **P 07 33 54.7 -0.1**
QSPA IAmb IAmb 07 34 15.8
comp=Z,14nm,1.2s
PDAR Pinedale Array 89.49 313 P **P 07 33 56.0 +0.4**
comp=Z,0.7nm,0.9s,baz=107,slow=5.0,SNR=6.2
PDAR LR LR 08 11 40.0
comp=Z,54nm,19.0s,baz=85,slow=34
comp=Z,0.7nm,0.9s
LPIG La Paz 89.78 294 LR LR 08 11 43.5
comp=Z,49nm,20.2s,baz=86,slow=34
BVAR Borovoye Array 91.22 37 LR LR 08 17 29.9
comp=Z,82nm,20.2s,baz=278,slow=37
YKAW1 Yellowknife Wh 92.25 332 P **P 07 34 07.9 +0.2**
YKAW1 IAmb IAmb 07 34 21.1
comp=Z,5.8nm,1.2s
YKAW3 Yellowknife Wh 92.30 332 **P 07 34 07.8 -0.1**
YKAW3 IAmb IAmb 07 34 28.3
comp=Z,18nm,1.8s
YKA Yellowknife Ar 92.30 332 P **P 07 34 08.6 +0.7**
comp=Z,1.5nm,0.8s,baz=85,slow=4.6,SNR=29
YKA LR LR 08 11 58.9
comp=Z,211nm,19.7s,baz=80,slow=33
comp=Z,1.5nm,0.8s
ELK Elko 93.76 311 LR LR 08 10 54.2
comp=Z,111nm,20.6s,baz=89,slow=32
AAK Ala-Archa 94.33 47 P **P 07 34 17.1 -0.9**
comp=Z,1.0nm,0.6s,baz=239,slow=12,SNR=4.3
AAK LR LR 08 22 57.3
comp=Z,50nm,18.0s,baz=298,slow=40
comp=Z,1.0nm,0.6s
AAK Ala-Archa 94.33 47 IAmb IAmb 07 34 31.6
comp=Z,5.5nm,1.1s
NEW Newport 94.67 318 LR LR 08 10 48.7
comp=Z,208nm,20.9s,baz=78,slow=32
A36M Sachs Harbour 95.03 342 IAmb IAmb 07 34 32.5
comp=Z,8.3nm,1.4s
PFO Pinyon Flats O 95.05 304 LR LR 08 10 29.3
comp=Z,64nm,20.9s,baz=63,slow=31
KSH2 Kashi 95.34 51 P **P 07 34 21.8 -0.9**
KSH2 pmax pmax
comp=Z,4.0nm,0.9s
KURBB Kurchatov Arra 96.41 39 P **P 07 34 27.4 +0.4**
comp=Z,0.1nm,0.3s,baz=303,slow=5.6,SNR=1.6
KURBB PP PP 07 38 12.0 -8.7
comp=Z,1.0nm,0.9s,baz=288,slow=7.4,SNR=4.8
KURBB LR LR 08 21 03.7
comp=Z,120nm,20.7s,baz=174,slow=38
comp=Z,0.1nm,0.3s
KURK Kurchatov 96.46 39 P **P 07 34 27.4 +0.2**
NRIK Norilsk 97.00 20 LR LR 08 21 38.3
comp=Z,113nm,18.8s,baz=295,slow=38
INK Inuvik 98.83 340 LR LR 08 14 19.6
comp=Z,116nm,21.5s,baz=350,slow=32
YBH Yreka Blue Hor 99.28 312 LR LR 08 14 00.4
comp=Z,11nm,21.2s,baz=84,slow=32
MKAR Makanchi Array 99.41 43 PP PP 07 38 38.8 -5.1
comp=Z,0.9nm,0.9s,baz=284,slow=6.1,SNR=6.8
MKAR LR LR 08 23 42.4
comp=Z,100nm,20.9s,baz=288,slow=38
ZALV Zalesovo Beam 99.67 35 LR LR 08 24 42.0
comp=Z,79nm,18.4s,baz=277,slow=38
LZH Lanzhou 117.83 49 *eP* **PKPdf 07 39 44.0 -1.2**
LZH sP sPKPdf 07 39 57.1 +10
LZH pmax pmax
comp=Z,19nm,1.0s
PZH PanZhiHua 119.14 60 PKP **PKPdf 07 39 48.2 +0.3**
CD2 Chengdu 119.55 54 PKP **PKPdf 07 39 48.5 0.0**
HHC Hu-ho-hao-te 121.22 41 *eP* **PKPdf 07 39 47.9 -3.6**
TBI Tubuai 124.73 241 *eLR* LR 08 18 41.2
comp=Z,486nm,26.5s
PPT2 Papeete2 126.44 248 *eLR* LR 08 19 28.8
comp=Z,42nm,22.8s
PPT2 *eLR* LR 08 19 39.6
comp=Z,124nm,28.8s
CN2 Changchun 127.55 30 *eP* **PKPdf 07 40 00.0 -3.4**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
NJ2 Nanjing 130.76 47 *eP* **PKPdf 07 40 10.3 +0.5**
NJ2 pmax pmax
comp=Z,43nm,0.6s
ASAR Alice Springs 145.56 136 PKPbc **PKPdf 07 40 37.0 -0.2**
comp=Z,18nm,0.7s,baz=225,slow=2.4,SNR=77
ASAR Alice Springs 145.56 136 **PKPdf 07 40 36.8 -0.4**
WRA Warramunga Arr 148.21 131 PKPbc **PKPdf 07 40 44.8 +3.1**
comp=Z,6.5nm,1.0s,baz=241,slow=2.7,SNR=18
WR8 Warramunga Arr 148.33 132 **PKPdf 07 40 45.2 +3.3**
WB0 Warramunga Arr 148.36 131 **PKPbc 07 40 47.9 +2.5**
DZM Mont Dzumac 156.37 197 *eLR* LR 08 33 21.4
comp=Z,194nm,27.1s

IDC 10 07:58:57.0±2.2, 6°.91S×129°.47E, h0km, mb3.6/1, mbtmp3.3/3, ML3.3/2, MS3.6/1, Error ellipse: s-maj=137.6km s-min=32.2km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.79**	**160**	Pn	Pn	08 02 12.7	-1.3
	0.1nm,0.3s,baz=339,slow=12,SNR=5.0						
WRA				Sn	Sn	08 04 37.0	-11
	0.3nm,0.3s,baz=334,slow=21,SNR=9.4						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**17.20**	**166**	P	P	08 02 60.0	-0.7
	0.1nm,0.3s,baz=341,slow=9.1,SNR=11						
	0.2nm,0.4s						
URZ	**Urewera**	**53.11**	**133**	LR	LR	08 32 18.0	
	comp=Z,59nm,19.0s,baz=150,slow=38						
MKAR	**Makanchi Array**	**67.86**	**327**	P	P	08 09 57.3	0.0
	0.2nm,0.3s,baz=121,slow=7.9,SNR=5.6						
	0.2nm,0.3s						

IDC 10 07:59:43.1±9.5, 7°.85S×158°.28E, h0km, mb3.9/3, mbtmp3.9/3, ML2.8/1, Error ellipse: s-maj=188.5km s-min=32.4km az=15.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.28**	**134**	Pn	Pn	08 00 22.1	+0.1
	2.5nm,0.3s,baz=94,slow=3.8,SNR=11						
HNR				Sn	Sn	08 00 46.8	-3.9
	5.5nm,0.3s,baz=169,slow=7.5,SNR=6.9						
WRA	**Warramunga Arr**	**26.12**	**240**	P	P	08 05 19.4	+0.4
	1.1nm,0.7s,baz=68,slow=9.2,SNR=6.0						
	1.1nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**27.46**	**18**	T	T	08 34 06.3	
	baz=198,slow=76,SNR=6.8						
H11S2	**WAKE ISLAND Hy**	**27.46**	**18**	T	T	08 34 04.6	
	baz=198,slow=76,SNR=8.0						
H11S1	**WAKE ISLAND Hy**	**27.48**	**18**	T	T	08 34 05.4	
	baz=198,slow=76,SNR=10						
ASAR	**Alice Springs**	**28.16**	**233**	P	P	08 05 37.5	+0.1
	0.4nm,0.8s,baz=56,slow=9.8,SNR=3.8						
	0.4nm,0.8s						
STKA	**Stephens Creek**	**28.51**	**211**	P	P	08 05 39.8	-0.5
	3.7nm,0.8s,baz=36,slow=13,SNR=6.4						
	3.7nm,0.8s						

*ASRS **10** 08:05:25.0±1.0, 53°.48N×87°.47E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 10 08:05:27.0±2.9, 53°.49N×87°.55E, h0km, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=29.5km s-min=16.2km az=60.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.69**	**287**	I	I	08 18 06.7	
	baz=106,slow=347,SNR=4.1						
ZALV	**Zalesovo Beam**	**1.69**	**287**	Pn	Pn	08 05 56.8	-0.9
	2.1nm,0.3s,baz=106,slow=16,SNR=13						
ZALV				Lg	Lg	08 06 21.0	
	1.1nm,0.3s,baz=106,slow=26,SNR=8.9						
KURBB	**Kurchatov Arra**	**6.26**	**246**	Pn	Pn	08 07 00.6	0.0
	0.1nm,0.3s,baz=61,slow=13,SNR=3.1						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**7.50**	**209**	Pn	Pn	08 07 19.3	+1.6
	0.1nm,0.3s,baz=26,slow=13,SNR=11						
	0.2nm,0.2s						

IDC 10 08:15:04.6±3.1, 62°.13S×153°.44W, h0km, mb3.9/3, mbtmp3.9/3, MS3.7/4, Error ellipse: s-maj=634.5km s-min=31.6km az=11.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPT	**Papeete**	**44.59**	**5**	LR	LR	08 37 24.2	
	comp=Z,32nm,20.4s,baz=222,slow=30						
RPN	**Rapa Nui**	**45.49**	**60**	LR	LR	08 37 42.4	
	comp=Z,49nm,19.6s,baz=208,slow=30						
MAW	**Mawson**	**47.92**	**198**	LR	LR	08 41 11.1	
	comp=Z,132nm,18.4s,baz=86,slow=33						
H03S2	**Juan Fernandez**	**53.58**	**95**	T	T	09 22 25.6	
	baz=212,slow=74,SNR=20						
H03S1	**Juan Fernandez**	**53.59**	**95**	T	T	09 22 27.7	
	baz=212,slow=74,SNR=20						
H03S3	**Juan Fernandez**	**53.60**	**95**	T	T	09 22 28.2	
	baz=212,slow=74,SNR=22						
ASAR	**Alice Springs**	**61.26**	**274**	P	P	08 25 21.3	-0.1
	1.5nm,0.9s,baz=147,slow=6.6,SNR=9.4						
	1.5nm,0.9s						
WRA	**Warramunga Arr**	**64.26**	**276**	P	P	08 25 41.2	-0.2
	0.7nm,0.9s,baz=157,slow=5.4,SNR=4.2						
	0.7nm,0.9s						
PMG	**Port Moresby**	**67.71**	**293**	LR	LR	08 52 54.2	
	comp=Z,142nm,19.8s,baz=258,slow=34						
CPUP	**Villa Florida**	**69.85**	**108**	P		08 26 16.8	-0.1
	1.8nm,0.9s,baz=201,slow=8.6,SNR=4.2						
	1.8nm,0.9s						
MKAR	**Makanchi Array**	**145.40**	**270**	PKPbc	PKPbc	08 34 43.0	-0.3
	7.3nm,0.7s,baz=121,slow=4.7,SNR=73						
KURBB	**Kurchatov Arra**	**149.87**	**272**	PKPbc	PKPbc	08 34 54.7	-0.6
	0.5nm,0.6s,baz=128,slow=2.3,SNR=7.5						

DJA 10 08:16:37.1±1.5, 11°.5E±15°×11°.7E±°, h10km, M3.8/11, mb4.1/2, MLv3.6/11, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**2.30**	**10**	P	Pn	08 17 14.8	-0.3
TWSI	**Taliwang, Sumb**	**2.41**	**348**	P	Pn	08 17 16.5	-0.1
WBSI	**Waikabubak, Su**	**2.46**	**54**	P	Pn	08 17 17.5	+0.2
WBSI				S	Sn	08 17 44.0	-3.5
DBNI	**Kabupaten Domp**	**2.75**	**20**	P	Pn	08 17 22.0	+0.7
KLNI	**Mataram**	**2.96**	**335**	P	Pn	08 17 24.9	+0.8
IGBI	**Denpasar**	**3.17**	**316**	P	Pn	08 17 27.1	+0.1
KHKI	**Kahang-Kahang**	**3.24**	**327**	P	Pn	08 17 27.4	-0.6
RTBI	**Rangdo, Negare**	**3.56**	**317**	P	Pn	08 17 33.2	+0.7
SRBI	**Singaraja**	**3.69**	**324**	P	Pn	08 17 35.1	+0.9
JAGI	**Jajag, Banyuwa**	**4.12**	**309**	P	Pn	08 17 38.7	-1.5
JAGI				S	Sn	08 18 23.9	-4.6
PCJI	**Pacitan**	**6.77**	**295**	P	Pn	08 18 17.0	+0.4

*KRNET **10** 08:26:18.6±0.1, 39°.21N×71°.66E, h7km, mb3.0*
ISC 10 08:26:18.2±1.8, 39°.27N±0°.06×71°.82E±0°.09, h33km, n6, σ0°64/10, 8C-4D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**0.21**	**356**	⇑*iP*	**Pn**	**08 26 24.4**	**-0.4**
DRK				⇑*iS*	**Sn**	**08 26 28.5**	**+0.2**
BTK	**Batken**	**1.10**	**316**	⇑*iP*	**Pb**	**08 26 39.1**	**+0.3**
BTK				⇑*iS*	**Sb**	**08 26 53.9**	**+0.9**
GAR	**Garm**	**1.20**	**258**	⇑*iP*	**Pn**	**08 26 39.0**	**+0.3**
GAR				⇑*iS*	**Sn**	**08 26 53.8**	**-0.1**
CHGR	**Chuyangaron**	**2.16**	**254**	⇓*iP*	**Pb**	**08 26 56.1**	**-0.6**
CHGR				⇓*iS*	**Sb**	**08 27 23.4**	**+0.3**
AAK	**Ala-Archa**	**3.93**	**30**	⇑Pn	**Pb**	**08 27 27.1**	**+0.3**
	1.9nm,0.7s						
AAK				⇓Lg	Lg	08 28 16.6	
	0.6nm,0.5s						
KK31	**Karatay Array**	**3.96**	**346**	⇑Pn	**Pb**	**08 27 26.1**	**-1.1**
	0.8nm,0.3s,baz=169,slow=13,SNR=8.7						
KK31				⇓Lg	Lg	08 28 16.2	
	0.9nm,0.3s						

*NEIC **10** 08:52:16.1±2.2, 2°.68S±0°.06×128°.86E±0°.06, h10km±1km, mb4.2/11, Error ellipse: s-maj=12.7km s-min=7.5km az=321.0*
*DJA **10** 08:52:17.1±0.2, 3°.5S±2°×12°.9E±°, h10km, M4.4/25, mB4.9/5, mb4.7/9, MLv4.4/25, Mw(mB)4.2/5*
*IDC **10** 08:52:24.7±3.3, 2°.72S×129°.52E, h108km±36km, mb3.9/3, mbtmp4.2/6, MS3.5/16, Error ellipse: s-maj=59.2km s-min=14.0km az=75.0*
ISC 10 08:52:18.8±0.7, 2°.65S±0°.05×128°.85E±0°.07, h35km, n49, σ2°11/39, mb4.3/6, MS3.5/13, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.70**	**173**	P	**Pn**	**08 52 32.8**	**+0.6**
MSAI				S	**Sn**	**08 52 44.9**	**+3.2**
KRAI	**Karang Ratu**	**0.80**	**214**	P	**Pn**	**08 52 34.1**	**+0.4**
AAI	**Ambon**	**1.22**	**212**	P	**Pn**	**08 52 41.9**	**+2.5**
NLAI	**Namlea**	**1.84**	**251**	P	**Pn**	**08 52 49.1**	**+1.2**
BNDI	**Bandanaira**	**2.14**	**150**	P	**Pn**	**08 52 55.3**	**+3.3**
SANI	**Sanana**	**2.92**	**282**	P	**Pn**	**08 53 02.0**	**-0.7**
SWI	**Sorong**	**2.99**	**54**	P	**Pn**	**08 53 03.6**	**-0.2**
SIJI	**Sorong**	**3.00**	**54**	P	**Pn**	**08 53 04.1**	**+0.3**
	60nm,0.2s,baz=243,slow=12,SNR=32						
SIJI				S	**Sn**	**08 53 39.4**	**+0.8**
	166nm,0.4s,baz=217,slow=22,SNR=14						
SIJI				LR	LR	08 54 37.6	
	comp=Z,763nm,21.3s,baz=198,slow=52						
SIJI	**Sorong**	**3.00**	**54**	P	**Pn**	**08 53 04.4**	**+0.6**
FAKI	**Fak Fak**	**3.41**	**95**		**Pn**	**08 53 09.9**	**+0.4**
FAKI	**Fak Fak**	**3.41**	**95**	P	**Pn**	**08 53 10.4**	**+0.9**
MWPI	**Manokwari, Pap**	**5.46**	**72**	P	**Pn**	**08 53 39.0**	**+1.2**
	143nm,1.2s						
LUWI	**Luwuk**	**6.28**	**285**	P	**Pn**	**08 53 48.8**	**-0.2**
	0.4nm57nm,0.6s						
APSI	**Ampana**	**7.40**	**283**	P	**Pn**	**08 54 04.8**	**+0.4**
TOLI2	**Tolitoli**	**8.89**	**295**	Pn	**Pn**	**08 54 25.8**	**+1.0**
KAPI	**Kappang**	**9.38**	**255**	LR	LR	08 58 44.5	
	comp=Z,182nm,21.3s,baz=74,slow=38						
DAV	**Davao City (W)**	**10.19**	**341**	LR	LR	08 59 35.4	
	comp=Z,344nm,19.6s,baz=58,slow=41						
MTN	**Manton Dam**	**10.38**	**168**		**Pn**	**08 54 44.2**	**-1.0**
KNRA	**Kununurra**	**12.95**	**180**		**Pn**	**08 55 20.0**	**-0.4**
FITZ	**Fitzroy Crossi**	**15.67**	**191**	P	**P**	**08 56 01.0**	**+0.2**
	1.8nm,0.6s,baz=24,slow=13,SNR=5.1						
WB0	**Warramunga Arr**	**17.86**	**163**	P	**Pn**	**08 56 21.5**	**-3.1**
WB0				IAmb	IAmb	08 56 49.9	
	comp=Z,14nm,1.0s						
WRAB	**Tennant Creek**	**18.00**	**163**	P	**Pn**	**08 56 26.0**	**-0.4**
WRAB				IAmb	IAmb	08 56 28.0	
	comp=Z,17nm,1.2s						
WRA	**Warramunga Arr**	**18.00**	**163**	P	**Pn**	**08 56 24.3**	**-2.1**
	comp=Z,2.2nm,0.5s,baz=334,slow=13,SNR=34						
WRA	**Warramunga Arr**	**18.00**	**163**		**Pn**	**08 56 23.0**	**-3.4**
WR8	**Warramunga Arr**	**18.07**	**163**		**Pn**	**08 56 25.9**	**-1.3**
COEN	**Coen**	**18.07**	**129**		**Pn**	**08 56 27.3**	**0.0**
COEN				IAmb	IAmb	08 57 09.9	
	comp=Z,11nm,1.1s						
PSA00	**Pilbara Seismi**	**20.75**	**204**	P	**P**	**08 56 55.9**	**-0.8**
PSA00				IAmb	IAmb	08 57 10.0	
	comp=Z,10nm,0.8s						
AS31	**Alice Springs**	**21.46**	**167**		**P**	**08 57 04.5**	**+0.2**
AS31				IAmb	IAmb	08 57 11.1	
	comp=Z,7.2nm,0.7s						
ASAR	**Alice Springs**	**21.46**	**167**	P	**P**	**08 57 03.8**	**-0.5**
	comp=Z,7.8nm,0.6s,baz=349,slow=12,SNR=124						
ASAR				S	**S**	**09 00 52.3**	**-8.4**
	comp=Z,1.6nm,0.8s,baz=347,slow=20,SNR=6.1						
	comp=Z,7.8nm,0.6s						
ASAR	**Alice Springs**	**21.46**	**167**		**P**	**08 57 04.6**	**+0.3**
ASAR					**S**	**09 00 56.2**	**-4.4**
LEM	**Lembang**	**21.56**	**258**	LR	LR	09 06 53.8	
	comp=Z,206nm,18.9s,baz=106,slow=39						
GUMO	**Guam**	**22.65**	**44**	LR	LR	09 07 26.2	
	comp=Z,64nm,18.5s,baz=166,slow=40						
JOW	**Kunigami**	**29.32**	**359**	LR	LR	09 08 32.2	
	comp=Z,110nm,19.5s,baz=282,slow=33						
BBOO	**Buckleboo**	**30.76**	**168**	P	**P**	**08 58 31.5**	**+0.6**
JNU	**Nakatsue**	**35.63**	**3**	LR	LR	09 12 21.3	
	comp=Z,57nm,19.9s,baz=181,slow=34						
CMAR	**Chiang Mai Anr**	**36.15**	**307**	LR	LR	09 16 29.3	
	comp=Z,31nm,19.9s,baz=125,slow=39						
KSRS	**Korea Array**	**39.91**	**359**	LR	LR	09 14 41.8	
	comp=Z,48nm,21.7s,baz=165,slow=33						
BRDH	**Bariadhala**	**44.17**	**307**	LR	LR	09 21 57.1	
	comp=Z,57nm,19.5s,baz=327,slow=40						
ASAJ	**Asahikawa**	**48.16**	**13**	LR	LR	09 19 52.6	
	comp=Z,62nm,21.5s,baz=16,slow=34						
MSVF	**Nonsavu**	**50.51**	**111**	LR	LR	09 21 49.3	
	comp=Z,55nm,18.1s,baz=257,slow=35						
BKZ	**Black Stump Fm**	**56.49**	**136**	P	**P**	**09 01 59.0**	**+1.4**
MKAR	**Makanchi Array**	**63.99**	**326**	P	**P**	**09 02 49.4**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=141,slow=6.7,SNR=4.8						
MKAR				LR	LR	09 34 04.8	
	comp=Z,24nm,18.7s,baz=68,slow=39	

comp=Z,2.5nm,0.2s
TIXI Tiksi 74.17 0 LR LR 09 36 18.2
comp=Z,55nm,21.0s,baz=192,slow=36
ABKAR Akbulak array 78.41 321 P **P** **09 04 15.2 -0.7**
D19K Kuna River 86.29 21 P **P** **09 04 57.8 +1.1**
D19K IAmb IAmb 09 04 59.0
comp=Z,4.4nm,1.4s
D20K Etivluk River 86.88 21 P **P** **09 05 00.4 +0.8**
D20K IAmb IAmb 09 05 14.1
comp=Z,2.1nm,0.9s
FURI Furi 90.57 279 LR LR 09 47 14.4
comp=Z,15nm,18.2s,baz=150,slow=36
EIL Elat 94.69 299 LR LR 09 58 19.4
comp=Z,18nm,18.0s,baz=330,slow=42

*IDC **10** 08:53:18.3±5.7, 35°.93N×70°.43E, h0km, mb3.5/3, mbtmp3.4/6, ML3.0/3, Error ellipse: s-maj=176.7km s-min=25.5km az=94.0*
*NNC **10** 08:53:35.2±6.7, 36°.65N×70°.64E, h118km±145km, mb2.8, mpv3.3, Error ellipse: s-maj=68.9km s-min=58.5km az=125.0*
ISC 10 08:53:30.0±1.6, 36°.4N±0°.1×70°.7E±0°.2, h100km, n9, σ2933/11, 1C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.68**	**359**	P	**Pn**	**08 55 08.1**	**+2.6**
	1.1nm,0.3s,baz=188,slow=14,SNR=17						
KK31				⇓S	**Sn**	**08 56 19.8**	**-0.3**
	4.0nm,0.3s,baz=182,slow=17,SNR=8.8						
AAK	**Ala-Archa**	**6.88**	**24**	Pn	**Pn**	**08 55 11.2**	**+2.9**
	1.7nm,0.3s,baz=198,slow=7.5,SNR=13						
AAK				Sn	**Sn**	**08 56 25.3**	**0.0**
	0.7nm,0.3s,baz=140,slow=23,SNR=6.5						
	3.4nm,0.4s						
AAK	**Ala-Archa**	**6.88**	**24**	⇓P	**Pn**	**08 55 10.2**	**+1.8**
	0.6nm,0.4s						
AAK				⇑S	**Sn**	**08 56 26.2**	**+1.0**
	1.9nm,0.6s						
MKAR	**Makanchi Array**	**13.52**	**36**	Pn	**P**	**08 56 39.3**	**-3.8**
	baz=219,slow=13,SNR=2.4						
	0.1nm,0.4s						
AB31	**Akbulak array**	**15.03**	**332**	P	**P**	**08 56 58.5**	**-1.3**
	0.3nm,0.2s,baz=150,slow=13,SNR=25						
KURBB	**Kurchatov Arra**	**15.29**	**19**	Pn	**P**	**08 57 00.4**	**-2.3**
	baz=204,slow=11,SNR=1.7						
	0.1nm,0.3s						
ZALV	**Zalesovo Beam**	**20.11**	**25**	P	Pn	08 57 57.5	-0.8
	1.4nm,0.5s,baz=222,slow=11,SNR=7.7						
	1.4nm,0.5s						
WRA	**Warramunga Arr**	**82.17**	**122**	P	**P**	**09 05 40.4**	**+0.4**
	0.4nm,0.9s,baz=314,slow=4.7,SNR=2.3						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**84.43**	**125**	P	**P**	**09 05 53.0**	**+1.4**
	0.5nm,0.9s,baz=306,slow=5.3,SNR=4.1						
	0.5nm,0.9s						

*IDC **10** 08:54:26.4±5.8, 7°.15S×150°.56E, h41km±53km, mb3.6/4, mbtmp3.9/6, ML2.8/2, MS3.6/1, Error ellipse: s-maj=62.8km s-min=33.6km az=148.0*
ISC 10 08:54:24.5±1.5, 7°.2S±0°.2×150°.7E±0°.2, h26km, n7, σ0961/7, mb3.6/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.11**	**238**	P	**Pn**	**08 55 26.5**	**+0.9**
	5.3nm,0.3s,baz=38,slow=10,SNR=10						
PMG				S	**Sn**	**08 56 12.3**	**-0.7**
	16nm,0.3s,baz=151,slow=21,SNR=7.6						
	14nm,0.3s						
CTA	**Charters Tower**	**13.51**	**198**	P	**Pn**	**08 57 34.6**	**0.0**
	0.2nm,0.3s,baz=4.8,slow=12,SNR=3.5						
	3.6nm,1.0s						
WRA	**Warramunga Arr**	**20.28**	**230**	P	**P**	**08 58 58.5**	**+0.1**
	3.4nm,0.6s,baz=55,slow=11,SNR=10						
	3.4nm,0.6s						
ASAR	**Alice Springs**	**22.96**	**223**	P	**P**	**08 59 26.9**	**-0.3**
	1.5nm,0.8s,baz=55,slow=9.3,SNR=4.8						
	1.5nm,0.8s						
FITZ	**Fitzroy Crossi**	**26.68**	**244**	P	**P**	**09 00 01.2**	**-0.4**
	3.1nm,0.6s,baz=96,slow=5.6,SNR=4.1						
	3.1nm,0.6s						
TGY	**Tagaytay City**	**36.31**	**306**	LR	LR	09 15 08.5	
	comp=Z,106nm,21.9s,baz=173,slow=34						
ILAR	**Eielson Array**	**85.17**	**22**	P	**P**	**09 06 58.0**	**-0.1**
	0.4nm,0.9s,baz=265,slow=6.2,SNR=4.1						
	0.4nm,0.9s						

*CATAC **10** 09:06:57.0±0.5, 14°.N±3°.×9°.1W±°, h32km±7km, M3.4/24, MLv3.4/24, Error ellipse: s-maj=7.4km s-min=2.4km az=23.7, confirmed*
*SNET **10** 09:06:58.6±1.0, 13°.79N×90°.67W, h78km, ML3.3, Presumed earthquake*
*GCG **10** 09:06:58.2±1.1, 13°.84N×90°.67W, h82km±7km, MD3.6, ML3.8, MW2.7, Presumed earthquake*
ISC 10 09:06:58.7±1.6, 13°.72N±0°.08×90°.62W±0°.05, h90km±9km, n48, σ1929/71, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESSJ	**San Jos, E**	**0.19**	**144**	*i* P	**Pn**	**09 07 10.7**	**-1.0**
FG8	**Yepocapa, Chim**	**0.54**	**6**	*i* P	**Pn**	**09 07 14.2**	**+0.2**
FG8				*i* S	**Sn**	**09 07 26.5**	**+1.2**
PCG5	**San Vicente Pa**	**0.55**	**25**	*i* P	**Pn**	**09 07 13.5**	**-0.6**
FG16	**Alotenango, Sa**	**0.56**	**11**	*i* P	**Pn**	**09 07 14.2**	**0.0**
FG16				*i* S	**Sn**	**09 07 26.8**	**+1.0**
FG16				IAML		09 07 31.3	
	comp=E,3μm,0.2s						
FAME	**Alcaldia de Sa**	**0.60**	**78**	P	**Pn**	**09 07 12.7**	**-1.6**
FAME				S	**Sn**	**09 07 25.3**	**-0.6**
ESSG	**Sabana Grande**	**0.69**	**343**	*i* P	**Pn**	**09 07 13.0**	**-2.3**
NUBE	**Las Nubes**	**0.83**	**77**	P	**Pn**	**09 07 15.8**	**-1.0**
NUBE				S	**Sn**	**09 07 30.3**	**0.0**
NUBE	**Las Nubes**	**0.83**	**77**	*i* P	**Pn**	**09 07 15.9**	**-0.8**
NUBE				*i* S	**Sn**	**09 07 30.0**	**-0.3**
NUBE	**Las Nubes**	**0.83**	**77**	*e*P	**Pn**	**09 07 15.9**	**-0.8**
NUBE				*e*S	**Sn**	**09 07 29.9**	**-0.3**
SLOZ	**Alcaldia de Sa**	**0.87**	**69**	P	**Pn**	**09 07 16.0**	**-0.9**
SLOZ				S	**Sn**	**09 07 30.9**	**+0.2**
CEVE	**Cerro Verde**	**0.97**	**84**	P	**Pn**	**09 07 17.4**	**-0.9**
CEVE				S	**Sn**	**09 07 33.7**	**+0.6**
SBLS	**San Blas**	**0.97**	**83**	*e*P	**Pn**	**09 07 19.1**	**+0.8**
SBLS				*e*S	**Sn**	**09 07 33.5**	**+0.4**
STG5	**El Palmar, Qui**	**0.98**	**314**	*i* P	**Pn**	**09 07 20.5**	**+2.2**
STG8	**El Palmar, Qui**	**1.02**	**316**	*i* P	Pn	09 07 21.3	+2.4
STG8				*i* S	**Sn**	**09 07 38.6**	**+4.7**
STG8				IAML		09 07 40.4	
	comp=E,1μm,0.1s						
STG2	**El Palmar, Qui**	**1.02**	**314**	*i* P	Pn	09 07 21.5	+2.6
STG2				*i* S	**Sn**	**09 07 38.9**	**+5.0**
STG2				IAML		09 07 40.0	
	comp=E,3μm,0.3s						
UNIC	**Universidad Ca**	**1.07**	**76**	P	**Pn**	**09 07 18.0**	**-1.3**
UNIC				S	**Sn**	**09 07 34.4**	**-0.4**
JAYA	**Jayaque - finc**	**1.14**	**93**	P	**Pn**	**09 07 19.3**	**-0.8**
JAYA				S	**Sn**	**09 07 37.3**	**+1.0**
JAYA	**Jayaque - finc**	**1.14**	**93**	*i* P	**Pn**	**09 07 19.5**	**-0.7**
JAYA				*i* S	**Sn**	**09 07 36.4**	**0.0**
JAYA				IAML		09 07 38.5	
	comp=N,956nm,0.2s						
JAYA	**Jayaque - finc**	**1.14**	**93**	*e*P	**Pn**	**09 07 19.6**	**-0.5**
JAYA				*e*S	**Sn**	**09 07 36.3**	**0.0**
PMON	**Piamonte**	**1.27**	**90**	P	**Pn**	**09 07 21.1**	**-0.6**
PMON				S	**Sn**	**09 07 40.0**	**+1.0**
PMON	**Piamonte**	**1.27**	**90**	*e*P	**Pn**	**09 07 21.2**	**-0.5**
PMON				*e*S	**Sn**	**09 07 40.0**	**+1.0**
LALI	**Alcalda de L**	**1.28**	**100**	P	**Pn**	**09 07 20.3**	**-1.4**
APG	**El Apazote**	**1.29**	**7**	*i* P	**Pn**	**09 07 20.8**	**-1.2**
RTAL	**Retalhuleu**	**1.32**	**308**	P	**Pn**	**09 07 20.5**	**-1.7**
RTAL				S	**Sn**	**09 07 37.2**	**-2.7**
SOKI	**Kika Raxquin**	**1.33**	**325**	*i* P	**Pn**	**09 07 21.3**	**-1.5**
SOKI				*i* S	**Sn**	**09 07 39.2**	**-1.7**
UEES	**Universidad Ev**	**1.34**	**90**	P	**Pn**	**09 07 22.7**	**+0.2**
UEES	**Universidad Ev**	**1.34**	**90**	*e*P	**Pn**	**09 07 23.3**	**+0.8**
UEES				*e*S	**Sn**	**09 07 41.9**	**+1.3**
SEMO	**Seminario San**	**1.35**	**91**	P	**Pn**	**09 07 22.6**	**-0.1**
SEMO				S	**Sn**	**09 07 41.9**	**+1.1**
MTO3	**Montecristo**	**1.40**	**61**	P	**Pn**	**09 07 21.9**	**-1.5**
PANCS	**Alcalda de**	**1.40**	**94**	P	**Pn**	**09 07 22.6**	**-0.7**
PANCS				S	**Sn**	**09 07 42.0**	**+0.2**
IGN	**Direccin Gen**	**1.41**	**90**	P	**Pn**	**09 07 23.6**	**+0.3**
LOMA	**Loma Larga**	**1.41**	**93**	*e*P	**Pn**	**09 07 23.8**	**+0.4**
UDBS	**Universidad Do**	**1.42**	**90**	P	**Pn**	**09 07 23.7**	**+0.2**
UDBS				S	**Sn**	**09 07 42.7**	**+0.4**
ESQI	**Esquipulas**	**1.49**	**56**	P	**Pn**	**09 07 23.8**	**-0.7**
PAVA	**Las Pavas**	**1.63**	**90**	P	**Pn**	**09 07 26.0**	**-0.3**
LLGN	**La Laguna**	**1.68**	**75**	P	**Pn**	**09 07 25.8**	**-1.1**
COEG	**Centro de Oper**	**1.69**	**93**	P	**Pn**	**09 07 26.9**	**-0.1**
COEG				S	**Sn**	**09 07 49.2**	**+0.8**
SMCA	**Catarina**	**1.81**	**309**	*i* P	**Pn**	**09 07 26.3**	**-2.1**
SCLA	**Alcaldia de Sa**	**1.84**	**90**	P	**Pn**	**09 07 28.8**	**0.0**
SARH	**Santa Rosa de**	**2.08**	**60**	P	**Pn**	**09 07 31.9**	**-0.1**
SARH	**Santa Rosa de**	**2.08**	**60**	*i* P	**Pn**	**09 07 32.0**	**-0.1**
PACA	**Pacayal**	**2.25**	**96**	P	**Pn**	**09 07 34.0**	**-0.3**
PACA				S	**Sn**	**09 08 03.0**	**+1.5**
LCND	**La Caada**	**2.68**	**98**	P	**Pn**	**09 07 39.2**	**-0.8**
PETF	**Flores**	**3.26**	**13**	P	**Pn**	**09 07 48.0**	**+0.2**
TGUH	**Tegucigalpa,Un**	**3.27**	**84**	P	**Pn**	**09 07 46.9**	**-1.0**
YUSH	**Yuscaran**	**3.67**	**86**	P	**Pn**	**09 07 53.3**	**-0.1**
OCON	**Estacion meteo**	**4.03**	**91**	P	**Pn**	**09 07 57.6**	**-0.6**
COPN	**Copaltepe**	**4.21**	**111**	P	**Pn**	**09 08 00.6**	**0.0**

*SDD **10** 09:07:46.7±1.8, 19°.15N×70°.69W, h18km±15km, MD3.0, ML2.4, MW2.5, Presumed earthquake*
*OSPL **10** 09:07:53.3±1.4, 19°.31N×70°.61W, h0km±35km, ML2.0, Presumed earthquake*
ISC 10 09:07:46.5±2.1, 19°.6N±0°.1×70°.44W±0°.04, h7km±13km, n8, σ1853/13, 8C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SC01	**Santiago de lo**	**0.29**	**246**	⇑*e*Pg	**Pg**	**09 07 52.1**	**-0.3**
SC01				⇑*e*Sg	**Sg**	**09 07 57.2**	**+0.9**
SC01				IAML		09 08 29.2	
	comp=N,132nm,4.3s						
SFDR	**San Fco. de Ma**	**0.32**	**144**	⇑*e*Pg	**Pb**	**09 07 55.2**	**+0.6**
SFDR				⇑*e*Sg	**Sb**	**09 08 00.6**	**+0.6**
SFDR				IAML		09 08 00.7	
	comp=N,360nm,0.3s						
NADR	**Nagua**	**0.59**	**109**	⇑*e*Pg	**Pn**	**09 07 59.7**	**-1.5**
NADR				⇑*e*Sg	**Sn**	**09 08 12.1**	**+1.1**
NADR				IAML		09 08 57.0	
	comp=N,394nm,1.6s						
LOPP1	**Punta Rusia, P**	**0.78**	**293**	*e*S	**Sn**	**09 08 17.6**	**+1.9**
LOPP1				IAML		09 08 21.1	
	comp=Z,89nm,0.9s						
SDDR	**Presa de Saban**	**0.98**	**235**	*i* P	**Pb**	**09 08 05.8**	**-0.1**
SDDR				*e*S	**Sb**	**09 08 15.9**	**-3.0**
SDDR				IAML		09 08 18.8	
	comp=Z,8.2nm,0.8s						
HATOM	**Hato Mayor del**	**1.26**	**127**	⇑*e*Pg	**Pn**	**09 08 09.2**	**-1.3**
HATOM				⇑*e*Sg	**Sb**	**09 08 26.8**	**-0.1**
HATOM				IAML		09 08 30.4	
	comp=N,52nm,3.0s						
LONE3	**El Aguacate, B**	**1.34**	**226**	*i* P	**Pn**	**09 08 11.6**	**-0.2**
LONE3				IAML		09 08 33.5	
	comp=Z,24nm,2.3s						
LODU1	**El Espartillar**	**1.54**	**220**	*i* P	**Pb**	**09 08 16.7**	**+1.3**
LODU1				IAML		09 08 37.6	
	comp=Z,65nm,2.7s						

TAP 10 09:27:57.0, 21°.28N×121°.90E, h163km, ML3.7, 3C-3D, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LYUB	**Lan-yu**	**0.77**	**338**	P	Pn	09 28 21.3	0.0
LYUB				*i* S	Sn	09 28 40.1	-0.1
LAY	**Lan-yu**	**0.82**	**337**	*i* P	Pn	09 28 21.1	-0.5
LAY				*i* S	Sn	09 28 39.3	-1.5
TSEB	**Hengchuen, Pin**	**1.11**	**304**	*i* P	Pn	09 28 25.1	+1.2
TSEB				*e*S	Sn	09 28 44.9	+0.3
TWKBT	**Hengchun**	**1.20**	**303**	⇓P	Pn	09 28 25.5	+0.8
TWKBT				*e*S	Sn	09 28 45.8	-0.3
TWK1	**Hengchun**	**1.21**	**303**	*i* P	Pn	09 28 25.5	+0.7
TWK1				*i* S	Sn	09 28 45.7	-0.5
SMST	**Manzhou Townsh**	**1.23**	**307**	P	Pn	09 28 25.5	+0.5
SMST				*i* S	Sn	09 28 45.5	-1.0
HEN	**Hengchun**	**1.30**	**304**	P	Pn	09 28 26.5	+0.9
HEN				*e*S	Sn	09 28 47.5	-0.1
SLIU	**Shizi**	**1.38**	**313**	⇑*i*P	Pn	09 28 26.7	+0.4
SLIU				*e*S	Sn	09 28 48.2	-0.9
TAW	**Tawu**	**1.42**	**319**	P	Pn	09 28 26.8	0.0
TAW				*e*S	Sn	09 28 48.1	-1.5
EAST	**Anshuo**	**1.47**	**319**	P	Pn	09 28 27.2	0.0
EAST				*e*S	Sn	09 28 49.8	-0.8
ECL	**Taimali**	**1.57**	**326**	⇑*i*P	Pn	09 28 27.7	-0.6
ECL				*i* S	Sn	09 28 50.7	-1.8
SCZT	**Fangliau**	**1.61**	**313**	⇓*i*P	Pn	09 28 28.9	+0.3
SCZT				S	Sn	09 28 51.7	-1.4
TTN	**Taitung**	**1.62**	**335**	*e*P	Pn	09 28 29.6	+0.9
TWGBT	**Beinan**	**1.71**	**334**	P	Pn	09 28 29.3	-0.3
TWG	**Pinlang**	**1.71**	**334**	*e*P	Pn	09 28 29.3	-0.5
TWG				S	Sn	09 28 54.7	-0.5
SSPT	**Xinbi**	**1.72**	**314**	*e*P	Pn	09 28 30.6	+0.8
SSPT				*e*S	Sn	09 28 55.2	0.0
LONT	**Longtian**	**1.77**	**336**	P	Pn	09 28 30.2	-0.2
MASBT	**Mashibuluo**	**1.77**	**319**	⇓*i*P	Pn	09 28 30.7	+0.3
MASBT				*e*S	Sn	09 28 54.9	-1.3
TWP	**Hsiaoliuchiu**	**1.78**	**307**	P	Pn	09 28 32.4	+1.9
TSMG	**Majia**	**1.83**	**321**	*e*P	Pn	09 28 31.8	+0.8
SSD	**Sandimen**	**1.87**	**321**	⇑P	Pn	09 28 31.7	+0.2
SSD				S	Sn	09 28 57.1	-1.1
CHKT	**Chengkung**	**1.88**	**345**	*e*P	Pn	09 28 30.8	-0.7
SGLT	**Jiouru**	**1.94**	**318**	*e*P	Pn	09 28 33.7	+1.5
CHKH	**Chenggong**	**1.96**	**346**	*e*P	Pn	09 28 33.5	+1.1
CHKH				*e*S	Sn	09 28 59.9	0.0
EHD	**Haiduan**	**1.97**	**341**	*i* P	Pn	09 28 31.8	-0.7
EHD				*e*S	Sn	09 28 58.3	-1.8
FULB	**Fuli**	**1.99**	**344**	*e*P	Pn	09 28 33.4	+0.6
FULB				S	Sn	09 29 01.1	+0.6
WSSB	**Gushan**	**2.03**	**312**	*e*P	Pn	09 28 34.6	+1.3
TWM1	**Shoushan**	**2.06**	**319**	*e*P	Pn	09 28 35.5	+2.0
SLGT	**Liugui**	**2.06**	**326**	*e*P	Pn	09 28 34.4	+0.8
ELDTW	**Lidau**	**2.07**	**337**	*e*P	Pn	09 28 34.8	+1.0
TWF1	**Yuli**	**2.13**	**345**	*e*P	Pn	09 28 34.6	+0.2
STYH	**Taoyuan**	**2.15**	**331**	*i* P	Pn	09 28 35.1	+0.5
STYH				S	Sn	09 29 03.0	-0.7
SGST	**Jiashian**	**2.17**	**326**	*e*P	Pn	09 28 34.4	-0.4
SGST				S	Sn	09 29 03.7	-0.5
YULB	**Yu-li**	**2.17**	**345**	*e*P	Pn	09 28 34.7	-0.2
YULB				*e*S	Sn	09 29 03.8	-0.6
HGSD	**Ruisui**	**2.24**	**349**	*e*P	Pn	09 28 36.0	+0.3
EHYH	**Wanrong**	**2.26**	**347**	*e*P	Pn	09 28 36.5	+0.6
EHY	**Hungye**	**2.28**	**347**	*e*P	Pn	09 28 36.1	0.0
CHN1	**Nanshi**	**2.28**	**326**	*i* P	Pn	09 28 36.5	+0.4
CHN1				*e*S	Sn	09 29 04.7	-1.8
WTP	**Ta-pu**	**2.29**	**329**	*e*P	Pn	09 28 36.8	+0.5
TPUB	**Ta-pu**	**2.33**	**330**	P	Pn	09 28 36.8	+0.1
TPUB				*i* S	Sn	09 29 06.0	-1.6
TWK	**Hsinying**	**2.37**	**327**	*e*P	Pn	09 28 37.4	+0.2
TWK				S	Sn	09 29 08.2	-0.2
CHN4	**Tsaushan**	**2.39**	**330**	*e*P	Pn	09 28 37.3	-0.1
ALS	**Alishan**	**2.44**	**336**	*i* P	Pn	09 28 38.1	-0.1
ALS				S	Sn	09 29 09.3	-1.0
WCKO	**Fanlu**	**2.46**	**331**	*e*P	Pn	09 28 38.5	+0.2
WCKO				*e*S	Sn	09 29 09.0	-1.3
TSCK	**Chigu Township**	**2.50**	**318**	*i* P	Pn	09 28 39.2	+0.5
TSCK				*e*S	Sn	09 29 10.3	-0.8
VWDT	**VWDT**	**2.56**	**344**	P	Pn	09 28 40.7	+1.3
VWDT				*i* S	Sn	09 29 12.9	+0.5
WHYT	**Xinyi Township**	**2.59**	**338**	*e*P	Pn	09 28 40.1	+0.2
WHYT				*e*S	Sn	09 29 12.7	-0.5
SSLB	**Suanglung**	**2.64**	**341**	*e*P	Pn	09 28 40.5	0.0
SSLB				*e*S	Sn	09 29 13.7	-0.6
WSL	**Shuilin Townsh**	**2.71**	**326**	P	Pn	09 28 41.2	-0.1
WSL				*e*S	Sn	09 29 15.2	-0.6
OWD	**Renai**	**2.74**	**346**	*e*P	Pn	09 28 42.7	+0.9
OWD				S	Sn	09 29 16.1	-0.6
LXIB	**Xiulin Townshi**	**2.76**	**351**	*e*P	Pn	09 28 42.4	+0.3
LXIB				S	Sn	09 29 16.6	-0.5
WUSB	**Renai**	**2.79**	**345**	*e*P	Pn	09 28 43.1	+0.7
WUSB				*e*S	Sn	09 29 17.8	+0.1
NACB	**Ninganchiao**	**2.89**	**355**	*e*P	Pn	09 28 44.6	+1.1
VCHM	**Qimei**	**2.98**	**310**	*e*P	Pn	09 28 44.6	0.0
VCHM				*e*S	Sn	09 29 20.6	-1.1
FUSS	**Fushou**	**3.01**	**349**	*e*P	Pn	09 28 46.6	+1.3
PHUB	**P'eng-hu**	**3.09**	**316**	*e*P	Pn	09 28 45.8	-0.2
PHUB				S	Sn	09 29 22.6	-1.5
WHP	**Taichung City**	**3.11**	**344**	P	Pn	09 28 46.9	+0.6
WHP				*i* S	Sn	09 29 24.7	0.0
VWUC	**VWUC**	**4.33**	**329**	P	Pn	09 29 01.7	0.0
VWUC				S	Sn	09 29 50.4	-2.0
PTMZ	**Houxiangcun**	**4.53**	**326**	*e*P	Pn	09 29 05.0	+0.5
PTMZ				*e*S	Sn	09 29 55.2	-2.0

*IDC **10** 09:29:34.9±3.0, 26°.57N×141°.77E, h38km±25km, mb3.8/9, mbtmp4.0/9, Error ellipse: s-maj=32.8km s-min=17.0km az=96.0*
*NEIC **10** 09:29:35.9±0.9, 26°.6N±0°.1×141°.7E±0°.2, h40km±7km, mb4.2/12, Error ellipse: s-maj=29.4km s-min=5.8km az=132.0*
ISC 10 09:29:34.7±0.7, 26°.5N±0°.1×141°.8E±0°.2, h35km, n32, σ0874/35, mb4.2/14, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**0.67**	**35**	Pn	**Pn**	**09 29 47.7**	**-0.1**
	313nm,0.3s,baz=107,slow=23,SNR=299						
JCJ				Sn	**Sn**	**09 29 56.4**	**-0.7**
	1μm,0.3s,baz=321,slow=20,SNR=37						
JCJ	**Chichijima**	**0.67**	**35**		**Pn**	**09 29 48.5**	**+0.7**
JCJ					**Sn**	**09 29 57.1**	**0.0**
WB0	**Warramunga Arr**	**46.59**	**190**	P	**P**	**09 37 59.7**	**+0.4**
WB0				IAmb	IAmb	09 38 13.3	
	comp=Z,5.3nm,1.1s						
WRAB	**Tennant Creek**	**46.75**	**190**	P	**P**	**09 38 01.1**	**+0.5**
WRA	**Warramunga Arr**	**46.77**	**190**	P	**P**	**09 38 00.9**	**+0.2**
	comp=Z,1.5nm,0.5s,baz=11,slow=8.5,SNR=23						
	comp=Z,1.5nm,0.5s						
WRA	**Warramunga Arr**	**46.77**	**190**	P	**P**	**09 38 01.1**	**+0.4**
AS31	**Alice Springs**	**50.49**	**189**	P	**P**	**09 38 29.9**	**+0.6**
ASAR	**Alice Springs**	**50.49**	**189**	P	**P**	**09 38 28.9**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=5.0,slow=5.5,SNR=7.6						
	comp=Z,0.1nm,0.3s						
ASAR	**Alice Springs**	**50.49**	**189**	P	**P**	**09 38 30.0**	**+0.7**
ANM	**Nome**	**50.63**	**26**	P	**P**	**09 38 31.2**	**+1.3**
ANM				IAmb	IAmb	09 38 54.3	
	comp=Z,2.9nm,1.4s						
C18K	**Utukok River**	**53.70**	**22**	P	**P**	**09 38 53.7**	**+0.9**
C18K				IAmb	IAmb	09 39 14.2	
	comp=Z,4.4nm,1.4s						
C19K	**Lookout Ridge**	**54.41**	**22**	P	**P**	**09 38 59.5**	**+1.6**
C19K				IAmb	IAmb	09 38 59.9	
	comp=Z,2.8nm,1.1s						
D19K	**Kuna River**	**54.72**	**23**	P	**P**	**09 39 01.1**	**+0.9**
D19K				IAmb	IAmb	09 39 14.6	
	comp=Z,6.0nm,1.4s						
D20K	**Etivluk River**	**55.31**	**23**	P	**P**	**09 39 05.4**	**+0.9**
IMAR	**Indian Mountai**	**55.71**	**27**	P	**P**	**09 39 07.2**	**-0.1**
IMAR				PcP	**PcP**	**09 40 05.8**	**-0.5**
BVAR	**Borovoye Array**	**58.19**	**318**	P	**P**	**09 39 24.8**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=75,slow=6.0,SNR=5.1						
	comp=Z,0.5nm,0.4s						
AB31	**Akbulak array**	**65.20**	**314**	P	**P**	**09 40 12.0**	**-0.4**
ABKAR	**Akbulak array**	**65.20**	**314**	P	**P**	**09 40 12.0**	**-0.4**
SPITS	**Spitsbergen Ar**	**70.85**	**350**	P	**P**	**09 40 48.7**	**+1.3**
	comp=Z,5.3nm,0.9s,baz=64,slow=3.4,SNR=5.8						
	comp=Z,5.3nm,0.9s						
YKA	**Yellowknife Ar**	**72.81**	**28**	P	**P**	**09 40 58.6**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=301,slow=6.7,SNR=9.0						
	comp=Z,0.4nm,0.7s						
YKA	**Yellowknife Ar**	**72.81**	**28**	P	**P**	**09 40 59.0**	**-0.4**
ARCES	**ARCESS Array B**	**73.93**	**341**	P	**P**	**09 41 06.7**	**+0.8**
	comp=Z,7.0nm,1.1s,baz=62,slow=6.3,SNR=4.3						
	comp=Z,7.0nm,1.1s						
FINES	**FINESS Array B**	**78.27**	**334**	P	**P**	**09 41 29.8**	**-0.8**
	comp=Z,2.0nm,0.5s,baz=68,slow=5.2,SNR=26						
	comp=Z,2.0nm,0.5s						
NC405	**NORSAR Array S**	**83.76**	**338**	P	**P**	**09 41 59.2**	**-0.7**
HFS	**Hagfors**	**83.78**	**337**	P	**P**	**09 41 58.7**	**-1.3**
	comp=Z,0.7nm,0.3s,baz=134,slow=4.3,SNR=7.7						
	comp=Z,0.7nm,0.3s						
PD31	**Pinedale Array**	**84.88**	**44**	P	**P**	**09 42 06.0**	**-0.4**
PD31				IAmb	IAmb	09 42 32.6	
	comp=Z,2.0nm,1.4s						
PDAR	**Pinedale Array**	**84.88**	**44**	P	**P**	**09 42 05.8**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=69,slow=1.6,SNR=4.0						
	comp=Z,0.2nm,0.5s						
PDAR	**Pinedale Array**	**84.88**	**44**	P	**P**	**09 42 05.6**	**-0.7**
PLCA	**Paso Flores**	**149.81**	**126**	PKPbc	**PKPbc**	**09 49 20.6**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=233,slow=5.1,SNR=4.0						
LPAZ	**La Paz**	**150.44**	**76**	PKPbc	**PKPbc**	**09 49

Plg25.0000°, Azm62.0000°; P -4.6020, Plg52.0000°, Azm189.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 10 10:18:05.2±0.6, **6°90S**±0°04×**106°55E**±0°03, **h19**km±2km, **n314**,σ2**01**/278, **mb4.8**/63, **MS4.4**/65, **8C-6D**, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNG	**Tangerang**	**0.73**	**7**	**P**	**Pb**	**10 18 14.5**	**-4.8**
TNG				P	Pg	10 18 14.2	-5.4
SBJI	**Serang**	**0.88**	**332**	**P**	**Pg**	**10 18 18.6**	**-3.8**
CGJI	**Cibinong**	**0.90**	**288**	**P**	**Pg**	**10 18 21.6**	**-1.2**
LEM	**Lembang**	**1.06**	**86**	Pg	**Pg**	**10 18 22.9**	**-3.0**
	471nm,0.3s,baz=247,slow=8.3,SNR=315						
LEM				Lg	Lg	10 18 40.2	
	395nm,0.3s,baz=319,slow=19,SNR=3.5						
LEM	**Lembang**	**1.06**	**86**	**P**	**Pg**	**10 18 22.7**	**-3.2**
BBJI	**Bungbulang**	**1.23**	**117**		**Pb**	**10 18 25.4**	**-2.5**
BBJI				Sn	**Sb**	**10 18 41.7**	**-1.7**
BBJI	**Bungbulang**	**1.23**	**117**	**P**	**Pb**	**10 18 25.1**	**-2.8**
BLSI	**Bandar Lampung**	**2.00**	**319**	**P**	**Pn**	**10 18 38.8**	**+0.8**
KPJI	**Karang Pucung**	**2.40**	**101**	**P**	**Pn**	**10 18 43.7**	**+0.2**
KASI	**Kota Agung**	**2.46**	**304**	**P**	**Pn**	**10 18 45.6**	**+1.3**
CTJI	**Waduk Cacaban**	**2.62**	**93**	**P**	**Pn**	**10 18 46.4**	**-0.1**
KLJ	**Kotabumi**	**2.63**	**320**	**P**	**Pn**	**10 18 48.7**	**+2.0**
KLSI		**2.84**	**320**	**P**	**Pn**	**10 18 50.7**	**+1.0**
LWLI	**Liwa**	**3.10**	**307**	**P**	**Pn**	**10 18 54.4**	**+1.1**
MDSI	**Maura Dua**	**3.36**	**315**	**P**	**Pn**	**10 18 58.7**	**+1.9**
XMI	**Christmas Isla**	**3.63**	**194**	**P**	**Pn**	**10 18 59.9**	**-0.6**
XMI	**Christmas Isla**	**3.63**	**194**	**S**	**Sn**	**10 19 41.6**	**-1.3**
YOGI	**Yogyakarta**	**3.82**	**104**	**P**	**Pn**	**10 19 04.4**	**+1.3**
SMRI	**Semarang**	**3.86**	**92**	**P**	**Pn**	**10 19 07.1**	**+3.4**
SMRI	**Semarang**	**3.86**	**92**		**Pn**	**10 19 01.7**	**-2.0**
SMRI	**Semarang**	**3.86**	**92**	**P**	**Pn**	**10 19 04.4**	**+0.7**
UGM	**Wanagama**	**4.07**	**105**	**P**	**Pn**	**10 19 09.5**	**+3.0**
UGM	**Wanagama**	**4.07**	**105**	**S**	**Sn**	**10 19 58.6**	**+5.0**
UGM	**Wanagama**	**4.07**	**105**		**Pn**	**10 19 05.6**	**-0.9**
UGM	**Wanagama**	**4.07**	**105**	**P**	**Pn**	**10 19 07.1**	**+0.6**
TPI	**Tanjungpandan**	**4.26**	**15**	**P**	**Pn**	**10 19 07.9**	**-1.2**
PMBI	**Palembang**	**4.32**	**336**	**Pn**	**Pn**	**10 19 10.2**	**+0.2**
PMBI	**Palembang**	**4.32**	**336**	**P**	**Pg**	**10 19 28.1**	**0.0**
MNAI	**Manna**	**4.38**	**305**	**P**	**Pn**	**10 19 14.0**	**+3.3**
MNAI	**Manna**	**4.38**	**305**		**Pn**	**10 19 11.2**	**+0.5**
MNAI	**Manna**	**4.38**	**305**	**P**	**Pn**	**10 19 12.3**	**+1.6**
EGSI	**Enggano, Bengk**	**4.52**	**290**	**P**	**Pn**	**10 19 14.3**	**+1.6**
PPBI	**Pangkal Pinang**	**4.72**	**355**	**P**	**Pn**	**10 19 14.6**	**-0.9**
PCJI	**Pacitan**	**4.76**	**106**	**P**	**Pn**	**10 19 16.6**	**+0.5**
NGJI	**Ngawi**	**4.89**	**96**	**P**	**Pb**	**10 19 31.5**	**+1.1**
KSI	**Kapahiang**	**5.09**	**309**	**P**	**Pn**	**10 19 24.4**	**+3.8**
SJI	**Sawahan**	**5.24**	**99**	**P**	**Pn**	**10 19 22.0**	**-0.7**
	1.2nm5μm143nm,1.0s						
SNJI	**Sawahan-Nganju**	**5.24**	**100**	**P**	**Pn**	**10 19 25.7**	**+2.9**
MASI	**Maura Aman, Be**	**5.69**	**311**	**P**	**Pn**	**10 19 31.2**	**+2.4**
DSRI	**Dabo**	**6.67**	**343**	**P**	**Pn**	**10 19 41.7**	**-0.6**
	1.3nm4μm85nm,0.7s						
KRJI	**Kerinci**	**6.97**	**313**	**P**	**Pn**	**10 19 47.7**	**+1.3**
GMJI	**Gumukmas**	**6.97**	**102**	**P**	**Pn**	**10 19 48.1**	**+1.7**
	0.4nm90nm,1.7s						
KMMI	**Kalianget**	**7.36**	**92**	**P**	**Pn**	**10 19 50.7**	**-1.1**
	0.5nm5μm45nm,1.1s						
ABJI	**Asem Bagus**	**7.67**	**97**	**P**	**Pn**	**10 19 58.1**	**+2.1**
	0.6nm3μm163nm,1.1s						
JAGI	**Jajag, Banyuwa**	**7.69**	**102**	**P**	Pn	10 20 02.0	+5.6
JAGI	**Jajag, Banyuwa**	**7.69**	**102**		**Pn**	**10 19 58.0**	**+1.7**
JAGI	**Jajag, Banyuwa**	**7.69**	**102**	**P**	**Pn**	**10 19 57.8**	**+1.4**
	0.5nm2μm1μm104nm,0.9s						
PPSI	**Pulau Pagai**	**7.70**	**302**	**P**	**Pn**	**10 19 55.3**	**-1.2**
	4μm180nm,1.4s						
PDSI	**Padang**	**8.50**	**314**	**P**	**Pn**	**10 20 07.6**	**+0.2**
	53nm,1.1s						
PPI	**Padang Panjang**	**8.87**	**316**	**P**	**Pn**	**10 20 13.1**	**+0.7**
	3μm88nm,1.6s						
MYKOM	**Kota Tinggi**	**9.04**	**343**	**P**	**Pn**	**10 20 16.9**	**+2.1**
MYKOM	**Kota Tinggi**	**9.04**	**343**		**Pn**	**10 20 13.9**	**-0.9**
MYKOM	**Kota Tinggi**	**9.04**	**343**	**P**	**Pn**	**10 20 15.3**	**+0.5**
	870nm48nm,1.5s						
MNSI	**Mandailing Nat**	**10.33**	**317**	**P**	**Pn**	**10 20 34.1**	**+1.5**
	50nm,1.8s						
SBUM	**Sibu**	**10.87**	**32**	**P**	Pn	10 20 46.0	+6.0
SBUM	**Sibu**	**10.87**	**32**		**Pn**	**10 20 37.4**	**-2.6**
SBUM	**Sibu**	**10.87**	**32**	**P**	**Pn**	**10 20 40.4**	**+0.4**
PLAI	**Plampang**	**11.29**	**101**	**P**	**Pn**	**10 20 46.1**	**+0.5**
	1μm819nm41nm,0.9s						
GSI	**Gunungsitoli**	**12.11**	**312**		**Pn**	**10 20 56.3**	**-0.6**
GSI	**Gunungsitoli**	**12.11**	**312**	**P**	**Pn**	**10 20 55.7**	**-1.2**
	2μm60nm,0.7s						
KAPI	**Kappang**	**13.26**	**83**	Pn	**Pn**	**10 21 11.5**	**-1.1**
	1.0nm,0.3s,baz=239,slow=12,SNR=5.2						
KAPI				LR	LR	10 27 43.4	
	comp=Z,970nm,18.2s,baz=260,slow=44 2.6nm,0.4s						
KAPI	**Kappang**	**13.26**	**83**	**P**	**P**	**10 21 18.3**	**-4.1**
KAPI	**Kappang**	**13.26**	**83**	Pn	**Pn**	**10 21 10.9**	**-1.7**
KAPI	**Kappang**	**13.26**	**83**	**P**	**Pn**	**10 21 14.0**	**+1.3**
KAPI				S	Sn	10 23 51.4	+12
KAPI	**Kappang**	**13.26**	**83**	**P**	**Pn**	**10 21 13.2**	**+0.5**
KULM	**Kulim**	**13.46**	**334**	**P**	**Pn**	**10 21 17.3**	**+1.9**
KULM	**Kulim**	**13.46**	**334**	Pn	**Pn**	**10 21 14.7**	**-0.7**
KULM	**Kulim**	**13.46**	**334**	**P**	**Pn**	**10 21 15.7**	**+0.3**
	2μm55nm,2.6s						
SPSI	**Sidrap Palu**	**13.48**	**78**	**P**	**P**	**10 21 25.1**	**+0.4**
KCSI	**Kotacane, Aceh**	**13.56**	**319**	**P**	**Pn**	**10 21 19.4**	**+2.6**
TTSI	**Tana Toraja**	**13.76**	**74**	**P**	**Pn**	**10 21 19.7**	**+0.3**
	1μm47nm,1.9s						
BSSI	**Bau Bau, Buton**	**13.87**	**88**	**P**	**P**	**10 21 26.2**	**-2.9**
BASI	**Baing, Sumba**	**14.26**	**104**	**P**	**Pn**	**10 21 26.3**	**0.0**
EDFI	**Ende, Flores**	**15.11**	**98**	**P**	**Pn**	**10 21 37.5**	**-0.5**
	26nm,1.4s						
MPSI	**Mapaga**	**15.13**	**62**	**P**	**P**	**10 21 49.2**	**+6.0**
MMRI	**Maumere**	**15.64**	**97**	**P**	**P**	**10 21 50.4**	**+1.6**
MMRI	**Maumere**	**15.64**	**97**	**P**	**P**	**10 21 50.5**	**+1.6**
KKM	**Kota Kinabalu**	**16.07**	**37**	**P**	**Pn**	**10 21 49.6**	**-0.8**
	45nm,1.7s						
APSI	**Ampana**	**16.19**	**69**	**P**	**Pn**	**10 21 51.6**	**-0.2**
	2μm176nm,1.8s						
TOLI2	**Tolitoli**	**16.28**	**61**	**P**	**P**	**10 21 58.3**	**+2.4**
TOLI2	**Tolitoli**	**16.28**	**61**	Pn	**Pn**	**10 21 50.6**	**-2.4**
MYLDM	**Lahad Datu**	**16.92**	**45**	**P**	**P**	**10 22 05.7**	**+2.7**
MYLDM	**Lahad Datu**	**16.92**	**45**	Pn	**Pn**	**10 21 57.9**	**-3.2**
MYLDM	**Lahad Datu**	**16.92**	**45**	**P**	**Pn**	**10 22 00.3**	**-0.8**
	949nm38nm,1.5s						
MRSI	**Marisa**	**17.01**	**65**	**P**	**P**	**10 22 07.9**	**+3.8**
BATI	**Baumata**	**17.24**	**102**	**P**	**Pn**	**10 22 03.7**	**-1.4**
	3.1nm,0.3s,baz=132,slow=16,SNR=6.8						
BATI				S	**S**	**10 25 23.2**	**-2.2**
	13nm,0.5s,baz=333,slow=4.5,SNR=1.7 16nm,0.5s						
BATI	**Baumata**	**17.24**	**102**	**P**	**Pn**	**10 22 03.8**	**-1.4**
	1μm73nm,0.9s						
SOEI	**Soe**	**17.76**	**100**	**P**	**P**	**10 22 16.1**	**+3.7**
SOEI	**Soe**	**17.76**	**100**	**P**	**Pn**	**10 22 11.1**	**-0.7**
SOEI				IAmb	IAmb	10 22 19.8	
	comp=Z,230nm,1.6s						
SOEI	**Soe**	**17.76**	**100**	**P**	**Pn**	**10 22 11.6**	**-0.1**
	comp=Z,1μmcomp=Z,68nm,1.0s						
GTOI	**Gorontalo**	**18.05**	**66**	**P**	**Pn**	**10 22 13.9**	**-1.3**
	comp=Z,1μmcomp=Z,85nm,1.4s						
MBWA	**Marble Bar**	**19.07**	**139**	**P**	**Pn**	**10 22 29.8**	**+2.3**
MBWA	**Marble Bar**	**19.07**	**139**		**P**	**10 22 27.7**	**+1.0**
MBWA	**Marble Bar**	**19.07**	**139**	**P**	**P**	**10 22 27.3**	**+0.6**
PSA00	**Pilbara Seismi**	**19.44**	**140**	**P**	**Pn**	**10 22 33.7**	**+1.7**
PSA00	**Pilbara Seismi**	**19.44**	**140**		**P**	**10 22 31.1**	**+0.3**
PSA00	**Pilbara Seismi**	**19.44**	**140**	**P**	**P**	**10 22 31.6**	**+0.8**
PSA00				IAmb	IAmb	10 22 40.6	
	comp=Z,43nm,1.9s						
SANI	**Sanana**	**19.96**	**77**	**P**	**Pn**	**10 22 41.9**	**+3.6**
FITZ	**Fitzroy Crossi**	**21.68**	**123**	**P**	**P**	**10 22 55.7**	**+0.6**
	comp=Z,11nm,0.7s,baz=281,slow=4.1,SNR=18						
FITZ				LR	LR	10 32 20.2	
	comp=Z,751nm,19.2s,baz=312,slow=39 comp=Z,11nm,0.7s						
UBPT	**Khong Chiam**	**22.06**	**357**	**P**	**P**	**10 23 02.0**	**+2.9**
MEEK	**Meekatharra**	**22.74**	**151**	**P**	**P**	**10 23 09.8**	**+3.4**
KNRA	**Kununurra**	**23.44**	**114**		**P**	**10 23 13.2**	**-0.5**
KNRA				IAmb	IAmb	10 23 32.8	
	comp=Z,80nm,1.6s						
DAV	**Davao City (W)**	**23.51**	**54**	LR	LR	10 34 39.8	
	comp=Z,472nm,18.4s,baz=239,slow=43						
MORW	**Morawa**	**23.80**	**159**	**P**	**P**	**10 23 19.3**	**+2.3**
AUDHS	**Darwin High Sc**	**24.55**	**105**	**P**	**P**	**10 23 25.7**	**+1.6**
MTN	**Manton Dam**	**24.92**	**106**	**P**	**P**	**10 23 27.2**	**-0.2**
MTN				IAmb	IAmb	10 23 53.9	
	comp=Z,28nm,1.2s						
QIZ	**Qiongzhong**	**25.97**	**7**	**P**	**P**	**10 23 37.5**	**+0.7**
QIZ				S	**S**	**10 28 11.0**	**+4.5**
QIZ				L	L		
	comp=Z,1μm,13.2s						
QIZ				L	L		
	comp=Z,2μm,16.2s						
QIZ				L	L		
	comp=Z,1μm,16.7s						
CM31	**Chiang Mai Arr**	**26.29**	**344**	**P**	**P**	**10 23 38.3**	**-1.5**
CM31				IAmb	IAmb	10 23 46.3	
	comp=Z,34nm,1.5s						
CMAR	**Chiang Mai Arr**	**26.29**	**344**	**P**	**P**	**10 23 36.9**	**-2.9**
	comp=Z,2.2nm,0.3s,baz=161,slow=8.5,SNR=22						
CMAR				PcP	**PcP**	**10 27 04.2**	**-1.9**
	comp=Z,0.8nm,0.3s,baz=207,slow=3.2,SNR=4.6						
CMAR				LR	LR	10 35 41.5	
	comp=Z,590nm,20.5s,baz=175,slow=41 comp=Z,2.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**26.29**	**344**		**P**	**10 23 37.0**	**-2.7**
CHTO	**Chiang Mai**	**26.63**	**344**	**P**	**P**	**10 23 46.0**	**+3.2**
CHTO	**Chiang Mai**	**26.63**	**344**	**P**	**P**	**10 23 41.3**	**-1.5**
CHTO				IAmb	IAmb	10 23 42.5	
	comp=Z,20nm,1.3s						
CHTO	**Chiang Mai**	**26.63**	**344**	**P**	**P**	**10 23 42.0**	**-0.8**
CHTO				S	**S**	**10 28 27.0**	**+10**
CHTO	**Chiang Mai**	**26.63**	**344**	**P**	**P**	**10 23 41.6**	**-1.2**
	comp=Z,14nm,1.7s						
NWAO	**Narrogin (SRO)**	**27.74**	**160**	LR	LR	10 35 12.3	
	comp=Z,664nm,20.0s,baz=329,slow=37						
PALK	**Pallekele**	**29.38**	**298**	LR	LR	10 35 32.3	
	comp=Z,843nm,18.6s,baz=119,slow=36						
PALK	**Pallekele**	**29.38**	**298**	**P**	**P**	**10 24 09.7**	**+2.2**
	comp=Z,296nmcomp=Z,13nm,1.5s						
WB0	**Warramunga Arr**	**29.90**	**118**	**P**	**P**	**10 24 09.2**	**-2.8**
WRA	**Warramunga Arr**	**29.91**	**118**	**P**	**P**	**10 24 11.3**	**-0.9**
	comp=Z,2.5nm,0.7s,baz=301,slow=8.9,SNR=34						
WRA				PcP	**PcP**	**10 27 15.5**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=300,slow=2.0,SNR=9.5 comp=Z,2.5nm,0.7s						
WRA	**Warramunga Arr**	**29.91**	**118**		**P**	**10 24 10.2**	**-2.0**
WRAB	**Tennant Creek**	**29.92**	**118**	**P**	**P**	**10 24 14.0**	**+1.7**
WRAB	**Tennant Creek**	**29.92**	**118**	**P**	**P**	**10 24 13.2**	**+1.0**
WR8	**Warramunga Arr**	**30.06**	**118**	**P**	**P**	**10 24 13.2**	**-0.4**
WR8				IAmb	IAmb	10 24 20.7	
	comp=Z,58nm,2.0s						
AS31	**Alice Springs**	**31.11**	**125**	**P**	**P**	**10 24 22.2**	**-0.6**
ASAR	**Alice Springs**	**31.11**	**125**	**P**	**P**	**10 24 23.8**	**+1.0**
	comp=Z,2.0nm,0.7s,baz=300,slow=9.1,SNR=32						
ASAR				PcP	**PcP**	**10 27 17.7**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=293,slow=2.0,SNR=4.7						
ASAR				LR	LR	10 36 40.0	
	comp=Z,409nm,21.1s,baz=303,slow=36 comp=Z,2.0nm,0.7s						
ASAR	**Alice Springs**	**31.11**	**125**	**P**	**P**	**10 24 21.1**	**-1.7**
ASAR				PcP	**PcP**	**10 27 16.4**	**-1.8**
BRDH	**Bariadhala**	**32.82**	**334**	LR	LR	10 39 16.3	
	comp=Z,1μm,21.2s,baz=154,slow=39						
PZH	**PanZhiHua**	**33.53**	**352**	**P**	**P**	**10 24 47.0**	**+3.0**
H08S2	**Diego Garcia H**	**33.79**	**267**	T	T	11 00 16.1	
	baz=91,slow=76,SNR=50						
H08S3	**Diego Garcia H**	**33.80**	**267**	T	T	11 00 17.1	
	baz=91,slow=76,SNR=43						
H08S1	**Diego Garcia H**	**33.81**	**267**	T	T	11 00 14.9	
	baz=91,slow=76,SNR=36						
QIS	**Mount Isa**	**34.77**	**116**	**P**	**P**	**10 24 55.8**	**+1.0**
SHL	**Shillong**	**35.28**	**337**	**P**	**P**	**10 24 56.5**	**-2.8**
SHL				IAmb	IAmb	10 24 57.9	
	comp=Z,30nm,1.3s						
COEN	**Coen**	**36.66**	**104**	**P**	**P**	**10 25 10.2**	**-0.8**
COEN				IAmb	IAmb	10 25 14.2	
	comp=Z,12nm,0.9s						
HYB	**Hyderabad**	**36.73**	**311**	*eP*	**P**	**10 25 12.1**	**+0.5**
BBOO	**Buckleboo**	**37.63**	**137**	**P**	**P**	**10 25 19.8**	**+0.7**
BBOO				IAmb	IAmb	10 25 39.5	
	comp=Z,45nm,1.8s						
CD2	**Chengdu**	**37.69**	**356**	*eP*	**P**	**10 25 21.4**	**+1.8**
CD2				S	**S**	**10 31 15.5**	**+6.6**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				L	L		
	comp=Z,2μm,11.2s						
CD2				L	L		
	comp=Z,2μm,13.5s						
CD2				L	L		
	comp=Z,3μm,11.2s						
INKA	**Innaminka**	**38.45**	**127**	**P**	**P**	**10 25 26.7**	**+0.6**
AUJCS	**Jamestown Cent**	**39.60**	**136**	**P**	**P**	**10 25 37.6**	**+1.9**
PMG	**Port Moresby**	**40.26**	**96**	LR	LR	10 45 35.9	
	comp=Z,438nm,18.3s,baz=288,slow=41						
PMG	**Port Moresby**	**40.26**	**96**	**P**	**P**	**10 25 43.9**	**+2.6**
PMG	**Port Moresby**	**40.26**	**96**	**P**	**P**	**10 25 44.0**	**+2.6**
PMG	**Port Moresby**	**40.26**	**96**	**P**	**P**	**10 25 40.0**	**-1.4**
PMG				IAmb	IAmb	10 25 44.5	
	comp=Z,94nm,1.6s						
PMG	**Port Moresby**	**40.26**	**96**	**P**	**P**	**10 25 40.5**	**-0.9**
	comp=Z,34nm,1.4s						
NJ2	**Nanjing**	**40.47**	**16**	*eP*	**P**	**10 25 44.2**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,24nm,0.6s						
XAN	**Xi'an**	**40.77**	**3**	⇓P	**P**	**10 25 44.6**	**-0.8**
XAN				pmax	pmax		
	comp=Z,8.0nm,2.0s						
XAN				L	L		
	comp=Z,2μm,11.7s						
XAN				L	L		
	comp=Z,960nm,12.8s						
XAN				L	L		
	comp=Z,3μm,14.4s						
QLP	**Quilpie**	**40.82**	**123**	**P**	**P**	**10 25 47.6**	**+1.7**
STKA	**Stephens Creek**	**41.04**	**132**	**P**	**P**	**10 25 48.3**	**+0.7**
	comp=Z,14nm,0.7s,baz=308,slow=9.4,SNR=26						
STKA				LR	LR	10 43 45.7	
	comp=Z,368nm,21.0s,baz=297,slow=37 comp=Z,14nm,0.7s						
STKA	**Stephens Creek**	**41.04**	**132**	**P**	**P**	**10 25 48.4**	**+0.8**
STKA	**Stephens Creek**	**41.04**	**132**	**P**	**P**	**10 25 47.5**	**-0.1**
LYN	**LuoYang**	**41.60**	**7**	**P**	**P**	**10 25 52.1**	**0.0**
LYN				pmax	pmax		
	comp=Z,34nm,0.9s						
LYN				L	L		
	comp=Z,620nm,14.1s						
LYN				L	L		
	comp=Z,1μm,11.7s						
LYN				L	L		
	comp=Z,1μm,12.8s						
LZH	**Lanzhou**	**42.83**	**357**	*eP*	**P**	**10 26 05.9**	**+3.6**
LZH				sP	sP	10 26 16.3	+5.5
LZH				pmax	pmax		
	comp=Z,17nm,1.6s						
LZH				L	L		
	comp=Z,780nm,14.4s						
LZH				L	L		
	comp=Z,980nm,13.1s						
LZH				L	L		
	comp=Z,2μm,13.1s						
GUMO	**Guam**	**43.15**	**62**	LR	LR	10 44 30.5	
	comp=Z,73nm,22.0s,baz=250,slow=37						
CMSA	**Cobar Meteorol**	**43.98**	**129**	**P**	**P**	**10 26 12.6**	**+1.1**
HNS	**HongShan**	**44.72**	**9**	⇑P	**P**	**10 26 16.5**	**-0.7**
HNS				pmax	pmax		
	comp=Z,7.0nm,1.5s						
HNS				L	L		
	comp=Z,480nm,13.3s						
HNS				L	L		
	comp=Z,630nm,11.6s						
HNS				L	L		
	comp=Z,530nm,12.8s						
GTA2	**Gaotai**	**46.58**	**353**	*eP*	**P**	**10 26 31.2**	**-0.9**
GTA2				pP	pP	10 26 36.3	-2.2
GTA2				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GTA2				L	L		
	comp=Z,1μm,19.2s						
GTA2				L	L		
	comp=Z,770nm,16.8s						
GTA2				L	L		
	comp=Z,1μm,15.1s						
BTO2	**Baotou**	**47.50**	**3**	*eP*	**P**	**10 26 41.9**	**+2.6**
BTO2				pP	**sP**	**10 26 46.3**	**-1.6**
BTO2				sP	**pP**	**10 26 48.9**	**+3.2**
BTO2				S	**S**	**10 33 37.2**	**+3.9**
BTO2				sS	**sS**	**10 33 46.0**	**+2.7**
BTO2				pmax	pmax		
	comp=Z,12nm,0.4s						
BTO2				pmax	pmax		
	comp=Z,500nm,5.9s						
BTO2				L	L		
	comp=Z,2μm,13.6s						
BTO2				L	L		
	comp=Z,2μm,13.6s						
BTO2				L	L		
	comp=Z,2μm,13.8s						
BJI2	**Beijing**	**47.52**	**10**	P	**P**	**10 26 40.6**	**+1.3**
BJI2				pP	**sP**	**10 26 47.9**	**+0.1**
BJI2				PP	**PP**	**10 28 32.8**	**+1.8**
BJI2				S	**S**	**10 33 33.9**	**+0.6**
BJI2				pmax	pmax		
	comp=Z,4.0nm,1.5s						
BJI2				pmax	pmax		
	comp=Z,120nm,4.6s						
BJI2				L	L		
	comp=Z,240nm,12.6s						
BJI2				L	L		
	comp=Z,230nm,13.5s						
BJI2				L	L		
	comp=Z,290nm,13.4s						
DL2	**Dalian**	**47.67**	**16**	P	**P**	**10 26 38.9**	**-1.6**
DL2				S	**S**	**10 33 31.8**	**-3.6**
DL2				pmax	pmax		
	comp=Z,42nm,1.4s						
DL2				pmax	pmax		
	comp=Z,320nm,8.8s						
DL2				L	L		
	comp=Z,590nm,12.8s						
DL2				L	L		
	comp=Z,360nm,13.3s						
DL2				L	L		
	comp=Z,730nm,14.7s						
HHC	**Hu-ho-hao-te**	**47.73**	**5**	*eP*	**P**	**10 26 43.0**	**+1.9**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,130nm,5.0s						
HHC				L	L		
	comp=Z,1μm,11.0s						
HHC				L	L		
	comp=Z,650nm,11.4s						
HHC				L	L		
	comp=Z,980nm,12.2s						
XLT	**XiLinHaoTe**	**51.29**	**9**	*eP*	**P**	**10 27 08.6**	**+0.5**
XLT				pP	pP	10 27 12.7	-1.9
XLT				PcP	**PcP**	**10 28 22.9**	**-0.1**
XLT				pmax	pmax		
	comp=Z,13nm,1.0s						
CN2	**Changchun**	**53.28**	**17**	*eP*	**P**	**10 27 24.7**	**+1.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WMQ	**Urumqi**	**53.29**	**343**	*eP*	**P**	**10 27 24.8**	**+1.8**
WMQ				L	L		
	comp=Z,440nm,17.7s						
WMQ				L	L		
	comp=Z,190nm,22.3s						
SONM	**Songino Array**	**54.49**	**360**	P	**P**	**10 27 29.2**	**-2.6**
	comp=Z,1.5nm,0.9s,baz=173,slow=7.0,SNR=9.1 comp=Z,1.5nm,0.9s						
SONM	**Songino Array**	**54.49**	**360**	**P**	**P**	**10 27 30.0**	**-1.8**
WBK	**Wadi Bani Khal**	**55.02**	**304**	**P**	**P**	**10 27 37.3**	**+1.3**
MHTO	**MHTO**	**55.16**	**301**	**P**	**P**	**10 27 36.7**	**-0.3**
PRZ	**Przheval'sk**	**55.44**	**335**	**P**	**P**	**10 27 37.4**	**-1.4**
WSAR	**Wadi Sarin**	**55.58**	**304**	**P**	**P**	**10 27 38.0**	**-1.9**
BNX	**BinXian**	**55.62**	**18**	⇑P	**P**	**10 27 40.1**	**+0.3**
BNX				pmax	pmax		
	comp=Z,12nm,1.6s						
JMDO	**Jabal Madar**	**55.64**	**303**	**P**	**P**	**10 27 41.5**	**+1.1**
KDJ	**Kajisay**	**55.67**	**334**	**P**	**P**	**10 27 38.2**	**-2.3**
KDJ				IAmb	IAmb	10 27 39.4	
	comp=Z,30nm,1.8s						
USRK	**Ussuriysk Ar.**	**55.81**	**22**	**P**	**P**	**10 27 39.9**	**-1.2**
	comp=Z,1.8nm,0.7s,baz=205,slow=9.5,SNR=2.7 comp=Z,1.8nm,0.7s						
SMDO	**Samad**	**55.98**	**304**	**P**	**P**	**10 27 44.1**	**+1.2**
SHAO	**Shalim**	**56.03**	**297**	**P**	**P**	**10 27 42.4**	**-0.8**
BIDO	**Bidbid**	**56.12**	**304**	**P**	**P**	**10 27 42.6**	**-1.2**
	SNR=9.1						
DRK	**Karamyk**	**56.23**	**328**	**P**	**P**	**10 27 42.4**	**-2.3**
BOOM	**Boomskoye usch**	**56.51**	**333**	**P**	**P**	**10 27 43.9**	**-2.6**
DMTO	**DMTO**	**56.52**	**296**	**P**	**P**	**10 27 47.5**	**+0.8**
BSY	**Bisya**	**56.55**	**303**	**P**	**P**	**10 27 45.5**	**-1.4**
	SNR=5.1						
GAR	**Garm**	**56.69**	**327**	**P**	**P**	**10 27 45.1**	**-2.6**
GAR				IAmb	IAmb	10 28 09.2	
	comp=Z,15nm,1.4s						
HOQ	**Hoqain**	**56.82**	**304**	**P**	**P**	**10 27 50.0**	**+1.2**
	SNR=5.2						
SHAA	**Shahritus**	**56.93**	**324**	P	P	10 27 45.6	-3.8
SHAA				IAmb	IAmb	10 27 46.2	
	comp=Z,73nm,1.8s						
ARSB	**Arslanbob**	**57.00**	**330**	**P**	**P**	**10 27 47.3**	**-2.6**
ARSB				IAmb	IAmb	10 27 56.9	
	comp=Z,8.4nm,1.0s						
RBK	**Rabkut**	**57.10**	**296**	**P**	**P**	**10 27 53.0**	**+2.0**
	SNR=8.0						

comp=Z,198nm,19.9s,baz=230,slow=36
BVAR Borovoye Array 67.10 337 P **P 10 28 54.0 -3.4**
comp=Z,0.8nm,0.5s,baz=149,slow=6.9,SNR=4.3
BVAR LR LR 11 02 09.2
comp=Z,180nm,18.8s,baz=141,slow=40
comp=Z,0.8nm,0.5s
AB31 Akbulak array 69.10 329 P **P 10 29 07.4 -2.6**
AB31 IAmb IAmb 10 29 09.6
comp=Z,46nm,1.9s
ABKAR Akbulak array 69.10 329 P **P 10 29 07.3 -2.7**
KMBO Kilima Mbogo 69.31 271 LR LR 10 55 19.4
comp=Z,279nm,20.5s,baz=102,slow=32
FURI Furi 69.44 282 LR LR 10 56 37.8
comp=Z,441nm,19.2s,baz=120,slow=33
URZ Urewera 70.51 128 LR LR 11 01 29.3
comp=Z,361nm,19.6s,baz=284,slow=37
AKTO Aktyubinsk 70.81 330 LR LR 11 05 10.8
comp=Z,121nm,19.0s,baz=144,slow=40
GNI Garni 73.57 315 LR LR 11 04 22.7
comp=Z,117nm,21.3s,baz=112,slow=38
GEVA Gevas 74.04 313 P **P 10 29 38.7 -1.6**
GEVA IAmb IAmb 10 29 42.3
comp=Z,27nm,1.5s
RAO Raoul Island 74.05 118 LR LR 11 03 36.0
comp=Z,154nm,19.2s,baz=278,slow=37
ARTI Arti 74.39 335 LR LR 11 05 20.6
comp=Z,293nm,21.0s,baz=152,slow=38
MA2 Magadan 74.96 22 P **P 10 29 42.2 -2.7**
comp=Z,1.3nm,0.3s,baz=231,slow=7.7,SNR=5.2
comp=Z,1.3nm,0.3s
MA2 Magadan 74.96 22 P **P 10 29 42.4 -2.6**
MA2 IAmb IAmb 10 29 45.0
comp=Z,17nm,1.5s
MA2 Magadan 74.96 22 P **P 10 29 42.7 -2.2**
comp=Z,8.0nm,1.6s
MBAR Mbarara 75.84 271 LR LR 10 59 08.1
comp=Z,175nm,20.1s,baz=96,slow=33
VNDA Vanda 76.15 169 P **P 10 29 52.5 +1.0**
comp=Z,3.4nm,0.9s,baz=321,slow=5.4,SNR=7.0
VNDA LR LR 10 57 47.4
comp=Z,103nm,19.4s,baz=298,slow=31
comp=Z,3.4nm,0.9s
VNDA Vanda 76.15 169 P **P 10 29 52.9 +1.4**
KBZ Khabaz 76.28 318 P **P 10 29 49.2 -3.6**
comp=Z,4.6nm,1.0s,baz=84,slow=9.2,SNR=7.2
KBZ LR LR 11 07 02.4
comp=Z,122nm,20.4s,baz=80,slow=39
comp=Z,4.6nm,1.0s
KOPT Kop Dagi 76.52 314 P **P 10 29 56.2 +1.5**
KOPT IAmb IAmb 10 29 56.4
comp=Z,44nm,1.5s
ASF Jabal al Asfar 76.73 305 LR LR 11 05 04.9
comp=Z,232nm,18.3s,baz=66,slow=37
LSZ Lusaka 77.03 256 LR LR 11 00 07.0
comp=Z,297nm,19.9s,baz=142,slow=33
LSZ Lusaka 77.03 256 P **P 10 29 59.8 +2.0**
LSZ IAmb IAmb 10 30 02.3
comp=Z,12nm,1.2s
NRIK Noril'sk 77.19 353 P **P 10 29 55.3 -2.2**
comp=Z,0.9nm,0.4s,baz=176,slow=8.9,SNR=4.8
NRIK LR LR 11 07 07.0
comp=Z,356nm,18.9s,baz=164,slow=38
comp=Z,0.9nm,0.4s
BELG Belogornoye 77.31 327 LR LR 11 09 15.1
comp=Z,190nm,19.2s,baz=99,slow=40
EIL Elat 77.64 302 LR LR 11 05 09.0
comp=Z,304nm,18.1s,baz=62,slow=36
SEY Seymchan 77.86 20 P **P 10 29 58.5 -2.8**
comp=Z,0.9nm,0.6s,baz=253,slow=7.9,SNR=5.0
comp=Z,0.9nm,0.6s
MMAI Mount Meron Ar 78.18 306 LR LR 11 06 12.5
comp=Z,245nm,18.5s,baz=104,slow=37
BOSA Boshof 79.11 242 P **P 10 30 08.6 -0.6**
comp=Z,3.7nm,1.0s,baz=41,slow=2.5,SNR=3.6
comp=Z,3.7nm,1.0s
BNN Bunyan 79.53 311 IAmb IAmb 10 30 12.4
comp=Z,28nm,1.5s
KIRV Kirov 79.60 333 LR LR 11 08 53.3
comp=Z,180nm,18.8s,baz=123,slow=38
TIXI Tiksi 79.76 7 P P 10 30 06.5 -5.1
comp=Z,3.6nm,0.2s,baz=156,slow=7.4,SNR=3.9
TIXI LR LR 11 10 33.6
comp=Z,125nm,19.8s,baz=196,slow=40
AFI Afiamalu 80.32 103 LR LR 11 05 14.5
comp=Z,35nm,18.9s,baz=258,slow=35
CSS Mathiatis 80.36 307 P **P 10 30 14.8 -0.9**
comp=Z,40nm,1.4s
BR131 Keskin Array S 81.43 312 P **P 10 30 19.1 -2.4**
BR131 IAmb IAmb 10 30 22.1
comp=Z,40nm,1.9s
BRTR Keskin Array B 81.43 312 P **P 10 30 19.8 -1.6**
comp=Z,3.7nm,0.8s,baz=135,slow=6.7,SNR=14
BRTR LR LR 11 09 11.7
comp=Z,178nm,19.2s,baz=120,slow=38
comp=Z,3.7nm,0.8s
BRTR Keskin Array B 81.43 312 P **P 10 30 18.8 -2.6**
QSPA South Pole Qui 83.09 180 P **P 10 30 30.8 +1.2**
comp=Z,4.3nm,0.9s,baz=168,slow=1.6,SNR=10.0
QSPA LR LR 11 04 01.9
comp=Z,82nm,18.2s,baz=328,slow=33
comp=Z,4.3nm,0.9s
QSPA South Pole Qui 83.09 180 P **P 10 30 28.4 -1.2**
OBN Obninsk 84.40 327 LR LR 11 14 20.7
comp=Z,114nm,18.3s,baz=218,slow=40
TSUM Tsumeb 86.80 251 LR LR 11 07 29.2
comp=Z,176nm,18.5s,baz=151,slow=34
TSUM Tsumeb 86.80 251 **P 10 30 51.9 +2.7**
TSUM IAmb IAmb 10 30 52.2
comp=Z,12nm,1.1s
IDI Anoyia 87.18 306 LR LR 11 11 08.2
comp=Z,86nm,21.4s,baz=120,slow=37
AKASG Malin Array Be 87.34 322 P **P 10 30 49.2 -1.7**
comp=Z,0.3nm,0.4s,baz=95,slow=3.6,SNR=8.1
AKASG LR LR 11 14 59.3
comp=Z,98nm,19.3s,baz=80,slow=39
comp=Z,0.3nm,0.4s
AKASG Malin Array Be 87.34 322 **P 10 30 48.8 -2.1**
AKASG IAmb IAmb 10 30 52.1
comp=Z,20nm,1.7s
AKBB Malin Array Si 87.34 322 P **P 10 30 49.6 -1.3**
TROLL Troll, Antarti 87.79 198 P P 10 31 01.8 +8.8
VRI Vrincioaia 87.87 317 ⇑P **P 10 30 53.9 +0.3**
VRI Vrincioaia 87.87 317 P **P 10 30 52.4 -1.2**
comp=Z,34nm,1.5s
PLOR Plostina 87.92 316 ⇓P **P 10 30 53.4 -0.5**
TESR Tescani 88.06 317 ⇑P **P 10 30 55.2 +0.7**
TESR Tescani 88.06 317 P **P 10 30 54.4 -0.1**
comp=Z,47nm,1.6s
LUBAR Lubar, Ukraine 88.07 321 P **P 10 30 51.9 -2.6**
MI29 MI29, Kamyanyy 88.12 321 P **P 10 30 53.8 -0.9**
comp=Z,87nm,2.8s
ONER Baraj Valea Uz 88.19 317 ⇓P **P 10 30 54.5 -0.7**
MLR Muntele Rosu 88.33 316 LR LR 11 17 13.2
comp=Z,106nm,18.2s,baz=68,slow=40
MLR Muntele Rosu 88.33 316 ⇑P **P 10 30 56.1 +0.1**
MLR Muntele Rosu 88.33 316 P **P 10 30 55.9 -0.1**
MI28 Mi28,Pidlybu 88.35 322 P **P 10 30 55.1 -0.7**
DOPR Dopca 88.80 316 ⇓P **P 10 30 57.4 -0.6**
PLVB Pleven 88.86 314 ⇑P **P 10 30 58.2 -0.1**
VOIR 88.94 316 ⇑P **P 10 30 58.0 -0.8**
BURAR Bucovina Array 89.23 318 ⇓P **P 10 30 59.3 -0.8**
BURAR Bucovina Array 89.23 318 P **P 10 31 00.3 +0.1**
BUR08 Bucovina Ar. S 89.25 318 P **P 10 30 59.5 -0.7**
BUR08 IAmb IAmb 10 31 05.8
comp=Z,16nm,1.4s
RNPP5 Staryi Chortor 89.51 322 P **P 10 30 59.7 -1.5**
RNPP9 Sopachiv 89.55 322 P **P 10 31 00.0 -1.4**
GZR Gura Zlata 90.50 316 ⇓P **P 10 31 07.7 +1.6**
MDVR Moldovita 91.15 315 ⇑P **P 10 31 10.1 +1.0**
FINES FINESS Array B 91.47 332 LR LR 11 17 16.4
comp=Z,146nm,20.2s,baz=112,slow=39
ARCES ARCESS Array B 93.29 340 LR LR 11 17 27.2
comp=Z,366nm,19.8s,baz=106,slow=38
VRAC Vranov 95.15 319 LR LR 11 19 47.5
comp=Z,93nm,19.6s,baz=70,slow=39
SPITS Spitsbergen Ar 96.74 348 LR LR 11 21 15.2
comp=Z,286nm,20.2s,baz=89,slow=39
GERES GERESS Array B 97.02 318 LR LR 11 20 56.4
comp=Z,98nm,19.1s,baz=76,slow=39
HFS Hagfors 97.36 330 LR LR 11 22 56.3
comp=Z,82nm,18.6s,baz=79,slow=40
NOA NORSAR Array B 98.58 331 LR LR 11 23 19.2
comp=Z,144nm,18.1s,baz=90,slow=40
TBI Tubuai 100.00 115 *e*LR LR 11 04 21.4
comp=Z,912nm,24.5s
PPT2 Papeete2 101.02 109 *e*LR LR 11 04 53.5
comp=Z,194nm,24.2s
PPT2 *e*LR LR 11 04 54.5
comp=Z,226nm,24.0s
TAOE Nuku Hiva Isla 111.71 102 *e*LR LR 11 09 41.7
comp=Z,145nm,32.0s
YKA Yellowknife Ar 116.92 20 PKP **PKPdf 10 36 46.0 -2.4**
comp=Z,0.3nm,0.7s,baz=323,slow=2.6,SNR=6.5
FCC Fort Churchill 125.88 13 **PKPdf 10 37 05.1 -0.5**
PLID Pearl Lake 127.04 37 **PKPdf 10 37 09.7 +1.0**
NVAR Mina Array Bea 128.80 45 PKP **PKPdf 10 37 12.5 +0.3**
comp=Z,0.3nm,0.6s,baz=265,slow=3.6,SNR=4.2
ELK Elko 129.79 41 **PKPdf 10 37 13.8 -0.3**
SCHQ Schefferville 131.91 355 PKP **PKPdf 10 37 18.2 +0.9**
comp=Z,2.1nm,0.8s,baz=17,slow=4.2,SNR=4.6
PDAR Pinedale Array 132.18 36 PKP **PKPdf 10 37 16.4 -2.1**
comp=Z,0.3nm,0.7s,baz=332,slow=4.2,SNR=4.0
CPUP Villa Florida 143.45 205 PKP PKPbc 10 37 37.6 +1.1
comp=Z,2.6nm,0.8s,baz=147,slow=1.6,SNR=6.3
TXAR Lajitas Array 143.83 48 PKP PKPbc 10 37 39.2 +1.5
comp=Z,0.4nm,0.6s,baz=297,slow=0.8,SNR=6.9
MGMO Mountain Grove 145.34 27 **PKPbc 10 37 40.7 -1.5**
Z35A Perchaven, San 145.66 37 PKPdf **PKPdf 10 37 42.0 -1.0**
BRDY Brady 145.95 41 **PKPdf 10 37 42.6 -1.0**
DRIO Del Rio 145.99 45 **PKPdf 10 37 43.1 -0.6**
BDFB Brasilia 146.29 228 PKPbc **PKPdf 10 37 46.4 +1.6**
comp=Z,4.2nm,0.7s,baz=136,slow=3.1,SNR=5.1
LCAR Lake Charles 146.74 27 **PKPdf 10 37 43.8 -0.9**
HNDO Hondo 146.86 44 **PKPdf 10 37 44.3 -0.9**
833A Chaparral WMA, 147.50 46 **PKPbc 10 37 49.6 +0.8**
AQDB Aquidauana 147.68 212 PKPbc **PKPbc 10 37 50.2 +0.7**

*CATAC **10** 10:20:13.1±0.5, 14°N±3°×9°1W±°, h10km±2km, M3.5/18, MLv3.5/18, Error ellipse: s-maj=6.1km s-min=2.8km az=27.6, confirmed*
*GCG **10** 10:20:14.2±1.2, 13°62N×91°16W, h52km±20km, MD3.9, ML4.0, MW3.4, Presumed earthquake*
*SNET **10** 10:20:19.5±5.4, 13°96N×90°57W, h88km, ML3.1, Presumed earthquake*

ISC 10 10:20:16.8±1.5, 13°64N±0°07×90°85W±0°06, h22km±8km, n41, σ1°00/60, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ESSJ	**San Jos, E**	**0.35**	**103**	*i*	P		**Pb**	**10 20 25.1**	**+0.7**
FG8	**Yepocapa, Chim**	**0.67**	**25**	*i*	P		**Pb**	**10 20 30.3**	**+0.3**
FG16	**Alotenango, Sa**	**0.71**	**28**	*i*	P		**Pb**	**10 20 30.7**	**+0.1**
FG16				*i*	S		**Sn**	**10 20 44.7**	**+2.7**
FG16					IAML			10 20 45.8	
	comp=N,9μm,0.3s								
FAME	**Alcaldia de Sa**	**0.83**	**76**		P		**Pb**	**10 20 31.2**	**-1.4**
STG5	**El Palmar, Qui**	**0.90**	**327**	*i*	P		**Pb**	**10 20 33.7**	**-0.1**
STG2	**El Palmar, Qui**	**0.94**	**327**	*i*	P		**Pb**	**10 20 35.2**	**+0.7**
STG2					IAML			10 20 57.6	
	comp=E,2μm,0.2s								
NUBE	**Las Nubes**	**1.07**	**76**		P		**Pn**	**10 20 35.4**	**-1.2**
NUBE					S		**Sn**	**10 20 51.3**	**+0.4**
SLOZ	**Alcaldia de Sa**	**1.10**	**70**		P		**Pn**	**10 20 35.9**	**-1.0**
SLOZ					S		**Sn**	**10 20 52.8**	**+1.3**
SLOZ	**Alcaldia de Sa**	**1.10**	**70**	*e*	P		**Pn**	**10 20 35.6**	**-1.4**
RTAL	**Retalhuleu**	**1.20**	**317**	*e*	P		Pb	10 20 47.5	+8.6
CEVE	**Cerro Verde**	**1.21**	**81**		P		**Pn**	**10 20 37.8**	**-0.8**
CEVE					S		**Sb**	**10 20 55.2**	**+0.9**
SBLS	**San Blas**	**1.21**	**81**	*e*	P		**Pn**	**10 20 37.6**	**-1.0**
UNIC	**Universidad Ca**	**1.31**	**75**		P		**Pn**	**10 20 39.2**	**-0.6**
UNIC					S		**Sb**	**10 20 57.3**	**+0.1**
JAYA	**Jayaque - finc**	**1.36**	**89**		P		**Pn**	**10 20 40.2**	**-0.4**
JAYA					S		**Sn**	**10 20 58.8**	**+0.7**
JAYA	**Jayaque - finc**	**1.36**	**89**		IAML			10 21 05.3	
	comp=N,1μm,0.3s								
JAYA	**Jayaque - finc**	**1.36**	**89**	*e*	P		**Pn**	**10 20 40.0**	**-0.7**
APG	**El Apazote**	**1.40**	**15**	*i*	P		**Pn**	**10 20 41.0**	**-0.3**
CEDA	**San Andres**	**1.42**	**83**		P		**Pn**	**10 20 40.9**	**-0.4**
CEDA					S		**Sb**	**10 21 00.9**	**+0.5**
LALI	**Alcalda de L**	**1.49**	**96**		S		**Sb**	**10 21 02.7**	**+0.3**
BOQS	**Boqueron**	**1.53**	**86**	*e*	P		**Pn**	**10 20 43.4**	**+0.4**
UEES	**Universidad Ev**	**1.57**	**87**		P		**Pn**	**10 20 42.4**	**-1.0**
UEES	**Universidad Ev**	**1.57**	**87**	*e*	P		**Pn**	**10 20 43.9**	**+0.5**
UEES					eS		**Sn**	**10 21 04.2**	**+1.1**
SEMO	**Seminario San**	**1.58**	**88**		P		**Pn**	**10 20 42.7**	**-0.9**
SEMO					S		**Sb**	**10 21 04.8**	**-0.2**
UTEC	**Universidad Te**	**1.60**	**88**		S		**Sn**	**10 21 05.3**	**+1.4**
MTO3	**Montecristo**	**1.63**	**62**		P		**Pn**	**10 20 43.7**	**-0.6**
MTO3					S		**Sb**	**10 21 06.1**	**-0.4**
IGN	**Direccin Gen**	**1.63**	**87**		S		**Sb**	**10 21 06.4**	**-0.2**
UDBS	**Universidad Do**	**1.65**	**87**		P		**Pn**	**10 20 44.4**	**-0.1**
UDBS					S		**Sb**	**10 21 06.8**	**-0.2**
ESQI	**Esquipulas**	**1.72**	**58**		P		**Pn**	**10 20 45.3**	**-0.3**
ESQI					S		**Sb**	**10 21 09.4**	**+0.3**
HUEH	**Huehuetenango**	**1.78**	**339**		P		**Pn**	**10 20 45.1**	**-1.4**
HUEH					S		**Sn**	**10 21 09.0**	**+0.4**
PAVA	**Las Pavas**	**1.86**	**88**		P		**Pn**	**10 20 45.5**	**-2.0**
PAVA					S		**Sb**	**10 21 12.5**	**-0.6**
COEG	**Centro de Oper**	**1.91**	**90**		P		**Pn**	**10 20 47.6**	**-0.6**
COEG					S		**Sb**	**10 21 14.0**	**-0.6**
LLGN	**La Laguna**	**1.92**	**74**		P		**Pn**	**10 20 47.7**	**-0.6**
LLGN					S		**Sb**	**10 21 14.0**	**-0.8**
TECO	**Alcaldia de Te**	**2.01**	**93**		P		**Pn**	**10 20 47.7**	**-1.8**
TECO					S		**Sn**	**10 21 16.2**	**+2.2**
P5NO	**Presa 5 de nov**	**2.06**	**80**		P		**Pn**	**10 20 49.8**	**-0.3**
P5NO					S		**Sb**	**10 21 17.4**	**-1.3**
SCLA	**Alcaldia de Sa**	**2.06**	**88**		P		**Pn**	**10 20 49.5**	**-0.7**
SCLA					S		**Sb**	**10 21 18.2**	**-0.6**
TECA	**Tecapa**	**2.29**	**93**	*e*	P		**Pn**	**10 20 52.7**	**-0.7**
SARH	**Santa Rosa de**	**2.32**	**61**		P		**Pn**	**10 20 52.7**	**-1.0**
SARH					S		**Sb**	**10 21 24.9**	**-1.4**
SARH	**Santa Rosa de**	**2.32**	**61**	*i*	P		**Pn**	**10 20 53.8**	**+0.1**
PACA	**Pacayal**	**2.46**	**94**		P		**Pn**	**10 20 56.0**	**+0.2**
PACA					S		**Sn**	**10 21 27.3**	**+2.0**
RANC	**El Ranchito**	**2.50**	**94**		P		**Pn**	**10 20 56.0**	**-0.3**
YUSH	**Yuscaran**	**3.91**	**85**		P		**Pn**	**10 21 14.5**	**-1.1**

IDC 10 10:20:17.3±999.0, 56°17N×5°08E, h0km, Error ellipse: s-maj=493.8km s-min=203.7km az=45.0, North Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
I37NO	**I37NO**	**14.31**	**20**	I		I	11 46 10.0	
	baz=212,slow=335,SNR=1.9							
I43RU	**DUBNA INFRASON**	**17.69**	**75**	I		I	12 06 40.0	
	baz=280,slow=322,SNR=2.8							
I31KZ	**AKTYUBINSK INF**	**31.50**	**78**	I		I	13 32 30.0	
	baz=304,slow=326,SNR=0.7							

*NEIC **10** 10:21:44.2±0.9, 19°3S±0°2×173°14W±0°07, h10km±1km, mb4.6/11, Error ellipse: s-maj=42.7km s-min=7.9km az=347.0*
*IDC **10** 10:21:48.6±1.7, 18°56S×174°47W, h0km, mb3.9/6, mbtmp3.9/7, ML4.0/1, MS3.4/3, Error ellipse: s-maj=89.7km s-min=21.2km az=144.0*

ISC 10 10:21:45.0±0.7, 19°1S±0°1×173°2W±0°1, h21km, n24, σ0°95/21, mb4.3/12, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NIUE	**Niue**	**3.08**	**91**		Pn		**Pn**	**10 22 32.3**	**-0.2**
AFI	**Afiamalu**	**5.31**	**15**		Pn		Pn	10 23 08.5	+5.4
	4.9nm,0.3s,baz=112,slow=8.9,SNR=9.9								
AFI					Sn		**Sn**	**10 24 03.4**	**-0.4**
	2.9nm,0.3s,baz=108,slow=19,SNR=1.3 15nm,0.4s								
RAR	**Rarotonga**	**12.78**	**102**		LR		LR	10 30 01.4	
	comp=Z,103nm,18.4s,baz=248,slow=35								
PPT	**Papeete**	**22.46**	**90**		LR		LR	10 34 15.6	
	comp=Z,50nm,18.2s,baz=246,slow=32								
EIDS	**Eidsvold**	**33.60**	**253**		P		**P**	**10 28 24.1**	**+0.1**
ARMA	**Armidale**	**33.76**	**244**		P		**P**	**10 28 25.8**	**+0.3**
ARMA					IAmb		IAmb	10 28 35.7	
	comp=Z,23nm,1.2s								
CTAO	**Charters Tower**	**38.16**	**262**		P		**P**	**10 29 02.9**	**-0.3**
CTAO					IAmb		IAmb	10 29 45.3	
	comp=Z,9.9nm,1.1s								
COEN	**Coen**	**42.07**	**270**		P		**P**	**10 29 36.4**	**+0.7**
COEN					IAmb		IAmb	10 29 59.9	
	comp=Z,9.4nm,1.2s								
STKA	**Stephens Creek**	**42.48**	**243**		P		**P**	**10 29 37.4**	**-1.5**
	comp=Z,0.7nm,0.4s,baz=108,slow=13,SNR=3.6 comp=Z,0.7nm,0.4s								
STKA	**Stephens Creek**	**42.48**	**243**		P		**P**	**10 29 39.1**	**+0.2**
STKA					IAmb		IAmb	10 30 04.2	
	comp=Z,25nm,1.3s								
AS31	**Alice Springs**	**49.26**	**255**		P		**P**	**10 30 31.9**	**-0.6**
ASAR	**Alice Springs**	**49.26**	**255**		P		**P**	**10 30 32.1**	**-0.5**
	comp=Z,1.3nm,0.4s,baz=87,slow=8.4,SNR=23								
ASAR					PcP		**PcP**	**10 31 56.9**	**+1.4**
	comp=Z,0.5nm,0.4s,baz=113,slow=4.2,SNR=5.2 comp=Z,1.3nm,0.4s								
ASAR	**Alice Springs**	**49.26**	**255**		P		**P**	**10 30 31.7**	**-0.9**
WB0	**Warramunga Arr**	**49.28**	**260**		P		**P**	**10 30 32.6**	**-0.1**
WB0					IAmb		IAmb	10 31 15.0	
	comp=Z,6.2nm,1.1s								
WRA	**Warramunga Arr**	**49.30**	**260**		P		**P**	**10 30 32.4**	**-0.5**
	comp=Z,1.0nm,0.4s,baz=93,slow=5.0,SNR=59								
WRA					PcP		**PcP**	**10 31 58.5**	**+2.9**
	comp=Z,0.3nm,0.4s,baz=98,slow=3.2,SNR=2.5 comp=Z,1.0nm,0.4s								
WRA	**Warramunga Arr**	**49.30**	**260**		P		**P**	**10 30 32.6**	**-0.3**
FITZ	**Fitzroy Crossi**	**57.72**	**260**		P		**P**	**10 31 33.8**	**-0.9**
	comp=Z,1.2nm,0.4s,baz=74,slow=5.5,SNR=9.6 comp=Z,1.2nm,0.4s								
MORW	**Morawa**	**64.56**	**246**		P		**P**	**10 32 20.3**	**-0.7**
QSPA	**South Pole Qui**	**70.99**	**180**		P		**P**	**10 33 00.9**	**-0.1**
QSPA					IAmb		IAmb	10 33 11.9	
	comp=Z,5.6nm,1.2s								
PETK	**Petropavlovsk-**	**76.17**	**342**		LR		LR	11 05 56.9	
	comp=Z,40nm,18.3s,baz=235,slow=35								
BELA	**Belgrano 2**	**80.35**	**172**		P		**P**	**10 33 54.2**	**0.0**
BELA					IAmb		IAmb	10 34 11.4	
	comp=Z,8.9nm,1.5s								
TXAR	**Lajitas Array**	**82.49**	**56**		P		P	10 34 18.9	+12
	comp=Z,0.5nm,1.0s,baz=259,slow=3.2,SNR=3.7 comp=Z,0.5nm,1.0s								
ILAR	**Eielson Array**	**85.99**	**11**		P		P	10 34 29.1	+5.8
	comp=Z,0.3nm,0.7s,baz=218,slow=5.7,SNR=9.7 comp=Z,0.3nm,0.7s								
BRTR	**Keskin Array B**	**149.06**	**317**		PKPbc		**PKiKP**	**10 41 33.6**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=104,slow=6.1,SNR=2.5								

IDC 10 10:27:12.6±1.4, 2°18N×125°86E, h0km, mb3.3/5, mbtmp3.3/5, MS3.1/2, Error ellipse: s-maj=163.4km s-min=21.1km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.51**	**160**		P		P	10 32 23.7	-0.7
	0.4nm,0.5s,baz=335,slow=11,SNR=5.7 0.4nm,0.5s								
ASAR	**Alice Springs**	**26.86**	**164**		P		P	10 32 55.8	+0.6
	0.2nm,0.3s,baz=344,slow=9.9,SNR=2.8 0.2nm,0.3s								
HNR	**Honiara**	**35.86**	**109**		LR		LR	10 50 31.8	
	comp=Z,4.4nm,18.5s,baz=360,slow=39								
SONM	**Songino Array**	**48.49**	**343**		P		P	10 35 55.4	-1.9
	0.3nm,0.4s,baz=152,slow=6.5,SNR=2.4 0.3nm,0.4s								
MSVF	**Nonsavu**	**55.08**	**113**		LR		LR	10 58 05.5	
	comp=Z,129nm,20.8s,baz=231,slow=34								
MKAR	**Makanchi Array**	**58.34**	**326**		P		P	10 37 10.3	+0.7
	0.2nm,0.6s,baz=116,slow=6.6,SNR=2.0 0.2nm,0.6s								
KURBB	**Kurchatov Arra**	**62.58**	**328**		P		P	10 37 39.2	+0.7
	0.2nm,0.5s,baz=123,slow=6.8,SNR=2.1 0.2nm,0.5s								

*IDC **10** 10:30:10.7±1.2, 61°54S×153°42W, h0km, mb4.0/5, mbtmp4.1/5, MS3.8/7, Error ellipse: s-maj=52.3km s-min=29.6km az=13.0*
*NEIC **10** 10:30:11.7±1.6, 62°30S±0°07×153°4W±0°3, h10km±1km, mb4.3/14, Error ellipse: s-maj=20.9km s-min=12.1km az=84.0*

ISC 10 10:30:11.6±0.6, 62°3S±0°2×153°5W±0°1, h10km, n39, σ0°83/30, mb4.3/12, MS3.8/7, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**20.77**	**206**		P		Pn	10 34 59.8	+5.2
	2.2nm,0.7s,baz=68,slow=12,SNR=2.2								
VNDA					LR		LR	10 40 42.4	
	comp=Z,243nm,20.0s,baz=102,slow=30 2.2nm,0.7s								
VNDA	**Vanda**	**20.77**	**206**		P		**P**	**10 34 51.7**	**-0.4**
QSPA	**South Pole Qui**	**27.86**	**180**		LR		LR	10 45 10.7	
	comp=Z,216nm,18.6s,baz=50,slow=32								
QSPA	**South Pole Qui**	**27.86**	**180**		P		**P**	**10 36 00.7**	**-0.4**
MG03	**Isla Dawson**	**41.78**	**118**		P		**P**	**10 38 00.1**	**-0.4**
MG03					IAmb		IAmb	10 38 16.4	
	comp=Z,8.7nm,1.0s								
PPT	**Papeete**	**44.73**	**5**		LR		LR	10 51 59.9	
	comp=Z,94nm,21.7s,baz=190,slow=30								
RPN	**Rapa Nui**	**45.56**	**60**		LR		LR	10 52 38.6	
	comp=Z,80nm,21.8s,baz=222,slow=30								
MAW	**Mawson**	**47.78**	**198**		LR		LR	10 56 15.3	
	comp=Z,140nm,21.5s,baz=106,slow=32								
MAW	**Mawson**	**47.78**	**198**		P		**P**	**10 38 48.7**	**+0.5**
MAW					IAmb		IAmb	10 39 08.2	
	comp=Z,2.5nm,0.9s								
STKA	**Stephens Creek**	**50.73**	**275**		P		**P**	**10 39 12.2**	**+1.0**
	comp=Z,1.9nm,0.8s,baz=150,slow=14,SNR=3.6 comp=Z,1.9nm,0.8s								
PLCA	**Paso Flores**	**51.80**	**106**		P		**P**	**10 39 21.6**	**+2.2**
	comp=Z,2.3nm,1.0s,baz=208,slow=12,SNR=3.0 comp=Z,2.3nm,1.0s								
H03S2	**Juan Fernandez**	**53.58**	**94**		T		T	11 37 39.7	
	baz=212,slow=74,SNR=54								
H03S1	**Juan Fernandez**	**53.59**	**95**		T		T	11 37 41.0	
	baz=212,slow=74,SNR=63								
H03S3	**Juan Fernandez**	**53.60**	**95**		T		T	11 37 40.3	
	baz=212,slow=74,SNR=74								
SANVU	**Saraoutou**	**54.35**	**311**		P		**P**	**10 39 38.1**	**0.0**
INKA	**Innaminka**	**54.60**	**277**		P		**P**	**10 39 41.6**	**+1.7**
INKA					IAmb		IAmb	10 39 42.2	
	comp=Z,1.5nm,0.9s								
BI02	**San Fabin de**	**54.79**	**103**		P		**P**	**10 39 41.6**	**+0.3**
BI02					IAmb		IAmb	10 39 48.9	
	comp=Z,6.4nm,1.1s								
ASAR	**Alice Springs**	**61.26**	**274**		P		**P**	**10 40 27.4**	**+0.6**
	comp=Z,3.7nm,0.9s,baz=150,slow=6.8,SNR=24 comp=Z,3.7nm,0.9s								
ASAR	**Alice Springs**	**61.26**	**274**		P		**P**	**10 40 26.6**	**-0.2**
ASAR					PcP		**PcP**	**10 41 07.8**	**-1.4**
AS31	**Alice Springs**	**61.26**	**274**		P		**P**	**10 40 26.5**	**-0.3**
AS31					IAmb		IAmb	10 40 28.5	
	comp=Z,1.9nm,1.1s								
WRA	**Warramunga Arr**	**64.27**	**276**		P		**P**	**10 40 47.0**	**+0.2**
	comp=Z,1.9nm,0.9s,baz=154,slow=6.1,SNR=8.6 comp=Z,1.9nm,0.9s								
WRA	**Warramunga Arr**	**64.27**	**276**		P		**P**	**10 40 46.5**	**-0.3**
WB0	**Warramunga Arr**	**64.39**	**276**		P		**P**	**10 40 46.9**	**-0.7**
WB0					IAmb		IAmb	10 40 49.1	
	comp=Z,3.4nm,1.0s								
MORW	**Morawa**	**64.94**	**255**		P		**P**	**10 40 51.

34nm,0.3s,baz=37,slow=4.1,SNR=37
LPIG Lg Lg 10 45 27.8
74nm,0.3s,baz=163,slow=19,SNR=8.8
TXAR Lajitas Array 6.85 43 Pn Pn 10 46 31.4 -1.1
0.1nm,0.3s,baz=221,slow=13,SNR=7.0
TXAR Sn Sn 10 47 46.1 -5.1
0.3nm,0.3s,baz=217,slow=14,SNR=5.3
TXAR Lg Lg 10 48 24.4
0.4nm,0.3s,baz=228,slow=26,SNR=5.7
0.1nm,0.3s
CMIG Matias Romero 15.13 116 LR LR 10 53 30.0
comp=Z,50nm,21.7s,baz=155,slow=34
PDAR Pinedale Array 18.28 359 P Pn 10 49 06.0 -0.1
0.1nm,0.3s,baz=182,slow=11,SNR=4.5
0.3nm,0.6s
ILAR Eielson Array 47.13 339 P P 10 53 25.8 +1.3
0.2nm,0.6s,baz=133,slow=6.3,SNR=3.0
0.2nm,0.6s
H03N2 Juan Fernandez 64.31 152 T T 12 05 52.8
baz=331,slow=77,SNR=7.9
H03N1 Juan Fernandez 64.32 152 T T 12 05 46.7
baz=331,slow=77,SNR=10.0
H03N3 Juan Fernandez 64.33 152 T T 12 05 45.4
baz=331,slow=77,SNR=11

IGQ ***10*** *11:13:45.1±0.9, 1˚N±9˚×9˚1W±˚, h87km±19km, M5.1/17, mb5.2/16, mB5.6/16, MLv4.8/5, Ms(BB)5.3/17, Mw(mB)5.2/16, MwMwp5.3/2, Mwp5.5/2*

IDC ***10*** *11:13:45.7±0.5, 1.21N×90.70W, h0km, mb4.6/17, mbtmp4.6/21, ML3.7/4, MS5.0/61, Error ellipse: s-maj=22.0km s-min=11.3km az=61.0*

NEIC ***10*** *11:13:48.5±1.2, 1.17N±0.09×90.6W±0.1, h10km±1km, mb5.0/419, Ms_20 5.1/389, Mww5.6/44, Error ellipse: s-maj=20.3km s-min=14.1km az=253.0*

MOS ***10*** *11:13:48.7±1.8, 1.28N×90.42W, h15km, mb5.2/19, MS4.9/6, Error ellipse: s-maj=11.9km s-min=8.2km az=115.2*

GFZ ***10*** *11:13:48.5, 1.14N×90.70W, h12km, MW5.4, Moment Tensor Solution. s100 Moment tensor: Mrr=0.28; Mθθ=0.57; Mφφ=0.85; Mrθ=0.19; Mθφ=1.58; Mφr=0.26; Fault plane solution: NP1:φs102.00000°, δ78.00000°, λ-173.00000°. NP2:φs11.00000°, δ83.00000°, λ-11.00000°. Principal axes: T 1.8800, Plg3.0000°, Azm57.0000°; N -0.2200, Plg77.0000°, Azm161.0000°; P -1.6600, Plg12.0000°, Azm326.0000°;*

GCMT ***10*** *11:13:48.5±0.1, 1.13N±0.01×90.69W±0.01, h12km, MW5.5/147, Moment Tensor Solution. s122,c207; s147,c282; Duration: 1s3 Moment tensor: Scale 10¹⁷ Nm; Mrr=0.32±.02; Mθθ=0.81±.02; Mφφ 1.14±.02; Mrθ=0.41±.04; Mθφ=1.58±.02; Mφr=0.17±.04; Best double couple: Mo1.92400×10¹⁷ NP1:φs15.00000°, δ77.00000°, λ-11.00000°. NP2:φs107.00000°, δ79.00000°, λ-167.00000°. Principal axes: T 2.0220, Plg1.0000°, Azm241.0000°; N -0.1920, Plg73.0000°, Azm146.0000°; P -1.8260, Plg16.0000°, Azm331.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***10*** *11:13:49.1, 1.25N×90.53W, h22km, Moment Tensor Solution. Duration: 2s8 Moment tensor: Scale 10¹⁷Nm; Mrr=0.69; Mθθ=1.15; Mφφ 1.83; Mrθ=0.13; Mθφ=1.71; Mφr=1.84; Fault plane solution: Mo2.98000×10¹⁷ NP1: φs110.25000°, δ48.64000°, λ-171.40000°. NP2: φs14.55000°, δ83.56000°, λ-41.68000°. Principal axes: T 3.2964, Plg23.0000°, Azm70.0000°; N -0.7832, Plg48.0000°, Azm187.0000°; P -2.5131, Plg33.0000°, Azm324.0000°;*

NEIC ***10*** *11:13:49.1, 1.15N×90.83W, h22km*

ISC 10 11:13:48.0±0.3, 1.09N±0.04×90.70W±0.05, h10km, n929, σ1s64/554, mb5.0/238, MS5.1/249, 8C-7D, Galapagos Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FER2	**Fernandina2, P**	**1.71**	**205**	P		Pn	Pn	11 14 12.5	-5.4
FER2				S		Sn	**Sn**	**11 14 35.7**	**-4.1**
I20EC	**Galapagos**	**1.72**	**169**	Pn		**Pn**	**Pn**	**11 14 16.8**	**-1.3**
	baz=347,slow=28								
I20EC				I		I	I	11 20 20.0	
	baz=341,slow=322,SNR=4.7								
FER1	**Fernandina1, P**	**1.74**	**206**	P		Pn	Pn	11 14 08.5	-10
FER1				S		Sn	Sn	11 14 28.9	-12
VCH1	**Volcn Chico**	**1.91**	**192**	P		Pn	Pn	11 14 16.1	-4.7
VCH1				S		Sn	**Sn**	**11 14 39.7**	**-5.3**
ALCE	**Alcedo, Punta**	**1.99**	**220**	P		Pn	Pn	11 14 10.0	-12
ALCE				S		Sn	Sn	11 14 31.7	-15
CEAZ	**Cerra Azul, Ca**	**2.02**	**201**	P		Pn	Pn	11 14 16.5	-5.7
CEAZ				S		Sn	Sn	11 14 40.0	-7.5
PVIL	**Puerto Villami**	**2.04**	**187**	P		Pn	Pn	11 14 16.9	-5.5
PVIL				S		Sn	Sn	11 14 41.3	-6.7
ISPT	**Isla de la Pla**	**9.90**	**104**	P		**Pn**	**Pn**	**11 16 13.2**	**+2.6**
ISPT				S		Sn	Sn	11 18 13.4	+11
SALI	**Salinas**	**10.24**	**109**	P		**Pn**	**Pn**	**11 16 17.3**	**+2.2**
SALI				S		Sn	Sn	11 18 21.0	+11
PPLP	**Puerto Lpez**	**10.26**	**105**	P		**Pn**	**Pn**	**11 16 17.9**	**+2.4**
PPLP				S		Sn	Sn	11 18 21.0	+10
PPLP	**Puerto Lpez**	**10.26**	**105**	P		Pn	Pn	11 16 21.8	+6.3
PIRO	**Carate, Puerto**	**10.32**	**45**	Pn		**Pn**	**Pn**	**11 16 14.2**	**-2.0**
JIPI	**JIPIJAPA**	**10.43**	**104**	P		**Pn**	**Pn**	**11 16 21.4**	**+3.6**
JTS	**Las Juntas de**	**10.78**	**32**	Pn		**Pn**	**Pn**	**11 16 20.7**	**-1.8**
	0.8nm,0.3s,baz=241,slow=9.2,SNR=5.1								
JTS				LR		LR	LR	11 19 33.2	
	comp=Z,15µm,18.7s,baz=206,slow=32 2.1nm,0.3s								
JTS	**Las Juntas de**	**10.78**	**32**	Pn		**Pn**	**Pn**	**11 16 18.9**	**-3.6**
JTS	**Las Juntas de**	**10.78**	**32**	P		**Pn**	**Pn**	**11 16 18.9**	**-3.6**
MORR	**Playas El Morr**	**11.00**	**110**	P		Pn	Pn	11 16 30.8	+5.3
HDC	**Heredia**	**11.01**	**36**	Pn		**Pn**	**Pn**	**11 16 24.9**	**-0.9**
HDC	**Heredia**	**11.01**	**36**	*eP*		Pn	Pn	11 16 30.5	+4.7
BRU2	**Volcan**	**11.05**	**46**			**Pn**	**Pn**	**11 16 27.2**	**+0.8**
ARNL	**Arenillas**	**11.58**	**113**	P		**Pn**	**Pn**	**11 16 35.7**	**+2.1**
LAMO	**ALAMOR**	**11.82**	**115**	P		Pn	Pn	11 16 42.2	+5.3
SNLR	**San Lorenzo-Es**	**11.85**	**89**	P		**Pn**	**Pn**	**11 16 38.8**	**+1.6**
PAC1	**Pacto, Paraso**	**11.93**	**94**	P		**Pn**	**Pn**	**11 16 43.1**	**+4.6**
COHC	**Cochancay**	**11.97**	**107**			**Pn**	**Pn**	**11 16 38.0**	**-0.9**
COHC	**Cochancay**	**11.97**	**107**	P		Pn	Pn	11 16 44.2	+5.3
PCRA	**Pucara 2**	**11.98**	**111**	P		**Pn**	**Pn**	**11 16 43.1**	**+3.7**
MCRA	**Macar, Loja**	**12.03**	**117**	P		**Pn**	**Pn**	**11 16 42.3**	**+2.6**
MCRA	**Macar, Loja**	**12.03**	**117**	P		**Pn**	**Pn**	**11 16 42.5**	**+2.8**
JSCH	**Cashca Totoras**	**12.05**	**103**	P		Pn	Pn	11 16 46.8	+6.6
CHSH	**Refugio Sur-Vo**	**12.10**	**102**	P		**Pn**	**Pn**	**11 16 45.9**	**+4.7**
ILLI	**Illinizas Sur**	**12.10**	**98**	P		**Pn**	**Pn**	**11 16 42.3**	**+1.2**
APR1	**Acelerografo,**	**12.14**	**95**	P		**Pn**	**Pn**	**11 16 42.3**	**+0.9**
TERV	**Terraza Guagua**	**12.16**	**96**	P		**Pn**	**Pn**	**11 16 45.4**	**+3.5**
GGPC	**Guagua Pichinc**	**12.17**	**96**	P		**Pn**	**Pn**	**11 16 46.6**	**+4.5**
PORT	**Chimborazo Vol**	**12.19**	**102**	P		**Pn**	**Pn**	**11 16 46.6**	**+4.2**
TAMH	**Tambohuasha Ch**	**12.20**	**102**	P		Pn	Pn	11 16 48.6	+6.1
OTAV	**Otavalo**	**12.28**	**94**			**Pn**	**Pn**	**11 16 44.0**	**+0.5**
OTAV	**Otavalo**	**12.28**	**94**	P		**Pn**	**Pn**	**11 16 44.0**	**+0.5**
OTAV	**Otavalo**	**12.28**	**94**	P		**Pn**	**Pn**	**11 16 42.9**	**-0.5**
OTAV	**Otavalo**	**12.28**	**94**	P		**Pn**	**Pn**	**11 16 43.5**	**+0.1**
	7µm2µm51nm,1.2s								
OTAV	**Otavalo**	**12.28**	**94**	*eP*		**Pn**	**Pn**	**11 16 41.0**	**-2.4**
CUSE	**Cuicocha Este**	**12.32**	**94**	P		**Pn**	**Pn**	**11 16 45.8**	**+1.7**
CUSE	**Cuicocha Este**	**12.32**	**94**	P		**Pn**	**Pn**	**11 16 42.2**	**-1.9**
SLOR	**San Lorenzo -**	**12.33**	**98**			**Pn**	**Pn**	**11 16 43.8**	**-0.5**
SLOR	**San Lorenzo -**	**12.33**	**98**	P		**Pn**	**Pn**	**11 16 46.6**	**+2.3**
BOAB	**BOACO BROADBAN**	**12.34**	**24**			**Pn**	**Pn**	**11 16 43.9**	**+0.1**
CUIC	**Cuicocha-Domo**	**12.36**	**94**	P		**Pn**	**Pn**	**11 16 46.6**	**+2.0**
BMOR	**Cotopaxi Volca**	**12.37**	**98**	P		**Pn**	**Pn**	**11 16 46.8**	**+2.0**
BREF	**Cotopaxi Volca**	**12.38**	**98**	P		**Pn**	**Pn**	**11 16 46.8**	**+1.8**
BVC2	**Cotopaxi Volca**	**12.41**	**98**	P		**Pn**	**Pn**	**11 16 48.3**	**+2.9**
BTAM	**Cotopaxi Volca**	**12.43**	**98**	P		**Pn**	**Pn**	**11 16 48.4**	**+2.8**
VCES	**Cotopaxi**	**12.45**	**99**	P		**Pn**	**Pn**	**11 16 48.4**	**+2.6**
URCU	**Urcuqui**	**12.46**	**93**	P		**Pn**	**Pn**	**11 16 49.7**	**+3.8**
GONZ	**Gonzanam**	**12.47**	**115**	P		Pn	Pn	11 16 51.3	+5.2
PIS1	**Pisayambo**	**12.49**	**100**	P		Pn	Pn	11 16 53.4	+6.8
BPAT	**Tungurahua Vol**	**12.53**	**102**	P		**Pn**	**Pn**	**11 16 49.2**	**+2.2**
ANTG	**Antisana-Guama**	**12.54**	**97**	P		**Pn**	**Pn**	**11 16 49.2**	**+2.0**
ANTM	**Antisana-La Mi**	**12.58**	**97**	P		**Pn**	**Pn**	**11 16 49.8**	**+2.2**
ANTS	**Antisana-Sarah**	**12.63**	**97**	P		**Pn**	**Pn**	**11 16 48.8**	**+0.4**
CHMA	**Chilma**	**12.63**	**91**	P		**Pn**	**Pn**	**11 16 47.7**	**-0.6**
YAHU	**Yahuarcocha**	**12.64**	**93**	P		**Pn**	**Pn**	**11 16 51.0**	**+2.6**
CAYR	**Refugio Cayamb**	**12.73**	**95**	P		**Pn**	**Pn**	**11 16 50.8**	**+0.9**
CHL1	**Volcn Chiles**	**12.75**	**91**	P		**Pn**	**Pn**	**11 16 50.8**	**+0.7**
CHL2	**Volcn Chiles**	**12.78**	**91**	P		**Pn**	**Pn**	**11 16 50.2**	**-0.3**
BOSC	**San Juan Bosco**	**12.91**	**109**	P		Pn	Pn	11 16 59.3	+7.4
TULM	**Tulcn-Chalpat**	**12.91**	**92**	P		**Pn**	**Pn**	**11 16 53.7**	**+1.5**
	2µm145nm,1.2s								
ZUMB	**Zumba**	**12.97**	**117**	P		Pn	Pn	11 16 59.3	+6.6
BONI	**La Bonita**	**13.18**	**93**	P		Pn	Pn	11 17 00.5	+4.8
BONI	**La Bonita**	**13.18**	**93**	P		**Pn**	**Pn**	**11 16 56.8**	**+1.1**
	6µm1µm71nm,1.3s								
PKYU	**Pakayacu**	**13.38**	**102**	P		**P**	**P**	**11 17 03.9**	**-3.9**
CASC	**Dorado de Casc**	**13.39**	**94**	P		**Pn**	**Pn**	**11 16 58.8**	**+0.4**
	2µm97nm,1.1s								
BBAC	**Balboa, Cauca**	**13.48**	**86**	P		**Pn**	**Pn**	**11 16 57.2**	**-2.5**
APG	**El Apazote**	**13.82**	**1**	Sn		**Sn**	**Sn**	**11 19 39.8**	**+1.6**
	baz=233,slow=20,SNR=1.0								
APG				LR		LR	LR	11 20 44.0	
	comp=Z,160nm,21.6s,baz=248,slow=30								
SIUN	**Universidad Ur**	**13.84**	**25**			**Pn**	**Pn**	**11 17 00.5**	**-3.9**
POPC	**Popayan, Colom**	**14.09**	**84**	P		**Pn**	**Pn**	**11 17 05.9**	**-2.1**
JAMC	**Jamundi, Valle**	**14.17**	**81**	P		**Pn**	**Pn**	**11 17 06.7**	**-2.5**
PTAC	**Punta Ardita,**	**14.19**	**65**	P		**Pn**	**Pn**	**11 17 06.2**	**-3.0**
	2µm85nm,1.6s								
ATAH	**Atahualpa**	**14.75**	**124**	Pn		**Pn**	**Pn**	**11 17 19.1**	**+1.9**
	0.1nm,0.3s,baz=300,slow=15,SNR=24								
ATAH				Sn		**Sn**	**Sn**	**11 20 03.1**	**+2.1**
	0.1nm,0.3s,baz=9.5,slow=18,SNR=1.1								
ATAH				LR		LR	LR	11 22 01.3	
	comp=Z,6µm,18.3s,baz=297,slow=34 28nm,1.1s								
PLMC	**San Jos del P**	**14.88**	**75**	P		**Pn**	**Pn**	**11 17 19.1**	**+0.3**
	1µm57nm,1.5s								
FLOC	**Florencia**	**15.05**	**88**	P		**Pn**	**Pn**	**11 17 20.0**	**-1.0**
	4µm2µm156nm,1.5s								
GARC	**Garzon, Huila**	**15.24**	**86**	P		**Pn**	**Pn**	**11 17 21.9**	**-1.8**
	5µm1µm67nm,1.6s								
CBOC	**Ciudad Bolivar**	**15.40**	**72**	P		**Pn**	**Pn**	**11 17 23.9**	**-1.9**
APAC	**Apartado, Choc**	**15.61**	**64**	P		**Pn**	**Pn**	**11 17 29.1**	**+0.8**
GUY2C	**Guyana, Caldas**	**15.85**	**75**	P		**Pn**	**Pn**	**11 17 29.3**	**-2.5**
	8µm2µm73nm,1.7s								
PTLC	**Puerto Leguiza**	**15.93**	**93**	P		**Pn**	**Pn**	**11 17 31.7**	**-0.7**
PTLC	**Puerto Leguiza**	**15.93**	**93**	P		**Pn**	**Pn**	**11 17 31.7**	**-0.7**
	2µm211nm,1.0s								
PRAC	**Prado**	**16.01**	**80**	P		**Pn**	**Pn**	**11 17 29.8**	**-3.7**
CMIG	**Matias Romero**	**16.42**	**346**	Sn		**Sn**	**Sn**	**11 20 44.5**	**+3.3**
	baz=349,slow=15								
CMIG				LR		LR	LR	11 22 30.4	
	comp=Z,7µm,19.9s,baz=156,slow=32								
UREC	**San Jos de Ur**	**16.50**	**66**	P		**Pn**	**Pn**	**11 17 37.7**	**-2.0**
	8µm2µm95nm,2.0s								
ROSC	**El Rosal**	**16.77**	**77**	Pn		**Pn**	**Pn**	**11 17 43.9**	**+0.3**
	2.1nm,0.3s,baz=204,slow=2.7,SNR=12								
ROSC				Sn		**S**	**S**	**11 21 03.2**	**+1.8**
	1.6nm,0.3s,baz=68,slow=19,SNR=1.6								
ROSC				LR		LR	LR	11 23 21.5	
	comp=Z,15µm,19.7s,baz=238,slow=34 5.3nm,0.3s								
ROSC	**El Rosal**	**16.77**	**77**			**Pn**	**Pn**	**11 17 40.6**	**-3.0**
ROSC	**El Rosal**	**16.77**	**77**	P		**Pn**	**Pn**	**11 17 40.6**	**-3.0**
ROSC				pmax		pmax			
	comp=Z,126nm,1.6s								
MACC	**Macarena, Meta**	**16.88**	**86**	P		**Pn**	**Pn**	**11 17 42.3**	**-2.3**
PTBC	**PUERTO BERRIO,**	**17.08**	**71**	P		**Pn**	**Pn**	**11 17 44.5**	**-2.6**
	comp=Z,7µmcomp=Z,2µmcomp=Z,50nm,1.8s								
SPBC	**San Pablo de B**	**17.20**	**74**	P		**Pn**	**Pn**	**11 17 48.6**	**-0.1**
	comp=Z,6µmcomp=Z,2µmcomp=Z,87nm,2.3s								
VILC	**Villavicencio,**	**17.25**	**80**	P		**P**	**P**	**11 17 50.4**	**-0.5**
CHIC	**Chingaza**	**17.30**	**78**	P		**Pn**	**Pn**	**11 17 50.0**	**-0.3**
	comp=Z,6µmcomp=Z,2µmcomp=Z,71nm,1.9s								
SJCC	**San Jacinto, C**	**17.74**	**60**	P		**Pn**	**Pn**	**11 17 52.7**	**-2.7**
	comp=Z,7µmcomp=Z,3µmcomp=Z,94nm,1.9s								
BRJC	**Barrancabermej**	**17.89**	**70**	P		**Pn**	**Pn**	**11 17 56.3**	**-0.8**
	comp=Z,3µmcomp=Z,150nm,2.5s								
TLIG	**Tlaja**	**18.10**	**335**	P		**Pn**	**Pn**	**11 17 54.6**	**-5.3**
RUSC	**La Rusia**	**18.21**	**74**	P		**Pn**	**Pn**	**11 18 00.8**	**-0.8**
	comp=Z,9µmcomp=Z,4µmcomp=Z,246nm,1.7s								
BARC	**Barichara**	**18.30**	**72**	P		**Pn**	**Pn**	**11 18 01.6**	**-0.9**
	comp=Z,1µmcomp=Z,109nm,1.2s								
OCAC	**Ocana**	**18.71**	**67**	P		**P**	**P**	**11 18 03.6**	**-3.4**
NNA	**Nana**	**18.93**	**134**	P		**P**	**P**	**11 18 09.6**	**+0.3**
	comp=Z,1.4nm,0.3s,baz=308,slow=8.8,SNR=7.0								
NNA				S		**Sn**	**Sn**	**11 21 40.5**	**-1.6**
	comp=Z,4.6nm,0.3s,baz=315,slow=1.4,SNR=2.0								
NNA				LR		LR	LR	11 23 55.5	
	comp=Z,6µm,21.7s,baz=304,slow=32 comp=Z,8.0nm,0.3s								
NNA	**Nana**	**18.93**	**134**			**P**	**P**	**11 18 07.1**	**-2.2**
NNA	**Nana**	**18.93**	**134**	*i* P		**Pn**	**Pn**	**11 18 11.0**	**+1.1**
NNA				pmax		pmax			
	comp=Z,172nm,2.3s								
PAMC	**Pamplona, Colo**	**18.98**	**70**	P		**Pn**	**Pn**	**11 18 10.5**	**-0.5**
MTDJ	**Mount Denham**	**21.38**	**36**			**P**	**P**	**11 18 34.1**	**-1.9**
MTDJ				IAMs_20		IAMs_20	IAMs_20	11 25 58.5	
	comp=Z,7µm,18.0s								
SDV	**Santo Domingo**	**21.42**	**68**	P		**P**	**P**	**11 18 36.1**	**-0.5**
	comp=Z,89nm,0.9s,baz=235,slow=8.0,SNR=34								
SDV				S		**S**	**S**	**11 22 28.8**	**-5.8**
	comp=Z,1.3nm,0.3s,baz=338,slow=17,SNR=1.6								
SDV				LR		LR	LR	11 25 56.4	
	comp=Z,7µm,21.1s,baz=266,slow=34 comp=Z,89nm,0.9s								
SDV	**Santo Domingo**	**21.42**	**68**			**P**	**P**	**11 18 33.3**	**-3.3**
SDV				IAMs_20		IAMs_20	IAMs_20	11 25 35.3	
	comp=Z,8µm,22.0s								
SDV	**Santo Domingo**	**21.42**	**68**	*eP*		**P**	**P**	**11 18 36.0**	**-0.5**
CHIV	**Chivirico**	**23.40**	**36**	P		**P**	**P**	**11 18 56.2**	**-1.0**
CHIV				IAmb		IAmb	IAmb	11 19 07.7	
	comp=Z,102nm,1.4s								
GTBY	**Guantanamo Bay**	**24.14**	**38**	IAMs_20		IAMs_20	IAMs_20	11 27 14.1	
	comp=Z,5µm,19.0s								
ZAIG	**Zacatecas**	**24.44**	**333**	P		**P**	**P**	**11 19 04.2**	**-3.3**
SDDR	**Presa de Saban**	**26.04**	**46**	IAMs_20		IAMs_20	IAMs_20	11 28 23.4	
	comp=Z,5µm,19.0s								
TEFE	**Tefe**	**26.45**	**100**	*eP*		**P**	**P**	**11 19 24.2**	**-1.2**
H06S1	**SOCORRO T**	**26.50**	**313**	T		T	T	11 46 55.9	
	SNR=7.8								
PB18	**Visviri**	**27.95**	**133**			**P**	**P**	**11 19 38.9**	**-0.7**
LPAZ	**La Paz**	**28.19**	**129**	P		**P**	**P**	**11 19 41.4**	**-0.3**
	comp=Z,13nm,1.1s,baz=321,slow=8.2,SNR=18								
LPAZ				PcP		**PcP**	**PcP**	**11 22 56.9**	**+1.2**
	comp=Z,4.1nm,0.8s,baz=353,slow=3.9,SNR=4.7								
LPAZ				LR		LR	LR	11 30 23.9	
	comp=Z,5µm,21.2s,baz=307,slow=35 comp=Z,13nm,1.1s								
LPAZ	**La Paz**	**28.19**	**129**			**P**	**P**	**11 19 42.4**	**+0.7**
LPAZ				IAmb		IAmb	IAmb	11 19 51.2	
	comp=Z,30nm,1.2s								
LPAZ	**La Paz**	**28.19**	**129**	P		**P**	**P**	**11 19 42.4**	**+0.7**
LPAZ				pmax		pmax			
	comp=Z,30nm,1.2s								
LPAZ	**La Paz**	**28.19**	**129**	*eP*		**P**	**P**	**11 19 42.2**	**+0.5**
833A	**Chaparral WMA,**	**28.33**	**344**	P		**P**	**P**	**11 19 41.7**	**-0.5**
PB16	**IPOC Station P**	**28.41**	**134**			**P**	**P**	**11 19 42.4**	**-1.3**
PB16				IAmb		IAmb	IAmb	11 19 49.4	
	comp=Z,25nm,0.9s								
545A	**Edgard**	**28.79**	**0**	IAMs_20		IAMs_20	IAMs_20	11 31 29.2	
	comp=Z,4µm,20.0s								
HKT	**Hockley**	**29.11**	**351**	*i* P		**P**	**P**	**11 19 50.7**	**+1.7**
SLBS	**Sierra La Lagu**	**29.20**	**322**			**P**	**P**	**11 19 47.6**	**-2.5**
PB11	**IPOC Station P**	**29.25**	**136**			**P**	**P**	**11 19 54.6**	**+4.0**
PB11						**PcP**	**PcP**	**11 23 02.0**	**+4.2**
HNDO	**Hondo**	**29.44**	**345**	P		**P**	**P**	**11 19 51.7**	**-0.3**
SJG	**San Juan**	**29.45**	**53**	LR		LR	LR	11 30 36.1	
	comp=Z,4µm,19.2s,baz=226,slow=34								
SJG	**San Juan**	**29.45**	**53**	IAMs_20		IAMs_20	IAMs_20	11 30 06.7	
	comp=Z,5µm,20.0s								
GO01	**Chusmiza**	**29.51**	**135**	P		**P**	**P**	**11 19 53.4**	**+0.1**
GO01				IAmb		IAmb	IAmb	11 20 02.3	
	comp=Z,40nm,1.4s								
PATCX	**Punta Patache**	**29.64**	**138**	P		**P**	**P**	**11 19 53.7**	**-0.3**
PATCX				IAmb		IAmb	IAmb	11 20 58.5	
	comp=Z,34nm,1.3s								
DRIO	**Del Rio**	**29.72**	**342**	IAmb		IAmb	IAmb	11 20 00.7	
	comp=Z,25nm,1.2s								
LPIG	**La Paz**	**29.73**	**322**	LR		LR	LR	11 29 00.2	
	comp=Z,1µm,19.6s,baz=130,slow=31								
PB08	**IPOC Station P**	**29.85**	**136**			**PcP**	**PcP**	**11 23 04.3**	**+4.6**
PB02	**IPOC Station P**	**30.16**	**139**	IAmb		IAmb	IAmb	11 20 04.3	
	comp=Z,36nm,1.0s								
BOAV	**Boa Vista**	**30.19**	**87**	IAmb		IAmb	IAmb	11 20 04.0	
	comp=Z,26nm,1.2s								
BOAV	**Boa Vista**	**30.19**	**87**	*eP*		**P**	**P**	**11 19 59.7**	**+0.9**
MACA	**Manacapuru-AM**	**30.30**	**98**	P		**P**	**P**	**11 19 58.9**	**-0.9**
MACA	**Manacapuru-AM**	**30.30**	**98**	*eP*		**P**	**P**	**11 19 59.0**	**-0.9**
PB07	**IPOC Station P**	**30.46**	**139**	IAmb		IAmb	IAmb	11 20 06.9	
	comp=Z,23nm,1.0s								
TXAR	**Lajitas Array**	**30.68**	**337**	P		**P**	**P**	**11 20 02.2**	**-1.0**
	comp=Z,1.0nm,0.7s,baz=156,slow=11,SNR=9.0								
TXAR				LR		LR	LR	11 31 21.4	
	comp=Z,6µm,19.2s,baz=140,slow=34								
	comp=Z,1.0nm,0.7s								
TXAR	**Lajitas Array**	**30.68**	**337**	P		**P**	**P**	**11 20 02.5**	**-0.7**
TXAR	**Lajitas Array**	**30.68**	**337**	P		**P**	**P**	**11 20 02.5**	**-0.7**
PB03	**IPOC Station P**	**30.77**	**140**	IAmb		IAmb	IAmb	11 20 11.7	
	comp=Z,23nm,1.2s								
PB03				IAMs_20		IAMs_20	IAMs_20	11 29 30.9	
	comp=Z,3µm,19.0s								
GRGR	**Grenville**	**30.82**	**68**	IAMs_20		IAMs_20	IAMs_20	11 31 56.4	
	comp=Z,4µm,22.0s								
PB05	**IPOC Station P**	**31.07**	**141**	IAmb		IAmb	IAmb	11 20 14.3	
	comp=Z,35nm,1.1s								
PB05				IAMs_20		IAMs_20	IAMs_20	11 29 26.7	
	comp=Z,3µm,20.0s								
PB06	**IPOC Station P**	**31.36**	**140**	IAMs_20		IAMs_20	IAMs_20	11 29 40.4	
	comp=Z,3µm,19.0s								
WHTX	**Lake Whitney,**	**31.39**	**349**	IAmb		IAmb	IAmb	11 20 19.0	
	comp=Z,34nm,1.2s								
SABA	**Saba**	**31.59**	**57**	IAMs_20		IAMs_20	IAMs_20	11 31 13.6	
	comp=Z,4µm,20.0s								
SEUS	**St. Eustatius**	**31.75**	**58**	IAMs_20		IAMs_20	IAMs_20	11 31 08.8	
	comp=Z,3µm,21.0s								
152A	**Waverly Hall**	**31.91**	**10**	IAmb		IAmb	IAmb	11 20 19.2	
	comp=Z,22nm,1.1s								
SMRT	**St. Maarten**	**31.94**	**57**	IAMs_20		IAMs_20	IAMs_20	11 32 21.7	
	comp=Z,3µm,19.0s								
TPB05	**Hovey Rd**	**31.99**	**339**	IAmb		IAmb	IAmb	11 20 21.8	
	comp=Z,7.6nm,1.1s								
TPB01	**Permian Basin**	**32.17**	**339**	IAmb		IAmb	IAmb	11 20 22.4	
	comp=Z,11nm,1.1s								
SGCY	**Sterling City**	**32.20**	**343**	IAmb		IAmb	IAmb	11 20 22.8	
	comp=Z,14nm,0.8s								
TMB01	**Midkiff**	**32.26**	**342**	IAmb		IAmb	IAmb	11 20 23.8	
	comp=Z,31nm,1.2s								
PB14	**IPOC Station P**	**32.26**	**144**	IAMs_20		IAMs_20	IAMs_20	11 30 01.5	
	comp=Z,3µm,20.0s								
CBE	**Ff, Capester**	**32.31**	**61**	IAMs_20		IAMs_20	IAMs_20	11 35 35.5	
	comp=Z,3µm,19.0s								
229A	**Bryant Ranch,**	**32.45**	**342**	IAmb		IAmb	IAmb	11 20 25.2	
	comp=Z,32nm,1.4s								
VHRN	**Van Horn**	**32.49**	**337**	IAmb		IAmb	IAmb	11 20 25.7	
	comp=Z,20nm,1.3s								
PECS	**Pecos**	**32.59**	**339**	IAmb		IAmb	IAmb	11 20 25.9	
	comp=Z,30nm,1.6s								
TPB06	**Permian Basin**	**32.61**	**340**	IAmb		IA

ANMO **Albuquerque** **36.75 338** *i* P **P** **11 20 56.3 +0.3**
ANMO pmax pmax
comp=Z,12nm,1.1s
RTBA **Rita Blanca** **36.90 344** IAmb IAmb 11 21 04.0
comp=Z,33nm,1.1s
R40A **Maddies Statio** **37.05 358** IAmb IAmb 11 21 11.5
comp=Z,42nm,1.3s
AROD **Rodeo** **37.09 149** *eP* **P** **11 20 59.9 +0.7**
214A **Organ Pipe Nat** **37.12 328** IAmb IAmb 11 21 06.5
comp=Z,26nm,1.2s
BLA **Blacksburg** **37.17 14** IAmb IAmb 11 21 04.7
comp=Z,42nm,1.2s
CO02 **Combarbal** **37.17 151** IAmb IAmb 11 21 05.2
comp=Z,60nm,1.3s
WCI **Wyandotte Cave** **37.18 6** P **P** **11 20 59.5 +0.2**
WCI IAmb IAmb 11 21 07.9
comp=Z,51nm,1.4s
WCI **Wyandotte Cave** **37.18 6** P **P** **11 20 59.5 +0.2**
WCI pmax pmax
comp=Z,51nm,1.5s
ACCO **Cerro Coronel** **37.64 149** *eP* **P** **11 21 03.6 -0.1**
X18A **Snowflake** **37.81 334** IAmb IAmb 11 21 12.6
comp=Z,32nm,1.3s
R32A **Long Quarter,** **37.87 350** IAmb IAmb 11 21 14.7
comp=Z,24nm,1.1s
CO04 **Los Peladeros** **37.88 152** **PcP** **11 23 25.9 +3.8**
CO04 IAMs_20 IAMs_20 11 32 43.5
comp=Z,3µm,21.0s
T25A **Trinidad** **38.04 342** IAmb IAmb 11 21 13.8
comp=Z,38nm,1.2s
T25A IAMs_20 IAMs_20 11 36 03.1
comp=Z,3µm,19.0s
VA06 **Catapilco** **38.17 153** IAMs_20 IAMs_20 11 32 51.1
comp=Z,3µm,21.0s
MDP **Montagnes des** **38.20 83** LR LR 11 36 07.0
comp=Z,4µm,18.3s,baz=274,slow=35
KSU1 **Kansas State U** **38.21 353** IAmb IAmb 11 21 17.2
comp=Z,50nm,1.4s
W18A **Petrified Fore** **38.22 334** IAmb IAmb 11 21 16.0
comp=Z,42nm,1.4s
P40A **Paris** **38.27 358** IAmb IAmb 11 21 22.5
comp=Z,37nm,1.2s
VA01 **Torpederas** **38.40 154** IAMs_20 IAMs_20 11 32 58.3
comp=Z,4µm,19.0s
Q52A **Bidwell** **38.47 11** IAmb IAmb 11 21 15.4
comp=Z,49nm,1.1s
P46A **Rosedale** **38.48 4** IAmb IAmb 11 21 15.6
comp=Z,28nm,0.9s
SALV **Santo Antonio** **38.48 117** *eP* **P** **11 21 09.8 -0.8**
P48A **Milroy** **38.49 7** IAmb IAmb 11 21 15.0
comp=Z,24nm,1.0s
AVFE **Valle Fertil** **38.55 147** *eP* **P** **11 21 10.1 -1.1**
VA03 **San Esteban** **38.68 152** IAmb IAmb 11 21 17.8
comp=Z,30nm,0.9s
MT02 **Curacav** **38.83 153** IAmb IAmb 11 21 18.8
comp=Z,42nm,1.3s
MT02 IAMs_20 IAMs_20 11 33 46.5
comp=Z,3µm,20.0s
P51A **Williamsport** **38.84 9** IAmb IAmb 11 21 17.5
comp=Z,58nm,1.6s
CFA **Coronel Fontan** **38.88 149** LR LR 11 34 04.4
comp=Z,2µm,18.6s,baz=329,slow=31
PEL **Peldehue** **38.94 153** IAMs_20 IAMs_20 11 33 14.5
comp=Z,3µm,20.0s
SDCO **Great Sand Dun** **38.94 341** IAmb IAmb 11 21 21.7
comp=Z,38nm,1.4s
SDCO IAMs_20 IAMs_20 11 36 22.9
comp=Z,3µm,19.0s
GLA **Glamis** **39.05 327** IAmb IAmb 11 21 22.8
comp=Z,34nm,1.2s
MT05 **Renca** **39.12 153** IAMs_20 IAMs_20 11 33 22.3
comp=Z,3µm,22.0s
MT16 **CCHEN** **39.25 153** IAMs_20 IAMs_20 11 33 24.7
comp=Z,4µm,21.0s
WUAZ **Wupatki** **39.28 333** IAmb IAmb 11 21 25.1
comp=Z,67nm,1.4s
WUAZ IAMs_20 IAMs_20 11 35 53.6
comp=Z,2µm,21.0s
MT01 **Popeta** **39.29 154** IAMs_20 IAMs_20 11 34 10.7
comp=Z,3µm,19.0s
MT03 **Universidad Ad** **39.31 153** IAMs_20 IAMs_20 11 33 26.3
comp=Z,3µm,21.0s
MT09 **Talagante** **39.33 154** IAMs_20 IAMs_20 11 34 11.8
comp=Z,3µm,18.0s
ACHE **Chepes** **39.37 147** *eP* P 11 21 04.3 -14
S22A **4UR Ranch, Cre** **39.38 340** IAmb IAmb 11 21 25.8
comp=Z,44nm,1.3s
N41A **Harden Midland** **39.43 360** IAmb IAmb 11 21 32.6
comp=Z,73nm,1.4s
MURT **Porto Murtinho** **39.44 127** *eP* **P** **11 21 17.2 -1.4**
BDQN **Bodoquena, MS** **39.54 125** *eP* **P** **11 21 18.5 -1.0**
MT13 **San Alfonso** **39.62 153** IAmb IAmb 11 21 27.8
comp=Z,86nm,1.8s
MT13 **PcP** **11 23 31.5 +4.3**
MT13 IAMs_20 IAMs_20 11 33 46.9
comp=Z,3µm,20.0s
BO04 **La Punta** **39.68 153** IAMs_20 IAMs_20 11 33 37.1
comp=Z,3µm,21.0s
BO01 **Tunca** **39.81 154** IAMs_20 IAMs_20 11 33 39.5
comp=Z,3µm,20.0s
N47A **Urbana** **39.86 6** IAmb IAmb 11 21 26.0
comp=Z,72nm,1.3s
PP1B **Ponte de Pedra** **39.87 119** *eP* **P** **11 21 21.7 -0.6**
GO05 **Hualane** **39.98 156** IAMs_20 IAMs_20 11 34 11.9
comp=Z,3µm,19.0s
BO02 **Sierra Bellavi** **40.28 154** P **P** **11 21 27.1 +1.6**
BO02 IAmb IAmb 11 21 31.3
comp=Z,60nm,1.6s
BO02 IAMs_20 IAMs_20 11 33 36.0
comp=Z,3µm,22.0s
PFO **Pinyon Flats O** **40.37 326** LR LR 11 35 12.7
comp=Z,2µm,20.4s,baz=136,slow=32
PFO **Pinyon Flats O** **40.37 326** IAMs_20 IAMs_20 11 35 00.5
comp=Z,2µm,21.0s
PFO **Pinyon Flats O** **40.37 326** *ceP* **P** **11 21 28.5 +2.1**
PFO pmax pmax
comp=Z,10.0nm,1.0s
AQDB **Aquidauana** **40.42 124** **P** **11 21 26.2 -0.6**
AQDB IAmb IAmb 11 21 31.5
comp=Z,30nm,0.9s
AQDB **Aquidauana** **40.42 124** *eP* **P** **11 21 26.6 -0.2**
U15A **North Rim** **40.45 333** IAmb IAmb 11 21 37.0
comp=Z,70nm,1.7s
PV02 **Paradox Valley** **40.48 338** IAmb IAmb 11 21 35.0
comp=Z,53nm,1.3s
DANC **Danby, Needles** **40.55 328** IAmb IAmb 11 21 35.6
comp=Z,41nm,1.1s
DANC IAMs_20 IAMs_20 11 38 00.1
comp=Z,2µm,19.0s
PV18 **Skein Mesa, Pa** **40.58 338** IAmb IAmb 11 21 34.2
comp=Z,62nm,1.4s
PV12 **Saucer Basin,** **40.60 338** IAmb IAmb 11 21 34.8
comp=Z,40nm,1.0s
PV17 **East Wray Mesa** **40.63 338** IAmb IAmb 11 21 35.3
comp=Z,41nm,1.5s
PV20 **West Nyswonger** **40.69 338** IAmb IAmb 11 21 35.7
comp=Z,48nm,1.3s
PV10 **Paradox Valley** **40.74 338** IAmb IAmb 11 21 35.6
comp=Z,41nm,1.3s
PV23 **Carpenter Ridg** **40.80 338** IAmb IAmb 11 21 36.1
comp=Z,27nm,0.9s
ML02 **Panimavida** **40.84 156** IAMs_20 IAMs_20 11 33 56.7
comp=Z,3µm,20.0s
PAGS **Pennsylvania G** **40.97 16** P **P** **11 21 30.3 -0.7**
PAGS IAmb IAmb 11 21 36.1
comp=Z,34nm,1.1s
OGNE **Ogallala** **40.98 347** IAmb IAmb 11 21 40.9
comp=Z,27nm,1.1s
L34A **Svendsen Farm,** **41.01 354** IAmb IAmb 11 21 45.9
comp=Z,32nm,1.1s
BI05 **Punta Hualpn** **41.01 158** IAMs_20 IAMs_20 11 34 11.0
comp=Z,3µm,20.0s
HMU **Henry Mountain** **41.04 336** P **P** **11 21 31.0 -1.0**
V12A **Nelson** **41.12 330** P **P** **11 21 32.0 -0.5**
V12A IAmb IAmb 11 21 40.0
comp=Z,40nm,1.3s
KNB **Kanab** **41.18 333** IAmb IAmb 11 22 00.4
comp=Z,54nm,1.8s
SNDB **Serra Nova Dou** **41.23 110** *eP* **P** **11 21 31.6 -2.0**
PKCU **Pink Cliffs** **41.30 334** IAmb IAmb 11 21 42.3
comp=Z,43nm,1.3s
PRPB **Paraupebas** **41.45 101** *eP* **P** **11 21 33.9 -1.5**
BI02 **San Fabin de** **41.68 156** IAmb IAmb 11 21 43.2
comp=Z,77nm,1.5s
BI02 IAMs_20 IAMs_20 11 34 34.8
comp=Z,3µm,22.0s
MTPU **Mount Pierson** **41.74 334** P **P** **11 21 37.2 -0.7**
MTPU IAmb IAmb 11 21 48.6
comp=Z,47nm,1.9s
ARAG **Araguaiana, MT** **41.89 115** *eP* **P** **11 21 39.3 +0.3**
SHOC **Shoshone, Teco** **41.99 328** IAmb IAmb 11 21 49.2
comp=Z,50nm,1.4s
Q16A **Castle Valley** **42.05 336** IAmb IAmb 11 21 49.7
comp=Z,35nm,1.5s
K30B **Basset** **42.16 350** IAmb IAmb 11 21 51.0
comp=Z,52nm,1.1s
AMBA **Amambai (Brazi** **42.17 127** *eP* **P** **11 21 40.5 -0.7**
CPUP **Villa Florida** **42.18 133** P **P** **11 21 41.2 0.0**
comp=Z,8.6nm,1.1s,baz=320,slow=8.6,SNR=12
CPUP LR LR 11 39 21.6
comp=Z,823nm,21.0s,baz=321,slow=36
comp=Z,8.6nm,1.1s
CPUP **Villa Florida** **42.18 133** IAmb IAmb 11 21 48.9
comp=Z,42nm,1.3s
CPUP **Villa Florida** **42.18 133** *eP* **P** **11 21 40.7 -0.6**
CCCA **Chr Cany lake** **42.29 327** IAmb IAmb 11 21 52.9
comp=Z,49nm,1.3s
QSM **Queen of Sheba** **42.35 328** IAmb IAmb 11 21 50.0
comp=Z,40nm,1.1s
P17A **Butcher Ranch,** **42.35 337** IAmb IAmb 11 22 03.9
comp=Z,48nm,1.7s
LRMC **Laurel Mtn Rad** **42.43 327** IAmb IAmb 11 21 51.0
comp=Z,28nm,1.2s
LRMC IAMs_20 IAMs_20 11 38 06.6
comp=Z,2µm,19.0s
CLC **China Lake** **42.63 327** IAmb IAmb 11 21 52.4
comp=Z,29nm,1.2s
FURC **Furnace Creek,** **42.73 328** IAmb IAmb 11 21 57.9
comp=Z,43nm,1.3s
ISA **Isabella, Lake** **43.00 326** IAmb IAmb 11 21 58.7
comp=Z,60nm,1.9s
S11A **Rachel** **43.07 331** IAmb IAmb 11 21 58.6
comp=Z,65nm,1.5s
LR04 **Corral** **43.73 161** IAMs_20 IAMs_20 11 35 29.9
comp=Z,3µm,21.0s
K22A **Casper** **43.74 343** IAmb IAmb 11 22 00.0
comp=Z,35nm,1.4s
K22A IAMs_20 IAMs_20 11 39 33.9
comp=Z,2µm,18.0s
SUSD **Miller** **43.78 351** IAmb IAmb 11 22 02.4
comp=Z,30nm,1.0s
DUG **Dugway, Tooele** **43.81 335** IAmb IAmb 11 22 00.8
comp=Z,27nm,1.6s
TRCB **Terra Rica** **44.02 125** *eP* **P** **11 21 55.2 -1.0**
SMTB **Santa Maria do** **44.08 104** *eP* **P** **11 21 57.1 +0.4**
GO06 **Curarrehue** **44.15 159** IAmb IAmb 11 22 05.3
comp=Z,51nm,1.6s
GO06 IAMs_20 IAMs_20 11 35 49.0
comp=Z,3µm,21.0s
RSSD **Black Hills** **44.45 346** P **P** **11 21 59.2 -0.4**
RSSD **Black Hills** **44.45 346** P **P** **11 21 59.2 -0.4**
RSSD pmax pmax
comp=Z,27nm,1.6s
RSSD MLR MLR
comp=Z,800nm,19.0s
BGU **Big Grassy Mou** **44.51 336** IAmb IAmb 11 22 07.0
comp=Z,34nm,1.3s
ITRB **Iturama** **44.63 120** *eP* **P** **11 22 02.5 +1.4**
MDPB **Devils Postpil** **44.77 328** IAmb IAmb 11 22 09.6
comp=Z,27nm,1.3s
PDAR **Pinedale Array** **44.80 340** P **P** **11 22 00.8 -1.6**
comp=Z,1.7nm,0.7s,baz=152,slow=7.5,SNR=9.9
PDAR LR LR 11 40 29.0
comp=Z,3µm,18.9s,baz=156,slow=36
comp=Z,1.7nm,0.7s
PDAR **Pinedale Array** **44.80 340** P **P** **11 22 02.4 0.0**
PSAL **Palomas, Salto** **44.85 138** *eP* **P** **11 22 02.8 +0.1**
LHV **Little Huntoon** **44.93 329** IAmb IAmb 11 22 13.8
comp=Z,21nm,1.0s
NVAR **Mina Array Bea** **44.96 329** P **P** **11 22 03.1 -0.6**
comp=Z,6.5nm,0.8s,baz=158,slow=8.4,SNR=28
NVAR LR LR 11 38 49.1
comp=Z,997nm,19.9s,baz=136,slow=34
comp=Z,6.5nm,0.8s
ELK **Elko** **45.30 334** IAmb IAmb 11 22 15.5
comp=Z,38nm,1.7s
ELK IAMs_20 IAMs_20 11 39 50.1
comp=Z,2µm,21.0s
BDFB **Brasilia** **45.33 113** P **P** **11 22 05.0 -1.9**
comp=Z,7.2nm,0.9s,baz=284,slow=8.4,SNR=9.6
BDFB LR LR 11 41 36.5
comp=Z,3µm,18.4s,baz=288,slow=37
comp=Z,7.2nm,0.9s
BDFB **Brasilia** **45.33 113** P **P** **11 22 05.0 -1.9**
E38A **The Farm, Brul** **45.33 359** IAMs_20 IAMs_20 11 39 58.2
comp=Z,2µm,21.0s
AHID **Auburn Hatcher** **45.34 339** IAMs_20 IAMs_20 11 40 29.4
comp=Z,2µm,20.0s
PTGB **Pitanga** **45.38 127** *eP* **P** **11 22 06.0 -1.1**
PLCA **Paso Flores** **45.49 158** P **P** **11 22 07.8 +0.1**
comp=Z,17nm,1.0s,baz=323,slow=8.3,SNR=15
PLCA LR LR 11 37 56.7
comp=Z,2µm,18.0s,baz=344,slow=32
comp=Z,17nm,1.0s
PLCA **Paso Flores** **45.49 158** IAmb IAmb 11 22 13.6
comp=Z,25nm,1.0s
PLCA **Paso Flores** **45.49 158** *eP* **P** **11 22 10.6 +2.8**
LONY **Lake Ozonia** **45.63 16** P **P** **11 22 09.8 +1.1**
CMB **Columbia Colle** **45.77 327** IAmb IAmb 11 22 19.0
comp=Z,20nm,1.4s
SNOW **Snow King Moun** **45.83 340** IAMs_20 IAMs_20 11 40 38.3
comp=Z,2µm,21.0s
IPMB **Ipameri, GO** **45.90 116** *eP* **P** **11 22 09.6 -1.7**
LOHW **Long Hollow** **45.91 340** IAmb IAmb 11 22 17.2
comp=Z,30nm,1.4s
LOHW IAMs_20 IAMs_20 11 40 42.4
comp=Z,3µm,21.0s
MOOW **Moose Ponds** **46.07 340** IAmb IAmb 11 22 20.5
comp=Z,38nm,1.9s
MOOW IAMs_20 IAMs_20 11 40 47.9
comp=Z,3µm,20.0s
FXWY **Fox Creek** **46.08 340** IAmb IAmb 11 22 18.4
comp=Z,26nm,1.2s
FXWY IAMs_20 IAMs_20 11 40 54.9
comp=Z,2µm,20.0s
PNTR **Pine Nut** **46.12 329** IAmb IAmb 11 22 20.5
comp=Z,24nm,1.0s
PAHR **Pah Rah Range** **46.47 329** IAmb IAmb 11 22 22.8
comp=Z,17nm,1.3s
MPK **Martis Peak** **46.50 328** IAmb IAmb 11 22 23.5
comp=Z,30nm,1.3s
ITAB **Concordia** **46.57 130** P **P** **11 22 15.6 -0.8**
ITAB **Concordia** **46.57 130** *eP* **P** **11 22 15.3 -1.0**
H17A **Grant Village** **46.59 340** IAmb IAmb 11 22 27.9
comp=Z,15nm,1.3s
BB19B **Bebedouro** **46.74 121** *eP* **P** **11 22 16.5 -1.3**
AFDM **Forest Hills D** **46.75 327** IAmb IAmb 11 22 24.5
comp=Z,16nm,1.2s
FRTB **Fartura** **46.79 124** *eP* **P** **11 22 18.8 +0.6**
YMR **Madison River** **46.96 340** IAmb IAmb 11 22 25.4
comp=Z,18nm,1.1s
YHB **Horse Butte** **47.11 340** IAmb IAmb 11 22 26.6
comp=Z,21nm,1.4s
LL02 **Futaleuf** **47.23 161** P **P** **11 22 21.1 -0.2**
LL02 IAMs_20 IAMs_20 11 37 28.5
comp=Z,3µm,20.0s
AGMN **Agassiz Nation** **47.23 355** IAmb IAmb 11 22 31.2
comp=Z,18nm,1.1s
AGMN IAMs_20 IAMs_20 11 43 11.6
comp=Z,2µm,21.0s
HLID **Hailey** **47.28 337** IAMs_20 IAMs_20 11 41 29.6
comp=Z,3µm,19.0s
CPSB **Cacapava Do Su** **47.32 135** *eP* **P** **11 22 21.3 -0.9**
SDBA **SAO DESIDERIO** **47.39 108** *eP* **P** **11 22 22.3 -0.7**
LAO **LASA Array** **47.40 346** IAmb IAmb 11 22 32.5
comp=Z,11nm,1.0s
ORV **Oroville** **47.47 328** IAmb IAmb 11 22 30.6
comp=Z,22nm,1.2s
PMNB **Patos De Minas** **47.67 116** *eP* **P** **11 22 24.4 -0.8**
BOZ **Bozeman (W)** **48.00 340** IAmb IAmb 11 22 35.8
comp=Z,18nm,1.4s
BOZ IAMs_20 IAMs_20 11 42 12.9
comp=Z,2µm,20.0s
AY01 **Puyuhuapi** **48.09 163** **P** **11 22 28.1 +0.3**
DLMT **Dillon** **48.13 339** IAMs_20 IAMs_20 11 42 06.2
comp=Z,1µm,19.0s
WVOR **Wild Horse Val** **48.19 332** IAmb IAmb 11 22 35.1
comp=Z,31nm,1.5s
WVOR IAMs_20 IAMs_20 11 42 16.5
comp=Z,2µm,18.0s
HATC **Hat Creek Radi** **48.36 329** IAmb IAmb 11 23 16.2
comp=Z,22nm,1.1s
EPLO **Experimental L** **48.47 357** IAmb IAmb 11 22 35.6
comp=Z,13nm,1.1s
JANB **Januaria** **48.59 111** *eP* **P** **11 22 29.9 -2.4**
SPB **Sao Paulo** **48.67 123** IAmb IAmb 11 22 38.8
comp=Z,30nm,1.2s
SPB **Sao Paulo** **48.67 123** *eP* **P** **11 22 33.1 +0.4**
VAO **Valinhos** **48.83 122** *eP* **P** **11 22 34.6 +0.6**
J08A **Circle Bar Ran** **48.84 333** IAmb IAmb 11 22 41.8
comp=Z,20nm,1.4s
E62A **Clayton Lake** **48.98 19** P **P** **11 22 39.1 +4.4**
M03C **McCloud** **49.04 329** IAmb IAmb 11 23 24.4
comp=Z,35nm,1.6s
PET01 **Itanhaem-SP** **49.09 124** *eP* **P** **11 22 36.8 +0.9**
ULM **Lac du Bonnet** **49.17 356** P **P** **11 22 34.9 -1.3**
comp=Z,3.6nm,0.8s,baz=182,slow=9.2,SNR=7.1
ULM LR LR 11 44 41.5
comp=Z,1µm,20.5s,baz=162,slow=38
comp=Z,3.6nm,0.8s
ULM **Lac du Bonnet** **49.17 356** IAmb IAmb 11 22 49.9
comp=Z,21nm,1.1s
ULM **Lac du Bonnet** **49.17 356** *i* P **P** **11 22 38.1 +2.0**
PLID **Pearl Lake** **49.18 336** IAmb IAmb 11 22 41.2
comp=Z,14nm,1.1s
PLID IAMs_20 IAMs_20 11 42 39.8
comp=Z,2µm,20.0s
KHBM **Hayfork Bally** **49.18 327** IAMs_20 IAMs_20 11 39 30.5
comp=Z,2µm,22.0s
COYC **Coyhaique** **49.30 163** P **P** **11 22 37.5 +0.3**
EGMT **Eagleton** **49.58 343** IAmb IAmb 11 23 00.8
comp=Z,22nm,1.5s
EGMT IAMs_20 IAMs_20 11 43 06.3
comp=Z,2µm,20.0s
KHMM **Horse Mountain** **49.61 327** IAMs_20 IAMs_20 11 40 11.8
comp=Z,1µm,20.0s
YBH **Yreka Blue Hor** **49.67 329** LR LR 11 43 55.0
comp=Z,70nm,18.5s,baz=118,slow=36
YBH **Yreka Blue Hor** **49.67 329** IAmb IAmb 11 22 44.6
comp=Z,22nm,1.6s
JCC **Jacoby Creek,** **49.73 327** IAMs_20 IAMs_20 11 39 16.8
comp=Z,2µm,19.0s
MSO **Missoula** **49.87 339** IAmb IAmb 11 22 47.9
comp=Z,24nm,1.4s
MSO IAMs_20 IAMs_20 11 43 21.2
comp=Z,2µm,18.0s
KRPM **Rodgers** **49.97 327** IAMs_20 IAMs_20 11 39 24.2
comp=Z,2µm,20.0s
BSCB **Bom Sucesso** **49.98 119** *eP* **P** **11 22 43.8 +0.9**
DIAM **Diamantina, MG** **50.09 115** *eP* **P** **11 22 42.4 -1.5**
PARB **Paraibuna** **50.10 122** *eP* **P** **11 22 43.2 -0.5**
PINE **Pine Mountain** **50.31 332** IAmb IAmb 11 22 56.4
comp=Z,34nm,1.3s
F10A **Beach Ranch, E** **50.40 336** IAmb IAmb 11 22 54.6
comp=Z,24nm,1.3s
BBOR **Butler Butte** **50.49 330** IAmb IAmb 11 22 52.9
comp=Z,34nm,1.8s
G08A **Pilot Rock** **50.58 334** IAmb IAmb 11 22 55.9
comp=Z,31nm,1.6s
AY03 **Cochrane** **50.69 164** P **P** **11 22 47.6 -0.1**
AY03 IAmb IAmb 11 22 53.6
comp=Z,29nm,1.1s
AY03 IAMs_20 IAMs_20 11 39 07.0
comp=Z,2µm,20.0s
K02D **Willamette Mer** **50.86 329** IAmb IAmb 11 22 55.6
comp=Z,21nm,1.1s
WIFE **Three Sisters-** **50.93 331** IAmb IAmb 11 23 32.4
comp=Z,42nm,1.8s
F07A **Phinny Hill Vi** **51.47 334** IAmb IAmb 11 23 05.0
comp=Z,23nm,1.1s
E08A **Dider Farm, El** **51.57 335** IAmb IAmb 11 22 59.1
comp=Z,41nm,1.9s
HOOD **Mount Hood Mea** **51.80 332** IAmb IAmb 11 23 01.1
comp=Z,18nm,1.1s
GO08 **Villa O'Higgin** **51.81 165** IAMs_20 IAMs_20 11 39 29.3
comp=Z,2µm,20.0s
E07A **Sunnyside** **51.96 335** IAmb IAmb 11 23 03.1
comp=Z,28nm,1.1s
D08A **Wollman Farm,** **51.96 336** IAmb IAmb 11 23 14.2
comp=Z,23nm,1.4s
WAH2 **Wahluke Slope** **51.99 335** IAmb IAmb 11 23 02.8
comp=Z,15nm,0.8s
COR **Corvallis** **52.04 331** IAMs_20 IAMs_20 11 45 13.3
comp=Z,2µm,18.0s
MXC **Moxie City** **52.16 334** IAmb IAmb 11 23 04.9
comp=Z,41nm,1.5s
NEW **Newport** **52.24 338** LR LR 11 44 59.5
comp=Z,3µm,18.9s,baz=140,slow=36
SJMB **Sao Joao De Ma** **52.46 115** *eP* **P** **11 23 01.1 -0.4**
EPH **Ephrata** **52.48 336** IAmb IAmb 11 23 20.1
comp=Z,30nm,1.7s
BSFB **Barra de Sao F** **52.81 115** *eP* **P** **11 23 05.0 +0.9**
LTY **Liberty** **52.85 335** IAmb IAmb 11 23 55.9
comp=Z,53nm,1.9s
CAM01 **Campos-RJ** **52.99 119** *eP* **P** **11 23 07.4 +2.1**
CMC01 **Camacan, BA** **53.15 110** *eP* **P** **11 23 06.7 +0.1**
B08A **Colville Reser** **53.17 336** IAmb IAmb 11 23 11.9
comp=Z,28nm,1.4s
GUA01 **Guaratinga, BA** **53.17 112** *eP* **P** **11 23 09.3 +2.6**
RIB01 **Linhares ES** **53.35 115** *eP* **P** **11 23 09.0 +0.9**
D05A **Enumclaw** **53.37 334** IAmb IAmb 11 23 28.7
comp=Z,31nm,1.2s
NBPA **Parai_RN** **53.94 98** *eP* **P** **11 23 13.6 +1.1**
GNW **Green Mountain** **54.03 334** IAmb IAmb 11 23 17.9
comp=Z,16nm,1.2s
FFC **Flin Flon** **54.25 352** P **P** **11 23 14.8 +0.8**
FFC IAmb IAmb 11 23 22.5
comp=Z,13nm,1.1s
FFC **Flin Flon** **54.25 352** P **P** **11 23 14.8 +0.8**
FFC pmax pmax
comp=Z,13nm,1.1s
NLWA **Neilton Lookou** **54.37 333** IAMs_20 IAMs_20 11 45 37.0
comp=Z,1µm,18.0s
B04A **Port Angeles** **54.70 334** IAmb IAmb 11 23 26.5
comp=Z,28nm,1.3s
RCBR **Riachuelo** **55.14 98** LR LR 11 46 56.8
comp=Z,1µm,20.2s,baz=290,slow=36
DRLN **Deer Lake** **55.77 26** P **P** **11 23 23.9 -1.2**
LLLB **Lillooet** **55.97 337** IAmb IAmb 11 23 32.9
comp=Z,35nm,1.6s
SCHQ **Schefferville** **57.01 16** P **P** **11 23 32.9 -1.0**
comp=Z,6.2nm,0.9s,baz=202,slow=8.5,SNR=5.5
SCHQ LR LR 11 47 51.1
comp=Z,668nm,20.0s,baz=210,slow=36
comp=Z,6.2nm,0.9s
FCC **Fort Churchill** **57.57 358** IAmb IAmb 11 23 42.7
comp=Z,17nm,1.0s
USHA **Ushuaia** **58.68 165** LR LR 11 44 48.1
comp=Z,1µm,18.2s,baz=332,slow=32
BBB **Bella Bella** **59.74 334** LR LR 11 49 49.5
comp=Z,679nm,18.3s,baz=136,slow=36
PPT **Papete** **60.84 249** LR LR 11 43 36.4
comp=Z,2µm,19.8s,baz=69,slow=29
BLKN **Baker Lake** **63.20 357** **P** **11 24 15.4 -0.7**
BLKN IAmb IAmb 11 24 24.3
comp=Z,17nm,1.2s
V35K **Ketchikan** **63.43 335** P **P** **11 24 18.5 +0.7**
baz=133
YKA **Yellowknife Ar** **63.82 348** P **P** **11 24 17.6 -2.7**
comp=Z,4.0nm,0.8s,baz=150,slow=5.7,SNR=32
YKA LR LR 11 52 52.8
comp=Z,1µm,19.4s,baz=152,slow=37
comp=Z,4.0nm,0.8s
YKA **Yellowknife Ar** **63.82 348** P **P** **11 24 18.1 -2.2**
YKA **Yellowknife Ar** **63.82 348** P **P** **11 24 18.1 -2.2**
T35M **Bob Quinn** **64.03 337** P **P** **11 24 22.5 +0.7**
baz=135
CRAG **Craig** **64.16 335** P **P** **11 24 23.4 +0.8**
baz=132
KOTAN **Kotaneelee Air** **64.25 342** P **P** **11 24 24.1 +1.0**
baz=143
WRAK **Wrangell Islan** **64.47 336** IAMs_20 IAMs_20 11 51 00.9
comp=Z,1µm,20.0s
WRAK **Wrangell Islan** **64.47 336** P **P** **11 24 25.3 +0.6**
baz=133
U33K **Whale Pass** **64.59 335** P **P** **11 24 26.6 +1.2**
baz=132
FRB **Frobisher Bay** **64.61 11** LR LR 11 53 15.6
comp=Z,437nm,19.1s,baz=204,slow=37
DLBC **Dease Lake** **64.98 338** LR LR 11 52 59.3
comp=Z,2µm,18.8s,baz=118,slow=36
DLBC **Dease Lake** **64.98 338** P **P** **11 24 29.3 +1.3**
baz=136
S34M **Telegraph Cree** **65.02 338** P **P** **11 24 29.9 +1.7**
baz=135
WTLY **Watson Lake, Y** **65.77 340** P **P** **11 24 34.6 +1.5**
baz=138
R33M **Jennings River** **66.01 339** P **P** **11 24 36.1 +1.3**
baz=135
S32K **Killisnoo** **66.09 336** P **P** **11 24 36.4 +1.3**
baz=131

SIT	Sitka	66.13	335	P	P	11 24 36.5	+1.2	
	baz=130							
Q32M	Nakina River	66.18	338	P	P	11 24 37.0	+1.0	
	baz=134							
WRGLY	Wrigley	66.57	345	P	P	11 24 39.1	+1.1	
	baz=144							
R32K	Eaglecrest	66.59	337	P	P	11 24 40.0	+1.6	
	baz=131							
BESE	Bessie Mountai	66.93	337	IAMs_20	IAMs_20	11 51 28.7		
	comp=Z,1µm,21.0s							
S31K	Pelican	67.08	336	IAMs_20	IAMs_20	11 52 53.9		
	comp=Z,1µm,18.0s							
S31K	Pelican	67.08	336	P	P	11 24 41.9	+0.5	
	baz=129							
P32M	Atlin	67.16	338	P	P	11 24 43.0	+1.0	
	baz=132							
R31K	City Hall, Gus	67.17	336	P	P	11 24 43.1	+1.1	
	baz=130							
P33M	Teslin, Yukon	67.25	339	P	P	11 24 44.0	+1.4	
	baz=134							
SKAG	Skagway	67.69	337	P	P	11 24 46.8	+1.6	
	baz=131							
N32M	Quiet Lake	67.99	339	P	P	11 24 48.9	+1.6	
	baz=134							
WHY	Whitehorse	68.31	338	P	P	11 24 50.7	+1.4	
	baz=132							
ILON	Igloolik, Nuna	68.42	3	P	P	11 24 47.1	-2.5	
PMSA	Palmer Station	68.54	168	LR	LR	11 48 54.7		
	comp=Z,577nm,19.4s,baz=324,slow=31							
P30M	Million Dollar	68.75	337	P	P	11 24 53.2	+1.2	
	baz=129							
O30N	Mendenhall	68.83	338	P	P	11 24 53.7	+1.2	
	baz=130							
M31M	Drury Creek, Y	69.17	340	IAmb	IAmb	11 25 29.6		
	comp=Z,18nm,1.4s							
M31M	Drury Creek, Y	69.17	340	P	P	11 24 55.6	+1.1	
	baz=133							
N31M	Braeburn, Yuko	69.18	339	P	P	11 24 55.9	+1.3	
	baz=131							
HYT	Haines Junctio	69.40	338	P	P	11 24 57.3	+1.1	
	baz=129							
O29M	Mount Kennedy	69.49	337	IAMs_20	IAMs_20	11 54 23.5		
	comp=Z,1µm,20.0s							
O29M	Mount Kennedy	69.49	337	P	P	11 24 57.8	+1.1	
	baz=128							
N30M	Aishikik Lake	69.65	338	P	P	11 24 58.7	+1.1	
	baz=130							
BCPM	Bancas Point	69.70	336	IAMs_20	IAMs_20	11 55 56.1		
	comp=Z,838nm,18.0s							
YUK6	Outpost Mounta	69.80	337	P	P	11 24 59.5	+0.7	
	baz=128							
PINM	Pinnacle	70.04	336	P	P	11 25 00.6	+0.6	
	baz=126							
YUK4	Talbot Arm	70.16	338	P	P	11 25 01.1	+0.2	
	baz=128							
M30M	Minto, Yukon	70.26	339	IAmb	IAmb	11 25 09.6		
	comp=Z,28nm,1.6s							
M30M	Minto, Yukon	70.26	339	P	P	11 25 01.7	+0.5	
	baz=130							
O28M	Mount Upton	70.41	337	IAMs_20	IAMs_20	11 54 39.9		
	comp=Z,902nm,21.0s							
O28M	Mount Upton	70.41	337	P	P	11 25 02.9	+0.3	
	baz=126							
YUK8	Steele Glacier	70.55	337	P	P	11 25 04.0	+0.6	
	baz=127							
MAYO	Mayo, Yukon	70.61	340	P	P	11 25 04.3	+0.9	
	baz=131							
LOGN	Logan Glacier	70.77	336	IAMs_20	IAMs_20	11 57 04.2		
	comp=Z,909nm,18.0s							
M29M	Somme Creek	70.77	339	P	P	11 25 05.4	+0.9	
	baz=129							
MESA	MESA	70.78	336	IAMs_20	IAMs_20	11 52 56.6		
	comp=Z,1µm,22.0s							
MESA	MESA	70.78	336	P	P	11 25 05.0	+0.2	
	baz=124							
RAR	Rarotonga	70.95	247	LR	LR	11 47 46.8		
	comp=Z,1µm,20.7s,baz=79,slow=29							
CTGM	Chitina Glacie	70.98	336	IAMs_20	IAMs_20	11 56 37.9		
	comp=Z,888nm,18.0s							
CTG	Chitna Glacier	70.98	336	P	P	11 25 06.8	+0.9	
	baz=125							
L29M	L29M	71.07	339	P	P	11 25 07.6	+1.4	
	baz=129							
YUK3	Moose Creek	71.11	337	P	P	11 25 07.9	+1.2	
	baz=126							
BARN	Barnard Glacie	71.17	336	IAMs_20	IAMs_20	11 56 34.8		
	comp=Z,795nm,20.0s							
K29M	Barlow Dome	71.32	340	IAMs_20	IAMs_20	11 56 53.0		
	comp=Z,1µm,20.0s							
K29M	Barlow Dome	71.32	340	P	P	11 25 08.7	+0.8	
	baz=130							
J30M	Hart River	71.40	341	IAMs_20	IAMs_20	11 57 02.1		
	comp=Z,1µm,18.0s							
J30M	Hart River	71.40	341	P	P	11 25 09.2	+0.9	
	baz=131							
SFJD	Kangerlussuaq	71.45	15	LR	LR	11 58 07.5		
	comp=Z,322nm,18.7s,baz=222,slow=37							
TGL	Tana Glacier	71.47	336	IAMs_20	IAMs_20	11 57 21.7		
	comp=Z,894nm,18.0s							
CRQE	Cirque	71.57	336	P	P	11 25 10.5	+1.1	
	baz=124							
CRQM	Cirque	71.59	336	IAMs_20	IAMs_20	11 57 34.5		
	comp=Z,844nm,18.0s							
H31M	Peel River	71.61	343	P	P	11 25 10.6	+1.2	
	baz=134							
BERG	Berg Lake	71.63	335	IAMs_20	IAMs_20	11 57 15.1		
	comp=Z,690nm,19.0s							
BVCY	Beaver Creek	71.64	338	P	P	11 25 10.8	+1.1	
	baz=126							
KAIM	Kayak Island	71.68	335	P	P	11 25 11.0	+1.1	
	baz=122							
C36M	Paulatuk	71.70	348	IAmb	IAmb	11 25 17.4		
	comp=Z,14nm,1.2s							
C36M	Paulatuk	71.70	348	P	P	11 25 11.1	+1.3	
	baz=145							
I30M	Mount Dempster	71.85	342	IAMs_20	IAMs_20	11 57 43.8		
	comp=Z,1µm,19.0s							
I30M	Mount Dempster	71.85	342	P	P	11 25 11.5	+0.5	
	baz=131							
MCARA	McCarthy VSAT	71.89	336	IAmb	IAmb	11 25 23.4		
	comp=Z,21nm,1.3s							
MCARA				IAMs_20	IAMs_20	11 56 45.0		
	comp=Z,1µm,22.0s							
MCARA	McCarthy VSAT	71.89	336	P	P	11 25 12.2	+1.1	
	baz=124							
J29N	Klondike Camp	71.95	340	IAMs_20	IAMs_20	11 57 59.5		
	comp=Z,1µm,19.0s							
J29N	Klondike Camp	71.95	340	P	P	11 25 13.0	+1.5	
	baz=129							
POIN	Pond Inlet	71.95	4		P	11 25 09.6	-1.7	
POIN				IAmb	IAmb	11 25 15.5		
	comp=Z,13nm,1.0s							
VRDI	Verde Repeater	71.98	336	IAMs_20	IAMs_20	11 56 06.3		
	comp=Z,766nm,21.0s							
M27K	Edge Creek, AK	72.00	338	IAMs_20	IAMs_20	11 56 57.7		
	comp=Z,1µm,20.0s							
M27K	Edge Creek, AK	72.00	338	P	P	11 25 13.0	+1.1	
	baz=125							
DAWY	Dawson	72.11	340	IAmb	IAmb	11 25 17.4		
	comp=Z,16nm,1.2s							
DAWY	Dawson	72.11	340	P	P	11 25 13.7	+1.3	
	baz=128							
GLB	Gilahina Butte	72.24	336	IAMs_20	IAMs_20	11 57 20.2		
	comp=Z,773nm,21.0s							
Q23K	Middleton Isla	72.26	334	P	P	11 25 14.5	+1.1	
	baz=120							
BMRM	Bremner River	72.31	336	IAmb	IAmb	11 25 18.9		
	comp=Z,22nm,1.0s							
BMRM	Bremner River	72.31	336	P	P	11 25 14.9	+1.2	
	baz=122							
G31M	Satah River	72.36	343	P	P	11 25 14.2	+0.4	
	baz=134							
BCAR	Beaver Creek A	72.37	338	P	P	11 25 13.9	-0.2	
L27K	Beaver Creek,	72.38	338	P	P	11 25 15.1	+1.0	
	baz=125							
M26K	Nabesna, AK	72.45	337	P	P	11 25 15.2	+0.7	
	baz=124							
I29M	Ogilvie Camp,	72.56	341	IAmb	IAmb	11 25 20.6		
	comp=Z,19nm,1.2s							
I29M				IAMs_20	IAMs_20	11 58 54.6		
	comp=Z,1µm,18.0s							
I29M	Ogilvie Camp,	72.56	341	P	P	11 25 16.4	+1.3	
	baz=130							
EYAK	Cordova Ski Ar	72.57	335	IAMs_20	IAMs_20	11 57 57.9		
	comp=Z,979nm,20.0s							
EYAK	Cordova Ski Ar	72.57	335	P	P	11 25 16.2	+1.1	
	baz=121							
F31M	Tsiigehtchic	72.58	344	IAMs_20	IAMs_20	11 56 50.2		
	comp=Z,926nm,22.0s							
F31M	Tsiigehtchic	72.58	344	P	P	11 25 15.9	+0.8	
	baz=134,SNR=29							
N25K	Chitina, Valde	72.65	336	IAmb	IAmb	11 25 41.9		
	comp=Z,19nm,1.2s							
N25K				IAMs_20	IAMs_20	11 57 11.0		
	comp=Z,907nm,22.0s							
N25K	Chitina, Valde	72.65	336	P	P	11 25 16.5	+0.7	
	baz=122							
EPYK	Eagle Plains	72.71	342	P	P	11 25 16.8	+0.8	
	baz=131							
L26K	Log Cabin Wild	72.93	338	P	P	11 25 18.0	+0.6	
	baz=124							
G30M	tAoh Zraii Nji	72.97	343	P	P	11 25 18.3	+0.8	
	baz=132							
INK	Inuvik	73.13	345	LR	LR	11 58 24.6		
	comp=Z,1µm,18.6s,baz=145,slow=37							
INK	Inuvik	73.13	345	P	P	11 25 18.8	+0.5	
	baz=135,SNR=28							
KLU	Klutina	73.13	336	P	P	11 25 18.8	+0.1	
	baz=121							
I28M	Miner Creek	73.14	341	IAMs_20	IAMs_20	11 58 38.6		
	comp=Z,1µm,18.0s							
I28M	Miner Creek	73.14	341	P	P	11 25 19.1	+0.4	
	baz=128							
F30M	Barrier River	73.27	344	P	P	11 25 20.0	+0.7	
	baz=132,SNR=19							
GLI	Glacier Island	73.31	335	IAMs_20	IAMs_20	11 58 39.5		
	comp=Z,635nm,18.0s							
RES	Resolute Bay	73.55	359	LR	LR	12 00 09.3		
	comp=Z,998nm,19.2s,baz=182,slow=38							
RES	Resolute Bay	73.55	359	IAmb	IAmb	11 25 27.5		
	comp=Z,22nm,1.4s							
M24K	Tolsona, Glenn	73.55	336	P	P	11 25 21.0	-0.1	
	baz=121							
SCRK	Sand Creek	73.70	338	P	P	11 25 22.2	+0.2	
	baz=124							
PAX	Paxson	73.72	337	IAmb	IAmb	11 25 29.8		
	comp=Z,24nm,1.6s							
PAX				IAMs_20	IAMs_20	11 57 43.3		
	comp=Z,1µm,21.0s							
PAX	Paxson	73.72	337	P	P	11 25 22.4	+0.3	
	baz=122							
I27K	Kandik River	73.80	340	P	P	11 25 23.6	+1.1	
	baz=126							
SCM	Sheep Creek Mo	73.88	336	IAMs_20	IAMs_20	11 56 53.6		
	comp=Z,723nm,20.0s							
SCM	Sheep Creek Mo	73.88	336	P	P	11 25 23.7	+0.7	
	baz=120							
RIDG	Independent Ri	73.89	338	IAmb	IAmb	11 25 30.4		
	comp=Z,15nm,1.2s							
RIDG	Independent Ri	73.89	338	P	P	11 25 23.7	+0.7	
	baz=123							
SEW	Seward	73.97	334	P	P	11 25 24.5	+1.1	
	baz=117							
M23K	Glacier View	74.03	336	P	P	11 25 25.0	+1.2	
	baz=119							
SAATT	Saattut	74.06	13	*e*P	P	11 25 23.1	-0.7	
SAATT				IAmb	IAmb	11 25 28.8		
	comp=Z,40nm,1.0s							
A36M	Sachs Harbour	74.08	349	IAMs_20	IAMs_20	11 59 31.2		
	comp=Z,1µm,19.0s							
A36M	Sachs Harbour	74.08	349	P	P	11 25 25.3	+1.4	
	baz=144							
H27K	Steamboat Moun	74.14	341	IAMs_20	IAMs_20	11 57 50.9		
	comp=Z,973nm,22.0s							
H27K	Steamboat Moun	74.14	341	P	P	11 25 25.7	+1.3	
	baz=126							
KNK	Knik Glacier	74.15	335	IAMs_20	IAMs_20	11 59 20.8		
	comp=Z,678nm,18.0s							
KNK	Knik Glacier	74.15	335	P	P	11 25 25.6	+1.1	
	baz=119							
I26K	Coal Creek Min	74.15	340	P	P	11 25 25.7	+1.3	
	baz=125							
O22K	Cooper Landing	74.26	334	P	P	11 25 25.7	+0.5	
	baz=117							
K24K	Donnelly Dome	74.28	338	P	P	11 25 26.1	+0.8	
	baz=122							
SML	Sawmill	74.28	335	IAmb	IAmb	11 26 15.4		
	comp=Z,22nm,1.1s							
SML	Sawmill	74.28	335	P	P	11 25 26.1	+0.7	
	baz=119							
E29M	Blow River	74.38	344	P	P	11 25 25.9	+0.2	
	baz=131,SNR=7.3							
BRSE	Bradley Lake S	74.39	333	P	P	11 25 26.6	+0.6	
	baz=116							
WAT6	Susitna Watana	74.42	336	P	P	11 25 26.9	+0.6	
	baz=120							
KDAK	Kodiak Island	74.43	331	LR	LR	11 56 53.0		
	comp=Z,838nm,18.5s,baz=113,slow=35							
KDAK	Kodiak Island	74.43	331	P	P	11 25 25.7	-0.5	
	baz=114							
F28M	Old Crow	74.46	342	IAmb	IAmb	11 25 31.4		
	comp=Z,19nm,0.9s							
F28M	Old Crow	74.46	342	P	P	11 25 27.1	+0.9	
	baz=128,SNR=20							
PMR	Palmer	74.52	335	P	P	11 25 27.6	+1.0	
	baz=118							
DHY	Denali Highway	74.52	337	IAMs_20	IAMs_20	11 59 18.4		
	comp=Z,795nm,20.0s							
DHY	Denali Highway	74.52	337	P	P	11 25 27.5	+0.6	
	baz=120							
RC01	Rabbit Creek A	74.54	334	P	P	11 25 27.9	+1.1	
	baz=117							
J25K	Salcha River,	74.55	339	P	P	11 25 27.9	+1.0	
	baz=122							
OHAK	Old Harbor	74.56	330	P	P	11 25 27.9	+0.9	
	baz=113							
SII	Sitkinak Islan	74.76	329	P	P	11 25 28.5	+0.3	
	baz=112							
WAT1	Susitna Watana	74.87	336	P	P	11 25 29.6	+0.9	
	baz=119							
CAPN	Captain Cook N	75.02	334	P	P	11 25 30.2	+0.6	
	baz=116							
HDA	Harding Lake	75.03	338	IAmb	IAmb	11 25 34.3		
	comp=Z,26nm,1.3s							
HDA	Harding Lake	75.03	338	P	P	11 25 30.8	+1.2	
	baz=121							
PRP	Porcupine Dome	75.09	339	IAmb	IAmb	11 25 35.2		
	comp=Z,21nm,1.2s							
PRP				IAMs_20	IAMs_20	11 57 33.6		
	comp=Z,754nm,21.0s							
PRP	Porcupine Dome	75.09	339	P	P	11 25 30.5	+0.4	
	baz=122							
IL31		75.19	338	IAmb	IAmb	11 25 34.5		
	comp=Z,17nm,1.1s							
ILAR	Eielson Array	75.19	338	P	P	11 25 27.6	-2.9	
	comp=Z,1.5nm,0.7s,baz=130,slow=4.2,SNR=34							
ILAR				LR	LR	11 59 16.2		
	comp=Z,1µm,18.8s,baz=102,slow=36							
	comp=Z,1.5nm,0.7s							
ILAR	Eielson Array	75.19	338	P	P	11 25 29.6	-0.9	
ILAR	Eielson Array	75.19	338	P	P	11 25 29.6	-0.9	
D28M	Stokes Point	75.22	344	P	P	11 25 31.3	+0.8	
	baz=130,SNR=8.1							
RND	Reindeer	75.27	337	IAMs_20	IAMs_20	11 59 40.2		
	comp=Z,752nm,20.0s							
G26K	Porcupine Rive	75.29	341	IAMs_20	IAMs_20	11 58 36.9		
	comp=Z,1µm,21.0s							
G26K	Porcupine Rive	75.29	341	P	P	11 25 32.4	+1.3	
	baz=124							
E27K	Coleen River	75.33	343	P	P	11 25 31.9	+0.6	
	baz=127,SNR=32							
CUT	Chulitna	75.37	335	IAMs_20	IAMs_20	11 59 11.9		
	comp=Z,920nm,22.0s							
CUT	Chulitna	75.37	335	P	P	11 25 32.6	+1.0	
	baz=117							
MCK	McKinley	75.45	337	IAMs_20	IAMs_20	11 59 10.2		
	comp=Z,1µm,20.0s							
MCK	McKinley	75.45	337	P	P	11 25 32.6	+0.6	
	baz=119							
FYU	Fort Yukon	75.56	340	IAMs_20	IAMs_20	11 58 52.0		
	comp=Z,722nm,20.0s							
POKR	Poker Plat Res	75.57	339	P	P	11 25 33.8	+1.1	
	baz=120							
RED	Redoubt Volcan	75.59	333	IAmb	IAmb	11 25 37.3		
	comp=Z,26nm,1.1s							
COLA	College	75.60	338	*i* P	P	11 25 33.2	+0.4	
COLA				pmax	pmax			
	comp=Z,12nm,1.5s							
L22K	Petersville	75.63	335	IAMs_20	IAMs_20	11 59 07.9		
	comp=Z,1µm,22.0s							
N20K	Mount Spurr	75.67	334	P	P	11 25 33.9	+0.5	
	baz=115							
SPCR	Spurr Chakacha	75.67	334	P	P	11 25 33.9	+0.5	
	baz=115							
SKT	Skwentna	75.71	335	P	P	11 25 33.8	+0.2	
	baz=116							
D27M	Malcolm River	75.79	344	P	P	11 25 34.8	+0.8	
	baz=128							
BMAR	Burnt Mountain	75.82	341	P	P	11 25 32.8	-1.3	
F26K	Sheenjek River	75.83	342	IAMs_20	IAMs_20	12 00 36.6		
	comp=Z,885nm,19.0s							
F26K	Sheenjek River	75.83	342	P	P	11 25 34.6	+0.5	
	baz=124,SNR=29							
TRF	Thorofare Moun	75.86	336	IAMs_20	IAMs_20	11 59 40.8		
	comp=Z,921nm,19.0s							
TRF	Thorofare Moun	75.86	336	P	P	11 25 35.2	+0.7	
	baz=117							
NEA2	Nenana	75.92	338	IAmb	IAmb	11 25 40.1		
	comp=Z,20nm,1.2s							
NEA2	Nenana	75.92	338	P	P	11 25 35.7	+1.0	
	baz=119							
Q18K	Katmai Hardscr	75.95	331	P	P	11 25 35.8	+0.7	
	baz=112							
H24K	Noodor Dome	76.09	339	P	P	11 25 36.4	+0.7	
	baz=120							
KTH	Kantishna Hill	76.16	336	IAmb	IAmb	11 25 44.4		
	comp=Z,30nm,1.6s							
KTH				IAMs_20	IAMs_20	12 00 19.7		
	comp=Z,811nm,20.0s							
O19K	Port Alsworth	76.21	333	P	P	11 25 37.3	+0.9	
	baz=113							
Q17K	Contact Creek	76.24	330	P	P	11 25 37.2	+0.4	
	baz=111							
F25K	Christian Rive	76.25	341	IAMs_20	IAMs_20	11 59 08.7		
	comp=Z,1µm,20.0s							
F25K	Christian Rive	76.25	341	P	P	11 25 37.6	+1.0	
	baz=123,SNR=25							
R17L	Mt. Peulik Vol	76.25	330	P	P	11 25 36.6	-0.2	
	baz=110							
I23K	Minto, Yukon-K	76.30	338	IAmb	IAmb	11 25 41.3		
	comp=Z,16nm,1.1s							
I23K	Minto, Yukon-K	76.30	338	P	P	11 25 37.4	+0.7	
	baz=119							
P18K	Big Mountain,	76.33	332	IAMs_20	IAMs_20	11 58 14.4		
	comp=Z,720nm,19.0s							
P18K	Big Mountain,	76.33	332	P	P	11 25 38.1	+0.9	
	baz=112							
M20K	Styx River	76.36	334	P	P	11 25 37.7	+0.4	
	baz=114							
TULEG	Thule	76.36	5		P	11 25 40.7	+3.8	
TULEG				IAmb	IAmb	11 26 37.1		
	comp=Z,35nm,1.7s							
TULEG	Thule	76.36	5	*i* P	P	11 25 37.6	+0.6	
TULEG				IAmb	IAmb	11 25 42.2		
	comp=Z,16nm,1.1s							
PPLA	Purkeypile	76.38	336	IAMs_20	IAMs_20	11 59 28.7		
	comp=Z,882nm,21.0s							
PPLA	Purkeypile	76.38	336	P	P	11 25 38.0	+0.4	
	baz=116							
G24K	Hadweenzic Riv	76.39	340	P	P	11 25 38.0	+0.7	
	baz=121,SNR=18							
BPAW	Bear Paw Mtn.	76.43	337	IAmb	IAmb	11 25 53.8		
	comp=Z,35nm,1.7s							
BPAW				IAMs_20	IAMs_20	11 59 27.9		
	comp=Z,1µm,21.0s							
BPAW	Bear Paw Mtn.	76.43	337	P	P	11 25 37.9	+0.3	
	baz=117							
O18K	Koktuh Hills	76.50	332	IAMs_20	IAMs_20	11 58 18.7		
	comp=Z,1µm,20.0s							
E25K	Arctic Village	76.51	342	IAmb	IAmb	11 25 43.9		
	comp=Z,25nm,1.1s							
E25K				IAMs_20	IAMs_20	11 59 52.2		
	comp=Z,990nm,21.0s							
E25K	Arctic Village	76.51	342	P	P	11 25 38.7	+0.7	
	baz=123,SNR=28							
N19K	Bonanza Creek	76.53	333	IAmb	IAmb	11 25 43.8		
	comp=Z,28nm,1.4s							
N19K	Bonanza Creek	76.53	333	P	P	11 25 39.0	+0.6	
	baz=113							
MLY	Manley	76.76	338	IAmb	IAmb	11 25 47.3		
	comp=Z,26nm,1.6s							
MLY	Manley	76.76	338	P	P	11 25 40.4	+0.9	
	baz=117							
Q16K	King Salmon	76.76	331	P	P	11 25 40.3	+0.7	
	baz=110							
C27K	Jago River	76.80	343	P	P	11 25 40.5	+0.9	
	baz=125							
P17K	Kvichak River	76.84	331	P	P	11 25 40.8	+0.8	
	baz=111							
CHUM	Lake Minchumin	76.86	336	P	P	11 25 40.7	+0.7	
	baz=116							
N18K	Kilae Creek	77.12	333	P	P	11 25 41.9	+0.4	
	baz=112							
L19K	White Mountain	77.22	334	P	P	11 25 42.7	+0.5	
	baz=113							
G23K	Bananza Creek	77.28	339	P	P	11 25 42.9	+0.5	
	baz=118,SNR=8.1							
C26K	Camden Bay	77.31	343	P	P	11 25 42.5	+0.1	
	baz=124,SNR=36							
K20K	Telida	77.35	336	IAMs_20	IAMs_20	12 00 41.6		
	comp=Z,821nm,20.0s							
K20K	Telida	77.35	336	P	P	11 25 42.9	0.0	
	baz=114							
O17K	Koliganek Bris	77.36	332	P	P	11 25 43.0	+0.2	
	baz=110							
M18K	Stony River	77.39	334	P	P	11 25 43.1	+0.1	
	baz=112							
H22K	Ishtalitna Cre	77.39	338	IAMs_20	IAMs_20	12 00 25.2		
	comp=Z,1µm,19.0s							
H22K	Ishtalitna Cre	77.39	338	P	P	11 25 43.7	+0.7	
	baz=117							
D25K	Kavik River	77.41	343	IAMs_20	IAMs_20	12 00 59.3		
	comp=Z,708nm,19.0s							
D25K	Kavik River	77.41	343	P	P	11 25 43.0	-0.1	
	baz=122							
E24K	Your Creek	77.42	341	IAMs_20	IAMs_20	12 00 04.8		
	comp=Z,878nm,20.0s							
E24K	Your Creek	77.42	341	P	P	11 25 43.6	+0.4	
	baz=120							
P16K	Nushagak River	77.54	331	IAMs_20	IAMs_20	11 57 06.2		
	comp=Z,842nm,22.0s							
P16K	Nushagak River	77.54	331	P	P	11 25 44.1	+0.2	
	baz=109							
COLD	Coldfoot	77.58	340	IAMs_20	IAMs_20	12 01 21.6		
	comp=Z,773nm,19.0s							
COLD	Coldfoot	77.58	340	P	P	11 25 44.7	+0.6	
	baz=118,SNR=10.0							
N17K	Nushagak Hills	77.66	332	IAMs_20	IAMs_20	11 59 04.8		
	comp=Z,829nm,20.0s							
N17K	Nushagak Hills	77.66	332	P	P	11 25 44.8	+0.3	
	baz=110							
SDPT	Sand Point	77.70	327	P	P	11 25 44.6	-0.3	
	baz=106							
O16K	Kokwok River B	77.77	331	IAMs_20	IAMs_20	11 58 41.4		
	comp=Z,730nm,19.0s							
O16K	Kokwok River B	77.77	331	P	P	11 25 45.3	+0.1	
	baz=109							
E23K	Chandalar	77.79	341	IAMs_20	IAMs_20	12 01 14.8		
	comp=Z,1µm,19.0s							
E23K	Chandalar	77.79	341	P	P	11 25 45.9	+0.7	
	baz=119,SNR=31							
H21K	Melozitna Rive	77.81	338	P	P	11 25 46.4	+1.0	
	baz=116							
L18K	Granite Mounta	78.03	334	P	P	11 25 47.5	+0.9	
	baz=111							
TOLK	Toolik Lake Re	78.06	341	P	P	11 25 47.2	+0.5	
	baz=119,SNR=6.0							
D24K	Happy Valley	78.07

baz=108
J18K Innoko River 78.50 335 IAMs_20 IAMs_20 12 01 30.0
comp=Z,897nm,19.0s
J18K Innoko River 78.50 335 P **P** 11 25 50.1 +0.9
baz=111
H20K Anotleneega Mo 78.53 337 P **P** 11 25 50.0 +0.6
baz=114,SNR=14
E22K Anaktuvuk Pass 78.55 340 IAmb IAmb 11 25 54.7
comp=Z,19nm,1.1s
E22K IAMs_20 IAMs_20 12 01 47.0
comp=Z,741nm,19.0s
E22K Anaktuvuk Pass 78.55 340 P **P** 11 25 50.4 +0.9
baz=117,SNR=17
D23K Nanushuk River 78.56 341 P **P** 11 25 50.1 +0.7
baz=118
M16K Timber Creek 78.65 333 IAMs_20 IAMs_20 12 00 23.9
comp=Z,720nm,19.0s
M16K Timber Creek 78.65 333 P **P** 11 25 50.1 0.0
baz=109
L17K Donlin 78.71 334 P **P** 11 25 51.2 +0.9
baz=110
F21K Alatna River 78.73 339 P **P** 11 25 51.8 +1.3
baz=115,SNR=6.9
K17K Iditarod 78.91 334 P **P** 11 25 52.0 +0.5
baz=110
N15K Kwethluk River 78.91 332 IAMs_20 IAMs_20 11 59 35.8
comp=Z,933nm,20.0s
N15K Kwethluk River 78.91 332 P **P** 11 25 52.2 +0.6
baz=108
C23K Itkillik River 78.96 342 P **P** 11 25 52.4 +0.8
baz=118,SNR=23
GCSA Galena City Sc 79.03 336 P **P** 11 25 53.1 +1.1
baz=112
L16K Owhat River 79.10 333 IAmb IAmb 11 26 43.8
comp=Z,19nm,1.2s
L16K IAMs_20 IAMs_20 12 00 02.5
comp=Z,722nm,22.0s
L16K Owhat River 79.10 333 P **P** 11 25 53.2 +0.7
baz=108
D22K Ayikyak River 79.17 341 IAMs_20 IAMs_20 12 02 09.9
comp=Z,1µm,19.0s
D22K Ayikyak River 79.17 341 P **P** 11 25 53.5 +0.7
baz=116,SNR=9.6
O14K Tigyukauivet M 79.21 330 IAMs_20 IAMs_20 11 59 15.9
comp=Z,663nm,21.0s
O14K Tigyukauivet M 79.21 330 P **P** 11 25 53.1 0.0
baz=106
NEEM North Greenlan 79.22 8 *e*P **P** 11 25 51.4 -1.9
NEEM IAmb IAmb 11 25 58.6
comp=Z,32nm,1.0s
M15K Kasigluk River 79.35 332 P **P** 11 25 53.8 -0.1
baz=107
E21K Killik River 79.41 340 IAMs_20 IAMs_20 12 02 38.3
comp=Z,585nm,19.0s
F20K Avaraart Lake 79.46 339 P **P** 11 25 54.8 +0.5
baz=113
N14K Kuskokwak Cree 79.61 331 IAMs_20 IAMs_20 11 59 57.9
comp=Z,798nm,18.0s
N14K Kuskokwak Cree 79.61 331 P **P** 11 25 55.5 +0.2
baz=106
G19K Purcell Mounta 79.62 338 IAMs_20 IAMs_20 12 01 54.8
comp=Z,1µm,19.0s
G19K Purcell Mounta 79.62 338 P **P** 11 25 55.9 +0.6
baz=112,SNR=9.7
H18K Honhosa River 79.76 337 IAMs_20 IAMs_20 12 02 13.0
comp=Z,798nm,18.0s
H18K Honhosa River 79.76 337 P **P** 11 25 56.9 +0.8
baz=110,SNR=15
M14K Bethel 79.97 332 P **P** 11 25 57.7 +0.5
baz=106
C21K Knifeblade Rid 79.97 341 P **P** 11 25 57.8 +0.6
baz=114,SNR=14
L15K Ungalak Mounta 80.01 333 P **P** 11 25 58.0 +0.6
baz=107,SNR=19
B22K Teshekpuk Lake 80.04 342 P **P** 11 25 58.8 +1.4
baz=116,SNR=6.1
J16K Anvik River 80.09 334 IAMs_20 IAMs_20 12 02 45.0
comp=Z,759nm,19.0s
J16K Anvik River 80.09 334 P **P** 11 25 58.5 +0.6
baz=108
E20K Nigu River 80.09 340 P **P** 11 25 58.2 +0.4
baz=113
B21K Ikpikpuk River 80.11 341 IAMs_20 IAMs_20 12 01 52.7
comp=Z,900nm,22.0s
B21K Ikpikpuk River 80.11 341 P **P** 11 25 58.4 +0.5
baz=114
G18K Tagagawik 80.13 337 IAMs_20 IAMs_20 12 02 12.8
comp=Z,999nm,20.0s
G18K Tagagawik 80.13 337 P **P** 11 25 58.8 +0.7
baz=110
E19K Redstone River 80.15 339 IAMs_20 IAMs_20 12 02 14.0
comp=Z,913nm,18.0s
E19K Redstone River 80.15 339 P **P** 11 25 58.8 +0.6
baz=112,SNR=13
K15K Wolf Creek Mou 80.20 333 P **P** 11 25 59.2 +0.7
baz=107
I17K Unalakleet 80.31 335 IAMs_20 IAMs_20 12 02 36.5
comp=Z,856nm,20.0s
I17K Unalakleet 80.31 335 P **P** 11 26 00.1 +1.1
baz=108
H17K Granite Mounta 80.31 336 IAMs_20 IAMs_20 12 02 14.0
comp=Z,801nm,20.0s
H17K Granite Mounta 80.31 336 P **P** 11 26 00.2 +1.1
baz=109
BORG Borgarnes 80.31 24 LR LR 11 57 45.8
comp=Z,581nm,20.5s,baz=247,slow=33
D20K Etivluk River 80.41 340 IAMs_20 IAMs_20 12 03 10.6
comp=Z,990nm,18.0s
D20K Etivluk River 80.41 340 P **P** 11 26 00.4 +0.9
baz=112
L14K Kuka Creek 80.46 332 P **P** 11 26 00.3 +0.5
baz=106
M13K Dall Lake 80.54 331 P **P** 11 26 00.7 +0.4
baz=105
F18K Selawik 80.75 338 P **P** 11 26 02.2 +0.9
baz=109
UNV Unalaska Valle 80.76 324 P **P** 11 26 02.1 +0.5
baz=101
G17K Kiwalik Mounta 80.78 337 P **P** 11 26 02.6 +1.0
baz=108,SNR=5.9
A22K Sinclair Lake 80.79 343 P **P** 11 26 02.2 +0.7
baz=114
D19K Kuna River 80.84 340 P **P** 11 26 02.9 +1.1
baz=111,SNR=7.6
H16K Elim 81.17 336 P **P** 11 26 04.1 +0.4
baz=106,SNR=7.5
J14K Nanvaranak Lak 81.23 334 IAMs_20 IAMs_20 12 02 10.2
comp=Z,667nm,20.0s
J14K Nanvaranak Lak 81.23 334 P **P** 11 26 04.5 +0.6
baz=105,SNR=6.1
F17K Baldwin Pennin 81.31 337 IAMs_20 IAMs_20 12 02 58.7
comp=Z,954nm,19.0s
F17K Baldwin Pennin 81.31 337 P **P** 11 26 04.9 +0.6
baz=108
E18K Tukpahlearik C 81.36 338 IAmb IAmb 11 26 09.9
comp=Z,22nm,1.1s
E18K Tukpahlearik C 81.36 338 P **P** 11 26 05.3 +0.7
baz=108
A21K Barrow 81.41 343 P **P** 11 26 05.5 +0.8
baz=113
G16K Koyuk River 81.43 336 IAMs_20 IAMs_20 12 02 45.7
comp=Z,636nm,21.0s
G16K Koyuk River 81.43 336 P **P** 11 26 05.9 +0.9
baz=106,SNR=7.1
K13K Kusilvak Mount 81.53 333 IAMs_20 IAMs_20 12 01 39.0
comp=Z,737nm,18.0s
K13K Kusilvak Mount 81.53 333 P **P** 11 26 06.0 +0.4
baz=104,SNR=6.1
C19K Lookout Ridge 81.55 340 P **P** 11 26 06.6 +0.9
baz=110
AFI Afiamalu 81.60 256 LR LR 11 55 08.1
comp=Z,1µm,18.1s,baz=92,slow=30
E17K Hotham Inlet 81.72 338 P **P** 11 26 06.7 +0.2
baz=107,SNR=25
M11K Mekoryuk 81.91 331 P **P** 11 26 08.0 +0.4
baz=102
C18K Utukok River 81.96 340 P **P** 11 26 08.4 +0.5
baz=108
SCO Scoresbysund 81.97 18 *i* P P 11 26 12.6 +4.9
SCO IAmb IAmb 11 26 14.1
comp=Z,17nm,1.1s
NIKH Nikolski High 82.00 323 P **P** 11 26 07.7 -0.5
baz=99
G15K Niukluk 82.01 336 P **P** 11 26 09.0 +1.0
baz=105
D17K Noatak River 82.36 338 P **P** 11 26 10.7 +0.8
baz=106,SNR=8.0
RDOG Red Dog Mine 82.39 339 IAMs_20 IAMs_20 12 03 47.5
comp=Z,863nm,19.0s
RDOG Red Dog Mine 82.39 339 P **P** 11 26 11.0 +0.9
baz=106
A19K Wainwright 82.40 341 P **P** 11 26 10.6 +0.6
baz=108
F15K North Star Dit 82.44 336 IAMs_20 IAMs_20 12 03 38.2
comp=Z,680nm,20.0s
F15K North Star Dit 82.44 336 P **P** 11 26 10.7 +0.4
baz=104,SNR=23
ANM Nome 82.46 335 IAmb IAmb 11 26 19.0
comp=Z,22nm,1.4s
ANM IAMs_20 IAMs_20 12 04 08.4
comp=Z,651nm,20.0s
ANM Nome 82.46 335 P **P** 11 26 11.0 +0.6
baz=104,SNR=5.9
C17K DeLong Mountai 82.61 339 P **P** 11 26 11.5 +0.3
baz=106
MORF Marmelete 83.00 53 *e*P **P** 11 26 13.8 -0.1
F14K Arctic Creek 83.06 336 P **P** 11 26 14.0 +0.5
baz=103
PCAS Casmilo, Conde 83.32 50 *e*P **P** 11 26 15.2 -0.2
PCAS *i* IAmb IAmb 11 26 34.1
comp=Z,54nm,2.0s
C16K Lisburne Hills 83.33 339 P **P** 11 26 15.7 +0.8
baz=104
MESJ Messejana 83.38 52 *e*P **P** 11 26 18.4 +2.5
SPIA Saint Paul Isl 83.42 327 P **P** 11 26 15.9 +0.4
baz=98
PMTG Montargil 83.46 51 *e*P **P** 11 26 18.4 +2.2
PARRA Arraiolos 83.59 51 *e*P **P** 11 26 19.0 +2.1
PARRA *i* IAmb IAmb 11 26 22.9
comp=Z,24nm,1.2s
EVO Evora 83.59 52 *e*P **P** 11 26 18.7 +1.8
EVO *i* IAmb IAmb 11 26 22.2
comp=Z,24nm,1.4s
PGAV Gavieira, Arco 83.63 48 *e*P **P** 11 26 18.3 +1.2
PGAV *i* IAmb IAmb 11 26 47.1
comp=Z,54nm,2.1s
PGAV *e*LR LR 11 57 07.7
PGAV *i* IAMs_20 IAMs_20 11 58 48.7
comp=Z,586nm,20.0s
TNA Tin City 83.73 336 IAmb IAmb 11 26 22.7
comp=Z,22nm,1.3s
TNA IAMs_20 IAMs_20 12 04 38.9
comp=Z,658nm,18.0s
TNA Tin City 83.73 336 P **P** 11 26 17.6 +0.6
baz=101,SNR=7.6
DBG Daneborg 83.73 15 *e*P **P** 11 26 18.4 +1.6
DBG IAmb IAmb 11 26 22.8
comp=Z,12nm,1.1s
PVIS Viseu 83.83 49 *e*P **P** 11 26 18.5 +0.4
POLO Lamas de Olo 83.95 49 *e*P **P** 11 26 20.2 +1.5
POLO *i* IAmb IAmb 11 26 33.7
comp=Z,21nm,1.6s
MTE Manteigas 84.07 50 P **P** 11 26 23.6 +4.2
MTE Manteigas 84.07 50 *e*P **P** 11 26 21.5 +2.1
MTE *i* IAmb IAmb 11 27 23.3
comp=Z,37nm,1.7s
MTE *e*LR LR 11 53 22.4
MTE *i* IAMs_20 IAMs_20 11 55 55.0
comp=Z,424nm,22.0s
PCBR Castelo Branco 84.09 50 *e*P **P** 11 26 20.9 +1.6
PCBR *i* IAmb IAmb 11 26 25.1
comp=Z,38nm,1.4s
PMRV Marv??o 84.13 51 *e*P **P** 11 26 23.3 +3.6
PMRV *i* IAmb IAmb 11 26 37.5
comp=Z,34nm,1.8s
PMRV *e*LR LR 11 53 38.2
PMRV *i* IAMs_20 IAMs_20 11 57 05.0
comp=Z,717nm,22.0s
BELA Belgrano 2 84.29 170 **P** 11 26 20.4 +0.7
BELA IAmb IAmb 11 26 28.8
comp=Z,19nm,1.2s
PBAR Barrancos 84.33 52 *e*P **P** 11 26 22.3 +1.6
PBAR *i* IAmb IAmb 11 26 49.8
comp=Z,30nm,1.9s
MVO Moncorvo 84.51 49 *e*P **P** 11 26 21.8 +0.2
MVO *i* IAmb IAmb 11 26 26.3
comp=Z,37nm,1.1s
PBRG Braganca 84.76 48 *e*P **P** 11 26 24.6 +1.7
DAG Danmarks Havn 84.87 13 *e*P **P** 11 26 22.8 +0.2
DAG IAmb IAmb 11 26 27.6
comp=Z,35nm,1.0s
GAMB Gambell 85.04 334 IAMs_20 IAMs_20 12 05 04.6
comp=Z,708nm,21.0s
GAMB Gambell 85.04 334 P **P** 11 26 24.1 +0.5
baz=98,SNR=8.2
DBIC Dimbokro 85.74 83 P **P** 11 26 26.5 -1.8
comp=Z,5.9nm,0.9s,baz=225,slow=3.1,SNR=5.4
DBIC LR LR 12 01 50.5
comp=Z,621nm,19.4s,baz=280,slow=34
comp=Z,5.9nm,0.9s
DBIC Dimbokro 85.74 83 P **P** 11 26 27.3 -0.9
DBIC Dimbokro 85.74 83 P **P** 11 26 27.3 -0.9
DBIC pmax pmax
comp=Z,29nm,1.4s
MDT Midelt 86.12 57 LR LR 11 58 15.8
comp=Z,382nm,21.7s,baz=294,slow=31
PAB San Pablo 86.49 51 **P** 11 26 36.0 +4.5
PAB San Pablo 86.49 51 P **P** 11 26 36.0 +4.5
PAB pmax pmax
comp=Z,35nm,1.6s
ESDC Sonseca Array 86.79 51 P **P** 11 26 31.9 -1.0
comp=Z,4.3nm,0.8s,baz=284,slow=4.1,SNR=13
ESDC LR LR 11 58 32.0
comp=Z,606nm,21.8s,baz=270,slow=31
comp=Z,4.3nm,0.8s
ESDC Sonseca Array 86.79 51 **P** 11 26 31.7 -1.2
ESDC IAmb IAmb 11 26 38.1
comp=Z,11nm,1.0s
ESBB Sonseca Array 86.79 51 **P** 11 26 32.3 -0.6
EKA Eskdalemuir Ar 87.70 35 P **P** 11 26 35.5 -1.4
comp=Z,5.0nm,0.9s,baz=258,slow=4.0,SNR=6.0
EKA LR LR 12 00 15.8
comp=Z,542nm,20.4s,baz=234,slow=32
comp=Z,5.0nm,0.9s
RAO Raoul Island 88.10 241 LR LR 11 56 17.1
comp=Z,837nm,21.8s,baz=106,slow=29
VNA3 Neumayer Olymp 88.14 161 ⇓P **P** 11 26 39.9 +1.2
comp=Z,15nm,0.9s
VNA1 Neumayer--Stat 88.51 161 ⇓P **P** 11 26 44.8 +4.4
comp=Z,18nm,0.9s
VNA2 Neumayer--Watz 88.83 161 ⇓P **P** 11 26 44.9 +2.9
comp=Z,6.4nm,0.8s,baz=301,slow=7.4
SNAA Sanae 90.35 162 ⇓P **P** 11 26 52.9 +3.7
comp=Z,150nm,0.8s
SNAA Sanae 90.35 162 P **P** 11 26 50.1 +0.9
comp=Z,8.4nm,1.0s,baz=256,slow=4.9,SNR=6.0
SNAA LR LR 12 01 20.2
comp=Z,524nm,21.0s,baz=278,slow=32
comp=Z,8.4nm,1.0s
SNAA Sanae 90.35 162 P **P** 11 26 49.3 +0.1
SNAA Sanae 90.35 162 *ce*P **P** 11 26 51.4 +2.2
SNAA pmax pmax
comp=Z,23nm,1.3s
QSPA South Pole Qui 91.13 180 P **P** 11 26 54.0 +1.1
comp=Z,5.2nm,1.2s,baz=158,slow=4.0,SNR=6.2
QSPA LR LR 12 02 39.2
comp=Z,597nm,18.1s,baz=138,slow=32
comp=Z,5.2nm,1.2s
QSPA South Pole Qui 91.13 180 P **P** 11 26 52.6 -0.4
MSVF Nonsavu 91.52 252 LR LR 11 58 43.5
comp=Z,344nm,20.1s,baz=77,slow=30
TROLL Troll, Antarti 92.03 162 P **P** 11 26 56.4 -0.7
TORD Torodi Ar. Bea 92.08 77 LR LR 12 04 58.5
comp=Z,810nm,21.7s,baz=272,slow=33
SHEM Shemya Is, Ala 92.30 323 LR LR 11 59 24.3
comp=Z,267nm,21.7s,baz=111,slow=30
URZ Urewera 92.39 232 LR LR 11 59 40.9
comp=Z,836nm,20.7s,baz=92,slow=30
SPITS Spitsbergen Ar 92.41 11 LR LR 12 07 37.0
comp=Z,452nm,21.0s,baz=280,slow=35
BGES Gesves 92.86 40 *d*P **P** 11 27 02.5 +1.4
comp=Z,12nm,1.0s
BILL Bilibino 93.86 338 **P** 11 27 05.8 +0.4
BILL IAmb IAmb 11 27 10.4
comp=Z,9.8nm,1.1s
BILL IAMs_20 IAMs_20 12 12 23.6
comp=Z,579nm,18.0s
BILL Bilibino 93.86 338 *ce*P **P** 11 27 08.2 +2.8
BILL pmax pmax
comp=Z,10.0nm,1.1s
VNDA Vanda 94.80 192 LR LR 11 59 31.7
comp=Z,191nm,21.4s,baz=110,slow=29
NOA NORSAR Array B 94.81 29 LR LR 12 06 38.1
comp=Z,358nm,20.1s,baz=270,slow=34
NVL N'lazarevskaya 95.15 161 *e*P **P** 11 27 10.3 -0.9
NVL *e* 11 31 00.0
NVL *e*S **SKSac** 11 37 45.9 -0.9
NVL *e*SS **SS** 11 44 53.4 +1.6
NVL *e*SSS SSS 11 48 36.2
NVL pmax pmax
comp=Z,20nm,1.6s
NVL MLR MLR
comp=Z,671nm,19.0s
TAM Tamanrasset 95.32 67 IAMs_20 IAMs_20 12 05 18.4
comp=Z,493nm,20.0s
HFS Hagfors 96.20 29 LR LR 12 09 53.4
comp=Z,303nm,18.0s,baz=277,slow=35
DAVOX Davos/Dischmat 96.45 43 LR LR 12 10 21.7
comp=Z,387nm,18.0s,baz=284,slow=35
RPZ Rata Peaks 96.72 226 LR LR 12 00 59.1
comp=Z,997nm,21.9s,baz=72,slow=29
KEST Kesra 97.52 54 LR LR 12 07 29.0
comp=Z,206nm,19.2s,baz=268,slow=33
CLL Collm 97.69 38 *e*PS PS 11 40 12.0 -0.7
CLL *e*SS SS 11 45 23.0 -5.6
CLL L L 12 08 00.0
comp=Z,500nm,20.4s
ARCES ARCESS Array B 97.90 19 LR LR 12 09 41.5
comp=Z,186nm,18.1s,baz=290,slow=34
ELIB Princess Elisa 98.34 163 *d*P **P** 11 27 24.8 -1.0
comp=Z,3.1nm,1.1s
KHC Kasperske Hory 98.49 40 *i* P Pdif 11 27 28.9 +2.0
KHC pmax pmax
comp=Z,2.0nm,1.0s
GERES GERESS Array B 98.63 40 LR LR 12 07 02.4
comp=Z,808nm,19.8s,baz=272,slow=32
H11N3 WAKE ISLAND Hyl 01.29 290 T T 13 20 37.6
baz=87,slow=74,SNR=58
H11N2 WAKE ISLAND Hyl 01.30 290 T T 13 20 36.5
baz=87,slow=74,SNR=48
H11N1 WAKE ISLAND Hyl 01.31 290 T T 13 20 33.4
baz=87,SNR=77
H11S2 WAKE ISLAND Hyl 01.59 289 T T 13 20 50.3
baz=86,slow=75,SNR=724
H11S1 WAKE ISLAND Hyl 01.60 289 T T 13 20 47.2
baz=86,slow=75,SNR=530
H11S3 WAKE ISLAND Hyl 01.61 289 T T 13 20 48.0
baz=86,slow=75,SNR=813
CEL Celeste 102.30 51 IAMs_20 IAMs_20 12 04 16.6
comp=Z,498nm,19.0s
TIP Timpagrande 102.78 49 IAMs_20 IAMs_20 12 09 48.1
comp=Z,585nm,21.0s
MNK Minsk 105.28 32 *i* P **Pdif** 11 27 58.8 +1.8
comp=E,22nm,0.9s
MNK *i* P **Pdif** 11 27 58.8 +1.8
comp=N,9.0nm,0.6s
MNK *i* P **Pdif** 11 27 58.8 +1.8
comp=Z,9.0nm,0.7s,baz=294
MNK *i* PP **PP** 11 32 19.9 +2.1
MNK *i* PPP PPP 11 34 33.0
MNK *i* S **Sdif** 11 39 53.7 +1.4
MNK *i* SS **SS** 11 47 17.2 +3.6
MNK *i* SSS SSS 11 51 12.2
MNK *i* LQ LQ 12 07 14.1
MNK *i* LR LR 12 14 10.5
MNK *i* LRM MLR 12 14 49.1
comp=E,200nm,17.2s
MNK *i* LRM MLR 12 15 41.7
comp=N,234nm,18.8s
MNK *i* LRM MLR 12 15 58.8
comp=Z,270nm,18.3s
MNK Minsk 105.28 32 *i* P **Pdif** 11 27 58.7 +1.8
MNK *i* 11 32 19.9
MNK *i* PPP PPP 11 34 32.9
MNK *i* S **Sdif** 11 39 53.6 +1.4
MNK *i* SS **SS** 11 47 17.1 +3.6
MNK *i* SSS SSS 11 51 12.2
MNK pmax pmax
comp=Z,9.0nm,0.7s
MNK pmax pmax
comp=N,9.0nm,0.6s
MNK pmax pmax
comp=E,22nm,0.9s
MNK MLR MLR
comp=E,200nm,17.0s
MNK MLR MLR
comp=N,234nm,19.0s
MNK MLR MLR
comp=Z,270nm,18.0s
TIRR Tirgusor 109.58 42 IAMs_20 IAMs_20 12 10 52.3
comp=Z,733nm,22.0s
YAK Yakutsk 110.02 341 IAMs_20 IAMs_20 12 21 56.2
comp=Z,482nm,20.0s
KIRV Kirov 112.69 21 *i* PKIKP **PKiKP** 11 32 24.7 0.0
YSS Yuzhno-Sakhali 113.21 323 IAMs_20 IAMs_20 12 24 26.0
comp=Z,315nm,18.0s
KIV Kislovodsk 118.87 37 *i* PKIKP **PKiKP** 11 32 38.3 +1.0
KIV pmax pmax
comp=Z,5.0nm,1.0s
KIV MLR MLR
comp=Z,309nm,22.0s
SHA1 Shidzhatmaz 118.98 37 *c i* PKIKP **PKPdf** 11 32 36.4 -1.2
BNX BinXian 122.51 329 ⇓PKP **PKPdf** 11 32 41.7 -2.3
HIA Hailar 123.39 337 IAMs_20 IAMs_20 12 29 49.8
comp=Z,342nm,19.0s
BVAR Borovoye Array 123.80 14 PKP **PKPdf** 11 32 45.5 -0.8
comp=Z,0.6nm,0.4s,baz=351,slow=3.8,SNR=4.6
AB31 Akbulak array 123.82 23 **PKiKP** 11 32 50.4 +3.7
CN2 Changchun 124.86 329 *e*PKP **PKPdf** 11 32 44.8 -3.8
ZAA0 Zalesovo Array 125.02 3 **PKiKP** 11 32 51.7 +2.7
ZALV Zalesovo Beam 125.02 3 PKP **PKPdf** 11 32 47.0 -1.6
comp=Z,2.2nm,0.7s,baz=282,slow=2.2,SNR=7.5
LODK Lodwar 125.90 85 **PKiKP** 11 32 56.0 +4.1
LODK IAMs_20 IAMs_20 12 25 12.1
comp=Z,571nm,22.0s
KURK Kurchatov 127.59 9 IAMs_20 IAMs_20 12 32 56.1
comp=Z,477nm,22.0s
KURK Kurchatov 127.59 9 *c i* PKIKP **PKiKP** 11 32 55.0 +0.9
KURK pmax pmax
comp=Z,6.0nm,1.0s
KSRS Korea Array 127.60 321 PKP **PKPdf** 11 32 53.6 -0.4
comp=Z,2.2nm,0.9s,baz=259,slow=1.3,SNR=5.4
KURBB Kurchatov Arra 127.66 9 PKP **PKPdf** 11 32 51.7 -2.1
comp=Z,3.2nm,1.0s,baz=342,slow=2.1,SNR=12
KNGR Kungurtug, Tuv 128.02 353 *i* PKIKP **PKPdf** 11 32 55.2 +0.6
FURI Furi 128.60 78 IAMs_20 IAMs_20 12 27 05.1
comp=Z,464nm,20.0s
ULN Ulaanbaatar 128.84 345 *c i* PKIKP **PKiKP** 11 32 59.0 +2.0
ULN pmax pmax
comp=Z,5.0nm,1.7s
DGZ Jazzator, Alta 129.38 2 *i* PKIKP **PKiKP** 11 32 58.8 +0.8
ASAR Alice Springs 131.32 239 PKP **PKPdf** 11 33 00.6 -1.0
comp=Z,1.7nm,0.9s,baz=113,slow=2.1,SNR=9.6
MAKZ Makanchi 131.87 7 **PKiKP** 11 33 04.6 +1.7
MAKZ IAMs_20 IAMs_20 12 31 59.2
comp=Z,399nm,20.0s
MAKZ Makanchi 131.87 7 PKIKP **PKiKP** 11 33 04.6 +1.7
MAKZ MLR MLR
comp=Z,400nm,20.0s
MK31 Makanchi Array 131.91 6 *c i* PKIKP **PKiKP** 11 33 05.1 +2.1
MKAR Makanchi Array 131.91 6 PKP **PKPdf** 11 33 02.6 +0.6
comp=Z,1.8nm,1.1s,baz=325,slow=2.3,SNR=8.7
MKAR Makanchi Array 131.91 6 **PKiKP** 11 33 04.0 +0.9
MKAR Makanchi Array 131.91 6 PKIKP **PKiKP** 11 33 04.0 +0.9
WRA Warramunga Arr 132.15 244 PKP **PKPdf** 11 33 01.5 -1.7
comp=Z,1.2nm,0.7s,baz=104,slow=2.0,SNR=17
WRA Warramunga Arr 132.15 244 **PKPdf** 11 33 03.0 -0.2
WRA Warramunga Arr 132.15 244 PKIKP **PKPdf** 11 33 03.0 -0.2
BJT Baijiatuao 132.28 332 IAMs_20 IAMs_20 12 39 34.3
comp=Z,453nm,19.0s
HHC Hu-ho-hao-te 133.60 337 *e*PKP **PKPdf** 11 33 01.8 -3.7
HNS HongShan 135.06 331 ⇑PKP **PKiKP** 11 33 13.4 +3.8
HNS L L
comp=Z,320nm,19.0s
HNS L L
comp=Z,190nm,17.3s
HNS L L
comp=Z,500nm,17.5s
WMQ Urumqi 135.26 2 PKP **PKPdf** 11 33 08.3 -0.2
WMQ PP PP 11 35 52.7 +10
WMQ L L
comp=Z,380nm,24.1s
CHGR Chuyangaron 136.31 23 *i* PKIKP **PKiKP** 11 33 12.1 -0.2
NJ2 Nanjing 136.77 322 *e*PKP **PKPdf** 11 33 09.2 -2.3
FAKI Fak Fak 137.04 267 IAMs_20 IAMs_20 12 26 26.0
comp=Z,399nm,19.0s
LZH Lanzhou 140.61 341 *e*PKP **PKPdf** 11 33 12.9 -5.7
LZH L L
comp=Z,410nm,18.2s
LZH L L
comp=Z,300nm,18.2s

LZH				L	L		
	comp=Z,640nm,23.0s						
TNTI	**Ternate**	**141.89**	**273**	IAMs_20	IAMs_20	12 22 43.2	
	comp=Z,315nm,22.0s						
PSA00	**Pilbara Seismi**	**143.94**	**233**		**PKPdf**	**11 33 25.4**	**+0.7**
CD2	**Chengdu**	**145.33**	**338**	PKPbc	**PKPbc**	**11 33 25.0**	**-1.7**
MMRI	**Maumere**	**146.36**	**256**	PKPdf	**PKPdf**	**11 33 27.6**	**-1.5**
TOLI2	**Tolitoli**	**148.45**	**274**	IAMs_20	IAMs_20	12 27 15.9	
	comp=Z,259nm,22.0s						
KAPI	**Kappang**	**149.35**	**262**		**PKPab**	**11 33 42.8**	**-0.3**
KAPI	**Kappang**	**149.35**	**262**	PKP2	**PKPab**	**11 33 42.8**	**-0.3**
PZH	**PanZhiHua**	**150.05**	**337**	PKPbc	**PKPdf**	**11 33 32.4**	**-2.6**
MYLDM	**Lahad Datu**	**150.18**	**282**		**PKiKP**	**11 33 43.1**	**+1.8**
KMI2	**Kunming**	**150.84**	**334**	PKPbc	**PKiKP**	**11 33 43.8**	**+1.1**
KMI2				LR	LR		
	comp=N,180nm,17.7s						
KMI2				LR	LR		
	comp=E,270nm,21.7s						
KMI2				LR	LR		
	comp=Z,270nm,19.5s						
EVN	**Everest**	**151.02**	**5**		**PKiKP**	**11 33 45.0**	**+1.6**
KKM	**Kota Kinabalu**	**152.21**	**285**	IAMs_20	IAMs_20	12 38 10.6	
	comp=Z,239nm,22.0s						
MORE	**Moreh**	**154.36**	**349**	IAMs_20	IAMs_20	12 57 38.6	
	comp=Z,393nm,22.0s						
CHTO	**Chiang Mai**	**158.06**	**335**		**PKPab**	**11 34 23.5**	**+4.0**
CHTO				IAMs_20	IAMs_20	12 57 24.9	
	comp=Z,318nm,22.0s						
CHTO	**Chiang Mai**	**158.06**	**335**	PKP2	**PKPab**	**11 34 23.5**	**+4.0**
CMAR	**Chiang Mai Arr**	**158.38**	**334**	PKP	**PKPdf**	**11 33 45.5**	**-1.2**
	comp=Z,0.5nm,0.4s,baz=52,slow=1.1,SNR=6.8						
CMAR				PKPab	**PKPab**	**11 34 20.8**	**-0.1**
	comp=Z,6.5nm,1.0s,baz=31,slow=4.0,SNR=17						
CMAR	**Chiang Mai Arr**	**158.38**	**334**		**PKPab**	**11 34 19.9**	**-0.9**
CMAR	**Chiang Mai Arr**	**158.38**	**334**	PKP2	**PKPab**	**11 34 19.9**	**-0.9**
HYB	**Hyderabad**	**158.77**	**29**	*e*PKPdf	**PKPdf**	**11 33 45.9**	**-1.3**

CATAC ***10*** *11:14:42.3±0.9, 14°N±5°×9°4W±°, h18km±9km, M4.2/8, mb4.7/1, MLv4.0/8, Error ellipse: s-maj=12.7km s-min=5.0km az=38.4, confirmed*
GCG ***10*** *11:14:44.2±1.6, 14°31N×93°76W, h36km±999km, MD4.2, ML3.9, Presumed earthquake*
MEX ***10*** *11:14:44.5±0.6, 14°33N×93°76W, h20km±64km, MD4.0*

ISC 10 11:14:35.3±1.7, 14°35N±0°06×93°96W±0°03, h7km±11km, n28, σ1s91/44, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.53**	**28**	*e*P	**Pg**	**11 15 06.4**	**+1.8**
PCIG				*e*S	**Sg**	**11 15 23.9**	**-0.6**
THIG		**1.73**	**71**	*e*P	**Pg**	**11 15 08.7**	**+0.2**
THIG				*e*S	**Sn**	**11 15 26.4**	**-1.8**
PATR	**El Naranjo**	**1.84**	**65**	*e*P	**Pb**	**11 15 09.7**	**+0.3**
PATR				*e*S	**Sn**	**11 15 29.4**	**-1.7**
CARR	**Arriaga**	**1.89**	**1**	*e*P	**Pg**	**11 15 12.1**	**+0.5**
CARR				*e*S	**Sn**	**11 15 30.8**	**-1.2**
PAVE	**Pavencul**	**1.92**	**64**	*e*P	**Pb**	**11 15 11.1**	**+0.4**
PAVE				*e*S	**Sn**	**11 15 31.3**	**-1.9**
CHUJ	**Union Juarez**	**1.94**	**67**	*e*P	**Pb**	**11 15 11.6**	**+0.5**
CHUJ				*e*S	**Sn**	**11 15 31.6**	**-2.0**
RTAL	**Retalhuleu**	**2.20**	**85**	P	**Pb**	**11 15 16.2**	**+0.7**
RTAL				S	**Sb**	**11 15 41.9**	**-1.1**
STG2	**El Palmar, Qui**	**2.51**	**88**	IAML		11 15 52.9	
	comp=E,1μm,0.3s						
HUIG	**Huatulco**	**2.51**	**305**	*e*P	**Pb**	**11 15 21.8**	**+1.1**
HUIG				*e*S	**Sn**	**11 15 49.0**	**+1.7**
STG8	**El Palmar, Qui**	**2.53**	**87**	*i* P	**Pn**	**11 15 16.8**	**-0.2**
STG5	**El Palmar, Qui**	**2.53**	**88**	*i* P	**Pn**	**11 15 16.8**	**-0.1**
TGIG		**2.55**	**18**	*e*P	**Pb**	**11 15 22.5**	**+1.1**
TGIG				*e*S	**Sb**	**11 15 51.3**	**-1.7**
TGIG		**2.55**	**18**	*i* P	**Pb**	**11 15 22.5**	**+1.1**
TGIG				*i* S	**Sb**	**11 15 52.7**	**-0.3**
TGIG				IAML		11 15 55.1	
	comp=E,318nm,0.8s						
HUEH	**Huehuetenango**	**2.57**	**68**	P	**Pb**	**11 15 20.9**	**-0.9**
HUEH				S	**Sb**	**11 15 51.2**	**-2.5**
HUEH	**Huehuetenango**	**2.57**	**68**	IAML		11 15 59.2	
	comp=N,605nm,0.7s						
CCIG	**Comitan**	**2.61**	**42**	*e*P	**Pg**	**11 15 23.9**	**-1.4**
CCIG				*i* S	**Sn**	**11 15 46.9**	**-3.1**
CCIG	**Comitan**	**2.61**	**42**	P	**Pb**	**11 15 23.3**	**+0.8**
CCIG				S	**Sb**	**11 15 51.4**	**-3.4**
CCIG	**Comitan**	**2.61**	**42**	*i* P	**Pg**	**11 15 23.9**	**-1.4**
CMIG	**Matias Romero**	**2.87**	**342**	*e*P	**Pb**	**11 15 27.3**	**+0.5**
CMIG				*e*S	**Sn**	**11 15 56.5**	**+0.3**
PEIG	**Puerto Escondi**	**3.49**	**298**	*e*P	**Pb**	**11 15 36.1**	**-1.3**
PEIG				*e*S	**Sn**	**11 16 11.9**	**+0.3**
NEUV	**Arroyo Zacate**	**3.79**	**332**	*e*P	**Pb**	**11 15 40.2**	**-2.2**
NEUV				*e*S	**Sn**	**11 16 18.9**	**0.0**
NUBE	**Las Nubes**	**4.08**	**96**	P	**Pn**	**11 15 41.9**	**+3.6**
YOIG	**Yosondua**	**4.26**	**306**	*e*P	**Pb**	**11 15 50.2**	**-0.5**
TXIG	**Tlaxiaco**	**4.67**	**309**	*e*P	**Pb**	**11 15 55.3**	**-2.3**
TXIG				*e*S	**Sn**	**11 16 40.9**	**-0.1**
PETF	**Flores**	**4.70**	**57**	P	**Pn**	**11 15 50.5**	**+3.9**
PETF				S	**Sn**	**11 16 43.6**	**+2.2**
PETF	**Flores**	**4.70**	**57**	*i* P	**Pn**	**11 15 50.8**	**+4.2**
TOIG	**Toxpalan**	**4.77**	**322**	*e*P	**Pb**	**11 15 55.5**	**-3.9**
SCIG	**Sabancuy**	**5.31**	**30**	P	Pn	11 15 59.7	+4.7
SCIG				S	**Sn**	**11 16 58.5**	**+2.0**

HEL 10 11:45:06.1±0.3, 65°49N×20°02E, h0km, ML1.5, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BURU	**Burvik**	**1.08**	**147**	PN	Pn	11 45 28.3	-0.1
BURU				SN	Sn	11 45 43.3	-0.7
ERTU	**Ertsjaerv**	**1.39**	**39**	PG	Pg	11 45 31.0	-1.7
ERTU				SB	Sg	11 45 49.2	-1.5
OBF8	**Ulkokalla**	**1.87**	**127**	PG	Pb	11 45 41.4	+0.4
	baz=305						
OBF8				smax	smax	11 46 01.8	
	comp=Z,4.6nm,0.2s						
OBF8				SG	Sg	11 46 06.3	+0.2
TOF	**Tornio**	**1.87**	**70**	PG	Pn	11 45 39.5	+0.1
TOF				smax	smax	11 46 01.8	
	comp=Z,1.9nm,0.2s						
TOF				SG	Sn	11 46 03.0	-0.6
OBF0	**Syolatti, Pyha**	**2.05**	**117**	smax	smax	11 46 07.0	
	comp=Z,4.0nm,0.2s						
OBF0				SG	Sb	11 46 10.3	+0.2
OBF4	**Vikkela, Lumij**	**2.25**	**105**	PG	Pb	11 45 46.5	-1.1
OBF4				smax	smax	11 46 12.7	
	comp=Z,1.9nm,0.2s						
OBF4				SG	Sb	11 46 16.0	0.0
OUF	**Merijarvi**	**2.30**	**117**	PG	Pb	11 45 48.0	-0.5
OUF				smax	smax	11 46 14.2	
	comp=Z,1.8nm,0.2s						
OUF				SG	Sb	11 46 16.9	-0.5
KLF	**Kolari**	**2.37**	**40**	PB	Pn	11 45 46.8	+0.7
	baz=225						
KLF				smax	smax	11 46 16.1	
	comp=Z,1.5nm,0.2s						
KLF				SG	Sb	11 46 19.5	+0.2
OUL	**Oulu**	**2.50**	**97**	PG	Pb	11 45 51.4	-0.5
OUL				SG	Sb	11 46 24.0	+0.8
LANU	**Lannavaara**	**2.69**	**16**	PB	Pn	11 45 52.2	+1.7
LANU				SG	Sb	11 46 28.2	-0.3
RNF	**Rovaniemi**	**2.69**	**63**	SB	Sb	11 46 27.2	-1.4
RANF	**Ranua**	**2.84**	**76**	PG	Pb	11 45 56.1	-1.6
RANF				SB	Sb	11 46 30.8	-2.2
HEF	**Hetta**	**3.26**	**24**	SG	Sb	11 46 44.7	-0.3
MSF	**Maaselka**	**3.75**	**79**	PG	Pb	11 46 15.5	+2.3
MSF				SG	Sb	11 47 02.8	+3.7
OLKF	**Oulanka, Finla**	**3.94**	**74**	SG	Sg	11 47 08.7	-3.7
KU6	**Riekki**	**4.11**	**78**	SG	Sg	11 47 13.8	-4.2
VRF	**Varrio**	**4.44**	**55**	SG	Sb	11 47 22.7	+3.7

NOU ***10*** *12:13:07.0, 40°59S×173°40E, h163km, MLv4.1/21, Cook Strait, New Zealand*
WEL ***10*** *12:13:10.2±0.9, 41°S±3°×17°3E±°, h143km±6km, M3.9/61, MLv3.9/61, Error ellipse: s-maj=6.6km s-min=4.1km az=103.9, confirmed*

ISC 10 12:13:05.6±1.5, 40°61S±0°04×173°36E±0°04, h181km±8km, n149, σ1s25/166, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUWZ	**D'Urville Isla**	**0.47**	**114**	P	**Pn**	**12 13 31.7**	**+1.3**
DUWZ				S	**Sn**	**12 13 48.2**	**-1.3**
TSFS	**Takaka Scotts**	**0.47**	**240**	P	**Pn**	**12 13 31.4**	**+1.0**
TSFS				S	**Sn**	**12 13 48.1**	**-1.3**
TKNZ	**Takaka Hill**	**0.52**	**216**	P	**Pn**	**12 13 31.8**	**+1.2**
TKNZ				S	**Sn**	**12 13 48.3**	**-1.7**
KHLK	**Kaihoka Lakes**	**0.57**	**275**	P	**Pn**	**12 13 31.8**	**+1.0**
KHLK				S	**Sn**	**12 13 48.8**	**-1.3**
NNZ	**Nelson**	**0.61**	**179**	P	**Pn**	**12 13 32.3**	**+1.3**
NNZ				S	**Sn**	**12 13 49.3**	**-1.4**
QRZ	**Quartz Range**	**0.67**	**251**	P	**Pn**	**12 13 32.4**	**+1.1**
QRZ	**Quartz Range**	**0.67**	**251**	S	**Sn**	**12 13 49.6**	**-1.5**
QRZ	**Quartz Range**	**0.67**	**251**	P	Pn	**12 13 32.5**	**+1.3**
QRZ				S	**Sn**	**12 13 49.4**	**-1.7**
MRNZ	**Matariki Terra**	**0.91**	**210**	P	**Pn**	**12 13 34.1**	**+1.4**
MRNZ				S	**Sn**	**12 13 52.5**	**-1.4**
TCW	**Tory Channel**	**0.92**	**131**	P	**Pn**	**12 13 34.5**	**+1.7**
TCW				S	**Sn**	**12 13 52.4**	**-1.5**
TUWZ	**Tuamarina**	**0.93**	**152**	P	**Pn**	**12 13 35.3**	**+2.4**
TUWZ				S	**Sn**	**12 13 53.2**	**-0.8**
BSWZ	**Blackbirch Sta**	**1.17**	**161**	P	**Pn**	**12 13 36.5**	**+1.9**
BSWZ				S	**Sn**	**12 13 56.5**	**-0.8**
THZ	**Tophouse**	**1.20**	**197**	P	**Pn**	**12 13 36.7**	**+1.7**
THZ				S	**Sn**	**12 13 56.8**	**-1.1**
KIW	**Kapiti Island**	**1.20**	**103**	P	**Pn**	**12 13 36.3**	**+1.3**
SNZO	**South Karori**	**1.23**	**125**	P	**Pn**	**12 13 36.6**	**+1.4**
SNZO	**South Karori**	**1.23**	**125**	S	**Sn**	**12 13 56.5**	**-1.7**
NMEZ	**Namu Road**	**1.26**	**18**	P	**Pn**	**12 13 36.7**	**+1.3**
NMEZ				S	**Sn**	**12 13 58.0**	**-0.5**
WEL	**Wellington**	**1.26**	**123**	P	**Pn**	**12 13 37.0**	**+1.5**
CMWZ	**Cape Campbell**	**1.31**	**151**	P	**Pn**	**12 13 38.1**	**+2.3**
CAW	**Cannon Point**	**1.39**	**112**	P	**Pn**	**12 13 37.9**	**+1.4**
CAW				S	**Sn**	**12 13 59.3**	**-1.2**
OGWZ	**Otaki Gorge**	**1.39**	**99**	P	**Pn**	**12 13 38.1**	**+1.6**
BHW	**Baring Head**	**1.39**	**125**	P	**Pn**	**12 13 38.0**	**+1.5**
NBEZ	**Newall Road No**	**1.40**	**16**	P	**Pn**	**12 13 38.0**	**+1.3**
NBEZ				S	**Sn**	**12 14 00.4**	**-0.3**
LREZ	**Lake Rotokare**	**1.40**	**35**	P	**Pn**	**12 13 38.1**	**+1.4**
LREZ				S	**Sn**	**12 14 00.0**	**-0.7**
KHEZ	**Kahui Hut**	**1.41**	**21**	P	**Pn**	**12 13 38.0**	**+1.1**
KHEZ	**Kahui Hut**	**1.41**	**21**	S	**Sn**	**12 14 00.3**	**-0.8**
KHEZ	**Kahui Hut**	**1.41**	**21**	P	Pn	**12 13 38.1**	**+1.1**
KHEZ				S	**Sn**	**12 14 00.1**	**-1.0**
PREZ	**Palmer Road**	**1.41**	**26**	P	**Pn**	**12 13 37.9**	**+1.1**
PREZ				S	**Sn**	**12 13 59.9**	**-1.1**
WAZ	**Wanganui**	**1.51**	**56**	P	**Pn**	**12 13 39.5**	**+1.8**
OHWZ	**Ohakea**	**1.54**	**75**	P	**Pn**	**12 13 39.7**	**+1.7**
DREZ	**Durham Road**	**1.56**	**25**	P	**Pn**	**12 13 39.3**	**+1.1**
DSZ	**Denniston Nort**	**1.63**	**226**	P	**Pn**	**12 13 40.5**	**+1.6**
MSWZ	**Moikau Station**	**1.64**	**128**	P	**Pn**	**12 13 40.4**	**+1.5**
HOWZ	**Holdsworth Sta**	**1.66**	**101**	P	**Pn**	**12 13 40.6**	**+1.4**
MRZ	**Mangatainoka R**	**1.69**	**92**	P	**Pn**	**12 13 40.7**	**+1.3**
MTW	**Mount Morrison**	**1.71**	**109**	P	**Pn**	**12 13 41.2**	**+1.5**
PLWZ	**Palliser**	**1.72**	**124**	P	**Pn**	**12 13 41.2**	**+1.4**
PAWZ	**Paruwai Farm**	**1.74**	**117**	P	**Pn**	**12 13 41.4**	**+1.4**
KHZ	**Kahutara**	**1.81**	**176**	P	**Pn**	**12 13 42.3**	**+1.7**
KHZ	**Kahutara**	**1.81**	**176**	S	**Sn**	**12 14 06.9**	**-1.1**
KHZ	**Kahutara**	**1.81**	**176**	P	**Pn**	**12 13 42.4**	**+1.8**
VRZ	**Vera Road**	**1.83**	**36**	P	**Pn**	**12 13 41.7**	**+0.7**
POWZ	**Post Office Ro**	**1.85**	**84**	P	**Pn**	**12 13 42.4**	**+1.3**
TIWZ	**Tintock**	**1.93**	**96**	P	**Pn**	**12 13 43.4**	**+1.5**
TRWZ	**Traveller**	**1.93**	**115**	P	**Pn**	**12 13 43.5**	**+1.6**
TMWZ	**Te Maipa**	**1.98**	**105**	P	**Pn**	**12 13 44.0**	**+1.5**
PRWZ	**Pori Road**	**1.99**	**89**	P	**Pn**	**12 13 44.2**	**+1.7**
PKVZ	**Pokaka**	**2.02**	**50**	P	**Pn**	**12 13 44.1**	**+1.1**
MTVZ	**Mangateitei**	**2.03**	**54**	P	**Pn**	**12 13 44.4**	**+1.3**
TSZ	**Takapari Road**	**2.06**	**75**	P	**Pn**	**12 13 44.6**	**+1.2**
TRVZ	**Turoa**	**2.13**	**53**	P	**Pn**	**12 13 46.3**	**+1.9**
WNVZ	**Wwianoa**	**2.14**	**54**	P	**Pn**	**12 13 45.4**	**+0.9**
FWVZ	**Far West T-bar**	**2.16**	**52**	P	**Pn**	**12 13 45.8**	**+1.0**
DVHZ	**Dannevirke**	**2.16**	**83**	P	**Pn**	**12 13 45.6**	**+1.1**
WHVZ	**Whangaehu Hut**	**2.17**	**53**	P	**Pn**	**12 13 47.1**	**+2.3**
CPWZ	**Castlepoint**	**2.18**	**99**	P	**Pn**	**12 13 46.7**	**+2.1**
COVZ	**Chateau Observ**	**2.19**	**51**	P	**Pn**	**12 13 45.6**	**+0.7**
MOVZ	**Moawhango**	**2.19**	**58**	P	**Pn**	**12 13 45.5**	**+0.6**
BFZ	**Birch Farm**	**2.20**	**93**	P	**Pn**	**12 13 46.2**	**+1.4**
BFZ	**Birch Farm**	**2.20**	**93**	S	**Sn**	**12 14 13.7**	**-1.6**
BFZ	**Birch Farm**	**2.20**	**93**	P	**Pn**	**12 13 46.3**	**+1.4**
TUVZ	**Tukino**	**2.21**	**53**	P	**Pn**	**12 13 46.3**	**+1.1**
TWVZ	**Taurewa**	**2.22**	**47**	P	**Pn**	**12 13 46.0**	**+0.7**
NGZ	**Ngauruhoe**	**2.24**	**51**	P	**Pn**	**12 13 46.2**	**+0.7**
SNVZ	**South Ngauruho**	**2.26**	**52**	P	**Pn**	**12 13 46.6**	**+0.9**
WTVZ	**West Tongariro**	**2.27**	**50**	P	**Pn**	**12 13 46.6**	**+0.7**
PNHZ	**Pukenui**	**2.28**	**73**	P	**Pn**	**12 13 46.9**	**+1.0**
OTVZ	**Oturere**	**2.29**	**52**	P	**Pn**	**12 13 46.9**	**+0.9**
LTZ	**Lake Taylor**	**2.32**	**200**	P	**Pn**	**12 13 47.9**	**+1.7**
ETVZ	**Etuere Tongariro**	**2.33**	**52**	P	**Pn**	**12 13 47.4**	**+0.9**
NTVZ	**North Tongarir**	**2.33**	**50**	P	**Pn**	**12 13 47.4**	**+0.8**
TMVZ	**Te Maari**	**2.34**	**51**	P	**Pn**	**12 13 47.6**	**+1.0**
GVZ	**Greta Valley S**	**2.37**	**186**	P	**Pn**	**12 13 48.4**	**+1.6**
ANWZ	**Angora Road**	**2.38**	**87**	P	**Pn**	**12 13 48.5**	**+1.6**
HIZ	**Hauiti**	**2.39**	**29**	P	**Pn**	**12 13 47.6**	**+0.5**
HIZ	**Hauiti**	**2.39**	**29**	S	**Sn**	**12 14 17.9**	**-1.4**
HIZ	**Hauiti**	**2.39**	**29**	P	**Pn**	**12 13 47.8**	**+0.7**
WPHZ	**Waipukurau**	**2.42**	**78**	P	**Pn**	**12 13 48.8**	**+1.4**
KATZ	**Kakaramea**	**2.43**	**48**	P	**Pn**	**12 13 48.8**	**+1.1**
KRHZ	**Kereru**	**2.50**	**68**	P	**Pn**	**12 13 49.2**	**+0.9**
PRHZ	**Porangahau**	**2.52**	**83**	P	**Pn**	**12 13 50.1**	**+1.6**
RITZ	**Rihia Road**	**2.52**	**51**	P	**Pn**	**12 13 49.7**	**+1.1**
RATZ	**Rangitukua**	**2.55**	**48**	P	**Pn**	**12 13 50.2**	**+1.3**
INZ	**Inchbonnie**	**2.56**	**214**	P	**Pn**	**12 13 50.4**	**+1.5**
AMCZ	**Amberley**	**2.62**	**191**	P	**Pn**	**12 13 51.2**	**+1.6**
KWHZ	**Kaweka Forest**	**2.63**	**64**	P	**Pn**	**12 13 51.3**	**+1.4**
PXZ	**Pawanui**	**2.74**	**79**	P	**Pn**	**12 13 52.5**	**+1.4**
BKZ	**Black Stump Fm**	**2.81**	**60**	P	**Pn**	**12 13 52.4**	**+0.4**
BKZ	**Black Stump Fm**	**2.81**	**60**	S	**Sn**	**12 14 26.3**	**-1.8**
BKZ	**Black Stump Fm**	**2.81**	**60**	P	**Pn**	**12 13 52.4**	**+0.4**
KAHZ	**Kahuranaki**	**2.81**	**74**	P	**Pn**	**12 13 53.6**	**+1.6**
MCHZ	**McNeill Hill**	**2.81**	**67**	P	**Pn**	**12 13 53.2**	**+1.2**
TLZ	**Tolley Road**	**2.83**	**37**	P	**Pn**	**12 13 52.9**	**+0.6**
OXZ	**Oxford**	**2.89**	**200**	P	**Pn**	**12 13 53.8**	**+0.9**
CKHZ	**Cape Kidnapper**	**3.00**	**73**	P	**Pn**	**12 13 55.9**	**+1.6**
NMHZ	**Naumai**	**3.05**	**61**	P	**Pn**	**12 13 56.5**	**+1.5**
ARHZ	**Aropaoanui**	**3.10**	**65**	P	**Pn**	**12 13 56.8**	**+1.3**
OKCZ	**Okains Bay**	**3.12**	**184**	P	**Pn**	**12 13 56.5**	**+0.9**
MQZ	**McQueen's Vall**	**3.14**	**189**	P	**Pn**	**12 13 56.2**	**+0.4**
WVZ	**Waitaha Valley**	**3.15**	**218**	P	**Pn**	**12 13 57.2**	**+1.2**
MTHZ	**Maungataniwha**	**3.21**	**58**	P	**Pn**	**12 13 57.2**	**+0.3**
MHCZ	**Mount Hutt**	**3.21**	**204**	P	**Pn**	**12 13 57.6**	**+0.8**
RACZ	**Rakaia**	**3.25**	**196**	P	**Pn**	**12 13 58.3**	**+1.2**
AKCZ	**Akaroa Harbour**	**3.28**	**186**	P	**Pn**	**12 13 58.3**	**+0.7**
RAHZ	**Arahi**	**3.33**	**61**	P	**Pn**	**12 13 59.1**	**+0.8**
MUGZ	**Murupara**	**3.39**	**52**	P	**Pn**	**12 13 59.1**	**+0.1**
RTZ	**Ruatahuna**	**3.43**	**56**	P	**Pn**	**12 13 59.9**	**+0.2**
WACZ	**Wakanui South**	**3.52**	**198**	P	**Pn**	**12 14 01.8**	**+1.3**
GCSZ	**Gaunt Creek Bo**	**3.53**	**219**	P	**Pn**	**12 14 01.8**	**+1.2**
RPZ	**Rata Peaks**	**3.54**	**208**	P	**Pn**	**12 14 02.1**	**+1.2**
RPZ	**Rata Peaks**	**3.54**	**208**	P	**Pn**	**12 14 01.9**	**+1.0**
SNGZ	**Shannon Statio**	**3.57**	**61**	P	**Pn**	**12 14 02.0**	**+0.7**
AWAZ	**Awhitu Peninsu**	**3.68**	**16**	P	**Pn**	**12 14 04.6**	**+2.0**
KNZ	**Kokohu**	**3.68**	**66**	P	**Pn**	**12 14 03.0**	**+0.4**
ARCZ	**Arundel**	**3.71**	**205**	P	**Pn**	**12 14 03.6**	**+0.6**
URZ	**Urewera**	**3.73**	**52**	P	**Pn**	**12 14 03.1**	**-0.2**
URZ	**Urewera**	**3.73**	**52**	P	**Pn**	**12 14 02.9**	**-0.4**
MKAZ	**Moumakai**	**3.77**	**22**	P	**Pn**	**12 14 05.4**	**+1.5**
MHGZ	**Mahia Peninsul**	**3.79**	**69**	P	**Pn**	**12 14 05.3**	**+1.2**
ETAZ	**East Tamaki Re**	**3.85**	**19**	P	**Pn**	**12 14 06.5**	**+1.7**
PRGZ	**Paritu Road**	**3.87**	**66**	P	**Pn**	**12 14 05.6**	**+0.5**
RIGZ	**Rimu Rau**	**3.89**	**62**	P	**Pn**	**12 14 05.9**	**+0.5**
FOZ	**Fox Glacier**	**3.94**	**221**	P	**Pn**	**12 14 06.4**	**+0.7**
MWZ	**Matawai**	**3.94**	**56**	P	**Pn**	**12 14 05.9**	**-0.1**
RVAZ	**Riverhead Bore**	**3.95**	**14**	P	**Pn**	**12 14 07.9**	**+1.9**
TMZ	**Timaru**	**4.15**	**204**	P	**Pn**	**12 14 09.5**	**+1.0**
RUGZ	**Raukumara Rang**	**4.26**	**53**	P	**Pn**	**12 14 09.6**	**-0.6**
TWGZ	**Tauwhareparae**	**4.33**	**57**	P	**Pn**	**12 14 11.5**	**+0.6**
LBZ	**Lake Benmore**	**4.44**	**211**	P	**Pn**	**12 14 13.0**	**+0.7**
HAZ	**Te Kaha**	**4.46**	**52**	P	**Pn**	**12 14 11.6**	**-1.0**
PUZ	**Puketiti**	**4.56**	**58**	P	**Pn**	**12 14 14.2**	**+0.3**
PKGZ	**Pakihiroa**	**4.57**	**55**	P	**Pn**	**12 14 13.8**	**-0.3**
WCZ	**Waipu Caves**	**4.73**	**10**	P	**Pn**	**12 14 18.1**	**+2.0**
WMGZ	**Waiomatatini S**	**4.81**	**56**	P	**Pn**	**12 14 16.9**	**-0.2**
JCZ	**Jackson Bay**	**4.84**	**223**	P	**Pn**	**12 14 18.1**	**+0.6**
JCZ	**Jackson Bay**	**4.84**	**223**	P	**Pn**	**12 14 18.2**	**+0.6**
ODZ	**Otahua Downs**	**4.86**	**203**	P	**Pn**	**12 14 19.0**	**+1.3**
ODZ	**Otahua Downs**	**4.86**	**203**	P	**Pn**	**12 14 18.9**	**+1.3**
MXZ	**Matakaoa Point**	**4.91**	**53**	P	**Pn**	**12 14 18.4**	**+0.1**
MXZ	**Matakaoa Point**	**4.91**	**53**	P	**Pn**	**12 14 18.4**	**+0.1**
WKZ	**Wanaka**	**5.29**	**216**	P	**Pn**	**12 14 23.3**	**+0.1**
OUZ	**Omahuta**	**5.38**	**2**	P	**Pn**	**12 14 24.8**	**+0.3**
EAZ	**Earnscleugh**	**5.49**	**211**	P	**Pn**	**12 14 25.5**	**-0.4**
HHSZ	**Highcliff Hill**	**5.64**	**200**	P	**Pn**	**12 14 29.9**	**+2.1**
MSZ	**Milford Sound**	**5.71**	**223**	P	**Pn**	**12 14 29.6**	**+1.0**
TUZ	**Tuapeka**	**6.00**	**206**	P	**Pn**	**12 14 33.7**	**+1.3**
MLZ	**Mavora Lakes**	**6.11**	**217**	P	**Pn**	**12 14 34.5**	**+0.5**
WHZ	**Wether Hill Ro**	**6.59**	**215**	P	**Pn**	**12 14 40.4**	**+0.2**
SYZ	**Scrubby Hill**	**6.67**	**206**	P	**Pn**	**12 14 42.1**	**+0.9**

SKHL ***10*** *12:50:26.8±0.2, 44°90N×147°40E, h146km±3km, mb4.9/4, msh5.4/3*
MOS ***10*** *12:50:26.1±1.1, 45°08N×147°28E, h150km, mb3.9/1, Error ellipse: s-maj=35.3km s-min=15.4km az=61.3*
JMA ***10*** *12:50:27.8±0.5, 45°N±2°×14°8E±°, h160km, MV3.5/30, NEAR ETOROFU ISLAND*
IDC ***10*** *12:50:35.2±12.0, 45°97N×146°94E, h172km±61km, mb3.2/4, mbtmp3.7/5, Error ellipse: s-maj=213.8km s-min=28.7km az=166.0*

ISC 10 12:50:25.0±1.0, 44°5N±0°1×147°8E±0°1, h150km, n39, σ2s07/47, mb3.4/4, 3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.70**	**4**	*e*PN	**Pn**	**12 50 47.1**	**-0.3**
KUR				*e*S	**Sn**	**12 51 03.0**	**-1.7**
KUR	**Kuril'sk**	**0.70**	**4**	*e*P	**Pn**	**12 50 49.2**	**+1.8**
KUR				AMB	AMB	12 50 50.2	
	100nm,0.3s						
KUR				*e*S	**Sn**	**12 51 05.9**	**+1.2**
KUR				A	A	12 51 10.2	
	150nm,0.3s						
KUR				A	A	12 51 10.2	
	120nm,0.3s						
SHO	**Shikotan**	**0.96**	**227**	*e*P	Pn	12 51 02.8	+13
SHO				AMB	AMB	12 51 03.2	
	280nm,0.3s						
SHO				*e*S	Sn	12 51 20.8	+13
SHO				A	A	12 51 22.5	
	1μm,0.5s						
SHO				A	A	12 51 22.5	
	1μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.48**	**251**	*d i* PN	**Pn**	**12 50 56.5**	**+2.2**
YUK				*e*S	**Sn**	**12 51 18.3**	**+1.7**
YUK				pmax	pmax		
	comp=E,39nm,0.2s						
YUK				pmax	pmax		
	comp=Z,397nm,0.2s						
YUK				pmax	pmax		
	comp=N,44nm,0.1s						
YUK				smax	smax		

VANB					Sg	Sb	13 04 12.3	-0.5
IMRD	**Marand**	**0.94**	**73**		Pg	Pn	13 04 00.7	-0.7
VMUR	**Van-Muradiye**	**0.95**	**305**		P	Pg	13 03 57.9	-2.2
VMUR					S	Sn	13 04 15.0	-0.3
NAX	**Nakhchivan**	**1.03**	**45**		P	Pn	13 04 02.0	-0.6
NAX					S	Sn	13 04 17.1	-0.2
HAKT	**HAKKARI**	**1.11**	**218**		P	Pg	13 04 02.1	-1.2
HAKT					S	Sn	13 04 19.6	+0.2
HAKT					IAML		13 04 21.0	
	comp=E,218nm,0.3s							
HAKT					IAML		13 04 26.0	
	comp=N,287nm,0.5s							
HAKT	**HAKKARI**	**1.11**	**218**		P	Pb	13 04 02.4	-1.1
HAKT					S	Sn	13 04 21.4	+1.9
GEVA	**Gevas**	**1.19**	**264**		P	Pg	13 04 02.4	-2.3
GEVA					S	Sn	13 04 21.8	+0.6
GEVA					IAML		13 04 24.0	
	comp=N,233nm,0.4s							
GEVA					IAML		13 04 26.0	
	comp=E,244nm,0.6s							
ORD	**Ordubad**	**1.22**	**66**		P	Pn	13 04 05.7	+0.5
ORD					S	Sn	13 04 23.9	+1.9
SBZ	**Shahbuz**	**1.23**	**39**		P	Pn	13 04 05.7	+0.3
SBZ					S	Sn	13 04 24.0	+1.9
ITBZ	**Tabriz**	**1.27**	**99**		Pg	Pn	13 04 05.8	-0.1
HYR	**Heyderabad**	**1.29**	**10**		P	Pg	13 04 07.8	+1.1
HYR					S	Sn	13 04 27.8	+4.0
CUKT	**Cukurca**	**1.41**	**213**		Pn	Pg	13 04 08.7	-0.3
VAYK	**Vayk**	**1.42**	**28**	‖	*eP*	Pg	13 04 08.6	-0.5
VAYK				⇓	*eS*	Sg	13 04 29.0	+1.4
IGDI	**IGDIR**	**1.47**	**345**		P	Pg	13 04 10.6	+0.4
IGDI					S	Sg	13 04 32.6	+3.4
ADCV	**BITLIS_Adilcev**	**1.48**	**285**		P	Pb	13 04 08.9	-0.9
ADCV					S	Sg	13 04 30.7	+1.1
ADCV					IAML		13 04 33.0	
	comp=E,157nm,0.7s							
AGRB	**Hanur-Agry**	**1.66**	**313**		Pn	Pg	13 04 12.8	-1.0
PERV	**Siirt/Pervari-**	**1.67**	**253**		P	Pg	13 04 14.0	+0.2
PERV					S	Sg	13 04 39.5	+4.0
PERV					IAML		13 04 40.0	
	comp=N,378nm,0.5s							
PERV					IAML		13 04 44.0	
	comp=E,311nm,0.5s							
GNI	**Garni**	**1.71**	**5**		Pn	Pg	13 04 13.9	-0.8
GNI	**Garni**	**1.71**	**5**		*eP*	Pg	13 04 15.4	+0.8
GNI					*eS*	Sg	13 04 38.6	+1.8
MLAZ	**Malazgirt-MUS**	**1.72**	**295**		Pn	Pb	13 04 13.3	-0.4
EGVZ	**Egvard**	**1.73**	**63**		*eP*	Pg	13 04 14.2	-0.9
EGVZ					*eS*	Sn	13 04 34.6	-0.1
GRS	**Goris**	**1.74**	**52**	⇓	*iP*	Pn	13 04 11.0	-1.4
GRS				⇓	*iS*	Sg	13 04 38.0	+0.2
AYRK	**Ayrk**	**1.92**	**29**		*eP*	Pg	13 04 17.9	-0.8
AYRK					*eS*	Sb	13 04 41.1	-0.3
IHRS	**Heris**	**1.95**	**93**		Pn	Pg	13 04 18.3	-1.0
GURO	**Guroymak-BITLI**	**1.99**	**274**		Pn	Pb	13 04 16.9	-1.4
SRTM	**Siirt_Merkez**	**2.13**	**259**		P	Pb	13 04 18.4	-2.2
SRTM					IAML		13 04 57.0	
	comp=E,169nm,0.7s							
SRTM					S	Sg	13 04 57.4	+7.2
SRTM					IAML		13 04 58.0	
	comp=N,243nm,0.7s							
QRD	**Qoradiz**	**2.38**	**64**		P	Pb	13 04 23.3	-1.6
QRD					S	Sb	13 04 55.7	+1.3
IHSH	**Hashtrud**	**2.42**	**117**		Pn	Pb	13 04 25.4	-0.5
GDB	**GEDABAY**	**2.46**	**22**		P	Pb	13 04 24.3	-2.0
GDB					S	Sb	13 04 57.7	+1.0
LSVT	**Lusahovit**	**2.52**	**11**		*eP*	Pb	13 04 27.9	+0.6
LSVT					*eS*	Sg	13 05 02.1	-0.7
AGDM	**Agdam**	**2.58**	**49**		P	Pb	13 04 26.6	-1.8
AGDM					S	Sn	13 04 57.6	+2.1
GANJ	**Ganja**	**2.59**	**31**		P	Pb	13 04 26.1	-2.3
GANJ					S	Sb	13 05 01.6	+1.3
QZX	**Qazax, Azerbai**	**2.69**	**13**		P	Pb	13 04 31.0	+0.8
QZX					S	Sb	13 05 02.0	-1.2
SENK	**Senkaya-Erzuru**	**2.72**	**322**		Pn	Pb	13 04 27.9	-2.9
YRD	**Yardimli**	**2.92**	**80**		P	Pb	13 04 31.4	-2.8
YRD					S	Sb	13 05 09.7	-0.4
LRK	**Lerik**	**2.97**	**85**		P	Pb	13 04 31.9	-3.2
LRK					S	Sb	13 05 11.9	+0.4

*NEIC **10** 13:07:32.8±1.1, 28.°54S±0.°06×68.°8W±0.°1, h130km±8km, mb4.6/2, Md4.2(SJA), Error ellipse: s-maj=13.9km s-min=8.7km az=77.0*

*SJA **10** 13:07:34.0±0.7, 28.°54S×68.°90W, h120km±3km, ML3.9, MW3.9*

*IDC **10** 13:07:35.8±1.8, 28.°60S×68.°80W, h103km±16km, mb3.6/7, mbtmp3.9/12, Error ellipse: s-maj=24.6km s-min=13.3km az=94.0*

ISC 10 13:07:34.6±0.7, 28.°53S±0.°03×68.°88W±0.°03, h120km±6km, n86, σ1§94/114, mb3.7/6, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
VCA	**Vinchina**	**0.63**	**109**	*eP*		**Pn**	**13 07 53.9**	**+0.2**
VCA				*eS*		**Sn**	**13 08 07.9**	**-0.2**
TINO	**Tinogasta**	**1.25**	**68**	*eP*		**Pn**	**13 08 00.0**	**+0.6**
TINO				*eS*		**Sn**	**13 08 18.4**	**+0.2**
AC05	**El Transito**	**1.26**	**256**			**Pn**	**13 07 59.7**	**+0.2**
AC05	**El Transito**	**1.26**	**256**	*eP*		**Pn**	**13 07 59.6**	**+0.2**
AC05				*eS*		**Sn**	**13 08 18.3**	**0.0**
AC05				IAML			13 08 19.0	
	comp=Z,1μm,0.4s							
GO03	**Copiapo**	**1.52**	**308**			**Pn**	**13 08 02.2**	**-0.1**
GO03	**Copiapo**	**1.52**	**308**	*eP*		**Pn**	**13 08 02.6**	**+0.3**
GO03				*eS*		**Sn**	**13 08 23.4**	**0.0**
GO03				IAML			13 08 25.4	
	comp=Z,613nm,0.3s							
ACDV	**Cuesta del Vie**	**1.65**	**187**	*eP*		**Pn**	**13 08 04.5**	**+0.5**
ACDV				*eS*		**Sn**	**13 08 27.0**	**+0.7**
ACDV				IAML			13 08 27.6	
	comp=Z,957nm,0.4s							
LCO	**Las Campanas**	**1.67**	**253**			**Pn**	**13 08 03.9**	**-0.4**
LCO	**Las Campanas**	**1.67**	**253**	*eP*		**Pn**	**13 08 04.2**	**-0.1**
LCO				*eS*		**Sn**	**13 08 26.3**	**-0.6**
AC02	**Maricunga**	**1.71**	**353**	*eP*		**Pn**	**13 08 07.2**	**+2.2**
AC02				*eS*		**Sn**	**13 08 30.9**	**+2.8**
AC02				IAML			13 08 35.0	
	comp=Z,556nm,0.5s							
AROD	**Rodeo**	**1.71**	**197**	*eP*		**Pn**	**13 08 05.5**	**+0.6**
AROD				*eS*		**Sn**	**13 08 28.8**	**+0.9**
AC06	**Mina Casimiro**	**1.75**	**312**			**Pn**	**13 08 04.0**	**-1.1**
CO01	**Juntas del Tor**	**1.79**	**216**	Pn		**Pn**	**13 08 05.5**	**-0.2**
CO01	**Juntas del Tor**	**1.79**	**216**	*eP*		**Pn**	**13 08 06.8**	**+1.1**
CO01				*eS*		**Sn**	**13 08 33.2**	**+3.8**
ACLC	**CERRO LA CRUZ**	**1.91**	**118**	*eP*		**Pn**	**13 08 08.0**	**+0.8**
ACLC				*eS*		**Sn**	**13 08 32.6**	**+0.5**
ACLC				IAML			13 08 33.1	
	comp=Z,512nm,1.1s							
AC04	**Llanos de Chal**	**1.96**	**279**			**Pn**	**13 08 07.1**	**-0.4**
AC04	**Llanos de Chal**	**1.96**	**279**	*eP*		**Pn**	**13 08 07.2**	**-0.4**
AC04				*eS*		**Sn**	**13 08 32.1**	**-0.6**
AC04				IAML			13 08 41.3	
	comp=Z,354nm,0.5s							
ACCO	**Cerro Coronel**	**2.05**	**184**	*eP*		**Pn**	**13 08 09.8**	**+0.8**
ACCO				*eS*		**Sn**	**13 08 37.0**	**+1.6**
GO04	**Tololo Observa**	**2.34**	**225**			**Pn**	**13 08 12.0**	**-0.6**
GO04	**Tololo Observa**	**2.34**	**225**	*eP*		**Pn**	**13 08 12.4**	**-0.1**
GO04				*eS*		**Sn**	**13 08 42.0**	**+0.3**
GO04				IAML			13 08 43.7	
	comp=Z,1μm,0.6s							
AVFE	**Valle Fertil**	**2.46**	**150**	*eP*		**Pn**	**13 08 14.4**	**+0.4**
AVFE				*eS*		**Sn**	**13 08 38.0**	**-6.2**
AVFE				IAML			13 08 44.7	
	comp=Z,666nm,1.1s							
CO05	**La Serena**	**2.48**	**236**			**Pn**	**13 08 13.0**	**-1.1**
CO03	**El Pedregal**	**2.78**	**214**			**Pn**	**13 08 17.9**	**-0.3**
CO03	**El Pedregal**	**2.78**	**214**	*eP*		**Pn**	**13 08 18.4**	**+0.3**
CO03				*eS*		**Sn**	**13 08 52.6**	**+0.9**
CO03				IAML			13 08 54.7	
	comp=Z,357nm,0.2s							
RTLL	**Cerro Villicun**	**2.81**	**173**	*eP*		**Pn**	**13 08 18.9**	**+0.4**
RTLL				*eS*		**Sn**	**13 08 52.0**	**-0.3**
RTLL				IAML			13 08 53.9	
	comp=Z,912nm,0.4s							
AC01	**Pan de Azucar**	**2.82**	**327**			**Pn**	**13 08 18.1**	**-0.5**
AC01	**Pan de Azucar**	**2.82**	**327**	*eP*		**Pn**	**13 08 19.4**	**+0.8**
AC01				*eS*		Sn	13 08 42.3	-10
AC01				IAML			13 08 57.1	
	comp=Z,225nm,0.3s							
SJA	**San Juan**	**3.00**	**175**	*eS*		**Sn**	**13 08 57.8**	**+1.2**
SJA				IAML			13 08 59.0	
	comp=Z,168nm,0.5s							
ZON	**Zonda**	**3.01**	**177**			**Pn**	**13 08 18.6**	**-2.5**
ZON	**Zonda**	**3.01**	**177**	*eP*		**Pn**	**13 08 21.0**	**-0.1**
ZON				*eS*		**Sn**	**13 08 56.5**	**-0.4**
ZON				IAML			13 08 57.5	
	comp=Z,158nm,0.4s							
CFA	**Coronel Fontan**	**3.11**	**170**	P		**Pn**	**13 08 22.8**	**+0.4**
	comp=Z,52nm,0.3s,baz=333,slow=14,SNR=267							
CFA				S		**Sn**	**13 08 58.0**	**-1.3**
	comp=Z,162nm,0.5s,baz=315,slow=9.3,SNR=22							
CFA	**Coronel Fontan**	**3.11**	**170**	*eP*		**Pn**	**13 08 22.9**	**+0.4**
CFA				*eS*		**Sn**	**13 08 58.7**	**-0.6**
CFA				IAML			13 09 01.0	
	comp=Z,269nm,0.6s							
CO02	**Combarbal**	**3.23**	**214**			**Pn**	**13 08 23.0**	**-1.1**
CO02	**Combarbal**	**3.23**	**214**	*eP*		**Pn**	**13 08 23.2**	**-0.9**
CO02				*eS*		Sn	13 08 45.6	-17
CO02				IAML			13 09 11.4	
	comp=Z,312nm,0.6s							
ACHE	**Chepes**	**3.25**	**144**	*eP*		**Pn**	**13 08 25.1**	**+0.7**
ACHE				*eS*		**Sn**	**13 09 01.7**	**-1.1**
RTLS	**Leoncito**	**3.27**	**186**	*eP*		**Pn**	**13 08 25.6**	**+0.8**
RTLS				*eS*		**Sn**	**13 09 04.7**	**+1.2**
RTLS				IAML			13 09 08.2	
	comp=Z,695nm,0.3s							
FSA	**Cafayete**	**3.54**	**48**	*eP*		**Pn**	**13 08 31.1**	**+3.0**
AHML	**Horco Molle**	**3.60**	**62**	*eP*		Pn	13 08 20.5	-8.4
AHML				*eS*		Sn	13 09 25.6	+15
AHML				IAML			13 09 26.2	
	comp=Z,106nm,0.5s							
CO04	**Los Peladeros**	**3.94**	**207**			**Pn**	**13 08 32.2**	**-1.4**
ACAN	**Cantantal**	**4.01**	**159**	*eP*		**Pn**	**13 08 34.1**	**-0.1**
ACAN				IAML			13 09 28.6	
	comp=Z,345nm,0.6s							
ASAL	**Salagasta**	**4.04**	**179**	*eP*		**Pn**	**13 08 35.5**	**+0.6**
ASAL				*eS*		**Sn**	**13 09 18.8**	**-2.7**
PB14	**IPOC Station P**	**4.12**	**340**			**Pn**	**13 08 34.8**	**-1.3**
PB14	**IPOC Station P**	**4.12**	**340**	*eP*		**Pn**	**13 08 37.3**	**+1.2**
PB14				*eS*		**Sn**	**13 09 24.8**	**+1.0**
PB14				IAML			13 09 34.2	
	comp=Z,138nm,0.7s							
ARCO	**CERRO ARCO**	**4.29**	**181**	*eP*		**Pn**	**13 08 39.2**	**+1.0**
ARCO				*eS*		**Sn**	**13 09 29.4**	**+1.8**
ARCO				IAML			13 09 32.1	
	comp=Z,115nm,0.4s							
VA03	**San Esteban**	**4.46**	**198**			**Pn**	**13 08 38.7**	**-1.6**
VA03	**San Esteban**	**4.46**	**198**	*eP*		**Pn**	**13 08 39.4**	**-0.9**
VA03				IAML			13 09 40.6	
	comp=Z,135nm,0.8s							
VA06	**Catapilco**	**4.52**	**207**			**Pn**	**13 08 38.7**	**-2.4**
AAGR	**Agrelo**	**4.54**	**179**	*eP*		**Pn**	**13 08 42.1**	**+0.6**
AAGR				*eS*		**Sn**	**13 09 36.4**	**+3.0**
AAGR				IAML			13 10 19.4	
	comp=Z,89nm,1.0s							
TCA	**Tanti**	**4.65**	**128**	*eP*		**Pn**	**13 08 43.1**	**+0.1**
TCA				*eS*		Sn	13 09 50.8	+15
TCA				IAML			13 10 17.4	
	comp=Z,70nm,0.5s							
MRA	**San Martin**	**4.74**	**146**	*eP*		**Pn**	**13 08 43.6**	**-0.5**
MRA				*eS*		**Sn**	**13 09 35.5**	**-2.7**
MRA				IAML			13 10 16.7	
	comp=Z,130nm,0.7s							
PEL	**Peldehue**	**4.85**	**198**			**Pn**	**13 08 44.0**	**-1.6**
MT04	**Ro Olivares**	**4.97**	**192**	*eP*		**Pn**	**13 08 47.9**	**+0.5**
MT04				*eS*		**Sn**	**13 09 47.9**	**+3.9**
MT04				*eS*			13 09 54.4	
MT04				IAML			13 09 59.2	
	comp=Z,59nm,0.6s							
MT08	**Bocatoma Ro**	**4.99**	**191**	*eP*		**Pn**	**13 08 50.0**	**+2.4**
MT08				*eS*		**Sn**	**13 09 50.4**	**+6.0**
MT08				IAML			13 09 51.4	
	comp=Z,45nm,0.6s							
MT05	**Renca**	**5.10**	**198**	*eP*		**Pn**	**13 08 48.2**	**-0.7**
MT05				*eS*		**Sn**	**13 09 45.0**	**-1.8**
MT05				IAML			13 09 54.0	
	comp=Z,93nm,0.3s							
MT03	**Universidad Ad**	**5.14**	**195**	*eP*		**Pn**	**13 08 48.0**	**-1.5**
MT03				*eP*			13 08 49.7	
MT03				*eS*		**Sn**	**13 09 48.0**	**+0.2**
MT03				IAML			13 10 00.3	
	comp=Z,93nm,0.3s							
PB06	**IPOC Station P**	**5.84**	**354**			**Pn**	**13 08 57.2**	**-1.8**
PB08	**IPOC Station P**	**8.36**	**358**			**Pn**	**13 09 31.7**	**-1.6**
PB16	**IPOC Station P**	**10.17**	**357**			**Pn**	**13 09 55.8**	**-2.1**
CPUP	**Villa Florida**	**10.50**	**81**	P		**Pn**	**13 10 02.9**	**+1.1**
	comp=Z,1.7nm,0.4s,baz=284,slow=12,SNR=5.9							
CPUP				Lg		Lg	13 12 52.5	
	comp=Z,0.4nm,0.3s,baz=202,slow=18,SNR=3.9							
CPUP	**Villa Florida**	**10.50**	**81**	Pn		**Pn**	**13 09 59.6**	**-2.2**
GO06	**Curarrehue**	**11.23**	**190**	Pn		**Pn**	**13 10 08.7**	**-2.9**
LPAZ	**La Paz**	**12.21**	**3**	P		**Pn**	**13 10 26.0**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=162,slow=7.0,SNR=5.7							
LPAZ	**La Paz**	**12.21**	**3**	Pn		**Pn**	**13 10 21.8**	**-3.3**
PLCA	**Paso Flores**	**12.25**	**186**	P		**Pn**	**13 10 25.1**	**+0.1**
	comp=Z,0.9nm,0.4s,baz=338,slow=11,SNR=9.1							
PLCA	**Paso Flores**	**12.25**	**186**	Pn		**Pn**	**13 10 22.5**	**-2.5**
SIV	**San Ignacio**	**14.42**	**32**	P		**P**	**13 10 54.7**	**-1.8**
	comp=Z,1.5nm,0.4s,baz=274,slow=6.8							
BDFB	**Brasilia**	**23.16**	**61**	P		**P**	**13 12 32.6**	**+1.8**
	comp=Z,2.0nm,0.5s,baz=227,slow=8.0,SNR=3.1							
	comp=Z,2.0nm,0.5s							
SNAA	**Sanae**	**55.68**	**160**	P		**P**	**13 17 00.6**	**+2.6**
	comp=Z,2.9nm,0.5s,baz=283,slow=8.5,SNR=5.4							
	comp=Z,2.9nm,0.5s							
SNAA	**Sanae**	**55.68**	**160**	P		P	**13 16 55.2**	**-2.8**
SNAA				IAmb		IAmb	13 17 02.2	
	comp=Z,10nm,1.3s							
QSPA	**South Pole Qui**	**61.69**	**180**	P		**P**	**13 17 42.8**	**+3.0**
	comp=Z,2.0nm,0.7s,baz=142,slow=3.3,SNR=6.9							
	comp=Z,2.0nm,0.7s							
QSPA	**South Pole Qui**	**61.69**	**180**	P		**P**	**13 17 37.6**	**-2.1**
QSPA				IAmb		IAmb	13 18 16.2	
	comp=Z,9.3nm,1.5s							
TXAR	**Lajitas Array**	**66.46**	**327**	P		**P**	**13 18 15.8**	**+4.6**
	comp=Z,0.6nm,0.6s,baz=150,slow=8.1,SNR=9.5							
	comp=Z,0.6nm,0.6s							
TXAR	**Lajitas Array**	**66.46**	**327**	P		**P**	**13 18 07.8**	**-3.5**
TORD	**Torodi Ar. Bea**	**79.77**	**69**	P		**P**	**13 19 32.9**	**+3.1**
	comp=Z,0.6nm,0.6s,baz=249,slow=6.7,SNR=5.7							
	comp=Z,0.6nm,0.6s							
PDAR	**Pinedale Array**	**80.22**	**331**	P		**P**	**13 19 36.0**	**+4.1**
	comp=Z,0.5nm,0.5s,baz=124,slow=7.5,SNR=8.6							
	comp=Z,0.5nm,0.5s							
PDAR	**Pinedale Array**	**80.22**	**331**	P		**P**	**13 19 28.6**	**-3.3**
NVAR	**Mina Array Bea**	**81.06**	**323**	P		**P**	**13 19 39.8**	**+3.3**
	comp=Z,0.5nm,0.9s,baz=177,slow=3.0,SNR=2.6							
	comp=Z,0.5nm,0.9s							
ASAR	**Alice Springs**	**123.65**	**205**	PKP		**PKiKP**	**13 26 20.2**	**+1.3**
	comp=Z,0.7nm,0.8s,baz=134,slow=1.7,SNR=11							
WRA	**Warramunga Arr**	**126.84**	**208**	PKP		**PKiKP**	**13 26 26.6**	**+1.3**
	comp=Z,0.9nm,0.6s,baz=168,slow=1.7,SNR=18							
NRIK	**Noril'sk**	**136.93**	**12**	PKP		**PKiKP**	**13 26 43.8**	**-0.3**
	comp=Z,2.8nm,0.4s,baz=50,slow=6.6,SNR=7.4							
KURBB	**Kurchatov Arra**	**146.99**	**39**	PKPbc		**PKiKP**	**13 27 04.7**	**-0.5**
	comp=Z,1.7nm,0.6s,baz=306,slow=3.0,SNR=7.9							
ZALV	**Zalesovo Beam**	**148.16**	**30**	PKPbc		**PKPab**	**13 27 09.9**	**+0.8**
	comp=Z,2.9nm,0.4s,baz=302,slow=3.2,SNR=15							
ZALV	**Zalesovo Beam**	**148.16**	**30**			**PKPab**	**13 27 09.7**	**+0.6**
MKAR	**Makanchi Array**	**151.03**	**43**	PKPbc		**PKPab**	**13 27 16.9**	**-4.3**
	comp=Z,2.7nm,0.7s,baz=291,slow=2.1,SNR=28							
HHC	**Hu-ho-hao-te**	**167.71**	**358**	*eP*		PKPdf	13 27 18.2	-8.5
PZH	**PanZhiHua**	**171.44**	**101**	PKP		**PKPdf**	**13 27 24.9**	**-4.4**

IDC 10 13:22:03.4±8.5, 5.°45S×150.°94E, h85km±60km, mb2.9/2, mbtmp3.5/3, ML1.8/1, Error ellipse: s-maj=115.8km s-min=54.5km az=121.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**5.43**	**223**	P		Pn	13 23 21.7	-0.2
	2.1nm,0.3s,baz=45,slow=14,SNR=10							
PMG				S		Sn	13 24 24.6	+1.5
	20nm,0.4s,baz=54,slow=8.7,SNR=9.5							
	9.2nm,0.3s							
WRA	**Warramunga Arr**	**21.64**	**227**	P		P	13 26 46.3	-0.7
	0.4nm,0.5s,baz=52,slow=10,SNR=10							
	0.4nm,0.5s							
ASAR	**Alice Springs**	**24.44**	**220**	P		P	13 27 13.9	-0.4
	0.5nm,0.6s,baz=56,slow=9.5,SNR=20							
	0.5nm,0.6s							
TORD	**Torodi Ar. Bea**	**148.73**	**286**	PKPbc		PKPbc	13 41 42.0	0.0
	1.2nm,0.7s,baz=107,slow=1.6,SNR=8.2							

HEL 10 13:28:32.6±1.5, 60.°58N×29.°31E, h0km, ML1.4, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
VJF	**Virojoki**	**0.87**	**268**	PG		Pg	13 28 48.4	-0.7
	baz=86							
VJF				smax		smax	13 28 59.3	
	comp=Z,4.6nm,0.2s							
VJF				SB		Sb	13 29 03.8	+1.3
RUF	**Ruokolahti**	**0.87**	**349**	PB		Pb	13 28 50.1	-0.4
RUF				smax		smax	13 28 59.3	
	comp=Z,2.4nm,0.2s							
RUF				SB		Sg	13 29 00.7	+0.2
PVF	**Pernaja**	**1.70**	**270**	PG		Pn	13 29 02.8	-0.7
	baz=92							
PVF				smax		smax	13 29 23.4	
	comp=Z,3.2nm,0.2s							
PVF				SN		Sg	13 29 27.1	-0.1
FIA0	**FINESS Array S**	**1.80**	**300**	PG		Pn	13 29 04.7	-0.1
	baz=114							
FIA0				smax		smax	13 29 26.2	
	comp=Z,2.1nm,0.2s							
FIA0				SN		Sn	13 29 28.1	-0.2
MEF	**Metsahovi**	**2.46**	**264**	PG		Pb	13 29 16.3	-1.4
MEF				smax		smax	13 29 45.4	
	comp=Z,1.1nm,0.2s							
JOF	**Joensuu**	**2.54**	**21**	PG		Pb	13 29 19.5	+0.6
JOF				SG		Sb	13 29 52.0	+1.4
KEF	**Keuruu**	**2.67**	**309**	PG		Pb	13 29 19.3	-1.8
KEF				smax		smax	13 29 51.1	
	comp=Z,0.7nm,0.2s							
KEF				SG		Sn	13 29 51.5	+1.8
NIF	**Nilsia**	**2.91**	**347**	smax		smax	13 29 58.1	
	comp=Z,1.0nm,0.2s							
NIF				SG		Sb	13 30 01.2	-0.2

*IDC **10** 13:39:09.1±1.5, 35.°35N×90.°58E, h0km, mb3.3/2, mbtmp3.4/8, ML3.1/6, MS3.3/3, Error ellipse: s-maj=54.1km s-min=20.6km az=60.0*

ISC 10 13:39:13.4±1.1, 35.°4N±0.°1×90.°6E±0.°2, h35km, n9, σ1§25/8, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
MKAR	**Makanchi Array**	**12.95**	**334**	Pn		**Pn**	**13 42 13.8**	**-1.1**
	0.3nm,0.3s,baz=144,slow=14,SNR=15							
	0.7nm,0.5s							
AAK	**Ala-Archa**	**14.42**	**305**	Pn		**Pn**	**13 42 34.6**	**-0.5**
	0.1nm,0.3s,baz=178,slow=8.1,SNR=1.4							
AAK				LR		LR	13 48 56.2	
	comp=Z,78nm,19.7s,baz=119,slow=41							
	0.4nm,0.4s							
SONM	**Songino Array**	**17.07**	**39**	P		**P**	**13 43 11.0**	**+0.1**
	0.1nm,0.3s,baz=226,slow=12,SNR=6.0							
	0.8nm,0.8s							
KURBB	**Kurchatov Arra**	**17.52**	**334**	P		**Pn**	**13 43 13.9**	**-0.8**
	baz=146,slow=12,SNR=7.1							
	0.6nm,0.8s							
CMAR	**Chiang Mai Arr**	**18.46**	**154**	P		**P**	**13 43 25.0**	**-1.2**
	0.1nm,0.3s,baz=299,slow=10,SNR=1.4							
CMAR				LR		LR	13 51 41.3	
	comp=Z,27nm,18.7s,baz=200,slow=41							
	0.2nm,0.3s							
ZALV	**Zalesovo Beam**	**18.95**	**349**	P		**Pn**	**13 43 31.4**	**-0.8**
	baz=163,slow=11,SNR=5.5							
	1.1nm,0.7s							
BVAR	**Borovoye Array**	**22.65**	**327**	P		**P**	**13 44 13.0**	**+1.7**
	0.7nm,0.7s,baz=108,slow=9.4,SNR=2.5							
	0.7nm,0.7s							
KLR	**Kul'dur**	**32.97**	**52**	LR		LR	14 00 15.4	
	comp=Z,210nm,21.8s,baz=269,slow=38							
ASAR	**Alice Springs**	**71.67**	**139**	P		**P**	**13 50 32.6**	**+0.9**
	0.3nm,0.7s,baz=323,slow=6.2,SNR=5.0							
	0.3nm,0.7s							

*RSNC **10** 13:44:07.4±3.5, 22.°S±43.°×6.°8W±1.°5, h10km, M4.9, mB5.5, mb5.0, Mw(mB)4.9*

*VAO **10** 13:44:09.0±0.6, 22.°32S×68.°65W, h92km±4km, mb5.4, Presumed earthquake*

*SJA **10** 13:44:14.0±0.5, 22.°12S×68.°46W, h10km, ML4.6, MW4.5*

*NEIC **10** 13:44:19.9, 22.°19S×67.°87W, h170km*

*NEIC **10** 13:44:19.9, 22.°19S×68.°09W, h170km, Moment Tensor Solution. Duration: 1§7 Moment tensor: Scale 10^{16}Nm; M_{rr}=0.12; $M_{\theta\theta}$=0.61; $M_{\phi\phi}

PB02 IAML 13 45 21.8
comp=N,11µm,0.4s
PB05 IPOC Station P 2.18 251 Pn 13 44 57.3 -0.5
PB05 IPOC Station P 2.18 251⇑ *i*P **Pn 13 44 57.6 -0.2**
PB05 *e*S **Sn 13 45 25.0 -1.6**
PB05 IAML 13 45 26.8
comp=N,6µm,0.2s
YJA Yavi 2.27 91 *e*P **Pn 13 45 01.7 +2.6**
YJA Yavi 2.27 91 *e*P **Pn 13 45 01.7 +2.6**
YJA *e*S **Sn 13 45 32.6 +3.8**
PB08 IPOC Station P 2.30 331 Pn 13 44 59.9 +0.4
PB08 IPOC Station P 2.30 331⇑ *i*P **Pn 13 45 00.5 +0.9**
PB08 *e*S **Sn 13 45 29.6 +0.1**
PB08 IAML 13 45 33.6
comp=N,6µm,0.5s
PATCX Punta Patache 2.44 303 Pn 13 45 00.5 -0.4
SALTA 2.53 144 *e*P **Pn 13 45 04.9 +2.5**
SALTA 2.53 144 *e*P **Pn 13 45 01.9 -0.5**
SALTA *e*P 13 45 02.4
SALTA *e*P 13 45 04.8
SALTA IAML 13 45 37.3
comp=Z,210nm,0.7s
HJA Humahuaca 2.57 114 *e*P **Pn 13 45 05.2 +2.5**
HJA *e*S **Sn 13 45 34.4 -1.0**
HMBC Humberstone 2.60 316 Pn 13 45 02.5 -0.3
HMBC Humberstone 2.60 316⇑ *i*P **Pn 13 45 01.9 -0.9**
GO01 Chusmiza 2.74 335 Pn 13 45 04.7 -0.3
GO01 Chusmiza 2.74 335⇑ *i*P **Pn 13 45 05.3 +0.3**
PB11 IPOC Station P 2.87 326 Pn 13 45 05.7 -0.6
PB11 IPOC Station P 2.87 326 *i* P **Pn 13 45 05.8 -0.6**
PB14 IPOC Station P 3.32 222 Pn 13 45 11.6 -0.6
PB14 IPOC Station P 3.32 222 *i* P **Pn 13 45 11.6 -0.6**
SLA San Lorenzo 3.40 139 *e*P **Pn 13 45 15.6 +2.6**
SLA San Lorenzo 3.40 139 *e*P **Pn 13 45 15.7 +2.6**
SLA *e*S Sn 13 46 13.3 +19
PB16 IPOC Station P 4.08 339 Pn 13 45 22.1 -0.1
PB16 IPOC Station P 4.08 339⇑ *e*P **Pn 13 45 22.2 0.0**
PB12 IPOC Station P 4.17 327 Pn 13 45 20.8 -2.4
PB12 IPOC Station P 4.17 327⇑ *e*P **Pn 13 45 20.7 -2.4**
FSA Cafayete 4.33 156 *e*P **Pn 13 45 27.0 +1.9**
AP01 Chacalluta 4.39 329 *e*P **Pn 13 45 24.0 -1.8**
AC01 Pan de Azucar 4.64 211 Pn 13 45 27.3 -1.8
AC01 Pan de Azucar 4.64 211 *e*P **Pn 13 45 27.5 -1.6**
AC02 Maricunga 4.77 193 Pn 13 45 29.9 -1.4
AC02 Maricunga 4.77 193⇓ *e*P **Pn 13 45 31.5 +0.2**
PB18 Visviri 4.77 342 Pn 13 45 31.4 +0.1
AHML Horco Molle 5.18 153⇓ *e*P Pn 13 45 28.1 -8.2
AC06 Mina Casimiro 5.61 202 Pn 13 45 38.8 -3.2
GO03 Copiapo 5.79 200 *e*P **Pn 13 45 41.9 -2.5**
GO03 *e*S **Sn 13 46 47.3 -2.6**
GO03 IAML 13 46 48.9
comp=Z,875nm,0.3s
LPAZ La Paz 5.85 358 P **Pn 13 45 45.3 -0.4**
comp=Z,47nm,0.3s,baz=176,slow=3.9,SNR=137
LPAZ S **Sn 13 46 47.8 -4.5**
comp=Z,78nm,0.8s,baz=130,slow=0.3,SNR=1.5
LPAZ La Paz 5.85 358 Pn 13 45 45.0 -0.7
LPAZ La Paz 5.85 358 *e*P Pn 13 45 36.9 -8.9
TINO Tinogasta 5.88 177 *e*P **Pn 13 45 45.8 +0.2**
VCA Vinchina 6.55 182 *e*P **Pn 13 45 54.7 +0.2**
VCA *e*S **Sn 13 47 02.4 -5.9**
VCA *e*S 13 47 09.5
VCA IAML 13 47 09.9
comp=Z,131nm,0.3s
AC05 El Transito 6.96 197 Pn 13 45 57.3 -2.8
LCO Las Campanas 7.25 199 Pn 13 46 00.4 -3.7
LCO Las Campanas 7.25 199 P **Pn 13 46 00.4 -3.7**
ACLC CERRO LA CRUZ 7.29 173 *e*P **Pn 13 46 04.0 -0.5**
ACLC *e*S **Sn 13 47 26.6 +0.5**
COJ Juntas del Tor 8.01 193 Pn 13 46 12.3 -1.7
ACDV Cuesta del Vie 8.04 187 *e*P **Pn 13 46 14.3 -0.2**
ACDV *e*S **Sn 13 47 42.1 -2.1**
ACDV IAML 13 47 44.5
comp=Z,77nm,0.3s
ACCO Cerro Coronel 8.45 187 *e*P **Pn 13 46 19.1 -1.0**
ACCO *e*S **Sn 13 47 54.1 -0.1**
AVFE Valle Fertil 8.47 177 *e*P **Pn 13 46 19.4 -0.8**
AVFE *e*S **Sn 13 47 53.7 -0.7**
AVFE IAML 13 47 54.9
comp=Z,25nm,0.6s
SIV San Ignacio 8.95 48 P **Pn 13 46 24.3 -2.3**
comp=Z,500nm,0.6s,baz=274,slow=8.1
SIV S Sn 13 47 56.6 -9.4
CO03 El Pedregal 8.98 195 Pn 13 46 23.2 -3.8
ACHE Chepes 9.04 173 *e*P **Pn 13 46 26.1 -1.6**
ACHE *e*S **Sn 13 48 08.4 +0.3**
RTLL Cerro Villicun 9.14 183 *e*P **Pn 13 46 28.0 -1.0**
RTLL *e*S **Sn 13 48 04.9 -5.6**
RTLL IAML 13 48 08.4
comp=Z,104nm,0.3s
ZON Zonda 9.37 184 Pn 13 46 30.2 -1.8
ZON Zonda 9.37 184 P **Pn 13 46 30.3 -1.8**
CO02 Combarbal 9.40 196 Pn 13 46 28.4 -4.2
CFA Coronel Fontan 9.41 181 P **Pn 13 46 30.6 -2.0**
comp=Z,7.3nm,0.3s,baz=14,slow=15,SNR=32
CFA S Sn 13 48 08.6 -8.3
comp=Z,21nm,0.5s,baz=298,slow=22,SNR=8.2
MURT Porto Murtinho 9.62 89 *e*P **Pn 13 46 33.2 -2.3**
RTLS Leoncito 9.67 187 *e*P **Pn 13 46 34.0 -2.3**
CO04 Los Peladeros 10.20 195 Pn 13 46 39.9 -3.4
CPUP Villa Florida 10.55 115 P **Pn 13 46 46.8 -0.9**
comp=Z,20nm,0.7s,baz=295,slow=13,SNR=42
CPUP S **Sn 13 48 37.3 -7.1**
comp=Z,16nm,0.7s,baz=311,slow=16,SNR=3.1
CPUP Villa Florida 10.55 115 Pn 13 46 46.2 -1.4
CPUP Villa Florida 10.55 115 *e*P **Pn 13 46 46.3 -1.4**
BDQN Bodoquena, MS 10.59 83 *e*P **Pn 13 46 45.7 -2.6**
PTLB Pontes e Lacer 10.69 53 Pn 13 46 46.8 -2.9
PTLB Pontes e Lacer 10.69 53 *e*P **Pn 13 46 46.6 -3.0**
VA06 Catapilco 10.77 195 Pn 13 46 53.8 +3.2
VA03 San Esteban 10.80 192 Pn 13 46 53.0 +1.8
MT08 Bocatoma Ro 11.38 189 Pn 13 46 59.3 +0.5
MT02 Curacav 11.40 194 Pn 13 46 59.0 +0.1
AQDB Aquidauana 11.55 84 Pn 13 46 58.7 -2.2
AQDB Aquidauana 11.55 84 *e*P **Pn 13 46 59.0 -2.0**
VILB Vilhena 11.77 40 Pn 13 47 01.8 -2.0
VILB Vilhena 11.77 40 *e*P **Pn 13 47 02.0 -1.9**
AMBA Amambai (Brazi 12.01 96 *e*P **Pn 13 47 03.9 -3.0**
BO01 Tunca 12.49 192 Pn 13 47 10.9 -2.1
PSAL Palomas, Salto 12.82 136 *e*P Pn 13 47 11.4 -5.9
PP1B Ponte de Pedra 13.11 72 *e*P **Pn 13 47 20.4 -0.8**
SALV Santo Antonio 13.16 64 *e*P **Pn 13 47 19.4 -2.4**
NNA Nana 13.21 319 P **Pn 13 47 23.7 +1.3**
comp=Z,24nm,0.8s,baz=128,slow=19,SNR=29
NNA S **Sn 13 49 42.7 -5.9**
comp=Z,19nm,0.6s,baz=296,slow=16,SNR=4.1
NNA Nana 13.21 319 Pn **Pn 13 47 22.6 +0.2**
NNA Nana 13.21 319 *i* P **Pn 13 47 23.9 +1.5**
TRCB Terra Rica 14.18 95 *e*P **Pn 13 47 33.6 -1.1**
C2SB Chapadao do Su 14.57 79 *e*P **Pn 13 47 39.7 +0.2**
BI02 San Fabin de 14.73 191 Pn **Pn 13 47 39.6 -2.0**
PTGB Pitanga 14.81 103 *e*P **Pn 13 47 43.0 +0.3**
VA04 Juan Fernndez 14.92 218 P **Pn 13 47 43.0 -0.8**
PDRB Porto dos Gac 15.01 47 *e*P **Pn 13 47 43.0 -2.2**
ITAB Concordia 15.24 113 *e*P **Pn 13 47 47.1 -0.8**
CPSB Cacapava Do Su 15.38 125 *e*P **Pn 13 47 48.5 -1.1**
LDASE Londrina, Braz 15.58 98 *e*P **Pn 13 47 51.1 -1.1**
PLTB Pedras Altas 15.96 130 Pn 13 47 55.3 -1.4
PLTB Pedras Altas 15.96 130 *e*P **Pn 13 47 50.3 -6.4**
CLB Colider 16.17 48 *e*P **Pn 13 47 59.4 -0.1**
ARAG Araguaiana, MT 16.57 70 *e*P **Pn 13 48 04.3 +0.1**
ITRB Iturama 16.62 85 *e*P **P 13 48 04.3 -0.4**
TRQA Tornquist 16.66 163 P **P 13 48 02.6 -2.3**
TRQA Tornquist 16.66 163 P **P 13 48 02.6 -2.3**
CNLB Canela 16.97 118 *e*P **P 13 48 04.9 -3.6**
FRTB Fartura 17.01 97 *e*P **Pn 13 48 09.5 -0.1**
GO06 Currarrehue 17.62 189 P 13 48 16.6 +1.0
MAJ01 Sao Joao Batis 17.97 111 *e*P **Pn 13 48 18.8 -0.7**
ATAH Atahualpa 18.02 324 P **Pn 13 48 22.1 +0.2**
comp=Z,16nm,0.8s,baz=175,slow=11,SNR=8.4
ATAH S **Sn 13 51 42.8 -1.8**
comp=Z,1.9nm,0.5s,baz=270,slow=20,SNR=1.1
BB19B Bebedouro 18.10 90 *e*P **P 13 48 21.1 +0.1**
PLCA Paso Flores 18.64 186 P **P 13 48 27.7 +0.9**
comp=Z,6.8nm,0.6s,baz=5.9,slow=13,SNR=32
PLCA S **S 13 51 53.8 +2.6**
comp=Z,1.8nm,0.9s,baz=344,slow=18,SNR=1.3
PLCA Paso Flores 18.64 186 P **P 13 48 26.7 -0.1**
PLCA Paso Flores 18.64 186 *e*P P 13 48 17.2 -10
TEFE Tefe 18.82 10 *e*P **P 13 48 23.8 -5.0**
SNDB Serra Nova Dou 18.86 60 *e*P **P 13 48 28.4 -0.8**
RCLB Rio Claro- Sao 18.91 95 *e*P **P 13 48 29.5 -0.2**

SPB Sao Paulo 18.97 98 *e*P **P 13 48 30.5 +0.2**
IPMB Ipameri, GO 19.01 81 *e*P **P 13 48 30.7 -0.2**
PET01 Itanhaem-SP 19.13 100 *e*P **P 13 48 32.0 -0.1**
NPGB Novo Progresso 19.33 41 *e*P **P 13 48 32.4 -2.0**
VAO Valinhos 19.40 96 P 13 48 34.1 -1.1
VAO Valinhos 19.40 96 *e*P **P 13 48 34.8 -0.4**
BDFB Brasilia 19.94 74 P **P 13 48 40.5 -0.6**
comp=Z,66nm,0.5s,baz=238,slow=9.1,SNR=68
BDFB S **S 13 52 13.9 -3.6**
comp=Z,12nm,0.7s,baz=184,slow=15,SNR=2.3
BDFB LR LR 13 56 59.6
comp=Z,222nm,20.0s,baz=258,slow=38
BDFB Brasilia 19.94 74 P 13 48 40.0 -1.1
MACA Manacapuru-AM 20.17 22 P 13 48 41.6 -1.8
MACA Manacapuru-AM 20.17 22 *e*P **P 13 48 40.9 -2.5**
PMNB Patos De Minas 20.50 84 *e*P **P 13 48 46.4 -0.5**
PARB Paraibuna 20.63 98 *e*P **P 13 48 48.0 -0.3**
MCRA Macar, Loja 21.17 325 P **P 13 48 55.3 +1.2**
comp=Z,75nm,1.3s
LL02 Futaleuf 21.22 188 P 13 48 54.0 -0.3
ITTB Itaituba 21.29 36 *e*P **P 13 48 53.2 -2.2**
BSCB Bom Sucesso 21.59 91 *e*P **P 13 48 57.1 -1.5**
SGC2 Sao Gabriel da 21.90 3 P **P 13 49 00.8 -1.0**
comp=Z,4µmcomp=Z,89nm,0.7s
AY01 Puyuhuapi 22.53 189 P 13 49 05.9 -1.8
AY01 IAmb IAmb 13 49 08.8
comp=Z,26nm,0.6s
DIAM Diamantina, MG 23.10 85 *e*P **P 13 49 12.9 -0.6**
JANB Januaria 23.48 77 *e*P **P 13 49 15.7 -1.1**
COYC Coyhaique 23.59 187 P 13 49 17.1 -0.4
COYC IAmb IAmb 13 49 19.1
comp=Z,31nm,0.6s
SMTB Santa Maria do 23.63 59 *e*P **P 13 49 18.3 +0.2**
PRPB Parauapebas 23.66 50 *e*P **P 13 49 16.9 -1.6**
DUB01 Friburgo-RJ 23.70 95 *e*P **P 13 49 17.9 -0.9**
SDBA SAO DESIDERIO 24.03 70 *e*P **P 13 49 20.7 -1.1**
BONI La Bonita 24.34 336 P **P 13 49 27.1 +2.2**
comp=Z,1µmcomp=Z,36nm,1.8s
CAM01 Campos-RJ 24.38 94 *e*P **P 13 49 23.9 -1.0**
OTAV Otavalo 24.50 334 *e*P P 13 49 16.9 -10
GARC Garzon, Huila 25.30 342 P **P 13 49 35.2 +1.7**
AY03 Cochrane 25.31 187 IAmb IAmb 13 49 37.1
comp=Z,18nm,0.7s
SJMB Sao Joao De Ma 25.31 87 *e*P **P 13 49 33.1 -0.3**
BOAV Boa Vista 25.47 18 P 13 49 35.1 +0.3
BOAV IAmb IAmb 13 49 36.4
comp=Z,65nm,1.2s
BOAV Boa Vista 25.47 18 P **P 13 49 35.7 +0.9**
comp=Z,51nm,1.4s
BOAV Boa Vista 25.47 18 *e*P **P 13 49 32.3 -2.5**
BBAC Balboa, Cauca 25.69 338 P **P 13 49 39.7 +2.6**
comp=Z,1µmcomp=Z,45nm,0.9s
RIB01 Linhares ES 25.92 89 *e*P **P 13 49 39.4 +0.5**
POPC Popayan, Colom 25.99 340 P **P 13 49 42.2 +2.4**
comp=Z,789nmcomp=Z,156nm,0.9s
ORTC Ortega, Tolima 26.88 344 P **P 13 49 49.0 +1.5**
comp=Z,48nm,0.9s
GUA01 Guaratinga, BA 27.11 83 *e*P **P 13 49 48.8 -0.7**
ROSC El Rosal 27.55 346 P **P 13 49 54.2 +0.3**
comp=Z,6.5nm,0.3s,baz=108,slow=19,SNR=1.6
comp=Z,6.5nm,0.3s
CMC01 Camacan, BA 27.74 81 *e*P **P 13 49 55.3 +0.2**
PAMC Pamplona, Colo 29.69 350 P **P 13 50 12.4 -0.5**
comp=Z,204nmcomp=Z,23nm,0.6s
EFI East Falkland 30.44 168 *i* P **P 13 50 18.8 +0.1**
EFI pmax pmax
comp=Z,35nm,1.4s
SDV Santo Domingo 30.97 355 LR LR 14 04 26.9
comp=Z,114nm,21.2s,baz=142,slow=39
SDV Santo Domingo 30.97 355 P 13 50 22.6 -1.3
SDV Santo Domingo 30.97 355 P **P 13 50 23.1 -0.8**
SDV Santo Domingo 30.97 355 *e*P **P 13 50 19.3 -4.6**
MDP Montagnes des 30.97 31 LR LR 14 04 03.8
comp=Z,171nm,18.0s,baz=313,slow=38
NBPS Pedro II - PI 31.17 59 *e*P **P 13 50 24.9 -0.8**
MG03 Isla Dawson 31.69 183 IAmb IAmb 13 50 32.0
comp=Z,26nm,0.7s
NBMO Morrinhos-CE 32.94 59 *e*P **P 13 50 40.6 -0.3**
NBPA Parau_RN 33.98 66 *e*P **P 13 50 49.3 -0.7**
RCBR Riachuelo 34.97 67 P **P 13 50 58.3 -0.3**
comp=Z,19nm,0.8s,baz=241,slow=17,SNR=24
comp=Z,19nm,0.8s
RCBR Riachuelo 34.97 67 P 13 50 56.4 -2.2
RCBR Riachuelo 34.97 67 *e*P **P 13 50 57.4 -1.2**
RCBR Riachuelo 34.97 67 P **P 13 50 58.8 +0.2**
NBPV Pedro Velho 35.20 69 *e*P **P 13 51 00.0 -0.5**
JTS Las Juntas de 36.31 331 *i* P **P 13 51 11.2 +1.3**
JTS pmax pmax
comp=Z,6.0nm,0.4s
CXM Morne La Croix 37.34 11 IAmb IAmb 13 51 20.0
comp=Z,130nm,0.4s
SVN Savane Anatole 37.38 11 P **P 13 51 18.8 -0.1**
RPN Rapa Nui 37.81 254 P **P 13 51 24.2 +1.7**
comp=Z,33nm,0.7s,baz=166,slow=4.2,SNR=4.1
RPN LR LR 14 03 54.5
comp=Z,140nm,18.4s,baz=175,slow=31
comp=Z,33nm,0.7s
RPN Rapa Nui 37.81 254 IAmb IAmb 13 51 28.8
comp=Z,243nm,1.6s
HOPE Hope Point 39.88 151 P **P 13 51 40.3 +1.0**
HOPE Hope Point 39.88 151 P **P 13 51 40.3 +1.0**
HOPE pmax pmax
comp=Z,150nm,0.9s
HOPE Hope Point 39.88 151 P **P 13 51 41.6 +2.3**
PDPR Patillas Dam, 39.98 3 P **P 13 51 38.7 -1.8**
CELP Cerrillos 40.02 2 P **P 13 51 39.1 -1.7**
PMSA Palmer Station 42.67 178 LR LR 14 10 24.2
comp=Z,150nm,18.7s,baz=298,slow=36
APG El Apazote 43.02 327 P **P 13 52 06.0 +0.3**
comp=Z,3.2nm,0.2s,baz=76,slow=18,SNR=1.8
comp=Z,3.2nm,0.2s
TEIG Tepich 46.57 333 P **P 13 52 32.5 -0.8**
TEIG IAmb IAmb 13 52 34.7
comp=Z,32nm,0.8s
CMIG Matias Romero 47.09 324 P **P 13 52 39.0 +1.5**
comp=Z,22nm,0.9s,baz=120,slow=5.3,SNR=16
comp=Z,22nm,0.9s
TLIG Tlapa 49.56 320 IAmb IAmb 13 52 59.9
comp=Z,35nm,0.8s
152A Waverly Hall 56.83 343 IAmb IAmb 13 53 50.1
comp=Z,15nm,0.7s
JSC Jeninsville 57.54 347 IAmb IAmb 13 53 55.9
comp=Z,22nm,1.0s
Y52A Lilburn 57.79 344 IAmb IAmb 13 53 57.0
comp=Z,17nm,0.8s
LRAL Lakeview Retre 57.82 341 IAmb IAmb 13 53 57.0
comp=Z,15nm,0.8s
W57A Gilead 58.14 348 IAmb IAmb 13 54 00.1
comp=Z,17nm,0.9s
PAULI Pauline 58.18 347 IAmb IAmb 13 54 00.1
comp=Z,14nm,0.7s
HKT Hockley 58.34 332 *i* P **P 13 54 01.4 +1.6**
HKT pmax pmax
comp=Z,7.0nm,0.9s
KMSC Kings Mountain 58.39 347 IAmb IAmb 13 54 02.0
comp=Z,26nm,1.0s
Y49A Blount Mountai 58.42 342 IAmb IAmb 13 54 00.7
comp=Z,16nm,0.6s
BG3 Lake Jocassee 58.59 346 IAmb IAmb 13 54 03.3
comp=Z,19nm,0.9s
V58A Windy Hill, Pi 58.60 349 IAmb IAmb 13 54 03.3
comp=Z,13nm,0.9s
FPAL Fort Paine 58.84 343 P **P 13 54 02.8 -0.5**
W52A Murphy 58.93 345 IAmb IAmb 13 54 05.3
comp=Z,22nm,1.0s
VNA3 Neumayer Olymp 59.17 161 ⇓P **P 13 54 06.7 +1.6**
comp=Z,21nm,0.8s
V53A Saluda 59.22 346 IAmb IAmb 13 54 07.0
comp=Z,16nm,0.7s
VNA1 Neumayer--Stat 59.37 160 ⇓P **P 13 54 08.1 +1.6**
comp=Z,18nm,0.8s
CPCT Cooper Cave 59.41 344 P **P 13 54 06.6 -0.6**
CPCT IAmb IAmb 13 54 08.5
comp=Z,27nm,0.9s
TKL Tuckaleechee C 59.43 345 P **P 13 54 07.5 +0.2**
comp=Z,27nm,0.8s,baz=163,slow=9.1,SNR=27
comp=Z,27nm,0.8s
T59A Double "B" Far 59.51 351 IAmb IAmb 13 54 09.4
comp=Z,13nm,0.9s
VNA2 Neumayer--Watz 59.73 161 ⇓P **P 13 54 10.7 +1.7**
comp=Z,22nm,0.7s,baz=278,slow=7.8
DRIO Del Rio 60.16 327 IAmb IAmb 13 54 51.8
comp=Z,22nm,1.1s
BLA Blacksburg 60.21 349 IAmb IAmb 13 54 15.7
comp=Z,25nm,0.8s
CLTN Cedars of Leba 60.49 343 IAmb IAmb 13 54 15.6

comp=Z,21nm,0.8s
S57A Dark Hollow, R 60.50 350 IAmb IAmb 13 54 16.5
comp=Z,29nm,1.3s
R58B Mineral 60.53 351 IAmb IAmb 13 54 16.3
comp=Z,16nm,0.7s
U49A Red Boiling Sp 60.74 344 P **P 13 54 15.5 -0.7**
WHTX Lake Whitney, 60.80 331 IAmb IAmb 13 54 56.1
comp=Z,43nm,1.4s
BRDY Brady 60.91 330 IAmb IAmb 13 54 19.0
comp=Z,12nm,0.8s
HPIG 60.94 321 IAmb IAmb 13 54 20.5
comp=Z,39nm,1.4s
WVT Waverly 60.95 342 P **P 13 54 17.6 -0.1**
WVT pP **pP 13 54 52.1 -2.1**
WVT x x 13 54 55.2
SLBS Sierra La Lagu 61.19 316 P **P 13 54 20.8 +1.2**
SLBS IAmb IAmb 13 54 23.2
comp=Z,14nm,0.8s
SLBS Sierra La Lagu 61.19 316 P **P 13 54 22.1 +2.4**
SLBS pP **pP 13 54 56.8 +0.6**
SLBS x x 13 54 59.8
SLBS sP **sP 13 55 14.7 +1.8**
S51A Beattyville 61.28 346 P **P 13 54 19.3 -0.5**
S51A IAmb IAmb 13 54 21.0
comp=Z,19nm,1.1s
SAND Sanderson 61.36 326 IAmb IAmb 13 54 22.7
comp=Z,23nm,1.1s
SNAA Sanae 61.37 161 ⇓P **P 13 54 21.7 +1.5**
comp=Z,402nm,0.6s
SNAA Sanae 61.37 161 P **P 13 54 21.9 +1.7**
comp=Z,19nm,0.7s,baz=280,slow=6.9,SNR=24
comp=Z,19nm,0.7s
SNAA Sanae 61.37 161 P **P 13 54 20.3 +0.2**
SNAA IAmb IAmb 13 54 22.5
comp=Z,19nm,0.7s
SNAA Sanae 61.37 161 *i* P **P 13 54 21.5 +1.4**
SNAA *i* *PP **pP 13 54 57.0 0.0**
SNAA pmax pmax
comp=Z,19nm,0.7s
MIAR Mount Ida 61.43 336 IAmb IAmb 13 54 22.4
comp=Z,37nm,1.3s
T47A Sharon Grove 61.55 343 P **P 13 54 21.1 -0.6**
WHAR Wooly Hollow 61.62 337 IAmb IAmb 13 54 23.3
comp=Z,13nm,0.8s
OZNA Ozona 61.64 328 IAmb IAmb 13 54 24.1
comp=Z,30nm,1.3s
TXAR Lajitas Array 61.68 325 P **P 13 54 24.0 +1.1**
comp=Z,3.7nm,0.7s,baz=150,slow=9.1,SNR=42
TXAR pP **pP 13 55 01.1 +1.8**
comp=Z,4.0nm,1.0s,baz=156,slow=5.6,SNR=5.0
comp=Z,3.7nm,0.7s
TXAR Lajitas Array 61.68 325 P **P 13 54 22.9 +0.1**
TXAR **pP 13 55 01.2 +1.8**
LPIG La Paz 61.72 316 P **P 13 54 24.1 +1.0**
comp=Z,15nm,0.3s,baz=117,slow=4.5,SNR=4.6
comp=Z,15nm,0.3s
LCAR Lake Charles 61.94 339 IAmb IAmb 13 54 25.2
comp=Z,16nm,0.9s
Q54A Coxs Mills 62.01 349 IAmb IAmb 13 54 26.2
comp=Z,23nm,0.7s
FCAR Ozark Folk Cen 62.11 338 IAmb IAmb 13 54 26.2
comp=Z,19nm,1.2s
R49A Shelbyville 62.27 345 IAmb IAmb 13 54 27.2
comp=Z,13nm,0.9s
ABTX Abilene, Hawle 62.33 330 IAmb IAmb 13 55 06.9
comp=Z,26nm,1.1s
MVL Millersville 62.34 353 IAmb IAmb 13 54 28.7
comp=Z,16nm,0.9s
ALPN Alpine 62.48 325 IAmb IAmb 13 55 07.6
comp=Z,25nm,1.4s
WCI Wyandotte Cave 62.49 344 P **P 13 54 27.4 -0.6**
WCI Wyandotte Cave 62.49 344 P **P 13 54 27.4 -0.6**
WCI pmax pmax
comp=Z,25nm,0.7s
CGM3 Cape Girardeau 62.58 341 IAmb IAmb 13 54 29.0
comp=Z,20nm,0.6s
TPB05 Hovey Rd 62.75 326 IAmb IAmb 13 54 32.0
comp=Z,17nm,0.9s
WTFS Witchita Falls 62.76 332 IAmb IAmb 13 54 31.4
comp=Z,23nm,0.8s
SIUC Southern Illin 62.83 341 IAmb IAmb 13 54 30.6
comp=Z,23nm,0.8s
TPB01 Permian Basin 63.01 326 IAmb IAmb 13 54 33.9
comp=Z,17nm,0.8s
TROLL Troll, Antarti 63.08 161 P **P 13 54 33.4 +1.8**
O54A Avella 63.10 349 IAmb IAmb 13 54 33.4
comp=Z,17nm,0.8s
HHAR Hobbs 63.11 337 IAmb IAmb 13 54 33.4
comp=Z,20nm,1.0s
APMT Aspermont 63.13 330 IAmb IAmb 13 54 34.0
comp=Z,17nm,0.9s
SSPA Standing Stone 63.16 352 P **P 13 54 32.8 +0.5**
X34A Smith Ranch, M 63.19 333 IAmb IAmb 13 54 34.3
comp=Z,12nm,0.8s
N58A Sunbury 63.21 353 IAmb IAmb 13 54 34.2
comp=Z,22nm,0.8s
TPB06 Permian Basin 63.27 327 IAmb IAmb 13 55 12.9
comp=Z,27nm,1.1s
MGMO Mountain Grove 63.30 338 IAmb IAmb 13 54 34.1
comp=Z,15nm,0.7s
SN07 Snyder 07 63.30 329 IAmb IAmb 13 54 34.8
comp=Z,22nm,0.7s
O53A New Philadelph 63.31 349 IAmb IAmb 13 55 13.5
comp=Z,34nm,1.1s
PECS Pecos 63.39 326 IAmb IAmb 13 55 13.9
comp=Z,18nm,1.3s
129A Stewart Farms, 63.39 328 IAmb IAmb 13 55 14.0
comp=Z,30nm,1.3s
RLO Rose Lookout 63.41 336 IAmb IAmb 13 54 35.2
comp=Z,13nm,0.8s
P48A Milroy 63.44 345 IAmb IAmb 13 54 34.3
comp=Z,39nm,1.3s
VHRN Van Horn 63.52 325 IAmb IAmb 13 54 36.7
comp=Z,18nm,0.7s
POST Post 63.57 329 IAmb IAmb 13 54 37.7
comp=Z,18nm,0.8s
128A Castleberry Fa 63.69 328 IAmb IAmb 13 54 37.4
comp=Z,6.3nm,0.7s
CCM Cathedral Cave 63.77 340 P **P 13 54 36.5 +0.1**
CCM x x 13 55 14.9
DKNS Dickens 63.79 330 IAmb IAmb 13 54 38.0
comp=Z,12nm,0.7s
KSPA Keystone Colle 63.81 353 IAmb IAmb 13 54 38.5
comp=Z,19nm,0.7s
Q44A Meyer Farm, Va 63.87 342 IAmb IAmb 13 55 16.6
comp=Z,31nm,1.0s
MNTX Cornudas Mount 64.44 325 IAmb IAmb 13 54 42.3
comp=Z,16nm,1.1s
BINY Binghamton 64.47 353 IAmb IAmb 13 54 42.6
comp=Z,21nm,0.8s
P40A Paris 65.37 340 IAmb IAmb 13 54 47.8
comp=Z,26nm,0.9s
NVL N'lazarevskaya 65.90 159 *e*P **P 13 54 49.8 0.0**
NVL pmax pmax
comp=Z,27nm,0.9s
319A Douglas 66.35 322 IAmb IAmb 13 54 56.4
comp=Z,33nm,1.0s
121A Cookes Peak, D 66.38 324 IAmb IAmb 13 54 57.0
comp=Z,42nm,1.2s
LONY Lake Ozonia 66.73 355 IAmb IAmb 13 54 57.1
comp=Z,15nm,0.7s
N38A Joes South For 66.90 339 IAmb IAmb 13 54 57.4
comp=Z,28nm,0.9s
Y22A Socorro 67.02 325 IAmb IAmb 13 55 00.6
comp=Z,37nm,1.9s
ANMO Albuquerque 67.54 326 P **P 13 55 02.6 +1.7**
comp=Z,11nm,0.8s,baz=123,slow=6.5,SNR=27
ANMO pP **pP 13 55 39.0 +0.6**
comp=Z,4.3nm,1.0s,baz=132,slow=11,SNR=2.8
comp=Z,11nm,0.8s
ANMO Albuquerque 67.54 326 P **P 13 55 01.9 +1.0**
ANMO PcP 13 55 02.4 -25
ANMO Albuquerque 67.54 326 pP 13 55 40.9 +2.5
ANMO Albuquerque 67.54 326 *de*P **P 13 55 02.1 +1.2**
ANMO pmax pmax
comp=Z,16nm,0.9s
ANMO Albuquerque 67.54 326 P **P 13 55 02.8 +1.9**
ANMO x x 13 55 40.2
ANMO x x 13 55 44.3
TUC Tucson 67.90 322 P **P 13 55 05.2 +2.2**
TUC pP **pP 13 55 40.5 0.0**
QSPA South Pole Qui 68.03 180 P **P 13 55 05.6 +2.1**
comp=Z,14nm,0.5s,baz=174,slow=0.7,SNR=190
QSPA pP **pP 13 55 42.0 +1.5**
comp=Z,4.5nm,0.7s,baz=150,slow=6.1,SNR=1.6
comp=Z,14nm,0.5s
QSPA South Pole Qui 68.03 180 P **P 13 55 05.5 +2.0**

QSPA lAmb lAmb 13 55 06.0
comp=Z,17nm,0.6s
QSPA South Pole Qui 68.03 180 P **P** **13 55 05.5 +2.0**
QSPA pP **pP** **13 55 42.1 +1.5**
QSPA sP **sP** **13 55 58.2 +0.7**
DBIC Dimbokro 68.08 73 P **P** **13 55 04.7 +0.2**
comp=Z,45nm,0.5s,baz=259,slow=6.8,SNR=76
comp=Z,45nm,0.5s
DBIC Dimbokro 68.08 73 P **P** **13 55 04.4 -0.1**
DBIC Dimbokro 68.08 73 P **P** **13 55 04.4 -0.1**
DBIC pmax pmax
comp=Z,91nm,1.0s
DBIC Dimbokro 68.08 73 P **P** **13 55 04.8 +0.3**
DBIC pP **pP** **13 55 39.9 -2.0**
D62A Allapoint, All 68.93 359 lAmb lAmb 13 55 11.2
comp=Z,16nm,0.8s
PIX Pinacate 68.94 319 P **P** **13 55 09.1 -0.4**
PIX lAmb lAmb 13 55 12.5
comp=Z,22nm,1.1s
SDCO Great Sand Dun 69.27 329 lAmb lAmb 13 55 14.6
comp=Z,20nm,0.9s
W18A Petrified Fore 69.40 324 lAmb lAmb 13 55 15.5
comp=Z,33nm,1.1s
ELIB Princess Elisa 69.52 161 *d*P **P** **13 55 12.0 -0.6**
comp=Z,13nm,0.6s
X16A Lo Mia Camp, P 69.82 323 lAmb lAmb 13 55 18.5
comp=Z,19nm,1.1s
113A Mohawk Valley, 69.98 320 P **P** **13 55 17.0 +1.2**
Q24A Divide 70.08 330 lAmb lAmb 13 55 19.4
comp=Z,22nm,0.9s
VTX Valle De La Tr 70.26 318 lAmb lAmb 13 55 21.0
comp=Z,26nm,1.3s
OGNE Ogallala 70.32 333 lAmb lAmb 13 55 20.1
comp=Z,17nm,0.7s
MVCO Mesa Verde 70.33 327 lAmb lAmb 13 55 21.1
comp=Z,24nm,0.9s
WUAZ Wupatki 70.59 324 lAmb lAmb 13 55 23.2
comp=Z,29nm,0.9s
ECSD EROS Data Cent 70.66 338 lAmb lAmb 13 55 21.1
comp=Z,37nm,1.4s
SPMN Marine on St. 70.79 342 lAmb lAmb 13 55 21.4
comp=Z,25nm,0.9s
GLA Glamis 70.81 320 P **P** **13 55 21.2 +0.3**
GLA Glamis 70.81 320 P **P** **13 55 21.2 +0.3**
GLA pmax pmax
comp=Z,16nm,1.1s
PV01 Paradox Valley 71.08 327 lAmb lAmb 13 55 25.9
comp=Z,19nm,1.0s
BLYC Blythe 71.12 320 lAmb lAmb 13 55 26.2
comp=Z,26nm,1.1s
PV15 Paradox Valley 71.19 327 lAmb lAmb 13 55 26.8
comp=Z,34nm,1.0s
PV02 Paradox Valley 71.22 327 lAmb lAmb 13 55 26.6
comp=Z,58nm,1.5s
PV13 Radium Mtn., P 71.22 327 lAmb lAmb 13 55 26.5
comp=Z,19nm,1.0s
PV05 Paradox Valley 71.30 327 lAmb lAmb 13 55 26.7
comp=Z,21nm,1.1s
PV18 Skein Mesa, Pa 71.33 327 lAmb lAmb 13 55 27.1
comp=Z,22nm,1.1s
PV19 Morning Glory 71.42 327 lAmb lAmb 13 55 27.5
comp=Z,26nm,1.3s
PV20 West Nyswonger 71.44 327 lAmb lAmb 13 55 27.5
comp=Z,21nm,1.1s
PV22 Blue Mesa, Par 71.50 327 lAmb lAmb 13 55 28.1
comp=Z,21nm,1.0s
PV10 Paradox Valley 71.50 327 lAmb lAmb 13 55 27.6
comp=Z,26nm,1.0s
PV23 Carpenter Ridg 71.54 327 lAmb lAmb 13 55 28.3
comp=Z,22nm,1.0s
BC3 Big Chuckawall 71.61 320 P **P** **13 55 28.3 +2.5**
BC3 lAmb lAmb 13 55 29.1
comp=Z,23nm,1.2s
E38A The Farm, Brul 71.70 343 lAmb lAmb 13 55 27.5
comp=Z,28nm,1.2s
U15A North Rim 71.76 324 lAmb lAmb 13 55 30.6
comp=Z,19nm,1.0s
IRM Iron Mountain 71.77 320 lAmb lAmb 13 55 30.1
comp=Z,24nm,1.3s
HMU Henry Mountain 72.04 326 lAmb lAmb 13 55 32.1
comp=Z,31nm,1.2s
PFO Pinyon Flats O 72.19 319 P **P** **13 55 31.5 +2.3**
comp=Z,7.1nm,1.0s,baz=139,slow=2.2,SNR=4.9
PFO pP **pP** **13 56 07.0 0.0**
comp=Z,3.1nm,0.8s,baz=298,slow=6.2,SNR=2.2
comp=Z,7.1nm,1.0s
PFO Pinyon Flats O 72.19 319 lAmb lAmb 13 55 32.8
comp=Z,14nm,1.2s
PFO Pinyon Flats O 72.19 319 *i* P **P** **13 55 30.3 +1.1**
PFO pmax pmax
comp=Z,11nm,1.0s
F33A 5 Mile Ranch, 72.41 340 lAmb lAmb 13 55 31.1
comp=Z,19nm,0.7s
O20A White River Ci 72.46 329 lAmb lAmb 13 55 33.9
comp=Z,35nm,0.9s
KNB Kanab 72.48 324 lAmb lAmb 13 55 34.9
comp=Z,48nm,1.1s
SRU San Rafael Swe 72.81 327 lAmb lAmb 13 55 35.8
comp=Z,25nm,0.9s
EYMN Ely 72.92 344 lAmb lAmb 13 55 34.2
comp=Z,18nm,0.8s
TBO Thunder Bay 73.06 345 lAmb lAmb 13 55 35.4
comp=Z,21nm,1.0s
P18A Preston Nutter 73.06 327 lAmb lAmb 13 55 37.7
comp=Z,25nm,0.9s
CCUT Cedar City 73.16 324 lAmb lAmb 13 55 39.1
comp=Z,24nm,1.0s
P17A Butcher Ranch, 73.19 327 lAmb lAmb 13 55 38.2
comp=Z,30nm,1.0s
RDMU Red Mountain 73.44 328 lAmb lAmb 13 55 39.3
comp=Z,20nm,0.9s
GSC Goldstone, Bar 73.55 320 lAmb lAmb 13 55 40.7
comp=Z,30nm,1.5s
K22A Casper 73.65 331 lAmb lAmb 13 55 40.5
comp=Z,21nm,1.1s
RSSD Black Hills 73.78 334 P **P** **13 55 39.2 +0.7**
RSSD lAmb lAmb 13 55 41.1
comp=Z,20nm,0.9s
RSSD Black Hills 73.78 334 P **P** **13 55 39.2 +0.7**
RSSD pmax pmax
comp=Z,20nm,0.9s
RSSD Black Hills 73.78 334 P **P** **13 55 40.2 +1.7**
BSUT Blindstream Ca 74.01 327 lAmb lAmb 13 55 43.3
comp=Z,18nm,0.8s
CCCA Chr Cany lake 74.04 320 lAmb lAmb 13 57 49.2
comp=Z,24nm,0.8s
LRMC Laurel Mtn Rad 74.19 320 lAmb lAmb 13 55 44.3
comp=Z,62nm,2.0s
FURC Furnace Creek, 74.38 321 lAmb lAmb 13 55 45.5
comp=Z,24nm,1.1s
AGMN Agassiz Nation 74.47 341 lAmb lAmb 13 55 43.6
comp=Z,23nm,0.9s
S11A Rachel 74.56 322 lAmb lAmb 13 55 47.2
comp=Z,53nm,1.8s
EPLO Experimental L 75.10 343 lAmb lAmb 13 55 47.1
comp=Z,31nm,0.9s
PDAR Pinedale Array 75.13 330 P **P** **13 55 47.8 +1.4**
comp=Z,2.5nm,0.7s,baz=140,slow=7.1,SNR=20
comp=Z,2.5nm,0.7s
PDAR Pinedale Array 75.13 330 P **P** **13 55 46.9 +0.6**
HWUT Hardware Ranch 75.21 328 lAmb lAmb 13 55 49.4
comp=Z,25nm,1.3s
VES Vestal, Richgr 75.28 319 lAmb lAmb 13 55 50.2
comp=Z,47nm,1.2s
SPUT South Promonto 75.43 327 lAmb lAmb 13 55 50.9
comp=Z,20nm,1.0s
AHID Auburn Hatcher 75.86 329 lAmb lAmb 13 55 53.1
comp=Z,28nm,0.9s
ULM Lac du Bonnet 76.22 342 P **P** **13 55 52.5 +0.5**
comp=Z,25nm,0.6s,baz=149,slow=6.0,SNR=49
comp=Z,25nm,0.6s
ULM Lac du Bonnet 76.22 342 lAmb lAmb 13 55 53.3
comp=Z,27nm,0.6s
MOOW Moose Ponds 76.44 330 lAmb lAmb 13 55 56.5
comp=Z,54nm,1.9s
ELK Elko 76.47 325 P **P** **13 55 55.3 +1.3**
comp=Z,6.5nm,0.9s,baz=126,slow=5.4,SNR=3.0
comp=Z,6.5nm,0.9s
NVAR Mina Array Bea 76.56 322 P **P** **13 55 56.9 +2.3**
comp=Z,4.3nm,0.9s,baz=156,slow=7.1,SNR=20
NVAR pP **pP** **13 56 34.5 +1.7**
comp=Z,3.2nm,0.9s,baz=149,slow=6.3,SNR=4.9
comp=Z,4.3nm,0.9s
NVAR Mina Array Bea 76.56 322 P **P** **13 55 55.9 +1.3**
FLWY Flagg Ranch 76.67 330 lAmb lAmb 13 55 58.4
comp=Z,29nm,0.9s
SCHQ Schefferville 76.69 1 P **P** **13 55 55.1 +0.5**
comp=Z,1.2nm,0.3s,baz=220,slow=5.3,SNR=6.1
SCHQ pP **pP** **13 56 34.4 +1.4**
comp=Z,4.0nm,0.7s,baz=121,slow=3.1,SNR=2.8
comp=Z,1.2nm,0.3s
SCHQ Schefferville 76.69 1 lAmb lAmb 13 56 41.8
comp=Z,46nm,1.9s
TORD Torodi Ar. Bea 76.75 70 P **P** **13 55 55.8 0.0**
comp=Z,73nm,0.4s,baz=256,slow=4.4,SNR=546
TORD pP **pP** **13 56 34.0 +0.1**
comp=Z,11nm,1.0s,baz=259,slow=8.4,SNR=1.1
TORD Torodi Ar. Bea 76.75 70 P **P** **13 55 55.8 0.0**
LAO LASA Array 76.76 334 lAmb lAmb 13 55 57.9
comp=Z,29nm,1.1s
YNE Yellowstone No 77.06 331 lAmb lAmb 13 56 00.2
comp=Z,30nm,0.9s
YMR Madison River 77.24 330 lAmb lAmb 13 56 02.0
comp=Z,29nm,1.1s
YHB Horse Butte 77.41 330 lAmb lAmb 13 56 02.6
comp=Z,20nm,0.9s
YHL Hebgen Lake 77.48 330 lAmb lAmb 13 56 03.3
comp=Z,51nm,1.6s
PNTR Pine Nut 77.75 321 lAmb lAmb 13 56 04.6
comp=Z,19nm,0.8s
PAHR Pah Rah Range 78.04 322 lAmb lAmb 13 56 06.1
comp=Z,36nm,0.8s
HLID Hailey 78.07 327 lAmb lAmb 13 56 06.4
comp=Z,24nm,0.8s
DLMT Dillon 78.52 330 lAmb lAmb 13 56 08.4
comp=Z,35nm,1.4s
MFID Camas Ranch 78.68 327 lAmb lAmb 13 56 09.5
comp=Z,28nm,1.4s
TSUM Tsumeb 79.01 106 P **P** **13 56 09.0 +0.5**
TSUM lAmb lAmb 13 56 11.0
comp=Z,32nm,0.8s
TSUM Tsumeb 79.01 106 P **P** **13 56 10.2 +1.7**
ORV Oroville 79.17 321 lAmb lAmb 13 56 11.9
comp=Z,31nm,1.1s
EGMT Eagleton 79.29 333 lAmb lAmb 13 56 11.5
comp=Z,23nm,1.1s
PLID Pearl Lake 79.96 328 lAmb lAmb 13 56 16.0
comp=Z,26nm,0.9s
HATC Hat Creek Radi 79.97 322 lAmb lAmb 13 56 15.7
comp=Z,27nm,0.8s
J08A Circle Bar Ran 80.02 325 lAmb lAmb 13 56 16.6
comp=Z,39nm,1.5s
BMO Blue Mountains 80.45 327 lAmb lAmb 13 56 18.5
comp=Z,22nm,1.1s
M03C McCloud 80.64 322 lAmb lAmb 13 56 18.7
comp=Z,21nm,0.8s
KHBM Hayfork Bally 80.89 321 lAmb lAmb 13 56 21.0
comp=Z,22nm,1.0s
K05A Summer Lake 80.90 323 lAmb lAmb 13 56 21.5
comp=Z,35nm,0.9s
K04D Chiloquin, OR 81.31 323 lAmb lAmb 13 56 23.0
comp=Z,29nm,0.9s
L04D Klamath Falls 81.36 322 lAmb lAmb 13 56 22.8
comp=Z,24nm,1.3s
MD01 Midelt array s 81.42 49 P **P** **13 56 20.5 -0.5**
PINE Pine Mountain 81.63 324 lAmb lAmb 13 56 25.3
comp=Z,30nm,0.8s
PBDV Barranco-do-Ve 81.75 44 *e*P **P** **13 56 21.4 -1.1**
PCVE Castro Verde 81.91 44 *e*P **P** **13 56 24.2 +0.9**
J04A Umpqua Nationa 81.91 323 lAmb lAmb 13 56 26.1
comp=Z,29nm,0.8s
MESJ Messejana 81.91 44 *e*P **P** **13 56 24.8 +1.4**
FFC Flin Flon 81.94 341 P **P** **13 56 23.9 +0.8**
FFC Flin Flon 81.94 341 P **P** **13 56 23.9 +0.8**
FFC pmax pmax
comp=Z,13nm,1.2s
FFC Flin Flon 81.94 341 P **P** **13 56 23.8 +0.7**
I05D Terrebonne, OR 82.21 324 lAmb lAmb 13 56 27.9
comp=Z,28nm,0.7s
PBEJ Beja 82.25 44 *e*P **P** **13 56 24.6 -0.5**
WIFE Three Sisters- 82.29 324 lAmb lAmb 13 56 28.3
comp=Z,19nm,0.8s
BOSA Boshof 82.36 118 P **P** **13 56 27.1 +1.0**
comp=Z,9.3nm,0.4s,baz=266,slow=4.0,SNR=39
comp=Z,9.3nm,0.4s
BOSA Boshof 82.36 118 P **P** **13 56 26.2 0.0**
BOSA lAmb lAmb 13 56 28.8
comp=Z,38nm,1.2s
BOSA Boshof 82.36 118 P **P** **13 56 26.2 0.0**
BOSA pmax pmax
comp=Z,38nm,1.3s
BOSA Boshof 82.36 118 P **P** **13 56 27.4 +1.2**
BOSA pP **pP** **13 57 05.0 0.0**
K02D Willamette Mer 82.44 322 lAmb lAmb 13 56 29.1
comp=Z,23nm,1.0s
PARRA Arriolos 82.60 43 *e*P **P** **13 56 27.8 +0.9**
PMTG Montargil 82.63 43 *e*P **P** **13 56 27.8 +0.7**
HAWA Hanford 82.64 327 lAmb lAmb 13 56 29.8
comp=Z,14nm,0.8s
CCD Concordia, Ant 82.69 183 P **P** **13 56 29.3 +2.0**
CCD x x 13 56 43.5
CCD x x 13 56 48.2
CCD x x 13 57 09.3
CCD sP **sP** **13 57 22.2 -0.3**
D08A Wollman Farm, 82.79 328 lAmb lAmb 13 56 30.5
comp=Z,30nm,1.5s
G05A Wamic 82.80 325 lAmb lAmb 13 56 31.2
comp=Z,26nm,1.1s
PBAR Barrocos 82.86 44 *e*P **P** **13 56 29.3 +1.0**
WAH2 Wahluke Slope 82.91 327 lAmb lAmb 13 56 31.0
comp=Z,33nm,1.4s
BUCK Buck Mountain 83.02 324 lAmb lAmb 13 56 31.4
comp=Z,29nm,0.9s
HOOD Mount Hood Mea 83.03 325 lAmb lAmb 13 56 35.0
comp=Z,18nm,0.9s
PCAS Casmilo, Conde 83.04 42 *e*P **P** **13 56 29.1 0.0**
EPH Ephrata 83.33 328 lAmb lAmb 13 56 33.5
comp=Z,12nm,0.9s
PMRV Marv??o 83.37 43 *e*P **P** **13 56 30.9 +0.1**
I02E Swisshome, OR 83.44 323 lAmb lAmb 13 56 34.0
comp=Z,20nm,0.8s
MAW Mawson 83.44 163 P **P** **13 56 32.5 +1.7**
comp=Z,8.3nm,0.5s,baz=228,slow=5.8,SNR=9.8
comp=Z,8.3nm,0.5s
MAW Mawson 83.44 163 P **P** **13 56 32.1 +1.3**
MAW Mawson 83.44 163 P **P** **13 56 32.1 +1.3**
MAW pmax pmax
comp=Z,5.0nm,1.1s
PCBR Castelo Branco 83.55 42 *e*P **P** **13 56 32.5 +0.8**
MTE Manteigas 83.84 42 *e*P **P** **13 56 34.0 +0.7**
LBTB Lobatse 83.94 114 P **P** **13 56 35.1 +0.7**
LBTB lAmb lAmb 13 56 36.5
comp=Z,33nm,0.8s
LBTB Lobatse 83.94 114 P **P** **13 56 35.1 +0.7**
LBTB pmax pmax
comp=Z,33nm,0.9s
LBTB Lobatse 83.94 114 P **P** **13 56 35.8 +1.5**
D05A Enumclaw 84.43 326 lAmb lAmb 13 56 38.2
comp=Z,21nm,0.9s
MVO Moncorvo 84.60 42 *e*P **P** **13 56 38.5 +1.4**
EDM Edmonton 84.74 335 lAmb lAmb 13 57 20.0
comp=Z,21nm,1.0s
PAB San Pablo 85.37 44 P **P** **13 56 40.9 -0.1**
PAB lAmb lAmb 13 56 43.1
comp=Z,19nm,0.9s
PAB San Pablo 85.37 44 P **P** **13 56 40.9 -0.1**
PAB pmax pmax
comp=Z,19nm,1.0s
NLWA Neilton Lookou 85.54 326 lAmb lAmb 13 56 44.3
comp=Z,22nm,1.2s
ESDC Sonseca Array 85.69 44 P **P** **13 56 44.1 +1.6**
comp=Z,9.6nm,1.1s,baz=238,slow=5.6,SNR=26
ESDC pP **pP** **13 57 23.5 +2.1**
comp=Z,3.0nm,1.1s,baz=250,slow=5.3,SNR=2.9
comp=Z,9.6nm,1.1s
ESDC Sonseca Array 85.69 44 P **P** **13 56 42.4 -0.2**
YKAW1 Yellowknife Wh 92.06 340 lAmb lAmb 13 57 14.1
comp=Z,14nm,0.8s
YKA Yellowknife Ar 92.11 340 P **P** **13 57 13.3 +1.1**
comp=Z,6.7nm,0.7s,baz=135,slow=3.7,SNR=154
YKA pP **pP** **13 57 53.9 +2.4**
comp=Z,2.8nm,0.8s,baz=140,slow=3.6,SNR=4.6
YKA PP **PP** **14 00 55.2 +0.6**
comp=Z,0.2nm,0.8s,baz=126,slow=7.5,SNR=3.8
comp=Z,6.7nm,0.7s
YKA Yellowknife Ar 92.11 340 P **P** **13 57 13.1 +0.9**
DLBC Dease Lake 95.20 332 P **P** **13 57 27.4 +0.8**
comp=Z,3.4nm,0.9s,baz=135,slow=10.0,SNR=4.2
comp=Z,3.4nm,0.9s
KHC Kasperske Hory 101.14 41 *i* P **Pdif** **13 57 54.2 +0.7**
KHC pmax pmax
comp=Z,2.0nm,1.0s
ILAR Eielson Array 105.22 334 PP **PKiKP** **14 02 26.4 +1.9**
comp=Z,0.3nm,0.8s,baz=105,slow=6.5,SNR=4.4
MNK Minsk 111.08 38 *i* P **Pdif** **13 58 38.7 +1.1**
comp=E,27nm,1.0s
MNK *i* P **Pdif** **13 58 38.7 +1.1**
comp=N,15nm,0.8s
MNK *i* P **Pdif** **13 58 38.7 +1.1**
comp=Z,12nm,0.5s,baz=261
MNK *i* pP **pPdif** **13 59 16.8 -0.2**
MNK *i* PP **PP** **14 03 17.8 +0.6**
MNK *i* PPP PPP 14 05 39.2
MNK *i* SKS **SKSdf** **14 09 35.4 +1.6**
MNK *i* SS **SS** **14 18 38.7 +1.0**
MNK *i* SSS SSS 14 22 48.6
MNK *i* LR LR 14 51 10.3
MNK Minsk 111.08 38 *i* P **Pdif** **13 58 38.6 +1.1**
MNK *i* 14 03 17.8
MNK *i* PPP PPP 14 05 39.1
MNK *i* 14 09 35.3
MNK *i* SS SS 14 18 38.6 +1.0
MNK *i* SSS SSS 14 22 48.5
MNK pmax pmax
comp=N,15nm,0.8s
MNK pmax pmax
comp=Z,12nm,0.5s
MNK pmax pmax
comp=E,27nm,1.0s
BRTR Keskin Array B 112.49 55 PP **PP** **14 03 22.6 -5.4**
comp=E,0.8nm,0.6s,baz=248,slow=6.5,SNR=4.7
ANN Anapa 116.01 50 *i* PKiKP **PKiKP** **14 02 46.6 +1.1**
ANN pmax pmax
comp=Z,44nm,1.0s
OBN Obninsk 116.14 38 *i* PKiKP **PKiKP** **14 02 47.6 +2.2**
OBN pmax pmax
comp=Z,5.0nm,0.9s
KIV Kislovodsk 119.70 51 *e*PKiKP **PKiKP** **14 02 54.6 +1.7**
KIV pmax pmax
comp=Z,4.0nm,1.0s
BELG Belogornoye 122.80 41 *i* PKiKP **PKiKP** **14 02 58.7 +0.2**
BILL Bilibino 123.46 339 *i* PKiKP **PKiKP** **14 03 00.3 +0.8**
BILL pmax pmax
comp=Z,1.0nm,0.9s
ARTI Arti 128.12 35 *i* PKiKP **PKiKP** **14 03 10.7 +1.6**
ARTI 14 05 18.9
ARTI 14 10 07.1
ARTI SS SS 14 22 20.2 +4.2
ASAR Alice Springs 129.72 206 PKhKP PKPpre 14 03 00.5
comp=Z,0.1nm,0.4s,baz=122,slow=1.0,SNR=5.4
ASAR PKP **PKiKP** **14 03 13.6 +0.1**
comp=Z,2.6nm,0.7s,baz=130,slow=1.7,SNR=38
ASAR pPKP pPKPdf 14 03 55.3 +1.6
comp=Z,2.7nm,1.0s,baz=153,slow=2.9,SNR=3.5
ASAR PP **PP** **14 05 24.6 +0.8**
comp=Z,0.2nm,0.3s,baz=57,slow=9.0,SNR=8.7
ASAR SKPbc SKPbc 14 06 23.2 +2.0
comp=Z,1.7nm,0.9s,baz=150,slow=4.6,SNR=8.8
ASAR Alice Springs 129.72 206 **PKPdf** **14 03 13.2 +0.6**
SEY Seymchan 131.05 337 *c* *i* PKiKP **PKiKP** **14 03 16.5 +1.8**
SEY pmax pmax
comp=Z,4.0nm,1.0s
WRA Warramunga Arr 132.82 209 PKhKP PKPpre 14 03 07.5
comp=Z,0.2nm,0.5s,baz=166,slow=1.3,SNR=9.2
WRA PKP **PKiKP** **14 03 19.8 0.0**
comp=Z,2.0nm,0.4s,baz=162,slow=1.8,SNR=44
WRA SKPbc **SKPab** **14 06 34.2 +0.3**
comp=Z,4.1nm,1.1s,baz=156,slow=3.1,SNR=11
PETK Petropavlovsk- 133.62 323 PKhKP PKPpre 14 03 09.8
comp=Z,1.7nm,0.8s,baz=79,slow=2.7,SNR=9.8
PETK PKP **PKiKP** **14 03 20.4 +0.1**
comp=Z,0.8nm,0.5s,baz=89,slow=5.6,SNR=5.6
BVAR Borovoye Array 135.83 35 PKP **PKPdf** **14 03 23.8 +0.7**
comp=Z,1.1nm,0.7s,baz=329,slow=1.7,SNR=5.7
YAK Yakutsk 138.35 348 *i* PKiKP **PKPdf** **14 03 27.5 0.0**
CHGR Chuyangaron 139.92 56 *i* PKiKP **PKPdf** **14 03 31.8 +0.6**
KURK Kurchatov 141.39 34 *c* *i* PKiKP **PKiKP** **14 03 37.0 +0.8**
KURK pmax pmax
comp=Z,4.0nm,1.7s
KURBB Kurchatov Arra 141.40 34 PKhKP PKPpre 14 03 29.9
comp=Z,0.4nm,0.4s,baz=306,slow=3.0,SNR=8.2
KURBB SKPbc **SKPbc** **14 06 54.5 -2.0**
comp=Z,0.8nm,0.8s,baz=291,slow=3.5,SNR=4.6
ZALV Zalesovo Beam 142.17 26 PKhKP PKPpre 14 03 30.6
comp=Z,0.7nm,0.4s,baz=322,slow=2.3,SNR=5.9
ZALV pPKP pPKPdf 14 04 18.2 +2.3
comp=Z,2.4nm,0.7s,baz=270,slow=1.6,SNR=2.3
ZALV SKPbc **SKPbc** **14 06 57.9 -0.5**
comp=Z,3.3nm,0.7s,baz=300,slow=3.3,SNR=7.0
AAK Ala-Archa 142.70 48 PKiKP **PKPdf** **14 03 34.8 -1.4**
AAK Ala-Archa 142.70 48 PKiKP **PKPdf** **14 03 34.8 -1.4**
KSH2 Kashi 144.63 53 PKP **PKPdf** **14 03 40.0 +0.3**
KSH2 pPKP pPKPdf 14 04 24.0 +2.9
KSH2 PP **PP** **14 06 58.1 +0.2**
KSH2 LR LR
comp=N,2μm,22.3s
KSH2 LR LR
comp=E,2μm,20.6s
KSH2 LR LR
comp=Z,3μm,20.3s
YSS Yuzhno-Sakhali 145.00 322 *c* *i* PKiKP **PKiKP** **14 03 42.1 -1.6**
YSS pmax pmax
comp=Z,52nm,1.7s
MK31 Makanchi Array 145.64 37 *c* *i* PKP2 **PKPab** **14 03 43.6 +1.5**
MKAR Makanchi Array 145.64 37 PKPbc **PKPbc** **14 03 41.5 0.0**
comp=Z,4.7nm,0.4s,baz=343,slow=2.9,SNR=174
MKAR pPKPbc pPKPab 14 04 22.8 +0.6
comp=Z,6.7nm,0.8s,baz=300,slow=2.7,SNR=3.9
MKAR SKPbc **SKPbc** **14 07 06.6 -0.3**
comp=Z,1.3nm,0.9s,baz=316,slow=3.3,SNR=3.8
GRNR Gornyy 145.68 332 *i* PKP2 **PKPab** **14 03 43.3 +1.3**
GRNR pmax pmax
comp=Z,9.0nm,0.7s
DGZ Jazzator, Alta 146.36 29 *i* PKP2 **PKPab** **14 03 44.4 -0.5**
DGZ pmax pmax
comp=Z,2.0nm,0.9s
ZEA Zeya 146.42 344 *e*PKP2 **PKPab** **14 03 45.0 +0.2**
ZEA pmax pmax
comp=Z,10.0nm,1.3s
HYB Hyderabad 148.18 92 *e*PKPdf **PKPdf** **14 03 44.6 -1.4**
HYB *e*PKiKP **PKPbc** **14 03 50.3 +0.8**
KLR Kul'dur 148.80 335 *i* PKiKP **PKPdf** **14 03 46.2 +0.1**
KLR pmax pmax
comp=Z,6.0nm,1.0s
KNGR Kungurtug, Tuv 149.42 18 *i* PKHKP PKPpre 14 03 51.3
HEH HeiHe 149.47 340 PKPbc **PKiKP** **14 03 52.8 0.0**
WMQ Urumqi 150.47 37 *e*PKPbc **PKPdf** **14 03 49.4 +0.3**
WMQ PKPab **PKPab** **14 04 03.5 +1.9**
WMQ sPKP sPKPdf 14 04 39.7 -6.4
WMQ LR LR
comp=E,2μm,24.1s
USRK Ussuriysk Ar. 152.54 328 PKPbc **PKiKP** **14 03 59.9 +0.6**
comp=E,2.7nm,0.5s,baz=88,slow=2.5,SNR=7.2
MJAR Matsushiro Arr 153.17 308 PKPbc **PKiKP** **14 04 01.2 +0.2**
comp=E,3.7nm,0.7s,baz=73,slow=1.5,SNR=6.1
MJAR PKPab **PKPab** **14 04 14.0 +0.9**
comp=E,3.7nm,0.9s,baz=137,slow=1.3,SNR=5.3
BNX BinXian 153.35 336 ‖P **PKPdf** **14 03 53.3 +0.1**
BNX pmax pmax
comp=Z,5.0nm,2.2s
SONM Songino Array 153.99 9 PKP **PKPdf** **14 03 50.1 -4.1**
comp=Z,0.1nm,0.3s,baz=158,slow=4.3,SNR=3.9
SONM PKPbc **PKiKP** **14 04 03.7 +1.3**
comp=Z,0.8nm,0.4s,baz=286,slow=1.1,SNR=7.0
SONM PKPab **PKPab** **14 04 17.0 +0.8**
comp=Z,0.9nm,0.4s,baz=311,slow=2.3,SNR=3.7
CN2 Changchun 155.73 336 *e*P **PKPdf** **14 03 54.0 -2.5**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
GTA2 Gaotai 159.80 28 PKP **PKPab** **14 04 43.1 +1.5**
HHC Hu-ho-hao-te 161.37 1 *e*P **PKPdf** **14 03 59.0 -4.5**
LZH Lanzhou 164.40 25 *e*P **PKPdf** **14 04 01.7 -5.0**
LZH pmax pmax
comp=Z,18nm,1.3s
CMAR Chiang Mai Arr 167.17 104 PKPab **PKPab** **14 05 15.6 +1.0**
comp=Z,1.6nm,0.6s,baz=249,slow=5.5,SNR=11
NJ2 Nanjing 168.44 330 *e*P **PKPdf** **14 04 09.6 -0.1**
NJ2 pmax pmax
comp=Z,41nm,0.5s
CD2 Chengdu 168.57 39 PKP **PKPdf** **14 04 08.0 -1.9**
PZH PanZhiHua 169.67 63 PKP **PKPdf** **14 04 07.1 -3.7**

*BJI **10** 14:06:19.0, 6˙.42S× 103˙.07E, h26km, mB5.7/68, mb5.5/90, Ms5.8/97, Ms7 5.8/92*
*MOS **10** 14:06:25.9± 1.0, 5˙.63S× 103˙.15E, h31km, mb5.7/67, MS5.3/37, Error ellipse: s-maj=8.0km s-min=4.3km az=114.4*
*IDC **10** 14:06:25.0± 1.6, 5˙.71S× 103˙.09E, h16km± 9km, mb5.1/34,*

mbtmp5.2/35,ML4.5/1,MS5.3/69,Error ellipse: s-maj=14.4km s-min=9.9km az=60.0

ISC-PP ***10*** *14:06:26,5.84S×103.02E,h28km,Mwppsm6.1,Moment Tensor Solution. s48 Moment tensor: Scale 10^{18}Nm; M_{rr}0.32±.16; $M_{\theta\theta}$-0.47±.17; $M_{\phi\phi}$-0.53±.18; $M_{r\theta}$0.15±.12; $M_{\theta\phi}$-0.25±.17; $M_{r\phi}$0.34±.18; Fault plane solution: M_{o}1.95000×10^{18} NP1:ϕ_s310.80000°,δ32.40000°, λ79.70000°. NP2:ϕ_s143.00000°,δ58.20000°,λ96.50000°.*

PTWC ***10*** *14:06:26,6.10S×102.80E,h57km,Mwp5.7/10*

IPGP ***10*** *14:06:26.0,5.88S×102.94E,h34km,Mw5.6, Fault plane solution: NP1:ϕ_s336.00000°,δ23.00000°,λ119.00000°. NP2:ϕ_s125.00000°,δ70.00000°,λ78.00000°.*

NEIC ***10*** *14:06:26.7±1.6,5.84S±0.06×103.02E±0.08,h26km±3km, mb5.6/162,Ms_20 5.6/399,Mwb5.6/69,Mww5.7/25,Error ellipse: s-maj=13.1km s-min=7.4km az=58.0,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.04; $M_{\theta\theta}$-0.90; $M_{\phi\phi}$-1.14; $M_{r\theta}$1.94; $M_{\theta\phi}$-0.26; $M_{r\phi}$-0.59; Fault plane solution: M_{o}2.70000×10^{17} NP1: ϕ_s256.34000°,δ19.25000°,λ69.29000°. NP2:ϕ_s98.16000°, δ72.04000°,λ97.04000°. Principal axes: T 3.0990, Plg62.0000°, Azm19.0000°; N -1.2321, Plg7.0000°, Azm276.0000°; P -1.8669, Plg27.0000°, Azm183.0000°;*

NEIC ***10*** *14:06:26.1,5.85S×102.97E,h24km*

NEIC ***10*** *14:06:26.1,5.85S×103.01E,h30km*

NEIC ***10*** *14:06:26.1,6.05S×103.01E,h30km,Moment Tensor Solution. Duration:38 Moment tensor: Scale 10^{17}Nm; M_{rr}1.74; $M_{\theta\theta}$-1.68; $M_{\phi\phi}$-0.06; $M_{r\theta}$4.18; $M_{\theta\phi}$0.90; $M_{r\phi}$-1.25; Fault plane solution: M_{o}4.77000×10^{17} NP1: ϕ_s303.63000°,δ12.20000°,λ106.17000°. NP2: ϕ_s107.10000°,δ78.29000°,λ86.55000°. Principal axes: T 4.6100, Plg50.0000°, Azm13.0000°; N 0.3062, Plg3.0000°, Azm108.0000°; P -4.9161, Plg33.0000°, Azm200.0000°;*

GFZ ***10*** *14:06:27.3,5.90S×103.01E,h39km,MW5.6,Moment Tensor Solution. s40 Moment tensor: M_{rr}1.61; $M_{\theta\theta}$-1.40; $M_{\phi\phi}$-0.21; $M_{r\theta}$1.51; $M_{\theta\phi}$1.40; $M_{r\phi}$-0.78; Fault plane solution: NP1:ϕ_s117.00000°,δ65.00000°, λ83.00000°. NP2:ϕ_s312.00000°,δ25.00000°,λ103.00000°. Principal axes: T 2.2500, Plg68.0000°, Azm15.0000°; N 0.7000, Plg5.0000°, Azm120.0000°; P -2.9600, Plg20.0000°, Azm212.0000°;*

DJA ***10*** *14:06:28.9±0.2,6.2S±1.1×101.3E±.7,h45km±2km,M5.5/151, mB6.0/137,mb5.7/151,MLv6.1/67,Mw5.7/175, Mw(mB)5.7/137,MwMwp5.3/112,Mwp5.5/112*

GCMT ***10*** *14:06:30.1±0.1,6.04S±0.01×102.89E±0.01,h31km, MW5.7/137,Moment Tension Solution. s136,c261; s137,c262; Duration: 1s7 Moment tensor: Scale 10^{17} Nm; M_{rr}2.42±.04; $M_{\theta\theta}$-1.94±.03; $M_{\phi\phi}$-0.47±.03; $M_{r\theta}$2.86±.07; $M_{\theta\phi}$1.19±.02; $M_{r\phi}$-1.45±.06; Best double couple: M_{o}4.07400×10^{17} NP1:ϕ_s301.00000°,δ19.00000°, λ94.00000°. NP2:ϕ_s117.00000°,δ71.00000°,λ89.00000°. Principal axes: T 3.9830, Plg64.0000°, Azm25.0000°; N 0.1870, Plg1.0000°, Azm118.0000°; P -4.1650, Plg26.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 14:06:27.7±0.4,5.80S±0.03×103.06E±0.02,h34km±1km, h35km:pP-P,n1416,σ1s49/1305,mb5.5/291,MS5.5/313, 85C-15D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EGSI	**Enggano, Bengk**	**0.90**	**300**	P		**Pn**	**14 06 44.1**	**+0.1**
EGSI				S		**Sb**	**14 06 56.9**	**+0.2**
LWLI	**Liwa**	**1.26**	**52**	P		**Pb**	**14 06 51.2**	**+0.1**
MNAI	**Manna**	**1.44**	**356**	P		**Pb**	**14 06 53.2**	**-0.8**
MNAI	**Manna**	**1.44**	**356**	S		**Sb**	**14 07 12.2**	**+0.2**
MNAI	**Manna**	**1.44**	**356**			**Pb**	**14 06 52.7**	**-1.3**
MNAI	**Manna**	**1.44**	**356**	P		**Pb**	**14 06 52.7**	**-1.3**
MNAI	**Manna**	**1.44**	**356**	P		**Pb**	**14 06 52.8**	**-1.3**
MNAI				S		**Sb**	**14 07 11.4**	**-0.6**
KASI	**Kota Agung**	**1.45**	**79**	P		**Pb**	**14 06 53.2**	**-1.1**
KASI				S		**Sb**	**14 07 12.7**	**+0.2**
MDSI	**Maura Dua**	**1.72**	**40**	P		**Pb**	**14 06 57.6**	**-1.1**
MDSI				S		**Sb**	**14 07 19.4**	**-0.6**
KLSI		**1.99**	**56**	P		**Pb**	**14 07 02.2**	**-1.2**
KLSI				S		**Sb**	**14 07 26.4**	**-1.5**
KLI	**Kotabumi**	**2.02**	**63**	P		**Pb**	**14 07 02.3**	**-1.5**
UBSI	**University, Be**	**2.17**	**339**	P		**Pn**	**14 07 02.0**	**+0.5**
KSI	**Kapahiang**	**2.19**	**348**	P		**Pn**	**14 07 02.5**	**+0.7**
BLSI	**Bandar Lampung**	**2.21**	**79**	P		**Pn**	**14 07 04.4**	**+2.3**
CGJI	**Cibinong**	**2.74**	**107**	P		**Pn**	**14 07 09.8**	**+0.6**
MASI	**Maura Aman, Be**	**2.77**	**343**	P		**Pn**	**14 07 10.7**	**+1.0**
SBJI	**Serang**	**3.07**	**96**	P		**Pn**	**14 07 16.2**	**+2.4**
PMBI	**Palembang**	**3.33**	**31**	P		**Pn**	**14 07 21.0**	**+3.6**
PMBI	**Palembang**	**3.33**	**31**			**Pn**	**14 07 18.8**	**+1.4**
PMBI	**Palembang**	**3.33**	**31**	P		**Pn**	**14 07 20.4**	**+3.0**
PMBI	**Palembang**	**3.33**	**31**	P		**Pn**	**14 07 19.6**	**+2.2**
TNG	**Tangerang**	**3.58**	**96**	P		**Pn**	**14 07 24.4**	**+3.5**
TNG				P		Pb	14 07 25.0	-5.5
DBJI	**Dramaga**	**3.74**	**102**	P		**Pn**	**14 07 25.0**	**+1.9**
KRJI	**Kerinci**	**4.02**	**337**	P		**Pn**	**14 07 28.0**	**+1.0**
JMBI	**JAMBI**	**4.18**	**8**	P		**Pn**	**14 07 30.7**	**+1.6**
PPSI	**Pulau Pagai**	**4.29**	**315**	P		**Pn**	**14 07 29.6**	**-1.0**
LEM	**Lembang**	**4.64**	**103**	Pn		**Pn**	**14 07 38.0**	**+2.4**
	152nm,0.3s,baz=216,slow=6.1,SNR=91							
LEM				Sn		**Sn**	**14 08 26.1**	**-2.3**
	127nm,0.3s,baz=203,slow=21,SNR=5.2							
LEM				LR		LR	14 09 56.5	
	comp=Z,42μm,19.9s,baz=276,slow=46							
LEM	**Lembang**	**4.64**	**103**	P		**Pn**	**14 07 38.5**	**+2.9**
BBJI	**Bungbulang**	**4.85**	**110**	P		**Pn**	**14 07 39.3**	**+0.9**
BBJI	**Bungbulang**	**4.85**	**110**			**Pn**	**14 07 38.5**	**+0.2**
BBJI	**Bungbulang**	**4.85**	**110**	P		**Pn**	**14 07 38.5**	**+0.2**
XMI	**Christmas Isla**	**5.30**	**151**	P		Pn	14 07 39.2	-5.3
XMI	**Christmas Isla**	**5.30**	**151**	P		Pn	14 07 38.9	-5.6
TPI	**Tanjungpandan**	**5.49**	**57**	P		**Pn**	**14 07 49.8**	**+2.7**
	15nm11μm471nm,1.1s							
DSRI	**Dabo**	**5.50**	**16**	P		**Pn**	**14 07 49.9**	**+2.6**
	14μm1μm,1.0s							
PDSI	**Padang**	**5.51**	**332**	P		**Pn**	**14 07 46.4**	**-1.0**
PPI	**Padang Panjang**	**5.94**	**333**	P		**Pn**	**14 07 52.7**	**-0.6**
	6.8nm25μm6μm623nm,0.9s							
KPJI	**Karang Pucung**	**6.03**	**105**	P		**Pn**	**14 07 56.9**	**+2.4**
	6.8nm24μm14μm426nm,0.7s							
CTJI	**Waduk Cacaban**	**6.20**	**101**	P		**Pn**	**14 07 59.9**	**+3.0**
	6.7nm24μm840nm,0.9s							
BKNI	**Bangkinang**	**6.41**	**342**	P		**Pn**	**14 07 59.7**	**-0.1**
BKNI	**Bangkinang**	**6.41**	**342**			**Pn**	**14 07 59.4**	**-0.5**
BKNI	**Bangkinang**	**6.41**	**342**	P		**Pn**	**14 07 59.8**	**-0.1**
BKNI	**Bangkinang**	**6.41**	**342**	P		**Pn**	**14 08 01.7**	**+1.9**
	8.2nm23μm12μm1μm,1.2s							
TPRI	**Tanjung Pinang**	**6.83**	**12**	P		**Pn**	**14 08 08.9**	**+3.3**
	4.4nm9μm461nm,0.6s							
MNSI	**Mandailing Nat**	**7.42**	**332**	P		**Pn**	**14 08 12.1**	**-1.6**
	2.1nm4μm201nm,0.7s							
SMRI	**Semarang**	**7.44**	**100**	P		**Pn**	**14 08 17.4**	**+3.5**
SMRI	**Semarang**	**7.44**	**100**			**Pn**	**14 08 14.8**	**+0.9**
SMRI	**Semarang**	**7.44**	**100**	P		**Pn**	**14 08 17.1**	**+3.2**
	7.0nm17μm18μm558nm,0.7s							
PBSI	**Pulau Batu**	**7.44**	**320**	P		**Pn**	**14 08 15.0**	**+1.0**
	7.3nm20μm12μm347nm,0.9s							
YOGI	**Yogyakarta**	**7.46**	**106**	P		**Pn**	**14 08 17.6**	**+3.4**
	12μm16μm972nm,1.2s							
MYKOM	**Kota Tinggi**	**7.58**	**6**	P		**Pn**	**14 08 19.4**	**+3.5**
MYKOM	**Kota Tinggi**	**7.58**	**6**			**Pn**	**14 08 17.4**	**+1.5**
MYKOM	**Kota Tinggi**	**7.58**	**6**	P		**Pn**	**14 08 17.8**	**+1.9**
MYKOM	**Kota Tinggi**	**7.58**	**6**	P		**Pn**	**14 08 19.4**	**+3.5**
	5μm326nm,1.0s							
UGM	**Wanagama**	**7.70**	**106**	P		**Pn**	**14 08 19.4**	**+1.9**
UGM	**Wanagama**	**7.70**	**106**			**Pn**	**14 08 18.8**	**+1.3**
UGM	**Wanagama**	**7.70**	**106**	P		**Pn**	**14 08 18.1**	**+0.6**
UGM	**Wanagama**	**7.70**	**106**	P		**Pn**	**14 08 19.4**	**+1.9**
	5.2nm8μm16μm902nm,0.9s							
PCJI	**Pacitan**	**8.40**	**107**	P		**Pn**	**14 08 27.7**	**+0.6**
	8μm13μm1μm,1.1s							
COCO	**West Island**	**8.84**	**224**	P		**Pn**	**14 08 30.4**	**-2.7**
COCO	**West Island**	**8.84**	**224**			**Pn**	**14 08 28.4**	**-4.7**
COCO	**West Island**	**8.84**	**224**	P		**Pn**	**14 08 28.4**	**-4.7**
COCO	**West Island**	**8.84**	**224**	P		**Pn**	**14 08 31.6**	**-1.5**
COCO				P		**Pn**	**14 08 31.6**	**-1.5**
COCO				S		**Sn**	**14 10 16.8**	**+5.2**
COCO				S		**Sn**	**14 10 16.8**	**+5.2**
COCO	**West Island**	**8.84**	**224**	P		**Pn**	**14 08 29.2**	**-3.9**
COCO	**West Island**	**8.84**	**224**	P		**Pn**	**14 08 30.4**	**-2.7**
SJI	**Sawahan**	**8.86**	**103**	P		**Pn**	**14 08 35.3**	**+1.9**
	2.4nm12μm7μm488nm,0.8s							
SNJI	**Sawahan-Nganju**	**8.86**	**103**	P		**Pn**	**14 08 36.2**	**+2.6**
	3.3nm11μm9μm776nm,0.7s							
GSI	**Gunungsitoli**	**8.94**	**322**	P		**Pn**	**14 08 32.3**	**-2.2**
GSI	**Gunungsitoli**	**8.94**	**322**			**Pn**	**14 08 32.9**	**-1.6**
GSI	**Gunungsitoli**	**8.94**	**322**	P		**Pn**	**14 08 32.6**	**-1.9**
GSI	**Gunungsitoli**	**8.94**	**322**	P		**Pn**	**14 08 33.5**	**-1.0**
	1.9nm15μm5μm242nm,0.6s							
BLJI	**Banyuglugur**	**10.64**	**101**	P		**Pn**	**14 08 59.3**	**+1.5**
	8μm8μm538nm,0.7s							
KCSI	**Kotacane, Aceh**	**10.66**	**330**	P		**Pn**	**14 09 02.3**	**+4.1**
KMMI	**Kalianget**	**10.91**	**97**	P		**Pn**	**14 09 03.7**	**+2.2**
	10μm7μm544nm,0.9s							
ABJI	**Asem Bagus**	**11.27**	**101**	P		**Pn**	**14 09 08.8**	**+2.3**
KULM	**Kulim**	**11.28**	**348**	P		**Pn**	**14 09 05.6**	**-1.0**
KULM	**Kulim**	**11.28**	**348**			**Pn**	**14 09 05.2**	**-1.4**
KULM	**Kulim**	**11.28**	**348**	P		**Pn**	**14 09 05.6**	**-1.0**
KULM	**Kulim**	**11.28**	**348**	P		**Pn**	**14 09 06.8**	**+0.2**
JAGI	**Jajag, Banyuwa**	**11.32**	**104**	P		**Pn**	**14 09 07.1**	**-0.1**
JAGI	**Jajag, Banyuwa**	**11.32**	**104**			**Pn**	**14 09 06.2**	**-0.9**
JAGI	**Jajag, Banyuwa**	**11.32**	**104**	P		**Pn**	**14 09 05.3**	**-1.9**
JAGI	**Jajag, Banyuwa**	**11.32**	**104**	P		**Pn**	**14 09 07.8**	**+0.6**
BBKI	**Banjar Baru**	**11.97**	**79**	P		**Pn**	**14 09 17.4**	**+1.4**
	10μm9μm304nm,2.5s							
MLSI	**Meulaboh, Aceh**	**12.01**	**326**	P		**Pn**	**14 09 19.3**	**+2.7**
	6μm5μm436nm,0.7s							
RTBI	**Rangdo, Negare**	**12.08**	**103**	P		**Pn**	**14 09 19.4**	**+1.8**
SBUM	**Sibu**	**12.28**	**48**	P		**Pn**	**14 09 24.3**	**+3.9**
SBUM	**Sibu**	**12.28**	**48**	P		**Pn**	**14 09 24.7**	**+4.4**
SBUM	**Sibu**	**12.28**	**48**	P		**Pn**	**14 09 24.2**	**+3.9**
IGBI	**Denpasar**	**12.35**	**105**	P		**Pn**	**14 09 21.8**	**+0.5**
	15μm1μm,1.4s							
DNP	**Denpasar**	**12.38**	**104**	P		**Pn**	**14 09 24.9**	**+3.2**
KHKI	**Kahang-Kahang**	**12.71**	**102**	P		**Pn**	**14 09 27.8**	**+1.7**
	5μm5μm503nm,0.8s							
TWSI	**Taliwang, Sumb**	**14.02**	**103**	P		**Pn**	**14 09 41.8**	**-2.2**
	4μm321nm,1.0s							
BKB	**Balikpapan**	**14.52**	**72**	P		**Pn**	**14 09 52.6**	**+1.7**
BKB	**Balikpapan**	**14.52**	**72**	Pn		**Pn**	**14 09 53.4**	**+2.5**
BKB	**Balikpapan**	**14.52**	**72**	P		**P**	**14 09 54.5**	**-2.6**
BKB	**Balikpapan**	**14.52**	**72**	P		**P**	**14 09 54.3**	**-2.8**
	12μm724nm,1.0s							
PLAI	**Plampang**	**14.90**	**103**	P		**Pn**	**14 09 53.3**	**-2.7**
DBNI	**Kabupaten Domp**	**15.37**	**101**	P		**Pn**	**14 09 59.3**	**-2.9**
	136nm,1.3s							
CMBY	**CAMPBELL BAY**	**15.66**	**324**	*eP*		**P**	**14 10 10.8**	**+1.1**
CMBY					IAmb	IAmb	14 10 31.3	
	comp=Z,418nm,1.0s							
PMSI	**Majene**	**15.96**	**82**	P		**P**	**14 10 12.3**	**-0.9**
	comp=Z,9μmcomp=Z,14μmcomp=Z,1μm,1.5s							
MMSI	**Mamuju**	**16.10**	**80**	P		**P**	**14 10 13.8**	**-0.9**
	comp=Z,11μmcomp=Z,7μmcomp=Z,455nm,1.8s							
MKS	**Makassar**	**16.34**	**89**	P		**Pn**	**14 10 14.4**	**-0.3**
	comp=Z,7μmcomp=Z,142nm,1.0s							
KAPI	**Kappang**	**16.63**	**88**	Pn		**Pn**	**14 10 16.7**	**-1.7**
	comp=Z,1.8nm,0.3s,baz=266,slow=9.8,SNR=18							
KAPI				Sn		**Sn**	**14 13 20.7**	**-1.6**
	comp=Z,1.5nm,0.3s,baz=239,slow=12,SNR=1.1							
KAPI				LR		LR	14 17 14.9	
	comp=Z,11μm,22.0s,baz=255,slow=39							
	comp=Z,9.8nm,0.4s							
KAPI	**Kappang**	**16.63**	**88**			**Pn**	**14 10 17.8**	**-0.6**
KAPI	**Kappang**	**16.63**	**88**	*c iP*		**Pn**	**14 10 17.9**	**-0.6**
KAPI					MLR	MLR		
	comp=Z,10μm,19.0s							
KAPI	**Kappang**	**16.63**	**88**	P		**Pn**	**14 10 17.5**	**-0.9**
KAPI				P		**Pn**	**14 10 17.5**	**-0.9**
KAPI				P		**Pn**	**14 10 17.5**	**-0.9**
KAPI	**Kappang**	**16.63**	**88**	P		**Pn**	**14 10 18.0**	**-0.4**
SPSI	**Sidrap Palu**	**16.75**	**84**	P		**Pn**	**14 10 20.1**	**+0.3**
	comp=Z,7μmcomp=Z,4μmcomp=Z,140nm,1.2s							
LBFI	**Labuhan Bajo,**	**16.91**	**100**	P		**Pn**	**14 10 20.8**	**-1.1**
TTSI	**Tana Toraja**	**16.93**	**81**	P		**P**	**14 10 24.1**	**+0.3**
	comp=Z,7μmcomp=Z,7μmcomp=Z,394nm,1.2s							
BSSI	**Bau Bau, Buton**	**17.34**	**92**	P		**P**	**14 10 27.8**	**-0.6**
	comp=Z,5μmcomp=Z,8μmcomp=Z,301nm,1.3s							
PCI	**Palu**	**17.43**	**74**	P		**P**	**14 10 30.8**	**+1.4**
	comp=Z,11μmcomp=Z,14μmcomp=Z,1μm,1.7s							
KKM	**Kota Kinabalu**	**17.63**	**48**	P		**P**	**14 10 32.7**	**+1.0**
KKM	**Kota Kinabalu**	**17.63**	**48**			**P**	**14 10 31.7**	**0.0**
KKM	**Kota Kinabalu**	**17.63**	**48**	P		**P**	**14 10 32.2**	**+0.6**
KKM	**Kota Kinabalu**	**17.63**	**48**	P		**P**	**14 10 32.3**	**+0.6**
	comp=Z,5μmcomp=Z,233nm,1.0s							
MPSI	**Mapaga**	**17.88**	**71**	P		**P**	**14 10 36.3**	**+1.9**
	comp=Z,9μmcomp=Z,457nm,1.2s							
BASI	**Baing, Sumba**	**17.89**	**105**	P		**Pn**	**14 10 30.7**	**-3.3**
KKSI	**Kolaka, Sulawe**	**18.59**	**86**	P		**Pn**	**14 10 45.6**	**+3.0**
MYLDM	**Lahad Datu**	**18.88**	**55**	P		**Pn**	**14 10 48.5**	**+2.3**
MYLDM	**Lahad Datu**	**18.88**	**55**	P		**Pn**	**14 10 48.2**	**+2.0**
	comp=Z,15μmcomp=Z,364nm,0.9s							
TOLI2	**Tolitoli**	**18.98**	**69**	P		**Pn**	**14 10 47.7**	**+0.3**
TOLI2	**Tolitoli**	**18.98**	**69**	P		**Pn**	**14 10 47.7**	**+0.3**
TOLI2					IAmb	IAmb	14 10 48.9	
	comp=Z,241nm,0.8s							
TOLI2	**Tolitoli**	**18.98**	**69**	P		**Pn**	**14 10 47.0**	**-0.3**
APSI	**Ampana**	**19.18**	**76**	P		**Pn**	**14 10 50.3**	**+0.6**
	comp=Z,8μmcomp=Z,684nm,1.1s							
MMRI	**Maumere**	**19.23**	**100**	P		**P**	**14 10 49.6**	**+0.4**
MMRI	**Maumere**	**19.23**	**100**	P		**P**	**14 10 47.6**	**-1.6**
MMRI					IAmb	IAmb	14 11 03.6	
	comp=Z,478nm,1.4s							
MMRI	**Maumere**	**19.23**	**100**	P		**P**	**14 10 45.9**	**-3.3**
MMRI	**Maumere**	**19.23**	**100**	P		**P**	**14 10 48.7**	**-0.5**
	comp=Z,4μmcomp=Z,5μmcomp=Z,385nm,0.9s							
MRSI	**Marisa**	**19.85**	**72**	P		**P**	**14 10 56.5**	**+0.5**
PBA	**Port Blair**	**20.15**	**329**	P		**P**	**14 10 57.7**	**-1.6**
PBA					IAmb	IAmb	14 11 06.2	
	comp=Z,270nm,1.3s							
PBA	**Port Blair**	**20.15**	**329**	P		**P**	**14 10 59.1**	**-0.2**
PBA	**Port Blair**	**20.15**	**329**	*eP*		**P**	**14 10 58.8**	**-0.4**
LUWI	**Luwuk**	**20.23**	**77**	P		**P**	**14 11 00.1**	**0.0**
LUWI	**Luwuk**	**20.23**	**77**	P		**Pn**	**14 11 01.9**	**-0.3**
LUWI	**Luwuk**	**20.23**	**77**	P		**P**	**14 11 00.7**	**+0.6**
LUWI	**Luwuk**	**20.23**	**77**	P		**Pn**	**14 11 02.6**	**+0.4**
	comp=Z,10μmcomp=Z,811nm,1.0s							
BATI	**Baumata**	**20.86**	**103**	P		**P**	**14 11 06.0**	**-1.0**
	comp=Z,346nm,0.8s,baz=270,slow=1.5,SNR=113							
BATI				S		**S**	**14 14 54.4**	**-3.6**
	comp=Z,165nm,0.6s,baz=286,slow=18,SNR=5.5							
	comp=Z,346nm,0.8s							
BATI	**Baumata**	**20.86**	**103**	P		**P**	**14 11 06.6**	**-0.4**
GTOI	**Gorontalo**	**20.92**	**73**	P		**P**	**14 11 06.6**	**-1.0**
	comp=Z,8μmcomp=Z,4μmcomp=Z,372nm,0.9s							
SOEI	**Soe**	**21.37**	**102**	P		**P**	**14 11 09.9**	**-2.6**
SOEI	**Soe**	**21.37**	**102**	P		**P**	**14 11 10.6**	**-2.0**
SOEI	**Soe**	**21.37**	**102**	P		**P**	**14 11 10.8**	**-1.8**
SOEI	**Soe**	**21.37**	**102**	P		**P**	**14 11 10.4**	**-2.2**
SOEI	**Soe**	**21.37**	**102**	P		**P**	**14 11 12.1**	**-0.5**
DGPR	**DIGLIPUR**	**21.37**	**332**	IAmb		IAmb	14 10 57.9	
	comp=Z,162nm,0.8s							
MBWA	**Marble Bar**	**22.23**	**135**	P		**P**	**14 11 21.9**	**+0.3**
	comp=Z,123nm,1.2s,comp=Z,0.0nm							
MBWA	**Marble Bar**	**22.23**	**135**	P		**P**	**14 11 21.6**	**0.0**
MBWA	**Marble Bar**	**22.23**	**135**	P		**P**	**14 11 20.8**	**-0.8**
MBWA					IAmb	IAmb	14 11 37.1	
	comp=Z,206nm,1.3s							
MBWA	**Marble Bar**	**22.23**	**135**	P		**P**	**14 11 21.6**	**0.0**
MBWA				P		**P**	**14 11 21.6**	**0.0**
MBWA				P		**P**	**14 11 21.6**	**0.0**
MBWA				S		**S**	**14 15 22.1**	**-2.4**
MBWA				S		**S**	**14 15 22.1**	**-2.4**
MBWA				S		**S**	**14 15 22.1**	**-2.4**
PSAC1	**Pilbara Seismi**	**22.53**	**136**	P		**P**	**14 11 25.0**	**+0.2**
	comp=Z,213nm,1.4s							
PSA00	**Pilbara Seismi**	**22.58**	**136**	P		**P**	**14 11 25.8**	**+0.5**
	comp=Z,153nm,1.0s							
PSA00	**Pilbara Seismi**	**22.58**	**136**	P		**P**	**14 11 25.3**	**-0.1**
PSA00	**Pilbara Seismi**	**22.58**	**136**	P		**P**	**14 11 24.5**	**-0.9**
PSA00					IAmb	IAmb	14 11 37.3	
	comp=Z,218nm,1.2s							
PSAB3	**Pilbara Seismi**	**22.60**	**136**	P		**P**	**14 11 25.6**	**0.0**
	comp=Z,182nm,1.7s							
PSAC2	**Pilbara Seismi**	**22.61**	**135**	P		**P**	**14 11 26.1**	**+0.4**
	comp=Z,163nm,1.0s							
MNI	**Manado**	**22.91**	**72**	P		**P**	**14 11 29.5**	**+0.6**
	comp=Z,7μmcomp=Z,7μmcomp=Z,280nm,0.9s							
SANI	**Sanana**	**23.17**	**82**	P		**P**	**14 11 29.4**	**-2.2**
SANI	**Sanana**	**23.17**	**82**	P		**P**	**14 11 31.0**	**-0.6**
SANI	**Sanana**	**23.17**	**82**	P		**P**	**14 11 30.7**	**-0.9**
	comp=Z,6μmcomp=Z,4μmcomp=Z,141nm,1.1s							
NLAI	**Namlea**	**24.09**	**85**	P		**P**	**14 11 39.9**	**-0.5**
	comp=Z,6μmcomp=Z,2μmcomp=Z,137nm,0.7s							
SGSI	**Sangihe**	**24.34**	**68**	P		**P**	**14 11 47.7**	**+5.1**
	comp=Z,8μmcomp=Z,9μmcomp=Z,453nm,0.9s							
CM31	**Chiang Mai Arr**	**24.45**	**351**	IAmb		IAmb	14 11 45.0	
	comp=Z,132nm,0.8s							
CM31	**Chiang Mai Arr**	**24.45**	**351**	P		**P**	**14 11 42.7**	**-0.8**
	SNR=62							
CM31				S		**S**	**14 16 00.7**	**-0.8**
CMAR	**Chiang Mai Arr**	**24.45**	**351**	P		**P**	**14 11 42.5**	**-1.1**
	comp=Z,90nm,0.8s,baz=182,slow=9.0,SNR=270							
CMAR				PcP		**PcP**	**14 15 23.3**	**+1.2**
	comp=Z,11nm,0.8s,baz=208,slow=3.1,SNR=7.5							
CMAR				ScP		**ScP**	**14 18 58.1**	**-0.2**
	comp=Z,3.7nm,1.0s,baz=210,slow=4.1,SNR=5.8							
CMAR				LR		LR	14 21 39.5	
	comp=Z,6μm,20.9s,baz=175,slow=38							
	comp=Z,90nm,0.8s							
CMAR	**Chiang Mai Arr**	**24.45**	**351**	P		**P**	**14 11 42.4**	**-1.2**
CMAR	**Chiang Mai Arr**	**24.45**	**351**			**ScP**	**14 18 59.5**	**+1.2**
DCPH	**Dipolog City**	**24.77**	**55**	*i* P		**P**	**14 11 47.1**	**+0.6**
CHTO	**Chiang Mai**	**24.80**	**351**	P		**P**	**14 11 45.6**	**-1.1**
CHTO	**Chiang Mai**	**24.80**	**351**	P		**P**	**14 11 45.3**	**-1.4**
CHTO				IAmb		IAmb	14 11 47.6	
	comp=Z,90nm,0.8s							
CHTO	**Chiang Mai**	**24.80**	**351**	P		**P**	**14 11 45.3**	**-1.4**
CHTO				pmax		pmax		
	comp=Z,90nm,0.8s							
CHTO				MLR		MLR		
	comp=Z,6μm,21.0s							
CHTO	**Chiang Mai**	**24.80**	**351**	P		**P**	**14 11 45.8**	**-0.9**
CHTO				P		**P**	**14 11 45.8**	**-0.9**
CHTO	**Chiang Mai**	**24.80**	**351**	P		**P**	**14 11 45.1**	**-1.6**
	comp=Z,6μmcomp=Z,2μmcomp=Z,124nm,0.9s							
GSPH	**General Santos**	**24.84**	**62**	*i* P		**P**	**14 11 49.6**	**+2.3**
TNTI	**Ternate**	**25.13**	**76**	P		**P**	**14 11 47.9**	**-1.9**
TNTI	**Ternate**	**25.13**	**76**	P		**P**	**14 11 49.2**	**-0.6**
	comp=Z,3μmcomp=Z,4μmcomp=Z,375nm,1.7s							
FITZ	**Fitzroy Crossi**	**25.20**	**121**	LR		LR	14 22 45.6	
	comp=Z,11μm,20.3s,baz=313,slow=39							
KRAI	**Karang Ratu**	**25.37**	**86**	P		**P**	**14 11 50.0**	**-2.0**
MEEK	**Meekatharra**	**25.48**	**146**	P		**P**	**14 11 52.8**	**-0.1**
	comp=Z,55nm,1.8s,comp=Z,0.0nm							
MEEK	**Meekatharra**	**25.48**	**146**	P		**P**	**14 11 53.0**	**+0.1**
DDMP	**Don Marcelino,**	**25.52**	**63**	*eP*		**P**	**14 11 53.2**	**-0.1**
DDMP

comp=Z,29nm,1.2s
TNCH TengChong 30.96 352 P **P** **14 12 41.5 -0.5**
TNCH pP pP 14 12 47.5 -3.9
TNCH S **S** **14 17 45.7 +1.1**
TNCH pmax pmax
comp=Z,57nm,1.6s
TNCH pmax pmax
comp=Z,760nm,5.6s
TNCH L L
comp=Z,8µm,13.6s
TNCH L L
comp=Z,8µm,14.6s
TNCH L L
comp=Z,12µm,14.6s
BELO BELONIA 31.02 339 *e*P **P** **14 12 42.1 -0.2**
GZH2 Guangzhou 31.05 19 P **P** **14 12 43.3 +0.7**
GZH2 PP **PP** **14 13 51.5 -1.6**
GZH2 S **S** **14 17 49.8 +4.2**
GZH2 L L
comp=Z,7µm,18.4s
GZH2 L L
comp=Z,6µm,19.2s
GZH2 L L
comp=Z,12µm,21.9s
MORE Moreh 31.05 344 IAmb IAmb 14 12 42.5
MORE comp=Z,128nm,0.9s IAMs_20 IAMs_20 14 26 59.6
comp=Z,2µm,20.0s
RAGD RAYAGADA 31.50 323 *e*P **P** **14 12 47.8 +1.1**
RAGD IAmb IAmb 14 13 02.8
comp=Z,51nm,0.8s
GULI GuiLin 31.71 13 P **P** **14 12 48.8 +0.4**
GULI S **S** **14 17 55.2 -0.8**
GULI pmax pmax
comp=Z,32nm,2.2s
GULI L L
comp=Z,12µm,19.0s
GULI L L
comp=Z,5µm,16.8s
GULI L L
comp=Z,17µm,18.1s
IMP Imphal 31.71 344 *e*P **P** **14 12 47.1 -1.4**
SILR SILCHAR 32.00 342 *e*P **P** **14 12 50.6 -0.3**
SILR IAmb IAmb 14 12 55.7
comp=Z,71nm,0.8s
PZH PanZhiHua 32.14 358 P **P** **14 12 51.3 -1.0**
PZH PP **PnPn** **14 13 59.6 +0.8**
PZH S **S** **14 18 05.1 +2.2**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,560nm,8.3s
PZH L L
comp=Z,11µm,14.7s
PZH L L
comp=Z,6µm,16.3s
PZH L L
comp=Z,11µm,14.6s
GYA Guiyang 32.26 6 ⇑P **P** **14 12 52.7 -0.7**
GYA S **S** **14 18 01.1 -3.6**
GYA pmax pmax
comp=Z,25nm,0.8s
GYA pmax pmax
comp=Z,870nm,5.7s
GYA L L
comp=Z,4µm,19.8s
GYA L L
comp=Z,6µm,17.1s
GYA L L
comp=Z,5µm,19.3s
KOHI KOHIMA 32.52 345 *e*P **P** **14 12 54.3 -1.4**
MOKO MOKOCHONG 32.99 346 *e*P **P** **14 12 58.5 -1.3**
MOKO IAmb IAmb 14 13 02.0
comp=Z,169nm,0.9s
SHL Shillong 33.02 341 P **P** **14 12 59.3 -0.8**
SNR=41
SHL Shillong 33.02 341 *e*P **P** **14 12 59.2 -0.9**
JHSG JHARSUGUGA 33.28 326 *e*P **P** **14 13 03.7 +1.4**
BAKI Biak 33.29 83 P **P** **14 13 04.5 +2.0**
SRPI Serui, Papua 33.33 85 P **P** **14 13 03.0 +0.2**
comp=Z,66nm,0.8s
HYB Hyderabad 33.44 314 *e*P **P** **14 13 03.6 -0.2**
HYB *es*P **pP** **14 13 14.6 +1.3**
HYB *e*PcP **PcP** **14 15 44.9 +0.1**
HYB *e*S **S** **14 18 23.8 +0.6**
HYB IVMs_BB IVMs_BB 14 27 24.1
comp=Z,963nm,15.7s
JORH JORHAT 33.46 346 *e*P **P** **14 13 02.3 -1.4**
TWGBT Beinan 33.46 31 P **P** **14 13 05.3 +1.5**
WRA Warramunga Arr 33.48 118 P **P** **14 13 04.1 -0.1**
comp=Z,14nm,0.6s,baz=304,slow=9.0,SNR=168
WRA S **S** **14 18 23.2 -0.7**
comp=Z,9.6nm,1.0s,baz=269,slow=17,SNR=5.3
WRA LR LR 14 28 09.4
comp=Z,6µm,20.3s,baz=283,slow=39
WRA P3KPbc 14 44 11.8
comp=Z,0.2nm,0.6s,baz=110,slow=4.5,SNR=5.4
comp=Z,14nm,0.6s
WRA Warramunga Arr 33.48 118 P **P** **14 13 03.6 -0.5**
WRA Warramunga Arr 33.48 118 P **P** **14 13 03.6 -0.5**
WRA pmax pmax
comp=Z,3.0nm,0.9s
WRAB Tennant Creek 33.49 118 P **P** **14 13 04.3 +0.1**
WRAB Tennant Creek 33.49 118 P **P** **14 13 04.0 -0.1**
WRAB IAmb IAmb 14 13 26.5
comp=Z,50nm,0.9s
WRAB Tennant Creek 33.49 118*ce*P **P** **14 13 03.4 -0.8**
WRAB pmax pmax
comp=Z,33nm,0.8s
WRAB MLR MLR
comp=Z,6µm,20.0s
WR8 Warramunga Arr 33.63 118 IAmb IAmb 14 13 18.9
comp=Z,54nm,0.6s
TPUB Ta-pu 33.63 30 P **P** **14 13 06.0 +0.7**
TPUB Ta-pu 33.63 30 P **P** **14 13 05.0 -0.3**
TPUB IAmb IAmb 14 13 27.4
comp=Z,91nm,1.0s
GUWA GUWAHATI 33.66 341 *e*P **P** **14 13 04.1 -1.4**
GUWA IAmb IAmb 14 13 05.6
comp=Z,37nm,0.6s
LKP Lekhapani 33.67 348 IAmb IAmb 14 12 39.4
comp=Z,235nm,1.3s
TEZP TEZPUR 33.73 343 *e*P **P** **14 13 04.4 -1.6**
TEZP IAmb IAmb 14 13 08.0
comp=Z,129nm,1.0s
BOK Bokaro 33.86 331 *e*P **P** **14 13 08.5 +1.2**
BOK IAmb IAmb 14 13 23.2
comp=Z,185nm,0.9s
ITAN ITANAGAR 33.98 345 *e*P **P** **14 13 07.6 -0.7**
ITAN IAmb IAmb 14 13 12.3
comp=Z,148nm,0.9s
YULB Yu-li 34.05 31 P **P** **14 13 10.3 +1.4**
YULB Yu-li 34.05 31 IAmb IAmb 14 13 29.3
comp=Z,48nm,0.8s
DHUB DHUBRI 34.08 339 *e*P **P** **14 13 09.2 0.0**
DHUB IAmb IAmb 14 13 09.9
comp=Z,87nm,1.1s
QZH2 Quanzhou 34.10 26 P **P** **14 13 07.9 -1.4**
QZH2 S S 14 18 44.1 +11
QZH2 pmax pmax
comp=Z,980nm,7.2s
QZH2 L L
comp=Z,6µm,16.1s
QZH2 L L
comp=Z,6µm,17.1s
QZH2 L L
comp=Z,7µm,16.6s
SSLB Suanglung 34.20 30 P **P** **14 13 11.6 +1.3**
SSLB Suanglung 34.20 30 P **P** **14 13 10.3 +0.1**
SSLB IAmb IAmb 14 13 11.3
comp=Z,117nm,1.4s
SHBG Sahibganj 34.30 335 *e*P **P** **14 13 11.6 +0.5**
SHBG IAmb IAmb 14 13 14.3
comp=Z,88nm,0.6s
ZIRO ZIRO 34.31 345 *e*P **P** **14 13 10.0 -1.3**
ZIRO IAmb IAmb 14 13 13.3
comp=Z,195nm,1.0s
BLSP Bilaspur 34.46 324 *e*P **P** **14 13 13.3 +0.8**
BLSP IAmb IAmb 14 13 25.5
comp=Z,69nm,0.8s
PASG PASIGHAT 34.48 348 *e*P **P** **14 13 10.6 -2.0**
PASG IAmb IAmb 14 13 13.1
comp=Z,98nm,1.4s
ASAR Alice Springs 34.58 124 P **P** **14 13 13.9 +0.3**
comp=Z,21nm,0.8s,baz=297,slow=7.0,SNR=229
ASAR S **S** **14 18 40.5 -0.3**
comp=Z,17nm,1.1s,baz=291,slow=16,SNR=8.4
ASAR LR LR 14 28 29.4
comp=Z,10µm,20.7s,baz=290,slow=38
ASAR P3KPbc 14 44 05.8
comp=Z,0.4nm,0.6s,baz=116,slow=4.3,SNR=10
comp=Z,21nm,0.8s
ASAR Alice Springs 34.58 124 P **P** **14 13 13.8 +0.1**
ASAR Alice Springs 34.58 124 P **P** **14 13 13.8 +0.1**
NACB Ninganchiao 34.84 31 P **P** **14 13 17.1 +1.3**
NACB Ninganchiao 34.84 31 P **P** **14 13 15.4 -0.4**
NACB IAmb IAmb 14 13 32.8
comp=Z,59nm,1.0s
NACB IAMs_20 IAMs_20 14 27 33.6
comp=Z,7µm,20.0s
TAWA Tawang 34.92 342 *e*P **P** **14 13 16.6 -0.2**
TAWA IAmb IAmb 14 13 19.6
comp=Z,136nm,0.8s
GAYA Gaya 35.02 331 *e*P **P** **14 13 17.8 +0.5**
GAYA IAmb IAmb 14 13 31.9
comp=Z,90nm,0.5s
CNSH ChangSha 35.10 15 P **P** **14 13 17.4 -0.5**
CNSH S **S** **14 18 49.0 +0.5**
CNSH pmax pmax
comp=Z,20nm,1.3s
CNSH L L
comp=Z,8µm,16.6s
CNSH L L
comp=Z,5µm,17.3s
CNSH L L
comp=Z,11µm,18.2s
YHNB Yeheng 35.15 30 P **P** **14 13 19.5 +1.0**
LATR Latur 35.55 313 *e*P **P** **14 13 22.2 +0.3**
LATR IAmb IAmb 14 13 41.9
comp=Z,18nm,0.8s
NGP Nagpur 35.69 319 *e*P **P** **14 13 23.6 +0.4**
NGP IAmb IAmb 14 13 37.8
comp=Z,50nm,1.0s
GTK Tadong 35.77 338 *e*P **P** **14 13 24.1 +0.2**
GTK IAmb IAmb 14 13 25.2
comp=Z,96nm,0.9s
ENH Enshi 36.39 9 P **P** **14 13 27.7 -1.3**
ENH Enshi 36.39 9 IAMs_20 IAMs_20 14 30 36.3
comp=Z,8µm,18.0s
CD2 Chengdu 36.51 1 P **P** **14 13 28.7 -1.3**
CD2 sP pP 14 13 41.0 +1.5
CD2 S **S** **14 19 14.0 +3.9**
CD2 pmax pmax
comp=Z,40nm,0.6s
CD2 pmax pmax
comp=Z,780nm,6.5s
CD2 L L
comp=Z,16µm,18.6s
CD2 L L
comp=Z,20µm,20.0s
CD2 L L
comp=Z,16µm,17.2s
KAD Karad 36.62 309 *e*P **P** **14 13 31.7 +0.5**
KAD IAmb IAmb 14 13 44.9
comp=Z,60nm,1.3s
AKL Akola 36.72 317 *e*P **P** **14 13 32.6 +0.7**
AKL IAmb IAmb 14 13 50.1
comp=Z,23nm,0.6s
LSA Lhasa 37.11 343 *i* P **P** **14 13 35.6 0.0**
SNR=26
LSA Lhasa 37.11 343 P **P** **14 13 36.0 +0.4**
LSA P **P** **14 13 36.0 +0.4**
LSA P **P** **14 13 36.0 +0.4**
LSA Lhasa 37.11 343 P **P** **14 13 32.7 -2.9**
LSA pmax pmax
comp=Z,100nm,1.0s
LSA L L
comp=Z,3µm,20.6s
LSA L L
comp=Z,1µm,13.4s
GENI Genyem 37.14 87 P **P** **14 13 33.8 -1.8**
comp=Z,3µmcomp=Z,214nm,1.2s
ALBI Allahabad 37.19 327 *e*P **P** **14 13 36.6 +0.7**
ALBI IAmb IAmb 14 13 50.6
comp=Z,167nm,0.9s
JMJ Miyako jima 2 37.34 35 P **P** **14 13 38.4 +1.3**
POO Poona 37.61 311 *e*P **P** **14 13 40.3 +0.7**
JAY Jayapura 37.68 87 P **P** **14 13 38.6 -1.6**
comp=Z,936nmcomp=Z,82nm,1.0s
WHN Wuhan 37.72 16 P **P** **14 13 39.1 -1.2**
WHN S **S** **14 19 27.3 -1.1**
WHN pmax pmax
comp=Z,120nm,1.2s
WHN pmax pmax
comp=Z,2µm,9.1s
WHN L L
comp=Z,16µm,16.8s
WHN L L
comp=Z,25µm,17.3s
WHN L L
comp=Z,30µm,23.7s
VLK Valmikinagar 37.88 332 *e*P **P** **14 13 42.5 +0.9**
VLK IAmb IAmb 14 13 57.7
comp=Z,144nm,1.4s
NRDN NARMADA NAGAR38.01 319 *e*P **P** **14 13 44.8 +1.9**
NRDN IAmb IAmb 14 13 59.2
comp=Z,86nm,1.1s
BHPL Bhopal 38.22 320 *e*P **P** **14 13 44.9 +0.2**
BHPL IAmb IAmb 14 13 59.1
comp=Z,47nm,0.9s
QIS Mount Isa 38.36 116 P **P** **14 13 46.3 +0.4**
JHNI Jhansi 39.12 324 *e*P **P** **14 13 51.7 -0.4**
GUNA GUNA 39.29 321 *e*P **P** **14 13 53.6 -0.1**
AIS Amsterdam Isla 39.40 212 IAMs_20 IAMs_20 14 25 57.4
comp=Z,10µm,21.0s
XAN Xi'an 40.01 8 ⇑P **P** **14 13 58.5 -1.0**
XAN pP pP 14 14 06.2 -3.0
XAN sP sP 14 14 09.9 -3.1
XAN PP **PP** **14 15 32.9 +0.9**
XAN S **S** **14 20 00.0 -3.0**
XAN sS sS 14 20 17.3 -1.7
XAN pmax pmax
comp=Z,78nm,1.4s
XAN pmax pmax
comp=Z,700nm,5.1s
XAN L L
comp=Z,8µm,15.4s
XAN L L
comp=Z,10µm,15.8s
XAN L L
comp=Z,13µm,15.1s
COEN Coen 40.29 105 P **P** **14 14 01.7 -0.3**
COEN Coen 40.29 105 P **P** **14 14 01.2 -0.8**
COEN IAmb IAmb 14 14 03.0
comp=Z,191nm,1.4s
NJ2 Nanjing 40.54 21 ⇓P **P** **14 14 05.0 +1.2**
NJ2 sP **sP** **14 14 16.3 -1.1**
NJ2 S **S** **14 20 14.6 +3.8**
NJ2 pmax pmax
comp=Z,100nm,0.6s
NJ2 pmax pmax
comp=Z,2µm,7.4s
NJ2 L L
comp=Z,18µm,16.1s
NJ2 L L
comp=Z,10µm,14.7s
NJ2 L L
comp=Z,22µm,16.5s
SSE Sheshan 40.58 24 P **P** **14 14 05.0 +0.9**
SSE S **S** **14 20 15.9 +4.5**
SSE pmax pmax
comp=Z,38nm,1.5s
SSE pmax pmax
comp=Z,480nm,4.8s
SSE L L
comp=Z,2µm,20.0s
SSE L L
comp=Z,1µm,20.0s
JOW Kunigami 40.60 36 LR LR 14 31 41.2
comp=Z,2µm,19.8s,baz=237,slow=37
BBOO Buckleboo 40.81 135 P **P** **14 14 06.8 +0.7**
comp=Z,39nm,1.3s
BBOO Buckleboo 40.81 135 P **P** **14 14 06.5 +0.4**
BBOO Buckleboo 40.81 135 P **P** **14 14 05.1 -1.1**
BBOO IAmb IAmb 14 14 18.0
comp=Z,129nm,1.6s
BHV Bhavnagar 40.84 313 *e*P **P** **14 14 07.7 +1.2**
ROCAM Rodrigues Isla 40.99 247 IAMs_20 IAMs_20 14 26 58.1
comp=Z,6µm,21.0s
LYN LuoYang 41.11 12 P **P** **14 14 08.3 -0.1**
LYN sP pwP 14 14 20.4 0.0
LYN PP **PnPn** **14 15 48.5 +0.1**
LYN S **S** **14 20 15.5 -3.7**
LYN sS sS 14 20 34.1 -1.2
LYN pmax pmax
comp=Z,120nm,1.0s
LYN pmax pmax
comp=Z,2µm,3.6s
LYN L L
comp=Z,24µm,19.1s
LYN L L
comp=Z,7µm,15.8s
LYN L L
comp=Z,30µm,18.2s
LGTI Lohaghat 41.38 329 *e*P **P** **14 14 10.6 -0.4**
PTH Pithoragarh 41.48 329 *e*P **P** **14 14 11.7 -0.1**
PTH IAmb IAmb 14 14 25.9
comp=Z,118nm,0.9s
LZDM Lanzhou Array 41.54 1 P **P** **14 14 12.0 -0.4**
comp=Z,4.5nm,0.3s,baz=186,slow=13,SNR=6.7
comp=Z,4.5nm,0.3s
UDPR Udaipur 41.58 318 *e*P **P** **14 14 12.9 +0.4**
LZH Lanzhou 41.67 1 P **P** **14 14 13.3 0.0**
LZH sP sP 14 14 25.5 -1.4
LZH ScP **ScP** **14 19 58.3 +0.8**
LZH S **S** **14 20 29.2 +1.3**
LZH pmax pmax
comp=Z,64nm,1.5s
LZH pmax pmax
comp=Z,1µm,6.2s
LZH L L
comp=Z,9µm,16.5s
LZH L L
comp=Z,7µm,17.9s
LZH L L
comp=Z,13µm,18.2s
TKRD Thakurdwara 41.83 327 *e*P **P** **14 14 14.4 -0.1**
INKA Innaminka 41.89 126 P **P** **14 14 15.7 +0.7**
MTSU Mount Surprise 42.07 111 P **P** **14 14 17.4 +0.8**
comp=Z,62nm,0.8s
MTSU Mount Surprise 42.07 111 P **P** **14 14 17.6 +0.9**
SONA Sohna 42.12 325 *e*P **P** **14 14 16.8 -0.1**
SONA IAmb IAmb 14 14 19.0
comp=Z,154nm,1.0s
BISR Bishrakh 42.16 325 *e*P **P** **14 14 17.1 -0.1**
BISR IAmb IAmb 14 14 30.2
comp=Z,224nm,0.6s
AJM Ajmer 42.26 321 *e*P **P** **14 14 18.2 +0.1**
AJM IAmb IAmb 14 14 32.4
comp=Z,95nm,1.3s
NPLP NPLP New Delhi 42.36 325 *e*P **P** **14 14 18.4 -0.5**
NPLP IAmb IAmb 14 14 36.3
comp=Z,113nm,0.5s
PTPS Port Pirie 42.37 135 P **P** **14 14 19.9 +1.0**
NDI New Delhi 42.37 325 *e*P **P** **14 14 18.5 -0.4**
NDI IAmb IAmb 14 14 32.2
comp=Z,84nm,0.8s
KUDL Kundal 42.38 324 *e*P **P** **14 14 18.6 -0.3**
KUDL IAmb IAmb 14 14 33.9
comp=Z,138nm,1.1s
GOMU GeErMu 42.49 350 P **P** **14 14 19.9 -0.3**
GOMU pP pP 14 14 23.6 -6.3
GOMU sP sP 14 14 26.9 -6.9
GOMU S **S** **14 20 42.0 +1.6**
GOMU pmax pmax
comp=Z,52nm,1.5s
GOMU L L
comp=Z,4µm,15.2s
GOMU L L
comp=Z,3µm,15.4s
GOMU L L
comp=Z,7µm,15.2s
NRLA Narela 42.52 325 *e*P **P** **14 14 19.7 -0.4**
RTK Rohtak 43.09 325 *e*P **P** **14 14 24.6 -0.1**
HTT Hallett 43.16 134 P **P** **14 14 25.8 +0.4**
comp=Z,33nm,1.4s
HTT Hallett 43.16 134 P **P** **14 14 26.2 +0.8**
DDI Dehra Dun 43.18 328 *e*P **P** **14 14 25.6 0.0**
DDI IAmb IAmb 14 14 39.6
comp=Z,151nm,0.7s
TIA Tai'an 43.83 16 P **P** **14 14 30.0 -0.6**
TIA pmax pmax
comp=Z,24nm,1.0s
TIA pmax pmax
comp=Z,640nm,4.8s
TIA L L
comp=Z,5µm,20.6s
TIA L L
comp=Z,2µm,19.9s
TIA L L
comp=Z,7µm,22.7s
PMG Port Moresby 43.83 97 P **P** **14 14 31.4 +0.4**
PMG Port Moresby 43.83 97 P **P** **14 14 31.3 +0.3**
PMG Port Moresby 43.83 97 P **P** **14 14 30.5 -0.5**
PMG Port Moresby 43.83 97*ce*P **P** **14 14 30.9 -0.1**
PMG pmax pmax
comp=Z,575nm,1.0s
PMG MLR MLR
comp=Z,2µm,22.0s
PMG Port Moresby 43.83 97 P **P** **14 14 30.5 -0.5**
KLP Kalpa 44.04 329 *e*P **P** **14 14 32.1 -0.6**
KLP IAmb IAmb 14 14 46.5
comp=Z,92nm,0.9s
TIY Taiyuan 44.16 11 P **P** **14 14 32.6 -0.7**
TIY pmax pmax
comp=Z,860nm,5.2s
TIY L L
comp=Z,17µm,18.6s
TIY L L
comp=Z,4µm,17.2s
TIY L L
comp=Z,16µm,19.2s
CTA Charters Tower 44.27 113 LR LR 14 34 15.3
comp=Z,5µm,20.3s,baz=276,slow=38
CTA Charters Tower 44.27 113 P **P** **14 14 35.1 +0.6**
CTAO Charters Tower 44.27 113 P **P** **14 14 35.0 +0.6**
CTAO Charters Tower 44.27 113 P **P** **14 14 34.7 +0.2**
CTAO IAmb IAmb 14 14 36.5
comp=Z,96nm,1.0s
CTAO Charters Tower 44.27 113 IAMs_20 IAMs_20 14 34 03.9
comp=Z,5µm,20.0s
CTAO Charters Tower 44.27 113 P **P** **14 14 34.7 +0.2**
CTAO pmax pmax
comp=Z,96nm,1.0s
CTAO MLR MLR
comp=Z,5µm,20.0s
SMLA Simla 44.28 328 *e*P **P** **14 14 33.8 -0.5**
SMLA IAmb IAmb 14 14 49.2
comp=Z,112nm,1.0s
QLP Quilpie 44.33 122 P **P** **14 14 36.2 +1.4**
HNS HongShan 44.33 13 ⇑P **P** **14 14 34.0 -0.5**
HNS pP **pP** **14 14 44.1 -0.1**
HNS sP **pwP** **14 14 46.5 -0.1**
HNS PP **PP** **14 16 20.9 +2.5**
HNS S **S** **14 21 13.8 +7.3**
HNS sS **sS** **14 21 28.5 +6.0**
HNS ScS **ScS** **14 24 30.3 0.0**
HNS pmax pmax
comp=Z,33nm,1.8s
HNS L L
comp=Z,6µm,17.9s
HNS L L
comp=Z,4µm,15.9s
HNS L L
comp=Z,7µm,22.2s
MANU Manus Island 44.34 87 IAmb IAmb 14 14 35.2
comp=Z,90nm,0.8s
STKA Stephens Creek 44.36 131 P **P** **14 14 35.6 +0.7**
comp=Z,714nm,0.9s
STKA Stephens Creek 44.36 131 P **P** **14 14 35.8 +0.8**
comp=Z,55nm,0.6s,baz=305,slow=7.5,SNR=112
STKA S **S** **14 21 07.2 -0.1**
comp=Z,5.4nm,1.1s,baz=205,slow=20,SNR=1.8
STKA LR LR 14 34 51.0
comp=Z,6µm,20.0s,baz=292,slow=38
comp=Z,55nm,0.6s
STKA Stephens Creek 44.36 131 P **P** **14 14 35.7 +0.7**
STKA Stephens Creek 44.36 131 P **P** **14 14 35.1 +0.1**
STKA Stephens Creek 44.36 131 P **P** **14 14 35.1 +0.1**
STKA S **S** **14 21 07.2 -0.1**
STKA pmax pmax
comp=Z,458nm,0.8s
BHK Bhakra 44.91 327 *e*P **P** **14 14 38.8 -0.6**
BHK IAmb IAmb 14 14 51.7
comp=Z,96nm,1.1s
GTA2 Gaotai 45.16 356 ⇑P **P** **14 14 41.3 -0.1**
GTA2 sP pP 14 14 52.5 +1.4

GTA2 ScP **ScP** 14 20 12.5 +0.9
GTA2 S **S** 14 21 16.0 -2.9
GTA2 pmax pmax
comp=Z,82nm,1.1s
GTA2 pmax pmax
comp=Z,1µm,9.6s
GTA2 L L
comp=Z,16µm,16.2s
GTA2 L L
comp=Z,8µm,18.2s
GTA2 L L
comp=Z,20µm,16.5s
JSU Suzuyama 45.39 34 P **P** 14 14 43.1 0.0
JSU Suzuyama 45.39 34 P **P** 14 14 42.6 -0.5
DHRM DHARAMSHALA 45.62 328 *eP* **P** 14 14 44.5 -0.7
DHRM IAmb IAmb 14 15 12.0
comp=Z,148nm,1.0s
GUMO Guam 45.76 65 LR LR 14 33 27.5
comp=Z,1µm,21.9s,baz=243,slow=36
GUMO Guam 45.76 65 P **P** 14 14 46.1 -0.2
THN Thein Dam 46.06 327 *eP* **P** 14 14 48.0 -0.5
THN IAmb IAmb 14 15 01.8
comp=Z,156nm,1.0s
TSSA Tissa 46.16 328 *eP* **P** 14 14 48.5 -0.9
TSSA IAmb IAmb 14 15 03.6
comp=Z,76nm,0.7s
ALCI Alchi Leh 46.72 330 *eP* **P** 14 14 53.6 -0.4
ALCI IAmb IAmb 14 15 11.3
comp=Z,56nm,0.9s
BTO2 Baotou 46.74 7 *eP* **P** 14 14 53.6 -0.2
BTO2 pP **pP** 14 15 01.4 -2.2
BTO2 sP **sP** 14 15 04.5 -2.9
BTO2 S **S** 14 21 44.7 +3.2
BTO2 sS **pS** 14 21 54.3 +1.6
BTO2 SS **SS** 14 25 05.0 -3.4
BTO2 pmax pmax
comp=Z,120nm,2.0s
BTO2 pmax pmax
comp=Z,2µm,7.5s
BTO2 L L
comp=Z,13µm,15.4s
BTO2 L L
comp=Z,14µm,14.1s
BTO2 L L
comp=Z,19µm,15.5s
JMU Jammu 46.82 327 *eP* **P** 14 14 54.2 -0.2
JNU Nakatsue 46.85 32 LR LR 14 36 08.3
comp=Z,2µm,19.1s,baz=212,slow=38
HHC Hu-ho-hao-te 47.08 9⇑*iP* **P** 14 14 56.8 +0.4
HHC sP pP 14 15 06.9 +0.7
HHC PP **PP** 14 16 50.5 +3.0
HHC S **S** 14 21 48.8 +2.6
HHC pmax pmax
comp=Z,82nm,1.2s
HHC pmax pmax
comp=Z,260nm,5.3s
HHC L L
comp=Z,11µm,17.0s
HHC L L
comp=Z,5µm,18.0s
HHC L L
comp=Z,11µm,18.9s
BJT Baijiatuau 47.17 14 P **P** 14 14 57.8 +0.9
BJT Baijiatuau 47.17 14 IAMs_20 IAMs_20 14 38 12.6
comp=Z,7µm,18.0s
BJI2 Beijing 47.17 14 P **P** 14 14 56.7 -0.2
BJI2 pP **pP** 14 15 03.7 -2.9
BJI2 sP **pwP** 14 15 06.8 -2.3
BJI2 PcP **PcP** 14 16 28.6 +0.4
BJI2 S **S** 14 21 49.9 +2.6
BJI2 SS **SS** 14 25 13.2 -1.9
BJI2 pmax pmax
comp=Z,26nm,1.4s
BJI2 pmax pmax
comp=Z,410nm,5.2s
BJI2 L L
comp=Z,3µm,19.0s
BJI2 L L
comp=Z,2µm,16.8s
BJI2 L L
comp=Z,6µm,14.7s
JTU Tsushima 47.19 30 P **P** 14 14 57.8 +0.6
CMSA Cobar Meteorol 47.37 128 P **P** 14 14 59.2 +0.5
MSEY Mahe Island 47.39 269 IAMs_20 IAMs_20 14 31 17.5
comp=Z,4µm,20.0s
MSEY Mahe Island 47.39 269 P **P** 14 15 01.6 +2.3
MSEY S **S** 14 21 55.0 +3.6
DL2 Dalian 47.70 20 P **P** 14 14 59.5 -1.5
DL2 S **S** 14 21 51.5 -3.3
DL2 pmax pmax
comp=Z,71nm,2.0s
DL2 pmax pmax
comp=Z,630nm,8.3s
DL2 L L
comp=Z,5µm,16.5s
DL2 L L
comp=Z,4µm,15.2s
DL2 L L
comp=Z,8µm,16.4s
NIL Nilore 48.34 326 P **P** 14 15 05.2 -1.0
NIL IAmb IAmb 14 15 31.0
comp=Z,67nm,0.8s
NIL Nilore 48.34 326 P **P** 14 15 05.2 -1.0
NIL pmax pmax
comp=Z,67nm,0.8s
NIL MLR MLR
comp=Z,2µm,20.0s
NIL Nilore 48.34 326 P **P** 14 15 05.8 -0.4
NIL P **P** 14 15 05.8 -0.4
KRVT Keravat (AS076 48.78 91 LR LR 14 40 57.5
comp=Z,72nm,18.3s,baz=184,slow=42
KSAR Wonju Array Be 48.86 26 P **P** 14 15 09.8 -0.2
KSAR Wonju Array Be 48.86 26 P **P** 14 15 09.8 -0.2
KSRS Korea Array 48.88 26 P **P** 14 15 09.2 -1.0
comp=Z,41nm,0.9s,baz=233,slow=7.6,SNR=70
KSRS ScP **ScP** 14 20 28.4 +1.4
comp=Z,2.1nm,1.0s,baz=178,slow=3.7,SNR=2.0
comp=Z,41nm,0.9s
JMN Monobe 48.96 34 P **P** 14 15 11.4 +0.4
EIDS Eidsvold 49.84 118 P **P** 14 15 18.1 +0.2
comp=Z,55nm,1.3s
EIDS Eidsvold 49.84 118 P **P** 14 15 19.5 +1.6
EIDS Eidsvold 49.84 118 IAmb IAmb 14 15 32.7
comp=Z,109nm,1.4s
JCJ Chichijima 50.01 47 LR LR 14 35 37.0
comp=Z,2µm,21.9s,baz=137,slow=35
YNG Young 50.55 130 P **P** 14 15 24.3 +1.2
comp=Z,86nm,1.2s
XLT XiLinHaoTe 50.85 12 *eP* **P** 14 15 24.9 -0.3
XLT sP pP 14 15 34.8 -0.2
XLT PcP **PcP** 14 16 40.0 -1.6
XLT PP **PP** 14 17 21.2 -0.6
XLT S **S** 14 22 35.6 -3.6
XLT sS sS 14 22 57.5 +2.0
XLT pmax pmax
comp=Z,92nm,1.2s
XLT L L
comp=Z,3µm,16.2s
XLT L L
comp=Z,7µm,16.2s
JLN Jalan Bani Buh 50.97 305 P **P** 14 15 26.8 +0.4
SNY Shenyang 50.97 20 ⇑P **P** 14 15 24.8 -1.2
SNY S **S** 14 22 41.5 +0.8
SNY pmax pmax
comp=Z,55nm,1.3s
SNY pmax pmax
comp=Z,570nm,3.5s
SNY L L
comp=Z,2µm,13.1s
SNY L L
comp=Z,3µm,14.9s
SNY L L
comp=Z,5µm,13.3s
NGCH Negor - Chabah 51.17 309 P **P** 14 15 29.1 +1.2
WMQ Urumqi 51.31 346 ⇑P **P** 14 15 29.3 +0.7
WMQ S **S** 14 22 45.4 -0.1
WMQ ScS **ScS** 14 25 15.2 -1.4
WMQ pmax pmax
comp=Z,220nm,1.1s
WMQ pmax pmax
comp=Z,710nm,3.6s
WMQ L L
comp=Z,3µm,18.1s
WMQ L L
comp=Z,3µm,19.3s
WMQ L L
comp=Z,2µm,18.1s
KBL Kabul 51.39 324 P **P** 14 15 28.2 -1.4
KBL Kabul 51.39 324 P **P** 14 15 28.2 -1.4
KBL pmax pmax
comp=Z,34nm,0.9s
KBL Kabul 51.39 324 P **P** 14 15 29.1 -0.5
SNR=24
KBL P **P** 14 15 29.1 -0.5
SNR=24
KBL P **P** 14 15 29.1 -0.5
SNR=24
KBL S **S** 14 22 45.0 -2.2
KBL S **S** 14 22 45.0 -2.2
KBL S **S** 14 22 45.0 -2.2
CAN Canberra 51.42 131 P **P** 14 15 30.9 +1.3
comp=Z,55nm,1.6s
CAN Canberra 51.42 131 P **P** 14 15 31.0 +1.3
KSH2 Kashi 51.45 333 P **P** 14 15 29.4 -0.5
KSH2 sP pwP 14 15 41.4 -0.5
KSH2 PP **PP** 14 17 27.4 -0.1
KSH2 S **S** 14 22 45.5 -2.3
KSH2 pmax pmax
comp=Z,73nm,0.8s
KSH2 pmax pmax
comp=Z,800nm,4.1s
KSH2 L L
comp=Z,2µm,21.3s
KSH2 L L
comp=Z,2µm,21.3s
KSH2 L L
comp=Z,3µm,21.3s
WBK Wadi Bani Khal 51.54 305 P **P** 14 15 32.2 +1.4
WBK P **P** 14 15 32.2 +1.4
MHTO MHTO 51.64 302 P **P** 14 15 31.9 +0.5
MHTO P **P** 14 15 31.9 +0.5
CNB Canberra Magne 51.69 131 P **P** 14 15 31.8 +0.1
ARMA Armidale 51.73 124 P **P** 14 15 32.7 +0.5
ARMA Armidale 51.73 124 IAmb IAmb 14 15 46.9
comp=Z,73nm,1.2s
INU Inuyama 51.92 35 P **P** 14 15 35.3 +2.1
JHJ Hachijo jima 2 52.07 40 LR LR 14 40 19.0
comp=Z,1µm,18.4s,baz=256,slow=39
WSAR Wadi Sarin 52.11 305 LR LR 14 35 59.1
comp=Z,25nm,19.2s,baz=140,slow=34
JGF Kuroka 52.29 35 P **P** 14 15 37.2 +1.1
JGF Kuroka 52.29 35 IAmb IAmb 14 15 47.5
comp=Z,180nm,1.8s
SMDO Samad 52.50 305 P **P** 14 15 38.2 +0.2
SMDO P **P** 14 15 38.2 +0.2
SMDO P **P** 14 15 39.1 +1.1
SMDO P **P** 14 15 39.1 +1.1
TARG Taragay, Kyrgy 52.63 336 IAmb IAmb 14 16 10.0
comp=Z,60nm,0.8s
BIDO Bidbid 52.65 305 P **P** 14 15 40.4 +1.4
BIDO P **P** 14 15 40.4 +1.4
DMTO DMTO 52.93 297 P **P** 14 15 41.4 +0.3
DMTO P **P** 14 15 41.4 +0.3
PRZ Przheval'sk 53.04 337 IAmb IAmb 14 15 44.5
comp=Z,83nm,1.0s
BSY Bisya 53.06 304 P **P** 14 15 42.3 +0.3
BSY P **P** 14 15 42.3 +0.3
NRN Naryn 53.13 335 IAmb IAmb 14 15 59.9
comp=Z,72nm,1.0s
SHLS Shalkode 53.22 339*c iP* **P** 14 15 42.1 -0.8
SHLS pmax pmax
comp=Z,70nm,0.8s
SHLS Shalkode 53.22 339⇑*iP* **P** 14 15 42.1 -0.8
comp=Z,70nm,0.8s
HOQ Hoqain 53.34 305 P **P** 14 15 45.1 +1.0
HOQ P **P** 14 15 45.1 +1.0
HOQ P **P** 14 15 45.1 +1.0
CN2 Changchun 53.35 20 ⇑P **P** 14 15 42.7 -1.0
CN2 *es*P pwP 14 15 54.7 -1.2
CN2 *eS* **S** 14 23 13.7 +0.4
CN2 pmax pmax
comp=Z,90nm,1.1s
CN2 pmax pmax
comp=Z,800nm,5.0s
CN2 L L
comp=Z,2µm,13.0s
CN2 L L
comp=Z,1µm,13.0s
CN2 L L
comp=Z,3µm,15.0s
PDGK Podgornoye 53.36 339 P **P** 14 15 43.1 -0.9
UZB Uzynbulak 53.37 338*c iP* **P** 14 15 44.1 0.0
UZB *eS* **S** 14 23 16.9 +3.0
UZB pmax pmax
comp=Z,52nm,0.9s
UZB Uzynbulak 53.37 338⇑*iP* **P** 14 15 44.2 0.0
comp=Z,52nm,0.9s
UZB *eS* **S** 14 23 16.9 +3.0
MAJO Matsushiro 53.44 35 P **P** 14 15 43.5 -1.1
MAJO Matsushiro 53.44 35 P **P** 14 15 42.7 -1.9
MAJO IAmb IAmb 14 15 59.1
comp=Z,150nm,1.7s
MAJO Matsushiro 53.44 35 P **P** 14 15 42.7 -1.9
MAJO pmax pmax
comp=Z,150nm,1.7s
MAJO MLR MLR
comp=Z,2µm,20.0s
MJAR Matsushiro Arr 53.44 35 P **P** 14 15 42.6 -1.9
comp=Z,18nm,0.8s,baz=217,slow=6.7,SNR=51
MJAR ScP **ScP** 14 20 48.8 +2.0
comp=Z,0.7nm,0.5s,baz=194,slow=4.2,SNR=3.1
MJAR S **S** 14 23 11.4 -3.4
comp=Z,2.1nm,1.0s,baz=243,slow=16,SNR=4.1
MJAR LR LR 14 39 54.7
comp=Z,2µm,19.7s,baz=229,slow=38
comp=Z,18nm,0.8s
MJAR Matsushiro Arr 53.44 35 P **P** 14 15 42.7 -1.9
MJB9 Matsu-Tunnel 53.44 35 IAmb IAmb 14 16 00.5
comp=Z,141nm,1.7s
SONM Songino Array 53.49 3 P **P** 14 15 44.9 +0.1
comp=Z,93nm,0.7s,baz=182,slow=8.8,SNR=556
SONM ScP **ScP** 14 20 47.1 +0.3
comp=Z,4.7nm,1.1s,baz=202,slow=3.2,SNR=3.8
SONM LR LR 14 41 37.1
comp=Z,6µm,18.6s,baz=188,slow=40
comp=Z,93nm,0.7s
SONM Songino Array 53.49 3 P **P** 14 15 45.1 +0.3
SONM **ScP** 14 20 47.2 +0.4
DRK Karamyk 53.51 330 IAmb IAmb 14 16 06.4
comp=Z,60nm,0.6s
SATY Saty 53.53 338*c iP* **P** 14 15 45.3 +0.1
SATY pmax pmax
comp=Z,33nm,0.8s
SATY Saty 53.53 338⇑*iP* **P** 14 15 45.3 +0.1
comp=Z,33nm,0.8s
ULN Ulaanbaatar 53.55 3 P **P** 14 15 45.6 +0.3
ULN IAmb IAmb 14 15 46.5
comp=Z,70nm,0.9s
ULN Ulaanbaatar 53.55 3 IAMs_20 IAMs_20 14 41 37.1
comp=Z,6µm,18.0s
ULN Ulaanbaatar 53.55 3*ceP* **P** 14 15 45.6 +0.3
ULN pmax pmax
comp=Z,84nm,0.9s
ULN Ulaanbaatar 53.55 3 P **P** 14 15 45.9 +0.6
ULN P **P** 14 15 45.9 +0.6
ULN P **P** 14 15 45.9 +0.6
ULN Ulaanbaatar 53.55 3 P **P** 14 15 45.3 0.0
comp=Z,387nm,2.0s
TAU Tasmania Unive 53.73 141 P **P** 14 15 46.9 +0.4
TAU Tasmania Unive 53.73 141 IAMs_20 IAMs_20 14 36 38.5
comp=Z,4µm,20.0s
KPKS Kokpek 53.77 338 *eP* **P** 14 15 47.0 +0.1
KPKS *eS* **S** 14 23 22.3 +3.0
KPKS Kokpek 53.77 338 *eP* **P** 14 15 47.0 +0.1
KPKS *eS* **S** 14 23 22.4 +3.1
ARQ Araqi 53.88 304 P **P** 14 15 48.4 +0.4
ARQ P **P** 14 15 48.4 +0.4
GAR Garm 53.91 329 IAmb IAmb 14 16 06.2
comp=Z,65nm,0.8s
JASK Jask - Hormozg 53.98 308 P **P** 14 15 49.8 +1.1
DOK Doka 53.99 298 P **P** 14 15 49.0 +0.2
DOK P **P** 14 15 49.0 +0.2
BOOM Boomskoye usch 54.03 335 IAmb IAmb 14 16 07.1
comp=Z,86nm,1.0s
SHAA Shahritus 54.04 326 IAmb IAmb 14 16 33.2
comp=Z,271nm,1.5s
WHFO Wadi Hawf 54.05 297 P **P** 14 15 49.7 +0.4
WHFO P **P** 14 15 49.7 +0.4
TNSS Tian-Shan 54.08 337 *eP* **P** 14 15 49.4 -0.1
TNSS Tian-Shan 54.08 337 *eP* **P** 14 15 49.4 -0.1
MDOK Medeo 54.14 337 *eP* **P** 14 15 49.6 -0.1
MDOK *eS* **S** 14 23 27.2 +2.9
MDOK Medeo 54.14 337 *eP* **P** 14 15 49.7 -0.1
MDOK *eS* **S** 14 23 27.3 +2.9
MDOK LR LR 14 41 34.9
SOHO SOHO 54.23 305 P **P** 14 15 51.2 +0.7
SOHO P **P** 14 15 51.2 +0.7
AAA Alma-Ata 54.23 337 *eP* **P** 14 15 50.3 0.0
AAA pmax pmax
comp=Z,33nm,0.7s
AAA Alma-Ata 54.23 337 *eP* **P** 14 15 50.3 0.0
comp=Z,32nm,0.7s
AAA LR LR 14 41 34.9
comp=Z,4µm,17.2s
CHGR Chuyangaron 54.26 327 IAmb IAmb 14 17 08.5
comp=Z,79nm,0.9s
CHGR Chuyangaron 54.26 327*c iP* **P** 14 15 48.6 -2.0
CHGR pmax pmax
comp=Z,37nm,0.8s
CHGR MLR MLR
comp=Z,3µm,23.0s
UCH Uchtor 54.42 334 P **P** 14 15 52.1 0.0
SNR=28
BTK Batken 54.44 330 IAmb IAmb 14 16 32.4
comp=Z,44nm,1.0s
TKM2 Tokmak 2 54.52 335 P **P** 14 15 52.7 +0.1
SNR=18
KBK Karagaybulak 54.58 335 P **P** 14 15 53.4 +0.5
SNR=26
ARXS Arharly 54.73 338 *eP* **P** 14 15 52.2 -1.7
UMZA Um Al Zommool 54.74 303 P **P** 14 15 54.9 +0.7
UMZA P **P** 14 15 54.9 +0.7
AAK Ala-Archa 54.76 334 LR LR 14 41 45.5
comp=Z,3µm,21.7s,baz=144,slow=39
AAK Ala-Archa 54.76 334 P **P** 14 15 53.7 -0.5
AAK Ala-Archa 54.76 334 P **P** 14 15 54.4 +0.1
SNR=22
AAK Ala-Archa 54.76 334 *i* P **P** 14 15 53.8 -0.4
SNR=29
AAK Ala-Archa 54.76 334*ceP* **P** 14 15 54.3 +0.1
AAK pmax pmax
comp=Z,20nm,1.1s
AAK MLR MLR
comp=Z,3µm,21.0s
AAK Ala-Archa 54.76 334 P **P** 14 15 54.5 +0.3
AAK P **P** 14 15 54.5 +0.3
ALNE Al Ain 54.83 305 *i* P **P** 14 15 55.5 +0.6
SNR=15
ALNE Al Ain 54.83 305 P **P** 14 15 55.5 +0.6
SNR=5.4
ALNE P **P** 14 15 55.5 +0.6
SNR=5.4
FRU1 Bishkek 54.84 335 IAmb IAmb 14 16 11.1
comp=Z,63nm,0.8s
ASHO Ashiyiah 54.86 306 P **P** 14 15 55.3 +0.1
ASHO Ashiyiah 54.86 306 P **P** 14 15 55.7 +0.6
UOSS Minazif 54.87 306 P **P** 14 15 55.9 +0.7
UOSS Minazif 54.87 306 P **P** 14 15 55.7 +0.6
HATD Hatta, Dubai 54.87 306 P **P** 14 15 55.5 +0.3
HATD Hatta, Dubai 54.87 306 P **P** 14 15 55.7 +0.5
HATD P **P** 14 15 55.7 +0.5
CHMS Chumysh 54.94 335 P **P** 14 15 55.0 -0.4
SNR=6.3
MDH Madha 54.95 306 P **P** 14 15 56.0 +0.2
EKS2 Erkin-Say 55.09 334 P **P** 14 15 56.7 +0.1
SNR=88
MSFE Esma-Masafi 55.09 306 P **P** 14 15 58.3 +1.5
MASF Masafi 55.10 306 P **P** 14 15 55.9 -1.0
MASF P **P** 14 15 55.9 -1.0
MASF P **P** 14 15 57.6 +0.7
MASF P **P** 14 15 57.6 +0.7
BANOM Banah 55.24 307 P **P** 14 15 58.9 +1.0
VLA Vladivostok 55.26 25*d iP* **P** 14 15 57.6 0.0
VLA pmax pmax
comp=Z,76nm,1.2s
VLA MLR MLR
comp=Z,2µm,19.0s
USP Ospenovka 55.27 335 P **P** 14 15 57.4 -0.4
SNR=37
FAQ Al Faqa, Dubai 55.27 305 *i* P **P** 14 15 59.1 +1.0
SNR=5.2
NAZ Nazwa, Dubai 55.32 306 *i* P **P** 14 15 59.4 +1.0
SNR=6.3
NAZ Nazwa, Dubai 55.32 306 P **P** 14 15 56.8 -1.6
SNR=6.3
NAZ P **P** 14 15 56.8 -1.6
SNR=6.3
NAZ P **P** 14 15 59.8 +1.3
SNR=6.3
NAZ P **P** 14 15 59.8 +1.3
SNR=6.3
ZSN Zaisan 55.41 345*c iP* **P** 14 15 59.2 +0.6
ZSN pmax pmax
comp=Z,25nm,0.6s
ZSN Zaisan 55.41 345⇑*iP* **P** 14 15 59.2 +0.6
comp=Z,25nm,0.6s
SHME Shamm 55.43 307 P **P** 14 15 60.0 +0.8
ASUD Al Ashush, Dub 55.43 305 P **P** 14 16 00.7 +1.5
ASUD Al Ashush, Dub 55.43 305 P **P** 14 16 00.1 +0.9
ASUD P **P** 14 16 00.1 +0.9
HRA Herat 55.51 319 P **P** 14 15 58.7 -1.1
MK31 Makanchi Array 55.52 343*ceP* **P** 14 15 58.8 -0.6
MKAR Makanchi Array 55.52 343 P **P** 14 15 59.0 -0.4
comp=Z,39nm,0.7s,baz=148,slow=8.1,SNR=447
MKAR LR LR 14 42 57.9
comp=Z,1µm,20.0s,baz=154,slow=40
MKAR PKP2bc **P'P'bc** 14 46 13.9 -1.0
comp=Z,0.7nm,1.1s,baz=336,slow=2.7,SNR=4.8
comp=Z,39nm,0.7s
MKAR Makanchi Array 55.52 343 P **P** 14 15 59.1 -0.3
MDJ Mudanjiang 55.57 23 IAMs_20 IAMs_20 14 41 50.3
comp=Z,4µm,20.0s
MDJ Mudanjiang 55.57 23 P **P** 14 15 58.0 -1.8
MDJ S **S** 14 23 44.2 +1.1
MDJ sS sS 14 23 58.4 -0.9
MDJ pmax pmax
comp=Z,47nm,1.0s
MDJ pmax pmax
comp=Z,1µm,3.6s
MDJ L L
comp=Z,2µm,16.2s
MDJ L L
comp=Z,3µm,16.5s
MDJ L L
comp=Z,5µm,19.1s
MAKZ Makanchi 55.62 343 P **P** 14 15 59.5 -0.7
MAKZ IAmb IAmb 14 16 01.2
comp=Z,78nm,1.4s
MAKZ Makanchi 55.62 343 P **P** 14 15 59.7 -0.5
BNX BinXian 55.73 20 ⇑P **P** 14 16 00.6 -0.3
BNX pP **pP** 14 16 08.8 -2.0
BNX sP **pwP** 14 16 12.1 -1.1
BNX S **S** 14 23 46.3 +1.1
BNX pmax pmax
comp=Z,310nm,1.1s
BNX pmax pmax
comp=Z,2µm,4.3s
BNX L L
comp=Z,4µm,15.9s
BNX L L
comp=Z,3µm,17.3s
BNX L L
comp=Z,7µm,16.6s
ZAK Zakamensk 55.96 0 *eP* **P** 14 16 02.1 -0.5
ZAK pmax pmax
comp=Z,49nm,1.5s
USRK Ussuriysk Ar. 56.18 25 P **P** 14 16 04.0 -0.2
comp=Z,94nm,0.8s,baz=217,slow=6.0,SNR=87
comp=Z,94nm,0.8s
USRK Ussuriysk Ar. 56.18 25 P **P** 14 16 04.0 -0.2
MZWR Madinat Zayed 56.25 303 P **P** 14 16 05.7 +0.7
MZWR P **P** 14 16 05.7 +0.7
MZR Muzera 56.26 302 *i* P **P** 14 16 06.3 +1.0
SNR=6.7
MZR Muzera 56.26 302 P **P** 14 16 06.2 +1.0
MZR P **P** 14 16 06.2 +1.0
TATA Tatamba Isabel 56.33 96 P **P** 14 16 06.3 +0.5
KNGR Kungurtug, Tuv 56.38 356 *i* P **P** 14 16 05.7 0.0
KNGR pmax pmax
comp=Z,66nm,0.9s
KNGR MLR MLR
comp=Z,2µm,14.0s
IUG luzhnay 56.41 331*c iP* **P** 14 16 05.8 -0.2
IUG pmax pmax
comp=Z,83nm,1.4s

IUG **Iuzhnay** 56.41 331⇑ *i*P P 14 16 05.9 -0.2
comp=Z,83nm,1.4s
HNR **Honiara** 56.45 97 LR LR 14 43 48.7
comp=Z,53nm,20.7s,baz=351,slow=40
HNR **Honiara** 56.45 97 P P 14 16 07.3 +0.6
HNR **Honiara** 56.45 97 P P 14 16 05.9 -0.8
HNR **Honiara** 56.45 97 P P 14 16 05.9 -0.8
HNR pmax pmax
comp=Z,260nm,0.9s
HNR MLR MLR
comp=Z,1μm,22.0s
NGOA **Tingoa Renbel** 56.56 100 P P 14 16 08.6 +1.1
VOI **Vohitsoka** 56.61 248 IAMs_20 IAMs_20 14 35 35.8
comp=Z,5μm,20.0s
VOI **Vohitsoka** 56.61 248 P P 14 16 08.7 +0.8
HIA **Hailar** 56.74 13 IAMs_20 IAMs_20 14 40 36.0
comp=Z,5μm,22.0s
BTLS **Baital** 56.91 336 *e*P P 14 16 09.5 +0.2
BTLS **Baital** 56.91 336 *e*P P 14 16 09.6 +0.2
FOMA **Nahampoana Res** 56.91 244 IAMs_20 IAMs_20 14 35 08.5
comp=Z,5μm,20.0s
KK31 **Karatay Array** 56.92 332 *i* P P 14 16 08.3 -1.2
KKAR **Karatay Array** 56.92 332 P P 14 16 08.7 -0.8
KKAR **Karatay Array** 56.92 332 P P 14 16 08.7 -0.8
DGZ **Jazzator, Alta** 56.92 348 *c i*P P 14 16 09.9 +0.3
DGZ pmax pmax
comp=Z,192nm,0.8s
DGZ MLR MLR
comp=Z,4μm,16.0s
GHWR **Ruwais** 57.16 303 P P 14 16 12.0 +0.4
GHWR P P 14 16 12.0 +0.4
GHWR P P 14 16 12.0 +0.4
TLY **Talaya** 57.26 0 LR LR 14 44 05.3
comp=Z,4μm,18.4s,baz=182,slow=40
TLY **Talaya** 57.26 0 P P 14 16 11.9 +0.1
TLY IAmb IAmb 14 16 13.7
comp=Z,48nm,0.8s
TLY **Talaya** 57.26 0 *ce*P P 14 16 12.5 +0.7
TLY pmax pmax
comp=Z,68nm,0.9s
TLY MLR MLR
comp=Z,6μm,16.0s
TLY **Talaya** 57.26 0 P P 14 16 12.6 +0.9
TLY P P 14 16 12.6 +0.9
MOY **Mondy** 57.27 358 *e*P P 14 16 12.2 +0.2
MOY pmax pmax
comp=Z,142nm,3.0s
JRN **Qarnain Island** 57.60 304 P P 14 16 15.1 +0.5
JRN P P 14 16 15.1 +0.5
IRK **Irkutsk** 57.83 1 *e*P P 14 16 13.4 -2.3
IRK *e*S S 14 24 13.6 +0.8
IRK pmax pmax
comp=Z,228nm,3.0s
SLWR **Sila** 58.20 303 P P 14 16 19.7 +0.9
SLWR P P 14 16 19.7 +0.9
CIT **Chita** 58.29 8 *e*P P 14 16 19.4 +0.4
CIT *e* 14 16 28.2
CIT *e* 14 18 25.0
CIT *e* 14 24 21.8
CIT *e* 14 24 44.0
CIT pmax pmax
comp=Z,290nm,2.8s
TRNA **Turayna** 58.86 303 P P 14 16 23.9 +0.4
SMRA **Abu-Samra** 59.19 303 P P 14 16 26.3 +0.5
SHMA **Al-Shehemyia** 59.53 304 P P 14 16 28.8 +0.7
H04N2 **CROZET ISLANDS** 59.67 219 T T 15 20 45.8
baz=65,slow=75
HEH **HeiHe** 59.68 18 *e*P P 14 16 27.8 -0.8
HEH pP pP 14 16 36.2 -2.3
HEH S S 14 24 44.6 +7.8
HEH sS sS 14 24 58.4 +5.1
HEH pmax pmax
comp=Z,180nm,0.9s
HEH pmax pmax
comp=Z,1μm,4.2s
HEH L L
comp=Z,3μm,20.3s
HEH L L
comp=Z,4μm,18.0s
HEH L L
comp=Z,4μm,21.6s
H04N1 **CROZET ISLANDS** 59.69 219 T T 15 20 54.6
baz=65,slow=75
H04N3 **CROZET ISLANDS** 59.69 219 T T 15 20 53.4
baz=65,slow=75,SNR=2496
CRZF **Crozet Islands** 59.75 219 IAMs_20 IAMs_20 14 35 37.9
comp=Z,4μm,21.0s
H04S1 **CROZET ISLANDS** 59.90 218 T T 15 21 12.2
baz=64,slow=76,SNR=661
H04S3 **CROZET ISLANDS** 59.92 218 T T 15 21 11.8
baz=64,slow=76,SNR=1449
H04S2 **CROZET ISLANDS** 59.92 218 T T 15 21 14.0
baz=64,slow=76,SNR=1040
JEM **Erimo** 59.99 34 P P 14 16 31.4 +0.5
KURBB **Kurchatov Arra** 60.06 342 P P 14 16 30.7 -0.5
comp=Z,29nm,0.7s,baz=161,slow=6.2,SNR=289
KURBB S S 14 24 38.8 -2.9
comp=Z,2.0nm,1.0s,baz=148,slow=14,SNR=6.9
KURBB PKP2bc P'P'bc 14 46 04.3 0.0
comp=Z,0.3nm,0.5s,baz=323,slow=3.0,SNR=4.0
KURBB LR LR 14 47 03.0
comp=Z,4μm,18.2s,baz=158,slow=41
comp=Z,29nm,0.7s
KURBB **Kurchatov Arra** 60.06 342 P P 14 16 29.7 -1.5
KURK **Kurchatov** 60.11 342 P P 14 16 31.1 -0.5
KURK IAmb IAmb 14 16 32.3
comp=Z,51nm,0.8s
KURK **Kurchatov** 60.11 342 IAMs_20 IAMs_20 14 46 42.9
comp=Z,3μm,19.0s
KURK **Kurchatov** 60.11 342 *ce*P P 14 16 31.2 -0.4
KURK pmax pmax
comp=Z,54nm,0.9s
KURK MLR MLR
comp=Z,3μm,18.0s
KURK **Kurchatov** 60.11 342 P P 14 16 31.5 -0.1
KURK P P 14 16 31.5 -0.1
KLR **Kul'dur** 60.24 21 LR LR 14 43 18.3
comp=Z,3μm,20.4s,baz=224,slow=37
KLR **Kul'dur** 60.24 21 *ce*P P 14 16 31.8 -0.7
KLR pmax pmax
comp=Z,73nm,0.9s
KLR MLR MLR
comp=Z,3μm,18.0s
ASAJ **Asahikawa** 61.12 32 LR LR 14 44 15.8
comp=Z,2μm,19.9s,baz=225,slow=37
ZALV **Zalesovo Beam** 61.47 348 P P 14 16 40.2 -0.6
comp=Z,83nm,0.6s,baz=172,slow=4.7,SNR=331
ZALV S S 14 24 57.3 -2.4
comp=Z,3.9nm,0.9s,baz=141,slow=9.6,SNR=8.6
ZALV PKP2bc P'P'bc 14 46 03.2 +2.6
comp=Z,1.1nm,0.7s,baz=270,slow=1.5,SNR=5.9
ZALV LR LR 14 46 30.2
comp=Z,8μm,18.9s,baz=156,slow=39
comp=Z,83nm,0.6s
ZALV **Zalesovo Beam** 61.47 348 P P 14 16 40.4 -0.4
ZALV **Zalesovo Beam** 61.47 348 P P 14 16 40.4 -0.4
BRZS **Berezniki** 61.48 338 *e*P P 14 16 41.4 +0.4
BRZS **Berezniki** 61.48 338 *e*P P 14 16 41.5 +0.4
ATD **Arta Tunnel** 62.33 286 LR LR 14 40 08.8
comp=Z,42nm,20.0s,baz=92,slow=32
ZEA **Zeya** 62.72 16 *e*P P 14 16 49.4 +0.3
ZEA *e* 14 19 14.6
ZEA *e*S S 14 25 19.2 +3.8
ZEA pmax pmax
comp=E,30nm,1.0s
ZEA pmax pmax
comp=N,30nm,1.2s
ZEA pmax pmax
comp=Z,80nm,1.0s
ZEA pmax pmax
comp=E,100nm,6.7s
ZEA pmax pmax
comp=N,200nm,7.2s
ZEA pmax pmax
comp=Z,500nm,6.2s
ZEA smax smax
comp=N,300nm,10.4s
YSS **Yuzhno-Sakhali** 63.17 29 P P 14 16 52.5 +0.2
YSS **Yuzhno-Sakhali** 63.17 29 P P 14 16 51.4 -0.9
YSS **Yuzhno-Sakhali** 63.17 29 *ce*P P 14 16 51.8 -0.5
YSS *e* 14 19 08.0
YSS *e*S S 14 25 19.5 -1.8
YSS *e*SS SS 14 29 25.9 -2.1
YSS pmax pmax
comp=Z,800nm,4.4s
YSS pmax pmax
comp=N,300nm,4.0s
YSS pmax pmax
comp=E,400nm,3.7s
YSS pmax pmax
comp=Z,110nm,1.2s
DZM **Mont Dzumac** 63.19 112 *e*P P 14 16 53.1 0.0
comp=Z,114nm,1.3s
DZM *e*S S 14 25 28.9 +6.2
comp=Z,402nm,23.3s
DZM *e*SS SS 14 29 37.6 +8.2
comp=Z,1μm,24.3s
DZM *e*LQ LQ 14 33 06.2
comp=Z,2μm,39.9s
DZM *e*LR LR 14 36 01.3
comp=Z,3μm,23.4s
DZM **Mont Dzumac** 63.19 112 LR LR 14 45 41.1
comp=Z,2μm,20.1s,baz=272,slow=37
GRNR **Gornyy** 63.25 23⇑ *i*P P 14 16 52.3 -0.5
GRNR pmax pmax
comp=N,20nm,1.0s
GRNR pmax pmax
comp=E,10.0nm,1.0s
GRNR pmax pmax
comp=Z,60nm,1.1s
GRNR MLR MLR
comp=E,950nm,14.0s
GRNR MLR MLR
comp=N,1μm,17.0s
GRNR MLR MLR
comp=Z,2μm,17.0s
RAYN **Ar Rayn** 63.25 300 P P 14 16 52.8 -0.6
RAYN **Ar Rayn** 63.25 300 *i* P P 14 16 53.4 0.0
SNR=18
RAYN **Ar Rayn** 63.25 300 P P 14 16 52.8 -0.6
RAYN pmax pmax
comp=Z,20nm,0.9s
RAYN MLR MLR
comp=Z,2μm,19.0s
RAYN **Ar Rayn** 63.25 300 P P 14 16 53.7 +0.3
SANVU **Saraoutou** 63.57 104 P P 14 16 56.4 +0.8
SANVU **Saraoutou** 63.57 104 P P 14 16 54.9 -0.7
SANVU IAmb IAmb 14 17 19.9
comp=Z,78nm,1.1s
OUENC **Ouen Island, N** 63.59 112 P P 14 16 57.3 +1.7
YATNC **Mamie plateau,** 63.60 112 P P 14 16 56.3 +0.6
BOD **Bodaibo** 64.03 6 *e*P P 14 16 56.8 -0.9
BOD pmax pmax
comp=Z,82nm,1.4s
UGL **Uglegorsk** 64.36 27⇓ *i*P P 14 17 00.3 +0.3
UGL *e*S S 14 25 32.9 -3.0
UGL pmax pmax
comp=Z,100nm,1.1s
UGL MLR MLR
comp=E,500nm,13.0s
UGL MLR MLR
comp=N,2μm,18.0s
UGL MLR MLR
comp=Z,1μm,20.0s
BVA0 **Borovoye Array** 64.80 339 *i* P P 14 17 01.9 -1.0
BVAR **Borovoye Array** 64.80 339 P P 14 17 02.1 -0.8
comp=Z,34nm,0.6s,baz=147,slow=8.3,SNR=188
BVAR LR LR 14 50 38.2
comp=Z,2μm,18.8s,baz=144,slow=41
comp=Z,34nm,0.6s
BORK **Borovoye** 64.84 339 P P 14 17 02.3 -0.9
BORK IAmb IAmb 14 17 15.8
comp=Z,47nm,0.8s
BORK **Borovoye** 64.84 339 IAMs_20 IAMs_20 14 50 19.2
comp=Z,3μm,18.0s
BORK **Borovoye** 64.84 339 *ce*P P 14 17 02.4 -0.7
BORK pmax pmax
comp=Z,38nm,0.9s
BORK MLR MLR
comp=Z,3μm,16.0s
KIBK **Kibwezi** 64.92 270 P P 14 17 05.0 +0.4
KIBK **Kibwezi** 64.92 270 IAMs_20 IAMs_20 14 40 01.2
comp=Z,3μm,21.0s
KIBK **Kibwezi** 64.92 270 P P 14 17 05.7 +1.1
FURI **Furi** 65.82 282 LR LR 14 43 43.3
comp=Z,3μm,18.5s,baz=100,slow=34
FURI **Furi** 65.82 282 IAMs_20 IAMs_20 14 43 50.3
comp=Z,3μm,19.0s
KMBO **Kilima Mbogo** 65.82 271 LR LR 14 40 45.4
comp=Z,2μm,21.4s,baz=100,slow=31
TYV **Tymovskoe** 65.91 26 *e*P P 14 17 10.2 +0.1
TYV *e*S S 14 25 55.6 +0.7
TYV pmax pmax
comp=Z,25nm,1.3s
TYV pmax pmax
comp=Z,800nm,4.5s
TYV smax smax
comp=N,200nm,6.8s
TYV smax smax
comp=E,400nm,6.8s
TYV MLR MLR
comp=Z,2μm,17.0s
TYV MLR MLR
comp=E,2μm,16.0s
AB31 **Akbulak array** 66.42 331 *i* P P 14 17 13.0 -0.4
ABKAR **Akbulak array** 66.42 331 P P 14 17 12.9 -0.6
MAW **Mawson** 67.42 196 P P 14 17 20.2 +0.8
comp=E,8.2nm,0.7s,baz=343,slow=7.7,SNR=3.9
MAW LR LR 14 40 44.0
comp=E,7μm,21.4s,baz=32,slow=30
comp=E,8.2nm,0.7s
PYZ **Puysegur Point** 67.70 138 IAMs_20 IAMs_20 14 45 11.5
comp=Z,4μm,21.0s
DCZ **Deep Cove** 67.83 137 IAMs_20 IAMs_20 14 45 47.2
comp=Z,3μm,20.0s
AKTO **Aktyubinsk** 68.14 331 P P 14 17 23.3 -1.0
MSZ **Milford Sound** 68.17 136 P P 14 17 26.5 +1.9
LODK **Lodwar** 68.23 276 P P 14 17 26.7 +1.0
SNR=9.4
MLZ **Mavora Lakes** 68.47 137 IAMs_20 IAMs_20 14 46 15.0
comp=Z,4μm,20.0s
MLZ **Mavora Lakes** 68.47 137 P P 14 17 27.1 +0.5
WHZ **Wether Hill Ro** 68.48 137 P P 14 17 27.4 +0.8
JCZ **Jackson Bay** 68.63 135 P P 14 17 28.5 +0.9
JCZ **Jackson Bay** 68.63 135 P P 14 17 28.6 +0.9
WKZ **Wanaka** 68.96 136 P P 14 17 30.8 +1.1
AKT **Akhty** 68.96 319 *e*P P 14 17 28.0 -1.8
AKT *e* 14 17 51.6
AKT *e* 14 19 59.8
AKT *e*PPP PPP 14 21 41.0
AKT *e*S S 14 26 30.9 -1.4
AKT pmax pmax
comp=Z,68nm,1.0s
TUZ **Tuapeka** 69.64 137 P P 14 17 34.2 +0.4
LBZ **Lake Benmore** 69.67 135 IAMs_20 IAMs_20 14 49 22.1
comp=Z,4μm,19.0s
MAK **Makhachkala** 69.82 320 *c i*P P 14 17 31.4 -3.5
MAK *e*S S 14 26 36.2 -5.9
MAK pmax pmax
comp=Z,260nm,1.4s
RPZ **Rata Peaks** 70.15 134 LR LR 14 49 57.8
comp=Z,3μm,19.0s,baz=132,slow=37
RPZ **Rata Peaks** 70.15 134 P P 14 17 37.5 +0.5
RPZ **Rata Peaks** 70.15 134 P P 14 17 37.4 +0.3
INZ **Inchbonnie** 70.25 133 P P 14 17 36.4 -1.2
GNI **Garni** 70.37 316 LR LR 14 50 13.8
comp=Z,766nm,21.0s,baz=158,slow=37
GNI **Garni** 70.37 316 P P 14 17 37.4 -1.2
GNI IAmb IAmb 14 18 29.6
comp=Z,29nm,0.8s
GNI **Garni** 70.37 316 P P 14 17 39.0 +0.5
GNI **Garni** 70.37 316 *ce*P P 14 17 38.9 +0.4
GNI pmax pmax
comp=Z,25nm,1.1s
GNI MLR MLR
comp=Z,927nm,18.0s
GNI **Garni** 70.37 316 P P 14 17 38.6 +0.1
comp=Z,759nmcomp=Z,43nm,1.0s
YAK **Yakutsk** 70.68 13 LR LR 14 51 48.0
comp=Z,3μm,18.2s,baz=212,slow=39
YAK **Yakutsk** 70.68 13 P P 14 17 38.3 -1.4
YAK **Yakutsk** 70.68 13 IAMs_20 IAMs_20 14 52 56.6
comp=Z,3μm,18.0s
YAK **Yakutsk** 70.68 13⇑ *i*P P 14 17 38.2 -1.5
YAK *e**PP **pwP** 14 17 51.4 -0.9
YAK *e* 14 17 58.8
YAK *e* 14 20 12.9
YAK *e*PPP PPP 14 21 54.3
YAK *e*S S 14 26 48.8 -2.6
YAK *e**SS **sS** 14 27 12.4 +4.2
YAK *e* 14 27 36.5
YAK *e*SS SS 14 31 21.6 -2.3
YAK pmax pmax
comp=Z,280nm,1.6s
YAK pmax pmax
comp=N,96nm,1.5s
YAK pmax pmax
comp=E,60nm,1.9s
YAK pmax pmax
comp=Z,182nm,3.8s
YAK pmax pmax
comp=N,180nm,4.8s
YAK pmax pmax
comp=E,146nm,5.3s
YAK smax smax
comp=N,190nm,5.6s
YAK smax smax
comp=E,135nm,5.6s
YAK MLR MLR
comp=Z,3μm,16.0s
YAK MLR MLR
comp=N,2μm,14.0s
YAK MLR MLR
comp=E,2μm,24.0s
QRZ **Quartz Range** 70.72 131 P P 14 17 41.3 +0.8
QRZ **Quartz Range** 70.72 131 P P 14 17 41.5 +1.0
OXZ **Oxford** 70.78 134 IAmb IAmb 14 17 57.5
comp=Z,38nm,0.7s
OXZ IAMs_20 IAMs_20 14 46 16.6
comp=Z,5μm,22.0s
LTZ **Lake Taylor** 70.85 133 IAmb IAmb 14 18 09.5
comp=Z,37nm,0.9s
THZ **Tophouse** 71.15 132 IAmb IAmb 14 18 13.7
comp=Z,61nm,0.9s
SVE **Sverdlovsk** 71.35 337 *de*P P 14 17 43.9 0.0
SVE *e*S S 14 26 58.4 -0.9
SVE *e* 14 31 34.0
SVE pmax pmax
comp=Z,104nm,1.4s
SVE MLR MLR
comp=Z,2μm,22.0s
NNZ **Nelson** 71.41 131 P P 14 17 45.2 +0.5
GVZ **Greta Valley S** 71.44 133 IAMs_20 IAMs_20 14 46 26.0
comp=Z,5μm,22.0s
GURO **Guroymak-BITLI** 71.61 314 IAmb IAmb 14 17 47.4
comp=Z,45nm,1.0s
KHEZ **Kahui Hut** 71.62 129 P P 14 17 46.6 +0.5
KHEZ **Kahui Hut** 71.62 129 P P 14 17 49.3 +3.2
KARS **Kars** 71.72 316 IAmb IAmb 14 17 48.2
comp=Z,50nm,0.8s
DUWZ **D'Urville Isla** 71.76 131 P P 14 17 47.2 +0.3
ARTI **Arti** 71.94 336 LR LR 14 53 08.3
comp=Z,2μm,20.0s,baz=132,slow=39
ARTI **Arti** 71.94 336 P P 14 17 47.0 -0.5
ARTI IAMs_20 IAMs_20 14 52 56.9
comp=Z,2μm,20.0s
ARTI **Arti** 71.94 336 *c i*P P 14 17 47.2 -0.3
ARTI 14 18 09.2
ARTI PPP PPP 14 22 09.3
ARTI S S 14 27 09.5 +3.3
ARTI SS SS 14 31 40.5 -3.0
ARTI pmax pmax
comp=Z,61nm,0.7s
ARTI MLR MLR
comp=Z,2μm,20.0s
HIZ **Hauiti** 72.17 128 P P 14 17 49.9 +0.5
HIZ **Hauiti** 72.17 128 IAMs_20 IAMs_20 14 46 46.0
comp=Z,3μm,21.0s
HIZ **Hauiti** 72.17 128 P P 14 17 52.0 +2.7
WIAZ **Waiheke Island** 72.20 127 P P 14 17 51.9 +2.4
MKAZ **Moumakai** 72.25 127 P P 14 17 50.0 +0.2
MBAR **Mbarara** 72.36 271 LR LR 14 45 44.2
comp=Z,3μm,19.9s,baz=97,slow=33
MBAR **Mbarara** 72.36 271 IAMs_20 IAMs_20 14 45 43.3
comp=Z,3μm,20.0s
MBAR **Mbarara** 72.36 271 *i* P P 14 17 50.3 -0.8
MBAR pmax pmax
comp=Z,7.0nm,0.9s
MBAR MLR MLR
comp=Z,2μm,19.0s
MBAR **Mbarara** 72.36 271 P P 14 17 52.5 +1.4
MBAR P P 14 17 52.5 +1.4
SKR **Severo-Kuril's** 72.36 32 *e*P P 14 17 49.5 -0.6
SKR *e*S **SKiKP** 14 27 18.3 -5.0
SKR *e*SS SS 14 31 45.5 -4.6
SKR pmax pmax
comp=Z,300nm,4.1s
SKR MLR MLR
comp=Z,700nm,16.0s
SNZO **South Karori** 72.42 131 P P 14 17 50.9 +0.2
WAZ **Wanganui** 72.42 130 P P 14 17 52.6 +1.8
KIW **Kapiti Island** 72.51 131 P P 14 17 51.7 +0.4
BHW **Baring Head** 72.55 131 IAMs_20 IAMs_20 14 48 32.7
comp=Z,4μm,21.0s
TOZ **Tahuroa Road** 72.59 128 IAmb IAmb 14 18 09.4
comp=Z,59nm,1.2s
CAW **Cannon Point** 72.66 131 P P 14 17 52.2 0.0
OGWZ **Otaki Gorge** 72.70 131 P P 14 17 53.0 +0.6
WTVZ **West Tongariro** 72.81 129 P P 14 17 54.7 +1.4
NGZ **Ngauruhoe** 72.83 129 P P 14 17 54.7 +1.2
WNVZ **Wahianoa** 72.84 129 P P 14 17 55.0 +1.4
KRVZ **Karewarewa** 72.85 129 P P 14 17 54.7 +1.2
SNVZ **South Ngauruho** 72.86 129 P P 14 17 55.0 +1.3
OTVZ **Oturere** 72.88 129 P P 14 17 55.0 +1.2
NTVZ **North Tongarir** 72.88 129 P P 14 17 55.2 +1.4
TMVZ **Te Maari** 72.90 129 P P 14 17 55.4 +1.6
ETVZ **East Tongariro** 72.91 129 P P 14 17 55.3 +1.4
PAWZ **Paruwai Farm** 72.96 131 P P 14 17 55.0 +0.9
HOWZ **Holdsworth Sta** 72.97 131 P P 14 17 55.4 +1.3
MOVZ **Moawhango** 72.97 129 P P 14 17 54.9 +0.7
MRZ **Mangatainoka R** 72.99 131 P P 14 17 56.8 +2.6
MTW **Mount Morrison** 72.99 131 P P 14 17 55.2 +1.0
TRWZ **Traveller** 73.16 131 P P 14 17 56.5 +1.3
KBZ **Khabaz** 73.16 319 P P 14 17 55.3 +0.3
comp=Z,34nm,0.8s,baz=111,slow=4.6,SNR=51
comp=Z,34nm,0.8s
KBZ **Khabaz** 73.16 319 *ce*P P 14 17 54.9 -0.1
KBZ pmax pmax
comp=Z,41nm,0.9s
PRWZ **Pori Road** 73.27 130 P P 14 17 57.0 +1.2
ASF **Jabal al Asfar** 73.28 306 LR LR 14 50 58.2
comp=Z,2μm,19.5s,baz=97,slow=36
TMWZ **Te Maipa** 73.28 131 P P 14 17 57.1 +1.2
SHA1 **Shidzhatmaz** 73.32 319 *ce*P P 14 17 56.4 +0.1
PNHZ **Pukenui** 73.37 130 P P 14 17 57.3 +0.8
DVHZ **Dannevirke** 73.39 130 P P 14 17 58.4 +1.8
KIV **Kislovodsk** 73.40 319⇑ P P 14 17 57.4 +0.8
KIV **Kislovodsk** 73.40 319 P P 14 17 55.4 -1.1
KIV IAmb IAmb 14 18 28.1
comp=Z,40nm,0.6s
KIV **Kislovodsk** 73.40 319 *i* P P 14 17 56.5 0.0
SNR=5.9
KIV **Kislovodsk** 73.40 319 *e*P P 14 17 56.6 0.0
KIV *e*S S 14 27 22.8 -0.7
KIV pmax pmax
comp=Z,35nm,1.1s
KIV pmax pmax
comp=Z,40nm,4.4s
KIV **Kislovodsk** 73.40 319 P P 14 17 57.2 +0.7
KIV P P 14 17 57.2 +0.7
KIV **Kislovodsk** 73.40 319 P P 14 17 56.7 +0.1
comp=Z,573nmcomp=Z,32nm,0.9s
KRHZ **Kereru** 73.47 130 P P 14 17 58.7 +1.6
BFZ **Birch Farm** 73.49 131 P P 14 17 57.7 +0.5
BFZ **Birch Farm** 73.49 131 P P 14 17 57.5 +0.4
BKZ **Black Stump Fm** 73.52 129 P P 14 17 59.0 +1.6
BKZ **Black Stump Fm** 73.52 129 IAMs_20 IAMs_20 14 49 31.5
comp=Z,4μm,21.0s
BKZ **Black Stump Fm** 73.52 129 P P 14 17 57.7 +0.4
WPHZ **Waipukurau** 73.57 130 P P 14 17 59.0 +1.4
GOF **Gofitskoye** 73.65 320 *ce*P P 14 17 57.8 -0.1
MCHZ **McNeill Hill** 73.70 129 P P 14 18 00.4 +2.0
PRHZ **Porangahau** 73.74 130 P P 14 18 00.2 +1.5
NMHZ **Naumai** 73.75 129 P P 14 18 00.7 +1.9
MTHZ **Maungataniwha** 73.75 129 P P 14 17 59.5 +0.7
RTZ **Ruatahuna** 73.84 128 P P 14 17 58.7 -0.7
RTZ **Ruatahuna** 73.84 128 P P 14 17 59.8 +0.5
PXZ **Pawanui** 73.89 130 P P 14 18 01.3 +1.8
URZ **Urewera** 73.91 128 LR LR 14 52 47.6
comp=Z,4μm,19.2s,baz=282,slow=38
URZ **Urewera** 73.91 128 P P 14 18 00.1 +0.5
URZ **Urewera** 73.91 128 P P 14 18 01.7 +2.1
LSZ **Lusaka** 73.93 256 LR LR 14 45 24.6
comp=Z,3μm,21.8s,baz=93,slow=32
LSZ **Lusaka** 73.93 256 P P 14 17 58.9 -1.4

LSZ	**Lusaka**	**73.93**	**256**	IAMs_20	IAMs_20	14 45 02.4		
	comp=Z,3μm,22.0s							
LSZ	**Lusaka**	**73.93**	**256**	P	**P**	**14 17 58.9**	**-1.4**	
LSZ				pmax	pmax			
	comp=Z,16nm,1.1s							
LSZ	**Lusaka**	**73.93**	**256**	P	**P**	**14 18 01.1**	**+0.8**	
LSZ				P	P	**14 18 01.1**	**+0.8**	
RAHZ	**Arahi**	**73.95**	**129**	P	**P**	**14 18 00.9**	**+1.0**	
MSVF	**Nonsavu**	**73.98**	**107**	P	**P**	**14 18 00.5**	**0.0**	
	comp=Z,20nm,1.0s,baz=244,slow=7.5,SNR=8.1							
MSVF				LR	LR	14 54 18.3		
	comp=Z,725nm,18.8s,baz=259,slow=39							
	comp=Z,20nm,1.0s							
MSVF	**Nonsavu**	**73.98**	**107**	P	**P**	**14 18 00.8**	**+0.3**	
MSVF				IAmb	IAmb	14 18 41.2		
	comp=Z,58nm,1.2s							
MSVF	**Nonsavu**	**73.98**	**107**	P	**P**	**14 18 00.8**	**+0.3**	
MSVF				pmax	pmax			
	comp=Z,58nm,1.3s							
GHAJ	**Ghor Haditha**	**74.09**	**305**	IAMs_20	IAMs_20	14 51 30.3		
	comp=Z,3μm,19.0s							
SNGZ	**Shannon Statio**	**74.14**	**129**	P	**P**	**14 18 01.4**	**+0.4**	
EIL	**Elat**	**74.14**	**303**	LR	LR	14 51 00.7		
	comp=Z,2μm,19.4s,baz=74,slow=36							
RAGZ	**Rawiri**	**74.17**	**128**	P	**P**	**14 18 01.6**	**+0.4**	
MWZ	**Matawai**	**74.24**	**128**	P	**P**	**14 18 01.6**	**0.0**	
RUGZ	**Raukumara Rang**	**74.33**	**128**	P	**P**	**14 18 02.1**	**-0.2**	
HAZ	**Te Kaha**	**74.39**	**127**	P	**P**	**14 18 01.8**	**-0.7**	
ARPR	**Arapgir-MALATY**	**74.48**	**313**	IAmb	IAmb	14 18 16.6		
	comp=Z,40nm,0.9s							
PETK	**Petropavlovsk-**	**74.51**	**31**	P	**P**	**14 18 01.9**	**-0.9**	
	comp=Z,12nm,0.7s,baz=274,slow=0.5,SNR=50							
PETK				LR	LR	14 52 35.2		
	comp=Z,832nm,18.7s,baz=249,slow=37							
	comp=Z,12nm,0.7s							
BELG	**Belogornoye**	**74.54**	**328**	LR	LR	14 56 33.7		
	comp=Z,515nm,18.9s,baz=116,slow=40							
BELG	**Belogornoye**	**74.54**	**328***c*	*i*P	**P**	**14 18 02.0**	**-0.9**	
BELG				pmax	pmax			
	comp=Z,5.0nm,0.9s							
TWGZ	**Tauwhareparae**	**74.58**	**128**	P	**P**	**14 18 04.6**	**+1.0**	
BROLN	**Tlhalogang**	**74.64**	**250**	*i*P	**P**	**14 18 02.1**	**-2.2**	
GAZ	**Gaziantep**	**74.65**	**311**	IAmb	IAmb	14 18 21.6		
	comp=Z,42nm,0.9s							
MMAI	**Mount Meron Ar**	**74.73**	**306**	P	**P**	**14 18 04.7**	**+0.1**	
	comp=Z,7.3nm,0.7s,baz=62,slow=9.9,SNR=8.9							
MMAI				LR	LR	14 51 57.0		
	comp=Z,2μm,19.6s,baz=94,slow=37							
	comp=Z,7.3nm,0.7s							
MXZ	**Matakaoa Point**	**74.79**	**127**	P	**P**	**14 18 05.8**	**+1.0**	
MXZ	**Matakaoa Point**	**74.79**	**127**	P	**P**	**14 18 05.4**	**+0.7**	
PUZ	**Puketiti**	**74.79**	**128**	P	**P**	**14 18 04.4**	**-0.4**	
WMGZ	**Waiomatatini S**	**74.90**	**127**	P	**P**	**14 18 06.0**	**+0.7**	
PET	**Petropavlovsk**	**74.95**	**31**	P	**P**	**14 18 05.2**	**-0.1**	
PET	**Petropavlovsk**	**74.95**	**31**	P	**P**	**14 18 04.3**	**-0.9**	
PET	**Petropavlovsk**	**74.95**	**31**⇑	*i*P	**P**	**14 18 04.4**	**-0.9**	
PET				*e*		14 18 16.3		
PET				*e*		14 20 53.5		
PET				*e*S	**S**	**14 27 40.7**	**+0.3**	
PET				*e*		14 28 23.0		
PET				pmax	pmax			
	comp=Z,97nm,0.8s							
PET				pmax	pmax			
	comp=Z,900nm,5.1s							
PET				pmax	pmax			
	comp=Z,400nm,13.0s							
PET				MLR	MLR			
	comp=Z,900nm,17.0s							
PET				MLR	MLR			
	comp=Z,1μm,19.0s							
PET	**Petropavlovsk**	**74.95**	**31**	P	**P**	**14 18 04.1**	**-1.2**	
	comp=Z,2μmcomp=Z,97nm,1.4s							
LABN	**Labinsk**	**74.97**	**319**	*e*P	**P**	**14 18 04.3**	**-1.3**	
LABN				pmax	pmax			
	comp=Z,34nm,0.6s							
SOC	**Sochi**	**75.20**	**318**	*e*P	**P**	**14 18 06.3**	**-0.7**	
SOC				*e*S	**S**	**14 27 40.4**	**-3.2**	
SOC				*e*SS	**SS**	**14 32 32.7**	**-1.1**	
SOC				pmax	pmax			
	comp=Z,55nm,0.7s							
SOC				MLR	MLR			
	comp=Z,1μm,22.0s							
MA2	**Magadan**	**75.27**	**23**	LR	LR	14 52 18.4		
	comp=Z,1μm,20.1s,baz=262,slow=37							
MA2	**Magadan**	**75.27**	**23**	P	**P**	**14 18 06.7**	**-0.3**	
MA2				IAmb	IAmb	14 18 07.7		
	comp=Z,80nm,0.9s							
MA2	**Magadan**	**75.27**	**23***ce*	P	**P**	**14 18 06.8**	**-0.2**	
MA2				pmax	pmax			
	comp=Z,186nm,1.7s							
MA2				MLR	MLR			
	comp=Z,1μm,17.0s							
MA2	**Magadan**	**75.27**	**23**	P	**P**	**14 18 06.5**	**-0.5**	
	comp=Z,2μmcomp=Z,136nm,1.3s							
SYO	**Syowa Base**	**75.30**	**199**⇓	*e*P	P	14 18 16.8	+10	
ERBR	**Yeremizino-Bor**	**75.56**	**320**	*e*P	**P**	**14 18 07.9**	**-1.1**	
ERBR				pmax	pmax			
	comp=Z,36nm,1.2s							
NRIK	**Noril'sk**	**75.74**	**354**	P	**P**	**14 18 08.7**	**-0.8**	
	comp=Z,10nm,0.3s,baz=157,slow=5.1,SNR=36							
NRIK				LR	LR	14 54 39.1		
	comp=Z,3μm,18.5s,baz=172,slow=38							
	comp=Z,10nm,0.3s							
NRIK	**Noril'sk**	**75.74**	**354**	IAmb	IAmb	14 18 26.2		
	comp=Z,89nm,1.2s							
NRIK	**Noril'sk**	**75.74**	**354***c*	*i*P	**P**	**14 18 08.2**	**-1.3**	
NRIK				pmax	pmax			
	comp=Z,33nm,1.0s							
NRIK				MLR	MLR			
	comp=Z,3μm,18.0s							
LPHEP	**Lephephe**	**75.99**	**247**	*i*P	**P**	**14 18 11.4**	**-0.7**	
LBTB	**Lobatse**	**76.22**	**246**	LR	LR	14 45 27.7		
	comp=Z,3μm,21.9s,baz=90,slow=31							
LBTB	**Lobatse**	**76.22**	**246**	P	**P**	**14 18 12.9**	**-0.5**	
LBTB	**Lobatse**	**76.22**	**246**	P	**P**	**14 18 12.9**	**-0.5**	
LBTB				pmax	pmax			
	comp=Z,11nm,0.9s							
KHWEE	**KHWEE**	**76.38**	**249**	*i*P	**P**	**14 18 12.9**	**-1.4**	
BOSA	**Boshof**	**76.55**	**242**	P	**P**	**14 18 15.4**	**+0.2**	
	comp=Z,4.6nm,0.8s,baz=108,slow=7.8,SNR=8.2							
BOSA				LR	LR	14 48 04.2		
	comp=Z,2μm,18.5s,baz=76,slow=33							
	comp=Z,4.6nm,0.8s							
KSANE	**Kasane**	**76.75**	**253**	*i*P	**P**	**14 18 16.8**	**+0.3**	
CSS	**Mathiatis**	**76.95**	**308**	IAmb	IAmb	14 18 35.5		
	comp=Z,84nm,1.1s							
CSS				IAMs_20	IAMs_20	14 53 24.8		
	comp=Z,2μm,20.0s							
CSS	**Mathiatis**	**76.95**	**308**	P	**P**	**14 18 17.6**	**+0.5**	
	comp=Z,73nm,1.1s							
KDWAN	**Kaudwane**	**77.09**	**247**	*i*P	**P**	**14 18 17.6**	**-0.7**	
KIRV	**Kirov**	**77.09**	**334***ce*	P	**P**	**14 18 17.3**	**0.0**	
VRH	**Novokhopyorsk**	**77.17**	**326**	*e*P	**P**	**14 18 17.2**	**-0.7**	
VRH				pmax	pmax			
	comp=Z,43nm,0.6s							
ANN	**Anapa**	**77.19**	**318**	*e*P	**P**	**14 18 14.8**	**-3.4**	
ANN				pmax	pmax			
	comp=Z,39nm,0.9s							
RAO	**Raoul Island**	**77.62**	**119**	LR	LR	14 52 57.0		
	comp=Z,2μm,20.2s,baz=220,slow=36							
KIRS	**Kirsehir-Merke**	**77.74**	**312**	⇑P	**P**	**14 18 21.2**	**-0.3**	
VNDA	**Vanda**	**77.87**	**169**	P	**P**	**14 18 22.2**	**+0.7**	
	comp=Z,8.1nm,0.8s,baz=321,slow=6.1,SNR=11							
VNDA				PKiKP	**PKiKP**	**14 24 01.3**	**+1.5**	
	comp=Z,3.5nm,1.0s,baz=19,slow=2.1,SNR=3.1							
VNDA				LR	LR	14 48 09.5		
	comp=Z,3μm,20.6s,baz=308,slow=32							
	comp=Z,8.1nm,0.8s							
VNDA	**Vanda**	**77.87**	**169**	P	**P**	**14 18 22.1**	**+0.7**	
VNDA	**Vanda**	**77.87**	**169**	P	**P**	**14 18 22.1**	**+0.6**	
VNDA				pmax	pmax			
	comp=Z,38nm,1.1s							
SEY	**Seymchan**	**78.03**	**21***ce*	P	**P**	**14 18 22.4**	**-0.1**	
SEY				pmax	pmax			
	comp=Z,64nm,1.2s							
BR131	**Keskin Array S**	**78.13**	**312***c*	*i*P	**P**	**14 18 23.0**	**-0.8**	
BR131	**Keskin Array S**	**78.13**	**312**	P	**P**	**14 18 23.3**	**-0.5**	
	SNR=15							
BR131				P	**P**	**14 18 23.3**	**-0.5**	
	SNR=16							
BRTR	**Keskin Array B**	**78.13**	**312**	P	**P**	**14 18 23.2**	**-0.5**	
	comp=Z,14nm,0.8s,baz=136,slow=7.1,SNR=65							
BRTR				LR	LR	14 55 30.2		
	comp=Z,2μm,19.0s,baz=112,slow=38							
	comp=Z,14nm,0.8s							
BRTR	**Keskin Array B**	**78.13**	**312**	P	**P**	**14 18 22.8**	**-1.0**	
BR105	**Keskin Array S**	**78.14**	**312**	P	**P**	**14 18 23.8**	**-0.1**	
	comp=Z,247nmcomp=Z,31nm,1.1s							
BR106	**Keskin Array S**	**78.14**	**312**	P	**P**	**14 18 23.7**	**-0.2**	
	comp=Z,226nmcomp=Z,28nm,1.1s							
VORD	**Divnogorie**	**78.45**	**325**	*e*P	**P**	**14 18 24.1**	**-1.0**	
VORD				pmax	pmax			
	comp=Z,10.0nm,0.7s							
ILGA	**Ilgaz**	**78.48**	**314**	IAmb	IAmb	14 18 27.2		
	comp=Z,118nm,1.5s							
VSR	**Storozhevoye**	**78.62**	**325**	*e*P	**P**	**14 18 25.1**	**-0.9**	
VSR				pmax	pmax			
	comp=Z,110nm,1.9s							
VORR	**Voronezh**	**78.79**	**325**	*e*P	**P**	**14 18 26.4**	**-0.5**	
VORR				pmax	pmax			
	comp=Z,45nm,0.5s							
TIXI	**Tiksi**	**79.14**	**8**	LR	LR	14 58 01.6		
	comp=Z,6μm,18.6s,baz=228,slow=39							
TIXI	**Tiksi**	**79.14**	**8**	P	**P**	**14 18 26.5**	**-2.0**	
TIXI				IAmb	IAmb	14 18 27.6		
	comp=Z,53nm,1.1s							
TIXI	**Tiksi**	**79.14**	**8**	IAMs_20	IAMs_20	14 57 48.4		
	comp=Z,4μm,19.0s							
TIXI	**Tiksi**	**79.14**	**8***ce*	P	**P**	**14 18 26.9**	**-1.5**	
TIXI				pmax	pmax			
	comp=Z,35nm,1.0s							
TIXI				MLR	MLR			
	comp=Z,6μm,16.0s							
LPSR	**Galich'ya Gora**	**79.33**	**326**	*e*P	**P**	**14 18 29.4**	**-0.5**	
LPSR				pmax	pmax			
	comp=Z,44nm,0.8s							
KGCAE	**Kacgae**	**79.36**	**248**	*i*P	**P**	**14 18 30.3**	**-0.6**	
SIM	**Simferopol'**	**79.45**	**318**	*e*P	**P**	**14 18 31.1**	**+0.4**	
SIM				pmax	pmax			
	comp=Z,56nm,0.8s							
ELL	**Elmali**	**80.11**	**309**	IAmb	IAmb	14 19 07.5		
	comp=Z,34nm,0.8s							
GRTLG	**Ghanzi**	**80.33**	**249**	*i*P	**P**	**14 18 35.3**	**-0.9**	
SUR	**Sutherland**	**80.39**	**238**	LR	LR	14 50 01.3		
	comp=Z,2μm,18.2s,baz=104,slow=32							
SUR	**Sutherland**	**80.39**	**238**	IAMs_20	IAMs_20	14 49 43.4		
	comp=Z,3μm,18.0s							
MOS	**Moscow**	**81.31**	**329**	*e*P	**P**	**14 18 39.4**	**-1.1**	
MOS				*e*		14 21 44.8		
MOS				*e*S	**S**	**14 28 45.6**	**-3.0**	
MOS				pmax	pmax			
	comp=Z,61nm,1.0s							
ELIB	**Princess Elisa**	**81.33**	**198**	*d*P	**P**	**14 18 41.4**	**+0.9**	
	comp=Z,31nm,1.3s							
ELIB				*dx*	x	14 18 51.5		
OBN	**Obninsk**	**81.62**	**328**	LR	LR	15 00 30.0		
	comp=Z,447nm,18.1s,baz=134,slow=40							
OBN	**Obninsk**	**81.62**	**328***c*	*i*P	**P**	**14 18 41.9**	**-0.2**	
OBN				*i*		14 18 50.4		
OBN				*i*		14 21 48.3		
OBN				*i*S	**S**	**14 28 52.0**	**+0.2**	
OBN				*i*SS	**SS**	**14 34 03.8**	**-5.8**	
OBN				pmax	pmax			
	comp=Z,34nm,1.0s							
OBN	**Obninsk**	**81.62**	**328**	P	**P**	**14 18 40.7**	**-1.4**	
	comp=Z,2μmcomp=Z,78nm,1.0s							
BALB	**Balikesir**	**82.38**	**311**	IAmb	IAmb	14 19 03.3		
	comp=Z,52nm,1.0s							
BAND	**Balkesir-Ban**	**82.39**	**312**	⇓P	**P**	**14 18 46.6**	**+0.1**	
TIRR	**Tirgusor**	**83.19**	**316**	⇓P	**P**	**14 18 50.1**	**-0.5**	
TIRR	**Tirgusor**	**83.19**	**316**	IAmb	IAmb	14 18 52.0		
	comp=Z,40nm,0.9s							
TIRR	**Tirgusor**	**83.19**	**316**	P	**P**	**14 18 50.0**	**-0.5**	
TIRR	**Tirgusor**	**83.19**	**316**	P	**P**	**14 18 50.8**	**+0.2**	
	comp=Z,56nm,1.0s							
SHEM	**Shemya Is, Ala**	**83.29**	**35**	LR	LR	14 58 16.5		
	comp=Z,173nm,20.3s,baz=272,slow=37							
CFR	**Carcaliu**	**83.57**	**317**	⇓P	**P**	**14 18 52.7**	**+0.2**	
CFR	**Carcaliu**	**83.57**	**317**	P	**P**	**14 18 52.7**	**+0.2**	
IDI	**Anoyia**	**83.74**	**306**	LR	LR	14 57 21.3		
	comp=Z,450nm,21.8s,baz=99,slow=36							
IDI	**Anoyia**	**83.74**	**306**	P	**P**	**14 18 53.7**	**0.0**	
IDI	**Anoyia**	**83.74**	**306**	IAmb	IAmb	14 19 09.5		
	comp=Z,61nm,1.4s							
TSUM	**Tsumeb**	**83.86**	**251**	LR	LR	14 52 17.6		
	comp=Z,3μm,19.6s,baz=85,slow=33							
TSUM	**Tsumeb**	**83.86**	**251**	P	**P**	**14 18 54.4**	**-0.4**	
TSUM	**Tsumeb**	**83.86**	**251**	IAMs_20	IAMs_20	14 51 56.0		
	comp=Z,3μm,20.0s							
AFI	**Afiamalu**	**83.94**	**103**	P	**P**	**14 18 55.3**	**+0.1**	
	comp=Z,69nm,1.0s,baz=278,slow=3.7,SNR=11							
	comp=Z,69nm,1.0s							
ALN	**Alexandroupoli**	**84.03**	**312**	IAmb	IAmb	14 18 55.8		
	comp=Z,60nm,1.8s							
QSPA	**South Pole Qui**	**84.18**	**180**	P	**P**	**14 18 55.9**	**+0.5**	
	comp=Z,6.6nm,0.7s,baz=228,slow=0.9,SNR=26							
QSPA				PKKPbc	**PKKPdf**	**14 37 07.5**	**+4.4**	
	comp=Z,1.3nm,0.8s,baz=204,slow=0.9,SNR=6.9							
QSPA				LR	LR	14 52 23.0		
	comp=Z,3μm,19.9s,baz=316,slow=33							
	comp=Z,6.6nm,0.7s							
QSPA	**South Pole Qui**	**84.18**	**180**	IAMs_20	IAMs_20	14 52 02.0		
	comp=Z,3μm,19.0s							
QSPA	**South Pole Qui**	**84.18**	**180**	IAmb	IAmb	14 19 09.6		
	comp=Z,46nm,1.0s							
SORM	**Soroca**	**84.19**	**319**	⇑P	**P**	**14 18 55.7**	**+0.1**	
SORM	**Soroca**	**84.19**	**319**	P	**P**	**14 18 55.7**	**+0.1**	
SORM	**Soroca**	**84.19**	**319**	P	**P**	**14 18 55.8**	**+0.1**	
	comp=Z,89nm,1.6s							
GHRR		**84.28**	**317**	⇑P	**P**	**14 18 57.6**	**+1.4**	
AK08	**Malin Array Si**	**84.30**	**322**	P	**P**	**14 18 55.9**	**-0.2**	
AKASG	**Malin Array Be**	**84.34**	**322**	P	**P**	**14 18 56.0**	**-0.3**	
	comp=Z,12nm,0.7s,baz=90,slow=4.6,SNR=43							
AKASG				PP	**PP**	**14 22 11.4**	**-0.1**	
	comp=Z,3.3nm,0.7s,baz=93,slow=6.3,SNR=4.5							
	comp=Z,12nm,0.7s							
AKASG	**Malin Array Be**	**84.34**	**322**	P	**P**	**14 18 55.5**	**-0.8**	
AKASG	**Malin Array Be**	**84.34**	**322**	*i*P	**P**	**14 18 56.0**	**-0.3**	
AKASG				pmax	pmax			
	comp=Z,15nm,0.7s							
AKBB	**Malin Array Si**	**84.34**	**322**	IAmb	IAmb	14 18 56.6		
	comp=Z,31nm,0.8s							
AKBB	**Malin Array Si**	**84.34**	**322***ce*	P	**P**	**14 18 55.5**	**-0.8**	
AKBB				pmax	pmax			
	comp=Z,37nm,0.9s							
KIEV	**Kiev**	**84.35**	**322**	⇓P	**P**	**14 18 55.9**	**-0.4**	
KIEV	**Kiev**	**84.35**	**322**	P	**P**	**14 18 55.6**	**-0.7**	
KIEV				IAmb	IAmb	14 18 56.6		
	comp=Z,28nm,0.8s							
KIEV	**Kiev**	**84.35**	**322**	*i*P	**P**	**14 18 56.1**	**-0.2**	
	SNR=9.6							
KIEV	**Kiev**	**84.35**	**322**	P	**P**	**14 18 55.6**	**-0.7**	
KIEV				pmax	pmax			
	comp=Z,28nm,0.9s							
KIEV	**Kiev**	**84.35**	**322**	P	**P**	**14 18 55.7**	**-0.7**	
	comp=Z,171nm,0.9s							
ADZR	**Andozero**	**84.42**	**336**	*e*P	**P**	**14 18 51.7**	**-4.7**	
ADZR				pmax	pmax			
	comp=Z,44nm,1.8s							
ELND	**Elena**	**84.61**	**314**	⇑P	**P**	**14 18 57.9**	**0.0**	
VRI	**Vrincioaia**	**84.70**	**317**	⇑P	**P**	**14 18 59.0**	**+0.7**	
VRI	**Vrincioaia**	**84.70**	**317**	P	**P**	**14 18 58.9**	**+0.7**	
PLOR	**Plostina**	**84.75**	**317**	⇑P	**P**	**14 18 58.9**	**+0.4**	
PLOR	**Plostina**	**84.75**	**317**	P	**P**	**14 18 58.9**	**+0.4**	
TESR	**Tescani**	**84.91**	**318**	⇑P	**P**	**14 19 00.2**	**+0.9**	
TESR	**Tescani**	**84.91**	**318**	P	**P**	**14 18 58.7**	**-0.6**	
	comp=Z,116nm,1.5s							
NVL	**N'lazarevskaya**	**84.97**	**199**	*e*P	**P**	**14 19 00.3**	**+1.2**	
NVL				*e*		14 22 16.6		
NVL				*e*PPP	PPP	14 24 09.5		
NVL				*e*S	**SKSac**	**14 29 21.9**	**+1.1**	
NVL				*e*SS	**SS**	**14 35 01.0**	**+2.7**	
NVL				*e*SSS	SSS	14 38 31.7		
NVL				pmax	pmax			
	comp=Z,21nm,1.2s							
MI30	**MI30,Zelenitsa**	**84.99**	**322**	P	**P**	**14 18 58.6**	**-1.0**	
	comp=Z,36nm,1.6s							
ONER	**Baraj Valea Uz**	**85.03**	**317**	⇑P	**P**	**14 19 00.6**	**+0.6**	
LUBAR	**Lubar, Ukraine**	**85.04**	**321**	P	**P**	**14 18 59.2**	**-0.7**	
COVR	**Voineasa-Covas**	**85.05**	**317**	⇑P	**P**	**14 19 00.5**	**+0.4**	
MI29	**MI29, Kamyanyy**	**85.11**	**322**	P	**P**	**14 19 00.1**	**-0.1**	
	comp=Z,260nm,1.1s							
GIRR	**Girov**	**85.11**	**318**	⇓P	**P**	**14 19 01.1**	**+0.8**	
MLR	**Muntele Rosu**	**85.14**	**317**	LR	LR	15 01 06.6		
	comp=Z,954nm,20.4s,baz=85,slow=39							
MLR	**Muntele Rosu**	**85.14**	**317**	⇑P	**P**	**14 19 01.5**	**+0.8**	
MLR	**Muntele Rosu**	**85.14**	**317**	P	**P**	**14 19 01.5**	**+0.8**	
MLR	**Muntele Rosu**	**85.14**	**317**	P	**P**	**14 19 01.1**	**+0.4**	
	comp=Z,84nm,1.5s							
MI28	**MI28,Pidlybu**	**85.35**	**322**	P	**P**	**14 18 59.8**	**-1.6**	
PRAR	**RASCA**	**85.39**	**318**	⇑P	**P**	**14 19 01.5**	**-0.2**	
KMPD	**K-Podol'skiy**	**85.52**	**320**	P	**P**	**14 19 01.5**	**-0.8**	
KMPD				P	**P**	**14 19 02.2**	**-0.1**	
HUMR	**Humele**	**85.60**	**315**	⇓P	**P**	**14 19 03.6**	**+0.9**	
PLVB	**Pleven**	**85.61**	**314**	⇑P	**P**	**14 19 03.7**	**+0.8**	
DOPR	**Dopca**	**85.63**	**317**	⇑P	**P**	**14 19 03.3**	**+0.3**	
BILL	**Bilibino**	**85.66**	**20**	P	**P**	**14 19 01.8**	**-0.8**	
BILL				IAmb	IAmb	14 19 02.8		
	comp=Z,39nm,1.0s							
BILL				IAMs_20	IAMs_20	15 03 51.9		
	comp=Z,2μm,20.0s							
BILL	**Bilibino**	**85.66**	**20***ce*	P	**P**	**14 19 01.9**	**-0.7**	
BILL				pmax	pmax			
	comp=Z,31nm,1.0s							
VOIR		**85.75**	**316**	⇑P	**P**	**14 19 03.6**	**-0.1**	
VOIR		**85.75**	**316**	P	**P**	**14 19 03.5**	**-0.1**	
ARR	**Arges**	**86.02**	**316**	⇑P	**P**	**14 19 05.4**	**+0.5**	
BURAR	**Bucovina Array**	**86.11**	**318**	⇑P	**P**	**14 19 07.1**	**+1.6**	
BURAR	**Bucovina Array**	**86.11**	**318**	P	**P**	**14 19 06.3**	**+0.9**	
BURAR	**Bucovina Array**	**86.11**	**318**	P	**P**	**14 19 07.0**	**+1.6**	
BUR08	**Bucovina Ar. S**	**86.13**	**319**	IAmb	IAmb	14 19 07.7		
	comp=Z,44nm,0.8s							
MNK	**Minsk**	**86.17**	**326**	*i*P	**P**	**14 19 06.0**	**+0.7**	
	comp=E,23nm,0.7s							
MNK				*i*P	**P**	**14 19 06.0**	**+0.7**	
	comp=N,40nm,1.2s							
MNK				*i*P	**P**	**14 19 06.0**	**+0.7**	
	comp=Z,46nm,0.8s,baz=105							
MNK				*i*PP	**PP**	**14 22 26.3**	**0.0**	
MNK				*i*PPP	PPP	14 24 20.0		
MNK				*i*S	**SKSac**	**14 29 31.4**	**+2.6**	
MNK				*i*SS	**SS**	**14 35 21.0**	**+4.0**	
MNK				*i*SSS	SSS	14 38 52.8		
MNK				*i*LQ	LQ	14 51 13.6		
MNK				*i*LR	LR	15 01 00.6		
MNK				*i*LRM	MLR	15 05 19.6		
	comp=Z,1μm,17.0s							
MNK				*i*LRM	MLR	15 05 24.7		
	comp=E,617nm,20.0s							
MNK				*i*LRM	MLR	15 05 25.3		
	comp=N,979nm,16.6s							
MNK	**Minsk**	**86.17**	**326**	*e*P	**P**	**14 19 06.0**	**+0.7**	
ITM	**Ithomi**	**86.44**	**308**	IAmb	IAmb	14 19 46.2		
	comp=Z,39nm,1.2s							
RNPP5	**Staryi Chortor**	**86.52**	**322**	P	**P**	**14 19 07.4**	**+0.2**	
RNPP9	**Sopachiv**	**86.56**	**322**	P	**P**	**14 19 07.6**	**+0.3**	
LOT	**Lotru**	**86.63**	**316**	⇑P	**P**	**14 19 07.4**	**-0.6**	
NACGM	**Naroch**	**86.89**	**326**	*e*P	**P**	**14 19 09.4**	**+0.5**	
	comp=Z,64nm,0.9s,baz=105							
CJR	**Cluj-Napoca**	**87.00**	**317**	⇓P	**P**	**14 19 10.6**	**+0.8**	
CJR	**Cluj-Napoca**	**87.00**	**317**	P	**P**	**14 19 10.5**	**+0.8**	
BMR	**Baia Mare**	**87.26**	**318**	⇑P	**P**	**14 19 12.2**	**+1.2**	
BMR	**Baia Mare**	**87.26**	**318**	P	**P**	**14 19 12.1**	**+1.2**	
GZR	**Gura Zlata**	**87.30**	**316**	⇑P	**P**	**14 19 11.8**	**+0.5**	
GZR	**Gura Zlata**	**87.30**	**316**	P	**P**	**14 19 11.7**	**+0.5**	
DEV	**Deva**	**87.31**	**316**	⇑P	**P**	**14 19 12.7**	**+1.5**	
DEV	**Deva**	**87.31**	**316**	P	**P**	**14 19 12.6**	**+1.5**	
MARR	**Marisel-Cluj**	**87.32**	**317**	⇑P	**P**	**14 19 12.4**	**+1.0**	
LVZ	**Lovozero**	**87.39**	**339**	IAMs_20	IAMs_20	15 02 38.3		
	comp=Z,3μm,21.0s							
DRGR		**87.61**	**317**	⇑P	**P**	**14 19 13.7**	**+0.9**	
DRGR		**87.61**	**317**	P	**P**	**14 19 13.6**	**+0.9**	
APA	**Apatity**	**87.71**	**339**⇓	*e*P	**P**	**14 19 13.7**	**+1.1**	
APA				*e*		14 22 41.1		
APA				*e*S	**S**	**14 29 56.2**	**+4.2**	
APA				*e*SS	**SS**	**14 35 40.3**	**+1.4**	
APA				pmax	pmax			
	comp=Z,18nm,1.1s							
APA				MLR	MLR			
	comp=Z,4μm,25.5s							
TROLL	**Troll, Antarti**	**87.77**	**198**	P	**P**	**14 19 14.7**	**+1.6**	
VSU	**Vasula**	**87.81**	**329***ce*	P	**P**	**14 19 12.9**	**-0.3**	
VSU				pmax	pmax			
	comp=Z,37nm,1.3s							
MDVR	**Moldovita**	**87.93**	**315**	⇓P	**P**	**14 19 14.9**	**+0.6**	
BZS	**Buzias**	**88.15**	**316**	⇑P	**P**	**14 19 15.8**	**+0.6**	
BZS	**Buzias**	**88.15**	**316**	P	**P**	**14 19 15.7**	**+0.6**	
KWP	**Kalwaria Pacla**	**88.16**	**320**	*e*P	**P**	**14 19 15.7**	**+0.5**	

CONA	Conrad Observa	92.39	318	*i* PcP		P		14 19 35.3	+0.3	
	comp=Z,3.2nm,0.8s									
KSP	Ksiaz	92.41	321	*e*P		P		14 19 35.2	+0.3	
KSP	Ksiaz	92.41	321	P		P		14 19 36.1	+1.1	
VAE	Valguarnera	92.42	307	LR		LR		15 03 08.7		
	comp=Z,345nm,19.9s,baz=99,slow=37									
OSTC	Ostas	92.43	320	*e*P		P		14 19 36.3	+1.2	
OSTC	Ostas	92.43	320	*e*P		P		14 19 36.3	+1.2	
CHVC	Chvalec	92.54	320	*e*P		P		14 19 36.8	+1.2	
CHVC				*e*				14 19 48.5		
CHVC	Chvalec	92.54	320	*e*P		P		14 19 36.8	+1.2	
CHVC				*ex*		x		14 19 48.5		
ARSA	Arzberg	92.55	317	*i* PcP		PcP		14 19 36.7	+0.3	
	comp=Z,11nm,1.1s									
UPC	Upice	92.56	320	*e*P		P		14 19 37.0	+1.3	
UPC				MLR		MLR				
	comp=Z,1µm,20.9s									
UPC	Upice	92.56	320	*e*P		P		14 19 37.0	+1.3	
UPC				AMS		AMS		15 10 00.0		
	comp=Z,1µm,20.9s									
SOKA	Soboth	92.82	316	*i* PcP		PcP		14 19 37.7	0.0	
	comp=Z,15nm,0.9s									
SPIA	Saint Paul Isl	93.03	33	P		P		14 19 38.0	+0.3	
	baz=264									
GAMB	Gambell	93.05	26	IAmb		IAmb		14 19 38.5		
	comp=Z,29nm,1.1s									
GAMB	Gambell	93.05	26	P		P		14 19 37.9	+0.3	
	baz=263									
OBKA	Obir	93.14	316	*i* PcP		PcP		14 19 39.2	+0.1	
	comp=Z,12nm,1.5s									
NIKH	Nikolski High	93.43	37	P		P		14 19 39.0	-0.6	
	baz=265									
PRU	Pruhonice	93.45	320	*e*P		P		14 19 40.9	+1.1	
PRU	Pruhonice	93.45	320	*e*P		P		14 19 40.9	+1.1	
MOA	Molln	93.45	318	*i* PcP		PcP		14 19 40.3	-0.1	
	comp=Z,3.7nm,0.7s									
PVCC	Panska Ves	93.47	320	AMS		AMS		15 10 30.0		
	comp=Z,2µm,18.5s									
CKRC	Cesky Krumlov	93.50	319	*e*P		P		14 19 41.2	+1.1	
CKRC	Cesky Krumlov	93.50	319	*e*P		P		14 19 41.2	+1.1	
GORS	Gorjuse	93.51	316	*e*P		P		14 19 40.5	+0.3	
ZVC	Zvikov	93.63	319	*e*P		P		14 19 41.5	+0.9	
MYKA	Terra Mystica	93.78	316	*e*PcP		P		14 19 41.5	0.0	
	comp=Z,16nm,1.4s									
GERES	GERESS Array B	93.90	319	P		P		14 19 41.6	-0.4	
	comp=Z,3.4nm,0.7s,baz=108,slow=3.0,SNR=9.2									
	comp=Z,3.4nm,0.7s									
KHC	Kasperske Hory	94.00	319	*ce*P		P		14 19 42.3	-0.1	
KHC				pmax		pmax				
	comp=Z,18nm,2.5s									
KHC	Kasperske Hory	94.00	319	*e*P		P		14 19 42.7	+0.3	
KHC				AMS		AMS		15 11 00.0		
	comp=Z,2µm,18.6s									
HSKC	Hora Svate Kat	94.20	320	*e*P		P		14 19 44.4	+1.1	
HSKC				AMS		AMS		15 11 00.0		
	comp=Z,1µm,17.0s									
STAL	STALIGIAL	94.39	316	IAmb		IAmb		14 19 59.5		
	comp=Z,23nm,1.2s									
LESA	Schwarzleotal	94.49	317	*i* PcP		P		14 19 44.6	-0.2	
	comp=Z,8.1nm,1.5s									
CLL	Collm	94.52	321	*i* P		P		14 19 44.6	-0.1	
CLL				pmax		pmax				
	comp=Z,26nm,1.5s									
CLL				MLR		MLR				
	comp=Z,700nm,23.5s									
CLL	Collm	94.52	321	*i* P		P		14 19 44.6	-0.1	
	comp=Z,26nm,1.5s									
CLL				*e*Plp				14 19 52.0		
CLL				*e*S		S		14 31 02.0	+7.2	
CLL				*e*SP		SP		14 32 18.0	+8.1	
ABTA	Abfaltersbach	94.56	316	*i* P		P		14 19 44.5	-0.6	
	comp=Z,3.6nm,0.7s									
RAR	Rarotonga	94.57	112	LR		LR		15 02 26.1		
	comp=Z,584nm,20.3s,baz=258,slow=36									
HFS	Hagfors	94.67	330	P		P		14 19 44.7	-0.4	
	comp=Z,7.9nm,0.8s,baz=123,slow=5.5,SNR=8.6									
HFS				PP		PP		14 23 31.9	-1.7	
	comp=Z,5.7nm,0.8s,baz=104,slow=9.8,SNR=3.8									
HFS				LR		LR		15 08 14.8		
	comp=Z,868nm,19.1s,baz=84,slow=39									
	comp=Z,7.9nm,0.8s									
TNA	Tin City	94.83	25	P		P		14 19 45.4	-0.3	
	baz=267									
UNV	Unalaska Valle	94.90	36	P		P		14 19 45.8	-0.5	
	baz=267									
SPITS	Spitsbergen Ar	94.96	348	P		P		14 19 43.9	-2.2	
	comp=Z,7.2nm,0.8s,baz=122,slow=11,SNR=15									
SPITS				LR		LR		15 08 14.5		
	comp=Z,1µm,21.5s,baz=85,slow=39									
	comp=Z,7.2nm,0.8s									
WTTA	Wattenberg	95.19	317	*i* PcP		P		14 19 47.7	-0.4	
	comp=Z,10.0nm,1.2s									
WATA	Walderalm	95.23	317	*e*P		P		14 19 47.3	-0.9	
	comp=Z,3.2nm,0.6s									
M11K	Mekoryuk	95.37	30	IAmb		IAmb		14 19 49.9		
	comp=Z,47nm,1.7s									
M11K	Mekoryuk	95.37	30	P		P		14 19 48.8	+0.5	
	baz=268									
SQTA	Sankt Quirin	95.47	317	*i* PcP		P		14 19 49.3	0.0	
	comp=Z,6.4nm,0.8s									
F14K	Arctic Creek	95.49	25	P		P		14 19 48.8	0.0	
	baz=268									
MOTA	Moosalm	95.55	317	*e*PcP		P		14 19 49.1	-0.6	
	comp=Z,5.9nm,1.1s									
RETA	Reutte	95.79	317	*i* PcP		P		14 19 50.7	0.0	
	comp=Z,5.7nm,1.0s									
FETA	Feichten	95.79	317	*i* PcP		P		14 19 50.3	-0.6	
	comp=Z,6.2nm,1.1s									
KBS	Kingsbay	95.87	349	IAMs_20		IAMs_20		15 07 39.2		
	comp=Z,2µm,20.0s									
ANM	Nome	95.87	26	IAmb		IAmb		14 19 51.4		
	comp=Z,34nm,1.6s									
ANM				IAMs_20		IAMs_20		15 09 55.1		
	comp=Z,1µm,19.0s									
ANM	Nome	95.87	26	P		P		14 19 50.8	+0.2	
	baz=269									
NB2	NORSAR Subarra	95.93	331	P		P		14 19 50.1	-0.8	
	comp=Z,1.1nm,0.7s,baz=95,slow=5.1									
NB2	NORSAR Subarra	95.93	331	P		PP		14 23 35.7	-7.7	
	comp=Z,3.9nm,1.0s,baz=90,slow=7.9									
NOA	NORSAR Array B	95.93	331	P		P		14 19 50.0	-1.0	
	comp=Z,2.4nm,0.8s,baz=94,slow=4.6,SNR=6.0									
NOA				PP		PP		14 23 39.9	-3.4	
	comp=Z,1.2nm,0.7s,baz=94,slow=7.0,SNR=3.7									
NOA				LR		LR		15 07 19.0		
	comp=Z,518nm,20.6s,baz=95,slow=38									
	comp=Z,2.4nm,0.8s									
NOA	NORSAR Array B	95.93	331	P		P		14 19 50.0	-1.0	
C16K	Lisburne Hills	95.94	22	IAmb		IAmb		14 19 51.5		
	comp=Z,30nm,1.3s									
C16K				IAMs_20		IAMs_20		15 09 16.8		
	comp=Z,1µm,18.0s									
C16K	Lisburne Hills	95.94	22	P		P		14 19 50.1	-0.7	
	baz=269									
K13K	Kusilvak Mount	96.16	28	P		P		14 19 52.3	+0.4	
	baz=269									
F15K	North Star Dit	96.19	25	IAmb		IAmb		14 19 52.5		
	comp=Z,12nm,0.8s									
F15K	North Star Dit	96.19	25	P		P		14 19 51.9	-0.1	
	baz=270									
KEST	Kesra	96.36	305	LR		LR		15 06 46.0		
	comp=Z,911nm,18.8s,baz=50,slow=38									
DAVA	Damuels	96.38	317	*i* PcP		P		14 19 53.2	-0.3	
	comp=Z,5.7nm,0.8s									
G15K	Niukluk	96.45	25	P		P		14 19 52.7	-0.4	
	baz=270									
J14K	Nanvaranak Lak	96.67	28	IAmb		IAmb		14 19 55.0		
	comp=Z,21nm,1.4s									
J14K				IAMs_20		IAMs_20		15 11 29.3		
	comp=Z,1µm,18.0s									
J14K	Nanvaranak Lak	96.67	28	P		P		14 19 54.4	+0.3	
	baz=270									
FALS	False Pass	96.73	36	P		P		14 19 54.6	0.0	
	baz=270									
C17K	DeLong Mountai	96.74	22	P		P		14 19 54.0	-0.4	
	baz=271									
M13K	Dall Lake	96.78	30	P		P		14 19 55.0	+0.3	
	baz=270									
D17K	Noatak River	96.80	23	P		P		14 19 54.6	0.0	
	baz=271									
RDOG	Red Dog Mine	96.85	22	IAMs_20		IAMs_20		15 09 38.9		
	comp=Z,1µm,18.0s									
RDOG	Red Dog Mine	96.85	22	P		P		14 19 54.5	-0.4	
	baz=272									
L14K	Kuka Creek	97.10	29	P		Pdif		14 19 56.4	+0.2	
	baz=271									
G16K	Koyuk River	97.15	25	P		Pdif		14 19 56.5	+0.1	
	baz=272									
H16K	Elim	97.22	26	P		P		14 19 56.6	0.0	
	baz=272									
E17K	Hotham Inlet	97.30	23	P		P		14 19 57.0	0.0	
	baz=272									
A19K	Wainwright	97.42	20	P		Pdif		14 19 57.9	+0.4	
	baz=274									
M14K	Bethel	97.46	30	P		Pdif		14 19 58.0	+0.2	
	baz=272,SNR=8.3									
C18K	Utukok River	97.46	22	IAMs_20		IAMs_20		15 08 54.0		
	comp=Z,2µm,19.0s									
C18K	Utukok River	97.46	22	P		P		14 19 57.5	-0.3	
	baz=273									
F17K	Baldwin Pennin	97.56	24	IAMs_20		IAMs_20		15 11 09.7		
	comp=Z,2µm,18.0s									
F17K	Baldwin Pennin	97.56	24	P		Pdif		14 19 58.3	+0.1	
	baz=273									
K15K	Wolf Creek Mou	97.62	28	P		Pdif		14 19 59.0	+0.4	
	baz=272									
N14K	Kuskokwak Cree	97.62	30	P		P		14 19 58.2	-0.3	
	baz=272									
L15K	Ungalak Mounta	97.66	29	P		P		14 19 58.5	-0.2	
	baz=272,SNR=7.0									
E18K	Tukpahlearik C	97.76	23	IAMs_20		IAMs_20		15 11 40.9		
	comp=Z,2µm,18.0s									
E18K	Tukpahlearik C	97.76	23	P		P		14 19 58.8	-0.2	
	baz=274									
O14K	Tigyukauivet M	97.86	31	P		P		14 19 59.6	0.0	
	baz=272									
G17K	Kiwalik Mounta	97.86	25	P		Pdif		14 19 59.6	+0.1	
	baz=273									
I17K	Unalakleet	97.93	26	P		Pdif		14 20 00.2	+0.4	
	baz=273,SNR=7.5									
J16K	Anvik River	98.00	27	IAmb		IAmb		14 20 03.4		
	comp=Z,24nm,0.8s									
J16K				IAMs_20		IAMs_20		15 11 54.4		
	comp=Z,1µm,18.0s									
J16K	Anvik River	98.00	27	P		Pdif		14 20 00.8	+0.5	
	baz=273,SNR=24									
C19K	Lookout Ridge	98.01	21	IAMs_20		IAMs_20		15 11 49.4		
	comp=Z,2µm,18.0s									
C19K	Lookout Ridge	98.01	21	P		Pdif		14 20 00.3	+0.1	
	baz=275									
M15K	Kasigluk River	98.09	30	P		P		14 20 00.3	-0.4	
	baz=273,SNR=9.2									
F18K	Selawik	98.19	24	P		Pdif		14 20 00.9	0.0	
	baz=274,SNR=24									
H17K	Granite Mounta	98.20	25	P		Pdif		14 20 01.4	+0.3	
	baz=274									
N15K	Kwethluk River	98.41	30	P		Pdif		14 20 02.3	+0.1	
	baz=273									
SDPT	Sand Point	98.42	35	P		Pdif		14 20 02.6	+0.3	
	baz=272									
BNI	Bardonecchia	98.58	315	IAMs_20		IAMs_20		15 09 42.1		
	comp=Z,2µm,20.0s									
O15K	Ungalikthiuk R	98.60	31	P		P		14 20 02.7	-0.3	
	baz=273									
D19K	Kuna River	98.60	22	IAMs_20		IAMs_20		15 13 56.1		
	comp=Z,1µm,20.0s									
D19K	Kuna River	98.60	22	P		P		14 20 02.6	-0.2	
	baz=276									
L16K	Owhat River	98.62	29	P		Pdif		14 20 03.2	+0.2	
	baz=274,SNR=5.3									
G18K	Tagagawik	98.65	24	IAMs_20		IAMs_20		15 11 54.6		
	comp=Z,1µm,18.0s									
G18K	Tagagawik	98.65	24	P		P		14 20 02.7	-0.4	
	baz=275									
A21K	Barrow	98.77	19	P		Pdif		14 20 03.4	0.0	
	baz=278									
H18K	Honhosa River	98.84	25	IAmb		IAmb		14 20 05.3		
	comp=Z,19nm,1.2s									
H18K	Honhosa River	98.84	25	P		Pdif		14 20 04.0	0.0	
	baz=275,SNR=9.6									
F19K	Shaleruckik Mo	98.91	23	IAMs_20		IAMs_20		15 12 19.4		
	comp=Z,2µm,18.0s									
F19K	Shaleruckik Mo	98.91	23	P		P		14 20 03.5	-0.7	
	baz=276									
M16K	Timber Creek	98.91	29	IAMs_20		IAMs_20		15 13 30.7		
	comp=Z,1µm,18.0s									
M16K	Timber Creek	98.91	29	P		P		14 20 04.3	0.0	
	baz=274									
CHNA	Chernabura Isl	98.95	36	P		Pdif		14 20 04.8	+0.2	
	baz=273									
N16K	Nishlik Lake	99.05	30	P		Pdif		14 20 05.5	+0.5	
	baz=274									
E19K	Redstone River	99.05	23	IAMs_20		IAMs_20		15 12 34.0		
	comp=Z,2µm,18.0s									
E19K	Redstone River	99.05	23	P		Pdif		14 20 04.7	-0.2	
	baz=277									
K17K	Iditarod	99.09	27	IAmb		IAmb		14 20 06.2		
	comp=Z,14nm,0.9s									
K17K	Iditarod	99.09	27	P		Pdif		14 20 05.4	+0.3	
	baz=275,SNR=9.2									
D20K	Etivluk River	99.13	21	IAMs_20		IAMs_20		15 14 07.9		
	comp=Z,2µm,19.0s									
D20K	Etivluk River	99.13	21	P		Pdif		14 20 05.0	-0.1	
	baz=278,SNR=28									
L17K	Donlin	99.14	28	P		Pdif		14 20 05.8	+0.5	
	baz=275									
G19K	Purcell Mounta	99.26	24	IAMs_20		IAMs_20		15 11 09.7		
	comp=Z,1µm,20.0s									
G19K	Purcell Mounta	99.26	24	P		Pdif		14 20 06.0	+0.2	
	baz=277									
E20K	Nigu River	99.34	22	P		Pdif		14 20 06.2	0.0	
	baz=278									
A22K	Sinclair Lake	99.35	19	P		Pdif		14 20 06.3	+0.3	
	baz=280									
O16K	Kokwok River B	99.45	31	P		Pdif		14 20 06.8	+0.1	
	baz=275									
GCSA	Galena City Sc	99.51	25	P		Pdif		14 20 07.0	+0.2	
	baz=277,SNR=6.2									
P16K	Nushagak River	99.55	31	P		Pdif		14 20 07.5	+0.3	
	baz=275									
M17K	Holitna River	99.62	29	P		Pdif		14 20 07.6	+0.2	
	baz=276									
F20K	Avaraart Lake	99.69	23	IAMs_20		IAMs_20		15 12 53.8		
	comp=Z,2µm,18.0s									
F20K	Avart Lake	99.69	23	P		Pdif		14 20 07.5	-0.1	
	baz=278									
B21K	Ikpikpuk River	99.70	20	IAMs_20		IAMs_20		15 14 30.9		
	comp=Z,2µm,18.0s									
B21K	Ikpikpuk River	99.70	20	P		Pdif		14 20 07.6	0.0	
	baz=280									
C21K	Knifeblade Rid	99.72	21	P		Pdif		14 20 08.0	+0.2	
	baz=279									
J18K	Innoko River	99.73	27	IAMs_20		IAMs_20		15 12 38.1		
	comp=Z,1µm,18.0s									
J18K	Innoko River	99.73	27	P		Pdif		14 20 07.7	-0.2	
	baz=277									
N17K	Nushagak Hills	99.82	30	IAMs_20		IAMs_20		15 11 59.8		
	comp=Z,1µm,19.0s									
N17K	Nushagak Hills	99.82	30	P		Pdif		14 20 08.5	+0.1	
	baz=276									
L18K	Granite Mounta	99.88	28	P		Pdif		14 20 09.0	+0.4	
	baz=276									
R16K	Pilot Point	99.89	33	P		Pdif		14 20 08.6	-0.1	
	baz=275									
O17K	Koliganek Bris	99.94	30	P		Pdif		14 20 08.7	-0.2	
	baz=276									
B22K	Teshekpuk Lake	99.97	20	IAMs_20		IAMs_20		15 12 30.1		
	comp=Z,1µm,20.0s									
B22K	Teshekpuk Lake	99.97	20	P		Pdif		14 20 08.8	-0.1	
	baz=281									
E21K	Killik River	100.13	21	IAMs_20		IAMs_20		15 14 41.3		
	comp=Z,2µm,20.0s									
E21K	Killik River	100.13	21	P		Pdif		14 20 09.3	-0.4	
	baz=280									
J19K	Poorman	100.15	26	P		Pdif		14 20 09.9	+0.1	
	baz=278									
H20K	Anotleneega Mo	100.25	24	P		Pdif		14 20 10.6	+0.3	
	baz=279,SNR=6.2									
P17K	Kvichak River	100.33	31	P		Pdif		14 20 11.0	+0.3	
	baz=276									
M18K	Stony River	100.38	29	P		Pdif		14 20 11.1	+0.2	
	baz=277									
N18K	Kilae Creek	100.44	29	P		Pdif		14 20 11.2	0.0	
	baz=277									
D22K	Ayikyak River	100.51	21	IAMs_20		IAMs_20		15 15 04.4		
	comp=Z,2µm,18.0s									
D22K	Ayikyak River	100.51	21	P		Pdif		14 20 11.4	+0.1	
	baz=281,SNR=8.3									
F21K	Alatna River	100.52	23	IAMs_20		IAMs_20		15 13 30.9		
	comp=Z,2µm,18.0s									
F21K	Alatna River	100.52	23	P		Pdif		14 20 11.6	+0.1	
	baz=280,SNR=5.9									
R17L	Mt. Peulik Vol	100.54	33	P		Pdif		14 20 11.7	0.0	
	baz=276									
G21K	Allakaket	100.64	23	IAMs_20		IAMs_20		15 13 23.0		
	comp=Z,1µm,18.0s									
G21K	Allakaket	100.64	23	P		Pdif		14 20 11.8	-0.1	
	baz=280									
Q17K	Contact Creek	100.72	32	P		Pdif		14 20 12.3	-0.3	
	baz=276									
L19K	White Mountain	100.74	28	P		Pdif		14 20 12.8	+0.3	
	baz=278									
O18K	Koktuh Hills	100.88	30	P		Pdif		14 20 13.3	+0.1	
	baz=277									
K20K	Telida	100.92	27	IAMs_20		IAMs_20		15 15 25.7		
	comp=Z,961nm,18.0s									
K20K	Telida	100.92	27	P		Pdif		14 20 13.7	+0.4	
	baz=279									
P18K	Big Mountain,	100.93	31	P		Pdif		14 20 13.8	+0.4	
	baz=277									
E22K	Anaktuvuk Pass	100.97	22	P		Pdif		14 20 13.4	0.0	
	baz=282,SNR=6.6									
M19K	Big River Lodg	101.00	28	P		Pdif		14 20 13.7	+0.1	
	baz=278									
C23K	Itkillik River	101.02	20	IAMs_20		IAMs_20		15 13 21.8		
	comp=Z,2µm,20.0s									
C23K	Itkillik River	101.02	20	P		Pdif		14 20 13.6	0.0	
	baz=284,SNR=5.8									
H21K	Melozitna Rive	101.07	24	IAMs_20		IAMs_20		15 13 37.6		
	comp=Z,1µm,18.0s									
H21K	Melozitna Rive	101.07	24	P		Pdif		14 20 14.0	+0.1	
	baz=281									
N19K	Bonanza Creek	101.11	29	P		Pdif		14 20 14.2	-0.1	
	baz=278									
D23K	Nanushuk River	101.20	21	P		Pdif		14 20 14.6	+0.3	
	baz=283,SNR=5.7									
O19K	Port Alsworth	101.28	30	P		Pdif		14 20 15.2	+0.3	
	baz=278									
M20K	Styx River	101.59	28	P		Pdif		14 20 16.5	+0.1	
	baz=280									
H22K	Ishtalitna Cre	101.61	24	P		Pdif		14 20 16.5	+0.2	
	baz=282									
CHUM	Lake Minchumin	101.61	26	P		Pdif		14 20 16.4	+0.1	
	baz=281									
TOLK	Toolik Lake Re	101.67	21	P		Pdif		14 20 16.7	+0.1	
	baz=284,SNR=10.0									
C24K	Franklin Bluff	101.69	20	IAMs_20		IAMs_20		15 11 50.6		
	comp=Z,2µm,21.0s									
C24K	Franklin Bluff	101.69	20	P		Pdif		14 20 16.2	-0.3	
	baz=285									
COLD	Coldfoot	101.77	22	IAMs_20		IAMs_20		15 14 37.9		
	comp=Z,2µm,19.0s									
COLD	Coldfoot	101.77	22	P		Pdif		14 20 17.1	+0.1	
	baz=283									
E23K	Chandalar	101.79	22	IAMs_20		IAMs_20		15 16 01.4		
	comp=Z,2µm,18.0s									
E23K	Chandalar	101.79	22	P		Pdif		14 20 17.1	0.0	
	baz=284,SNR=7.5									
D24K	Happy Valley	101.80	20	IAMs_20		IAMs_20		15 13 51.5		
	comp=Z,2µm,19.0s									
D24K	Happy Valley	101.80	20	P		Pdif		14 20 17.1	+0.1	
	baz=285,SNR=7.0									
Q19K	Cape Douglas,	101.80	31	P		Pdif		14 20 17.6	+0.4	
	baz=278									
PPLA	Purkeypile	101.85	27	P		Pdif		14 20 17.1	-0.4	
	baz=281									
G23K	Bananza Creek	101.96	23	IAMs_20		IAMs_20		15 16 13.9		
	comp=Z,2µm,21.0s									
G23K	Bananza Creek	101.96	23	P		Pdif		14 20 18.0	+0.1	
	baz=283									
MLY	Manley	102.05	25	P		Pdif		14 20 18.4	+0.1	
	baz=282									
BPAW	Bear Paw Mtn.	102.14	26	P		Pdif		14 20 18.8	+0.1	
	baz=282									
N20K	Mount Spurr	102.14	29	P		Pdif		14 20 19.1	+0.3	
	baz=280									
SPCR	Spurr Chakacha	102.14	29	P		Pdif		14 20 18.7	-0.1	
	baz=280									
E24K	Your Creek	102.20	21	IAMs_20		IAMs_20		15 14 22.1		
	comp=Z,2µm,19.0s									
E24K	Your Creek	102.20	21	P		Pdif		14 20 18.8	-0.2	
	baz=285									
OHAK	Old Harbor	102.24	33	P		Pdif		14 20 19.3	+0.1	
	baz=278									
SKT	Skwentna	102.32	28	IAMs_20		IAMs_20		15 14 27.5		
	comp=Z,985nm,19.0s									
SKT	Skwentna	102.32	28	P		Pdif		14 20 19.4	-0.1	
	baz=281									
TORD	Torodi Ar. Bea	102.34	282	PKKP				14 36 28.9		
	comp=Z,0.5nm,0.8s,baz=307,slow=3.7,SNR=4.2									
KDAK	Kodiak Island	102.53	32	P		Pdif		14 20 20.1	-0.4	
	baz=279									
L22K	Petersville	102.56	27	IAMs_20		IAMs_20		15 16 29.8		
	comp=Z,1µm,18.0s									
TRF	Thorofare Moun	102.58	26	P		Pdif		14 20 20.6	-0.3	
	baz=282									
D25K	Kavik River	102.59	20	IAMs_20		IAMs_20		15 13 50.3		
	comp=Z,2µm,20.0s									
D25K	Kavik River	102.59	20	P		Pdif		14 20 20.5	-0.1	
	baz=287									
I23K	Minto, Yukon-K	102.59	24	P		Pdif		14 20 20.5	-0.1	
	baz=284									
HOM	Homer	102.69	30	P		Pdif		14 20 21.1	-0.1	
	baz=280									
CAPN	Captain Cook N	102.73

comp=Z,0.6nm,0.7s,baz=289,slow=4.2,SNR=10.0
ILAR PKKPbc **PKKPbc 14 36 17.0 -2.9**
comp=Z,0.4nm,0.9s,baz=128,slow=1.5,SNR=4.2
ILAR PKKP **PKKPdf 14 36 28.9 +0.5**
comp=Z,0.7nm,0.7s,baz=117,slow=1.8,SNR=8.1
HDA Harding Lake 103.78 25 P **Pdif 14 20 26.1 +0.2**
baz=286
SML Sawmill 103.83 28 P **Pdif 14 20 26.0 -0.3**
baz=284
FYU Fort Yukon 103.84 23 IAMs_20 IAMs_20 15 14 10.5
comp=Z,1μm,19.0s
KNK Knik Glacier 103.87 28 IAMs_20 IAMs_20 15 15 53.5
comp=Z,1μm,20.0s
KNK Knik Glacier 103.87 28 P **Pdif 14 20 26.4 0.0**
baz=284
F26K Sheenjek River 103.88 21 IAMs_20 IAMs_20 15 11 26.6
comp=Z,2μm,20.0s
F26K Sheenjek River 103.88 21 P **Pdif 14 20 26.2 -0.1**
baz=289
WAT6 Susitna Watana 103.91 27 P **Pdif 14 20 26.7 -0.1**
baz=285
DHY Denali Highway 103.95 26 IAMs_20 IAMs_20 15 14 10.4
comp=Z,1μm,22.0s
DHY Denali Highway 103.95 26 P **Pdif 14 20 26.8 -0.1**
baz=285
PRP Porcupine Dome 104.04 24 IAMs_20 IAMs_20 15 17 42.0
comp=Z,2μm,18.0s
PRP Porcupine Dome 104.04 24 P **Pdif 14 20 27.2 -0.1**
baz=287
M23K Glacier View 104.12 28 P **Pdif 14 20 27.3 -0.2**
baz=284
G26K Porcupine Rive 104.26 22 IAMs_20 IAMs_20 15 17 49.6
comp=Z,2μm,18.0s
G26K Porcupine Rive 104.26 22 P **Pdif 14 20 28.0 0.0**
baz=289
SCM Sheep Creek Mo 104.29 27 P **Pdif 14 20 28.3 0.0**
baz=285
J25K Salcha River, 104.38 24 P **Pdif 14 20 28.8 +0.1**
baz=287
D27M Malcolm River 104.43 19 IAMs_20 IAMs_20 15 13 39.8
comp=Z,1μm,22.0s
K24K Donnelly Dome 104.44 25 IAMs_20 IAMs_20 15 16 43.4
comp=Z,1μm,19.0s
K24K Donnelly Dome 104.44 25 P **Pdif 14 20 28.9 -0.1**
baz=287
E27K Coleen River 104.61 20 IAMs_20 IAMs_20 15 16 20.8
comp=Z,2μm,20.0s
E27K Coleen River 104.61 20 P **Pdif 14 20 29.5 -0.1**
baz=292
GLI Glacier Island 104.64 28 P **Pdif 14 20 29.9 0.0**
baz=285
PPT2 Papeete2 104.66 110 *e*P **Pdif 14 20 32.3 +1.3**
comp=Z,165nm,27.8s
PPT2 *e*PP **PKiKP 14 24 40.3 -6.5**
comp=Z,98nm,27.2s
PPT2 *e*S **Sdif 14 32 18.6 -3.4**
comp=Z,197nm,25.8s
PPT2 *e*SS **SS 14 39 33.5 -7.6**
comp=Z,858nm,26.0s
PPT2 *e*LQ LQ 14 50 32.1
comp=Z,2μm,34.5s
PPT2 *e*LR LR 14 54 59.0
comp=Z,2μm,22.5s
PPT2 *e*LR LR 14 55 06.2
comp=Z,2μm,22.5s
P23K Montague Islan 104.72 29 P **Pdif 14 20 30.3 +0.2**
baz=284
M24K Tolsona, Glenn 104.74 27 P **Pdif 14 20 30.3 0.0**
baz=286
PAX Paxson 104.81 26 P **Pdif 14 20 30.4 -0.3**
baz=287
RIDG Independent Ri 104.86 25 P **Pdif 14 20 30.5 -0.3**
baz=288
KLU Klutina 105.03 28 P **PKiKP 14 24 45.9 -0.3**
baz=286
HIN Hinchinbrook I 105.05 29 IAMs_20 IAMs_20 15 16 34.8
comp=Z,1μm,19.0s
I26K Coal Creek Min 105.05 23 IAMs_20 IAMs_20 15 16 44.7
comp=Z,2μm,19.0s
I26K Coal Creek Min 105.05 23 P **PKiKP 14 24 45.8 -0.2**
baz=290
D28M Stokes Point 105.12 19 P **PKiKP 14 24 46.1 +0.1**
baz=295
SCRK Sand Creek 105.14 25 P **PKiKP 14 24 46.4 -0.1**
baz=288
H27K Steamboat Moun 105.36 22 IAMs_20 IAMs_20 15 16 41.7
comp=Z,1μm,18.0s
H27K Steamboat Moun 105.36 22 P **PKiKP 14 24 46.6 -0.1**
baz=291
EYAK Cordova Ski Ar 105.37 29 IAMs_20 IAMs_20 15 11 41.2
comp=Z,1μm,20.0s
EYAK Cordova Ski Ar 105.37 29 P **PKiKP 14 24 46.8 +0.1**
baz=286
Q23K Middleton Isla 105.38 30 P **PKiKP 14 24 46.5 -0.3**
baz=285
F28M Old Crow 105.44 21 IAMs_20 IAMs_20 15 12 03.6
comp=Z,1μm,20.0s
F28M Old Crow 105.44 21 P **PKiKP 14 24 46.6 -0.1**
baz=293
I27K Kandik River 105.55 23 IAMs_20 IAMs_20 15 17 21.8
comp=Z,1μm,20.0s
I27K Kandik River 105.55 23 P **PKiKP 14 24 46.9 -0.1**
baz=291
N25K Chitina, Valde 105.60 27 P **PKiKP 14 24 47.2 -0.1**
baz=287
L26K Log Cabin Wild 105.72 26 IAMs_20 IAMs_20 15 14 38.2
comp=Z,1μm,21.0s
L26K Log Cabin Wild 105.72 26 P **PKiKP 14 24 47.1 -0.3**
baz=289
BMRM Bremner River 105.79 28 P **PKiKP 14 24 47.3 -0.3**
baz=287
E29M Blow River 105.80 20 IAMs_20 IAMs_20 15 17 04.0
comp=Z,2μm,19.0s
E29M Blow River 105.80 20 P **PKiKP 14 24 47.5 +0.2**
baz=295
RAGM Ragged Mountai 105.92 29 IAMs_20 IAMs_20 15 12 17.9
comp=Z,1μm,20.0s
M26K Nabesna, AK 106.08 26 IAMs_20 IAMs_20 15 11 57.8
comp=Z,1μm,22.0s
M26K Nabesna, AK 106.08 26 P **PKiKP 14 24 47.9 -0.2**
baz=289
KAIM Kayak Island 106.18 29 P **PKiKP 14 24 48.1 -0.2**
baz=287
I28M Miner Creek 106.26 23 IAMs_20 IAMs_20 15 17 10.5
comp=Z,1μm,20.0s
I28M Miner Creek 106.26 23 P **PKiKP 14 24 48.3 -0.1**
baz=293
L27K Beaver Creek, 106.36 25 IAMs_20 IAMs_20 15 18 02.1
comp=Z,1μm,20.0s
L27K Beaver Creek, 106.36 25 P **PKiKP 14 24 48.6 0.0**
baz=290
MCARA McCarthy VSAT 106.39 27 P **PKiKP 14 24 48.5 -0.1**
baz=289
SUCK Suckling Hills 106.44 29 IAMs_20 IAMs_20 15 12 26.6
comp=Z,1μm,19.0s
CRQE Cirque 106.56 28 P **PKiKP 14 24 49.0 -0.2**
baz=288
M27K Edge Creek, AK 106.58 26 IAMs_20 IAMs_20 15 12 33.2
comp=Z,1μm,21.0s
M27K Edge Creek, AK 106.58 26 P **PKiKP 14 24 49.2 +0.1**
baz=290
F30M Barrier River 106.85 20 IAMs_20 IAMs_20 15 16 24.0
comp=Z,2μm,20.0s
F30M Barrier River 106.85 20 P **PKiKP 14 24 49.5 +0.2**
baz=297
I29M Ogilvie Camp, 106.92 23 P **PKiKP 14 24 49.7 +0.2**
baz=294
G30M tAoh Zraii Nji 106.99 21 IAMs_20 IAMs_20 15 12 51.6
comp=Z,2μm,21.0s
G30M tAoh Zraii Nji 106.99 21 P **PKiKP 14 24 49.7 +0.1**
baz=297
BVCY Beaver Creek 107.01 26 P **PKiKP 14 24 49.9 +0.1**
baz=291
DAWY Dawson 107.01 24 P **PKiKP 14 24 49.8 +0.1**
baz=293
EPYK Eagle Plains 107.08 21 IAMs_20 IAMs_20 15 13 14.2
comp=Z,1μm,20.0s
EPYK Eagle Plains 107.08 21 P **PKiKP 14 24 50.0 +0.2**
baz=296
BARN Barnard Glacie 107.12 27 IAMs_20 IAMs_20 15 18 47.4
comp=Z,1μm,21.0s
GRNC Granite Creek 107.19 28 IAMs_20 IAMs_20 15 17 20.3
comp=Z,1μm,21.0s
INK Inuvik 107.27 19 P **PKiKP 14 24 50.3 +0.2**
baz=300
MESA MESA 107.28 28 P **PKiKP 14 24 50.3 -0.3**
baz=289
CTG Chitna Glacier 107.30 27 P **PKiKP 14 24 50.2 -0.4**
baz=290
CTGM Chitina Glacie 107.30 27 IAMs_20 IAMs_20 15 18 54.1
comp=Z,993nm,20.0s
YUK3 Moose Creek 107.41 26 P **PKiKP 14 24 50.7 -0.1**
baz=291
LOGN Logan Glacier 107.50 28 IAMs_20 IAMs_20 15 19 00.5
comp=Z,1μm,21.0s
A36M Sachs Harbour 107.54 14 IAMs_20 IAMs_20 15 17 14.5
comp=Z,2μm,20.0s
A36M Sachs Harbour 107.54 14 P **PKiKP 14 24 50.8 +0.3**
baz=309
F31M Tsiigehtchic 107.63 20 IAMs_20 IAMs_20 15 19 58.4
comp=Z,2μm,19.0s
F31M Tsiigehtchic 107.63 20 P **PKiKP 14 24 50.9 +0.2**
baz=299
G31M Satah River 107.70 20 P **PKiKP 14 24 51.1 +0.3**
baz=299
I30M Mount Dempster 107.71 22 IAMs_20 IAMs_20 15 17 15.9
comp=Z,2μm,20.0s
I30M Mount Dempster 107.71 22 P **PKiKP 14 24 51.2 +0.1**
baz=296
K29M Barlow Dome 107.86 24 IAMs_20 IAMs_20 15 19 08.8
comp=Z,1μm,20.0s
K29M Barlow Dome 107.86 24 P **PKiKP 14 24 51.5 +0.1**
baz=294
O28M Mount Upton 107.89 27 P **PKiKP 14 24 51.4 -0.4**
baz=291
YUK8 Steele Glacier 107.90 27 P **PKiKP 14 24 51.2 -0.6**
baz=292
L29M L29M 107.91 25 IAMs_20 IAMs_20 15 18 28.2
comp=Z,1μm,20.0s
L29M L29M 107.91 25 P **PKiKP 14 24 51.5 0.0**
baz=294
J30M Hart River 108.02 23 IAMs_20 IAMs_20 15 18 26.9
comp=Z,2μm,22.0s
J30M Hart River 108.02 23 P **PKiKP 14 24 51.7 0.0**
baz=296
M29M Somme Creek 108.03 25 IAMs_20 IAMs_20 15 18 31.6
comp=Z,1μm,19.0s
M29M Somme Creek 108.03 25 P **PKiKP 14 24 51.6 -0.2**
baz=293
PCA Pinnacle 108.10 28 IAMs_20 IAMs_20 15 19 23.5
comp=Z,2μm,22.0s
PINM Pinnacle 108.11 28 P **PKiKP 14 24 51.3 -0.6**
baz=291
H31M Peel River 108.20 21 IAMs_20 IAMs_20 15 18 32.8
comp=Z,1μm,18.0s
H31M Peel River 108.20 21 P **PKiKP 14 24 51.6 -0.3**
baz=298
YUK4 Talbot Arm 108.38 27 P **PKiKP 14 24 52.1 -0.5**
baz=293
MAYO Mayo, Yukon 108.62 24 P **PKiKP 14 24 52.7 -0.1**
baz=296
YUK6 Outpost Mounta 108.66 27 P **PKiKP 14 24 52.6 -0.6**
baz=293
M30M Minto, Yukon 108.68 25 IAMs_20 IAMs_20 15 20 40.5
comp=Z,1μm,19.0s
M30M Minto, Yukon 108.68 25 P **PKiKP 14 24 52.7 -0.2**
baz=295
O29M Mount Kennedy 108.81 28 P **PKiKP 14 24 53.0 -0.4**
baz=292
N30M Aishikik Lake 109.02 26 IAMs_20 IAMs_20 15 20 42.7
comp=Z,2μm,20.0s
N30M Aishikik Lake 109.02 26 P **PKiKP 14 24 53.3 -0.4**
baz=294
HYT Haines Junctio 109.09 27 P **PKiKP 14 24 53.4 -0.5**
baz=294
C36M Paulatuk 109.51 16 IAMs_20 IAMs_20 15 15 31.9
comp=Z,1μm,22.0s
C36M Paulatuk 109.51 16 P **PKiKP 14 24 54.0 -0.2**
baz=309
N31M Braeburn, Yuko 109.58 26 P **PKiKP 14 24 54.4 -0.3**
baz=296
P30M Million Dollar 109.62 27 P **PKiKP 14 24 54.4 -0.4**
baz=294
O30N Mendenhall 109.75 27 IAMs_20 IAMs_20 15 21 06.8
comp=Z,1μm,21.0s
O30N Mendenhall 109.75 27 P **PKiKP 14 24 54.7 -0.3**
baz=295
M31M Drury Creek, Y 109.86 25 IAMs_20 IAMs_20 15 20 56.6
comp=Z,1μm,21.0s
M31M Drury Creek, Y 109.86 25 P **PKiKP 14 24 54.6 -0.5**
baz=297
AVE Averroes 110.27 303 IAMs_20 IAMs_20 15 11 36.1
comp=Z,1μm,19.0s
WHY Whitehorse 110.33 26 P **PKiKP 14 24 55.7 -0.5**
baz=296
SKAG Skagway 110.65 28 P **PKiKP 14 24 56.5 -0.1**
baz=295
S31K Pelican 110.84 29 P **PKiKP 14 24 56.6 -0.4**
baz=294
N32M Quiet Lake 110.89 26 IAMs_20 IAMs_20 15 18 21.3
comp=Z,1μm,21.0s
P32M Atlin 111.33 27 P **PKiKP 14 24 57.7 -0.3**
baz=297
P33M Teslin, Yukon 111.45 26 IAMs_20 IAMs_20 15 20 10.7
comp=Z,1μm,18.0s
P33M Teslin, Yukon 111.45 26 P **PKiKP 14 24 57.9 -0.4**
baz=298
R32K Eaglecrest 111.54 29 P **PKiKP 14 24 58.2 -0.2**
baz=296
SIT Sitka 111.66 30 P **PKiKP 14 24 58.1 -0.5**
baz=294
S32K Killisnoo 111.86 29 P **PKiKP 14 24 58.5 -0.5**
baz=295
Q32M Nakina River 112.28 27 P **PKiKP 14 24 59.3 -0.8**
baz=298
R33M Jennings River 112.66 27 P **PKiKP 14 25 00.0 -0.7**
baz=299
U33K Whale Pass 113.16 30 P **PKiKP 14 25 01.0 -0.4**
baz=296
WTLY Watson Lake, Y 113.25 25 P **PKiKP 14 25 01.3 -0.3**
baz=302
WRAK Wrangell Islan 113.41 30 P **PKiKP 14 25 01.6 -0.3**
baz=297
CRAG Craig 113.44 31 P **PKiKP 14 25 01.7 -0.3**
baz=296
WRGLY Wrigley 113.55 21 P **PKiKP 14 25 01.8 -0.2**
baz=308
DLBC Dease Lake 113.56 27 P **PKiKP 14 25 01.9 -0.4**
baz=300
T35M Bob Quinn 114.17 29 P PKPdf 14 25 02.7 -0.8
baz=299
V35K Ketchikan 114.28 31 P PKPdf 14 25 03.2 -0.4
baz=297
KOTAN Kotaneelee Air 115.20 24 P **PKPdf 14 25 05.5 +0.1**
baz=306
TAOE Nuku Iva Isla 115.33 103 *e*LR LR 14 59 50.8
comp=Z,1μm,22.4s
YKA Yellowknife Ar 117.04 19 PKP **PKPdf 14 25 08.3 -0.4**
comp=Z,1.7nm,0.8s,baz=340,slow=2.8,SNR=23
YKA PKKPbc **PKKPab 14 35 38.6 +0.6**
comp=Z,0.4nm,0.7s,baz=129,slow=3.6,SNR=7.5
M02C Callahan 125.94 42 IAMs_20 IAMs_20 15 11 38.0
comp=Z,932nm,22.0s
BMO Blue Mountains 127.57 36 IAMs_20 IAMs_20 15 29 38.2
comp=Z,792nm,21.0s
CVS Carmenet Viney 127.60 45 IAMs_20 IAMs_20 15 11 12.4
comp=Z,844nm,22.0s
MSO Missoula 128.21 32 IAMs_20 IAMs_20 15 33 09.7
comp=Z,1μm,19.0s
SCHQ Schefferville 130.44 352 PKP **PKPdf 14 25 34.9 +0.2**
comp=Z,7.2nm,0.8s,baz=29,slow=3.3,SNR=9.9
NVAR Mina Array Bea 130.44 43 PKP **PKPdf 14 25 35.4 -0.2**
comp=Z,2.8nm,0.6s,baz=290,slow=1.9,SNR=14
NVAR SKPbc **SKPbc 14 28 57.5 +1.1**
comp=Z,4.7nm,0.9s,baz=273,slow=4.2,SNR=9.2
VES Vestal, Richgr 131.14 46 IAMs_20 IAMs_20 15 11 59.6
comp=Z,744nm,22.0s
ISA Isabella, Lake 131.66 46 IAMs_20 IAMs_20 15 20 33.0
comp=Z,795nm,22.0s
FXWY Fox Creek 131.86 33 IAMs_20 IAMs_20 15 30 07.3
comp=Z,991nm,21.0s
LL01 San Ignacio de 131.87 185 IAMs_20 IAMs_20 15 19 54.5
comp=Z,1μm,21.0s
AHID Auburn Hatcher 132.39 34 IAMs_20 IAMs_20 15 34 34.6
comp=Z,1μm,18.0s
ULM Lac du Bonnet 132.93 17 PKP **PKPdf 14 25 38.6 -0.9**
comp=Z,7.7nm,0.8s,baz=339,slow=3.9,SNR=14
ULM SKPbc **SKPbc 14 29 04.1 -0.6**
comp=Z,13nm,1.1s,baz=317,slow=2.6,SNR=6.3
DUG Dugway, Tooele 133.01 38 IAMs_20 IAMs_20 15 37 01.5
comp=Z,1μm,20.0s
PDAR Pinedale Array 133.24 33 PKP **PKPdf 14 25 40.0 -0.7**
comp=Z,1.4nm,0.6s,baz=131,slow=2.4,SNR=9.1
PDAR SKPbc **SKPab 14 29 09.3 +1.1**
comp=Z,3.4nm,0.9s,baz=322,slow=0.8,SNR=6.6
PLCA Paso Flores 133.32 187 PKP **PKPdf 14 25 40.2 -0.5**
comp=Z,1.9nm,0.7s,baz=66,slow=0.8,SNR=7.8
PLCA SKPbc **SKPbc 14 29 07.0 +0.5**
comp=Z,5.1nm,1.1s,baz=161,slow=5.4,SNR=4.0
LR04 Corral 134.43 184 IAMs_20 IAMs_20 15 21 32.2
comp=Z,1μm,19.0s
GO06 Curarrehue 134.56 186 IAMs_20 IAMs_20 15 19 00.6
comp=Z,2μm,20.0s
AGMN Agassiz Nation 134.69 18 IAMs_20 IAMs_20 15 32 46.6
comp=Z,2μm,20.0s
BC3 Big Chuckawall 134.81 47 IAMs_20 IAMs_20 15 13 59.4
comp=Z,1μm,19.0s
F33A 5 Mile Ranch, 136.72 20 IAMs_20 IAMs_20 15 30 32.7
comp=Z,2μm,20.0s
RCBR Riachuelo 137.44 255 *e*P **PKiKP 14 25 50.2 -0.8**
ECSD EROS Data Cent 138.44 22 IAMs_20 IAMs_20 15 38 30.4
comp=Z,1μm,22.0s
G40A Rib Lake 139.02 14 IAMs_20 IAMs_20 15 38 39.3
comp=Z,1μm,21.0s
I37A Lemond, Waseca 139.28 18 IAMs_20 IAMs_20 15 36 15.3
comp=Z,1μm,20.0s
KSCO Kaye Shedlock' 139.59 31 IAMs_20 IAMs_20 15 36 13.6
comp=Z,1μm,21.0s
BO01 Tunca 139.64 187 IAMs_20 IAMs_20 15 22 32.2
comp=Z,1μm,22.0s
MT01 Popeta 140.18 187 IAMs_20 IAMs_20 15 21 16.5
comp=Z,1μm,22.0s
ANMO Albuquerque 140.22 39 IAMs_20 IAMs_20 15 39 17.9
comp=Z,1μm,18.0s
ANMO Albuquerque 140.22 39 IAMs_20 IAMs_20 15 39 17.6
comp=Z,1μm,18.0s
ANMO Albuquerque 140.22 39 IAMs_20 IAMs_20 15 39 18.5
comp=Z,1μm,18.0s
MT09 Talagante 140.24 188 IAMs_20 IAMs_20 15 20 56.9
comp=Z,1μm,21.0s
VT1 Waterbury 141.45 355 IAMs_20 IAMs_20 15 35 10.5
comp=Z,1μm,20.0s
AUSP Uspallata 141.51 190 *i* P **PKPdf 14 25 54.9 -1.5**
I49A Point Hope 141.66 7 IAMs_20 IAMs_20 15 35 29.3
comp=Z,1μm,20.0s
K43A Burlington 141.89 14 IAMs_20 IAMs_20 15 41 34.8
comp=Z,1μm,21.0s
ACHE Chepes 141.96 194 *i* P **PKPdf 14 25 54.4 -2.7**
EPT El Paso 142.16 43 IAMs_20 IAMs_20 15 41 07.4
comp=Z,1μm,20.0s
L42A Oliver, Polo 142.21 16 IAMs_20 IAMs_20 15 34 35.9
comp=Z,1μm,21.0s
KSU1 Kansas State U 142.38 25 IAMs_20 IAMs_20 15 35 27.1
comp=Z,1μm,20.0s
L44A Lake County Fo 142.49 13 IAMs_20 IAMs_20 15 35 12.5
comp=Z,1μm,21.0s
AVFE Valle Fertil 142.63 194 *i* P **PKPdf 14 25 55.2 -2.9**
J55A Hilton 142.68 1 IAMs_20 IAMs_20 15 37 21.9
comp=Z,1μm,20.0s
CPUP Villa Florida 142.83 210 PKP **PKPdf 14 25 58.5 0.0**
comp=Z,1.5nm,0.6s,baz=152,slow=4.4,SNR=5.6
ACCO Cerro Coronel 143.04 191 *e*P **PKPdf 14 25 57.6 -1.5**
AAM Ann Arbor 143.17 8 IAMs_20 IAMs_20 15 35 34.1
comp=Z,1μm,20.0s
L61B Northampton 143.31 355 IAMs_20 IAMs_20 15 36 23.3
comp=Z,1μm,19.0s
OK038 West end E0370 143.51 30 IAMs_20 IAMs_20 15 39 18.5
comp=Z,1μm,19.0s
AROD Rodeo 143.53 191 *i* P PKPbc 14 25 58.1 +0.9
M50A Fremont 144.13 8 IAMs_20 IAMs_20 15 32 55.0
comp=Z,1μm,22.0s
BDFB Brasilia 144.30 233 PKP **PKPdf 14 26 00.8 -0.6**
comp=Z,9.7nm,0.6s,baz=73,slow=3.0,SNR=14
SFIN Lafayette 144.38 13 IAMs_20 IAMs_20 15 34 47.8
comp=Z,1μm,21.0s
P43A Skaggs, Pawnee 144.45 17 IAMs_20 IAMs_20 15 35 47.9
comp=Z,1μm,20.0s
VCA Vinchina 144.65 193 *i* P **PKPdf 14 26 01.5 -0.3**
OK029 Liberty Lake 144.69 30 IAMs_20 IAMs_20 15 41 08.5
comp=Z,1μm,20.0s
N51A Ashland 144.70 7 IAMs_20 IAMs_20 15 35 30.6
comp=Z,2μm,21.0s
N53A Lisbon 144.97 5 IAMs_20 IAMs_20 15 41 42.7
comp=Z,1μm,21.0s
TINO Tinogasta 145.14 195 *i* P **PKPdf 14 26 03.1 +0.4**
SSPA Standing Stone 145.31 1 IAMs_20 IAMs_20 15 35 48.4
comp=Z,1μm,20.0s
TXAR Lajitas Array 145.58 44 PKPbc **PKPbc 14 26 03.6 +0.1**
comp=Z,49nm,0.8s,baz=296,slow=2.0,SNR=370
TXAR SKPbc **SKiKP 14 29 42.8 +1.6**
comp=Z,0.3nm,0.6s,baz=326,slow=2.6,SNR=2.6
Q51A Peebles 146.42 9 IAMs_20 IAMs_20 15 36 41.3
comp=Z,1μm,21.0s
P57A Homestead Farm 146.46 2 IAMs_20 IAMs_20 15 42 05.8
comp=Z,1μm,21.0s
FSA Cafayete 146.54 198 *i* P **PKPab 14 26 07.2 -0.4**
AQDB Aquidauana 146.57 218 *e*P **PKPdf 14 26 05.4 +0.4**
WCI Wyandotte Cave 146.62 13 IAMs_20 IAMs_20 15 35 40.0
comp=Z,1μm,21.0s
AC02 Maricunga 146.69 193 *i* P **PKPdf 14 26 06.3 +0.5**
Z35A Perchaven, San 146.73 32 IAMs_20 IAMs_20 15 42 28.7
comp=Z,1μm,21.0s
MURT Porto Murinho 146.78 214 *e*P **PKPab 14 26 07.7 -0.6**
R49A Shelbyville 146.81 12 IAMs_20 IAMs_20 15 39 45.7
comp=Z,1μm,19.0s
BDQN Bodoquena, MS 147.23 217 *e*P **PKPbc 14 26 07.7 -0.7**
R55A Marlinton 147.54 5 IAMs_20 IAMs_20 15 38 15.6
comp=Z,1μm,20.0s
T47A Sharon Grove 147.60 15 IAMs_20 IAMs_20 15 36 51.0
comp=Z,1μm,22.0s
AC01 Pan de Azucar 147.65 191 IAMs_20 IAMs_20 15 28 35.2
comp=Z,1μm,19.0s
WVT Waverly 148.20 17 IAMs_20 IAMs_20 15 40 10.2
comp=Z,1μm,20.0s
U49A Red Boiling Sp 148.38 14 IAMs_20 IAMs_20 15 36 35.5
comp=Z,1μm,22.0s
T59A Double "B" Far 148.97 1 IAMs_20 IAMs_20 15 35 27.4
comp=Z,1μm,22.0s
SNDB Serra Nova Dou 148.98 235 *e*P **PKPdf 14 26 10.3 +1.1**
V58A Windy Hill, Pi 150.09 4 IAMs_20 IAMs_20 15 44 58.7
comp=Z,1μm,19.0s
HKT Hockley 150.10 34 IAMs_20 IAMs_20 15 39 22.9
comp=Z,1μm,20.0s
PRPB Parauapebas 150.43 247 *e*P **PKPdf 14 26 13.7 +2.1**
W57A Gilead 150.66 5 IAMs_20 IAMs_20 15 44 15.2
comp=Z,1μm,20.0s
Y49A Blount Mountai 150.73 16 IAMs_20 IAMs_20 15 36 32.1
comp=Z,1μm,22.0s
X58A Rowland 151.30 4 IAMs_20 IAMs_20 15 44 38.5
comp=Z,1μm,20.0s
Y57A Sumter 151.74 6 IAMs_20 IAMs_20 15 46 48.0
comp=Z,1μm,20.0s
PTLB Pontes e Lacer 152.49 220 *e*P **PKPdf 14 26 15.2 +0.7**
352A Blakely 153.38 15 IAMs_20 IAMs_20 15 41 49.1
comp=Z,1μm,22.0s
LPAZ La Paz 156.38 202 PKPab **PKPab 14 26 48.0 -0.9**
comp=Z,6.5nm,0.7s,baz=216,slow=2.9,SNR=8.1
LPAZ La Paz 156.38 202 *e*P **PKPdf 14 26 22.0 +1.2**
CMIG Matias Romero 159.16 56 PKP **PKPdf 14 26 22.7 -0.7**
comp=Z,2.2nm,0.8s,baz=77,slow=2.0,SNR=4.4
CMIG PKPab **PKPab 14 26 59.5 -0.8**
comp=Z,5.8nm,0.9s,baz=312,slow=2.4,SNR=11

NEIC ***10*** *14:11:57.8±1.5, 12°.77N±0°.07×89°.68W±0°.07, h35km±2km, mb4.4/32, Error ellipse: s-maj=13.7km s-min=9.0km az=221.0*

CATAC ***10*** *14:12:00.7±0.4, 13°N±2°×9°0W±°, h21km±2km, M4.5/10, MLv4.5/10, Error ellipse: s-maj=5.0km s-min=2.7km az=17.5, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-1.11; $M_{\theta\theta}$2.08; $M_{\phi\phi}$-0.96; $M_{r\theta}$1.98; $M_{\theta\phi}$-5.44; $M_{\phi r}$-2.01; Fault plane solution: $M_0$6.39004×10^{16} NP1: ϕ_s172.95601°, δ81.84554°, λ18.32546°. NP2:ϕ_s80.26624°, δ71.86631°, λ171.41623°. Principal axes: T 7.1535, Plg18.6856°, Azm37.8352°; N -2.0103, Plg69.9992°, Azm196.1392°; P -5.1432, Plg6.8794°, Azm305.4967°; confirmed*

SNET ***10*** *14:12:00.8±1.3, 13°.03N×89°.60W, h23km, ML4.4, Presumed earthquake*

GCG ***10*** *14:12:03.5±1.7, 13°.24N×89°.73W, h30km±8km, MD4.3, ML4.5, Presumed earthquake*

IDC ***10*** *14:12:03.6±1.7, 13°.74N×88°.82W, h54km±19km, mb3.8/8, mbtmp4.1/10, ML3.5/3, MS2.7/2, Error ellipse: s-maj=41.5km s-min=13.3km az=42.0*

ISC 10 14:12:00.2±1.2, 13°.02N±0°.06×89°.57W±0°.03, h45km±10km**, n147,** σ1**°67**/172**, mb4.3**/19**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
					Op	h	m	s	ISC
LALI	**Alcalda de L**	**0.53**	**28**	P	**Pn**	**14**	**12**	**12.4**	**+0.8**
LALI	**Alcalda de L**	**0.53**	**28**	*i* P	**Pn**	**14**	**12**	**12.4**	**+0.8**

LALI *i* S **Sn** **14 12 19.1 -0.6**
LALI IAML 14 12 20.9
comp=E,4µm,0.3s
LALI Alcalda de L 0.53 28 *e*P **Pn** **14 12 12.3 +0.8**
JAYA Jayaque - finc 0.65 11 P **Pn** **14 12 13.7 +0.4**
JAYA Jayaque - finc 0.65 11 *i*P **Pn** **14 12 13.7 +0.4**
JAYA *i*S **Sn** **14 12 22.0 -0.5**
JAYA IAML 14 12 23.3
comp=E,102µm,0.3s
JAYA Jayaque - finc 0.65 11 *e*P **Pn** **14 12 13.8 +0.5**
JAYA *e*S **Sn** **14 12 22.1 -0.5**
PANCS Alcalda de 0.71 33 P **Pn** **14 12 14.6 +0.7**
PANCS S **Sn** **14 12 24.5 +0.7**
PANCS Alcalda de 0.71 33 *e*P **Pn** **14 12 14.8 +0.9**
PMON Piamonte 0.74 20 P **Pn** **14 12 15.1 +0.7**
PMON S **Sn** **14 12 25.4 +0.7**
PMON Piamonte 0.74 20 *e*P **Pn** **14 12 15.2 +0.7**
LOMA Loma Larga 0.74 32 *e*P **Pn** **14 12 15.4 +1.0**
SEMO Seminario San 0.76 26 P **Pn** **14 12 15.5 +0.7**
SEMO S **Sn** **14 12 26.1 +0.8**
SEMO Seminario San 0.76 26 *e*P **Pn** **14 12 15.5 +0.7**
UEES Universidad Ev 0.77 25 P **Pn** **14 12 15.6 +0.8**
UEES S **Sn** **14 12 26.3 +0.9**
UEES Universidad Ev 0.77 25 *e*P **Pn** **14 12 15.8 +0.9**
BOQS Boqueron 0.77 22 *e*P **Pn** **14 12 15.8 +0.9**
UTEC Universidad Te 0.77 28 P **Pn** **14 12 15.7 +0.9**
UTEC S **Sn** **14 12 26.6 +1.2**
LFRS El Faro 0.78 39 *e*P **Pn** **14 12 16.2 +1.2**
PIC2 El Picacho 0.79 23 P **Pn** **14 12 16.1 +0.9**
IGN Direccin Gen 0.80 29 P **Pn** **14 12 16.2 +1.0**
IGN S **Sn** **14 12 27.3 +1.3**
IGN Direccin Gen 0.80 29 *e*P **Pn** **14 12 16.2 +1.0**
IGN *e*P 14 12 16.4
CEDA San Andres 0.80 13 P **Pn** **14 12 15.9 +0.7**
CEDA S **Sn** **14 12 26.6 +0.6**
CEDA San Andres 0.80 13 *e*P **Pn** **14 12 16.0 +0.7**
UDBS Universidad Do 0.81 30 P **Pn** **14 12 16.3 +1.1**
UDBS S **Sn** **14 12 27.5 +1.3**
UDBS Universidad Do 0.81 30 *e*P **Pn** **14 12 16.4 +1.1**
CEVE Cerro Verde 0.81 357 P **Pn** **14 12 16.1 +0.6**
CEVE S **Sn** **14 12 26.6 +0.1**
CEVE Cerro Verde 0.81 357 *e*P **Pn** **14 12 16.1 +0.6**
CEVE *e*S **Sn** **14 12 28.6 +2.1**
SBLS San Blas 0.82 357 *e*P **Pn** **14 12 16.2 +0.6**
SBLS *e*S **Sn** **14 12 27.4 +0.5**
SNJE San Jose 0.85 358 *e*P **Pn** **14 12 16.6 +0.6**
LFIJ La Fuente 0.86 32 *e*P **Pn** **14 12 17.3 +1.3**
LBRS Las Brisas 0.89 36 *e*P **Pn** **14 12 17.8 +1.4**
COEG Centro de Oper 0.90 48 P **Pn** **14 12 17.8 +1.2**
COEG Centro de Oper 0.90 48 *e*P **Pn** **14 12 17.9 +1.2**
COEG *e*S **Sn** **14 12 30.5 +1.9**
NUBE Las Nubes 0.90 347 P **Pn** **14 12 17.0 +0.3**
NUBE Las Nubes 0.90 347 *i*P **Pn** **14 12 16.9 +0.3**
NUBE *i*S **Sn** **14 12 27.8 -0.9**
NUBE IAML 14 12 28.9
comp=N,15µm,0.1s
NUBE Las Nubes 0.90 347 *e*P **Pn** **14 12 16.9 +0.3**
NUBE *e*S **Sn** **14 12 28.2 -0.5**
FAME Alcaldia de Sa 0.93 333 P **Pn** **14 12 17.0 +0.1**
FAME S **Sn** **14 12 27.8 -1.3**
PAVA Las Pavas 0.93 42 P **Pn** **14 12 18.7 +1.7**
PAVA Las Pavas 0.93 42 *e*P **Pn** **14 12 18.7 +1.7**
PAVA *e*S **Sn** **14 12 31.8 +2.5**
TECO Alcaldia de Te 0.93 56 P **Pn** **14 12 17.9 +1.0**
TECO Alcaldia de Te 0.93 56 *e*P **Pn** **14 12 18.0 +1.0**
TECO *e*S **Sn** **14 12 30.7 +1.6**
UNIC Universidad Ca 0.96 1 P **Pn** **14 12 18.3 +0.9**
UNIC S **Sn** **14 12 30.6 +0.7**
SLOZ Alcaldia de Sa 1.02 349 P **Pn** **14 12 18.9 +0.7**
ESSJ San Jos, E 1.05 301 *i*P Pn 14 12 25.8 +7.2
SCLA Alcaldia de Sa 1.07 50 P **Pn** **14 12 20.6 +1.8**
SCLA Alcaldia de Sa 1.07 50 *e*P **Pn** **14 12 20.6 +1.8**
RBDL Robledal 1.10 354 *e*P **Pn** **14 12 20.2 +0.9**
PQSS Presa 15 de Se 1.16 58 P **Pn** **14 12 21.5 +1.5**
PQSS S **Sn** **14 12 37.5 +2.8**
P5NO Presa 5 de nov 1.25 39 P **Pn** **14 12 22.9 +1.6**
P5NO S **Sn** **14 12 39.6 +2.7**
P5NO Presa 5 de nov 1.25 39 *e*P **Pn** **14 12 22.9 +1.6**
LLGN La Laguna 1.29 28 P **Pn** **14 12 23.3 +1.4**
LLGN La Laguna 1.29 28 *e*P **Pn** **14 12 23.4 +1.4**
PACA Pacayal 1.30 70 P **Pn** **14 12 23.6 +1.6**
PACA Pacayal 1.30 70 *e*P **Pn** **14 12 23.9 +1.8**
PACA *e*S **Sn** **14 12 40.8 +2.5**
LCY Lacayo 1.31 72 *e*P **Pn** **14 12 24.1 +2.0**
RANC El Ranchito 1.32 71 P **Pn** **14 12 24.1 +1.8**
RANC S **Sn** **14 12 42.0 +3.2**
BLLM Bellamira 1.37 72 *e*P **Pn** **14 12 25.0 +2.1**
MTO3 Montecristo 1.39 9 P **Pn** **14 12 24.5 +1.1**
MTO3 Montecristo 1.39 9 P **Pn** **14 12 24.6 +1.2**
MTO3 S **Sn** **14 12 42.1 +1.4**
MTO3 Montecristo 1.39 9 *i*P **Pn** **14 12 24.6 +1.2**
MTO3 Montecristo 1.39 9 *e*P **Pn** **14 12 24.6 +1.2**
PCG5 San Vicente Pa 1.43 327 *i*P **Pn** **14 12 27.7 +3.9**
PCG5 *i*S **Sn** **14 12 46.3 +4.8**
PCG5 IAML 14 12 52.1
comp=E,6µm,0.5s
CNRM Centro Naciona 1.44 71 S **Sn** **14 12 45.0 +3.4**
INTP Intipuca 1.49 83 *e*P **Pn** **14 12 26.3 +1.8**
FG16 Alotenango, Sa 1.55 324 *i*P Pn 14 12 30.6 +5.1
FG16 IAML 14 13 03.0
comp=N,30µm,0.2s
ESQI Esquipulas 1.55 8 **Pn** **14 12 26.9 +1.5**
ESQI Esquipulas 1.55 8 P **Pn** **14 12 27.0 +1.5**
ESQI S **Sn** **14 12 46.3 +1.8**
ESQI Esquipulas 1.55 8 *e*P **Pn** **14 12 27.1 +1.5**
FG8 Yepocapa, Chim 1.56 322 *i*P Pn 14 12 30.9 +5.2
FG8 *i*S **Sn** **14 12 51.7 +6.8**
ZAFR2 Estanzuela, Za 1.57 8 *i*P Pn 14 12 32.3 +6.6
LCND La Caada 1.67 80 P **Pn** **14 12 28.9 +2.0**
LCND La Caada 1.67 80 *e*P **Pn** **14 12 29.0 +2.0**
CNCH Conchagua 1.71 81 P **Pn** **14 12 29.9 +2.2**
CNCH S **Sn** **14 12 52.2 +3.7**
ESSG Sabana Grande 1.83 318 *i*P **Pn** **14 12 29.2 0.0**
ESSG *i*S **Sn** **14 12 49.3 -1.9**
ESSG IAML 14 12 52.6
comp=E,4µm,0.3s
SARH Santa Rosa de 1.92 24 P **Pn** **14 12 32.6 +2.1**
SARH S **Sn** **14 12 55.9 +2.4**
SARH Santa Rosa de 1.92 24 *i*P **Pn** **14 12 32.6 +2.1**
APG El Apazote 2.16 336 P **Pn** **14 12 35.2 +1.3**
comp=E,2.0nm,0.3s,baz=134,slow=10,SNR=39
APG S **Sn** **14 13 02.8 +3.2**
comp=E,25nm,0.5s,baz=82,slow=17,SNR=9.7
APG LR LR 14 13 32.7
comp=E,34nm,19.2s,baz=102,slow=44
APG El Apazote 2.16 336 *i*P **Pn** **14 12 35.2 +1.3**
STG5 El Palmar, Qui 2.21 309 *i*P Pn 14 12 40.0 +5.5
STG5 *i*S **Sn** **14 13 06.8 +6.1**
STG8 El Palmar, Qui 2.24 310 *i*P Pn 14 12 40.5 +5.4
STG8 IAML 14 13 20.6
comp=N,4µm,0.4s
STG2 El Palmar, Qui 2.25 309 *i*P Pn 14 12 41.1 +6.0
STG2 *i*S **Sn** **14 13 07.8 +6.1**
STG2 IAML 14 13 17.4
comp=E,19µm,0.4s
TGUH Tegucigalpa,Un 2.47 65 **Pn** **14 12 38.2 +0.2**
TGUH Tegucigalpa,Un 2.47 65 P **Pn** **14 12 39.9 +1.9**
CRIN San Cristobal 2.48 97 **Pn** **14 12 37.6 -0.6**
SOKI Kika Raxquin 2.52 316 *i*P **Pn** **14 12 41.3 +2.2**
RTAL Retalhuleu 2.55 306 Pn **Pn** **14 12 37.7 -1.4**
RTAL Retalhuleu 2.55 306 P **Pn** **14 12 39.9 +0.9**
RTAL S **Sn** **14 13 10.5 +1.6**
QUEO Labor Ovalle 2.64 315 IAML 14 13 27.1
comp=E,3µm,0.4s
HERN Volcan Telica 2.71 98 **Pn** **14 12 41.0 -0.3**
CNGN Cerro Negro 2.85 100 **Pn** **14 12 42.9 -0.4**
BOAB BOACO BROADBAN 2.85 98 **Pn** **14 12 56.1 -0.9**
PETF Flores 3.89 356 **Pn** **14 12 59.5 +2.0**
PETF Flores 3.89 356 *i*P **Pn** **14 12 59.9 +2.4**
SIUN Universidad Ur 4.72 81 **Pn** **14 13 11.2 +2.2**
JTS Las Juntas de 5.28 120 P **Pn** **14 13 17.9 +1.3**
comp=E,2.3nm,0.3s,baz=121,slow=23,SNR=5.4
JTS S **Sn** **14 14 16.6 +0.4**
comp=E,15nm,0.4s,baz=274,slow=20,SNR=1.7
comp=E,7.6nm,0.5s
CMIG Matias Romero 6.54 309 P Pn 14 13 38.3 +4.5
comp=E,4.9nm,0.3s,baz=103,slow=9.1,SNR=40
CMIG S **Sn** **14 14 49.7 +2.6**
comp=E,14nm,0.3s,baz=208,slow=18,SNR=4.6
CMIG LR LR 14 16 35.0
comp=E,273nm,19.7s,baz=122,slow=40
comp=E,23nm,0.5s
TEIG Tepich 7.28 10 **Pn** **14 13 45.5 +1.5**
SDV Santo Domingo 19.04 101 P **P** **14 16 19.0 0.0**
comp=E,6.0nm,0.6s,baz=298,slow=8.7,SNR=9.0
SDV Santo Domingo 19.04 101 **P** **14 16 17.2 -1.8**
BRDY Brady 20.15 336 **P** **14 16 31.7 +0.9**
WHTX Lake Whitney, 20.23 340 P **P** **14 16 30.9 -0.7**
WHTX IAmb IAmb 14 16 34.8
comp=E,15nm,0.6s
SAND Sanderson 20.48 327 **P** **14 16 33.6 -0.8**
TXAR Lajitas Array 20.85 323 P Pn 14 16 41.7 +0.3
comp=E,2.9nm,0.6s,baz=145,slow=11,SNR=47
comp=E,2.9nm,0.6s
TX31 Lajitas Ar. Si 20.86 323 **P** **14 16 39.6 +1.1**
APMT Aspermont 22.39 336 **P** **14 16 55.2 +0.3**
APMT IAmb IAmb 14 17 09.1
comp=E,5.2nm,0.7s
MNTX Cornudas Mount 23.60 325 P **P** **14 17 06.5 -0.6**
S39A Bolivar 24.80 353 P **P** **14 17 18.1 0.0**
S39A IAmb IAmb 14 17 19.7
comp=E,6.2nm,0.5s
T59A Double "B" Far 26.18 22 P **P** **14 17 30.6 +0.1**
T59A IAmb IAmb 14 17 48.5
comp=E,21nm,1.4s
I42A Draeger Farm, 30.77 1 P **P** **14 18 11.3 -0.1**
ECSD EROS Data Cent 31.20 350 P **P** **14 18 14.5 -0.8**
ECSD IAmb IAmb 14 18 18.3
comp=E,7.2nm,1.4s
BUKO Buck Lake 33.46 13 P **P** **14 18 34.3 -0.7**
NCB Newcomb 33.55 20 PcP 14 21 23.4 +7.7
PDAR Pinedale Array 34.32 333 P **P** **14 18 41.5 -1.3**
comp=E,0.1nm,0.5s,baz=123,slow=11,SNR=1.9
comp=E,0.1nm,0.5s
E28A Huff 34.74 346 **PcP** **14 21 16.2 -2.8**
EYMN Ely 34.86 358 P **P** **14 18 45.6 -1.5**
TBO Thunder Bay 35.52 0 P **P** **14 18 51.9 -0.9**
AGMN Agassiz Nation 35.56 353 **P** **14 18 52.5 -0.6**
NVAR Mina Array Bea 35.93 320 P **P** **14 18 59.0 +2.3**
comp=E,2.0nm,0.7s,baz=132,slow=8.6,SNR=12
comp=E,2.0nm,0.7s
NVAR Mina Array Bea 35.93 320 P **P** **14 18 57.5 +0.8**
EPLO Experimental L 36.71 355 P **P** **14 19 01.9 -1.0**
ULM Lac du Bonnet 37.49 353 P **P** **14 19 07.8 -1.6**
comp=E,1.7nm,0.5s,baz=165,slow=8.8,SNR=4.3
comp=E,1.7nm,0.5s
ULM Lac du Bonnet 37.49 353 P **P** **14 19 08.1 -1.4**
ULM IAmb IAmb 14 19 14.1
comp=E,5.4nm,1.2s
FFC Flin Flon 42.74 349 P **P** **14 19 52.5 -0.4**
EDM Edmonton 44.35 340 P **P** **14 20 05.5 -0.4**
SCHQ Schefferville 45.37 18 P P 14 20 07.8 -6.2
comp=E,2.6nm,0.4s,baz=295,slow=7.2,SNR=14
comp=E,2.6nm,0.4s
SCHQ Schefferville 45.37 18 IAmb IAmb 14 20 12.8
comp=E,3.2nm,0.6s
FCC Fort Churchill 45.79 357 P **P** **14 20 16.2 -1.0**
FCC IAmb IAmb 14 20 16.6
comp=E,5.1nm,1.2s
YKA Yellowknife Ar 52.54 346 P **P** **14 21 07.8 -1.0**
comp=E,1.1nm,0.3s,baz=154,slow=7.6,SNR=33
comp=E,1.1nm,0.3s
YKAW3 Yellowknife Wh 52.60 346 P **P** **14 21 08.7 -0.5**
YKAW3 IAmb IAmb 14 21 10.1
comp=E,2.6nm,0.7s
M29M Somme Creek 60.26 336 P **P** **14 22 04.0 +0.1**
M29M IAmb IAmb 14 22 22.6
comp=E,3.6nm,1.2s
INK Inuvik 62.06 343 P **P** **14 22 15.3 -0.5**
INK IAmb IAmb 14 22 53.4
comp=E,5.9nm,1.4s
F28M Old Crow 63.56 341 P **P** **14 22 26.1 +0.2**
F28M IAmb IAmb 14 22 57.0
comp=E,4.3nm,1.1s
ILAR Eielson Array 64.67 336 P **P** **14 22 32.6 -0.6**
comp=E,0.2nm,0.5s,baz=164,slow=4.3,SNR=8.3
comp=E,0.2nm,0.5s
BMAR Burnt Mountain 65.03 340 P **P** **14 22 35.7 +0.2**
K20K Telida 67.11 334 P **P** **14 22 48.4 -0.6**
K20K IAmb IAmb 14 23 22.9
comp=E,3.3nm,1.2s
E22K Anaktuvuk Pass 67.82 339 P **P** **14 22 53.3 -0.1**
E22K IAmb IAmb 14 22 53.6
comp=E,3.0nm,1.1s
G18K Tagagawik 69.70 336 P **P** **14 23 05.0 -0.1**
G18K IAmb IAmb 14 23 33.4
comp=E,5.1nm,1.4s
SPITS Spitsbergen Ar 80.58 12 P **P** **14 24 05.9 -1.6**
comp=E,11nm,1.1s,baz=188,slow=9.1,SNR=1.9
comp=E,11nm,1.1s
KURK Kurchatov 115.71 8 **PKiKP** **14 30 38.4 +0.6**
KURBB Kurchatov Arra 115.78 8 PKP **PKiKP** **14 30 38.4 +0.5**
comp=E,0.4nm,0.6s,baz=354,slow=2.0,SNR=6.3
MKAR Makanchi Array 120.02 6 PKP **PKPdf** **14 30 45.8 -0.5**
comp=E,0.1nm,0.4s,baz=346,slow=3.4,SNR=2.9
HHC Hu-ho-hao-te 122.94 341 *e*P **PKiKP** **14 30 54.3 +2.0**
LZH Lanzhou 129.54 346 *e*P **PKiKP** **14 31 06.1 +0.4**
LZH pP pPKPdf 14 31 18.3 -0.4
LZH pmax pmax
comp=E,13nm,1.3s
WRA Warramunga Arr 137.43 255 PKP **PKiKP** **14 31 22.0 +0.2**
comp=E,0.5nm,0.5s,baz=90,slow=2.4,SNR=13
ASAR Alice Springs 137.54 249 PKP **PKiKP** **14 31 22.5 +0.5**
comp=E,0.3nm,0.8s,baz=116,slow=2.0,SNR=4.7
PZH PanZhiHua 139.21 344 PKP **PKPdf** **14 31 22.8 -0.4**
CMAR Chiang Mai Arr 147.62 345 PKPbc **PKPbc** **14 31 41.1 +0.5**
comp=E,2.4nm,0.6s,baz=344,slow=3.7,SNR=14

*NNC **10** 14:21:23.9±1.9, 41.°67N×74.°78E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=14.1km s-min=7.6km az=3.0*
*KRNET **10** 14:21:23.3±0.1, 41.°66N×74.°80E, h19km, mb3.0*
*SOME **10** 14:21:23.8, 41.°68N×74.°83E, h10km*
*KNET **10** 14:21:24.5±0.5, 41.°77N×74.°94E, h10km±2km, ml2.1, Error ellipse: s-maj=3.5km s-min=1.8km az=17.0*

ISC 10 14:21:23.2±1.1, 41.°66N±0.°03×74.°82E±0.°02, h9km±12km, n47, σ0°95/81, 26C-13D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ARLS	**Aral**	**0.42**	**298**	⇑*i*P		**Pg**	**14 21 31.3**	**-0.2**
ARLS				⇑*i*S		**Sg**	**14 21 37.2**	**+0.2**
UCH	**Uchtor**	**0.61**	**338**	⇓P		**Pg**	**14 21 35.2**	**+0.1**
UCH	25nm,0.2s,SNR=50			⇓S		**Sg**	**14 21 44.0**	**+0.8**
	54nm,0.2s							
UCH	**Uchtor**	**0.61**	**338**	⇑*i*P		**Pg**	**14 21 35.1**	**0.0**
UCH				⇑*i*S		**Sg**	**14 21 43.8**	**+0.7**
JNKS	**Jany-Kuch**	**0.86**	**135**	⇑*i*P		**Pg**	**14 21 40.0**	**+0.2**
JNKS				⇑*i*S		**Sg**	**14 21 51.8**	**+0.7**
NRN	**Naryn**	**0.92**	**104**	⇑*i*P		**Pg**	**14 21 40.3**	**-0.6**
NRN				⇑*i*S		**Sg**	**14 21 52.9**	**+0.1**
KBK	**Karagaybulak**	**1.00**	**6**	⇓P		**Pg**	**14 21 41.8**	**-0.6**
KBK	12nm,0.1s,SNR=11			⇓S		**Sg**	**14 21 55.6**	**+0.3**
	137nm,0.3s							
KBK	**Karagaybulak**	**1.00**	**6**	⇓*i*P		**Pg**	**14 21 42.1**	**-0.3**
KBK				⇓*i*S		**Sb**	**14 21 55.8**	**-0.3**
AAK	**Ala-Archa**	**1.00**	**346**	⇑P		**Pg**	**14 21 42.2**	**-0.3**
AAK	9.6nm,0.3s,SNR=14			⇑S		**Sg**	**14 21 55.5**	**-0.1**
	37nm,0.5s							
AAK	**Ala-Archa**	**1.00**	**346**	⇑P		**Pg**	**14 21 42.0**	**-0.5**
AAK	4.8nm,0.5s			⇑S		**Sg**	**14 21 55.8**	**+0.2**
	6.9nm,0.5s							
AAK	**Ala-Archa**	**1.00**	**346**	⇓*i*P		**Pg**	**14 21 42.2**	**-0.3**
AAK				⇓*i*S		**Sg**	**14 21 55.9**	**+0.4**
SALK	**Salom-Alik**	**1.08**	**224**	⇑*i*P		**Pg**	**14 21 43.3**	**-0.7**
SALK				⇑*i*S		**Sg**	**14 21 57.5**	**-0.6**
BOOM	**Boomskoye usch**	**1.18**	**45**	⇑*i*P		**Pb**	**14 21 45.2**	**-0.6**
BOOM				⇑*i*S		**Sb**	**14 22 01.2**	**0.0**
ULHL	**Ulahol**	**1.21**	**61**	⇑P		**Pb**	**14 21 45.3**	**-1.2**
ULHL	10nm,0.2s,SNR=42			⇓S		**Sb**	**14 22 01.2**	**-1.1**
	47nm,0.3s							
CHMS	**Chumysh**	**1.33**	**358**	⇓P		**Pn**	**14 21 48.0**	**-0.1**
CHMS	8.0nm,0.3s			⇑S		**Sg**	**14 22 06.1**	**0.0**
	8.6nm,0.2s							
CHMS	**Chumysh**	**1.33**	**358**	⇑*i*P		**Pn**	**14 21 48.1**	**0.0**
CHMS				⇑*i*S		**Sb**	**14 22 05.8**	**+0.1**
TKM2	**Tokmak 2**	**1.38**	**24**	⇑P		**Pn**	**14 21 48.9**	**-0.1**
TKM2	4.3nm,0.1s,SNR=23			⇑S		**Sb**	**14 22 06.4**	**-0.8**
	19nm,0.1s							
MRKS Merke 1.60 313 P **Pb** **14 21 53.3 +0.2**
3.8nm,0.3s
MRKS S **Sb** **14 22 14.3 +0.9**
22nm,0.3s
MRKS Merke 1.60 313 *e*P **Pb** **14 21 53.2 +0.2**
3.8nm,0.3s
MRKS *e*S **Sb** **14 22 14.3 +0.9**
22nm,0.3s
KST Kastek 1.62 31 P **Pb** **14 21 53.8 +0.4**
1.3nm,0.2s
KST S **Sg** **14 22 15.4 +0.1**
42nm,0.3s
KST Kastek 1.62 31 *e*P **Pb** **14 21 53.8 +0.4**
1.7nm,0.2s
KST *e*S **Sg** **14 22 15.4 +0.1**
42nm,0.3s
USP Ospenovka 1.62 352 ⇓P **Pb** **14 21 53.4 +0.1**
14nm,0.3s,SNR=13
USP ⇑S **Sg** **14 22 15.3 0.0**
33nm,0.4s
DGS Degeres 1.73 24 P **Pb** **14 21 55.4 +0.2**
14nm,0.3s
DGS S **Sg** **14 22 18.2 -0.6**
38nm,0.3s
DGS Degeres 1.73 24 *e*P **Pb** **14 21 55.5 +0.2**
14nm,0.3s
DGS *e*S **Sg** **14 22 18.2 -0.6**
38nm,0.3s
MTBS Maitube 1.89 39 P **Pg** **14 21 59.1 -0.4**
10nm,0.2s
MTBS S **Sg** **14 22 24.1 +0.2**
50nm,0.2s
MTBS Maitube 1.89 39 *e*P **Pg** **14 21 58.9 -0.5**
10nm,0.2s
MTBS *e*S **Sg** **14 22 24.1 +0.2**
50nm,0.2s
IZV Izvestkoviy 1.91 44 Pg **Pg** **14 21 59.5 -0.3**
6.4nm,0.2s
IZV Lg Lg 14 22 25.3
44nm,0.3s
IZV Izvestkoviy 1.91 44 *e*P **Pg** **14 21 59.6 -0.3**
5.5nm,0.2s
IZV *e*S **Sg** **14 22 25.3 +0.6**
44nm,0.3s
TNSS Tian-Shan 2.09 48 Pg **Pb** **14 22 02.1 +0.5**
4.4nm,0.3s
TNSS Lg Lg 14 22 30.5
9.0nm,0.5s
TNSS Tian-Shan 2.09 48 *e*P **Pb** **14 22 02.6 +1.0**
4.2nm,0.3s
TNSS *e*S **Sg** **14 22 30.5 0.0**
9.0nm,0.5s
KRBS Karabastau 2.13 17 Pg **Pb** **14 22 02.5 +0.6**
22nm,0.3s
KRBS Lg Lg 14 22 30.5
56nm,0.3s
KRBS Karabastau 2.13 17 *e*P **Pb** **14 22 02.6 +0.6**
22nm,0.3s
KRBS *e*S **Sg** **14 22 30.5 -1.1**
56nm,0.3s
KNDC Almaty 2.22 45 ⇑Pn **Pg** **14 22 05.9 +0.1**
17nm,0.3s
KNDC ⇓Sn **Sg** **14 22 35.1 +0.5**
92nm,0.6s
MDOK Medeo 2.23 47 Pg **Pb** **14 22 04.3 +0.5**
20nm,0.4s
MDOK Lg Lg 14 22 34.0
32nm,0.5s
KOTS Kotyrbulak 2.31 46 Pg **Pb** **14 22 06.3 +1.1**
25nm,0.3s
KOTS Lg Lg 14 22 37.6
70nm,0.3s
KOTS Kotyrbulak 2.31 46 *e*P **Pg** **14 22 06.6 -0.9**
25nm,0.3s
KOTS *e*S **Sg** **14 22 37.6 +0.1**
70nm,0.3s
KTBS Karatobe 2.47 33 Pg **Pb** **14 22 08.4 +0.7**
6.7nm,0.2s
KTBS Lg Lg 14 22 40.8
0.4nm,0.3s
KTBS Karatobe 2.47 33 *e*P **Pb** **14 22 08.6 +0.9**
13nm,0.3s
KTBS *e*S **Sg** **14 22 40.8 -1.6**
0.4nm,0.3s
SATY Saty 3.00 61 Pg **Pb** **14 22 18.7 +1.8**
6.6nm,0.4s
SATY Lg Lg 14 22 58.1
35nm,0.2s
KURS Kuram 3.08 53 Pg **Pb** **14 22 20.1 +2.0**
9.0nm,0.5s
KURS Lg Lg 14 23 00.4
34nm,0.5s
ARXS Arharly 3.37 40 Pg **Pb** **14 22 24.4 +1.2**
3.1nm,0.3s
ARXS Lg Lg 14 23 08.0
38nm,0.3s
ARXS Arharly 3.37 40 *e*P **Pb** **14 22 24.5 +1.3**
3.1nm,0.3s
ARXS *e*S **Sg** **14 23 08.0 -3.5**
38nm,0.3s
KPKS Kokpek 3.38 56 Pg **Pb** **14 22 23.5 +0.2**
0.4nm,0.2s
KPKS Lg Lg 14 23 06.4
71nm,0.5s
KPKS Kokpek 3.38 56 *e*P **Pb** **14 22 23.6 +0.2**
0.4nm,0.2s
KPKS *e*S **Sb** **14 23 06.4 +1.9**
71nm,0.5s
UZB Uzynbulak 3.45 63 Pg **Pg** **14 22 28.0 -1.3**
4.3nm,0.3s
UZB Lg Lg 14 23 14.4
11nm,0.4s
UZB Uzynbulak 3.45 63 *e*P **Pb** **14 22 25.8 +1.2**
4.1nm,0.2s
UZB *e*S **Sb** **14 23 09.9 +3.3**
33nm,0.5s
KK31 Karatay Array 3.50 296 ⇓Pg **Pg** **14 22 28.5 -1.7**
1.2nm,0.3s,baz=114,slow=16,SNR=8.4
KK31 Lg Lg 14 23 13.2
6.3nm,0.6s,baz=125,slow=26,SNR=8.1
PDGK Podgornoye 3.83 63 ⇑Pg **Pb** **14 22 28.9 -2.3**
1.4nm,0.4s
PDGK ⇑Lg Lg 14 23 20.4
32nm,1.2s

*IDC **10** 14:41:09.0±8.5, 15.°75S×66.°35E, h0km, mb3.5/6, mbtmp3.5/6, Error ellipse: s-maj=279.3km s-min=30.0km az=58.0*

ISC 10 14:41:10.8±8.5, 16.°S±1.°×6.°6E±.°, h10km, n9, σ0°30/6, mb3.7/6, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**9.99**	**37**	T		T	14 52 52.0	
	baz=214,slow=75,SNR=117							
H08S2	**Diego Garcia H**	**10.00**	**37**	T		T	14 52 52.8	
	baz=214,slow=75,SNR=28							
H08S3	**Diego Garcia H**	**10.01**	**37**	T		T	14 52 53.5	
	baz=214,slow=75,SNR=140							
ASAR	**Alice Springs**	**63.55**	**109**	P		**P**	**14 51 42.0**	**-0.1**
	0.4nm,0.9s,baz=273,slow=6.6,SNR=4.2							
	0.4nm,0.9s							
MKAR	**Makanchi Array**	**63.85**	**12**	P		**P**	**14 51 43.1**	**-0.4**
	0.2nm,0.6s,baz=208,slow=7.5,SNR=5.1							
	0.2nm,0.6s							
WRA	**Warramunga Arr**	**64.43**	**105**	P		**P**	**14 51 48.0**	**+0.1**
	0.2nm,0.6s,baz=264,slow=6.6,SNR=6.5							
	0.2nm,0.6s							
KURBB	**Kurchatov Arra**	**66.91**	**8**	P		**P**	**14 52 03.1**	**-0.1**
	0.3nm,0.5s,baz=192,slow=5.6,SNR=4.2							
	0.3nm,0.5s							
BVAR	**Borovoye Array**	**68.55**	**3**	P		**P**	**14 52 13.7**	**+0.2**
	0.3nm,0.4s,baz=181,slow=7.2,SNR=1.4							
	0.3nm,0.4s							
SONM	**Songino Array**	**72.66**	**27**	P		**P**	**14 52 39.1**	**+0.2**
	0.4nm,0.5s,baz=222,slow=4.0,SNR=4.0							
	0.4nm,0.5s							

*IDC **10** 14:55:00.8±2.0, 55.°08N×164.°59E, h0km, mb3.3/3, mbtmp3.3/4, ML2.7/1, Error ellipse: s-maj=124.8km s-min=30.4km az=150.0*
*KRSC **10** 14:55:01.4±1.2, 54.°81N×164.°60E, h46km±26km, Ml3.8*

ISC 10 14:54:59.6±3.2, 54.°90N±0.°05×164.°64E±0.°05, h1km±21km, n38, σ1°93/50, mb3.5/3, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.83**	**68**	*eP*	**Pn**	**14 55 18.0**	**-0.4**
BKI				*eS*	**Sb**	**14 55 29.3**	**+0.9**
KBTR	**Krutoberegovo**	**1.67**	**323**	*eP*	**Pn**	**14 55 29.7**	**-0.3**
KBTR				*eS*	**Sn**	**14 55 49.3**	**-2.7**
MKZ	**Mys Kozlova**	**1.72**	**260**	*eP*	**Pn**	**14 55 30.9**	**+0.3**
MKZ				*eS*	**Sn**	**14 55 50.6**	**-2.6**
KBG	**Krutoberegovo**	**1.75**	**322**	*eP*	**Pb**	**14 55 32.0**	**-0.4**
TUMD	**Tumrok D**	**2.46**	**279**	*eS*	**Sn**	**14 56 11.5**	**+0.1**
SMKR	**Semkarok**	**2.46**	**315**	*eP*	**Pb**	**14 55 43.1**	**-1.6**
KMNR	**Kamenistaya**	**2.66**	**291**	*eP*	**Pb**	**14 55 46.4**	**-1.6**
KMNR				*eS*	**Sn**	**14 56 18.5**	**+2.0**
KLY	**Klyuchi**	**2.67**	**304**	*eP*	**Pn**	**14 55 44.3**	**+0.6**
KLY				*eS*	**Sn**	**14 56 15.4**	**-1.2**
KPT	**Kopyto**	**2.73**	**295**	*eP*	**Pb**	**14 55 47.9**	**-1.4**
KOZ	**Kozyrevsk**	**2.95**	**295**	*eP*	**Pb**	**14 55 50.7**	**-2.2**
SRDR	**Sredinnyy**	**3.13**	**299**	*eP*	**Pn**	**14 55 52.8**	**+2.7**
KII	**Karymskiy**	**3.15**	**256**	*eP*	**Pn**	**14 55 52.6**	**+2.3**
SPN	**Mys Shipunski**	**3.27**	**238**	*eP*	**Pn**	**14 55 52.0**	**+0.2**
ESO	**Esso**	**3.54**	**289**	*eP*	**Pn**	**14 55 57.2**	**+1.6**
ESO				*eS*	**Sn**	**14 56 36.2**	**-1.9**
NLC	**Nalytchevo**	**3.57**	**243**	*eP*	**Pn**	**14 55 57.9**	**+1.9**
NLC				*eS*	**Sn**	**14 56 35.6**	**-3.1**
SDLR	**Sedlovina**	**3.75**	**247**	*eP*	**Pn**	**14 56 00.4**	**+1.7**
SDLR				*eS*	**Sn**	**14 56 41.5**	**-2.1**
SMAR	**Somma**	**3.81**	**247**	*eP*	**Pn**	**14 56 01.2**	**+1.7**
SMAR				*eS*	**Sn**	**14 56 42.6**	**-2.4**
KRER	**Koryakskii**	**3.81**	**248**	*eP*	**Pn**	**14 56 01.6**	**+2.0**
KRER				*eS*	**Sn**	**14 56 44.4**	**-0.8**
UGLR	**Uglovaya**	**3.82**	**246**	*eP*	**Pn**	**14 56 01.4**	**+1.8**
UGLR				*eS*	**Sn**	**14 56 42.7**	**-2.4**
KRX	**Arik**	**3.84**	**249**	*eP*	**Pn**	**14 56 01.8**	**+1.9**
KRX				*eS*	**Sn**	**14 56 43.3**	**-2.6**
KOK	**Koryaka**	**3.88**	**248**	*eP*	**Pn**	**14 56 02.4**	**+2.0**
KOK				*eS*	**Sn**	**14 56 44.6**	**-2.1**
DALK	**Dalny**	**3.94**	**244**	*eP*	**Pn**	**14 56 02.8**	**+1.6**
DALK				*eS*	**Sn**	**14 56 44.4**	**-3.7**
PET	**Petropavlovsk**	**4.00**	**244**	*eP*	**Pn**	**14 56 04.1**	**+2.2**
GNL	**Ganaly**	**4.10**	**256**	*eP*	**Pn**	**14 56 05.8**	**+2.3**
KRMR	**Karymshinskiy**	**4.37**	**244**	*eP*	**Pn**	**14 56 08.7**	**+1.6**
PETK	**Petropavlovsk-** 1.7nm,0.3s,baz=71,slow=17,SNR=99	**4.47**	**249**	Pn	**Pn**	**14 56 10.3**	**+1.9**
PETK				Sn	**Sn**	**14 57 01.3**	**+0.3**
	1.6nm,0.3s,baz=284,slow=20,SNR=8.2 1.9nm,0.4s						
MTVR	**Mutnovka**	**4.53**	**240**	*eP*	**Pn**	**14 56 10.9**	**+1.5**
GRL	**Gorelyy**	**4.55**	**242**	*eP*	**Pn**	**14 56 11.4**	**+1.8**
ASAK	**Asacha**	**4.73**	**241**	*eP*	**Pn**	**14 56 14.3**	**+2.2**
APC	**Apacha**	**4.84**	**249**	*eP*	**Pn**	**14 56 16.8**	**+3.3**
KDTR	**Khodutka, Kamc**	**5.00**	**234**	*eP*	**Pn**	**14 56 16.0**	**+0.3**
SKR	**Severo-Kuril's**	**6.67**	**234**	*eP*	**Pn**	**14 56 40.3**	**+1.7**
ILAR	**Eielson Array** 0.8nm,0.8s,baz=259,slow=9.1,SNR=11 0.8nm,0.8s	**25.62**	**48**	P	**P**	**15 00 30.4**	**+0.2**
H11N2	**WAKE ISLAND Hy** baz=359,slow=76,SNR=18	**35.15**	**176**	T	T	15 40 18.3	
H11N3	**WAKE ISLAND Hy** baz=359,slow=76,SNR=15	**35.16**	**176**	T	T	15 40 24.5	
H11N1	**WAKE ISLAND Hy** baz=359,slow=76,SNR=18	**35.17**	**176**	T	T	15 40 23.4	
YKA	**Yellowknife Ar** 0.1nm,0.4s,baz=301,slow=8.4,SNR=2.9 0.1nm,0.4s	**40.00**	**45**	P	**P**	**15 02 36.0**	**+0.6**
TXAR	**Lajitas Array** 0.2nm,0.5s,baz=318,slow=6.9,SNR=3.6 0.2nm,0.5s	**67.48**	**71**	P	**P**	**15 05 58.4**	**+1.2**

*IDC **10** 15:04:11.0±4.1,36°.12N×71°.24E,h91km±37km,mb3.5/12, mbtmp3.9/16,MS4.3/1, Error ellipse: s-maj=25.7km s-min=19.1km az=9.0*

*NNC **10** 15:04:17.4±4.5,36°.66N×70°.70E,h98km±63km,mb3.9, mpv4.7,Error ellipse: s-maj=40.3km s-min=31.7km az=150.0*

ISC 10 15:04:12.4±0.9,36°.28N±0°.09×71°.1E±0°.1,h100km,n32, σ1$40/34,mb3.7/10,2C-5D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UCH	**Uchtor** SNR=43	**6.50**	**23**	P	**Pn**	**15 05 46.6**	**+0.8**
EKS2	**Erkin-Say** SNR=63	**6.70**	**17**	P	**Pn**	**15 05 49.2**	**+0.9**
KK31	**Karatay Array** 47nm,0.3s,baz=176,slow=12,SNR=390	**6.84**	**356**	⇓P	**Pn**	**15 05 50.0**	**0.0**
KK31				⇓S	**Sn**	**15 07 02.7**	**-3.6**
	22nm,0.5s,baz=192,slow=25,SNR=6.8						
AAK	**Ala-Archa** 61nm,0.4s,baz=194,slow=7.1,SNR=160	**6.87**	**21**	P	**Pn**	**15 05 51.7**	**+1.2**
AAK				S	**Sn**	**15 07 08.2**	**+1.1**
	49nm,0.9s,baz=327,slow=23,SNR=13						
AAK	**Ala-Archa** SNR=106	**6.87**	**21**	P	**Pn**	**15 05 51.7**	**+1.2**
AAK	**Ala-Archa** 6.5nm,0.3s	**6.87**	**21**	⇓P	**Pn**	**15 05 51.8**	**+1.2**
AAK				⇑S	**Sn**	**15 07 07.1**	**-0.1**
	16nm,0.6s						
KBK	**Karagaybulak** SNR=20	**7.02**	**24**	P	**Pn**	**15 05 53.9**	**+1.2**
ULHL	**Ulahol** SNR=6.5	**7.16**	**32**	P	**Pn**	**15 05 56.0**	**+1.5**
CHMS	**Chumysh** SNR=24	**7.27**	**21**	P	**Pn**	**15 05 57.0**	**+1.0**
USP	**Ospenovka** SNR=49	**7.45**	**19**	P	**Pn**	**15 05 59.5**	**+1.1**
TKM2	**Tokmak 2** SNR=16	**7.48**	**26**	P	**Pn**	**15 06 00.1**	**+1.2**
MK31	**Makanchi Array** 1.6nm,0.7s,baz=196,slow=6.8,SNR=7.1	**13.41**	**35**	⇓P	**P**	**15 07 24.7**	**+0.3**
MKAR	**Makanchi Array** 1.1nm,0.7s,baz=224,slow=13,SNR=12	**13.41**	**35**	P	**Pn**	**15 07 18.0**	**-0.5**
KURBB	**Kurchatov Arra** 3.1nm,0.7s,baz=206,slow=10,SNR=20	**15.30**	**18**	P	**Pn**	**15 07 44.9**	**+2.1**
AB31	**Akbulak array** 2.4nm,0.3s,baz=145,slow=11,SNR=67	**15.33**	**331**	P	**Pn**	**15 07 40.9**	**-2.2**
BVA0	**Borovoye Array** 4.2nm,0.8s,baz=174,slow=11,SNR=3.9	**16.76**	**358**	⇑P	**Pn**	**15 07 58.0**	**-2.8**
BVAR	**Borovoye Array** 2.1nm,0.4s,baz=172,slow=12,SNR=16	**16.71**	**358**	P	**Pn**	**15 08 00.5**	**-0.3**
AKTO	**Aktyubinsk** 7.9nm,0.7s,baz=130,slow=11,SNR=16	**17.03**	**330**	P	**Pn**	**15 08 03.7**	**-0.4**
AKTO				S	Sn	15 10 59.4	-14
	3.9nm,0.6s,baz=152,slow=18,SNR=3.9						
AKTO	**Aktyubinsk** 10nm,0.9s	**17.03**	**330**	⇓P	**Pn**	**15 08 03.5**	**-0.7**
ZALV	**Zalesovo Beam** 2.9nm,0.6s,baz=223,slow=11,SNR=14 2.9nm,0.6s	**20.07**	**24**	P	**P**	**15 08 38.1**	**+0.5**
GNI	**Garni** 13nm,0.7s,baz=325,slow=8.2,SNR=6.1 13nm,0.7s	**21.07**	**289**	P	**P**	**15 08 50.2**	**+1.6**
BRTR	**Keskin Array B** 0.8nm,0.7s,baz=94,slow=8.7,SNR=2.3 0.8nm,0.7s	**29.61**	**288**	P	**P**	**15 10 09.8**	**+1.6**
FINES	**FINESS Array B** 2.8nm,1.1s,baz=134,slow=11,SNR=3.5 2.8nm,1.1s	**37.73**	**326**	P	**P**	**15 11 19.3**	**+1.3**
ARCES	**ARCESS Array B** 3.9nm,0.8s,baz=90,slow=6.1,SNR=5.5 3.9nm,0.8s	**41.39**	**338**	P	**P**	**15 11 49.5**	**+1.2**
HFS	**Hagfors** 1.2nm,0.5s,baz=94,slow=15,SNR=6.4 1.2nm,0.5s	**43.31**	**322**	P	**P**	**15 12 05.1**	**+1.1**
NOA	**NORSAR Array B** 0.3nm,0.4s,baz=182,slow=14,SNR=1.7 0.3nm,0.4s	**44.62**	**323**	P	**P**	**15 12 15.2**	**+0.7**
ASAJ	**Asahikawa** comp=Z,268nm,18.5s,baz=163,slow=40	**53.58**	**58**	LR	LR	15 40 16.8	
TORD	**Torodi Ar. Bea** 0.7nm,0.5s,baz=51,slow=7.6,SNR=5.4 0.7nm,0.5s	**65.82**	**269**	P	**P**	**15 14 45.7**	**-1.7**
BOSA	**Boshof** 2.7nm,0.7s,baz=17,slow=6.7,SNR=3.6 2.7nm,0.7s	**77.64**	**220**	P	**P**	**15 15 57.5**	**-0.4**
YKA	**Yellowknife Ar** 0.2nm,0.7s,baz=352,slow=5.8,SNR=2.5 0.2nm,0.7s	**81.46**	**3**	P	**P**	**15 16 18.6**	**+0.5**
WRA	**Warramunga Arr** 0.3nm,0.7s,baz=315,slow=5.0,SNR=1.9 0.3nm,0.7s	**81.78**	**122**	P	**P**	**15 16 19.7**	**-0.7**
ASAR	**Alice Springs** 0.2nm,0.8s,baz=315,slow=4.8,SNR=5.3 0.2nm,0.8s	**84.04**	**125**	P	**P**	**15 16 30.7**	**-1.3**

TRN 10 15:06:02.8,14°.62N×59°.72W,h169km,MD3.5,East of Martinique.,Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSLB	**Salisbury**	**1.84**	**297**	*eP*	Pn	15 06 38.8	+1.4
DSLB				*eS*	Sn	15 07 03.9	-0.3
DSDZ	**La Diserade, G**	**2.13**	**323**	*eS*	Sn	15 07 09.9	0.0
TBG	**Guadaloupe-3**	**2.23**	**304**	*eP*	Pn	15 06 43.0	+1.2
TBG				*eS*	Sn	15 07 12.0	0.0
MMLZ	**Guadeloupe Bro**	**2.36**	**307**	*eP*	Pn	15 06 43.4	+0.2
MMLZ				*eS*	Sn	15 07 14.9	+0.3
DHSZ	**Broadband at M**	**2.57**	**310**	*eS*	Sn	15 07 18.6	-0.5

*IDC **10** 15:41:45.5±2.2, 17°.46S×178°.86W, h617km±19km, mb2.7/5, mbtmp3.7/6, Error ellipse: s-maj=101.3km s-min=20.0km az=153.0*

ISC 10 15:41:44.2±1.8,17°.5S±0°.7×178°.7W±0°.4,h600km,n6, σ1$28/7,mb3.3/5,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu** 30nm,0.8s,baz=94,slow=1.9,SNR=20	**3.09**	**266**	P	**P**	**15 43 05.8**	**+1.9**
WRA	**Warramunga Arr** 0.3nm,0.5s,baz=96,slow=6.9,SNR=17 0.3nm,0.5s	**44.41**	**259**	P	**P**	**15 49 02.5**	**-0.9**
ASAR	**Alice Springs** 0.9nm,0.5s,baz=87,slow=9.2,SNR=42	**44.61**	**254**	P	**P**	**15 49 04.3**	**-0.6**
ASAR				PcP	**PcP**	**15 50 33.2**	**-1.2**
	0.3nm,0.7s,baz=100,slow=3.7,SNR=5.6 0.9nm,0.5s						
ILAR	**Eielson Array** 0.2nm,0.5s,baz=215,slow=5.5,SNR=5.9 0.2nm,0.5s	**85.59**	**13**	P	**P**	**15 53 19.2**	**-0.4**
TXAR	**Lajitas Array** 0.5nm,0.7s,baz=232,slow=6.8,SNR=6.6 0.5nm,0.7s	**86.04**	**58**	P	**P**	**15 53 23.4**	**+0.6**
PDAR	**Pinedale Array** 0.3nm,0.5s,baz=306,slow=4.0,SNR=3.7 0.3nm,0.5s	**87.28**	**44**	P	**P**	**15 53 28.2**	**-0.3**

*NEIC **10** 15:53:09.7±1.0,0°.01N±0°.08×126°.71E±0°.07,h70km±8km, mb4.2/16, Error ellipse: s-maj=11.2km s-min=9.2km az=154.0*

*DJA **10** 15:53:09.8±0.7,0°.N±2°×12°.7E±°,h25km±8km,M4.3/30, mB4.9/6,mb4.6/13,MLv4.3/30,Mw(mB)4.2/6*

*IDC **10** 15:53:10.8±2.5,0°.04S×126°.77E,h83km±24km,mb3.7/7, mbtmp4.0/10, Error ellipse: s-maj=20.0km s-min=16.6km az=68.0*

ISC 10 15:53:09.6±0.6,0°.01S±0°.05×126°.72E±0°.05,h73km,n48, σ0$96/52,mb4.1/14,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.01**	**40**		**Pn**	**15 53 27.8**	**-0.6**
TNTI	**Ternate**	**1.01**	**40**	P	**Pn**	**15 53 28.4**	**0.0**
SANI	**Sanana**	**2.15**	**200**	P	**Pn**	**15 53 43.3**	**-0.1**
MNI	**Manado**	**2.37**	**308**	P	**Pn**	**15 53 46.9**	**+0.6**
MNI				S	**Sn**	**15 54 14.5**	**0.0**
NLAI	**Namlea**	**3.23**	**173**	P	**Pn**	**15 53 58.4**	**+0.4**
KRAI	**Karang Ratu**	**3.69**	**153**	P	**Pn**	**15 54 05.9**	**+1.7**
GTOI	**Gorontalo**	**3.76**	**280**	P	**Pn**	**15 54 08.0**	**+2.7**
SGSI	**Sangihe**	**3.86**	**342**	P	**Pn**	**15 54 07.0**	**+0.4**
MSAI	**Masohi**	**3.98**	**146**	P	**Pn**	**15 54 10.1**	**+1.9**
LUWI	**Luwuk**	**4.08**	**255**	Pn	**Pn**	**15 54 09.9**	**+0.4**
LUWI	**Luwuk**	**4.08**	**255**	P	**Pn**	**15 54 10.0**	**+0.4**
SWI	**Sorong**	**4.62**	**101**	P	**Pn**	**15 54 18.1**	**+1.2**
SIJI	**Sorong** 8.0nm,0.3s,baz=275,slow=12,SNR=18	**4.63**	**101**	P	**Pn**	**15 54 18.4**	**+1.3**
SIJI				S	**Sn**	**15 55 09.5**	**0.0**
	4.4nm,0.6s,baz=197,slow=22,SNR=1.4						
SIJI	**Sorong**	**4.63**	**101**	P	**Pn**	**15 54 18.7**	**+1.6**
APSI	**Ampana** 0.4nm2µm42nm,0.6s	**5.15**	**260**	P	**Pn**	**15 54 24.8**	**+0.6**
TOLI2	**Tolitoli**	**6.04**	**281**		**Pn**	**15 54 35.9**	**-0.5**
FAKI	**Fak Fak**	**6.24**	**118**	Pn	**Pn**	**15 54 39.8**	**+0.7**
MPSI	**Mapaga**	**6.83**	**273**	P	**Pn**	**15 54 48.4**	**+1.2**
PCI	**Palu** 0.1nm27nm,1.1s	**6.94**	**263**	P	**Pn**	**15 54 50.0**	**+1.3**
TTSI	**Tana Toraja** 0.1nm678nm31nm,0.5s	**7.53**	**246**	P	**Pn**	**15 54 58.0**	**+1.3**
SPSI	**Sidrap Palu**	**7.98**	**240**	P	**Pn**	**15 55 04.4**	**+1.5**
KAPI	**Kappang** 8.2nm,0.4s,baz=59,slow=5.4,SNR=7.5	**8.55**	**234**	P	**Pn**	**15 55 12.4**	**+1.7**
KAPI				S	**Sn**	**15 56 43.7**	**-2.0**
	7.4nm,0.4s,baz=255,slow=19,SNR=8.6						
KAPI	**Kappang**	**8.55**	**234**		**Sn**	**15 56 45.2**	**-0.5**
KNRA	**Kununurra**	**15.70**	**173**	Pn	**Pn**	**15 56 46.3**	**-0.2**
KNRA				IAmb	IAmb	15 57 18.7	
	comp=Z,21nm,1.4s						
FITZ	**Fitzroy Crossi** comp=Z,2.2nm,1.0s,baz=347,slow=11,SNR=1.9	**18.00**	**183**	P	**P**	**15 57 13.8**	**-0.8**
WB0	**Warramunga Arr**	**21.02**	**159**	P	**P**	**15 57 47.2**	**-0.3**
WRAB	**Tennant Creek**	**21.16**	**160**	P	**P**	**15 57 48.7**	**-0.3**
WRA	**Warramunga Arr** comp=Z,2.2nm,0.5s,baz=338,slow=9.8,SNR=39 comp=Z,2.2nm,0.5s	**21.17**	**160**	P	**P**	**15 57 48.8**	**-0.3**
WRA	**Warramunga Arr** comp=Z,0.2nm,1.1s	**21.17**	**160**	IAmb	IAmb	15 57 56.2	
WR8	**Warramunga Arr**	**21.24**	**159**	P	**P**	**15 57 49.4**	**-0.4**
WR8				IAmb	IAmb	15 57 49.9	
	comp=Z,4.5nm,0.4s						
MBWA	**Marble Bar**	**22.10**	**198**	P	**P**	**15 57 59.8**	**+0.8**
MBWA				IAmb	IAmb	15 58 13.9	
	comp=Z,11nm,1.2s						
SSLB	**Suanglung**	**24.31**	**347**	P	**P**	**15 58 19.6**	**-0.9**
AS31	**Alice Springs**	**24.53**	**164**	P	**P**	**15 58 22.3**	**-0.2**
ASAR	**Alice Springs** comp=Z,3.4nm,0.7s,baz=341,slow=9.9,SNR=55	**24.53**	**164**	P	**P**	**15 58 22.6**	**+0.1**
ASAR				PcP	**PcP**	**16 01 58.5**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=348,slow=2.4,SNR=5.7 comp=Z,3.4nm,0.7s						
BBOO	**Buckleboo**	**33.79**	**166**	P	**P**	**15 59 44.5**	**-0.2**
STKA	**Stephens Creek** comp=Z,1.6nm,0.4s,baz=331,slow=10,SNR=5.8 comp=Z,1.6nm,0.4s	**34.68**	**157**	P	**P**	**15 59 52.4**	**0.0**
STKA	**Stephens Creek**	**34.68**	**157**	P	**P**	**15 59 52.3**	**0.0**
PETK	**Petropavlovsk-** comp=Z,1.0nm,0.8s,baz=210,slow=8.6,SNR=1.1 comp=Z,1.0nm,0.8s	**58.89**	**21**	P	**P**	**16 03 01.3**	**+0.5**
MKAR	**Makanchi Array** comp=Z,0.5nm,0.5s,baz=121,slow=7.3,SNR=8.9	**60.63**	**327**	P	**P**	**16 03 13.5**	**+0.5**
MKAR				PcP	**PcP**	**16 03 55.5**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=88,slow=2.8,SNR=1.7 comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**60.63**	**327**	P	**P**	**16 03 13.0**	**0.0**
KURBB	**Kurchatov Arra** comp=Z,0.4nm,0.4s,baz=121,slow=6.3,SNR=6.3 comp=Z,0.4nm,0.4s	**64.88**	**328**	P	**P**	**16 03 41.8**	**+0.7**
KURK	**Kurchatov** comp=Z,2.3nm,1.1s	**64.89**	**328**	P	**P**	**16 03 41.4**	**+0.3**
KURK				IAmb	IAmb	16 03 44.6	
TIXI	**Tiksi** comp=Z,5.1nm,1.4s	**71.56**	**1**	P	**P**	**16 04 21.8**	**-0.6**
TIXI				IAmb	IAmb	16 05 05.0	
H17K	**Granite Mounta**	**83.01**	**24**	P	**P**	**16 05 27.2**	**+0.6**
H17K				IAmb	IAmb	16 05 48.1	
	comp=Z,2.8nm,1.4s						
C18K	**Utukok River**	**83.54**	**21**	P	**P**	**16 05 30.0**	**+0.6**
C18K				IAmb	IAmb	16 06 08.6	
	comp=Z,3.8nm,1.4s						
L18K	**Granite Mounta**	**83.77**	**27**	P	**P**	**16 05 31.3**	**+0.7**
L18K				IAmb	IAmb	16 05 47.4	
	comp=Z,4.2nm,1.2s						
QSPA	**South Pole Qui** comp=Z,2.8nm,1.0s,baz=348,slow=9.3,SNR=4.1 comp=Z,2.8nm,1.0s	**89.92**	**180**	P	**P**	**16 06 00.9**	**+0.4**
QSPA	**South Pole Qui**	**89.92**	**180**	P	**P**	**16 05 59.5**	**-1.1**

*IDC **10** 15:59:48.8±3.8,4°.80S×152°.32E,h0km,mb3.3/5, mbtmp3.4/6,ML1.7/1, Error ellipse: s-maj=118.5km s-min=25.2km az=113.0*

ISC 10 15:59:54.1±3.0,5°.1S±0°.4×152°.6E±0°.5,h55km,n6,σ1$94/7, mb3.1/5,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby** 0.8nm,0.3s,baz=45,slow=13,SNR=5.6	**6.91**	**232**	Pn	**Pn**	**16 01 30.3**	**-2.5**
PMG				Sn	**Sn**	**16 02 51.6**	**+1.5**
	0.2nm,0.3s,baz=99,slow=24,SNR=1.5 4.6nm,0.5s						
WRA	**Warramunga Arr** 0.4nm,0.9s,baz=50,slow=9.7,SNR=5.0 0.4nm,0.9s	**23.11**	**229**	P	**P**	**16 04 57.1**	**+1.5**
ASAR	**Alice Springs** 0.6nm,1.0s,baz=60,slow=9.0,SNR=6.9 0.6nm,1.0s	**25.81**	**223**	P	**P**	**16 05 21.6**	**+1.2**
MKAR	**Makanchi Array** 0.1nm,0.6s,baz=91,slow=7.2,SNR=1.8 0.1nm,0.6s	**80.47**	**319**	P	**P**	**16 12 00.5**	**+0.2**
ZALV	**Zalesovo Beam** 0.3nm,0.3s,baz=103,slow=4.6,SNR=2.0 0.3nm,0.3s	**81.33**	**326**	P	**P**	**16 12 03.7**	**-1.0**
KURBB	**Kurchatov Arra** 0.1nm,0.4s,baz=97,slow=5.6,SNR=1.8 0.1nm,0.4s	**83.96**	**322**	P	**P**	**16 12 19.8**	**+1.5**

*IDC **10** 16:06:06.1±1.0,24°.00N×122°.53E,h0km,mb3.4/6, mbtmp3.4/7,ML3.7/1,MS2.8/1,Error ellipse: s-maj=45.8km s-min=20.6km az=74.0*

*JMA **10** 16:06:09.8±0.1,24°.N±1°×122°.8E±0°.5,h31km±2km, MV3.7/14,NW OFF ISHIGAKIJIMA IS*

*TAP **10** 16:06:09.5,24°.09N×122°.77E,h24km,ML4.1,C*

ISC 10 16:06:07.5±1.1,23°.97N±0°.02×122°.79E±0°.02,h10km±8km, n180,σ0$96/297,mb3.5/6,17C-2D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS4	**EOS4**	**0.46**	**289**	*iP*	**Pb**	**16 06 18.2**	**+0.7**
EOS4				S	**Sb**	**16 06 25.1**	**+0.9**
JYNG	**Yonagunijimaku**	**0.50**	**16**	P	**Pb**	**16 06 18.3**	**-0.1**
JYNG				*eS*	**Sg**	**16 06 24.3**	**+0.5**
YOJ	**Yonaguni jima**	**0.53**	**22**	⇑*iP*	**Pb**	**16 06 18.9**	**0.0**
YOJ				*i* S	**Sg**	**16 06 25.2**	**+0.4**
YOJ	**Yonaguni jima**	**0.53**	**22**	P	**Pb**	**16 06 18.9**	**0.0**
YOJ				*eS*	**Sg**	**16 06 25.1**	**+0.4**
EOS3	**EOS3**	**0.53**	**306**	⇑*iP*	**Pb**	**16 06 19.4**	**+0.5**
EOS3				*eS*	**Sb**	**16 06 26.8**	**+0.1**
EOS2	**EOS2**	**0.68**	**311**	⇓*iP*	**Pn**	**16 06 22.2**	**-0.9**
EOS2				*eS*	**Sn**	**16 06 31.9**	**-1.7**
HATJ	**Hateruma jima**	**0.93**	**85**	P	**Pg**	**16 06 26.1**	**+0.6**
IRIF	**Iriomote-Funau**	**0.93**	**67**	P	**Pg**	**16 06 25.5**	**0.0**
IRIF				*eS*	**Sg**	**16 06 37.4**	**-0.2**
EAHA	**Aohua**	**1.02**	**290**	*eP*	**Pb**	**16 06 27.7**	**+0.3**
EAHA				*eS*	**Sn**	**16 06 41.1**	**-0.7**
EWUT	**Wuta**	**1.04**	**297**	*eP*	**Pb**	**16 06 27.6**	**0.0**
EWUT				*eS*	**Sb**	**16 06 41.3**	**0.0**
ESAO	**Su ao**	**1.05**	**305**	*eP*	**Pg**	**16 06 27.7**	**-0.1**
ESAO				*eS*	**Sn**	**16 06 42.3**	**-0.9**
ENA	**Nanau**	**1.06**	**296**	*i P*	**Pb**	**16 06 28.2**	**+0.2**
ENA				*eS*	**Sb**	**16 06 42.1**	**+0.2**
TWC	**Suao**	**1.07**	**307**	⇑*iP*	**Pb**	**16 06 27.8**	**-0.4**
TWC				*eS*	**Sg**	**16 06 40.8**	**-1.1**
ETL	**Fush Village**	**1.08**	**280**	*eP*	**Pg**	**16 06 28.8**	**+0.4**
ETL				*eS*	**Sn**	**16 06 43.6**	**-0.4**
HWA	**Hwalien**	**1.08**	**270**	*eP*	**Pg**	**16 06 28.7**	**+0.3**
HWA				*eS*	**Sn**	**16 06 43.3**	**-0.6**
TEYL	**Yanliau Villag**	**1.10**	**265**	P	**Pb**	**16 06 28.8**	**+0.2**
TEYL				S	**Sn**	**16 06 43.8**	**-0.4**
TWD	**Chiawan**	**1.10**	**276**	P	**Pb**	**16 06 28.4**	**-0.2**
TWD				*eS*	**Sb**	**16 06 42.4**	**-0.6**
NACB	**Ninganchiao**	**1.11**	**281**	⇑P	**Pb**	**16 06 28.8**	**-0.1**
NACB				*eS*	**Sn**	**16 06 44.5**	**+0.1**
SHUL	**Shoufeng**	**1.14**	**261**	*eP*	**Pb**	**16 06 29.5**	**+0.2**
JKRS	**Kuro-shima**	**1.14**	**76**	P	**Pb**	**16 06 29.3**	**-0.1**
JKRS				*eS*	**Sb**	**16 06 43.2**	**-1.2**
EGS		**1.17**	**318**	*eP*	**Pg**	**16 06 30.2**	**+0.2**
EGS				*eS*	**Sg**	**16 06 44.8**	**-0.4**
TEGC	**Jichi Village**	**1.18**	**257**	*eP*	**Pb**	**16 06 28.4**	**-1.6**
TEGC				*eS*	**Sb**	**16 06 43.8**	**-1.4**
NDS	**Dongshan**	**1.18**	**304**	⇑P	**Pn**	**16 06 30.1**	**0.0**
NDS				*eS*	**Sn**	**16 06 45.6**	**-0.7**
ETM	**Tongmen**	**1.19**	**270**	*eP*	**Pb**	**16 06 29.6**	**-0.5**
ETM				*eS*	**Sb**	**16 06 45.0**	**-0.6**
ETLH	**Xiulin Townshi**	**1.22**	**281**	P	**Pb**	**16 06 30.6**	**-0.2**
ETLH				*eS*	**Sn**	**16 06 47.2**	**-0.2**
ILA	**Ilan**	**1.24**	**310**	*i P*	**Pg**	**16 06 31.6**	**+0.3**
ILA				*i* S	**Sg**	**16 06 46.9**	**-0.4**
ESL	**Shilin**	**1.25**	**263**	⇑*eP*	**Pn**	**16 06 30.3**	**-0.9**
ESL				*eS*	**Sb**	**16 06 46.4**	**-1.1**
TWB1	**Santiao Chiao**	**1.26**	**325**	*eP*	**Pn**	**16 06 30.6**	**-0.7**
TWE	**Neicheng**	**1.27**	**306**	⇑*iP*	**Pb**	**16 06 31.6**	**+0.1**
TWE				*i* S	**Sb**	**16 06 47.0**	**-0.9**
LATG	**Datong**	**1.28**	**296**	⇑P	**Pb**	**16 06 32.0**	**+0.1**
LATG				S	**Sg**	**16 06 48.4**	**-0.4**
EGFH	**Guangfu**	**1.28**	**257**	*i P*	**Pn**	**16 06 31.7**	**+0.1**
EGFH				S	**Sb**	**16 06 48.0**	**-0.4**
JIJ	**Ishigaki jima**	**1.29**	**72**	P	**Pn**	**16 06 31.7**	**0.0**
ENTT	**Nioudou**	**1.30**	**301**	⇑*iP*	**Pg**	**16 06 32.3**	**-0.2**
ENTT				*eS*	**Sn**	**16 06 48.7**	**-0.6**
WARBT	**Fenglin Townsh**	**1.31**	**259**	⇑P	**Pn**	**16 06 31.2**	**-0.8**
WARBT				*eS*	**Sb**	**16 06 47.4**	**-1.8**
NDT	**Datong Townshi**	**1.32**	**299**	*eP*	**Pg**	**16 06 33.0**	**+0.1**
NDT				*i* S	**Sn**	**16 06 49.6**	**-0.3**
TIPB	**Shuangxi**	**1.33**	**319**

YM08	**YM08**	**1.63 318**	*e*P	**Pn**	**16 06 36.5**	**+0.1**
YM08			eS	**Sb**	**16 06 57.9**	**-0.5**
ZUZH	**Zhuzihu**	**1.64 316**	*e*P	**Pn**	**16 06 36.5**	**0.0**
NFF	**Wufeng Townshi**	**1.66 294**	*e*P	**Pb**	**16 06 38.3**	**0.0**
NFF			eS	**Sb**	**16 06 59.7**	**+0.3**
EHD	**Haiduan**	**1.67 241**	*e*P	**Pn**	**16 06 36.4**	**-0.5**
EHD			eS	**Sn**	**16 06 56.5**	**-1.9**
ANP	**Anpu**	**1.67 317**	*e*P	**Pb**	**16 06 38.6**	**+0.1**
KSHI	**Guanxi Townshi**	**1.68 299**	*e*P	**Pb**	**16 06 38.8**	**+0.3**
WPL	**Puli Township**	**1.68 272**	P	**Pn**	**16 06 37.8**	**+0.8**
WPL			eS	**Sb**	**16 07 00.4**	**+0.6**
TWS1	**Kuangyinshan**	**1.68 312**	*e*P	**Pb**	**16 06 38.4**	**-0.2**
TWS1			eS	**Sg**	**16 07 00.2**	**-1.3**
ECS	**Chishang**	**1.69 239**	*e*P	**Pn**	**16 06 37.0**	**-0.1**
ECS			eS	**Sn**	**16 06 58.8**	**0.0**
TWY	**Chenhua**	**1.69 320**	*e*P	**Pn**	**16 06 37.4**	**+0.2**
TWY			S	**Sn**	**16 06 58.6**	**-0.3**
SSLB	**Suanglung**	**1.69 264**	P	**Pn**	**16 06 37.6**	**+0.4**
SSLB			eS	**Sb**	**16 07 00.1**	**-0.1**
NTY	**Taoyuan**	**1.70 307**	*e*P	**Pb**	**16 06 38.8**	**-0.1**
NTST	**Danshui**	**1.70 314**	*e*P	**Pb**	**16 06 38.9**	**-0.1**
DPDB	**Guoxing**	**1.71 272**	*e*P	**Pn**	**16 06 38.2**	**+0.8**
WHP	**Taichung City**	**1.71 281**	*e*P	**Pb**	**16 06 38.9**	**-0.3**
WHP			eS	**Sb**	**16 07 01.0**	**+0.2**
WCS	**Beigang Elemen**	**1.72 273**	*e*P	**Pb**	**16 06 38.8**	**-0.4**
NJD	**Zhudong**	**1.73 296**	*e*P	**Pb**	**16 06 39.9**	**+0.5**
SMLT	**Sun Moon Lake**	**1.73 267**	P	**Pn**	**16 06 38.5**	**+0.6**
SMLT			eS	**Sb**	**16 07 01.4**	**0.0**
LIOB	**Emei**	**1.75 293**	*e*P	**Pb**	**16 06 39.2**	**-0.6**
LIOB			eS	**Sb**	**16 07 01.9**	**0.0**
YUS	**Yu-Shan**	**1.75 254**	*e*P	**Pn**	**16 06 38.5**	**0.0**
NSTT	**Nanjuang**	**1.76 292**	*e*P	**Pb**	**16 06 39.6**	**-0.4**
NSTT			eS	**Sb**	**16 07 02.0**	**-0.1**
NCU	**National Centr**	**1.77 305**	*e*P	**Pn**	**16 06 38.7**	**+0.5**
NCUH	**Zhongli**	**1.77 304**	*e*P	**Pg**	**16 06 41.1**	**-0.3**
TYC	**Yuchr**	**1.77 268**	P	**Pn**	**16 06 39.0**	**+0.7**
TYC			eS	**Sn**	**16 07 01.4**	**+0.6**
LDUT	**Ludao**	**1.77 223**	*e*P	**Pn**	**16 06 37.4**	**-0.9**
PCYT	**Pengchaiyu**	**1.77 339**	*e*P	**Pn**	**16 06 39.0**	**+0.6**
PCYT			eS	**Sn**	**16 07 00.6**	**-0.4**
WHYT	**Xinyi Township**	**1.79 262**	*e*P	**Pn**	**16 06 39.9**	**+1.2**
ELDTW	**Lidau**	**1.80 245**⇑	*e*P	**Pn**	**16 06 38.3**	**-0.6**
ELDTW			eS	**Sn**	**16 07 00.6**	**-1.3**
HSN1	**Hsinchu**	**1.80 297**	*e*P	**Pb**	**16 06 40.4**	**-0.3**
SBCB	**Hsinchu**	**1.84 297**	*e*P	**Pb**	**16 06 41.6**	**+0.4**
HSN	**Hsinchu**	**1.85 297**	*e*P	**Pb**	**16 06 41.3**	**-0.2**
JTJ	**Tarama**	**1.87 69**	P	**Pn**	**16 06 40.1**	**+0.5**
ALS	**Alishan**	**1.88 256**	P	**Pn**	**16 06 40.8**	**+0.8**
ALS			S	**Sn**	**16 07 04.1**	**+0.2**
TWQ1	**Liyutan**	**1.88 282**	P	**Pb**	**16 06 41.6**	**-0.3**
TWQ1			S	**Sb**	**16 07 05.0**	**+0.6**
WJS	**Zhushan**	**1.89 266**	*i* P	**Pb**	**16 06 41.9**	**-0.4**
WJS			eS	**Sb**	**16 07 05.3**	**-0.7**
NSY	**Sanyi**	**1.91 284**	*e*P	**Pb**	**16 06 43.1**	**+0.7**
WWF	**Wufeng**	**1.92 273**	*e*P	**Pb**	**16 06 42.3**	**-0.3**
WWF			eS	**Sb**	**16 07 06.6**	**0.0**
WNT	**Mingjian**	**1.93 268**	*e*P	**Pb**	**16 06 42.3**	**-0.5**
WNT			eS	**Sb**	**16 07 06.5**	**-0.5**
WNT1	**Nantou City**	**1.93 268**	*e*P	**Pb**	**16 06 42.4**	**-0.5**
TTN	**Taitung**	**1.94 232**	*e*P	**Pn**	**16 06 41.9**	**+1.4**
TTN			eS	**Sn**	**16 07 05.9**	**+0.9**
TCU	**Taichung**	**1.94 276**	*e*P	**Pb**	**16 06 42.4**	**-0.6**
TCU			eS	**Sb**	**16 07 06.7**	**-0.6**
TWGBT	**Beinan**	**1.95 234**	*e*P	**Pn**	**16 06 40.2**	**-0.5**
TWGBT			eS	**Sn**	**16 07 03.4**	**-1.9**
TWG	**Pinlang**	**1.95 234**	*e*P	**Pn**	**16 06 40.4**	**-0.4**
TWG			eS	**Sn**	**16 07 03.4**	**-1.9**
CHN5	**Tsauling**	**1.97 259**	P	**Pb**	**16 06 42.7**	**-0.9**
CHN5			eS	**Sb**	**16 07 07.4**	**-0.8**
WDJ	**Dajia District**	**2.00 281**	*e*P	**Pn**	**16 06 42.2**	**+0.8**
WDJ			eS	**Sb**	**16 07 08.8**	**-0.2**
STYH	**Taoyuan**	**2.01 247**	*e*P	**Pn**	**16 06 42.9**	**+1.3**
STYH			eS	**Sn**	**16 07 07.5**	**+0.6**
WYL	**Yuanlin Townsh**	**2.02 270**	*e*P	**Pb**	**16 06 43.8**	**-0.6**
WYL			eS	**Sb**	**16 07 09.6**	**-0.1**
STYT	**Tauyuan**	**2.03 247**	*e*P	**Pn**	**16 06 42.7**	**+0.8**
STYT			eS	**Sn**	**16 07 07.7**	**+0.2**
WCHH	**Zhanghua**	**2.04 273**	*e*P	**Pn**	**16 06 43.5**	**+1.5**
WCHH			eS	**Sn**	**16 07 08.7**	**+1.1**
WCH1	**Changhua City**	**2.05 273**	*e*P	**Pb**	**16 06 44.1**	**-0.8**
WCH1			eS	**Sb**	**16 07 09.9**	**-0.7**
WGK	**Gukeng**	**2.06 262**	*e*P	**Pn**	**16 06 43.7**	**+1.4**
WCKO	**Fanlu**	**2.07 256**	*e*P	**Pn**	**16 06 44.6**	**-0.7**
WCKO			eS	**Sn**	**16 07 09.3**	**+0.9**
WDL	**Douliou City**	**2.08 263**	*e*P	**Pb**	**16 06 44.3**	**-1.1**
WDL			eS	**Sb**	**16 07 11.2**	**+0.1**
WDLH	**Douliu**	**2.08 263**	*e*P	**Pb**	**16 06 44.7**	**-0.7**
WDLH			eS	**Sb**	**16 07 11.5**	**+0.1**
TPUB	**Ta-pu**	**2.09 252**	*e*P	**Pn**	**16 06 44.3**	**+1.6**
TPUB			eS	**Sn**	**16 07 10.5**	**+1.6**
CHN4	**Tsaushan**	**2.11 253**	*e*P	**Pb**	**16 06 44.8**	**-1.1**
CHN4			eS	**Sn**	**16 07 10.7**	**+1.4**
WTP	**Ta-pu**	**2.12 251**	*e*P	**Pn**	**16 06 44.6**	**+1.5**
WTP			eS	**Sn**	**16 07 10.7**	**+1.0**
ECL	**Taimali**	**2.17 231**	*e*P	**Pn**	**16 06 42.9**	**-0.9**
ECL			eS	**Sn**	**16 07 08.7**	**-2.2**
SLGT	**Liugui**	**2.20 244**	*e*P	**Pn**	**16 06 45.9**	**+1.7**
SLGT			eS	**Sn**	**16 07 13.4**	**+1.9**
WRL	**Guolierlin Hig**	**2.21 269**	*e*P	**Pb**	**16 06 46.4**	**-1.2**
WRL			eS	**Sn**	**16 07 13.1**	**+1.4**
SGST	**Jiashian**	**2.21 247**	*e*P	**Pn**	**16 06 45.7**	**+1.4**
SGST			eS	**Sn**	**16 07 12.9**	**+1.1**
WTK	**Tuku**	**2.22 263**	*e*P	**Pb**	**16 06 46.8**	**-1.0**
CHN1	**Nanshi**	**2.22 250**	P	**Pn**	**16 06 46.3**	**+1.8**
CHN1			eS	**Sn**	**16 07 13.4**	**+1.4**
CHY	**Chiayi**	**2.22 258**	*e*P	**Pn**	**16 06 46.3**	**+1.8**
RLNB	**Erlin**	**2.23 268**	*e*P	**Pb**	**16 06 46.5**	**-1.4**
RLNB			eS	**Sn**	**16 07 13.2**	**+1.1**
TWK	**Hsinying**	**2.23 252**	P	**Pn**	**16 06 46.4**	**+1.8**
TWK			eS	**Sn**	**16 07 13.2**	**+1.0**
LAY	**Lan-yu**	**2.24 211**	*e*P	**Pn**	**16 06 43.9**	**-0.9**
LYUB	**Lan-yu**	**2.25 210**	*e*P	**Pn**	**16 06 43.6**	**-1.4**
WTCT	**Ta-ch'eng**	**2.30 268**	*e*P	**Pb**	**16 06 47.9**	**-1.2**
SSD	**Sandimen**	**2.33 239**	*e*P	**Pn**	**16 06 46.6**	**+0.7**
SSD			eS	**Sn**	**16 07 15.9**	**+1.2**
TSMG	**Majia**	**2.34 238**	*e*P	**Pn**	**16 06 47.9**	**+1.8**
SCST	**Cishan**	**2.37 243**	*e*P	**Pb**	**16 06 49.8**	**-0.5**
WSF	**Szhu**	**2.38 262**	*e*P	**Pn**	**16 06 48.7**	**+2.1**
WSF			eS	**Sn**	**16 07 17.0**	**+1.2**
ICHU	**Yijhu**	**2.38 256**	*e*P	**Pn**	**16 06 48.1**	**+1.9**
EAST	**Anshuo**	**2.39 229**	*e*P	**Pn**	**16 06 46.7**	**-0.1**
TAWH	**Dawu Township**	**2.39 228**	*e*P	**Pn**	**16 06 46.8**	**+0.1**
WSL	**Shuilin Townsh**	**2.39 260**	*e*P	**Pn**	**16 06 48.5**	**+1.8**
WSL			eS	**Sn**	**16 07 18.2**	**+2.0**
CHN3	**Shinhua**	**2.40 249**	*e*P	**Pn**	**16 06 49.3**	**+2.4**
MASBT	**Mashibuluo**	**2.40 236**	P	**Pn**	**16 06 47.8**	**+0.8**
MASBT			eS	**Sn**	**16 07 17.2**	**+0.7**
JMJ	**Miyako jima 2**	**2.43 69**	P	**Pn**	**16 06 48.2**	**+0.8**
SSHA	**Shanhua**	**2.44 251**	*e*P	**Pn**	**16 06 47.8**	**+0.3**
CHN8	**Yiju**	**2.45 256**	*e*P	**Pn**	**16 06 49.4**	**+1.8**
CHN8			eS	**Sn**	**16 07 19.1**	**+1.5**
TWM1	**Shoushan**	**2.46 243**	*e*P	**Pn**	**16 06 50.1**	**+2.4**
SCLT	**Jiali**	**2.51 252**	*e*P	**Pn**	**16 06 50.6**	**+2.1**
SCLT			eS	**Sn**	**16 07 20.8**	**+1.6**
SSPT	**Xinbi**	**2.52 234**	*e*P	**Pb**	**16 06 51.5**	**-1.5**
SLIU	**Shizi**	**2.53 227**	*e*P	**Pn**	**16 06 48.8**	**0.0**
SCZT	**Fangliau**	**2.56 232**	*e*P	**Pn**	**16 06 49.7**	**+0.6**
SCZT			eS	**Sn**	**16 07 22.0**	**+1.8**
SMST	**Manzhou Townsh**	**2.65 223**	*e*P	**Pn**	**16 06 51.1**	**+0.8**
TSEB	**Hengchuen, Pin**	**2.70 221**	*e*P	**Pn**	**16 06 54.2**	**+3.2**
TSEB			eS	**Sn**	**16 07 25.6**	**+1.8**
HEN	**Hengchun**	**2.72 224**	*e*P	**Pn**	**16 06 53.4**	**+2.0**
HEN			eS	**Sn**	**16 07 25.0**	**+0.7**
TWKBT	**Hengchun**	**2.72 222**	*e*P	**Pn**	**16 06 52.0**	**+0.7**
TWKBT			eS	**Sn**	**16 07 24.8**	**+0.4**
TWK1	**Hengchun**	**2.73 223**	*e*P	**Pn**	**16 06 51.9**	**+0.5**
TWK1			eS	**Sn**	**16 07 24.3**	**-0.2**
PHUB	**P'eng-hu**	**2.98 262**	*e*P	**Pn**	**16 06 56.2**	**+1.3**
PHUB			eS	**Sn**	**16 07 31.0**	**+0.1**
PNG	**Penghu**	**2.99 263**	*e*P	**Pn**	**16 06 56.3**	**+1.2**
VCHM	**Qimei**	**3.18 257**	*e*P	**Pn**	**16 06 59.1**	**+1.5**
MATB	**Ma-tsu**	**3.37 311**	*e*P	**Pn**	**16 07 01.5**	**+1.3**
PTMZ	**Houxiangcun**	**3.51 288**	*e*P	**Pn**	**16 07 02.5**	**+0.3**
LYJJ	**Jianjiangzhen**	**3.76 314**	*e*P	**Pn**	**16 07 06.1**	**+0.6**
XPSS	**Dashiqiu**	**3.77 322**	*e*P	**Pn**	**16 07 05.7**	**0.0**
KNM	**Kinmen**	**4.00 277**	*e*P	**Pn**	**16 07 11.3**	**+2.4**
MHZQ	**Yeshan**	**4.01 303**	*e*P	**Pn**	**16 07 10.4**	**+1.3**
AXDP	**Jialang**	**4.49 283**	*e*P	**Pn**	**16 07 16.4**	**+0.8**
DSXP	**Dongshan**	**4.92 268**	*e*P	**Pn**	**16 07 22.7**	**+1.1**

JOW	**Kunigami**	**5.72 59**	*e*P	**Pn**	**16 07 32.5**	**0.0**
KSRS	**Korea Array**	**14.14 17**	Pn	**Pn**	**16 09 29.0**	**+1.1**
	0.3nm,0.3s,baz=199,slow=12,SNR=7.5 1.0nm,0.7s					
CMAR	**Chiang Mai Arr**	**22.89 261**	LR	LR	16 20 46.3	
	comp=Z,28nm,21.6s,baz=180,slow=39					
MKAR	**Makanchi Array**	**39.51 315**	P	**P**	**16 13 37.5**	**-0.9**
	0.2nm,0.3s,baz=108,slow=7.9,SNR=4.5 0.2nm,0.3s					
KURBB	**Kurchatov Arra**	**43.22 320**	P	**P**	**16 14 06.5**	**-2.3**
	0.1nm,0.5s,baz=116,slow=8.2,SNR=2.1 0.1nm,0.5s					
WRA	**Warramunga Arr**	**45.08 165**	P	**P**	**16 14 24.4**	**+0.4**
	0.7nm,0.8s,baz=347,slow=8.9,SNR=8.5 0.7nm,0.8s					
ASAR	**Alice Springs**	**48.57 166**	P	**P**	**16 14 52.3**	**+1.0**
	0.4nm,0.5s,baz=348,slow=7.5,SNR=27 0.4nm,0.5s					
ILAR	**Eielson Array**	**68.73 27**	P	**P**	**16 17 11.3**	**0.0**
	0.2nm,0.5s,baz=277,slow=5.9,SNR=2.4 0.2nm,0.5s					
YKA	**Yellowknife Ar**	**82.59 23**	P	**P**	**16 18 31.8**	**+1.1**
	0.1nm,0.4s,baz=310,slow=5.6,SNR=2.2 0.1nm,0.4s					

ROM 10 16:08:14.8±0.4,**35°26N**±0°02×**14°53E**±0°02,**h10**km,
ML3.4/17,**Error ellipse: s-maj=2.9km s-min=1.7km az=337.0,Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WDD	**Wied Dalam**	**0.58**	**359**	P	Pg	16 08 25.6	-0.5
LINA	**Linosa Island**	**1.50**	**295**	P	Pn	16 08 42.1	+0.4
LINA				S	Sb	16 09 01.8	+0.1
HPAC	**Pachino**	**1.51**	**18**	P	Pn	16 08 42.1	+0.1
HPAC				S	Sg	16 09 03.1	-0.4
ISPIC	**ISPICA**	**1.55**	**11**	P	Pb	16 08 43.5	-0.1
CROCE	**Santa Croce Ca**	**1.57**	**0**	P	Pn	16 08 42.6	-0.2
CROCE				S	Sn	16 09 03.2	-0.1
MEU	**Monte Lauro**	**1.87**	**10**	P	Pn	16 08 47.1	+0.1
MEU				S	Sb	16 09 12.5	-0.1
HVZN	**Vizzini**	**1.92**	**4**	P	Pb	16 08 49.1	-0.9
SSY	**Sortino**	**1.94**	**13**	P	Pn	16 08 49.0	+1.1
SSY				S	Sb	16 09 13.8	-0.9
RAFF	**Raffo Rosso**	**1.97**	**356**	P	Pn	16 08 48.1	-0.2
RAFF				S	Sb	16 09 14.6	-0.8
HAGA	**Augusta**	**2.09**	**14**	P	Pn	16 08 49.5	-0.4
HLNI	**Lentini**	**2.11**	**7**	P	Pn	16 08 50.1	0.0
HLNI				S	Sn	16 09 17.1	+0.7
CPTP	**Pietraperzia**	**2.17**	**352**	P	Pb	16 08 53.0	-1.2
PETRA	**Petralia Sopra**	**2.59**	**353**	P	Pn	16 08 58.3	+1.2
MSFR	**San Fratello**	**2.77**	**1**	P	Pn	16 09 00.8	+1.4
CORL	**Corleone**	**2.81**	**340**	P	Pn	16 09 00.2	+0.3
CORL				S	Sn	16 09 35.1	+1.2
MPNC	**Port Mandanici**	**2.96**	**13**	P	Pn	16 09 02.9	+1.0
MSRU	**Castanea**	**3.10**	**14**	P	Pn	16 09 04.9	+1.1
PLAC	**Placanica**	**3.54**	**25**	P	Pn	16 09 10.5	+0.7
CELI	**Celico**	**4.43**	**20**	P	Pn	16 09 22.6	+0.4

*IDC **10** 16:13:34.1±1.1,15°.24S×67°.24E,h0km,mb3.7/12, mbtmp3.7/12,MS3.8/12,Error ellipse: s-maj=35.4km s-min=22.3km az=28.0*
*NEIC **10** 16:13:36.4±1.3,15°.25S±0°.05×67°.2E±0°.1,h10km±1km, mb4.6/21,Error ellipse: s-maj=22.3km s-min=5.3km az=111.0*
ISC 10 16:13:35.7±0.7,**15°2S**±0°.1×**67°3E**±0°.1,**h10**km,**n62,**
s0877/45,mb4.2/20,MS3.9/12,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**9.10**	**35**	T	T	16 25 12.6	
	baz=214,slow=75						
H08S2	**Diego Garcia H**	**9.11**	**35**	T	T	16 25 13.4	
	baz=214,slow=75						
H08S3	**Diego Garcia H**	**9.12**	**35**	T	T	16 25 14.1	
	baz=214,slow=75						
KAAM	**Kaadhehdhoo**	**16.61**	**20**	Pn	**Pn**	**16 17 29.3**	**+0.4**
KAAM				IAmb	IAmb	16 17 50.6	
	comp=Z,86nm,1.1s						
H04N2	**CROZET ISLANDS**	**33.46**	**200**	T	T	16 55 29.8	
	baz=28,slow=75,SNR=74						
H04N1	**CROZET ISLANDS**	**33.47**	**200**	T	T	16 55 30.3	
	baz=28,slow=75,SNR=69						
H04N3	**CROZET ISLANDS**	**33.48**	**200**	T	T	16 55 29.2	
	baz=28,slow=75,SNR=66						
CRZF	**Crozet Islands**	**33.68**	**199**	P	**P**	**16 20 18.1**	**+1.3**
MNAI	**Manna**	**36.72**	**77**	P	**P**	**16 20 42.7**	**-0.8**
LSZ	**Lusaka**	**37.67**	**265**	LR	LR	16 34 49.2	
	comp=Z,336nm,19.0s,baz=104,slow=34						
LBTB	**Lobatse**	**40.19**	**249**	LR	LR	16 35 42.5	
	comp=Z,214nm,18.1s,baz=29,slow=33						
LEM	**Lembang**	**40.41**	**83**	LR	LR	16 34 45.3	
	comp=Z,67nm,18.6s,baz=284,slow=31						
BOSA	**Boshof**	**40.98**	**244**	LR	LR	16 34 40.1	
	comp=Z,174nm,20.6s,baz=28,slow=31						
RAYN	**Ar Rayn**	**44.00**	**331**	P	**P**	**16 21 43.4**	**-0.3**
BRDH	**Bariadhala**	**44.59**	**33**	LR	LR	16 40 46.9	
	comp=Z,84nm,18.4s,baz=104,slow=37						
SUR	**Sutherland**	**45.43**	**239**	LR	LR	16 38 10.7	
	comp=Z,127nm,19.0s,baz=330,slow=32						
CMAR	**Chiang Mai Arr**	**45.76**	**44**	P	**P**	**16 21 57.2**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=248,slow=7.8,SNR=4.2						
CMAR				LR	LR	16 39 17.0	
	comp=Z,130nm,19.9s,baz=310,slow=34 comp=Z,0.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**45.76**	**44**	P	**P**	**16 21 56.9**	**-0.8**
CRAI	**Chiangrai**	**47.96**	**44**	P	**P**	**16 22 16.0**	**+1.1**
KAPI	**Kappang**	**52.53**	**85**	LR	LR	16 41 40.5	
	comp=Z,59nm,22.0s,baz=266,slow=32						
FITZ	**Fitzroy Crossi**	**55.80**	**102**	LR	LR	16 44 23.0	
	comp=Z,84nm,20.5s,baz=180,slow=33						
WUS	**Wushi**	**57.22**	**11**	P	**P**	**16 23 23.9**	**+0.5**
WUS				IAmb	IAmb	16 23 30.7	
	comp=Z,5.5nm,1.2s						
KDJ	**Kajisay**	**57.80**	**9**	P	**P**	**16 23 28.3**	**+0.8**
AAK	**Ala-Archa**	**57.96**	**6**	P	**P**	**16 23 29.5**	**+1.0**
AAK				IAmb	IAmb	16 23 36.1	
	comp=Z,7.3nm,1.4s						
KKAR	**Karatay Array**	**58.12**	**3**	P	**P**	**16 23 29.1**	**-0.4**
GURO	**Guroymak-BITLI**	**58.49**	**337**	P	**P**	**16 23 32.0**	**-0.3**
ASAR	**Alice Springs**	**62.92**	**109**	P	**P**	**16 24 03.2**	**+0.4**
	comp=Z,0.6nm,0.9s,baz=271,slow=5.4,SNR=4.5						
ASAR				LR	LR	16 47 50.5	
	comp=Z,72nm,20.5s,baz=167,slow=33 comp=Z,0.6nm,0.9s						
ASAR	**Alice Springs**	**62.92**	**109**	P	**P**	**16 24 01.3**	**-1.5**
BRTR	**Keskin Array B**	**63.02**	**331**	P	**P**	**16 24 04.0**	**+0.8**
	comp=Z,0.7nm,0.9s,baz=166,slow=5.7,SNR=3.8 comp=Z,0.7nm,0.9s						
BRTR	**Keskin Array B**	**63.02**	**331**	P	**P**	**16 24 03.7**	**+0.6**
MKAR	**Makanchi Array**	**63.19**	**12**	P	**P**	**16 24 04.4**	**+0.3**
	comp=Z,0.6nm,0.9s,baz=212,slow=4.3,SNR=5.1 comp=Z,0.6nm,0.9s						
MKAR	**Makanchi Array**	**63.19**	**12**	P	**P**	**16 24 04.0**	**-0.1**
WRA	**Warramunga Arr**	**63.74**	**105**	P	**P**	**16 24 08.3**	**0.0**
	comp=Z,1.5nm,1.0s,baz=266,slow=6.1,SNR=8.1 comp=Z,1.5nm,1.0s						
WRA	**Warramunga Arr**	**63.74**	**105**	P	**P**	**16 24 08.4**	**0.0**
AB31	**Akbulak array**	**64.52**	**355**	P	**P**	**16 24 13.5**	**+0.8**
AB31				IAmb	IAmb	16 24 21.1	
	comp=Z,4.0nm,1.3s						
ABKAR	**Akbulak array**	**64.52**	**355**	P	**P**	**16 24 13.5**	**+0.8**
KURBB	**Kurchatov Arra**	**66.30**	**8**	P	**P**	**16 24 24.1**	**-0.1**
	comp=Z,0.9nm,1.0s,baz=207,slow=6.6,SNR=5.2 comp=Z,0.9nm,1.0s						
KURK	**Kurchatov**	**66.41**	**8**	P	**P**	**16 24 25.7**	**+0.9**
KURK				IAmb	IAmb	16 24 31.3	
	comp=Z,2.5nm,0.9s						
BVAR	**Borovoye Array**	**68.02**	**2**	P	**P**	**16 24 35.3**	**+0.2**
	comp=Z,0.8nm,0.9s,baz=188,slow=5.4,SNR=3.6 comp=Z,0.8nm,0.9s						
ZAA0	**Zalesovo Array**	**70.52**	**11**	P	**P**	**16 24 51.3**	**+0.8**
ZAA0				IAmb	IAmb	16 24 57.0	
	comp=Z,10nm,1.4s						
ZALV	**Zalesovo Beam**	**70.52**	**11**	P	**P**	**16 24 50.1**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=200,slow=3.9,SNR=4.5 comp=Z,0.8nm,0.7s						
ZALV	**Zalesovo Beam**	**70.52**	**11**	P	**P**	**16 24 51.0**	**+0.5**
TORD	**Torodi Ar. Bea**	**70.74**	**290**	P	**P**	**16 24 52.4**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=136,slow=5.4,SNR=5.5 comp=Z,0.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**70.74**	**290**	P	**P**	**16 24 52.0**	**-0.8**
TORD				IAmb	IAmb	16 24 59.3	
	comp=Z,2.3nm,0.7s						

SONM	**Songino Array**	**71.84 27**	P	**P**	**16 24 59.6**	**+0.8**
	comp=Z,1.1nm,0.8s,baz=225,slow=6.9,SNR=6.0 comp=Z,1.1nm,0.8s					
SONM	**Songino Array**	**71.84 27**	P	**P**	**16 24 59.1**	**+0.3**
SONM			IAmb	IAmb	16 25 06.8	
	comp=Z,6.8nm,1.2s					
BURAR	**Bucovina Array**	**72.98 332**	P	**P**	**16 25 06.6**	**+1.0**
AKASG	**Malin Array Be**	**73.62 336**	P	**P**	**16 25 08.1**	**-1.0**
	comp=Z,0.2nm,0.4s,baz=124,slow=4.9,SNR=6.2 comp=Z,0.2nm,0.4s					
KSAR	**Wonju Array Be**	**77.35 45**	P	**P**	**16 25 32.1**	**+1.2**
KSRS	**Korea Array**	**77.38 45**	LR	LR	16 58 57.2	
	comp=Z,28nm,21.7s,baz=35,slow=35					
ARSA	**Arzberg**	**77.52 327**	P	**P**	**16 25 32.4**	**+0.7**
ARSA			IAmb	IAmb	16 25 38.2	
	comp=Z,8.8nm,1.1s					
PMG	**Port Moresby**	**77.90 97**	P	**P**	**16 25 34.1**	**-0.5**
PMG			IAmb	IAmb	16 25 51.4	
	comp=Z,8.1nm,1.1s					
BNI	**Bardonecchia**	**81.26 321**	P	**P**	**16 25 51.6**	**-0.7**
BNI			IAmb	IAmb	16 25 54.4	
	comp=Z,9.9nm,1.5s					
ESDC	**Sonseca Array**	**85.77 313**	P	**P**	**16 26 15.4**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=112,slow=5.1,SNR=8.4 comp=Z,0.6nm,0.7s					
NC602	**NORSAR Array S**	**87.72 336**	P	**P**	**16 26 23.1**	**-1.4**
PMSA	**Palmer Station**	**92.14 199**	LR	LR	17 02 25.1	
	comp=Z,65nm,18.6s,baz=150,slow=32					
YKA	**Yellowknife Ar**	**132.77 1**	PKP	**PKPdf**	**16 32 49.0**	**-1.6**
	comp=Z,0.1nm,0.5s,baz=346,slow=3.0,SNR=1.8					
ULM	**Lac du Bonnet**	**142.49 342**	PKhKP	PKPpre	16 33 00.3	
	comp=Z,3.7nm,0.3s,baz=49,slow=15,SNR=5.5					
NEW	**Newport**	**146.86 5**	PKPbc	**PKPbc**	**16 33 19.1**	**+0.7**
	comp=Z,4.4nm,0.9s,baz=324,slow=5.0,SNR=5.5					
PDAR	**Pinedale Array**	**152.42 355**	PKPbc	**PKPbc**	**16 33 32.8**	**0.0**
	comp=Z,1.6nm,0.8s,baz=56,slow=2.7,SNR=6.1					
NVAR	**Mina Array Bea**	**156.37 11**	PKPab	**PKPab**	**16 33 59.6**	**0.0**
	comp=Z,0.6nm,0.6s,baz=348,slow=4.3,SNR=4.6					
TXAR	**Lajitas Array**	**163.66 331**	PKPab	**PKPab**	**16 34 31.5**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=56,slow=3.8,SNR=5.1					

*IDC **10** 16:14:19.1±1.2,23°.95N×122°.26E,h0km,mb3.3/5, mbtmp3.4/6,ML3.6/1,Error ellipse: s-maj=69.4km s-min=20.1km az=67.0*
*TAP **10** 16:14:23.8,24°.03N×122°.70E,h33km,ML3.9,C*
*JMA **10** 16:14:23.9±0.2,24°N±1°×122°.7E±0°.6,h28km±4km, MV3.2/15,NW OFF ISHIGAKUJIMA IS*
ISC 10 16:14:22.5±1.0,**23°88N**±0°02×**122°66E**±0°02,**h26**km±9km,
n174,s1900/278,mb3.2/5,10C-3D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS4	**EOS4**	**0.40**	**308**⇑	*i*P	**Pn**	**16 14 32.1**	**-0.1**
EOS4				S	Sn	16 14 38.4	-0.3
EOS3	**EOS3**	**0.51**	**322**⇓	*i*P	**Pn**	**16 14 33.7**	**-0.4**
EOS3				eS	Sn	16 14 41.2	-0.7
JYNG	**Yonaguni jima**

CHKT eS Sb 16 15 04.7 -1.2
TDCB Techi 1.42 286 P Pb 16 14 48.1 -0.3
TDCB S Sb 16 15 05.3 -0.9
FULB Fuli 1.43 242 eP Pb 16 14 48.0 -0.4
FULB eS Sb 16 15 06.3 +0.2
NSK Sanguang 1.43 304 P Pb 16 14 47.8 -0.8
NSK eS Sb 16 15 06.3 0.0
NWF Wu-fen Shan 1.43 326 eP Pn 16 14 47.1 +0.2
NWF eS Sn 16 15 04.7 -0.3
WFSB Wu-fen Shan 1.43 326 P Pn 16 14 46.9 +0.1
WFSB eS Sn 16 15 04.2 -0.6
JJ Ishigaki jima 1.44 70 P Pn 16 14 47.7 +0.8
TWA Mucha 1.47 318 eP Pn 16 14 47.4 0.0
TWA eS Sn 16 15 04.6 +0.6
NHDH Xindian Distri 1.50 316 eP Pb 16 14 49.3 -0.3
NHDH eS Sb 16 15 07.6 -0.6
TNOU National Taiwa 1.50 328 eP Pn 16 14 48.2 +0.5
TNOU eS Sn 16 15 05.6 -0.9
EHD Haiduan 1.52 242 eP Pb 16 14 49.3 -0.7
EHD eS Sb 16 15 08.0 -0.9
TATO Taipei 1.53 316 P Pb 16 14 50.0 -0.1
TATO Taipei 1.53 316 S Sb 16 15 10.2 +1.1
TATO Taipei 1.53 316 P Pb 16 14 49.4 -0.8
TATO S Sb 16 15 08.3 -0.8
ECS Chishang 1.54 240 eP Pb 16 14 50.2 -0.1
ECS eS Sb 16 15 08.7 -0.6
TAP Taipei 1.56 318 eP Pn 16 14 49.3 +0.7
WPL Puli Township 1.56 275 eP Pb 16 14 49.8 -0.9
WPL eS Sb 16 15 10.0 -0.2
SSLB Suanglung 1.57 267 P Pb 16 14 50.5 -0.4
SSLB Suanglung 1.57 267 eP Pb 16 14 50.4 -0.4
DPLB Guoxing 1.59 276 eP Pb 16 14 50.9 -0.4
NFF Wufeng Townshi 1.60 298 eP Pb 16 14 50.8 -0.6
NFF eS Sb 16 15 10.6 -0.5
YM01 YM01 1.61 322 eP Pn 16 14 50.1 +0.9
YM01 eS Sn 16 15 09.7 +0.5
SMLT Sun Moon Lake 1.61 271 P Pb 16 14 51.1 -0.5
SMLT S Sb 16 15 10.8 -0.8
YUS Yu-Shan 1.61 256 eP Pb 16 14 51.1 -0.8
WHP Taichung City 1.62 285 eP Pb 16 14 51.7 0.0
WHP eS Sb 16 15 11.4 -0.3
KSHI Guanxi Townshi 1.62 304 eP Pb 16 14 51.2 -0.5
LDUT Ludao 1.62 223 eP Pb 16 14 53.8 +2.0
YM08 YM08 1.63 323 eP Pn 16 14 50.2 +0.6
YM08 eS Sn 16 15 09.8 +0.1
ZUZH Zhuzihu 1.63 322 eP Pn 16 14 50.1 +0.5
TYC Yuchr 1.65 271 P Pb 16 14 51.6 -0.6
ELDTW Lidau 1.66 246 eP Pb 16 14 51.2 -1.2
ELDTW eS Sb 16 15 11.2 -1.7
JISG Ishigakijimahi 1.66 65 P Pn 16 14 50.6 +0.7
JISG S Sn 16 15 10.8 +0.3
TWS1 Kuangyinshan 1.66 317 eP Pn 16 14 51.1 +1.1
TWS1 eS Sn 16 15 11.0 +0.5
WHYT Xinyi Township 1.67 264 eP Pb 16 14 52.6 0.0
ANP Anpu 1.67 322 eP Pn 16 14 51.3 +1.2
LIOB Emei 1.69 297 P Pb 16 14 52.4 -0.4
LIOB eS Sb 16 15 12.8 -0.8
NSTT Nanjuang 1.69 297 P Pb 16 14 52.2 -0.7
NSTT eS Sb 16 15 13.3 -0.5
NTST Danshui 1.69 319 eP Pn 16 14 51.7 +1.3
TWY Chenhua 1.69 325 eP Pn 16 14 51.1 +0.7
LONT Longtian 1.71 236 eP Pb 16 14 52.4 -0.8
ALS Alishan 1.74 258 eP Pb 16 14 53.6 -0.3
ALS S Sb 16 15 14.7 -0.8
WJS Zhushan 1.77 269 eP Pb 16 14 54.6 +0.3
WJS eS Sb 16 15 17.6 +1.5
SBCB Hsinchu 1.78 301 eP Pb 16 14 55.5 +1.1
TWQ1 Liyutan 1.79 286 P Pb 16 14 54.2 -0.4
TWQ1 eS Sb 16 15 16.2 -0.3
TWGBT Beinan 1.80 234 P Pb 16 14 53.7 -1.0
TWGBT Beinan 1.80 234 eP Pb 16 14 53.2 -1.5
TWGBT eS Sb 16 15 14.1 -2.7
TWG Pinlang 1.80 235 ⇑P Pb 16 14 53.2 -1.5
TWG eS Sn 16 15 14.0 +0.1
WWF Wufeng 1.80 276 eP Pb 16 14 54.6 -0.2
WNT Mingjian 1.81 270 eP Pb 16 14 54.8 -0.1
WNT1 Nantou City 1.81 271 eP Pb 16 14 54.7 -0.3
WNT1 eS Sb 16 15 18.2 +0.9
NSY Sanyi 1.82 288 eP Pb 16 14 54.0 -1.1
TCU Taichung 1.83 279 eP Pb 16 14 55.0 -0.3
TCU eS Sb 16 15 17.8 -0.1
CHN5 Tsauling 1.84 262 eP Pb 16 14 55.6 +0.1
STYH Taoyuan 1.87 248 eP Pb 16 14 55.8 -0.1
STYH eS Sb 16 15 18.3 -0.6
STYT Tauyuan 1.89 248 eP Pb 16 14 54.9 +0.1
WDJ Dajia District 1.91 285 eP Pb 16 14 54.9 -1.7
WYL Yuanlin Townsh 1.91 273 eP Pb 16 14 56.5 0.0
WGK Gukeng 1.93 265 eP Pb 16 14 56.5 -0.5
WCHH Zhanghua 1.93 276 eP Pb 16 14 56.7 -0.3
WCHH eS Sb 16 15 20.2 -0.5
WCKO Fanlu 1.94 257 eP Pb 16 14 57.0 -0.1
WCKO eS Sb 16 15 21.1 +0.3
TPUB Ta-pu 1.95 253 P Pb 16 14 57.6 +0.3
TPUB Ta-pu 1.95 253 S Sb 16 15 22.4 +1.1
TPUB Ta-pu 1.95 253 eP Pb 16 14 57.4 +0.1
TPUB S Sb 16 15 21.3 +0.1
WDL Douliou City 1.95 266 eP Pb 16 14 57.1 -0.3
WDLH Douliu 1.95 265 eP Pb 16 14 56.9 -0.5
WDLH eS Sb 16 15 21.2 -0.1
CHN4 Tsaushan 1.97 255 eP Pb 16 14 57.9 +0.3
CHN4 eS Sb 16 15 21.8 +0.1
WTP Ta-pu 1.98 252 eP Pb 16 14 58.1 +0.2
WTP eS Sb 16 15 21.7 +0.5
JTJ Tarama 2.01 67 P Pn 16 14 56.1 +1.3
ECL Taimali 2.02 231 eP Pb 16 14 56.5 -2.1
ECL eS Sn 16 15 19.9 +0.5
SLGT Liugui 2.05 245 eP Pb 16 14 59.0 0.0
SLGT eS Sb 16 15 24.6 +0.5
SGST Jiashian 2.07 248 eP Pb 16 14 59.4 +0.1
SGST eS Sb 16 15 24.5 -0.1
CHN1 Nanshi 2.08 251 eP Pb 16 14 59.5 0.0
TWK Hsinying 2.08 253 eP Pb 16 14 59.2 -0.4
TWK eS Sb 16 15 24.9 -0.3
CHY Chiayi 2.08 260 eP Pb 16 14 58.5 -1.1
CHY eS Sb 16 15 25.1 0.0
WTK Tuku 2.09 265 eP Pb 16 14 58.3 -1.4
WRL Guolierlin Hig 2.09 271 eP Pb 16 14 59.0 -0.7
WRL eS Sb 16 15 24.9 -0.3
LAY Lan-yu 2.10 209 eP Pn 16 14 57.2 +1.2
RLNB Erlin 2.11 271 P Pb 16 14 58.9 -1.1
RLNB eS Sb 16 15 25.4 -0.3
LYUB Lan-yu 2.12 208 eP Pn 16 14 56.5 +0.3
SSD Sandimen 2.18 239 eP Pb 16 14 60.0 -1.3
SSD eS Sb 16 15 26.6 -1.2
TSMG Majia 2.19 238 eP Pb 16 15 01.1 -0.3
EAST Anshuo 2.24 229 eP Pb 16 15 00.7 -1.5
EAST eS Sb 16 15 26.1 -3.4
TAWH Dawu Township 2.24 227 eP Pb 16 15 00.4 -1.8
ICHU Yijhu 2.24 257 eP Pb 16 15 00.7 -1.7
WSF Szhu 2.25 264 eP Pb 16 15 01.2 -1.2
WSF eS Sb 16 15 28.8 -1.0
MASBT Mashibuluo 2.25 236 eP Pb 16 15 00.7 -1.8
WSL Shuilin Townsh 2.26 261 eP Pb 16 15 01.2 -1.3
WSL eS Sb 16 15 29.4 -0.7
CHN8 Yiju 2.31 257 eP Pb 16 15 01.6 -1.8
CHN8 eS Sb 16 15 29.9 -1.6
TWM1 Shoushan 2.31 243 eP Pb 16 15 04.0 +0.5
SCLT Jiali 2.37 253 eP Pb 16 15 02.8 -1.7
SSPT Xinbi 2.37 235 eP Pb 16 15 03.8 -0.8
SLIU Shizi 2.38 226 eP Pb 16 15 03.1 -1.6
SCZT Fangliau 2.40 232 eP Pb 16 15 03.0 -2.1
SMST Manzhou Townsh 2.50 223 eP Pb 16 15 04.5 -2.2
SMST eS Sb 16 15 33.2 -3.8
HEN Hengchun 2.57 224 eP Pb 16 15 05.5 -2.5
HEN eS Sb 16 15 35.9 -3.2
TWKBT Hengchun 2.57 222 eP Pb 16 15 07.1 -0.9
TWKBT eS Sb 16 15 36.2 -3.0
JMJ Miyako jima 2 2.58 68 eP Pn 16 15 04.1 +1.6
JMJ eS Sn 16 15 32.9 -0.1
WDGT Dungji 2.82 258 eP Pn 16 15 08.3 +2.4
PHUB P'eng-hu 2.85 263 P Pn 16 15 08.9 +2.6
PHUB S Sn 16 15 41.7 +1.8
PNG Penghu 2.86 264 eP Pn 16 15 08.4 +1.9
VCHM Qimei 3.04 258 eP Pn 16 15 11.6 +2.7
VWUC VWUC 3.13 291 eP Pn 16 15 10.8 +0.7
MATB Ma-tsu 3.35 313 eP Pn 16 15 13.3 +0.2
PTMZ Houxiangcun 3.43 290 eP Pn 16 15 15.0 +0.7
LYJJ Jianjiangzhen 3.74 316 eP Pn 16 15 18.4 -0.1
XPSS Dashiqiu 3.77 324 eP Pn 16 15 19.9 +0.9

MHZQ Yeshan 3.97 305 eP Pn 16 15 23.7 +2.0
AXDP Jialang 4.40 284 eP Pn 16 15 29.2 +1.6
AXDP eS Sn 16 16 18.0 0.0
DSXP Dongshan 4.80 269 eP Pn 16 15 34.7 +1.6
KSRS Korea Array 14.27 17 Pn Pn 16 17 44.7 +1.9
0.3nm,0.3s,baz=197,slow=12,SNR=9.2
2.1nm,0.7s
SONM Songino Array 27.19 336 P P 16 20 01.4 -2.7
0.4nm,0.6s,baz=153,slow=10,SNR=2.0
0.4nm,0.6s
MKAR Makanchi Array 39.50 316 P P 16 21 49.3 -1.6
0.3nm,0.6s,baz=105,slow=9.8,SNR=6.5
MKAR PcP PcP 16 23 58.1 -0.2
0.5nm,0.8s,baz=93,slow=3.0,SNR=3.6
0.3nm,0.6s
KURBB Kurchatov Arra 43.21 320 P P 16 22 19.0 -2.3
0.2nm,0.5s,baz=114,slow=9.2,SNR=4.8
0.2nm,0.5s
WRA Warramunga Ar 45.02 164 P P 16 22 37.6 +1.5
0.2nm,0.5s,baz=349,slow=9.7,SNR=5.1
0.2nm,0.5s
ASAR Alice Springs 48.51 166 P P 16 23 05.3 +2.0
0.2nm,0.6s,baz=347,slow=8.5,SNR=8.4
0.2nm,0.6s

*IDC **10** 16:18:45.4±2.1,52.°04N×178.°37E,h127km±16km, mb3.2/10,mbtmp3.7/13,Error ellipse: s-maj=27.1km s-min=15.0km az=167.0*
*AEIC **10** 16:18:46.4±1.2,51.°9N±0.°1×178.°29E±0.°10,h142km±6km, Error ellipse: s-maj=14.9km s-min=8.5km az=173.0*
*NEIC **10** 16:18:46.1±0.8,52.°1N±0.°1×178.°26E±0.°10,h126km±7km, mb3.8/14,ML3.3/10,ML3.0(AEIC),Error ellipse: s-maj=16.3km s-min=8.5km az=177.0*

ISC 10 16:18:45.9±0.7,52.°0N±0.°1×178.°29E±0.°04,h132km±7km, n64,σ0.°88/74,mb3.6/16,Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEPE	**Semis' Perret**	**0.84**	**94**		**Pn**	**16 19 08.1**	**+0.5**
AMKA	**Amchitka**	**0.91**	**136**		**Pn**	**16 19 08.5**	**+0.3**
AMKA	**Amchitka**	**0.91**	**136**		**Sn**	**16 19 24.8**	**-0.2**
GANO	**Gareloi North**	**1.81**	**96**		**Pn**	**16 19 17.9**	**+0.1**
GANO					**Sn**	**16 19 42.1**	**0.0**
GANE	**Gareloi Northe**	**1.83**	**96**		**Pn**	**16 19 18.3**	**+0.3**
GANE					**Sn**	**16 19 42.8**	**+0.4**
GAKI	**Gareloi-Kavalg**	**1.86**	**104**		**Pn**	**16 19 18.3**	**0.0**
GAKI					**Sn**	**16 19 43.0**	**0.0**
TANO	**Tanaga North**	**2.22**	**92**		**Pn**	**16 19 22.9**	**+0.2**
TANO					**Sn**	**16 19 51.5**	**+0.5**
TASE	**Tanaga Southea**	**2.28**	**94**		**Pn**	**16 19 23.6**	**+0.1**
TASE					**Sn**	**16 19 52.9**	**+0.5**
TAFP	**Tanaga Falls P**	**2.31**	**92**		**Pn**	**16 19 23.7**	**-0.1**
TAFP					**Sn**	**16 19 53.0**	**+0.1**
TAPA	**Tanaga Point A**	**2.42**	**94**		**Pn**	**16 19 25.3**	**+0.1**
SHEM	**Shemya Is, Ala**	**2.66**	**287**	P	**Pn**	**16 19 28.1**	**0.0**
	39nm,0.3s,baz=90,slow=5.1,SNR=18						
SHEM				S	**Sn**	**16 20 01.4**	**+0.8**
	42nm,0.3s,baz=75,slow=22,SNR=15						
SHEM	**Shemya Is, Ala**	**2.66**	**287**	Pn	**Pn**	**16 19 27.9**	**-0.3**
SMY	**Shemya**	**2.66**	**287**		**Pn**	**16 19 27.7**	**-0.4**
SMY					**Sn**	**16 20 02.0**	**+1.3**
SMY	**Shemya**	**2.66**	**287**	IAML		16 20 03.1	
	comp=N,120nm,0.9s						
SMY				IAML		16 20 07.7	
	comp=E,121nm,0.9s						
KIMD	**Kanaga Island**	**2.79**	**94**		**Pn**	**16 19 29.6**	**-0.2**
KIMD					**Sn**	**16 20 03.1**	**-0.5**
KIKV	**Kanaga Island**	**2.81**	**91**		**Pn**	**16 19 30.2**	**0.0**
KIKV					**Sn**	**16 20 04.6**	**+0.3**
KIWB	**Kanaga Island**	**2.83**	**92**	Pn	**Pn**	**16 19 30.2**	**-0.1**
KIWB				IAML		16 20 07.1	
	comp=E,80nm,0.5s						
KIWB				IAML		16 20 12.8	
	comp=N,61nm,1.1s						
KIWB	**Kanaga Island**	**2.83**	**92**		**Sn**	**16 20 04.9**	**+0.3**
ADK	**Adak**	**3.11**	**91**		**Pn**	**16 19 33.7**	**-0.3**
ADK					**Sn**	**16 20 10.3**	**-0.8**
ADK	**Adak**	**3.11**	**91**	IAML		16 20 11.5	
	comp=N,62nm,0.3s						
ADK				IAML		16 20 17.1	
	comp=N,61nm,0.7s						
ADAG	**Mount Adagdak**	**3.16**	**89**		**Pn**	**16 19 34.3**	**-0.3**
ETKA	**Kagalaska Isla**	**3.29**	**91**		**Pn**	**16 19 35.5**	**-0.8**
ETKA					**Sn**	**16 20 13.8**	**-1.4**
GSTD	**Great Sitkin T**	**3.44**	**87**		**Pn**	**16 19 37.7**	**-0.6**
GSTD					**Sn**	**16 20 18.5**	**-0.3**
GSMY	**Great Sitkin M**	**3.49**	**88**		**Pn**	**16 19 38.9**	**-0.1**
GSMY					**Sn**	**16 20 19.6**	**-0.4**
GSIG	**Igitkin Island**	**3.58**	**88**		**Pn**	**16 19 39.2**	**-0.9**
GSIG					**Sn**	**16 20 21.6**	**-0.4**
KOWE	**Korovin West**	**4.60**	**83**		**Pn**	**16 19 53.4**	**-0.3**
KOKL	**Mount Kliuchef**	**4.63**	**83**		**Pn**	**16 19 53.8**	**-0.3**
KOFP	**Korovin Flat P**	**4.70**	**84**		**Pn**	**16 19 55.5**	**+0.5**
MREP	**Makushin Rep't**	**9.22**	**73**		**Pn**	**16 20 56.5**	**+0.9**
UNV	**Unalaska Valle**	**9.36**	**73**		**Pn**	**16 20 58.2**	**+0.7**
PETK	**Petropavlovsk-**	**12.57**	**283**	P	**Pn**	**16 21 41.4**	**+1.5**
	comp=N,4.0nm,1.0s,baz=87,slow=16,SNR=12						
PETK				S	**Sn**	**16 23 52.9**	**-5.5**
	comp=N,1.8nm,0.8s,baz=86,slow=20,SNR=1.4						
KDAK	**Kodiak Island**	**17.62**	**59**	P	**P**	**16 22 40.5**	**-1.4**
	comp=N,19nm,1.1s,baz=257,slow=1.1,SNR=8.7						
KDAK	**Kodiak Island**	**17.62**	**59**	IAmb	IAmb	16 22 45.2	
	comp=Z,70nm,1.4s						
L19K	**White Mountain**	**17.63**	**44**	P	**Pn**	**16 22 43.1**	**0.0**
L19K				IAmb	IAmb	16 22 47.7	
	comp=Z,4.2nm,1.0s						
J19K	**Poorman**	**18.12**	**39**	P	**P**	**16 22 47.8**	**+0.4**
CNPM	**China Poot**	**18.57**	**54**	P	**P**	**16 22 52.8**	**+0.4**
F19K	**Shaleruckik Mo**	**18.99**	**30**	P	**P**	**16 22 57.5**	**+0.7**
L22K	**Petersville**	**19.54**	**45**	P	**P**	**16 23 03.6**	**+0.7**
L22K				IAmb	IAmb	16 23 47.7	
	comp=Z,9.5nm,1.4s						
IMAR	**Indian Mountai**	**19.81**	**34**	P	**P**	**16 23 06.4**	**+0.7**
SML	**Sawmill**	**20.44**	**48**	P	**P**	**16 23 13.7**	**+1.0**
WRH	**Wood River Hil**	**21.31**	**41**	P	**P**	**16 23 22.4**	**+0.6**
HDA	**Harding Lake**	**21.76**	**42**	P	**P**	**16 23 27.1**	**+0.4**
HDA				IAmb	IAmb	16 23 47.2	
	comp=Z,3.1nm,1.1s						
ILAR	**Eielson Array**	**21.90**	**41**	P	**P**	**16 23 27.1**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=250,slow=9.4,SNR=5.7						
	comp=Z,0.2nm,0.5s						
ILAR	**Eielson Array**	**21.90**	**41**	P	**P**	**16 23 27.0**	**-1.1**
E23K	**Chandalar**	**22.27**	**32**	P	**P**	**16 23 31.9**	**0.0**
E23K				IAmb	IAmb	16 23 54.5	
	comp=Z,3.6nm,1.2s						
L29M	**L29M**	**25.33**	**47**	P	**P**	**16 24 00.2**	**+0.1**
L29M				IAmb	IAmb	16 24 30.4	
	comp=Z,3.2nm,1.2s						
USRK	**Ussuriysk Ar.**	**31.43**	**274**	P	**P**	**16 24 54.5**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=60,slow=8.9,SNR=1.0						
	comp=Z,0.4nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**33.45**	**200**	T	T	17 00 51.4	
	baz=11						
H11N3	**WAKE ISLAND Hy**	**33.46**	**200**	T	T	17 00 49.8	
	baz=11						
H11N1	**WAKE ISLAND Hy**	**33.47**	**200**	T	T	17 00 46.6	
	baz=11						
YKAW3	**Yellowknife Wh**	**36.07**	**46**	P	**P**	**16 25 34.9**	**+0.6**
YKAW3				IAmb	IAmb	16 25 53.5	
	comp=Z,3.2nm,1.4s						
YKA	**Yellowknife Ar**	**36.09**	**47**	P	**P**	**16 25 34.3**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=241,slow=9.2,SNR=3.4						
	comp=Z,0.2nm,0.5s						
NVAR	**Mina Array Bea**	**45.26**	**81**	P	**P**	**16 26 50.5**	**+0.3**
KURK	**Kurchatov**	**57.24**	**312**	P	**P**	**16 28 19.5**	**+0.5**
KURK				IAmb	IAmb	16 28 21.5	
	comp=Z,0.9nm,0.8s						
KURBB	**Kurchatov Arra**	**57.35**	**312**	P	**P**	**16 28 20.0**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=43,slow=6.7,SNR=10						
	comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**58.20**	**306**	P	**P**	**16 28 25.5**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=56,slow=6.6,SNR=7.0						
	comp=Z,0.2nm,0.4s						
BVAR	**Borovoye Array**	**59.20**	**318**	P	**P**	**16 28 33.0**	**+0.4**
	comp=Z,1.0nm,0.5s,baz=52,slow=7.5,SNR=6.2						
	comp=Z,1.0nm,0.5s						
TXAR	**Lajitas Array**	**60.33**	**79**	P	**P**	**16 28 40.8**	**0.0**
	comp=Z,0.2nm,0.5s,baz=312,slow=3.6,SNR=1.8						
	comp=Z,0.2nm,0.5s						
AKTO	**Aktyubinsk**	**66.08**	**323**	P	**P**	**16 29 18.7**	**+0.4**
	comp=Z,1.0nm,0.4s,baz=30,slow=8.1,SNR=4.0						
	comp=Z,1.0nm,0.4s						
AB31	**Akbulak array**	**66.30**	**321**	P	**P**	**16 29 20.2**	**+0.5**

AB31 IAmb IAmb 16 29 52.6
comp=Z,2.9nm,1.4s
ABKAR Akbulak array 66.30 321 P P 16 29 20.2 +0.5
WRA Warramunga Arr 81.27 221 P P 16 30 46.6 -0.5
comp=Z,0.6nm,0.9s,baz=30,slow=5.8,SNR=5.7
comp=Z,0.6nm,0.9s
ASAR Alice Springs 84.78 220 P P 16 31 06.2 +0.9
comp=Z,0.3nm,0.7s,baz=25,slow=4.7,SNR=5.1
comp=Z,0.3nm,0.7s
BOSA Boshof 149.17 309 PKPbc PKPbc 16 38 18.3 -0.3
comp=Z,1.9nm,0.8s,baz=146,slow=4.3,SNR=4.5

*ISK **10** 16:25:24.9,35.°50N×29.°64E,h15km,ML2.4/16*
*GII **10** 16:25:24.3±0.0,35.°419N±0.°002×29.°676E±0.°001,h0km, Mws3.5,confirmed*
*NIC **10** 16:25:25.9,35.°45N×29.°66E,h24km±1km,Ml2.5/12*
*AFAD **10** 16:25:31.4,35.°78N×29.°89E,h6km±2km,ML2.1*

ISC 10 16:25:25.8±1.3,35.°43N±0.°03×29.°68E±0.°03,h25km±14km, n50,σ1.°18/82,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSL	**Kastellorizon**	**0.72**	**354**	P	**Pb**	**16 25 39.5**	**-0.3**
KSL				S	**Sb**	**16 25 50.5**	**+1.2**
KSL				AML	AML	16 25 59.2	
	0.7nm,0.4s						
KSL				AML	AML	16 26 02.0	
	0.4nm,0.4s						
AKAS	**Kas**	**0.80**	**356**	Pg	**Pb**	**16 25 40.4**	**-0.9**
AKAS	**Kas**	**0.80**	**356**	P	**Pb**	**16 25 39.9**	**-1.4**
AKAS				IAML		16 25 55.0	
	comp=E,226nm,1.4s						
AKAS				IAML		16 25 59.0	
	comp=N,291nm,0.5s						
DEMR	**Demre-Antalya**	**0.82**	**13**	Pg	**Pb**	**16 25 40.4**	**-1.1**
DEMR				Sg	**Sb**	**16 25 51.2**	**-1.0**
AKUM	**Antalya-Kumluc**	**1.04**	**31**	P	**Pn**	**16 25 43.8**	**-1.0**
AKUM				S	**Sn**	**16 25 58.0**	**-0.4**
AKUM				IAML		16 26 04.0	
	comp=N,75nm,0.6s						
IZZE	**Mula-Seydike**	**1.07**	**340**	P	**Pb**	**16 25 48.3**	**+2.6**
IZZE				IAML		16 26 11.0	
	comp=E,135nm,0.4s						
FETY	**Fethiye**	**1.30**	**338**	P	**Pb**	**16 25 51.0**	**+1.4**
FETY				S	**Sn**	**16 26 05.5**	**+0.6**
ELL	**Elmali**	**1.33**	**8**	Pn	**Pn**	**16 25 48.9**	**0.0**
ARG	**Arkhangelos**	**1.49**	**302**	Pn	**Pn**	**16 25 50.9**	**-0.1**
SABU	**Mula-Dalaman**	**1.50**	**338**	P	**Pb**	**16 25 54.0**	**+0.9**
SABU				IAML		16 26 17.0	
	comp=E,30nm,0.6s						
SABU				IAML		16 26 28.0	
	comp=N,40nm,0.9s						
CAME	**Cameli-Denizli**	**1.54**	**349**	Pn	**Pn**	**16 25 51.5**	**-0.3**
CAME				Sn	**Sn**	**16 26 10.9**	**-0.2**
DALY	**Dalyan (Mula)**	**1.61**	**329**	Pn	**Pn**	**16 25 52.7**	**0.0**
KORT	**Korkueli**	**1.66**	**19**	Pn	**Pn**	**16 25 53.5**	**+0.1**
KORT				Sn	**Sn**	**16 26 13.9**	**-0.1**
TURN	**Turunc**	**1.78**	**319**	Pn	**Pn**	**16 25 54.9**	**0.0**
GOLH	**Golhisar**	**1.81**	**357**	P	**Pn**	**16 25 56.5**	**+1.0**
GOLH				S	**Sn**	**16 26 16.8**	**-0.8**
GOLH				IAML		16 26 20.0	
	comp=E,30nm,0.5s						
GOLH				IAML		16 26 44.0	
	comp=N,33nm,0.7s						
YER	**Yerkesik**	**2.04**	**327**	Pn	**Pn**	**16 25 58.8**	**+0.1**
APMY	**Acipayam-Deniz**	**2.06**	**352**	Pn	**Pn**	**16 25 59.1**	**+0.2**
KARP	**Karpathos**	**2.06**	**274**	Pn	**Pn**	**16 25 59.1**	**+0.2**
KARP	**Karpathos**	**2.06**	**274**	P	**Pn**	**16 25 59.0**	**+0.1**
KARP				S	**Sn**	**16 26 24.2**	**+0.4**
KARP				AML	AML	16 26 24.5	
	0.2nm,0.1s						
KARP				AML	AML	16 26 27.0	
	0.2nm,0.1s						
TAVA	**DENIZLI_Tavas**	**2.12**	**343**	P	**Pn**	**16 26 01.7**	**+1.9**
TAVA				S	**Sn**	**16 26 22.9**	**-2.5**
TAVA				IAML		16 26 31.0	
	comp=E,14nm,0.6s						
TAVA				IAML		16 26 35.0	
	comp=N,19nm,0.6s						
AKMS	**Akamas**	**2.21**	**100**	P	**Pn**	**16 26 01.8**	**+0.8**
AKMS				AML	AML	16 26 28.4	
	0.1nm,0.7s						
AKMS				S	**Sn**	**16 26 29.2**	**+1.8**
AKMS				AML	AML	16 26 34.2	
	0.1nm,0.4s						
GAZI	**Gazipasa**	**2.29**	**69**	Pn	**Pn**	**16 26 03.0**	**+1.1**
OSC1	**CSNet OBS 1**	**2.33**	**145**	P	**Pn**	**16 26 03.3**	**+0.7**
OSC1				S	**Sn**	**16 26 32.0**	**+1.6**
OSC1				AML	AML	16 26 34.8	
	0.1nm,0.1s						
OSC1				AML	AML	16 26 36.0	
	0.1nm,0.1s						
ALFC	**Alefka**	**2.40**	**96**	P	**Pn**	**16 26 04.3**	**+0.8**
ALFC				S	**Sn**	**16 26 34.0**	**+1.8**
ALFC				AML	AML	16 26 39.7	
	0.1nm,0.2s						
ALFC				AML	AML	16 26 40.3	
	0.1nm,0.1s						
NATA	**Nata**	**2.46**	**105**	P	**Pn**	**16 26 05.3**	**+1.0**
NATA				S	**Sn**	**16 26 35.0**	**+1.5**
NATA				AML	AML	16 26 37.8	
	0.2nm,0.6s						
NATA				AML	AML	16 26 44.3	
	0.2nm,0.7s						
BODT	**Bodrum**	**2.52**	**311**	Pn	**Pn**	**16 26 05.5**	**+0.4**
SEYD	**Seydisehir-KON**	**2.63**	**41**	Pn	**Pn**	**16 26 07.8**	**+1.0**
TROD	**Troodos**	**2.65**	**100**	P	**Pn**	**16 26 07.5**	**+0.3**
TROD				S	**Sn**	**16 26 40.5**	**+1.9**
TROD				AML	AML	16 26 41.7	
TROD				AML	AML	16 26 46.5	
	0.1nm,0.8s						
HDMB	**Hadim**	**2.73**	**55**	Pn	**Pn**	**16 26 09.5**	**+1.2**
XYLS	**Xyliatos**	**2.79**	**98**	P	**Pn**	**16 26 09.3**	**+0.4**
XYLS				S	**Sn**	**16 26 43.7**	**+2.0**
XYLS				AML	AML	16 26 45.0	
	0.1nm,0.2s						
XYLS				AML	AML	16 26 47.3	
ASGA	**Asgata**	**2.99**	**101**	P	**Pn**	**16 26 12.6**	**+0.9**
ASGA				S	**Sn**	**16 26 48.7**	**+1.9**
ASGA				AML	AML	16 26 51.7	
	0.1nm,0.5s						
ASGA				AML	AML	16 26 53.5	
	0.1nm,0.3s						
CSS	**Mathiatis**	**3.02**	**98**	P	**Pn**	**16 26 13.0**	**+0.9**
CSS				S	**Sn**	**16 26 48.7**	**+1.2**
CSS				AML	AML	16 26 50.1	
CSS				AML	AML	16 26 55.6	
CSS	**Mathiatis**	**3.02**	**98**	P	**Pn**	**16 26 10.5**	**-1.6**
CSS				S	**Sn**	**16 26 45.9**	**-1.6**
ODEM	**Odemis-Izmir**	**3.12**	**336**	Pn	**Pn**	**16 26 13.3**	**-0.2**
OSC2	**CSNet OBS 4**	**3.18**	**137**	P	**Pn**	**16 26 16.0**	**+1.8**
OSC2				S	**Sn**	**16 26 53.2**	**+1.9**
OSC2				AML	AML	16 26 53.7	
	0.1nm,0.7s						
OSC2				AML	AML	16 26 55.1	
	0.1nm,0.9s			

KRMI	**Paran Flat**	**6.79**	**140**	P		**Pn**	**16 27 02.8**	**-1.1**
KRMI				S		**Sn**	**16 28 18.5**	**-1.9**
HRFI	**Mount Harif**	**7.02**	**139**	P		**Pn**	**16 27 05.7**	**-1.3**
HRFI				S		**Sn**	**16 28 25.2**	**-0.9**
EIL	**Elat**	**7.26**	**141**	P		**Pn**	**16 27 09.1**	**-1.3**

*MEX **10** 16:25:53.2±0.5, 13°.85N×92°.21W, h33^{km}±68^{km}, MD3.8*
*GCG **10** 16:25:54.8±1.4, 13°.99N×91°.79W, h14^{km}±19^{km}, MD3.5, ML3.6, Presumed earthquake*
ISC 10 16:25:50.5±3.3**, 14°.0N**±0°.1×**92°.09W**±0°.06**, h14**^{km}±25^{km}**, n15**, σ1^{s}11/20**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	**Retalhuleu**	**0.69**	**34**	*eP*	**Pn**	**16 26 06.4**	**+0.4**
RTAL				*i* S	**Sn**	**16 26 17.5**	**+0.9**
STG2	**El Palmar, Qui**	**0.85**	**55**	*eP*	**Pn**	**16 26 08.5**	**+0.2**
STG2				IAML		16 26 26.8	
	comp=E,4μm,0.3s						
STG5	**El Palmar, Qui**	**0.85**	**58**	*i* P	**Pn**	**16 26 08.4**	**+0.1**
STG8	**El Palmar, Qui**	**0.88**	**55**	*eP*	**Pn**	**16 26 09.2**	**+0.5**
CHUJ	**Union Juarez**	**1.14**	**359**	*eP*	**Pb**	**16 26 12.5**	**+0.3**
CHUJ				*eS*	**Sn**	**16 26 27.8**	**-0.1**
PATR	**El Naranjo**	**1.17**	**353**	*eP*	**Pb**	**16 26 12.9**	**+0.1**
PATR				*eS*	**Sn**	**16 26 28.1**	**-0.6**
PAVE	**Pavencul**	**1.24**	**356**	*eP*	**Pb**	**16 26 14.2**	**+0.2**
PAVE				*eS*	**Sn**	**16 26 29.6**	**-0.8**
FG8	**Yepocapa, Chim**	**1.52**	**78**	*i* P	Pn	16 26 12.3	-5.2
FG16	**Alotenango, Sa**	**1.57**	**78**	*i* P	Pn	16 26 13.5	-4.8
APG	**El Apazote**	**1.90**	**56**	*i* P	**Pn**	**16 26 23.8**	**+1.0**
PCIG		**2.06**	**328**	*eP*	**Pn**	**16 26 25.0**	**+0.2**
PCIG				*eS*	**Sn**	**16 26 51.5**	**+1.2**
NUBE	**Las Nubes**	**2.25**	**91**	*i* P	**Pn**	**16 26 27.6**	**+0.1**
CCIG	**Comitan**	**2.32**	**359**	*eP*	**Pb**	**16 26 32.4**	**+0.1**
CCIG				*eS*	**Sb**	**16 26 59.7**	**-1.3**
CMIG	**Matias Romero**	**4.12**	**320**	*eP*	**Pb**	**16 27 01.3**	**-1.7**
CMIG				*eS*	**Sn**	**16 27 39.7**	**-1.6**
NEUV	**Arroyo Zacate**	**5.17**	**317**	*eP*	**Pn**	**16 27 10.3**	**+2.7**

*IDC **10** 16:29:11.4±1.0, 32°.45N×85°.20E, h0^{km}, mb3.5/8, mbtmp3.5/11, ML2.6/2, Error ellipse: s-maj=35.4km s-min=18.3km az=60.0*
ISC 10 16:29:14.0±1.0**, 32°.5N**±0°.1×**85°.2E**±0°.2**, h16**^{km}**, n11**, σ0^{s}69/11**, mb3.5/7, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**14.44**	**352**	Pn	**Pn**	**16 32 36.9**	**-0.9**
	baz=169,slow=14,SNR=6.7						
	0.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**18.65**	**135**	P	**Pn**	**16 33 31.0**	**-0.6**
	0.2nm,0.4s,baz=308,slow=11,SNR=6.4						
KURBB	**Kurchatov Arra**	**18.77**	**347**	P	**P**	**16 33 31.8**	**-0.4**
	baz=164,slow=10,SNR=5.7						
	0.6nm,0.7s						
ZALV	**Zalesovo Beam**	**21.43**	**359**	P	**P**	**16 34 01.5**	**+0.3**
	0.4nm,0.4s,baz=185,slow=9.8,SNR=4.8						
	0.4nm,0.4s						
SONM	**Songino Array**	**22.16**	**40**	P	**P**	**16 34 09.5**	**+0.3**
	0.8nm,0.7s,baz=233,slow=12,SNR=3.8						
	0.8nm,0.7s						
FINES	**FINESS Array B**	**47.37**	**326**	P	**P**	**16 37 47.1**	**+0.1**
	4.3nm,1.1s,baz=112,slow=9.1,SNR=2.0						
	4.3nm,1.1s						
NOA	**NORSAR Array B**	**54.52**	**325**	P	**P**	**16 38 40.6**	**-0.2**
	0.7nm,0.6s,baz=89,slow=6.8,SNR=2.1						
	0.7nm,0.6s						
WRA	**Warramunga Arr**	**70.18**	**131**	P	**P**	**16 40 25.5**	**-0.6**
	0.4nm,0.6s,baz=320,slow=6.0,SNR=10						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**72.65**	**134**	P	**P**	**16 40 41.4**	**+0.3**
	0.3nm,0.7s,baz=316,slow=6.4,SNR=4.6						
	0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**77.67**	**278**	P	**P**	**16 41 10.4**	**+0.1**
	0.5nm,0.7s,baz=54,slow=2.9,SNR=3.5						
	0.5nm,0.7s						
YKA	**Yellowknife Ar**	**83.99**	**9**	P	**P**	**16 41 44.5**	**+1.3**
	0.1nm,0.5s,baz=336,slow=5.5,SNR=3.0						
	0.1nm,0.5s						

*SJA **10** 16:34:19.8±0.6, 23°.88S×66°.94W, h173^{km}±5^{km}, ML3.5, MW3.5*
*NEIC **10** 16:34:22.9±1.2, 23°.81S±0°.07×67°.71W±0°.1, h176^{km}±7^{km}, mb4.0/6, ML3.8(GUC), Error ellipse: s-maj=16.5km s-min=10.0km az=93.0*
*IDC **10** 16:34:22.1±2.1, 23°.79S×66°.85W, h170^{km}±25^{km}, mb3.5/2, mbtmp4.0/6, Error ellipse: s-maj=37.7km s-min=17.1km az=99.0*
*GUC **10** 16:34:24.6±0.8, 23°.78S×67°.19W, h179^{km}±12^{km}, ML3.8*
ISC 10 16:34:21.7±0.7**, 23°.79S**±0°.04×**67°.08W**±0°.05**, h181**^{km}**, n71**, σ1^{s}60/86**, 2C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALTA		**0.81**	**123**	*eP*	**Pn**	**16 34 51.8**	**+2.9**
SALTA		**0.81**	**123**	*eP*	**Pn**	**16 34 51.9**	**+3.1**
SALTA				*eP*		16 34 52.2	
AF01	**San Pedro de A**	**1.31**	**309**	Pn	**Pn**	**16 34 52.5**	**+0.1**
AF01	**San Pedro de A**	**1.31**	**309**	*eP*	Pn	16 35 09.2	+17
AF01				*eS*	**Sn**	**16 35 15.2**	**-0.8**
HJA	**Humahuaca**	**1.64**	**70**	*eP*	**Pn**	**16 34 53.4**	**-2.2**
SLA	**San Lorenzo**	**1.71**	**123**	*eP*	Pn	16 34 59.6	+3.6
SLA	**San Lorenzo**	**1.71**	**123**	*eP*	Pn	16 34 59.9	+3.8
YJA	**Yavi**	**2.16**	**42**	*eP*	**Pn**	**16 35 04.5**	**+3.3**
YJA	**Yavi**	**2.16**	**42**	*eP*	**Pn**	**16 34 59.9**	**-1.2**
YJA				*eS*	Sn	16 35 10.9	-21
FSA	**Cafayete**	**2.52**	**157**	*eP*	**Pn**	**16 35 01.6**	**-3.4**
PB06	**IPOC Station P**	**2.53**	**295**	Pn	**Pn**	**16 35 06.3**	**+1.3**
PB06	**IPOC Station P**	**2.53**	**295**	*eP*	**Pn**	**16 35 06.5**	**+1.5**
PB06				*eS*	**Sn**	**16 35 38.2**	**-0.4**
PB06				IAML		16 35 39.7	
	comp=N,399nm,0.4s						
PB06	**IPOC Station P**	**2.53**	**295**	*eP*	**Pn**	**16 35 06.1**	**+1.1**
PB06				*eS*	**Sn**	**16 35 39.0**	**+0.4**
PB06				IAML		16 35 39.7	
	comp=Z,186nm,0.3s						
PB09	**IPOC Station P**	**2.81**	**314**		**Pn**	**16 35 10.0**	**+1.6**
PB09	**IPOC Station P**	**2.81**	**314**	*eP*	**Pn**	**16 35 10.3**	**+2.0**
PB09				*eS*	**Sn**	**16 35 45.2**	**+0.6**
PB09				IAML		16 35 46.7	
	comp=N,113nm,0.6s						
PB09	**IPOC Station P**	**2.81**	**314**	*eP*	**Pn**	**16 35 09.9**	**+1.6**
PB09				*eS*	**Sn**	**16 35 46.1**	**+1.5**
PB09				IAML		16 35 47.8	
	comp=Z,97nm,0.4s						
PB03	**IPOC Station P**	**3.01**	**305**		**Pn**	**16 35 11.8**	**+1.1**
PB03	**IPOC Station P**	**3.01**	**305**	*eP*	**Pn**	**16 35 11.8**	**+1.1**
PB03				IAML		16 35 50.5	
	comp=N,155nm,0.2s						
PB03	**IPOC Station P**	**3.01**	**305**	*eP*	**Pn**	**16 35 11.3**	**+0.5**
PB03				*eS*	**Sn**	**16 35 48.3**	**-0.6**
PB03				IAML		16 35 50.2	
	comp=Z,154nm,0.3s						
PB05	**IPOC Station P**	**3.01**	**287**		**Pn**	**16 35 11.7**	**+1.0**
PB05	**IPOC Station P**	**3.01**	**287**	*eP*	**Pn**	**16 35 11.7**	**+1.0**
PB05				IAML		16 35 50.5	
	comp=N,111nm,0.7s						
PB05	**IPOC Station P**	**3.01**	**287**	*eP*	**Pn**	**16 35 11.1**	**+0.3**
PB05				*eS*	**Sn**	**16 35 47.3**	**-1.6**
PB05				IAML		16 35 51.0	
	comp=Z,56nm,0.7s						
PB14	**IPOC Station P**	**3.14**	**254**		**Pn**	**16 35 12.9**	**+0.4**
PB14	**IPOC Station P**	**3.14**	**254**	*eP*	**Pn**	**16 35 13.0**	**+0.5**
PB14	**IPOC Station P**	**3.14**	**254**	*eP*	**Pn**	**16 35 12.9**	**+0.4**
PB14				*eS*	**Sn**	**16 35 51.1**	**-0.9**
PB14				IAML		16 35 52.1	
	comp=Z,52nm,0.7s						
PB07	**IPOC Station P**	**3.30**	**308**		**Pn**	**16 35 15.1**	**+0.8**
PB07	**IPOC Station P**	**3.30**	**308**	*eP*	**Pn**	**16 35 15.2**	**+0.8**
PB07				IAML		16 35 55.3	
	comp=E,178nm,0.5s						
PB07	**IPOC Station P**	**3.30**	**308**	*eP*	**Pn**	**16 35 14.6**	**+0.2**
PB07				*eS*	**Sn**	**16 35 54.1**	**-1.3**
PB07				IAML		16 35 55.6	
	comp=Z,134nm,0.3s						
AHML	**Horco Molle**	**3.38**	**152**	*eP*	Pn	16 35 07.8	-7.4
AHML	**Horco Molle**	**3.38**	**152**	*eP*	Pn	16 35 07.9	-7.3
PB01	**IPOC Station P**	**3.52**	**320**		**Pn**	**16 35 17.8**	**+0.8**
PB01	**IPOC Station P**	**3.52**	**320**	*eP*	**Pn**	**16 35 17.8**	**+0.8**
PB01	**IPOC Station P**	**3.52**	**320**	*eP*	**Pn**	**16 35 17.4**	**+0.4**
PB01				*eS*	**Sn**	**16 35 59.9**	**-0.3**
PB01				IAML		16 36 02.2	
	comp=Z,56nm,0.2s						
AC02	**Maricunga**	**3.55**	**211**		**Pn**	**16 35 18.4**	**+0.7**
AC02	**Maricunga**	**3.55**	**211**	*eP*	**Pn**	**16 35 19.0**	**+1.2**
AC02	**Maricunga**	**3.55**	**211**	*eP*	**Pn**	**16 35 18.4**	**+0.7**
AC02				*eS*	**Sn**	**16 35 57.9**	**-3.6**
PB02	**IPOC Station P**	**3.58**	**313**		**Pn**	**16 35 18.2**	**+0.6**
PB02	**IPOC Station P**	**3.58**	**313**	*eP*	**Pn**	**16 35 18.3**	**+0.6**
PB02	**IPOC Station P**	**3.58**	**313**	*eP*	**Pn**	**16 35 18.0**	**+0.3**
PB02				*eS*	**Sn**	**16 36 00.1**	**-1.3**
PB02				IAML		16 36 00.5	
	comp=Z,144nm,0.3s						
AC01	**Pan de Azucar**	**3.96**	**233**		**Pn**	**16 35 21.7**	**-0.7**
AC01					**Sn**	**16 36 07.0**	**-3.0**
AC01	**Pan de Azucar**	**3.96**	**233**	*eP*	**Pn**	**16 35 21.7**	**-0.7**
AC01	**Pan de Azucar**	**3.96**	**233**	*eP*	**Pn**	**16 35 21.9**	**-0.5**
AC01				*eS*	**Sn**	**16 36 07.9**	**-2.0**
AC01				IAML		16 36 10.4	
	comp=Z,34nm,0.5s						
PATCX	**Punta Patache**	**4.10**	**316**	Pn	**Pn**	**16 35 24.1**	**-0.1**
PATCX					**Sn**	**16 36 11.1**	**-2.1**
PATCX	**Punta Patache**	**4.10**	**316**	*eP*	**Pn**	**16 35 24.2**	**-0.1**
PATCX	**Punta Patache**	**4.10**	**316**	*eP*	**Pn**	**16 35 24.9**	**+0.6**
PATCX				*eS*	**Sn**	**16 36 06.7**	**-6.5**
PATCX				IAML		16 36 15.3	
	comp=Z,32nm,0.6s						
PB08	**IPOC Station P**	**4.11**	**332**		**Pn**	**16 35 25.1**	**+0.4**
TINO	**Tinogasta**	**4.28**	**186**	*eP*	**Pn**	**16 35 28.9**	**+2.3**
HMBC	**Humberstone**	**4.36**	**323**		**Pn**	**16 35 27.0**	**-0.7**
HMBC	**Humberstone**	**4.36**	**323**	*eP*	**Pn**	**16 35 26.9**	**-0.7**
HMBC	**Humberstone**	**4.36**	**323**	*eP*	**Pn**	**16 35 27.1**	**-0.5**
HMBC				*eS*	**Sn**	**16 36 17.6**	**-1.6**
HMBC				IAML		16 36 21.5	
	comp=Z,39nm,0.2s						
GO01	**Chusmiza**	**4.54**	**334**		**Pn**	**16 35 30.7**	**+0.3**
AC06	**Mina Casimiro**	**4.62**	**219**		**Sn**	**16 36 21.9**	**-3.2**
AC06	**Mina Casimiro**	**4.62**	**219**	*eP*	**Pn**	**16 35 30.0**	**-0.8**
PB11	**IPOC Station P**	**4.67**	**329**	*eP*	**Pn**	**16 35 31.4**	**-0.3**
PB11				*eS*	**Sn**	**16 36 24.7**	**-1.7**
PB11				IAML		16 36 25.6	
	comp=Z,31nm,0.2s						
GO03	**Copiapo**	**4.74**	**216**	*eP*	**Pn**	**16 35 31.4**	**-0.9**
GO03	**Copiapo**	**4.74**	**216**	*eP*	**Pn**	**16 35 32.3**	**-0.1**
GO03				*eS*	**Sn**	**16 36 24.3**	**-3.5**
GO03				IAML		16 36 26.2	
	comp=Z,41nm,0.3s						
PB16	**IPOC Station P**	**5.88**	**337**		**Pn**	**16 35 47.9**	**+0.1**
LPAZ	**La Paz**	**7.53**	**352**	P	**Pn**	**16 36 11.3**	**+1.8**
	comp=Z,4.6nm,0.4s,baz=160,slow=7.6,SNR=33						
LPAZ				S	**Sn**	**16 37 34.1**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=196,slow=24,SNR=3.8						
LPAZ	**La Paz**	**7.53**	**352**		**Pn**	**16 36 10.7**	**+1.2**
CFA	**Coronel Fontan**	**7.85**	**187**	P	**Pn**	**16 36 13.9**	**+0.8**
	comp=Z,1.4nm,0.3s,baz=74,slow=17,SNR=4.0						
TRQA	**Tornquist**	**14.88**	**164**	P	**P**	**16 37 45.5**	**+1.0**
GO06	**Curarrehue**	**16.18**	**192**	P	**Pn**	**16 37 59.6**	**+0.4**
GO06				IAmb	IAmb	16 38 04.7	
	comp=Z,4.4nm,0.9s						
PLCA	**Paso Flores**	**17.14**	**189**	P	**Pn**	**16 38 10.8**	**+0.1**
	comp=Z,2.4nm,1.2s,baz=4.8,slow=13,SNR=3.7						
PLCA	**Paso Flores**	**17.14**	**189**	P	**Pn**	**16 38 10.4**	**-0.3**
PLCA				IAmb	IAmb	16 38 53.2	
	comp=Z,6.3nm,1.3s						
BDFB	**Brasilia**	**19.68**	**69**	P	**P**	**16 38 37.0**	**-0.4**
	comp=Z,6.6nm,0.6s,baz=231,slow=9.4,SNR=8.4						
BDFB	**Brasilia**	**19.68**	**69**		**Pn**	**16 38 38.5**	**-2.3**
BDFB				IAmb	IAmb	16 38 39.4	
	comp=Z,8.0nm,0.8s						
SIUN	**Universidad Ur**	**41.09**	**333**	P	**P**	**16 41 48.5**	**+0.6**
SIUN				IAmb	IAmb	16 41 50.1	
	comp=Z,12nm,1.3s						
QSPA	**South Pole Qui**	**66.42**	**180**	P	**P**	**16 44 52.7**	**+1.5**
	comp=Z,1.2nm,0.8s,baz=288,slow=6.4,SNR=2.2						
	comp=Z,1.2nm,0.8s						
TRY	**Troy**	**66.46**	**355**	P	**P**	**16 44 53.1**	**+1.5**
TORD	**Torodi Ar. Bea**	**76.56**	**69**	P	**P**	**16 45 52.1**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=248,slow=7.1,SNR=5.1						
	comp=Z,0.6nm,0.5s						
MKAR	**Makanchi Array**	**146.41**	**39**	PKPbc	**PKiKP**	**16 53 42.9**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=292,slow=4.0,SNR=6.6						

*IDC **10** 16:52:57.6±1.4, 11°.45S×116°.73E, h0^{km}, mb3.4/6, mbtmp3.5/10, ML3.6/4, Error ellipse: s-maj=49.0km s-min=19.6km az=44.0*
*DJA **10** 16:53:03.8±0.3, 11°.5S±3°×11°.7E±°, h71^{km}±20^{km}, M4.3/29, mB5.3/5, mb4.2/13, MLv4.3/29, Mw(mB)4.7/5*
ISC 10 16:53:00.1±0.8**, 11°.44S**±0°.06×**116°.81E**±0°.04**, h26**^{km}**, n39**, σ2^{s}14/51**, mb3.6/5, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWSI	**Taliwang, Sumb**	**2.69**	**2**	P	**Pn**	**16 53 42.4**	**+0.7**
TWSI				S	**Sn**	**16 54 10.8**	**-2.6**
PLAI	**Plampang**	**2.77**	**20**	P	**Pn**	**16 53 43.6**	**+0.8**
PLAI				S	**Sn**	**16 54 12.9**	**-2.5**
IGBI	**Denpasar**	**3.08**	**328**	P	**Pn**	**16 53 49.1**	**+2.1**
IGBI				S	**Sn**	**16 54 20.1**	**-2.9**
WBSI	**Waikabubak, Su**	**3.11**	**55**	P	**Pn**	**16 53 48.1**	**+0.6**
WBSI				S	**Sn**	**16 54 23.2**	**-0.7**
DNP	**Denpasar**	**3.16**	**330**	P	**Pn**	**16 53 49.7**	**+1.5**
DNP				S	**Sn**	**16 54 23.5**	**-1.7**
DBNI	**Kabupaten Domp**	**3.28**	**27**	P	**Pn**	**16 53 51.8**	**+2.0**
DBNI				S	**Sn**	**16 54 26.6**	**-1.4**
KHKI	**Kahang-Kahang**	**3.28**	**339**	P	**Pn**	**16 53 49.3**	**-0.5**
KHKI				S	**Sn**	**16 54 27.2**	**-0.8**
RTBI	**Rangdo, Negare**	**3.49**	**328**	P	**Pn**	**16 53 53.8**	**+1.1**
WSI	**Waingapu**	**3.86**	**63**	P	**Pn**	**16 53 59.3**	**+1.5**
WSI				S	**Sn**	**16 54 42.2**	**-0.1**
BASI	**Baing, Sumba**	**3.90**	**72**	P	**Pn**	**16 54 00.2**	**+1.8**
BASI				S	**Sn**	**16 54 43.3**	**0.0**
JAGI	**Jajag, Banyuwa**	**3.94**	**318**	P	**Pn**	**16 53 58.8**	**-0.2**
LBFI	**Labuhan Bajo,**	**4.23**	**46**	P	**Pn**	**16 54 04.3**	**+1.4**
ABJI	**Asem Bagus**	**4.42**	**325**	P	**Pn**	**16 54 07.7**	**+2.2**
ABJI				S	**Sn**	**16 54 56.1**	**-0.1**
BLJI	**Banyuglugur**	**4.85**	**319**	P	**Pn**	**16 54 12.4**	**+1.0**
BLJI				S	**Sn**	**16 55 04.9**	**-1.9**
EDFI	**Ende, Flores**	**5.50**	**61**	P	**Pn**	**16 54 23.0**	**+2.5**
	0.1nm7.4nm,0.6s						
MMRI	**Maumere**	**6.03**	**63**	P	**Pn**	**16 54 28.2**	**+0.5**
SNJI	**Sawahan-Nganju**	**6.16**	**306**	P	**Pn**	**16 54 31.9**	**+2.2**
	0.1nm21nm,1.1s						
SJI	**Sawahan**	**6.18**	**306**	P	**Pn**	**16 54 31.1**	**+1.2**
BSSI	**Bau Bau, Buton**	**6.40**	**35**	P	**Pn**	**16 54 34.7**	**+1.9**
	0.2nm28nm,0.8s						
PCJI	**Pacitan**	**6.42**	**300**	P	**Pn**	**16 54 33.1**	**+0.1**
	0.2nm27nm,0.6s						
BATI	**Baumata**	**6.85**	**80**	Pn	**Pn**	**16 54 40.5**	**+1.5**
	2.2nm,0.3s,baz=308,slow=19,SNR=3.1						
BATI				Sn	**Sn**	**16 55 55.9**	**-0.2**
	4.4nm,0.3s,baz=355,slow=17,SNR=9.1						
	5.2nm,0.3s						
BATI	**Baumata**	**6.85**	**80**	P	**Pn**	**16 54 40.0**	**+1.1**
	0.1nm10nm,0.8s						
BATI				S	**Sn**	**16 55 57.5**	**+1.4**
	0.1nm10nm,0.8s						
KAPI	**Kappang**	**7.02**	**25**	Pn	**Pn**	**16 54 43.1**	**+1.9**
	1.3nm,0.3s,baz=180,slow=12,SNR=3.9						
KAPI				Sn	**Sn**	**16 55 55.8**	**-4.5**
	1.4nm,0.3s,baz=277,slow=23,SNR=1.8						
	4.3nm,0.3s						
KAPI	**Kappang**	**7.02**	**25**	P	**Pn**	**16 54 41.3**	**0.0**
KAPI				S	**Sn**	**16 55 56.8**	**-3.5**
UGM	**Wanagama**	**7.12**	**299**	P	**Pn**	**16 54 44.4**	**+1.8**
PSA00	**Pilbara Seismi**	**10.49**	**164**	P	Sn	16 57 13.2	-12
FITZ	**Fitzroy Crossi**	**10.80**	**129**	Pn	**Pn**	**16 55 33.6**	**+0.5**
	0.4nm,0.3s,baz=310,slow=5.9,SNR=18						
FITZ				Sn	Sn	16 57 24.7	-8.6
	1.3nm,0.3s,baz=178,slow=23,SNR=13						
	1.9nm,0.5s						
MEEK	**Meekatharra**	**15.21**	**174**	P	**Pn**	**16 56 31.5**	**-1.8**
MORW	**Morawa**	**17.55**	**182**	P	**Pn**	**16 57 01.8**	**-1.2**
WRA	**Warramunga Arr**	**18.86**	**119**	P	**Pn**	**16 57 20.1**	**+0.9**
	0.2nm,0.3s,baz=291,slow=13,SNR=6.9						
WRA				S	Sn	17 00 34.4	-15
	0.2nm,0.3s,baz=77,slow=26,SNR=6.1						
	0.2nm,0.5s						
BLDU	**Ballidu**	**19.08**	**180**	P	**P**	**16 57 22.1**	**+1.3**
KLBR	**Kellerberrin**	**20.07**	**178**	P	Pn	16 57 35.5	+2.0
ASAR	**Alice Springs**	**20.31**	**129**	P	Pn	16 57 36.6	+0.2
	0.5nm,0.7s,baz=305,slow=10,SNR=7.2						
ASAR				S	**S**	**17 01 12.0**	**-8.9**
	1.0nm,0.7s,baz=306,slow=23,SNR=6.6						
	0.5nm,0.7s						
MUN	**Mundaring**	**20.45**	**181**	P	Pn	16 57 42.7	+4.8
SONM	**Songino Array**	**59.73**	**352**	P	**P**	**17 03 03.0**	**+0.3**
	0.2nm,0.5s,baz=162,slow=6.1,SNR=2.2						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**65.68**	**335**	P	**P**	**17 03 43.2**	**+0.9**
	0.3nm,0.4s,baz=149,slow=6.7,SNR=9.0						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**70.23**	**335**	P	**P**	**17 04 12.3**	**+1.6**
	0.2nm,0.5s,baz=147,slow=5.9,SNR=2.3						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**70.58**	**341**	P	**P**	**17 04 15.3**	**+2.5**
	0.3nm,0.3s,baz=146,slow=5.7,SNR=1.8						
	0.3nm,0.3s						
BVAR	**Borovoye Array**	**75.45**	**333**	P	**P**	**17 04 43.9**	**+2.3**
	0.3nm,0.5s,baz=128,slow=4.2,SNR=2.1						
	0.3nm,0.5s						

IDC 10 16:55:56.7±46.0**, 17°.99S×170°.84W, h0^{km}, mb3.9**/3**, mbtmp3.9/3, Error ellipse: s-maj=904.8km s-min=192.1km az=82.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**44.96**	**243**	P	P	17 04 14.2	+0.4
	0.7nm,0.5s,baz=67,slow=7.7,SNR=1.4						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**51.69**	**259**	P	P	17 05 05.8	-0.2
	0.3nm,0.3s,baz=97,slow=6.8,SNR=25						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**51.70**	**254**	P	P	17 05 05.8	-0.3
	1.6nm,0.6s,baz=93,slow=8.2,SNR=27						
	1.6nm,0.6s						

*IDC **10** 17:10:31.9±2.8, 36°.07N×22°.56E, h0^{km}, mb3.8/8, mbtmp3.8/11, ML3.3/3, Error ellipse: s-maj=58.0km s-min=21.4km az=11.0*
*THE **10** 17:10:36.0, 36°N±2°×2°3E±°, h3^{km}±3^{km}, M3.2/14, MLh3.2/14*
*ATH **10** 17:10:37.3, 36°.22N×22°.93E, h14^{km}±1^{km}, ML3.2/29, Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*
ISC 10 17:10:35.7±1.1**, 36°.19N**±0°.03×**22°.78E**±0°.03**, h12**^{km}±7^{km}**, n86**, σ1^{s}46/106**, mb3.8/8, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTHA	**Kythira Island**	**0.24**	**73**	P	**Pg**	**17 10 40.9**	**+0.1**
KTHA	**Kythira Island**	**0.24**	**73**	P	**Pg**	**17 10 40.8**	**0.0**
NPS1	**Neapolis Lacon**	**0.40**	**35**	P	**Pg**	**17 10 43.8**	**+0.1**
NPS1				S	**Sg**	**17 10 48.8**	**-0.2**
MNVA	**Monemvasia**	**0.54**	**23**	P	**Pg**	**17 10 46.9**	**+0.6**
MNVA				S	**Sg**	**17 10 53.7**	**+0.1**
VLI	**Veliai**	**0.55**	**14**	P	**Pg**	**17 10 46.4**	**-0.1**
VLI				S	**Sg**	**17 10 53.5**	**-0.2**
VLI	**Veliai**	**0.55**	**14**	P	**Pg**	**17 10 46.3**	**-0.1**
VLI				S	**Sg**	**17 10 53.9**	**+0.2**
MTHA	**Methoni**	**1.07**	**307**	P	**Pn**	**17 10 57.5**	**+1.0**
PYL	**PYLOS**	**1.09**	**311**	P	**Pg**	**17 10 55.2**	**-1.5**
PYL				S	**Sg**	**17 11 11.1**	**+0.1**
KNDR	**Palaiochora Ch**	**1.17**	**144**	P	**Pg**	**17 10 58.7**	**+0.5**
KNDR				S	**Sg**	**17 11 14.3**	**+0.8**
ITM	**Ithomi**	**1.21**	**326**	P	**Pg**	**17 10 58.2**	**-0.7**
ITM				S	**Sg**	**17 11 13.7**	**-0.9**
ITM	**Ithomi**	**1.21**	**326**	P	**Pg**	**17 10 58.5**	**-0.4**
CH01	**Chania**	**1.21**	**123**	P	**Pg**	**17 10 58.4**	**-0.6**
CH01				S	**Sg**	**17 11 14.0**	**-0.7**
IMMV	**Iera Moni Meta**	**1.22**	**126**	P	**Pg**	**17 10 58.1**	**-1.0**
IMMV				S	**Sg**	**17 11 15.3**	**+0.4**
IMMV	**Iera Moni Meta**	**1.22**	**126**	P	**Pg**	**17 10 57.9**	**-1.1**
IMMV				S	**Sg**	**17 11 14.5**	**-0.4**
CHAN	**Chania**	**1.22**	**123**	P	**Pg**	**17 10 58.5**	**-0.8**
CHAN				S	**Sg**

0.4nm,0.4s
KURBB **Kurchatov Arra 42.00 52** P **P** **17 18 24.9 -1.7**
0.4nm,0.4s,baz=278,slow=8.7,SNR=2.3
0.4nm,0.4s
SPITS **Spitsbergen Ar 42.19 358** P **P** **17 18 27.6 -0.3**
7.3nm,1.0s,baz=186,slow=8.1,SNR=1.8
7.3nm,1.0s
MKAR **Makanchi Array 44.84 57** P **P** **17 18 49.0 -0.7**
1.6nm,0.4s,baz=275,slow=7.9,SNR=41
1.6nm,0.4s
ZALV **Zalesovo Beam 45.71 47** P **P** **17 18 55.0 -1.4**
0.4nm,0.4s,baz=274,slow=8.5,SNR=2.8
0.4nm,0.4s

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*JMA **10** 17:12:01.0±0.2,36˚N±1˚×137˚2E±1˚.0, h255km±1km, MV2.8/23, NORTHERN GIFU PREF*
*IDC **10** 17:12:00.6±0.8, 36˚.27N×137˚.35E, h261km±29km, mb2.8/4, mbtmp3.4/4, Error ellipse: s-maj=118.0km s-min=19.8km az=62.0*
ISC 10 17:12:00.6±1.0, 36˚.2N±0˚.1×137˚.18E±0˚.09, h256km±8km, n17, σ0$52/20, mb3.0/4, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JGN	**Niukaw**	**0.11**	**83**	*eP*		**Pn**	**17 12 34.2**	**+0.6**
JKG	**Kaga**	**0.69**	**276**	*eP*		**Pn**	**17 12 35.3**	**+0.5**
JYTA	**Yamagatataniai**	**0.71**	**210**	*eP*		**Pn**	**17 12 35.1**	**+0.1**
JYTA				*eS*		**S**	**17 13 00.9**	**-1.1**
MAT	**Matsushiro**	**0.90**	**68**	P		**Pn**	**17 12 36.1**	**+0.4**
MJAR	**Matsushiro Arr**	**0.90**	**68**	P		**Pn**	**17 12 36.4**	**+0.6**
	15nm,0.3s,baz=246,slow=2.9,SNR=125							
MJAR				S		**S**	**17 13 03.6**	**+0.2**
	3.0nm,0.7s,baz=155,slow=9.4,SNR=2.4							
JYN	**Shimob**	**1.32**	**122**	*eP*		**Pn**	**17 12 38.5**	**+0.2**
JRY	**Ryogami san**	**1.41**	**97**	P		**Pn**	**17 12 39.4**	**+0.5**
JWT	**Wachi**	**1.71**	**238**	*eP*		**Pn**	**17 12 41.3**	**+0.1**
JOD2	**Odawara 2**	**1.82**	**121**	P		**Pn**	**17 12 42.7**	**+0.6**
JAG	**Ashikaga**	**1.85**	**83**	*eP*		**Pn**	**17 12 42.0**	**-0.2**
JAG				*eS*		**S**	**17 13 14.7**	**-0.4**
JIE	**Ise**	**1.85**	**192**	*eP*		**Pn**	**17 12 43.1**	**+0.7**
JWY	**Kouya**	**2.37**	**214**	*eP*		**Pn**	**17 12 47.7**	**+0.5**
JTNC	**Tanabenakahech**	**2.71**	**209**	*eP*		**Pn**	**17 12 50.9**	**+0.3**
MKAR	**Makanchi Array**	**41.67**	**302**	P		**P**	**17 19 24.5**	**+0.2**
	0.3nm,0.6s,baz=82,slow=9.9,SNR=2.5							
	0.3nm,0.6s							
KURBB	**Kurchatov Arra 43.83 308**			P		**P**	**17 19 41.1**	**-0.3**
	0.6nm,0.6s,baz=83,slow=7.8,SNR=6.8							
	0.6nm,0.6s							
WRA	**Warramunga Arr 55.91 183**			P		**P**	**17 21 11.9**	**-0.3**
	0.5nm,0.7s,baz=1.3,slow=7.2,SNR=10.0							
	0.5nm,0.7s							
ASAR	**Alice Springs 59.63 183**			P		**P**	**17 21 38.2**	**+0.1**
	0.1nm,0.4s,baz=357,slow=6.3,SNR=1.7							
	0.1nm,0.4s							

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*DJA **10** 17:16:17.1±1.6,13˚N±16˚×12˚6E±˚, h10km, M4.4/18, mb4.4/18, mB4.8/2, Mw(mB)4.0/2*
*MAN **10** 17:16:39.0, 11˚.26N×124˚.62E, h8km, MS4.5*
MAN INTENSITY IV - CAPOOCAN CARIGARA AND LEYTE LEYTE; . INTENSITY III - CABUCGAYAN NAVAL AND BILIRAN BILIRAN; TUNGA LEYTE; . INTENSITY II - JARO LEYTE.
*NEIC **10** 17:16:43.3±1.4, 11˚.08N±0˚.07×124˚.87E±0˚.09, h52km±7km, mb4.5/55, Error ellipse: s-maj=13.1km s-min=10.1km az=94.0*
*IDC **10** 17:16:48.1±2.4, 11˚.10N×124˚.69E, h90km±23km, mb3.7/25, mbtmp4.1/28, MS3.5/27, Error ellipse: s-maj=23.4km s-min=10.9km az=73.0*
ISC 10 17:16:40.7±0.9, 11˚.23N±0˚.03×124˚.72E±0˚.03, h28km±7km, n155, σ1$80/143, mb4.5/49, MS3.6/24, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**0.26**	**104**	*i* P		**Pn**	**17 16 47.2**	**-1.5**
PLP				*i* S		**Sb**	**17 16 54.2**	**+2.2**
PLP	**Palo**	**0.26**	**104**	*i* P		**Pn**	**17 16 47.2**	**-1.5**
PLP				*i* S		**Sb**	**17 16 54.2**	**+2.2**
LLP	**Lapu-Lapu**	**1.17**	**219**	*eP*		**Pn**	**17 16 59.2**	**-2.1**
LLP				*i* s		**Sb**	**17 17 16.8**	**-0.4**
LLP	**Lapu-Lapu**	**1.17**	**219**	*eP*		**Pn**	**17 16 59.2**	**-2.1**
LLP				*i* s		**Sb**	**17 17 16.8**	**-0.4**
MMPH	**Masbate**	**1.55**	**316**	*eP*		**Pn**	**17 17 05.0**	**-1.6**
MMPH				*eS*		**Sn**	**17 17 25.3**	**-0.5**
MMPH	**Masbate**	**1.55**	**316**	*eP*		**Pn**	**17 17 05.0**	**-1.6**
MMPH				*eS*		**Sn**	**17 17 25.3**	**-0.5**
RCP	**Roxas**	**1.97**	**280**	*i* P		**Pn**	**17 17 11.5**	**-0.8**
RCP				*i* S		**Sn**	**17 17 36.4**	**+0.4**
RCP	**Roxas**	**1.97**	**280**	*i* P		**Pn**	**17 17 11.5**	**-0.8**
RCP				*i* S		**Sn**	**17 17 36.4**	**+0.4**
IBAJ	**Ibajay, Aklan**	**2.57**	**283**	*eP*		**Pn**	**17 17 19.3**	**-1.2**
IBAJ				*eS*		**Sb**	**17 17 58.6**	**+1.3**
IBAJ	**Ibajay, Aklan**	**2.57**	**283**	*eP*		**Pn**	**17 17 19.3**	**-1.2**
IBAJ				*eS*		**Sb**	**17 17 58.6**	**+1.3**
CGP	**Cagayan de Oro**	**2.76**	**181**	*eP*		**Pb**	**17 17 26.0**	**-3.4**
CGP				*eS*		**Sb**	**17 18 08.7**	**+5.9**
DCPH	**Dipolog City**	**2.96**	**207**	*eP*		**Pn**	**17 17 25.2**	**-0.6**
DCPH	**Dipolog City**	**2.96**	**207**	*eP*		**Pn**	**17 17 25.2**	**-0.6**
BIPH	**Bislig**	**3.43**	**152**	*eP*		**Pb**	**17 17 36.9**	**-4.0**
BIPH				*eS*		**Sb**	**17 18 25.5**	**+3.4**
GQP	**Guinayangan**	**3.47**	**320**	*eP*		**Pn**	**17 17 32.6**	**-0.3**
GQP				*eS*		**Sb**	**17 18 20.5**	**-2.6**
BOAC	**Boac**	**3.58**	**309**	*eP*		**Pn**	**17 17 34.0**	**-0.4**
CTBH	**Cotabato--PC H**	**4.01**	**187**	*eP*		**Pn**	**17 17 42.9**	**+2.5**
DMPH	**Davao City--Mi**	**4.19**	**169**	*eP*		**Pb**	**17 17 52.6**	**-1.3**
KCP	**Kidapawan**	**4.21**	**175**	*eP*		**Pb**	**17 17 54.4**	**+0.2**
DAV	**Davao City (W)**	**4.22**	**168**	P		Pb	17 17 49.5	-4.8
	122nm,0.4s,baz=339,slow=8.6,SNR=1.2							
DAV	**Davao City (W)**	**4.22**	**168**			**Pn**	**17 17 43.2**	**0.0**
TGY	**Tagaytay City**	**4.67**	**308**	P		Pn	17 17 57.0	+7.5
	73nm,0.3s,baz=133,slow=13,SNR=3.0							
TGY				LR		LR	17 19 49.2	
	comp=Z,1μm,20.2s,baz=152,slow=38							
PCPS	**Palayan City**	**4.93**	**314**	*eP*		**Pb**	**17 18 03.6**	**-2.9**
PCPS				*eS*		Sn	17 18 37.5	-12
DDMP	**Don Marcelino,**	**5.18**	**169**	*eP*		Pb	17 18 04.6	-6.2
MYLDM	**Lahad Datu**	**8.60**	**226**			**Pn**	**17 18 44.1**	**+0.6**
MYLDM					Sn	**Sn**	**17 20 21.4**	**+1.6**
MYLDM	**Lahad Datu**	**8.60**	**226**	P		Pn	17 18 52.5	+9.0
TNTI	**Ternate**	**10.72**	**166**	Pn		**Pn**	**17 19 11.4**	**-1.1**
YULB	**Yu-li**	**12.53**	**345**	Pn		**Pn**	**17 19 38.9**	**+1.7**
TPUB	**Ta-pu**	**12.62**	**343**	Pn		**Pn**	**17 19 39.7**	**+1.2**
SSLB	**Suanglung**	**12.99**	**344**	Pn		**Pn**	**17 19 44.9**	**+1.3**
SIJI	**Sorong**	**13.67**	**151**	LR		LR	17 26 14.8	
	comp=Z,41nm,19.2s,baz=274,slow=42							
YHNB	**Yeheng**	**13.74**	**347**	Pn		**Pn**	**17 19 54.7**	**+0.9**
TATO	**Taipei**	**14.01**	**348**	Pn		**Pn**	**17 19 58.0**	**+0.5**
BKB	**Balikpapan**	**14.65**	**213**	Pn		**Pn**	**17 20 04.5**	**-1.7**
TTSI	**Tana Toraja**	**15.00**	**199**	P		P	17 20 21.2	+5.1
	22nm,1.2s							
SBUM	**Sibu**	**15.16**	**236**			**Pn**	**17 20 14.7**	**+1.6**
SBUM					IAmb	IAmb	17 20 28.3	
	comp=Z,33nm,1.4s							
SBUM	**Sibu**	**15.16**	**236**	P		**P**	**17 20 20.3**	**+2.4**
	comp=Z,227nmcomp=Z,17nm,1.5s							
JOW	**Kunigami**	**15.88**	**12**	LR		LR	17 25 17.0	
	comp=Z,226nm,21.4s,baz=71,slow=32							
JOW	**Kunigami**	**15.88**	**12**	Pn		**Pn**	**17 20 24.4**	**+2.0**
JOW					IAmb	IAmb	17 20 55.5	
	comp=Z,69nm,1.1s							
SPSI	**Sidrap Palu**	**15.88**	**198**	P		**P**	**17 20 28.7**	**+2.8**
	comp=Z,18nm,1.1s							
KAPI	**Kappang**	**16.88**	**197**	P		**P**	**17 20 35.7**	**-1.2**
	comp=Z,4.6nm,0.4s,baz=29,slow=16,SNR=4.8							
KAPI				LR		LR	17 28 04.5	
	comp=Z,110nm,18.4s,baz=34,slow=40							
KAPI	**Kappang**	**16.88**	**197**			**Pn**	**17 20 33.6**	**-1.5**
KAPI	**Kappang**	**16.88**	**197**	P		**P**	**17 20 42.1**	**+5.1**
	comp=Z,8.4nm,1.0s							
MKS	**Makassar**	**17.16**	**198**	P		**P**	**17 20 46.4**	**+6.4**
	comp=Z,24nm,0.8s							
GUMO	**Guam**	**19.81**	**81**	LR		LR	17 27 06.7	
	comp=Z,143nm,21.5s,baz=250,slow=31							
EDFI	**Ende, Flores**	**20.08**	**189**	P		Pn	17 21 16.3	+2.1
SAUI	**Saumlaki**	**20.18**	**161**	P		**P**	**17 21 09.7**	**-3.6**
SOEI	**Soe**	**20.85**	**181**	P		**P**	**17 21 17.7**	**-3.0**
SOEI					IAmb	IAmb	17 21 43.5	
	comp=Z,16nm,0.9s							
SOEI	**Soe**	**20.85**	**181**	P		Pn	17 21 22.6	-0.7
	comp=Z,19nm,1.1s							
JSU	**Suzuyama**	**20.86**	**14**	P		**P**	**17 21 19.8**	**-0.8**
KMMI	**Kalianget**	**21.08**	**211**	P		**P**	**17 21 26.5**	**+3.5**
	comp=Z,27nm,1.0s							
BATI	**Baumata**	**21.32**	**183**	P		**P**	**17 21 26.7**	**+1.1**
	comp=Z,10nm,0.6s,baz=31,slow=19,SNR=5.4							
	comp=Z,10nm,0.6s							
BATI	**Baumata**	**21.32**	**183**	P		**P**	**17 21 26.8**	**+1.1**
JNU	**Nakatsue**	**22.51**	**14**	LR		LR	17 31 37.4	
	comp=Z,52nm,19.3s,baz=214,slow=39							
ENH	**Enshi**	**23.66**	**325**	P		**P**	**17 21 50.1**	**+0.1**
ENH					IAmb	IAmb	17 22 11.1	
	comp=Z,24nm,1.5s							
UGM	**Wanagama**	**23.69**	**217**	P		**P**	**17 21 48.9**	**-1.5**
KULM	**Kulim**	**24.53**	**258**	P		**P**	**17 21 57.8**	**-0.4**
KULM					IAmb	IAmb	17 22 03.4	
	comp=Z,17nm,1.2s							
LEM	**Lembang**	**24.73**	**224**	LR		LR	17 32 55.1	
	comp=Z,114nm,20.0s,baz=356,slow=39							
MTN	**Manton Dam**	**24.75**	**165**	P		**P**	**17 21 58.2**	**-1.9**
MTN					IAmb	IAmb	17 22 20.6	
	comp=Z,17nm,1.2s							
TJN	**Taejon**	**25.15**	**5**	P		**P**	**17 22 04.0**	**+0.4**
BBJI	**Bungbulang**	**25.17**	**223**	P		**P**	**17 22 03.6**	**-0.5**
LYN	**LuoYang**	**25.77**	**336**	*eP*		**P**	**17 22 10.8**	**+1.6**
LYN					pmax	pmax		
	comp=Z,13nm,0.6s							
CMAR	**Chiang Mai Arr**	**25.91**	**289**	P		**P**	**17 22 11.7**	**+0.9**
	comp=Z,0.3nm,0.4s,baz=102,slow=8.1,SNR=5.0							
CMAR					LR	LR	17 32 57.2	
	comp=Z,42nm,19.3s,baz=120,slow=37							
	comp=Z,0.3nm,0.4s							
KSRS	**Korea Array**	**26.27**	**6**	P		**P**	**17 22 15.0**	**+1.3**
	comp=Z,1.0nm,0.9s,baz=191,slow=10,SNR=1.8							
KSRS					LR	LR	17 32 07.3	
	comp=Z,113nm,21.4s,baz=185,slow=35							
	comp=Z,1.0nm,0.9s							
KS19	**Wonju Array Si**	**26.31**	**6**	P		**P**	**17 22 13.5**	**-0.6**
XAN	**Xi'an**	**26.91**	**330**	⇑P		**P**	**17 22 20.9**	**+1.3**
XAN					pmax	pmax		
	comp=Z,10.0nm,1.1s							
XAN					LR	LR		
	comp=N,250nm,15.7s							
XAN					LR	LR		
	comp=E,170nm,14.4s							
XAN					LR	LR		
	comp=Z,270nm,16.5s							
KNRA	**Kununurra**	**27.03**	**171**	P		**P**	**17 22 18.7**	**-2.1**
KNRA					IAmb	IAmb	17 22 56.6	
	comp=Z,22nm,1.4s							
WB0	**Warramunga Arr**	**32.24**	**163**	P		**P**	**17 23 04.1**	**-2.9**
WB0					IAmb	IAmb	17 23 06.7	
	comp=Z,7.2nm,1.4s							
WRA	**Warramunga Arr**	**32.39**	**163**	P		**P**	**17 23 08.8**	**+0.5**
	comp=Z,1.2nm,0.9s,baz=342,slow=8.7,SNR=7.8							
	comp=Z,1.2nm,0.9s							
WR8	**Warramunga Arr**	**32.45**	**163**	P		**P**	**17 23 05.9**	**-2.9**
WR8					IAmb	IAmb	17 23 14.1	
	comp=Z,6.3nm,1.2s							
USRK	**Ussuriysk Ar.**	**33.45**	**10**	P		**P**	**17 23 18.7**	**+1.5**
	comp=Z,2.4nm,0.7s,baz=194,slow=7.3,SNR=5.9							
	comp=Z,2.4nm,0.7s							
BRDH	**Bariadhala**	**33.55**	**294**	LR		LR	17 37 18.4	
	comp=Z,123nm,20.2s,baz=130,slow=37							
GTA2	**Gaotai**	**35.82**	**326**	*eP*		**P**	**17 23 39.8**	**+1.7**
GTA2					pP	pP	17 23 42.7	-3.6
GTA2					pmax	pmax		
	comp=Z,7.0nm,1.2s							
GTA2					LR	LR		
	comp=N,250nm,17.2s							
GTA2					LR	LR		
	comp=E,120nm,16.1s							
GTA2					LR	LR		
	comp=Z,240nm,17.5s							
AS31	**Alice Springs**	**35.82**	**166**	P		**P**	**17 23 36.1**	**-2.0**
ASAR	**Alice Springs**	**35.82**	**166**	P		**P**	**17 23 37.7**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=345,slow=8.9,SNR=31							
ASAR					PcP	**PcP**	**17 26 05.0**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=340,slow=3.3,SNR=1.9							
	comp=Z,0.8nm,0.7s							
ASAJ	**Asahikawa**	**36.22**	**22**	LR		LR	17 38 56.2	
	comp=Z,59nm,19.4s,baz=218,slow=36							
LSA	**Lhasa**	**36.23**	**306**	P		**P**	**17 23 41.7**	**-0.5**
LSA					IAmb	IAmb	17 23 50.2	
	comp=Z,12nm,1.4s							
LSA	**Lhasa**	**36.23**	**306**	P		**P**	**17 23 41.5**	**-0.6**
GOMU	**GeErMu**	**36.71**	**318**	P		P	17 23 50.7	+4.7
GOMU					pP	pP	17 23 54.5	+0.2
GOMU					sP	sP	17 23 57.8	+0.1
GOMU					pmax	pmax		
	comp=Z,7.0nm,1.4s							
ULN	**Ulaanbaatar**	**39.42**	**341**	P		**P**	**17 24 08.2**	**-0.2**
SONM	**Songino Array**	**39.60**	**341**	P		**P**	**17 24 11.0**	**+1.1**
	comp=Z,1.2nm,0.7s,baz=157,slow=7.8,SNR=8.7							
SONM					LR	LR	17 40 58.8	
	comp=Z,69nm,19.6s,baz=159,slow=36							
	comp=Z,1.2nm,0.7s							
MORW	**Morawa**	**40.93**	**192**	P		**P**	**17 24 19.3**	**-1.6**
MORW					IAmb	IAmb	17 24 51.4	
	comp=Z,19nm,1.4s							
INKA	**Innaminka**	**41.73**	**158**	P		**P**	**17 24 24.6**	**-2.9**
FORT	**Forrest**	**41.89**	**176**	P		**P**	**17 24 26.8**	**-1.9**
FORT					IAmb	IAmb	17 24 34.0	
	comp=Z,8.0nm,0.8s							
PALK	**Pallekele**	**43.59**	**269**	LR		LR	17 41 11.3	
	comp=Z,69nm,21.9s,baz=116,slow=34							
TLY	**Talaya**	**43.83**	**341**	P		**P**	**17 24 45.3**	**+0.9**
BBOO	**Buckleboo**	**45.11**	**166**	P		**P**	**17 24 53.1**	**-1.6**
STKA	**Stephens Creek**	**45.81**	**160**	P		**P**	**17 24 59.8**	**-0.5**
	comp=Z,1.8nm,0.8s,baz=331,slow=10,SNR=4.5							
	comp=Z,1.8nm,0.8s							
STKA	**Stephens Creek**	**45.81**	**160**	P		**P**	**17 24 58.1**	**-2.2**
ARMA	**Armidale**	**48.83**	**149**	P		**P**	**17 25 21.3**	**-2.6**
PETK	**Petropavlovsk-**	**49.42**	**26**	LR		LR	17 43 53.6	
	comp=Z,43nm,21.0s,baz=203,slow=33							
WUS	**Wushi**	**49.77**	**315**	P		**P**	**17 25 31.4**	**+0.3**
WUS					IAmb	IAmb	17 26 03.5	
	comp=Z,6.0nm,1.1s							
MKAR	**Makanchi Array**	**50.35**	**323**	P		**P**	**17 25 36.8**	**+1.5**
	comp=Z,1.3nm,0.8s,baz=122,slow=7.7,SNR=12							
	comp=Z,1.3nm,0.8s							
MAKZ	**Makanchi**	**50.54**	**323**	P		**P**	**17 25 37.6**	**+0.9**
MAKZ					IAmb	IAmb	17 25 44.0	
	comp=Z,8.7nm,1.4s							
YAK	**Yakutsk**	**50.84**	**3**	P		**P**	**17 25 41.1**	**+2.4**
	comp=Z,3.4nm,0.6s,baz=210,slow=20,SNR=2.2							
	comp=Z,3.4nm,0.6s							
YAK	**Yakutsk**	**50.84**	**3**	P		**P**	**17 25 39.5**	**+0.8**
YAK					IAmb	IAmb	17 25 51.6	
	comp=Z,8.4nm,0.9s							
PRZ	**Przheval'sk**	**50.85**	**316**	P		**P**	**17 25 40.1**	**+0.8**
MGBR	**Mount Gambier**	**50.91**	**164**	P		**P**	**17 25 37.2**	**-2.3**
NIL	**Nilore**	**51.94**	**304**	P		**P**	**17 25 48.2**	**+0.7**
MA2	**Magadan**	**52.04**	**16**	P		**P**	**17 25 49.6**	**+1.9**
	comp=Z,1.3nm,0.6s,baz=169,slow=10,SNR=4.3							
	comp=Z,1.3nm,0.6s							
MA2	**Magadan**	**52.04**	**16**	P		**P**	**17 25 48.5**	**+0.9**
MA2					IAmb	IAmb	17 25 53.1	
	comp=Z,3.8nm,1.1s							
MA2	**Magadan**	**52.04**	**16**	P		P	17 25 52.7	+5.0
	comp=Z,4.7nm,2.6s							
ZALV	**Zalesovo Beam**	**53.06**	**332**	P		**P**	**17 25 56.8**	**+1.4**
	comp=Z,2.2nm,1.0s,baz=123,slow=5.3,SNR=6.9							
	comp=Z,2.2nm,1.0s							
ARSB	**Arslanbob**	**54.21**	**313**	P		**P**	**17 26 03.7**	**-0.5**
KURK	**Kurchatov**	**54.42**	**326**	P		**P**	**17 26 05.7**	**+0.3**
KURK					IAmb	IAmb	17 26 17.1	
	comp=Z,4.3nm,0.7s							
KURBB	**Kurchatov Arra 54.43 326**			P		**P**	**17 26 06.1**	**+0.7**
	comp=Z,1.8nm,0.7s,baz=125,slow=7.4,SNR=13							
	comp=Z,1.8nm,0.7s							
SEY	**Seymchan**	**55.28**	**15**	P		**P**	**17 26 13.3**	**+2.0**
	comp=Z,1.4nm,0.7s,baz=216,slow=14,SNR=7.3							
	comp=Z,1.4nm,0.7s							
GAR	**Garm**	**55.51**	**310**	P		**P**	**17 26 13.7**	**0.0**
MIDW	**Midway**	**56.56**	**64**	P		**P**	**17 26 18.8**	**-2.3**
MSVF	**Nonsavu**	**60.01**	**118**	LR		LR	17 54 16.7	
	comp=Z,26nm,18.0s,baz=295,slow=38							
BVAR	**Borovoye Array**	**60.02**	**325**	P		**P**	**17 26 46.9**	**+2.0**
	comp=Z,0.5nm,0.7s,baz=123,slow=5.3,SNR=4.5							
BVAR					LR	LR	17 55 00.3	
	comp=Z,55nm,18.4s,baz=119,slow=38							
	comp=Z,0.5nm,0.7s							
BORK	**Borovoye**	**60.06**	**325**	P		**P**	**17 26 45.9**	**+0.6**
BORK					IAmb	IAmb	17 27 18.6	
	comp=Z,2.3nm,0.8s							
TIXI	**Tiksi**	**60.43**	**2**	LR		LR	17 53 08.3	
	comp=Z,66nm,22.0s,baz=193,slow=36							
TIXI	**Tiksi**	**60.43**	**2**			**P**	**17 26 47.1**	**-0.2**
TIXI					IAmb	IAmb	17 26 59.9	
	comp=Z,4.0nm,0.8s							
NRIK	**Noril'sk**	**62.72**	**346**	P		**P**	**17 27 04.0**	**+1.1**
	comp=Z,8.0nm,1.1s,baz=127,slow=7.4,SNR=7.6							
NRIK					LR	LR	17 54 58.5	
	comp=Z,43nm,20.1s,baz=154,slow=36							
	comp=Z,8.0nm,1.1s							
NRIK	**Noril'sk**	**62.72**	**346**	P		**P**	**17 27 03.3**	**+0.4**
BILL	**Bilibino**	**62.91**	**16**	P		**P**	**17 27 04.9**	**+0.8**
BILL					IAmb	IAmb	17 27 11.5	
	comp=Z,6.1nm,1.4s							
AB31	**Akbulak array**	**65.16**	**319**	P		**P**	**17 27 19.0**	**-0.3**
NIKH	**Nikolski High**	**66.96**	**37**	P		**P**	**17 27 28.9**	**-1.9**
SPIA	**Saint Paul Isl**	**67.18**	**32**	P		**P**	**17 27 30.8**	**-1.2**
ARTI	**Arti**	**67.68**	**327**	LR		LR	18 01 26.7	
	comp=Z,36nm,20.1s,baz=72,slow=40							
AFI	**Afiamalu**	**67.74**	**110**	LR		LR	17 53 56.4	
	comp=Z,27nm,20.4s,baz=278,slow=33							
QRZ	**Quartz Range**	**68.03**	**143**	P		**P**	**17 27 34.6**	**-3.1**
LBZ	**Lake Benmore**	**68.99**	**147**	P		**P**	**17 27 41.4**	**-2.2**
L14K	**Kuka Creek**	**71.88**	**29**	P		**P**	**17 28 00.3**	**-0.7**
L14K					IAmb	IAmb	17 28 10.3	
	comp=Z,11nm,1.4s							
F15K	**North Star Dit**	**71.89**	**24**	P		**P**	**17 28 00.8**	**-0.3**
BELG	**Belogornoye**	**73.31**	**321**	P		**P**	**17 28 10.0**	**+0.3**
	comp=Z,3.2nm,0.7s,baz=86,slow=16,SNR=4.4							
	comp=Z,3.2nm,0.7s							
H17K	**Granite Mounta**	**73.70**	**25**	P		**P**	**17 28 12.0**	**+0.2**
C18K	**Utukok River**	**73.83**	**22**	P		**P**	**17 28 13.3**	**+0.7**
C19K	**Lookout Ridge**	**74.48**	**21**	P		**P**	**17 28 16.4**	**+0.1**
D19K	**Kuna River**	**74.92**	**22**	P		**P**	**17 28 19.2**	**+0.3**
D19K					IAmb	IAmb	17 28 39.2	
	comp=Z,6.0nm,1.2s							
E19K	**Redstone River**	**75.11**	**23**	P		**P**	**17 28 20.3**	**+0.3**
E19K					IAmb	IAmb	17 29 02.2	
	comp=Z,6.6nm,1.4s							
B21K	**Ikpikpuk River**	**76.29**	**21**	P		**P**	**17 28 27.5**	**+0.9**
B21K					IAmb	IAmb	17 28 50.1	
	comp=Z,4.4nm,1.1s							
ILAR	**Eielson Array**	**79.24**	**26**	P		**P**	**17 28 42.1**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=259,slow=5.3,SNR=1.8							
	comp=Z,0.2nm,0.6s							
ASF	**Jabal al Asfar**	**82.29**	**301**	LR		LR	18 10 04.5	
	comp=Z,39nm,18.4s,baz=30,slow=39							
ARCES	**ARCESS Array B**	**82.77**	**340**	P		**P**	**17 29 02.8**	**+0.8**
	comp=Z,7.0nm,1.0s,baz=72,slow=5.0,SNR=4.3							
	comp=Z,7.0nm,1.0s							
SPITS	**Spitsbergen Ar**	**82.78**	**349**	P		**P**	**17 29 02.5**	**+0.6**
	comp=Z,6.4nm,0.9s,baz=86,slow=4.5,SNR=5.1							
	comp=Z,6.4nm,0.9s							
MMAI	**Mount Meron Ar**	**83.41**	**302**	LR		LR	18 10 23.7	
	comp=Z,32nm,18.9s,baz=116,slow=38							
BRTR	**Keskin Array B**	**83.75**	**309**	P		**P**	**17 29 08.2**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=86,slow=1.4,SNR=1.8							
BRTR					LR	LR	18 11 32.4	
	comp=Z,30nm,20.2s,baz=235,slow=39							
	comp=Z,0.4nm,0.7s							
FINES	**FINESS Array B**	**84.33**	**331**	P		**P**	**17 29 10.3**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=66,slow=3.4,SNR=9.0							
	comp=Z,2.8nm,0.8s							
EIL	**Elat**	**84.34**	**299**	LR		LR	18 13 25.0	
	comp=Z,29nm,18.2s,baz=206,slow=40							
AKASG	**Malin Array Be**	**84.86**	**321**	P		**P**	**17 29 12.1**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=64,slow=5.3,SNR=11							
	comp=Z,0.3nm,0.3s							
AKBB	**Malin Array Si**	**84.86**	**321**	P		**P**	**17 29 13.7**	**+0.7**
KIEV	**Kiev**	**84.87**	**321**			**P**	**17 29 13.5**	**+0.5**
AK02	**Malin Array Si**	**84.88**	**320**	P		**P**	**17 29 14.8**	**+1.7**
MI28	**Mi28,Pidlybu**	**85.78**	**321**	P		**P**	**17 29 15.7**	**-1.8**
LUBAR	**Lubar, Ukraine**	**85.94**	**320**	P		**P**	**17 29 17.5**	**-0.9**
RNPP8	**Varash**	**86.80**	**322**	P		**P**	**17 29 23.6**	**+1.0**
**

IUG	**Iuzhnay**	**2.03**	**319**		Pg		**Pb**	**17 23 29.2**	**+1.6**
	27nm,0.2s								
IUG					Lg		Lg	17 23 56.5	
	242nm,0.7s								
IUG	**Iuzhnay**	**2.03**	**319**		*eP*		**Pb**	**17 23 29.4**	**+1.8**
	53nm,0.2s								
IUG					*eS*		**Sg**	**17 23 56.5**	**+0.5**
	242nm,0.7s								
NZBK	**Nazarbek**	**2.13**	**287**		S		**Sg**	**17 24 00.6**	**+1.3**
DZA	**Taraz**	**2.29**	**351**		Pg		**Pb**	**17 23 33.1**	**+1.0**
	20nm,0.1s								
DZA					Lg		Lg	17 24 02.7	
	95nm,0.3s								
DZA	**Taraz**	**2.29**	**351**		*eP*		**Pb**	**17 23 33.0**	**+1.0**
	20nm,0.1s								
DZA					*eS*		**Sb**	**17 24 02.7**	**+2.3**
	95nm,0.3s								
MRKS	**Merke**	**2.37**	**26**		Pg		**Pb**	**17 23 34.7**	**+1.4**
	4.6nm,0.3s								
MRKS					Lg		Lg	17 24 05.6	
	23nm,0.3s								
MRKS	**Merke**	**2.37**	**26**		*eP*		**Pb**	**17 23 34.0**	**+0.7**
	8.7nm,0.3s								
MRKS					*eS*		**Sb**	**17 24 04.0**	**+1.5**
	23nm,0.3s								
CHM	**Chimkent**	**2.37**	**316**		*eP*		**Pg**	**17 23 36.6**	**+0.4**
	46nm,0.1s								
CHM					*eS*		**Sg**	**17 24 08.6**	**+1.6**
	251nm,0.3s								
EKS2	**Erkin-Say**	**2.51**	**35**		P		**Pb**	**17 23 35.0**	**-0.8**
	SNR=8.0								
UCH	**Uchtor**	**2.58**	**51**		P		**Pn**	**17 23 34.0**	**+1.3**
	SNR=10								
KK31	**Karatay Array**	**2.66**	**339**		Pn		**Pn**	**17 23 35.5**	**+2.1**
	3.8nm,0.3s,baz=146,slow=11,SNR=57								
KK31					⇓Sn		**Sb**	**17 24 13.0**	**+2.1**
	2.5nm,0.2s,baz=34,slow=19,SNR=4.6								
BRLS	**Boroldaу**	**2.82**	**329**		Pg		**Pb**	**17 23 41.2**	**+0.1**
	2.9nm,0.2s								
BRLS					Lg		Lg	17 24 16.9	
	17nm,0.3s								
BRLS	**Boroldaу**	**2.82**	**329**		*eP*		**Pb**	**17 23 41.3**	**+0.2**
	4.7nm,0.2s								
BRLS					*eS*		**Sb**	**17 24 16.9**	**+1.3**
	17nm,0.3s								
AAK	**Ala-Archa**	**2.84**	**44**		Pn		Pn	17 23 36.5	+5.2
	3.2nm,0.3s,baz=216,slow=8.7,SNR=20								
AAK					Sn		**Sn**	**17 24 17.4**	**+0.7**
	2.0nm,0.3s,baz=180,slow=20,SNR=6.5								
	5.5nm,0.3s								
AAK	**Ala-Archa**	**2.84**	**44**		P		**Pn**	**17 23 37.9**	**+1.9**
	SNR=18								
AAK	**Ala-Archa**	**2.84**	**44**		⇓Pn		**Pn**	**17 23 38.2**	**+2.2**
	2.9nm,0.5s								
AAK					⇑Sn		**Sb**	**17 24 18.3**	**+2.1**
	6.9nm,0.6s								
TKM2	**Tokmak 2**	**3.64**	**50**		P		**Pn**	**17 23 47.4**	**+0.4**
	SNR=9.8								
KST	**Kastek**	**3.93**	**51**		Pg		**Pb**	**17 24 02.4**	**+2.4**
	0.6nm,0.1s								
KST					Lg		Lg	17 24 53.1	
	10.0nm,0.5s								
KST	**Kastek**	**3.93**	**51**		*eP*		**Pb**	**17 24 00.6**	**+0.7**
	2.6nm,0.3s								
KST					*eS*		**Sb**	**17 24 49.9**	**+2.5**
	10.0nm,0.5s								
DGS	**Degeres**	**3.94**	**47**		Pg		**Pb**	**17 24 00.1**	**-0.1**
	1.9nm,0.4s								
DGS					Lg		Lg	17 24 50.2	
	6.8nm,0.7s								
DGS	**Degeres**	**3.94**	**47**		*eP*		**Pb**	**17 24 00.7**	**+0.6**
	1.9nm,0.4s								
DGS					*eS*		**Sb**	**17 24 50.2**	**+2.4**
	6.8nm,0.7s								
AGL	**Agalyk**	**3.95**	**255**		S		**Sn**	**17 24 33.9**	**-3.5**
TMD	**Tamdy-Bulak**	**5.53**	**284**		S		**Sn**	**17 25 14.9**	**-1.4**
MKAR	**Makanchi Array**	**9.77**	**47**		Pn		**Pn**	**17 25 06.3**	**+1.4**
	baz=231,slow=15,SNR=3.5								
	0.1nm,0.6s								
KURBB	**Kurchatov Arra**	**11.04**	**23**		Pn		**Pn**	**17 25 25.8**	**+0.4**
	baz=212,slow=14,SNR=1.7								
	0.2nm,0.3s								
AB31	**Akbulak array**	**12.04**	**320**		⇓P		**Pn**	**17 25 37.9**	**-4.0**
	0.5nm,0.5s,baz=131,slow=14,SNR=12								
BVAR	**Borovoye Array**	**12.44**	**356**		Pn		**Pn**	**17 25 44.7**	**-0.1**
	baz=172,slow=12,SNR=2.6								
	0.2nm,0.4s								
AKTO	**Aktyubinsk**	**13.75**	**320**		Pn		**P**	**17 26 01.9**	**-1.7**
	0.2nm,0.3s,baz=129,slow=15,SNR=1.8								
AKTO					Sn		**Sn**	**17 28 38.1**	**-0.9**
	0.1nm,0.3s,baz=142,slow=16,SNR=1.2								
	0.7nm,0.4s								
ZALV	**Zalesovo Beam**	**15.94**	**29**		Pn		**P**	**17 26 33.0**	**+1.9**
	0.3nm,0.3s,baz=214,slow=12,SNR=5.7								
	0.6nm,0.4s								
WRA	**Warramunga Arr**	**83.66**	**123**		P		**P**	**17 34 57.8**	**+2.5**
	0.2nm,0.6s,baz=331,slow=7.2,SNR=8.8								
	0.2nm,0.6s								

*IDC **10** 17:26:00.2±0.6,54˚.95N×164˚.67E,h0km,mb3.9/25, mbtmp4.0/30,ML3.8/5,Error ellipse: s-maj=15.8km s-min=12.8km az=157.0*

*KRSC **10** 17:26:00.9±1.5,54˚.79N×164˚.65E,h46km±26km,Ml4.3*

*NEIC **10** 17:26:01.2±1.2,54˚.91N±0˚.08×164˚.73E±0˚.09,h10km± 1km, mb4.0/48,Error ellipse: s-maj=15.1km s-min=7.9km az=159.0*

*MOS **10** 17:26:02.7±0.9,54˚.84N×164˚.73E,h36km,mb4.5/11,Error ellipse: s-maj=6.0km s-min=5.6km az=114.5*

ISC 10 17:26:01.8±1.3,54˚.81N±0˚.04×164˚.76E±0˚.03,h16km±8km, n188,σ1$36/209,mb4.1/43,8C,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.81**	**60**	PN	**Pn**	**17 26 17.9**	**-0.5**
BKI				S	**Sn**	**17 26 29.2**	**-0.8**
BKI	**Bering**	**0.81**	**60**	*eP*	**Pn**	**17 26 18.0**	**-0.5**
BKI				*eS*	**Sn**	**17 26 29.2**	**-0.8**
MKZ	**Mys Kozlova**	**1.77**	**263**	PN	**Pn**	**17 26 30.7**	**-1.0**
MKZ				S	**Sn**	**17 26 50.2**	**-3.7**
MKZ	**Mys Kozlova**	**1.77**	**263**	*eP*	**Pn**	**17 26 30.8**	**-1.0**
MKZ				*eS*	**Sn**	**17 26 50.2**	**-3.7**
KBTR	**Krutoberegovo**	**1.79**	**323**	PN	**Pn**	**17 26 29.1**	**-2.8**
KBTR	**Krutoberegovo**	**1.79**	**323**	*eP*	**Pn**	**17 26 29.2**	**-2.8**
KBG	**Krutoberegovo**	**1.86**	**322**	PN	**Pn**	**17 26 30.9**	**-2.0**
KBG				S	**Sn**	**17 26 51.9**	**-4.2**
KBG	**Krutoberegovo**	**1.86**	**322**	*eP*	**Pn**	**17 26 31.0**	**-2.0**
KBG				*eS*	**Sn**	**17 26 51.9**	**-4.2**
ZLN	**Zelenaya**	**2.56**	**300**	PN	**Pn**	**17 26 40.4**	**-2.2**
ZLN	**Zelenaya**	**2.56**	**300**	*eP*	**Pn**	**17 26 40.4**	**-2.2**
SMKR	**Semkarok**	**2.58**	**315**	PN	**Pn**	**17 26 42.8**	**0.0**
SMKR				S	**Sn**	**17 27 13.4**	**-0.4**
SMKR	**Semkarok**	**2.58**	**315**	*eP*	**Pn**	**17 26 42.9**	**0.0**
SMKR				*eS*	**Sn**	**17 27 13.4**	**-0.4**
BZGR	**Bezymyannyi-Gr**	**2.58**	**298**	PN	**Pn**	**17 26 43.3**	**+0.4**
BZGR	**Bezymyannyi-Gr**	**2.58**	**298**	*eP*	**Pn**	**17 26 43.3**	**+0.4**
BZP	**Bezymyannyi-Pe**	**2.65**	**296**	PN	**Pn**	**17 26 44.1**	**+0.2**
BZP	**Bezymyannyi-Pe**	**2.65**	**296**	*eP*	**Pn**	**17 26 44.1**	**+0.2**
BZWR	**Bezymyannyi-We**	**2.69**	**297**	PN	**Pn**	**17 26 42.7**	**-1.8**
BZWR	**Bezymyannyi-We**	**2.69**	**297**	*eP*	**Pn**	**17 26 42.7**	**-1.8**
KMNR	**Kamenistaya**	**2.76**	**292**	PN	**Pn**	**17 26 46.2**	**+0.9**
KMNR				S	**Sn**	**17 27 19.2**	**+0.9**
KMNR	**Kamenistaya**	**2.76**	**292**	*eP*	**Pn**	**17 26 46.2**	**+0.9**
KMNR				*eS*	**Sn**	**17 27 19.3**	**+0.9**
KIRR	**Kirishev**	**2.77**	**296**	PN	**Pn**	**17 26 46.4**	**+0.8**
KIRR				S	**Sn**	**17 27 19.2**	**+0.5**
KIRR	**Kirishev**	**2.77**	**296**	*eP*	**Pn**	**17 26 46.4**	**+0.8**
KIRR				*eS*	**Sn**	**17 27 19.3**	**+0.5**
KLY	**Klyuchi**	**2.78**	**305**	PN	**Pn**	**17 26 44.0**	**-1.5**
KLY	**Klyuchi**	**2.78**	**305**	*eP*	**Pn**	**17 26 44.1**	**-1.5**
KPT	**Kopyto**	**2.84**	**296**	PN	**Pn**	**17 26 47.2**	**+0.8**
KPT				S	**Sn**	**17 27 20.7**	**+0.4**
KPT	**Kopyto**	**2.84**	**296**	*eP*	**Pn**	**17 26 47.2**	**+0.8**
KPT				*eS*	**Sn**	**17 27 20.7**	**+0.4**
KOZ	**Kozyrevsk**	**3.05**	**296**	PN	**Pn**	**17 26 50.2**	**+0.9**
KOZ	**Kozyrevsk**	**3.05**	**296**	*eP*	**Pn**	**17 26 50.2**	**+0.9**
KII	**Karymskiy**	**3.19**	**258**	PN	**Pn**	**17 26 52.5**	**+1.2**
KII	**Karymskiy**	**3.19**	**258**	*eP*	**Pn**	**17 26 52.5**	**+1.2**
SRDR	**Sredinnyy**	**3.24**	**300**	PN	**Pn**	**17 26 53.5**	**+1.6**
SRDR				S	**Sn**	**17 27 31.1**	**+1.0**
SRDR	**Sredinnyy**	**3.24**	**300**	*eP*	**Pn**	**17 26 53.5**	**+1.6**
SRDR				*eS*	**Sn**	**17 27 31.1**	**+1.0**
SPN	**Mys Shipunski**	**3.28**	**240**	PN	**Pn**	**17 26 51.8**	**-0.5**
SPN	**Mys Shipunski**	**3.28**	**240**	*eP*	**Pn**	**17 26 51.9**	**-0.5**
SPN				*eS*	**Sn**	**17 27 27.5**	**-3.5**
ESO	**Esso**	**3.63**	**290**	PN	**Pn**	**17 26 57.3**	**0.0**
ESO	**Esso**	**3.63**	**290**	*eP*	**Pn**	**17 26 57.4**	**0.0**
SDLR	**Sedlovina**	**3.79**	**249**	PN	**Pn**	**17 27 00.0**	**+0.5**
SDLR	**Sedlovina**	**3.79**	**249**	*eP*	**Pn**	**17 27 00.0**	**+0.5**
SDLR				*eS*	**Sn**	**17 27 41.6**	**-2.1**
SMAR	**Somma**	**3.84**	**249**	PN	**Pn**	**17 27 00.1**	**-0.2**
SMAR	**Somma**	**3.84**	**249**	*eP*	**Pn**	**17 27 00.1**	**-0.2**
SMAR				*eS*	**Sn**	**17 27 42.5**	**-2.6**
KRER	**Koryakskii**	**3.85**	**249**	PN	**Pn**	**17 27 01.2**	**+0.8**
KRER	**Koryakskii**	**3.85**	**249**	*eP*	**Pn**	**17 27 01.2**	**+0.8**
KRER				*eS*	**Sn**	**17 27 43.3**	**-2.0**
UGLR	**Uglovaya**	**3.85**	**248**	PN	**Pn**	**17 27 01.4**	**+1.1**
UGLR	**Uglovaya**	**3.85**	**248**	*eP*	**Pn**	**17 27 01.5**	**+1.1**
UGLR				*eS*	**Sn**	**17 27 43.1**	**-2.1**
KRX	**Arik**	**3.88**	**251**	PN	**Pn**	**17 27 01.4**	**+0.6**
KRX	**Arik**	**3.88**	**251**	*eP*	**Pn**	**17 27 01.4**	**+0.6**
KOK	**Koryaka**	**3.91**	**250**	PN	**Pn**	**17 27 02.1**	**+0.9**
KOK	**Koryaka**	**3.91**	**250**	*eP*	**Pn**	**17 27 02.1**	**+0.9**
DALK	**Dalny**	**3.97**	**246**	PN	**Pn**	**17 27 02.3**	**+0.5**
DALK	**Dalny**	**3.97**	**246**	*eP*	**Pn**	**17 27 02.4**	**+0.5**
DALK				*eS*	**Sn**	**17 27 44.8**	**-3.2**
PET	**Petropavlovsk**	**4.03**	**246**		**Pn**	**17 27 02.9**	**+0.2**
PET				Sn	**Sn**	**17 27 46.3**	**-3.1**
PET	**Petropavlovsk**	**4.03**	**246**	*eP*	**Pn**	**17 27 02.7**	**+0.1**
PET				pmax	pmax		
	comp=Z,38nm,0.8s						
INSR	**Institute**	**4.03**	**247**	*eS*	**Sn**	**17 27 49.2**	**-0.3**
GNL	**Ganaly**	**4.15**	**257**	PN	**Pn**	**17 27 05.7**	**+1.2**
GNL	**Ganaly**	**4.15**	**257**	*eP*	**Pn**	**17 27 05.8**	**+1.2**
KRMR	**Karymshinskiy**	**4.40**	**246**	PN	**Pn**	**17 27 08.5**	**+0.8**
KRMR	**Karymshinskiy**	**4.40**	**246**	*eP*	**Pn**	**17 27 08.5**	**+0.8**
KRMR				*eS*	**Sn**	**17 27 55.6**	**-3.0**
PEA0B	**Petropavlovsk-**	**4.50**	**251**	PN	**Pn**	**17 27 10.1**	**+0.9**
PETK	**Petropavlovsk-**	**4.50**	**251**	Pn	**Pn**	**17 27 10.1**	**+0.9**
	comp=Z,5.0nm,0.3s,baz=70,slow=18,SNR=64						
PETK				Sn	**Sn**	**17 27 59.9**	**-1.3**
	comp=Z,5.0nm,0.3s,baz=66,slow=20,SNR=8.1						
	comp=Z,6.5nm,0.3s						
MTVR	**Mutnovka**	**4.55**	**242**	PN	**Pn**	**17 27 10.5**	**+0.5**
MTVR	**Mutnovka**	**4.55**	**242**	*eP*	**Pn**	**17 27 10.5**	**+0.5**
OSSR	**Ossora**	**4.55**	**349**	PN	**Pn**	**17 27 09.0**	**-0.8**
OSSR	**Ossora**	**4.55**	**349**	*eP*	**Pn**	**17 27 09.1**	**-0.8**
GRL	**Gorelyy**	**4.57**	**243**	PN	**Pn**	**17 27 11.2**	**+1.0**
GRL	**Gorelyy**	**4.57**	**243**	*eP*	**Pn**	**17 27 11.3**	**+1.0**
ASAK	**Asacha**	**4.75**	**242**	PN	**Pn**	**17 27 14.3**	**+1.6**
ASAK	**Asacha**	**4.75**	**242**	*eP*	**Pn**	**17 27 14.4**	**+1.6**
KDTR	**Khodutka, Kamc**	**5.00**	**236**	PN	**Pn**	**17 27 16.0**	**-0.1**
KDTR	**Khodutka, Kamc**	**5.00**	**236**	*eP*	**Pn**	**17 27 16.0**	**-0.1**
PALN	**Palana**	**5.03**	**331**	PN	**Pn**	**17 27 20.2**	**+3.8**
PALN	**Palana**	**5.03**	**331**	*eP*	**Pn**	**17 27 20.2**	**+3.8**
SHEM	**Shemya Is, Ala**	**5.92**	**107**	Pn	**Pn**	**17 27 31.0**	**+2.3**
	comp=Z,2.4nm,0.3s,baz=297,slow=19,SNR=2.0						
	comp=Z,70nm,0.9s						
SHEM	**Shemya Is, Ala**	**5.92**	**107**		**Pn**	**17 27 29.6**	**+1.0**
SMY	**Shemya**	**5.92**	**107**	Pn	**Pn**	**17 27 29.4**	**+0.8**
SMY	**Shemya**	**5.92**	**107**	PN	**Pn**	**17 27 29.4**	**+0.8**
SKR	**Severo-Kuril's**	**6.67**	**235**	*ce*PN	**Pn**	**17 27 39.8**	**+0.8**
SKR	**Severo-Kuril's**	**6.67**	**235**	*eP*	**Pn**	**17 27 40.2**	**+1.2**
MA2	**Magadan**	**8.97**	**308**	Pn	**Pn**	**17 28 12.7**	**+2.3**
	comp=Z,0.1nm,0.3s,baz=127,slow=20,SNR=3.7						
	comp=Z,0.7nm,0.3s						
MA2	**Magadan**	**8.97**	**308**		**Pn**	**17 28 09.7**	**-0.7**
JKA	**Kamikawa-asahi**	**17.86**	**242**	P	**Pn**	**17 30 08.4**	**-0.9**
JKA				lAmb	lAmb	17 30 49.0	
	comp=Z,25nm,1.3s						
ASAJ	**Asahikawa**	**17.86**	**242**	P	**P**	**17 30 10.5**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=38,slow=12,SNR=4.6						
	comp=Z,7.9nm,1.0s						
ASAJ	**Asahikawa**	**17.86**	**242**	P	**Pn**	**17 30 08.4**	**-0.9**
ASAJ				pmax	pmax		
	comp=Z,25nm,1.3s						
M13K	**Dall Lake**	**17.86**	**59**		**P**	**17 30 08.6**	**-1.2**
M13K				lAmb	lAmb	17 30 10.6	
	comp=Z,17nm,1.4s						
L14K	**Kuka Creek**	**18.27**	**56**	P	**P**	**17 30 13.5**	**-0.8**
M14K	**Bethel**	**18.57**	**58**	P	**Pn**	**17 30 16.1**	**-1.7**
M14K				lAmb	lAmb	17 30 58.8	
	comp=Z,12nm,1.4s						
C16K	**Lisburne Hills**	**19.33**	**34**	P	**Pn**	**17 30 25.6**	**-1.4**
N15K	**Kwethluk River**	**19.47**	**60**	P	**Pn**	**17 30 27.6**	**-1.2**
N15K				lAmb	lAmb	17 30 38.2	
	comp=Z,11nm,1.2s						
YAK	**Yakutsk**	**19.54**	**306**	P	**P**	**17 30 26.4**	**-1.8**
	comp=Z,0.8nm,0.3s,baz=106,slow=3.7,SNR=6.9						
	comp=Z,7.2nm,0.6s						
YAK	**Yakutsk**	**19.54**	**306**	P	**P**	**17 30 25.9**	**-2.2**
YAK	**Yakutsk**	**19.54**	**306**	*ce*P	**P**	**17 30 27.3**	**-0.9**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
L16K	**Owhat River**	**19.83**	**55**	P	**Pn**	**17 30 32.0**	**-1.0**
L16K				lAmb	lAmb	17 30 50.1	
	comp=Z,11nm,1.4s						
M16K	**Timber Creek**	**20.05**	**57**	P	**Pn**	**17 30 33.8**	**-1.8**
M16K				lAmb	lAmb	17 31 17.2	
	comp=Z,11nm,1.3s						
H17K	**Granite Mounta**	**20.14**	**46**	P	Pn	17 30 35.2	-1.4
H17K				lAmb	lAmb	17 30 50.5	
	comp=Z,8.9nm,1.4s						
K17K	**Iditarod**	**20.47**	**52**	P	Pn	17 30 39.7	-0.8
H18K	**Honhosa River**	**20.82**	**46**	P	**P**	**17 30 41.5**	**-0.7**
H18K				lAmb	lAmb	17 30 54.5	
	comp=Z,8.4nm,1.4s						
C18K	**Utukok River**	**20.87**	**35**	P	**P**	**17 30 41.1**	**-1.6**
KLR	**Kul'dur**	**20.93**	**268**	P	**P**	**17 30 43.0**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=69,slow=8.9,SNR=5.5						
	comp=Z,0.9nm,0.7s						
J18K	**Innoko River**	**21.26**	**50**	P	**P**	**17 30 46.9**	**0.0**
C19K	**Lookout Ridge**	**21.59**	**35**		**P**	**17 30 50.6**	**+0.2**
C19K				lAmb	lAmb	17 31 04.3	
	comp=Z,12nm,1.4s						
E19K	**Redstone River**	**21.84**	**40**	P	**P**	**17 30 53.0**	**-0.1**
D19K	**Kuna River**	**21.86**	**37**	P	**P**	**17 30 52.5**	**-0.8**
N19K	**Bonanza Creek**	**22.23**	**58**	P	**P**	**17 30 55.9**	**-1.6**
TIXI	**Tiksi**	**22.79**	**331**		**P**	**17 31 02.5**	**-0.6**
TIXI				lAmb	lAmb	17 31 05.4	
	comp=Z,5.7nm,1.1s						
TIXI	**Tiksi**	**22.79**	**331**	*ce*P	**P**	**17 31 03.2**	**+0.1**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
Q19K	**Cape Douglas,**	**22.83**	**63**	P	**P**	**17 31 01.4**	**-2.4**
B21K	**Ikpikpuk River**	**23.42**	**35**		**P**	**17 31 09.1**	**-0.5**
B21K				lAmb	lAmb	17 31 13.1	
	comp=Z,4.3nm,1.1s						
USRK	**Ussuriysk Ar.**	**23.56**	**257**	P	**P**	**17 31 10.9**	**-0.4**
	comp=Z,1.6nm,0.8s,baz=73,slow=16,SNR=2.0						
	comp=Z,1.6nm,0.8s						
E22K	**Anaktuvuk Pass**	**24.01**	**39**		**P**	**17 31 14.0**	**-1.3**
B22K	**Teshekpuk Lake**	**24.04**	**34**	P	**P**	**17 31 15.1**	**-0.5**
B22K				lAmb	lAmb	17 31 16.9	
	comp=Z,3.5nm,0.8s						
I23K	**Minto, Yukon-K**	**24.59**	**47**	P	**P**	**17 31 20.3**	**-0.4**
E23K	**Ampndalar**	**24.80**	**40**	P	**P**	**17 31 22.4**	**-0.3**
E24K	**Your Creek**	**25.23**	**40**	P	**P**	**17 31 26.0**	**-0.5**
CCB	**Clear Creek Bu**	**25.24**	**48**		**P**	**17 31 25.9**	**-0.6**
CCB				lAmb	lAmb	17 31 38.4	
	comp=Z,4.1nm,0.9s						
D24K	**Happy Valley**	**25.28**	**37**	P	**P**	**17 31 25.8**	**-1.1**
D24K				lAmb	lAmb	17 31 39.9	
	comp=Z,2.6nm,0.6s						
ILAR	**Eielson Array**	**25.64**	**48**	P	**P**	**17 31 30.2**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=270,slow=9.5,SNR=10						
	comp=Z,0.7nm,0.7s						
ILAR	**Eielson Array**	**25.64**	**48**	*eP*	**P**	**17 31 33.3**	**+3.2**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MJB9	**Matsu-Tunnel**	**25.78**	**236**	P	**P**	**17 31 33.2**	**+1.5**
MAJO	**Matsushiro**	**25.78**	**236**	P	**P**	**17 31 32.0**	**+0.3**
MAJO	**Matsushiro**	**25.78**	**236**	P	**P**	**17 31 32.0**	**+0.3**
MJAR	**Matsushiro Arr**	**25.78**	**236**	P	**P**	**17 31 33.4**	**+1.7**
	comp=Z,2.6nm,0.8s,baz=18,slow=6.9,SNR=3.8						
	comp=Z,2.6nm,0.8s						
D25K	**Kavik River**	**26.17**	**37**	P	**P**	**17 31 34.5**	**-0.5**
KSRS	**Korea Array**	**30.40**	**251**	P	**P**	**17 32 14.6**	**+1.6**
	comp=Z,2.5nm,0.7s,baz=44,slow=9.6,SNR=9.0						
	comp=Z,2.5nm,0.7s						
KSRS	**Korea Array**	**30.40**	**251**	*eP*	**P**	**17 32 15.6**	**+2.7**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**35.05**	**176**	T	T	18 11 21.9	
	baz=359,slow=76,SNR=56						
H11N3	**WAKE ISLAND Hy**	**35.07**	**176**	T	T	18 11 28.6	
	baz=359,slow=76,SNR=25						
H11N1	**WAKE ISLAND Hy**	**35.07**	**176**	T	T	18 11 23.9	
	baz=359,slow=76,SNR=35						
SONM	**Songino Array**	**36.18**	**284**	P	**P**	**17 33 04.3**	**+0.9**
	comp=Z,1.4nm,0.7s,baz=59,slow=8.2,SNR=10						
SONM				PcP	**PcP**	**17 35 29.9**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=57,slow=2.4,SNR=2.5						
	comp=Z,1.4nm,0.7s						
H11S1	**WAKE ISLAND Hy**	**36.26**	**177**	T	T	18 12 48.3	
	baz=359,slow=76,SNR=4.1						
H11S3	**WAKE ISLAND Hy**	**36.27**	**177**	T	T	18 13 02.3	
	baz=359,slow=76,SNR=3.2						
H11S2	**WAKE ISLAND Hy**	**36.27**	**177**	T	T	18 12 58.2	
	baz=359,slow=76,SNR=4.5						
YKA	**Yellowknife Ar**	**40.02**	**45**	P	**P**	**17 33 35.7**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=299,slow=8.7,SNR=3.0						
	comp=Z,0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**44.16**	**303**	P	**P**	**17 34 09.6**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=45,slow=6.3,SNR=1.8						
ZALV				PcP	**PcP**	**17 35 54.5**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=40,slow=2.5,SNR=3.7						
	comp=Z,0.2nm,0.3s						
DGZ	**Jazzator, Alta**	**45.37**	**297**	*i* P	**P**	**17 34 19.3**	**+0.2**
DGZ				*i* *PP	**pwP**	**17 34 28.7**	**-0.1**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SPITS	**Spitsbergen Ar**	**45.88**	**351**	P	**P**	**17 34 22.4**	**-0.2**
	comp=Z,6.3nm,1.1s,baz=15,slow=12,SNR=1.0						
	comp=Z,6.3nm,1.1s						
ENH	**Enshi**	**46.03**	**261**		**P**	**17 34 24.3**	**0.0**
BLKN	**Baker Lake**	**46.10**	**37**	P	**P**	**17 34 24.0**	**-0.5**
YBH	**Yreka Blue Hor**	**47.87**	**74**	P	**P**	**17 34 37.6**	**-1.1**
YBH	**Yreka Blue Hor**	**47.87**	**74**	P	**P**	**17 34 37.6**	**-1.1**
YBH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KURK	**Kurchatov**	**49.14**	**303**		**P**	**17 34 47.6**	**-0.6**
KURK	**Kurchatov**	**49.14**	**303**		**PcP**	**17 36 12.2**	**+0.8**
KURK	**Kurchatov**	**49.14**	**303**	*ce*P	**P**	**17 34 47.5**	**-0.8**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KURBB	**Kurchatov Arra**	**49.24**	**303**	P	**P**	**17 34 48.8**	**-0.2**
	comp=Z,2.1nm,0.5s,baz=56,slow=7.6,SNR=19						
KURBB				PcP	**PcP**	**17 36 12.2**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=48,slow=2.8,SNR=2.1						
	comp=Z,2.1nm,0.5s						
MK31	**Makanchi Array**	**49.87**	**297**	P	**P**	**17 34 53.6**	**-0.3**
MK31				lAmb	lAmb	17 34 54.5	
	comp=Z,1.4nm,0.8s						
MK31	**Makanchi Array**	**49.87**	**297**	*ce*P	**P**	**17 34 53.6**	**-0.3**
MKAR	**Makanchi Array**	**49.87**	**297**	P	**P**	**17 34 53.6**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=49,slow=6.0,SNR=20						
	comp=Z,1.6nm,0.7s						
MKAR	**Makanchi Array**	**49.87**	**297**	*eP*	**P**	**17 34 53.7**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MAKZ	**Makanchi**	**50.02**	**297**		**P**	**17 34 54.2**	**-0.8**
MAKZ				lAmb	lAmb	17 34 55.4	
	comp=Z,2.6nm,1.0s						
MAKZ	**Makanchi**	**50.02**	**297**	P	**P**	**17 34 54.2**	**-0.8**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BVAR	**Borovoye Array**	**

*IDC **10** 17:26:38.6±1.4,21°.72S×175°.11W,h0km,mb3.6/5, mbtmp3.6/5,Error ellipse: s-maj=43.4km s-min=37.4km az=141.0*
ISC 10 17:26:43.9±1.4,**21°.8S**±0°.3×**175°.1W**±0°.3,**h33**km,**n7,** σ0s**64**/6,**mb3.6**/5,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**46.84**	**257**	P	**P**	**17 35 11.7**	**+0.7**
	0.3nm,0.8s,baz=92,slow=8.1,SNR=6.1 0.3nm,0.8s						
WRA	**Warramunga Arr**	**47.08**	**263**	P	**P**	**17 35 12.3**	**-0.6**
	0.3nm,0.7s,baz=96,slow=8.3,SNR=11 0.3nm,0.7s						
FITZ	**Fitzroy Crossi**	**55.51**	**263**	P	**P**	**17 36 15.6**	**-0.5**
	0.5nm,0.4s,baz=90,slow=10,SNR=1.3 0.5nm,0.4s						
VNDA	**Vanda**	**56.90**	**186**	P	**P**	**17 36 25.1**	**-0.1**
	3.2nm,1.0s,baz=27,slow=4.5,SNR=5.8 3.2nm,1.0s						
ILAR	**Eielson Array**	**88.99**	**12**	P	**P**	**17 39 35.0**	**+0.2**
	0.2nm,0.6s,baz=206,slow=5.2,SNR=2.3 0.2nm,0.6s						
MKAR	**Makanchi Array**	**114.02**	**313**	PKiKP	PKPdf	17 45 19.0	-0.5
	0.3nm,0.9s,baz=65,slow=3.3,SNR=2.2						
BVAR	**Borovoye Array**	**121.77**	**320**	PKP	**PKPdf**	**17 45 33.9**	**-0.3**
	0.3nm,0.3s,baz=107,slow=3.7,SNR=4.6						

*IDC **10** 17:26:56.0±2.8, 47°.56N×92°.69W,h0km,mb2.8/1, mbtmp2.9/4,ML0.7/1,Error ellipse: s-maj=36.3km s-min=13.6km az=79.0*
*NEIC **10** 17:26:56.3±1.0, 47°.59N±0°.04×92°.69W±0°.03,h0km±1km, ML3.0/12,Error ellipse: s-maj=7.4km s-min=3.3km az=354.0*
ISC 10 17:26:55.0±0.8,**47°.58N**±0°.04×**92°.69W**±0°.04,**h0**km,**n27,** σ0s**96**/31,**Minnesota**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EYMN	**Ely**	**0.89**	**65**		**Pg**	**17 27 12.3**	**+0.3**
EYMN	**Ely**	**0.89**	**65**	Sg	**Sg**	**17 27 24.1**	**+0.6**
EYMN				IAML		17 27 29.6	
	274nm,1.1s						
E38A	**The Farm, Brul**	**1.24**	**141**		**Pg**	**17 27 18.8**	**0.0**
E38A				IAML		17 27 39.0	
	377nm,0.6s						
EPLO	**Experimental L**	**2.21**	**342**		**Pn**	**17 27 34.6**	**+1.6**
EPLO				IAML		17 28 10.6	
	comp=E,100nm,1.2s						
AGMN	**Agassiz Nation**	**2.25**	**290**		**Pn**	**17 27 34.0**	**+0.5**
AGMN					**Sb**	**17 28 04.2**	**-0.8**
SPMN	**Marine on St.**	**2.35**	**182**		**Pn**	**17 27 35.8**	**+0.9**
SPMN					**Sn**	**17 28 05.5**	**+1.0**
TBO	**Thunder Bay**	**2.45**	**63**	Pn	**Pn**	**17 27 36.2**	**0.0**
TBO				IAML		17 28 25.2	
	comp=E,73nm,1.0s						
TBO				IAML		17 28 25.2	
	comp=N,55nm,1.2s						
G40A	**Rib Lake**	**2.88**	**142**		**Pn**	**17 27 42.9**	**+0.7**
F33A	**5 Mile Ranch,**	**3.03**	**236**		**Pn**	**17 27 45.1**	**+0.9**
ULM	**Lac du Bonnet**	**3.40**	**323**	Pn	**Pn**	**17 27 50.4**	**+1.0**
	comp=N,0.1nm,0.3s,baz=142,slow=14,SNR=2.4						
ULM				Pg	**Pb**	**17 27 56.5**	**+0.4**
	comp=N,0.4nm,0.3s,baz=142,slow=12,SNR=8.9						
ULM				Sn	**Sn**	**17 28 30.2**	**-0.2**
	comp=N,0.7nm,0.3s,baz=142,slow=18,SNR=4.7						
ULM				Lg	Lg	17 28 40.7	
	comp=N,8.1nm,0.3s,baz=212,slow=18,SNR=8.4 comp=N,1.4nm,0.7s						
ULM	**Lac du Bonnet**	**3.40**	**323**	Pn	**Pn**	**17 27 50.1**	**+0.8**
I37A	**Lemond, Waseca**	**3.60**	**188**		**Pn**	**17 27 53.1**	**+1.1**
I40A	**Norwalk**	**3.96**	**158**	Pn	**Pn**	**17 27 58.1**	**+1.0**
I42A	**Draeger Farm,**	**4.54**	**143**	Pn	**Pn**	**17 28 05.2**	**+0.2**
H43A	**Windswept, Lux**	**4.62**	**130**	Pn	**Pn**	**17 28 06.4**	**+0.3**
MDND	**Maddock**	**4.67**	**276**	Pn	**Pn**	**17 28 08.9**	**+2.1**
ECSD	**EROS Data Cent**	**4.72**	**217**		**Pn**	**17 28 09.5**	**+2.0**
JFWS	**Jewell Farm**	**4.97**	**159**		**Pn**	**17 28 12.4**	**+1.5**
SUSD	**Miller**	**5.37**	**237**	Pn	**Pn**	**17 28 16.6**	**+0.2**
E28A	**Huff**	**5.56**	**263**	Pn	**Pn**	**17 28 18.9**	**-0.1**
L40A	**Anamosa**	**5.61**	**169**	Pn	**Pn**	**17 28 19.3**	**-0.4**
K43A	**Burlington**	**5.76**	**146**	Pn	**Pn**	**17 28 21.3**	**-0.5**
E46A	**Sault Ste Mari**	**5.87**	**99**	Pn	**Pn**	**17 28 23.4**	**+0.3**
L42A	**Oliver, Polo**	**5.97**	**158**	Pn	**Pn**	**17 28 23.9**	**-0.8**
PDAR	**Pinedale Array**	**12.83**	**254**	Pn	**Pn**	**17 29 57.4**	**-1.4**
	comp=N,0.3nm,0.5s,baz=70,slow=13,SNR=4.9						
PDAR				Lg	Lg	17 33 31.3	
	baz=63,slow=34						
YKA	**Yellowknife Ar**	**19.36**	**328**	P	**P**	**17 31 21.0**	**-0.9**
	comp=N,0.3nm,0.8s,baz=128,slow=11,SNR=4.4						
YKA				Lg	Lg	17 36 52.8	
	baz=131,slow=27,SNR=6.0						
TXAR	**Lajitas Array**	**20.10**	**209**	P	**P**	**17 31 30.4**	**+0.1**
	comp=N,0.4nm,0.7s,baz=26,slow=13,SNR=3.6 comp=N,0.4nm,0.7s						

*NOU **10** 17:34:51.7,37°.62S×179°.72W,h0km,MLv3.9/6,East of North Island, N.Z.*
*WEL **10** 17:34:57.4±1.4,38°.5±12°×18°.0E±°,h12km,M2.8/9, ML3.0/17,MLv2.8/9,Error ellipse: s-maj=15.8km s-min=11.1km az=16.0,confirmed*
ISC 10 17:34:55.1±3.7,**37°.63S**±0°.09×**180°.0E**±0°.2,**h10**km,**n32,** σ0s**81**/41,**Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.26**	**261**	P	**Pn**	**17 35 19.3**	**+0.5**
MXZ	**Matakaoa Point**	**1.34**	**273**	P	**Pn**	**17 35 19.7**	**-0.1**
MXZ	**Matakaoa Point**	**1.34**	**273**	P	**Pn**	**17 35 19.5**	**-0.3**
MXZ				S	**Sn**	**17 35 36.6**	**-1.0**
PUZ	**Puketiti**	**1.44**	**252**	P	**Pn**	**17 35 21.7**	**+0.5**
PUZ				S	**Sn**	**17 35 39.5**	**-0.7**
PKGZ	**Pakihiroa**	**1.53**	**261**	P	**Pn**	**17 35 22.6**	**+0.1**
CNGZ	**Carnagh Statio**	**1.64**	**238**	P	**Pn**	**17 35 25.3**	**+1.3**
TWGZ	**Tauwhareparae**	**1.68**	**251**	P	**Pn**	**17 35 25.5**	**+0.9**
HAZ	**Te Kaha**	**1.76**	**265**	P	**Pn**	**17 35 26.0**	**+0.4**
RUGZ	**Raukumara Rang**	**1.86**	**259**	P	**Pn**	**17 35 27.5**	**+0.4**
TKGZ	**Te Karaka**	**1.87**	**244**	P	**Pn**	**17 35 28.1**	**+1.0**
TKGZ				S	**Sn**	**17 35 51.3**	**+0.4**
RIGZ	**Rimuhau**	**2.06**	**238**	P	**Pn**	**17 35 30.6**	**+0.8**
RIGZ				S	**Sn**	**17 35 55.5**	**+0.1**
MWZ	**Matawai**	**2.07**	**249**	P	**Pn**	**17 35 30.0**	**+0.1**
MWZ				S	**Sn**	**17 35 54.9**	**-0.9**
RAGZ	**Rawiri**	**2.21**	**246**	P	**Pn**	**17 35 32.9**	**+1.1**
MHGZ	**Mahia Peninsul**	**2.23**	**227**	P	**Pn**	**17 35 33.1**	**+1.0**
URZ	**Urewera**	**2.36**	**254**	P	**Pn**	**17 35 35.6**	**+1.7**
URZ	**Urewera**	**2.36**	**254**	P	**Pn**	**17 35 35.0**	**+1.1**
RTZ	**Ruatahuna**	**2.57**	**247**	P	**Pn**	**17 35 38.0**	**+1.2**
RTZ				S	**Sn**	**17 36 08.1**	**-0.1**
MUGZ	**Murupara**	**2.68**	**251**	P	**Pn**	**17 35 38.9**	**+0.6**
MTHZ	**Maungataniwha**	**2.76**	**243**	P	**Pn**	**17 35 39.9**	**+0.5**
MTHZ				S	**Sn**	**17 36 12.4**	**-0.5**
ARHZ	**Aropaoanui**	**2.86**	**234**	P	**Pn**	**17 35 42.2**	**+1.5**
NMHZ	**Naumai**	**2.90**	**239**	P	**Pn**	**17 35 42.3**	**+0.9**
BKZ	**Black Stump Fm**	**3.15**	**240**	P	**Pn**	**17 35 45.2**	**+0.5**
BKZ	**Black Stump Fm**	**3.15**	**240**	P	**Pn**	**17 35 45.1**	**+0.4**
BKZ				S	**Sn**	**17 36 21.3**	**-1.1**
KAHZ	**Kahuranaki**	**3.25**	**228**	P	**Pn**	**17 35 45.8**	**-0.4**
KAHZ				S	**Sn**	**17 36 25.4**	**+0.3**
PNHZ	**Pukenui**	**3.74**	**231**	P	**Pn**	**17 35 52.2**	**-0.7**
TSZ	**Takapari Road**	**3.97**	**231**	P	**Pn**	**17 35 56.2**	**+0.2**
DVHZ	**Dannevirke**	**4.00**	**227**	P	**Pn**	**17 35 55.5**	**-0.9**
HIZ	**Hauiti**	**4.15**	**256**	P	**Pn**	**17 35 58.8**	**+0.4**
BFZ	**Birch Farm**	**4.21**	**223**	P	**Pn**	**17 35 59.0**	**-0.3**
PRWZ	**Pori Road**	**4.28**	**226**	P	**Pn**	**17 36 00.2**	**0.0**
MRZ	**Mangatainoka R**	**4.57**	**227**	P	**Pn**	**17 36 03.1**	**-1.2**
OUZ	**Omahuta**	**5.69**	**293**	P	**Pn**	**17 36 20.2**	**+0.6**

*IDC **10** 17:46:53.2±1.0, 17°.73N×122°.99E,h0km,mb3.6/10, mbtmp3.7/11,Error ellipse: s-maj=33.7km s-min=15.7km az=75.0*
*MAN **10** 17:46:56.0, 17°.58N×122°.58E,h7km,MS3.6*
ISC 10 17:46:54.9±0.9,**17°.76N**±0°.07×**122°.87E**±0°.09,**h10**km,**n21,** σ1s**48**/18,**mb3.5**/9,**Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**2.21**	**285**	*i* P	**Pn**	**17 47 32.1**	**+0.4**
PIP				*i* S	**Sn**	**17 47 58.1**	**-1.0**
SIPP	**Brgy, Tapao**	**2.30**	**274**	*e*P	**Pn**	**17 47 32.7**	**-0.3**
SIPP				*e*S	**Sn**	**17 47 59.5**	**-1.9**
PCPS	**Palayan City**	**3.55**	**210**	*e*P	Pn	17 47 38.4	-12
PCPS				*e*S	Sn	17 48 09.0	-23
GQP	**Guinayangan**	**3.85**	**186**	*e*P	**Pn**	**17 47 54.7**	**+0.4**
GQP				*i* S	**Sn**	**17 48 36.5**	**-3.2**
TGY	**Tagaytay City**	**4.08**	**207**	Pn	**Pn**	**17 47 58.7**	**+1.1**
	40nm,0.3s,baz=56,slow=18,SNR=4.0						
TGY				Sn	**Sn**	**17 48 47.4**	**+1.9**
	37nm,0.3s,baz=50,slow=17,SNR=3.7						
KSRS	**Korea Array**	**20.12**	**12**	P	**P**	**17 51 27.2**	**-1.7**
	1.3nm,0.8s,baz=195,slow=11,SNR=2.4 1.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**22.75**	**275**	P	**P**	**17 51 57.2**	**-0.3**
	0.8nm,0.4s,baz=93,slow=11,SNR=4.8 0.8nm,0.4s						
SONM	**Songino Array**	**32.89**	**339**	P	**P**	**17 53 29.7**	**+0.4**
	0.2nm,0.4s,baz=152,slow=9.5,SNR=1.9 0.2nm,0.4s						
WRA	**Warramunga Arr**	**39.12**	**163**	P	**P**	**17 54 22.1**	**-0.7**
	2.2nm,0.8s,baz=341,slow=8.5,SNR=20 2.2nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**41.57**	**82**	T	T	18 39 44.2	
	baz=276,slow=75,SNR=301						
H11S1	**WAKE ISLAND Hy**	**41.58**	**82**	T	T	18 39 44.4	
	baz=276,slow=75,SNR=179						
H11S2	**WAKE ISLAND Hy**	**41.59**	**82**	T	T	18 39 46.4	
	baz=276,slow=75,SNR=196						
H11N1	**WAKE ISLAND Hy**	**41.65**	**80**	T	T	18 39 52.0	
	baz=274,slow=75,SNR=99						
H11N2	**WAKE ISLAND Hy**	**41.65**	**80**	T	T	18 39 50.4	
	baz=274,slow=75,SNR=60						
H11N3	**WAKE ISLAND Hy**	**41.67**	**80**	T	T	18 39 53.3	
	baz=274,slow=75,SNR=45						
ASAR	**Alice Springs**	**42.56**	**165**	P	**P**	**17 54 50.2**	**-1.0**
	0.8nm,0.8s,baz=341,slow=8.5,SNR=10 0.8nm,0.8s						
MKAR	**Makanchi Array**	**44.15**	**320**	P	**P**	**17 55 04.0**	**+0.2**
	0.3nm,0.5s,baz=112,slow=9.3,SNR=10 0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**46.52**	**330**	P	**P**	**17 55 24.6**	**+2.2**
	0.2nm,0.4s,baz=113,slow=7.0,SNR=1.5 0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**48.10**	**323**	P	**P**	**17 55 36.2**	**+1.5**
	0.7nm,0.6s,baz=120,slow=8.0,SNR=9.1 0.7nm,0.6s						
BVAR	**Borovoye Array**	**53.69**	**324**	P	**P**	**17 56 16.4**	**-0.4**
	0.2nm,0.4s,baz=97,slow=7.4,SNR=3.8 0.2nm,0.4s						
FINES	**FINESS Array B**	**77.78**	**331**	P	**P**	**17 58 53.0**	**+0.9**
	3.1nm,1.1s,baz=126,slow=19,SNR=1.4 3.1nm,1.1s						

*IDC **10** 17:50:40.1±1.3,2°.36S×128°.45E,h0km,mb3.2/3, mbtmp3.2/5,ML3.2/2,Error ellipse: s-maj=40.4km s-min=24.3km az=70.0*
*DJA **10** 17:50:53.3±0.4,3°.5±3°×13°.0E±°,h10km±4km,M3.0/13, MLv3.0/13*
ISC 10 17:50:54.2±1.0,**2°.84S**±0°.08×**129°.97E**±0°.06,**h25**km,**n13,** σ1s**06**/13,**mb3.2**/3,**Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.15**	**244**	P	**Pn**	**17 51 15.2**	**+0.4**
MSAI				S	**Sb**	**17 51 31.3**	**+1.2**
KRAI	**Karang Ratu**	**1.64**	**253**	P	**Pn**	**17 51 21.9**	**+0.4**
BNDI	**Bandanaira**	**1.67**	**182**	P	**Pb**	**17 51 24.7**	**+0.4**
AAI	**Ambon**	**1.96**	**245**	P	**Pn**	**17 51 26.5**	**+0.6**
FAKI	**Fak Fak**	**2.28**	**92**	P	**Pn**	**17 51 31.9**	**+1.6**
SIJI	**Sorong**	**2.35**	**33**	Pn	**Pn**	**17 51 31.5**	**+0.1**
	2.1nm,0.3s,baz=229,slow=19,SNR=75						
SIJI				Sn	**Sn**	**17 51 59.9**	**+0.5**
	3.6nm,0.3s,baz=229,slow=19,SNR=17 7.0nm,0.4s						
SIJI	**Sorong**	**2.35**	**33**	P	**Pn**	**17 51 31.2**	**-0.1**
SWI	**Sorong**	**2.35**	**33**	P	**Pn**	**17 51 31.7**	**+0.4**
NLAI	**Namlea**	**2.89**	**262**	P	**Pn**	**17 51 39.3**	**+0.6**
WRA	**Warramunga Arr**	**17.52**	**166**	P	**Pn**	**17 54 54.9**	**-2.1**
	0.1nm,0.3s,baz=344,slow=12,SNR=5.5 0.2nm,0.4s						
ASAR	**Alice Springs**	**21.05**	**170**	P	**P**	**17 55 35.4**	**-1.2**
	1.1nm,0.7s,baz=349,slow=9.4,SNR=11 1.1nm,0.7s						
MKAR	**Makanchi Array**	**64.77**	**326**	P	P	18 01 11.5	-19
	0.1nm,0.5s,baz=125,slow=5.1,SNR=5.2 0.1nm,0.5s						
KURBB	**Kurchatov Arra**	**68.99**	**328**	P	P	18 01 40.8	-17
	0.1nm,0.5s,baz=112,slow=7.4,SNR=1.7 0.1nm,0.5s						

*UPP **10** 18:00:32.4±0.1, 67°.04N×20°.96E,h0km,ML2.2,Suspected explosion*
*IDC **10** 18:00:33.1±1.0, 67°.03N×21°.10E,h0km,mbtmp2.9/4, ML1.9/4,Error ellipse: s-maj=17.6km s-min=8.4km az=108.0*
*HEL **10** 18:00:34.3±0.2, 67°.03N×21°.13E,h0km,ML1.8,Suspected explosion*
ISC 10 18:00:32.6±0.8,**67°.04N**±0°.02×**20°.93E**±0°.03,**h0**km,**n48,** σ1s**42**/65,**Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.17**	**301**	P	**Pg**	**18 00 36.0**	**+0.2**
DUNU				S	**Sg**	**18 00 38.7**	**+0.8**
MASU	**Masugnsbyn**	**0.59**	**44**	P	**Pg**	**18 00 43.5**	**-0.4**
MASU				S	**Sg**	**18 00 51.5**	**-0.1**
ERTU	**Ertsjaerv**	**0.69**	**134**	P	**Pg**	**18 00 45.4**	**-0.5**
ERTU				S	**Sg**	**18 00 55.1**	**+0.2**
ERTU	**Ertsjaerv**	**0.69**	**134**	PG	**Pg**	**18 00 45.4**	**-0.5**
	baz=317						
ERTU				SG	**Sg**	**18 00 50.9**	**-4.0**
HARU	**Harads**	**0.88**	**179**	P	**Pg**	**18 00 49.0**	**-0.4**
RATU	**Laukkuluspa**	**0.94**	**327**	P	**Pg**	**18 00 49.9**	**-0.8**
KUA	**Kurravaara**	**0.95**	**346**	P	**Pg**	**18 00 50.0**	**-0.8**
SALU	**Saltoluokta**	**1.01**	**291**	P	**Pg**	**18 00 51.3**	**-0.5**
LANU	**Lannavaara**	**1.09**	**21**	P	**Pg**	**18 00 52.5**	**-1.1**
LANU	**Lannavaara**	**1.09**	**21**	SG	**Sb**	**18 01 08.7**	**-0.5**
NIKU	**Nikkaluokta**	**1.11**	**320**	P	**Pg**	**18 00 53.0**	**-0.9**
KLF	**Kolari**	**1.20**	**79**	PG	**Pg**	**18 00 54.3**	**-1.3**
KLF				smax	smax	18 01 08.5	
	comp=Z,8.5nm,0.2s						
KLF				SN	**Sb**	**18 01 13.6**	**+1.4**
KOVU	**Salmi**	**1.23**	**346**	P	**Pg**	**18 00 55.1**	**-1.0**
KALU	**Kalix**	**1.53**	**139**	P	**Pn**	**18 01 00.5**	**-0.7**
SJUU	**Sjulsmark**	**1.56**	**170**	P	**Pn**	**18 01 01.1**	**-0.4**
TOF	**Tornio**	**1.66**	**124**	PG	**Pn**	**18 01 02.8**	**-0.1**
TOF				smax	smax	18 01 22.2	
	comp=Z,7.3nm,0.2s						
TOF				SN	**Sn**	**18 01 25.9**	**+1.0**
HEF	**Hetta**	**1.73**	**36**	*e*P	**Pn**	**18 01 04.0**	**+0.1**
HEF	**Hetta**	**1.73**	**36**	PB	**Pn**	**18 01 03.8**	**0.0**
HEF				smax	smax	18 01 24.6	
	comp=Z,10nm,0.2s						
HEF				SN	**Sn**	**18 01 27.2**	**+0.7**
KIF	**Kilpisjarvi**	**1.98**	**359**	*e*P	**Pn**	**18 01 07.0**	**-0.2**
KIF	**Kilpisjarvi**	**1.98**	**359**	smax	smax	18 01 34.4	
	comp=Z,15nm,0.2s						
KIF				SB	**Sg**	**18 01 35.8**	**-0.2**
RNF	**Rovaniemi**	**2.06**	**100**	PG	**Pn**	**18 01 09.2**	**+0.9**
KTK1	**Kautokeino**	**2.16**	**23**	PB	**Pn**	**18 01 11.3**	**+1.4**
KTK1				SG	**Sb**	**18 01 40.1**	**+0.2**
RANF	**Ranua**	**2.56**	**111**	PB	**Pn**	**18 01 15.6**	**+0.3**
	baz=296						
TRO	**Tromso**	**2.71**	**345**	SN	**Sb**	**18 01 53.2**	**-2.4**
OBF4	**Vikkela, Lumij**	**2.81**	**141**	PN	**Pn**	**18 01 19.5**	**+0.8**
	baz=330						
OBF4				smax	smax	18 01 55.7	
	comp=Z,1.8nm,0.2s						
OUL	**Oulu**	**2.82**	**132**	PN	**Pn**	**18 01 19.7**	**+0.9**
OBF0	**Syolatti, Pyha**	**2.89**	**150**	PB	**Pn**	**18 01 22.8**	**+3.0**
	baz=334						
OBF0				smax	smax	18 01 58.2	
	comp=Z,2.9nm,0.2s						
OBF8	**Ulkokalla**	**2.91**	**158**	PN	**Pn**	**18 01 22.2**	**+2.1**
OBF8				smax	smax	18 01 59.0	
	comp=Z,4.1nm,0.2s						
ARA0	**ARCESS Array S**	**3.03**	**32**	PN	**Pn**	**18 01 22.3**	**+0.5**
ARA0				SN	**Sn**	**18 02 00.6**	**+1.9**
ARCES	**ARCESS Array B**	**3.03**	**32**	Pn	**Pn**	**18 01 21.9**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=212,slow=14,SNR=15						
ARCES				Sn	**Sn**	**18 01 59.0**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=216,slow=21,SNR=8.4 comp=Z,0.7nm,0.2s						
OUF	**Merijarvi**	**3.11**	**148**	PN	**Pn**	**18 01 23.9**	**+1.1**
OUF				smax	smax	18 02 04.2	
	comp=Z,1.9nm,0.2s						
OUF				SG	**Sb**	**18 02 05.8**	**-1.2**
RAJF	**Raja-Jooseppi**	**3.15**	**59**	PN	**Pn**	**18 01 25.2**	**+1.8**
UMAU	**Umeaa**	**3.17**	**182**	PN	**Pn**	**18 01 24.5**	**+0.8**
UMAU				SG	**Sb**	**18 02 11.7**	**+2.9**
KU2	**Taivalkoski**	**3.23**	**111**	PN	**Pn**	**18 01 25.6**	**+1.1**
VRF	**Varrio**	**3.43**	**74**	PN	**Pn**	**18 01 27.9**	**+0.7**
VRF				SG	**Sb**	**18 02 17.9**	**+1.7**
MSF	**Maaselka**	**3.44**	**105**	PN	**Pn**	**18 01 29.3**	**+1.9**
OLKF	**Oulanka, Finla**	**3.44**	**98**	PN	**Pn**	**18 01 28.1**	**+0.7**
KEV	**Kevo**	**3.53**	**37**	PN	**Pn**	**18 01 30.4**	**+1.8**
KEV				SG	**Sb**	**18 02 22.7**	**+3.4**
KU6	**Riekki**	**3.73**	**102**	PN	**Pn**	**18 01 31.5**	**+0.3**
	baz=289						
HUSU	**Husum**	**3.78**	**192**	PN	**Pn**	**18 01 33.2**	**+1.2**
HUSU				SN	**Sn**	**18 02 19.2**	**+2.0**
KU1	**Kurvinen**	**3.78**	**109**	PN	**Pn**	**18 01 33.0**	**+1.0**
VAF	**Ylistaro**	**4.08**	**169**	PN	**Pn**	**18 01 37.3**	**+1.2**
	baz=354						
HEMU	**Hemsoen**	**4.55**	**197**	SN	**Sn**	**18 02 36.2**	**+0.1**
NIF	**Nilsia**	**4.67**	**138**	PN	**Pn**	**18 01 45.2**	**+1.0**
	baz=326						
RMF	**Romuvaara**	**4.68**	**123**	PN	**Pn**	**18 01 46.4**	**+2.1**
FINES	**FINESS Array B**	**6.04**	**156**	Pn	**Pn**	**18 02 04.1**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=346,slow=14,SNR=7.5						
FINES				Sn	**Sn**	**18 03 10.8**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=340,slow=22,SNR=4.2						
FINES				Lg	Lg	18 03 42.6	
	comp=Z,0.2nm,0.3s,baz=342,slow=26,SNR=1.8 comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	**7.37**	**220**	Pn	**Pn**	**18 02 19.9**	**-1.5**
	baz=35,slow=12,SNR=1.5 comp=Z,0.6nm,0.8s						
HFS	**Hagfors**	**7.64**	**208**	Pn	**Pn**	**18 02 24.4**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=29,slow=14,SNR=0.9						
HFS				Sn	**Sn**	**18 03 49.0**	**-3.1**
	comp=Z,0.1nm,0.3s,baz=28,slow=3.4,SNR=1.2 comp=Z,1.7nm,1.0s						

*AFAD **10** 18:05:59.9, 34°.99N×27°.93E,h14km±2km,ML2.7*
*ISK **10** 18:06:01.9, 35°.13N×27°.91E,h5km,ML2.8/19*
*IDC **10** 18:06:01.2±1.1, 35°.07N×28°.01E,h0km,mb3.4/6, mbtmp3.3/10,ML3.1/3,MS3.4/1,Error ellipse: s-maj=26.8km s-min=16.8km az=169.0*
*ATH **10** 18:06:09.5±0.7, 35°.39N×27°.56E,h7km±2km,ML2.6/5, Latitude uncertainty: 4 km; Longitude uncertainty: 3 km*
ISC 10 18:06:01.5±1.5,**35°.02N**±0°.04×**27°.91E**±0°.03,**h6**km±9km, **n55,** σ1s**49**/75,**mb3.4**/5,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.81**	**311**	Pg	**Pg**	**18 06 16.8**	**-0.3**
KARP				Sg	**Sb**	**18 06 28.8**	**-0.5**
KARP	**Karpathos**	**0.81**	**311**	P	**Pg**	**18 06 16.9**	**-0.1**
KARP				S	**Sg**	**18 06 22.9**	**-4.7**
ARG	**Arkhangelos**	**1.21**	**8**	Pn	**Pg**	**18 06 24.0**	**-0.7**
ARG				Sn	**Sg**	**18 06 40.4**	**-0.1**
ARG	**Arkhangelos**	**1.21**	**8**	P	**Pn**	**18 06 27.2**	**+2.2**
ARG				S	**Sg**	**18 06 41.2**	**+0.8**
ZKR	**Zakros**	**1.39**	**275**	Pn	**Pg**	**18 06 29.7**	**+1.5**
ZKR	**Zakros**	**1.39**	**275**	P	**Pg**	**18 06 30.6**	**+2.4**
ZKR				S	**Sn**	**18 06 47.4**	**+1.2**
YAZI	**Mula-Dat§a-**	**1.70**	**348**	P	**Pn**	**18 06 31.7**	**-0.1**
YAZI				S	**Sb**	**18 06 56.0**	**+1.1**
YAZI				IAML		18 07 03.0	
	comp=E,71nm,0.5s						
YAZI				IAML		18 07 10.0	
	comp=N,64nm,0.6s						
DAT	**Datca**	**1.73**	**351**	Pn	**Pn**	**18 06 32.9**	**+0.6**
IZZE	**Mula-Seydike**	**1.78**	**37**	P	**Pn**	**18 06 32.6**	**-0.3**
IZZE				IAML		18 06 58.0	
	comp=N,86nm,0.5s						
TURN	**Turunc**	**1.78**	**9**	Pn	**Pn**	**18 06 33.5**	**+0.7**
TURN	**Turunc**	**1.78**	**9**	P	**Pb**	**18 06 34.0**	**-0.5**
TURN				S	**Sg**	**18 06 58.8**	**+0.1**
TURN				IAML		18 07 08.0	
	comp=E,72nm,1.0s						
TURN				IAML		18 07 17.0	
	comp=N,67nm,0.6s						
AKAS	**Kas**	**1.84**	**48**	Pn	**Pn**	**18 06 34.8**	**+1.0**
FETY	**Fethiye**	**1.88**	**30**	Pn	**Pn**	**18 06 34.9**	**+0.7**
FETY	**Fethiye**	**1.88**	**30**	P	**Pg**	**18 06 37.6**	**+0.1**
DALY	**Dalyan (Mula)**	**1.90**	**18**	Pn	**Pn**	**18 06 35.3**	**+0.9**
NPS	**Neapolis**	**1.90**	**278**	P	**Pg**	**18 06 38.4**	**+0.5**
NPS				S	**Sn**	**18 06 58.5**	**-0.2**
SABU	**Mula-Dalaman**	**2.00**	**25**	P	**Pn**	**18 06 36.4**	**+0.5**
SABU				S	**Sg**	**18 07 09.6**	**+3.9**
SABU				IAML		18 07 29.0	
	comp=E,57nm,1.9s						
BODT	**Bodrum**	**2.10**	**347**	Pn	**Pn**	**18 06 38.2**	**+0.9**
YER	**Yerkesik**

0.1nm,0.5s,baz=274,slow=8.8,SNR=2.0
0.1nm,0.5s

BORG	**Borgarnes**	**41.76**	**331**	LR	LR	18 34 28.7	
	comp=Z,47nm,18.2s,baz=11,slow=41						
MKAR	**Makanchi Array**	**41.97**	**57**	P	**P**	**18 13 54.3**	**+1.0**
	0.1nm,0.5s,baz=280,slow=6.5,SNR=2.2						
	0.1nm,0.5s						
SONM	**Songino Array**	**57.83**	**51**	P	**P**	**18 15 53.8**	**-0.2**
	0.2nm,0.6s,baz=286,slow=7.0,SNR=2.0						
	0.2nm,0.6s						

*IDC **10** 18:15:45.0±1.0,23˚.54N×126˚.08E, h0km, mb3.6/7, mbtmp3.7/9, ML3.4/2, MS2.9/6, Error ellipse: s-maj=31.6km s-min=18.5km az=73.0*
*JMA **10** 18:15:49.3±0.3,24˚N±1˚×12˚6E±˚, h108km, MV3.4/18, NEAR MIYAKOJIMA ISLAND*
ISC 10 18:15:46.9±2.0, **23˚.54N**±0˚.07×**126˚.00E**±0˚.05, **h15**km±12km, **n32**, σ1**s31**/38, **mb3.5**/7, **MS2.9**/4, **Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**1.33**	**336**	P		**Pg**	**18 16 12.4**	**-0.1**
JOGS				eS		**Sg**	**18 16 29.7**	**-0.1**
JMJ2	**Miyako jima3**	**1.34**	**333**	*e*P		**Pb**	**18 16 12.2**	**+0.4**
JMJ2				eS		**Sb**	**18 16 29.3**	**+0.5**
JIKM	**Ikemajima**	**1.54**	**334**	*e*P		**Pb**	**18 16 14.9**	**-0.3**
JIKM				eS		**Sb**	**18 16 34.1**	**-0.4**
JTJ	**Tarama**	**1.61**	**313**	*e*P		**Pn**	**18 16 15.3**	**+0.4**
JTJ				eS		**Sn**	**18 16 34.2**	**-1.2**
JISG	**Ishigakijimahi**	**1.86**	**304**	P		**Pn**	**18 16 18.7**	**+0.4**
JISG				eS		**Sn**	**18 16 40.4**	**-1.2**
JIJ	**Ishigaki jima**	**1.89**	**296**	*e*P		**Pn**	**18 16 18.7**	**+0.1**
JIJ				eS		**Sn**	**18 16 40.4**	**-1.8**
JKRS	**Kuro-shima**	**1.95**	**291**	*e*P		**Pn**	**18 16 19.7**	**+0.2**
JKRS				eS		**Sn**	**18 16 42.0**	**-1.7**
HATJ	**Hateruma jima**	**2.08**	**285**	*e*P		**Pn**	**18 16 21.0**	**-0.2**
HATJ				eS		**Sn**	**18 16 43.9**	**-3.0**
IRIF	**Iriomote-Funau**	**2.22**	**291**	*e*P		**Pn**	**18 16 23.7**	**+0.4**
IRIF				eS		**Sn**	**18 16 49.0**	**-1.5**
JKE	**Kume jima 2**	**2.86**	**14**	*e*P		**Pn**	**18 16 32.5**	**+0.4**
JKE				eS		**Sn**	**18 17 05.3**	**-1.0**
JJT3	**Tamagusuku3**	**3.06**	**32**	*e*P		**Pn**	**18 16 35.3**	**+0.6**
JNTH	**Nagotoyohara**	**3.48**	**31**	*e*P		**Pn**	**18 16 41.0**	**+0.4**
JOW	**Kunigami**	**3.87**	**32**	Pn		**Pn**	**18 16 44.0**	**-1.9**
	7.5nm,0.3s,baz=214,slow=15,SNR=9.1							
JOW				Sn		**Sn**	**18 17 27.4**	**-3.8**
	5.2nm,0.3s,baz=225,slow=11,SNR=1.5							
	24nm,0.3s							
JIH	**Iheya**	**3.91**	**27**	*e*P		**Pn**	**18 16 47.0**	**+0.6**
NACB	**Ninganchiao**	**4.08**	**280**	P		**Pn**	**18 16 47.8**	**-1.0**
YULB	**Yu-li**	**4.32**	**269**	P		**Pn**	**18 16 50.3**	**-1.8**
YHNB	**Yeheng**	**4.37**	**286**	P		**Pn**	**18 16 53.7**	**+0.8**
SSLB	**Suanglung**	**4.63**	**274**	P		**Pn**	**18 16 55.3**	**-1.2**
TPUB	**Ta-pu**	**4.94**	**268**	P		**Pn**	**18 17 00.3**	**-0.4**
JNU	**Nakatsue**	**10.46**	**23**	Pn		**Pn**	**18 18 15.1**	**-1.4**
	0.2nm,0.3s,baz=211,slow=12,SNR=2.3							
	12nm,1.0s							
KSRS	**Korea Array**	**13.97**	**6**	LR		LR	18 25 12.0	
	comp=Z,17nm,18.4s,baz=200,slow=41							
DAV	**Davao City (W)**	**16.38**	**181**	LR		LR	18 27 35.4	
	comp=Z,24nm,18.3s,baz=24,slow=43							
SIJI	**Sorong**	**24.80**	**167**	LR		LR	18 28 39.7	
	comp=Z,22nm,21.0s,baz=184,slow=31							
CMAR	**Chiang Mai Arr**	**25.74**	**264**	P		**P**	**18 21 16.5**	**-0.7**
	0.4nm,0.3s,baz=70,slow=8.5,SNR=4.5							
CMAR				LR		LR	18 32 03.7	
	comp=Z,19nm,18.4s,baz=95,slow=38							
	0.4nm,0.3s							
TLY	**Talaya**	**32.94**	**334**	LR		LR	18 37 39.4	
	comp=Z,32nm,18.3s,baz=74,slow=40							
LEM	**Lembang**	**35.12**	**213**	LR		LR	18 39 09.1	
	comp=Z,52nm,18.1s,baz=200,slow=40							
MKAR	**Makanchi Array**	**41.90**	**315**	P		**P**	**18 23 37.1**	**+0.4**
	0.8nm,0.8s,baz=106,slow=9.2,SNR=8.1							
	0.8nm,0.8s							
ZALV	**Zalesovo Beam**	**43.23**	**325**	P		**P**	**18 23 48.6**	**+1.2**
	0.2nm,0.3s,baz=113,slow=7.3,SNR=1.9							
	0.2nm,0.3s							
WRA	**Warramunga Arr**	**43.98**	**169**	P		**P**	**18 23 53.8**	**+0.1**
	0.8nm,0.5s,baz=347,slow=8.3,SNR=28							
	0.8nm,0.5s							
KURBB	**Kurchatov Arra**	**45.47**	**319**	P		**P**	**18 24 06.3**	**+0.9**
	0.8nm,0.7s,baz=111,slow=8.7,SNR=8.7							
	0.8nm,0.7s							
ASAR	**Alice Springs**	**47.55**	**170**	P		**P**	**18 24 22.3**	**+0.3**
	0.3nm,0.6s,baz=350,slow=8.8,SNR=10							
	0.3nm,0.6s							
BRTR	**Keskin Array B**	**77.08**	**308**	P		**P**	**18 27 42.4**	**+2.5**
	0.5nm,0.8s,baz=82,slow=3.1,SNR=2.5							
	0.5nm,0.8s							

*IDC **10** 18:21:45.9±3.4, 15˚.57S×66˚.86E, h0km, mb3.4/5, mbtmp3.4/5, MS3.3/2, Error ellipse: s-maj=115.9km s-min=32.5km az=57.0*
ISC 10 18:21:48.0±3.4, **15˚.6S**±0˚.5×**66˚.8E**±0˚.7, **h14**km, **n14**, σ0**s44**/6, **mb3.5**/5, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**9.64**	**36**	T		T	18 33 30.2	
	baz=214,slow=75,SNR=50							
H08S2	**Diego Garcia H**	**9.65**	**36**	T		T	18 33 25.4	
	baz=214,slow=75,SNR=49							
H08S3	**Diego Garcia H**	**9.66**	**36**	T		T	18 33 30.3	
	baz=214,slow=75,SNR=51							
H04N2	**CROZET ISLANDS**	**32.98**	**199**	T		T	19 03 42.7	
	baz=28,slow=76,SNR=25							
H04N1	**CROZET ISLANDS**	**32.98**	**199**	T		T	19 03 42.0	
	baz=28,slow=76,SNR=20							
H04N3	**CROZET ISLANDS**	**32.99**	**199**	T		T	19 03 40.6	
	baz=28,slow=76,SNR=22							
LBTB	**Lobatse**	**39.66**	**250**	LR		LR	18 44 40.3	
	comp=Z,49nm,18.8s,baz=132,slow=35							
CMAR	**Chiang Mai Arr**	**46.31**	**44**	LR		LR	18 49 41.1	
	comp=Z,25nm,18.1s,baz=270,slow=36							
ASAR	**Alice Springs**	**63.20**	**109**	P		**P**	**18 32 16.3**	**-0.1**
	0.2nm,0.6s,baz=271,slow=6.0,SNR=6.3							
	0.2nm,0.6s							
MKAR	**Makanchi Array**	**63.64**	**12**	P		**P**	**18 32 18.0**	**-0.6**
	0.2nm,0.6s,baz=216,slow=7.1,SNR=2.5							
	0.2nm,0.6s							
WRA	**Warramunga Arr**	**64.06**	**105**	P		**P**	**18 32 22.1**	**0.0**
	0.2nm,0.6s,baz=272,slow=6.1,SNR=4.9							
	0.2nm,0.6s							
KURBB	**Kurchatov Arra**	**66.72**	**8**	P		**P**	**18 32 38.8**	**+0.3**
	0.3nm,0.5s,baz=204,slow=8.0,SNR=2.7							
	0.3nm,0.5s							
SONM	**Songino Array**	**72.35**	**27**	P		**P**	**18 33 13.8**	**+0.3**
	0.3nm,0.6s,baz=220,slow=5.5,SNR=5.0							
	0.3nm,0.6s							
PDAR	**Pinedale Array**	**152.74**	**354**	PKPbc		**PKiKP**	**18 41 45.2**	**-0.1**
	0.3nm,0.7s,baz=351,slow=3.3,SNR=2.7							

*RSNC **10** 18:30:50.6±0.7, 0˚.5±3˚×8˚.0W±˚, h9km±9km, M3.9, mB5.2, mb4.5, ML3.4, Mw(mB)4.6*
*IGQ **10** 18:30:51.1±0.3, 0˚.5±2˚×8˚.0W±˚, h12km±2km, M4.2/36, mb4.5/2, mB4.8/1, Mjma4.1/36, ML4.5/7, MLv4.0/36, Ms(BB)4.2/29, Mw(mB)4.1/1*
ISC 10 18:30:50.6±1.3, **0˚.24S**±0˚.03×**80˚.39W**±0˚.04, **h8**km±10km, **n114**, σ1**s71**/136, **11C-10D**, **Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ABH3	**Manabi, Bahia**	**0.35**	**186**	⇑P		**Pg**	**18 30 58.7**	**+1.2**
ABH3				S		**Sb**	**18 31 04.9**	**-0.1**
ABH2	**Ecuador-Univer**	**0.41**	**181**	⇑P		**Pb**	**18 31 00.3**	**0.0**
ABH2				S		**Sb**	**18 31 07.5**	**+0.8**
PECV	**Mancha de Ca P**	**0.63**	**147**	P		**Pg**	**18 31 01.4**	**-1.4**
AMNT	**Manta-Manabi**	**0.78**	**207**	P		**Pb**	**18 31 06.1**	**-0.3**
AMNT				S		**Sb**	**18 31 17.5**	**+0.5**
AV18	**Acelerografo,**	**1.06**	**59**	P		**Pn**	**18 31 11.9**	**0.0**
JIPI	**JIPIJAPA**	**1.12**	**189**	P		**Pb**	**18 31 11.2**	**-1.2**
JIPI				S		**Sg**	**18 31 28.0**	**+1.1**
AATC	**Ecuador-Atacam**	**1.22**	**25**	P		**Pg**	**18 31 14.5**	**+0.5**
ISPT	**Isla de la Pla**	**1.22**	**214**	P		**Pn**	**18 31 12.3**	**-1.8**
ISPT				S		**Sb**	**18 31 28.3**	**-1.7**
AV21	**Acelerografo,**	**1.23**	**43**	P		**Pg**	**18 31 14.5**	**+0.3**
BV15	**Puerto Quito-O**	**1.23**	**71**	P		**Pn**	**18 31 12.8**	**-1.4**
BV15				S		**Sg**	**18 31 32.3**	**+2.0**
ASDO	**Santo Domingo**	**1.27**	**91**	P		**Pn**	**18 31 13.0**	**-1.7**
AMA1	**Acelerografo,**	**1.34**	**30**	P		**Pg**	**18 31 17.1**	**+0.7**
PPLP	**Puerto Lpez**	**1.35**	**197**	P		**Pn**	**18 31 13.9**	**-1.9**
PPLP	**Puerto Lpez**	**1.35**	**197**	⇑P		**Pn**	**18 31 14.1**	**-1.7**
PPLP	**Puerto Lpez**	**1.35**	**197**	P		**Pn**	**18 31 13.9**	**-1.9**
PPLP				S		**Sn**	**18 31 32.8**	**-1.2**
CSOL	**CASCOL**	**1.41**	**183**	P		**Pn**	**18 31 15.6**	**-1.1**
AES2	**Ecuador-Puerto**	**1.43**	**31**	P		**Pb**	**18 31 16.8**	**-0.8**
APR2	**Miler**	**1.46**	**77**	P		**Pn**	**18 31 16.1**	**-1.3**
PAC1	**Pacto, Paraso**	**1.68**	**72**	⇓P		**Pn**	**18 31 19.3**	**-1.1**
PAC1	**Pacto, Paraso**	**1.68**	**72**	P		**Pn**	**18 31 19.1**	**-1.3**
PAC1				S		**Sn**	**18 31 39.3**	**-2.9**
ILLI	**Illinizas Sur**	**1.73**	**106**	⇑P		**Pn**	**18 31 19.8**	**-1.7**
GGPT	**Toaza - Volcan**	**1.77**	**89**	⇓P		**Pn**	**18 31 20.4**	**-1.5**
JUA2	**San Juan 2**	**1.78**	**89**	P		**Pn**	**18 31 21.1**	**-1.1**
APR1	**Acelerografo,**	**1.79**	**84**	P		**Pn**	**18 31 21.2**	**-0.9**
TERV	**Terraza Guagua**	**1.79**	**88**	⇓P		**Pn**	**18 31 20.8**	**-1.5**
GGPC	**Guagua Pichinc**	**1.79**	**88**	⇓P		**Pn**	**18 31 21.0**	**-1.4**
YANA	**Yana**	**1.82**	**86**	⇑P		**Pn**	**18 31 21.6**	**-1.1**
AGUAY	**Guayaquil**	**1.85**	**166**	P		**Pn**	**18 31 21.5**	**-1.2**
SRAM	**San Ramn-Vol**	**1.89**	**105**	P		**Pn**	**18 31 23.3**	**-0.3**
PULU	**Pululahua**	**1.90**	**82**	P		**Pn**	**18 31 23.3**	**-0.5**
SUCR	**Mariscal Sucre**	**1.93**	**102**	P		**Pn**	**18 31 24.1**	**-0.2**
AC07	**Ecuador-Guayaq**	**1.94**	**168**	P		**Pn**	**18 31 23.1**	**-0.9**
TING	**Casa Alexandra**	**1.94**	**91**	P		**Pn**	**18 31 24.5**	**+0.3**
SLOR	**San Lorenzo -**	**1.95**	**104**	⇓P		**Pn**	**18 31 24.3**	**-0.2**
CHSH	**Refugio Sur-Vo**	**1.96**	**129**	P		**Pn**	**18 31 24.4**	**-0.4**
TOMA	**Boca Toma-Volc**	**1.97**	**97**	P		**Pn**	**18 31 24.6**	**-0.1**
PITA	**Cotopaxi Volc**	**1.98**	**99**	P		**Pn**	**18 31 24.9**	**0.0**
BRRN	**Barrancas-Volc**	**1.99**	**106**	P		**Pn**	**18 31 24.8**	**-0.2**
BMOR	**Cotopaxi Volca**	**1.99**	**104**	⇓P		**Pn**	**18 31 24.8**	**-0.3**
BREF	**Cotopaxi Volca**	**1.99**	**102**	⇓P		**Pn**	**18 31 25.4**	**+0.2**
OTAV	**Otavalo**	**2.00**	**76**	⇑P		**Pn**	**18 31 24.2**	**-0.9**
OTAV	**Otavalo**	**2.00**	**76**	P		**Pn**	**18 31 24.0**	**-1.1**
OTAV				S		**Sn**	**18 31 49.3**	**-1.2**
BVC2	**Cotopaxi Volca**	**2.02**	**102**	⇓P		**Pn**	**18 31 25.5**	**0.0**
SALI	**Salinas**	**2.02**	**197**	P		**Pn**	**18 31 26.0**	**+0.9**
VC1	**Cotopaxi 1**	**2.02**	**101**	P		**Pn**	**18 31 25.8**	**+0.2**
JSCH	**Cashca Totoras**	**2.03**	**136**	P		**Pn**	**18 31 25.0**	**-0.5**
BTAM	**Cotopaxi Volca**	**2.04**	**102**	⇓P		**Pn**	**18 31 25.9**	**+0.1**
AMIL	**Milagro (Trans**	**2.04**	**157**	P		**Pn**	**18 31 25.6**	**+0.3**
TAMH	**Tambohuasha Ch**	**2.06**	**129**	⇑P		**Pn**	**18 31 25.6**	**-0.4**
CUSE	**Cuicocha Este**	**2.06**	**75**	P		**Pn**	**18 31 25.6**	**-0.4**
CUSE	**Cuicocha Este**	**2.06**	**75**	P		**Pn**	**18 31 25.5**	**-0.5**
CUSE				S		**Sn**	**18 31 51.4**	**-0.8**
TAMB	**Tambo**	**2.07**	**103**	P		**Pn**	**18 31 26.4**	**+0.2**
VCES	**Cotopaxi**	**2.07**	**106**	⇓P		**Pn**	**18 31 25.8**	**-0.4**
CUIC	**Cuicocha-Domo**	**2.10**	**75**	P		**Pn**	**18 31 26.1**	**-0.4**
COTA	**Cotacachi**	**2.13**	**74**	P		**Pn**	**18 31 26.9**	**-0.2**
IGUA	**Igualata**	**2.14**	**125**	⇑P		**Pn**	**18 31 26.9**	**-0.4**
ANTG	**Antisana-Guama**	**2.15**	**97**	P		**Pn**	**18 31 27.7**	**+0.4**
PIS1	**Pisayambo**	**2.17**	**112**	⇑P		**Pn**	**18 31 27.6**	**+0.2**
SNLR	**San Lorenzo-Es**	**2.17**	**45**	P		**Pb**	**18 31 28.1**	**-2.1**
ANTM	**Antisana-La Mi**	**2.19**	**98**	P		**Pn**	**18 31 28.5**	**+0.7**
MILO	**Milagro-Astudi**	**2.19**	**158**	P		**Pn**	**18 31 25.3**	**-2.0**
ANTS	**Antisana-Sarah**	**2.23**	**97**	P		**Pn**	**18 31 29.1**	**+0.6**
ANTI	**Antisana**	**2.24**	**95**	⇑P		**Pn**	**18 31 29.0**	**+0.4**
URCU	**Urcuqui**	**2.24**	**72**	P		**Pn**	**18 31 29.8**	**+1.4**
BBIL	**Ulba Tungurahu**	**2.25**	**122**	P		**Pn**	**18 31 28.8**	**+0.4**
IMBA	**Imbabura, San**	**2.25**	**77**	P		**Pb**	**18 31 30.4**	**-1.4**
JUI6	**Juive**	**2.25**	**121**	P		**Pn**	**18 31 28.9**	**+0.4**
ALIT	**Ecuador-Imbabu**	**2.27**	**63**	P		**Pn**	**18 31 28.6**	**-0.1**
LITE1	**Lita**	**2.27**	**63**	P		**Pn**	**18 31 28.3**	**-0.3**
BPAT	**Tungurahua Vol**	**2.32**	**123**	P		**Pn**	**18 31 29.7**	**+0.1**
MORR	**Playas El Morr**	**2.38**	**179**	P		**Pn**	**18 31 31.2**	**+1.2**
CAYR	**Refugio Cayamb**	**2.40**	**84**	P		**Pn**	**18 31 32.2**	**+1.4**
YAHU	**Yahuarcocha**	**2.40**	**75**	P		**Pn**	**18 31 32.7**	**-1.6**
COHC	**Cochancay**	**2.48**	**153**	P		**Pn**	**18 31 30.2**	**-1.2**
COHC	**Cochancay**	**2.48**	**153**	P		**Pn**	**18 31 30.3**	**-1.1**
COHC				S		**Sn**	**18 32 02.0**	**+0.1**
CHMA	**Chilma**	**2.57**	**65**	P		**Pn**	**18 31 32.2**	**-0.7**
LNGL	**El Angel-Carch**	**2.58**	**68**	⇑P		**Pn**	**18 31 34.5**	**+1.3**
PUYO	**Puyo, Santa Ro**	**2.67**	**118**	P		**Pn**	**18 31 35.8**	**+1.7**
CHL2	**Volcn Chiles**	**2.68**	**67**	P		**Pn**	**18 31 35.9**	**+1.3**
SANGA	**Volcan Sangay**	**2.70**	**132**	P		**Pn**	**18 31 35.9**	**+1.1**
ISPG	**Isla Puna-Puer**	**2.72**	**175**	P		**Pb**	**18 31 38.3**	**-1.2**
TULM	**Tulcn-Chalpat**	**2.77**	**70**	P		**Pb**	**18 31 39.0**	**-1.8**
TULM	**Tulcn-Chalpat**	**2.77**	**70**	P		**Pb**	**18 31 38.5**	**-2.2**
TULM				S		**Sb**	**18 32 15.6**	**+0.6**
REVS	**Reventador Sur**	**2.77**	**87**	P		**Pb**	**18 31 39.0**	**-1.6**
CMBC	**Cumbal**	**2.82**	**65**	P		**Pb**	**18 31 39.3**	**-2.3**
CMBC	**Cumbal**	**2.82**	**65**	P		**Pb**	**18 31 39.2**	**-2.3**
CMBC				S		**Sb**	**18 32 14.7**	**-1.7**
ATUL	**Tulcn**	**2.85**	**69**	P		**Pb**	**18 31 40.9**	**-1.1**
BONI	**La Bonita**	**2.94**	**76**	P		**Pb**	**18 31 40.7**	**-2.8**
BONI	**La Bonita**	**2.94**	**76**	P		**Pn**	**18 31 40.2**	**+2.2**
BONI				S		**Sn**	**18 32 16.5**	**+2.9**
CASC	**Dorado de Casc**	**3.07**	**83**	P		**Pn**	**18 31 43.3**	**-2.3**
CASC	**Dorado de Casc**	**3.07**	**83**	P		**Pn**	**18 31 42.6**	**+3.0**
CASC				S		**Sb**	**18 32 22.0**	**-1.4**
PCRA	**Pucara 2**	**3.08**	**163**	P		**Pn**	**18 31 39.2**	**-0.8**
PKYU	**Pakayacu**	**3.12**	**117**	P		**Pb**	**18 31 44.1**	**-2.4**
ARNL	**Arenillas**	**3.30**	**174**	P		**Pn**	**18 31 44.5**	**+1.9**
GCUF	**Volcan Galeras**	**3.38**	**64**	P		**Pn**	**18 31 46.5**	**+2.4**
GCUF				S		**Sb**	**18 32 33.8**	**+1.3**
BOSC	**San Juan Bosco**	**3.45**	**147**	P		**Pn**	**18 31 48.0**	**+3.0**
TAIS	**Taisha**	**3.58**	**126**	P		**Pn**	**18 31 50.7**	**+4.1**
BBAC	**Balboa, Cauca**	**3.86**	**54**	P		**Pn**	**18 31 50.7**	**+0.1**
BBAC	**Balboa, Cauca**	**3.86**	**54**	P		**Pn**	**18 31 50.2**	**-0.4**
BBAC				S		**Sn**	**18 32 39.5**	**+3.2**
CRUC	**La Cruz**	**3.88**	**62**	P		**Pn**	**18 31 53.1**	**+2.2**
GONZ	**Gonzanam**	**4.09**	**166**	P		**Pn**	**18 31 55.9**	**+2.0**
MCRA	**Macar, Loja**	**4.12**	**174**	P		**Pn**	**18 31 56.5**	**+2.4**
MCRA	**Macar, Loja**	**4.12**	**174**	P		**Pn**	**18 31 55.1**	**+1.1**
MCRA				S		**Sn**	**18 32 42.4**	**-0.1**
POPC	**Popayan, Colom**	**4.63**	**53**	P		**Pn**	**18 32 01.2**	**+0.1**
POPC				S		**Sb**	**18 33 01.3**	**-7.0**
ZUMB	**Zumba**	**4.75**	**165**	P		**Pn**	**18 32 05.8**	**+3.0**
JAMC	**Jamundi, Valle**	**5.06**	**47**	P		**Pn**	**18 32 05.5**	**-1.5**
	2µm49nm,0.5s							
JAMC				S		**Sn**	**18 33 10.5**	**+4.7**
	2µm49nm,0.5s							
FLOC	**Florencia**	**5.07**	**69**	P		**Pn**	**18 32 08.2**	**+1.1**
PTLC	**Puerto Leguiza**	**5.61**	**86**	P		**Pn**	**18 32 15.7**	**+1.3**
PTLC	**Puerto Leguiza**	**5.61**	**86**	P		**Pn**	**18 32 15.7**	**+1.3**
	856nm78nm,0.9s							
YOTC	**Yotoco, Valle**	**5.83**	**44**	P		**Pn**	**18 32 17.6**	**+0.1**
	25nm,0.6s							
YOTC				S		**Sn**	**18 33 25.6**	**+0.9**
	25nm,0.6s							
ORTC	**Ortega, Tolima**	**6.59**	**51**	P		**Pn**	**18 32 27.5**	**-0.4**
	42nm,1.1s							
ORTC				S		**Sn**	**18 33 51.1**	**+7.7**
	42nm,1.1s							
PRAC	**Prado**	**6.76**	**54**	P		**Pn**	**18 32 29.9**	**-0.4**
	26nm,0.5s							
URMC	**La Uribe, Meta**	**6.94**	**60**	P		**Pn**	**18 32 33.4**	**+0.7**
	26nm,0.6s							
GUY2C	**Guyana, Caldas**	**7.39**	**43**	P		**Pn**	**18 32 38.7**	**-0.7**

*GCG **10** 18:37:47.3±0.9, 13˚.09N×90˚.46W, h14km±8km, MD3.9, ML4.0, Presumed earthquake*
*CATAC **10** 18:37:48.2±0.7, 13˚N±3˚×9˚0W±˚, h8km±2km, M3.3/12, MLv3.3/12, Error ellipse: s-maj=7.9km s-min=5.1km az=36.9, confirmed*
*SNET **10** 18:37:51.1±0.8, 13˚.24N×90˚.25W, h27km±6km, ML3.2, Presumed earthquake*
ISC 10 18:37:49.3±1.9, **13˚.19N**±0˚.08×**90˚.33W**±0˚.05, **h14**km±11km, **n34**, σ0**s60**/41, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
FAME	**Alcaldia de Sa**	**0.72**	**25**	P		**Pb**	**18 38 03.5**	**-0.1**
FAME				S		**Sb**	**18 38 14.1**	**+0.8**
NUBE	**Las Nubes**	**0.89**	**37**	P		**Pb**	**18 38 06.0**	**-0.6**
NUBE	**Las Nubes**	**0.89**	**37**	*i* P		**Pb**	**18 38 06.1**	**-0.4**
NUBE	**Las Nubes**	**0.89**	**37**	*e*P		**Pb**	**18 38 06.2**	**-0.4**
CEVE	**Cerro Verde**	**0.94**	**47**	P		**Pg**	**18 38 07.4**	**-0.1**
CEVE				S		**Sn**	**18 38 21.3**	**-0.3**
CEVE	**Cerro Verde**	**0.94**	**47**	*e*P		**Pg**	**18 38 07.3**	**-0.1**
SBLS	**San Blas**	**0.94**	**47**	*e*P		**Pg**	**18 38 07.3**	**-0.3**
SBLS				*e*S		**Sg**	**18 38 20.5**	**+0.5**
SBLS				IAML			18 38 23.8	
	comp=Z,993nm,0.2s							
JAYA	**Jayaque - finc**	**0.97**	**62**	P		**Pb**	**18 38 07.4**	**-0.7**
JAYA				S		**Sb**	**18 38 20.5**	**-0.4**
JAYA	**Jayaque - finc**	**0.97**	**62**	*i* P		**Pb**	**18 38 07.5**	**-0.5**
JAYA				IAML			18 38 26.0	
	comp=E,3µm,0.4s							
SNJE	**San Jose**	**0.97**	**46**	*e*P		**Pg**	**18 38 07.8**	**-0.4**
SLOZ	**Alcaldia de Sa**	**0.99**	**33**	P		**Pg**	**18 38 07.9**	**-0.4**
SLOZ	**Alcaldia de Sa**	**0.99**	**33**	*e*P		**Pb**	**18 38 07.9**	**-0.3**
LALI	**Alcalda de L**	**1.03**	**73**	*i* P		**Pb**	**18 38 08.2**	**-0.6**
UNIC	**Universidad Ca**	**1.09**	**44**	P		**Pb**	**18 38 09.3**	**-0.7**
UNIC				S		**Sb**	**18 38 24.7**	**+0.5**
RBDL	**Robledal**	**1.11**	**34**	*e*P		**Pb**	**18 38 09.9**	**-0.5**
RBDL				IAML			18 38 11.6	
	comp=Z,407nm,0.3s							
PMON	**Piamonte**	**1.12**	**62**	P		**Pb**	**18 38 09.8**	**-0.7**
PMON				S		**Sn**	**18 38 25.8**	**0.0**
PMON	**Piamonte**	**1.12**	**62**	*e*P		**Pg**	**18 38 10.6**	**-0.3**
BOQS	**Boqueron**	**1.16**	**62**	*e*P		**Pn**	**18 38 10.4**	**-0.9**
ESSG	**Sabana Grande**	**1.28**	**338**	*i* P		**Pn**	**18 38 11.2**	**-1.6**
PAVA	**La Pavas**	**1.45**	**69**	P		**Pg**	**18 38 18.1**	**+0.8**
COEG	**Centro de Oper**	**1.48**	**73**	P		**Pn**	**18 38 15.3**	**-0.2**
MTO3	**Montecristo**	**1.53**	**38**	P		**Pn**	**18 38 16.1**	**-0.3**
MTO3				S		**Sb**	**18 38 37.5**	**+0.7**
MTO3	**Montecristo**	**1.53**	**38**	*i* P		**Pn**	**18 38 16.2**	**-0.1**
MTO3	**Montecristo**	**1.53**	**38**	*e*P		**Pn**	**18 38 16.3**	**-0.1**
TECO	**Alcaldia de Te**	**1.55**	**77**	P		**Pn**	**18 38 15.9**	**-0.6**
STG8	**El Palmar, Qui**	**1.60**	**322**	*i* P		**Pg**	**18 38 20.8**	**+0.8**
STG2	**El Palmar, Qui**	**1.60**	**321**	*i* P		**Pg**	**18 38 20.3**	**+0.3**
STG2				IAML			18 38 50.8	
	comp=E,2µm,0.2s							
SCLA	**Alcaldia de Sa**	**1.64**	**72**	P		**Pn**	**18 38 17.8**	**0.0**
ESQI	**Esquipulas**	**1.67**	**35**	P		**Pn**	**18 38 18.5**	**+0.3**
P5NO	**Presa 5 de nov**	**1.72**	**63**	P		**Pn**	**18 38 18.1**	**-0.7**
APG	**El Apazote**	**1.81**	**356**	*i* P		**Pn**	**18 38 20.5**	**+0.3**
PACA	**Pacayal**	**1.97**	**82**	P		**Pn**	**18 38 22.8**	**+0.4**
RANC	**El Ranchito**	**2.00**	**83**	P		**Pn**	**18 38 23.0**	**+0.2**
CNCH	**Conchagua**	**2.43**	**88**	S		**Sn**	**18 38 59.7**	**+1.3**

*IDC **10** 18:44:18.1±1.3, 5˚.34N×126˚.55E, h0km, mb3.5/6, mbtmp3.6/7, ML3.6/1, Error ellipse: s-maj=129.1km s-min=18.1km az=63.0*
*MAN **10** 18:44:24.0, 5˚.15N×126˚.87E, h30km, MS3.1*
ISC 10 18:44:24.2±0.8, **5˚.30N**±0˚.08×**126˚.85E**±0˚.09, **h35**km, **n11**, σ2**s50**/15, **mb3.6**/6, **Mindanao**

| Code

TLY	**Talaya**	**74.55**	**23**	LR	LR	19 30 12.0		
	comp=Z,43nm,18.1s,baz=206,slow=35							
CTA	**Charters Tower**	**75.02**	**107**	LR	LR	19 30 14.8		
	comp=Z,74nm,18.5s,baz=224,slow=35							
KSRS	**Korea Array**	**78.17**	**45**	LR	LR	19 31 22.4		
	comp=Z,24nm,21.8s,baz=240,slow=34							
JNU	**Nakatsue**	**78.17**	**50**	LR	LR	19 33 29.2		
	comp=Z,37nm,19.3s,baz=246,slow=36							
MJAR	**Matsushiro Arr**	**85.09**	**50**	LR	LR	19 36 43.7		
	comp=Z,18nm,19.7s,baz=166,slow=36							
ESDC	**Sonseca Array**	**85.89**	**313**	P	**P**	**18 59 11.2**	**+0.8**	
	0.3nm,0.5s,baz=98,slow=2.6,SNR=4.0							
	0.3nm,0.5s							
NRIK	**Noril'sk**	**86.28**	**7**	LR	LR	19 36 21.9		
	comp=Z,34nm,18.5s,baz=172,slow=35							
KLR	**Kul'dur**	**86.47**	**37**	LR	LR	19 39 54.6		
	comp=Z,31nm,18.1s,baz=225,slow=37							
ASAJ	**Asahikawa**	**91.08**	**44**	LR	LR	19 38 49.0		
	comp=Z,25nm,20.4s,baz=328,slow=34							
YAK	**Yakutsk**	**91.91**	**25**	LR	LR	19 40 26.6		
	comp=Z,57nm,20.2s,baz=270,slow=35							
TIXI	**Tiksi**	**96.63**	**16**	LR	LR	19 43 33.8		
	comp=Z,37nm,21.0s,baz=202,slow=36							
PDAR	**Pinedale Array**	**153.04**	**354**	PKPbc	**PKPbc**	**19 06 27.9**	**-0.4**	
	0.7nm,0.8s,baz=342,slow=4.5,SNR=5.0							

*NNC **10** 18:53:47.4±9.0, 37°.88N×71°.94E, h0km, mb3.7, mpv2.9, Error ellipse: s-maj=86.9km s-min=59.7km az=141.0*
ISC 10 18:53:44.2±1.2, 37°.39N±0°.08×72°.1E±0°.1, h100km, n9, σ2s60/16, 3C-1D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ALCI	**Alchi Leh**	**5.20**	**126**		*eP*	**Pn**		**18 55 02.5**	**+2.6**
ALCI					*eS*	**Sn**		**18 56 00.2**	**+1.4**
ALCI					IAML			18 56 04.0	
	comp=E,54nm,0.3s								
ALCI					IAML			18 56 04.1	
	comp=N,70nm,0.2s								
AAK	**Ala-Archa**	**5.55**	**18**	⇑	P	**Pn**		**18 55 05.8**	**+1.3**
	comp=N,1.9nm,0.5s								
AAK				⇑	S	**Sn**		**18 56 06.8**	**-0.3**
	comp=N,0.8nm,0.4s								
TSSA	**Tissa**	**5.62**	**143**		*eP*	**Pn**		**18 55 08.3**	**+2.9**
TSSA					*eS*	**Sn**		**18 56 08.5**	**-0.2**
TSSA					IAML			18 56 12.0	
	comp=E,59nm,0.3s								
TSSA					IAML			18 56 13.4	
	comp=N,43nm,0.7s								
KK31	**Karatay Array**	**5.84**	**348**		P	**Pn**		**18 55 10.2**	**+2.0**
	comp=N,0.1nm,0.1s,baz=162,slow=12,SNR=5.7								
KK31				⇓	S	**Sn**		**18 56 12.0**	**-1.8**
	comp=N,5.5nm,0.3s,baz=200,slow=30,SNR=6.1								
DHRM	**DHARAMSHALA**	**6.17**	**145**		*eP*	**Pn**		**18 55 15.8**	**+2.8**
DHRM					*eS*	**Sn**		**18 56 22.2**	**-0.1**
DHRM					IAML			18 56 25.2	
	comp=N,52nm,0.3s								
DHRM					IAML			18 56 26.2	
	comp=E,57nm,0.4s								
SMLA	**Simla**	**7.51**	**145**		*eP*	**Pn**		**18 55 32.2**	**+1.2**
SMLA					*eS*	**Sn**		**18 56 50.7**	**-3.9**
KLP	**Kalpa**	**7.73**	**137**		*eP*	**Pn**		**18 55 34.8**	**+0.5**
KLP					*eS*	**Sn**		**18 56 56.0**	**-4.3**
KLP					IAML			18 57 03.5	
	comp=E,18nm,0.4s								
KLP					IAML			18 57 05.2	
	comp=N,11nm,0.3s								
JOSI	**Joshimath**	**9.20**	**136**		*eS*	**Sn**		**18 57 31.9**	**-4.0**
AB31	**Akbulak array**	**14.78**	**327**	⇑	P	**Pn**		**18 57 06.4**	**-1.5**
	comp=N,1.6nm,0.9s,baz=177,slow=11,SNR=4.5								

UPA 10 18:58:43.8±0.5, 9°.57N×79°.63W, h10km±2km, MW2.8, 2C-2D, Presumed earthquake, Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MLIR	**Monte Lirio**	**0.39**	**214**		*eP*		Pg	18 58 51.9	+0.3
MLIR					*eS*		Sb	18 58 58.1	-0.8
BCIP	**Isla Barro Col**	**0.45**	**207**	⇓	*iP*		Pg	18 58 52.8	+0.3
BCIP					*eS*		Sb	18 59 00.4	-0.2
GAMB1	**Gamboa**	**0.59**	**190**	⇑	*iP*		Pg	18 58 52.9	+0.3
GAMB1					*eS*		Sb	18 59 00.4	-0.3
UPA	**Univ. de Panam**	**0.59**	**171**	⇓	*iP*		Pg	18 58 48.9	-6.4
UPA					*eS*		Sg	18 58 58.1	-4.9
CHPO	**Chepo, Panama**	**0.64**	**128**	⇑	*iP*		Pg	18 58 56.7	+0.4
CHPO					*eS*		Sb	18 59 06.5	+0.3
ZANG	**Zanguenga, Cho**	**0.65**	**201**		*eP*		Pg	18 58 56.2	-0.2
ZANG					*eS*		Sb	18 59 06.0	-0.4
FLAM	**Flamenco Islan**	**0.66**	**172**		*eP*		Pg	18 58 56.3	-0.2
FLAM					*eS*		Sb	18 59 06.8	+0.2
TABO3	**Taboga, Panama**	**0.77**	**174**		*eP*		Pg	18 58 58.7	0.0
TOTI	**Torti**	**1.45**	**116**		*eP*		Pn	18 59 08.9	-1.1
AZU	**Azuero**	**1.88**	**200**		*eP*		Pn	18 59 15.9	-0.1
AZU					*eS*		Sn	18 59 37.9	-1.8
PTAC	**Punta Ardita,**	**3.00**	**143**		*eP*		Pn	18 59 31.2	-0.3

*IDC **10** 18:59:27.3±1.1, 25°.82N×128°.61E, h0km, mb3.2/6, mbtmp3.3/7, ML3.4/1, Error ellipse: s-maj=45.7km s-min=18.5km az=76.0*
*JMA **10** 18:59:33.2±0.3, 26°.1°N×12°.8°E±°, h48km±3km, MV3.2/11, NEAR OKINAWAJIMA ISLAND*
ISC 10 18:59:31.6±2.2, 25°.97N±0°.08×128°.51E±0°.10, h25km±14km, n17, σ1s42/18, mb3.2/6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JJT3	**Tamagusuku3**	**0.68**	**285**		P		**Pb**	**18 59 45.5**	**+0.6**
JNTH	**Nagotoyohara**	**0.70**	**321**		P		**Pb**	**18 59 45.2**	**-0.1**
JNTH					*eS*		**Sb**	**18 59 54.3**	**-0.3**
JOW	**Kunigami**	**0.89**	**346**		*eP*		**Pn**	**18 59 48.3**	**-0.2**
	41nm,0.3s,baz=161,slow=14,SNR=66								
JOW						Sn	**Sb**	**18 59 59.4**	**-0.5**
	126nm,0.3s,baz=143,slow=20,SNR=13								
JOW	**Kunigami**	**0.89**	**346**		*eP*		**Pn**	**18 59 48.3**	**-0.2**
JOW					*eS*		**Sb**	**18 59 59.2**	**-0.7**
JYRO	**Yoronjima**	**1.06**	**357**		*eP*		Pn	18 59 50.6	-0.2
JYRO					*eS*		**Sn**	**19 00 03.0**	**-1.7**
JIH	**Iheya**	**1.17**	**335**		*eP*		Pn	18 59 52.6	+0.3
JAGN	**Aguni-jima**	**1.30**	**299**		*eP*		Pn	18 59 54.3	+0.2
JOKE	**Okinoerabujima**	**1.39**	**2**		*eP*		Pn	18 59 55.5	+0.1
JOKE					*eS*		**Sn**	**19 00 11.8**	**-1.2**
JKE	**Kume jima 2**	**1.59**	**283**		*eP*		Pn	18 59 57.6	-0.6
JKE					*eS*		**Sn**	**19 00 16.3**	**-1.7**
JTK	**Tokunoshima**	**1.85**	**12**		*eP*		Pn	19 00 01.9	+0.1
JTK					*eS*		**Sn**	**19 00 22.9**	**-1.5**
JNU	**Nakatsue**	**7.42**	**16**		Pn		**Pn**	**19 01 19.4**	**+1.1**
	0.5nm,0.3s,baz=191,slow=18,SNR=2.2								
	7.9nm,0.9s								
SONM	**Songino Array**	**27.91**	**327**		P		**P**	**19 05 20.8**	**+1.1**
	0.1nm,0.3s,baz=134,slow=8.3,SNR=1.4								
	0.1nm,0.3s								
MKAR	**Makanchi Array**	**41.90**	**312**		P		**P**	**19 07 20.7**	**+0.8**
	0.2nm,0.5s,baz=98,slow=7.5,SNR=2.8								
	0.2nm,0.5s								
WRA	**Warramunga Arr**	**45.98**	**172**		P		**P**	**19 07 52.4**	**-0.5**
	0.2nm,0.6s,baz=350,slow=7.8,SNR=1.9								
	0.2nm,0.6s								
ASAR	**Alice Springs**	**49.62**	**174**		P		**P**	**19 08 17.7**	**-3.4**
	0.4nm,1.1s,baz=3.0,slow=7.2,SNR=4.6								
	0.4nm,1.1s								
BVAR	**Borovoye Array**	**50.64**	**318**		P		**P**	**19 08 29.9**	**+1.4**
	0.1nm,0.4s,baz=88,slow=9.1,SNR=4.7								
	0.1nm,0.4s								
YKA	**Yellowknife Ar**	**78.66**	**25**		P		**P**	**19 11 32.1**	**+1.0**
	0.1nm,0.3s,baz=302,slow=6.9,SNR=1.8								
	0.1nm,0.3s								

*IDC **10** 19:00:52.0±3.5, 22°.81N×11°.91W, h0km, mb3.8/2, mbtmp3.6/3, ML3.5/1, Error ellipse: s-maj=117.9km s-min=48.5km az=77.0*
ISC 10 19:00:56.1±1.6, 23°.2N±0°.1×11°.5W±0°.2, h10km, n9, σ1s75/11, Mauritania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TANT	**Tantan**	**5.23**	**3**		P		**Pn**	**19 02 13.9**	**-0.5**
TANT					S		**Sn**	**19 03 13.3**	**-1.6**
TIO	**Tiouine**	**8.62**	**25**		P		**Pn**	**19 03 03.2**	**+2.0**
TIO					S		**Sn**	**19 04 39.1**	**+0.5**
ZGR	**Zagora**	**8.72**	**36**		P		**Pn**	**19 03 03.6**	**+1.1**
OUZM	**OUZ**	**8.81**	**28**		P		**Pn**	**19 03 00.8**	**-3.0**
TORD	**Torodi Ar. Bea**	**16.03**	**126**		Pn		**Pn**	**19 04 39.7**	**-2.1**
	0.2nm,0.3s,baz=306,slow=12,SNR=5.2								
	0.4nm,0.6s								
FINES	**FINESS Array B**	**46.11**	**24**		P		**P**	**19 09 20.8**	**+0.6**
	2.6nm,0.9s,baz=221,slow=6.5,SNR=1.9								
	2.6nm,0.9s								
MKAR	**Makanchi Array**	**76.00**	**45**		P		**P**	**19 12 44.1**	**+0.5**
	0.3nm,0.7s,baz=288,slow=5.5,SNR=5.1								
	0.3nm,0.7s								
WRA	**Warramunga Arr**	**148.15**	**91**		PKPbc		**PKPdf**	**19 20 40.8**	**+1.1**
	0.3nm,0.9s,baz=293,slow=2.4,SNR=1.7								
ASAR	**Alice Springs**	**148.33**	**98**		PKPbc		**PKPdf**	**19 20 41.0**	**+1.0**
	0.2nm,0.7s,baz=288,slow=2.9,SNR=4.4								

IDC 10 19:07:33.2±16.0, 15°.69S×68°.02E, h0km, mb3.5/5, mbtmp3.5/5, MS3.4/13, Error ellipse: s-maj=397.3km s-min=79.0km az=1.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**9.11**	**29**		T		T	19 19 15.0	
	baz=214,slow=75,SNR=52								
H08S2	**Diego Garcia H**	**9.12**	**29**		T		T	19 19 18.6	
	baz=214,slow=75,SNR=82								
H08S3	**Diego Garcia H**	**9.13**	**29**		T		T	19 19 19.3	
	baz=214,slow=75,SNR=111								
PALK	**Pallekele**	**26.05**	**30**		LR		LR	19 21 06.6	
	comp=Z,57nm,20.7s,baz=214,slow=31								
H04N2	**CROZET ISLANDS**	**33.27**	**201**		T		T	19 49 30.1	
	baz=28,slow=75,SNR=38								
H04N1	**CROZET ISLANDS**	**33.28**	**201**		T		T	19 49 34.3	
	baz=28,slow=75,SNR=33								
H04N3	**CROZET ISLANDS**	**33.29**	**201**		T		T	19 49 30.4	
	baz=28,slow=75,SNR=38								
LSZ	**Lusaka**	**38.35**	**265**		LR		LR	19 28 40.3	
	comp=Z,131nm,18.8s,baz=128,slow=33								
MBAR	**Mbarara**	**39.72**	**289**		LR		LR	19 28 55.3	
	comp=Z,44nm,18.7s,baz=138,slow=32								
LEM	**Lembang**	**39.76**	**82**		LR		LR	19 28 40.3	
	comp=Z,42nm,20.2s,baz=264,slow=32								
LBTB	**Lobatse**	**40.70**	**250**		LR		LR	19 29 35.6	
	comp=Z,99nm,18.4s,baz=104,slow=32								
BOSA	**Boshof**	**41.42**	**244**		LR		LR	19 30 12.7	
	comp=Z,65nm,18.7s,baz=50,slow=33								
CMAR	**Chiang Mai Arr**	**45.60**	**43**		LR		LR	19 32 29.2	
	comp=Z,53nm,20.8s,baz=220,slow=33								
SUR	**Sutherland**	**45.82**	**240**		LR		LR	19 32 02.0	
	comp=Z,47nm,20.6s,baz=122,slow=32								
KAPI	**Kappang**	**51.86**	**84**		LR		LR	19 36 04.9	
	comp=Z,33nm,20.5s,baz=271,slow=33								
AAK	**Ala-Archa**	**58.35**	**6**		LR		LR	19 40 08.3	
	comp=Z,32nm,18.8s,baz=252,slow=34								
MKAR	**Makanchi Array**	**63.51**	**11**		P		P	19 18 05.4	+0.2
	0.1nm,0.5s,baz=190,slow=8.4,SNR=4.0								
	0.1nm,0.5s								
BRTR	**Keskin Array B**	**63.77**	**331**		P		P	19 18 07.3	+0.1
	0.3nm,0.3s,baz=156,slow=6.9,SNR=3.6								
	0.3nm,0.3s								
BVAR	**Borovoye Array**	**68.47**	**2**		P		P	19 18 36.6	-0.4
	0.1nm,0.4s,baz=169,slow=8.2,SNR=1.4								
	0.1nm,0.4s								
ZALV	**Zalesovo Beam**	**70.84**	**10**		P		P	19 18 51.7	+0.1
	0.2nm,0.3s,baz=190,slow=7.3,SNR=1.3								
	0.2nm,0.3s								
SONM	**Songino Array**	**71.94**	**26**		P		P	19 18 58.5	0.0
	0.6nm,0.8s,baz=224,slow=5.8,SNR=4.6								
	0.6nm,0.8s								
TLY	**Talaya**	**73.91**	**22**		LR		LR	19 50 32.1	
	comp=Z,23nm,19.6s,baz=241,slow=35								
CTA	**Charters Tower**	**73.96**	**107**		LR		LR	19 51 30.2	
	comp=Z,36nm,18.6s,baz=222,slow=36								
KSRS	**Korea Array**	**77.20**	**45**		LR		LR	19 53 38.3	
	comp=Z,12nm,18.5s,baz=195,slow=36								

*IDC **10** 19:16:02.0±1.4, 25°.51N×141°.17E, h152km±17km, mb3.3/8, mbtmp3.8/11, Error ellipse: s-maj=33.5km s-min=13.2km az=83.0*
*NEIC **10** 19:16:02.5±1.7, 25°.45N±0°.08×140°.9E±0°.1, h141km±8km, mb4.3/23, Error ellipse: s-maj=18.7km s-min=11.5km az=99.0*
*JMA **10** 19:16:04.9±0.2, 25°.6N±0°.5×14°1E±°, h120km, MV4.5/18, IOTO ISLANDS REGION*
ISC 10 19:16:03.5±0.6, 25°.52N±0°.06×141°.1E±0°.1, h160km, n45, σ1s61/50, mb4.1/19, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**1.47**	**40**		*eP*	**Pn**		**19 16 32.9**	**-0.6**
JHH2					*eS*	**Sn**		**19 16 54.0**	**-2.6**
CBIJ	**Chichi jima**	**1.84**	**31**		*eP*	**Pn**		**19 16 37.4**	**-0.1**
CBIJ					*eS*	**Sn**		**19 17 02.3**	**-1.4**
JCJ	**Chichijima**	**1.84**	**31**		P	**Pn**		**19 16 36.3**	**-1.1**
	196nm,0.3s,baz=266,slow=13,SNR=56								
JCJ					S		**Sn**	**19 17 01.0**	**-2.7**
	979nm,0.6s,baz=236,slow=22,SNR=28								
JCJ	**Chichijima**	**1.84**	**31**			**Pn**		**19 16 37.0**	**-0.5**
JCJ					Sn	**Sn**		**19 17 02.2**	**-1.5**
JHJ2	**Mitsune**	**7.65**	**352**		Pn	**Pn**		**19 17 53.3**	**+1.1**
BSO3	**Boso 3**	**9.27**	**357**		*eP*	**Pn**		**19 18 12.6**	**-0.7**
JAO	**Obara**	**10.27**	**342**		*eP*	**Pn**		**19 18 29.5**	**+2.6**
INU	**Inuyama**	**10.42**	**341**		Pn	**Pn**		**19 18 28.5**	**-0.3**
JGF	**Kuroka**	**10.56**	**343**		Pn	**Pn**		**19 18 29.1**	**-1.5**
MJAR	**Matsushiro Arr**	**11.27**	**348**		P	**Pn**		**19 18 38.2**	**-1.7**
	1.4nm,0.4s,baz=158,slow=10,SNR=11								
MAJO	**Matsushiro**	**11.27**	**348**		Pn	**Pn**		**19 18 38.5**	**-1.5**
JMM	**Marumori**	**12.31**	**359**		Pn	**Pn**		**19 18 54.2**	**+0.7**
GUMO	**Guam**	**12.38**	**163**		Pn	**Pn**		**19 18 55.5**	**+1.0**
KSRS	**Korea Array**	**16.35**	**320**		P	**P**		**19 19 44.6**	**+0.7**
	1.3nm,0.5s,baz=140,slow=11,SNR=8.0								
ASAJ	**Asahikawa**	**18.60**		3	P	**P**		**19 20 08.0**	**-0.4**
	4.9nm,0.7s,baz=223,slow=14,SNR=8.9								
JKA	**Kamikawa-asahi**	**18.60**		3	P	**P**		**19 20 10.2**	**+1.8**
KLR	**Kul'dur**	**24.77**	**345**		P	**P**		**19 21 09.1**	**-1.2**
	0.8nm,0.6s,baz=192,slow=6.9,SNR=2.2								
	0.8nm,0.6s								
PMG	**Port Moresby**	**35.21**	**170**		P	**P**		**19 22 42.2**	**-0.3**
SONM	**Songino Array**	**35.22**	**318**		P	**P**		**19 22 42.4**	**-0.1**
	0.2nm,0.6s,baz=131,slow=6.3,SNR=4.2								
	0.2nm,0.6s								
MTN	**Manton Dam**	**39.35**	**195**		P	**P**		**19 23 15.9**	**-1.4**
MTN					IAmb	IAmb		19 23 48.6	
	comp=Z,11nm,1.4s								
WB0	**Warramunga Arr**	**45.48**	**189**		P	**P**		**19 24 05.9**	**-1.0**
WB0					IAmb	IAmb		19 24 18.6	
	comp=Z,9.4nm,1.4s								
WR8	**Warramunga Arr**	**45.66**	**189**		P	**P**		**19 24 07.5**	**-0.7**
WR8					IAmb	IAmb		19 24 09.9	
	comp=Z,12nm,1.4s								
WRA	**Warramunga Arr**	**45.66**	**189**		P	**P**		**19 24 07.5**	**-0.8**
	comp=Z,1.6nm,0.3s,baz=7.7,slow=8.6,SNR=123								
	comp=Z,1.6nm,0.3s								
JOHN	**Johnston Islan**	**46.65**	**91**		P	**P**		**19 24 16.1**	**+0.1**
AKUT	**Akutan**	**48.28**	**39**		P	**P**		**19 24 30.4**	**+2.3**
ASAR	**Alice Springs**	**49.39**	**189**		P	**P**		**19 24 35.9**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=4.3,slow=4.5,SNR=12								
	comp=Z,0.2nm,0.3s								
F15K	**North Star Dit**	**52.52**	**25**		P	**P**		**19 25 02.6**	**+2.8**
N15K	**Kwethluk River**	**52.77**	**32**		P	**P**		**19 25 04.0**	**+2.2**
N15K					PcP	**PcP**		**19 26 07.6**	**-1.5**
C16K	**Lisburne Hills**	**53.31**	**22**		P	**P**		**19 25 08.0**	**+2.5**
C16K					IAmb	IAmb		19 25 50.6	
	comp=Z,5.7nm,1.5s								
H18K	**Honhosa River**	**54.82**	**27**		P	**P**		**19 25 19.0**	**+2.4**
H18K					IAmb	IAmb		19 25 51.7	
	comp=Z,5.0nm,1.4s								
C18K	**Utukok River**	**54.87**	**22**		P	**P**		**19 25 18.3**	**+1.4**
C18K					IAmb	IAmb		19 26 00.1	
	comp=Z,5.5nm,1.5s								
C19K	**Lookout Ridge**	**55.57**	**22**		P	**P**		**19 25 24.7**	**+2.8**
C19K					IAmb	IAmb		19 25 50.5	
	comp=Z,4.7nm,1.4s								
D19K	**Kuna River**	**55.88**	**23**		P	**P**		**19 25 26.2**	**+2.1**
D19K					IAmb	IAmb		19 25 38.0	
	comp=Z,5.1nm,1.4s								
D20K	**Etivluk River**	**56.47**	**23**		P	**P**		**19 25 30.8**	**+2.5**
D20K					IAmb	IAmb		19 25 31.7	
	comp=Z,2.9nm,0.7s								
B20K	**Meade River**	**56.67**	**21**		P	**P**		**19 25 32.1**	**+2.5**
B20K					IAmb	IAmb		19 25 52.7	
	comp=Z,7.8nm,1.5s								
STKA	**Stephens Creek**	**57.07**	**180**		P	**P**		**19 25 32.4**	**-0.5**
	comp=Z,0.9nm,0.5s,baz=354,slow=5.5,SNR=5.5								
	comp=Z,0.9nm,0.5s								
L22K	**Petersville**	**57.61**	**31**		P	**P**		**19 25 37.8**	**+1.4**
L22K					IAmb	IAmb		19 25 42.8	
	comp=Z,6.0nm,1.4s								
BVAR	**Borovoye Array**	**58.56**	**318**		P	**P**		**19 25 42.9**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=103,slow=6.1,SNR=4.5								
	comp=Z,0.3nm,0.5s								
ILAR	**Eielson Array**	**59.55**	**28**		P	**P**		**19 25 49.6**	**-0.2**
	comp=Z,0.4nm,0.9s,baz=291,slow=10,SNR=4.3								
	comp=Z,0.4nm,0.9s								
KLU	**Klutina**	**59.81**	**32**		P	**P**		**19 25 53.4**	**+1.7**
SCRK	**Sand Creek**	**60.77**	**29**		P	**P**		**19 25 59.8**	**+1.5**
TGL	**Tana Glacier**	**61.31**	**33**		P	**P**		**19 26 03.3**	**+1.4**
I28M	**Miner Creek**	**62.51**	**28**		P	**P**		**19 26 11.2**	**+1.3**
I30M	**Mount Dempster**	**64.01**	**28**		P	**P**		**19 26 21.3**	**+1.6**
FINES	**FINESS Array B**	**78.93**	**334**		P	**P**		**19 27 48.1**	**-0.8**
	comp=Z,1.6nm,0.7s,baz=79,slow=6.2,SNR=8.4								
	comp=Z,1.6nm,0.7s								

IDC 10 19:18:31.1±2.1, 33°.59S×179°.64W, h0km, mb3.5/3, mbtmp3.6/4, ML3.5/1, MS3.4/1, Error ellipse: s-maj=51.9km s-min=32.5km az=128.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.36**	**209**		Pn	Pn		19 19 51.7	-0.6
	1.5nm,0.3s,baz=268,slow=5.0,SNR=9.8								
URZ					Sn	Sn		19 20 55.4	+0.7
	2.7nm,0.3s,baz=189,slow=23,SNR=9.7								
	4.4nm,0.2s								
ASAR	**Alice Springs**	**41.66**	**271**		P	P		19 26 21.7	+0.1
	0.3nm,0.8s,baz=114,slow=8.3,SNR=4.3								
ASAR					LR	LR		19 42 00.1	
	comp=Z,44nm,18.1s,baz=255,slow=34								
	0.3nm,0.8s								
WRA	**Warramunga Arr**	**42.95**	**276**		P	P		19 26 31.8	-0.2
	0.3nm,0.3s,baz=114,slow=7.6,SNR=5.3								
	0.3nm,0.3s								
NVAR	**Mina Array Bea**	**91.51**	**44**		P	P		19 31 39.7	0.0
	0.2nm,0.3s,baz=199,slow=5.8,SNR=1.7								
	0.2nm,0.3s								

*IDC **10** 19:25:54.8±2.8, 13°.75N×92°.92W, h0km, mb3.4/3, mbtmp3.3/5, ML3.6/2, Error ellipse: s-maj=54.3km s-min=27.4km az=7.0*
*MEX **10** 19:25:59.1±1.0, 13°.76N×92°.83W, h16km±999km, MD3.9*
ISC 10 19:26:02.3±3.0, 14°.0N±0°.2×92°.83W±0°.08, h46km±22km, n15, σ2s14/22, mb3.5/3, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PATR	**El Naranjo**	**1.24**	**28**		*eP*	**Pn**		**19 26 21.4**	**-2.1**
PATR					*eS*	**Sn**		**19 26 40.1**	**+1.0**
CHUJ	**Union Juarez**	**1.28**	**33**		*eP*	**Pn**		**19 26 21.9**	**-2.1**
CHUJ					*eS*	**Sn**		**19 26 38.3**	**-1.8**
PAVE	**Pavencul**	**1.33**	**28**		*eP*	**Pn**		**19 26 23.1**	**-1.7**
PAVE					*eS*	**Sn**		**19 26 41.9**	**+0.5**
PCIG		**1.72**	**347**		*eP*	**Pn**		**19 26 28.1**	**-1.8**
PCIG					*eS*	**Sn**		**19 26 45.3**	**-5.4**
CCIG	**Comitan**	**2.35**	**16**		*eP*	**Pn**		**19 26 39.4**	**+0.7**
CCIG					*eS*	**Sn**		**19 27 07.0**	**+0.6**
APG	**El Apazote**	**2.49**	**66**		Pn	**Pn**		**19 26 39.9**	**-0.8**
	0.2nm,0.3s,baz=198,slow=13,SNR=17								
APG					Sn	**Sn**		**19 27 13.4**	**+3.5**
	0.3nm,0.3s,baz=217,slow=17,SNR=4.4								
TGIG		**2.76**	**354**		*eP*	**Pn**		**19 26 43.8**	**-0.3**
TGIG					*eS*	**Sn**		**19 27 18.2**	**+1.9**
CMIG	**Matias Romero**	**3.64**	**327**		Pn	**Pn**		**19 26 55.3**	**-0.9**
	1.3nm,0.3s,baz=175,slow=10,SNR=4.6								
CMIG					Sn	**Sn**		**19 27 41.7**	**+3.7**
	1.4nm,0.3s,baz=278,slow=22,SNR=4.1								
	3.3nm,0.3s								
CMIG	**Matias Romero**	**3.64**	**327**		*eP*	**Pn**		**19 26 55.3**	**-0.9**
NEUV	**Arroyo Zacate**	**4.66**	**323**		*eP*	Pn		19 27 15.7	+5.5
NEUV					*eS*	Sn		19 28 09.7	+6.8
TXAR	**Lajitas Array**	**18.25**	**328**		Pn	**P**		**19 30 13.4**	**+1.3**
	0.1nm,0.3s,baz=146,slow=12,SNR=3.9								

WNVZ	Wahianoa	2.04	59	P		Pn	19 29 23.7	+1.3
FWVZ	Far West T-bar	2.05	56	P		Pn	19 29 23.6	+1.0
TMWZ	Te Maipa	2.05	111	P		Pn	19 29 24.3	+1.9
TWVZ	Taurewa	2.09	51	P		Pn	19 29 23.6	+0.7
MOVZ	Moawhango	2.10	62	P		Pn	19 29 23.7	+0.7
TUVZ	Tukino	2.11	58	P		Pn	19 29 24.4	+1.2
NGZ	Ngauruhoe	2.13	55	P		Pn	19 29 24.2	+0.8
SNVZ	South Ngauruho	2.15	56	P		Pn	19 29 24.6	+1.1
DVHZ	Dannevirke	2.15	88	P		Pn	19 29 24.8	+1.4
WTVZ	West Tongariro	2.15	54	P		Pn	19 29 24.6	+1.0
OTVZ	Oturere	2.17	56	P		Pn	19 29 24.9	+1.1
ETVZ	East Tongariro	2.22	56	P		Pn	19 29 25.5	+1.2
NTVZ	North Tongarir	2.22	55	P		Pn	19 29 25.3	+1.1
BFZ	Birch Farm	2.22	98	P		Pn	19 29 25.8	+1.7
BFZ	Birch Farm	2.22	98	S		S	19 29 54.4	-1.4
BFZ	Birch Farm	2.22	98	P		Pn	19 29 25.9	+1.8
HIZ	Hauiti	2.22	32	P		Pn	19 29 25.1	+0.9
HIZ	Hauiti	2.22	32	P		S	19 29 55.0	-0.9
HIZ	Hauiti	2.22	32	P		Pn	19 29 25.1	+0.9
TMVZ	Te Maari	2.23	55	P		Pn	19 29 25.6	+1.2
PNHZ	Pukenui	2.24	78	P		Pn	19 29 25.6	+1.3
KATZ	Kakaramea	2.31	52	P		Pn	19 29 26.3	+1.1
WPHZ	Waipukurau	2.39	83	P		Pn	19 29 27.6	+1.7
RATZ	Rangitukua	2.42	51	P		Pn	19 29 27.9	+1.6
KRHZ	Kereru	2.44	73	P		Pn	19 29 27.6	+1.1
LTZ	Lake Taylor	2.50	199	P		Pn	19 29 28.8	+1.6
WATZ	Wairara	2.50	48	P		Pn	19 29 28.7	+1.4
PRHZ	Porangahau	2.51	88	P		Pn	19 29 29.2	+1.9
KWHZ	Kaweka Forest	2.56	68	P		Pn	19 29 29.7	+1.8
GVZ	Greta Valley S	2.57	185	P		Pn	19 29 29.0	+1.2
PXZ	Pawanui	2.71	83	P		Pn	19 29 31.1	+1.6
BKZ	Black Stump Fm	2.72	64	P		Pn	19 29 30.3	+0.7
BKZ	Black Stump Fm	2.72	64	S		Pn	19 30 03.6	-2.1
BKZ	Black Stump Fm	2.72	64	P		Pn	19 29 30.4	+0.7
INZ	Inchbonnie	2.72	211	P		Pn	19 29 31.0	+1.5
MCHZ	McNeill Hill	2.75	71	P		Pn	19 29 31.4	+1.5
KAHZ	Kahuranaki	2.77	78	P		Pn	19 29 32.0	+1.8
NMHZ	Naumai	2.97	65	P		Pn	19 29 34.6	+2.1
ARHZ	Aropaoanui	3.03	69	P		Pn	19 29 34.5	+1.3
OXZ	Oxford	3.08	198	P		Pn	19 29 34.6	+1.0
MTHZ	Maungataniwha	3.11	61	P		Pn	19 29 34.8	+0.6
WVZ	Waitaha Valley	3.31	215	P		Pn	19 29 37.6	+1.2
OKCZ	Okains Bay	3.32	184	P		Pn	19 29 37.2	+0.7
RTZ	Ruatahuna	3.33	59	P		Pn	19 29 37.2	+0.4
MQZ	McQueen's Vall	3.33	189	P		Pn	19 29 37.5	+0.8
MHCZ	Mount Hutt	3.39	203	P		Pn	19 29 38.7	+1.3
RACZ	Rakaia	3.44	195	P		Pn	19 29 39.0	+1.1
SNGZ	Shannon Statio	3.48	63	P		Pn	19 29 40.1	+1.6
URZ	Urewera	3.62	55	P		Pn	19 29 40.6	+0.4
URZ	Urewera	3.61	55	P		Pn	19 29 40.4	+0.3
GCSZ	Gaunt Creek Bo	3.68	217	P		Pn	19 29 42.0	+1.1
RPZ	Rata Peaks	3.72	207	P		Pn	19 29 43.1	+1.7
RPZ	Rata Peaks	3.72	207	P		Pn	19 29 42.7	+1.3
MHGZ	Mahia Peninsul	3.73	72	P		Pn	19 29 43.2	+1.6
RIGZ	Rimuhau	3.81	65	P		Pn	19 29 43.7	+1.2
MWZ	Matawai	3.84	59	P		Pn	19 29 43.3	+0.3
ARCZ	Arundel	3.89	204	P		Pn	19 29 44.5	+1.1
FOZ	Fox Glacier	4.08	219	P		Pn	19 29 46.5	+0.7
RUGZ	Raukumara Rang	4.15	55	P		Pn	19 29 46.7	-0.2
TWGZ	Tauwhareparae	4.23	60	P		Pn	19 29 48.5	+0.8
TMZ	Timaru	4.33	203	P		Pn	19 29 50.4	+1.5
HAZ	Te Kaha	4.35	54	P		Pn	19 29 48.9	-0.3
PUZ	Puketiti	4.47	60	P		Pn	19 29 50.8	+0.1
PKGZ	Pakihiroa	4.47	57	P		Pn	19 29 51.1	+0.4
WMGZ	Waiomatatini S	4.71	58	P		Pn	19 29 53.8	+0.1
MXZ	Matakaoa Point	4.79	55	P		Pn	19 29 55.6	+0.8
MXZ	Matakaoa Point	4.79	55	P		Pn	19 29 55.2	+0.4
JCZ	Jackson Bay	4.99	221	P		Pn	19 29 58.4	+1.1
JCZ	Jackson Bay	4.99	221	P		Pn	19 29 58.1	+0.8
WKZ	Wanaka	5.45	214	P		Pn	19 30 03.3	+0.2

*MAN **10** 19:29:24.0, 15°.86N × 118°.85E, h28km, MS2.8*

IDC 10 19:29:28.2±3.5, 14°.86N × 118°.18E, h0km, mb3.3/3, mbtmp3.3/3, MS2.8/1, Error ellipse: s-maj=512.0km s-min=29.2km az=60.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	20.30	139	LR	LR	19 41 10.8	
	comp=Z,28nm,19.9s,baz=106,slow=35						
WRA	Warramunga Arr	38.07	155	P	P	19 36 47.9	-0.8
	0.4nm,0.8s,baz=334,slow=9.2,SNR=4.6 0.4nm,0.8s						
ASAR	Alice Springs	41.27	158	P	P	19 37 15.9	+0.5
	0.2nm,0.5s,baz=336,slow=7.4,SNR=6.5 0.2nm,0.5s						
MKAR	Makanchi Array	43.66	324	P	P	19 37 34.5	-0.1
	0.5nm,1.0s,baz=139,slow=7.9,SNR=2.9 0.5nm,1.0s						

*MAN **10** 19:31:39.0, 16°.00N × 118°.96E, h6km, MS2.7*

*IDC **10** 19:31:39.8±1.3, 15°.89N × 119°.62E, h0km, mb3.5/5, mbtmp3.5/5, MS2.6/1, Error ellipse: s-maj=152.8km s-min=20.4km az=65.0*

ISC 10 19:31:44.4±1.1, 15°.7N±0°.2 × 119°.1E±0°.3, h29km, n7, σ0s.79/6, mb3.5/5, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GQP	Guinayangan	3.70	118	eP	Pn	19 32 39.8	+0.2
CMAR	Chiang Mai Arr	19.44	281	LR	LR	19 43 43.3	
	comp=Z,17nm,19.1s,baz=105,slow=36						
SONM	Songino Array	33.76	345	P	P	19 38 23.2	-0.4
	0.5nm,0.9s,baz=138,slow=8.8,SNR=2.6 0.5nm,0.9s						
WRA	Warramunga Arr	38.42	157	P	P	19 39 02.7	-1.0
	0.4nm,0.5s,baz=339,slow=9.1,SNR=6.3 0.4nm,0.5s						
ASAR	Alice Springs	41.68	159	P	P	19 39 31.2	+0.6
	0.5nm,0.5s,baz=337,slow=6.7,SNR=13 0.5nm,0.5s						
MKAR	Makanchi Array	43.53	323	P	P	19 39 46.2	+0.6
	0.3nm,0.7s,baz=130,slow=8.2,SNR=2.7 0.3nm,0.7s						
KURBB	Kurchatov Arra	47.70	326	P	P	19 40 18.3	0.0
	0.8nm,0.6s,baz=124,slow=6.6,SNR=2.2 0.8nm,0.6s						

IDC 10 19:40:22.5±3.6, 12°.70N × 120°.93E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=426.4km s-min=29.6km az=62.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	General Santos	7.68	149	eP	Pb	19 42 37.3	+0.7
GSPH				*i* S	Sn	19 43 02.5	-41
WRA	Warramunga Arr	35.02	158	P	P	19 47 16.8	-0.3
	0.4nm,0.8s,baz=336,slow=9.3,SNR=4.9 0.4nm,0.8s						
ASAR	Alice Springs	38.31	161	P	P	19 47 45.1	+0.1
	0.2nm,0.4s,baz=339,slow=6.9,SNR=5.0 0.2nm,0.4s						
MKAR	Makanchi Array	46.96	324	P	P	19 48 55.1	-0.1
	0.1nm,0.4s,baz=139,slow=6.0,SNR=1.2 0.1nm,0.4s						

*IDC **10** 19:49:39.3±4.1, 15°.85S × 168°.58E, h241km±35km, mb3.6/6, mbtmp4.2/7, Error ellipse: s-maj=34.2km s-min=26.8km az=6.0*

*NEIC **10** 19:49:42.2±1.5, 16°.05S±0°.09 × 168°.6E±0°.1, h257km±8km, mb4.3/23, Error ellipse: s-maj=18.7km s-min=12.3km az=74.0*

*NOU **10** 19:49:44.0, 16°.11S × 168°.41E, h262km, MLv4.3/12, Vanuatu Islands*

ISC 10 19:49:41.6±1.0, 16°.09S±0°.07 × 168°.6E±0°.1, h250km, n42, σ1s.74/44, mb4.2/16, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.45	296	P	Pn	19 50 22.0	+2.4
SANVU	Saraoutou	1.45	296	S	S	19 50 53.0	+3.6
SANVU	Saraoutou	1.45	296		Pn	19 50 21.3	+1.7
SANVU				Sn	S	19 50 50.7	+1.3
DVP	Devils Point	1.66	192	P	Pn	19 50 25.3	+4.1
DVP	Devils Point	1.66	192	S	S	19 50 57.3	+4.9
MARNC	Mare, Loyalty	5.38	185	P	Pn	19 51 03.7	+1.6
MARNC	Mare, Loyalty	5.38	185	Pn	Pn	19 51 02.0	0.0
MARNC				Sn	S	19 52 03.4	-3.0
YATNC	Mamie plateau,	6.14	195	P	Pn	19 51 13.0	+1.5
DZM	Mont Dzumac	6.28	198	P	Pn	19 51 15.0	+1.7
	10nm,0.8s,baz=220,slow=17,SNR=9.8						
DZM				S	S	19 52 27.6	+1.0
	3.0nm,0.7s,baz=104,slow=14,SNR=1.1						
ONTNC	Ouen Toro	6.50	197	P	Pn	19 51 18.9	+3.0
ONTNC	Ouen Toro	6.50	197	Pn	Pn	19 51 17.9	+2.0
OUENC	Ouen Island, N	6.50	194	P	Pn	19 51 17.6	+1.6
OUENC	Ouen Island, N	6.50	194	Pn	Pn	19 51 16.8	+0.8
EIDS	Eidsvold	18.75	238		P	19 53 43.1	+0.7
EIDS				IAmb	IAmb	19 53 44.3	
	comp=Z,27nm,1.4s						
ARMA	Armidale	21.06	224	P	P	19 54 07.7	+0.7
CTA	Charters Tower	21.57	256	P	P	19 54 11.8	0.0
	comp=Z,4.8nm,0.8s,baz=76,slow=12,SNR=2.0 comp=Z,4.8nm,0.8s						
CTAO	Charters Tower	21.57	256	P	P	19 54 11.8	0.0
CTAO				IAmb	IAmb	19 54 25.6	
	comp=Z,30nm,1.4s						
BKZ	Black Stump Fm	24.02	165	P	P	19 54 35.3	+1.3
BKZ				IAmb	IAmb	19 54 40.1	
	comp=Z,20nm,1.3s						
BFZ	Birch Farm	25.40	166	P	P	19 54 46.6	+0.3
INKA	Innaminka	28.22	241	P	P	19 55 11.6	0.0
STKA	Stephens Creek	29.11	232	P	P	19 55 20.0	+0.5
	comp=Z,2.0nm,0.4s,baz=73,slow=11,SNR=18 comp=Z,2.0nm,0.4s						
STKA	Stephens Creek	29.11	232	P	P	19 55 19.9	+0.5
WR8	Warramunga Arr	32.58	258	P	P	19 55 48.4	-1.6
WR8				IAmb	IAmb	19 56 18.6	
	comp=Z,10nm,1.4s						
WB0	Warramunga Arr	32.68	258	P	P	19 55 49.6	-1.3
WB0				IAmb	IAmb	19 56 24.3	
	comp=Z,8.0nm,1.4s						
WRA	Warramunga Arr	32.73	258	P	P	19 55 49.8	-1.6
	comp=Z,0.9nm,0.3s,baz=84,slow=8.4,SNR=62 comp=Z,0.9nm,0.3s						
AS31	Alice Springs	33.38	251	P	P	19 55 56.3	-0.7
ASAR	Alice Springs	33.38	251	P	P	19 55 56.1	-0.8
	comp=Z,11nm,0.4s,baz=76,slow=9.4,SNR=328 comp=Z,11nm,0.4s						
BBOO	Buckleboo	33.77	234	P	P	19 56 00.3	+0.2
BBOO				IAmb	IAmb	19 56 33.4	
	comp=Z,16nm,1.3s						
MTN	Manton Dam	36.35	270	P	P	19 56 21.9	-0.4
MTN				IAmb	IAmb	19 56 35.8	
	comp=Z,15nm,1.4s						
FAKI	Fak Fak	38.04	286	P	P	19 56 34.0	-2.4
KNRA	Kununurra	38.24	265	P	P	19 56 36.8	-1.3
KNRA				IAmb	IAmb	19 56 37.4	
	comp=Z,8.5nm,0.5s						
FORT	Forrest	39.70	241	P	P	19 56 49.2	-0.8
FORT				IAmb	IAmb	19 57 27.6	
	comp=Z,9.6nm,1.0s						
PSA00	Pilbara Seismi	46.28	255	P	P	19 57 42.0	-0.8
PSA00				IAmb	IAmb	19 57 51.8	
	comp=Z,13nm,1.2s						
MBWA	Marble Bar	46.40	256	P	P	19 57 43.0	-0.7
MORW	Morawa	49.82	245	P	P	19 58 09.0	-0.6
MORW				IAmb	IAmb	19 58 11.8	
	comp=Z,17nm,1.4s						
QSPA	South Pole Qui	73.94	180	P	P	20 00 49.2	-0.2
	comp=Z,0.0nm,1.0s,baz=41,slow=4.3,SNR=5.0 comp=Z,2.0nm,1.0s						
QSPA	South Pole Qui	73.94	180	IAmb	IAmb	20 00 50.3	
	comp=Z,2.1nm,0.9s						
SLKM	Skilak Lake	83.20	19	P	P	20 01 39.2	-0.4
J18K	Innoko River	83.76	15	P	P	20 01 42.2	-0.2
J18K				IAmb	IAmb	20 02 25.2	
	comp=Z,4.7nm,1.4s						
G19K	Purcell Mounta	85.92	13	P	P	20 01 53.2	+0.2
F19K	Shaleruckik Mo	86.36	13	P	P	20 01 54.8	-0.3
ILAR	Eielson Array	87.44	18	P	P	20 01 58.0	-2.4
	comp=Z,0.3nm,0.6s,baz=235,slow=5.1,SNR=6.0 comp=Z,0.3nm,0.6s						

*MAN **10** 19:52:23.0, 6°.16N × 127°.04E, h32km, MS3.3*

*IDC **10** 19:52:25.9±3.2, 6°.34N × 127°.09E, h65km±29km, mb3.4/7, mbtmp3.7/8, ML4.2/1, MS2.6/2, Error ellipse: s-maj=51.3km s-min=12.3km az=55.0*

*NEIC **10** 19:52:26.7±1.3, 6°.20N±0°.07 × 126°.83E±0°.10, h64km±9km, mb4.1/10, Error ellipse: s-maj=15.8km s-min=7.9km az=59.0*

ISC 10 19:52:27.1±1.0, 6°.08N±0°.05 × 126°.76E±0°.07, h69km±11km, n35, σ1s.84/43, mb3.8/10, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.05	272	eP	Pn	19 52 45.6	-0.5
DDMP				*i* S	Sn	19 53 01.8	+1.5
DAV	Davao City (W)	1.54	310	P	Pn	19 52 52.0	-0.5
	437nm,0.5s,baz=73,slow=3.8,SNR=12						
DAV				S	Sn	19 53 13.8	+2.1
	384nm,0.4s,baz=97,slow=20,SNR=4.7						
DAV	Davao City (W)	1.54	310		Pn	19 52 52.0	-0.5
DAV				Sn	Sn	19 53 10.2	-1.5
DMPH	Davao City--Mi	1.60	309	eP	Pn	19 52 53.5	+0.1
DMPH				*i* S	Sn	19 53 06.5	-6.7
GSPH	General Santos	1.80	270	*i* P	Pn	19 52 54.8	-1.4
GSPH				*i* S	Sn	19 53 17.2	-1.1
KCP	Kidapawan	1.90	299	*i* P	Pn	19 52 56.8	-0.7
KCP				*i* S	Sn	19 53 20.7	+0.2
BIPH	Bislig	2.13	349	*i* P	Pn	19 52 57.1	-3.4
BIPH				eS	Sn	19 53 29.7	+3.7
CTBH	Cotabato--PC H	2.75	295	*i* P	Pn	19 53 02.8	-6.1
CGP	Cagayan de Oro	3.13	319	eP	Pn	19 53 14.8	+0.7
CGP				eS	Sn	19 53 52.2	+1.9
TNTI	Ternate	5.30	173	Pn	Pn	19 53 45.0	+1.2
TNTI				Sn	Sn	19 54 45.7	+2.1
PLP	Palo	5.36	341	eP	Pn	19 53 46.3	+1.8
RCP	Roxas	6.74	324	eP	Pn	19 54 05.3	+1.9
TOLI2	Tolitoli	7.74	231	Pn	Pn	19 54 17.3	+0.2
TOLI2				Sn	Sn	19 55 43.0	-0.4
LUWI	Luwuk	8.12	210	Pn	Pn	19 54 23.5	+1.2
SIJI	Sorong	8.23	147	P	Pn	19 54 23.2	-0.7
	2.9nm,0.3s,baz=335,slow=24,SNR=16						
SIJI				S	Sn	19 55 52.0	-3.5
	3.2nm,0.3s,baz=343,slow=23,SNR=9.0 6.4nm,0.4s						
MYLDM	Lahad Datu	8.27	264	Pn	Pn	19 54 24.4	0.0
FAKI	Fak Fak	10.48	148	Pn	Pn	19 54 54.8	+0.2
SBUM	Sibu	14.94	257		Pn	19 55 56.2	+1.7
WB0	Warramunga Arr	26.76	164	P	P	19 57 59.7	-0.8
WB0				IAmb	IAmb	19 58 29.8	
	comp=Z,5.7nm,1.2s						
WRA	Warramunga Arr	26.91	164	P	P	19 58 02.7	+0.8
	comp=Z,0.6nm,0.6s,baz=344,slow=10,SNR=5.7 comp=Z,0.6nm,0.6s						
WR8	Warramunga Arr	26.96	164	P	P	19 58 02.5	+0.1
WR8				IAmb	IAmb	19 58 31.1	
	comp=Z,8.4nm,1.4s						
CMAR	Chiang Mai Arr	29.78	297	LR	LR	20 10 49.5	
	comp=Z,14nm,19.6s,baz=10.0,slow=37						
ASAR	Alice Springs	30.37	167	P	P	19 58 33.5	+0.9
	comp=Z,0.3nm,0.4s,baz=343,slow=7.2,SNR=7.8 comp=Z,0.3nm,0.4s						
KSRS	Korea Array	31.25	2	LR	LR	20 14 41.3	
	comp=Z,7.5nm,18.6s,baz=215,slow=43						
BBOO	Buckleboo	39.67	168	P	P	19 59 52.7	+0.3
NWAO	Narrogin (SRO)	39.83	193	P	P	19 59 55.4	+1.6
STKA	Stephens Creek	40.31	160	P	P	19 59 58.6	+0.9
	comp=Z,1.6nm,0.8s,baz=324,slow=8.7,SNR=4.6 comp=Z,1.6nm,0.8s						
SONM	Songino Array	45.10	341	P	P	20 00 35.5	-1.1
	comp=Z,0.3nm,0.5s,baz=161,slow=9.2,SNR=2.8 comp=Z,0.3nm,0.5s						
MKAR	Makanchi Array	55.67	324	P	P	20 01 55.4	-0.8
	comp=Z,0.3nm,0.5s,baz=114,slow=7.2,SNR=8.9 comp=Z,0.3nm,0.5s						
KURK	Kurchatov	59.80	327	P	P	20 02 24.0	-1.0
KURBB	Kurchatov Arra	59.80	327	P	P	20 02 24.0	-1.0
	comp=Z,0.4nm,0.2s,baz=126,slow=6.1,SNR=5.3 comp=Z,0.4nm,0.2s						
BVAR	Borovoye Array	65.39	326	P	P	20 03 00.3	-1.9
	comp=Z,0.4nm,0.6s,baz=115,slow=6.5,SNR=3.9 comp=Z,0.4nm,0.6s						
K13K	Kusilvak Mount	74.67	27	P	P	20 03 57.5	-1.4
K13K				IAmb	IAmb	20 04 32.9	
	comp=Z,4.4nm,1.4s						
BMRM	Bremner River	84.07	29	P	P	20 04 49.7	-0.4
O29M	Mount Kennedy	87.08	30	P	P	20 05 05.2	0.0

IDC 10 19:57:05.7±3.9, 4°.95S × 133°.48E, h0km, mb3.1/1, mbtmp3.1/4, ML3.0/3, Error ellipse: s-maj=198.0km s-min=28.6km az=75.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	4.62	331	Pn	Pn	19 58 17.0	+0.2
	0.4nm,0.3s,baz=150,slow=22,SNR=1.5						
SIJI				Sn	Sn	19 59 07.5	-3.7
	0.3nm,0.3s,baz=147,slow=23,SNR=1.6 1.6nm,0.4s						
WRA	Warramunga Arr	14.93	177	Pn	Pn	20 00 37.9	-0.3
	0.1nm,0.3s,baz=355,slow=13,SNR=5.0						
WRA				Sn	Sn	20 03 13.7	-11
	baz=2.6,slow=22,SNR=2.5 0.2nm,0.6s						
ASAR	Alice Springs	18.61	179	P	P	20 01 24.9	0.0
	0.1nm,0.3s,baz=358,slow=11,SNR=5.0						
ASAR				S	Sn	20 04 43.2	-11
	0.3nm,0.9s,baz=4.8,slow=28,SNR=1.9 0.2nm,0.5s						
MKAR	Makanchi Array	68.49	325	P	P	20 08 09.9	0.0
	0.1nm,0.5s,baz=130,slow=5.7,SNR=1.9 0.1nm,0.5s						

*IDC **10** 20:06:16.1±1.3, 21°.92N × 144°.22E, h0km, mb3.7/6, mbtmp3.7/6, Error ellipse: s-maj=55.2km s-min=22.2km az=88.0*

ISC 10 20:06:28.8±1.3, 21°.9N±0°.2 × 144°.2E±0°.4, h105km, n6, σ0s.60/6, mb3.8/6, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	42.64	194	P	P	20 14 15.2	+0.1
	0.6nm,0.5s,baz=16,slow=9.0,SNR=28 0.6nm,0.5s						
ASAR	Alice Springs	46.34	193	P	P	20 14 44.4	0.0
	0.4nm,0.9s,baz=17,slow=13,SNR=5.3 0.4nm,0.9s						
KURBB	Kurchatov Arra	58.03	317	P	P	20 16 10.9	+0.2
	0.5nm,0.4s,baz=93,slow=7.8,SNR=6.2 0.5nm,0.4s						
ILAR	Eielson Array	61.48	27	P	P	20 16 34.3	+0.2
	0.2nm,0.8s,baz=270,slow=7.5,SNR=2.0 0.2nm,0.8s						
BVAR	Borovoye Array	63.14	319	P	P	20 16 46.0	+0.6
	1.0nm,0.4s,baz=101,slow=8.1,SNR=9.5 1.0nm,0.4s						
FINES	FINESS Array B	83.43	335	P	P	20 18 43.5	-0.8
	1.9nm,1.0s,baz=48,slow=6.6,SNR=4.0 1.9nm,1.0s						

*NNC **10** 20:09:02.6±0.4, 42°.90N × 71°.78E, h0km, mb3.7, mpv3.6, Error ellipse: s-maj=8.2km s-min=2.7km az=177.0*

*SOME **10** 20:09:03.5, 42°.82N × 71°.82E, h10km*

*KRNET **10** 20:09:03.0±0.1, 42°.76N × 71°.79E, h13km, mb3.7*

*KNET **10** 20:09:04.0±0.4, 42°.94N × 71°.88E, h26km±2km, ml3.1, Error ellipse: s-maj=6.8km s-min=3.3km az=11.0*

ISC 10 20:09:01.8±1.0, 42°.89N±0°.03 × 71°.86E±0°.01, h6km±8km, n75, σ1s.66/134, 50C-29D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZA	Taraz	0.39	271	eP	Pb	20 09 10.2	-0.9
DZA				eS	Sg	20 09 15.1	+0.7
DZA	Taraz	0.39	271	eP	Pb	20 09 10.2	-0.9
	408nm,0.1s						
DZA				eS	Sg	20 09 15.1	+0.7
	6μm,0.2s						
MNAS	Manas	0.62	130	↑eP	Pg	20 09 14.4	+0.6
MNAS				↑eS	Sg	20 09 22.6	+0.6
KK31	Karatay Array	1.01	283	↓P	Pb	20 09 21.2	-0.6
	6.7nm,0.2s,baz=103,slow=9.5,SNR=1474						
KK31				↑S	Sg	20 09 33.9	-0.4
	62nm,0.2s,baz=136,slow=35,SNR=48						
MRKS	Merke	1.02	98	P	Pn	20 09 23.0	+0.2
	12nm,0.1s						
MRKS				S	Sn	20 09 37.6	+0.1
	132nm,0.2s						
MRKS	Merke	1.02	98	eP	Pn	20 09 23.0	+0.2
	12nm,0.1s						
MRKS				eS	Sn	20 09 37.6	+0.1
	132nm,0.2s						
ARK	Arkit	1.09	176	↑eP	Pg	20 09 21.3	-1.5
ARK				↑eS	Sg	20 09 34.6	-2.3
EKS2	Erkin-Say	1.43	98	↑P	Pg	20 09 30.3	+1.0
	43nm,0.3s,SNR=148						
EKS2				↓S	Sn	20 09 50.1	+2.4
	179nm,0.3s						
EKS2	Erkin-Say	1.43	98	↑*i*P	Pg	20 09 30.3	+1.0
EKS2				↑eS	Sn	20 09 50.1	+2.4
TRKS	Terek-Say	1.46	202	↓eP	Pn	20 09 28.6	-0.3
TRKS				↓eS	Sb	20 09 47.2	-1.1
BRLS	Boroldaу	1.49	276	P	Pg	20 09 30.8	+0.4
	23nm,0.2s						
BRLS				S	Sg	20 09 51.1	+1.3
	154nm,0.2s						
BRLS	Boroldaу	1.49	276	eP	Pg	20 09 30.8	+0.4
BRLS				eS	Sg	20 09 51.0	+1.3
BRLS	Boroldaу	1.49	276	eP	Pg	20 09 30.8	+0.4
	23nm,0.2s						
BRLS				eS	Sg	20 09 51.1	+1.3
	154nm,0.2s						
IUG	luzhnay	1.54	242	P	Pn	20 09 30.2	+0.2
	88nm,0.2s						
IUG				S	Sn	20 09 49.1	-1.2
	888nm,0.4s						
IUG	luzhnay	1.54	242	eP	Pn	20 09 30.2	+0.2
	88nm,0.2s						
IUG				eS	Sn	20 09 49.1	-1.2
	888nm,0.4s						
CHM	Chimkent	1.76	252	eP	Pb	20 09 34.2	-0.3
CHM				eS	Sb	20 09 56.7	-0.1
CHM	Chimkent	1.76	252	eP	Pb	20 09 34.1	-0.3
	136nm,0.3s						
CHM				eS	Sb	20 09 56.7	-0.1
	215nm,0.3s						
ARSB	Arslanbob	1.77	151	↑eP	Pn	20 09 34.2	+1.0
ARSB				↑eS	Sn	20 09 57.0	+0.9
AAK	Ala-Archa	1.96	96	↑P	Pg	20 09 38.7	-0.7
	39nm,0.3s,SNR=46						
AAK				↑S	Sg	20

	4.1nm,0.2s								
BTLS					Lg		Lg	20 10 30.0	
	37nm,0.2s								
BTLS	**Baital**	**2.67**	**36**	*e*P		**Pg**		**20 09 53.7**	**+0.7**
	4.1nm,0.2s								
BTLS				*e*S		**Sg**		**20 10 30.0**	**+2.4**
	37nm,0.2s								
TKM2	**Tokmak 2**	**2.75**	**88**	⇑P		**Pb**		**20 09 49.3**	**-2.3**
	5.6nm,0.2s,SNR=15								
DGS	**Degeres**	**2.89**	**82**	Pg		**Pg**		**20 09 56.9**	**-0.3**
	2.5nm,0.2s								
DGS				Lg		Lg		20 10 35.2	
	59nm,0.3s								
DGS	**Degeres**	**2.89**	**82**	*e*P		**Pg**		**20 09 56.9**	**-0.3**
	2.5nm,0.2s								
DGS				*e*S		**Sg**		**20 10 35.1**	**+0.5**
	59nm,0.3s								
KRBS	**Karabastau**	**2.90**	**73**	Pg		**Pg**		**20 09 57.2**	**-0.3**
	8.0nm,0.2s								
KRBS				Lg		Lg		20 10 35.6	
	9.3nm,0.3s								
KRBS	**Karabastau**	**2.90**	**73**	*e*P		**Pg**		**20 09 57.2**	**-0.3**
	8.0nm,0.2s								
KRBS				*e*S		**Sg**		**20 10 35.6**	**+0.5**
	9.3nm,0.3s								
BTK	**Batken**	**2.93**	**196**	⇓*e*P		**Pn**		**20 09 50.3**	**+1.2**
BTK				⇓*e*S		**Sn**		**20 10 24.9**	**+0.2**
KST	**Kastek**	**3.02**	**86**	Pg		**Pg**		**20 09 58.6**	**-1.1**
	9.7nm,0.3s								
KST				Lg		Lg		20 10 38.0	
	33nm,0.4s								
KST	**Kastek**	**3.02**	**86**	*e*P		**Pg**		**20 09 58.6**	**-1.1**
	9.7nm,0.3s								
KST				*e*S		**Sg**		**20 10 38.0**	**-0.7**
	33nm,0.4s								
BOOM	**Boomskoye usch**	**3.04**	**96**	⇓*e*P		**Pb**		**20 09 54.0**	**-2.4**
BOOM				⇑*e*S		**Sb**		**20 10 31.7**	**-2.1**
SFK	**Sufi-Kurgan**	**3.13**	**156**	⇓*e*P		**Pn**		**20 09 53.7**	**+1.8**
SFK				⇑*e*S		**Sn**		**20 10 30.8**	**+1.1**
ULHL	**Ulahol**	**3.30**	**100**	⇓*e*P		**Pb**		**20 09 57.9**	**-3.0**
ULHL				⇓*e*S		**Sb**		**20 10 38.0**	**-3.5**
JNKS	**Jany-Kuch**	**3.35**	**122**	⇓*e*P		**Pn**		**20 09 58.1**	**+3.1**
JNKS				⇓*e*S		**Sn**		**20 10 38.4**	**+3.1**
MTBS	**Maitube**	**3.36**	**84**	Pg		**Pg**		**20 10 05.5**	**-0.7**
	3.5nm,0.2s								
MTBS				Lg		Lg		20 10 49.9	
	19nm,0.2s								
MTBS	**Maitube**	**3.36**	**84**	*e*P		**Pg**		**20 10 05.5**	**-0.7**
	3.5nm,0.2s								
MTBS				*e*S		**Sg**		**20 10 49.9**	**+0.1**
	19nm,0.2s								
DRK	**Karamyk**	**3.41**	**181**	⇑*i*P		**Pn**		**20 09 57.2**	**+1.4**
DRK				⇑*e*S		**Sn**		**20 10 36.7**	**+0.1**
NRN	**Naryn**	**3.41**	**114**	⇑*e*P		**Pn**		**20 09 58.7**	**+2.9**
NRN				⇑*e*S		**Sn**		**20 10 39.4**	**+2.7**
IZV	**Izvestkoviy**	**3.49**	**86**	Pg		**Pg**		**20 10 08.3**	**-0.5**
	9.8nm,0.3s								
IZV				Lg		Lg		20 10 54.6	
	31nm,0.3s								
IZV	**Izvestkoviy**	**3.49**	**86**	*e*P		**Pg**		**20 10 08.3**	**-0.5**
	9.8nm,0.3s								
IZV				*e*S		**Sg**		**20 10 54.6**	**+0.5**
	31nm,0.3s								
KTBS	**Karatobe**	**3.62**	**75**	Pg		**Pg**		**20 10 10.8**	**-0.3**
	2.2nm,0.2s								
KTBS				Lg		Lg		20 10 58.9	
	0.1nm,0.3s								
KTBS	**Karatobe**	**3.62**	**75**	*e*P		**Pg**		**20 10 10.8**	**-0.3**
	2.2nm,0.2s								
KTBS				*e*S		**Sg**		**20 10 58.9**	**+0.9**
	0.1nm,0.3s								
TNSS	**Tian-Shan**	**3.74**	**86**	Pg		**Pg**		**20 10 11.6**	**-1.9**
	1.1nm,0.2s								
TNSS				Lg		Lg		20 11 00.3	
	15nm,0.5s								
TNSS	**Tian-Shan**	**3.74**	**86**	*e*P		**Pg**		**20 10 11.6**	**-1.9**
	1.1nm,0.2s								
TNSS				*e*S		**Sg**		**20 11 00.3**	**-1.6**
	15nm,0.5s								
MDOK	**Medeo**	**3.82**	**84**	Pg		**Pg**		**20 10 13.0**	**-1.9**
	6.8nm,0.3s								
MDOK				Lg		Lg		20 11 02.7	
	27nm,0.5s								
KOTS	**Kotyrbulak**	**3.87**	**83**	Pg		**Pg**		**20 10 14.7**	**-1.2**
	4.5nm,0.3s								
KOTS				Lg		Lg		20 11 05.6	
	23nm,0.4s								
KOTS	**Kotyrbulak**	**3.87**	**83**	*e*P		**Pg**		**20 10 14.7**	**-1.2**
	4.5nm,0.3s								
KOTS				*e*S		**Sg**		**20 11 05.6**	**-0.4**
	23nm,0.4s								
KDJ	**Kajisay**	**4.01**	**99**	⇓*e*P		**Pn**		**20 10 07.8**	**+3.8**
KDJ				⇓*e*S		**Sn**		**20 10 55.2**	**+3.9**
GAR	**Garm**	**4.05**	**197**	⇑*e*P		**Pn**		**20 10 05.8**	**+1.3**
GAR				⇑*e*S		**Sn**		**20 10 51.8**	**-0.6**
ARXS	**Arharly**	**4.54**	**71**	*e*P		**Pg**		**20 10 26.8**	**-2.0**
	1.9nm,0.3s								
ARXS				*e*S		**Sg**		**20 11 26.1**	**-1.4**
	26nm,0.5s								
TARG	**Taragay, Kyrgy**	**4.56**	**103**	⇑*e*P		**Pn**		**20 10 15.4**	**+3.6**
TARG				⇑*e*S		**Sn**		**20 11 08.2**	**+2.9**
SATY	**Saty**	**4.81**	**86**	Pg		**Pg**		**20 10 33.4**	**-0.6**
	2.4nm,0.2s								
SATY				Lg		Lg		20 11 37.6	
	21nm,0.3s								
PRZ	**Przheval'sk**	**4.84**	**93**	⇓*e*P		**Pn**		**20 10 19.4**	**+4.0**
PRZ				⇓*e*S		**Sn**		**20 11 15.1**	**+3.2**
TDK	**Taldyqorghan**	**5.18**	**64**	Pg		**Pg**		**20 10 38.1**	**-2.9**
	27nm,0.4s								
TDK				Lg		Lg		20 11 45.8	
	71nm,0.5s								
TDK	**Taldyqorghan**	**5.18**	**64**	*e*P		**Pg**		**20 10 38.1**	**-2.9**
	27nm,0.4s								
TDK				*e*S		**Sg**		**20 11 45.8**	**-2.3**
	71nm,0.5s								
UZB	**Uzynbulak**	**5.26**	**85**	*e*P		**Pg**		**20 10 39.9**	**-2.7**
	4.4nm,0.3s								
UZB				*e*S		**Sg**		**20 11 48.7**	**-2.0**
	10nm,0.6s								
PDGK	**Podgornoye**	**5.61**	**83**	⇑Pg		**Pg**		**20 10 47.7**	**-1.5**
	3.3nm,0.7s								
PDGK				⇑Lg		Lg		20 11 58.8	
	11nm,0.7s								
MK31	**Makanchi Array**	**8.38**	**59**	⇓Pn		**Pn**		**20 11 05.3**	**+1.5**
	0.3nm,0.3s,baz=243,slow=16,SNR=36								
MK31				⇓Sn		**Sn**		**20 12 40.1**	**+1.5**
	1.0nm,0.5s,baz=242,slow=25,SNR=3.3								
MK31				Lg		Lg		20 13 32.0	
	2.8nm,0.5s,baz=246,slow=27,SNR=3.5								
KURBB	**Kurchatov Arra**	**8.99**	**28**	⇓Pn		**Pn**		**20 11 10.8**	**-1.3**
	0.4nm,0.6s								
KURBB				⇑Sn		**Sn**		**20 12 48.8**	**-4.8**
	3.0nm,0.6s								
KURBB				⇑Lg		Lg		20 13 49.3	
	14nm,0.8s								
KURK	**Kurchatov**	**9.10**	**28**	⇑Pn		**Pn**		**20 11 14.1**	**+0.5**
	0.1nm,0.5s								
KURK				⇑Sn		**Sn**		**20 12 53.7**	**-2.5**
	0.6nm,0.7s								
KURK				⇓Lg		Lg		20 13 51.7	
	3.3nm,0.7s								
BVA0	**Borovoye Array**	**10.19**	**355**	⇓Pn		**Pn**		**20 11 31.6**	**+3.1**
	0.5nm,0.5s,baz=162,slow=12,SNR=5.3								
BVA0				⇓Sn		**Sn**		**20 13 19.5**	**-3.6**
	0.6nm,0.5s,baz=169,slow=24,SNR=2.6								
BVA0				⇓Lg		Lg		20 14 23.1	
	3.9nm,1.1s								
AB31	**Akbulak array**	**10.44**	**312**	⇑P		**Pn**		**20 11 29.8**	**-2.1**
	0.3nm,0.5s,baz=119,slow=14,SNR=6.3								

*IDC **10** 20:28:13.1±61.0, 36°.31N×21°.58E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=1158.0km s-min=68.0km az=38.0*
*ATH **10** 20:28:17.5, 37°.02N×21°.20E, h9km±1km, ML2.9/19, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **10** 20:28:18.5, 37°.N±1°×2°.1E±°, h0km±2km, M2.8/20, MLh2.8/20*

ISC 10 20:28:18.1±1.3, **37°.06N**±0°.04×**21°.26E**±0°.03, **h18**km±3km, **n64**, σ0°**88**/95, **mb3.4**/4, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYL1	**Pylos**	**0.38**	**112**	P	**Pb**	**20 28 25.9**	**-0.4**
PYL1				S	**Sb**	**20 28 31.2**	**-0.7**
PYL	**PYLOS**	**0.42**	**112**	P	**Pb**	**20 28 26.6**	**-0.5**
PYL				S	**Sb**	**20 28 33.4**	**+0.4**
PYL	**PYLOS**	**0.42**	**112**	P	**Pb**	**20 28 26.4**	**-0.7**
PYL				S	**Sb**	**20 28 33.5**	**+0.4**
MTHA	**Methoni**	**0.43**	**123**	P	**Pb**	**20 28 27.5**	**+0.3**
MTHA				S	**Sb**	**20 28 33.8**	**+0.5**
ZARO	**Zacharo**	**0.53**	**36**	P	**Pb**	**20 28 28.7**	**-0.2**
ZARO				S	**Sn**	**20 28 37.4**	**-1.9**
ITM	**Ithomi**	**0.55**	**77**	P	**Pb**	**20 28 28.8**	**-0.4**
ITM				S	**Sb**	**20 28 37.1**	**+0.5**
ITM	**Ithomi**	**0.55**	**77**	P	**Pb**	**20 28 28.3**	**-0.8**
ITM				S	**Sb**	**20 28 36.6**	**0.0**
AMT	**Artemida-Makis**	**0.59**	**37**	P	**Pg**	**20 28 29.8**	**-0.2**
AMT				S	**Sb**	**20 28 37.1**	**-0.9**
AMT	**Artemida-Makis**	**0.59**	**37**	P	**Pg**	**20 28 29.9**	**-0.2**
AMT				S	**Sn**	**20 28 39.4**	**-1.6**
LTHK	**Lithakia**	**0.73**	**333**	P	**Pb**	**20 28 32.0**	**-0.4**
LTHK				S	**Sg**	**20 28 42.6**	**+0.2**
LTHK	**Lithakia**	**0.73**	**333**	P	**Pb**	**20 28 31.8**	**-0.6**
LTHK				S	**Sg**	**20 28 42.8**	**+0.4**
ZAK2	**Zakynthos**	**0.79**	**339**	P	**Pn**	**20 28 33.5**	**-0.7**
ZAK2				S	**Sn**	**20 28 45.1**	**-0.5**
KYPS	**Kipseli, Zakin**	**0.84**	**336**	P	**Pb**	**20 28 33.9**	**-0.2**
KYPS				S	**Sg**	**20 28 45.6**	**0.0**
CLEM	**Kyllini,Ilia,G**	**0.84**	**353**	P	**Pb**	**20 28 33.4**	**-0.8**
CLEM				S	**Sg**	**20 28 45.7**	**0.0**
ORTH	**Orthonies,Zaky**	**0.91**	**331**	P	**Pn**	**20 28 35.9**	**-0.2**
ORTH				S	**Sn**	**20 28 48.4**	**-0.3**
ORTH	**Orthonies,Zaky**	**0.91**	**331**	P	**Pg**	**20 28 35.6**	**-0.3**
ORTH				S	**Sn**	**20 28 48.5**	**-0.2**
VLX	**Vlachokerasia**	**0.95**	**70**	P	**Pn**	**20 28 35.9**	**-0.7**
VLX				S	**Sn**	**20 28 49.9**	**+0.2**
DRO	**Drossia**	**0.96**	**22**	P	**Pn**	**20 28 36.0**	**-0.6**
DRO				S	**Sn**	**20 28 50.0**	**0.0**
DRO	**Drossia**	**0.96**	**22**	P	**Pn**	**20 28 36.0**	**-0.7**
DRO				S	**Sn**	**20 28 50.4**	**+0.4**
RLS	**Riolos of Patr**	**1.01**	**9**	P	**Pg**	**20 28 37.2**	**-0.7**
RLS				S	**Sn**	**20 28 52.2**	**+1.0**
RLS	**Riolos of Patr**	**1.01**	**9**	P	**Pn**	**20 28 36.9**	**-0.6**
RLS				S	**Sn**	**20 28 52.4**	**+1.2**
RTZL	**Ratzakli, Kefa**	**1.09**	**339**	P	**Pn**	**20 28 38.2**	**-0.3**
RTZL				S	**Sg**	**20 28 54.0**	**+0.4**
RTZL	**Ratzakli, Kefa**	**1.09**	**339**	P	**Pb**	**20 28 37.7**	**-0.7**
RTZL				S	**Sg**	**20 28 54.1**	**+0.5**
AXS	**Araxos**	**1.14**	**5**	P	**Pb**	**20 28 39.2**	**-0.1**
KLV	**Kalavryta, Ach**	**1.21**	**35**	P	**Pg**	**20 28 40.4**	**-1.2**
KLV				S	**Sg**	**20 28 58.8**	**+1.2**
KLV	**Kalavryta, Ach**	**1.21**	**35**	P	**Pg**	**20 28 40.6**	**-1.1**
KLV				S	**Sg**	**20 28 58.8**	**+1.2**
GUR	**Goura**	**1.23**	**44**	P	**Pg**	**20 28 40.7**	**-1.2**
GUR				S	**Sg**	**20 28 59.8**	**+1.7**
GUR	**Goura**	**1.23**	**44**	P	**Pg**	**20 28 41.0**	**-1.0**
GUR				S	**Sg**	**20 28 59.3**	**+1.2**
VLS	**Valsamata**	**1.24**	**335**	P	**Pb**	**20 28 40.4**	**-0.6**
VLS				S	**Sg**	**20 28 58.4**	**0.0**
VLS	**Valsamata**	**1.24**	**335**	P	**Pn**	**20 28 40.2**	**-0.4**
VLS				S	**Sg**	**20 28 58.8**	**+0.4**
ZIRI	**Ziria, Aigiali**	**1.36**	**23**	P	**Pg**	**20 28 43.2**	**-1.2**
AGEO	**AgiosGiorgios,**	**1.36**	**28**	P	**Pg**	**20 28 43.8**	**-0.7**
DMLN	**Damoulianata-K**	**1.37**	**329**	P	**Pb**	**20 28 43.1**	**-0.3**
DMLN	**Damoulianata-K**	**1.37**	**329**	P	**Pb**	**20 28 42.9**	**-0.4**
DMLN				S	**Sg**	**20 29 02.0**	**-0.6**
VLI	**Veliai**	**1.39**	**104**	P	**Pg**	**20 28 44.1**	**-0.8**
VLI	**Veliai**	**1.39**	**104**	P	**Pg**	**20 28 43.5**	**-1.3**
VLI				S	**Sg**	**20 29 03.4**	**+0.4**
AGRP	**Agrapidokambos**	**1.39**	**15**	P	**Pg**	**20 28 43.8**	**-1.1**
MALA	**Malamata, Dori**	**1.42**	**20**	P	**Pg**	**20 28 44.5**	**-1.1**
TRIZ	**Trizonia**	**1.46**	**26**	P	**Pb**	**20 28 44.6**	**-0.1**
EFP	**Efpalio**	**1.46**	**20**	P	**Pg**	**20 28 45.6**	**-0.7**
EFP	**Efpalio**	**1.46**	**20**	P	**Pg**	**20 28 45.0**	**-1.3**
MG00	**Magoula, Dorid**	**1.46**	**22**	P	**Pb**	**20 28 44.8**	**0.0**
SERG	**Sergoula**	**1.50**	**25**	P	**Pg**	**20 28 45.7**	**-1.3**
KALE	**Kalithea**	**1.50**	**27**	P	**Pg**	**20 28 45.8**	**-1.4**
KALE	**Kalithea**	**1.50**	**27**	P	**Pb**	**20 28 45.2**	**-0.4**
FSK	**Fiskardo**	**1.51**	**339**	P	**Pb**	**20 28 45.4**	**-0.2**
FSK	**Fiskardo**	**1.51**	**339**	P	**Pb**	**20 28 44.6**	**-1.0**
PVO	**Paravola**	**1.57**	**8**	P	**Pg**	**20 28 47.6**	**-0.8**
PVO	**Paravola**	**1.57**	**8**	P	**Pb**	**20 28 46.9**	**+0.2**
ANX	**Ano Chora**	**1.62**	**19**	P	**Pg**	**20 28 49.2**	**-0.2**
ANX	**Ano Chora**	**1.62**	**19**	P	**Pg**	**20 28 48.5**	**-0.9**
EVGI	**Lefkada island**	**1.63**	**343**	P	**Pb**	**20 28 47.2**	**-0.5**
LTK	**Loutraki**	**1.67**	**54**	P	**Pb**	**20 28 47.9**	**-0.4**
MET2	**Kameni Chora,**	**1.74**	**71**	P	**Pb**	**20 28 49.2**	**-0.3**
MET6	**Megalochori,Me**	**1.75**	**72**	P	**Pb**	**20 28 48.7**	**-1.1**
MET5	**Makryloggos,Me**	**1.77**	**71**	P	**Pb**	**20 28 49.6**	**-0.3**
LKD2	**Lefkada island**	**1.79**	**345**	P	**Pb**	**20 28 49.6**	**-0.2**
MET4	**Agioi Theodoro**	**1.80**	**71**	P	**Pb**	**20 28 50.0**	**-0.5**
TSLK	**Tsoukalades, L**	**1.83**	**345**	P	**Pb**	**20 28 50.3**	**-0.8**
AMPL	**Ampelaki**	**1.86**	**359**	P	**Pb**	**20 28 51.3**	**-0.4**
FINES	**FINESS Array B**	**24.60**	**6**	P	**P**	**20 33 41.0**	**+4.1**
	7.0nm,1.1s,baz=182,slow=10,SNR=2.4						
	7.0nm,1.1s						
KURBB	**Kurchatov Arra**	**42.43**	**53**	P	**P**	**20 36 10.8**	**-0.8**
	0.3nm,0.6s,baz=276,slow=8.8,SNR=2.8						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**45.40**	**58**	P	**P**	**20 36 34.5**	**-1.0**
	0.1nm,0.4s,baz=270,slow=7.5,SNR=4.7						
	0.1nm,0.4s						
ZALV	**Zalesovo Beam**	**46.01**	**47**	P	**P**	**20 36 41.5**	**+1.3**
	0.3nm,0.4s,baz=269,slow=9.7,SNR=2.2						
	0.3nm,0.4s						

*NEIC **10** 20:41:50.1±1.4, 17°.87N±0°.03×66°.96W±0°.02, h17km±1km, ML3.4/37, Md3.1/4(RSPR), Error ellipse: s-maj=4.8km s-min=2.0km az=193.0*
*OSPL **10** 20:41:51.8±0.3, 17°.88N×66°.96W, h11km±2km, ML2.8, Presumed earthquake*

ISC 10 20:41:50.4±1.1, **17°.92N**±0°.05×**66°.95W**±0°.02, **h18**km±3km, **n27**, σ0°**65**/44, **Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.09**	**49**		**Pg**	**20 41 54.6**	**+0.6**
GBPR					**Sg**	**20 41 56.5**	**+0.1**
MLPR	**Magueyes Islan**	**0.11**	**298**		**Pg**	**20 41 54.7**	**+0.6**
MLPR				Sg	**Sg**	**20 41 56.7**	**0.0**
MLPR				IAML		20 41 57.0	
	6μm,0.4s						
MLPR				IAML		20 41 57.1	
	7μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.18**	**299**		**Pg**	**20 41 55.7**	**+0.6**
CRPR				Sg	**Sg**	**20 41 58.1**	**-0.1**
CRPR				IAML		20 41 58.7	
	5μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.18**	**299**	*i* P	**Pg**	**20 41 55.7**	**+0.6**
CRPR				*e*S	**Sg**	**20 41 58.5**	**+0.3**
CRPR				IAML		20 41 58.6	
	comp=Z,2μm,0.3s						
LSP	**Las Mesas**	**0.29**	**333**		**Pb**	**20 41 57.6**	**+0.6**
LSP					**Sb**	**20 42 01.8**	**+0.3**
OBIP	**Obispado Ponce**	**0.35**	**69**		**Pb**	**20 41 58.5**	**+0.5**
OBIP				Sg	**Sb**	**20 42 03.6**	**+0.3**
OBIP	**Obispado Ponce**	**0.35**	**69**	*i* P	**Pb**	**20 41 58.6**	**+0.5**
OBIP				*e*S	**Sb**	**20 42 03.7**	**+0.4**
OBIP				IAML		20 42 04.7	
	comp=Z,907nm,0.2s						
PRSN	**Puerto Rico Se**	**0.35**	**328**		**Pb**	**20 41 58.4**	**+0.2**
PRSN				Sg	**Sg**	**20 42 02.4**	**-0.6**
CELP	**Cerrillos**	**0.38**	**66**		**Pb**	**20 41 59.2**	**+0.4**
CELP				Sg	**Sb**	**20 42 04.7**	**+0.4**
CELP				IAML		20 42 05.3	
	comp=Z,4μm,0.4s						
UUPR	**Utuado, UPR, P**	**0.40**	**33**		**Pb**	**20 41 59.1**	**+0.1**
UUPR				Sg	**Sg**	**20 42 04.0**	**-0.3**
AOPR	**Arecibo Observ**	**0.46**	**23**		**Pb**	**20 42 00.3**	**+0.2**
AOPR				Sg	**Sg**	**20 42 05.9**	**-0.4**
AGPR	**Aguadilla, PR**	**0.57**	**344**		**Pg**	**20 42 02.1**	**+0.3**
AGPR				Sg	**Sg**	**20 42 09.5**	**+0.1**
AGPR				IAML		20 42 10.1	
	comp=Z,2μm,0.5s						
EMPR	**Esperanza - Ma**	**0.68**	**35**		**Pn**	**20 42 04.7**	**-0.4**
EMPR					**Sg**	**20 42 13.3**	**+0.3**
ECPR	**Experimental S**	**0.68**	**54**		**Pg**	**20 42 04.1**	**+0.2**
ECPR				Sg	**Sb**	**20 42 12.8**	**0.0**
ECPR				IAML		20 42 13.9	
	comp=Z,1μm,0.2s						
ECPR				IAML		20 42 14.8	
	comp=Z,1μm,0.2s						
IDE	**Isla Desecheo**	**0.68**	**313**		**Pn**	**20 42 04.3**	**-0.9**
IDE					**Sg**	**20 42 13.8**	**+0.7**
SJG	**San Juan**	**0.78**	**76**		**Pg**	**20 42 05.9**	**+0.2**
SJG	**San Juan**	**0.78**	**76**	*i* P	**Pg**	**20 42 05.9**	**+0.2**
SJG				*e*S	**Sg**	**20 42 16.5**	**+0.4**
SJG				IAML		20 42 17.9	
	comp=Z,294nm,0.2s						
PDPR	**Patillas Dam,**	**0.89**	**83**		**Pn**	**20 42 07.8**	**-0.1**
PDPR				Sg	**Sb**	**20 42 18.9**	**+0.2**
HUMP	**Col San Antoni**	**1.07**	**78**		**Pn**	**20 42 10.4**	**-0.1**
HUMP				IAML		20 42 28.7	
	comp=Z,444nm,0.3s						
HUMP	**Col San Antoni**	**1.07**	**78**		**Sg**	**20 42 25.6**	**+0.4**
CUPR	**Culebra, Puert**	**1.63**	**76**		**Pn**	**20 42 17.6**	**-0.6**
DR12	**Loma Pena Alta**	**2.47**	**291**		**Pn**	**20 42 28.3**	**-1.5**
SDD	**Santo Domingo**	**2.87**	**281**	Pn	**Pn**	**20 42 34.9**	**-0.4**
SDD				IAML		20 43 39.3	
	comp=E,172nm,2.4s						
SDD				IAML		20 43 43.5	
	comp=N,147nm,2.4s						
BANI	**BANI**	**3.28**	**279**	Pn	**Pn**	**20 42 40.5**	**-0.5**
SDDR	**Presa de Saban**	**4.25**	**285**	Pn	**Pn**	**20 42 54.2**	**-0.2**
CBE	**Ff, Capester**	**5.43**	**109**	Pn	**Pn**	**20 43 07.7**	**-2.8**

*GII **10** 20:44:37.7±0.0, 33°.85N±0°.02×34°.657E±0°.009, h0km, Mws2.1, confirmed*
*GRAL **10** 20:44:37.8±0.2, 34°.05N×34°.74E, h28km±1km, MD2.8*

ISC 10 20:44:35.5±2.3, **34°.05N**±0°.07×**34°.66E**±0°.09, **h26**km±15km, **n21**, σ0°**65**/37, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DQRL	**Deir Qamar**	**0.83**	**114**	*e*P	**Pb**	**20 44 51.7**	**+0.4**
BHL	**Bhannes**	**0.84**	**100**	*e*P	**Pb**	**20 44 51.8**	**+0.3**
QRWL	**Qaraoun**	**0.98**	**120**	*e*P	**Pb**	**20 44 54.2**	**+0.2**
ZAHL	**Zahle**	**1.03**	**100**	*e*P	**Pn**	**20 44 54.9**	**+0.5**
HWQ	**Hawqa**	**1.09**	**78**	*e*P	**Pn**	**20 44 55.6**	**+0.4**
HWQ				*e*S	**Sb**	**20 45 08.8**	**-0.8**
RCY	**Rachaya**	**1.12**	**119**	*e*P	**Pn**	**20 44 56.2**	**+0.5**
RCY				*e*S	**Sb**	**20 45 09.8**	**-0.8**
GEM	**Giv'at Ha'Em**	**1.18**	**135**	P	**Pn**	**20 44 56.9**	**+0.5**
GEM				S	**Sn**	**20 45 11.7**	**+0.1**
NATI	**Neve Ativ**	**1.19**	**131**	P	**Pn**	**20 44 57.2**	**+0.8**
NATI				S	**Sn**	**20 45 12.4**	**+0.6**
MMC7	**Mount Meron ar**	**1.19**	**149**	P	**Pn**	**20 44 56.6**	**0.0**
MMA0B	**Mount Meron ar**	**1.20**	**149**	P	**Pn**	**20 44 56.7**	**0.0**
MMA0B				S	**Sn**	**20 45 11.5**	**-0.8**
BEIL	**Beino**	**1.35**	**68**	*e*P	**Pn**	**20 44 59.2**	**+0.5**
BEIL				*e*S	**Sn**	**20 45 15.0**	**-0.8**
BLGI	**Bet Lehem HaGe**	**1.39**	**161**	P	**Pn**	**20 45 00.1**	**+0.9**
BLGI				S	**Sn**	**20 45 16.2**	**-0.4**
KSHT	**Keshet**	**1.43**	**138**	P	**Pn**	**20 45 01.0**	**+1.1**
KSHT				S	**Sn**	**20 45 18.3**	**+0.4**
OFRI	**ˇOfer**	**1.45**	**169**	P	**Pn**	**20 45 00.4**	**+0.3**
OFRI				S	**Sn**	**20 45 17.9**	**-0.5**
MMLI	**Mount Malkishu**	**1.73**	**158**	P	**Pn**	**20 45 04.5**	**+0.5**
MMLI				S	**Sn**	**20 45 24.6**	**-0.6**
SLTI	**Sal'it**	**1.83**	**170**	P	**Pn**	**20 45 06.1**	**+0.8**
SLTI				S	**Sn**	**20 45 27.2**	**-0.5**
HMDT	**Nahal Hemdat**	**1.93**	**158**	P	**Pn**	**20 45 07.7**	**+1.0**
HMDT				S	**Sn**	**20 45 30.0**	**-0.2**
AMAZ	**Amatzia**	**2.52**	**175**	P	**Pn**	**20 45 15.5**	**+0.7**
AMAZ				S	**Sn**	**20 45 44.3**	**-0.4**
DSI	**Dead Sea**	**2.55**	**166**	P	**Pn**	**20 45 15.1**	**-0.1**
DSI				S	**Sn**	**20 45 44.5**	**-0.8**
YTIR	**Yattir**	**2.71**	**172**	P	**Pn**	**20 45 17.9**	**+0.4**
YTIR				S	**Sn**	**20 45 48.5**	**-0.9**
KZIT	**Kziot**	**3.14**	**184**	P	**Pn**	**20 45 24.3**	**+0.9**
KZIT				S	**Sn**	**20 45 59.1**	**-1.0**

*DJA **10** 20:44:48.8±0.4, 4°.S±4°×12°.9E±°, h10km, M3.4/13, MLv3.4/13*
*IDC **10** 20:44:49.6±1.4, 4°.23S×129°.22E, h0km, mb3.4/2, mbtmp3.4/5, ML3.3/3, Error ellipse: s-maj=44.5km s-min=24.4km az=88.0*

ISC 10 20:44:49.4±0.9, **4°.18S**±0°.07×**128°.72E**±0°.05, **h10**km, **n13**, σ2°**06**/16, **Banda Sea**

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

PLAI	**Plampang**	**1.67**	**293**	P	**Pn**	**21 02 05.4**	**+1.6**
PLAI				S	**Sn**	**21 02 25.5**	**+0.5**
EDFI	**Ende, Flores**	**2.44**	**73**	P	**Pn**	**21 02 16.5**	**+2.5**
EDFI				S	**Sn**	**21 02 44.3**	**+1.1**
BSSI	**Bau Bau, Buton**	**3.52**	**19**	P	**Pn**	**21 02 29.6**	**+1.2**
BSSI				S	**Sn**	**21 03 08.9**	**-0.1**
KHKI	**Kahang-Kahang**	**3.85**	**287**	P	**Pn**	**21 02 35.0**	**+2.2**
IGBI	**Denpasar**	**4.19**	**279**	P	**Pn**	**21 02 40.2**	**+2.8**
MKS	**Makassar**	**4.25**	**2**	P	**Pn**	**21 02 39.9**	**+1.6**
MKS				S	**Sn**	**21 03 26.9**	**+0.2**
BATI	**Baumata**	**4.33**	**100**	P	**Pn**	**21 02 41.8**	**+2.5**
KAPI	**Kappang**	**4.47**	**5**	P	**Pn**	**21 02 42.6**	**+1.4**
	4.8nm,0.3s,baz=163,slow=8.7,SNR=9.9						
KAPI				S	**Sn**	**21 03 30.8**	**-1.2**
	7.0nm,0.3s,baz=227,slow=23,SNR=6.2						
KAPI	**Kappang**	**4.47**	**5**	P	**Pn**	**21 02 42.7**	**+1.5**
FITZ	**Fitzroy Crossi**	**10.52**	**145**	P	**Pn**	**21 04 04.4**	**+0.7**
	1.4nm,0.8s,baz=328,slow=12,SNR=1.7						
FITZ				S	**Sn**	**21 05 56.4**	**-3.3**
	1.3nm,0.6s,baz=18,slow=22,SNR=7.0						
WRA	**Warramunga Arr**	**17.83**	**127**	P	**Pn**	**21 05 39.0**	**+0.8**
	0.4nm,1.0s,baz=304,slow=12,SNR=1.3						
ASAR	**Alice Springs**	**19.81**	**137**	P	**Pn**	**21 06 00.8**	**-0.9**
	0.1nm,0.3s,baz=316,slow=12,SNR=6.7						
SONM	**Songino Array**	**58.22**	**350**	P	**P**	**21 11 19.9**	**-0.8**
	0.2nm,0.4s,baz=166,slow=7.1,SNR=2.4						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**65.04**	**333**	P	**P**	**21 12 05.3**	**-1.2**
	0.2nm,0.6s,baz=141,slow=7.4,SNR=1.4						
	0.2nm,0.6s						

*RSNC **10** 21:01:44.8±0.0, 7°N±1°×7°3W±°, h155km±2km, M3.2, mb3.9, ML2.9*
*IDC **10** 21:01:46.4±6.4, 6°.63N×73°.21W, h184km±39km, mb2.6/1, mbtmp3.3/2, Error ellipse: s-maj=107.2km s-min=40.0km az=74.0*
ISC 10 21:01:44.0±0.9, **6°.83N**±0°.03×**73°.10W**±0°.04, **h156**km±6km, **n34**, σ1§**18**/64, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.25**	**199**	P	**Pn**	**21 02 05.7**	**+0.2**
BARC				S	**Sn**	**21 02 21.4**	**-0.5**
PAMC	**Pamplona, Colo**	**0.64**	**38**	P	**Pn**	**21 02 08.5**	**+1.1**
PAMC				S	**Sn**	**21 02 25.7**	**+0.4**
BRJC	**Barrancabermej**	**0.65**	**282**	P	**Pn**	**21 02 07.4**	**+0.5**
BRJC				S	**Sn**	**21 02 24.9**	**+0.6**
RUSC	**La Rusia**	**0.94**	**179**	P	**Pn**	**21 02 09.5**	**0.0**
RUSC				S	**Sn**	**21 02 28.4**	**-0.5**
PTBC	**PUERTO BERRIO,**	**1.38**	**258**	P	**Pn**	**21 02 12.6**	**-0.2**
PTBC				S	**Sn**	**21 02 33.8**	**-1.1**
OCAC	**Ocana**	**1.41**	**351**	P	**Pn**	**21 02 14.0**	**+0.6**
SPBC	**San Pablo de B**	**1.52**	**219**	P	**Pn**	**21 02 14.6**	**+0.2**
SPBC				S	**Sn**	**21 02 36.6**	**-1.1**
NORC	**Norcasia**	**2.16**	**234**	P	**Pn**	**21 02 21.2**	**-0.3**
NORC				S	**Sn**	**21 02 49.5**	**-0.9**
CHIC	**Chingaza**	**2.28**	**196**	P	**Pn**	**21 02 23.5**	**+0.3**
CHIC				S	**Sn**	**21 02 52.8**	**-0.6**
ROSC	**El Rosal**	**2.32**	**212**	P	**Pn**	**21 02 25.1**	**+1.4**
	78nm,0.3s,baz=270,slow=19,SNR=18						
ROSC				S	**Sn**	**21 02 55.5**	**+1.2**
	156nm,0.5s,baz=196,slow=23,SNR=18						
ROSC	**El Rosal**	**2.32**	**212**	P	**Pn**	**21 02 25.1**	**+1.4**
ROSC				S	**Sn**	**21 02 55.1**	**+0.8**
CVER	**Cruz Verde, Cu**	**2.49**	**203**	P	**Pn**	**21 02 26.7**	**+0.9**
CVER				S	**Sn**	**21 02 58.2**	**+0.1**
HELC	**Santa Helena**	**2.50**	**255**	P	**Pn**	**21 02 27.0**	**+1.3**
HELC				S	**Sn**	**21 02 57.4**	**-0.5**
UREC	**San Jos de Ur**	**2.58**	**291**	P	**Pn**	**21 02 26.0**	**-0.4**
UREC				S	**Sn**	**21 02 56.9**	**-2.3**
GUY2C	**Guyana, Caldas**	**2.76**	**235**	P	**Pn**	**21 02 30.5**	**+1.4**
GUY2C				S	**Sn**	**21 03 03.3**	**-0.6**
VILC	**Villavicencio,**	**2.77**	**192**	P	**Pn**	**21 02 29.2**	**+0.3**
VILC				S	**Sn**	**21 03 03.0**	**-0.6**
PTGC	**Puerto Gaitan,**	**2.79**	**160**	P	**Pn**	**21 02 28.7**	**-0.3**
PTGC				S	**Sn**	**21 03 01.9**	**-2.0**
CBOC	**Ciudad Bolivar**	**3.05**	**252**	P	**Pn**	**21 02 33.7**	**+1.3**
CBOC				S	**Sn**	**21 03 09.6**	**-0.3**
DBBC	**Dabeiba**	**3.09**	**274**	P	**Pn**	**21 02 33.2**	**+0.3**
DBBC				S	**Sn**	**21 03 08.9**	**-1.8**
SDV	**Santo Domingo**	**3.18**	**50**	P	**Pn**	**21 02 34.8**	**+0.7**
SDV				S	**Sn**	**21 03 12.0**	**-1.0**
ARGC	**Ariguani, Magd**	**3.21**	**339**	P	**Pn**	**21 02 36.6**	**+2.3**
ARGC				S	**Sn**	**21 03 15.1**	**+1.7**
PRAC	**Prado**	**3.57**	**210**	P	**Pn**	**21 02 39.2**	**+0.2**
PRAC				S	**Sn**	**21 03 21.3**	**-0.4**
ORTC	**Ortega, Tolima**	**3.61**	**216**	P	**Pn**	**21 02 40.4**	**+1.0**
ORTC				S	**Sn**	**21 03 23.1**	**+0.6**
SJCC	**San Jacinto, C**	**3.67**	**326**	P	**Pn**	**21 02 39.9**	**-0.4**
SJCC				S	**Sn**	**21 03 21.3**	**-2.7**
PLMC	**San Jos del P**	**3.70**	**239**	P	**Pn**	**21 02 41.1**	**+0.5**
PLMC				S	**Sn**	**21 03 25.6**	**+1.0**
URMC	**La Uribe, Meta**	**3.78**	**200**	P	**Pn**	**21 02 42.0**	**+0.3**
URMC				S	**Sn**	**21 03 26.6**	**0.0**
YOTC	**Yotoco, Valle**	**4.29**	**229**	P	**Pn**	**21 02 48.2**	**-0.2**
YOTC				S	**Sn**	**21 03 38.6**	**0.0**
SMRC	**Santa Marta, M**	**4.44**	**346**	P	**Pn**	**21 02 51.0**	**+0.8**
SMRC				S	**Sn**	**21 02 39.1**	**-2.8**
MACC	**Macarena, Meta**	**4.72**	**189**	P	**Pn**	**21 02 52.3**	**-1.6**
MACC				S	**Sn**	**21 03 45.0**	**-3.4**
URIC	**Uribia, Colomb**	**4.96**	**13**	P	**Pn**	**21 02 55.8**	**-1.2**
URIC				S	**Sn**	**21 03 52.6**	**-1.5**
BBAC	**Balboa, Cauca**	**6.32**	**221**	P	**Pn**	**21 03 16.3**	**+1.0**
BBAC				S	**Sn**	**21 04 26.4**	**-0.4**
TXAR	**Lajitas Array**	**36.47**	**312**	P	**P**	**21 08 34.4**	**+0.2**
	0.1nm,0.5s,baz=129,slow=9.5,SNR=1.6						
	0.1nm,0.5s						
ASAR	**Alice Springs**	**149.13**	**234**	PKPbc	**PKPdf**	**21 21 12.2**	**+1.7**
	0.2nm,0.5s,baz=120,slow=3.3,SNR=4.3						
WRA	**Warramunga Arr**	**150.36**	**241**	PKPbc	**PKPbc**	**21 21 16.6**	**-1.2**
	0.2nm,0.4s,baz=126,slow=3.3,SNR=7.5						

*NORS **10** 21:01:48.6, 40°.75N×46°.19E, h5km, MPVA3.7*
*MOS **10** 21:01:49.7, 40°.82N×46°.11E, h5km, MPVA3.5*
*AZER **10** 21:01:49.6, 40°.75N×45°.93E, h15km, ml2.7*
*TEH **10** 21:01:51.5, 40°.63N×45°.90E, h7km±148km, ML2.5, Presumed earthquake*
*DRS **10** 21:01:52.4, 40°.76N×46°.05E, h54km*
ISC 10 21:01:50.2±0.9, **40°.75N**±0°.02×**46°.00E**±0°.02, **h12**km±7km, **n45**, σ1§**18**/85, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GDB	**GEDABAY**	**0.19**	**263**	P	**Pg**	**21 01 54.8**	**+0.2**
GDB				S	**Sg**	**21 01 57.6**	**+0.1**
GANJ	**Ganja**	**0.26**	**112**	Pg	**Pg**	**21 01 56.3**	**+0.6**
GANJ				Sg	**Sg**	**21 02 00.5**	**+1.0**
QZX	**Qazax, Azerbai**	**0.57**	**303**	P	**Pg**	**21 02 01.7**	**+0.4**
QZX				S	**Sg**	**21 02 09.9**	**+0.9**
MNGR	**Mingechevir, A**	**0.82**	**88**	P	**Pn**	**21 02 07.8**	**+0.2**
MNGR				S	**Sn**	**21 02 21.5**	**+1.8**
ZKTA	**Zakatala**	**1.01**	**28**	P	**Pn**	**21 02 10.3**	**+0.1**
ZKTA				S	**Sn**	**21 02 25.6**	**+1.3**
SEKA	**Sheki**	**1.02**	**63**	P	**Pn**	**21 02 10.2**	**-0.1**
SEKA				S	**Sn**	**21 02 27.6**	**+3.0**
BRDA	**Brd**	**1.02**	**118**	P	**Pn**	**21 02 10.7**	**+0.4**
BRDA				S	**Sn**	**21 02 27.0**	**+2.4**
AGDM	**Agdam**	**1.06**	**127**	P	**Pn**	**21 02 10.3**	**-0.6**
AGDM				S	**Sn**	**21 02 25.4**	**-0.1**
HYR	**Heyderabad**	**1.35**	**221**	Pn	**Pn**	**21 02 14.7**	**-0.3**
HYR				Sn	**Sb**	**21 02 32.6**	**-0.1**
ZRD	**Zardab**	**1.37**	**109**	Pn	**Pg**	**21 02 16.3**	**-0.2**
ZRD				Sn	**Sn**	**21 02 36.9**	**+3.8**
TLTR	**Tlyarata**	**1.39**	**11**	*e*Pg	**Pg**	**21 02 16.3**	**-0.6**
TLTR				*e*Sg	**Sn**	**21 02 35.7**	**+1.9**
SBZ	**Shahbuz**	**1.39**	**194**	Pn	**Pn**	**21 02 15.1**	**-0.5**
SBZ				Sn	**Sb**	**21 02 33.5**	**-0.5**
QBL	**Gabala**	**1.41**	**81**	Pn	**Pg**	**21 02 17.3**	**0.0**
QBL				Sn	**Sg**	**21 02 37.4**	**+1.8**
AKT	**Akhty**	**1.50**	**60**	*e*Pg	**Pg**	**21 02 18.4**	**-0.6**
AKT				*e*Sg	**Sg**	**21 02 38.7**	**+0.1**
BLQ	**Beylaqan**	**1.57**	**130**	Pn	**Pb**	**21 02 18.6**	**-0.6**
BLQ				Sn	**Sg**	**21 02 39.4**	**-1.4**
KMKR	**Kumukh**	**1.61**	**30**	*e*Pg	**Pg**	**21 02 20.6**	**-0.6**
KMKR				*e*Sg	**Sg**	**21 02 43.2**	**+1.0**
NAX	**Nakhchivan**	**1.62**	**194**	Pn	**Pb**	**21 02 19.8**	**-0.3**
NAX				Sn	**Sb**	**21 02 41.5**	**+1.0**
QRD	**Qoradiz**	**1.63**	**141**	Pn	**Pn**	**21 02 19.1**	**+0.3**
QRD				Sn	**Sb**	**21 02 40.5**	**-0.3**
IML	**Ismayilli**	**1.66**	**88**	Pn	**Pb**	**21 02 19.8**	**-0.9**
IML				Sn	**Sg**	**21 02 42.8**	**-0.8**
XNQ	**Khinaliq**	**1.68**	**75**	Pn	**Pg**	**21 02 21.1**	**-1.3**
XNQ				Sn	**Sg**	**21 02 43.7**	**-0.5**
KDMR	**Kurdemir**	**1.70**	**102**	Sn	**Sg**	**21 02 45.4**	**+0.3**
IGDI	**IGDIR**	**1.71**	**240**	Pn	**Pn**	**21 02 20.1**	**+0.2**
IGDI				Sn	**Sn**	**21 02 42.6**	**+0.9**
MAKU	**Maku**	**1.72**	**216**	Pg	**Pn**	**21 02 20.8**	**+0.7**
MAKU				Sg	**Sn**	**21 02 42.6**	**+0.6**
GNBR	**Gunib**	**1.79**	**23**	*e*Pg	**Pg**	**21 02 23.8**	**-0.9**
GNBR				*e*Sg	**Sg**	**21 02 48.8**	**+0.5**
ORD	**Ordubad**	**1.81**	**180**	Pn	**Pb**	**21 02 22.9**	**-0.5**
ORD				Sn	**Sb**	**21 02 46.4**	**+0.3**
XNZR	**Khunzakh**	**1.87**	**16**	*e*Pg	**Pg**	**21 02 25.4**	**-0.8**
XNZR				*e*Sg	**Sg**	**21 02 51.4**	**+0.9**
BTLR	**Botlikh**	**1.92**	**5**	*e*Pg	**Pb**	**21 02 25.1**	**-0.2**
BTLR				*e*Sg	**Sg**	**21 02 51.6**	**-0.5**
PQL	**Pirkuli**	**1.97**	**88**	Pn	**Pg**	**21 02 26.8**	**-1.3**
PQL				Sn	**Sg**	**21 02 53.1**	**-0.4**
ARKR	**Arakani**	**2.00**	**22**	*e*Pg	**Pb**	**21 02 26.6**	**0.0**
ARKR				*e*Sg	**Sg**	**21 02 54.0**	**-0.5**
IMRD	**Marand**	**2.04**	**187**	Pn	**Pb**	**21 02 26.9**	**-0.5**
SAAT	**Saatly**	**2.05**	**115**	Pn	**Pb**	**21 02 25.5**	**-1.9**
SAAT				Sn	**Sb**	**21 02 51.6**	**-1.3**
UNCR	**Uncukul**	**2.06**	**17**	*e*Pg	**Pb**	**21 02 27.6**	**+0.2**
UNCR				*e*Sg	**Sg**	**21 02 54.9**	**-1.4**
GUDG	**Gudauri**	**2.06**	**327**	*e*Pg	**Pb**	**21 02 27.9**	**+0.2**
GUDG				*e*Sg	**Sb**	**21 02 53.3**	**-0.1**
KRNR	**Karanay**	**2.19**	**18**	*e*Pg	**Pb**	**21 02 29.2**	**-0.6**
KRNR				*e*Sg	**Sg**	**21 02 58.8**	**-1.8**
DVE	**Vedeno**	**2.21**	**2**	*e*Pg	**Pb**	**21 02 29.3**	**-0.9**
DVE				*e*Sg	**Sg**	**21 02 59.0**	**-2.3**
GLBA	**Clilabad**	**2.37**	**128**	Pn	**Pb**	**21 02 30.8**	**-2.1**
GLBA				Sn	**Sb**	**21 03 02.8**	**+0.7**
GRMI	**Germi**	**2.42**	**142**	Pn	**Pb**	**21 02 32.3**	**-1.6**
LACR	**Lac**	**2.44**	**329**	*e*Pn	**Pb**	**21 02 33.4**	**-0.7**
LACR				*e*Sn	**Sg**	**21 03 07.4**	**-1.2**
ISHB	**Shabestar**	**2.48**	**187**	Pn	**Pb**	**21 02 33.2**	**-1.6**
YRD	**Yardimli**	**2.51**	**136**	Pn	**Pb**	**21 02 33.2**	**-2.2**
YRD				Sn	**Sb**	**21 03 05.3**	**-1.1**
IHRS	**Heris**	**2.55**	**161**	Pn	**Pb**	**21 02 34.5**	**-1.6**
KORR	**Kora**	**2.75**	**329**	*e*Pn	**Pb**	**21 02 37.1**	**-2.2**
KORR				*e*Sn	**Sb**	**21 03 14.9**	**+2.0**
LRK	**Lerik**	**2.77**	**139**	Pg	**Pb**	**21 02 39.0**	**-0.7**
LRK				Sn	**Sb**	**21 03 14.1**	**+0.4**
DIGR	**Digorskoe uzhe**	**2.81**	**321**	*e*Pn	**Pb**	**21 02 39.3**	**-1.1**
DIGR				*e*Sn	**Sb**	**21 03 13.5**	**-1.4**
ASTR	**Astara**	**3.07**	**134**	Pg	**Pb**	**21 02 45.0**	**+0.3**
ASTR				Sn	**Sb**	**21 03 23.6**	**+1.5**

*IDC **10** 21:20:34.1±3.3, 0°.67N×97°.47E, h0km, mb3.4/5, mbtmp3.5/6, ML3.9/1, Error ellipse: s-maj=128.5km s-min=23.9km az=60.0*
*DJA **10** 21:20:35.9±0.4, 0°N±2°×9°7E±°, h44km±24km, M4.1/24, mB5.2/2, mb4.3/5, MLv4.0/24, Mw(mB)4.6/2*
ISC 10 21:20:33.8±1.3, **0°.10N**±0°.08×**96°.8E**±0°.1, **h22**km, **n20**, σ1§**75**/19, **mb3.4/5**, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**1.44**	**34**	P	**Pn**	**21 21 00.3**	**+1.7**
GSI				S	**Sn**	**21 21 16.8**	**-0.1**
PBSI	**Pulau Batu**	**1.52**	**96**	P	**Pn**	**21 20 59.9**	**+0.3**
PBSI				S	**Sn**	**21 21 19.1**	**+0.4**
MNSI	**Mandailing Nat**	**2.89**	**76**	P	**Pn**	**21 21 19.5**	**+0.9**
MNSI				S	**Sn**	**21 21 53.4**	**+0.7**
TPTI		**3.17**	**7**	P	**Pn**	**21 21 23.6**	**+1.2**
KCSI	**Kotacane, Aceh**	**3.54**	**16**	P	**Pn**	**21 21 28.5**	**+0.9**
KCSI				S	**Sn**	**21 22 11.3**	**+2.5**
PPI	**Padang Panjang**	**3.67**	**99**	P	**Pn**	**21 21 29.7**	**+0.4**
PPI				S	**Sn**	**21 22 10.6**	**-1.3**
KRJI	**Kerinci**	**5.17**	**115**	P	**Pn**	**21 21 50.6**	**+0.6**
MASI	**Maura Aman, Be**	**6.34**	**121**	P	**Pn**	**21 22 08.2**	**+2.1**
CMAR	**Chiang Mai Arr**	**18.37**	**7**	P	**Pn**	**21 24 42.6**	**-4.7**
	0.2nm,0.3s,baz=193,slow=11,SNR=1.8						
	0.6nm,0.3s						
H08S2	**Diego Garcia H**	**25.40**	**252**	T	T	21 53 24.7	
	baz=76						
H08S3	**Diego Garcia H**	**25.41**	**252**	T	T	21 53 26.4	
	baz=76						
H08S1	**Diego Garcia H**	**25.42**	**252**	T	T	21 53 22.4	
	baz=76						
WRA	**Warramunga Arr**	**41.83**	**121**	P	**P**	**21 28 23.7**	**+1.2**
	0.3nm,0.8s,baz=303,slow=8.0,SNR=1.8						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**43.09**	**126**	P	**P**	**21 28 34.2**	**+1.5**
	0.2nm,0.7s,baz=299,slow=8.6,SNR=2.1						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**48.20**	**347**	P	**P**	**21 29 13.9**	**+1.2**
	0.6nm,0.6s,baz=157,slow=8.5,SNR=9.3						
	0.6nm,0.6s						
SONM	**Songino Array**	**48.28**	**9**	P	**P**	**21 29 12.0**	**-1.4**
	0.2nm,0.5s,baz=190,slow=7.3,SNR=2.2						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**54.57**	**351**	P	**P**	**21 29 59.6**	**-0.6**
	0.5nm,0.4s,baz=173,slow=6.9,SNR=2.7						
	0.5nm,0.4s						
H04N2	**CROZET ISLANDS**	**60.63**	**214**	T	T	22 37 06.5	
	baz=53						
H04N1	**CROZET ISLANDS**	**60.64**	**214**	T	T	22 37 07.6	
	baz=53						
H04N3	**CROZET ISLANDS**	**60.65**	**214**	T	T	22 37 06.5	
	baz=53						

IDC 10 21:33:19.2±2.3, **1°.64N×128°.74E, h0**km, **mb3.2**/3, **mbtmp3.2**/3, **Error ellipse: s-maj=145.4km s-min=28.3km az=68.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.14**	**166**	P	P	21 38 14.9	-1.8
	0.3nm,0.5s,baz=346,slow=11,SNR=9.3						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**25.65**	**169**	P	P	21 38 52.1	+1.3
	0.4nm,0.4s,baz=338,slow=9.5,SNR=11						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**60.41**	**325**	P	P	21 43 30.4	-0.2
	0.1nm,0.6s,baz=114,slow=6.5,SNR=2.0						
	0.1nm,0.6s						

*IDC **10** 21:45:30.9±0.8, 8°.46S×128°.42E, h0km, mb4.1/8, mbtmp4.1/13, ML4.0/5, MS2.9/2, Error ellipse: s-maj=27.7km s-min=16.5km az=87.0*
*NEIC **10** 21:45:33.1±1.3, 8°.51S±0°.08×128°.53E±0°.07, h10km±1km, mb4.4/12, Error ellipse: s-maj=13.9km s-min=10.6km az=151.0*
*DJA **10** 21:45:44.2±1.5, 8°S±4°×12°8E±°, h20km±14km, M4.3/16, mB5.3/3, mb4.4/13, MLv4.3/16, Mw(mB)4.7/3*
ISC 10 21:45:32.3±0.5, **8°.54S**±0°.05×**128°.45E**±0°.05, **h10**km, **n49**, σ2§**31**/44, **mb4.3**/14, **Timor Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.88**	**79**	Pn	**Pn**	**21 46 18.0**	**-0.2**
SAUI	**Saumlaki**	**2.88**	**79**	P	**Pg**	**21 46 30.6**	**+3.1**
BNDI	**Bandanaira**	**4.25**	**20**	P	**Pb**	**21 46 42.7**	**-4.4**
SOEI	**Soe**	**4.30**	**253**	Pn	**Pn**	**21 46 41.2**	**+3.2**
SOEI	**Soe**	**4.30**	**253**	P	**Pb**	**21 46 47.6**	**-0.5**
SOEI				S	**Sb**	**21 47 38.4**	**-1.8**
AAI	**Ambon**	**4.83**	**357**	P	Pn	21 46 50.4	+5.3
BATI	**Baumata**	**5.00**	**250**	Pn	**Pn**	**21 46 47.4**	**-0.2**
	1.4nm,0.3s,baz=195,slow=9.3,SNR=1.5						
BATI				Sn	**Sn**	**21 47 46.4**	**+0.9**
	6.3nm,0.3s,baz=296,slow=19,SNR=7.2						
	5.3nm,0.4s						
BATI	**Baumata**	**5.00**	**250**	P	**Pb**	**21 46 58.5**	**-1.5**
	0.3nm1μm39nm,0.5s						
MTN	**Manton Dam**	**5.03**	**149**	Pn	Pn	21 46 53.0	+5.2
KRAI	**Karang Ratu**	**5.19**	**359**	P	Pn	21 46 54.7	+4.7
NLAI	**Namlea**	**5.43**	**346**	P	Pn	21 46 59.2	+5.8
	0.2nm47nm,0.8s						
EDFI	**Ende, Flores**	**6.69**	**268**	P	Pn	21 47 18.6	+7.9
	0.0nm13nm,1.3s						
FAKI	**Fak Fak**	**6.74**	**34**	Pn	**Pn**	**21 47 15.2**	**+3.8**
FAKI	**Fak Fak**	**6.74**	**34**	P	Pn	21 47 19.1	+7.7
	24nm,0.9s						
SANI	**Sanana**	**6.90**	**339**	P	Pn	21 47 20.2	+6.7
	0.1nm8.4nm,0.6s						
KNRA	**Kununurra**	**7.10**	**178**	Pn	**Pn**	**21 47 18.8**	**+2.5**
LBMI	**Labuha**	**7.91**	**353**	P	Pn	21 47 33.1	+5.7
SIJI	**Sorong**	**8.12**	**20**	Pn	**Pn**	**21 47 29.4**	**-1.0**
	0.4nm,0.3s,baz=254,slow=23,SNR=1.8						
SIJI				Sn	**Sn**	**21 49 02.3**	**0.0**
	baz=128,slow=24						
SIJI				LR	LR	21 51 08.5	
	comp=Z,52nm,21.8s,baz=105,slow=42						
	3.4nm,0.6s						
SWI	**Sorong**	**8.12**	**20**	P	Pn	21 47 36.9	+6.5
	0.1nm15nm,0.6s						
KAPI	**Kappang**	**9.32**	**292**	LR	LR	21 51 53.7	
	comp=Z,120nm,18.4s,baz=114,slow=41						
FITZ	**Fitzroy Crossi**	**9.89**	**196**	Pn	**Pn**	**21 47 55.9**	**+1.3**
	0.9nm,0.3s,baz=32,slow=12,SNR=13						
FITZ				Sn	**Sn**	**21 49 41.5**	**-4.2**
	1.8nm,0.3s,baz=44,slow=2.0,SNR=4.0						
	1.9nm,0.3s						
TOLI2	**Tolitoli**	**12.26**	**321**	Pn	Pn	21 48 34.5	+7.4
WB0	**Warramunga Arr**	**12.56**	**153**	Pn	**Pn**	**21 48 31.0**	**-0.2**
WRAB	**Tennant Creek**	**12.69**	**154**	Pn	**Pn**	**21 48 33.5**	**+0.6**
WRA	**Warramunga Arr**	**12.69**	**154**	Pn	**Pn**	**21 48 33.2**	**+0.2**
	1.9nm,0.3s,baz=338,slow=12,SNR=50						
WRA				Sn	**Sn**	**21 50 48.2**	**-6.2**
	1.5nm,0.3s,baz=332,slow=22,SNR=6.6						
	6.2nm,0.8s						
WR8	**Warramunga Arr**	**12.77**	**153**	Pn	**Pn**	**21 48 34.3**	**+0.2**
JAGI	**Jajag, Banyuwa**	**14.14**	**269**	Pn	**Pn**	**21 48 52.2**	**-0.6**
COEN	**Coen**	**15.41**	**112**	Pn	**Pn**	**21 49 09.3**	**-0.7**
AS31	**Alice Springs**	**15.92**	**161**	Pn	**Pn**	**21 49 17.1**	**+0.4**
ASAR	**Alice Springs**	**15.93**	**161**	Pn	**Pn**	**21 49 17.4**	**+0.7**
	1.5nm,0.3s,baz=331,slow=9.7,SNR=76						
ASAR				Sn	**Sn**	**21 52 07.4**	**-6.0**
	0.4nm,0.3s,baz=318,slow=20,SNR=4.2						
	2.5nm,0.5s						
FORT	**Forrest**	**22.13**	**181**	P	**P**	**21 50 31.6**	**+3.5**
FORT				IAmb	IAmb	21 50 38.1	
	comp=Z,14nm,1.2s						
INKA	**Innaminka**	**22.36**	**150**	P	**P**	**21 50 34.9**	**+4.3**
BBOO	**Buckleboo**	**25.16**	**165**	P	**P**	**21 51 01.3**	**+3.4**
STKA	**Stephens Creek**	**26.24**	**154**	P	**P**	**21 51 09.3**	**+1.6**
	comp=Z,1.6nm,0.5s,baz=314,slow=12,SNR=3.9						
	comp=Z,1.6nm,0.5s						
STKA	**Stephens Creek**	**26.24**	**154**	P	**P**	**21 51 07.9**	**+0.2**
KSRS	**Korea Array**	**45.75**	**359**	P	**P**	**21 53 53.5**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=182,slow=9.3,SNR=2.2						
	comp=Z,1.2nm,0.7s						
PETK	**Petropavlovsk-**	**66.26**	**19**	P	**P**	**21 56 19.5**	**-1.1**
	comp=Z,0.9nm,0.5s,baz=157,slow=3.1,SNR=2.2						
	comp=Z,0.9nm,0.5s						
MKAR	**Makanchi Array**	**68.68**	**328**	P	**P**	**21 56 36.0**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=118,slow=8.3,SNR=25						
	comp=Z,0.7nm,0.5s						
MAKZ	**Makanchi**	**68.86**	**328**	P	**P**	**21 56 35.9**	**-1.2**
MAKZ				IAmb	IAmb	21 56 48.3	
	comp=Z,2.7nm,1.4s						
BOOM	**Boomskoye usch**	**69.76**	**321**	P	**P**	**21 56 43.3**	**+0.4**
BOOM				IAmb	IAmb	21 56 56.7	
	comp=Z,3.9nm,1.1s						
ZALV	**Zalesovo Beam**	**72.29**	**335**	P	**P**	**21 56 57.2**	**-0.7**
	comp=Z,1.1nm,0.4s,baz=126,slow=5.4,SNR=5.7						
	comp=Z,1.1nm,0.4s						
KURBB	**Kurchatov Arra**	**73.03**	**329**	P	**P**	**21 57 02.3**	**0.0**
	comp=Z,1.6nm,0.4s,baz=131,slow=5.1,SNR=38						
	comp=Z,1.6nm,0.4s						
KURK	**Kurchatov**	**73.04**	**329**	P	**P**	**21 57 02.1**	**-0.3**
BVAR	**Borovoye Array**	**78.55**	**328**	P	**P**	**21 57 33.8**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=124,slow=10,SNR=8.4						
	comp=Z,0.5nm,0.4s						
L16K	**Owhat River**	**89.12**	**27**	P	**P**	**21 58 29.1**	**+1.4**
L16K				IAmb

1.1nm,0.4s
ZALV Zalesovo Beam 45.75 47 P **P** **22 44 49.3 -0.5**
0.4nm,0.4s,baz=281,slow=8.4,SNR=3.0
0.4nm,0.4s
SONM Songino Array 60.37 50 P **P** **22 46 37.4 -0.4**
0.2nm,0.4s,baz=299,slow=7.1,SNR=2.6
0.2nm,0.4s

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*GII **10** 23:03:07.6±0.0, 33°.674N±0°.002×35°.893E±0°.001, h0km, Mws1.9, confirmed*
*GRAL **10** 23:03:07.8±0.3, 33°.68N×35°.83E, h18km±3km, MD2.5*
ISC 10 23:03:06.7±1.3**, 33.72N**±0.03×**35.91E**±0.07**, h15**km±9km**, n16**, σ9**65/26, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ZAHL	**Zahle**	**0.14**	**353**	*eP*		**Pb**		**23 03 12.1**	**+0.9**
RCY	**Rachaya**	**0.23**	**195**	*eP*		**Pb**		**23 03 12.3**	**-0.4**
RCY				*eS*		**Sb**		**23 03 15.5**	**-1.1**
QRWL	**Qaraoun**	**0.25**	**228**	*eP*		**Pg**		**23 03 12.0**	**-0.2**
BHL	**Bhannes**	**0.28**	**312**	*eP*		**Pb**		**23 03 13.2**	**-0.4**
DQRL	**Deir Qamar**	**0.28**	**268**	*eP*		**Pg**		**23 03 12.6**	**-0.1**
DQRL				*eS*		**Sg**		**23 03 16.2**	**-0.5**
NATI	**Neve Ativ**	**0.48**	**197**	P		**Pb**		**23 03 17.2**	**+0.5**
NATI				S		**Sb**		**23 03 24.7**	**+1.1**
GEM	**Giv'at Ha'Em**	**0.55**	**202**	P		**Pb**		**23 03 18.2**	**+0.2**
GEM				S		**Sb**		**23 03 26.5**	**+0.9**
HWQ	**Hawqa**	**0.56**	**3**	*eP*		**Pb**		**23 03 18.7**	**+0.3**
KSHT	**Keshet**	**0.74**	**186**	P		**Pn**		**23 03 22.1**	**-0.6**
KSHT				S		**Sn**		**23 03 33.0**	**-0.7**
MMC7	**Mount Meron ar**	**0.82**	**212**	P		**Pn**		**23 03 23.4**	**-0.4**
MMA0B	**Mount Meron ar**	**0.82**	**211**	P		**Pn**		**23 03 23.4**	**-0.4**
MMA0B				S		**Sn**		**23 03 35.6**	**-0.1**
BEIL	**Beino**	**0.85**	**16**	*eP*		**Pn**		**23 03 23.6**	**-0.6**
HNTI	**Hanita**	**0.88**	**224**	P		**Pn**		**23 03 24.6**	**0.0**
HNTI				S		**Sn**		**23 03 37.4**	**+0.2**
MMLI	**Mount Malkishu**	**1.34**	**198**	P		**Pg**		**23 03 32.6**	**+0.1**
MMLI				S		**Sg**		**23 03 51.0**	**+1.1**
OFRI	**`Ofer**	**1.34**	**216**	P		**Pg**		**23 03 32.5**	**0.0**
OFRI				S		**Sg**		**23 03 51.1**	**+1.2**
HMDT	**Nahal Hemdat**	**1.50**	**192**	P		**Pg**		**23 03 35.1**	**-0.3**
HMDT				S		**Sg**		**23 03 54.8**	**-0.1**

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*BJI **10** 23:08:28.5, 3°.39N×97°.00E, h114km, mB5.2/17, mb5.0/69*
*IDC **10** 23:08:34.8±0.4, 3°.97N×97°.28E, h10km±3km, mb4.5/34, mbtmp4.9/36, MS3.5/27, Error ellipse: s-maj=12.2km s-min=8.9km az=61.0*
*DJA **10** 23:08:34.9±0.1, 4°.1N±1°.1×97°.7E±°, h102km±1km, M5.0/73, mB5.5/44, mb5.1/73, MLv5.5/38, Mw4.8/22, Mw(mB)5.0/44, MwMwp4.6/1, Mwp5.0/1*
*NEIC **10** 23:08:34.9±2.2, 3°.87N±0°.06×97°.25E±0°.07, h110km±5km, mb5.0/129, Error ellipse: s-maj=11.1km s-min=8.0km az=69.0*
*GCMT **10** 23:08:35.9±0.3, 3°.85N±0°.02×97°.25E±0°.02, h119km±3km, MW4.9/103, Moment Tensor Solution. s34,c40; s103,c149; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-0.37±.13; Mθθ0.02±.12; Mϕϕ0.34±.13; Mrθ2.13±.08; Mθϕ-1.90±.11; Mϕr-1.94±.08; Best double couple: M=3.16100×10^16^ NP1:ϕs181.00000°, δ18.00000°, λ-33.00000°. NP2:ϕs303.00000°, δ80.00000°, λ-106.00000°. Principal axes: T 3.9870, Plg33.0000°, Azm46.0000°; N -1.6510, Plg15.0000°, Azm305.0000°; P -2.3360, Plg52.0000°, Azm195.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*MOS **10** 23:08:35.3±0.9, 4°.04N×97°.29E, h129km, mb4.9/53 Error ellipse: s-maj=8.2km s-min=3.9km az=113.2*
*BGR **10** 23:08:36.9, 5°.29N×95°.54E, h33km, mb4.8*
ISC 10 23:08:34.4±0.2, **3°.85N**±0°.03×**97°.25E**±0°.01, **h113**km±1km, **h114**km:**pP-P, n911,** σ1:**25**/979, **mb5.0**/254, **87C-21D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TPTI			**0.59**	**187**	P		**Pn**	**23 08 51.9**	**-0.4**
TPTI					S		**Sn**	**23 09 04.2**	**-1.5**
KCSI	**Kotacane, Aceh**		**0.61**	**122**	P		**Pn**	**23 08 53.0**	**+0.5**
KCSI					S		**Sn**	**23 09 05.8**	**-0.2**
MLSI	**Meulaboh, Aceh**		**0.94**	**296**	P		**Pn**	**23 08 55.7**	**+0.4**
MLSI					S		**Sn**	**23 09 10.5**	**-0.5**
TSI	**Tuntungan**		**1.36**	**105**	P		**Pn**	**23 09 00.6**	**+0.8**
TSI					S		**Sn**	**23 09 20.1**	**+1.1**
LHMI	**Lhok Sumawe**		**1.40**	**348**	P		**Pn**	**23 09 01.9**	**+1.6**
LHMI	**Lhok Sumawe**		**1.40**	**348**	S		**Sn**	**23 09 22.7**	**+2.7**
LHMI	**Lhok Sumawe**		**1.40**	**348**			**Pn**	**23 09 01.6**	**+1.3**
LHMI	**Lhok Sumawe**		**1.40**	**348**	P		**Pn**	**23 09 00.7**	**+0.4**
LHMI					S		**Sn**	**23 09 21.8**	**+1.8**
BSI	**Banda Aceh**		**2.54**	**310**	P		**Pn**	**23 09 13.9**	**-0.7**
BSI					S		**Sn**	**23 09 45.8**	**+0.4**
GSI	**Gunungsitoli**		**2.55**	**173**	P		**Pn**	**23 09 14.4**	**-0.3**
GSI	**Gunungsitoli**		**2.55**	**173**	S		**Sn**	**23 09 43.3**	**-2.2**
GSI	**Gunungsitoli**		**2.55**	**173**	Pn		**Pn**	**23 09 14.1**	**-0.5**
GSI	**Gunungsitoli**		**2.55**	**173**	P		**Pn**	**23 09 13.4**	**-1.3**
GSI					S		**Sn**	**23 09 43.8**	**-1.7**
KULM	**Kulim**		**3.68**	**67**	P		**Pn**	**23 09 30.6**	**+1.0**
KULM	**Kulim**		**3.68**	**67**	S		**Sn**	**23 10 14.7**	**+2.4**
KULM	**Kulim**		**3.68**	**67**	Pn		**Pn**	**23 09 30.4**	**+0.8**
KULM	**Kulim**		**3.68**	**67**	P		**Pn**	**23 09 30.6**	**+1.0**
MNSI	**Mandailing Nat**		**3.82**	**142**	P		**Pn**	**23 09 31.5**	**0.0**
PBSI	**Pulau Batu**		**4.01**	**165**	P		**Pn**	**23 09 34.4**	**+0.4**
PBSI					S		**Sn**	**23 10 17.9**	**-2.3**
CMBY	**CAMPBELL BAY**		**4.56**	**314**	*eP*		**Pn**	**23 09 41.6**	**+0.2**
CMBY						IAmb	IAmb	23 10 00.8	
	comp=Z,431nm,0.8s								
BKNI	**Bangkinang**		**5.16**	**133**	Pn		**Pn**	**23 09 50.4**	**+0.9**
BKNI	**Bangkinang**		**5.16**	**133**	P		**Pn**	**23 09 49.5**	**0.0**
	comp=Z,3.1nmcomp=Z,7μmcomp=Z,522nm,1.0s								
PPI	**Padang Panjang**		**5.31**	**144**	P		**Pn**	**23 09 51.5**	**0.0**
	comp=Z,1.4nmcomp=Z,4μmcomp=Z,194nm,0.8s								
PDSI	**Padang**		**5.72**	**146**	P		**Pn**	**23 09 56.6**	**-0.5**
	comp=Z,2.1nmcomp=Z,10μmcomp=Z,369nm,0.8s								
MYKOM	**Kota Tinggi**		**6.90**	**107**	P		**Pn**	**23 10 14.3**	**+1.2**
MYKOM	**Kota Tinggi**		**6.90**	**107**	Pn		**Pn**	**23 10 14.1**	**+1.0**
MYKOM	**Kota Tinggi**		**6.90**	**107**	P		**Pn**	**23 10 15.5**	**+2.4**
	comp=Z,50nm,0.7s								
KRJI	**Kerinci**		**7.25**	**144**	P		**Pn**	**23 10 19.3**	**+1.4**
	comp=Z,2μmcomp=Z,11μmcomp=Z,658nm,1.0s								
TPRI	**Tanjung Pinang**		**7.83**	**112**	P		**Pn**	**23 10 27.6**	**+1.9**
	comp=Z,0.5nmcomp=Z,102nm,0.6s								
JMBI	**JAMBI**		**8.40**	**130**	P		**Pn**	**23 10 35.7**	**+2.4**
MASI	**Maura Aman, Be**		**8.55**	**144**	P		**Pn**	**23 10 36.5**	**+1.0**
UBSI	**University, Be**		**9.07**	**146**	P		**Pn**	**23 10 41.6**	**-0.9**
KSI	**Kapahiang**		**9.17**	**144**	P		**Pn**	**23 10 43.1**	**-0.8**
MNAI	**Manna**		**9.95**	**145**	P		**Pn**	**23 10 52.4**	**-2.0**
MNAI	**Manna**		**9.95**	**145**	Pn		**Pn**	**23 10 51.8**	**-2.6**
MNAI	**Manna**		**9.95**	**145**	P		**Pn**	**23 10 52.3**	**-2.1**
PMBI	**Palembang**		**10.09**	**132**	Pn		**Pn**	**23 10 56.7**	**+0.4**
PPBI	**Pangkal Pinang**		**10.70**	**124**	P		**Pn**	**23 11 08.7**	**+4.1**
MDSI	**Maura Dua**		**10.79**	**140**	P		**Pn**	**23 11 03.7**	**-2.1**
	comp=Z,2μmcomp=Z,265nm,1.0s								
LWLI	**Liwa**		**11.13**	**142**	P		**Pn**	**23 11 07.8**	**-2.6**
KLSI			**11.30**	**139**	P		**Pn**	**23 11 10.9**	**-1.8**
KASI	**Kota Agung**		**11.79**	**142**	P		**Pn**	**23 11 16.2**	**-3.0**
	comp=Z,95nm,0.8s								
TPI	**Tanjungpandan**		**12.30**	**122**	P		**Pn**	**23 11 27.9**	**+2.1**
	comp=Z,940nmcomp=Z,74nm,1.3s								
CM31	**Chiang Mai Arr**		**14.62**	**6**			**P**	**23 11 57.2**	**-1.9**
CMAR	**Chiang Mai Arr**		**14.62**	**6**	P		**P**	**23 12 00.5**	**+1.4**
	comp=Z,153nm,0.7s,baz=197,slow=11,SNR=150								
CMAR						LR	LR	23 17 45.5	
	comp=Z,96nm,18.9s,baz=190,slow=38								
CMAR						ScP	**ScP**	**23 20 26.8**	**+1.7**
	comp=Z,2.2nm,0.7s,baz=216,slow=3.0,SNR=7.6								
CMAR						ScS	**ScS**	**23 24 01.2**	**-1.8**
	comp=Z,1.3nm,0.3s,baz=197,slow=24,SNR=4.1								
CMAR	**Chiang Mai Arr**		**14.62**	**6**	Pn		**Pn**	**23 11 56.1**	**+0.3**
CMAR	**Chiang Mai Arr**		**14.62**	**6**	P		**Pn**	**23 11 56.1**	**+0.3**
CHTO	**Chiang Mai**		**14.97**	**6**	P		**P**	**23 12 03.6**	**+0.6**
CHTO	**Chiang Mai**		**14.97**	**6**			**P**	**23 12 01.6**	**-1.4**
CHTO	**Chiang Mai**		**14.97**	**6**	P		**P**	**23 12 01.6**	**-1.4**
CHTO	**Chiang Mai**		**14.97**	**6**	P		**P**	**23 12 02.2**	**-0.8**
	comp=Z,1μmcomp=Z,106nm,0.9s								
SBUM	**Sibu**		**15.02**	**95**	Pn		**Pn**	**23 12 01.1**	**+0.3**
SBUM	**Sibu**		**15.02**	**95**	P		**P**	**23 12 03.6**	**+0.1**
BBJI	**Bungbulang**		**15.30**	**137**	Pn		**Pn**	**23 12 00.3**	**-4.2**
BBJI	**Bungbulang**		**15.30**	**137**	P		**Pn**	**23 12 02.5**	**-2.0**
	comp=Z,20nm,0.7s								
KPJI	**Karang Pucung**		**16.10**	**134**	P		**Pn**	**23 12 13.5**	**-0.9**
	comp=Z,24nm,0.6s								
PALK	**Pallekele**		**16.81**	**282**	P		**P**	**23 12 25.3**	**+1.8**
	comp=Z,21nm,0.8s,baz=95,slow=12,SNR=14								
PALK						S	Sn	23 15 15.0	-15
	comp=Z,18nm,0.6s,baz=47,slow=10,SNR=8.0								
PALK						LR	LR	23 18 12.8	
	comp=Z,161nm,18.6s,baz=108,slow=34								
PALK	**Pallekele**		**16.81**	**282**			**P**	**23 12 25.2**	**+1.7**
PALK	**Pallekele**		**16.81**	**282**	*i*	P	**P**	**23 12 25.5**	**+2.0**
	SNR=5.6								
PALK	**Pallekele**		**16.81**	**282**		P	**P**	**23 12 25.2**	**+1.7**
PALK	**Pallekele**		**16.81**	**282**		P	**P**	**23 12 25.9**	**+2.4**
UGM	**Wanagama**		**17.66**	**131**		P	**P**	**23 12 33.0**	**+0.2**
UGM	**Wanagama**		**17.66**	**131**		P	**P**	**23 12 30.3**	**-2.5**
SJI	**Sawahan**		**18.50**	**128**		P	**Pn**	**23 12 43.9**	**+0.3**
	comp=Z,35nm,0.8s								
SNJI	**Sawahan-Nganju**		**18.52**	**129**		P	**P**	**23 12 42.9**	**+0.5**
	comp=Z,33nm,0.8s								
SAIH	**SAIHA**		**18.99**	**348**	*eP*		**P**	**23 12 46.9**	**-0.5**
SAIH						IAmb	IAmb	23 12 50.3	
	comp=Z,43nm,0.7s								
KKM	**Kota Kinabalu**		**19.02**	**83**	P		**Pn**	**23 12 49.9**	**+0.1**
KKM	**Kota Kinabalu**		**19.02**	**83**	P		**Pn**	**23 12 49.6**	**-0.2**
KKM	**Kota Kinabalu**		**19.02**	**83**	P		**Pn**	**23 12 49.9**	**+0.1**
	comp=Z,895nmcomp=Z,91nm,1.0s								
BBKI	**Banjar Baru**		**19.02**	**112**	P		**Pn**	**23 12 49.9**	**+0.2**
MDRS	**Chennai**		**19.13**	**300**	*eP*		**Pn**	**23 12 51.9**	**+0.9**
VIS	**Vishakhapatnam**		**19.39**	**316**	*eP*		**Pn**	**23 12 52.7**	**-1.3**
QIZ	**Qiongzhong**		**19.47**	**38**	P		**Pn**	**23 12 53.9**	**-1.0**
QIZ	**Qiongzhong**		**19.47**	**38**	P		**Pn**	**23 12 54.8**	**-0.1**
QIZ					pP		**pP**	**23 13 12.0**	**-1.4**
QIZ					S		**S**	**23 16 29.4**	**+2.8**
QIZ					PcP		**PcP**	**23 17 10.2**	**+1.0**
QIZ					pmax		pmax		
	comp=Z,63nm,0.7s								
QIZ					L		L		
	comp=Z,470nm,14.1s								
QIZ					L		L		
	comp=Z,330nm,15.0s								
QIZ					L		L		
	comp=Z,310nm,15.6s								
BRDH	**Bariadhala**		**19.49**	**344**	P		**P**	**23 12 52.6**	**0.0**
	comp=Z,103nm,0.4s,baz=142,slow=3.2,SNR=6.6								
BRDH						LR	LR	23 21 03.9	
	comp=Z,181nm,18.0s,baz=154,slow=39								
KMMI	**Kalianget**		**19.89**	**123**	P		**P**	**23 12 58.4**	**+1.3**
	comp=Z,2μmcomp=Z,274nm,0.7s								
KMMI						pP	**pP**	**23 13 16.4**	**-2.1**
	comp=Z,2μmcomp=Z,274nm,0.7s								
BLJI	**Banyuglugur**		**19.97**	**125**	P		**P**	**23 12 59.3**	**+1.4**
	comp=Z,2μmcomp=Z,98nm,0.9s								
BLJI						pP	**pP**	**23 13 20.3**	**+1.2**
	comp=Z,2μmcomp=Z,98nm,0.9s								
RAGD	**RAYAGADA**		**20.39**	**320**	*eP*		Pn	23 13 03.8	-1.8
SALM	**Salem**		**20.43**	**293**	*eP*		Pn	23 13 06.6	+0.5
MORE	**Moreh**		**20.47**	**352**	P		**P**	**23 13 02.7**	**-0.5**
ABJI	**Asem Bagus**		**20.52**	**124**	P		Pn	23 13 06.2	-0.9
	comp=Z,2μmcomp=Z,144nm,0.8s								
ABJI						pP	pP	23 13 21.7	-3.6
	comp=Z,2μmcomp=Z,144nm,0.8s								
VJD	**Vijayawada**		**20.60**	**309**	*eP*		Pn	23 13 13.3	+5.3
KOD	**Kodaikanal**		**20.62**	**289**	*eP*		Pn	23 13 08.3	-0.3
JAGI	**Jajag, Banyuwa**		**20.83**	**126**	P		**P**	**23 13 06.6**	**-0.6**
JAGI	**Jajag, Banyuwa**		**20.83**	**126**	P		**P**	**23 13 06.3**	**-1.0**
	comp=Z,50nm,1.2s								
TNCH	**TengChong**		**21.09**	**3**	P		**P**	**23 13 11.1**	**+0.9**
TNCH					S		**S**	**23 16 54.0**	**-4.8**
TNCH					pmax		pmax		
	comp=Z,150nm,0.9s								
TNCH					pmax		pmax		
	comp=Z,180nm,3.2s								
MYLDM	**Lahad Datu**		**21.23**	**86**	P		**P**	**23 13 13.6**	**+2.1**
	comp=Z,112nm,1.0s								
KMI2	**Kunming**		**21.83**	**14**	⇑P		**P**	**23 13 19.6**	**+1.6**
KMI2					PP		**PnPn**	**23 13 47.7**	**+1.7**
KMI2					S		**S**	**23 17 12.7**	**0.0**
KMI2					pmax		pmax		
	comp=Z,42nm,0.8s								
KMI2					pmax		pmax		
	comp=Z,160nm,3.1s								
KMI2					L		L		
	comp=Z,160nm,17.9s								
KMI2					L		L		
	comp=Z,160nm,16.7s								
KMI2					L		L		
	comp=Z,220nm,14.5s								
KOHI	**KOHIMA**		**21.96**	**352**	*eP*		**P**	**23 13 16.5**	**-2.8**
KOHI						IAmb	IAmb	23 13 50.4	
	comp=Z,58nm,1.0s								
KHKI	**Kahang-Kahang**		**21.97**	**124**	P		**P**	**23 13 21.9**	**+2.6**
	comp=Z,769nmcomp=Z,42nm,1.0s								
SHL	**Shillong**		**22.20**	**347**	P		**P**	**23 13 19.8**	**-2.1**
SHL	**Shillong**		**22.20**	**347**	P		**P**	**23 13 19.8**	**-2.1**
SHL	**Shillong**		**22.20**	**347**	*eP*		**P**	**23 13 19.9**	**-1.9**
SHL						IAmb	IAmb	23 13 32.6	
	comp=Z,26nm,0.9s								
MOKO	**MOKOCHONG**		**22.50**	**354**	*eP*		**P**	**23 13 23.1**	**-1.8**
MOKO						IAmb	IAmb	23 13 27.3	
	comp=Z,115nm,0.5s								
MMSI	**Mamuju**		**22.60**	**106**	P		P	23 13 34.4	+8.5
BOK	**Bokaro**		**22.66**	**332**	*eP*		**P**	**23 13 24.2**	**-2.1**
BOK						IAmb	IAmb	23 13 27.6	
	comp=Z,18nm,0.8s								
HYB	**Hyderabad**		**22.75**	**308**	*eP*		**P**	**23 13 29.0**	**+1.6**
HYB					*es*P		**sP**	**23 14 04.0**	**+0.3**
HYB					*e*ScS		ScS	23 24 28.6	-0.5
GUWA	**GUWAHATI**		**22.85**	**347**	*eP*		**P**	**23 13 26.4**	**-1.8**
GUWA						IAmb	IAmb	23 13 27.8	
	comp=Z,23nm,0.5s								
MPSI	**Mapaga**		**22.90**	**98**	P		**P**	**23 13 30.3**	**+1.5**
	comp=Z,695nmcomp=Z,71nm,1.0s								
PZH	**PanZhiHua**		**22.94**	**10**	P		**P**	**23 13 29.1**	**0.0**
PZH						pmax	pmax		
	comp=Z,120nm,0.7s								
TEZP	**TEZPUR**		**23.04**	**350**	*eP*		**P**	**23 13 28.0**	**-1.9**
PCI	**Palu**		**23.06**	**101**	P		P	23 13 37.6	+7.2
DHUB	**DHUBRI**		**23.12**	**343**	*eP*		**P**	**23 13 29.1**	**-1.6**
DHUB						IAmb	IAmb	23 13 31.8	
	comp=Z,19nm,0.7s								
TWSI	**Taliwang, Sumb**		**23.23**	**123**	P		**P**	**23 13 36.3**	**+4.4**
	comp=Z,28nm,1.2s								
ITAN	**ITANAGAR**		**23.41**	**352**	*eP*		**P**	**23 13 32.5**	**-0.9**
TTSI	**Tana Toraja**		**23.57**	**107**	P		**P**	**23 13 36.8**	**+1.7**
	comp=Z,856nmcomp=Z,28nm,1.1s								
TOLI2	**Tolitoli**		**23.67**	**96**	P		**P**	**23 13 37.3**	**+1.4**
TOLI2	**Tolitoli**		**23.67**	**96**	P		**P**	**23 13 36.3**	**+0.4**
ZIRO	**ZIRO**		**23.77**	**352**	*eP*		**P**	**23 13 35.5**	**-1.4**
ZIRO						IAmb	IAmb	23 13 39.9	
	comp=Z,50nm,0.7s								
SPSI	**Sidrap Palu**		**23.80**	**109**	P		**P**	**23 13 38.2**	**+1.1**
GAYA	**Gaya**		**23.83**	**332**	*eP*		**P**	**23 13 35.0**	**-2.2**
GAYA						IAmb	IAmb	23 13 55.8	
	comp=Z,8.5nm,0.9s								
PLAI	**Plampang**		**24.03**	**122**	P		**P**	**23 13 40.2**	**+1.0**
HMDM	**Hanimaadhoo**		**24.13**	**278**	P		**P**	**23 13 44.5**	**+4.4**
KAPI	**Kappang**		**24.14**	**111**	LR		LR	23 24 14.9	
	comp=Z,75nm,19.3s,baz=286,slow=39								
KAPI	**Kappang**		**24.14**	**111**	P		**P**	**23 13 40.7**	**+0.5**
KAPI	**Kappang**		**24.14**	**111**	P		**P**	**23 13 40.7**	**+0.5**
KAPI	**Kappang**		**24.14**	**111**	P		**P**	**23 13 42.5**	**+2.3**
PASG	**PASIGHAT**		**24.15**	**356**	*eP*		**P**	**23 13 38.6**	**-1.4**
PASG						IAmb	IAmb	23 13 41.7	
	comp=Z,99nm,0.6s								
TAWA	**Tawang**		**24.17**	**348**	*eP*		**P**	**23 13 40.1**	**-0.5**
TAWA						IAmb	IAmb	23 13 42.3	
	comp=Z,51nm,0.7s								
GYA	**Guiyang**		**24.23**	**21**	⇓P		**P**	**23 13 41.8**	**+0.9**
GYA						pmax	pmax		
	comp=Z,54nm,0.8s								
GTK	**Tadong**		**24.76**	**341**	*eP*		**P**	**23 13 45.8**	**0.0**
GTK						IAmb	IAmb	23 13 48.6	
	comp=Z,36nm,0.5s								
APSI	**Ampana**		**24.84**	**100**	P		**P**	**23 13 48.2**	**+1.7**
	comp=Z,864nmcomp=Z,97nm,1.0s								
MRSI	**Marisa**		**24.90**	**97**	P		**P**	**23 13 49.0**	**+1.9**
	comp=Z,791nmcomp=Z,65nm,0.5s								
LUWI	**Luwuk**		**25.97**	**100**	P		**P**	**23 14 02.6**	**+5.8**
	comp=Z,1μmcomp=Z,80nm,1.0s								
ALBI	**Allahabad**		**25.99**	**327**	*eP*		**P**	**23 13 55.9**	**-1.0**
ALBI						IAmb	IAmb	23 13 58.7	
	comp=Z,22nm,0.5s								
LSA	**Lhasa**		**26.35**	**348**	P		**P**	**23 14 00.3**	**-0.3**
LSA	**Lhasa**		**26.35**	**348**	P		**P**	**23 14 00.7**	**+0.2**
LSA	**Lhasa**		**26.35**	**348**	P		**P**	**23 14 00.3**	**-0.3**
LSA					pmax		pmax		
	comp=Z,14nm,0.6s								
LSA	**Lhasa**		**26.35**	**348**	P		**P**	**23 13 57.5**	**-3.1**
LSA					pmax		pmax		
	comp=Z,15nm,1.0s								
NRDN	**NARMADA NAGAR**		**27.02**	**316**	*eP*		**P**	**23 14 08.5**	**+2.4**
BHPL	**Bhopal**		**27.18**	**317**	*eP*		**P**	**23 14 07.4**	**-0.2**
BHPL						IAmb	IAmb	23 14 09.5	
	comp=Z,12nm,1.1s								
H08S2	**Diego Garcia H**		**27.21**	**245**	T		T	23 41 17.0	
	baz=69,slow=75,SNR=632								
H08S3	**Diego Garcia H**		**27.21**	**245**	T		T	23 41 17.3	
	baz=69,slow=75,SNR=663								
H08S1	**Diego Garcia H**		**27.23**	**245**	T		T	23 41 19.7	
	baz=69,slow=75,SNR=737								
CD2	**Chengdu**		**27.61**	**12**	P		**P**	**23 14 10.6**	**-0.7**
CD2					pmax		pmax		
	comp=Z,40nm,0.5s								
JHNI	**Jhansi**		**27.96**	**322**	*eP*		**P**	**23 14 13.2**	**-1.3**
ENH	**Enshi**		**28.72**	**22**	P		**P**	**23 14 20.3**	**-0.9**
ENH						IAmb	IAmb	23 14 21.6	
	comp=Z,45nm,0.7s								
BATI	**Baumata**		**29.78**	**118**	S		**S**	**23 19 13.2**	**-6.1**
	comp=Z,10nm,0.3s,baz=70,slow=20,SNR=3.7								
LGTI	**Lohaghat**		**30.18**	**329**	*eP*		**P**	**23 14 33.8**	**-0.5**
PTH	**Pithoragarh**		**30.27**	**330**	*eP*		**P**	**23 14 34.4**	**-0.6**
UDPR	**Udaipur**		**30.64**	**314**	*eP*		**P**	**23 14 38.3**	**+0.1**
WHN	**Wuhan**		**31.08**	**29**	P		**P**	**23 14 42.6**	**+0.6**
WHN					pmax		pmax		
	comp=Z,60nm,0.8s								
YHNB	**Yeheng**		**31.12**	**46**	P		**P**	**23 14 45.1**	**+2.6**
GIRL	**Giralia**		**31.12**	**149**	P		**P**	**23 14 44.8**	**+2.3**
GIRL						IAmb	IAmb	23 14 45.6	
	comp=Z,26nm,0.9s								
AJM	**Ajmer**		**31.20**	**318**	*eP*		**P**	**23 14 43.2**	**+0.1**
KUDL	**Kundal**		**31.22**	**323**	*eP*		**P**	**23 14 42.4**	**-0.8**
JOSI	**Joshimath**		**31.38**	**330**	*eP*		**P**	**23 14 44.1**	**-0.8**
XAN	**Xi'an**		**31.95**	**19**	⇑P		**P**	**23 14 49.1**	**-0.5**
XAN					pP		pP	23 15 15.8	+0.8
XAN					ScP		**ScP**	**23 21 10.5**	**-0.1**
XAN					pmax		pmax		
	comp=Z,130nm,0.8s								
XAN	**Xi'an**		**31.95**	**19**	P		**P**	**23 14 49.4**	**-0.2**
XAN					pP		**pP**	**23 15 14.3**	**-0.6**
XAN					x		x	23 15 24.5	
GOMU	**GeErMu**		**32.27**	**356**	P		**P**	**23 14 52.9**	**+0.1**
GOMU					pmax		pmax		
	comp=Z,22nm,1.1s								
LZDM	**Lanzhou Array**		**32.50**	**10**	P		**P**	**23 14 54.5**	**-0.3**
	comp=Z,17nm,0.6s,baz=188,slow=9.0,SNR=38								
LZDM					PcP		**PcP**	**23 17 40.4**	**+1.2**
	comp=Z,4.0nm,0.5s,baz=197,slow=4.6,SNR=6.8								
LZDM					ScP		**ScP**	**23 21 13.1**	**+0.3**
	comp=Z,3.0nm,0.4s,baz=205,slow=6.6,SNR=9.8								
	comp=Z,17nm,0.6s								
LZH	**Lanzhou**		**32.66**	**10**	*eP*		**P**	**23 14 55.8**	**-0.1**
LZH					sP		sP	23 15 30.9	-3.6
LZH					PcP		**PcP**	**23 17 36.5**	**-2.9**
LZH					pmax		pmax		
	comp=Z,34nm,1.0s								
PSA00	**Pilbara Seismi**		**33.59**	**140**	P		**P**	**23 15 04.3**	**+0.3**
PSA00	**Pilbara Seismi**		**33.59**	**140**	P		**P**

comp=Z,13nm,1.1s
WMQ L L
comp=Z,98nm,24.2s
NWAO Narrogin (SRO) 41.19 154 P **P** **23 16 09.8 +1.8**
NWAO x x 23 16 28.2
NWAO pP **pP** **23 16 35.5 +1.4**
NWAO x x 23 16 39.2
NWAO sP **sP** **23 16 47.7 +0.6**
DL2 Dalian 41.34 29 P **P** **23 16 09.7 +0.5**
DL2 pP **pP** **23 16 34.1 -1.1**
DL2 S **S** **23 22 15.1 -0.2**
DL2 pmax pmax
comp=Z,81nm,0.8s
DL2 pmax pmax
comp=Z,380nm,4.0s
TARG Taragay, Kyrgy 41.54 338 P **P** **23 16 10.9 -0.4**
TARG IAmb IAmb 23 16 13.5
comp=Z,31nm,1.4s
TARG Taragay, Kyrgy 41.54 338 P **P** **23 16 10.9 -0.4**
TARG pmax pmax
comp=Z,31nm,1.4s
KDJ Kajisay 42.12 338 P **P** **23 16 15.6 -0.2**
KDJ IAmb IAmb 23 16 16.8
comp=Z,24nm,1.1s
KDJ Kajisay 42.12 338 P **P** **23 16 15.6 -0.2**
KDJ pmax pmax
comp=Z,24nm,1.1s
SHLS Shalkode 42.21 341*c i*P **P** **23 16 14.9 -1.5**
SHLS *e*S **S** **23 22 26.3 -2.0**
SHLS Shalkode 42.21 341⇑*i*P **P** **23 16 14.9 -1.5**
SHLS *e*S **S** **23 22 26.3 -2.0**
UZB Uzynbulak 42.35 340 *e*P **P** **23 16 17.1 -0.4**
UZB *e*S **S** **23 22 30.4 +0.1**
UZB Uzynbulak 42.35 340 *e*P **P** **23 16 17.2 -0.4**
UZB *e*S **S** **23 22 30.5 +0.1**
SATY Saty 42.48 339*c i*P **P** **23 16 18.3 -0.3**
SATY Saty 42.48 339⇑*i*P **P** **23 16 18.4 -0.3**
ULHL Ulahol 42.59 337 P **P** **23 16 19.1 -0.5**
SNR=6.5
GAR Garm 42.70 329 P **P** **23 16 20.0 -0.4**
GAR IAmb IAmb 23 16 21.8
comp=Z,26nm,0.8s
KPKS Kokpek 42.75 340 *e*P **P** **23 16 20.3 -0.3**
KPKS Kokpek 42.75 340 *e*P **P** **23 16 20.4 -0.3**
JNU Nakatsue 42.83 43 LR LR 23 36 46.4
comp=Z,55nm,18.2s,baz=214,slow=40
SHAA Shahritus 42.85 325 IAmb IAmb 23 16 21.7
comp=Z,109nm,0.5s
BOOM Boomskoye usch 42.91 337 IAmb IAmb 23 16 24.3
comp=Z,25nm,1.3s
TNSS Tian-Shan 42.99 338 *e*P **P** **23 16 22.4 -0.6**
TNSS Tian-Shan 42.99 338 *e*P **P** **23 16 22.4 -0.6**
MDOK Medeo 43.06 338 *e*P **P** **23 16 23.0 -0.3**
MDOK Medeo 43.06 338 *e*P **P** **23 16 23.0 -0.3**
AAA Alma-Ata 43.15 338 *e*P **P** **23 16 23.8 -0.1**
AAA pmax pmax
comp=Z,14nm,0.9s
AAA Alma-Ata 43.15 338 *e*P **P** **23 16 23.8 -0.1**
comp=Z,14nm,0.9s
ARSB Arslanbob 43.20 333 IAmb IAmb 23 16 26.8
comp=Z,28nm,0.9s
XLT XiLinHaoTe 43.22 20 *e*P **P** **23 16 25.1 +0.6**
XLT pP pP 23 16 52.7 +1.9
XLT PcP **PcP** **23 18 11.8 0.0**
XLT pmax pmax
comp=Z,12nm,0.9s
UCH Uchtor 43.27 335 P **P** **23 16 25.4 0.0**
SNR=24
WB0 Warramunga Arr 43.40 124 P **P** **23 16 26.1 0.0**
TKM2 Tokmak 2 43.41 337 P **P** **23 16 25.9 -0.2**
SNR=21
WRA Warramunga Arr 43.44 124 P **P** **23 16 27.3 +0.8**
comp=Z,42nm,0.5s,baz=302,slow=9.2,SNR=574
WRA ScP **ScP** **23 21 54.6 +0.5**
comp=Z,6.3nm,0.9s,baz=311,slow=3.6,SNR=17
WRA S **S** **23 22 42.4 -4.2**
comp=Z,8.1nm,1.0s,baz=293,slow=16,SNR=15
comp=Z,42nm,0.5s
WRA Warramunga Arr 43.44 124 P **P** **23 16 26.4 0.0**
WRA Warramunga Arr 43.44 124*ce*P **P** **23 16 27.1 +0.6**
WRA pmax pmax
comp=Z,81nm,0.6s
WRAB Tennant Creek 43.44 124 P **P** **23 16 27.2 +0.7**
WRAB Tennant Creek 43.44 124 P **P** **23 16 26.9 +0.4**
WRAB Tennant Creek 43.44 124*ce*P **P** **23 16 27.4 +0.9**
WRAB pmax pmax
comp=Z,139nm,1.3s
WRAB Tennant Creek 43.44 124 P **P** **23 16 27.3 +0.7**
WRAB x x 23 17 03.3
WRAB sP **sP** **23 17 06.1 +0.4**
WRAB ScP **ScP** **23 21 54.9 +0.7**
KBK Karagaybulak 43.45 336 P **P** **23 16 26.6 +0.2**
SNR=32
WR8 Warramunga Arr 43.57 124 P **P** **23 16 27.8 +0.2**
AAK Ala-Archa 43.62 336 P **P** **23 16 28.0 +0.2**
comp=Z,4.5nm,0.7s,baz=167,slow=5.6,SNR=22
AAK PcP **PcP** **23 18 15.1 +1.8**
AAK comp=Z,11nm,0.7s,baz=172,slow=4.3,SNR=9.7 LR LR 23 36 27.6
comp=Z,32nm,20.5s,baz=179,slow=38
comp=Z,4.5nm,0.7s
AAK Ala-Archa 43.62 336 P **P** **23 16 28.4 +0.5**
AAK IAmb IAmb 23 16 34.9
comp=Z,20nm,1.2s
AAK Ala-Archa 43.62 336 P **P** **23 16 29.1 +1.4**
SNR=8.1
AAK Ala-Archa 43.62 336 *i*P **P** **23 16 28.3 +0.5**
SNR=18
AAK Ala-Archa 43.62 336*ce*P **P** **23 16 27.7 -0.1**
AAK pmax pmax
comp=Z,6.0nm,0.9s
AAK Ala-Archa 43.62 336 P **P** **23 16 28.3 +0.5**
AAK x x 23 16 57.0
AAK x x 23 17 24.8
AAK PcP **PcP** **23 18 15.1 +1.8**
AAK ScP **ScP** **23 21 56.0 +1.5**
KSRS Korea Array 43.67 36 P **P** **23 16 27.9 -0.1**
comp=Z,4.5nm,0.5s,baz=224,slow=7.2,SNR=13
KSRS pP **pP** **23 16 54.5 +0.2**
comp=Z,7.0nm,0.8s,baz=230,slow=8.4,SNR=8.0
KSRS ScP **ScP** **23 21 54.4 -0.2**
comp=Z,4.7nm,1.0s,baz=230,slow=3.8,SNR=4.4
KSRS LR LR 23 37 38.6
comp=Z,89nm,18.2s,baz=225,slow=40
comp=Z,4.5nm,0.5s
KSRS Korea Array 43.67 36 P **P** **23 16 28.0 -0.1**
CHMS Chumysh 43.81 336 P **P** **23 16 28.9 -0.2**
SNR=9.6
EKS2 Erkin-Say 43.94 335 P **P** **23 16 30.6 +0.3**
SNR=12
KUU Kurty 43.95 338 *e*P **P** **23 16 30.1 -0.1**
KUU Kurty 43.95 338 *e*P **P** **23 16 30.2 -0.1**
USP Ospenovka 44.14 336 P **P** **23 16 31.6 -0.2**
SNR=39
TDK Taldyqorghan 44.20 341 *e*P **P** **23 16 32.0 -0.2**
TDK Taldyqorghan 44.20 341 *e*P **P** **23 16 32.1 -0.2**
SONM Songino Array 44.52 9 P **P** **23 16 35.0 +0.2**
comp=Z,10nm,0.4s,baz=191,slow=9.3,SNR=128
SONM pP **pP** **23 17 01.8 +0.4**
comp=Z,6.7nm,0.7s,baz=190,slow=8.7,SNR=4.0
SONM PcP **PcP** **23 18 16.9 +0.7**
comp=Z,12nm,0.5s,baz=190,slow=3.8,SNR=27
SONM ScP **ScP** **23 21 57.5 -0.6**
comp=Z,8.9nm,0.7s,baz=201,slow=4.7,SNR=31
SONM ScS **ScS** **23 26 17.1 -4.2**
comp=Z,0.1nm,0.4s,baz=205,slow=7.5,SNR=1.2
SONM comp=Z,81nm,18.0s,baz=212,slow=39 LR LR 23 37 25.5
comp=Z,10nm,0.4s
SONM Songino Array 44.52 9 P **P** **23 16 34.1 -0.8**
SONM IAmb IAmb 23 16 36.2
comp=Z,29nm,1.2s
SNY Shenyang 44.55 28⇑P **P** **23 16 34.2 -0.8**
SNY pmax pmax
comp=Z,17nm,0.9s
ULN Ulaanbaatar 44.66 9 P **P** **23 16 35.4 -0.6**
ULN Ulaanbaatar 44.66 9*ce*P **P** **23 16 33.6 -2.4**
ULN pmax pmax
comp=Z,14nm,1.0s
ULN Ulaanbaatar 44.66 9 P **P** **23 16 34.3 -1.7**
ULN x x 23 17 03.5
ULN PcP **PcP** **23 18 17.1 +0.4**
ULN ScP **ScP** **23 21 58.1 -0.6**
MK31 Makanchi Array 44.70 345*ce*P **P** **23 16 35.5 -0.7**
MKAR Makanchi Array 44.70 345 P **P** **23 16 35.3 -0.9**
comp=Z,14nm,0.8s,baz=156,slow=8.1,SNR=122
MKAR PcP **PcP** **23 18 17.5 +0.7**
comp=Z,4.2nm,0.6s,baz=145,slow=3.0,SNR=3.6
MKAR ScP **ScP** **23 21 59.2 +0.5**
comp=Z,1.3nm,0.6s,baz=134,slow=5.2,SNR=6.1
MKAR ScS **ScS** **23 26 20.5 -1.8**
comp=Z,1.7nm,1.0s,baz=192,slow=9.7,SNR=7.3
comp=Z,14nm,0.8s
MKAR Makanchi Array 44.70 345 P **P** **23 16 35.0 -1.2**
MKAR Makanchi Array 44.70 345*ce*P **P** **23 16 35.2 -0.9**
MKAR pmax pmax
comp=Z,7.0nm,0.4s
ZSN Zaisan 44.73 348 *e*P **P** **23 16 36.3 -0.1**
ZSN Zaisan 44.73 348 *e*P **P** **23 16 36.4 -0.1**
ALNE Al Ain 44.75 301 *i*P **P** **23 16 39.5 +2.6**
SNR=12
MAKZ Makanchi 44.80 345 P **P** **23 16 35.8 -1.1**
MAKZ IAmb IAmb 23 16 37.6
comp=Z,24nm,1.1s
MAKZ Makanchi 44.80 345 P **P** **23 16 36.0 -0.9**
MAKZ Makanchi 44.80 345 P **P** **23 16 36.1 -0.8**
MAKZ PcP **PcP** **23 18 17.6 +0.6**
BANOM Banah 44.96 303 P **P** **23 16 41.2 +2.6**
ASAR Alice Springs 44.98 129 P **P** **23 16 39.4 +0.6**
comp=Z,12nm,0.8s,baz=304,slow=7.8,SNR=97
ASAR ScP **ScP** **23 22 01.2 +0.8**
comp=Z,3.3nm,0.7s,baz=310,slow=4.2,SNR=12
ASAR S **S** **23 23 03.9 -5.2**
comp=Z,2.2nm,0.9s,baz=296,slow=14,SNR=12
comp=Z,12nm,0.8s
ASAR Alice Springs 44.98 129 P **P** **23 16 38.4 -0.4**
DZA Taraz 45.19 333 *e*P **P** **23 16 40.0 -0.1**
DZA Taraz 45.19 333 *e*P **P** **23 16 40.0 -0.1**
IUG Iuzhnay 45.22 331*c i*P **P** **23 16 40.2 -0.2**
IUG pmax pmax
comp=Z,20nm,0.8s
IUG Iuzhnay 45.22 331⇑*i*P **P** **23 16 40.2 -0.2**
comp=Z,20nm,0.8s
JMN Monobe 45.24 44 P **P** **23 16 41.2 +0.5**
FORT Forrest 45.28 142 P **P** **23 16 42.0 +1.1**
FORT IAmb IAmb 23 16 43.0
comp=Z,15nm,0.7s
ASUD Al Ashush, Dub 45.30 301 *i*P **P** **23 16 43.4 +2.1**
SNR=9.5
CHM Chimkent 45.55 331 *e*P **P** **23 16 42.8 -0.2**
CHM Chimkent 45.55 331 *e*P **P** **23 16 42.8 -0.2**
KKAR Karatay Array 45.73 333 P **P** **23 16 43.3 -1.1**
KKAR Karatay Array 45.73 333 P **P** **23 16 43.3 -1.1**
BTLS Baital 45.80 337 *e*P **P** **23 16 44.7 -0.1**
BTLS Baital 45.80 337 *e*P **P** **23 16 44.8 -0.1**
BRLS Borolday 45.99 332 *e*P **P** **23 16 45.4 -1.0**
BRLS Borolday 45.99 332 *e*P **P** **23 16 45.4 -1.0**
MZR Muzera 46.38 298 *i*P **P** **23 16 51.6 +1.8**
SNR=15
DGZ Jazzator, Alta 46.44 351 *i*P **P** **23 16 50.1 +0.1**
DGZ pmax pmax
comp=Z,11nm,1.0s
KNGR Kungurtug, Tuv 46.59 0 *i*P **P** **23 16 51.2 +0.1**
KNGR pmax pmax
comp=Z,32nm,1.0s
ZAK Zakamensk 46.65 5 *e*P **P** **23 16 50.3 -1.2**
ZAK pmax pmax
comp=Z,15nm,1.8s
CN2 Changchun 46.95 28 *e*P **P** **23 16 54.6 +0.8**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,300nm,5.0s
MOY Mondy 47.76 3 *e*P **P** **23 16 59.7 -0.4**
TLY Talaya 47.97 5 LR LR 23 38 59.2
comp=Z,74nm,21.8s,baz=172,slow=38
TLY Talaya 47.97 5 P **P** **23 17 02.2 +0.6**
TLY Talaya 47.97 5*ce*P **P** **23 17 02.3 +0.6**
TLY pmax pmax
comp=Z,13nm,1.7s
GUMO Guam 47.97 75 LR LR 23 36 13.7
comp=Z,26nm,22.0s,baz=80,slow=35
IRK Irkutsk 48.59 6 *e*P P 23 17 01.4 -5.0
IRK pmax pmax
comp=Z,36nm,1.9s
JGF Kuroka 48.66 44 P **P** **23 17 06.6 -0.6**
JGF IAmb IAmb 23 18 43.8
comp=Z,74nm,1.7s
COEN Coen 48.87 112 P **P** **23 17 08.2 -0.9**
COEN IAmb IAmb 23 17 49.8
comp=Z,24nm,1.1s
HIA Hailar 49.14 19 P **P** **23 17 10.8 +0.2**
HIA IAmb IAmb 23 17 39.8
comp=Z,13nm,0.9s
HIA Hailar 49.14 19 P **P** **23 17 10.9 +0.2**
HIA pmax pmax
comp=Z,13nm,0.9s
KURBB Kurchatov Arra 49.21 344 P **P** **23 17 10.5 -0.6**
comp=Z,14nm,0.9s,baz=166,slow=6.9,SNR=127
KURBB PcP **PcP** **23 18 33.5 +0.9**
comp=Z,7.5nm,0.5s,baz=155,slow=3.1,SNR=19
KURBB ScP **ScP** **23 22 17.8 +0.3**
comp=Z,4.1nm,1.0s,baz=162,slow=3.8,SNR=16
KURBB S **S** **23 24 00.3 -7.9**
comp=Z,0.4nm,0.3s,baz=204,slow=16,SNR=6.5
KURBB ScS **ScS** **23 26 47.6 -4.0**
comp=Z,0.7nm,1.0s,baz=169,slow=6.5,SNR=3.4
comp=Z,14nm,0.9s
KURK Kurchatov 49.27 344 P **P** **23 17 11.3 -0.3**
KURK IAmb IAmb 23 17 12.5
comp=Z,18nm,0.9s
KURK Kurchatov 49.27 344*ce*P **P** **23 17 10.6 -0.9**
KURK pmax pmax
comp=Z,33nm,1.3s
KURK Kurchatov 49.27 344 P **P** **23 17 10.8 -0.7**
KURK x x 23 17 35.7
KURK PcP **PcP** **23 18 33.4 +0.7**
BNX BinXian 49.33 28⇓P **P** **23 17 11.7 -0.4**
BNX pP **pP** **23 17 39.5 +0.6**
BNX pmax pmax
comp=Z,14nm,0.7s
VLA Vladivostok 49.72 33 *i*P **P** **23 17 15.2 +0.1**
VLA pmax pmax
comp=Z,29nm,0.8s
MJAR Matsushiro Arr 49.74 44 P **P** **23 17 15.0 -0.4**
comp=Z,5.0nm,1.0s,baz=234,slow=9.0,SNR=5.6
MJAR PcP **PcP** **23 18 36.0 +1.1**
comp=Z,7.2nm,0.9s,baz=232,slow=2.5,SNR=7.6
MJAR ScP **ScP** **23 22 21.0 +0.8**
comp=Z,1.8nm,0.6s,baz=206,slow=3.7,SNR=4.3
MJAR LR LR 23 42 33.5
comp=Z,21nm,18.4s,baz=237,slow=41
comp=Z,5.0nm,1.0s
MANU Manus Island 50.43 96 P **P** **23 17 22.2 +1.2**
BRZS Berezniki 50.45 340 *e*P **P** **23 17 20.5 -0.1**
BRZS Berezniki 50.45 340 *e*P **P** **23 17 20.5 -0.1**
USRK Ussuriysk Ar. 50.50 32 P **P** **23 17 21.1 +0.1**
comp=Z,4.6nm,0.5s,baz=234,slow=6.1,SNR=21
comp=Z,4.6nm,0.5s
USRK Ussuriysk Ar. 50.50 32 P **P** **23 17 20.4 -0.6**
ZAA0 Zalesovo Array 50.97 351 P **P** **23 17 23.7 -0.6**
ZALV Zalesovo Beam 50.97 351 P **P** **23 17 23.8 -0.6**
comp=Z,18nm,0.6s,baz=174,slow=6.7,SNR=113
ZALV ScP **ScP** **23 22 24.1 -0.9**
comp=Z,6.3nm,0.8s,baz=132,slow=2.2,SNR=13
ZALV S **S** **23 24 24.5 -8.0**
comp=Z,0.9nm,0.5s,baz=160,slow=11,SNR=5.0
ZALV ScS **ScS** **23 26 57.5 -6.0**
comp=Z,1.4nm,0.7s,baz=173,slow=6.0,SNR=7.0
comp=Z,18nm,0.6s
PMG Port Moresby 51.45 105 P **P** **23 17 29.5 +0.8**
PMG IAmb IAmb 23 18 11.4
comp=Z,26nm,0.8s
PMG Port Moresby 51.45 105*de*P **P** **23 17 29.6 +1.0**
PMG pmax pmax
comp=Z,19nm,0.7s
PMG Port Moresby 51.45 105 P **P** **23 17 30.4 +1.8**
comp=Z,28nm,0.7s
PMG Port Moresby 51.45 105 P **P** **23 17 29.4 +0.8**
PMG pP **pP** **23 17 55.2 -0.7**
PMG sP **sP** **23 18 10.2 +1.5**
BBOO Buckleboo 51.77 138 P **P** **23 17 30.7 0.0**
BBOO IAmb IAmb 23 18 10.6
comp=Z,46nm,1.4s
INKA Innaminka 52.36 130 IAmb IAmb 23 17 37.5
comp=Z,14nm,0.8s
HEH HeiHe 52.78 24 *e*P **P** **23 17 37.6 -0.2**
HEH pmax pmax
comp=Z,7.0nm,0.9s
RAYN Ar Rayn 53.59 296 P **P** **23 17 45.2 +0.9**
RAYN IAmb IAmb 23 18 15.6
comp=Z,8.4nm,0.8s
RAYN Ar Rayn 53.59 296 *i*P **P** **23 17 45.3 +0.9**
SNR=18
RAYN Ar Rayn 53.59 296 P **P** **23 17 45.2 +0.9**
RAYN Ar Rayn 53.59 296 P **P** **23 17 45.3 +0.9**
RAYN pP **pP** **23 18 11.9 +0.3**
RAYN sP **sP** **23 18 24.1 -0.2**
RAYN ScP **ScP** **23 22 36.9 -0.3**
BVAR Borovoye Array 53.79 340 P **P** **23 17 44.3 -0.9**
comp=Z,16nm,0.7s,baz=140,slow=7.7,SNR=104
BVAR PcP **PcP** **23 18 50.3 +0.7**
comp=Z,5.4nm,0.6s,baz=174,slow=4.5,SNR=5.8
BVAR ScP **ScP** **23 22 37.8 +0.4**
comp=Z,1.4nm,0.7s,baz=145,slow=5.4,SNR=4.9
BVAR S **S** **23 25 03.5 -7.5**
comp=Z,0.3nm,0.5s,baz=150,slow=13,SNR=1.3
BVAR ScS **ScS** **23 27 16.6 -6.7**
comp=Z,0.4nm,0.6s,baz=171,slow=10,SNR=2.1
comp=Z,16nm,0.7s
BORK Borovoye 53.83 340 P **P** **23 17 44.0 -1.4**
BORK IAmb IAmb 23 17 46.2
comp=Z,20nm,0.8s
BORK Borovoye 53.83 340*ce*P **P** **23 17 44.4 -1.1**
BORK pmax pmax
comp=Z,21nm,0.7s
BORK Borovoye 53.83 340 P **P** **23 17 44.5 -0.9**
BORK pP **pP** **23 18 10.4 -2.5**
BORK ScP **ScP** **23 22 38.1 +0.7**
KLR Kul'dur 53.89 27 LR LR 23 42 08.9
comp=Z,34nm,18.5s,baz=228,slow=38
KLR Kul'dur 53.89 27*ce*P **P** **23 17 46.6 +0.6**
KLR pmax pmax
comp=Z,4.0nm,1.3s
STKA Stephens Creek 55.11 134 P **P** **23 17 55.9 +0.8**
comp=Z,6.7nm,0.7s,baz=309,slow=6.9,SNR=19
STKA pP **pP** **23 18 22.3 -0.2**
comp=Z,6.1nm,0.6s,baz=303,slow=9.3,SNR=4.5
STKA sP **sP** **23 18 33.7 -1.5**
comp=Z,14nm,0.9s,baz=317,slow=7.7,SNR=5.5
STKA LR LR 23 45 27.2
comp=Z,76nm,18.2s,baz=210,slow=40
comp=Z,6.7nm,0.7s
AB31 Akbulak array 55.22 331 P **P** **23 17 55.5 -0.1**
AB31 IAmb IAmb 23 17 57.0
comp=Z,31nm,1.0s
ABKAR Akbulak array 55.22 331 P **P** **23 17 55.1 -0.5**
ZEA Zeya 55.46 21 *e*P **P** **23 17 57.8 +0.5**
ZEA *e* 23 18 26.4
ZEA pmax pmax
comp=E,10.0nm,0.6s
ZEA pmax pmax
comp=N,10.0nm,0.8s
ZEA pmax pmax
comp=Z,20nm,0.7s
ASAJ Asahikawa 56.54 38 LR LR 23 44 42.1
comp=Z,30nm,18.3s,baz=178,slow=38
YSS Yuzhno-Sakhali 58.16 35 *i*P **P** **23 18 16.7 +0.3**
YSS pmax pmax
comp=Z,21nm,1.0s
FURI Furi 58.37 278 LR LR 23 39 33.0
comp=Z,45nm,21.1s,baz=102,slow=32
GNI Garni 59.45 315 P **P** **23 18 25.7 0.0**
GNI IAmb IAmb 23 19 03.2
comp=Z,15nm,0.9s
GNI Garni 59.45 315 P **P** **23 18 25.7 0.0**
GNI pmax pmax
comp=Z,15nm,0.9s
KIBK Kibwezi 59.48 265 P **P** **23 18 26.3 -0.1**
KIBK IAmb IAmb 23 18 29.6
comp=Z,12nm,1.3s
GEVA Gevas 59.97 313 P **P** **23 18 29.5 +0.1**
SVE Sverdlovsk 60.27 338*de*P **P** **23 18 30.3 -0.5**
SVE *e*S **S** **23 26 34.6 -1.3**
SVE pmax pmax
comp=Z,36nm,1.2s
GURO Guroymak-BITLI 60.81 312 IAmb IAmb 23 18 37.2
comp=Z,14nm,0.9s
ARTI Arti 60.83 336 P **P** **23 18 33.5 -1.1**
ARTI Arti 60.83 336*ce*P **P** **23 18 33.5 -1.1**
ARTI pmax pmax
comp=Z,41nm,1.3s
ARTI Arti 60.83 336 P **P** **23 18 33.6 -0.9**
ARTI PcP **PcP** **23 19 17.7 +0.5**
NCK Nalchik 61.57 318 *i*P **P** **23 18 40.3 +0.4**
NCK pmax pmax
comp=Z,15nm,0.8s
LODK Lodwar 61.75 272 P **P** **23 18 42.8 +1.1**
NEUR Neytrino 62.08 318 *i*P **P** **23 18 45.8 +2.3**
NEUR pmax pmax
comp=Z,6.0nm,0.9s
KBZ Khabaz 62.13 318 P **P** **23 18 43.6 +0.1**
comp=Z,21nm,0.8s,baz=136,slow=5.1,SNR=34
KBZ ScP **ScP** **23 23 15.0 +0.6**
comp=Z,7.7nm,0.8s,baz=126,slow=2.0,SNR=9.9
comp=Z,21nm,0.8s
KBZ Khabaz 62.13 318*ce*P **P** **23 18 43.8 +0.3**
KBZ pmax pmax
comp=Z,25nm,0.9s
SHA1 Shidzhatmaz 62.29 318*ce*P **P** **23 18 44.9 -0.1**
KIV Kislovodsk 62.36 318⇓P **P** **23 18 45.1 -0.1**
KIV Kislovodsk 62.36 318 P **P** **23 18 45.0 -0.3**
KIV Kislovodsk 62.36 318 *i*P **P** **23 18 45.3 +0.1**
SNR=12
KIV Kislovodsk 62.36 318 P **P** **23 18 45.1 -0.1**
KIV Kislovodsk 62.36 318 P **P** **23 18 44.9 -0.3**
comp=Z,40nm,1.0s
GOF Gofitskoye 62.57 320*ce*P **P** **23 18 45.8 -0.7**
YAK Yakutsk 62.88 17 LR LR 23 48 12.8
comp=Z,46nm,19.7s,baz=244,slow=38
YAK Yakutsk 62.88 17 P **P** **23 18 47.3 -0.9**
YAK Yakutsk 62.88 17 *e*P **P** **23 18 47.0 -1.2**
YAK *e**PP **pP** **23 19 13.8 -2.6**
YAK *e* 23 19 24.6
YAK *e* 23 21 05.7
YAK *e*PPP PPP 23 22 37.2
YAK *e*S **S** **23 27 08.5 -0.3**
YAK *e* 23 28 25.6
YAK *e*SS **SS** **23 31 16.6 +0.7**
YAK pmax pmax
comp=Z,130nm,1.5s
YAK pmax pmax
comp=N,41nm,1.9s
YAK pmax pmax
comp=E,32nm,1.4s
YAK pmax pmax
comp=Z,310nm,8.7s
YAK pmax pmax
comp=N,100nm,4.2s
YAK pmax pmax
comp=E,141nm,4.3s
YAK smax smax
comp=N,141nm,5.6s
YAK smax smax
comp=E,140nm,4.3s
BELG Belogornoye 63.34 329*d i*P **P** **23 18 50.5 -0.9**
BELG pmax pmax
comp=Z,15nm,1.0s
LABN Labinsk 63.92 318 *e*P **P** **23 18 56.8 +1.3**
LABN *e*S **S** **23 27 20.9 -1.5**
LABN pmax pmax
comp=Z,27nm,1.0s
H04N2 CROZET ISLANDS 63.98 213 T T 00 26 50.9
baz=52,slow=74,SNR=1583
H04N1 CROZET ISLANDS 63.99 213 T T 00 26 48.0
baz=52,slow=74,SNR=2279
H04N3 CROZET ISLANDS 64.00 213 T T 00 26 46.6
baz=52,slow=74,SNR=1919
H04S1 CROZET ISLANDS 64.34 213 T T 00 27 07.2
baz=51,slow=75,SNR=161
H04S3 CROZET ISLANDS 64.35 213 T T 00 27 04.6
baz=51,slow=75,SNR=177
H04S2 CROZET ISLANDS 64.36 213 T T 00 27 05.9
baz=51,slow=75,SNR=106
MMAI Mount Meron Ar 64.42 305 P **P** **23 19 00.1 +1.1**
comp=Z,0.6nm,0.3s,baz=109,slow=9.3,SNR=6.0
comp=Z,0.6nm,0.3s
ERBR Yeremizino-Bor 64.49 320 *e*P **P** **23 18 58.4 -0.7**
ERBR *e**PP **pP** **23 19 27.0 -0.5**
ERBR pmax pmax
comp=Z,42nm,0.8s
TOKA Tokat 65.45 313 IAmb IAmb 23 19 07.2
comp=Z,8.4nm,0.7s
NRIK Noril'sk 65.71 356 P **P** **23 19 05.9 -0.6**
comp=Z,19nm,0.6s,baz=151,slow=5.2,SNR=49
NRIK S **S** **23 27 36.4 -7.0**
comp=Z,0.7nm,0.4s,baz=179,slow=23,SNR=1.5

NRIK LR LR 23 49 09.9
comp=Z,37nm,21.6s,baz=172,slow=37
comp=Z,19nm,0.6s
NRIK Noril'sk 65.71 356 P **P** **23 19 05.5 -1.0**
NRIK Noril'sk 65.71 356*c i*P **P** **23 19 05.7 -0.8**
NRIK pmax pmax
comp=Z,29nm,1.0s
KIRV Kirov 65.94 335*ce*P **P** **23 19 08.0 -0.2**
VRH Novokhopyorsk 65.97 325 *e*P **P** **23 19 07.1 -1.5**
VRH pmax pmax
comp=Z,70nm,0.7s
ANN Anapa 66.17 318 *e*P **P** **23 19 11.3 +1.3**
ANN *e*S **S** **23 27 52.6 +2.8**
ANN pmax pmax
comp=Z,42nm,1.0s
MBAR Mbarara 66.61 268 LR LR 23 44 12.8
comp=Z,32nm,21.9s,baz=92,slow=32
MBAR Mbarara 66.61 268 P **P** **23 19 15.3 +1.7**
MBAR Mbarara 66.61 268*d i*P **P** **23 19 15.1 +1.5**
MBAR pmax pmax
comp=Z,8.0nm,1.1s
KIRS Kirsehir-Merke 67.03 311 ⇑P **P** **23 19 15.4 -0.3**
VORD Divnogorie 67.27 324 *e*P **P** **23 19 14.8 -2.0**
VORD pmax pmax
comp=Z,20nm,0.7s
BR104 Keskin Array S 67.38 312 P **P** **23 19 17.5 -0.5**
comp=Z,120nmcomp=Z,15nm,0.8s
BR131 Keskin Array S 67.39 312 P **P** **23 19 16.8 -1.2**
BR131 IAmb IAmb 23 19 18.9
comp=Z,15nm,0.7s
BR131 Keskin Array S 67.39 312 P **P** **23 19 16.8 -1.2**
BR131 pmax pmax
comp=Z,15nm,0.7s
BRTR Keskin Array B 67.39 312 P **P** **23 19 17.4 -0.6**
comp=Z,12nm,0.7s,baz=127,slow=7.0,SNR=72
comp=Z,12nm,0.7s
BRTR Keskin Array B 67.39 312*ce*P **P** **23 19 17.3 -0.7**
BRTR pmax pmax
comp=Z,12nm,0.7s
BR105 Keskin Array S 67.40 312 P **P** **23 19 17.6 -0.5**
comp=Z,124nmcomp=Z,16nm,0.7s
BR106 Keskin Array S 67.41 312 P **P** **23 19 17.5 -0.6**
comp=Z,127nmcomp=Z,17nm,0.8s
VSR Storozhevoye 67.44 325 *e*P **P** **23 19 16.3 -1.6**
VSR pmax pmax
comp=Z,30nm,0.7s
VORR Voronezh 67.60 325 *e*P **P** **23 19 17.7 -1.2**
VORR pmax pmax
comp=Z,100nm,1.2s
ILGA Ilgaz 67.67 313 IAmb IAmb 23 19 21.9
comp=Z,26nm,1.0s
BZK Bozkurt 67.70 314 ⇑P **P** **23 19 20.0 +0.3**
SIM Simferopol' 68.46 317 *e*P **P** **23 19 24.6 +0.2**
SIM pmax pmax
comp=Z,18nm,0.6s
MA2 Magadan 68.94 26 LR LR 23 54 49.8
comp=Z,45nm,18.5s,baz=246,slow=40
MA2 Magadan 68.94 26 P **P** **23 19 26.1 -1.0**
MA2 IAmb IAmb 23 19 28.1
comp=Z,18nm,1.0s
MA2 Magadan 68.94 26*ce*P **P** **23 19 26.9 -0.2**
MA2 pmax pmax
comp=Z,34nm,1.7s
MA2 Magadan 68.94 26 P **P** **23 19 26.8 -0.3**
comp=Z,20nm,0.9s
PETK Petropavlovsk- 69.52 34 P **P** **23 19 29.4 -1.4**
comp=Z,3.3nm,0.8s,baz=169,slow=3.0,SNR=3.9
PETK LR LR 23 52 23.5
comp=Z,27nm,18.2s,baz=228,slow=38
comp=Z,3.3nm,0.8s
PETK Petropavlovsk- 69.52 34 P **P** **23 19 30.2 -0.6**
PETK Petropavlovsk- 69.52 34 P **P** **23 19 30.3 -0.6**
ELL Elmali 69.61 308 IAmb IAmb 23 20 13.1
comp=Z,18nm,0.9s
BORA Eskisehir 69.81 311 P **P** **23 19 32.8 -0.2**
PET Petropavlovsk 70.03 34*ce*P **P** **23 19 34.4 +0.5**
PET pmax pmax
comp=Z,25nm,1.7s
MOS Moscow 70.10 329 *e*P **P** **23 19 33.0 -1.3**
MOS *e* 23 20 03.6
MOS pmax pmax
comp=Z,100nm,0.6s
OBN Obninsk 70.41 328 LR LR 23 55 17.4
comp=Z,47nm,18.1s,baz=202,slow=40
OBN Obninsk 70.41 328 P **P** **23 19 35.0 -1.2**
OBN Obninsk 70.41 328*c i*P **P** **23 19 35.4 -0.7**
OBN *i* 23 19 56.7
OBN *i* *PP **pP** **23 20 08.0 +2.8**
OBN pmax pmax
comp=Z,43nm,0.9s
OBN Obninsk 70.41 328 P **P** **23 19 35.5 -0.7**
comp=Z,77nm,1.3s
OBN Obninsk 70.41 328 P **P** **23 19 35.8 -0.4**
TIXI Tiksi 70.59 10 LR LR 23 53 09.9
comp=Z,32nm,19.8s,baz=193,slow=38
TIXI Tiksi 70.59 10 P **P** **23 19 35.2 -1.8**
TIXI IAmb IAmb 23 19 36.9
comp=Z,22nm,0.6s
TIXI Tiksi 70.59 10*ce*P **P** **23 19 35.8 -1.2**
TIXI pmax pmax
comp=Z,55nm,1.7s
LSZ Lusaka 70.93 252 LR LR 23 48 23.4
comp=Z,60nm,18.5s,baz=142,slow=34
LSZ Lusaka 70.93 252 P **P** **23 19 41.7 +1.4**
LSZ Lusaka 70.93 252 P **P** **23 19 41.7 +1.4**
LSZ pmax pmax
comp=Z,10.0nm,0.7s
SEY Seymchan 71.33 23*ce*P **P** **23 19 41.0 -0.6**
SEY pmax pmax
comp=Z,50nm,1.7s
KARP Karpathos 71.59 306 P **P** **23 19 44.9 +1.1**
comp=Z,94nm,0.8s
BAND Balkesir-Ban 71.67 311 ⇑P **P** **23 19 43.6 -0.6**
BALB Balikesir 71.71 310 IAmb IAmb 23 19 46.0
comp=Z,21nm,0.7s
PURM Purcari 71.75 318 ⇑P **P** **23 19 44.3 -0.1**
PURM Purcari 71.75 318 P **P** **23 19 44.7 +0.3**
comp=Z,30nm,0.6s
CTYL Yalíkoy Yolu 71.75 312 P **P** **23 19 44.2 -0.4**
TLCR 72.15 316 ⇑P **P** **23 19 47.7 +0.8**
TLCR 72.15 316 P **P** **23 19 47.7 +0.8**
BAL3X Bal3x, Balta 72.27 319 P **P** **23 19 47.3 -0.3**
TIRR Tirgusor 72.27 315 ⇓P **P** **23 19 47.3 -0.3**
TIRR Tirgusor 72.27 315 P **P** **23 19 47.3 -0.3**
TPGR Topolog 72.35 316 ⇓P **P** **23 19 48.1 -0.1**
CFR Carcaliu 72.62 316 ⇑P **P** **23 19 50.1 +0.4**
CFR Carcaliu 72.62 316 P **P** **23 19 50.0 +0.4**
BROLN Tihalogang 72.77 247 *i*P **P** **23 19 52.4 +1.2**
VLDR Vladesti 72.80 317 ⇓P **P** **23 19 51.3 +0.6**
SORM Soroca 73.13 319 ⇑P **P** **23 19 52.0 -0.6**
SORM Soroca 73.13 319 P **P** **23 19 52.1 -0.6**
SORM Soroca 73.13 319 P **P** **23 19 51.9 -0.7**
comp=Z,47nm,0.5s
AK09 Malin Array Si 73.15 322 P **P** **23 19 52.2 -0.5**
AK10 Malin Array Si 73.17 322 P **P** **23 19 52.3 -0.5**
VASR Vaslui 73.17 318 ⇓P **P** **23 19 53.1 +0.2**
AK08 Malin Array Si 73.17 322 P **P** **23 19 52.4 -0.4**
AK07 Malin Array Si 73.18 322 P **P** **23 19 52.3 -0.6**
AK06 Malin Array Si 73.19 322 P **P** **23 19 52.5 -0.5**
AK05 Malin Array Si 73.20 322 P **P** **23 19 52.5 -0.5**
AK02 Malin Array Si 73.21 322 P **P** **23 19 52.0 -1.0**
AKASG Malin Array Be 73.21 322 P **P** **23 19 52.1 -0.9**
comp=Z,4.6nm,0.5s,baz=90,slow=5.5,SNR=32
comp=Z,4.6nm,0.5s
AKASG Malin Array Be 73.21 322 P **P** **23 19 52.2 -0.8**
AKASG Malin Array Be 73.21 322 P **P** **23 19 52.2 -0.8**
AKASG pmax pmax
comp=Z,6.0nm,0.8s
AKBB Malin Array Si 73.21 322 IAmb IAmb 23 19 53.1
comp=Z,17nm,0.7s
AKBB Malin Array Si 73.21 322*ce*P **P** **23 19 52.5 -0.5**
AKBB pmax pmax
comp=Z,19nm,0.9s
AKBB Malin Array Si 73.21 322 P **P** **23 19 52.0 -1.0**
AK01 Malin Array Si 73.21 322 P **P** **23 19 52.1 -1.0**
AK03 Malin Array Si 73.22 322 P **P** **23 19 52.2 -0.9**
KIEV Kiev 73.22 322 ⇑P **P** **23 19 52.2 -0.9**
KIEV Kiev 73.22 322 P **P** **23 19 52.2 -0.9**
KIEV IAmb IAmb 23 19 53.1
comp=Z,16nm,0.7s
KIEV Kiev 73.22 322 *i*P **P** **23 19 52.4 -0.7**
SNR=11
KIEV Kiev 73.22 322 P **P** **23 19 52.2 -0.9**
KIEV pmax pmax
comp=Z,16nm,0.7s

AK12 Malin Array Si 73.24 322 P **P** **23 19 52.3 -0.9**
AK11 Malin Array Si 73.24 322 P **P** **23 19 52.3 -0.9**
AK04 Malin Array Si 73.25 322 P **P** **23 19 52.4 -0.9**
AK14 Malin Array Si 73.26 322 P **P** **23 19 52.4 -0.9**
AK16 Malin Array Si 73.27 322 P **P** **23 19 52.3 -1.1**
AK23 Malin Array Si 73.28 322 P **P** **23 19 52.5 -1.0**
AK23 pP **pP** **23 20 19.3 -3.2**
AK13 Malin Array Si 73.29 322 P **P** **23 19 52.5 -1.0**
GHRR 73.30 317 ⇑P **P** **23 19 54.0 +0.3**
GHRR 73.30 317 P **P** **23 19 54.6 +0.9**
AK17 Malin Array Si 73.31 322 P **P** **23 19 52.6 -1.0**
AK18 Malin Array Si 73.31 322 P **P** **23 19 52.6 -1.0**
AK22 Malin Array Si 73.32 322 P **P** **23 19 52.7 -1.0**
AK21 Malin Array Si 73.34 322 P **P** **23 19 52.8 -1.0**
LOZB Loznitsa 73.34 314 ⇑P **P** **23 19 54.1 0.0**
AK19 Malin Array Si 73.34 322 P **P** **23 19 52.7 -1.1**
AK20 Malin Array Si 73.35 322 P **P** **23 19 52.7 -1.2**
RAZG Razgrad 73.44 314 ⇓P **P** **23 19 55.1 +0.5**
PANC Panciu 73.44 317 ⇑P **P** **23 19 54.1 -0.4**
ODBI Odobesti 73.48 317 ⇑P **P** **23 19 56.0 +1.3**
SOOWA Sowa 73.70 247 *i*P **P** **23 19 57.6 +0.9**
VRI Vrincioaia 73.73 317 ⇑P **P** **23 19 57.2 +0.9**
VRI Vrincioaia 73.73 317 P **P** **23 19 57.1 +0.9**
VRI Vrincioaia 73.73 317 P **P** **23 19 56.8 +0.6**
comp=Z,45nm,0.9s
PLOR Plostina 73.78 317 ⇑P **P** **23 19 56.8 +0.2**
PLOR Plostina 73.78 317 P **P** **23 19 57.8 +1.2**
ELND Elena 73.78 314 ⇑P **P** **23 19 56.3 -0.3**
TESR Tescani 73.91 317 ⇑P **P** **23 19 57.4 +0.1**
TESR Tescani 73.91 317 P **P** **23 19 56.5 -0.8**
comp=Z,76nm,0.7s
LUBAR Lubar, Ukraine 73.93 321 P **P** **23 19 56.6 -0.7**
MI29 MI29, Kamyanyy 73.99 321 P **P** **23 19 56.7 -0.9**
comp=Z,277nm,0.8s
PLAR PLOIESTI 74.03 316 ⇑P **P** **23 19 58.1 +0.2**
COVR Voineasa-Covas 74.08 317 ⇑P **P** **23 19 58.5 +0.2**
GIRR Girov 74.10 318 ⇑P **P** **23 19 58.4 0.0**
MLR Muntele Rosu 74.19 316 ⇑P **P** **23 19 59.2 +0.1**
MLR Muntele Rosu 74.19 316 IAmb IAmb 23 20 01.5
comp=Z,18nm,1.0s
MLR Muntele Rosu 74.19 316 P **P** **23 20 00.0 +0.9**
MLR Muntele Rosu 74.19 316 P **P** **23 19 59.6 +0.5**
KSANE Kasane 74.21 250 *i*P **P** **23 20 01.7 +2.0**
MI28 MI28,Pidlybu 74.22 322 P **P** **23 19 57.1 -1.8**
TURR Turia 74.25 317 ⇓P **P** **23 19 59.9 +0.6**
PRAR RASCA 74.36 318 ⇑P **P** **23 19 59.7 -0.2**
OZUR 74.42 317 ⇑P **P** **23 19 58.7 -1.5**
COPA Copaceanca 74.46 315 ⇑P **P** **23 20 00.2 -0.2**
LPHEP Lephephe 74.55 245 *i*P **P** **23 20 03.1 +1.6**
DOPR Dopca 74.67 317 ⇑P **P** **23 20 02.3 +0.6**
HUMR Humele 74.69 315 ⇑P **P** **23 20 01.8 0.0**
VOIR 74.80 316 ⇑P **P** **23 20 02.4 -0.2**
VOIR 74.80 316 P **P** **23 20 02.5 -0.1**
MNK Minsk 74.97 326 *i*P **P** **23 20 03.6 +0.3**
comp=E,22nm,0.7s
MNK *i*P **P** **23 20 03.6 +0.3**
comp=N,41nm,1.0s
MNK *i*P **P** **23 20 03.6 +0.3**
comp=Z,58nm,0.8s,baz=105
MNK *i* pP **pP** **23 20 31.4 -1.0**
MNK *i* PP **PP** **23 22 52.4 0.0**
MNK *i* PPP PPP 23 24 38.6
MNK *i* S **S** **23 29 32.8 +1.1**
MNK *i* sS **sS** **23 30 21.2 -0.2**
MNK *i* SS **SS** **23 34 24.3 +1.9**
MNK *i* SSS SSS 23 37 47.1
MNK *i* LQ LQ 23 49 50.2
MNK *i* LR LR 23 54 53.5
MNK *i* LRM MLR 23 56 53.8
comp=E,58nm,15.8s
MNK *i* LRM MLR 23 57 07.8
comp=E,177nm,20.1s
MNK *i* LRM MLR 23 57 10.9
comp=N,193nm,19.3s
MNK Minsk 74.97 326 *i*P **P** **23 20 03.5 +0.3**
MNK *i* *PP **pP** **23 20 31.3 -1.0**
MNK *i* 23 22 52.4
MNK *i* PPP PPP 23 24 38.6
MNK *i* S **S** **23 29 32.7 +1.1**
MNK *i* *SS **sS** **23 30 21.1 -0.2**
MNK *i* SS **SS** **23 34 24.3 +1.9**
MNK pmax pmax
comp=Z,58nm,0.8s
MNK pmax pmax
comp=N,41nm,1.0s
MNK pmax pmax
comp=E,22nm,0.7s
MNK MLR MLR
comp=Z,58nm,16.0s
MNK MLR MLR
comp=E,177nm,20.0s
MNK MLR MLR
comp=N,193nm,19.0s
VLAD Vladila 75.02 314 ⇑P **P** **23 20 04.4 +0.7**
ARR Arges 75.08 316 ⇑P **P** **23 20 03.9 -0.3**
BURAR Bucovina Array 75.09 318 ⇑P **P** **23 20 04.6 +0.4**
BURAR Bucovina Array 75.09 318 P **P** **23 20 04.8 +0.7**
BURAR IAmb IAmb 23 20 06.5
comp=Z,28nm,1.3s
BURAR Bucovina Array 75.09 318 P **P** **23 20 04.6 +0.4**
LBTB Lobatse 75.11 243 LR LR 23 52 02.9
comp=Z,29nm,18.4s,baz=115,slow=35
LBTB Lobatse 75.11 243 P **P** **23 20 04.3 -0.5**
LBTB pP **pP** **23 20 32.5 -0.8**
TGMR Targu Mures 75.36 317 ⇓P **P** **23 20 06.3 +0.7**
MDB Medias 75.39 317 ⇑P **P** **23 20 06.0 +0.2**
MDB Medias 75.39 317 P **P** **23 20 06.0 +0.2**
KDWAN Kaudwane 75.64 245 *i*P **P** **23 20 08.9 +1.1**
LOT Lotru 75.69 316 ⇑P **P** **23 20 07.2 -0.5**
CJR Cluj-Napoca 76.02 317 ⇑P **P** **23 20 10.2 +0.7**
CJR Cluj-Napoca 76.02 317 P **P** **23 20 10.1 +0.7**
BOSA Boshof 76.14 239 P **P** **23 20 12.2 +1.6**
comp=Z,12nm,0.6s,baz=98,slow=3.8,SNR=52
comp=Z,12nm,0.6s
BOSA Boshof 76.14 239 P **P** **23 20 11.7 +1.1**
BOSA IAmb IAmb 23 20 13.3
comp=Z,38nm,1.2s
BOSA Boshof 76.14 239 P **P** **23 20 11.7 +1.1**
BOSA pmax pmax
comp=Z,38nm,1.3s
BMR Baia Mare 76.24 318 ⇑P **P** **23 20 10.4 -0.2**
BMR Baia Mare 76.24 318 P **P** **23 20 10.4 -0.2**
MARR Marisel-Cluj 76.34 317 ⇑P **P** **23 20 12.1 +0.7**
GZR Gura Zlata 76.38 316 ⇑P **P** **23 20 12.2 +0.6**
GZR Gura Zlata 76.38 316 P **P** **23 20 12.1 +0.6**
LVZ Lovozero 76.38 340 P **P** **23 20 09.9 -1.1**
LVZ Lovozero 76.38 340*ce*P **P** **23 20 10.9 -0.1**
LVZ pmax pmax
comp=Z,160nm,2.5s
LVZ Lovozero 76.38 340 P **P** **23 20 10.8 -0.3**
LVZ PcP **PcP** **23 20 22.9 +0.5**
LVZ x 23 20 32.7
LVZ pP **pP** **23 20 38.7 -1.3**
HERR Herculane 76.56 315 ⇑P **P** **23 20 12.1 -0.4**
VSU Vasula 76.61 329*ce*P **P** **23 20 11.0 -1.4**
VSU pmax pmax
comp=Z,58nm,1.7s
DRGR 76.63 317 ⇑P **P** **23 20 13.3 +0.4**
DRGR 76.63 317 P **P** **23 20 13.3 +0.4**
DRV Dumont d'Urvil 76.66 164 P **P** **23 20 12.7 +0.2**
DRV pP **pP** **23 20 41.2 -0.6**
DRV sP **sP** **23 20 53.0 -1.2**
APA Apatity 76.68 339⇓ *e*P **P** **23 20 11.1 -1.6**
APA *e* 23 20 25.6
APA pmax pmax
comp=Z,59nm,0.9s
APA MLR MLR
comp=Z,2µm,5.2s
MDVR Moldovita 77.04 315 ⇑P **P** **23 20 14.9 -0.3**
KWP Kalwaria Pacla 77.08 320 *e*P **P** **23 20 15.7 +0.3**
BZS Buzias 77.22 316 ⇑P **P** **23 20 16.4 +0.3**
BZS Buzias 77.22 316 P **P** **23 20 16.4 +0.3**
TIM Timisoara 77.51 316 ⇓P **P** **23 20 18.7 +0.9**
TIM Timisoara 77.51 316 P **P** **23 20 18.6 +0.9**
SUW Suwalki 77.56 324 *e*P **P** **23 20 17.5 -0.4**
FINES FINESS Array B 77.69 332 P **P** **23 20 18.5 +0.1**
comp=Z,20nm,0.7s,baz=100,slow=6.3,SNR=67
comp=Z,20nm,0.7s
FINES FINESS Array B 77.69 332 P **P** **23 20 18.1 -0.3**
FINES FINESS Array B 77.69 332*ce*P **P** **23 20 18.5 +0.1**
FINES pmax pmax
comp=Z,20nm,0.7s

KGCAE Kacgae 77.77 246 *i*P **P** **23 20 21.2 +1.3**
KGCAE Kacgae 77.77 246 IAmb IAmb 23 20 22.7
comp=Z,31nm,0.7s
STHS Stebnicka Huta 77.99 320 *e*P **P** **23 20 20.8 +0.4**
STHS pmax pmax
comp=Z,5.0nm,0.8s
STHS Stebnicka Huta 77.99 320 *e*P **P** **23 20 20.8 +0.4**
SJES Sjenica 78.11 313 *e*P **P** **23 20 22.1 +0.8**
GRTLG Ghanzi 78.44 247 *i*P **P** **23 20 25.1 +1.5**
GRTLG Ghanzi 78.44 247 IAmb IAmb 23 20 26.3
comp=Z,13nm,0.7s
PDG Podgorica 78.55 312 ⇑P **P** **23 20 23.0 -0.6**
PDG Podgorica 78.55 312 *e*P **P** **23 20 22.7 -0.9**
BBLS Lazi&#263i 78.58 314 *e*P **P** **23 20 23.9 +0.1**
RUDO Rudo 78.58 314 *e*P P 23 20 18.5 -5.3
NIE Niedzica 78.60 320 *e*P **P** **23 20 24.5 +0.7**
BEL Belsk 78.62 322 *e*P **P** **23 20 24.9 +1.1**
BILL Bilibino 78.69 21 P **P** **23 20 23.1 -0.7**
BILL Bilibino 78.69 21*ce*P **P** **23 20 23.4 -0.4**
BILL pmax pmax
comp=Z,4.0nm,0.3s
BILL Bilibino 78.69 21 P **P** **23 20 23.5 -0.3**
UPM Unac-Piva 78.88 313 *e*P **P** **23 20 25.4 -0.2**
VADS Vadso 78.98 341 *e*P **P** **23 20 25.6 +0.2**
VADS IAmb IAmb 23 20 26.2
comp=Z,76nm,0.7s
OJC Ojcow 79.03 320 *e*P **P** **23 20 26.2 +0.2**
LANS Liptovska Anna 79.11 319 *e*P **P** **23 20 27.9 +1.3**
LANS pmax pmax
comp=Z,1.0nm,0.6s
LANS Liptovska Anna 79.11 319 *e*P **P** **23 20 27.9 +1.3**
BRY Bratogost 79.12 313 *e*P **P** **23 20 26.5 -0.4**
TREB Trebinje 79.24 313 *e*P **P** **23 20 26.9 -0.5**
MORH Mrgy, Hungar 79.35 316 ⇑P **P** **23 20 28.2 +0.4**
MORH Mrgy, Hungar 79.35 316 *e*P **P** **23 20 27.9 +0.1**
KOOLE Kule 79.62 246 *i*P **P** **23 20 31.6 +1.6**
KOOLE Kule 79.62 246 IAmb IAmb 23 20 33.0
comp=Z,23nm,0.7s
ARA0 ARCESS Array S 80.08 340 *e*P **P** **23 20 31.9 +0.5**
ARA0 IAmb IAmb 23 20 32.6
comp=Z,27nm,0.5s
ARCES ARCESS Array B 80.08 340 P **P** **23 20 31.6 +0.3**
comp=Z,16nm,0.5s,baz=92,slow=5.3,SNR=178
comp=Z,16nm,0.5s
ARCES ARCESS Array B 80.08 340 P **P** **23 20 31.4 +0.1**
ARCES IAmb IAmb 23 20 32.8
comp=Z,60nm,1.2s
ARCES ARCESS Array B 80.08 340 *e*P **P** **23 20 31.5 +0.1**
MAUC Maruska 80.20 319 *e*P **P** **23 20 32.9 +0.4**
BLY Banja Luka 80.24 315 ⇑P **P** **23 20 33.0 +0.3**
BLY Banja Luka 80.24 315 *e*P **P** **23 20 32.1 -0.6**
JAVC Velka Javorina 80.25 319 *e*P **P** **23 20 34.2 +1.4**
STEB Steborice 80.29 320 *e*P **P** **23 20 33.1 +0.2**
CCD Concordia, Ant 80.36 173 P **P** **23 20 35.5 +2.3**
CCD pP **pP** **23 21 04.1 +1.5**
CCD x x 23 21 05.9
MORC Moravsky Berou 80.42 320 ⇑P **P** **23 20 33.9 +0.2**
MORC Moravsky Berou 80.42 320 P **P** **23 20 33.8 +0.2**
MORC Moravsky Berou 80.42 320 *e*P **P** **23 20 33.9 +0.2**
MODS Modra-Piesok 80.47 318 *e*P **P** **23 20 34.6 +0.7**
MODS pmax pmax
comp=Z,11nm,0.8s
MODS Modra-Piesok 80.47 318 *e*P **P** **23 20 34.6 +0.7**
SUR Sutherland 80.65 236 LR LR 23 49 06.8
comp=Z,44nm,21.4s,baz=131,slow=30
SUR Sutherland 80.65 236 P **P** **23 20 37.4 +2.0**
SUR IAmb IAmb 23 20 39.4
comp=Z,41nm,1.1s
KTK1 Kautokeino 80.72 339 *e*P **P** **23 20 35.1 +0.3**
KTK1 IAmb IAmb 23 20 35.5
comp=Z,68nm,0.7s
ACER Acerenza 80.91 311 IAmb IAmb 23 20 38.9
comp=Z,24nm,0.8s
HAMF Hammerfest 80.97 341 *e*P **P** **23 20 36.3 +0.2**
HAMF IAmb IAmb 23 20 36.9
comp=Z,62nm,0.8s
VRAC Vranov 81.00 319 *e*P **P** **23 20 37.2 +0.5**
KOGS Kog 81.02 316 *i*P **P** **23 20 37.3 +0.4**
RONA Rosalia, Austr 81.07 318 *i*P **P** **23 20 37.1 -0.1**
comp=Z,2.3nm,0.8s
KRUC Moravsky 81.11 319 *e*P **P** **23 20 37.7 +0.4**
DPC Dobruska-Polom 81.26 320 *e*P **P** **23 20 38.5 +0.4**
DPC Dobruska-Polom 81.26 320 *e*P **P** **23 20 38.5 +0.4**
KSP Ksiaz 81.31 321 *e*P **P** **23 20 39.8 +1.5**
OSTC Ostas 81.34 320 *e*P **P** **23 20 39.2 +0.7**
OSTC Ostas 81.34 320 *e*P **P** **23 20 39.2 +0.7**
CONA Conrad Observa 81.38 318 *i*P **P** **23 20 38.9 +0.1**
comp=Z,2.1nm,0.8s
UPC Upice 81.47 320 *e*P **P** **23 20 40.2 +1.1**
UPC Upice 81.47 320 *e*P **P** **23 20 40.2 +1.1**
TSUM Tsumeb 81.52 250 LR LR 23 55 12.7
comp=Z,29nm,18.0s,baz=144,slow=34
TSUM Tsumeb 81.52 250 P **P** **23 20 42.1 +1.9**
ARSA Arzberg 81.57 317 *i*P **P** **23 20 41.4 +1.7**
comp=Z,2.7nm,0.8s
BOJS Bojanci 81.66 315 *i*P **P** **23 20 40.8 +0.5**
JETT Jettan, Norway 81.82 340 *e*P **P** **23 20 41.1 +0.4**
JETT IAmb IAmb 23 20 41.5
comp=Z,115nm,0.7s
SOKA Soboth 81.87 316 *i*P **P** **23 20 41.8 +0.4**
comp=Z,4.2nm,1.0s,SNR=8.0
BLEU Blekinge 82.06 326 *i*P **P** **23 20 42.2 +0.2**
HOPEN Hopen 82.17 347 *e*P **P** **23 20 42.5 +0.2**
HOPEN IAmb IAmb 23 20 43.0
comp=Z,58nm,0.6s
OBKA Obir 82.20 316 *i*P **P** **23 20 43.6 +0.4**
comp=Z,3.3nm,0.7s,SNR=6.2
TRO Tromso 82.35 340 *e*P **P** **23 20 43.2 -0.1**
TRO IAmb IAmb 23 20 43.6
comp=Z,60nm,0.9s
PRU Pruhonice 82.38 320 *e*P **P** **23 20 44.5 +0.6**
PRU Pruhonice 82.38 320 *e*P **P** **23 20 44.5 +0.6**
CRNS Crni Vrh 82.38 316 *i*P **P** **23 20 44.5 +0.4**
MOA Molln 82.45 318 *i*P **P** **23 20 44.5 +0.1**
comp=Z,2.5nm,0.8s
CKRC Cesky Krumlov 82.47 319 *e*P **P** **23 20 45.5 +1.1**
CKRC Cesky Krumlov 82.47 319 *e*P **P** **23 20 45.5 +1.1**
ZVC Zvikov 82.57 319 *e*P **P** **23 20 44.6 -0.3**
MYKA Terra Mystica 82.83 316 *i*P **P** **23 20 47.0 +0.6**
comp=Z,2.2nm,0.6s
BIOA Bad Ischl, Aus 82.87 317 *i*P **P** **23 20 46.3 -0.2**
comp=Z,2.4nm,0.9s
GEC2 GERESS Array S 82.87 319 *e*P **P** **23 20 47.0 +0.4**
comp=Z,2.9nm,0.8s,baz=91,slow=5.2
GERES GERESS Array B 82.87 319 P **P** **23 20 47.0 +0.4**
comp=Z,1.3nm,0.5s,baz=116,slow=3.9,SNR=13
comp=Z,1.3nm,0.5s
GERES GERESS Array B 82.87 319 P **P** **23 20 46.3 -0.3**
AQU L'Aquila 82.88 312 *e*P **P** **23 20 46.6 -0.1**
KHC Kasperske Hory 82.96 319*ce*P **P** **23 20 48.2 +1.2**
KHC pmax pmax
comp=Z,3.0nm,0.9s
KHC Kasperske Hory 82.96 319 *e*P **P** **23 20 47.5 +0.5**
RUE Ruedersdorf 82.98 322 *e*P **P** **23 20 47.5 +0.6**
comp=Z,48nm,0.7s,baz=91,slow=5.2
KBA Koelnbreinsper 83.05 317 *i*P **P** **23 20 47.4 -0.3**
comp=Z,1.5nm,0.5s
DEL Delary 83.15 326 *i*P **P** **23 20 48.4 +0.7**
LUNU Lund 83.34 325 *i*P **P** **23 20 50.0 +1.3**
FAUS Fauske 83.37 337 *e*P **P** **23 20 49.0 +0.3**
FAUS IAmb IAmb 23 20 49.3
comp=Z,56nm,0.7s
CLL Collm 83.41 321 *e*P **P** **23 20 51.0 +1.8**
CLL pmax pmax
comp=Z,5.0nm,0.8s
CLL Collm 83.41 321 *e*P **P** **23 20 51.0 +1.8**
comp=Z,5.0nm,0.8s
WET Wettzell 83.42 319 *e*P **P** **23 20 49.6 +0.3**
comp=Z,3.0nm,0.7s,baz=91,slow=5.2
RJOB Jochberg 83.44 317 *e*P **P** **23 20 50.6 +1.1**
comp=Z,3.4nm,0.6s,baz=91,slow=5.2
STEI Steigen 83.44 338 *e*P **P** **23 20 49.5 +0.5**
STEI IAmb IAmb 23 20 49.7
comp=Z,86nm,0.9s
HFS Hagfors 83.47 330 P **P** **23 20 49.8 +0.5**
comp=Z,14nm,0.5s,baz=107,slow=5.0,SNR=106
comp=Z,14nm,0.5s
LESA Schwarzleotal 83.51 317 *i*P **P** **23 20 49.5 -0.5**
comp=Z,2.1nm,0.6s
MOR8 Moi Rana 83.59 336 *e*P **P** **23 20 49.6 -0.2**
MOR8 IAmb IAmb 23 20 50.0
comp=Z,43nm,0.8s
BJUU Bjuv 83.60 326 *i*P **P** **23 20 50.4 +0.4**
ABTA Abfaltersbach 83.61 316 *e*PcP **PcP** **23 20 53.6 -0.8**

comp=Z,1.5nm,0.5s
RAUS Rausandaksla 83.77 336 *e*P **P** **23 20 50.9 +0.2**
RAUS IAmb IAmb 23 20 51.5
comp=Z,55nm,0.9s
BORU Boraas 83.81 327 *i* P **P** **23 20 51.7 +0.6**
FABU Falkenberg 83.81 327 *i* P **P** **23 20 52.2 +1.1**
ROTZ Rotzenmuhle 83.88 319 *e*P **P** **23 20 52.3 +0.7**
comp=Z,0.9nm,0.8s,baz=91,slow=5.2
COP Copenhagen 83.92 325 *i* P **P** **23 20 52.9 +1.3**
COP IAmb IAmb 23 20 53.2
comp=Z,102nm,1.0s
LOF Lofoten 84.10 338 *e*P **P** **23 20 52.3 0.0**
LOF IAmb IAmb 23 20 52.5
comp=Z,56nm,0.9s
VAGH Vaagaholmen 84.10 337 *e*P **P** **23 20 52.7 +0.4**
VAGH IAmb IAmb 23 20 53.2
comp=Z,29nm,0.9s
LEIR Leirfjorden 84.12 336 *e*P **P** **23 20 52.9 +0.5**
LEIR IAmb IAmb 23 20 53.4
comp=Z,37nm,0.7s
KONS Konsvik 84.15 336 *e*P **P** **23 20 53.3 +0.7**
KONS IAmb IAmb 23 20 54.6
comp=Z,73nm,1.3s
STOK Stokkvaagen 84.17 336 *e*P **P** **23 20 52.8 +0.1**
STOK IAmb IAmb 23 20 53.5
comp=Z,44nm,1.0s
CTI Castel Tesino 84.19 316 P **P** **23 20 53.5 0.0**
CTI IAmb IAmb 23 21 34.1
comp=Z,11nm,0.8s
CTI Castel Tesino 84.19 316 P **P** **23 20 53.5 0.0**
CTI pmax pmax
comp=Z,11nm,0.8s
WTTA Wattenberg 84.21 317 *i* P **P** **23 20 53.4 -0.2**
comp=Z,3.7nm,0.7s,SNR=4.3
WATA Walderalm 84.25 317 *e*P **P** **23 20 54.9 +1.1**
comp=Z,4.5nm,0.5s
ONAU Onsala 84.26 327 *i* P **P** **23 20 54.1 +0.8**
MOX Moxa 84.27 320 *e*P **P** **23 20 54.2 +0.6**
comp=Z,2.0nm,0.7s,baz=91,slow=5.2
SPA0 Spitsbergen Ar 84.39 348 *e*P **P** **23 20 53.4 -0.3**
SPA0 IAmb IAmb 23 20 54.0
comp=Z,112nm,1.1s
SPITS Spitsbergen Ar 84.39 348 P **P** **23 20 53.3 -0.3**
comp=Z,43nm,0.7s,baz=94,slow=9.3,SNR=115
comp=Z,43nm,0.7s
SPITS Spitsbergen Ar 84.39 348 P **P** **23 20 53.4 -0.3**
SPITS pmax pmax
comp=Z,67nm,0.8s
HSPB Hornsund (broa 84.41 347 *e*P **P** **23 20 53.5 -0.3**
HSPB Hornsund (broa 84.41 347 *e*P **P** **23 20 54.0 +0.3**
TJOU Tjoern 84.44 328 *i* P **P** **23 20 54.7 +0.5**
NC405 NORSAR Array S 84.49 331 IAmb IAmb 23 20 55.6
comp=Z,24nm,0.8s
SQTA Sankt Quirin 84.50 317 *i* P **P** **23 20 54.6 -0.4**
comp=Z,5.3nm,0.5s,SNR=9.6
GRF Grafenberg Arr 84.51 319 *e*P **P** **23 20 55.6 +0.7**
comp=Z,7.2nm,0.7s,baz=91,slow=5.2
NSS Namsos 84.51 334 *e*P **P** **23 20 54.8 +0.3**
NSS IAmb IAmb 23 20 55.7
comp=Z,32nm,0.9s
FLTG Flechtingen 84.53 322 *e*P **P** **23 20 55.6 +0.7**
comp=Z,6.1nm,0.6s,baz=91,slow=5.2
NC602 NORSAR Array S 84.56 331 *e*P **P** **23 20 55.1 +0.3**
NC602 IAmb IAmb 23 20 55.4
comp=Z,22nm,0.8s
NORES NORESS Array B 84.56 331 *e*P **P** **23 20 55.6 +0.8**
MOTA Moosalm 84.58 317 *i* P **P** **23 20 55.5 +0.1**
comp=Z,3.7nm,0.6s,SNR=5.1
ZCCA Zocca 84.66 314 IAmb IAmb 23 21 03.8
comp=Z,13nm,0.7s
STRU Stroemstad 84.69 329 *i* P **P** **23 20 56.1 +0.6**
NB2 NORSAR Subarra 84.73 331 P **P** **23 20 55.7 -0.1**
comp=Z,4.0nm,0.6s,baz=95,slow=4.8
NB2 NORSAR Subarra 84.73 331 P **P** **23 20 55.7 -0.1**
NOA NORSAR Array B 84.73 331 P **P** **23 20 55.9 +0.2**
comp=Z,6.8nm,0.8s,baz=94,slow=5.0,SNR=24
comp=Z,6.8nm,0.8s
RETA Reutte 84.81 317 *i* P **P** **23 20 56.3 -0.2**
comp=Z,6.7nm,0.9s,SNR=7.2
FETA Feichten 84.83 317 *i* P **P** **23 20 56.5 -0.3**
comp=Z,2.8nm,0.8s,SNR=5.6
ASSE Asse, Remlinge 84.88 322 *e*P **P** **23 20 57.3 +0.8**
comp=Z,6.2nm,0.8s,baz=91,slow=5.2
OSL Oslo 84.95 330 IAmb IAmb 23 20 57.0
comp=Z,97nm,1.5s
OSL *e*P **P** **23 20 57.5 +0.8**
SALO Salr 84.98 315 IAmb IAmb 23 21 01.0
comp=Z,20nm,0.7s
CLZ Clausthal 85.06 322 *e*P **P** **23 20 58.1 +0.5**
comp=Z,10nm,0.7s,baz=91,slow=5.2
BSEG Bad Segeberg 85.10 324 *e*P **P** **23 20 58.7 +1.0**
comp=Z,6.0nm,0.7s,baz=91,slow=5.2
KBS Kingsbay 85.34 349 *e*P **P** **23 20 57.8 -0.6**
KBS IAmb IAmb 23 20 58.4
comp=Z,27nm,0.9s
KBS Kingsbay 85.34 349 *ce*P **P** **23 20 58.1 -0.3**
KBS pmax pmax
comp=Z,26nm,1.0s
KBS Kingsbay 85.34 349 *i* P **P** **23 20 57.4 -1.0**
DAVA Damuels 85.41 317 *e*P **P** **23 21 00.3 +0.7**
comp=Z,5.7nm,1.1s
KONO Kongsberg 85.51 329 *e*P **P** **23 21 00.1 +0.5**
KONO Kongsberg 85.51 329 *ce*P **P** **23 21 00.8 +1.2**
KONO pmax pmax
comp=Z,57nm,1.7s
GOET G??ttrup 85.72 327 *i* P **P** **23 21 00.9 +0.3**
GOET IAmb IAmb 23 21 01.8
comp=Z,68nm,0.4s
DOMB Dombas 85.77 332 *e*P **P** **23 21 01.3 +0.4**
DOMB IAmb IAmb 23 21 02.0
comp=Z,15nm,0.6s
TUE Stuetta 85.79 316 P **P** **23 21 03.0 +1.4**
KEST Kesra 86.07 305 P **P** **23 21 04.5 +1.4**
comp=Z,13nm,0.9s,baz=333,slow=4.4,SNR=8.5
KEST pP **pP** **23 21 31.9 -0.8**
comp=Z,10nm,0.8s,baz=23,slow=2.1,SNR=4.1
KEST sP **sP** **23 21 42.7 -2.2**
comp=Z,11nm,0.9s,baz=85,slow=5.1,SNR=3.9
comp=Z,13nm,0.9s
KEST Kesra 86.07 305 IAmb IAmb 23 21 07.5
comp=Z,14nm,0.9s
SKAR Skarsla 86.15 330 *e*P **P** **23 21 04.0 +1.2**
MOL Molde 86.47 332 *e*P **P** **23 21 05.0 +0.7**
MOL IAmb IAmb 23 21 05.9
comp=Z,27nm,0.7s
AKN Aaknes 86.74 332 *e*P **P** **23 21 06.0 +0.4**
AKN IAmb IAmb 23 21 07.4
comp=Z,25nm,0.8s
EDA Edea 86.86 274 IAmb IAmb 23 21 09.4
comp=Z,11nm,0.8s
BUG Bochum-Univer 87.01 321 *e*P **P** **23 21 08.3 +1.2**
comp=Z,8.5nm,0.7s,baz=91,slow=5.2
GAMB Gambell 87.04 26 IAmb IAmb 23 21 07.9
comp=Z,24nm,0.8s
GAMB Gambell 87.04 26 P **P** **23 21 06.9 0.0**
baz=273,SNR=21
BLS5 Blasjo 87.12 329 *e*P **P** **23 21 08.7 +1.2**
BLS5 IAmb IAmb 23 21 09.4
comp=Z,114nm,1.3s
HYA Hoyanger 87.17 331 *e*P **P** **23 21 08.4 +0.7**
HYA IAmb IAmb 23 21 10.1
comp=Z,677nm,2.5s
SENIN Lac Senin/Sane 87.21 316 IAmb IAmb 23 21 12.5
comp=Z,11nm,0.8s
VNDA Vanda 88.39 169 P **P** **23 21 14.3 +1.2**
comp=Z,2.2nm,0.7s,baz=327,slow=5.6,SNR=7.8
comp=Z,2.2nm,0.7s
VNDA Vanda 88.39 169 IAmb IAmb 23 21 31.5
comp=Z,41nm,1.8s
TNA Tin City 88.53 24 P **P** **23 21 13.4 -0.6**
TNA IAmb IAmb 23 21 14.6
comp=Z,11nm,0.7s
TNA Tin City 88.53 24 P **P** **23 21 13.5 -0.6**
baz=276,SNR=13
ELIB Princess Elisa 88.69 197 *d*P **P** **23 21 17.7 +2.9**
ELIB *dp*P **pP** **23 21 45.1 +0.5**
ELIB *ds*P **sP** **23 21 57.6 +0.9**
ELIB *d*PP **PP** **23 24 42.5 -2.5**
C16K Lisburne Hills 89.20 22 P **P** **23 21 17.0 -0.1**
baz=278
F14K Arctic Creek 89.20 25 P **P** **23 21 17.1 -0.1**
baz=277
NIKH Nikolski High 89.31 37 P **P** **23 21 17.7 -0.2**
baz=275
NOR Nord 89.63 352 *i* P **P** **23 21 18.5 -0.4**
NOR IAmb IAmb 23 21 19.4
comp=Z,27nm,0.8s
ANM Nome 89.73 25 P **P** **23 21 19.8 +0.1**
baz=278
F15K North Star Dit 89.86 24 P **P** **23 21 20.3 0.0**
baz=279
M11K Mekoryuk 89.92 30 P **P** **23 21 20.6 -0.1**
baz=278
C17K DeLong Mountai 89.96 21 P **P** **23 21 20.8 +0.1**
baz=280
D17K Noatak River 90.14 22 P **P** **23 21 21.7 +0.2**
baz=280
RDOG Red Dog Mine 90.14 22 P **P** **23 21 21.5 -0.1**
baz=281
G15K Niukluk 90.22 25 P **P** **23 21 21.8 -0.2**
baz=280
A19K Wainwright 90.35 19 P **P** **23 21 23.1 +0.6**
baz=282
K13K Kusilvak Mount 90.44 28 P **P** **23 21 23.2 +0.1**
baz=279
UNV Unalaska Valle 90.61 36 P **P** **23 21 23.8 -0.2**
baz=277
C18K Utukok River 90.64 21 P **P** **23 21 23.8 -0.1**
C18K IAmb IAmb 23 21 25.1
comp=Z,18nm,1.1s
C18K Utukok River 90.64 21 P **P** **23 21 24.1 +0.1**
baz=282
E17K Hotham Inlet 90.73 23 P **P** **23 21 24.4 +0.1**
baz=282,SNR=9.6
J14K Nanvaranak Lak 90.82 27 P **P** **23 21 24.9 +0.1**
baz=280
G16K Koyuk River 90.85 24 P **P** **23 21 25.0 +0.1**
baz=281
H16K Elim 91.05 25 P **P** **23 21 25.7 -0.1**
baz=281,SNR=10
F17K Baldwin Pennin 91.08 23 P **P** **23 21 26.1 +0.2**
baz=282
C19K Lookout Ridge 91.11 20 P **P** **23 21 26.8 +0.7**
baz=284
E18K Tukpahlearik C 91.12 22 P **P** **23 21 26.4 +0.2**
baz=283
M13K Dall Lake 91.32 29 P **P** **23 21 27.6 +0.5**
baz=280
L14K Kuka Creek 91.47 28 P **P** **23 21 28.0 +0.1**
baz=281
A21K Barrow 91.50 18 P **P** **23 21 28.0 +0.2**
baz=286,SNR=24
G17K Kiwalik Mounta 91.53 24 P **P** **23 21 28.0 -0.1**
baz=283
F18K Selawik 91.67 23 P **P** **23 21 28.9 +0.3**
baz=284,SNR=12
B20K Meade River 91.70 19 P **P** **23 21 29.0 +0.3**
baz=286
D19K Kuna River 91.78 21 P **P** **23 21 29.4 +0.2**
baz=285
K15K Wolf Creek Mou 91.82 27 P **P** **23 21 29.9 +0.4**
baz=282
I17K Unalakleet 91.86 26 P **P** **23 21 29.8 +0.2**
baz=282
M14K Bethel 91.93 29 P **P** **23 21 30.0 +0.1**
baz=281
H17K Granite Mounta 91.96 25 P **P** **23 21 30.3 +0.3**
baz=283
L15K Ungalak Mounta 91.97 28 P **P** **23 21 30.3 +0.1**
baz=282,SNR=6.0
J16K Anvik River 92.03 26 P **P** **23 21 31.1 +0.6**
baz=283,SNR=13
DAG Danmarks Havn 92.03 348 *i* P **P** **23 21 29.4 -0.7**
DAG IAmb IAmb 23 21 30.3
comp=Z,18nm,1.0s
A22K Sinclair Lake 92.11 18 P **P** **23 21 31.1 +0.5**
baz=288,SNR=42
N14K Kuskokwak Cree 92.23 30 P **P** **23 21 31.0 -0.3**
baz=282
G18K Tagagawik 92.24 23 P **P** **23 21 30.8 -0.5**
baz=284
D20K Etivluk River 92.25 21 P **P** **23 21 31.7 +0.3**
baz=286
F19K Shaleruckik Mo 92.34 22 P **P** **23 21 31.7 -0.1**
baz=285
E19K Redstone River 92.38 22 P **P** **23 21 32.0 0.0**
baz=286
E20K Nigu River 92.53 21 P **P** **23 21 32.9 +0.2**
baz=287
H18K Honhosa River 92.54 24 P **P** **23 21 32.7 -0.1**
baz=285
M15K Kasigluk River 92.56 29 P **P** **23 21 32.7 -0.1**
baz=282
O14K Tigyukauivet M 92.58 30 P **P** **23 21 32.9 0.0**
baz=282
B21K Ikpikpuk River 92.66 19 P **P** **23 21 32.9 -0.3**
B21K Ikpikpuk River 92.66 19 P **P** **23 21 33.5 +0.3**
baz=286,SNR=28
C21K Kniveblade Rid 92.75 20 P **P** **23 21 34.0 +0.4**
baz=288
EKA Eskdalemuir Ar 92.77 326 P **P** **23 21 34.1 +0.1**
comp=Z,1.2nm,0.6s,baz=90,slow=5.1,SNR=6.8
comp=Z,1.2nm,0.6s
G19K Purcell Mounta 92.79 23 P **P** **23 21 34.0 +0.1**
baz=286,SNR=16
B22K Teshekpuk Lake 92.81 19 P **P** **23 21 34.0 +0.1**
baz=290
L16K Owhat River 92.90 28 P **P** **23 21 34.7 +0.3**
baz=284
N15K Kwethluk River 92.96 29 P **P** **23 21 35.0 +0.2**
baz=283
F20K Avaraart Lake 93.05 22 P **P** **23 21 35.3 +0.3**
baz=287,SNR=51
K17K Iditarod 93.19 27 P **P** **23 21 36.4 +0.6**
baz=285,SNR=9.8
E21K Kilik River 93.26 21 P **P** **23 21 36.0 0.0**
baz=289
GCSA Galena City Sc 93.26 24 P **P** **23 21 36.5 +0.5**
baz=286
M16K Timber Creek 93.30 28 P **P** **23 21 36.4 0.0**
baz=284
O15K Ungalikthiuk R 93.31 30 P **P** **23 21 36.5 +0.1**
baz=283
L17K Donlin 93.34 27 P **P** **23 21 37.0 +0.6**
baz=285
DBG Daneborg 93.50 346 *i* P **P** **23 21 37.0 0.0**
DBG IAmb IAmb 23 21 38.4
comp=Z,30nm,1.6s
N16K Nishlik Lake 93.53 29 P **P** **23 21 38.0 +0.6**
baz=284,SNR=6.2
J18K Innoko River 93.68 26 P **P** **23 21 38.0 0.0**
baz=286
QSPA South Pole Qui 93.77 180 P **P** **23 21 40.1 +1.6**
comp=Z,2.2nm,0.6s,baz=283,slow=0.9,SNR=15
QSPA PKKPbc **PKKPdf** **23 38 41.1 -2.9**
comp=Z,1.2nm,0.8s,baz=136,slow=2.4,SNR=6.2
comp=Z,2.2nm,0.6s
QSPA South Pole Qui 93.77 180 P **P** **23 21 40.1 +1.6**
QSPA IAmb IAmb 23 23 33.1
comp=Z,18nm,1.6s
F21K Alatna River 93.83 22 P **P** **23 21 38.8 +0.1**
baz=289,SNR=22
H20K Anaktuvuk Mo 93.85 23 P **P** **23 21 39.2 +0.4**
baz=288,SNR=23
C23K Itkillik River 93.89 19 P **P** **23 21 38.9 0.0**
baz=292,SNR=8.5
M17K Holitna River 93.92 28 P **P** **23 21 39.6 +0.4**
baz=285
J19K Poorman 94.00 25 P **P** **23 21 39.9 +0.5**
baz=287
L18K Granite Mounta 94.04 27 P **P** **23 21 39.8 +0.1**
baz=286
G21K Allakaket 94.06 22 P **P** **23 21 39.8 0.0**
baz=289
O16K Kokwok River B 94.08 30 P **P** **23 21 40.1 +0.2**
baz=285
E22K Anaktuvuk Pass 94.12 21 P **P** **23 21 40.1 +0.1**
baz=291,SNR=5.7
IMAR Indian Mountai 94.14 23 P **P** **23 21 40.4 +0.3**
D23K Nanushuk River 94.20 20 IAmb IAmb 23 21 41.8
comp=Z,13nm,1.1s
D23K Nanushuk River 94.20 20 P **P** **23 21 40.8 +0.5**
baz=292,SNR=8.8
N17K Nushagak Hills 94.27 29 P **P** **23 21 41.4 +0.6**
baz=286
O17K Koliganek Bris 94.52 29 P **P** **23 21 42.4 +0.5**
baz=286
TORD Torodi Ar. Bea 94.53 283 P **P** **23 21 44.0 +1.0**
comp=Z,1.7nm,0.8s,baz=110,slow=3.8,SNR=20
TORD pP **pP** **23 22 12.6 -0.3**
comp=Z,1.4nm,0.6s,baz=126,slow=3.8,SNR=5.4
comp=Z,1.7nm,0.8s
C24K Franklin Bluff 94.55 19 P **P** **23 21 41.9 0.0**
baz=294
H21K Melozitna Rive 94.61 23 P **P** **23 21 42.7 +0.4**
baz=290,SNR=16
M18K Stony River 94.64 27 P **P** **23 21 42.9 +0.5**
baz=287
TOLK Toolik Lake Re 94.70 20 P **P** **23 21 42.8 +0.1**
baz=293
D24K Happy Valley 94.74 19 IAmb IAmb 23 21 43.9
comp=Z,5.1nm,0.8s
D24K Happy Valley 94.74 19 P **P** **23 21 43.0 +0.2**
baz=294
N18K Kilae Creek 94.84 28 P **P** **23 21 43.6 +0.1**
baz=287
K20K Telida 94.85 25 P **P** **23 21 44.0 +0.6**
baz=288,SNR=14
L19K White Mountain 94.88 27 P **P** **23 21 43.8 +0.3**
baz=288,SNR=5.6
E23K Chandalar 94.91 20 IAmb IAmb 23 21 45.0
comp=Z,13nm,1.3s
E23K Chandalar 94.91 20 P **P** **23 21 43.8 +0.1**
baz=293
P17K Kvichak River 95.00 30 P **P** **23 21 44.2 +0.1**
baz=286
COLD Coldfoot 95.02 21 P **P** **23 21 44.2 +0.1**
baz=292
H22K Ishtalitna Cre 95.08 23 P **P** **23 21 44.9 +0.4**
baz=291,SNR=19
TROLL Troll, Antarti 95.10 198 P P 23 21 50.0 +5.5
M19K Big River Lodg 95.17 27 P **P** **23 21 45.3 +0.4**
baz=288
G23K Bananza Creek 95.29 22 P **P** **23 21 45.6 +0.3**
baz=292,SNR=6.5
E24K Your Creek 95.29 20 P **P** **23 21 45.7 +0.3**
baz=294
CHUM Lake Minchumin 95.42 25 P **P** **23 21 46.4 +0.5**
baz=290
D25K Kavik River 95.46 19 IAmb IAmb 23 21 47.1
comp=Z,14nm,1.2s
D25K Kavik River 95.46 19 P **P** **23 21 46.0 -0.2**
baz=296
N19K Bonanza Creek 95.46 28 P **P** **23 21 46.6 +0.3**
baz=288
C26K Camden Bay 95.65 18 P **P** **23 21 47.3 +0.5**
baz=298
MLY Manley 95.65 23 P **P** **23 21 47.1 +0.1**
baz=292
O19K Port Alsworth 95.73 28 P **P** **23 21 47.6 +0.2**
baz=288
M20K Styx River 95.74 27 P **P** **23 21 47.9 +0.3**
baz=289
PPLA Purkeypile 95.81 26 P **P** **23 21 48.0 0.0**
baz=290
BPAW Bear Paw Mtn. 95.89 24 P **P** **23 21 48.2 +0.1**
baz=291,SNR=12
C27K Jago River 96.15 18 P **P** **23 21 49.5 +0.3**
baz=299
ESDC Sonseca Array 96.16 310 P **P** **23 21 51.0 +1.0**
comp=Z,0.5nm,0.6s,baz=58,slow=4.4,SNR=8.5
ESDC pP **pP** **23 22 19.2 -0.7**
comp=Z,0.9nm,0.9s,baz=68,slow=4.8,SNR=2.8
ESDC PP **PP** **23 25 46.8 +2.5**
comp=Z,0.2nm,0.3s,baz=352,slow=7.5,SNR=4.9
comp=Z,0.5nm,0.6s
G24K Hadweenzic Riv 96.22 21 P **P** **23 21 49.7 +0.1**
baz=295
E25K Arctic Village 96.26 20 P **P** **23 21 49.7 0.0**
baz=297
TRF Thorofare Moun 96.42 25 P **P** **23 21 51.0 +0.2**
baz=292
SKT Skwentna 96.42 26 P **P** **23 21 49.8 -0.8**
baz=291
H24K Noodor Dome 96.43 22 P **P** **23 21 50.9 +0.3**
baz=294
F25K Christian Rive 96.47 20 P **P** **23 21 51.1 +0.3**
baz=297
NEA2 Nenana 96.47 23 P **P** **23 21 51.0 +0.3**
baz=293
MCK McKinley 96.87 24 P **P** **23 21 52.5 -0.1**
baz=293
NEEM North Greenlan 96.93 353 *i* P **P** **23 21 53.2 +0.2**
NEEM IAmb IAmb 23 21 54.2
comp=Z,10nm,0.9s
F26K Sheenjek River 96.94 20 P **P** **23 21 53.1 +0.2**
baz=298
ILAR Eielson Array 97.26 23 P **P** **23 21 52.7 -1.6**
comp=Z,0.8nm,0.7s,baz=295,slow=4.0,SNR=11
ILAR LR LR 00 12 00.5
comp=Z,38nm,19.4s,baz=342,slow=39
comp=Z,0.8nm,0.7s
ILAR Eielson Array 97.26 23 P **P** **23 21 52.4 -1.9**
G26K Porcupine Rive 97.41 20 P Pdif 23 21 55.2 +0.2
baz=298,SNR=6.4
PRP Porcupine Dome 97.45 22 P **P** **23 21 55.3 -0.1**
baz=296
E27K Coleen River 97.53 19 P **P** **23 21 55.4 -0.1**
baz=301
RC01 Rabbit Creek A 97.55 27 P **P** **23 21 55.6 -0.1**
baz=292
PMR Palmer 97.62 26 P Pdif 23 21 56.1 +0.1
baz=293
D28M Stokes Point 97.81 17 P Pdif 23 21 57.0 +0.4
baz=303
WAT6 Susitna Watana 97.83 25 P Pdif 23 21 57.1 0.0
baz=294
J25K Salcha River, 97.91 23 P **P** **23 21 57.0 -0.4**
baz=297
E28M Babbage River 97.97 18 IAmb IAmb 23 21 58.3
comp=Z,3.5nm,0.8s
E28M Babbage River 97.97 18 P **P** **23 21 57.3 -0.1**
baz=303,SNR=6.1
VNA2 Neumayer--Watz 98.39 199 ⇑P P 23 21 51.9 -7.3
comp=Z,3.7nm,0.8s,slow=8.1
F28M Old Crow 98.39 19 P **P** **23 21 59.2 -0.1**
baz=302
I26K Coal Creek Min 98.43 22 P Pdif 23 21 59.6 +0.1
baz=299
RIDG Independent Ri 98.51 23 P **P** **23 21 59.9 -0.2**
baz=297
H27K Steamboat Moun 98.55 21 P **P** **23 22 00.0 -0.1**
baz=300
E29M Blow River 98.59 18 P **P** **23 21 60.0 -0.2**
baz=304
M24K Tolsona, Glenn 98.69 25 P **P** **23 22 00.7 -0.2**
baz=296
SUMG Summit 98.72 348 *i* P **P** **23 21 57.3 -3.9**
SCRK Sand Creek 98.74 23 P **P** **23 22 00.2 -1.0**
SCRK Sand Creek 98.74 23 P **P** **23 22 01.0 -0.1**
baz=298
I27K Kandik River 98.84 21 P **P** **23 22 01.4 -0.1**
baz=300
VNA3 Neumayer Olymp 99.03 198 ⇑P **Pdif** **23 21 52.5 -10**
comp=Z,6.4nm,1.0s
P23K Montague Islan 99.04 27 P Pdif 23 22 02.3 0.0
baz=294
L26K Log Cabin Wild 99.44 24 P **Pdif** **23 22 04.0 -0.2**
baz=298
I28M Miner Creek 99.52 21 P **Pdif** **23 22 04.0 -0.5**
baz=302
A36M Sachs Harbour 99.53 12 P **Pdif** **23 22 04.3 0.0**
baz=317,SNR=15
N25K Chitina, Valde 99.58 25 P **Pdif** **23 22 05.0 +0.1**
baz=297
F30M Barrier River 99.69 18 P **Pdif** **23 22 05.3 +0.1**
baz=306
BMRM Bremner River 99.87 26 P **Pdif** **23 22 06.2 +0.1**
baz=297
M26K Nabesna, AK 99.88 24 P **Pdif** **23 22 06.2 0.0**
baz=298
G30M tAoh Zraii Nji 99.92 19 P **Pdif** **23 22 06.1 -0.2**
baz=306
INK Inuvik 99.95 17 P **Pdif** **23 22 05.3 -0.9**
comp=Z,1.8nm,0.8s,baz=275,slow=1.8,SNR=4.9
comp=Z,1.8nm,0.8s
INK Inuvik 99.95 17 **Pdif** **23 22 05.6 -0.6**
INK IAmb IAmb 23 23 57.7
comp=Z,14nm,1.8s
INK Inuvik 99.95 17 P **Pdif** **23 22 05.6 -0.6**
INK pmax pmax
comp=Z,14nm,1.8s
INK Inuvik 99.95 17 P **Pdif** **23 22 06.3 +0.1**
baz=308
L27K Beaver Creek, 100.03 23 P **Pdif** **23 22 06.8 0.0**
baz=300
EPYK Eagle Plains 100.11 19 P **Pdif** **23 22 06.8 -0.3**
baz=305
MCARA McCarthy VSAT 100.36 25 P **Pdif** **23 22 08.0 -0.2**
baz=298
F31M Tsiigehtchic 100.42 18 P **Pdif** **23 22 08.4 +0.1**
baz=308

DAWY	**Dawson**	**100.45**	**22**	P		**Pdif**	**23 22 08.3**	**-0.4**
	baz=302							
I30M	**Mount Dempster**	**100.89**	**20**	P		**Pdif**	**23 22 10.3**	**-0.4**
	baz=305							
H31M	**Peel River**	**101.23**	**19**	P		**Pdif**	**23 22 11.9**	**-0.2**
	baz=307							
YUK3	**Moose Creek**	**101.23**	**24**	P		**Pdif**	**23 22 11.9**	**-0.5**
	baz=301							
K29M	**Barlow Dome**	**101.27**	**22**	P		**Pdif**	**23 22 12.1**	**-0.3**
	baz=304							
L29M	**L29M**	**101.44**	**22**	P		**Pdif**	**23 22 12.7**	**-0.4**
	baz=303							
C36M	**Paulatuk**	**101.75**	**14**	P		**Pdif**	**23 22 14.0**	**-0.2**
	baz=318							
YUK8	**Steele Glacier**	**101.77**	**24**	P		**Pdif**	**23 22 14.0**	**-0.8**
	baz=301							
O28M	**Mount Upton**	**101.86**	**25**	P		**Pdif**	**23 22 14.7**	**-0.6**
	baz=301							
M31M	**Drury Creek, Y**	**103.38**	**22**	P		**Pdif**	**23 22 21.3**	**-0.4**
	baz=306							
O30N	**Mendenhall**	**103.55**	**24**	P		**Pdif**	**23 22 22.3**	**-0.2**
	baz=305							
YKA	**Yellowknife Ar**	**109.54**	**15**	Pdiff		**Pdif**	**23 22 49.0**	**0.0**
	comp=Z,0.1nm,0.4s,baz=348,slow=4.1,SNR=2.1							
YKA				PKiKP		**PKiKP**	**23 26 51.4**	**-0.1**
	comp=Z,0.5nm,1.1s,baz=305,slow=5.0,SNR=4.1							
YKA				PP		**PP**	**23 27 22.1**	**-0.9**
	comp=Z,0.5nm,1.0s,baz=329,slow=9.3,SNR=4.4							
KUQ	**Kuujjuuaa**	**117.17**	**352**	PKPdf		**PKiKP**	**23 27 06.2**	**+0.1**
FFC	**Flin Flon**	**119.49**	**13**	PKPdf		**PKPdf**	**23 27 10.6**	**-0.2**
FFC	**Flin Flon**	**119.49**	**13**	PKiKP		**PKPdf**	**23 27 10.6**	**-0.2**
NEW	**Newport**	**120.05**	**26**	PKP		**PKiKP**	**23 27 12.2**	**+0.1**
	comp=Z,2.5nm,0.9s,baz=202,slow=1.3,SNR=4.0							
SCHQ	**Schefferville**	**120.05**	**349**	PKP		**PKPdf**	**23 27 11.9**	**+0.1**
	comp=Z,4.5nm,0.7s,baz=254,slow=6.0,SNR=10.0							
SCHQ	**Schefferville**	**120.05**	**349**	PKPdf		**PKPdf**	**23 27 11.8**	**-0.1**
K05A	**Summer Lake**	**122.22**	**33**	PKPdf		**PKiKP**	**23 27 18.1**	**+1.3**
PLID	**Pearl Lake**	**122.96**	**28**	PKPdf		**PKPdf**	**23 27 18.1**	**+0.1**
BOZ	**Bozeman (W)**	**124.47**	**24**	PKPdf		**PKiKP**	**23 27 21.1**	**+0.1**
BOZ	**Bozeman (W)**	**124.47**	**24**	PKiKP		**PKiKP**	**23 27 21.2**	**+0.1**
ULM	**Lac du Bonnet**	**124.94**	**10**	PKP		**PKPdf**	**23 27 21.4**	**0.0**
	comp=Z,12nm,0.7s,baz=350,slow=2.2,SNR=32							
ULM	**Lac du Bonnet**	**124.94**	**10**	PKPdf		**PKPdf**	**23 27 21.1**	**-0.2**
ULM	**Lac du Bonnet**	**124.94**	**10**	PKiKP		**PKPdf**	**23 27 21.1**	**-0.2**
EPLO	**Experimental L**	**125.85**	**9**	PKPdf		**PKiKP**	**23 27 23.4**	**-0.1**
ELK	**Elko**	**126.59**	**31**	PKP		**PKiKP**	**23 27 25.8**	**+0.2**
	comp=Z,2.5nm,0.7s,baz=107,slow=14,SNR=9.7							
NVAR	**Mina Array Bea**	**126.61**	**35**	PKP		**PKiKP**	**23 27 26.2**	**+0.5**
	comp=Z,4.5nm,0.8s,baz=271,slow=1.8,SNR=19							
PDAR	**Pinedale Array**	**127.64**	**25**	PKP		**PKPdf**	**23 27 27.4**	**+0.3**
	comp=Z,2.5nm,0.8s,baz=14,slow=0.6,SNR=12							
BSUT	**Blindstream Ca**	**128.92**	**27**	PKPdf		**PKiKP**	**23 27 31.5**	**+1.0**
O20A	**White River Ci**	**130.37**	**26**	PKPdf		**PKiKP**	**23 27 33.4**	**+0.3**
PFO	**Pinyon Flats O**	**130.99**	**38**	SKPbc		**SKPbc**	**23 30 47.2**	**-0.7**
	comp=Z,12nm,0.9s,baz=313,slow=3.9,SNR=15							
ANMO	**Albuquerque**	**135.44**	**28**	PKP		**PKiKP**	**23 27 42.9**	**-0.6**
	comp=Z,1.1nm,0.7s,baz=208,slow=5.3,SNR=8.9							
ANMO				SKPbc		**SKPbc**	**23 31 03.5**	**+0.5**
	comp=Z,5.1nm,0.8s,baz=295,slow=2.4,SNR=14							
ANMO	**Albuquerque**	**135.44**	***28c***	*i*PKiKP		**PKPdf**	**23 27 42.8**	**+0.8**
ANMO				pmax		pmax		
	comp=Z,5.0nm,1.0s							
FCAR	**Ozark Folk Cen**	**139.51**	**12**	PKPpre		PKPpre	23 27 39.4	
TXAR	**Lajitas Array**	**141.38**	**30**	PKhKP		PKPpre	23 27 46.5	
	comp=Z,1.1nm,0.6s,baz=200,slow=1.1,SNR=13							
TXAR				PP		**PP**	**23 30 55.3**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=20,slow=4.0,SNR=3.9							
TXAR				SKPbc		**SKPbc**	**23 31 20.2**	**+0.4**
	comp=Z,2.1nm,0.7s,baz=212,slow=0.2,SNR=18							
PLCA	**Paso Flores**	**141.67**	**195**	PKhKP		PKPpre	23 27 46.9	
	comp=Z,2.3nm,0.8s,baz=211,slow=0.8,SNR=7.4							
BDFB	**Brasilia**	**143.88**	**249**	PKP		**PKPdf**	**23 27 57.2**	**-0.4**
	comp=Z,2.8nm,0.6s,baz=93,slow=4.4,SNR=4.9							
CPUP	**Villa Florida**	**146.94**	**225**	PKPbc		**PKPbc**	**23 28 04.7**	**+0.1**
	comp=Z,5.6nm,0.7s,baz=122,slow=6.0,SNR=15							
CPUP				pPKPbc		**pPKPdf**	**23 28 34.2**	**+0.2**
	comp=Z,5.8nm,0.9s,baz=92,slow=4.3,SNR=4.9							
BO02	**Sierra Bellavi**	**147.26**	**198**	PKPbc		**PKPbc**	**23 28 05.9**	**+0.6**
LPAZ	**La Paz**	**161.04**	**228**	PKP		**PKPdf**	**23 28 23.2**	**0.0**
	comp=Z,1.4nm,0.8s,baz=9.0,slow=12,SNR=4.6							
LPAZ				pPKP		**pPKPdf**	**23 28 54.9**	**-0.2**
	comp=Z,2.3nm,0.8s,baz=39,slow=4.0,SNR=5.5							
LPAZ				PKPab		**PKPab**	**23 29 08.7**	**+2.0**
	comp=Z,2.8nm,0.6s,baz=110,slow=2.6,SNR=8.9							
LPAZ				pPKPab		**pPKPab**	**23 29 37.1**	**+0.5**
	comp=Z,0.8nm,0.3s,baz=307,slow=3.6,SNR=2.4							

NEIC ***10*** *23:27:49.8±0.8, 41.92N±0.04×125.73W±0.07, h10km±2km, ML3.3/106, ML3.5/72(NCEDC), Error ellipse: s-maj=9.4km s-min=7.3km az=253.0*

NCEDC ***10*** *23:27:51.8±1.2, 41.89N±0.05×125.86W±0.08, h18km±8km, Error ellipse: s-maj=9.2km s-min=6.7km az=92.0*

IDC ***10*** *23:27:51.5±1.7, 41.98N×125.55W, h0km, mb3.5/6, mbtmp3.5/9, ML3.0/3, MS3.0/7, Error ellipse: s-maj=35.5km s-min=13.7km az=38.0*

ISC 10 23:27:50.0±2.2, 41.85N±0.05×125.70W±0.07, h1km±13km, n96, σ1°31/91, mb3.6/6, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KBO	**Bosley Butte**	**1.15**	**71**			**Pb**	**23 28 11.9**	**-0.9**
KBO						**Sb**	**23 28 26.9**	**-1.5**
SIGP	**Signal Peak, C**	**1.22**	**88**			**Pg**	**23 28 13.6**	**+0.3**
SIGP						**Sg**	**23 28 29.7**	**+0.6**
KRPM	**Rodgers**	**1.44**	**118**			**Pn**	**23 28 16.6**	**-0.7**
KRPM				Sn		**Sn**	**23 28 35.7**	**-1.2**
KRPM				IAML			23 28 36.7	
	comp=E,651nm,0.6s							
KRPM				IAML			23 28 42.3	
	comp=N,462nm,0.8s							
L02F	**Cave Junction**	**1.61**	**80**	Pn		**Pn**	**23 28 18.5**	**-1.1**
L02F				Sn		**Sn**	**23 28 39.7**	**-1.3**
JCC	**Jacoby Creek,**	**1.63**	**129**	Pn		**Pn**	**23 28 18.6**	**-1.2**
JCC				IAML			23 28 40.5	
	comp=E,209nm,0.7s							
JCC	**Jacoby Creek,**	**1.63**	**129**			**Sn**	**23 28 39.7**	**-1.7**
KCTM	**Capetown**	**1.72**	**143**			**Pn**	**23 28 20.9**	**-0.2**
K02D	**Willamette Mer**	**1.73**	**60**	Pn		**Pn**	**23 28 19.6**	**-1.7**
KHMM	**Horse Mountain**	**1.77**	**123**	Pn		**Pn**	**23 28 21.5**	**-0.5**
KHMM				IAML			23 28 44.9	
	comp=E,307nm,0.2s							
J01E	**Myrtle Point**	**1.85**	**44**	Pn		**Pn**	**23 28 21.0**	**-1.9**
KMPM	**Mount Pierce**	**1.86**	**140**	Pn		**Pn**	**23 28 21.9**	**-1.3**
KMPM				IAML			23 28 46.6	
	comp=N,337nm,0.6s							
PETL	**Petrolia**	**1.87**	**146**			**Pn**	**23 28 22.5**	**-0.7**
DMOR	**Dinsmores, CA**	**1.89**	**127**			**Pn**	**23 28 23.3**	**-0.2**
KCRM	**Chalk Rock**	**2.01**	**135**			**Pn**	**23 28 24.9**	**-0.2**
KSMM	**Slide Mountain**	**2.02**	**145**			**Pn**	**23 28 24.9**	**-0.5**
M02C	**Callahan**	**2.18**	**101**	Pn		**Pn**	**23 28 27.4**	**-0.1**
KHBM	**Hayfork Bally**	**2.21**	**122**	Pn		**Pn**	**23 28 27.7**	**-0.4**
KHBM				IAML			23 28 58.3	
	comp=E,116nm,0.4s							
KHBM				IAML			23 28 58.5	
	comp=N,118nm,0.5s							
YBH	**Yreka Blue Hor**	**2.24**	**92**	Pn		**Pb**	**23 28 29.2**	**-2.1**
	comp=N,1.3nm,0.3s,baz=346,slow=16,SNR=125							
YBH				Sn		**Sn**	**23 28 53.3**	**-3.3**
	comp=N,0.6nm,0.3s,baz=136,slow=9.1,SNR=5.7							
YBH				LR		LR	23 28 57.0	
	comp=N,8.9nm,20.8s,baz=1.0,slow=31							
YBH	**Yreka Blue Hor**	**2.24**	**92**	Pn		**Pn**	**23 28 28.7**	**+0.4**
KPPM	**Pickett Peak**	**2.32**	**130**			**Pn**	**23 28 28.5**	**-1.0**
WEAV	**Weaverville**	**2.32**	**118**			**Pn**	**23 28 29.7**	**+0.2**
LBKM	**Bonanza King**	**2.40**	**108**			**Pn**	**23 28 31.0**	**+0.4**
N02D	**Trinity Center**	**2.42**	**110**	Pn		**Pn**	**23 28 30.3**	**-0.5**
N02D				IAML			23 29 07.4	
	comp=E,90nm,0.4s							
B040	**Montague**	**2.45**	**89**			**Pn**	**23 28 31.8**	**+0.6**
B040	**Montague**	**2.45**	**89**			**Pn**	**23 28 32.0**	**+0.9**
BBOR	**Butler Butte**	**2.46**	**64**	Pn		**Pn**	**23 28 31.1**	**-0.4**
BBOR				IAML			23 29 06.4	
	comp=N,104nm,1.0s							
BBOR				IAML			23 29 07.2	
	comp=E,102nm,0.4s							
I03D	**Drain, OR**	**2.53**	**42**	Pn		**Pn**	**23 28 29.9**	**-2.3**
I03D				IAML			23 29 01.8	
	comp=E,84nm,0.2s							
I03D				IAML			23 29 02.0	
	comp=N,123nm,0.3s							
L04D	**Klamath Falls**	**2.55**	**81**	Pn		**Pn**	**23 28 32.9**	**+0.2**
L04D				IAML			23 29 12.8	
	comp=E,109nm,0.7s							
I02E	**Swisshome, OR**	**2.63**	**30**	Pn		**Pn**	**23 28 31.9**	**-1.8**
I02E				IAML			23 29 05.3	
	comp=E,151nm,0.6s							
I02E				IAML			23 29 06.8	
	comp=N,155nm,0.5s							
KCPM	**Cahto Peak**	**2.69**	**143**	Pn		**Pn**	**23 28 33.8**	**-0.8**
M03C	**McCloud**	**2.74**	**101**	Pn		**Pn**	**23 28 35.8**	**+0.5**
M03C				IAML			23 29 14.8	
	comp=N,70nm,0.8s							
M03C				IAML			23 29 24.1	
	comp=E,88nm,1.6s							
O02D	**Mt. Diablo Mer**	**2.76**	**126**	Pn		**Pn**	**23 28 35.0**	**-0.5**
J04A	**Umpqua Nationa**	**2.99**	**61**	Pn		**Pn**	**23 28 38.7**	**-0.1**
K04D	**Chiloquin, OR**	**3.03**	**74**	Pn		**Pn**	**23 28 38.4**	**-0.9**
K04D				IAML			23 29 29.5	
	comp=E,118nm,1.4s							
BUCK	**Buck Mountain**	**3.07**	**39**	Pn		**Pn**	**23 28 38.2**	**-1.6**
BUCK				IAML			23 29 19.6	
	comp=N,94nm,0.4s							
BUCK				IAML			23 29 19.7	
	comp=E,132nm,0.9s							
I04A	**Tendick Farm,**	**3.10**	**50**	Pn		**Pn**	**23 28 40.2**	**+0.1**
I04A				IAML			23 29 19.6	
	comp=E,99nm,0.2s							
I04A				IAML			23 29 19.8	
	comp=N,65nm,0.2s							
COR	**Corvallis**	**3.25**	**32**	Pn		**Pn**	**23 28 41.0**	**-1.0**
COR				IAML			23 29 23.4	
	comp=N,102nm,0.6s							
COR				IAML			23 29 28.9	
	comp=N,96nm,0.6s							
O03E	**Paynes Creek**	**3.33**	**117**	Pn		**Pn**	**23 28 43.7**	**+0.4**
O03E				IAML			23 29 30.6	
	comp=E,51nm,0.8s							
HATC	**Hat Creek Radi**	**3.35**	**107**	Pn		**Pn**	**23 28 44.4**	**+0.7**
HATC				IAML			23 30 18.2	
	comp=N,70nm,3.0s							
HATC				IAML			23 30 31.4	
	comp=E,66nm,2.5s							
H04D	**Lebanon**	**3.44**	**38**	Pn		**Pn**	**23 28 43.6**	**-1.2**
H04D				IAML			23 29 32.8	
	comp=N,81nm,0.7s							
HOPS	**Hopland Field**	**3.49**	**144**	Pn		**Pn**	**23 28 45.4**	**0.0**
HOPS				IAML			23 29 42.2	
	comp=E,50nm,3.1s							
HOPS				IAML			23 30 18.7	
	comp=N,52nm,3.4s							
J05D	**Fort Rock, OR**	**3.59**	**65**	Pn		**Pn**	**23 28 46.6**	**-0.5**
WIFE	**Three Sisters-**	**3.60**	**51**	Pn		**Pn**	**23 28 46.8**	**-0.4**
WIFE				IAML			23 29 43.0	
	comp=N,38nm,2.1s							
WIFE				IAML			23 30 04.1	
	comp=E,44nm,2.1s							
K05A	**Summer Lake**	**3.67**	**75**	Pn		**Pn**	**23 28 47.7**	**-0.5**
G03D	**McMinnville, O**	**3.79**	**27**	Pn		**Pn**	**23 28 48.1**	**-1.6**
G03D				IAML			23 29 36.1	
	comp=N,85nm,0.7s							
G03D				IAML			23 29 41.2	
	comp=E,56nm,0.7s							
H04A	**Detroit Lake**	**3.82**	**41**	Pn		**Pn**	**23 28 48.5**	**-1.5**
ORV	**Oroville**	**3.93**	**124**	Pn		**Pn**	**23 28 51.1**	**-0.4**
SUTB	**Sutter Butte**	**3.97**	**130**	Pn		**Pn**	**23 28 51.1**	**-0.9**
PINE	**Pine Mountain**	**4.00**	**59**	Pn		**Pn**	**23 28 52.2**	**-0.5**
PINE				IAML			23 30 32.2	
	comp=N,25nm,5.0s							
G04A	**Mulino**	**4.09**	**34**	Pn		**Pn**	**23 28 52.2**	**-1.5**
MCCM	**Marconi Confer**	**4.29**	**149**	Pn		**Pn**	**23 28 55.5**	**-0.8**
F03A	**Seaside**	**4.36**	**20**	Pn		**Pn**	**23 28 56.1**	**-1.3**
BEKR	**Beckworth**	**4.51**	**114**	Pn		**Pn**	**23 29 01.5**	**+1.9**
HOOD	**Mount Hood Mea**	**4.54**	**39**	Pn		**Pn**	**23 29 01.1**	**+1.0**
HOOD				IAML			23 29 59.3	
	comp=N,30nm,0.6s							
HOOD				IAML			23 30 10.4	
	comp=E,43nm,1.2s							
AFDM	**Forest Hills D**	**4.63**	**127**	Pn		**Pn**	**23 29 02.2**	**+1.0**
AFDM				IAML			23 29 59.4	
	comp=N,32nm,0.6s							
AFDM				IAML			23 30 01.0	
	comp=E,17nm,0.3s							
G05A	**Wamic**	**4.65**	**42**	Pn		**Pn**	**23 29 00.8**	**-0.6**
G05A				IAML			23 30 20.0	
	comp=N,38nm,4.8s							
G05A				IAML			23 30 26.3	
	comp=E,33nm,4.7s							
RADR	**Rader Ridge**	**4.77**	**16**	Pn		**Pn**	**23 29 02.4**	**-0.6**
RADR				IAML			23 29 52.4	
	comp=N,39nm,1.7s							
RADR				IAML			23 31 41.2	
	comp=E,38nm,2.0s							
G06A	**Carlson Farm,**	**5.00**	**46**	Pn		**Pn**	**23 29 05.7**	**-0.5**
G06A				IAML			23 30 15.5	
	comp=N,12nm,4.7s							
MPK	**Martis Peak**	**5.01**	**119**			**Pn**	**23 29 08.6**	**+1.9**
I07A	**Izee**	**5.06**	**62**	Pn		**Pn**	**23 29 07.9**	**+0.7**
PAHR	**Pah Rah Range**	**5.25**	**112**	Pn		**Pn**	**23 29 11.0**	**+1.2**
WVOR	**Wild Horse Val**	**5.28**	**81**	Pn		**Pn**	**23 29 09.6**	**-0.6**
PNTR	**Pine Nut**	**5.41**	**119**	Pn		**Pn**	**23 29 14.0**	**+2.0**
MHC	**Mount Hamilton**	**5.49**	**144**	Pn		**Pn**	**23 29 12.5**	**-0.5**
LON	**Longmire**	**5.63**	**28**	Pn		**Pn**	**23 29 14.8**	**-0.2**
NLWA	**Neilton Lookou**	**5.69**	**13**	Pn		**Pn**	**23 29 13.9**	**-1.8**
G08A	**Pilot Rock**	**5.98**	**53**	Pn		**Pn**	**23 29 20.1**	**+0.3**
SAO	**San Andreas Ge**	**6.05**	**146**	Pn		**Pn**	**23 29 20.1**	**-0.7**
GNW	**Green Mountain**	**6.07**	**19**	Pn		**Pn**	**23 29 20.6**	**-0.2**
LHV	**Little Huntoon**	**6.58**	**121**	Pn		**Pn**	**23 29 30.9**	**+2.9**
NVAR	**Mina Array Bea**	**6.62**	**119**	Pn		**Pn**	**23 29 30.2**	**+1.5**
	comp=N,0.9nm,0.3s,baz=307,slow=16,SNR=11							
NVAR				Lg		Lg	23 31 05.5	
	comp=N,0.2nm,0.3s,baz=313,slow=22,SNR=5.7							
NVAR				LR		LR	23 32 14.6	
	comp=N,120nm,21.0s,baz=291,slow=39							
	comp=N,1.3nm,0.5s							
BMO	**Blue Mountains**	**6.81**	**61**	Pn		**Pn**	**23 29 29.8**	**-1.4**
CLRS	**Cowichan Lake**	**7.05**	**8**	Pn		**Pn**	**23 29 33.7**	**-0.7**
PLID	**Pearl Lake**	**7.76**	**62**	Pn		**Pn**	**23 29 45.5**	**+1.2**
ELK	**Elko**	**7.95**	**95**	Pn		**Pn**	**23 29 48.8**	**+1.8**
	comp=N,0.2nm,0.3s,baz=290,slow=12,SNR=14							
	comp=N,3.5nm,0.7s							
ELK	**Elko**	**7.95**	**95**	Pn		**Pn**	**23 29 50.4**	**+3.5**
NEW	**Newport**	**8.82**	**40**	LR		LR	23 33 19.1	
	comp=N,54nm,20.0s,baz=250,slow=38							
LLLB	**Lillooet**	**9.15**	**15**	Pn		**Pn**	**23 30 03.9**	**+0.8**
PSUT	**Pine Spring**	**9.65**	**106**	Pn		**Pn**	**23 30 11.3**	**+1.1**
CCUT	**Cedar City**	**10.43**	**110**	Pn		**Pn**	**23 30 24.0**	**+3.1**
PFO	**Pinyon Flats O**	**11.00**	**135**	LR		LR	23 35 12.4	
	comp=N,69nm,20.7s,baz=286,slow=40							
PDAR	**Pinedale Array**	**11.99**	**80**	Pn		**Pn**	**23 30 45.4**	**+3.1**
	comp=N,0.3nm,0.7s,baz=261,slow=13,SNR=1.4							
PDAR				LR		LR	23 35 48.6	
	comp=N,41nm,21.2s,baz=259,slow=40							
ANMO	**Albuquerque**	**16.57**	**108**	LR		LR	23 38 58.9	
	comp=N,76nm,18.0s,baz=280,slow=40							
YKA	**Yellowknife Ar**	**21.70**	**14**	P		**P**	**23 32 41.9**	**-0.2**
	comp=N,2.5nm,0.9s,baz=208,slow=12,SNR=22							
YKA				LR		LR	23 40 38.4	
	comp=N,76nm,19.2s,baz=275,slow=36							
	comp=N,2.5nm,0.9s							
TXAR	**Lajitas Array**	**21.77**	**118**	P		**P**	**23 32 45.4**	**+2.1**
	comp=N,1.1nm,0.8s,baz=291,slow=10,SNR=6.0							
	comp=N,1.1nm,0.8s							
ULM	**Lac du Bonnet**	**22.22**	**58**	P		**P**	**23 32 48.2**	**+0.4**
	comp=N,1.8nm,0.9s,baz=243,slow=12,SNR=3.2							
	comp=N,1.8nm,0.9s							
ILAR	**Eielson Array**	**25.96**	**339**	P		**P**	**23 33 24.5**	**+0.8**
	comp=N,0.4nm,0.8s,baz=229,slow=9.4,SNR=4.9							
	comp=N,0.4nm,0.8s							
TKL	**Tuckaleechee C**	**33.02**	**87**	LR		LR	23 49 38.3	
	comp=N,68nm,18.3s,baz=296,slow=40							
H11N3	**WAKE ISLAND Hy**	**60.43**	**271**	T		T	00 43 29.1	
	baz=52,slow=75,SNR=24							
H11N2	**WAKE ISLAND Hy**	**60.43**	**271**	T		T	00 43 28.0	
	baz=52,slow=75,SNR=13							
H11N1	**WAKE ISLAND Hy**	**60.45**	**271**	T		T	00 43 33.0	
	baz=52,slow=75,SNR=19							
H11S1	**WAKE ISLAND Hy**	**61.32**	**270**	T		T	00 44 37.0	
	baz=52,slow=75,SNR=12							
H11S2	**WAKE ISLAND Hy**	**61.33**	**270**	T		T	00 44 37.1	
	baz=52,slow=75,SNR=9.7							
H11S3	**WAKE ISLAND Hy**	**61.34**	**270**	T		T	00 44 36.4	
	baz=52,slow=75,SNR=8.7							
BVAR	**Borovoye Array**	**84.48**	**350**	P		**P**	**23 40 24.6**	**+0.3**
	comp=N,0.5nm,0.5s,baz=359,slow=7.2,SNR=3.0							
	comp=N,0.5nm,0.5s							
KURBB	**Kurchatov Arra**	**85.50**	**345**	P		**P**	**23 40 31.6**	**+2.2**
	comp=N,0.4nm,0.7s,baz=18,slow=6.3,SNR=1.6							
	comp=N,0.4nm,0.7s							

IDC 10 23:32:23.5±2.3, 6.33N×124.85E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=214.4km s-min=26.4km az=64.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**27.73**	**161**	P		P	23 38 14.4	+0.5
	0.2nm,0.5s,baz=341,slow=8.8,SNR=5.9							
	0.2nm,0.5s							
ASAR	**Alice Springs**	**31.10**	**164**	P		P	23 38 43.4	-0.5
	0.4nm,0.4s,baz=337,slow=8.0,SNR=7.0							
	0.4nm,0.4s							
MKAR	**Makanchi Array**	**54.37**	**325**	P		P	23 41 52.1	-0.1
	0.1nm,0.3s,baz=133,slow=7.0,SNR=6.7							
	0.1nm,0.3s							

SDD ***10*** *23:43:37.0±2.5, 19.91N×71.10W, h20km±15km, MD3.4, ML2.3, MW3.0, Presumed earthquake*

OSPL ***10*** *23:43:38.0±1.5, 19.80N×71.06W, h0km±14km, ML2.4, Presumed earthquake*

ISC 10 23:43:37.7±0.9, 19.81N±0.04×71.10W±0.03, h11km±7km, n18, σ0°81/27, 18C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LOPP1	**Punta Rusia, P**	**0.10**	**296**	*i* P		**Pg**	**23 43 40.2**	**-0.2**
LOPP1				*e*S		**Sg**	**23 43 43.4**	**+0.9**
LOPP1				IAML			23 43 43.9	
	comp=Z,2μm,0.3s							
LUDR	**Luperon**	**0.16**	**59**	↑*e*Pg		**Pg**	**23 43 41.2**	**-0.1**
LUDR				↑*e*Sg		**Sg**	**23 43 43.4**	**-0.6**
SC01	**Santiago de lo**	**0.52**	**137**	↑*e*Sg		**Sb**	**23 43 57.5**	**+1.2**
SC01				IAML			23 44 35.5	
	comp=N,135nm,3.9s							
MCDR	**Montecristi**	**0.53**	**279**	↑*e*Sg		**Sg**	**23 43 54.4**	**-0.6**
MCDR				IAML			23 43 58.0	
	comp=N,147nm,0.2s							
LODA1	**ITESIL, Dajabo**	**0.63**	**245**	*e*S		**Sg**	**23 43 57.9**	**-0.2**
REDR	**Restauracion**	**0.70**	**203**	↑*e*Pg		**Pg**	**23 43 51.2**	**0.0**
REDR				↑*e*Sg		**Sb**	**23 44 02.3**	**+0.9**
REDR				IAML			23 44 03.6	
	comp=N,435nm,0.1s							
SDDR	**Presa de Saban**	**0.84**	**192**	↑*e*Pg		**Pg**	**23 43 52.5**	**-1.4**
SDDR				↑*e*Sg		**Sg**	**23 44 05.2**	**+0.3**
SDDR				IAML			23 44 05.5	
	comp=N,84nm,0.3s							
SDDR	**Presa de Saban**	**0.84**	**192**	*i* P		**Pg**	**23 43 52.6**	**-1.4**
SDDR				*e*S		**Sg**	**23 44 04.3**	**-0.6**
SDDR				IAML			23 44 05.4	
	comp=Z,58nm,0.4s							
ABDR	**Alto Bandera**	**1.09**	**156**	↑*e*Sg		**Sg**	**23 44 12.9**	**0.0**
ABDR				IAML			23 44 28.8	
	comp=N,0.2nm,0.5s							
LONE3	**El Aguacate, B**	**1.24**	**196**	*i* P		**Pn**	**23 43 59.9**	**-1.3**
LONE3				*e*S		**Sb**	**23 44 17.3**	**0.0**
LONE3				IAML			23 44 18.9	
	comp=Z,41nm,1.2s							
DR08	**Loma La Naviza**	**1.32**	**129**	↑*e*Pg		**Pg**	**23 44 03.0**	**-0.1**
DR08				↑*e*Sg		**Sb**	**23 44 18.9**	**-0.6**
DR08				IAML			23 44 23.0	
	comp=N,693nm,0.1s							
NEDR	**Neiba UASD**	**1.35**	**193**	↑*e*Sg		**Sn**	**23 44 21.0**	**+0.7**
NEDR				IAML			23 44 34.0	
	comp=N,45nm,1.2s							
JIDR	**Jimani**	**1.49**	**209**	↑*e*Sg		**Sb**	**23 44 25.9**	**+1.7**
LODU1	**El Espartillar**	**1.49**	**194**	*i* P		**Pn**	**23 44 05.0**	**+0.6**
LODU1				IAML			23 44 30.1

BAYT	**Aydıntepe-Bayb**	**1.95**	**277**	Pn		**Pb**	**23 47 52.9**	**-1.2**
BNGB	**Bingl**	**1.96**	**233**	Pn		**Pb**	**23 47 52.9**	**-1.3**
ALIG	**Mtskhetisjvari**	**2.04**	**21**	P		**Pb**	**23 47 55.0**	**-0.7**
ALIG				S		**Sg**	**23 48 23.4**	**0.0**
LSVT	**Lusahovit**	**2.05**	**69**	⇑*i*P		**Pb**	**23 47 54.8**	**-0.9**
LSVT				⇓*i*S		**Sg**	**23 48 24.5**	**+1.0**
VAYK	**Vayk**	**2.17**	**102**	⇓*e*P		**Pb**	**23 47 58.1**	**+0.2**
VAYK				⇓*e*S		**Sg**	**23 48 28.6**	**+1.1**
TBLG	**Delisi**	**2.19**	**45**	Pn		**Pb**	**23 47 56.5**	**-1.6**
TBLG	**Delisi**	**2.19**	**45**	P		**Pb**	**23 47 57.6**	**-0.5**
TBLG				S		**Sg**	**23 48 29.1**	**+1.0**
SEAG	**Tbilisi Sea**	**2.25**	**45**	P		**Pb**	**23 47 59.5**	**+0.4**
SEAG				S		**Sb**	**23 48 27.8**	**+0.4**
ERZN	**Erzincan**	**2.35**	**256**	Pn		**Pb**	**23 47 58.8**	**-2.2**
AYRK	**Ayrk**	**2.39**	**91**	⇓*i*P		**Pb**	**23 48 02.1**	**+0.4**
AYRK				⇓*i*S		**Sg**	**23 48 36.9**	**+2.4**
DGRG	**David-gareji**	**2.40**	**58**	P		**Pb**	**23 48 00.9**	**-0.9**
DGRG				S		**Sb**	**23 48 31.7**	**-0.2**
CHRG	**Chargali**	**2.73**	**38**	P		**Pb**	**23 48 04.9**	**-2.4**
DDFL	**Dedoflistskaro**	**2.90**	**63**	P		**Pb**	**23 48 11.6**	**+1.3**
VSHL	**Vashlovani**	**3.01**	**69**	P		**Pg**	**23 48 13.8**	**-1.7**
VSHL				S		Sg	23 49 04.0	+9.4
SHTL	**Shatili**	**3.08**	**36**	P		**Pb**	**23 48 10.7**	**-2.8**
LGD	**Lagodekhi**	**3.16**	**58**	P		**Pb**	**23 48 12.0**	**-2.6**
LGD				S		**Sg**	**23 48 59.0**	**-0.2**
KBZ	**Khabaz**	**3.53**	**3**	Pn		**Pn**	**23 48 16.7**	**+3.0**
	0.4nm,0.3s,baz=185,slow=9.7,SNR=15							
	8.0nm,0.8s							
KVAR	**Kislovodsk Arr**	**3.76**	**0**	Pn		**Pn**	**23 48 20.0**	**+3.1**
	2.4nm,0.4s,baz=185,slow=15							
BRTR	**Keskin Array B**	**6.96**	**269**	Pn		Pn	23 49 05.2	+4.3
	baz=70,slow=16,SNR=2.9							
BRTR				LR		LR	23 52 18.3	
	comp=Z,57nm,19.1s,baz=82,slow=43							
	0.5nm,0.8s							
MMAI	**Mount Meron Ar**	**9.24**	**221**	LR		LR	23 53 34.9	
	comp=Z,163nm,19.6s,baz=22,slow=41							
ASF	**Jabal al Asfar**	**9.27**	**212**	Pn		**Pn**	**23 49 33.4**	**+0.9**
	0.1nm,0.3s,baz=63,slow=11,SNR=2.1							
ASF				Lg		Lg	23 52 10.2	
	0.1nm,0.3s,baz=44,slow=12,SNR=1.9							
ASF				LR		LR	23 53 24.2	
	comp=Z,109nm,20.4s,baz=26,slow=40							
	1.3nm,0.6s							
EIL	**Elat**	**12.26**	**213**	LR		LR	23 55 36.1	
	comp=Z,135nm,18.7s,baz=58,slow=41							
AKASG	**Malin Array Be**	**14.10**	**323**	Pn		**Pn**	**23 50 38.6**	**+0.2**
	0.3nm,0.3s,baz=121,slow=13,SNR=4.2							
	0.3nm,0.3s							
AKTO	**Aktyubinsk**	**14.85**	**41**	Pn		**Pn**	**23 50 44.3**	**-4.3**
	0.1nm,0.3s,baz=229,slow=11,SNR=1.8							
AKTO				LR		LR	23 58 03.6	
	comp=Z,103nm,19.1s,baz=290,slow=44							
	0.6nm,0.5s							
MNK	**Minsk**	**17.42**	**330**	*i* P		**P**	**23 51 22.6**	**-0.5**
	comp=E,9.0nm,0.8s							
MNK				*i* P		**P**	**23 51 22.6**	**-0.5**
	N,14nm,1.0s							
MNK				*i* P		**P**	**23 51 22.6**	**-0.5**
	comp=Z,3.0nm,0.7s,baz=139							
MNK				*i* PP		**PnPn**	**23 51 32.8**	**+1.0**
MNK				*i* PPP		PPP	23 51 40.5	
MNK				*i* S		**Sn**	**23 54 37.2**	**+1.2**
MNK				*i* SS		**SnSn**	**23 54 52.1**	**+2.8**
MNK				*i* SSS		SSS	23 55 04.8	
MNK				*i* LQ		LQ	23 56 32.5	
MNK				*i* LR		LR	23 57 52.0	
MNK				*i* LRM		MLR	23 59 23.2	
	comp=E,131nm,15.8s							
MNK				*i* LRM		MLR	23 59 33.3	
	comp=N,95nm,14.3s							
MNK				*i* LRM		MLR	23 59 36.5	
	comp=Z,51nm,16.8s							
KIRV	**Kirov**	**18.91**	**11**	P		**Pn**	**23 51 39.9**	**-0.1**
	comp=Z,3.1nm,0.5s,baz=261,slow=10,SNR=3.7							
KIRV				LR		LR	23 59 34.0	
	comp=Z,146nm,18.0s,baz=196,slow=39							
ARTI	**Arti**	**19.20**	**27**	P		**P**	**23 51 42.5**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=217,slow=18,SNR=1.4							
ARTI				LR		LR	00 01 30.6	
	comp=Z,106nm,18.5s,baz=226,slow=44							
	0.4nm,0.3s							
RONA	**Rosalia, Austr**	**20.35**	**300**	*e*P		Pn	23 52 02.4	+5.0
	comp=Z,4.6nm,1.1s							
CONA	**Conrad Observa**	**20.69**	**301**	*e*P		Pn	23 52 05.2	+3.8
	comp=Z,5.7nm,1.3s							
SOKA	**Soboth**	**21.03**	**297**	*e*P		P	23 52 09.7	+6.9
	comp=Z,3.9nm,1.3s							
OBKA	**Obir**	**21.34**	**297**	*e*P		P	23 52 13.8	+7.7
	comp=Z,4.4nm,1.2s							
KBA	**Koelnbreinsper**	**22.23**	**298**	*e*P		P	23 52 23.1	+7.3
	comp=Z,5.6nm,1.2s							
GERES	**GERESS Array B**	**22.29**	**302**	P		**P**	**23 52 19.2**	**+2.9**
	comp=Z,0.6nm,0.9s,baz=119,slow=10,SNR=2.1							
	comp=Z,0.6nm,0.9s							
LESA	**Schwarzleotal**	**22.72**	**298**	*e*P		**P**	**23 52 26.9**	**+5.9**
	comp=Z,4.3nm,1.0s							
ABTA	**Abfaltersbach**	**22.76**	**297**	*e*P		P	23 52 28.7	+7.4
	comp=Z,4.1nm,1.1s							
BVAR	**Borovoye Array**	**22.79**	**46**	P		**P**	**23 52 21.0**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=233,slow=12,SNR=9.4							
BVAR				LR		LR	00 02 31.0	
	comp=Z,64nm,18.2s,baz=243,slow=40							
	comp=Z,0.1nm,0.3s							
WTTA	**Wattenberg**	**23.41**	**298**	*i* P		P	23 52 35.3	+7.1
	comp=Z,7.2nm,1.4s							
FINES	**FINESS Array B**	**23.58**	**340**	P		**P**	**23 52 31.1**	**+1.6**
	comp=Z,5.1nm,1.1s,baz=148,slow=18,SNR=3.7							
	comp=Z,5.1nm,1.1s							
SQTA	**Sankt Quirin**	**23.69**	**298**	*e*P		**P**	**23 52 33.4**	**+2.5**
	comp=Z,7.6nm,1.4s							
MOTA	**Moosalm**	**23.77**	**298**	*i* P		**P**	**23 52 34.3**	**+2.6**
	comp=Z,9.6nm,1.6s							
FETA	**Feichten**	**24.00**	**297**	*e*P		**P**	**23 52 37.8**	**+3.9**
	comp=Z,7.3nm,1.3s							
RETA	**Reutte**	**24.02**	**298**	*i* P		**P**	**23 52 37.7**	**+3.6**
	comp=Z,5.3nm,1.3s							
KURBB	**Kurchatov Arra**	**27.00**	**55**	LR		LR	00 04 52.6	
	comp=Z,58nm,19.1s,baz=186,slow=39							
NOA	**NORSAR Array B**	**28.41**	**328**	LR		LR	00 06 21.5	
	comp=Z,16nm,20.5s,baz=5.0,slow=40							
MKAR	**Makanchi Array**	**29.25**	**64**	P		**P**	**23 53 19.5**	**-1.5**
	comp=Z,0.1nm,0.5s,baz=268,slow=6.6,SNR=3.8							
	comp=Z,0.1nm,0.5s							
ARCES	**ARCESS Array B**	**30.77**	**348**	LR		LR	00 06 40.6	
	comp=Z,104nm,19.8s,baz=120,slow=38							
ZALV	**Zalesovo Beam**	**31.32**	**50**	LR		LR	00 08 14.4	
	comp=Z,50nm,18.9s,baz=122,slow=40							
FURI	**Furi**	**31.37**	**180**	LR		LR	00 06 53.1	
	comp=Z,64nm,19.0s,baz=355,slow=38							
NRIK	**Noril'sk**	**37.47**	**24**	LR		LR	00 12 46.3	
	comp=Z,75nm,18.5s,baz=309,slow=41							
MBAR	**Mbarara**	**42.04**	**198**	LR		LR	00 13 01.1	
	comp=Z,65nm,18.6s,baz=50,slow=37							
TORD	**Torodi Ar. Bea**	**44.88**	**245**	P		**P**	**23 55 33.1**	**-0.8**
	comp=Z,0.7nm,0.9s,baz=45,slow=5.4,SNR=4.8							
	comp=Z,0.7nm,0.9s							
TIXI	**Tiksi**	**51.25**	**24**	LR		LR	00 22 46.1	
	comp=Z,33nm,19.4s,baz=14,slow=42							
KLR	**Kul'dur**	**60.42**	**49**	LR		LR	00 27 13.5	
	comp=Z,21nm,19.1s,baz=20,slow=40							

AFAD ***10*** *23:56:18.8, 40.20N×42.71E, h6km±1km, ML3.0*
ISK ***10*** *23:56:18.1, 40.20N×42.69E, h5km, ML3.0/12*
TIF ***10*** *23:56:19.0, 40.19N×42.65E, h11km±1km*
ISC 10 23:56:19.0±1.1, 40.20N±0.02×42.71E±0.03, h9km±10km, n28, σ0.88/41, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SENK	**Senkaya-Erzuru**	**0.46**	**323**	Pg	**Pg**	**23 56 28.0**	**0.0**
SENK				Sg	**Sb**	**23 56 35.3**	**-1.1**
KARS	**Kars**	**0.51**	**33**	Pg	**Pg**	**23 56 29.5**	**+0.5**
KARS				Sg	**Sb**	**23 56 37.7**	**-0.3**
AGRB	**Hanur-Agry**	**0.66**	**161**	Pg	**Pg**	**23 56 32.1**	**+0.4**
AGRB				Sg	**Sb**	**23 56 42.3**	**+0.2**
MLAZ	**Malazgirt-MUS**	**1.06**	**187**	Pg	**Pb**	**23 56 39.4**	**-0.3**
ERZM	**Erzurum**	**1.07**	**255**	P	**Pb**	**23 56 39.4**	**-0.5**
ERZM				S	**Sn**	**23 56 56.4**	**+0.7**
DBAD	**Bademkaya**	**1.13**	**317**	P	**Pb**	**23 56 40.7**	**-0.1**
DBAD				S	**Sn**	**23 56 57.1**	**+0.2**
DBAD				IAML		23 57 02.0	
	comp=E,332nm,0.7s						
DBAD				IAML		23 57 05.0	
	comp=N,340nm,0.6s						
EJDE	**Erzurum, Palan**	**1.14**	**252**	P	**Pb**	**23 56 40.8**	**-0.3**
EJDE				S	**Sn**	**23 56 56.7**	**-0.8**
EJDE				IAML		23 57 09.0	
	comp=N,645nm,0.6s						
EJDE				IAML		23 57 09.0	
	comp=E,612nm,0.8s						
EMRE	**Erzurum,Aziziy**	**1.34**	**263**	P	**Pg**	**23 56 46.7**	**+1.9**
EMRE				S	**Sg**	**23 57 01.3**	**-1.0**
EMRE				IAML		23 57 08.0	
	comp=E,279nm,0.8s						
EMRE				IAML		23 57 16.0	
	comp=N,411nm,0.6s						
AKH	**Akhalkalaki**	**1.35**	**26**	P	**Pg**	**23 56 44.9**	**0.0**
AKH				S	**Sn**	**23 57 04.5**	**+2.1**
KRIK	**Erzurum-spir**	**1.37**	**276**	P	**Pg**	**23 56 45.4**	**0.0**
KRIK				S	**Sn**	**23 57 02.8**	**-0.2**
DBOC	**Borcka**	**1.40**	**326**	P	**Pn**	**23 56 44.7**	**-0.1**
DBOC				S	**Sb**	**23 57 03.1**	**-0.1**
DBOC				IAML		23 57 09.0	
	comp=E,139nm,0.6s						
VRTB	**Varto-Mus**	**1.42**	**224**	Pn	**Pg**	**23 56 46.1**	**-0.1**
VANB	**Van**	**1.68**	**162**	Pn	**Pg**	**23 56 51.1**	**-0.2**
TRLG	**Trialeti**	**1.71**	**38**	P	**Pb**	**23 56 50.6**	**0.0**
TRLG				S	**Sg**	**23 57 13.8**	**-0.1**
GURO	**Guroymak-BITLI**	**1.73**	**198**	Pn	**Pb**	**23 56 50.3**	**-0.7**
CHOM	**Cayeli-Rize**	**1.74**	**302**	Pn	**Pb**	**23 56 50.3**	**-0.8**
MUSM	**Mu-Merkez**	**1.74**	**213**	P	**Pb**	**23 56 50.9**	**-0.3**
MUSM				S	**Sg**	**23 57 16.0**	**+1.0**
YEDI	**Yedisu-Bingol**	**1.83**	**246**	Pn	**Pb**	**23 56 51.7**	**-1.1**
AKDM	**Akdamar-Van**	**1.88**	**174**	Pn	**Pb**	**23 56 52.9**	**-0.7**
BAYT	**Aydıntepe-Bayb**	**1.98**	**277**	Pn	**Pn**	**23 56 53.7**	**+0.9**
BNGB	**Bingl**	**1.98**	**233**	Pn	**Pb**	**23 56 54.0**	**-1.3**
ALIG	**Mtskhetisjvari**	**2.03**	**20**	P	**Pb**	**23 56 56.3**	**+0.1**
ALIG				S	**Sg**	**23 57 25.4**	**+1.1**
TBLG	**Delisi**	**2.17**	**44**	P	**Pb**	**23 56 58.4**	**-0.1**
DGRG	**David-gareji**	**2.38**	**57**	P	**Pb**	**23 57 01.4**	**-0.6**
CHRG	**Chargali**	**2.71**	**37**	P	**Pb**	**23 57 06.1**	**-1.6**
DDFL	**Dedoflistskaro**	**2.87**	**63**	P	**Pg**	**23 57 13.8**	**-0.2**
VSHL	**Vashlovani**	**2.99**	**69**	P	**Pb**	**23 57 11.8**	**-0.6**
SHTL	**Shatili**	**3.07**	**36**	P	**Pb**	**23 57 11.5**	**-2.4**

IDC ***11*** *00:00:32.1±1.0, 30.35S×71.98W, h0km, mb4.2/3, mbtmp3.9/8, ML3.9/4, MS3.3/2, Error ellipse: s-maj=29.5km s-min=23.4km az=111.0*
SJA ***11*** *00:00:36.2±2.4, 30.48S×71.69W, h10km±26km, ML4.0, MW3.7*
GUC ***11*** *00:00:38.5±0.7, 30.45S×71.64W, h36km±1km, ML4.4*
NEIC ***11*** *00:00:38.4±2.1, 30.41S±0.01×71.66W±0.06, h28km±6km, mb4.3/3, ML4.4(GUC), Error ellipse: s-maj=7.2km s-min=1.5km az=91.0*
ISC 11 00:00:37.7±0.8, 30.42S±0.03×71.70W±0.04, h33km±5km, n117, σ1.982/133, mb4.3/3, 4C-7D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.26**	**167**		**Pb**	**00 00 44.9**	**0.0**
CO06				Sg	**Sb**	**00 00 49.6**	**-0.3**
CO06	**Fray Jorge**	**0.26**	**167**	⇑*i*P	**Pb**	**00 00 45.0**	**+0.1**
CO06				*i* S	**Sb**	**00 00 49.6**	**-0.3**
CO05	**La Serena**	**0.64**	**39**		**Pb**	**00 00 50.5**	**-0.1**
CO05				Sg	**Sb**	**00 00 58.3**	**-1.2**
CO05	**La Serena**	**0.64**	**39**	⇓*i*P	**Pb**	**00 00 50.7**	**+0.1**
GO04	**Tololo Observa**	**0.82**	**72**		**Pb**	**00 00 53.2**	**-0.6**
GO04				Sg	**Sb**	**00 01 03.1**	**-1.5**
GO04	**Tololo Observa**	**0.82**	**72**	*i* P	**Pb**	**00 00 53.0**	**-0.8**
GO04				*i* S	**Sb**	**00 01 02.8**	**-1.8**
GO04				IAML		00 01 05.8	
	comp=E,17μm,0.3s						
GO04	**Tololo Observa**	**0.82**	**72**	*i* P	**Pb**	**00 00 52.5**	**-1.2**
GO04				⇓*e*S	**Sn**	**00 01 04.5**	**+0.2**
GO04				IAML		00 01 06.0	
	comp=Z,12μm,0.7s						
CO03	**El Pedregal**	**0.97**	**116**	Pn	**Pn**	**00 00 55.0**	**0.0**
CO03	**El Pedregal**	**0.97**	**116**	⇓*i*P	**Pn**	**00 00 55.1**	**+0.1**
CO03				*i* S	**Sb**	**00 01 06.7**	**-1.9**
CO03				IAML		00 01 09.0	
	comp=E,11μm,0.3s						
CO03	**El Pedregal**	**0.97**	**116**	*i* P	**Pn**	**00 00 54.1**	**-0.9**
CO03				IAML		00 01 09.1	
	comp=Z,3μm,0.3s						
CO02	**Combarbal**	**0.98**	**142**	Pn	**Pn**	**00 00 55.7**	**+0.3**
CO02	**Combarbal**	**0.98**	**142**	⇓*i*P	**Pn**	**00 00 55.6**	**+0.3**
CO02				*i* S	**Sn**	**00 01 08.4**	**+0.2**
CO02	**Combarbal**	**0.98**	**142**	*i* P	**Pn**	**00 00 54.9**	**-0.4**
CO02				*e*S	**Sn**	**00 01 07.2**	**-1.0**
CO02				IAML		00 01 09.8	
	comp=Z,11μm,0.4s						
CO01	**Juntas del Tor**	**1.46**	**73**	Pn	**Pn**	**00 01 03.0**	**+1.0**
CO01	**Juntas del Tor**	**1.46**	**73**	⇓*i*P	**Pn**	**00 01 03.3**	**+1.3**
CO01	**Juntas del Tor**	**1.46**	**73**	*i* P	**Pn**	**00 01 02.6**	**+0.6**
CO01				IAML		00 01 25.0	
	comp=Z,2μm,0.7s						
LCO	**Las Campanas**	**1.66**	**32**	Pn	**Pn**	**00 01 06.1**	**+1.4**
LCO	**Las Campanas**	**1.66**	**32**	⇓*i*P	**Pn**	**00 01 05.8**	**+1.1**
LCO				*i* S	**Sb**	**00 01 26.8**	**-1.6**
CO04	**Los Peladeros**	**1.73**	**159**	Pn	**Pn**	**00 01 07.5**	**+1.7**
CO04	**Los Peladeros**	**1.73**	**159**	⇑*i*P	**Pn**	**00 01 07.3**	**+1.5**
CO04				*i* S	**Sn**	**00 01 28.9**	**+2.0**
CO04				IAML		00 01 34.4	
	comp=E,4μm,0.2s						
AROD	**Rodeo**	**1.94**	**83**	*i* P	**Pb**	**00 01 12.0**	**-0.7**
AC05	**El Transito**	**2.01**	**39**	*i* P	**Pb**	**00 01 11.7**	**+2.2**
AC05				*i* S	**Sb**	**00 01 37.0**	**-1.5**
AC05				IAML		00 01 41.4	
	comp=N,2μm,0.5s						
VA06	**Catapilco**	**2.16**	**171**	Pn	**Pn**	**00 01 12.4**	**+1.1**
VA06	**Catapilco**	**2.16**	**171**	*i* P	**Pn**	**00 01 12.2**	**+0.8**
VA06				IAML		00 01 47.8	
	comp=N,3μm,0.5s						
ACDV	**Cuesta del Vie**	**2.25**	**84**	*i* P	**Pb**	**00 01 17.5**	**-0.3**
ACDV				IAML		00 01 56.1	
	comp=Z,492nm,0.5s						
AC04	**Llanos de Chal**	**2.28**	**14**	Pn	**Pn**	**00 01 13.8**	**+0.8**
AC04	**Llanos de Chal**	**2.28**	**14**	⇑*i*P	**Pn**	**00 01 13.9**	**+0.9**
ACCO	**Cerro Coronel**	**2.28**	**95**	*i* P	**Pb**	**00 01 17.7**	**-0.8**
RTLS	**Leoncito**	**2.48**	**124**	*i* P	**Pn**	**00 01 19.1**	**+3.0**
RTLS				IAML		00 02 03.1	
	comp=Z,3μm,0.5s						
VA03	**San Esteban**	**2.53**	**157**	Pn	**Pn**	**00 01 18.2**	**+1.6**
VA03	**San Esteban**	**2.53**	**157**	*i* P	**Pn**	**00 01 18.6**	**+2.0**
VA03				*i* S	**Sn**	**00 01 49.8**	**+3.5**
VA03				IAML		00 01 58.0	
	comp=N,2μm,0.4s						
VA03	**San Esteban**	**2.53**	**157**	*i* P	**Pn**	**00 01 18.0**	**+1.4**
VA03				IAML		00 01 59.0	
	comp=Z,1μm,0.9s						
VA01	**Torpederas**	**2.59**	**179**	Pn	**Pn**	**00 01 18.7**	**+1.4**
VA01	**Torpederas**	**2.59**	**179**	*e*P	**Pn**	**00 01 17.0**	**-0.3**
ROCH	**El Roble**	**2.61**	**167**	⇑*e*P	**Pn**	**00 01 18.9**	**+1.1**
ZON	**Zonda**	**2.83**	**114**	*i* P	**Pn**	**00 01 24.2**	**+3.6**
ZON				IAML		00 02 11.1	
	comp=Z,280nm,1.0s						
PEL	**Peldehue**	**2.85**	**163**	Pn	**Pn**	**00 01 22.2**	**+1.3**
PEL	**Peldehue**	**2.85**	**163**	*i* P	**Pn**	**00 01 22.2**	**+1.3**
PEL				*i* S	**Sn**	**00 01 56.8**	**+2.7**
PEL				IAML		00 02 10.4	
	comp=N,1μm,0.5s						
MT02	**Curacav**	**2.87**	**171**	Pn	**Pn**	**00 01 23.4**	**+2.3**
MT02	**Curacav**	**2.87**	**171**	*e*P	**Pn**	**00 01 21.7**	**+0.5**
MT02				*e*S	**Sn**	**00 01 56.9**	**+2.4**
RTLL	**Cerro Villicun**	**2.92**	**109**	*i* P	**Pn**	**00 01 24.8**	**+3.0**
RTLL				IAML		00 02 15.9	
	comp=Z,546nm,0.5s						
MT10	**Hacienda Santa**	**3.01**	**161**	*e*P	**Pn**	**00 01 25.1**	**+1.9**
MT10				*e*S	**Sn**	**00 02 01.2**	**+3.0**
MT05	**Renca**	**3.07**	**165**	Pn	**Pn**	**00 01 25.9**	**+1.9**
MT05	**Renca**	**3.07**	**165**	*e*P	**Pn**	**00 01 26.0**	**+2.0**
MT05				*e*S	**Sn**	**00 02 01.5**	**+1.9**
MT05				IAML		00 02 17.5	
	comp=E,2μm,0.3s						
MT05	**Renca**	**3.07**	**165**	*i* P	**Pn**	**00 01 25.8**	**+1.9**
MT05				IAML		00 02 12.1	
	comp=Z,610nm,0.8s						
GO03	**Copiapo**	**3.10**	**25**	Pn	**Pn**	**00 01 25.7**	**+1.3**
GO03	**Copiapo**	**3.10**	**25**	*i* P	**Pn**	**00 01 25.7**	**+1.3**
GO03				*e*S	**Sn**	**00 02 03.0**	**+2.7**
GO03				IAML		00 02 17.6	
	comp=E,808nm,0.4s						
MT14	**Cerro Cal¡n**	**3.12**	**162**	*i* P	**Pn**	**00 01 26.8**	**+2.0**
MT14				*i* S	**Sn**	**00 02 03.4**	**+2.4**
MT14				IAML		00 02 18.1	
	comp=E,2μm,0.7s						
MT16	**CCHEN**	**3.16**	**162**	Pn	**Pn**	**00 01 26.8**	**+1.6**
MT16	**CCHEN**	**3.16**	**162**	*i* P	**Pn**	**00 01 27.2**	**+2.0**
MT16				*i* S	**Sn**	**00 02 03.4**	**+1.6**
MT16				IAML		00 02 19.5	
	comp=N,1μm,0.8s						
CFA	**Coronel Fontan**	**3.20**	**112**	Pn	**Pn**	**00 01 29.2**	**+3.5**
	comp=N,18nm,0.3s,baz=326,slow=12,SNR=79						
CFA				Sn	**Sb**	**00 02 09.2**	**-3.2**
	comp=N,21nm,0.3s,baz=66,slow=15,SNR=9.4						
	comp=N,76nm,0.3s						
CFA	**Coronel Fontan**	**3.20**	**112**	*i* P	**Pn**	**00 01 28.6**	**+2.9**
CFA				IAML		00 02 21.4	
	comp=Z,456nm,0.6s						
MT03	**Universidad Ad**	**3.22**	**162**	Pn	**Pn**	**00 01 27.7**	**+1.6**
MT03	**Universidad Ad**	**3.22**	**162**	*i* P	**Pn**	**00 01 27.4**	**+1.3**
MT03				*i* S	**Sn**	**00 02 05.8**	**+2.4**
MT03				IAML		00 02 22.2	
	comp=N,1μm,0.3s						
MT03	**Universidad Ad**	**3.22**	**162**	*i* P	**Pn**	**00 01 28.0**	**+1.9**
MT03				IAML		00 02 26.8	
	comp=Z,808nm,0.6s						
MT04	**Ro Olivares**	**3.26**	**156**	*e*P	**Pn**	**00 01 28.6**	**+1.9**
MT04				IAML		00 02 18.9	
	comp=E,900nm,0.4s						
MT04	**Ro Olivares**	**3.26**	**156**	*i* P	**Pn**	**00 01 30.4**	**+3.8**
MT04				IAML		00 02 16.9	
	comp=Z,589nm,1.0s						
ASAL	**Salagasta**	**3.27**	**132**	*i* P	**Pb**	**00 01 31.6**	**-3.5**
ASAL				IAML		00 02 29.8	
	comp=Z,0.4nm,1.2s						
AC06	**Mina Casimiro**	**3.28**	**21**	Pn	**Pn**	**00 01 28.2**	**+1.4**
AC06	**Mina Casimiro**	**3.28**	**21**	*i* P	**Pn**	**00 01 27.9**	**+1.1**
AC06				IAML		00 02 26.8	
	comp=E,569nm,0.7s						
MT15	**Las Vizcachas**	**3.33**	**163**	*i* P	**Pn**	**00 01 29.4**	**+1.9**
MT15				IAML		00 02 25.2	
	comp=N,2μm,0.4s						
MT08	**Bocatoma Ro**	**3.33**	**155**	*i* P	**Pn**	**00 01 31.6**	**+3.8**
MT08				*i* S	**Sn**	**00 02 09.0**	**+2.6**
MT08				IAML		00 02 22.3	
	comp=N,662nm,0.5s						
MT08	**Bocatoma Ro**	**3.33**	**155**	*i* P	**Pn**	**00 01 31.3**	**+3.6**
MT08				IAML		00 02 28.5	
	comp=Z,478nm,0.6s						
ARCO	**CERRO ARCO**	**3.38**	**136**	*i* P	**Pb**	**00 01 33.6**	**-3.4**
ARCO				IAML		00 02 32.3	
	comp=Z,563nm,0.8s						
MT09	**Talagante**	**3.40**	**170**	*i* P	**Pn**	**00 01 30.0**	**+1.4**
MT09				IAML		00 02 26.4	
	comp=E,733nm,0.4s						
MT12	**Pirque**	**3.44**	**164**	*e*P	**Pn**	**00 01 30.5**	**+1.5**
MT12				*e*S	**Sn**	**00 02 10.7**	**+1.9**
MT12				IAML		00 02 31.1	
	comp=N,1μm,0.3s						
MT01	**Popeta**	**3.45**	**174**	⇓*i*P	**Pn**	**00 01 30.0**	**+0.8**
VCA	**Vinchina**	**3.48**	**62**	*i* P	**Pn**	**00 01 34.3**	**+4.6**
VCA				IAML		00 02 39.7	
	comp=Z,615nm,1.0s						
AAGR	**Agrelo**	**3.61**	**138**	*i* P	Pn	00 01 36.5	+5.0
AAGR				IAML		00 02 31.9	
	comp=Z,356nm,0.9s						
LMEL	**Las Melosas**	**3.64**	**160**	*i* P	**Pn**	**00 01 34.3**	**+2.4**
LMEL				*i* S	**Sn**	**00 02 15.4**	**+1.5**
AVFE	**Valle Fertil**	**3.67**	**95**	*i* P	**Pn**	**00 01 35.5**	**+3.2**
AVFE				IAML		00 02 30.2	
	comp=Z,320nm,0.7s						
BO04	**La Punta**	**3.67**	**166**	*e*P	**Pn**	**00 01 33.8**	**+1.5**
BO01	**Tunca**	**3.99**	**173**	Pn	**Pn**	**00 01 37.8**	**+1.2**
BO01	**Tunca**	**3.99**	**173**	*e*P	**Pn**	**00 01 37.2**	**+0.6**
AC02	**Maricunga**	**4.23**	**33**	Pn	**Pn**	**00 01 42.1**	**+1.7**
AC02	**Maricunga**	**4.23**	**33**	*e*P	**Pn**	**00 01 42.2**	**+1.9**
ACLC	**CERRO LA CRUZ**	**4.24**	**78**	*i* P	**Pn**	**00 01 43.7**	**+3.5**
ACLC				IAML		00 02 45.3	
	comp=Z,218nm,0.4s						

*KRNET **11** 00:01:17.8±0.1, 40˚.09N×76˚.42E, mb3.1*
*NNC **11** 00:01:26.0±1.8, 40˚.34N×76˚.35E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=12.9km s-min=9.0km az=165.0*
*SOME **11** 00:01:27.5, 40˚.43N×76˚.37E, h5km*
ISC 11 00:01:23.2±2.0, **40˚.25N**±0˚.08×**76˚.24E**±0˚.04, **h0**km±13km, **n39**, σ1§**53**/61, **16C-3D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNKS	**Jany-Kuch**	**0.93**	**330**	⇑*iP*	**Pg**	**00 01 39.4**	**-1.6**
JNKS				⇑*iS*	**Sg**	**00 01 55.2**	**+2.2**
TARG	**Taragay, Kyrgy**	**1.89**	**38**	⇑*eP*	**Pn**	**00 01 54.1**	**-3.0**
TARG				⇑*iS*	**Sn**	**00 02 20.3**	**-1.6**
SALK	**Salom-Alik**	**1.95**	**290**	⇑*eP*	**Pn**	**00 01 57.5**	**-0.2**
SALK				⇑*iS*	**Sg**	**00 02 25.9**	**+0.1**
ULHL	**Ulahol**	**1.99**	**360**	⇑*iP*	**Pn**	**00 01 57.4**	**-0.9**
ULHL				⇑*iS*	**Sb**	**00 02 25.7**	**-0.2**
KDJ	**Kajisay**	**2.01**	**20**	⇑*eP*	**Pn**	**00 01 56.5**	**-2.0**
KDJ				⇑*iS*	**Sb**	**00 02 24.7**	**-1.5**
BOOM	**Boomskoye usch**	**2.25**	**354**	⇑*iP*	**Pn**	**00 02 00.9**	**-0.9**
BOOM				⇑*iS*	**Sb**	**00 02 32.2**	**-1.0**
AAK	**Ala-Archa**	**2.72**	**332**	⇑Pn	**Pn**	**00 02 09.7**	**+1.4**
	0.3nm,0.4s						
AAK				⇓Pg	**Pb**	**00 02 14.5**	**+1.7**
	5.6nm,0.5s						
AAK				⇑Lg	Lg	00 02 50.4	
	5.5nm,0.6s						
IZV	**Izvestkoviy**	**2.80**	**6**	*eP*	**Pb**	**00 02 14.7**	**+0.6**
	3.6nm,0.3s						
IZV				*eS*	**Sb**	**00 02 48.3**	**-0.7**
	8.6nm,0.4s						
KST	**Kastek**	**2.80**	**356**	Pg	**Pg**	**00 02 16.8**	**0.0**
	7.6nm,0.4s						
KST				Lg	Lg	00 02 52.3	
	15nm,0.5s						
KST	**Kastek**	**2.80**	**356**	*eP*	**Pg**	**00 02 16.8**	**0.0**
	7.6nm,0.4s						
KST				*eS*	**Sg**	**00 02 52.3**	**-0.8**
	15nm,0.5s						
TNSS	**Tian-Shan**	**2.83**	**11**	Pg	**Pg**	**00 02 18.2**	**+0.7**
	4.0nm,0.3s						
TNSS				Lg	Lg	00 02 54.8	
	4.8nm,0.8s						
TNSS	**Tian-Shan**	**2.83**	**11**	*eP*	**Pg**	**00 02 18.2**	**+0.7**
	4.0nm,0.3s						
TNSS				*eS*	**Sg**	**00 02 54.8**	**+0.6**
	4.8nm,0.8s						
MTBS	**Maitube**	**2.88**	**3**	Pg	**Pg**	**00 02 18.2**	**-0.1**
	5.5nm,0.4s						
MTBS				Lg	Lg	00 02 54.9	
	7.8nm,0.5s						
MTBS	**Maitube**	**2.88**	**3**	*eP*	**Pg**	**00 02 18.2**	**-0.1**
	5.5nm,0.4s						
MTBS				*eS*	**Sg**	**00 02 54.9**	**-0.8**
	7.8nm,0.5s						
MDOK	**Medeo**	**2.97**	**11**	Pg	**Pg**	**00 02 20.6**	**+0.4**
	20nm,0.4s						
MDOK				Lg	Lg	00 02 58.7	
	22nm,0.5s						
DGS	**Degeres**	**3.01**	**353**	Pg	**Pg**	**00 02 21.2**	**+0.4**
	7.7nm,0.5s						
DGS				Lg	Lg	00 02 59.7	
	14nm,0.5s						
DGS	**Degeres**	**3.01**	**353**	*eP*	**Pg**	**00 02 21.2**	**+0.4**
	7.7nm,0.5s						
DGS				*eS*	**Sg**	**00 02 59.7**	**-0.1**
	14nm,0.5s						
KOTS	**Kotyrbulak**	**3.05**	**12**	Pg	**Pg**	**00 02 21.1**	**-0.5**
	8.3nm,0.3s						
KOTS				Lg	Lg	00 02 59.6	
	38nm,0.3s						
KOTS	**Kotyrbulak**	**3.05**	**12**	*eP*	**Pg**	**00 02 21.1**	**-0.5**
	8.3nm,0.3s						
KOTS				*eS*	**Sg**	**00 02 59.6**	**-1.6**
	38nm,0.3s						
SATY	**Saty**	**3.24**	**29**	Pg	**Pb**	**00 02 23.1**	**+1.5**
	4.9nm,0.3s						
SATY				Lg	Lg	00 03 03.1	
	12nm,0.4s						
MRKS	**Merke**	**3.37**	**319**	*eP*	**Pg**	**00 02 28.0**	**+0.3**
	4.6nm,0.4s						
MRKS				*eS*	**Sg**	**00 03 11.1**	**-0.2**
	8.0nm,0.3s						
SGDS	**Sogindy**	**3.42**	**340**	Pg	**Pg**	**00 02 28.5**	**-0.2**
	2.2nm,0.2s						
SGDS				Lg	Lg	00 03 12.2	
	4.6nm,0.5s						
KRBS	**Karabastau**	**3.47**	**353**	Pg	**Pg**	**00 02 29.2**	**-0.4**
	11nm,0.4s						
KRBS				Lg	Lg	00 03 13.6	
	9.3nm,0.3s						
KRBS	**Karabastau**	**3.47**	**353**	*eP*	**Pg**	**00 02 29.2**	**-0.4**
	11nm,0.4s						
KRBS				*eS*	**Sg**	**00 03 13.6**	**-0.9**
	9.3nm,0.3s						
KTBS	**Karatobe**	**3.47**	**5**	Pg	**Pg**	**00 02 28.3**	**-1.5**
	10nm,0.3s						
KTBS				Lg	Lg	00 03 12.0	
KTBS	**Karatobe**	**3.47**	**5**	*eP*	**Pg**	**00 02 28.3**	**-1.5**
	10nm,0.3s						
KTBS				*eS*	**Sb**	**00 03 12.0**	**+3.7**
	0.4nm,0.4s						
UZB	**Uzynbulak**	**3.56**	**35**	Pg	**Pb**	**00 02 27.6**	**+0.4**
	4.8nm,0.2s						
UZB				Lg	Lg	00 03 10.8	
	6.6nm,0.7s						
UZB	**Uzynbulak**	**3.56**	**35**	*eP*	**Pb**	**00 02 27.6**	**+0.4**
	2.2nm,0.2s						
UZB				*eS*	**Sb**	**00 03 10.8**	**-0.2**
	5.2nm,0.8s						
KPKS	**Kokpek**	**3.69**	**29**	Pg	**Pb**	**00 02 31.1**	**+1.8**
	0.6nm,0.2s						
KPKS				Lg	Lg	00 03 17.1	
	18nm,0.4s						
KPKS	**Kokpek**	**3.69**	**29**	*eP*	**Pb**	**00 02 31.1**	**+1.8**
	0.6nm,0.2s						
KPKS				*eS*	**Sb**	**00 03 17.1**	**+2.5**
	18nm,0.4s						
SHLS	**Shalkode**	**3.77**	**39**	Pg	**Pg**	**00 02 35.9**	**+0.5**
	4.3nm,0.3s						
SHLS				Lg	Lg	00 03 25.1	
	9.0nm,0.6s						
SHLS	**Shalkode**	**3.77**	**39**	*eP*	**Pg**	**00 02 35.9**	**+0.5**
	4.3nm,0.3s						
SHLS				*eS*	**Sg**	**00 03 25.1**	**+0.7**
	9.0nm,0.6s						
PDGK	**Podgornoye**	**3.92**	**37**	⇑Pg	**Pb**	**00 02 34.9**	**+1.7**
	2.7nm,0.6s						
PDGK				⇑Lg	Lg	00 03 27.6	
	5.9nm,0.7s						
ARXS	**Arharly**	**4.13**	**16**	Pg	**Pb**	**00 02 39.7**	**+2.9**
	5.0nm,0.6s						
ARXS				Lg	Lg	00 03 31.3	
	5.7nm,0.4s						
ARXS	**Arharly**	**4.13**	**16**	*eP*	**Pb**	**00 02 39.7**	**+2.9**
	5.0nm,0.6s						
ARXS				*eS*	**Sb**	**00 03 31.3**	**+4.1**
	5.7nm,0.4s						
BLB	**Baldybastay**	**4.19**	**23**	Pg	**Pb**	**00 02 38.7**	**+1.0**
	14nm,0.6s						
BLB				Lg	Lg	00 03 30.3	
	10nm,0.5s						
BTLS	**Baital**	**5.05**	**342**	*eP*	**Pg**	**00 02 57.8**	**-2.2**
	1.8nm,0.4s						
BTLS				*eS*	**Sg**	**00 04 02.3**	**-3.2**
	6.8nm,0.9s						
KK31	**Karatay Array**	**5.15**	**305**	⇓Pg	**Pb**	**00 02 55.6**	**+1.5**
	0.5nm,0.5s,baz=119,slow=17,SNR=4.3						
KK31				⇓Lg	Lg	00 04 05.0	
	1.0nm,0.5s,baz=126,slow=27,SNR=3.7						
BRLS	**Boroldaу**	**5.54**	**302**	*eP*	**Pg**	**00 03 07.9**	**-1.5**
	1.1nm,0.5s						
BRLS				*eS*	**Sg**	**00 04 19.9**	**-1.3**
	1.8nm,0.5s						

*SDD **11** 00:03:15.1±2.1, 19˚.92N×71˚.13W, h23km±11km, MD3.4, ML2.8, MW3.3, Presumed earthquake*
*OSPL **11** 00:03:16.3±2.2, 19˚.80N×71˚.07W, h0km±16km, ML2.7, Presumed earthquake*
ISC 11 00:03:14.5±1.0, **19˚.86N**±0˚.03×**71˚.11W**±0˚.03, **h24**km±5km, **n21**, σ0§**96**/34, **17C-3D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LOPP1	**Punta Rusia, P**	**0.09**	**266**	*i* P	**Pb**	**00 03 18.4**	**-0.5**
LOPP1				*e*S	**Sb**	**00 03 21.5**	**-0.5**
LOPP1				IAML		00 03 21.9	
	comp=Z,8μm,0.4s						
LUDR	**Luperon**	**0.15**	**77**	⇑*e*Pg	**Pn**	**00 03 19.4**	**-1.9**
LUDR				*e*Sg	**Sn**	**00 03 23.9**	**+1.1**
MCDR	**Montecristi**	**0.52**	**274**	⇑*e*Pg	**Pn**	**00 03 25.6**	**-0.8**
MCDR				IAML		00 03 36.2	
	comp=N,438nm,0.1s						
SC01	**Santiago de lo**	**0.56**	**140**	⇑*e*Pg	**Pn**	**00 03 26.2**	**-0.7**
SC01				⇑*e*Sg	**Sn**	**00 03 35.9**	**+0.4**
SC01				IAML		00 03 36.3	
	comp=N,381nm,0.3s						
LODA1	**ITESIL, Dajabo**	**0.65**	**241**	⇑*e*Sg	**Sb**	**00 03 36.3**	**+0.5**
LODA1				IAML		00 04 06.9	
	comp=N,2μm,4.9s						
LODA1	**ITESIL, Dajabo**	**0.65**	**241**	*i* P	**Pb**	**00 03 26.7**	**-0.5**
LODA1				*e*S	**Sb**	**00 03 36.0**	**+0.3**
REDR	**Restauracion**	**0.74**	**202**	⇑*e*Pg	**Pb**	**00 03 29.3**	**+0.5**
REDR				⇓*e*Sg	**Sn**	**00 03 40.4**	**+0.4**
REDR				IAML		00 03 41.7	
	comp=N,1μm,0.2s						
SDDR	**Presa de Saban**	**0.89**	**191**	⇓*e*Pg	**Pn**	**00 03 30.5**	**-1.0**
SDDR				⇑*e*Sg	**Sn**	**00 03 43.4**	**-0.3**
SDDR				IAML		00 03 43.7	
	comp=N,343nm,0.4s						
SDDR	**Presa de Saban**	**0.89**	**191**	*i* P	**Pn**	**00 03 30.7**	**-0.8**
SDDR				*e*S	**Sn**	**00 03 43.0**	**-0.7**
SDDR				IAML		00 03 43.7	
	comp=Z,224nm,0.4s						
ABDR	**Alto Bandera**	**1.14**	**156**	⇑*e*Pg	**Pb**	**00 03 35.5**	**-0.2**
ABDR				⇑*e*Sg	**Sn**	**00 03 50.2**	**-0.1**
ABDR				IAML		00 03 52.1	
	comp=N,0.3nm,0.7s						
LONE3	**El Aguacate, B**	**1.29**	**195**	*i* P	**Pb**	**00 03 38.0**	**-0.2**
LONE3				*e*S	**Sb**	**00 03 55.5**	**+1.0**
LONE3				IAML		00 03 56.7	
	comp=Z,126nm,0.8s						
DR08	**Loma La Naviza**	**1.36**	**131**	⇓*e*Pg	**Pb**	**00 03 40.2**	**+0.9**
DR08				⇑*e*Sg	**Sb**	**00 03 57.2**	**+0.9**
DR08				IAML		00 03 58.3	
	comp=N,2μm,0.2s						
NEDR	**Neiba UASD**	**1.40**	**192**	⇑*e*Sg	**Sb**	**00 03 58.5**	**+1.1**
NEDR				IAML		00 04 01.1	
	comp=N,130nm,0.5s						
JIDR	**Jimani**	**1.53**	**207**	⇑*e*Pg	**Pb**	**00 03 42.7**	**+0.5**
JIDR				⇑*e*Sg	**Sb**	**00 04 03.6**	**+2.4**
JIDR				IAML		00 04 48.9	
	comp=N,178nm,3.6s						
LODU1	**El Espartillar**	**1.54**	**193**	*i* P	**Pb**	**00 03 42.9**	**+0.5**
LODU1				IAML		00 04 04.7	
	comp=Z,140nm,0.6s						
BANI	**BANI**	**1.62**	**154**	⇑*e*Pg	**Pb**	**00 03 43.8**	**0.0**
BANI				IAML		00 04 12.1	
	comp=N,152nm,0.3s						
GRTK	**Grand Turk**	**1.64**	**359**	*i* P	**Pb**	**00 03 44.3**	**+0.1**
GRTK				*e*S	**Sb**	**00 04 07.1**	**+2.6**
GRTK				IAML		00 04 14.9	
	comp=Z,54nm,0.5s						
PODR	**Polo**	**1.69**	**186**	⇑*e*Pg	**Pb**	**00 03 45.0**	**-0.1**
PODR				IAML		00 04 11.6	
	comp=N,168nm,0.6s						
PAPH	**Port-au-Prince**	**1.74**	**221**	*i* P	**Pb**	**00 03 45.7**	**-0.2**
HATOM	**Hato Mayor del**	**1.95**	**123**	⇑*e*Pg	**Pb**	**00 03 48.5**	**-0.8**
HATOM				⇑*e*Sg	**Sb**	**00 04 13.7**	**+0.5**
HATOM				IAML		00 04 15.0	
	comp=N,89nm,0.7s						
LOBH	**Bahia de las A**	**2.05**	**194**	*i* P	**Pb**	**00 03 51.2**	**+0.1**
LOBH				IAML		00 04 25.4	
	comp=Z,58nm,1.0s						

*IDC **11** 00:22:11.3±1.1, 67˚.74N×20˚.36E, h0km, mbtmp3.1/4, ML2.3/3, Error ellipse: s-maj=17.5km s-min=7.8km az=120.0*
*UPP **11** 00:22:11.4±0.0, 67˚.85N×20˚.22E, h0km, ML2.4, Suspected explosion*
*HEL **11** 00:22:11.6±0.1, 67˚.84N×20˚.16E, h0km, ML2.0, Suspected explosion*
ISC 11 00:22:10.9±0.7, **67˚.84N**±0˚.02×**20˚.20E**±0˚.02, **h0**km, **n37**, σ1§**64**/67, **Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.13**	**25**	P	**Pg**	**00 22 13.8**	**+0.4**
	baz=222						
KUA				S	**Sg**	**00 22 15.5**	**+0.5**
RATU	**Laukkuluspa**	**0.23**	**266**	P	**Pg**	**00 22 16.1**	**+0.8**
RATU				S	**Sg**	**00 22 19.6**	**+1.3**
KOVU	**Salmi**	**0.38**	**358**	P	**Pg**	**00 22 18.5**	**+0.3**
KOVU				S	**Sg**	**00 22 23.7**	**+0.5**
NIKU	**Nikkaluokta**	**0.44**	**274**	P	**Pg**	**00 22 19.9**	**+0.5**
NIKU				S	**Sg**	**00 22 26.2**	**+1.2**
LANU	**Lannavaara**	**0.71**	**72**	P	**Pg**	**00 22 24.7**	**+0.2**
LANU				S	**Sg**	**00 22 34.1**	**+0.4**
LANU	**Lannavaara**	**0.71**	**72**	PG	**Pg**	**00 22 24.5**	**0.0**
LANU				SG	**Sg**	**00 22 33.9**	**+0.2**
DUNU	**Dundret**	**0.74**	**169**	P	**Pg**	**00 22 25.2**	**+0.2**
DUNU				S	**Sg**	**00 22 35.7**	**+1.2**
MASU	**Masugnsbyn**	**0.79**	**118**	P	**Pg**	**00 22 26.2**	**+0.2**
SALU	**Saltoluokta**	**0.80**	**235**	P	**Pg**	**00 22 26.5**	**+0.4**
SALU				S	**Sg**	**00 22 37.6**	**+1.2**
KIF	**Kilpisjarvi**	**1.19**	**11**	*eP*	**Pb**	**00 22 34.7**	**+0.4**
KIF	**Kilpisjarvi**	**1.19**	**11**	PG	**Pg**	**00 22 34.0**	**+0.3**
KIF				*smax*	*smax*	00 22 48.9	
	comp=Z,22nm,0.2s						
KIF				SG	**Sg**	**00 22 49.6**	**+0.5**
HEF	**Hetta**	**1.42**	**65**	*eP*	**Pn**	**00 22 37.0**	**-0.9**
HEF	**Hetta**	**1.42**	**65**	PG	**Pn**	**00 22 37.2**	**-0.8**
	baz=251						
HEF				*smax*	*smax*	00 22 54.6	
	comp=Z,16nm,0.2s						
HEF				SG	**Sg**	**00 22 55.6**	**-0.7**
ERTU	**Ertsjaerv**	**1.51**	**148**	P	**Pn**	**00 22 39.0**	**-0.1**
ERTU	**Ertsjaerv**	**1.51**	**148**	PG	**Pn**	**00 22 38.9**	**-0.3**
ERTU				SN	**Sg**	**00 22 59.6**	**+0.3**
KLF	**Kolari**	**1.57**	**111**	PG	**Pn**	**00 22 39.9**	**-0.1**
	baz=298						
KLF				*smax*	*smax*	00 22 59.0	
	comp=Z,6.8nm,0.2s						
KLF				SN	**Sn**	**00 23 01.2**	**+0.2**
KTK1	**Kautokeino**	**1.63**	**42**	PG	**Pn**	**00 22 40.9**	**+0.1**
KTK1				SN	**Sg**	**00 23 04.5**	**+1.4**
HARU	**Harads**	**1.71**	**169**	P	**Pn**	**00 22 42.7**	**+0.8**
TRO	**Tromso**	**1.86**	**346**	PG	**Pn**	**00 22 44.7**	**+0.7**
TRO				SG	**Sb**	**00 23 09.5**	**+0.1**
TOF	**Tornio**	**2.40**	**136**	PG	**Pn**	**00 22 53.2**	**+1.9**
TOF				*smax*	*smax*	00 23 22.9	
	comp=Z,5.1nm,0.2s						
TOF				SG	**Sb**	**00 23 25.5**	**+0.5**
RNF	**Rovaniemi**	**2.58**	**116**	PB	**Pn**	**00 22 55.9**	**+2.1**
	baz=302						
RNF				SG	**Sb**	**00 23 30.5**	**+0.3**
ARA0	**ARCESS Array S**	**2.58**	**46**	PB	**Pn**	**00 22 55.0**	**+1.1**
ARA0				SB	**Sb**	**00 23 29.1**	**-1.2**
ARCES	**ARCESS Array B**	**2.58**	**46**	Pn	**Pn**	**00 22 54.8**	**+0.9**
	comp=Z,1.0nm,0.3s,baz=226,slow=15,SNR=26						
ARCES				Sn	**Sb**	**00 23 28.9**	**-1.3**
	comp=Z,2.9nm,0.3s,baz=228,slow=24,SNR=15						
	comp=Z,1.9nm,0.3s						
RAJF	**Raja-Jooseppi**	**3.10**	**74**	PN	**Pn**	**00 23 01.6**	**+0.6**
RAJF				SB	**Sb**	**00 23 44.7**	**-0.5**
KEV	**Kevo**	**3.13**	**49**	PN	**Pn**	**00 23 02.4**	**+0.9**
KEV				SN	**Sn**	**00 23 40.8**	**+1.3**
RANF	**Ranua**	**3.18**	**122**	PB	**Pn**	**00 23 03.6**	**+1.5**
RANF				SG	**Sb**	**00 23 49.2**	**+1.9**
BURU	**Burvik**	**3.31**	**171**	PB	**Pn**	**00 23 05.9**	**+2.1**
BURU				SB	**Sn**	**00 23 47.0**	**+3.3**
VRF	**Varrio**	**3.58**	**87**	PN	**Pn**	**00 23 08.7**	**+1.1**
VRF				SN	**Sn**	**00 23 52.1**	**+1.6**
OUL	**Oulu**	**3.59**	**138**	PG	**Pg**	**00 23 17.9**	**-1.7**
	baz=322						
OUL				SG	**Sb**	**00 24 00.1**	**+1.0**
KU2	**Taivalkoski**	**3.83**	**120**	PN	**Pn**	**00 23 12.9**	**+1.8**
OLKF	**Oulanka, Finla**	**3.91**	**109**	PN	**Pn**	**00 23 13.5**	**+1.3**
OLKF				SG	**Sb**	**00 24 12.5**	**+4.0**
MSF	**Maaselka**	**3.99**	**115**	PN	**Pn**	**00 23 14.8**	**+1.5**
	baz=302						
MSF				SN	**Sn**	**00 24 02.3**	**+1.6**
KU6	**Riekki**	**4.23**	**111**	PN	**Pn**	**00 23 17.6**	**+1.1**
	baz=295						
KU1	**Kurvinen**	**4.36**	**117**	PN	**Pn**	**00 23 20.1**	**+1.8**
KU1				SN	**Sn**	**00 24 11.4**	**+1.6**
FINES	**FINESS Array B**	**6.90**	**156**	Pn	**Pn**	**00 23 51.4**	**-1.7**
	comp=Z,2.3nm,1.0s,baz=343,slow=12,SNR=1.3						
FINES				Sn	**Sn**	**00 25 09.4**	**-2.8**
	comp=Z,0.2nm,0.3s,baz=340,slow=24,SNR=4.1						
FINES				Lg	Lg	00 25 44.0	
	comp=Z,0.6nm,0.3s,baz=338,slow=30,SNR=8.5						
NOA	**NORSAR Array B**	**7.84**	**214**	Pn	**Pn**	**00 24 04.1**	**-2.1**
	baz=24,slow=11,SNR=2.4						
NOA				Sn	**Sn**	**00 25 30.8**	**-4.7**
	baz=28,slow=20,SNR=1.2						
NOA				Lg	Lg	00 26 14.6	
	baz=30,slow=21,SNR=6.3						
	comp=Z,1.1nm,0.9s						
HFS	**Hagfors**	**8.24**	**203**	Pn	**Pn**	**00 24 09.6**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=16,slow=11,SNR=1.2						
HFS				Sn	**Sn**	**00 25 39.0**	**-6.3**
	comp=Z,0.1nm,0.3s,baz=20,slow=25,SNR=1.8						
	comp=Z,1.8nm,0.9s						

*IDC **11** 00:32:13.3±0.9, 35˚.81N×28˚.23E, h0km, mb3.8/8, mbtmp3.7/18, ML3.6/9, MS3.1/9, Error ellipse: s-maj=18.5km s-min=13.7km az=177.0*
*HLW **11** 00:32:14.3, 35˚.75N×28˚.29E, h1km±1km, Md3.7, Ml3.9*
*NIC **11** 00:32:15.0, 35˚.55N×28˚.26E, h0km±1km, Ml3.5/17*
*ISK **11** 00:32:14.9, 35˚.82N×28˚.19E, h5km, ML3.8/20*
*AFAD **11** 00:32:15.9, 35˚.79N×28˚.15E, h22km±1km, MW3.9*
*GII **11** 00:32:15.4±0.0, 35˚.622N±0˚.001×28˚.258E±0˚.001, h0km, Mws4.0, confirmed*
*ATH **11** 00:32:16.1, 35˚.81N×28˚.26E, h12km±3km, ML3.7/10, Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*THE **11** 00:32:16.3, 36˚N±2˚×28˚E±˚, h0km±2km, M3.5/20, mb4.6/2, MLh3.5/20*
ISC 11 00:32:14.8±1.1, **35˚.70N**±0˚.03×**28˚.23E**±0˚.02, **h8**km±8km, **n172**, σ1§**65**/242, **mb3.8**/7, **MS3.3**/3, **Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.52**	**350**	P	**Pg**	**00 32 23.8**	**-1.1**
ARG				S	**Sg**	**00 32 30.5**	**-1.3**
ARG	**Arkhangelos**	**0.52**	**350**	Pg	**Pg**	**00 32 23.8**	**-1.1**
ARG				Sg	**Sg**	**00 32 30.5**	**-1.3**
ARG	**Arkhangelos**	**0.52**	**350**	P	**Pg**	**00 32 24.0**	**-0.9**
ARG				S	**Sg**	**00 32 30.7**	**-1.0**
ARG				AML	AML	00 32 34.9	
	19nm,0.5s						
ARG				AML	AML	00 32 36.6	
	9.7nm,0.6s						
ARG	**Arkhangelos**	**0.52**	**350**	P	**Pg**	**00 32 23.9**	**-1.1**
ARG				S	**Sg**	**00 32 30.3**	**-1.5**
RDI1	**Rhodes Town Ha**	**0.75**	**359**	P	**Pg**	**00 32 28.6**	**-0.6**
RDI1				S	**Sg**	**00 32 37.6**	**-1.4**
KARP	**Karpathos**	**0.89**	**260**	P	**Pg**	**00 32 32.4**	**+0.6**
KARP				S	**Sb**	**00 32 46.6**	**+2.1**
KARP	**Karpathos**	**0.89**	**260**	Pg	**Pg**	**00 32 32.4**	**+0.6**
KARP				Sg	**Sb**	**00 32 46.5**	**+2.1**
KARP	**Karpathos**	**0.89**	**260**	P	**Pg**	**00 32 32.4**	**+0.6**
KARP				S	**Sn**	**00 32 47.1**	**+0.5**
KARP				AML	AML	00 32 51.7	
	11nm,0.7s						
KARP				AML	AML	00 32 55.5	
	14nm,0.5s						
KARP	**Karpathos**	**0.89**	**260**	P	**Pg**	**00 32 32.8**	**+1.0**
KARP				S	**Sb**	**00 32 46.7**	**+2.3**
TURN	**Turunc**	**1.07**	**0**	Pg	**Pg**	**00 32 33.9**	**-1.5**
TURN	**Turunc**	**1.07**	**0**	P	**Pg**	**00 32 34.1**	**-1.3**
TURN				S	**Sn**	**00 32 52.8**	**+1.7**
IZZE	**Mula-Seydike**	**1.09**	**47**	P	**Pg**	**00 32 36.5**	**+0.8**
IZZE				S	**Sb**	**00 32 52.0**	**+1.8**
DATC	**Datca-Mugla**	**1.15**	**336**	Pg	**Pg**	**00 32 35.5**	**-1.4**
DAT	**Datca**	**1.15**	**333**	P	**Pg**	**00 32 35.8**	**-1.2**
DAT				S	**Sg**	**00 32 51.6**	**-0.4**
DAT	**Datca**	**1.15**	**333**	Pg	**Pg**	**00 32 36.1**	**-0.9**
FETY	**Fethiye**	**1.16**	**36**	P	**Pn**	**00 32 40.1**	**+2.8**
FETY				S	**Sn**	**00 32 57.4**	**+4.1**
DALY	**Dalyan (Mula)**	**1.16**	**17**	Pg	**Pg**	**00 32 36.3**	**-0.8**
YAZI	**Mula-Dat§a-**	**1.16**	**327**	P	**Pg**	**00 32 36.5**	**-0.7**
YAZI				S	**Sg**	**00 32 50.8**	**-1.4**
KSL	**Kastellorizon**	**1.18**	**67**	P	**Pn**	**00 32 38.6**	**+1.1**
KSL				S	**Sn**	**00 32 56.3**	**+2.4**
KSL	**Kastellorizon**	**1.18**	**67**	P	**Pn**	**00 32 38.5**	**+1.0**
KSL				S	**Sn**	**00 32 58.5**	**+4.6**
KSL				AML	AML	00 33 03.2	
	3.3nm,1.0s						
KSL				AML	AML	00 33 03.9	
	4.5nm,1.0s						
AKAS	**Kas**	**1.23**	**64**	Pn	**Pn**	**00 32 39.4**	**+1.0**
AKAS				Sn	**Sn**	**00 32 57.5**	**+2.2**
SABU	**Mula-Dalaman**	**1.27**	**28**	P	**Pg**	**00 32 38.8**	**-0.3**
SABU				S	**Sb**	**00 32 56.6**	**+1.2**
YER	**Yerkesik**	**1.43**	**2**	P	**Pn**	**00 32 41.1**	**+0.1**
YER				S	**Sb**	**00 33 00.5**	**+0.4**
YER	**Yerkesik**	**1.43**	**2**	Pn	**Pn**	**00 32 40.8**	**-0.3**
BODA	**Bodrum-Mula**	**1.48**	**334**	Pn	**Pn**	**00 32 41.7**	**0.0**
CAME	**Cameli-Denizli**	**1.51**	**35**	Pn	**Pn**	**00 32 43.2**	**+1.0**
MULA	**Mugla, Merkez-**	**1.55**	**3**	P	**Pn**	**00 32 43.4**	**+0.6**
MULA				S	**Sg**	**00 33 06.0**	**+1.2**
YKAV	**Yalikavak-Bodr**	**1.61**	**332**	Pn	**Pn**	**00 32 43.9**	**+0.4**
MLSB	**Milas**	**1.63**	**347**	Pn	**Pn**	**00 32 44.1**	**+0.3**
CAEL	**Denizli, Camel**	**1.67**	**31**	P	**Pn**	**00 32 45.9**	**+1.5**
DNZT	**Denizli-Tavas-**	**1.70**	**22**	P	**Pn**	**00 32 46.5**	**+1.8**
DNZT				S	**Sn**	**00 33 07.0**	**+0.3**
ELL	**Elmali**	**1.71**	**52**	Pn	**Pn**	**00 32 45.9**	**+0.9**
ELL	**Elmali**	**1.71**	**52**	P	**Pn**	**00 32 46.6**	**+1.7**
ELL

BLCB	**Balcova**	**2.84**	**341**	P	**Pn**	**00 33 00.4**	**-0.1**
VAM	**Vamos**	**3.30**	**266**	P	**Pn**	**00 33 08.2**	**+1.4**
OSC1	**CSNet OBS 1**	**3.33**	**130**	P	**Pn**	**00 33 07.5**	**+0.3**
OSC1				S	**Sn**	**00 33 48.4**	**+1.4**
OSC1				AML	AML	00 33 52.6	
	0.2nm,0.5s						
OSC1				AML	AML	00 33 56.9	
	0.2nm,0.5s						
AKMS	**Akamas**	**3.42**	**100**	P	**Pn**	**00 33 09.4**	**+1.0**
AKMS				S	**Sn**	**00 33 51.9**	**+2.8**
AKMS				AML	AML	00 33 54.1	
	0.4nm,0.7s						
AKMS				AML	AML	00 33 54.4	
	0.4nm,0.6s						
AKMS	**Akamas**	**3.42**	**100**	P	**Pn**	**00 33 09.4**	**+1.0**
IMMV	**Iera Moni Meta**	**3.48**	**267**	P	**Pn**	**00 33 11.6**	**+2.5**
GVD	**Gavdhos**	**3.50**	**257**	P	**Pn**	**00 33 12.3**	**+2.9**
ALFC	**Alefka**	**3.61**	**97**	P	**Pn**	**00 33 11.6**	**+0.7**
ALFC				AML	AML	00 33 56.8	
	0.5nm,0.8s						
ALFC				S	**Sn**	**00 33 57.3**	**+3.6**
ALFC				AML	AML	00 33 59.6	
	0.3nm,0.8s						
ALFC	**Alefka**	**3.61**	**97**	P	**Pn**	**00 33 11.8**	**+0.9**
NATA	**Nata**	**3.67**	**103**	P	**Pn**	**00 33 12.8**	**+1.0**
NATA				S	**Sn**	**00 33 57.4**	**+2.3**
NATA				AML	AML	00 34 05.1	
	1.1nm,0.6s						
NATA				AML	AML	00 34 06.5	
	0.8nm,0.7s						
NATA	**Nata**	**3.67**	**103**	P	**Pn**	**00 33 12.8**	**+1.0**
TROD	**Troodos**	**3.86**	**100**	P	**Pn**	**00 33 14.9**	**+0.3**
TROD				AML	AML	00 34 04.5	
	0.1nm,0.8s						
TROD				S	**Sb**	**00 34 09.1**	**-1.1**
TROD				AML	AML	00 34 12.6	
	0.3nm,0.7s						
PRK	**Paraskevi**	**3.87**	**337**	P	**Pn**	**00 33 15.1**	**+0.6**
APOL	**The Sanctuary**	**3.93**	**104**	P	**Pn**	**00 33 16.0**	**+0.7**
APOL				S	**Sn**	**00 34 04.6**	**+3.0**
APOL				AML	AML	00 34 08.4	
	0.2nm,0.5s						
APOL				AML	AML	00 34 12.9	
	0.2nm,0.5s						
SIGR	**SIGRI**	**3.98**	**332**	P	**Pn**	**00 33 16.8**	**+0.7**
XYLS	**Xyliatos**	**4.00**	**98**	P	**Pn**	**00 33 17.1**	**+0.8**
XYLS				S	**Sn**	**00 34 05.8**	**+2.5**
XYLS				AML	AML	00 34 10.0	
	0.2nm,0.5s						
XYLS				AML	AML	00 34 14.4	
	0.3nm,0.6s						
VLY	**Voula,Athens**	**4.16**	**302**	P	**Pn**	**00 33 20.3**	**+1.8**
VLY	**Voula,Athens**	**4.16**	**302**	P	**Pn**	**00 33 19.1**	**+0.6**
ASGA	**Asgata**	**4.20**	**101**	P	**Pn**	**00 33 19.9**	**+0.8**
ASGA				S	**Sn**	**00 34 11.0**	**+2.6**
ASGA				AML	AML	00 34 15.9	
	0.3nm,0.5s						
ASGA				AML	AML	00 34 16.7	
	0.2nm,0.4s						
ASGA	**Asgata**	**4.20**	**101**	P	**Pn**	**00 33 20.0**	**+0.9**
CSS	**Mathiatis**	**4.23**	**99**	P	**Pn**	**00 33 20.2**	**+0.6**
CSS				S	**Sn**	**00 34 11.9**	**+2.8**
CSS				AML	AML	00 34 12.2	
	0.2nm,0.7s						
CSS				AML	AML	00 34 23.7	
	0.2nm,0.7s						
CSS	**Mathiatis**	**4.23**	**99**	P	**Pn**	**00 33 20.2**	**+0.6**
CSS	**Mathiatis**	**4.23**	**99**	P	**Pn**	**00 33 20.0**	**+0.5**
CSS				S	**Sn**	**00 34 08.**	**-0.2**
KTHA	**Kythira Island**	**4.23**	**279**	P	**Pn**	**00 33 20.9**	**+1.3**
OSC2	**CSNet OBS 4**	**4.24**	**127**	P	**Pn**	**00 33 20.5**	**+0.8**
OSC2				S	**Sn**	**00 34 10.5**	**+1.3**
OSC2				AML	AML	00 34 19.2	
	0.2nm,0.9s						
OSC2				AML	AML	00 34 27.1	
	0.2nm,0.6s						
ATHP	**Athens-Neo Psi**	**4.25**	**304**	P	**Pn**	**00 33 21.1**	**+1.3**
EZN	**Ezine**	**4.39**	**340**	P	**Pn**	**00 33 22.1**	**+0.5**
VLI	**Veliai**	**4.40**	**285**	P	**Pn**	**00 33 23.7**	**+1.8**
VLI	**Veliai**	**4.40**	**285**	P	**Pn**	**00 33 22.8**	**+0.9**
MATC	**Matruh**	**4.42**	**191**	P	**Pn**	**00 33 23.4**	**+1.3**
MVOU	**Mavrovouni**	**4.46**	**97**	P	**Pn**	**00 33 23.5**	**+0.8**
MVOU				S	**Sn**	**00 34 17.8**	**+3.0**
MVOU				AML	AML	00 34 19.6	
	0.2nm,0.5s						
MVOU				AML	AML	00 34 30.3	
	0.1nm,1.0s						
PARAL	**Paralimni**	**4.80**	**97**	P	**Pn**	**00 33 28.8**	**+1.5**
PARAL				S	**Sn**	**00 34 26.5**	**+3.4**
PARAL				AML	AML	00 34 34.8	
	0.3nm,1.2s						
PARAL				AML	AML	00 34 35.0	
	0.3nm,1.0s						
LIA	**Limnos Island**	**4.84**	**331**	P	**Pn**	**00 33 27.9**	**+0.1**
GADA	**Gvkgeada**	**4.85**	**338**	P	**Pn**	**00 33 28.2**	**+0.3**
SLUM	**Salum**	**4.90**	**212**	P	**Pn**	**00 33 28.9**	**+0.2**
SLUM				S	**Sn**	**00 34 25.1**	**-0.4**
ENEZ	**Enez**	**5.29**	**343**	P	**Pn**	**00 33 34.9**	**+0.9**
	0.1nm95nm,0.8s						
KLV	**Kalavryta, Ach**	**5.41**	**297**	P	**Pn**	**00 33 37.9**	**+2.2**
BRTR	**Keskin Array B**	**5.87**	**45**	Pn	**Pn**	**00 33 42.8**	**+0.6**
	0.2nm,0.3s,baz=222,slow=12,SNR=13						
BRTR				Sn	**Sn**	**00 34 46.9**	**-2.9**
	0.9nm,0.3s,baz=216,slow=26,SNR=11						
BRTR				LR	LR	00 35 54.0	
	comp=Z,20nm,21.2s,baz=223,slow=38						
	2.3nm,0.8s						
OFRI	**`Ofer**	**6.38**	**117**	P	**Pn**	**00 33 48.9**	**-0.3**
OFRI				S	**Sn**	**00 35 01.5**	**-0.8**
MMC7	**Mount Meron ar**	**6.50**	**112**	P	**Pn**	**00 33 50.7**	**0.0**
MMA0B	**Mount Meron ar**	**6.51**	**112**	P	**Pn**	**00 33 51.1**	**+0.2**
MMA0B				S	**Sn**	**00 35 05.0**	**-0.3**
MMAI	**Mount Meron Ar**	**6.51**	**112**	Pn	**Pn**	**00 33 50.4**	**-0.4**
	6.4nm,0.3s,baz=336,slow=14,SNR=23						
MMAI				Sn	**Sn**	**00 35 04.0**	**-1.2**
	4.3nm,0.3s,baz=282,slow=29,SNR=5.4						
	3.3nm,0.3s						
GEM	**Giv'at Ha'Em**	**6.62**	**110**	P	**Pn**	**00 33 52.5**	**+0.2**
GEM				S	**Sn**	**00 35 07.6**	**-0.4**
SLTI	**Sal'it**	**6.62**	**119**	P	**Pn**	**00 33 52.1**	**-0.3**
SLTI				S	**Sn**	**00 35 07.3**	**-0.8**
NATI	**Neve Ativ**	**6.66**	**109**	P	**Pn**	**00 33 52.7**	**-0.1**
NATI				S	**Sn**	**00 35 08.5**	**-0.3**
MMLI	**Mount Malkishu**	**6.79**	**117**	P	**Pn**	**00 33 54.5**	**-0.2**
MMLI				S	**Sn**	**00 35 11.4**	**-0.9**
RYAN	**Fayoum**	**6.82**	**165**	P	**Pn**	**00 33 56.4**	**+1.3**
RYAN				S	**Sn**	**00 35 10.4**	**-2.5**
SALP	**Salfit**	**6.83**	**120**	P	**Pn**	**00 33 55.1**	**-0.1**
SALP				S	**Sn**	**00 35 12.2**	**-0.9**
KSHT	**Keshet**	**6.83**	**111**	P	**Pn**	**00 33 55.3**	**+0.1**
KSHT				S	**Sn**	**00 35 13.1**	**-0.1**
SWA2		**6.85**	**201**	P	**Pn**	**00 33 57.2**	**+1.6**
AMAZ	**Amatzia**	**6.95**	**125**	P	**Pn**	**00 33 56.8**	**-0.1**
AMAZ				S	**Sn**	**00 35 15.5**	**-0.7**
HMDT	**Nahal Hemdat**	**6.96**	**118**	P	**Pn**	**00 33 57.0**	**0.0**
HMDT				S	**Sn**	**00 35 14.8**	**-1.7**
KZIT	**Kziot**	**7.03**	**131**	P	**Pn**	**00 33 57.9**	**-0.1**
KZIT				S	**Sn**	**00 35 17.4**	**-0.8**
UJAP	**Al Uja**	**7.08**	**120**	P	**Pn**	**00 33 58.5**	**-0.2**
UJAP				S	**Sn**	**00 35 18.7**	**-0.6**
YTIR	**Yattir**	**7.19**	**125**	P	**Pn**	**00 34 00.3**	**+0.1**
YTIR				S	**Sn**	**00 35 22.0**	**-0.2**
DSI	**Dead Sea**	**7.24**	**123**	P	**Pn**	**00 34 00.9**	**0.0**
DSI				S	**Sn**	**00 35 22.6**	**-0.7**
MSBI	**Mazada**	**7.38**	**124**	P	**Pn**	**00 34 02.5**	**-0.2**
MSBI				S	**Sn**	**00 35 25.7**	**-1.0**
RMNI	**Mount Ramon**	**7.47**	**131**	P	**Pn**	**00 34 04.0**	**-0.2**
RMNI				S	**Sn**	**00 35 28.3**	**-0.9**
IDAN	**Idan**	**7.63**	**127**	P	**Pn**	**00 34 06.1**	**-0.2**
IDAN				S	**Sn**	**00 35 31.9**	**-1.1**
ZFRI	**Zfri**	**7.76**	**129**	P	**Pn**	**00 34 07.5**	**-0.5**
ZFRI				S	**Sn**	**00 35 34.8**	**-1.3**
PRNI	**Paran**	**7.79**	**131**	P	**Pn**	**00 34 08.4**	**-0.1**
PRNI				S	**Sn**	**00 35 36.2**	**-0.7**
KRMI	**Paran Flat**	**7.79**	**134**	P	**Pn**	**00 34 08.4**	**-0.1**
KRMI				S	**Sn**	**00 35 36.3**	**-0.7**
ASF	**Jabal al Asfar**	**8.01**	**114**	Pn	**Pn**	**00 34 10.2**	**-1.3**
	0.4nm,0.3s,baz=289,slow=18,SNR=4.5						
ASF				Sn	**Sn**	**00 35 37.9**	**-4.5**
	0.2nm,0.3s,baz=290,slow=22,SNR=1.1						
	2.1nm,0.8s						
HRFI	**Mount Harif**	**8.04**	**133**	P	**Pn**	**00 34 11.6**	**-0.3**
HRFI				S	**Sn**	**00 35 41.6**	**-1.4**

EIL	**Elat**	**8.26**	**135**	Pn	**Pn**	**00 34 14.4**	**-0.4**
	1.4nm,0.3s,baz=324,slow=4.6,SNR=10						
EIL				Sn	**Sn**	**00 35 41.9**	**-6.4**
	1.4nm,0.3s,baz=360,slow=12,SNR=5.7						
	4.2nm,0.5s						
EIL	**Elat**	**8.26**	**135**	P	**Pn**	**00 34 14.7**	**-0.1**
EIL				S	**Sn**	**00 35 47.6**	**-0.7**
GRB	**Gharib**	**8.36**	**151**	P	**Pn**	**00 34 17.4**	**+1.2**
HFRF	**Wahat Farafira**	**8.53**	**180**	P	**Pn**	**00 34 19.9**	**+1.4**
TR2	**Tor 2**	**8.65**	**146**	P	**Pn**	**00 34 21.5**	**+1.3**
HKAT	**Jabal Katrina**	**8.66**	**144**	P	**Pn**	**00 34 21.5**	**+0.9**
HKAT				S	**Sn**	**00 35 54.5**	**-4.1**
MLR	**Muntele Rosu**	**9.93**	**351**	Pn	**Pn**	**00 34 37.0**	**-0.8**
	0.2nm,0.3s,baz=241,slow=10,SNR=5.6						
MLR				LR	LR	00 39 09.1	
	comp=Z,100nm,19.6s,baz=192,slow=42						
	3.3nm,0.8s						
VAE	**Valguarnera**	**11.25**	**283**	Sn	**Sn**	**00 36 55.3**	**-6.6**
	0.3nm,0.3s,baz=69,slow=14,SNR=1.2						
GNI	**Garni**	**13.76**	**66**	LR	LR	00 42 10.4	
	comp=Z,58nm,18.9s,baz=290,slow=44						
SOKA	**Soboth**	**14.78**	**322**	*e*Pn	**P**	**00 35 52.0**	**+1.9**
	1.5nm,0.6s						
AKASG	**Malin Array Be**	**15.01**	**2**	LR	LR	00 41 10.0	
	comp=Z,52nm,18.0s,baz=192,slow=36						
MODS	**Modra-Piesok**	**15.03**	**331**	*e*PN	**P**	**00 35 55.2**	**+2.3**
KEST	**Kesra**	**15.35**	**276**	Pn	**Pn**	**00 35 52.2**	**+0.5**
	0.4nm,0.3s,baz=50,slow=17,SNR=5.8						
	2.5nm,0.8s						
MYKA	**Terra Mystica**	**15.46**	**319**	*e*Pn	**P**	**00 35 58.8**	**+1.1**
	1.4nm,0.4s						
KBA	**Koelnbreinsper**	**15.91**	**320**	*e*Pn	**P**	**00 36 05.6**	**+2.9**
	0.8nm,0.5s						
KRUC	**Moravsky**	**15.93**	**331**	*e*P	**P**	**00 36 03.2**	**+0.4**
VRAC	**Vranov**	**16.05**	**331**	Pn	**Pn**	**00 35 59.5**	**-1.2**
	0.2nm,0.3s,baz=150,slow=7.8,SNR=5.1						
VRAC				LR	LR	00 42 34.1	
	comp=Z,98nm,18.0s,baz=172,slow=39						
	0.7nm,0.4s						
VRAC	**Vranov**	**16.05**	**331**	*e*P	**P**	**00 36 04.7**	**+0.5**
ABTA	**Abfaltersbach**	**16.14**	**318**	*e*Pn	**P**	**00 36 08.7**	**+3.4**
	0.9nm,0.6s						
BIOA	**Bad Ischl, Aus**	**16.16**	**322**	*e*Pn	**P**	**00 36 08.5**	**+3.1**
	4.2nm,1.1s						
LESA	**Schwarzleotal**	**16.48**	**320**	*e*Pn	**P**	**00 36 10.7**	**+1.7**
	1.7nm,0.5s						
CKRC	**Cesky Krumlov**	**16.64**	**326**	*e*P	**P**	**00 36 17.2**	**+6.5**
WTTA	**Wattenberg**	**16.93**	**318**	*e*Pn	**P**	**00 36 16.1**	**+1.9**
	4.2nm,1.0s						
GERES	**GERESS Array B**	**16.93**	**325**	Pn	**Pn**	**00 36 11.4**	**-0.7**
	baz=149,slow=13,SNR=6.6						
GERES				LR	LR	00 42 54.0	
	comp=Z,102nm,18.1s,baz=284,slow=38						
	0.7nm,0.8s						
WATA	**Walderalm**	**17.01**	**318**	*e*Pn	**P**	**00 36 18.5**	**+3.6**
	2.8nm,0.5s						
SQTA	**Sanki Quirin**	**17.14**	**317**	*i* Pn	**P**	**00 36 18.8**	**+2.4**
	2.7nm,0.7s						
KHC	**Kasperske Hory**	**17.20**	**326**	*e*P	**P**	**00 36 19.7**	**+2.8**
MOTA	**Moosalm**	**17.27**	**318**	*i* Pn	**P**	**00 36 20.5**	**+2.6**
	6.9nm,1.2s						
FETA	**Feichten**	**17.29**	**316**	*i* Pn	**P**	**00 36 20.6**	**+2.5**
	2.6nm,1.0s						
RETA	**Reutte**	**17.54**	**318**	*e*Pn	**P**	**00 36 23.3**	**+2.5**
	1.4nm,0.5s						
DAVOX	**Davos/Dischmat**	**17.65**	**314**	P	**Pn**	**00 36 19.4**	**-1.6**
	0.1nm,0.3s,baz=168,slow=15,SNR=1.8						
	0.8nm,0.6s						
BELG	**Belogornoye**	**21.63**	**34**	P	**P**	**00 37 03.3**	**-1.9**
	2.6nm,0.6s,baz=188,slow=3.1,SNR=5.5						
	2.6nm,0.6s						
ESDC	**Sonseca Array**	**25.71**	**289**	P	**P**	**00 37 44.5**	**-1.0**
	0.9nm,0.6s,baz=84,slow=9.9,SNR=11						
	0.9nm,0.6s						
FINES	**FINESS Array B**	**25.80**	**358**	P	**P**	**00 37 43.9**	**-2.0**
	1.7nm,0.9s,baz=160,slow=12,SNR=4.2						
	1.7nm,0.9s						
HFS	**Hagfors**	**26.20**	**343**	P	**P**	**00 37 48.5**	**-1.1**
	7.9nm,1.1s,baz=162,slow=9.9,SNR=2.3						
	7.9nm,1.1s						
NOA	**NORSAR Array B**	**27.59**	**342**	LR	LR	00 51 11.8	
	comp=Z,24nm,18.1s,baz=125,slow=41						
TORD	**Torodi Ar. Bea**	**32.79**	**233**	P	**P**	**00 38 48.6**	**0.0**
	0.6nm,0.5s,baz=38,slow=5.3,SNR=7.0						
	0.6nm,0.5s						
AAK	**Ala-Archa**	**36.16**	**65**	LR	LR	00 57 04.5	
	comp=Z,49nm,18.1s,baz=225,slow=41						
MBAR	**Mbarara**	**36.19**	**176**	LR	LR	00 56 26.4	
	comp=Z,56nm,18.0s,baz=122,slow=40						
KURBB	**Kurchatov Arra**	**38.83**	**51**	P	**P**	**00 39 40.1**	**+0.2**
	0.5nm,0.5s,baz=274,slow=8.7,SNR=8.0						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**41.38**	**57**	P	**P**	**00 40 01.8**	**+0.5**
	1.4nm,0.7s,baz=280,slow=5.5,SNR=21						
	1.4nm,0.7s						
ZALV	**Zalesovo Beam**	**42.81**	**47**	P	**P**	**00 40 11.8**	**-1.0**
	0.5nm,0.3s,baz=242,slow=9.3,SNR=1.5						
	0.5nm,0.3s						

NEIC ***11*** *00:38:53.2±1.1, 10°.15S±0°.08×161°.2E±0°.1, h71km±6km, mb4.1/12, Error ellipse: s-maj=15.6km s-min=10.8km az=60.0*

IDC ***11*** *00:38:54.1±1.0, 10°.19S×161°.12E, h88km±7km, mb3.6/8, mbtmp4.0/9, MS3.2/4, Error ellipse: s-maj=19.0km s-min=11.2km az=48.0*

ISC 11 00:38:52.9±0.6, 10°.15S±0°.08×161°.27E±0°.09, h71km, n36, σ1s76/35, mb4.0/14, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.49**	**299**	P		**Pn**	**00 39 16.8**	**-1.0**
	4.7nm,0.3s,baz=68,slow=12,SNR=6.7							
HNR				S		**Sn**	**00 39 36.5**	**0.0**
	38nm,0.5s,baz=258,slow=22,SNR=31							
HNR				LR		LR	00 40 01.4	
	comp=Z,8.2nm,18.4s,baz=116,slow=49							
HNR	**Honiara**	**1.49**	**299**	Pn		**Pn**	**00 39 17.4**	**-0.3**
SANVU	**Saraoutou**	**7.82**	**133**	Pn		**Pn**	**00 40 44.3**	**+0.3**
DZM	**Mont Dzumac**	**12.85**	**158**	P		**Pn**	**00 41 54.7**	**+2.0**
	5.1nm,0.4s,baz=143,slow=22,SNR=41							
DZM				S		**Sn**	**00 44 12.8**	**-1.2**
	6.0nm,0.3s,baz=323,slow=20,SNR=9.1							
DZM				LR		LR	00 46 00.8	
	comp=Z,61nm,18.8s,baz=286,slow=33							
MARNC	**Mare, Loyalty**	**13.00**	**151**	Pn		**Pn**	**00 41 55.6**	**+0.9**
ONTNC	**Ouen Toro**	**13.07**	**158**	Pn		**Pn**	**00 41 59.5**	**+3.9**
CTA	**Charters Tower**	**17.52**	**234**	LR		LR	00 47 58.4	
	comp=Z,89nm,18.5s,baz=50,slow=31							
COEN	**Coen**	**18.09**	**256**	P		**Pn**	**00 43 02.6**	**+3.0**
COEN				IAmb		IAmb	00 43 12.5	
	comp=Z,13nm,1.1s							
WR8	**Warramunga Arr**	**27.59**	**246**	P		**P**	**00 44 32.5**	**-1.1**
WR8				IAmb		IAmb	00 44 60.0	
	comp=Z,5.0nm,1.1s							
WB0	**Warramunga Arr**	**27.63**	**247**	P		**P**	**00 44 33.3**	**-0.8**
WB0				IAmb		IAmb	00 44 55.0	
	comp=Z,6.2nm,1.1s							
WRA	**Warramunga Arr**	**27.73**	**246**	P		**P**	**00 44 33.4**	**-1.5**
	comp=Z,1.3nm,0.7s,baz=75,slow=9.2,SNR=20							
WRA				pP		**pP**	**00 44 53.2**	**+2.4**
	comp=Z,4.3nm,1.1s,baz=74,slow=9.5,SNR=7.0							
WRA				PcP		**PcP**	**00 47 47.9**	**-2.4**
	comp=Z,0.4nm,0.7s,baz=78,slow=3.0,SNR=3.1							
	comp=Z,1.3nm,0.7s							
WRA	**Warramunga Arr**	**27.73**	**246**	P		**P**	**00 44 33.2**	**-1.8**
STKA	**Stephens Creek**	**28.26**	**217**	P		**P**	**00 44 39.5**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=30,slow=18,SNR=3.8							
	comp=Z,0.9nm,0.5s							
H11S2	**WAKE ISLAND Hy**	**28.96**	**11**	T		T	01 13 46.4	
	baz=189							
H11S3	**WAKE ISLAND Hy**	**28.96**	**11**	T		T	01 13 40.2	
	baz=189,slow=74,SNR=4.7							
H11S1	**WAKE ISLAND Hy**	**28.98**	**11**	T		T	01 13 42.1	
	baz=189,slow=74,SNR=4.2							
ASAR	**Alice Springs**	**29.35**	**239**	P		**P**	**00 44 47.0**	**-2.4**
	comp=Z,1.2nm,0.9s,baz=65,slow=9.5,SNR=9.1							
ASAR				pP		**pwP**	**00 45 07.8**	**-1.4**
	comp=Z,0.7nm,0.7s,baz=69,slow=9.7,SNR=3.5							
ASAR				PcP		**PcP**	**00 47 50.9**	**-3.4**
	comp=Z,0.5nm,0.9s,baz=62,slow=5.9,SNR=2.7							
ASAR				LR		LR	00 55 55.8	
	comp=Z,62nm,19.2s,baz=59,slow=35							
	comp=Z,1.2nm,0.9s							
H11N1	**WAKE ISLAND Hy**	**30.19**	**11**	T		T	01 15 15.8	
	baz=193,slow=76,SNR=6.0							
H11N3	**WAKE ISLAND Hy**	**30.20**	**11**	T		T	01 15 17.9	
	baz=193,slow=76,SNR=4.0							
H11N2	**WAKE ISLAND Hy**	**30.21**	**11**	T		T	01 15 17.4	
	baz=193,slow=76,SNR=7.0							
BBOO	**Buckleboo**	**32.37**	**222**	P		**P**	**00 45 15.1**	**-0.7**
PETK	**Petropavlovsk-**	**63.09**	**358**	LR		LR	01 15 20.3	
	comp=Z,26nm,19.7s,baz=307,slow=35							
SONM	**Songino Array**	**75.39**	**325**	P		**P**	**00 50 28.8**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=141,slow=5.2,SNR=7.0							
SONM				pP		**pwP**	**00 50 51.0**	**+3.3**
	comp=Z,0.4nm,0.3s,baz=132,slow=8.0,SNR=2.6							
	comp=Z,1.4nm,0.6s							
SONM	**Songino Array**	**75.39**	**325**	P		**P**	**00 50 28.9**	**-0.2**
O14K	**Tigyukauivet M**	**75.45**	**19**	P		**P**	**00 50 29.6**	**+0.7**
O14K				IAmb		IAmb	00 50 32.4	
	comp=Z,3.6nm,1.1s							
M16K	**Timber Creek**	**77.56**	**19**	P		**P**	**00 50 41.1**	**+0.3**
M16K				IAmb		IAmb	00 50 49.9	
	comp=Z,3.2nm,1.1s							
J14K	**Nanvaranak Lak**	**77.59**	**16**	P		**P**	**00 50 40.8**	**-0.1**
QSPA	**South Pole Qui**	**79.84**	**180**	P		**P**	**00 50 52.9**	**-0.7**
	comp=Z,3.4nm,0.8s,baz=39,slow=0.6,SNR=12							
	comp=Z,3.4nm,0.8s							
QSPA	**South Pole Qui**	**79.84**	**180**	P		**P**	**00 50 52.7**	**-0.9**
IMAR	**Indian Mountai**	**82.81**	**17**	P		**P**	**00 51 08.7**	**-0.4**
ILAR	**Eielson Array**	**84.12**	**20**	P		**P**	**00 51 14.8**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=248,slow=5.6,SNR=5.2							
	comp=Z,0.3nm,0.5s							
J25K	**Salcha River,**	**84.53**	**20**	P		**P**	**00 51 18.4**	**+0.5**
M30M	**Minto, Yukon**	**86.61**	**24**	P		**P**	**00 51 28.6**	**+0.3**
M30M				IAmb		IAmb	00 51 34.0	
	comp=Z,1.9nm,1.1s							
NVAR	**Mina Array Bea**	**88.84**	**51**	P		**P**	**00 51 40.8**	**+1.0**
	comp=Z,0.5nm,0.8s,baz=227,slow=5.9,SNR=3.5							
	comp=Z,0.5nm,0.8s							
MKAR	**Makanchi Array**	**89.88**	**318**	P		**P**	**00 51 42.4**	**-1.8**
	comp=Z,0.1nm,0.4s,baz=98,slow=7.4,SNR=2.1							
MKAR				pP		**pP**	**00 52 06.2**	**+3.1**
	comp=Z,0.6nm,0.9s,baz=113,slow=2.8,SNR=4.3							
	comp=Z,0.1nm,0.4s							
KURBB	**Kurchatov Arra**	**93.20**	**321**	pP		pP	00 52 19.7	+1.1
	comp=Z,0.3nm,0.4s,baz=84,slow=3.4,SNR=4.4							

WEL ***11*** *01:01:46.0±0.9, 33°.5S±5°.1×17°.7W±1°.3, h33km, M5.2/15, mB5.5/46, ML5.5/15, MLv5.8/15, Mw(mB)5.0/14, Error ellipse: s-maj=17.7km s-min=4.1km az=107.5, confirmed*

IDC ***11*** *01:01:46.9±0.4, 32°.35S×178°.20W, h0km, mb4.6/15, mbtmp4.6/20, ML5.3/3, MS4.8/44, Error ellipse: s-maj=16.7km s-min=13.6km az=94.0*

NEIC ***11*** *01:01:47.9, 32°.81S×177°.58W, h20km, Moment Tensor Solution. Duration: 28.0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.06; $M_{\theta\theta}$-0.63; $M_{\phi\phi}$-4.43; $M_{r\theta}$2.95; $M_{\theta\phi}$-1.63; $M_{r\phi}$3.81; Fault plane solution: $M_0$6.98000×10^{16} NP1: ϕ_s189.65000°, δ24.61000°, λ69.56000°. NP2:ϕ_s31.94000°, δ67.03000°, λ99.09000°. Principal axes: T 7.0972, Plg67.0000°, Azm318.0000°; N -0.2424, Plg8.0000°, Azm208.0000°; P -6.8547, Plg22.0000°, Azm115.0000°;*

NEIC ***11*** *01:01:47.9, 32°.41S×178°.05W, h20km*

BJI ***11*** *01:01:47.0, 32°.23S×177°.92W, h12km, mB5.8/8, mb5.3/22, Ms5.1/19, Ms7 4.9/23*

GFZ ***11*** *01:01:48.6, 32°.48S×178°.30W, h17km, MW5.2, Moment Tensor Solution. s21 Moment tensor: M_{rr}4.22; $M_{\theta\theta}$0.07; $M_{\phi\phi}$-4.28; $M_{r\theta}$0.77; $M_{\theta\phi}$-0.65; $M_{r\phi}$6.21; Fault plane solution: NP1:ϕ_s189.00000°, δ17.00000°, λ92.00000°. NP2:ϕ_s7.00000°, δ72.00000°, λ89.00000°.*

NEIC ***11*** *01:01:48.4±2.0, 32°.39S±0°.07×178°.1W±0°.1, h10km±1km, mb5.3/67, Mww5.2/17 Error ellipse: s-maj=17.3km s-min=12.3km az=84.0*

MOS ***11*** *01:01:48.8±1.3, 32°.29S×178°.15W, h19km, mb5.4/18, MS4.9/4, Error ellipse: s-maj=11.4km s-min=8.7km az=95.2*

NOU ***11*** *01:01:50.4, 32°.93S×177°.68W, h43km, mb5.1/33, South of Kermadec Islands*

GCMT ***11*** *01:01:52.4±0.2, 32°.46S±0°.01×177°.75W±0°.01, h20km, MW5.2/124, Moment Tensor Solution. s85,c131; s124,c199; Duration: 1s0 Moment tensor: Scale 10^{16} Nm; M_{rr}5.49±.17; $M_{\theta\theta}$-0.39±.11; $M_{\phi\phi}$-5.10±.11; $M_{r\theta}$1.12±.23; $M_{\theta\phi}$-1.21±.08; $M_{r\phi

RAHZ **Arahi** 7.51 210 P **Pn** 01 03 36.4 -1.3
MTHZ **Maungataniwha** 7.56 212 P **Pn** 01 03 37.4 -1.0
WHHZ **Waihua** 7.58 209 P **Pn** 01 03 39.2 +0.6
MRHZ **Matea Rd** 7.74 214 P **Pn** 01 03 39.2 -1.7
NMHZ **Naumai** 7.78 211 P **Pn** 01 03 41.4 0.0
WHTZ **Whakaora** 7.83 217 P **Pn** 01 03 41.6 -0.6
ARHZ **Aropaoanui** 7.83 209 P **Pn** 01 03 41.2 -0.9
BKZ **Black Stump Fm** 7.97 212 P **Pn** 01 03 41.3 -2.8
BKZ **Black Stump Fm** 7.97 212 P **Pn** 01 03 41.6 -2.5
WATZ **Wairara** 7.98 218 P **Pn** 01 03 43.3 -0.9
RATZ **Rangitukua** 8.08 217 P **Pn** 01 03 44.3 -1.3
MCHZ **McNeill Hill** 8.11 210 P **Pn** 01 03 43.8 -2.2
CKHZ **Cape Kidnapper** 8.14 208 P **Pn** 01 03 41.8 -4.5
KATZ **Kakaramea** 8.20 216 P **Pn** 01 03 46.0 -1.3
KWHZ **Kaweka Forest** 8.21 211 P **Pn** 01 03 45.8 -1.6
TMVZ **Te Maari** 8.30 216 P **Pn** 01 03 45.5 -3.2
NTVZ **North Tongarir** 8.31 216 P **Pn** 01 03 45.6 -3.1
HIZ **Hauiti** 8.31 222 P **Pn** 01 03 48.6 -0.1
HIZ **Hauiti** 8.31 222 P **Pn** 01 03 48.4 -0.3
ETVZ **East Tongariro** 8.32 216 P **Pn** 01 03 46.3 -2.6
KRVZ **Karewarewa** 8.32 216 P **Pn** 01 03 47.3 -1.7
KAHZ **Kahuranaki** 8.34 208 P Pn 01 03 43.3 -5.7
OTVZ **Oturere** 8.36 216 P **Pn** 01 03 46.3 -3.2
WTVZ **West Tongariro** 8.36 216 P **Pn** 01 03 47.8 -1.7
SNVZ **South Ngauruho** 8.39 216 P **Pn** 01 03 47.8 -2.2
NGZ **Ngauruhoe** 8.40 216 P **Pn** 01 03 48.1 -2.0
TWVZ **Taurewa** 8.40 217 P **Pn** 01 03 48.7 -1.4
KRHZ **Kereru** 8.42 211 P **Pn** 01 03 47.3 -2.9
TUVZ **Tukino** 8.45 215 P **Pn** 01 03 50.0 -0.7
MOVZ **Moawhango** 8.51 214 P **Pn** 01 03 48.0 -3.5
WNVZ **Wahianoa** 8.52 215 P **Pn** 01 03 50.0 -1.8
PXZ **Pawanui** 8.54 207 P **Pn** 01 03 48.7 -3.2
PKVZ **Pokaka** 8.62 217 P **Pn** 01 03 54.2 +1.2
PNHZ **Pukenui** 8.71 211 P **Pn** 01 03 50.1 -4.2
PRHZ **Porangahau** 8.84 207 P Pn 01 03 50.9 -4.9
TSZ **Takapari Road** 8.94 211 P **Pn** 01 03 54.1 -3.2
DVHZ **Dannevirke** 9.05 209 P **Pn** 01 03 54.7 -4.2
KHEZ **Kahui Hut** 9.33 221 P **Pn** 01 04 01.6 -1.1
BFZ **Birch Farm** 9.34 208 P Pn 01 03 57.5 -5.4
BFZ **Birch Farm** 9.34 208 P Pn 01 03 57.5 -5.4
PRWZ **Pori Road** 9.35 209 P **Pn** 01 03 58.7 -4.2
MRZ **Mangatainoka R** 9.60 210 P Pn 01 04 01.2 -5.2
SNZO **South Karori** 10.51 211 P **Pn** 01 04 15.9 -2.9
QRZ **Quartz Range** 11.21 220 P **Pn** 01 04 25.2 -3.2
CTZ **Chatham Island** 11.26 175 P **Pn** 01 04 24.5 -4.5
CTZ **Chatham Island** 11.26 175 Pn **Pn** 01 04 24.7 -4.3
KHZ **Kahutara** 11.92 212 P **Pn** 01 04 34.7 -3.3
NFK **Norfolk Island** 12.53 282 P **P** 01 04 54.6 -3.4
comp=Z,829nm,1.5s
RPZ **Rata Peaks** 14.07 214 P **Pn** 01 05 04.2 -3.3
MSVF **Nonsavu** 15.14 346 Pn **Pn** 01 05 19.5 -2.6
comp=Z,0.7nm,0.3s,baz=145,slow=14,SNR=17
MSVF LR LR 01 10 13.2
comp=Z,4µm,18.7s,baz=172,slow=34
comp=Z,29nm,0.9s
MSVF **Nonsavu** 15.14 346 **Pn** 01 05 19.8 -2.3
MSVF **Nonsavu** 15.14 346*c i* P **Pn** 01 05 20.5 -1.6
ODZ **Otahua Downs** 15.28 212 P **Pn** 01 05 19.8 -4.0
JCZ **Jackson Bay** 15.46 218 P **Pn** 01 05 21.5 -4.8
MARNC **Mare, Loyalty** 16.55 308 **Pn** 01 05 40.2 -0.2
ONTNC **Ouen Toro** 17.09 303 **Pn** 01 05 47.9 +0.8
ONTNC IAmb IAmb 01 05 55.0
comp=Z,180nm,0.9s
SYZ **Scrubby Hill** 17.10 211 P **Pn** 01 05 46.0 -1.1
DZM **Mont Dzumac** 17.25 303 P **Pn** 01 05 48.3 -0.9
comp=Z,8.9nm,1.1s,baz=121,slow=14,SNR=12
AFI **Afiamalu** 19.39 19 P **P** 01 06 11.9 -2.3
comp=Z,5.7nm,0.3s,baz=43,slow=18,SNR=6.5
comp=Z,32nm,0.5s
LHI **Lord Howe Isla** 19.43 267 P **P** 01 06 12.6 -1.9
LHI IAmb IAmb 01 06 20.1
comp=Z,293nm,1.7s
RAR **Rarotonga** 19.79 60 P **P** 01 06 18.4 0.0
comp=Z,17nm,0.5s,baz=185,slow=4.1,SNR=8.6
RAR LR LR 01 14 34.0
comp=Z,2µm,18.4s,baz=226,slow=39
RAR **Rarotonga** 19.79 60 P **P** 01 06 15.2 -3.2
SANVU **Saraoutou** 21.64 318 P **P** 01 06 42.5 +4.0
SANVU **Saraoutou** 21.64 318 **P** 01 06 38.7 +0.2
ARMA **Armidale** 25.90 267 P **P** 01 07 20.2 0.0
comp=Z,78nm,1.6s
ARMA **Armidale** 25.90 267 **P** 01 07 22.0 +1.8
ARMA **Armidale** 25.90 267 **P** 01 07 19.9 -0.2
ARMA IAmb IAmb 01 07 27.2
comp=Z,64nm,1.1s
CNB **Canberra Magne** 27.12 255 P **P** 01 07 32.7 +1.6
MILA **Mila** 27.23 251 P **P** 01 07 34.3 +2.2
comp=Z,12nm,1.3s
CAN **Canberra** 27.41 255 P **P** 01 07 36.0 +2.3
comp=Z,33nm,2.0s
CAN **Canberra** 27.41 255 **P** 01 07 34.0 +0.4
CAN IAmb IAmb 01 07 36.8
comp=Z,93nm,1.7s
CAN **Canberra** 27.41 255 P **P** 01 07 34.1 +0.4
CAN pmax pmax
comp=Z,93nm,1.7s
EIDS **Eidsvold** 27.86 277 P **P** 01 07 38.9 +1.1
comp=Z,61nm,0.8s
EIDS **Eidsvold** 27.86 277 P **P** 01 07 39.5 +1.7
EIDS **Eidsvold** 27.86 277 **P** 01 07 38.5 +0.7
EIDS IAmb IAmb 01 07 41.7
comp=Z,38nm,0.8s
YNG **Young** 27.99 257 P **P** 01 07 41.1 +2.2
comp=Z,21nm,1.7s
GLAD **Gladstone** 28.33 243 P **P** 01 07 41.9 +0.1
TAU **Tasmania Unive** 29.11 239 P **P** 01 07 47.7 -0.9
TAU IAmb IAmb 01 08 14.7
comp=Z,52nm,1.2s
TAU **Tasmania Unive** 29.11 239 P **P** 01 07 47.7 -0.9
TAU pmax pmax
comp=Z,52nm,1.3s
MOO **Moorlands** 29.13 240 P **P** 01 07 50.0 +1.1
comp=Z,34nm,1.3s
TOO **Toolangi** 30.14 250 P **P** 01 07 59.5 +1.6
comp=Z,9.2nm,1.4s
TOO **Toolangi** 30.14 250 **P** 01 07 57.9 -0.1
TOO **Toolangi** 30.14 250 P **P** 01 07 57.9 -0.1
TOO pmax pmax
comp=Z,13nm,1.4s
CMSA **Cobar Meteorol** 30.66 262 P **P** 01 08 04.3 +1.8
comp=Z,75nm,1.5s
CMSA **Cobar Meteorol** 30.66 262 P **P** 01 08 03.5 +1.0
HNR **Honiara** 30.68 314 LR LR 01 19 09.4
comp=Z,89nm,19.1s,baz=257,slow=34
TATA **Tatamba Isabel** 31.59 315 P **P** 01 08 12.1 +1.3
ARPS **Mount Arapiles** 33.10 251 P **P** 01 08 24.7 +0.8
comp=Z,35nm,1.3s
QLP **Quilpie** 33.21 270 P **P** 01 08 26.5 +1.5
comp=Z,158nm,1.8s
STKA **Stephens Creek** 34.01 260 P **P** 01 08 33.1 +1.2
comp=Z,128nm,2.3s
STKA **Stephens Creek** 34.01 260 P **P** 01 08 31.6 -0.4
comp=Z,8.4nm,0.6s,baz=98,slow=11,SNR=17
STKA LR LR 01 21 55.9
comp=Z,4µm,18.1s,baz=91,slow=36
comp=Z,8.4nm,0.6s
STKA **Stephens Creek** 34.01 260 P **P** 01 08 34.0 +2.1
STKA **Stephens Creek** 34.01 260 **P** 01 08 32.1 +0.2
STKA **Stephens Creek** 34.01 260 P **P** 01 08 32.1 +0.2
STKA pmax pmax
comp=Z,131nm,1.3s
CTA **Charters Tower** 34.15 282 LR LR 01 21 34.8
comp=Z,2µm,18.1s,baz=128,slow=35
CTA **Charters Tower** 34.15 282 P **P** 01 08 34.5 +1.3
CTAO **Charters Tower** 34.15 282 P **P** 01 08 34.3 +1.1
CTAO **Charters Tower** 34.15 282 **P** 01 08 34.1 +0.9
CTAO **Charters Tower** 34.15 282 P **P** 01 08 34.1 +0.9
CTAO pmax pmax
comp=Z,323nm,1.7s
INKA **Innaminka** 35.79 267 **P** 01 08 48.1 +0.8
HTT **Hallett** 35.91 257 P **P** 01 08 49.2 +0.8
comp=Z,5.6nm,1.5s
HTT **Hallett** 35.91 257 P **P** 01 08 49.4 +1.0
MTSU **Mount Surprise** 36.70 284 P **P** 01 08 56.5 +1.3
comp=Z,60nm,0.8s
MTSU **Mount Surprise** 36.70 284 P **P** 01 08 56.4 +1.3
BBOO **Buckleboo** 38.39 257 P **P** 01 09 09.0 -0.4
comp=Z,22nm,1.1s
BBOO **Buckleboo** 38.39 257 P **P** 01 09 09.2 -0.2
BBOO **Buckleboo** 38.39 257 **P** 01 09 08.4 -1.0
QIS **Mount Isa** 39.47 277 P **P** 01 09 18.6 0.0
comp=Z,35nm,1.5s
QIS **Mount Isa** 39.47 277 P **P** 01 09 19.0 +0.5
PMG **Port Moresby** 39.51 298 LR LR 01 24 02.1
comp=Z,1µm,18.7s,baz=143,slow=34
PMG **Port Moresby** 39.51 298 P **P** 01 09 18.6 -0.3
PMG **Port Moresby** 39.51 298*c i* P **P** 01 09 18.9 0.0
PMG pmax pmax
comp=Z,22nm,0.9s
RABL **Rabaul** 39.63 309 P **P** 01 09 18.9 -1.0
COEN **Coen** 39.85 288 P **P** 01 09 23.2 +1.6
comp=Z,49nm,1.2s
COEN **Coen** 39.85 288 P **P** 01 09 23.3 +1.6
COEN **Coen** 39.85 288 **P** 01 09 21.8 +0.1
AS31 **Alice Springs** 42.99 269 **P** 01 09 46.8 -0.8
ASAR **Alice Springs** 42.99 269 P **P** 01 09 46.8 -0.8
comp=Z,45nm,0.8s,baz=110,slow=7.9,SNR=232
ASAR S **S** 01 16 08.3 -3.7
comp=Z,1.4nm,0.8s,baz=113,slow=16,SNR=5.1
ASAR LR LR 01 26 45.5
comp=Z,1µm,18.6s,baz=112,slow=35
comp=Z,45nm,0.8s
WRAB **Tennant Creek** 44.16 274 P **P** 01 09 56.4 -0.6
WRAB **Tennant Creek** 44.16 274*c i* P **P** 01 09 55.9 -1.1
WRAB pmax pmax
comp=Z,75nm,0.9s
WRA **Warramunga Arr** 44.17 274 P **P** 01 09 56.1 -0.9
comp=Z,59nm,0.6s,baz=114,slow=7.6,SNR=367
WRA ScP **ScP** 01 15 33.6 +1.1
comp=Z,2.9nm,0.9s,baz=114,slow=4.4,SNR=7.0
WRA S **S** 01 16 25.4 -3.9
comp=Z,0.9nm,0.7s,baz=113,slow=15,SNR=3.0
WRA **Warramunga Arr** 44.17 274 P **P** 01 09 55.4 -1.6
WRA **Warramunga Arr** 44.17 274 P **P** 01 09 55.4 -1.6
WRA pmax pmax
comp=Z,6.0nm,0.9s
WB0 **Warramunga Arr** 44.20 275 **P** 01 09 56.2 -1.1
MANU **Manus Island** 44.43 306 P **P** 01 09 58.0 -1.0
MANU IAmb IAmb 01 10 06.2
comp=Z,89nm,1.4s
FORT **Forrest** 45.49 257 P **P** 01 10 06.5 -0.9
comp=Z,86nm,0.8s
FORT **Forrest** 45.49 257 **P** 01 10 06.1 -1.3
VNDA **Vanda** 45.99 186 P **P** 01 10 13.5 +2.8
comp=Z,1.1nm,0.8s,baz=1.8,slow=7.9,SNR=13
comp=Z,1.1nm,0.8s
VNDA **Vanda** 45.99 186 P **P** 01 10 13.7 +3.0
VNDA IAmb IAmb 01 10 48.5
comp=Z,66nm,1.9s
VNDA **Vanda** 45.99 186 P **P** 01 10 13.7 +3.0
VNDA pmax pmax
comp=Z,66nm,1.9s
WRKA **Warakurna** 47.20 265 P **P** 01 10 19.6 -1.4
comp=Z,59nm,0.7s
JAY **Jayapura** 48.85 299 LR LR 01 31 18.2
comp=Z,743nm,18.2s,baz=12,slow=36
JAY **Jayapura** 48.85 299 P **P** 01 10 37.1 +3.3
comp=Z,49nm,1.2s
GENI **Genyem** 49.20 298 P **P** 01 10 36.7 +0.3
MTN **Manton Dam** 50.30 281 P **P** 01 10 43.6 -1.2
comp=Z,49nm,0.9s
MTN **Manton Dam** 50.30 281 **P** 01 10 44.0 -0.7
MTN IAmb IAmb 01 10 44.9
comp=Z,35nm,0.7s
KMBL **Kambalda** 50.37 254 P **P** 01 10 44.0 -1.2
comp=Z,16nm,1.7s
DRS **Darwin Rock St** 50.71 281 P **P** 01 10 47.3 -0.6
KNRA **Kununurra** 50.85 276 P **P** 01 10 48.7 -0.3
comp=Z,61nm,1.1s
KNRA **Kununurra** 50.85 276 **P** 01 10 48.4 -0.5
KNRA IAmb IAmb 01 10 49.6
comp=Z,79nm,1.2s
FITZ **Fitzroy Crossi** 52.34 272 LR LR 01 33 23.0
comp=Z,3µm,18.1s,baz=114,slow=36
SAUI **Saumlaki** 52.81 286 P **P** 01 11 02.4 -1.2
NWAO **Narrogin (SRO)** 53.63 251 LR LR 01 32 57.3
comp=Z,566nm,18.4s,baz=106,slow=35
KLBR **Kellerberrin** 53.64 253 P **P** 01 11 08.5 -1.1
comp=Z,43nm,0.9s
MEEK **Meekatharra** 54.69 259 P **P** 01 11 15.8 -1.5
comp=Z,39nm,1.3s
FAKI **Fak Fak** 55.05 292 P **P** 01 11 19.1 -0.9
FAKI IAmb IAmb 01 11 35.0
comp=Z,47nm,1.0s
PSAC2 **Pilbara Seismi** 55.66 265 P **P** 01 11 22.7 -1.6
comp=Z,40nm,1.6s
PSAB3 **Pilbara Seismi** 55.68 265 P **P** 01 11 22.9 -1.6
comp=Z,36nm,1.2s
PSA00 **Pilbara Seismi** 55.70 265 P **P** 01 11 23.0 -1.6
comp=Z,30nm,1.3s
PSA00 **Pilbara Seismi** 55.70 265 P **P** 01 11 22.3 -2.3
PSA00 IAmb IAmb 01 11 23.8
comp=Z,21nm,0.7s
PSA00 **Pilbara Seismi** 55.70 265 P **P** 01 11 22.1 -2.6
PSA00 IAmb IAmb 01 11 23.8
comp=Z,16nm,0.9s
PSAC1 **Pilbara Seismi** 55.75 265 P **P** 01 11 23.4 -1.6
comp=Z,37nm,1.2s
MORW **Morawa** 55.91 255 P **P** 01 11 25.2 -0.8
comp=Z,16nm,1.1s
MORW **Morawa** 55.91 255 P **P** 01 11 24.6 -1.4
MBWA **Marble Bar** 55.97 265 P **P** 01 11 25.0 -1.6
comp=Z,46nm,1.2s
MBWA **Marble Bar** 55.97 265 **P** 01 11 24.9 -1.7
MBWA IAmb IAmb 01 11 25.9
comp=Z,35nm,0.8s
SIJI **Sorong** 57.09 293 LR LR 01 35 05.2
comp=Z,750nm,19.5s,baz=143,slow=35
SIJI **Sorong** 57.09 293 P **P** 01 11 34.8 +0.2
comp=Z,835nmcomp=Z,43nm,1.4s
SWI **Sorong** 57.10 293 P **P** 01 11 34.7 +0.1
comp=Z,51nm,1.2s
QSPA **South Pole Qui** 57.60 180 P **P** 01 11 39.8 +2.2
comp=Z,4.5nm,0.8s,baz=82,slow=0.7,SNR=12
comp=Z,4.5nm,0.8s
QSPA **South Pole Qui** 57.60 180 P **P** 01 11 39.1 +1.5
SOEI **Soe** 57.63 280 P **P** 01 11 39.2 +0.7
SOEI **Soe** 57.63 280 P **P** 01 11 39.5 +0.9
comp=Z,1µmcomp=Z,111nm,0.9s
BATI **Baumata** 57.90 279 LR LR 01 36 38.3
comp=Z,2µm,19.8s,baz=146,slow=36
BATI **Baumata** 57.90 279 P **P** 01 11 41.5 +1.2
GUMO **Guam** 57.96 316 LR LR 01 35 34.1
comp=Z,402nm,18.6s,baz=88,slow=35
RPN **Rapa Nui** 58.94 104 LR LR 01 34 05.7
comp=Z,1µm,18.1s,baz=200,slow=33
MMRI **Maumere** 59.92 279 P **P** 01 11 52.9 -1.4
MMRI **Maumere** 59.92 279 P **P** 01 11 54.3 0.0
comp=Z,101nm,1.0s
GIRL **Giralia** 59.95 261 P **P** 01 11 52.7 -1.7
comp=Z,51nm,1.5s
GIRL **Giralia** 59.95 261 P **P** 01 11 52.5 -1.9
EDFI **Ende, Flores** 60.32 279 P **P** 01 11 55.9 -1.3
comp=Z,435nmcomp=Z,38nm,1.0s
BASI **Baing, Sumba** 60.47 277 P **P** 01 11 58.3 +0.2
SANI **Sanana** 60.55 288 P **P** 01 11 58.2 -0.4
comp=Z,777nmcomp=Z,44nm,1.9s
WSI **Waingapu** 61.00 277 P **P** 01 12 01.9 +0.2
WBSI **Waikabubak, Su** 61.77 277 P **P** 01 12 05.5 -1.5
comp=Z,61nm,0.8s
LBFI **Labuhan Bajo,** 61.96 278 P **P** 01 12 07.4 -0.8
comp=Z,16nm,0.7s
DBNI **Kabupaten Domp** 63.27 277 P **P** 01 12 16.1 -0.9
comp=Z,38nm,0.9s
PLAI **Plampang** 63.55 277 P **P** 01 12 18.5 -0.3
comp=Z,674nmcomp=Z,71nm,1.0s
LUWI **Luwuk** 63.73 287 P **P** 01 12 17.0 -3.0
KAPI **Kappang** 63.95 281 LR LR 01 40 47.1
comp=Z,1µm,18.1s,baz=116,slow=37
KAPI **Kappang** 63.95 281 P **P** 01 12 18.1 -3.4
KAPI IAmb IAmb 01 12 22.0
comp=Z,24nm,1.2s
KAPI **Kappang** 63.95 281 P **P** 01 12 18.1 -3.4
KAPI pmax pmax
comp=Z,24nm,1.2s
KAPI **Kappang** 63.95 281 P **P** 01 12 21.2 -0.3
comp=Z,9.8nm,0.8s
TWSI **Taliwang, Sumb** 64.35 276 P **P** 01 12 23.5 -0.6
comp=Z,809nmcomp=Z,86nm,0.8s
SPSI **Sidrap Palu** 64.52 282 P **P** 01 12 24.3 -0.9
comp=Z,15nm,1.1s
APSI **Ampana** 64.72 286 P **P** 01 12 26.4 -0.1
comp=Z,1µmcomp=Z,40nm,1.5s
IGBI **Denpasar** 65.77 275 P **P** 01 12 35.2 +1.9
TOLI2 **Tolitoli** 66.60 287 P **P** 01 12 35.7 -3.0
TOLI2 IAmb IAmb 01 12 48.1
comp=Z,33nm,1.5s
MPSI **Mapaga** 66.87 286 P **P** 01 12 40.9 +0.6
BELA **Belgrano 2** 67.70 172 P **P** 01 12 47.7 +3.0
BELA IAmb IAmb 01 12 58.9
comp=Z,24nm,0.9s
PCJI **Pacitan** 69.44 273 P **P** 01 12 57.1 +0.6
comp=Z,82nm,1.1s
MAW **Mawson** 70.31 201 LR LR 01 42 12.6
comp=Z,1µm,20.2s,baz=116,slow=34
MAW **Mawson** 70.31 201 P **P** 01 13 03.0 +2.0
MAW **Mawson** 70.31 201 P **P** 01 13 03.0 +2.0
MAW pmax pmax
comp=Z,17nm,1.6s
JCJ **Chichijima** 70.33 323 LR LR 01 39 09.1
comp=Z,283nm,19.6s,baz=152,slow=32
PMSA **Palmer Station** 70.36 155 LR LR 01 42 04.8
comp=Z,386nm,18.0s,baz=252,slow=34
LEM **Lembang** 73.15 273 LR LR 01 46 03.3
comp=Z,887nm,20.4s,baz=163,slow=36
ESPZ **Base Esperanza** 73.65 156 P **P** 01 13 21.2 +0.2
ESPZ IAmb IAmb 01 13 36.7
comp=Z,28nm,0.9s
SBUM **Sibu** 74.35 283 P **P** 01 13 22.9 -3.1
SBUM **Sibu** 74.35 283 P **P** 01 13 25.7 -0.3
TGY **Tagaytay City** 74.47 298 LR LR 01 43 36.6
comp=Z,230nm,20.6s,baz=192,slow=34
ELIB **Princess Elisa** 74.75 187 *d* P **P** 01 13 27.6 0.0
TROLL **Troll, Antarti** 75.76 180 ⇑P **P** 01 13 34.2 +0.9
SNAA **Sanae** 76.05 178 P **P** 01 13 36.0 +1.0
comp=Z,3.0nm,0.6s,baz=204,slow=12,SNR=8.3
comp=Z,3.0nm,0.6s
SNAA **Sanae** 76.05 178 P **P** 01 13 34.4 -0.5
SNAA IAmb IAmb 01 13 47.2
comp=Z,50nm,1.1s
SNAA **Sanae** 76.05 178 *d i* P **P** 01 13 35.9 +1.0
SNAA pmax pmax
comp=Z,37nm,1.1s
VNA3 **Neumayer Olymp** 76.20 176 ⇑P **P** 01 13 36.6 +0.9
comp=Z,31nm,0.6s
VNA2 **Neumayer--Watz** 76.63 177 ⇓P **P** 01 13 38.9 +0.7
comp=Z,6.9nm,0.5s,baz=168,slow=5.7
NVL **N'lazarevskaya** 76.76 183 *e* P P 01 13 45.6 +6.7
NVL *e* 01 13 56.5
NVL *e* 01 16 38.2
NVL *e* PPP PPP 01 18 25.2
NVL *e* S S 01 23 34.0 +9.4
NVL *e* SS SS 01 28 31.2 +12
NVL pmax pmax
comp=Z,23nm,1.2s
NVL MLR MLR
comp=Z,473nm,16.0s
VNA1 **Neumayer--Stat** 76.86 177 ⇓P P 01 13 51.0 +12
comp=Z,66nm,0.8s
MDSI **Maura Dua** 77.29 273 P **P** 01 13 40.7 -2.1
comp=Z,22nm,0.7s
COYC **Coyhaique** 77.44 136 P **P** 01 13 43.3 +0.1
COYC IAmb IAmb 01 13 52.5
comp=Z,79nm,1.7s
LL02 **Futaleuf** 78.91 134 P **P** 01 13 51.6 +0.2
H03S2 **Juan Fernandez** 79.34 123 T T 02 42 51.4
baz=236
H03S1 **Juan Fernandez** 79.35 123 T T 02 42 50.6
baz=236
H03S3 **Juan Fernandez** 79.36 123 T T 02 42 42.8
baz=236
H03N3 **Juan Fernandez** 79.54 123 T T 02 42 55.3
baz=240,slow=72,SNR=15
H03N2 **Juan Fernandez** 79.55 123 T T 02 42 53.7
baz=240,slow=72,SNR=13
H03N1 **Juan Fernandez** 79.56 123 T T 02 42 59.5
baz=240,slow=72,SNR=25
MJAR **Matsushiro Arr** 79.95 326 P **P** 01 13 55.0 -1.9
comp=Z,1.5nm,0.4s,baz=173,slow=5.5,SNR=5.2
MJAR LR LR 01 43 15.0
comp=Z,287nm,21.7s,baz=143,slow=31
comp=Z,1.5nm,0.4s
LR05 **Currie** 80.48 132 P **P** 01 13 58.6 -1.4
LR05 IAmb IAmb 01 14 19.5
comp=Z,28nm,1.1s
PLCA **Paso Flores** 81.10 133 P **P** 01 14 05.0 +1.6
comp=Z,9.6nm,1.0s,baz=225,slow=5.2,SNR=9.5
PLCA LR LR 01 44 49.2
comp=Z,661nm,18.3s,baz=228,slow=32
comp=Z,9.6nm,1.0s
PLCA **Paso Flores** 81.10 133 P **P** 01 14 03.6 +0.2
PLCA **Paso Flores** 81.10 133 P **P** 01 14 03.6 +0.2
PLCA pmax pmax
comp=Z,21nm,1.2s
JNU **Nakatsue** 81.11 319 LR LR 01 45 20.0
comp=Z,256nm,20.4s,baz=136,slow=32
GO06 **Curarrehue** 81.19 131 P **P** 01 14 03.5 -0.4
GO06 IAmb IAmb 01 14 20.6
comp=Z,36nm,1.6s
BI02 **San Fabin de** 83.00 129 P **P** 01 14 14.1 +0.7
BI02 IAmb IAmb 01 14 43.8
comp=Z,23nm,1.4s
ADK **Adak** 84.05 1 P **P** 01 14 18.6 +0.6
ADK **Adak** 84.05 1 P **P** 01 14 18.6 +0.6
ADK pmax pmax
comp=Z,153nm,1.4s
BO02 **Sierra Bellavi** 84.41 128 P **P** 01 14 20.8 +0.2
BO02 IAmb IAmb 01 14 26.3
comp=Z,18nm,0.9s
LPIG **La Paz** 85.69 58 LR LR 01 47 47.9
comp=Z,1µm,18.1s,baz=214,slow=32
QIZ **Qiongzhong** 85.86 295 P **P** 01 14 27.4 -0.5
QIZ S **S** 01 25 02.2 +1.8
QIZ L L
comp=Z,290nm,14.9s
QIZ L L
comp=Z,300nm,20.6s
QIZ L L
comp=Z,310nm,17.8s
KSRS **Korea Array** 85.93 320 P **P** 01 14 28.4 +0.6
comp=Z,5.5nm,0.9s,baz=143,slow=6.0,SNR=8.2
KSRS LR LR 01 50 16.9
comp=Z,294nm,19.8s,baz=145,slow=34
comp=Z,5.5nm,0.9s
KSAR **Wonju Array Be** 85.94 320 **P** 01 14 26.7 -1.2
KSAR **Wonju Array Be** 85.94 320 P **P** 01 14 26.7 -1.2
GSI **Gunungsitoli** 85.94 274 P **P** 01 14 27.9 -0.6
GSI IAmb IAmb 01 14 29.9
comp=Z,32nm,0.8s
GSI **Gunungsitoli** 85.94 274 P **P** 01 14 29.3 +0.8
comp=Z,43nm,0.8s
YSS **Yuzhno-Sakhali** 86.63 334 *e* P **P** 01 14 32.7 +1.7
YSS *e* S **S** 01 25 07.6 +1.0
YSS pmax pmax
comp=Z,30nm,1.0s
PET **Petropavlovsk** 87.57 346 *e* P **P** 01 14 36.1 +0.7
PET *e* 01 25 05.6
PET *e* S **S** 01 25 16.6 +1.2
PET pmax pmax
comp=Z,28nm,1.3s
PET pmax pmax
comp=Z,100nm,12.1s
PET MLR MLR
comp=Z,600nm,19.0s
PET MLR MLR
comp=Z,700nm,17.0s
NJ2 **Nanjing** 87.58 311 *e* P **P** 01 14 37.1 +1.1
NJ2 pmax pmax
comp=Z,25nm,0.6s
PFO **Pinyon Flats O** 87.67 47 LR LR 01 48 18.2
comp=Z,694nm,18.2s,baz=238,slow=32
PFO **Pinyon Flats O** 87.67 47 *i* P **P** 01 14 35.3 -1.3
PFO pmax pmax
comp=Z,7.0nm,1.1s
ZON **Zonda** 87.75 126 **P** 01 14 37.3 +0.1
ZON IAmb IAmb 01 14 53.9
comp=Z,26nm,1.4s
ZON **Zonda** 87.75 126 P **P** 01 14 37.3 +0.1
ZON pmax pmax
comp=Z,27nm,1.4s
ISA **Isabella, Lake** 87.83 45 P **P** 01 14 37.4 +0.1
ISA IAmb IAmb 01 14 44.5
comp=Z,19nm,1.3s
ISA **Isabella, Lake** 87.83 45 P **P** 01 14 37.4 +0.1
ISA pmax pmax
comp=Z,19nm,1.3s
PEA0B **Petropavlovsk-** 87.85 346 **P** 01 14 36.8 0.0
PEA0B **Petropavlovsk-** 87.85 346 P **P** 01 14 36.8 0.0
PEA0B pmax pmax
comp=Z,111nm,1.4s
PETK **Petropavlovsk-** 87.85 346 P **P** 01 14 37.1 +0.3
comp=Z,21nm,0.9s,baz=162,slow=11,SNR=6.1
PETK LR LR 01 51 24.6
comp=Z,374nm,18.7s,baz=166,slow=34
comp=Z,21nm,0.9s
PETK **Petropavlovsk-** 87.85 346 **P** 01 14 36.5 -0.3

CLC China Lake 88.46 45 P **P** **01 14 40.0 -0.2**
CLC IAmb IAmb 01 14 47.4
comp=Z,44nm,1.6s
CLC China Lake 88.46 45 P **P** **01 14 40.0 -0.2**
CLC pmax pmax
comp=Z,44nm,1.6s
113A Mohawk Valley, 88.82 49 P **P** **01 14 42.3 +0.4**
113A IAmb IAmb 01 14 49.6
comp=Z,22nm,1.6s
IRM Iron Mountain 88.85 48 P **P** **01 14 41.8 -0.3**
IRM IAmb IAmb 01 14 50.0
comp=Z,49nm,1.5s
USRK Ussuriysk Ar. 88.90 327 P **P** **01 14 42.8 +0.9**
comp=Z,7.1nm,0.9s,baz=199,slow=5.2,SNR=5.8
comp=Z,7.1nm,0.9s
M02C Callahan 89.41 38 P **P** **01 14 45.7 +1.2**
YBH Yreka Blue Hor 89.73 38 LR LR 01 50 17.9
comp=Z,41nm,18.9s,baz=241,slow=32
NVAR Mina Array Bea 89.82 43 P **P** **01 14 47.7 +0.9**
comp=Z,2.3nm,1.0s,baz=217,slow=8.0,SNR=8.1
NVAR LR LR 01 51 08.1
comp=Z,508nm,18.4s,baz=262,slow=33
comp=Z,2.3nm,1.0s
TYV Tymovskoe 89.97 336 *e*P **P** **01 14 48.7 +1.9**
TYV *e*S **S** **01 25 41.7 +3.5**
TYV pmax pmax
comp=Z,400nm,3.8s
TYV pmax pmax
comp=Z,45nm,1.0s
TYV smax smax
comp=N,500nm,7.0s
V12A Nelson 90.06 47 P **P** **01 14 48.1 +0.3**
V12A IAmb IAmb 01 14 54.5
comp=Z,25nm,1.8s
W13A Hualapai Mount 90.25 48 **P** **01 14 49.5 +0.7**
MDJ Mudanjiang 90.34 326 P **P** **01 14 47.2 -1.5**
MDJ pmax pmax
comp=Z,15nm,2.3s
TUC Tucson 90.47 51 P **P** **01 14 49.6 -0.2**
TUC IAmb IAmb 01 14 57.6
comp=Z,23nm,1.6s
TUC Tucson 90.47 51 P **P** **01 14 49.6 -0.2**
TUC pmax pmax
comp=Z,23nm,1.6s
DL2 Dalian 90.47 317 *e*P **P** **01 14 49.6 +0.2**
DL2 SKS **SKSac** **01 25 22.4 +2.8**
DL2 *e*S **ScS** **01 25 46.0 -1.0**
DL2 pmax pmax
comp=Z,22nm,1.1s
DL2 pmax pmax
comp=Z,270nm,4.7s
DL2 L L
comp=Z,450nm,22.8s
DL2 L L
comp=Z,630nm,20.3s
X16A Lo Mia Camp, P 91.36 49 P **P** **01 14 54.5 +0.5**
X16A IAmb IAmb 01 15 01.0
comp=Z,29nm,1.8s
TIA Tai'an 91.38 313 P **P** **01 14 55.8 +2.0**
TIA pmax pmax
comp=Z,24nm,0.8s
TIA L L
comp=Z,430nm,16.5s
TIA L L
comp=Z,730nm,19.0s
CN2 Changchun 91.80 323 *e*P **P** **01 14 55.0 -0.5**
CN2 *e*S **S** **01 25 50.0 -5.2**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 L L
comp=Z,200nm,11.0s
CN2 L L
comp=Z,200nm,10.0s
WIFE Three Sisters- 91.85 37 P **P** **01 14 56.3 +0.2**
H04A Detroit Lake 92.11 36 P **P** **01 14 57.9 +0.9**
H04A IAmb IAmb 01 15 02.6
comp=Z,31nm,1.7s
GRNR Gornyy 92.14 333 *e*P **P** **01 14 58.6 +1.6**
GRNR MLR MLR
comp=N,350nm,17.0s
GRNR MLR MLR
comp=E,400nm,17.0s
GRNR MLR MLR
comp=Z,360nm,17.0s
BNX BinXian 92.22 325 ⇑P **P** **01 14 56.0 -1.4**
BNX pmax pmax
comp=Z,11nm,1.6s
KDAK Kodiak Island 92.47 13 LR LR 01 49 54.8
comp=Z,330nm,20.8s,baz=206,slow=31
KLR Kul'dur 92.83 330 LR LR 01 55 23.6
comp=Z,373nm,18.5s,baz=176,slow=35
KLR Kul'dur 92.83 330*ce*P **P** **01 14 59.4 -0.8**
KLR pmax pmax
comp=Z,5.0nm,2.5s
ELK Elko 93.13 43 LR LR 01 51 55.9
comp=Z,409nm,18.9s,baz=238,slow=32
LYN LuoYang 93.30 309 P **P** **01 15 04.9 +2.2**
LYN SKS **SKSac** **01 25 37.2 +1.4**
LYN pmax pmax
comp=Z,16nm,0.6s
LYN pmax pmax
comp=Z,260nm,5.2s
CMIG Matias Romero 93.45 72 LR LR 01 50 18.4
comp=Z,443nm,18.3s,baz=190,slow=31
N15K Kwethluk River 93.53 9 **P** **01 15 03.1 0.0**
N15K IAmb IAmb 01 15 33.0
comp=Z,21nm,1.4s
TXAR Lajitas Array 93.57 57 P **P** **01 15 05.2 +1.0**
comp=Z,0.7nm,1.1s,baz=201,slow=6.7,SNR=4.5
comp=Z,0.7nm,1.1s
TXAR Lajitas Array 93.57 57 P **P** **01 15 03.8 -0.4**
HNS HongShan 93.63 313 ‖P **P** **01 15 06.1 +2.0**
HNS SKS **SKSac** **01 25 37.7 +0.3**
HNS S **ScS** **01 26 17.1 +3.8**
HNS pmax pmax
comp=Z,10.0nm,1.1s
HNS L L
comp=Z,250nm,15.9s
HNS L L
comp=Z,460nm,17.1s
CMAR Chiang Mai Arr 94.05 289 P **P** **01 15 06.0 -0.5**
comp=Z,1.1nm,0.3s,baz=129,slow=4.0,SNR=2.2
CMAR PP **PP** **01 18 54.8 +1.6**
comp=Z,1.1nm,0.3s,baz=138,slow=5.5,SNR=6.8
CMAR LR LR 01 59 43.2
comp=Z,148nm,19.6s,baz=120,slow=37
comp=Z,1.1nm,0.3s
CMAR Chiang Mai Arr 94.05 289 P **P** **01 15 04.8 -1.7**
ATAH Atahualpa 94.28 101 LR LR 01 52 11.6
comp=Z,495nm,18.1s,baz=243,slow=32
BJI2 Beijing 94.39 315 P **P** **01 15 09.0 +1.5**
BJI2 sP **sP** **01 15 15.6 +1.5**
BJI2 PP **PP** **01 18 58.4 +3.0**
BJI2 SKS **SKSac** **01 25 41.8 +0.3**
BJI2 pmax pmax
comp=Z,4.0nm,1.1s
BJI2 pmax pmax
comp=Z,89nm,8.7s
BJI2 L L
comp=Z,130nm,20.4s
BJI2 L L
comp=Z,120nm,20.2s
BJI2 L L
comp=Z,210nm,20.8s
ANMO Albuquerque 94.93 51 LR LR 01 53 18.3
comp=Z,715nm,18.1s,baz=238,slow=33
ANMO Albuquerque 94.93 51 *i* P **P** **01 15 09.1 -1.4**
ANMO pmax pmax
comp=Z,1.0nm,1.3s
BBB Bella Bella 94.98 28 LR LR 01 52 21.3
comp=Z,390nm,18.9s,baz=186,slow=32
MA2 Magadan 95.32 345 LR LR 01 57 45.8
comp=Z,225nm,18.2s,baz=149,slow=35
MA2 Magadan 95.32 345 **P** **01 15 09.9 -1.4**
MA2 IAmb IAmb 01 15 12.3
comp=Z,7.3nm,0.9s
MA2 Magadan 95.32 345*ce*P **P** **01 15 09.5 -1.8**
MA2 pmax pmax
comp=Z,8.0nm,1.1s
MA2 Magadan 95.32 345 P **P** **01 15 11.2 -0.1**
PZH PanZhiHua 96.24 297 P **P** **01 15 17.1 +0.6**
NEW Newport 97.11 36 LR LR 01 53 01.6
comp=Z,1µm,19.4s,baz=219,slow=32
LPAZ La Paz 97.32 114 LR LR 01 55 07.5
comp=Z,241nm,18.1s,baz=242,slow=33
HHC Hu-ho-hao-te 97.67 314 *e*P Pdif 01 15 22.7 0.0
HHC SKS **SKSac** **01 25 59.9 +0.9**
HHC S **ScS** **01 26 48.4 +1.3**
HHC SS **SS** **01 33 26.2 -1.8**
HHC pmax pmax
comp=Z,6.0nm,0.5s
HHC pmax pmax
comp=Z,220nm,5.4s
HHC L L
comp=Z,240nm,17.0s
HHC L L
comp=Z,300nm,18.7s
HHC L L
comp=Z,450nm,17.0s
PDAR Pinedale Array 97.70 44 P Pdif 01 15 24.0 +1.0
comp=Z,0.1nm,0.6s,baz=258,slow=6.1,SNR=1.9
PDAR LR LR 01 52 26.6
comp=Z,278nm,19.5s,baz=234,slow=31
comp=Z,0.1nm,0.6s
SEY Seymchan 98.02 347 LR LR 01 57 55.1
comp=Z,469nm,19.1s,baz=146,slow=34
SEY Seymchan 98.02 347*ce*P **P** **01 15 21.6 -1.9**
SEY pmax pmax
comp=Z,5.0nm,1.1s
JTS Las Juntas de 98.05 83 LR LR 01 52 02.4
comp=Z,300nm,19.1s,baz=248,slow=31
CPUP Villa Florida 98.71 129 PKKPbc PKKPbc 01 31 56.4 +1.4
comp=Z,0.9nm,0.7s,baz=337,slow=5.9,SNR=3.8
CPUP LR LR 01 54 06.4
comp=Z,233nm,18.9s,baz=224,slow=32
DLBC Dease Lake 99.08 23 LR LR 02 00 01.3
comp=Z,196nm,18.0s,baz=207,slow=35
COLA College 99.91 13 *i* P **Pdif** **01 15 33.1 +1.3**
COLA pmax pmax
comp=Z,3.0nm,1.0s
LZH Lanzhou 99.94 306 *e*P **Pdif** **01 15 33.4 +0.4**
LZH SKS **SKSac** **01 26 12.3 +1.6**
LZH L L
comp=Z,280nm,20.6s
LZH L L
comp=Z,220nm,19.2s
LZH L L
comp=Z,390nm,20.3s
ILAR Eielson Array 100.00 13 P **Pdif** **01 15 33.2 +0.9**
comp=Z,0.6nm,1.0s,baz=228,slow=7.0,SNR=4.6
ILAR PP **PP** **01 19 45.4 +7.3**
comp=Z,1.1nm,1.1s,baz=225,slow=8.7,SNR=4.2
ILAR LR LR 02 00 49.2
comp=Z,244nm,18.1s,baz=196,slow=36
comp=Z,0.6nm,1.0s
BILL Bilibino 100.94 354 *i* P **Pdif** **01 15 36.4 0.0**
BILL pmax pmax
comp=Z,3.0nm,1.0s
YAK Yakutsk 103.18 337 *i* P **Pdif** **01 15 45.1 -1.4**
YAK pmax pmax
comp=Z,7.0nm,0.7s
YKA Yellowknife Ar 107.37 26 PKiKP **PKiKP** **01 20 15.4 +1.9**
comp=Z,0.3nm,0.9s,baz=268,slow=3.2,SNR=3.8
YKA PKKPbc **PKKPbc** **01 31 30.4 -0.5**
comp=Z,0.8nm,0.8s,baz=31,slow=3.1,SNR=7.5
WMQ Urumqi 114.48 308 *e*PKP **PKiKP** **01 20 28.3 +0.6**
WMQ L L
comp=Z,130nm,24.0s
BOSA Boshof 115.30 203 PKP **PKPdf** **01 20 30.1 +0.1**
comp=Z,4.1nm,1.0s,baz=124,slow=4.5,SNR=3.7
BOSA Boshof 115.30 203 **PKiKP** **01 20 29.3 -0.7**
DGZ Jazzator, Alta 116.75 314 *i* PKiKP **PKPdf** **01 20 30.9 -1.1**
MK31 Makanchi Array 119.08 309*c* iPKiKP **PKPdf** **01 20 35.9 -0.5**
MKAR Makanchi Array 119.08 309 PKP **PKPdf** **01 20 35.9 -0.5**
comp=Z,5.0nm,0.9s,baz=90,slow=1.6,SNR=32
MKAR PKKPbc **PKKPab** **01 30 53.5 +2.7**
comp=Z,0.7nm,1.0s,baz=253,slow=3.7,SNR=4.2
MKAR Makanchi Array 119.08 309 PKiKP **PKPdf** **01 20 36.0 -0.5**
MAKZ Makanchi 119.29 309 **PKPdf** **01 20 36.4 -0.4**
MAKZ Makanchi 119.29 309 PKiKP **PKPdf** **01 20 36.4 -0.4**
WUS Wushi 119.44 302 **PKPdf** **01 20 36.4 -1.1**
ZAA0 Zalesovo Array 119.57 318 **PKPdf** **01 20 36.6 -0.5**
ZALV Zalesovo Beam 119.57 318 PKP **PKPdf** **01 20 36.9 -0.2**
comp=Z,2.0nm,0.5s,baz=100,slow=2.1,SNR=11
ZALV Zalesovo Beam 119.57 318 **PKPdf** **01 20 36.5 -0.6**
PRZ Przheval'sk 120.42 303 **PKPdf** **01 20 39.1 -0.3**
PRZ Przheval'sk 120.42 303 PKiKP **PKPdf** **01 20 39.1 -0.3**
TARG Taragay, Kyrgy 120.61 302 **PKPdf** **01 20 39.4 -0.7**
TARG Taragay, Kyrgy 120.61 302 PKiKP **PKPdf** **01 20 39.4 -0.7**
NIL Nilore 121.39 292 PKPdf **PKPdf** **01 20 40.6 -0.7**
NIL Nilore 121.39 292 PKiKP **PKPdf** **01 20 40.6 -0.7**
KSH2 Kashi 121.44 299 PKP **PKiKP** **01 20 42.3 +0.8**
NRIK Noril'sk 121.54 335 PKP **PKiKP** **01 20 41.0 +0.4**
comp=Z,1.7nm,0.5s,baz=8.6,slow=2.8,SNR=3.7
NRIK Noril'sk 121.54 335 *i* PKiKP **PKiKP** **01 20 40.7 +0.1**
KGCAE Kacgae 121.63 202 PKPdf **PKiKP** **01 20 43.2 +0.7**
ULHL Ulahol 121.88 303 P **PKiKP** **01 20 42.7 +0.4**
SNR=15
KOOLE Kule 122.11 200 PKPdf **PKPdf** **01 20 43.2 -0.1**
BOOM Boomskoye usch 122.16 303 **PKPdf** **01 20 42.7 0.0**
BOOM Boomskoye usch 122.16 303 PKiKP **PKPdf** **01 20 42.7 0.0**
KURK Kurchatov 122.46 313 **PKPdf** **01 20 41.9 -0.8**
KURK Kurchatov 122.46 313 PKiKP **PKPdf** **01 20 42.2 -0.5**
KURBB Kurchatov Arra 122.50 313 PKP **PKPdf** **01 20 42.2 -0.6**
comp=Z,10nm,0.7s,baz=110,slow=1.9,SNR=94
TKM2 Tokmak 2 122.53 303 P **PKPdf** **01 20 43.2 -0.2**
SNR=13
UCH Uchtor 123.11 302 P **PKiKP** **01 20 46.2 +1.1**
SNR=14
CHMS Chumysh 123.15 303 P **PKiKP** **01 20 45.1 +0.5**
SNR=9.7
AAK Ala-Archa 123.23 303 P **PKiKP** **01 20 45.6 +0.6**
SNR=7.1
AAK Ala-Archa 123.23 303 **PKPdf** **01 20 44.1 -0.6**
AAK Ala-Archa 123.23 303 *i* PKiKP **PKPdf** **01 20 44.4 -0.3**
USP Ospenovka 123.39 303 P **PKiKP** **01 20 45.6 +0.5**
SNR=11
EKS2 Erkin-Say 123.75 303 P **PKiKP** **01 20 47.0 +1.1**
SNR=12
ARSB Arslanbob 123.97 301 **PKPdf** **01 20 46.0 -0.2**
ARSB Arslanbob 123.97 301 PKiKP **PKPdf** **01 20 46.0 -0.2**
DRK Karamyk 124.33 298 **PKPdf** **01 20 47.1 0.0**
DRK Karamyk 124.33 298 PKiKP **PKPdf** **01 20 47.1 0.0**
KBL Kabul 124.98 292 **PKPdf** **01 20 48.4 0.0**
KBL Kabul 124.98 292 PKiKP **PKPdf** **01 20 48.4 0.0**
BTK Batken 125.22 299 **PKPdf** **01 20 48.0 -0.5**
BTK Batken 125.22 299 PKiKP **PKPdf** **01 20 48.0 -0.5**
KK31 Karatay Array 126.18 302 **PKPdf** **01 20 49.6 -0.6**
KK31 Karatay Array 126.18 302 PKiKP **PKPdf** **01 20 49.6 -0.6**
KKAR Karatay Array 126.18 302 **PKPdf** **01 20 49.4 -0.8**
KKAR Karatay Array 126.18 302 PKiKP **PKPdf** **01 20 49.4 -0.8**
LSZ Lusaka 126.25 212 PKPdf **PKPdf** **01 20 51.5 +0.2**
LSZ Lusaka 126.25 212 PKiKP **PKPdf** **01 20 51.5 +0.2**
BVAR Borovoye Array 127.87 315 PKP **PKiKP** **01 20 53.4 -0.2**
comp=Z,7.2nm,0.5s,baz=114,slow=1.8,SNR=37
BORK Borovoye 127.91 315 **PKPdf** **01 20 52.6 -0.5**
BORK Borovoye 127.91 315*c* iPKiKP **PKiKP** **01 20 54.0 +0.3**
BORK pmax pmax
comp=Z,56nm,2.5s
HRA Herat 130.31 290 **PKPdf** **01 20 58.6 0.0**
SVE Sverdlovsk 133.49 320 *e*PKiKP **PKiKP** **01 21 04.8 0.0**
SPA0 Spitsbergen Ar 133.81 356 *e*PKPdf **PKiKP** **01 21 04.8 -0.1**
SPITS Spitsbergen Ar 133.81 356 PKP **PKPdf** **01 21 04.0 +0.3**
comp=Z,5.4nm,0.8s,baz=60,slow=5.1,SNR=5.7
SPITS SKPbc **SKPab** **01 24 34.2 +0.3**
comp=Z,10nm,1.1s,baz=256,slow=5.8,SNR=3.9
AB31 Akbulak array 134.23 309 **PKPdf** **01 21 05.5 +0.3**
ABKAR Akbulak array 134.23 309 **PKPdf** **01 21 05.5 +0.3**
ARTI Arti 134.78 319 PKP **PKiKP** **01 21 06.9 -0.5**
comp=Z,11nm,0.9s,baz=95,slow=2.4,SNR=15
ARTI SKPbc **SKPab** **01 24 37.8 -0.9**
comp=Z,20nm,1.1s,baz=129,slow=1.3,SNR=11
ARTI Arti 134.78 319 **PKPdf** **01 21 06.2 +0.1**
ARTI Arti 134.78 319 *i* PKiKP **PKiKP** **01 21 06.9 -0.5**
ARTI 01 23 35.9
ARTI SS SS 01 41 24.4 -7.4
AKTO Aktyubinsk 135.47 311 PKP **PKPdf** **01 21 08.1 +0.6**
comp=Z,6.6nm,0.9s,baz=139,slow=3.9,SNR=9.1
AKTO SKPbc **SKPab** **01 24 40.2 -1.8**
comp=Z,4.2nm,0.9s,baz=125,slow=4.6,SNR=4.8
KIRV Kirov 139.01 324 PKP **PKiKP** **01 21 15.0 -0.9**
comp=Z,7.2nm,0.5s,baz=355,slow=1.6,SNR=5.8
KIRV SKPbc **SKiKP** **01 24 50.6 -0.3**
comp=Z,4.8nm,0.5s,baz=333,slow=4.5,SNR=4.6
ARA0 ARCESS Array S 140.64 347 *e* PKPpre 01 21 07.9
ARCES ARCESS Array B 140.64 347 PKhKP PKPpre 01 21 07.9
comp=Z,4.3nm,0.7s,baz=44,slow=3.0,SNR=9.3
ARCES PKP **PKiKP** **01 21 18.1 -1.0**
comp=Z,2.3nm,0.6s,baz=75,slow=1.2,SNR=7.5
RAYN Ar Rayn 140.74 268 PKPdf **PKPdf** **01 21 17.4 -0.7**
RAYN Ar Rayn 140.74 268 ‖PKiKP **PKPdf** **01 21 18.5 +0.4**
KTK1 Kautokeino 141.51 348 *e* PKPpre 01 21 12.2
BELG Belogornoye 141.68 315 PKhKP PKPpre 01 21 12.5
comp=Z,7.3nm,0.7s,baz=45,slow=5.7,SNR=2.6
BELG PKP **PKiKP** **01 21 20.9 -0.7**
comp=Z,36nm,0.9s,baz=211,slow=0.5,SNR=10
BELG Belogornoye 141.68 315 *i* PKiKP **PKPdf** **01 21 18.6 -0.1**
KLMR Klimovskoe 142.59 331 *e*PKiKP **PKPdf** **01 21 16.8 -3.3**
KLMR pmax pmax
comp=Z,40nm,1.4s
MAK Makhachkala 142.90 300 *e*PKHKP PKPpre 01 21 15.9
MAK *e* 01 24 29.5
MAK *e* 01 28 26.8
MAK *e*SS SS 01 43 01.7 -6.7
MAK *e*SSS SSS 01 48 27.8
MAK pmax pmax
comp=Z,163nm,1.1s
STEI Steigen 143.71 352 *e*PKPdf **PKPdf** **01 21 21.2 -0.7**
LOF Lofoten 143.72 353 *e*PKPdf PKPbc 01 21 20.2 +0.7
FAUS Fauske 144.23 351 *e*PKPdf **PKPdf** **01 21 22.1 -0.7**
GNI Garni 144.96 295 PKP **PKPdf** **01 21 25.6 +0.4**
comp=Z,3.8nm,0.6s,baz=286,slow=1.8,SNR=4.0
VAGH Vaagaholmen 145.09 352 *e*PKPab **PKPab** **01 21 24.0 +0.1**
RAUS Rausandaksla 145.28 351 *e*PKPbc **PKPbc** **01 21 24.2 -0.2**
KONS Konsvik 145.33 352 *e*PKPbc **PKPbc** **01 21 24.2 -0.4**
MOR8 Moi Rana 145.49 351 *e*PKPbc **PKPdf** **01 21 24.5 -0.6**
STOK Stokkvaagen 145.51 352 *e*PKPbc **PKPbc** **01 21 25.3 +0.1**
VRH Novokhopyorsk 145.52 315 *e*PKiKP **PKPdf** **01 21 25.3 -0.3**
VRH pmax pmax
comp=Z,110nm,1.6s
LEIR Leirfjorden 145.71 352 *e*PKPbc **PKPbc** **01 21 25.9 0.0**
NCK Nalchik 145.72 301 *i* PKiKP **PKPdf** **01 21 26.2 0.0**
GOF Gofitskoye 145.96 304*c* iPKP2 **PKPbc** **01 21 27.2 -0.1**
MOS Moscow 146.03 324 *i* PKHKP PKPpre 01 21 22.1
MOS pmax pmax
comp=Z,700nm,1.7s
MOS pmax pmax
comp=Z,317nm,1.2s
MOS pmax pmax
comp=E,68nm,1.2s
MOS pmax pmax
comp=N,118nm,1.3s
GEVA Gevas 146.20 292 **PKPbc** **01 21 28.0 -0.5**
KBZ Khabaz 146.21 301 PKPbc **PKPbc** **01 21 27.9 -0.1**
comp=N,17nm,0.9s,baz=168,slow=5.9,SNR=27
KBZ Khabaz 146.21 301*c* iPKP2 **PKPbc** **01 21 27.8 -0.3**
KVAR Kislovodsk Arr 146.33 302 PKPbc **PKPab** **01 21 29.7 +0.3**
comp=N,7.9nm,1.2s,baz=259,slow=5.2,SNR=2.5
KIV Kislovodsk 146.34 302 **PKPbc** **01 21 28.2 -0.4**
KIV Kislovodsk 146.34 302 *i* PKP2 **PKPbc** **01 21 28.3 -0.4**
KIV pmax pmax
comp=Z,24nm,1.1s
KIV Kislovodsk 146.34 302 PKP **PKPbc** **01 21 28.7 +0.1**
SHA1 Shidzhatmaz 146.38 301*c* iPKP2 **PKPbc** **01 21 29.1 +0.2**
NEUR Neytrino 146.39 300*c* iPKP2 **PKPdf** **01 21 28.2 +0.6**
LPSR Galich'ya Gora 146.68 318 *e*PKP2 **PKPdf** **01 21 28.3 +0.8**
LPSR pmax pmax
comp=Z,201nm,1.0s
OBN Obninsk 146.86 323 PKPbc **PKPbc** **01 21 29.4 -0.1**
comp=Z,51nm,0.9s,baz=66,slow=3.5,SNR=27
OBN Obninsk 146.86 323 ‖P **PKPbc** **01 21 29.6 0.0**
OBN Obninsk 146.86 323 **PKPdf** **01 21 28.5 +0.8**
OBN Obninsk 146.86 323*c* iPKP2 **PKPbc** **01 21 29.4 -0.1**
OBN pmax pmax
comp=Z,242nm,1.4s
OBN Obninsk 146.86 323 PKP **PKPbc** **01 21 29.0 -0.6**
VORR Voronezh 146.86 316 *e*PKP2 **PKPbc** **01 21 29.0 -0.7**
VORR pmax pmax
comp=Z,203nm,1.2s
PUL Pulkovo 146.88 334*c* iPKP2 **PKPab** **01 21 30.8 -0.1**
PUL pmax pmax
comp=Z,264nm,0.8s
GURO Guroymak-BITLI 147.02 292 **PKPdf** **01 21 29.4 +0.7**
VSR Storozhevoye 147.04 316 *e*PKP2 **PKPbc** **01 21 29.7 -0.5**
VSR pmax pmax
comp=Z,160nm,1.3s
VORD Divnogorie 147.05 315 *e*PKP2 **PKPbc** **01 21 29.7 -0.6**
VORD pmax pmax
comp=Z,110nm,1.2s
FINES FINESS Array B 147.10 339 PKPbc **PKPbc** **01 21 29.7 -0.4**
comp=Z,58nm,0.8s,baz=87,slow=1.9,SNR=118
FINES FINESS Array B 147.10 339 **PKPbc** **01 21 29.4 -0.7**
NSS Namsos 147.37 352 *e*PKPbc **PKPbc** **01 21 30.9 +0.2**
ERBR Yeremizino-Bor 147.64 305 *i* PKP2 **PKPbc** **01 21 32.1 0.0**
ERBR *e* 01 25 02.7
ERBR pmax pmax
comp=Z,77nm,1.1s
LABN Labinsk 147.65 303 *i* PKP2 **PKPbc** **01 21 31.4 -0.8**
LABN pmax pmax
comp=Z,33nm,0.7s
SOC Sochi 148.52 302 *i* PKiKP **PKPdf** **01 21 30.4 -0.5**
SOC *e* 01 25 04.5
SOC *e*SS SS 01 44 13.4 +0.9
SOC pmax pmax
comp=Z,33nm,1.1s
VSU Vasula 149.12 335*c* iPKP2 **PKPbc** **01 21 35.5 0.0**
VSU pmax pmax
comp=Z,116nm,1.3s
KHAM Kharkiv 149.21 315 PKP **PKiKP** **01 21 38.6 +1.3**
MOL Molde 149.72 355 *e*PKPbc **PKPbc** **01 21 36.8 0.0**
ANN Anapa 149.93 304 *e*PKP2 **PKPbc** **01 21 38.3 +0.4**
ANN pmax pmax
comp=Z,139nm,1.1s
DOMB Dombas 150.11 353 *e*PKPbc **PKiKP** **01 21 38.4 -0.3**
AKN Aaknes 150.15 355 *e*PKPbc **PKPbc** **01 21 38.4 +0.5**
EDA Edea 150.39 197 PKPbc **PKPbc** **01 21 39.7 -0.4**
ASF Jabal al Asfar 150.55 279 PKPbc **PKPbc** **01 21 40.0 +0.1**
comp=Z,24nm,1.0s,baz=120,slow=1.8,SNR=22
NC303 NORSAR Array S 150.63 351 **PKPbc** **01 21 39.1 0.0**
NB2 NORSAR Subarra 150.83 351 PKP **PKPbc** **01 21 40.0 +0.3**
comp=Z,7.0nm,0.7s,baz=19,slow=2.6
NB2 NORSAR Subarra 150.83 351 PKPab **PKPbc** **01 21 40.0 +0.3**
NOA NORSAR Array B 150.83 351 PKPbc **PKPbc** **01 21 39.2 -0.5**
comp=Z,8.2nm,0.6s,baz=15,slow=4.1,SNR=25
NC602 NORSAR Array S 151.08 350 *e*PKPbc **PKPbc** **01 21 40.0 -0.1**
HFS Hagfors 151.30 348 PKPbc **PKPbc** **01 21 40.8 +0.1**
comp=Z,6.2nm,0.4s,baz=116,slow=3.4,SNR=29
MNK Minsk 151.37 328 *i* PKiKP **PKiKP** **01 21 42.1 +0.6**
comp=E,24nm,1.0s
MNK *i* PKiKP **PKiKP** **01 21 42.1 +0.6**
comp=N,24nm,1.0s
MNK *i* PKiKP **PKiKP** **01 21 42.1 +0.6**
comp=Z,87nm,0.9s,baz=50
MNK *i* SKP 01 24 27.9
MNK *i* PKS **PKSdf** **01 25 02.5 -6.9**
MNK *i* PP **PP** **01 25 23.0 +3.0**
MNK *i* PPP PPP 01 28 37.1
MNK *i* SKS SKSdf 01 29 01.1 +20
MNK *i* SS **SS** **01 44 46.2 +3.5**
MNK *i* SSS SSS 01 51 22.4
MNK *i* LRM MLR 02 36 37.4
comp=E,256nm,18.5s
MNK *i* LRM MLR 02 37 28.8
comp=Z,230nm,14.4s
MNK *i* LRM MLR 02 38 33.4
comp=N,275nm,16.8s
MNK Minsk 151.37 328 *i* PKiKP **PKiKP** **01 21 42.1 +0.6**
MNK *i* 01 25 23.0
MNK *i* PPP PPP 01 28 37.0
MNK *i* SS SS 01 44 46.2 +3.5
MNK pmax pmax
comp=Z,87nm,0.9s
MNK pmax pmax
comp=E,24nm,1.0s
MNK pmax pmax
comp=N,24nm,1.0s
SKAR Skarslia 151.52 353 *e*PKPbc **PKPbc** **01 21 40.9 -0.4**
EIL Elat 151.66 273 PKPbc **PKiKP** **01 21 43.4 +0.4**
comp=N,68nm,1.0s,baz=151,slow=0.4,SNR=32
MMAI Mount Meron Ar 151.93 280 PKPbc **PKiKP** **01 21 44.4 +0.9**
comp=N,24nm,0.6s,baz=49,slow=7.0,SNR=42
SIM Simferopol' 152.19 306 *i* PKiKP **PKiKP** **01 21 44.5 +0.9**
SIM *e* 01 25 28.6
SIM pmax pmax
comp=Z,94nm,1.4s
KONO Kongsberg 152.39 352 *e*PKPbc **PKiKP** **01 21 43.6 +0.1**
AK03 Malin Array Si 152.91 320 PKP **PKPbc** **01 21 43.5 -1.1**
AKASG Malin Array Be 152.92 320 PKPbc **PKPbc** **01 21 44.4 -0.2**
comp=Z,16nm,0.8s,baz=53,slow=2.5,SNR=42
AKASG Malin Array Be 152.92 320 **PKPdf** **01 21 36.3 -1.1**
AKASG Malin Array Be 152.92 320 PKiKP **PKPdf** **01 21 36.3 -1.1**
AKBB Malin Array Si 152.92 320*c* iPKiKP **PKPbc** **01 21 43.6 -1.1**
AKBB Malin Array Si 152.92 320 PKP **PKPbc** **01 21 44.7 0.0**

AK01	**Malin Array Si**	**152.93**	**320**	PKP	**PKiKP**	**01 21 45.3**	**+0.4**
KIEV	**Kiev**	**152.94**	**320**	PKP	**PKPdf**	**01 21 40.7**	**+3.3**
KIRS	**Kirsehir-Merke**	**153.34**	**293**	⇑P	**PKPbc**	**01 21 46.0**	**-0.1**
BR131	**Keskin Array S**	**153.50**	**295**	*i* PKiKP	**PKPdf**	**01 21 38.1**	**-0.7**
BRTR	**Keskin Array B**	**153.50**	**295**	PKP	**PKPdf**	**01 21 39.9**	**+1.0**
	comp=Z,1.2nm,1.0s,baz=197,slow=3.9,SNR=5.2						
BRTR				PKPbc	**PKPbc**	**01 21 46.5**	**0.0**
	comp=Z,12nm,0.6s,baz=135,slow=3.7,SNR=59						
DBIC	**Dimbokro**	**153.51**	**165**	PKP	**PKPdf**	**01 21 41.1**	**+1.7**
	comp=Z,5.9nm,0.9s,baz=116,slow=1.9,SNR=3.8						
DBIC				PKPbc	**PKiKP**	**01 21 48.3**	**+1.1**
	comp=Z,6.4nm,0.7s,baz=263,slow=1.0,SNR=5.2						
DBIC	**Dimbokro**	**153.51**	**165**	PKPdf	**PKPdf**	**01 21 38.3**	**-1.1**
BR106	**Keskin Array S**	**153.52**	**295**	PKP	**PKPdf**	**01 21 41.6**	**+2.7**
BR105	**Keskin Array S**	**153.52**	**295**	PKP	**PKiKP**	**01 21 46.9**	**+0.2**
MI28	**Mi28,Pidlybu**	**153.62**	**322**	PKP	**PKPbc**	**01 21 46.1**	**-0.1**
SUW	**Suwalki**	**153.72**	**331**	*e*PKP	**PKiKP**	**01 21 47.3**	**+0.9**
SUW	**Suwalki**	**153.72**	**331**		**PKiKP**	**01 21 46.8**	**+0.4**
SUW	**Suwalki**	**153.72**	**331**	PKIKP	**PKiKP**	**01 21 46.8**	**+0.4**
CSS	**Mathiatis**	**153.84**	**284**		**PKPbc**	**01 21 45.1**	**-2.1**
CSS	**Mathiatis**	**153.84**	**284**	PKP	**PKPbc**	**01 21 46.1**	**-1.1**
BAL3X	**Bal3x, Balta**	**154.05**	**314**	PKP	**PKPbc**	**01 21 47.2**	**0.0**
LUBAR	**Lubar, Ukraine**	**154.13**	**320**	PKP	**PKPbc**	**01 21 47.3**	**0.0**
RNPP9	**Sopachiv**	**154.25**	**324**	PKP	**PKiKP**	**01 21 48.0**	**+0.4**
PURM	**Purcari**	**154.47**	**311**	⇑P	**PKiKP**	**01 21 49.5**	**+1.3**
PURM	**Purcari**	**154.47**	**311**	PKP	**PKiKP**	**01 21 49.5**	**+1.3**
SORM	**Soroca**	**154.71**	**316**	⇑P	**PKPbc**	**01 21 46.1**	**-2.5**
SORM	**Soroca**	**154.71**	**316**	⇑PKIKP	**PKPbc**	**01 21 46.1**	**-2.5**
SORM	**Soroca**	**154.71**	**316**	PKP	**PKiKP**	**01 21 48.9**	**+0.3**
BEL	**Belsk**	**156.30**	**330**	*e*PKP	**PKPab**	**01 22 10.9**	**+0.7**
TESR	**Tescani**	**156.49**	**314**	⇑P	**PKPab**	**01 22 08.6**	**-2.7**
VRI	**Vrincioaia**	**156.74**	**312**	⇑P	**PKPab**	**01 22 12.0**	**-0.4**
VRI	**Vrincioaia**	**156.74**	**312**	⇑PKP2	**PKPab**	**01 22 12.0**	**-0.4**
BURAR	**Bucovina Array**	**156.79**	**317**	⇑P	**PKPdf**	**01 21 39.5**	**-3.5**
BURAR	**Bucovina Array**	**156.79**	**317**	⇑PKIKP	**PKPdf**	**01 21 39.5**	**-3.5**
PLOR	**Plostina**	**156.79**	**312**	⇑P	**PKPab**	**01 22 13.9**	**+1.2**
PLOR	**Plostina**	**156.79**	**312**	⇑PKP2	**PKPab**	**01 22 13.9**	**+1.2**
EKA	**Eskdalemuir Ar**	**156.91**	**7**	PKPab	**PKPab**	**01 22 13.1**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=323,slow=3.1,SNR=3.7						
KWP	**Kalwaria Pacla**	**156.94**	**324**	*e*PKP	**PKPab**	**01 22 13.5**	**+0.4**
TURR	**Turia**	**157.09**	**313**	⇑P	**PKPab**	**01 22 14.9**	**+1.0**
MLR	**Muntele Rosu**	**157.39**	**312**	PKPab	**PKPab**	**01 22 15.8**	**+0.4**
	comp=Z,5.7nm,0.9s,baz=123,slow=10,SNR=5.0						
DOPR	**Dopca**	**157.52**	**313**	⇑P	**PKPab**	**01 22 15.8**	**0.0**
BMR	**Baia Mare**	**157.73**	**319**	⇑P	**PKPab**	**01 22 19.1**	**+2.6**
BMR	**Baia Mare**	**157.73**	**319**	⇑PKP2	**PKPab**	**01 22 19.1**	**+2.6**
STHS	**Stebnicka Huta**	**157.80**	**325**	*e*PKP2	**PKPab**	**01 22 17.4**	**+0.5**
STHS	**Stebnicka Huta**	**157.80**	**325**	*e*PKP	**PKPab**	**01 22 17.4**	**+0.5**
OJC	**Ojcow**	**157.91**	**328**	*e*PKP	**PKPab**	**01 22 15.0**	**-2.3**
NIE	**Niedzica**	**158.25**	**326**	*e*PKP	**PKPdf**	**01 21 45.8**	**+1.1**
NIE	**Niedzica**	**158.25**	**326**	PKP	**PKPdf**	**01 21 48.6**	**+3.9**
ARR	**Arges**	**158.27**	**313**	⇓P	**PKPdf**	**01 21 42.9**	**-2.0**
TNR	**Turnu Rosu**	**158.35**	**314**	⇑P	**PKPab**	**01 22 21.2**	**+1.8**
TNR	**Turnu Rosu**	**158.35**	**314**	⇑PKP2	**PKPab**	**01 22 21.2**	**+1.8**
HUMR	**Humele**	**158.43**	**310**	⇓P	**PKPab**	**01 22 19.5**	**-0.2**
MARR	**Marisel-Cluj**	**158.55**	**317**	⇑P	**PKPab**	**01 22 18.4**	**-1.7**
DRGR		**158.67**	**318**	⇑P	**PKPdf**	**01 21 44.5**	**-0.8**
DRGR		**158.67**	**318**	⇑PKIKP	**PKPdf**	**01 21 44.5**	**-0.8**
LOT	**Lotru**	**158.76**	**314**	⇓P	**PKPab**	**01 22 22.8**	**+1.5**
LANS	**Liptovska Anna**	**158.83**	**327**	*e*PKiKP	PKPdf	01 21 54.5	+9.1
LANS				*e*		01 22 20.2	
LANS	**Liptovska Anna**	**158.83**	**327**	*e*	PKPdf	01 21 54.5	+9.1
LANS	**Liptovska Anna**	**158.83**	**327**	*e*PKP	**PKPab**	**01 22 20.2**	**-1.1**
KSP	**Ksiaz**	**158.85**	**334**	*e*PKP	**PKPab**	**01 22 21.4**	**+0.1**
STEB	**Steborice**	**158.99**	**331**	*e*PKPAB	**PKPab**	**01 22 22.9**	**+1.0**
VLAD	**Vladila**	**159.04**	**310**	⇓P	**PKPab**	**01 22 23.7**	**+1.4**
CHVC	**Chvalec**	**159.15**	**334**	*e*PKP2	**PKPab**	**01 22 24.4**	**+1.8**
CHVC	**Chvalec**	**159.15**	**334**	*e*PKPAB	**PKPab**	**01 22 24.4**	**+1.8**
MORC	**Moravsky Berou**	**159.21**	**331**	*e*PKP	**PKPab**	**01 22 22.7**	**-0.2**
UPC	**Upice**	**159.23**	**334**	*e*PKP2	**PKPab**	**01 22 24.2**	**+1.2**
UPC	**Upice**	**159.23**	**334**	*e*PKPAB	**PKPab**	**01 22 24.2**	**+1.2**
DPC	**Dobruska-Polom**	**159.24**	**333**	*e*PKP2	**PKPab**	**01 22 23.8**	**+0.7**
DPC	**Dobruska-Polom**	**159.24**	**333**	*e*PKPAB	**PKPab**	**01 22 23.8**	**+0.7**
KRLC	**Kraliky**	**159.28**	**332**	*e*PKP2	**PKPab**	**01 22 23.8**	**+0.5**
KRLC	**Kraliky**	**159.28**	**332**	*e*PKPAB	**PKPab**	**01 22 23.8**	**+0.5**
CLL	**Collm**	**159.54**	**340**	*i* PKP2	**PKPab**	**01 22 24.5**	**+0.3**
CLL				pmax	pmax		
	comp=Z,36nm,1.1s						
CLL				MLR	MLR		
	comp=Z,200nm,19.7s						
CLL	**Collm**	**159.54**	**340**	*i* PKPdf	**PKPdf**	**01 21 46.9**	**+0.8**
	comp=Z,3.0nm,0.7s						
CLL				*i* PKPab	**PKPab**	**01 22 24.5**	**+0.3**
	comp=Z,36nm,1.1s						
CLL				AMS	AMS	02 32 00.0	
	comp=Z,200nm,19.7s						
CLL	**Collm**	**159.54**	**340**	*e*PKPbc	**PKPab**	**01 22 24.9**	**+0.6**
	baz=23,slow=4.3						
BRG	**Berggiesshubel**	**159.64**	**338**	*e*PKPbc	**PKPab**	**01 22 25.5**	**+0.8**
	baz=23,slow=4.3						
PVCC	**Panska Ves**	**159.73**	**336**	*e*PKP2	**PKPab**	**01 22 26.0**	**+0.9**
PVCC	**Panska Ves**	**159.73**	**336**	*e*PKPAB	**PKPab**	**01 22 26.0**	**+0.9**
IBBN	**Ibbenburen**	**159.78**	**350**	*e*PKPbc	**PKPab**	**01 22 26.0**	**+0.8**
	baz=23,slow=4.3						
JAVC	**Velka Javorina**	**159.85**	**329**	*e*PKP	**PKPab**	**01 22 27.0**	**+1.2**
BZS	**Buzias**	**159.96**	**316**	⇑P	**PKPdf**	**01 21 47.1**	**+0.3**
BZS	**Buzias**	**159.96**	**316**	⇑PKIKP	**PKPdf**	**01 21 47.1**	**+0.3**
VRAC	**Vranov**	**159.96**	**331**	PKPab	**PKPab**	**01 22 26.4**	**+0.2**
	comp=Z,3.9nm,0.6s,baz=28,slow=5.9,SNR=6.7						
VRAC	**Vranov**	**159.96**	**331**	⇑P	**PKPab**	**01 22 25.8**	**-0.4**
VRAC	**Vranov**	**159.96**	**331**	*e*PKP	**PKPab**	**01 22 26.3**	**+0.1**
HSKC	**Hora Svate Kat**	**160.03**	**338**	*e*PKPAB	**PKPab**	**01 22 27.6**	**+1.2**
GTTG	**Gottingen**	**160.10**	**345**	*e*PKPbc	**PKPab**	**01 22 27.0**	**+0.3**
	baz=23,slow=4.3						
SMOL	**Smolenice**	**160.22**	**328**	*e*PKP2	**PKPab**	**01 22 28.4**	**+1.1**
KRUC	**Moravsky**	**160.24**	**331**	*e*PKP	**PKPab**	**01 22 27.1**	**-0.3**
SRO	**Srobarova**	**160.32**	**326**	*e*PKP2	**PKPab**	**01 22 30.1**	**+2.3**
SRO	**Srobarova**	**160.32**	**326**	*e*PKP	**PKPab**	**01 22 30.1**	**+2.3**
MDVR	**Moldovita**	**160.35**	**314**	*e*PKP	**PKPab**	**01 22 28.6**	**+0.4**
MODS	**Modra-Piesok**	**160.39**	**328**	*e*PKIKP	**PKPdf**	**01 21 48.2**	**+1.0**
MODS	**Modra-Piesok**	**160.39**	**328**	*e*PKP	**PKPdf**	**01 21 48.2**	**+1.0**
MODS				*e*		01 22 30.0	
TANN	**Tannenbergstha**	**160.50**	**340**	*e*PKPbc	**PKPab**	**01 22 28.9**	**+0.4**
	baz=23,slow=4.3						
MOX	**Moxa**	**160.53**	**341**	*e*PKPbc	**PKPab**	**01 22 28.8**	**+0.2**
	baz=23,slow=4.3						
TORD	**Torodi Ar. Bea**	**160.72**	**179**	PKP	**PKPdf**	**01 21 49.2**	**+0.7**
	comp=Z,1.3nm,0.9s,baz=290,slow=2.1,SNR=3.5						
TORD				PKPab	**PKPab**	**01 22 31.1**	**+0.9**
	comp=Z,6.7nm,1.0s,baz=185,slow=5.7,SNR=12						
TORD	**Torodi Ar. Bea**	**160.72**	**179**		**PKPdf**	**01 21 48.2**	**-0.3**
IDI	**Anoyia**	**160.76**	**285**	PKPab	**PKPab**	**01 22 29.5**	**-0.8**
	comp=Z,3.4nm,0.5s,baz=68,slow=8.1,SNR=6.8						
ZVC	**Zvikov**	**160.78**	**335**	*e*PKPAB	**PKPab**	**01 22 30.8**	**+1.1**
MANZ	**Manzenberg**	**160.98**	**340**	*e*PKPbc	**PKPab**	**01 22 31.1**	**+0.5**
	baz=23,slow=4.3						
WINA	**Alland / Wiene**	**161.12**	**330**	*e*PKP	**PKPab**	**01 22 32.0**	**+0.7**
	baz=23,slow=4.3						
ROTZ	**Rotzenmuhle**	**161.15**	**339**	*e*PKPbc	**PKPab**	**01 22 31.7**	**+0.4**
	baz=23,slow=4.3						
MORH	**Mrgy, Hungar**	**161.25**	**322**	⇓P	**PKPdf**	**01 21 48.2**	**+0.1**
MORH	**Mrgy, Hungar**	**161.25**	**322**	PKP	**PKPdf**	**01 21 48.6**	**+0.5**
CKRC	**Cesky Krumlov**	**161.25**	**334**	*e*PKP2	**PKPab**	**01 22 32.4**	**+0.6**
CKRC	**Cesky Krumlov**	**161.25**	**334**	*e*PKPAB	**PKPab**	**01 22 32.4**	**+0.6**
KHC	**Kasperske Hory**	**161.25**	**336**	*i* PKIKP	**PKPdf**	**01 21 47.0**	**-1.1**
KHC	**Kasperske Hory**	**161.25**	**336**	*e*PKPAB	**PKPab**	**01 22 31.9**	**+0.1**
RONA	**Rosalia, Austr**	**161.33**	**328**	*e*PKP	**PKPab**	**01 22 33.0**	**+0.7**
	comp=Z,14nm,1.5s,SNR=6.4						
CONA	**Conrad Observa**	**161.34**	**330**	*i* PKP	**PKPab**	**01 22 31.9**	**-0.5**
	comp=Z,9.1nm,1.7s						
GEC2	**GERESS Array S**	**161.45**	**335**	*e*PKPbc	**PKPab**	**01 22 33.3**	**+0.5**
	baz=23,slow=4.3						
GERES	**GERESS Array B**	**161.45**	**335**	PKPab	**PKPab**	**01 22 32.1**	**-0.6**
	comp=Z,3.6nm,0.8s,baz=22,slow=7.5,SNR=9.1						
WET	**Wettzell**	**161.48**	**337**	*e*PKPbc	**PKPab**	**01 22 33.3**	**+0.5**
	baz=23,slow=4.3						
GRF	**Grafenberg Arr**	**161.50**	**341**	*e*PKPbc	**PKPab**	**01 22 33.1**	**+0.2**
	baz=23,slow=4.3						
TNS	**Taunus Mts**	**161.66**	**347**	*e*PKPbc	**PKPab**	**01 22 33.9**	**+0.3**
	baz=23,slow=4.3						
ARSA	**Arzberg**	**162.01**	**329**	*i* PKP	**PKPab**	**01 22 34.8**	**-0.5**
	comp=Z,8.6nm,1.1s						
MOA	**Molln**	**162.06**	**332**	*e*PKP	**PKPab**	**01 22 36.2**	**+0.8**
	comp=Z,10nm,1.2s						
BIOA	**Bad Ischl, Aus**	**162.44**	**333**	*i* PKP	**PKPab**	**01 22 37.5**	**+0.5**
	comp=Z,9.4nm,1.0s						
SOKA	**Soboth**	**162.67**	**328**	*i* PKP	**PKPab**	**01 22 38.4**	**+0.2**
	comp=Z,14nm,1.2s						
RJOB	**Jochberg**	**162.71**	**335**	*e*PKPbc	**PKPab**	**01 22 38.9**	**+0.6**
	baz=23,slow=4.3						
FUR	**Furstenfeldbru**	**162.85**	**338**	*e*PKPbc	**PKPab**	**01 22 39.2**	**+0.4**
	baz=23,slow=4.3						
STU	**Stuttgart**	**162.87**	**344**	*e*PKPbc	**PKPab**	**01 22 38.8**	**-0.1**
	baz=23,slow=4.3						
OBKA	**Obir**	**163.01**	**329**	*e*PKP	**PKPab**	**01 22 38.3**	**-1.4**
	comp=Z,4.7nm,1.3s						
LESA	**Schwarzleotal**	**163.02**	**334**	*e*PKP	**PKPab**	**01 22 39.0**	**-0.7**
	comp=Z,16nm,1.3s,SNR=6.1						
KBA	**Koelnbreinsper**	**163.05**	**332**	*e*PKP	**PKPab**	**01 22 38.5**	**-1.5**
	comp=Z,8.0nm,1.9s						
MYKA	**Terra Mystica**	**163.30**	**331**	*i* PKP	**PKPab**	**01 22 40.4**	**-0.5**
	comp=Z,10nm,1.4s						
BFO	**Black Forest**	**163.49**	**345**	*e*PKPbc	**PKPab**	**01 22 41.7**	**+0.1**
	baz=23,slow=4.3						
RETA	**Reutte**	**163.61**	**338**	*i* PKP	**PKPab**	**01 22 42.1**	**-0.2**
	comp=Z,19nm,1.1s,SNR=5.6						
MOTA	**Moosalm**	**163.63**	**337**	*i* PKP	**PKPab**	**01 22 43.0**	**+0.5**
	comp=Z,16nm,1.0s,SNR=5.3						
ABTA	**Abfaltersbach**	**163.65**	**333**	*e*PKP	**PKPab**	**01 22 41.9**	**-0.6**
	comp=Z,11nm,1.0s						
SQTA	**Sankt Quirin**	**163.70**	**337**	*e*PKP	**PKPab**	**01 22 43.4**	**+0.6**
	comp=Z,14nm,1.0s						
FETA	**Feichten**	**164.04**	**338**	*e*PKP	**PKPab**	**01 22 44.7**	**+0.5**
	comp=Z,12nm,1.0s						
DAVA	**Damuels**	**164.06**	**340**	*i* PKP	**PKPab**	**01 22 44.9**	**+0.5**
	comp=Z,25nm,1.0s,SNR=6.4						
DAVOX	**Davos/Dischmat**	**164.51**	**339**	PKPab	**PKPab**	**01 22 46.5**	**+0.2**
	comp=Z,11nm,0.9s,baz=12,slow=1.8,SNR=19						
FUORN	**Ofenpass-Fuorn**	**164.54**	**338**		**PKPab**	**01 22 44.9**	**-1.6**
TUE	**Stuetta**	**164.95**	**340**		**PKPab**	**01 22 47.6**	**-0.8**
ESDC	**Sonseca Array**	**171.41**	**32**	PKP	**PKPdf**	**01 21 57.2**	**+0.8**
	comp=Z,0.7nm,0.9s,baz=334,slow=4.1,SNR=6.9						
ESDC				PKPab	**PKPab**	**01 23 17.4**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=304,slow=6.0,SNR=4.3						

*IDC **11** 01:05:45.9±0.7,52.°51S×12.°98E,h0km,mb4.2/13, mbtmp4.2/13,MS4.0/11,Error ellipse: s-maj=22.8km s-min=19.2km az=99.0*
*NEIC **11** 01:05:47.8±1.0,52.°5S±0.°1×13.°0E±0.°2,h10km±1km, mb4.7/15,Error ellipse: s-maj=24.2km s-min=19.4km az=84.0*

ISC 11 01:05:47.6±0.6,52.°46S±0.°09×13.°0E±0.°1,h10km,n53, σ0665/39,mb4.5/17,MS4.0/11,3C,Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TROLL	**Troll, Antarti**	**20.16**	**189**	⇑P	Pn	01 10 24.9	+1.3
SNAA	**Sanae**	**20.52**	**194**	⇑P	**P**	**01 10 26.6**	**+1.0**
	comp=Z,395nm,0.8s						
SNAA	**Sanae**	**20.52**	**194**	P	**P**	**01 10 24.3**	**-1.3**
	comp=Z,6.1nm,0.8s,baz=28,slow=9.4,SNR=7.3						
SNAA				LR	LR	01 16 40.6	
	comp=Z,232nm,20.2s,baz=8.5,slow=32 comp=Z,6.1nm,0.8s						
SNAA	**Sanae**	**20.52**	**194**	P	**P**	**01 10 25.1**	**-0.5**
VNA2	**Neumayer--Watz**	**20.68**	**199**	⇑P	**P**	**01 10 28.6**	**+1.3**
	comp=Z,22nm,0.8s,baz=24,slow=14						
SUR	**Sutherland**	**20.86**	**19**	P	**P**	**01 10 30.0**	**+0.3**
	comp=Z,11nm,0.8s,baz=172,slow=11,SNR=6.9						
SUR				LR	LR	01 16 35.5	
	comp=Z,268nm,21.6s,baz=170,slow=31 comp=Z,11nm,0.8s						
SUR	**Sutherland**	**20.86**	**19**	P	**P**	**01 10 29.7**	**0.0**
VNA3	**Neumayer Olymp**	**21.39**	**200**	P	**P**	**01 10 35.4**	**+0.3**
	comp=Z,22nm,0.8s						
GRHM	**Grahamstown, E**	**21.48**	**32**	P	**P**	**01 10 36.5**	**+0.3**
BOSA	**Boshof**	**25.51**	**26**	P	**P**	**01 11 15.9**	**-0.3**
	comp=Z,3.3nm,1.0s,baz=186,slow=11,SNR=3.3						
BOSA				LR	LR	01 19 23.6	
	comp=Z,297nm,21.2s,baz=195,slow=32 comp=Z,3.3nm,1.0s						
BOSA	**Boshof**	**25.51**	**26**	P	**P**	**01 11 15.4**	**-0.7**
H04S2	**CROZET ISLANDS**	**25.59**	**93**	T	T	01 38 01.3	
	baz=244,slow=76,SNR=10						
H04S3	**CROZET ISLANDS**	**25.59**	**93**	T	T	01 38 05.7	
	baz=244,slow=76,SNR=11						
H04S1	**CROZET ISLANDS**	**25.61**	**93**	T	T	01 38 08.0	
	baz=244,slow=76,SNR=12						
MAW	**Mawson**	**28.17**	**142**	LR	LR	01 21 20.8	
	comp=Z,233nm,18.3s,baz=276,slow=33						
LBTB	**Lobatse**	**29.03**	**24**	LR	LR	01 21 58.2	
	comp=Z,190nm,18.0s,baz=183,slow=33						
KOOLE	**Kule**	**29.93**	**13**	P	**P**	**01 11 55.8**	**-0.1**
KOOLE				IAmb	IAmb	01 12 04.9	
	comp=Z,8.2nm,1.0s						
BELA	**Belgrano 2**	**30.65**	**198**	P	**P**	**01 12 01.7**	**+0.1**
BELA				IAmb	IAmb	01 12 10.5	
	comp=Z,8.8nm,0.8s						
TSUM	**Tsumeb**	**33.38**	**8**	LR	LR	01 24 17.7	
	comp=Z,372nm,18.9s,baz=176,slow=33						
QSPA	**South Pole Qui**	**37.78**	**180**	P	**P**	**01 13 04.2**	**+0.6**
QSPA				IAmb	IAmb	01 13 21.2	
	comp=Z,21nm,1.1s						
LSZ	**Lusaka**	**39.02**	**24**	LR	LR	01 27 18.8	
	comp=Z,261nm,21.2s,baz=182,slow=33						
H10S2	**ASCENSION HYDR**	**48.84**	**323**	T	T	02 07 09.5	
	baz=157,slow=74,SNR=8.1						
H10S3	**ASCENSION HYDR**	**48.85**	**323**	T	T	02 07 17.8	
	baz=63,slow=74,SNR=7.0						
VNDA	**Vanda**	**48.85**	**171**	P	**P**	**01 14 32.5**	**-0.1**
	comp=Z,2.6nm,1.0s,baz=180,slow=10,SNR=2.1 comp=Z,2.6nm,1.0s						
VNDA	**Vanda**	**48.85**	**171**	P	**P**	**01 14 32.7**	**+0.1**
VNDA				IAmb	IAmb	01 14 40.8	
	comp=Z,12nm,1.4s						
MBAR	**Mbarara**	**53.77**	**22**	LR	LR	01 37 24.2	
	comp=Z,238nm,18.5s,baz=178,slow=35						
PLCA	**Paso Flores**	**55.48**	**246**	P	**P**	**01 15 21.7**	**-0.8**
	comp=Z,2.9nm,0.9s,baz=76,slow=3.0,SNR=2.8 comp=Z,2.9nm,0.9s						
PLCA	**Paso Flores**	**55.48**	**246**	P	**P**	**01 15 21.4**	**-1.0**
PLCA				IAmb	IAmb	01 15 23.3	
	comp=Z,4.1nm,1.0s						
CPUP	**Villa Florida**	**57.71**	**268**	P	**P**	**01 15 37.9**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=144,slow=6.8,SNR=6.4 comp=Z,1.9nm,0.7s						
CPUP	**Villa Florida**	**57.71**	**268**		**P**	**01 15 37.7**	**-0.6**
CPUP				IAmb	IAmb	01 15 39.6	
	comp=Z,11nm,1.4s						
BI02	**San Fabin de**	**58.69**	**249**	P	**P**	**01 15 45.5**	**+0.3**
BI02				IAmb	IAmb	01 15 46.3	
	comp=Z,6.6nm,0.9s						
BDFB	**Brasilia**	**60.13**	**284**	P	**P**	**01 15 55.3**	**-0.1**
	comp=Z,3.0nm,0.6s,baz=47,slow=6.5,SNR=6.0 comp=Z,3.0nm,0.6s						
BDFB	**Brasilia**	**60.13**	**284**	P	**P**	**01 15 55.2**	**-0.2**
BDFB				IAmb	IAmb	01 15 57.1	
	comp=Z,6.1nm,1.0s						
DBIC	**Dimbokro**	**60.83**	**340**	LR	LR	01 37 34.0	
	comp=Z,89nm,18.2s,baz=200,slow=31						
AC02	**Maricunga**	**64.51**	**259**	P	**P**	**01 16 25.6**	**+0.5**
AC02				IAmb	IAmb	01 16 27.3	
	comp=Z,5.5nm,0.8s						
FURI	**Furi**	**64.96**	**28**	LR	LR	01 42 32.6	
	comp=Z,133nm,21.6s,baz=186,slow=34						
TORD	**Torodi Ar. Bea**	**66.05**	**348**	P	**P**	**01 16 33.7**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=187,slow=7.0,SNR=6.0 comp=Z,0.5nm,0.8s						
PTLB	**Pontes e Lacer**	**67.00**	**275**	P	**P**	**01 16 40.4**	**-0.2**
PTLB				IAmb	IAmb	01 16 42.1	
	comp=Z,9.7nm,1.4s						
LPAZ	**La Paz**	**71.85**	**267**	P	**P**	**01 17 11.7**	**+0.2**
	comp=Z,7.4nm,0.8s,baz=108,slow=4.2,SNR=22 comp=Z,7.4nm,0.8s						
LPAZ	**La Paz**	**71.85**	**267**	P	**P**	**01 17 11.9**	**+0.5**
STKA	**Stephens Creek**	**84.80**	**138**	P	**P**	**01 18 21.9**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=180,slow=13,SNR=3.1 comp=Z,1.9nm,0.7s						
ASAR	**Alice Springs**	**88.44**	**128**	P	**P**	**01 18 39.8**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=202,slow=5.8,SNR=9.6 comp=Z,1.6nm,0.7s						
ASAR	**Alice Springs**	**88.44**	**128**	P	**P**	**01 18 39.9**	**-0.2**
WRA	**Warramunga Arr**	**91.81**	**127**	P	**P**	**01 18 55.0**	**-0.8**
	comp=Z,0.5nm,1.0s,baz=206,slow=0.2,SNR=1.5 comp=Z,0.5nm,1.0s						
ESDC	**Sonseca Array**	**92.93**	**347**	P	**P**	**01 19 01.2**	**+0.9**
	comp=Z,1.1nm,0.9s,baz=171,slow=3.8,SNR=6.3 comp=Z,1.1nm,0.9s						
SDV	**Santo Domingo**	**93.09**	**280**	LR	LR	02 00 13.0	
	comp=Z,476nm,18.7s,baz=249,slow=35						
SCHQ	**Schefferville**	**125.61**	**316**	PKP	**PKPdf**	**01 24 48.3**	**+0.3**
	comp=Z,4.7nm,1.1s,baz=45,slow=4.3,SNR=3.0						
SCHQ	**Schefferville**	**125.61**	**316**		**PKPdf**	**01 24 48.0**	**0.0**
TXAR	**Lajitas Array**	**128.68**	**269**	PKP	**PKPdf**	**01 24 54.4**	**-0.4**
	comp=Z,0.3nm,0.9s,baz=46,slow=3.0,SNR=3.5						
YKA	**Yellowknife Ar**	**150.89**	**311**	PKPbc	**PKPbc**	**01 25 38.4**	**-0.5**
	comp=Z,4.0nm,0.9s,baz=80,slow=1.9,SNR=43						
YKA	**Yellowknife Ar**	**150.89**	**311**		**PKPbc**	**01 25 38.1**	**-0.8**
ILAR	**Eielson Array**	**163.90**	**328**	PKPab	**PKPab**	**01 26 43.8**	**+1.4**
	comp=Z,1.5nm,0.9s,baz=31,slow=3.4,SNR=11						
ILAR	**Eielson Array**	**163.90**	**328**		**PKPab**	**01 26 43.2**	**+0.8**

*REN **11** 01:17:15.3±0.5,39.°47N±0.°01×120.°25W±0.°02,h11km±2km, Error ellipse: s-maj=1.8km s-min=1.5km az=109.0*
*NEIC **11** 01:17:15.1,39.°47N×120.°25W,h13km*
*NCEDC **11** 01:17:16.1±0.5,39.°475N±0.°009×120.°25W±0.°01, h8km±3km, Error ellipse: s-maj=1.6km s-min=1.0km az=135.0*

NEIC 11 01:17:15.1±0.5,39.°473N±0.°010×120.°24W±0.°01, h12km±3km,ML3.7/114,Mwr3.7/41,ML3.9(REN), Mwr3.7/4(NCEDC),Error ellipse: s-maj=1.5km s-min=1.2km az=196.0,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; Mrr1.47; Mθθ-5.57; Mφφ4.10; Mrθ1.46; Mθφ-0.79; Mφr-0.38; Fault plane solution: M0 5.28000×10^{14} NP1:φs309.87000°, δ89.91000°,λ-164.50000°. NP2:φs219.85000°, δ74.50000°,λ-0.09000°. Principal axes: T 4.2582, Plg11.0000°, Azm84.0000°; N 1.6519, Plg74.0000°, Azm310.0000°; P -5.9101, Plg11.0000°, Azm176.0000°;

Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DONR	**Donner Summit**	**0.14**	**207**		Pg	01 17 18.9	+0.3
DONR					Sg	01 17 21.4	+0.2
VPK	**Verdi Peak**	**0.16**	**89**		Pg	01 17 19.1	+0.1
VPK					Sg	01 17 22.0	+0.2
BABR	**Babbit Peak**	**0.17**	**39**		Pg	01 17 19.4	+0.2
BABR					Sg	01 17 22.0	-0.1
LOY	**Loyalton**	**0.19**	**1**		Pg	01 17 19.6	+0.3
LOY					Sg	01 17 22.7	+0.4
MPK	**Martis Peak**	**0.24**	**137**		Pg	01 17 20.6	+0.3
MPK				Sg	Sg	01 17 24.0	+0.1

Q09A	**Carvers**	**2.46**	**104**		Pn	01 17 55.1	-0.1
KHBM	**Hayfork Bally**	**2.57**	**298**		Pn	01 17 58.5	+1.7
KHBM				IAML		01 18 43.9	
	comp=N,198nm,1.1s						
KHBM				IAML		01 18 50.5	
	comp=E,187nm,1.1s						
KCPM	**Cahto Peak**	**2.59**	**276**		Pn	01 17 58.6	+1.7
KCPM				IAML		01 18 43.7	
	comp=E,303nm,0.9s						
KCPM				IAML		01 18 55.2	
	comp=N,209nm,1.0s						
JRSC	**Jasper Ridge**	**2.59**	**218**		Pn	01 17 58.2	+1.3
JRSC				IAML		01 18 34.6	
	comp=E,484nm,0.4s						
JRSC				IAML		01 18 35.2	
	comp=N,529nm,1.0s						
DSP	**Deep Springs**	**2.75**	**139**		Pn	01 18 00.8	+1.7
M02C	**Callahan**	**2.77**	**315**		Pn	01 18 00.8	+1.5
KMRM	**Mail Ridge**	**2.77**	**287**		Pn	01 18 00.8	+1.4
KMRM				IAML		01 18 54.1	
	comp=E,226nm,0.9s						
KMRM				IAML		01 19 01.2	
	comp=N,201nm,1.4s						
FARB	**Farallon Islan**	**2.80**	**232**		Pn	01 18 00.1	+0.5
SAO	**San Andreas Ge**	**2.87**	**200**		Pn	01 18 02.4	+1.8
BBGB	**Big Mountain B**	**2.96**	**193**		Pn	01 18 04.1	+2.1
KHMM	**Horse Mountain**	**3.02**	**299**		Pn	01 18 04.7	+1.9
KHMM				IAML		01 18 56.8	
	comp=E,140nm,1.2s						
KHMM				IAML		01 19 02.4	
	comp=N,142nm,1.4s						
L04D	**Klamath Falls**	**3.16**	**331**		Pn	01 18 06.7	+1.9
L04D				IAML		01 19 19.0	
	comp=N,115nm,1.2s						
L04D				IAML		01 19 22.4	
	comp=E,112nm,1.5s						
WVOR	**Wild Horse Val**	**3.20**	**22**		Pn	01 18 07.3	+2.0
WVOR				IAML		01 19 00.9	
	comp=E,124nm,0.8s						
WVOR				IAML		01 19 03.8	
	comp=E,125nm,1.0s						
PMPB	**Monarch Peak**	**3.28**	**188**		Pn	01 18 08.4	+2.1
K05A	**Summer Lake**	**3.29**	**352**		Pn	01 18 09.6	+3.0
K05A				IAML		01 19 18.0	
	comp=N,114nm,1.4s						
KRPM	**Rodgers**	**3.34**	**301**		Pn	01 18 07.6	+0.3
KRPM				IAML		01 19 04.5	
	comp=E,112nm,0.9s						
PKD	**Bear Valley Ra**	**3.53**	**184**		Pn	01 18 10.6	+0.8
PKD				IAML		01 19 09.0	
	comp=N,136nm,1.3s						
PKD				IAML		01 19 22.3	
	comp=E,136nm,0.9s						
SGV	**South Grapevin**	**3.55**	**134**		Pn	01 18 12.2	+2.1
VES	**Vestal, Richgr**	**3.74**	**165**		Pn	01 18 14.5	+1.9
R11B	**Troy Canyon, C**	**3.80**	**106**		Pn	01 18 14.4	+0.8
BBOR	**Butler Butte**	**3.88**	**332**		Pn	01 18 17.4	+2.7
WCT	**Wildcat Mounta**	**3.91**	**132**	Pn	Pn	01 18 16.9	+1.9
WCT				IAML		01 19 23.5	
	comp=E,60nm,0.8s						
J04A	**Umpqua Nationa**	**4.02**	**340**		Pn	01 18 19.4	+2.7
J04A				IAML		01 19 29.1	
	comp=N,158nm,0.8s						
J04A				IAML		01 19 36.4	
	comp=E,168nm,1.1s						
ELK	**Elko**	**4.04**	**70**		Pn	01 18 17.1	+0.1
K02D	**Willamette Mer**	**4.13**	**322**		Pn	01 18 19.1	+1.0
GWY	**Greenwater Val**	**4.33**	**138**		Pn	01 18 22.6	+1.7
GWY				IAML		01 19 45.1	
	comp=N,47nm,1.8s						
GWY				IAML		01 19 45.8	
	comp=E,64nm,0.8s						
PRN	**Pahroc Range**	**4.57**	**115**		Pn	01 18 25.1	+0.9
PRN				IAML		01 19 43.6	
	comp=N,108nm,0.4s						
PRN				IAML		01 19 53.7	
	comp=E,111nm,0.8s						
I04A	**Tendick Farm,**	**4.61**	**340**		Pn	01 18 25.8	+1.2
TPO	**Tropico Hills**	**4.86**	**160**	Pn	Pn	01 18 28.1	0.0
TPO				IAML		01 19 51.9	
	comp=N,77nm,1.1s						
SHPR	**Sheep Range**	**4.99**	**125**		Pn	01 18 30.6	+0.6
PSUT	**Pine Spring**	**5.06**	**99**	Pn	Pn	01 18 31.0	0.0
PSUT				IAML		01 20 01.5	
	comp=E,65nm,1.0s						
PSUT				IAML		01 20 07.3	
	comp=N,47nm,1.4s						
BUCK	**Buck Mountain**	**5.15**	**337**		Pn	01 18 33.2	+1.2
BUCK				IAML		01 20 21.3	
	comp=N,31nm,4.1s						
BUCK				IAML		01 20 49.4	
	comp=E,26nm,4.4s						
BGU	**Big Grassy Mou**	**5.71**	**73**		Pn	01 18 40.9	+1.0
DUG	**Dugway, Tooele**	**5.76**	**80**		Pn	01 18 41.3	+0.7
HLID	**Hailey**	**5.99**	**45**	Pn	Pn	01 18 44.8	+1.2
HVU	**Hansel Valley**	**6.13**	**66**		Pn	01 18 45.8	+0.2
SPUT	**South Promonto**	**6.22**	**70**		Pn	01 18 47.4	+0.4
Q16A	**Castle Valley**	**7.07**	**92**	Pn	Pn	01 18 59.8	+1.3
FXWY	**Fox Creek**	**8.06**	**56**	Pn	Pn	01 19 11.8	-0.5
PDAR	**Pinedale Array**	**8.71**	**64**	Pn	Pn	01 19 22.4	+1.3
PV10	**Paradox Valley**	**8.80**	**94**	Pn	Pn	01 19 23.7	+1.3
PV23	**Carpenter Ridg**	**8.81**	**93**	Pn	Pn	01 19 23.6	+1.1
PV02	**Paradox Valley**	**9.07**	**94**	Pn	Pn	01 19 26.5	+0.5

IDC 11 01:20:33.5±7.0, 30°.84S×179°.21W, h0km, mb3.5/2, mbtmp3.5/2 Error ellipse: s-maj=280.0km s-min=64.7km az=156.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.05**	**268**	P	P	01 28 26.7	-0.4
	0.2nm,0.4s,baz=110,slow=7.9,SNR=2.1 0.2nm,0.4s						
WRA	**Warramunga Arr**	**43.08**	**273**	P	P	01 28 35.6	+0.1
	0.3nm,0.3s,baz=114,slow=8.0,SNR=9.3 0.3nm,0.3s						
FINES	**FINESS Array B**	**145.19**	**339**	PKPbc	PKPbc	01 40 10.9	-1.0
	4.2nm,1.1s,baz=36,slow=5.2,SNR=1.4						

*IDC **11** 01:47:54.6±1.1, 29°.38N×130°.44E, h0km, mb3.7/11, mbtmp3.7/16, ML3.3/5, MS3.7/1, Error ellipse: s-maj=25.9km s-min=20.3km az=111.0*
*NIED **11** 01:47:58.8, 29°.31N×130°.56E, h22km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr-0.97; Mθθ0.84; Mϕϕ0.14; Mrθ0.09; Mθϕ0.31; Mϕr2.02; Fault plane solution: M₀2.15000×10¹⁵ NP1:φ₁66.00000°, δ15.00000°, λ-37.00000°. NP2:φ₂191.00000°, δ81.00000°, λ-102.00000°.*
*JMA **11** 01:47:58.8±0.3, 29°.3N±0°.6×130°.6E±0°.9, h22km±4km, MV3.8/18, NEAR AMAMI-OSHIMA ISLAND*
JMA Felt I J1 at NEAR AMAMI-OSHIMA ISLAND.
ISC 11 01:47:59.5±0.7, 29°.36N±0°.05×130°.50E±0°.07, h34km, n25, σ0§90/31, mb3.7/11, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**0.73**	**312**	*eP*	**Pn**	**01 48 13.7**	**+0.2**
JNN				*eS*	**Sb**	**01 48 24.9**	**+1.1**
JYAK	**Yakushimahirau**	**0.88**	**0**	*eP*	**Pn**	**01 48 16.1**	**+0.6**
JYAK				*eS*	**Sb**	**01 48 28.5**	**+0.6**
JMTN	**Minamitane**	**1.09**	**18**	*eP*	**Pn**	**01 48 19.1**	**+0.7**
JMTN				*eS*	**Sb**	**01 48 34.1**	**+0.1**
JKC	**Kuchinoerabu**	**1.13**	**346**	*eP*	**Pn**	**01 48 19.9**	**+0.9**
JTAJ	**Takarajima**	**1.15**	**260**	*eP*	**Pb**	**01 48 20.5**	**-0.5**
JAM	**Amami Oshima**	**1.23**	**220**	*eP*	**Pn**	**01 48 21.0**	**+0.7**
JAM				*eS*	**Sb**	**01 48 37.3**	**-0.5**
JTN	**Tanegashima 3**	**1.36**	**18**	*eP*	**Pn**	**01 48 22.8**	**+0.7**
JAMN	**Amaminishikomi**	**1.61**	**227**	*eP*	**Pn**	**01 48 26.4**	**+0.8**
JTSR	**Tashiro 2**	**1.84**	**11**	*eP*	**Pn**	**01 48 30.7**	**+1.9**
JOW	**Kunigami**	**3.19**	**219**	Pn	**Pn**	**01 48 46.7**	**-0.6**
	9.2nm,0.3s,baz=114,slow=24,SNR=7.3						
JOW				Sn	**Sn**	**01 49 26.6**	**+2.3**
	8.5nm,0.3s,baz=186,slow=10,SNR=4.0 12nm,0.3s						
JNU	**Nakatsue**	**3.77**	**5**	Pn	**Pn**	**01 48 55.7**	**+0.4**
	2.7nm,0.3s,baz=191,slow=17,SNR=18						
JNU				Sn	**Sn**	**01 49 39.3**	**+0.9**
	1.6nm,0.3s,baz=168,slow=4.7,SNR=4.3 38nm,0.8s						
KSRS	**Korea Array**	**8.36**	**346**	Pn	**Pn**	**01 49 58.0**	**-0.3**
	0.4nm,0.3s,baz=159,slow=15,SNR=4.8 0.4nm,0.3s						
MJAR	**Matsushiro Arr**	**9.65**	**40**	Pn	**Pn**	**01 50 15.5**	**-0.5**
	0.2nm,0.3s,baz=238,slow=15,SNR=4.4 1.1nm,0.3s						
KLR	**Kul'dur**	**19.87**	**2**	P	**P**	**01 52 26.8**	**-0.8**
	0.1nm,0.3s,baz=174,slow=5.1,SNR=7.0 1.7nm,0.7s						
LZDM	**Lanzhou Array**	**23.47**	**293**	P	**P**	**01 53 06.2**	**-0.2**
	2.3nm,0.4s,baz=162,slow=6.2,SNR=4.6						
LZDM				LR	LR	02 02 32.7	
	comp=Z,211nm,21.8s,baz=100,slow=38 2.3nm,0.4s						
SONM	**Songino Array**	**26.20**	**321**	P	**P**	**01 53 30.5**	**-0.6**
	1.4nm,0.6s,baz=139,slow=12,SNR=3.7 1.4nm,0.6s						
MKAR	**Makanchi Array**	**41.05**	**309**	P	**P**	**01 55 39.9**	**+0.2**
	0.3nm,0.4s,baz=90,slow=10,SNR=11 0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**44.06**	**314**	P	**P**	**01 56 03.6**	**-0.5**
	1.2nm,0.6s,baz=100,slow=8.5,SNR=9.6 1.2nm,0.6s						
WRA	**Warramunga Arr**	**49.15**	**175**	P	**P**	**01 56 44.6**	**+0.4**
	0.4nm,0.8s,baz=350,slow=7.7,SNR=2.5 0.4nm,0.8s						
BVAR	**Borovoye Array**	**49.35**	**316**	P	**P**	**01 56 44.2**	**-1.2**
	0.5nm,0.4s,baz=106,slow=5.1,SNR=4.1 0.5nm,0.4s						
ILAR	**Eielson Array**	**60.74**	**29**	P	**P**	**01 58 07.7**	**+0.2**
	0.2nm,0.7s,baz=281,slow=7.4,SNR=2.6 0.2nm,0.7s						
FINES	**FINESS Array B**	**71.14**	**331**	P	**P**	**01 59 12.9**	**-1.5**
	3.8nm,0.9s,baz=62,slow=5.5,SNR=4.3 3.8nm,0.9s						
AKASG	**Malin Array Be**	**74.46**	**320**	P	**P**	**01 59 33.9**	**-0.4**
	0.4nm,0.4s,baz=60,slow=6.3,SNR=2.8 0.4nm,0.4s						
YKA	**Yellowknife Ar**	**74.85**	**26**	P	**P**	**01 59 37.1**	**+0.9**
	0.2nm,0.7s,baz=310,slow=6.6,SNR=4.5 0.2nm,0.7s						
BRTR	**Keskin Array B**	**76.70**	**308**	P	**P**	**01 59 48.0**	**+0.4**
	0.6nm,0.8s,baz=53,slow=7.4,SNR=2.5 0.6nm,0.8s						

*JMA **11** 02:08:44.2±0.2, 24°.N±4°.×122°.8E±0°.9, h52km±3km, MV2.5/11, NW OFF ISHIGAKIJIMA IS*
*TAP **11** 02:08:44.0, 24°.29N×122°.78E, h52km, ML3.1, D*
ISC 11 02:08:44.3±1.3, 24°.21N±0°.04×122°.80E±0°.03, h52km±9km, n47, σ1§04/88, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.27**	**30**	P	**Pn**	**02 08 52.8**	**-0.6**
JYNG				S	**Sn**	**02 08 59.0**	**-0.9**
YOJ	**Yonaguni jima**	**0.32**	**39**	P	**Pn**	**02 08 53.5**	**-0.3**
YOJ				*eS*	**Sn**	**02 08 59.4**	**-1.1**
YOJ	**Yonaguni jima**	**0.32**	**39**	*eP*	**Pn**	**02 08 53.3**	**-0.5**
EOS3	**EOS3**	**0.44**	**280**	P	**Pn**	**02 08 55.5**	**+0.6**
EOS3				*eS*	**Sn**	**02 09 04.3**	**+1.9**
EOS4	**EOS4**	**0.45**	**258**	*eP*	**Pn**	**02 08 55.3**	**+0.6**
EOS4				*eS*	**Sn**	**02 09 03.6**	**+1.4**
EOS2	**EOS2**	**0.55**	**292**	*eP*	**Pn**	**02 08 56.4**	**+0.2**
EOS2				*eS*	**Sn**	**02 09 06.2**	**+1.5**
IRIF	**Iriomote-Funau**	**0.86**	**82**	P	**Pn**	**02 09 00.2**	**0.0**
IRIF				*eS*	**Sn**	**02 09 12.5**	**+0.6**
HATJ	**Hateruma jima**	**0.94**	**99**	*eP*	**Pn**	**02 09 02.5**	**+1.3**
TWC	**Suao**	**0.95**	**295**	*eP*	**Pn**	**02 09 01.1**	**-0.3**
TWC				*eS*	**Sn**	**02 09 10.1**	**+0.9**
NACB	**Ninganchiao**	**1.10**	**268**	*eP*	**Pn**	**02 09 03.0**	**-0.4**
NACB				*eS*	**Sn**	**02 09 16.9**	**-0.6**
JKRS	**Kuro-shima**	**1.11**	**89**	P	**Pn**	**02 09 04.4**	**+0.8**
TIPB	**Shuangxi**	**1.16**	**311**	*eP*	**Pn**	**02 09 03.9**	**-0.4**
TIPB				*eS*	**Sn**	**02 09 17.7**	**-1.5**
ENTT	**Nioudou**	**1.20**	**291**	*eP*	**Pn**	**02 09 05.7**	**+0.9**
ENTT				*eS*	**Sn**	**02 09 20.3**	**+0.3**
ETLH	**Xiulin Townshi**	**1.20**	**270**	*eP*	**Pn**	**02 09 04.5**	**-0.4**
ETLH				*eS*	**Sn**	**02 09 19.1**	**-1.1**
LATG	**Datong**	**1.20**	**286**	*eP*	**Pn**	**02 09 05.8**	**+0.9**
LATG				*eS*	**Sn**	**02 09 19.5**	**-0.7**
SHUL	**Shoufeng**	**1.20**	**250**	*eP*	**Pn**	**02 09 04.6**	**-0.2**
SHUL				*eS*	**Sn**	**02 09 19.5**	**-0.6**
SXI1	**Grass Mountain**	**1.21**	**317**	*eP*	**Pn**	**02 09 04.7**	**-0.3**
SXI1				*eS*	**Sn**	**02 09 19.1**	**-1.3**
ETM	**Tongmen**	**1.22**	**259**	*eP*	**Pn**	**02 09 04.0**	**-1.0**
ETM				*eS*	**Sn**	**02 09 17.8**	**-2.6**
FUSB	**Fushanzhiwuyua**	**1.23**	**297**	*eP*	**Pn**	**02 09 05.9**	**+0.7**
FUSB				*eS*	**Sn**	**02 09 20.4**	**-0.4**
NDT	**Datong Townshi**	**1.23**	**289**	*eP*	**Pn**	**02 09 06.9**	**+1.7**
JJJ	**Ishigaki jima**	**1.24**	**83**	*eP*	**Pn**	**02 09 05.2**	**-0.1**
NWLT	**Wulai**	**1.30**	**296**	*eP*	**Pn**	**02 09 07.5**	**+1.2**
NWLT				*eS*	**Sn**	**02 09 22.2**	**-0.4**
NNSB	**Datong**	**1.31**	**280**	*eP*	**Pn**	**02 09 06.5**	**+0.2**
NNSB				*eS*	**Sn**	**02 09 22.5**	**-0.2**
YHNB	**Yeheng**	**1.37**	**290**	*eP*	**Pn**	**02 09 05.7**	**-1.5**
YHNB				*eS*	**Sn**	**02 09 25.0**	**+0.8**
WARBT	**Fenglin Townsh**	**1.38**	**249**	P	**Pn**	**02 09 06.3**	**-0.9**
WARBT				S	**Sn**	**02 09 22.7**	**-1.7**
NSK	**Sanguang**	**1.39**	**290**	*eP*	**Pn**	**02 09 08.2**	**+0.8**
NSK				*eS*	**Sn**	**02 09 24.8**	**+0.1**
WHF	**Hehuan Shan**	**1.40**	**268**	*eP*	**Pn**	**02 09 07.6**	**-0.2**
WHF				*eS*	**Sn**	**02 09 24.5**	**-0.9**
JISG	**Ishigakijimahi**	**1.43**	**75**	*eP*	**Pn**	**02 09 08.1**	**+0.2**
HGSD	**Ruisui**	**1.45**	**240**	*eP*	**Pn**	**02 09 08.1**	**-0.1**
HGSD				*eS*	**Sn**	**02 09 23.1**	**-2.0**
OWD	**Renai**	**1.50**	**260**	*eP*	**Pn**	**02 09 08.9**	**-0.1**
OWD				*eS*	**Sn**	**02 09 26.4**	**-1.1**
EHYH	**Wanrong**	**1.51**	**242**	*eP*	**Pn**	**02 09 09.1**	**+0.2**
EHYH				*eS*	**Sn**	**02 09 26.8**	**-0.7**
EHY	**Hungye**	**1.52**	**243**	*eP*	**Pn**	**02 09 08.5**	**-0.7**
EHY				*eS*	**Sn**	**02 09 26.6**	**-1.3**
WUSB	**Renai**	**1.55**	**262**	*eP*	**Pn**	**02 09 10.1**	**+0.4**
WUSB				*eS*	**Sn**	**02 09 27.8**	**-0.9**
VWDT	**VWDT**	**1.58**	**253**	P	**Pn**	**02 09 10.3**	**+0.3**
VWDT				S	**Sn**	**02 09 28.6**	**-0.7**
YULB	**Yu-li**	**1.60**	**240**	*eP*	**Pn**	**02 09 09.8**	**-0.4**
YULB				*eS*	**Sn**	**02 09 28.3**	**-1.4**
TWF1	**Yuli**	**1.62**	**238**	*eP*	**Pn**	**02 09 10.0**	**-0.5**
TWF1				*eS*	**Sn**	**02 09 29.6**	**-0.7**
FULB	**Fuli**	**1.71**	**234**	*eP*	**Pn**	**02 09 12.1**	**+0.4**
FULB				*eS*	**Sn**	**02 09 31.3**	**-1.1**
WCS	**Beigang Elemen**	**1.73**	**265**	*eP*	**Pn**	**02 09 13.0**	**+1.1**
WCS				*eS*	**Sn**	**02 09 34.9**	**+2.0**
SSLB	**Suanglung**	**1.74**	**256**	*eP*	**Pn**	**02 09 11.7**	**-0.5**
SSLB				*eS*	**Sn**	**02 09 33.0**	**-0.1**
SMLT	**Sun Moon Lake**	**1.76**	**260**	*eP*	**Pn**	**02 09 13.3**	**+0.7**
SMLT				*eS*	**Sn**	**02 09 34.1**	**+0.2**
TYC	**Yuchr**	**1.80**	**261**	*eP*	**Pn**	**02 09 13.8**	**+0.9**
TYC				*eS*	**Sn**	**02 09 34.1**	**-0.5**
EHD	**Haiduan**	**1.80**	**234**	*eP*	**Pn**	**02 09 12.8**	**-0.1**
EHD				*eS*	**Sn**	**02 09 32.2**	**-2.5**
CHN5	**Tsauling**	**2.03**	**253**	*eP*	**Pn**	**02 09 17.7**	**+1.5**
CHN5				*eS*	**Sn**	**02 09 41.2**	**+0.7**
STYH	**Taoyuan**	**2.12**	**241**	*eP*	**Pn**	**02 09 17.4**	**0.0**
STYH				*eS*	**Sn**	**02 09 42.8**	**+0.2**
WDLH	**Douliu**	**2.13**	**256**	*eP*	**Pn**	**02 09 17.6**	**+0.2**
WDLH				*eS*	**Sn**	**02 09 45.5**	**+2.8**
WTP	**Ta-pu**	**2.22**	**245**	*eP*	**Pn**	**02 09 19.7**	**+1.0**
WTP				*eS*	**Sn**	**02 09 46.5**	**+1.5**
SGST	**Jiashian**	**2.32**	**241**	*eP*	**Pn**	**02 09 20.5**	**+0.4**
SGST				*eS*	**Sn**	**02 09 48.6**	**+1.2**

TAP 11 02:18:08.2, 24°.48N×121°.86E, h5km±1km, ML2.1, 1C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EWUT	**Wuta**	**0.08**	**244**	*eP*	Pg	02 18 11.5	+1.6
ESAO	**Su ao**	**0.09**	**350**	*i* P	Pg	02 18 10.8	+0.6
ESAO				*i* S	Sg	02 18 11.9	+0.4
NDS	**Dongshan**	**0.20**	**319**	*eP*	Pg	02 18 12.8	+0.7
NDS				S	Sg	02 18 17.2	+2.5
TWE	**Neicheng**	**0.30**	**323**	*i* P	Pb	02 18 15.3	-0.7
TWE				S	Sb	02 18 20.1	-1.1
LATG	**Datong**	**0.31**	**280**	⇑P	Pb	02 18 15.4	-0.8
LATG				S	Sb	02 18 20.2	-1.5
ENTT	**Nioudou**	**0.31**	**300**	*i* P	Pb	02 18 15.3	-0.9
ENTT				S	Sb	02 18 20.9	-0.7
NDT	**Datong Townshi**	**0.34**	**291**	P	Pb	02 18 16.1	-0.6
NDT				S	Sg	02 18 20.7	+1.5
EOS2	**EOS2**	**0.34**	**101**	*eP*	Pb	02 18 16.1	-0.6
EOS2				*eS*	Sb	02 18 21.6	-0.8
EOS2	**EOS2**	**0.34**	**101**	*eP*	Sb	02 18 21.9	-0.6
FUSB	**Fushanzhiwuyua**	**0.37**	**318**	P	Pb	02 18 17.0	-0.4
FUSB				*eS*	Sg	02 18 21.8	+1.5
ETL	**Fush Village**	**0.39**	**214**	*eP*	Pb	02 18 16.9	-0.7
NACB	**Ninganchiao**	**0.39**	**218**	P	Pb	02 18 17.1	-0.5
NWLT	**Wulai**	**0.44**	**312**	*eP*	Pb	02 18 18.2	-0.2
NWLT				*eS*	Sb	02 18 24.7	-0.6
NWLT	**Wulai**	**0.44**	**312**	P	Sb	02 18 24.7	-0.6
NNSB	**Datong**	**0.44**	**263**	*eP*	Pb	02 18 17.6	-0.8
ETLH	**Xiulin Townshi**	**0.44**	**232**	*eP*	Pg	02 18 17.1	+0.4
EOS3	**EOS3**	**0.46**	**115**	*eP*	Pb	02 18 18.9	+0.3
TWD	**Chiawan**	**0.47**	**211**	P	Pb	02 18 18.6	-0.3
YHNB	**Yeheng**	**0.48**	**293**	P	Pb	02 18 18.7	-0.5
NSK	**Sanguang**	**0.50**	**293**	P	Pb	02 18 19.9	+0.4
TWB1	**Santiao Chiao**	**0.54**	**12**	*eP*	Pb	02 18 20.3	+0.2
SXI1	**Grass Mountain**	**0.61**	**1**	*eP*	Pb	02 18 21.1	-0.3
OWD	**Renai**	**0.82**	**230**	*eP*	Pb	02 18 25.1	+0.1
OWD				*eS*	Sb	02 18 36.7	+0.4
WUSB	**Renai**	**0.84**	**234**	*eP*	Pb	02 18 25.2	-0.1
VWDT	**VWDT**	**0.98**	**222**	*eP*	Pb	02 18 27.8	+0.1
SSLB	**Suanglung**	**1.08**	**230**	*eP*	Pn	02 18 29.9	-0.1

TAP 11 02:18:14.4, 24°.51N×121°.87E, h11km, ML2.3, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESAO	**Su ao**	**0.06**	**343**	*i* P	Pg	02 18 17.2	+0.4
ESAO				*i* S	Sg	02 18 18.3	-0.3
EWUT	**Wuta**	**0.10**	**229**	*i* P	Pb	02 18 18.1	-0.4
EWUT				S	Sg	02 18 19.8	+0.5
NDS	**Dongshan**	**0.18**	**311**	P	Pb	02 18 19.3	-0.5
NDS				S	Sg	02 18 22.1	+0.9
EAHA	**Aohua**	**0.22**	**212**	*eP*	Pg	02 18 18.9	-0.2
EAHA				*eS*	Sg	02 18 24.0	+1.9
TWE	**Neicheng**	**0.27**	**319**	*i* P	Pb	02 18 22.1	+0.7
TWE				*i* S	Sb	02 18 25.4	-0.7
ENTT	**Nioudou**	**0.30**	**295**	*i* P	Pb	02 18 21.8	0.0
ENTT				*i* S	Sb	02 18 26.7	-0.1
LATG	**Datong**	**0.31**	**274**	P	Pb	02 18 22.2	+0.2
LATG				*eS*	Sb	02 18 26.2	-0.9
NDT	**Datong Townshi**	**0.33**	**285**	*i* P	Pb	02 18 22.7	+0.3
NDT				*i* S	Sb	02 18 27.2	-0.5
EOS2	**EOS2**	**0.35**	**106**	S	Sb	02 18 27.9	-0.1
FUSB	**Fushanzhiwuyua**	**0.35**	**314**	*eP*	Pb	02 18 23.0	+0.3
FUSB				*eS*	Sb	02 18 28.2	-0.2
ETL	**Fush Village**	**0.42**	**212**	P	Pb	02 18 23.7	-0.1
ETL				S	Sb	02 18 31.6	+1.4
NACB	**Ninganchiao**	**0.42**	**216**	*eP*	Pg	02 18 23.1	+0.4
NACB				*eS*	Sb	02 18 30.0	-0.2
NWLT	**Wulai**	**0.42**	**309**	S	Sb	02 18 30.2	-0.1
NNSB	**Datong**	**0.45**	**259**	*eP*	Pg	02 18 23.4	+0.1
NNSB				*eS*	Sg	02 18 30.2	+0.9
NNS	**Nan Shan**	**0.45**	**261**	*i* P	Pg	02 18 23.8	+0.3
NNS				*i* S	Sb	02 18 30.5	-0.8
TIPB	**Shuangxi**	**0.46**	**356**	P	Pb	02 18 25.3	+0.7
TIPB				S	Sb	02 18 31.8	+0.5
ETLH	**Xiulin Townshi**	**0.46**	**229**	*eP*	Pb	02 18 24.2	-0.5
ETLH				*eS*	Sg	02 18 30.6	+0.8
EOS3	**EOS3**	**0.47**	**119**	*eP*	Pb	02 18 24.8	+0.2
YHNB	**Yeheng**	**0.47**	**289**	P	Pn	02 18 26.3	-0.9
YHNB				*eS*	Sb	02 18 31.6	-0.1
NSK	**Sanguang**	**0.49**	**289**	*i* P	Pb	02 18 25.9	+0.9
NSK				*i* S	Sb	02 18 32.0	-0.2
TWD	**Chiawan**	**0.50**	**210**	P	Pg	02 18 24.6	+0.4
TWB1	**Santiao Chiao**	**0.51**	**13**	S	Sb	02 18 31.9	-0.8
NWF	**Wu-fen Shan**	**0.56**	**352**	P	Pg	02 18 25.6	+0.2
NWF				S	Sb	02 18 33.8	-0.6
WFSB	**Wu-fen Shan**	**0.56**	**352**	*eP*	Pg	02 18 25.6	+0.3
WFSB				*eS*	Sb	02 18 33.9	-0.3
SXI1	**Grass Mountain**	**0.58**	**1**	*eS*	Sb	02 18 35.1	+0.2
FUSS	**Fushou**	**0.62**	**245**	*eP*	Pb	02 18 28.2	+0.7
ETM	**Tongmen**	**0.64**	**212**	*eP*	Pg	02 18 27.1	+0.1
WHF	**Hehuan Shan**	**0.66**	**236**	P	Pb	02 18 28.3	+0.1
NFF	**Wufeng Townshi**	**0.69**	**280**	*eP*	Pb	02 18 28.6	+0.1
TDCB	**Techi**	**0.69**	**248**	*eP*	Pb	02 18 29.5	+0.8

*IDC **11** 02:42:39.3±3.7, 38°.05N×74°.19E, h127km±30km, mb3.4/11, mbtmp4.0/17, Error ellipse: s-maj=28.9km s-min=17.2km az=27.0*
*MOS **11** 02:42:41.9±0.9, 38°.20N×74°.20E, h161km, mb4.1/5, Error ellipse: s-maj=10.3km s-min=5.1km az=87.8*
*NEIC **11** 02:42:42.9±1.8, 38°.24N±0°.05×74°.11E±0°.06, h158km±8km, mb4.2/12, Error ellipse: s-maj=9.8km s-min=3.2km az=139.0*
*NNC **11** 02:42:45.9±3.8, 38°.66N×73°.49E, h0km, mb4.3, mpv3.9, Error ellipse: s-maj=28.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TSSA	Tissa	5.54	162	eP	Pn	02 44 04.0	+1.5
TSSA				eS	Sn	02 45 02.4	-3.3
TSSA				IAML		02 45 08.6	
	comp=E,417nm,0.7s						
TSSA				IAML		02 45 10.4	
	comp=N,420nm,0.3s						
KK31	Karatay Array	5.66	333		Pn	02 44 03.9	0.0
KK31	Karatay Array	5.66	333	⇑P	Pn	02 44 03.8	0.0
	comp=N,31nm,0.6s,baz=143,slow=13,SNR=237						
KK31				⇓S	Sn	02 45 01.4	-6.7
	comp=N,90nm,0.7s,baz=37,slow=53,SNR=5.4						
KK31	Karatay Array	5.66	333	PN	Pn	02 44 03.8	0.0
KKAR	Karatay Array	5.66	333		Pn	02 44 03.9	+0.1
KKAR	Karatay Array	5.66	333	PN	Pn	02 44 03.9	+0.1
THN	Thein Dam	5.84	166	eP	Pn	02 44 09.3	+2.9
THN				eS	Sn	02 45 11.1	-1.4
THN				IAML		02 45 18.4	
	comp=N,150nm,0.5s						
THN				IAML		02 45 19.5	
	comp=E,138nm,0.4s						
DHRM	DHARAMSHALA	6.14	162	eP	Pn	02 44 11.7	+1.2
DHRM				eS	Sn	02 45 17.5	-2.5
DHRM				IAML		02 45 23.6	
	comp=E,289nm,0.3s						
DHRM				IAML		02 45 26.2	
	comp=N,497nm,0.4s						
HNLY	HANLEY	6.67	142	eP	Pn	02 44 18.8	+0.9
HNLY				eS	Sn	02 45 30.0	-3.0
HNLY				IAML		02 45 34.9	
	comp=N,214nm,0.6s						
HNLY				IAML		02 45 36.1	
	comp=E,212nm,0.9s						
BHK	Bhakra	6.98	164	eP	Pn	02 44 22.9	+1.4
BHK				eS	Sn	02 45 36.5	-3.3
BHK				IAML		02 45 44.8	
	comp=E,72nm,0.2s						
BHK				IAML		02 45 46.3	
	comp=N,96nm,0.4s						
KLP	Kalpa	7.42	151	eP	Pn	02 44 29.0	+1.3
KLP				eS	Sn	02 45 44.7	-6.1
KLP				IAML		02 45 52.6	
	comp=N,98nm,0.5s						
KLP				IAML		02 45 52.8	
	comp=E,132nm,0.4s						
SMLA	Simla	7.43	159	eP	Pn	02 44 28.1	+0.6
SMLA				eS	Sn	02 45 45.4	-5.2
SMLA				IAML		02 45 47.4	
	comp=E,145nm,0.5s						
SMLA				IAML		02 45 52.2	
	comp=N,218nm,0.6s						
JOSI	Joshimath	8.81	147	eP	Pn	02 44 46.2	+0.2
JOSI				eS	Sn	02 46 16.3	-7.7
JOSI				IAML		02 46 24.1	
	comp=N,110nm,0.3s						
JOSI				IAML		02 46 25.2	
	comp=E,141nm,0.5s						
PTH	Pithoragarh	9.92	147	eP	Pn	02 45 00.4	-0.4
PTH				eS	Sn	02 46 40.1	-11
KUDL	Kundal	10.16	168	eP	Pn	02 45 03.7	-0.1
KUDL				eS	Sn	02 46 49.0	-7.3
KUDL				IAML		02 46 55.8	
	comp=E,28nm,0.4s						
KUDL				IAML		02 46 59.8	
	comp=N,24nm,0.3s						
MAKZ	Makanchi	10.45	31		Pn	02 45 06.5	-1.0
MAKZ	Makanchi	10.45	31	P	Pn	02 45 06.5	-1.0
MK31	Makanchi Array	10.57	32	iP	Pn	02 45 08.8	-0.3
MKAR	Makanchi Array	10.57	32	P	Pn	02 45 08.2	-0.9
	comp=N,2.8nm,0.7s,baz=208,slow=15,SNR=38						
MKAR	Makanchi Array	10.57	32		Pn	02 45 07.8	-1.3
MKAR	Makanchi Array	10.57	32	iP	Pn	02 45 08.1	-1.0
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AJM	Ajmer	11.68	178	eP	Pn	02 45 22.4	-1.3
AJM				eS	Sn	02 47 23.6	-9.3
WMQ	Urumqi	11.76	57	eP	Pn	02 45 25.8	+1.1
KURBB	Kurchatov Arra	12.89	13	P	Pn	02 45 36.9	-2.3
	comp=Z,1.6nm,0.7s,baz=202,slow=12,SNR=11						
KURK	Kurchatov	12.99	13	Pn	Pn	02 45 38.1	-2.4
KURK	Kurchatov	12.99	13	iP	Pn	02 45 38.1	-2.4
DGZ	Jazzator, Alta	15.02	35	iP	Pn	02 46 05.8	-0.5
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AB31	Akbulak array	15.08	322		Pn	02 46 05.6	-1.2
AB31	Akbulak array	15.08	322	⇑P	P	02 46 09.1	+0.7
	comp=Z,3.1nm,0.6s,baz=342,slow=8.0,SNR=45						
AB31				⇑S	Sn	02 48 50.8	-3.4
	comp=Z,1.5nm,0.5s,baz=130,slow=24,SNR=6.3						
AB31	Akbulak array	15.08	322	P	P	02 46 09.6	+1.2
AB31				S	Sn	02 48 50.8	-3.4
ABKAR	Akbulak array	15.08	322	P	Pn	02 46 05.3	-1.5
BHPL	Bhopal	15.11	168	eP	Pn	02 46 08.8	+1.3
BHPL				eS	Sn	02 48 46.5	-9.1
BVAR	Borovoye Array	15.12	351	P	Pn	02 46 07.1	-0.2
	comp=Z,10nm,0.7s,baz=152,slow=16,SNR=20						
BORK	Borovoye	15.15	351		Pn	02 46 06.8	-0.8
BORK	Borovoye	15.15	351	P	Pn	02 46 06.8	-0.8
BORK				pmax	pmax		
	comp=Z,14nm,0.9s						
AKTO	Aktyubinsk	16.79	322	P	P	02 46 27.1	-0.3
	comp=Z,8.7nm,1.0s,baz=123,slow=10,SNR=17						
AKTO	Aktyubinsk	16.79	322	⇑P	Pn	02 46 31.0	+3.2
	comp=Z,5.2nm,0.9s						
AKTO				⇑S	S	02 49 33.2	-1.0
	comp=Z,3.1nm,0.9s						
AKTO	Aktyubinsk	16.79	322	P	Pn	02 46 31.0	+3.2
AKTO				S	S	02 49 33.2	-1.0
ZAA0	Zalesovo Array	17.46	22	P	Pn	02 46 34.2	-1.5
ZALV	Zalesovo Beam	17.46	22	P	Pn	02 46 34.2	-1.5
	comp=Z,13nm,0.5s,baz=212,slow=12,SNR=58						
ZALV	Zalesovo Beam	17.46	22	P	P	02 46 34.1	-0.6
SHL	Shillong	19.60	125	P	P	02 46 57.6	-0.7
SHL				IAmb	IAmb	02 47 00.6	
	comp=Z,6.7nm,0.9s						
SHL	Shillong	19.60	125	P	P	02 46 57.7	-0.7
SHL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GTA2	Gaotai	20.05	78	eP	Pn	02 47 04.8	-1.6
GTA2				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KNGR	Kungurtug, Tuv	20.79	46	iP	P	02 47 11.8	+1.0
KNGR				pmax	pmax		
	comp=Z,8.0nm,1.6s						
ARTI	Arti	21.05	335	P	P	02 47 12.7	-0.7
	comp=Z,4.4nm,0.6s,baz=166,slow=3.7,SNR=6.7						
	comp=Z,4.4nm,0.6s						
ARTI	Arti	21.05	335	P	P	02 47 12.9	-0.5
ARTI				IAmb	IAmb	02 47 15.9	
	comp=Z,6.7nm,0.6s						
ARTI	Arti	21.05	335c	iP	P	02 47 14.5	+1.1
ARTI						02 47 48.6	
ARTI				S	S	02 50 58.5	-0.5
ARTI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LZH	Lanzhou	23.79	86	eP	P	02 47 44.1	+3.5
LZH				pP	pP	02 48 13.5	+2.2
LZH				pmax	pmax		
	comp=Z,12nm,0.8s						
NEUR	Neytrino	24.25	292	iP	P	02 47 44.5	-0.2
NEUR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SONM	Songino Array	25.40	57	P	P	02 47 54.0	-1.0
	comp=Z,1.0nm,0.7s,baz=270,slow=10,SNR=3.0						
	comp=Z,1.0nm,0.7s						
PZH	PanZhiHua	26.00	108	P	P	02 48 02.5	+1.9
HHC	Hu-ho-hao-te	28.92	73	eP	P	02 48 28.2	+1.7
HHC				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,93nm,4.9s						
FINES	FINESS Array B	37.55	324	P	P	02 49 41.8	+1.0
	comp=Z,4.3nm,1.0s,baz=104,slow=8.7,SNR=9.3						
	comp=Z,4.3nm,1.0s						
FINES	FINESS Array B	37.55	324	P	P	02 49 41.3	+0.5
STHS	Stebnicka Huta	39.03	304	eP	P	02 50 01.9	+8.5
STHS	Stebnicka Huta	39.03	304	eP	P	02 50 01.9	+8.5
LANS	Liptovska Anna	40.21	304	eP	P	02 50 09.3	+6.2
LANS	Liptovska Anna	40.21	304	eP	P	02 50 09.3	+6.2
ARCES	ARCESS Array B	40.62	336	P	P	02 50 08.0	+1.9
	comp=Z,1.5nm,0.5s,baz=101,slow=6.3,SNR=9.2						
	comp=Z,1.5nm,0.5s						
ARCES	ARCESS Array B	40.62	336	P	P	02 50 07.3	+1.2
ARCES				IAmb	IAmb	02 50 23.8	
	comp=Z,9.5nm,1.4s						
ARCES	ARCESS Array B	40.62	336	P	P	02 50 07.3	+1.2
ARCES				pmax	pmax		
	comp=Z,10.0nm,1.4s						
HFS	Hagfors	43.33	321	P	P	02 50 28.8	+0.6
	comp=Z,1.9nm,0.6s,baz=98,slow=11,SNR=9.4						
	comp=Z,1.9nm,0.6s						
CLL	Collm	44.10	308	iP	P	02 50 35.2	+0.7
CLL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CLL	Collm	44.10	308	iP	P	02 50 35.2	+0.7
	comp=Z,4.0nm,0.6s						
NOA	NORSAR Array B	44.59	322	P	P	02 50 39.2	+1.0
	comp=Z,0.4nm,0.5s,baz=90,slow=7.8,SNR=1.7						
	comp=Z,0.4nm,0.5s						
C19K	Lookout Ridge	66.03	18	P	P	02 53 12.5	+1.0
C19K				IAmb	IAmb	02 53 37.8	
	comp=Z,4.0nm,1.4s						
D19K	Kuna River	66.84	18	P	P	02 53 17.3	+0.6
TORD	Torodi Ar. Bea	68.19	270	P	P	02 53 26.8	+0.9
	comp=Z,0.5nm,0.6s,baz=48,slow=7.3,SNR=6.4						
	comp=Z,0.5nm,0.6s						
E23K	Chandalar	69.18	16	P	P	02 53 31.6	+0.3
M14K	Bethel	71.39	25	P	P	02 53 46.0	+1.3
M14K				IAmb	IAmb	02 53 53.9	
	comp=Z,5.8nm,1.1s						
ILAR	Eielson Array	72.53	17	P	P	02 53 52.2	+0.7
	comp=Z,0.5nm,0.9s,baz=344,slow=6.4,SNR=4.2						
	comp=Z,0.5nm,0.9s						
YKA	Yellowknife Ar	79.48	4	P	P	02 54 31.9	+1.0
	comp=Z,0.3nm,0.5s,baz=350,slow=6.2,SNR=7.0						
	comp=Z,0.3nm,0.5s						
YKA	Yellowknife Ar	79.48	4	P	P	02 54 31.4	+0.6
WRA	Warramunga Arr	80.82	124	P	P	02 54 38.3	-0.3
	comp=Z,0.7nm,0.7s,baz=326,slow=5.0,SNR=8.9						
	comp=Z,0.7nm,0.7s						
WRA	Warramunga Arr	80.82	124	P	P	02 54 38.3	-0.3
WRA	Warramunga Arr	80.82	124	eP	P	02 54 39.0	+0.4
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WR8	Warramunga Arr	80.94	124	P	P	02 54 39.1	-0.1
WR8				IAmb	IAmb	02 54 50.0	
	comp=Z,5.2nm,1.4s						
ASAR	Alice Springs	83.22	127	P	P	02 54 51.0	-0.1
	comp=Z,0.4nm,0.7s,baz=337,slow=4.4,SNR=2.6						
	comp=Z,0.4nm,0.7s						

NNC 11 02:47:25.9±0.7, 42°.96N×78°.23E, h0km, mb3.2, mpv3.0, Error ellipse: s-maj=9.5km s-min=2.0km az=172.0
KRNET 11 02:47:26.6±0.1, 42°.97N×78°.25E, h20km, mb2.5
SOME 11 02:47:26.6, 42°.97N×78°.23E, h10km
ISC 11 02:47:26.4±0.9, 42°.96N±0°.04×78°.23E±0°.02, h10km±8km, n22, σ0s.43/43, 13C-1D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	Saty	0.16	52	P	Pg	02 47 30.3	+0.1
	71nm,0.1s						
SATY				S	Sg	02 47 33.0	+0.2
	352nm,0.1s						
KPKS	Kokpek	0.61	33	P	Pg	02 47 37.8	-0.5
	0.5nm,0.2s						
KPKS				S	Sg	02 47 45.7	-0.5
	7.4nm,0.2s						
KPKS	Kokpek	0.61	33	eP	Pg	02 47 37.8	-0.5
	0.5nm,0.2s						
KPKS				eS	Sg	02 47 45.7	-0.5
	7.4nm,0.2s						
UZB	Uzynbulak	0.61	72	P	Pg	02 47 38.1	-0.2
	4.0nm,0.1s						
UZB				S	Sg	02 47 46.7	+0.3
	55nm,0.2s						
UZB	Uzynbulak	0.61	72	eP	Pg	02 47 38.2	-0.2
UZB				eS	Sg	02 47 46.8	+0.4
UZB	Uzynbulak	0.61	72	eP	Pg	02 47 38.1	-0.2
	4.0nm,0.1s						
UZB				eS	Sg	02 47 46.7	+0.3
	55nm,0.2s						
KNDC	Almaty	0.96	286	⇑P	Pg	02 47 44.5	-0.5
	30nm,0.5s						
KNDC				⇓S	Sg	02 47 57.4	-0.1
	26nm,0.6s						
PDGK	Podgornoye	0.99	68	⇑P	Pg	02 47 45.3	-0.3
	4.1nm,0.7s						
PDGK				⇑S	Sg	02 47 57.9	-0.6
	2.6nm,0.3s						
KDJ	Kajisay	1.14	223	⇑iP	Pb	02 47 48.1	-0.1
KDJ				⇑iS	Sg	02 48 03.0	0.0
IZV	Izvestkoviy	1.19	274	P	Pb	02 47 49.1	0.0
	1.9nm,0.1s						
IZV				S	Sn	02 48 05.5	-0.1
IZV	Izvestkoviy	1.19	274	eP	Pb	02 47 49.1	0.0
	1.3nm,0.1s						
IZV				eS	Sn	02 48 05.4	-0.1
	9.1nm,0.2s						
TARG	Taragay, Kyrgy	1.27	195	⇑iP	Pn	02 47 49.9	-0.7
TARG				⇑iS	Sb	02 48 07.2	0.0
MTBS	Maitube	1.33	278	P	Pn	02 47 51.3	+0.2
MTBS				S	Sn	02 48 09.2	+0.3
MTBS	Maitube	1.33	278	eP	Pn	02 47 51.3	+0.2
	0.9nm,0.2s						
MTBS				eS	Sn	02 48 09.2	+0.3
	4.4nm,0.2s						
KNOS	Konyrlen	1.56	26	P	Pn	02 47 54.6	+0.2
	4.9nm,0.1s						
KNOS				S	Sn	02 48 14.8	+0.1
	5.0nm,0.2s						
ULHL	Ulahol	1.63	245	⇑iP	Pb	02 47 56.9	+0.2
ULHL				⇑iS	Sg	02 48 18.6	-0.3
BOOM	Boomskoye usch	1.75	255	⇑iP	Pb	02 47 59.0	+0.3
BOOM				⇑iS	Sb	02 48 22.0	+1.2
DJR	Jarkent	1.78	39	P	Pb	02 47 59.2	0.0
	3.2nm,0.2s						
DJR				S	Sg	02 48 22.9	-0.7
	5.0nm,0.2s						
DJR	Jarkent	1.78	39	eP	Pb	02 47 59.2	0.0
	3.2nm,0.2s						
DJR				eS	Sg	02 48 22.9	-0.7
	5.0nm,0.2s						
TKM2	Tokmak 2	1.93	270	⇑iP	Pb	02 48 01.8	-0.1
TKM2				⇑iS	Sb	02 48 26.9	+0.8
KRBS	Karabastau	2.00	292	Pg	Pb	02 48 03.3	+0.3
	3.6nm,0.2s						
KRBS				Lg	Lg	02 48 30.0	
	13nm,0.3s						
KRBS	Karabastau	2.00	292	eP	Pb	02 48 03.3	+0.3
	3.6nm,0.2s						
KRBS				eS	Sg	02 48 30.0	-0.9
	13nm,0.3s						

IDC 11 03:01:33.5±2.2, 3°.76S×151°.14E, h0km, mb3.3/3, mbtmp3.3/3, MS3.2/6, Error ellipse: s-maj=193.0km s-min=30.0km az=125.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.04	122	LR	LR	03 02 10.1	
	comp=Z,208nm,18.9s,baz=12,slow=35						
HNR	Honiara	10.41	123	LR	LR	03 07 56.4	
	comp=Z,10nm,20.4s,baz=10.0,slow=37						
JAY	Jayapura	10.49	276	LR	LR	03 07 36.7	
	comp=Z,321nm,18.5s,baz=236,slow=35						
CTA	Charters Tower	16.91	196	LR	LR	03 11 23.0	
	comp=Z,77nm,20.0s,baz=31,slow=35						
WRA	Warramunga Arr	22.96	224	P	P	03 06 40.7	+0.9
	0.2nm,0.5s,baz=51,slow=10,SNR=4.9						
	0.2nm,0.5s						
DZM	Mont Dzumac	23.49	142	LR	LR	03 15 56.9	
	comp=Z,98nm,18.0s,baz=341,slow=37						
ASAR	Alice Springs	25.86	219	P	P	03 07 06.3	-0.9
	0.5nm,0.9s,baz=45,slow=9.3,SNR=2.9						
	0.5nm,0.9s						
STKA	Stephens Creek	29.37	197	LR	LR	03 19 04.6	
	comp=Z,46nm,20.0s,baz=36,slow=36						
JCJ	Chichijima	31.87	345	LR	LR	03 21 42.1	
	comp=Z,19nm,18.2s,baz=162,slow=38						
KSRS	Korea Array	46.34	334	LR	LR	03 27 40.3	
	comp=Z,15nm,21.7s,baz=325,slow=34						
ILAR	Eielson Array	81.83	22	P	P	03 13 54.4	0.0
	0.6nm,0.9s,baz=244,slow=5.1,SNR=4.8						
	0.6nm,0.9s						

IDC 11 03:03:55.5±0.5, 0°.56N×126°.25E, h0km, mb4.3/15, mbtmp4.3/18, ML3.8/3, MS3.2/3, Error ellipse: s-maj=26.3km s-min=12.6km az=75.0
DJA 11 03:03:58.9±0.6, 0°N±8°×12°6E±°, h10km, M4.2/10, MLv4.2/10
NEIC 11 03:04:03.9±1.7, 0°.43N±0°.08×126°.35E±0°.05, h55km±7km, mb4.6/42, Error ellipse: s-maj=11.5km s-min=7.6km az=166.0
ISC 11 03:04:02.9±1.0, 0°.40N±0°.06×126°.30E±0°.06, h49km±10km, n87, σ1s.17/92, mb4.6/34, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.13	71		Pn	03 04 22.2	-0.2
TNTI				Sn	Sn	03 04 37.1	+0.3
TNTI	Ternate	1.13	71	P	Pn	03 04 22.0	-0.4
MNI	Manado	1.79	306	P	Pn	03 04 27.6	-3.8
GAMI	Galela, Maluku	2.06	46	P	Pn	03 04 36.5	+1.3
GTOI	Gorontalo	3.30	274	P	Pn	03 04 51.6	-0.5
LUWI	Luwuk	3.81	248		Pn	03 05 00.7	+1.6
SIJI	Sorong	5.12	104	Pn	Pn	03 05 16.7	-0.4
	0.9nm,0.3s,baz=226,slow=23,SNR=1.4						
SIJI				LR	LR	03 07 37.4	
	comp=Z,231nm,21.9s,baz=216,slow=43						
	4.9nm,0.3s						
TOLI2	Tolitoli	5.56	277		Pn	03 05 24.9	+1.7
FAKI	Fak Fak	6.80	119	Pn	Pn	03 05 38.4	-1.7
KAPI	Kappang	8.47	231	Pn	Pn	03 06 01.4	-1.6
	3.1nm,0.3s,baz=41,slow=8.5,SNR=9.2						
KAPI				LR	LR	03 09 34.8	
	comp=Z,121nm,19.0s,baz=50,slow=40						
	13nm,0.5s						
KAPI	Kappang	8.47	231		Pn	03 06 02.8	-0.1
MYLDM	Lahad Datu	9.12	302		Pn	03 06 12.2	+0.2
SBUM	Sibu	14.22	278	Pn	Pn	03 07 22.6	+0.9
KNRA	Kununurra	16.15	171		Pn	03 07 46.2	-0.5
FITZ	Fitzroy Crossi	18.39	182	P	P	03 08 14.0	+0.1
	0.3nm,0.3s,baz=40,slow=5.8,SNR=8.6						
	3.1nm,0.7s						
BBJI	Bungbulang	20.17	247	P	P	03 08 34.3	+0.8
BBJI				IAmb	IAmb	03 08 36.5	
	comp=Z,31nm,1.4s						
WB0	Warramunga Arr	21.55	159	P	P	03 08 48.8	+0.5
WB0				IAmb	IAmb	03 08 53.9	
	comp=Z,29nm,0.8s						
WRAB	Tennant Creek	21.69	159	P	P	03 08 49.6	-0.1
WRAB				IAmb	IAmb	03 08 55.1	
	comp=Z,30nm,0.8s						
WRA	Warramunga Arr	21.69	159	P	P	03 08 50.2	+0.4
	comp=Z,26nm,0.8s,baz=341,slow=12,SNR=49						
	comp=Z,26nm,0.8s						
WRA	Warramunga Arr	21.69	159	P	P	03 08 48.9	-0.9
WR8	Warramunga Arr	21.76	159	P	P	03 08 50.5	-0.1
WR8				IAmb	IAmb	03 08 56.0	
	comp=Z,29nm,0.9s						
COEN	Coen	21.97	131	P	P	03 08 54.4	+1.6
COEN				IAmb	IAmb	03 09 00.8	
	comp=Z,13nm,0.9s						
MBWA	Marble Bar	22.36	196	P	P	03 08 56.4	-0.6
PSA00	Pilbara Seismi	22.73	196	P	P	03 09 01.0	+0.2
AS31	Alice Springs	25.03	163	P	P	03 09 24.1	+1.5
ASAR	Alice Springs	25.03	163	P	P	03 09 22.6	0.0
	comp=Z,11nm,0.9s,baz=351,slow=15,SNR=67						
ASAR				PcP	PcP	03 12 57.4	+0.7
	comp=Z,0.8nm,0.7s,baz=2.9,slow=2.3,SNR=5.1						
	comp=Z,11nm,0.9s						
ASAR	Alice Springs	25.03	163	P	P	03 09 23.7	+1.1
ASAR					PcP	03 12 56.7	0.0
GIRL	Giralia	25.74	206	P	P	03 09 29.6	+0.7
GIRL				IAmb	IAmb	03 09 30.8	
	comp=Z,42nm,1.4s						
FORT	Forrest	31.05	177	P	P	03 10 16.2	0.0
FORT				IAmb	IAmb	03 10 18.6	
	comp=Z,9.9nm,0.8s						
NJ2	Nanjing	32.26	348	eP	P	03 10 29.7	+2.8
NJ2				pmax	pmax		
	comp=Z,17nm,0.7s						
BBOO	Buckleboo	34.29	165	P	P	03 10 45.3	+0.7
BBOO				IAmb	IAmb	03 10 47.4	
	comp=Z,16nm,1.3s						
PZH	PanZhiHua	35.11	320	P	P	03 10 54.2	+2.3
STKA	Stephens Creek	35.21	157	P	P	03 10 53.7	+1.2
	comp=Z,5.9nm,0.8s,baz=321,slow=5.2,SNR=15						
	comp=Z,5.9nm,0.8s						
STKA	Stephens Creek	35.21	157	P	P	03 10 53.0	+0.4
JGF	Kuroka	36.51	15	P	P	03 11 04.1	+0.4
MJAR	Matsushiro Arr	37.62	16	P	P	03 11 10.3	-2.7
	comp=Z,2.4nm,0.8s,baz=185,slow=9.4,SNR=5.2						
	comp=Z,2.4nm,0.8s						
MJAR	Matsushiro Arr	37.62	16	P	P	03 11 11.5	-1.6
MJAR				IAmb	IAmb	03 11 31.7	
	comp=Z,6.1nm,1.2s						
LZH	Lanzhou	41.19	332	eP	P	03 11 42.6	-0.4
LZH				pP	pP	03 11 55.8	+0.4
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
TOO	Toolangi	41.73	157	P	P	03 11 47.2	-0.1
HHC	Hu-ho-hao-te	42.43	343	eP	P	03 11 54.7	+1.7
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,130nm,5.4s						
PETK	Petropavlovsk-	58.66	22	P	P	03 13 54.3	-0.8
	comp=Z,3.3nm,0.7s,baz=188,slow=7.1,SNR=2.0						
	comp=Z,3.3nm,0.7s						
PETK	Petropavlovsk-	58.66	22	P	P	03 13 54.6	-0.5
MK31	Makanchi Array	60.06	327	P	P	03 14 03.3	-1.6
MK31				PcP	PcP	03 14 49.0	-1.4
MKAR	Makanchi Array	60.06	327	P	P	03 14 03.0	-1.9
	comp=Z,1.2nm,0.4s,baz=122,slow=8.4,SNR=21						
MKAR				PcP	PcP	03 14 49.7	-0.7
	comp=Z,1.5nm,0.7s,baz=121,slow=4.8,SNR=5.0						
	comp=Z,1.2nm,0.4s						
MKAR	Makanchi Array	60.06	327	P	P	03 14 03.1	-1.8
MKAR				PcP	PcP	03 14 49.3	-1.1
MAKZ	Makanchi	60.24	326	P	P	03 14 05.0	-1.1
MAKZ				IAmb	IAmb	03 14 07.1	
	comp=Z,5.7nm,1.3s						
YAK	Yakutsk	61.53	2	LR	LR	03 41 08.0	
	comp=Z,29nm,19.8s,baz=3.5,slow=36						
MA2	Magadan	62.02	14	P	P	03 14 17.8	-0.1
	comp=Z,2.3nm,0.3s,baz=149,slow=7.1,SNR=4.5						
	comp=Z,2.3nm,0.3s						
MA2	Magadan	62.02	14	P	P	03 14 17.5	-0.5
MA2				IAmb	IAmb	03 14 22.4	
	comp=Z,4.3nm,0.8s						
ZALV	Zalesovo Beam	63.36	334	P	P	03 14 25.9	-1.0
	comp=Z,1.0nm,0.5s,baz=121,slow=11,SNR=5.5						
	comp=Z,1.0nm,0.5s						
ZALV	Zalesovo Beam	63.36	334	P	P	03 14 26.5	-0.4
KURBB	Kurchatov Arra	64.32	328	P	P	03 14 31.4	-1.9
	comp=Z,2.8nm,0.7s,baz=128,slow=6.2,SNR=29						
	comp=Z,2.8nm,0.7s						
KURK	Kurchatov	64.32	329	P	P	03 14 32.0	-1.3
KURK				IAmb	IAmb	03 14 32.8	
	comp=Z,5.6nm,0.7s						
PAF	Port-aux-Franc	68.92	216	P	P	03 15 03.4	+0.8
BVAR	Borovoye Array	69.88	328	P	P	03 15 07.0	-1.6
	comp=Z,4.1nm,1.0s,baz=124,slow=7.4,SNR=8.4						
	comp=Z,4.1nm,1.0s						
BORK	Borovoye	69.93	328	P	P	03 15 09.8	+0.9
NRIK	Noril'sk	73.55	347	P	P	03 15 29.1	-1.2
	comp=Z,3.3nm,0.7s,baz=119,slow=8.6,SNR=7.6						
	comp=Z,3.3nm,0.7s						
NRIK	Noril'sk	73.55	347	P	P	03 15 30.0	-0.3
NRIK				IAmb	IAmb	03 15 30.4	
	comp=Z,3.6nm,0.7s						
AB31	Akbulak array	74.46	321	P	P	03 15 35.3	-0.7
ABKAR	Akbulak array	74.46	321	P	P	03 15 34.7	-1.3
VNDA	Vanda	80.19	173	P	P	03 16 07.3	-0.2
	comp=Z,2.2nm,0.9s,baz=337,slow=8.6,SNR=1.9						
	comp=Z,2.2nm,0.9s						
VNDA	Vanda	80.19	173	P	P	03 16 07.7	+0.1
VNDA				IAmb	IAmb	03 16 10.4	
	comp=Z,9.2nm,1.3s						
M14K	Bethel	80.80	28	P	P	03 16 12.6	+1.5
M14K				IAmb	IAmb	03 16 13.1	
	comp=Z,3.8nm,0.8s						
RAYN	Ar Rayn	81.40	294	P	P	03 16 13.6	-1.6
E18K	Tukpahlearik C	83.19	22		P	03 16 25.2	+1.7
E18K				IAmb	IAmb	03 16 26.8	
	comp=Z,3.7nm,0.8s						
L18K	Granite Mounta	83.61	27	P	P	03 16 27.5	+1.7
L18K				IAmb	IAmb	03 16 28.7	
	comp=Z,4.2nm,0.7s						
P18K	Big Mountain,	83.79	30	P	P	03 16 26.7	-0.1
GEVA	Gevas	84.45	308	P	P	03 16 30.3	-0.5
KDAK	Kodiak Island	84.92	32	P	P	03 16 33.0	+0.5
GURO	Guroymak-BITLI	85.27	308	P	P	03 16 35.0	+0.1

GURO					IAmb	IAmb	03 16 36.1		
	comp=Z,7.3nm,1.0s								
IMAR	**Indian Mountai**	**85.55**	**24**	P	**P**	**P**	**03 16 36.2**	**+0.7**	
HOM	**Homer**	**85.64**	**30**	P	**P**	**P**	**03 16 35.3**	**-0.8**	
SKT	**Skwentna**	**85.96**	**28**	P	**P**	**P**	**03 16 37.6**	**-0.1**	
L22K	**Petersville**	**86.38**	**27**	P	**P**	**P**	**03 16 39.6**	**-0.1**	
L22K					IAmb	IAmb	03 16 53.2		
	comp=Z,7.1nm,1.3s								
SLKM	**Skilak Lake**	**86.44**	**30**	P	**P**	**P**	**03 16 39.9**	**-0.1**	
E22K	**Anaktuvuk Pass**	**86.61**	**22**	P	**P**	**P**	**03 16 41.3**	**+0.5**	
E22K					IAmb	IAmb	03 17 07.1		
	comp=Z,6.4nm,1.5s								
I23K	**Minto, Yukon-K**	**87.25**	**25**	P	**P**	**P**	**03 16 44.2**	**+0.4**	
I23K					IAmb	IAmb	03 17 23.8		
	comp=Z,4.5nm,1.4s								
KNK	**Knik Glacier**	**87.37**	**29**	P	**P**	**P**	**03 16 45.2**	**+0.7**	
ILAR	**Eielson Array**	**88.28**	**25**	P	**P**	**P**	**03 16 46.3**	**-2.5**	
	comp=Z,0.3nm,0.6s,baz=240,slow=5.0,SNR=11								
	comp=Z,0.3nm,0.6s								
ILAR	**Eielson Array**	**88.28**	**25**	P	**P**	**P**	**03 16 47.7**	**-1.1**	
QSPA	**South Pole Qui**	**90.32**	**180**	P	**P**	**P**	**03 16 58.9**	**+0.4**	
	comp=Z,2.4nm,0.7s,baz=305,slow=1.5,SNR=6.8								
	comp=Z,2.4nm,0.7s								
QSPA	**South Pole Qui**	**90.32**	**180**	P	**P**	**P**	**03 16 58.9**	**+0.4**	
QSPA					IAmb	IAmb	03 16 60.0		
	comp=Z,3.6nm,0.8s								
BRTR	**Keskin Array B**	**91.80**	**310**	P	**P**	**P**	**03 17 06.8**	**+0.8**	
	comp=Z,0.6nm,0.7s,baz=135,slow=4.9,SNR=4.1								
	comp=Z,0.6nm,0.7s								
BRTR	**Keskin Array B**	**91.80**	**310**	P	**P**	**P**	**03 17 07.1**	**+1.1**	
TORD	**Torodi Ar. Bea**	**123.48**	**286**	PKP		**PKPdf**	**03 22 55.6**	**-0.2**	
	comp=Z,0.5nm,0.6s,baz=172,slow=0.9,SNR=5.3								
TXAR	**Lajitas Array**	**123.94**	**54**	PKP		**PKPdf**	**03 22 55.9**	**-0.6**	
	comp=Z,0.3nm,0.7s,baz=252,slow=0.4,SNR=4.1								
TXAR	**Lajitas Array**	**123.94**	**54**			**PKPdf**	**03 22 55.6**	**-0.8**	

*IDC **11** 03:36:09.8±8.4, 15°.51S×173°.12W, h0km, mb3.6/2, mbtmp3.7/3, ML4.1/1, MS2.7/2, Error ellipse: s-maj=409.6km s-min=27.1km az=142.0*
*NEIC **11** 03:36:12.1±1.3, 15°.23S±0°.06×173°.18W±0°.08, h10km±1km, mb4.7/12, Error ellipse: s-maj=13.2km s-min=9.7km az=102.0*

ISC 11 03:36:13.7±0.6, 15°26S±0°.07×173°.07W±0°.09, h29km, n21, σ1§37/22, mb4.6/8, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**1.84**	**43**	Pn		**Pn**	**03 36 44.7**	**+1.3**
	74nm,0.3s,baz=17,slow=14,SNR=65							
AFI				Sn		**Sn**	**03 37 03.8**	**-1.9**
	187nm,0.3s,baz=48,slow=20,SNR=16							
AFI				LR		LR	03 37 35.5	
	comp=Z,153nm,22.0s,baz=162,slow=42							
	169nm,0.3s							
NIUE	**Niue**	**4.84**	**142**			**Pn**	**03 37 26.7**	**+2.0**
NIUE						**Sn**	**03 38 16.1**	**-3.7**
MSVF	**Nonsavu**	**8.86**	**253**	LR		LR	03 41 15.0	
	comp=Z,56nm,20.4s,baz=73,slow=35							
WKZ	**Wanaka**	**33.14**	**204**	P		**P**	**03 42 46.9**	**-0.6**
BBOO	**Buckleboo**	**49.16**	**240**	P		**P**	**03 44 59.2**	**0.0**
BBOO				IAmb		IAmb	03 45 15.8	
	comp=Z,11nm,1.1s							
WR8	**Warramunga Arr**	**50.03**	**257**	P		**P**	**03 45 06.0**	**-0.1**
WB0	**Warramunga Arr**	**50.14**	**257**	P		**P**	**03 45 06.4**	**-0.5**
WB0				IAmb		IAmb	03 45 24.2	
	comp=Z,5.2nm,1.2s							
WRA	**Warramunga Arr**	**50.18**	**257**	P		**P**	**03 45 06.3**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=94,slow=7.5,SNR=5.4							
	comp=Z,0.3nm,0.6s							
WRA	**Warramunga Arr**	**50.18**	**257**	P		**P**	**03 45 06.5**	**-0.8**
ASAR	**Alice Springs**	**50.45**	**252**	P		**P**	**03 45 08.5**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=86,slow=8.1,SNR=6.1							
	comp=Z,0.5nm,0.5s							
ASAR	**Alice Springs**	**50.45**	**252**	P		**P**	**03 45 07.9**	**-1.4**
FORT	**Forrest**	**55.76**	**243**	P		**P**	**03 45 47.9**	**-0.4**
FORT				IAmb		IAmb	03 46 01.9	
	comp=Z,6.2nm,0.8s							
KNRA	**Kununurra**	**55.90**	**261**	P		**P**	**03 45 49.2**	**-0.2**
KNRA				IAmb		IAmb	03 46 07.3	
	comp=Z,7.8nm,1.2s							
VNDA	**Vanda**	**63.55**	**186**	P		**P**	**03 46 41.1**	**0.0**
VNDA				IAmb		IAmb	03 46 45.4	
	comp=Z,9.9nm,1.4s							
NWAO	**Narrogin (SRO)**	**64.96**	**241**	P		**P**	**03 46 51.7**	**+0.5**
NWAO				IAmb		IAmb	03 47 10.3	
	comp=Z,15nm,1.1s							
QSPA	**South Pole Qui**	**74.79**	**180**	P		**P**	**03 47 53.0**	**+2.0**
UGM	**Wanagama**	**74.90**	**266**	P		**P**	**03 47 51.8**	**-0.7**
GO05	**Hualane**	**90.22**	**126**	P		**P**	**03 49 13.3**	**+1.3**
PSZ	**Piszkesteto**	**145.71**	**344**	PKPdf		**PKPab**	**03 55 50.1**	**-0.2**
BRTR	**Keskin Array B**	**146.24**	**321**	PKPbc		**PiKP**	**03 55 54.2**	**-0.9**
	comp=Z,0.8nm,0.9s,baz=48,slow=2.1,SNR=3.7							
BRTR	**Keskin Array B**	**146.24**	**321**	PKPdf		**PKPbc**	**03 55 51.2**	**-0.8**

*IDC **11** 03:54:59.7±1.7, 32°.44S×178°.15W, h0km, mb4.2/2, mbtmp4.2/3, ML4.0/1, MS3.4/3, Error ellipse: s-maj=44.3km s-min=41.0km az=144.0*
*WEL **11** 03:55:03.8±0.9, 32°.5±12°×17°.9W±3°.2, h33km, M4.6/7, mB4.7/6, ML4.5/10, MLv4.6/7, Mw(mB)3.9/3, Error ellipse: s-maj=44.0km s-min=4.2km az=110.2, confirmed*
*NEIC **11** 03:55:03.1±1.8, 32°.47S±0°.08×178°.4W±0°.2, h10km±1km, mb4.4/13, Error ellipse: s-maj=22.6km s-min=14.1km az=90.0*

ISC 11 03:55:04.8±0.8, 32°46S±0°.07×178°.3W±0°.1, h33km, n46, σ1§40/54, mb4.3/9, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GLKZ	**Green Lake**	**3.21**	**6**	P		**Pn**	**03 55 50.5**	**-2.4**
GLKZ				S		**Sn**	**03 56 28.3**	**-1.6**
MXZ	**Matakaoa Point**	**5.79**	**208**	Pn		**Pn**	**03 56 28.4**	**0.0**
WMGZ	**Waiomatatini S**	**5.97**	**206**	P		**Pn**	**03 56 30.6**	**-0.3**
WMGZ				S		**Sn**	**03 57 38.2**	**0.0**
PKGZ	**Pakihiroa**	**6.14**	**208**	P		**Pn**	**03 56 30.4**	**-2.8**
PKGZ				S		**Sn**	**03 57 41.9**	**-0.5**
HAZ	**Te Kaha**	**6.17**	**210**	P		**Pn**	**03 56 32.0**	**-1.6**
PUZ	**Puketiti**	**6.26**	**206**	P		**Pn**	**03 56 32.8**	**-2.1**
PUZ				S		**Sn**	**03 57 44.3**	**-0.9**
RUGZ	**Raukumara Rang**	**6.39**	**210**	P		**Pn**	**03 56 35.0**	**-1.7**
RUGZ				S		**Sn**	**03 57 48.1**	**-0.5**
TWGZ	**Tauwhareparae**	**6.45**	**207**	P		**Pn**	**03 56 35.3**	**-2.3**
TWGZ				S		**Sn**	**03 57 49.8**	**-0.3**
CNGZ	**Carnagh Statio**	**6.64**	**204**	P		**Pn**	**03 56 36.9**	**-3.2**
MWZ	**Matawai**	**6.77**	**209**	P		**Pn**	**03 56 41.5**	**-0.4**
URZ	**Urewera**	**6.88**	**211**	Pn		**Pn**	**03 56 41.8**	**-1.5**
	2.7nm,0.3s,baz=259,slow=4.8,SNR=15							
URZ				Sn		**Sn**	**03 57 59.0**	**-1.5**
	8.1nm,0.3s,baz=194,slow=18,SNR=15							
	7.0nm,0.4s							
URZ	**Urewera**	**6.88**	**211**	P		**Pn**	**03 56 41.9**	**-1.5**
URZ				S		**Sn**	**03 57 59.0**	**-1.5**
RIGZ	**Rimuhau**	**7.00**	**206**	P		**Pn**	**03 56 44.2**	**-0.8**
RTZ	**Ruatahuna**	**7.23**	**211**	Pn		**Pn**	**03 56 45.6**	**-2.7**
MTHZ	**Maungataniwha**	**7.49**	**210**	P		**Pn**	**03 56 51.0**	**-0.8**
MTHZ				S		**Sn**	**03 58 13.8**	**-1.8**
NMHZ	**Naumai**	**7.71**	**209**	P		**Pn**	**03 56 53.8**	**-1.0**
NMHZ				S		**Sn**	**03 58 18.9**	**-2.2**
BKZ	**Black Stump Fm**	**7.90**	**211**	Pn		**Pn**	**03 56 57.0**	**-0.5**
BKZ	**Black Stump Fm**	**7.90**	**211**	P		**Pn**	**03 56 57.0**	**-0.5**
OTVZ	**Oturere**	**8.28**	**214**	P		**Pn**	**03 57 01.0**	**-1.7**
OTVZ				S		**Sn**	**03 58 33.5**	**-1.6**
MRZ	**Mangatainoka R**	**9.54**	**209**	Pn		**Pn**	**03 57 20.2**	**+0.4**
CTZ	**Chatham Island**	**11.34**	**174**	Pn		**Pn**	**03 57 44.1**	**-0.4**
THZ	**Tophouse**	**11.62**	**214**	Pn		**Pn**	**03 57 49.6**	**+1.2**
THZ	**Tophouse**	**11.62**	**214**	P		**Pn**	**03 57 47.7**	**-0.7**
DZM	**Mont Dzumac**	**17.02**	**304**	LR		LR	04 04 09.7	
	comp=Z,168nm,19.0s,baz=183,slow=32							
DCZ	**Deep Cove**	**17.17**	**217**			**P**	**03 59 03.5**	**0.0**
RAR	**Rarotonga**	**19.96**	**60**	LR		LR	04 07 36.7	
	comp=Z,57nm,18.4s,baz=252,slow=38							
TOO	**Toolangi**	**29.94**	**250**	P		**P**	**04 01 11.5**	**+1.5**
CTA	**Charters Tower**	**33.91**	**282**	LR		LR	04 14 56.5	
	comp=Z,87nm,18.3s,baz=220,slow=35							
BBOO	**Buckleboo**	**38.18**	**257**	P		**P**	**04 02 23.4**	**+2.1**
BBOO				IAmb		IAmb	04 02 24.7	
	comp=Z,11nm,1.2s							
ASAR	**Alice Springs**	**42.76**	**269**	P		**P**	**04 03 00.6**	**+1.2**
	comp=Z,1.9nm,0.6s,baz=110,slow=7.8,SNR=20							
	comp=Z,1.9nm,0.6s							
ASAR	**Alice Springs**	**42.76**	**269**	P		**P**	**04 02 58.7**	**-0.6**
WR0	**Warramunga Arr**	**43.76**	**275**	P		**P**	**04 03 08.4**	**+0.9**
WR0				IAmb		IAmb	04 03 12.0	
	comp=Z,6.8nm,1.2s							
WR8	**Warramunga Arr**	**43.79**	**275**	P		**P**	**04 03 08.5**	**+0.8**
WR8				IAmb		IAmb	04 03 10.4	
	comp=Z,5.7nm,1.0s							
WB2	**Warramunga Arr**	**43.92**	**274**	P		**P**	**04 03 09.4**	**+0.7**
WB2				IAmb		IAmb	04 03 16.0	
	comp=Z,8.8nm,1.1s							
WRA	**Warramunga Arr**	**43.93**	**274**	P		**P**	**04 03 09.9**	**+1.0**
	comp=Z,1.8nm,0.3s,baz=113,slow=8.2,SNR=51							
	comp=Z,1.8nm,0.3s							
WRA	**Warramunga Arr**	**43.93**	**274**			**P**	**04 03 08.8**	**0.0**
WB0	**Warramunga Arr**	**43.97**	**275**			**P**	**04 03 09.7**	**+0.6**
WB0				IAmb		IAmb	04 03 23.8	
	comp=Z,4.6nm,0.8s							
FORT	**Forrest**	**45.28**	**257**	P		**P**	**04 03 19.8**	**+0.4**
KNRA	**Kununurra**	**50.61**	**276**	P		**P**	**04 04 01.9**	**+1.0**
KNRA				IAmb		IAmb	04 04 02.7	
	comp=Z,10nm,1.4s							
QSPA	**South Pole Qui**	**57.66**	**180**	P		**P**	**04 04 52.4**	**+0.7**
QSPA				IAmb		IAmb	04 05 04.0	
	comp=Z,7.8nm,1.1s							
PMSA	**Palmer Station**	**70.51**	**156**	P		**P**	**04 06 17.4**	**+1.5**
FINES	**FINESS Array B**	**146.97**	**339**	PKPbc		**PKPbc**	**04 14 43.2**	**0.0**
	comp=Z,1.4nm,0.5s,baz=37,slow=3.0,SNR=12							
BRTR	**Keskin Array B**	**153.27**	**295**	PKPbc		**PKiKP**	**04 14 59.3**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=116,slow=3.4,SNR=4.4							
BRTR	**Keskin Array B**	**153.27**	**295**			**PKiKP**	**04 14 58.9**	**-0.8**
TORD	**Torodi Ar. Bea**	**160.78**	**180**	PKPab		**PKPab**	**04 15 44.1**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=192,slow=4.8,SNR=4.0							
TORD	**Torodi Ar. Bea**	**160.78**	**180**			**PKPab**	**04 15 41.8**	**-2.3**

*IDC **11** 04:04:20.6±0.6, 39°.67N×140°.80E, h0km, mb4.2/23, mbtmp4.2/27, ML3.5/4, MS3.1/9, Error ellipse: s-maj=15.4km s-min=12.3km az=105.0*
*NIED **11** 04:04:23.4, 39°.68N×140°.74E, h12km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr1.46; Mθθ0.16; Mϕϕ -1.61; Mrθ0.54; Mθϕ0.05; Mϕr0.52; Fault plane solution: M0 1.71000×10¹⁵ NP1: ϕs160.00000°, δ39.00000°, λ60.00000°. NP2: ϕs17.00000°, δ57.00000°, λ112.00000°.*
*JMA **11** 04:04:23.4±0.1, 39°.7N±0°.2×140°.7E±0°.2, h12km, MD4.4/20, MV4.2/20, NORTHERN AKITA PREF*
JMA Felt IV J1 at NORTHERN AKITA PREF .
*MOS **11** 04:04:26.2±0.9, 39°.68N×140°.61E, h47km, mb4.6/22, Error ellipse: s-maj=9.2km s-min=5.7km az=106.8*
*NEIC **11** 04:04:29.2±1.0, 39°.73N±0°.06×140°.59E±0°.03, h52km±6km, mb4.5/69, Error ellipse: s-maj=9.4km s-min=2.4km az=166.0*

ISC 11 04:04:23.9±0.7, 39°67N±0°03×140°76E±0°03, h17km±4km, n217, σ1§30/209, mb4.5/85, MS3.0/6, 10C-13D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JSZI	**Iwateshizukuis**	**0.16**	**64**	⇓*i*P		**Pg**	**04 04 27.1**	**-1.1**
JSZI				A		A	04 04 27.1	
	comp=N,205nm,1.2s,comp=E,297nm,1.4s							
JSZI				⇓*e*S		**Sg**	**04 04 29.9**	**-1.2**
JRG	**Rokugo**	**0.29**	**200**	P		**Pb**	**04 04 29.4**	**-1.3**
JRG				A		A	04 04 29.4	
	comp=N,55nm,0.6s,comp=E,59nm,0.9s							
JRG				*e*S		**Sg**	**04 04 33.8**	**-0.7**
JYW	**Yuwa**	**0.45**	**253**	A		A	04 04 31.9	
	comp=N,72nm,0.5s,comp=E,81nm,0.7s							
JOM	**Ohasama**	**0.45**	**116**	⇓P		**Pb**	**04 04 32.2**	**-1.2**
JOM				A		A	04 04 32.2	
	comp=N,19nm,1.9s,comp=E,14nm,3.0s							
JOM				⇓*e*S		**Sb**	**04 04 38.7**	**-1.2**
JAH	**Hinai**	**0.53**	**349**	⇓P		**Pg**	**04 04 33.4**	**-1.0**
JAH				A		A	04 04 33.4	
	comp=N,13nm,0.6s,comp=E,35nm,0.4s							
JAH				⇓*e*S		**Sg**	**04 04 40.4**	**-1.1**
JKZ	**Kuzumaki**	**0.54**	**54**	⇓P		**Pg**	**04 04 33.8**	**-0.8**
JKZ				A		A	04 04 33.8	
	comp=N,6.0nm,1.9s,comp=E,8.0nm,3.0s							
JKZ				⇓*e*S		**Sg**	**04 04 40.9**	**-0.9**
JNTW	**Noshirotokiwa**	**0.76**	**323**	A		A	04 04 37.5	
	comp=N,63nm,3.3s,comp=E,50nm,3.1s							
JMK	**Ichinoseki**	**0.80**	**154**	⇓*i*P		**Pb**	**04 04 38.2**	**-1.1**
JMK				⇓*e*S		**Sb**	**04 04 49.0**	**-0.9**
JYK	**Kaneyama**	**0.81**	**203**	⇓*i*P		**Pb**	**04 04 38.3**	**-1.3**
JYK				A		A	04 04 38.3	
	comp=N,4.0nm,1.3s,comp=E,6.0nm,2.9s							
JYK				⇓*e*S		**Sb**	**04 04 49.0**	**-1.3**
JKEN	**Kujiedanarisaw**	**0.90**	**53**	A		A	04 04 40.5	
	comp=N,17nm,1.1s,comp=E,10.0nm,0.9s							
JANG	**Nango**	**0.91**	**39**	*i* P		**Pg**	**04 04 40.5**	**-1.1**
JANG				*e*S		**Sg**	**04 04 52.6**	**-0.9**
JHHS	**Hirosakihyakuz**	**1.03**	**343**	A		A	04 04 42.4	
	comp=N,22nm,3.1s,comp=E,15nm,2.7s							
JTB	**Tobi-shima**	**1.05**	**243**	A		A	04 04 42.6	
	comp=N,19nm,0.9s,comp=E,10.0nm,1.4s							
JIW	**Iwasaki**	**1.09**	**328**	A		A	04 04 43.5	
	comp=N,11nm,0.5s,comp=E,12nm,0.6s							
JOG3	**Oga3**	**1.32**	**281**	A		A	04 04 37.7	
	comp=N,23nm,0.9s,comp=E,34nm,0.5s							
JYA	**Atsumi**	**1.35**	**218**	A		A	04 04 47.9	
	comp=N,19nm,1.4s,comp=E,19nm,1.9s							
JSI2	**Shiura 2**	**1.41**	**349**	A		A	04 04 48.7	
	comp=N,11nm,1.0s,comp=E,9.0nm,1.1s							
MJB9	**Matsu-Tunnel**	**3.72**	**214**			**Pn**	**04 05 23.0**	**+2.5**
MJB9					Sn	**Sn**	**04 06 06.4**	**+2.5**
MAJO	**Matsushiro**	**3.72**	**214**			**Pn**	**04 05 21.8**	**+1.3**
MAJO	**Matsushiro**	**3.72**	**214**	P		**Pn**	**04 05 21.8**	**+1.3**
MJAR	**Matsushiro Arr**	**3.72**	**214**	Pn		**Pn**	**04 05 20.7**	**+0.2**
	comp=E,0.5nm,0.3s,baz=24,slow=14,SNR=19							
MJAR				Lg		Lg	04 06 19.2	
	comp=E,0.5nm,0.3s,baz=23,slow=30,SNR=5.7							
MJAR				LR		LR	04 06 49.6	
	comp=E,180nm,18.0s,baz=134,slow=40							
	comp=E,5.7nm,0.5s							
MJAR	**Matsushiro Arr**	**3.72**	**214**			**Pn**	**04 05 22.4**	**+1.9**
MJAR	**Matsushiro Arr**	**3.72**	**214**	P		**Pn**	**04 05 22.4**	**+1.9**
ASAJ	**Asahikawa**	**4.65**	**17**	Pn		**Pn**	**04 05 33.8**	**+0.5**
	comp=E,0.9nm,0.3s,baz=229,slow=30,SNR=4.5							
	comp=E,8.5nm,0.5s							
ASAJ	**Asahikawa**	**4.65**	**17**	P		**Pn**	**04 05 36.2**	**+3.0**
JKA	**Kamikawa-asahi**	**4.65**	**17**	Pn		**Pn**	**04 05 36.2**	**+3.0**
JGF	**Kuroka**	**4.88**	**215**			**Pn**	04 05 40.3	+3.8
INU	**Inuyama**	**5.24**	**216**	Pn		**Pn**	**04 05 44.0**	**+2.6**
TEY	**Ternei**	**6.18**	**331**	*e*P		Pn	04 05 59.7	+5.4
YSS	**Yuzhno-Sakhali**	**7.42**	**11**	*e*P		**Pn**	**04 06 15.3**	**+4.0**
YSS				pmax		pmax		
	comp=Z,20nm,1.1s							
YSS				MLR		MLR		
	comp=Z,700nm,16.0s							
YSS				MLR		MLR		
	comp=E,700nm,18.0s							
USRK	**Ussuriysk Ar.**	**7.95**	**308**	Pn		**Pn**	**04 06 18.8**	**+0.2**
	comp=E,5.8nm,0.3s,baz=119,slow=13,SNR=30							
USRK				Sn		**Sn**	**04 07 46.4**	**-1.7**
	comp=E,1.3nm,0.3s,baz=115,slow=26,SNR=12							
	comp=E,9.4nm,0.5s							
KSRS	**Korea Array**	**10.30**	**262**	Pn		**Pn**	**04 06 51.0**	**+0.2**
	comp=E,1.3nm,0.3s,baz=69,slow=14,SNR=18							
KSRS				Sn		**Sn**	**04 08 49.7**	**+4.0**
	comp=E,0.6nm,0.3s,baz=71,slow=23,SNR=5.7							
KSRS				LR		LR	04 10 10.9	
	comp=E,112nm,18.9s,baz=75,slow=34							
	comp=E,3.8nm,0.8s							
KS19	**Wonju Array Si**	**10.33**	**262**			**Pn**	**04 06 54.1**	**+2.9**
KSAR	**Wonju Array Be**	**10.33**	**262**	Pn		**Pn**	**04 06 52.7**	**+1.5**
KSAR	**Wonju Array Be**	**10.33**	**262**	P		**Pn**	**04 06 52.7**	**+1.5**
KLR	**Kul'dur**	**11.52**	**329**	LR		LR	04 11 35.0	
	comp=E,115nm,18.1s,baz=206,slow=38							
KLR	**Kul'dur**	**11.52**	**329**	*i* P		**Pn**	**04 07 07.6**	**+0.2**
KLR				pmax		pmax		
	comp=Z,9.0nm,1.2s							
BNX	**BinXian**	**11.54**	**306**	⇑P		Pn	04 07 13.0	+5.2
BNX				pmax		pmax		
	comp=Z,12nm,1.5s							
PETK	**Petropavlovsk-**	**17.74**	**35**	LR		LR	04 15 49.6	
	comp=Z,40nm,19.3s,baz=203,slow=39							
HIA	**Hailar**	**17.76**	**310**	*i* P		**Pn**	**04 08 29.7**	**-0.4**
HIA				pmax		pmax		
	comp=Z,4.0nm,0.8s							
BJI2	**Beijing**	**18.88**	**279**	P		**P**	**04 08 43.4**	**+0.2**
BJI2				pP		**sP**	**04 08 52.7**	**+2.1**
BJI2				sP		pP	04 08 59.1	+11
BJI2				S		**Sn**	**04 12 08.3**	**-6.4**
BJI2				pmax		pmax		
	comp=Z,3.0nm,1.3s							
BJI2				pmax		pmax		
	comp=Z,83nm,5.0s							
BJI2				LR		LR		
	comp=N,88nm,11.0s							
BJI2				LR		LR		
	comp=E,93nm,14.7s							
BJI2				LR		LR		
	comp=Z,100nm,12.6s							
TIA	**Tai'an**	**18.95**	**267**	P		**Pn**	**04 08 45.3**	**+0.5**
TIA				pmax		pmax		
	comp=Z,13nm,0.9s							
TIA				LR		LR		
	comp=N,330nm,10.9s							
TIA				LR		LR		
	comp=E,370nm,13.9s							
TIA				LR		LR		
	comp=Z,470nm,12.0s							
NJ2	**Nanjing**	**19.29**	**254**	*e*P		**Pn**	**04 08 48.0**	**-0.8**
NJ2				pmax		pmax		
	comp=Z,19nm,0.5s							
HNS	**HongShan**	**20.49**	**272**	⇑P		Pn	04 09 03.9	+0.9
HNS				pmax		pmax		
	comp=Z,7.0nm,1.0s							
HNS				LR		LR		
	comp=E,270nm,11.2s							
HNS				LR		LR		
	comp=Z,210nm,12.5s							
MA2	**Magadan**	**20.91**	**14**	P		**P**	**04 09 04.4**	**-0.7**
	comp=Z,8.9nm,0.7s,baz=162,slow=13,SNR=3.0							
	comp=Z,8.9nm,0.7s							
MA2	**Magadan**	**20.91**	**14**	P		**P**	**04 09 06.3**	**+1.1**
MA2	**Magadan**	**20.91**	**14**	*ce*P		**P**	**04 09 05.0**	**-0.2**
MA2				pmax		pmax		
	comp=Z,11nm,0.7s							
HHC	**Hu-ho-hao-te**	**22.27**	**282**	*e*P		**P**	**04 09 21.2**	**+1.0**
HHC				pmax		pmax		
	comp=Z,7.0nm,0.6s							
HHC				pmax		pmax		
	comp=Z,180nm,5.6s							
YAK	**Yakutsk**	**23.39**	**347**	*e*P		**P**	**04 09 32.3**	**+0.9**
YAK				*e*			04 09 58.6	
YAK				*e*			04 13 19.1	
YAK				*e*SS		Sn	04 14 22.9	+20
YAK				pmax		pmax		
	comp=Z,10.0nm,0.8s							
YAK				pmax		pmax		
	comp=Z,163nm,4.5s							
YAK				pmax		pmax		
	comp=N,92nm,4.9s							
YAK				pmax		pmax		
	comp=E,77nm,5.1s							
SEY	**Seymchan**	**24.32**	**13**	*ce*P		**P**	**04 09 40.8**	**+0.5**
SEY				pmax		pmax		
	comp=Z,17nm,1.3s							
ULN	**Ulaanbaatar**	**25.52**	**300**	*i* P		**P**	**04 09 51.8**	**+0.3**
ULN				pmax		pmax		
	comp=Z,1.0nm,1.0s							
SONM	**Songino Array**	**25.96**	**300**	LR		LR	04 21 27.5	
	comp=Z,28nm,18.0s,baz=242,slow=40							
XAN	**Xi'an**	**26.01**	**268**	⇑P		**P**	**04 09 54.4**	**-1.5**
XAN				pmax		pmax		
	comp=Z,5.0nm,1.3s							
TLY	**Talaya**	**28.27**	**308**	LR		LR	04 21 35.3	
	comp=Z,44nm,19.0s,baz=92,slow=37							
LZH	**Lanzhou**	**29.23**	**275**	*e*P		**P**	**04 10 27.8**	**+2.9**
LZH				sP		sP	04 10 46.0	+13
LZH				pmax		pmax		
	comp=Z,13nm,1.6s							
H11N2	**WAKE ISLAND Hy**	**29.99**	**124**	T		T	04 41 08.4	
	baz=318,slow=75,SNR=147							
H11N1	**WAKE ISLAND Hy**	**30.00**	**124**	T		T	04 41 09.4	
	baz=318,slow=75,SNR=130							
H11N3	**WAKE ISLAND Hy**	**30.01**	**124**	T		T	04 41 17.9	
	baz=318,slow=75,SNR=125							
H11S1	**WAKE ISLAND Hy**	**30.77**	**126**	T		T	04 42 08.1	
	baz=319,slow=76,SNR=19							
H11S3	**WAKE ISLAND Hy**	**30.77**	**126**	T		T	04 42 06.2	
	baz=319,slow=76,SNR=31							
H11S2	**WAKE ISLAND Hy**	**30.78**	**126**	T		T	04 42 07.4	
	baz=319,slow=76,SNR=15							
BILL	**Bilibino**	**31.66**	**18**	*i* P		**P**	**04 10 46.8**	**+1.0**
BILL				pmax		pmax		
	comp=Z,1.0nm,0.8s							
TIXI	**Tiksi**	**32.61**	**353**	*i* P		**P**	**04 10 54.6

G21K IAmb IAmb 04 12 38.9
comp=Z,7.0nm,1.1s
H21K Melozitna Rive 45.04 32 P P 04 12 39.1 +0.8
H21K IAmb IAmb 04 12 40.9
comp=Z,9.7nm,1.4s
B22K Teshekpuk Lake 45.15 26 P 04 12 40.0 +1.0
B22K IAmb IAmb 04 12 46.2
comp=Z,16nm,1.4s
E22K Anaktuvuk Pass 45.53 29 P 04 12 43.1 +1.0
E22K IAmb IAmb 04 12 54.8
comp=Z,4.0nm,0.8s
EVN Everest 45.70 272 P 04 12 44.3 -0.5
KTH Kantishna Hill 45.87 35 P 04 12 46.0 +1.1
KTH IAmb IAmb 04 12 56.4
comp=Z,7.5nm,1.0s
C23K Itkillik River 46.06 27 P P 04 12 47.5 +1.3
C23K IAmb IAmb 04 12 54.2
comp=Z,6.4nm,1.1s
G23K Bananza Creek 46.19 31 P 04 12 48.8 +1.4
G23K IAmb IAmb 04 12 53.6
comp=Z,3.9nm,0.9s
E23K Chandalar 46.35 29 P P 04 12 50.3 +1.6
E23K IAmb IAmb 04 12 51.3
comp=Z,8.5nm,1.2s
D24K Happy Valley 46.66 28 P P 04 12 52.3 +1.4
D24K IAmb IAmb 04 13 02.0
comp=Z,6.9nm,1.0s
C24K Franklin Bluff 46.72 27 P P 04 12 52.5 +1.2
C24K IAmb IAmb 04 13 05.7
comp=Z,8.5nm,0.9s
E24K Your Creek 46.78 29 P P 04 12 53.1 +1.2
TARG Taragay, Kyrgy 46.82 294 P 04 12 52.7 -0.4
TARG IAmb IAmb 04 12 54.7
comp=Z,4.6nm,0.8s
TARG Taragay, Kyrgy 46.82 294 P P 04 12 52.7 -0.4
TARG pmax pmax
comp=Z,5.0nm,0.8s
G24K Hadweenzic Riv 47.20 31 P P 04 12 56.5 +1.3
G24K IAmb IAmb 04 12 58.4
comp=Z,11nm,1.2s
D25K Kavik River 47.53 27 P P 04 12 59.0 +1.2
D25K IAmb IAmb 04 12 59.8
comp=Z,3.5nm,0.9s
ILAR Eielson Array 47.56 34 P P 04 12 57.3 -0.8
comp=Z,1.7nm,0.9s,baz=269,slow=6.3,SNR=15
comp=Z,1.7nm,0.9s
ILAR Eielson Array 47.56 34 P P 04 12 58.6 +0.5
ILAR Eielson Array 47.56 34 P P 04 12 58.6 +0.5
BOOM Boomskoye usch 47.87 296 P 04 13 01.2 +0.2
BOOM IAmb IAmb 04 13 02.0
comp=Z,7.5nm,1.1s
BOOM Boomskoye usch 47.87 296 P P 04 13 01.2 +0.2
BOOM pmax pmax
comp=Z,7.0nm,1.1s
PRP Porcupine Dome 48.07 33 P 04 13 03.5 +1.4
PRP IAmb IAmb 04 13 15.5
comp=Z,4.6nm,1.1s
BMAR Burnt Mountain 48.29 30 P P 04 13 05.0 +1.3
F26K Sheenjek River 48.43 30 P P 04 13 06.4 +1.6
F26K IAmb IAmb 04 13 08.2
comp=Z,7.5nm,1.1s
BVAR Borovoye Array 48.45 311 P P 04 13 05.0 -0.1
comp=Z,3.4nm,0.6s,baz=71,slow=7.6,SNR=16
comp=Z,3.4nm,0.6s
BVAR Borovoye Array 48.45 311 P P 04 13 05.0 -0.1
C27K Jago River 48.46 27 P P 04 13 06.2 +1.3
C27K IAmb IAmb 04 13 19.1
comp=Z,7.3nm,1.1s
BORK Borovoye 48.48 311 P 04 13 05.5 +0.2
BORK IAmb IAmb 04 13 10.8
comp=Z,2.8nm,0.7s
BORK Borovoye 48.48 311 *ce*P **P 04 13 05.5 +0.2**
BORK pmax pmax
comp=Z,12nm,1.7s
G26K Porcupine Rive 48.64 31 P P 04 13 07.7 +1.4
AAK Ala-Archa 48.83 296 P P 04 13 08.2 -0.2
comp=Z,2.1nm,0.7s,baz=261,slow=16,SNR=4.9
comp=Z,2.1nm,0.7s
AAK Ala-Archa 48.83 296 P 04 13 08.1 -0.2
AAK IAmb IAmb 04 13 09.0
comp=Z,4.0nm,0.9s
AAK Ala-Archa 48.83 296 *ce*P **P 04 13 08.0 -0.4**
AAK pmax pmax
comp=Z,4.0nm,1.0s
SCRK Sand Creek 48.91 34 P P 04 13 09.3 +0.8
SCRK IAmb IAmb 04 13 10.3
comp=Z,6.0nm,1.1s
DOT Dot Lake 48.92 35 P P 04 13 10.4 +1.8
ARLS Aral 49.22 295 P P 04 13 11.6 +0.2
ARLS pmax pmax
comp=Z,6.0nm,1.2s
KSH2 Kashi 49.34 291 P P 04 13 12.3 0.0
KSH2 pmax pmax
comp=Z,4.0nm,1.1s
E27K Coleen River 49.35 29 P P 04 13 13.1 +1.2
E27K IAmb IAmb 04 13 14.8
comp=Z,5.4nm,1.4s
L27K Beaver Creek, 50.01 35 P P 04 13 17.9 +1.0
L27K IAmb IAmb 04 13 21.3
comp=Z,5.5nm,1.1s
ARSB Arslanbob 50.35 295 P P 04 13 20.4 +0.4
ARSB Arslanbob 50.35 295 P P 04 13 20.4 +0.4
ARSB pmax pmax
comp=Z,13nm,1.0s
E29M Blow River 50.68 28 P 04 13 23.5 +1.6
E29M IAmb IAmb 04 13 27.6
comp=Z,7.7nm,1.4s
ARK Arkit 50.88 296 P P 04 13 24.8 +0.8
ARK pmax pmax
comp=Z,6.0nm,1.0s
KKAR Karatay Array 51.40 298 P 04 13 28.0 +0.4
KKAR Karatay Array 51.40 298 P P 04 13 28.0 +0.4
EPYK Eagle Plains 51.51 31 P P 04 13 30.0 +1.8
TRKS Terek-Say 51.56 296 P P 04 13 29.3 +0.2
TRKS pmax pmax
comp=Z,9.0nm,1.2s
F30M Barrier River 51.61 29 P P 04 13 30.6 +1.7
L29M L29M 51.64 35 P P 04 13 31.1 +1.8
I30M Mount Dempster 51.90 32 P 04 13 32.4 +1.1
INK Inuvik 52.29 28 P 04 13 35.2 +1.4
INK IAmb IAmb 04 13 36.6
comp=Z,7.9nm,1.3s
INK Inuvik 52.29 28 P P 04 13 35.2 +1.4
INK pmax pmax
comp=Z,8.0nm,1.3s
HYT Haines Junctio 52.51 38 P 04 13 37.4 +1.6
H31M Peel River 52.58 31 P 04 13 37.4 +1.2
GAR Garm 53.15 293 P P 04 13 40.9 +0.1
A36M Sachs Harbour 54.02 23 P P 04 13 47.8 +1.3
A36M IAmb IAmb 04 14 00.7
comp=Z,3.6nm,0.8s
ARTI Arti 54.17 317 P P 04 13 47.3 -0.6
comp=Z,10nm,0.8s,baz=98,slow=4.2,SNR=15
comp=Z,10nm,0.8s
ARTI Arti 54.17 317 P 04 13 47.8 -0.1
ARTI Arti 54.17 317 *d* iP **P 04 13 47.8 -0.1**
ARTI S **S 04 21 25.9 +2.0**
ARTI SS **SS 04 25 04.2 -0.9**
ARTI pmax pmax
comp=Z,14nm,0.8s
AB31 Akbulak array 55.87 309 P 04 13 59.9 -0.4
AB31 IAmb IAmb 04 14 00.6
comp=Z,5.0nm,0.8s
ABKAR Akbulak array 55.87 309 P 04 13 60.0 -0.4
KBL Kabul 56.03 289 P P 04 14 01.3 -0.7
KBL pmax pmax
comp=Z,7.0nm,0.9s
AKTO Aktyubinsk 56.55 311 P P 04 14 04.5 -0.7
comp=Z,2.4nm,0.7s,baz=65,slow=13,SNR=5.3
comp=Z,2.4nm,0.7s
SPITS Spitsbergen Ar 57.84 348 P P 04 14 13.1 -0.8
comp=Z,6.1nm,1.0s,baz=44,slow=10,SNR=2.0
comp=Z,6.1nm,1.0s
KIRV Kirov 57.85 322 *ce*P **P 04 14 13.7 -0.5**
WB0 Warramunga Arr 59.43 187 P 04 14 25.1 -0.5
WR8 Warramunga Arr 59.60 187 P 04 14 26.5 -0.3
WRA Warramunga Arr 59.60 187 P P 04 14 26.1 -0.7
comp=Z,4.7nm,0.8s,baz=3.4,slow=7.1,SNR=38
comp=Z,4.7nm,0.8s
WRA Warramunga Arr 59.60 187 P 04 14 25.9 -0.9
WRA Warramunga Arr 59.60 187 P P 04 14 25.9 -0.9
WRA pmax pmax
comp=Z,1.0nm,1.1s
RES Resolute Bay 60.18 15 P P 04 14 30.1 0.0
YKA Yellowknife Ar 61.80 31 P P 04 14 41.7 +0.4

comp=Z,0.6nm,0.7s,baz=303,slow=7.3,SNR=8.6
comp=Z,0.6nm,0.7s
ASAR Alice Springs 63.33 187 P P 04 14 51.8 -0.2
comp=Z,3.1nm,0.8s,baz=12,slow=6.5,SNR=25
comp=Z,3.1nm,0.8s
ASAR Alice Springs 63.33 187 P P 04 14 52.3 +0.3
ASAR Alice Springs 63.33 187 P P 04 14 52.3 +0.3
OBN Obninsk 65.69 322 ǁ *e*P **P 04 15 07.0 0.0**
OBN pmax pmax
comp=Z,8.0nm,1.4s
FINES FINESS Array B 66.25 332 P P 04 15 10.6 0.0
comp=Z,1.4nm,0.5s,baz=42,slow=8.7,SNR=5.3
comp=Z,1.4nm,0.5s
FINES FINESS Array B 66.25 332 P P 04 15 10.4 -0.1
BLKN Baker Lake 67.17 23 P P 04 15 16.7 +0.4
BLKN IAmb IAmb 04 15 16.9
comp=Z,7.3nm,1.0s
KIV Kislovodsk 68.81 310 *e*P **P 04 15 26.6 -0.6**
KIV pmax pmax
comp=Z,16nm,1.1s
KBZ Khabaz 68.81 310 *i* P **P 04 15 27.2 +0.2**
KBZ pmax pmax
comp=Z,5.0nm,1.1s
STKA Stephens Creek 71.19 179 P P 04 15 41.0 -0.6
comp=Z,2.6nm,0.8s,baz=3.3,slow=12,SNR=4.2
comp=Z,2.6nm,0.8s
STKA Stephens Creek 71.19 179 P P 04 15 42.6 +1.0
STKA Stephens Creek 71.19 179 P P 04 15 42.6 +1.0
STKA pmax pmax
comp=Z,29nm,1.1s
HFS Hagfors 71.48 335 P P 04 15 41.9 -1.2
comp=Z,1.5nm,0.4s,baz=55,slow=5.9,SNR=8.2
comp=Z,1.5nm,0.4s
NB2 NORSAR Subarra 71.56 337 P P 04 15 43.2 -0.5
comp=Z,1.6nm,0.6s,baz=39,slow=6.2
NOA NORSAR Array B 71.56 337 P P 04 15 42.6 -1.1
comp=Z,2.7nm,0.9s,baz=39,slow=6.2,SNR=4.6
comp=Z,2.7nm,0.9s
AKASG Malin Array Be 71.91 322 P P 04 15 45.6 -0.3
comp=Z,1.7nm,0.8s,baz=41,slow=7.4,SNR=4.7
comp=Z,1.7nm,0.8s
AKASG Malin Array Be 71.91 322 P P 04 15 46.2 +0.4
AKASG Malin Array Be 71.91 322 P P 04 15 46.3 +0.4
AKASG pmax pmax
comp=Z,3.0nm,1.1s
NVAR Mina Array Bea 73.82 53 P P 04 15 57.0 -0.7
comp=Z,0.7nm,0.8s,baz=279,slow=6.5,SNR=5.2
comp=Z,0.7nm,0.8s
PDAR Pinedale Array 76.19 46 P P 04 16 11.6 +0.2
comp=Z,0.6nm,0.6s,baz=254,slow=1.4,SNR=5.9
comp=Z,0.6nm,0.6s
BRTR Keskin Array B 76.73 311 P P 04 16 15.1 +0.8
comp=Z,0.5nm,0.7s,baz=101,slow=7.5,SNR=4.2
comp=Z,0.5nm,0.7s
BRTR Keskin Array B 76.73 311 P P 04 16 14.1 -0.3
BRTR Keskin Array B 76.73 311 P P 04 16 14.1 -0.3
MLR Muntele Rosu 77.05 319 LR LR 04 54 04.3
comp=Z,29nm,20.3s,baz=330,slow=39
LANS Liptovska Anna 77.51 325 *e*P **P 04 16 17.1 -1.3**
LANS Liptovska Anna 77.51 325 *e*P **P 04 16 17.1 -1.3**
CLL Collm 78.56 330 *e*P **P 04 16 22.0 -2.1**
CLL pmax pmax
comp=Z,3.0nm,0.7s
CLL Collm 78.56 330 *e*P **P 04 16 22.0 -2.1**
comp=Z,3.0nm,0.7s
MODS Modra-Piesok 79.05 326 *e*P **P 04 16 29.4 +2.5**
MODS Modra-Piesok 79.05 326 *e*P **P 04 16 29.4 +2.5**
RAYN Ar Rayn 79.20 291 P P 04 16 28.0 -0.2
RAYN Ar Rayn 79.20 291 P P 04 16 28.0 -0.2
RAYN pmax pmax
comp=Z,3.0nm,0.7s
GERES GERESS Array B 80.21 328 P P 04 16 31.9 -1.4
comp=Z,1.1nm,0.5s,baz=54,slow=10.0,SNR=6.0
comp=Z,1.1nm,0.5s
SOKA Soboth 81.33 326 *e*P **P 04 16 37.9 -1.4**
comp=Z,5.5nm,1.1s
OBKA Obir 81.67 326 *e*P **P 04 16 40.0 -1.1**
comp=Z,2.4nm,0.7s
LESA Schwarzleotal 81.75 327 *e*P **P 04 16 39.9 -1.7**
comp=Z,1.4nm,0.8s
MYKA Terra Mystica 81.97 326 *e*P **P 04 16 40.5 -2.2**
comp=Z,2.1nm,0.8s
DAVA Damuels 83.00 329 *e*P **P 04 16 46.1 -2.1**
comp=Z,5.7nm,1.1s
FUORN Ofenpass-Fuorn 83.39 328 P 04 16 50.0 -0.3
TXAR Lajitas Array 88.91 52 P P 04 17 16.9 -0.7
comp=Z,0.6nm,0.9s,baz=303,slow=2.5,SNR=3.8
comp=Z,0.6nm,0.9s
TXAR Lajitas Array 88.91 52 P P 04 17 17.1 -0.6
TXAR Lajitas Array 88.91 52 P P 04 17 17.1 -0.6
NVL N'lazarevskaya 139.52 203 *e*PKHKP PKPpre 04 23 39.4
NVL pmax pmax
comp=Z,10.0nm,1.3s
LPAZ La Paz 145.71 55 PKPbc **PKPdf 04 24 00.3 -2.2**
comp=Z,2.0nm,0.9s,baz=4.0,slow=3.3,SNR=4.9
LPAZ La Paz 145.71 55 PKPdf 04 24 01.3 -1.2
LPAZ La Paz 145.71 55 PKP2 **PKPdf 04 24 01.3 -1.2**

IDC 11 04:43:57.5±5.8, 31°29N×109°29E, h0km, mb3.3/3, mbtmp3.3/3, MS3.4/2, Error ellipse: s-maj=655.3km s-min=29.6km az=52.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**25.89**	**314**	P	P	04 49 31.1	0.0
	0.3nm,0.6s,baz=122,slow=11,SNR=4.1						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**35.48**	**319**	LR	LR	05 04 46.0	
	comp=Z,47nm,18.3s,baz=339,slow=35						
WRA	**Warramunga Arr**	**56.33**	**151**	P	P	04 53 40.6	+0.3
	0.3nm,0.6s,baz=336,slow=8.1,SNR=5.0						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**59.52**	**154**	P	P	04 54 02.2	-0.5
	0.1nm,0.3s,baz=340,slow=7.5,SNR=1.7						
	0.1nm,0.3s						
CTA	**Charters Tower**	**62.20**	**140**	LR	LR	05 23 39.6	
	comp=Z,31nm,18.5s,baz=82,slow=38						

IDC ***11*** *05:03:32.9±1.4, 38°30N×142°09E, h0km, mb3.7/6, mbtmp3.8/10, ML3.7/4, MS3.1/2, Error ellipse: s-maj=32.8km s-min=22.0km az=100.0*

NIED ***11*** *05:03:38.7, 38°31N×141°93E, h43km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.24; $M_{\theta\theta}$3.00; $M_{\phi\phi}$-5.24; $M_{r\theta}$2.56; $M_{r\phi}$1.99; $M_{\theta\phi}$-3.30; Fault plane solution: $M_0$6.26000×10^{14} NP1:ϕ_s29.00000°, δ41.00000°, λ160.00000°. NP2:ϕ_s135.00000°, δ77.00000°, λ51.00000°.*

JMA ***11*** *05:03:38.7±0.1, 38°31N±0°.4×141°.9E±0°.7, h43km, MD4.0/38, MV4.3/38, E OFF MIYAGI PREF .*

JMA Felt II J1 at E OFF MIYAGI PREF .

NEIC ***11*** *05:03:39.0±1.6, 38°.36N±0°.07×141°.98E±0°.10, h38km±9km, mb4.0/6, Error ellipse: s-maj=13.7km s-min=6.3km az=132.0*

ISC 11 05:03:38.0±1.0, 38°28N±0°.05×141°99E±0°.09, h37km±2km, n48, σ1°914/43, mb3.9/10, 12D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**0.41**	**275**	⇓P	**Pn**	**05 03 47.8**	**+0.6**
JIKH				⇓S	**Sn**	**05 03 54.1**	**+0.1**
JIO	**Ouri**	**0.53**	**290**	⇓*i*P	**Pn**	**05 03 49.3**	**+0.1**
JIO				⇓S	**Sn**	**05 03 56.6**	**-0.4**
JKMT	**Kesennumamotoy**	**0.67**	**323**	⇓P	**Pn**	**05 03 51.1**	**0.0**
JKMT				A	A	05 03 51.1	
	comp=N,6.0nm,0.8s,comp=E,8.0nm,0.3s						
JKMT				⇓S	**Sn**	**05 03 59.8**	**-0.5**
OFUJ	**Ofunato**	**0.84**	**343**	⇓*i*P	**Pn**	**05 03 53.4**	**+0.1**
OFUJ				A	A	05 03 53.4	
	comp=N,3.0nm,0.4s,comp=E,6.0nm,0.3s						
JMK	**Ichinoseki**	**0.91**	**318**	⇓*i*P	**Pn**	**05 03 54.5**	**+0.3**
JMK				⇓S	**Sn**	**05 04 05.9**	**-0.1**
JOFO	**Osakifurukawao**	**0.91**	**291**	A	A	05 03 54.4	
	comp=N,25nm,0.2s,comp=E,23nm,4.0s						
JMM	**Marumori**	**1.03**	**247**	⇓*i*P	**Pn**	**05 03 55.6**	**-0.2**
JMM				⇓S	**Sn**	**05 04 07.0**	**-2.0**
JMST	**Minamisoumatoc**	**1.03**	**238**	A	A	05 03 56.7	
	comp=N,9.0nm,0.2s,comp=E,13nm,0.4s						
JOU	**Okura**	**1.05**	**275**	⇓*i*P	**Pn**	**05 03 56.5**	**+0.4**
JOU				A	A	05 03 56.5	
	comp=N,7.0nm,0.6s,comp=E,8.0nm,0.8s						
JOM	**Ohasama**	**1.31**	**336**	*i* P	**Pn**	**05 04 00.2**	**+0.4**

JYK	**Kaneyama**	**1.43**	**297**	*i* P	**Pn**	**05 04 01.9**	**+0.5**
JOTO	**OTAMA OYAMA**	**1.49**	**242**	S	**Sn**	**05 04 20.5**	**0.0**
ONAJ	**Iwakimizuishiy**	**1.51**	**219**	A	A	05 04 03.8	
	comp=N,9.0nm,0.2s,comp=E,9.0nm,0.3s						
JYS	**Shirataka**	**1.52**	**268**	*i* P	**Pn**	**05 04 03.0**	**+0.4**
JRG	**Rokugo**	**1.54**	**317**	*e*P	**Pn**	**05 04 03.5**	**+0.6**
MJAR	**Matsushiro Arr**	**3.47**	**241**	Pn	**Pn**	**05 04 30.3**	**+0.8**
	comp=E,1.3nm,0.3s,baz=62,slow=10.0,SNR=22						
MJAR				Sn	**Sn**	**05 05 06.6**	**-2.8**
	comp=E,0.9nm,0.3s,baz=81,slow=17,SNR=6.1						
MJAR				LR	LR	05 06 10.7	
	comp=E,144nm,19.5s,baz=52,slow=44						
	comp=E,6.8nm,0.5s						
MJAR	**Matsushiro Arr**	**3.47**	**241**		**Pn**	**05 04 28.6**	**-0.9**
MAJO	**Matsushiro**	**3.47**	**241**		**Pn**	**05 04 31.4**	**+1.9**
MJB9	**Matsu-Tunnel**	**3.47**	**241**		**Pn**	**05 04 31.2**	**+1.7**
JGF	**Kuroka**	**4.57**	**236**		**Pn**	**05 04 47.2**	**+2.6**
INU	**Inuyama**	**4.95**	**235**		**Pn**	**05 04 51.2**	**+1.5**
JHJ2	**Mitsune**	**5.45**	**200**	Pn	**Pn**	**05 04 58.7**	**+2.0**
JHJ	**Hachijo jima 2**	**5.45**	**200**	Pn	**Pn**	**05 04 57.6**	**+0.9**
	comp=E,14nm,0.3s,baz=50,slow=19,SNR=2.1						
JHJ				Sn	**Sn**	**05 05 57.0**	**-1.2**
	comp=E,35nm,0.3s,baz=76,slow=23,SNR=2.0						
JHJ				LR	LR	05 07 05.7	
	comp=E,324nm,19.9s,baz=118,slow=39						
	comp=E,84nm,0.4s						
JKA	**Kamikawa-asahi**	**5.85**	**4**		**Pn**	**05 05 01.3**	**-0.9**
ASAJ	**Asahikawa**	**5.85**	**4**	Pn	**Pn**	**05 05 01.3**	**-0.9**
	comp=E,3.1nm,0.3s,baz=206,slow=11,SNR=7.6						
	comp=E,3.3nm,0.3s						
JMN	**Monobe**	**7.99**	**238**	Pn	**Pn**	**05 05 33.0**	**+1.5**
USRK	**Ussuriysk Ar.**	**9.57**	**311**	Pn	**Pn**	**05 05 53.2**	**0.0**
	comp=E,0.6nm,0.3s,baz=119,slow=14,SNR=5.4						
	comp=E,0.9nm,0.3s						
ENH	**Enshi**	**27.91**	**263**	P	**P**	**05 09 24.8**	**+0.2**
H11N2	**WAKE ISLAND Hy**	**28.42**	**124**	T	T	05 39 43.8	
	baz=316,slow=76,SNR=293						
H11N1	**WAKE ISLAND Hy**	**28.43**	**124**	T	T	05 39 43.7	
	baz=316,slow=76,SNR=263						
H11N3	**WAKE ISLAND Hy**	**28.44**	**124**	T	T	05 39 44.4	
	baz=316,slow=76,SNR=250						
H11S1	**WAKE ISLAND Hy**	**29.18**	**126**	T	T	05 40 40.4	
	baz=318,slow=76,SNR=94						
H11S3	**WAKE ISLAND Hy**	**29.18**	**126**	T	T	05 40 40.6	
	baz=318,slow=76,SNR=108						
H11S2	**WAKE ISLAND Hy**	**29.20**	**126**	T	T	05 40 41.8	
	baz=318,slow=76,SNR=74						
MK31	**Makanchi Array**	**43.86**	**301**	P	**P**	**05 11 41.4**	**+0.8**
MK31				IAmb	IAmb	05 11 43.2	
	comp=Z,2.1nm,1.3s						
MKAR	**Makanchi Array**	**43.86**	**301**	P	**P**	**05 11 40.0**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=89,slow=9.9,SNR=5.4						
	comp=Z,0.3nm,0.5s						
D19K	**Kuna River**	**44.03**	**27**	P	**P**	**05 11 41.6**	**-0.1**
D19K				IAmb	IAmb	05 11 49.5	
	comp=Z,3.9nm,1.4s						
KURK	**Kurchatov**	**45.54**	**307**	P	**P**	**05 11 53.3**	**-0.5**
KURK				IAmb	IAmb	05 12 07.3	
	comp=Z,1.4nm,0.5s						
KURBB	**Kurchatov Arra**	**45.61**	**307**	P	**P**	**05 11 53.9**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=80,slow=8.0,SNR=10.0						
	comp=Z,1.0nm,0.5s						
ILAR	**Eielson Array**	**48.20**	**33**	P	**P**	**05 12 14.7**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=263,slow=7.5,SNR=2.9						
	comp=Z,0.3nm,0.7s						
BVAR	**Borovoye Array**	**50.08**	**312**	P	**P**	**05 12 31.0**	**+2.0**
	comp=Z,0.5nm,0.4s,baz=89,slow=8.1,SNR=3.7						
	comp=Z,0.5nm,0.4s						
AB31	**Akbulak array**	**57.49**	**310**	P	**P**	**05 13 22.9**	**-0.4**
AB31				IAmb	IAmb	05 13 39.5	
	comp=Z,1.1nm,0.7s						
ABKAR	**Akbulak array**	**57.49**	**310**	P	**P**	**05 13 21.2**	**-2.0**
WRA	**Warramunga Arr**	**58.35**	**188**	P	**P**	**05 13 29.1**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=6.7,slow=6.9,SNR=2.9						
	comp=Z,0.5nm,0.7s						
HFS	**Hagfors**	**73.14**	**336**	P	**P**	**05 15 05.0**	**+0.6**
	comp=Z,5.0nm,1.0s,baz=76,slow=6.1,SNR=2.5						
	comp=Z,5.0nm,1.0s						
H03N2	**Juan Fernandez**	**146.68**	**94**	T	T	08 07 57.3	
	baz=291,slow=76,SNR=3.7						
H03N3	**Juan Fernandez**	**146.69**	**94**	T	T	08 07 54.2	
	baz=291,slow=76,SNR=6.1						
H03N1	**Juan Fernandez**	**146.70**	**94**	T	T	08 07 44.3	
	baz=291,slow=76,SNR=5.6						

NIED ***11*** *05:29:11.1, 32°.13N×130°.06E, h10km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.02; $M_{\theta\theta}$3.30; $M_{\phi\phi}$-3.33; $M_{r\theta}$1.47; $M_{r\phi}$0.85; $M_{\theta\phi}$0.93; Fault plane solution: $M_0$3.82000×10^{14} NP1: ϕ_s130.00000°, δ65.00000°, λ7.00000°. NP2:ϕ_s37.00000°, δ84.00000°, λ155.00000°.*

JMA 11 05:29:11.1±0.0, 32°.1N±0°.1×130°.1E±0°.2, h10km, MV3.5/40, 5D, AMAKUSA REGION, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHD	**Hondo**	**0.34**	**11**	P	Pg	05 29 18.1	+0.3
JHD				*e*S	Sg	05 29 22.9	+0.6
JZO	**Okuchi**	**0.46**	**89**	⇓P	Pg	05 29 20.3	+0.2
JZO				⇓*e*S	Sg	05 29 26.6	+0.5
JSJ	**Shimokoshiki**	**0.54**	**213**	P	Pg	05 29 21.5	-0.1
JSJ				*e*S	Sg	05 29 28.8	+0.1
JSU	**Suzuyama**	**0.71**	**152**	P	Pg	05 29 24.6	-0.3
JSU				*e*S	Sg	05 29 33.8	-0.4
JIU3	**Izumi3**	**0.76**	**57**	⇓P	Pg	05 29 25.5	-0.4
JIU3				⇓*e*S	Sg	05 29 35.6	-0.2
JTZ	**Takazaki**	**0.91**	**105**	⇓*e*P	Pg	05 29 28.8	+0.2
JTA	**Tamana**	**0.92**	**26**	P	Pg	05 29 28.2	-0.6
JTA				*e*S	Sg	05 29 40.5	-0.4

NEIC 11 05:36:33.9±1.3, 19°.06N±0°.08×64°.8W±0°.1, h35km±2km, ML2.7/29, Md3.6/3(RSPR), Error ellipse: s-maj=18.2km s-min=12.1km az=113.0, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUPR	**Culebra, Puert**	**0.86**	**210**	Pn	Pn	05 36 48.8	-0.6
CUPR					Sn	05 36 59.7	-1.1
HUMP	**Col San Antoni**	**1.32**	**227**		Pn	05 36 55.7	-0.2
HUMP					Sn	05 37 11.6	-0.7
HUMP	**Col San Antoni**	**1.32**	**227**	IAML		05 37 13.5	
	97nm,0.2s						
HUMP				IAML		05 37 14.8	
	90nm,0.2s						
PDPR	**Patillas Dam,**	**1.53**	**228**	Pn	Pn	05 36 58.6	-0.1
SJG	**San Juan**	**1.56**	**233**	Pn	Pn	05 36 58.7	-0.5
ECPR	**Experimental S**	**1.62**	**243**		Pn	05 36 59.8	-0.2
ECPR				IAML		05 37 23.5	
	88nm,0.2s						
ECPR				IAML		05 37 24.6	
	92nm,0.2s						
CELP	**Cerrillos**	**1.92**	**240**		Pn	05 37 04.0	-0.1
CELP				IAML		05 37 54.0	
	52nm,3.7s						
CELP				IAML		05 38 04.2	
	44nm,2.7s						
AOPR	**Arecibo Observ**	**1.95**	**249**	Pn	Pn	05 37 05.0	+0.4
AOPR				IAML		05 37 35.8	
	69nm,0.3s						
UUPR	**Utuado, UPR, P**	**1.96**	**246**		Pn	05 37 04.8	+0.2
OBIP	**Obispado Ponce**	**1.96**	**239**		Pn	05 37 04.5	-0.1
OBIP					Sn	05 37 26.8	-1.2
LSP	**Las Mesas**	**2.31**	**248**		Sn	05 37 35.6	-1.1
MLPR	**Magueyes Islan**	**2.36**	**243**	Pn	Pn	05 37 10.3	+0.2
MLPR				IAML		05 38 03.2	
	56nm,3.0s						
MLPR				IAML		05 38 14.7	
	56nm,4.0s						
CRPR	**Cabo Rojo, PR**	**2.40**	**245**		Pn	05 37 10.9	+0.2
CRPR					Sn	05 37 37.6	-1.2

ASRS ***11*** *05:59:10.0±1.0, 54°.11N×86°.44E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 11 05:59:12.2±2.8, 54°.15N×86°.58E, h0km, mbtmp3.0/2, ML2.7/2, Error ellipse: s-maj=22.6km s-min=13.7km az=60.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.06**	**260**	I	I	06 05 00.0	
	baz=80,slow=344,SNR=12						
ZALV	**Zalesovo Beam**	**1.06**	**260**	Pg	Pg	05 59 30.8	-1.7

	1.2nm,0.3s,baz=77,slow=17,SNR=12								
ZALV					Lg	Lg	05 59 48.0		
	1.1nm,0.3s,baz=80,slow=31,SNR=7.0								
KURBB	**Kurchatov Arra**	**6.06**	**238**		Pn	Pn	06 00 43.4	+0.3	
	0.1nm,0.3s,baz=55,slow=13,SNR=4.9								
KURBB					Lg	Lg	06 02 27.6		
	0.1nm,0.3s,baz=61,slow=30,SNR=3.4								
	0.7nm,0.4s								
MKAR	**Makanchi Array**	**7.86**	**202**		Pn	Pn	06 01 09.3	+1.5	
	0.2nm,0.3s,baz=25,slow=13,SNR=5.7								
	0.4nm,0.3s								

IDC ***11*** *06:19:31.6±1.2, 12°.03S×33°.86E, h0km, mb3.8/5, mbtmp4.1/11, ML4.2/3, MS3.3/3, Error ellipse: s-maj=28.9km s-min=22.1km az=126.0*
NEIC ***11*** *06:19:32.1±2.2, 11°.91S±0°.07×34°.0E±0°.1, h10km±1km, mb4.2/7, Error ellipse: s-maj=24.3km s-min=8.1km az=290.0*

ISC 11 06:19:32.5±0.7, 12°.08S±0°.07×33°.81E±0°.08, h10km, n30, σ2s37/30, mb3.7/4, Malawi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSZ	**Lusaka**	**6.32**	**239**	Pn	**Pn**	**06 21 07.4**	**+1.5**
	7.2nm,0.3s,baz=48,slow=12,SNR=20						
LSZ				Sn	**Sn**	**06 22 16.5**	**-1.8**
	13nm,0.3s,baz=14,slow=10,SNR=4.5						
LSZ				Lg	Lg	06 22 48.2	
	21nm,0.3s,baz=140,slow=21,SNR=7.7						
LSZ	**Lusaka**	**6.32**	**239**		**Pn**	**06 21 08.6**	**+2.8**
KSANE	**Kasane**	**10.10**	**235**		**Pn**	**06 21 58.9**	**+1.0**
KIBK	**Kibwezi**	**10.55**	**24**		**Pn**	**06 21 50.0**	**-3.9**
BROLN	**Tlhalogang**	**10.90**	**214**	*i* P	**Pn**	**06 22 10.9**	**+2.2**
BROLN				*i* S	**Sn**	**06 24 06.5**	**-4.5**
BROLN				IAML		06 25 20.8	
	comp=E,49nm,0.8s						
SOOWA	**Sowa**	**11.14**	**220**	*i* P	**Pn**	**06 22 16.3**	**+4.3**
MBAR	**Mbarara**	**11.80**	**345**	Pn	**Pn**	**06 22 19.1**	**-2.1**
	comp=E,12nm,0.2s,baz=21,slow=17,SNR=8.3						
MBAR				Sn	Sn	06 24 20.5	-13
	comp=E,9.1nm,0.3s,baz=168,slow=22,SNR=5.7						
MBAR	**Mbarara**	**11.80**	**345**		**Pn**	**06 22 18.6**	**-2.6**
LPHEP	**Lephephe**	**13.53**	**213**	*i* P	**Pn**	**06 22 46.4**	**+1.7**
LPHEP				*i* S	Sn	06 25 02.8	-12
LPHEP				IAML		06 27 02.0	
	comp=E,27nm,0.7s						
KDWAN	**Kaudwane**	**14.21**	**217**	*i* P	Pn	06 22 48.8	-5.3
KDWAN				IAML		06 27 12.1	
	comp=E,54nm,0.7s						
OPO	**Ambohidratompo**	**14.43**	**118**	Pn	**Pn**	**06 22 57.9**	**+0.9**
	comp=E,0.1nm,0.3s,baz=270,slow=19,SNR=2.1						
	comp=E,4.8nm,1.0s						
ABPO	**Ambohimpanom**	**14.65**	**120**	Pn	**Pn**	**06 23 00.3**	**+0.1**
LBTB	**Lobatse**	**15.03**	**210**	Pn	**Pn**	**06 23 05.0**	**-0.2**
	comp=E,0.7nm,0.3s,baz=22,slow=12,SNR=18						
LBTB				Sn	**Sn**	**06 25 46.1**	**-5.8**
	comp=E,0.9nm,0.3s,baz=320,slow=15,SNR=4.7						
LBTB				Lg	Lg	06 27 23.4	
	comp=E,1.8nm,0.3s,baz=128,slow=23,SNR=7.2						
LBTB				LR	LR	06 29 07.6	
	comp=E,57nm,18.9s,baz=104,slow=38						
	comp=E,9.8nm,0.7s						
LBTB	**Lobatse**	**15.03**	**210**		**Pn**	**06 23 05.3**	**+0.1**
LBTB				IAmb	IAmb	06 23 08.5	
	comp=Z,10.0nm,0.7s						
GRTLG	**Ghanzi**	**15.18**	**231**	*i* P	**Pn**	**06 23 08.0**	**+0.8**
GRTLG				IAML		06 27 54.2	
	comp=N,17nm,0.8s						
GRTLG	**Ghanzi**	**15.18**	**231**	Pn	**Pn**	**06 23 09.3**	**+2.1**
GRTLG				IAmb	IAmb	06 23 24.9	
	comp=Z,8.2nm,0.9s						
KGCAE	**Kacgae**	**15.39**	**224**	*i* P	**Pn**	**06 23 06.4**	**-3.6**
KGCAE				IAML		06 28 08.8	
	comp=N,57nm,0.8s						
KGCAE	**Kacgae**	**15.39**	**224**	Pn	**Pn**	**06 23 11.8**	**+1.8**
KGCAE				IAmb	IAmb	06 23 29.0	
	comp=Z,12nm,0.7s						
KOOLE	**Kule**	**16.90**	**228**	Pn	**Pn**	**06 23 29.9**	**+0.5**
KOOLE				IAmb	IAmb	06 23 37.3	
	comp=Z,31nm,0.8s						
TSUM	**Tsumeb**	**17.14**	**244**	Pn	**Pn**	**06 23 33.2**	**+0.7**
	comp=Z,0.9nm,0.3s,baz=60,slow=13,SNR=5.4						
TSUM				Lg	Lg	06 28 30.6	
	comp=Z,0.4nm,0.3s,baz=339,slow=22,SNR=4.2						
BOSA	**Boshof**	**18.29**	**205**	P	**P**	**06 23 47.6**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=24,slow=12,SNR=11						
	comp=Z,5.6nm,0.8s						
BOSA	**Boshof**	**18.29**	**205**	P	**P**	**06 23 47.3**	**+0.6**
BOSA				IAmb	IAmb	06 23 52.3	
	comp=Z,13nm,1.1s						
FURI	**Furi**	**21.39**	**13**	LR	LR	06 32 09.7	
	comp=Z,64nm,19.5s,baz=94,slow=36						
SUR	**Sutherland**	**23.47**	**209**	P	**P**	**06 24 44.3**	**+1.7**
TORD	**Torodi Ar. Bea**	**40.53**	**307**	P	**P**	**06 27 12.8**	**+0.7**
	comp=Z,1.7nm,0.7s,baz=136,slow=6.9,SNR=12						
	comp=Z,1.7nm,0.7s						
DBIC	**Dimbokro**	**42.72**	**294**	P	**P**	**06 27 31.1**	**+0.9**
	comp=Z,3.8nm,0.7s,baz=125,slow=8.0,SNR=4.3						
	comp=Z,3.8nm,0.7s						
MDT	**Midelt**	**57.77**	**322**	LR	LR	06 56 06.7	
	comp=Z,74nm,19.1s,baz=231,slow=38						
ESDC	**Sonseca Array**	**62.32**	**328**	P	**P**	**06 29 57.0**	**+1.8**
	comp=Z,0.5nm,0.7s,baz=136,slow=6.5,SNR=6.0						
	comp=Z,0.5nm,0.7s						
MKAR	**Makanchi Array**	**72.88**	**33**	P	**P**	**06 31 02.2**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=215,slow=5.0,SNR=3.5						
	comp=Z,0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**73.60**	**28**	P	**P**	**06 31 05.7**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=236,slow=6.4,SNR=3.5						
	comp=Z,0.3nm,0.7s						

IDC ***11*** *06:23:59.9±1.0, 32°.53S×177°.98W, h0km, mb4.6/2, mbtmp4.4/5, ML4.4/3, MS3.8/15, Error ellipse: s-maj=35.2km s-min=30.7km az=143.0*
WEL ***11*** *06:24:01.5±1.1, 33°S±6°×17°8W±1°.8, h33km, M4.5/9, mB4.9/7, ML5.1/12, MLv4.8/9, Mw(mB)4.2/7, Error ellipse: s-maj=24.6km s-min=4.3km az=106.8, confirmed*
NEIC ***11*** *06:24:03.0±1.5, 32°.47S±0°.05×178°.2W±0°.1, h10km±1km, mb4.7/12, Error ellipse: s-maj=19.7km s-min=7.2km az=81.0*

ISC 11 06:24:02.2±0.8, 32°.48S±0°.06×178°.3W±0°.1, h10km, n70, σ1s24/65, mb4.6/8, MS3.8/12, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.23**	**6**	P	**Pn**	**06 24 51.4**	**-1.5**
GLKZ				S	**Sn**	**06 25 30.3**	**-1.1**
RAO	**Raoul Island**	**3.23**	**6**	Sn	**Sn**	**06 25 31.7**	**+0.1**
	82nm,0.3s,baz=273,slow=22,SNR=5.4						
RAO				LR	LR	06 26 02.3	
	comp=Z,404nm,20.1s,baz=158,slow=37						
RAO	**Raoul Island**	**3.23**	**6**	Pn	**Pn**	**06 24 51.5**	**-1.6**
MXZ	**Matakaoa Point**	**5.79**	**208**	Pn	**Pn**	**06 25 26.8**	**-1.3**
MXZ	**Matakaoa Point**	**5.79**	**208**	P	**Pn**	**06 25 26.5**	**-1.6**
MXZ				S	**Sn**	**06 26 34.2**	**-0.4**
HAZ	**Te Kaha**	**6.17**	**210**	P	**Pn**	**06 25 32.8**	**-0.6**
HAZ				S	**Sn**	**06 26 46.1**	**+2.2**
PUZ	**Puketiti**	**6.25**	**206**	P	**Pn**	**06 25 32.2**	**-2.3**
PUZ				S	**Sn**	**06 26 44.9**	**-1.2**
RUGZ	**Raukumara Rang**	**6.39**	**210**	P	**Pn**	**06 25 36.6**	**+0.1**
RUGZ				S	**Sn**	**06 26 50.5**	**+0.9**
TWGZ	**Tauwhareparae**	**6.45**	**207**	P	**Pn**	**06 25 36.0**	**-1.3**
TWGZ				S	**Sn**	**06 26 50.6**	**-0.3**
TKGZ	**Te Karaka**	**6.73**	**207**	S	**Sn**	**06 26 56.6**	**-1.1**
MWZ	**Matawai**	**6.76**	**209**	P	**Pn**	**06 25 40.2**	**-1.4**
MWZ				S	**Sn**	**06 26 57.6**	**-1.1**
URZ	**Urewera**	**6.88**	**212**	Pn	**Pn**	**06 25 43.5**	**+0.4**
	5.6nm,0.3s,baz=262,slow=2.5,SNR=35						
URZ				Sn	**Sn**	**06 27 01.0**	**-0.4**
	9.9nm,0.3s,baz=254,slow=22,SNR=10						
	11nm,0.3s						
URZ	**Urewera**	**6.88**	**212**	P	**Pn**	**06 25 43.2**	**0.0**
URZ				S	**Sn**	**06 27 00.4**	**-1.0**
RIGZ	**Rimuhau**	**6.99**	**206**	P	**Pn**	**06 25 44.2**	**-0.5**
RIGZ				S	**Sn**	**06 27 03.0**	**-1.3**
MUGZ	**Murupara**	**7.21**	**213**	P	**Pn**	**06 25 47.6**	**-0.1**
MUGZ				P	**Sn**	**06 27 09.0**	**-0.6**
SNGZ	**Shannon Statio**	**7.22**	**208**	S	**Sn**	**06 27 09.4**	**-0.5**
RTZ	**Ruatahuna**	**7.23**	**211**		**Pn**	**06 25 48.1**	**+0.1**
RTZ	**Ruatahuna**	**7.23**	**211**	P	**Sn**	**06 27 07.9**	**-2.3**
OUZ	**Omahuta**	**7.28**	**246**	P	Pn	06 25 54.7	+6.1
RAHZ	**Arahi**	**7.44**	**209**	P	**Pn**	**06 25 50.6**	**-0.3**
MTHZ	**Maungataniwha**	**7.49**	**211**	P	**Pn**	**06 25 51.4**	**-0.2**
NMHZ	**Naumai**	**7.71**	**210**	P	**Pn**	**06 25 54.7**	**+0.2**
ARHZ	**Aropaoanui**	**7.77**	**208**	P	**Sn**	**06 27 21.4**	**-2.0**
BKZ	**Black Stump Fm**	**7.90**	**211**	P	**Sn**	**06 27 22.8**	**-3.9**
OTVZ	**Oturere**	**8.28**	**215**	P	**Pn**	**06 26 02.8**	**+0.3**
BFZ	**Birch Farm**	**9.29**	**207**	Pn	**Pn**	**06 26 15.0**	**-1.1**
CTZ	**Chatham Island**	**11.31**	**174**	P	**Pn**	**06 26 45.1**	**+1.2**
MSVF	**Nonsavu**	**15.05**	**346**	Pn	**Pn**	**06 27 34.9**	**-0.3**
	0.2nm,0.3s,baz=103,slow=12,SNR=3.6						
MSVF				LR	LR	06 32 36.8	
	comp=Z,414nm,18.4s,baz=169,slow=34						
	6.0nm,0.9s						
MSVF	**Nonsavu**	**15.05**	**346**	IAmb	IAmb	06 27 37.1	
	comp=Z,13nm,1.1s						
DZM	**Mont Dzumac**	**17.06**	**304**	*e*P	**Pn**	**06 28 01.5**	**+0.5**
	comp=Z,51nm,1.2s						
DZM				*e*LR	LR	06 32 11.2	
	comp=Z,755nm,22.6s						
DZM	**Mont Dzumac**	**17.06**	**304**	P	**P**	**06 28 04.0**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=107,slow=16,SNR=6.2						
DZM				LR	LR	06 33 38.0	
	comp=Z,935nm,19.4s,baz=148,slow=33						
	comp=Z,6.1nm,1.0s						
RAR	**Rarotonga**	**19.94**	**60**	LR	LR	06 36 59.0	
	comp=Z,190nm,18.3s,baz=268,slow=40						
TBI	**Tubuai**	**26.99**	**78**	*e*P	P	06 29 22.5	-22
	comp=Z,223nm,30.0s						
TBI				*e*LR	LR	06 36 07.4	
	comp=Z,576nm,23.2s						
PPT2	**Papeete2**	**29.83**	**67**	*e*P	P	06 29 52.4	-17
	comp=Z,26nm,23.2s						
PPT2				*e*LR	LR	06 37 05.7	
	comp=Z,106nm,30.0s						
PPT2				*e*LR	LR	06 37 22.2	
	comp=Z,111nm,22.5s						
PPT	**Papeete**	**29.84**	**67**	LR	LR	06 42 02.6	
	comp=Z,139nm,18.2s,baz=203,slow=37						
HNR	**Honiara**	**30.51**	**314**	LR	LR	06 41 32.7	
	comp=Z,8.0nm,18.7s,baz=266,slow=34						
STKA	**Stephens Creek**	**33.82**	**260**	LR	LR	06 44 00.7	
	comp=Z,301nm,18.3s,baz=60,slow=35						
CTA	**Charters Tower**	**33.94**	**282**	LR	LR	06 43 20.6	
	comp=Z,124nm,18.4s,baz=92,slow=34						
CTAO	**Charters Tower**	**33.94**	**282**		**P**	**06 30 46.5**	**+0.6**
BBOO	**Buckleboo**	**38.20**	**257**	P	**P**	**06 31 22.9**	**+0.6**
BBOO				IAmb	IAmb	06 31 23.2	
	comp=Z,18nm,1.4s						
COEN	**Coen**	**39.65**	**289**	P	**P**	**06 31 34.0**	**-0.5**
COEN				IAmb	IAmb	06 31 49.9	
	comp=Z,16nm,1.1s						
AS31	**Alice Springs**	**42.79**	**269**		**P**	**06 32 01.6**	**+1.3**
ASAR	**Alice Springs**	**42.79**	**269**	P	**P**	**06 32 01.6**	**+1.3**
	comp=Z,5.6nm,0.8s,baz=111,slow=7.7,SNR=42						
ASAR				LR	LR	06 49 50.3	
	comp=Z,131nm,18.4s,baz=108,slow=36						
	comp=Z,5.6nm,0.8s						
ASAR	**Alice Springs**	**42.79**	**269**		**P**	**06 32 00.8**	**+0.4**
WR8	**Warramunga Arr**	**43.82**	**275**		**P**	**06 32 09.7**	**+1.0**
WR8				IAmb	IAmb	06 32 10.7	
	comp=Z,12nm,1.1s						
WRA	**Warramunga Arr**	**43.97**	**274**	P	**P**	**06 32 10.6**	**+0.8**
	comp=Z,5.0nm,0.5s,baz=114,slow=7.7,SNR=44						
	comp=Z,5.0nm,0.5s						
WRA	**Warramunga Arr**	**43.97**	**274**		**P**	**06 32 10.7**	**+0.9**
WB0	**Warramunga Arr**	**44.00**	**275**		**P**	**06 32 11.1**	**+1.0**
FORT	**Forrest**	**45.30**	**257**	P	**P**	**06 32 21.4**	**+1.0**
FORT				IAmb	IAmb	06 32 23.5	
	comp=Z,7.6nm,0.8s						
VNDA	**Vanda**	**46.01**	**186**	LR	LR	06 49 35.4	
	comp=Z,89nm,18.1s,baz=310,slow=33						
MTN	**Manton Dam**	**50.09**	**281**	P	**P**	**06 32 58.6**	**+0.9**
MTN				IAmb	IAmb	06 33 13.8	
	comp=Z,14nm,1.4s						
KNRA	**Kununurra**	**50.64**	**276**	P	**P**	**06 33 02.6**	**+0.8**
KNRA				IAmb	IAmb	06 33 18.5	
	comp=Z,7.2nm,0.9s						
RPN	**Rapa Nui**	**59.15**	**104**	LR	LR	06 56 21.6	
	comp=Z,90nm,18.1s,baz=244,slow=33						
KAPI	**Kappang**	**63.75**	**281**	LR	LR	07 02 14.6	
	comp=Z,99nm,19.2s,baz=123,slow=36						
BELA	**Belgrano 2**	**67.76**	**172**	P	**P**	**06 35 01.6**	**+2.0**
PLCA	**Paso Flores**	**81.28**	**133**	LR	LR	07 06 37.4	
	comp=Z,58nm,18.3s,baz=202,slow=32						
LPIG	**La Paz**	**85.84**	**58**	LR	LR	07 09 54.4	
	comp=Z,68nm,18.1s,baz=194,slow=32						
MA2	**Magadan**	**95.23**	**345**	LR	LR	07 14 12.8	
	comp=Z,30nm,21.7s,baz=120,slow=32						
CPUP	**Villa Florida**	**98.89**	**129**	LR	LR	07 16 30.0	
	comp=Z,32nm,19.7s,baz=156,slow=32						
MKAR	**Makanchi Array**	**118.90**	**309**	PKP	**PKPdf**	**06 42 48.1**	**-2.6**
	comp=Z,0.8nm,0.9s,baz=63,slow=3.3,SNR=4.6						
KURK	**Kurchatov**	**122.29**	**313**		**PKPdf**	**06 42 57.4**	**+0.3**
KURBB	**Kurchatov Arra**	**122.33**	**313**	PKP	**PKPdf**	**06 42 57.4**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=108,slow=1.7,SNR=8.9						
BVAR	**Borovoye Array**	**127.70**	**315**	PKP	**PKPdf**	**06 43 05.6**	**-1.8**
	comp=Z,0.7nm,0.5s,baz=132,slow=2.1,SNR=3.4						
KBZ	**Khabaz**	**146.02**	**301**	PKPbc	**PKPdf**	**06 43 42.9**	**+1.6**
	comp=Z,4.5nm,1.0s,baz=180,slow=3.0,SNR=4.6						
FINES	**FINESS Array B**	**147.00**	**339**	PKPbc	**PKPbc**	**06 43 45.2**	**+0.9**
	comp=Z,7.2nm,0.8s,baz=57,slow=3.6,SNR=16						
NOA	**NORSAR Array B**	**150.76**	**351**	PKPbc	**PKPbc**	**06 43 52.7**	**-1.4**
	comp=Z,0.6nm,0.7s,baz=14,slow=2.5,SNR=1.5						
HFS	**Hagfors**	**151.22**	**348**	PKPbc	**PKPbc**	**06 43 54.1**	**-1.0**
	comp=Z,4.4nm,0.8s,baz=297,slow=6.5,SNR=4.2						
AKASG	**Malin Array Be**	**152.76**	**320**	PKPbc	**PKPbc**	**06 43 58.1**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=59,slow=2.0,SNR=5.7						
BRTR	**Keskin Array B**	**153.30**	**295**	PKPbc	**PKPbc**	**06 44 00.9**	**+0.2**
	comp=Z,2.0nm,0.9s,baz=146,slow=2.7,SNR=6.5						
TORD	**Torodi Ar. Bea**	**160.76**	**180**	PKPab	**PKPab**	**06 44 44.1**	**-0.9**
	comp=Z,1.4nm,1.0s,baz=219,slow=3.8,SNR=4.3						

IDC 11 06:26:43.7±4.8, 30°.41S×179°.09W, h0km, mb3.8/2, mbtmp3.8/2, Error ellipse: s-maj=262.2km s-min=72.6km az=167.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**42.17**	**267**	P	P	06 34 37.2	-1.2
	0.7nm,0.6s,baz=111,slow=8.5,SNR=2.7						
	0.7nm,0.6s						
WRA	**Warramunga Arr**	**43.16**	**273**	P	P	06 34 47.1	+0.8
	1.2nm,0.5s,baz=113,slow=7.9,SNR=5.0						
	1.2nm,0.5s						
FINES	**FINESS Array B**	**144.83**	**339**	PKP	PKPbc	06 46 21.2	+0.2
	3.7nm,0.8s,baz=48,slow=2.1,SNR=5.4						

MDD ***11*** *06:27:21.9±1.2, 35°.92N×10°.75W, h29km±15km, mb_Lg2.8/7, Error ellipse: s-maj=12.7km s-min=5.6km az=87.0*
INMG ***11*** *06:27:26.4±1.5, 35°.94N×10°.56W, h29km±16km, ML1.9, Error ellipse: s-maj=10.4km s-min=7.3km az=77.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Mar de Marrocos*
CNRM ***11*** *06:27:27.6, 35°.68N×9°.85W, h84km*

ISC 11 06:27:27.2±4.1, 36°.1N±0°.2×10°.4W±0°.2, h42km, n39, σ1s16/48, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**1.66**	**49**	Sn	**Sn**	**06 28 14.5**	**+0.6**
PFVI	**Vila Bisbo**	**1.66**	**49**	*e*P	**Pn**	**06 27 54.3**	**+0.4**
PFVI				*e*S	**Sn**	**06 28 15.5**	**+1.6**
PFVI				*i* IAML		06 28 17.3	
PFVI				*i* IAML		06 28 17.9	
PFVI				*i* IAML		06 28 17.9	
MORF	**Marmelete**	**1.88**	**48**	*e*P	**Pn**	**06 27 58.1**	**+1.3**
MORF				*e*S	**Sn**	**06 28 20.6**	**+1.2**
MORF				*i* IAML		06 28 21.4	
MORF				*i* IAML		06 28 21.9	
MORF				*i* IAML		06 28 22.1	
PTEO	**Sao Teotonio**	**2.01**	**42**	*e*S	**Sn**	**06 28 23.6**	**+1.2**
PTEO				*i* IAML		06 28 24.8	
PTEO				*i* IAML		06 28 26.7	
PTEO				*i* IAML		06 28 34.7	
PBDV	**Barranco-do-Ve**	**2.31**	**58**	Pn	**Pn**	**06 28 03.2**	**+0.4**
PBDV				Sn	**Sn**	**06 28 30.9**	**+0.8**
PBDV	**Barranco-do-Ve**	**2.31**	**58**	*e*P	**Pn**	**06 28 03.3**	**+0.5**
PBDV				*e*S	**Sn**	**06 28 31.0**	**+0.9**
PBDV				*i* IAML		06 28 33.8	
PBDV				*i* IAML		06 28 36.2	
PBDV				*i* IAML		06 28 43.8	
PCVE	**Castro Verde**	**2.46**	**50**	Pn	**Pn**	**06 28 04.7**	**-0.1**
PCVE				Sn	**Sn**	**06 28 35.2**	**+1.5**
PCVE	**Castro Verde**	**2.46**	**50**	*e*S	**Sn**	**06 28 35.4**	**+1.7**
PCVE				*i* IAML		06 28 36.9	
PCVE				*i* IAML		06 28 37.3	
PCVE				*i* IAML		06 28 37.9	
MESJ	**Messejana**	**2.50**	**44**	*e*P	**Pn**	**06 28 06.2**	**+1.0**
MESJ				*e*S	**Sn**	**06 28 35.1**	**+0.7**
MESJ				*i* IAML		06 28 37.1	
MESJ				*i* IAML		06 28 37.4	
MESJ				*i* IAML		06 28 38.0	
PVAQ	**Vaqueiros**	**2.54**	**57**	*e*P	**Pn**	**06 28 06.3**	**+0.4**
PVAQ				*e*S	**Sn**	**06 28 36.3**	**+0.7**
PVAQ				*i* IAML		06 28 37.6	
PVAQ				*i* IAML		06 28 38.7	
PVAQ				*i* IAML		06 28 40.4	
PVAQ	**Vaqueiros**	**2.54**	**57**	P	Pn	06 28 03.4	-2.5
PVAQ				S	**Sn**	**06 28 35.8**	**+0.2**
EGRO	**El Granado**	**2.77**	**57**	Pn	**Pn**	**06 28 09.8**	**+0.8**
EGRO				Sn	**Sn**	**06 28 42.5**	**+1.3**
EGRO	**El Granado**	**2.77**	**57**	P	**Pn**	**06 28 09.3**	**+0.3**
EGRO				S	**Sn**	**06 28 41.4**	**+0.2**
EGRO				*i* IVmb_Lg		06 28 43.3	
PBEJ	**Beja**	**2.83**	**45**	*e*S	**Sn**	**06 28 43.0**	**+0.3**
MOE	**Montemor**	**2.96**	**33**	*e*S	**Sn**	**06 28 46.2**	**+0.3**
PMAFR	**Mafra**	**3.03**	**17**	*e*S	**Sn**	**06 28 47.8**	**+0.2**
PMAFR				*i* IAML		06 28 48.3	
PMAFR				*i* IAML		06 28 52.5	
PMAFR				*i* IAML		06 28 55.5	
EVO	**Evora**	**3.12**	**37**	Pn	**Pn**	**06 28 15.3**	**+1.5**
EVO				Sn	**Sn**	**06 28 49.1**	**-0.8**
EVO	**Evora**	**3.12**	**37**	*e*S	**Sn**	**06 28 49.7**	**-0.2**
EVO				*i* IAML		06 28 50.4	
EVO				*i* IAML		06 28 50.5	
EVO				*i* IAML		06 28 51.1	
PARRA	**Arraiolos**	**3.33**	**34**	*e*P	**Pn**	**06 28 16.7**	**-0.1**
PARRA				*e*S	**Sn**	**06 28 54.5**	**-0.6**
PARRA				*i* IAML		06 28 55.7	
PARRA				*i* IAML		06 28 56.4	
PARRA				*i* IAML		06 28 57.1	
PBAR	**Barrancos**	**3.42**	**51**	Sn	**Sn**	**06 28 57.7**	**+0.4**
PBAR	**Barrancos**	**3.42**	**51**	*e*S	**Sn**	**06 28 57.9**	**+0.6**
PBAR				*i* IAML		06 28 59.2	
PBAR				*i* IAML		06 28 59.9	
PBAR				*i* IAML		06 29 00.2	
EMIN	**Mina Concepcio**	**3.44**	**59**	P	Pn	06 28 15.3	-3.0
EMIN				S	**Sn**	**06 28 58.0**	**+0.2**
EMIN				*i* IVmb_Lg		06 28 59.7	
PMTG	**Montargil**	**3.47**	**29**	*e*P	**Pn**	**06 28 19.4**	**+0.7**
PMTG				*e*S	**Sn**	**06 28 57.7**	**-0.7**
PMTG				*i* IAML		06 28 59.1	
PMTG				*i* IAML		06 29 60.0	
PMTG				*i* IAML		06 29 01.6	
PESTR	**Estremoz**	**3.59**	**38**	*e*S	**Sn**	**06 29 00.9**	**-0.6**
PSBE	**So Bento**	**3.68**	**20**	*e*S	**Sn**	**06 29 03.4**	**-0.3**
ESPR	**Espera**	**3.75**	**76**	Sn	**Sn**	**06 29 06.0**	**+0.5**
PSARD	**Sardoal**	**3.96**	**26**	*e*S	**Sn**	**06 29 09.9**	**-0.6**
PSARD				*i* IAML		06 29 11.0	
PSARD				*i* IAML		06 29 11.1	
PSARD				*i* IAML		06 29 11.4	
PMRV	**Marv??o**	**4.13**	**34**	*e*P	**Pn**	**06 28 27.4**	**-0.3**
PMRV				*e*S	**Sn**	**06 29 13.4**	**-1.3**
PMRV				*i* IAML		06 29 14.4	
PMRV				*i* IAML		06 29 14.9	
PMRV				*i* IAML		06 29 15.6	
PCAS	**Casmilo, Conde**	**4.26**	**20**	*e*S	**Sn**	**06 29 16.9**	**-1.1**
PCAS				*i* IAML		06 29 17.3	
PCAS				*i* IAML		06 29 18.0	
PCAS				*i* IAML		06 29 18.9	
ECAB	**El Cabril**	**4.47**	**62**	Sn	**Sn**	**06 29 21.5**	**-1.6**
ECAB	**El Cabril**	**4.47**	**62**	P	**Pn**	**06 28 31.1**	**-1.3**
ECAB				S	**Sn**	**06 29 22.2**	**-0.9**
ECAB				*i* IVmb_Lg		06 29 30.5	
EADA	**Adamuz**	**5.11**	**64**	S	**Sn**	**06 29 35.6**	**-3.3**
EADA				*i* IVmb_Lg		06 29 41.2	
EPLA	**Plasencia**	**5.26**	**39**	S	**Sn**	**06 29 39.5**	**-3.1**
EPLA				*i* IVmb_Lg		06 29 51.2	
TISM	**Timmit**	**5.44**	**142**	P	Pn	06 28 37.1	-8.6
TISM				S	Sn	06 29 33.8	-13
MD31	**MD31**	**5.64**	**123**	P	Pn	06 28 42.0	-6.6
MD31				S	Sn	06 29 39.1	-13
MDT	**Midelt**	**5.78**	**122**	P	Pn	06 28 44.5	-6.0
MDT				S	Sn	06 29 40.8	-15
PSIM	**Granatula de C**	**5.96**	**60**	S	**Sn**	**06 29 57.5**	**-2.

JAUV eS **Sn** **06 44 41.2 -2.0**
LVIG Laguna Verde 2.35 339 eP **Pn** **06 44 15.9 -3.3**
LVIG eS **Sn** **06 44 41.8 -5.1**
TGIG 2.42 107 eP **Pn** **06 44 20.9 +0.7**
TGIG eS **Sn** **06 44 48.9 +0.3**
TGBT Tuxtla Gutierr 2.45 107 eP **Pn** **06 44 20.4 -0.1**
TGBT eS **Sn** **06 44 49.7 +0.5**
FTIG Fresnillo de T 2.51 279 eP **Pn** **06 44 21.5 0.0**
FTIG eS **Sn** **06 44 50.0 -1.0**
VHSA Villahermosa 2.52 79 eP **Pn** **06 44 20.4 -1.1**
VHSA eS **Sn** **06 44 54.0 +3.1**
PNIG Pinotepa 2.72 246 eP **Pn** **06 44 22.2 -2.1**
PNIG eS **Sn** **06 44 54.7 -1.4**
PCIG 2.85 129 eP **Pn** **06 44 26.5 +0.3**
PCIG eS **Sn** **06 45 00.6 +1.3**
TLIG Tlapa 2.90 271 **Pn** **06 44 27.8 +1.0**
TLIG Tlapa 2.90 271 eP **Pn** **06 44 26.0 -0.8**
TLIG eS **Sn** **06 44 59.5 -1.0**
TLIG Tlapa 2.90 271 ⇓P **Pn** **06 44 27.4 +0.6**
TLIG S **Sn** **06 45 04.6 +4.1**
MGIG Malinaltepec 2.98 265 eP **Pn** **06 44 27.7 -0.3**
MGIG eS **Sn** **06 45 03.2 +0.7**
CXUV Coxquihui 3.29 324 eP **Pn** **06 44 31.1 -1.0**
CXUV eS **Sn** **06 45 09.2 -0.8**
PPM Popocatepetl 3.32 298 eP **Pn** **06 44 34.6 +1.6**
PPM eS **Sn** **06 45 11.5 0.0**
CCIG Comitan 3.47 110 **Pn** **06 44 36.5 +1.7**
CCIG Comitan 3.47 110 eP **Pn** **06 44 34.2 -0.6**
CCIG eS **Sn** **06 45 15.2 +0.3**
CCIG Comitan 3.47 110 P **Pn** **06 44 37.1 +2.3**
AMVM AMECAMECA 3.48 298 eP **Pn** **06 44 37.5 +2.4**
AMVM eS **Sn** **06 45 11.0 -4.3**
CRIG Cruz Grande 3.53 258 eP **Pn** **06 44 32.9 -2.5**
CRIG eS **Sn** **06 45 12.6 -3.3**
YAIG Yautepec 3.62 292 eP **Pn** **06 44 36.6 -0.2**
YAIG eS **Sn** **06 45 17.9 -0.4**
MPVM San Francisco 3.71 297 eP **Pn** **06 44 38.6 +0.6**
MPVM eS **Sn** **06 45 23.5 +2.9**
THVM De Xico 3.72 299 eP **Pn** **06 44 41.2 +2.8**
THVM eS **Sn** **06 45 18.8 -2.4**
VTVM Tizayuca 3.81 307 eP **Pn** **06 44 39.7 +0.1**
VTVM eS **Sn** **06 45 20.9 -2.3**
XCVM Xochimilco 3.82 297 eP **Pn** **06 44 41.4 +1.7**
XCVM eS **Sn** **06 45 24.4 +1.0**
TLVM San Miguel Top 3.83 297 eP **Pn** **06 44 42.1 +2.2**
TLVM eS **Sn** **06 45 19.1 -4.8**
PBVM Pinon 3.88 300 eP **Pn** **06 44 40.6 +0.4**
PBVM eS **Sn** **06 45 24.5 0.0**
PLIG Platanillo 3.88 284 eP **Pn** **06 44 40.4 +0.1**
PLIG eS **Sn** **06 45 21.5 -3.2**
MZVM 3.89 296 eP **Pn** **06 44 41.0 +0.6**
MZVM eS **Sn** **06 45 26.5 +1.8**
UNM Universidad Na 3.90 298 Pn **Pn** **06 44 43.9 +3.1**
MEIG Mezcala 3.92 277 eP **Pn** **06 44 39.4 -1.4**
MEIG eS **Sn** **06 45 22.0 -3.7**
PAVE Pavencul 3.96 125 eP **Pn** **06 44 42.9 +1.3**
PAVE eS **Sn** **06 45 28.8 +1.9**
PATR El Naranjo 3.96 126 eP **Pn** **06 44 42.9 +1.2**
PATR eS **Sn** **06 45 29.4 +2.4**
DAIG Los Arroyos 3.96 264 eP **Pn** **06 44 38.9 -2.6**
DAIG eS **Sn** **06 45 21.6 -5.2**
MCRU Las Cruces 3.96 298 eP **Pn** **06 44 42.0 +0.3**
MCRU eS **Sn** **06 45 22.4 -4.8**
MHVM Bosque de Chap 3.97 299 eP **Pn** **06 44 42.5 +0.8**
MHVM eS **Sn** **06 45 26.9 -0.2**
PTVM Pico Tres Padr 3.98 302 eP **Pn** **06 44 43.1 +1.2**
PTVM eS **Sn** **06 45 29.4 +2.0**
AOVM Tlapan 4.00 296 eP **Pn** **06 44 44.9 +2.6**
AOVM eS **Sn** **06 45 28.9 +0.7**
APVM Azcapotzalco 4.00 300 eP **Pn** **06 44 44.8 +2.5**
APVM eS **Sn** **06 45 27.0 -1.0**
MAVM Malinalco, Edo 4.03 291 eP **Pn** **06 44 43.5 +1.0**
MAVM eS **Sn** **06 45 27.9 -0.7**
INVM La Marquesa 4.06 296 eP **Pn** **06 44 45.4 +2.3**
INVM eS **Sn** **06 45 24.8 -4.8**
THIG 4.07 129 eP **Pn** **06 44 41.4 -1.4**
THIG eS **Sn** **06 45 31.0 +1.7**
ZUVM ZUMPANGO 4.07 305 eP **Pn** **06 44 44.1 +0.9**
ZUVM eS **Sn** **06 45 34.8 +5.1**
CHUJ Union Juarez 4.07 126 eP **Pn** **06 44 44.3 +1.2**
CHUJ eS **Sn** **06 45 31.9 +2.2**
AZVM Cuida Lopez Ma 4.11 301 eP **Pn** **06 44 40.7 -3.0**
AZVM eS **Sn** **06 45 29.1 -1.6**
TOVM TOLUCA 4.31 295 eP Pn 06 44 41.0 -5.5
TOVM eS **Sn** **06 45 29.9 -5.8**
DEIG Demacu 4.32 310 eP **Pn** **06 44 43.3 -3.3**
DEIG eS **Sn** **06 45 37.9 +2.0**
SCIG Sabancuy 4.38 70 eP **Pn** **06 44 46.5 -0.6**
SCIG eS **Sn** **06 45 34.1 -2.7**
SCIG Sabancuy 4.38 70 ⇓P **Pn** **06 44 47.7 +0.6**
HUEH Huehuetenango 4.44 119 **Pn** **06 44 49.3 +1.1**
HUEH Huehuetenango 4.44 119 eP **Pn** **06 44 47.4 -0.8**
HUEH eS **Sn** **06 45 38.9 +0.2**
HUEH Huehuetenango 4.44 119 P **Pn** **06 44 49.2 +1.1**
HUEH S **Sn** **06 45 40.4 +1.6**
CAIG El Cayaco 4.55 265 eP **Pn** **06 44 47.1 -2.4**
CAIG eS **Sn** **06 45 35.7 -5.3**
ARIG Puente Sto Nin 4.65 280 eP **Pn** **06 44 51.7 +0.8**
ARIG eS **Sn** **06 45 38.7 -4.9**
RTAL Retalhuleu 4.74 128 **Pn** **06 44 54.4 +2.3**
RTAL Retalhuleu 4.74 128 eP **Pn** **06 44 52.0 -0.1**
RTAL eS **Sn** **06 45 45.5 -0.3**
RTAL Retalhuleu 4.74 128 P **Pn** **06 44 47.3 +2.2**
RTAL S **Sn** **06 45 47.7 +1.9**
CTUV Llano Grande 4.75 326 eP **Pn** **06 44 51.0 -1.3**
CTUV eS **Sn** **06 45 42.9 -3.2**
ACIG Acambay 4.79 301 eP **Pn** **06 44 53.9 +0.8**
ACIG eS **Sn** **06 45 52.6 +5.2**
PETF Flores 5.45 95 **Pn** **06 45 03.4 +1.6**
PETF Flores 5.45 95 eP **Pn** **06 45 01.9 0.0**
PETF eS **Sn** **06 45 59.7 -3.6**
PETF Flores 5.45 95 ⇓P **Pn** **06 45 03.4 +1.6**
PETF S **Sn** **06 46 03.7 +0.4**
APG El Apazote 5.47 116 P **Pn** **06 45 01.4 -0.9**
3.2nm,0.3s,baz=213,slow=16,SNR=42
APG S **Sn** **06 46 00.5 -3.6**
28nm,0.3s,baz=85,slow=16,SNR=15
ZIIG Zihuatanejo 5.66 272 eP **Pn** **06 45 04.7 0.0**
ZIIG eS **Sn** **06 46 06.4 -2.1**
MOIG Morelia 5.78 293 eP **Pn** **06 45 06.3 -0.4**
MOIG eS **Sn** **06 46 12.0 +0.2**
RPIG Rio Verde 6.04 317 eP **Pn** **06 45 09.5 -0.5**
RPIG eS **Sn** **06 46 24.1 +6.1**
FAME Alcaldia de Sa 6.45 124 P **Pn** **06 45 15.5 0.0**
FAME S **Sn** **06 46 28.9 +1.0**
MYIG Merida 6.46 57 P **Pn** **06 45 17.9 +2.2**
MYIG S **Sn** **06 46 30.2 +2.1**
GTIG Gomez Farias 6.49 329 eP **Pn** **06 45 14.0 -2.2**
GTIG eS **Sn** **06 46 31.5 +2.4**
SLOZ Alcaldia de Sa 6.53 121 P **Pn** **06 45 19.4 +2.6**
NUBE Las Nubes 6.60 122 P **Pn** **06 45 18.8 +1.0**
NUBE S **Sn** **06 46 33.4 +1.5**
ESQI Esquipulas 6.64 115 **Pn** **06 45 20.1 +1.9**
ESQI Esquipulas 6.64 115 P **Pn** **06 45 19.7 +1.4**
ESQI S **Sn** **06 46 30.8 +1.9**
MTO3 Montecristo 6.70 117 **Pn** **06 45 20.3 +1.2**
MTO3 Montecristo 6.70 117 P **Pn** **06 45 19.6 +0.4**
MTO3 S **Sn** **06 46 31.1 -3.3**
IZABA Izabal, Puerto 6.89 104 eP **Pn** **06 45 20.6 -1.0**
IZABA eS **Sn** **06 46 33.1 -5.7**
IZABA Izabal, Puerto 6.89 104 P **Pn** **06 45 22.4 +0.7**
CEDA San Andres 6.97 121 P **Pn** **06 45 22.9 +0.2**
SARH Santa Rosa de 7.05 112 ⇓P **Pn** **06 45 24.2 +0.3**
SARH S **Sn** **06 46 39.1 -3.9**
PMON Piamonte 7.08 121 P **Pn** **06 45 27.2 +2.8**
LLGN La Laguna 7.16 117 P **Pn** **06 45 27.8 +2.3**
TEIG Tepich 7.38 67 **Pn** **06 45 28.8 +0.5**
TEIG Tepich 7.38 67 ⇓P **Pn** **06 45 28.9 +0.5**
TEIG S **Sn** **06 46 45.4 -5.4**
PAVA Las Pavas 7.39 120 P **Pn** **06 45 29.8 +1.1**
P5NO Presa 5 de nov 7.40 117 P **Pn** **06 45 30.6 +1.9**
MMIG Aquila 7.48 277 eP **Pn** **06 45 29.5 -2.2**
MMIG eS **Sn** **06 46 49.1 -4.2**
COEG Centro de Oper 7.49 120 P **Pn** **06 45 30.2 +0.3**
SCLA Alcaldia de Sa 7.57 119 P **Pn** **06 45 33.2 +2.2**
TECO Alcaldia de Te 7.61 120 P **Pn** **06 45 31.6 0.0**
INCO Volcan de Coli 7.92 286 eP **Pn** **06 45 37.8 +1.8**
INCO eS **Sn** **06 47 10.5 +5.9**
SOMAC Volcano de Col 7.94 286 eP **Pn** **06 45 38.6 +2.2**
SOMAC eS **Sn** **06 47 10.9 +5.7**
PACA Pacayal 8.03 119 P **Pn** **06 45 39.7 +2.3**
CEGR Campo Tres 8.12 285 eP **Pn** **06 45 38.8 +0.1**
CEGR eS **Sn** **06 47 11.2 +1.9**
CDAR Ciudad de Arme 8.18 281 eP Pn 06 45 44.8 +5.4
CDAR eS **Sn** **06 47 11.8 +1.2**
LNIG Linares 8.21 334 eP **Pn** **06 45 39.2 -0.6**
LNIG eS **Sn** **06 47 05.9 -5.5**
ZAIG Zacatecas 8.43 310 **Pn** **06 45 43.2 +0.3**
TGUH Tegucigalpa,Un 8.66 112 **Pn** **06 45 47.5 +1.4**
YUSH Yuscaran 9.08 112 P **Pn** **06 45 52.9 +1.0**
CJM Chamela 9.24 284 eP Pn 06 45 49.8 -4.0
CJM eS **Sn** **06 47 33.2 -3.4**
BOAB BOACO BROADBAN 9.78 116 Pn **Pn** **06 46 16.7 +1.7**
SIUN Universidad Ur 11.03 109 Pn **Pn** **06 46 20.5 +2.1**
833A Chaparral WMA, 11.33 342 **Pn** **06 46 24.0 +1.5**
HKT Hockley 12.38 359 **Pn** **06 46 38.0 +1.2**
HNDO Hondo 12.44 345 **Pn** **06 46 39.7 +2.0**
JTS Las Juntas de 12.53 124 P **Pn** **06 46 38.5 -0.4**
4.7nm,0.4s,baz=309,slow=17,SNR=6.1
JTS LR LR 06 51 57.4
comp=Z,252nm,21.1s,baz=293,slow=40
JTS Las Juntas de 12.53 124 **Pn** **06 46 40.3 +1.4**
DRIO Del Rio 12.74 339 **Pn** **06 46 43.2 +1.4**
HNVL Huntsville, TX 13.19 0 **Pn** **06 46 48.9 +1.1**
HPIG 13.26 317 **Pn** **06 46 50.1 +1.1**
435B Jarrell 13.34 352 **Pn** **06 46 50.7 +0.7**
441A DeRidder 13.35 9 **Pn** **06 46 51.0 +0.9**
JCT Junction City 13.48 344 **Pn** **06 46 54.2 +2.2**
SAND Sanderson 13.77 335 **Pn** **06 46 60.0 +4.1**
TXAR Lajitas Array 13.93 329 P **Pn** **06 47 00.4 +2.3**
5.5nm,1.3s,baz=150,slow=13,SNR=13
TXAR PcP **PcP** **06 52 18.2 -0.2**
0.7nm,0.8s,baz=199,slow=2.2,SNR=3.6
TXAR LR LR 06 53 05.1
comp=Z,92nm,19.5s,baz=130,slow=40
TXAR Lajitas Array 13.93 329 **Pn** **06 47 01.6 +3.5**
BRDY Brady 14.07 348 **Pn** **06 47 01.3 +1.4**
NATX Nacogdoches 14.21 3 **Pn** **06 47 00.8 -0.9**
TPB05 Hovey Rd 15.11 333 IAmb IAmb 06 47 21.5
comp=Z,29nm,1.4s
SGCY Sterling City 15.21 342 IAmb IAmb 06 47 23.4
comp=Z,19nm,0.8s
LPIG La Paz 15.29 298 LR LR 06 53 52.2
comp=Z,111nm,20.6s,baz=120,slow=39
TMB01 Midkiff 15.29 338 IAmb IAmb 06 47 23.5
comp=Z,24nm,1.5s
TPB01 Permian Basin 15.33 332 IAmb IAmb 06 47 24.0
comp=Z,39nm,1.3s
ABTX Abilene, Hawle 15.50 347 IAmb IAmb 06 47 25.0
comp=Z,19nm,0.6s
143A Socs Landing, 15.58 13 IAmb IAmb 06 47 20.8
comp=Z,36nm,1.0s
PECS Pecos 15.73 333 P **P** **06 47 24.8 -0.9**
VHRN Van Horn 15.77 329 IAmb IAmb 06 47 29.1
comp=Z,53nm,1.2s
Z35A Perchaven, San 15.83 355 IAmb IAmb 06 47 37.2
comp=Z,32nm,0.6s
ODSA Odessa 15.87 338 P **P** **06 47 26.2 -0.9**
129A Stewart Farms, 16.10 340 IAmb IAmb 06 47 31.5
comp=Z,32nm,0.5s
SN07 Snyder 07 16.25 344 IAmb IAmb 06 47 32.7
comp=Z,16nm,0.6s
128A Castleberry Fa 16.30 339 IAmb IAmb 06 47 35.0
comp=Z,9.4nm,0.6s
POST Post 16.39 342 P **Pn** **06 47 31.7 +1.2**
WTFS Witchita Falls 16.40 351 P **P** **06 47 33.0 +0.1**
WTFS IAmb IAmb 06 47 55.6
comp=Z,43nm,0.8s
250A Grady 16.66 28 IAmb IAmb 06 47 47.0
comp=Z,21nm,0.8s
352A Blakely 16.91 33 IAmb IAmb 06 47 44.7
comp=Z,50nm,1.1s
MIAR Mount Ida 17.05 6 IAmb IAmb 06 47 43.0
comp=Z,36nm,0.6s
X40A Basin Creek Fa 17.08 8 IAmb IAmb 06 47 56.4
comp=Z,18nm,0.7s
Y45A Yeager Farm, C 17.15 17 IAmb IAmb 06 47 45.5
comp=Z,38nm,0.8s
UALR University of 17.43 9 IAmb IAmb 06 48 15.2
comp=Z,29nm,0.9s
TIGA Tifton 17.60 36 IAmb IAmb 06 47 48.3
comp=Z,49nm,1.0s
W35A Tecumseh 17.61 356 IAmb IAmb 06 48 00.2
comp=Z,37nm,0.6s
OXF Oxford 17.79 17 IAmb IAmb 06 48 02.7
comp=Z,37nm,0.7s
SMWD Samnorwood 18.02 347 IAmb IAmb 06 47 53.1
comp=Z,22nm,0.7s
AMTX Amarillo 18.15 344 IAmb IAmb 06 47 53.7
comp=Z,18nm,0.6s
DEOK Depew 18.28 357 IAmb IAmb 06 47 58.2
comp=Z,31nm,0.6s
OK052 Battle Ridge R 18.44 357 IAmb IAmb 06 48 02.9
comp=Z,62nm,1.4s
FCAR Ozark Folk Cen 18.55 9 IAmb IAmb 06 48 03.4
comp=Z,36nm,0.8s
QUOK Quay 18.61 357 IAmb IAmb 06 48 05.5
comp=Z,32nm,0.6s
HHAR Hobbs 18.75 4 IAmb IAmb 06 48 15.6
comp=Z,26nm,1.0s
LCAR Lake Charles 18.89 11 IAmb IAmb 06 48 06.4
comp=Z,20nm,0.7s
OK051 E0350 and S346 18.95 357 IAmb IAmb 06 48 22.1
comp=Z,31nm,1.0s
Y52A Lilburn 19.26 30 IAmb IAmb 06 48 11.3
comp=Z,19nm,0.7s
Y22A Socorro 19.30 330 IAmb IAmb 06 48 07.8
comp=Z,25nm,0.8s
T35A Sooner Cattle 19.35 358 IAmb IAmb 06 48 13.0
comp=Z,43nm,0.9s
KAN08 Anthony NE Sta 19.76 354 IAmb IAmb 06 48 15.3
comp=Z,22nm,0.5s
WVT Waverly 19.76 19 P **P** **06 48 10.5 +0.6**
MGMO Mountain Grove 19.78 8 IAmb IAmb 06 48 31.6
comp=Z,18nm,0.7s
T42A Van Buren 19.83 11 IAmb IAmb 06 48 32.0
comp=Z,15nm,0.7s
RTBA Rita Blanca 19.90 343 P **P** **06 48 12.8 +1.2**
RTBA IAmb IAmb 06 48 13.8
comp=Z,35nm,0.8s
ANMO Albuquerque 19.91 333 P **P** **06 48 13.0 +1.2**
comp=Z,19nm,0.6s,baz=136,slow=11,SNR=122
ANMO Albuquerque 19.91 333 P **P** **06 48 12.7 +1.0**
ANMO IAmb IAmb 06 48 14.1
comp=Z,18nm,0.6s
TUC Tucson 20.17 320 P Pn 06 48 16.4 -0.2
TUC IAmb IAmb 06 48 19.8
comp=Z,39nm,1.3s
S39A Bolivar 20.20 5 IAmb IAmb 06 48 35.6
comp=Z,23nm,0.9s
HODGE Hodges 20.45 33 IAmb IAmb 06 48 48.1
comp=Z,25nm,1.3s
T47A Sharon Grove 20.78 19 P Pn 06 48 22.9 -0.5
T47A IAmb IAmb 06 48 31.4
comp=Z,21nm,0.7s
U49A Red Boiling Sp 20.80 23 P Pn 06 48 23.2 -0.5
U49A IAmb IAmb 06 48 30.8
comp=Z,18nm,0.5s
S44A Carbondale 20.85 14 IAmb IAmb 06 48 44.3
comp=Z,18nm,0.8s
TKL Tuckaleechee C 20.88 28 P **P** **06 48 21.8 -0.2**
comp=Z,2.6nm,0.7s,baz=168,slow=11,SNR=6.7
TKL LR LR 06 58 44.5
comp=Z,54nm,18.8s,baz=240,slow=43
comp=Z,2.6nm,0.7s
TKL Tuckaleechee C 20.88 28 IAmb IAmb 06 48 49.9
comp=Z,28nm,1.4s
SIUC Southern Illin 20.88 14 IAmb IAmb 06 48 45.1
comp=Z,40nm,1.3s
R32A Long Quarter, 21.02 353 IAmb IAmb 06 48 39.0
comp=Z,28nm,1.2s
T25A Trinidad 21.06 340 P **P** **06 48 25.9 +1.7**
T25A IAmb IAmb 06 48 27.0
comp=Z,18nm,0.9s
214A Organ Pipe Nat 21.24 316 IAmb IAmb 06 48 44.1
comp=Z,27nm,1.0s
KSU1 Kansas State U 21.53 358 IAmb IAmb 06 49 13.9
comp=Z,18nm,0.7s
CBKS Cedar Bluff 21.54 351 P **P** **06 48 29.9 +0.8**
CBKS IAmb IAmb 06 48 46.2
comp=Z,25nm,1.0s
P40A Paris 22.15 7 IAmb IAmb 06 48 55.5
comp=Z,39nm,1.4s
WCI Wyandotte Cave 22.17 20 P **P** **06 48 37.8 +1.9**
WCI IAmb IAmb 06 48 44.7
comp=Z,28nm,1.2s
Y14A Wickenburg 22.64 320 IAmb IAmb 06 48 58.8
comp=Z,30nm,1.3s
WUAZ Wupatki 22.80 325 IAmb IAmb 06 48 46.8
comp=Z,18nm,0.8s
GLA Glamis 23.26 315 P **P** **06 48 49.1 +1.8**
GLA IAmb IAmb 06 48 50.2
comp=Z,17nm,0.7s
PV01 Paradox Valley 23.51 334 IAmb IAmb 06 48 53.9
comp=Z,16nm,1.0s
P48A Milroy 23.57 20 IAmb IAmb 06 49 05.1
comp=Z,26nm,1.2s
PV02 Paradox Valley 23.64 333 IAmb IAmb 06 49 10.2
comp=Z,16nm,0.9s
PV18 Skein Mesa, Pa 23.75 333 IAmb IAmb 06 49 10.4
comp=Z,17nm,1.0s
PV11 David Mesa, Pa 23.78 333 IAmb IAmb 06 48 57.9
comp=Z,10nm,0.7s
PV07 Paradox Valley 23.80 334 IAmb IAmb 06 48 56.6
comp=Z,18nm,1.0s
PV16 Nyswonger Mesa 23.80 333 IAmb IAmb 06 48 56.3
comp=Z,30nm,1.5s
PV19 Morning Glory 23.83 333 IAmb IAmb 06 49 11.7
comp=Z,12nm,0.9s
PV20 West Nyswonger 23.85 333 IAmb IAmb 06 49 00.4
comp=Z,12nm,0.8s
PV04 Paradox Valley 23.87 333 IAmb IAmb 06 48 57.0
comp=Z,24nm,0.9s
PV10 Paradox Valley 23.91 333 IAmb IAmb 06 49 21.2
comp=Z,16nm,1.0s
PV22 Blue Mesa, Par 23.94 334 IAmb IAmb 06 48 57.7
comp=Z,15nm,0.9s
W13A Hualapai Mount 23.96 321 IAmb IAmb 06 49 13.3
comp=Z,16nm,1.3s
U15A North Rim 23.97 325 IAmb IAmb 06 49 19.8
comp=Z,21nm,1.2s
OTAV Otavalo 24.03 134 P **P** **06 48 55.3 +0.1**
BC3 Big Chuckawall 24.04 316 **P** **06 48 55.7 +0.9**
BC3 IAmb IAmb 06 48 58.4
comp=Z,17nm,0.9s
IRM Iron Mountain 24.14 317 IAmb IAmb 06 48 58.8
comp=Z,12nm,0.9s
ROSC El Rosal 24.29 119 LR LR 06 58 11.1
comp=Z,217nm,20.4s,baz=45,slow=36
DANC Danby, Needles 24.59 318 IAmb IAmb 06 49 19.4
comp=Z,19nm,1.2s
PFO Pinyon Flats O 24.69 314 LR LR 06 59 35.3
comp=Z,263nm,18.4s,baz=142,slow=38
KNB Kanab 24.70 325 IAmb IAmb 06 49 20.5
comp=Z,20nm,1.0s
PKCU Pink Cliffs 24.74 327 IAmb IAmb 06 49 21.5
comp=Z,14nm,1.1s
L40A Anamosa 24.75 8 IAmb IAmb 06 49 33.5
comp=Z,20nm,1.1s
V12A Nelson 24.96 320 IAmb IAmb 06 49 06.1
comp=Z,17nm,1.1s
O20A White River Ci 25.09 337 IAmb IAmb 06 49 09.3
comp=Z,14nm,1.0s
MTPU Mount Pierson 25.13 328 IAmb IAmb 06 49 24.5
comp=Z,18nm,1.1s
SDV Santo Domingo 25.69 106 LR LR 07 00 14.8
comp=Z,145nm,21.1s,baz=323,slow=39
JFWS Jewell Farm 25.72 9 IAmb IAmb 06 49 27.6
comp=Z,14nm,0.7s
ECSD EROS Data Cent 26.16 358 IAmb IAmb 06 49 44.1
comp=Z,28nm,1.5s
K22A Casper 26.75 342 IAmb IAmb 06 49 21.2
comp=Z,16nm,1.1s
RSSD Black Hills 27.48 347 **P** **06 49 26.4 +0.4**
PDAR Pinedale Array 27.86 338 P **P** **06 49 29.8 +0.3**
comp=Z,0.7nm,0.6s,baz=136,slow=11,SNR=11
PDAR LR LR 07 02 33.5
comp=Z,38nm,20.9s,baz=148,slow=40
comp=Z,0.7nm,0.6s
SJG San Juan 27.97 84 LR LR 07 00 20.2
comp=Z,113nm,21.2s,baz=274,slow=36
NVAR Mina Array Bea 28.82 321 P **P** **06 49 40.2 +2.2**
comp=Z,5.2nm,0.8s,baz=136,slow=9.5,SNR=42
NVAR PcP **PcP** **06 52 46.1 -1.1**
comp=Z,0.3nm,0.7s,baz=100,slow=1.9,SNR=3.7
NVAR LR LR 07 03 22.4
comp=Z,136nm,19.4s,baz=150,slow=41
comp=Z,5.2nm,0.8s
ATAH Atahualpa 29.77 144 LR LR 06 59 54.9
comp=Z,58nm,20.3s,baz=328,slow=33
SADO Sadowa 30.46 23 LR LR 07 04 33.9
comp=Z,51nm,18.2s,baz=230,slow=41
J08A Circle Bar Ran 32.27 328 IAmb IAmb 06 50 11.3
comp=Z,5.6nm,0.8s
PLID Pearl Lake 32.39 332 IAmb IAmb 06 50 11.3
comp=Z,2.2nm,1.1s
ULM Lac du Bonnet 32.66 360 P **P** **06 50 10.7 -0.8**
comp=Z,2.9nm,0.7s,baz=154,slow=8.7,SNR=7.4
ULM LR LR 07 06 12.6
comp=Z,35nm,19.4s,baz=186,slow=41
comp=Z,2.9nm,0.7s
YBH Yreka Blue Hor 33.52 322 LR LR 07 05 48.7
comp=Z,7.2nm,19.8s,baz=132,slow=39
NEW Newport 35.38 335 IAmb IAmb 06 50 37.0
comp=Z,3.6nm,0.8s
FFC Flin Flon 37.47 354 **P** **06 50 52.4 -0.5**
FFC IAmb IAmb 06 50 53.3
comp=Z,4.7nm,0.7s
LPAZ La Paz 43.09 140 P **P** **06 51 39.8 -0.8**
comp=Z,1.4nm,0.6s,baz=240,slow=21,SNR=6.5
comp=Z,1.4nm,0.6s
LPAZ La Paz 43.09 140 P **P** **06 51 39.9 -0.7**
SCHQ Schefferville 43.26 24 P **P** **06 51 39.6 -1.2**
comp=Z,3.9nm,0.9s,baz=206,slow=6.8,SNR=4.7
SCHQ LR LR 07 13 45.4
comp=Z,102nm,18.4s,baz=218,slow=42
comp=Z,3.9nm,0.9s
SCHQ Schefferville 43.26 24 IAmb IAmb 06 52 09.2
comp=Z,12nm,1.3s
PB16 IPOC Station P 43.87 143 **P** **06 51 45.9 -0.9**
PB16 IAmb IAmb 06 51 56.2
comp=Z,9.1nm,1.3s
V35K Ketchikan 46.67 332 P **P** **06 52 09.3 +1.4**
baz=129
BLKN Baker Lake 46.77 360 IAmb IAmb 06 52 26.5
comp=Z,7.0nm,1.1s
YKAW1 Yellowknife Wh 46.84 348 IAmb IAmb 06 52 09.6
comp=Z,8.4nm,1.1s
YKA Yellowknife Ar 46.87 348 P **P** **06 52 08.2 -1.1**
comp=Z,0.8nm,0.4s,baz=158,slow=6.8,SNR=20
YKA PcP **PcP** **06 53 39.4 -2.2**
comp=Z,0.8nm,0.9s,baz=149,slow=3.9,SNR=3.6
comp=Z,0.8nm,0.4s
YKAW3 Yellowknife Wh 46.94 348 IAmb IAmb 06 52 10.4
comp=Z,6.3nm,1.1s
T35M Bob Quinn 47.18 335 P **P** **06 52 13.3 +1.4**
baz=132
KOTAN Kotaneelee Air 47.27 341 P **P** **06 52 13.3 +0.8**
baz=142
CRAG Craig 47.44 332 P **P** **06 52 15.2 +1.4**
baz=128
WRAK Wrangell Islan 47.69 333 P **P** **06 52 17.1 +1.4**
baz=129
U33K Whale Pass 47.83 333 P **P** **06 52 18.4 +1.5**
baz=128
DLBC Dease Lake 48.08 336 P **P** **06 52 20.7 +1.8**
baz=133
PTLB Pontes e Lacer 48.58 130 **P** **06 52 22.2 -1.0**
PTLB IAmb IAmb 06 52 34.8
comp=Z,7.8nm,1.1s
WTLY Watson Lake, Y 48.82 339 P **P** **06 52 25.9 +1.4**
baz=136
R33M Jennings River 49.10 337 P **P** **06 52 28.3 +1.5**
baz=133
Q32M Nakina River 49.30 336 P **P** **06 52 29.7 +1.3**
baz=131
FRB Frobisher Bay 49.76 15 LR LR 07 17 19.5
comp=Z,41nm,20.4s,baz=232,slow=41
P32M Atlin 50.28 336 P **P** **06 52 37.0 +1.4**
baz=130
P33M Teslin, Yukon 50.34 337 P **P** **06 52 37.7 +1.5**
baz=131
N32M Quiet Lake 51.06 338 P **P** **06 52 42.9 +1.4**
baz=132
TAOE Nuku Hiva Isla 51.28 243 eLR LR 07 07 19.1
comp=Z,139nm,25.4s
P30M Million Dollar 51.89 335 P **P** **06 52 49.0 +1.2**
baz=127
O30N Mendenhall 51.95 336 P **P** **06 52 49.5 +1.4**
baz=128
M31M Drury Creek, Y 52.23 338 P **P** **06 52 51.6 +1.4**
baz=131
N31M Braeburn, Yuko 52.27 337 P **P** **06 52 51.6 +1.0**

baz=129
HYT Haines Junctio 52.53 336 P P 06 52 53.7 +1.1
baz=126
ILON Igloolik, Nuna 52.54 6 P 06 52 51.9 -0.5
ILON IAmb IAmb 06 52 52.8
comp=Z,6.0nm,1.1s
N30M Aishikik Lake 52.75 336 P P 06 52 55.3 +1.1
baz=127
YUK6 Outpost Mounta 52.94 335 P P 06 52 56.8 +1.0
baz=126
M30M Minto, Yukon 53.33 338 P P 06 52 59.7 +1.4
baz=128
O28M Mount Upton 53.58 335 P P 06 53 01.6 +1.0
baz=124
YUK8 Steele Glacier 53.69 335 P P 06 53 02.3 +1.0
baz=124
M29M Somme Creek 53.86 337 P P 06 53 03.5 +1.2
baz=126
MESA MESA 54.00 333 P P 06 53 04.3 +0.8
baz=121
L29M L29M 54.14 338 P P 06 53 05.4 +1.1
baz=127
CTG Chitna Glacier 54.16 334 P P 06 53 05.7 +1.2
baz=122
YUK3 Moose Creek 54.25 336 P P 06 53 06.3 +1.0
baz=124
K29M Barlow Dome 54.38 339 P P 06 53 07.2 +1.1
baz=128
J30M Hart River 54.44 340 P P 06 53 07.1 +0.6
baz=130
C36M Paulatuk 54.76 348 P P 06 53 09.6 +1.0
baz=146
BVCY Beaver Creek 54.76 336 P P 06 53 09.8 +1.0
baz=124
CRQE Cirque 54.78 334 P P 06 53 09.6 +0.6
baz=120
I30M Mount Dempster 54.87 340 P P 06 53 10.4 +0.7
baz=130
KAIM Kayak Island 54.94 332 P P 06 53 10.9 +0.8
baz=119
J29N Klondike Camp 54.99 339 P P 06 53 11.3 +0.8
baz=128
MCARA McCarthy VSAT 55.07 334 P P 06 53 12.3 +1.2
baz=121
DAWY Dawson 55.17 338 P P 06 53 12.2 +0.5
baz=126
G31M Satah River 55.37 343 P P 06 53 13.1 +0.1
baz=134,SNR=9.5
L27K Beaver Creek, 55.49 336 P P 06 53 14.7 +0.7
baz=123
BMRM Bremner River 55.53 333 P P 06 53 14.5 +0.2
baz=119
F31M Tsiigehtchic 55.58 343 P P 06 53 14.7 +0.1
baz=134,SNR=5.1
Q23K Middleton Isla 55.58 331 P P 06 53 15.3 +0.7
baz=116
I29M Ogilvie Camp, 55.59 340 P P 06 53 14.9 +0.2
baz=128
M26K Nabesna, AK 55.59 335 P P 06 53 15.3 +0.5
baz=122
EPYK Eagle Plains 55.72 341 P P 06 53 16.1 +0.4
baz=130
EYAK Cordova Ski Ar 55.82 333 P P 06 53 16.7 +0.3
baz=118
N25K Chitina, Valde 55.84 334 P P 06 53 17.2 +0.6
baz=119
G30M tAoh Zraii Nji 55.98 342 P P 06 53 18.4 +0.9
baz=131
L26K Log Cabin Wild 56.06 336 P P 06 53 18.9 +0.8
baz=122
INK Inuvik 56.13 344 LR LR 07 21 49.4
comp=Z,90nm,18.4s,baz=303,slow=41
INK Inuvik 56.13 344 P P 06 53 18.6 +0.2
baz=135,SNR=18
I28M Miner Creek 56.18 339 P P 06 53 19.5 +0.5
baz=126
F30M Barrier River 56.27 343 P P 06 53 20.1 +0.5
baz=132
P23K Montague Islan 56.31 332 P P 06 53 20.9 +1.0
baz=116
KLU Klutina 56.34 334 P P 06 53 20.9 +0.7
baz=118
GLI Glacier Island 56.56 333 P P 06 53 22.7 +1.0
baz=116
M24K Tolsona, Glenn 56.73 334 P P 06 53 23.5 +0.5
baz=118
SCRK Sand Creek 56.80 337 P P 06 53 24.3 +0.8
baz=121
I27K Kandik River 56.84 339 P P 06 53 24.6 +0.9
baz=125
PAX Paxson 56.86 335 P P 06 53 24.7 +0.8
baz=119,SNR=5.2
RIDG Independent Ri 57.00 336 P P 06 53 25.3 +0.5
baz=120
SCM Sheep Creek Mo 57.09 334 P P 06 53 26.5 +1.0
baz=117
H27K Steamboat Moun 57.17 340 P P 06 53 27.0 +1.0
baz=125
A36M Sachs Harbour 57.17 349 P 06 53 24.7 -1.1
A36M Sachs Harbour 57.17 349 P P 06 53 26.3 +0.5
baz=146,SNR=9.5
I26K Coal Creek Min 57.21 338 P P 06 53 26.9 +0.7
baz=123
M23K Glacier View 57.24 333 P P 06 53 27.0 +0.4
baz=116
SFJD Kangerlussuaq 57.27 19 LR LR 07 21 19.4
comp=Z,80nm,18.8s,baz=226,slow=39
E29M Blow River 57.38 343 P P 06 53 28.3 +0.9
baz=130
KNK Knik Glacier 57.39 333 P P 06 53 28.2 +0.6
baz=115
K24K Donnelly Dome 57.39 336 P P 06 53 28.1 +0.5
baz=120
F28M Old Crow 57.47 341 P P 06 53 28.6 +0.6
baz=128,SNR=14
SML Sawmill 57.51 333 P P 06 53 29.2 +0.8
baz=116
WAT6 Susitna Watana 57.60 334 P P 06 53 30.1 +0.8
baz=117
J25K Salcha River, 57.64 337 P P 06 53 30.2 +0.8
baz=120
BRSE Bradley Lake S 57.75 331 P P 06 53 30.9 +0.8
baz=112
PMR Palmer 57.76 333 P P 06 53 30.8 +0.8
baz=115
RC01 Rabbit Creek A 57.82 332 P P 06 53 31.3 +0.8
baz=114
WAT1 Susitna Watana 58.05 334 P P 06 53 32.8 +0.6
baz=116
HDA Harding Lake 58.14 336 P P 06 53 33.4 +0.7
baz=119
Q20K Shuyak Island 58.14 329 P P 06 53 33.5 +0.7
baz=110
PRP Porcupine Dome 58.16 338 P 06 53 33.7 +0.7
PRP IAmb IAmb 06 53 34.5
comp=Z,4.8nm,0.8s
PRP Porcupine Dome 58.16 338 P P 06 53 33.5 +0.4
baz=121
D28M Stokes Point 58.23 343 P P 06 53 33.8 +0.6
baz=130
M22K Willow 58.26 333 P P 06 53 34.5 +0.9
baz=114
IL31 58.29 337 P P 06 53 34.0 +0.3
IL31 IAmb IAmb 06 53 35.7
comp=Z,6.0nm,0.9s
ILAR Eielson Array 58.29 337 P P 06 53 34.1 +0.3
comp=Z,4.0nm,0.9s,baz=127,slow=5.4,SNR=37
ILAR PcP PcP 06 54 23.6 -1.1
comp=Z,0.7nm,0.7s,baz=160,slow=2.1,SNR=6.0
comp=Z,4.0nm,0.9s
G26K Porcupine Rive 58.32 340 P P 06 53 34.2 +0.3
baz=123,SNR=6.4
E27K Coleen River 58.34 342 P P 06 53 34.7 +0.5
baz=126,SNR=12
SII Sitkinak Islan 58.41 326 P P 06 53 35.2 +0.4
baz=107
CUT Chulitna 58.59 334 P P 06 53 36.4 +0.6
baz=114
MCK McKinley 58.60 335 P P 06 53 36.5 +0.5
baz=116
POKR Poker Plat Res 58.66 337 P P 06 53 36.7 +0.3
baz=118
COLA College 58.70 337 P P 06 53 36.6 0.0
baz=118
D27M Malcolm River 58.79 343 P P 06 53 37.4 +0.1
baz=127
BMAR Burnt Mountain 58.85 340 P 06 53 38.3 +0.6
F26K Sheenjek River 58.85 340 P P 06 53 38.3 +0.6
baz=123
Q19K Cape Douglas, 58.86 329 P P 06 53 38.1 +0.2
baz=109
P19K Oil Pt 58.90 330 P P 06 53 38.5 +0.4
baz=110
SKT Skwentna 58.96 333 P P 06 53 39.1 +0.6
baz=113
N20K Mount Spurr 58.97 332 P P 06 53 39.0 +0.3
baz=112
SPCR Spurr Chakacha 58.97 332 P P 06 53 39.2 +0.6
baz=112
CHIR Chirikof Islan 58.97 325 P P 06 53 39.2 +0.5
baz=105
TRF Thorofare Moun 59.03 335 P P 06 53 39.7 +0.6
baz=115,SNR=7.6
NEA2 Nenana 59.04 336 P P 06 53 39.8 +0.8
baz=116
H24K Noodor Dome 59.17 338 P P 06 53 40.4 +0.4
baz=118,SNR=8.0
F25K Christian Rive 59.28 340 P P 06 53 41.6 +0.9
baz=122,SNR=7.7
I23K Minto, Yukon-K 59.40 337 P P 06 53 41.9 +0.4
baz=116,SNR=11
G24K Hadweenzic Riv 59.44 339 P P 06 53 42.4 +0.6
baz=119
NUUG Nuugaatsiaq 59.45 14 i P P 06 53 42.5 +0.8
NUUG IAmb IAmb 06 53 43.0
comp=Z,6.6nm,0.6s
E25K Arctic Village 59.53 341 IAmb IAmb 06 53 44.2
comp=Z,6.3nm,1.0s
E25K Arctic Village 59.53 341 P P 06 53 43.1 +0.7
baz=122
BPAW Bear Paw Mtn. 59.58 335 P P 06 53 43.2 +0.4
baz=114,SNR=6.2
O19K Port Alsworth 59.59 330 P P 06 53 43.2 +0.4
baz=119
PPLA Purkeypile 59.59 334 P P 06 53 43.5 +0.4
baz=112
M20K Styx River 59.63 332 P P 06 53 44.0 +0.7
baz=111
Q17K Contact Creek 59.78 328 P P 06 53 44.8 +0.5
baz=106
P18K Big Mountain, 59.78 329 P P 06 53 44.8 +0.6
baz=108
C27K Jago River 59.80 342 P P 06 53 44.8 +0.6
baz=125
MLY Manley 59.87 336 P 06 53 45.5 +0.6
MLY Manley 59.87 336 P P 06 53 45.2 +0.4
baz=115,SNR=13
N19K Bonanza Creek 59.87 331 P 06 53 45.6 +0.6
N19K Bonanza Creek 59.87 331 P P 06 53 45.5 +0.6
baz=109
O18K Koktuh Hills 59.91 330 P P 06 53 45.5 +0.4
baz=108
CHUM Lake Minchumin 60.03 335 P P 06 53 46.3 +0.5
baz=113
C26K Camden Bay 60.31 342 P P 06 53 48.8 +1.1
baz=124
P17K Kvichak River 60.32 329 P P 06 53 48.5 +0.7
baz=106
G23K Bananza Creek 60.34 338 P 06 53 48.5 +0.5
G23K IAmb IAmb 06 53 49.4
comp=Z,6.2nm,0.9s
G23K Bananza Creek 60.34 338 P P 06 53 48.9 +0.8
baz=117,SNR=6.8
D25K Kavik River 60.42 342 P P 06 53 49.2 +0.6
baz=122
E24K Your Creek 60.46 340 P P 06 53 49.6 +0.8
baz=119
H22K Ishtalitna Cre 60.48 337 P P 06 53 48.9 0.0
baz=115
N18K Kilae Creek 60.49 331 P P 06 53 49.3 +0.3
baz=108
L19K White Mountain 60.49 332 P P 06 53 49.3 +0.2
baz=109
K20K Telida 60.56 334 P 06 53 49.7 +0.2
K20K Telida 60.56 334 P P 06 53 49.4 -0.1
baz=111,SNR=6.5
CHGN Chignik 60.61 325 P P 06 53 50.2 +0.3
baz=103
TULEG Thule 60.63 7 i P P 06 53 49.4 -0.4
TULEG IAmb IAmb 06 53 50.2
comp=Z,4.5nm,0.9s
COLD Coldfoot 60.64 339 IAmb IAmb 06 53 51.9
comp=Z,3.7nm,1.0s
COLD Coldfoot 60.64 339 P P 06 53 50.8 +0.8
baz=117,SNR=5.7
M18K Stony River 60.70 331 P P 06 53 50.8 +0.3
baz=108
KULLO Kullorsuaq 60.76 11 i P P 06 53 50.1 -0.5
KULLO IAmb IAmb 06 53 50.9
comp=Z,7.4nm,0.7s
O17K Koliganek Bris 60.80 329 P P 06 53 51.6 +0.4
baz=106
E23K Chandalar 60.82 340 P P 06 53 52.0 +0.6
baz=118,SNR=9.2
H21K Melozitna Rive 60.92 336 P P 06 53 52.7 +0.8
baz=113,SNR=5.4
P16K Nushagak River 61.04 328 P P 06 53 53.6 +0.8
baz=105
N17K Nushagak Hills 61.05 330 P P 06 53 53.9 +1.0
baz=106
TOLK Toolik Lake Re 61.08 340 P P 06 53 53.4 +0.4
baz=118
D24K Happy Valley 61.09 341 P P 06 53 53.5 +0.5
baz=119
O16K Kokwok River B 61.24 329 P P 06 53 54.8 +0.6
baz=105
L18K Granite Mounta 61.32 332 P P 06 53 55.1 +0.5
baz=108
C24K Franklin Bluff 61.33 341 P P 06 53 55.1 +0.5
baz=120,SNR=8.0
M17K Holitna River 61.42 331 P P 06 53 55.6 +0.2
baz=106
J19K Poorman 61.43 334 P P 06 53 55.7 +0.4
baz=110
G21K Allakaket 61.52 337 P 06 53 56.3 +0.3
G21K IAmb IAmb 06 53 57.1
comp=Z,3.6nm,0.9s
G21K Allakaket 61.52 337 P P 06 53 56.6 +0.6
baz=113
SDPT Sand Point 61.55 324 P P 06 53 56.8 +0.5
baz=100
D23K Nanushuk River 61.59 340 P P 06 53 57.1 +0.7
baz=117
E22K Anaktuvuk Pass 61.59 339 P P 06 53 57.1 +0.6
baz=116,SNR=11
H20K Anotleneega Mo 61.66 336 P P 06 53 57.6 +0.7
baz=111
J18K Innoko River 61.72 333 P P 06 53 57.9 +0.6
baz=108
N16K Nishlik Lake 61.79 330 P P 06 53 58.5 +0.6
baz=105
F21K Alatna River 61.79 338 P P 06 53 58.7 +0.9
baz=113
C23K Itkillik River 61.97 341 P P 06 53 59.8 +0.9
baz=118,SNR=9.9
O15K Ungalikthiuk R 62.00 328 P P 06 53 59.1 -0.2
baz=103
L17K Donlin 62.02 332 P P 06 53 59.9 +0.5
baz=106
M16K Timber Creek 62.02 330 P P 06 53 59.7 +0.3
baz=105
K17K Iditarod 62.18 332 P P 06 54 00.5 +0.1
baz=106
GCSA Galena City Sc 62.20 335 P P 06 54 00.5 +0.1
baz=109
N15K Kwethluk River 62.36 329 P P 06 54 01.9 +0.2
baz=103
PLCA Paso Flores 62.43 159 P P 06 54 01.9 -0.5
comp=Z,3.9nm,1.0s,baz=313,slow=7.3,SNR=8.6
comp=Z,3.9nm,1.0s
L16K Owhat River 62.44 331 P P 06 54 02.5 +0.3
baz=105
E21K Killik River 62.45 339 P P 06 54 02.5 +0.2
baz=114
F20K Avaraart Lake 62.54 337 IAmb IAmb 06 54 04.3
comp=Z,6.7nm,1.1s
F20K Avaraart Lake 62.54 337 P P 06 54 03.3 +0.6
baz=111,SNR=7.8
G19K Purcell Mounta 62.74 336 P P 06 54 04.5 +0.4
baz=109
M15K Kasigluk River 62.77 330 P P 06 54 04.8 +0.4
baz=103
H18K Honhosa River 62.92 335 P P 06 54 05.6 +0.2
baz=108
C21K Knifeblade Rid 63.01 340 P P 06 54 06.4 +0.5
baz=113
B22K Teshekpuk Lake 63.06 341 P P 06 54 06.7 +0.5
baz=115
N14K Kuskokwak Cree 63.08 329 P P 06 54 06.5 +0.1
baz=102
B21K Ikpikpuk River 63.13 340 P P 06 54 07.6 +0.9
baz=113
E20K Nigu River 63.14 339 P P 06 54 07.6 +0.8
baz=111
F19K Shaleruckik Mo 63.22 337 IAmb IAmb 06 54 08.7
comp=Z,5.5nm,1.0s
F19K Shaleruckik Mo 63.22 337 P P 06 54 07.6 +0.3
baz=109
E19K Redstone River 63.23 338 IAmb IAmb 06 54 08.6
comp=Z,4.6nm,0.9s
E19K Redstone River 63.23 338 P P 06 54 07.9 +0.5
baz=110
G18K Tagagawik 63.26 336 P P 06 54 08.4 +0.7
baz=108
J16K Anvik River 63.35 333 P P 06 54 09.0 +0.8
baz=104
L15K Ungalak Mounta 63.37 331 P P 06 54 08.7 +0.4
baz=103
M14K Bethel 63.39 330 P P 06 54 09.0 +0.5
baz=102,SNR=7.5
D20K Etivluk River 63.45 339 P P 06 54 09.2 +0.3
baz=111
H17K Granite Mounta 63.49 335 P P 06 54 09.9 +0.7
baz=106
K15K Wolf Creek Mou 63.52 332 P P 06 54 10.1 +0.7
baz=103
I17K Unalakleet 63.54 333 P P 06 54 10.6 +1.1
baz=105
PPT Papeete 63.59 240 LR LR 07 13 43.6
comp=Z,80nm,21.2s,baz=51,slow=28
PPT2 Papeete2 63.60 240 eLR LR 07 13 00.0
comp=Z,112nm,26.2s
PPT2 eLR LR 07 13 10.0
comp=Z,68nm,24.2s
A22K Sinclair Lake 63.80 342 P P 06 54 12.0 +0.9
baz=114
SUMG Summit 63.80 16 i P P 06 54 11.3 -0.2
NEEM North Greenlan 63.84 10 i P P 06 54 11.3 -0.3
NEEM IAmb IAmb 06 54 12.1
comp=Z,15nm,0.9s
L14K Kuka Creek 63.85 330 P P 06 54 12.1 +0.5
baz=102
F18K Selawik 63.86 336 P P 06 54 12.0 +0.5
baz=107
D19K Kuna River 63.89 339 P P 06 54 12.5 +0.7
baz=109,SNR=5.1
G17K Kiwalik Mounta 63.94 335 P P 06 54 13.0 +0.9
baz=106
M13K Dall Lake 63.99 329 P P 06 54 13.3 +0.9
baz=100
B20K Meade River 64.10 340 P P 06 54 13.7 +0.7
baz=111,SNR=6.4
H16K Elim 64.38 334 P P 06 54 15.8 +0.8
baz=104
A21K Barrow 64.42 342 P P 06 54 15.6 +0.5
baz=112,SNR=5.7
F17K Baldwin Pennin 64.43 336 P P 06 54 15.5 +0.2
baz=105
E18K Tukpahlearik C 64.46 337 P P 06 54 15.9 +0.5
baz=111
J14K Nanvaranak Lak 64.54 332 P P 06 54 16.7 +0.7
baz=102
C19K Lookout Ridge 64.60 339 P P 06 54 17.2 +0.8
baz=108
G16K Koyuk River 64.61 335 P P 06 54 16.8 +0.4
baz=104
E17K Hotham Inlet 64.82 337 P P 06 54 18.2 +0.4
baz=105,SNR=14
UNV Unalaska Valle 64.83 322 P P 06 54 18.3 +0.2
baz=95
K13K Kusilvak Mount 64.89 331 P P 06 54 18.6 +0.3
baz=100
C18K Utukok River 65.02 338 P P 06 54 19.7 +0.5
baz=106
G15K Niukluk 65.21 334 P P 06 54 21.2 +0.9
baz=102
M11K Mekoryuk 65.39 329 P P 06 54 22.3 +0.8
baz=98
A19K Wainwright 65.43 340 P P 06 54 22.3 +0.7
baz=107,SNR=7.7
D17K Noatak River 65.45 337 P P 06 54 22.4 +0.6
baz=104
RDOG Red Dog Mine 65.47 338 P P 06 54 22.4 +0.3
baz=104
F15K North Star Dit 65.61 335 IAmb IAmb 06 54 24.8
comp=Z,8.2nm,1.1s
F15K North Star Dit 65.61 335 P P 06 54 23.7 +0.8
baz=102
C17K DeLong Mountai 65.67 338 P P 06 54 23.9 +0.5
baz=104
ANM Nome 65.68 334 IAmb IAmb 06 54 25.0
comp=Z,11nm,1.5s
ANM Nome 65.68 334 P P 06 54 24.1 +0.6
baz=101
F14K Arctic Creek 66.25 334 P P 06 54 28.2 +1.1
baz=100,SNR=6.3
C16K Lisburne Hills 66.41 338 P P 06 54 28.7 +0.7
baz=102
TBI Tubuai 66.52 234 eLR LR 07 14 34.2
comp=Z,527nm,26.5s
TBI eLR LR 07 14 34.8
comp=Z,937nm,28.5s
TNA Tin City 66.92 334 IAmb IAmb 06 54 32.8
comp=Z,5.7nm,1.1s
TNA Tin City 66.92 334 P P 06 54 32.2 +0.9
baz=99
SPIA Saint Paul Isl 67.18 325 P P 06 54 34.1 +1.0
baz=93
BORG Borgarnes 67.57 27 LR LR 07 25 06.7
comp=Z,54nm,18.6s,baz=323,slow=37
GAMB Gambell 68.33 332 P P 06 54 41.3 +1.1
baz=94
DAG Danmarks Havn 70.07 14 i P P 06 54 50.1 -0.7
DAG IAmb IAmb 06 54 50.6
comp=Z,5.2nm,0.8s
NOR Nord 71.16 9 i P P 06 54 57.0 -0.4
NOR IAmb IAmb 06 54 57.9
comp=Z,2.7nm,0.6s
EKA Eskdalemuir Ar 77.12 36 P P 06 55 31.2 -1.4
comp=Z,1.6nm,0.7s,baz=256,slow=3.4,SNR=4.8
comp=Z,1.6nm,0.7s
SPITS Spitsbergen Ar 77.33 11 P P 06 55 32.5 -1.0
comp=Z,1.1nm,0.5s,baz=282,slow=1.3,SNR=5.9
SPITS LR LR 07 32 37.1
comp=Z,45nm,18.1s,baz=272,slow=38
comp=Z,1.1nm,0.5s
ESDC Sonseca Array 80.21 52 P P 06 55 49.2 -0.8
comp=Z,0.4nm,0.6s,baz=287,slow=4.4,SNR=2.9
ESDC LR LR 07 27 44.5
comp=Z,74nm,19.0s,baz=269,slow=33
comp=Z,0.4nm,0.6s
AFI Afiamalu 81.44 253 LR LR 07 24 03.3
comp=Z,25nm,20.2s,baz=78,slow=30
MDT Midelt 81.47 58 LR LR 07 29 04.6
comp=Z,63nm,18.2s,baz=266,slow=34
ARCES ARCESS Array B 83.86 18 P P 06 56 07.8 -0.8
comp=Z,5.6nm,0.9s,baz=294,slow=6.0,SNR=6.2
comp=Z,5.6nm,0.9s
ARCES ARCESS Array B 83.86 18 IAmb IAmb 06 56 22.3
comp=Z,9.4nm,1.1s
PETK Petropavlovsk- 85.83 325 P P 06 56 20.2 +1.5
comp=Z,1.9nm,0.6s,baz=91,slow=8.9,SNR=1.5
comp=Z,1.9nm,0.6s
DAVOX Davos/Dischmat 87.54 42 LR LR 07 35 27.1
comp=Z,47nm,18.1s,baz=292,slow=36
FINES FINESS Array B 88.74 24 P P 06 56 32.4 -0.2
comp=Z,2.8nm,0.9s,baz=200,slow=7.3,SNR=1.9
comp=Z,2.8nm,0.9s
MSVF Nonsavu 91.93 252 LR LR 07 28 32.3
comp=Z,34nm,19.6s,baz=29,slow=29
DZM Mont Dzumac 103.61 251 eLR LR 07 31 49.8
comp=Z,75nm,24.4s
MKAR Makanchi Array 115.97 2 PKP PKiKP 07 02 19.7 -2.4
comp=Z,0.1nm,0.6s,baz=270,slow=1.4,SNR=2.1
HHC Hu-ho-hao-te 116.72 337 eP PKiKP 07 02 24.9 +1.0
NJ2 Nanjing 120.71 326 eP PKiKP 07 02 33.3 +1.6
NJ2 pmax pmax
comp=Z,22nm,0.7s
LZH Lanzhou 123.62 341 eP PKiKP 07 02 40.2 +2.6
LZH pP pPKPdf 07 02 47.9 -1.7
LZH pmax pmax
comp=Z,13nm,0.7s
STKA Stephens Creek 126.71 243 PKP PKPdf 07 02 42.0 -1.0
comp=Z,2.5nm,0.7s,baz=157,slow=0.8,SNR=6.3

WRA Warramunga Arr 132.84 259 PKP **PKPdf 07 02 54.4 -0.6**
comp=Z,0.8nm,0.4s,baz=87,slow=2.7,SNR=15
PZH PanZhiHua 133.14 339 PKP **PKPdf 07 02 56.9 +1.2**
ASAR Alice Springs 133.50 254 PKP **PKPdf 07 02 55.6 -0.6**
comp=Z,0.6nm,0.7s,baz=74,slow=2.0,SNR=7.2

IDC ***11*** *07:06:52.5±0.6,43.°01N×80.°29E,h0km,mb4.1/14, mbtmp4.1/20,ML3.6/7,MS3.2/12,Error ellipse: s-maj=11.2km s-min=9.7km az=95.0*
MOS ***11*** *07:06:54.1±1.5,43.°16N×80.°48E,h14km,mb4.4/6,Error ellipse: s-maj=5.7km s-min=5.1km az=156.5*
NEIC ***11*** *07:06:55.3±2.8,43.°13N±0.°06×80.°35E±0.°09,h10km±1km, mb4.2/11,Error ellipse: s-maj=11.9km s-min=8.5km az=121.0*
KRNET ***11*** *07:06:55.7±0.1,43.°10N×80.°37E,mb4.6*
SOME ***11*** *07:06:55.9,43.°17N×80.°15E,h5km,MS3.7*
NNC ***11*** *07:06:56.7±0.8,43.°19N×80.°30E,h0km,mb4.5,mpv4.2, Error ellipse: s-maj=7.7km s-min=2.8km az=167.0*
ISC 11 07:06:53.6±1.1,43.°11N±0.°03×80.°40E±0.°02,h6km±7km, n161,σ2≥40/233,mb4.2/16,MS3.1/4,42C-27D,
Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		ISC
KTMS	**Ketmen**	**0.34**	**354**	*e*P	**Pg**	**07 07 00.4**	**+0.1**
	466nm,0.2s						
KTMS				*e*S	**Sg**	**07 07 03.7**	**-1.1**
	2μm,0.2s						
SHLS	**Shalkode**	**0.69**	**274**	*e*PG	**Pg**	**07 07 02.9**	**-4.0**
SHLS	**Shalkode**	**0.69**	**274**	*e*P	**Pg**	**07 07 03.7**	**-3.2**
	9μm,0.2s						
SHLS				*e*S	**Sg**	**07 07 09.2**	**-6.7**
	33μm,0.3s						
PDGK	**Podgornoye**	**0.70**	**288**	⇑P	**Pb**	**07 07 08.6**	**+0.2**
	594nm,0.4s						
PDGK				⇓S	**Sg**	**07 07 17.4**	**+1.1**
	3μm,0.5s						
PDGK	**Podgornoye**	**0.70**	**288**	PG	**Pb**	**07 07 08.6**	**+0.2**
PDGK				S	**Sg**	**07 07 17.4**	**+1.1**
UZB	**Uzynbulak**	**1.01**	**273**	*e*PG	**Pg**	**07 07 13.2**	**+0.1**
UZB				pmax	pmax		
	comp=Z,184nm,0.1s						
UZB	**Uzynbulak**	**1.01**	**273**	*e*P	**Pg**	**07 07 13.6**	**+0.5**
	comp=Z,818nm,0.1s						
UZB				*e*S	**Sg**	**07 07 26.1**	**-0.2**
	comp=Z,9μm,0.2s						
DJR	**Jarkent**	**1.30**	**340**	*e*P	**Pg**	**07 07 20.2**	**+1.6**
	comp=Z,615nm,0.3s						
DJR				*e*S	**Sn**	**07 07 38.0**	**+1.9**
	comp=Z,658nm,0.5s						
KPKS	**Kokpek**	**1.30**	**286**	*e*P	**Pn**	**07 07 18.6**	**+0.1**
	comp=Z,1.1nm,0.3s						
KPKS				*e*S	**Sb**	**07 07 35.2**	**-0.5**
	comp=Z,11μm,0.3s						
PRZ	**Przheval'sk**	**1.60**	**248**		**Pg**	**07 07 24.6**	**+0.2**
PRZ	**Przheval'sk**	**1.60**	**248**	*e*PN	**Pb**	**07 07 24.4**	**+0.7**
PRZ				*e*S	**Sb**	**07 07 45.1**	**+0.8**
PRZ	**Przheval'sk**	**1.60**	**248**	⇑*e*P	**Pb**	**07 07 24.4**	**+0.7**
PRZ				⇑*e*S	**Sb**	**07 07 45.1**	**+0.8**
ANVS	**Anan'yevo**	**2.04**	**262**	*e*PN	**Pb**	**07 07 31.0**	**-0.1**
ANVS				*e*S	**Sb**	**07 07 57.0**	**+0.2**
ANVS	**Anan'yevo**	**2.04**	**262**	⇑*e*P	**Pb**	**07 07 31.0**	**-0.1**
ANVS				⇑*e*S	**Sb**	**07 07 57.0**	**+0.2**
WUS	**Wushi**	**2.10**	**205**		**Pb**	**07 07 32.8**	**+0.5**
ARXS	**Arharly**	**2.17**	**301**	*e*P	**Pb**	**07 07 32.7**	**-0.6**
	comp=Z,383nm,0.3s						
ARXS				*e*S	**Sb**	**07 07 59.5**	**-1.0**
	comp=Z,3μm,0.4s						
TARG	**Taragay, Kyrgy**	**2.37**	**235**		**Pb**	**07 07 36.9**	**-0.1**
TARG	**Taragay, Kyrgy**	**2.37**	**235**	*e*PN	**Pb**	**07 07 35.9**	**-1.0**
TARG				*e*S	**Sn**	**07 08 05.0**	**+2.1**
TARG	**Taragay, Kyrgy**	**2.37**	**235**	⇓*e*P	**Pb**	**07 07 35.9**	**-1.0**
TARG				⇓*e*S	**Sn**	**07 08 05.0**	**+2.1**
TDK	**Taldygorghan**	**2.38**	**323**	*e*P	**Pb**	**07 07 36.3**	**-0.6**
	comp=Z,1μm,0.4s						
TDK				*e*S	**Sb**	**07 08 05.4**	**-1.0**
	comp=Z,4μm,0.4s						
KOTS	**Kotyrbulak**	**2.41**	**274**	*e*P	**Pb**	**07 07 37.9**	**+0.4**
	comp=Z,271nm,0.1s						
KOTS				*e*S	**Sb**	**07 08 08.4**	**+0.9**
	comp=Z,3μm,0.4s						
KNDC	**Almaty**	**2.52**	**274**	⇓Pn	**Pb**	**07 07 38.1**	**-1.1**
	comp=Z,129nm,0.6s						
KNDC				⇓Pg	**Pg**	**07 07 43.1**	**+1.2**
	comp=Z,544nm,0.6s						
KNDC				⇑Lg	Lg	07 08 11.7	
	comp=Z,2μm,0.6s						
KNDC	**Almaty**	**2.52**	**274**	PN	**Pb**	**07 07 38.1**	**-1.1**
KNDC				S	Sn	07 07 43.7	-22
TNSS	**Tian-Shan**	**2.53**	**270**	*e*P	**Pb**	**07 07 38.2**	**-1.5**
	comp=Z,83nm,0.3s						
TNSS				*e*S	**Sn**	**07 08 08.5**	**+1.5**
	comp=Z,604nm,0.4s						
AAA	**Alma-Ata**	**2.55**	**273**	*e*P	**Pb**	**07 07 40.8**	**+0.9**
	comp=Z,307nm,0.3s						
AAA				*e*S	**Sb**	**07 08 13.0**	**+1.4**
	comp=Z,148nm,0.2s						
KDJ	**Kajisay**	**2.57**	**249**		**Pn**	**07 07 38.0**	**+2.0**
KDJ	**Kajisay**	**2.57**	**249**	*e*PN	**Pn**	**07 07 38.2**	**+2.2**
KDJ				*e*S	**Sn**	**07 08 09.7**	**+2.0**
KDJ	**Kajisay**	**2.57**	**249**	⇑*e*P	**Pn**	**07 07 38.2**	**+2.2**
KDJ				⇑*e*S	**Sn**	**07 08 09.7**	**+2.0**
KTBS	**Karatobe**	**2.78**	**284**	*e*P	**Pb**	**07 07 43.9**	**+0.3**
	comp=Z,164nm,0.4s						
KTBS				*e*S	**Sb**	**07 08 18.1**	**+0.1**
	comp=Z,0.9nm,0.2s						
IZV	**Izvestkoviy**	**2.78**	**270**	*e*P	**Pn**	**07 07 41.1**	**+2.3**
	comp=Z,243nm,0.2s						
IZV				*e*S	**Sn**	**07 08 13.5**	**+0.8**
	comp=Z,1μm,0.1s						
MTBS	**Maitube**	**2.91**	**272**	*e*P	**Pb**	**07 07 46.1**	**+0.1**
	comp=Z,156nm,0.3s						
MTBS				*e*S	**Sb**	**07 08 21.5**	**-0.4**
	comp=Z,899nm,0.5s						
ULHL	**Ulahol**	**3.19**	**256**	*e*PN	**Pn**	**07 07 47.0**	**+2.5**
ULHL				*e*S	**Sn**	**07 08 24.7**	**+1.8**
ULHL	**Ulahol**	**3.19**	**256**	⇓*e*P	**Pn**	**07 07 47.0**	**+2.5**
ULHL				⇓*e*S	**Sn**	**07 08 24.7**	**+1.8**
KST	**Kastek**	**3.25**	**270**	*e*P	**Pb**	**07 07 53.0**	**+1.1**
	comp=Z,361nm,0.3s						
KST				*e*S	**Sb**	**07 08 33.1**	**+1.4**
	comp=Z,802nm,0.5s						
BOOM	**Boomskoye usch**	**3.34**	**261**		**Pn**	**07 07 48.4**	**+1.8**
BOOM	**Boomskoye usch**	**3.34**	**261**	*e*PN	**Pn**	**07 07 49.3**	**+2.7**
BOOM				*e*S	**Sn**	**07 08 28.4**	**+1.8**
BOOM	**Boomskoye usch**	**3.34**	**261**	⇓*e*P	**Pn**	**07 07 49.3**	**+2.7**
BOOM				⇓*e*S	**Sn**	**07 08 28.4**	**+1.8**
DGS	**Degeres**	**3.39**	**274**	*e*P	**Pb**	**07 07 55.6**	**+1.4**
	comp=Z,268nm,0.4s						
DGS				*e*S	**Sb**	**07 08 37.9**	**+2.2**
	comp=Z,1μm,0.4s						
KRBS	**Karabastau**	**3.50**	**281**	*e*P	**Pb**	**07 07 56.6**	**+0.6**
	comp=Z,149nm,0.4s						
KRBS				*e*S	**Sb**	**07 08 39.9**	**+1.3**
	comp=Z,269nm,0.4s						
TKM2	**Tokmak 2**	**3.53**	**269**	*e*PN	**Pn**	**07 07 51.9**	**+2.7**
TKM2				*e*S	**Sn**	**07 08 32.9**	**+1.6**
TKM2	**Tokmak 2**	**3.53**	**269**	⇑*e*P	**Pn**	**07 07 51.9**	**+2.7**
TKM2				⇑*e*S	**Sn**	**07 08 32.9**	**+1.6**
NRN	**Naryn**	**3.67**	**244**		**Pn**	**07 07 54.5**	**+3.2**
NRN	**Naryn**	**3.67**	**244**	*e*PN	**Pn**	**07 07 54.2**	**+3.0**
NRN				*e*S	**Sn**	**07 08 36.9**	**+1.9**
NRN	**Naryn**	**3.67**	**244**	⇓*e*P	**Pn**	**07 07 54.2**	**+3.0**
NRN				⇓*e*S	**Sn**	**07 08 36.9**	**+1.9**
MAKZ	**Makanchi**	**3.86**	**16**		**Pn**	**07 07 57.3**	**+3.7**
MAKZ	**Makanchi**	**3.86**	**16**	Pn	**Pb**	**07 07 58.3**	**-3.8**
MAKZ				Sn	**Sn**	**07 08 42.2**	**+3.0**
MAKZ				Lg	Lg	07 08 57.9	
MAKZ	**Makanchi**	**3.86**	**16**	PN	**Pb**	**07 07 58.3**	**-3.8**
MAKZ				SN	**Sn**	**07 08 42.2**	**+3.0**
MK31	**Makanchi Array**	**3.92**	**19**	⇑Pn	**Pn**	**07 07 58.2**	**+3.9**
	comp=Z,15nm,0.2s,baz=199,slow=13,SNR=1958						
MK31				Pg	**Pg**	**07 08 08.1**	**-0.6**
	comp=Z,33nm,0.6s,baz=206,slow=15,SNR=23						
MK31				⇑Sn	**Sn**	**07 08 45.3**	**+4.7**
	comp=Z,28nm,0.3s,baz=196,slow=17,SNR=4.6						
MK31				⇓Lg	Lg	07 09 01.4	
	comp=Z,117nm,0.5s,baz=202,slow=26,SNR=7.5						
MK31	**Makanchi Array**	**3.92**	**19**	PN	**Pn**	**07 07 58.2**	**+3.9**
MK31				P	**Pg**	**07 08 08.1**	**-0.6**
MK31				S	**Sn**	**07 08 45.3**	**+4.7**
MKAR	**Makanchi Array**	**3.92**	**19**	Pn	**Pn**	**07 07 58.0**	**+3.7**
	comp=Z,35nm,0.3s,baz=198,slow=12,SNR=1528						
MKAR				Sn	**Sn**	**07 08 33.3**	**-7.3**
	comp=Z,14nm,0.3s,baz=201,slow=20,SNR=7.4						
MKAR				Lg	Lg	07 08 58.5	
	comp=Z,24nm,0.3s,baz=201,slow=28,SNR=5.7						
MKAR				LR	LR	07 09 33.2	
	comp=Z,146nm,18.7s,baz=170,slow=40						
	comp=Z,46nm,0.3s						
MKAR	**Makanchi Array**	**3.92**	**19**		**Pn**	**07 07 58.3**	**+4.0**
KBK	**Karagaybulak**	**4.04**	**265**	*e*PN	**Pn**	**07 07 59.0**	**+2.9**
KBK				*e*S	**Sn**	**07 08 45.0**	**+1.3**
KBK	**Karagaybulak**	**4.04**	**265**	⇑*e*P	**Pn**	**07 07 59.0**	**+2.9**
KBK				⇑*i*S	**Sn**	**07 08 45.0**	**+1.3**
JNKS	**Jany-Kuch**	**4.11**	**242**	⇑*e*P	**Pn**	**07 07 59.5**	**+2.4**
JNKS				⇑*e*S	**Sn**	**07 08 46.1**	**+0.5**
CHMS	**Chumysh**	**4.14**	**270**	*e*PN	**Pn**	**07 08 00.3**	**+2.9**
CHMS				*e*S	**Sn**	**07 08 47.6**	**+1.4**
CHMS	**Chumysh**	**4.14**	**270**	⇑*i*P	**Pn**	**07 08 00.3**	**+2.9**
CHMS				⇑*i*S	**Sn**	**07 08 47.6**	**+1.4**
FRU1	**Bishkek**	**4.25**	**268**	*e*PN	**Pn**	**07 08 01.7**	**+2.8**
FRU1				*i* S	**Sn**	**07 08 50.1**	**+1.3**
FRU1	**Bishkek**	**4.25**	**268**	⇑*i*P	**Pn**	**07 08 01.7**	**+2.8**
FRU1				⇑*i*S	**Sn**	**07 08 50.1**	**+1.3**
USP	**Ospenovka**	**4.32**	**274**	*i* PN	**Pn**	**07 08 02.6**	**+2.7**
USP				*i* S	**Sn**	**07 08 51.8**	**+1.2**
USP	**Ospenovka**	**4.32**	**274**	⇑*i*P	**Pn**	**07 08 02.8**	**+2.9**
USP				⇑*i*S	**Sn**	**07 08 51.8**	**+1.2**
AAK	**Ala-Archa**	**4.37**	**266**	Pn	**Pn**	**07 08 02.0**	**+1.4**
	comp=Z,0.8nm,0.3s,baz=103,slow=5.5,SNR=12						
AAK				Lg	Lg	07 09 05.6	
	comp=Z,36nm,0.3s,baz=258,slow=16,SNR=7.6						
AAK				LR	LR	07 09 57.4	
	comp=Z,242nm,19.7s,baz=56,slow=43						
AAK	**Ala-Archa**	**4.37**	**266**		**Pn**	**07 08 03.1**	**+2.4**
AAK	**Ala-Archa**	**4.37**	**266**	⇓Pn	**Pn**	**07 08 02.7**	**+2.0**
	comp=Z,3.7nm,0.5s						
AAK				⇑Pg	**Pg**	**07 08 14.6**	**-2.7**
	comp=Z,42nm,0.6s						
AAK				⇑Lg	Lg	07 09 12.6	
	comp=Z,175nm,0.7s						
AAK	**Ala-Archa**	**4.37**	**266**	PN	**Pn**	**07 08 03.1**	**+2.4**
AAK	**Ala-Archa**	**4.37**	**266**	⇓*i*P	**Pn**	**07 08 03.5**	**+2.8**
AAK				⇓*i*S	**Sn**	**07 08 53.1**	**+1.2**
UCH	**Uchtor**	**4.43**	**261**	*i* PN	**Pn**	**07 08 04.7**	**+2.9**
UCH				*i* S	**Sn**	**07 08 55.0**	**+1.1**
UCH	**Uchtor**	**4.43**	**261**	⇓*i*P	**Pn**	**07 08 04.7**	**+2.9**
UCH				⇓*i*S	**Sn**	**07 08 55.0**	**+1.1**
ARLS	**Aral**	**4.67**	**257**	*i* PN	**Pn**	**07 08 07.6**	**+2.9**
ARLS				*i* S	**Sn**	**07 08 59.9**	**+0.6**
ARLS	**Aral**	**4.67**	**257**	⇓*i*P	**Pn**	**07 08 07.6**	**+2.9**
ARLS				⇓*i*S	**Sn**	**07 08 59.9**	**+0.6**
EKS2	**Erkin-Say**	**4.89**	**267**	*i* PN	**Pn**	**07 08 10.6**	**+2.8**
EKS2				*i* S	**Sn**	**07 09 05.3**	**+0.6**
EKS2	**Erkin-Say**	**4.89**	**267**	⇓*i*P	**Pn**	**07 08 10.6**	**+2.8**
EKS2				⇓*i*S	**Sn**	**07 09 05.3**	**+0.6**
BTLS	**Baital**	**4.97**	**295**	*e*PN	**Pn**	**07 08 10.7**	**+1.9**
BTLS	**Baital**	**4.97**	**295**	*e*P	**Pb**	**07 08 22.4**	**+1.4**
	comp=Z,24nm,0.5s						
BTLS				*e*S	**Sb**	**07 09 24.1**	**+3.1**
	comp=Z,304nm,0.4s						
MRKS	**Merke**	**5.28**	**268**	*e*P	**Pb**	**07 08 29.5**	**+3.1**
	comp=Z,35nm,0.4s						
MRKS				*e*S	**Sb**	**07 09 36.6**	**+6.5**
	comp=Z,159nm,0.4s						
WMQ	**Urumqi**	**5.35**	**80**	Pn	Pn	07 08 20.0	+5.9
WMQ				Sn	**Sn**	**07 09 22.4**	**+6.3**
WMQ				smax	smax		
	comp=N,110nm,1.1s						
WMQ				smax	smax		
	comp=E,170nm,1.3s						
ZSN	**Zaisan**	**5.36**	**34**	*e*P	**Pg**	**07 08 34.9**	**-1.4**
	comp=E,17nm,0.4s						
ZSN				*e*S	**Sg**	**07 09 45.4**	**-0.3**
	comp=E,204nm,0.7s						
ARSB	**Arslanbob**	**5.79**	**255**	*e*PN	**Pn**	**07 08 23.0**	**+2.8**
ARSB	**Arslanbob**	**5.79**	**255**	⇓*e*P	**Pn**	**07 08 23.0**	**+2.8**
ARSB				⇓*e*S	**Sn**	**07 09 26.6**	**-0.4**
MNAS	**Manas**	**5.84**	**267**	*i* PN	**Pn**	**07 08 23.9**	**+3.0**
MNAS	**Manas**	**5.84**	**267**	⇑*i*P	**Pn**	**07 08 23.9**	**+3.0**
MNAS				⇑*i*S	**Sn**	**07 09 28.2**	**-0.1**
SFK	**Sufi-Kurgan**	**6.03**	**241**	⇑*i*P	**Pn**	**07 08 26.1**	**+2.6**
SFK				⇑*i*S	**Sn**	**07 09 32.5**	**-0.5**
OHH	**Osh**	**6.25**	**248**	⇑*i*P	**Pn**	**07 08 29.3**	**+2.9**
OHH				⇑*i*S	**Sn**	**07 09 37.4**	**-0.8**
ARK	**Arkit**	**6.38**	**261**	*i* PN	**Pn**	**07 08 31.0**	**+2.8**
ARK	**Arkit**	**6.38**	**261**	⇑*i*P	**Pn**	**07 08 31.0**	**+2.8**
ARK				⇑*i*S	**Sn**	**07 09 40.6**	**-0.8**
KK31	**Karatay Array**	**7.24**	**273**	⇓Pg	Pg	07 09 07.5	-4.7
	comp=E,18nm,0.6s,baz=83,slow=16,SNR=26						
KK31				⇓Lg	Lg	07 10 44.0	
	comp=E,31nm,0.4s,baz=77,slow=27,SNR=10						
KURBB	**Kurchatov Arra**	**7.62**	**351**	Pn	**Pn**	**07 08 45.9**	**+0.8**
	comp=E,0.4nm,0.3s,baz=177,slow=12,SNR=48						
KURBB				Sn	**Sn**	**07 10 10.8**	**-1.0**
	comp=E,0.8nm,0.3s,baz=170,slow=18,SNR=4.3						
KURBB				Lg	Lg	07 10 54.5	
	comp=E,1.9nm,0.3s,baz=164,slow=28,SNR=7.3						
KURBB				LR	LR	07 12 05.3	
	comp=E,252nm,18.6s,baz=184,slow=41						
KURBB	**Kurchatov Arra**	**7.62**	**351**	⇓Pn	**Pn**	**07 08 45.8**	**+0.6**
	comp=E,5.8nm,0.8s						
KURBB				⇑Lg	Lg	07 10 58.2	
	comp=E,210nm,0.7s						
KURBB	**Kurchatov Arra**	**7.62**	**351**	P	**Pn**	**07 08 45.8**	**+0.6**
KURK	**Kurchatov**	**7.71**	**352**		**Pn**	**07 08 47.3**	**+1.0**
KURK	**Kurchatov**	**7.71**	**352**	⇑Pn	**Pn**	**07 08 46.6**	**+0.3**
	comp=E,7.8nm,0.7s						
KURK				⇑Lg	Lg	07 10 59.1	
	comp=E,77nm,0.7s						
KURK	**Kurchatov**	**7.71**	**352**	P	**Pn**	**07 08 45.9**	**-0.3**
KURK						07 10 10.8	
IUG	**Iuzhnay**	**7.71**	**266**	*e*P	Pg	07 09 15.0	-6.2
	comp=E,68nm,0.5s						
IUG				*e*S	**Sg**	**07 10 54.9**	**-6.2**
	comp=E,336nm,0.7s						
BRLS	**Boroldaу**	**7.74**	**273**	*e*P	Pg	07 09 16.3	-5.5
	comp=E,4.4nm,0.7s						
BRLS				*e*S	**Sg**	**07 10 57.9**	**-4.1**
	comp=E,16nm,0.7s						
DGZ	**Jazzator, Alta**	**8.18**	**34**	*i* P	**Pn**	**07 08 55.7**	**+2.7**
GAR	**Garm**	**8.66**	**245**		**Pn**	**07 09 02.1**	**+2.6**
ALCI	**Alchi Leh**	**9.23**	**197**	*e*P	**Pn**	**07 09 11.8**	**+4.2**
ALCI				*e*S	**Sn**	**07 10 50.7**	**-1.2**
CHGR	**Chuyangaron**	**9.61**	**246**		**Pn**	**07 09 13.9**	**+1.4**
CHGR	**Chuyangaron**	**9.61**	**246**	P	**Pn**	**07 09 13.9**	**+1.4**
HNLY	**HANLEY**	**10.38**	**187**	*e*P	**Pn**	**07 09 25.5**	**+2.1**
HNLY				*e*S	**Sn**	**07 11 16.6**	**-3.7**
HNLY				IAML		07 11 22.3	
	comp=N,55nm,0.8s						
HNLY				IAML		07 11 27.0	
	comp=E,45nm,0.9s						
TSSA	**Tissa**	**10.79**	**199**	*e*P	**Pn**	**07 09 31.6**	**+2.8**
TSSA				*e*S	**Sn**	**07 11 25.9**	**-4.1**
TSSA				IAML		07 11 32.8	
	comp=E,47nm,0.5s						
TSSA				IAML		07 11 34.0	
	comp=N,41nm,0.4s						
ZAA0	**Zalesovo Array**	**11.23**	**14**		**Pn**	**07 09 37.0**	**+2.5**
ZALV	**Zalesovo Beam**	**11.23**	**14**	Pn	**Pn**	**07 09 35.9**	**+1.4**
	comp=N,1.0nm,0.3s,baz=201,slow=14,SNR=10						
ZALV				Sn	**Sn**	**07 11 37.5**	**-2.8**
	comp=N,1.3nm,0.3s,baz=199,slow=22,SNR=7.7						
ZALV				Lg	Lg	07 12 53.4	
	comp=N,0.2nm,0.3s,baz=199,slow=26,SNR=1.2						
ZALV				LR	LR	07 14 13.7	
	comp=N,166nm,18.8s,baz=202,slow=39						
	comp=N,2.4nm,0.3s						
ZALV	**Zalesovo Beam**	**11.23**	**14**		**Pn**	**07 09 36.5**	**+2.0**
ZALV	**Zalesovo Beam**	**11.23**	**14**	*i* P	**Pn**	**07 09 36.7**	**+2.2**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.3s						
THN	**Thein Dam**	**11.27**	**201**	*e*P	**Pn**	**07 09 37.4**	**+2.3**
THN				*e*S	**Sn**	**07 11 37.9**	**-3.5**
THN				IAML		07 11 46.1	
	comp=E,50nm,0.3s						
THN				IAML		07 11 47.1	
	comp=N,57nm,0.5s						
DHRM	**DHARAMSHALA**	**11.32**	**198**	*e*P	**Pn**	**07 09 37.5**	**+1.5**
KLP	**Kalpa**	**11.68**	**189**	*e*P	**Pn**	**07 09 43.0**	**+1.8**
KLP				*e*S	**Sn**	**07 11 46.0**	**-6.0**
KLP				IAML		07 11 50.2	
	comp=E,47nm,0.6s						
KLP				IAML		07 11 51.6	
	comp=N,50nm,0.3s						
BVA0	**Borovoye Array**	**11.96**	**330**	Pn	**Pn**	**07 09 46.2**	**+1.8**
	comp=N,5.0nm,1.2s,baz=144,slow=14,SNR=11						
BVA0				⇑Sn	**Sn**	**07 11 58.8**	**+0.7**
	comp=N,6.6nm,0.7s,baz=137,slow=25,SNR=3.8						
BVA0				⇑Lg	Lg	07 13 14.0	
	comp=N,28nm,1.0s,baz=259,slow=43,SNR=3.7						
BVA0	**Borovoye Array**	**11.96**	**330**	P	**Pn**	**07 09 46.3**	**+1.8**
BVA0				SN	**Sn**	**07 11 58.8**	**+0.7**
BVAR	**Borovoye Array**	**11.96**	**330**	Pn	**Pn**	**07 09 45.1**	**+0.6**
	comp=N,0.1nm,0.3s,baz=137,slow=11,SNR=10						
BVAR				Sn	**Sn**	**07 11 52.9**	**-5.2**
	comp=N,0.2nm,0.3s,baz=133,slow=19,SNR=4.0						
BVAR				Lg	Lg	07 13 12.5	
	comp=N,0.3nm,0.3s,baz=117,slow=22,SNR=4.9						
BVAR				LR	LR	07 14 30.4	
	comp=N,183nm,18.7s,baz=152,slow=38						
	comp=N,0.9nm,0.3s						
BORK	**Borovoye**	**12.00**	**329**		**Pn**	**07 09 46.0**	**+1.0**
BORK	**Borovoye**	**12.00**	**329**	P	**Pn**	**07 09 46.0**	**+1.0**
BHK	**Bhakra**	**12.12**	**197**	*e*P	**Pn**	**07 09 46.1**	**-0.8**
BHK				*e*S	**Sn**	**07 11 55.8**	**-6.5**
BHK				IAML		07 12 00.6	
	comp=N,44nm,0.4s						
BHK				IAML		07 12 00.9	
	comp=E,33nm,0.4s						
JOSI	**Joshimath**	**12.55**	**183**	*e*S	**Sn**	**07 12 04.7**	**-8.4**
KNGR	**Kungurtug, Tuv**	**13.88**	**51**	*i* P	**Pn**	**07 10 10.5**	**-0.4**
GTA2	**Gaotai**	**14.99**	**97**	*e*P	**Pn**	**07 10 26.5**	**+0.4**
GTA2				pP	P	07 10 33.7	+2.0
GTA2				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AB31	**Akbulak array**	**15.42**	**301**		**Pn**	**07 10 31.1**	**-0.5**
AB31				IAmb	IAmb	07 10 44.6	
	comp=Z,13nm,1.5s						
AB31	**Akbulak array**	**15.42**	**301**	⇑Pn	**Pn**	**07 10 32.9**	**+1.3**
	comp=Z,3.1nm,0.7s						
AB31				⇓Lg	Lg	07 15 05.1	
	comp=Z,6.6nm,0.8s						
AB31	**Akbulak array**	**15.42**	**301**	P	**Pn**	**07 10 32.9**	**+1.3**
ABKAR	**Akbulak array**	**15.42**	**301**		**Pn**	**07 10 31.0**	**-0.7**
EVN	**Everest**	**15.99**	**159**	Pn	**Pn**	**07 10 41.8**	**+2.1**
EVN				IAmb	IAmb	07 10 46.0	
	comp=Z,7.5nm,0.7s						
AKTO	**Aktyubinsk**	**16.95**	**303**	Pn	**Pn**	**07 10 50.5**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=107,slow=11,SNR=17						
AKTO				Sn	**Sn**	**07 13 50.3**	**-9.5**
	comp=Z,0.1nm,0.3s,baz=311,slow=5.6,SNR=1.9						
AKTO				Lg	Lg	07 15 50.0	
	comp=Z,0.1nm,0.3s,baz=36,slow=16,SNR=2.1						
AKTO				LR	LR	07 17 57.9	
	comp=Z,99nm,20.5s,baz=224,slow=39						
TLY	**Talaya**	**17.86**	**53**	LR	LR	07 17 33.2	
	comp=Z,17nm,18.4s,baz=107,slow=36						
SONM	**Songino Array**	**18.79**	**66**	P	**Pn**	**07 11 15.4**	**+1.3**
	comp=Z,0.6nm,0.3s,baz=268,slow=11,SNR=14						
SONM				Lg	Lg	07 16 55.6	
	comp=Z,0.1nm,0.3s,baz=271,slow=26,SNR=1.7						
SONM				LR	LR	07 19 09.2	
	comp=Z,223nm,20.5s,baz=308,slow=39						
	comp=Z,4.7nm,0.6s						
SONM	**Songino Array**	**18.79**	**66**	P	**Pn**	**07 11 15.7**	**+1.6**
SONM	**Songino Array**	**18.79**	**66**	P	**Pn**	**07 11 15.7**	**+1.6**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ULN	**Ulaanbaatar**	**19.23**	**66**	*ce*P	**P**	**07 11 18.9**	**+0.3**
ULN				pmax	pmax		
	comp=Z,14nm,2.5s						
ARTI	**Arti**	**19.35**	**321**	P	**Pn**	**07 11 21.4**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=118,slow=8.1,SNR=7.1						
ARTI				LR	LR	07 19 14.2	
	comp=Z,100nm,19.9s,baz=52,slow=38						
	comp=Z,4.3nm,0.5s						
ARTI	**Arti**	**19.35**	**321**		**P**	**07 11 19.9**	**+0.3**
ARTI				IAmb	IAmb	07 11 25.6	
	comp=Z,10nm,0.6s						
ARTI	**Arti**	**19.35**	**321**	P	**P**	**07 11 19.5**

*SDD **11** 07:07:41.5±1.4, 17.96N×66.85W, h18km±9km, MD3.1, ML2.9, MW3.3, Presumed earthquake*
*OSPL **11** 07:07:41.5±0.4, 17.92N×66.85W, h12km±3km, ML2.7, Presumed earthquake*
*NEIC **11** 07:07:41.5±1.4, 17.96N±0.03×66.836W±0.009, h10km±1km, ML3.1/35, Mb3.2/4(RSPR), Error ellipse: s-maj=5.2km s-min=2.1km az=1.0*

ISC 11 07:07:40.9±1.0, 17.95N±0.05×66.84W±0.02, h18km±3km, n30, σ0963/42, 7C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.04**	**303**		**Pg**	**07 07 44.0**	**-0.2**
GBPR					**Sg**	**07 07 45.9**	**-0.6**
MLPR	**Magueyes Islan**	**0.19**	**275**		**Pg**	**07 07 45.8**	**0.0**
MLPR				IAML		07 07 49.7	
	3μm,0.2s						
MLPR				IAML		07 07 49.7	
	5μm,0.2s						
MLPR	**Magueyes Islan**	**0.19**	**275**	*e*Pg	**Pg**	**07 07 45.8**	**0.0**
MLPR				*e*Sg	**Sg**	**07 07 49.1**	**-0.1**
MLPR				IAML		07 07 49.4	
	comp=N,1μm,0.2s						
OBIP	**Obispado Ponce**	**0.24**	**68**		**Pg**	**07 07 46.7**	**+0.1**
OBIP					**Sg**	**07 07 50.6**	**+0.2**
OBIP	**Obispado Ponce**	**0.24**	**68**	IAML		07 07 51.0	
	comp=N,420nm,0.3s						
OBIP	**Obispado Ponce**	**0.24**	**68**	*i* P	**Pg**	**07 07 46.5**	**0.0**
OBIP				*e*S	**Sg**	**07 07 50.4**	**0.0**
OBIP				IAML		07 07 51.0	
	comp=Z,694nm,0.5s						
CRPR	**Cabo Rojo, PR**	**0.26**	**282**		**Pg**	**07 07 46.9**	**0.0**
CRPR					**Sg**	**07 07 50.7**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.26**	**282**	IAML		07 07 51.0	
	comp=Z,2μm,0.2s						
CRPR				IAML		07 07 51.0	
	comp=Z,3μm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.26**	**282**	*i* P	**Pg**	**07 07 46.8**	**0.0**
CRPR				*e*S	**Sg**	**07 07 50.3**	**-0.7**
CRPR				IAML		07 07 51.1	
	comp=Z,2μm,0.3s						
CELP	**Cerrillos**	**0.28**	**64**		**Pg**	**07 07 47.4**	**+0.2**
CELP				IAML		07 07 52.0	
	comp=Z,5μm,0.3s						
UUPR	**Utuado, UPR, P**	**0.32**	**21**		**Pg**	**07 07 47.7**	**-0.2**
LSP	**Las Mesas**	**0.32**	**314**		**Pg**	**07 07 47.8**	**-0.1**
LSP					**Sg**	**07 07 53.0**	**+0.3**
PRSN	**Puerto Rico Se**	**0.39**	**312**		**Pg**	**07 07 48.8**	**-0.3**
PRSN				IAML		07 07 55.2	
	comp=Z,3μm,0.2s						
AOPR	**Arecibo Observ**	**0.40**	**12**		**Pg**	**07 07 49.1**	**-0.3**
AOPR	**Arecibo Observ**	**0.40**	**12**	*e*Pg	**Pg**	**07 07 49.0**	**-0.3**
AOPR				*e*Sg	**Sg**	**07 07 54.6**	**-0.3**
AOPR				IAML		07 07 55.0	
	comp=N,4μm,0.2s						
AGPR	**Aguadilla, PR**	**0.57**	**333**		**Pg**	**07 07 52.0**	**-0.4**
AGPR	**Aguadilla, PR**	**0.57**	**333**	*e*Pg	**Pg**	**07 07 52.0**	**-0.4**
AGPR				*e*Sg	**Sg**	**07 07 58.9**	**-1.2**
AGPR				IAML		07 08 02.7	
	comp=N,380nm,0.2s						
ECPR	**Experimental S**	**0.58**	**51**		**Pg**	**07 07 52.1**	**-0.5**
ECPR				IAML		07 08 01.2	
	comp=N,1μm,0.2s						
ECPR				IAML		07 08 03.5	
	comp=N,1μm,0.2s						
EMPR	**Esperanza - Ma**	**0.60**	**29**		**Pg**	**07 07 53.4**	**+0.4**
EMPR					**Sg**	**07 08 01.6**	**+0.6**
SJG	**San Juan**	**0.68**	**76**		**Pg**	**07 07 53.7**	**-0.5**
SJG				IAML		07 08 04.7	
	comp=N,762nm,0.4s						
SJG				IAML		07 08 04.9	
	comp=N,547nm,0.3s						
SJG	**San Juan**	**0.68**	**76**	*i* P	**Pg**	**07 07 53.8**	**-0.5**
SJG				*e*S	**Sg**	**07 08 03.2**	**-0.2**
SJG				IAML		07 08 04.2	
	comp=Z,342nm,0.2s						
IDE	**Isla Desecheo**	**0.74**	**306**		**Pg**	**07 07 54.9**	**-0.6**
IDE					**Sg**	**07 08 05.5**	**+0.1**
PDPR	**Patillas Dam,**	**0.78**	**85**		**Pg**	**07 07 55.9**	**-0.4**
HUMP	**Col San Antoni**	**0.96**	**78**		**Pg**	**07 07 58.8**	**-0.9**
HUMP					**Sg**	**07 08 11.8**	**-0.6**
HUMP	**Col San Antoni**	**0.96**	**78**	IAML		07 08 15.7	
	comp=Z,450nm,0.2s						
HUMP				IAML		07 08 16.2	
	comp=Z,373nm,0.2s						
CUPR	**Culebra, Puert**	**1.52**	**76**		**Pn**	**07 08 08.1**	**+0.9**
HIDR	**Higuey Centro**	**1.89**	**290**	*e*Pg	**Pn**	**07 08 13.4**	**+1.1**
HIDR				*e*Sg	**Sb**	**07 08 39.2**	**+0.9**
HIDR				IAML		07 08 51.4	
	comp=N,61nm,1.1s						
DR12	**Loma Pena Alta**	**2.55**	**289**	Pn	**Pn**	**07 08 23.5**	**+2.0**
HATOM	**Hato Mayor del**	**2.55**	**289**	*e*Pg	**Pb**	**07 08 25.2**	**-1.0**
HATOM				*e*Sg	**Sb**	**07 08 56.5**	**-0.8**
HATOM				IAML		07 09 11.5	
	comp=N,60nm,2.5s						
SDDR	**Presa de Saban**	**4.34**	**284**	Pn	**Pn**	**07 08 46.5**	**+0.4**

*NEIC **11** 07:11:59.8±0.8, 18.17S±0.08×169.2E±0.2, h163km±13km, mb4.5/13, Error ellipse: s-maj=21.0km s-min=11.4km az=96.0*
*IDC **11** 07:12:02.2±4.2, 18.34S×169.08E, h187km±45km, mb3.8/5, mbtmp4.3/6, Error ellipse: s-maj=72.1km s-min=31.5km az=150.0*

ISC 11 07:11:59.7±1.6, 18.17S±0.07×169.1E±0.2, h163km, n23, σ0991/22, mb4.4/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**3.27**	**326**	Pn	**Pn**	**07 12 51.3**	**+0.3**
MARNC	**Mare, Loyalty**	**3.45**	**197**		**Pn**	**07 12 52.6**	**-0.5**
DZM	**Mont Dzumac**	**4.62**	**213**	P	**Pn**	**07 13 09.1**	**+0.6**
	17nm,0.4s,baz=350,slow=23,SNR=91						
DZM				S	**Sn**	**07 14 03.0**	**+0.8**
	12nm,0.6s,baz=168,slow=4.2,SNR=3.3						
OUENC	**Ouen Island, N**	**4.74**	**206**	Pn	**Pn**	**07 13 10.3**	**+0.5**
ONTNC	**Ouen Toro**	**4.82**	**211**		**Pn**	**07 13 11.4**	**+0.5**
EIDS	**Eidsvold**	**18.21**	**244**	P	**P**	**07 16 00.5**	**+0.1**
EIDS				IAmb	IAmb	07 16 08.5	
	comp=Z,28nm,1.3s						
RABL	**Rabaul**	**21.64**	**308**	P	**P**	**07 16 35.6**	**-1.8**
CTA	**Charters Tower**	**21.69**	**261**	P	**P**	**07 16 39.1**	**+1.3**
	comp=Z,3.6nm,0.6s,baz=81,slow=12,SNR=1.7						
	comp=Z,3.6nm,0.6s						
CTAO	**Charters Tower**	**21.69**	**261**	P	**P**	**07 16 37.3**	**-0.6**
CTAO				IAmb	IAmb	07 16 47.2	
	comp=Z,15nm,1.2s						
CAN	**Canberra**	**24.71**	**222**	P	**P**	**07 17 05.3**	**-0.6**
CAN				IAmb	IAmb	07 17 14.5	
	comp=Z,23nm,1.5s						
STKA	**Stephens Creek**	**28.34**	**236**	P	**P**	**07 17 37.1**	**-1.3**
	comp=Z,3.0nm,0.7s,baz=69,slow=9.4,SNR=8.4						
	comp=Z,3.0nm,0.7s						
STKA	**Stephens Creek**	**28.34**	**236**	IAmb	IAmb	07 17 38.4	
	comp=Z,13nm,0.7s						
WR8	**Warramunga Arr**	**32.74**	**261**	P	**P**	**07 18 16.9**	**-0.3**
WR8				IAmb	IAmb	07 18 20.3	
	comp=Z,11nm,1.4s						
WB0	**Warramunga Arr**	**32.85**	**262**	P	**P**	**07 18 17.9**	**-0.3**
WRA	**Warramunga Arr**	**32.89**	**261**	P	**P**	**07 18 18.0**	**-0.5**
	comp=Z,1.8nm,0.5s,baz=90,slow=8.5,SNR=34						
	comp=Z,1.8nm,0.5s						
WRA	**Warramunga Arr**	**32.89**	**261**	IAmb	IAmb	07 18 18.6	
	comp=Z,0.2nm,1.0s						
BBOO	**Buckleboo**	**33.05**	**237**	P	**P**	**07 18 18.4**	**-1.4**
BBOO				IAmb	IAmb	07 18 51.0	
	comp=Z,12nm,1.3s						
AS31	**Alice Springs**	**33.29**	**254**		**P**	**07 18 21.8**	**-0.2**
ASAR	**Alice Springs**	**33.29**	**254**	P	**P**	**07 18 21.6**	**-0.5**
	comp=Z,14nm,0.4s,baz=82,slow=8.8,SNR=358						
	comp=Z,14nm,0.4s						
KNRA	**Kununurra**	**38.64**	**267**	P	**P**	**07 19 08.2**	**+0.7**
KNRA				IAmb	IAmb	07 19 51.6	
	comp=Z,11nm,1.2s						
SOEI	**Soe**	**44.23**	**275**	P	**P**	**07 19 55.0**	**+1.7**
PSA00	**Pilbara Seismi**	**46.32**	**257**	P	**P**	**07 20 09.6**	**+0.1**
ILAR	**Eielson Array**	**89.25**	**17**	P	**P**	**07 24 37.5**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=237,slow=4.9,SNR=4.8						
	comp=Z,0.3nm,0.7s						

*FUNV **11** 07:14:21.7, 10.24N×67.81W, h5km, MW3.5, Presumed earthquake*

*RSNC **11** 07:14:23.7±0.5, 10.6N×6.8W±, h138km±23km, M2.9, mB4.4, mb4.0, ML2.9, Mw(mB)3.5*

ISC 11 07:14:21.5±0.9, 10.26N±0.04×67.83W±0.03, h15km±7km, n29, σ1968/42, 1C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TURV	**Turiamo**	**0.19**	**358**	*e*P	**Pg**	**07 14 25.7**	**-0.3**
TURV				*e*S	**Sg**	**07 14 28.5**	**-0.6**
BENV	**Beln**	**0.37**	**142**	*e*P	**Pg**	**07 14 29.0**	**-0.1**
BENV				*e*S	**Sg**	**07 14 34.0**	**-0.3**
TACV	**Tcata**	**0.80**	**98**	*e*P	**Pb**	**07 14 36.5**	**-0.6**
TACV				*e*S	**Sg**	**07 14 48.4**	**+0.7**
FUNV	**FUNVISIS**	**1.03**	**78**	*e*P	**Pb**	**07 14 40.4**	**-0.6**
FUNV				*e*S	**Sb**	**07 14 54.5**	**+0.1**
JACV	**Jacura**	**1.28**	**310**	*e*P	**Pg**	**07 14 47.3**	**+1.1**
JACV				*e*S	**Sg**	**07 15 04.9**	**+2.0**
TEPV	**Terepaima**	**1.37**	**258**	*e*P	**Pn**	**07 14 46.0**	**0.0**
TEPV				*e*S	**Sg**	**07 15 05.9**	**+0.2**
CACV	**CAICARA DEL OR**	**2.96**	**154**	*e*P	**Pn**	**07 15 12.0**	**+4.0**
CACV				*e*S	**Sb**	**07 15 50.3**	**+0.3**
SDV	**Santo Domingo**	**3.08**	**244**	P	**Pn**	**07 15 10.6**	**+0.8**
SDV	**Santo Domingo**	**3.08**	**244**	*e*P	**Pn**	**07 15 10.5**	**+0.8**
SDV				*e*S	**Sn**	**07 15 48.1**	**+1.7**
PCRV	**Puerto La Cruz**	**3.15**	**91**	*e*P	**Pn**	**07 15 12.9**	**+2.3**
PCRV				*e*S	**Sn**	**07 15 49.4**	**+1.5**
SOCV	**Socops**	**3.57**	**237**	*e*P	**Pn**	**07 15 16.8**	**+0.5**
SOCV				*e*S	**Sn**	**07 16 00.7**	**+2.4**
URIC	**Uribia, Colomb**	**4.33**	**290**	P	**Pn**	**07 15 26.5**	**-0.3**
URIC	**Uribia, Colomb**	**4.33**	**290**	*e*P	**Pn**	**07 15 27.6**	**+0.8**
CAPV	**Capacho**	**5.02**	**242**	*e*P	**Pn**	**07 15 37.6**	**+1.1**
PAMC	**Pamplona, Colo**	**5.62**	**239**	P	**Pn**	**07 15 45.5**	**+0.6**
	197nm12nm,0.7s						
PAMC				S	**Sn**	**07 16 47.7**	**-1.7**
	197nm12nm,0.7s						
OCAC	**Ocana**	**5.78**	**250**	P	**Pn**	**07 15 47.4**	**+0.6**
	1μm19nm,0.6s						
ARGC	**Ariguani, Magd**	**6.33**	**267**	P	**Pn**	**07 15 55.0**	**+0.7**
	16nm,2.5s						
GRGR	**Grenville**	**6.34**	**72**	P	**Pn**	**07 15 54.6**	**+0.1**
	109nm,1.2s						
RUSC	**La Rusia**	**6.77**	**231**	P	**Pn**	**07 16 01.2**	**+0.5**
	11nm,2.6s						
RUSC	**La Rusia**	**6.77**	**231**	*e*P	**Pn**	**07 16 00.7**	**-0.1**
SJCC	**San Jacinto, C**	**7.24**	**268**	P	**Pn**	**07 16 08.2**	**+1.3**
	15nm,1.4s						
SJCC	**San Jacinto, C**	**7.24**	**268**	*e*P	**Pn**	**07 16 08.0**	**+1.1**
SJCC				*e*S	**Sn**	**07 17 23.7**	**-5.3**
PTBC	**PUERTO BERRIO,**	**7.52**	**241**	P	**Pn**	**07 16 08.3**	**-2.4**
	8.5nm,0.5s						
SPBC	**San Pablo de B**	**7.69**	**234**	P	**Pn**	**07 16 13.6**	**+0.6**
	6.1nm,0.6s						
CHIC	**Chingaza**	**8.09**	**227**	P	**Pn**	**07 16 18.4**	**-0.4**
	6.1nm,0.8s						
CHIC				S	**Sn**	**07 17 46.4**	**-3.9**
	6.1nm,0.8s						
ROSC	**El Rosal**	**8.38**	**231**	P	**Pn**	**07 16 24.9**	**+2.0**
	19nm,0.6s						
CVER	**Cruz Verde, Cu**	**8.41**	**228**	P	**Pn**	**07 16 24.9**	**+1.6**
VILC	**Villavicencio,**	**8.43**	**224**	P	**Pn**	**07 16 23.7**	**+0.5**
	261nm10nm,0.6s						
GUY2C	**Guyana, Caldas**	**8.98**	**237**	P	**Pn**	**07 16 31.5**	**+0.4**

*AFAD **11** 07:29:38.6, 38.54N×44.50E, h7km±4km, ML2.9*
*AZER **11** 07:29:39.0, 38.47N×44.43E, h9km, ml2.5*
*TEH **11** 07:29:39.2, 38.47N×44.36E, h10km±999km, ML2.5, Presumed earthquake*

ISC 11 07:29:41.2±1.2, 38.50N±0.03×44.35E±0.03, h11km±10km, n16, σ1987/26, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.32**	**301**	P	**Pg**	**07 29 46.7**	**-1.1**
OZAP				S	**Sg**	**07 29 53.6**	**+1.4**
OZAP				IAML		07 30 00.0	
	comp=N,839nm,0.8s						
TVAN	**Van**	**0.74**	**273**	P	**Pg**	**07 29 54.1**	**-1.5**
TVAN				S	**Sb**	**07 30 08.2**	**+1.8**
VMUR	**Van-Muradiye**	**0.78**	**309**	P	**Pg**	**07 29 55.3**	**-1.0**
VMUR				S	**Sn**	**07 30 09.5**	**-0.7**
MAKU	**Maku**	**0.90**	**17**	Pg	**Pb**	**07 29 56.5**	**-2.4**
ISHB	**Shabestar**	**1.02**	**102**	Pg	**Pb**	**07 29 58.2**	**-2.9**
GEVA	**Gevas**	**1.03**	**260**	P	**Pb**	**07 29 58.8**	**-2.4**
GEVA				S	**Sb**	**07 30 16.4**	**+1.6**
HAKT	**HAKKARI**	**1.06**	**208**	P	**Pb**	**07 30 00.8**	**-1.0**
HAKT				S	**Sg**	**07 30 18.5**	**+2.9**
HAKT	**HAKKARI**	**1.06**	**208**	P	**Pb**	**07 30 01.3**	**-0.5**
HAKT				S	**Sb**	**07 30 18.3**	**+2.4**
IMRD	**Marand**	**1.08**	**78**	Pg	**Pb**	**07 29 59.9**	**-2.3**
NAX	**Nakhchivan**	**1.12**	**53**	P	**Pb**	**07 30 01.9**	**-0.8**
NAX				S	**Sb**	**07 30 18.4**	**+0.9**
ORD	**Ordubad**	**1.36**	**71**	P	**Pn**	**07 30 06.0**	**-0.3**
ORD				S	**Sn**	**07 30 25.1**	**+0.7**
IGDI	**IGDIR**	**1.38**	**351**	P	**Pb**	**07 30 08.1**	**+0.9**
IGDI				S	**Sg**	**07 30 29.2**	**+3.4**
DORK	**Agr/Tutak/Do**	**1.51**	**307**	P	**Pn**	**07 30 06.6**	**-1.9**
DORK				S	**Sg**	**07 30 30.9**	**+1.1**
IAZR	**Azarshahr**	**1.53**	**122**	Pg	**Pn**	**07 30 07.6**	**-1.2**
IHRS	**Heris**	**2.13**	**94**	Pn	**Pn**	**07 30 18.2**	**+1.3**
YRD	**Yardimli**	**3.08**	**81**	P	**Pn**	**07 30 31.0**	**+1.0**

IDC 11 07:35:52.3±19.0, 24.34N×43.96W, h0km, mb3.4/3, mbtmp3.4/3, MS3.4/11, Error ellipse: s-maj=458.9km s-min=140.9km az=157.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SADO	**Sadowa**	**35.05**	**314**	LR	LR	07 54 22.1	
	comp=Z,54nm,21.2s,baz=102,slow=32						
TKL	**Tuckaleechee C**	**36.05**	**298**	LR	LR	07 54 31.3	
	comp=Z,30nm,21.0s,baz=134,slow=31						
DBIC	**Dimbokro**	**41.38**	**109**	LR	LR	07 57 23.6	
	comp=Z,56nm,19.4s,baz=17,slow=31						
H10N2	**ASCENSION HYDR**	**43.00**	**134**	T	T	08 28 30.2	
	baz=314,slow=75,SNR=29						
H10N3	**ASCENSION HYDR**	**43.00**	**134**	T	T	08 28 23.6	
	baz=314,slow=75,SNR=44						
H10N1	**ASCENSION HYDR**	**43.02**	**134**	T	T	08 28 31.6	
	baz=314,slow=75,SNR=69						
H10S3	**ASCENSION HYDR**	**43.73**	**136**	T	T	08 29 17.3	
	baz=267,slow=74,SNR=8.6						
H10S2	**ASCENSION HYDR**	**43.75**	**136**	T	T	08 29 16.4	
	baz=313,slow=74,SNR=12						
ULM	**Lac du Bonnet**	**47.51**	**317**	LR	LR	08 01 45.2	
	comp=Z,63nm,20.6s,baz=96,slow=33						
CMIG	**Matias Romero**	**47.96**	**271**	LR	LR	08 05 35.7	
	comp=Z,28nm,18.1s,baz=58,slow=37						
ANMO	**Albuquerque**	**54.57**	**297**	LR	LR	08 06 23.2	
	comp=Z,26nm,21.0s,baz=64,slow=34						
PDAR	**Pinedale Array**	**56.30**	**306**	P	P	07 45 35.0	-0.1
	0.2nm,0.6s,baz=88,slow=4.0,SNR=2.5						
PDAR				LR	LR	08 07 07.8	
	comp=Z,26nm,20.4s,baz=50,slow=33						
	0.2nm,0.6s						
YKA	**Yellowknife Ar**	**59.78**	**330**	P	P	07 45 58.5	-0.4
	0.4nm,1.0s,baz=94,slow=7.0,SNR=4.1						
	0.4nm,1.0s						
NEW	**Newport**	**61.22**	**313**	LR	LR	08 09 50.4	
	comp=Z,41nm,20.4s,baz=80,slow=33						
PFO	**Pinyon Flats O**	**62.95**	**297**	LR	LR	08 12 34.7	
	comp=Z,42nm,18.8s,baz=112,slow=35						
NVAR	**Mina Array Bea**	**63.45**	**302**	LR	LR	08 12 46.6	
	comp=Z,26nm,18.7s,baz=64,slow=35						
INK	**Inuvik**	**67.48**	**336**	LR	LR	08 16 07.7	
	comp=Z,33nm,19.6s,baz=278,slow=36						
ILAR	**Eielson Array**	**73.57**	**334**	P	P	07 47 27.2	+0.3
	0.7nm,0.9s,baz=67,slow=4.4,SNR=5.9						
	0.7nm,0.9s						

*IDC **11** 07:47:55.4±1.0, 2.35N×127.60E, h0km, mb3.9/6, mbtmp4.0/7, ML4.1/1, MS2.8/1, Error ellipse: s-maj=78.5km s-min=16.0km az=63.0*
*NEIC **11** 07:48:05.4±0.9, 2.5N±0.1×128.23E±0.09, h81km±11km, mb4.2/11, Error ellipse: s-maj=17.5km s-min=10.5km az=216.0*
*DJA **11** 07:48:05.8±0.4, 3.1N×127.8E±, h50km±5km, M4.3/18, mB5.0/3, mb4.6/5, MLv4.2/18, Mw(mB)4.3/3*

ISC 11 07:48:02.9±0.8, 2.52N±0.06×128.34E±0.07, h50km, n38, σ2914/32, mb4.2/12, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAMI	**Galela, Maluku**	**0.88**	**219**	P	**Pn**	**07 48 21.0**	**+2.0**
GAMI				S	**Sn**	**07 48 33.8**	**+3.1**
TNTI	**Ternate**	**1.99**	**209**		**Pn**	**07 48 35.8**	**+1.7**
TNTI	**Ternate**	**1.99**	**209**	P	**Pn**	**07 48 35.7**	**+1.6**
SGSI	**Sangihe**	**3.04**	**292**	P	**Pn**	**07 48 50.3**	**+1.8**
MNI	**Manado**	**3.66**	**253**	P	**Pn**	**07 48 58.7**	**+1.7**
MNI				S	**Sn**	**07 49 39.9**	**+0.9**
DDMP	**Don Marcelino,**	**4.42**	**324**	*i* P	**Pn**	**07 49 10.5**	**+3.0**
DDMP				*i* S	**Sn**	**07 50 01.4**	**+3.7**
SWI	**Sorong**	**4.45**	**139**	P	**Pn**	**07 49 10.7**	**+2.8**
SIJI	**Sorong**	**4.46**	**139**	Pn	**Pn**	**07 49 11.4**	**+3.4**
	7.6nm,0.3s,baz=114,slow=22,SNR=14						
SIJI				Sn	**Sn**	**07 49 60.0**	**+1.3**
	4.2nm,0.3s,baz=111,slow=23,SNR=1.9						
	19nm,0.2s						
SIJI	**Sorong**	**4.46**	**139**	P	**Pn**	**07 49 12.4**	**+4.4**
SANI	**Sanana**	**5.11**	**207**	P	**Pn**	**07 49 19.1**	**+2.1**
	0.2nm55nm,0.7s						
GTOI	**Gorontalo**	**5.65**	**251**	P	**Pn**	**07 49 26.5**	**+2.2**
	0.3nm825nm43nm,0.7s						
FAKI	**Fak Fak**	**6.67**	**144**	Pn	**Pn**	**07 49 41.4**	**+3.1**
MRSI	**Marisa**	**6.71**	**253**	P	**Pn**	**07 49 39.7**	**+0.8**
TOLI2	**Tolitoli**	**7.68**	**260**		**Pn**	**07 49 52.9**	**+0.6**
KAPI	**Kappang**	**11.39**	**229**	LR	LR	07 54 48.8	
	comp=Z,45nm,19.5s,baz=250,slow=38						
MTN	**Manton Dam**	**15.51**	**170**	Pn	**Pn**	**07 51 38.2**	**-0.3**
MTN				IAmb	IAmb	07 52 15.4	
	comp=Z,9.7nm,1.3s						
KNRA	**Kununurra**	**18.09**	**179**	P	**P**	**07 52 09.4**	**-1.1**
WB0	**Warramunga Arr**	**22.93**	**165**		**P**	**07 53 02.2**	**-0.8**
WB0				IAmb	IAmb	07 53 03.5	
	comp=Z,6.0nm,0.5s						
WRAB	**Tennant Creek**	**23.08**	**165**		**P**	**07 53 03.4**	**-1.1**
WRAB				IAmb	IAmb	07 53 35.3	
	comp=Z,7.8nm,1.0s						
WRA	**Warramunga Arr**	**23.09**	**165**	P	**P**	**07 53 03.3**	**-1.2**
	comp=Z,5.0nm,0.5s,baz=344,slow=10,SNR=40						
	comp=Z,5.0nm,0.5s						
WRA	**Warramunga Arr**	**23.09**	**165**		**P**	**07 53 02.5**	**-2.0**
WR8	**Warramunga Arr**	**23.14**	**165**		**P**	**07 53 04.3**	**-0.8**
WR8				IAmb	IAmb	07 53 04.4	
	comp=Z,7.0nm,0.7s						
ASAR	**Alice Springs**	**26.59**	**169**	P	**P**	**07 53 35.4**	**-1.2**
	comp=Z,0.5nm,0.5s,baz=351,slow=7.9,SNR=13						
	comp=Z,0.5nm,0.5s						
FORT	**Forrest**	**33.12**	**180**	P	P	07 54 32.3	-2.0
FORT				IAmb	IAmb	07 54 32.4	
	comp=Z,7.3nm,0.9s						
BBOO	**Buckleboo**	**35.89**	**169**	P	**P**	**07 54 57.0**	**-1.3**
STKA	**Stephens Creek**	**36.45**	**161**	P	**P**	**07 55 02.2**	**-0.8**
	comp=Z,1.9nm,0.4s,baz=348,slow=8.2,SNR=16						
	comp=Z,1.9nm,0.4s						
H11S3	**WAKE ISLAND Hy**	**40.77**	**64**	T	T	08 39 08.5	
	baz=252,slow=74						
H11S2	**WAKE ISLAND Hy**	**40.78**	**64**	T	T	08 39 08.9	
	baz=252,slow=74						
H11S1	**WAKE ISLAND Hy**	**40.79**	**64**	T	T	08 39 04.6	
	baz=252						
H11N1	**WAKE ISLAND Hy**	**41.35**	**63**	T	T	08 39 40.0	
	baz=250,slow=75,SNR=10						
H11N2	**WAKE ISLAND Hy**	**41.36**	**63**	T	T	08 39 43.8	
	baz=250,slow=75,SNR=5.7						
H11N3	**WAKE ISLAND Hy**	**41.36**	**63**	T	T	08 39 41.1	
	baz=250,slow=75,SNR=9.2						
EVN	**Everest**	**47.00**	**307**	P	**P**	**07 56 29.4**	**-0.8**
EVN				IAmb	IAmb	07 56 30.5	
	comp=Z,6.3nm,0.7s						
MKAR	**Makanchi Array**	**59.46**	**325**	P	**P**	**07 57 58.6**	**-2.2**
	comp=Z,0.6nm,0.4s,baz=117,slow=8.0,SNR=14						
	comp=Z,0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**63.62**	**327**	P	**P**	**07 58 26.9**	**-1.8**
	comp=Z,0.7nm,0.5s,baz=127,slow=6.1,SNR=10						
	comp=Z,0.7nm,0.5s						
KURK	**Kurchatov**	**63.62**	**327**	P	**P**	**07 58 26.9**	**-1.8**
KURK	**Kurchatov**	**63.62**	**327**	IAmb	IAmb	07 58 44.5	
	comp=Z,1.7nm,0.9s						
BVAR	**Borovoye Array**	**69.20**	**327**	P	P	07 59 01.8	-2.5
	comp=Z,0.3nm,0.4s,baz=116,slow=5.0,SNR=2.2						
	comp=Z,0.3nm,0.4s						

*NEIC **11** 07:58:09.7±1.8, 22.0S±0.1×176.4W±0.1, h153km±8km, mb4.6/30, Error ellipse: s-maj=19.6km s-min=14.5km az=182.0*
*IDC **11** 07:58:13.2±2.5, 22.00S×176.66W, h180km±21km, mb4.0/5, mbtmp4.4/8, MS2.6/1, Error ellipse: s-maj=27.2km s-min=20.8km az=173.0*

ISC 11 07:58:12.2±0.6, 22.0S±0.1×176.59W±0.08, h171km, n49, σ0999/43, mb4.6/18, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.60**	**309**	P	**Pn**	**07 59 48.5**	**+1.3**
	7.5nm,0.7s,baz=122,slow=18,SNR=9.9						
MSVF				S	Sn	08 00 45.1	-17
	6.1nm,0.8s,baz=160,slow=19,SNR=1.4						
MSVF	**Nonsavu**	**6.60**	**309**		**Pn**	**07 59 46.6**	**-0.6**
NIUE	**Niue**	**6.90**	**66**	Pn	Pn	07 59 44.1	-6.9
OUENC	**Ouen Island, N**	**15.35**	**265**		**Pn**	**08 01 40.8**	**+0.8**
OUENC				IAmb	IA

WRA	**Warramunga Arr**	**45.71**	**263**	P	**P**	**08 06 15.7**	**-0.8**
	comp=Z,5.9nm,0.7s,baz=100,slow=7.9,SNR=79						
	comp=Z,5.9nm,0.7s						
WRA	**Warramunga Arr**	**45.71**	**263**		**P**	**08 06 15.0**	**-1.5**
FORT	**Forrest**	**49.92**	**248**		**P**	**08 06 48.1**	**-0.6**
FORT				IAmb	IAmb	08 06 48.9	
	comp=Z,14nm,0.7s						
KNRA	**Kununurra**	**51.88**	**267**		**P**	**08 07 03.4**	**-0.1**
KNRA				IAmb	IAmb	08 07 03.9	
	comp=Z,8.1nm,0.8s						
VNDA	**Vanda**	**56.53**	**185**	P	**P**	**08 07 37.4**	**+1.2**
VNDA				IAmb	IAmb	08 07 52.9	
	comp=Z,6.6nm,1.3s						
SOEI	**Soe**	**57.86**	**272**		**P**	**08 07 46.3**	**-0.4**
QSPA	**South Pole Qui**	**68.06**	**180**	P	**P**	**08 08 53.2**	**0.0**
	comp=Z,4.3nm,0.9s,baz=44,slow=7.5,SNR=7.3						
	comp=Z,4.3nm,0.9s						
QSPA	**South Pole Qui**	**68.06**	**180**	P	**P**	**08 08 53.9**	**+0.7**
QSPA				IAmb	IAmb	08 09 02.2	
	comp=Z,8.3nm,1.4s						
BELA	**Belgrano 2**	**77.89**	**172**	P	**P**	**08 09 50.1**	**-0.4**
H03S2	**Juan Fernandez**	**84.06**	**124**	T	T	09 43 01.6	
	baz=244						
H03S1	**Juan Fernandez**	**84.07**	**124**	T	T	09 42 47.0	
	baz=244						
H03S3	**Juan Fernandez**	**84.08**	**124**	T	T	09 42 48.5	
	baz=244						
H03N2	**Juan Fernandez**	**84.20**	**124**	T	T	09 42 52.8	
	baz=240						
H03N3	**Juan Fernandez**	**84.20**	**124**	T	T	09 42 51.0	
	baz=240,slow=74						
H03N1	**Juan Fernandez**	**84.22**	**124**	T	T	09 42 59.8	
	baz=240,slow=74						
MOOW	**Moose Ponds**	**88.95**	**41**		**P**	**08 10 46.7**	**-0.9**
ILAR	**Eielson Array**	**89.50**	**12**	P	**P**	**08 10 48.5**	**-0.9**
	comp=Z,0.4nm,0.8s,baz=218,slow=5.1,SNR=6.0						
	comp=Z,0.4nm,0.8s						
BRTR	**Keskin Array B**	**148.82**	**311**	PKPbc	**PKPbc**	**08 17 39.0**	**-0.9**
	comp=Z,1.1nm,0.6s,baz=103,slow=4.3,SNR=5.8						

*ISK **11** 07:58:16.6,38.30N×38.76E,h9km,ML2.5/5*
*AFAD **11** 07:58:17.5,38.34N×38.78E,h7km±2km,ML1.8*
ISC 11 07:58:17.1±1.1,38.32N±0.04×38.73E±0.05,h5km±13km, n11,σ0s94/20,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDYL	**Doganyol-Malat**	**0.24**	**90**	Pg	**Pg**	**07 58 21.9**	**+0.1**
MDYL				Sg	**Sg**	**07 58 25.2**	**+0.2**
MAYA	**Malatya/Merkez**	**0.24**	**272**	P	**Pb**	**07 58 23.6**	**+1.7**
MAYA				S	**Sb**	**07 58 27.8**	**+2.7**
MAYA				IAML		07 58 28.0	
	comp=N,719nm,0.1s						
MAYA				IAML		07 58 28.0	
	comp=E,420nm,0.1s						
ELZG	**Elazig**	**0.27**	**47**	P	**Pg**	**07 58 22.4**	**-0.1**
ELZG				S	**Sg**	**07 58 26.0**	**-0.1**
ELZG				IAML		07 58 26.0	
	comp=N,486nm,0.2s						
ELZG				IAML		07 58 26.0	
	comp=E,473nm,0.1s						
SVRC	**Sivrice-ELAZID**	**0.46**	**82**	Pg	**Pg**	**07 58 25.6**	**-0.3**
SVRC				Sg	**Sg**	**07 58 31.9**	**0.0**
CNGT	**ngs**	**0.46**	**103**	P	**Pg**	**07 58 25.7**	**-0.3**
CNGT				S	**Sg**	**07 58 32.1**	**+0.2**
CNGT				IAML		07 58 33.0	
	comp=E,34nm,0.3s						
CNGT				IAML		07 58 35.0	
	comp=N,52nm,0.3s						
AZEY	**Adyaman-Merk**	**0.63**	**217**	P	**Pb**	**07 58 31.2**	**+0.5**
AZEY				S	**Sb**	**07 58 41.5**	**+1.6**
AZEY				IAML		07 58 43.0	
	comp=N,24nm,0.4s						
AZEY				IAML		07 58 43.0	
	comp=E,18nm,0.5s						
AKCD	**Akcadag**	**0.64**	**268**	P	**Pb**	**07 58 30.5**	**-0.3**
AKCD				S	**Sb**	**07 58 40.5**	**+0.4**
AKCD				IAML		07 58 42.0	
	comp=N,73nm,0.4s						
AKCD				IAML		07 58 42.0	
	comp=E,78nm,0.1s						
HANM	**anlurfa/Hi**	**0.74**	**171**	P	**Pn**	**07 58 33.9**	**-0.4**
HANM				S	**Sn**	**07 58 46.2**	**+0.2**
HANM				IAML		07 58 47.0	
	comp=N,56nm,0.2s						
HANM				IAML		07 58 47.0	
	comp=E,43nm,0.5s						
ARPR	**Arapgir-MALATY**	**0.84**	**338**	Pg	**Pg**	**07 58 33.5**	**+0.3**
ARPR				Sg	**Sb**	**07 58 46.1**	**+0.2**
URFA	**Urfa**	**0.88**	**175**	Pg	**Pg**	**07 58 33.3**	**-0.6**
SARI	**SarD1z-Kayseri**	**1.82**	**274**	Pn	**Pn**	**07 58 49.4**	**+0.1**

*IDC **11** 08:40:24.9±4.8,21.96N×143.26E,h263km±47km, mb3.4/13,mbtmp4.0/14,Error ellipse: s-maj=23.1km s-min=12.0km az=82.0*
ISC 11 08:40:23.5±0.9,22.0N±0.1×143.3E±0.2,h250km,n14, σ0s51/14,mb3.6/12,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**15.18**	**344**	P	**P**	**08 43 44.7**	**-0.6**
	1.7nm,0.5s,baz=102,slow=10,SNR=4.5						
KSRS	**Korea Array**	**20.36**	**323**	P	**P**	**08 44 42.0**	**+0.8**
	2.9nm,0.8s,baz=143,slow=8.7,SNR=8.7						
	2.9nm,0.8s						
SONM	**Songino Array**	**39.20**	**320**	P	**P**	**08 47 27.7**	**0.0**
	0.9nm,0.4s,baz=122,slow=7.2,SNR=8.8						
	0.9nm,0.4s						
WRA	**Warramunga Arr**	**42.56**	**192**	P	**P**	**08 47 55.4**	**+0.2**
	1.1nm,0.6s,baz=17,slow=9.0,SNR=26						
	1.1nm,0.6s						
ASAR	**Alice Springs**	**46.26**	**192**	P	**P**	**08 48 24.0**	**-0.3**
	0.3nm,0.4s,baz=16,slow=13,SNR=14						
	0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**54.06**	**322**	P	**P**	**08 49 22.0**	**-0.3**
	1.8nm,0.5s,baz=109,slow=8.2,SNR=9.4						
	1.8nm,0.5s						
MKAR	**Makanchi Array**	**54.59**	**312**	P	**P**	**08 49 26.4**	**+0.1**
	0.7nm,0.7s,baz=87,slow=8.6,SNR=7.6						
	0.7nm,0.7s						
KURBB	**Kurchatov Arra**	**57.40**	**317**	P	**P**	**08 49 46.0**	**+0.1**
	3.1nm,0.6s,baz=94,slow=7.6,SNR=15						
	3.1nm,0.6s						
ILAR	**Eielson Array**	**61.76**	**27**	P	**P**	**08 50 15.4**	**0.0**
	0.8nm,0.7s,baz=262,slow=5.3,SNR=11						
	0.8nm,0.7s						
BVAR	**Borovoye Array**	**62.53**	**319**	P	**P**	**08 50 20.9**	**+0.2**
	3.5nm,0.4s,baz=90,slow=7.2,SNR=21						
	3.5nm,0.4s						
YKA	**Yellowknife Ar**	**76.18**	**28**	P	**P**	**08 51 44.9**	**+1.0**
	0.3nm,0.5s,baz=298,slow=6.2,SNR=5.7						
	0.3nm,0.5s						
ARCES	**ARCESS Array B**	**78.70**	**341**	P	**P**	**08 51 57.2**	**-0.5**
	6.7nm,1.1s,baz=57,slow=11,SNR=2.2						
	6.7nm,1.1s						
NVAR	**Mina Array Bea**	**82.91**	**52**	P	**P**	**08 52 20.6**	**-0.3**
	0.4nm,0.7s,baz=268,slow=5.3,SNR=2.7						
	0.4nm,0.7s						
FINES	**FINESS Array B**	**82.98**	**334**	P	**P**	**08 52 19.8**	**-0.6**
	4.0nm,1.1s,baz=68,slow=5.1,SNR=6.3						
	4.0nm,1.1s						

*MAN **11** 08:45:38.0,17.54N×119.41E,h25km,MS2.3*
*IDC **11** 08:46:32.9±3.1,11.16N×122.70E,h0km,mb3.5/3, mbtmp3.5/3,Error ellipse: s-maj=318.0km s-min=26.9km az=63.0*
ISC 11 08:45:38.7±2.9,17.5N±0.3×119.4E±0.3,h32km,n5, σ0s39/6,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**1.07**	**66**	*eP*	**Pn**	**08 45 57.6**	**+0.1**
SIPP				*eS*	**Sb**	**08 46 12.4**	**-0.1**
PIP	**Pasuquin**	**1.41**	**54**	*eP*	**Pn**	**08 46 02.0**	**-0.1**
PIP				*eS*	**Sn**	**08 46 19.6**	**+0.1**
PCPS	**Palayan City**	**3.23**	**151**	*eP*	Pn	08 46 19.4	-7.8
PCPS				*eS*	Sn	08 46 50.6	-14
WRA	**Warramunga Arr**	**39.98**	**158**	P	**P**	**08 53 10.1**	**-0.5**
	0.3nm,0.8s,baz=340,slow=8.4,SNR=11						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**43.28**	**160**	P	**P**	**08 53 38.0**	**+0.4**
	0.6nm,0.6s,baz=337,slow=6.7,SNR=13						
	0.6nm,0.6s						

*NEIC **11** 09:06:14.0±0.7,20.2S×0.1×177.4W±0.1,h511km±13km, mb4.2/26,Error ellipse: s-maj=20.4km s-min=17.0km az=98.0*
*IDC **11** 09:06:14.3±2.3,20.30S×177.59W,h502km±23km,mb3.5/6, mbtmp4.4/9,Error ellipse: s-maj=27.5km s-min=22.1km az=57.0*
ISC 11 09:06:13.4±0.6,20.06S±0.09×177.53W±0.07,h500km, n75,σ1s84/78,mb4.2/19,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.78**	**298**	P	**P**	**09 07 41.1**	**+2.5**
	22nm,0.4s,baz=242,slow=21,SNR=75						
MSVF	**Nonsavu**	**4.78**	**298**	P	**P**	**09 07 40.8**	**+2.2**
FUTU	**Fugatoga**	**5.75**	**354**	P	**P**	**09 07 49.4**	**+2.0**
NIUE	**Niue**	**7.23**	**84**	P	**P**	**09 08 02.1**	**+0.1**
NIUE	**Niue**	**7.23**	**84**	P	**P**	**09 08 02.3**	**+0.4**
NIUE				P	**S**	**09 09 37.3**	**+6.4**
AFI	**Afiamalu**	**8.22**	**43**	P	**P**	**09 08 11.3**	**-1.0**
	45nm,0.7s,baz=21,slow=2.9,SNR=10						
AFI				S	**S**	**09 09 43.8**	**-5.9**
	73nm,0.6s,baz=63,slow=23,SNR=9.6						
MARNC	**Mare, Loyalty**	**13.58**	**261**	P	**P**	**09 09 09.1**	**+0.4**
DZM	**Mont Dzumac**	**15.10**	**260**	P	**P**	**09 09 24.6**	**-0.1**
	4.3nm,0.6s,baz=85,slow=17,SNR=12						
SANVU	**Saraoutou**	**15.25**	**285**	P	**P**	**09 09 27.4**	**+1.1**
OUZ	**Omahuta**	**17.01**	**206**	P	**P**	**09 09 45.0**	**+0.7**
WCZ	**Waipu Caves**	**17.36**	**203**	P	**P**	**09 09 48.3**	**+0.6**
WMGZ	**Waiomatatini S**	**18.05**	**190**	P	**P**	**09 09 52.4**	**-1.6**
ETAZ	**East Tamaki Re**	**18.08**	**200**	P	**P**	**09 09 55.7**	**+1.4**
HAZ	**Te Kaha**	**18.10**	**192**	P	**P**	**09 09 52.6**	**-1.9**
HAZ				S	**S**	**09 12 55.4**	**+0.6**
MKAZ	**Moumakai**	**18.14**	**199**	P	**P**	**09 09 55.1**	**+0.2**
PKGZ	**Pakihiroa**	**18.15**	**191**	P	**P**	**09 09 53.9**	**-1.1**
RUGZ	**Raukumara Rang**	**18.32**	**192**	P	**P**	**09 09 56.8**	**+0.1**
TWGZ	**Tauwhareparae**	**18.47**	**191**	P	**P**	**09 09 56.9**	**-1.0**
TOZ	**Tahuroa Road**	**18.63**	**198**	P	**P**	**09 09 59.6**	**+0.3**
MWZ	**Matawai**	**18.71**	**192**	P	**P**	**09 09 57.7**	**-2.4**
URZ	**Urewera**	**18.73**	**193**	P	**P**	**09 09 57.0**	**-3.2**
	8.8nm,0.3s,baz=325,slow=2.8,SNR=19						
URZ	**Urewera**	**18.73**	**193**	P	**P**	**09 09 57.2**	**-3.0**
MUGZ	**Murupara**	**19.01**	**194**	P	**P**	**09 10 00.1**	**-2.7**
RIGZ	**Rimuhau**	**19.03**	**191**	P	**P**	**09 10 01.2**	**-1.8**
HRRZ	**Handcock Road**	**19.04**	**195**	P	**P**	**09 10 01.8**	**-1.3**
PRRZ	**Plateau Road**	**19.12**	**195**	P	**P**	**09 10 01.8**	**-2.0**
SNGZ	**Shannon Statio**	**19.18**	**192**	P	**P**	**09 10 02.2**	**-2.2**
MTHZ	**Maungataniwha**	**19.35**	**193**	P	**P**	**09 10 04.0**	**-2.0**
RAHZ	**Arahi**	**19.36**	**193**	P	**P**	**09 10 04.0**	**-2.0**
HIZ	**Hauiti**	**19.54**	**198**	P	**P**	**09 10 08.4**	**+0.8**
NMHZ	**Naumai**	**19.59**	**193**	P	**P**	**09 10 05.9**	**-2.3**
RITZ	**Rihia Road**	**19.70**	**195**	P	**P**	**09 10 07.0**	**-2.2**
BKZ	**Black Stump Fm**	**19.73**	**194**	P	**P**	**09 10 05.6**	**-3.8**
KATZ	**Kakaramea**	**19.74**	**196**	P	**P**	**09 10 08.7**	**-0.9**
TMVZ	**Te Maari**	**19.87**	**196**	P	**P**	**09 10 09.1**	**-1.7**
ETVZ	**East Tongariro**	**19.89**	**196**	P	**P**	**09 10 08.8**	**-2.1**
WTVZ	**West Tongariro**	**19.90**	**196**	P	**P**	**09 10 09.1**	**-2.0**
OTVZ	**Oturere**	**19.93**	**196**	P	**P**	**09 10 08.3**	**-3.0**
MCHZ	**McNeill Hill**	**19.95**	**193**	P	**P**	**09 10 08.9**	**-2.5**
SNVZ	**South Ngauruho**	**19.95**	**196**	P	**P**	**09 10 09.6**	**-2.0**
KWHZ	**Kaweka Forest**	**19.99**	**194**	P	**P**	**09 10 09.0**	**-2.9**
MOVZ	**Moawhango**	**20.13**	**195**	P	**P**	**09 10 10.6**	**-2.6**
KRHZ	**Kereru**	**20.21**	**194**	P	**P**	**09 10 11.2**	**-2.6**
LHI	**Lord Howe Isla**	**23.91**	**237**	P	**P**	**09 10 47.4**	**+0.2**
EIDS	**Eidsvold**	**29.39**	**254**	P	**P**	**09 11 35.3**	**-0.3**
EIDS				IAmb	IAmb	09 11 54.8	
	comp=Z,14nm,1.1s						
ARMA	**Armidale**	**29.66**	**244**	P	**P**	**09 11 38.4**	**+0.4**
ARMA				IAmb	IAmb	09 11 38.6	
	comp=Z,14nm,1.1s						
CAN	**Canberra**	**33.12**	**236**	P	**P**	**09 12 07.2**	**-0.3**
CAN				IAmb	IAmb	09 12 07.8	
	comp=Z,5.4nm,0.8s						
CTAO	**Charters Tower**	**33.98**	**264**	P	**P**	**09 12 15.0**	**+0.1**
TOO	**Toolangi**	**36.51**	**233**	P	**P**	**09 12 35.4**	**-0.5**
COEN	**Coen**	**38.00**	**273**	P	**P**	**09 12 48.1**	**-0.2**
COEN				IAmb	IAmb	09 12 51.1	
	comp=Z,12nm,1.1s						
STKA	**Stephens Creek**	**38.38**	**244**	P	**P**	**09 12 51.0**	**-0.3**
	comp=Z,6.8nm,0.8s,baz=87,slow=11,SNR=18						
	comp=Z,6.8nm,0.8s						
STKA	**Stephens Creek**	**38.38**	**244**		**P**	**09 12 51.2**	**0.0**
BBOO	**Buckleboo**	**43.14**	**243**	P	**P**	**09 13 28.7**	**-0.5**
BBOO				IAmb	IAmb	09 13 29.3	
	comp=Z,8.5nm,0.7s						
WR8	**Warramunga Arr**	**44.95**	**262**		**P**	**09 13 42.9**	**-0.6**
WR8				IAmb	IAmb	09 13 45.1	
	comp=Z,6.5nm,1.1s						
AS31	**Alice Springs**	**45.05**	**256**		**P**	**09 13 44.1**	**-0.1**
AS31				IAmb	IAmb	09 13 45.3	
	comp=Z,4.4nm,1.0s						
ASAR	**Alice Springs**	**45.05**	**256**	P	**P**	**09 13 44.0**	**-0.3**
	comp=Z,13nm,0.8s,baz=100,slow=7.8,SNR=163						
	comp=Z,13nm,0.8s						
ASAR	**Alice Springs**	**45.05**	**256**	P	**P**	**09 13 44.1**	**-0.2**
WB0	**Warramunga Arr**	**45.08**	**262**		**P**	**09 13 44.0**	**-0.4**
WB0				IAmb	IAmb	09 13 45.3	
	comp=Z,6.4nm,1.0s						
WRA	**Warramunga Arr**	**45.10**	**262**	P	**P**	**09 13 43.9**	**-0.7**
	comp=Z,2.5nm,0.5s,baz=98,slow=8.0,SNR=75						
	comp=Z,2.5nm,0.5s						
WRA	**Warramunga Arr**	**45.10**	**262**		**P**	**09 13 43.9**	**-0.7**
MTN	**Manton Dam**	**49.60**	**270**	P	**P**	**09 14 18.5**	**-0.1**
MTN				IAmb	IAmb	09 14 31.8	
	comp=Z,5.5nm,1.1s						
FORT	**Forrest**	**49.88**	**246**	P	**P**	**09 14 19.9**	**-0.5**
FORT				IAmb	IAmb	09 14 27.9	
	comp=Z,14nm,1.1s						
KNRA	**Kununurra**	**51.13**	**266**	P	**P**	**09 14 29.9**	**+0.1**
PSA00	**Pilbara Seismi**	**58.20**	**257**	P	**P**	**09 15 18.4**	**-1.0**
PSA00	**Pilbara Seismi**	**58.20**	**257**	P	**P**	**09 15 19.1**	**-0.3**
PSA00				IAmb	IAmb	09 15 19.3	
	comp=Z,7.5nm,0.7s						
SBA	**Scott Base**	**58.34**	**184**	P	**P**	**09 15 18.2**	**-1.2**
MBWA	**Marble Bar**	**58.38**	**257**	P	**P**	**09 15 20.0**	**-0.6**
MBWA				IAmb	IAmb	09 15 20.8	
	comp=Z,8.6nm,0.8s						
VNDA	**Vanda**	**58.39**	**185**	P	**P**	**09 15 18.9**	**-0.8**
MORW	**Morawa**	**60.41**	**247**	P	**P**	**09 15 33.6**	**-0.5**
MORW				IAmb	IAmb	09 15 34.2	
	comp=Z,8.4nm,0.9s						
GIRL	**Giralia**	**63.09**	**254**	P	**P**	**09 15 50.3**	**-1.5**
CASY	**Casey**	**64.55**	**205**	P	**P**	**09 15 59.5**	**-0.8**
QSPA	**South Pole Qui**	**70.01**	**180**	P	**P**	**09 16 34.2**	**+0.2**
	comp=Z,6.0nm,0.7s,baz=19,slow=5.4,SNR=24						
	comp=Z,6.0nm,0.7s						
QSPA	**South Pole Qui**	**70.01**	**180**		**P**	**09 16 34.4**	**+0.3**
QSPA				IAmb	IAmb	09 16 35.4	
	comp=Z,6.3nm,0.8s						
ILAR	**Eielson Array**	**87.79**	**13**	P	**P**	**09 18 08.6**	**+0.3**
	comp=Z,0.3nm,0.9s,baz=224,slow=6.0,SNR=4.3						
	comp=Z,0.3nm,0.9s						
CMAR	**Chiang Mai Arr**	**90.38**	**289**	P	**P**	**09 18 23.6**	**+2.2**
	comp=Z,0.6nm,0.3s,baz=112,slow=4.0,SNR=5.0						
	comp=Z,0.6nm,0.3s						

*ISK **11** 09:15:38.4,35.76N×28.33E,h5km,ML2.8/11*
*AFAD **11** 09:15:39.6,35.79N×28.10E,h8km±3km,ML2.4*
ISC 11 09:15:39.7±1.8,35.77N±0.06×28.20E±0.03,h6km±12km, n19,σ1s15/29,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.45**	**353**	Pg	**Pb**	**09 15 48.8**	**-1.3**
ARG				Sg	**Sb**	**09 15 56.9**	**-0.1**
KARP	**Karpathos**	**0.87**	**256**	Pg	**Pn**	**09 15 57.7**	**-0.8**
KARP				Sg	**Sn**	**09 16 13.3**	**+1.8**
TURN	**Turunc**	**1.00**	**2**	Pg	**Pb**	**09 15 59.0**	**-0.5**
TURN	**Turunc**	**1.00**	**2**	P	**Pn**	**09 15 59.1**	**-1.2**
TURN				S	**Sn**	**09 16 15.9**	**+1.1**
TURN				IAML		09 16 20.0	
	comp=E,79nm,0.4s						
TURN				IAML		09 16 21.0	
	comp=N,95nm,0.4s						
IZZE	**Mula-Seydike**	**1.07**	**51**	P	**Pn**	**09 16 01.1**	**-0.2**
IZZE				S	**Sn**	**09 16 17.3**	**+0.9**
IZZE				IAML		09 16 20.0	
	comp=E,210nm,0.4s						
IZZE				IAML		09 16 24.0	
	comp=N,299nm,0.5s						
DATC	**Datca-Mugla**	**1.08**	**337**	Pn	**Pn**	**09 16 01.0**	**-0.4**
DAT	**Datca**	**1.08**	**333**	Pn	**Pn**	**09 16 01.3**	**-0.2**
DALY	**Dalyan (Mula)**	**1.11**	**19**	Pn	**Pb**	**09 16 00.4**	**-0.9**
SABU	**Mula-Dalaman**	**1.22**	**30**	P	**Pn**	**09 16 02.5**	**-0.9**
SABU				S	**Sn**	**09 16 20.8**	**+0.5**
SABU				IAML		09 16 23.0	
	comp=E,88nm,0.4s						
SABU				IAML		09 16 29.0	
	comp=N,84nm,0.4s						
AKAS	**Kas**	**1.23**	**68**	P	**Pn**	**09 16 03.9**	**+0.3**
AKAS				S	**Sn**	**09 16 22.7**	**+2.0**
AKAS				IAML		09 16 35.0	
	comp=E,143nm,0.6s						
YER	**Yerkesik**	**1.36**	**3**	Pn	**Pg**	**09 16 05.7**	**-0.2**
BODT	**Bodrum**	**1.48**	**331**	Pn	**Pg**	**09 16 08.2**	**+0.2**
BODT				Sn	**Sg**	**09 16 29.8**	**+2.6**
YKAV	**Yalikavak-Bodr**	**1.54**	**332**	Pn	**Pg**	**09 16 09.1**	**-0.2**
KNIK	**Mula-Seydike**	**1.55**	**46**	P	**Pg**	**09 16 08.8**	**-0.6**
KNIK				S	**Sg**	**09 16 31.4**	**+2.0**
KNIK				IAML		09 16 34.0	
	comp=E,32nm,0.7s						
MLSB	**Milas**	**1.56**	**348**	Pn	**Pg**	**09 16 09.0**	**-0.7**
DNZT	**Denizli-Tavas-**	**1.65**	**24**	P	**Pg**	**09 16 11.1**	**-0.3**
DNZT				S	**Sg**	**09 16 33.6**	**+0.8**
DNZT				IAML		09 16 44.0	
	comp=N,27nm,0.4s						
AKUM	**Antalya-Kumluc**	**1.83**	**72**	P	**Pn**	**09 16 11.2**	**-0.4**
AKUM				S	**Sb**	**09 16 36.0**	**-0.7**
AKUM				IAML		09 17 08.0	
	comp=E,22nm,1.2s						
GCAM	**G?zelcaml?**	**2.08**	**338**	Pn	**Pb**	**09 16 16.9**	**-0.9**
AYDB	**Zeytinkoy-Aydi**	**2.19**	**354**	Pn	**Pb**	**09 16 17.9**	**-1.9**

*SDD **11** 09:19:05.5±0.8,18.82N×71.76W,h23km±7km,MD3.0, ML2.6,MW3.2,Presumed earthquake*
*OSPL **11** 09:19:07.0±1.0,18.67N×71.61W,h21km±4km,ML1.9, Presumed earthquake*
ISC 11 09:19:06.0±1.2,18.70N±0.04×71.63W±0.03,h17km±10km, n11,σ0s58/19,10C,Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LONE3	**El Aguacate, B**	**0.19**	**119**	*i* P	**Pg**	**09 19 10.8**	**-0.1**
LONE3				*e*S	**Sb**	**09 19 14.9**	**+0.4**
LONE3				IAML		09 19 15.9	
	comp=Z,102nm,0.4s						
JIDR	**Jimani**	**0.29**	**226**	↑*e*Pg	**Pg**	**09 19 12.3**	**0.0**
JIDR				↑*e*Sg	**Sb**	**09 19 18.1**	**+0.8**
JIDR				IAML		09 19 18.2	
	comp=N,2μm,0.2s						
LODU1	**El Espartillar**	**0.37**	**156**	*i* P	**Pg**	**09 19 13.7**	**-0.1**
LODU1				IAML		09 19 24.3	
	comp=Z,137nm,0.5s						
SDDR	**Presa de Saban**	**0.43**	**49**	↑*e*Pg	**Pg**	**09 19 14.9**	**0.0**
SDDR				↑*e*Sg	**Sb**	**09 19 21.4**	**-0.1**
SDDR				IAML		09 19 31.4	
	comp=N,49nm,1.0s						
SDDR	**Presa de Saban**	**0.43**	**49**	*i* P	**Pb**	**09 19 15.1**	**-0.2**
SDDR				*e*S	**Sb**	**09 19 21.7**	**+0.2**
SDDR				IAML		09 19 24.5	
	comp=Z,40nm,0.2s						
PAPH	**Port-au-Prince**	**0.66**	**255**	*i* P	**Pg**	**09 19 18.5**	**-0.5**
PAPH				*e*S	**Sb**	**09 19 28.7**	**+0.8**
PAPH				IAML		09 19 29.3	
	comp=Z,52nm,0.1s						
LOBH	**Bahia de las A**	**0.83**	**180**	*i* P	**Pb**	**09 19 21.3**	**-0.7**
LOBH				IAML		09 19 40.0	
	comp=Z,68nm,3.6s						
LOVI	**El Cajuil, Ovi**	**0.93**	**164**	*i* P	**Pb**	**09 19 22.9**	**-0.8**
LOVI				IAML		09 19 36.8	
	comp=Z,74nm,1.1s						
BANI	**BANI**	**1.25**	**104**	↑*e*Pg	**Pn**	**09 19 29.0**	**+0.2**
BANI				IAML		09 19 47.1	
	comp=N,123nm,4.1s						
BANI				↑*e*Sg	**Sg**	**09 19 47.2**	**+0.7**
DR08	**Loma La Naviza**	**1.55**	**80**	↑*e*Pg	**Pb**	**09 19 33.9**	**-0.4**
DR08				↑*e*Sg	**Sb**	**09 19 53.5**	**-0.1**
DR08				IAML		09 19 58.1	
	comp=N,170nm,0.2s						
HATOM	**Hato Mayor del**	**2.14**	**87**	↑*e*Pg	**Pb**	**09 19 43.3**	**-1.0**
HATOM				↑*e*Sg	**Sb**	**09 20 11.1**	**+0.6**
HATOM				IAML		09 20 21.1	
	comp=N,28nm,2.9s						

*AZER **11** 09:36:51.5,38.48N×44.37E,h5km,ml2.9*
*AFAD **11** 09:36:51.3,38.48N×44.45E,h6km±1km,ML2.9*
*TEH **11** 09:36:52.9,38.52N×44.39E,h6km±121km,ML2.8, Presumed earthquake*
*ISK **11** 09:36:57.1,38.65N×44.24E,h17km,ML2.8/6*
ISC 11 09:36:53.4±1.2,38.52N±0.03×44.39E±0.02,h2km±10km, n32,σ1s64/50,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.34**	**295**	P	**Pg**	**09 36 59.8**	**-0.3**
OZAP				S	**Sg**	**09 37 05.7**	**+1.1**
OZAP				IAML		09 37 12.0	
	comp=N,2μm,0.6s						
TVAN	**Van**	**0.77**	**271**	P	**Pg**	**09 37 07.0**	**-1.2**
TVAN				S	**Sb**	**09 37 19.4**	**-1.3**
TVAN				IAML		09 37 27.0	
	comp=N,615nm,0.5s						
TVAN				IAML		09 37 28.0	
	comp=E,473nm,0.4s						
VANB	**Van**	**0.79**	**276**	Pg	**Pn**	**09 37 10.6**	**-1.0**
VANB				Sg	**Sb**	**09 37 20.5**	**-0.6**
VMUR

GDB	**GEDABAY**	**2.44**	**25**	P		**Pb**	**09 37 37.8**	**-0.3**
GDB				S		**Sg**	**09 38 12.9**	**+1.1**
SVAN	**Silvan-Diyarba**	**2.54**	**263**	Pn		**Pb**	**09 37 37.4**	**-2.3**
GANJ	**Ganja**	**2.60**	**34**	P		**Pb**	**09 37 40.3**	**-0.4**
GANJ				S		**Sg**	**09 38 16.2**	**-0.6**
QZX	**Qazax, Azerbai**	**2.65**	**16**	P		**Pb**	**09 37 39.9**	**-1.6**
QZX				S		**Sb**	**09 38 15.5**	**+1.1**
LRK	**Lerik**	**3.10**	**86**	P		**Pb**	**09 37 46.3**	**-2.9**
LRK				S		**Sb**	**09 38 26.1**	**-1.4**

*IDC **11** 09:40:44.0±1.1,29°.32N×130°.35E, h0km, mb3.7/7, mbtmp3.6/12, ML3.3/5, MS3.2/6, Error ellipse: s-maj=31.2km s-min=15.7km az=89.0*

*NIED **11** 09:40:47.2, 29°.29N×130°.59E, h20km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.25; $M_{\theta\theta}$0.66; $M_{\phi\phi}$-0.41; $M_{r\theta}$3.70; $M_{\theta\phi}$-0.44; $M_{\phi r}$5.76; Fault plane solution: $M_0$6.86000×10^{14} NP1: ϕ_s134.00000°, δ3.00000°, λ11.00000°. NP2:ϕ_s33.00000°, δ90.00000°, λ93.00000°.*

*JMA **11** 09:40:47.2±0.2, 29°.3N±0°.6×130°.6E±0°.8, h20km, MV3.5/18, NEAR AMAMI-OSHIMA ISLAND*

ISC 11 09:40:48.3±0.9, 29°.31N±0°.05×130°.50E±0°.08, h34km, n25, σ0^{s}93/28, mb3.6/7, MS3.5/3, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNN	**Nakanoshima**	**0.76**	**315**	P	**Pb**	**09 41 02.6**	**-0.6**
JNN				A	A	09 41 02.6	
	comp=N,18nm,0.9s,comp=E,18nm,0.3s						
JNN				S	**Sb**	**09 41 13.9**	**+0.7**
JYAK	**Yakushimahirau**	**0.93**	**1**	P	**Pb**	**09 41 05.0**	**-0.9**
JYAK				*eS*	**Sb**	**09 41 18.4**	**+0.4**
JTAJ	**Takarajima**	**1.14**	**263**	P	**Pb**	**09 41 09.6**	**+0.1**
JMTN	**Minamitane**	**1.14**	**18**	P	**Pn**	**09 41 08.0**	**+0.1**
JKC	**Kuchinoerabu**	**1.18**	**347**	*eP*	**Pn**	**09 41 08.6**	**+0.2**
JAM	**Amami Oshima**	**1.19**	**221**	P	**Pn**	**09 41 09.6**	**+1.1**
JTN	**Tanegashima 3**	**1.41**	**17**	P	**Pn**	**09 41 11.6**	**+0.1**
JAMN	**Amaminishikomi**	**1.57**	**228**	P	**Pn**	**09 41 14.9**	**+1.1**
JTSR	**Tashiro 2**	**1.89**	**11**	*eP*	**Pn**	**09 41 19.5**	**+1.4**
JTK	**Tokunoshima**	**2.04**	**222**	*eP*	**Pn**	**09 41 21.7**	**+1.5**
JTK				*eS*	**Sb**	**09 41 47.6**	**-2.0**
JYRO	**Yoronjima**	**2.90**	**219**	P	**Pn**	**09 41 32.8**	**+0.7**
JOW	**Kunigami**	**3.15**	**219**	Pn	**Pn**	**09 41 36.1**	**+0.6**
	comp=E,6.7nm,0.3s,baz=299,slow=29,SNR=9.4						
JOW				Sn	**Sn**	**09 42 11.3**	**-0.7**
	comp=E,7.0nm,0.3s,baz=145,slow=29,SNR=1.9 comp=E,12nm,0.2s						
JNU	**Nakatsue**	**3.81**	**5**	Pn	**Pn**	**09 41 45.8**	**+1.1**
	comp=E,3.9nm,0.3s,baz=176,slow=21,SNR=46						
JNU				Sn	**Sn**	**09 42 27.8**	**-0.6**
	comp=E,1.2nm,0.3s,baz=231,slow=7.3,SNR=3.9 comp=E,9.1nm,0.3s						
KSRS	**Korea Array**	**8.40**	**346**	Pn	**Pn**	**09 42 47.8**	**+0.2**
	comp=E,0.2nm,0.3s,baz=174,slow=14,SNR=4.2						
KSRS				LR	LR	09 46 21.9	
	comp=E,84nm,18.4s,baz=150,slow=40 comp=E,0.8nm,0.5s						
MJAR	**Matsushiro Arr**	**9.69**	**40**	Pn	**Pn**	**09 43 06.0**	**+0.6**
	comp=E,0.1nm,0.3s,baz=240,slow=15,SNR=2.9 comp=E,0.6nm,0.4s						
ASAJ	**Asahikawa**	**17.65**	**30**	LR	LR	09 51 35.5	
	comp=E,64nm,19.9s,baz=348,slow=37						
KLR	**Kul'dur**	**19.92**	**2**	P	**P**	**09 45 15.7**	**-1.2**
	comp=E,0.2nm,0.3s,baz=205,slow=11,SNR=4.1						
KLR				LR	LR	09 52 34.5	
	comp=E,48nm,19.6s,baz=226,slow=36 comp=E,0.8nm,0.4s						
SONM	**Songino Array**	**26.23**	**322**	P	**P**	**09 46 20.0**	**-0.1**
	comp=E,0.8nm,0.5s,baz=138,slow=9.9,SNR=4.2 comp=E,0.8nm,0.5s						
CMAR	**Chiang Mai Arr**	**30.71**	**257**	LR	LR	09 59 18.9	
	comp=E,21nm,19.9s,baz=85,slow=36						
MKAR	**Makanchi Array**	**41.08**	**309**	P	**P**	**09 48 28.2**	**-0.4**
	comp=E,0.3nm,0.5s,baz=89,slow=12,SNR=5.1 comp=E,0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**44.09**	**314**	P	**P**	**09 48 52.8**	**-0.3**
	comp=E,0.8nm,0.5s,baz=95,slow=8.7,SNR=8.4						
KURBB				LR	LR	10 08 35.8	
	comp=E,74nm,19.0s,baz=168,slow=38 comp=E,0.8nm,0.5s						
NRIK	**Noril'sk**	**46.98**	**341**	P	**P**	**09 49 16.6**	**+1.0**
	comp=E,1.2nm,0.4s,baz=84,slow=9.2,SNR=4.5 comp=E,1.2nm,0.4s						
WRA	**Warramunga Arr**	**49.10**	**175**	P	**P**	**09 49 32.8**	**+0.2**
	comp=E,0.4nm,0.6s,baz=355,slow=8.1,SNR=5.5 comp=E,0.4nm,0.6s						
BVAR	**Borovoye Array**	**49.38**	**316**	P	**P**	**09 49 33.3**	**-1.1**
	comp=E,0.8nm,0.6s,baz=92,slow=10,SNR=5.3						
BVAR				LR	LR	10 12 30.9	
	comp=E,52nm,20.7s,baz=133,slow=39 comp=E,0.8nm,0.6s						
ASAR	**Alice Springs**	**52.77**	**176**	P	**P**	**09 50 01.4**	**+1.3**
	comp=E,0.3nm,0.8s,baz=11,slow=14,SNR=7.7 comp=E,0.3nm,0.8s						

*NEIC **11** 09:48:42.1±0.4, 33°.64S±0°.06×178°.0W±0°.2, h10km±2km, mb4.2/13, Error ellipse: s-maj=28.8km s-min=6.8km az=105.0*

*IDC **11** 09:48:43.7±3.0, 32°.45S×178°.45W, h0km, mb4.2/2, mbtmp4.1/3, ML3.7/1, Error ellipse: s-maj=67.2km s-min=35.6km az=114.0*

*WEL **11** 09:48:44.1±1.0, 33°.S±6°.×17°.8W±1°.8, h100km, M4.6/9, mB4.4/5, ML4.6/12, MLv4.6/9, Mw(mB)3.5/1, Error ellipse: s-maj=24.4km s-min=4.2km az=107.6, confirmed*

ISC 11 09:48:41.2±1.5, 32°.61S±0°.08×177.6W±0°.2, h21km, n43, σ1^{s}40/51, mb4.3/8, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.35**	**355**	P	**Pn**	**09 49 32.2**	**-0.1**
GLKZ				S	**Sn**	**09 50 10.5**	**-0.9**
RAO	**Raoul Island**	**3.36**	**355**	Pn	Pb	09 49 47.4	+7.3
MXZ	**Matakaoa Point**	**5.96**	**213**	P	**Pn**	**09 50 09.7**	**+1.6**
PKGZ	**Pakihiroa**	**6.31**	**213**	P	**Pn**	**09 50 13.6**	**+0.6**
PKGZ				S	**Sn**	**09 51 25.2**	**+0.7**
HAZ	**Te Kaha**	**6.37**	**215**	P	**Pn**	**09 50 15.8**	**+2.1**
HAZ				S	**Sn**	**09 51 27.1**	**+1.4**
PUZ	**Puketiti**	**6.41**	**211**	P	**Pn**	**09 50 15.2**	**+0.9**
PUZ				S	**Sn**	**09 51 26.1**	**-0.7**
RUGZ	**Raukumara Rang**	**6.58**	**214**	P	**Pn**	**09 50 18.7**	**+1.8**
RUGZ				S	**Sn**	**09 51 31.9**	**+0.7**
TWGZ	**Tauwhareparae**	**6.61**	**212**	P	**Pn**	**09 50 18.4**	**+1.2**
TWGZ				S	**Sn**	**09 51 32.7**	**+0.7**
TKGZ	**Te Karaka**	**6.89**	**211**	P	**Pn**	**09 50 22.2**	**+1.3**
TKGZ				S	**Sn**	**09 51 38.1**	**-0.5**
MWZ	**Matawai**	**6.95**	**213**	P	**Pn**	**09 50 23.1**	**+1.3**
MWZ				S	**Sn**	**09 51 39.3**	**-0.9**
URZ	**Urewera**	**7.09**	**216**	Pn	**Pn**	**09 50 25.0**	**+1.3**
	1.3nm,0.3s,baz=237,slow=4.3,SNR=16						
URZ				Sn	**Sn**	**09 51 42.0**	**-1.5**
	3.9nm,0.3s,baz=261,slow=13,SNR=11 4.6nm,0.4s						
URZ	**Urewera**	**7.09**	**216**	P	**Pn**	**09 50 24.8**	**+1.1**
URZ				S	**Sn**	**09 51 42.2**	**-1.3**
RIGZ	**Rimuhau**	**7.15**	**210**	P	**Pn**	**09 50 26.1**	**+1.5**
RIGZ				S	**Sn**	**09 51 44.2**	**-0.9**
SNGZ	**Shannon Statio**	**7.40**	**212**	P	**Pn**	**09 50 30.0**	**+2.1**
SNGZ				S	**Sn**	**09 51 50.6**	**-0.6**
MUGZ	**Murupara**	**7.43**	**216**	P	**Pn**	**09 50 30.7**	**+2.4**
RTZ	**Ruatahuna**	**7.43**	**215**	P	**Pn**	**09 50 28.8**	**+0.4**
RAHZ	**Arahi**	**7.62**	**213**	P	**Pn**	**09 50 33.6**	**+2.6**
MTHZ	**Maungataniwha**	**7.68**	**214**	S	**Sn**	**09 51 57.4**	**-0.8**
WHHZ	**Waihua**	**7.69**	**211**	S	**Sn**	**09 51 57.1**	**-1.2**
OUZ	**Omahuta**	**7.75**	**248**	P	**Pn**	**09 50 35.9**	**+3.1**
NMHZ	**Naumai**	**7.89**	**213**	S	**Sn**	**09 52 02.2**	**-1.4**
ARHZ	**Aropaoanui**	**7.94**	**212**	S	**Sn**	**09 52 04.2**	**-0.4**
BKZ	**Black Stump Fm**	**8.10**	**215**	P	**Pn**	**09 50 38.5**	**+0.9**
BKZ				S	**Sn**	**09 52 05.2**	**-3.3**
MCHZ	**McNeill Hill**	**8.22**	**212**	S	**Sn**	**09 52 09.8**	**-1.7**
SNZO	**South Karori**	**10.63**	**213**	Pn	Pn	09 50 58.9	-13
ARMA	**Armidale**	**26.27**	**267**	P	**P**	**09 54 13.7**	**-1.5**
ARMA				IAmb	IAmb	09 54 28.5	
	comp=Z,4.0nm,0.9s						
INKA	**Innaminka**	**36.16**	**267**	P	**P**	**09 55 39.5**	**-2.6**
INKA				IAmb	IAmb	09 55 58.3	
	comp=Z,1.8nm,0.8s						
AS31	**Alice Springs**	**43.36**	**269**	P	**P**	**09 56 41.3**	**-0.9**
ASAR	**Alice Springs**	**43.36**	**269**	P	**P**	**09 56 42.4**	**+0.2**
	comp=Z,2.5nm,1.0s,baz=110,slow=7.9,SNR=17 comp=Z,2.5nm,1.0s						
ASAR	**Alice Springs**	**43.36**	**269**	P	**P**	**09 56 40.9**	**-1.3**
WR0	**Warramunga Arr**	**44.37**	**274**	P	**P**	**09 56 50.2**	**-0.1**
WR0				IAmb	IAmb	09 56 52.0	
	comp=Z,3.8nm,0.8s						
WR8	**Warramunga Arr**	**44.41**	**274**	P	**P**	**09 56 50.7**	**+0.1**
WR8				IAmb	IAmb	09 56 52.6	
	comp=Z,3.8nm,0.8s						
WB2	**Warramunga Arr**	**44.54**	**274**	P	**P**	**09 56 51.6**	**0.0**
WRAB	**Tennant Creek**	**44.54**	**274**	P	**P**	**09 56 51.5**	**-0.2**
WRA	**Warramunga Arr**	**44.55**	**274**	P	**P**	**09 56 51.8**	**+0.1**
	comp=Z,3.1nm,0.7s,baz=113,slow=8.1,SNR=29 comp=Z,3.1nm,0.7s						
WB0	**Warramunga Arr**	**44.58**	**274**	P	**P**	**09 56 52.2**	**+0.3**
SBA	**Scott Base**	**45.86**	**185**	P	P	09 56 55.6	-5.8
VNDA	**Vanda**	**45.94**	**186**	P	P	09 56 55.6	-6.4
MTN	**Manton Dam**	**50.68**	**281**	P	**P**	**09 57 39.8**	**+0.5**
MTN				IAmb	IAmb	09 57 53.5	
	comp=Z,3.5nm,1.0s						
KNRA	**Kununurra**	**51.23**	**276**	P	**P**	**09 57 44.4**	**+0.9**
KNRA				IAmb	IAmb	09 58 02.2	
	comp=Z,3.5nm,1.0s						
QSPA	**South Pole Qui**	**57.50**	**180**	P	P	09 58 24.2	-4.5
FINES	**FINESS Array B**	**147.33**	**339**	PKPbc	**PKiKP**	**10 08 26.4**	**+1.8**
	comp=Z,4.4nm,0.9s,baz=46,slow=4.0,SNR=7.0						
FINES	**FINESS Array B**	**147.33**	**339**		**PKPbc**	**10 08 22.8**	**+0.4**

*KRNET **11** 10:16:55.3±0.1, 40°.95N×69°.45E, mb3.0*
*ISU **11** 10:16:57, 40°.77N×69°.66E, h11km*

ISC 11 10:17:00.3±2.1, 40°.89N±0°.03×69°.68E±0°.08, h21km±5km, n9, σ1^{s}94/16, 10C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHMG	**Chimgan**	**0.70**	**21**	P	**Pb**	**10 17 12.6**	**-1.4**
CHMG				S	**Sb**	**10 17 23.8**	**+0.5**
CHRV	**Charvak**	**0.78**	**15**	P	**Pb**	**10 17 13.9**	**-1.3**
CHRV				S	**Sb**	**10 17 25.7**	**+0.4**
CHDK	**Chadak**	**0.82**	**84**	P	**Pb**	**10 17 13.2**	**-2.7**
CHDK				S	**Sb**	**10 17 24.6**	**-1.9**
BTK	**Batken**	**1.20**	**133**	⇑*i*P	**Pb**	**10 17 21.5**	**-0.9**
BTK				⇑*i*S	**Sn**	**10 17 40.4**	**+2.7**
TRKS	**Terek-Say**	**1.27**	**59**	⇑*e*P	**Pn**	**10 17 22.0**	**-1.0**
TRKS				⇑*i*S	**Sb**	**10 17 41.2**	**+1.5**
GAR	**Garm**	**1.95**	**165**	⇑*i*P	**Pb**	**10 17 33.2**	**-2.0**
GAR				⇑*i*S	**Sb**	**10 18 01.1**	**+1.9**
DRK	**Karamyk**	**2.15**	**130**	⇑*i*P	**Pb**	**10 17 37.0**	**-1.7**
DRK				⇑*i*S	**Sb**	**10 18 07.6**	**+2.6**
KK31	**Karatay Array**	**2.29**	**15**	⇑Pg	**Pb**	**10 17 41.3**	**+0.3**
	0.9nm,0.2s,baz=177,slow=9.2,SNR=10						
KK31				⇓Lg	Lg	10 18 13.3	
	3.1nm,0.3s,baz=193,slow=27,SNR=12						
AAK	**Ala-Archa**	**4.00**	**63**	⇑Pg	**Pb**	**10 18 11.5**	**+1.3**
	0.5nm,0.5s						
AAK				⇓Lg	Lg	10 19 07.9	
	6.1nm,1.5s						

*IDC **11** 10:21:56.8±1.3, 38°.19S×75°.39W, h0km, mb3.7/2, mbtmp3.6/4, ML3.9/2, MS3.1/1, Error ellipse: s-maj=38.9km s-min=25.9km az=70.0*

*GUC **11** 10:22:01.3±0.7, 38°.42S×75°.19W, h26km±7km, ML4.0*

ISC 11 10:21:56.9±2.2, 38°.17S±0°.05×75°.06W±0°.08, h6km±12km, n22, σ1^{s}80/28, mb4.2/3, 1C-2D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BI04	**Isla Mocha**	**0.95**	**105**	*e*P	**Pn**	**10 22 18.4**	**+1.6**
BI04				*e*S	**Sn**	**10 22 32.0**	**+1.3**
LC02	**Puerto Saavedr**	**1.45**	**116**	*i* P	**Pg**	**10 22 25.3**	**+0.5**
LC02				*e*S	**Sg**	**10 22 44.1**	**+0.5**
LC02				IAML		10 22 50.6	
	comp=N,3μm,0.4s						
LR04	**Corral**	**2.13**	**144**	⇓*i*P	**Pb**	**10 22 34.5**	**-1.4**
LR04				*i* S	**Sn**	**10 22 59.1**	**-0.7**
LR04				IAML		10 23 00.9	
	comp=N,2μm,0.2s						
LR02	**Universidad Au**	**2.16**	**140**	*e*P	**Pn**	**10 22 34.8**	**+1.4**
LR02				*e*S	**Sn**	**10 22 59.7**	**-0.7**
LR02				IAML		10 23 05.5	
	comp=N,2μm,0.5s						
LC01	**Cunco**	**2.60**	**107**	*e*P	**Pb**	**10 22 42.8**	**-1.1**
LC01				*e*S	**Sn**	**10 23 12.4**	**+1.0**
LC01				IAML		10 23 17.4	
	comp=E,667nm,0.1s						
GO06	**Curarrehue**	**3.13**	**118**	⇓*i*P	**Pb**	**10 22 50.6**	**-2.5**
GO06				*e*S	**Sn**	**10 23 26.5**	**+1.7**
LR05	**Currie**	**3.14**	**132**	*e*P	**Pn**	**10 22 48.7**	**+1.8**
LR05				*e*S	**Sn**	**10 23 24.6**	**-0.1**
LR05				IAML		10 23 29.9	
	comp=E,473nm,0.2s						
BI02	**San Fabin de**	**3.37**	**65**	*e*P	**Pn**	**10 22 52.1**	**+1.9**
BI02				*e*S	**Sn**	**10 23 29.8**	**-0.7**
LL05	**Los Muermos**	**3.45**	**160**	*e*P	**Pn**	**10 22 52.2**	**+1.0**
GO05	**Hualane**	**4.04**	**40**	*e*P	**Pn**	**10 22 59.4**	**+0.1**
PLCA	**Paso Flores**	**4.33**	**128**	Pn	**Pn**	**10 23 06.8**	**+3.5**
	comp=E,2.3nm,0.3s,baz=301,slow=14,SNR=22						
PLCA				Sn	**Sb**	**10 24 01.8**	**-4.1**
	comp=E,2.1nm,0.3s,baz=11,slow=13,SNR=6.6 comp=E,2.3nm,0.3s						
BO03	**Pichilemu**	**4.44**	**35**	⇑*i*P	**Pn**	**10 23 04.2**	**-0.6**
BO02	**Sierra Bellavi**	**4.82**	**47**	*e*P	**Pn**	**10 23 11.8**	**+1.6**
BO01	**Tunca**	**4.96**	**42**	*e*P	**Pn**	**10 23 13.6**	**+1.7**
H03S1	**Juan Fernandez**	**5.33**	**323**	T	T	10 28 50.4	
	baz=146,slow=72,SNR=24						
H03S2	**Juan Fernandez**	**5.34**	**323**	T	T	10 28 44.9	
	baz=146,slow=72,SNR=19						
H03S3	**Juan Fernandez**	**5.34**	**323**	T	T	10 28 46.9	
	baz=146,slow=72,SNR=25						
CFA	**Coronel Fontan**	**8.62**	**43**	Pn	**Pn**	**10 24 04.2**	**+2.0**
	comp=E,0.5nm,0.3s,baz=219,slow=4.5,SNR=7.4						
CFA				Sn	**Sn**	**10 25 37.7**	**-2.2**
	comp=E,0.2nm,0.3s,baz=275,slow=10,SNR=1.6 comp=E,1.0nm,0.3s						
CPUP	**Villa Florida**	**19.05**	**57**	LR	LR	10 34 45.7	
	comp=E,49nm,18.6s,baz=116,slow=40						
QSPA	**South Pole Qui**	**52.07**	**180**	P	**P**	**10 31 06.5**	**-0.8**
	comp=E,2.9nm,1.0s,baz=132,slow=11,SNR=4.7 comp=E,2.9nm,1.0s						
MAW	**Mawson**	**69.86**	**164**	P	**P**	**10 33 09.9**	**+2.0**
	comp=E,14nm,0.4s,baz=228,slow=10,SNR=17						
TXAR	**Lajitas Array**	**72.29**	**334**	P	**P**	**10 33 23.8**	**+0.6**
	comp=E,0.2nm,0.6s,baz=148,slow=6.5,SNR=3.8 comp=E,0.2nm,0.6s						

*MOS **11** 10:24:04.9±0.8, 29°.48N×52°.16E, h14km, mb4.4/21, Error ellipse: s-maj=7.8km s-min=5.4km az=69.0*

*IDC **11** 10:24:05.8±0.8, 29°.65N×52°.19E, h0km, mb4.1/24, mbtmp4.1/29, ML3.8/4, MS3.4/25, Error ellipse: s-maj=20.1km s-min=13.1km az=165.0*

*TEH **11** 10:24:05.7, 29°.60N×52°.14E, h5km, ML4.3, Presumed earthquake*

*NEIC **11** 10:24:06.7±1.3, 29°.51N±0°.08×52°.19E±0°.02, h10km±1km, mb4.3/35, Error ellipse: s-maj=13.5km s-min=2.9km az=180.0*

*THR **11** 10:24:06.8±0.0, 29°.62N×52°.14E, h10km±7km, ML4.5, Presumed earthquake*

*DSN **11** 10:24:09.7±0.8, 29°.34N×52°.09E, h15km, mb4.5/1, ML4.0/18, Error ellipse: s-maj=8.5km s-min=8.0km az=25.0*

*OMAN **11** 10:24:11.3±0.1, 29°.33N×52°.36E, h10km, mb3.9/20, ml4.5/9, ms3.0/3, Error ellipse: s-maj=1.1km s-min=0.7km az=347.0*

ISC 11 10:24:06.9±0.3, 29°.57N±0°.03×52°.19E±0°.03, h10km, n243, σ1^{s}50/267, mb4.3/56, MS3.5/21, 5C-1D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHI	**Shiraz**	**0.29**	**77**	P	**Pg**	**10 24 12.6**	**-0.3**
SHI	**Shiraz**	**0.29**	**77**	Pg	**Pg**	**10 24 12.7**	**-0.3**
SHI				Sg	**Sg**	**10 24 17.7**	**+0.9**
KAZ2	**Kazeron-Fars-I**	**0.46**	**275**	Pg	**Pg**	**10 24 14.6**	**-1.2**
QIR1	**Qir**	**1.33**	**145**	Pg	**Pg**	**10 24 33.4**	**+1.0**
DSBU	**Dashti - Bushe**	**1.45**	**214**	Pg	**Pg**	**10 24 35.3**	**+0.5**
KLNJ	**Kolanjah**	**1.52**	**340**	*e*Pg	**Pn**	**10 24 34.2**	**-0.3**
KLNJ				IAML		10 25 05.2	
	comp=Z,7μm,1.0s						
KLNJ	**Kolanjah**	**1.52**	**340**	Pg	**Pn**	**10 24 35.3**	**+0.8**
JHRM	**Jahrom**	**1.62**	**131**	Pg	**Pg**	**10 24 37.4**	**-0.5**
KHL1	**Khalili_Fars**	**2.16**	**153**	Pn	**Pb**	**10 24 45.3**	**-0.9**
LMD1	**Lamerd**	**2.39**	**159**	*e*Pn	**Pb**	**10 24 48.8**	**-1.2**
LMD1				IAML		10 25 37.3	
	comp=Z,3μm,1.0s						
LMD1	**Lamerd**	**2.39**	**159**	Pn	**Pb**	**10 24 48.7**	**-1.2**
IBRJ	**Brojen**	**2.46**	**341**	Pn	**Pn**	**10 24 48.7**	**+1.4**
TAFT	**Taft - Yazd**	**2.74**	**38**	Pn	**Pn**	**10 24 53.3**	**+2.1**
IMEH	**Mehriz**	**2.77**	**49**	Pn	**Pn**	**10 24 53.5**	**+1.9**
JHBN	**Jahan bin**	**2.95**	**334**	Pn	**Pn**	**10 24 55.6**	**+1.5**
DOBD	**Dorbid, Yazd**	**3.13**	**39**	Pn	**Pn**	**10 24 58.8**	**+2.3**
AMIS	**Naft Sefid**	**3.25**	**311**	Pn	**Pn**	**10 24 59.1**	**+1.1**
NASN	**Na'in**	**3.26**	**9**	*e*Pn	**Pn**	**10 24 59.4**	**+1.0**
NASN				IAML		10 26 00.4	
	comp=Z,190nm,1.0s						
IZEF	**Zefreh**	**3.31**	**2**	Pn	**Pn**	**10 25 00.6**	**+1.5**
YZKH	**Yazd**	**3.48**	**36**	*e*Pn	**Pn**	**10 25 03.3**	**+2.0**
YZKH				IAML		10 26 09.4	
	comp=Z,190nm,1.0s						
KFJS2	**Khafji**	**3.54**	**251**	P	**Pn**	**10 25 04.6**	**+2.7**
IKLH	**Kolahrood**	**3.77**	**352**	Pn	**Pn**	**10 25 06.8**	**+1.5**
KHGB	**Koh Gabri**	**3.81**	**77**	Pn	**Pn**	**10 25 08.3**	**+2.5**
ANAR	**Anarak**	**3.84**	**20**	Pn	**Pn**	**10 25 08.0**	**+1.8**
SHMA	**Al-Shehemyia**	**3.86**	**197**	P	**Pn**	**10 25 08.0**	**+1.7**
	SNR=16						
SHMA				S	**Sn**	**10 25 53.6**	**+1.9**
SAKB	**Bahrain**	**3.87**	**203**	P	**Pn**	**10 25 08.0**	**+1.6**
SAKB				S	**Sn**	**10 25 54.5**	**+2.6**
GTMR	**Gotvand**	**3.91**	**318**	*e*Pn	**Pn**	**10 25 08.2**	**+1.1**
GTMR				IAML		10 26 24.8	
	comp=Z,540nm,1.0s						
NGRK	**Negar Kerman**	**3.96**	**88**	Pn	**Pn**	**10 25 10.5**	**+2.5**
KFJS1	**Al Wafrah**	**3.97**	**251**	P	**Pn**	**10 25 09.2**	**+1.4**
KFJS1				S	**Sn**	**10 25 56.7**	**+2.2**
ZRDN	**Zarand Kerman**	**4.01**	**69**	Pn	**Pn**	**10 25 11.0**	**+2.3**
WANAN	**Al Wanan**	**4.22**	**232**	P	**Pn**	**10 25 13.5**	**+2.3**
ARIRA	**AirJ**	**4.43**	**222**	P	**Pn**	**10 25 15.7**	**+1.5**
KHMZ	**Khomeyn**	**4.56**	**336**	*e*Pn	**Pn**	**10 25 17.7**	**+1.5**
KHMZ				IAML		10 26 32.6	
	comp=Z,150nm,1.0s						
HOFOF	**Al Hofuf**	**4.63**	**207**	P	**Pn**	**10 25 18.8**	**+1.9**
JRN	**Qarnain Island**	**4.65**	**173**	S	**Sn**	**10 26 12.1**	**+0.8**
NHFOF	**Ain Dar Gosp**	**4.75**	**214**	P	**Pn**	**10 25 20.8**	**+2.2**
NHFOF				S	**Sn**	**10 26 15.8**	**+2.0**
TRNA	**Turayna**	**4.90**	**190**	P	**Pn**	**10 25 22.5**	**+1.9**
TRNA				S	**Sn**	**10 26 18.2**	**+0.9**
GHVR	**GHOM**	**4.95**	**351**	*e*Pn	**Pn**	**10 25 23.8**	**+2.4**
GHVR				IAML		10 26 04.5	
	comp=Z,440nm,1.0s						
SLWS		**4.95**	**196**	P	**Pn**	**10 25 22.6**	**+1.2**
SLWS				S	**Sn**	**10 26 20.6**	**+1.9**
SHME	**Shamm**	**4.96**	**134**	P	**Pn**	**10 25 22.4**	**+1.0**
SHME	**Shamm**	**4.96**	**134**	P	**Pn**	**10 25 22.6**	**+1.2**
SMRA	**Abu-Samra**	**4.96**	**194**	P	**Pn**	**10 25 23.0**	**+1.5**
	SNR=5.5						
SMRA				S	**Sn**	**10 26 20.8**	**+2.0**
SMAN	**Sihmah**	**4.97**	**228**	P	Pg	10 26 10.6	+28
SHOFU	**Shofu**	**5.05**	**206**	P	**Pn**	**10 25 24.2**	**+1.4**
KHNJ	**Kahnooj**	**5.11**	**107**	Pn	**Pn**	**10 25 26.3**	**+2.7**
BANOM	**Banah**	**5.15**	**134**	*i* P	**Pn**	**10 25 26.0**	**+1.9**
	SNR=19						
BANOM	**Banah**	**5.15**	**134**	P	**Pn**	**10 25 24.9**	**+0.7**
BANOM				S	**Sn**	**10 26 24.2**	**+0.6**
ASAO	**Ashtian**	**5.29**	**340**	*e*Pn	**Pn**	**10 25 27.9**	**+1.7**
ASAO				IAML		10 27 20.3	
	comp=Z,180nm,1.0s						
IDOB	**Doab**	**5.41**	**322**	Pn	**Pn**	**10 25 29.1**	**+1.2**
MASF	**Masafi**	**5.48**	**139**	P	**Pn**	**10 25 30.0**	**+1.4**
	SNR=12						
MASF				S	**Sn**	**10 26 31.8**	**+0.2**
MSFE	**Esma-Masafi**	**5.49**	**139**	*i* P	**Pn**	**10 25 29.5**	**+0.8**
	SNR=5.0						
KBAM	**BAM**	**5.49**	**93**	Pn	**Pn**	**10 25 31.6**	**+2.8**
SLWR	**Sila**	**5.50**	**185**	P	**Pn**	**10 25 29.9**	**+1.0**
SLWR				S	**Sn**	**10 26 31.5**	**-0.7**
NAZ	**Nazwa, Dubai**	**5.52**	**145**	*i* P	**Pn**	**10 25 30.3**	**+1.2**
	SNR=6.6						
NAZ	**Nazwa, Dubai**	**5.52**	**145**	P	**Pn**	**10 25 31.5**	**+2.3**
	SNR=7.7						
NAZ				S	**Sn**	**10 26 33.0**	**+0.4**
MDH	**Madha**	**5.61**	**138**	*i* P	**Pn**	**10

GEVA	**Gevas**	**11.54**	**321**			**Pn**	**10 26 51.5**	**-0.4**
WHFO	**Wadi Hawf**	**11.69**	**173**	P		**Pn**	**10 26 52.1**	**-1.8**
	SNR=18							
SHAO	**Shalim**	**11.92**	**164**	P		**Pn**	**10 26 55.0**	**-2.1**
SHAO	**Shalim**	**11.92**	**164**	P		**Pn**	**10 26 55.1**	**-1.9**
DMTO	**DMTO**	**12.07**	**167**	P		**Pn**	**10 26 56.6**	**-2.5**
	SNR=17							
RBK	**Rabkut**	**12.16**	**171**	P		**Pn**	**10 26 59.3**	**-1.0**
GNI	**Garni**	**12.19**	**332**	LR		LR	10 31 23.8	
	comp=Z,108nm,18.1s,baz=135,slow=36							
GURO	**Guroymak-BITLI**	**12.28**	**319**			**Pn**	**10 27 02.9**	**+1.0**
ASF	**Jabal al Asfar**	**13.39**	**285**	Pn		**Pn**	**10 27 16.7**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=76,slow=16,SNR=7.6							
ASF				Sn		**Sn**	**10 29 38.1**	**-7.8**
	comp=Z,0.6nm,0.3s,baz=284,slow=8.0,SNR=3.6							
ASF				Lg		Lg	10 31 17.9	
	comp=Z,0.5nm,0.3s,baz=292,slow=23,SNR=7.6							
ASF				LR		LR	10 33 40.6	
	comp=Z,121nm,19.1s,baz=116,slow=43							
	comp=Z,4.4nm,0.4s							
MAK	**Makhachkala**	**13.88**	**346**	*c*	*i*P	**Pn**	**10 27 20.7**	**-2.9**
MAK					*e*S	**Sn**	**10 29 55.0**	**-2.7**
MAK					pmax	pmax		
	comp=Z,143nm,1.0s							
MAK					MLR	MLR		
	comp=Z,184nm,14.0s							
MMAI	**Mount Meron Ar**	**14.75**	**288**	Pn		**Pn**	**10 27 36.2**	**+0.5**
	comp=Z,5.2nm,0.7s,baz=90,slow=14,SNR=5.6							
EIL	**Elat**	**14.99**	**275**	Pn		**Pn**	**10 27 39.9**	**+1.0**
	comp=Z,0.5nm,0.3s,baz=107,slow=11,SNR=3.8							
EIL				Sn		**Sn**	**10 30 27.4**	**+2.4**
	comp=Z,0.4nm,0.3s,baz=279,slow=12,SNR=1.5							
EIL				Lg		Lg	10 32 06.3	
	comp=Z,0.6nm,0.3s,baz=80,slow=15,SNR=1.2							
EIL				LR		LR	10 34 07.8	
	comp=Z,98nm,18.5s,baz=78,slow=40							
	comp=Z,3.1nm,0.7s							
KBL	**Kabul**	**15.12**	**67**	Pn		**Pn**	**10 27 40.2**	**-0.6**
KBL				IAmb		IAmb	10 27 52.0	
	comp=Z,16nm,1.4s							
KBL	**Kabul**	**15.12**	**67**	P		**Pn**	**10 27 40.2**	**-0.6**
KBL				pmax		pmax		
	comp=Z,15nm,1.4s							
SHAA	**Shahritus**	**15.48**	**55**	Pn		**Pn**	**10 27 45.2**	**-0.1**
SHAA				IAmb		IAmb	10 28 20.0	
	comp=Z,15nm,0.8s							
KBZ	**Khabaz**	**15.96**	**335**	Pn		**Pn**	**10 27 50.8**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=166,slow=14,SNR=7.3							
	comp=Z,2.3nm,0.8s							
SHA1	**Shidzhatmaz**	**16.05**	**334**	*i*	P	**Pn**	**10 27 52.9**	**0.0**
KIV	**Kislovodsk**	**16.23**	**335**	*e*	P	**Pn**	**10 27 53.9**	**-1.1**
KIV					pmax	pmax		
	comp=Z,9.0nm,1.0s							
KIV					MLR	MLR		
	comp=Z,26nm,14.0s							
BNN	**Bunyan**	**16.36**	**309**			**Pn**	**10 27 55.6**	**-1.2**
CHGR	**Chuyangaron**	**16.70**	**53**			**Pn**	**10 28 01.0**	**-0.1**
CHGR	**Chuyangaron**	**16.70**	**53**	P		**Pn**	**10 28 01.0**	**-0.1**
CHGR				pmax		pmax		
	comp=Z,9.0nm,0.8s							
CSS	**Mathiatis**	**16.82**	**293**	P		**Pn**	**10 28 01.9**	**-0.7**
CSS				IAmb		IAmb	10 28 08.0	
	comp=Z,15nm,0.9s							
SOC	**Sochi**	**17.17**	**328**	*e*	P	**P**	**10 28 10.0**	**+1.6**
SOC				*e*	S	**Sn**	**10 31 19.1**	**+1.3**
SOC				MLR		MLR		
	comp=Z,194nm,20.0s							
GAR	**Garm**	**17.66**	**53**	P		**Pn**	**10 28 13.0**	**-0.2**
BR131	**Keskin Array S**	**18.28**	**309**			**Pn**	**10 28 20.7**	**-0.1**
BR131				IAmb		IAmb	10 28 27.6	
	comp=Z,11nm,0.8s							
BR131	**Keskin Array S**	**18.28**	**309**	P		**Pn**	**10 28 20.7**	**-0.1**
BR131				pmax		pmax		
	comp=Z,11nm,0.8s							
BRTR	**Keskin Array B**	**18.28**	**309**	P		**Pn**	**10 28 20.8**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=133,slow=10,SNR=15							
BRTR				LR		LR	10 36 17.5	
	comp=Z,78nm,20.3s,baz=109,slow=40							
	comp=Z,6.1nm,0.8s							
BRTR	**Keskin Array B**	**18.28**	**309**	P		**Pn**	**10 28 20.4**	**-0.3**
NIL	**Nilore**	**18.39**	**72**	P		**Pn**	**10 28 22.6**	**+0.5**
NIL	**Nilore**	**18.39**	**72**	P		**Pn**	**10 28 22.6**	**+0.5**
NIL				pmax		pmax		
	comp=Z,13nm,1.0s							
ILGA	**Ilgaz**	**18.89**	**312**	P		**Pn**	**10 28 28.8**	**+0.6**
ILGA				IAmb		IAmb	10 28 39.7	
	comp=Z,16nm,1.0s							
DRK	**Karamyk**	**18.91**	**53**	P		**P**	**10 28 27.8**	**-0.2**
DRK	**Karamyk**	**18.91**	**53**	P		**P**	**10 28 27.8**	**-0.2**
DRK				pmax		pmax		
	comp=Z,10.0nm,1.1s							
TRKS	**Terek-Say**	**19.45**	**47**	P		**P**	**10 28 34.5**	**+0.7**
KK31	**Karatay Array**	**19.95**	**42**			**P**	**10 28 39.6**	**+0.5**
KK31	**Karatay Array**	**19.95**	**42**	P		**P**	**10 28 39.6**	**+0.5**
KK31				pmax		pmax		
	comp=Z,7.0nm,1.1s							
KKAR	**Karatay Array**	**19.95**	**42**	P		**P**	**10 28 39.4**	**+0.3**
KKAR	**Karatay Array**	**19.95**	**42**	P		**P**	**10 28 39.4**	**+0.3**
ARK	**Arkit**	**20.11**	**47**	P		**P**	**10 28 42.0**	**+1.0**
ARK				pmax		pmax		
	comp=Z,7.0nm,0.7s							
MDUB	**Mudurnu**	**20.29**	**308**	P		**P**	**10 28 43.5**	**+0.6**
AB31	**Akbulak array**	**20.53**	**15**			**P**	**10 28 45.4**	**+0.2**
ABKAR	**Akbulak array**	**20.53**	**15**	P		**P**	**10 28 46.0**	**+0.7**
BORA	**Eskisehir**	**20.56**	**306**			**P**	**10 28 45.7**	**-0.1**
BORA				IAmb		IAmb	10 28 50.0	
	comp=Z,22nm,0.9s							
AKTO	**Aktyubinsk**	**21.30**	**10**	P		**P**	**10 28 53.8**	**+0.3**
	comp=Z,9.7nm,0.8s,baz=195,slow=10,SNR=13							
AKTO				LR		LR	10 39 16.8	
	comp=Z,78nm,19.6s,baz=212,slow=43							
	comp=Z,9.7nm,0.8s							
MANT	**Manisa**	**21.46**	**301**	P		**P**	**10 28 55.5**	**-0.2**
MANT				IAmb		IAmb	10 29 36.1	
	comp=Z,12nm,0.9s							
KSH2	**Kashi**	**21.48**	**57**	P		**P**	**10 28 59.7**	**+3.8**
KSH2				pmax		pmax		
	comp=Z,4.0nm,0.6s							
ARLS	**Aral**	**21.69**	**50**	P		**P**	**10 28 59.1**	**+1.1**
ARLS				pmax		pmax		
	comp=Z,10.0nm,0.8s							
AAK	**Ala-Archa**	**22.16**	**48**	LR		LR	10 38 07.3	
	comp=Z,150nm,18.1s,baz=264,slow=38							
AAK	**Ala-Archa**	**22.16**	**48**	P		**P**	**10 29 04.1**	**+0.9**
AAK				IAmb		IAmb	10 29 29.1	
	comp=Z,11nm,1.2s							
AAK	**Ala-Archa**	**22.16**	**48**	P		**P**	**10 29 06.6**	**+3.5**
AAK	**Ala-Archa**	**22.16**	**48**	P		**P**	**10 29 04.1**	**+0.9**
AAK				pmax		pmax		
	comp=Z,11nm,1.3s							
BOOM	**Boomskoye usch**	**23.04**	**50**	P		**P**	**10 29 12.4**	**0.0**
BOOM				IAmb		IAmb	10 29 34.0	
	comp=Z,12nm,1.2s							
BOOM	**Boomskoye usch**	**23.04**	**50**	P		**P**	**10 29 12.5**	**0.0**
BOOM				pmax		pmax		
	comp=Z,12nm,1.2s							
BELG	**Belogornoye**	**23.05**	**353**	*i*	P	**P**	**10 29 11.4**	**-0.7**
BELG				pmax		pmax		
	comp=Z,4.0nm,0.8s							
SOH	**Sokhos**	**25.98**	**303**	P		**P**	**10 29 36.3**	**-3.5**
SOH				pmax		pmax		
	comp=Z,14nm,0.9s							
MLR	**Muntele Rosu**	**26.02**	**315**	P		**P**	**10 29 43.8**	**+3.6**
VOIR		**26.55**	**314**	P		**P**	**10 29 47.9**	**+2.9**
BORK	**Borovoye**	**26.97**	**24**	*c*	*e*P	**P**	**10 29 49.5**	**+1.0**
BORK				pmax		pmax		
	comp=Z,6.0nm,1.7s							
BVAR	**Borovoye Array**	**26.97**	**25**	P		**P**	**10 29 49.2**	**+0.6**
	comp=Z,0.9nm,0.4s,baz=215,slow=8.5,SNR=5.9							
BVAR				LR		LR	10 41 02.6	
	comp=Z,63nm,19.7s,baz=222,slow=38							
	comp=Z,0.9nm,0.4s							
ARTI	**Arti**	**27.16**	**8**	LR		LR	10 42 25.1	
	comp=Z,66nm,19.1s,baz=199,slow=41							
ARTI	**Arti**	**27.16**	**8**	*c*	*i*P	**P**	**10 29 50.2**	**0.0**
ARTI							10 30 31.4	
ARTI				pmax		pmax		
	comp=Z,17nm,2.0s							
AKASG	**Malin Array Be**	**27.25**	**327**	P		**P**	**10 29 51.5**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=134,slow=9.5,SNR=2.6							
AKASG				LR		LR	10 41 32.1	
	comp=Z,85nm,21.8s,baz=223,slow=38							
	comp=Z,0.7nm,0.4s							
AKBB	**Malin Array Si**	**27.25**	**327**	*i*	P	**P**	**10 29 52.4**	**+1.4**
AKBB				pmax		pmax		
	comp=Z,43nm,3.3s							

OBN	**Obninsk**	**27.88**	**341**	*e*	P	**P**	**10 29 57.9**	**+1.3**
OBN					pmax	pmax		
	comp=Z,13nm,1.8s							
MAKZ	**Makanchi**	**28.82**	**45**	P		**P**	**10 30 05.1**	**-0.1**
MAKZ				IAmb		IAmb	10 30 07.9	
	comp=Z,2.2nm,0.6s							
MAKZ	**Makanchi**	**28.82**	**45**	P		**P**	**10 30 05.1**	**-0.1**
MAKZ				pmax		pmax		
	comp=Z,2.0nm,0.6s							
KURBB	**Kurchatov Arra**	**28.86**	**36**	P		**P**	**10 30 06.2**	**+0.7**
	comp=Z,1.3nm,0.8s,baz=235,slow=9.1,SNR=7.8							
KURBB				LR		LR	10 43 04.1	
	comp=Z,99nm,18.4s,baz=182,slow=40							
	comp=Z,1.3nm,0.8s							
KURK	**Kurchatov**	**28.96**	**36**	P		**P**	**10 30 05.5**	**-0.9**
KURK	**Kurchatov**	**28.96**	**36**	P		**P**	**10 30 05.5**	**-0.9**
KURK				pmax		pmax		
	comp=Z,2.0nm,0.9s							
MK31	**Makanchi Array**	**29.00**	**45**	*c*	*e*P	**P**	**10 30 08.1**	**+1.2**
MKAR	**Makanchi Array**	**29.00**	**45**	P		**P**	**10 30 07.0**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=240,slow=7.9,SNR=14							
MKAR				LR		LR	10 43 38.5	
	comp=Z,68nm,20.0s,baz=244,slow=40							
	comp=Z,1.0nm,0.6s							
MKAR	**Makanchi Array**	**29.00**	**45**	*c*	*e*P	**P**	**10 30 08.1**	**+1.2**
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.6s							
KIRV	**Kirov**	**29.07**	**357**	LR		LR	10 43 15.2	
	comp=Z,35nm,20.5s,baz=185,slow=40							
KIRV	**Kirov**	**29.07**	**357**	*i*	P	**P**	**10 30 06.8**	**-0.4**
EVN	**Everest**	**30.34**	**84**	P		**P**	**10 30 19.1**	**-0.5**
EVN				IAmb		IAmb	10 30 30.9	
	comp=Z,4.4nm,0.8s							
WMQ	**Urumqi**	**31.56**	**53**	*e*	P	**P**	**10 30 30.5**	**+1.0**
WMQ				pmax		pmax		
	comp=Z,16nm,0.7s							
KLMR	**Klimovskoe**	**32.41**	**348**	*e*	P	**P**	**10 30 35.2**	**-1.4**
KLMR				pmax		pmax		
	comp=Z,19nm,1.2s							
DGZ	**Jazzator, Alta**	**33.34**	**43**	*i*	P	**P**	**10 30 46.1**	**+0.9**
DGZ				pmax		pmax		
	comp=Z,2.0nm,0.8s							
VRAC	**Vranov**	**33.39**	**316**	LR		LR	10 46 26.0	
	comp=Z,80nm,18.4s,baz=350,slow=40							
NRCA	**Norcia**	**33.89**	**304**	P		**P**	**10 30 48.8**	**-1.1**
NRCA				IAmb		IAmb	10 31 02.0	
	comp=Z,4.8nm,0.7s							
ZAA0	**Zalesovo Array**	**33.93**	**35**	P		**P**	**10 30 50.1**	**+0.1**
ZAA0				IAmb		IAmb	10 30 58.4	
	comp=Z,2.6nm,0.6s							
ZALV	**Zalesovo Beam**	**33.93**	**35**	P		**P**	**10 30 50.5**	**+0.5**
	comp=Z,2.5nm,0.6s,baz=248,slow=7.8,SNR=11							
ZALV				LR		LR	10 47 23.4	
	comp=Z,31nm,18.8s,baz=254,slow=41							
	comp=Z,2.5nm,0.6s							
ZALV	**Zalesovo Beam**	**33.93**	**35**	P		**P**	**10 30 50.1**	**+0.1**
ZALV	**Zalesovo Beam**	**33.93**	**35**	*i*	P	**P**	**10 30 52.0**	**+2.0**
ZALV				pmax		pmax		
	comp=Z,2.0nm,0.4s							
FDMO	**Fiordimonte**	**33.94**	**304**	P		**P**	**10 30 49.3**	**-1.0**
FDMO				IAmb		IAmb	10 30 59.7	
	comp=Z,4.1nm,0.7s							
KBA	**Koelnbreinsper**	**34.70**	**311**	*e*	P	**P**	**10 30 57.4**	**+0.4**
	comp=Z,3.3nm,1.1s							
KHC	**Kasperske Hory**	**35.17**	**315**	*i*	P	**P**	**10 31 00.7**	**-0.2**
KHC				pmax		pmax		
	comp=Z,23nm,3.8s							
WTTA	**Wattenberg**	**35.87**	**311**	*e*	P	**P**	**10 31 07.8**	**+0.7**
	comp=Z,4.1nm,0.7s							
WATA	**Walderalm**	**35.92**	**311**	*e*	pP	pP	10 31 09.7	-1.6
	comp=Z,4.7nm,0.6s							
BRDH	**Bariadhala**	**35.96**	**92**	LR		LR	10 49 21.7	
	comp=Z,80nm,20.4s,baz=82,slow=42							
SQTA	**Sankt Quirin**	**36.14**	**311**	*e*	P	**P**	**10 31 09.9**	**+0.5**
	comp=Z,1.7nm,0.3s							
MOTA	**Moosalm**	**36.24**	**311**	*e*	pP	**P**	**10 31 12.0**	**+1.8**
	comp=Z,0.9nm,0.3s							
FIA1	**FINESS Array S**	**36.24**	**339**	P		**P**	**10 31 10.3**	**+0.4**
FINES	**FINESS Array B**	**36.24**	**339**	P		**P**	**10 31 09.8**	**-0.1**
	comp=Z,3.6nm,0.5s,baz=142,slow=9.8,SNR=30							
	comp=Z,3.6nm,0.5s							
FINES	**FINESS Array B**	**36.24**	**339**	P		**P**	**10 31 09.2**	**-0.6**
FETA	**Feichten**	**36.41**	**310**	*e*	P	**P**	**10 31 12.5**	**+0.8**
	comp=Z,0.7nm,0.6s							
DAVA	**Damuels**	**37.03**	**310**	*e*	P	**P**	**10 31 16.4**	**-0.6**
	comp=Z,11nm,0.6s							
HFS	**Hagfors**	**39.97**	**331**	P		**P**	**10 31 41.3**	**0.0**
	comp=Z,2.2nm,0.4s,baz=112,slow=11,SNR=9.3							
HFS				LR		LR	10 49 48.4	
	comp=Z,151nm,19.6s,baz=160,slow=39							
	comp=Z,2.2nm,0.4s							
GTA2	**Gaotai**	**40.02**	**63**	*e*	P	**P**	**10 31 43.9**	**+1.7**
GTA2					pP	sP	10 31 47.7	+0.3
GTA2					pmax	pmax		
	comp=Z,6.0nm,1.0s							
NC405	**NORSAR Array S**	**41.32**	**331**	P		**P**	**10 31 52.0**	**-0.5**
NOA	**NORSAR Array B**	**41.49**	**331**	P		**P**	**10 31 53.2**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=122,slow=8.2,SNR=4.2							
NOA				LR		LR	10 50 27.5	
	comp=Z,44nm,18.1s,baz=265,slow=38							
	comp=Z,1.2nm,0.6s							
ARCES	**ARCESS Array B**	**42.83**	**347**	P		**P**	**10 32 04.3**	**-0.3**
	comp=Z,2.2nm,0.8s,baz=335,slow=5.4,SNR=3.5							
ARCES				LR		LR	10 53 24.0	
	comp=Z,49nm,18.6s,baz=118,slow=41							
	comp=Z,2.2nm,0.8s							
ARCES	**ARCESS Array B**	**42.83**	**347**	P		**P**	**10 32 04.4**	**-0.3**
ARCES	**ARCESS Array B**	**42.83**	**347**	P		**P**	**10 32 04.4**	**-0.3**
ARCES				pmax		pmax		
	comp=Z,19nm,1.5s							
PZH	**PanZhiHua**	**43.59**	**82**	P		**P**	**10 32 11.6**	**+0.1**
TLY	**Talaya**	**43.76**	**45**	LR		LR	10 51 31.5	
	comp=Z,65nm,19.3s,baz=266,slow=38							
CMAR	**Chiang Mai Arr**	**43.86**	**94**	LR		LR	10 55 17.1	
	comp=Z,33nm,18.3s,baz=265,slow=43							
NRIK	**Noril'sk**	**44.67**	**17**	*i*	P	**P**	**10 32 20.7**	**+1.3**
NRIK				pmax		pmax		
	comp=Z,13nm,3.0s							
SONM	**Songino Array**	**45.08**	**51**	P		**P**	**10 32 24.0**	**+0.7**
	comp=Z,1.6nm,0.7s,baz=261,slow=7.9,SNR=6.3							
SONM				LR		LR	10 51 52.3	
	comp=Z,57nm,20.4s,baz=239,slow=37							
	comp=Z,1.6nm,0.7s							
SONM	**Songino Array**	**45.08**	**51**	P		**P**	**10 32 22.6**	**-0.6**
SONM				IAmb		IAmb	10 32 28.4	
	comp=Z,3.1nm,1.2s							
SONM	**Songino Array**	**45.08**	**51**	P		**P**	**10 32 22.6**	**-0.6**
SONM				pmax		pmax		
	comp=Z,3.0nm,1.2s							
ULN	**Ulaanbaatar**	**45.52**	**51**	P		**P**	**10 32 26.1**	**-0.6**
ULN				IAmb		IAmb	10 32 31.9	
	comp=Z,5.2nm,1.1s							
ULN	**Ulaanbaatar**	**45.52**	**51**	P		**P**	**10 32 26.2**	**-0.6**
ULN				pmax		pmax		
	comp=Z,5.0nm,1.2s							
ESDC	**Sonseca Array**	**46.63**	**298**	P		**P**	**10 32 35.4**	**-0.1**
	comp=Z,0.8nm,0.8s,baz=70,slow=8.7,SNR=5.1							
	comp=Z,0.8nm,0.8s							
EKA	**Eskdalemuir Ar**	**46.68**	**320**	P		**P**	**10 32 34.8**	**-0.8**
	comp=Z,1.2nm,0.5s,baz=104,slow=8.2,SNR=4.7							
	comp=Z,1.2nm,0.5s							
XAN	**Xi'an**	**47.90**	**69**	⇓	P	**P**	**10 32 47.7**	**+2.2**
XAN				pmax		pmax		
	comp=Z,6.0nm,1.0s							
HHC	**Hu-ho-hao-te**	**48.96**	**60**	*e*	P	**P**	**10 32 53.8**	**+0.2**
HHC				pmax		pmax		
	comp=Z,18nm,0.6s							
HHC				pmax		pmax		
	comp=Z,180nm,5.0s							
TORD	**Torodi Ar. Bea**	**49.39**	**262**	P		**P**	**10 32 57.7**	**+0.6**
	comp=Z,4.3nm,0.7s,baz=61,slow=5.4,SNR=17							
	comp=Z,4.3nm,0.7s							
TORD	**Torodi Ar. Bea**	**49.39**	**262**	P		**P**	**10 32 56.0**	**-1.1**
SPB2	**Spitsbergen Ar**	**51.23**	**351**	P		**P**	**10 33 10.4**	**+0.3**
SPITS	**Spitsbergen Ar**	**51.23**	**351**	P		**P**	**10 33 09.9**	**-0.3**
	comp=Z,3.5nm,0.8s,baz=150,slow=8.6,SNR=6.6							
	comp=Z,3.5nm,0.8s							
TIXI	**Tiksi**	**58.04**	**21**	*i*	P	**P**	**10 34 01.5**	**+1.9**
TIXI				pmax		pmax		
	comp=Z,6.0nm,1.7s							
DBIC	**Dimbokro**	**58.17**	**259**	P		**P**	**10 34 01.7**	**+0.4**
	comp=Z,2.6nm,0.6s,baz=82,slow=1.3,SNR=4.3							
	comp=Z,2.6nm,0.6s							
YAK	**Yakutsk**	**58.53**	**33**	LR		LR	11 01 05.6	
	comp=Z,45nm,19.4s,baz=272,slow=38							
KLR	**Kul'dur**	**61.69**	**47**	LR		LR	11 02 30.6	
	comp=Z,82nm,19.1s,baz=284,slow=37							

KSRS	**Korea Array**	**62.09**	**61**	P		**P**	**10 34 26.4**	**-1.5**
	comp=Z,1.5nm,0.7s,baz=279,slow=6.2,SNR=5.5							
KSRS				LR		LR	11 03 57.0	
	comp=Z,47nm,18.9s,baz=330,slow=39							
	comp=Z,1.5nm,0.7s							
USRK	**Ussuriysk Ar.**	**63.12**	**53**	P		**P**	**10 34 34.1**	**-0.6**
	comp=Z,1.6nm,0.7s,baz=274,slow=6.8,SNR=4.8							
	comp=Z,1.6nm,0.7s							
BOSA	**Boshof**	**63.33**	**206**	P		**P**	**10 34 37.4**	**+1.1**
	comp=Z,3.0nm,0.9s,baz=337,slow=4.9,SNR=3.2							
	comp=Z,3.0nm,0.9s							
BOSA	**Boshof**	**63.33**	**206**	P		**P**	**10 34 35.2**	**-1.1**
BOSA	**Boshof**	**63.33**	**206**	P		**P**	**10 34 35.2**	**-1.1**
BOSA				pmax		pmax		
	comp=Z,16nm,1.5s							
ASAJ	**Asahikawa**	**70.36**	**50**	LR		LR	11 09 13.0	
	comp=Z,36nm,20.6s,baz=92,slow=38							
SCHQ	**Schefferville**	**81.02**	**329**	P		**P**	**10 36 22.4**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=72,slow=6.4,SNR=6.5							
	comp=Z,1.0nm,0.6s							
SCHQ	**Schefferville**	**81.02**	**329**	P		**P**	**10 36 21.5**	**-0.4**
SCHQ				IAmb		IAmb	10 36 28.4	
	comp=Z,3.8nm,0.9s							
C36M	**Paulatuk**	**81.33**	**359**	P		**P**	**10 36 22.2**	**-1.0**
C36M				IAmb		IAmb	10 36 26.4	
	comp=Z,2.0nm,0.9s							
INK	**Inuvik**	**82.32**	**2**	P		**P**	**10 36 27.8**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=343,slow=14,SNR=6.6							
	comp=Z,0.4nm,0.6s							
INK	**Inuvik**	**82.32**	**2**	P		**P**	**10 36 28.1**	**-0.3**
INK				IAmb		IAmb	10 36 34.6	
	comp=Z,3.1nm,1.1s							
INK	**Inuvik**	**82.32**	**2**	P		**P**	**10 36 28.1**	**-0.3**
INK				pmax		pmax		
	comp=Z,3.0nm,1.2s							
BMAR	**Burnt Mountain**	**82.47**	**6**	P		**P**	**10 36 29.9**	**+0.6**
ILAR	**Eielson Array**	**84.79**	**8**	P		**P**	**10 36 40.6**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=331,slow=5.6,SNR=3.6							
	comp=Z,0.3nm,0.6s							
H31M	**Peel River**	**84.80**	**3**	P		**P**	**10 36 41.4**	**+0.2**
YKA	**Yellowknife Ar**	**87.64**	**354**	P		**P**	**10 36 55.6**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=4.6,slow=5.6,SNR=11							
	comp=Z,0.5nm,0.7s							
YKA	**Yellowknife Ar**	**87.64**	**354**	P		**P**	**10 36 55.0**	**-0.2**
ASAR	**Alice Springs**	**94.64**	**114**	P		**P**	**10 37 30.8**	**+2.3**
	comp=Z,2.0nm,0.4s,baz=309,slow=5.0,SNR=2.8							
	comp=Z,2.0nm,0.4s							
ASAR	**Alice Springs**	**94.64**	**114**	P		**P**	**10 37 26.9**	**-1.6**

IDC 11 10:31:18.1±412.0, 57.55N×31.67E, h0km, Error ellipse: s-maj=165.0km s-min=69.2km az=100.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON 3.1**	**4**	**103**	I	I	10 51 44.7	
	0.1nm,0.5s,baz=285,slow=336,SNR=1.2						
I37NO	**I37NO**	**12.92**	**339**	I	I	11 44 15.4	
	baz=140,slow=327						
I31KZ	**AKTYUBINSK INF**	**17.00**	**104**	I	I	12 15 50.0	
	baz=307,slow=328,SNR=0.9						

AZER ***11*** *10:43:05.2,38.3°N×44.4°E,h3km,ml3.2*
AFAD ***11*** *10:43:06.4,38.4°N×44.6°E,h7km±5km,ML3.1*
ISK ***11*** *10:43:07.3,38.5°N×44.7°E,h6km,ML3.3/7*
NSSP ***11*** *10:43:08.7,38.3°N×44.6°E,h10km,Ms3.0*
TEH ***11*** *10:43:08.6,38.4°N×44.6°E,h6km±97km,ML2.8, Presumed earthquake*

ISC 11 10:43:07.2±1.1, 38.30N±0.03×44.58E±0.02, h8km±10km, n45,σ1°44/72,1C-3D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.58**	**308**	P	**Pg**	**10 43 17.2**	**-1.3**
OZAP				S	**Sg**	**10 43 26.3**	**+0.2**
OZAP				IAML		10 43 29.0	
	comp=N,2μm,1.1s						
YOVA	**Hakkari_Yksek**	**0.75**	**198**	P	**Pn**	**10 43 23.7**	**-0.5**
YOVA				S	**Sn**	**10 43 36.4**	**+0.5**
YOVA				IAML		10 43 39.0	
	comp=N,682nm,0.6s						
YOVA				IAML		10 43 44.0	
	comp=E,604nm,0.5s						
ISHB	**Shabestar**	**0.82**	**91**	Pg	**Pb**	**10 43 23.0**	**-0.9**
TVAN	**Van**	**0.94**	**284**	P	**Pb**	**10 43 24.0**	**-1.9**
TVAN				S	**Sn**	**10 43 40.2**	**-0.

GRMI	**Germi**	**2.65**	**78**	Pn	**Pb**	**10 43 53.4**	**-1.5**
SVAN	**Silvan-Diyarba**	**2.66**	**268**	Pn	**Pb**	**10 43 54.5**	**-0.6**
AGDM	**Agdam**	**2.67**	**47**	P	**Pb**	**10 43 56.4**	**+1.2**
AGDM				S	**Sb**	**10 44 27.6**	**-0.5**
GANJ	**Ganja**	**2.70**	**29**	P	**Pn**	**10 43 52.8**	**+1.9**
GANJ				S	**Sb**	**10 44 28.5**	**-0.6**
QZX	**Qazax, Azerbai**	**2.82**	**12**	P	**Pb**	**10 43 57.2**	**-0.6**
QZX				S	**Sb**	**10 44 31.6**	**-0.9**
YRD	**Yardimli**	**2.94**	**77**	P	**Pb**	**10 43 58.5**	**-1.4**
YRD				S	**Sb**	**10 44 33.8**	**-2.2**
LRK	**Lerik**	**2.97**	**82**	P	**Pb**	**10 43 57.7**	**-2.8**
LRK				S	**Sb**	**10 44 35.0**	**-2.1**
BNGB	**Bingl**	**3.13**	**284**	Pn	**Pb**	**10 44 00.1**	**-3.0**
VSHL	**Vashlovani**	**3.24**	**25**	P	**Pb**	**10 44 02.2**	**-2.9**
VSHL				S	**Sg**	**10 44 52.9**	**+1.5**
SHTL	**Shatili**	**4.37**	**6**	P	**Pb**	**10 44 24.7**	**+0.4**
SHTL				S	**Sg**	**10 45 30.1**	**+2.6**

*NEIC **11** 10:43:39.7±0.6, 43˚.29N±0˚.02×73˚.64W±0˚.03, h13km±4km, mb_Lg3.1/78, ML3.5/16, Error ellipse: s-maj=3.3km s-min=2.3km az=46.0*
*OTT **11** 10:43:40.7±0.1, 43˚.29N×73˚.63W, h18km, MN3.7/18, New York State, U.S. 204km south from Huntingdon, Qc Northern Appalachians Seismic Zone.*

ISC 11 10:43:39.1±0.9, 43˚.30N±0˚.03×73˚.63W±0˚.03, h15km±6km, n102, σ0˚.92/108, New York

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ACCN	**Adirondack Com**	**0.09**	**341**			**Pg**	**10 43 42.7**	**+0.3**
ACCN				Sg		**Sg**	**10 43 44.4**	**0.0**
TRY	**Troy**	**0.57**	**183**			**Pg**	**10 43 49.9**	**-0.3**
TRY				Sg		**Sg**	**10 43 56.9**	**-0.9**
TRY				IAML			10 43 57.1	
	2μm,0.2s							
J59A	**Piesco**	**0.66**	**285**			**Pg**	**10 43 51.8**	**-0.3**
J59A				Sg		**Sg**	**10 44 00.4**	**-0.5**
J59A				IAML			10 44 04.0	
	6μm,0.1s							
J61A	**Chester**	**0.79**	**86**			**Pg**	**10 43 54.0**	**-0.4**
J61A				IAML			10 44 08.1	
	2μm,0.2s							
NCB	**Newcomb**	**0.80**	**327**			**Pg**	**10 43 54.0**	**-0.7**
HNH	**Hanover**	**1.06**	**67**			**Pb**	**10 43 58.8**	**-0.3**
HNH				IAML			10 44 17.6	
	273nm,0.2s							
L61B	**Northampton**	**1.10**	**140**			**Pb**	**10 43 59.5**	**-0.2**
L61B				IAML			10 44 18.4	
	773nm,0.2s							
L61B				IAML			10 44 18.8	
	998nm,0.1s							
K62A	**Royalston**	**1.20**	**121**			**Pn**	**10 44 01.5**	**+0.2**
K62A				IAML			10 44 17.1	
	1μm,0.1s							
K62A				IAML			10 44 18.9	
	1μm,0.1s							
VT1	**Waterbury**	**1.21**	**31**	Pn		**Pn**	**10 44 00.7**	**-0.8**
LONY	**Lake Ozonia**	**1.49**	**333**			**Pn**	**10 44 05.2**	**-0.2**
L59A	**Walton**	**1.52**	**224**	Pn		**Pn**	**10 44 05.8**	**0.0**
FRNY	**Flat Rock**	**1.54**	**1**			**Pn**	**10 44 06.1**	**+0.1**
FRNY	**Flat Rock**	**1.54**	**1**	PN		**Pn**	**10 44 06.2**	**+0.1**
FRNY				SN		**Sn**	**10 44 26.9**	**+1.2**
FRNY				Trac			10 44 28.1	
	comp=Z,188nm,0.1s							
LBNH	**Lisbon**	**1.55**	**52**			**Pn**	**10 44 07.1**	**+0.9**
KSCT	**Kent School, K**	**1.57**	**176**	Pn		**Pn**	**10 44 07.2**	**+0.7**
HRV	**Adam Dziewonsk**	**1.71**	**117**			**Pn**	**10 44 09.2**	**+0.9**
HRV	**Adam Dziewonsk**	**1.71**	**117**	Pn		**Pn**	**10 44 09.1**	**+0.7**
HRV				IAmb_Lg			10 44 33.1	
	comp=Z,91nm,0.8s							
J57A	**Williamstown**	**1.73**	**275**			**Pn**	**10 44 09.2**	**+0.5**
I62A	**Tamworth**	**1.76**	**70**			**Pn**	**10 44 10.2**	**+1.1**
UCCT	**U. Connecticut**	**1.82**	**145**			**Pn**	**10 44 11.1**	**+1.2**
WES	**Weston**	**1.93**	**117**			**Pn**	**10 44 12.0**	**+0.8**
WES				IAmb_Lg			10 44 43.1	
	comp=Z,94nm,1.0s							
BCX	**Boston College**	**2.05**	**117**			**Pn**	**10 44 13.7**	**+0.8**
BCX				IAmb_Lg			10 44 44.4	
	comp=Z,107nm,0.8s							
WBO	**Williamsburg**	**2.08**	**326**	Pn		**Pn**	**10 44 14.9**	**+1.6**
WBO	**Williamsburg**	**2.08**	**326**	PN		**Pn**	**10 44 14.5**	**+1.1**
WBO				SN		**Sn**	**10 44 39.6**	**+0.7**
WBO				Trac			10 44 45.6	
	comp=Z,63nm,0.1s							
WSPT	**Westport, CT**	**2.14**	**174**	Pn		**Pn**	**10 44 15.8**	**+1.6**
WSPT				IAmb_Lg			10 44 48.8	
	comp=Z,111nm,0.8s							
K57A	**Scipio Center**	**2.19**	**256**			**Pn**	**10 44 16.7**	**+1.7**
H62A	**Milan**	**2.19**	**54**			**Pn**	**10 44 16.7**	**+1.7**
RIGQ	**Rigaud**	**2.20**	**348**	PN		**Pn**	**10 44 16.2**	**+1.2**
RIGQ				SN		**Sn**	**10 44 42.4**	**+0.5**
MNTQ	**Montreal, Queb**	**2.20**	**0**	Pn		**Pn**	**10 44 15.7**	**+0.6**
MNTQ	**Montreal, Queb**	**2.20**	**0**	PN		**Pn**	**10 44 16.4**	**+1.3**
MNTQ				SN		**Sn**	**10 44 42.9**	**+0.8**
MNTQ				Trac			10 44 51.0	
	comp=Z,62nm,0.1s							
M63A	**Gales Ferry**	**2.23**	**148**	Pn		**Pn**	**10 44 16.3**	**+0.9**
M63A				IAmb_Lg			10 44 49.7	
	comp=Z,82nm,0.8s							
SJUQ	**Ste-Julie**	**2.27**	**5**	PN		**Pn**	**10 44 17.2**	**+1.1**
SJUQ				SN		**Sn**	**10 44 44.7**	**+0.9**
KGNO	**Kingston**	**2.28**	**295**	PN		**Pn**	**10 44 17.3**	**+1.2**
KGNO				SN		**Sn**	**10 44 44.5**	**+0.6**
KGNO				Trac			10 44 52.7	
	comp=Z,80nm,0.1s							
PAL	**Palisades**	**2.30**	**185**			**Pn**	**10 44 17.6**	**+1.2**
SURQ	**Ste-Clotilde**	**2.32**	**36**	PN		**Pn**	**10 44 11.7**	**-5.0**
SURQ				SN		Sn	**10 44 35.5**	**-10**
I63A	**Otisfield**	**2.33**	**70**	Pn		**Pn**	**10 44 17.7**	**+0.8**
KSPA	**Keystone Colle**	**2.35**	**223**			**Pn**	**10 44 18.7**	**+1.5**
KSPA				IAmb_Lg			10 44 56.8	
	comp=Z,106nm,0.7s							
L64A	**Middleborough**	**2.47**	**123**	Pn		**Pn**	**10 44 19.5**	**+0.8**
MRBQ	**Mirabel**	**2.51**	**354**	PN		**Pn**	**10 44 20.7**	**+1.3**
MRBQ				SN		**Sn**	**10 44 50.3**	**+0.6**
CPNY	**Central Park**	**2.52**	**186**	Pn		**Pn**	**10 44 20.3**	**+0.9**
OTAO	**Ottawa Anderso**	**2.52**	**327**	SN		**Sn**	**10 44 51.9**	**+1.9**
PECO	**Prince Edward**	**2.53**	**286**			**Pn**	**10 44 20.0**	**+0.5**
PECO	**Prince Edward**	**2.53**	**286**	PN		**Pn**	**10 44 20.4**	**+0.9**
PECO				SN		**Sn**	**10 44 50.2**	**+0.2**
PECO				Trac			10 44 59.4	
	comp=Z,96nm,0.1s							
ORIO	**Orleans, Innes**	**2.54**	**329**	PN		**Pn**	**10 44 21.1**	**+1.3**
ORIO				SN		**Sn**	**10 44 50.8**	**+0.3**
ORIO				Trac			10 44 59.8	
	comp=Z,126nm,0.3s							
OTT	**Ottawa**	**2.58**	**325**	PN		**Pn**	**10 44 21.7**	**+1.4**
OTT				SN		**Sn**	**10 44 51.5**	**+0.2**
OTT				Trac			10 45 00.1	
	comp=Z,35nm,0.1s							
DRMQ	**Drummondville**	**2.73**	**17**	PN		**Pn**	**10 44 24.2**	**+1.9**
GAC	**Glen Almond**	**2.75**	**332**	PN		**Pn**	**10 44 23.9**	**+1.4**
GAC				SN		**Sn**	**10 44 55.8**	**+0.3**
GAC				LG	Lg		10 45 08.0	
GAC				Trac			10 45 09.9	
	comp=Z,41nm,0.2s							
M65A	**Busby, Falmout**	**2.81**	**127**	Pn		**Pn**	**10 44 24.3**	**+0.9**
G62A	**West of Eustis**	**2.94**	**48**	Pn		**Pn**	**10 44 26.0**	**+0.7**
G62A				IAmb_Lg			10 45 11.3	
	comp=Z,86nm,0.9s							
TRQ	**Mont Tremblant**	**3.00**	**348**	Pn		**Pn**	**10 44 26.8**	**+0.7**
TRQ	**Mont Tremblant**	**3.00**	**348**	PN		**Pn**	**10 44 27.1**	**+1.0**
TRQ				SN		**Sn**	**10 45 01.6**	**-0.3**
TRQ				Trac			10 45 15.2	
	comp=Z,50nm,0.2s							
PLVO	**Plevna**	**3.03**	**306**	PN		**Pn**	**10 44 26.9**	**+0.4**
PLVO				SN		**Sn**	**10 45 02.4**	**-0.2**
PLVO				LG	Lg		10 45 14.7	
PLVO				Trac			10 45 17.9	
	comp=Z,88nm,0.2s							
J55A	**Hilton**	**3.06**	**271**	Pn		**Pn**	**10 44 27.3**	**+0.4**
J55A				IAmb_Lg			10 45 22.0	
	comp=Z,54nm,0.7s							
L56A	**Greenwood**	**3.12**	**250**	Pn		**Pn**	**10 44 29.1**	**+1.4**
DELO	**Deloro Mine**	**3.13**	**294**			**Pn**	**10 44 27.9**	**0.0**
DELO	**Deloro Mine**	**3.13**	**294**	PN		**Pn**	**10 44 28.2**	**+0.3**
DELO				SN		**Sn**	**10 45 04.7**	**-0.3**
DELO				LG	Lg		10 45 18.3	
DELO				Trac			10 45 21.4	
	comp=Z,58nm,0.1s							
WVL	**Waterville**	**3.13**	**65**	IAmb_Lg			10 45 20.1	
	comp=Z,51nm,0.8s							
BECQ	**Becancour**	**3.15**	**15**	PN		**Pn**	**10 44 27.9**	**-0.2**
BECQ				SN		**Sn**	**10 45 05.7**	**+0.2**
BECQ				Trac			10 45 21.3	
	comp=Z,24nm,0.1s							
MMNY	**Mt. Morris Dam**	**3.19**	**261**	Pn		**Pn**	**10 44 29.5**	**+0.8**
MMNY				IAmb_Lg			10 45 25.7	
	comp=Z,72nm,0.8s							
M57A	**Sunshine Farm,**	**3.25**	**234**	Pn		**Pn**	**10 44 30.5**	**+0.9**
N58A	**Sunbury**	**3.36**	**224**	Pn		**Pn**	**10 44 31.4**	**+0.4**
N58A				IAmb_Lg			10 45 25.3	
	comp=Z,54nm,0.8s							
DPQ	**Saint Jean**	**3.44**	**10**	PN		**Pn**	**10 44 33.1**	**+1.0**
DPQ				SN		**Sn**	**10 45 12.1**	**-0.4**
DPQ				LG	Lg		10 45 28.5	
DPQ				Trac			10 45 30.2	
	comp=Z,18nm,0.1s							
PEMO	**Pembroke**	**3.52**	**314**	PN		**Pn**	**10 44 33.8**	**+0.6**
PEMO				SN		**Sn**	**10 45 13.7**	**-0.7**
PEMO				LG	Lg		10 45 27.6	
PEMO				Trac			10 45 30.5	
	comp=Z,61nm,0.2s							
WLVO	**Wesleyville**	**3.52**	**282**	PN		**Pn**	**10 44 33.9**	**+0.7**
WLVO				SN		**Sn**	**10 45 14.0**	**-0.5**
WLVO				Trac			10 45 30.6	
	comp=Z,117nm,0.3s							
MEDO	**Medina**	**3.53**	**270**	PN		**Pn**	**10 44 34.4**	**+1.0**
MEDO				SN		**Sn**	**10 45 14.1**	**-0.7**
MEDO				Trac			10 45 29.0	
	comp=Z,54nm,0.1s							
GRQ	**Grand Remous**	**3.67**	**335**	PN		**Pn**	**10 44 36.4**	**+1.1**
GRQ				SN		**Sn**	**10 45 17.2**	**-1.0**
GRQ				LG	Lg		10 45 36.4	
GRQ				Trac			10 45 43.5	
	comp=Z,49nm,0.3s							
WUPA	**West Chester U**	**3.67**	**204**	Pn		**Pn**	**10 44 36.9**	**+1.5**
PKME	**Peaks-Kenny Pk**	**3.68**	**56**	Pn		**Pn**	**10 44 36.2**	**+0.8**
PKME				IAmb_Lg			10 45 36.8	
	comp=Z,50nm,0.9s							
DRWO	**Darlington Wes**	**3.75**	**281**	SN		**Sn**	**10 45 20.2**	**-0.1**
DRWO				Trac			10 45 39.9	
	comp=Z,124nm,0.1s							
CHRO	**Chalk River**	**3.83**	**317**	PN		**Pn**	**10 44 37.6**	**+0.1**
CHRO				SN		**Sn**	**10 45 20.8**	**-1.4**
CHRO				Trac			10 45 39.4	
	comp=Z,70nm,0.2s							
SSPA	**Standing Stone**	**4.14**	**232**	Pn		**Pn**	**10 44 42.1**	**+0.3**
SSPA				IAmb_Lg			10 45 51.6	
	comp=Z,47nm,1.0s							
SADO	**Sadowa**	**4.24**	**292**	Pn		**Pn**	**10 44 42.0**	**-1.1**
E62A	**Clayton Lake**	**4.42**	**40**	Pn		**Pn**	**10 44 46.6**	**+1.0**
F64A	**Sherman**	**4.56**	**54**			**Pn**	**10 44 48.2**	**+0.7**
F64A				IAmb_Lg			10 46 10.9	
	comp=Z,35nm,0.7s							
BUKO	**Buck Lake**	**4.66**	**299**	Pn		**Pn**	**10 44 47.7**	**-1.2**
BUKO				IAmb_Lg			10 46 05.5	
	comp=Z,42nm,0.7s							
EMMW	**East Machias**	**4.67**	**70**	Pn		**Pn**	**10 44 49.1**	**+0.2**
EMMW				IAmb_Lg			10 46 10.9	
	comp=Z,44nm,1.0s							
G65A	**Princeton**	**4.75**	**64**	Pn		**Pn**	**10 44 50.8**	**+0.7**
LMQ	**La Malbaie**	**4.84**	**28**	Pn		**Pn**	**10 44 52.2**	**+0.8**
LDAQ	**Lac Daran**	**4.96**	**19**	Pn		**Pn**	**10 44 53.4**	**+0.4**
LDAQ				IAmb_Lg			10 46 14.4	
	comp=Z,35nm,0.7s							
D62A	**Allapoint, All**	**4.98**	**39**	Pn		**Pn**	**10 44 53.6**	**+0.4**
P57A	**Homestead Farm**	**5.04**	**222**	IAmb_Lg			10 46 15.9	
	comp=Z,38nm,0.8s							
GGN	**Saint George**	**5.21**	**67**	IAmb_Lg			10 46 25.1	
	comp=Z,38nm,0.9s							
PAMR	**Moraine State**	**5.36**	**246**	IAmb_Lg			10 46 26.6	
	comp=Z,36nm,1.1s							
VLDQ	**Val d'Or**	**5.51**	**332**	Pn		**Pn**	**10 45 03.3**	**+2.8**
N53A	**Lisbon**	**5.92**	**248**	IAmb_Lg			10 46 51.9	
	comp=Z,27nm,0.7s							
O54A	**Avella**	**5.93**	**241**	IAmb_Lg			10 46 45.0	
	comp=Z,27nm,0.8s							
Q56A	**Snyder Ridge,**	**5.97**	**226**	Pn		**Pn**	**10 45 07.4**	**+0.4**
M52A	**Chesterland**	**5.99**	**256**	IAmb_Lg			10 46 49.5	
	comp=Z,39nm,0.8s							
R58B	**Mineral**	**6.23**	**213**	Pn		**Pn**	**10 45 10.9**	**+0.4**
R58B				IAmb_Lg			10 46 56.1	
	comp=Z,31nm,1.1s							
K50A	**Casco**	**6.61**	**269**	IAmb_Lg			10 47 18.7	
	comp=Z,32nm,0.7s							
O52A	**Adamsville**	**6.92**	**245**	IAmb_Lg			10 47 16.9	
	comp=Z,26nm,0.8s							
N51A	**Ashland**	**6.93**	**253**	IAmb_Lg			10 47 25.9	
	comp=Z,23nm,0.8s							
Q54A	**Coxs Mills**	**6.94**	**234**	IAmb_Lg			10 47 17.1	
	comp=Z,25nm,0.9s							
P53A	**Whipple**	**6.97**	**240**	IAmb_Lg			10 47 20.2	
	comp=Z,30nm,0.8s							
R55A	**Marlinton**	**7.02**	**227**	Pn		**Pn**	**10 45 21.8**	**+0.3**
R55A				IAmb_Lg			10 47 30.1	
	comp=Z,23nm,0.7s							
M50A	**Fremont**	**7.23**	**258**	IAmb_Lg			10 47 31.8	
	comp=Z,29nm,0.8s							
ICQ	**Pointe Anglais**	**7.62**	**33**	Pn		**Pn**	**10 45 28.8**	**-0.6**
S54A	**Dingess, Beckl**	**8.02**	**229**	IAmb_Lg			10 47 57.6	
	comp=Z,23nm,1.0s							
E46A	**Sault Ste Mari**	**8.19**	**296**	Pn		**Pn**	**10 45 36.4**	**-0.9**
Q51A	**Peebles**	**8.48**	**243**	IAmb_Lg			10 48 24.8	
	comp=Z,20nm,0.7s							
U56A	**King**	**8.67**	**219**	IAmb_Lg			10 48 20.2	
	comp=Z,19nm,0.9s							
U54A	**Nelsons Funny**	**9.24**	**226**	IAmb_Lg			10 48 45.2	
	comp=Z,22nm,0.8s							

IDC 11 10:53:14.7±417.0, 57˚.79N×31˚.08E, h0km, Error ellipse: s-maj=165.6km s-min=87.5km az=100.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**3.50**	**105**	I	I		11 15 47.4	
	baz=288,slow=334,SNR=3.2							
I37NO	**I37NO**	**12.59**	**339**	I	I		12 05 56.4	
	baz=143,slow=325,SNR=1.3							
I31KZ	**AKTYUBINSK INF**	**17.36**	**104**	I	I		12 38 20.0	
	baz=308,slow=325,SNR=1.7							

IDC 11 10:56:52.0±7.6, 18˚.00S×177˚.22W, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=330.8km s-min=38.8km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.73**	**259**	P		P	11 05 15.2	-0.2
	0.7nm,0.4s,baz=97,slow=7.8,SNR=9.4							
	0.7nm,0.4s							
ASAR	**Alice Springs**	**45.86**	**254**	P		P	11 05 16.4	0.0
	0.8nm,0.5s,baz=82,slow=9.0,SNR=7.8							
	0.8nm,0.5s							
ILAR	**Eielson Array**	**85.72**	**13**	P		P	11 09 32.4	-0.1
	0.2nm,0.8s,baz=232,slow=5.4,SNR=4.6							
	0.2nm,0.8s							

*NSSP **11** 11:36:15.3, 38˚.48N×44˚.55E, h10km, Ms3.0*
*AZER **11** 11:36:15.8, 38˚.43N×44˚.58E, h10km, ml3.1*
*AFAD **11** 11:36:16.5, 38˚.44N×44˚.48E, h7km±5km, ML2.8*
*TEH **11** 11:36:16.3, 38˚.44N×44˚.55E, h6km±134km, ML2.8, Presumed earthquake*

ISC 11 11:36:16.4±1.0, 38˚.43N±0˚.02×44˚.54E±0˚.02, h10km±9km, n38, σ1˚.53/69, 1C-3D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.49**	**298**	P		**Pg**	**11 36 25.5**	**-0.5**
OZAP				S		**Sg**	**11 36 32.8**	**+0.3**
OZAP				IAML			11 36 40.0	
	comp=N,2μm,0.7s							
ISHB	**Shabestar**	**0.86**	**100**	Pg		**Pg**	**11 36 32.1**	**-0.9**
YOVA	**Hakkari_Yksek**	**0.86**	**193**	P		**Pg**	**11 36 32.8**	**-0.3**
YOVA				S		**Sn**	**11 36 46.8**	**-0.8**
YOVA				IAML			11 36 52.0	
	comp=N,354nm,0.4s							
YOVA				IAML			11 36 53.0	
	comp=E,368nm,0.5s							
TVAN	**Van**	**0.90**	**277**	P		**Pg**	**11 36 32.2**	**-1.5**
TVAN				S		**Sg**	**11 36 44.6**	**-0.8**
TVAN				IAML			11 36 50.0	
	comp=E,383nm,0.4s							
TVAN				IAML			11 37 00.0	
	comp=N,532nm,1.1s							
MAKU	**Maku**	**0.93**	**7**	Pg		**Pg**	**11 36 33.6**	**-0.8**
VMUR	**Van-Muradiye**	**0.94**	**307**	P		**Pg**	**11 36 32.3**	**-2.3**
VMUR				S		**Sb**	**11 36 47.6**	**0.0**
VMUR				IAML			11 36 50.0	
	comp=E,361nm,0.5s							
VMUR				IAML			11 36 59.0	
	comp=N,335nm,0.6s							
IMRD	**Marand**	**0.95**	**72**	Pg		**Pb**	**11 36 35.0**	**-0.2**
NAX	**Nakhchivan**	**1.05**	**45**	P		**Pb**	**11 36 36.7**	**-0.1**
NAX				S		**Sn**	**11 36 52.4**	**+0.3**
HAKT	**HAKKARI**	**1.09**	**217**	P		**Pg**	**11 36 36.7**	**-0.7**
HAKT				S		**Sb**	**11 36 52.6**	**+0.6**
HAKT				IAML			11 36 58.0	
	comp=N,257nm,0.6s							
HAKT				IAML			11 37 02.0	
	comp=E,237nm,0.8s							
HAKT	**HAKKARI**	**1.09**	**217**	P		**Pg**	**11 36 37.0**	**-0.4**
HAKT				S		**Sn**	**11 36 53.6**	**+0.4**
GEVA	**Gevas**	**1.17**	**265**	P		**Pb**	**11 36 36.1**	**-2.7**
GEVA				S		**Sg**	**11 36 54.4**	**+0.2**
GEVA				IAML			11 37 01.0	
	comp=N,223nm,1.0s							
GEVA				IAML			11 37 07.0	
	comp=E,234nm,0.9s							
ORD	**Ordubad**	**1.24**	**66**	P		**Pg**	**11 36 40.0**	**-0.2**
ORD				S		**Sn**	**11 36 58.0**	**+1.2**
SBZ	**Shahbuz**	**1.25**	**39**	P		**Pg**	**11 36 40.4**	**0.0**
SBZ				S		**Sn**	**11 36 58.8**	**+1.8**
ITBZ	**Tabriz**	**1.28**	**98**	Pg		**Pn**	**11 36 39.5**	**-1.0**
DYDN	**Diyadin**	**1.29**	**329**	P		**Pg**	**11 36 41.4**	**0.0**
DYDN				S		**Sb**	**11 36 57.8**	**0.0**
DYDN				IAML			11 37 03.0	
	comp=E,388nm,0.6s							
DYDN				IAML			11 37 04.0	
	comp=N,312nm,0.7s							
HYR	**Heyderabad**	**1.31**	**11**	P		**Pg**	**11 36 41.3**	**-0.3**
HYR				S		**Sg**	**11 37 02.6**	**+4.0**
IAZR	**Azarshahr**	**1.36**	**123**	Pg		**Pg**	**11 36 42.4**	**-0.2**
CUKT	**Cukurca**	**1.39**	**212**	P		**Pg**	**11 36 45.9**	**+2.7**
CUKT				S		**Sg**	**11 37 05.5**	**+4.3**
VAYK	**Vayk**	**1.44**	**28**	⇓*eP*		**Pb**	**11 36 43.2**	**-0.2**
VAYK				⇓*eS*		**Sg**	**11 37 03.6**	**+0.8**
ADCV	**BITLIS_Adilcev**	**1.47**	**285**	P		**Pn**	**11 36 42.9**	**-0.3**
ADCV				S		**Sg**	**11 37 06.4**	**+2.5**
ADCV				IAML			11 37 09.0	
	comp=N,175nm,0.7s							
ADCV				IAML			11 37 09.0	
	comp=E,111nm,0.4s							
IGDI	**IGDIR**	**1.48**	**346**	P		**Pb**	**11 36 44.1**	**0.0**
IGDI				S		**Sg**	**11 37 07.2**	**+3.1**
IGDI				IAML			11 37 10.0	
	comp=E,127nm,0.5s							
IGDI	**IGDIR**	**1.48**	**346**	P		**Pg**	**11 36 44.8**	**0.0**
IGDI				S		**Sg**	**11 37 08.0**	**+3.9**
ALVK	**Alvank**	**1.50**	**70**	*eP*		**Pb**	**11 36 44.1**	**-0.3**
ALVK				*eS*		**Sg**	**11 37 04.1**	**-0.8**
DORK	**Agr/Tutak/Do**	**1.67**	**305**	P		**Pb**	**11 36 46.7**	**-0.7**
DORK				S		**Sg**	**11 37 11.6**	**+1.3**
DORK				IAML			11 37 13.0	
	comp=N,134nm,0.7s							
KOTA	**Agri, Merkez-K**	**1.72**	**323**	P		**Pb**	**11 36 47.8**	**-0.4**
KOTA				S		**Sb**	**11 37 09.5**	**-0.5**
GNI	**Garni**	**1.72**	**5**	*eP*		**Pg**	**11 36 48.9**	**-0.6**
GNI				*eS*		**Sg**	**11 37 16.3**	**+4.4**
EGVZ	**Egvard**	**1.75**	**62**	*eP*		**Pb**	**11 36 48.6**	**-0.2**
EGVZ				*eS*		**Sg**	**11 37 11.8**	**-1.1**
GRS	**Goris**	**1.76**	**52**	⇓*iP*		**Pn**	**11 36 46.0**	**-1.1**
GRS				⇓*iS*		**Sb**	**11 37 10.0**	**-1.0**
AYRK	**Ayrk**	**1.94**	**30**	*eP*		**Pg**	**11 36 52.7**	**-1.0**
AYRK				*eS*		**Sg**	**11 37 19.1**	**+0.2**
IHRS	**Heris**	**1.97**	**92**	Pn		**Pb**	**11 36 52.9**	**+0.4**
QRD	**Qoradiz**	**2.40**	**64**	P		**Pn**	**11 36 57.0**	**+1.3**
QRD				S		**Sb**	**11 37 30.2**	**+0.9**
GDB	**GEDABAY**	**2.47**	**22**	P		**Pb**	**11 36 59.7**	**-1.3**
GDB				S		**Sb**	**11 37 31.8**	**+0.1**
LSVT	**Lusahovit**	**2.53**	**11**	*eP*		**Pb**	**11 37 02.4**	**+0.3**
LSVT				*eS*		**Sg**	**11 37 35.8**	**-2.1**
AGDM	**Agdam**	**2.60**	**49**	P		**Pb**	**11 37 01.6**	**-1.6**
GANJ	**Ganja**	**2.61**	**31**	P		**Pb**	**11 37 02.0**	**-1.3**
GANJ				S		**Sb**	**11 37 35.0**	**-0.3**
QZX	**Qazax, Azerbai**	**2.70**	**13**	P		**Pb**	**11 37 04.3**	**-0.6**
QZX				S		**Sb**	**11 37 37.0**	**-1.1**
YRD	**Yardimli**	**2.94**	**79**	P		**Pb**	**11 37 06.8**	**-2.2**
YRD				S		**Sb**	**11 37 45.5**	**+0.5**
LRK	**Lerik**	**2.99**	**85**	P		**Pb**	**11 37 07.6**	**-2.2**
LRK				S		**Sb**	**11 37 46.2**	**-0.2**

*IDC **11** 12:03:34.0±2.8, 11˚.00S×119˚.06E, h0km, mb3.2/2, mbtmp3.2/5, ML3.2/3, MS2.5/1, Error ellipse: s-maj=233.0km s-min=24.0km az=50.0*
*DJA **11** 12:03:36.7±0.6, 11˚.5±5˚×11˚.8E±˚, h10km, M3.7/13, mb3.9

ML3.4/14,MLv3.3/60,Error ellipse: s-maj=4.0km s-min=3.1km az=164.5,confirmed
*NOU **11** 12:40:34.1,40.41S×176.12E,h56km,MLv3.5/14,North Island, New Zealand*
ISC 11 12:40:35.3±0.9,**40.36S**±0.02×**175.90E**±0.02,**h33**km±2km, **n128,σ**1°**12**/138,**North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WDPS	**Woodville Poli**	**0.03**	**312**	P	**Pb**	**12 40 40.4**	**-0.4**
WDPS				S	**Sb**	**12 40 45.0**	**+0.5**
POWZ	**Post Office Ro**	**0.10**	**252**	P	**Pb**	**12 40 40.5**	**-0.7**
PRWZ	**Pori Road**	**0.20**	**164**	P	**Pb**	**12 40 42.3**	**+0.3**
PRWZ				S	**Sb**	**12 40 47.9**	**+1.4**
DVHZ	**Dannevirke**	**0.21**	**74**	P	**Pb**	**12 40 41.8**	**-0.3**
DVHZ				S	**Sb**	**12 40 47.1**	**+0.4**
DVHS	**Dannevirke Hig**	**0.22**	**45**	P	**Pn**	**12 40 41.7**	**-0.1**
DVHS				S	**Sb**	**12 40 47.6**	**+0.8**
PNBS	**Palmerston Nor**	**0.22**	**272**	P	**Pn**	**12 40 41.5**	**-0.4**
PNBS				S	**Sb**	**12 40 47.1**	**+0.4**
PNMS	**Monrad Interme**	**0.23**	**269**	P	**Pn**	**12 40 41.7**	**-0.4**
PNMS				S	**Sb**	**12 40 47.3**	**+0.3**
FAHS	**Feilding Agric**	**0.29**	**300**	P	**Pn**	**12 40 42.2**	**-0.9**
FAHS				S	**Sb**	**12 40 48.4**	**+0.4**
TSZ	**Takapari Road**	**0.30**	**9**	P	**Pn**	**12 40 42.0**	**-1.4**
WBFS	**Weber Fire Sta**	**0.32**	**98**	P	**Pn**	**12 40 43.6**	**+0.1**
WBFS				S	**Sb**	**12 40 50.7**	**+2.0**
TRMS	**Tiraumea**	**0.32**	**167**	P	**Pn**	**12 40 43.9**	**+0.2**
EKTS	**Eketahuna Scho**	**0.33**	**206**	P	**Pb**	**12 40 43.3**	**-0.1**
EKTS				S	**Sb**	**12 40 49.7**	**+0.8**
MRZ	**Mangatainoka R**	**0.39**	**219**	P	**Pb**	**12 40 43.9**	**-0.3**
MRZ				S	**Sn**	**12 40 50.9**	**+0.1**
BFZ	**Birch Farm**	**0.42**	**141**	P	**Pn**	**12 40 45.0**	**0.0**
BFZ	**Birch Farm**	**0.42**	**141**	S	**Sn**	**12 40 53.6**	**+2.0**
BFZ	**Birch Farm**	**0.42**	**141**	P	**Pn**	**12 40 45.0**	**0.0**
TIWZ	**Tintock**	**0.42**	**181**	P	**Pn**	**12 40 45.1**	**0.0**
ANWZ	**Angora Road**	**0.45**	**103**	P	**Pn**	**12 40 45.5**	**+0.1**
OHWZ	**Ohakea**	**0.47**	**289**	P	**Pb**	**12 40 44.9**	**-0.5**
PNHZ	**Pukenui**	**0.50**	**27**	P	**Pb**	**12 40 45.0**	**-0.9**
WPHZ	**Waipukurau**	**0.51**	**55**	P	**Pb**	**12 40 45.9**	**-0.2**
PGFS	**Porangahau Fir**	**0.55**	**84**	P	**Pb**	**12 40 47.0**	**+0.4**
PRHZ	**Porangahau**	**0.57**	**81**	P	**Pb**	**12 40 47.3**	**+0.3**
CPWZ	**Castlepoint**	**0.60**	**157**	P	**Pb**	**12 40 48.2**	**+0.7**
HOWZ	**Holdsworth Sta**	**0.61**	**208**	P	**Pn**	**12 40 47.3**	**-0.3**
WAKS	**Wakarara Rangi**	**0.65**	**25**	P	**Pn**	**12 40 47.3**	**-0.8**
OGWZ	**Otaki Gorge**	**0.72**	**230**	P	**Pn**	**12 40 48.7**	**-0.5**
TMWZ	**Te Maipa**	**0.75**	**180**	P	**Pn**	**12 40 49.1**	**-0.4**
KRHZ	**Kereru**	**0.80**	**27**	P	**Pn**	**12 40 49.7**	**-0.6**
PXZ	**Pawanui**	**0.81**	**66**	P	**Pn**	**12 40 50.2**	**-0.1**
MTW	**Mount Morrison**	**0.85**	**201**	P	**Pn**	**12 40 50.4**	**-0.7**
KIW	**Kapiti Island**	**0.91**	**236**	P	**Pn**	**12 40 51.5**	**-0.2**
WAZ	**Wanganui**	**0.93**	**310**	P	**Pn**	**12 40 52.1**	**+0.1**
KAHZ	**Kahuranaki**	**0.94**	**53**	P	**Pn**	**12 40 51.9**	**-0.2**
MOVZ	**Moawhango**	**0.96**	**353**	P	**Pn**	**12 40 51.6**	**-0.9**
CAW	**Cannon Point**	**0.98**	**220**	P	**Pn**	**12 40 52.2**	**-0.5**
KWHZ	**Kaweka Forest**	**1.02**	**24**	P	**Pn**	**12 40 52.8**	**-0.5**
MTVZ	**Mangateitei**	**1.03**	**341**	P	**Pn**	**12 40 53.0**	**-0.5**
TRWZ	**Traveller**	**1.05**	**189**	P	**Pn**	**12 40 53.0**	**-0.7**
WNVZ	**Wahianoa**	**1.06**	**347**	P	**Pn**	**12 40 53.4**	**-0.6**
PAWZ	**Paruwai Farm**	**1.08**	**199**	P	**Pn**	**12 40 53.3**	**-0.9**
TRVZ	**Turoa**	**1.09**	**346**	P	**Pn**	**12 40 54.1**	**-0.4**
MCHZ	**McNeill Hill**	**1.10**	**34**	P	**Pn**	**12 40 54.2**	**-0.2**
WHVZ	**Whangaehu Hut**	**1.10**	**347**	P	**Pn**	**12 40 54.2**	**-0.5**
TUVZ	**Tukino**	**1.11**	**350**	P	**Pn**	**12 40 54.3**	**-0.3**
MAVZ	**Matarangi**	**1.12**	**346**	P	**Pn**	**12 40 55.0**	**0.0**
FWVZ	**Far West T-bar**	**1.13**	**346**	P	**Pn**	**12 40 54.6**	**-0.4**
CKHZ	**Cape Kidnapper**	**1.14**	**53**	P	**Pn**	**12 40 54.3**	**-0.7**
PKVZ	**Pokaka**	**1.15**	**338**	P	**Pn**	**12 40 54.8**	**-0.3**
MSWZ	**Moikau Station**	**1.17**	**205**	P	**Pn**	**12 40 54.1**	**-1.2**
SNVZ	**South Ngauruho**	**1.19**	**350**	P	**Pn**	**12 40 55.5**	**-0.3**
COVZ	**Chateau Observ**	**1.19**	**347**	P	**Pn**	**12 40 55.4**	**-0.3**
NGZ	**Ngauruhoe**	**1.20**	**349**	P	**Pn**	**12 40 55.7**	**-0.2**
OTVZ	**Oturere**	**1.21**	**351**	P	**Pn**	**12 40 55.8**	**-0.2**
ETVZ	**East Tongariro**	**1.23**	**353**	P	**Pn**	**12 40 56.2**	**-0.1**
TMVZ	**Te Maari**	**1.25**	**353**	P	**Pn**	**12 40 56.4**	**-0.2**
WEL	**Wellington**	**1.26**	**223**	P	**Pn**	**12 40 55.8**	**-0.8**
WTVZ	**West Tongariro**	**1.27**	**349**	P	**Pn**	**12 40 56.7**	**-0.1**
NTVZ	**North Tongarir**	**1.27**	**352**	P	**Pn**	**12 40 56.7**	**-0.2**
BKZ	**Black Stump Fm**	**1.28**	**21**	P	**Pn**	**12 40 56.1**	**-0.8**
BKZ	**Black Stump Fm**	**1.28**	**21**	S	**Sn**	**12 40 56.1**	**+0.6**
BKZ	**Black Stump Fm**	**1.28**	**21**	P	**Pn**	**12 40 56.1**	**-0.8**
KRVZ	**Karewarewa**	**1.28**	**351**	P	**Pn**	**12 40 56.9**	**-0.1**
PLWZ	**Palliser**	**1.30**	**202**	P	**Pn**	**12 40 55.9**	**-1.3**
BHW	**Baring Head**	**1.31**	**216**	P	**Pn**	**12 40 56.1**	**-1.1**
SNZO	**South Karori**	**1.31**	**223**	P	**Pn**	**12 40 56.4**	**-0.9**
SNZO	**South Karori**	**1.31**	**223**	S	**Sb**	**12 41 15.3**	**-0.6**
TWVZ	**Taurewa**	**1.33**	**344**	P	**Pn**	**12 40 57.5**	**-0.2**
RITZ	**Rihia Road**	**1.38**	**359**	P	**Pn**	**12 40 58.3**	**+0.1**
ARHZ	**Aropaoanui**	**1.38**	**38**	P	**Pn**	**12 40 57.5**	**-0.8**
KATZ	**Kakaramea**	**1.39**	**353**	P	**Pn**	**12 40 59.0**	**+0.5**
NMHZ	**Naumai**	**1.44**	**29**	P	**Pn**	**12 40 58.5**	**-0.7**
LREZ	**Lake Rotokare**	**1.46**	**307**	P	**Pn**	**12 40 59.8**	**+0.5**
RATZ	**Rangitukua**	**1.49**	**356**	P	**Pn**	**12 41 01.2**	**+1.4**
TCW	**Tory Channel**	**1.50**	**235**	P	**Pn**	**12 40 58.7**	**-1.1**
VRZ	**Vera Road**	**1.51**	**324**	P	**Pn**	**12 41 00.1**	**0.0**
DUWZ	**D'Urville Isla**	**1.57**	**253**	P	**Pn**	**12 41 00.2**	**-0.6**
MRHZ	**Matea Rd**	**1.57**	**11**	P	**Pn**	**12 41 00.1**	**-0.8**
WAZ	**Wairara**	**1.65**	**355**	P	**Pn**	**12 41 01.6**	**-0.4**
MTHZ	**Maungataniwha**	**1.67**	**26**	P	**Pn**	**12 41 01.1**	**-1.2**
PREZ	**Palmer Road**	**1.68**	**307**	P	**Pn**	**12 41 03.4**	**+1.0**
WHTZ	**Whakaora**	**1.69**	**2**	P	**Pn**	**12 41 04.0**	**+1.4**
RAHZ	**Arahi**	**1.71**	**33**	P	**Pn**	**12 41 01.5**	**-1.3**
DREZ	**Durham Road**	**1.75**	**311**	P	**Pn**	**12 41 04.0**	**+0.6**
KHEZ	**Kahui Hut**	**1.80**	**306**	P	**Pn**	**12 41 04.7**	**+0.6**
KHEZ	**Kahui Hut**	**1.80**	**306**	P	**Pn**	**12 41 04.8**	**+0.8**
NMEZ	**Namu Road**	**1.82**	**301**	P	**Pn**	**12 41 05.2**	**+1.0**
ALRZ	**Allen Road**	**1.83**	**11**	P	**Pn**	**12 41 03.2**	**-1.2**
TUWZ	**Tuamarina**	**1.83**	**234**	P	**Pn**	**12 41 03.7**	**-0.7**
WPRZ	**Whakapapatarin**	**1.85**	**6**	P	**Pn**	**12 41 03.7**	**-1.0**
KUTZ	**Kaahu Road**	**1.87**	**358**	P	**Pn**	**12 41 04.5**	**-0.4**
PRRZ	**Plateau Road**	**1.90**	**12**	P	**Pn**	**12 41 04.1**	**-1.2**
NBEZ	**Newall Road No**	**1.91**	**304**	P	**Pn**	**12 41 06.8**	**+1.3**
SNGZ	**Shannon Statio**	**1.93**	**36**	P	**Pn**	**12 41 04.4**	**-1.4**
RTZ	**Ruatahuna**	**1.93**	**26**	P	**Pn**	**12 41 04.6**	**-1.3**
HRRZ	**Handcock Road**	**1.99**	**9**	P	**Pn**	**12 41 04.9**	**-0.7**
MUGZ	**Murupara**	**2.00**	**20**	P	**Pn**	**12 41 04.9**	**-1.8**
HIZ	**Hauiti**	**2.01**	**336**	P	**Pn**	**12 41 07.5**	**+0.5**
HIZ	**Hauiti**	**2.01**	**336**	S	**Sn**	**12 41 32.8**	**+1.9**
HIZ	**Hauiti**	**2.01**	**336**	P	**Pn**	**12 41 07.4**	**+0.5**
TLZ	**Tolley Road**	**2.05**	**352**	P	**Pn**	**12 41 08.6**	**+1.2**
HSRZ	**Hossack Road**	**2.06**	**8**	P	**Pn**	**12 41 06.9**	**-0.8**
NNZ	**Nelson**	**2.10**	**245**	P	**Pn**	**12 41 06.9**	**-1.1**
TARZ	**Mount Tarawera**	**2.17**	**13**	P	**Pn**	**12 41 08.1**	**-1.1**
RIGZ	**Rimuhau**	**2.19**	**42**	P	**Pn**	**12 41 07.5**	**-2.0**
URZ	**Urewera**	**2.30**	**25**	P	**Pn**	**12 41 08.3**	**-2.5**
URZ	**Urewera**	**2.30**	**25**	S	**Sn**	**12 41 36.5**	**-1.5**
URZ	**Urewera**	**2.30**	**25**	P	**Pn**	**12 41 08.6**	**-2.2**
TKNZ	**Takaka Hill**	**2.33**	**252**	P	**Pn**	**12 41 13.7**	**+2.3**
MWZ	**Matawai**	**2.38**	**33**	P	**Pn**	**12 41 09.8**	**-2.2**
MRNZ	**Matariki Terra**	**2.60**	**245**	P	**Pn**	**12 41 13.9**	**-1.1**
QRZ	**Quartz Range**	**2.61**	**259**	P	**Pn**	**12 41 15.5**	**+0.4**
QRZ	**Quartz Range**	**2.61**	**259**	P	**Pn**	**12 41 14.4**	**-0.7**
TOZ	**Tahuroa Road**	**2.64**	**353**	P	**Pn**	**12 41 17.4**	**+1.8**
THZ	**Tophouse**	**2.66**	**237**	P	**Pn**	**12 41 14.0**	**-1.9**
TWGZ	**Tauwhareparae**	**2.71**	**37**	P	**Pn**	**12 41 14.4**	**-2.2**
KHZ	**Kahutara**	**2.72**	**220**	P	**Pn**	**12 41 17.1**	**+0.5**
KHZ	**Kahutara**	**2.72**	**220**	P	**Pn**	**12 41 14.6**	**-2.0**
RUGZ	**Raukumara Rang**	**2.76**	**31**	P	**Pn**	**12 41 15.2**	**-2.2**
HAZ	**Te Kaha**	**2.98**	**30**	P	**Pn**	**12 41 18.4**	**-1.9**
PKGZ	**Pakihiroa**	**3.01**	**35**	P	**Pn**	**12 41 18.0**	**-2.7**
WMGZ	**Waiomatatini S**	**3.20**	**38**	P	**Pn**	**12 41 20.4**	**-2.9**
MKAZ	**Moumakai**	**3.30**	**350**	P	**Pn**	**12 41 26.2**	**+1.5**
DSZ	**Denniston Nort**	**3.39**	**245**	P	**Pn**	**12 41 24.1**	**-1.9**
AWAZ	**Awhitu Peninsu**	**3.43**	**343**	P	**Pn**	**12 41 29.1**	**+2.7**
LTZ	**Lake Taylor**	**3.64**	**227**	P	**Pn**	**12 41 26.5**	**-2.9**
OKCZ	**Okains Bay**	**3.97**	**211**	P	**Pn**	**12 41 31.1**	**-2.8**
JCZ	**Jackson Bay**	**6.45**	**233**	P	**Pn**	**12 42 08.4**	**+0.4**

*IDC **11** 12:44:25.8±1.8,32.69S×178.04W,h0km,mb4.2/3, mbtmp4.1/5,ML3.5/2,Error ellipse: s-maj=44.4km s-min=32.2km az=129.0*
*NEIC **11** 12:44:28.1±0.9,32.7S±0.2×178.12W±0.07,h10km±2km, mb4.3/14,Error ellipse: s-maj=27.1km s-min=8.6km az=168.0*
*WEL **11** 12:44:30.1±1.3,33°S±15'×17'7W±2'2,h300km,M4.5/6, mB4.2/6,ML4.3/7,MLv4.5/6,Mw(mB)3.3/1,Error ellipse: s-maj=32.3km s-min=10.1km az=121.5,confirmed*

ISC 11 12:44:27.5±1.4,**32.61S**±0.09×**177.9W**±0.2,**h20**km,**n43, σ**0°**92**/53,**mb4.3**/10,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**5.85**	**211**	P	**Pn**	**12 45 53.7**	**+0.7**
MXZ				S	**Sn**	**12 46 59.0**	**-0.4**
WMGZ	**Waiomatatini S**	**6.02**	**209**	P	**Pn**	**12 45 56.0**	**+0.7**
WMGZ				S	**Sn**	**12 47 05.5**	**+1.8**
PKGZ	**Pakihiroa**	**6.20**	**211**	P	**Pn**	**12 45 57.0**	**-0.8**
PKGZ				S	**Sn**	**12 47 09.0**	**+0.8**
HAZ	**Te Kaha**	**6.24**	**214**	P	**Pn**	**12 45 58.6**	**+0.2**
HAZ				S	**Sn**	**12 47 11.8**	**+2.6**
PUZ	**Puketiti**	**6.30**	**209**	P	**Pn**	**12 45 59.0**	**-0.2**
PUZ				S	**Sn**	**12 47 10.4**	**-0.1**
RUGZ	**Raukumara Rang**	**6.46**	**213**	P	**Pn**	**12 46 01.1**	**-0.5**
RUGZ				S	**Sn**	**12 47 16.6**	**+1.9**
TWGZ	**Tauwhareparae**	**6.50**	**210**	P	**Pn**	**12 46 01.0**	**-1.0**
TWGZ				S	**Sn**	**12 47 16.4**	**+0.7**
MWZ	**Matawai**	**6.83**	**212**	P	**Pn**	**12 46 05.3**	**-1.2**
MWZ				S	**Sn**	**12 47 22.7**	**-1.1**
URZ	**Urewera**	**6.96**	**215**	Pn	**Pn**	**12 46 07.0**	**-1.3**
	1.6nm,0.3s,baz=259,slow=4.4,SNR=19						
URZ				Sn	**Sn**	**12 47 25.8**	**-1.1**
	3.8nm,0.3s,baz=119,slow=1.9,SNR=11						
	5.6nm,0.3s						
URZ	**Urewera**	**6.96**	**215**	P	**Pn**	**12 46 07.1**	**-1.3**
URZ				S	**Sn**	**12 47 25.8**	**-1.1**
RIGZ	**Rimuhau**	**7.04**	**209**	P	**Pn**	**12 46 08.6**	**-0.9**
RIGZ				S	**Sn**	**12 47 27.4**	**-1.5**
MUGZ	**Murupara**	**7.30**	**215**	P	**Pn**	**12 46 12.9**	**-0.1**
RTZ	**Ruatahuna**	**7.31**	**214**	Pn	**Pn**	**12 46 13.3**	**+0.1**
RTZ	**Ruatahuna**	**7.31**	**214**	P	**Pn**	**12 46 13.0**	**-0.1**
RAHZ	**Arahi**	**7.50**	**212**	P	**Pn**	**12 46 16.7**	**+0.9**
OUZ	**Omahuta**	**7.55**	**248**	P	Pn	12 46 20.4	+4.0
MTHZ	**Maungataniwha**	**7.56**	**213**	P	**Pn**	**12 46 17.6**	**+1.0**
BKZ	**Black Stump Fm**	**7.98**	**213**	Pn	**Pn**	**12 46 21.2**	**-1.1**
BKZ	**Black Stump Fm**	**7.98**	**213**	P	**Pn**	**12 46 21.3**	**-1.1**
TMVZ	**Te Maari**	**8.32**	**217**	P	**Pn**	**12 46 27.2**	**+0.1**
DZM	**Mont Dzumac**	**17.42**	**303**	P	**P**	**12 48 31.5**	**+0.8**
	0.1nm,0.3s,baz=241,slow=20,SNR=2.0						
	4.8nm,0.9s						
CTA	**Charters Tower**	**34.32**	**282**	P	**P**	**12 51 13.9**	**+1.1**
	3.4nm,0.9s,baz=117,slow=14,SNR=1.2						
	3.4nm,0.9s						
CTAO	**Charters Tower**	**34.32**	**282**	P	**P**	**12 51 12.3**	**-0.5**
CTAO				IAmb	IAmb	12 51 29.8	
	comp=Z,5.6nm,0.9s						
INKA	**Innaminka**	**35.94**	**267**	P	**P**	**12 51 26.8**	**0.0**
BBOO	**Buckleboo**	**38.52**	**257**	P	**P**	**12 51 47.3**	**-1.3**
BBOO				IAmb	IAmb	12 52 09.9	
	comp=Z,7.6nm,1.1s						
COEN	**Coen**	**40.02**	**288**	P	**P**	**12 52 01.8**	**+0.5**
COEN				IAmb	IAmb	12 52 08.5	
	comp=Z,7.7nm,1.1s						
AS31	**Alice Springs**	**43.14**	**269**	P	**P**	**12 52 26.9**	**+0.1**
ASAR	**Alice Springs**	**43.14**	**269**	P	**P**	**12 52 26.9**	**0.0**
	comp=Z,1.2nm,0.5s,baz=111,slow=7.9,SNR=28						
	comp=Z,1.2nm,0.5s						
ASAR	**Alice Springs**	**43.14**	**269**	P	**P**	**12 52 26.2**	**-0.7**
WR8	**Warramunga Arr**	**44.19**	**274**	P	**P**	**12 52 35.0**	**-0.3**
WR8				IAmb	IAmb	12 52 36.9	
	comp=Z,2.9nm,0.7s						
WRAB	**Tennant Creek**	**44.32**	**274**	P	**P**	**12 52 35.9**	**-0.5**
WRAB				IAmb	IAmb	12 52 38.0	
	comp=Z,2.4nm,0.6s						
WRA	**Warramunga Arr**	**44.33**	**274**	P	**P**	**12 52 36.0**	**-0.4**
	comp=Z,2.0nm,0.5s,baz=113,slow=8.2,SNR=66						
	comp=Z,2.0nm,0.5s						
WRA	**Warramunga Arr**	**44.33**	**274**	P	**P**	**12 52 35.6**	**-0.8**
WB0	**Warramunga Arr**	**44.36**	**275**	P	**P**	**12 52 36.6**	**-0.1**
WB0				IAmb	IAmb	12 52 38.6	
	comp=Z,2.7nm,0.7s						
FORT	**Forrest**	**45.62**	**257**	P	**P**	**12 52 46.6**	**0.0**
MTN	**Manton Dam**	**50.46**	**281**	P	**P**	**12 53 24.0**	**-0.2**
MTN				IAmb	IAmb	12 53 33.8	
	comp=Z,6.4nm,1.1s						
KNRA	**Kununurra**	**51.01**	**276**	P	**P**	**12 53 27.9**	**-0.4**
KNRA				IAmb	IAmb	12 53 28.6	
	comp=Z,7.9nm,1.1s						
CASY	**Casey**	**53.25**	**209**	P	**P**	**12 53 44.8**	**+0.6**
KKM	**Kota Kinabalu**	**73.35**	**289**	P	**P**	**12 55 58.1**	**-0.3**
KURBB	**Kurchatov Arra**	**122.67**	**313**	PKP	**PKiKP**	**13 03 22.3**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=115,slow=2.0,SNR=5.7						
BVAR	**Borovoye Array**	**128.04**	**315**	PKP	**PKiKP**	**13 03 33.1**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=101,slow=1.4,SNR=1.9						
FINES	**FINESS Array B**	**147.25**	**339**	PKPbc	**PKPab**	**13 04 09.9**	**-0.5**
	comp=Z,2.8nm,0.8s,baz=38,slow=3.4,SNR=6.7						
FINES	**FINESS Array B**	**147.25**	**339**		**PKPbc**	**13 04 07.8**	**-0.9**

IDC 11 12:46:24.9±3.3,**32.59S**×**178.34W**,**h0**km,**mb3.6**/2, **mbtmp3.7**/3,**Error ellipse: s-maj=76.0km s-min=37.8km az=114.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.77**	**212**	Pn	Pn	12 48 04.8	-0.6
	6.5nm,0.6s,baz=161,slow=23,SNR=1.0						
URZ				Sn	Sn	12 49 22.5	-0.6
	0.8nm,0.3s,baz=162,slow=20,SNR=2.1						
ASAR	**Alice Springs**	**42.75**	**269**	P	P	12 54 24.3	+0.1
	0.5nm,0.8s,baz=106,slow=8.4,SNR=4.1						
	0.5nm,0.8s						
WRA	**Warramunga Arr**	**43.94**	**275**	P	P	12 54 33.7	0.0
	0.6nm,0.4s,baz=114,slow=8.0,SNR=6.0						
	0.6nm,0.4s						
FINES	**FINESS Array B**	**147.08**	**339**	PKPbc	PKPbc	13 06 08.2	-0.8
	1.5nm,0.9s,baz=42,slow=4.3,SNR=4.0						

*NNC **11** 12:47:57.8±0.8,42.93N×78.26E,h0km,mb2.8,mpv2.6, Error ellipse: s-maj=6.3km s-min=2.7km az=1.0*
*KRNET **11** 12:47:58.5±0.1,42.95N×78.25E,h17km,mb2.4*
*SOME **11** 12:47:59.3,42.97N×78.25E,h10km*
ISC 11 12:47:58.5±0.9,**42.94N**±0.03×**78.25E**±0.02,**h10**km±8km, **n27,σ**0°**38**/52,**4C-7D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	**Saty**	**0.17**	**45**	P	**Pg**	**12 48 02.4**	**+0.2**
	21nm,0.1s						
SATY				S	**Sg**	**12 48 04.6**	**-0.3**
	270nm,0.1s						
ANVS	**Anan'yevo**	**0.46**	**250**	⇓*i*P	**Pg**	**12 48 07.7**	**+0.2**
ANVS				⇓*i*S	**Sg**	**12 48 13.9**	**+0.4**
KURS	**Kuram**	**0.55**	**354**	P	**Pg**	**12 48 09.3**	**+0.1**
	1.7nm,0.1s						
KURS				S	**Sg**	**12 48 16.7**	**+0.3**
	5.3nm,0.2s						
UZB	**Uzunbulak**	**0.60**	**70**	P	**Pg**	**12 48 10.2**	**-0.1**
	5.2nm,0.1s						
UZB				S	**Sg**	**12 48 18.2**	**0.0**
	34nm,0.2s						
UZB	**Uzunbulak**	**0.60**	**70**	*e*P	**Pg**	**12 48 10.2**	**-0.1**
UZB				*e*S	**Sg**	**12 48 18.3**	**0.0**
UZB	**Uzunbulak**	**0.60**	**70**	*e*P	**Pg**	**12 48 10.2**	**-0.1**
	5.2nm,0.1s						
UZB				*e*S	**Sg**	**12 48 18.2**	**0.0**
	34nm,0.2s						
KPKS	**Kokpek**	**0.61**	**31**	P	**Pg**	**12 48 10.5**	**+0.1**
	0.3nm,0.2s						
KPKS				S	**Sg**	**12 48 18.7**	**+0.2**
	8.5nm,0.3s						
KPKS	**Kokpek**	**0.61**	**31**	*e*P	**Pg**	**12 48 10.5**	**+0.1**
	0.3nm,0.2s						
KPKS				*e*S	**Sg**	**12 48 18.7**	**+0.2**
	8.5nm,0.3s						
KOTS	**Kotyrbulak**	**0.88**	**290**	P	**Pg**	**12 48 15.1**	**-0.4**
	3.7nm,0.2s						
KOTS				S	**Sg**	**12 48 26.7**	**-0.3**
	8.2nm,0.3s						
KOTS	**Kotyrbulak**	**0.88**	**290**	*e*P	**Pg**	**12 48 15.1**	**-0.4**
KOTS				*e*S	**Sg**	**12 48 26.7**	**-0.3**
KOTS	**Kotyrbulak**	**0.88**	**290**	*e*P	**Pg**	**12 48 15.1**	**-0.4**
	3.7nm,0.2s						
KOTS				*e*S	**Sg**	**12 48 26.7**	**-0.3**
	8.2nm,0.3s						
MDOK	**Medeo**	**0.91**	**284**	Pg	**Pg**	**12 48 15.8**	**-0.2**
	2.4nm,0.2s						
MDOK				Lg	Lg	12 48 27.6	
	15nm,0.6s						
PDGK	**Podgornoye**	**0.99**	**67**	⇑P	**Pg**	**12 48 17.0**	**-0.5**
	2.6nm,0.9s						
PDGK				⇑S	**Sg**	**12 48 29.4**	**-1.0**
	8.9nm,0.6s						
KDJ	**Kajisay**	**1.13**	**225**	⇑*i*P	**Pb**	**12 48 20.0**	**-0.2**
KDJ				⇑*i*S	**Sg**	**12 48 34.7**	**-0.3**
BLB	**Baldybastay**	**1.17**	**8**	P	**Pb**	**12 48 20.6**	**-0.2**
	4.7nm,0.1s						
BLB				S	**Sg**	**12 48 35.8**	**-0.3**
	3.1nm,0.2s						
TARG	**Taragay, Kyrgy**	**1.26**	**195**	⇓*i*P	**Pn**	**12 48 22.3**	**-0.2**
TARG				⇓*i*S	**Sb**	**12 48 38.7**	**-0.2**
ARXS	**Arharly**	**1.31**	**347**	P	**Pb**	**12 48 23.0**	**-0.2**
	0.8nm,0.1s						
ARXS				S	**Sb**	**12 48 39.9**	**-0.1**
	7.1nm,0.2s						
ARXS	**Arharly**	**1.31**	**347**	*e*P	**Pb**	**12 48 23.0**	**-0.2**
	0.8nm,0.1s						
ARXS				*e*S	**Sb**	**12 48 39.9**	**-0.1**
	7.1nm,0.2s						
KTBS	**Karatobe**	**1.38**	**304**	P	**Pb**	**12 48 24.3**	**0.0**
	1.7nm,0.1s						
KTBS				S	**Sn**	**12 48 42.2**	**+0.1**
	0.4nm,0.2s						
KTBS	**Karatobe**	**1.38**	**304**	*e*P	**Pb**	**12 48 24.3**	**0.0**
	1.7nm,0.1s						
KTBS				*e*S	**Sn**	**12 48 42.2**	**+0.1**
	0.4nm,0.2s						
KNOS	**Konyrlen**	**1.57**	**25**	P	**Pb**	**12 48 27.8**	**+0.1**
	0.9nm,0.2s						
KNOS				S	**Sg**	**12 48 48.6**	**-0.4**
	6.2nm,0.2s						
KTMS	**Ketmen**	**1.62**	**71**	P	**Pb**	**12 48 28.6**	**0.0**
KTMS				S	**Sb**	**12 48 49.5**	**+0.5**
KTMS	**Ketmen**	**1.62**	**71**	*e*P	**Pb**	**12 48 28.6**	**0.0**
KTMS				*e*S	**Sb**	**12 48 49.5**	**+0.5**
BOOM	**Boomskoye usch**	**1.76**	**256**	⇓*i*P	**Pb**	**12 48 31.1**	**+0.2**
BOOM				⇓*i*S	**Sb**	**12 48 54.1**	**+1.0**
DJR	**Jarkent**	**1.78**	**38**	P	**Pb**	**12 48 31.5**	**+0.2**
	1.3nm,0.2s						
DJR				S	**Sg**	**12 48 54.9**	**-1.0**
	4.5nm,0.5s						
DJR	**Jarkent**	**1.78**	**38**	*e*P	**Pb**	**12 48 31.5**	**+0.2**
	1.3nm,0.2s						
DJR				*e*S	**Sg**	**12 48 54.9**	**-1.0**
	4.5nm,0.5s						
MK31	**Makanchi Array**	**4.80**	**35**	Pn	**Pn**	**12 49 11.3**	**+0.4**
	0.1nm,0.2s,baz=44,slow=2.8,SNR=4.0						
MK31				⇓Lg	Lg	12 50 24.7	
	0.1nm,0.2s,baz=212,slow=28,SNR=3.7						

*ISK **11** 13:32:21.8,40.78N×27.41E,h6km,ML2.5/28*
*AFAD **11** 13:32:23.7,40.73N×27.56E,h7km±4km,ML2.3*
ISC 11 13:32:22.4±0.9,**40.76N**±0.03×**27.44E**±0.02,**h9**km±7km, **n43,σ**0°**69**/57,**Turkey**

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

OXLC	**Oaxaca**	**1.28**	**2**	*eP*	**Pb**	**13 51 05.0**	**-1.0**
OXLC				*eS*	**Sn**	**13 51 21.1**	**-1.5**
OXBJ	**Oaxaca**	**1.28**	**1**		**Pb**	**13 51 04.9**	**-1.0**
OXBJ					**Sn**	**13 51 20.7**	**-2.0**
OXBJ	**Oaxaca**	**1.28**	**1**	*eP*	**Pb**	**13 51 04.9**	**-1.0**
OXBJ				*i* S	**Sn**	**13 51 20.7**	**-2.0**
OXIG	**Oaxaca**	**1.29**	**0**		**Pb**	**13 51 05.0**	**-1.1**
OXIG					**Sn**	**13 51 21.0**	**-1.8**
VHO	**Vista Hermosa**	**1.29**	**0**	*eP*	**Pb**	**13 51 05.0**	**-1.1**
VHO				*i* S	**Sn**	**13 51 21.0**	**-1.8**
YOIG	**Yosondua**	**1.32**	**324**		**Pn**	**13 51 05.7**	**-0.5**
YOIG					**Sb**	**13 51 22.5**	**-1.1**
YOIG	**Yosondua**	**1.32**	**324**	*eP*	**Pn**	**13 51 05.7**	**-0.5**
YOIG				*i* S	**Sb**	**13 51 22.5**	**-1.1**
PNIG	**Pinotepa**	**1.47**	**295**	*eP*	**Pn**	**13 51 07.1**	**-0.9**
PNIG				*eS*	**Sn**	**13 51 24.0**	**-2.9**
TXIG	**Tlaxiaco**	**1.77**	**326**		**Pn**	**13 51 12.3**	**0.0**
TXIG					**Sn**	**13 51 34.2**	**-0.6**
TXIG	**Tlaxiaco**	**1.77**	**326**	*eP*	**Pn**	**13 51 12.3**	**0.0**
TXIG				*i* S	**Sn**	**13 51 34.2**	**-0.6**
NEUV	**Arroyo Zacate**	**2.12**	**25**		**Pn**	**13 51 17.0**	**0.0**
NEUV	**Arroyo Zacate**	**2.12**	**25**	*eP*	**Pn**	**13 51 17.0**	**0.0**
NEUV				*i* S	**Sg**	**13 51 45.5**	**-4.9**
CMIG	**Matias Romero**	**2.21**	**53**	Pn	**Pn**	**13 51 16.8**	**-1.3**
	20nm,0.3s,baz=228,slow=9.5,SNR=118						
CMIG				Lg	Lg	13 51 45.5	
	79nm,0.3s,baz=41,slow=20,SNR=7.0						
CMIG	**Matias Romero**	**2.21**	**53**		**Pn**	**13 51 16.8**	**-1.3**
CMIG					**Sn**	**13 51 44.4**	**-0.8**
CMIG	**Matias Romero**	**2.21**	**53**	*eP*	**Pn**	**13 51 16.8**	**-1.3**
CMIG				*i* S	**Sn**	**13 51 44.4**	**-0.8**
HLIG	**Huajuapan de L**	**2.28**	**334**		**Pn**	**13 51 20.7**	**+1.3**
HLIG					**Sn**	**13 51 47.3**	**0.0**
HLIG	**Huajuapan de L**	**2.28**	**334**	*eP*	**Pn**	**13 51 20.7**	**+1.3**
HLIG				*i* S	**Sn**	**13 51 47.3**	**0.0**
MGIG	**Malinaltepec**	**2.32**	**309**		**Pn**	**13 51 20.6**	**+0.8**
MGIG	**Malinaltepec**	**2.32**	**309**	*eP*	**Pn**	**13 51 20.6**	**+0.8**
MGIG				*i* S	**Sn**	**13 51 45.8**	**-2.5**
TOIG	**Toxpalan**	**2.33**	**352**		**Sn**	**13 51 47.9**	**-0.4**
TOIG	**Toxpalan**	**2.33**	**352**	*eP*	**Pb**	**13 51 22.1**	**-1.7**
TOIG				*i* S	**Sn**	**13 51 47.9**	**-0.4**
CRIG	**Cruz Grande**	**2.49**	**293**	*eP*	**Pn**	**13 51 22.0**	**0.0**
CRIG				*eS*	**Sn**	**13 51 47.5**	**-4.6**
TLIG	**Tlapa**	**2.49**	**316**		**Pn**	**13 51 25.2**	**+3.1**
TLIG	**Tlapa**	**2.49**	**316**		**Sb**	**13 51 57.2**	**0.0**
TLIG	**Tlapa**	**2.49**	**316**	*eP*	**Pn**	**13 51 24.3**	**+2.1**
TLIG				*i* S	**Sb**	**13 51 57.2**	**0.0**
FTIG	**Fresnillo de T**	**2.50**	**328**		**Pn**	**13 51 23.6**	**+1.3**
FTIG					**Sn**	**13 51 52.1**	**-0.6**
FTIG	**Fresnillo de T**	**2.50**	**328**	*eP*	**Pn**	**13 51 23.6**	**+1.3**
FTIG				*i* S	**Sn**	**13 51 52.1**	**-0.6**
HMTT	**Tlapaneco**	**2.66**	**319**	*eP*	**Pb**	**13 51 29.0**	**-0.4**
HMTT				*eS*	**Sn**	**13 51 54.6**	**-1.9**
TPIG	**Tehuac#an**	**2.69**	**347**	*eP*	**Pb**	**13 51 27.8**	**-2.2**
TPIG				*eS*	**Sb**	**13 52 00.2**	**-2.8**
CARR	**Arriaga**	**2.76**	**80**	*eP*	**Pn**	**13 51 24.4**	**-1.3**
CARR				*eS*	**Sn**	**13 51 54.6**	**-4.2**
DAIG	**Los Arroyos**	**3.06**	**294**		**Pn**	**13 51 30.9**	**+1.1**
DAIG	**Los Arroyos**	**3.06**	**294**	*eP*	**Pn**	**13 51 30.9**	**+1.1**
DAIG				*eS*	**Sn**	**13 52 01.4**	**-4.7**
TUIG	**Tuzandepetl**	**3.15**	**44**	*eP*	**Pn**	**13 51 30.1**	**-1.1**
PMUV	**Sontecomapan**	**3.16**	**29**		**Pn**	**13 51 29.6**	**-1.6**
PMUV	**Sontecomapan**	**3.16**	**29**	*eP*	**Pn**	**13 51 29.6**	**-1.6**
PCIG		**3.39**	**91**		**Pn**	**13 51 34.5**	**+0.1**
PCIG		**3.39**	**91**	*eP*	**Pn**	**13 51 34.5**	**+0.1**
PCIG				*i* S	**Sn**	**13 52 10.6**	**-3.9**
MEIG	**Mezcala**	**3.49**	**308**	*eP*	**Pn**	**13 51 39.9**	**+4.0**
MEIG				*i* S	**Sn**	**13 52 12.9**	**-4.0**
JAUV	**Jalcomulco**	**3.57**	**359**		**Pn**	**13 51 36.6**	**-0.3**
JAUV	**Jalcomulco**	**3.57**	**359**	*eP*	**Pn**	**13 51 36.6**	**-0.3**
JAUV				*i* S	**Sb**	**13 52 24.9**	**-3.2**
CAIG	**El Cayaco**	**3.61**	**291**		**Pn**	**13 51 38.1**	**+0.7**
CAIG	**El Cayaco**	**3.61**	**291**	*eP*	**Pn**	**13 51 38.1**	**+0.7**
CAIG				*i* S	**Sn**	**13 52 14.0**	**-5.9**
TGIG		**3.61**	**74**		**Pn**	**13 51 37.9**	**+0.4**
TGIG		**3.61**	**74**	*eP*	**Pn**	**13 51 37.9**	**+0.4**
TGIG				*eS*	**Sn**	**13 52 20.0**	**-0.1**
PLIG	**Platanillo**	**3.71**	**315**	*eP*	**Pb**	**13 51 45.1**	**-2.2**
PLIG				*i* S	**Sn**	**13 52 19.2**	**-3.1**
PPM	**Popocatepetl**	**3.73**	**331**	*eP*	**Pn**	**13 51 42.3**	**+2.7**
PPM				*i* S	**Sn**	**13 52 25.3**	**+1.4**
YAIG	**Yautepec**	**3.79**	**324**		**Pn**	**13 51 42.0**	**+2.0**
YAIG	**Yautepec**	**3.79**	**324**	*eP*	**Pn**	**13 51 42.0**	**+2.0**
YAIG				*i* S	**Sn**	**13 52 22.2**	**-2.2**
LVIG	**Laguna Verde**	**3.94**	**4**		**Pn**	**13 51 41.5**	**-0.4**
LVIG	**Laguna Verde**	**3.94**	**4**	*eP*	**Pn**	**13 51 41.5**	**-0.4**
LVIG				*i* S	**Sn**	**13 52 28.5**	**+0.7**
UNM	**Universidad Na**	**4.23**	**327**	*eP*	**Pb**	**13 51 52.0**	**-4.3**
UNM				*eS*	**Sn**	**13 52 32.9**	**-2.6**
ARIG	**Puente Sto Nin**	**4.25**	**306**		**Pn**	**13 51 48.0**	**+1.7**
ARIG	**Puente Sto Nin**	**4.25**	**306**	*eP*	**Pn**	**13 51 48.0**	**+1.7**
ARIG				*eS*	**Sn**	**13 52 34.4**	**-1.3**
PATR	**El Naranjo**	**4.39**	**98**		**Pn**	**13 51 49.2**	**+0.7**
PATR	**El Naranjo**	**4.39**	**98**	*eP*	**Pn**	**13 51 49.2**	**+0.7**
PATR				*eS*	**Sn**	**13 52 37.5**	**-2.0**
PAVE	**Pavencul**	**4.44**	**97**		**Pn**	**13 51 50.5**	**+1.5**
PAVE	**Pavencul**	**4.44**	**97**	*eP*	**Pn**	**13 51 50.5**	**+1.5**
PAVE				*i* S	**Sn**	**13 52 36.9**	**-3.7**
CXUV	**Coxquihui**	**4.45**	**350**		**Pn**	**13 51 50.9**	**+1.9**
CXUV	**Coxquihui**	**4.45**	**350**	*eP*	**Pn**	**13 51 50.9**	**+1.9**
CXUV				*i* S	**Sn**	**13 52 38.6**	**-1.9**
CCIG	**Comitan**	**4.46**	**83**	Pn	**Pn**	**13 51 49.8**	**+0.6**
CCIG	**Comitan**	**4.46**	**83**	*eP*	**Pn**	**13 51 49.5**	**+0.3**
CCIG				*i* S	**Sn**	**13 52 39.5**	**-1.5**
CHUJ	**Union Juarez**	**4.52**	**98**	*eP*	**Pn**	**13 51 50.7**	**+0.6**
CHUJ				*eS*	**Sn**	**13 52 39.2**	**-3.4**
ZIIG	**Zihuatanejo**	**4.88**	**293**	*eP*	**Pn**	**13 51 56.1**	**+1.3**
ZIIG				*eS*	**Sn**	**13 52 47.5**	**-3.6**
DEIG	**Demacu**	**5.00**	**334**	*eP*	**Pb**	**13 52 04.9**	**-4.5**
DEIG				*i* S	**Sn**	**13 52 59.7**	**+5.2**
HUEH	**Huehuetenango**	**5.07**	**94**	Pn	**Pn**	**13 51 58.6**	**+0.9**
MOIG	**Morelia**	**5.75**	**313**	Pn	**Pn**	**13 52 08.0**	**+1.0**
MOIG	**Morelia**	**5.75**	**313**	*eS*	**Sn**	**13 53 15.0**	**+2.1**
CTUV	**Llano Grande**	**5.87**	**345**	*eP*	**Pn**	**13 52 10.7**	**+2.2**
CTUV				*i* S	**Sn**	**13 53 19.5**	**+4.0**
APG	**El Apazote**	**6.10**	**96**	Pn	**Pn**	**13 52 12.8**	**+0.9**
	0.2nm,0.3s,baz=208,slow=15,SNR=8.5						
APG				Sn	**Sn**	**13 53 19.7**	**-1.9**
	0.2nm,0.3s,baz=69,slow=21,SNR=4.4						
APG				Lg	Lg	13 53 41.4	
	0.3nm,0.3s,baz=186,slow=11,SNR=7.4						
PETF	**Flores**	**6.70**	**79**	Pn	**Pn**	**13 52 19.5**	**-0.4**
PETF	**Flores**	**6.70**	**79**	*eP*	**Pn**	**13 52 17.9**	**-1.9**
MMIG	**Aquila**	**6.79**	**293**	*eP*	Pn	13 52 17.4	-3.8
MMIG				*i* S	**Sn**	**13 53 42.6**	**+4.2**
RPIG	**Rio Verde**	**6.81**	**334**		**Pn**	**13 52 23.2**	**+1.7**
RPIG	**Rio Verde**	**6.81**	**334**	*eP*	**Pn**	**13 52 23.2**	**+1.7**
RPIG				*i* S	**Sn**	**13 53 39.8**	**+1.0**
TEIG	**Tepich**	**9.19**	**60**	Pn	**Pn**	**13 52 50.0**	**-1.1**
JUD3	**Juan Diaz 3**	**12.26**	**116**	Pn	**Pn**	**13 53 39.5**	**+3.3**
JTS	**Las Juntas de**	**12.71**	**114**	Pn	**Pn**	**13 53 44.4**	**+2.1**
	0.7nm,0.3s,baz=267,slow=17,SNR=2.6						
	4.5nm,0.5s						
TXAR	**Lajitas Array**	**14.93**	**336**	Pn	**Pn**	**13 54 15.0**	**+2.4**
	0.1nm,0.3s,baz=156,slow=13,SNR=16						
	0.2nm,0.6s						
TXAR	**Lajitas Array**	**14.93**	**336**	Pn	**Pn**	**13 54 12.5**	**-0.1**
TX31	**Lajitas Ar. Si**	**14.93**	**336**	Pn	**Pn**	**13 54 14.4**	**+1.7**
SAND	**Sanderson**	**14.95**	**342**	Pn	**Pn**	**13 54 15.2**	**+2.3**
BRDY	**Brady**	**15.58**	**353**	Pn	**Pn**	**13 54 21.7**	**+0.5**
BRDY				IAmb	IAmb	13 54 35.2	
	comp=Z,8.9nm,0.8s						
OZNA	**Ozona**	**15.60**	**346**	Pn	**Pn**	**13 54 22.1**	**+0.6**
OZNA				IAmb	IAmb	13 54 38.1	
	comp=Z,7.5nm,0.7s						
WHTX	**Lake Whitney,**	**16.16**	**358**	Pn	**Pn**	**13 54 28.6**	**0.0**
VHRN	**Van Horn**	**16.74**	**335**	P	**P**	**13 54 38.6**	**+0.2**
PECS	**Pecos**	**16.83**	**338**	Pn	**Pn**	**13 54 37.5**	**+0.2**
ABTX	**Abilene, Hawle**	**16.98**	**352**		**P**	**13 54 40.9**	**-0.1**
ABTX				IAmb	IAmb	13 54 51.1	
	comp=Z,12nm,0.7s						
PLPT	**Palo Pinto**	**17.02**	**355**		**Pn**	**13 54 40.6**	**+1.0**
PLPT				IAmb	IAmb	13 54 51.4	
	comp=Z,24nm,1.2s						
MNTX	**Cornudas Mount**	**17.70**	**335**		**Pn**	**13 54 49.1**	**+1.1**
POST	**Post**	**17.75**	**347**		**P**	**13 54 50.0**	**+0.6**
DKNS	**Dickens**	**18.21**	**349**	P	**Pn**	**13 54 53.9**	**-0.4**
MIAR	**Mount Ida**	**18.91**	**8**	P	**P**	**13 55 02.0**	**-0.1**
MSTX	**Muleshoe**	**18.91**	**344**	P	**P**	**13 55 02.9**	**+0.5**
MSTX				IAmb	IAmb	13 55 04.8	
	comp=Z,15nm,1.0s						

WMOK	**Wichita Mounta**	**18.97**	**355**		P	**P**	**13 55 02.6**	**-0.2**
W35A	**Tecumseh**	**19.30**	**360**		P	**P**	**13 55 07.1**	**+0.7**
W35A					IAmb	IAmb	13 55 16.4	
	comp=Z,12nm,0.7s							
UALR	**University of**	**19.33**	**11**	P	P	**P**	**13 55 06.8**	**+0.1**
WHAR	**Wooly Hollow**	**19.84**	**11**	P	P	**P**	**13 55 12.0**	**-0.3**
WHAR					IAmb	IAmb	13 55 42.8	
	comp=Z,16nm,0.9s							
CRNM	**Carthage**	**20.22**	**335**	P	P	**P**	**13 55 17.7**	**+1.1**
Y49A	**Blount Mountai**	**20.27**	**26**	P	P	**P**	**13 55 16.3**	**-0.8**
Y49A					IAmb	IAmb	13 55 17.2	
	comp=Z,7.1nm,0.7s							
Y22A	**Socorro**	**20.30**	**335**	P	P	**P**	**13 55 19.0**	**+1.4**
SBM	**South Baldy**	**20.42**	**334**	P	P	**P**	**13 55 19.5**	**+0.4**
FCAR	**Ozark Folk Cen**	**20.45**	**11**	P	P	**P**	**13 55 18.1**	**-0.9**
LENM	**Lemitar**	**20.50**	**335**	P	P	**P**	**13 55 21.5**	**+1.7**
U38A	**Gravette**	**20.69**	**5**	P	P	**P**	**13 55 22.6**	**+1.0**
U38A					IAmb	IAmb	13 55 26.1	
	comp=Z,11nm,0.8s							
ANMO	**Albuquerque**	**20.99**	**337**	P	P	**P**	**13 55 25.0**	**0.0**
	comp=Z,2.6nm,0.7s,baz=147,slow=11,SNR=8.5							
ANMO					LR	LR	14 02 50.9	
	comp=Z,54nm,20.1s,baz=124,slow=35							
	comp=Z,2.6nm,0.7s							
ANMO	**Albuquerque**	**20.99**	**337**			**P**	**13 55 26.9**	**+1.9**
T35A	**Sooner Cattle**	**21.06**	**1**	P		**P**	**13 55 25.4**	**-0.1**
SWET	**Sewanee**	**21.65**	**25**	P		**P**	**13 55 30.9**	**-1.1**
SWET					IAmb	IAmb	13 55 39.0	
	comp=Z,9.5nm,0.9s							
PBMO	**Poplar Bluff**	**21.66**	**14**	P		**P**	**13 55 31.6**	**-0.4**
PBMO					IAmb	IAmb	13 55 32.8	
	comp=Z,16nm,0.7s							
MGMO	**Mountain Grove**	**21.66**	**10**	P		**P**	**13 55 32.6**	**+0.6**
T42A	**Van Buren**	**21.75**	**12**	P		**P**	**13 55 33.1**	**+0.1**
T42A					IAmb	IAmb	13 55 35.7	
	comp=Z,11nm,0.7s							
S39A	**Bolivar**	**22.04**	**7**	P		**P**	**13 55 35.5**	**-0.6**
S39A					IAmb	IAmb	13 55 46.5	
	comp=Z,17nm,0.9s							
X18A	**Snowflake**	**22.13**	**330**			**P**	**13 55 37.1**	**-0.2**
CGM3	**Cape Girardeau**	**22.34**	**15**	P		**P**	**13 55 38.4**	**-0.9**
CGM3					IAmb	IAmb	13 55 50.6	
	comp=Z,20nm,1.2s							
T25A	**Trinidad**	**22.34**	**344**			**P**	**13 55 41.6**	**+2.1**
T25A					IAmb	IAmb	13 55 51.9	
	comp=Z,6.8nm,0.8s							
TKL	**Tuckaleechee C**	**22.94**	**28**	LR	LR		14 05 47.1	
	comp=Z,46nm,19.0s,baz=240,slow=40							
GLA	**Glamis**	**23.75**	**320**	P		**P**	**13 55 56.0**	**+2.2**
GLA					IAmb	IAmb	13 56 05.5	
	comp=Z,5.1nm,0.7s							
BC3	**Big Chuckawall**	**24.54**	**320**	P		**P**	**13 56 02.9**	**+1.6**
U54A	**Nelsons Funny**	**24.56**	**30**	P		**P**	**13 56 00.2**	**-1.2**
PV01	**Paradox Valley**	**24.59**	**337**	P		**P**	**13 56 04.0**	**+2.1**
W13A	**Hualapai Mount**	**24.62**	**325**			**P**	**13 56 04.2**	**+2.0**
IRM	**Iron Mountain**	**24.69**	**321**	P		**P**	**13 56 05.0**	**+2.5**
IRM					IAmb	IAmb	13 56 07.3	
	comp=Z,5.7nm,1.0s							
PV13	**Radium Mtn., P**	**24.71**	**337**	P		**P**	**13 56 04.0**	**+1.1**
PV13					IAmb	IAmb	13 56 14.7	
	comp=Z,6.7nm,0.8s							
PV15	**Paradox Valley**	**24.74**	**338**			**P**	**13 56 04.3**	**+1.0**
PV15					IAmb	IAmb	13 56 15.6	
	comp=Z,11nm,0.9s							
U15A	**North Rim**	**24.79**	**329**			**P**	**13 56 05.8**	**+2.0**
U15A					IAmb	IAmb	13 56 16.9	
	comp=Z,7.4nm,1.1s							
PV03	**Paradox Valley**	**24.80**	**337**	P		**P**	**13 56 05.2**	**+1.4**
PV03					IAmb	IAmb	13 56 16.2	
	comp=Z,11nm,1.1s							
PV18	**Skein Mesa, Pa**	**24.82**	**337**			**P**	**13 56 04.9**	**+1.0**
PV18					IAmb	IAmb	13 56 15.6	
	comp=Z,10.0nm,0.9s							
PV12	**Saucer Basin,**	**24.84**	**337**	P		**P**	**13 56 06.0**	**+1.9**
PV16	**Nyswonger Mesa**	**24.88**	**337**	P		**P**	**13 56 05.7**	**+1.3**
PV16					IAmb	IAmb	13 56 07.8	
	comp=Z,6.5nm,1.0s							
PV07	**Paradox Valley**	**24.89**	**337**	P		**P**	**13 56 06.6**	**+2.1**
PV22	**Blue Mesa, Par**	**25.03**	**337**	P		**P**	**13 56 07.8**	**+2.1**
PV21	**Cone Mtn., Par**	**25.12**	**337**	P		**P**	**13 56 07.5**	**+0.8**
PV21					IAmb	IAmb	13 56 18.7	
	comp=Z,10.0nm,0.9s							
ISCO	**Idaho Springs**	**25.16**	**344**			**P**	**13 56 07.0**	**0.0**
ISCO					IAmb	IAmb	13 56 18.9	
	comp=Z,5.7nm,0.9s							
HMU	**Henry Mountain**	**25.30**	**333**	P		**P**	**13 56 10.2**	**+1.9**
MTPU	**Mount Pierson**	**26.03**	**331**			**P**	**13 56 16.5**	**+1.4**
MTPU					IAmb	IAmb	13 56 29.1	
	comp=Z,7.8nm,0.8s							
SCIA	**State Center**	**26.22**	**6**	P	P	**P**	**13 56 16.2**	**0.0**
Q52A	**Bidwell**	**26.36**	**26**		P	**P**	**13 56 17.1**	**-0.5**
O48B	**Farmland**	**26.40**	**20**		P	**P**	**13 56 16.9**	**-1.1**
O49A	**Covington**	**26.62**	**22**		P	**P**	**13 56 19.0**	**-0.9**
PDAR	**Pinedale Array**	**29.06**	**340**	P	P	**P**	**13 56 43.1**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=139,slow=8.5,SNR=10.0							
PDAR					LR	LR	14 09 36.7	
	comp=Z,37nm,18.7s,baz=17,slow=39							
	comp=Z,0.6nm,0.7s							
NVAR	**Mina Array Bea**	**29.48**	**324**	P		**P**	**13 56 47.3**	**+1.5**
	comp=Z,2.1nm,0.8s,baz=151,slow=9.4,SNR=11							
	comp=Z,2.1nm,0.8s							
ELK	**Elko**	**29.61**	**331**	LR	LR		14 10 06.1	
	comp=Z,78nm,18.8s,baz=296,slow=40							
ULM	**Lac du Bonnet**	**34.39**	**1**	P		**P**	**13 57 27.5**	**-0.9**
	comp=Z,1.4nm,0.7s,baz=190,slow=6.1,SNR=3.3							
	comp=Z,1.4nm,0.7s							
NEW	**Newport**	**36.48**	**337**	LR	LR		14 14 03.0	
	comp=Z,108nm,19.4s,baz=350,slow=39							
FFC	**Flin Flon**	**39.08**	**355**	P		**P**	**13 58 08.2**	**-0.1**
FFC					IAmb	IAmb	13 58 10.0	
	comp=Z,3.5nm,0.8s							
MDP	**Montagnes des**	**44.55**	**99**	LR	LR		14 18 46.4	
	comp=Z,58nm,18.7s,baz=88,slow=38							
SCHQ	**Schefferville**	**45.31**	**24**	P		**P**	**13 58 58.3**	**-0.9**
	comp=Z,3.9nm,0.9s,baz=218,slow=11,SNR=5.0							
	comp=Z,3.9nm,0.9s							
YKA	**Yellowknife Ar**	**48.33**	**349**	P		**P**	**13 59 22.6**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=160,slow=6.6,SNR=12							
	comp=Z,1.0nm,0.8s							
H03N2	**Juan Fernandez**	**51.82**	**161**	T		T	14 55 38.5	
	baz=332,slow=77,SNR=26							
H03N1	**Juan Fernandez**	**51.82**	**161**	T		T	14 55 40.8	
	baz=332,slow=77,SNR=34							
H03N3	**Juan Fernandez**	**51.83**	**161**	T		T	14 55 38.9	
	baz=332,slow=77,SNR=19							
K29M	**Barlow Dome**	**55.57**	**339**	P		**P**	**14 00 17.1**	**+0.3**
K29M					IAmb	IAmb	14 00 53.3	
	comp=Z,4.0nm,1.3s							
I30M	**Mount Dempster**	**56.12**	**341**	P		**P**	**14 00 21.1**	**+0.4**
I30M					IAmb	IAmb	14 00 44.3	
	comp=Z,6.6nm,1.5s							
G31M	**Satah River**	**56.68**	**343**	P		**P**	**14 00 25.1**	**+0.7**
G31M					IAmb	IAmb	14 00 26.0	
	comp=Z,4.5nm,0.9s							
INK	**Inuvik**	**57.48**	**345**	P		**P**	**14 00 30.7**	**+0.5**
INK					IAmb	IAmb	14 00 31.8	
	comp=Z,3.5nm,0.9s							
F28M	**Old Crow**	**58.75**	**342**			**P**	**14 00 40.1**	**+1.0**
F28M					IAmb	IAmb	14 00 41.4	
	comp=Z,4.3nm,0.9s							
ILAR	**Eielson Array**	**59.43**	**338**	P		**P**	**14 00 44.7**	**+0.9**
	comp=Z,1.4nm,0.9s,baz=130,slow=4.7,SNR=16							
	comp=Z,1.4nm,0.9s							
ILAR	**Eielson Array**	**59.43**	**338**	P		**P**	**14 00 45.8**	**+1.9**
I23K	**Minto, Yukon-K**	**60.53**	**337**	P		**P**	**14 00 52.5**	**+1.1**
J19K	**Poorman**	**62.49**	**335**	P		**P**	**14 01 05.7**	**+1.0**
ESDC	**Sonseca Array**	**82.19**	**51**	P		**P**	**14 03 03.1**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=281,slow=5.3,SNR=5.1							
	comp=Z,0.7nm,0.7s							
HHC	**Hu-ho-hao-te**	**117.84**	**336**	*eP*		**PKPdf**	**14 09 28.4**	**0.0**
PZH	**PanZhiHua**	**134.29**	**337**	PKP		**PKPdf**	**14 10 00.3**	**+0.1**

*SDD **11** 13:52:51.9±12.0, 17.°45N×70.°10W, h100km±132km, MD3.3, ML3.1, MW3.4, Presumed earthquake*
*OSPL **11** 13:52:57.8±1.2, 18.°43N×69.°36W, h31km±330km, ML2.7, Presumed earthquake*

ISC 11 13:52:58.0±1.6, 18.°49N±0.°09×69.°65W±0.°04, h122km±10km, n16, σ1°48/27, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SDD	**Santo Domingo**	**0.26**	**264**	*i* P		**P**	**Pn**	**13 53 14.4**	**-0.6**
SDD				*i* S		**Sn**		**13 53 28.2**	**+0.5**
SDD				IAML				13 53 30.1	
	comp=N,96nm,0.1s								
HATOM	**Hato Mayor del**	**0.39**	**40**	*i* P			**Pn**	**13 53 15.2**	**-0.4**
HATOM				*i* S			**Sn**	**13 53 28.6**	**-0.4**
HATOM				IAML				13 53 31.0	
	comp=N,50nm,0.1s								
DR08	**Loma La Naviza**	**0.59**	**323**	*i* P			**Pn**	**13 53 16.0**	**-0.9**
DR08				*i* S			**Sn**	**13 53 29.5**	**-1.6**
DR08				IAML				13 53 30.6	
	comp=N,3μm,0.2s								
BANI	**BANI**	**0.68**	**262**	*i* P			**Pn**	**13 53 19.0**	**+1.4**
BANI				*i* S			**Sn**	**13 53 33.8**	**+1.5**
BANI				IAML				13 53 38.3	
	comp=N,638nm,0.2s								
HIDR	**Higuey Centro**	**0.89**	**83**	*i* P			**Pn**	**13 53 19.6**	**+0.5**
HIDR				*i* S			**Sn**	**13 53 36.6**	**+1.5**
HIDR				IAML				13 53 38.5	
	comp=N,142nm,0.2s								
SDDR	**Presa de Saban**	**1.63**	**288**	*i* P			**Pn**	**13 53 26.9**	**-0.3**
SDDR				*i* S			**Sn**	**13 53 47.0**	**-2.4**
SDDR				IAML				13 53 52.2	
	comp=N,28nm,0.6s								
SDDR	**Presa de Saban**	**1.63**	**288**	*i* P			**Pn**	**13 53 26.7**	**-0.4**
SDDR				IAML				13 53 51.9	
	comp=Z,18nm,1.2s								
LONE3	**El Aguacate, B**	**1.72**	**274**	*i* P			**Pn**	**13 53 28.0**	**-0.3**
LONE3				*eS*			**Sn**	**13 53 50.9**	**-0.5**
LONE3				IAML				13 53 56.6	
	comp=Z,20nm,2.5s								
LODU1	**El Espartillar**	**1.74**	**266**	*i* P			**Pn**	**13 53 28.5**	**+0.1**
LODU1				IAML				13 53 53.9	
	comp=Z,51nm,3.4s								
LOVI	**El Cajuil, Ovi**	**1.77**	**248**	*i* P			**Pn**	**13 53 27.6**	**-1.2**
LOVI				*eS*			**Sn**	**13 53 50.6**	**-1.6**
LOVI				IAML				13 53 52.2	
	comp=Z,81nm,1.6s								
REDR	**Restauracion**	**1.79**	**293**	*i* P			**Pn**	**13 53 31.2**	**+2.2**
REDR				*i* S			**Sn**	**13 53 57.0**	**+4.4**
REDR				IAML				13 53 59.2	
	comp=N,69nm,0.2s								
LUDR	**Luperon**	**1.87**	**319**	*i* P			**Pn**	**13 53 29.0**	**-0.9**
LOBH	**Bahia de las A**	**1.99**	**252**	*i* P			**Pn**	**13 53 32.5**	**+1.0**
LOBH				*eS*			**Sn**	**13 53 56.5**	**-0.6**
LOBH				IAML				13 54 03.8	
	comp=Z,60nm,2.9s								
PRSN	**Puerto Rico Se**	**2.39**	**96**	*i* P			**Pn**	**13 53 35.6**	**-0.9**
PRSN				IAML				13 54 07.8	
	comp=N,156nm,0.3s								
AOPR	**Arecibo Observ**	**2.75**	**92**	*i* P			**Pn**	**13 53 41.8**	**+0.6**
AOPR				*i* S			**Sn**	**13 54 13.8**	**-0.6**
AOPR				IAML				13 54 20.0	
	comp=N,67nm,2.9s								
CELP	**Cerrillos**	**2.94**	**97**	*i* P			**

baz=34,slow=72,SNR=17
H03N2 Juan Fernandez 16.06 211 T T 14 16 50.6
baz=34,slow=72,SNR=21
H03N3 Juan Fernandez 16.07 211 T T 14 16 53.8
baz=34,slow=72,SNR=2.4
CMIG Matias Romero 44.57 324 LR LR 14 21 23.2
comp=Z,55nm,18.8s,baz=312,slow=35
TORD Torodi Ar. Bea 77.06 71 P **P 14 07 06.1 -1.2**
comp=Z,0.5nm,0.9s,baz=249,slow=5.7,SNR=4.8
comp=Z,0.5nm,0.9s
YKA Yellowknife Ar 89.57 341 P **P 14 08 10.7 +0.4**
comp=Z,0.4nm,0.8s,baz=137,slow=3.9,SNR=11
comp=Z,0.4nm,0.8s
H11S2 WAKE ISLAND Hyl 27.40 278 T T 16 36 38.9
baz=102,slow=74,SNR=59
H11S1 WAKE ISLAND Hyl 27.41 278 T T 16 36 40.6
baz=102,slow=74,SNR=26
H11S3 WAKE ISLAND Hyl 27.42 278 T T 16 36 40.6
baz=102,slow=74,SNR=30
H11N3 WAKE ISLAND Hyl 27.44 280 T T 16 36 49.6
baz=103,slow=74,SNR=9.6
H11N2 WAKE ISLAND Hyl 27.45 280 T T 16 36 48.4
baz=103,slow=74,SNR=14
H11N1 WAKE ISLAND Hyl 27.46 280 T T 16 36 45.0
baz=103
WRA Warramunga Arr 134.21 212 PKP **PKPdf 14 14 30.9 -0.5**
comp=Z,0.6nm,1.2s,baz=138,slow=2.0,SNR=1.9
SONM Songino Array 151.88 6 PKPbc **PKPbc 14 15 07.8 0.0**
comp=Z,0.4nm,0.5s,baz=340,slow=1.7,SNR=2.2

IDC 11 13:57:12.0±999.0, 69.50N×40.06E, h0km, Error ellipse: s-maj=751.8km s-min=269.5km az=124.0, Barents Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I31KZ	**AKTYUBINSK INF**	**20.99**	**147**	I	I	16 01 30.0	
	baz=343,slow=333,SNR=2.2						
I46RU	**ZALESOVO INFRA**	**25.48**	**105**	I	I	16 33 30.0	
	baz=325,slow=328,SNR=0.5						
I34MN	**SONGINO INFRAS**	**38.14**	**89**	I	I	17 50 20.0	
	baz=328,slow=334,SNR=1.0						

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*SJA **11** 13:57:33.7±0.6, 21.62S×68.51W, h120km±5km, ML4.4, MW4.5*
*VAO **11** 13:57:34.3±0.7, 21.54S×68.36W, h86km±5km, mb5.2, Presumed earthquake*
*NEIC **11** 13:57:35.2, 21.62S×68.40W, h90km*
*NEIC **11** 13:57:35.2, 21.62S×68.50W, h90km, Moment Tensor Solution. Duration: 1s0 Moment tensor: Scale 10^{16}Nm; M_{rr}=1.13; $M_{\theta\theta}$=0.05; $M_{\phi\phi}$=1.18; $M_{r\theta}$=-0.06; $M_{\theta\phi}$=-0.22; $M_{\phi r}$=0.09; Fault plane solution: $M_0$1.18000×10^{16} NP1: ϕ_s166.08000°, δ43.11000°, λ-95.80000°. NP2: ϕ_s353.99000°, δ47.16000°, λ-84.60000°. Principal axes: T 1.2191, Plg2.0000°, Azm80.0000°; N -0.0818, Plg4.0000°, Azm170.0000°; P -1.1373, Plg86.0000°, Azm323.0000°;*
*GUC **11** 13:57:35.9±0.8, 21.61S×68.63W, h110km±5km, ML4.3*
*NEIC **11** 13:57:35.2±1.4, 21.62S±0.02×68.40W±0.06, h101km±6km, mb5.1/87, Mww4.6/17, ML4.3(GUC), Error ellipse: s-maj=8.8km s-min=2.1km az=100.0*
*MOS **11** 13:57:36.1±1.6, 21.60S×68.52W, h119km, mb5.0/17, Error ellipse: s-maj=18.1km s-min=7.1km az=110.9*
*IDC **11** 13:57:36.9±0.7, 21.56S×68.36W, h115km±5km, mb4.5/15, mbtmp4.8/20, MS3.4/4, Error ellipse: s-maj=16.0km s-min=10.8km az=61.0*
ISC 11 13:57:35.0±0.5, 21.56S±0.03×68.49W±0.04, h103km±4km, **h103km**:**pP-P, n296, σ1968/341, mb5.0/60, 21C-4D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.74**	**251**	Pn	**Pn**	**13 57 54.6**	**+1.4**
PB09	**IPOC Station P**	**0.74**	**251**	⇑*i*P	**Pn**	**13 57 54.4**	**+1.2**
PB09				*e*S	**Sn**	**13 58 07.8**	**+0.9**
PB09	**IPOC Station P**	**0.74**	**251**	*e*P	**Pn**	**13 57 54.1**	**+0.9**
PB09				IAML		13 58 12.7	
	comp=Z,8μm,1.2s						
PB01	**IPOC Station P**	**1.06**	**299**	Pn	**Pn**	**13 57 57.4**	**+1.0**
PB01	**IPOC Station P**	**1.06**	**299**	⇑*i*P	**Pn**	**13 57 57.4**	**+1.0**
PB01				*e*S	**Sn**	**13 58 14.0**	**+1.4**
PB01				IAML		13 58 16.4	
	comp=E,6μm,0.2s						
PB01	**IPOC Station P**	**1.06**	**299**	*e*P	**Pn**	**13 57 57.5**	**+1.0**
PB01				*e*S	**Sn**	**13 58 14.8**	**+2.1**
PB01				IAML		13 58 15.9	
	comp=Z,5μm,0.2s						
PB03	**IPOC Station P**	**1.27**	**247**	Pn	**Pn**	**13 57 59.1**	**+0.3**
PB03	**IPOC Station P**	**1.27**	**247**	⇑*i*P	**Pn**	**13 57 59.2**	**+0.4**
PB03				*e*S	**Sn**	**13 58 16.8**	**-0.1**
PB03				IAML		13 58 18.4	
	comp=E,5μm,0.4s						
PB03	**IPOC Station P**	**1.27**	**247**	*e*P	**Pn**	**13 57 58.9**	**+0.1**
PB03				IAML		13 58 20.2	
	comp=Z,4μm,0.4s						
PB07	**IPOC Station P**	**1.31**	**263**	Pn	**Pn**	**13 57 59.8**	**+0.4**
PB07	**IPOC Station P**	**1.31**	**263**	⇑*i*P	**Pn**	**13 57 59.7**	**+0.4**
PB07				*e*S	**Sn**	**13 58 17.9**	**+0.2**
PB07				IAML		13 58 19.7	
	comp=E,10μm,0.4s						
PB07	**IPOC Station P**	**1.31**	**263**	*e*P	**Pn**	**13 57 59.7**	**+0.4**
PB07				*e*S	**Sn**	**13 58 19.1**	**+1.4**
PB07				IAML		13 58 19.3	
	comp=Z,4μm,0.3s						
PB02	**IPOC Station P**	**1.33**	**280**	Pn	**Pn**	**13 57 59.8**	**+0.3**
PB02	**IPOC Station P**	**1.33**	**280**	⇑*i*P	**Pn**	**13 58 00.0**	**+0.6**
PB02				*e*S	**Sn**	**13 58 18.6**	**+0.6**
PB02				IAML		13 58 21.5	
	comp=E,9μm,0.4s						
PB02	**IPOC Station P**	**1.33**	**280**	*e*P	**Pn**	**13 58 00.1**	**+0.6**
PB02				*e*S	**Sn**	**13 58 19.6**	**+1.5**
PB02				IAML		13 58 21.3	
	comp=Z,6μm,0.2s						
AF01	**San Pedro de A**	**1.41**	**168**		**Pn**	**13 57 59.4**	**-1.3**
AF01	**San Pedro de A**	**1.41**	**168**	*e*P	**Pn**	**13 58 02.8**	**+2.1**
AF01	**San Pedro de A**	**1.41**	**168**	*e*P	**Pn**	**13 58 00.4**	**-0.2**
AF01				*e*S	Sn	13 58 33.2	+13
AF01				IAML		13 58 46.8	
	comp=Z,5μm,0.8s						
PB06	**IPOC Station P**	**1.52**	**221**	Pn	**Pn**	**13 58 02.1**	**+0.4**
PB06	**IPOC Station P**	**1.52**	**221**	⇑*i*P	**Pn**	**13 58 02.2**	**+0.4**
PB06				*e*S	**Sn**	**13 58 22.2**	**+0.1**
PB06				IAML		13 58 23.2	
	comp=E,4μm,0.4s						
PB06	**IPOC Station P**	**1.52**	**221**	*e*P	**Pn**	**13 58 01.8**	**+0.1**
PB06				*e*S	**Sn**	**13 58 23.2**	**+1.1**
PB06				IAML		13 58 24.1	
	comp=Z,3μm,1.2s						
PB08	**IPOC Station P**	**1.54**	**336**	Pn	**Pn**	**13 58 04.6**	**+2.3**
PB08	**IPOC Station P**	**1.54**	**336**	⇑*i*P	**Pn**	**13 58 05.1**	**+2.8**
PB08				*e*S	**Sn**	**13 58 26.5**	**+3.5**
PB08				IAML		13 58 28.9	
	comp=E,3μm,0.4s						
PB08	**IPOC Station P**	**1.54**	**336**	*e*P	**Pn**	**13 58 05.2**	**+2.8**
PB08				*e*S	**Sn**	**13 58 28.0**	**+4.9**
PX03	**IPOC Station P**	**1.57**	**317**	*e*P	**Pn**	**13 58 03.6**	**+1.2**
PX03				*e*S	**Sn**	**13 58 24.8**	**+1.6**
PX03				IAML		13 58 26.7	
	comp=N,4μm,0.3s						
PATCX	**Punta Patache**	**1.72**	**295**		**Pn**	**13 58 05.0**	**+0.8**
HMBC	**Humberstone**	**1.83**	**314**	Pn	**Pn**	**13 58 06.6**	**+1.0**
HMBC	**Humberstone**	**1.83**	**314**	⇑*i*P	**Pn**	**13 58 06.6**	**+1.0**
HMBC				*e*S	**Sn**	**13 58 30.1**	**+1.2**
HMBC	**Humberstone**	**1.83**	**314**	*e*P	**Pn**	**13 58 06.6**	**+1.0**
HMBC				*e*S	**Sn**	**13 58 30.6**	**+1.6**
HMBC				IAML		13 58 32.1	
	comp=Z,4μm,1.2s						
TA01	**Diego Aracena**	**1.86**	**302**	Pn	**Pn**	**13 58 06.2**	**+0.3**
TA01	**Diego Aracena**	**1.86**	**302**	⇑*i*P	**Pn**	**13 58 06.7**	**+0.7**
TA01				*e*S	**Sn**	**13 58 30.4**	**+0.8**
TA01				IAML		13 58 37.7	
	comp=E,4μm,0.4s						
TA01	**Diego Aracena**	**1.86**	**302**	*e*P	**Pn**	**13 58 06.8**	**+0.9**
TA01				*e*S	**Sn**	**13 58 31.1**	**+1.5**
TA01				IAML		13 58 36.1	
	comp=Z,2μm,1.3s						
GO01	**Chusmiza**	**2.00**	**341**	*e*P	**Pn**	**13 58 10.5**	**+2.4**
GO01				*e*S	**Sn**	**13 58 35.9**	**+2.6**
GO01				IAML		13 58 40.2	
	comp=N,2μm,0.2s						
GO01	**Chusmiza**	**2.00**	**341**	*e*P	**Pn**	**13 58 11.3**	**+3.2**
GO01				*e*S	**Sn**	**13 58 32.4**	**-0.9**
GO01				IAML		13 58 40.0	
	comp=Z,1μm,0.6s						
TA02	**Huaiquique**	**2.00**	**310**	*e*P	**Pn**	**13 58 08.2**	**+0.6**
TA02				*e*S	**Sn**	**13 58 33.6**	**+1.0**
TA02				IAML		13 58 41.4	
	comp=N,5μm,0.1s						
TA02	**Huaiquique**	**2.00**	**310**	*e*P	**Pn**	**13 58 08.4**	**+0.7**
TA02				*e*S	**Sn**	**13 58 36.0**	**+3.3**
TA02				IAML		13 58 40.8	
	comp=Z,3μm,0.3s						
PB05	**IPOC Station P**	**2.04**	**231**	Pn	**Pn**	**13 58 07.2**	**-1.1**
PB05	**IPOC Station P**	**2.04**	**231**	⇑*i*P	**Pn**	**13 58 07.8**	**-0.5**
PB05				*e*S	**Sn**	**13 58 31.4**	**-2.4**
PB05				IAML		13 58 40.9	
	comp=E,2μm,0.2s						
PB05	**IPOC Station P**	**2.04**	**231**	*e*P	**Pn**	**13 58 08.0**	**-0.3**
PB05				*e*S	**Sn**	**13 58 28.0**	**-5.8**
PB05				IAML		13 58 38.9	
	comp=Z,1μm,0.8s						
PB11	**IPOC Station P**	**2.10**	**328**	Pn	**Pn**	**13 58 10.6**	**+1.4**
PB11	**IPOC Station P**	**2.10**	**328**	⇑*i*P	**Pn**	**13 58 10.7**	**+1.6**
PB11				*e*S	**Sn**	**13 58 36.5**	**+1.4**
PB11				IAML		13 58 38.9	
	comp=N,5μm,0.5s						
PB11	**IPOC Station P**	**2.10**	**328**	*e*P	**Pn**	**13 58 10.4**	**+1.3**
PB11				*e*S	**Sn**	**13 58 38.1**	**+2.9**
PB11				IAML		13 58 41.0	
	comp=Z,2μm,1.1s						
PB10	**IPOC Station P**	**2.72**	**224**		**Pn**	**13 58 17.2**	**+0.1**
YJA	**Yavi**	**2.83**	**103**	⇑*e*P	**Pn**	**13 58 22.7**	**+3.8**
YJA	**Yavi**	**2.83**	**103**	*e*P	**Pn**	**13 58 22.7**	**+3.8**
YJA				*e*S	**Sn**	**13 59 01.0**	**+8.3**
HJA	**Humahuaca**	**3.29**	**120**	*e*P	**Pn**	**13 58 28.2**	**+3.2**
SALTA		**3.31**	**144**	⇑*e*P	**Pn**	**13 58 28.3**	**+2.9**
SALTA		**3.31**	**144**	*e*P	**Pn**	**13 58 23.0**	**-2.4**
SALTA				*e*P		13 58 23.4	
SALTA				*e*P		13 58 28.3	
PB16	**IPOC Station P**	**3.35**	**343**	Pn	**Pn**	**13 58 28.7**	**+2.7**
PB16	**IPOC Station P**	**3.35**	**343**	*e*P	**Pn**	**13 58 28.1**	**+2.0**
PB16	**IPOC Station P**	**3.35**	**343**	*e*P	**Pn**	**13 58 26.1**	**0.0**
PB16				*e*S	Sn	13 58 54.6	-11
PB16				IAML		13 59 40.4	
	comp=Z,539nm,1.1s						
PB12	**IPOC Station P**	**3.40**	**329**	Pn	**Pn**	**13 58 26.2**	**-0.1**
PB12	**IPOC Station P**	**3.40**	**329**	⇑*e*P	**Pn**	**13 58 26.0**	**-0.3**
PB12				IAML		13 59 13.2	
	comp=E,807nm,0.6s						
PB12	**IPOC Station P**	**3.40**	**329**	*e*P	**Pn**	**13 58 26.5**	**+0.2**
PB12				*e*S	**Sn**	**13 59 05.4**	**-0.5**
PB12				IAML		13 59 32.7	
	comp=Z,2μm,0.9s						
PB14	**IPOC Station P**	**3.52**	**210**	*e*P	**Pn**	**13 58 27.9**	**-0.2**
PB14	**IPOC Station P**	**3.52**	**210**	*e*S	**Sn**	**13 59 16.0**	**+6.9**
PB14				IAML		13 59 20.6	
	comp=Z,1μm,1.0s						
AC01	**Pan de Azucar**	**4.96**	**203**	*e*P	**Pn**	**13 58 44.5**	**-2.6**
AC01				*e*S	**Sn**	**13 59 51.1**	**+7.8**
AC01				IAML		13 59 55.8	
	comp=Z,503nm,1.6s						
FSA	**Cafayete**	**5.08**	**154**	*e*P	**Pn**	**13 58 52.1**	**+3.2**
FSA				*e*S	Sn	13 59 32.0	-14
LPAZ	**La Paz**	**5.26**	**4**	P	**Pn**	**13 58 55.1**	**+3.3**
	comp=Z,25nm,0.4s,baz=178,slow=7.4,SNR=36						
LPAZ				S	**Sn**	**13 59 45.4**	**-6.1**
	comp=Z,22nm,0.5s,baz=195,slow=6.3,SNR=5.2						
LPAZ	**La Paz**	**5.26**	**4**	*e*P	**Pn**	**13 58 51.1**	**-0.7**
AC02	**Maricunga**	**5.28**	**186**	Pn	**Pn**	**13 58 51.5**	**-0.5**
AC02	**Maricunga**	**5.28**	**186**	*e*P	**Pn**	**13 58 51.6**	**-0.5**
AC02				*e*S	Sn	13 59 30.5	-21
AC02				IAML		14 00 26.6	
	comp=Z,226nm,0.9s						
AC06	**Mina Casimiro**	**6.01**	**196**		**Pn**	**13 58 58.6**	**-2.8**
GO03	**Copiapo**	**6.21**	**194**		**Pn**	**13 59 01.1**	**-3.1**
AC05	**El Transito**	**7.42**	**192**		**Pn**	**13 59 17.0**	**-3.7**
CO01	**Juntas del Tor**	**8.50**	**189**		**Pn**	**13 59 32.4**	**-3.1**
SIV	**San Ignacio**	**8.95**	**53**	P	**Pn**	**13 59 40.3**	**-1.1**
	comp=Z,81nm,0.4s,baz=274,slow=11						
SIV				S	**Sn**	**14 01 15.0**	**-5.5**
	baz=274,slow=18						
CFA	**Coronel Fontan**	**10.01**	**179**	P	**Pn**	**13 59 54.7**	**-1.0**
	comp=Z,1.0nm,0.3s,baz=354,slow=18,SNR=1.5						
CFA				S	**Sn**	**14 01 38.0**	**-8.1**
	comp=Z,3.8nm,0.7s,baz=206,slow=14,SNR=1.5						
MURT	**Porto Murtinho**	**10.12**	**93**	*e*P	**Pn**	**13 59 55.8**	**-1.5**
PTLB	**Pontes e Lacer**	**10.75**	**57**		**Pn**	**14 00 03.8**	**-2.1**
PTLB	**Pontes e Lacer**	**10.75**	**57**	*e*P	**Pn**	**14 00 03.6**	**-2.3**
PTLB				*e*S	**Sn**	**14 01 59.2**	**-5.2**
BDQN	**Bodoquena, MS**	**11.02**	**86**	*e*P	**Pn**	**14 00 07.7**	**-1.9**
CPUP	**Villa Florida**	**11.25**	**117**	P	**Pn**	**14 00 11.4**	**-1.2**
	comp=Z,7.2nm,0.5s,baz=290,slow=12,SNR=20						
CPUP				LR	LR	14 05 39.0	
	comp=Z,116nm,19.3s,baz=253,slow=43						
CPUP	**Villa Florida**	**11.25**	**117**	Pn	**Pn**	**14 00 11.2**	**-1.4**
CPUP	**Villa Florida**	**11.25**	**117**	*e*P	**Pn**	**14 00 10.1**	**-2.5**
VILB	**Vilhena**	**11.66**	**44**		**Pn**	**14 00 17.4**	**-0.7**
VILB	**Vilhena**	**11.66**	**44**	*e*P	**Pn**	**14 00 17.4**	**-0.7**
AQDB	**Aquidauana**	**11.99**	**87**	Pn	**Pn**	**14 00 20.9**	**-1.6**
AQDB	**Aquidauana**	**11.99**	**87**	*e*P	**Pn**	**14 00 21.1**	**-1.4**
NNA	**Nana**	**12.43**	**319**	*i*P	**Pn**	**14 00 26.8**	**-1.6**
BO02	**Sierra Bellavi**	**13.34**	**188**	Pn	**Pn**	**14 00 39.8**	**-0.4**
SALV	**Santo Antonio**	**13.36**	**67**	*e*P	**Pn**	**14 00 37.6**	**-3.0**
PP1B	**Ponte de Pedra**	**13.42**	**75**	*e*P	**Pn**	**14 00 39.0**	**-2.3**
C2SB	**Chapadao do Su**	**14.96**	**82**	*e*P	**Pn**	**14 01 00.5**	**-0.6**
PDRB	**Porto dos Gac**	**14.99**	**51**	*e*P	**Pn**	**14 01 01.7**	**+0.2**
BI02	**San Fabin de**	**15.24**	**189**		**Pn**	**14 01 03.0**	**-1.7**
PTGB	**Pitanga**	**15.43**	**105**	*e*P	**Pn**	**14 01 06.4**	**-0.7**
ITAB	**Concordia**	**15.93**	**114**		**Pn**	**14 01 13.4**	**+0.2**
ITAB	**Concordia**	**15.93**	**114**	*e*P	**Pn**	**14 01 11.5**	**-1.7**
CLDB	**Colider**	**16.16**	**51**	*e*P	**Pn**	**14 01 15.5**	**-0.6**
LDASE	**Londrina, Braz**	**16.16**	**100**	*e*P	**Pn**	**14 01 14.7**	**-1.5**
PLTB	**Pedras Altas**	**16.72**	**130**		**Pn**	**14 01 21.7**	**-1.3**
PLTB	**Pedras Altas**	**16.72**	**130**	*e*P	**Pn**	**14 01 20.4**	**-2.5**
ARAG	**Araguaiana, MT**	**16.84**	**73**	*e*P	**Pn**	**14 01 23.4**	**-1.1**
ITRB	**Iturama**	**17.07**	**87**	*e*P	**Pn**	**14 01 26.2**	**-1.2**
ATAH	**Atahualpa**	**17.24**	**325**	P	**Pn**	**14 01 30.6**	**+0.8**
	comp=Z,37nm,0.7s,baz=175,slow=12,SNR=2.1						
TRQA	**Tornquist**	**17.37**	**163**		**P**	**14 01 29.0**	**-1.7**
TRQA	**Tornquist**	**17.37**	**163**	P	**P**	**14 01 29.0**	**-1.7**
TRQA				pmax	pmax		
	comp=Z,19nm,0.7s						
FRTB	**Fartura**	**17.59**	**99**	*e*P	**P**	**14 01 32.5**	**-0.7**
GO06	**Curarrehue**	**18.14**	**187**		**P**	**14 01 39.0**	**-0.2**
BB19B	**Bebedouro**	**18.61**	**92**	*e*P	**P**	**14 01 44.4**	**0.0**
MAJ01	**Sao Joao Batis**	**18.65**	**112**	*e*P	**P**	**14 01 43.9**	**-0.8**
SNDB	**Serra Nova Dou**	**19.01**	**63**	*e*P	**P**	**14 01 48.6**	**-0.2**
PLCA	**Paso Flores**	**19.19**	**185**	P	**P**	**14 01 50.4**	**-0.3**
	comp=Z,4.5nm,0.7s,baz=7.2,slow=11,SNR=17						
PLCA				PcP	**PcP**	**14 06 11.0**	**+1.0**
	comp=Z,3.2nm,0.9s,baz=342,slow=3.2,SNR=4.5						
PLCA	**Paso Flores**	**19.19**	**185**	P	**P**	**14 01 50.6**	**-0.1**
PLCA	**Paso Flores**	**19.19**	**185**	P	**P**	**14 01 50.6**	**-0.1**
PLCA				pmax	pmax		
	comp=Z,13nm,0.8s						
PLCA	**Paso Flores**	**19.19**	**185**	*e*P	**P**	**14 01 50.5**	**-0.1**
IPMB	**Ipameri, GO**	**19.41**	**83**	*e*P	**P**	**14 01 53.3**	**+0.1**
RCLB	**Rio Claro- Sao**	**19.45**	**96**	*e*P	**P**	**14 01 53.3**	**-0.3**
SPB	**Sao Paulo**	**19.55**	**100**	*e*P	**P**	**14 01 54.3**	**-0.3**
PET01	**Itanhaem-SP**	**19.73**	**102**	*e*P	**P**	**14 01 56.9**	**+0.4**
MACA	**Manacapuru-AM**	**19.80**	**24**		**P**	**14 01 56.5**	**-0.9**
MACA	**Manacapuru-AM**	**19.80**	**24**	*e*P	**P**	**14 01 56.5**	**-0.9**
VAO	**Valinhos**	**19.97**	**98**		**P**	**14 01 58.1**	**-1.1**
VAO				IAmb	IAmb	14 01 59.8	
	comp=Z,66nm,0.8s						
VAO	**Valinhos**	**19.97**	**98**	*e*P	**P**	**14 01 58.9**	**-0.3**
BDFB	**Brasilia**	**20.27**	**77**	P	**P**	**14 02 02.5**	**-0.1**
	comp=Z,8.5nm,0.7s,baz=262,slow=10,SNR=10.0						
BDFB				LR	LR	14 10 52.3	
	comp=Z,77nm,21.9s,baz=266,slow=40						
	comp=Z,8.5nm,0.7s						
BDFB	**Brasilia**	**20.27**	**77**	P	**P**	**14 01 59.8**	**-2.8**
BDFB	**Brasilia**	**20.27**	**77**	P	**P**	**14 01 59.8**	**-2.8**
BDFB				pmax	pmax		
	comp=Z,26nm,1.3s						
PMNB	**Patos De Minas**	**20.93**	**86**	*e*P	**P**	**14 02 08.9**	**-0.7**
ITTB	**Itaituba**	**21.11**	**38**	*e*P	**P**	**14 02 10.2**	**-1.2**
LL02	**Futaleuf**	**21.75**	**187**		**P**	**14 02 18.0**	**0.0**
BSCB	**Bom Sucesso**	**22.11**	**93**	*e*P	**P**	**14 02 22.2**	**+0.1**
DIAM	**Diamantina, MG**	**23.55**	**86**	*e*P	**P**	**14 02 35.8**	**-0.5**
SMTB	**Santa Maria do**	**23.75**	**61**	*e*P	**P**	**14 02 38.1**	**0.0**
JANB	**Januaria**	**23.83**	**78**	*e*P	**P**	**14 02 38.0**	**-0.8**
SDBA	**SAO DESIDERIO**	**24.30**	**72**	*e*P	**P**	**14 02 42.2**	**-0.8**
BOAV	**Boa Vista**	**25.05**	**19**		**P**	**14 02 50.5**	**+0.8**
BOAV	**Boa Vista**	**25.05**	**19**	*e*P	**P**	**14 02 50.6**	**+0.8**
GUA01	**Guaratinga, BA**	**27.54**	**85**	*e*P	**P**	**14 03 12.6**	**+0.4**
SDV	**Santo Domingo**	**30.33**	**356**	LR	LR	14 18 54.7	
	comp=Z,94nm,18.8s,baz=238,slow=42						
SDV	**Santo Domingo**	**30.33**	**356**		**P**	**14 03 36.5**	**-0.7**
MG02	**Cerro Sombrero**	**31.17**	**181**	P	**P**	**14 03 44.7**	**+0.8**
MG03	**Isla Dawson**	**32.27**	**182**	P	**P**	**14 03 53.8**	**+0.3**
MG03				IAmb	IAmb	14 04 01.6	
	comp=Z,46nm,1.1s						
JTS	**Las Juntas de**	**35.54**	**331**	*i*P	**P**	**14 04 21.6**	**-0.7**
JTS				pmax	pmax		
	comp=Z,21nm,1.5s						
SJG	**San Juan**	**39.49**	**4**	P	**P**	**14 04 54.1**	**-1.5**
SJG				IAmb	IAmb	14 04 54.6	
	comp=Z,32nm,0.7s						
SJG	**San Juan**	**39.49**	**4**	P	**P**	**14 04 54.1**	**-1.5**
SJG				pmax	pmax		
	comp=Z,32nm,0.7s						
656A	**Willston**	**52.41**	**344**	P	**P**	**14 06 37.5**	**+0.7**
553A	**Crawfordville**	**53.69**	**343**	P	**P**	**14 06 47.5**	**+1.4**
ZAIG	**Zacatecas**	**55.18**	**321**		**P**	**14 06 58.5**	**+1.0**
ZAIG				IAmb	IAmb	14 07 00.7	
	comp=Z,23nm,0.8s						
Y58A	**Scranton**	**56.18**	**349**	P	**P**	**14 07 04.7**	**+0.7**
JSC	**Jenkinsville**	**56.85**	**347**	P	**P**	**14 07 09.3**	**+0.6**
JSC				IAmb	IAmb	14 07 10.4	
	comp=Z,16nm,0.8s						
JSC	**Jenkinsville**	**56.85**	**347**	P	**P**	**14 07 09.4**	**+0.6**
JSC				pmax	pmax		
	comp=Z,16nm,0.8s						
LRAL	**Lakeview Retre**	**57.09**	**341**		**P**	**14 07 10.4**	**-0.1**
LRAL				IAmb	IAmb	14 07 11.3	
	comp=Z,16nm,1.1s						
W57A	**Gilead**	**57.45**	**349**	P	**P**	**14 07 13.4**	**+0.4**
W57A				IAmb	IAmb	14 07 14.6	
	comp=Z,29nm,0.9s						
HKT	**Hockley**	**57.58**	**332**	*i*P	**P**	**14 07 13.6**	**-0.3**
HKT				pmax	pmax		
	comp=Z,14nm,0.9s						
Y49A	**Blount Mountai**	**57.70**	**342**		**P**	**14 07 14.3**	**-0.5**
Y49A				IAmb	IAmb	14 07 15.9	
	comp=Z,11nm,0.9s						
833A	**Chaparral WMA,**	**57.88**	**328**		**P**	**14 07 16.8**	**+0.6**
833A				IAmb	IAmb	14 07 18.1	
	comp=Z,27nm,0.8s						
BG3	**Lake Jocassee**	**57.89**	**346**		**P**	**14 07 16.7**	**+0.6**
BG3				IAmb	IAmb	14 07 17.7	
	comp=Z,15nm,0.9s						
V58A	**Windy Hill, Pi**	**57.92**	**350**	P	**P**	**14 07 16.4**	**+0.2**
V58A				IAmb	IAmb	14 07 17.7	
	comp=Z,14nm,1.1s						
V55A	**Taylorsville**	**58.36**	**348**		**P**	**14 07 20.5**	**+1.2**
X48A	**Hartselle**	**58.43**	**342**		**P**	**14 07 19.9**	**0.0**
V53A	**Saluda**	**58.52**	**346**		**P**	**14 07 21.2**	**+0.7**
V53A				IAmb	IAmb	14 07 21.9	
	comp=Z,14nm,0.7s						
CPCT	**Cooper Cave**	**58.70**	**345**		**P**	**14 07 21.9**	**+0.1**
CPCT				IAmb	IAmb	14 07 22.9	
	comp=Z,23nm,1.0s						
TKL	**Tuckaleechee C**	**58.72**	**345**	P	**P**	**14 07 22.5**	**+0.6**
TKL	**Tuckaleechee C**	**58.72**	**345**	P	**P**	**14 07 22.5**	**+0.6**
TKL				pmax	pmax		
	comp=Z,28nm,0.9s						
SWET	**Sewanee**	**58.84**	**343**	P	**P**	**14 07 22.7**	**-0.1**
T59A	**Double "B" Far**	**58.84**	**352**	P	**P**	**14 07 23.2**	**+0.6**
T59A				IAmb	IAmb	14 07 24.0	
	comp=Z,24nm,1.1s						
U54A	**Nelsons Funny**	**59.13**	**348**	P	**P**	**14 07 25.4**	**+0.6**
DRIO	**Del Rio**	**59.39**	**327**		**P**	**14 07 27.0**	**+0.3**
DRIO				IAmb	IAmb	14 07 28.6	
	comp=Z,12nm,0.9s						
BLA	**Blacksburg**	**59.53**	**349**		**P**	**14 07 28.2**	**+0.7**
BLA				IAmb	IAmb	14 07 29.5	
	comp=Z,19nm,0.7s						
BLA	**Blacksburg**	**59.53**	**349**	P	**P**	**14 07 28.2**	**+0.7**
BLA				pmax	pmax		
	comp=Z,19nm,0.7s						
VNA3	**Neumayer Olymp**	**59.89**	**161**	⇓P	**P**	**14 07 29.7**	**+0.1**
	comp=Z,19nm,0.7s						
U49A	**Red Boiling Sp**	**60.03**	**344**		**P**	**14 07 30.9**	**0.0**
U49A				IAmb	IAmb	14 07 31.6	
	comp=Z,14nm,0.7s						
WVT	**Waverly**	**60.23**	**342**		**P**	**14 07 31.5**	**-0

NVL *e* 14 08 43.0
NVL *e* 14 10 42.1
NVL *e*PPP PPP 14 12 18.7
NVL *e*S **S** **14 16 57.6 +0.7**
NVL *e*SS **SS** **14 21 17.6 +2.0**
NVL pmax pmax
comp=Z,33nm,1.8s
ANMO Albuquerque 66.76 327 P **P** **14 08 16.6 +1.0**
comp=Z,6.1nm,0.8s,baz=148,slow=7.8,SNR=19
comp=Z,6.1nm,0.8s
ANMO Albuquerque 66.76 327 P **P** **14 08 16.5 +1.0**
ANMO pmax pmax
comp=Z,7.0nm,0.8s
TUC Tucson 67.13 322 P **P** **14 08 18.9 +1.1**
TUC Tucson 67.13 322 P **P** **14 08 18.9 +1.1**
TUC pmax pmax
comp=Z,4.0nm,0.9s
DBIC Dimbokro 68.38 73 P **P** **14 08 25.9 0.0**
comp=Z,25nm,0.8s,baz=263,slow=6.6,SNR=24
comp=Z,25nm,0.8s
DBIC Dimbokro 68.38 73 **P** **14 08 25.4 -0.5**
DBIC IAmb IAmb 14 08 26.8
comp=Z,32nm,0.9s
DBIC Dimbokro 68.38 73 P **P** **14 08 25.4 -0.5**
DBIC pmax pmax
comp=Z,32nm,1.0s
BGNE Belgrade 68.43 336 **P** **14 08 26.1 +0.4**
QSPA South Pole Qui 68.63 180 P **P** **14 08 27.9 +1.1**
comp=Z,14nm,0.5s,baz=173,slow=0.8,SNR=111
comp=Z,14nm,0.5s
ICQ Pointe Anglais 70.77 1 **P** **14 08 39.9 +0.1**
ICQ IAmb IAmb 14 08 41.2
comp=Z,22nm,0.8s
BC3 Big Chuckawall 70.83 320 **P** **14 08 41.9 +1.2**
BC3 IAmb IAmb 14 08 43.9
comp=Z,25nm,1.5s
PFO Pinyon Flats O 71.41 319 *i* P **P** **14 08 44.1 -0.1**
PFO pmax pmax
comp=Z,16nm,1.6s
ELS Elsinore Mount 72.03 319 P **P** **14 08 48.9 +1.1**
RSSD Black Hills 73.02 334 **P** **14 08 54.8 +1.1**
RSSD Black Hills 73.02 334 P **P** **14 08 54.8 +1.1**
RSSD pmax pmax
comp=Z,6.0nm,0.7s
MPU Maple Canyon 73.28 327 P **P** **14 08 56.1 +0.8**
PDAR Pinedale Array 74.36 330 P **P** **14 09 02.5 +0.9**
comp=Z,1.2nm,0.5s,baz=127,slow=7.7,SNR=23
comp=Z,1.2nm,0.5s
ULM Lac du Bonnet 75.49 342 P **P** **14 09 07.7 +0.1**
comp=Z,6.0nm,0.5s,baz=152,slow=6.7,SNR=20
comp=Z,6.0nm,0.5s
NVAR Mina Array Bea 75.78 322 P **P** **14 09 11.2 +1.4**
comp=Z,3.1nm,0.8s,baz=157,slow=7.0,SNR=14
comp=Z,3.1nm,0.8s
SCHQ Schefferville 76.09 1 P **P** **14 09 10.8 -0.1**
comp=Z,10.0nm,0.7s,baz=194,slow=4.9,SNR=20
comp=Z,10.0nm,0.7s
TORD Torodi Ar. Bea 77.01 70 P **P** **14 09 16.7 -0.3**
comp=Z,18nm,0.8s,baz=244,slow=7.3,SNR=89
TORD pP **pP** **14 09 45.8 +0.8**
comp=Z,15nm,0.8s,baz=244,slow=7.4,SNR=10.0
comp=Z,18nm,0.8s
TORD Torodi Ar. Bea 77.01 70 P **P** **14 09 16.5 -0.5**
TSUM Tsumeb 79.65 107 **P** **14 09 31.4 -0.4**
TSUM IAmb IAmb 14 09 33.5
comp=Z,20nm,0.8s
FFC Flin Flon 81.22 341 P **P** **14 09 39.5 +0.5**
FFC Flin Flon 81.22 341 P **P** **14 09 39.5 +0.5**
FFC pmax pmax
comp=Z,6.0nm,1.1s
PBDV Barranco-do-Ve 81.67 45 *e*P **P** **14 09 42.5 +0.6**
PCVE Castro Verde 81.82 44 *e*P **P** **14 09 44.4 +1.8**
MESJ Messejana 81.82 44 *e*P **P** **14 09 44.2 +1.6**
MOE Montemor 82.13 43 *e*P **P** **14 09 45.6 +1.4**
PBEJ Beja 82.16 44 *e*P **P** **14 09 46.1 +1.7**
PARRA Arraiolos 82.50 43 *e*P **P** **14 09 47.5 +1.4**
PMTG Montargil 82.53 43 *e*P **P** **14 09 47.4 +1.1**
PBAR Barrancos 82.78 44 *e*P **P** **14 09 48.6 +1.0**
BOSA Boshof 83.07 118 P **P** **14 09 49.5 -0.1**
comp=Z,12nm,0.8s,baz=262,slow=3.7,SNR=15
comp=Z,12nm,0.8s
BOSA Boshof 83.07 118 **P** **14 09 48.6 -1.0**
BOSA IAmb IAmb 14 09 50.6
comp=Z,14nm,0.8s
BOSA Boshof 83.07 118 P **P** **14 09 48.7 -1.0**
BOSA pmax pmax
comp=Z,14nm,0.9s
MTE Manteigas 83.72 42 *e*P **P** **14 09 53.7 +1.2**
POLO Lamas de Olo 84.13 41 *e*P **P** **14 09 55.6 +1.0**
MAW Mawson 84.16 163 P **P** **14 09 54.9 +0.7**
comp=Z,20nm,0.9s,baz=259,slow=8.1,SNR=3.9
comp=Z,20nm,0.9s
MVO Moncorvo 84.48 42 *e*P **P** **14 09 57.3 +1.0**
LBTB Lobatse 84.64 115 LR LR 14 45 43.4
comp=Z,42nm,18.6s,baz=108,slow=34
LBTB Lobatse 84.64 115 **P** **14 09 57.3 -0.4**
LBTB IAmb IAmb 14 09 59.0
comp=Z,13nm,0.8s
LBTB Lobatse 84.64 115 P **P** **14 09 57.3 -0.4**
LBTB pmax pmax
comp=Z,13nm,0.8s
PBRG Braganca 85.02 41 *e*P **P** **14 09 59.9 +0.9**
PAB San Pablo 85.28 44 **P** **14 10 00.9 +0.5**
PAB IAmb IAmb 14 10 02.2
comp=Z,12nm,0.8s
PAB San Pablo 85.28 44 P **P** **14 10 00.9 +0.5**
PAB pmax pmax
comp=Z,12nm,0.9s
ESDC Sonseca Array 85.60 44 P **P** **14 10 02.3 +0.3**
comp=Z,4.3nm,0.9s,baz=256,slow=4.2,SNR=21
comp=Z,4.3nm,0.9s
YKA Yellowknife Ar 91.38 340 P **P** **14 10 29.3 +0.6**
comp=Z,12nm,0.8s,baz=136,slow=3.7,SNR=176
YKA pP **pP** **14 10 58.9 +1.7**
comp=Z,2.7nm,0.9s,baz=142,slow=3.6,SNR=3.9
comp=Z,12nm,0.8s
MNK Minsk 110.92 38 *i* P **Pdif** **14 11 56.3 -0.4**
comp=E,14nm,1.0s
MNK *i* P **Pdif** **14 11 56.3 -0.4**
comp=N,14nm,1.0s,baz=262
MNK *i* P **Pdif** **14 11 56.3 -0.4**
comp=Z,5.0nm,0.7s
MNK *i* pP **pPdif** **14 12 23.5 -1.7**
MNK *i* sP **sPdif** **14 12 34.7 -1.9**
MNK *i* PP **PP** **14 16 27.9 -7.5**
MNK *i* PPP PPP 14 18 32.1
MNK *i* SKP 14 19 33.7
MNK *i* PKS PKSdf 14 19 47.7 +16
MNK *i* SKS 14 21 37.6
MNK *i* PS PS 14 26 29.6 +22
MNK *i* SS SS 14 33 15.6 +77
MNK *i* SSS SSS 14 36 07.7
MNK *i* LQ LQ 14 46 42.1
MNK *i* LR LR 14 54 40.0
MNK Minsk 110.92 38 *i* P **Pdif** **14 11 56.3 -0.4**
MNK *i* SSS SSS 14 36 07.6
MNK pmax pmax
comp=N,14nm,1.0s
MNK pmax pmax
comp=E,14nm,1.0s
MNK pmax pmax
comp=Z,5.0nm,0.7s
OBN Obninsk 115.98 38 *i* PKIKP **PKiKP** **14 16 06.1 +0.8**
OBN pmax pmax
comp=Z,6.0nm,0.9s
KBZ Khabaz 119.85 51 PKP **PKiKP** **14 16 13.7 +0.5**
comp=Z,2.3nm,0.9s,baz=236,slow=2.5,SNR=6.3
KBZ Khabaz 119.85 51 *i* PKIKP **PKPdf** **14 16 12.8 -0.3**
KIRV Kirov 122.64 33 *i* PKIKP **PKiKP** **14 16 18.3 +0.1**
BELG Belogornoye 122.67 41 *i* PKIKP **PKPdf** **14 16 18.2 -0.1**
BILL Bilibino 122.72 339 *i* PKIKP **PKPdf** **14 16 16.6 -1.4**
ARTI Arti 127.90 34 *i* PKIKP **PKiKP** **14 16 28.6 -0.2**
ARTI 14 18 29.8
ARTI 14 23 29.8
ARTI SS SS 14 35 29.2 -7.4
TIXI Tiksi 128.90 353 *i* PKIKP **PKPdf** **14 16 28.3 -1.4**
AKTO Aktyubinsk 129.42 42 PKP **PKiKP** **14 16 32.1 +0.1**
comp=Z,1.5nm,0.3s,baz=316,slow=3.0,SNR=2.9
ASAR Alice Springs 130.04 207 PKP **PKPdf** **14 16 33.2 -0.2**
comp=Z,5.7nm,0.9s,baz=148,slow=2.4,SNR=31
SEY Seymchan 130.31 337 *ce*PKIKP **PKiKP** **14 16 34.7 +1.3**
SEY pmax pmax
comp=Z,19nm,2.5s
PETK Petropavlovsk- 132.84 324 PKP **PKiKP** **14 16 39.3 +0.5**
comp=Z,6.8nm,1.0s,baz=88,slow=3.7,SNR=6.6
WRA Warramunga Arr 133.10 210 PKhKP PKPpre 14 16 26.3
comp=Z,0.6nm,1.0s,baz=129,slow=2.9,SNR=7.0
WRA PKP **PKPdf** **14 16 39.5 +0.2**
comp=Z,4.8nm,0.7s,baz=160,slow=1.8,SNR=60
WRAB Tennant Creek 133.10 210 *ce*PKIKP **PKPdf** **14 16 39.0 -0.3**
WRAB pmax pmax
comp=Z,8.0nm,1.7s
BORK Borovoye 135.58 35 *i* PKIKP **PKPdf** **14 16 42.7 -0.1**
BVAR Borovoye Array 135.62 35 PKP **PKPdf** **14 16 43.0 +0.1**
comp=Z,1.9nm,0.7s,baz=318,slow=2.0,SNR=8.8
BVAR Borovoye Array 135.62 35 PKIKP **PKPdf** **14 16 43.0 +0.1**
YAK Yakutsk 137.66 347 *i* PKIKP **PKPdf** **14 16 46.6 +0.2**
CHGR Chuyangaron 139.99 55 *i* PKIKP **PKPdf** **14 16 51.1 -0.4**
KURK Kurchatov 141.16 33 *ce*PKIKP **PKiKP** **14 16 55.3 -0.6**
KURK pmax pmax
comp=Z,10.0nm,2.5s
KURBB Kurchatov Arra 141.17 34 PKhKP PKPpre 14 16 43.8
comp=Z,2.0nm,0.8s,baz=294,slow=2.4,SNR=9.6
ZALV Zalesovo Beam 141.84 25 PKhKP PKPpre 14 16 49.0
comp=Z,2.3nm,0.6s,baz=291,slow=4.7,SNR=10
ZALV PKP **PKPdf** **14 16 54.5 +0.3**
comp=Z,1.5nm,0.7s,baz=320,slow=3.4,SNR=3.6
AAK Ala-Archa 142.66 47 *ce*PKIKP **PKPdf** **14 16 56.1 -0.2**
AAK pmax pmax
comp=Z,4.0nm,1.0s
KSH2 Kashi 144.66 52 PKPbc **PKPdf** **14 17 00.1 +0.2**
GRNR Gornyy 144.92 332 ⇓*i*PKIKP **PKPdf** **14 17 00.8 +1.0**
GRNR pmax pmax
comp=Z,20nm,0.8s
MK31 Makanchi Array 145.45 36 *ce*PKP2 **PKPab** **14 17 01.8 +0.4**
MKAR Makanchi Array 145.45 36 PKPbc **PKPab** **14 17 01.8 +0.4**
comp=Z,7.2nm,0.6s,baz=317,slow=4.3,SNR=96
MKAR pPKPbc **pPKPdf** **14 17 32.2 +1.4**
comp=Z,7.9nm,0.9s,baz=299,slow=2.5,SNR=6.9
ZEA Zeya 145.71 343 *e*PKP2 **PKPab** **14 17 02.8 +0.8**
ZEA pmax pmax
comp=Z,10.0nm,0.9s
DGZ Jazzator, Alta 146.07 28 *i* PKP2 **PKPdf** **14 17 02.4 +0.4**
HEH HeiHe 148.74 340 PKPbc **PKPdf** **14 17 06.7 +0.5**
MOY Mondy 148.85 13 *e*PKP2 **PKiKP** **14 17 11.8 0.0**
MOY pmax pmax
comp=Z,20nm,1.8s
WMQ Urumqi 150.29 36 *e*PKPbc **PKPdf** **14 17 11.0 +2.0**
WMQ PKPab **PKPab** **14 17 23.4 +2.7**
USRK Ussuriysk Ar. 151.77 328 PKPbc **PKiKP** **14 17 18.5 +0.6**
comp=Z,8.5nm,0.7s,baz=48,slow=2.1,SNR=6.7
MJAR Matsushiro Arr 152.41 309 PKPbc **PKiKP** **14 17 19.5 0.0**
comp=Z,4.8nm,0.8s,baz=95,slow=1.4,SNR=8.2
BNX BinXian 152.60 335 ⇑P **PKPdf** **14 17 12.3 0.0**
BNX pmax pmax
comp=Z,9.0nm,1.4s
SONM Songino Array 153.47 8 PKP **PKPdf** **14 17 14.8 +1.2**
comp=Z,2.5nm,0.8s,baz=307,slow=0.6,SNR=14
SONM PKPbc **PKiKP** **14 17 22.0 +0.5**
comp=Z,2.5nm,0.7s,baz=343,slow=1.5,SNR=11
SONM PKPab **PKPab** **14 17 34.5 +0.6**
comp=Z,2.6nm,0.7s,baz=326,slow=3.9,SNR=8.4
KSRS Korea Array 158.72 322 PKP **PKPdf** **14 17 21.6 +0.9**
comp=Z,2.6nm,0.8s,baz=83,slow=3.5,SNR=9.1
GOMU GeErMu 159.40 41 P **PKPdf** **14 17 22.0 -0.1**
GOMU pmax pmax
comp=Z,3.0nm,1.0s
GTA2 Gaotai 159.50 27 PKP **PKPdf** **14 17 23.0 +1.2**
GTA2 sPKP sPKPdf 14 18 00.9 -1.9
GTA2 PKPab **pPKPab** **14 18 31.7 +2.8**
HHC Hu-ho-hao-te 160.77 360 *e*P **PKPdf** **14 17 23.0 -0.1**
LZH Lanzhou 164.06 23 *e*P **PKPdf** **14 17 26.2 -0.4**
LZH pmax pmax
comp=Z,12nm,1.0s
CMAR Chiang Mai Arr 167.79 102 PKP **PKPdf** **14 17 30.5 +0.7**
comp=Z,0.8nm,0.4s,baz=274,slow=1.8,SNR=11
CMAR PKPab **PKPab** **14 18 37.1 -0.1**
comp=Z,0.8nm,0.7s,baz=257,slow=5.8,SNR=6.1
PZH PanZhiHua 169.81 59 PKP **PKPdf** **14 17 31.8 +0.7**

*IDC **11** 14:19:29.9±0.8, 32.˚57N×78.˚77E, h0km, mb3.8/13, mbtmp3.8/16, ML3.5/2, MS3.1/3, Error ellipse: s-maj=24.3km s-min=15.4km az=50.0*
*NEIC **11** 14:19:31.9±2.0, 32.˚57N±0.˚10×78.˚46E±0.˚05, h10km±2km, mb4.0/11, Error ellipse: s-maj=17.0km s-min=4.8km az=197.0*
*NDI **11** 14:19:33.6±3.5, 32.˚58N×78.˚50E, h10km, ML4.0, MW3.8, Presumed earthquake*
ISC 11 14:19:31.4±1.7, 32.˚54N±0.˚04×78.˚54E±0.˚04, h11km±11km, n64, σ1°90/74, mb3.9/18, Kashmir-Xizang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KLP	**Kalpa**	**1.03**	**194**	*e*P		**Pg**	**14 19 51.9**	**+0.6**
KLP				IAML			14 20 03.4	
	comp=E,2μm,0.2s							
KLP				IAML			14 20 03.7	
	comp=N,1μm,0.2s							
SMLA	**Simla**	**1.83**	**220**	*e*P		**Pn**	**14 20 03.1**	**+0.3**
SMLA				*e*S		**Sb**	**14 20 27.9**	**+0.2**
SMLA				IAML			14 20 31.4	
	comp=N,1μm,0.5s							
SMLA				IAML			14 20 32.4	
	comp=E,1μm,0.3s							
DHRM	**DHARAMSHALA**	**1.92**	**262**	*e*P		**Pn**	**14 20 04.2**	**0.0**
DHRM				*e*S		**Sb**	**14 20 31.4**	**+0.9**
DHRM				IAML			14 20 41.8	
	comp=E,2μm,0.4s							
DHRM				IAML			14 20 44.2	
	comp=N,1μm,0.6s							
ALCI	**Alchi Leh**	**2.02**	**326**	*e*P		**Pb**	**14 20 08.2**	**-0.2**
ALCI				*e*S		**Sb**	**14 20 32.3**	**-1.4**
ALCI				IAML			14 20 36.1	
	comp=E,2μm,0.2s							
ALCI				IAML			14 20 38.1	
	comp=N,2μm,0.4s							
TSSA	**Tissa**	**2.04**	**279**	*e*P		**Pn**	**14 20 05.8**	**0.0**
TSSA				*e*S		**Sn**	**14 20 30.9**	**-0.5**
TSSA				IAML			14 20 41.6	
	comp=E,18μm,0.2s							
TSSA				IAML			14 20 42.0	
	comp=N,24μm,0.2s							
JOSI	**Joshimath**	**2.16**	**156**	*e*P		**Pb**	**14 20 11.1**	**+0.5**
JOSI				*e*S		**Sb**	**14 20 39.5**	**+2.0**
JOSI				IAML			14 20 46.9	
	comp=E,187nm,0.7s							
JOSI				IAML			14 20 52.0	
	comp=N,280nm,0.7s							
BHK	**Bhakra**	**2.16**	**239**	*e*P		**Pn**	**14 20 07.0**	**-0.4**
BHK				*e*S		**Sn**	**14 20 30.3**	**-3.8**
BHK				IAML			14 20 40.2	
	comp=E,12μm,0.3s							
BHK				IAML			14 20 41.3	
	comp=N,11μm,0.3s							
THN	**Thein Dam**	**2.35**	**268**	*e*P		**Pn**	**14 20 11.7**	**+1.7**
THN				*e*S		**Sn**	**14 20 40.4**	**+1.4**
THN				IAML			14 20 51.8	
	comp=E,632nm,0.8s							
THN				IAML			14 20 52.6	
	comp=N,624nm,0.8s							
JMU	**Jammu**	**3.14**	**275**	*e*P		**Pn**	**14 20 23.2**	**+2.4**
JMU				*e*S		**Sn**	**14 21 00.4**	**+2.1**
JMU				IAML			14 21 13.4	
	comp=N,1μm,0.7s							
JMU				IAML			14 21 15.9	
	comp=E,762nm,0.7s							
PTH	**Pithoragarh**	**3.27**	**154**	*e*P		**Pb**	**14 20 28.1**	**-1.4**
LGTI	**Lohaghat**	**3.40**	**157**	*e*P		**Pn**	**14 20 27.0**	**+2.5**
LGTI				*e*S		**Sn**	**14 21 05.6**	**+0.7**
NIL	**Nilore**	**4.58**	**285**	Pn		**Pn**	**14 20 41.5**	**+0.9**
KUDL	**Kundal**	**4.72**	**203**	*e*P		**Pn**	**14 20 45.8**	**+3.3**
KUDL				*e*S		**Sn**	**14 21 37.0**	**-0.4**
KUDL				IAML			14 21 56.5	
	comp=N,602nm,0.5s							
KUDL				IAML			14 21 56.7	
	comp=E,510nm,0.5s							
KSH2	**Kashi**	**7.02**	**341**	P		**Pn**	**14 21 17.3**	**+3.0**
KSH2				sP		Pb	14 21 24.8	-8.6
KSH2				S		**Sn**	**14 22 39.9**	**+5.7**
KSH2				pmax	pmax			
	comp=Z,16nm,1.0s							
KBL	**Kabul**	**8.18**	**287**	Pn		**Pn**	**14 21 29.4**	**-0.8**
EVN	**Everest**	**8.49**	**120**			**Pn**	**14 21 36.7**	**+1.8**
WUS	**Wushi**	**8.66**	**3**			**Pn**	**14 21 37.3**	**+0.6**
DRK	**Karamyk**	**8.82**	**324**	Pn		**Pn**	**14 21 40.4**	**+1.4**
NRN	**Naryn**	**9.11**	**348**	Pn		**Pn**	**14 21 44.7**	**+1.7**
TARG	**Taragay, Kyrgy**	**9.19**	**357**			**Pn**	**14 21 45.3**	**+1.0**

GAR Garm 9.28 316 Pn **Pn** **14 21 44.4 -0.9**
KDJ Kajisay 9.64 354 **Pn** **14 21 51.0 +0.9**
BTK Batken 9.75 322 Pn **Pn** **14 21 50.2 -1.4**
CHGR Chuyangaron 9.78 311 Pn **Pn** **14 21 52.0 0.0**
SHAA Shahritus 9.90 303 **Pn** **14 21 53.1 -0.6**
BOOM Boomskoye usch 10.15 349 **Pn** **14 21 56.9 -0.3**
AAK Ala-Archa 10.58 344 Pn **Pn** **14 22 03.4 +0.4**
comp=Z,0.2nm,0.3s,baz=159,slow=23,SNR=8.1
comp=Z,0.3nm,0.3s
AAK Ala-Archa 10.58 344 **Pn** **14 22 04.2 +1.2**
KK31 Karatay Array 12.30 331 Pn **Pn** **14 22 25.3 -1.2**
KKAR Karatay Array 12.30 331 Pn **Pn** **14 22 24.9 -1.6**
WMQ Urumqi 13.36 30 *e*P **Pn** **14 22 43.4 +2.5**
MKAR Makanchi Array 14.53 10 Pn **Pn** **14 22 55.8 -1.1**
comp=Z,0.3nm,0.3s,baz=187,slow=14,SNR=32
MKAR Sn Sn 14 25 28.2 -10
baz=193,slow=24,SNR=1.9
MKAR LR LR 14 29 27.2
comp=Z,77nm,19.2s,baz=202,slow=41
comp=Z,0.2nm,0.3s
MKAR Makanchi Array 14.53 10 Pn **Pn** **14 22 56.5 -0.3**
KURBB Kurchatov Arra 18.07 360 P **Pn** **14 23 40.4 -1.9**
comp=Z,1.2nm,0.7s,baz=188,slow=11,SNR=12
KURK Kurchatov 18.16 0 P **Pn** **14 23 42.0 -1.5**
GTA2 Gaotai 18.49 62 *e*P **Pn** **14 23 49.3 +1.6**
GTA2 pP sP 14 23 56.0 +2.0
GTA2 pmax pmax
comp=Z,1.0nm,1.1s
PZH PanZhiHua 21.05 101 P **P** **14 24 10.2 -5.4**
LZH Lanzhou 21.18 73 *e*P **P** **14 24 12.5 -4.5**
LZH pP pP 14 24 22.2 +0.8
LZH pmax pmax
comp=Z,11nm,0.8s
BVAR Borovoye Array 21.30 346 P **P** **14 24 17.6 -0.3**
comp=Z,1.7nm,0.4s,baz=155,slow=12,SNR=10
comp=Z,1.7nm,0.4s
BORK Borovoye 21.34 346 P **P** **14 24 17.7 -0.6**
BORK IAmb IAmb 14 24 28.3
comp=Z,3.2nm,0.6s
AB31 Akbulak array 21.73 326 P **P** **14 24 20.7 -1.9**
ABKAR Akbulak array 21.73 326 P **P** **14 24 20.2 -2.3**
ZALV Zalesovo Beam 21.87 10 P **P** **14 24 22.7 -1.3**
comp=Z,0.9nm,0.5s,baz=198,slow=8.9,SNR=5.1
comp=Z,0.5nm,0.5s
CM31 Chiang Mai Arr 23.09 122 P **P** **14 24 36.8 -0.5**
CM31 IAmb IAmb 14 24 43.8
comp=Z,11nm,1.2s
CMAR Chiang Mai Arr 23.09 122 P **P** **14 24 36.4 -0.8**
comp=Z,1.3nm,0.7s,baz=313,slow=10,SNR=9.6
comp=Z,1.3nm,0.7s
CMAR Chiang Mai Arr 23.09 122 P **P** **14 24 36.8 -0.4**
SONM Songino Array 26.01 46 P **P** **14 25 05.0 +0.6**
comp=Z,1.5nm,0.9s,baz=244,slow=9.1,SNR=7.4
SONM LR LR 14 37 07.5
comp=Z,32nm,20.6s,baz=189,slow=41
comp=Z,1.5nm,0.9s
SONM Songino Array 26.01 46 P **P** **14 25 04.9 +0.4**
SONM IAmb IAmb 14 25 12.9
comp=Z,3.0nm,1.3s
ULN Ulaanbaatar 26.42 46 P **P** **14 25 08.4 +0.2**
ULN IAmb IAmb 14 25 17.9
comp=Z,3.0nm,1.1s
HHC Hu-ho-hao-te 27.62 63 *e*P **P** **14 25 14.6 -4.4**
HHC pmax pmax
comp=Z,12nm,0.6s
HHC pmax pmax
comp=Z,160nm,5.2s
RAYN Ar Rayn 30.41 261 P **P** **14 25 43.5 -0.4**
RAYN IAmb IAmb 14 25 47.1
comp=Z,3.1nm,0.5s
BRTR Keskin Array B 36.66 294 P **P** **14 26 41.6 +3.4**
comp=Z,0.5nm,0.4s,baz=98,slow=8.9,SNR=4.9
comp=Z,0.5nm,0.4s
KSRS Korea Array 40.38 69 LR LR 14 44 15.0
comp=Z,27nm,21.5s,baz=10.0,slow=37
KARP Karpathos 42.29 289 P **P** **14 27 25.1 -0.1**
BURAR Bucovina Array 42.65 307 P **P** **14 27 28.0 0.0**
FINES FINESS Array B 44.22 327 P **P** **14 27 41.6 +1.4**
comp=Z,4.2nm,1.0s,baz=129,slow=11,SNR=3.7
comp=Z,4.2nm,1.0s
ARCES ARCESS Array B 47.18 337 P **P** **14 28 03.9 +0.3**
comp=Z,3.5nm,0.7s,baz=94,slow=6.7,SNR=6.4
comp=Z,3.5nm,0.7s
HFS Hagfors 49.98 324 P **P** **14 28 25.4 +0.1**
comp=Z,3.7nm,0.6s,baz=108,slow=9.5,SNR=12
comp=Z,3.7nm,0.6s
NB2 NORSAR Subarra 51.24 325 P **P** **14 28 38.6 +3.8**
comp=Z,4.5nm,0.8s,baz=94,slow=7.9
NOA NORSAR Array B 51.24 325 P **P** **14 28 37.3 +2.5**
comp=Z,1.1nm,0.6s,baz=94,slow=7.4,SNR=6.4
comp=Z,1.1nm,0.6s
TORD Torodi Ar. Bea 72.05 274 P **P** **14 30 56.7 +0.8**
comp=Z,1.1nm,0.6s,baz=65,slow=3.3,SNR=8.2
comp=Z,1.1nm,0.6s
WRA Warramunga Arr 74.62 126 P **P** **14 31 09.7 -1.2**
comp=Z,0.5nm,0.7s,baz=323,slow=5.2,SNR=4.7
comp=Z,0.5nm,0.7s
ILAR Eielson Array 76.73 18 P **P** **14 31 21.7 -0.7**
comp=Z,0.4nm,0.6s,baz=319,slow=4.2,SNR=4.6
comp=Z,0.4nm,0.6s
ASAR Alice Springs 76.91 129 P **P** **14 31 23.5 -0.5**
comp=Z,0.3nm,0.6s,baz=322,slow=6.0,SNR=8.2
comp=Z,0.3nm,0.6s

*BGSI **11** 14:19:33.2±1.4, 26.˚22S×30.˚54E, h0km±327km, ML2.4*
PRE 11 14:19:54.9±1.2, 25.˚94S×29.˚41E, h0km, ML2.4, Suspected explosion, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HRAO	**HartRAO**	**1.55**	**271**	*e*P		Pn	14 20 24.0	0.0
HRAO				*e*S		Sb	14 20 45.8	+0.9
HRAO				IAML			14 20 45.9	
	comp=Z,56nm,0.4s							
NWCL	**Newcastle**	**1.84**	**167**	*e*P		Pn	14 20 28.2	+0.3
NWCL				*e*S		Sb	14 20 52.9	-0.3
NWCL				IAML			14 20 53.8	
	comp=Z,48nm,0.4s							
LEPH	**Lephalale, Lim**	**2.54**	**324**	*e*P		Pn	14 20 37.2	-0.2
LEPH				*e*S		Sn	14 21 09.6	+0.5
LEPH				IAML			14 21 14.3	
	comp=Z,45nm,0.4s							
LBTB	**Lobatse**	**3.57**	**284**	*e*P		Pn	14 20 52.2	+0.6
LBTB				*e*S		Sn	14 21 35.0	+0.5
LBTB				IAML			14 21 47.3	
	comp=Z,12nm,0.7s							
MUSN	**Musina, Limpop**	**3.66**	**7**	*e*P		Pn	14 20 54.0	+1.2
MUSN				*e*S		Sn	14 21 37.0	+0.2
MUSN				IAML			14 21 47.2	
	comp=Z,22nm,1.1s							
PMBG	**Pietermaritzbu**	**3.69**	**165**	*e*P		Pn	14 20 54.7	+1.5
PMBG				*e*S		Sn	14 21 36.3	-1.2
PMBG				IAML			14 21 51.4	
	comp=Z,12nm,0.5s							
LPHEP	**Lephephe**	**4.12**	**308**	*i* P		Pn	14 20 49.8	-9.5
LPHEP				*i* S		Sn	14 21 44.7	-3.6
LPHEP				IAML			14 22 12.8	
	comp=N,11nm,0.4s							
BOSA	**Boshof**	**4.55**	**233**	*e*P		Pn	14 21 06.7	+1.4
BOSA				*e*S		Sn	14 21 58.6	-0.3
BOSA				IAML			14 22 20.9	
	comp=Z,7.4nm,0.4s							
KSTD	**Kokstad**	**4.66**	**181**	*e*P		Pn	14 21 08.3	+1.6
KSTD				*e*S		Sn	14 22 01.0	-0.7
KSTD				IAML			14 22 16.3	
	comp=Z,6.9nm,0.6s							
KDWAN	**Kaudwane**	**5.01**	**300**	*i* P		Pn	14 21 01.7	-10
KDWAN				*i* S		Sn	14 22 07.1	-3.2
KDWAN				IAML			14 22 37.2	
	comp=E,13nm,0.8s							
BROLN	**Tlhalogang**	**5.18**	**338**	*i* P		Pn	14 20 58.7	-15
BROLN				*i* S		Sn	14 22 03.8	-11
BROLN				IAML			14 22 37.6	
	comp=E,8.4nm,0.4s							

IDC 11 14:25:19.6±1.8, 0.˚14N×126.˚50E, h0km, mb3.1/4, mbtmp3.2/4, Error ellipse: s-maj=183.6km s-min=23.4km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.38**	**159**	P		P	14 30 08.5	-0.5
	0.2nm,0.3s,baz=338,slow=10,SNR=9.0							
	0.2nm,0.3s							

ASAR Alice Springs 24.73 164 P P 14 30 43.2 +0.3
0.2nm,0.4s,baz=345,slow=10,SNR=13
0.2nm,0.4s
MKAR Makanchi Array 60.38 327 P P 14 35 31.3 +0.5
0.1nm,0.4s,baz=124,slow=8.1,SNR=2.1
0.1nm,0.4s
KURBB Kurchatov Arra 64.64 328 P P 14 35 58.5 -0.6
0.2nm,0.5s,baz=117,slow=5.6,SNR=2.0
0.2nm,0.5s

IDC 11 14:29:53.1±2.3, 6.70S×129.50E, h0km, mb3.1/1, mbtmp3.3/3, ML3.2/3, Error ellipse: s-maj=82.7km s-min=30.6km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.94**	**198**	Pn	Pn	14 32 45.9	+1.2
	0.1nm,0.3s,baz=18,slow=16,SNR=2.0						
FITZ				Sn	Sn	14 34 46.9	-12
	0.2nm,0.3s,baz=147,slow=17,SNR=6.4						
	1.5nm,0.8s						
WRA	**Warramunga Arr**	**13.98**	**161**	Pn	Pn	14 33 11.1	-1.5
	0.1nm,0.3s,baz=339,slow=14,SNR=11						
WRA				Sn	Sn	14 35 34.6	-14
	0.1nm,0.3s,baz=332,slow=23,SNR=6.2						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**17.39**	**166**	P	Pn	14 33 57.6	+0.2
	0.1nm,0.3s,baz=344,slow=8.5,SNR=1.3						
ASAR				S	Sn	14 36 58.0	-14
	0.2nm,0.7s,baz=334,slow=23,SNR=1.5						
MKAR	**Makanchi Array**	**67.71**	**327**	P	P	14 40 52.3	0.0
	0.1nm,0.5s,baz=123,slow=7.2,SNR=1.6						
	0.1nm,0.5s						

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*IDC **11** 14:41:30.7±1.1, 6.55S×107.83E, h0km, mb3.8/4, mbtmp3.9/4, Error ellipse: s-maj=22.2km s-min=7.2km az=135.0*
*DJA **11** 14:41:31.6±0.2, 7.°S±2.°×107.°E±.°, h10km, M3.8/29, MLv3.8/29*
ISC 11 14:41:31.2±0.8, 6.79S±0.06×107.32E±0.04, h10km, n19, σ1§19/23, mb3.8/5, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LEM	**Lembang**	**0.29**	**98**	Pg	**Pg**	**14 41 38.0**	**+0.7**
	189nm,0.3s,baz=311,slow=20,SNR=60						
LEM				Lg	Lg	14 41 41.5	
	763nm,0.3s,baz=6.6,slow=21,SNR=29						
LEM	**Lembang**	**0.29**	**98**	P	**Pg**	**14 41 37.9**	**+0.7**
LEM				S	**Sg**	**14 41 41.5**	**+0.3**
DBJI	**Dramaga**	**0.61**	**292**	P	**Pg**	**14 41 43.7**	**+0.6**
DBJI				S	**Sb**	**14 41 53.2**	**+0.4**
BBJI	**Bungbulang**	**0.75**	**154**	P	**Pg**	**14 41 46.9**	**+1.3**
BBJI				S	**Sb**	**14 41 58.0**	**+1.4**
SBJI	**Serang**	**1.36**	**299**	P	**Pn**	**14 41 56.5**	**+0.3**
CGJI	**Cibinong**	**1.63**	**276**	P	**Pn**	**14 42 01.1**	**+1.2**
KPJI	**Karang Pucung**	**1.69**	**109**	P	**Pn**	**14 42 01.7**	**+1.0**
CTJI	**Waduk Cacaban**	**1.86**	**97**	P	**Pn**	**14 42 02.8**	**-0.3**
BLSI	**Bandar Lampung**	**2.50**	**304**	P	**Pn**	**14 42 12.0**	**0.0**
KASI	**Kota Agung**	**3.08**	**294**	P	**Pn**	**14 42 20.0**	**+0.1**
KLJ	**Kotabumi**	**3.11**	**308**	P	**Pn**	**14 42 20.9**	**+0.6**
MDSI	**Maura Dua**	**3.88**	**306**	P	**Pn**	**14 42 31.0**	**+0.1**
TPI	**Tanjungpandan**	**4.02**	**5**	P	**Pn**	**14 42 34.8**	**+2.0**
SNJI	**Sawahan-Nganju**	**4.51**	**103**	P	**Pn**	**14 42 39.8**	**0.0**
FITZ	**Fitzroy Crossi**	**21.10**	**124**	P	**P**	**14 46 15.7**	**-0.4**
	3.5nm,0.7s,baz=294,slow=12,SNR=8.0						
	3.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**26.41**	**342**	P	**P**	**14 47 08.8**	**+0.6**
	1.2nm,0.6s,baz=177,slow=8.3,SNR=12						
	1.2nm,0.6s						
WRA	**Warramunga Arr**	**29.30**	**119**	P	**P**	**14 47 30.9**	**-3.1**
	0.4nm,0.8s,baz=293,slow=10,SNR=4.6						
WRA				PcP	**PcP**	**14 50 39.2**	**-1.7**
	2.2nm,1.4s,baz=298,slow=2.3,SNR=4.5						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**30.55**	**126**	P	**P**	**14 47 43.6**	**-1.7**
	0.9nm,0.7s,baz=302,slow=9.2,SNR=8.7						
STKA	**Stephens Creek**	**40.55**	**133**	P	**P**	**14 49 11.2**	**+0.3**
	2.4nm,0.6s,baz=309,slow=8.1,SNR=8.1						
	2.4nm,0.6s						

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*IDC **11** 14:44:23.6±5.4, 53.°72N×161.°60E, h91km±58km, mb3.3/3, mbtmp3.5/4, ML2.0/1, Error ellipse: s-maj=105.1km s-min=31.7km az=143.0*
*KRSC **11** 14:44:23.8±0.9, 54.°40N×160.°90E, h118km±17km, Ml4.0, Felt [IV] at kordon Kronoki.*
ISC 11 14:44:25.3±0.9, 54.42N±0.05×160.81E±0.07, h122km±9km, n35, σ0§73/43, mb3.4/3, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TUMD	**Tumrok D**	**0.82**	**343**	*eP*	**Pn**	**14 44 45.4**	**-0.5**
TUMD				*eS*	**Sn**	**14 45 00.6**	**-1.0**
KII	**Karymskiy**	**0.89**	**245**	*eP*	**Pn**	**14 44 46.6**	**+0.1**
TUMR	**Tumrok**	**0.95**	**336**	*eP*	**Pn**	**14 44 47.5**	**+0.4**
KMNR	**Kamenistaya**	**1.38**	**346**	*eP*	**Pn**	**14 44 51.8**	**+0.2**
KMNR				*eS*	**Sn**	**14 45 12.0**	**+0.3**
BZGR	**Bezymyannyi-Gr**	**1.53**	**358**	*eP*	**Pn**	**14 44 53.8**	**+0.6**
BZWR	**Bezymyannyi-We**	**1.56**	**353**	*eP*	**Pn**	**14 44 54.5**	**+0.8**
SDLR	**Sedlovina**	**1.61**	**226**	*eP*	**Pn**	**14 44 55.0**	**+0.7**
KRER	**Koryakskii**	**1.65**	**228**	*eP*	**Pn**	**14 44 55.3**	**+0.5**
SMAR	**Somma**	**1.66**	**227**	*eP*	**Pn**	**14 44 55.2**	**+0.3**
KRX	**Arik**	**1.66**	**231**	*eP*	**Pn**	**14 44 55.3**	**+0.4**
UGLR	**Uglovaya**	**1.69**	**225**	*eP*	**Pn**	**14 44 55.4**	**+0.3**
KOK	**Koryaka**	**1.71**	**230**	*eP*	**Pn**	**14 44 55.9**	**+0.5**
GNL	**Ganaly**	**1.84**	**248**	*eP*	**Pn**	**14 44 56.9**	**0.0**
GNL				*eS*	**Sn**	**14 45 21.7**	**+0.6**
INSR	**Institute**	**1.88**	**225**	*eS*	**Sn**	**14 45 22.9**	**+1.1**
KLY	**Klyuchi**	**1.90**	**357**	*eP*	**Pn**	**14 44 58.1**	**+0.5**
KLY				*eS*	**Sn**	**14 45 22.7**	**+0.4**
ESO	**Esso**	**1.94**	**322**	*eP*	**Pn**	**14 44 57.2**	**-0.8**
SRDR	**Sredinnyy**	**2.01**	**342**	*eP*	**Pn**	**14 44 58.4**	**-0.6**
KBTR	**Krutoberegovo**	**2.13**	**32**	*eP*	**Pn**	**14 45 00.8**	**+0.4**
KBTR				*eS*	**Sn**	**14 45 26.5**	**-0.9**
KBG	**Krutoberegovo**	**2.14**	**30**	*eP*	**Pn**	**14 45 00.4**	**-0.1**
KBG				*eS*	**Sn**	**14 45 27.3**	**-0.2**
SMKR	**Semkarok**	**2.20**	**9**	*eP*	**Pn**	**14 45 01.6**	**+0.2**
KRMR	**Karymshinskiy**	**2.25**	**226**	*eP*	**Pn**	**14 45 02.1**	**+0.1**
KRMR				*eS*	**Sn**	**14 45 29.5**	**-0.6**
PETK	**Petropavlovsk-**	**2.27**	**236**	P	**Pn**	**14 45 01.5**	**-0.6**
	1.7nm,0.3s,baz=71,slow=15,SNR=43						
PETK				S	**Sn**	**14 45 30.8**	**+0.4**
	4.8nm,0.3s,baz=76,slow=20,SNR=7.0						
	4.5nm,0.4s						
RUS	**Russkaya**	**2.42**	**216**	*eP*	**Pn**	**14 45 03.8**	**-0.2**
RUS				*eS*	**Sn**	**14 45 32.8**	**-0.9**
GRL	**Gorelyy**	**2.48**	**222**	*eP*	**Pn**	**14 45 05.8**	**+0.8**
MTVR	**Mutnovka**	**2.49**	**220**	*eP*	**Pn**	**14 45 05.6**	**+0.4**
MTVR				*eS*	**Sn**	**14 45 36.4**	**+0.6**
APC	**Apacha**	**2.64**	**237**	*eP*	**Pn**	**14 45 07.4**	**+0.5**
ASAK	**Asacha**	**2.68**	**222**	*eP*	**Pn**	**14 45 07.8**	**+0.3**
ASAK				*eS*	**Sn**	**14 45 40.1**	**+0.1**
KDTR	**Khodutka, Kamc**	**3.09**	**213**	*eS*	**Sn**	**14 45 46.3**	**-3.0**
BKI	**Bering**	**3.09**	**73**	*eS*	**Sn**	**14 45 49.1**	**-0.2**
H11N2	**WAKE ISLAND Hy**	**34.94**	**170**	T	T	15 28 23.8	
	baz=354,slow=76,SNR=16						
H11N3	**WAKE ISLAND Hy**	**34.95**	**170**	T	T	15 28 23.3	
	baz=354,slow=76,SNR=16						
H11N1	**WAKE ISLAND Hy**	**34.95**	**170**	T	T	15 28 25.0	
	baz=354,slow=76,SNR=17						
TXAR	**Lajitas Array**	**69.73**	**68**	P	**P**	**14 55 22.6**	**+0.6**
	0.2nm,0.5s,baz=320,slow=8.5,SNR=2.3						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**77.46**	**205**	P	**P**	**14 56 06.3**	**-0.6**
	0.5nm,0.5s,baz=18,slow=5.8,SNR=4.8						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**81.14**	**205**	P	**P**	**14 56 26.6**	**-0.2**
	0.4nm,0.6s,baz=14,slow=5.2,SNR=6.2						
	0.4nm,0.6s						

IDC 11 15:13:22.5±2.9, 32.59S×178.29W, h0km, mb3.8/2, mbtmp3.9/4, ML3.8/2, Error ellipse: s-maj=66.6km s-min=32.9km az=112.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.79**	**212**	Pn	Pn	15 15 03.7	+0.3
	1.5nm,0.3s,baz=279,slow=4.5,SNR=12						
URZ				Sn	Sn	15 16 21.0	-0.4
	2.1nm,0.3s,baz=271,slow=21,SNR=14						
	3.7nm,0.3s						
RPZ	**Rata Peaks**	**13.90**	**214**	Pn	Pn	15 16 41.3	+0.5
	0.6nm,0.3s,baz=36,slow=8.7,SNR=1.5						
	3.3nm,0.6s						
ASAR	**Alice Springs**	**42.79**	**269**	P	P	15 21 22.2	+0.1
	0.3nm,0.3s,baz=110,slow=7.8,SNR=25						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**43.98**	**275**	P	P	15 21 31.5	-0.3
	1.2nm,0.5s,baz=116,slow=7.9,SNR=42						
	1.2nm,0.5s						
FINES	**FINESS Array B**	**147.10**	**339**	PKPbc	PKPbc	15 33 05.6	-1.0
	2.8nm,0.9s,baz=29,slow=3.2,SNR=7.2						

IDC 11 15:14:19.5±2.4, 4.61N×122.84E, h0km, mb3.4/3, mbtmp3.4/3, MS2.8/1, Error ellipse: s-maj=352.0km s-min=27.8km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KCP	**Kidapawan**	**3.27**	**43**	*i* P	Pn	15 15 14.1	+2.0
KCP				*i* S	Sn	15 15 14.4	-37
WRA	**Warramunga Arr**	**26.89**	**156**	P	P	15 20 02.2	-0.1
	0.2nm,0.5s,baz=334,slow=9.6,SNR=6.1						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**30.10**	**159**	P	P	15 20 31.1	+0.1
	0.4nm,1.0s,baz=339,slow=8.6,SNR=7.1						
	0.4nm,1.0s						
HNR	**Honiara**	**39.52**	**111**	LR	LR	15 38 50.8	
	comp=Z,12nm,18.1s,baz=32,slow=37						
MKAR	**Makanchi Array**	**54.67**	**327**	P	P	15 23 50.2	-0.1
	1.0nm,1.2s,baz=124,slow=7.1,SNR=4.0						
	1.0nm,1.2s						

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*BGR **11** 15:16:37.8, 15.°06S×160.°66E, h33km, Ms4.9*
*IDC **11** 15:16:54.7±1.9, 6.°90S×155.°44E, h27km±12km, mb4.9/30, mbtmp5.0/34, ML4.0/5, MS4.5/60, Error ellipse: s-maj=11.7km s-min=9.7km az=40.0*
*MOS **11** 15:16:54.9±1.1, 6.°89S×155.°38E, h35km, mb5.3/38, MS4.7/4, Error ellipse: s-maj=7.6km s-min=6.1km az=125.3*
*BJI **11** 15:16:54.8, 6.°85S×155.°56E, h44km, mB5.3/23, mb5.0/77, Ms4.8/46, Ms7 4.6/47*
*NEIC **11** 15:16:56.0±1.7, 6.°96S±0.°07×155.°46E±0.°07, h28km±4km, mb5.3/73, Mww5.3/29, Error ellipse: s-maj=11.1km s-min=9.1km az=208.0*
*GFZ **11** 15:16:55.9, 6.°91S×155.°43E, h29km, MW5.3, Moment Tensor Solution. s30 Moment tensor: Mrr0.87; Mθθ-0.58; Mϕϕ-0.28; Mrθ0.44; Mrϕ0.50; Mθϕ-0.30; Fault plane solution: NP1:ϕs125.00000°, δ60.00000°, λ88.00000°. NP2:ϕs308.00000°, δ29.00000°, λ92.00000°. Principal axes: T 1.0100, Plg74.0000°, Azm31.0000°; N 0.0900, Plg1.0000°, Azm126.0000°; P -1.1000, Plg15.0000°, Azm216.0000°;*
*NEIC **11** 15:16:57.7, 6.°98S×155.°47E, h30km*
*NEIC **11** 15:16:57.7, 6.°88S×155.°57E, h30km, Moment Tensor Solution. Duration: 2s3 Moment tensor: Scale 10^17^Nm; Mrr0.93; Mθθ-0.71; Mϕϕ-0.22; Mrθ0.34; Mrϕ0.62; Mθϕ-0.11; Fault plane solution: M0 1.11000×10^17^ NP1: ϕs312.01000°, δ36.26000°, λ101.90000°. NP2: ϕs117.36000°, δ54.63000°, λ81.39000°. Principal axes: T 0.9956, Plg78.0000°, Azm356.0000°; N 0.1951, Plg7.0000°, Azm122.0000°; P -1.1907, Plg9.0000°, Azm214.0000°;*
*GCMT **11** 15:16:58.0±0.1, 7.°18S±0.°01×155.°33E±0.°01, h34km, MW5.3/126, Moment Tensor Solution. s126,c208; s125,c207; Duration: 1s2 Moment tensor: Scale 10^17^ Nm; Mrr1.04±.02; Mθθ-0.83±.01; Mϕϕ-0.20±.01; Mrθ0.60±.02; Mrϕ0.68±.01; Mθϕ-0.36±.02; Best double couple: M0 1.35000×10^17^ NP1:ϕs304.00000°, δ29.00000°, λ92.00000°. NP2:ϕs122.00000°, δ61.00000°, λ89.00000°. Principal axes: T 1.2370, Plg74.0000°, Azm28.0000°; N 0.2290, Plg1.0000°, Azm122.0000°; P -1.4630, Plg16.0000°, Azm213.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **11** 15:16:59.3±0.5, 7.°5S±3.°×155.°5E±.°, h57km±5km, M5.1/87, mB5.6/46, mb5.4/87, MLv5.0/1, Mw(mB)5.1/46, MwMwp5.1/8, Mwp5.3/8*
ISC 11 15:16:56.6±0.3, 6.95S±0.04×155.40E±0.04, h41km±2km, h41km:pP-P, n872, σ1§28/882, mb5.2/189, MS4.6/79, 23C-21D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**4.22**	**310**		**Pn**	**15 18 00.3**	**+1.8**
I40PG	**Keravat**	**4.27**	**308**	I	I	15 37 30.0	
	0.1nm,0.3s,baz=124,slow=318,SNR=0.7						
TATA	**Tatamba Isabel**	**4.60**	**108**	P	**Pn**	**15 18 06.7**	**+3.0**
SAVO	**Savo Central**	**4.89**	**117**	P	**Pn**	**15 18 11.3**	**+3.6**
HNR	**Honiara**	**5.14**	**119**	Pn	**Pn**	**15 18 11.0**	**-0.1**
	2.2nm,0.3s,baz=316,slow=3.5,SNR=19						
HNR				Sn	**Sn**	**15 19 08.2**	**-0.9**
	1.7nm,0.3s,baz=306,slow=17,SNR=1.3						
HNR				LR	LR	15 20 16.3	
	comp=Z,977nm,18.8s,baz=18,slow=39						
HNR	**Honiara**	**5.14**	**119**	P	**Pn**	**15 18 14.9**	**+3.8**
NGOA	**Tingoa Renbel**	**6.49**	**135**	P	**Pn**	**15 18 31.0**	**+1.3**
HURO	**Huro Makira**	**7.32**	**119**	P	**Pn**	**15 18 44.2**	**+3.1**
PMG	**Port Moresby**	**8.51**	**253**	Pn	**Pn**	**15 18 58.5**	**+1.1**
	16nm,0.3s,baz=57,slow=10.0,SNR=39						
PMG				Sn	**Sn**	**15 20 31.9**	**-0.4**
	6.3nm,0.3s,baz=103,slow=21,SNR=9.5						
PMG				LR	LR	15 22 16.5	
	comp=Z,6μm,19.7s,baz=61,slow=38						
	207nm,0.6s						
PMG	**Port Moresby**	**8.51**	**253**	P	**Pn**	**15 18 59.4**	**+2.0**
PMG	**Port Moresby**	**8.51**	**253**	P	**Pn**	**15 18 59.5**	**+2.0**
PMG	**Port Moresby**	**8.51**	**253**		**Pn**	**15 18 58.7**	**+1.3**
PMG	**Port Moresby**	**8.51**	**253**	P	**Pn**	**15 18 59.5**	**+2.0**
	6μm3μm346nm,0.7s						
COEN	**Coen**	**13.89**	**239**	P	**Pn**	**15 20 11.8**	**+0.8**
	comp=Z,145nm,0.9s						
COEN	**Coen**	**13.89**	**239**	P	**Pn**	**15 20 12.0**	**+1.0**
COEN	**Coen**	**13.89**	**239**		**Pn**	**15 20 11.8**	**+0.8**
PATS	**Pohnpei**	**14.00**	**12**	P	**Pn**	**15 20 14.5**	**+2.0**
	comp=Z,312nm,0.9s						
PATS	**Pohnpei**	**14.00**	**12**		**Pn**	**15 20 12.9**	**+0.4**
SANVU	**Saraoutou**	**14.33**	**127**	P	**Pn**	**15 20 19.5**	**+2.5**
SANVU	**Saraoutou**	**14.33**	**127**		**Pn**	**15 20 17.1**	**+0.1**
AUAYR	**Ayr State High**	**14.76**	**211**	P	**Pn**	**15 20 24.9**	**+2.1**
JAY	**Jayapura**	**15.29**	**286**	Pn	**Pn**	**15 20 30.4**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=126,slow=8.7,SNR=3.7						
	comp=Z,36nm,1.0s						
JAY	**Jayapura**	**15.29**	**286**	P	**Pn**	**15 20 30.3**	**+0.5**
MTSU	**Mount Surprise**	**15.50**	**223**	P	**Pn**	**15 20 33.4**	**+0.8**
	comp=Z,58nm,1.2s						
MTSU	**Mount Surprise**	**15.50**	**223**	P	**Pn**	**15 20 34.0**	**+1.5**
CTA	**Charters Tower**	**15.79**	**213**	P	**P**	**15 20 37.9**	**-1.7**
	comp=Z,2.4nm,1.0s						
CTA	**Charters Tower**	**15.79**	**213**	Pn	**Pn**	**15 20 37.6**	**+1.3**
	comp=Z,1.2nm,0.3s,baz=36,slow=11,SNR=13						
CTA				LR	LR	15 26 14.4	
	comp=Z,4μm,18.8s,baz=44,slow=35						
	comp=Z,42nm,0.8s						
CTA	**Charters Tower**	**15.79**	**213**	P	**P**	**15 20 38.6**	**-1.0**
CTAO	**Charters Tower**	**15.79**	**213**	P	**P**	**15 20 38.4**	**-1.2**
CTAO	**Charters Tower**	**15.79**	**213**	Pn	**Pn**	**15 20 36.7**	**+0.4**
CTAO	**Charters Tower**	**15.79**	**213**	P	**Pn**	**15 20 36.7**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,51nm,1.0s						
AUNRC	**North Rockhamp**	**16.97**	**195**	P	**P**	**15 20 52.4**	**-0.2**
DZM	**Mont Dzumac**	**18.43**	**146**	P	**P**	**15 21 09.8**	**+0.9**
	comp=Z,1.3nm,0.3s,baz=325,slow=16,SNR=21						
DZM				LR	LR	15 27 24.4	
	comp=Z,2μm,21.1s,baz=310,slow=34						
	comp=Z,22nm,0.9s						
ONTNC	**Ouen Toro**	**18.63**	**146**	P	**P**	**15 21 11.3**	**+0.4**
YATNC	**Mamie plateau,**	**18.68**	**145**	P	**Pn**	**15 21 13.1**	**+1.0**
EIDS	**Eidsvold**	**18.78**	**192**	P	**Pn**	**15 21 13.4**	**+0.1**
	comp=Z,61nm,1.2s						
EIDS	**Eidsvold**	**18.78**	**192**	P	**Pn**	**15 21 13.6**	**+0.3**
EIDS	**Eidsvold**	**18.78**	**192**		**P**	**15 21 12.8**	**+0.3**
SRPI	**Serui, Papua**	**19.75**	**284**	P	**Pn**	**15 21 26.1**	**+1.1**
	comp=Z,40nm,0.6s						
BAKI	**Biak**	**20.07**	**286**	P	**Pn**	**15 21 28.2**	**-0.6**
	comp=Z,3μmcomp=Z,2μmcomp=Z,149nm,0.9s						
QIS	**Mount Isa**	**20.43**	**227**	P	Pn	15 21 31.6	-1.4
	comp=Z,85nm,0.9s						
QIS	**Mount Isa**	**20.43**	**227**	P	Pn	15 21 31.8	-1.1
RMQ	**Roma**	**20.43**	**197**	P	Pn	15 21 33.1	+0.1
	comp=Z,78nm,1.5s						
RMQ	**Roma**	**20.43**	**197**	P	Pn	15 21 33.1	+0.1
TW1H	**Toowoomba 1 Ha**	**20.74**	**189**	P	**P**	**15 21 35.2**	**+1.2**
RKPI	**Ransiki, Papua**	**21.83**	**283**	P	**P**	**15 21 47.0**	**+1.2**
	comp=Z,2μmcomp=Z,3μmcomp=Z,268nm,1.0s						
MWPI	**Manokwari, Pap**	**22.12**	**285**	P	**P**	**15 21 51.9**	**+3.0**
	comp=Z,145nm,0.8s						
QLP	**Quilpie**	**22.23**	**207**	P	**P**	**15 21 50.0**	**0.0**
	comp=Z,205nm,1.0s						
QLP	**Quilpie**	**22.23**	**207**	P	**P**	**15 21 49.8**	**-0.2**
GUMO	**Guam**	**22.92**	**333**	LR	LR	15 29 47.3	
	comp=Z,664nm,21.9s,baz=148,slow=34						
KDU	**Kakadu**	**23.29**	**254**	P	**P**	**15 22 00.5**	**-0.6**
	comp=Z,57nm,0.9s						
FAKI	**Fak Fak**	**23.40**	**279**	P	**P**	**15 22 02.1**	**-0.1**
FAKI	**Fak Fak**	**23.40**	**279**		**P**	**15 22 01.5**	**-0.7**
FAKI				IAmb	IAmb	15 22 18.8	
	comp=Z,73nm,0.9s						
FAKI	**Fak Fak**	**23.40**	**279**	P	**P**	**15 22 02.6**	**+0.4**
AULRC	**Lightning Ridg**	**23.43**	**196**	P	**P**	**15 22 02.0**	**-0.3**
ARMA	**Armidale**	**23.62**	**188**	P	**P**	**15 22 06.2**	**+2.0**
	comp=Z,67nm,1.0s						
ARMA	**Armidale**	**23.62**	**188**	P	**P**	**15 22 05.9**	**+1.7**
ARMA	**Armidale**	**23.62**	**188**		**P**	**15 22 03.4**	**-0.8**
ARMA				IAmb	IAmb	15 22 15.5	
	comp=Z,52nm,0.9s						
SAUI	**Saumlaki**	**23.91**	**266**	P	**P**	**15 22 08.5**	**+1.5**
SAUI	**Saumlaki**	**23.91**	**266**	P	**P**	**15 22 07.5**	**+0.4**
SAUI	**Saumlaki**	**23.91**	**266**	P	**P**	**15 22 09.1**	**+2.1**
	comp=Z,4μmcomp=Z,307nm,1.2s						
WB0	**Warramunga Arr**	**24.04**	**236**	P	**P**	**15 22 08.3**	**+0.1**
WB0				IAmb	IAmb	15 22 10.1	
	comp=Z,159nm,1.2s						
WR8	**Warramunga Arr**	**24.05**	**235**	P	**P**	**15 22 08.2**	**0.0**
WR8				IAmb	IAmb	15 22 10.2	
	comp=Z,154nm,1.1s						
WRAB	**Tennant Creek**	**24.16**	**236**	P	**P**	**15 22 09.7**	**+0.4**
WRAB	**Tennant Creek**	**24.16**	**236**	P	**P**	**15 22 09.4**	**+0.2**
WRAB				IAmb	IAmb	15 22 11.2	
	comp=Z,126nm,1.1s						
WRAB	**Tennant Creek**	**24.16**	**236**	*ce*P	**P**	**15 22 09.6**	**+0.3**
WRAB				pmax	pmax		
	comp=Z,140nm,1.3s						
WRA	**Warramunga Arr**	**24.17**	**236**	P	**P**	**15 22 09.3**	**-0.1**
	comp=Z,87nm,1.0s,baz=61,slow=9.4,SNR=82						
WRA				PcP	**PcP**	**15 25 49.4**	**-0.3**
	comp=Z,3.7nm,0.6s,baz=64,slow=2.4,SNR=6.3						
WRA				ScP	**ScP**	**15 29 23.9**	**-1.3**
	comp=Z,2.0nm,0.9s,baz=66,slow=2.9,SNR=5.2						
WRA				ScS	**ScS**	**15 33 15.9**	**+3.2**
	comp=Z,2.1nm,1.0s,baz=66,slow=6.1,SNR=6.4						
	comp=Z,87nm,1.0s						
WRA	**Warramunga Arr**	**24.17**	**236**	P	**P**	**15 22 08.5**	**-0.9**
WRA	**Warramunga Arr**	**24.17**	**236**	P	**P**	**15 22 08.5**	**-0.9**
AUPHS	**Peel High Scho**	**24.40**	**189**	P	**P**	**15 22 12.6**	**+1.3**
MSVF	**Nonsavu**	**24.56**	**118**	P	**P**	**15 22 13.3**	**+0.3**
	comp=Z,112nm,0.8s,baz=281,slow=8.4,SNR=69						
MSVF				LR	LR	15 31 01.8	
	comp=Z,2μm,20.4s,baz=291,slow=34						
	comp=Z,112nm,0.8s						
MSVF	**Nonsavu**	**24.56**	**118**	P	**P**	**15 22 14.4**	**+1.4**
MSVF	**Nonsavu**	**24.56**	**118**		**P**	**15 22 12.7**	**-0.3**
MSVF	**Nonsavu**	**24.56**	**118**	P	**P**	**15 22 12.7**	**-0.3**
MSVF				pmax	pmax		
	comp=Z,123nm,0.9s						
MTN	**Manton Dam**	**24.60**	**254**	P	**P**	**15 22 14.7**	**+1.4**
	comp=Z,89nm,1.3s						
DRS	**Darwin Rock St**	**24.75**	**255**	P	**P**	**15 22 16.0**	**+1.4**
SIJI	**Sorong**	**24.81**	**283**	P	**P**	**15 22 15.5**	**+0.3**
	comp=Z,46nm,0.7s,baz=105,slow=5.4,SNR=11						
	comp=Z,46nm,0.7s						
SIJI	**Sorong**	**24.81**	**283**	P	**P**	**15 22 17.6**	**+2.4**
	comp=Z,1μmcomp=Z,160nm,1.1s						
AUDHS	**Darwin High Sc**	**24.81**	**255**	P	**P**	**15 22 16.5**	**+1.3**
SWI	**Sorong**	**24.82**	**283**	P	**P**	**15 22 18.1**	**+2.8**
	comp=Z,2μmcomp=Z,245nm,0.9s						
INKA	**Innaminka**	**24.91**	**212**		**P**	**15 22 15.3**	**-0.7**
INKA				IAmb	IAmb	15 22 28.2	
	comp=Z,63nm,0.9s						
AUDCS	**Dubbo College**	**25.94**	**193**	P	**P**	**15 22 26.5**	**+1.3**
CMSA	**Cobar Meteorol**	**26.09**	**199**	P	**P**	**15 22 26.0**	**-0.6**
	comp=Z,71nm,1.1s						
CMSA	**Cobar Meteorol**	**26.09**	**199**	P	**P**	**15 22 27.7**	**+1.0**
MGCD	**Mangrove Creek**	**26.43**	**188**	P	**P**	**15 22 31.2**	**+1.5**
ASAR	**Alice Springs**	**26.50**	**229**	P	**P**	**15 22 29.9**	**-0.6**
	comp=Z,12nm,0.9s,baz=59,slow=9.7,SNR=106						
ASAR				PcP	**PcP**	**15 25 54.8**	**-0.1**
	comp=Z,4.4nm,0.7s,baz=76,slow=1.9,SNR=6.1						
ASAR				ScP	**ScP**	**15 29 33.1**	**+1.3**
	comp

EDFI Ende, Flores 33.43 265 P **P** **15 23 31.2 -0.9**
comp=Z,846nmcomp=Z,89nm,1.0s
RAO Raoul Island 33.54 135 LR LR 15 35 42.2
comp=Z,894nm,19.3s,baz=310,slow=34
KKSI Kolaka, Sulawe 33.69 273 P **P** **15 23 37.3 +3.0**
comp=Z,1µmcomp=Z,49nm,0.9s
GLAD Gladstone 34.53 190 P **P** **15 23 42.1 +1.0**
BSSI Bau Bau, Buton 34.68 269 P **P** **15 23 43.5 +0.7**
FORT Forrest 34.90 224 P **P** **15 23 44.0 -0.5**
comp=Z,25nm,0.8s
LBFI Labuhan Bajo, 35.21 265 P **P** **15 23 48.1 +0.7**
TOLI2 Tolitoli 35.46 282 P **P** **15 23 49.3 -0.2**
TOLI2 IAmb IAmb 15 23 59.5
comp=Z,15nm,0.7s
KAPI Kappang 35.50 271 P **P** **15 23 50.0 +0.1**
comp=Z,44nm,0.8s,baz=97,slow=3.8,SNR=23
comp=Z,44nm,0.8s
KAPI Kappang 35.50 271 P **P** **15 23 51.6 +1.8**
KAPI Kappang 35.50 271 P **P** **15 23 49.5 -0.3**
KAPI Kappang 35.50 271 P **P** **15 23 49.6 -0.3**
KAPI pmax pmax
comp=Z,63nm,0.9s
KAPI Kappang 35.50 271 P **P** **15 23 50.6 +0.8**
comp=Z,431nmcomp=Z,46nm,0.9s
KAPI Kappang 35.50 271 P **P** **15 23 50.8 +1.0**
KAPI pP **pP** **15 23 59.0 -1.5**
SPSI Sidrap Palu 35.58 273 P **P** **15 23 52.4 +1.8**
comp=Z,34nm,1.1s
TTSI Tana Toraja 35.64 274 P **P** **15 23 52.3 +1.2**
comp=Z,27nm,0.8s
WBSI Waikabubak, Su 35.72 263 P **P** **15 23 52.8 +1.0**
comp=Z,890nmcomp=Z,100nm,0.9s
NIUE Niue 35.79 113 P **P** **15 23 52.6 +0.3**
PCI Palu 35.96 278 P **P** **15 23 53.9 0.0**
MOO Moorlands 36.09 190 P **P** **15 23 55.8 +1.3**
MPSI Mapaga 36.15 280 P **P** **15 23 54.4 -1.0**
comp=Z,40nm,0.8s
JCJ Chichijima 36.18 340 LR LR 15 37 51.8
comp=Z,278nm,20.4s,baz=150,slow=35
VRZ Vera Road 36.48 154 P **P** **15 23 58.4 +0.4**
TAU Tasmania Unive 36.52 190 P **P** **15 23 59.7 +1.5**
TAU Tasmania Unive 36.52 190 P **P** **15 23 58.7 +0.5**
TAU Tasmania Unive 36.52 190 P **P** **15 23 58.7 +0.5**
TAU pmax pmax
comp=Z,171nm,1.9s
DBNI Kabupaten Domp 36.77 265 P **P** **15 23 59.8 -1.0**
comp=Z,20nm,0.8s
HAZ Te Kaha 36.79 150 P **P** **15 24 02.3 +1.7**
URZ Urewera 36.85 151 LR LR 15 38 06.2
comp=Z,1µm,18.1s,baz=326,slow=34
SNVZ South Ngauruho 36.92 153 P **P** **15 24 02.9 +1.1**
QRZ Quartz Range 37.04 158 P **P** **15 24 04.0 +1.3**
RTZ Ruatahuna 37.08 151 P **P** **15 24 03.7 +0.6**
RTZ IAmb IAmb 15 24 13.1
comp=Z,34nm,0.8s
RTZ Ruatahuna 37.08 151 P **P** **15 24 03.3 +0.3**
MWZ Matawai 37.12 151 P **P** **15 24 05.0 +1.6**
PSAC2 Pilbara Seismi 37.23 243 P **P** **15 24 05.1 +0.6**
comp=Z,57nm,1.0s
MBWA Marble Bar 37.26 244 P **P** **15 24 05.4 +0.6**
comp=Z,52nm,0.7s
MBWA Marble Bar 37.26 244 P **P** **15 24 06.0 +1.2**
MBWA Marble Bar 37.26 244 P **P** **15 24 04.9 +0.1**
MBWA IAmb IAmb 15 24 15.7
comp=Z,32nm,0.8s
MBWA Marble Bar 37.26 244 P **P** **15 24 05.3 +0.6**
MBWA pP **pP** **15 24 13.7 -1.5**
PUZ Puketiti 37.27 150 P **P** **15 24 06.6 +1.8**
PSAB3 Pilbara Seismi 37.27 243 P **P** **15 24 05.4 +0.4**
comp=Z,51nm,1.1s
PSA00 Pilbara Seismi 37.28 243 P **P** **15 24 05.7 +0.7**
comp=Z,55nm,1.1s
PSA00 Pilbara Seismi 37.28 243 P **P** **15 24 05.7 +0.7**
PSA00 Pilbara Seismi 37.28 243 P **P** **15 24 04.6 -0.3**
PSA00 IAmb IAmb 15 24 06.9
comp=Z,48nm,0.9s
PSAC1 Pilbara Seismi 37.30 243 P **P** **15 24 04.5 -0.6**
comp=Z,55nm,0.9s
PLAI Plampang 37.30 265 P **P** **15 24 04.6 -0.7**
PLAI Plampang 37.30 265 P **P** **15 24 04.2 -1.1**
comp=Z,1µmcomp=Z,117nm,1.0s
KRHZ Kereru 37.62 153 P **P** **15 24 07.4 -0.2**
PNHZ Pukenui 37.76 154 P **P** **15 24 10.3 +1.5**
KAHZ Kahuranaki 37.97 153 P **P** **15 24 10.3 -0.3**
THZ Tophouse 38.00 159 P **P** **15 24 10.2 -0.6**
THZ IAmb IAmb 15 24 22.4
comp=Z,37nm,0.8s
THZ Tophouse 38.00 159 P **P** **15 24 10.4 -0.5**
TCW Tory Channel 38.04 157 P **P** **15 24 11.8 +0.7**
OGWZ Otaki Gorge 38.07 155 P **P** **15 24 11.6 +0.2**
TUWZ Tuamarina 38.10 157 P **P** **15 24 11.4 -0.2**
MRZ Mangatainoka R 38.11 155 P **P** **15 24 10.3 -1.4**
TWSI Taliwang, Sumb 38.19 265 P **P** **15 24 10.5 -2.2**
comp=Z,46nm,0.8s
HOWZ Holdsworth Sta 38.28 155 P **P** **15 24 11.8 -1.4**
MTW Mount Morrison 38.49 155 P **P** **15 24 14.4 -0.5**
PAWZ Paruwai Farm 38.65 156 P **P** **15 24 16.5 +0.2**
LTZ Lake Taylor 38.67 160 P **P** **15 24 16.2 -0.3**
MYLDM Lahad Datu 38.74 287 P **P** **15 24 19.2 +1.8**
MYLDM Lahad Datu 38.74 287 P **P** **15 24 18.6 +1.2**
comp=Z,53nm,1.2s
KHZ Kahutara 38.80 158 P **P** **15 24 17.3 -0.2**
OXZ Oxford 39.08 161 P **P** **15 24 19.0 -0.8**
GVZ Greta Valley S 39.10 159 P **P** **15 24 19.8 -0.3**
RPZ Rata Peaks 39.12 162 P **P** **15 24 20.1 0.0**
comp=Z,12nm,0.8s,baz=4.4,slow=6.2,SNR=8.3
RPZ LR LR 15 38 16.8
comp=Z,2µm,21.8s,baz=312,slow=33
comp=Z,12nm,0.8s
RPZ Rata Peaks 39.12 162 P **P** **15 24 20.3 +0.2**
RPZ Rata Peaks 39.12 162 P **P** **15 24 20.1 0.0**
KMBL Kambalda 39.62 228 P **P** **15 24 24.3 -0.3**
comp=Z,16nm,0.9s
MEEK Meekatharra 40.07 236 P **P** **15 24 28.5 +0.1**
comp=Z,32nm,0.8s
MEEK Meekatharra 40.07 236 P **P** **15 24 29.9 +1.5**
TGY Tagaytay City 40.08 302 LR LR 15 38 58.4
comp=Z,652nm,20.9s,baz=116,slow=33
BBKI Banjar Baru 40.52 273 P **P** **15 24 34.2 +1.9**
comp=Z,85nm,0.9s
JAGI Jajag, Banyuwa 40.89 265 P **P** **15 24 36.9 +1.6**
JAGI Jajag, Banyuwa 40.89 265 P **P** **15 24 33.0 -2.2**
JAGI IAmb IAmb 15 24 53.2
comp=Z,46nm,0.9s
JAGI Jajag, Banyuwa 40.89 265 P **P** **15 24 34.7 -0.6**
comp=Z,60nm,1.3s
KKM Kota Kinabalu 41.17 287 P **P** **15 24 38.5 +0.8**
KKM Kota Kinabalu 41.17 287 P **P** **15 24 37.4 -0.3**
comp=Z,780nmcomp=Z,75nm,0.9s
JOW Kunigami 42.64 323 LR LR 15 41 13.1
comp=Z,329nm,20.8s,baz=122,slow=34
KLBR Kellerberrin 42.82 230 P **P** **15 24 50.8 0.0**
comp=Z,100nm,0.7s
KLBR Kellerberrin 42.82 230 P **P** **15 24 50.9 0.0**
MORW Morawa 43.11 234 P **P** **15 24 54.7 +1.5**
SJI Sawahan 43.27 266 P **P** **15 24 57.3 +2.5**
comp=Z,46nm,0.8s
SNJI Sawahan-Nganju 43.27 266 P **P** **15 24 57.3 +2.4**
comp=Z,56nm,0.7s
NWAO Narrogin (SRO) 43.83 229 P **P** **15 25 02.6 +3.7**
NWAO Narrogin (SRO) 43.83 229 LR LR 15 43 01.2
comp=Z,1µm,20.1s,baz=66,slow=36
PCJI Pacitan 43.84 265 P P 15 25 05.8 +6.6
comp=Z,117nm,1.2s
SBUM Sibu 44.09 281 P **P** **15 25 03.0 +1.7**
YULB Yu-li 44.94 313 P **P** **15 25 08.3 +0.4**
SSLB Suanglung 45.43 313 P **P** **15 25 13.5 +1.7**
SSLB Suanglung 45.43 313 P **P** **15 25 12.8 +1.0**
RAR Rarotonga 45.56 113 P **P** **15 25 12.6 -0.3**
comp=Z,18nm,0.8s,baz=266,slow=8.0,SNR=4.2
RAR LR LR 15 40 42.6
comp=Z,695nm,21.1s,baz=278,slow=31
comp=Z,18nm,0.8s
RAR Rarotonga 45.56 113 P **P** **15 25 12.2 -0.7**
RAR IAmb IAmb 15 25 40.5
comp=Z,63nm,1.3s
RAR Rarotonga 45.56 113 P **P** **15 25 12.2 -0.7**
RAR pmax pmax
comp=Z,63nm,1.3s
KPJI Karang Pucung 46.09 267 P **P** **15 25 17.7 +0.5**
comp=Z,78nm,0.7s
MJAR Matsushiro Arr 46.16 341 P **P** **15 25 16.6 -0.8**
comp=Z,5.7nm,0.8s,baz=162,slow=8.1,SNR=9.9
MJAR PcP **PcP** **15 26 53.0 +0.1**
comp=Z,15nm,0.8s,baz=162,slow=3.8,SNR=14
MJAR LR LR 15 43 38.0
comp=Z,113nm,18.3s,baz=166,slow=35
comp=Z,5.7nm,0.8s
MJAR Matsushiro Arr 46.16 341 P **P** **15 25 17.0 -0.4**
MJAR Matsushiro Arr 46.16 341 P **P** **15 25 17.0 -0.4**
MJAR pmax pmax
comp=Z,11nm,0.8s
MAJO Matsushiro 46.17 341 *e*P **P** **15 25 16.3 -1.1**
MAJO pmax pmax
comp=Z,92nm,2.7s
BBJI Bungbulang 47.35 266 P **P** **15 25 28.5 +1.3**
BBJI Bungbulang 47.35 266 P **P** **15 25 26.4 -0.8**
BBJI IAmb IAmb 15 25 39.7
comp=Z,20nm,0.7s
LEM Lembang 47.42 267 P **P** **15 25 28.4 +0.6**
comp=Z,27nm,0.7s,baz=111,slow=7.5,SNR=7.2
LEM LR LR 15 49 03.7
comp=Z,320nm,19.1s,baz=49,slow=41
comp=Z,27nm,0.7s
CGJI Cibinong 49.34 267 P **P** **15 25 41.4 -1.0**
KASI Kota Agung 50.60 269 P **P** **15 25 48.3 -3.7**
comp=Z,51nm,1.1s
MDSI Maura Dua 51.00 270 P **P** **15 25 56.0 +1.0**
comp=Z,28nm,1.3s
KSRS Korea Array 51.08 332 P **P** **15 25 55.1 0.0**
comp=Z,4.7nm,0.8s,baz=150,slow=7.9,SNR=15
KSRS PcP **PcP** **15 27 09.7 -0.9**
comp=Z,2.2nm,0.8s,baz=142,slow=4.0,SNR=1.8
KSRS LR LR 15 47 52.9
comp=Z,148nm,18.1s,baz=145,slow=36
comp=Z,4.7nm,0.8s
KS19 Wonju Array Si 51.15 332 P **P** **15 25 56.2 +0.5**
KS19 IAmb IAmb 15 26 30.6
comp=Z,32nm,1.4s
INCN Inchon 51.72 331 P **P** **15 26 00.7 +0.7**
QIZ Qiongzhong 51.78 301 P **P** **15 26 02.7 +2.0**
QIZ Qiongzhong 51.78 301 P **P** **15 26 01.9 +1.2**
QIZ IAmb IAmb 15 26 03.4
comp=Z,34nm,0.7s
QIZ Qiongzhong 51.78 301 P **P** **15 26 02.2 +1.5**
QIZ S **S** **15 33 23.0 +2.7**
QIZ pmax pmax
comp=Z,47nm,0.8s
QIZ L L
comp=Z,280nm,23.1s
QIZ L L
comp=Z,430nm,21.0s
QIZ L L
comp=Z,680nm,18.1s
JKA Kamikawa-asahi 52.12 348 P **P** **15 26 03.7 +0.9**
JKA IAmb IAmb 15 26 09.4
comp=Z,29nm,0.7s
ASAJ Asahikawa 52.12 348 LR LR 15 46 41.0
comp=Z,625nm,20.0s,baz=172,slow=34
ASAJ Asahikawa 52.12 348 P **P** **15 26 03.7 +0.9**
ASAJ pmax pmax
comp=Z,29nm,0.7s
NJ2 Nanjing 52.13 320 *e*P **P** **15 26 04.9 +1.8**
NJ2 pmax pmax
comp=Z,14nm,0.7s
NJ2 L L
comp=Z,920nm,21.3s
NJ2 L L
comp=Z,910nm,15.6s
NJ2 L L
comp=Z,1µm,17.5s
CNSH ChangSha 53.84 312 P **P** **15 26 17.2 +1.4**
CNSH S **S** **15 33 40.7 -7.4**
CNSH pmax pmax
comp=Z,16nm,0.8s
CNSH L L
comp=Z,270nm,19.2s
CNSH L L
comp=Z,370nm,22.7s
CNSH L L
comp=Z,400nm,17.5s
UBPT Khong Chiam 54.17 294 P **P** **15 26 20.0 +1.6**
WHN Wuhan 54.18 316 P **P** **15 26 19.1 +0.9**
WHN S **S** **15 33 56.1 +3.4**
WHN pmax pmax
comp=Z,48nm,0.9s
VLA Vladivostok 54.22 339 *i* P **P** **15 26 19.7 +1.5**
VLA pmax pmax
comp=Z,55nm,2.1s
GULI GuiLin 54.26 308 P **P** **15 26 21.3 +2.4**
GULI pmax pmax
comp=Z,18nm,0.7s
GULI L L
comp=Z,250nm,19.1s
GULI L L
comp=Z,380nm,20.4s
GULI L L
comp=Z,600nm,19.4s
PPT Papeete 54.63 107 P **P** **15 26 21.3 -0.5**
comp=Z,32nm,0.9s,baz=277,slow=17,SNR=4.3
PPT LR LR 15 45 58.1
comp=Z,348nm,19.2s,baz=278,slow=32
comp=Z,32nm,0.9s
OVEH Oceanview Est 54.65 61 P **P** **15 26 22.3 +0.3**
OVEH IAmb IAmb 15 26 26.9
comp=Z,56nm,0.7s
YSS Yuzhno-Sakhali 54.83 349 *e*P **P** **15 26 26.3 +3.7**
YSS *e* 15 27 26.2
YSS *e*S **S** **15 34 05.1 +4.4**
YSS pmax pmax
comp=Z,20nm,0.7s
YSS MLR MLR
comp=Z,800nm,16.0s
WOH Wood Valley 54.92 61 P **P** **15 26 24.4 +0.5**
DL2 Dalian 55.34 328 P **P** **15 26 23.1 -3.3**
DL2 S **S** **15 34 03.2 -4.6**
DL2 pmax pmax
comp=Z,40nm,0.9s
DL2 pmax pmax
comp=Z,240nm,4.3s
DL2 L L
comp=Z,620nm,27.0s
DL2 L L
comp=Z,570nm,24.6s
DL2 L L
comp=Z,700nm,23.9s
TIA Tai'an 55.97 323 P **P** **15 26 30.6 -0.5**
TIA pmax pmax
comp=Z,15nm,0.8s
KULM Kulim 55.97 281 P **P** **15 26 32.2 +0.7**
KULM Kulim 55.97 281 P **P** **15 26 31.0 -0.5**
KULM IAmb IAmb 15 26 43.8
comp=Z,30nm,1.2s
MDJ Mudanjiang 56.34 338 P **P** **15 26 35.4 +1.9**
MDJ pmax pmax
comp=Z,8.0nm,2.0s
CN2 Changchun 57.32 335 *e*P **P** **15 26 40.4 -0.1**
CN2 *e*S **S** **15 34 32.7 -1.3**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 L L
comp=Z,100nm,10.0s
CN2 L L
comp=Z,300nm,10.0s
CN2 L L
comp=Z,200nm,11.0s
ENH Enshi 57.50 313 P **P** **15 26 42.9 +0.8**
ENH Enshi 57.50 313 P **P** **15 26 41.6 -0.5**
ENH IAmb IAmb 15 27 32.7
comp=Z,24nm,1.1s
ENH Enshi 57.50 313 P **P** **15 26 42.5 +0.5**
LYN LuoYang 57.85 318 P **P** **15 26 44.3 -0.1**
LYN pmax pmax
comp=Z,17nm,0.7s
LYN L L
comp=Z,470nm,22.3s
LYN L L
comp=Z,480nm,23.4s
LYN L L
comp=Z,1µm,23.0s
BNX BinXian 58.12 337 ⇑P **P** **15 26 46.8 +0.7**
BNX pmax pmax
comp=Z,11nm,1.0s
HNS HongShan 58.21 322 ⇑P **P** **15 26 46.5 -0.3**
HNS pmax pmax
comp=Z,8.0nm,0.8s
HNS L L
comp=Z,180nm,16.9s
HNS L L
comp=Z,440nm,19.2s
HNS L L
comp=Z,460nm,22.0s
GSI Gunungsitoli 58.27 276 P **P** **15 26 49.2 +1.4**
GSI Gunungsitoli 58.27 276 P **P** **15 26 46.0 -1.8**
GSI IAmb IAmb 15 27 05.1
comp=Z,26nm,0.8s
GSI Gunungsitoli 58.27 276 P **P** **15 26 47.0 -0.8**
comp=Z,36nm,0.8s
TYV Tymovskoe 58.62 351 *e*P **P** **15 26 51.4 +2.0**
TYV *e*S **S** **15 34 53.0 +2.3**
TYV pmax pmax
comp=Z,400nm,3.3s
TYV pmax pmax
comp=Z,18nm,0.9s
TYV smax smax
comp=N,600nm,4.7s
TYV smax smax
comp=E,600nm,4.7s
BJI2 Beijing 59.09 326 P **P** **15 26 52.6 -0.4**
BJI2 pP **pP** **15 27 04.8 0.0**
BJI2 sP **sP** **15 27 11.1 +1.6**
BJI2 S **S** **15 34 55.7 -1.6**
BJI2 pmax pmax
comp=E,3.0nm,0.6s
BJI2 pmax pmax
comp=E,120nm,9.0s
BJI2 L L
comp=E,150nm,23.5s
BJI2 L L
comp=E,190nm,19.1s
BJI2 L L
comp=E,270nm,20.4s
BJT Baijiatuau 59.09 326 P **P** **15 26 54.1 +1.1**
KLR Kul'dur 59.64 342 LR LR 15 51 28.4
comp=E,282nm,20.5s,baz=160,slow=35
KLR Kul'dur 59.64 342 *ce*P **P** **15 26 57.3 +0.7**
KLR pmax pmax
comp=Z,7.0nm,2.5s
PET Petropavlovsk 59.80 2 *e*P **P** **15 26 54.3 -3.3**
PET *e*S **S** **15 35 05.7 -0.2**
PET MLR MLR
comp=Z,500nm,14.0s
PETK Petropavlovsk- 59.85 2 P **P** **15 26 59.0 +1.0**
comp=Z,37nm,0.8s,baz=137,slow=8.5,SNR=32
PETK LR LR 15 50 29.6
comp=Z,205nm,20.4s,baz=177,slow=34
comp=Z,37nm,0.8s
PETK Petropavlovsk- 59.85 2 P **P** **15 26 58.5 +0.6**
PETK Petropavlovsk- 59.85 2 P **P** **15 26 59.0 +1.0**
XAN Xi'an 59.95 316 ⇓P **P** **15 26 59.2 +0.1**
XAN pP pP 15 27 10.3 -0.7
XAN pmax pmax
comp=Z,36nm,0.8s
XAN L L
comp=Z,350nm,20.6s
XAN L L
comp=Z,240nm,16.5s
XAN L L
comp=Z,460nm,20.6s
KMI2 Kunming 60.32 304 P **P** **15 27 03.4 +1.4**
KMI2 pP sP 15 27 18.6 +0.2
KMI2 S **S** **15 35 19.1 +4.9**
KMI2 pmax pmax
comp=Z,26nm,0.9s
KMI2 L L
comp=Z,230nm,16.6s
KMI2 L L
comp=Z,240nm,20.5s
KMI2 L L
comp=Z,620nm,23.8s
DRV Dumont d'Urvil 60.56 187 P **P** **15 27 02.7 +0.1**
DRV pP **pP** **15 27 11.2 -2.7**
CMAR Chiang Mai Arr 61.12 295 P **P** **15 27 08.6 +1.3**
comp=Z,38nm,0.7s,baz=124,slow=5.3,SNR=260
CMAR LR LR 15 54 05.3
comp=Z,133nm,19.1s,baz=110,slow=36
comp=Z,38nm,0.7s
CMAR Chiang Mai Arr 61.12 295 P **P** **15 27 08.4 +1.1**
CHTO Chiang Mai 61.24 296 P **P** **15 27 09.6 +1.5**
CHTO Chiang Mai 61.24 296 P **P** **15 27 08.6 +0.5**
CHTO IAmb IAmb 15 27 10.0
comp=Z,22nm,0.7s
CHTO Chiang Mai 61.24 296 P **P** **15 27 08.6 +0.5**
CHTO pmax pmax
comp=Z,22nm,0.7s
CHTO Chiang Mai 61.24 296 P **P** **15 27 08.6 +0.5**
comp=Z,618nmcomp=Z,41nm,0.8s
CHTO Chiang Mai 61.24 296 P **P** **15 27 09.1 +1.0**
CHTO pP **pP** **15 27 17.8 -2.1**
SHEM Shemya Is, Ala 61.54 13 LR LR 15 49 53.3
comp=Z,756nm,21.7s,baz=184,slow=32
PZH PanZhiHua 61.71 305 P **P** **15 27 11.2 -0.1**
PZH S **S** **15 35 34.9 +3.3**
PZH pmax pmax
comp=Z,20nm,0.8s
PZH pmax pmax
comp=Z,230nm,7.3s
PZH L L
comp=Z,280nm,22.9s
PZH L L
comp=Z,250nm,22.2s
PZH L L
comp=Z,370nm,24.1s
XLT XiLinHaoTe 61.82 329 *e*P **P** **15 27 11.5 -0.2**
XLT pP pP 15 27 23.3 -0.3
XLT sP sP 15 27 28.7 +0.4
XLT PcP **PcP** **15 27 52.7 +0.3**
XLT pmax pmax
comp=Z,21nm,0.7s
XLT pmax pmax
comp=Z,84nm,8.0s
XLT L L
comp=Z,320nm,16.5s
XLT L L
comp=Z,390nm,20.6s
HEH HeiHe 61.92 340 *e*P **P** **15 27 10.5 -1.6**
HEH pmax pmax
comp=Z,9.0nm,0.7s
CD2 Chengdu 62.09 310 P **P** **15 27 14.2 +0.6**
CD2 S **S** **15 35 36.2 +0.2**
CD2 pmax pmax
comp=Z,50nm,0.6s
CD2 L L
comp=Z,680nm,22.0s
CD2 L L
comp=Z,470nm,22.0s
HHC Hu-ho-hao-te 62.29 324 *e*P **P** **15 27 15.1 +0.2**
HHC S **S** **15 35 35.6 -2.8**
HHC pmax pmax
comp=Z,10.0nm,0.7s
HHC pmax pmax
comp=Z,220nm,6.0s
HHC L L
comp=Z,210nm,17.9s
HHC L L
comp=Z,230nm,18.7s
HHC L L
comp=Z,340nm,18.7s
KIWB Kanaga Island 63.12 19 P **P** **15 27 20.8 +0.8**
ADK Adak 63.29 19 P **P** **15 27 21.8 +0.7**
ADK Adak 63.29 19 P **P** **15 27 21.8 +0.7**
ADK pmax pmax
comp=Z,52nm,0.7s
ADK Adak 63.29 19 P **P** **15 27 21.9 +0.8**
TNCH TengChong 63.80 302 P **P** **15 27 26.3 +1.0**
TNCH pP sP 15 27 40.1 -1.7
TNCH S **S** **15 35 56.6 -1.3**
TNCH pmax pmax
comp=Z,46nm,0.8s
TNCH pmax pmax
comp=Z,220nm,3.6s
HIA Hailar 64.05 335 P **P** **15 27 27.6 +1.3**
HIA Hailar 64.05 335 IAmb IAmb 15 27 28.2
comp=Z,10nm,0.6s
LZH Lanzhou 64.56 315 *e*P **P** **15 27 31.4 +1.3**
LZH pP sP 15 27 45.4 -1.0
LZH sP pP 15 27 50.1 +8.3
LZH pmax pmax
comp=Z,19nm,1.2s
LZH L L
comp=Z,230nm,19.0s
LZH L L
comp=Z,270nm,18.6s
LZH L L
comp=Z,340nm,18.9s

LZDM **Lanzhou Array** 64.60 315 P **P** **15 27 31.0 +0.5**
comp=Z,3.8nm,0.4s,baz=152,slow=6.7,SNR=4.3
LZDM LR LR 15 53 50.5
comp=Z,154nm,21.9s,baz=30,slow=34
comp=Z,3.8nm,0.4s
ZEA Zeya 64.95 342 *e*P **P** **15 27 33.7 +1.7**
ZEA pmax pmax
comp=N,20nm,0.7s
ZEA pmax pmax
comp=Z,30nm,0.8s
MA2 Magadan 66.41 357 LR LR 15 53 30.8
comp=Z,234nm,21.4s,baz=164,slow=33
MA2 Magadan 66.41 357 P **P** **15 27 42.0 +0.7**
MA2 Magadan 66.41 357 P **P** **15 27 41.8 +0.5**
MA2 IAmb IAmb 15 27 47.4
comp=Z,28nm,0.8s
MA2 Magadan 66.41 357 *ce*P **P** **15 27 41.0 -0.3**
MA2 pmax pmax
comp=Z,30nm,0.8s
MA2 Magadan 66.41 357 P **P** **15 27 42.1 +0.7**
comp=Z,43nm,0.8s
MA2 Magadan 66.41 357 P **P** **15 27 41.9 +0.5**
MA2 pP **pP** **15 27 51.0 -2.4**
PASG PASIGHAT 67.57 304 *e*P **P** **15 27 50.5 +1.2**
PASG IAmb IAmb 15 27 52.5
comp=Z,27nm,0.7s
IMP Imphal 67.61 300 *e*P **P** **15 27 48.7 -1.0**
IMP IAmb IAmb 15 27 50.9
comp=Z,23nm,0.5s
MOKO MOKOCHONG 67.63 302 *e*P **P** **15 27 50.2 +0.2**
MOKO IAmb IAmb 15 27 56.1
comp=Z,28nm,0.7s
SAIH SAIHA 67.69 298 *e*P **P** **15 27 50.7 +0.3**
SAIH IAmb IAmb 15 27 55.2
comp=Z,11nm,0.7s
KOHI KOHIMA 67.77 301 *e*P **P** **15 27 50.4 -0.4**
KOHI IAmb IAmb 15 27 51.8
comp=Z,13nm,0.6s
UNV Unalaska Valle 68.52 23 P **P** **15 27 54.8 0.0**
baz=221
ZIRO ZIRO 68.60 303 *e*P **P** **15 27 56.8 +0.7**
ZIRO IAmb IAmb 15 27 58.2
comp=Z,11nm,0.8s
BRDH Bariadhala 68.93 297 LR LR 15 58 49.7
comp=Z,183nm,20.2s,baz=152,slow=36
GTA2 Gaotai 69.05 317 *e*P **P** **15 27 58.7 +0.1**
GTA2 pP pP 15 28 06.3 -4.1
GTA2 pmax pmax
comp=Z,7.0nm,1.0s
GTA2 L L
comp=Z,240nm,22.8s
GTA2 L L
comp=Z,240nm,21.6s
GTA2 L L
comp=Z,440nm,23.8s
TEZP TEZPUR 69.18 302 *e*P **P** **15 27 59.6 +0.1**
TEZP IAmb IAmb 15 28 01.1
comp=Z,27nm,0.8s
ULN Ulaanbaatar 69.18 327 P **P** **15 27 59.5 +0.3**
ULN Ulaanbaatar 69.18 327 *ce*P **P** **15 28 00.1 +0.9**
ULN pmax pmax
comp=Z,10.0nm,1.0s
ULN Ulaanbaatar 69.18 327 P **P** **15 27 59.8 +0.6**
comp=Z,61nm,0.9s
ULN Ulaanbaatar 69.18 327 P **P** **15 27 60.0 +0.8**
SONM Songino Array 69.51 327 P **P** **15 28 01.4 +0.1**
comp=Z,13nm,0.8s,baz=134,slow=5.9,SNR=83
SONM PKP2bc **P'P'bc** **15 56 08.2 +0.7**
comp=Z,2.9nm,1.0s,baz=289,slow=3.0,SNR=11
SONM LR LR 16 00 14.1
comp=Z,175nm,18.1s,baz=144,slow=37
comp=Z,13nm,0.8s
SONM Songino Array 69.51 327 P **P** **15 28 01.5 +0.3**
SONM IAmb IAmb 15 28 03.6
comp=Z,13nm,0.9s
SONM Songino Array 69.51 327 P **P** **15 28 01.5 +0.3**
SONM pmax pmax
comp=Z,13nm,0.9s
SHL Shillong 69.61 300 *e*P **P** **15 28 03.1 +0.7**
SEY Seymchan 69.71 359 *ce*P **P** **15 28 02.9 +0.9**
SEY pmax pmax
comp=Z,9.0nm,0.7s
GUWA GUWAHATI 69.98 301 *e*P **P** **15 28 04.4 +0.1**
GUWA IAmb IAmb 15 28 06.5
comp=Z,23nm,0.6s
TAWA Tawang 70.28 302 *e*P **P** **15 28 08.1 +1.4**
TAWA IAmb IAmb 15 28 09.9
comp=Z,20nm,0.8s
CCD Concordia, Ant 70.51 188 P **P** **15 28 07.6 +0.3**
CCD pP **pP** **15 28 16.4 -2.4**
VNDA Vanda 70.62 179 P **P** **15 28 07.7 +0.3**
comp=Z,6.5nm,0.8s,baz=330,slow=5.6,SNR=12
VNDA LR LR 15 53 39.0
comp=Z,368nm,21.2s,baz=358,slow=31
comp=Z,6.5nm,0.8s
VNDA Vanda 70.62 179 P **P** **15 28 07.5 +0.1**
VNDA IAmb IAmb 15 29 26.3
comp=Z,52nm,1.8s
VNDA Vanda 70.62 179 P **P** **15 28 07.5 +0.1**
VNDA pmax pmax
comp=Z,52nm,1.8s
GOMU GeErMu 71.11 312 P **P** **15 28 12.6 +1.0**
GOMU S **S** **15 37 27.3 +1.5**
GOMU pmax pmax
comp=Z,5.0nm,0.8s
GOMU L L
comp=Z,170nm,20.0s
GOMU L L
comp=Z,390nm,19.7s
GOMU L L
comp=Z,560nm,19.7s
DHUB DHUBRI 71.37 300 *e*P **P** **15 28 13.1 +0.2**
DHUB IAmb IAmb 15 28 14.6
comp=Z,20nm,0.8s
LSA Lhasa 71.57 304 P **P** **15 28 13.1 -1.5**
LSA pmax pmax
comp=Z,22nm,0.7s
YAK Yakutsk 71.59 348 LR LR 15 58 13.0
comp=Z,122nm,20.6s,baz=151,slow=35
YAK Yakutsk 71.59 348 P **P** **15 28 13.8 +0.4**
YAK Yakutsk 71.59 348 *e*P **P** **15 28 14.3 +0.9**
YAK *e**PP **sP** **15 28 31.1 +0.9**
YAK *e* 15 28 32.4
YAK *e* 15 30 57.1
YAK *e*S **S** **15 37 29.4 -0.1**
YAK *e**SS **SKiKP** **15 37 57.8 +8.5**
YAK *e* 15 38 16.7
YAK *e*SS **SS** **15 41 59.2 -6.5**
YAK pmax pmax
comp=Z,42nm,0.9s
YAK pmax pmax
comp=E,3.0nm,1.1s
YAK pmax pmax
comp=N,5.0nm,1.1s
YAK pmax pmax
comp=Z,113nm,4.5s
YAK smax smax
comp=N,237nm,4.6s
YAK smax smax
comp=E,74nm,4.3s
YAK Yakutsk 71.59 348 P **P** **15 28 13.9 +0.5**
YAK sP **pP** **15 28 26.8 +1.3**
SDPT Sand Point 72.04 25 P **P** **15 28 16.0 -0.2**
baz=226
CHNA Chernabura Isl 72.06 25 P **P** **15 28 16.4 0.0**
baz=227
ZAK Zakamensk 72.66 328 *e*P **P** **15 28 19.4 -0.8**
ZAK pmax pmax
comp=Z,11nm,1.3s
GTK Tadong 72.95 301 *e*P **P** **15 28 23.0 +0.5**
GTK IAmb IAmb 15 28 25.7
comp=Z,20nm,0.9s
SHBG Sahibganj 73.18 299 *e*P **P** **15 28 24.7 +1.0**
SHBG IAmb IAmb 15 28 26.2
comp=Z,21nm,0.7s
TLY Talaya 73.22 329 LR LR 16 00 25.4
comp=Z,132nm,20.4s,baz=127,slow=36
TLY Talaya 73.22 329 *ce*P **P** **15 28 24.5 +1.1**
TLY pmax pmax
comp=Z,6.0nm,0.7s
BWNR Bhubaneshwar 73.50 293 *e*P **P** **15 28 26.0 +0.3**
BWNR IAmb IAmb 15 28 27.9
comp=Z,24nm,0.6s
M11K Mekoryuk 73.61 19 P **P** **15 28 26.3 +0.8**
baz=220
O14K Tigyukauivet M 74.46 21 P **P** **15 28 31.2 +0.7**
baz=225
M13K Dall Lake 74.57 20 P **P** **15 28 32.2 +1.2**
baz=223
MOY Mondy 74.58 328 *e*P **P** **15 28 31.4 -0.1**
MOY pmax pmax
comp=Z,28nm,3.1s
EVN Everest 74.65 301 P **P** **15 28 33.1 +0.1**
EVN IAmb IAmb 15 28 37.1
comp=Z,30nm,0.8s
GAMB Gambell 74.77 14 P **P** **15 28 33.0 +0.9**
baz=214,SNR=32
N14K Kuskokwak Cree 74.79 21 P **P** **15 28 32.8 +0.5**
baz=224
O15K Ungalikthiuk R 74.94 22 P **P** **15 28 33.6 +0.4**
baz=226
GAYA Gaya 75.17 298 *e*P **P** **15 28 35.5 +0.2**
GAYA IAmb IAmb 15 28 37.0
comp=Z,17nm,0.8s
BILL Bilibino 75.20 4 P **P** **15 28 35.2 +0.7**
BILL IAmb IAmb 15 28 41.4
comp=Z,20nm,0.8s
BILL Bilibino 75.20 4 *ce*P **P** **15 28 35.6 +1.0**
BILL pmax pmax
comp=Z,25nm,1.0s
BILL Bilibino 75.20 4 P **P** **15 28 35.6 +1.0**
R17L Mt. Peulik Vol 75.26 25 P **P** **15 28 35.3 +0.1**
baz=230
K13K Kusilvak Mount 75.28 18 P **P** **15 28 36.3 +1.2**
baz=221
M14K Bethel 75.29 20 P **P** **15 28 35.9 +0.8**
baz=224
RAGD RAYAGADA 75.44 292 *e*P **P** **15 28 37.5 +0.5**
RAGD IAmb IAmb 15 28 39.1
comp=Z,19nm,0.7s
L14K Kuka Creek 75.47 19 P **P** **15 28 37.3 +1.0**
baz=223
SII Sitkinak Islan 75.51 26 P **P** **15 28 37.4 +0.8**
baz=232
N15K Kwethluk River 75.53 21 P **P** **15 28 37.6 +0.9**
baz=226
P16K Nushagak River 75.53 23 P **P** **15 28 36.2 -0.4**
baz=228
M15K Kasigluk River 75.69 21 P **P** **15 28 38.0 +0.5**
baz=225
PALK Pallekele 75.83 279 LR LR 16 05 21.0
comp=Z,143nm,19.9s,baz=116,slow=38
PALK Pallekele 75.83 279 P **P** **15 28 39.4 0.0**
PALK Pallekele 75.83 279 P **P** **15 28 39.4 0.0**
PALK pmax pmax
comp=Z,9.0nm,0.9s
PALK Pallekele 75.83 279 P **P** **15 28 39.9 +0.5**
Q17K Contact Creek 75.86 24 P **P** **15 28 38.1 -0.6**
baz=230
O16K Kokwok River B 75.87 22 P **P** **15 28 39.0 +0.5**
baz=228
KNGR Kungurtug, Tuv 75.89 326 *i*P **P** **15 28 37.6 -1.5**
KNGR pmax pmax
comp=Z,9.0nm,0.8s
ACHA Angle Creek He 76.06 24 IAmb IAmb 15 28 44.3
comp=Z,18nm,0.8s
L15K Ungalak Mounta 76.11 20 P **P** **15 28 40.2 +0.3**
baz=224
N16K Nishlik Lake 76.22 21 P **P** **15 28 41.8 +1.2**
baz=227
J14K Nanvaranak Lak 76.23 18 P **P** **15 28 41.8 +1.3**
baz=222
P17K Kvichak River 76.24 23 P **P** **15 28 40.9 +0.2**
baz=230
OHAK Old Harbor 76.31 26 P **P** **15 28 40.8 -0.3**
baz=233
O17K Koliganek Bris 76.37 23 P **P** **15 28 41.1 -0.3**
baz=229
M16K Timber Creek 76.52 21 P **P** **15 28 43.4 +1.1**
baz=227
K15K Wolf Creek Mou 76.54 19 P **P** **15 28 43.5 +1.1**
baz=224
L16K Owhat River 76.82 20 P **P** **15 28 44.6 +0.7**
baz=226
N17K Nushagak Hills 76.83 22 P **P** **15 28 45.0 +1.0**
baz=228
P18K Big Mountain, 76.85 24 P **P** **15 28 44.4 +0.3**
baz=231
KDAK Kodiak Island 76.95 26 LR LR 16 00 47.4
comp=Z,252nm,19.1s,baz=223,slow=34
KDAK Kodiak Island 76.95 26 P **P** **15 28 45.4 +0.7**
baz=233
ANM Nome 77.07 16 P **P** **15 28 46.3 +1.0**
baz=220,SNR=35
O18K Koktuh Hills 77.15 23 P **P** **15 28 46.0 +0.1**
baz=230
TNA Tin City 77.17 15 P **P** **15 28 46.6 +0.8**
baz=217,SNR=24
Q19K Cape Douglas, 77.20 24 P **P** **15 28 46.4 +0.2**
baz=232
BLSP Bilaspur 77.24 294 *e*P **P** **15 28 47.0 -0.2**
BLSP IAmb IAmb 15 28 48.5
comp=Z,20nm,0.8s
M17K Holitna River 77.32 21 P **P** **15 28 48.2 +1.4**
baz=228
N18K Kilae Creek 77.42 22 P **P** **15 28 48.3 +1.0**
baz=230
L17K Donlin 77.52 20 P **P** **15 28 49.2 +1.4**
baz=227
F14K Arctic Creek 77.52 15 P **P** **15 28 48.8 +1.1**
baz=219
Q20K Shuyak Island 77.52 25 P **P** **15 28 48.5 +0.6**
baz=233
J16K Anvik River 77.55 19 P **P** **15 28 49.4 +1.4**
baz=225
G15K Niukluk 77.77 16 P **P** **15 28 49.8 +0.6**
baz=221,SNR=36
P19K Oil Pt 77.81 24 P **P** **15 28 49.4 -0.1**
baz=232
K17K Iditarod 77.91 20 P **P** **15 28 51.0 +1.0**
baz=227
I17K Unalakleet 77.95 18 P **P** **15 28 50.9 +0.8**
I17K IAmb IAmb 15 28 55.3
comp=Z,28nm,0.8s
I17K Unalakleet 77.95 18 P **P** **15 28 51.4 +1.2**
baz=225,SNR=37
M18K Stony River 77.97 22 P **P** **15 28 51.7 +1.3**
baz=230,SNR=7.2
H16K Elim 78.02 17 P **P** **15 28 51.3 +0.8**
baz=223,SNR=13
N19K Bonanza Creek 78.04 23 P **P** **15 28 51.0 +0.2**
baz=231
L18K Granite Mounta 78.13 21 P **P** **15 28 52.5 +1.3**
baz=229
F15K North Star Dit 78.14 16 P **P** **15 28 52.2 +0.9**
baz=221
ALBI Allahabad 78.30 298 *e*P **P** **15 28 52.6 -0.4**
ALBI IAmb IAmb 15 28 54.2
comp=Z,17nm,0.7s
G16K Koyuk River 78.55 17 P **P** **15 28 54.7 +1.2**
baz=223
M19K Big River Lodg 78.76 22 P **P** **15 28 55.7 +0.9**
baz=231
L19K White Mountain 78.77 21 P **P** **15 28 55.8 +1.0**
baz=230
BRSE Bradley Lake S 78.88 25 P **P** **15 28 56.0 +0.5**
baz=235
H17K Granite Mounta 78.93 18 P **P** **15 28 56.8 +1.1**
baz=225,SNR=48
J18K Innoko River 78.95 20 P **P** **15 28 56.3 +0.5**
baz=228
SALM Salem 79.01 283 *e*P **P** **15 28 57.7 +0.6**
SALM IAmb IAmb 15 28 59.8
comp=Z,13nm,0.7s
WMQ Urumqi 79.06 317 *e*P **P** **15 28 58.8 +1.9**
WMQ L L
comp=Z,370nm,24.0s
G17K Kiwalik Mounta 79.11 17 P **P** **15 28 57.7 +1.1**
baz=224,SNR=38
SPCR Spurr Chakacha 79.15 23 P **P** **15 28 58.0 +1.1**
baz=233
M20K Styx River 79.21 22 P **P** **15 28 57.9 +0.6**
baz=232
CAPN Captain Cook N 79.31 24 P **P** **15 28 58.5 +0.8**
baz=234
KOD Kodaikanal 79.45 282 *e*P **P** **15 29 00.3 +0.4**
KOD IAmb IAmb 15 29 01.9
comp=Z,15nm,0.7s
H18K Honhosa River 79.56 18 P **P** **15 28 59.3 +0.2**
baz=227
SEW Seward 79.62 25 P **P** **15 28 59.6 +0.2**
baz=236
F17K Baldwin Pennin 79.62 16 P **P** **15 29 00.4 +1.1**
baz=224
HYB Hyderabad 79.63 289 *e*P **P** **15 29 00.9 +0.5**
HYB *es*P **pP** **15 29 13.5 +0.8**
HYB *e*S **S** **15 39 02.1 +1.9**
J19K Poorman 79.67 20 P **P** **15 29 00.6 +1.0**
baz=230
GCSA Galena City Sc 79.75 19 P **P** **15 29 00.8 +0.7**
baz=228,SNR=15
K20K Telida 79.79 21 P **P** **15 29 01.2 +0.9**
baz=231,SNR=15
SKT Skwentna 79.88 23 P **P** **15 28 59.6 -1.2**
baz=234
NGP Nagpur 79.89 293 *e*P **P** **15 29 01.3 -0.5**
NGP IAmb IAmb 15 29 02.8
comp=Z,15nm,0.6s
E17K Hotham Inlet 79.93 16 P **P** **15 29 02.2 +1.2**
baz=223,SNR=74
C16K Lisburne Hills 79.94 14 P **P** **15 29 01.7 +0.7**
baz=220,SNR=26
G18K Tagagawik 79.98 17 P **P** **15 29 01.9 +0.5**
baz=226,SNR=31
D17K Noatak River 80.06 15 P **P** **15 29 02.8 +1.2**
baz=222,SNR=45
RC01 Rabbit Creek A 80.06 24 P **P** **15 29 01.7 -0.1**
baz=235,SNR=8.8
PPLA Purkeypile 80.18 22 P **P** **15 29 02.4 -0.2**
baz=233
F18K Selawik 80.19 17 P **P** **15 29 02.8 +0.5**
baz=225,SNR=25
M22K Willow 80.29 23 P **P** **15 29 02.5 -0.5**
baz=235
TIXI Tiksi 80.36 352 LR LR 16 02 44.1
comp=Z,182nm,21.7s,baz=186,slow=34
TIXI Tiksi 80.36 352 P **P** **15 29 03.2 0.0**
TIXI Tiksi 80.36 352 *ce*P **P** **15 29 03.2 0.0**
TIXI pmax pmax
comp=Z,10.0nm,1.1s
TIXI Tiksi 80.36 352 P **P** **15 29 03.5 +0.2**
RDOG Red Dog Mine 80.37 15 P **P** **15 29 04.5 +1.1**
baz=229,SNR=139
E18K Tukpahlearik C 80.51 16 P **P** **15 29 05.1 +1.1**
baz=224,SNR=46
PMR Palmer 80.58 24 P **P** **15 29 04.5 -0.1**
baz=236,SNR=9.8
C17K DeLong Mountai 80.62 14 P **P** **15 29 05.8 +1.1**
baz=222
G19K Purcell Mounta 80.62 18 P **P** **15 29 05.6 +0.9**
baz=228
PTH Pithoragarh 80.68 301 *e*P **P** **15 29 06.3 +0.2**
PTH IAmb IAmb 15 29 08.5
comp=Z,20nm,0.8s
CHUM Lake Minchumin 80.73 21 P **P** **15 29 05.7 +0.4**
baz=233,SNR=16
LGTI Lohaghat 80.73 301 *e*P **P** **15 29 06.5 +0.1**
LGTI IAmb IAmb 15 29 08.3
comp=Z,24nm,0.7s
KNK Knik Glacier 80.75 24 P **P** **15 29 05.9 +0.3**
baz=236
H20K Anotleneega Mo 80.88 19 P **P** **15 29 06.9 +0.7**
baz=230
F19K Shaleruckik Mo 80.89 17 P **P** **15 29 06.5 +0.4**
baz=227
GLI Glacier Island 81.02 25 P **P** **15 29 07.1 +0.1**
baz=238
SML Sawmill 81.02 24 P **P** **15 29 07.3 +0.2**
baz=237,SNR=12
JHNI Jhansi 81.15 297 *e*P **P** **15 29 07.1 -1.4**
JHNI IAmb IAmb 15 29 09.8
comp=Z,18nm,0.7s
TRF Thorofare Moun 81.20 22 P **P** **15 29 07.3 -0.8**
baz=235,SNR=17
C18K Utukok River 81.24 15 P **P** **15 29 08.7 +0.6**
baz=224
M23K Glacier View 81.25 24 P **P** **15 29 08.3 0.0**
baz=237
BPAW Bear Paw Mtn. 81.33 21 P **P** **15 29 08.1 -0.5**
baz=234,SNR=5.1
DGZ Jazzator, Alta 81.34 322 *i*P **P** **15 29 08.7 -0.5**
DGZ pmax pmax
comp=Z,7.0nm,0.8s
EYAK Cordova Ski Ar 81.41 25 P **P** **15 29 08.7 -0.3**
baz=239
SCM Sheep Creek Mo 81.44 24 P **P** **15 29 09.5 +0.2**
baz=238,SNR=7.5
JOSI Joshimath 81.44 302 *e*P **P** **15 29 10.6 +0.3**
JOSI IAmb IAmb 15 29 12.6
comp=Z,18nm,0.8s
E19K Redstone River 81.47 17 P **P** **15 29 10.3 +1.1**
baz=228
WAT1 Susitna Watana 81.50 23 P **P** **15 29 09.4 -0.2**
baz=236
IMAR Indian Mountai 81.55 19 P **P** **15 29 10.1 +0.4**
F20K Avaraart Lake 81.63 17 P **P** **15 29 10.9 +0.9**
baz=229
I21K Tanana 81.63 20 P **P** **15 29 10.8 +0.7**
baz=233
H21K Melozitna Rive 81.65 19 P **P** **15 29 10.9 +0.6**
baz=232,SNR=18
AKL Akola 81.67 292 *e*P **P** **15 29 10.8 -0.5**
AKL IAmb IAmb 15 29 12.2
comp=Z,15nm,0.7s
WAT6 Susitna Watana 81.68 23 P **P** **15 29 10.5 -0.1**
baz=237,SNR=7.8
BHPL Bhopal 81.77 295 *e*P **P** **15 29 11.3 -0.5**
BHPL IAmb IAmb 15 29 12.7
comp=Z,13nm,0.6s
KLU Klutina 81.83 24 P **P** **15 29 11.4 +0.1**
baz=239,SNR=7.5
MCK McKinley 81.86 22 P **P** **15 29 11.0 -0.5**
baz=236,SNR=43
NRDN NARMADA NAGAR 81.90 294 *e*P **P** **15 29 14.9 +2.4**
NRDN IAmb IAmb 15 29 16.5
comp=Z,30nm,0.7s
D19K Kuna River 81.93 16 P **P** **15 29 12.4 +0.7**
baz=227
G21K Allakaket 81.96 18 P **P** **15 29 12.4 +0.6**
baz=231
MLY Manley 81.97 20 P **P** **15 29 12.0 0.0**
baz=234,SNR=20
C19K Lookout Ridge 81.97 15 P **P** **15 29 13.1 +1.1**
baz=225
M24K Tolsona, Glenn 82.04 24 P **P** **15 29 13.2 +0.8**
baz=239,SNR=6.9
DHY Denali Highway 82.09 23 P **P** **15 29 12.9 +0.2**
baz=237,SNR=20
BMRM Bremner River 82.11 25 P **P** **15 29 13.1 +0.3**
baz=240
GUNA GUNA 82.13 296 *e*P **P** **15 29 13.0 -0.7**
GUNA IAmb IAmb 15 29 14.4
comp=Z,22nm,0.7s
ZSN Zaisan 82.16 320 *e*P **P** **15 29 12.6 -0.7**
ZSN Zaisan 82.16 320 *e*P **P** **15 29 12.7 -0.7**
H22K Ishtalitna Cre 82.27 19 P **P** **15 29 14.1 +0.6**
baz=233
E20K Nigu River 82.30 16 P **P** **15 29 14.8 +1.2**
baz=228
NEA2 Nenana 82.30 21 P **P** **15 29 13.0 -0.7**
baz=236,SNR=15
A19K Wainwright 82.40 14 P **P** **15 29 15.1 +1.1**
baz=224
F21K Alatna River 82.42 18 P **P** **15 29 14.7 +0.4**
baz=231
N25K Chitina, Valde 82.43 25 P **P** **15 29 15.1 +0.5**
baz=240
D20K Etivluk River 82.48 16 P **P** **15 29 15.3 +0.7**
baz=228
I23K Minto, Yukon-K 82.51 20 P **P** **15 29 14.9 +0.2**
baz=235,SNR=7.6
CRQE Cirque 82.65 26 P **P** **15 29 16.0 +0.3**
baz=242,SNR=6.0
KLP Kalpa 82.76 303 *e*P **P** **15 29 17.2 0.0**
KLP IAmb IAmb 15 29 31.4
comp=Z,21nm,0.8s
PAX Paxson 82.77 23 P **P** **15 29 16.9 +0.6**
baz=239
BISR Bishrakh 82.82 300 *e*P **P** **15 29 15.6 -1.5**
MESA MESA 82.88 27 P **P** **15 29 17.4 +0.4**
baz=243
COLA College 82.89 21 P **P** **15 29 16.1 -0.6**
COLA IAmb IAmb 15 29 17.6
comp=Z,25nm,0.7s
COLA College 82.89 21 P **P** **15 29 16.1 -0.6**
COLA pmax pmax
comp=Z,25nm,0.8s
COLA College 82.89 21 P **P** **15 29 15.9 -0.8**
baz=237
COLA College 82.89 21 P **P** **15 29 16.0 -0.7**
HDA Harding Lake 82.97 22 P **P** **15 29 16.9 -0.2**

baz=238,SNR=10
MCARA **McCarthy VSAT** 82.98 25 P P 15 29 17.3 0.0
baz=242,SNR=7.5
QSPA **South Pole Qui** 83.03 180 P P 15 29 17.4 -0.2
comp=Z,32nn,0.7s,baz=348,slow=0.9,SNR=149
QSPA PKKPbc **PKKPbc** 15 47 38.6 -4.3
comp=Z,2.5nm,0.8s,baz=224,slow=1.4,SNR=11
QSPA LR LR 16 01 12.0
comp=Z,272nm,18.1s,baz=14,slow=32
comp=Z,32nn,0.7s
QSPA South Pole Qui 83.03 180 P P 15 29 17.3 -0.4
NDI New Delhi 83.03 300 *eP* P 15 29 17.3 -1.0
E21K Killik River 83.04 17 P P 15 29 18.2 +0.7
baz=231
AYAN Aya Nagar 83.07 300 *eP* P 15 29 17.5 -1.0
AYAN IAmb IAmb 15 29 21.1
comp=Z,15nm,0.8s
SONA Sohna 83.08 299 *eP* P 15 29 17.8 -0.8
SONA IAmb IAmb 15 29 18.9
comp=Z,23nm,0.5s
K24K Donnelly Dome 83.08 22 P P 15 29 17.7 -0.1
baz=239,SNR=9.7
POKR Poker Plat Res 83.17 21 P P 15 29 17.4 -0.8
baz=237
IL31 83.18 21 IAmb IAmb 15 29 20.1
comp=Z,15nm,0.6s
ILAR Eielson Array 83.18 21 P P 15 29 17.1 -1.1
comp=Z,11nm,0.5s,baz=244,slow=5.6,SNR=139
ILAR PKiKP **PKiKP** 15 34 34.4 -2.0
comp=Z,0.3nm,0.7s,baz=250,slow=1.8,SNR=1.9
ILAR LR LR 16 01 33.6
comp=Z,925nm,21.7s,baz=236,slow=32
comp=Z,11nm,0.5s
ILAR Eielson Array 83.18 21 P P 15 29 16.9 -1.3
G23K Bananza Creek 83.19 19 P P 15 29 18.9 +0.6
baz=234
B20K Meade River 83.22 15 P P 15 29 19.1 +0.8
baz=227
C21K Knifeblade Rid 83.28 16 P P 15 29 19.6 +0.9
baz=230
RIDG Independent Ri 83.41 23 P P 15 29 19.7 +0.2
baz=240,SNR=11
H24K Noodor Dome 83.41 20 P P 15 29 19.9 +0.4
baz=237,SNR=8.0
COLD Coldfoot 83.44 19 P P 15 29 20.2 +0.7
baz=234,SNR=14
M26K Nabesna, AK 83.48 24 P P 15 29 21.1 +1.2
baz=241,SNR=7.7
E22K Anaktuvuk Pass 83.48 17 P P 15 29 20.3 +0.5
baz=233,SNR=34
CTG Chitna Glacier 83.51 26 P P 15 29 20.6 +0.4
baz=243,SNR=11
KUDL Kundal 83.55 299 *eP* P 15 29 19.3 -1.7
KUDL IAmb IAmb 15 29 22.3
comp=Z,22nm,0.7s
SMLA Simla 83.58 302 *eP* P 15 29 20.8 -0.2
SMLA IAmb IAmb 15 29 26.2
comp=Z,26nm,0.6s
PINM Pinnacle 83.61 27 P P 15 29 21.0 +0.4
baz=244
B21K Ikpikpuk River 83.62 16 P P 15 29 21.2 +0.8
baz=230
MK31 Makanchi Array 83.63 319 *ceP* P 15 29 20.9 -0.1
MKAR Makanchi Array 83.63 319 P P 15 29 20.7 -0.3
comp=Z,12nn,0.8s,baz=105,slow=5.2,SNR=124
MKAR PKiKP **PKiKP** 15 34 35.8 -1.9
comp=Z,0.4nm,0.8s,baz=123,slow=1.7,SNR=1.9
MKAR PKKPbc **PKKPbc** 15 47 38.1 -2.3
comp=Z,0.7nm,0.7s,baz=291,slow=2.5,SNR=8.4
MKAR PKPPKP **P'P'df** 15 55 42.2 -1.3
comp=Z,0.7nm,0.8s,baz=318,slow=1.6,SNR=6.5
MKAR LR LR 16 05 20.1
comp=Z,145nm,21.7s,baz=94,slow=35
comp=Z,12nn,0.8s
MKAR Makanchi Array 83.63 319 P P 15 29 20.4 -0.6
L26K Log Cabin Wild 83.64 24 P P 15 29 21.0 +0.4
baz=241,SNR=10
J25K Salcha River, 83.65 22 P P 15 29 20.7 -0.1
baz=239
KAD Karad 83.72 288 *eP* P 15 29 21.5 -0.6
KAD IAmb IAmb 15 29 22.9
comp=Z,29nm,0.7s
MAKZ Makanchi 83.84 319 P P 15 29 21.5 -0.6
MAKZ IAmb IAmb 15 29 27.9
comp=Z,16nm,0.7s
MAKZ Makanchi 83.84 319 P P 15 29 21.5 -0.6
MAKZ pmax pmax
comp=Z,16nm,0.7s
MAKZ Makanchi 83.84 319 P P 15 29 21.8 -0.2
SCRK Sand Creek 83.86 23 IAmb IAmb 15 29 23.0
comp=Z,13nm,0.7s
SCRK Sand Creek 83.86 23 P P 15 29 22.0 +0.1
baz=240,SNR=15
M27K Edge Creek, AK 83.92 25 P P 15 29 23.1 +0.8
baz=242
O28M Mount Upton 83.93 26 P P 15 29 22.6 +0.1
baz=244
G24K Hadweenzic Riv 84.02 20 P P 15 29 23.1 +0.6
baz=237,SNR=13
PRP Porcupine Dome 84.07 21 P P 15 29 21.3 -1.6
baz=239
E23K Chandalar 84.10 18 P P 15 29 23.9 +0.9
baz=235,SNR=30
ALCI Alchi Leh 84.21 305 *eP* P 15 29 24.2 -0.5
ALCI IAmb IAmb 15 29 31.8
comp=Z,16nm,0.6s
POO Poona 84.23 289 *eP* P 15 29 24.3 -0.4
POO IAmb IAmb 15 29 25.4
comp=Z,14nm,0.8s
A21K Barrow 84.24 14 P P 15 29 23.9 +0.5
baz=228
WUS Wushi 84.25 313 P P 15 29 24.9 +0.5
YUK3 Moose Creek 84.25 25 P P 15 29 24.5 +0.4
baz=244,SNR=9.4
L27K Beaver Creek, 84.27 24 P P 15 29 24.7 +0.8
baz=242,SNR=13
D23K Nanushuk River 84.32 17 P P 15 29 25.4 +1.4
baz=234
YUK8 Steele Glacier 84.34 26 P P 15 29 25.5 +1.0
baz=244
ZALV Zalesovo Beam 84.36 326 P P 15 29 23.2 -1.3
comp=Z,5.0nm,0.6s,baz=116,slow=5.5,SNR=23
ZALV PKKPbc **PKKPbc** 15 47 36.3 -2.7
comp=Z,0.8nm,0.5s,baz=254,slow=1.5,SNR=4.6
ZALV PKPPKP **P'P'df** 15 55 44.0 +2.4
comp=Z,0.6nm,0.4s,baz=270,slow=1.5,SNR=4.5
ZALV LR LR 16 08 17.9
comp=Z,167nm,20.4s,baz=112,slow=37
comp=Z,5.0nm,0.6s
ZALV Zalesovo Beam 84.36 326 P P 15 29 22.9 -1.6
BVCY Beaver Creek 84.37 25 P P 15 29 25.3 +0.9
baz=243,SNR=9.6
B22K Teshekpuk Lake 84.40 15 P P 15 29 25.0 +0.6
baz=231
A22K Sinclair Lake 84.43 15 P P 15 29 25.2 +0.7
baz=229
O29M Mount Kennedy 84.45 27 P P 15 29 25.7 +0.7
baz=246
TOLK Toolik Lake Re 84.45 18 P P 15 29 25.6 +0.9
baz=235,SNR=71
E24K Your Creek 84.46 18 P P 15 29 25.2 +0.4
baz=236
DHRM DHARAMSHALA 84.53 303 *eP* P 15 29 25.6 -0.5
DHRM IAmb IAmb 15 29 31.6
comp=Z,28nm,0.6s
SHLS Shalkode 84.57 315 *eP* P 15 29 23.6 -2.4
SHLS Shalkode 84.57 315 *eP* P 15 29 23.7 -2.3
MAW Mawson 84.59 203 P P 15 29 25.8 +0.3
comp=Z,26nm,0.8s,baz=108,slow=6.6,SNR=7.9
MAW LR LR 16 05 58.2
comp=Z,203nm,18.0s,baz=86,slow=35
comp=Z,26nm,0.8s
MAW Mawson 84.59 203 P P 15 29 26.0 +0.6
MAW Mawson 84.59 203 P P 15 29 26.0 +0.6
MAW pmax pmax
comp=Z,6.0nm,0.9s
YUK6 Outpost Mounta 84.81 27 P P 15 29 27.7 +0.7
baz=246
I26K Coal Creek Min 84.82 22 P P 15 29 26.5 -0.1
baz=241
C23K Itkillik River 84.85 16 P P 15 29 27.8 +1.2
baz=234,SNR=39
YUK4 Talbot Arm 84.85 26 P P 15 29 28.5 +1.4
baz=246,SNR=5.7
AJM Ajmer 84.86 297 *eP* P 15 29 26.7 -1.0
AJM IAmb IAmb 15 29 28.4
comp=Z,29nm,0.8s

UZB Uzynbulak 84.88 314 *eP* P 15 29 26.4 -1.1
UZB Uzynbulak 84.88 314 *eP* P 15 29 26.5 -1.1
D24K Happy Valley 84.97 17 P P 15 29 28.3 +1.1
baz=235,SNR=63
F25K Christian Rive 85.11 19 P P 15 29 29.2 +1.2
baz=238,SNR=19
P30M Million Dollar 85.12 28 P P 15 29 29.1 +0.8
baz=247
HYT Haines Junctio 85.15 27 P P 15 29 28.9 +0.5
HYT Haines Junctio 85.15 27 P P 15 29 29.5 +1.0
baz=246,SNR=19
KPKS Kokpek 85.19 315 *eP* P 15 29 28.1 -0.9
KPKS Kokpek 85.19 315 *eP* P 15 29 28.2 -0.9
S32K Killisnoo 85.29 31 P P 15 29 29.4 +0.4
baz=249
SATY Saty 85.29 314 *eP* P 15 29 28.6 -1.0
SATY Saty 85.29 314 *eP* P 15 29 28.6 -1.0
C24K Franklin Bluff 85.33 17 P P 15 29 30.0 +1.0
baz=236
UDPR Udaipur 85.35 295 *eP* P 15 29 29.6 -0.6
CRAG Craig 85.36 33 P P 15 29 29.6 +0.2
baz=251
BMAR Burnt Mountain 85.37 20 P P 15 29 30.2 +0.9
M29M Somme Creek 85.39 25 P P 15 29 30.3 +0.7
baz=246
G26K Porcupine Rive 85.40 20 P P 15 29 30.6 +1.2
baz=240,SNR=52
E25K Arctic Village 85.41 19 P P 15 29 30.5 +1.0
baz=239,SNR=14
I27K Kandik River 85.53 22 P P 15 29 30.8 +0.6
baz=242,SNR=15
N30M Aishikik Lake 85.58 26 P P 15 29 31.2 +0.6
baz=247
SKAG Skagway 85.63 29 P P 15 29 31.4 +0.6
baz=248
F26K Sheenjek River 85.65 19 P P 15 29 32.1 +1.4
baz=240
DAWY Dawson 85.69 24 P P 15 29 32.1 +1.1
baz=245,SNR=11
TDK Taldyqorghan 85.76 316 *eP* P 15 29 30.9 -0.9
TDK Taldyqorghan 85.76 316 *eP* P 15 29 30.9 -0.9
O30N Mendenhall 85.77 27 P P 15 29 32.0 +0.6
baz=248
D25K Kavik River 85.79 18 P P 15 29 31.8 +0.4
baz=238
L29M L29M 85.80 25 P P 15 29 32.4 +0.8
baz=246
H27K Steamboat Moun 85.85 21 P P 15 29 32.7 +0.9
baz=242
I28M Miner Creek 86.08 22 P P 15 29 33.6 +0.6
baz=244,SNR=26
WRAK Wrangell Islan 86.09 32 P P 15 29 33.4 +0.4
baz=251
V35K Ketchikan 86.14 33 P P 15 29 33.9 +0.6
baz=252
M30M Minto, Yukon 86.15 25 P P 15 29 34.1 +0.8
baz=247,SNR=7.3
N31M Braeburn, Yuko 86.18 27 P P 15 29 34.3 +0.8
baz=248,SNR=8.0
WHY Whitehorse 86.28 28 P P 15 29 35.0 +0.9
baz=249
MDOK Medeo 86.28 314 *eP* P 15 29 33.7 -0.8
MDOK Medeo 86.28 314 *eP* P 15 29 33.8 -0.8
J29N Klondike Camp 86.32 23 P P 15 29 35.4 +1.2
baz=246,SNR=12
TNSS Tian-Shan 86.33 314 *eP* P 15 29 33.9 -1.2
TNSS pmax pmax
comp=Z,18nm,1.1s
TNSS Tian-Shan 86.33 314 *eP* P 15 29 33.1 -2.0
comp=Z,18nm,1.1s
K29M Barlow Dome 86.35 24 P P 15 29 35.3 +0.9
baz=246
AAA Alma-Ata 86.39 314 *eP* P 15 29 34.2 -0.8
AAA pmax pmax
comp=Z,12nm,0.6s
AAA Alma-Ata 86.39 314 *eP* P 15 29 34.2 -0.8
comp=Z,12nm,0.6s
P32M Atlin 86.45 29 P P 15 29 35.2 +0.3
baz=250
KSH2 Kashi 86.52 310 P P 15 29 36.3 +0.5
KSH2 pmax pmax
comp=Z,11nm,0.8s
C26K Camden Bay 86.54 17 P P 15 29 36.8 +1.8
baz=239
I29M Ogilvie Camp, 86.66 23 P P 15 29 36.3 +0.5
baz=246,SNR=30
E27K Coleen River 86.73 19 P P 15 29 37.2 +1.1
baz=242,SNR=111
C27K Jago River 86.75 18 P P 15 29 37.3 +1.2
baz=240
Q32M Nakina River 86.94 30 P P 15 29 38.1 +0.6
baz=251
KUU Kurty 86.95 315 *eP* P 15 29 36.8 -0.8
KUU Kurty 86.95 315 *eP* P 15 29 36.9 -0.8
KURK Kurchatov 87.04 322 P P 15 29 36.4 -1.4
KURK Kurchatov 87.04 322 *i* P 15 29 36.4 -1.4
KURK pmax pmax
comp=Z,20nm,3.0s
KURK Kurchatov 87.04 322 P P 15 29 36.5 -1.4
KURK sP **pP** 15 29 49.2 -0.8
M31M Drury Creek, Y 87.05 26 P P 15 29 37.8 0.0
baz=249,SNR=8.2
F28M Old Crow 87.06 20 P P 15 29 38.7 +1.1
baz=244,SNR=46
KURBB Kurchatov Arra 87.07 322 P P 15 29 36.8 -1.2
comp=Z,1.6nm,0.6s,baz=96,slow=5.5,SNR=24
KURBB PKKPbc **PKKPbc** 15 47 30.7 -1.6
comp=Z,1.7nm,0.8s,baz=291,slow=2.9,SNR=16
KURBB PKPPKP **P'P'df** 15 55 36.2 -0.7
comp=Z,0.5nm,0.7s,baz=287,slow=2.5,SNR=6.6
KURBB LR LR 16 08 40.9
comp=Z,213nm,20.6s,baz=178,slow=36
comp=Z,1.6nm,0.6s
P33M Teslin, Yukon 87.08 28 P P 15 29 38.6 +0.6
baz=251
J30M Hart River 87.12 24 P P 15 29 39.1 +0.9
baz=247
U35K Hyder 87.17 33 P P 15 29 39.7 +1.4
baz=253
S34M Telegraph Cree 87.18 31 P P 15 29 39.4 +1.0
baz=252
BBB Bella Bella 87.24 37 LR LR 16 02 33.1
comp=Z,1µm,20.3s,baz=272,slow=31
N32M Quiet Lake 87.28 27 P P 15 29 39.5 +0.6
baz=250
NIL Nilore 87.31 304 P P 15 29 39.7 +0.1
NIL IAmb IAmb 15 29 58.6
comp=Z,14nm,1.0s
NIL Nilore 87.31 304 P P 15 29 39.7 +0.1
NIL pmax pmax
comp=Z,14nm,1.0s
I30M Mount Dempster 87.35 23 P P 15 29 39.9 +0.6
baz=247
T35M Bob Quinn 87.36 32 P P 15 29 40.3 +1.0
baz=253
D27M Malcolm River 87.43 19 P P 15 29 40.8 +1.3
baz=243
EPYK Eagle Plains 87.67 22 P P 15 29 41.4 +0.8
baz=247,SNR=36
R33M Jennings River 87.71 29 P P 15 29 41.9 +0.8
baz=252
DLBC Dease Lake 87.90 30 LR LR 16 06 04.4
comp=Z,249nm,18.2s,baz=248,slow=34
DLBC Dease Lake 87.90 30 P P 15 29 42.9 +1.0
baz=253
AAK Ala-Archa 88.01 313 LR LR 16 09 34.1
comp=Z,134nm,21.1s,baz=86,slow=36
AAK Ala-Archa 88.01 313 P P 15 29 42.5 -0.5
AAK Ala-Archa 88.01 313 *ce* P P 15 29 43.4 +0.5
AAK pmax pmax
comp=Z,4.0nm,0.7s
AAK Ala-Archa 88.01 313 P P 15 29 42.8 -0.1
E29M Blow River 88.06 20 P P 15 29 42.8 +0.4
baz=246
SGDS Sogindy 88.07 314 *eP* P 15 29 42.2 -0.9
G30M tAoh Zrail Nji 88.09 21 P P 15 29 43.0 +0.3
baz=247,SNR=20
D28M Stokes Point 88.18 19 P P 15 29 43.9 +1.1
baz=245
H31M Peel River 88.35 23 P P 15 29 44.5 +0.6
baz=249,SNR=31
F30M Barrier River 88.48 21 P P 15 29 45.1 +0.7
baz=248
YBH Yreka Blue Hor 88.56 48 LR LR 16 05 39.0
comp=Z,59nm,18.8s,baz=276,slow=33
G31M Satah River 88.78 22 P P 15 29 46.4 +0.6
baz=249

NRIK Noril'sk 88.82 341 P P 15 29 45.1 -0.8
comp=Z,11nm,0.7s,baz=113,slow=3.7,SNR=30
NRIK LR LR 16 08 48.9
comp=Z,174nm,21.9s,baz=106,slow=35
comp=Z,11nm,0.7s
NRIK Noril'sk 88.82 341 *i* P P 15 29 43.6 -2.3
NRIK pmax pmax
comp=Z,9.0nm,0.6s
WTLY Watson Lake, Y 88.97 29 P P 15 29 47.8 +0.8
baz=254,SNR=6.0
ORV Oroville 89.08 50 P P 15 29 47.5 -0.3
ORV IAmb IAmb 15 31 05.1
comp=Z,21nm,1.9s
ORV Oroville 89.08 50 P P 15 29 47.6 -0.3
ORV pmax pmax
comp=Z,21nm,2.0s
F31M Tsiigehtchic 89.15 21 P P 15 29 47.8 +0.3
baz=250
INK Inuvik 89.53 21 LR LR 16 05 44.2
comp=Z,737nm,21.6s,baz=241,slow=33
INK Inuvik 89.53 21 P P 15 29 49.4 +0.1
INK Inuvik 89.53 21 P P 15 29 49.4 +0.1
INK pmax pmax
comp=Z,20nm,0.7s
INK Inuvik 89.53 21 P P 15 29 49.4 +0.1
baz=250
DZA Taraz 90.35 313 *eP* P 15 29 53.0 -0.7
DZA Taraz 90.35 313 *eP* P 15 29 53.1 -0.7
IUG Iuzhnay 91.18 312 *eP* P 15 29 56.9 -0.9
IUG Iuzhnay 91.18 312 *eP* P 15 29 56.9 -0.9
KOTAN Kotaneelee Air 91.28 30 P P 15 29 57.8 +0.2
baz=258
CHGR Chuyangaron 91.36 309 *i* P P 15 29 55.8 -2.8
NVAR Mina Array Bea 91.38 52 P P 15 29 59.6 +0.7
comp=Z,2.7nm,0.8s,baz=244,slow=6.6,SNR=8.6
NVAR LR LR 16 06 07.2
comp=Z,351nm,19.8s,baz=275,slow=32
comp=Z,2.7nm,0.8s
BRLS Borolday 91.45 313 *eP* P 15 29 58.2 -0.7
BRLS Borolday 91.45 313 *eP* P 15 29 58.3 -0.7
RPN Rapa Nui 91.53 117 LR LR 16 03 00.5
comp=Z,392nm,21.4s,baz=272,slow=30
PFO Pinyon Flats O 92.25 57 LR LR 16 05 18.8
comp=Z,529nm,19.9s,baz=274,slow=32
PFO Pinyon Flats O 92.25 57 *i* P P 15 30 00.1 -2.8
BVAR Borovoye Array 92.50 323 P P 15 30 02.2 -1.2
comp=Z,3.7nm,0.8s,baz=114,slow=3.7,SNR=16
BVAR PKiKP **PKiKP** 15 34 50.0 -2.1
comp=Z,0.5nm,0.7s,baz=135,slow=1.2,SNR=2.4
BVAR PKPPbc **PKKPdf** 15 47 15.7 -1.0
comp=Z,0.9nm,0.6s,baz=282,slow=2.9,SNR=4.7
BVAR LR LR 16 10 41.5
comp=Z,165nm,22.0s,baz=93,slow=35
comp=Z,3.7nm,0.8s
BORK Borovoye 92.54 323 *ce* P P 15 30 01.8 -1.8
BORK pmax pmax
comp=Z,20nm,3.3s
C36M Paulatuk 93.12 21 P P 15 30 06.0 +0.1
baz=259
A36M Sachs Harbour 93.27 18 P P 15 30 06.6 0.0
baz=258
NEW Newport 93.45 42 LR LR 16 09 31.6
comp=Z,777nm,18.1s,baz=264,slow=34
NEW Newport 93.45 42 P P 15 30 07.0 -1.0
NEW Newport 93.45 42 P P 15 30 07.0 -1.0
NEW pmax pmax
comp=Z,9.0nm,1.4s
SHPR Sheep Range 93.63 54 P P 15 30 08.3 -1.0
ELK Elko 94.00 50 LR LR 16 05 23.3
comp=Z,377nm,21.8s,baz=269,slow=31
ELIB Princess Elisa 95.35 193 *dP* P 15 30 15.9 -0.5
comp=Z,4.9nm,1.0s
YKA Yellowknife Ar 96.11 28 P P 15 30 19.7 -0.1
comp=Z,3.5nm,0.6s,baz=274,slow=5.1,SNR=77
YKA PKKPbc **PKKPbc** 15 47 05.8 -3.8
comp=Z,0.3nm,0.6s,baz=75,slow=2.3,SNR=5.7
YKA LR LR 16 10 12.9
comp=Z,210nm,18.6s,baz=284,slow=33
comp=Z,3.5nm,0.6s
YKA Yellowknife Ar 96.11 28 P P 15 30 19.8 +0.1
LPIG La Paz 96.70 67 LR LR 16 06 44.0
comp=Z,627nm,20.3s,baz=236,slow=31
RDMU Red Mountain 98.29 50 IAmb IAmb 15 30 32.3
comp=Z,6.7nm,0.9s
PDAR Pinedale Array 98.37 48 P P 15 30 29.6 -1.1
comp=Z,3.1nm,0.8s,baz=236,slow=2.3,SNR=20
PDAR LR LR 16 12 05.2
comp=Z,345nm,18.8s,baz=288,slow=34
comp=Z,3.1nm,0.8s
PDAR Pinedale Array 98.37 48 P P 15 30 29.5 -1.3
NVL N'lazarevskaya 98.70 191 *eP* Pdif 15 30 31.8 +0.4
NVL *e* 15 34 33.1
NVL *e*PPP PPP 15 36 39.0
NVL *e*S **SKSac** 15 41 06.3 +0.3
NVL *e*SS **SS** 15 48 46.0 +3.1
NVL *e*SSS SSS 15 52 34.3
ARTI Arti 99.63 326 PKKPbc PKKPbc 15 46 57.0 -2.6
comp=Z,1.5nm,0.6s,baz=308,slow=5.0,SNR=3.3
ARTI LR LR 16 18 18.1
comp=Z,116nm,20.3s,baz=74,slow=37
RES Resolute Bay 101.81 15 P Pdif 15 30 44.5 -0.6
comp=Z,3.1nm,0.8s,baz=274,slow=6.6,SNR=9.0
RES PKiKP **PKiKP** 15 35 06.3 -1.7
comp=Z,1.0nm,0.8s,baz=272,slow=4.2,SNR=5.3
TXAR Lajitas Array 102.89 62 PKKPbc PKKPbc 15 46 46.8 -2.5
comp=Z,0.8nm,0.9s,baz=133,slow=5.5,SNR=3.6
SPITS Spitsbergen Ar 105.79 352 PKKPbc PKKPbc 15 46 38.2 -3.7
comp=Z,6.0nm,1.0s,baz=160,slow=2.7,SNR=4.6
ULM Lac du Bonnet 107.26 40 PKiKP **PKiKP** 15 35 16.6 -2.1
comp=Z,1.4nm,0.5s,baz=358,slow=2.4,SNR=4.3
APA Apatity 108.23 340 *eP* Pdif 15 31 18.1 +4.4
APA pmax pmax
comp=Z,6.0nm,1.2s
ARCES ARCESS Array B 109.66 343 PKiKP **PKiKP** 15 35 22.3 -0.3
comp=Z,1.5nm,0.4s,baz=85,slow=1.7,SNR=21
KIV Kislovodsk 111.09 314 *i* PKiKP **PKiKP** 15 35 24.6 -1.6
KIV pmax pmax
comp=Z,6.0nm,1.1s
KIV MLR MLR
comp=Z,105nm,21.0s
FINES FINESS Array B 114.06 336 PKP PKPdf 15 35 30.7 -0.4
comp=Z,4.9nm,0.8s,baz=85,slow=3.5,SNR=12
FINES PKKPbc **PKKPbc** 15 46 11.4 -3.3
comp=Z,3.8nm,0.8s,baz=197,slow=6.0,SNR=6.0
FINES FINESS Array B 114.06 336 PKPdf 15 35 30.4 -0.7
FINES FINESS Array B 114.06 336 *c* *i* PKiKP **PKiKP** 15 35 31.7 +0.6
FINES pmax pmax
comp=Z,5.0nm,0.8s
PLCA Paso Flores 116.52 142 PKP **PKPdf** 15 35 36.5 -0.2
comp=Z,5.1nm,0.6s,baz=243,slow=2.4,SNR=30
PLCA PKKPbc **PKKPbc** 15 46 04.1 -1.7
comp=Z,1.2nm,0.7s,baz=49,slow=2.0,SNR=4.0
PLCA Paso Flores 116.52 142 **PKPdf** 15 35 36.0 -0.7
MNK Minsk 116.75 329 *i* PKiKP **PKPdf** 15 35 35.2 -1.3
comp=E,23nm,0.9s
MNK *i* PKiKP **PKPdf** 15 35 35.2 -1.3
comp=N,14nm,0.8s
MNK *i* PKiKP **PKPdf** 15 35 35.2 -1.3
comp=Z,3.0nm,0.7s,baz=62
MNK *i* pPKiKP sPKPdf 15 35 53.5 -0.3
MNK *i* sPKiKP **sPKiKP** 15 36 00.6 +6.7
MNK *i* PP **PP** 15 36 44.6 -0.1
MNK *i* SKP **SKPdf** 15 39 17.3 +8.3
MNK *i* PKS PKSdf 15 39 23.1 +10
MNK *i* PPP PPP 15 39 38.9
MNK *i* SKS SKSac 15 41 31.2 -54
MNK *i* SP SP 15 46 02.9 -20
MNK *i* PS PKKPdf 15 46 52.5 +21
MNK *i* SS **SS** 15 52 48.7 +0.4
MNK *i* SSS SSS 15 58 00.6
MNK *i* LR LR 16 27 31.6
MNK Minsk 116.75 329 *i* PKiKP **PKPdf** 15 35 35.2 -1.3
MNK *i* 15 36 44.6
MNK *i* 15 39 17.2
MNK *i* SS SS 15 52 48.6 +0.4
MNK pmax pmax
comp=E,23nm,0.9s
MNK pmax pmax
comp=N,14nm,0.8s
MNK pmax pmax
comp=Z,3.0nm,0.7s
AKASG Malin Array Be 117.73 325 PKP **PKPdf** 15 35 37.7 -0.8
comp=Z,5.7nm,0.8s,baz=65,slow=2.1,SNR=9.8
AKASG Malin Array Be 117.73 325 *c* *i* PKiKP **PKPdf** 15 35 38.0 -0.5
AKASG pmax pmax
comp=Z,6.0nm,0.8s

AKBB	Malin Array Si	117.73 325	c	iPKIKP	PKiKP	15 35 38.9	+0.4
BRTR	Keskin Array B	118.65 312		PKP	PKPdf	15 35 40.0	-0.9
	comp=Z,1.1nm,0.7s,baz=87,slow=1.7,SNR=7.0						
BRTR				PKKPbc	PKKPbc	15 45 57.2	-0.9
	comp=Z,0.7nm,0.8s,baz=226,slow=5.0,SNR=3.7						
BRTR	Keskin Array B	118.65 312		PKPdf	PKPdf	15 35 39.6	-1.2
BRTR	Keskin Array B	118.65 312		PKiKP	PKPdf	15 35 40.0	-0.9
HFS	Hagfors	119.60 339		PKP	PKPdf	15 35 41.3	-0.5
	comp=Z,3.0nm,0.4s,baz=48,slow=2.1,SNR=18						
SADO	Sadowa	119.64 42		PKP	PKPdf	15 35 41.3	-1.1
	comp=Z,5.3nm,0.7s,baz=274,slow=4.0,SNR=5.1						
NB2	NORSAR Subarra	119.78 341		PKPdf	PKPdf	15 35 41.6	-0.7
	comp=Z,2.2nm,0.6s,baz=41,slow=1.9						
NOA	NORSAR Array B	119.78 341		PKP	PKPdf	15 35 41.9	-0.3
	comp=Z,4.4nm,0.7s,baz=45,slow=1.9,SNR=13						
SAHE	Sakarya_HENDEK	120.35 314	↑	P	PKPdf	15 35 43.7	-0.3
CFR	Carcaliu	120.67 319	↑	P	PKPdf	15 35 44.2	-0.1
CFR	Carcaliu	120.67 319	↑	PKiKP	PKPdf	15 35 44.2	-0.1
SILT	Sile	121.12 314	↓	P	PKPdf	15 35 44.3	-1.0
BURAR	Bucovina Array	121.45 323	↓	P	PKiKP	15 35 47.0	+0.9
BURAR	Bucovina Array	121.45 323	↓	PKiKP	PKiKP	15 35 47.0	+0.9
SCHQ	Schefferville	121.55 27		PKP	PKPdf	15 35 44.7	-1.1
	comp=Z,3.5nm,0.5s,baz=320,slow=1.5,SNR=15						
DOPR	Dopca	122.09 321	↑	P	PKiKP	15 35 47.9	+0.6
AAGR	Agrelo	122.14 136		eP	PKPdf	15 35 48.0	+0.2
AUSP	Uspallata	122.24 135		eP	PKPdf	15 35 48.5	+0.3
ASAL	Salagasta	122.42 136		eP	PKPdf	15 35 48.1	-0.2
BAND	Balkesir-Ban	122.49 314	↓	P	PKPdf	15 35 47.6	-0.5
VOIR		122.54 320	↓	P	PKiKP	15 35 48.6	+0.3
VOIR		122.54 320	↓	PKiKP	PKiKP	15 35 48.6	+0.3
RTLS	Leoncito	122.54 135		eP	PKPdf	15 35 48.7	-0.1
STHS	Stebnicka Huta	122.86 326		ePKiKP	PKiKP	15 35 49.0	+0.3
STHS	Stebnicka Huta	122.86 326		ePKP	PKiKP	15 35 49.0	+0.3
ELND	Elena	123.06 317	↓	P	PKPdf	15 35 49.2	+0.2
TRQA	Tornquist	123.30 145		PKPdf	PKPdf	15 35 49.1	-0.6
TRQA	Tornquist	123.30 145		PKiKP	PKPdf	15 35 49.1	-0.6
ARGD	Rodeo	123.32 133		eP	PKPdf	15 35 50.8	+0.4
ACCO	Cerro Coronel	123.38 134		eP	PKPdf	15 35 50.5	0.0
CFA	Coronel Fontan	123.40 135		PKP	PKPdf	15 35 49.4	-0.7
	comp=Z,10nm,0.6s,baz=261,slow=3.0,SNR=31						
ACDV	Cuesta del Vie	123.57 133		eP	PKPdf	15 35 50.4	-0.3
PLVB	Pleven	123.70 318	↓	P	PKPdf	15 35 50.4	+0.2
ACAN	Cantantal	123.73 136		eP	PKPdf	15 35 50.4	-0.4
EZN	Ezine	123.95 314		PKP	PKPdf	15 35 51.1	+0.3
GZR	Gura Zlata	123.98 321	↓	P	PKPdf	15 35 50.7	-0.1
GZR	Gura Zlata	123.98 321	↓	PKiKP	PKPdf	15 35 50.7	-0.1
LANS	Liptovska Anna	123.98 327		ePKiKP	PKiKP	15 35 52.1	+1.1
LANS	Liptovska Anna	123.98 327		ePKP	PKiKP	15 35 52.1	+1.1
STEB	Steborice	124.44 328		ePKPDF	PKPdf	15 35 51.7	+0.2
AVFE	Valle Fertil	124.49 135		eP	PKPdf	15 35 52.1	-0.2
BZS	Buzias	124.59 322	↓	P	PKPdf	15 35 52.1	+0.2
BZS	Buzias	124.59 322	↓	PKiKP	PKPdf	15 35 52.1	+0.2
MORC	Moravsky Berou	124.66 328	↓	P	PKiKP	15 35 52.7	+0.4
MORC	Moravsky Berou	124.66 328	↓	PKiKP	PKiKP	15 35 52.7	+0.4
MORC	Moravsky Berou	124.66 328		ePKiKP	PKPdf	15 35 52.1	+0.1
MAUC	Maruska	124.75 328		ePKPDF	PKiKP	15 35 52.9	+0.4
ACHE	Chepes	124.75 136		eP	PKPdf	15 35 52.7	-0.2
OSTC	Ostas	124.87 329		ePKPDF	PKiKP	15 35 53.1	+0.4
MDVR	Moldovita	124.94 321	↓	P	PKPdf	15 35 52.5	-0.2
DPC	Dobruska-Polom	124.94 329		ePKiKP	PKiKP	15 35 54.0	+1.2
DPC	Dobruska-Polom	124.94 329		ePKPDF	PKiKP	15 35 54.0	+1.2
VCA	Vinchina	125.02 132		eP	PKPdf	15 35 54.0	+0.5
JAVC	Velka Javorina	125.12 327		ePKiKP	PKiKP	15 35 53.0	+0.1
BSEG	Bad Segeberg	125.32 335		ePKPdf	PKiKP	15 35 53.8	+0.4
	baz=46,slow=1.9						
VRAC	Vranov	125.43 328		PKP	PKPdf	15 35 53.3	-0.1
	comp=Z,3.7nm,0.8s,baz=63,slow=4.5,SNR=4.5						
VRAC	Vranov	125.43 328	↑	P	PKiKP	15 35 54.4	+0.6
VRAC	Vranov	125.43 328	↑	PKiKP	PKiKP	15 35 54.4	+0.6
VRAC	Vranov	125.43 328		ePKiKP	PKPdf	15 35 53.8	+0.4
ACLC	CERRO LA CRUZ	125.55 134		eP	PKPdf	15 35 54.0	-0.5
MODS	Modra-Piesok	125.62 327		ePKiKP	PKiKP	15 35 55.0	+0.8
MODS	Modra-Piesok	125.62 327		ePKP	PKiKP	15 35 55.0	+0.8
KRUC	Moravsky	125.68 328		ePKiKP	PKPdf	15 35 54.3	+0.4
PVCC	Panska Ves	125.71 330		ePKiKP	PKiKP	15 35 54.8	+0.5
PVCC	Panska Ves	125.71 330		ePKPDF	PKiKP	15 35 54.8	+0.5
BRG	Berggiesshubel	125.80 331		ePKPdf	PKiKP	15 35 54.9	+0.5
	baz=46,slow=1.9						
TINO	Tinogasta	125.86 132		eP	PKPdf	15 35 55.0	0.0
CLL	Collm	125.96 332		iPKIKP	PKPdf	15 35 54.2	-0.1
CLL				pmax	pmax		
	comp=Z,15nm,0.8s						
CLL				MLR	MLR		
	comp=Z,200nm,19.7s						
CLL	Collm	125.96 332		iPKPdf	PKPdf	15 35 54.2	-0.1
	comp=Z,15nm,0.8s						
CLL				AMS	AMS	16 32 00.0	
	comp=Z,200nm,19.7s						
CLL	Collm	125.96 332		ePKPdf	PKiKP	15 35 55.1	+0.4
	baz=46,slow=1.9						
MORH	Mrgy, Hungar	126.06 324	↓	P	PKPdf	15 35 54.7	0.0
FLTG	Flechtingen	126.07 334		ePKPdf	PKiKP	15 35 55.1	+0.2
	baz=46,slow=1.9						
HSKC	Hora Svate Kat	126.22 331		ePKPDF	PKiKP	15 35 55.5	+0.2
ASSE	Asse, Remlinge	126.45 334		ePKPdf	PKiKP	15 35 55.8	+0.2
	baz=46,slow=1.9						
RONA	Rosalia, Austr	126.55 327		iPKiKP	PKPdf	15 35 55.8	+0.2
	comp=Z,6.0nm,0.9s						
ZVC	Zvikov	126.59 329		ePKPDF	PKiKP	15 35 57.0	+0.9
IDI	Anoyia	126.63 309		PKP	PKPdf	15 35 54.4	-0.8
	comp=Z,8.2nm,0.9s,baz=94,slow=5.1,SNR=4.9						
CONA	Conrad Observa	126.85 327		iPKiKP	PKPdf	15 35 56.1	+0.3
	comp=Z,2.6nm,0.8s						
CLZ	Clausthal	126.79 334		ePKPdf	PKiKP	15 35 56.7	+0.2
	baz=46,slow=1.9						
TANN	Tannenbergstha	126.81 331		ePKPdf	PKiKP	15 35 56.7	+0.2
	baz=46,slow=1.9						
CKRC	Cesky Krumlov	126.92 329		ePKiKP	PKiKP	15 35 56.9	+0.1
CKRC	Cesky Krumlov	126.92 329		ePKPDF	PKiKP	15 35 56.9	+0.1
NKC	Novy Kostel	126.94 331		ePKiKP	PKPdf	15 35 56.8	+0.5
NKC	Novy Kostel	126.94 331		ePKPDF	PKPdf	15 35 56.8	+0.5
MOX	Moxa	127.05 332		ePKPdf	PKiKP	15 35 57.1	+0.1
	baz=46,slow=1.9						
MOX				eL	L	16 32 21.1	
	comp=Z,224nm,19.3s						
KHC	Kasperske Hory	127.10 329	c	iPKiKP	PKiKP	15 35 57.7	+0.5
KHC				pmax	pmax		
	comp=Z,12nm,1.0s						
KHC	Kasperske Hory	127.10 329		ePKPDF	PKPdf	15 35 57.1	+0.5
GTTG	Gottingen	127.18 334		ePKPdf	PKiKP	15 35 57.4	+0.2
	baz=46,slow=1.9						
GEC2	GERESS Array S	127.22 329		ePKPdf	PKPdf	15 35 57.5	+0.5
	baz=46,slow=1.9						
GERES	GERESS Array B	127.22 329		PKP	PKPdf	15 35 57.0	+0.1
	comp=Z,6.4nm,0.8s,baz=51,slow=3.1,SNR=23						
ARSA	Arzberg	127.23 327		ePKiKP	PKPdf	15 35 56.9	0.0
	comp=Z,2.1nm,0.7s						
MANZ	Manzenberg	127.26 331		ePKPdf	PKiKP	15 35 57.7	+0.3
	baz=46,slow=1.9						
WET	Wettzell	127.44 330		ePKPdf	PKiKP	15 35 57.9	+0.1
	baz=46,slow=1.9						
MOA	Molln	127.55 328		iPKiKP	PKPdf	15 35 57.8	+0.3
	comp=Z,3.1nm,1.0s						
SOKA	Soboth	127.84 326		iPKiKP	PKPdf	15 35 58.6	+0.4
	comp=Z,2.2nm,0.7s						
KASTN	Kahler Asten	128.10 334		ePKPdf	PKiKP	15 35 59.2	+0.1
	baz=46,slow=1.9						
FSA	Cafayete	128.11 131		eP	PKPdf	15 35 59.0	-0.5
OBKA	Obir	128.21 326		ePKiKP	PKPdf	15 35 59.0	+0.1
	comp=Z,4.0nm,1.6s						
RJOB	Jochberg	128.39 328		ePKPdf	PKPdf	15 35 59.7	+0.5
	baz=46,slow=1.9						
BUG	Bochum--Univer	128.41 335		ePKPdf	PKiKP	15 35 59.8	+0.2
	baz=46,slow=1.9						
KBA	Koelnbreinsper	128.52 328		ePKiKP	PKPdf	15 35 59.4	-0.2
	comp=Z,2.1nm,0.7s						
MYKA	Terra Mystica	128.63 327		ePKiKP	PKPdf	15 36 00.2	+0.5
	comp=Z,1.7nm,0.6s						
LESA	Schwarzleotal	128.65 328		iPKP	PKPdf	15 35 59.5	-0.3
	comp=Z,4.3nm,1.0s						
EKA	Eskdalemuir Ar	128.80 344		PKP	PKPdf	15 35 59.8	+0.1
	comp=Z,2.4nm,0.4s,baz=13,slow=2.4,SNR=14						
TNS	Taunus Mts	128.80 333		ePKPdf	PKiKP	15 36 00.6	0.0
	baz=46,slow=1.9						
ABTA	Abfaltersbach	129.17 328		iPKP	PKPdf	15 36 00.4	-0.4
	comp=Z,5.7nm,1.0s						
WATA	Walderalm	129.28 329		ePKiKP	PKPdf	15 36 01.4	+0.4
	comp=Z,6.0nm,0.8s						
WTTA	Wattenberg	129.29 329		iPKiKP	PKPdf	15 36 01.2	+0.1
	comp=Z,6.9nm,1.0s						
MOTA	Moosalm	129.51 329		iPKiKP	PKPdf	15 36 02.0	+0.5
	comp=Z,5.7nm,0.6s						
SQTA	Sankt Quirin	129.54 329		iPKiKP	PKiKP	15 36 02.2	0.0
	comp=Z,5.1nm,0.7s						
RETA	Reutte	129.59 329		iPKiKP	PKiKP	15 36 02.7	+0.5
	comp=Z,2.8nm,0.5s						
UBR	Ueberruh	129.79 330		ePKPdf	PKPdf	15 36 02.2	+0.4
	baz=46,slow=1.9						
FETA	Feichten	129.92 329		iPKiKP	PKiKP	15 36 03.0	-0.1
	comp=Z,8.4nm,0.9s						
DAVA	Damuels	130.17 330		iPKiKP	PKPdf	15 36 03.2	+0.5
	comp=Z,5.7nm,0.7s						
BFO	Black Forest	130.20 332		ePKPdf	PKPdf	15 36 02.8	+0.2
	baz=46,slow=1.9						
BMRD	Maredsous	130.31 336		dPKPdf	PKPdf	15 36 02.8	+0.1
FUORN	Ofenpass-Fuorn	130.43 329		PKPdf	PKiKP	15 36 04.2	0.0
DAVOX	Davos/Dischmat	130.51 329		PKP	PKPdf	15 36 04.1	+0.7
	comp=Z,8.2nm,0.7s,baz=107,slow=5.0,SNR=14						
DOU	Dourbes	130.54 336		dPKP	PKiKP	15 36 04.3	+0.3
TIP	Timpagrande	130.90 317		↓P	PKPdf	15 36 04.1	-0.1
LPAZ	La Paz	131.13 119		PKP	PKPdf	15 36 05.7	-0.3
	comp=Z,6.0nm,0.7s,baz=233,slow=0.9,SNR=21						
LPAZ				SKPbc	SKPab	15 39 29.2	+1.3
	comp=Z,5.2nm,0.8s,baz=318,slow=0.9,SNR=12						
CPUP	Villa Florida	134.15 137		PKP	PKPdf	15 36 10.4	-0.2
	comp=Z,8.8nm,0.8s,baz=272,slow=1.7,SNR=25						
CPUP				SKPbc	SKPbc	15 39 37.6	+0.6
	comp=Z,6.0nm,1.2s,baz=260,slow=13,SNR=4.0						
ITAB	Concordia	136.82 143		PKPdf	PKPdf	15 36 15.1	-0.5
SIV	San Ignacio	137.30 123		SKPbc	SKPbc	15 39 47.5	+0.4
	baz=274,slow=4.2						
PGAV	Gavieira, Arco	142.24 340		ePKP	PKPdf	15 36 20.7	-4.5
MVO	Moncorvo	142.50 338		ePKP	PKPdf	15 36 22.1	-3.5
ESDC	Sonseca Array	142.50 333		PKhKP	PKPpre	15 36 21.9	
	comp=Z,3.2nm,0.8s,baz=14,slow=3.5,SNR=21						
POLO	Lamas de Olo	142.59 339		ePKP	PKPdf	15 36 22.2	-3.6
PVRL	Vila Real	142.65 339		ePKP	PKPdf	15 36 22.8	-3.1
PVIS	Viseu	143.21 339		ePKP	PKPbc	15 36 24.2	+0.4
MTE	Manteigas	143.35 338		ePKP	PKPbc	15 36 24.6	+0.4
PCBR	Castelo Branco	143.82 337		ePKP	PKPbc	15 36 26.4	+0.9
BOAV	Boa Vista	143.93 95		PKPdf	PKPab	15 36 25.7	-0.4
PCAS	Casmilo, Conde	144.01 339		ePKP	PKPbc	15 36 27.5	+1.3
PMRV	Marv??o	144.14 337		ePKP	PKPbc	15 36 27.1	+0.5
PSARD	Sardoal	144.28 338		ePKP	PKPbc	15 36 27.4	+0.4
PSBE	So Bento	144.59 339		ePKP	PKPab	15 36 27.7	-0.1
PMTG	Montargil	144.77 338		ePKP	PKPab	15 36 28.4	-0.1
PARRA	Arraiolos	144.92 337		ePKP	PKPab	15 36 28.8	-0.2
PBAR	Barrancos	145.07 335		ePKP	PKPbc	15 36 29.7	+0.2
EVO	Evora	145.16 337		ePKP	PKPab	15 36 30.2	+0.3
EDA	Edea	145.26 267			PKPab	15 36 30.5	-0.4
PMAFR	Mafra	145.26 339		ePKP	PKPab	15 36 30.6	+0.3
MOE	Montemor	145.30 337		ePKP	PKPbc	15 36 30.6	+0.3
PBEJ	Beja	145.54 336		ePKP	PKPab	15 36 31.4	+0.2
MESJ	Messejana	145.84 337		ePKP	PKPab	15 36 32.8	+0.3
PCVE	Castro Verde	145.95 336		ePKP	PKPab	15 36 33.2	+0.4
PVAQ	Vaqueiros	146.01 336		ePKP	PKPbc	15 36 33.0	+0.5
PBDV	Barranco-do-Ve	146.24 336		ePKP	PKPdf	15 36 31.4	-0.7
PTEO	Sao Teotonio	146.29 337		ePKP	PKPbc	15 36 33.7	+0.3
MORF	Marmelete	146.47 337		ePKP	PKPab	15 36 34.7	-0.2
PFVI	Vila Bisbo	146.69 337		ePKP	PKPdf	15 36 33.6	+0.7
BDFB	Brasilia	147.73 134		PKPbc	PKPdf	15 36 35.5	+0.2
	comp=Z,66nm,0.6s,baz=264,slow=1.6,SNR=55						
TORD	Torodi Ar. Bea	153.40 285		PKP	PKPdf	15 36 43.1	-1.0
	comp=Z,1.9nm,0.8s,baz=108,slow=6.6,SNR=8.8						
TORD				PKPbc	PKPbc	15 36 50.9	-0.7
	comp=Z,7.0nm,0.7s,baz=101,slow=1.7,SNR=19						
TORD				PP	PP	15 40 34.3	-3.6
	comp=Z,0.9nm,0.9s,baz=70,slow=2.0,SNR=2.1						
DBIC	Dimbokro	160.39 270		PKPab	PKPab	15 37 32.5	-1.5
	comp=Z,7.5nm,0.7s,baz=112,slow=3.8,SNR=6.8						
DBIC	Dimbokro	160.39 270		PKPab	PKPab	15 37 33.1	-0.9
DBIC	Dimbokro	160.39 270		PKP2	PKPab	15 37 33.1	-0.9

JMA 11 15:18:02.9±0.2,24°N±3°×123.5E±0.7,h17km±2km, MV0.9/6,NEAR ISHIGAKIJIMA ISLAND,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IRIF	Iriomote-Funau	0.21	97	eP	Pg	15 18 07.7	-0.1
IRIF				eS	Sg	15 18 11.3	+0.2
JKRS	Kuro-shima	0.48	105	eS	Sb	15 18 19.5	-0.2
JIJ	Ishigaki jima	0.59	89	eP	Pg	15 18 14.0	-0.5
JIJ				eS	Sg	15 18 21.9	-0.4
JISG	Ishigakijimahi	0.77	73	eP	Pb	15 18 17.6	-0.2
JISG				eS	Sg	15 18 28.9	+0.7

TAP 11 15:19:00.9,24.00N×121.47E,h23km,ML2.5,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETM	Tongmen	0.04	147	iP	Pb	15 19 05.0	+0.1
ETM				iS	Sb	15 19 07.7	0.0
HWA	Hwalien	0.13	101	iP	Pb	15 19 05.8	+0.3
HWA				iS	Sb	15 19 09.7	+1.1
TWD	Chiawan	0.14	57	iP	Pb	15 19 05.8	+0.1
TWD				S	Sb	15 19 09.2	+0.3
TEYL	Yanliau Villag	0.18	138	P	Pb	15 19 05.9	-0.1
TEYL				eS	Sb	15 19 09.9	+0.3
ESL	Shilin	0.19	189	iP	Pb	15 19 05.9	-0.3
ESL				iS	Sb	15 19 09.5	-0.3
ETLH	Xiulin Townshi	0.20	4	P	Pb	15 19 06.6	+0.1
ETLH				S	Sb	15 19 10.2	-0.1
NACB	Ninganchiao	0.21	35	P	Pb	15 19 06.1	-0.3
NACB	Ninganchiao	0.21	35	S	Sb	15 19 10.1	-0.1
NACB	Ninganchiao	0.21	35	iP	Pb	15 19 06.2	-0.2
NACB				S	Sb	15 19 09.7	-0.5
ETL	Fush Village	0.21	43	P	Pb	15 19 06.4	-0.1
ETL				S	Sb	15 19 10.3	0.0
SHUL	Shoufeng	0.23	158	P	Pb	15 19 06.8	+0.1
SHUL				eS	Sb	15 19 11.3	+0.6
WHF	Hehuan Shan	0.23	308	P	Pb	15 19 07.1	0.0
WHF				S	Sb	15 19 11.7	+0.3
OWD	Renai	0.27	260	iP	Pb	15 19 07.6	+0.2
OWD				S	Sb	15 19 11.6	-0.2
WARBT	Fenglin Townsh	0.29	194	P	Pb	15 19 07.2	-0.5
WARBT				S	Sb	15 19 11.5	-0.7
FUSS	Fushou	0.32	320	iP	Pb	15 19 08.5	+0.3
FUSS				S	Sb	15 19 13.8	+0.6
WUSB	Renai	0.32	268	iP	Pb	15 19 08.4	+0.3
WUSB				eS	Sb	15 19 13.2	+0.1
TWT	Tachien	0.36	313	iP	Pb	15 19 09.5	+0.6
TWT				S	Sb	15 19 15.0	+0.7
TDCB	Techi	0.38	312	P	Pb	15 19 09.5	+0.5
TDCB				eS	Sb	15 19 14.9	+0.3
VWDT	VWDT	0.39	230	P	Pb	15 19 09.5	+0.3
VWDT				iS	Sb	15 19 15.1	+0.4
EAHA	Aohua	0.41	37	S	Sb	15 19 14.9	-0.5
NNSB	Datong	0.43	350	P	Pb	15 19 10.3	+0.3
NNSB				S	Sb	15 19 16.1	0.0
NNS	Nan Shan	0.44	349	eP	Pb	15 19 10.6	+0.4
NNS				eS	Sb	15 19 16.7	+0.3
HGSD	Ruisui	0.51	184	eP	Pb	15 19 11.3	+0.1
HGSD				eS	Sn	15 19 19.5	-1.2
WCS	Beigang Elemen	0.51	276	iP	Pb	15 19 11.4	+0.2
WCS				eS	Sb	15 19 19.4	+1.2
EHY	Hungye	0.51	195	iP	Pb	15 19 11.0	-0.3
EHY				S	Sb	15 19 18.0	-0.3
SSLB	Suanglung	0.52	246	P	Pb	15 19 11.1	-0.2
SSLB	Suanglung	0.52	246	P	Pn	15 19 15.4	+2.5
SSLB	Suanglung	0.52	246	P	Pb	15 19 11.3	0.0
SSLB				eS	Sb	15 19 18.3	-0.1
EHYH	Wanrong	0.52	192	iP	Pb	15 19 11.0	-0.3
EHYH				S	Sb	15 19 18.2	-0.2
EWUT	Wuta	0.53	33	eP	Pb	15 19 11.6	+0.1
EWUT				eS	Sb	15 19 18.3	-0.3
SMLT	Sun Moon Lake	0.53	257	iP	Pb	15 19 11.8	+0.2
SMLT				eS	Sb	15 19 19.1	+0.2
LATG	Datong	0.53	6	P	Pb	15 19 11.9	+0.2
LATG				eS	Sb	15 19 19.3	+0.3
WHP	Taichung City	0.55	300	eP	Pn	15 19 12.8	-0.5
WHP				S	Sb	15 19 20.4	+1.0
TYC	Yuchr	0.57	260	P	Pb	15 19 12.2	0.0
TYC				eS	Sb	15 19 20.3	+0.5
YULB	Yu-li	0.63	194	P	Pb	15 19 12.5	-0.7
YULB	Yu-li	0.63	194	S	Sb	15 19 21.2	-0.4
YULB	Yu-li	0.63	194	P	Pb	15 19 12.8	-0.4
YULB				eS	Sb	15 19 21.2	-0.3
WHYT	Xinyi Township	0.64	242	iP	Pn	15 19 14.0	-0.5
WHYT				eS	Sb	15 19 22.6	+0.7
ENTT	Nioudou	0.64	8	eP	Pb	15 19 13.8	+0.4
TWF1	Yuli	0.67	193	iP	Pb	15 19 13.5	-0.3
TWF1				S	Sb	15 19 22.6	-0.1
YHNB	Yeheng	0.67	353	P	Pb	15 19 14.3	+0.3
YHNB	Yeheng	0.67	353	S	Sn	15 19 24.1	-0.7
YHNB	Yeheng	0.67	353	iP	Pb	15 19 14.3	+0.3
YHNB				eS	Sb	15 19 22.9	0.0
NSK	Sanguang	0.68	352	P	Pb	15 19 14.4	+0.4
NSK				S	Sb	15 19 23.1	0.0
TWC	Suao	0.70	30	S	Sb	15 19 23.7	+0.1
WJS	Zhushan	0.70	255	iP	Pn	15 19 15.6	+0.2
WJS				S	Sn	15 19 26.0	+0.5
NFF	Wufeng Townshi	0.70	333	iP	Pn	15 19 17.1	+1.6
TWQ1	Liyutan	0.72	299	eP	Pn	15 19 16.0	+0.4
TWQ1				eS	Sn	15 19 26.9	+0.9
WNT	Mingjian	0.73	260	P	Pn	15 19 16.0	+0.3
WNT				S	Sn	15 19 27.0	+0.9
TCU	Taichung	0.74	281	eP	Pn	15 19 16.0	+0.1
TCU				eS	Sb	15 19 25.2	+0.6
NSTT	Nanjuang	0.76	326	eP	Pn	15 19 17.4	+1.3
NSTT				eS	Sn	15 19 27.8	+0.9
LIOB	Emei	0.76	327	eP	Pn	15 19 17.3	+1.1
LIOB				eS	Sn	15 19 29.1	+2.1
FUSB	Fushanzhiwuyua	0.76	8	eP	Pn	15 19 16.0	-0.3
FUSB				eS	Sb	15 19 25.9	+0.4
NWLT	Wulai	0.77	2	eP	Pn	15 19 17.1	+0.7
NWLT				eS	Sb	15 19 25.2	-0.5
ALS	Alishan	0.78	231	eP	Pn	15 19 16.4	-0.3
KSHI	Guanxi Townshi	0.81	341	eP	Pn	15 19 16.8	-0.2
KSHI				eS	Sn	15 19 27.7	-0.6
FULB	Fuli	0.82	191	eP	Pn	15 19 17.2	+0.2
FULB				eS	Sb	15 19 27.6	+0.6
CHN5	Tsauling	0.83	241	iP	Pn	15 19 17.6	+0.4
CHN5				S	Sn	15 19 29.7	+0.9
EHD	Haiduan	0.88	196	P	Pb	15 19 17.4	-0.1
EHD				S	Sb	15 19 28.9	0.0
CHKT	Chengkung	0.90	186	eS	Sb	15 19 28.8	-0.7
WDLH	Douliu	0.91	250	eP	Pn	15 19 19.1	+0.9
WDLH				eS	Sn	15 19 32.0	+1.4
ELDTW	Lidau	0.91	207	eP	Pb	15 19 17.9	-0.2
ELDTW				eS	Sb	15 19 29.9	+0.2
WCKO	Fanlu	0.97	235	P	Pn	15 19 20.0	+0.9
WCKO				eS	Sn	15 19 33.5	+1.4
WRL	Guolierlin Hig	1.00	264	eP	Pb	15 19 20.2	+0.7
WRL				eS	Sn	15 19 34.8	+1.9
RLNB	Erlin	1.02	264	eP	Pn	15 19 18.5	-1.2
RLNB				eS	Sn	15 19 33.8	+0.5
TIPB	Shuangxi	1.02	19	eP	Pb	15 19 19.9	+0.1
TIPB				eS	Sb	15 19 31.9	-0.9
TPUB	Ta-pu	1.04	228	P	Pb	15 19 21.5	+1.3
TPUB	Ta-pu	1.04	228	S	Sn	15 19 35.3	+1.4
TPUB	Ta-pu	1.04	228	P	Pb	15 19 20.9	+0.8
TPUB				S	Sn	15 19 35.8	+2.0
STYH	Taoyuan	1.04	218	P	Pb	15 19 20.7	+0.5
STYH				eS	Sn	15 19 34.4	+0.5
CHY	Chiayi	1.08	242	eS	Sn	15 19 35.2	+0.4
WTP	Ta-pu	1.09	226	eP	Pb	15 19 22.2	+1.2
WTP				eS	Sn	15 19 37.5	+2.4
YM01	YM01	1.14	5	eP	Pb	15 19 23

UZB	**Uzynbulak**	**2.29**	**3**	*eP*	**Pb**	**15 43 37.4**	**-1.9**
	8.4nm,0.4s							
UZB				*eS*	**Sb**	**15 44 07.0**	**-0.7**
	6.5nm,0.6s							
SHLS	**Shalkode**	**2.35**	**11**	Pg	**Pb**	**15 43 40.0**	**-0.1**
	7.7nm,0.3s							
SHLS				Lg	Lg	15 44 11.5		
	32nm,0.5s							
SHLS	**Shalkode**	**2.35**	**11**	*eP*	**Pb**	**15 43 40.0**	**-0.1**
	7.7nm,0.3s							
SHLS				*eS*	**Sg**	**15 44 11.5**	**-1.5**
	32nm,0.5s							
ULHL	**Ulahol**	**2.39**	**306**	⇓*eP*	**Pb**	**15 43 38.9**	**-2.0**
ULHL				⇓*iS*	**Sb**	**15 44 10.9**	**+0.3**
JNKS	**Jany-Kuch**	**2.44**	**276**	⇑*iP*	**Pb**	**15 43 40.7**	**-1.1**
JNKS				⇑*iS*	**Sb**	**15 44 13.5**	**+1.5**
PDGK	**Podgornoye**	**2.52**	**11**	⇑Pg	**Pb**	**15 43 41.0**	**-2.1**
	5.2nm,0.8s							
PDGK				⇑Lg	Lg	15 44 14.7		
	13nm,0.6s							
TNSS	**Tian-Shan**	**2.59**	**328**	Pg	**Pb**	**15 43 44.4**	**-0.2**
	2.1nm,0.3s							
TNSS				Lg	Lg	15 44 19.3		
	9.1nm,0.6s							
TNSS	**Tian-Shan**	**2.59**	**328**	*eP*	**Pb**	**15 43 44.4**	**-0.2**
	2.1nm,0.3s							
TNSS				*eS*	**Sg**	**15 44 19.3**	**-1.8**
	9.1nm,0.6s							
KPKS	**Kokpek**	**2.61**	**358**	Pg	**Pb**	**15 43 43.3**	**-1.3**
	0.4nm,0.1s							
KPKS				Lg	Lg	15 44 17.2		
	11nm,0.5s							
KPKS	**Kokpek**	**2.61**	**358**	*eP*	**Pb**	**15 43 43.3**	**-1.3**
	0.4nm,0.1s							
KPKS				*eS*	**Sb**	**15 44 17.2**	**+0.4**
	11nm,0.5s							
MDOK	**Medeo**	**2.66**	**331**	Pg	**Pb**	**15 43 45.1**	**-0.5**
	13nm,0.4s							
MDOK				Lg	Lg	15 44 20.3		
	28nm,0.6s							
KURS	**Kuram**	**2.68**	**350**	Pg	**Pb**	**15 43 45.5**	**-0.1**
	2.1nm,0.7s							
KURS				Lg	Lg	15 44 21.0		
	5.3nm,0.5s							
KOTS	**Kotyrbulak**	**2.70**	**332**	Pg	**Pb**	**15 43 46.3**	**+0.1**
	6.3nm,0.2s							
KOTS				Lg	Lg	15 44 22.7		
	17nm,0.7s							
KOTS	**Kotyrbulak**	**2.70**	**332**	*eP*	**Pb**	**15 43 46.3**	**+0.1**
	6.3nm,0.2s							
KOTS				*eS*	**Sg**	**15 44 22.3**	**-2.1**
	17nm,0.7s							
IZV	**Izvestkoviy**	**2.74**	**323**	Pg	**Pb**	**15 43 45.8**	**-1.0**
	3.2nm,0.4s							
IZV				Lg	Lg	15 44 21.4		
	12nm,0.3s							
IZV	**Izvestkoviy**	**2.74**	**323**	*eP*	**Pb**	**15 43 45.8**	**-1.0**
	3.2nm,0.4s							
IZV				*eS*	**Sb**	**15 44 21.4**	**+0.9**
	12nm,0.3s							
KNDC	**Almaty**	**2.74**	**330**	⇓Pg	**Pn**	**15 43 43.2**	**+1.5**
	16nm,0.7s							
KNDC				⇑Lg	Lg	15 44 22.9		
	35nm,0.5s							
MTBS	**Maitube**	**2.90**	**322**	*eP*	**Pb**	**15 43 50.5**	**+1.1**
	0.7nm,0.2s							
MTBS				*eS*	**Sg**	**15 44 29.4**	**-1.2**
	6.4nm,0.3s							
KST	**Kastek**	**3.06**	**316**	Pg	**Pb**	**15 43 53.0**	**+0.7**
	1.0nm,0.1s							
KST				Lg	Lg	15 44 34.0		
	6.9nm,0.4s							
KST	**Kastek**	**3.06**	**316**	*eP*	**Pb**	**15 43 53.0**	**+0.7**
	1.0nm,0.1s							
KST				*eS*	**Sg**	**15 44 34.0**	**-2.0**
	6.9nm,0.4s							
BLB	**Baldybastay**	**3.25**	**355**	Pg	**Pb**	**15 43 55.0**	**-0.5**
BLB				Lg	Lg	15 44 37.1		
KTBS	**Karatobe**	**3.27**	**331**	*eP*	**Pb**	**15 43 56.0**	**+0.2**
	1.3nm,0.2s							
KTBS				*eS*	**Sb**	**15 44 38.8**	**+3.1**
	0.4nm,0.3s							
DGS	**Degeres**	**3.30**	**317**	*eP*	**Pb**	**15 43 56.4**	**0.0**
	2.0nm,0.3s							
DGS				*eS*	**Sb**	**15 44 39.4**	**+2.8**
	5.2nm,0.5s							
ARXS	**Arharly**	**3.44**	**348**	Pg	**Pb**	**15 43 58.6**	**-0.1**
	1.6nm,0.3s							
ARXS				Lg	Lg	15 44 43.6		
	19nm,0.5s							
ARXS	**Arharly**	**3.44**	**348**	*eP*	**Pb**	**15 43 58.6**	**-0.1**
	1.6nm,0.3s							
ARXS				*eS*	**Sb**	**15 44 43.6**	**+3.1**
	19nm,0.5s							
KNOS	**Konyrlen**	**3.51**	**4**	Pg	**Pb**	**15 43 59.8**	**-0.1**
	0.6nm,0.2s							
KNOS				Lg	Lg	15 44 45.7		
	5.5nm,0.7s							
DJR	**Jarkent**	**3.54**	**11**	Pg	**Pb**	**15 44 00.4**	**-0.1**
	0.8nm,0.2s							
DJR				Lg	Lg	15 44 46.3		
	3.8nm,0.5s							
DJR	**Jarkent**	**3.54**	**11**	*eP*	**Pb**	**15 44 00.4**	**-0.1**
	0.8nm,0.2s							
DJR				*eS*	**Sb**	**15 44 46.3**	**+2.7**
	3.8nm,0.5s							
KRBS	**Karabastau**	**3.68**	**321**	Pg	**Pb**	**15 44 03.3**	**+0.5**
	1.3nm,0.3s							
KRBS				Lg	Lg	15 44 51.8		
	2.7nm,0.4s							
KRBS	**Karabastau**	**3.68**	**321**	*eP*	**Pb**	**15 44 03.4**	**+0.5**
	1.3nm,0.3s							
KRBS				*eS*	**Sg**	**15 44 51.9**	**-4.0**
	2.7nm,0.4s							

IDC 11 15:48:55.6±286.0, 54°27N×42°31E, h0km, Error ellipse: s-maj=124.0km s-min=81.8km az=144.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**3.80**	**312**	I	I	16 13 20.0	
	baz=129,slow=321,SNR=1.2						
I31KZ	**AKTYUBINSK INF**	**10.37**	**105**	I	I	16 50 20.0	
	0.1nm,0.6s,baz=299,slow=318,SNR=5.2						
I46RU	**ZALESOVO INFRA**	**24.65**	**73**	I	I	18 19 20.0	
	baz=292,slow=320,SNR=1.7						

*IDC **11** 15:54:26.3±0.7, 5°.26S×134°.09E, h0km, mb3.9/10, mbtmp4.0/17, ML3.9/6, MS3.2/3, Error ellipse: s-maj=28.0km s-min=15.0km az=66.0*

*NEIC **11** 15:54:28.5±1.5, 5°.17S±0°.07×134°.18E±0°.08, h10km±1km, mb4.5/19, Error ellipse: s-maj=13.3km s-min=11.1km az=77.0*

*DJA **11** 15:54:31.9±0.1, 5°S±2°×13°4E±°, h88km±4km, M4.5/32, mb4.6/32, mB5.0/15, MLv4.7/28, Mw(mB)4.3/15*

ISC 11 15:54:30.1±0.4, 5°20S±0°.04×134°16E±0°.04, h28km, n98, σ2°40/111, mb4.2/20, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMPI	**Kaimana, Papua**	**1.60**	**343**	P	**Pn**	**15 54 55.4**	**-1.1**
KMPI				S	**Sb**	**15 55 16.1**	**-2.6**
FAKI	**Fak Fak**	**2.96**	**320**	P	**Pn**	**15 55 15.7**	**+0.4**
FAKI	**Fak Fak**	**2.96**	**320**	S	**Sn**	**15 55 49.3**	**-0.7**
FAKI	**Fak Fak**	**2.96**	**320**		**Pn**	**15 55 15.1**	**-0.3**
FAKI	**Fak Fak**	**2.96**	**320**	P	**Pn**	**15 55 15.0**	**-0.3**
FAKI				S	**Sn**	**15 55 49.0**	**-1.0**
RKPI	**Ransiki, Papua**	**3.67**	**0**	P	**Pn**	**15 55 24.4**	**-0.6**
RKPI				S	**Sn**	**15 56 02.5**	**-4.9**
SRPI	**Serui, Papua**	**3.91**	**32**	P	**Pn**	**15 55 28.1**	**-0.2**
SAUI	**Saumlaki**	**3.96**	**226**	Pn	**Pn**	**15 55 30.6**	**+1.6**
SAUI	**Saumlaki**	**3.96**	**226**	P	**Pn**	**15 55 32.2**	**+3.2**
MWPI	**Manokwari, Pap**	**4.25**	**358**	P	**Pn**	**15 55 32.9**	**0.0**
MWPI				S	**Sn**	**15 56 18.9**	**-2.7**
BNDI	**Bandanaira**	**4.29**	**279**	P	**Pn**	**15 55 35.7**	**+2.1**
BNDI	**Bandanaira**	**4.29**	**279**	P	**Pn**	**15 55 35.2**	**+1.6**
BNDI				S	**Sn**	**15 56 25.0**	**+2.2**
BAKI	**Biak**	**4.43**	**26**	P	**Pn**	**15 55 35.4**	**-0.1**
WAMI	**Wamena**	**4.72**	**74**	P	Pn	15 55 43.4	+3.9
SIJI	**Sorong**	**5.19**	**326**	Pn	**Pn**	**15 55 45.5**	**-0.3**
	20nm,0.3s,baz=163,slow=9.2,SNR=92						
SIJI				S	**Sn**	**15 56 40.8**	**-4.1**
	16nm,0.3s,baz=31,slow=22,SNR=9.1						
	48nm,0.3s						
SIJI	**Sorong**	**5.19**	**326**	P	**Pn**	**15 55 45.2**	**-0.7**
	0.4nm3μm83nm,0.7s						
SIJI				S	**Sn**	**15 56 41.2**	**-3.6**
	0.4nm3μm83nm,0.7s						
SWI	**Sorong**	**5.19**	**326**	P	**Pn**	**15 55 45.2**	**-0.8**
	0.8nm2μm151nm,0.8s						
SWI				S	**Sn**	**15 56 40.2**	**-4.8**
	0.8nm2μm151nm,0.8s						
MSAI	**Masohi**	**5.53**	**289**	P	**Pn**	**15 55 51.8**	**+1.2**
	0.8nm2μm117nm,0.7s						
KRAI	**Karang Ratu**	**6.05**	**288**	P	**Pn**	**15 56 00.4**	**+2.7**
	0.3nm1μm47nm,0.6s						
KRAI				S	**Sn**	**15 57 05.4**	**-0.7**
	0.3nm1μm47nm,0.6s						
AAI	**Ambon**	**6.14**	**284**	P	**Pn**	**15 56 00.2**	**+1.3**
	0.5nm2μm95nm,0.6s						
AAI				S	**Sn**	**15 57 04.7**	**-3.5**
	0.5nm2μm95nm,0.6s						
GENI	**Genyem**	**6.53**	**67**	P	**Pn**	**15 56 04.5**	**+0.2**
	0.4nm2μm76nm,1.0s						
GENI				S	**Sn**	**15 57 14.0**	**-4.0**
	0.4nm2μm76nm,1.0s						
MMPI	**Merauke**	**6.98**	**118**	P	**Pn**	**15 56 13.3**	**+2.8**
JAY	**Jayapura**	**7.05**	**68**	Pn	**Pn**	**15 56 11.6**	**0.0**
	2.0nm,0.3s,baz=222,slow=13,SNR=11						
JAY				Sn	**Sn**	**15 57 29.6**	**-1.4**
	1.5nm,0.3s,baz=311,slow=20,SNR=1.8						
JAY				LR	LR	15 59 41.0	
	comp=Z,183nm,21.1s,baz=292,slow=44						
	16nm,0.6s						
JAY	**Jayapura**	**7.05**	**68**	P	**Pn**	**15 56 09.6**	**-2.0**
	0.1nm20nm,0.8s						
NLAI	**Namlea**	**7.31**	**285**	P	**Pn**	**15 56 18.3**	**+3.3**
	0.4nm81nm60nm,0.5s						
DRS	**Darwin Rock St**	**7.87**	**204**	P	Pn	15 56 27.9	+5.2
MTN	**Manton Dam**	**8.16**	**201**	Pn	**Pn**	**15 56 27.9**	**+1.3**
SANI	**Sanana**	**8.74**	**291**	P	**Pn**	**15 56 34.0**	**-0.6**
SANI	**Sanana**	**8.74**	**291**	P	**Pn**	**15 56 32.7**	**-1.9**
	30nm,0.8s						
SOEI	**Soe**	**10.80**	**245**	P	**Pn**	**15 57 06.1**	**+3.1**
SOEI	**Soe**	**10.80**	**245**	S	**Sn**	**15 59 05.5**	**+2.4**
SOEI	**Soe**	**10.80**	**245**	Pn	**Pn**	**15 57 03.9**	**+0.9**
SOEI	**Soe**	**10.80**	**245**	P	**Pn**	**15 57 04.2**	**+1.2**
	56nm,0.8s						
BATI	**Baumata**	**11.53**	**244**	Pn	**Pn**	**15 57 14.4**	**+1.5**
	5.4nm,0.3s,baz=149,slow=4.6,SNR=6.5						
BATI				Sn	**Sn**	**15 59 15.7**	**-5.2**
	1.0nm,0.3s,baz=79,slow=18,SNR=1.7						
BATI				LR	LR	16 02 06.4	
	comp=Z,176nm,21.1s,baz=122,slow=40						
BATI	**Baumata**	**11.53**	**244**	P	**Pn**	**15 57 15.4**	**+2.5**
	28nm,0.8s						
KNRA	**Kununurra**	**11.68**	**207**	Pn	**Pn**	**15 57 14.5**	**-0.5**
COEN	**Coen**	**12.43**	**135**	Pn	**Pn**	**15 57 22.1**	**-3.2**
EDFI	**Ende, Flores**	**12.87**	**253**	P	**Pn**	**15 57 34.0**	**+2.7**
	8.9nm,0.8s						
APSI	**Ampana**	**13.20**	**288**	P	**Pn**	**15 57 34.5**	**-1.3**
	42nm,1.3s						
MRSI	**Marisa**	**13.45**	**294**	P	**Pn**	**15 57 40.2**	**+1.1**
	550nm16nm,0.8s						
PMG	**Port Moresby**	**13.55**	**109**	Pn	**Pn**	**15 57 42.4**	**+1.8**
	11nm,1.0s,baz=287,slow=11,SNR=1.6						
PMG	**Port Moresby**	**13.55**	**109**	Pn	**Pn**	**15 57 39.8**	**-0.8**
KAPI	**Kappang**	**14.35**	**270**	LR	LR	16 04 40.7	
	comp=Z,70nm,18.5s,baz=50,slow=43						
SPSI	**Sidrap Palu**	**14.40**	**274**	P	**Pn**	**15 57 52.7**	**+0.5**
	17nm,1.3s						
WB0	**Warramunga Arr**	**14.48**	**179**	Pn	**Pn**	**15 57 50.4**	**-2.8**
WRAB	**Tennant Creek**	**14.64**	**179**	Pn	**Pn**	**15 57 52.7**	**-2.8**
WRA	**Warramunga Arr**	**14.65**	**179**	Pn	**Pn**	**15 57 52.0**	**-3.5**
	0.3nm,0.3s,baz=2.0,slow=13,SNR=14						
WRA				Sn	**Sn**	**16 00 30.0**	**-7.2**
	0.4nm,0.3s,baz=353,slow=24,SNR=5.3						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**14.65**	**179**	Pn	**Pn**	**15 57 51.6**	**-4.0**
WR8	**Warramunga Arr**	**14.67**	**179**	Pn	**Pn**	**15 57 53.7**	**-2.1**
TOLI2	**Tolitoli**	**14.76**	**295**	P	**Pn**	**15 57 57.2**	**+0.1**
TOLI2	**Tolitoli**	**14.76**	**295**	P	**P**	**15 58 02.6**	**-0.2**
FITZ	**Fitzroy Crossi**	**15.28**	**212**	Pn	**Pn**	**15 58 01.8**	**-2.2**
	1.0nm,0.3s,baz=31,slow=11,SNR=23						
FITZ				Sn	**Sn**	**16 00 43.2**	**-9.3**
	1.2nm,0.3s,baz=222,slow=23,SNR=7.1						
	2.7nm,0.4s						
QIS	**Mount Isa**	**16.15**	**161**	P	**P**	**15 58 21.0**	**+2.7**
MTSU	**Mount Surprise**	**16.24**	**143**	P	**P**	**15 58 22.4**	**+3.2**
PLAI	**Plampang**	**16.65**	**257**	P	**P**	**15 58 23.6**	**-0.2**
AS31	**Alice Springs**	**18.36**	**181**	P	**P**	**15 58 41.1**	**-1.6**
ASAR	**Alice Springs**	**18.36**	**181**	P	**P**	**15 58 41.7**	**-1.0**
	0.3nm,0.3s,baz=2.8,slow=10,SNR=37						
ASAR				S	**Sn**	**16 02 02.5**	**-4.7**
	2.4nm,1.0s,baz=359,slow=30,SNR=3.6						
	12nm,0.8s						
ASAR	**Alice Springs**	**18.36**	**181**	P	**P**	**15 58 41.1**	**-1.6**
MYLDM	**Lahad Datu**	**18.73**	**303**	P	**P**	**15 58 43.2**	**-3.6**
	19nm,1.4s						
CTA	**Charters Tower**	**18.90**	**143**	P	**Pn**	**15 58 48.9**	**-0.5**
	0.1nm,0.3s,baz=311,slow=11,SNR=1.4						
	3.7nm,0.7s						
CTAO	**Charters Tower**	**18.90**	**143**	P	**Pn**	**15 58 55.0**	**+5.6**
CTAO	**Charters Tower**	**18.90**	**143**	P	**Pn**	**15 58 49.2**	**-0.2**
CTAO				IAmb	IAmb	15 59 03.0	
	comp=Z,22nm,0.9s						
KMMI	**Kalianget**	**20.16**	**264**	P	**P**	**15 59 00.8**	**-1.6**
MBWA	**Marble Bar**	**21.16**	**220**	P	**P**	**15 59 17.4**	**+4.3**
PSA00	**Pilbara Seismi**	**21.38**	**219**	P	**P**	**15 59 16.8**	**+1.2**
INKA	**Innaminka**	**23.27**	**165**	P	**P**	**15 59 36.2**	**+0.7**
FORT	**Forrest**	**26.08**	**192**	P	**P**	**16 00 02.2**	**+0.8**
FORT				IAmb	IAmb	16 00 13.4	
	comp=Z,14nm,0.7s						
STKA	**Stephens Creek**	**27.43**	**166**	P	**P**	**16 00 13.9**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=324,slow=11,SNR=2.9						
	comp=Z,1.3nm,0.8s						
STKA	**Stephens Creek**	**27.43**	**166**	P	**P**	**16 00 12.9**	**-0.7**
BBOO	**Buckleboo**	**27.52**	**177**	P	**P**	**16 00 18.7**	**+4.3**
CMAR	**Chiang Mai Arr**	**41.93**	**305**	P	**P**	**16 02 19.7**	**+1.1**
	comp=Z,0.4nm,0.4s,baz=132,slow=7.1,SNR=5.6						
	comp=Z,0.4nm,0.4s						
KSRS	**Korea Array**	**42.84**	**353**	P	**P**	**16 02 28.0**	**+2.3**
	comp=Z,0.6nm,0.6s,baz=160,slow=6.8,SNR=4.2						
	comp=Z,0.6nm,0.6s						
WHZ	**Wether Hill Ro**	**50.02**	**150**	P	**P**	**16 03 22.7**	**+0.7**
GTA2	**Gaotai**	**54.63**	**328**	*eP*	**P**	**16 03 58.4**	**+1.9**
GTA2				sP	sP	16 04 06.9	-0.2
GTA2				pmax	pmax		
	comp=Z,3.0nm,1.2s						
SONM	**Songino Array**	**58.19**	**338**	P	**P**	**16 04 22.3**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=144,slow=6.7,SNR=4.8						
	comp=Z,0.8nm,0.5s						
SONM	**Songino Array**	**58.19**	**338**	P	**P**	**16 04 23.1**	**+1.4**
MKAR	**Makanchi Array**	**69.08**	**325**	P	**P**	**16 05 34.2**	**+0.7**
	comp=Z,1.6nm,0.7s,baz=118,slow=7.8,SNR=24						
	comp=Z,1.6nm,0.7s						
MKAR	**Makanchi Array**	**69.08**	**325**	P	**P**	**16 05 34.6**	**+1.0**
MAKZ	**Makanchi**	**69.27**	**325**	P	**P**	**16 05 35.7**	**+1.0**
MAKZ				IAmb	IAmb	16 05 36.7	
	comp=Z,2.5nm,0.8s						
KSH2	**Kashi**	**69.70**	**315**	P	**P**	**16 05 39.9**	**+2.2**
KDJ	**Kajisay**	**69.91**	**318**	P	**P**	**16 05 41.0**	**+2.0**
KDJ				IAmb	IAmb	16 05 43.9	
	comp=Z,2.1nm,0.9s						
ZALV	**Zalesovo Beam**	**71.89**	**332**	P	**P**	**16 05 50.5**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=114,slow=5.6,SNR=7.8						
	comp=Z,1.3nm,0.6s						
ZALV	**Zalesovo Beam**	**71.89**	**332**	P	**P**	**16 05 50.7**	**+0.2**
KURK	**Kurchatov**	**73.22**	**327**	P	**P**	**16 05 58.8**	**+0.3**
KURK				IAmb	IAmb	16 06 32.3	
	comp=Z,3.2nm,1.2s						
KURBB	**Kurchatov Arra**	**73.22**	**327**	P	**P**	**16 05 59.1**	**+0.6**
	comp=Z,1.3nm,1.0s,baz=120,slow=4.7,SNR=9.3						
	comp=Z,1.3nm,1.0s						
KKAR	**Karatay Array**	**74.79**	**317**	P	**P**	**16 06 09.3**	**+1.5**
BVAR	**Borovoye Array**	**78.81**	**326**	P	**P**	**16 06 30.8**	**+0.5**
	comp=Z,1.1nm,0.6s,baz=134,slow=6.4,SNR=8.1						
	comp=Z,1.1nm,0.6s						
BORK	**Borovoye**	**78.86**	**326**	P	**P**	**16 06 31.2**	**+0.7**
BORK				IAmb	IAmb	16 06 32.0	
	comp=Z,1.7nm,0.7s						
L14K	**Kuka Creek**	**82.08**	**26**	P	**P**	**16 06 48.5**	**+0.9**
L14K				IAmb	IAmb	16 06 49.3	
	comp=Z,4.2nm,0.8s						
K15K	**Wolf Creek Mou**	**82.98**	**25**	P	**P**	**16 06 53.3**	**+0.9**
L16K	**Owhat River**	**83.63**	**26**	P	**P**	**16 06 56.0**	**+0.3**
L16K				IAmb	IAmb	16 07 04.7	
	comp=Z,3.2nm,0.8s						
H17K	**Granite Mounta**	**84.75**	**23**	P	**P**	**16 07 02.2**	**+0.8**
H17K				IAmb	IAmb	16 07 02.8	
	comp=Z,2.4nm,0.9s						
QSPA	**South Pole Qui**	**84.76**	**180**	P	**P**	**16 07 01.8**	**+0.2**
	comp=Z,0.8nm,0.9s,baz=307,slow=5.1,SNR=1.3						
	comp=Z,0.8nm,0.9s						
QSPA	**South Pole Qui**	**84.76**	**180**	P	**P**	**16 07 01.4**	**-0.2**
QSPA				IAmb	IAmb	16 07 20.8	
	comp=Z,7.4nm,1.4s						
D19K	**Kuna River**	**86.82**	**20**	P	**P**	**16 07 12.4**	**+0.8**
D19K				IAmb	IAmb	16 07 16.0	
	comp=Z,5.5nm,1.4s						
SML	**Sawmill**	**88.68**	**28**	P	**P**	**16 07 21.7**	**+1.0**
ILAR	**Eielson Array**	**89.98**	**25**	P	**P**	**16 07 26.0**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=253,slow=4.8,SNR=5.3						
	comp=Z,0.4nm,0.8s						
LPAZ	**La Paz**	**149.30**	**134**	PKPbc	**PKiKP**	**16 14 19.8**	**+0.5**
	comp=Z,1.7nm,0.9s,baz=207,slow=3.5,SNR=5.0						

WEL 11 16:16:24.9±1.3, 35°S±19°×118°0E±1°9, h303km±22km, M3.6/7, ML3.8/7, MLv3.6/7, Error ellipse: s-maj=26.6km s-min=23.3km az=131.1, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.10**	**200**	P	Pn	16 17 22.5	+0.8
MXZ				S	S	16 18 06.0	-1.1
WMGZ	**Waiomatatini S**	**3.31**	**197**	P	Pn	16 17 25.4	+1.6
WMGZ				S	S	16 18 12.3	+1.3
HAZ	**Te Kaha**	**3.44**	**206**	P	Pn	16 17 25.1	0.0
HAZ				S	S	16 18 13.6	+0.2
PKGZ	**Pakihiroa**	**3.44**	**201**	P	Pn	16 17 24.2	-1.1
PKGZ				S	S	16 18 14.1	+0.5
PUZ	**Puketiti**	**3.59**	**198**	P	Pn	16 17 28.3	+1.5
PUZ				S	S	16 18 16.4	+0.1
RUGZ	**Raukumara Rang**	**3.67**	**205**	P	Pn	16 17 27.0	-0.7
TWGZ	**Tauwhareparae**	**3.76**	**201**	S	S	16 18 21.3	+1.6
GRZ	**Great Barrier**	**3.78**	**244**	P	Pn	16 17 29.0	+0.2
TKGZ	**Te Karaka**	**4.04**	**201**	P	Pn	16 17 30.5	-1.1
TKGZ				S	S	16 18 25.5	+0.4
MWZ	**Matawai**	**4.05**	**205**	P	Pn	16 17 30.8	-1.0
MWZ				S	S	16 18 26.0	+0.6
OPRZ	**Ohinepanea**	**4.05**	**217**	P	Pn	16 17 32.3	+0.6
URZ	**Urewera**	**4.14**	**209**	P	Pn	16 17 31.9	-0.7
URZ				S	S	16 18 27.4	+0.4
MUGZ	**Murupara**	**4.46**	**211**	P	Pn	16 17 36.3	0.0
RTZ	**Ruatahuna**	**4.50**	**208**	P	Pn	16 17 35.3	-1.4
TOZ	**Tahuroa Road**	**4.55**	**226**	P	Pn	16 17 37.0	-0.3
RAHZ	**Arahi**	**4.72**	**205**	P	Pn	16 17 40.5	+1.3
RAHZ				S	S	16 18 40.2	+1.2
MTHZ	**Maungataniwha**	**4.76**	**208**	P	Pn	16 17 40.6	+0.9
TLZ	**Tolley Road**	**4.94**	**221**	P	Pn	16 17 42.7	+0.9
NMHZ	**Naumai**	**4.98**	**207**	P	Pn	16 17 41.2	-1.1
WHTZ	**Whakaora**	**4.98**	**216**	P	Pn	16 17 41.3	-1.0
ARHZ	**Aropaoanui**	**5.07**	**204**	P	Pn	16 17 44.2	+1.0
BKZ	**Black Stump Fm**	**5.16**	**209**	P	Pn	16 17 44.9	+0.6
KWHZ	**Kaweka Forest**	**5.41**	**208**	P	Pn	16 17 47.3	0.0
TMVZ	**Te Maari**	**5.46**	**214**	P	Pn	16 17 48.0	0.0
OTVZ	**Oturere**	**5.52**	**214**	P	Pn	16 17 48.7	+0.1
SNVZ	**South Ngauruho**	**5.55**	**214**	P	Pn	16 17 49.1	+0.1
KAHZ	**Kahuranaki**	**5.58**	**203**	P	Pn	16 17 50.1	+0.8
KRHZ	**Kereru**	**5.62**	**207**	P	Pn	16 17 49.2	-0.5
PXZ	**Pawanui**	**5.80**	**202**	P	Pn	16 17 52.0	+0.2
PNHZ	**Pukenui**	**5.92**	**207**	P	Pn	16 17 51.2	-2.1
TSZ	**Takapari Road**	**6.14**	**208**	P	Pn	16 17 53.6	-2.2

*IDC **11** 16:24:12.6±9.0, 0°.05N×123°.45E, h141km±82km, mb3.0/4, mbtmp3.5/6, Error ellipse: s-maj=105.5km s-min=17.9km az=55.0*

*DJA **11** 16:24:13.6±0.3, 0°S±3°×12°3E±°, h137km±4km, M4.0/31, mB4.6/1, mb4.0/5, MLv4.0/31, Mw(mB)3.8/1*

ISC 11 16:24:13.6±0.9, 0°.04S±0°.09×123°.24E±0°.06, h150km, n16, σ1°17/17, mb3.3/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.10**	**205**	P	**Pn**	**16 24 37.9**	**-1.4**
MRSI	**Marisa**	**1.39**	**291**	P	**Pn**	**16 24 40.7**	**-1.4**
APSI	**Ampana**	**1.81**	**241**	P	**Pn**	**16 24 45.4**	**-1.2**
SANI	**Sanana**	**3.40**	**126**	P	**Pn**	**16 25 04.2**	**-1.9**
PCI	**Palu**	**3.51**	**256**	P	**Pn**	**16 25 07.2**	**-0.3**
TNTI	**Ternate**	**4.21**	**79**	P	**Pn**	**16 25 17.5**	**-0.9**
TTSI	**Tana Toraja**	**4.54**	**229**	P	**Pn**	**16 25 19.8**	**-1.2**
NLAI	**Namlea**	**5.00**	**130**	P	**Pn**	**16 25 27.8**	**+0.7**
	0.2nm765nm8.6nm,0.6s						
SPSI	**Sidrap Palu**	**5.22**	**222**	P	**Pn**	**16 25 30.2**	**

	comp=E,91nm,0.8s								
JHNI	**Jhansi**		**9.42**	**223**	*e*P		**Pn**	**16 45 32.8**	**+0.8**
JHNI					*e*S		**Sn**	**16 47 14.3**	**-2.4**
JHNI					IAML			16 47 22.7	
	comp=N,91nm,1.0s								
JHNI					IAML			16 47 23.0	
	comp=E,81nm,1.2s								
WMQ	**Urumqi**		**11.33**	**7**	*e*P		**Pn**	**16 45 57.9**	**-0.2**
WMQ					pmax		pmax		
	comp=Z,11nm,0.9s								
WMQ					LR		LR		
	comp=Z,230nm,18.5s								
AJM	**Ajmer**		**11.41**	**240**	*e*P		**Pn**	**16 45 57.9**	**-1.4**
AAK	**Ala-Archa**		**13.38**	**322**	Pn		**Pn**	**16 46 24.6**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=145,slow=17,SNR=4.4								
AAK					LR		LR	16 51 39.4	
	comp=Z,197nm,18.0s,baz=140,slow=38 comp=Z,0.5nm,0.6s								
MKAR	**Makanchi Array**		**14.43**	**351**	Pn		**Pn**	**16 46 38.1**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=164,slow=14,SNR=25								
MKAR					LR		LR	16 52 58.7	
	comp=Z,154nm,19.0s,baz=138,slow=41 comp=Z,2.0nm,0.7s								
LZDM	**Lanzhou Array**		**15.27**	**72**	Pn		**P**	**16 46 54.9**	**-1.5**
	baz=277,slow=11 comp=Z,2.6nm,0.3s								
CMAR	**Chiang Mai Arr**		**18.44**	**137**	P		**Pn**	**16 47 34.5**	**+2.9**
	comp=Z,0.4nm,0.3s,baz=315,slow=12,SNR=15 comp=Z,1.9nm,0.8s								
KURBB	**Kurchatov Arra**		**18.78**	**346**	P		**P**	**16 47 33.4**	**-1.4**
	comp=Z,1.1nm,0.3s,baz=162,slow=11,SNR=19								
XAN	**Xi'an**		**19.47**	**79**	⇑P		**Pn**	**16 47 43.5**	**-0.5**
XAN					pmax		pmax		
	comp=Z,4.0nm,1.1s								
XAN					LR		LR		
	comp=N,220nm,10.3s								
XAN					LR		LR		
	comp=E,380nm,15.0s								
XAN					LR		LR		
	comp=Z,370nm,11.6s								
ZALV	**Zalesovo Beam**		**21.36**	**359**	P		**P**	**16 48 02.7**	**-0.1**
	comp=Z,3.4nm,0.8s,baz=181,slow=10,SNR=13								
ZALV					LR		LR	16 57 16.7	
	comp=Z,84nm,19.8s,baz=210,slow=40 comp=Z,3.4nm,0.8s								
SONM	**Songino Array**		**21.86**	**40**	P		**P**	**16 48 10.7**	**+2.4**
	comp=Z,1.4nm,0.9s,baz=232,slow=11,SNR=7.3								
SONM					LR		LR	16 57 25.2	
	comp=Z,139nm,19.7s,baz=202,slow=39 comp=Z,1.4nm,0.9s								
TLY	**Talaya**		**23.16**	**29**	LR		LR	16 57 56.0	
	comp=Z,102nm,21.4s,baz=221,slow=38								
BVAR	**Borovoye Array**		**23.21**	**336**	P		**P**	**16 48 21.5**	**-0.9**
	comp=Z,2.5nm,1.1s,baz=140,slow=12,SNR=7.6 comp=Z,2.5nm,1.1s								
PALK	**Pallekele**		**25.61**	**191**	LR		LR	16 58 51.5	
	comp=Z,87nm,20.4s,baz=18,slow=37								
AKTO	**Aktyubinsk**		**27.10**	**319**	LR		LR	17 00 09.8	
	comp=Z,123nm,18.2s,baz=18,slow=38								
GNI	**Garni**		**33.59**	**295**	LR		LR	17 05 48.2	
	comp=Z,85nm,19.4s,baz=85,slow=41								
KSRS	**Korea Array**		**34.72**	**70**	LR		LR	17 05 57.3	
	comp=Z,28nm,19.7s,baz=300,slow=39								
NRIK	**Noril'sk**		**36.82**	**1**	P		**P**	**16 50 23.5**	**+0.6**
	comp=Z,0.8nm,0.4s,baz=157,slow=6.3,SNR=4.3								
NRIK					LR		LR	17 07 06.2	
	comp=Z,153nm,18.9s,baz=168,slow=39 comp=Z,0.8nm,0.4s								
JOW	**Kunigami**		**37.25**	**87**	LR		LR	17 06 23.5	
	comp=Z,70nm,20.6s,baz=88,slow=37								
JNU	**Nakatsue**		**37.74**	**77**	LR		LR	17 06 57.2	
	comp=Z,120nm,19.4s,baz=306,slow=38								
ASF	**Jabal al Asfar**		**40.91**	**283**	LR		LR	17 11 32.5	
	comp=Z,96nm,18.0s,baz=21,slow=42								
BRTR	**Keskin Array B**		**42.13**	**295**	P		**P**	**16 51 08.2**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=100,slow=6.4,SNR=4.5								
BRTR					LR		LR	17 13 28.2	
	comp=Z,62nm,18.3s,baz=218,slow=43 comp=Z,0.6nm,0.8s								
MJAR	**Matsushiro Arr**		**43.00**	**70**	LR		LR	17 09 55.6	
	comp=Z,105nm,19.7s,baz=342,slow=37								
EIL	**Elat**		**43.20**	**280**	LR		LR	17 12 47.3	
	comp=Z,114nm,19.2s,baz=49,slow=41								
AKASG	**Malin Array Be**		**44.74**	**311**	LR		LR	17 10 09.9	
	comp=Z,116nm,18.3s,baz=56,slow=36								
TIXI	**Tiksi**		**45.30**	**18**	LR		LR	17 10 37.2	
	comp=Z,82nm,20.0s,baz=314,slow=36								
MA2	**Magadan**		**50.03**	**37**	LR		LR	17 15 13.0	
	comp=Z,85nm,18.2s,baz=90,slow=38								
PETK	**Petropavlovsk-**		**54.21**	**45**	LR		LR	17 19 21.1	
	comp=Z,51nm,19.2s,baz=313,slow=40								
NOA	**NORSAR Array B**		**54.67**	**325**	P		**P**	**16 52 42.9**	**-1.1**
	comp=Z,1.3nm,0.8s,baz=85,slow=7.3,SNR=3.3								
NOA					LR		LR	17 16 09.5	
	comp=Z,46nm,18.3s,baz=210,slow=36 comp=Z,1.3nm,0.8s								
GUMO	**Guam**		**56.93**	**95**	LR		LR	17 18 36.9	
	comp=Z,29nm,20.3s,baz=63,slow=37								
WRA	**Warramunga Arr**		**69.95**	**131**	P		**P**	**16 54 28.5**	**+1.9**
	comp=Z,0.5nm,0.7s,baz=319,slow=6.2,SNR=9.6 comp=Z,0.5nm,0.7s								
ASAR	**Alice Springs**		**72.44**	**134**	P		**P**	**16 54 43.4**	**+1.7**
	comp=Z,0.3nm,0.7s,baz=317,slow=5.8,SNR=6.7 comp=Z,0.3nm,0.7s								
ILAR	**Eielson Array**		**74.67**	**21**	P		**P**	**16 54 53.6**	**-0.6**
	comp=Z,0.3nm,0.9s,baz=325,slow=5.9,SNR=1.5 comp=Z,0.3nm,0.9s								
TORD	**Torodi Ar. Bea**		**78.04**	**278**	P		**P**	**16 55 13.5**	**-0.7**
	comp=Z,1.1nm,0.8s,baz=41,slow=1.9,SNR=5.2 comp=Z,1.1nm,0.8s								
BOSA	**Boshof**		**83.63**	**230**	P		**P**	**16 55 43.2**	**-0.6**
	comp=Z,3.8nm,0.9s,baz=107,slow=4.9,SNR=3.5 comp=Z,3.8nm,0.9s								
YKA	**Yellowknife Ar**		**83.85**	**9**	P		**P**	**16 55 44.3**	**0.0**
	comp=Z,0.3nm,0.7s,baz=338,slow=6.1,SNR=5.6								
YKA					LR		LR	17 38 27.5	
	comp=Z,79nm,19.2s,baz=19,slow=40 comp=Z,0.3nm,0.7s								

IDC 11 16:43:40.8±999.0, 57.74N×27.78E, h0km, Error ellipse: s-maj=964.9km s-min=155.2km az=97.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**5.23**	**97**	I	I	17 16 50.0	
	0.2nm,0.5s,baz=282,slow=325,SNR=1.5						
I31KZ	**AKTYUBINSK INF**	**19.08**	**100**	I	I	18 39 40.0	
	baz=307,slow=329,SNR=1.5						
I46RU	**ZALESOVO INFRA**	**31.43**	**72**	I	I	19 54 23.5	
	baz=301,slow=323						

*NEIC **11** 16:49:22.7±2.3, 15°.88N±0°.06×96°.74W±0°.04, h12km±7km, mb4.3/39, Md4.5/73(MEX), Error ellipse: s-maj=8.8km s-min=5.5km az=160.0*
*MEX **11** 16:49:23.0±0.8, 15°.78N×96°.76W, h4km±9km, MD4.5*
*IDC **11** 16:49:30.2±3.8, 16°.07N×96°.23W, h76km±33km, mb3.4/6, mbtmp3.7/8, MS3.3/2, Error ellipse: s-maj=34.9km s-min=20.9km az=46.0*

ISC 11 16:49:20.9±1.5, 15.69N±0°.04×96.76W±0°.02, h16km±10km, n136, σ2925/201, mb4.2/17, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEIG	**Puerto Escondi**	**0.48**	**310**		**Pb**	**16 49 31.1**	**+0.1**
PEIG					**Sg**	**16 49 37.0**	**-0.1**
PEIG	**Puerto Escondi**	**0.48**	**310**	*e*P	**Pb**	**16 49 31.1**	**+0.1**
PEIG				*e*S	**Sg**	**16 49 37.0**	**-0.1**
HUIG	**Huatulco**	**0.63**	**83**		**Pb**	**16 49 34.5**	**+0.9**
HUIG					**Sb**	**16 49 42.8**	**+0.6**
HUIG	**Huatulco**	**0.63**	**83**	*e*P	**Pb**	**16 49 34.5**	**+0.9**
HUIG				*e*S	**Sb**	**16 49 42.8**	**+0.6**
OXLC	**Oaxaca**	**1.37**	**2**		**Pn**	**16 49 44.3**	**-1.2**
OXLC					**Sn**	**16 50 00.3**	**-3.1**
OXLC	**Oaxaca**	**1.37**	**2**	*e*P	**Pn**	**16 49 44.3**	**-1.2**
OXLC				*i*S	**Sn**	**16 50 00.3**	**-3.1**
OXBJ	**Oaxaca**	**1.37**	**2**		**Pn**	**16 49 44.3**	**-1.3**
OXBJ					**Sn**	**16 50 00.1**	**-3.5**
OXBJ	**Oaxaca**	**1.37**	**2**	*e*P	**Pn**	**16 49 44.3**	**-1.3**
OXBJ				*e*S	**Sn**	**16 50 00.1**	**-3.5**
VHO	**Vista Hermosa**	**1.38**	**1**	*i*P	**Pn**	**16 49 44.4**	**-1.3**
VHO				*i*S	**Sn**	**16 50 00.3**	**-3.3**
OXIG	**Oaxaca**	**1.38**	**1**		**Pn**	**16 49 44.4**	**-1.3**
OXIG					**Sn**	**16 50 00.3**	**-3.4**
YOIG	**Yosondua**	**1.39**	**327**		**Pn**	**16 49 45.0**	**-0.8**
YOIG					**Sn**	**16 50 01.3**	**-2.6**
YOIG	**Yosondua**	**1.39**	**327**	*e*P	**Pn**	**16 49 45.0**	**-0.8**
YOIG				*i*S	**Sn**	**16 50 01.3**	**-2.6**
PNIG	**Pinotepa**	**1.49**	**298**		**Pn**	**16 49 46.4**	**-0.6**
PNIG					**Sn**	**16 50 03.6**	**-2.5**
PNIG	**Pinotepa**	**1.49**	**298**	*e*P	**Pn**	**16 49 46.4**	**-0.6**
PNIG				*i*S	**Sn**	**16 50 03.6**	**-2.5**
TXIG	**Tlaxiaco**	**1.83**	**328**		**Pn**	**16 49 51.7**	**-0.2**
TXIG					**Sn**	**16 50 11.7**	**-3.3**
TXIG	**Tlaxiaco**	**1.83**	**328**	*e*P	**Pn**	**16 49 51.7**	**-0.2**
TXIG				*i*S	**Sn**	**16 50 11.7**	**-3.3**
NEUV	**Arroyo Zacate**	**2.21**	**24**		**Pn**	**16 49 56.4**	**-0.6**
NEUV					**Sn**	**16 50 22.1**	**-1.8**
NEUV	**Arroyo Zacate**	**2.21**	**24**	*e*P	**Pn**	**16 49 56.4**	**-0.6**
NEUV				*e*S	**Sn**	**16 50 22.1**	**-1.8**
CMIG	**Matias Romero**	**2.28**	**52**	P	**Pn**	**16 49 57.1**	**-0.8**
	42nm,0.3s,baz=247,slow=10,SNR=94						
CMIG				S	**Sn**	**16 50 17.8**	**-7.8**
	212nm,0.4s,baz=276,slow=17,SNR=6.7						
CMIG	**Matias Romero**	**2.28**	**52**		**Pn**	**16 49 56.1**	**-1.7**
CMIG					**Sn**	**16 50 24.6**	**-1.0**
CMIG	**Matias Romero**	**2.28**	**52**	*e*P	**Pn**	**16 49 56.1**	**-1.7**
CMIG				*e*S	**Sn**	**16 50 24.6**	**-1.0**
HLIG	**Huajuapan de L**	**2.35**	**335**		**Pn**	**16 50 00.4**	**+1.3**
HLIG					**Sn**	**16 50 26.7**	**-1.1**
HLIG	**Huajuapan de L**	**2.35**	**335**	*e*P	**Pn**	**16 50 00.4**	**+1.3**
HLIG				*e*S	**Sn**	**16 50 26.7**	**-1.1**
MGIG	**Malinaltepec**	**2.36**	**311**		**Pn**	**16 50 00.9**	**+1.7**
MGIG					**Sn**	**16 50 26.6**	**-1.4**
MGIG	**Malinaltepec**	**2.36**	**311**	*e*P	**Pn**	**16 50 00.9**	**+1.7**
MGIG				*i*S	**Sn**	**16 50 26.6**	**-1.4**
TOIG	**Toxpalan**	**2.41**	**353**		**Pn**	**16 50 01.5**	**+1.7**
TOIG					**Sn**	**16 50 31.1**	**+2.0**
TOIG	**Toxpalan**	**2.41**	**353**	*e*P	**Pn**	**16 50 01.5**	**+1.7**
TOIG				*i*S	**Sn**	**16 50 31.1**	**+2.0**
CRIG	**Cruz Grande**	**2.50**	**295**		**Pn**	**16 50 01.8**	**+0.9**
CRIG					**Sn**	**16 50 27.2**	**-4.0**
CRIG	**Cruz Grande**	**2.50**	**295**	*e*P	**Pn**	**16 50 01.8**	**+0.9**
CRIG				*i*S	**Sn**	**16 50 27.2**	**-4.0**
TLIG	**Tlapa**	**2.54**	**317**	Pn	**Pn**	**16 50 03.1**	**+1.5**
TLIG					**Sb**	**16 50 37.1**	**-0.3**
TLIG	**Tlapa**	**2.54**	**317**	*e*P	**Pb**	**16 50 05.2**	**-1.0**
TLIG				*e*S	**Sn**	**16 50 31.1**	**-1.2**
FTIG	**Fresnillo de T**	**2.57**	**329**		**Pn**	**16 50 02.8**	**+0.9**
FTIG					**Sn**	**16 50 30.9**	**-2.1**
FTIG	**Fresnillo de T**	**2.57**	**329**	*e*P	**Pn**	**16 50 02.8**	**+0.9**
FTIG				*i*S	**Sn**	**16 50 30.9**	**-2.1**
TPIG	**Tehuac#an**	**2.78**	**348**		**Pn**	**16 50 07.8**	**+2.9**
TPIG					**Sn**	**16 50 36.1**	**-2.0**
TPIG	**Tehuac#an**	**2.78**	**348**	*e*P	**Pn**	**16 50 07.8**	**+2.9**
TPIG				*i*S	**Sn**	**16 50 36.1**	**-2.0**
CARR	**Arriaga**	**2.80**	**78**	*i*P	**Pn**	**16 50 04.2**	**-0.8**
CARR				*i*S	**Sn**	**16 50 34.1**	**-4.3**
DAIG	**Los Arroyos**	**3.07**	**296**		**Pn**	**16 50 10.2**	**+1.4**
DAIG					**Sn**	**16 50 41.3**	**-3.9**
DAIG	**Los Arroyos**	**3.07**	**296**	*e*P	**Pn**	**16 50 10.2**	**+1.4**
DAIG				*e*S	**Sn**	**16 50 41.3**	**-3.9**
PMUV	**Sontecomapan**	**3.25**	**29**		**Pn**	**16 50 08.8**	**-2.4**
PMUV	**Sontecomapan**	**3.25**	**29**	*e*P	**Pn**	**16 50 08.8**	**-2.4**
PCIG		**3.41**	**89**		**Pn**	**16 50 13.8**	**+0.4**
PCIG					**Sn**	**16 50 50.7**	**-2.9**
PCIG		**3.41**	**89**	*e*P	**Pn**	**16 50 13.8**	**+0.4**
PCIG				*i*S	**Sn**	**16 50 50.7**	**-2.9**
MEIG	**Mezcala**	**3.53**	**310**		**Pn**	**16 50 19.3**	**+4.2**
MEIG					**Sn**	**16 50 54.9**	**-1.7**
MEIG	**Mezcala**	**3.53**	**310**	*e*P	**Pn**	**16 50 19.3**	**+4.2**
MEIG				*i*S	**Sn**	**16 50 54.9**	**-1.7**
CAIG	**El Cayaco**	**3.63**	**292**		**Pn**	**16 50 18.7**	**+2.3**
CAIG					**Sn**	**16 50 53.6**	**-5.3**
CAIG	**El Cayaco**	**3.63**	**292**	*e*P	**Pn**	**16 50 18.7**	**+2.3**
CAIG				*i*S	**Sn**	**16 50 53.6**	**-5.3**
JAUV	**Jalcomulco**	**3.66**	**359**		**Pn**	**16 50 16.0**	**-0.9**
JAUV					**Sn**	**16 51 03.6**	**+3.9**
JAUV	**Jalcomulco**	**3.66**	**359**	*e*P	**Pn**	**16 50 16.0**	**-0.9**
JAUV				*i*S	**Sn**	**16 51 03.6**	**+3.9**
TGIG		**3.66**	**72**		**Pn**	**16 50 17.6**	**+0.7**
TGIG					**Sn**	**16 50 59.9**	**+0.1**
TGIG		**3.66**	**72**	*e*P	**Pn**	**16 50 17.6**	**+0.7**
TGIG				*i*S	**Sn**	**16 50 59.9**	**+0.1**
PLIG	**Platanillo**	**3.76**	**316**		**Pn**	**16 50 22.6**	**+4.3**
PLIG					**Sn**	**16 51 00.7**	**-1.5**
PLIG	**Platanillo**	**3.76**	**316**	*e*P	**Pn**	**16 50 22.6**	**+4.3**
PLIG				*i*S	**Sn**	**16 51 00.7**	**-1.5**
PPM	**Popocatepetl**	**3.80**	**332**	*e*P	**Pn**	**16 50 21.9**	**+2.6**
PPM				*i*S	**Sn**	**16 51 05.0**	**+1.0**
PPIG	**Popocatepetl**	**3.80**	**332**		**Pn**	**16 50 21.9**	**+2.6**
PPIG					**Sn**	**16 51 05.0**	**+1.0**
YAIG	**Yautepec**	**3.85**	**325**		**Pb**	**16 50 25.9**	**-2.6**
YAIG					**Sn**	**16 51 02.0**	**-2.5**
YAIG	**Yautepec**	**3.85**	**325**	*e*P	**Pb**	**16 50 25.9**	**-2.6**
YAIG				*e*S	**Sn**	**16 51 02.0**	**-2.5**
LVIG	**Laguna Verde**	**4.03**	**5**		**Pn**	**16 50 19.7**	**-2.2**
LVIG					**Sn**	**16 51 10.5**	**+1.8**
LVIG	**Laguna Verde**	**4.03**	**5**	*e*P	**Pn**	**16 50 19.7**	**-2.2**
LVIG				*e*S	**Sn**	**16 51 10.5**	**+1.8**
ARIG	**Puente Sto Nin**	**4.29**	**307**		Pn	16 50 31.1	+5.5
ARIG					**Sn**	**16 51 12.4**	**-3.0**
ARIG	**Puente Sto Nin**	**4.29**	**307**	*e*P	Pn	16 50 31.1	+5.5
ARIG				*i*S	**Sn**	**16 51 12.4**	**-3.0**
UNM	**Universidad Na**	**4.29**	**328**	Pn	**Pn**	**16 50 26.1**	**+0.3**
PATR	**El Naranjo**	**4.40**	**97**		**Pn**	**16 50 28.3**	**+1.0**
PATR					**Sn**	**16 51 15.2**	**-3.2**
PATR	**El Naranjo**	**4.40**	**97**	*e*P	**Pn**	**16 50 28.3**	**+1.0**
PATR				*i*S	**Sn**	**16 51 15.2**	**-3.2**
PAVE	**Pavencul**	**4.45**	**96**		**Pn**	**16 50 29.2**	**+1.3**
PAVE					**Sn**	**16 51 14.4**	**-5.1**
PAVE	**Pavencul**	**4.45**	**96**	*e*P	**Pn**	**16 50 29.2**	**+1.3**
PAVE				*i*S	**Sn**	**16 51 14.4**	**-5.1**
CCIG	**Comitan**	**4.49**	**82**	Pn	**Pn**	**16 50 28.1**	**-0.3**
CCIG	**Comitan**	**4.49**	**82**	*e*P	**Pn**	**16 50 27.9**	**-0.5**
CCIG				*i*S	**Sn**	**16 51 23.1**	**+2.7**
CHUJ	**Union Juarez**	**4.53**	**97**	*i*P	**Pn**	**16 50 30.3**	**+1.3**
CHUJ				*i*S	**Sn**	**16 51 15.8**	**-5.7**
CXUV	**Coxquihui**	**4.53**	**350**		**Pn**	**16 50 31.9**	**+3.0**
CXUV					**Sb**	**16 51 29.3**	**-5.2**
CXUV	**Coxquihui**	**4.53**	**350**	*e*P	**Pn**	**16 50 31.9**	**+3.0**
CXUV				*i*S	**Sb**	**16 51 29.3**	**-5.2**
ZIIG	**Zihuatanejo**	**4.90**	**294**	*e*S	**Sn**	**16 51 36.0**	**+5.8**
DHIG	**Demacu**	**5.07**	**335**		**Pn**	**16 50 36.8**	**+0.3**
DHIG					**Sn**	**16 51 33.5**	**-1.4**
DEIG	**Demacu**	**5.07**	**335**	*e*P	**Pn**	**16 50 36.8**	**+0.3**
DEIG				*e*S	**Sn**	**16 51 33.5**	**-1.4**
HUEH	**Huehuetenango**	**5.08**	**93**	Pn	**Pn**	**16 50 37.4**	**+0.8**
MOIG	**Morelia**	**5.79**	**314**	*i*S	**Sn**	**16 51 53.1**	**+0.5**
CTUV	**Llano Grande**	**5.95**	**346**		**Sn**	**16 51 59.1**	**+2.9**
CTUV	**Llano Grande**	**5.95**	**346**	*e*S	**Sn**	**16 51 59.1**	**+2.9**
APG	**El Apazote**	**6.11**	**96**	P	**Pn**	**16 50 52.0**	**+1.2**
	0.5nm,0.3s,baz=160,slow=10,SNR=10						
APG				S	**Sn**	**16 51 56.8**	**-3.8**
	1.5nm,0.8s,baz=85,slow=14,SNR=3.6						
PETF	**Flores**	**6.73**	**79**	Pn	**Pn**	**16 50 58.9**	**-0.2**
MTO3	**Montecristo**	**7.26**	**99**	Pn	**Pn**	**16 51 07.5**	**+0.9**
TEIG	**Tepich**	**9.25**	**60**	Pn	**Pn**	**16 51 32.4**	**-1.3**
CNGN	**Cerro Negro**	**10.26**	**107**	Pn	**Pn**	**16 51 52.0**	**+4.4**
TXAR	**Lajitas Array**	**15.00**	**336**	P	**P**	**16 52 58.4**	**+0.6**
	1.1nm,0.7s,baz=157,slow=13,SNR=11						
TXAR				LR	LR	16 59 16.1	
	comp=Z,148nm,18.1s,baz=126,slow=39						
TXAR	**Lajitas Array**	**15.00**	**336**	P	**P**	**16 52 57.8**	**+0.1**
TX31	**Lajitas Ar. Si**	**15.00**	**336**	P	**P**	**16 52 59.8**	**+2.0**
BRDY	**Brady**	**15.66**	**353**		**P**	**16 53 04.7**	**-0.3**
SGCY	**Sterling City**	**16.64**	**347**		**P**	**16 53 15.3**	**-0.6**
VHRN	**Van Horn**	**16.81**	**335**	P	**P**	**16 53 19.0**	**+1.1**
PECS	**Pecos**	**16.91**	**339**		**P**	**16 53 19.3**	**+0.4**
ODSA	**Odessa**	**17.19**	**343**	P	**P**	**16 53 22.2**	**+0.2**
GDL2	**Guadalupe Moun**	**17.84**	**339**	P	**Pn**	**16 53 28.6**	**0.0**
Z41A	**Richland Creek**	**17.86**	**11**		**Pn**	**16 53 29.5**	**+0.8**
Z41A					IAmb	IAmb	16 53 38.9	
	comp=Z,20nm,0.6s						
DKNS	**Dickens**	**18.29**	**349**		**Pn**	**16 53 33.1**	**-1.0**
MSTX	**Muleshoe**	**19.00**	**344**	P	**P**	**16 53 41.7**	**-0.2**
MIAR	**Mount Ida**	**19.00**	**8**	P	**P**	**16 53 42.1**	**+0.3**
MIAR					IAmb	IAmb	16 53 52.6	
	comp=Z,19nm,0.8s						
UALR	**University of**	**19.42**	**11**	P	**P**	**16 53 45.7**	**-0.7**
UALR					IAmb	IAmb	16 53 56.0	
	comp=Z,18nm,0.7s						
SMWD	**Samnorwood**	**19.59**	**351**	P	**P**	**16 53 48.1**	**-0.3**
SMWD					IAmb	IAmb	16 53 55.2	
	comp=Z,9.6nm,0.6s						
DEOK	**Depew**	**20.07**	**1**	P	**P**	**16 53 53.3**	**-0.3**
DEOK					IAmb	IAmb	16 54 03.6	
	comp=Z,9.5nm,0.8s						
TUL3	**Leonard**	**20.16**	**2**	P	**P**	**16 53 55.1**	**+0.6**
CRNM	**Carthage**	**20.29**	**335**	P	**P**	**16 53 57.7**	**+1.5**
SBM	**South Baldy**	**20.49**	**335**	P	**P**	**16 53 59.6**	**+1.0**
FCAR	**Ozark Folk Cen**	**20.54**	**11**	P	**P**	**16 53 58.8**	**+0.2**
FCAR					IAmb	IAmb	16 54 08.4	
	comp=Z,15nm,0.8s						
LENM	**Lemitar**	**20.57**	**335**	P	Pn	16 54 01.5	0.0
HHAR	**Hobbs**	**20.66**	**6**	P	**P**	**16 54 01.0**	**+1.0**
CROK	**Carrier**	**20.76**	**357**	P	**P**	**16 54 02.7**	**+1.6**
CROK					IAmb	IAmb	16 54 12.0	
	comp=Z,25nm,0.9s						
U38A	**Gravette**	**20.78**	**5**	P	**P**	**16 54 01.8**	**+0.6**
U38A					IAmb	IAmb	16 54 05.5	
	comp=Z,7.5nm,0.7s						
ANMO	**Albuquerque**	**21.06**	**337**	P	**P**	**16 54 07.0**	**+2.5**
	comp=Z,1.4nm,0.7s,baz=148,slow=13,SNR=4.4 comp=Z,1.4nm,0.7s						
MGMO	**Mountain Grove**	**21.75**	**10**	P	**P**	**16 54 13.1**	**+1.4**
MGMO					IAmb	IAmb	16 54 14.8	
	comp=Z,12nm,0.8s						
WVT	**Waverly**	**21.86**	**20**	P	**P**	**16 54 11.0**	**-1.9**
WVT					IAmb	IAmb	16 54 23.7	
	comp=Z,13nm,1.1s						
T47A	**Sharon Grove**	**22.88**	**20**	P	**P**	**16 54 22.3**	**-1.5**
TKL	**Tuckaleechee C**	**23.03**	**28**	LR	LR	17 05 57.5	
	comp=Z,52nm,18.2s,baz=109,slow=44						
P40A	**Paris**	**24.11**	**9**	P	**P**	**16 54 34.9**	**-1.0**
P40A					IAmb	IAmb	16 54 36.2	
	comp=Z,12nm,0.9s						
WCI	**Wyandotte Cave**	**24.28**	**20**	P	**P**	**16 54 36.9**	**-0.5**
N38A	**Joes South For**	**25.20**	**6**	P	**P**	**16 54 45.5**	**-0.3**
Q52A	**Bidwell**	**26.45**	**26**	P	**P**	**16 54 56.3**	**-0.8**
O49A	**Covington**	**26.71**	**22**	P	**P**	**16 54 59.5**	**+0.1**
PDAR	**Pinedale Array**	**29.13**	**340**	P	**P**	**16 55 23.1**	**+1.8**
	comp=Z,0.4nm,0.7s,baz=147,slow=7.7,SNR=3.7 comp=Z,0.4nm,0.7s						
PDAR	**Pinedale Array**	**29.13**	**340**	P	**P**	**16 55 21.9**	**+0.6**
NVAR	**Mina Array Bea**	**29.54**	**324**	P	**P**	**16 55 27.4**	**+2.4**
	comp=Z,0.9nm,0.7s,baz=124,slow=5.4,SNR=5.9 comp=Z,0.9nm,0.7s						
LOHW	**Long Hollow**	**30.23**	**340**	P	**P**	**16 55 32.3**	**+1.2**
LOHW					IAmb	IAmb	16 55 33.9	
	comp=Z,2.8nm,0.8s						
MOOW	**Moose Ponds**	**30.40**	**340**	P	**P**	**16 55 34.4**	**+1.8**
MCMT	**McKenzie Canyo**	**32.07**	**338**	P	**P**	**16 55 47.9**	**+0.6**
PLID	**Pearl Lake**	**33.50**	**335**	P	**P**	**16 56 00.3**	**+0.6**
PLID					IAmb	IAmb	16 56 11.0	
	comp=Z,3.1nm,0.9s						
FCC	**Fort Churchill**	**43.05**	**2**	P	**P**	**16 57 19.6**	**0.0**
FCC					IAmb	IAmb	16 57 28.5	
	comp=Z,4.3nm,1.2s						
SCHQ	**Schefferville**	**45.40**	**24**	P	**P**	**16 57 37.4**	**-1.2**
	comp=Z,3.2nm,1.0s,baz=230,slow=8.1,SNR=2.4 comp=Z,3.2nm,1.0s						
YKA	**Yellowknife Ar**	**48.42**	**349**	P	**P**	**16 58 01.6**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=160,slow=6.6,SNR=7.3 comp=Z,0.6nm,0.8s						
M29M	**Somme Creek**	**55.09**	**338**	P	**P**	**16 58 54.5**	**+2.5**
M29M					IAmb	IAmb	16 59 20.5	
	comp=Z,7.8nm,1.4s						
G31M	**Satah River**	**56.76**	**343**	P	**P**	**16 59 04.5**	**+0.8**
G31M					IAmb	IAmb	16 59 05.9	
	comp=Z,3.0nm,0.8s						
F30M	**Barrier River**	**57.

CO01 eS Sg **17 05 24.6 -1.1**
CO01 IAML 17 05 32.0
comp=Z,8µm,0.8s
CO04 Los Peladeros 2.06 149 Pb 17 05 00.6 -2.1
CO04 Los Peladeros 2.06 149 eP **Pb 17 05 00.6 -2.1**
CO04 *i* S **Sn 17 05 26.2 +0.2**
CO04 IAML 17 05 37.3
comp=E,8µm,0.3s
AC05 El Transito 2.24 50 Pn 17 05 03.0 +0.5
AC05 El Transito 2.24 50 eP **Pb 17 05 04.0 -1.8**
AC05 *i* S **Sb 17 05 32.8 -0.8**
AC05 El Transito 2.24 50 eP **Pb 17 05 03.4 -2.4**
AC05 eS **Sb 17 05 32.9 -0.8**
AC05 IAML 17 05 40.1
comp=Z,3µm,0.7s
AC04 Llanos de Chal 2.31 26 Pn 17 05 03.4 +0.1
AC04 Llanos de Chal 2.31 26 eP **Pn 17 04 59.6 -3.6**
AC04 Llanos de Chal 2.31 26 eP **Pn 17 05 02.9 -0.4**
AC04 eS **Sb 17 05 36.6 +1.1**
AC04 IAML 17 05 47.7
comp=Z,3µm,0.8s
AROD Rodeo 2.40 88 eP **Pb 17 05 08.1 -0.4**
AROD eS **Sg 17 05 45.9 +3.8**
VA06 Catapilco 2.41 161 Pn 17 05 04.7 +0.1
VA06 Catapilco 2.41 161⇑ eP **Pn 17 05 04.7 +0.1**
VA06 IAML 17 05 52.5
comp=N,6µm,0.5s
ACDV Cuesta del Vie 2.70 88 eP **Pb 17 05 14.0 +0.3**
ACDV eS **Sg 17 05 50.7 -1.2**
ACDV IAML 17 05 54.7
comp=Z,5µm,0.6s
ACCO Cerro Coronel 2.76 97 eP **Pb 17 05 14.0 -0.7**
ACCO eP **Pb 17 05 14.0 -0.7**
ACCO eS **Sg 17 05 52.6 -1.1**
VA01 Torpederas 2.77 170 Pn 17 05 09.2 -0.4
VA01 Torpederas 2.77 170 eP **Pn 17 05 09.3 -0.3**
VA01 Torpederas 2.77 170 eP **Pn 17 05 08.1 -1.5**
VA03 San Esteban 2.86 150 Pn 17 05 12.0 +1.1
VA03 San Esteban 2.86 150⇑ eP **Pn 17 05 12.1 +1.2**
VA03 San Esteban 2.86 150 eP **Pn 17 05 12.1 +1.2**
VA03 IAML 17 06 20.8
comp=Z,2µm,0.8s
ROCH El Roble 2.87 159 eP **Pn 17 05 11.5 +0.3**
ROCH IAML 17 06 09.2
comp=N,3µm,0.3s
RTLS Leoncito 2.94 122 eP **Pb 17 05 16.1 -1.7**
RTLS IAML 17 06 01.8
comp=Z,9µm,0.9s
MT02 Curacav 3.11 163 Pn 17 05 14.1 -0.1
MT02 Curacav 3.11 163 eP **Pn 17 05 14.4 +0.1**
MT02 Curacav 3.11 163 eP **Pn 17 05 14.0 -0.3**
MT02 IAML 17 06 13.5
comp=Z,1µm,0.8s
PEL Peldehue 3.14 155 Pn 17 05 15.6 +0.9
PEL Peldehue 3.14 155 eP **Pn 17 05 15.7 +1.0**
PEL eS **Sg 17 06 07.7 +1.7**
PEL IAML 17 06 10.0
comp=Z,3µm,0.8s
GO03 Copiapo 3.21 34 Pn 17 05 16.2 +0.5
GO03 Copiapo 3.21 34⇑ eP **Pn 17 05 16.1 +0.5**
GO03 Copiapo 3.21 34 eP **Pn 17 05 16.1 +0.5**
GO03 IAML 17 06 16.6
comp=Z,2µm,0.8s
ZON Zonda 3.31 113 Pb 17 05 20.2 -3.7
MT10 Hacienda Santa 3.31 154⇑ eP **Pn 17 05 18.2 +1.0**
MT05 Renca 3.35 158 eP **Pn 17 05 18.3 +0.7**
MT05 eS **Sn 17 06 00.0 +2.6**
MT05 IAML 17 06 19.2
comp=Z,2µm,0.9s
AC06 Mina Casimiro 3.35 30⇑ eP **Pn 17 05 18.5 +0.9**
RTLL Cerro Villicun 3.40 109 eP **Pb 17 05 21.9 -3.6**
RTLL eS **Sb 17 06 05.0 -1.9**
RTLL IAML 17 06 16.5
comp=Z,2µm,1.2s
MT14 Cerro Cal¡n 3.42 155 eP **Pn 17 05 20.3 +1.7**
MT16 CCHEN 3.46 155 Pn 17 05 19.8 +0.7
MT16 CCHEN 3.46 155⇓ eP **Pn 17 05 20.7 +1.6**
MT03 Universidad Ad 3.52 156 Pn 17 05 20.2 +0.2
MT03 Universidad Ad 3.52 156 eP **Pn 17 05 20.8 +0.9**
MT03 Universidad Ad 3.52 156 eP Pn 17 05 11.6 -8.3
MT03 eP Pb 17 05 21.1 -6.4
MT03 eS **Sn 17 06 02.6 +0.9**
MT03 IAML 17 06 34.5
comp=Z,2µm,0.8s
MT04 Ro Olivares 3.59 151⇑ eP **Pn 17 05 22.8 +1.8**
MT04 Ro Olivares 3.59 151 eP **Pn 17 05 22.6 +1.6**
MT04 eS **Sn 17 06 06.2 +2.6**
MT04 IAML 17 06 22.7
comp=Z,1µm,0.8s
MT15 Las Vizcachas 3.62 156 eP **Pn 17 05 22.4 +1.1**
MT09 Talagante 3.64 163⇑ eP **Pn 17 05 21.9 +0.3**
MT01 Popeta 3.66 167⇑ eP **Pn 17 05 21.7 -0.2**
MT01 Popeta 3.66 167 eP **Pn 17 05 21.4 -0.5**
MT08 Bocatoma Ro 3.67 150 eP **Pn 17 05 24.8 +2.6**
MT08 Bocatoma Ro 3.67 150 eP **Pn 17 05 24.8 +2.6**
MT08 eS **Sb 17 06 09.6 -5.3**
MT08 IAML 17 06 31.6
comp=Z,1µm,0.8s
CFA Coronel Fontan 3.68 112 Pn **Pn 17 05 24.4 +2.3**
comp=Z,27nm,0.3s,baz=288,slow=15,SNR=134
CFA Sn **Sn 17 06 08.7 +3.1**
comp=Z,40nm,0.3s,baz=202,slow=19,SNR=7.4
CFA LR LR 17 06 43.4
comp=Z,462nm,21.6s,baz=236,slow=38
comp=Z,60nm,0.4s
CFA Coronel Fontan 3.68 112 eP **Pb 17 05 25.6 -4.6**
CFA eS **Sb 17 06 11.8 -3.2**
CFA IAML 17 06 29.7
comp=Z,1µm,0.7s
ASAL Salagasta 3.71 129 eP **Pb 17 05 26.9 -3.9**
MT12 Pirque 3.72 158⇑ eP **Pn 17 05 23.7 +1.0**
MT13 San Alfonso 3.82 155 Pn 17 05 25.5 +1.3
MT13 San Alfonso 3.82 155 eP **Pn 17 05 25.7 +1.6**
MT13 San Alfonso 3.82 155 eP **Pn 17 05 25.4 +1.3**
MT13 eS **Sn 17 06 09.6 +0.3**
MT13 IAML 17 06 27.9
comp=Z,693nm,0.5s
VCA Vinchina 3.84 67 eP **Pb 17 05 28.7 -4.4**
BO04 La Punta 3.94 160⇑ eP **Pn 17 05 26.4 +0.7**
LMEL Las Melosas 3.95 155 eP **Pn 17 05 27.3 +1.3**
LMEL *i* S **Sn 17 06 11.8 -0.5**
AAGR Agrelo 4.03 135 eP **Pb 17 05 31.9 -4.4**
AAGR IAML 17 06 44.8
comp=Z,2µm,1.5s
BO01 Tunca 4.21 167 Pn 17 05 29.1 -0.2
AC01 Pan de Azucar 4.37 20 Pn 17 05 30.7 -0.9
AC02 Maricunga 4.39 39 Pn 17 05 33.6 +1.3
AC02 Maricunga 4.39 39⇑ eP **Pn 17 05 33.9 +1.5**
BO02 Sierra Bellavi 4.66 165 Pn 17 05 35.8 +0.2
GO05 Hualane 4.72 177 Pn 17 05 35.4 -0.9
ML02 Panimavida 5.50 173 Pn 17 05 46.8 -0.4
H03N1 Juan Fernandez 6.49 239 T T 17 13 08.7
baz=70,slow=72,SNR=747
H03N2 Juan Fernandez 6.50 239 T T 17 13 09.5
baz=70,slow=72,SNR=697
H03N3 Juan Fernandez 6.50 239 T T 17 13 08.0
baz=70,slow=72,SNR=508
VA04 Juan Fernndez 6.52 237 Pn 17 06 00.1 -1.1
TCA Tanti 6.66 101⇑ eP **Pn 17 06 03.9 +0.8**
PB10 IPOC Station P 6.91 13 Pn 17 06 06.2 -0.4
PB05 IPOC Station P 7.62 14 Pn 17 06 13.7 -2.7
PB06 IPOC Station P 7.92 18 Pn **Pn 17 06 17.6 -2.9**
PB03 IPOC Station P 8.50 16 Pn **Pn 17 06 24.8 -3.8**
PB07 IPOC Station P 8.78 14 Pn **Pn 17 06 28.1 -4.3**
PB09 IPOC Station P 8.87 18 Pn **Pn 17 06 30.8 -2.8**
PB02 IPOC Station P 9.18 14 Pn **Pn 17 06 33.5 -4.2**
PB01 IPOC Station P 9.53 16 Pn **Pn 17 06 39.8 -2.7**
LR04 Corral 9.62 185 Pn **Pn 17 06 43.0 -0.6**
LR05 Currie 9.92 179 Pn **Pn 17 06 44.0 -3.7**
PLCA Paso Flores 10.51 173 Pn **Pn 17 06 56.7 +0.8**
comp=Z,1.0nm,0.3s,baz=334,slow=11,SNR=14
comp=Z,3.7nm,0.5s
PLCA Paso Flores 10.51 173 Pn **Pn 17 06 56.0 0.0**
TRQA Tornquist 11.49 135 Pn **Pn 17 07 08.4 -0.9**
PB16 IPOC Station P 12.16 12 Pn 17 07 18.7 -0.3
PB18 Visviri 12.89 12 Pn 17 07 35.3 +6.4
LPA La Plata 12.91 115 PN **Pn 17 07 27.2 -1.4**
LPA pP 17 07 31.6
LPA sP 17 07 35.9
LPA PP 17 07 38.7
LPA pPP 17 07 47.2
LPA PPP PPP 17 08 10.1
LPA PP **PgPg 17 08 32.8 +0.4**
LPA S **Sn 17 09 56.1 +3.7**
LPA La Plata 12.91 115 SN Sn 17 10 01.6 +9.2
LPA sS 17 10 09.0
LPA SS SnSn 17 10 56.7 +52
LPA SS 17 12 10.6
LPA SSS SSS 17 12 23.2
LPA PCP **PcP 17 13 03.0 -0.1**
LPA SCS **ScS 17 20 17.5 +4.7**
LPA PKIKP PKiKP 17 20 45.1 -15
LPA SKIKP 17 24 19.1
LPA PKIKS 17 24 25.4
LPA SKIKS 17 27 49.9
CPUP Villa Florida 13.71 77 Pn Pn 17 07 39.2 -0.4
comp=Z,0.2nm,0.3s,baz=238,slow=12,SNR=5.8
CPUP LR LR 17 13 16.1
comp=Z,676nm,18.4s,baz=257,slow=39
comp=Z,2.7nm,0.9s
CPUP Villa Florida 13.71 77 Pn 17 07 40.0 +0.3
LPAZ La Paz 14.43 16 Pn **Pn 17 07 52.5 +2.4**
comp=Z,1.2nm,0.3s,baz=184,slow=7.0,SNR=28
comp=Z,5.2nm,0.5s
LPAZ La Paz 14.43 16 P P 17 07 53.5 -3.7
LPAZ La Paz 14.43 16 eP **P 17 07 54.1 -3.0**
COYC Coyhaique 15.26 180 P 17 08 13.3 +7.8
COYC IAmb IAmb 17 08 27.2
comp=Z,88nm,1.5s
MURT Porto Murtinho 15.70 60 eP **P 17 08 08.5 -2.0**
BDQN Bodoquena, MS 17.07 59 eP **P 17 08 26.4 +0.7**
AQDB Aquidauana 17.83 61 P 17 08 34.7 +0.5
ITAB Concordia 17.89 85 P 17 08 34.2 -0.5
PTGB Pitanga 18.73 78 eP **Pn 17 08 44.3 -0.2**
PTLB Pontes e Lacer 19.05 42 Pn 17 08 47.5 -0.7
PTLB Pontes e Lacer 19.05 42 eP **Pn 17 08 48.7 +0.4**
LDASE Londrina, Braz 20.04 75 eP Pn 17 08 58.6 -1.6
VILB Vilhena 20.53 35 P P 17 09 02.4 -1.4
VILB IAmb IAmb 17 09 10.3
comp=Z,68nm,1.2s
VILB Vilhena 20.53 35 eP **P 17 09 03.3 -0.5**
MAJ01 Sao Joao Batis 20.54 88 eP Pn 17 09 04.1 -2.0
C2SB Chapadao do Su 21.01 61 eP **P 17 09 10.4 +1.5**
FRTB Fartura 21.36 77 eP **P 17 09 12.7 -0.1**
ITRB Iturama 22.42 67 eP **P 17 09 23.8 -0.3**
PET01 Itanhaem-SP 22.95 81 eP **P 17 09 30.8 +1.1**
SPB Sao Paulo 23.07 79 P P 17 09 31.7 +0.8
SPB IAmb IAmb 17 09 33.1
comp=Z,38nm,1.1s
SPB Sao Paulo 23.07 79 eP **P 17 09 32.4 +1.4**
BB19B Bebedouro 23.22 72 eP **P 17 09 31.8 -0.7**
PDRB Porto dos Gac 23.51 41 eP **P 17 09 34.4 -1.0**
VAO Valinhos 23.69 78 P P 17 09 36.1 -1.1
VAO IAmb IAmb 17 09 38.6
comp=Z,24nm,0.8s
VAO Valinhos 23.69 78 eP **P 17 09 36.8 -0.5**
ARAG Araguaiana, MT 23.69 57 eP **P 17 09 35.9 -1.3**
CLDB Colider 24.64 42 eP **P 17 09 46.6 +0.6**
IPMB Ipameri, GO 25.05 66 eP **P 17 09 50.1 +0.3**
PMNB Patos De Minas 26.18 69 eP **P 17 10 00.4 +0.4**
BSCB Bom Sucesso 26.38 76 eP **P 17 10 02.6 +0.8**
BDFB Brasilia 26.57 62 P P 17 10 04.2 +0.6
comp=Z,9.1nm,0.5s,baz=234,slow=8.6,SNR=12
comp=Z,9.1nm,0.5s
BDFB Brasilia 26.57 62 P P 17 10 03.2 -0.4
BDFB IAmb IAmb 17 10 05.4
comp=Z,33nm,1.3s
SNDB Serra Nova Dou 26.63 51 eP **P 17 10 04.5 +0.5**
TEFE Tefe 27.59 17 eP **P 17 10 13.9 +1.3**
NPGB Novo Progresso 28.03 38 eP **P 17 10 16.9 +0.3**
DIAM Diamantina, MG 28.56 72 eP **P 17 10 22.6 +1.1**
MACA Manacapuru-AM 29.11 24 P P 17 10 24.4 -1.8
MACA IAmb IAmb 17 10 31.6
comp=Z,19nm,0.9s
JANB Januaria 29.79 66 eP **P 17 10 33.1 +0.9**
ITTB Itaituba 30.13 34 eP **P 17 10 35.6 +0.3**
SJMB Sao Joao De Ma 30.42 75 eP **P 17 10 38.7 +0.8**
SDBA SAO DESIDERIO 30.93 61 eP **P 17 10 42.8 +0.4**
SMTB Santa Maria do 31.38 52 eP **P 17 10 47.8 +1.4**
RPN Rapa Nui 32.60 266 LR LR 17 20 16.2
comp=Z,316nm,19.8s,baz=145,slow=29
CMC01 Camacan, BA 33.47 71 eP **P 17 11 06.0 +1.3**
BOAV Boa Vista 34.37 21 P P 17 11 13.6 +1.2
BOAV IAmb IAmb 17 11 15.2
comp=Z,18nm,1.3s
BOAV Boa Vista 34.37 21 eP **P 17 11 14.0 +1.6**
PMSA Palmer Station 34.89 174 LR LR 17 25 29.4
comp=Z,403nm,18.5s,baz=274,slow=36
NBMA Murití-CE 38.78 61 eP **P 17 11 51.0 +0.8**
NBPS Pedro II - PI 38.82 55 eP **P 17 11 51.1 +0.6**
MDP Montagnes des 39.88 31 LR LR 17 30 08.7
comp=Z,216nm,18.6s,baz=173,slow=39
CMIG Matias Romero 51.91 332 LR LR 17 29 43.6
comp=Z,38nm,20.2s,baz=90,slow=29
VNA2 Neumayer--Watz 53.50 158 ⇓P **P 17 13 46.5 +1.2**
comp=Z,7.9nm,0.6s,baz=289,slow=7.8
SNAA Sanae 55.09 159 ⇑P **P 17 13 58.5 +1.5**
comp=Z,192nm,0.5s
SNAA Sanae 55.09 159 P **P 17 13 58.5 +1.5**
comp=Z,10.0nm,0.6s,baz=280,slow=7.5,SNR=14
comp=Z,10.0nm,0.6s
SNAA Sanae 55.09 159 P **P 17 13 57.9 +0.9**
QSPA South Pole Qui 59.94 180 P **P 17 14 33.3 +2.0**
comp=Z,4.2nm,0.8s,baz=153,slow=2.8,SNR=18
comp=Z,4.2nm,0.8s
QSPA South Pole Qui 59.94 180 P P 17 14 33.1 +1.8
QSPA IAmb IAmb 17 14 34.5
comp=Z,17nm,1.4s
X48A Hartselle 65.89 347 IAmb IAmb 17 15 14.4
comp=Z,7.9nm,0.9s
BRDY Brady 66.30 335 IAmb IAmb 17 15 33.7
comp=Z,4.6nm,0.9s
TXAR Lajitas Array 66.43 330 P P 17 15 17.9 +3.3
comp=Z,1.4nm,0.7s,baz=152,slow=8.6,SNR=12
comp=Z,1.4nm,0.7s
WVT Waverly 67.67 346 P 17 15 22.1 -0.2
LCAR Lake Charles 68.36 344 IAmb IAmb 17 15 29.4
comp=Z,5.1nm,0.7s
MNTX Cornudas Mount 69.21 330 P 17 15 33.7 +1.6
MNTX IAmb IAmb 17 15 44.5
comp=Z,6.0nm,1.1s
HHAR Hobbs 69.28 341 IAmb IAmb 17 15 50.7
comp=Z,8.0nm,1.0s
S39A Bolivar 70.44 342 IAmb IAmb 17 15 51.2
comp=Z,12nm,1.2s
PPT Papeete 70.65 261 LR LR 17 40 22.9
comp=Z,58nm,18.3s,baz=186,slow=30
R40A Maddies Statio 70.74 343 IAmb IAmb 17 15 44.8
comp=Z,10nm,0.8s
N38A Joes South For 73.35 344 IAmb IAmb 17 16 00.2
comp=Z,11nm,0.9s
T25A Trinidad 73.54 334 IAmb IAmb 17 16 12.1
comp=Z,8.6nm,0.9s
L40A Anamosa 74.09 345 IAmb IAmb 17 16 14.6
comp=Z,12nm,0.9s
DBIC Dimbokro 74.18 72 P P 17 16 04.0 +1.6
comp=Z,6.8nm,0.8s,baz=242,slow=7.9,SNR=6.6
DBIC LR LR 17 46 16.6
comp=Z,131nm,19.7s,baz=224,slow=34
comp=Z,6.8nm,0.8s
DBIC Dimbokro 74.18 72 P P 17 16 03.2 +0.8
DBIC IAmb IAmb 17 16 04.9
comp=Z,13nm,1.0s
SUR Sutherland 76.79 120 LR LR 17 48 11.5
comp=Z,63nm,18.2s,baz=186,slow=34
ECSD EROS Data Cent 76.97 342 P 17 16 19.0 +1.2
ECSD IAmb IAmb 17 16 36.9
comp=Z,8.2nm,0.8s
PDAR Pinedale Array 80.38 333 P **P 17 16 39.4 +2.5**
comp=Z,0.5nm,0.6s,baz=131,slow=6.3,SNR=4.0
comp=Z,0.5nm,0.6s
PDAR Pinedale Array 80.38 333 P P 17 16 37.3 +0.5
TSUM Tsumeb 80.41 107 LR LR 17 47 53.8
comp=Z,116nm,19.7s,baz=211,slow=32
TSUM Tsumeb 80.41 107 P 17 16 37.0 -0.6
TSUM IAmb IAmb 17 16 41.9
comp=Z,12nm,1.2s
NVAR Mina Array Bea 80.75 325 P P 17 16 41.0 +2.1
comp=Z,0.7nm,0.9s,baz=126,slow=6.4,SNR=1.5
comp=Z,0.7nm,0.9s
BOSA Boshof 81.96 118 P P 17 16 47.7 +2.1
comp=Z,1.5nm,0.6s,baz=224,slow=1.7,SNR=1.4
BOSA LR LR 17 48 36.6
comp=Z,44nm,20.7s,baz=206,slow=32
comp=Z,1.5nm,0.6s
BOSA Boshof 81.96 118 P P 17 16 46.2 +0.6
BOSA IAmb IAmb 17 17 03.3
comp=Z,14nm,1.3s
ULM Lac du Bonnet 82.88 345 P P 17 16 51.0 +1.5
comp=Z,1.6nm,0.5s,baz=168,slow=7.6,SNR=3.4
comp=Z,1.6nm,0.5s
TORD Torodi Ar. Bea 83.12 71 P P 17 16 53.1 +1.5
comp=Z,8.9nm,0.9s,baz=256,slow=6.8,SNR=34
comp=Z,8.9nm,0.9s
LBTB Lobatse 84.03 115 LR LR 17 51 29.7
comp=Z,86nm,19.0s,baz=208,slow=34
MDT Midelt 89.62 51 LR LR 17 58 20.5
comp=Z,88nm,18.3s,baz=256,slow=36
AFI Afiamalu 91.11 253 LR LR 17 47 47.7
comp=Z,43nm,21.4s,baz=104,slow=28
LSZ Lusaka 91.13 108 LR LR 17 55 09.4
comp=Z,80nm,18.6s,baz=230,slow=33
ESDC Sonseca Array 94.13 46 LR LR 18 00 31.6
comp=Z,103nm,18.1s,baz=244,slow=36
ASAR Alice Springs 120.77 208 PKP PKiKP 17 23 19.0 +0.8
comp=Z,0.2nm,0.5s,baz=122,slow=1.5,SNR=7.7
ASAR Alice Springs 120.77 208 PKiKP 17 23 18.7 +0.5
WRA Warramunga Arr 123.89 210 PKP PKiKP 17 23 24.6 +0.2
comp=Z,0.4nm,0.4s,baz=161,slow=1.8,SNR=9.6
WRA Warramunga Arr 123.89 210 PKiKP 17 23 24.5 +0.1
H11S2 WAKE ISLAND Hyd 25.57 272 T T 19 42 16.7
baz=115,slow=75,SNR=41
H11S1 WAKE ISLAND Hyd 25.58 272 T T 19 42 14.1
baz=115,slow=75,SNR=30
H11S3 WAKE ISLAND Hyd 25.59 272 T T 19 42 13.9
baz=115,slow=75,SNR=28
BORK Borovoye 144.55 39 PKPdf **PKPdf 17 23 59.8 -1.6**
BVAR Borovoye Array 144.60 39 PKP PKiKP 17 24 02.9 -2.4
comp=Z,1.6nm,0.4s,baz=316,slow=3.8,SNR=10
YAK Yakutsk 145.17 342 PKPdf 17 24 01.4 -0.7
SHAA Shahritus 146.51 67 PKPab 17 24 06.2 -1.6
KBL Kabul 147.18 72 PKPdf **PKPdf 17 24 04.9 -1.9**
CHGR Chuyangaron 147.29 65 PKPdf **PKPbc 17 24 06.7 -2.4**
KK31 Karatay Array 147.77 56 PKPbc **PKiKP 17 24 10.9 -1.2**
KKAR Karatay Array 147.77 56 PKPbc **PKiKP 17 24 10.9 -1.3**
GAR Garm 148.17 64 PKPbc **PKPbc 17 24 11.1 -0.3**
DRK Karamyk 149.27 63 PKPbc **PKPab 17 24 16.3 -2.8**
KURBB Kurchatov Arra 150.19 39 PKPbc **PKiKP 17 24 18.2 +1.4**
comp=Z,2.0nm,0.2s,baz=300,slow=3.1,SNR=15
KURK Kurchatov 150.19 39 PKPbc **PKiKP 17 24 16.9 +0.2**
EKS2 Erkin-Say 150.21 56 P PKPab 17 24 19.2 -3.4
SNR=8.1
USP Ospenovka 150.58 55 P PKPab 17 24 20.1 -3.9
SNR=7.3
NIL Nilore 150.61 74 PKiKP 17 24 19.6 +1.3
AAK Ala-Archa 150.73 56 P PKPab 17 24 20.7 -4.1
SNR=8.0
AAK Ala-Archa 150.73 56 PKPbc **PKiKP 17 24 19.6 +1.2**
UCH Uchtor 150.84 57 P PKPab 17 24 21.4 -4.3
SNR=10
ZAA0 Zalesovo Array 151.12 28 PKPbc **PKiKP 17 24 18.6 0.0**
ZALV Zalesovo Beam 151.12 28 PKPbc **PKiKP 17 24 20.2 +1.6**
comp=Z,12nm,0.7s,baz=298,slow=3.2,SNR=45
ZALV Zalesovo Beam 151.12 28 PKPbc **PKiKP 17 24 19.4 +0.8**
TKM2 Tokmak 2 151.44 55 P PKiKP 17 24 21.5 +1.6
SNR=7.9
KSH2 Kashi 152.22 63 P PKiKP 17 24 23.5 +1.9
KSH2 pmax pmax
comp=Z,11nm,1.1s
KDJ Kajisay 152.78 56 PKiKP 17 24 24.3 +1.6
MKAR Makanchi Array 154.31 43 PKPbc **PKiKP 17 24 26.9 +1.5**
comp=Z,1.6nm,0.9s,baz=313,slow=2.0,SNR=11
MKAR Makanchi Array 154.31 43 PKiKP 17 24 26.8 +1.3
WMQ Urumqi 159.12 44 ePKP **PKPdf 17 24 27.5 +4.0**
CMAR Chiang Mai Arr 165.75 144 PKP **PKPdf 17 24 32.5 +1.7**
comp=Z,0.4nm,0.3s,baz=166,slow=1.1,SNR=2.3
CMAR Chiang Mai Arr 165.75 144 PKPdf 17 24 32.1 +1.4
HHC Hu-ho-hao-te 169.02 345 eP **PKPdf 17 24 26.5 -6.1**
NJ2 Nanjing 170.34 283 eP **PKPdf 17 24 34.4 +0.9**
NJ2 pmax pmax
comp=Z,23nm,0.6s
PZH PanZhiHua 173.50 124 PKP **PKPdf 17 24 34.7 -0.6**

IDC ***11*** *17:11:11.2±2.5, 37.83N×69.87E, h0km, mb3.8/6, mbtmp3.8/12, ML3.3/6, Error ellipse: s-maj=43.2km s-min=14.2km az=154.0*
NEIC ***11*** *17:11:20.6±2.0, 38.71N±0.04×69.61E±0.04, h10km±1km, mb4.2/3, Error ellipse: s-maj=7.9km s-min=4.6km az=169.0*

ISC 11 17:11:19.6±0.7, 38.72N±0.05×69.68E±0.04, h12km, n47,
α2340/57, mb3.9/7, 2C-5D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
CHGR	**Chuyangaron**	**0.41**	**262**		**Pg**	**17 11 26.2**	**-1.6**
CHGR				Sg	**Sg**	**17 11 32.3**	**-0.9**
GAR	**Garm**	**0.57**	**60**	Pg	**Pg**	**17 11 28.6**	**-2.3**
BTK	**Batken**	**1.60**	**33**		**Pn**	**17 11 47.9**	**0.0**
SHAA	**Shahritus**	**1.68**	**227**	Pn	**Pb**	**17 11 50.0**	**-0.5**
SHAA					**Sg**	**17 12 15.0**	**+1.3**
DRK	**Karamyk**	**1.82**	**65**		**Pn**	**17 11 51.1**	**+0.1**
DRK				Sn	**Sg**	**17 12 18.4**	**+0.2**
ARSB	**Arslanbob**	**3.64**	**43**		**Pn**	**17 12 17.7**	**+1.8**
KBL	**Kabul**	**4.20**	**187**	Pn	**Pn**	**17 12 26.6**	**+3.0**
KK31	**Karatay Array**	**4.43**	**8**		**Pn**	**17 12 29.3**	**+2.7**
KK31	**Karatay Array**	**4.43**	**8**	Pn	**Pn**	**17 12 29.6**	**+3.0**
	3.5nm,0.3s,baz=196,slow=14,SNR=45						
KK31				⇓Pg	**Pg**	**17 12 44.2**	**-0.1**
	2.2nm,0.2s,baz=189,slow=18,SNR=4.0						
KK31				⇓Sn	**Sn**	**17 13 22.6**	**+4.6**
	7.1nm,0.5s						
KK31				⇓Lg	Lg	17 13 38.8	
	23nm,0.7s,baz=192,slow=28						
KKAR	**Karatay Array**	**4.43**	**8**		**Pn**	**17 12 29.1**	**+2.5**
EKS2	**Erkin-Say**	**5.02**	**37**	P	**Pn**	**17 12 39.6**	**+4.7**
	SNR=22						
UCH	**Uchtor**	**5.09**	**45**	P	**Pn**	**17 12 39.8**	**+3.7**
	SNR=14						
AAK	**Ala-Archa**	**5.36**	**42**	Pn	**Pn**	**17 12 42.0**	**+2.5**
	5.5nm,0.3s,baz=216,slow=7.4,SNR=51						
AAK				Pg	**Pg**	**17 13 01.4**	**-0.9**
	1.4nm,0.3s,baz=216,slow=15,SNR=8.4						
AAK				Sn	**Sb**	**17 13 51.3**	**-6.4**
	0.9nm,0.3s,baz=179,slow=19,SNR=4.8						
AAK				Lg	Lg	17 14 09.0	
	1.0nm,0.3s,baz=8.0,slow=22,SNR=2.2						
	9.9nm,0.3s						
AAK	**Ala-Archa**	**5.36**	**42**	P	**Pn**	**17 12 44.2**	**+4.7**
	SNR=16						
AAK	**Ala-Archa**	**5.36**	**42**		**Pn**	**17 12 41.0**	**+1.5**
AAK	**Ala-Archa**	**5.36**	**42**	⇑Pn	**Pn**	**17 12 41.2**	**+1.6**
	1.9nm,0.4s						
AAK				⇓Pg	**Pg**	**17 13 00.4**	**-1.9**
	3.2nm,0.5s						
AAK				⇓Sn	**Sn**	**17 13 46.7**	**+5.4**
	3.7nm,0.6s						
AAK				⇑Lg	Lg	17 14 14.3	
	12nm,0.9s						
FRU1	**Bishkek**	**5.55**	**41**	Pn	**Pn**	**17 12 40.5**	**-1.6**
NRN	**Naryn**	**5.56**	**59**		**Pn**	**17 12 42.9**	**+0.5**
KBK	**Karagaybulak**	**5.62**	**44**	P	**Pn**	**17 12 45.6**	**+2.6**
	SNR=9.3						
NIL	**Nilore**	**5.82**	**149**	Pn	**Pn**	**17 12 45.3**	**-0.5**
USP	**Ospenovka**	**5.83**	**37**	P	**Pn**	**17 12 50.2**	**+4.3**
	SNR=6.9						
BOOM	**Boomskoye usch**	**6.08**	**50**	Pn	**Pn**	**17 12 49.2**	**-0.2**
TKM2	**Tokmak 2**	**6.15**	**45**	P	**Pn**	**17 12 52.1**	**+1.7**
	SNR=23						
KDJ	**Kajisay**	**6.66**	**57**		**Pn**	**17 12 59.7**	**+2.2**
TARG	**Taragay, Kyrgy**	**6.91**	**62**		**Pn**	**17 13 03.0**	**+2.0**
MKAR	**Makanchi Array**	**12.28**	**45**	Pn	**Pn**	**17 14 14.8**	**+0.5**
	0.1nm,0.3s,baz=229,slow=14,SNR=4.5						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**12.28**	**45**		**Pn**	**17 14 16.1**	**+1.8**
AB31	**Akbulak array**	**12.64**	**330**		**Pn**	**17 14 17.3**	**-1.8**
AB31				Sn	**Sn**	**17 16 34.6**	**-5.1**
ABKAR	**Akbulak array**	**12.64**	**330**	Pn	**Pn**	**17 14 17.2**	**-1.9**
KURBB	**Kurchatov Arra**	**13.45**	**25**	Pn	**Pn**	**17 14 29.8**	**-0.4**
	baz=213,slow=9.9,SNR=1.6						
	1.2nm,0.2s						
KURK	**Kurchatov**	**13.56**	**25**		**Pn**	**17 14 29.8**	**-1.9**
BVAR	**Borovoye Array**	**14.32**	**2**	Pn	**Pn**	**17 14 43.3**	**+1.2**
	baz=163,slow=12,SNR=2.7						
	0.8nm,0.5s						
BORK	**Borovoye**	**14.34**	**2**	P	**P**	**17 14 50.1**	**+0.7**
AKTO	**Aktyubinsk**	**14.34**	**329**	Pn	**Pn**	**17 14 43.7**	**+1.3**
	0.6nm,0.3s,baz=139,slow=8.9,SNR=11						
	1.0nm,0.4s						
ZAA0	**Zalesovo Array**	**18.41**	**29**	P	**Pn**	**17 15 35.0**	**+0.5**
ZAA0				IAmb	IAmb	17 15 37.7	
	comp=Z,2.7nm,1.2s						

ZALV	**Zalesovo Beam**	**18.41**	**29**	P	**P**	**17 15 34.2**	**-0.3**	
	comp=Z,0.3nm,0.3s,baz=221,slow=11,SNR=5.2							
	comp=Z,0.6nm,0.3s							
ZALV	**Zalesovo Beam**	**18.41**	**29**	P	**P**	**17 15 33.9**	**-0.6**	
BRTR	**Keskin Array B**	**27.82**	**284**	P	**P**	**17 17 06.0**	**-2.9**	
	comp=Z,0.3nm,0.7s,baz=70,slow=8.4,SNR=2.0							
	comp=Z,0.3nm,0.7s							
FINES	**FINESS Array B**	**35.06**	**325**	P	**P**	**17 18 12.0**	**0.0**	
	comp=Z,1.5nm,0.8s,baz=105,slow=8.4,SNR=3.5							
	comp=Z,1.5nm,0.8s							
FINES	**FINESS Array B**	**35.06**	**325**	P	**P**	**17 18 12.4**	**+0.3**	
HIA	**Hailar**	**36.91**	**57**	P	**P**	**17 18 29.8**	**+1.7**	
HIA				IAmb	IAmb	17 19 09.9		
	comp=Z,4.5nm,0.7s							
ARCES	**ARCESS Array B**	**38.70**	**337**	P	**P**	**17 18 43.5**	**+0.7**	
	comp=Z,1.0nm,0.5s,baz=108,slow=7.8,SNR=9.0							
	comp=Z,1.0nm,0.5s							
ARCES	**ARCESS Array B**	**38.70**	**337**	P	**P**	**17 18 43.6**	**+0.7**	
ARCES				IAmb	IAmb	17 18 59.3		
	comp=Z,17nm,1.5s							
HFS	**Hagfors**	**40.68**	**320**	P	**P**	**17 18 58.0**	**-1.5**	
	comp=Z,4.4nm,0.8s,baz=97,slow=12,SNR=4.9							
	comp=Z,4.4nm,0.8s							
NOA	**NORSAR Array B**	**41.99**	**322**	P	**P**	**17 19 09.8**	**-0.5**	
	comp=Z,0.8nm,0.6s,baz=96,slow=8.3,SNR=3.5							
	comp=Z,0.8nm,0.6s							
YKA	**Yellowknife Ar**	**79.08**	**2**	P	**P**	**17 23 23.2**	**-0.2**	
	comp=Z,0.2nm,0.6s,baz=348,slow=5.8,SNR=4.0							
	comp=Z,0.2nm,0.6s							
JTMT	**Jette**	**93.84**	**3**	P	**P**	**17 24 38.3**	**+1.4**	

*IDC **11** 17:13:18.4±2.4, 28°.39N×142°.72E, h0km, mb3.5/4, mbtmp3.5/5, ML2.7/1, Error ellipse: s-maj=75.1km s-min=17.5km az=84.0*

ISC 11 17:13:21.8±2.3, 28°.42N±0°.08×142°.7E±0°.5, h25km, n7, σ0§81/8, mb3.8/5, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.39**	**199**	Pn		**Pn**		**17 13 45.5**	**-0.1**
	22nm,0.3s,baz=55,slow=15,SNR=4.6								
JCJ				Sn		**Sn**		**17 14 03.2**	**0.0**
	35nm,0.3s,baz=93,slow=23,SNR=8.5								
MJAR	**Matsushiro Ar**	**8.95**	**336**	Pn		**Pn**		**17 15 28.8**	**-0.6**
	0.1nm,0.3s,baz=136,slow=12,SNR=5.2								
	0.9nm,0.4s								
WRA	**Warramunga Ar**	**48.75**	**190**	P		**P**		**17 22 05.4**	**+0.8**
	1.0nm,0.5s,baz=12,slow=8.3,SNR=12								
	1.0nm,0.5s								
ZALV	**Zalesovo Beam**	**48.80**	**318**	P		**P**		**17 22 05.8**	**+1.1**
	0.3nm,0.3s,baz=99,slow=9.3,SNR=2.0								
	0.3nm,0.3s								
MKAR	**Makanchi Array**	**50.00**	**309**	P		**P**		**17 22 14.2**	**+0.2**
	0.2nm,0.5s,baz=95,slow=8.7,SNR=2.5								
	0.2nm,0.5s								
KURBB	**Kurchatov Arra**	**52.46**	**314**	P		**P**		**17 22 32.7**	**+0.4**
	2.6nm,0.2s,baz=88,slow=7.3,SNR=5.4								
ASAR	**Alice Springs**	**52.47**	**190**	P		**P**		**17 22 31.7**	**-1.0**
	0.3nm,0.9s,baz=9.4,slow=7.7,SNR=1.7								
	0.3nm,0.9s								

IDC 11 17:13:53.5±5.8, 2°.96N×122°.96E, h550km±87km, mb3.1/5, mbtmp4.2/6, Error ellipse: s-maj=57.2km s-min=21.1km az=59.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**13.10**	**177**	P		P	P	17 16 44.5	+1.0
	20nm,0.5s,baz=350,slow=11,SNR=9.2								
WRA	**Warramunga Arr**	**25.35**	**154**	P		P	P	17 18 36.4	-1.2
	1.0nm,0.4s,baz=336,slow=9.7,SNR=35								
	1.0nm,0.4s								
ASAR	**Alice Springs**	**28.53**	**159**	P		P	P	17 19 05.8	+0.4
	1.1nm,0.5s,baz=344,slow=7.4,SNR=62								
	1.1nm,0.5s								
STKA	**Stephens Creek**	**38.91**	**154**	P		P	P	17 20 32.9	+0.5
	1.3nm,0.5s,baz=337,slow=13,SNR=2.9								
	1.3nm,0.5s								
MKAR	**Makanchi Array**	**56.10**	**327**	P		P	P	17 22 40.7	-0.3
	0.3nm,0.3s,baz=120,slow=7.8,SNR=14								
	0.3nm,0.3s								
PETK	**Petropavlovsk-**	**57.61**	**24**	P		P	P	17 22 51.7	+0.5
	4.9nm,0.9s,baz=226,slow=7.8,SNR=1.4								
	4.9nm,0.9s								

*IDC **11** 17:18:00.4±3.0, 32°.52S×178°.12W, h0km, mb4.0/2, mbtmp4.0/3, ML3.7/1, Error ellipse: s-maj=72.2km s-min=45.5km az=125.0*

*NEIC **11** 17:18:03.1±1.4, 32°.7S±0°.1×178°.29W±0°.06, h10km±2km, mb4.5/10, Error ellipse: s-maj=24.9km s-min=8.5km az=4.0*

ISC 11 17:18:03.2±1.3, 32°.7S±0°.1×178°.2W±0°.2, h20km, n22, σ1§41/23, mb4.4/8, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**5.62**	**209**	Pn		**Pn**		**17 19 25.7**	**+0.1**
URZ	**Urewera**	**6.72**	**213**	Pn		**Pn**		**17 19 42.3**	**+1.6**
	1.3nm,0.3s,baz=61,slow=13,SNR=6.1								
URZ				Sn		**Sn**		**17 20 58.0**	**+1.4**
	4.3nm,0.3s,baz=212,slow=17,SNR=11								
	3.2nm,0.3s								
RTZ	**Ruatahuna**	**7.07**	**212**	Pn		**Pn**		**17 19 46.8**	**+1.2**
RTZ				Sn		**Sn**		**17 21 02.8**	**-2.6**
TOZ	**Tahuroa Road**	**7.17**	**224**	Pn		**Pn**		**17 19 50.3**	**+3.4**
BKZ	**Black Stump Fm**	**7.74**	**212**	Pn		**Pn**		**17 19 55.5**	**+0.8**
MRZ	**Mangatainoka R**	**9.37**	**210**	Pn		**Pn**		**17 20 16.6**	**-0.4**
THZ	**Tophouse**	**11.47**	**215**	Pn		**Pn**		**17 20 43.6**	**-2.2**
CTAO	**Charters Tower**	**34.04**	**283**	P		**P**		**17 24 44.6**	**-1.6**
CTAO				IAmb		IAmb		17 25 27.4	
	comp=Z,38nm,1.5s								
INKA	**Innaminka**	**35.63**	**267**	P		**P**		**17 24 59.5**	**-0.3**
INKA				IAmb		IAmb		17 25 26.7	
	comp=Z,4.1nm,1.4s								
AS31	**Alice Springs**	**42.84**	**270**				**P**	**17 26 00.9**	**+0.8**
ASAR	**Alice Springs**	**42.84**	**270**	P			**P**	**17 26 01.4**	**+1.2**
	comp=Z,1.4nm,0.8s,baz=109,slow=7.2,SNR=32								
	comp=Z,1.4nm,0.8s								
ASAR	**Alice Springs**	**42.84**	**270**	P		**P**		**17 25 59.5**	**-0.6**
WR0	**Warramunga Arr**	**43.85**	**275**	P		**P**		**17 26 08.5**	**+0.1**
WR0				IAmb		IAmb		17 26 10.0	
	comp=Z,7.5nm,1.2s								
WR8	**Warramunga Arr**	**43.89**	**275**	P		**P**		**17 26 08.6**	**0.0**
WR8				IAmb		IAmb		17 26 27.6	
	comp=Z,8.7nm,1.4s								
WRA	**Warramunga Arr**	**44.03**	**275**	P		**P**		**17 26 10.6**	**+0.8**
	comp=Z,1.8nm,0.5s,baz=114,slow=8.0,SNR=19								
	comp=Z,1.8nm,0.5s								
WRA	**Warramunga Arr**	**44.03**	**275**	IAmb		IAmb		17 26 18.3	
	comp=Z,0.4nm,1.4s								
WB0	**Warramunga Arr**	**44.06**	**275**	P		**P**		**17 26 10.9**	**+0.9**
WB0				IAmb		IAmb		17 26 11.3	
	comp=Z,3.7nm,0.7s								
CASY	**Casey**	**53.02**	**209**	P		**P**		**17 27 18.0**	**-0.4**
PSA00	**Pilbara Seismi**	**55.53**	**265**	P		**P**		**17 27 37.8**	**+0.5**
PSA00				IAmb		IAmb		17 28 09.3	
	comp=Z,13nm,1.1s								
PMSA	**Palmer Station**	**70.26**	**155**	P		**P**		**17 29 15.9**	**+1.4**
FIA1	**FINESS Array S**	**147.22**	**339**	PKPdf		**PKPbc**		**17 37 43.1**	**-1.2**
FINES	**FINESS Array B**	**147.22**	**339**	PKPbc		**PKPbc**		**17 37 43.7**	**-0.6**
	comp=Z,2.9nm,0.9s,baz=38,slow=2.5,SNR=6.9								

*NEIC **11** 17:31:04.5±2.4, 15°.2S±0°.1×178°.9W±0°.1, h417km±6km, mb4.3/31, Error ellipse: s-maj=16.6km s-min=15.3km az=132.0*

*IDC **11** 17:31:06.3±1.6, 15°.15S×179°.12W, h429km±16km, mb3.3/8, mbtmp4.2/10, Error ellipse: s-maj=29.2km s-min=13.4km az=158.0*

*NOU **11** 17:31:17.2, 17°.14S×179°.41W, h349km, mb4.6/7, Fiji Islands Region*

ISC 11 17:31:02.8±0.6, 15°.1S±0°.1×178°.98W±0°.08, h401km, n56, σ1§68/56, mb4.2/24, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FUTU	**Fugatoga**	**1.14**	**47**	P		**P**		**17 31 56.5**	**+1.9**
MSVF	**Nonsavu**	**3.88**	**227**	P		**P**		**17 32 17.5**	**+3.8**
	96nm,0.4s,baz=281,slow=22,SNR=167								
MSVF	**Nonsavu**	**3.88**	**227**				**P**	**17 32 17.3**	**+3.6**
AFI	**Afiamalu**	**7.07**	**81**	P		**P**		**17 32 47.2**	**-0.8**
	27nm,0.6s,baz=295,slow=14,SNR=7.5								
NIUE	**Niue**	**9.52**	**116**	P		P		17 33 26.0	+11
NIUE	**Niue**	**9.52**	**116**	P		**P**		**17 33 16.1**	**+1.1**
DVP	**Devils Point**	**12.59**	**256**	P		P		17 33 57.2	+8.2
SANVU	**Saraoutou**	**13.34**	**267**	P		**P**		**17 33 57.7**	**+0.4**
MARNC	**Mare, Loyalty**	**13.88**	**241**	P		**P**		**17 34 05.0**	**+1.9**
MARNC	**Mare, Loyalty**	**13.88**	**241**	P		**P**		**17 34 04.7**	**+1.6**
DZM	**Mont Dzumac**	**15.46**	**241**	P		**P**		**17 34 23.1**	**+2.7**
	8.8nm,0.6s,baz=73,slow=19,SNR=18								
ONTNC	**Ouen Toro**	**15.55**	**240**	P		**P**		**17 34 24.1**	**+2.9**
ONTNC	**Ouen Toro**	**15.55**	**240**	P		**P**		**17 34 21.2**	**0.0**
MRZ	**Mangatainoka R**	**25.91**	**190**	P		**P**		**17 36 00.1**	**-0.2**
QRZ	**Quartz Range**	**26.68**	**194**	P		**P**		**17 36 07.7**	**+0.5**
QRZ	**Quartz Range**	**26.68**	**194**	P		**P**		**17 36 04.3**	**-2.9**
THZ	**Tophouse**	**27.49**	**193**	P		**P**		**17 36 12.8**	**-1.5**
DSZ	**Denniston Nort**	**27.73**	**195**	P		**P**		**17 36 15.0**	**-1.5**
LTZ	**Lake Taylor**	**28.60**	**194**	P		**P**		**17 36 21.2**	**-2.9**
LTZ				IAmb		IAmb		17 36 38.9	
	comp=Z,17nm,1.3s								
INZ	**Inchbonnie**	**28.74**	**195**	P		**P**		**17 36 23.7**	**-1.6**
INZ				IAmb		IAmb		17 36 25.7	
	comp=Z,9.2nm,0.8s								
FOZ	**Fox Glacier**	**29.92**	**196**	P		**P**		**17 36 33.8**	**-1.8**
JCZ	**Jackson Bay**	**30.71**	**197**	P		**P**		**17 36 41.9**	**-0.7**
TOO	**Toolangi**	**38.59**	**228**	P		**P**		**17 37 47.6**	**-1.7**
INKA	**Innaminka**	**39.38**	**245**	P		**P**		**17 37 56.5**	**+0.7**
STKA	**Stephens Creek**	**39.58**	**238**	P		**P**		**17 37 57.9**	**+0.5**
	comp=Z,2.5nm,0.7s,baz=84,slow=11,SNR=5.4								
	comp=Z,2.5nm,0.7s								
STKA	**Stephens Creek**	**39.58**	**238**	P		**P**		**17 37 56.9**	**-0.5**
BBOO	**Buckleboo**	**44.35**	**238**	P		**P**		**17 38 34.3**	**-1.2**
BBOO				IAmb		IAmb		17 38 51.9	
	comp=Z,28nm,1.2s								
WR0	**Warramunga Arr**	**44.48**	**257**	P		**P**		**17 38 35.5**	**-1.2**
WR0				IAmb		IAmb		17 38 53.2	
	comp=Z,6.8nm,1.3s								
WR8	**Warramunga Arr**	**44.52**	**257**	P		**P**		**17 38 35.2**	**-1.8**
WB0	**Warramunga Arr**	**44.63**	**257**	P		**P**		**17 38 36.7**	**-1.2**
WB0				IAmb		IAmb		17 38 38.0	
	comp=Z,11nm,1.4s								
WRA	**Warramunga Arr**	**44.67**	**257**	P		**P**		**17 38 37.6**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=83,slow=5.1,SNR=26								
WRA				S		**S**		**17 44 42.1**	**-2.1**
	comp=Z,0.9nm,1.2s,baz=89,slow=15,SNR=2.0								
	comp=Z,0.4nm,0.3s								
AS31	**Alice Springs**	**45.09**	**252**				**P**	**17 38 41.5**	**+0.1**
AS31				IAmb		IAmb		17 38 42.0	
	comp=Z,8.4nm,0.3s								
ASAR	**Alice Springs**	**45.09**	**252**	P			**P**	**17 38 41.4**	**-0.1**
	comp=Z,11nm,0.3s,baz=85,slow=8.6,SNR=772								
ASAR				S		**S**		**17 44 47.5**	**-2.7**
	comp=Z,0.5nm,0.7s,baz=81,slow=15,SNR=7.2								
	comp=Z,11nm,0.3s								
ASAR	**Alice Springs**	**45.09**	**252**				**P**	**17 38 41.7**	**+0.2**
MTN	**Manton Dam**	**48.39**	**266**	P			**P**	**17 39 07.2**	**+0.5**
MTN				IAmb		IAmb		17 39 09.4	
	comp=Z,15nm,1.4s								
KNRA	**Kununurra**	**50.28**	**262**	P			**P**	**17 39 18.6**	**-2.2**
KNRA				IAmb		IAmb		17 39 36.7	
	comp=Z,24nm,1.4s								
FORT	**Forrest**	**50.77**	**242**	P			**P**	**17 39 23.3**	**-0.9**
FORT				IAmb		IAmb		17 39 24.4	
	comp=Z,6.4nm,0.7s								
NWAO	**Narrogin (SRO)**	**60.08**	**241**	P			**P**	**17 40 28.4**	**-1.2**
NWAO				IAmb		IAmb		17 40 37.4	
	comp=Z,30nm,1.4s								
QSPA	**South Pole Qui**	**74.94**	**180**	P			**P**	**17 42 01.8**	**+0.7**
	comp=Z,4.2nm,0.6s,baz=24,slow=0.7,SNR=29								
	comp=Z,4.2nm,0.6s								
QSPA	**South Pole Qui**	**74.94**	**180**	P			**P**	**17 42 01.1**	**+0.1**
QSPA				IAmb		IAmb		17 42 02.5	
	comp=Z,5.1nm,0.8s								
N14K	**Kuskokwak Cree**	**76.05**	**9**	P			**P**	**17 42 07.1**	**+0.1**
N14K				IAmb		IAmb		17 42 09.1	
	comp=Z,7.8nm,1.1s								
O16K	**Kokwok River B**	**76.33**	**11**	P			**P**	**17 42 08.0**	**-0.5**
O16K				IAmb		IAmb		17 42 48.3	
	comp=Z,8.1nm,1.4s								
NVAR	**Mina Array Bea**	**77.79**	**44**	P			**P**	**17 42 19.0**	**+1.6**
	comp=Z,0.7nm,0.8s,baz=253,slow=6.6,SNR=2.4								
	comp=Z,0.7nm,0.8s								
L18K	**Granite Mounta**	**79.04**	**10**	P			**P**	**17 42 25.0**	**+1.7**
L18K				IAmb		IAmb		17 42 25.7	
	comp=Z,2.9nm,0.8s								
J16K	**Anvik River**	**79.42**	**8**	P			**P**	**17 42 26.7**	**+1.3**
J18K	**Innoko River**	**80.19**	**10**	P			**P**	**17 42 30.6**	**+1.1**
TNA	**Tin City**	**80.84**	**5**	P			**P**	**17 42 34.0**	**+1.2**
KTH	**Kantishna Hill**	**81.35**	**12**	P			**P**	**17 42 35.5**	**-0.1**
KTH				IAmb		IAmb		17 42 50.2	
	comp=Z,13nm,1.4s								
TRF	**Thorofare Moun**	**81.39**	**13**	P			**P**	**17 42 34.2**	**-1.7**
TRF				IAmb		IAmb		17 42 50.8	
	comp=Z,12nm,1.5s								
IMAR	**Indian Mountai**	**83.02**	**10**	P			**P**	**17 42 44.0**	**0.0**
TXAR	**Lajitas Array**	**84.96**	**58**	P			**P**	**17 42 56.4**	**+1.8**
	comp=Z,0.5nm,0.8s,baz=212,slow=5.9,SNR=4.9								
	comp=Z,0.5nm,0.8s								
TXAR	**Lajitas Array**	**84.96**	**58**	P			**P**	**17 42 50.9**	**-3.8**
BELA	**Belgrano 2**	**85.01**	**173**	P			**P**	**17 42 52.6**	**-1.3**
BELA				IAmb		IAmb		17 43 36.4	
	comp=Z,14nm,1.4s								
PDAR	**Pinedale Array**	**85.70**	**44**	P			**P**	**17 42 58.8**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=175,slow=2.1,SNR=6.0								
	comp=Z,0.4nm,0.5s								
PDAR	**Pinedale Array**	**85.70**	**44**	P			**P**	**17 42 58.4**	**+0.3**
CMAR	**Chiang Mai Arr**	**87.43**	**290**	P			**P**	**17 43 08.2**	**+1.6**
	comp=Z,0.9nm,0.9s,baz=101,slow=9.2,SNR=9.8								
	comp=Z,0.9nm,0.9s								

*IDC **11** 17:38:00.6±1.6, 14°.68N×122°.36E, h0km, mb3.3/5, mbtmp3.3/5, MS3.7/1, Error ellipse: s-maj=175.3km s-min=21.1km az=66.0*

*MAN **11** 17:38:02.0, 14°.97N×122°.63E, h4km, MS3.1*

ISC 11 17:38:01.5±0.9, 14°.97N±0°.05×122°.69E±0°.07, h10km, n14, σ1§21/14, mb3.3/5, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GQP	**Guinayangan**	**1.08**	**192**	*e*P		**Pn**		**17 38 23.1**	**+0.4**
GQP				*e*S		**Sb**		**17 38 36.8**	**+0.2**
PCPS	**Palayan City**	**1.61**	**259**	*e*P		**Pg**		**17 38 31.6**	**-0.7**
PCPS				*e*S		**Sg**		**17 38 52.9**	**-0.3**
BOAC	**Boac**	**1.71**	**209**	*e*P		**Pb**		**17 38 33.2**	**+0.2**
BOAC				*e*S		**Sg**		**17 38 55.6**	**-0.9**
PIP	**Pasuquin**	**3.88**	**330**	*e*P		**Pb**		**17 39 08.1**	**-1.9**
PIP				*e*S		**Sn**		**17 39 48.3**	**+1.4**
PLP	**Palo**	**4.39**	**149**	*e*P		**Pb**		**17 39 18.0**	**-0.8**
PLP				*e*S		Sn		17 39 24.3	-35
SONM	**Songino Array**	**35.44**	**341**	P		**P**		**17 44 58.7**	**+0.7**
	0.6nm,1.0s,baz=167,slow=8.6,SNR=2.5								
	0.6nm,1.0s								
WRA	**Warramunga Arr**	**36.54**	**161**	P		**P**		**17 45 06.1**	**-1.4**
	0.2nm,0.9s,baz=331,slow=9.8,SNR=1.7								
	0.2nm,0.9s								
ASAR	**Alice Springs**	**39.94**	**164**	P		**P**		**17 45 35.4**	**-0.7**
	0.1nm,0.4s,baz=339,slow=7.8,SNR=7.8								
	0.1nm,0.4s								
H11S3	**WAKE ISLAND Hy**	**42.21**	**79**	T		T		18 30 55.0	
	baz=271,slow=75,SNR=10.0								
H11S1	**WAKE ISLAND Hy**	**42.22**	**79**	T		T		18 30 57.0	
	baz=271,slow=75,SNR=7.7								
H11S2	**WAKE ISLAND Hy**	**42.23**	**79**	T		T		18 30 56.5	
	baz=271,slow=75,SNR=4.3								
MKAR	**Makanchi Array**	**46.19**	**322**	P		**P**		**17 46 28.1**	**+1.5**
	0.3nm,0.8s,baz=111,slow=9.7,SNR=3.6								
	0.3nm,0.8s								
STKA	**Stephens Creek**	**49.99**	**159**	LR		LR		18 11 25.8	
	comp=Z,74nm,18.0s,baz=204,slow=40								
KURBB	**Kurchatov Arra**	**50.24**	**325**	P		**P**		**17 46 59.3**	**+1.6**
	0.4nm,0.3s,baz=126,slow=8.3,SNR=4.3								
	0.4nm,0.3s								

*NEIC **11** 17:39:04.1±2.3, 25°.6S±0°.1×179°.6E±0°.2, h495km±8km, mb4.4/15, Error ellipse: s-maj=21.6km s-min=18.3km az=92.0*

*IDC **11** 17:39:08.8±6.8, 25°.06S×179°.30E, h542km±55km, mb2.9/4, mbtmp3.9/6, Error ellipse: s-maj=129.0km s-min=20.3km az=152.0*

ISC 11 17:39:04.3±0.6, 25°.52S±0°.10×179°.6E±0°.1, h507km, n36, σ1§35/36, mb4.2/12, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.88**	**349**	P			**P**	**17 41 00.2**	**+0.3**
	20nm,0.8s,baz=251,slow=14,SNR=15								
MSVF	**Nonsavu**	**7.88**	**349**	P		**P**	**P**	**17 40 59.3**	**-0.5**
MARNC	**Mare, Loyalty**	**11.34**	**288**	P		**P**	**P**	**17 41 37.1**	**+1.2**
DZM	**Mont Dzumac**	**12.51**	**283**	P		**P**	**P**	**17 41 50.4**	**+2.1**
	9.0nm,0.8s,baz=107,slow=11,SNR=6.3								
RTZ	**Ruatahuna**	**13.24**	**189**	P		**P**	**P**	**17 41 54.2**	**-1.5**
BKZ	**Black Stump Fm**	**13.85**	**190**	P		**P**	**P**	**17 42 01.1**	**-1.1**
MRZ	**Mangatainoka R**	**15.46**	**191**	P		**P**	**P**	**17 42 18.1**	**-0.8**
QRZ	**Quartz Range**	**16.35**	**199**	P		**P**	**P**	**17 42 28.1**	**-0.1**
THZ	**Tophouse**	**17.11**	**197**	P		**P**	**P**	**17 42 35.6**	**-0.3**
THZ				IAmb		IAmb	IAmb	17 43 16.1	
	comp=Z,24nm,1.1s								
EIDS	**Eidsvold**	**25.72**	**264**	P		**P**	**P**	**17 43 52.9**	**-0.8**
EIDS				IAmb		IAmb	IAmb	17 43 59.7	
	comp=Z,48nm,1.4s								
CTAO	**Charters Tower**	**31.14**	**273**	P		**P**	**P**	**17 44 43.4**	**+2.2**
AS31	**Alice Springs**	**41.42**	**263**	P		**P**	**P**	**17 46 06.1**	**-0.1**
ASAR	**Alice Springs**	**41.42**	**263**	P		**P**	**P**	**17 46 06.7**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=90,slow=7.2,SNR=13								
ASAR				PcP		**PcP**	**PcP**	**17 47 52.9**	**+0.5**
	comp=Z,0.6nm,1.0s,baz=100,slow=3.8,SNR=4.1								
	comp=Z,0.8nm,0.8s								
WRA	**Warramunga Arr**	**41.94**	**268**	P		**P**	**P**	**17 46 10.2**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=99,slow=6.8,SNR=12								
	comp=Z,0.7nm,0.7s								
WRA	**Warramunga Arr**	**41.94**	**268**	P		**P**	**P**	**17 46 09.7**	**-0.7**
WB0	**Warramunga Arr**	**41.94**	**268**	P		**P**	**P**	**17 46 08.7**	**-1.7**
WB0				IAmb		IAmb	IAmb	17 46 45.6	
	comp=Z,14nm,1.4s								
KNRA	**Kununurra**	**48.32**	**271**	P		**P**	**P**	**17 46 57.2**	**-2.2**
KNRA				IAmb		IAmb	IAmb	17 47 39.7	
	comp=Z,21nm,1.4s								
VNDA	**Vanda**	**52.74**	**185**	P		**P**	**P**	**17 47 31.9**	**+1.2**
QSPA	**South Pole Qui**	**64.57**	**180**	P		**P**	**P**	**17 48 52.5**	**+1.6**
QSPA				IAmb		IAmb	IAmb	17 49 10.3	
	comp=Z,2.5nm,1.1s								
NVAR	**Mina Array Bea**	**86.18**	**44**	P		**P**	**P**	**17 50 53.1**	**+1.3**
	comp=Z,0.7nm,0.8s,baz=257,slow=5.7,SNR=2.6								
	comp=Z,0.7nm,0.8s								
PINE	**Pine Mountain**	**87.89**	**39**	P		**P**	**P**	**17 51 01.3**	**+1.7**
PINE				IAmb		IAmb	IAmb	17 51 02.6	
	comp=Z,13nm,1.3s								
M17K	**Holitna River**	**88.59**	**11**	P		**P**	**P**	**17 51 02.7**	**+0.5**
M17K				IAmb		IAmb	IAmb	17 51 22.0	
	comp=Z,11nm,1.4s								
I07A	**Izee**	**88.89**	**39**	P		**P**	**P**	**17 51 05.6**	**+1.4**
I07A				IAmb		IAmb	IAmb	17 51 05.9	
	comp=Z,4.1nm,1.2s								
L19K	**White Mountain**	**89.78**	**12**	P		**P**	**P**	**17 51 08.1**	**+0.4**
L19K				IAmb		IAmb	IAmb	17 51 09.4	
	comp=Z,9.0nm,1.3s								
TXAR	**Lajitas Array**	**91.61**	**58**	P		**P**	**P**	**17 51 18.4**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=277,slow=5.8,SNR=4.0								
	comp=Z,0.1nm,0.3s								
BVAR	**Borovoye Array**	**121.39**	**318**	PKP		**PKiKP**	**PKiKP**	**17 56 59.0**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=81,slow=1.5,SNR=5.2								
NB2	**NORSAR Subarra**	**143.62**	**350**	PKP		**PKPdf**	**PKPdf**	**17 57 38.9**	**-1.6**
	comp=Z,1.2nm,0.5s,baz=16,slow=3.3								
NOA	**NORSAR Array B**	**143.62**	**350**	PKP		PKPbc	PKPbc	17 57 38.3	-1.0
	comp=Z,2.4nm,0.8s,baz=11,slow=2.4,SNR=7.1								
HFS	**Hagfors**	**144.05**	**348**	PKP		**PKPdf**	**PKPdf**	**17 57 40.3**	**-0.9**
	comp=Z,6.8nm,0.7s,baz=64,slow=3.4,SNR=21								
AKASG	**Malin Array Be**	**146.11**	**326**	PKPdf		**PKPab**	**PKPab**	**17 57 46.5**	**-2.5**
SUW	**Suwalki**	**146.57**	**335**			**PKPbc**	**PKPbc**	**17 57 46.2**	**-2.0**
ILGA	**Ilgaz**	**147.77**	**307**	PKPdf		**PKPdf**	**PKPdf**	**17 57 48.3**	**-0.1**
MMAI	**Mount Meron Ar**	**147.99**	**292**	PKPbc		**PKiKP**	**PKiKP**	**17 57 53.5**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=36,slow=5.9,SNR=4.4								
BRTR	**Keskin Array B**	**148.22**	**305**	PKPbc		**PKiKP**	**PKiKP**	**17 57 53.3**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=156,slow=1.2,SNR=4.5								
BRTR	**Keskin Array B**	**148.22**	**305**				**PKPbc**	**17 57 50.6**	**-2.6**
EKA	**Eskdalemuir Ar**	**150.15**	**3**	PKPbc			**PKPbc**	**

JHJ2	**Mitsune**	**63.79**	**322**	P		**P**	**18 53 11.5**	**-0.2**
MJAR	**Matsushiro Arr**	**67.15**	**324**	P		**P**	**18 53 31.7**	**-1.0**
	comp=Z,2.0nm,0.8s,baz=154,slow=6.7,SNR=3.0							
	comp=Z,2.0nm,0.8s							
JKA	**Kamikawa-asahi**	**70.55**	**332**	P		**P**	**18 53 54.3**	**+1.4**
SSLB	**Suanglung**	**71.48**	**303**	P		**P**	**18 53 58.4**	**-0.5**
QSPA	**South Pole Qui**	**72.66**	**180**	P		**P**	**18 54 05.7**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=29,slow=2.3,SNR=7.1							
	comp=Z,1.0nm,0.6s							
QSPA	**South Pole Qui**	**72.66**	**180**	P		**P**	**18 54 05.9**	**+0.7**
QSPA				IAmb		IAmb	18 54 43.8	
	comp=Z,6.1nm,1.4s							
PETK	**Petropavlovsk-**	**73.04**	**346**	P		**P**	**18 54 07.6**	**+0.4**
	comp=Z,7.4nm,1.0s,baz=149,slow=5.8,SNR=1.9							
	comp=Z,7.4nm,1.0s							
P16K	**Nushagak River**	**78.07**	**11**	P		**P**	**18 54 35.3**	**+0.3**
M11K	**Mekoryuk**	**78.19**	**6**	P		**P**	**18 54 36.8**	**+1.2**
M11K				IAmb		IAmb	18 54 37.6	
	comp=Z,4.7nm,0.9s							
N14K	**Kuskokwak Cree**	**78.32**	**9**	P		**P**	**18 54 36.5**	**+0.3**
O16K	**Kokwok River B**	**78.58**	**11**	P		**P**	**18 54 36.7**	**-1.0**
O16K				IAmb		IAmb	18 54 46.7	
	comp=Z,11nm,1.5s							
N15K	**Kwethluk River**	**78.79**	**10**	P		**P**	**18 54 39.1**	**+0.2**
N15K				IAmb		IAmb	18 55 18.0	
	comp=Z,15nm,1.5s							
P18K	**Big Mountain,**	**78.94**	**12**	P		**P**	**18 54 39.1**	**-0.5**
P18K				IAmb		IAmb	18 54 40.6	
	comp=Z,11nm,1.2s							
DSP	**Deep Springs**	**79.11**	**45**	P		**P**	**18 54 42.5**	**+1.4**
O18K	**Koktuh Hills**	**79.37**	**12**	P		**P**	**18 54 41.8**	**-0.1**
O18K				IAmb		IAmb	18 54 42.4	
	comp=Z,15nm,1.0s							
NVAR	**Mina Array Bea**	**79.45**	**44**	P		**P**	**18 54 43.4**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=227,slow=8.8,SNR=6.0							
	comp=Z,1.0nm,0.7s							
M16K	**Timber Creek**	**79.78**	**10**	P		**P**	**18 54 44.9**	**+0.9**
M16K				IAmb		IAmb	18 54 49.4	
	comp=Z,9.4nm,1.4s							
N18K	**Kilae Creek**	**80.00**	**11**	P		**P**	**18 54 44.4**	**-0.8**
N18K				IAmb		IAmb	18 55 14.4	
	comp=Z,10.0nm,1.3s							
K05A	**Summer Lake**	**80.16**	**39**	P		**P**	**18 54 47.3**	**+0.6**
K05A				IAmb		IAmb	18 54 58.0	
	comp=Z,18nm,1.5s							
L16K	**Owhat River**	**80.36**	**9**	P		**P**	**18 54 45.5**	**-1.5**
RED	**Redoubt Volcan**	**80.38**	**13**	P		**P**	**18 54 46.5**	**-0.8**
RED				IAmb		IAmb	18 55 08.6	
	comp=Z,18nm,1.4s							
N19K	**Bonanza Creek**	**80.39**	**12**	P		**P**	**18 54 45.7**	**-1.6**
N19K				IAmb		IAmb	18 54 53.9	
	comp=Z,14nm,1.5s							
K15K	**Wolf Creek Mou**	**80.61**	**8**	P		**P**	**18 54 49.1**	**+0.8**
K15K				IAmb		IAmb	18 54 50.3	
	comp=Z,5.8nm,1.1s							
J16K	**Anvik River**	**81.69**	**8**	P		**P**	**18 54 54.5**	**+0.7**
J16K				IAmb		IAmb	18 54 55.4	
	comp=Z,4.2nm,0.8s							
SEY	**Seymchan**	**83.15**	**347**	P		**P**	**18 55 01.0**	**-0.2**
	comp=Z,3.2nm,0.4s,baz=133,slow=6.3,SNR=12							
	comp=Z,3.2nm,0.4s							
ILAR	**Eielson Array**	**85.51**	**13**	P		**P**	**18 55 12.1**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=226,slow=5.2,SNR=18							
	comp=Z,0.6nm,0.4s							
ILAR	**Eielson Array**	**85.51**	**13**	P		**P**	**18 55 11.8**	**-1.0**
TX31	**Lajitas Ar. Sí**	**86.20**	**58**	P		**P**	**18 55 18.5**	**+1.5**
TXAR	**Lajitas Array**	**86.20**	**58**	P		**P**	**18 55 18.3**	**+1.3**
	comp=Z,0.7nm,0.7s,baz=210,slow=6.8,SNR=8.4							
	comp=Z,0.7nm,0.7s							
TXAR	**Lajitas Array**	**86.20**	**58**	P		**P**	**18 55 17.1**	**+0.1**
PDAR	**Pinedale Array**	**87.37**	**44**	P		**P**	**18 55 22.9**	**+0.5**
	comp=Z,0.8nm,0.5s,baz=217,slow=3.5,SNR=11							
	comp=Z,0.8nm,0.5s							
PDAR	**Pinedale Array**	**87.37**	**44**	P		**P**	**18 55 22.4**	**0.0**
SONM	**Songino Array**	**92.79**	**319**	P		**P**	**18 55 47.1**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=105,slow=4.1,SNR=2.5							
	comp=Z,0.2nm,0.4s							
SONM	**Songino Array**	**92.79**	**319**	P		**P**	**18 55 47.1**	**-0.1**
YKA	**Yellowknife Ar**	**94.10**	**25**	P		**P**	**18 55 51.9**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=257,slow=5.1,SNR=7.2							
	comp=Z,0.3nm,0.7s							
BNN	**Bunyan**	**142.89**	**312**			**PKPdf**	**19 02 03.3**	**-1.6**
BR131	**Keskin Array S**	**144.02**	**315**			PKPbc	19 02 05.6	-0.6
BRTR	**Keskin Array B**	**144.02**	**315**	PKP		PKPbc	19 02 06.5	+0.3
	comp=Z,0.6nm,0.5s,baz=153,slow=3.9,SNR=5.9							
BRTR	**Keskin Array B**	**144.02**	**315**			PKPbc	19 02 06.1	-0.1
CLL	**Collm**	**144.83**	**347**	PKPdf		**PKPdf**	**19 02 07.8**	**+0.2**
CLL	**Collm**	**144.83**	**347**	*i* P		**PKPdf**	**19 02 08.3**	**+0.7**
	comp=Z,4.0nm,0.6s							
MMAI	**Mount Meron Ar**	**145.38**	**303**	PKPbc		**PKPbc**	**19 02 11.2**	**+0.8**
	comp=Z,0.9nm,0.4s,baz=41,slow=7.8,SNR=5.4							
GERES	**GERESS Array B**	**146.97**	**345**	PKPbc		**PKPbc**	**19 02 14.4**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=17,slow=3.8,SNR=7.7							
GERES	**GERESS Array B**	**146.97**	**345**			**PKPbc**	**19 02 14.2**	**-0.2**
CONA	**Conrad Observa**	**147.19**	**341**	*i* PKP		**PKPbc**	**19 02 15.2**	**+0.2**
	comp=Z,3.9nm,0.7s							
LESA	**Schwarzleotal**	**148.54**	**345**	*i* PKP		**PKPbc**	**19 02 18.2**	**-0.2**
	comp=Z,1.2nm,0.4s							
SOKA	**Soboth**	**148.57**	**341**	*e*PKP		**PKPbc**	**19 02 17.6**	**-0.9**
	comp=Z,1.2nm,0.4s							
RETA	**Reutte**	**148.93**	**347**	*e*PKP		**PKPbc**	**19 02 19.5**	**+0.2**
	comp=Z,1.7nm,0.5s							
WTTA	**Wattenberg**	**148.94**	**346**	*i* PKP		**PKPbc**	**19 02 19.5**	**0.0**
	comp=Z,4.1nm,0.5s							
MOTA	**Moosalm**	**148.99**	**347**	*i* PKP		**PKPbc**	**19 02 19.6**	**0.0**
	comp=Z,8.1nm,1.3s							
MYKA	**Terra Mystica**	**149.02**	**343**	*e*PKP		**PKPbc**	**19 02 18.8**	**-0.8**
	comp=Z,2.2nm,0.4s							
SQTA	**Sankt Quirin**	**149.08**	**346**	*i* PKP		**PKPbc**	**19 02 19.8**	**0.0**
	comp=Z,3.9nm,0.6s							
ABTA	**Abfaltersbach**	**149.21**	**344**	*i* PKP		**PKPbc**	**19 02 19.7**	**-0.3**
	comp=Z,2.8nm,0.6s							
FUORN	**Ofenpass-Fuorn**	**149.86**	**347**	PKPbc		**PKPbc**	**19 02 21.9**	**+0.1**

*ASRS **11** 18:56:00.2±0.3,51°N±1°×8°7E±°, h4km±3km, MLh4.0/14, Error ellipse: s-maj=4.1km s-min=2.5km az=65.6, confirmed*
*NNC **11** 18:56:04.2±1.4,50°.63N×87°.22E, h0km, mb4.0,mpv3.7, Error ellipse: s-maj=12.6km s-min=5.3km az=100.0*
ISC 11 18:56:02.0±0.7,50°.59N±0°.02×87°.49E±0°.03,h10km,n27, σ2ş15/57,17C-13D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHBI	**Chibit, Altay**	**0.28**	**179**	⇓Pg	**Pg**	**18 56 05.4**	**-2.2**
CHBI				Sg	**Sg**	**18 56 08.6**	**-2.9**
AKAR	**Aktash**	**0.29**	**163**	⇓Pg	**Pg**	**18 56 05.8**	**-2.0**
AKAR				Sg	**Sg**	**18 56 09.2**	**-2.5**
ULGR	**Ulagan, Altay**	**0.30**	**84**	⇑Pg	**Pg**	**18 56 07.7**	**-0.3**
ULGR				Sg	**Sg**	**18 56 12.4**	**+0.4**
CUR	**Chagan-Uzun**	**0.74**	**132**	⇑Pg	**Pg**	**18 56 14.6**	**-1.6**
CUR				Sg	**Sg**	**18 56 24.9**	**-1.0**
DGZ	**Jazzator, Alta**	**0.90**	**183**	⇓Pg	**Pg**	**18 56 16.6**	**-2.6**
DGZ				Sg	**Sg**	**18 56 27.5**	**-3.3**
YALR	**Yailyu, Altay**	**1.18**	**4**	⇓Pg	**Pb**	**18 56 23.4**	**-1.0**
YALR				Sg	**Sb**	**18 56 39.8**	**0.0**
ARTR	**Artybash**	**1.21**	**354**	⇓Pg	**Pn**	**18 56 24.2**	**-0.8**
ARTR				Sg	**Sb**	**18 56 41.0**	**+0.2**
GALT	**Gorno-Altaysk,**	**1.68**	**325**	Pg	**Pb**	**18 56 31.9**	**-1.0**
GALT				Sg	**Sg**	**18 56 56.4**	**+0.5**
UKR	**Ust'-Kan**	**1.76**	**282**	⇑Pg	**Pb**	**18 56 32.9**	**-1.5**
UKR				Sg	**Sg**	**18 56 57.3**	**-1.2**
TEL	**Teeli**	**1.77**	**75**	⇑Pg	**Pn**	**18 56 30.5**	**-2.2**
TEL				Sg	**Sn**	**18 56 56.1**	**+0.8**
ELT	**Eltsovka**	**2.78**	**344**	⇑Pg	**Pb**	**18 56 49.6**	**-2.1**
ELT				Sg	**Sb**	**18 57 28.0**	**+2.1**
KALT2	**Kaltan 2**	**2.81**	**358**	Pg	**Pb**	**18 56 51.7**	**-0.5**
KALT2				Sg	**Sg**	**18 57 31.1**	**-1.1**
TAIL	**Tailep, Kuzbas**	**2.86**	**356**	Pg	**Pg**	**18 56 55.7**	**-1.1**
TAIL				Sg	**Sg**	**18 57 33.1**	**-0.8**
KALT3	**Kaltan 3**	**2.92**	**359**	Pg	**Pb**	**18 56 55.0**	**+0.8**
KALT3				Sg	**Sg**	**18 57 34.1**	**-1.7**
KIYZ	**Kiyzas, Kuzbas**	**2.97**	**3**	Pn	**Pb**	**18 56 52.4**	**-2.6**
KIYZ				Pg	**Pg**	**18 56 55.7**	**-3.2**
KIYZ				Sg	**Sg**	**18 57 35.1**	**-2.3**
VEH	**Verkhnyaya Baz**	**3.19**	**32**	Pn	**Pb**	**18 56 55.9**	**-2.8**
VEH				Pg	**Pg**	**18 56 59.2**	**-3.8**
VEH				Sg	**Sb**	**18 57 40.9**	**+3.4**
DJO	**Djoy, Khakassi**	**3.19**	**45**	Pg	**Pb**	**18 57 00.4**	**+1.7**
DJO				Sg	**Sb**	**18 57 41.7**	**+4.1**
LUZB	**Luzhba, Kemero**	**3.19**	**15**	Pn	**Pb**	**18 56 55.9**	**-2.8**
LUZB				Pg	**Pg**	**18 56 59.3**	**-3.8**
LUZB				Sg	**Sg**	**18 57 44.0**	**-0.4**
CERR	**Cheremushki**	**3.33**	**46**	Pg	**Pb**	**18 57 02.7**	**+1.7**
CERR				Sg	**Sb**	**18 57 45.5**	**+3.9**
ERU	**Erunakovo, Kuz**	**3.55**	**359**	Pg	**Pg**	**18 57 08.8**	**-1.2**
ERU				Sg	**Sg**	**18 57 55.9**	**0.0**
ZAA0	**Zalesovo Array**	**3.74**	**335**	⇑Pn	**Pn**	**18 57 01.4**	**+1.7**
	6.2nm,0.4s						
ZAA0				⇓Sn	**Sn**	**18 57 45.9**	**+2.1**
	64nm,0.8s						
ZAA0				⇑Lg	Lg	18 58 02.9	
	40nm,0.6s						
MK31	**Makanchi Array**	**5.13**	**224**	⇓Pn	**Pn**	**18 57 22.0**	**+3.2**
	1.8nm,0.2s,baz=45,slow=12,SNR=358						
MK31				⇓Sn	**Sn**	**18 58 20.3**	**+2.2**
	13nm,0.4s,baz=47,slow=26,SNR=6.6						
MK31				⇑Lg	Lg	18 58 40.8	
	23nm,0.5s,baz=43,slow=33,SNR=6.4						
MAKZ	**Makanchi**	**5.26**	**226**	⇓Pn	**Pn**	**18 57 23.6**	**+3.0**
	7.6nm,0.5s						
MAKZ				⇓Sn	**Sn**	**18 58 23.9**	**+2.6**
	40nm,0.7s						
MAKZ				⇓Lg	Lg	18 58 45.8	
	20nm,0.6s						
KURK	**Kurchatov**	**5.64**	**275**	⇓Pn	**Pn**	**18 57 26.8**	**+1.0**
	2.4nm,0.5s						
KURK				⇑Sn	**Sn**	**18 58 32.8**	**+2.1**
	4.7nm,0.5s						
KURK				⇑Lg	Lg	18 58 56.2	
	31nm,0.9s						
KURBB	**Kurchatov Arra**	**5.71**	**274**	⇑Pn	**Pn**	**18 57 27.5**	**+0.9**
	16nm,0.4s						
KURBB				⇑Sn	**Sn**	**18 58 34.0**	**+1.8**
	25nm,0.6s						
KURBB				⇑Lg	Lg	18 58 56.5	
	115nm,0.7s						
BVA0	**Borovoye Array**	**10.87**	**290**	⇑Pn	**Pn**	**18 58 36.6**	**-0.8**
	1.8nm,0.8s,baz=99,slow=14,SNR=11						
BVA0				⇑Sn	**Sn**	**19 00 36.9**	**-2.0**
	4.0nm,1.1s,baz=109,slow=27,SNR=5.7						
KK31	**Karatay Array**	**13.81**	**244**	⇑Pn	**Pn**	**18 59 19.6**	**+2.0**
	0.4nm,0.5s						
KK31				⇑Sn	**Sn**	**19 01 52.5**	**+1.6**
	0.5nm,0.5s						
KK31				⇓Lg	Lg	19 03 19.4	
	3.9nm,0.8s,baz=45,slow=30,SNR=3.8						

*SDD **11** 19:09:31.8±0.9, 17°.88N×66°.74W, h20km±7km, MD3.1, ML3.2, MW3.4, Presumed earthquake*
*NEIC **11** 19:09:31.4±0.9, 17°.87N±0°.03×66°.735W±0°.006, h10km±1km, ML3.4/35, Md3.3/5(RSPR), Error ellipse: s-maj=5.0km s-min=2.8km az=352.0*
*OSPL **11** 19:09:32.6±0.6, 17°.87N×66°.75W, h2km±999km, ML2.9, Presumed earthquake*
ISC 11 19:09:31.8±1.0,17°.89N±0°.05×66°.74W±0°.02,h14km±7km, n33,σ0ş56/46,6C,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.15**	**303**		**Pg**	**19 09 35.3**	**-0.3**
GBPR					**Sg**	**19 09 37.8**	**-0.5**
OBIP	**Obispado Ponce**	**0.20**	**41**		**Pg**	**19 09 35.9**	**-0.4**
OBIP	**Obispado Ponce**	**0.20**	**41**		**Sg**	**19 09 39.5**	**0.0**
OBIP	**Obispado Ponce**	**0.20**	**41**	*i* P	**Pg**	**19 09 36.4**	**0.0**
OBIP				*e*S	**Sg**	**19 09 39.4**	**0.0**
OBIP				IAML		19 09 40.0	
	comp=Z,2μm,0.5s						
CELP	**Cerrillos**	**0.24**	**40**		**Pg**	**19 09 36.6**	**-0.4**
CELP				IAML		19 09 42.5	
	comp=Z,4μm,0.3s						
CELP				IAML		19 09 42.7	
	comp=Z,3μm,0.5s						
CELP	**Cerrillos**	**0.24**	**40**	⇑*e*Pg	**Pg**	**19 09 37.0**	**0.0**
CELP				⇑*e*Sg	**Sg**	**19 09 40.9**	**+0.3**
CELP				IAML		19 09 42.4	
	comp=N,2μm,0.3s						
CELP				IAML		19 09 42.6	
	comp=E,934nm,0.4s						
MLPR	**Magueyes Islan**	**0.30**	**285**		**Pg**	**19 09 37.8**	**-0.2**
MLPR				Sg	**Sg**	**19 09 42.6**	**+0.4**
MLPR				IAML		19 09 44.4	
	comp=E,4μm,0.2s						
MLPR				IAML		19 09 44.4	
	comp=E,3μm,0.4s						
MLPR	**Magueyes Islan**	**0.30**	**285**	*e*Pg	**Pg**	**19 09 37.7**	**-0.2**
MLPR				⇑*e*Sg	**Sg**	**19 09 42.5**	**+0.3**
MLPR				IAML		19 09 44.3	
	comp=E,1μm,0.3s						
MLPR				IAML		19 09 44.3	
	comp=N,1μm,0.2s						
UUPR	**Utuado, UPR, P**	**0.36**	**3**		**Pg**	**19 09 38.5**	**-0.6**
CRPR	**Cabo Rojo, PR**	**0.37**	**288**		**Pg**	**19 09 39.1**	**-0.2**
CRPR					**Sg**	**19 09 44.2**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.37**	**288**	IAML		19 09 46.2	
	comp=N,4μm,0.3s						
CRPR				IAML		19 09 46.5	
	comp=N,3μm,0.5s						
CRPR	**Cabo Rojo, PR**	**0.37**	**288**	*i* P	**Pg**	**19 09 39.1**	**-0.2**
CRPR				*e*S	**Sg**	**19 09 44.5**	**+0.2**
CRPR				IAML		19 09 46.8	
	comp=Z,3μm,0.2s						
LSP	**Las Mesas**	**0.43**	**311**		**Pg**	**19 09 40.2**	**-0.3**
LSP					**Sg**	**19 09 47.0**	**+0.7**
AOPR	**Arecibo Observ**	**0.45**	**359**		**Pg**	**19 09 40.1**	**-0.7**
AOPR				IAML		19 09 48.8	
	comp=Z,3μm,0.2s						
AOPR	**Arecibo Observ**	**0.45**	**359**	⇑*e*Pg	**Pg**	**19 09 40.2**	**-0.7**
AOPR				⇑*e*Sg	**Sg**	**19 09 47.0**	**0.0**
AOPR				IAML		19 09 48.0	
	comp=E,7μm,0.2s						
AOPR				IAML		19 09 48.7	
	comp=N,3μm,0.2s						
PRSN	**Puerto Rico Se**	**0.50**	**310**		**Pg**	**19 09 41.1**	**-0.7**
PRSN				IAML		19 09 50.4	
	comp=N,6μm,0.3s						
PRSN	**Puerto Rico Se**	**0.50**	**310**	*e*Pg	**Pg**	**19 09 41.2**	**-0.5**
PRSN				⇑*e*Sg	**Sg**	**19 09 48.9**	**+0.4**
PRSN				IAML		19 09 50.4	
	comp=N,6μm,0.2s						
PRSN				IAML		19 09 51.3	
	comp=E,3μm,0.3s						
ECPR	**Experimental S**	**0.56**	**40**		**Pg**	**19 09 42.2**	**-0.6**
ECPR				IAML		19 09 53.3	
	comp=E,3μm,0.2s						
SJG	**San Juan**	**0.61**	**69**		**Pg**	**19 09 42.8**	**-0.9**
SJG	**San Juan**	**0.61**	**69**	*e*Pg	**Pg**	**19 09 43.5**	**-0.1**
SJG	**San Juan**	**0.61**	**69**	*i* P	**Pg**	**19 09 43.7**	**0.0**
SJG				*e*S	**Sg**	**19 09 52.2**	**+0.5**
SJG				IAML		19 09 54.3	
	comp=Z,531nm,0.2s						
EMPR	**Esperanza - Ma**	**0.62**	**19**		**Pg**	**19 09 43.6**	**-0.3**
EMPR					**Sg**	**19 09 52.8**	**+0.7**
PDPR	**Patillas Dam,**	**0.70**	**79**		**Pg**	**19 09 44.8**	**-0.6**
IDE	**Isla Desecheo**	**0.85**	**305**		**Pg**	**19 09 47.5**	**-0.8**
IDE					**Sg**	**19 09 59.6**	**0.0**
HUMP	**Col San Antoni**	**0.89**	**73**		**Pg**	**19 09 48.2**	**-0.8**
HUMP					**Sg**	**19 10 00.3**	**-0.3**
HUMP	**Col San Antoni**	**0.89**	**73**	Pg	**Pg**	**19 09 48.0**	**-1.0**
HUMP				IAML		19 10 04.5	
	comp=Z,478nm,0.2s						
HUMP				IAML		19 10 05.4	
	comp=Z,505nm,0.3s						
CUPR	**Culebra, Puert**	**1.45**	**73**		**Pn**	**19 09 58.3**	**+0.7**
CUPR				IAML		19 10 25.0	
	comp=Z,226nm,0.7s						
DR12	**Loma Pena Alta**	**2.66**	**290**		**Pn**	**19 10 14.8**	**+0.4**
HATOM	**Hato Mayor del**	**2.66**	**290**	*e*Pg	**Pn**	**19 10 16.0**	**+1.6**
HATOM				IAML		19 10 58.6	
	comp=E,59nm,0.6s						
HATOM				IAML		19 11 04.1	
	comp=N,75nm,0.4s						
BANI	**BANI**	**3.47**	**279**	Pn	**Pn**	**19 10 25.9**	**+0.2**
SMRT	**St. Maarten**	**3.50**	**87**	Pn	**Pn**	**19 10 26.5**	**+0.7**
SDDR	**Presa de Saban**	**4.45**	**285**	Pn	**Pn**	**19 10 38.1**	**-0.9**
SDV	**Santo Domingo**	**9.72**	**203**	Pn	**Pn**	**19 11 51.4**	**-0.1**

*MAN **11** 19:42:03.0, 4°.41N×126°.01E, h115km, MS3.5*
*NEIC **11** 19:42:03.8±1.8, 4°.48N±0°.04×125°.8E±0°.1, h131km±11km, mb4.3/11, Error ellipse: s-maj=18.6km s-min=5.2km az=83.0*
*IDC **11** 19:42:06.0±3.5, 4°.43N×126°.03E, h157km±36km, mb3.0/4, mbtmp3.9/7, Error ellipse: s-maj=41.7km s-min=19.4km az=64.0*

*DJA **11** 19:42:06.6±0.6, 4°.N±5°×12°.6E±°, h130km±4km, M4.3/16, mB5.1/5, mb4.2/7, MLv4.3/16, Mw(mB)4.5/5*
ISC 11 19:42:04.6±0.7, 4°.47N±0°.05×125°.95E±0°.08,h150km,n44, σ1ş62/48,mb3.8/8,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.88**	**208**	P	**Pn**	**19 42 27.5**	**-1.0**
SGSI				S	**Sn**	**19 42 45.9**	**-0.8**
DDMP	**Don Marcelino,**	**1.64**	**352**	*e*P	**Pn**	**19 42 34.6**	**-1.2**
DDMP				*e*S	**Sn**	**19 42 56.1**	**-3.6**
DAV	**Davao City (W)**	**2.61**	**352**	Pn	**Pn**	**19 42 44.5**	**-2.7**
DMPH	**Davao City--Mi**	**2.64**	**350**	*e*P	**Pn**	**19 42 48.0**	**+0.6**
DMPH				*e*S	**Sn**	**19 43 19.9**	**-0.7**
KCP	**Kidapawan**	**2.67**	**341**	*e*P	Pn	19 42 53.0	+5.1
KCP				*e*S	**Sn**	**19 43 17.5**	**-3.8**
MNI	**Manado**	**3.20**	**200**	P	**Pn**	**19 42 55.6**	**+1.0**
CTBH	**Cotabato--PC H**	**3.22**	**328**	*e*P	**Pn**	**19 42 52.4**	**-2.5**
BIPH	**Bislig**	**3.72**	**6**	*i* P	**Pn**	**19 43 03.0**	**+1.8**
BIPH				*e*S	**Sn**	**19 43 43.9**	**-1.3**
TNTI	**Ternate**	**3.93**	**159**	Pn	**Pn**	**19 43 03.2**	**-1.0**
TNTI				Sn	Sn	19 43 39.3	-11
TNTI	**Ternate**	**3.93**	**159**	P	**Pn**	**19 43 03.1**	**-1.0**
CGP	**Cagayan de Oro**	**4.15**	**343**	*e*P	**Pn**	**19 43 11.2**	**+4.3**
CGP				*e*S	**Sn**	**19 43 54.7**	**-0.7**
TSSP	**Tandag City**	**4.55**	**3**	*e*P	**Pn**	**19 43 11.2**	**-1.0**
TSSP				*e*S	Sn	19 43 16.1	-49
GTOI	**Gorontalo**	**4.80**	**218**	P	**Pn**	**19 43 17.0**	**+1.5**
MRSI	**Marisa**	**5.63**	**225**	P	**Pn**	**19 43 27.8**	**+1.3**
	0.1nm18nm,0.5s						
TOLI2	**Tolitoli**	**6.14**	**237**	Pn	**Pn**	**19 43 31.6**	**-1.8**
SANI	**Sanana**	**6.47**	**180**	P	**Pn**	**19 43 35.0**	**-2.7**
MYLDM	**Lahad Datu**	**7.46**	**276**	Pn	Pn	19 43 46.6	-4.3
SWI	**Sorong**	**7.50**	**135**	P	**Pn**	**19 43 50.7**	**-0.7**
SIJI	**Sorong**	**7.50**	**135**	P	**Pn**	**19 43 51.6**	**0.0**
	7.7nm,0.3s,baz=338,slow=19,SNR=26						
SIJI				S	**Sn**	**19 45 11.7**	**-3.8**
	4.7nm,0.7s,baz=135,slow=20,SNR=1.7						
SIJI	**Sorong**	**7.50**	**135**	P	**Pn**	**19 43 51.1**	**-0.4**
NLAI	**Namlea**	**7.74**	**171**	P	**Pn**	**19 43 54.1**	**-0.5**
	3μm53nm,0.7s						
KRAI	**Karang Ratu**	**8.11**	**162**	P	**Pn**	**19 43 59.5**	**-0.1**
FAKI	**Fak Fak**	**9.67**	**139**	Pn	**Pn**	**19 44 21.0**	**+0.6**
KKM	**Kota Kinabalu**	**9.82**	**280**	Pn	Pn	19 44 13.6	-8.9
KAPI	**Kappang**	**11.27**	**213**	P	**Pn**	**19 44 42.9**	**+1.4**
	6.3nm,0.5s,baz=20,slow=12,SNR=4.4						
KAPI	**Kappang**	**11.27**	**213**		**Pn**	**19 44 40.9**	**-0.6**
SOEI	**Soe**	**14.23**	**187**		**Pn**	**19 45 18.5**	**-1.2**
BATI	**Baumata**	**14.75**	**189**	P	**Pn**	**19 45 27.3**	**+1.2**
	12nm,0.4s,baz=62,slow=4.7,SNR=5.2						
JAGI	**Jajag, Banyuwa**	**17.42**	**222**	P	**P**	**19 45 57.6**	**-0.1**
JAGI				IAmb	IAmb	19 46 02.3	
	comp=Z,23nm,1.2s						
MTN	**Manton Dam**	**17.95**	**163**	P	**P**	**19 46 03.1**	**-0.4**
MTN				IAmb	IAmb	19 46 27.3	
	comp=Z,12nm,1.1s						
KNRA	**Kununurra**	**20.21**	**172**	P	**P**	**19 46 28.0**	**+0.1**
KNRA				IAmb	IAmb	19 46 29.5	
	comp=Z,8.9nm,0.7s						
WB0	**Warramunga Arr**	**25.47**	**161**	P	**P**	**19 47 20.1**	**+1.0**
WB0				IAmb	IAmb	19 47 23.2	
	comp=Z,8.0nm,1.4s						
WRA	**Warramunga Arr**	**25.62**	**161**	P	**P**	**19 47 21.0**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=339,slow=10,SNR=12						
	comp=Z,0.3nm,0.5s						
WR8	**Warramunga Arr**	**25.68**	**161**	P	**P**	**19 47 22.1**	**+1.1**
WR8				IAmb	IAmb	19 47 36.4	
	comp=Z,6.6nm,1.2s						
MBWA	**Marble Bar**	**26.19**	**193**	P	**P**	**19 47 26.1**	**+0.7**
MBWA				IAmb	IAmb	19 47 49.8	
	comp=Z,23nm,1.4s						
PSA00	**Pilbara Seismi**	**26.56**	**193**	P	**P**	**19 47 30.0**	**+1.3**
PSA00				IAmb	IAmb	19 47 39.8	
	comp=Z,18nm,1.4s						
JCJ	**Chichijima**	**27.33**	**33**	P	**P**	**19 47 35.9**	**+0.3**
AS31	**Alice Springs**	**29.02**	**165**	P	**P**	**19 47 50.

NIUE Niue 2.85 85 Pn 19 54 51.5 -3.5
NIUE Sn **Sn** 19 55 28.5 -0.8
NIUE Niue 2.85 85 P **Pn** 19 54 51.7 -3.3
NIUE S **Sn** 19 55 23.4 -6.0
AFI Afiamalu 5.51 12 Pn Pn 19 55 28.0 -3.6
10nm,0.3s,baz=92,slow=23,SNR=8.8
AFI Sn Sn 19 56 20.3 -15
13nm,0.3s,baz=47,slow=23,SNR=5.4
MSVF Nonsavu 8.71 279 Pn **Pn** 19 56 17.7 +2.0
1.1nm,0.3s,baz=110,slow=11,SNR=20
MSVF LR LR 19 59 14.5
comp=Z,14µm,18.9s,baz=83,slow=37
MSVF Nonsavu 8.71 279 P **Pn** 19 56 17.6 +2.0
MSVF Nonsavu 8.71 279 **Pn** 19 56 17.9 +2.3
MSVF Nonsavu 8.71 279 P **Pn** 19 56 17.9 +2.3
RAR Rarotonga 12.49 101 Pn **Pn** 19 57 04.6 -2.7
11nm,0.3s,baz=264,slow=8.5,SNR=15
RAR LR LR 20 01 20.1
comp=Z,4µm,19.2s,baz=254,slow=33
RAR Rarotonga 12.49 101 P **Pn** 19 57 06.2 -1.1
RAR Rarotonga 12.49 101 Pn 19 57 00.6 -6.7
RAR Rarotonga 12.49 101 P **Pn** 19 57 04.4 -2.9
FUNA Funafuti 13.18 324 Pn **Pn** 19 57 13.0 -3.8
RTV Rentapao 17.75 272 P **P** 19 58 18.7 +1.1
MARNC Mare, Loyalty 17.98 260 P **P** 19 58 20.5 +0.4
MARNC Mare, Loyalty 17.98 260 **Pn** 19 58 15.3 -4.3
MARNC IAmb IAmb 19 58 19.2
comp=Z,388nm,1.4s
DVP Devils Point 17.98 272 P **P** 19 58 21.2 +1.0
YATNC Mamie plateau, 19.07 258 P **Pn** 19 58 33.2 +0.2
OUENC Ouen Island, N 19.15 257 P **P** 19 58 30.5 -2.5
OUENC IAmb IAmb 19 58 36.2
comp=Z,263nm,1.8s
SANVU Saraoutou 19.35 278 P **Pn** 19 58 37.3 +1.0
SANVU Saraoutou 19.35 278 **P** 19 58 31.5 -3.8
SANVU IAmb IAmb 19 58 38.0
comp=Z,365nm,1.5s
DZM Mont Dzumac 19.49 258 P **P** 19 58 34.3 -2.5
comp=Z,1.3nm,0.3s,baz=73,slow=19,SNR=21
DZM LR LR 20 05 07.9
comp=Z,4µm,19.3s,baz=90,slow=34
comp=Z,45nm,1.0s
ONTNC Ouen Toro 19.50 258 P **Pn** 19 58 38.3 +0.2
ONTNC Ouen Toro 19.50 258 **P** 19 58 32.3 -4.6
OUZ Omahuta 19.81 214 P **Pn** 19 58 47.4 +0.7
HAZ Te Kaha 20.06 202 P Pn 19 58 46.3 +1.7
TKGZ Te Karaka 20.65 201 S S 20 02 21.4 -19
MWZ Matawai 20.67 202 P Pn 19 58 51.8 0.0
MWZ Matawai 20.67 202 S S 20 02 20.0 -21
URZ Urewera 20.75 203 P Pn 19 58 52.0 -0.7
comp=Z,36nm,0.9s,baz=302,slow=2.4,SNR=16
comp=Z,36nm,0.9s
URZ Urewera 20.75 203 P Pn 19 58 51.9 -0.8
RAGZ Rawiri 20.85 202 S S 20 02 26.2 -18
RIGZ Rimuhau 20.92 201 S S 20 02 26.9 -19
TOZ Tahuroa Road 20.92 206 **P** 19 58 50.3 -1.9
RTZ Ruatahuna 21.11 202 **P** 19 58 53.1 -1.3
RTZ Ruatahuna 21.11 202 S S 20 02 31.2 -18
SNGZ Shannon Statio 21.13 201 S S 20 02 32.8 -18
KNZ Kokohu 21.24 201 S S 20 02 33.4 -18
MHGZ Mahia Peninsul 21.28 200 S S 20 02 34.7 -18
BKZ Black Stump Fm 21.77 203 P **P** 19 59 01.7 +0.2
BKZ Black Stump Fm 21.77 203 P **P** 19 58 58.7 -2.8
PPT Papeete 22.22 89 LR LR 20 06 06.9
comp=Z,3µm,18.8s,baz=278,slow=32
TSZ Takaparí Road 22.76 202 P **P** 19 59 14.2 +2.3
BFZ Birch Farm 23.21 201 P **P** 19 59 16.3 -0.3
BFZ IAmb IAmb 19 59 24.7
comp=Z,109nm,1.2s
BFZ Birch Farm 23.21 201 P **P** 19 59 18.9 +2.3
MRZ Mangatainoka R 23.42 202 P **P** 19 59 18.2 -0.5
TCW Tory Channel 24.39 204 P **P** 19 59 27.2 -0.7
TCW Tory Channel 24.39 204 P **P** 19 59 28.7 +0.8
TUWZ Tuamarina 24.70 204 P **P** 19 59 32.9 +2.2
NNZ Nelson 24.74 205 P **P** 19 59 31.0 -0.1
NNZ IAmb IAmb 19 59 40.0
comp=Z,166nm,1.6s
NNZ Nelson 24.74 205 P P 19 59 38.5 +7.4
QRZ Quartz Range 24.77 207 P **P** 19 59 32.2 +0.8
QRZ Quartz Range 24.77 207 P **P** 19 59 34.4 +3.0
QRZ Quartz Range 24.77 207 P **P** 19 59 35.1 +3.7
MRNZ Matariki Terra 25.15 206 P **P** 19 59 37.0 +2.2
MRNZ Matariki Terra 25.15 206 P **P** 19 59 37.3 +2.5
THZ Tophouse 25.39 205 P **P** 19 59 36.5 -0.6
THZ Tophouse 25.39 205 P **P** 19 59 42.5 +5.4
KHZ Kahutara 25.70 204 P **P** 19 59 45.5 +5.8
DSZ Denniston Nort 25.84 207 P **P** 19 59 40.6 -0.5
DSZ IAmb IAmb 20 00 14.0
comp=Z,80nm,1.0s
DSZ Denniston Nort 25.84 207 P P 19 59 47.7 +6.6
GVZ Greta Valley S 26.37 204 P P 19 59 54.9 +9.0
LTZ Lake Taylor 26.51 205 P **P** 19 59 46.7 -0.4
LTZ Lake Taylor 26.51 205 P **P** 19 59 50.5 +3.4
INZ Inchbonnie 26.80 206 P **P** 19 59 52.0 +2.3
INZ IAmb IAmb 20 00 09.1
comp=Z,75nm,0.9s
OXZ Oxford 27.06 205 P **P** 19 59 54.0 +2.0
OXZ IAmb IAmb 20 00 16.5
comp=Z,50nm,0.8s
OXZ Oxford 27.06 205 P P 19 59 59.6 +7.6
WVZ Waitaha Valley 27.38 207 P **P** 19 59 60.0 +5.1
MHCZ Mount Hutt 27.41 205 P P 20 00 03.3 +7.9
RPZ Rata Peaks 27.77 205 P **P** 20 00 00.9 +2.4
comp=Z,5.1nm,0.4s,baz=213,slow=0.5,SNR=15
comp=Z,5.1nm,0.4s
RPZ Rata Peaks 27.77 205 **P** 19 59 57.4 -1.1
RPZ Rata Peaks 27.77 205 P **P** 20 00 04.3 +5.8
ARCZ Arundel 27.92 205 P P 20 00 06.9 +7.1
LHI Lord Howe Isla 27.97 239 P **P** 20 00 03.2 +2.8
HNR Honiara 28.02 287 LR LR 20 09 30.6
comp=Z,45nm,19.4s,baz=194,slow=33
FOZ Fox Glacier 28.14 207 P **P** 20 00 01.4 -0.4
FOZ Fox Glacier 28.14 207 P P 20 00 07.5 +5.7
TMZ Timaru 28.35 205 P P 20 00 09.9 +6.3
LBZ Lake Benmore 28.68 206 P P 20 00 12.7 +6.1
JCZ Jackson Bay 29.02 208 P **P** 20 00 12.4 +2.7
WKZ Wanaka 29.53 207 P **P** 20 00 17.7 +3.6
WKZ Wanaka 29.53 207 P P 20 00 18.2 +4.1
WHZ Wether Hill Ro 30.83 207 P **P** 20 00 24.9 -0.7
WHZ IAmb IAmb 20 00 45.6
comp=Z,99nm,1.6s
EIDS Eidsvold 33.75 253 P **P** 20 00 49.1 -2.4
EIDS IAmb IAmb 20 01 05.2
comp=Z,74nm,1.8s
ARMA Armidale 33.86 244 P **P** 20 00 50.6 -2.0
ARMA IAmb IAmb 20 01 08.4
comp=Z,69nm,1.6s
CNB Canberra Magne 36.83 237 P **P** 20 01 17.8 -0.2
comp=Z,42nm,1.3s
CNB Canberra Magne 36.83 237 P **P** 20 01 18.1 +0.1
AULRC Lightning Ridg 36.84 247 P **P** 20 01 18.9 +0.8
AUDAR Daramalan Coll 36.99 237 P **P** 20 01 19.9 +0.6
AUMHS Melrose High S 37.06 237 P **P** 20 01 20.8 +0.9
AUMTS Mt Stromlo 37.12 237 P **P** 20 01 20.7 +0.3
CAN Canberra 37.12 237 P **P** 20 01 19.0 -1.4
comp=Z,31nm,1.5s
CAN Canberra 37.12 237 P **P** 20 01 21.3 +0.9
CAN Canberra 37.12 237 **P** 20 01 18.5 -1.9
CAN IAmb IAmb 20 01 20.3
comp=Z,56nm,1.3s
CAN Canberra 37.12 237 P **P** 20 01 18.5 -1.9
CAN pmax pmax
comp=Z,56nm,1.3s
KRVT Keravat (AS076 37.30 289 LR LR 20 16 29.9
comp=Z,298nm,19.8s,baz=43,slow=36
YNG Young 37.35 239 P **P** 20 01 21.2 -1.1
CTA Charters Tower 38.37 262 P **P** 20 01 30.3 -0.8
comp=Z,1.3nm,1.5s
CTA Charters Tower 38.37 262 P **P** 20 01 28.3 -2.8
comp=Z,21nm,0.6s,baz=96,slow=9.7,SNR=36
CTA LR LR 20 16 21.7
comp=Z,3µm,19.5s,baz=82,slow=35
comp=Z,21nm,0.6s
CTA Charters Tower 38.37 262 P **P** 20 01 29.2 -1.8
CTAO Charters Tower 38.37 262 P **P** 20 01 29.3 -1.8
CTAO Charters Tower 38.37 262 P **P** 20 01 28.2 -2.9
CTAO IAmb IAmb 20 01 30.6
comp=Z,158nm,1.8s
CTAO Charters Tower 38.37 262 P **P** 20 01 28.2 -2.9
CTAO pmax pmax
comp=Z,158nm,1.8s
CMSA Cobar Meteorol 39.08 244 P **P** 20 01 35.0 -1.9
comp=Z,21nm,1.4s

CMSA Cobar Meteorol 39.08 244 P **P** 20 01 35.0 -1.9
PMG Port Moresby 39.81 279 LR LR 20 16 12.1
comp=Z,2µm,18.4s,baz=106,slow=34
PMG Port Moresby 39.81 279 P **P** 20 01 43.9 +0.7
PMG Port Moresby 39.81 279 P **P** 20 01 44.3 +1.1
PMG Port Moresby 39.81 279 *ce*P **P** 20 01 42.7 -0.5
PMG pmax pmax
comp=Z,81nm,1.7s
PMG Port Moresby 39.81 279 P **P** 20 01 42.9 -0.3
QLP Quilpie 39.95 251 P **P** 20 01 41.2 -3.0
comp=Z,25nm,0.9s
QLP Quilpie 39.95 251 P **P** 20 01 43.9 -0.4
MTSU Mount Surprise 40.43 264 P **P** 20 01 45.9 -2.5
comp=Z,26nm,0.8s
MTSU Mount Surprise 40.43 264 P **P** 20 01 46.4 -2.0
TOO Toolangi 40.44 234 P **P** 20 01 48.1 -0.1
comp=Z,7.5nm,1.6s
TOO Toolangi 40.44 234 **P** 20 01 47.0 -1.2
TOO Toolangi 40.44 234 P **P** 20 01 47.0 -1.2
TOO pmax pmax
comp=Z,15nm,1.5s
MOO Moorlands 40.74 227 P **P** 20 01 50.5 -0.1
comp=Z,48nm,1.9s
TAU Tasmania Unive 40.83 226 P **P** 20 01 52.2 +0.9
TAU Tasmania Unive 40.83 226 P **P** 20 01 50.4 -0.9
TAU IAmb IAmb 20 01 56.0
comp=Z,105nm,1.6s
TAU Tasmania Unive 40.83 226 P **P** 20 01 50.4 -0.9
TAU pmax pmax
comp=Z,105nm,1.6s
BRAT Ballarat 41.63 235 P **P** 20 01 58.5 +0.5
AUMTC Mt Clear Colle 41.69 235 P **P** 20 01 58.6 +0.2
TRAIL Trail 42.12 25 P **P** 20 02 01.9 -0.6
COEN Coen 42.31 270 P **P** 20 02 01.1 -2.8
STKA Stephens Creek 42.58 244 P **P** 20 02 04.3 -1.5
comp=Z,75nm,2.0s
STKA Stephens Creek 42.58 244 P **P** 20 02 03.8 -2.1
comp=Z,5.4nm,0.9s,baz=102,slow=12,SNR=7.9
STKA LR LR 20 18 20.2
comp=Z,3µm,18.9s,baz=79,slow=34
comp=Z,5.4nm,0.9s
STKA Stephens Creek 42.58 244 P **P** 20 02 04.4 -1.5
STKA Stephens Creek 42.58 244 **P** 20 02 03.5 -2.4
STKA Stephens Creek 42.58 244 P **P** 20 02 03.5 -2.4
STKA pmax pmax
comp=Z,295nm,1.8s
KIP Kipapa 43.06 21 *ce*P **P** 20 02 13.3 +3.6
KIP pmax pmax
comp=Z,97nm,1.7s
INKA Innaminka 43.08 250 **P** 20 02 08.4 -1.6
ARPS Mount Arapiles 43.10 237 P **P** 20 02 10.4 +0.4
comp=Z,13nm,1.3s
QIS Mount Isa 44.51 260 P **P** 20 02 19.9 -1.6
comp=Z,18nm,2.0s
QIS Mount Isa 44.51 260 P **P** 20 02 22.9 +1.3
AUMBR Murray Bridge 44.88 239 P **P** 20 02 25.2 +0.9
HTT Hallett 44.98 242 P **P** 20 02 23.7 -1.5
comp=Z,11nm,1.5s
HTT Hallett 44.98 242 P **P** 20 02 25.3 +0.1
HTT Hallett 44.98 242 P **P** 20 02 25.6 +0.4
AUJCS Jamestown Cent 45.22 242 P **P** 20 02 27.0 -0.1
AUMAR Marden Senior 45.37 240 P **P** 20 02 29.2 +1.0
BBOO Buckleboo 47.33 243 P **P** 20 02 41.9 -1.8
comp=Z,35nm,1.6s
BBOO Buckleboo 47.33 243 P **P** 20 02 44.4 +0.8
BBOO Buckleboo 47.33 243 P **P** 20 02 41.3 -2.3
JAY Jayapura 48.28 284 LR LR 20 22 19.8
comp=Z,504nm,20.5s,baz=103,slow=35
WR8 Warramunga Arr 49.34 260 P **P** 20 02 56.4 -3.0
WR8 IAmb IAmb 20 02 57.6
comp=Z,89nm,1.6s
AS31 Alice Springs 49.43 255 **P** 20 02 57.4 -2.6
ASAR Alice Springs 49.43 255 P **P** 20 02 57.7 -2.3
comp=Z,46nm,1.0s,baz=87,slow=8.3,SNR=123
ASAR S **S** 20 10 00.7 -6.8
comp=Z,1.2nm,1.0s,baz=88,slow=15,SNR=5.6
ASAR LR LR 20 23 14.8
comp=Z,2µm,19.6s,baz=100,slow=36
comp=Z,46nm,1.0s
WRAB Tennant Creek 49.48 260 P **P** 20 02 59.5 -1.0
WRAB Tennant Creek 49.48 260 P **P** 20 02 56.8 -3.6
WRAB Tennant Creek 49.48 260 *ce*P **P** 20 02 58.1 -2.4
WRAB pmax pmax
comp=Z,89nm,2.5s
WRA Warramunga Arr 49.49 260 P **P** 20 02 57.9 -2.7
comp=Z,8.3nm,0.6s,baz=97,slow=8.8,SNR=120
WRA S **S** 20 10 00.3 -8.2
comp=Z,0.8nm,1.0s,baz=101,slow=12,SNR=4.8
comp=Z,8.3nm,0.6s
WRA Warramunga Arr 49.49 260 **P** 20 02 57.3 -3.3
WRA Warramunga Arr 49.49 260 P **P** 20 02 57.3 -3.3
WRA pmax pmax
comp=Z,10.0nm,1.8s
KDU Kakadu 52.72 269 P **P** 20 03 22.7 -2.1
comp=Z,25nm,2.1s
MTN Manton Dam 53.95 268 P **P** 20 03 31.4 -2.5
comp=Z,40nm,0.7s
MTN Manton Dam 53.95 268 **P** 20 03 31.0 -2.9
MTN IAmb IAmb 20 03 33.5
comp=Z,27nm,0.8s
FORT Forrest 54.12 246 P **P** 20 03 33.4 -1.5
comp=Z,18nm,1.2s
FORT Forrest 54.12 246 P **P** 20 03 32.2 -2.7
DRS Darwin Rock St 54.27 268 P **P** 20 03 36.0 -0.2
AUDHS Darwin High Sc 54.34 268 P **P** 20 03 35.0 -1.7
WRKA Warakurna 54.37 253 P **P** 20 03 35.1 -1.7
comp=Z,30nm,1.6s
KNRA Kununurra 55.51 264 P **P** 20 03 43.0 -2.2
comp=Z,43nm,1.7s
KNRA Kununurra 55.51 264 **P** 20 03 43.2 -2.0
KNRA IAmb IAmb 20 03 44.1
comp=Z,70nm,1.4s
SIJI Sorong 57.62 282 LR LR 20 26 55.9
comp=Z,510nm,20.9s,baz=96,slow=34
SIJI Sorong 57.62 282 P **P** 20 03 58.8 -1.4
comp=Z,75nm,1.1s
SWI Sorong 57.62 282 P **P** 20 03 58.9 -1.4
FITZ Fitzroy Crossi 57.92 260 LR LR 20 28 12.8
comp=Z,1µm,19.6s,baz=99,slow=36
RPN Rapa Nui 58.43 110 LR LR 20 23 38.1
comp=Z,2µm,19.5s,baz=261,slow=30
KRAI Karang Ratu 59.40 278 P **P** 20 04 11.8 -0.9
comp=Z,3µmcomp=Z,27nm,1.9s
VNDA Vanda 59.53 186 P **P** 20 04 14.7 +2.2
comp=Z,6.1nm,1.1s,baz=354,slow=6.2,SNR=4.6
VNDA LR LR 20 24 24.1
comp=Z,336nm,21.0s,baz=10,slow=30
comp=Z,6.1nm,1.1s
VNDA Vanda 59.53 186 **P** 20 04 13.2 +0.7
VNDA IAmb IAmb 20 06 14.2
comp=Z,57nm,1.9s
VNDA Vanda 59.53 186 P **P** 20 04 13.2 +0.7
VNDA pmax pmax
comp=Z,57nm,1.9s
NLAI Namlea 60.64 277 P **P** 20 04 20.5 -0.7
comp=Z,779nmcomp=Z,54nm,1.9s
SOEI Soe 61.26 269 P **P** 20 04 27.0 +1.4
SOEI Soe 61.26 269 **P** 20 04 23.7 -1.8
SOEI Soe 61.26 269 P **P** 20 04 25.2 -0.4
BATI Baumata 61.70 269 LR LR 20 31 54.4
comp=Z,872nm,19.3s,baz=150,slow=37
BATI Baumata 61.70 269 P **P** 20 04 28.5 +0.1
comp=Z,30nm,1.0s
TNTI Ternate 61.84 282 P **P** 20 04 29.0 -0.4
TNTI Ternate 61.84 282 P P 20 04 23.9 -5.4
TNTI Ternate 61.84 282 P **P** 20 04 28.9 -0.4
comp=Z,833nmcomp=Z,38nm,1.1s
SANI Sanana 62.10 278 P **P** 20 04 30.0 -1.0
SANI Sanana 62.10 278 P **P** 20 04 29.2 -1.8
comp=Z,39nm,1.2s
AUKUL Kulin High Sch 62.40 243 P **P** 20 04 33.8 +0.9
PSA00 Pilbara Seismi 62.58 255 P **P** 20 04 32.0 -2.2
PSA00 IAmb IAmb 20 04 33.5
comp=Z,20nm,1.2s
MBWA Marble Bar 62.76 256 P **P** 20 04 32.8 -2.7
KLBR Kellerberrin 62.86 244 P **P** 20 04 36.0 +0.1
NWAO Narrogin (SRO) 63.14 242 LR LR 20 30 58.6
comp=Z,2µm,19.1s,baz=82,slow=35
NWAO Narrogin (SRO) 63.14 242 P **P** 20 04 39.1 +1.3
NWAO Narrogin (SRO) 63.14 242 **P** 20 04 35.3 -2.5
NWAO Narrogin (SRO) 63.14 242 P **P** 20 04 35.3 -2.5
NWAO pmax pmax
comp=Z,142nm,1.6s
JCJ Chichijima 63.43 315 LR LR 20 28 19.6
comp=Z,2µm,20.3s,baz=130,slow=32

EDFI Ende, Flores 63.99 270 P **P** 20 04 41.9 -1.8
comp=Z,30nm,1.2s
MUN Mundaring 64.12 243 P **P** 20 04 45.2 +1.0
MORW Morawa 64.67 246 P **P** 20 04 48.0 +0.1
MORW Morawa 64.67 246 **P** 20 04 46.1 -1.8
LBFI Labuhan Bajo, 65.77 269 P **P** 20 04 53.5 -1.7
DAV Davao City (W) 65.98 287 LR LR 20 34 33.4
comp=Z,185nm,18.1s,baz=76,slow=37
KAPI Kappang 66.96 273 LR LR 20 32 28.2
comp=Z,308nm,20.8s,baz=126,slow=34
KAPI Kappang 66.96 273 *i*P **P** 20 04 59.9 -3.0
KAPI pmax pmax
comp=Z,18nm,1.5s
DBNI Kabupaten Domp 67.25 269 P **P** 20 05 03.4 -1.3
comp=Z,30nm,0.7s
PLAI Plampang 67.66 268 P **P** 20 05 08.1 +0.8
PLAI Plampang 67.66 268 P **P** 20 05 07.9 +0.6
comp=Z,873nmcomp=Z,38nm,0.9s
TOLI2 Tolitoli 68.08 279 P **P** 20 05 07.8 -2.2
TOLI2 IAmb IAmb 20 05 11.0
comp=Z,19nm,1.0s
PCI Palu 68.25 277 P **P** 20 05 12.2 +1.1
comp=Z,49nm,0.9s
MPSI Mapaga 68.63 278 P **P** 20 05 13.1 -0.3
comp=Z,525nmcomp=Z,24nm,1.5s
QSPA South Pole Qui 70.73 180 P **P** 20 05 28.5 +2.8
comp=Z,17nm,1.0s,baz=40,slow=3.2,SNR=24
QSPA LR LR 20 31 36.4
comp=Z,387nm,19.9s,baz=35,slow=32
comp=Z,17nm,1.0s
QSPA South Pole Qui 70.73 180 P **P** 20 05 25.3 -0.4
QSPA IAmb IAmb 20 05 30.2
comp=Z,30nm,1.1s
MYLDM Lahad Datu 71.69 282 P **P** 20 05 33.2 +1.0
MYLDM Lahad Datu 71.69 282 **P** 20 05 31.6 -0.6
MYLDM Lahad Datu 71.69 282 P **P** 20 05 34.8 +2.6
comp=Z,985nmcomp=Z,52nm,1.7s
KMMI Kalianget 71.79 269 P **P** 20 05 33.7 +0.9
comp=Z,33nm,2.6s
NIKH Nikolski High 72.09 3 P **P** 20 05 35.1 +1.5
baz=184
BBKI Banjar Baru 72.10 273 P **P** 20 05 36.0 +1.3
comp=Z,2µmcomp=Z,69nm,1.9s
MJAR Matsushiro Arr 72.23 320 P **P** 20 05 35.0 0.0
comp=Z,18nm,1.1s,baz=162,slow=5.9,SNR=14
MJAR LR LR 20 32 49.7
comp=Z,588nm,21.0s,baz=124,slow=32
comp=Z,18nm,1.1s
MJAR Matsushiro Arr 72.23 320 **P** 20 05 33.1 -1.9
MJAR IAmb IAmb 20 05 36.0
comp=Z,36nm,1.4s
MJAR Matsushiro Arr 72.23 320 P **P** 20 05 33.1 -1.9
MJAR pmax pmax
comp=Z,36nm,1.4s
MAJO Matsushiro 72.23 320 P **P** 20 05 36.2 +1.2
MAJO Matsushiro 72.23 320 **P** 20 05 33.5 -1.4
MAJO Matsushiro 72.23 320 *i*P **P** 20 05 35.1 +0.1
MAJO pmax pmax
comp=Z,27nm,1.1s
MJB9 Matsu-Tunnel 72.24 320 P **P** 20 05 34.8 -0.2
SHEM Shemya Is, Ala 72.64 352 LR LR 20 32 17.3
comp=Z,922nm,21.3s,baz=118,slow=32
TGY Tagaytay City 73.08 292 LR LR 20 34 05.6
comp=Z,687nm,20.6s,baz=106,slow=33
UNV Unalaska Valle 73.09 4 P **P** 20 05 41.4 +1.8
baz=187
JOW Kunigami 73.18 307 LR LR 20 34 54.1
comp=Z,415nm,19.9s,baz=119,slow=34
SNJI Sawahan-Nganju 73.65 267 P **P** 20 05 44.8 +0.7
comp=Z,61nm,1.5s
SJI Sawahan 73.66 267 P **P** 20 05 44.2 +0.2
comp=Z,41nm,2.0s
PCJI Pacitan 74.07 267 P **P** 20 05 46.2 -0.1
FALS False Pass 74.34 6 P **P** 20 05 48.7 +1.8
baz=190
LPIG La Paz 74.74 57 LR LR 20 32 16.9
comp=Z,1µm,19.1s,baz=219,slow=30
CHNA Chernabura Isl 74.75 8 P **P** 20 05 50.8 +1.5
baz=193
ASAJ Asahikawa 75.11 329 LR LR 20 34 51.1
comp=Z,718nm,20.2s,baz=170,slow=33
BORC Borrego Spring 75.12 46 P **P** 20 05 53.0 +1.0
SDPT Sand Point 75.14 7 P **P** 20 05 52.7 +1.2
baz=192
ISA Isabella, Lake 75.17 43 P **P** 20 05 53.1 +0.8
ISA IAmb IAmb 20 05 56.1
comp=Z,38nm,1.8s
ISA Isabella, Lake 75.17 43 P **P** 20 05 53.1 +0.8
ISA pmax pmax
comp=Z,38nm,1.8s
PFO Pinyon Flats O 75.29 46 LR LR 20 34 15.7
comp=Z,430nm,19.4s,baz=238,slow=32
PFO Pinyon Flats O 75.29 46 *i*P **P** 20 05 53.8 +0.7
PFO pmax pmax
comp=Z,21nm,1.6s
LRMC Laurel Mtn Rad 75.58 44 P **P** 20 05 56.4 +1.7
CCCA Chr Cany lake 75.81 44 P **P** 20 05 57.9 +1.9
CWC Cottonwood Cre 75.89 43 **P** 20 05 58.4 +1.8
MDPB Devils Postpil 75.99 41 P **P** 20 05 57.8 +0.6
BC3 Big Chuckawall 76.00 46 **P** 20 05 58.5 +1.3
BC3 IAmb IAmb 20 06 02.0
comp=Z,35nm,1.7s
O03E Paynes Creek 76.04 38 P **P** 20 05 58.5 +1.3
O03E IAmb IAmb 20 06 13.4
comp=Z,62nm,1.8s
GSC Goldstone, Bar 76.05 44 P **P** 20 05 58.9 +1.5
GSC Goldstone, Bar 76.05 44 P **P** 20 05 58.9 +1.5
GSC pmax pmax
comp=Z,33nm,1.9s
MPMC Manual Prospec 76.05 43 P **P** 20 05 59.3 +1.8
GLA Glamis 76.09 47 P **P** 20 05 58.4 +0.8
GLA Glamis 76.09 47 P **P** 20 05 58.4 +0.8
GLA pmax pmax
comp=Z,19nm,1.4s
PET Petropavlovsk 76.15 343 *e*P **P** 20 06 01.1 +3.7
PET *e*S **S** 20 15 43.8 +2.7
PET MLR MLR
comp=Z,1µm,14.0s
PET MLR MLR
comp=Z,2µm,14.0s
CTJI Waduk Cacaban 76.32 267 P **P** 20 05 58.0 -1.3
comp=Z,68nm,1.6s
CHGN Chignik 76.33 8 P **P** 20 05 59.3 +0.9
baz=194
MPK Martis Peak 76.45 40 P **P** 20 05 59.6 -0.1
MPK IAmb IAmb 20 06 13.8
comp=Z,25nm,1.2s
KPJI Karang Pucung 76.45 267 P **P** 20 06 00.5 +0.4
comp=Z,48nm,1.3s
YBH Yreka Blue Hor 76.47 36 LR LR 20 33 38.6
comp=Z,53nm,19.2s,baz=250,slow=31
YBH Yreka Blue Hor 76.47 36 P **P** 20 06 01.6 +1.9
YBH Yreka Blue Hor 76.47 36 P **P** 20 06 01.6 +1.9
YBH pmax pmax
comp=Z,15nm,1.4s
IRM Iron Mountain 76.50 46 P **P** 20 06 01.7 +1.8
IRM IAmb IAmb 20 06 04.7
comp=Z,46nm,1.8s
PETK Petropavlovsk- 76.50 342 P **P** 20 06 00.3 +0.9
comp=Z,16nm,1.0s,baz=122,slow=7.3,SNR=4.0
PETK LR LR 20 35 09.3
comp=Z,198nm,20.6s,baz=170,slow=32
comp=Z,16nm,1.0s
DSP Deep Springs 76.53 42 **P** 20 06 02.1 +2.2
DSP IAmb IAmb 20 06 30.3
comp=Z,51nm,1.9s
SBUM Sibu 76.55 277 P **P** 20 06 01.5 +0.9
SBUM Sibu 76.55 277 **P** 20 05 58.8 -1.8
SBUM Sibu 76.55 277 P **P** 20 06 01.5 +0.9
PNTR Pine Nut 76.58 40 **P** 20 06 01.6 +1.2
GWY Greenwater Val 76.66 44 **P** 20 06 02.5 +1.6
113A Mohawk Valley, 76.67 48 **P** 20 06 01.1 +0.3
113A IAmb IAmb 20 06 05.6
comp=Z,40nm,2.0s
GRAC Grapevine Rang 76.69 43 P **P** 20 06 02.3 +1.4
BLYC Blythe 76.69 47 P **P** 20 06 01.2 +0.3
LHV Little Huntoon 76.73 41 P **P** 20 06 02.5 +1.5
GMN Gold Mountain 76.94 43 P **P** 20 06 02.6 0.0
NVAR Mina Array Bea 76.96 41 P **P** 20 06 05.1 +2.5
comp=Z,5.6nm,0.9s,baz=224,slow=9.1,SNR=19
NVAR LR LR 20 35 19.1
comp=Z,782nm,18.2s,baz=258,slow=32
comp=Z,5.6nm,0.9s
YSS Yuzhno-Sakhali 77.11 331 *e*P **P** 20 06 04.4 +1.4
YSS *e*S **S** 20 15 50.9 -1.0
YSS pmax pmax

comp=Z,20nm,0.9s
YSS MLR MLR
comp=N,600nm,15.0s
YSS MLR MLR
comp=Z,1µm,15.0s
YSS MLR MLR
comp=E,800nm,16.0s
SII Sitkinak Islan 77.23 11 P **P** **20 06 05.0 +1.5**
baz=198
TPNV Topopah Spring 77.38 43 P **P** **20 06 05.8 +0.8**
TPNV Topopah Spring 77.38 43 P **P** **20 06 05.8 +0.8**
TPNV pmax pmax
comp=Z,18nm,1.4s
V12A Nelson 77.59 45 **P** **20 06 06.7 +0.6**
BBJI Bungbulang 77.62 266 P **P** **20 06 07.6 +0.9**
BBJI Bungbulang 77.62 266 **P** **20 06 04.5 -2.2**
BBJI IAmb IAmb 20 06 06.5
comp=Z,33nm,1.2s
BBJI Bungbulang 77.62 266 P **P** **20 06 06.5 -0.2**
comp=Z,450nmcomp=Z,24nm,1.1s
SHPR Sheep Range 77.83 44 **P** **20 06 07.8 +0.3**
LEM Lembang 77.85 267 LR LR 20 40 34.8
comp=Z,349nm,20.0s,baz=118,slow=36
R17L Mt. Peulik Vol 77.91 9 P **P** **20 06 08.6 +1.3**
baz=196
OHAK Old Harbor 78.02 11 P **P** **20 06 09.0 +1.2**
baz=199
K05A Summer Lake 78.14 36 IAmb IAmb 20 06 26.8
comp=Z,30nm,1.3s
PRN Pahroc Range 78.42 44 IAmb IAmb 20 06 41.4
comp=Z,47nm,1.7s
TUC Tucson 78.55 50 P **P** **20 06 12.9 +1.4**
TUC Tucson 78.55 50 P **P** **20 06 12.9 +1.4**
TUC pmax pmax
comp=Z,25nm,1.5s
Q17K Contact Creek 78.59 9 P **P** **20 06 12.3 +1.1**
baz=197
KDAK Kodiak Island 78.68 11 LR LR 20 34 57.0
comp=Z,834nm,21.4s,baz=196,slow=31
KDAK Kodiak Island 78.68 11 P **P** **20 06 12.8 +1.3**
baz=200
H04A Detroit Lake 78.72 34 P **P** **20 06 13.1 +1.0**
H04A IAmb IAmb 20 06 17.6
comp=Z,84nm,2.0s
DBJI Dramaga 78.75 267 P **P** **20 06 13.1 +0.2**
comp=Z,60nm,1.3s
PINE Pine Mountain 78.81 36 **P** **20 06 13.3 +0.6**
PINE IAmb IAmb 20 06 19.0
comp=Z,46nm,1.6s
Q16K King Salmon 78.88 9 P **P** **20 06 13.6 +1.1**
baz=196
O14K Tigyukauivet M 78.89 6 P **P** **20 06 13.5 +1.0**
baz=191
O15K Ungalikthiuk R 78.97 7 IAmb IAmb 20 06 31.0
comp=Z,55nm,1.7s
O15K Ungalikthiuk R 78.97 7 P **P** **20 06 14.0 +1.0**
baz=193
P16K Nushagak River 79.04 8 P **P** **20 06 12.7 -0.7**
P16K Nushagak River 79.04 8 P **P** **20 06 14.6 +1.2**
baz=195
X16A Lo Mia Camp, P 79.20 48 P **P** **20 06 16.8 +1.6**
WVOR Wild Horse Val 79.24 38 P **P** **20 06 15.2 +0.1**
WVOR IAmb IAmb 20 06 53.5
comp=Z,48nm,1.9s
WVOR Wild Horse Val 79.24 38 P **P** **20 06 15.2 +0.1**
WVOR pmax pmax
comp=Z,48nm,1.9s
KSRS Korea Array 79.28 316 P **P** **20 06 16.1 +0.9**
comp=Z,24nm,1.2s,baz=137,slow=6.2,SNR=19
KSRS LR LR 20 36 58.6
comp=Z,397nm,20.5s,baz=150,slow=32
comp=Z,24nm,1.2s
KSAR Wonju Array Be 79.30 316 **P** **20 06 15.6 +0.3**
KSAR Wonju Array Be 79.30 316 **P** **20 06 15.6 +0.3**
LCMT Little Creek M 79.39 45 P **P** **20 06 16.1 +0.1**
P17K Kvichak River 79.41 9 IAmb IAmb 20 06 29.5
comp=Z,62nm,1.1s
P17K Kvichak River 79.41 9 P **P** **20 06 16.6 +1.2**
baz=196
Q20K Shuyak Island 79.49 11 P **P** **20 06 17.2 +1.4**
baz=200
N14K Kuskokwak Cree 79.51 6 IAmb IAmb 20 06 31.3
comp=Z,80nm,1.6s
N14K Kuskokwak Cree 79.51 6 P **P** **20 06 17.5 +1.6**
baz=191,SNR=7.1
O16K Kokwok River B 79.58 8 P **P** **20 06 17.4 +1.1**
baz=194
Q19K Cape Douglas, 79.58 10 P **P** **20 06 18.2 +1.8**
baz=199
CCUT Cedar City 79.61 44 **P** **20 06 19.0 +1.6**
M11K Mekoryuk 79.63 3 **P** **20 06 17.3 +0.7**
M11K IAmb IAmb 20 06 20.4
comp=Z,32nm,1.2s
M11K Mekoryuk 79.63 3 P **P** **20 06 17.2 +0.7**
baz=187
KNB Kanab 79.67 45 **P** **20 06 20.2 +2.6**
KNB Kanab 79.67 45 P **P** **20 06 20.2 +2.6**
KNB pmax pmax
comp=Z,38nm,1.6s
U15A North Rim 79.70 46 P **P** **20 06 19.6 +1.7**
P18K Big Mountain, 79.78 9 **P** **20 06 16.1 -1.4**
P18K IAmb IAmb 20 06 20.2
comp=Z,38nm,1.1s
P18K Big Mountain, 79.78 9 P **P** **20 06 18.6 +1.1**
baz=197
I07A Izee 79.79 36 **P** **20 06 19.3 +1.3**
PSUT Pine Spring 79.84 43 **P** **20 06 17.9 -0.7**
M13K Dall Lake 79.85 5 P **P** **20 06 19.2 +1.5**
baz=189
O17K Koliganek Bris 79.88 8 P **P** **20 06 19.2 +1.2**
baz=195
DUN6 Lazy B Ranch 79.90 50 P **P** **20 06 20.1 +1.2**
N15K Kwethluk River 79.91 6 IAmb IAmb 20 06 35.7
comp=Z,62nm,1.9s
N15K Kwethluk River 79.91 6 P **P** **20 06 19.7 +1.6**
baz=192
J08A Circle Bar Ran 79.91 37 **P** **20 06 18.6 -0.1**
G06A Carlson Farm, 79.91 35 P **P** **20 06 18.2 -0.4**
G06A IAmb IAmb 20 06 47.3
comp=Z,60nm,1.9s
BELA Belgrano 2 80.06 172 **P** **20 06 19.3 +0.4**
O18K Koktuh Hills 80.22 9 **P** **20 06 20.2 +0.3**
O18K IAmb IAmb 20 06 22.4
comp=Z,48nm,1.3s
O18K Koktuh Hills 80.22 9 P **P** **20 06 21.2 +1.3**
baz=197
ELK Elko 80.24 41 **P** **20 06 22.6 +1.9**
ELK Elko 80.24 41 P **P** **20 06 22.6 +1.9**
ELK pmax pmax
comp=Z,14nm,1.4s
PKCU Pink Cliffs 80.24 45 **P** **20 06 21.3 +0.4**
PKCU IAmb IAmb 20 07 03.9
comp=Z,32nm,1.2s
M14K Bethel 80.30 5 **P** **20 06 21.1 +1.0**
M14K Bethel 80.30 5 P **P** **20 06 22.2 +2.0**
baz=191
P19K Oil Pt 80.34 10 P **P** **20 06 22.0 +1.5**
baz=199
N16K Nishlik Lake 80.35 7 P **P** **20 06 22.1 +1.5**
baz=194
M15K Kasigluk River 80.36 6 P **P** **20 06 22.1 +1.5**
baz=192
PMSA Palmer Station 80.42 156 LR LR 20 34 36.6
comp=Z,471nm,20.0s,baz=264,slow=30
N17K Nushagak Hills 80.60 8 P **P** **20 06 22.9 +1.1**
baz=195
MTPU Mount Pierson 80.66 44 **P** **20 06 26.1 +2.9**
MTPU IAmb IAmb 20 06 54.5
comp=Z,61nm,1.9s
ILSW Iliamna Southw 80.67 10 IAmb IAmb 20 06 25.1
comp=Z,55nm,1.1s
O19K Port Alsworth 80.68 9 P **P** **20 06 23.4 +1.1**
baz=198
USRK Ussuriysk Ar. 80.79 323 P **P** **20 06 24.0 +0.8**
comp=Z,2.2nm,0.8s,baz=111,slow=11,SNR=8.0
comp=Z,2.2nm,0.8s
USRK Ussuriysk Ar. 80.79 323 P **P** **20 06 23.4 +0.2**
L14K Kuka Creek 80.82 5 IAmb IAmb 20 06 26.6
comp=Z,35nm,1.3s
L14K Kuka Creek 80.82 5 P **P** **20 06 24.2 +1.2**
baz=190
121A Cookes Peak, D 80.84 51 **P** **20 06 25.9 +1.8**
BRSE Bradley Lake S 80.85 11 P **P** **20 06 24.7 +1.5**
baz=201
G08A Pilot Rock 80.86 35 P **P** **20 06 23.2 -0.6**
M16K Timber Creek 80.87 7 P **P** **20 06 24.8 +1.5**
baz=194
N18K Kilae Creek 80.92 8 P **P** **20 06 25.4 +1.8**
baz=196
BBB Bella Bella 81.20 26 LR LR 20 38 52.8
comp=Z,391nm,18.1s,baz=188,slow=33
KASI Kota Agung 81.20 267 P **P** **20 06 26.0 -0.2**
N19K Bonanza Creek 81.25 9 **P** **20 06 24.7 -0.7**
N19K IAmb IAmb 20 06 27.5
comp=Z,27nm,1.2s
N19K Bonanza Creek 81.25 9 P **P** **20 06 26.5 +1.1**
baz=198
HAWA Hanford 81.25 34 **P** **20 06 26.6 +1.0**
L15K Ungalak Mounta 81.25 5 P **P** **20 06 27.2 +1.9**
baz=191
K13K Kusilvak Mount 81.26 4 P **P** **20 06 27.3 +1.9**
baz=188
MG05 Puerto Natales 81.30 142 **P** **20 06 27.8 +1.8**
MG05 IAmb IAmb 20 06 31.5
comp=Z,69nm,1.4s
M17K Holitna River 81.42 7 IAmb IAmb 20 06 29.8
comp=Z,38nm,1.3s
M17K Holitna River 81.42 7 P **P** **20 06 28.4 +2.2**
baz=195
SEW Seward 81.43 12 P **P** **20 06 28.4 +2.1**
baz=203
Q23K Middleton Isla 81.45 13 P **P** **20 06 27.9 +1.6**
baz=206
L16K Owhat River 81.48 6 **P** **20 06 28.3 +1.7**
L16K IAmb IAmb 20 06 30.2
comp=Z,33nm,1.2s
L16K Owhat River 81.48 6 P **P** **20 06 28.6 +2.1**
baz=193
BMO Blue Mountains 81.50 36 **P** **20 06 29.0 +1.8**
BMO Blue Mountains 81.50 36 P **P** **20 06 29.0 +1.8**
BMO pmax pmax
comp=Z,22nm,1.7s
HMU Henry Mountain 81.56 45 P **P** **20 06 29.4 +1.5**
HMU IAmb IAmb 20 06 58.1
comp=Z,50nm,1.9s
SLKM Skilak Lake 81.66 11 **P** **20 06 27.7 +0.2**
M18K Stony River 81.71 8 P **P** **20 06 29.7 +2.0**
baz=196
BGU Big Grassy Mou 81.72 41 P **P** **20 06 29.6 +1.2**
O22K Cooper Landing 81.73 11 P **P** **20 06 29.1 +1.3**
baz=202
P23K Montague Islan 81.74 13 P **P** **20 06 29.6 +1.7**
baz=204
CAPN Captain Cook N 81.74 11 P **P** **20 06 29.3 +1.4**
baz=201
CRAG Craig 81.81 22 P **P** **20 06 30.0 +1.7**
baz=218
MDSI Maura Dua 81.83 268 P **P** **20 06 28.5 -1.0**
comp=Z,15nm,1.0s
K15K Wolf Creek Mou 81.86 5 P **P** **20 06 30.7 +2.2**
baz=191,SNR=31
N20K Mount Spurr 81.97 10 P **P** **20 06 30.3 +1.0**
baz=200
SPCR Spurr Chakacha 81.97 10 P **P** **20 06 30.7 +1.5**
baz=200
SPU Mount Spurr 81.98 10 P **P** **20 06 30.0 +0.8**
TMUT Trail Mountain 81.98 44 P **P** **20 06 29.9 -0.2**
L17K Donlin 82.03 7 P **P** **20 06 31.8 +2.4**
baz=194
VHRN Van Horn 82.10 54 **P** **20 06 31.3 +0.6**
VHRN IAmb IAmb 20 06 35.8
comp=Z,64nm,1.8s
J14K Nanvaranak Lak 82.15 4 P **P** **20 06 32.2 +2.3**
baz=189
MNTX Cornudas Mount 82.22 53 **P** **20 06 32.5 +1.3**
V35K Ketchikan 82.23 22 P **P** **20 06 33.1 +2.5**
baz=219
RC01 Rabbit Creek A 82.29 11 P **P** **20 06 31.6 +0.8**
RC01 Rabbit Creek A 82.29 11 P **P** **20 06 32.6 +1.8**
baz=202
SPUT South Promonto 82.30 41 P **P** **20 06 30.7 -0.8**
SPUT IAmb IAmb 20 07 11.0
comp=Z,33nm,1.8s
L18K Granite Mounta 82.30 8 P **P** **20 06 31.2 +0.4**
L18K IAmb IAmb 20 06 48.2
comp=Z,76nm,2.0s
L18K Granite Mounta 82.30 8 P **P** **20 06 32.7 +1.8**
baz=196
M19K Big River Lodg 82.31 9 P **P** **20 06 31.9 +1.0**
baz=198
CRNM Carthage 82.31 50 P **P** **20 06 31.7 -0.1**
STLK Strandline Lak 82.31 10 P **P** **20 06 30.9 -0.1**
U33K Whale Pass 82.32 21 P **P** **20 06 33.3 +2.2**
baz=218
KAIM Kayak Island 82.33 14 P **P** **20 06 32.7 +1.7**
baz=207
SRU San Rafael Swe 82.33 44 P **P** **20 06 32.3 +0.5**
SRU San Rafael Swe 82.33 44 P **P** **20 06 32.3 +0.5**
SRU pmax pmax
comp=Z,22nm,1.4s
SIT Sitka 82.35 20 P **P** **20 06 33.5 +2.3**
baz=216
HVU Hansel Valley 82.36 41 P **P** **20 06 31.8 0.0**
HVU Hansel Valley 82.36 41 P **P** **20 06 31.8 0.0**
HVU pmax pmax
comp=Z,30nm,1.9s
PLID Pearl Lake 82.38 37 **P** **20 06 31.4 -0.5**
PLID IAmb IAmb 20 06 47.9
comp=Z,38nm,1.8s
P17A Butcher Ranch, 82.38 44 P **P** **20 06 33.8 +1.7**
P17A IAmb IAmb 20 06 36.2
comp=Z,47nm,1.9s
HLID Hailey 82.39 39 **P** **20 06 31.8 -0.2**
MDJ Mudanjiang 82.41 323 P **P** **20 06 33.3 +1.5**
MDJ Mudanjiang 82.41 323 P **P** **20 06 34.2 +2.4**
MDJ pmax pmax
comp=Z,22nm,2.1s
TX31 Lajitas Ar. Si 82.44 55 IAmb IAmb 20 06 37.9
comp=Z,40nm,1.4s
TXAR Lajitas Array 82.44 55 P **P** **20 06 35.2 +2.7**
comp=Z,7.5nm,1.1s,baz=218,slow=7.9,SNR=45
TXAR LR LR 20 37 54.9
comp=Z,670nm,18.3s,baz=236,slow=32
comp=Z,7.5nm,1.1s
TXAR Lajitas Array 82.44 55 **P** **20 06 34.2 +1.7**
M20K Styx River 82.47 9 P **P** **20 06 33.9 +2.1**
baz=199
L19K White Mountain 82.51 8 P **P** **20 06 33.9 +1.9**
baz=197
EYAK Cordova Ski Ar 82.59 13 P **P** **20 06 34.2 +1.9**
baz=206
K17K Iditarod 82.59 7 IAmb IAmb 20 06 48.7
comp=Z,39nm,1.4s
K17K Iditarod 82.59 7 P **P** **20 06 34.4 +2.1**
baz=194
GLI Glacier Island 82.61 12 P **P** **20 06 34.4 +1.9**
baz=205
PV05 Paradox Valley 82.73 46 P **P** **20 06 34.9 +0.9**
PV05 IAmb IAmb 20 07 04.9
comp=Z,53nm,1.6s
P18A Preston Nutter 82.79 44 P **P** **20 06 34.9 +0.6**
P18A IAmb IAmb 20 06 51.3
comp=Z,26nm,1.6s
S31K Pelican 82.81 19 P **P** **20 06 36.2 +2.6**
baz=215
SKT Skwentna 82.82 10 IAmb IAmb 20 06 37.4
comp=Z,39nm,1.6s
SKT Skwentna 82.82 10 P **P** **20 06 33.8 +0.2**
baz=200
WRAK Wrangell Islan 82.83 21 P **P** **20 06 35.8 +2.1**
baz=218
KNK Knik Glacier 82.83 12 P **P** **20 06 35.5 +1.9**
baz=203
TCUT Toone Canyon 82.84 42 P **P** **20 06 35.5 +1.0**
GAMB Gambell 82.85 1 IAmb IAmb 20 06 37.2
comp=Z,28nm,1.2s
GAMB Gambell 82.85 1 P **P** **20 06 35.4 +1.8**
baz=181,SNR=13
PMR Palmer 82.87 11 P **P** **20 06 34.9 +1.1**
PMR Palmer 82.87 11 **P** **20 06 34.8 +1.0**
PMR Palmer 82.87 11 P **P** **20 06 34.8 +1.0**
PMR pmax pmax
comp=Z,74nm,1.7s
PMR Palmer 82.87 11 P **P** **20 06 35.7 +1.9**
baz=203
NJ2 Nanjing 82.89 307 *e*P **P** **20 06 35.1 +0.5**
NJ2 pmax pmax
comp=Z,15nm,0.7s
J16K Anvik River 82.92 6 IAmb IAmb 20 06 37.9
comp=Z,32nm,1.2s
J16K Anvik River 82.92 6 P **P** **20 06 36.3 +2.3**
baz=192,SNR=16
S32K Killisnoo 82.93 20 P **P** **20 06 35.6 +1.4**
baz=216
PV10 Paradox Valley 82.93 45 P **P** **20 06 35.8 +0.8**
PV10 IAmb IAmb 20 06 38.7
comp=Z,32nm,1.3s
PV17 East Wray Mesa 82.93 45 P **P** **20 06 35.5 +0.5**
PV17 IAmb IAmb 20 07 14.8
comp=Z,39nm,1.6s
PV19 Morning Glory 82.93 45 P **P** **20 06 36.0 +1.1**
ALPN Alpine 82.94 55 **P** **20 06 35.8 +0.7**
ALPN IAmb IAmb 20 06 40.0
comp=Z,29nm,1.4s
BSUT Blindstream Ca 82.94 43 **P** **20 06 35.5 +0.3**
PV18 Skein Mesa, Pa 82.95 45 P **P** **20 06 36.3 +1.3**
PV20 West Nyswonger 82.96 45 **P** **20 06 36.2 +1.1**
PV20 IAmb IAmb 20 07 04.5
comp=Z,30nm,1.1s
PV13 Radium Mtn., P 82.96 46 P **P** **20 06 35.0 -0.1**
PV13 IAmb IAmb 20 06 39.9
comp=Z,30nm,1.5s
PV16 Nyswonger Mesa 82.98 45 P **P** **20 06 35.5 +0.3**
PV16 IAmb IAmb 20 06 55.4
comp=Z,44nm,1.8s
PV23 Carpenter Ridg 82.99 45 P **P** **20 06 35.9 +0.6**
PV23 IAmb IAmb 20 07 04.8
comp=Z,34nm,1.0s
PV03 Paradox Valley 82.99 46 P **P** **20 06 36.6 +1.3**
PV03 IAmb IAmb 20 06 40.0
comp=Z,40nm,1.7s
ANMO Albuquerque 82.99 49 LR LR 20 38 23.9
comp=Z,412nm,18.0s,baz=242,slow=32
ANMO Albuquerque 82.99 49 **P** **20 06 37.0 +1.6**
ANMO IAmb IAmb 20 06 40.7
comp=Z,46nm,1.9s
ANMO Albuquerque 82.99 49 P **P** **20 06 37.0 +1.6**
ANMO pmax pmax
comp=Z,47nm,1.9s
PV11 David Mesa, Pa 83.00 45 IAmb IAmb 20 07 05.8
comp=Z,30nm,1.3s
PV02 Paradox Valley 83.04 46 IAmb IAmb 20 07 17.4
comp=Z,49nm,1.5s
GHO Glory Hole Cre 83.08 11 P **P** **20 06 35.0 +0.1**
GHO IAmb IAmb 20 07 19.6
comp=Z,54nm,1.6s
TPB01 Permian Basin 83.09 54 IAmb IAmb 20 06 39.9
comp=Z,50nm,1.7s
MESA MESA 83.13 15 P **P** **20 06 37.2 +1.8**
baz=210
PV22 Blue Mesa, Par 83.18 45 P **P** **20 06 37.3 +1.1**
PV22 IAmb IAmb 20 06 40.2
comp=Z,32nm,1.6s
BMRM Bremner River 83.22 13 P **P** **20 06 37.7 +2.0**
baz=207
SML Sawmill 83.22 11 P **P** **20 06 37.5 +1.8**
baz=204
GDL2 Guadalupe Moun 83.22 53 **P** **20 06 38.0 +1.5**
M23K Glacier View 83.32 12 P **P** **20 06 38.3 +2.1**
baz=204
CRQE Cirque 83.37 14 P **P** **20 06 38.6 +2.1**
baz=208
KLU Klutina 83.41 13 P **P** **20 06 38.8 +2.1**
baz=206
CUT Chulitna 83.43 10 P **P** **20 06 35.8 -0.9**
CUT Chulitna 83.43 10 P **P** **20 06 38.3 +1.7**
baz=202
SCM Sheep Creek Mo 83.44 12 P **P** **20 06 38.7 +1.9**
baz=204
L22K Petersville 83.45 10 **P** **20 06 37.3 +0.4**
L22K IAmb IAmb 20 06 38.9
comp=Z,38nm,1.3s
PINM Pinnacle 83.49 16 P **P** **20 06 39.2 +2.1**
baz=211
I17K Unalakleet 83.50 5 **P** **20 06 39.3 +2.3**
I17K IAmb IAmb 20 06 55.6
comp=Z,40nm,1.7s
I17K Unalakleet 83.50 5 P **P** **20 06 39.0 +2.0**
baz=192,SNR=6.2
J18K Innoko River 83.50 7 IAmb IAmb 20 06 52.2
comp=Z,24nm,1.2s
J18K Innoko River 83.50 7 P **P** **20 06 38.9 +1.9**
baz=196
PPLA Purkeypile 83.58 9 P **P** **20 06 39.1 +1.4**
baz=200
R32K Eaglecrest 83.60 19 P **P** **20 06 39.5 +1.9**
baz=216
NEW Newport 83.70 34 LR LR 20 39 52.0
comp=Z,2µm,18.2s,baz=212,slow=33
RDMU Red Mountain 83.73 43 P **P** **20 06 39.0 0.0**
RDMU IAmb IAmb 20 07 07.9
comp=Z,26nm,1.6s
K20K Telida 83.74 8 IAmb IAmb 20 06 41.2
comp=Z,34nm,1.5s
K20K Telida 83.74 8 P **P** **20 06 40.0 +1.7**
baz=198
N25K Chitina, Valde 83.79 13 IAmb IAmb 20 06 41.6
comp=Z,21nm,1.2s
N25K Chitina, Valde 83.79 13 P **P** **20 06 40.6 +1.9**
baz=207
ANM Nome 83.84 3 **P** **20 06 39.0 +0.3**
ANM IAmb IAmb 20 06 54.1
comp=Z,21nm,1.4s
ANM Nome 83.84 3 P **P** **20 06 39.0 +0.3**
ANM pmax pmax
comp=Z,21nm,1.4s
ANM Nome 83.84 3 P **P** **20 06 40.6 +1.9**
baz=187,SNR=5.9
M24K Tolsona, Glenn 83.91 12 P **P** **20 06 39.7 +0.4**
M24K Tolsona, Glenn 83.91 12 P **P** **20 06 41.3 +2.1**
baz=206
SAND Sanderson 83.92 56 **P** **20 06 40.6 +0.6**
SAND IAmb IAmb 20 06 44.7
comp=Z,38nm,1.7s
MCARA McCarthy VSAT 83.94 14 P **P** **20 06 41.2 +1.8**
baz=208
CTG Chitna Glacier 83.97 15 P **P** **20 06 41.4 +1.7**
baz=210
T35M Bob Quinn 84.00 22 P **P** **20 06 41.8 +2.0**
baz=220
MA2 Magadan 84.03 342 LR LR 20 42 03.0
comp=Z,351nm,19.5s,baz=129,slow=34
MA2 Magadan 84.03 342 *ce*P **P** **20 06 41.2 +1.4**
MA2 pmax pmax
comp=Z,31nm,1.7s
MCMT McKenzie Canyo 84.04 38 P **P** **20 06 41.2 +0.6**
WAT6 Susitna Watana 84.04 11 P **P** **20 06 41.5 +1.4**
baz=204,SNR=7.9
KLR Kul'dur 84.05 327 LR LR 20 39 48.7
comp=Z,452nm,20.1s,baz=139,slow=33
KLR Kul'dur 84.05 327 *ce*P **P** **20 06 41.8 +1.6**
KLR pmax pmax
comp=Z,4.0nm,1.7s
O28M Mount Upton 84.09 15 P **P** **20 06 42.2 +1.7**
baz=211
O29M Mount Kennedy 84.10 16 P **P** **20 06 42.3 +1.9**
baz=213
S22A 4UR Ranch, Cre 84.11 47 P **P** **20 06 41.8 +0.6**
S22A IAmb IAmb 20 06 45.6
comp=Z,20nm,1.2s
H16K Elim 84.11 5 P **P** **20 06 42.1 +1.9**
baz=190,SNR=19
WAT1 Susitna Watana 84.12 11 P **P** **20 06 41.7 +1.4**
baz=203
J19K Poorman 84.15 8 P **P** **20 06 42.5 +2.1**
baz=197
MAW Mawson 84.22 199 LR LR 20 43 34.9
comp=Z,897nm,18.9s,baz=108,slow=35
DL2 Dalian 84.24 314 P P 20 06 34.9 -6.5
SKAG Skagway 84.32 18 P **P** **20 06 43.4 +2.2**
baz=216
BNX BinXian 84.32 323 ⇓P **P** **20 06 42.4 +0.8**
BNX pmax pmax
comp=Z,16nm,1.4s
G15K Niukluk 84.34 4 P **P** **20 06 43.1 +1.8**
baz=189,SNR=25
O20A White River Ci 84.36 44 P **P** **20 06 41.1 -1.2**
O20A IAmb IAmb 20 06 45.9
comp=Z,50nm,1.7s
CN2 Changchun 84.38 320 *e*P **P** **20 06 43.6 +1.6**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 pmax pmax
comp=Z,100nm,5.0s
CN2 L L
comp=Z,200nm,12.0s
CN2 L L
comp=Z,300nm,12.0s
CN2 L L

comp=Z,200nm,11.0s
KTH Kantishna Hill 84.39 10 P 20 06 41.9 +0.2
KTH IAmb IAmb 20 06 57.2
comp=Z,52nm,1.6s
P30M Million Dollar 84.39 17 P P 20 06 43.2 +1.5
baz=214
TRF Thorofare Moun 84.40 10 P 20 06 42.3 +0.5
TRF Thorofare Moun 84.40 10 P P 20 06 43.0 +1.1
baz=202
S34M Telegraph Cree 84.41 21 P P 20 06 44.0 +2.2
baz=219
FXWY Fox Creek 84.46 40 P P 20 06 43.4 +0.6
FXWY IAmb IAmb 20 06 59.5
comp=Z,32nm,1.8s
CHUM Lake Minchumin 84.49 9 P P 20 06 42.8 +0.7
baz=200,SNR=7.9
DHY Denali Highway 84.56 11 P P 20 06 43.4 +0.7
DHY Denali Highway 84.56 11 P P 20 06 43.8 +1.1
baz=204
H17K Granite Mounta 84.60 6 IAmb IAmb 20 06 45.7
comp=Z,26nm,1.4s
H17K Granite Mounta 84.60 6 P P 20 06 44.1 +1.5
baz=192,SNR=9.9
RND Reindeer 84.60 11 P 20 06 42.8 0.0
RND Reindeer 84.60 11 P P 20 06 42.8 0.0
RND pmax pmax
comp=Z,102nm,1.5s
YUK8 Steele Glacier 84.63 15 P P 20 06 44.8 +1.6
baz=211
MOOW Moose Ponds 84.69 40 P 20 06 43.9 +0.1
F14K Arctic Creek 84.70 3 P P 20 06 45.2 +2.1
baz=186
YUK6 Outpost Mounta 84.70 16 P P 20 06 45.3 +1.8
baz=213
LOHW Long Hollow 84.70 40 P P 20 06 44.0 +0.1
TNA Tin City 84.72 2 P 20 06 44.1 +0.9
TNA IAmb IAmb 20 06 46.5
comp=Z,21nm,1.2s
TNA Tin City 84.72 2 P P 20 06 45.2 +2.0
baz=185,SNR=17
GCSA Galena City Sc 84.72 7 P P 20 06 45.2 +2.0
baz=195
LL02 Futaleuf 84.73 134 P 20 06 43.8 -0.2
CMIG Matias Romero 84.78 70 LR LR 20 37 03.2
comp=Z,882nm,18.8s,baz=183,slow=30
QIZ Qiongzhong 84.79 292 P P 20 06 44.3 -0.3
QIZ S **S 20 17 11.4 -1.8**
QIZ SS **SS 20 22 44.1 -1.6**
QIZ pmax pmax
comp=Z,350nm,3.5s
QIZ L L
comp=Z,150nm,12.7s
QIZ L L
comp=Z,280nm,19.2s
QIZ L L
comp=Z,240nm,20.6s
HYT Haines Junctio 84.83 17 P P 20 06 45.6 +1.5
baz=214
PAX Paxson 84.83 12 P P 20 06 44.1 +0.2
PAX IAmb IAmb 20 06 59.1
comp=Z,43nm,1.6s
PAX Paxson 84.83 12 P P 20 06 44.2 +0.2
PAX pmax pmax
comp=Z,43nm,1.6s
PAX Paxson 84.83 12 P P 20 06 45.1 +1.2
baz=206,SNR=5.6
M26K Nabesna, AK 84.85 13 P P 20 06 45.7 +1.7
baz=208
G16K Koyuk River 84.85 4 IAmb IAmb 20 06 59.9
comp=Z,48nm,1.7s
G16K Koyuk River 84.85 4 P P 20 06 45.9 +2.1
baz=190
DRIO Del Rio 84.87 57 P 20 06 45.4 +0.6
QLMT Earthquake Lak 84.88 39 P P 20 06 45.4 +0.7
YUK3 Moose Creek 84.89 15 P P 20 06 46.0 +1.6
baz=211,SNR=5.6
MCK McKinley 84.89 10 P P 20 06 45.4 +1.3
baz=203,SNR=11
BW06 Boulder Array 84.89 41 P P 20 06 46.5 +1.6
PD31 Pinedale Array 84.90 41 P P 20 06 46.5 +1.6
PDAR Pinedale Array 84.90 41 P P 20 06 46.9 +2.0
comp=Z,1.2nm,0.7s,baz=200,slow=4.0,SNR=13
PDAR LR LR 20 40 39.6
comp=Z,343nm,18.1s,baz=236,slow=33
comp=Z,1.2nm,0.7s
PDAR Pinedale Array 84.90 41 P P 20 06 46.1 +1.2
BPAW Bear Paw Mtn. 84.90 9 P P 20 06 45.7 +1.5
baz=201
P32M Atlin 84.91 19 P P 20 06 46.2 +1.8
baz=217
H18K Honhosa River 84.96 6 P P 20 06 46.0 +1.5
baz=194
YUK4 Talbot Arm 84.97 16 P P 20 06 47.4 +2.6
baz=212
F15K North Star Dit 85.02 3 P P 20 06 46.4 +1.7
baz=188
SDCO Great Sand Dun 85.03 47 P 20 06 47.6 +1.8
YHL Hebgen Lake 85.03 39 P P 20 06 46.2 +0.6
YHL IAmb IAmb 20 07 04.3
comp=Z,34nm,1.5s
M27K Edge Creek, AK 85.06 14 P P 20 06 47.3 +2.2
baz=209
G17K Kiwalik Mounta 85.09 5 P P 20 06 46.8 +1.8
baz=192
OZNA Ozona 85.12 55 P P 20 06 47.1 +1.0
OZNA IAmb IAmb 20 06 49.7
comp=Z,28nm,1.5s
MENT Mentasta 85.17 13 P P 20 06 46.7 +1.1
MENT Mentasta 85.17 13 P P 20 06 46.8 +1.3
O30N Mendenhall 85.17 17 IAmb IAmb 20 06 49.1
comp=Z,22nm,1.1s
O30N Mendenhall 85.17 17 P P 20 06 47.9 +2.2
baz=215
BOZ Bozeman (W) 85.18 38 P P 20 06 45.6 -0.6
BOZ Bozeman (W) 85.18 38 P P 20 06 45.6 -0.6
BOZ pmax pmax
comp=Z,21nm,1.5s
DLBC Dease Lake 85.19 21 LR LR 20 39 58.1
comp=Z,392nm,18.3s,baz=220,slow=32
DLBC Dease Lake 85.19 21 P P 20 06 47.8 +2.0
baz=220
MSTX Muleshoe 85.22 52 P 20 06 47.8 +1.2
L26K Log Cabin Wild 85.32 13 P P 20 06 47.6 +1.3
L26K IAmb IAmb 20 07 03.1
comp=Z,58nm,1.8s
L26K Log Cabin Wild 85.32 13 P P 20 06 48.5 +2.2
baz=208,SNR=5.8
BVCY Beaver Creek 85.34 14 P P 20 06 48.4 +2.0
baz=210
WHY Whitehorse 85.43 18 P P 20 06 48.9 +1.9
baz=216
HBVL Hebbronville 85.44 59 P 20 06 47.5 -0.2
N30M Aishikik Lake 85.47 16 P P 20 06 49.1 +2.0
baz=214
K24K Donnelly Dome 85.53 12 P 20 06 47.8 +0.5
K24K Donnelly Dome 85.53 12 P P 20 06 49.0 +1.7
baz=206,SNR=6.6
R33M Jennings River 85.62 20 P P 20 06 49.8 +1.8
baz=220
RIDG Independent Ri 85.65 12 P 20 06 48.0 0.0
RIDG IAmb IAmb 20 06 50.9
comp=Z,39nm,1.4s
RIDG Independent Ri 85.65 12 P P 20 06 49.5 +1.5
baz=207,SNR=7.5
G18K Tagagawik 85.66 6 IAmb IAmb 20 06 50.8
comp=Z,20nm,1.2s
G18K Tagagawik 85.66 6 P P 20 06 49.8 +1.8
baz=194
NEA2 Nenana 85.67 10 P P 20 06 48.1 +0.1
NEA2 Nenana 85.67 10 P P 20 06 49.8 +1.8
baz=203
WHN Wuhan 85.67 304 P P 20 06 47.9 -0.8
WHN pmax pmax
comp=Z,80nm,1.5s
P33M Teslin, Yukon 85.68 19 P P 20 06 49.8 +1.6
baz=218
H20K Anotleneega Mo 85.68 7 P P 20 06 50.1 +2.1
baz=197
L27K Beaver Creek, 85.69 14 IAmb IAmb 20 07 04.2
comp=Z,40nm,1.6s
L27K Beaver Creek, 85.69 14 P P 20 06 50.1 +1.9
baz=210
BCAR Beaver Creek A 85.70 14 P P 20 06 47.6 -0.6
LR05 Currie 85.71 131 P 20 06 48.5 -0.4
WRH Wood River Hil 85.72 11 P 20 06 48.4 +0.1
DOT Dot Lake 85.73 12 P P 20 06 48.4 +0.1

DOT IAmb IAmb 20 06 51.3
comp=Z,48nm,1.4s
POST Post 85.77 53 P 20 06 49.9 +0.6
POST IAmb IAmb 20 06 53.6
comp=Z,41nm,1.3s
MLY Manley 85.81 9 P 20 06 48.4 -0.3
MLY IAmb IAmb 20 06 50.8
comp=Z,19nm,1.2s
MLY Manley 85.81 9 P P 20 06 49.8 +1.1
baz=201,SNR=15
N31M Braeburn, Yuko 85.85 17 P P 20 06 51.0 +2.0
baz=215
HDA Harding Lake 85.86 11 P P 20 06 49.1 +0.1
HDA IAmb IAmb 20 07 03.4
comp=Z,24nm,1.2s
HDA Harding Lake 85.86 11 P P 20 06 50.2 +1.3
baz=205,SNR=6.8
CCB Clear Creek Bu 85.93 11 P 20 06 49.4 +0.1
CCB IAmb IAmb 20 06 51.7
comp=Z,46nm,1.2s
ISCO Idaho Springs 85.95 45 P 20 06 48.8 -1.6
ISCO IAmb IAmb 20 07 19.4
comp=Z,36nm,1.9s
ISCO Idaho Springs 85.95 45 P P 20 06 48.8 -1.6
ISCO pmax pmax
comp=Z,37nm,1.9s
M29M Somme Creek 85.95 15 IAmb IAmb 20 07 32.5
comp=Z,48nm,1.8s
M29M Somme Creek 85.95 15 P P 20 06 51.6 +2.0
baz=213
F17K Baldwin Pennin 85.97 5 IAmb IAmb 20 06 52.6
comp=Z,36nm,1.3s
F17K Baldwin Pennin 85.97 5 P P 20 06 51.3 +1.9
baz=191
SCRK Sand Creek 86.04 12 P 20 06 49.1 -0.8
SCRK IAmb IAmb 20 07 08.0
comp=Z,39nm,1.7s
SCRK Sand Creek 86.04 12 P P 20 06 51.6 +1.6
baz=207
G19K Purcell Mounta 86.06 6 IAmb IAmb 20 06 53.2
comp=Z,29nm,1.2s
G19K Purcell Mounta 86.06 6 P P 20 06 51.8 +1.9
baz=195,SNR=16
TIA Tai'an 86.09 310 P P 20 06 52.0 +1.3
TIA pmax pmax
comp=Z,13nm,1.2s
TIA pmax pmax
comp=Z,480nm,5.7s
TIA L L
comp=Z,520nm,21.2s
TIA L L
comp=Z,550nm,19.8s
TIA L L
comp=Z,750nm,16.3s
H21K Melozitna Rive 86.10 8 P P 20 06 49.8 -0.3
H21K IAmb IAmb 20 07 06.1
comp=Z,45nm,1.5s
H21K Melozitna Rive 86.10 8 P P 20 06 51.9 +1.8
baz=199,SNR=16
COLA College 86.13 10 P P 20 06 50.6 +0.4
COLA College 86.13 10 *i* P P 20 06 51.1 +0.9
COLA pmax pmax
comp=Z,49nm,1.3s
COLA College 86.13 10 P P 20 06 51.3 +1.1
baz=204
I23K Minto, Yukon-K 86.13 10 P P 20 06 50.0 -0.2
I23K Minto, Yukon-K 86.13 10 P P 20 06 51.5 +1.2
baz=202,SNR=9.2
IL31 86.20 11 P 20 06 51.0 +0.4
IL31 IAmb IAmb 20 07 05.9
comp=Z,41nm,1.4s
ILAR Eielson Array 86.20 11 P P 20 06 51.0 +0.3
comp=Z,5.5nm,1.0s,baz=216,slow=4.8,SNR=30
ILAR LR LR 20 39 59.4
comp=Z,386nm,20.3s,baz=182,slow=32
comp=Z,5.5nm,1.0s
ILAR Eielson Array 86.20 11 P P 20 06 51.0 +0.3
SN07 Snyder 07 86.24 53 P P 20 06 51.6 0.0
SN07 IAmb IAmb 20 06 55.0
comp=Z,32nm,1.4s
F18K Selawik 86.26 5 P P 20 06 52.2 +1.4
baz=193,SNR=10
IMAR Indian Mountai 86.29 8 P 20 06 50.4 -0.7
GO06 Curarrehue 86.33 131 P 20 06 52.2 0.0
GO06 IAmb IAmb 20 06 57.5
comp=Z,41nm,1.4s
J25K Salcha River, 86.34 12 P P 20 06 51.8 +0.4
J25K IAmb IAmb 20 07 07.9
comp=Z,42nm,1.5s
J25K Salcha River, 86.34 12 P P 20 06 53.0 +1.7
baz=206,SNR=8.8
N32M Quiet Lake 86.34 18 P P 20 06 53.1 +1.6
baz=218
RTBA Rita Blanca 86.37 49 P P 20 06 52.5 +0.2
SEY Seymchan 86.42 345 *ce* P P 20 06 52.6 +0.9
SEY pmax pmax
comp=Z,54nm,1.7s
POKR Poker Plat Res 86.42 11 P P 20 06 53.3 +1.6
baz=204
AMTX Amarillo 86.44 51 P 20 06 53.2 +0.6
AMTX IAmb IAmb 20 06 57.0
comp=Z,25nm,1.0s
DKNS Dickens 86.47 53 P P 20 06 53.5 +0.8
DKNS IAmb IAmb 20 06 57.4
comp=Z,32nm,1.2s
M30M Minto, Yukon 86.48 16 P P 20 06 53.9 +1.8
baz=214
H22K Ishtalitna Cre 86.53 9 IAmb IAmb 20 07 07.9
comp=Z,60nm,1.8s
H22K Ishtalitna Cre 86.53 9 P P 20 06 53.9 +1.7
baz=200
PLCA Paso Flores 86.55 132 P P 20 06 56.7 +3.5
comp=Z,6.1nm,1.0s,baz=256,slow=2.7,SNR=6.7
PLCA LR LR 20 40 06.9
comp=Z,444nm,18.1s,baz=217,slow=32
comp=Z,6.1nm,1.0s
PLCA Paso Flores 86.55 132 P 20 06 53.9 +0.7
PLCA IAmb IAmb 20 06 58.8
comp=Z,42nm,1.6s
PLCA Paso Flores 86.55 132 P P 20 06 53.9 +0.7
PLCA pmax pmax
comp=Z,42nm,1.6s
E17K Hotham Inlet 86.56 4 P P 20 06 54.1 +1.8
baz=191,SNR=18
L29M L29M 86.59 15 P P 20 06 54.7 +2.1
baz=213,SNR=14
F19K Shaleruckik Mo 86.66 6 IAmb IAmb 20 06 55.8
comp=Z,29nm,1.2s
F19K Shaleruckik Mo 86.66 6 P P 20 06 54.4 +1.6
baz=194
M31M Drury Creek, Y 86.82 17 P P 20 06 55.4 +1.7
baz=216
G21K Allakaket 86.83 8 P P 20 06 55.3 +1.6
baz=198
HEH HeiHe 86.92 326 *e* P P 20 06 55.1 +0.7
HEH pmax pmax
comp=Z,18nm,1.5s
APMT Aspermont 86.92 53 P 20 06 56.2 +1.2
BRDY Brady 86.92 55 P 20 06 55.0 0.0
BRDY IAmb IAmb 20 06 58.4
comp=Z,25nm,1.4s
E18K Tukpahlearik C 86.98 5 P P 20 06 55.3 +0.9
E18K Tukpahlearik C 86.98 5 P P 20 06 56.3 +1.9
baz=192,SNR=18
ABTX Abilene, Hawle 86.99 54 P 20 06 55.9 +0.6
H24K Noodor Dome 87.01 10 IAmb IAmb 20 06 56.3
comp=Z,31nm,2.0s
H24K Noodor Dome 87.01 10 P P 20 06 56.4 +1.8
baz=204
F20K Avaraart Lake 87.08 7 IAmb IAmb 20 07 11.8
comp=Z,25nm,1.5s
F20K Avaraart Lake 87.08 7 P P 20 06 56.8 +1.9
baz=196,SNR=10
D17K Noatak River 87.09 4 P P 20 06 56.7 +1.8
baz=190,SNR=9.9
DAWY Dawson 87.11 14 P 20 06 55.8 +0.6
DAWY Dawson 87.11 14 P P 20 06 57.0 +1.9
baz=212,SNR=13
PRP Porcupine Dome 87.13 11 P 20 06 56.0 +0.7
PRP Porcupine Dome 87.13 11 P P 20 06 56.8 +1.5
baz=206,SNR=17
E19K Redstone River 87.32 6 P P 20 06 58.0 +2.0
baz=195
K29M Barlow Dome 87.36 15 P P 20 06 58.5 +2.0
baz=213,SNR=6.5
I26K Coal Creek Min 87.39 12 P P 20 06 58.4 +2.0
baz=208

RDOG Red Dog Mine 87.45 4 P P 20 06 57.0 +0.3
RDOG Red Dog Mine 87.45 4 P P 20 06 58.4 +1.8
baz=190
G22K Bettles 87.48 8 P P 20 06 58.7 +1.9
baz=200
G23K Bananza Creek 87.49 9 IAmb IAmb 20 07 12.8
comp=Z,43nm,1.8s
G23K Bananza Creek 87.49 9 P P 20 06 58.6 +1.7
baz=202,SNR=8.0
F21K Alatna River 87.51 7 IAmb IAmb 20 07 00.8
comp=Z,38nm,1.9s
F21K Alatna River 87.51 7 P P 20 06 58.5 +1.5
baz=198,SNR=6.8
C16K Lisburne Hills 87.54 3 P 20 06 57.8 +0.8
C16K IAmb IAmb 20 07 40.1
comp=Z,32nm,1.8s
C16K Lisburne Hills 87.54 3 P P 20 06 58.6 +1.6
baz=187
BI02 San Fabin de 87.58 128 P 20 06 58.9 +0.6
J29N Klondike Camp 87.71 14 P P 20 06 59.5 +1.4
J29N Klondike Camp 87.71 14 P P 20 07 00.0 +2.0
baz=213
C17K DeLong Mountai 87.85 4 P P 20 07 00.2 +1.6
baz=189
COLD Coldfoot 87.94 9 P P 20 07 01.0 +1.9
COLD IAmb IAmb 20 07 16.5
comp=Z,48nm,1.9s
COLD Coldfoot 87.94 9 P P 20 07 01.3 +2.2
baz=202,SNR=6.5
I27K Kandik River 87.96 12 P P 20 07 01.2 +2.0
baz=210
APG El Apazote 88.00 73 LR LR 20 38 43.4
comp=Z,45nm,19.9s,baz=74,slow=30
MMPY Sheldon Lake, 88.04 18 P P 20 07 01.6 +2.0
baz=219
C18K Utukok River 88.15 4 IAmb IAmb 20 07 09.4
comp=Z,33nm,1.9s
C18K Utukok River 88.15 4 P P 20 07 01.8 +1.7
baz=191
I28M Miner Creek 88.17 13 IAmb IAmb 20 07 16.2
comp=Z,45nm,1.6s
I28M Miner Creek 88.17 13 P P 20 07 02.2 +2.0
baz=211
E20K Nigu River 88.20 6 P P 20 07 02.4 +2.1
baz=196
D19K Kuna River 88.25 5 P P 20 07 02.2 +1.7
baz=194
J30M Hart River 88.26 15 IAmb IAmb 20 07 27.4
comp=Z,46nm,1.9s
J30M Hart River 88.26 15 P P 20 07 02.7 +2.0
baz=214
ELIB Princess Elisa 88.27 185 *d* P P 20 07 01.8 +0.9
HNS HongShan 88.35 311 ⇑ P P 20 07 03.2 +1.6
HNS S **S 20 17 46.2 -0.8**
HNS pmax pmax
comp=Z,21nm,1.5s
HNS L L
comp=Z,390nm,14.8s
HNS L L
comp=Z,650nm,17.7s
HNS L L
comp=Z,730nm,21.4s
BILL Bilibino 88.45 352 P 20 07 01.5 +0.1
BILL IAmb IAmb 20 07 04.3
comp=Z,21nm,1.3s
BILL Bilibino 88.45 352 *ce* P P 20 07 03.1 +1.7
BILL pmax pmax
comp=Z,26nm,1.7s
I29M Ogilvie Camp, 88.46 14 P P 20 07 02.4 +0.9
BJI2 Beijing 88.48 313 P P 20 07 02.1 -0.1
BJI2 pP **PcP 20 07 07.0 +3.1**
BJI2 PP **PP 20 10 32.2 +1.6**
BJI2 SKS **SKSac 20 17 28.4 -3.0**
BJI2 pmax pmax
comp=Z,140nm,6.8s
BJI2 L L
comp=Z,140nm,21.5s
BJI2 L L
comp=Z,190nm,22.4s
BJI2 L L
comp=Z,190nm,21.2s
BJT Baijiatuao 88.49 313 P P 20 07 03.5 +1.3
BJT Baijiatuao 88.49 313 IAmb IAmb 20 07 25.0
comp=Z,29nm,1.4s
KOTAN Kotaneelee Air 88.52 22 P P 20 07 04.1 +2.2
baz=226
H27K Steamboat Moun 88.52 12 P P 20 07 03.9 +2.1
baz=210,SNR=6.4
WMOK Wichita Mounta 88.53 52 P P 20 07 02.7 +0.1
WMOK IAmb IAmb 20 07 06.7
comp=Z,21nm,1.6s
WMOK Wichita Mounta 88.53 52 P P 20 07 02.7 +0.1
WMOK pmax pmax
comp=Z,21nm,1.7s
E22K Anaktuvuk Pass 88.58 8 P P 20 07 03.6 +1.5
E22K IAmb IAmb 20 07 17.1
comp=Z,32nm,1.9s
E22K Anaktuvuk Pass 88.58 8 P P 20 07 04.2 +2.1
baz=200
D20K Etivluk River 88.60 6 P P 20 07 03.9 +1.8
baz=196
C19K Lookout Ridge 88.72 5 P P 20 07 04.9 +2.2
baz=193
G26K Porcupine Rive 88.73 11 P P 20 07 05.1 +2.4
baz=208
I30M Mount Dempster 88.79 15 P P 20 07 05.1 +1.9
baz=214
LYN LuoYang 88.79 307 P P 20 07 05.1 +1.3
LYN S **S 20 17 50.7 -0.7**
LYN sS ScS 20 17 59.3 +2.6
LYN pmax pmax
comp=Z,18nm,0.8s
LYN pmax pmax
comp=Z,310nm,8.2s
LYN L L
comp=Z,400nm,15.8s
LYN L L
comp=Z,460nm,22.7s
LYN L L
comp=Z,780nm,20.2s
E23K Chandalar 88.80 9 P P 20 07 05.1 +1.9
baz=202
HKT Hockley 88.88 58 *i* P P 20 07 07.4 +3.2
HKT pmax pmax
comp=Z,27nm,1.9s
SNAA Sanae 88.97 177 P P 20 07 06.3 +2.1
comp=Z,5.6nm,1.0s,baz=174,slow=8.6,SNR=3.6
SNAA LR LR 20 42 47.9
comp=Z,454nm,20.0s,baz=190,slow=33
comp=Z,5.6nm,1.0s
SNAA Sanae 88.97 177 IAmb IAmb 20 07 19.0
comp=Z,17nm,1.2s
SNAA Sanae 88.97 177 *e* P P 20 07 04.6 +0.4
SNAA pmax pmax
comp=Z,14nm,1.3s
E24K Your Creek 88.98 9 IAmb IAmb 20 07 23.8
comp=Z,30nm,2.0s
E24K Your Creek 88.98 9 P P 20 07 06.1 +2.1
baz=203
F25K Christian Rive 88.98 10 IAmb IAmb 20 07 32.9
comp=Z,39nm,1.9s
F25K Christian Rive 88.98 10 P P 20 07 06.5 +2.5
baz=206
G27K Doyon Strip 89.00 12 IAmb IAmb 20 07 07.7
comp=Z,34nm,1.9s
G27K Doyon Strip 89.00 12 P P 20 07 06.0 +1.9
baz=210
ZEA Zeya 89.01 329 *e* P P 20 07 06.2 +1.8
ZEA pmax pmax
comp=E,10.0nm,1.1s
ZEA pmax pmax
comp=N,10.0nm,1.4s
ZEA pmax pmax
comp=Z,30nm,1.3s
BMAR Burnt Mountain 89.02 11 P P 20 07 04.5 +0.3
C21K Knifeblade Rid 89.21 6 P P 20 07 06.8 +1.8
baz=197
F26K Sheenjek River 89.33 11 IAmb IAmb 20 07 22.5
comp=Z,39nm,1.9s
F26K Sheenjek River 89.33 11 P P 20 07 07.7 +2.1
baz=207
TOLK Toolik Lake Re 89.35 8 P P 20 07 07.8 +2.1
baz=202
ENH Enshi 89.40 302 P P 20 07 07.8 +1.0
E25K Arctic Village 89.47 10 P P 20 07 08.0 +1.7
baz=206
D23K Nanushuk River 89.51 8 P P 20 07 08.4 +2.1

baz=201
EPYK Eagle Plains 89.66 14 P P **20 07 09.1 +1.9**
baz=214
B21K Ikpikpuk River 89.67 6 P P **20 07 09.2 +2.1**
baz=198
A19K Wainwright 89.69 4 P P **20 07 09.1 +2.0**
baz=191
H31M Peel River 89.75 15 IAmb IAmb 20 07 23.2
comp=Z,49nm,1.8s
H31M Peel River 89.75 15 P P **20 07 09.8 +2.1**
baz=216
B20K Meade River 89.80 5 IAmb IAmb 20 07 38.5
comp=Z,24nm,1.6s
B20K Meade River 89.80 5 P P **20 07 09.8 +2.1**
baz=195
D24K Happy Valley 89.93 8 P P **20 07 10.5 +2.2**
baz=203
GSI Gunungsitoli 89.95 271 P P **20 07 13.1 +3.4**
comp=Z,37nm,2.1s
F28M Old Crow 90.05 12 IAmb IAmb 20 07 26.3
comp=Z,37nm,1.9s
F28M Old Crow 90.05 12 P P **20 07 10.8 +1.9**
baz=211
NVL N'lazarevskaya 90.07 182 *e*P P **20 07 11.6 +2.4**
NVL *e* 20 10 45.4
NVL *e*PPP PPP 20 12 42.6
NVL *e*SS **SKSac** **20 17 43.0 +3.0**
NVL *e*SS **SS** **20 24 07.9 +8.6**
NVL pmax pmax
comp=Z,37nm,1.8s
NVL MLR MLR
comp=Z,683nm,19.0s
E27K Coleen River 90.22 11 IAmb IAmb 20 07 26.4
comp=Z,38nm,1.9s
E27K Coleen River 90.22 11 P P **20 07 11.9 +2.1**
baz=210
CO03 El Pedregal 90.25 123 IAmb IAmb 20 07 15.4
comp=Z,30nm,1.4s
GYA Guiyang 90.28 298 P P **20 07 12.9 +1.8**
GYA pmax pmax
comp=Z,8.0nm,1.2s
G30M tAoh Zraii Nji 90.28 14 P P **20 07 12.0 +1.9**
baz=215
XLT XiLinHaoTe 90.29 317 *e*P P **20 07 12.7 +2.0**
XLT S S **20 18 11.3 +6.1**
XLT pmax pmax
comp=Z,10.0nm,1.0s
XLT pmax pmax
comp=Z,170nm,6.7s
XLT L L
comp=Z,500nm,21.3s
XLT L L
comp=Z,530nm,18.5s
C23K Itkillik River 90.33 8 P P **20 07 12.1 +1.9**
baz=201
D25K Kavik River 90.44 9 P P **20 07 12.5 +1.7**
baz=205
C24K Franklin Bluff 90.47 8 P P **20 07 12.8 +2.0**
baz=203
B22K Teshekpuk Lake 90.49 6 P P **20 07 12.8 +2.0**
baz=199
G31M Satah River 90.68 14 P P **20 07 13.7 +1.8**
baz=216
F30M Barrier River 90.90 13 P P **20 07 14.8 +2.0**
baz=215
LCO Las Campanas 90.94 121 P P **20 07 14.7 +0.3**
LCO IAmb IAmb 20 07 19.3
comp=Z,30nm,1.2s
LCO Las Campanas 90.94 121 P P **20 07 14.7 +0.3**
LCO pmax pmax
comp=Z,31nm,1.3s
A22K Sinclair Lake 90.97 6 P P **20 07 14.9 +1.9**
baz=197
E28M Babbage River 90.97 12 P P **20 07 15.1 +1.9**
baz=212
CO01 Juntas del Tor 91.05 122 IAmb IAmb 20 08 24.2
comp=Z,9.8nm,0.4s
E29M Blow River 91.11 12 IAmb IAmb 20 07 29.7
comp=Z,30nm,1.9s
E29M Blow River 91.11 12 P P **20 07 15.7 +1.8**
baz=213
A21K Barrow 91.12 5 P P **20 07 15.5 +1.7**
baz=196
C27K Jago River 91.13 10 IAmb IAmb 20 07 27.5
comp=Z,21nm,1.9s
C27K Jago River 91.13 10 P P **20 07 16.0 +2.0**
baz=208
C26K Camden Bay 91.20 9 P P **20 07 16.2 +2.0**
baz=206
F31M Tsiigehtchic 91.22 14 P P **20 07 16.2 +1.9**
baz=217
D27M Malcolm River 91.26 11 IAmb IAmb 20 07 31.1
comp=Z,23nm,1.7s
D27M Malcolm River 91.26 11 P P **20 07 16.5 +1.9**
baz=210
XAN Xi'an 91.28 306 ⇑P P **20 07 16.7 +1.2**
XAN S S **20 18 17.0 +2.4**
XAN pmax pmax
comp=Z,13nm,1.5s
XAN L L
comp=Z,220nm,18.0s
XAN L L
comp=Z,410nm,19.2s
XAN L L
comp=Z,370nm,22.7s
JTS Las Juntas de 91.47 80 LR LR 20 39 24.0
comp=Z,698nm,19.4s,baz=232,slow=30
NNA Nana 91.72 103 LR LR 20 39 38.7
comp=Z,546nm,19.8s,baz=242,slow=30
D28M Stokes Point 91.74 12 P P **20 07 18.7 +2.0**
baz=212
ATAH Atahualpa 91.92 98 LR LR 20 40 42.6
comp=Z,851nm,18.1s,baz=275,slow=30
INK Inuvik 91.97 14 P P **20 07 19.4 +1.6**
comp=Z,5.2nm,1.1s,baz=231,slow=7.9,SNR=7.5
INK LR LR 20 46 32.6
comp=Z,443nm,18.1s,baz=234,slow=34
comp=Z,5.2nm,1.1s
INK Inuvik 91.97 14 IAmb IAmb 20 07 34.5
comp=Z,37nm,1.7s
INK Inuvik 91.97 14 P P **20 07 19.3 +1.6**
baz=217
HHC Hu-ho-hao-te 92.02 313 *e*P P **20 07 19.4 +0.6**
HHC SKS **SKSac** **20 17 50.4 -1.8**
HHC S S **20 18 16.9 -4.2**
HHC pmax pmax
comp=Z,18nm,0.6s
HHC pmax pmax
comp=Z,220nm,5.3s
HHC L L
comp=Z,180nm,15.3s
HHC L L
comp=Z,430nm,16.2s
HHC L L
comp=Z,310nm,15.3s
YAK Yakutsk 92.89 337 LR LR 20 45 49.3
comp=Z,263nm,20.0s,baz=126,slow=34
YAK Yakutsk 92.89 337 P P **20 07 21.6 -0.6**
YAK IAmb IAmb 20 07 23.2
comp=Z,27nm,1.6s
YAK Yakutsk 92.89 337 *e*P P **20 07 22.7 +0.5**
YAK *e**PP **sP** **20 07 25.9 +2.9**
YAK *e* 20 11 04.5
YAK *e*S **SKSac** **20 17 56.4 +0.7**
YAK *e* 20 18 30.1
YAK pmax pmax
comp=Z,14nm,1.4s
YAK pmax pmax
comp=N,3.0nm,1.4s
YAK pmax pmax
comp=E,4.0nm,1.4s
YAK pmax pmax
comp=Z,270nm,4.6s
YAK pmax pmax
comp=E,231nm,4.6s
YAK smax smax
comp=N,195nm,5.3s
YAK smax smax
comp=E,85nm,2.8s
BTO2 Baotou 93.15 312 *e*P P **20 07 25.8 +1.7**
BTO2 pP **pwP** **20 07 30.8 -4.8**
BTO2 sP sP 20 07 32.8 +7.9
BTO2 S S **20 18 29.7 -1.5**
BTO2 pmax pmax
comp=E,26nm,1.2s
BTO2 pmax pmax
comp=E,420nm,11.0s
BTO2 L L
comp=E,780nm,16.4s
BTO2 L L
comp=E,640nm,17.8s
BTO2 L L
comp=E,900nm,20.8s
YKA Yellowknife Ar 93.52 23 P P **20 07 26.9 +1.8**
comp=E,0.4nm,0.8s,baz=250,slow=5.0,SNR=7.7
YKA LR LR 20 44 54.1
comp=E,371nm,19.1s,baz=240,slow=32
comp=E,0.4nm,0.8s
YKA Yellowknife Ar 93.52 23 P P **20 07 23.8 -1.2**
ECSD EROS Data Cent 93.72 45 IAmb IAmb 20 07 30.4
comp=Z,18nm,1.3s
S39A Bolivar 93.74 51 IAmb IAmb 20 07 29.9
comp=Z,38nm,1.8s
CD2 Chengdu 94.23 301 *e*P P **20 07 29.0 -0.2**
CMAR Chiang Mai Arr 94.26 288 P P **20 07 30.0 +0.4**
comp=Z,4.4nm,1.0s,baz=106,slow=2.8,SNR=27
CMAR LR LR 20 47 03.8
comp=Z,211nm,20.6s,baz=115,slow=34
comp=Z,4.4nm,1.0s
CMAR Chiang Mai Arr 94.26 288 P **20 07 29.4 -0.2**
CMAR Chiang Mai Arr 94.26 288 P P **20 07 30.0 +0.4**
MGMO Mountain Grove 94.33 52 IAmb IAmb 20 08 12.8
comp=Z,15nm,0.8s
CHTO Chiang Mai 94.38 288 P P **20 07 31.4 +1.3**
CHTO Chiang Mai 94.38 288 P P **20 07 29.9 -0.2**
CHTO Chiang Mai 94.38 288 P P **20 07 29.9 -0.2**
CHTO pmax pmax
comp=Z,9.0nm,1.2s
CHTO Chiang Mai 94.38 288 P P **20 07 31.7 +1.6**
PZH PanZhiHua 94.43 296 P P **20 07 31.8 +1.5**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,160nm,7.5s
R40A Maddies Statio 94.73 51 IAmb IAmb 20 07 35.0
comp=Z,23nm,1.3s
C36M Paulatuk 95.01 16 IAmb IAmb 20 08 22.9
comp=Z,34nm,1.9s
C36M Paulatuk 95.01 16 P P **20 07 33.4 +1.6**
baz=226
ULM Lac du Bonnet 96.69 39 LR LR 20 47 30.9
comp=Z,696nm,18.4s,baz=203,slow=33
ULN Ulaanbaatar 97.65 318 *ce*P Pdif 20 07 43.6 -1.0
ULN pmax pmax
comp=Z,5.0nm,1.6s
LPAZ La Paz 98.04 110 LR LR 20 43 33.7
comp=Z,737nm,19.8s,baz=262,slow=30
SONM Songino Array 98.06 318 P Pdif 20 07 46.9 +0.6
comp=Z,0.4nm,1.0s,baz=172,slow=4.5,SNR=3.9
SONM LR LR 20 47 51.4
comp=Z,203nm,21.3s,baz=121,slow=33
comp=Z,0.4nm,1.0s
SONM Songino Array 98.06 318 P Pdif 20 07 45.8 -0.6
SONM Songino Array 98.06 318 P Pdif 20 07 45.8 -0.6
SONM pmax pmax
comp=Z,9.0nm,1.9s
TIXI Tiksi 98.89 344 *ce*P Pdif 20 07 50.7 +1.4
TIXI pmax pmax
comp=Z,8.0nm,1.5s
WMQ Urumqi 109.78 311 Pdif **Pdif** **20 08 39.2 +0.7**
WMQ L L
comp=Z,300nm,17.7s
ZSN Zaisan 112.16 314 *i* PKIKP **PKiKP** **20 12 45.5 +0.2**
ZSN Zaisan 112.16 314 *e*PKiKP **PKiKP** **20 12 45.5 +0.2**
ZALV Zalesovo Beam 112.58 321 PKiKP **PKiKP** **20 12 46.5 +0.6**
comp=Z,0.6nm,0.8s,baz=62,slow=3.7,SNR=4.8
MK31 Makanchi Array 113.87 313 *i* PKIKP **PKiKP** **20 12 48.4 -0.2**
MKAR Makanchi Array 113.87 313 PKiKP **PKiKP** **20 12 49.0 +0.4**
comp=Z,0.7nm,0.7s,baz=50,slow=1.9,SNR=7.7
MKAR Makanchi Array 113.87 313 *i* PKIKP **PKiKP** **20 12 49.0 +0.4**
SHLS Shalkode 115.68 309 *e*PKiKP **PKiKP** **20 12 51.6 -0.7**
SHLS Shalkode 115.68 309 *e*PKP **PKiKP** **20 12 51.7 -0.7**
UZB Uzynbulak 116.00 309 *e*PKiKP **PKiKP** **20 12 52.7 -0.3**
UZB Uzynbulak 116.00 309 *e*PKP **PKiKP** **20 12 52.7 -0.3**
KPKS Kokpek 116.26 310 *e*PKiKP **PKiKP** **20 12 53.3 -0.1**
KPKS Kokpek 116.26 310 *e*PKP **PKiKP** **20 12 53.4 -0.1**
KURK Kurchatov 116.36 318 **PKPdf** **20 12 51.1 -2.1**
KURK Kurchatov 116.36 318 *c i* PKIKP **PKiKP** **20 12 54.7 +1.5**
KURK pmax pmax
comp=Z,9.0nm,1.7s
KURBB Kurchatov Arra 116.42 318 PKP **PKiKP** **20 12 54.0 +0.7**
comp=Z,1.3nm,0.9s,baz=86,slow=1.7,SNR=9.3
SATY Saty 116.45 309 *e*PKiKP **PKiKP** **20 12 53.6 -0.2**
SATY Saty 116.45 309 *e*PKP **PKiKP** **20 12 53.6 -0.2**
TDK Taldyqorghan 116.51 311 *e*PKiKP **PKiKP** **20 12 53.7 0.0**
TDK Taldyqorghan 116.51 311 *e*PKP **PKiKP** **20 12 53.7 0.0**
MDOK Medeo 117.45 309 *e*PKiKP **PKiKP** **20 12 55.5 -0.3**
MDOK Medeo 117.45 309 *e*PKP **PKiKP** **20 12 55.5 -0.3**
TNSS Tian-Shan 117.52 309 *e*PKiKP **PKiKP** **20 12 55.7 -0.5**
TNSS Tian-Shan 117.52 309 *e*PKP **PKiKP** **20 12 55.8 -0.5**
AAA Alma-Ata 117.55 309 *e*PKiKP **PKiKP** **20 12 55.6 -0.3**
AAA Alma-Ata 117.55 309 *e*PKP **PKiKP** **20 12 55.6 -0.3**
AAK Ala-Archa 119.32 309 *c i* PKIKP **PKiKP** **20 13 01.3 +1.8**
AAK pmax pmax
comp=Z,3.0nm,1.7s
BTLS Baital 119.60 311 *e*PKiKP **PKiKP** **20 12 59.6 -0.1**
BTLS Baital 119.60 311 *e*PKP **PKiKP** **20 12 59.6 -0.1**
SPITS Spitsbergen Ar 120.95 358 PKP **PKiKP** **20 13 02.7 +1.2**
comp=Z,16nm,1.0s,baz=10,slow=1.6,SNR=4.2
BVAR Borovoye Array 121.23 321 PKP **PKiKP** **20 13 03.5 +0.8**
comp=Z,2.0nm,0.7s,baz=82,slow=2.2,SNR=14
BORK Borovoye 121.27 321 **PKiKP** **20 13 02.6 -0.1**
BORK Borovoye 121.27 321 *c i* PKIKP **PKiKP** **20 13 04.3 +1.6**
BORK pmax pmax
comp=Z,10.0nm,1.7s
DZA Taraz 121.64 309 *e*PKiKP **PKiKP** **20 13 03.5 -0.3**
DZA Taraz 121.64 309 *e*PKP **PKiKP** **20 13 03.6 -0.3**
IUG luzhnay 122.64 308 *e*PKiKP **PKiKP** **20 13 05.4 -0.5**
IUG luzhnay 122.64 308 *e*PKP **PKiKP** **20 13 05.4 -0.5**
BRLS Borolday 122.73 309 *e*PKiKP **PKiKP** **20 13 05.9 0.0**
BRLS *e* 20 14 44.6
BRLS Borolday 122.73 309 *e*PKP **PKiKP** **20 13 06.0 0.0**
BRLS *e*PP **PP** **20 14 44.6 +0.9**
CHGR Chuyangaron 123.43 304 **PKPdf** **20 13 05.5 -1.8**
CHGR Chuyangaron 123.43 304 *i* PKIKP **PKiKP** **20 13 07.8 +0.2**
KBL Kabul 123.51 299 **PKiKP** **20 13 07.7 -0.3**
KBL Kabul 123.51 299 PKIKP **PKiKP** **20 13 07.7 -0.3**
ARTI Arti 127.00 327 **PKiKP** **20 13 14.7 +0.7**
ARTI Arti 127.00 327 *i* PKIKP **PKiKP** **20 13 15.4 +1.4**
ARTI 20 15 15.3
ARTI 20 20 26.4
AB31 Akbulak array 128.47 318 **PKiKP** **20 13 18.6 +1.4**
ABKAR Akbulak array 128.47 318 **PKiKP** **20 13 17.1 -0.1**
ARCES ARCESS Array B 128.55 352 PKP **PKiKP** **20 13 17.6 +0.9**
comp=Z,5.2nm,0.9s,baz=64,slow=2.8,SNR=4.5
APA Apatity 128.96 347 ⇓*i* PKIKP **PKiKP** **20 13 20.7 +3.1**
APA *e* 20 15 25.0
APA pmax pmax
comp=Z,8.0nm,1.3s
APA MLR MLR
comp=Z,1μm,5.0s
KLMR Klimovskoe 132.62 339 *e*PKiKP **PKPdf** **20 13 22.0 -2.0**
KLMR pmax pmax
comp=Z,25nm,1.5s
FINES FINESS Array B 135.86 347 PKP **PKiKP** **20 13 31.8 +0.2**
comp=Z,2.0nm,0.9s,baz=22,slow=1.5,SNR=4.3
OBN Obninsk 137.87 335 ⇓*i* PKIKP **PKiKP** **20 13 35.7 -0.2**
OBN *e* 20 16 23.8
OBN pmax pmax
comp=Z,44nm,1.7s
KIV Kislovodsk 141.45 318 *i* PKIKP **PKiKP** **20 13 44.5 +0.7**
KIV pmax pmax
comp=Z,3.0nm,1.1s
KIV MLR MLR
comp=Z,365nm,24.0s
ERBR Yeremizino-Bor 141.92 321 *i* PKIKP **PKPdf** **20 13 38.6 -3.1**
ERBR pmax pmax
comp=Z,17nm,1.2s
LABN Labinsk 142.34 320 *i* PKIKP **PKPdf** **20 13 38.8 -3.6**
LABN pmax pmax
comp=Z,9.0nm,0.5s
LABN MLR MLR
comp=Z,396nm,20.0s
KIBK Kibwezi 142.71 238 **PKPdf** **20 13 41.7 -2.5**
RAYN Ar Rayn 144.06 284 PKPbc 20 13 43.8 -0.4
RAYN Ar Rayn 144.06 284 ⇑PKIKP **PKiKP** **20 13 47.3 -2.4**
AKASG Malin Array Be 144.11 336 PKP **PKPdf** **20 13 44.4 -0.9**
comp=Z,3.1nm,0.8s,baz=29,slow=2.9,SNR=11
AKASG Malin Array Be 144.11 336 **PKPdf** **20 13 43.5 -1.9**
KIEV Kiev 144.13 336 ⇑P **PKiKP** **20 13 47.3 -1.6**
KIEV Kiev 144.13 336 **PKPab** **20 13 40.5 -2.4**
KIEV Kiev 144.13 336 ⇑PKIKP **PKiKP** **20 13 47.3 -1.6**
KIEV Kiev 144.13 336 PKP **PKiKP** **20 13 48.0 -0.9**
ANN Anapa 144.22 322 *e*PKIKP **PKiKP** **20 13 53.4 +4.1**
ANN pmax pmax
comp=Z,107nm,1.2s
RNPP9 Sopachiv 144.72 340 PKP **PKPdf** **20 13 46.4 0.0**
RNPP8 Varash 144.80 339 PKP **PKPdf** **20 13 46.8 +0.3**
RNPP5 Staryi Chortor 144.88 339 PKP **PKPdf** **20 13 47.0 +0.3**
GKP Gorka Klasztor 145.23 349 *e*PKP **PKPdf** **20 13 48.0 +0.8**
LUBAR Lubar, Ukraine 145.30 336 PKP **PKPdf** **20 13 48.2 +0.7**
R9F13 Warsaw-Wawer 145.38 345 *e*PKP **PKiKP** **20 13 49.8 -1.6**
BEL Belsk 145.83 345 *e*PKP **PKiKP** **20 13 51.2 -1.1**
SIM Simferopol' 145.99 325 *e*PKP2 **PKiKP** **20 13 51.1 -1.9**
SIM *e* 20 17 17.8
SIM pmax pmax
comp=Z,60nm,1.4s
SIM pmax pmax
comp=Z,58nm,15.1s
BAL3X Bal3x, Balta 146.11 332 PKP **PKiKP** **20 13 50.8 -2.3**
SORM Soroca 146.49 334 ⇓P **PKPab** **20 13 51.7 -0.1**
SORM Soroca 146.49 334 ⇓PKP2 **PKPab** **20 13 51.7 -0.1**
SORM Soroca 146.49 334 PKP **PKPab** **20 13 51.1 -0.7**
KMPD K-Podol'skiy 146.90 336 PKP **PKPab** **20 13 51.8 -1.6**
PURM Purcari 147.05 331 ⇑P **PKiKP** **20 13 54.5 -0.6**
KWP Kalwaria Pacla 147.28 341 *e*PKP **PKPbc** **20 13 51.2 -2.0**
OJC Ojcow 147.56 345 *e*PKP **PKPbc** **20 13 53.9 0.0**
KSP Ksiaz 147.72 349 *e*PKP **PKPbc** **20 13 54.1 -0.2**
CLL Collm 147.76 353 *i* PKP2 **PKiKP** **20 13 55.2 -1.2**
CLL pmax pmax
comp=Z,57nm,1.2s
CLL MLR MLR
comp=Z,400nm,20.0s
CLL Collm 147.76 353 *i* PKPbc **PKiKP** **20 13 55.2 -1.2**
comp=Z,57nm,1.2s
CLL AMS AMS 21 23 00.0
comp=Z,400nm,20.0s
BZK Bezkurt 147.90 321 ⇓P **PKPab** **20 13 58.1 +0.5**
STHS Stebnicka Huta 147.91 342 *e*PKP2 **PKPab** **20 13 57.3 -0.1**
STHS Stebnicka Huta 147.91 342 *e*PKP **PKPab** **20 13 57.3 -0.1**
OSTC Ostas 148.01 349 *e*PKPAB **PKPab** **20 13 57.5 -0.3**
UPC Upice 148.10 349 *e*PKP2 **PKPab** **20 14 01.0 +2.9**
UPC Upice 148.10 349 *e*PKPAB **PKPab** **20 14 01.0 +2.9**
BURAR Bucovina Array 148.16 336 ⇓P **PKPab** **20 13 58.5 0.0**
BURAR Bucovina Array 148.16 336 **PKPdf** **20 13 50.3 -2.2**
BURAR Bucovina Array 148.16 336 ⇓PKP2 **PKPab** **20 13 58.5 0.0**
LODK Lodwar 148.16 244 **PKiKP** **20 13 56.9 -1.6**
NIE Niedzica 148.17 344 *e*PKP **PKPbc** **20 13 55.2 -0.4**
DPC Dobruska-Polom 148.19 349 *e*PKP2 **PKPab** **20 13 57.9 -0.6**
DPC Dobruska-Polom 148.19 349 *e*PKPAB **PKPab** **20 13 57.9 -0.6**
STEB Steborice 148.30 347 *e*PKPAB **PKPab** **20 13 58.0 -0.9**
KRLC Kraliky 148.37 348 *e*PKP2 **PKPab** **20 13 58.5 -0.7**
KRLC Kraliky 148.37 348 *e*PKPAB **PKPab** **20 13 58.5 -0.7**
TESR Tescani 148.49 334 ⇓P **PKPab** **20 13 59.2 -0.6**
MORC Moravsky Berou 148.50 347 ⇑P **PKPab** **20 13 58.7 -1.1**
MORC Moravsky Berou 148.50 347 ⇑PKP2 **PKPab** **20 13 58.7 -1.1**
MORC Moravsky Berou 148.50 347 *e*PKP **PKPab** **20 13 58.4 -1.4**
GHRR 148.51 332 ⇑P **PKPab** **20 14 00.7 +0.8**
UCC Uccle 148.53 3 *d*PKPdf **PKPdf** **20 13 53.0 +0.2**
CIDE Kastamonu/Cide 148.58 321 ⇓P **PKPab** **20 14 01.2 +1.0**
LANS Liptovska Anna 148.63 344 *e*PKP2 **PKPab** **20 14 00.1 -0.2**
LANS Liptovska Anna 148.63 344 *e*PKP **PKPab** **20 14 00.1 -0.2**
NEGRR Negrea 148.71 331 ⇑P **PKPab** **20 14 00.9 +0.2**
BMR Baia Mare 148.73 338 ⇑P **PKPab** **20 14 00.5 -0.2**
BMR Baia Mare 148.73 338 ⇑PKP2 **PKPab** **20 14 00.5 -0.2**
MEM Membach 148.79 1 *d*PKP **PKPbc** **20 13 56.6 -0.5**
BSTI Sart Tilman 148.80 2 *d*PKP **PKPab** **20 13 59.6 -1.3**
BTNL Ternell 148.81 1 *d*PKPdf **PKPdf** **20 13 53.6 +0.2**
BTNL *d*PKP **PKPab** **20 13 59.8 -1.2**
JURR Jurilovca 148.82 329 ⇑P **PKPab** **20 14 00.5 -0.6**
MAUC Maruska 148.82 346 *e*PKPAB **PKPab** **20 13 59.6 -1.5**
CFR Carcaliu 148.86 331 ⇑P **PKPab** **20 13 59.5 -1.8**
CFR Carcaliu 148.86 331 ⇑PKP2 **PKPab** **20 13 59.5 -1.8**
ODBI Odobesti 148.90 332 ⇓P **PKPab** **20 14 01.0 -0.5**
VRI Vrincioaia 148.96 333 ⇑P **PKiKP** **20 13 59.3 +0.2**
VRI Vrincioaia 148.96 333 ⇑PKP2 **PKiKP** **20 13 59.3 +0.2**
TPGR Topolog 148.97 330 ⇑P **PKPab** **20 13 59.9 -2.0**
PLOR Plostina 149.01 333 ⇑P **PKPab** **20 13 59.8 -2.2**
PLOR Plostina 149.01 333 ⇑PKP2 **PKPab** **20 13 59.8 -2.2**
BHOU Houvegnez 149.04 1 *d*PKP **PKPab** **20 13 59.8 -2.1**
TURR Turia 149.11 334 ⇑P **PKPab** **20 14 00.8 -1.6**
VRAC Vranov 149.14 348 ⇑P **PKPab** **20 14 00.7 -1.6**
VRAC Vranov 149.14 348 ⇑PKP2 **PKPab** **20 14 00.7 -1.6**
VRAC Vranov 149.14 348 *e*PKP **PKPab** **20 14 00.1 -2.2**
OZUR 149.18 334 ⇓P **PKPab** **20 14 00.4 -2.2**
COVR Voineasa-Covas 149.20 333 ⇑P **PKiKP** **20 14 00.1 +0.5**
RCHB Rochefort 149.22 2 *d*PKP **PKiKP** **20 13 58.3 -1.1**
DOU Dourbes 149.25 3 *d*PKPdf **PKPdf** **20 13 53.9 -0.1**
DOU *d*PKP **PKiKP** **20 14 00.1 +0.6**
TIRR Tirgusor 149.27 329 ⇓P **PKPab** **20 14 01.2 -1.8**
TIRR Tirgusor 149.27 329 ⇓PKP2 **PKPab** **20 14 01.2 -1.8**
JAVC Velka Javorina 149.33 346 *e*PKP **PKPab** **20 14 01.5 -1.7**
MESR Meseseni 149.37 338 ⇓P **PKPab** **20 14 01.8 -1.5**
KRUC Moravsky 149.41 348 *e*PKP **PKiKP** **20 14 00.4 +0.5**
BRTR Keskin Array B 149.42 317 PKPbc **PKiKP** **20 14 00.3 -0.1**
comp=Z,9.8nm,1.1s,baz=126,slow=2.0,SNR=16
BRTR Keskin Array B 149.42 317 **PKPdf** **20 13 53.3 -1.5**
BRTR Keskin Array B 149.42 317 PKHKP PKPpre 20 13 53.3
ZVC Zvikov 149.43 351 *e*PKPAB **PKPab** **20 14 01.7 -1.8**
DOPR Dopca 149.44 334 ⇑P **PKPab** **20 14 01.6 -2.1**
MBAR Mbarara 149.47 232 **PKPdf** **20 13 51.8 -3.9**
MBAR Mbarara 149.47 232 PKHKP PKPpre 20 13 51.8
MFTR Murfatlar 149.47 329 ⇑P **PKPab** **20 14 02.1 -1.7**
CJR Cluj-Napoca 149.51 337 ⇓P **PKPab** **20 14 02.0 -2.0**
CJR Cluj-Napoca 149.51 337 ⇓PKP2 **PKPab** **20 14 02.0 -2.0**
LTVH Ltavrtes, Hu 149.52 340 ⇑P **PKiKP** **20 14 02.7 -1.1**
KIRS Kirsehir-Merke 149.56 316 ⇑P **PKiKP** **20 14 01.4 -0.8**
MLR Muntele Rosu 149.59 333 ⇓P **PKPab** **20 14 01.9 -2.6**
PSZ Piszkesteto 149.64 343 ⇑P **PKPab** **20 14 01.9 -2.6**
PSZ Piszkesteto 149.64 343 ⇑PKP2 **PKPab** **20 14 01.9 -2.6**
MANR Mangalia 149.66 328 ⇑P **PKPab** **20 14 03.0 -1.6**
MDB Medias 149.70 336 ⇓P **PKPab** **20 14 03.1 -1.6**
MDB Medias 149.70 336 ⇓PKP2 **PKPab** **20 14 03.1 -1.6**
SMOL Smolenice 149.71 346 *e*PKP2 **PKPab** **20 14 02.3 -2.4**
MARR Marisel-Cluj 149.72 338 ⇑P **PKiKP** **20 14 01.5 +0.8**
WLF Walferdange 149.74 1 *d*PKP **PKiKP** **20 14 01.1 +0.5**
DRGR 149.76 338 ⇑P **PKPab** **20 14 02.1 -3.0**
DRGR 149.76 338 ⇑PKP2 **PKPab** **20 14 02.1 -3.0**
KHC Kasperske Hory 149.82 351 ⇑*e*PKP **PKPbc** **20 13 59.1 -0.7**
MODS Modra-Piesok 149.88 346 *e*PKP2 **PKPab** **20 14 02.9 -2.5**
MODS Modra-Piesok 149.88 346 *e*PKP **PKPab** **20 14 02.9 -2.5**
VOIR 150.01 334 ⇓P **PKPab** **20 14 03.3 -2.8**
VOIR 150.01 334 ⇓PKIKP **PKPab** **20 14 03.3 -2.8**
CKRC Cesky Krumlov 150.01 350 *e*PKP **PKPbc** **20 14 03.3 -2.0**
CKRC Cesky Krumlov 150.01 350 *e*PKPAB **PKPbc** **20 14 03.3 -2.0**
GERES GERESS Array B 150.08 351 PKP **PKPbc** **20 13 57.3 -3.2**
comp=Z,3.0nm,1.1s,baz=263,slow=4.0,SNR=5.1
GERES PKPbc **PKiKP** **20 14 02.6 +1.2**
comp=Z,9.9nm,1.1s,baz=293,slow=1.0,SNR=26
GERES GERESS Array B 150.08 351 **PKPdf** **20 13 54.1 -1.4**
SRO Srobarova 150.16 345 *e*PKIKP **PKiKP** **20 14 02.6 +1.2**
SRO Srobarova 150.16 345 *e*PKP **PKiKP** **20 14 02.6 +1.2**
ARR Arges 150.24 335 ⇓P **PKiKP** **20 14 03.3 +1.5**
WINA Alland / Wiene 150.38 348 *i* pPKP **PKPab** **20 14 04.2 -3.3**
SNR=7.5
SAHE Sakarya_HENDEK 150.45 322 ⇑P **PKiKP** **20 14 03.3 +0.9**
LOT Lotru 150.51 336 ⇑P **PKiKP** **20 14 02.8 +0.4**
CONA Conrad Observa 150.60 348 *i* PKiKP **PKiKP** **20 14 04.1 +1.6**
comp=Z,40nm,1.3s,SNR=12
RONA Rosalia, Austr 150.73 347 *i* PKiKP **PKiKP** **20 14 04.5 +1.8**
comp=Z,29nm,1.1s,SNR=7.4
HUMR Humele 150.78 333 ⇑P **PKiKP** **20 14 03.6 +0.8**
RAZG Razgrad 150.85 330 ⇑P **PKiKP** **20 14 04.4 +1.4**
GZR Gura Zlata 150.94 337 ⇑P **PKiKP** **20 14 04.1 +0.9**
GZR Gura Zlata 150.94 337 ⇑PKIKP **PKiKP** **20 14 04.1 +0.9**
SILT Sile 150.95 323 ⇑P **PKiKP** **20 14 04.8 +1.5**
MOA Molln 150.96 350 *i* pPKP **PKiKP** **20 14 05.3 +2.2**
comp=Z,17nm,1.3s
COPA Copaceanca 150.99 332 ⇑P **PKiKP** **20 14 05.6 +2.4**
BZS Buzias 151.16 339 ⇑P **PKiKP** **20 14 04.0 +0.4**
BZS Buzias 151.16 339 ⇑PKIKP **PKiKP** **20 14 04.0 +0.4**
BIOA Bad Ischl, Aus 151.22 351 *i* PKiKP **PKiKP** **20 14 04.9 +1.2**
comp=Z,15nm,1.1s
MMAI Mount Meron Ar 151.26 304 PKPbc **PKiKP** **20 14 06.5 +2.2**
comp=Z,8.5nm,0.9s,baz=24,slow=9.1,SNR=7.1
ARSA Arzberg 151.31 348 *i* PKiKP **PKiKP** **20 14 05.2 +1.3**
comp=Z,12nm,1.4s
SRE Strehaia 151.39 336 ⇑P **PKiKP** **20 14 06.6 +2.5**
SRE Strehaia 151.39 336 ⇑PKIKP **PKiKP** **20 14 06.6 +2.5**
HERR Herculane 151.51 337 ⇓P **PKiKP** **20 14 05.1 +0.7**
BANR Banloc 151.53 339 ⇓P **PKPab** **20 14 08.2 -4.1**
MORH Mrgy, Hungar 151.55 343 ⇓P **PKiKP** **20 14 06.1 +1.7**

LESA	**Schwarzleotal**	**151.61**	**352**	*i* PKiKP	**PKiKP**	**20 14 06.0**	**+1.4**
	comp=Z,18nm,1.4s,SNR=5.9							
ELND	**Elena**	**151.63**	**330**	⇑P	**PKiKP**	**20 14 06.6**	**+2.0**
RETA	**Reutte**	**151.76**	**355**	*i* PKiKP	**PKiKP**	**20 14 06.6**	**+1.7**
	comp=Z,21nm,1.3s,SNR=6.1							
WATA	**Walderalm**	**151.83**	**354**	*i* PKiKP	**PKiKP**	**20 14 06.7**	**+1.5**
	comp=Z,26nm,1.3s,SNR=5.6							
PLVB	**Pleven**	**151.84**	**332**	⇑P	**PKiKP**	**20 14 06.7**	**+1.6**
MDVR	**Moldovita**	**151.85**	**338**	⇑P	**PKiKP**	**20 14 06.6**	**+1.4**
KBA	**Koelnbreinsper**	**151.86**	**351**	*i* PKiKP	**PKiKP**	**20 14 05.7**	**+0.5**
	comp=Z,10.0nm,1.3s							
MOTA	**Moosalm**	**151.87**	**354**	*i* PKiKP	**PKiKP**	**20 14 06.8**	**+1.6**
	comp=Z,31nm,1.2s,SNR=7.0							
WTTA	**Wattenberg**	**151.90**	**353**	*i* PKiKP	**PKiKP**	**20 14 06.2**	**+0.9**
	comp=Z,24nm,0.9s,SNR=10							
KOGS	**Kog**	**151.93**	**346**	*i* PKPbc	**PKiKP**	**20 14 06.6**	**+1.5**
SOKA	**Soboth**	**151.96**	**348**	*i* PKP	**PKiKP**	**20 14 05.8**	**+0.5**
	comp=Z,20nm,1.2s,SNR=8.0							
PERS	**Pernice**	**151.98**	**348**	*i* PKPbc	**PKiKP**	**20 14 06.5**	**+1.1**
SQTA	**Sankt Quirin**	**151.98**	**354**	*i* PKiKP	**PKiKP**	**20 14 06.5**	**+1.1**
	comp=Z,22nm,1.2s,SNR=6.1							
DAVA	**Damuels**	**152.03**	**356**	*i* PKiKP	**PKiKP**	**20 14 07.2**	**+1.6**
	comp=Z,18nm,1.4s							
OBKA	**Obir**	**152.21**	**349**	*i* PKiKP	**PKiKP**	**20 14 07.0**	**+1.2**
	comp=Z,8.4nm,1.4s							
FETA	**Feichten**	**152.23**	**355**	*i* PKiKP	**PKiKP**	**20 14 07.6**	**+1.6**
	comp=Z,19nm,1.1s,SNR=5.6							
MYKA	**Terra Mystica**	**152.25**	**350**	*i* PKiKP	**PKiKP**	**20 14 06.8**	**+0.9**
	comp=Z,16nm,1.5s							
ABTA	**Abfaltersbach**	**152.30**	**352**	*i* PKP	**PKiKP**	**20 14 06.5**	**+0.5**
	comp=Z,23nm,1.5s,SNR=8.5							
BAND	**Balkesir-Ban**	**152.36**	**324**	⇓P	**PKiKP**	**20 14 08.2**	**+1.9**
LJU	**Ljubljana**	**152.66**	**349**	*i* PKPdf	**PKPdf**	**20 14 01.4**	**+2.0**
LJU				*i* PKPbc	**sPKPbc**	**20 14 08.5**	**+1.0**
LJU				*i* PKPab	**PKPab**	**20 14 13.5**	**-3.5**
ESDC	**Sonseca Array**	**157.61**	**23**	PKPab	**PKPab**	**20 14 40.5**	**+2.1**
	comp=Z,1.4nm,1.1s,baz=326,slow=4.2,SNR=4.9							
TORD	**Torodi Ar. Bea**	**171.97**	**139**	PKP	**PKPdf**	**20 14 20.1**	**+0.7**
	comp=Z,1.6nm,1.0s,baz=254,slow=2.7,SNR=7.3							
TORD				PKPab	**sPKPab**	**20 15 42.6**	**-0.2**
	comp=Z,0.9nm,0.9s,baz=240,slow=6.3,SNR=2.0							

*SNET **11** 19:56:38.9±0.8, 13°.71N×90°.62W, h86km±12km, ML3.5, Presumed earthquake*
*GCG **11** 19:56:40.0±0.9, 13°.66N×90°.60W, h69km±12km, MD3.7, ML3.8, MW3.0, Presumed earthquake*
ISC 11 19:56:43.1±2.0, **13°.8N**±0°.1×**90°.36W**±0°.06, **h84**km±13km, **n23**, σ1**°968**/33, **1C**, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PCG5	**San Vicente Pa**	**0.40**	**358**	*i* P		**Pn**		**19 56 55.5**	**-1.1**
PCG5				*i* S		**Sn**		**19 57 07.9**	**+1.3**
PCG5				IAML				19 57 11.4	
	comp=E,1μm,0.4s								
FG16	**Alotenango, Sa**	**0.48**	**343**	*i* P		**Pn**		**19 56 57.0**	**-0.3**
FG16				*e*S		**Sn**		**19 57 10.3**	**+2.5**
FG8	**Yepocapa, Chim**	**0.49**	**337**	*i* P		**Pn**		**19 56 57.1**	**-0.1**
FG8				*i* S		**Sn**		**19 57 10.3**	**+2.6**
NUBE	**Las Nubes**	**0.57**	**81**	*i* P		**Pn**		**19 56 56.6**	**-1.3**
NUBE				*i* S		**Sn**		**19 57 09.2**	**+0.2**
NUBE	**Las Nubes**	**0.57**	**81**	*e*P		**Pn**		**19 56 56.7**	**-1.3**
NUBE				*e*S		**Sn**		**19 57 09.6**	**+0.5**
SLOZ	**Alcaldia de Sa**	**0.60**	**69**	*e*P		**Pn**		**19 56 57.3**	**-0.8**
SLOZ				*e*S		**Sn**		**19 57 11.0**	**+1.7**
CEVE	**Cerro Verde**	**0.72**	**88**	*e*P		**Pn**		**19 56 58.7**	**-0.8**
SBLS	**San Blas**	**0.72**	**88**	*e*P		**Pn**		**19 56 58.5**	**-1.0**
SBLS				*e*S		**Sn**		**19 57 13.1**	**+1.4**
RBDL	**Robledal**	**0.72**	**65**	*e*P		**Pn**		**19 56 58.9**	**-0.5**
ESSG	**Sabana Grande**	**0.73**	**322**	*i* P		**Pn**		**19 56 56.0**	**-3.4**
ESSG				*i* S		**Sn**		**19 57 07.6**	**-4.0**
SNJE	**San Jose**	**0.74**	**85**	*e*P		**Pn**		**19 56 58.8**	**-0.8**
JAYA	**Jayaque - finc**	**0.90**	**100**	*i* P		**Pn**		**19 56 60.0**	**-1.4**
JAYA				IAML				19 57 16.6	
	comp=E,3μm,0.2s								
JAYA	**Jayaque - finc**	**0.90**	**100**	*e*P		**Pn**		**19 56 60.0**	**-1.4**
PMON	**Piamonte**	**1.02**	**95**	*e*P		**Pn**		**19 57 01.7**	**-1.0**
BOQS	**Boqueron**	**1.05**	**94**	*e*P		**Pn**		**19 57 02.4**	**-0.8**
STG5	**El Palmar, Qui**	**1.12**	**302**	*i* P		**Pn**		**19 57 04.1**	**+0.2**
STG8	**El Palmar, Qui**	**1.15**	**304**	*i* P		**Pn**		**19 57 04.8**	**+0.4**
STG8				*i* S		**Sn**		**19 57 23.1**	**+2.7**
STG8				IAML				19 57 26.1	
	comp=E,859nm,0.2s								
STG2	**El Palmar, Qui**	**1.16**	**303**	*i* P		**Pn**		**19 57 04.9**	**+0.5**
STG2				*i* S		**Sn**		**19 57 22.8**	**+2.3**
STG2				IAML				19 57 26.1	
	comp=E,3μm,0.2s								
LOMA	**Loma Larga**	**1.17**	**98**	*e*P		**Pn**		**19 57 04.3**	**-0.2**
APG	**El Apazote**	**1.19**	**355**	*i* P		**Pn**		**19 57 03.8**	**-1.1**
SOKI	**Kika Raxquin**	**1.42**	**315**	*i* S		**Sn**		**19 57 24.4**	**-2.3**
COEG	**Centro de Oper**	**1.45**	**97**	*e*P		**Pn**		**19 57 07.1**	**-0.9**
SARH	**Santa Rosa de**	**1.83**	**58**	*i* P		**Pn**		**19 57 13.4**	**+0.5**

*IDC **11** 19:58:17.8±0.6, 28°.68S×178°.60W, h252km±5km, mb3.7/9, mbtmp4.3/10, Error ellipse: s-maj=24.0km s-min=17.0km az=71.0*
*NEIC **11** 19:58:18.6±1.3, 28°.8S±0°.1×178°.6W±0°.1, h251km±7km, mb4.3/11, Error ellipse: s-maj=18.7km s-min=13.5km az=200.0*
ISC 11 19:58:18.3±0.5, **28°.98S**±0°.06×**178°.8W**±0°.1, **h250**km, **n63**, σ1**°56**/60, **mb4.2**/13, **1C-2D**, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.83**	**109**	P		**Pn**		**19 58 53.5**	**+1.1**
	433nm,0.3s,baz=181,slow=11,SNR=8.3								
RAO				S		**S**		**19 59 19.3**	**+0.1**
	1μm,0.3s,baz=64,slow=24,SNR=6.9								
RAO	**Raoul Island**	**0.83**	**109**			**Pn**		**19 58 52.8**	**+0.4**
RAO						**S**		**19 59 17.6**	**-1.6**
GLKZ	**Green Lake**	**0.83**	**110**	P		**Pn**		**19 58 53.6**	**+1.2**
MXZ	**Matakaoa Point**	**8.89**	**195**	Pn		**Pn**		**20 00 25.0**	**+2.3**
MXZ				Sn		S		20 01 54.2	-9.1
MXZ	**Matakaoa Point**	**8.89**	**195**	S		**S**		20 01 58.8	-4.4
WMGZ	**Waiomatatini S**	**9.11**	**194**	S		**S**		**20 02 05.9**	**-2.5**
HAZ	**Te Kaha**	**9.20**	**197**	P		**Pn**		**20 00 27.6**	**+1.0**
HAZ				S		**S**		**20 02 06.7**	**-3.8**
PKGZ	**Pakihiroa**	**9.23**	**196**	P		**Pn**		**20 00 25.2**	**-1.9**
PKGZ				S		S		20 02 05.9	-5.4
PUZ	**Puketiti**	**9.39**	**194**	S		S		20 02 10.1	-4.9
RUGZ	**Raukumara Rang**	**9.43**	**197**	P		**Pn**		**20 00 28.8**	**-0.8**
RUGZ				S		S		20 02 09.6	-6.3
TWGZ	**Tauwhareparae**	**9.55**	**195**	S		**S**		**20 02 15.1**	**-3.7**
URZ	**Urewera**	**9.86**	**199**	P		**Pn**		**20 00 34.7**	**-0.2**
	4.0nm,0.3s,baz=244,slow=5.0,SNR=11								
URZ				S		**S**		**20 02 21.5**	**-4.2**
	27nm,0.3s,baz=274,slow=24,SNR=12								
URZ	**Urewera**	**9.86**	**199**	P		**Pn**		**20 00 35.1**	**+0.2**
URZ				S		S		20 02 20.5	-5.2
MUGZ	**Murupara**	**10.16**	**200**	P		**Pn**		**20 00 40.2**	**+1.5**
MUGZ				S		S		20 02 28.2	-4.5
RTZ	**Ruatahuna**	**10.22**	**199**	Pn		**Pn**		**20 00 38.6**	**-1.1**
NMHZ	**Naumai**	**10.72**	**199**	P		**Pn**		**20 00 45.5**	**-0.3**
NMHZ				S		S		20 02 41.7	-4.3
BKZ	**Black Stump Fm**	**10.88**	**200**	Pn		**Pn**		**20 00 47.7**	**0.0**
BKZ	**Black Stump Fm**	**10.88**	**200**	S		S		20 02 44.6	-4.9
KAHZ	**Kahuranaki**	**11.36**	**197**	P		**Pn**		**20 00 54.1**	**+0.4**
KAHZ				S		S		20 02 55.2	-5.5
MSVF	**Nonsavu**	**11.56**	**345**	P		**Pn**		**20 00 56.7**	**+0.1**
	43nm,0.7s,baz=155,slow=11,SNR=18								
MSVF	**Nonsavu**	**11.56**	**345**	P		**P**		**20 00 57.7**	**-2.5**
PXZ	**Pawanui**	**11.58**	**197**	P		**Pn**		**20 00 56.6**	**+0.1**
PNHZ	**Pukenui**	**11.65**	**199**	P		**Pn**		**20 00 56.9**	**-0.6**
PNHZ				S		S		20 02 59.4	-8.1
TSZ	**Takapari Road**	**11.86**	**200**	P		**Pn**		**20 00 59.1**	**-0.9**
PRHZ	**Porangahau**	**11.86**	**197**	P		**Pn**		**20 00 58.9**	**-1.1**
PRHZ				S		S		20 03 07.1	-5.2
DVHZ	**Dannevirke**	**12.02**	**199**	P		Pn		20 00 59.8	-2.2
DVHZ				S		S		20 03 06.6	-9.3
BFZ	**Birch Farm**	**12.35**	**198**	Pn		**Pn**		**20 01 04.3**	**-1.8**
BFZ	**Birch Farm**	**12.35**	**198**	P		**Pn**		**20 01 04.8**	**-1.3**
BFZ				S		S		20 03 13.6	-10
MRZ	**Mangatainoka R**	**12.52**	**200**	Pn		Pn		20 01 05.7	-2.5
MRZ	**Mangatainoka R**	**12.52**	**200**	P		**Pn**		**20 01 07.2**	**-1.0**
TCW	**Tory Channel**	**13.44**	**203**	Pn		Pn		20 01 17.4	-2.1
QRZ	**Quartz Range**	**13.78**	**209**	P		Pn		20 01 21.2	-2.4
DZM	**Mont Dzumac**	**14.97**	**294**	P		**P**		**20 01 39.1**	**+1.2**
	6.4nm,1.0s,baz=113,slow=22,SNR=1.4								
HNR	**Honiara**	**27.84**	**310**	P		**P**		**20 03 44.7**	**-0.3**
STKA	**Stephens Creek**	**34.13**	**255**	P		**P**		**20 04 43.0**	**+3.2**

ASAR	**Alice Springs**	**42.49**	**266**	P		**P**	**20 05 50.1**	**+0.7**
	0.4nm,0.4s,baz=101,slow=7.9,SNR=0.9							
ASAR				ScP		**ScP**	**20 11 03.1**	**-0.9**
	0.2nm,0.6s,baz=97,slow=4.1,SNR=1.9							
	0.4nm,0.4s							
WRA	**Warramunga Arr**	**43.35**	**271**	P		**P**	**20 05 56.9**	**+0.6**
	0.4nm,0.5s,baz=110,slow=8.5,SNR=1.1							
	0.4nm,0.5s							
FORT	**Forrest**	**45.74**	**254**	P		**P**	**20 06 15.7**	**+0.8**
FORT				IAmb		IAmb	20 06 32.9	
	comp=Z,12nm,1.1s							
VNDA	**Vanda**	**49.43**	**185**	P		**P**	**20 06 44.2**	**+1.6**
QSPA	**South Pole Qui**	**61.12**	**180**	P		**P**	**20 08 08.1**	**+2.1**
	comp=Z,8.9nm,0.6s,baz=7.7,slow=0.7,SNR=26							
	comp=Z,8.9nm,0.6s							
QSPA	**South Pole Qui**	**61.12**	**180**	P		**P**	**20 08 08.2**	**+2.1**
QSPA				IAmb		IAmb	20 08 09.2	
	comp=Z,10nm,0.7s							
BELA	**Belgrano 2**	**71.28**	**172**	P		**P**	**20 09 10.7**	**+0.7**
BELA				IAmb		IAmb	20 09 11.6	
	comp=Z,6.4nm,0.9s							
MAW	**Mawson**	**73.38**	**201**	P		**P**	**20 09 23.2**	**+0.8**
	comp=Z,7.9nm,0.8s,baz=340,slow=15,SNR=1.8							
	comp=Z,7.9nm,0.8s							
MAW	**Mawson**	**73.38**	**201**	P		**P**	**20 09 22.8**	**+0.3**
MAW				IAmb		IAmb	20 10 02.9	
	comp=Z,9.5nm,1.5s							
MJAR	**Matsushiro Arr**	**76.68**	**326**	P		**P**	**20 09 41.4**	**-0.3**
	comp=Z,2.3nm,0.8s,baz=149,slow=6.0,SNR=4.1							
	comp=Z,2.3nm,0.8s							
MJAR	**Matsushiro Arr**	**76.68**	**326**	P		**P**	**20 09 41.3**	**-0.4**
MJAR				IAmb		IAmb	20 09 41.7	
	comp=Z,6.0nm,1.1s							
TROLL	**Troll, Antarti**	**79.28**	**180**	⇓P		**P**	**20 09 57.2**	**+1.4**
SNAA	**Sanae**	**79.58**	**179**	P		**P**	**20 09 57.7**	**+0.4**
	comp=Z,5.3nm,0.8s,baz=300,slow=7.2,SNR=5.0							
	comp=Z,5.3nm,0.8s							
SNAA	**Sanae**	**79.58**	**179**	P		**P**	**20 09 57.8**	**+0.5**
SNAA				IAmb		IAmb	20 10 24.7	
	comp=Z,18nm,1.4s							
VNA3	**Neumayer Olymp**	**79.76**	**176**	⇓P		**P**	**20 09 58.6**	**+0.4**
	comp=Z,16nm,0.7s							
VNA2	**Neumayer--Watz**	**80.19**	**177**	⇑P		**P**	**20 10 01.6**	**+1.2**
	comp=Z,10.0nm,0.6s,baz=173,slow=5.5							
PLCA	**Paso Flores**	**83.99**	**133**	P		**P**	**20 10 20.7**	**-0.1**
	comp=Z,1.8nm,0.8s,baz=270,slow=1.0,SNR=3.6							
	comp=Z,1.8nm,0.8s							
PLCA	**Paso Flores**	**83.99**	**133**	P		**P**	**20 10 21.9**	**+1.1**
PLCA				IAmb		IAmb	20 10 38.0	
	comp=Z,5.1nm,1.3s							
PETK	**Petropavlovsk-**	**84.27**	**346**	P		**P**	**20 10 20.1**	**-1.4**
	comp=Z,2.4nm,0.6s,baz=115,slow=8.2,SNR=5.0							
	comp=Z,2.4nm,0.6s							
PETK	**Petropavlovsk-**	**84.27**	**346**	P		**P**	**20 10 20.6**	**-0.9**
NVAR	**Mina Array Bea**	**87.69**	**43**	P		**P**	**20 10 37.8**	**-1.1**
	comp=Z,2.1nm,0.7s,baz=221,slow=9.7,SNR=5.4							
	comp=Z,1.2nm,0.7s							
KURBB	**Kurchatov Arra**	**119.60**	**314**	PKP		**PKPdf**	**20 16 36.0**	**-1.9**
	comp=Z,0.3nm,0.6s,baz=120,slow=1.7,SNR=5.1							
BVAR	**Borovoye Array**	**124.89**	**316**	PKP		**PKPdf**	**20 16 45.0**	**-3.0**
	comp=Z,0.5nm,0.5s,baz=79,slow=1.4,SNR=4.1							
FINES	**FINESS Array B**	**143.57**	**340**	PKP		PKPab	20 17 19.0	-0.7
	comp=Z,1.8nm,0.5s,baz=58,slow=3.4,SNR=11							
NOA	**NORSAR Array B**	**147.25**	**351**	PKPbc		**PKPdf**	**20 17 28.0**	**-0.8**
	comp=Z,1.3nm,0.7s,baz=16,slow=3.0,SNR=4.2							
HFS	**Hagfors**	**147.72**	**348**	PKPbc		**PKPdf**	**20 17 30.6**	**+1.0**
	comp=Z,2.4nm,0.8s,baz=328,slow=2.2,SNR=5.5							
AKASG	**Malin Array Be**	**149.74**	**324**	PKPbc		**PKPbc**	**20 17 36.4**	**-1.7**
	comp=Z,0.6nm,0.3s,baz=57,slow=2.7,SNR=4.3							
TORD	**Torodi Ar. Bea**	**164.24**	**182**	PKPab		**PKPab**	**20 18 47.9**	**+0.4**
	comp=Z,2.6nm,0.8s,baz=196,slow=5.6,SNR=9.2							

*NEIC **11** 20:09:26.6±1.5, 56°.1S±0°.2×27°.6W±0°.1, h100km±8km, mb4.2/7, Error ellipse: s-maj=23.4km s-min=5.7km az=197.0*
*IDC **11** 20:09:30.3±8.3, 56°.08S×27°.59W, h136km±74km, mb3.7/5, mbtmp4.1/6, MS3.3/1, Error ellipse: s-maj=39.5km s-min=25.5km az=44.0*
ISC 11 20:09:26.4±0.9, **56°.0S**±0°.1×**27°.8W**±0°.1, **h100**km, **n19**, σ1**°19**/19, **mb4.1**/4, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.30**	**286**	Pn		**Pn**		**20 10 44.4**	**+1.4**
HOPE				Sn		**Sn**		**20 11 40.2**	**-2.7**
SNAA	**Sanae**	**18.88**	**156**	P		**P**		**20 13 38.1**	**-0.4**
	5.8nm,0.5s,baz=294,slow=12,SNR=16								
SNAA				LR		LR		20 20 15.0	
	comp=Z,95nm,18.6s,baz=194,slow=4								
SNAA	**Sanae**	**18.88**	**156**	P		**P**		**20 13 38.0**	**-0.6**
SNAA				IAmb		IAmb		20 13 39.8	
	comp=Z,18nm,1.4s								
PMSA	**Palmer Station**	**19.66**	**229**	P		**P**		**20 13 47.1**	**+0.2**
BELA	**Belgrano 2**	**22.07**	**184**	P		**P**		**20 14 11.8**	**-0.8**
PLCA	**Paso Flores**	**31.68**	**281**	P		**P**		**20 15 41.7**	**+1.5**
	comp=Z,1.0nm,0.7s,baz=16,slow=16,SNR=1.6								
	comp=Z,1.0nm,0.7s								
PLCA	**Paso Flores**	**31.68**	**281**	P		**P**		**20 15 41.4**	**+1.2**
PLCA				IAmb		IAmb		20 15 43.4	
	comp=Z,7.4nm,1.4s								
QSPA	**South Pole Qui**	**34.21**	**180**	P		**P**		**20 16 02.4**	**+0.4**
	comp=Z,1.0nm,0.5s,baz=170,slow=1.6,SNR=16								
	comp=Z,1.0nm,0.5s								
QSPA	**South Pole Qui**	**34.21**	**180**	P		**P**		**20 16 02.6**	**+0.5**
QSPA				IAmb		IAmb		20 16 06.5	
	comp=Z,4.1nm,1.4s								
MAW	**Mawson**	**40.35**	**144**	P		**P**		**20 16 54.1**	**+0.6**
	comp=Z,6.9nm,0.8s,baz=293,slow=17,SNR=1.4								
	comp=Z,6.9nm,0.8s								
MAW	**Mawson**	**40.35**	**144**	P		**P**		**20 16 53.8**	**+0.3**
MAW				IAmb		IAmb		20 17 31.1	
	comp=Z,4.6nm,1.3s								
TORD	**Torodi Ar. Bea**	**73.20**	**30**	P		**P**		**20 20 46.1**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=197,slow=4.5,SNR=2.3								
	comp=Z,0.6nm,0.6s								
TORD	**Torodi Ar. Bea**	**73.20**	**30**	IAmb		IAmb		20 20 50.0	
	comp=Z,1nm,0.6s								
ASAR	**Alice Springs**	**99.09**	**163**	P		**Pdif**		**20 22 53.9**	**-2.3**
	comp=Z,0.2nm,0.7s,baz=181,slow=3.7,SNR=1.5								
	comp=Z,0.2nm,0.7s								
ILAR	**Eielson Array**	**149.87**	**312**	PKPbc		**PKPbc**		**20 29 02.6**	**-0.6**
	comp=Z,1.1nm,0.7s,baz=131,slow=3.2,SNR=15								
ILAR	**Eielson Array**	**149.87**	**312**			**PKPbc**		**20 29 02.2**	**-1.0**
F25K	**Christian Rive**	**149.89**	**318**	PKPbc		**PKPbc**		**20 29 03.4**	**+0.1**
E25K	**Arctic Village**	**149.94**	**319**	PKPbc		**PKPbc**		**20 29 02.8**	**-0.6**
SONM	**Songino Array**	**151.05**	**87**	PKPbc		**PKPbc**		**20 29 05.8**	**-0.9**
	comp=Z,0.7nm,0.4s,baz=229,slow=3.6,SNR=14								

*MOS **11** 20:23:36.2±0.9, 45°.56N×26°.39E, h125km, mb4.3/13, Error ellipse: s-maj=4.5km s-min=3.6km az=104.5*
*NEIC **11** 20:23:36.9±2.2, 45°.50N±0°.06×26°.33E±0°.08, h118km±5km, mb4.3/24, Error ellipse: s-maj=9.5km s-min=7.4km az=223.0*
*SIGU **11** 20:23:37.0±0.2, 46°.N±1°.×2°.6E±°, h124km±1km, mb3.6/9, MD4.1/25*
*BUC **11** 20:23:37.6±0.1, 45°.52N×26°.33E, h118km±1km, ml4.4/92, Error ellipse: s-maj=1.1km s-min=0.9km az=13.0*
*MED_RC **11** 20:23:37.0±0.8, 45°.53N×26°.34E, h115km±9km, MW4.1/17, Moment Tensor Solution. Mantle waves: s17,c18; Duration: 1s0 Moment tensor: Scale 10^15 Nm; Mrr 2.00±.23; Mθθ -1.65±.39; Mφφ -0.35±.37; Mrθ 0.11±.34; Mrφ -0.25±.35; Mθφ -0.70±.22; Best double couple: M0 1.95000×10^15 NP1 φs 95.00000°, δ47.00000°, λ112.00000°. NP2 φs 244.00000°, δ47.00000°, λ68.00000°. Principal axes: T 2.2000, Plg74.0000°, Azm81.0000°; N -0.5100, Plg16.0000°, Azm259.0000°; P -1.7000, Plg0.0000°, Azm349.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*MCSM **11** 20:23:37.9±0.3, 46°.N±2°.×2°.6E±°, h111km±4km, mb4.3, mB4.6, MLv4.3, Mw(mB)3.8*
*PDG **11** 20:23:37.0±0.6, 45°.46N×26°.30E, h120km±1km, ML4.0/13, Error ellipse: s-maj=0.8km s-min=0.9km az=0.0*
*SOF **11** 20:23:37.1, 45°.55N±0°.03×26°.29E±0°.01, h120km±12km, MD4.3/13*
*IDC **11** 20:23:37.5±0.3, 45°.53N×26°.20E, h121km±2km, mb3.8/19, mbtmp4.1/28, MS3.0/2, Error ellipse: s-maj=11.8km s-min=8.0km az=162.0*
*CFUSG **11** 20:23:37.4, 45°.79N×26°.55E, h130km, Mb3.9/7, MD3.7/7, MSH3.6/7*

*NAO **11** 20:23:49.1, 46°.90N×25°.90E, h33km, MB3.5*
ISC 11 20:23:37.1±0.4, **45°.54N**±0°.03×**26°.31E**±0°.03, **h120**km±3km, **h120**km:**pP-P**, **n481**, **σ1°37**/603, **mb4.2**/38, **78C-116D**, **Romania**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NEHR	**Nehoiu**	**0.11**	**184**	⇑P		**Pn**		**20 23 54.8**	**+1.2**
NEHR				⇓S		**Sn**		**20 24 06.7**	**+0.8**
MLR	**Muntele Rosu**	**0.26**	**260**	P		**Pn**		**20 23 55.1**	**+1.1**
	11μm,0.8s,baz=213,slow=0.4,SNR=4889								
MLR				S		**Sn**		**20 24 08.2**	**+1.5**
	2μm,0.4s,baz=108,slow=17,SNR=10								
MLR	**Muntele Rosu**	**0.26**	**260**	⇑P		**Pn**		**20 23 55.3**	**+1.3**
MLR				⇓S		**Sn**		**20 24 07.6**	**+0.8**
MLR	**Muntele Rosu**	**0.26**				**Pn**		**20 23 54.4**	**+0.4**
MLR						Sn		**20 24 07.3**	**+0.6**
MLR	**Muntele Rosu**	**0.26**	**260**	P		**Pn**		**20 23 55.3**	**+1.3**
BISRR	**Bisoca**	**0.28**	**87**	⇓P		**Pn**		**20 23 54.9**	**+0.9**
BISRR				⇓S		**Sn**		**20 24 07.6**	**+0.8**
BISRR	**Bisoca**	**0.28**	**87**	P		**Pn**		**20 23 55.5**	**+1.5**
COVR	**Voineasa-Covas**	**0.32**	**347**	⇑P		**Pn**		**20 23 55.0**	**+0.9**
COVR				⇓S		**Sn**		**20 24 07.4**	**+0.4**
PLOR	**Plostina**	**0.40**	**37**	⇑P		**Pn**		**20 23 55.4**	**+0.9**
PLOR				⇓S		**Sn**		**20 24 08.0**	**+0.3**
PLOR	**Plostina**	**0.40**	**37**	P		**Pn**		**20 23 55.3**	**+0.9**
PLOR				S		**Sn**		**20 24 07.9**	**+0.3**
VRI	**Vrincioaia**	**0.44**	**42**	⇑P		**Pn**		**20 23 55.8**	**+1.1**
VRI				⇓S		**Sn**		**20 24 08.6**	**+0.5**
VRI	**Vrincioaia**	**0.44**	**42**	P		**Pn**		**20 23 55.7**	**+1.1**
VRI				S		**Sn**		**20 24 08.5**	**+0.5**
VRI	**Vrincioaia**	**0.44**	**42**	P		**Pn**		**20 23 55.8**	**+1.1**
ISR	**Istrita**	**0.45**	**158**	⇑P		**Pn**		**20 23 56.1**	**+1.3**
ISR				⇓S		**Sn**		**20 24 08.3**	**+0.1**
ISR	**Istrita**	**0.45**	**158**	P		**Pn**		**20 23 55.8**	**+1.0**
ISR				S		**Sn**		**20 24 08.2**	**+0.1**
ISR	**Istrita**	**0.45**	**158**	P		**Pn**		**20 23 56.1**	**+1.3**
ISR				S		**Sn**		**20 24 07.4**	**-0.7**
GRER		**0.49**	**108**	⇓S		**Sn**		**20 24 09.7**	**+1.2**
TURR	**Turia**	**0.56**	**339**	⇑P		**Pn**		**20 23 56.5**	**+1.1**
TURR				⇓S		**Sn**		**20 24 10.1**	**+0.8**
ODBI	**Odobesti**	**0.57**	**66**	⇑P		**Pn**		**20 24 10.2**	**+0.9**
OZUR		**0.67**	**327**	⇑P		**Pn**		**20 23 57.0**	**+0.8**
OZUR				⇓S		**Sn**		**20 24 11.2**	**+0.6**
PANC	**Panciu**	**0.68**	**60**	⇑S		**Pn**		**20 24 11.5**	**+0.8**
BOSR	**Bodos**	**0.70**	**320**	⇑P		**Pn**		**20 23 57.4**	**+0.9**
BOSR				⇑S		**Sn**		**20 24 11.9**	**+0.8**
COSR	**Cosmesti PH**	**0.77**	**65**	⇑P		**Pn**		**20 23 57.8**	**+0.9**
COSR				⇑S		**Sn**		**20 24 12.3**	**+0.3**
DOPR	**Dopca**	**0.77**	**304**	⇑P	

EFOR ⇓S Sn 20 24 40.0 -0.6
BURAR Bucovina Array 2.21 341 ⇑P Pn 20 24 15.5 +2.3
BURAR ⇑S Sn 20 24 43.3 +2.3
BURAR Bucovina Array 2.21 341 Pn 20 24 15.0 +1.8
BURAR Bucovina Array 2.21 341 P Pn 20 24 15.0 +1.8
BURAR S Sn 20 24 43.2 +2.3
CJR Cluj-Napoca 2.22 303 ⇓P Pn 20 24 14.4 +1.1
CJR Cluj-Napoca 2.22 303 P Pn 20 24 14.4 +1.1
BUR08 Bucovina Ar. S 2.24 341 Pn 20 24 15.4 +1.7
KIS Kishinev 2.27 49 ⇓P Pn 20 24 14.4 +0.5
KIS Kishinev 2.27 49 P Pn 20 24 14.4 +0.5
KIS Kishinev 2.27 49 P Pn 20 24 14.4 +0.5
PSN Preselentsi 2.30 145 i P Pn 20 24 15.2 +0.9
PSN Preselentsi 2.30 145 P Pn 20 24 15.2 +0.9
SRE Strehaia 2.36 249 ⇓P Pn 20 24 15.9 +0.8
SRE ⇓S Sn 20 24 44.4 +0.2
SRE Strehaia 2.36 249 P Pn 20 24 15.8 +0.8
MANR Mangalia 2.37 136 ⇓P Pn 20 24 15.6 +0.5
NEF NEVSHA 2.37 163 i P Pn 20 24 16.1 +0.9
NEF NEVSHA 2.37 163 P Pn 20 24 16.1 +0.9
TSMN Mangalia Port- 2.38 136 ⇑P Pn 20 24 15.8 +0.5
TSMN ⇑S Sn 20 24 44.1 -0.5
DEV Deva 2.41 280 ⇓P Pn 20 24 16.4 +0.7
DEV ⇓S Sn 20 24 45.9 +0.6
DEV Deva 2.41 280 P Pn 20 24 17.0 +1.4
TSSL Sulina 2.44 98 ⇑P Pn 20 24 16.6 +0.6
TSSL ⇑S Sn 20 24 46.4 +0.4
PLVB Pleven 2.46 210 ⇑P Pn 20 24 17.1 +0.7
GZR Gura Zlata 2.49 268 ⇓P Pn 20 24 17.5 +0.7
GZR ⇓S Sn 20 24 47.7 +0.5
GZR Gura Zlata 2.49 268 P Pn 20 24 17.4 +0.7
MARR Marisel-Cluj 2.49 298 ⇓P Pn 20 24 17.8 +1.0
MARR ⇑S Sn 20 24 48.4 +1.0
PRD Provadia 2.50 161 i P Pn 20 24 17.7 +0.8
PVL Pavlikeni 2.55 199 i P Pn 20 24 18.2 +0.8
PVL Pavlikeni 2.55 199 P Pn 20 24 18.2 +0.8
ROIA ROIAK 2.56 162 i P Pn 20 24 18.7 +1.1
AVR AVREN 2.61 157 i P Pn 20 24 19.2 +1.0
ELND Elena 2.62 187 ⇑P Pn 20 24 19.3 +0.9
PURM Purcari 2.68 67 ⇓P Pn 20 24 19.4 +0.4
PURM ⇑S Sn 20 24 50.8 -0.6
PURM Purcari 2.68 67 P Pn 20 24 19.4 +0.4
DRBR Darabani 2.68 4 ⇓P Pn 20 24 20.0 +0.9
RMGR Halanga-Turnu 2.70 252 ⇓P Pn 20 24 20.0 +0.6
PUNG Punghina 2.71 244 ⇓P Pn 20 24 19.5 0.0
VALD Valchedram 2.76 229 i P Pn 20 24 20.8 +0.7
CHRU Chernivtsi 2.78 355 ⇑i P Pn 20 24 21.0 +0.7
CHRU pmax pmax 20 24 21.7
CHRU smax smax 20 24 54.7
DRGR 2.80 298 ⇓P Pn 20 24 21.4 +0.7
DRGR 2.80 298 P Pn 20 24 21.4 +0.7
DJES Djerdap 2.82 253 ⇓P Pn 20 24 20.6 -0.3
HERR Herculane 2.83 258 ⇓P Pn 20 24 21.2 +0.2
MESR Meseseni 2.83 306 ⇓P Pn 20 24 21.9 +0.8
MPEP Malo Peshtene 2.85 221 i P Pn 20 24 22.2 +0.8
BMR Baia Mare 2.89 319 ⇓P Pn 20 24 22.8 +1.0
BMR Baia Mare 2.89 319 P Pn 20 24 22.8 +1.0
RAKU Rahkiv 2.89 330 ⇓i P Pn 20 24 22.8 +0.9
RAKU pmax pmax 20 24 23.8
RAKU eS Sn 20 24 56.6 +0.1
RAKU smax smax 20 24 59.2
KSV Kosov 2.91 343 ⇓i P Pn 20 24 23.6 +1.5
KSV Kosov 2.91 343 P Pn 20 24 23.8 +1.7
NSLU Nyzhne Selyshc 2.95 335 eP Pn 20 24 28.1 +5.5
SORM Soroca 2.96 28 ⇓P Pn 20 24 22.6 -0.1
SORM Soroca 2.96 28 P Pn 20 24 22.5 -0.1
SORM Soroca 2.96 28 P Pn 20 24 22.6 -0.1
KMPD K-Podol'skiy 3.03 2 ⇓i P Pn 20 24 23.8 +0.1
KMPD eS Sn 20 24 58.6 -1.0
KMPD K-Podol'skiy 3.03 2 P Pn 20 24 23.5 -0.2
KMPD P 20 24 24.0
JMB Yambol 3.05 177 i P Pn 20 24 24.8 +0.8
NDNU Novodnistrovsk 3.15 13 ⇑i P Pn 20 24 25.6 +0.4
NDNU pmax pmax 20 24 25.7
NDNU eS Sn 20 25 00.6 -1.8
NDNU smax smax 20 25 01.6
BZS Buzias 3.29 273 ⇓P Pn 20 24 27.5 +0.4
BZS Buzias 3.29 273 P Pn 20 24 27.5 +0.4
BAL3X Bal3x, Balta 3.30 42 P Pn 20 24 26.5 -0.7
MDVR Moldovita 3.34 259 ⇓P Pn 20 24 28.0 +0.2
PGB Panagyurishte 3.39 208 eP Pn 20 24 29.6 +1.1
NE56 Odesa 3.39 69 P Pn 20 24 28.3 -0.1
STNU Starunia 3.41 339 eP Pn 20 24 30.2 +1.6
STNU Starunia 3.41 339 P Pn 20 24 30.6 +2.0
KORU Korolevo 3.41 321 eP Pn 20 24 28.7 +0.1
TRSU Trosnyk 3.44 319 eP Pn 20 24 30.7 +1.6
BLSH Balsha 3.45 220 i P Pn 20 24 30.4 +1.1
BORR Bors 3.50 298 ⇑P Pn 20 24 30.8 +1.0
DIM Dimitrovgrad 3.53 189 P Pn 20 24 31.1 +0.8
DIM Dimitrovgrad 3.53 189 eP Pn 20 24 30.9 +0.6
MEZ Mezhgor'ye 3.54 328 ⇓i P Pn 20 24 32.1 +1.7
MEZ Mezhgor'ye 3.54 328 P Pn 20 24 32.4 +2.0
LTVH Ltavrtes, Hu 3.56 303 ⇓P Pn 20 24 31.2 +0.5
PLD Plovdiv 3.57 199 P Pn 20 24 31.6 +0.7
PLD Plovdiv 3.57 199 eP Pn 20 24 31.8 +1.0
BRIU Brid 3.59 322 eP Pn 20 24 31.5 +0.4
BRIU Brid 3.59 322 P Pn 20 24 32.2 +1.1
BANR Banloc 3.64 269 ⇑P Pn 20 24 32.3 +0.6
VTS Vitosha 3.66 218 i P Pn 20 24 33.2 +1.0
VTS Vitosha 3.66 218 P Pn 20 24 32.5 +0.3
HORU Horodok 3.68 1 P Pn 20 24 32.9 +0.7
HORU Horodok 3.68 1 ⇓i P Pn 20 24 33.0 +0.7
HORU pmax pmax 20 24 33.4
HORU eS Sn 20 25 16.5 +1.5
HORU smax smax 20 25 37.6
HORU Horodok 3.68 1 P Pn 20 24 32.9 +0.7
BERU Beregovo 3.69 318 eP Pn 20 24 32.6 +0.3
BERU Beregovo 3.69 318 P Pn 20 24 33.6 +1.3
PLNA Plana 3.70 215 i P Pn 20 24 33.9 +1.2
MUKU Mukachevo 3.83 321 ⇓i P Pn 20 24 35.0 +0.8
MUKU Mukachevo 3.83 321 P Pn 20 24 35.6 +1.4
MORS Morshin 3.96 336 P Pn 20 24 38.2 +2.3
MORS Morshin 3.96 336 eP Pn 20 24 37.4 +1.5
MORS Morshin 3.96 336 P Pn 20 24 38.2 +2.3
RZN Rozhen 4.00 197 P Pn 20 24 37.5 +0.7
RZN Rozhen 4.00 197 i P Pn 20 24 37.8 +1.0
HOLU Holmets 4.02 320 ⇓i P Pn 20 24 37.0 +0.3
HOLU Holmets 4.02 320 P Pn 20 24 37.8 +1.1
UZH Uzhgorod 4.14 320 eP Pn 20 24 39.2 +0.9
SHIU Shidnytsya 4.20 333 eP Pn 20 24 41.0 +1.8
SHIU eS Sn 20 25 31.3 +3.9
STZU Stuzhytsa 4.29 326 ⇓i P Pn 20 24 42.2 +1.8
CTYL Yalikoy Yolu 4.31 160 P Pn 20 24 41.0 +0.3
KKB Krupnik 4.35 213 i P Pn 20 24 42.4 +1.1
TARU Tarkhankut 4.38 90 ⇑i P Pn 20 24 42.0 +0.4
TARU pmax pmax 20 24 42.4
comp=Z,138nm,0.2s
TARU eS Sn 20 25 29.9 -1.9
TARU smax smax 20 25 35.3
comp=N,19nm,0.2s
TARU smax smax 20 25 35.3
comp=E,69nm,0.3s
MMB Musomishta 4.40 206 P Pn 20 24 42.8 +0.9
MMB Musomishta 4.40 206 i P Pn 20 24 42.7 +0.8
RDO Rodhopi 4.42 188 Pn 20 24 42.5 +0.2
RDO Rodhopi 4.42 188 P Pn 20 24 42.7 +0.5
LUBAR Lubar, Ukraine 4.50 12 P Pn 20 24 43.6 +0.5
NVR Nevrokopi 4.55 204 P Pn 20 24 44.9 +1.0
LVV L'vov 4.55 341 P Pn 20 24 45.6 +1.7
LVV L'vov 4.55 341 P Pn 20 24 45.6 +1.7
FRGS Fruska Gora 4.59 268 ePn Pn 20 24 44.0 -0.5
ALN Alexandroupoli 4.64 182 Pn 20 24 45.5 +0.4
ALN Alexandroupoli 4.64 182 P Pn 20 24 45.5 +0.4
ALN Alexandroupoli 4.64 182 P Pn 20 24 45.5 +0.4
KLYT Kilyos 4.72 154 P Pn 20 24 45.9 -0.3
KWP Kalwaria Pacla 4.77 331 P Pn 20 24 49.6 +2.8
ENEZ Enez 4.80 181 P Pn 20 24 47.5 +0.3
SRS Serrai 4.84 205 P Pn 20 24 48.6 +0.8
CAVK Edirne/Enez-Ca 4.84 181 ⇓P Pn 20 24 48.7 +0.9
DNZ2 Donuzlav2 4.86 89 eP Pn 20 24 47.9 -0.2
DNZ2 pmax pmax 20 24 48.3
comp=Z,163nm,0.3s
DNZ2 eS Sn 20 25 40.6 -2.7
DNZ2 smax smax 20 25 42.6
comp=N,145nm,0.4s
DNZ2 smax smax 20 25 42.7
comp=E,96nm,0.3s
KECS Kecovo 4.95 309 eP Pn 20 24 50.3 +1.0
KECS Kecovo 4.95 309 eP Pn 20 24 50.3 +1.0
SILT Sile 5.01 150 ⇓P Pn 20 24 50.1 0.0

PSZ Piszkesteto 5.01 301 ⇑P Pn 20 24 49.7 -0.5
PSZ Piszkesteto 5.01 301 Pn 20 24 49.7 -0.5
PSZ Piszkesteto 5.01 301 P Pn 20 24 49.7 -0.5
VAY Valandovo 5.01 214 i Pn Pn 20 24 51.1 +1.0
SJES Sjenica 5.08 246 ePn Pn 20 24 51.2 +0.1
SMTH Samothraki Isl 5.09 187 P Pn 20 24 51.1 -0.1
SOH Sokhos 5.18 206 P Pn 20 24 53.3 +0.8
SOH Sokhos 5.18 206 P Pn 20 24 53.3 +0.8
STHS Stebnicka Huta 5.18 320 eP Pn 20 24 53.0 +0.6
STHS Stebnicka Huta 5.18 320 eP Pn 20 24 53.0 +0.6
BBLS Lazi&#263i 5.20 254 ePn Pn 20 24 52.9 +0.3
SEV Sevastopol' 5.31 98 ⇓i P Pn 20 24 53.9 -0.2
SEV eS Sn 20 25 53.5 -0.6
SEV Sevastopol' 5.31 98 ⇓i P Pn 20 24 53.8 -0.3
SEV pmax pmax 20 24 55.2
comp=Z,62nm,0.3s
SEV eS Sn 20 25 53.5 -0.6
SEV smax smax 20 25 55.2
comp=N,18nm,0.3s
SEV smax smax 20 25 55.2
comp=E,49nm,0.4s
SEV Sevastopol' 5.31 98 ⇓i P Pn 20 24 53.8 -0.3
SEV pmax pmax 20 24 55.2
SEV eS Sn 20 25 53.5 -0.6
SEV smax smax 20 25 55.2
RUDO Rudo 5.31 251 ePn Pn 20 24 51.5 -2.7
IVA Berane 5.32 242 ⇑i Pn Pn 20 24 55.4 +1.0
IVA i Sn Sn 20 25 53.7 -0.9
BAND Balkesir-Ban 5.34 165 ⇓P Pn 20 24 54.2 -0.3
MORH Mrgy, Hungar 5.39 280 ⇑P Pn 20 24 56.1 +0.8
MORH Mrgy, Hungar 5.39 280 ePn Pn 20 24 56.0 +0.8
PLE Pljevlja 5.42 248 ⇑i Pn Pn 20 24 56.3 +0.6
PLE i Sn Sn 20 25 53.0 -4.0
PVY Plav 5.44 240 ⇓i Pn Pn 20 24 57.0 +1.0
PVY i Sn Sn 20 25 56.0 -1.4
HORT Hortiatis 5.46 207 P Pn 20 24 56.8 +0.4
MI28 Mi28,Pidlybu 5.47 9 P Pn 20 24 55.7 -0.6
KIEV Kiev 5.52 20 ⇓P Pn 20 24 56.5 -0.3
KIEV Kiev 5.52 20 Pn 20 24 56.2 -0.5
KIEV Kiev 5.52 20 P Pn 20 24 56.3 -0.5
AKASG Malin Array Be 5.53 20 P Pn 20 24 56.2 -0.8
comp=E,8.2nm,0.4s,baz=207,slow=11,SNR=47
AKASG S Sn 20 25 56.3 -3.0
comp=E,3.4nm,0.2s,baz=195,slow=22,SNR=5.8
AKASG LR LR 20 27 29.1
comp=E,67nm,18.6s,baz=258,slow=42
AKBB Malin Array Si 5.53 20 Pn 20 24 56.2 -0.8
AKBB Malin Array Si 5.53 20 P Pn 20 24 56.2 -0.8
AKBB Malin Array Si 5.53 20 P Pn 20 24 56.4 -0.6
SIM Simferopol' 5.55 93 eP Pn 20 24 56.7 -0.6
SIM eS Sn 20 25 56.7 -3.1
SIM pmax pmax
comp=Z,34nm,0.9s
SIM smax smax
comp=E,77nm,1.1s
SIM smax smax
comp=N,83nm,1.0s
SIM Simferopol' 5.55 93 eP Pn 20 24 56.7 -0.6
SIM pmax pmax 20 24 57.9
comp=Z,93nm,0.3s
SIM eS Sn 20 25 58.1 -1.7
SIM smax smax 20 26 00.0
comp=N,14nm,0.3s
SIM smax smax 20 26 00.0
comp=E,31nm,0.4s
SIM Simferopol' 5.55 93 eP Pn 20 24 56.7 -0.6
SIM pmax pmax 20 24 57.9
SIM eS Sn 20 25 58.1 -1.7
SIM smax smax 20 26 00.0
KOME Kolasin 5.57 244 ⇑i Pn Pn 20 24 58.8 +1.1
KOME i Sn Sn 20 25 59.2 -1.4
YAL Yalta 5.66 98 ⇑i P Pn 20 24 58.6 -0.2
YAL eS Sn 20 26 02.3 -0.3
YAL Yalta 5.66 98 ⇑i P Pn 20 24 58.6 -0.2
YAL pmax pmax 20 25 01.7
comp=Z,29nm,0.3s
YAL eS Sn 20 26 02.3 -0.3
YAL smax smax 20 26 02.9
comp=N,7.0nm,0.3s
YAL smax smax 20 26 02.9
comp=E,22nm,0.4s
YAL Yalta 5.66 98 ⇑i P Pn 20 24 58.6 -0.2
YAL pmax pmax 20 25 01.7
YAL eS Sn 20 26 02.3 -0.3
YAL smax smax 20 26 02.9
EZN Ezine 5.71 180 P Pn 20 25 00.3 +0.8
EZN Ezine 5.71 180 P Pn 20 25 00.3 +0.8
comp=E,0.2nmcomp=E,42nm,0.4s
ALU Alushta 5.79 96 ⇓i P Pn 20 24 58.6 -2.0
ALU eS Sn 20 26 02.9 -2.9
ALU Alushta 5.79 96 ⇓i P Pn 20 24 58.6 -2.0
ALU pmax pmax 20 24 59.6
comp=Z,25nm,0.3s
ALU eS Sn 20 26 02.9 -2.9
ALU smax smax 20 26 08.7
comp=N,151nm,0.4s
ALU smax smax 20 26 08.7
comp=E,11nm,0.2s
ALU Alushta 5.79 96 ⇓i P Pn 20 24 58.6 -2.0
ALU pmax pmax 20 24 59.6
ALU eS Sn 20 26 02.9 -2.9
ALU smax smax 20 26 08.7
UPM Unac-Piva 5.79 249 ⇑i Pn Pn 20 25 01.7 +0.9
UPM i Sn Sn 20 26 05.9 -0.2
UPM Unac-Piva 5.79 249 ePn Pn 20 25 01.3 +0.5
RNPP2 Kostyukhnivka 5.80 357 P Pn 20 25 01.6 +0.9
LANS Liptovska Anna 5.89 310 eP Pn 20 25 03.5 +1.6
LANS Liptovska Anna 5.89 310 eP Pn 20 25 03.5 +1.6
SRO Srobarova 5.95 295 eP Pn 20 25 04.1 +1.4
SRO Srobarova 5.95 295 eP Pn 20 25 04.1 +1.4
PDG Podgorica 5.96 241 Pn 20 25 02.3 -0.5
PDG Podgorica 5.96 241 ⇓i Pn Pn 20 25 03.8 +1.0
PDG i Sn Sn 20 26 08.5 -1.3
PDG Podgorica 5.96 241 ePn Pn 20 25 01.9 -0.9
NKME Niksic 5.97 245 ⇓i Pn Pn 20 25 04.5 +1.4
NKME i Sn Sn 20 26 08.3 -1.9
BALB Balikesir 6.00 168 Pn 20 25 02.0 -1.5
KLINJ Klinje 6.02 250 ePn Pn 20 25 03.9 +0.1
CIDE Kastamonu/Cide 6.04 125 ⇓P Pn 20 25 02.9 -1.0
CEME Cevo 6.11 243 ⇑i Pn Pn 20 25 06.2 +1.3
CEME i Sn Sn 20 26 11.9 -1.6
DRME Dracevica, Mon 6.14 239 ⇑i Pn Pn 20 25 07.7 +2.4
DRME i Sn Sn 20 26 12.8 -1.4
DRME Dracevica, Mon 6.14 239 ePn Pn 20 25 07.7 +2.4
BRY Bratogost 6.17 247 ⇑i Pn Pn 20 25 07.3 +1.4
BRY i Sn Sn 20 26 13.6 -1.6
BRY Bratogost 6.17 247 ePn Pn 20 25 06.3 +0.4
SUDU Sudak 6.18 93 ⇓i P Pn 20 25 04.1 -1.7
SUDU eS Sn 20 26 12.2 -2.8
SUDU Sudak 6.18 93 ⇓i P Pn 20 25 04.1 -1.7
SUDU pmax pmax 20 25 06.3
comp=Z,54nm,0.4s
SUDU eS Sn 20 26 12.2 -2.8
SUDU smax smax 20 26 19.0
comp=N,76nm,0.5s
SUDU smax smax 20 26 19.0
comp=E,24nm,0.3s
SUDU Sudak 6.18 93 ⇓i P Pn 20 25 04.1 -1.7
SUDU pmax pmax 20 25 06.3
SUDU eS Sn 20 26 12.2 -2.8
SUDU smax smax 20 26 19.0
MDUB Mudurnu 6.20 143 Pn 20 25 04.0 -2.2
ULC Ulcinj 6.24 238 ⇓i Pn Pn 20 25 08.9 +2.2
ULC i Sn Sn 20 26 15.0 -1.6
BUM Brajici-Budva 6.25 241 ⇓i Pn Pn 20 25 09.6 +2.7
BUM i Sn Sn 20 26 15.2 -1.9
MPLH Magyarpolny 6.29 288 P Pn 20 25 09.0 +1.8
comp=E,0.2nmcomp=E,36nm,0.8s
PRK Paraskevi 6.29 180 P Pn 20 25 08.5 +1.2
SIGR SIGRI 6.33 183 P Pn 20 25 08.1 +0.3
TREB Trebinje 6.38 247 ePn Pn 20 25 10.5 +1.9
OJC Ojcow 6.41 319 Pn Pn 20 25 06.3 -2.5
OJC Ojcow 6.41 319 P Pn 20 25 06.4 -2.5
OJC Ojcow 6.41 319 P Pn 20 25 09.6 +0.7
BORA Eskisehir 6.42 150 P Pn 20 25 07.5 -1.7
HCY Herceg Novi 6.42 244 ⇑i Pn Pn 20 25 11.7 +2.5
HCY i Sn Sn 20 26 19.7 -1.4
HCY Herceg Novi 6.42 244 ePn Pn 20 25 12.3 +3.1
FEO Feodosiya 6.43 91 eP Pn 20 25 07.0 -2.2
FEO Feodosiya 6.43 91 eP Pn 20 25 07.0 -2.2
FEO pmax pmax 20 25 09.4
comp=Z,33nm,0.3s

FEO Feodosiya 6.43 91 eP Pn 20 25 07.0 -2.2
BLY Banja Luka 6.50 266 ePn Pn 20 25 10.1 -0.1
TYRN Tyrnavos 6.55 209 P Pn 20 25 11.5 +0.6
AOS Alonnisos 6.61 197 P Pn 20 25 11.2 -0.5
BZK Bozkurt 6.62 120 Pn 20 25 09.7 -2.1
NEO Neokhori 6.63 201 P Pn 20 25 11.5 -0.5
JAVC Velka Javorina 6.76 303 eP Pn 20 25 15.5 +1.8
MODS Modra-Piesok 6.80 298 eP Pn 20 25 14.4 +0.2
MODS Modra-Piesok 6.80 298 eP Pn 20 25 14.4 +0.2
MAUC Maruska 6.91 307 eP Pn 20 25 16.7 +1.0
ILGA Ilgaz 7.02 127 Pn Pn 20 25 15.4 -2.0
KOGS Kog 7.07 281 i P Pn 20 25 19.7 +1.9
KYMI Kymi, Euboea I 7.09 194 P Pn 20 25 17.6 -0.6
RONA Rosalia, Austr 7.22 291 i Pn Pn 20 25 20.8 +0.8
comp=Z,3.8nm,0.6s,SNR=4.2
RONA eSn Sn 20 26 41.4 +0.9
comp=Z,10.0nm,0.6s
MANT Manisa 7.24 166 Pn 20 25 18.6 -1.8
STEB Steborice 7.24 310 eP Pn 20 25 20.3 +0.2
MORC Moravsky Berou 7.28 309 Pn 20 25 20.6 -0.2
MORC Moravsky Berou 7.28 309 P Pn 20 25 20.6 -0.2
MORC Moravsky Berou 7.28 309 eP Pn 20 25 20.5 -0.2
CONA Conrad Observa 7.56 292 i Pn Pn 20 25 26.6 +1.9
comp=Z,9.6nm,1.3s
CONA eSn Sn 20 26 51.1 +2.3
comp=Z,5.7nm,0.7s
VRAC Vranov 7.59 303 P Pn 20 25 25.7 +0.8
comp=Z,12nm,1.0s,baz=117,slow=12,SNR=9.2
VRAC Vranov 7.59 303 eP Pn 20 25 26.0 +1.1
KRUC Moravsky 7.60 301 eP Pn 20 25 25.8 +0.8
ARSA Arzberg 7.65 287 Pn 20 25 25.3 -0.4
ARSA Arzberg 7.65 287 i Pn Pn 20 25 28.3 +2.6
comp=Z,7.4nm,1.1s
ARSA eSn Sn 20 26 51.1 +0.3
comp=Z,1.1nm,0.4s
KRLC Kraliky 7.86 309 eP Pn 20 25 28.2 -0.3
KRLC Kraliky 7.86 309 eP Pn 20 25 28.2 -0.3
PERS Pernice 7.86 282 i P Pn 20 25 30.4 +1.8
ANN Anapa 7.90 91 eP Pn 20 25 26.5 -2.5
ANN pmax pmax
comp=Z,76nm,1.0s
BR106 Keskin Array S 7.91 135 P Pn 20 25 29.3 -0.1
comp=Z,0.0nmcomp=Z,118nmcomp=Z,73nmcomp=Z,4.8nm,0.9s
SOKA Soboth 7.92 282 ePn Pn 20 25 31.1 +1.7
comp=Z,8.4nm,0.7s,SNR=13
SOKA eSn Sn 20 26 56.7 -0.7
comp=Z,1.5nm,0.6s
BR105 Keskin Array S 7.92 135 P Pn 20 25 29.5 -0.1
comp=Z,0.0nmcomp=Z,118nmcomp=Z,7.4nm,0.5s
BR131 Keskin Array S 7.93 134 Pn 20 25 27.2 -2.4
BR131 Keskin Array S 7.93 134 i P Pn 20 25 29.1 -0.6
BRTR Keskin Array B 7.93 134 P Pn 20 25 29.2 -0.4
comp=Z,3.9nm,0.6s,baz=320,slow=11,SNR=34
BRTR Keskin Array B 7.93 134 Pn 20 25 28.3 -1.4
OBKA Obir 8.24 281 i Pn Pn 20 25 35.5 +1.7
comp=Z,9.7nm,1.0s,SNR=4.9
OBKA eSn Sn 20 27 06.5 +1.3
comp=Z,3.2nm,0.7s
LJU Ljubljana 8.25 278 i P Pn 20 25 36.5 +2.7
DPC Dobruska-Polom 8.25 309 eP Pn 20 25 34.9 +1.1
DPC Dobruska-Polom 8.25 309 eP Pn 20 25 34.9 +1.1
KSP Ksiaz 8.54 312 P Pn 20 25 38.4 +0.8
MOA Molln 8.60 290 i Pn Pn 20 25 40.7 +2.3
comp=Z,4.4nm,1.2s
TRI Trieste 8.79 276 Pn 20 25 42.7 +1.5
TRI Trieste 8.79 276 P Pn 20 25 42.7 +1.5
CKRC Cesky Krumlov 8.81 296 eP Pn 20 25 42.9 +1.6
CKRC Cesky Krumlov 8.81 296 eP Pn 20 25 42.9 +1.6
MYKA Terra Mystica 8.87 282 i Pn Pn 20 25 44.6 +2.3
comp=Z,7.0nm,1.0s
BIOA Bad Ischl, Aus 8.98 288 i Pn Pn 20 25 46.8 +3.1
comp=Z,7.2nm,1.2s
MNK Minsk 9.03 6 i P Pn 20 25 42.7 -1.6
comp=E,13nm,0.7s
MNK i P Pn 20 25 42.7 -1.6
comp=N,8.0nm,0.7s
MNK i P Pn 20 25 42.7 -1.6
comp=Z,9.0nm,0.7s,baz=186
MNK i sP 20 26 09.8
MNK i S Sn 20 27 21.1 -3.0
MNK Minsk 9.03 6 i P Pn 20 25 42.7 -1.6
MNK i S Sn 20 27 21.1 -3.0
MNK pmax pmax
comp=Z,9.0nm,0.7s
MNK pmax pmax
comp=E,13nm,0.7s
MNK pmax pmax
comp=N,8.0nm,0.7s
ZVC Zvikov 9.08 300 eP Pn 20 25 46.7 +1.7
PRU Pruhonice 9.09 304 eP Pn 20 25 46.5 +1.4
PRU Pruhonice 9.09 304 eP Pn 20 25 46.5 +1.4
KBA Koelnbreinsper 9.11 284 ePn Pn 20 25 48.1 +2.6
comp=N,22nm,1.0s,SNR=18
GERES GERESS Array B 9.20 296 P Pn 20 25 47.5 +0.8
comp=N,2.4nm,0.6s,baz=117,slow=11,SNR=18
GERES S Sn 20 27 27.0 -1.4
comp=N,0.5nm,0.6s,baz=111,slow=7.3,SNR=5.8
GERES GERESS Array B 9.20 296 Pn 20 25 47.1 +0.5
KHC Kasperske Hory 9.36 297 eP Pn 20 25 51.0 +2.2
KHC Kasperske Hory 9.36 297 eP Pn 20 25 51.0 +2.2
NACGM Naroch 9.38 2 eP Pn 20 25 48.1 -0.9
comp=Z,22nm,0.8s,baz=182
CUC Castrocucco 9.49 238 Pn 20 25 49.5 -1.2
STAL STALIGIAL 9.51 279 Pn 20 25 49.5 -1.3
LESA Schwarzleotal 9.59 286 i Pn Pn 20 25 55.6 +3.6
comp=Z,6.1nm,0.8s,SNR=4.1
INTR Introdacqua 9.64 253 Pn 20 25 50.5 -2.1
ABTA Abfaltersbach 9.65 282 i Pn Pn 20 25 54.9 +2.1
comp=Z,6.3nm,1.3s
CAMP Campotosto 9.76 257 Pn 20 25 54.2 -0.1
AQU L'Aquila 9.84 256 P Pn 20 25 56.2 +0.9
ERBR Yeremizino-Bor 9.94 84 eP Pn 20 25 54.8 -1.8
ERBR eS Sn 20 27 44.9 -1.3
ERBR pmax pmax
comp=Z,11nm,0.6s
PABE Paberze 10.09 352 eP Pn 20 25 56.6 -2.0
MURB Monte Urbino 10.12 262 Pn 20 25 58.9 -0.3
VORD Divnogorie 10.22 53 eP Pn 20 25 58.5 -1.8
VORD eS Sn 20 27 45.3 -7.5
VORD pmax pmax
comp=Z,20nm,0.4s
VSR Storozhevoye 10.27 52 eP Pn 20 25 59.7 -1.2
VSR eS Sn 20 27 48.4 -5.6
VSR pmax pmax
comp=Z,20nm,0.4s
WTTA Wattenberg 10.28 285 i Pn Pn 20 26 03.8 +2.4
comp=Z,7.4nm,1.2s
CESX Cesi 10.30 258 Pn 20 26 01.5 0.0
WATA Walderalm 10.33 285 i Pn Pn 20 26 05.2 +3.2
comp=Z,11nm,1.3s
VORR Voronezh 10.51 50 eP Pn 20 26 04.0 -0.3
VORR pmax pmax
comp=Z,20nm,0.3s
CLL Collm 10.55 308 eP Pn 20 26 11.0 +6.2
CLL Collm 10.55 308 ePx Px 20 26 11.0
SQTA Sankt Quirin 10.57 285 i Pn Pn 20 26 08.0 +2.8
comp=Z,8.1nm,1.4s
CEL Celeste 10.63 230 Pn Pn 20 26 03.5 -2.5
MOTA Moosalm 10.65 285 i Pn Pn 20 26 08.2 +1.9
comp=Z,6.4nm,1.2s
LPSR Galich'ya Gora 10.88 45 eP Pn 20 26 15.0 +5.9
LPSR eS Sn 20 28 02.1 -6.7
LPSR pmax pmax
comp=Z,10.0nm,0.6s
ARPR Arapgir-MALATY 10.98 122 Pn Pn 20 26 08.3 -2.5
DAVOX Davos/Dischmat 11.46 282 P Pn 20 26 17.5 +0.2
comp=Z,1.0nm,0.9s,baz=58,slow=12,SNR=3.7
DAVOX LR LR 20 31 22.4
comp=Z,119nm,19.2s,baz=242,slow=41
OBN Obninsk 11.60 31 ceP Pn 20 26 16.1 -2.6
OBN eS Sn 20 28 15.2 -11
OBN pmax pmax
comp=Z,19nm,0.5s
VRH Novokhopyorsk 11.71 56 eP Pn 20 26 17.5 -2.7
VRH eS Sn 20 28 18.0 -11
VRH pmax pmax
comp=Z,86nm,0.6s
VRH smax smax
comp=E,28nm,0.6s
KIV Kislovodsk 11.76 92 eP Pn 20 26 18.6 -2.4
KIV pmax pmax
comp=Z,4.0nm,1.1s
SHA1 Shidzhatmaz 11.79 93 i P Pn 20 26 20.1 -1.5
KBZ Khabaz 11.96 93 P Pn 20 26 24.1 +0.5

comp=Z,0.5nm,0.2s,baz=331,slow=10,SNR=5.2
KBZ Khabaz 11.96 93 i P Pn 20 26 23.4 -0.2
MOS Moscow 12.47 31 eP Pn 20 26 17.3 -13
VSU Vasula 12.95 1 eP Pn 20 26 32.5 -3.9
ARBE Arbavere 13.93 359 eP Pn 20 26 46.3 -2.7
MEF Metsahovi 14.75 356 eP Pn 20 26 56.4 -3.0
BELG Belogornoye 15.56 56 P Pn 20 27 09.0 -0.6
comp=Z,55nm,0.7s,baz=324,slow=1.8,SNR=12
BELG Belogornoye 15.56 56 i P Pn 20 27 08.0 -1.6
RAF Rauma 15.74 352 eP Pn 20 27 11.7 -0.1
FINES FINESS Array B 15.94 360 P Pn 20 27 10.2 -4.0
comp=Z,2.7nm,0.5s,baz=168,slow=14,SNR=12
FINES FINESS Array B 15.94 360 P Pn 20 27 11.7 -2.5
FINES FINESS Array B 15.94 360 P Pn 20 27 11.7 -2.5
AKT Akhty 16.05 97 eP Pn 20 27 15.3 -0.6
AKT pmax pmax
comp=Z,26nm,1.6s
KEST Kesra 16.15 239 P P 20 27 18.0 0.0
comp=Z,3.1nm,0.7s,baz=53,slow=6.2,SNR=4.7
KEST Kesra 16.15 239 P P 20 27 17.9 -0.2
HFS Hagfors 16.44 337 P Pn 20 27 20.2 -0.2
comp=Z,3.5nm,0.6s,baz=145,slow=14,SNR=11
KEF Keuruu 16.69 358 eP P 20 27 23.8 +0.1
KLMR Klimovskoe 17.21 22 eP P 20 27 27.4 -2.0
KLMR pmax pmax
comp=Z,19nm,1.0s
SUF Sumiainen 17.22 360 eP Pn 20 27 30.6 +0.8
JOF Joensuu 17.65 8 eP Pn 20 27 35.2 +0.1
VAF Ylistaro 17.67 355 eP P 20 27 34.7 +0.3
NAO01 NORSAR Array S 17.82 335 P P 20 27 34.5 -1.8
NB201 NORSAR Array S 17.87 336 P P 20 27 36.5 -0.3
NB201 IAmb IAmb 20 28 13.0
comp=Z,24nm,1.1s
NB2 NORSAR Subarra 17.89 336 P P 20 27 37.0 +0.1
comp=Z,0.8nm,0.5s,baz=142,slow=14
NOA NORSAR Array B 17.89 336 P P 20 27 37.1 +0.1
comp=Z,1.0nm,0.6s,baz=142,slow=10,SNR=4.1
EKA Eskdalemuir Ar 21.02 308 P P 20 28 11.3 +0.4
comp=Z,0.2nm,0.3s,baz=104,slow=9.3,SNR=3.4
AKTO Aktyubinsk 21.68 65 P P 20 28 18.5 +0.5
comp=Z,2.8nm,0.5s,baz=268,slow=8.8,SNR=12
comp=Z,2.8nm,0.5s
ARTI Arti 22.72 50 P P 20 28 28.9 +0.4
comp=Z,18nm,0.4s,baz=258,slow=8.2,SNR=81
comp=Z,18nm,0.4s
ARTI Arti 22.72 50 P P 20 28 28.0 -0.5
ARTI Arti 22.72 50c iP P 20 28 28.1 -0.5
ARTI *PP pP 20 28 50.0 -1.5
ARTI 20 28 57.0
ARTI S S 20 32 27.8 0.0
ARTI SS SnSn 20 33 10.0 -1.9
ARTI pmax pmax
comp=Z,11nm,0.5s
LVZ Lovozero 22.84 8 P P 20 28 29.7 +0.1
LVZ Lovozero 22.84 8 P P 20 28 29.7 +0.1
LVZ pmax pmax
comp=Z,51nm,1.5s
ESDC Sonseca Array 22.95 266 P P 20 28 30.1 -0.8
comp=Z,0.5nm,0.5s,baz=61,slow=10,SNR=10.0
comp=Z,0.5nm,0.5s
AB31 Akbulak array 22.96 69 P P 20 28 30.7 -0.1
ABKAR Akbulak array 22.96 69 P P 20 28 31.4 +0.5
ARCES ARCESS Array B 24.07 359 P P 20 28 41.5 +0.6
comp=Z,1.0nm,0.5s,baz=168,slow=6.2,SNR=8.9
comp=Z,1.0nm,0.5s
ARCES ARCESS Array B 24.07 359 P P 20 28 41.3 +0.5
ARCES IAmb IAmb 20 28 44.4
comp=Z,21nm,1.5s
ARCES ARCESS Array B 24.07 359 P P 20 28 41.3 +0.5
ARCES pmax pmax
comp=Z,21nm,1.5s
BORK Borovoye 29.28 59 P 20 29 28.2 +0.5
BORK IAmb IAmb 20 29 30.0
comp=Z,3.3nm,0.7s
BORK Borovoye 29.28 59 P P 20 29 28.2 +0.5
BORK pmax pmax
comp=Z,3.0nm,0.7s
BVAR Borovoye Array 29.32 59 P P 20 29 29.7 +1.6
comp=Z,1.6nm,0.6s,baz=277,slow=9.4,SNR=15
BVAR pP pP 20 29 56.2 +2.0
comp=Z,0.9nm,0.6s,baz=264,slow=10,SNR=3.8
comp=Z,1.6nm,0.6s
KK31 Karatay Array 31.42 78 IAmb IAmb 20 29 49.2
comp=Z,5.3nm,0.5s
KKAR Karatay Array 31.42 78 P P 20 29 48.3 +1.6
KKAR Karatay Array 31.42 78 P P 20 29 48.3 +1.6
CHGR Chuyangaron 32.23 87 i P P 20 29 55.3 +1.4
CHGR pmax pmax
comp=Z,7.0nm,0.7s
SPITS Spitsbergen Ar 32.99 356 P P 20 30 00.8 +0.9
comp=Z,5.8nm,0.8s,baz=140,slow=12,SNR=7.3
comp=Z,5.8nm,0.8s
KBS Kingsbay 33.95 355 P P 20 30 08.0 -0.3
KBS Kingsbay 33.95 355 P P 20 30 08.0 -0.3
KBS pmax pmax
comp=Z,34nm,1.4s
AAK Ala-Archa 34.33 77 P 20 30 13.7 +1.6
AAK IAmb IAmb 20 30 15.4
comp=Z,4.8nm,0.6s
AAK Ala-Archa 34.33 77ceP P 20 30 15.0 +2.9
AAK pmax pmax
comp=Z,12nm,1.6s
KURBB Kurchatov Arra 34.65 62 P P 20 30 15.7 +1.1
comp=Z,2.6nm,0.6s,baz=287,slow=9.2,SNR=25
KURBB pP pP 20 30 42.4 +1.3
comp=Z,0.4nm,0.6s,baz=288,slow=9.6,SNR=2.0
KURBB PcP PcP 20 32 46.7 +0.7
comp=Z,0.3nm,0.7s,baz=273,slow=3.6,SNR=2.5
comp=Z,2.6nm,0.6s
KURK Kurchatov 34.69 62 P P 20 30 15.7 +0.7
KURK IAmb IAmb 20 30 16.6
comp=Z,2.7nm,0.7s
KURK Kurchatov 34.69 62ceP P 20 30 16.5 +1.5
KURK pmax pmax
comp=Z,8.0nm,2.5s
KDJ Kajisay 36.36 77 IAmb IAmb 20 30 32.7
comp=Z,3.2nm,0.9s
KSH2 Kashi 36.49 82 P P 20 30 33.4 +2.7
KSH2 pmax pmax
comp=Z,3.0nm,0.8s
TARG Taragay, Kyrgy 36.95 77 IAmb IAmb 20 30 38.8
comp=Z,2.7nm,0.8s
NIL Nilore 37.57 92 P 20 30 42.5 +2.7
NIL Nilore 37.57 92 P P 20 30 42.5 +2.7
NIL pmax pmax
comp=Z,11nm,1.3s
ZALV Zalesovo Beam 37.74 55 P P 20 30 42.1 +1.2
comp=Z,6.0nm,0.5s,baz=283,slow=8.7,SNR=46
ZALV pP pP 20 31 09.0 +1.3
comp=Z,2.0nm,0.6s,baz=274,slow=8.9,SNR=4.3
comp=Z,6.0nm,0.5s
ZALV Zalesovo Beam 37.74 55 P P 20 30 41.8 +0.9
MK31 Makanchi Array 38.09 67ceP P 20 30 45.7 +1.7
MKAR Makanchi Array 38.09 67 P P 20 30 45.3 +1.3
comp=Z,2.4nm,0.6s,baz=273,slow=7.9,SNR=38
MKAR pP pP 20 31 12.4 +1.7
comp=Z,0.8nm,0.5s,baz=279,slow=7.9,SNR=3.7
MKAR PcP PcP 20 32 57.2 +0.7
comp=Z,0.3nm,0.5s,baz=289,slow=4.4,SNR=2.3
comp=Z,2.4nm,0.6s
MKAR Makanchi Array 38.09 67 P P 20 30 44.9 +0.9
MKAR Makanchi Array 38.09 67 i P P 20 30 45.2 +1.2
MKAR pmax pmax
comp=Z,2.0nm,0.6s
TORD Torodi Ar. Bea 38.44 221 P P 20 30 48.2 +1.1
comp=Z,1.6nm,0.6s,baz=22,slow=8.1,SNR=13
TORD PcP PcP 20 32 57.5 -0.5
comp=Z,1.0nm,0.8s,baz=228,slow=1.3,SNR=3.7
comp=Z,1.6nm,0.6s
DGZ Jazzator, Alta 40.42 61 i P P 20 31 04.2 +0.8
DGZ pmax pmax
comp=Z,6.0nm,0.7s
KNGR Kungurtug, Tuv 46.17 57 i P P 20 31 49.1 -0.4
KNGR pmax pmax
comp=Z,2.0nm,0.7s
DBIC Dimbokro 47.20 224 P P 20 31 56.9 -0.9
comp=Z,1.5nm,0.3s,baz=64,slow=7.4,SNR=7.6
comp=Z,1.5nm,0.3s
DBIC Dimbokro 47.20 224 P P 20 31 56.8 -0.9
DBIC IAmb IAmb 20 32 38.9
comp=Z,10nm,1.2s
DBIC Dimbokro 47.20 224 P P 20 31 56.8 -0.9
DBIC pmax pmax
comp=Z,10.0nm,1.3s
TLY Talaya 49.27 53ceP P 20 32 16.0 +2.8
TLY pmax pmax
comp=Z,5.0nm,1.7s
EVN Everest 50.37 89 P 20 32 24.0 +1.4
EVN IAmb IAmb 20 32 27.0
comp=Z,3.1nm,0.6s
SONM Songino Array 52.62 57 P P 20 32 40.1 +1.6
comp=Z,3.8nm,0.7s,baz=299,slow=8.2,SNR=38
comp=Z,3.8nm,0.7s
SONM Songino Array 52.62 57 P P 20 32 39.3 +0.8
SONM IAmb IAmb 20 32 40.8
comp=Z,2.4nm,0.7s
SONM Songino Array 52.62 57 P P 20 32 39.3 +0.8
SONM pmax pmax
comp=Z,2.0nm,0.7s
GTA2 Gaotai 52.74 69 eP P 20 32 40.7 +1.2
GTA2 pmax pmax
comp=Z,2.0nm,1.4s
GTA2 LR LR
comp=N,180nm,16.2s
GTA2 LR LR
comp=E,210nm,18.4s
GTA2 LR LR
comp=Z,350nm,20.3s
SCHQ Schefferville 56.09 316 LR LR 20 58 45.2
comp=Z,366nm,18.1s,baz=278,slow=38
LZH Lanzhou 57.32 70 eP P 20 33 13.2 +0.7
LZH pmax pmax
comp=Z,14nm,1.5s
LZH LR LR
comp=N,310nm,19.5s
LZH LR LR
comp=E,300nm,20.3s
LZH LR LR
comp=Z,470nm,21.5s
HHC Hu-ho-hao-te 59.50 61 eP P 20 33 25.6 -1.9
PZH PanZhiHua 61.70 80 P P 20 33 43.9 +1.2
PZH pmax pmax
comp=Z,10.0nm,0.8s
CMAR Chiang Mai Arr 64.98 89 P P 20 34 05.1 +0.9
comp=Z,4.3nm,0.6s,baz=304,slow=7.8,SNR=13
comp=Z,4.3nm,0.6s
CMAR Chiang Mai Arr 64.98 89 P P 20 34 04.2 0.0
YKA Yellowknife Ar 67.87 342 P P 20 34 22.1 +0.2
comp=Z,0.5nm,0.5s,baz=27,slow=6.2,SNR=4.6
YKA pP pP 20 34 52.4 +0.7
comp=Z,0.4nm,0.8s,baz=24,slow=7.1,SNR=1.8
comp=Z,0.5nm,0.5s
ILAR Eielson Array 69.91 357 P P 20 34 34.8 +0.3
comp=Z,0.3nm,0.6s,baz=356,slow=5.4,SNR=7.9
comp=Z,0.3nm,0.6s
ILAR Eielson Array 69.91 357 P P 20 34 34.6 +0.1
FFC Flin Flon 70.92 331 i P P 20 34 46.0 +5.1
KSRS Korea Array 71.45 55 P P 20 34 44.0 -0.3
comp=Z,1.0nm,0.7s,baz=325,slow=4.0,SNR=2.9
comp=Z,1.0nm,0.7s
KSRS Korea Array 71.45 55 P P 20 34 44.0 -0.3
K20K Telida 71.45 0 P P 20 34 44.8 +0.8
M31M Drury Creek, Y 71.50 351 P P 20 34 45.1 +0.8
M31M IAmb IAmb 20 35 29.3
comp=Z,8.3nm,1.5s
ULM Lac du Bonnet 72.24 325 P P 20 34 47.6 -1.2
comp=Z,1.6nm,0.6s,baz=46,slow=5.3,SNR=4.4
ULM pP pP 20 35 18.0 -0.9
comp=Z,1.0nm,0.5s,baz=8.5,slow=8.1,SNR=2.6
comp=Z,1.6nm,0.6s
BOSA Boshof 73.80 181 P P 20 34 58.4 +0.1
comp=Z,2.6nm,0.9s,baz=303,slow=17,SNR=1.9
comp=Z,2.6nm,0.9s
BOSA Boshof 73.80 181 P P 20 34 58.1 -0.1
BOSA Boshof 73.80 181 P P 20 34 58.2 -0.1
BOSA pmax pmax
comp=Z,4.0nm,1.1s
PDAR Pinedale Array 83.70 329 P P 20 35 52.5 -0.1
comp=Z,0.3nm,0.6s,baz=71,slow=5.3,SNR=4.0
comp=Z,0.3nm,0.6s
PDAR Pinedale Array 83.70 329 P P 20 35 52.4 -0.2
WRA Warramunga Arr 116.48 92 PKP PKPdf 20 42 06.0 -0.7
comp=Z,0.6nm,0.7s,baz=316,slow=1.8,SNR=8.4
ASAR Alice Springs 118.61 95 PKP PKPdf 20 42 10.3 -0.5
comp=Z,0.8nm,0.4s,baz=313,slow=1.4,SNR=19
ASAR Alice Springs 118.61 95 PKPdf 20 42 10.0 -0.8
STKA Stephens Creek 129.00 98 PKP PKPdf 20 42 30.6 +0.1
comp=Z,1.1nm,0.4s,baz=336,slow=3.4,SNR=7.2
STKA Stephens Creek 129.00 98 PKPdf 20 42 30.3 -0.1
QSPA South Pole Qui 135.38 180 PKP PKPdf 20 42 41.4 0.0
comp=Z,1.9nm,1.0s,baz=249,slow=3.7,SNR=3.1
QSPA South Pole Qui 135.38 180 PKPdf 20 42 41.0 -0.4

IDC 11 21:04:23.6±1.6, 43.°89N×105.°78W, h0km, mbtmp3.0/3, ML3.2/3, Error ellipse: s-maj=41.1km s-min=8.2km az=148.0
NEIC 11 21:04:26.1±1.2, 43.°80N±0.°02×105.°32W±0.°10, h0km±1km, ML3.5/52, Error ellipse: s-maj=12.0km s-min=2.6km az=255.0
ISC 11 21:04:26.2±1.1, 43.°82N±0.°06×105.°28W±0.°06, h0km, n34, σ1.s65/32, Wyoming

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RSSD Black Hills 0.95 71 Pg Pb 21 04 46.4 +0.7
K22A Casper 1.48 218 Pn 21 04 53.4 -0.9
K22A IAML 21 05 19.1
692nm,0.3s
K22A IAML 21 05 23.8
521nm,0.3s
LAO LASA Array 2.95 347 Pn 21 05 16.7 +2.3
RLMT Red Lodge 3.14 296 Pn 21 05 18.5 +1.4
RLMT IAML 21 06 11.9
112nm,0.7s
RLMT IAML 21 06 13.2
100nm,0.7s
PD31 Pinedale Array 3.30 253 Pn Pn 21 05 20.4 +1.1
PDAR Pinedale Array 3.30 253 Pn Pn 21 05 14.2 -5.1
0.9nm,0.3s,baz=71,slow=15,SNR=12
PDAR Pg Pb 21 05 20.5 -5.3
0.3nm,0.3s,baz=74,slow=18,SNR=1.6
PDAR Lg Lg 21 05 58.1
22nm,0.3s,baz=66,slow=33,SNR=10.0
1.3nm,0.4s
PDAR Pinedale Array 3.30 253 Pn 21 05 18.6 -0.7
BW06 Boulder Array 3.30 253 Pn Pn 21 05 20.6 +1.3
BW06 IAML 21 06 17.4
74nm,0.8s
BW06 IAML 21 06 18.6
68nm,0.8s
YNE Yellowstone No 3.59 291 Pn 21 05 24.7 +1.3
YNE IAML 21 06 26.2
comp=N,105nm,0.4s
YNE IAML 21 06 29.5
comp=E,102nm,0.4s
HAYD Hayden 3.61 205 Pn 21 05 25.6 +1.9
HAYD IAML 21 06 34.1
comp=E,95nm,1.0s
HAYD IAML 21 06 39.7
comp=N,79nm,1.1s
YMP Mirror Lake Pl 3.62 286 Pn Pn 21 05 25.0 +1.1
OGNE Ogallala 3.74 139 Pn 21 05 26.6 +1.3
MOOW Moose Ponds 3.96 271 Pn 21 05 28.8 +0.3
YPP Pitchstone Pla 4.01 278 Pn 21 05 31.3 +2.1
YPP IAML 21 07 15.3
comp=E,39nm,2.5s
ISCO Idaho Springs 4.02 184 Pn 21 05 30.3 +0.9
FXWY Fox Creek 4.17 270 Pn 21 05 33.4 +2.1
O20A White River Ci 4.29 212 Pn 21 05 34.3 +1.3
O20A IAML 21 06 42.4
comp=E,63nm,1.0s
O20A IAML 21 06 56.6
comp=E,86nm,1.7s
AHID Auburn Hatcher 4.38 258 Pn 21 05 35.9 +1.7
AHID IAML 21 06 54.5
comp=E,74nm,1.2s
AHID IAML 21 07 04.0
comp=E,59nm,1.1s
RDMU Red Mountain 4.55 226 Pn 21 05 37.0 +0.4
RDMU IAML 21 06 59.1
comp=N,44nm,1.0s
SUSD Miller 4.59 80 Pn 21 05 38.9 +1.9
BOZ Bozeman (W) 4.87 294 Pn 21 05 42.5 +1.7
BOZ IAML 21 07 09.4
comp=N,29nm,1.1s
BOZ IAML 21 07 10.7
comp=N,37nm,1.0s
HWUT Hardware Ranch 5.13 247 Pn 21 05 45.5 +1.0
HWUT IAML 21 07 26.8
comp=N,46nm,1.1s
KSCO Kaye Shedlock' 5.20 157 Pn 21 05 46.2 +0.9
BSUT Blindstream Ca 5.23 233 Pn 21 05 46.5 +0.5
BSUT IAML 21 07 28.7
comp=N,26nm,1.4s
BSUT IAML 21 07 29.4
comp=E,26nm,1.4s
EGMT Eagleton 5.24 325 Pn Pn 21 05 46.8 +0.9
TCUT Toone Canyon 5.28 241 Pn 21 05 48.9 +2.3
LRM Limekiln Ridge 5.48 294 Pn 21 05 51.6 +2.2
P18A Preston Nutter 5.60 223 Pn 21 05 52.0 +0.9
PV22 Blue Mesa, Par 5.90 208 Pn 21 05 56.5 +1.4
SDCO Great Sand Dun 6.07 182 Pn 21 05 58.4 +0.9
S22A 4UR Ranch, Cre 6.18 192 Pn 21 05 59.7 +0.7
I10CA LAC DU BONNET 8.98 41 I I 21 59 00.0
baz=225,slow=317
ULM Lac du Bonnet 9.08 42 Pn Pn 21 06 37.0 -1.5
comp=E,1.5nm,0.3s,baz=232,slow=12,SNR=14
ULM Lg Lg 21 09 07.7
comp=E,0.3nm,0.3s,baz=133,slow=19,SNR=2.0
comp=E,2.7nm,0.3s
YKA Yellowknife Ar 19.49 347 P P 21 08 50.3 -4.2
comp=E,0.1nm,0.3s,baz=160,slow=12,SNR=4.3
comp=E,0.1nm,0.7s

IDC 11 21:05:10.1±6.5, 38.°01N×25.°38W, h0km, mb3.4/3, mbtmp3.4/4, ML4.2/1, Error ellipse: s-maj=127.2km s-min=40.7km az=87.0
SVSA 11 21:05:11.3±1.6, 37.°93N×26.°39W, h5km, ML3.9(INMG), Error ellipse: s-maj=5.9km s-min=1.5km az=29.0, #DIST_RANGE: LOCAL #IPMA_REGION: Fossa de Hirondelle
ISC 11 21:05:06.7±1.3, 37.°92N±0.°07×26.°42W±0.°04, h20km±6km, n33, σ0.s82/52, 4C-1D, Azores Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PSET Sete Cidades 0.56 99⇑iP Pn 21 05 20.1 +0.5
PSET eS Sn 21 05 28.0 -0.3
PSET IAML 21 05 28.2
PSET IAML 21 05 30.7
PSET IAML 21 05 34.2
PDA Ponta Delgada 0.62 106⇑eP Pn 21 05 21.2 +0.9
PDA eS Sn 21 05 29.8 0.0
PDA IAML 21 05 30.0
PDA IAML 21 05 30.6
PDA IAML 21 05 31.1
POVGA Lagoa 0.68 105⇑eP Pn 21 05 22.2 +1.0
POVGA IAML 21 05 33.6
CMLA Cha da Macela 0.72 102⇑eP Pn 21 05 22.6 +0.8
CMLA eS Sn 21 05 32.1 -0.2
CMLA IAML 21 05 33.4
CMLA IAML 21 05 35.6
CMLA IAML 21 05 39.3
PCALD Caldeiras da R 0.74 99 eP Pn 21 05 22.9 +0.7
PCALD eS Sn 21 05 32.6 -0.3
PCALD IAML 21 05 32.9
PGRON Lagoa das Cont 0.84 100 eP Pn 21 05 24.2 +0.8
PGRON eS Sn 21 05 35.0 -0.2
PGRON IAML 21 05 37.7
PGRON IAML 21 05 38.3
PGRON IAML 21 05 39.4
PSCM Serra do Cume 0.96 325 eP Pn 21 05 26.0 +0.9
PSCM eS Sn 21 05 37.9 -0.2
PSCM IAML 21 05 38.5
PSCM IAML 21 05 41.2
PSCM IAML 21 05 41.3
ADH Angra Heroismo 0.98 319⇓eP Pg 21 05 26.4 +0.6
ADH eS Sn 21 05 38.6 0.0
ADH IAML 21 05 40.3
ADH IAML 21 05 40.6
ADH IAML 21 05 41.0
BART Pico Bartolome 1.00 98 eP Pg 21 05 26.2 +0.1
BART eS Sg 21 05 38.9 -0.3
BART IAML 21 05 43.1
BART IAML 21 05 43.3
BART IAML 21 05 44.4
PAGU Agualva, Azore 1.04 325 eP Pg 21 05 27.3 +0.3
PAGU eS Sn 21 05 40.2 0.0
PAGU IAML 21 05 40.9
PAGU IAML 21 05 41.0
PAGU IAML 21 05 41.3
PSBA Serra de Santa 1.11 320 eP Pg 21 05 28.4 +0.1
PSBA eS Sg 21 05 42.6 -0.2
PSBA IAML 21 05 45.6
PSBA IAML 21 05 45.8
PSBA IAML 21 05 46.9
PTOPO Topo S. Jorge 1.23 301 eS Sn 21 05 44.9 +0.1
PTOPO IAML 21 05 45.8
PTOPO IAML 21 05 45.8
PTOPO IAML 21 05 46.2
PSMN Pico do Norte, 1.41 130 eP Pb 21 05 32.6 +0.3
PSMN eS Sn 21 05 48.5 -0.8
PSMN IAML 21 05 51.4
PSMN IAML 21 05 51.5
PSMN IAML 21 05 51.6
PID Ribeirinha 1.44 292 eP Pg 21 05 34.0 -0.6
PID eS Sn 21 05 49.5 -0.6
PID IAML 21 05 51.0
PID IAML 21 05 53.9
PID IAML 21 05 55.6
PMAN Manadas 1.50 299 eP Pb 21 05 34.1 +0.3
PMAN eS Sn 21 05 51.2 -0.2
PMAN IAML 21 05 51.3
PMAN IAML 21 05 52.5
PMAN IAML 21 05 57.6
PPNO Prainha do Nor 1.56 291 eP Pb 21 05 34.9 0.0
PPNO eS Sn 21 05 52.8 -0.2
PPNO IAML 21 05 53.6
PPNO IAML 21 05 56.3
ROSA Rosais 1.65 300 eP Pb 21 05 36.2 -0.2
ROSA eS Sn 21 05 55.3 +0.2
ROSA IAML 21 05 56.2
ROSA IAML 21 05 56.4
ROSA IAML 21 05 57.1
PGRA Graciosa 1.66 313 eP Pb 21 05 36.0 -0.5
PGRA eS Sn 21 05 55.3 -0.1
PGRA IAML 21 05 55.9
PGRA IAML 21 05 59.8
PGRA IAML 21 06 00.1
PICO Pico 1.69 291 eP Pb 21 05 36.9 -0.2
PICO eS Sn 21 05 56.4 +0.2
PICO IAML 21 05 57.1
PICO IAML 21 05 57.4
PICO IAML 21 05 57.4
SRBC Serra Branca 1.70 312 eS Sn 21 05 55.8 -0.5
SRBC IAML 21 05 59.6
SRBC IAML 21 06 00.2
SRBC IAML 21 06 05.1
PSCRZ Santa Cruz da 1.71 313 eP Pn 21 05 36.2 +0.8
PCAN Candelaria 1.72 289 eP Pb 21 05 37.5 -0.2
PCAN eS Sn 21 05 57.3 +0.3
PCAN IAML 21 06 00.1
PCAN IAML 21 06 02.1
PCAN IAML 21 06 04.6
HOR Horta 1.85 290 eP Pb 21 05 39.1 -0.7
HOR eS Sn 21 06 00.0 0.0
HOR IAML 21 06 01.1
HOR IAML 21 06 01.9
HOR IAML 21 06 02.3
PFCBR Castelo Branco 1.91 289 eP Pb 21 05 40.1 -0.8
PFCBR eS Sn 21 06 01.8 +0.2
PFCBR IAML 21 06 02.6
PFCBR IAML 21 06 04.0
PFCBR IAML 21 06 06.8
CALA Caldeira 1.92 291 eP Pb 21 05 40.1 -0.9
CALA eS Sn 21 06 01.8 -0.1
CALA IAML 21 06 02.8
CALA IAML 21 06 03.5
CALA IAML 21 06 08.9
PCED Cedros 1.94 292 eP Pb 21 05 40.6 -0.7
PCED eS Sn 21 06 01.9 -0.3
PCED IAML 21 06 02.4
PCED IAML 21 06 04.6
PCED IAML 21 06 04.8
ESDC Sonseca Array 17.59 77 Pn Pn 21 09 06.6 -4.0
0.2nm,0.3s,baz=271,slow=13,SNR=14
0.4nm,0.6s
EKA Eskdalemuir Ar 23.45 35 P P 21 10 16.2 +1.7
1.4nm,0.7s,baz=232,slow=11,SNR=4.5
1.4nm,0.7s

TORD	**Torodi Ar. Bea**	**35.13**	**127**	P		**P**	**21 12 00.4**	**+1.4**
	0.3nm,0.5s,baz=325,slow=9.4,SNR=2.4							
	0.3nm,0.5s							
AKASG	**Malin Array Be**	**40.88**	**53**	P		**P**	**21 12 46.6**	**-0.5**
	0.1nm,0.3s,baz=291,slow=8.4,SNR=1.5							
	0.1nm,0.3s							
H10N2	**ASCENSION HYDR**	**46.85**	**164**	T		T	22 03 25.9	
	baz=347,slow=74,SNR=11							
H10N3	**ASCENSION HYDR**	**46.86**	**164**	T		T	22 03 37.9	
	baz=347,slow=74,SNR=13							
H10N1	**ASCENSION HYDR**	**46.87**	**164**	T		T	22 03 38.4	
	baz=347,slow=74,SNR=20							

IDC ***11*** *21:09:30.5±1.1, 33°.03N×85°.90E, h0km, mb3.1/7, mbtmp3.2/10, ML2.5/2, MS3.0/1, Error ellipse: s-maj=38.8km s-min=17.7km az=62.0*
ISC 11 21:09:35.8±1.0, 33°.1N±0°.1×85°.9E±0°.2, h35km, n11, σ1s18/11, mb3.1/7, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MKAR	**Makanchi Array**	**13.93**	**350**	Pn		**Pn**	**21 12 49.6**	**-1.1**
	baz=171,slow=11,SNR=7.5							
MKAR				Lg		Lg	21 16 46.9	
	baz=161,slow=26							
	0.4nm,0.8s							
KURBB	**Kurchatov Arra**	**18.32**	**345**	P		**P**	**21 13 45.9**	**-0.9**
	baz=164,slow=10,SNR=7.9							
	0.5nm,0.9s							
CMAR	**Chiang Mai Arr**	**18.70**	**138**	P		**P**	**21 13 50.0**	**-1.2**
	0.4nm,0.4s,baz=321,slow=10,SNR=7.8							
CMAR				LR		LR	21 21 54.4	
	comp=Z,39nm,18.3s,baz=320,slow=40							
ZALV	**Zalesovo Beam**	**20.83**	**358**	P		**P**	**21 14 13.0**	**-1.2**
	0.2nm,0.3s,baz=169,slow=8.2,SNR=3.8							
	0.2nm,0.3s							
SONM	**Songino Array**	**21.32**	**40**	P		**P**	**21 14 21.3**	**+1.7**
	0.2nm,0.6s,baz=243,slow=7.9,SNR=7.1							
	0.2nm,0.6s							
BVAR	**Borovoye Array**	**22.81**	**335**	P		**P**	**21 14 35.6**	**+0.2**
	0.7nm,0.9s,baz=130,slow=13,SNR=3.6							
	0.7nm,0.9s							
BRTR	**Keskin Array B**	**42.09**	**294**	P		**P**	**21 17 25.1**	**+0.5**
	0.1nm,0.4s,baz=90,slow=7.2,SNR=2.2							
	0.1nm,0.4s							
WRA	**Warramunga Arr**	**70.15**	**132**	P		**P**	**21 20 43.8**	**-1.2**
	0.5nm,0.8s,baz=325,slow=6.4,SNR=8.0							
	0.5nm,0.8s							
ASAR	**Alice Springs**	**72.67**	**134**	P		**P**	**21 21 00.0**	**-0.1**
	0.3nm,0.8s,baz=317,slow=6.7,SNR=3.0							
	0.3nm,0.8s							
YKA	**Yellowknife Ar**	**83.29**	**9**	P		**P**	**21 21 59.5**	**+1.0**
	0.1nm,0.7s,baz=336,slow=5.5,SNR=2.1							
	0.1nm,0.7s							
STKA	**Stephens Creek**	**83.29**	**135**	P		**P**	**21 21 59.8**	**+0.9**
	3.0nm,1.0s,baz=1.7,slow=16,SNR=3.1							

MOS ***11*** *21:30:02.5±1.1, 77°.83N×1°.23E, h10km, mb4.8/58, Error ellipse: s-maj=20.7km s-min=4.7km az=94.7*
IDC ***11*** *21:30:03.5±0.4, 77°.80N×1°.44E, h0km, mb4.3/31, mbtmp4.3/37, ML3.6/6, MS3.8/42, Error ellipse: s-maj=10.6km s-min=9.1km az=33.0*
DNK ***11*** *21:30:03.3±1.9, 77°.69N×2°.07E, h30km±15km, ML3.5, Presumed earthquake*
BER ***11*** *21:30:04.7±3.5, 77°.85N×1°.71E, h10km, Mw4.7, ML4.2(NAO), Confirmed Earthquake*
NEIC ***11*** *21:30:04.7±1.4, 77°.90N±0°.08×1°.6E±0°.3, h10km±1km, mb4.6/117, Error ellipse: s-maj=13.3km s-min=8.9km az=336.0*
GCMT ***11*** *21:30:04.8±0.4, 78°.06N±0°.04×2°.2E±0°.2, h15km±1km, MW4.7/82, Moment Tensor Solution. s10,c10; s82,c102; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=1.12±.12; Mθθ=0.49±.08; Mϕϕ=0.62±.07; Mre=0.70±.20; Mθϕ=0.52±.05; Mϕr=0.35±.16; Best double couple: M=0.130500×10^16 NP1:ϕs=20.00000°, δ=44.00000°, λ=52.00000°. NP2: ϕs=247.00000°, δ=57.00000°, λ=121.00000°. Principal axes: T 1.5080, Plg=64.0000°, Azm=212.0000°; N -0.4010, Plg=25.0000°, Azm=49.0000°; P -1.1030, Plg=7.0000°, Azm=316.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NAO ***11*** *21:30:05.2±1.0, 78°.05N×2°.37E, h10km, ML4.0*
FCIAR ***11*** *21:30:08.0, 78°.06N×3°.10E, h10km, station SPA0 has station magnitude of 3.99*
KOLA ***11*** *21:30:08.3, 77°.84N×3°.94E, h0km, ML2.8, Error ellipse: s-maj=22.0km s-min=13.8km az=60.0, Greenland sea*
ISC 11 21:30:03.2±1.4, 77°.85N±0°.04×1°.64E±0°.03, h5km±8km, n455, σ2s14/463, mb4.6/150, MS3.8/39, 31C-25D, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KBS	**Kingsbay**	**2.35**	**58**	Pn		**Pn**	**21 30 40.8**	**-1.6**
KBS				Sn		**Sn**	**21 31 04.7**	**-6.8**
KBS	**Kingsbay**	**2.35**	**58**			**Pn**	**21 30 40.6**	**-1.7**
KBS				Sn		**Sn**	**21 31 05.1**	**-6.4**
KBS	**Kingsbay**	**2.35**	**58**	*i*P	⇑	**Pn**	**21 30 40.6**	**-1.7**
KBS				*e*S		**Sn**	**21 31 05.3**	**-6.2**
KBS				IAML			21 31 16.4	
	comp=Z,319nm,0.5s							
KBS	**Kingsbay**	**2.35**	**58**	P		**Pn**	**21 30 40.6**	**-1.7**
KBS							21 31 05.1	
KBS	**Kingsbay**	**2.35**	**58**	*i*P		**Pn**	**21 30 40.8**	**-1.6**
KBS				*i*S		**Sn**	**21 31 05.7**	**-5.8**
KBS	**Kingsbay**	**2.35**	**58**	P		**Pn**	**21 30 40.2**	**-2.1**
KBS				S		**Sn**	**21 31 05.3**	**-6.2**
BRBB	**Barentsburg B**	**2.64**	**79**	Pn		**Pn**	**21 30 44.7**	**-1.7**
BRBB				Sn		**Sn**	**21 31 11.6**	**-7.2**
BRBB	**Barentsburg B**	**2.64**	**79**	*e*P		**Pn**	**21 30 45.5**	**-0.9**
BRBB				*e*Pg		**Pg**	**21 30 53.5**	**-0.3**
BRBB				*e*S		**Sn**	**21 31 15.5**	**-3.3**
BRBB	**Barentsburg B**	**2.64**	**79**	P		**Pn**	**21 30 45.6**	**-0.7**
BRBB				S		**Sn**	**21 31 13.3**	**-5.5**
BRBA	**Barentsburg A**	**2.65**	**79**	Pn		**Pn**	**21 30 46.5**	**+0.1**
BRBA				Sn		**Sn**	**21 31 09.8**	**-9.0**
BRBA	**Barentsburg A**	**2.65**	**79**	*e*P		**Pn**	**21 30 46.6**	**+0.1**
BRBA				*e*Pg		**Pg**	**21 30 54.0**	**+0.1**
BRBA				*e*S		**Sn**	**21 31 12.5**	**-6.3**
BRBA				IAML			21 31 17.1	
	comp=Z,125nm,0.6s							
SPA0	**Spitsbergen Ar**	**3.09**	**77**	Pn		**Pn**	**21 30 52.3**	**-0.3**
	baz=262,slow=14							
SPA0				Sn		**Sn**	**21 31 25.2**	**-4.6**
	baz=259,slow=22							
SPA0	**Spitsbergen Ar**	**3.09**	**77**	Pn		**Pn**	**21 30 52.3**	**-0.3**
SPA0				Sn		**Sn**	**21 31 25.2**	**-4.6**
SPA0	**Spitsbergen Ar**	**3.09**	**77**	*i*P	⇓	**Pn**	**21 30 52.1**	**-0.5**
SPA0				*i*S		**Sn**	**21 31 25.0**	**-4.8**
SPITS	**Spitsbergen Ar**	**3.09**	**77**	Pn		**Pn**	**21 30 52.0**	**-0.5**
	baz=251,slow=13							
SPITS				Sn		**Sn**	**21 31 25.8**	**-3.9**
	baz=231,slow=18							
	comp=Z,20nm,0.3s							
SPITS	**Spitsbergen Ar**	**3.09**	**77**	P		**Pn**	**21 30 51.6**	**-0.9**
SPITS				S		**Sn**	**21 31 25.9**	**-3.9**
SPB2	**Spitsbergen Ar**	**3.09**	**77**			**Pn**	**21 30 52.1**	**-0.5**
HSPB	**Hornsund (broa**	**3.15**	**99**	Pn		**Pn**	**21 30 50.8**	**-2.6**
HSPB	**Hornsund (broa**	**3.15**	**99**	*e*P		**Pn**	**21 30 50.8**	**-2.6**
HSPB				*e*S		**Sn**	**21 31 22.6**	**-8.7**
HSPB	**Hornsund (broa**	**3.15**	**99**	P		**Pn**	**21 30 50.9**	**-2.5**
HSPB				S		Sn	21 31 22.0	-9.3
DAG	**Danmarks Havn**	**4.59**	**266**	*i*P		**Pn**	**21 31 11.0**	**-2.1**
DAG				*i*S		**Sn**	**21 32 00.6**	**-6.1**
DAG				IAML			21 32 03.6	
	comp=Z,673nm,0.2s							
DAG	**Danmarks Havn**	**4.59**	**266**	P		**Pn**	**21 31 11.7**	**-1.4**
DAG	**Danmarks Havn**	**4.59**	**266**	*i*P		**Pn**	**21 31 11.0**	**-2.1**
DAG				*i*P		**Pn**	**21 31 12.0**	**-1.2**
DAG				*i*S		**Sn**	**21 32 00.6**	**-6.1**
DAG				IAML			21 32 03.6	
	comp=Z,673nm,0.2s							
NOR	**Nord**	**4.96**	**328**	Pn		**Pn**	**21 31 17.6**	**-0.6**
NOR				Sn		**Sn**	**21 32 11.2**	**-4.6**
NOR	**Nord**	**4.96**	**328**	*i*P		**Pn**	**21 31 17.7**	**-0.6**
NOR				*i*S		**Sn**	**21 32 13.0**	**-2.8**
NOR				IAML			21 32 20.4	
	comp=Z,69nm,0.2s							
NOR	**Nord**	**4.96**	**328**	*i*P		**Pn**	**21 31 17.7**	**-0.6**
NOR				*i*S		**Sn**	**21 32 13.0**	**-2.8**

NOR				IAML			21 32 20.4	
	comp=Z,69nm,0.2s							
BJO1	**Bjornoya**	**5.33**	**120**	Pn		**Pn**	**21 31 24.1**	**+0.8**
BJO1	**Bjornoya**	**5.33**	**120**	*e*P		**Pn**	**21 31 24.0**	**+0.8**
BJO1				IAML			21 32 40.0	
	comp=Z,11nm,0.7s							
BEAR	**Bear Island, N**	**5.33**	**120**	Pn		**Pn**	**21 31 22.9**	**-0.5**
	baz=314,slow=14							
HOPEN	**Hopen**	**5.35**	**93**	Pn		**Pn**	**21 31 22.0**	**-1.6**
HOPEN				Sn		**Sn**	**21 32 17.2**	**-8.2**
HOPEN	**Hopen**	**5.35**	**93**	*e*P		**Pn**	**21 31 21.8**	**-1.8**
HOPEN				*e*S		**Sn**	**21 32 17.4**	**-8.0**
HOPEN				IAML			21 32 20.0	
	comp=Z,29nm,0.5s							
DBG	**Daneborg**	**6.32**	**247**	Pn		**Pn**	**21 31 35.2**	**-1.6**
DBG	**Daneborg**	**6.32**	**247**	*i*P		**Pn**	**21 31 35.3**	**-1.6**
DBG				*i*S		Sn	21 32 40.8	-8.5
DBG				IAML			21 32 47.3	
	comp=Z,144nm,0.3s							
DBG	**Daneborg**	**6.32**	**247**	*i*P		**Pn**	**21 31 35.3**	**-1.6**
DBG				*i*S		Sn	21 32 40.8	-8.5
DBG				IAML			21 32 47.3	
	comp=Z,144nm,0.3s							
JNW	**Jan Mayen West**	**7.35**	**207**	*e*P		**Pn**	**21 31 50.0**	**-1.0**
JNW				*e*S		**Sn**	**21 33 06.1**	**-8.6**
JNW				IAML			21 33 12.1	
	comp=Z,63nm,0.4s							
JNE	**Jan Mayen East**	**7.38**	**206**	*e*P		**Pn**	**21 31 50.0**	**-1.4**
JNE				IAML			21 33 04.2	
	comp=Z,87nm,0.6s							
JNE				*e*S		Sn	21 33 05.8	-10
JMIC	**Jan Mayen**	**7.40**	**207**	Pn		**Pn**	**21 31 50.3**	**-1.4**
	comp=Z,43nm,0.3s,baz=215,slow=0.7,SNR=15							
JMIC				Sn		Sn	21 33 05.4	-10
	comp=Z,6.1nm,0.3s,baz=167,slow=16,SNR=1.1							
JMIC	**Jan Mayen**	**7.40**	**207**	*e*P		**Pn**	**21 31 50.6**	**-1.1**
JMIC				*e*S		**Sn**	**21 33 08.5**	**-7.4**
JMI	**Jan Mayen**	**7.48**	**207**	*e*P		**Pn**	**21 31 51.8**	**-0.9**
JMI				*e*S		Sn	21 33 06.2	-12
JMI				IAML			21 33 17.9	
	comp=Z,52nm,0.3s							
ZFI2	**Zemlya Franca-**	**8.79**	**49**	*e*P		**Pn**	**21 32 10.1**	**-0.6**
ZFI2				*e*S		Sn	21 33 40.0	-10
OMEGA	**Omega**	**8.81**	**49**	*e*P		**Pn**	**21 32 10.1**	**-0.8**
OMEGA				*e*S		Sn	21 33 40.1	-10
HAMF	**Hammerfest**	**9.30**	**129**	*e*P		**Pn**	**21 32 22.4**	**+4.6**
TRO	**Tromso**	**9.51**	**141**	Pn		**Pn**	**21 32 23.3**	**+2.8**
TRO	**Tromso**	**9.51**	**141**	*e*P		**Pn**	**21 32 24.3**	**+3.8**
SCO	**Scoresbysund**	**9.70**	**233**			**Pn**	**21 32 21.8**	**-1.3**
SCO	**Scoresbysund**	**9.70**	**233**	*i*P		**Pn**	**21 32 22.1**	**-1.0**
SCO				*i*S		Sn	21 34 02.8	-10
SCO	**Scoresbysund**	**9.70**	**233**	P		**Pn**	**21 32 21.8**	**-1.3**
SCO	**Scoresbysund**	**9.70**	**233**	*i*P		**Pn**	**21 32 22.1**	**-1.0**
SCO				*i*S		Sn	21 34 02.8	-10
JETT	**Jettan, Norway**	**9.78**	**138**	*e*P		Pn	21 32 31.3	+7.0
LOF	**Lofoten**	**10.33**	**154**	*e*P		**Pn**	**21 32 32.2**	**+0.4**
LOF				*e*			21 41 59.0	
KIF	**Kilpisjarvi**	**10.35**	**139**	P		**Pn**	**21 32 32.1**	**+0.2**
ARA0	**ARCESS Array S**	**10.58**	**129**	Pn		**Pn**	**21 32 37.4**	**+2.2**
	baz=340,slow=11							
ARA0	**ARCESS Array S**	**10.58**	**129**	*e*P		**Pn**	**21 32 37.0**	**+1.8**
ARA0				IAML			21 32 46.3	
	comp=Z,3.6nm,0.7s							
ARCES	**ARCESS Array B**	**10.58**	**129**	Pn		**Pn**	**21 32 36.0**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=326,slow=10,SNR=15							
ARCES				LR		LR	21 36 33.3	
	comp=Z,224nm,18.8s,baz=349,slow=37							
	comp=Z,8.6nm,1.0s							
ARCES	**ARCESS Array B**	**10.58**	**129**	Pn		**Pn**	**21 32 36.6**	**+1.4**
ARCES	**ARCESS Array B**	**10.58**	**129**	P		**Pn**	**21 32 36.6**	**+1.4**
KTK1	**Kautokeino**	**10.69**	**134**	*e*P		**Pn**	**21 32 38.7**	**+1.9**
KTK1				IAML			21 32 48.3	
	comp=Z,4.0nm,0.6s							
VADS	**Vadso**	**10.74**	**121**	*e*P		**Pn**	**21 32 39.8**	**+2.4**
VADS				*e*			21 36 56.4	
FAUS	**Fauske**	**11.23**	**152**	*e*P		**Pn**	**21 32 47.8**	**+3.7**
FAUS				*e*			21 42 27.1	
SUMG	**Summit**	**11.27**	**263**			**Pn**	**21 32 43.6**	**-1.4**
SUMG	**Summit**	**11.27**	**263**	*i*P		**Pn**	**21 32 43.9**	**-1.1**
SUMG				*i*S		Sn	21 34 42.6	-8.6
SUMG	**Summit**	**11.27**	**263**	P		**Pn**	**21 32 43.6**	**-1.4**
SUMG	**Summit**	**11.27**	**263**	*i*P		**Pn**	**21 32 43.9**	**-1.1**
SUMG				*i*S		Sn	21 34 42.6	-8.6
VAGH	**Vaagaholmen**	**11.68**	**157**	*e*P		**Pn**	**21 32 51.4**	**+1.2**
KONS	**Konsvik**	**11.89**	**157**	*e*P		**Pn**	**21 32 55.6**	**+2.5**
STOK	**Stokkvaagen**	**12.05**	**158**	*e*P		**Pn**	**21 32 56.4**	**+1.1**
LEIR	**Leirfjorden**	**12.28**	**158**	*e*P		**Pn**	**21 32 59.8**	**+1.4**
LVZ	**Lovozero**	**13.63**	**119**	Pn		**Pn**	**21 33 18.2**	**+1.3**
LVZ	**Lovozero**	**13.63**	**119**	P		**Pn**	**21 33 18.2**	**+1.3**
APA	**Apatity**	**13.69**	**121**	⇓*e*P		**Pn**	**21 33 17.6**	**0.0**
APA				*e*			21 35 51.8	
APA				pmax		pmax		
	comp=Z,12nm,1.3s							
APA				MLR		MLR		
	comp=Z,2μm,4.8s							
KULLO	**Kullorsuaq**	**13.84**	**287**	*i*P		**Pn**	**21 33 15.3**	**-4.3**
KULLO				*i*S		Sn	21 35 34.5	-19
KULLO	**Kullorsuaq**	**13.84**	**287**	*i*P		**Pn**	**21 33 15.3**	**-4.3**
KULLO				*i*S		Sn	21 35 34.5	-19
TULEG	**Thule**	**14.83**	**300**	Pn		Pn	21 33 26.6	-6.5
TULEG	**Thule**	**14.83**	**300**	*i*P		Pn	21 33 28.1	-5.0
TULEG				*i*S		Sn	21 36 00.8	-17
TULEG	**Thule**	**14.83**	**300**	*i*P		Pn	21 33 28.1	-5.0
TULEG				*i*S		Sn	21 36 00.8	-17
UPNV	**Upernavik**	**14.85**	**281**	*i*P		Pn	21 33 28.4	-5.0
UPNV				*i*S		Sn	21 36 01.1	-17
UPNV	**Upernavik**	**14.85**	**281**	*i*P		Pn	21 33 28.4	-5.0
UPNV				*i*S		Sn	21 36 01.1	-17
BORG	**Borgarnes**	**14.88**	**221**	Pn		**Pn**	**21 33 32.5**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=36,slow=8.3,SNR=1.4							
BORG				Sn		**Sn**	**21 36 16.3**	**-2.4**
	comp=Z,0.3nm,0.3s,baz=285,slow=20,SNR=1.9							
	comp=Z,23nm,1.0s							
NUUG	**Nuugaatsiaq**	**15.15**	**275**	*i*P		**Pn**	**21 33 31.1**	**-6.3**
NUUG				*e*S		Sn	21 36 07.2	-18
NUUG	**Nuugaatsiaq**	**15.15**	**275**	*i*P		**Pn**	**21 33 31.1**	**-6.3**
NUUG				*e*S		Sn	21 36 07.2	-18
DOMB	**Dombas**	**16.06**	**167**	*e*P		**P**	**21 33 52.3**	**-0.6**
ILULI	**Ilulissat**	**16.53**	**267**	Pn		**Pn**	**21 33 49.2**	**-6.1**
ILULI	**Ilulissat**	**16.53**	**267**	P		**Pn**	**21 33 49.2**	**-6.1**
ILULI				pmax		pmax		
	comp=Z,22nm,0.8s							
NC204	**NORSAR Array S**	**16.91**	**165**	P		**P**	**21 34 02.5**	**+0.1**
NC204	**NORSAR Array S**	**16.91**	**165**	*e*P		**P**	**21 34 02.2**	**-0.1**
NB201	**NORSAR Array S**	**17.17**	**164**	*e*P		**P**	**21 34 07.5**	**+2.4**
NOA	**NORSAR Array B**	**17.18**	**164**	P		**Pn**	**21 34 02.9**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=358,slow=17,SNR=6.2							
NOA				LR		LR	21 39 32.7	
	comp=Z,149nm,21.7s,baz=355,slow=33							
	comp=Z,0.6nm,0.6s							
SKAR	**Skarslia**	**17.39**	**169**	*e*P		**P**	**21 34 08.6**	**+1.0**
NRA0	**NORESS Array S**	**17.50**	**164**	P		**P**	**21 34 10.6**	**+1.8**
	baz=358,slow=11							
NRA0	**NORESS Array S**	**17.50**	**164**	P		**P**	**21 34 10.6**	**+1.8**
ADZR	**Andozero**	**17.86**	**121**	*e*P		**Pn**	**21 34 08.8**	**-3.1**
ADZR				pmax		pmax		
	comp=Z,30nm,1.6s							
HFS	**Hagfors**	**18.24**	**160**	P		**P**	**21 34 18.1**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=8.9,slow=10,SNR=9.9							
HFS				LR		LR	21 40 04.8	
	comp=Z,350nm,19.3s,baz=345,slow=33							
	comp=Z,3.9nm,0.7s							
HFS	**Hagfors**	**18.24**	**160**	P		**P**	**21 34 18.4**	**+1.5**
	baz=348,slow=8.6							
HFS	**Hagfors**	**18.24**	**160**	P		**P**	**21 34 18.4**	**+1.5**
FIA0	**FINESS Array S**	**18.24**	**141**	P		**P**	**21 34 18.6**	**+1.7**
	baz=341,slow=12							
FIA0	**FINESS Array S**	**18.24**	**141**	P		**P**	**21 34 18.6**	**+1.7**
FIA1	**FINESS Array S**	**18.24**	**141**	P		**P**	**21 34 17.2**	**+0.3**
FIA1				IAmb		IAmb	21 34 28.4	
	comp=Z,63nm,1.1s							
FINES	**FINESS Array B**	**18.24**	**141**	P		**Pn**	**21 34 16.8**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=339,slow=8.9,SNR=16							
FINES				LR		LR	21 41 04.3	
	comp=Z,236nm,22.0s,baz=350,slow=36							
	comp=Z,5.2nm,0.7s							
FINES	**FINESS Array B**	**18.24**	**141**			**P**	**21 34 17.5**	**+0.6**
FINES	**FINESS Array B**	**18.24**	**141**	P		**P**	**21 34 17.5**	**+0.6**
SFJD	**Kangerlussuaq**	**18.27**	**263**	P		**Pn**	**21 34 13.8**	**-3.1**
	comp=Z,18nm,0.7s,baz=23,slow=12,SNR=12							
SFJD				S		Sn	21 37 23.5	-17
	comp=Z,11nm,0.6s,baz=315,slow=14,SNR=4.0							
SFJD				LR		LR	21 40 37.4	
	comp=Z,160nm,19.0s,baz=25,slow=35							

SFJD	**Kangerlussuaq**	**18.27**	**263**			**Pn**	**21 34 14.0**	**-2.9**
SFJD	**Kangerlussuaq**	**18.27**	**263**	P		**Pn**	**21 34 14.0**	**-2.9**
SFJD				pmax		pmax		
	comp=Z,27nm,0.8s							
LSH	**Leshukonskoye**	**18.43**	**110**	*e*P		**P**	**21 34 20.6**	**+1.7**
	comp=Z,39nm,1.4s							
KONO	**Kongsberg**	**18.48**	**167**	P		**Pn**	**21 34 19.8**	**+0.2**
KONO				IAmb		IAmb	21 34 56.1	
	comp=Z,47nm,1.2s							
KONO	**Kongsberg**	**18.48**	**167**	P		**Pn**	**21 34 19.8**	**+0.2**
KONO				pmax		pmax		
	comp=Z,47nm,1.3s							
POIN	**Pond Inlet**	**19.27**	**297**			**P**	**21 34 25.8**	**-2.3**
RES	**Resolute Bay**	**20.65**	**312**	P		**P**	**21 34 42.5**	**-0.6**
	comp=Z,4.7nm,0.3s,baz=44,slow=9.6,SNR=39							
RES				S		S	21 38 19.7	-14
	comp=Z,4.5nm,0.4s,baz=296,slow=21,SNR=7.4							
RES				LR		LR	21 42 35.8	
	comp=Z,239nm,20.5s,baz=21,slow=36							
	comp=Z,4.7nm,0.3s							
RES	**Resolute Bay**	**20.65**	**312**			**P**	**21 34 41.5**	**-1.6**
RES	**Resolute Bay**	**20.65**	**312**	P		**P**	**21 34 41.5**	**-1.6**
RES				pmax		pmax		
	comp=Z,7.0nm,0.7s							
KLMR	**Klimovskoe**	**20.93**	**123**	*e*P		**P**	**21 34 46.5**	**+0.3**
KLMR				pmax		pmax		
	comp=Z,48nm,1.8s							
KLMR	**Klimovskoe**	**20.93**	**123**	*e*P		**P**	**21 34 46.6**	**+0.3**
	comp=Z,31nm,1.7s							
EKA	**Eskdalemuir Ar**	**22.68**	**187**	P		**P**	**21 35 03.7**	**-1.4**
	comp=Z,2.6nm,0.7s,baz=9.9,slow=10,SNR=4.1							
	comp=Z,2.6nm,0.7s							
ILON	**Igloolik, Nuna**	**22.72**	**294**			**P**	**21 35 05.5**	**+0.2**
ILON				IAmb		IAmb	21 35 09.8	
	comp=Z,24nm,1.1s							
IVI	**Ivigtut**	**22.88**	**252**	P		**P**	**21 35 06.2**	**-0.9**
IVI				IAmb		IAmb	21 35 22.4	
	comp=Z,36nm,1.1s							
NRIK	**Noril'sk**	**23.21**	**64**	P		**P**	**21 35 10.5**	**0.0**
	comp=Z,9.9nm,0.8s,baz=344,slow=7.8,SNR=21							
	comp=Z,9.9nm,0.8s							
NRIK	**Noril'sk**	**23.21**	**64**			**P**	**21 35 10.5**	**0.0**
NRIK				IAmb		IAmb	21 35 22.0	
	comp=Z,37nm,1.2s							
NRIK	**Noril'sk**	**23.21**	**64**	*i*P		**P**	**21 35 10.8**	**+0.3**
NRIK				pmax		pmax		
	comp=Z,21nm,1.0s							
FRB	**Frobisher Bay**	**24.87**	**276**	LR		LR	21 46 16.2	
	comp=Z,220nm,18.4s,baz=42,slow=39							
KIRV	**Kirov**	**24.89**	**113**	LR		LR	21 45 31.8	
	comp=Z,226nm,20.0s,baz=330,slow=37							
KIRV	**Kirov**	**24.89**	**113**	*ce*P		**P**	**21 35 27.9**	**+1.5**
MNK	**Minsk**	**25.22**	**143**	*i*P		**P**	**21 35 29.6**	**+0.2**
	comp=E,24nm,0.9s							
MNK				*i*P		**P**	**21 35 29.6**	**+0.2**
	comp=N,13nm,0.8s							
MNK				*i*P		**P**	**21 35 29.6**	**+0.2**
	comp=Z,16nm,0.8s,baz=348							
MNK				*i*PP		**PnPn**	**21 36 05.6**	**+2.5**
MNK				*i*PPP		PPP	21 36 11.3	
MNK				*i*S		**S**	**21 39 58.8**	**+3.9**
MNK				*i*SS		**SnSn**	**21 40 36.9**	**-7.6**
MNK				*i*SSS		SSS	21 41 22.8	
MNK				*i*LQ		LQ	21 43 01.2	
MNK				*i*LR		LR	21 44 02.5	
MNK				*i*LRM		MLR	21 44 51.0	
	comp=Z,102nm,11.3s							
MNK				*i*LRM		MLR	21 44 59.6	
	comp=N,345nm,13.5s							
MNK				*i*LRM		MLR	21 45 01.1	
	comp=E,279nm,11.4s							
MNK	**Minsk**	**25.22**	**143**	*i*P		**P**	**21 35 29.6**	**+0.2**
MNK				*i*PPP		PPP	21 36 11.2	
MNK				*i*S		**S**	**21 39 58.8**	**+3.9**
MNK				pmax		pmax		
	comp=N,13nm,0.8s							
MNK				pmax		pmax		
	comp=E,16nm,0.8s							
MNK				pmax		pmax		
	comp=E,24nm,0.9s							
MNK				MLR		MLR		
	comp=Z,102nm,11.0s							
MNK				MLR		MLR		
	comp=N,345nm,13.

VORR Voronezh 29.63 130 *e*P P 21 36 11.7 +2.8
VORR pmax pmax
comp=Z,6.0nm,0.6s
JAVC Velka Javorina 29.74 158 *e*P P 21 36 12.3 +2.3
BLKN Baker Lake 29.84 300 P 21 36 09.4 -1.3
KUQ Kuujjuuaa 29.93 270 P P 21 36 10.7 -0.9
KUQ IAmb IAmb 21 36 19.5
comp=Z,14nm,1.4s
SMOL Smolenice 30.06 159 *e*P P 21 36 15.2 +2.4
SMOL pmax pmax
comp=Z,6.0nm,0.6s
VSR Storozhevoye 30.06 130 *e*P P 21 36 10.4 -2.4
VSR pmax pmax
comp=Z,10.0nm,0.7s
MODS Modra-Piesok 30.19 159 *e*P P 21 36 16.4 +2.4
MODS pmax pmax
comp=Z,141nm,2.5s
MODS Modra-Piesok 30.19 159 *e*P P 21 36 16.4 +2.4
VORD Divnogorie 30.33 130 *e*P P 21 36 12.8 -2.3
VORD pmax pmax
comp=Z,6.0nm,0.8s
BELG Belogornoye 30.40 119 *i* P P 21 36 16.2 +0.5
BELG pmax pmax
comp=Z,6.0nm,1.4s
VRH Novokhopyorsk 30.50 127 *e*P P 21 36 10.6 -6.0
VRH pmax pmax
comp=Z,7.0nm,0.8s
MOA Molln 30.50 163 *e*P P 21 36 18.3 +1.5
comp=Z,2.4nm,0.7s
CONA Conrad Observa 30.53 161 *i* P P 21 36 19.0 +1.9
comp=Z,5.6nm,0.7s
BIOA Bad Ischl, Aus 30.62 164 *e*P P 21 36 19.7 +1.8
comp=Z,3.7nm,1.1s
RETA Reutte 30.68 168 *i* pP pP 21 36 21.9 +2.9
comp=Z,8.7nm,1.3s
BRIU Brid 30.73 152 P P 21 36 20.9 +2.2
RONA Rosalia, Austr 30.79 160 *i* pP pP 21 36 21.6 +1.7
comp=Z,8.0nm,0.7s,SNR=7.3
LESA Schwarzleotal 30.84 165 *i* P P 21 36 21.6 +1.9
comp=Z,5.4nm,1.3s
MOTA Moosalm 30.84 167 *e*pP pP 21 36 21.8 +1.3
comp=Z,11nm,1.3s
DAVA Damuels 30.84 169 *e*pP pP 21 36 22.1 +1.6
comp=Z,7.4nm,1.2s
PSZ Piszkesteto 30.85 156 ⇓P P 21 36 22.2 +2.3
PSZ Piszkesteto 30.85 156 P 21 36 20.3 +0.4
PSZ Piszkesteto 30.85 156 P P 21 36 20.3 +0.4
PSZ pmax pmax
comp=Z,21nm,1.3s
WATA Walderalm 30.87 167 *i* pP pP 21 36 22.6 +1.8
comp=Z,12nm,1.8s
WTTA Wattenberg 30.94 167 *e*pP pP 21 36 23.4 +2.0
comp=Z,8.6nm,1.3s
SQTA Sankt Quirin 30.97 167 *i* P P 21 36 21.1 +0.1
comp=Z,2.7nm,1.1s
FETA Feichten 31.14 168 *e*P P 21 36 22.9 +0.3
comp=Z,4.6nm,1.3s
ARSA Arzberg 31.18 162 *e*P P 21 36 23.9 +1.2
comp=Z,5.9nm,1.3s
KBA Koelnbreinsper 31.22 164 *e*P P 21 36 24.0 +0.8
comp=Z,5.8nm,1.3s
DAVOX Davos/Dischmat 31.35 169 LR LR 21 49 58.3
comp=Z,155nm,18.2s,baz=41,slow=38
MPLH Magyarpolny 31.41 159 P P 21 36 26.7 +2.0
comp=Z,25nm,0.9s
ABTA Abfaltersbach 31.50 166 *e*P P 21 36 26.6 +1.0
comp=Z,8.5nm,1.5s
FUORN Ofenpass-Fuorn 31.52 169 P P 21 36 28.1 +2.0
FUORN IAmb IAmb 21 36 36.8
comp=Z,10nm,1.5s
SORM Soroca 31.53 145 ⇓P P 21 36 24.3 -1.4
SORM Soroca 31.53 145 ⇓P P 21 36 24.3 -1.4
INK Inuvik 31.64 330 LR LR 21 51 37.2
comp=Z,99nm,18.1s,baz=320,slow=41
INK Inuvik 31.64 330 P 21 36 24.5 -2.0
INK IAmb IAmb 21 36 36.1
comp=Z,7.3nm,1.1s
INK Inuvik 31.64 330 P P 21 36 24.5 -2.0
INK pmax pmax
comp=Z,7.0nm,1.2s
BUR08 Bucovina Ar. S 31.65 149 P 21 36 28.1 +1.1
BUR08 IAmb IAmb 21 36 39.0
comp=Z,8.7nm,1.1s
BURAR Bucovina Array 31.68 149 ⇓P P 21 36 28.7 +1.5
BURAR Bucovina Array 31.68 149 P 21 36 28.6 +1.5
BURAR Bucovina Array 31.68 149 ⇓P P 21 36 28.7 +1.5
MYKA Terra Mystica 31.68 164 *e*P P 21 36 28.5 +1.3
comp=Z,11nm,1.2s
SOKA Soboth 31.72 162 *e*P P 21 36 29.4 +1.9
comp=Z,7.4nm,1.0s
B20K Meade River 31.81 346 P P 21 36 29.0 +1.0
OBKA Obir 31.86 163 *i* pP pP 21 36 31.1 +1.7
comp=Z,10nm,1.0s
MESR Meseseni 31.90 152 ⇑P P 21 36 39.4 +10
E29M Blow River 32.00 333 P P 21 36 31.4 +1.7
E29M IAmb IAmb 21 36 39.5
comp=Z,8.5nm,1.2s
STAL STALIGIAL 32.00 165 P P 21 36 31.3 +1.3
STAL IAmb IAmb 21 36 34.7
comp=Z,9.9nm,1.3s
BEHE Becsehely 32.05 160 P P 21 36 31.9 +1.6
BEHE IAmb IAmb 21 36 40.9
comp=Z,5.8nm,0.7s
CTI Castel Tesino 32.16 167 P P 21 36 32.4 +1.0
CTI Castel Tesino 32.16 167 P P 21 36 32.4 +1.0
CTI pmax pmax
comp=Z,18nm,1.3s
DRGR 32.23 152 ⇑P P 21 36 33.4 +1.4
DRGR 32.23 152 ⇑P P 21 36 33.4 +1.4
SABO M.te Sabotino 32.33 164 P 21 36 33.8 +1.0
MARR Marisel-Cluj 32.39 152 ⇑P P 21 36 35.1 +1.7
MORH Mrgy, Hungar 32.44 158 ⇓P P 21 36 35.8 +2.0
SCHQ Schefferville 32.64 266 P P 21 36 35.4 0.0
comp=Z,1.4nm,0.4s,baz=24,slow=7.3,SNR=8.3
SCHQ LR LR 21 49 28.6
comp=Z,167nm,19.6s,baz=31,slow=36
comp=Z,1.4nm,0.4s
SCHQ Schefferville 32.64 266 P P 21 36 35.4 0.0
SCHQ IAmb IAmb 21 36 43.2
comp=Z,8.7nm,1.3s
TESR Tescani 32.93 148 ⇓P P 21 36 39.4 +1.4
F28M Old Crow 32.94 334 P 21 36 38.2 +0.3
G31M Satah River 33.05 330 P P 21 36 40.3 +1.4
G31M IAmb IAmb 21 36 48.6
comp=Z,11nm,1.2s
ONER Baraj Valea Uz 33.07 148 ⇓P P 21 36 41.5 +2.2
BZS Buzias 33.29 154 ⇑P P 21 36 43.1 +1.9
PURM Purcari 33.30 143 ⇑P P 21 36 33.4 -7.8
TURR Turia 33.31 148 ⇓P P 21 36 43.8 +2.4
DOPR Dopca 33.32 149 ⇑P P 21 36 43.1 +1.5
C18K Utukok River 33.35 349 P 21 36 41.8 +0.2
C18K IAmb IAmb 21 36 45.4
comp=Z,10nm,0.9s
GHRR 33.46 147 ⇓P P 21 36 44.8 +2.1
GHRR 33.46 147 P P 21 36 44.8 +2.1
BMAR Burnt Mountain 33.53 337 P 21 36 43.8 +0.6
COVR Voineasa-Covas 33.53 148 ⇑P P 21 36 45.3 +1.9
VRI Vrincioaia 33.57 148 ⇓P P 21 36 45.5 +1.8
VRI Vrincioaia 33.57 148 ⇓P P 21 36 45.5 +1.8
PLOR Plostina 33.58 148 ⇓P P 21 36 45.8 +2.0
PLOR Plostina 33.58 148 ⇓P P 21 36 45.8 +2.0
GZR Gura Zlata 33.62 153 ⇑P P 21 36 46.1 +1.9
GZR Gura Zlata 33.62 153 ⇑P P 21 36 46.1 +1.9
LOT Lotru 33.67 151 ⇓P P 21 36 46.2 +1.5
BLY Banja Luka 33.79 160 ⇑P P 21 36 48.0 +2.4
VOIR 33.81 150 ⇓P P 21 36 48.2 +2.3
VOIR 33.81 150 ⇓P P 21 36 48.2 +2.3
ARR Arges 33.84 150 ⇑P P 21 36 47.9 +1.8
MLR Muntele Rosu 33.85 149 LR LR 21 50 26.5
comp=Z,324nm,18.7s,baz=267,slow=36
MLR Muntele Rosu 33.85 149 ⇑P P 21 36 51.2 +4.9
MLR Muntele Rosu 33.85 149 P P 21 36 47.4 +1.1
MLR IAmb IAmb 21 36 58.1
comp=Z,8.8nm,1.0s
MLR Muntele Rosu 33.85 149 P P 21 36 47.4 +1.1
MLR pmax pmax
comp=Z,9.0nm,1.0s
RDOG Red Dog Mine 34.02 350 P P 21 36 47.6 +0.3
RDOG IAmb IAmb 21 36 50.7
comp=Z,12nm,1.1s
BILL Bilibino 34.03 10 P P 21 36 47.9 +0.5
BILL IAmb IAmb 21 36 57.1
comp=Z,13nm,1.3s
BILL Bilibino 34.03 10 *i* P P 21 36 44.9 -2.6
BILL pmax pmax
comp=Z,9.0nm,1.1s
HERR Herculane 34.10 153 ⇑P P 21 36 49.5 +1.3
MDVR Moldovita 34.13 154 ⇓P P 21 36 50.7 +2.1
AKTO Aktyubinsk 34.27 109 LR LR 21 52 49.6
comp=Z,117nm,19.0s,baz=332,slow=40
BORK Borovoye 34.35 95 *ce*P P 21 36 51.2 +0.8
BORK pmax pmax
comp=Z,10.0nm,2.5s
BVAR Borovoye Array 34.39 95 P P 21 36 51.6 +0.9
comp=Z,1.8nm,0.7s,baz=331,slow=9.6,SNR=8.6
BVAR PcP PcP 21 39 26.8 +0.8
comp=Z,0.5nm,0.7s,baz=0.0,slow=2.9,SNR=1.2
BVAR LR LR 21 52 25.2
comp=Z,151nm,21.8s,baz=329,slow=39
comp=Z,1.8nm,0.7s
CFR Carcaliu 34.41 146 ⇑P P 21 36 52.0 +1.0
CFR Carcaliu 34.41 146 ⇑P P 21 36 52.0 +1.0
FCC Fort Churchill 34.60 294 P P 21 36 52.5 +0.1
FCC Fort Churchill 34.60 294 P P 21 36 52.5 +0.1
FCC pmax pmax
comp=Z,4.0nm,0.8s
YKA Yellowknife Ar 34.71 313 P P 21 36 54.8 +1.5
comp=Z,6.0nm,1.2s,baz=16,slow=9.5,SNR=24
YKA PcP PcP 21 39 28.0 +1.2
comp=Z,2.1nm,0.8s,baz=5.7,slow=3.3,SNR=17
YKA LR LR 21 51 26.8
comp=Z,161nm,18.2s,baz=344,slow=37
comp=Z,6.0nm,1.2s
YKA Yellowknife Ar 34.71 313 P P 21 36 53.9 +0.6
TPGR Topolog 34.77 146 ⇑P P 21 36 55.4 +1.3
MURB Monte Urbino 34.98 166 P P 21 36 58.0 +2.1
MURB IAmb IAmb 21 37 16.5
comp=Z,16nm,1.2s
I27K Kandik River 35.06 334 P P 21 36 56.8 +0.3
I27K IAmb IAmb 21 37 08.3
comp=Z,16nm,1.5s
G21K Allakaket 35.08 343 P P 21 36 57.2 +0.7
G21K IAmb IAmb 21 37 05.9
comp=Z,15nm,1.5s
TIRR Tirgusor 35.16 146 ⇓P P 21 36 58.7 +1.4
TIRR Tirgusor 35.16 146 P P 21 36 58.1 +0.7
TIRR IAmb IAmb 21 37 06.1
comp=Z,19nm,1.3s
TIRR Tirgusor 35.16 146 P P 21 36 58.1 +0.7
TIRR pmax pmax
comp=Z,19nm,1.3s
FDMO Fiordimonte 35.23 165 P 21 36 59.2 +1.1
FDMO IAmb IAmb 21 37 08.3
comp=Z,16nm,1.3s
CEST Esterri de Car 35.36 180 P P 21 37 01.4 +2.0
CEST IAmb IAmb 21 37 04.2
comp=Z,17nm,1.4s
IMAR Indian Mountai 35.62 343 P P 21 37 00.8 -0.4
AB31 Akbulak array 35.78 108 P 21 37 03.2 +0.5
ABKAR Akbulak array 35.78 108 P 21 37 02.8 +0.1
PLVB Pleven 35.79 151 ⇑P P 21 37 03.6 +0.7
PDG Podgorica 36.25 158 ⇓P P 21 37 08.2 +1.4
INTR Introdacqua 36.30 164 P P 21 37 08.6 +1.3
INTR IAmb IAmb 21 37 16.2
comp=Z,14nm,1.1s
COLA College 36.31 339 *i* P P 21 37 05.2 -1.8
COLA pmax pmax
comp=Z,14nm,1.5s
IL31 36.33 338 P P 21 37 07.2 0.0
IL31 IAmb IAmb 21 37 11.2
comp=Z,8.5nm,1.1s
ILAR Eielson Array 36.33 338 P P 21 37 09.8 +2.5
comp=Z,3.5nm,0.8s,baz=6.0,slow=7.2,SNR=42
ILAR PcP PcP 21 39 32.4 +0.9
comp=Z,1.9nm,0.7s,baz=338,slow=4.2,SNR=14
comp=Z,3.5nm,0.8s
ILAR Eielson Array 36.33 338 P P 21 37 07.6 +0.3
CCB Clear Creek Bu 36.53 338 P P 21 37 10.3 +1.4
ZAAQ Zalesovo Array 36.57 80 P P 21 37 09.2 -0.2
ZALV Zalesovo Beam 36.57 80 P P 21 37 11.3 +1.9
comp=Z,2.6nm,0.7s,baz=332,slow=8.1,SNR=15
ZALV PcP PcP 21 39 33.4 +1.1
comp=Z,0.5nm,0.5s,baz=329,slow=5.4,SNR=2.2
ZALV LR LR 21 54 26.5
comp=Z,81nm,18.1s,baz=322,slow=40
comp=Z,2.6nm,0.7s
ZALV Zalesovo Beam 36.57 80 P P 21 37 10.2 +0.9
YAK Yakutsk 36.84 38 P P 21 37 12.8 +1.3
comp=Z,6.5nm,0.4s,baz=309,slow=1.6,SNR=5.6
comp=Z,6.5nm,0.4s
YAK Yakutsk 36.84 38 P P 21 37 11.6 0.0
YAK IAmb IAmb 21 37 13.7
comp=Z,16nm,1.1s
YAK Yakutsk 36.84 38 *e*P P 21 37 12.6 +1.0
YAK *e* 21 38 37.5
YAK *e* 21 39 34.3
YAK *e*S S 21 42 57.5 +1.7
YAK *e*SS SnSn 21 45 25.5 -1.1
YAK *e* 21 47 30.7
YAK pmax pmax
comp=Z,16nm,1.3s
YAK pmax pmax
comp=N,8.0nm,1.4s
YAK pmax pmax
comp=E,5.0nm,1.8s
YAK pmax pmax
comp=Z,318nm,5.4s
YAK pmax pmax
comp=E,281nm,5.1s
YAK pmax pmax
comp=N,307nm,4.8s
YAK smax smax
comp=E,338nm,6.5s
YAK smax smax
comp=N,282nm,5.9s
DOT Dot Lake 37.20 335 P P 21 37 15.6 +0.8
DOT IAmb IAmb 21 37 25.1
comp=Z,13nm,1.3s
BCAR Beaver Creek A 37.57 334 P P 21 37 19.9 +2.0
KIV Kislovodsk 37.69 129 P P 21 37 20.2 +1.1
KIV IAmb IAmb 21 37 38.1
comp=Z,8.9nm,0.5s
KIV Kislovodsk 37.69 129 *e*P P 21 37 19.3 +0.2
KIV pmax pmax
comp=Z,7.0nm,1.0s
KBZ Khabaz 37.94 129 P P 21 37 22.8 +1.7
comp=Z,5.9nm,0.8s,baz=355,slow=3.1,SNR=17
comp=Z,5.9nm,0.8s
KBZ Khabaz 37.94 129 *ce*P P 21 37 20.5 -0.6
KBZ pmax pmax
comp=Z,9.0nm,0.9s
RDO Rodhopi 38.11 150 P P 21 37 22.8 +0.3
SOH Sokhos 38.21 153 P P 21 37 24.7 +1.2
SOH pmax pmax
comp=Z,12nm,1.4s
KURK Kurchatov 38.30 88 P 21 37 24.6 +0.5
KURK Kurchatov 38.30 88 *ce*P P 21 37 24.7 +0.6
KURK pmax pmax
comp=Z,24nm,1.7s
SEY Seymchan 38.33 21 *i* P P 21 37 21.5 -2.7
SEY pmax pmax
comp=Z,29nm,3.5s
BZK Bozkurt 38.33 140 P P 21 37 25.4 +1.0
ESDC Sonseca Array 38.36 187 P P 21 37 26.2 +1.4
comp=Z,1.4nm,0.8s,baz=0.1,slow=8.0,SNR=10
ESDC LR LR 21 51 42.7
comp=Z,156nm,18.3s,baz=209,slow=34
comp=Z,1.4nm,0.8s
KURBB Kurchatov Arra 38.37 88 P P 21 37 26.6 +1.9
comp=Z,3.7nm,0.6s,baz=337,slow=7.7,SNR=47
KURBB PcP PcP 21 39 38.6 +0.7
comp=Z,0.3nm,0.7s,baz=29,slow=2.1,SNR=2.2
KURBB LR LR 21 56 19.9
comp=Z,70nm,18.5s,baz=180,slow=41
comp=Z,3.7nm,0.6s
PAB San Pablo 38.50 187 P P 21 37 26.6 +0.7
PAB San Pablo 38.50 187 P P 21 37 26.6 +0.7
PAB pmax pmax
comp=Z,7.0nm,1.4s
TIP Timpagrande 39.30 161 P P 21 37 33.5 +0.8
TIP IAmb IAmb 21 37 43.6
comp=Z,16nm,1.2s
MDUB Mudurnu 39.43 144 P P 21 37 35.3 +1.5
MDUB IAmb IAmb 21 37 44.6
comp=Z,10nm,0.9s
MAK Makhachkala 39.47 124 *d* *i*P P 21 37 29.5 -4.5
MAK *e*S S 21 43 30.9 -5.1
MAK pmax pmax
comp=Z,61nm,1.1s
MAK MLR MLR
comp=Z,305nm,18.0s
BATG Bathurst New B 39.60 261 P P 21 37 35.6 +0.6
BATG IAmb IAmb 21 38 08.6
comp=Z,14nm,1.3s
AGG Agios Georgios 39.90 155 P P 21 37 38.1 +0.5
FFC Flin Flon 39.90 298 P P 21 37 38.1 +0.7
FFC Flin Flon 39.90 298 P P 21 37 38.1 +0.7
FFC pmax pmax
comp=Z,8.0nm,1.3s
MESJ Messejana 40.34 192 P P 21 37 41.3 +0.1
MESJ IAmb IAmb 21 37 48.2
comp=Z,18nm,1.3s
MESJ Messejana 40.34 192 P P 21 37 41.3 +0.1
MESJ pmax pmax
comp=Z,18nm,1.3s
BR106 Keskin Array S 40.47 141 P P 21 37 44.7 +2.3
comp=Z,35nmcomp=Z,4.0nm,1.1s
BR131 Keskin Array S 40.48 141 P 21 37 43.6 +1.1
BR131 Keskin Array S 40.48 141 P P 21 37 43.6 +1.1
BR131 pmax pmax
comp=Z,4.0nm,0.8s
BRTR Keskin Array B 40.48 141 P P 21 37 44.8 +2.3
comp=Z,3.0nm,0.7s,baz=345,slow=6.5,SNR=20
comp=Z,3.0nm,0.7s
BRTR Keskin Array B 40.48 141 P 21 37 44.0 +1.4
LMN Caledonia Moun 40.70 259 P P 21 37 44.6 +0.5
DLBC Dease Lake 40.79 323 LR LR 21 55 36.6
comp=Z,126nm,20.5s,baz=339,slow=38
AKT Akhty 40.95 124 *e*P P 21 37 47.9 +1.5
AKT *e* 21 39 20.7
AKT *e*PPP PPP 21 39 48.8
AKT pmax pmax
comp=Z,26nm,1.6s
MANT Manisa 41.06 147 P P 21 37 48.5 +1.0
MANT IAmb IAmb 21 37 57.6
comp=Z,11nm,1.1s
DGZ Jazzator, Alta 41.12 80 P P 21 37 48.4 +0.7
DGZ pmax pmax
comp=Z,16nm,3.4s
KOPT Kop Dagi 41.18 133 P P 21 37 49.5 +1.0
KOPT IAmb IAmb 21 38 00.3
comp=Z,19nm,1.4s
BNN Bunyan 41.64 139 P 21 37 53.6 +1.5
ITM Ithomi 41.69 155 P P 21 37 53.0 +0.7
ARPR Arapgir-MALATY 41.76 136 P P 21 37 53.6 +0.5
GGN Saint George 41.83 261 P P 21 37 54.5 +1.1
MOY Mondy 42.00 67 *e*P P 21 37 57.4 +2.5
MOY pmax pmax
comp=Z,26nm,1.8s
PKME Peaks-Kenny Pk 42.20 264 P P 21 37 57.7 +1.3
KNGR Kungurtug, Tuv 42.32 70 *i* P P 21 37 57.3 -0.2
KNGR pmax pmax
comp=Z,4.0nm,0.9s
KEST Kesra 42.35 171 P P 21 37 58.9 +1.0
comp=Z,3.7nm,0.8s,baz=2.3,slow=7.0,SNR=4.2
comp=Z,3.7nm,0.8s
KEST Kesra 42.35 171 P P 21 37 59.4 +1.5
MAKZ Makanchi 42.72 87 P P 21 38 02.0 +1.3
MAKZ Makanchi 42.72 87 P P 21 38 02.0 +1.3
MAKZ pmax pmax
comp=Z,8.0nm,1.3s
MK31 Makanchi Array 42.80 86 *ce*P P 21 38 00.9 -0.4
MKAR Makanchi Array 42.80 86 P P 21 38 03.2 +1.8
comp=Z,5.1nm,0.8s,baz=349,slow=6.8,SNR=49
MKAR PcP PcP 21 39 52.3 -0.1
comp=Z,0.3nm,0.6s,baz=346,slow=3.6,SNR=1.5
MKAR LR LR 21 59 20.9
comp=Z,77nm,18.2s,baz=320,slow=41
comp=Z,5.1nm,0.8s
MKAR Makanchi Array 42.80 86 P 21 38 02.0 +0.7
ULM Lac du Bonnet 42.98 291 P P 21 38 03.8 +1.1
comp=Z,2.5nm,0.7s,baz=16,slow=8.7,SNR=4.6
ULM LR LR 21 55 48.6
comp=Z,186nm,21.1s,baz=16,slow=36
comp=Z,2.5nm,0.7s
EPLO Experimental L 43.10 289 P P 21 38 03.9 +0.2
GAZ Gaziantep 43.48 138 P P 21 38 08.1 +1.0
GAZ IAmb IAmb 21 38 19.8
comp=Z,9.0nm,1.1s
KDAK Kodiak Island 43.69 340 LR LR 21 59 06.1
comp=Z,56nm,18.5s,baz=0.3,slow=40
KDAK Kodiak Island 43.69 340 P P 21 38 09.8 +1.4
KDAK Kodiak Island 43.69 340 P P 21 38 09.8 +1.4
KDAK pmax pmax
comp=Z,46nm,1.3s
KK31 Karatay Array 43.84 99 P P 21 38 11.1 +1.4
KK31 Karatay Array 43.84 99 P P 21 38 11.1 +1.4
KK31 pmax pmax
comp=Z,4.0nm,0.8s
KKAR Karatay Array 43.84 99 P 21 38 11.4 +1.7
KKAR Karatay Array 43.84 99 P P 21 38 11.4 +1.7
SADO Sadowa 44.76 273 LR LR 21 56 30.0
comp=Z,115nm,19.5s,baz=86,slow=36
FRU1 Bishkek 44.98 95 P P 21 38 19.4 +0.4
FRU1 IAmb IAmb 21 38 23.2
comp=Z,11nm,0.9s
FRU1 Bishkek 44.98 95 P P 21 38 19.4 +0.4
FRU1 pmax pmax
comp=Z,11nm,0.9s
AAK Ala-Archa 45.12 96 P P 21 38 23.2 +3.0
comp=Z,2.6nm,0.8s,baz=317,slow=1.9,SNR=15
AAK LR LR 22 00 22.5
comp=Z,102nm,19.1s,baz=335,slow=40
comp=Z,2.6nm,0.8s
AAK Ala-Archa 45.12 96 P 21 38 21.7 +1.5
AAK IAmb IAmb 21 38 31.8
comp=Z,11nm,1.4s
AAK Ala-Archa 45.12 96 P P 21 38 21.7 +1.5
AAK pmax pmax
comp=Z,11nm,1.4s
MD01 Midelt array s 45.17 188 P P 21 38 21.5 +0.9
BOOM Boomskoye usch 45.56 94 P P 21 38 24.5 +0.8
BOOM IAmb IAmb 21 38 27.9
comp=Z,8.1nm,0.7s
BOOM Boomskoye usch 45.56 94 P P 21 38 24.5 +0.8
BOOM pmax pmax
comp=Z,8.0nm,0.7s
KDJ Kajisay 46.17 93 P 21 38 30.2 +1.7
KDJ IAmb IAmb 21 38 31.7
comp=Z,5.2nm,0.8s
KDJ Kajisay 46.17 93 P P 21 38 30.2 +1.7
KDJ pmax pmax
comp=Z,5.0nm,0.8s
NRN Naryn 46.59 95 P P 21 38 31.7 -0.3
NRN IAmb IAmb 21 38 43.9
comp=Z,5.7nm,1.2s
NRN Naryn 46.59 95 P P 21 38 31.7 -0.3
NRN pmax pmax
comp=Z,6.0nm,1.2s
BBB Bella Bella 46.63 319 LR LR 21 58 33.5
comp=Z,147nm,18.9s,baz=352,slow=37
TARG Taragay, Kyrgy 46.69 93 P 21 38 34.3 +1.4
TARG IAmb IAmb 21 38 36.6
comp=Z,5.3nm,0.8s
TARG Taragay, Kyrgy 46.69 93 P P 21 38 34.3 +1.4
TARG pmax pmax
comp=Z,5.0nm,0.8s
SONM Songino Array 46.70 64 P P 21 38 33.7 +1.1
comp=Z,1.2nm,0.9s,baz=338,slow=8.2,SNR=9.8
SONM PcP PcP 21 40 06.7 +0.8
comp=Z,0.4nm,0.7s,baz=348,slow=2.6,SNR=3.6
SONM PP PP 21 40 23.3 +1.4
comp=Z,0.7nm,1.0s,baz=352,slow=8.7,SNR=2.6
comp=Z,1.2nm,0.9s
SONM Songino Array 46.70 64 P P 21 38 33.0 +0.5
SONM Songino Array 46.70 64 P P 21 38 33.0 +0.5
SONM pmax pmax
comp=Z,2.0nm,1.2s
WMQ Urumqi 46.77 82 *e*P P 21 38 36.1 +3.0
WMQ pmax pmax
comp=Z,12nm,1.1s
ULN Ulaanbaatar 46.79 63 P P 21 38 34.1 +0.8
ULN IAmb IAmb 21 38 36.0
comp=Z,6.4nm,0.8s
ULN Ulaanbaatar 46.79 63 P P 21 38 34.1 +0.8
ULN pmax pmax
comp=Z,6.0nm,0.8s
BTK Batken 46.82 100 P P 21 38 35.0 +1.4
BTK Batken 46.82 100 P P 21 38 35.0 +1.4
BTK pmax pmax
comp=Z,14nm,1.4s
MMAI Mount Meron Ar 47.32 141 P P 21 38 39.0 +1.5
comp=Z,2.2nm,0.7s,baz=341,slow=13,SNR=2.5
comp=Z,2.2nm,0.7s
WUS Wushi 47.49 92 P 21 38 39.7 +0.8
WUS IAmb IAmb 21 38 42.5
comp=Z,9.4nm,1.0s

DRK	**Karamyk**	**47.58**	**100**	P	**P**	**21 38 41.2**	**+1.5**
DRK	**Karamyk**	**47.58**	**100**	P	**P**	**21 38 41.2**	**+1.5**
DRK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GAR	**Garm**	**47.73**	**101**		**P**	**21 38 41.8**	**+1.1**
CHGR	**Chuyangaron**	**47.83**	**103**	P	**P**	**21 38 42.1**	**+0.7**
CHGR	**Chuyangaron**	**47.83**	**103**	P	**P**	**21 38 42.1**	**+0.7**
CHGR				pmax	pmax		
	comp=Z,24nm,1.5s						
SSPA	**Standing Stone**	**48.45**	**270**	P	**P**	**21 38 47.0**	**+1.0**
PETK	**Petropavlovsk-**	**48.47**	**19**	P	**P**	**21 38 48.1**	**+2.0**
	comp=Z,3.8nm,0.9s,baz=340,slow=12,SNR=1.7						
	comp=Z,3.8nm,0.9s						
SHAA	**Shahritus**	**48.67**	**104**	P	**P**	**21 38 49.9**	**+2.1**
SHAA				IAmb	IAmb	21 39 07.1	
	comp=Z,8.7nm,1.0s						
KSH2	**Kashi**	**48.69**	**96**	P	**P**	**21 38 51.0**	**+2.9**
KSH2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NEW	**Newport**	**48.78**	**309**	LR	LR	21 59 24.0	
	comp=Z,125nm,19.7s,baz=26,slow=36						
ECSD	**EROS Data Cent**	**49.37**	**289**		**P**	**21 38 54.2**	**+1.1**
ECSD				IAmb	IAmb	21 39 02.0	
	comp=Z,12nm,1.2s						
KLR	**Kul'**	**49.57**	**41**	*ce*P	**P**	**21 38 52.5**	**-2.0**
KLR				pmax	pmax		
	comp=Z,4.0nm,2.5s						
MCMT	**McKenzie Canyo**	**51.38**	**304**	P	**P**	**21 39 09.1**	**+0.5**
FXWY	**Fox Creek**	**52.21**	**302**	P	**P**	**21 39 16.1**	**+1.3**
BNX	**BinXian**	**52.34**	**46**	⇑P	**P**	**21 39 12.5**	**-2.9**
BNX				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BW06	**Boulder Array**	**52.79**	**300**		**P**	**21 39 20.1**	**+1.0**
BW06				IAmb	IAmb	21 39 28.5	
	comp=Z,8.4nm,1.3s						
PDAR	**Pinedale Array**	**52.79**	**300**	P	**P**	**21 39 19.3**	**+0.2**
	comp=Z,2.1nm,1.0s,baz=34,slow=5.6,SNR=8.9						
PDAR				LR	LR	22 02 41.9	
	comp=Z,85nm,18.6s,baz=1.0,slow=37						
	comp=Z,2.1nm,1.0s						
PDAR	**Pinedale Array**	**52.79**	**300**		**P**	**21 39 19.6**	**+0.5**
HLID	**Hailey**	**52.88**	**305**		**P**	**21 39 19.9**	**+0.2**
GTA2	**Gaotai**	**53.43**	**73**	P	**P**	**21 39 25.7**	**+2.0**
GTA2				pP	pwP	21 39 32.4	+4.0
GTA2				pmax	pmax		
	comp=Z,16nm,1.6s						
NIL	**Nilore**	**53.50**	**100**		**P**	**21 39 25.1**	**+0.9**
NIL				IAmb	IAmb	21 39 26.7	
	comp=Z,6.5nm,0.8s						
NIL	**Nilore**	**53.50**	**100**	P	**P**	**21 39 25.1**	**+0.9**
NIL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CN2	**Changchun**	**53.93**	**48**	*e*P	**P**	**21 39 28.7**	**+1.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC	**Hu-ho-hao-te**	**54.41**	**61**	*e*P	**P**	**21 39 30.2**	**-0.6**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
TKL	**Tuckaleechee C**	**54.48**	**274**	LR	LR	22 02 57.3	
	comp=Z,98nm,18.4s,baz=30,slow=36						
USRK	**Ussuriysk Ar.**	**54.52**	**42**	P	**P**	**21 39 33.0**	**+1.5**
	comp=Z,5.7nm,0.8s,baz=302,slow=7.9,SNR=4.8						
	comp=Z,5.7nm,0.8s						
USRK	**Ussuriysk Ar.**	**54.52**	**42**	P	**P**	**21 39 33.0**	**+1.5**
O20A	**White River Ci**	**55.09**	**298**		**P**	**21 39 36.9**	**+1.0**
TAM	**Tamanrasset**	**55.15**	**176**	P	**P**	**21 39 37.4**	**+1.0**
TAM	**Tamanrasset**	**55.15**	**176**	P	**P**	**21 39 37.4**	**+1.0**
TAM				pmax	pmax		
	comp=Z,11nm,0.4s						
BSUT	**Blindstream Ca**	**55.17**	**301**	P	**P**	**21 39 37.6**	**+0.9**
BSUT				IAmb	IAmb	21 39 40.6	
	comp=Z,5.0nm,1.0s						
GOMU	**GeErMu**	**55.59**	**78**	P	**P**	**21 39 40.9**	**+1.2**
GOMU				pmax	pmax		
	comp=Z,16nm,0.7s						
ELK	**Elko**	**55.76**	**305**	LR	LR	22 04 16.3	
	comp=Z,85nm,18.9s,baz=64,slow=37						
YBH	**Yreka Blue Hor**	**56.04**	**312**	LR	LR	22 04 20.7	
	comp=Z,8.3nm,18.1s,baz=27,slow=37						
SDCO	**Great Sand Dun**	**56.89**	**295**		**P**	**21 39 49.5**	**+0.6**
LZH	**Lanzhou**	**57.53**	**70**	*e*P	**P**	**21 39 55.0**	**+1.7**
LZH				pP	pwP	21 40 01.5	+3.6
LZH				pmax	pmax		
	comp=Z,13nm,1.6s						
LZDM	**Lanzhou Array**	**57.63**	**70**	P	**P**	**21 39 55.6**	**+1.5**
	comp=Z,0.9nm,0.3s,baz=320,slow=4.3,SNR=1.9						
	comp=Z,0.9nm,0.3s						
MVCO	**Mesa Verde**	**57.98**	**298**		**P**	**21 39 57.9**	**+1.4**
MVCO				IAmb	IAmb	21 40 06.3	
	comp=Z,7.4nm,0.9s						
RAYN	**Ar Rayn**	**58.13**	**131**	P	**P**	**21 39 58.1**	**+0.7**
RAYN				IAmb	IAmb	21 39 59.6	
	comp=Z,3.3nm,0.7s						
RAYN	**Ar Rayn**	**58.13**	**131**	P	**P**	**21 39 58.2**	**+0.7**
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
WMOK	**Wichita Mounta**	**58.48**	**288**	P	**P**	**21 40 00.3**	**+0.5**
WMOK				IAmb	IAmb	21 40 13.7	
	comp=Z,3.5nm,0.8s						
WMOK	**Wichita Mounta**	**58.48**	**288**	P	**P**	**21 40 00.3**	**+0.5**
WMOK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NVAR	**Mina Array Bea**	**58.54**	**307**	P	**P**	**21 40 01.8**	**+1.4**
	comp=Z,1.5nm,0.7s,baz=24,slow=5.0,SNR=7.1						
NVAR				LR	LR	22 05 34.9	
	comp=Z,79nm,20.6s,baz=80,slow=36						
	comp=Z,1.5nm,0.7s						
ANMO	**Albuquerque**	**59.79**	**295**	LR	LR	22 07 05.7	
	comp=Z,119nm,20.7s,baz=27,slow=37						
KSRS	**Korea Array**	**60.52**	**47**	P	**P**	**21 40 15.4**	**+1.6**
	comp=Z,2.0nm,0.8s,baz=349,slow=6.8,SNR=4.7						
	comp=Z,2.0nm,0.8s						
LSA	**Lhasa**	**61.10**	**84**	P	**P**	**21 40 19.6**	**+1.2**
LSA	**Lhasa**	**61.10**	**84**	P	**P**	**21 40 19.6**	**+1.2**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
LSA	**Lhasa**	**61.10**	**84**	P	**P**	**21 40 17.9**	**-0.5**
LSA				pmax	pmax		
	comp=Z,12nm,0.9s						
BRDY	**Brady**	**61.87**	**287**	P	**P**	**21 40 23.1**	**0.0**
BRDY				IAmb	IAmb	21 40 26.5	
	comp=Z,3.0nm,0.7s						
EVN	**Everest**	**61.87**	**88**	P	**P**	**21 40 24.4**	**+0.7**
MJAR	**Matsushiro Arr**	**62.90**	**38**	P	**P**	**21 40 31.4**	**+1.5**
	comp=Z,4.6nm,0.8s,baz=353,slow=5.8,SNR=8.5						
	comp=Z,4.6nm,0.8s						
PFO	**Pinyon Flats O**	**62.92**	**304**	LR	LR	22 11 26.9	
	comp=Z,60nm,20.1s,baz=8.0,slow=40						
NJ2	**Nanjing**	**64.29**	**57**	*e*P	**P**	**21 40 37.5**	**-1.5**
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
TX31	**Lajitas Ar. Si**	**64.69**	**291**	P	**P**	**21 40 42.8**	**+0.9**
TX31				IAmb	IAmb	21 40 44.0	
	comp=Z,4.6nm,0.8s						
TXAR	**Lajitas Array**	**64.69**	**291**	P	**P**	**21 40 42.9**	**+1.0**
	comp=Z,4.2nm,0.8s,baz=42,slow=5.1,SNR=35						
TXAR				LR	LR	22 09 31.0	
	comp=Z,174nm,18.8s,baz=22,slow=37						
	comp=Z,4.2nm,0.8s						
TXAR	**Lajitas Array**	**64.69**	**291**	P	**P**	**21 40 42.5**	**+0.7**
TORD	**Torodi Ar. Bea**	**64.71**	**180**	P	**P**	**21 40 42.8**	**+0.8**
	comp=Z,4.7nm,0.7s,baz=344,slow=5.5,SNR=23						
	comp=Z,4.7nm,0.7s						
TORD	**Torodi Ar. Bea**	**64.71**	**180**	P	**P**	**21 40 42.6**	**+0.7**
SHL	**Shillong**	**65.25**	**84**	P	**P**	**21 40 45.6**	**0.0**
SHL	**Shillong**	**65.25**	**84**	P	**P**	**21 40 45.6**	**0.0**
SHL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
PZH	**PanZhiHua**	**66.39**	**74**	P	**P**	**21 40 53.5**	**+0.6**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LPIG	**La Paz**	**71.06**	**296**	LR	LR	22 14 10.9	
	comp=Z,114nm,18.5s,baz=30,slow=37						
CHTO	**Chiang Mai**	**73.28**	**79**	P	**P**	**21 41 35.0**	**-0.2**
CHTO				IAmb	IAmb	21 41 36.7	
	comp=Z,5.4nm,0.9s						
CHTO	**Chiang Mai**	**73.28**	**79**	P	**P**	**21 41 35.0**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**73.62**	**79**	P	**P**	**21 41 38.1**	**+0.8**
	comp=Z,3.0nm,0.3s,baz=352,slow=6.0,SNR=19						
CMAR				LR	LR	22 19 18.3	
	comp=Z,38nm,18.4s,baz=165,slow=40						
	comp=Z,3.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**73.62**	**79**	P	**P**	**21 41 37.7**	**+0.5**
JTS	**Las Juntas de**	**79.29**	**269**	LR	LR	22 19 44.3	

	comp=Z,51nm,18.8s,baz=70,slow=38								
PALK	**Pallekele**	**80.63**	**99**	LR	LR	22 23 41.1			
	comp=Z,80nm,18.0s,baz=316,slow=40								
OTAV	**Otavalo**	**87.68**	**260**	P	**P**	**21 42 53.5**	**+0.5**		
OTAV	**Otavalo**	**87.68**	**260**	P	**P**	**21 42 53.5**	**+0.5**		
OTAV				pmax	pmax				
	comp=Z,10.0nm,1.5s								
WRA	**Warramunga Arr**	**117.81**	**51**	PKP	**PKPdf**	**21 48 49.9**	**-0.1**		
	comp=Z,0.6nm,0.7s,baz=339,slow=2.5,SNR=3.4								
ASAR	**Alice Springs**	**121.38**	**53**	PKP	**PKPdf**	**21 48 56.7**	**-0.1**		
	comp=Z,1.7nm,0.6s,baz=358,slow=2.0,SNR=23								
PLCA	**Paso Flores**	**125.88**	**243**	PKP	**PKPdf**	**21 49 05.2**	**+0.3**		
	comp=Z,2.2nm,1.1s,baz=313,slow=12,SNR=2.2								
NVL	**N'lazarevskaya**	**148.54**	**174**	*e*PKP2	**PKPbc**	**21 49 47.8**	**-1.0**		
NVL				*e*		21 53 22.4			
NVL				*e*PPP	PPP	21 56 41.5			
NVL				*e*SS	SS	22 12 34.5	+6.2		
NVL				SSS	SSS	22 18 10.9			
NVL				pmax	pmax				
	comp=Z,37nm,1.0s								
VNA2	**Neumayer--Watz**	**148.67**	**186**	⇑PKPdf	**PKiKP**	**21 49 50.1**	**-0.6**		
	comp=Z,4.8nm,0.7s,baz=0.6,slow=3.9								
SNAA	**Sanae**	**149.35**	**183**	⇓PKPdf	**PKiKP**	**21 49 52.5**	**+0.4**		
	comp=Z,188nm,1.0s								
SNAA	**Sanae**	**149.35**	**183**	PKPbc	**PKiKP**	**21 49 52.2**	**+0.1**		
	comp=Z,5.9nm,0.9s,baz=23,slow=2.5,SNR=6.6								
QSPA	**South Pole Qui**	**167.83**	**180**	PKPab	**PKPab**	**21 51 16.8**	**+1.0**		
	comp=Z,2.6nm,1.1s,baz=253,slow=2.8,SNR=3.6								

*IGIL **11** 21:37:30.4, 38.03N×8.59W, h6km, ML0.3*
INMG 11 21:37:30.3±1.1, 38.02N×8.58W, h11km±5km, ML0.9, 1C-1D, Error ellipse: s-maj=4.4km s-min=2.2km az=96.0, #DIST_RANGE: LOCAL #IPMA_REGION: E Santiago do Cacem, Portugal

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
MESJ	**Messejana**	**0.34**	**123**	*e*P	Pg	21 37 36.5		-0.6
MESJ				IAML		21 37 42.8		
	comp=E,2.7nm,0.1s							
MESJ	**Messejana**	**0.34**	**123**	⇓*e*Pg	Pg	21 37 36.5		-0.6
MESJ				*i* IAML		21 37 43.0		
MESJ				*i* IAML		21 37 43.2		
PTEO	**Sao Teotonio**	**0.49**	**194**	*e*Pg	Pg	21 37 39.5		-0.3
PTEO				*e*Sg	Sg	21 37 46.0		-0.4
PCVE	**Castro Verde**	**0.58**	**132**	⇑*e*Pg	Pg	21 37 40.6		-1.0
PCVE				*e*Sg	Sg	21 37 48.9		-0.2
PCVE				*i* IAML		21 37 49.4		
PCVE				*i* IAML		21 37 49.9		
PCVE				*i* IAML		21 37 51.3		
PARRA	**Arraiolos**	**0.90**	**28**	*e*P	Pg	21 37 46.6		-1.0
PARRA				*e*S	Sg	21 37 58.3		-1.0
PARRA				*i* IAML		21 38 00.1		
PARRA				*i* IAML		21 38 00.3		
PARRA				*i* IAML		21 38 00.5		
PMTG	**Montargil**	**1.08**	**15**	*e*P	Pb	21 37 49.8		-1.2
PMTG				*e*S	Sb	21 38 04.0		-1.1
PMTG				*i* IAML		21 38 04.4		
PMTG				*i* IAML		21 38 05.3		
PMTG				*i* IAML		21 38 06.4		
PESTR	**Estremoz**	**1.15**	**42**	*e*P	Pb	21 37 51.2		-0.9
PESTR				*e*S	Sb	21 38 06.2		-0.8
PMRV	**Marv??o**	**1.68**	**33**	*e*P	Pn	21 37 59.1		-0.6
PMRV				*e*S	Sn	21 38 18.2		-3.0

*CATAC **11** 21:43:22.3±0.2, 12.7°N±2.°×8.°8W±.°, h40km±13km, M3.7/35, MLv3.7/35, Error ellipse: s-maj=4.6km s-min=1.7km az=26.4, confirmed*
*SNET **11** 21:43:23.0±0.7, 12.46N×88.19W, h31km±5km, ML3.5, Presumed earthquake*
ISC 11 21:43:22.6±.2, 12.37N±0.05×88.20W±0.03, h36km±9km, n73, σ0.48/111, 14C-5D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
INTP	**Intipuca**	**0.83**	**10**	⇑*i*P	**Pn**	**21 43 37.3**		**-0.5**
INTP				*e*S	**Sn**	**21 43 48.1**		**-0.8**
CSGN	**Cosiguina Volc**	**0.86**	**46**	P	**Pn**	**21 43 38.6**		**+0.3**
CNCH	**Conchagua**	**0.96**	**22**	⇑P	**Pn**	**21 43 39.3**		**-0.3**
CNCH	**Conchagua**	**0.96**	**22**	⇑*i*P	**Pn**	**21 43 39.4**		**-0.3**
CNCH				*e*S	**Sn**	**21 43 52.7**		**+0.4**
LCND	**La Caada**	**0.98**	**18**	⇑P	**Pn**	**21 43 39.3**		**-0.5**
LCND	**La Caada**	**0.98**	**18**	⇑*i*P	**Pn**	**21 43 39.3**		**-0.5**
LCND				*e*S	**Sn**	**21 43 52.4**		**0.0**
LCY	**Lacayo**	**1.05**	**355**	⇑*i*P	**Pn**	**21 43 40.6**		**-0.2**
VSM	**San Miguel**	**1.05**	**356**	*e*P	**Pn**	**21 43 40.9**		**-0.1**
RANC	**El Ranchito**	**1.06**	**355**	⇓P	**Pn**	**21 43 40.7**		**-0.3**
RANC				S	**Sn**	**21 43 54.5**		**-0.1**
RANC	**El Ranchito**	**1.06**	**355**	*e*P	**Pn**	**21 43 40.8**		**-0.3**
BLLM	**Bellamira**	**1.06**	**358**	⇓*i*P	**Pn**	**21 43 40.8**		**-0.3**
CNRM	**Centro Naciona**	**1.09**	**1**	P	**Pn**	**21 43 40.9**		**-0.5**
CNRM				S	**Sn**	**21 43 55.4**		**+0.1**
PACA	**Pacayal**	**1.09**	**354**	⇑P	**Pn**	**21 43 41.3**		**-0.2**
PACA	**Pacayal**	**1.09**	**354**	⇑*i*P	**Pn**	**21 43 41.3**		**-0.2**
PACA				*e*S	**Sn**	**21 43 55.3**		**-0.2**
TECA	**Tecapa**	**1.15**	**345**	⇑*i*P	**Pn**	**21 43 42.1**		**-0.3**
TECA				*e*S	**Sn**	**21 43 56.7**		**-0.3**
CRIN	**San Cristobal**	**1.17**	**74**	⇓P	**Pn**	**21 43 42.9**		**+0.5**
CRIN				S	**Sn**	**21 43 58.1**		**+0.9**
PKGN	**Cerro Pekin**	**1.23**	**76**	⇓P	**Pn**	**21 43 43.0**		**-0.2**
PKGN				S	**Sn**	**21 43 59.1**		**+0.5**
TECO	**Alcaldia de Te**	**1.29**	**334**	P	**Pn**	**21 43 43.6**		**-0.4**
TECO				S	**Sn**	**21 43 59.1**		**-1.0**
TECO	**Alcaldia de Te**	**1.29**	**334**	*e*P	**Pn**	**21 43 43.6**		**-0.4**
QUEN	**Al S del Volca**	**1.33**	**80**	P	**Pn**	**21 43 44.4**		**-0.3**
TEL3	**Telica 3**	**1.34**	**81**	P	**Pn**	**21 43 44.4**		**-0.3**
TELN	**Telica**	**1.35**	**80**	P	**Pn**	**21 43 44.4**		**-0.6**
TELN				S	**Sn**	**21 44 02.8**		**+0.9**
HERN	**Volcan Telica**	**1.35**	**80**	P	**Pn**	**21 43 44.4**		**-0.7**
HERN				S	**Sn**	**21 44 01.9**		**+0.1**
PAON	**Al O del Volca**	**1.38**	**85**	P	**Pn**	**21 43 45.3**		**0.0**
PACN				S	**Sn**	**21 44 02.7**		**+0.4**
POLN	**Al Sur del Vol**	**1.38**	**78**	P	**Pn**	**21 43 45.3**		**0.0**
COEG	**Centro de Oper**	**1.41**	**332**	P	**Pn**	**21 43 45.4**		**-0.3**
COEG				S	**Sn**	**21 44 02.5**		**-0.6**
COEG	**Centro de Oper**	**1.41**	**332**	*e*P	**Pn**	**21 43 45.5**		**-0.2**
SCLA	**Alcaldia de Sa**	**1.42**	**339**	P	**Pn**	**21 43 46.1**		**+0.2**
SCLA				S	**Sn**	**21 44 03.5**		**+0.2**
SCLA	**Alcaldia de Sa**	**1.42**	**339**	⇑*e*P	**Pn**	**21 43 46.1**		**+0.2**
ROCN	**Rota Cerro Neg**	**1.43**	**84**	P	**Pn**	**21 43 44.4**		**-1.6**
ROCN				S	**Sn**	**21 44 03.2**		**-0.3**
CNGA	**Al SSO del Vol**	**1.47**	**85**	P	**Pn**	**21 43 46.1**		**-0.5**
CNGA				S	**Sn**	**21 44 04.5**		**-0.1**
CNGN	**Cerro Negro**	**1.47**	**85**	P	**Pn**	**21 43 46.0**		**-0.6**
MACN	**El Madrono**	**1.49**	**86**	P	**Pn**	**21 43 46.4**		**-0.5**
MACN				S	**Sn**	**21 44 05.1**		**0.0**
LFRS	**El Faro**	**1.50**	**326**	*e*P	**Pn**	**21 43 47.1**		**0.0**
PAVA	**Las Pavas**	**1.51**	**332**	P	**Pn**	**21 43 47.4**		**+0.1**
PAVA				S	**Sn**	**21 44 05.8**		**0.0**
PAVA	**Las Pavas**	**1.51**	**332**	*e*P	**Pn**	**21 43 47.8**		**+0.5**
LALI	**Alcalda de L**	**1.56**	**315**	S	**Sn**	**21 44 05.9**		**-0.8**
PANCS	**Alcalda de**	**1.56**	**322**	S	**Sn**	**21 44 07.0**		**+0.2**
LOMA	**Loma Larga**	**1.58**	**323**	*e*P	**Pn**	**21 43 48.2**		**0.0**
COPN	**Copaltepe**	**1.58**	**97**	⇓P	**Pn**	**21 43 47.4**		**-0.7**
MOMN	**Momotombo**	**1.62**	**89**	P	**Pn**	**21 43 48.3**		**-0.4**
MOMN				S	**Sn**	**21 44 07.5**		**-0.8**
SEMO	**Seminario San**	**1.66**	**323**	S	**Sn**	**21 44 09.5**		**+0.2**
MOM2	**El Cardon**	**1.68**	**88**	P	**Pn**	**21 43 49.0**		**-0.3**
MOM2				S	**Sn**	**21 44 09.7**		**+0.1**
P5NO	**Presa 5 de nov**	**1.69**	**341**	P	**Pn**	**21 43 49.5**		**-0.1**
P5NO				S	**Sn**	**21 44 09.9**		**-0.2**
P5NO	**Presa 5 de nov**	**1.69**	**341**	*e*P	**Pn**	**21 43 49.6**		**-0.1**
AESN	**El Sauce Leon**	**1.70**	**72**	P	**Pn**	**21 43 49.1**		**-0.6**
AESN				S	**Sn**	**21 44 09.8**		**-0.4**
PMON	**Piamonte**	**1.72**	**321**	P	**Pn**	**21 43 50.2**		**+0.2**
PMON				S	**Sn**	**21 44 10.8**		**0.0**
PMON	**Piamonte**	**1.72**	**321**	*e*P	**Pn**	**21 43 50.6**		**+0.5**
JAYA	**Jayaque - finc**	**1.76**	**316**	P	**Pn**	**21 43 50.3**		**-0.4**
JAYA				S	**Sn**	**21 44 11.1**		**-0.9**
JAYA	**Jayaque - finc**	**1.76**	**316**	*e*P	**Pn**	**21 43 50.4**		**-0.3**
SAPS	**Ciudad Sandino**	**1.76**	**96**	P	**Pn**	**21 43 50.3**		**-0.3**
SAPS				S	**Sn**	**21 44 11.1**		**-0.7**
APYN	**Apoyeque**	**1.81**	**94**	P	**Pn**	**21 43 51.3**		**0.0**
APYN				S	**Sn**	**21 44 13.1**		**+0.1**
TISN	**Laguna Tiscapa**	**1.90**	**97**	P	**Pn**	**21 43 52.3**		**-0.2**
TGUH	**Tegucigalpa,Un**	**1.90**	**28**	⇑P	**Pn**	**21 43 52.6**		**0.0**
TGUH				S	**Sn**	**21 44 15.7**		**+0.4**
LIMN	**Finca el Limon**	**1.91**	**69**	P	**Pn**	**21 43 52.7**		**0.0**
CEVE	**Cerro Verde**	**2.00**	**316**	S	**Sn**	**21 44 18.1**		**0.0**

MAS3	**Al N del Volca**	**2.01**	**100**	P	**Pn**	**21 43 53.5**		**-0.5**	
MAS3				S	**Sn**	**21 44 16.8**		**-1.0**	
YUSH	**Yuscaran**	**2.05**	**40**	⇑P	**Pn**	**21 43 54.4**		**-0.2**	
YUSH				S	**Sn**	**21 44 18.6**		**-0.4**	
UNIC	**Universidad Ca**	**2.07**	**321**	S	**Sn**	**21 44 19.7**		**+0.3**	
NANN	**Nandasmo**	**2.08**	**102**	P	**Pn**	**21 43 55.8**		**+0.9**	
NANN				S	**Sn**	**21 44 19.9**		**+0.4**	
OCON	**Estacion meteo**	**2.09**	**53**	P	**Pn**	**21 43 55.3**		**+0.2**	
OCON				S	**Sn**	**21 44 19.5**		**-0.5**	
NUBE	**Las Nubes**	**2.16**	**315**	P	**Pn**	**21 43 56.5**		**+0.2**	
NUBE				S	**Sn**	**21 44 21.2**		**-0.7**	
NUBE	**Las Nubes**	**2.16**	**315**	*e*P	**Pn**	**21 43 56.5**		**+0.2**	
RCFN	**Al S de San Ju**	**2.25**	**59**	P	**Pn**	**21 43 57.5**		**+0.1**	
RCFN				S	**Sn**	**21 44 23.9**		**-0.2**	
RCON	**San Juan de Ri**	**2.28**	**61**	P	**Pn**	**21 43 56.8**		**-1.0**	
RCON				S	**Sn**	**21 44 24.1**		**-0.6**	
MATN	**Matagalpa**	**2.29**	**76**	⇑P	**Pn**	**21 43 56.6**		**-1.3**	
MATN				S	**Sn**	**21 44 24.5**		**-0.4**	
RCVN	**Varillal2**	**2.29**	**58**	⇑P	**Pn**	**21 43 58.0**		**0.0**	
RCVN				S	**Sn**	**21 44 24.6**		**-0.5**	
FAME	**Alcaldia de Sa**	**2.29**	**310**	P	**Pn**	**21 43 57.6**		**-0.3**	
FAME				S	**Sn**	**21 44 24.3**		**-0.6**	
MTO3	**Montecristo**	**2.31**	**331**	P	**Pn**	**21 43 58.6**		**+0.3**	
ESQI	**Esquipulas**	**2.44**	**333**	P	**Pn**	**21 44 00.6**		**+0.6**	
BOAB	**BOACO BROADBAN**	**2.47**	**88**	P	**Pn**	**21 43 59.6**		**-0.7**	
JAPN	**Al SSO del Vol**	**2.61**	**109**	P	**Pn**	**21 44 02.6**		**+0.4**	
CONN	**Concepcion**	**2.64**	**107**	P	**Pn**	**21 44 02.3**		**-0.3**	

*IDC **11** 21:59:47.0±1.2, 19.79S×176.06E, h0km, mb4.0/7, mbtmp4.0/7, MS3.2/7, Error ellipse: s-maj=45.8km s-min=28.7km az=163.0*
ISC 11 21:59:52.9±1.1, 19.9S±0.3×176.0E±0.2, h35km, n14, σ1.913/9, mb4.1/7, MS3.2/7, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
HNR	**Honiara**	**18.66**	**301**	LR	LR	22 09 50.9		
	comp=Z,5.8nm,18.9s,baz=237,slow=32							
RAR	**Rarotonga**	**22.71**	**98**	LR	LR	22 11 40.5		
	comp=Z,62nm,20.8s,baz=264,slow=32							
CTA	**Charters Tower**	**27.96**	**264**	LR	LR	22 14 07.7		
	comp=Z,70nm,21.7s,baz=32,slow=31							
KRVT	**Keravat (AS076**	**28.02**	**300**	LR	LR	22 17 44.0		
	comp=Z,7.3nm,18.1s,baz=45,slow=38							
STKA	**Stephens Creek**	**33.07**	**242**	P	**P**	**22 06 26.9**		**+1.6**
	3.7nm,0.8s,baz=61,slow=10,SNR=4.3							
STKA				LR	LR	22 18 19.1		
	comp=Z,76nm,19.0s,baz=347,slow=34							
	3.7nm,0.8s							
WRA	**Warramunga Arr**	**39.12**	**263**	P	**P**	**22 07 15.9**		**-1.3**
	0.3nm,0.7s,baz=98,slow=8.0,SNR=2.2							
	0.3nm,0.7s							
ASAR	**Alice Springs**	**39.20**	**257**	P	**P**	**22 07 16.9**		**-1.0**
	0.8nm,0.8s,baz=82,slow=8.8,SNR=8.3							
ASAR				PcP	**PcP**	**22 09 26.9**		**0.0**
	0.3nm,0.7s,baz=96,slow=3.6,SNR=3.0							
ASAR				LR	LR	22 22 27.4		
	comp=Z,73nm,18.6s,baz=140,slow=35							
	0.8nm,0.8s							
GUMO	**Guam**	**45.21**	**315**	LR	LR	22 25 07.0		
	comp=Z,28nm,21.4s,baz=76,slow=34							
FITZ	**Fitzroy Crossi**	**47.53**	**263**	P	**P**	**22 08 24.7**		**-0.5**
	5.4nm,1.1s,baz=107,slow=8.3,SNR=3.7							
	5.4nm,1.1s							
JOW	**Kunigami**	**

*DJA **11** 22:12:51.3±0.8, 7°S±2°×12°8E±°, h12km±6km, M4.8/27, mB5.5/7, mb4.9/18, MLv4.6/27, Mw(mB)4.9/7*
*IDC **11** 22:12:51.5±1.5, 7°44S×128°09E, h147km±14km, mb3.7/14, mbtmp4.2/16, MS2.8/1, Error ellipse: s-maj=15.2km s-min=10.5km az=91.0*
*NEIC **11** 22:12:52.5±1.6, 7°46S±0°07×128°16E±0°06, h154km±6km, mb4.3/20, Error ellipse: s-maj=11.6km s-min=7.5km az=144.0*
ISC 11 22:12:50.7±0.4, 7°52S±0°04×128°16E±0°04, h142km, n94, σ1$92/104, mb4.0/23, 1C-1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**3.15**	**99**	Pn	**Pn**	**22 13 41.8**	**+2.1**
SAUI				Sn	**Sn**	**22 14 20.1**	**+2.5**
SAUI	**Saumlaki**	**3.15**	**99**	P	**Pn**	**22 13 41.8**	**+2.1**
SAUI				S	**Sn**	**22 14 20.9**	**+3.3**
BNDI	**Bandanaira**	**3.44**	**30**	P	**Pn**	**22 13 45.1**	**+1.5**
AAI	**Ambon**	**3.80**	**1**	P	**Pn**	**22 13 50.3**	**+2.0**
KRAI	**Karang Ratu**	**4.18**	**3**	P	**Pn**	**22 13 57.1**	**+3.9**
NLAI	**Namlea**	**4.38**	**346**	P	**Pn**	**22 13 57.2**	**+1.4**
SOEI	**Soe**	**4.44**	**240**	P	**Pn**	**22 13 59.3**	**+2.5**
SOEI	**Soe**	**4.44**	**240**	S	**Sn**	**22 14 50.6**	**+2.5**
SOEI	**Soe**	**4.44**	**240**		**Pn**	**22 13 59.3**	**+2.5**
SOEI	**Soe**	**4.44**	**240**	P	**Pn**	**22 13 59.3**	**+2.5**
SOEI				S	**Sn**	**22 14 51.1**	**+3.0**
BATI	**Baumata**	**5.18**	**239**	P	**Pn**	**22 14 08.5**	**+2.0**
	367nm,0.4s,baz=90,slow=5.3,SNR=50						
BATI				S	**Sn**	**22 15 05.8**	**+0.2**
	252nm,0.5s,baz=112,slow=23,SNR=11						
BATI				LR	LR	22 16 35.9	
	comp=Z,106nm,21.2s,baz=61,slow=43						
BATI	**Baumata**	**5.18**	**239**	P	**Pn**	**22 14 08.5**	**+2.0**
BATI				S	**Sn**	**22 15 07.6**	**+2.0**
DRS	**Darwin Rock St**	**5.58**	**151**	P	**Pn**	**22 14 13.6**	**+1.8**
DRS	**Darwin Rock St**	**5.58**	**151**	S	**Sn**	**22 15 13.5**	**-1.6**
MMRI	**Maumere**	**5.96**	**259**		**Pn**	**22 14 19.0**	**+2.0**
MMRI	**Maumere**	**5.96**	**259**	P	**Pn**	**22 14 19.9**	**+3.0**
	0.3nm2µm63nm,1.1s						
MTN	**Manton Dam**	**6.05**	**151**		**Pn**	**22 14 19.4**	**+1.3**
FAKI	**Fak Fak**	**6.12**	**42**	Pn	**Pn**	**22 14 19.2**	**+0.2**
FAKI	**Fak Fak**	**6.12**	**42**	P	**Pn**	**22 14 19.5**	**+0.5**
	0.2nm67nm,0.7s						
EDFI	**Ende, Flores**	**6.52**	**259**	P	**Pn**	**22 14 27.1**	**+2.7**
	0.1nm46nm,0.8s						
KMPI	**Kaimana, Papua**	**6.72**	**56**	P	**Pn**	**22 14 28.7**	**+1.7**
	156nm,0.7s						
SIJI	**Sorong**	**7.29**	**25**	P	**Pn**	**22 14 35.8**	**+1.0**
	35nm,0.4s,baz=199,slow=8.1,SNR=21						
SIJI				S	**Sn**	**22 15 54.6**	**-1.8**
	13nm,0.5s,baz=253,slow=17,SNR=4.9						
SIJI	**Sorong**	**7.29**	**25**	P	**Pn**	**22 14 36.7**	**+1.9**
	0.2nm1µm41nm,0.6s						
SWI	**Sorong**	**7.30**	**25**	P	**Pn**	**22 14 36.3**	**+1.5**
	0.2nm41nm,0.5s						
BSSI	**Bau Bau, Buton**	**7.73**	**280**	P	**Pn**	**22 14 43.5**	**+2.9**
	0.1nm38nm,0.8s						
WSI	**Waingapu**	**8.06**	**254**	P	**Pn**	**22 14 45.4**	**+0.4**
KNRA	**Kununurra**	**8.13**	**176**		**Pn**	**22 14 46.6**	**+0.6**
LBFI	**Labuhan Bajo,**	**8.24**	**263**	P	**Pn**	**22 14 49.5**	**+2.0**
RKPI	**Ransiki, Papua**	**8.46**	**45**	P	**Pn**	**22 14 52.5**	**+2.1**
MWPI	**Manokwari, Pap**	**8.79**	**42**	P	**Pn**	**22 14 57.8**	**+3.0**
PLAI	**Plampang**	**10.36**	**262**	P	**Pn**	**22 15 17.7**	**+2.0**
PLAI	**Plampang**	**10.36**	**262**	S	**Sn**	**22 17 13.3**	**+3.0**
FITZ	**Fitzroy Crossi**	**10.80**	**193**	P	**Pn**	**22 15 19.9**	**-1.6**
	11nm,0.3s,baz=32,slow=11,SNR=36						
FITZ				S	**Sn**	**22 17 13.9**	**-7.0**
	11nm,0.3s,baz=90,slow=20,SNR=6.4						
WB0	**Warramunga Arr**	**13.60**	**154**		**Pn**	**22 15 57.2**	**-0.8**
WRAB	**Tennant Creek**	**13.73**	**155**	P	**Pn**	**22 15 59.3**	**-0.3**
WRA	**Warramunga Arr**	**13.73**	**155**	P	**Pn**	**22 15 57.9**	**-1.8**
	8.9nm,0.7s,baz=322,slow=13,SNR=42						
WRA				S	Sn	22 18 22.3	-9.4
	12nm,0.5s,baz=318,slow=26,SNR=11						
WRA	**Warramunga Arr**	**13.73**	**155**		**Pn**	**22 15 57.6**	**-2.1**
JAGI	**Jajag, Banyuwa**	**13.90**	**265**		**P**	**22 16 04.5**	**-0.9**
MBWA	**Marble Bar**	**15.82**	**210**	P	**P**	**22 16 28.8**	**+2.1**
MBWA	**Marble Bar**	**15.82**	**210**	P	**Pn**	**22 16 27.3**	**+1.6**
MBWA				IAmb	IAmb	22 16 55.0	
	comp=Z,24nm,1.1s						
COEN	**Coen**	**16.08**	**115**	P	**P**	**22 16 31.5**	**+1.9**
COEN	**Coen**	**16.08**	**115**		**Pn**	**22 16 30.0**	**+1.1**
COEN				IAmb	IAmb	22 17 11.5	
	comp=Z,22nm,1.3s						
PSA00	**Pilbara Seismi**	**16.11**	**209**	P	**P**	**22 16 30.8**	**+0.9**
PSA00	**Pilbara Seismi**	**16.11**	**209**		**Pn**	**22 16 30.2**	**+0.9**
AS31	**Alice Springs**	**16.98**	**162**	P	**Pn**	**22 16 41.2**	**+1.3**
ASAR	**Alice Springs**	**16.98**	**162**	P	**Pn**	**22 16 41.0**	**+1.1**
	comp=Z,7.0nm,0.6s,baz=337,slow=10,SNR=91						
ASAR				S	**S**	**22 19 40.8**	**-8.5**
	comp=Z,3.7nm,0.7s,baz=345,slow=25,SNR=8.7						
QIS	**Mount Isa**	**17.06**	**141**	P	**Pn**	**22 16 42.8**	**+2.0**
KKM	**Kota Kinabalu**	**17.98**	**318**	P	**Pn**	**22 16 51.7**	**-0.3**
BBJI	**Bungbulang**	**20.33**	**269**	P	**P**	**22 17 15.2**	**-0.8**
BBJI				IAmb	IAmb	22 17 57.4	
	comp=Z,26nm,1.5s						
MEEK	**Meekatharra**	**21.07**	**204**	P	**P**	**22 17 27.0**	**+3.1**
CTA	**Charters Tower**	**21.54**	**127**	P	**P**	**22 17 30.4**	**+1.5**
	comp=Z,2.5nm,0.4s,baz=38,slow=9.8,SNR=1.6						
	comp=Z,2.5nm,0.4s						
CTAO	**Charters Tower**	**21.54**	**127**	P	**P**	**22 17 29.2**	**+0.3**
STKA	**Stephens Creek**	**27.28**	**154**	P	**P**	**22 18 22.9**	**+1.0**
	comp=Z,1.2nm,0.4s,baz=304,slow=9.4,SNR=3.5						
	comp=Z,1.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**38.69**	**312**	P	**P**	**22 20 00.6**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=144,slow=6.7,SNR=4.6						
	comp=Z,0.5nm,0.4s						
KSRS	**Korea Array**	**44.73**	**360**	P	**P**	**22 20 50.1**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=179,slow=9.0,SNR=5.1						
	comp=Z,1.6nm,0.6s						
XAN	**Xi'an**	**45.17**	**337**	⇓P	**P**	**22 20 52.5**	**-1.0**
XAN				pmax	pmax		
	comp=Z,11nm,0.6s						
HNS	**HongShan**	**46.42**	**345**	⇑P	**P**	**22 21 02.2**	**-0.9**
HNS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LZDM	**Lanzhou Array**	**48.98**	**334**	P	**P**	**22 21 22.9**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=212,slow=14,SNR=1.2						
	comp=Z,0.7nm,0.3s						
LSA	**Lhasa**	**51.33**	**318**	P	**P**	**22 21 41.4**	**+0.1**
LSA				IAmb	IAmb	22 21 42.6	
	comp=Z,4.9nm,0.7s						
LSA	**Lhasa**	**51.33**	**318**	P	**P**	**22 21 38.7**	**-2.6**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
USRK	**Ussuriysk Ar.**	**51.59**	**4**	P	**P**	**22 21 41.3**	**-1.1**
	comp=Z,1.2nm,0.4s,baz=177,slow=7.6,SNR=4.3						
	comp=Z,1.2nm,0.4s						
EVN	**Everest**	**53.28**	**313**	P	**P**	**22 21 55.3**	**-0.6**
EVN				IAmb	IAmb	22 21 56.5	
	comp=Z,6.0nm,0.8s						
GTA2	**Gaotai**	**53.65**	**333**	*e*P	**P**	**22 21 58.0**	**+0.2**
GTA2				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ULN	**Ulaanbaatar**	**58.21**	**343**	P	**P**	**22 22 30.2**	**+0.1**
ULN				IAmb	IAmb	22 22 31.2	
	comp=Z,5.1nm,1.1s						
SONM	**Songino Array**	**58.37**	**343**	P	**P**	**22 22 31.6**	**+0.4**
	comp=Z,2.5nm,0.8s,baz=170,slow=7.9,SNR=17						
SONM				PcP	**PcP**	**22 23 19.8**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=138,slow=4.8,SNR=1.6						
	comp=Z,2.5nm,0.8s						
SONM	**Songino Array**	**58.37**	**343**	P	**P**	**22 22 31.7**	**+0.4**
SONM				IAmb	IAmb	22 22 32.4	
	comp=Z,3.5nm,1.1s						
MKAR	**Makanchi Array**	**67.67**	**328**	P	**P**	**22 23 32.0**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=116,slow=8.7,SNR=20						
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**67.67**	**328**	P	**P**	**22 23 31.8**	**-0.7**
KDJ	**Kajisay**	**67.82**	**321**	P	**P**	**22 23 33.4**	**-0.4**
BOOM	**Boomskoye usch**	**68.78**	**321**	P	**P**	**22 23 39.3**	**-0.5**
ZAA0	**Zalesovo Array**	**71.25**	**335**	P	**P**	**22 23 53.3**	**-1.0**
ZAA0				IAmb	IAmb	22 23 54.0	
	comp=Z,2.1nm,0.6s						
ZALV	**Zalesovo Beam**	**71.25**	**335**	P	**P**	**22 23 53.5**	**-0.8**
	comp=Z,2.0nm,0.5s,baz=146,slow=5.3,SNR=9.3						
	comp=Z,2.0nm,0.5s						
ZALV	**Zalesovo Beam**	**71.25**	**335**	P	**P**	**22 23 53.2**	**-1.1**
KURBB	**Kurchatov Arra**	**72.00**	**329**	P	**P**	**22 23 58.5**	**-0.5**
	comp=Z,1.9nm,0.6s,baz=129,slow=4.8,SNR=27						
	comp=Z,1.9nm,0.6s						
KURK	**Kurchatov**	**72.02**	**329**	P	**P**	**22 23 58.4**	**-0.6**
KURK				IAmb	IAmb	22 23 59.9	
	comp=Z,6.6nm,1.1s						
VNDA	**Vanda**	**72.17**	**173**	P	**P**	**22 24 00.2**	**+0.8**
	comp=Z,2.9nm,1.0s,baz=315,slow=2.9,SNR=2.6						
	comp=Z,2.9nm,1.0s						
KKAR	**Karatay Array**	**72.53**	**320**	P	**P**	**22 24 02.1**	**-0.2**
BVAR	**Borovoye Array**	**77.53**	**328**	P	**P**	**22 24 30.2**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=115,slow=10.0,SNR=3.2						
	comp=Z,0.8nm,0.5s						
NRIK	**Noril'sk**	**81.62**	**346**	P	**P**	**22 24 52.5**	**0.0**
	comp=Z,2.1nm,0.7s,baz=126,slow=4.1,SNR=4.0						
	comp=Z,2.1nm,0.7s						
NRIK	**Noril'sk**	**81.62**	**346**	P	**P**	**22 24 52.5**	**0.0**
ABKAR	**Akbulak array**	**81.78**	**322**	P	**P**	**22 24 52.8**	**-0.9**
QSPA	**South Pole Qui**	**82.47**	**180**	P	**P**	**22 24 57.6**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=283,slow=3.2,SNR=5.9						
	comp=Z,1.0nm,0.6s						
QSPA	**South Pole Qui**	**82.47**	**180**	P	**P**	**22 24 57.1**	**-0.1**
ARTI	**Arti**	**85.26**	**328**	P	**P**	**22 25 10.2**	**-1.1**
L16K	**Owhat River**	**88.35**	**27**	P	**P**	**22 25 25.2**	**-1.0**
L16K				IAmb	IAmb	22 25 53.5	
	comp=Z,5.7nm,1.5s						
BELA	**Belgrano 2**	**94.20**	**184**	P	**P**	**22 25 53.2**	**+0.1**
BMAR	**Burnt Mountain**	**95.83**	**23**	P	**P**	**22 25 59.0**	**-1.7**
PDAR	**Pinedale Array**	**118.55**	**45**	PKP	**PKPdf**	**22 31 20.7**	**-1.7**
	comp=Z,0.1nm,0.5s,baz=292,slow=1.5,SNR=2.0						
TXAR	**Lajitas Array**	**126.76**	**59**	PKP	**PKPdf**	**22 31 37.9**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=197,slow=3.9,SNR=4.0						
TXAR	**Lajitas Array**	**126.76**	**59**	PKPdf	**PKPdf**	**22 31 38.2**	**-0.1**
TORD	**Torodi Ar. Bea**	**127.11**	**281**	PKP	**PKPdf**	**22 31 38.2**	**-1.0**
	comp=Z,0.6nm,0.9s,baz=62,slow=3.5,SNR=5.7						
CPUP	**Villa Florida**	**145.94**	**171**	PKPbc	**PKPdf**	**22 32 14.4**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=163,slow=2.5,SNR=4.7						
LPAZ	**La Paz**	**151.38**	**146**	PKPbc	**PKPbc**	**22 32 29.9**	**+0.3**
	comp=Z,1.4nm,0.4s,baz=201,slow=1.2,SNR=6.2						
LPAZ				PKPab	**PKPab**	**22 32 39.1**	**+1.1**
	comp=Z,2.5nm,0.6s,baz=186,slow=3.5,SNR=9.7						
LPAZ	**La Paz**	**151.38**	**146**		**PKPbc**	**22 32 28.7**	**-0.8**

*IDC **11** 22:45:06.7±0.6, 54°56N×164°35E, h0km, mb3.8/23, mbtmp3.8/26, ML3.7/3, MS3.2/8, Error ellipse: s-maj=19.7km s-min=12.3km az=158.0*
*KRSC **11** 22:45:07.1±1.3, 54°45N×164°23E, h42km±33km, Ml4.4*
*NEIC **11** 22:45:07.8±1.4, 54°5N±0°1×164°3E±0°1, h10km±1km, mb4.2/23, Error ellipse: s-maj=22.7km s-min=11.1km az=169.0*
*MOS **11** 22:45:09.9±1.1, 54°48N×164°31E, h43km, mb4.6/6, Error ellipse: s-maj=9.5km s-min=6.6km az=143.0*
ISC 11 22:45:08.8±0.5, 54°49N±0°05×164°38E±0°04, h17km, n126, σ1$57/150, mb4.0/35, MS3.3/7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**1.17**	**52**	PN	**Pn**	**22 45 29.5**	**-0.8**
BKI				S	**Sb**	**22 45 43.6**	**-1.7**
BKI	**Bering**	**1.17**	**52**	*e*P	**Pn**	**22 45 29.5**	**-0.8**
BKI				*e*S	**Sb**	**22 45 43.6**	**-1.7**
KBTR	**Krutoberegovo**	**1.94**	**333**	PN	**Pn**	**22 45 38.8**	**-2.1**
KBTR				S	**Sn**	**22 46 01.7**	**-3.2**
KBTR	**Krutoberegovo**	**1.94**	**333**	*e*P	**Pn**	**22 45 38.9**	**-2.1**
KBTR				*e*S	**Sn**	**22 46 01.8**	**-3.2**
KBG	**Krutoberegovo**	**2.01**	**332**	*e*S	**Sn**	**22 46 04.3**	**-2.4**
TUMD	**Tumrok D**	**2.41**	**289**	PN	**Pn**	**22 45 47.2**	**-0.2**
TUMD				S	**Sn**	**22 46 15.2**	**-1.4**
TUMD	**Tumrok D**	**2.41**	**289**	*e*P	**Pn**	**22 45 47.3**	**-0.2**
TUMD				*e*S	**Sn**	**22 46 15.2**	**-1.4**
BZGR	**Bezymyannyi-Gr**	**2.56**	**306**	PN	**Pn**	**22 45 49.9**	**+0.3**
BZGR	**Bezymyannyi-Gr**	**2.56**	**306**	*e*P	**Pn**	**22 45 49.9**	**+0.3**
KII	**Karymskiy**	**2.93**	**263**	PN	**Pn**	**22 45 54.1**	**-0.5**
KII				S	**Sn**	**22 46 26.1**	**-3.3**
KII	**Karymskiy**	**2.93**	**263**	*e*P	**Pn**	**22 45 54.1**	**-0.5**
KII				*e*S	**Sn**	**22 46 26.1**	**-3.3**
SPN	**Mys Shipunski**	**2.94**	**243**	*e*S	**Sn**	**22 46 25.7**	**-3.8**
NLC	**Nalytchevo**	**3.26**	**248**	*e*S	**Sn**	**22 46 33.7**	**-3.8**
SDLR	**Sedlovina**	**3.47**	**252**	PN	**Pn**	**22 46 01.4**	**-0.7**
SDLR				S	**Sn**	**22 46 41.0**	**-1.8**
SDLR	**Sedlovina**	**3.47**	**252**	*e*P	**Pn**	**22 46 01.4**	**-0.7**
SDLR				*e*S	**Sn**	**22 46 41.1**	**-1.8**
SMAR	**Somma**	**3.52**	**252**	PN	**Pn**	**22 46 03.0**	**+0.1**
SMAR				S	**Sn**	**22 46 41.7**	**-2.6**
SMAR	**Somma**	**3.52**	**252**	*e*P	**Pn**	**22 46 03.0**	**+0.1**
SMAR				*e*S	**Sn**	**22 46 41.7**	**-2.6**
UGLR	**Uglovaya**	**3.53**	**251**	PN	**Pn**	**22 46 02.7**	**-0.2**
UGLR				S	**Sn**	**22 46 41.2**	**-3.1**
UGLR	**Uglovaya**	**3.53**	**251**	*e*P	**Pn**	**22 46 02.7**	**-0.2**
UGLR				*e*S	**Sn**	**22 46 41.3**	**-3.1**
KRER	**Koryakskii**	**3.54**	**253**	PN	**Pn**	**22 46 02.8**	**-0.3**
KRER				S	**Sn**	**22 46 42.3**	**-2.3**
KRER	**Koryakskii**	**3.54**	**253**	*e*P	**Pn**	**22 46 02.9**	**-0.3**
KRER				*e*S	**Sn**	**22 46 42.3**	**-2.3**
ESO	**Esso**	**3.56**	**296**	PN	**Pn**	**22 46 02.6**	**-0.6**
ESO	**Esso**	**3.56**	**296**	*e*P	**Pn**	**22 46 02.7**	**-0.6**
KRX	**Arik**	**3.57**	**254**	PN	**Pn**	**22 46 03.3**	**-0.2**
KRX				S	**Sn**	**22 46 41.9**	**-3.5**
KRX	**Arik**	**3.57**	**254**	*e*P	**Pn**	**22 46 03.4**	**-0.2**
KRX				*e*S	**Sn**	**22 46 42.0**	**-3.5**
KOK	**Koryaka**	**3.60**	**253**	PN	**Pn**	**22 46 03.8**	**-0.1**
KOK				S	**Sn**	**22 46 44.2**	**-1.9**
KOK	**Koryaka**	**3.60**	**253**	*e*P	**Pn**	**22 46 03.8**	**-0.1**
KOK				*e*S	**Sn**	**22 46 44.3**	**-1.9**
DALK	**Dalny**	**3.64**	**249**	PN	**Pn**	**22 46 03.2**	**-1.2**
DALK	**Dalny**	**3.64**	**249**	*e*P	**Pn**	**22 46 03.2**	**-1.2**
DALK				*e*S	**Sn**	**22 46 43.2**	**-3.8**
PET	**Petropavlovsk**	**3.70**	**249**	Pn	**Pn**	**22 46 04.5**	**-0.7**
PET				Sn	**Sn**	**22 46 44.2**	**-4.1**
PET	**Petropavlovsk**	**3.70**	**249**	*e*PN	**Pn**	**22 46 04.1**	**-1.1**
INSR	**Institute**	**3.71**	**250**	*e*S	**Sn**	**22 46 45.8**	**-2.8**
GNL	**Ganaly**	**3.87**	**261**	PN	**Pn**	**22 46 08.1**	**+0.5**
GNL				S	**Sn**	**22 46 51.2**	**-1.5**
GNL	**Ganaly**	**3.87**	**261**	*e*P	**Pn**	**22 46 08.2**	**+0.5**
GNL				*e*S	**Sn**	**22 46 51.3**	**-1.5**
RUS	**Russkaya**	**4.07**	**242**	PN	**Pn**	**22 46 09.9**	**-0.3**
RUS	**Russkaya**	**4.07**	**242**	*e*P	**Pn**	**22 46 09.9**	**-0.3**
RUS				*e*S	**Sn**	**22 46 53.6**	**-3.8**
KRMR	**Karymshinskiy**	**4.07**	**248**	PN	**Pn**	**22 46 10.4**	**+0.2**
KRMR	**Karymshinskiy**	**4.07**	**248**	*e*P	**Pn**	**22 46 10.5**	**+0.2**
KRMR				*e*S	**Sn**	**22 46 54.3**	**-3.1**
PEA0B	**Petropavlovsk-**	**4.20**	**253**	Pn	**Pn**	**22 46 11.7**	**-0.3**
PEA0B	**Petropavlovsk-**	**4.20**	**253**	PN	**Pn**	**22 46 11.9**	**-0.1**
PEA0B				S	**Sn**	**22 46 59.2**	**-1.4**
PETK	**Petropavlovsk-**	**4.20**	**253**	Pn	**Pn**	**22 46 12.3**	**+0.3**
	8.1nm,0.3s,baz=68,slow=20,SNR=80						
PETK				Sn	**Sn**	**22 46 58.4**	**-2.2**
	9.2nm,0.3s,baz=64,slow=23,SNR=2.5						
	12nm,0.5s						
PETK	**Petropavlovsk-**	**4.20**	**253**		**Pn**	**22 46 11.6**	**-0.4**
MTVR	**Mutnovka**	**4.21**	**244**	PN	**Pn**	**22 46 12.2**	**-0.1**
MTVR	**Mutnovka**	**4.21**	**244**	*e*P	**Pn**	**22 46 12.2**	**-0.1**
MTVR				*e*S	**Sn**	**22 46 57.2**	**-4.0**
GRL	**Gorelyy**	**4.23**	**245**	PN	**Pn**	**22 46 13.0**	**+0.4**
GRL				S	**Sn**	**22 46 59.9**	**-1.7**
GRL	**Gorelyy**	**4.23**	**245**	*e*P	**Pn**	**22 46 13.0**	**+0.4**
GRL				*e*S	**Sn**	**22 46 60.0**	**-1.7**
ASAK	**Asacha**	**4.41**	**244**	PN	**Pn**	**22 46 15.4**	**+0.4**
ASAK	**Asacha**	**4.41**	**244**	*e*P	**Pn**	**22 46 15.5**	**+0.4**
ASAK				*e*S	**Sn**	**22 47 04.0**	**-2.0**
APC	**Apacha**	**4.57**	**253**	PN	**Pn**	**22 46 18.5**	**+1.5**
APC	**Apacha**	**4.57**	**253**	*e*P	**Pn**	**22 46 18.5**	**+1.5**
SHEM	**Shemya Is, Ala**	**6.05**	**103**	Pn	**Pn**	**22 46 37.5**	**+0.1**
	3.2nm,0.3s,baz=291,slow=22,SNR=1.4						
SHEM				Sn	**Sn**	**22 47 40.5**	**-5.7**
	2.6nm,0.3s,baz=241,slow=19,SNR=2.1						
	40nm,0.8s						
SMY	**Shemya**	**6.05**	**103**	Pn	**Pn**	**22 46 37.1**	**-0.3**
SMY	**Shemya**	**6.05**	**103**	PN	**Pn**	**22 46 37.1**	**-0.3**
MA2	**Magadan**	**8.99**	**310**	LR	LR	22 50 46.8	
	comp=Z,70nm,19.8s,baz=226,slow=38						
JKA	**Kamikawa-asahi**	**17.52**	**243**	Pn	**Pn**	**22 49 10.3**	**-1.8**
JKA				IAmb	IAmb	22 49 35.6	
	comp=Z,36nm,1.5s						
ASAJ	**Asahikawa**	**17.52**	**243**	P	**P**	**22 49 13.3**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=52,slow=8.1,SNR=4.8						
	comp=Z,4.3nm,0.6s						
F15K	**North Star Dit**	**18.85**	**41**	P	**Pn**	**22 49 29.3**	**+1.0**
KLR	**Kul'dur**	**20.70**	**269**	LR	LR	22 59 23.2	
	comp=Z,42nm,18.1s,baz=286,slow=41						
E18K	**Tukpahlearik C**	**20.98**	**38**	P	**P**	**22 49 51.6**	**+0.7**
C18K	**Utukok River**	**21.25**	**35**	P	**P**	**22 49 54.2**	**+0.3**
C19K	**Lookout Ridge**	**21.97**	**34**	P	**P**	**22 50 02.2**	**+0.7**
E19K	**Redstone River**	**22.23**	**39**	P	**P**	**22 50 05.3**	**+1.1**
E19K				IAmb	IAmb	22 50 18.2	
	comp=Z,4.3nm,1.0s						
TIXI	**Tiksi**	**22.96**	**332**		**P**	**22 50 12.4**	**+0.5**
TIXI				IAmb	IAmb	22 50 24.3	
	comp=Z,11nm,1.1s						
TIXI	**Tiksi**	**22.96**	**332**	P	**P**	**22 50 12.4**	**+0.5**
TIXI				pmax	pmax		
	comp=Z,11nm,1.2s						
IMAR	**Indian Mountai**	**23.24**	**44**	P	**P**	**22 50 14.9**	**0.0**
STLK	**Strandline Lak**	**23.84**	**55**	P	**P**	**22 50 21.2**	**+0.4**
STLK				IAmb	IAmb	22 50 22.8	
	comp=Z,6.1nm,1.4s						
KDAK	**Kodiak Island**	**23.90**	**64**	P	**P**	**22 50 21.0**	**-0.3**
	comp=Z,13nm,1.0s,baz=273,slow=18,SNR=2.3						
KDAK				LR	LR	22 58 51.3	
	comp=Z,40nm,19.9s,baz=227,slow=34						
	comp=Z,13nm,1.0s						
KDAK	**Kodiak Island**	**23.90**	**64**	P	**P**	**22 50 19.8**	**-1.5**
KDAK	**Kodiak Island**	**23.90**	**64**	P	**P**	**22 50 19.8**	**-1.5**
KDAK				pmax	pmax		
	comp=Z,29nm,1.3s						
L22K	**Petersville**	**24.30**	**53**	P	**P**	**22 50 24.8**	**-0.3**
L22K				IAmb	IAmb	22 50 30.4	
	comp=Z,5.7nm,1.3s						
MLY	**Manley**	**24.38**	**47**	P	**P**	**22 50 25.8**	**0.0**
E22K	**Anaktuvuk Pass**	**24.39**	**39**	P	**P**	**22 50 25.9**	**0.0**
E22K				IAmb	IAmb	22 50 27.0	
	comp=Z,3.7nm,0.6s						
TRF	**Thorofare Moun**	**24.52**	**50**	P	**P**	**22 50 27.0**	**-0.2**
TRF				IAmb	IAmb	22 50 29.4	
	comp=Z,5.8nm,0.9s						
COLD	**Coldfoot**	**24.84**	**41**	P	**P**	**22 50 29.6**	**-0.2**
COLD				IAmb	IAmb	22 50 36.3	
	comp=Z,4.1nm,0.9s						
I23K	**Minto, Yukon-K**	**24.97**	**46**	P	**P**	**22 50 31.0**	**0.0**
I23K				IAmb	IAmb	22 50 33.4	
	comp=Z,5.0nm,1.0s						
MJAR	**Matsushiro Arr**	**25.42**	**236**	P	**P**	**22 50 35.7**	**+0.3**
	comp=Z,1.5nm,0.8s,baz=20,slow=9.8,SNR=5.5						
	comp=Z,1.5nm,0.8s						
CCB	**Clear Creek Bu**	**25.62**	**48**	P	**P**	**22 50 37.2**	**+0.4**
CCB				IAmb	IAmb	22 50 38.8	
	comp=Z,7.0nm,1.2s						
ILAR	**Eielson Array**	**26.01**	**47**	P	**P**	**22 50 39.6**	**-0.8**
	comp=Z,1.6nm,0.9s,baz=254,slow=8.4,SNR=12						
	comp=Z,1.6nm,0.9s						
ILAR	**Eielson Array**	**26.01**	**47**	P	**P**	**22 50 41.2**	**+0.7**
ILAR	**Eielson Array**	**26.01**	**47**	P	**P**	**22 50 41.2**	**+0.7**
BMAR	**Burnt Mountain**	**27.02**	**41**	P	**P**	**22 50 49.6**	**0.0**
BCAR	**Beaver Creek A**	**28.38**	**51**	P	**P**	**22 51 02.1**	**+0.3**
KSRS	**Korea Array**	**30.09**	**251**	P	**P**	**22 51 18.2**	**+1.1**
	comp=Z,0.5nm,0.4s,baz=50,slow=9.6,SNR=1.8						
KSRS				LR	LR	23 03 10.4	
	comp=Z,18nm,19.9s,baz=45,slow=36						
	comp=Z,0.5nm,0.4s						
INK	**Inuvik**	**31.19**	**39**	P	**P**	**22 51 27.3**	**+0.8**
	comp=Z,0.8nm,0.5s,baz=292

*INMG **11** 23:00:39.4±1.6,36.58N×7.91W,h26km±6km,ML1.8,Error ellipse: s-maj=3.8km s-min=2.7km az=59.0, #DIST_RANGE: LOCAL #IPMA_REGION: Golfo de Cadiz*
*SFS **11** 23:00:39.3,36.62N×7.87W,h26km,ML2.5/9,ML2.0/12, MLv1.8/12*
*IGIL **11** 23:00:40.0,36.66N×7.95W,h17km,ML1.5*

ISC 11 23:00:37.4±1.3,36.56N±0.04×7.89W±0.03,h58km±13km, n56,σ1§28/107,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PBDV	**Barranco-do-Ve**	**0.68**	**357**	Pg		**Pn**	**23 00 51.4**	**0.0**
PBDV				Sg		**Sn**	**23 01 00.1**	**-1.5**
PBDV	**Barranco-do-Ve**	**0.68**	**357**	*eP*		**Pn**	**23 00 51.4**	**0.0**
PBDV				*eS*		**Sn**	**23 01 00.3**	**-1.3**
PBDV				*i* IAML			23 01 03.8	
PBDV				*i* IAML			23 01 04.0	
PBDV				*i* IAML			23 01 05.9	
PVAQ	**Vaqueiros**	**0.85**	**9**	*eP*		**Pn**	**23 00 53.8**	**+0.3**
PVAQ				*eS*		**Sn**	**23 01 04.2**	**-1.1**
PVAQ				*i* IAML			23 01 04.3	
PVAQ				*i* IAML			23 01 04.6	
PVAQ				*i* IAML			23 01 05.0	
PVAQ	**Vaqueiros**	**0.85**	**9**	P		**Pn**	**23 00 54.8**	**+1.3**
PVAQ				S		**Sn**	**23 01 09.8**	**+4.5**
PFVI	**Vila Bisbo**	**0.95**	**308**	Pg		**Pn**	**23 00 55.0**	**+0.4**
PFVI				Sg		**Sn**	**23 01 06.7**	**-0.7**
PFVI	**Vila Bisbo**	**0.95**	**308**	*eP*		**Pn**	**23 00 55.1**	**+0.4**
PFVI				*eS*		**Sn**	**23 01 06.7**	**-0.7**
PFVI				*i* IAML			23 01 10.4	
PFVI				*i* IAML			23 01 18.8	
PFVI				*i* IAML			23 01 19.5	
PFVI	**Vila Bisbo**	**0.95**	**308**	P		**Pn**	**23 00 54.8**	**+0.1**
PFVI				S		**Sn**	**23 01 08.4**	**+1.0**
MORF	**Marmelete**	**0.97**	**321**	*eP*		**Pn**	**23 00 55.1**	**+0.2**
MORF	**Marmelete**	**0.97**	**321**	*eP*		**Pn**	**23 00 55.2**	**+0.2**
MORF				*eS*		**Sn**	**23 01 07.0**	**-0.9**
MORF				*i* IAML			23 01 12.6	
MORF				*i* IAML			23 01 13.1	
MORF				*i* IAML			23 01 13.8	
EGRO	**El Granado**	**1.03**	**18**	Pn		**Pn**	**23 00 56.4**	**+0.6**
EGRO				Sn		**Sn**	**23 01 07.9**	**-1.4**
EGRO	**El Granado**	**1.03**	**18**	Pn		**Pn**	**23 00 56.3**	**+0.6**
EGRO				Sn		**Sn**	**23 01 07.6**	**-1.6**
EGRO				*i* IVmb_Lg			23 01 11.5	
PCVE	**Castro Verde**	**1.08**	**354**	Pn		**Pn**	**23 00 56.9**	**+0.5**
PCVE				Sn		**Sn**	**23 01 10.0**	**-0.5**
PCVE	**Castro Verde**	**1.08**	**354**	*eP*		**Pn**	**23 00 57.2**	**+0.8**
PCVE				*eS*		**Sn**	**23 01 10.1**	**-0.4**
PCVE				*i* IAML			23 01 10.2	
PCVE				*i* IAML			23 01 10.5	
PCVE				*i* IAML			23 01 14.4	
PTEO	**Sao Teotonio**	**1.19**	**326**	*eP*		**Pn**	**23 00 58.8**	**+0.9**
PTEO				*eS*		**Sn**	**23 01 13.1**	**-0.1**
PTEO				*i* IAML			23 01 13.5	
PTEO				*i* IAML			23 01 19.4	
PTEO				*i* IAML			23 01 20.1	
MESJ	**Messejana**	**1.31**	**348**	*eP*		**Pn**	**23 01 00.2**	**+0.8**
MESJ				*eS*		**Sn**	**23 01 15.2**	**-0.7**
MESJ				IAML			23 01 17.6	
	comp=E,7.4nm,0.1s							
MESJ	**Messejana**	**1.31**	**348**	*eP*		**Pn**	**23 01 00.3**	**+0.8**
MESJ				*eS*		**Sn**	**23 01 15.8**	**-0.2**
MESJ				*i* IAML			23 01 25.6	
MESJ				*i* IAML			23 01 28.8	
MESJ				*i* IAML			23 01 29.2	
PBEJ	**Beja**	**1.47**	**1**	*eP*		**Pn**	**23 01 01.7**	**+0.1**
PBEJ				*eS*		**Sn**	**23 01 19.7**	**0.0**
PBEJ				*i* IAML			23 01 21.6	
EMIN	**Mina Concepcio**	**1.55**	**38**	Pn		**Pn**	**23 01 03.3**	**+0.6**
EMIN				Sn		**Sn**	**23 01 20.9**	**-0.9**
EMIN				*i* IVmb_Lg			23 01 24.2	
ESPR	**Espera**	**1.66**	**79**	Pn		**Pn**	**23 01 05.7**	**+1.5**
ESPR				Sn		**Sn**	**23 01 24.4**	**0.0**
ESPR	**Espera**	**1.66**	**79**	Pn		**Pn**	**23 01 05.7**	**+1.5**
ESPR				Sn		**Sn**	**23 01 24.5**	**0.0**
ESPR				*i* IVmb_Lg			23 01 25.8	
PBAR	**Barrancos**	**1.75**	**22**	Pn		**Pn**	**23 01 06.1**	**+0.6**
PBAR				Sn		**Sn**	**23 01 25.9**	**-0.7**
PBAR	**Barrancos**	**1.75**	**22**	*eP*		**Pn**	**23 01 06.2**	**+0.8**
PBAR				*eS*		**Sn**	**23 01 25.9**	**-0.7**
PBAR				*i* IAML			23 01 28.5	
PBAR				*i* IAML			23 01 29.1	
PBAR				*i* IAML			23 01 29.2	
EVO	**Evora**	**1.97**	**357**	Pn		**Pn**	**23 01 09.3**	**+0.9**
EVO				Sn		**Sn**	**23 01 30.7**	**-1.4**
EVO	**Evora**	**1.97**	**357**	*eP*		**Pn**	**23 01 09.5**	**+1.1**
EVO				*eS*		**Sn**	**23 01 32.0**	**-0.1**
EVO				*i* IAML			23 01 34.3	
EVO				*i* IAML			23 01 34.4	
EVO				*i* IAML			23 01 36.7	
MOE	**Montemor**	**2.00**	**349**	*eP*		**Pn**	**23 01 09.8**	**+1.1**
MOE				*eS*		**Sn**	**23 01 32.3**	**-0.3**
MOE				*i* IAML			23 01 34.4	
MOE				*i* IAML			23 01 35.2	
MOE				*i* IAML			23 01 35.9	
E1302	**La Puebla de C**	**2.19**	**74**	Pn		**Pn**	**23 01 13.1**	**+1.7**
E1302				Sn		**Sn**	**23 01 39.0**	**+1.4**
E1302				*i* IVmb_Lg			23 01 41.0	
PARRA	**Arraiolos**	**2.26**	**357**	*eP*		**Pn**	**23 01 13.2**	**+0.9**
PARRA				*eS*		**Sn**	**23 01 38.4**	**-0.6**
PARRA				*i* IAML			23 01 40.8	
PARRA				*i* IAML			23 01 41.7	
PARRA				*i* IAML			23 01 41.8	
PESTR	**Estremoz**	**2.32**	**6**	Pn		**Pn**	**23 01 14.9**	**+1.8**
PESTR				Sn		**Sn**	**23 01 40.2**	**-0.3**
PESTR	**Estremoz**	**2.32**	**6**	*eP*		**Pn**	**23 01 14.8**	**+1.6**
PESTR				*eS*		**Sn**	**23 01 39.8**	**-0.7**
ECAB	**El Cabril**	**2.48**	**52**	Pn		**Pn**	**23 01 16.8**	**+1.4**
ECAB				Sn		**Sn**	**23 01 42.3**	**-2.3**
ECAB	**El Cabril**	**2.48**	**52**	Pn		**Pn**	**23 01 16.4**	**+1.0**
ECAB				Sn		**Sn**	**23 01 42.7**	**-1.9**
ECAB				*i* IVmb_Lg			23 01 50.8	
PMTG	**Montargil**	**2.52**	**354**	*eP*		**Pn**	**23 01 16.8**	**+0.9**
PMTG				*eS*		**Sn**	**23 01 45.1**	**-0.4**
PMTG				*i* IAML			23 01 46.0	
PMTG				*i* IAML			23 01 46.3	
PMTG				*i* IAML			23 01 46.8	
PMAFR	**Mafra**	**2.64**	**336**	Pn		**Pn**	**23 01 18.8**	**+1.2**
PMAFR				Sn		**Sn**	**23 01 48.5**	**+0.2**
PMAFR	**Mafra**	**2.64**	**336**	*eP*		**Pn**	**23 01 18.8**	**+1.2**
PMAFR				*eS*		**Sn**	**23 01 48.0**	**-0.3**
PMRV	**Marv??o**	**2.89**	**8**	*eP*		**Pn**	**23 01 21.9**	**+0.8**
PMRV				*eS*		**Sn**	**23 01 54.0**	**-0.6**
PMRV				*i* IAML			23 01 54.9	
PMRV				*i* IAML			23 01 55.8	
PMRV				*i* IAML			23 01 55.8	
PSBE	**So Bento**	**3.04**	**347**	*eP*		**Pn**	**23 01 24.3**	**+1.3**
PSBE				*eS*		**Sn**	**23 01 57.1**	**-1.0**
PSBE				*i* IAML			23 02 09.4	
PSARD	**Sardoal**	**3.04**	**356**	*eP*		**Pn**	**23 01 24.2**	**+1.1**
PSARD				*eS*		**Sn**	**23 01 56.8**	**-1.6**
PSARD				*i* IAML			23 01 59.2	
PSARD				*i* IAML			23 01 59.5	
PSARD				*i* IAML			23 01 59.7	
EADA	**Adamuz**	**3.09**	**58**	Pn		**Pn**	**23 01 25.2**	**+1.5**
EADA				Sn		**Sn**	**23 01 58.5**	**-0.9**
EADA	**Adamuz**	**3.09**	**58**	Pn		**Pn**	**23 01 25.2**	**+1.5**
EADA				Sn		**Sn**	**23 01 57.4**	**-2.0**
EADA				*i* IVmb_Lg			23 02 02.7	
PCBR	**Castelo Branco**	**3.29**	**5**	*eS*		**Sn**	**23 02 02.9**	**-1.5**
PCBR				*i* IAML			23 02 04.4	
PCBR				*i* IAML			23 02 04.7	
PCBR				*i* IAML			23 02 04.9	
PCAS	**Casmilo, Conde**	**3.52**	**352**	*eP*		**Pn**	**23 01 31.1**	**+1.5**
PCAS				*eS*		**Sn**	**23 02 08.9**	**-1.1**
EPLA	**Plasencia**	**3.78**	**22**	Pn		**Pn**	**23 01 33.8**	**+0.7**
EPLA				Sn		**Sn**	**23 02 14.7**	**-1.6**
EPLA				*i* IVmb_Lg			23 02 17.7	
AKLM	**AKL**	**3.87**	**121**	P		**Pn**	**23 01 32.5**	**-1.9**
AKLM				S		**Sn**	**23 02 17.9**	**-0.7**
PSIM	**Granatula de C**	**3.98**	**54**	Pn		**Pn**	**23 01 37.2**	**+1.2**
PSIM				Sn		**Sn**	**23 02 20.2**	**-1.1**
EQES	**Quesada**	**4.04**	**71**	Pn		**Pn**	**23 01 39.1**	**+2.3**
EQES				Sn		**Sn**	**23 02 22.1**	**-0.8**
EQES				*i* IVmb_Lg			23 03 22.8	
PAB	**San Pablo**	**4.08**	**42**	Pn		**Pn**	**23 01 38.2**	**+0.8**
PAB				Sn		**Sn**	**23 02 21.1**	**-2.8**
PAB				*i* IVmb_Lg			23 03 28.7	
MD31	**MD31**	**4.49**	**144**	P		**Pn**	**23 01 43.5**	**+0.5**
MD31				S		**Sn**	**23 02 36.0**	**+2.0**
MDT	**Midelt**	**4.61**	**143**	P		**Pn**	**23 01 45.4**	**+0.8**
MDT				S		**Sn**	**23 02 36.5**	**-0.4**
MVO	**Moncorvo**	**4.65**	**8**	*eS*		**Sn**	**23 02 36.1**	**-1.6**
POLO	**Lamas de Olo**	**4.81**	**1**	*eP*		**Pn**	**23 01 48.2**	**+0.8**
POLO				*eS*		**Sn**	**23 02 40.6**	**-1.2**
TISM	**Timmit**	**4.97**	**166**	P		Pn	23 01 48.1	-1.4
TISM				S		**Sn**	**23 02 43.6**	**-2.0**
PCAB	**Cabril**	**5.15**	**359**	*eS*		**Sn**	**23 02 47.4**	**-2.6**
PCAB				*i* IAML			23 02 51.5	
PCAB				*i* IAML			23 02 53.4	
ELOB	**Lobios**	**5.30**	**359**	Pn		**Pn**	**23 01 55.1**	**+1.0**
ELOB				Sn		**Sn**	**23 02 50.8**	**-3.1**
ELOB				*i* IVmb_Lg			23 03 42.3	
PGAV	**Gavieira, Arco**	**5.41**	**357**	*eP*		**Pn**	**23 01 56.7**	**+1.2**
PGAV				*eS*		**Sn**	**23 02 56.2**	**-0.3**
ETOB	**Tobarra**	**5.45**	**66**	Pn		**Pn**	**23 01 57.8**	**+1.8**
ETOB				Sn		**Sn**	**23 02 55.4**	**-2.0**
ETOB				*i* IVmb_Lg			23 03 58.0	
OUZM	**OUZ**	**5.71**	**170**	P		**Pn**	**23 02 00.1**	**+0.3**
OUZM				S		**Sn**	**23 03 03.6**	**-0.5**

*IDC **11** 23:20:10.9±0.7,6.68N×72.88W,h164km±8km,mb3.3/6, mbtmp3.9/8,Error ellipse: s-maj=26.6km s-min=7.5km az=133.0*
*FUNV **11** 23:20:11.3,6.80N×73.16W,h164km,MW4.0,Presumed earthquake*
*RSNC **11** 23:20:12.2±0.0,7.1N±1.1×7.3W±.1,h149km±1km,M3.6, mB5.1,mb3.9,ML3.2,Mw(mB)4.4*

ISC 11 23:20:10.8±0.7,6.86N±0.03×73.13W±0.03,h155km±5km, n56,σ1§29/96,mb3.7/6,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BARC	**Barichara**	**0.27**	**191**	P		**Pn**	**23 20 32.3**	**+0.2**
BARC				S		**Sn**	**23 20 47.6**	**-0.8**
BRJC	**Barrancabermej**	**0.62**	**281**	P		**Pn**	**23 20 33.9**	**+0.6**
BRJC				S		**Sn**	**23 20 50.7**	**+0.2**
PAMC	**Pamplona, Colo**	**0.64**	**42**	P		**Pn**	**23 20 35.1**	**+1.0**
PAMC				S		**Sn**	**23 20 52.4**	**+0.6**
RUSC	**La Rusia**	**0.96**	**177**	P		**Pn**	**23 20 36.2**	**-0.1**
RUSC				S		**Sn**	**23 20 55.0**	**-0.8**
RUSC	**La Rusia**	**0.96**	**177**	*eP*		**Pn**	**23 20 36.2**	**-0.1**
RUSC				*eS*		**Sn**	**23 20 54.2**	**-1.6**
CAPV	**Capacho**	**1.29**	**39**	*eP*		**Pn**	**23 20 40.2**	**+1.3**
CAPV				*eS*		**Sn**	**23 21 01.5**	**+1.1**
PTBC	**PUERTO BERRIO,**	**1.35**	**257**	P		**Pn**	**23 20 38.7**	**-0.5**
PTBC				S		**Sn**	**23 21 00.0**	**-1.0**
OCAC	**Ocana**	**1.39**	**352**	P		**Pn**	**23 20 40.6**	**+0.9**
OCAC				S		**Sn**	**23 21 03.2**	**+1.2**
SPBC	**San Pablo de B**	**1.52**	**218**	P		**Pn**	**23 20 41.0**	**0.0**
SPBC				S		**Sn**	**23 21 03.6**	**-0.6**
NORC	**Norcasia**	**2.15**	**233**	P		**Pn**	**23 20 48.0**	**-0.1**
NORC				S		**Sn**	**23 21 15.5**	**-1.3**
CHIC	**Chingaza**	**2.29**	**195**	P		**Pn**	**23 20 50.2**	**+0.1**
CHIC				S		**Sn**	**23 21 19.9**	**-0.4**
ROSC	**El Rosal**	**2.33**	**211**	P		**Pn**	**23 20 52.2**	**+1.7**
	98nm,0.3s,baz=55,slow=16,SNR=80							
ROSC				S		**Sn**	**23 21 22.2**	**+1.2**
	662nm,0.4s,baz=325,slow=23,SNR=19							
ROSC	**El Rosal**	**2.33**	**211**	P		**Pn**	**23 20 51.8**	**+1.3**
ROSC				S		**Sn**	**23 21 22.1**	**+1.1**
HELC	**Santa Helena**	**2.47**	**255**	P		**Pn**	**23 20 52.9**	**+0.7**
HELC				S		**Sn**	**23 21 25.8**	**+1.8**
HELC	**Santa Helena**	**2.47**	**255**	*eP*		**Pn**	**23 20 52.6**	**+0.5**
HELC				*eS*		**Sn**	**23 21 21.9**	**-2.1**
CVER	**Cruz Verde, Cu**	**2.50**	**202**	P		**Pn**	**23 20 53.2**	**+0.5**
CVER				S		**Sn**	**23 21 25.3**	**+0.4**
UREC	**San Jos de Ur**	**2.54**	**291**	P		**Pn**	**23 20 52.1**	**-0.6**
UREC				S		**Sn**	**23 21 23.3**	**-1.7**
SOCV	**Socops**	**2.67**	**58**	*eP*		**Pn**	**23 20 55.1**	**+0.9**
SOCV				*eS*		**Sn**	**23 21 26.9**	**-0.9**
GUY2C	**Guyana, Caldas**	**2.75**	**234**	P		**Pn**	**23 20 57.1**	**+1.4**
GUY2C				S		**Sn**	**23 21 33.5**	**+3.2**
VILC	**Villavicencio,**	**2.78**	**192**	P		**Pn**	**23 20 55.4**	**-0.4**
VILC				S		**Sn**	**23 21 30.0**	**-0.6**
CBOC	**Ciudad Bolivar**	**3.03**	**251**	P		**Pn**	**23 20 59.9**	**+1.0**
CBOC				S		**Sn**	**23 21 37.0**	**+0.9**
DBBC	**Dabeiba**	**3.06**	**273**	P		**Pn**	**23 20 59.5**	**+0.3**
DBBC				S		**Sn**	**23 21 35.5**	**-1.1**
ARGC	**Ariguani, Magd**	**3.18**	**340**	P		**Pn**	**23 21 02.8**	**+2.2**
ARGC				S		**Sn**	**23 21 41.6**	**+2.3**
SDV	**Santo Domingo**	**3.19**	**51**	P		**Pn**	**23 21 02.0**	**+1.1**
	42nm,0.3s,baz=239,slow=12,SNR=79							
SDV				S		**Sn**	**23 21 39.2**	**-0.7**
	48nm,0.4s,baz=267,slow=17,SNR=16							
SDV	**Santo Domingo**	**3.19**	**51**	P		**Pn**	**23 21 01.9**	**+0.9**
SDV				S		**Sn**	**23 21 38.9**	**-1.0**
SDV	**Santo Domingo**	**3.19**	**51**	*eP*		**Pn**	**23 21 01.9**	**+0.9**
SDV				*eS*		**Sn**	**23 21 38.6**	**-1.3**
MCQV	**Machiques**	**3.23**	**11**	*eP*		**Pn**	**23 21 01.6**	**+0.3**
MCQV				*eS*		**Sn**	**23 21 38.7**	**-1.7**
APAC	**Apartado, Choc**	**3.57**	**287**	P		**Pn**	**23 21 06.0**	**+0.3**
APAC				S		**Sn**	**23 21 47.7**	**-0.6**
PRAC	**Prado**	**3.58**	**209**	P		**Pn**	**23 21 05.8**	**0.0**
PRAC				S		**Sn**	**23 21 48.1**	**-0.4**
ORTC	**Ortega, Tolima**	**3.61**	**216**	P		**Pn**	**23 21 06.5**	**+0.4**
ORTC				S		**Sn**	**23 21 49.8**	**+0.7**
SJCC	**San Jacinto, C**	**3.64**	**326**	P		**Pn**	**23 21 06.4**	**-0.1**
SJCC				S		**Sn**	**23 21 47.5**	**-2.4**
SJCC	**San Jacinto, C**	**3.64**	**326**	*eP*		**Pn**	**23 21 06.4**	**-0.1**
SJCC				*eS*		**Sn**	**23 21 46.9**	**-3.0**
PLMC	**San Jos del P**	**3.69**	**238**	P		**Pn**	**23 21 07.5**	**+0.3**
PLMC				S		**Sn**	**23 21 51.0**	**0.0**
URMC	**La Uribe, Meta**	**3.79**	**199**	P		**Pn**	**23 21 09.0**	**+0.4**
URMC				S		**Sn**	**23 21 52.7**	**-0.9**
YOTC	**Yotoco, Valle**	**4.29**	**228**	P		**Pn**	**23 21 14.7**	**-0.4**
SMRC	**Santa Marta, M**	**4.41**	**346**	P		**Pn**	**23 21 17.2**	**+0.6**
SMRC				S		**Sn**	**23 22 05.4**	**-2.5**
URIC	**Uribia, Colomb**	**4.94**	**13**	P		**Pn**	**23 21 22.7**	**-0.9**
URIC				S		**Sn**	**23 22 19.3**	**-1.1**
URIC	**Uribia, Colomb**	**4.94**	**13**	*eP*		**Pn**	**23 21 22.6**	**-0.9**
URIC				*eS*		**Sn**	**23 22 16.5**	**-3.9**
TEPV	**Terepaima**	**4.97**	**51**	*eP*		**Pn**	**23 21 23.4**	**-0.6**
JAMC	**Jamundi, Valle**	**5.05**	**224**	P		**Pn**	**23 21 25.6**	**+0.4**
	10nm,0.4s							
GARC	**Garzon, Huila**	**5.20**	**207**	P		**Pn**	**23 21 26.6**	**-0.6**
GARC				S		**Sn**	**23 22 22.7**	**-4.2**
MAPV	**Macapo**	**5.49**	**57**	*eP*		**Pn**	**23 21 30.8**	**0.0**
FLOC	**Florencia**	**5.81**	**206**	P		**Pn**	**23 21 34.8**	**-0.3**
	14nm,0.9s							
FLOC				S		**Sn**	**23 22 41.3**	**+0.2**
	14nm,0.9s							
BENV	**Beln**	**6.28**	**60**	*eP*		**Pn**	**23 21 40.6**	**-0.8**
GR1C	**Gorgona, Isla**	**6.31**	**233**	P		**Pn**	**23 21 40.7**	**-1.0**
BBAC	**Balboa, Cauca**	**6.32**	**221**	P		**Pn**	**23 21 42.9**	**+0.9**
BBAC				S		**Sn**	**23 22 52.4**	**-1.0**
TURV	**Turiamo**	**6.33**	**55**	*eP*		**Pn**	**23 21 41.2**	**-0.8**
CACV	**CAICARA DEL OR**	**6.58**	**83**	*eP*		Pn	23 21 50.3	+5.0
SGC2	**Sao Gabriel da**	**9.28**	**138**	P		**Pn**	**23 22 22.7**	**+1.4**
SGC2				S		**Sn**	**23 24 03.3**	**-1.1**
TXAR	**Lajitas Array**	**36.43**	**312**	P		**P**	**23 27 02.1**	**+1.3**
	0.7nm,1.0s,baz=128,slow=8.1,SNR=4.6							
	0.7nm,1.0s							
ULM	**Lac du Bonnet**	**47.25**	**340**	P		**P**	**23 28 28.8**	**+0.6**
	1.0nm,0.4s,baz=193,slow=7.0,SNR=3.3							
	1.0nm,0.4s							
PDAR	**Pinedale Array**	**48.04**	**324**	P		**P**	**23 28 35.8**	**+1.1**
	0.2nm,0.5s,baz=138,slow=9.1,SNR=1.9							
	0.2nm,0.5s							
SCHQ	**Schefferville**	**48.11**	**5**	P		**P**	**23 28 35.6**	**+0.9**
	1.2nm,0.7s,baz=193,slow=6.9,SNR=5.1							
	1.2nm,0.7s							
YKA	**Yellowknife Ar**	**63.23**	**340**	P		**P**	**23 30 23.1**	**+0.7**
	0.5nm,0.6s,baz=132,slow=6.2,SNR=12							
	0.5nm,0.6s							
DBIC	**Dimbokro**	**67.74**	**86**	P		**P**	**23 30 49.3**	**-3.0**
	5.7nm,1.1s,baz=255,slow=9.9,SNR=3.3							
	5.7nm,1.1s							
WRA	**Warramunga Arr**	**150.34**	**241**	PKPbc		**PKiKP**	**23 39 44.1**	**-1.3**
	0.2nm,0.5s,baz=108,slow=2.8,SNR=5.3							

*IDC **11** 23:45:47.5±0.9,55.32S×29.27W,h0km,mb3.8/3, mbtmp3.9/4,ML4.0/1,MS3.1/2,Error ellipse: s-maj=47.2km s-min=26.9km az=65.0*
*NEIC **11** 23:45:49.6±1.0,55.4S±0.1×29.6W±0.3,h10km±1km, mb4.4/13,Error ellipse: s-maj=25.8km s-min=14.4km az=64.0*

ISC 11 23:45:51.7±0.8,55.4S±0.1×29.6W±0.1,h28km,n30, σ0§63/24,mb4.4/8,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HOPE	**Hope Point**	**4.15**	**282**	Pn		**Pn**	**23 46 52.5**	**-0.5**
SNAA	**Sanae**	**19.92**	**155**	P		**P**	**23 50 20.4**	**-0.4**
	0.5nm,0.3s,baz=309,slow=10,SNR=2.4							
	2.6nm,0.7s							
SNAA	**Sanae**	**19.92**	**155**	P		**P**	**23 50 20.1**	**-0.7**
BELA	**Belgrano 2**	**22.67**	**183**	P		**P**	**23 50 51.2**	**+0.9**
QSPA	**South Pole Qui**	**34.88**	**180**	P		**P**	**23 52 40.6**	**+0.3**
	0.5nm,0.5s,baz=271,slow=1.4,SNR=1.4							
	0.5nm,0.5s							
QSPA	**South Pole Qui**	**34.88**	**180**	P		**P**	**23 52 40.3**	**0.0**
MT09	**Talagante**	**35.81**	**290**	P		**P**	**23 52 47.7**	**-1.0**
MT02	**Curacav**	**36.29**	**290**	P		**P**	**23 52 51.6**	**-0.9**
VA06	**Catapilco**	**36.91**	**291**	P		**P**	**23 52 57.6**	**-0.2**
CO03	**El Pedregal**	**37.94**	**293**	P		**P**	**23 53 06.9**	**+0.3**
CO03				IAmb		IAmb	23 53 30.6	
	comp=Z,12nm,1.4s							
CO01	**Juntas del Tor**	**38.31**	**295**	P		**P**	**23 53 10.4**	**+0.4**
CO01				IAmb		IAmb	23 53 13.4	
	comp=Z,4.1nm,0.8s							
AC05	**El Transito**	**39.32**	**295**	P		**P**	**23 53 16.9**	**-1.4**
AC05				IAmb		IAmb	23 53 18.9	
	comp=Z,18nm,1.5s							
PTLB	**Pontes e Lacer**	**45.88**	**318**	P		**P**	**23 54 11.8**	**+0.3**
PTLB				IAmb		IAmb	23 54 13.1	
	comp=Z,2.3nm,0.7s							
GO01	**Chusmiza**	**46.44**	**304**			**P**	**23 54 16.6**	**+0.2**
GO01				IAmb		IAmb	23 54 20.5	
	comp=Z,5.8nm,1.2s							
H10S2	**ASCENSION HYDR**	**47.78**	**20**	T		T	00 46 17.4	
	baz=190							
H10S3	**ASCENSION HYDR**	**47.78**	**20**	T		T	00 46 15.8	
	baz=30							
LPAZ	**La Paz**	**48.89**	**307**	P		**P**	**23 54 36.4**	**+0.8**
	comp=Z,2.0nm,0.4s,baz=90,slow=5.2,SNR=16							
LPAZ				LR		LR	00 16 24.7	
	comp=Z,19nm,20.1s,baz=164,slow=38							
	comp=Z,2.0nm,0.4s							
LPAZ	**La Paz**	**48.89**	**307**			**P**	**23 54 36.1**	**+0.5**
LPAZ				IAmb		IAmb	23 54 39.7	
	comp=Z,2.2nm,0.6s							
H10N1	**ASCENSION HYDR**	**48.90**	**20**	T		T	00 47 49.0	
	baz=195							
H10N3	**ASCENSION HYDR**	**48.90**	**20**	T		T	00 47 39.4	
	baz=195							
H10N2	**ASCENSION HYDR**	**48.91**	**20**	T		T	00 47 34.6	
	baz=195							
NNA	**Nana**	**56.74**	**301**	LR		LR	00 22 28.4	
	comp=Z,14nm,18.7s,baz=136,slow=39							
BOAV	**Boa Vista**	**62.93**	**325**	P		**P**	**23 56 16.1**	**+0.7**
BOAV				IAmb		IAmb	23 56 43.3	
	comp=Z,5.8nm,1.4s							
TORD	**Torodi Ar. Bea**	**73.16**	**32**	P		**P**	**23 57 19.1**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=189,slow=5.7,SNR=1.9							
	comp=Z,0.2nm,0.4s							
INK	**Inuvik**	**144.43**	**322**	PKP		**PKPab**	**00 05 22.1**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=128,slow=3.3,SNR=3.6							
ILAR	**Eielson Array**	**148.66**	**313**	PKPbc		**PKPbc**	**00 05 34.9**	**+0.3**
	comp=Z,1.5nm,0.6s,baz=122,slow=1.7,SNR=15							
KDAK	**Kodiak Island**	**149.31**	**298**	PKPbc		**PKPbc**	**00 05 36.6**	**+0.3**
	comp=Z,6.9nm,1.0s,baz=96,slow=2.1,SNR=4.8							
KDAK	**Kodiak Island**	**149.31**	**298**			**PKPbc**	**00 05 36.5**	**+0.1**
SONM	**Songino Array**	**152.04**	**87**	PKPbc		**PKPbc**	**00 05 43.1**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=222,slow=2.1,SNR=4.1							
SONM	**Songino Array**	**152.04**	**87**			**PKPbc**	**00 05 42.6**	**-0.8**

IDC 11 23:54:17.3±3.4,7.02S×149.48E,h0km,mb3.0/2, mbtmp3.2/4,ML3.4/1,Error ellipse: s-maj=110.3km s-min=29.2km az=115.0,New Britain region

| Code | Station Name | Δ° | AZ° | Phase

PHC	**Port Hardy**	**1.77**	**68**	Pn	**Pb**	**00 04 49.5**	**-1.0**
PHC				Sn	**Sb**	**00 05 12.1**	**-0.9**
FHBB	**Fair Harbour**	**1.87**	**89**	Pn	**Pb**	**00 04 51.8**	**-0.3**
TAHB	**Tahsis**	**2.16**	**93**	Pn	**Pb**	**00 04 56.5**	**-0.6**
WOSB	**Woss**	**2.22**	**86**	Pn	**Pb**	**00 04 57.4**	**-0.7**
NTKA	**Nootka**	**2.25**	**101**	Sn	**Sb**	**00 05 26.6**	**-0.1**
JEDB	**Jedway, Haida**	**2.35**	**342**	Pn	**Pn**	**00 04 55.7**	**-1.2**
BBB	**Bella Bella**	**2.43**	**29**	Pn	**Pb**	**00 04 59.8**	**-1.9**
	21nm,0.3s,baz=225,slow=5.4,SNR=170						
BBB				Sn	**Sn**	**00 05 27.8**	**-0.3**
	51nm,0.3s,baz=127,slow=20,SNR=23						
BBB				LR	LR	00 06 09.6	
	comp=Z,377nm,19.4s,baz=176,slow=42						
	82nm,0.5s						
NCSB	**Newcastle Ridg**	**2.56**	**81**	Pn	**Pb**	**00 05 01.8**	**-2.2**
NCSB				Sn	**Sn**	**00 05 31.6**	**0.0**
GDR	**Gold River**	**2.59**	**95**	Pn	**Pb**	**00 05 02.5**	**-1.9**
BAIB	**Barry Inlet**	**2.74**	**337**	Pn	**Pn**	**00 05 01.2**	**-1.1**
CBB	**Campbell River**	**2.99**	**89**	Pn	**Pb**	**00 05 09.0**	**-2.3**
MOBC	**Moresby Island**	**3.31**	**339**	Pn	**Pn**	**00 05 10.5**	**+0.4**
BNAB	**Bonilla**	**3.45**	**354**	Pn	**Pn**	**00 05 11.0**	**-1.0**
DIB	**Dawson Inlet,**	**3.50**	**335**	Pn	**Pn**	**00 05 12.6**	**+0.1**
MGRB	**Mount Grey**	**3.62**	**105**	Pn	**Pn**	**00 05 17.6**	**+3.1**
GRNB	**Grenville Isla**	**3.79**	**0**	Pn	**Pn**	**00 05 15.5**	**-1.1**
PCLB	**Port Clements**	**3.97**	**338**	Pn	**Pn**	**00 05 19.2**	**0.0**
SHB	**Sechelt**	**4.00**	**94**	Pn	**Pn**	**00 05 22.4**	**+2.8**
KITB	**Kitimat**	**4.11**	**11**	Pn	**Pn**	**00 05 21.0**	**+0.1**
RUBB	**Prince Rupert**	**4.27**	**358**	Pn	**Pn**	**00 05 22.7**	**-0.4**
WPB	**Watts Point**	**4.42**	**93**	Pn	**Pn**	**00 05 28.6**	**+3.4**
DLBC	**Dease Lake**	**8.39**	**360**	Pn	**Pn**	**00 06 21.6**	**+1.8**
	0.3nm,0.3s,baz=182,slow=24,SNR=9.1						
DLBC				Sn	**Sn**	**00 07 58.0**	**+3.1**
	0.2nm,0.3s,baz=271,slow=26,SNR=2.4						
DLBC				LR	LR	00 09 04.8	
	comp=Z,42nm,18.5s,baz=176,slow=34						
	0.5nm,0.5s						
NEW	**Newport**	**8.64**	**97**	Pn	**Pn**	**00 06 22.6**	**-0.6**
	0.1nm,0.3s,baz=2.0,slow=9.4,SNR=1.5						
NEW				LR	LR	00 09 03.9	
	comp=Z,62nm,21.4s,baz=252,slow=33						
	0.5nm,0.4s						
ELK	**Elko**	**13.93**	**126**	Pn	**Pn**	**00 07 37.1**	**+1.4**
	0.1nm,0.3s,baz=322,slow=14,SNR=1.5						
	0.3nm,0.5s						
NVAR	**Mina Array Bea**	**14.32**	**140**	Pn	**Pn**	**00 07 41.2**	**+0.1**
	0.1nm,0.3s,baz=333,slow=12,SNR=1.7						
	0.1nm,0.4s						
YKA	**Yellowknife Ar**	**15.05**	**28**	Pn	**Pn**	**00 07 49.5**	**-1.1**
	0.1nm,0.3s,baz=225,slow=12,SNR=10						
	0.1nm,0.5s						
KDAK	**Kodiak Island**	**15.32**	**309**	LR	LR	00 11 47.6	
	comp=Z,40nm,19.6s,baz=160,slow=29						
PDAR	**Pinedale Array**	**15.85**	**110**	Pn	**Pn**	**00 08 01.9**	**+0.4**
	baz=306,slow=7.0,SNR=12						
PDAR				LR	LR	00 14 18.8	
	comp=Z,38nm,19.6s,baz=309,slow=38						
	0.1nm,0.4s						
ILAR	**Eielson Array**	**17.22**	**335**	P	**P**	**00 08 19.3**	**-1.0**
	0.1nm,0.8s,baz=152,slow=10,SNR=8.7						
ILAR				LR	LR	00 14 09.7	
	comp=Z,40nm,18.2s,baz=276,slow=34						
INK	**Inuvik**	**18.38**	**356**	P	**P**	**00 08 32.8**	**-0.1**
	baz=163,slow=15,SNR=6.4						
	0.8nm,1.0s						
ULM	**Lac du Bonnet**	**21.76**	**76**	P	**P**	**00 09 11.4**	**+1.5**
	4.9nm,0.9s,baz=299,slow=7.8,SNR=9.3						
ULM				LR	LR	00 17 51.5	
	comp=Z,150nm,18.3s,baz=282,slow=37						
	4.9nm,0.9s						
TXAR	**Lajitas Array**	**28.72**	**126**	P	**P**	**00 10 12.5**	**-3.4**
	0.1nm,0.3s,baz=320,slow=8.4,SNR=3.6						
	0.1nm,0.3s						
SADO	**Sadowa**	**34.27**	**79**	LR	LR	00 25 16.0	
	comp=Z,107nm,18.8s,baz=294,slow=37						
FRB	**Frobisher Bay**	**34.73**	**43**	LR	LR	00 24 55.8	
	comp=Z,75nm,21.4s,baz=295,slow=36						
TKL	**Tuckaleechee C**	**36.22**	**96**	LR	LR	00 26 51.3	
	comp=Z,44nm,19.7s,baz=352,slow=37						
SCHQ	**Schefferville**	**37.63**	**58**	LR	LR	00 26 54.7	
	comp=Z,75nm,20.3s,baz=285,slow=36						
SFJD	**Kangerlussuaq**	**41.43**	**36**	LR	LR	00 29 12.0	
	comp=Z,102nm,18.2s,baz=258,slow=36						
H11N2	**WAKE ISLAND Hy**	**57.90**	**263**	T	T	01 16 54.8	
	baz=42,slow=75,SNR=50						
H11N3	**WAKE ISLAND Hy**	**57.91**	**263**	T	T	01 16 52.0	
	baz=42,slow=75,SNR=66						
H11N1	**WAKE ISLAND Hy**	**57.92**	**263**	T	T	01 16 53.1	
	baz=42,slow=75,SNR=55						
H11S1	**WAKE ISLAND Hy**	**58.93**	**262**	T	T	01 18 08.8	
	baz=46,slow=76,SNR=5.3						
H11S2	**WAKE ISLAND Hy**	**58.94**	**262**	T	T	01 18 15.1	
	baz=46,slow=76,SNR=4.7						
H11S3	**WAKE ISLAND Hy**	**58.95**	**262**	T	T	01 18 18.5	
	baz=46,slow=76,SNR=3.9						
FINES	**FINESS Array B**	**67.20**	**12**	P	**P**	**00 15 12.8**	**+0.6**
	3.0nm,0.9s,baz=343,slow=6.9,SNR=1.7						
	3.0nm,0.9s						
KURBB	**Kurchatov Arra**	**76.77**	**342**	P	**P**	**00 16 10.9**	**+1.2**
	0.4nm,0.8s,baz=17,slow=6.0,SNR=4.8						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**79.55**	**338**	P	**P**	**00 16 25.8**	**+0.5**
	0.7nm,1.1s,baz=32,slow=3.6,SNR=3.1						
	0.7nm,1.1s						
MLR	**Muntele Rosu**	**82.56**	**17**	LR	LR	00 52 31.9	
	comp=Z,47nm,19.0s,baz=162,slow=35						

*AZER **12** 00:18:23.1,38˚.42N×44˚.53E,h3km,ml2.5*
*AFAD **12** 00:18:26.1,38˚.41N×44˚.42E,h8km±3km,ML2.3*
*ISK **12** 00:18:27.2,38˚.62N×44˚.58E,h12km,ML2.4/4*

ISC 12 00:18:26.6±1.1,38˚.45N±0˚.02×44˚.47E±0˚.02,h6km±10km, n28,σ1°59/50,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.42**	**299**	P	**Pg**	**00 18 34.4**	**-0.5**
OZAP				S	**Sg**	**00 18 41.5**	**+1.1**
OZAP				IAML		00 18 43.0	
	comp=N,420nm,0.4s						
TVAN	**Van**	**0.83**	**275**	P	**Pg**	**00 18 41.5**	**-1.1**
TVAN				IAML		00 19 08.0	
	comp=E,86nm,0.7s						
TVAN				IAML		00 19 09.0	
	comp=N,146nm,0.9s						
VANB	**Van**	**0.86**	**280**	Pg	**Pn**	**00 18 45.5**	**+0.2**
YOVA	**Hakkari_Yksek**	**0.88**	**189**	P	**Pg**	**00 18 42.8**	**-0.6**
YOVA				S	**Sg**	**00 18 54.3**	**-0.5**
VMUR	**Van-Muradiye**	**0.88**	**308**	P	**Pg**	**00 18 43.1**	**-0.4**
VMUR				S	**Sg**	**00 18 54.3**	**-0.7**
VMUR				IAML		00 19 00.0	
	comp=E,82nm,0.3s						
HAKT	**HAKKARI**	**1.08**	**214**	P	**Pg**	**00 18 45.9**	**-1.3**
HAKT				S	**Sg**	**00 18 59.8**	**-1.4**
HAKT	**HAKKARI**	**1.08**	**214**	P	**Pg**	**00 18 46.0**	**-1.3**
HAKT				S	**Sn**	**00 19 04.1**	**+0.2**
NAX	**Nakhchivan**	**1.08**	**48**	P	**Pn**	**00 18 47.2**	**-1.2**
NAX				S	**Sn**	**00 19 03.5**	**-0.3**
GEVA	**Gevas**	**1.11**	**263**	P	**Pg**	**00 18 45.6**	**-2.4**
GEVA				S	**Sg**	**00 19 02.5**	**+0.1**
GEVA				IAML		00 19 07.0	
	comp=E,60nm,0.3s						
DYDN	**Diyadin**	**1.25**	**331**	P	**Pg**	**00 18 51.7**	**+1.2**
DYDN				S	**Sb**	**00 19 05.4**	**-1.7**
DYDN				IAML		00 19 13.0	
	comp=N,68nm,0.6s						
DYDN				IAML		00 19 14.0	
	comp=E,57nm,0.5s						
SBZ	**Shahbuz**	**1.27**	**42**	P	**Pg**	**00 18 50.4**	**-0.6**
SBZ				S	**Sn**	**00 19 09.6**	**+1.2**
ORD	**Ordubad**	**1.29**	**68**	P	**Pg**	**00 18 50.2**	**-1.1**
ORD				S	**Sn**	**00 19 09.3**	**+0.5**
HYR	**Heyderabad**	**1.30**	**13**	P	**Pb**	**00 18 51.1**	**-0.4**
HYR				S	**Sn**	**00 19 12.5**	**+3.4**
CUKT	**Cukurca**	**1.38**	**210**	Pn	**Pg**	**00 18 55.7**	**+2.6**
CUKT				Sn	**Sg**	**00 19 16.5**	**+5.5**
CUKT	**Cukurca**	**1.38**	**210**	P	**Pg**	**00 18 55.6**	**+2.5**
CUKT				IAML		00 19 18.0	
	comp=E,46nm,0.9s						
CUKT				IAML		00 19 29.0	
	comp=N,52nm,0.7s						
ADCV	**BITLIS_Adilcev**	**1.41**	**285**	P	**Pn**	**00 18 52.4**	**-0.6**
ADCV				S	**Sn**	**00 19 12.6**	**+0.5**
IGDI	**IGDIR**	**1.44**	**348**	P	**Pn**	**00 18 53.5**	**+0.1**
IGDI	**IGDIR**	**1.44**	**348**	P	**Pb**	**00 18 54.1**	**+0.1**
IGDI				S	**Sg**	**00 19 17.4**	**+4.4**
PERV	**Siirt/Pervari-**	**1.60**	**252**	P	**Pn**	**00 18 56.0**	**+0.4**
PERV				IAML		00 19 26.0	
	comp=N,57nm,0.8s						
PERV				IAML		00 19 29.0	
	comp=E,50nm,0.6s						
AGRB	**Hanur-Agry**	**1.60**	**315**	Pn	**Pn**	**00 18 55.6**	**-0.1**
AGRB				Sn	**Sn**	**00 19 16.1**	**-0.8**
DORK	**Agr/Tutak/Do**	**1.61**	**306**	P	**Pn**	**00 18 55.9**	**+0.1**
DORK				S	**Sn**	**00 19 16.1**	**-0.9**
KOTA	**Agri, Merkez-K**	**1.67**	**324**	P	**Pn**	**00 18 57.3**	**+0.8**
KOTA				S	**Sn**	**00 19 18.8**	**+0.4**
GURO	**Guroymak-BITLI**	**1.91**	**274**	Pn	**Pb**	**00 19 01.8**	**-0.2**
QRD	**Qoradiz**	**2.44**	**65**	P	**Pn**	**00 19 06.6**	**-0.5**
QRD				S	**Sb**	**00 19 41.6**	**+0.3**
GDB	**GEDABAY**	**2.47**	**23**	P	**Pb**	**00 19 09.3**	**-2.3**
GDB				S	**Sb**	**00 19 43.1**	**+0.7**
GANJ	**Ganja**	**2.62**	**33**	P	**Pn**	**00 19 10.9**	**+1.4**
GANJ				S	**Sb**	**00 19 45.2**	**-1.2**
AGDM	**Agdam**	**2.63**	**50**	P	**Pb**	**00 19 12.3**	**-1.9**
AGDM				S	**Sb**	**00 19 45.8**	**-1.0**
YRD	**Yardimli**	**2.99**	**80**	P	**Pn**	**00 19 15.2**	**+0.5**
YRD				S	**Sn**	**00 19 52.0**	**+0.9**

*RSNC **12** 00:21:23.0±3.6,3˚.5S×30˚.7W±˚,h0km,M3.5,mB4.7, mb4.3,ML3.0,Mw(mB)3.9*
*IDC **12** 00:21:29.3±2.4,2˚.37S×77˚.17W,h135km±24km,mb3.7/5, mbtmp4.1/9,Error ellipse: s-maj=36.4km s-min=18.7km az=100.0*
*IGQ **12** 00:21:31.6±0.6,3˚.5S±3˚×77˚.7W±˚,h117km±5km,M3.7/19, MLv3.7/19*
*NEIC **12** 00:21:32.1±2.0,2˚.42S±0˚.07×77˚.1W±0˚.1,h151km±8km, mb4.3/9,Error ellipse: s-maj=21.6km s-min=10.4km az=85.0.*

ISC 12 00:21:30.3±0.7,2˚.50S±0˚.05×76˚.89W±0˚.06,h135km±7km, n65,σ1°48/71,mb4.1/4,2C-13D,Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAIS	**Taisha**	**0.62**	**281**	↑P	**Pn**	**00 21 50.7**	**+0.1**
TAIS				S	**Sn**	**00 22 06.1**	**+0.1**
PKYU	**Pakayacu**	**1.10**	**320**	↓P	**Pn**	**00 21 54.4**	**-0.2**
PKYU				S	**Sn**	**00 22 12.5**	**-0.7**
PUYO	**Puyo, Santa Ro**	**1.51**	**312**	↓P	**Pn**	**00 21 59.0**	**0.0**
PUYO				S	**Sn**	**00 22 20.1**	**-0.8**
SANGA	**Volcan Sangay**	**1.54**	**287**	P	**Pn**	**00 21 57.5**	**-2.1**
BOSC	**San Juan Bosco**	**1.72**	**248**	↑P	**Pn**	**00 22 00.1**	**-1.3**
BOSC				S	**Sn**	**00 22 23.1**	**-2.1**
BPAT	**Tungurahua Vol**	**1.83**	**303**	P	**Pn**	**00 22 02.7**	**-0.3**
BPAT				S	**Sn**	**00 22 27.1**	**-0.8**
BMAS	**Trigal station**	**1.87**	**302**	P	**Pn**	**00 22 00.6**	**-2.7**
PIS1	**Pisayambo**	**2.07**	**314**	↓P	**Pn**	**00 22 05.9**	**0.0**
TAMH	**Tambohuasha Ch**	**2.11**	**297**	P	**Pn**	**00 22 06.8**	**+0.4**
CHSH	**Refugio Sur-Vo**	**2.21**	**297**	P	**Pn**	**00 22 07.6**	**-0.1**
VCES	**Cotopaxi**	**2.26**	**318**	↓P	**Pn**	**00 22 08.6**	**+0.4**
TAMB	**Tambo**	**2.33**	**321**	P	**Pn**	**00 22 10.1**	**+1.1**
BRRN	**Barrancas-Volc**	**2.33**	**317**	P	**Pn**	**00 22 10.0**	**+0.9**
BMOR	**Cotopaxi Volca**	**2.36**	**318**	↓P	**Pn**	**00 22 10.3**	**+0.8**
BTAM	**Cotopaxi Volca**	**2.36**	**320**	↓P	**Pn**	**00 22 10.3**	**+0.8**
COHC	**Cochancay**	**2.36**	**271**	P	**Pn**	**00 22 08.8**	**-0.2**
ANTM	**Antisana-La Mi**	**2.36**	**326**	↓P	**Pn**	**00 22 09.6**	**+0.1**
ANTS	**Antisana-Sarah**	**2.37**	**327**	↓P	**Pn**	**00 22 09.7**	**+0.1**
BVC2	**Cotopaxi Volca**	**2.38**	**320**	↓P	**Pn**	**00 22 10.8**	**+1.0**
SLOR	**San Lorenzo -**	**2.38**	**318**		**Pn**	**00 22 10.3**	**+0.6**
SLOR	**San Lorenzo -**	**2.38**	**318**	P	**Pn**	**00 22 10.8**	**+1.1**
VC1	**Cotopaxi 1**	**2.39**	**321**	↓P	**Pn**	**00 22 10.8**	**+1.0**
BREF	**Cotopaxi Volca**	**2.39**	**320**	↓P	**Pn**	**00 22 11.0**	**+1.1**
ANTI	**Antisana**	**2.40**	**328**	P	**Pn**	**00 22 10.1**	**0.0**
ANTG	**Antisana-Guama**	**2.41**	**326**	↓P	**Pn**	**00 22 10.4**	**+0.3**
PITA	**Cotopaxi Volc**	**2.47**	**321**	↓P	**Pn**	**00 22 11.9**	**+1.1**
ILLI	**Illinizas Sur**	**2.55**	**314**	P	**Pn**	**00 22 12.3**	**+0.4**
CASC	**Dorado de Casc**	**2.66**	**350**	P	**Pn**	**00 22 12.2**	**-0.7**
PCRA	**Pucara 2**	**2.70**	**255**	P	**Pn**	**00 22 10.7**	**-2.9**
GONZ	**Gonzanam**	**3.00**	**235**	P	**Pn**	**00 22 17.4**	**-0.5**
OTAV	**Otavalo**	**3.14**	**330**		**Pn**	**00 22 21.1**	**+1.8**
OTAV	**Otavalo**	**3.14**	**330**	P	**Pn**	**00 22 20.4**	**+1.1**
ZUMB	**Zumba**	**3.25**	**224**	P	**Pn**	**00 22 19.6**	**-0.8**
ARNL	**Arenillas**	**3.33**	**252**	P	**Pn**	**00 22 18.6**	**-2.8**
PTLC	**Puerto Leguiza**	**3.38**	**38**	P	**Pn**	**00 22 18.7**	**-3.4**
CMBC	**Cumbal**	**3.55**	**345**	P	**Pn**	**00 22 26.5**	**+1.9**
GCUF	**Volcan Galeras**	**3.73**	**353**	P	**Pn**	**00 22 27.6**	**+0.5**
FLOC	**Florencia**	**4.25**	**17**	P	**Pn**	**00 22 32.8**	**-0.7**
ATAH	**Atahualpa**	**4.84**	**198**	P	**Pn**	**00 22 43.2**	**+1.5**
	62nm,0.7s,baz=20,slow=15,SNR=66						
ATAH				S	**Sn**	**00 23 36.5**	**-0.6**
	59nm,0.6s,baz=18,slow=20,SNR=9.0						
GARC	**Garzon, Huila**	**4.87**	**17**	P	**Pn**	**00 22 40.1**	**-1.8**
POPC	**Popayan, Colom**	**5.02**	**2**	P	**Pn**	**00 22 45.8**	**+1.9**
	4.0nm,0.8s						
MACC	**Macarena, Meta**	**5.53**	**33**	P	**Pn**	**00 22 49.6**	**-1.0**
	428nm17nm,0.5s						
JAMC	**Jamundi, Valle**	**5.69**	**2**	P	**Pn**	**00 22 53.9**	**+1.0**
	16nm,0.8s						
URMC	**La Uribe, Meta**	**6.24**	**24**	P	**Pn**	**00 23 00.5**	**+0.3**
	24nm,1.2s						
ORTC	**Ortega, Tolima**	**6.58**	**14**	P	**Pn**	**00 23 06.4**	**+1.7**
	25nm,0.9s						
CHIC	**Chingaza**	**7.76**	**24**	P	**Pn**	**00 23 22.6**	**+1.7**
NNA	**Nana**	**9.42**	**180**	P	**Pn**	**00 23 43.7**	**+0.8**
	8.2nm,0.3s,baz=343,slow=14,SNR=5.8						
NNA				S	Sn	00 25 17.4	-10
	17nm,0.4s,baz=269,slow=13,SNR=4.6						
NNA	**Nana**	**9.42**	**180**	Pn	**Pn**	**00 23 45.1**	**+2.2**
SDV	**Santo Domingo**	**12.92**	**29**	P	**Pn**	**00 24 29.1**	**-0.1**
	3.5nm,0.7s,baz=276,slow=12,SNR=5.3						
LPAZ	**La Paz**	**16.19**	**148**	P	**P**	**00 25 14.3**	**+2.9**
	0.3nm,0.4s,baz=326,slow=11,SNR=2.1						
LPAZ	**La Paz**	**16.19**	**148**	P	**P**	**00 25 13.9**	**+2.6**
MACA	**Manacapuru-AM**	**16.20**	**93**	P	**Pn**	**00 25 10.4**	**0.0**
MACA				IAmb	IAmb	00 25 12.4	
	comp=Z,13nm,0.6s						
PB11	**IPOC Station P**	**18.55**	**158**	P	**P**	**00 25 39.0**	**+2.1**
PB11				IAmb	IAmb	00 26 21.0	
	comp=Z,12nm,1.1s						
GO01	**Chusmiza**	**18.64**	**157**	P	**P**	**00 25 40.3**	**+2.0**
TA01	**Diego Aracena**	**19.11**	**160**	P	**P**	**00 25 44.0**	**+1.3**
TA01				IAmb	IAmb	00 25 53.0	
	comp=Z,35nm,1.3s						
ECPR	**Experimental S**	**23.14**	**26**	P	**P**	**00 26 23.4**	**-1.4**
PLCA	**Paso Flores**	**38.48**	**172**	P	**P**	**00 28 40.5**	**+1.1**
	comp=Z,1.3nm,0.7s,baz=350,slow=6.2,SNR=3.5						
	comp=Z,1.3nm,0.7s						
ULM	**Lac du Bonnet**	**55.02**	**345**	P	**P**	**00 30 45.2**	**-2.5**
	comp=Z,1.3nm,0.4s,baz=160,slow=9.5,SNR=4.4						
	comp=Z,1.3nm,0.4s						
ULM	**Lac du Bonnet**	**55.02**	**345**	P	**P**	**00 30 45.7**	**-1.9**
ULM				IAmb	IAmb	00 30 46.3	
	comp=Z,2.7nm,1.1s						
DBIC	**Dimbokro**	**72.48**	**82**	P	**P**	**00 32 43.6**	**+0.8**
	comp=Z,1.4nm,0.4s,baz=262,slow=4.4,SNR=4.4						
	comp=Z,1.4nm,0.4s						
DBIC	**Dimbokro**	**72.48**	**82**	P	**P**	**00 32 43.0**	**+0.1**
TORD	**Torodi Ar. Bea**	**79.47**	**76**	P	**P**	**00 33 22.0**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=262,slow=6.5,SNR=9.8						
	comp=Z,0.4nm,0.4s						
QSPA	**South Pole Qui**	**87.57**	**180**	P	**P**	**00 34 03.4**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=134,slow=1.9,SNR=6.2						
	comp=Z,1.3nm,0.8s						
QSPA	**South Pole Qui**	**87.57**	**180**	P	**P**	**00 34 03.9**	**+0.9**
QSPA				IAmb	IAmb	00 34 39.6	
	comp=Z,4.0nm,1.4s						
WRA	**Warramunga Arr**	**142.09**	**233**	PKP	**PKPdf**	**00 40 43.4**	**-4.0**
	comp=Z,0.4nm,0.6s,baz=122,slow=2.2,SNR=5.1						

*IDC **12** 00:44:00.8±1.1,16˚.14N×120˚.06E,h0km,mb3.6/6, mbtmp3.6/6,MS2.7/2,Error ellipse: s-maj=147.1km s-min=19.0km az=65.0*

ISC 12 00:44:06.4±0.9,15˚.7N±0˚.1×119˚.1E±0˚.2,h35km,n9, σ1°00/10,mb3.5/6,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**2.96**	**28**	*eP*	**Pn**	**00 44 51.1**	**+0.2**
PIP				*eS*	**Sn**	**00 45 25.4**	**+0.2**
CMAR	**Chiang Mai Arr**	**19.50**	**281**	LR	LR	00 56 30.8	
	comp=Z,23nm,18.1s,baz=120,slow=37						
KSRS	**Korea Array**	**23.01**	**18**	LR	LR	00 57 28.4	
	comp=Z,17nm,18.9s,baz=30,slow=36						
SONM	**Songino Array**	**33.72**	**344**	P	**P**	**00 50 43.6**	**-0.9**
	0.2nm,0.5s,baz=156,slow=7.3,SNR=4.2						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**38.45**	**157**	P	**P**	**00 51 24.9**	**-0.3**
	0.8nm,0.8s,baz=338,slow=9.2,SNR=7.1						
WRA				PcP	**PcP**	**00 53 37.5**	**-0.4**
	0.2nm,0.5s,baz=339,slow=3.3,SNR=1.8						
	0.8nm,0.8s						
ASAR	**Alice Springs**	**41.72**	**159**	P	**P**	**00 51 52.9**	**+0.8**
	0.4nm,0.5s,baz=339,slow=6.9,SNR=7.3						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**43.52**	**323**	P	**P**	**00 52 08.3**	**+1.7**
	0.3nm,0.8s,baz=108,slow=7.8,SNR=4.1						
MKAR				PcP	**PcP**	**00 53 54.5**	**+0.4**
	0.1nm,0.6s,baz=107,slow=3.0,SNR=1.9						
	0.3nm,0.8s						
KURBB	**Kurchatov Arra**	**47.69**	**326**	P	**P**	**00 52 40.2**	**+0.8**
	0.2nm,0.3s,baz=118,slow=9.1,SNR=4.6						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**77.80**	**331**	P	**P**	**00 55 58.6**	**-1.3**
	4.3nm,1.0s,baz=62,slow=3.6,SNR=3.3						
	4.3nm,1.0s						

CATAC 12 00:44:29.6±0.4,11˚N±2˚×8˚7W±˚,h12km,M3.7/25, MLv3.7/25,Error ellipse: s-maj=4.5km s-min=3.3km az=32.3,confirmed,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NADN	**Granada**	**1.52**	**44**	P	Pn	00 44 55.4	-1.3
NADN				S	Sb	00 45 17.7	+0.7
COPN	**Copaltepe**	**1.61**	**18**	P	Pn	00 44 58.1	+0.2
NANN	**Nandasmo**	**1.61**	**37**	P	Pn	00 44 58.1	+0.2
NANN				S	Sb	00 45 19.2	-0.4
CARN	**Rivas**	**1.65**	**71**	P	Pn	00 44 57.6	-0.8
CARN				S	Sb	00 45 20.2	-0.4
MAS3	**Al N del Volca**	**1.65**	**33**	P	Pn	00 44 57.5	-1.0
MAS3				S	Sb	00 45 20.4	-0.4
ABCN	**Banco Central**	**1.66**	**28**	S	Sn	00 45 20.4	+0.5
SAPS	**Ciudad Sandino**	**1.67**	**24**	P	Pn	00 44 58.8	+0.2
SAPS				S	Sn	00 45 20.5	+0.5
UNAN	**Cigeo UNAN**	**1.67**	**29**	P	Pn	00 44 58.5	-0.2
UNAN				S	Sn	00 45 20.6	+0.4
OMEN	**Al SSO del Vol**	**1.69**	**59**	P	Pn	00 44 58.2	-0.7
MORN	**Al O del Volca**	**1.69**	**58**	P	Pn	00 44 57.4	-1.6
ALLN	**Telcor Managua**	**1.71**	**28**	S	Sn	00 45 21.3	+0.3
CONN	**Concepcion**	**1.71**	**58**	P	Pn	00 44 58.9	-0.4
CONN				S	Sn	00 45 21.0	-0.2
MGAN	**Managua**	**1.71**	**29**	P	Pn	00 45 00.0	+0.7
MGAN				S	Sb	00 45 22.2	-0.5
APQ2	**Apoyeque**	**1.72**	**26**	S	Sn	00 45 21.6	+0.2
APYN	**Apoyeque**	**1.75**	**25**	S	Sn	00 45 22.7	+0.7
APQ3	**Volcan Apoyequ**	**1.77**	**24**	P	Pn	00 44 59.8	-0.3
APQ3				S	Sn	00 45 23.3	+0.7
ALEN	**Leon**	**1.82**	**7**	S	Sn	00 45 24.0	+0.2
MACN	**El Madrono**	**1.86**	**13**	P	Pn	00 45 01.5	+0.2
MACN				S	Sb	00 45 26.3	-0.6
PACN	**Al O del Volca**	**1.87**	**9**	P	Pn	00 45 01.7	+0.2
PACN				S	Sb	00 45 26.4	-0.8
CNGA	**Al SSO del Vol**	**1.88**	**12**	P	Pn	00 45 01.9	+0.3
CNGA				S	Sb	00 45 26.7	-0.8
MOM2	**El Cardon**	**1.88**	**19**	P	Pn	00 45 01.6	0.0
MOM2				S	Sn	00 45 24.8	-0.5
CNGN	**Cerro Negro**	**1.89**	**12**	P	Pn	00 45 02.3	+0.6
CNGN				S	Sb	00 45 26.9	-0.8
ILCN	**San Idelfonso**	**1.96**	**12**	P	Pn	00 45 01.0	-1.7
ILCN				S	Sn	00 45 27.8	+0.4
HERN	**Volcan Telica**	**1.97**	**8**	P	Pn	00 45 03.9	+1.0
HERN				S	Sb	00 45 29.0	-1.1
POLN	**Al Sur del Vol**	**2.02**	**8**	P	Pn	00 45 03.8	+0.3
POLN				S	Sn	00 45 29.1	+0.5
PKGN	**Cerro Pekin**	**2.02**	**4**	P	Pn	00 45

CARR				*e*S		**Sn**	**00 51 07.1 +2.3**
PCG5	**San Vicente Pa**	**2.15**	**101**	*i* P		**Pn**	**00 50 39.8 -1.5**
TGIG		**2.20**	**346**	*e*P		**Pn**	**00 50 44.1 +2.4**
TGIG				*e*S		**Sn**	**00 51 05.9 -2.1**
FAME	**Alcaldia de Sa**	**2.59**	**107**	P		**Pn**	**00 50 49.2 +2.3**
FAME				S		**Sn**	**00 51 19.2 +1.8**
NUBE	**Las Nubes**	**2.79**	**105**	P		**Pn**	**00 50 51.7 +1.8**
NUBE				S		**Sn**	**00 51 25.3 +2.8**
MTO3	**Montecristo**	**3.11**	**94**	P		**Pn**	**00 50 55.5 +1.3**
JAYA	**Jayaque - finc**	**3.17**	**108**	P		**Pn**	**00 50 56.3 +1.3**
JAYA				S		**Sn**	**00 51 33.8 +2.0**
PMON	**Piamonte**	**3.28**	**106**	P		**Pn**	**00 50 57.6 +1.2**
CMIG	**Matias Romero**	**3.31**	**318**	*e*P		**Pn**	**00 50 57.9 +1.1**
CMIG				*e*S		**Sn**	**00 51 36.1 +1.1**
PETF	**Flores**	**3.44**	**48**	*e*P		**Pn**	**00 50 59.0 +0.4**
PETF				*e*S		**Sn**	**00 51 36.7 -1.6**
PETF	**Flores**	**3.44**	**48**	P		**Pn**	**00 50 60.0 +1.4**
NEUV	**Arroyo Zacate**	**4.37**	**315**	*e*P		**Pn**	**00 51 14.1 +2.9**
NEUV				*e*S		**Sn**	**00 51 54.8 -6.0**
SCIG	**Sabancuy**	**4.50**	**17**	*e*P		**Pn**	**00 51 11.1 -2.0**
SCIG				*e*S		Sn	00 51 54.2 -10
PMUV	**Sontecomapan**	**4.60**	**328**	*e*P		**Pn**	**00 51 12.5 -1.9**
PMUV				*e*S		**Sn**	**00 52 05.3 -1.3**
YOIG	**Yosondua**	**5.29**	**295**	*e*P		**Pn**	**00 51 27.8 +3.8**
YOIG				*e*S		**Sn**	**00 52 24.3 +0.5**
TOIG	**Toxpalan**	**5.53**	**309**	*e*P		**Pn**	**00 51 28.9 +1.7**
TOIG				*e*S		**Sn**	**00 52 25.0 -4.4**
JAUV	**Jalcomulco**	**6.21**	**320**	*e*P		**Pn**	**00 51 34.5 -2.1**
JAUV				*e*S		**Sn**	**00 52 39.6 -6.6**

OSPL ***12*** *00:57:36.3±0.9, 18°.37N×70°.36W, h0km±19km, ML1.7, Presumed earthquake*
SDD ***12*** *00:57:36.7±1.6, 18°.40N×70°.36W, h17km±8km, MD3.0, ML1.8, MW2.9, Presumed earthquake*

ISC 12 00:57:35.4±1.3, 18°.28N±0°.05×70°.32W±0°.04, h9km±9km, n11, σ2s32/17, 10C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BANI	**BANI**	**0.11**	**341**	⇑*e*P	**Pg**	**00 57 39.0**	**+0.8**
BANI				⇑*e*Sg	**Sg**	**00 57 42.1**	**+1.9**
BANI				IAML		00 57 42.7	
	comp=N,891nm,0.2s						
ABDR	**Alto Bandera**	**0.60**	**331**	⇑*e*Sg	**Sg**	**00 57 51.4**	**-3.7**
ABDR				IAML		00 58 14.7	
	comp=N,0.5nm,0.7s						
DR08	**Loma La Naviza**	**0.73**	**23**	⇑*e*P*g*	**Pg**	**00 57 48.6**	**-0.9**
DR08				⇑*e*Sg	**Sg**	**00 57 57.1**	**-2.1**
DR08				IAML		00 58 40.0	
	comp=N,691nm,0.1s						
HATOM	**Hato Mayor del**	**1.02**	**60**	⇑*e*P*g*	**Pg**	**00 57 54.3**	**-0.7**
HATOM				⇑*e*Sg	**Sg**	**00 58 07.6**	**-0.8**
HATOM				IAML		00 58 22.4	
	comp=N,24nm,2.9s						
LODU1	**El Espartillar**	**1.10**	**274**	*i* P	**Pg**	**00 57 55.6**	**-0.9**
LODU1				IAML		00 58 13.0	
	comp=Z,18nm,1.4s						
LOVI	**El Cajuil, Ovi**	**1.11**	**244**	*i* P	**Pg**	**00 57 56.4**	**-0.3**
LOVI				*e*S	**Sg**	**00 58 10.8**	**-0.4**
LOVI				IAML		00 58 12.5	
	comp=Z,38nm,1.1s						
LONE3	**El Aguacate, B**	**1.13**	**287**	*i* P	**Pg**	**00 57 55.1**	**-2.0**
LONE3				*e*S	**Sg**	**00 58 10.3**	**-1.5**
LONE3				IAML		00 58 12.6	
	comp=Z,17nm,1.4s						
SDDR	**Presa de Saban**	**1.15**	**307**	⇑*e*Sg	**Sg**	**00 58 10.1**	**-2.4**
SDDR				IAML		00 58 14.4	
	comp=N,28nm,2.2s						
SDDR	**Presa de Saban**	**1.15**	**307**	*e*S	**Sg**	**00 58 09.7**	**-2.9**
SDDR				IAML		00 58 11.1	
	comp=Z,19nm,3.3s						
LOBH	**Bahia de las A**	**1.32**	**252**	*i* P	**Pn**	**00 58 00.1**	**+0.1**
REDR	**Restauracion**	**1.34**	**311**	⇑*e*P*g*	**Pg**	**00 58 02.7**	**+1.5**
REDR				⇑*e*Sg	**Sg**	**00 58 23.0**	**+4.7**
REDR				IAML		00 58 24.9	
	comp=N,24nm,0.2s						

NAO ***12*** *01:04:19.8±1.3, 79°.31N×2°.76E, h10km, ML3.6*
BER ***12*** *01:04:20.7±3.6, 79°.25N×2°.55E, h10km, Mw4.2, ML3.6(NAO), Confirmed Earthquake*
KOLA ***12*** *01:04:22.8, 79°.24N×4°.21E, h0km, ML2.6, Greenland sea,Knipovich ridge, north*
DNK ***12*** *01:04:22.4±3.6, 79°.17N×2°.76E, h36km±26km, ML2.4, Presumed earthquake*
IDC ***12*** *01:04:22.8±3.3, 79°.04N×3°.23E, h0km, mb3.2/2, mbtmp3.7/6, ML2.8/3, MS3.2/6, Error ellipse: s-maj=40.7km s-min=33.8km az=124.0*
FCIAR ***12*** *01:04:24.0, 78°.94N×3°.83E, h10km, station ZFI2 has station magnitude of 3.70 station OMEGA has station magnitude of 3.80*

ISC 12 01:04:19.1±0.7, 79°.22N±0°.06×2°.53E±0°.04, h10km, n64, σ2s50/79, MS3.2/6, 2C, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**1.82**	**95**	Pn	**Pn**	**01 04 50.3**	**-0.1**
KBS				Sn	**Sn**	**01 05 10.2**	**-3.2**
KBS	**Kingsbay**	**1.82**	**95**	⇑*i*P	**Pn**	**01 04 50.2**	**-0.1**
KBS				*e*S	**Sn**	**01 05 10.0**	**-3.3**
KBS				IAML		01 05 11.4	
	comp=Z,143nm,0.2s						
KBS	**Kingsbay**	**1.82**	**95**	*i* P	**Pn**	**01 04 50.2**	**-0.1**
KBS				*i* S	**Sn**	**01 05 10.1**	**-3.3**
KBS	**Kingsbay**	**1.82**	**95**	P	**Pn**	**01 04 49.9**	**-0.5**
KBS				S	**Sn**	**01 05 07.3**	**-6.1**
BRBB	**Barentsburg B**	**2.57**	**110**	Pn	**Pn**	**01 05 00.8**	**+0.2**
BRBB				Sn	**Sn**	**01 05 30.7**	**-1.1**
BRBB	**Barentsburg B**	**2.57**	**110**	*e*P	**Pn**	**01 05 00.7**	**+0.1**
BRBB				*e*S	**Sn**	**01 05 28.6**	**-3.2**
BRBB	**Barentsburg B**	**2.57**	**110**	P	**Pn**	**01 05 00.1**	**-0.5**
BRBB				S	**Sn**	**01 05 29.6**	**-2.3**
BRBA	**Barentsburg A**	**2.59**	**111**	Pn	**Pn**	**01 05 00.7**	**-0.2**
BRBA				Sn	**Sn**	**01 05 30.9**	**-1.4**
BRBA	**Barentsburg A**	**2.59**	**111**	*e*P	**Pn**	**01 05 01.5**	**+0.6**
BRBA				*e*S	**Sn**	**01 05 29.2**	**-3.1**
BRBA				IAML		01 05 34.1	
	comp=Z,73nm,0.4s						
SPA0	**Spitsbergen Ar**	**2.92**	**104**	Pn	**Pn**	**01 05 06.1**	**+0.7**
	baz=297,slow=11						
SPA0				Sn	**Sn**	**01 05 38.9**	**-1.5**
	baz=300,slow=56						
SPA0	**Spitsbergen Ar**	**2.92**	**104**	Pn	**Pn**	**01 05 06.1**	**+0.7**
SPA0				Sn	**Sn**	**01 05 38.9**	**-1.5**
SPA0	**Spitsbergen Ar**	**2.92**	**104**	⇑*i*P	**Pn**	**01 05 06.2**	**+0.8**
SPA0				*e*S	**Sn**	**01 05 37.7**	**-2.7**
SPITS	**Spitsbergen Ar**	**2.92**	**104**	Pn	**Pn**	**01 05 06.2**	**+0.8**
	comp=Z,68nm,0.4s,baz=292,slow=7.6,SNR=1185						
SPITS				Sn	**Sn**	**01 05 38.9**	**-1.5**
	baz=291,slow=20						
SPITS	**Spitsbergen Ar**	**2.92**	**104**	P	**Pn**	**01 05 05.9**	**+0.5**
SPITS				S	**Sn**	**01 05 38.7**	**-1.8**
HSPB	**Hornsund (broa**	**3.48**	**123**	Pn	**Pn**	**01 05 13.2**	**0.0**
HSPB				Sn	**Sn**	**01 05 51.2**	**-3.2**
HSPB	**Hornsund (broa**	**3.48**	**123**	*e*P	**Pn**	**01 05 13.6**	**+0.4**
HSPB				*e*S	**Sn**	**01 05 51.5**	**-2.9**
HSPB				IAML		01 05 56.1	
	comp=Z,16nm,0.3s						
HSPB	**Hornsund (broa**	**3.48**	**123**	*e*P	**Pn**	**01 05 13.2**	**0.0**
HSPB				*e*S	**Sn**	**01 05 49.6**	**-4.8**
HSPB	**Hornsund (broa**	**3.48**	**123**	P	**Pn**	**01 05 13.2**	**0.0**
HSPB				S	**Sn**	**01 05 51.7**	**-2.7**
NOR	**Nord**	**3.99**	**316**	Pn	**Pn**	**01 05 20.2**	**+0.2**
NOR	**Nord**	**3.99**	**316**	*i* P	**Pn**	**01 05 20.3**	**+0.2**
NOR				*i* S	**Sn**	**01 06 05.9**	**-0.9**
NOR				IAML		01 06 08.3	
	comp=Z,8.1nm,0.5s						
NOR	**Nord**	**3.99**	**316**	*i* P	**Pn**	**01 05 20.3**	**+0.2**
NOR				*i* S	**Sn**	**01 06 05.9**	**-0.9**
NOR				IAML		01 06 08.3	
	comp=Z,8.1nm,0.5s						
DAG	**Danmarks Havn**	**5.03**	**252**	*i* P	**Pn**	**01 05 34.4**	**-0.1**
DAG				*i* S	**Sn**	**01 06 26.6**	**-5.9**
DAG				IAML		01 06 31.0	
	comp=Z,27nm,0.7s						
DAG	**Danmarks Havn**	**5.03**	**252**	*i* P	**Pn**	**01 05 34.4**	**-0.1**
DAG				*i* S	**Sn**	**01 06 26.6**	**-5.9**
DAG				IAML		01 06 31.0	
	comp=Z,27nm,0.7s						
HOPEN	**Hopen**	**5.43**	**108**	Pn	**Pn**	**01 05 39.9**	**0.0**
HOPEN				Sn	**Sn**	**01 06 37.0**	**-5.3**
HOPEN	**Hopen**	**5.43**	**108**	*e*P	**Pn**	**01 05 39.2**	**-0.7**
HOPEN				*e*S	**Sn**	**01 06 37.3**	**-5.0**
HOPEN				IAML		01 06 40.4	
	comp=Z,26nm,0.3s						
BJO1	**Bjornoya**	**6.01**	**133**	Pn	**Pn**	**01 05 50.0**	**+2.1**
BJO1	**Bjornoya**	**6.01**	**133**	*e*P	**Pn**	**01 05 50.0**	**+2.1**
BEAR	**Bear Island, N**	**6.02**	**133**	Pn	**Pn**	**01 05 49.8**	**+1.9**
	baz=342,slow=18						
DBG	**Daneborg**	**7.12**	**238**	Pn	**Pn**	**01 06 02.0**	**-1.1**
DBG				Sn	Sn	01 07 15.4	-8.4
DBG	**Daneborg**	**7.12**	**238**	*i* P	**Pn**	**01 06 01.9**	**-1.1**
DBG				*i* S	Sn	01 07 14.4	-9.3
DBG				IAML		01 07 24.6	
	comp=Z,13nm,0.3s						
DBG	**Daneborg**	**7.12**	**238**	*i* P	**Pn**	**01 06 01.9**	**-1.1**
DBG				*i* S	Sn	01 07 14.4	-9.3
DBG				IAML		01 07 24.6	
	comp=Z,13nm,0.3s						
ZFI2	**Zemlya Franca-**	**7.82**	**57**	*e*P	**Pn**	**01 06 12.3**	**-0.4**
ZFI2				*e*S	**Sn**	**01 07 35.1**	**-5.9**
	comp=Z,22nm,3.3s						
OMEGA	**Omega**	**7.84**	**57**	*e*P	**Pn**	**01 06 12.3**	**-0.6**
OMEGA				*e*S	**Sn**	**01 07 35.3**	**-6.2**
	comp=Z,25nm,2.0s						
JNW	**Jan Mayen West**	**8.67**	**204**	*e*P	**Pn**	**01 06 25.0**	**+0.6**
JNE	**Jan Mayen East**	**8.70**	**204**	*e*P	**Pn**	**01 06 24.7**	**0.0**
NEEM	**North Greenlan**	**10.65**	**288**	*i* P	Pn	01 06 47.8	-3.9
NEEM				*i* S	Sn	01 08 38.3	-13
NEEM				IAML		01 08 43.4	
	comp=Z,6.4nm,0.6s						
NEEM	**North Greenlan**	**10.65**	**288**	*i* P	Pn	01 06 47.8	-3.9
NEEM				*i* S	Sn	01 08 38.3	-13
NEEM				IAML		01 08 43.4	
	comp=Z,6.4nm,0.6s						
SCO	**Scoresbysund**	**10.71**	**229**	*i* P	**Pn**	**01 06 52.1**	**-0.1**
SCO				*i* S	Sn	01 08 39.0	-13
SCO				IAML		01 08 47.8	
	comp=Z,6.5nm,0.9s						
SCO	**Scoresbysund**	**10.71**	**229**	*i* P	**Pn**	**01 06 52.1**	**-0.1**
SCO				*i* S	Sn	01 08 39.0	-13
SCO				IAML		01 08 47.8	
	comp=Z,6.5nm,0.9s						
KIF	**Kilpisjarvi**	**11.32**	**145**	*e*P	**Pn**	**01 07 03.9**	**+3.4**
KEV	**Kevo**	**11.38**	**133**	*e*P	**Pn**	**01 07 04.3**	**+3.0**
VADS	**Vadso**	**11.38**	**129**	*e*P	**Pn**	**01 07 04.0**	**+2.7**
ARA0	**ARCESS Array S**	**11.38**	**136**	Pn	**Pn**	**01 07 03.4**	**+1.9**
	baz=348,slow=12						
ARA0	**ARCESS Array S**	**11.38**	**136**	*e*P	**Pn**	**01 07 03.3**	**+1.9**
ARA0				Pn	Pn	01 07 03.4	+2.0
ARCES	**ARCESS Array B**	**11.38**	**136**	Pn	**Pn**	**01 07 02.1**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=341,slow=11,SNR=6.7						
ARCES				Sn	Sn	01 08 57.3	-11
	comp=Z,0.1nm,0.3s,baz=343,slow=23,SNR=1.5 comp=Z,4.4nm,1.1s						
LOF	**Lofoten**	**11.53**	**159**	*e*P	**Pn**	**01 07 05.7**	**+2.3**
SUMG	**Summit**	**11.68**	**258**	*i* P	**Pn**	**01 07 05.3**	**-0.5**
SUMG				*i* S	Sn	01 09 07.3	-8.8
SUMG	**Summit**	**11.68**	**258**	*i* P	**Pn**	**01 07 05.3**	**-0.5**
SUMG				*i* S	Sn	01 09 07.3	-8.8
KULLO	**Kullorsuaq**	**13.67**	**282**	*i* P	**Pn**	**01 07 29.9**	**-2.6**
KULLO	**Kullorsuaq**	**13.67**	**282**	*i* P	**Pn**	**01 07 29.9**	**-2.6**
TULEG	**Thule**	**14.33**	**296**	*i* P	Pn	01 07 36.8	-4.8
TULEG				*i* S	Sn	01 10 03.7	-17
TULEG	**Thule**	**14.33**	**296**	*i* P	Pn	01 07 36.8	-4.8
TULEG				*i* S	Sn	01 10 03.7	-17
UPNV	**Upernavik**	**14.83**	**276**	*i* P	Pn	01 07 43.3	-5.1
UPNV				*i* S	Sn	01 10 15.5	-17
UPNV	**Upernavik**	**14.83**	**276**	*i* P	Pn	01 07 43.3	-5.1
UPNV				*i* S	Sn	01 10 15.5	-17
LSH	**Leshukonskoye**	**18.79**	**115**	*e*P	**P**	**01 08 37.6**	**-0.4**
	comp=Z,15nm,1.7s						
FINES	**FINESS Array B**	**19.22**	**144**	Pn	**P**	**01 08 44.7**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=349,slow=11,SNR=4.2 comp=Z,4.0nm,1.0s						
HFS	**Hagfors**	**19.49**	**163**	Pn	**P**	**01 08 47.5**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=350,slow=15,SNR=2.4 comp=Z,4.1nm,1.0s						
FRB	**Frobisher Bay**	**24.93**	**274**	LR	LR	01 18 49.2	
	comp=Z,51nm,18.0s,baz=332,slow=34						
AKASG	**Malin Array Be**	**30.12**	**145**	LR	LR	01 21 48.3	
	comp=Z,31nm,20.0s,baz=336,slow=35						
AKTO	**Aktyubinsk**	**34.59**	**112**	LR	LR	01 26 49.2	
	comp=Z,46nm,18.1s,baz=28,slow=39						
KURBB	**Kurchatov Arra**	**38.18**	**91**	P	**P**	**01 11 41.9**	**+3.8**
	comp=Z,0.3nm,0.8s,baz=339,slow=7.9,SNR=3.1 comp=Z,0.3nm,0.8s						
MKAR	**Makanchi Array**	**42.56**	**89**	P	**P**	**01 12 18.5**	**+4.0**
	comp=Z,0.2nm,0.4s,baz=339,slow=6.5,SNR=4.0						
MKAR				LR	LR	01 33 40.7	
	comp=Z,37nm,18.1s,baz=265,slow=41 comp=Z,0.2nm,0.4s						
AAK	**Ala-Archa**	**45.10**	**98**	LR	LR	01 33 36.4	
	comp=Z,23nm,18.5s,baz=37,slow=39						
SONM	**Songino Array**	**45.95**	**66**	LR	LR	01 34 24.9	
	comp=Z,41nm,18.7s,baz=178,slow=39						

IDC ***12*** *01:06:37.2±2.4, 40°.73N×141°.49E, h0km, mb3.7/5, mbtmp3.6/6, ML2.1/1, MS3.4/1, Error ellipse: s-maj=67.5km s-min=27.7km az=78.0*
JMA ***12*** *01:06:45.8±0.1, 40°.9N±0°.3×14°2E±°, h73km±1km, MV2.9/32, E OFF AOMORI PREF*

ISC 12 01:06:45.8±1.1, 40°.92N±0°.04×141°.7E±0°.1, h71km±7km, n25, σ0s77/25, mb3.7/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JARK	**Aomorirokkasho**	**0.29**	**288**	P	**Pn**	**01 06 57.1**	**+0.2**
JARK				*e*S	**Sn**	**01 07 05.3**	**+0.2**
JAHD	**Aomorihigashid**	**0.45**	**320**	*i* P	**Pn**	**01 06 58.5**	**+0.3**
JAHD				*e*S	**Sn**	**01 07 07.6**	**+0.2**
JTM	**Tenmabayashi**	**0.52**	**255**	P	**Pn**	**01 06 58.7**	**-0.1**
JTM				S	**Sn**	**01 07 08.1**	**-0.3**
JANG	**Nango**	**0.57**	**196**	*i* P	**Pn**	**01 06 59.2**	**-0.1**
JANG				S	**Sn**	**01 07 09.0**	**-0.3**
JOT	**Ohata**	**0.69**	**312**	*i* P	**Pn**	**01 07 00.3**	**-0.3**
JOT				S	**Sn**	**01 07 11.6**	**+0.1**
JKB	**Kayabe**	**1.10**	**332**	*i* P	**Pn**	**01 07 05.7**	**+0.2**
JKB				S	**Sn**	**01 07 20.2**	**0.0**
JAH	**Hinai**	**1.11**	**229**	P	**Pn**	**01 07 06.6**	**+1.0**
JAH				*e*S	**Sn**	**01 07 20.9**	**+0.5**
JSR	**Shiriuchi**	**1.16**	**302**	*e*P	**Pn**	**01 07 06.1**	**-0.2**
JSR				S	**Sn**	**01 07 21.6**	**0.0**
JIW	**Iwasaki**	**1.35**	**256**	P	**Pn**	**01 07 08.7**	**-0.1**
JOM	**Ohasama**	**1.48**	**193**	*i* P	**Pn**	**01 07 11.2**	**+0.6**
JYM2	**Yakumo 2**	**1.57**	**320**	P	**Pn**	**01 07 12.0**	**+0.4**
JNB	**Noboribetsu**	**1.63**	**342**	*i* P	**Pn**	**01 07 12.2**	**-0.2**
MJAR	**Matsushiro Arr**	**5.16**	**213**	Pn	Pn	01 07 54.4	-6.2
	0.1nm,0.3s,baz=23,slow=16,SNR=1.3 0.9nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**30.11**	**127**	T	T	01 43 57.4	
	baz=318,slow=75,SNR=3.7						
H11N1	**WAKE ISLAND Hy**	**30.12**	**127**	T	T	01 43 59.4	
	baz=318,slow=75,SNR=4.1						
H11N3	**WAKE ISLAND Hy**	**30.13**	**127**	T	T	01 43 52.7	
	baz=318,slow=75,SNR=4.4						
H11S1	**WAKE ISLAND Hy**	**30.94**	**129**	T	T	01 45 07.2	
	baz=321						
H11S3	**WAKE ISLAND Hy**	**30.94**	**129**	T	T	01 45 01.8	
	baz=321						
H11S2	**WAKE ISLAND Hy**	**30.95**	**129**	T	T	01 45 03.2	
	baz=321						
TIXI	**Tiksi**	**31.47**	**352**	LR	LR	01 27 22.8	
	comp=Z,61nm,19.1s,baz=196,slow=39						
ZALV	**Zalesovo Beam**	**39.57**	**309**	P	**P**	**01 14 09.8**	**+0.1**
	0.7nm,0.7s,baz=99,slow=8.9,SNR=4.3 0.7nm,0.7s						
MKAR	**Makanchi Array**	**42.37**	**299**	P	**P**	**01 14 31.8**	**-1.0**
	0.4nm,0.7s,baz=85,slow=8.7,SNR=4.1 0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**43.89**	**305**	P	**P**	**01 14 44.3**	**-0.7**
	1.0nm,0.6s,baz=78,slow=8.9,SNR=8.7 1.0nm,0.6s						
ARCES	**ARCESS Array B**	**60.46**	**339**	P	**P**	**01 16 49.8**	**+2.3**
	3.0nm,0.9s,baz=46,slow=7.2,SNR=1.8 3.0nm,0.9s						
WRA	**Warramunga Arr**	**60.94**	**188**	P	**P**	**01 16 49.6**	**-1.8**
	0.4nm,0.8s,baz=7.1,slow=6.8,SNR=2.1 0.4nm,0.8s						

IDC ***12*** *01:18:08.8±2.4, 36°.45S×74°.08W, h0km, mb3.4/2,*

mbtmp3.2/3, ML3.0/1, Error ellipse: s-maj=114.2km s-min=37.1km az=56.0
GUC ***12*** *01:18:22.6±0.8, 37°.03S×73°.56W, h19km±7km, ML3.3*

ISC 12 01:18:16.2±2.1, 36°.75S±0°.10×74°.0W±0°.1, h17km±20km, n15, σ1s68/15, 1C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BI05	**Punta Hualpn**	**0.62**	**90**	⇓*i*P	**Pb**	**01 18 30.4**	**+1.9**
BI05				*i* S	**Sb**	**01 18 35.4**	**-1.6**
BI05				IAML		01 18 37.0	
	comp=N,6μm,0.2s						
BI04	**Isla Mocha**	**1.66**	**178**	*e*P	**Pn**	**01 18 46.2**	**+1.7**
BI04				*e*S	**Sn**	**01 19 04.0**	**-1.3**
BI04				IAML		01 19 13.2	
	comp=E,888nm,0.2s						
LC02	**Puerto Saavedr**	**2.09**	**167**	*e*P	**Pn**	**01 18 51.9**	**+1.6**
LC02				*e*S	**Sn**	**01 19 13.9**	**-2.0**
LC02				IAML		01 19 26.5	
	comp=N,1μm,0.4s						
BI02	**San Fabin de**	**2.16**	**88**	⇑*i*P	**Pn**	**01 18 53.7**	**+2.2**
BI02				*i* S	**Sn**	**01 19 17.3**	**-0.7**
BI02				IAML		01 19 23.7	
	comp=E,308nm,0.3s						
ML02	**Panimavida**	**2.28**	**65**	*e*P	**Pb**	**01 18 57.6**	**+0.7**
ML02				IAML		01 19 31.1	
	comp=E,609nm,0.4s						
GO05	**Hualane**	**2.40**	**44**	*e*P	**Pg**	**01 19 01.2**	**-1.0**
GO05				*e*S	**Sg**	**01 19 33.1**	**-0.2**
GO05				IAML		01 19 45.8	
	comp=E,131nm,0.4s						
LC01	**Cunco**	**2.70**	**143**	*e*P	**Pn**	**01 18 60.0**	**+1.1**
BO03	**Pichilemu**	**2.78**	**37**	*e*P	**Pb**	**01 19 05.6**	**+0.2**
BO03				IAML		01 19 56.8	
	comp=N,56nm,0.4s						
GO06	**Curarrehue**	**3.44**	**146**	*i* P	**Pn**	**01 19 11.2**	**+2.1**
GO06				IAML		01 20 00.4	
	comp=N,46nm,0.5s						
PLCA	**Paso Flores**	**4.79**	**147**	Pn	**Pn**	**01 19 26.4**	**-1.1**
	comp=N,0.1nm,0.3s,baz=328,slow=15,SNR=5.7						
PLCA				Lg	Lg	01 20 39.5	
	comp=N,0.7nm,0.3s,baz=315,slow=2.9,SNR=5.5 comp=N,1.2nm,0.8s						
H03S1	**Juan Fernandez**	**4.98**	**304**	T	T	01 25 05.3	
	baz=125,slow=75,SNR=43						
H03S3	**Juan Fernandez**	**4.99**	**304**	T	T	01 25 07.5	
	baz=125,slow=75,SNR=51						
H03S2	**Juan Fernandez**	**4.99**	**304**	T	T	01 25 05.3	
	baz=125,slow=75,SNR=54						
TXAR	**Lajitas Array**	**71.41**	**333**	P	P	01 29 29.0	-6.5
	comp=N,0.2nm,0.8s,baz=153,slow=6.4,SNR=1.6 comp=N,0.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**86.61**	**71**	P	P	01 30 54.4	-4.6
	comp=N,0.3nm,0.8s,baz=237,slow=3.4,SNR=1.9 comp=N,0.3nm,0.8s						

IDC 12 01:37:26.2±8.5, 18°.47S×176°.72W, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=375.0km s-min=37.4km az=142.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**46.12**	**260**	P	P	01 45 52.3	-0.4
	0.3nm,0.7s,baz=97,slow=8.0,SNR=1.6 0.3nm,0.7s						
ASAR	**Alice Springs**	**46.19**	**255**	P	P	01 45 53.3	+0.1
	0.9nm,0.6s,baz=93,slow=7.8,SNR=16 0.9nm,0.6s						
ILAR	**Eielson Array**	**86.08**	**12**	P	P	01 50 08.3	-0.1
	0.2nm,0.5s,baz=209,slow=4.7,SNR=7.2 0.2nm,0.5s						

TIR ***12*** *02:03:35.6, 39°.91N×19°.76E, h25km, MI2.8/4*
ATH ***12*** *02:03:36.1, 40°.08N×19°.80E, h6km±1km, ML2.4/9, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

ISC 12 02:03:36.6±1.2, 40°.02N±0°.03×19°.79E±0°.04, h18km±4km, n21, σ0s87/30, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRN	**Sarande**	**0.21**	**130**	Pg	**Pb**	**02 03 41.2**	**-0.4**
SRN				S	**Sb**	**02 03 45.5**	**+0.6**
KEK	**Kerkira**	**0.30**	**179**	P	**Pb**	**02 03 43.4**	**-0.1**
KEK				S	**Sb**	**02 03 48.4**	**+0.2**
VLO	**Vlora**	**0.51**	**333**	Pg	**Pb**	**02 03 46.6**	**-0.4**
VLO				S	**Sn**	**02 03 56.0**	**-1.2**
VLO				AML	AML	02 03 59.5	
	6.0nm,0.5s						
IGT	**Igoumenitsa**	**0.64**	**139**	P	**Pb**	**02 03 49.3**	**+0.1**
IGT				S	**Sb**	**02 03 57.9**	**+0.2**
JAN	**Janina**	**0.89**	**113**	P	**Pn**	**02 03 53.9**	**-0.4**
JAN				S	**Sn**	**02 04 05.9**	**-0.8**
KBN	**Korca**	**0.97**	**51**	Pg	**Pn**	**02 03 55.4**	**-0.1**
KBN				S	**Sn**	**02 04 09.9**	**+1.0**
KBN				AML	AML	02 04 14.0	
	0.3nm,0.7s						
NEST	**Nestorio**	**1.04**	**67**	P	**Pb**	**02 03 55.7**	**-0.5**
PENT	**Pentalofos**	**1.05**	**80**	P	**Pg**	**02 03 56.3**	**-0.7**
PRMD	**Pramanda**	**1.11**	**115**	P	**Pg**	**02 03 58.5**	**+0.

IACM	**Heraklion**	**1.69**	**41**	P		**Pn**	**02 28 23.8**	**+1.7**
IACM				S		**Sn**	**02 28 46.5**	**+3.5**
NPS	**Neapolis**	**1.98**	**51**	P		**Pn**	**02 28 28.0**	**+1.9**
NPS				S		**Sn**	**02 28 55.4**	**+5.4**
NPS	**Neapolis**	**1.98**	**51**	P		**Pn**	**02 28 27.8**	**+1.7**
ZKR	**Zakros**	**2.32**	**61**	Pn		**Pn**	**02 28 30.4**	**-0.2**
ZKR	**Zakros**	**2.32**	**61**	P		**Pn**	**02 28 32.9**	**+2.2**
THR9	**Santorini-Faro**	**2.68**	**29**	P		**Pn**	**02 28 36.7**	**+1.3**
THR6	**Thira Island,**	**2.70**	**30**	P		**Pn**	**02 28 36.2**	**+0.6**
SNT5	**Nea Kammeni, S**	**2.74**	**29**	P		**Pn**	**02 28 36.3**	**+0.1**
THERA	**Ancient Thera,**	**2.74**	**31**	P		**Pn**	**02 28 36.0**	**-0.3**
THR3	**Thira Island,**	**2.74**	**29**	P		**Pn**	**02 28 36.6**	**+0.3**
VLI	**Veliai**	**2.76**	**347**	P		**Pn**	**02 28 36.8**	**+0.2**
VLI				S		**Sn**	**02 29 10.0**	**+1.2**
VLI	**Veliai**	**2.76**	**347**	P		**Pn**	**02 28 36.8**	**+0.2**
KARP	**Karpathos**	**3.21**	**61**	P		**Pn**	**02 28 45.0**	**+2.3**
KARP				S		**Sn**	**02 29 24.1**	**+4.3**
KARP	**Karpathos**	**3.21**	**61**	Pn		**Pn**	**02 28 42.9**	**+0.3**
YAZI	**Mula-Dat§a-**	**4.03**	**48**	P		**Pn**	**02 28 54.1**	**+0.3**
YAZI				S		Sn	02 29 29.2	-11
GUR	**Goura**	**4.06**	**344**	P		**Pn**	**02 28 54.0**	**-0.3**
DAT	**Datca**	**4.14**	**48**	Pn		**Pn**	**02 28 56.6**	**+1.1**
DAT	**Datca**	**4.14**	**48**	P		**Pn**	**02 28 55.6**	**+0.2**
DAT				S		Sn	02 29 31.4	-11
BODT	**Bodrum**	**4.21**	**43**	Pn		**Pn**	**02 28 57.8**	**+1.5**
KLV	**Kalavryta, Ach**	**4.21**	**343**	P		**Pn**	**02 28 55.5**	**-0.8**
ARG	**Arkhangelos**	**4.21**	**58**	Pn		**Pn**	**02 28 57.4**	**+1.1**
TURN	**Turunc**	**4.60**	**52**	Pn		**Pn**	**02 29 02.4**	**+0.9**
TURN	**Turunc**	**4.60**	**52**	P		**Pn**	**02 29 01.8**	**+0.3**
TURN				S		**Sn**	**02 29 48.0**	**-5.5**
YER	**Yerkesik**	**4.84**	**49**	Pn		**Pn**	**02 29 06.3**	**+1.4**
DALY	**Dalyan (Mula)**	**4.89**	**54**	Pn		**Pn**	**02 29 06.9**	**+1.4**
MULA	**Mugla, Merkez-**	**4.94**	**48**	P		**Pn**	**02 29 08.1**	**+1.8**
MULA				S		**Sn**	**02 29 57.0**	**-5.1**
AYDN	**Tasoluk**	**4.95**	**42**	P		**Pn**	**02 29 07.3**	**+0.9**
AYDN				S		Sn	02 29 51.8	-11
FETY	**Fethiye**	**5.09**	**58**	Pn		**Pn**	**02 29 08.8**	**+0.4**
FETY	**Fethiye**	**5.09**	**58**	P		**Pn**	**02 29 08.8**	**+0.4**
FETY				S		**Sn**	**02 30 01.0**	**-4.9**
IZZE	**Mula-Seydike**	**5.10**	**60**	P		**Pn**	**02 29 08.8**	**+0.3**
IZZE				S		**Sn**	**02 30 00.5**	**-5.5**
SABU	**Mula-Dalaman**	**5.11**	**55**	P		**Pn**	**02 29 09.0**	**+0.5**
AKAS	**Kas**	**5.29**	**64**	Pn		**Pn**	**02 29 11.7**	**+0.5**
AKAS	**Kas**	**5.29**	**64**	P		**Pn**	**02 29 11.3**	**+0.1**
AKAS				S		**Sn**	**02 30 07.2**	**-3.8**
ESEN	**Aydn-Nazilli**	**5.31**	**44**	P		**Pn**	**02 29 12.5**	**+1.2**
IZMR	**zmir-demi**	**5.34**	**39**	P		**Pn**	**02 29 12.8**	**+1.1**
DNZT	**Denizli-Tavas-**	**5.40**	**52**	P		**Pn**	**02 29 13.5**	**+1.0**
DNZT				S		**Sn**	**02 30 07.7**	**-5.7**
CAME	**Cameli-Denizli**	**5.40**	**56**	Pn		**Pn**	**02 29 13.7**	**+1.1**
TAVA	**DENIZLI_Tavas**	**5.43**	**49**	P		**Pn**	**02 29 14.5**	**+1.4**
CAEL	**Denizli, Camel**	**5.50**	**54**	P		**Pn**	**02 29 13.8**	**-0.3**
CAEL				S		**Sn**	**02 30 10.2**	**-5.9**
KNIK	**Mula-Seydike**	**5.54**	**58**	P		**Pn**	**02 29 15.0**	**+0.5**
KNIK				S		**Sn**	**02 30 09.2**	**-7.7**
KIRA	**zmir-Kiraz**	**5.62**	**41**	P		**Pn**	**02 29 14.3**	**-1.4**
APMY	**Acipayam-Deniz**	**5.69**	**51**	Pn		**Pn**	**02 29 17.7**	**+1.2**
SULTU	**Buldan**	**5.73**	**44**	P		**Pn**	**02 29 15.5**	**-1.6**
GOLH	**Golhisar**	**5.73**	**54**	P		**Pn**	**02 29 17.7**	**+0.6**
GOLH				S		**Sn**	**02 30 17.6**	**-3.9**
ELL	**Elmali**	**5.73**	**60**	Pn		**Pn**	**02 29 18.0**	**+0.8**
INCE	**Denizli-Bozkur**	**6.00**	**51**	P		**Pn**	**02 29 21.7**	**+0.9**
INCE				S		Sn	02 30 18.6	-10
VAE	**Valguarnera**	**8.32**	**297**	P		**Pn**	**02 29 49.9**	**-2.6**
	3.5nm,0.5s,baz=90,slow=19,SNR=6.1							
VAE				Sn		Sn	02 31 15.3	-10
	1.3nm,0.3s,baz=72,slow=19,SNR=1.8							
BRTR	**Keskin Array B**	**9.76**	**52**	Pn		**Pn**	**02 30 13.8**	**+1.5**
	0.1nm,0.3s,baz=241,slow=16,SNR=4.2							
BRTR				Sn		**Sn**	**02 31 57.9**	**-2.3**
	0.1nm,0.3s,baz=230,slow=11,SNR=1.3							
	0.3nm,0.5s							
MMAI	**Mount Meron Ar**	**9.80**	**93**	Pn		**Pn**	**02 30 12.3**	**-0.4**
	1.2nm,0.3s,baz=278,slow=10.0,SNR=7.0							
MMAI				Sn		**Sn**	**02 31 56.6**	**-4.5**
	5.8nm,0.3s,baz=278,slow=10.0,SNR=9.3							
	0.4nm,0.2s							
EIL	**Elat**	**10.48**	**111**	Pn		**Pn**	**02 30 20.1**	**-1.8**
	0.9nm,0.3s,baz=298,slow=15,SNR=32							
EIL				Sn		**Sn**	**02 32 10.2**	**-7.5**
	2.4nm,0.3s,baz=353,slow=8.1,SNR=8.1							
	2.9nm,0.3s							
ASF	**Jabal al Asfar**	**11.20**	**96**	Pn		**Pn**	**02 30 31.2**	**-0.6**
	0.2nm,0.3s,baz=283,slow=16,SNR=1.3							
ASF				Sn		**Sn**	**02 32 30.6**	**-4.7**
	0.5nm,0.3s,baz=308,slow=19,SNR=2.0							
	0.5nm,0.3s							
HFS	**Hagfors**	**26.93**	**349**	P		**P**	**02 33 30.0**	**+1.3**
	2.3nm,0.8s,baz=157,slow=8.8,SNR=1.3							
	2.3nm,0.8s							
TORD	**Torodi Ar. Bea**	**28.86**	**229**	P		**P**	**02 33 46.1**	**-0.1**
	0.2nm,0.6s,baz=41,slow=7.2,SNR=1.9							
	0.2nm,0.6s							
KURBB	**Kurchatov Arra**	**42.75**	**50**	P		**P**	**02 35 48.0**	**+3.6**
	0.6nm,0.4s,baz=275,slow=8.7,SNR=4.6							
	0.6nm,0.4s							
MKAR	**Makanchi Array**	**45.38**	**55**	P		**P**	**02 36 09.4**	**+3.8**
	0.4nm,0.5s,baz=274,slow=6.5,SNR=9.7							
	0.4nm,0.5s							

*IDC **12** 02:27:59.6±0.7,57°.29S×25°.82W,h0km,mb4.2/6,*
mbtmp4.1/7,ML4.0/1,MS3.4/1,Error ellipse: s-maj=31.4km
s-min=19.8km az=74.0
*NEIC **12** 02:28:04.6±1.6,57°.3S±0°.1×25°.1W±0°.2,h35km±1km,*
mb4.3/8, Error ellipse: s-maj=23.0km s-min=17.6km
az=206.0

ISC 12 02:28:05.9±0.6,57°.3S±0°.1×25°.6W±0°.1,h43km,n36,
σ1§31/30,mb4.2/6,4C,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**6.85**	**291**	Pn	**Pn**	**02 29 45.5**	**+1.9**
VNA1	**Neumayer--Stat**	**15.34**	**158**	⇑P	**Pn**	**02 31 39.9**	**+1.0**
	comp=Z,1.0nm,0.2s						
VNA3	**Neumayer Olympp**	**15.55**	**161**	⇑P	**Pn**	**02 31 41.8**	**+0.1**
	comp=Z,0.9nm,0.2s						
VNA2	**Neumayer--Watz**	**15.73**	**158**	⇑P	**Pn**	**02 31 45.3**	**+1.3**
	comp=Z,1.1nm,0.2s,baz=320,slow=14						
SNAA	**Sanae**	**17.27**	**156**	P	**Pn**	**02 32 03.4**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=315,slow=7.1,SNR=2.3						
	comp=Z,0.9nm,0.3s						
SNAA	**Sanae**	**17.27**	**156**		**Pn**	**02 32 02.2**	**-1.3**
TROLL	**Troll, Antarti**	**18.76**	**153**	⇑P	**Pn**	**02 32 25.6**	**+3.9**
QSPA	**South Pole Qui**	**32.99**	**180**	P	**P**	**02 34 35.9**	**-0.5**
	comp=Z,3.9nm,0.6s,baz=197,slow=2.5,SNR=41						
	comp=Z,3.9nm,0.6s						
QSPA	**South Pole Qui**	**32.99**	**180**	P	**P**	**02 34 36.3**	**-0.1**
QSPA				IAmb	IAmb	02 34 47.9	
	comp=Z,4.0nm,1.4s						
PLCA	**Paso Flores**	**33.10**	**280**	P	**P**	**02 34 36.0**	**-1.5**
	comp=Z,1.7nm,1.0s,baz=169,slow=3.3,SNR=3.0						
	comp=Z,1.7nm,1.0s						
SUR	**Sutherland**	**40.12**	**72**	LR	LR	02 47 55.2	
	comp=Z,61nm,21.8s,baz=164,slow=30						
SUR	**Sutherland**	**40.12**	**72**	P	**P**	**02 35 37.0**	**-0.4**
BDFB	**Brasilia**	**44.86**	**329**	P	**P**	**02 36 15.7**	**-0.3**
	comp=Z,1.3nm,0.5s,baz=170,slow=12,SNR=3.8						
	comp=Z,1.3nm,0.5s						
BDFB	**Brasilia**	**44.86**	**329**	P	**P**	**02 36 15.5**	**-0.5**
BDFB				IAmb	IAmb	02 36 23.1	
	comp=Z,7.8nm,1.3s						
VNDA	**Vanda**	**45.41**	**182**	P	**P**	**02 36 19.2**	**-0.2**
	comp=Z,2.0nm,0.6s,baz=179,slow=7.2,SNR=8.9						
	comp=Z,2.0nm,0.6s						
VNDA	**Vanda**	**45.41**	**182**	P	**P**	**02 36 19.2**	**-0.2**
H10S2	**ASCENSION HYDR**	**48.92**	**14**	T	T	03 29 40.0	
	baz=188,slow=74,SNR=7.2						
H10S3	**ASCENSION HYDR**	**48.92**	**14**	T	T	03 29 41.1	
	baz=32,slow=74,SNR=7.2						
H10N1	**ASCENSION HYDR**	**50.04**	**14**	T	T	03 31 08.3	
	baz=189						
H10N3	**ASCENSION HYDR**	**50.04**	**14**	T	T	03 31 11.6	
	baz=189						
H10N2	**ASCENSION HYDR**	**50.06**	**14**	T	T	03 31 06.2	
	baz=189						
LPAZ	**La Paz**	**51.81**	**304**	P	**P**	**02 37 09.2**	**-0.8**
	comp=Z,2.0nm,0.5s,baz=104,slow=5.4,SNR=14						
	comp=Z,2.0nm,0.5s						
LPAZ	**La Paz**	**51.81**	**304**	P	**P**	**02 37 09.9**	**-0.1**
LPAZ				IAmb	IAmb	02 37 14.4	
	comp=Z,2.1nm,0.6s						
DBIC	**Dimbokro**	**65.91**	**23**	P	**P**	**02 38 47.3**	**+0.2**
TORD	**Torodi Ar. Bea**	**73.68**	**28**	P	**P**	**02 39 36.5**	**+1.6**
	comp=Z,1.1nm,0.6s,baz=202,slow=5.2,SNR=15						
	comp=Z,1.1nm,0.6s						
TORD	**Torodi Ar. Bea**	**73.68**	**28**	P	**P**	**02 39 35.5**	**+0.6**
TORD				IAmb	IAmb	02 40 13.3	
	comp=Z,5.9nm,1.2s						
PDAR	**Pinedale Array**	**121.74**	**301**	PKP	**PKPdf**	**02 46 53.1**	**-1.2**
	comp=Z,0.2nm,0.6s,baz=104,slow=1.3,SNR=2.1						
PDAR	**Pinedale Array**	**121.74**	**301**		**PKPdf**	**02 46 53.7**	**-0.7**
FINES	**FINESS Array B**	**125.03**	**27**	PKP	**PKPdf**	**02 46 59.2**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=245,slow=2.9,SNR=4.9						
FINES	**FINESS Array B**	**125.03**	**27**		**PKiKP**	**02 46 59.6**	**-0.5**
BVAR	**Borovoye Array**	**134.66**	**58**	PKP	**PKiKP**	**02 47 20.4**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=228,slow=3.7,SNR=2.2						
YKA	**Yellowknife Ar**	**137.67**	**316**	PKP	**PKPdf**	**02 47 23.3**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=122,slow=1.5,SNR=11						
SONM	**Songino Array**	**149.89**	**87**	PKPbc	**PKPbc**	**02 47 49.2**	**-1.2**
	comp=Z,1.1nm,0.6s,baz=254,slow=4.1,SNR=8.2						
SONM	**Songino Array**	**149.89**	**87**		**PKPbc**	**02 47 48.4**	**-2.0**
ILAR	**Eielson Array**	**151.59**	**310**	PKPbc	**PKPbc**	**02 47 53.3**	**-0.4**
	comp=Z,2.6nm,0.7s,baz=121,slow=6.3,SNR=41						
ILAR	**Eielson Array**	**151.59**	**310**	PKPdf	**PKPdf**	**02 47 50.2**	**+2.8**

*FUNV **12** 02:36:31.0,10°.73N×61°.84W,h5km,MW3.2,Presumed earthquake*
*TRN **12** 02:36:31.4,10°.73N×61°.80W,h42km,MD3.6,North-west of Trinidad.*

ISC 12 02:36:30.9±1.9,10°.73N±0°.09×61°.82W±0°.10,h44km±27km,
n11,σ0§76/18,Trinidad

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DMDM	**Guralp CMG5TDE**	**0.26**	**96**	*eP*	**Pn**	**02 36 39.5**	**+0.4**
DMDM				*eS*	**Sn**	**02 36 44.9**	**0.0**
TRN	**Trinidad (W)**	**0.41**	**101**	*eP*	**Pn**	**02 36 40.8**	**0.0**
TRN				*eS*	**Sn**	**02 36 47.2**	**-0.5**
TRN	**Trinidad (W)**	**0.41**	**101**	*eP*	**Pn**	**02 36 41.0**	**+0.2**
TRN				*eS*	**Sn**	**02 36 47.2**	**-0.5**
GRFF	**Grenada Fort F**	**1.32**	**3**	*eP*	**Pn**	**02 36 52.8**	**-0.1**
GRFF				*eS*	**Sn**	**02 37 08.8**	**-0.5**
GRW	**Mount Saint Ca**	**1.43**	**6**	*eP*	**Pn**	**02 36 54.1**	**-0.4**
GRW				*eS*	**Sn**	**02 37 12.1**	**-0.1**
GCMP	**Grenada, Carri**	**1.79**	**12**	*eP*	**Pn**	**02 36 59.5**	**+0.2**
GCMP				*eS*	**Sn**	**02 37 21.0**	**+0.1**
SVB	**Belmont**	**2.59**	**12**	*eP*	**Pn**	**02 37 11.4**	**+1.0**
SVB				*eS*	**Sn**	**02 37 40.4**	**-0.3**
PCRV	**Puerto La Cruz**	**2.83**	**259**	*eP*	**Pn**	**02 37 14.8**	**+1.2**
TACV	**Tcata**	**5.16**	**264**	*eP*	**Pn**	**02 37 46.6**	**+1.0**
CACV	**CAICARA DEL OR**	**5.62**	**236**	*eP*	Pn	02 37 45.0	-7.0
CACV				*eS*	Sn	02 38 41.0	-14
BENV	**Beln**	**5.74**	**263**	*eP*	**Pn**	**02 37 53.6**	**-0.1**
BENV				*eS*	**Sn**	**02 38 56.5**	**-1.9**

*IDC **12** 02:54:40.6±0.8,17°.83S×116°.44W,h0km,mb3.8/7,*
mbtmp3.8/7,MS3.5/9,Error ellipse: s-maj=42.4km
s-min=23.8km az=88.0
*NEIC **12** 02:54:43.9±1.6,18°.0S±0°.1×116°.2W±0°.1,h10km±1km,*
mb4.4/22,Error ellipse: s-maj=25.7km s-min=22.4km
az=325.0

ISC 12 02:54:42.5±0.8,18°.0S±0°.2×116°.3W±0°.2,h10km,n55,
σ0§90/41,mb4.3/14,MS3.5/8,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**11.19**	**146**	LR	LR	03 00 35.3	
	comp=Z,193nm,19.3s,baz=286,slow=31						
H03N2	**Juan Fernandez**	**36.84**	**122**	T	T	03 40 47.1	
	baz=290,slow=76,SNR=15						
H03N3	**Juan Fernandez**	**36.85**	**122**	T	T	03 40 44.8	
	baz=290,slow=76,SNR=14						
H03N1	**Juan Fernandez**	**36.86**	**122**	T	T	03 40 46.3	
	baz=290,slow=76,SNR=15						
CMIG	**Matias Romero**	**40.72**	**32**	LR	LR	03 15 11.2	
	comp=Z,70nm,19.9s,baz=202,slow=30						
LPIG	**La Paz**	**42.21**	**8**	LR	LR	03 15 04.5	
	comp=Z,58nm,20.9s,baz=204,slow=29						
LPAZ	**La Paz**	**46.00**	**96**	P	**P**	**03 03 07.9**	**+0.7**
	0.5nm,0.6s,baz=222,slow=3.0,SNR=1.9						
LPAZ				LR	LR	03 17 36.8	
	comp=Z,60nm,21.8s,baz=252,slow=30						
	0.5nm,0.6s						
LPAZ	**La Paz**	**46.00**	**96**	P	**P**	**03 03 05.8**	**-1.4**
TXAR	**Lajitas Array**	**48.57**	**15**	P	**P**	**03 03 24.6**	**-1.8**
	0.4nm,0.9s,baz=193,slow=6.1,SNR=4.4						
TXAR				PcP	**PcP**	**03 04 50.8**	**-1.2**
	0.5nm,0.9s,baz=236,slow=4.3,SNR=3.7						
	0.4nm,0.9s						
TXAR	**Lajitas Array**	**48.57**	**15**	P	**P**	**03 03 27.0**	**+0.7**
TXAR					**PcP**	**03 04 53.3**	**+1.3**
SAND	**Sanderson**	**49.56**	**16**		**P**	**03 03 35.0**	**+1.2**
SAND				IAmb	IAmb	03 03 35.8	
	comp=Z,6.4nm,1.4s						
MNTX	**Cornudas Mount**	**50.47**	**12**		**P**	**03 03 41.9**	**+1.3**
MNTX				IAmb	IAmb	03 03 42.4	
	comp=Z,3.5nm,0.8s						
OZNA	**Ozona**	**50.74**	**17**	P	**P**	**03 03 43.9**	**+1.1**
OZNA				IAmb	IAmb	03 03 44.3	
	comp=Z,3.7nm,0.8s						
PFO	**Pinyon Flats O**	**51.27**	**360**	LR	LR	03 20 51.9	
	comp=Z,28nm,20.5s,baz=192,slow=31						
BRDY	**Brady**	**51.71**	**19**	P	**P**	**03 03 50.8**	**+0.7**
BRDY				IAmb	IAmb	03 03 51.0	
	comp=Z,4.7nm,0.9s						
MSTX	**Muleshoe**	**53.22**	**14**		**P**	**03 04 01.3**	**0.0**
APMT	**Aspermont**	**53.29**	**17**		**P**	**03 04 02.1**	**+0.4**
ANMO	**Albuquerque**	**53.43**	**10**	LR	LR	03 22 17.6	
	comp=Z,30nm,19.9s,baz=178,slow=31						
SHPR	**Sheep Range**	**54.17**	**1**		**P**	**03 04 08.3**	**+0.1**
PKCU	**Pink Cliffs**	**55.23**	**4**	P	**P**	**03 04 15.9**	**-0.2**
CCUT	**Cedar City**	**55.27**	**3**		**P**	**03 04 16.8**	**+0.5**
NVAR	**Mina Array Bea**	**56.11**	**358**	P	**P**	**03 04 21.9**	**-0.4**
	comp=Z,1.6nm,0.8s,baz=183,slow=6.6,SNR=12						
NVAR				LR	LR	03 23 14.6	
	comp=Z,58nm,19.5s,baz=98,slow=31						
	comp=Z,1.6nm,0.8s						
SDCO	**Great Sand Dun**	**56.33**	**10**		**P**	**03 04 24.5**	**+0.5**
DUG	**Dugway, Tooele**	**57.94**	**3**		**P**	**03 04 36.2**	**+1.0**
DUG				IAmb	IAmb	03 04 38.1	
	comp=Z,6.6nm,1.4s						
ELK	**Elko**	**58.40**	**1**	LR	LR	03 23 50.6	
	comp=Z,40nm,18.4s,baz=192,slow=30						
BGU	**Big Grassy Mou**	**58.65**	**3**	P	**P**	**03 04 40.6**	**+0.5**
SPUT	**South Promonto**	**59.06**	**3**	P	**P**	**03 04 43.1**	**+0.1**
SPUT				IAmb	IAmb	03 04 45.1	
	comp=Z,2.9nm,0.9s						
PDAR	**Pinedale Array**	**60.73**	**6**	P	**P**	**03 04 53.3**	**-1.2**
	comp=Z,0.8nm,0.6s,baz=190,slow=6.7,SNR=10						
	comp=Z,0.8nm,0.6s						
PDAR	**Pinedale Array**	**60.73**	**6**	P	**P**	**03 04 54.4**	**-0.2**
MFID	**Camas Ranch**	**61.06**	**0**	P	**P**	**03 04 57.6**	**+1.0**
HLID	**Hailey**	**61.23**	**2**	P	**P**	**03 04 58.9**	**+1.1**
HLID				IAmb	IAmb	03 05 00.0	
	comp=Z,2.1nm,0.8s						
MCMT	**McKenzie Canyo**	**62.55**	**3**	P	**P**	**03 05 06.8**	**0.0**
NEW	**Newport**	**65.91**	**359**	LR	LR	03 29 45.5	
	comp=Z,63nm,18.3s,baz=82,slow=32						
QSPA	**South Pole Qui**	**72.17**	**180**	P	**P**	**03 06 07.7**	**+0.3**
	comp=Z,6.4nm,1.1s,baz=124,slow=1.7,SNR=9.7						
	comp=Z,6.4nm,1.1s						
QSPA	**South Pole Qui**	**72.17**	**180**	P	**P**	**03 06 08.6**	**+1.2**
QSPA				IAmb	IAmb	03 06 21.5	
	comp=Z,3.9nm,1.0s						
YKA	**Yellowknife Ar**	**80.18**	**1**	P	**P**	**03 06 51.5**	**-1.1**
	comp=Z,0.4nm,0.9s,baz=181,slow=5.0,SNR=8.3						
	comp=Z,0.4nm,0.9s						
YKA	**Yellowknife Ar**	**80.18**	**1**	P	**P**	**03 06 54.3**	**+1.6**
H11S2	**WAKE ISLAND Hy**	**83.84**	**292**	T	T	04 39 42.9	
	baz=111,slow=75,SNR=22						
H11S1	**WAKE ISLAND Hy**	**83.85**	**292**	T	T	04 39 43.6	
	baz=111,slow=75,SNR=21						
H11S3	**WAKE ISLAND Hy**	**83.86**	**292**	T	T	04 39 43.0	
	baz=111,slow=75,SNR=27						
H11N3	**WAKE ISLAND Hy**	**84.10**	**293**	T	T	04 40 01.7	
	baz=109						
H11N1	**WAKE ISLAND Hy**	**84.12**	**293**	T	T	04 40 04.1	
	baz=109						
H11N2	**WAKE ISLAND Hy**	**84.12**	**293**	T	T	04 40 02.7	
	baz=109						
ILAR	**Eielson Array**	**85.72**	**347**	P	**P**	**03 07 20.0**	**-1.3**
	comp=Z,0.3nm,0.8s,baz=112,slow=5.7,SNR=2.8						
	comp=Z,0.3nm,0.8s						
ILAR	**Eielson Array**	**85.72**	**347**	P	**P**	**03 07 22.4**	**+1.1**
BVAR	**Borovoye Array**	**144.60**	**353**	PKP	**PKPab**	**03 14 17.4**	**-0.3**
	comp=Z,2.3nm,0.8s,baz=352,slow=2.9,SNR=11						
KURK	**Kurchatov**	**145.20**	**343**		**PKPbc**	**03 14 19.5**	**-0.4**
KURBB	**Kurchatov Arra**	**145.30**	**343**	PKPbc	**PKPbc**	**03 14 19.6**	**-0.7**
	comp=Z,5.4nm,0.8s,baz=28,slow=3.3,SNR=26						
BRTR	**Keskin Array B**	**146.16**	**44**	PKPbc	**PKPdf**	**03 14 22.6**	**0.0**
	comp=Z,1.4nm,0.8s,baz=298,slow=1.3,SNR=11						
BRTR	**Keskin Array B**	**146.16**	**44**		**PKPdf**	**03 14 21.4**	**-1.1**
CMAR	**Chiang Mai Arr**	**146.52**	**276**	PKPbc	**PKPbc**	**03 14 24.1**	**-0.8**
	comp=Z,1.3nm,0.3s,baz=78,slow=3.0,SNR=9.5						
CMAR	**Chiang Mai Arr**	**146.52**	**276**	PKPdf	**PKPdf**	**03 14 23.5**	**-0.1**
MKAR	**Makanchi Array**	**147.39**	**336**	PKPbc	**PKPdf**	**03 14 24.6**	**+0.3**
	comp=Z,2.0nm,0.8s,baz=30,slow=3.1,SNR=18						
MKAR	**Makanchi Array**	**147.39**	**336**	PKPdf	**PKPdf**	**03 14 24.3**	**+0.1**
KBZ	**Khabaz**	**148.90**	**30**	PKPbc	**PKPbc**	**03 14 30.3**	**-0.3**
	comp=Z,3.1nm,0.9s,baz=282,slow=3.4,SNR=7.5						

*IDC **12** 03:17:18.4±0.8,73°.29N×7°.03E,h0km,mb3.4/9,*
mbtmp3.5/14,ML2.9/5,MS3.3/20,Error ellipse:
s-maj=21.1km s-min=12.5km az=63.0
*NAO **12** 03:17:20.0±2.0,73°.44N×7°.37E,h8km±17km,ML3.1*
*BER **12** 03:17:21.0±3.5,73°.43N×7°.46E,h10km,Mw4.3,*
ML3.1(NAO),Confirmed Earthquake
*DNK **12** 03:17:22.0±1.9,73°.66N×6°.46E,h0km±60km,ML1.8,*
Presumed earthquake
*FCIAR **12** 03:17:22.3,73°.73N×6°.27E,h10km,station SPA0 has*
station magnitude of 3.06
*KOLA **12** 03:17:25.8,73°.01N×8°.65E,h0km,ML2.4,Norwegian sea*

ISC 12 03:17:18.2±0.6,73°.38N±0°.04×7°.26E±0°.05,h10km,n93,
σ3§12/104,mb3.5/8,MS3.3/16,Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BEA6	**Bear Island, N**	**3.45**	**65**	Pn	**Pn**	**03 18 11.7**	**-0.1**
BJO1	**Bjornoya**	**3.45**	**65**	Pn	**Pn**	**03 18 11.7**	**-0.1**
BJO1	**Bjornoya**	**3.45**	**65**	*eP*	**Pn**	**03 18 11.7**	**-0.1**
BJO1				*eS*	**Sn**	**03 18 50.3**	**-2.4**
BJO1				IAML		03 18 53.8	
	comp=Z,7.7nm,0.8s						
BEAR	**Bear Island, N**	**3.45**	**65**	Pn	**Pn**	**03 18 11.5**	**-0.4**
	baz=257,slow=18						
HSPB	**Hornsund (broa**	**4.21**	**26**	Pn	**Pn**	**03 18 22.6**	**+0.4**
HSPB	**Hornsund (broa**	**4.21**	**26**	*eP*	**Pn**	**03 18 21.6**	**-0.7**
HSPB	**Hornsund (broa**	**4.21**	**26**	*eP*	**Pn**	**03 18 22.1**	**-0.2**
BRBA	**Barentsburg A**	**5.00**	**17**	Pn	**Pn**	**03 18 33.6**	**+0.4**
BRBA	**Barentsburg A**	**5.00**	**17**	*eP*	**Pn**	**03 18 33.3**	**+0.2**
BRBB	**Barentsburg B**	**5.04**	**17**	Pn	**Pn**	**03 18 34.1**	**+0.5**
BRBB	**Barentsburg B**	**5.04**	**17**	*eP*	**Pn**	**03 18 33.8**	**+0.2**
BRBB				*eS*	**Sn**	**03 19 27.0**	**-4.7**
TRO	**Tromso**	**5.28**	**130**	Pn	**Pn**	**03 18 38.4**	**+1.5**
TRO				Sn	**Sn**	**03 19 34.6**	**-3.1**
TRO	**Tromso**	**5.28**	**130**	*eP*	**Pn**	**03 18 38.1**	**+1.1**
TRO				*eS*	**Sn**	**03 19 32.5**	**-5.3**
TRO				IAML		03 19 37.4	
	comp=Z,14nm,0.6s						
SPA0	**Spitsbergen Ar**	**5.31**	**21**	Pn	**Pn**	**03 18 38.2**	**+0.8**
	baz=198,slow=14						
SPA0				Sn	**Sn**	**03 19 36.3**	**-2.2**

DBG				IAML		03 20 35.0		
	comp=Z,2.2nm,0.9s							
NSS	**Namsos**	**9.05**	**167**	*e*P	**Pn**	**03 19 30.8**	**+2.1**
NSS				*e*S	**Sn**	**03 21 03.8**	**-6.6**
NSS				IAML		03 21 08.2	
	comp=Z,5.2nm,0.6s							
SCO	**Scoresbysund**	**9.46**	**267**	*i* P	**Pn**	**03 19 34.3**	**+0.1**
SCO	**Scoresbysund**	**9.46**	**267**	*i* P	**Pn**	**03 19 34.3**	**+0.1**
APA0	**Apatity Array**	**10.28**	**111**	Pn	**Pn**	**03 19 43.2**	**-2.3**
	baz=306,slow=12							
APA0	**Apatity Array**	**10.28**	**111**	Pn	**Pn**	**03 19 43.2**	**-2.3**
APA0	**Apatity Array**	**10.28**	**111**	P	**Pn**	**03 19 43.8**	**-1.7**
APA0				S	Sn	03 21 28.9	-12
MOL	**Molde**	**10.86**	**179**	*e*P	**Pn**	**03 19 55.5**	**+2.0**
MOL				*e*S	Sn	03 21 45.2	-10
MOL				IAML		03 21 53.4	
	comp=Z,2.5nm,0.8s							
ZFI2	**Zemlya Franca-**	**11.34**	**32**	*e*P	**Pn**	**03 20 00.1**	**+0.2**
OMEGA	**Omega**	**11.35**	**32**	*e*P	**Pn**	**03 20 00.1**	**+0.1**
DOMB	**Dombas**	**11.41**	**176**	*e*P	**Pn**	**03 20 02.4**	**+1.4**
DOMB				*e*S	Sn	03 21 58.2	-10
DOMB				IAML		03 22 12.1	
	comp=Z,2.4nm,0.5s							
NOA	**NORSAR Array B**	**12.49**	**171**	Pn	**Pn**	**03 20 15.6**	**-0.1**
	baz=355,slow=13,SNR=4.1							
NOA				Sn	Sn	03 22 25.9	-8.7
	baz=4.7,slow=18,SNR=1.5							
	comp=Z,0.9nm,0.9s							
NRA0	**NORESS Array S**	**12.81**	**170**	Pn	**Pn**	**03 20 21.0**	**+1.0**
	baz=6.0,slow=16							
NRA0				Sn	Sn	03 22 34.1	-8.3
	baz=356,slow=22							
NRA0	**NORESS Array S**	**12.81**	**170**	Pn	**Pn**	**03 20 21.0**	**+1.0**
NRA0				Sn	Sn	03 22 34.1	-8.3
HFS	**Hagfors**	**13.53**	**166**	Pn	**Pn**	**03 20 29.8**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=352,slow=12,SNR=6.4							
HFS				Sn	Sn	03 22 51.0	-9.0
	comp=Z,0.2nm,0.3s,baz=357,slow=22,SNR=4.5							
HFS				LR	LR	03 25 28.3		
	comp=Z,129nm,19.9s,baz=338,slow=36							
	comp=Z,4.3nm,1.0s							
HFS	**Hagfors**	**13.53**	**166**	P	**Pn**	**03 20 31.5**	**+1.6**
	baz=353,slow=14							
HFS	**Hagfors**	**13.53**	**166**	P	**Pn**	**03 20 31.5**	**+1.6**
FIA0	**FINESS Array S**	**13.88**	**140**	P	**Pn**	**03 20 35.0**	**+0.3**
	baz=340,slow=14							
FIA0	**FINESS Array S**	**13.88**	**140**	P	**Pn**	**03 20 35.0**	**+0.3**
FINES	**FINESS Array B**	**13.88**	**140**	Pn	**Pn**	**03 20 35.1**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=347,slow=12,SNR=8.2							
FINES				Sn	Sn	03 22 57.1	-12
	comp=Z,0.1nm,0.3s,baz=336,slow=24,SNR=1.7							
FINES				LR	LR	03 25 22.8		
	comp=Z,149nm,19.8s,baz=5.0,slow=35							
	comp=Z,2.7nm,0.9s							
SFJD	**Kangerlussuaq**	**19.82**	**281**	LR	LR	03 28 14.4		
	comp=Z,76nm,19.8s,baz=28,slow=33							
AKASG	**Malin Array Be**	**24.66**	**145**	P	**P**	**03 22 40.4**	**+1.9**
	comp=Z,1.7nm,0.7s,baz=346,slow=9.3,SNR=5.1							
AKASG				LR	LR	03 32 02.8		
	comp=Z,92nm,19.8s,baz=343,slow=36							
	comp=Z,1.7nm,0.7s							
GERES	**GERESS Array B**	**24.79**	**170**	P	**P**	**03 22 41.4**	**+1.5**
	comp=Z,0.8nm,0.8s,baz=9.7,slow=4.4,SNR=2.1							
	comp=Z,0.8nm,0.8s							
ARTI	**Arti**	**26.32**	**102**	LR	LR	03 32 32.0		
	comp=Z,26nm,18.6s,baz=177,slow=35							
FRB	**Frobisher Bay**	**27.23**	**290**	LR	LR	03 32 17.3		
	comp=Z,53nm,19.2s,baz=358,slow=33							
TIXI	**Tiksi**	**30.61**	**32**	LR	LR	03 35 47.2		
	comp=Z,52nm,18.8s,baz=196,slow=36							
AKTO	**Aktyubinsk**	**31.50**	**109**	LR	LR	03 35 04.8		
	comp=Z,43nm,21.6s,baz=40,slow=34							
BVAR	**Borovoye Array**	**32.67**	**93**	P	**P**	**03 23 52.2**	**+2.2**
	comp=Z,0.9nm,0.7s,baz=335,slow=6.4,SNR=4.4							
	comp=Z,0.9nm,0.7s							
KBZ	**Khabaz**	**33.98**	**131**	LR	LR	03 38 09.1		
	comp=Z,63nm,20.9s,baz=24,slow=37							
SCHQ	**Schefferville**	**34.23**	**278**	LR	LR	03 36 39.8		
	comp=Z,68nm,18.4s,baz=356,slow=34							
BRTR	**Keskin Array B**	**36.05**	**144**	P	**P**	**03 24 20.9**	**+1.3**
	comp=Z,0.5nm,0.7s,baz=335,slow=6.4,SNR=4.1							
	comp=Z,0.5nm,0.7s							
KEST	**Kesra**	**37.74**	**177**	LR	LR	03 42 39.4		
	comp=Z,71nm,18.1s,baz=288,slow=40							
GNI	**Garni**	**37.80**	**130**	LR	LR	03 40 40.4		
	comp=Z,42nm,20.2s,baz=346,slow=37							
YKA	**Yellowknife Ar**	**38.95**	**321**	P	**P**	**03 24 46.0**	**+2.3**
	comp=Z,0.1nm,0.5s,baz=18,slow=8.8,SNR=5.3							
	comp=Z,0.1nm,0.5s							
ILAR	**Eielson Array**	**41.04**	**343**	P	**P**	**03 25 03.7**	**+2.8**
	comp=Z,0.5nm,0.9s,baz=2.1,slow=8.6,SNR=6.1							
	comp=Z,0.5nm,0.9s							
MKAR	**Makanchi Array**	**41.67**	**87**	P	**P**	**03 25 09.9**	**+3.4**
	comp=Z,0.3nm,0.9s,baz=346,slow=9.2,SNR=2.3							
MKAR				LR	LR	03 46 06.5		
	comp=Z,42nm,18.3s,baz=314,slow=41							
	comp=Z,0.3nm,0.9s							
DLBC	**Dease Lake**	**45.31**	**330**	LR	LR	03 44 06.9		
	comp=Z,40nm,18.9s,baz=326,slow=36							
ULM	**Lac du Bonnet**	**46.19**	**300**	LR	LR	03 44 42.5		
	comp=Z,39nm,19.8s,baz=23,slow=36							
NEW	**Newport**	**52.85**	**316**	LR	LR	03 49 40.8		
	comp=Z,55nm,18.2s,baz=26,slow=37							
TKL	**Tuckaleechee C**	**56.52**	**283**	LR	LR	03 48 35.3		
	comp=Z,22nm,20.6s,baz=67,slow=33							
ELK	**Elko**	**59.66**	**312**	LR	LR	03 54 55.5		
	comp=Z,35nm,18.9s,baz=350,slow=38							
TORD	**Torodi Ar. Bea**	**60.30**	**186**	P	**P**	**03 27 28.8**	**+2.2**
	comp=Z,0.7nm,0.8s,baz=346,slow=6.8,SNR=4.0							
	comp=Z,0.7nm,0.8s							
NVAR	**Mina Array Bea**	**62.52**	**314**	P	**P**	**03 27 42.3**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=40,slow=5.5,SNR=3.0							
NVAR				LR	LR	03 55 28.7		
	comp=Z,40nm,19.0s,baz=88,slow=37							
	comp=Z,0.4nm,0.8s							

IDC 12 03:51:26.4±3.0, 6.70S×128.50E, h0km, mb3.5/1, mbtmp3.4/3, ML3.6/2, Error ellipse: s-maj=312.8km s-min=33.0km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.33**	**157**	Pn	Pn	03 54 49.8	-0.9
	0.3nm,0.3s,baz=335,slow=13,SNR=12						
WRA				Sn	Sn	03 57 18.9	-12
	0.2nm,0.3s,baz=336,slow=22,SNR=5.8						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**17.65**	**163**	P	P	03 55 34.5	-0.4
	0.2nm,0.3s,baz=344,slow=8.6,SNR=8.1						
ASAR				S	Sn	03 58 44.5	-6.8
	0.1nm,0.3s,baz=353,slow=29,SNR=2.0						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**67.17**	**327**	P	P	04 02 22.2	0.0
	0.2nm,0.5s,baz=129,slow=7.2,SNR=2.8						
	0.2nm,0.5s						

IDC 12 03:57:58.1±2.0, 6.22N×124.46E, h0km, mb4.0/4, mbtmp4.0/4, MS3.3/1, Error ellipse: s-maj=234.6km s-min=19.8km az=65.0
NEIC 12 03:57:59.7±1.4, 6.11N±0.09×124.0E±0.1, h10km±1km, mb4.6/16, Error ellipse: s-maj=24.9km s-min=15.9km az=85.0

ISC 12 03:58:02.2±0.7, 6.08N±0.08×124.1E±0.2, h35km, n25, σ1.932/24, mb4.4/11, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TOLI2	**Tolitoli**	**5.92**	**214**	Pn	**Pn**	**03 59 28.8**	**+1.4**
LUWI	**Luwuk**	**7.19**	**190**	Pn	**Pn**	**03 59 45.3**	**+0.4**
KNMB	**Chin-men Tao**	**19.07**	**344**	P	**P**	**04 02 21.0**	**-0.7**
KNMB				IAmb	IAmb	04 02 23.1	
	comp=Z,34nm,0.8s						
JMZ	**Minamidaito 2**	**20.79**	**18**	P	**P**	**04 02 40.7**	**+0.3**
KNRA	**Kununurra**	**22.12**	**168**	P	**P**	**04 02 55.1**	**+0.3**
WB0	**Warramunga Arr**	**27.63**	**159**	P	**P**	**04 03 47.5**	**+0.8**
WB0				IAmb	IAmb	04 04 12.0	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**27.77**	**159**	P	**P**	**04 03 48.8**	**+0.8**
	comp=Z,0.9nm,0.4s,baz=339,slow=8.8,SNR=21						
	comp=Z,0.9nm,0.4s						
WRA	**Warramunga Arr**	**27.77**	**159**	P	**P**	**04 03 48.8**	**+0.8**
WB2	**Warramunga Arr**	**27.78**	**159**	P	**P**	**04 03 48.8**	**+0.7**
WB2				IAmb	IAmb	04 04 24.5	
	comp=Z,11nm,1.1s						
WR8	**Warramunga Arr**	**27.84**	**159**	P	**P**	**04 03 49.5**	**+0.9**
WR8				IAmb	IAmb	04 04 00.2	
	comp=Z,12nm,1.4s						
JHJ	**Hachijo jima 2**	**30.62**	**27**	LR	LR	04 15 32.0	
	comp=Z,57nm,20.7s,baz=103,slow=35						
ASAR	**Alice Springs**	**31.09**	**162**	P	**P**	**04 04 18.4**	**+0.9**
	comp=Z,1.0nm,0.5s,baz=341,slow=8.7,SNR=21						
	comp=Z,1.0nm,0.5s						
MAJO	**Matsushiro**	**32.97**	**21**	P	**P**	**04 04 33.9**	**+0.1**
MAJO				IAmb	IAmb	04 05 00.4	
	comp=Z,26nm,1.5s						
MORW	**Morawa**	**35.79**	**192**	P	**P**	**04 04 56.7**	**-1.5**
MORW				IAmb	IAmb	04 05 21.9	
	comp=Z,17nm,1.4s						
FORT	**Forrest**	**36.85**	**174**	P	**P**	**04 05 06.3**	**-1.0**
FORT				IAmb	IAmb	04 05 32.3	
	comp=Z,5.1nm,1.0s						
BBOO	**Buckleboo**	**40.33**	**164**	P	**P**	**04 05 35.3**	**-1.1**
BBOO				IAmb	IAmb	04 05 57.6	
	comp=Z,11nm,1.1s						
KAAM	**Kaadhehdhoo**	**51.25**	**266**	P	**P**	**04 07 02.5**	**-0.5**
MKAR	**Makanchi Array**	**54.12**	**326**	P	**P**	**04 07 26.4**	**+2.6**
	comp=Z,0.6nm,0.4s,baz=121,slow=7.1,SNR=22						
	comp=Z,0.6nm,0.4s						
MKAR	**Makanchi Array**	**54.12**	**326**	P	**P**	**04 07 26.0**	**+2.3**
KURBB	**Kurchatov Arra**	**58.33**	**328**	P	**P**	**04 07 55.1**	**+1.4**
	comp=Z,0.7nm,0.5s,baz=123,slow=6.6,SNR=13						
	comp=Z,0.7nm,0.5s						
KURK	**Kurchatov**	**58.34**	**328**	P	**P**	**04 07 55.1**	**+1.3**
NNZ	**Nelson**	**65.18**	**141**	P	**P**	**04 08 40.3**	**+0.4**
ODZ	**Otahua Downs**	**65.78**	**146**	P	**P**	**04 08 44.7**	**+0.9**
AB31	**Akbulak array**	**68.65**	**321**	P	**P**	**04 09 00.1**	**-1.9**
ABKAR	**Akbulak array**	**68.65**	**321**	P	**P**	**04 08 59.8**	**-2.2**

MCSM 12 04:17:02.3±0.7, 45°N±6°×2°6E±°, h132km±6km, mb3.9, MLv2.9
BUC 12 04:17:04.0±0.2, 45.43N×26.31E, h118km±2km, ml3.3/27, Error ellipse: s-maj=1.7km s-min=1.2km az=155.0

ISC 12 04:17:03.3±1.4, 45.45N±0.04×26.31E±0.03, h126km±8km, n46, σ0.952/70, 31C-31D, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEHR	**Nehoiu**	**0.03**	**194**	⇑P	**Pn**	**04 17 21.0**	**+0.5**
NEHR				⇓S	**Sn**	**04 17 33.2**	**-0.3**
MLR	**Muntele Rosu**	**0.26**	**278**	⇓P	**Pn**	**04 17 21.5**	**+0.5**
MLR				⇓S	**Sn**	**04 17 34.2**	**-0.2**
MLR	**Muntele Rosu**	**0.26**	**278**	P	**Pn**	**04 17 21.5**	**+0.5**
BISRR	**Bisoca**	**0.30**	**72**	⇑S	**Sn**	**04 17 34.1**	**-0.4**
ISR	**Istrita**	**0.38**	**153**	⇑P	**Pn**	**04 17 21.7**	**+0.4**
ISR				⇑S	**Sn**	**04 17 34.2**	**-0.8**
COVR	**Voineasa-Covas**	**0.40**	**350**	⇑P	**Pn**	**04 17 21.5**	**+0.1**
COVR				⇓S	**Sn**	**04 17 35.0**	**-0.2**
PLOR	**Plostina**	**0.47**	**31**	⇑P	**Pn**	**04 17 22.1**	**+0.3**
PLOR				⇑S	**Sn**	**04 17 35.5**	**-0.3**
VRI	**Vrincioaia**	**0.51**	**36**	⇑P	**Pn**	**04 17 22.3**	**+0.3**
VRI				⇓S	**Sn**	**04 17 35.9**	**-0.3**
VRI	**Vrincioaia**	**0.51**	**36**	P	**Pn**	**04 17 22.5**	**+0.5**
ODBI	**Odobesti**	**0.61**	**59**	⇓S	**Sn**	**04 17 37.3**	**0.0**
TURR	**Turia**	**0.63**	**341**	⇑P	**Pn**	**04 17 23.0**	**+0.1**
TURR				⇓S	**Sn**	**04 17 37.3**	**+0.1**
PANC	**Panciu**	**0.72**	**54**	⇓S	**Sn**	**04 17 38.7**	**0.0**
SULR		**0.78**	**183**	⇑S	**Sn**	**04 17 39.0**	**-0.4**
DOPR	**Dopca**	**0.82**	**309**	⇑P	**Pn**	**04 17 24.4**	**+0.1**
DOPR				⇓S	**Sn**	**04 17 39.2**	**-0.9**
ONER	**Baraj Valea Uz**	**0.88**	**4**	⇑P	**Pn**	**04 17 25.3**	**+0.5**
ONER				⇑S	**Sn**	**04 17 41.3**	**+0.2**
VOIR		**0.88**	**269**	⇑P	**Pn**	**04 17 25.2**	**+0.3**
VOIR				⇓S	**Sn**	**04 17 40.3**	**-0.9**
TUDR		**0.97**	**81**	⇑S	**Sn**	**04 17 41.8**	**-0.5**
GHRR		**0.98**	**51**	⇓P	**Pn**	**04 17 26.2**	**+0.6**
GHRR				⇑S	**Sn**	**04 17 42.6**	**0.0**
GHRR		**0.98**	**51**	P	**Pn**	**04 17 26.4**	**+0.8**
GHRR				S	**Sn**	**04 17 43.7**	**+1.1**
SCHLR	**Schela**	**1.07**	**89**	⇑S	**Sn**	**04 17 43.2**	**-0.9**
TESR	**Tescani**	**1.08**	**13**	⇑P	**Pn**	**04 17 26.9**	**+0.2**
TESR				⇓S	**Sn**	**04 17 43.7**	**-0.8**
TESR	**Tescani**	**1.08**	**13**	P	**Pn**	**04 17 26.9**	**+0.2**
NEGRR	**Negrea**	**1.11**	**85**	⇓P	**Pn**	**04 17 26.9**	**0.0**
NEGRR				⇓S	**Sn**	**04 17 44.4**	**-0.3**
BUC1	**Bucharest**	**1.12**	**190**	⇓S	**Sn**	**04 17 45.1**	**+0.1**
VARL	**Varlezi**	**1.17**	**67**	⇓P	**Pn**	**04 17 27.5**	**+0.1**
VARL				⇑S	**Sn**	**04 17 45.9**	**0.0**
SCTR	**Scanteiesti**	**1.21**	**79**	⇑P	**Pn**	**04 17 27.8**	**-0.1**
SCTR				⇑S	**Sn**	**04 17 46.4**	**-0.2**
BIR	**Birlad**	**1.23**	**48**	⇓P	**Pn**	**04 17 28.9**	**+0.8**
BIR				⇑S	**Sn**	**04 17 46.5**	**-0.5**
TATR	**Tatarca**	**1.23**	**83**	⇓S	**Sn**	**04 17 46.2**	**-0.9**
SGRR	**Singureni**	**1.25**	**191**	⇑S	**Sn**	**04 17 46.8**	**-0.6**
VLDR	**Vladesti**	**1.31**	**72**	⇓P	**Pn**	**04 17 29.5**	**+0.6**
VLDR				⇓S	**Sn**	**04 17 48.2**	**-0.2**
HUMR	**Humele**	**1.32**	**226**	⇓P	**Pn**	**04 17 29.6**	**+0.5**
HUMR				⇓S	**Sn**	**04 17 48.5**	**-0.2**
CFR	**Carcaliu**	**1.32**	**101**	⇓P	**Pn**	**04 17 29.2**	**+0.2**
COPA	**Copaceanca**	**1.53**	**211**	⇓S	**Sn**	**04 17 52.4**	**-0.4**
VASI	**Vaslui**	**1.57**	**41**	⇑P	**Pn**	**04 17 32.4**	**+0.5**
TPGR	**Topolog**	**1.61**	**111**	⇑P	**Pn**	**04 17 32.6**	**+0.2**
TPGR				⇓S	**Sn**	**04 17 53.4**	**-1.1**
LOT	**Lotru**	**1.78**	**271**	⇓P	**Pn**	**04 17 34.8**	**+0.3**
LOT				⇑S	**Sn**	**04 17 58.0**	**-0.4**
TLCR		**1.79**	**98**	⇓P	**Pn**	**04 17 35.1**	**+0.7**
TLCR				⇑S	**Sn**	**04 17 58.9**	**+0.6**
TIRR	**Tirgusor**	**1.80**	**123**	⇓P	**Pn**	**04 17 34.9**	**+0.4**
TIRR				⇑S	**Sn**	**04 17 57.9**	**-0.5**
TIRR	**Tirgusor**	**1.80**	**123**	P	**Pn**	**04 17 34.8**	**+0.3**
VLAD	**Vladila**	**1.99**	**224**	⇑S	**Sn**	**04 18 02.3**	**-0.2**
BURAR	**Bucovina Array**	**2.29**	**341**	⇓P	**Pn**	**04 17 41.6**	**+0.9**
PLVB	**Pleven**	**2.39**	**211**	⇓P	**Pn**	**04 17 42.3**	**+0.3**
PLVB				⇑S	**Sn**	**04 18 12.0**	**+0.4**
GZR	**Gura Zlata**	**2.48**	**270**	⇓P	**Pn**	**04 17 44.3**	**+1.2**
KMPD	**K-Podol'skiy**	**3.11**	**2**	P	**Pn**	**04 17 51.2**	**+0.1**
MDVR	**Moldovita**	**3.32**	**260**	⇑P	**Pn**	**04 17 53.8**	**-0.1**
RNPP5	**Staryi Chortor**	**5.79**	**357**	P	**Pn**	**04 18 26.1**	**-0.6**

NNC 12 04:25:07.7±0.6, 42.59N×77.90E, h0km±3km, mb3.5, mpv3.5, Error ellipse: s-maj=4.6km s-min=1.8km az=175.0
KRNET 12 04:25:07.1±0.1, 42.55N×77.85E, h30km, mb2.8
SOME 12 04:25:07.9, 42.53N×77.83E, h15km

ISC 12 04:25:07.1±1.1, 42.54N±0.03×77.78E±0.02, h10km±10km, n45, σ1.958/76, 11C-12D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANVS	**Anan'yevo**	**0.26**	**342**	⇓*i*P	**Pb**	**04 25 14.5**	**+0.4**
ANVS				⇓*e*S	**Sb**	**04 25 19.7**	**+1.0**
PRZ	**Przheval'sk**	**0.46**	**96**	*e*P	**Pb**	**04 25 16.3**	**-1.2**
PRZ				⇑*e*S	**Sb**	**04 25 22.7**	**-1.7**
KDJ	**Kajisay**	**0.60**	**228**	*e*P	**Pb**	**04 25 19.8**	**0.0**
KDJ				⇑*e*S	**Sb**	**04 25 29.1**	**+0.7**
SATY	**Saty**	**0.70**	**41**	P	**Pg**	**04 25 19.8**	**-0.9**
	11nm,0.2s						
SATY				S	**Sg**	**04 25 28.6**	**-1.3**
	121nm,0.1s						
TNSS	**Tian-Shan**	**0.79**	**310**	P	**Pn**	**04 25 23.7**	**-1.0**
	18nm,0.3s						
TNSS				S	**Sb**	**04 25 35.2**	**+1.1**
	41nm,0.3s						
TNSS	**Tian-Shan**	**0.79**	**310**	⇓*i*P	**Pn**	**04 25 23.7**	**-1.0**
	18nm,0.3s						
TNSS				*e*S	**Sb**	**04 25 35.2**	**+1.1**
	41nm,0.3s						
TARG	**Taragay, Kyrgy**	**0.81**	**179**	⇓*i*P	**Pb**	**04 25 23.0**	**-0.4**
TARG				⇓*e*S	**Sb**	**04 25 34.3**	**-0.2**
MDOK	**Medeo**	**0.83**	**320**	Pg	**Pn**	**04 25 24.1**	**-0.9**
	85nm,0.5s						
MDOK				Lg	Lg	04 25 35.9	
	71nm,0.6s						
KOTS	**Kotyrbulak**	**0.85**	**325**	P	**Pn**	**04 25 24.6**	**-0.8**
	155nm,0.1s						
KOTS				S	**Sb**	**04 25 36.6**	**+0.9**
	215nm,0.3s						
KOTS	**Kotyrbulak**	**0.85**	**325**	*e*P	**Pn**	**04 25 24.6**	**-0.8**
	155nm,0.1s						
KOTS				*e*S	**Sb**	**04 25 36.6**	**+0.9**
	215nm,0.3s						
KURS	**Kuram**	**0.99**	**17**	P	**Pg**	**04 25 25.6**	**-0.7**
	13nm,0.2s						
KURS				S	**Sg**	**04 25 38.1**	**-1.2**
	15nm,0.2s						
UZB	**Uzunbulak**	**1.10**	**56**	P	**Pg**	**04 25 26.7**	**-1.7**
	4.8nm,0.1s						
UZB				S	**Sg**	**04 25 40.0**	**-2.6**
	49nm,0.2s						
UZB	**Uzunbulak**	**1.10**	**56**	*e*P	**Pg**	**04 25 26.7**	**-1.7**
	4.8nm,0.1s						
UZB				*e*S	**Sg**	**04 25 40.0**	**-2.6**
	49nm,0.2s						
MTBS	**Maitube**	**1.16**	**301**	P	**Pn**	**04 25 30.0**	**+0.6**
	23nm,0.2s						
MTBS				S	**Sn**	**04 25 45.8**	**+0.4**
	57nm,0.3s						
MTBS	**Maitube**	**1.16**	**301**	*e*P	**Pn**	**04 25 30.0**	**+0.6**
	23nm,0.2s						
MTBS				*e*S	**Sn**	**04 25 45.8**	**+0.4**
	57nm,0.3s						
ULHL	**Ulahol**	**1.18**	**256**	⇓*e*P	**Pn**	**04 25 29.6**	**-0.2**
ULHL				⇓*i*S	**Sn**	**04 25 46.0**	**+0.1**
BOOM	**Boomskoye usch**	**1.36**	**269**	⇓*i*P	**Pg**	**04 25 32.7**	**-0.6**
BOOM				⇓*e*S	**Sg**	**04 25 51.1**	**+0.2**
SHLS	**Shalkode**	**1.39**	**63**	P	**Pg**	**04 25 37.3**	**+3.5**
	54nm,0.2s						
SHLS				S	**Sg**	**04 25 58.2**	**+6.5**
	80nm,0.5s						
SHLS	**Shalkode**	**1.39**	**63**	*e*P	**Pg**	**04 25 37.3**	**+3.5**
	54nm,0.2s						
SHLS				*e*S	**Sg**	**04 25 58.2**	**+6.5**
	80nm,0.5s						
KTBS	**Karatobe**	**1.42**	**326**	P	**Pg**	**04 25 34.4**	**-0.1**
	36nm,0.2s						
KTBS				S	**Sg**	**04 25 53.3**	**+0.3**
	7.1nm,0.2s						
KTBS	**Karatobe**	**1.42**	**326**	*e*P	**Pg**	**04 25 34.4**	**-0.1**
	36nm,0.2s						
KTBS				*e*S	**Sg**	**04 25 53.3**	**+0.3**
	7.1nm,0.2s						
PDGK	**Podgornoye**	**1.49**	**57**	⇑P	**Pn**	**04 25 33.0**	**-1.0**
	2.6nm,0.4s						
PDGK				⇓S	**Sn**	**04 25 51.2**	**-2.3**
	15nm,0.5s						
DGS	**Degeres**	**1.64**	**296**	P	**Pg**	**04 25 39.2**	**+0.7**
	9.5nm,0.2s						
DGS				S	**Sg**	**04 26 01.5**	**+1.8**
	26nm,0.2s						
DGS	**Degeres**	**1.64**	**296**	*e*P	**Pg**	**04 25 39.2**	**+0.7**
	9.5nm,0.2s						
DGS				*e*S	**Sg**	**04 26 01.5**	**+1.8**
	26nm,0.2s						
BLB	**Baldybastay**	**1.64**	**18**	P	**Pb**	**04 25 37.4**	**-0.2**
	1.4nm,0.2s						
BLB				S	**Sb**	**04 25 58.4**	**0.0**
	163nm,0.3s						
TKM2	**Tokmak 2**	**1.65**	**284**	⇑*i*P	**Pb**	**04 25 36.9**	**-0.9**
TKM2				⇑*e*S	**Sb**	**04 25 58.5**	**-0.2**
ARXS	**Arharly**	**1.68**	**1**	P	**Pg**	**04 25 38.5**	**-0.9**
	26nm,0.3s						
ARXS				S	**Sb**	**04 25 59.9**	**+0.6**
	58nm,0.3s						
ARXS	**Arharly**	**1.68**	**1**	*e*P	**Pg**	**04 25 38.5**	**-0.9**
	26nm,0.3s						
ARXS				*e*S	**Sb**	**04 25 59.9**	**+0.6**
	58nm,0.3s						
KRBS	**Karabastau**	**1.93**	**308**	Pg	**Pg**	**04 25 43.9**	**-0.2**
	4.4nm,0.2s						
KRBS				Lg	Lg	04 26 09.5	
	10nm,0.3s						
KRBS	**Karabastau**	**1.93**	**308**	*e*P	**Pg**	**04 25 43.9**	**-0.2**
	4.4nm,0.2s						
KRBS				*e*S	**Sg**	**04 26 09.5**	**+0.4**
	10nm,0.3s						
KNOS	**Konyrlen**	**2.09**	**29**	Pg	**Pb**	**04 25 45.2**	**0.0**
	3.2nm,0.1s						
KNOS				Lg	Lg	04 26 11.3	
	31nm,0.4s						
KBK	**Karagaybulak**	**2.09**	**274**	⇑*i*P	**Pn**	**04 25 43.1**	**+0.7**
KBK				⇑*e*S	**Sn**	**04 26 09.1**	**+0.5**
DJR	**Jarkent**	**2.32**	**39**	Pg	**Pb**	**04 25 49.2**	**+0.1**
	8.9nm,0.4s						
DJR				Lg	Lg	04 26 18.2	
	11nm,0.2s						
DJR	**Jarkent**	**2.32**	**39**	*e*P	**Pb**	**04 25 49.2**	**+0.1**
	8.9nm,0.4s						
DJR				*e*S	**Sb**	**04 26 18.1**	**+0.4**
	11nm,0.2s						
AAK	**Ala-Archa**	**2.43**	**274**	⇓Pn	**Pb**	**04 25 51.0**	**0.0**
	1.6nm,0.8s						
AAK				⇓Lg	Lg	04 26 25.8	
	3.9nm,0.5s						
SGDS	**Sogindy**	**2.48**	**293**	Pg	**Pg**	**04 25 55.1**	**+0.4**
	1.7

n856,σ1ŝ23/693,mb4.7/309,32C-37D,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	ΔZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**0.33**	**270**	PN	**Pn**	**05 20 21.4**	**+0.7**
RUS				S	**Sn**	**05 20 29.0**	**+0.8**
RUS	**Russkaya**	**0.33**	**270**	*e*P	**Pn**	**05 20 21.5**	**+0.7**
RUS				*e*S	**Sn**	**05 20 29.0**	**+0.8**
MTVR	**Mutnovka**	**0.53**	**276**	PN	**Pn**	**05 20 24.0**	**+1.1**
MTVR	**Mutnovka**	**0.53**	**276**	*e*P	**Pn**	**05 20 24.1**	**+1.1**
GRL	**Gorelyy**	**0.61**	**282**	PN	**Pn**	**05 20 25.4**	**+1.7**
GRL	**Gorelyy**	**0.61**	**282**	*e*P	**Pn**	**05 20 25.5**	**+1.7**
DALK	**Dalny**	**0.63**	**344**	PN	**Pn**	**05 20 24.4**	**+0.6**
DALK				S	**Sn**	**05 20 33.9**	**+0.4**
DALK	**Dalny**	**0.63**	**344**	*e*P	**Pn**	**05 20 24.5**	**+0.6**
DALK				*e*S	**Sn**	**05 20 34.0**	**+0.4**
PET	**Petropavlovsk**	**0.64**	**338**	P	**Pn**	**05 20 24.8**	**+0.7**
PET	**Petropavlovsk**	**0.64**	**338**	⇓*i*PN	**Pn**	**05 20 24.7**	**+0.7**
PET				*e*S	**Sn**	**05 20 34.3**	**+0.4**
PET	comp=Z,5μm,0.5s			pmax	pmax		
PET	comp=E,45μm,0.7s			smax	smax		
PET	comp=N,65μm,0.7s			smax	smax		
PET	**Petropavlovsk**	**0.64**	**338**	*e*P	**Pn**	**05 20 24.6**	**+0.6**
PET				*e*S	**Sn**	**05 20 34.2**	**+0.4**
PET	**Petropavlovsk**	**0.64**	**338**	P	**Pn**	**05 20 24.6**	**+0.6**
KRMR	**Karymshinskiy**	**0.69**	**306**	PN	**Pn**	**05 20 25.4**	**+0.9**
KRMR				S	**Sn**	**05 20 36.2**	**+1.4**
KRMR	**Karymshinskiy**	**0.69**	**306**	*e*P	**Pn**	**05 20 25.4**	**+0.9**
KRMR				*e*S	**Sn**	**05 20 36.3**	**+1.4**
INSR	**Institute**	**0.69**	**337**	PN	**Pn**	**05 20 25.5**	**+0.9**
INSR				S	**Sn**	**05 20 35.7**	**+0.8**
INSR	**Institute**	**0.69**	**337**	*e*P	**Pn**	**05 20 25.5**	**+0.9**
INSR				*e*S	**Sn**	**05 20 35.8**	**+0.8**
ASAK	**Asacha**	**0.70**	**266**	PN	**Pn**	**05 20 26.3**	**+1.5**
ASAK	**Asacha**	**0.70**	**266**	*e*P	**Pn**	**05 20 26.3**	**+1.5**
NLC	**Nalytchevo**	**0.76**	**14**	PN	**Pn**	**05 20 25.5**	**+0.1**
NLC				S	**Sn**	**05 20 36.0**	**-0.4**
NLC	**Nalytchevo**	**0.76**	**14**	*e*P	**Pn**	**05 20 25.6**	**+0.1**
NLC				*e*S	**Sn**	**05 20 36.0**	**-0.4**
UGLR	**Uglovaya**	**0.79**	**350**	PN	**Pn**	**05 20 26.9**	**+1.0**
UGLR	**Uglovaya**	**0.79**	**350**	*e*P	**Pn**	**05 20 27.0**	**+1.0**
SMAR	**Somma**	**0.84**	**350**	PN	**Pn**	**05 20 27.4**	**+0.6**
SMAR	**Somma**	**0.84**	**350**	*e*P	**Pn**	**05 20 27.4**	**+0.6**
SDLR	**Sedlovina**	**0.85**	**353**	PN	**Pn**	**05 20 27.3**	**+0.6**
SDLR	**Sedlovina**	**0.85**	**353**	*e*P	**Pn**	**05 20 27.4**	**+0.6**
AVH	**Avacha**	**0.85**	**347**	PN	**Pn**	**05 20 27.9**	**+1.2**
AVH				S	**Sn**	**05 20 40.4**	**+1.7**
AVH	**Avacha**	**0.85**	**347**	*e*P	**Pn**	**05 20 28.0**	**+1.2**
AVH				*e*S	**Sn**	**05 20 40.4**	**+1.7**
KDTR	**Khodutka, Kamc**	**0.86**	**224**	PN	**Pn**	**05 20 27.5**	**+0.8**
KDTR				S	**Sn**	**05 20 39.2**	**+0.5**
KDTR	**Khodutka, Kamc**	**0.86**	**224**	*e*P	**Pn**	**05 20 27.5**	**+0.8**
KDTR				*e*S	**Sn**	**05 20 39.3**	**+0.5**
KRER	**Koryakskii**	**0.89**	**348**	PN	**Pn**	**05 20 28.2**	**+0.9**
KRER	**Koryakskii**	**0.89**	**348**	*e*P	**Pn**	**05 20 28.3**	**+0.9**
SPN	**Mys Shipunski**	**0.89**	**41**	PN	**Pn**	**05 20 28.1**	**+1.0**
SPN				S	**Sn**	**05 20 41.1**	**+1.7**
SPN	**Mys Shipunski**	**0.89**	**41**	*e*P	**Pn**	**05 20 28.1**	**+1.0**
SPN				*e*S	**Sn**	**05 20 41.2**	**+1.7**
KOK	**Koryaka**	**0.90**	**344**	PN	**Pn**	**05 20 28.6**	**+1.3**
KOK	**Koryaka**	**0.90**	**344**	*e*P	**Pn**	**05 20 28.7**	**+1.3**
KRX	**Arik**	**0.96**	**346**	PN	**Pn**	**05 20 29.2**	**+1.1**
KRX	**Arik**	**0.96**	**346**	*e*P	**Pn**	**05 20 29.2**	**+1.1**
PEA0B	**Petropavlovsk-**	**1.06**	**310**	Pn	**Pn**	**05 20 30.7**	**+1.4**
PEA0B				Sn	**Sn**	**05 20 46.1**	**+2.7**
PEA0B	**Petropavlovsk-**	**1.06**	**310**	PN	**Pn**	**05 20 30.7**	**+1.4**
PEA0B						05 20 46.1	
PETK	**Petropavlovsk-**	**1.06**	**310**	P	**Pn**	**05 20 30.7**	**+1.3**
PETK	comp=N,5μm,0.4s,baz=108,slow=18,SNR=4832			S	**Sn**	**05 20 45.8**	**+2.4**
PETK	comp=N,5μm,0.6s,baz=84,slow=27,SNR=12			LR	LR	05 20 59.5	
PETK	comp=N,1μm,20.0s,baz=151,slow=58 **Petropavlovsk-**	**1.06**	**310**		**Pn**	**05 20 30.5**	**+1.1**
APC	**Apacha**	**1.25**	**294**	PN	**Pn**	**05 20 33.6**	**+1.8**
APC				S	**Sn**	**05 20 50.4**	**+2.7**
APC	**Apacha**	**1.25**	**294**	*e*P	**Pn**	**05 20 33.6**	**+1.8**
APC				*e*S	**Sn**	**05 20 50.5**	**+2.7**
MIPR	**Malaya Ipel'ka**	**1.41**	**265**	PN	**Pn**	**05 20 36.1**	**+2.1**
MIPR	**Malaya Ipel'ka**	**1.41**	**265**	*e*P	**Pn**	**05 20 36.1**	**+2.1**
KII	**Karymskiy**	**1.62**	**8**	PN	**Pn**	**05 20 39.1**	**+2.2**
KII				S	**Sn**	**05 21 00.3**	**+3.5**
KII	**Karymskiy**	**1.62**	**8**	*e*P	**Pn**	**05 20 39.2**	**+2.2**
KII				*e*S	**Sn**	**05 21 00.3**	**+3.5**
PAU	**Pauzhetka**	**1.69**	**236**	PN	**Pn**	**05 20 39.4**	**+1.8**
PAU	**Pauzhetka**	**1.69**	**236**	*e*P	**Pn**	**05 20 39.5**	**+1.8**
SKR	**Severo-Kuril's**	**2.53**	**227**	*e*PN	**Pn**	**05 20 52.0**	**+2.9**
SKR				*e*S	**Sn**	**05 21 18.9**	**+0.1**
SKR	comp=Z,189nm,0.6s			pmax	pmax		
SKR	comp=E,2μm,0.4s			smax	smax		
SKR	comp=N,3μm,0.3s			smax	smax		
SKR	**Severo-Kuril's**	**2.53**	**227**	*e*P	**Pn**	**05 20 51.0**	**+1.9**
SKR				*e*S	**Sn**	**05 21 19.2**	**+0.4**
TUMD	**Tumrok D**	**2.89**	**16**	PN	**Pn**	**05 20 56.8**	**+2.8**
TUMD				S	**Sn**	**05 21 31.6**	**+4.0**
TUMD	**Tumrok D**	**2.89**	**16**	*e*P	**Pn**	**05 20 56.9**	**+2.8**
TUMD				*e*S	**Sn**	**05 21 31.6**	**+4.0**
KMNR	**Kamenistaya**	**3.40**	**11**	PN	**Pn**	**05 21 05.4**	**+4.3**
KMNR	**Kamenistaya**	**3.40**	**11**	*e*P	**Pn**	**05 21 05.4**	**+4.3**
ESO	**Esso**	**3.51**	**357**	PN	**Pn**	**05 21 05.2**	**+2.8**
ESO	**Esso**	**3.51**	**357**	*e*P	**Pn**	**05 21 05.3**	**+2.8**
BZP	**Bezymyannyi-Pe**	**3.59**	**14**	PN	**Pn**	**05 21 07.2**	**+3.4**
BZP	**Bezymyannyi-Pe**	**3.59**	**14**	*e*P	**Pn**	**05 21 07.2**	**+3.4**
KPT	**Kopyto**	**3.61**	**11**	PN	**Pn**	**05 21 07.4**	**+3.5**
KPT	**Kopyto**	**3.61**	**11**	*e*P	**Pn**	**05 21 07.4**	**+3.5**
KIRR	**Kirishev**	**3.61**	**12**	PN	**Pn**	**05 21 07.5**	**+3.5**
KIRR	**Kirishev**	**3.61**	**12**	*e*P	**Pn**	**05 21 07.6**	**+3.5**
BZWR	**Bezymyannyi-We**	**3.64**	**13**	PN	**Pn**	**05 21 07.3**	**+2.9**
BZWR	**Bezymyannyi-We**	**3.64**	**13**	*e*P	**Pn**	**05 21 07.4**	**+2.9**
BZGR	**Bezymyannyi-Gr**	**3.65**	**15**	PN	**Pn**	**05 21 08.4**	**+3.9**
BZGR	**Bezymyannyi-Gr**	**3.65**	**15**	*e*P	**Pn**	**05 21 08.4**	**+3.9**
KOZ	**Kozyrevsk**	**3.67**	**7**	PN	**Pn**	**05 21 08.1**	**+3.5**
KOZ	**Kozyrevsk**	**3.67**	**7**	*e*P	**Pn**	**05 21 08.2**	**+3.5**
SRDR	**Sredinnyy**	**3.91**	**5**	PN	**Pn**	**05 21 11.6**	**+3.6**
SRDR	**Sredinnyy**	**3.91**	**5**	*e*P	**Pn**	**05 21 11.7**	**+3.6**
KLY	**Klyuchi**	**4.00**	**13**	PN	Pn	05 21 14.8	+5.6
KLY	**Klyuchi**	**4.00**	**13**	*e*P	Pn	05 21 14.8	+5.6
KBTR	**Krutoberegovo**	**4.38**	**29**	PN	**Pn**	**05 21 17.2**	**+2.8**
KBTR	**Krutoberegovo**	**4.38**	**29**	*e*P	**Pn**	**05 21 17.2**	**+2.8**
SMKR	**Semkarok**	**4.39**	**18**	PN	**Pn**	**05 21 18.2**	**+3.6**
SMKR	**Semkarok**	**4.39**	**18**	*e*P	**Pn**	**05 21 18.3**	**+3.6**
BKI	**Bering**	**4.95**	**53**	PN	**Pn**	**05 21 22.5**	**+0.3**
BKI	**Bering**	**4.95**	**53**	*e*P	**Pn**	**05 21 22.5**	**+0.3**
TIGL	**Tigil**	**5.35**	**358**	PN	**Pn**	**05 21 31.2**	**+3.6**
TIGL	**Tigil**	**5.35**	**358**	*e*P	**Pn**	**05 21 31.3**	**+3.6**
PALN	**Palana**	**6.69**	**4**	PN	**Pn**	**05 21 50.3**	**+4.3**
PALN	**Palana**	**6.69**	**4**	*e*P	**Pn**	**05 21 50.3**	**+4.3**
MA2	**Magadan**	**8.52**	**330**	P	**Pn**	**05 22 11.5**	**+0.5**
MA2	comp=N,14nm,0.6s,baz=143,slow=7.9,SNR=12			LR	LR	05 25 56.1	
SHEM	comp=N,289nm,18.1s,baz=106,slow=41 **Shemya Is, Ala**	**9.17**	**82**	P	**Pn**	**05 22 21.2**	**+1.2**
SHEM	comp=N,191nm,0.9s,baz=300,slow=2.4,SNR=4.4			S	**Sn**	**05 23 55.1**	**-6.4**
SHEM	comp=N,49nm,0.5s,baz=251,slow=23,SNR=5.8			LR	LR	05 25 57.6	
SMY	comp=N,225nm,21.0s,baz=284,slow=37 **Shemya**	**9.17**	**82**	Pn	**Pn**	**05 22 21.1**	**+1.1**
SMY	**Shemya**	**9.17**	**82**	PN	**Pn**	**05 22 21.1**	**+1.1**
OKH	**Okha**	**9.78**	**283**	*de*PN	Pn	05 22 22.0	-6.3
OKH	comp=E,1μm,18.0s			MLR	MLR		
OKH	comp=Z,700nm,6.0s			MLR	MLR		
OKH	comp=N,1μm,17.0s			MLR	MLR		
TYV	**Tymovskoe**	**10.31**	**268**	*e*PN	Pn	05 22 42.1	+6.6
TYV	comp=Z,22nm,1.2s			pmax	pmax		
TYV	comp=Z,900nm,2.5s			pmax	pmax		
SEY	**Seymchan**	**11.11**	**344**	P	**Pn**	**05 22 47.6**	**+1.4**
SEY	comp=Z,2.7nm,0.2s,baz=1.4,slow=23,SNR=0.9			LR	LR	05 27 21.2	
	comp=Z,405nm,21.6s,baz=164,slow=39						
SEY	**Seymchan**	**11.11**	**344**	*i* PN	**Pn**	**05 22 47.1**	**+0.8**
YSS	**Yuzhno-Sakhali**	**11.88**	**249**	*ce*PN	**Pn**	**05 22 58.0**	**+1.1**
YSS	comp=Z,16nm,1.0s			pmax	pmax		
JKA	**Kamikawa-asahi**	**13.73**	**239**		**Pn**	**05 23 23.6**	**+1.5**
ASAJ	**Asahikawa**	**13.73**	**239**	P	**Pn**	**05 23 23.8**	**+1.7**
ASAJ	comp=Z,72nm,0.8s,baz=57,slow=10,SNR=37			LR	LR	05 28 34.7	
GRNR	comp=Z,142nm,18.0s,baz=136,slow=37 **Gornyy**	**14.15**	**272**	⇓*i*P	**P**	**05 23 33.3**	**-0.2**
GRNR	comp=Z,6.0nm,0.9s			pmax	pmax		
BILL	**Bilibino**	**16.04**	**10**		**Pn**	**05 23 52.8**	**+0.9**
KLR	**Kul'dur**	**17.50**	**270**	P	**P**	**05 24 11.0**	**+0.5**
KLR	comp=Z,9.5nm,0.8s,baz=58,slow=11,SNR=16			LR	LR	05 31 24.5	
KLR	comp=Z,205nm,19.8s,baz=72,slow=39 **Kul'dur**	**17.50**	**270**	*ce*P	**P**	**05 24 10.9**	**+0.4**
KLR	comp=Z,3.0nm,0.8s			pmax	pmax		
YAK	**Yakutsk**	**18.41**	**313**	P	**P**	**05 24 19.4**	**-1.0**
YAK	comp=Z,22nm,0.5s,baz=112,slow=8.6,SNR=6.4			LR	LR	05 31 27.1	
YAK	comp=Z,106nm,20.4s,baz=96,slow=37 **Yakutsk**	**18.41**	**313**	P	**P**	**05 24 17.9**	**-2.5**
YAK	comp=Z,38nm,0.7s			IAmb	IAmb	05 24 39.6	
YAK	**Yakutsk**	**18.41**	**313**	*e*P	**P**	**05 24 19.9**	**-0.5**
YAK				*e*S	**S**	**05 27 46.9**	**-0.1**
YAK	comp=Z,28nm,0.8s			pmax	pmax		
YAK	comp=N,6.0nm,1.4s			pmax	pmax		
YAK	comp=E,18nm,1.3s			pmax	pmax		
YAK	comp=E,206nm,2.8s			smax	smax		
YAK	comp=N,125nm,2.5s			smax	smax		
GAMB	**Gambell**	**18.97**	**42**		**Pn**	**05 24 27.7**	**-0.1**
GAMB	**Gambell**	**18.97**	**42**	P	**Pn**	**05 24 28.3**	**+0.5**
USRK	baz=248,SNR=6.5 **Ussuriysk Ar.**	**19.70**	**256**	P	**P**	**05 24 34.5**	**-0.2**
HEH	comp=N,4.3nm,0.8s,baz=59,slow=11,SNR=5.1 **HeiHe**	**19.80**	**276**	*e*P	**P**	**05 24 35.7**	**0.0**
HEH	comp=N,13nm,0.6s			pmax	pmax		
M11K	**Mekoryuk**	**20.59**	**54**	P	**P**	**05 24 45.4**	**+1.2**
UNV	baz=263 **Unalaska Valle**	**20.60**	**72**	P	**P**	**05 24 45.7**	**+1.4**
AKUT	baz=281 **Akutan**	**20.97**	**71**	P	**P**	**05 24 49.1**	**+0.8**
TNA	**Tin City**	**21.17**	**39**		**P**	**05 24 51.5**	**+1.2**
TNA	**Tin City**	**21.17**	**39**	P	**P**	**05 24 51.5**	**+1.2**
K13K	baz=248,SNR=10 **Kusilvak Mount**	**21.56**	**50**	P	**P**	**05 24 56.0**	**+1.4**
K13K	**Kusilvak Mount**	**21.56**	**50**	P	**P**	**05 24 55.8**	**+1.3**
MJB9	baz=261 **Matsu-Tunnel**	**21.64**	**231**	P	**P**	**05 24 56.4**	**+0.8**
MJB9	comp=Z,42nm,0.8s			IAmb	IAmb	05 24 58.7	
MAJO	**Matsushiro**	**21.64**	**231**		**P**	**05 24 55.8**	**+0.2**
MAJO	comp=Z,44nm,0.8s			IAmb	IAmb	05 24 57.4	
MAJO	**Matsushiro**	**21.64**	**231**	P	**P**	**05 24 55.8**	**+0.2**
MAJO	comp=Z,44nm,0.9s			pmax	pmax		
MJAR	**Matsushiro Arr**	**21.64**	**231**	P	**P**	**05 24 56.9**	**+1.3**
MJAR	comp=Z,26nm,0.9s,baz=24,slow=11,SNR=38			PcP	**PcP**	**05 28 54.8**	**-0.2**
MJAR	comp=Z,0.9nm,0.3s,baz=96,slow=1.2,SNR=1.9			LR	LR	05 35 06.0	
MJAR	comp=Z,35nm,20.2s,baz=40,slow=41 **Matsushiro Arr**	**21.64**	**231**		**P**	**05 24 55.8**	**+0.2**
MJAR	**Matsushiro Arr**	**21.64**	**231**	P	**P**	**05 24 55.8**	**+0.2**
MJAR	comp=Z,7.0nm,0.9s			pmax	pmax		
BNX	**BinXian**	**21.65**	**265**	⇓P	**P**	**05 24 55.5**	**-0.2**
BNX	comp=Z,18nm,1.0s			pmax	pmax		
F14K	**Arctic Creek** baz=250	**21.75**	**40**	P	**P**	**05 24 57.8**	**+1.2**
ANM	**Nome**	**21.85**	**42**		**P**	**05 24 58.3**	**+0.7**
ANM	**Nome**	**21.85**	**42**	P	**P**	**05 24 58.3**	**+0.7**
ANM	comp=Z,7.0nm,0.9s			pmax	pmax		
ANM	**Nome** baz=254,SNR=7.9	**21.85**	**42**	P	**P**	**05 24 58.0**	**+0.4**
M13K	**Dall Lake**	**22.01**	**54**	P	**P**	**05 25 01.0**	**+1.7**
M13K	**Dall Lake** baz=266	**22.01**	**54**	P	**P**	**05 24 59.7**	**+0.4**
J14K	**Nanvaranak Lak** baz=260,SNR=6.1	**22.21**	**48**	P	**P**	**05 25 01.3**	**-0.2**
L14K	**Kuka Creek**	**22.42**	**52**	P	**P**	**05 25 04.9**	**+1.2**
L14K	**Kuka Creek** baz=264	**22.42**	**52**	P	**P**	**05 25 03.3**	**-0.4**
F15K	**North Star Dit** baz=252,SNR=17	**22.49**	**40**	P	**P**	**05 25 03.8**	**-0.7**
G15K	**Niukluk** baz=254,SNR=7.0	**22.52**	**42**	P	**P**	**05 25 03.7**	**-1.2**
M14K	**Bethel**	**22.71**	**53**		**P**	**05 25 08.0**	**+1.1**
M14K	**Bethel** baz=267	**22.71**	**53**	P	**P**	**05 25 06.0**	**-0.9**
JGF	**Kuroka**	**22.80**	**231**	P	**P**	**05 25 08.4**	**+0.3**
JGF	comp=Z,25nm,1.1s			IAmb	IAmb	05 25 24.9	
N14K	**Kuskokwak Cree** comp=Z,30nm,0.9s	**22.81**	**55**	IAmb	IAmb	05 25 11.2	
N14K	**Kuskokwak Cree** baz=269	**22.81**	**55**	P	**P**	**05 25 07.4**	**-0.6**
O14K	**Tiguvkauivet M** baz=271	**23.02**	**57**	P	**P**	**05 25 09.9**	**-0.1**
L15K	**Ungalak Mounta** baz=265	**23.02**	**51**	P	**P**	**05 25 09.3**	**-0.7**
K15K	**Wolf Creek Mou** baz=263	**23.07**	**49**	P	**P**	**05 25 10.0**	**-0.5**
INU	**Inuyama**	**23.17**	**231**		**P**	**05 25 12.0**	**+0.3**
INU	comp=Z,26nm,0.9s			IAmb	IAmb	05 25 13.4	
H16K	**Elim** baz=257,SNR=10	**23.17**	**43**	P	**P**	**05 25 10.5**	**-1.0**
C16K	**Lisburne Hills** comp=Z,26nm,0.8s	**23.20**	**33**	IAmb	IAmb	05 25 12.7	
C16K	**Lisburne Hills** baz=245,SNR=38	**23.20**	**33**	P	**P**	**05 25 10.7**	**-1.0**
G16K	**Koyuk River** baz=255,SNR=14	**23.31**	**41**	P	**P**	**05 25 11.7**	**-1.1**
M15K	**Kasigluk River** baz=268,SNR=9.4	**23.34**	**53**	P	**P**	**05 25 12.2**	**-0.9**
TIXI	**Tiksi**	**23.42**	**336**	LR	LR	05 35 15.3	
	comp=Z,212nm,18.5s,baz=184,slow=39						
TIXI	**Tiksi**	**23.42**	**336**		**P**	**05 25 12.4**	**-1.4**
TIXI	comp=Z,16nm,0.7s			IAmb	IAmb	05 25 15.6	
TIXI	**Tiksi**	**23.42**	**336**	*ce*P	**P**	**05 25 13.5**	**-0.3**
TIXI	comp=Z,20nm,0.8s			pmax	pmax		
N15K	**Kwethluk River** comp=Z,20nm,0.9s	**23.62**	**55**	IAmb	IAmb	05 25 18.1	
N15K	**Kwethluk River** baz=270	**23.62**	**55**	P	**P**	**05 25 15.6**	**-0.1**
J16K	**Anvik River** baz=262	**23.63**	**47**	P	**P**	**05 25 15.4**	**-0.4**
I17K	**Unalakleet** baz=260	**23.68**	**45**	P	**P**	**05 25 15.8**	**-0.4**
D17K	**Noatak River** baz=249	**23.76**	**36**	P	**P**	**05 25 16.1**	**-0.8**
O15K	**Ungalikthiuk R** baz=272	**23.76**	**57**	P	**P**	**05 25 17.0**	**0.0**
SDPT	**Sand Point** baz=280	**23.79**	**67**	P	**P**	**05 25 17.4**	**+0.1**
RDOG	**Red Dog Mine**	**23.95**	**35**	P	**P**	**05 25 18.1**	**-0.5**
RDOG	**Red Dog Mine** baz=249,SNR=13	**23.95**	**35**	P	**P**	**05 25 18.7**	**0.0**
L16K	**Owhat River** baz=267	**23.98**	**51**	P	**P**	**05 25 19.0**	**+0.1**
E17K	**Hotham Inlet** baz=252	**24.01**	**37**	P	**P**	**05 25 18.7**	**-0.4**
C17K	**Del ong Mountai** baz=248,SNR=23	**24.02**	**34**	P	**P**	**05 25 18.7**	**-0.6**
G17K	**Kiwalik Mounta** baz=257,SNR=14	**24.03**	**41**	P	**P**	**05 25 20.0**	**+0.5**
F17K	**Baldwin Pennin** comp=Z,21nm,0.8s	**24.03**	**39**	IAmb	IAmb	05 25 22.1	
F17K	**Baldwin Pennin** baz=254,SNR=21	**24.03**	**39**	P	**P**	**05 25 19.1**	**-0.3**
M16K	**Timber Creek** baz=269	**24.19**	**53**	P	**P**	**05 25 21.6**	**+0.7**
H17K	**Granite Mounta** baz=259	**24.21**	**43**	P	**P**	**05 25 21.4**	**+0.4**
N16K	**Nishlik Lake** baz=270	**24.28**	**54**	P	**P**	**05 25 22.9**	**+1.2**
CHNA	**Chernabura Isl** baz=282	**24.39**	**68**	P	**P**	**05 25 23.8**	**+1.0**
E18K	**Tukpahlearik C** baz=253	**24.56**	**37**	P	**P**	**05 25 24.1**	**-0.2**
L17K	**Donlin** baz=267	**24.56**	**50**	P	**P**	**05 25 24.3**	**0.0**
K17K	**Iditarod** baz=266	**24.60**	**49**	P	**P**	**05 25 25.7**	**+1.0**
F18K	**Selawik** baz=256	**24.69**	**39**	P	**P**	**05 25 26.2**	**+0.8**
P16K	**Nushagak River**	**24.71**	**57**		**P**	**05 25 26.4**	**+0.8**
P16K	comp=Z,22nm,0.9s			IAmb	IAmb	05 25 29.0	
P16K	**Nushagak River** baz=274,SNR=5.9	**24.71**	**57**	P	**P**	**05 25 27.5**	**+1.9**
C18K	**Utukok River** baz=250,SNR=47	**24.76**	**34**	P	**P**	**05 25 25.7**	**-0.4**
CHGN	**Chignik** baz=280	**24.79**	**64**	P	**P**	**05 25 28.6**	**+2.3**
HIA	**Hailar**	**24.80**	**278**		**P**	**05 25 25.5**	**-1.1**
HIA	comp=Z,19nm,0.9s			IAmb	IAmb	05 25 27.9	
HIA	**Hailar**	**24.80**	**278**	P	**P**	**05 25 25.5**	**-1.1**
HIA	comp=Z,19nm,0.9s			pmax	pmax		
H18K	**Honhosa River** baz=260	**24.90**	**43**	P	**P**	**05 25 28.4**	**+1.1**
G18K	**Tagagawik** baz=258,SNR=14	**24.92**	**41**	P	**P**	**05 25 28.6**	**+1.0**
M17K	**Holitna River** comp=Z,26nm,1.0s	**24.94**	**52**	IAmb	IAmb	05 25 31.7	
M17K	**Holitna River** baz=269	**24.94**	**52**	P	**P**	**05 25 29.2**	**+1.4**
N17K	**Nushagak Hills** baz=271	**25.06**	**54**	P	**P**	**05 25 30.0**	**+1.2**
R16K	**Pilot Point** baz=277	**25.06**	**61**	P	**P**	**05 25 29.3**	**+0.4**
O17K	**Koliganek Bris** baz=273	**25.13**	**56**	P	**P**	**05 25 28.9**	**-0.5**
L18K	**Granite Mounta**	**25.32**	**50**	P	**P**	**05 25 32.1**	**+1.0**
L18K	**Granite Mounta** baz=268	**25.32**	**50**	P	**P**	**05 25 30.8**	**-0.3**
J18K	**Innoko River** baz=266	**25.39**	**47**	P	**P**	**05 25 32.2**	**+0.4**
A19K	**Wainwright** baz=247	**25.39**	**31**	P	**P**	**05 25 31.0**	**-0.7**
GCSA	**Galena City Sc** baz=263	**25.46**	**44**	P	**P**	**05 25 31.8**	**-0.5**
C19K	**Lookout Ridge** comp=Z,41nm,0.9s	**25.46**	**33**	IAmb	IAmb	05 25 36.4	
C19K	**Lookout Ridge** baz=251	**25.46**	**33**	P	**P**	**05 25 32.0**	**-0.4**
F19K	**Shaleruckik Mo** baz=257	**25.48**	**39**	P	**P**	**05 25 32.4**	**-0.1**
P17K	**Kvichak River** baz=275	**25.50**	**57**	P	**P**	**05 25 33.3**	**+0.5**
G19K	**Purcell Mounta** baz=260,SNR=5.6	**25.60**	**41**	P	**P**	**05 25 33.8**	**+0.2**
N18K	**Kilae Creek**	**25.70**	**53**	P	**P**	**05 25 36.4**	**+1.7**
N18K	**Kilae Creek** baz=272	**25.70**	**53**	P	**P**	**05 25 34.4**	**-0.2**
R17L	**Mt. Peulik Vol** baz=278	**25.70**	**61**	P	**P**	**05 25 35.9**	**+1.2**
M18K	**Stony River** baz=270	**25.72**	**52**	P	**P**	**05 25 34.8**	**0.0**
D19K	**Kuna River** comp=Z,19nm,1.0s	**25.78**	**35**	IAmb	IAmb	05 25 42.0	
D19K	**Kuna River** baz=254	**25.78**	**35**	P	**P**	**05 25 34.7**	**-0.6**
E19K	**Redstone River** baz=257	**25.82**	**38**	P	**P**	**05 25 35.5**	**-0.2**
Q17K	**Contact Creek** baz=277	**25.88**	**59**	P	**P**	**05 25 37.1**	**+0.8**
J19K	**Poorman**	**25.92**	**46**	P	**P**	**05 25 36.8**	**+0.3**
J19K	**Poorman** baz=265,SNR=6.1	**25.92**	**46**	P	**P**	**05 25 35.8**	**-0.8**
P18K	**Big Mountain,**	**26.10**	**56**	P	**P**	**05 25 39.2**	**+0.9**
P18K	comp=Z,16nm,1.0s			IAmb	IAmb	05 25 57.5	
P18K	**Big Mountain,** baz=275	**26.10**	**56**	P	**P**	**05 25 38.9**	**+0.6**
ACHA	**Angle Creek He**	**26.18**	**59**	P	**P**	**05 25 40.0**	**+0.9**
L19K	**White Mountain**	**26.18**	**50**	P	**P**	**05 25 40.2**	**+1.2**
L19K	**White Mountain** baz=270	**26.18**	**50**	P	**P**	**05 25 39.9**	**+1.0**
F20K	**Avaraart Lake** baz=259	**26.31**	**39**	P	**P**	**05 25 40.9**	**+0.9**
D20K	**Etivluk River** baz=255	**26.37**	**35**	P	**P**	**05 25 40.3**	**-0.4**
KSRS	**Korea Array**	**26.38**	**248**	P	**P**	**05 25 41.7**	**+0.8**
KSRS	comp=Z,3.6nm,0.8s,baz=42,slow=9.3,SNR=6.4			LR	LR	05 35 17.3	
N19K	comp=Z,53nm,21.8s,baz=40,slow=34 comp=Z,3.6nm,0.8s **Bonanza Creek**	**26.38**	**53**	P	**P**	**05 25 42.7**	**+1.8**
N19K	**Bonanza Creek** baz=273	**26.38**	**53**	P	**P**	**05 25 41.1**	**+0.2**
H20K	**Anotleneega Mo** baz=263,SNR=5.5	**26.39**	**43**	P	**P**	**05 25 40.5**	**-0.4**
M19K	**Big River Lodg** baz=271	**26.40**	**51**	P	**P**	**05 25 41.2**	**+0.3**
E20K	**Nigu River** baz=256	**26.40**	**36**	P	**P**	**05 25 40.9**	**-0.1**
O19K	**Port Alsworth** baz=274	**26.50**	**54**	P	**P**	**05 25 43.1**	**+1.3**
B20K	**Meade River** comp=Z,29nm,0.8s	**26.57**	**32**	IAmb	IAmb	05 26 01.9	
B20K	**Meade River** baz=252,SNR=12	**26.57**	**32**	P	**P**	**05 25 42.7**	**+0.4**
K20K	**Telida**	**26.57**	**47**		**P**	**05 25 43.9**	**+1.5**
K20K	**Telida** baz=268	**26.57**	**47**	P	**P**	**05 25 43.4**	**+1.0**
IMAR	**Indian Mountai**	**26.92**	**42**	P	**P**	**05 25 46.1**	**+0.5**
M20K	**Styx River** baz=272	**26.99**	**51**	P	**P**	**05 25 47.5**	**+1.1**
SII	**Sitkinak Islan** baz=282	**27.05**	**62**	P	**P**	**05 25 48.3**	**+1.4**
G21K	**Allakaket** baz=262	**27.09**	**40**	P	**P**	**05 25 47.9**	**+0.8**
P19K	**Oil Pt** baz=276	**27.09**	**56**	P	**P**	**05 25 47.5**	**+0.3**

comp=Z,66nm,18.7s,baz=28,slow=37
CAPN Captain Cook N 28.01 53 P P 05 25 55.4 0.0
baz=276
MLY Manley 28.09 44 P P 05 25 55.9 -0.2
baz=268
TRF Thorofare Moun 28.27 47 P P 05 25 58.2 +0.4
baz=271
JCJ Chichijima 28.29 213 LR LR 05 38 56.7
comp=Z,19nm,18.9s,baz=347,slow=40
BRSE Bradley Lake S 28.34 55 P P 05 25 58.4 +0.2
baz=278
COLD Coldfoot 28.47 39 P P 05 25 59.1 -0.3
baz=264,SNR=5.5
G23K Bananza Creek 28.49 40 P P 05 25 59.9 +0.3
baz=266
D23K Nanushuk River 28.53 36 P P 05 25 58.6 -1.3
baz=261
RC01 Rabbit Creek A 28.67 52 P P 05 26 01.1 -0.1
baz=276
I23K Minto, Yukon-K 28.68 44 P P 05 26 01.8 +0.6
baz=269
C23K Itkillik River 28.71 34 P P 05 26 01.3 -0.2
baz=259,SNR=9.4
O22K Cooper Landing 28.75 53 P P 05 26 02.1 +0.3
baz=277
E23K Chandalar 28.78 38 P P 05 26 02.1 -0.2
baz=264,SNR=11
NEA2 Nenana 28.80 45 P P 05 26 01.8 -0.6
baz=270,SNR=7.9
MCK McKinley 28.87 47 P P 05 26 03.4 +0.4
MCK McKinley 28.87 47 P P 05 26 03.4 +0.4
MCK pmax pmax
comp=Z,8.0nm,1.0s
MCK McKinley 28.87 47 P P 05 26 02.4 -0.6
baz=272
TOLK Toolik Lake Re 28.88 36 P P 05 26 02.7 -0.3
baz=262,SNR=7.7
PMR Palmer 28.91 51 P P 05 26 04.2 +0.9
baz=276
RND Reindeer 28.92 47 P 05 26 03.6 +0.1
RND Reindeer 28.92 47 P P 05 26 03.6 +0.1
RND pmax pmax
comp=Z,9.0nm,0.9s
SEW Seward 28.93 54 P P 05 26 03.8 +0.3
baz=278
GHO Glory Hole Cre 28.99 51 P P 05 26 05.0 +0.8
GHO IAmb IAmb 05 26 20.2
comp=Z,20nm,1.3s
WAT1 Susitna Watana 29.09 48 P P 05 26 04.7 -0.3
baz=274
E24K Your Creek 29.21 38 P P 05 26 05.9 -0.1
baz=265,SNR=7.3
D24K Happy Valley 29.21 35 P P 05 26 05.5 -0.4
baz=262
WRH Wood River Hil 29.22 45 IAmb IAmb 05 26 08.1
comp=Z,11nm,0.9s
KNK Knik Glacier 29.25 51 P P 05 26 06.5 +0.1
baz=277,SNR=6.2
SML Sawmill 29.27 51 P P 05 26 06.8 +0.1
baz=276,SNR=9.2
H24K Noodor Dome 29.31 42 P P 05 26 06.6 -0.4
baz=269
COLA College 29.32 44 *i* P P 05 26 06.7 -0.2
COLA pmax pmax
comp=Z,9.0nm,1.0s
COLA College 29.32 44 P P 05 26 06.2 -0.7
baz=271
C24K Franklin Bluff 29.34 34 P P 05 26 06.8 -0.2
baz=262
WAT6 Susitna Watana 29.48 49 P P 05 26 07.8 -0.7
baz=275
POKR Poker Plat Res 29.49 44 P P 05 26 07.8 -0.7
baz=271
G24K Hadweenzic Riv 29.50 40 P P 05 26 08.0 -0.6
baz=268,SNR=6.5
M23K Glacier View 29.56 50 P P 05 26 08.3 -0.8
baz=277
DHY Denali Highway 29.60 48 P P 05 26 08.9 -0.8
baz=275
HDA Harding Lake 29.72 45 IAmb IAmb 05 26 11.3
comp=Z,7.9nm,0.5s
HDA Harding Lake 29.72 45 P P 05 26 09.2 -1.3
baz=273,SNR=7.7
IL31 29.73 44 IAmb IAmb 05 26 12.5
comp=Z,10nm,0.8s
ILAR Eielson Array 29.73 44 P P 05 26 10.8 +0.2
comp=Z,7.0nm,0.8s,baz=263,slow=7.9,SNR=65
ILAR PcP PcP 05 29 12.0 -0.9
comp=Z,0.7nm,0.5s,baz=278,slow=3.4,SNR=7.0
ILAR LR LR 05 39 26.6
comp=Z,49nm,19.9s,baz=258,slow=39
ILAR Eielson Array 29.73 44 P P 05 26 11.1 +0.5
SCM Sheep Creek Mo 29.74 50 P P 05 26 10.2 -0.6
baz=277
D25K Kavik River 30.10 35 P P 05 26 13.9 0.0
baz=264,SNR=38
F25K Christian Rive 30.25 39 P P 05 26 15.1 -0.1
baz=268
M24K Tolsona, Glenn 30.25 50 P P 05 26 15.2 -0.1
baz=277
K24K Donnelly Dome 30.27 46 IAmb IAmb 05 26 16.4
comp=Z,13nm,0.9s
K24K Donnelly Dome 30.27 46 P P 05 26 14.7 -0.7
baz=275
PRP Porcupine Dome 30.29 43 IAmb IAmb 05 26 17.7
comp=Z,13nm,0.8s
PRP Porcupine Dome 30.29 43 P P 05 26 15.0 -0.7
baz=272,SNR=13
E25K Arctic Village 30.30 38 P P 05 26 14.9 -0.7
baz=267
J25K Salcha River, 30.39 45 P P 05 26 15.1 -1.4
baz=274
KLU Klutina 30.45 51 P P 05 26 16.2 -0.9
baz=278
C26K Camden Bay 30.67 34 P P 05 26 19.3 +0.5
baz=265,SNR=9.6
RIDG Independent Ri 30.68 46 IAmb IAmb 05 26 19.4
comp=Z,14nm,1.0s
RIDG Independent Ri 30.68 46 P P 05 26 18.0 -1.0
baz=276,SNR=5.5
F26K Sheenjek River 30.83 39 P P 05 26 19.5 -0.7
baz=270
G26K Porcupine Rive 30.96 40 P P 05 26 20.8 -0.6
baz=271
SCRK Sand Creek 31.04 46 P P 05 26 22.3 0.0
baz=276,SNR=7.8
N25K Chitina, Valde 31.06 50 P P 05 26 22.4 -0.1
baz=279
C27K Jago River 31.06 35 IAmb IAmb 05 26 24.4
comp=Z,9.5nm,0.9s
C27K Jago River 31.06 35 P P 05 26 21.2 -1.1
baz=267,SNR=10
BMRM Bremner River 31.16 52 IAmb IAmb 05 26 25.4
comp=Z,18nm,0.8s
BMRM Bremner River 31.16 52 P P 05 26 23.0 -0.3
baz=280
L26K Log Cabin Wild 31.43 48 P P 05 26 25.8 +0.1
baz=278
M26K Nabesna, AK 31.68 49 IAmb IAmb 05 26 31.3
comp=Z,15nm,1.0s
M26K Nabesna, AK 31.68 49 P P 05 26 28.5 +0.6
baz=279
E27K Coleen River 31.79 38 P P 05 26 28.9 +0.2
baz=271
MCARA McCarthy VSAT 31.84 51 P P 05 26 29.6 +0.4
baz=281
H27K Steamboat Moun 31.89 41 IAmb IAmb 05 26 32.0
comp=Z,9.9nm,1.2s
H27K Steamboat Moun 31.89 41 P P 05 26 30.1 +0.4
baz=274,SNR=5.3
CRQE Cirque 31.93 52 P P 05 26 30.8 +0.7
baz=282
D27M Malcolm River 32.02 36 IAmb IAmb 05 26 32.4
comp=Z,8.9nm,0.8s
D27M Malcolm River 32.02 36 P P 05 26 30.7 -0.1
baz=270
L27K Beaver Creek, 32.12 47 P P 05 26 31.7 +0.1
baz=279,SNR=22
BCAR Beaver Creek A 32.13 47 P 05 26 32.9 +1.1
M27K Edge Creek, AK 32.21 49 IAmb IAmb 05 26 35.1
comp=Z,16nm,0.9s
M27K Edge Creek, AK 32.21 49 P P 05 26 32.8 +0.3
baz=280
F28M Old Crow 32.46 39 P P 05 26 34.9 +0.3
baz=274,SNR=7.9
MESA MESA 32.60 53 P P 05 26 36.8 +0.7
baz=284

I28M Miner Creek 32.62 43 IAmb IAmb 05 26 38.6
comp=Z,16nm,1.4s
I28M Miner Creek 32.62 43 P P 05 26 36.4 +0.3
baz=277,SNR=6.4
BVCY Beaver Creek 32.66 48 P P 05 26 36.8 +0.4
baz=281,SNR=8.4
CTG Chitna Glacier 32.73 51 P P 05 26 37.7 +0.6
baz=283,SNR=5.2
CTGM Chitina Glacie 32.73 51 IAmb IAmb 05 26 40.2
comp=Z,15nm,0.7s
D28M Stokes Point 32.81 35 P P 05 26 37.4 -0.1
baz=272,SNR=5.5
YUK3 Moose Creek 32.97 49 P P 05 26 39.2 -0.1
baz=282
ULN Ulaanbaatar 33.03 283 *ce* P P 05 26 39.5 -0.4
ULN pmax pmax
comp=Z,7.0nm,1.9s
DAWY Dawson 33.04 45 P P 05 26 40.2 +0.5
baz=279,SNR=6.0
E29M Blow River 33.16 37 P P 05 26 40.1 -0.6
baz=274
H11N2 WAKE ISLAND Hy 33.21 166 T T 06 01 47.1
baz=351,slow=76
H11N3 WAKE ISLAND Hy 33.22 166 T T 06 01 51.6
baz=351,slow=76
H11N1 WAKE ISLAND Hy 33.22 166 T T 06 01 51.7
baz=351,slow=76
I29M Ogilvie Camp, 33.31 43 P P 05 26 41.6 -0.4
baz=278
O28M Mount Upton 33.32 51 P P 05 26 42.5 0.0
baz=284,SNR=5.7
TLY Talaya 33.37 291 LR LR 05 41 11.1
comp=Z,88nm,18.1s,baz=45,slow=38
YUK8 Steele Glacier 33.40 50 P 05 26 43.0 -0.1
baz=283
SONM Songino Array 33.43 284 P P 05 26 43.0 -0.4
comp=Z,0.6nm,0.4s,baz=62,slow=7.4,SNR=4.0
SONM PcP PcP 05 29 23.7 +0.3
comp=Z,2.9nm,0.8s,baz=88,slow=2.1,SNR=11
SONM LR LR 05 41 22.8
comp=Z,206nm,20.6s,baz=52,slow=38
comp=Z,0.6nm,0.4s
SONM Songino Array 33.43 284 P P 05 26 41.9 -1.5
SONM Songino Array 33.43 284 P P 05 26 41.9 -1.5
SONM pmax pmax
comp=Z,1.0nm,0.8s
PINM Pinnacle 33.45 52 P P 05 26 43.2 -0.1
baz=285
J29N Klondike Camp 33.48 44 P P 05 26 43.7 +0.1
baz=280
M29M Somme Creek 33.75 48 P P 05 26 45.9 -0.1
baz=282,SNR=9.3
L29M L29M 33.76 47 P P 05 26 46.3 +0.2
baz=282,SNR=14
EPYK Eagle Plains 33.81 41 P P 05 26 45.9 -0.5
baz=278
K29M Barlow Dome 33.89 45 P P 05 26 46.7 -0.5
baz=281
YUK4 Talbot Arm 33.91 50 P P 05 26 47.6 +0.1
baz=284
G30M tAoh Zraii Nji 33.93 40 IAmb IAmb 05 27 20.0
comp=Z,7.9nm,1.2s
G30M tAoh Zraii Nji 33.93 40 P P 05 26 46.8 -0.6
baz=278
HHC Hu-ho-hao-te 34.00 269 *e* P P 05 26 48.8 +0.4
HHC pmax pmax
comp=Z,8.0nm,0.7s
HHC pmax pmax
comp=Z,220nm,7.0s
F30M Barrier River 34.02 38 IAmb IAmb 05 26 52.1
comp=Z,16nm,1.0s
F30M Barrier River 34.02 38 P P 05 26 48.1 0.0
baz=277
I30M Mount Dempster 34.13 43 IAmb IAmb 05 26 50.7
comp=Z,9.2nm,0.8s
I30M Mount Dempster 34.13 43 P P 05 26 49.2 0.0
baz=280,SNR=8.6
YUK6 Outpost Mounta 34.14 51 P P 05 26 49.7 +0.1
baz=285
O29M Mount Kennedy 34.21 52 P P 05 26 49.4 -0.6
baz=286
HNS HongShan 34.22 262 ⇑ P P 05 26 50.4 +0.3
HNS pmax pmax
comp=Z,10.0nm,1.1s
J30M Hart River 34.26 44 P P 05 26 50.4 0.0
baz=281
H11S1 WAKE ISLAND Hy 34.38 167 T T 06 03 16.5
baz=351,slow=76
H11S3 WAKE ISLAND Hy 34.39 167 T T 06 03 17.4
baz=351,slow=76
H11S2 WAKE ISLAND Hy 34.40 167 T T 06 03 17.9
baz=351,slow=76
M30M Milo, Yukon 34.48 47 P P 05 26 52.7 +0.5
baz=284
HYT Haines Junctio 34.58 51 IAmb IAmb 05 26 55.7
comp=Z,15nm,1.0s
HYT Haines Junctio 34.58 51 P P 05 26 52.6 -0.6
baz=286
N30M Aishikik Lake 34.61 49 P P 05 26 52.8 -0.6
baz=285
MAYO Mayo, Yukon 34.65 45 IAmb IAmb 05 27 00.2
comp=Z,13nm,0.8s
MAYO Mayo, Yukon 34.65 45 P P 05 26 53.9 +0.3
baz=283
G31M Satah River 34.70 39 P P 05 26 54.2 +0.3
baz=279
INK Inuvik 34.78 37 LR LR 05 41 38.0
comp=Z,57nm,20.4s,baz=341,slow=37
INK Inuvik 34.78 37 P 05 26 55.5 +0.8
INK IAmb IAmb 05 26 56.6
comp=Z,7.2nm,0.9s
INK Inuvik 34.78 37 P P 05 26 55.5 +0.8
INK pmax pmax
comp=Z,7.0nm,1.0s
INK Inuvik 34.78 37 P P 05 26 54.9 +0.3
baz=278,SNR=7.1
F31M Tsiigehtchic 34.82 39 IAmb IAmb 05 26 56.5
comp=Z,12nm,1.2s
F31M Tsiigehtchic 34.82 39 P P 05 26 55.4 +0.3
baz=279
H31M Peel River 34.86 41 IAmb IAmb 05 26 59.0
comp=Z,9.9nm,1.1s
H31M Peel River 34.86 41 P P 05 26 55.7 +0.2
baz=281
P30M Million Dollar 35.03 52 P P 05 26 57.8 +0.8
baz=287
N31M Braeburn, Yuko 35.21 49 P P 05 26 59.4 +0.8
baz=286
O30N Mendenhall 35.26 50 IAmb IAmb 05 27 01.6
comp=Z,12nm,0.8s
O30N Mendenhall 35.26 50 P P 05 26 59.5 +0.5
baz=287,SNR=6.3
NJ2 Nanjing 35.44 251 *e* P P 05 27 00.9 +0.2
NJ2 pmax pmax
comp=Z,37nm,0.6s
M31M Drury Creek, Y 35.65 48 IAmb IAmb 05 27 05.1
comp=Z,9.1nm,0.8s
M31M Drury Creek, Y 35.65 48 P P 05 27 02.8 +0.5
baz=286,SNR=7.8
WHY Whitehorse 35.86 50 P P 05 27 05.1 +0.8
baz=288,SNR=5.2
SKAG Skagway 36.02 52 P P 05 27 06.1 +0.8
baz=289
S31K Pelican 36.07 55 P P 05 27 06.6 +0.8
baz=290
P32M Atlin 36.76 52 P P 05 27 12.0 +0.3
baz=290
R32K Eaglecrest 36.81 54 P P 05 27 12.6 +0.4
baz=291
SIT Sitka 36.85 56 P P 05 27 13.3 +0.8
baz=292
P33M Teslin, Yukon 36.98 50 IAmb IAmb 05 27 16.5
comp=Z,12nm,1.1s
P33M Teslin, Yukon 36.98 50 P P 05 27 14.5 +0.8
baz=290,SNR=5.2
A36M Sachs Harbour 37.02 30 IAmb IAmb 05 27 15.6
comp=Z,16nm,1.2s
A36M Sachs Harbour 37.02 30 P P 05 27 14.3 +0.5
baz=280,SNR=15
S32K Killisnoo 37.07 55 P P 05 27 15.2 +0.8
baz=292
Q32M Nakina River 37.67 52 P P 05 27 20.4 +0.7
baz=291
C36M Paulatuk 37.95 34 IAmb IAmb 05 27 47.0
comp=Z,12nm,1.1s
C36M Paulatuk 37.95 34 P P 05 27 22.2 +0.5
baz=284,SNR=12
R33M Jennings River 38.14 51 IAmb IAmb 05 27 27.3

comp=Z,11nm,0.9s
R33M Jennings River 38.14 51 P P 05 27 24.5 +1.0
baz=292,SNR=6.6
CRAG Craig 38.60 58 P P 05 27 28.9 +1.7
baz=295
WRAK Wrangell Islan 38.61 56 P P 05 27 26.9 -0.4
baz=294
S34M Telegraph Cree 38.62 53 P P 05 27 27.5 +0.1
baz=293
WTLY Watson Lake, Y 38.89 49 IAmb IAmb 05 27 32.3
comp=Z,7.2nm,0.6s
WTLY Watson Lake, Y 38.89 49 P P 05 27 30.2 +0.4
baz=292
DLBC Dease Lake 38.95 52 LR LR 05 44 23.4
comp=Z,59nm,20.5s,baz=285,slow=37
DLBC Dease Lake 38.95 52 P P 05 27 31.0 +0.7
baz=293
KOTAN Kotaneelee Air 41.07 48 P P 05 27 48.6 +0.9
baz=295
LZDM Lanzhou Array 41.87 269 P P 05 27 54.3 -0.7
comp=Z,1.3nm,0.3s,baz=119,slow=39,SNR=3.1
comp=Z,1.3nm,0.3s
GTA2 Gaotai 42.03 276 *e* P P 05 27 55.1 -0.9
GTA2 pmax pmax
comp=Z,5.0nm,1.5s
ZALV Zalesovo Beam 42.60 303 P P 05 27 57.1 -3.2
comp=Z,0.2nm,0.3s,baz=77,slow=6.4,SNR=2.2
ZALV PcP PcP 05 29 50.4 -1.0
comp=Z,1.8nm,0.5s,baz=78,slow=3.4,SNR=7.1
ZALV LR LR 05 46 53.2
comp=Z,130nm,18.3s,baz=80,slow=38
ZALV Zalesovo Beam 42.60 303 P P 05 27 59.0 -1.3
ZALV Zalesovo Beam 42.60 303 P P 05 27 59.0 -1.3
DGZ Jazzator, Alta 43.39 296 *i* P P 05 28 06.0 -0.9
YKA Yellowknife Ar 44.08 42 P P 05 28 12.9 +0.8
comp=Z,1.7nm,0.7s,baz=301,slow=8.8,SNR=30
YKA PcP PcP 05 29 56.7 +0.5
comp=Z,0.2nm,0.6s,baz=302,slow=4.5,SNR=3.7
comp=Z,1.7nm,0.7s
YKA Yellowknife Ar 44.08 42 P P 05 28 12.1 0.0
RES Resolute Bay 44.17 21 P P 05 28 13.0 +0.3
RES IAmb IAmb 05 28 14.2
comp=Z,13nm,0.7s
RES Resolute Bay 44.17 21 P P 05 28 13.0 +0.3
RES pmax pmax
comp=Z,13nm,0.7s
CD2 Chengdu 45.27 264 *e* P P 05 28 20.0 -2.0
WMQ Urumqi 46.59 289 *e* P P 05 28 29.9 -2.3
WMQ pmax pmax
comp=Z,20nm,0.9s
GOMU GeErMu 47.14 276 P P 05 28 29.1 -7.9
GOMU pmax pmax
comp=Z,4.0nm,0.5s
KURK Kurchatov 47.54 302 P P 05 28 37.7 -1.8
KURK IAmb IAmb 05 28 39.1
comp=Z,4.8nm,0.5s
KURK Kurchatov 47.54 302 P P 05 28 37.7 -1.8
KURK pmax pmax
comp=Z,5.0nm,0.5s
KURBB Kurchatov Arra 47.64 302 P P 05 28 38.1 -2.1
comp=Z,3.2nm,0.2s,baz=60,slow=7.6,SNR=8.4
KURBB PcP PcP 05 30 08.3 -0.5
comp=Z,2.5nm,0.7s,baz=54,slow=3.3,SNR=7.8
KURBB LR LR 05 50 04.8
comp=Z,139nm,18.7s,baz=154,slow=38
comp=Z,3.2nm,0.2s
SPITS Spitsbergen Ar 47.68 350 P P 05 28 38.9 -1.3
comp=Z,3.5nm,0.4s,baz=62,slow=9.0,SNR=42
SPITS LR LR 05 48 22.2
comp=Z,21nm,18.9s,baz=24,slow=36
comp=Z,3.5nm,0.4s
SPITS Spitsbergen Ar 47.68 350 P P 05 28 39.6 -0.6
SPITS pmax pmax
comp=Z,43nm,1.3s
SPB2 Spitsbergen Ar 47.68 350 P P 05 28 39.3 -0.9
TULEG Thule 47.75 14 IAmb IAmb 05 28 41.5
comp=Z,12nm,0.9s
TULEG Thule 47.75 14 *i* P P 05 28 40.5 -0.2
TULEG IAmb IAmb 05 28 41.1
comp=Z,15nm,0.5s
MK31 Makanchi Array 47.87 296 *ce* P P 05 28 40.8 -1.3
MKAR Makanchi Array 47.87 296 P P 05 28 39.9 -2.2
comp=Z,1.3nm,0.5s,baz=55,slow=7.1,SNR=20
MKAR PcP PcP 05 30 09.6 -0.2
comp=Z,0.5nm,0.6s,baz=44,slow=3.1,SNR=2.0
MKAR LR LR 05 49 52.4
comp=Z,117nm,19.6s,baz=120,slow=37
comp=Z,1.3nm,0.5s
NEEM North Greenlan 49.03 8 *i* P P 05 28 50.4 -0.5
NEEM IAmb IAmb 05 28 51.3
comp=Z,29nm,1.1s
POIN Pond Inlet 49.10 19 IAmb IAmb 05 28 52.0
comp=Z,5.9nm,0.9s
B08A Colville Reser 49.56 60 IAmb IAmb 05 28 57.3
comp=Z,8.9nm,0.9s
PZH PanZhiHua 49.66 262 P P 05 28 56.4 +0.2
EDM Edmonton 49.67 52 P 05 28 57.1 +1.2
EDM Edmonton 49.67 52 P P 05 28 57.1 +1.2
EDM pmax pmax
comp=Z,19nm,0.8s
BLKN Baker Lake 50.00 33 IAmb IAmb 05 28 59.1
comp=Z,11nm,1.0s
BVAR Borovoye Array 50.30 308 P P 05 28 58.1 -2.4
comp=Z,1.9nm,0.4s,baz=52,slow=7.9,SNR=10.0
BVAR PcP PcP 05 30 18.0 -0.5
comp=Z,2.6nm,0.5s,baz=68,slow=3.9,SNR=5.7
BVAR LR LR 05 52 37.9
comp=Z,115nm,18.8s,baz=46,slow=39
comp=Z,1.9nm,0.4s
BORK Borovoye 50.32 308 P P 05 28 58.3 -2.4
BORK Borovoye 50.32 308 *ce* P P 05 28 58.6 -2.1
BORK pmax pmax
comp=Z,4.0nm,1.0s
NEW Newport 50.79 59 LR LR 05 48 14.9
comp=Z,33nm,21.9s,baz=304,slow=33
KULLO Kullorsuaq 50.97 12 *i* P P 05 29 04.7 -0.6
KULLO IAmb IAmb 05 29 05.7
comp=Z,29nm,0.8s
DAG Danmarks Havn 51.06 359 *i* P P 05 29 05.1 -0.9
DAG IAmb IAmb 05 29 06.5
comp=Z,6.5nm,0.8s
E09A Wood Farm, Sta 51.34 61 IAmb IAmb 05 29 10.5
comp=Z,13nm,1.0s
UPNV Upernavik 52.72 12 *i* P P 05 29 17.9 -0.3
UPNV IAmb IAmb 05 29 18.4
comp=Z,14nm,0.5s
BMO Blue Mountains 52.85 62 IAmb IAmb 05 29 22.2
comp=Z,5.7nm,1.1s
MSO Missoula 53.36 59 IAmb IAmb 05 29 27.9
comp=Z,6.5nm,1.0s
PLID Pearl Lake 53.40 62 IAmb IAmb 05 29 26.3
comp=Z,5.4nm,0.8s
DBG Daneborg 53.55 360 *i* P P 05 29 23.4 -1.0
DBG IAmb IAmb 05 29 25.0
comp=Z,4.4nm,0.7s
ARTI Arti 53.55 317 LR LR 05 53 19.8
comp=Z,42nm,18.6s,baz=205,slow=37
ARCES ARCESS Array B 53.72 342 P P 05 29 24.5 -1.2
comp=Z,3.0nm,0.7s,baz=47,slow=7.2,SNR=8.8
ARCES PcP PcP 05 30 30.7 -0.4
comp=Z,2.0nm,0.6s,baz=28,slow=3.6,SNR=5.4
ARCES LR LR 05 56 48.7
comp=Z,53nm,18.3s,baz=12,slow=41
comp=Z,3.0nm,0.7s
ARCES ARCESS Array B 53.72 342 P P 05 29 24.2 -1.5
ARCES IAmb IAmb 05 30 06.7
comp=Z,9.9nm,1.2s
ARCES ARCESS Array B 53.72 342 P P 05 29 24.2 -1.5
ARCES pmax pmax
comp=Z,10.0nm,1.3s
FFC Flin Flon 53.94 45 P 05 29 28.1 +0.6
FFC IAmb IAmb 05 29 29.3
comp=Z,4.8nm,0.8s
FFC Flin Flon 53.94 45 P P 05 29 28.1 +0.6
FFC pmax pmax
comp=Z,5.0nm,0.9s
ORV Oroville 53.98 70 IAmb IAmb 05 29 30.4
comp=Z,6.5nm,0.9s
FCC Fort Churchill 54.39 38 P 05 29 31.1 +0.4
FCC IAmb IAmb 05 29 31.5
comp=Z,5.5nm,0.6s
FCC Fort Churchill 54.39 38 P P 05 29 31.1 +0.4
FCC pmax pmax
comp=Z,6.0nm,0.6s
SUMG Summit 54.69 6 P 05 29 33.8 +0.6
SUMG Summit 54.69 6 P P 05 29 33.8 +0.6
SUMG pmax pmax

comp=Z,48nm,1.2s
SUMG Summit 54.69 6 *i* P **P** **05 29 33.3 +0.1**
SUMG IAmb IAmb 05 29 35.7
comp=Z,22nm,0.7s
EGMT Eagleton 54.73 55 IAmb IAmb 05 29 38.3
comp=Z,13nm,1.4s
AAK Ala-Archa 54.80 296 LR LR 05 52 54.5
comp=Z,74nm,19.7s,baz=56,slow=36
AAK Ala-Archa 54.80 296 P **P** **05 29 32.9 -1.2**
AAK Ala-Archa 54.80 296 *ce* P **P** **05 29 33.3 -0.8**
AAK pmax pmax
comp=Z,5.0nm,1.7s
MPK Martis Peak 54.99 69 IAmb IAmb 05 29 39.0
comp=Z,9.4nm,0.8s
PAHR Pah Rah Range 55.09 69 IAmb IAmb 05 29 39.2
comp=Z,6.6nm,0.9s
BOZ Bozeman (W) 55.38 59 IAmb IAmb 05 29 40.7
comp=Z,5.7nm,0.8s
KIRV Kirov 55.54 323 LR LR 05 55 36.1
comp=Z,108nm,18.9s,baz=22,slow=38
YHL Hebgen Lake 56.12 59 IAmb IAmb 05 29 46.5
comp=Z,6.1nm,0.9s
YHB Horse Butte 56.18 59 IAmb IAmb 05 29 46.8
comp=Z,6.8nm,0.7s
GDH Godhavn 56.30 13 *i* P **P** **05 29 43.5 -0.7**
GDH IAmb IAmb 05 29 44.8
comp=Z,14nm,0.6s
YMR Madison River 56.36 59 IAmb IAmb 05 29 48.2
comp=Z,9.0nm,1.0s
KSH2 Kashi 56.55 292 P **P** **05 29 45.6 -1.2**
KSH2 pmax pmax
comp=Z,9.0nm,0.7s
NVAR Mina Array Bea 56.57 69 P **P** **05 29 49.1 +2.1**
comp=Z,4.7nm,0.8s,baz=297,slow=7.2,SNR=35
NVAR LR LR 05 52 07.0
comp=Z,23nm,18.9s,baz=279,slow=34
comp=Z,4.7nm,0.8s
LHV Little Hntoon 56.58 69 IAmb IAmb 05 29 50.6
comp=Z,8.3nm,1.0s
YNE Yellowstone No 56.63 58 IAmb IAmb 05 29 49.9
comp=Z,6.7nm,0.9s
ILULI Ilulissat 56.66 12 IAmb IAmb 05 29 47.1
comp=Z,24nm,0.7s
ILULI Ilulissat 56.66 12 *i* P **P** **05 29 45.8 -1.1**
ILULI IAmb IAmb 05 29 47.2
comp=Z,23nm,0.6s
MDPB Devils Postpil 56.67 70 IAmb IAmb 05 30 26.1
comp=Z,9.7nm,1.5s
H17A Grant Village 56.75 59 IAmb IAmb 05 29 52.4
comp=Z,9.5nm,1.0s
FLWY Flagg Ranch 56.89 59 IAmb IAmb 05 29 52.7
comp=Z,9.6nm,0.9s
FXWY Fox Creek 57.02 60 IAmb IAmb 05 29 53.3
comp=Z,4.2nm,0.8s
CHTO Chiang Mai 57.14 258 P **P** **05 29 51.8 +0.8**
CHTO IAmb IAmb 05 29 52.4
comp=Z,4.0nm,0.7s
CHTO Chiang Mai 57.14 258 P **P** **05 29 51.8 +0.8**
CHTO pmax pmax
comp=Z,4.0nm,0.7s
LOHW Long Hollow 57.27 60 IAmb IAmb 05 29 55.1
comp=Z,7.0nm,0.9s
SNOW Snow King Moun 57.29 60 IAmb IAmb 05 29 55.5
comp=Z,4.7nm,0.8s
SCO Scoresbysund 57.39 0 P **P** **05 29 52.4 +0.4**
SCO Scoresbysund 57.39 0 P **P** **05 29 52.4 +0.4**
SCO pmax pmax
comp=Z,14nm,1.2s
CMAR Chiang Mai Arr 57.42 258 P **P** **05 29 52.6 -0.3**
comp=Z,1.7nm,0.3s,baz=28,slow=7.2,SNR=12
CMAR PcP **PcP** **05 30 46.4 +0.2**
comp=Z,0.8nm,0.3s,baz=32,slow=3.8,SNR=4.2
CMAR LR LR 05 55 29.0
comp=Z,42nm,19.4s,baz=30,slow=37
comp=Z,1.7nm,0.3s
DSP Deep Springs 57.49 70 IAmb IAmb 05 29 56.9
comp=Z,5.2nm,1.0s
AHID Auburn Hatcher 57.58 61 IAmb IAmb 05 29 57.0
comp=Z,8.8nm,0.9s
EVN Everest 57.72 275 P **P** **05 29 54.1 -1.6**
EVN IAmb IAmb 05 29 56.5
comp=Z,3.2nm,0.6s
AB31 Akbulak array 57.73 310 **P** **05 29 52.6 -2.2**
AKTO Aktyubinsk 57.80 312 LR LR 05 57 33.9
comp=Z,110nm,18.5s,baz=172,slow=39
SPUT South Promonto 57.86 63 IAmb IAmb 05 29 58.7
comp=Z,4.3nm,0.8s
CWC Cottonwood Cre 58.07 71 IAmb IAmb 05 30 00.5
comp=Z,4.3nm,1.0s
HWUT Hardware Ranch 58.13 62 IAmb IAmb 05 30 01.1
comp=Z,7.7nm,0.8s
FRB Frobisher Bay 58.36 23 LR LR 05 57 41.7
comp=Z,58nm,18.9s,baz=20,slow=39
PDAR Pinedale Array 58.40 60 P **P** **05 30 01.5 +1.7**
comp=Z,9.8nm,0.7s,baz=318,slow=2.6,SNR=86
PDAR LR LR 05 54 40.2
comp=Z,26nm,20.4s,baz=322,slow=35
comp=Z,9.8nm,0.7s
PDAR Pinedale Array 58.40 60 P **P** **05 30 01.6 +1.8**
DUG Dugway, Tooele 58.43 64 IAmb IAmb 05 30 03.0
comp=Z,5.7nm,0.9s
TPNV Topopah Spring 58.77 69 IAmb IAmb 05 30 05.3
comp=Z,6.1nm,0.9s
CLC China Lake 58.79 71 IAmb IAmb 05 30 05.1
comp=Z,6.1nm,0.9s
SFJD Kangerlussuaq 58.81 13 LR LR 05 56 08.5
comp=Z,50nm,21.0s,baz=1.5,slow=37
SFJD Kangerlussuaq 58.81 13 *i* P **P** **05 30 01.1 -0.8**
SFJD IAmb IAmb 05 30 01.9
comp=Z,14nm,0.5s
LRMC Laurel Mtn Rad 58.98 71 IAmb IAmb 05 30 06.3
comp=Z,4.4nm,0.8s
GWY Greenwater Val 59.06 70 IAmb IAmb 05 30 07.1
comp=Z,6.3nm,0.8s
QSM Queen of Sheba 59.10 70 IAmb IAmb 05 30 06.9
comp=Z,5.1nm,1.0s
PRN Pahroc Range 59.13 68 IAmb IAmb 05 30 07.9
comp=Z,7.7nm,1.0s
MPU Maple Canyon 59.21 63 IAmb IAmb 05 30 08.4
comp=Z,7.1nm,0.9s
BSUT Blindstream Ca 59.32 62 IAmb IAmb 05 30 09.5
comp=Z,5.5nm,0.9s
SHOC Shoshone, Teco 59.49 70 IAmb IAmb 05 30 10.0
comp=Z,8.2nm,1.1s
GSC Goldstone, Bar 59.61 71 IAmb IAmb 05 30 10.8
comp=Z,5.2nm,0.9s
ULM Lac du Bonnet 59.74 46 P **P** **05 30 09.2 +0.6**
comp=Z,2.8nm,0.4s,baz=278,slow=5.7,SNR=7.4
ULM LR LR 05 56 51.3
comp=Z,60nm,20.7s,baz=347,slow=37
comp=Z,2.8nm,0.4s
ULM Lac du Bonnet 59.74 46 IAmb IAmb 05 30 09.7
comp=Z,4.0nm,0.6s
CCUT Cedar City 59.98 67 IAmb IAmb 05 30 13.4
comp=Z,3.1nm,0.8s
K22A Casper 60.08 58 IAmb IAmb 05 30 13.7
comp=Z,5.4nm,0.8s
Q16A Castle Valley 60.23 64 IAmb IAmb 05 30 15.0
comp=Z,4.8nm,1.0s
P18A Preston Nutter 60.24 63 P **P** **05 30 15.0 +2.4**
P18A IAmb IAmb 05 30 20.8
comp=Z,5.6nm,0.9s
TOLI2 Tolitoli 60.27 225 P **P** **05 30 13.1 +0.4**
TOLI2 IAmb IAmb 05 30 14.1
comp=Z,11nm,1.1s
RSSD Black Hills 60.30 55 **P** **05 30 13.8 +0.9**
RSSD Black Hills 60.30 55 P **P** **05 30 13.8 +0.9**
RSSD pmax pmax
comp=Z,29nm,0.7s
LCMT Little Creek M 60.43 67 IAmb IAmb 05 30 16.9
comp=Z,4.7nm,1.0s
V12A Nelson 60.43 69 IAmb IAmb 05 30 19.9
comp=Z,5.6nm,1.3s
FINES FINESS Array B 60.47 336 P **P** **05 30 12.2 -1.2**
comp=Z,4.0nm,0.8s,baz=35,slow=7.6,SNR=12
FINES LR LR 05 59 46.2
comp=Z,97nm,19.1s,baz=31,slow=39
comp=Z,4.0nm,0.8s
FINES FINESS Array B 60.47 336 P **P** **05 30 12.1 -1.3**
CHGR Chuyangaron 60.48 296 P **P** **05 30 11.9 -2.1**
CHGR Chuyangaron 60.48 296 P **P** **05 30 11.9 -2.1**
CHGR pmax pmax
comp=Z,18nm,0.7s
PKCU Pink Cliffs 60.65 66 IAmb IAmb 05 30 18.4
comp=Z,5.7nm,1.0s
DANC Danby, Needles 60.90 70 IAmb IAmb 05 30 24.7
comp=Z,5.6nm,1.0s
O20A White River Ci 60.96 61 IAmb IAmb 05 30 19.4
comp=Z,6.7nm,0.9s
PFO Pinyon Flats O 61.01 72 LR LR 05 52 22.0
comp=Z,35nm,21.8s,baz=296,slow=32
AGMN Agassiz Nation 61.18 47 IAmb IAmb 05 30 19.9
comp=Z,3.7nm,0.8s
BORC Borrego Spring 61.28 72 IAmb IAmb 05 30 21.9
comp=Z,4.2nm,0.9s
PV21 Cone Mtn., Par 61.69 63 IAmb IAmb 05 30 24.9
comp=Z,7.1nm,0.7s
NIL Nilore 61.74 289 P **P** **05 30 21.5 -1.0**
NIL IAmb IAmb 05 30 22.2
comp=Z,8.6nm,0.8s
NIL Nilore 61.74 289 P **P** **05 30 21.5 -1.0**
NIL pmax pmax
comp=Z,9.0nm,0.9s
PV01 Paradox Valley 62.22 63 IAmb IAmb 05 30 28.0
comp=Z,3.3nm,0.7s
GLA Glamis 62.36 71 IAmb IAmb 05 30 29.6
comp=Z,5.5nm,0.8s
WUAZ Wupatki 62.55 67 IAmb IAmb 05 30 31.4
comp=Z,11nm,1.3s
ISCO Idaho Springs 62.60 60 IAmb IAmb 05 30 31.6
comp=Z,8.8nm,0.9s
OBN Obninsk 62.73 327 LR LR 06 02 49.0
comp=Z,65nm,19.3s,baz=20,slow=41
F33A 5 Mile Ranch, 62.80 49 IAmb IAmb 05 30 31.1
comp=Z,11nm,0.9s
MVCO Mesa Verde 62.92 64 IAmb IAmb 05 30 33.2
comp=Z,6.1nm,0.7s
S22A 4UR Ranch, Cre 63.44 62 IAmb IAmb 05 30 37.3
comp=Z,6.1nm,0.9s
NC204 NORSAR Array S 63.85 344 P **P** **05 30 35.9 -0.3**
NB2 NORSAR Subarra 63.99 343 P **P** **05 30 36.4 -0.7**
comp=Z,4.8nm,0.5s,baz=23,slow=6.9
NOA NORSAR Array B 63.99 343 P **P** **05 30 36.5 -0.7**
comp=Z,10.0nm,0.7s,baz=21,slow=6.7,SNR=31
NOA LR LR 06 01 47.6
comp=Z,23nm,18.2s,baz=280,slow=39
comp=Z,10.0nm,0.7s
X18A Snowflake 64.07 67 IAmb IAmb 05 30 41.3
comp=Z,7.7nm,0.9s
ECSD EROS Data Cent 64.23 51 IAmb IAmb 05 30 40.3
comp=Z,10nm,0.8s
PIX Pinacate 64.24 71 IAmb IAmb 05 30 41.5
comp=Z,7.0nm,1.2s
214A Organ Pipe Nat 64.32 71 IAmb IAmb 05 30 42.5
comp=Z,7.5nm,1.2s
HFS Hagfors 64.38 342 P **P** **05 30 38.8 -0.7**
comp=Z,5.5nm,0.4s,baz=57,slow=5.5,SNR=42
HFS LR LR 06 01 28.1
comp=Z,47nm,19.4s,baz=24,slow=39
comp=Z,5.5nm,0.4s
ANMO Albuquerque 65.71 64 P **P** **05 30 50.3 +1.5**
comp=Z,4.4nm,0.8s,baz=312,slow=7.0,SNR=18
ANMO LR LR 05 56 45.5
comp=Z,28nm,21.9s,baz=327,slow=33
comp=Z,4.4nm,0.8s
ANMO Albuquerque 65.71 64 *ce* P **P** **05 30 48.3 -0.5**
ANMO pmax pmax
comp=Z,9.0nm,1.7s
STRU Stroemstad 65.88 342 *i* P **P** **05 30 49.8 +0.5**
SCHQ Schefferville 66.53 27 P **P** **05 30 53.5 0.0**
comp=Z,5.4nm,0.7s,baz=316,slow=4.0,SNR=16
SCHQ LR LR 06 02 30.7
comp=Z,41nm,19.7s,baz=358,slow=38
comp=Z,5.4nm,0.7s
SCHQ Schefferville 66.53 27 IAmb IAmb 05 30 54.3
comp=Z,9.1nm,1.0s
RTBA Rita Blanca 66.61 60 IAmb IAmb 05 30 55.8
comp=Z,8.8nm,0.7s
TJOU Tjoern 66.73 342 *i* P **P** **05 30 54.8 +0.1**
121A Cookes Peak, D 66.76 67 IAmb IAmb 05 30 58.8
comp=Z,7.9nm,1.3s
319A Douglas 66.78 68 IAmb IAmb 05 30 58.5
comp=Z,14nm,1.0s
BORU Boraas 66.88 341 *i* P **P** **05 30 55.5 -0.1**
I40A Norwalk 66.90 47 IAmb IAmb 05 30 57.0
comp=Z,12nm,1.0s
SNART Snartemo 67.23 344 *i* P **P** **05 30 58.0 +0.1**
ONAU Onsala 67.27 341 *i* P **P** **05 30 57.8 -0.3**
BLEU Blekinge 67.47 339 *i* P **P** **05 30 58.6 -0.9**
FABU Falkenberg 67.48 341 *i* P **P** **05 30 59.3 -0.2**
DEL Delary 67.74 340 *i* P **P** **05 31 00.5 -0.6**
KSU1 Kansas State U 67.75 55 IAmb IAmb 05 31 01.8
comp=Z,9.1nm,0.8s
L40A Anamosa 68.05 49 IAmb IAmb 05 31 03.9
comp=Z,9.1nm,0.8s
MSTX Muleshoe 68.45 62 IAmb IAmb 05 31 08.1
comp=Z,15nm,1.1s
NOKA Waynoka 68.46 58 IAmb IAmb 05 31 07.1
comp=Z,13nm,0.8s
HAMD Hammershus, De 68.66 339 *i* P **P** **05 31 06.7 -0.2**
HAMD IAmb IAmb 05 31 09.3
comp=Z,49nm,1.1s
MNTX Cornudas Mount 68.73 66 IAmb IAmb 05 31 10.4
comp=Z,7.0nm,0.8s
BSD Bornholm Skovb 68.77 339 *i* P **P** **05 31 07.7 +0.1**
BSD IAmb IAmb 05 31 12.2
comp=Z,18nm,0.9s
AK03 Malin Array Si 68.83 328 P **P** **05 31 06.9 -1.1**
AK21 Malin Array Si 68.84 329 P **P** **05 31 07.0 -1.1**
AK22 Malin Array Si 68.84 329 P **P** **05 31 06.6 -1.5**
AKASG Malin Array Be 68.85 328 P **P** **05 31 06.9 -1.2**
comp=Z,5.3nm,0.5s,baz=31,slow=6.2,SNR=23
AKASG LR LR 06 06 51.9
comp=Z,57nm,18.3s,baz=40,slow=41
comp=Z,5.3nm,0.5s
AKASG Malin Array Be 68.85 328 P **P** **05 31 06.8 -1.4**
AKASG Malin Array Be 68.85 328 P **P** **05 31 06.8 -1.4**
AKASG pmax pmax
comp=Z,2.0nm,0.8s
AKBB Malin Array Si 68.85 328 IAmb IAmb 05 31 07.4
comp=Z,8.8nm,0.8s
AKBB Malin Array Si 68.85 328 *ce* P **P** **05 31 07.3 -0.8**
AKBB Malin Array Si 68.85 328 P **P** **05 31 06.6 -1.5**
AK04 Malin Array Si 68.85 328 P **P** **05 31 06.4 -1.7**
KIEV Kiev 68.86 328 ⇓P **P** **05 31 06.9 -1.2**
KIEV Kiev 68.86 328 P **P** **05 31 07.0 -1.2**
KIEV IAmb IAmb 05 31 07.4
comp=Z,7.6nm,0.8s
KIEV Kiev 68.86 328 P **P** **05 31 07.0 -1.2**
KIEV pmax pmax
comp=Z,8.0nm,0.8s
KIEV Kiev 68.86 328 P **P** **05 31 06.6 -1.6**
AK01 Malin Array Si 68.86 328 P **P** **05 31 06.7 -1.5**
P38A Dawn 68.86 52 IAmb IAmb 05 31 09.5
comp=Z,12nm,0.9s
VLDQ Val d'Or 68.88 37 P **P** **05 31 07.0 -1.3**
VLDQ IAmb IAmb 05 31 07.2
comp=Z,8.2nm,0.9s
AK18 Malin Array Si 68.88 329 P **P** **05 31 06.8 -1.5**
AK20 Malin Array Si 68.88 329 P **P** **05 31 06.8 -1.5**
AK11 Malin Array Si 68.89 328 P **P** **05 31 06.9 -1.5**
AK15 Malin Array Si 68.89 328 P **P** **05 31 06.9 -1.5**
AK02 Malin Array Si 68.89 328 P **P** **05 31 06.9 -1.5**
AK08 Malin Array Si 68.90 328 P **P** **05 31 06.9 -1.5**
AK19 Malin Array Si 68.90 329 P **P** **05 31 06.9 -1.6**
AK09 Malin Array Si 68.90 328 P **P** **05 31 07.0 -1.5**
AK16 Malin Array Si 68.91 328 P **P** **05 31 07.0 -1.6**
AK17 Malin Array Si 68.92 329 P **P** **05 31 07.0 -1.6**
AK12 Malin Array Si 68.92 328 P **P** **05 31 07.1 -1.5**
AK05 Malin Array Si 68.92 328 P **P** **05 31 07.1 -1.5**
AK10 Malin Array Si 68.93 328 P **P** **05 31 07.1 -1.5**
AK14 Malin Array Si 68.95 328 P **P** **05 31 07.2 -1.6**
AK06 Malin Array Si 68.95 328 P **P** **05 31 07.3 -1.5**
AK13 Malin Array Si 68.98 328 P **P** **05 31 07.4 -1.6**
AK07 Malin Array Si 68.98 328 P **P** **05 31 07.5 -1.5**
AKT Akhty 69.24 312 *ce* P **P** **05 31 09.8 -1.1**
AKT *e* 05 31 32.8
AKT pmax pmax
comp=Z,7.0nm,0.6s
MTN Manton Dam 69.33 209 P **P** **05 31 12.2 +0.8**
MTN IAmb IAmb 05 31 12.9
comp=Z,7.9nm,0.8s
RNPP5 Staryi Chortor 69.42 331 P **P** **05 31 10.5 -1.2**
KIV Kislovodsk 69.48 316 *e* P **P** **05 31 13.3 +1.0**
KIV pmax pmax
comp=Z,5.0nm,0.9s
KIV MLR MLR
comp=Z,41nm,17.0s
KBZ Khabaz 69.57 316 P **P** **05 31 12.1 -0.6**
comp=Z,2.3nm,0.7s,baz=91,slow=4.2,SNR=7.4
comp=Z,2.3nm,0.7s
KBZ Khabaz 69.57 316 *ce* P **P** **05 31 13.1 +0.4**
KBZ pmax pmax
comp=Z,11nm,2.5s
128A Castleberry Fa 69.63 63 IAmb IAmb 05 31 15.0
comp=Z,5.1nm,0.6s
VHRN Van Horn 69.64 66 IAmb IAmb 05 31 16.1
comp=Z,6.9nm,0.8s
P40A Paris 69.65 51 IAmb IAmb 05 31 14.5
comp=Z,14nm,0.9s
DKNS Dickens 69.68 61 IAmb IAmb 05 31 15.4
comp=Z,6.1nm,0.7s
OK029 Liberty Lake 69.86 57 IAmb IAmb 05 31 15.6
comp=Z,9.5nm,0.7s
PSI Prapat 69.94 247 P **P** **05 31 15.4 -0.1**
PSI pmax pmax
comp=Z,5.0nm,0.6s
J47A Sunmer 69.96 44 IAmb IAmb 05 31 16.0
comp=Z,12nm,0.8s
TPB06 Permian Basin 69.97 64 IAmb IAmb 05 31 17.7
comp=Z,8.5nm,0.8s
WMOK Wichita Mounta 69.99 59 IAmb IAmb 05 31 17.2
comp=Z,13nm,1.1s
LUBAR Lubar, Ukraine 69.99 329 P **P** **05 31 13.2 -2.0**
RPSI Rantau Prapat 70.03 247 P **P** **05 31 15.4 -0.5**
RPSI IAmb IAmb 05 31 17.6
comp=Z,5.1nm,0.6s
TPB01 Permian Basin 70.19 65 IAmb IAmb 05 31 21.1
comp=Z,6.7nm,0.7s
APMT Aspermont 70.37 61 IAmb IAmb 05 31 19.3
comp=Z,7.9nm,0.7s
TPB05 Hovey Rd 70.46 65 IAmb IAmb 05 31 21.0
comp=Z,9.3nm,0.8s
R40A Maddies Statio 70.52 52 IAmb IAmb 05 31 19.5
comp=Z,8.7nm,0.8s
TMB01 Midkiff 70.58 63 IAmb IAmb 05 31 21.5
comp=Z,11nm,0.9s
TUL3 Leonard 70.63 56 IAmb IAmb 05 31 20.6
comp=Z,12nm,0.8s
W35A Tecumseh 70.66 57 IAmb IAmb 05 31 21.1
comp=Z,11nm,0.7s
ALPN Alpine 70.71 65 IAmb IAmb 05 31 22.2
comp=Z,7.1nm,0.9s
P43A Skaggs, Pawnee 70.75 50 IAmb IAmb 05 31 21.3
comp=Z,8.7nm,0.7s
U38A Gravette 70.93 55 IAmb IAmb 05 31 22.0
comp=Z,8.7nm,0.8s
HORU Horodok 71.03 329 P **P** **05 31 20.5 -1.1**
ABTX Abilene, Hawle 71.16 61 IAmb IAmb 05 31 24.4
comp=Z,10nm,0.8s
LDAQ Lac Daran 71.18 33 P **P** **05 31 22.6 -0.1**
LDAQ IAmb IAmb 05 31 23.4
comp=Z,8.2nm,0.8s
CCM Cathedral Cave 71.19 52 P **P** **05 31 22.6 -0.1**
CCM IAmb IAmb 05 31 25.2
comp=Z,10.0nm,1.2s
CCM Cathedral Cave 71.19 52 P **P** **05 31 22.6 -0.1**
CCM pmax pmax
comp=Z,10.0nm,1.2s
SORM Soroca 71.36 328 ⇑P **P** **05 31 22.6 -1.0**
SORM Soroca 71.36 328 ⇑P **P** **05 31 22.6 -1.0**
SORM Soroca 71.36 328 P **P** **05 31 22.2 -1.4**
MGMO Mountain Grove 71.41 53 IAmb IAmb 05 31 24.6
comp=Z,6.4nm,0.8s
TXAR Lajitas Array 71.48 66 P **P** **05 31 26.2 +1.5**
comp=Z,12nm,0.6s,baz=299,slow=4.6,SNR=209
comp=Z,12nm,0.6s
TXAR Lajitas Array 71.48 66 **P** **05 31 26.4 +1.6**
TXAR Lajitas Array 71.48 66 P **P** **05 31 26.4 +1.6**
TRQ Mont Tremblant 71.53 36 **P** **05 31 24.2 -0.5**
TRQ IAmb IAmb 05 31 25.4
comp=Z,9.3nm,1.0s
EKA Eskdalemuir Ar 71.59 349 P **P** **05 31 24.3 -0.5**
comp=Z,11nm,0.7s,baz=16,slow=5.1,SNR=25
comp=Z,11nm,0.7s
EKA Eskdalemuir Ar 71.59 349 P **P** **05 31 24.8 -0.1**
EKA pmax pmax
comp=Z,26nm,1.1s
KMPD K-Podol'skiy 71.59 329 P **P** **05 31 23.4 -1.6**
KMPD P **P** **05 31 23.2 -1.8**
FVM French Village 71.64 51 IAmb IAmb 05 31 26.7
comp=Z,8.0nm,0.8s
LPIG La Paz 71.65 74 LR LR 06 01 55.5
comp=Z,25nm,18.1s,baz=302,slow=35
GNI Garni 71.66 313 LR LR 06 07 42.6
comp=Z,47nm,18.8s,baz=28,slow=40
OZNA Ozona 71.67 63 IAmb IAmb 05 31 27.4
comp=Z,10nm,1.4s
KWP Kalwaria Pacla 71.78 332 P **P** **05 31 25.7 -0.4**
comp=Z,26nm,1.1s
SAND Sanderson 71.87 64 IAmb IAmb 05 31 29.3
comp=Z,12nm,1.3s
STNU Starunia 72.07 330 P **P** **05 31 26.8 -1.1**
FLTG Flechtingen 72.16 340 *eP* **P** **05 31 28.0 -0.3**
comp=Z,8.9nm,0.8s,baz=21,slow=6.0
KSV Kosov 72.25 330 P **P** **05 31 28.1 -0.8**
SIUC Southern Illin 72.43 51 IAmb IAmb 05 31 31.3
comp=Z,12nm,0.8s
FCAR Ozark Folk Cen 72.48 54 IAmb IAmb 05 31 31.2
comp=Z,9.9nm,0.8s
PBMO Poplar Bluff 72.60 52 IAmb IAmb 05 31 32.5
comp=Z,7.7nm,0.8s
D62A Allapoint, All 72.68 32 P **P** **05 31 31.9 +0.5**
D62A IAmb IAmb 05 31 32.5
comp=Z,9.8nm,0.8s
CLL Collm 72.74 338 IAmb IAmb 05 31 32.2
comp=Z,14nm,1.0s
CLL Collm 72.74 338 ⇓*i* P **P** **05 31 31.5 -0.3**
CLL pmax pmax
comp=Z,20nm,1.1s
CLL Collm 72.74 338 ⇓*i* P **P** **05 31 31.5 -0.3**
comp=Z,20nm,1.1s
CLL Collm 72.74 338 *eP* **P** **05 31 31.1 -0.6**
comp=Z,8.1nm,0.9s,baz=21,slow=6.0
CLL Collm 72.74 338 P **P** **05 31 30.8 -1.0**
P48A Milroy 72.77 47 IAmb IAmb 05 31 32.7
comp=Z,9.9nm,0.8s
BUR08 Bucovina Ar. S 72.80 329 P **P** **05 31 32.1 -0.3**
BUR08 IAmb IAmb 05 31 32.4
comp=Z,6.9nm,0.7s
CLZ Clausthal 72.81 340 *eP* **P** **05 31 31.8 -0.5**
comp=Z,11nm,0.8s,baz=21,slow=6.0
MIAR Mount Ida 72.82 56 IAmb IAmb 05 31 34.0
comp=Z,8.4nm,1.0s
BURAR Bucovina Array 72.82 329 ⇑P **P** **05 31 31.7 -0.8**
BURAR Bucovina Array 72.82 329 P **P** **05 31 32.1 -0.4**
BURAR Bucovina Array 72.82 329 ⇑P **P** **05 31 31.7 -0.8**
BRG Berggiesshubel 72.93 338 *eP* **P** **05 31 32.3 -0.7**
comp=Z,3.2nm,0.8s,baz=21,slow=6.0
MORC Moravsky Berou 73.06 335 ⇑P **P** **05 31 33.9 +0.1**
MORC Moravsky Berou 73.06 335 ⇑P **P** **05 31 33.9 +0.1**
DRIO Del Rio 73.11 64 IAmb IAmb 05 31 36.0
comp=Z,7.3nm,0.7s
LANS Liptovska Anna 73.12 334 *eP* **P** **05 31 35.0 +0.8**
LANS pmax pmax
comp=Z,7.0nm,0.7s
LANS Liptovska Anna 73.12 334 *eP* **P** **05 31 35.0 +0.8**
GTTG Gottingen 73.17 340 *eP* **P** **05 31 34.0 -0.3**
comp=Z,12nm,0.9s,baz=21,slow=6.0
HSKC Hora Svate Kat 73.30 338 *eP* **P** **05 31 35.9 +0.8**
TESR Tescani 73.34 328 ⇑P **P** **05 31 35.0 -0.4**
TESR Tescani 73.34 328 P **P** **05 31 34.6 -0.8**
comp=Z,11nm,1.7s
MOX Moxa 73.67 339 *eP* **P** **05 31 37.0 -0.3**
comp=Z,3.3nm,0.8s,baz=21,slow=6.0
TANN Tannenbergstha 73.70 338 *eP* **P** **05 31 37.3 -0.2**
baz=21,slow=6.0
VRAC Vranov 73.74 335 LR LR 06 07 51.5
comp=Z,93nm,18.1s,baz=1.5,slow=39
VRAC Vranov 73.74 335 ⇓P **P** **05 31 38.0 +0.3**
VRAC Vranov 73.74 335 ⇓P **P** **05 31 38.0 +0.3**
BUG Bochum--Univer 73.80 342 *eP* **P** **05 31 38.4 +0.4**
comp=Z,20nm,0.9s,baz=21,slow=6.0
KASTN Kahler Asten 73.81 341 *eP* **P** **05 31 38.2 +0.1**
comp=Z,11nm,0.9s,baz=21,slow=6.0
UBBA Unterbreizbach 73.85 340 *eP* **P** **05 31 38.1 -0.1**
comp=Z,3.3nm,0.8s,baz=21,slow=6.0
VRI Vrincioaia 73.89 327 ⇑P **P** **05 31 38.5 -0.1**
VRI Vrincioaia 73.89 327 ⇑P **P** **05 31 38.5 -0.1**
O53A New Philadelph 73.96 44 IAmb IAmb 05 31 39.5
comp=Z,10nm,0.8s
T47A Sharon Grove 74.01 50 IAmb IAmb 05 31 41.0
comp=Z,9.9nm,0.9s
CFR Carcaliu 74.02 326 ⇑P **P** **05 31 39.0 -0.3**
CFR Carcaliu 74.02 326 ⇑P **P** **05 31 39.0 -0.3**
COVR Voineasa-Covas 74.07 328 ⇓P **P** **05 31 40.6 +0.9**
CJR Cluj-Napoca 74.13 330 ⇓P **P** **05 31 40.3 +0.2**
CJR Cluj-Napoca 74.13 330 ⇓P **P** **05 31 40.3 +0.2**
MANZ Manzenberg 74.18 339 *eP* **P** **05 31 40.4 +0.1**
comp=Z,0.8nm,0.9s,baz=21,slow=6.0

TPGR Topolog 74.20 326 ⇓P P 05 31 40.2 -0.3
ZVC Zvikov 74.21 337 *e*P P 05 31 40.6 +0.2
DOPR Dopca 74.23 328 ⇓P P 05 31 39.5 -1.2
DRGR 74.33 330 ⇓P P 05 31 40.9 -0.4
DRGR 74.33 330 ⇓P P 05 31 40.9 -0.4
ROTZ Rotzenmuhle 74.36 338 *e*P P 05 31 41.5 +0.2
comp=Z,1.0nm,0.8s,baz=21,slow=6.0
MLR Muntele Rosu 74.47 328 LR LR 06 07 00.4
comp=Z,103nm,18.0s,baz=47,slow=38
MLR Muntele Rosu 74.47 328 ⇑P P 05 31 42.1 -0.1
MLR Muntele Rosu 74.47 328 IAmb IAmb 05 31 43.3
comp=Z,5.4nm,0.6s
MLR Muntele Rosu 74.47 328 ⇑P P 05 31 42.1 -0.1
MLR Muntele Rosu 74.47 328 P P 05 31 42.6 +0.4
comp=Z,7.0nm,1.1s
TIRR Tirgusor 74.55 326 ⇑P P 05 31 42.3 -0.2
TIRR Tirgusor 74.55 326 ⇑P P 05 31 42.3 -0.2
833A Chaparral WMA, 74.63 64 IAmb IAmb 05 31 45.7
comp=Z,6.6nm,0.8s
KHC Kasperske Hory 74.64 337 IAmb IAmb 05 31 44.4
comp=Z,9.0nm,0.9s
KHC Kasperske Hory 74.64 337 *ce*P P 05 31 44.0 +1.0
KHC pmax pmax
comp=Z,21nm,2.5s
KHC Kasperske Hory 74.64 337 *e*P P 05 31 43.3 +0.3
KHC Kasperske Hory 74.64 337 P P 05 31 43.1 +0.1
comp=Z,11nm,1.1s
GRF Grafenberg Arr 74.65 339 *e*P P 05 31 43.1 +0.1
comp=Z,11nm,0.7s,baz=21,slow=6.0
BEBN Eben Emael 74.71 343 *d*P P 05 31 42.6 -0.6
comp=Z,29nm,0.7s
M57A Sunshine Farm, 74.72 40 IAmb IAmb 05 31 44.1
comp=Z,9.6nm,0.6s
TNS Taunus Mts 74.73 341 *e*P P 05 31 43.9 +0.3
comp=Z,9.1nm,0.7s,baz=21,slow=6.0
WET Wettzell 74.79 338 *e*P P 05 31 43.9 0.0
comp=Z,7.5nm,0.9s,baz=21,slow=6.0
VOIR 74.81 328 ⇓P P 05 31 44.2 +0.1
VOIR 74.81 328 ⇓P P 05 31 44.2 +0.1
VOIR 74.81 328 P P 05 31 43.4 -0.7
BTNL Ternell 74.83 342 *d*P P 05 31 44.3 +0.3
comp=Z,33nm,0.8s
MEM Membach 74.83 343 *d*P P 05 31 44.3 +0.2
comp=Z,57nm,0.8s
GEC2 GERESS Array S 74.88 337 *e*P P 05 31 44.1 -0.3
comp=Z,2.1nm,0.7s,baz=21,slow=6.0
GERES GERESS Array B 74.88 337 P P 05 31 44.4 0.0
comp=Z,1.6nm,0.5s,baz=7.4,slow=4.2,SNR=6.5
GERES LR LR 06 12 49.5
comp=Z,33nm,18.7s,baz=319,slow=42
comp=Z,1.6nm,0.5s
GERES GERESS Array B 74.88 337 P P 05 31 43.3 -1.1
BSTI Sart Tilman 74.94 343 *d*P P 05 31 44.7 +0.1
comp=Z,6.9nm,0.8s
UCC Uccle 74.94 344 *d*P P 05 31 44.5 -0.1
SSPA Standing Stone 75.01 41 P P 05 31 45.3 +0.1
SSPA IAmb IAmb 05 31 45.6
comp=Z,6.5nm,0.7s
BHOU Houvegnez 75.08 343 *d*P P 05 31 46.2 +0.8
comp=Z,22nm,0.9s
CIDE Kastamonu/Cide 75.14 321 ⇑P P 05 31 43.3 -2.6
BCLA Clavier 75.14 343 *d*P P 05 31 45.8 0.0
comp=Z,15nm,1.0s
V48A Smith Brothers 75.16 50 IAmb IAmb 05 31 47.4
comp=Z,5.2nm,0.8s
WR8 Warramunga Arr 75.19 204 IAmb IAmb 05 31 47.9
comp=Z,10.0nm,0.9s
CONA Conrad Observa 75.20 335 *i* P P 05 31 46.6 +0.3
comp=Z,7.4nm,1.2s
WRAB Tennant Creek 75.20 204 *ce*P P 05 31 47.8 +1.4
WRAB pmax pmax
comp=Z,23nm,2.5s
BGES Gesves 75.21 343 *d*P P 05 31 45.5 -0.7
comp=Z,15nm,0.9s
WRA Warramunga Arr 75.22 204 P P 05 31 47.1 +0.6
comp=Z,9.3nm,0.8s,baz=19,slow=5.9,SNR=51
comp=Z,9.3nm,0.8s
WRA Warramunga Arr 75.22 204 P 05 31 46.7 +0.2
WRA Warramunga Arr 75.22 204 P P 05 31 46.7 +0.2
WRA pmax pmax
comp=Z,1.0nm,1.0s
RONA Rosalia, Austr 75.30 335 *i* P P 05 31 47.7 +0.9
comp=Z,6.4nm,1.2s
BMRD Maredsous 75.35 343 *d*P P 05 31 47.1 +0.2
comp=Z,23nm,1.0s
RCHB Rochefort 75.41 343 *d*P P 05 31 47.5 +0.2
comp=Z,14nm,0.8s
MPLH Magyarpolny 75.46 334 P P 05 31 47.6 -0.1
comp=Z,37nm,1.2s
ILGA Ilgaz 75.55 320 IAmb IAmb 05 31 50.1
comp=Z,5.7nm,0.9s
GZR Gura Zlata 75.56 330 ⇓P P 05 31 48.0 -0.4
GZR Gura Zlata 75.56 330 ⇓P P 05 31 48.0 -0.4
DOU Dourbes 75.58 343 *d*P P 05 31 47.3 -1.0
comp=Z,12nm,1.0s
MOA Molln 75.67 336 *e*P P 05 31 50.2 +1.3
comp=Z,4.4nm,0.8s
WLF Walferdange 75.71 342 *d*P P 05 31 49.7 +0.6
WLF Walferdange 75.71 342 *e*P P 05 31 50.1 +1.0
comp=Z,6.2nm,0.8s,baz=21,slow=6.0
BZS Buzias 75.72 331 ⇓P P 05 31 48.6 -0.6
BZS Buzias 75.72 331 ⇓P P 05 31 48.6 -0.6
ARSA Arzberg 75.91 335 *i* P P 05 31 50.9 +0.6
comp=Z,2.9nm,0.6s
RAZG Razgrad 75.99 326 ⇓P P 05 31 58.7 +7.9
SWET Sewanee 76.00 50 IAmb IAmb 05 31 51.9
comp=Z,9.2nm,0.8s
FUR Furstenfeldbru 76.08 338 *e*P P 05 31 51.1 -0.2
comp=Z,16nm,0.6s,baz=21,slow=6.0
HERR Herculane 76.14 330 ⇑P P 05 31 50.5 -1.1
LESA Schwarzleotal 76.45 337 *i* P P 05 31 54.0 +0.5
comp=Z,6.8nm,0.9s
BFO Black Forest 76.56 340 *e*P P 05 31 54.3 +0.4
comp=Z,5.9nm,0.8s,baz=21,slow=6.0
SOKA Soboth 76.57 335 *i* P P 05 31 54.3 +0.1
comp=Z,10nm,1.1s
PERS Pernice 76.59 335 *i* P P 05 31 54.2 0.0
KBA Koelnbreinsper 76.61 337 *i* P P 05 31 55.2 +0.7
comp=Z,34nm,0.8s,SNR=18
Z47A Carrollton 76.63 53 IAmb IAmb 05 31 55.7
comp=Z,13nm,0.9s
TKL Tuckaleechee C 76.64 48 LR LR 06 06 57.1
comp=Z,56nm,19.6s,baz=351,slow=37
GROS Grobnik 76.65 335 *i* P P 05 31 54.5 -0.1
FPAL Fort Paine 76.71 50 IAmb IAmb 05 31 56.1
comp=Z,7.8nm,1.0s
BR131 Keskin Array S 76.72 320 P P 05 31 54.3 -0.9
BR131 Keskin Array S 76.72 320 P P 05 31 54.3 -0.9
BR131 pmax pmax
comp=Z,3.0nm,0.9s
BR106 Keskin Array S 76.72 320 P P 05 31 53.7 -1.5
comp=Z,2.1nm,0.9s
BRTR Keskin Array B 76.72 320 P P 05 31 54.5 -0.7
comp=Z,0.9nm,0.6s,baz=60,slow=3.0,SNR=6.0
BRTR LR LR 06 10 18.3
comp=Z,20nm,19.4s,baz=332,slow=39
comp=Z,0.9nm,0.6s
BRTR Keskin Array B 76.72 320 P P 05 31 54.0 -1.2
BR104 Keskin Array S 76.73 320 P P 05 31 54.3 -0.9
comp=Z,2.6nm,0.8s
BR105 Keskin Array S 76.73 320 P P 05 31 54.3 -1.0
comp=Z,3.3nm,0.7s
WATA Walderalm 76.79 338 *i* P P 05 31 55.9 +0.4
comp=Z,11nm,1.1s
UBR Ueberruh 76.80 339 *e*P P 05 31 55.5 +0.1
comp=Z,7.7nm,1.0s,baz=21,slow=6.0
RETA Reutte 76.83 339 *i* P P 05 31 55.7 +0.1
comp=Z,11nm,1.0s
WTTA Wattenberg 76.85 338 *i* P P 05 31 56.7 +0.9
comp=Z,12nm,1.0s,SNR=5.1
OBKA Obir 76.85 336 *i* P P 05 31 55.8 +0.1
comp=Z,11nm,1.0s,SNR=5.1
MOTA Moosalm 76.89 338 *i* P P 05 31 56.4 +0.3
comp=Z,14nm,0.9s,SNR=5.5
MYKA Terra Mystica 76.96 336 *e*P P 05 31 56.5 +0.2
comp=Z,4.3nm,0.9s
SQTA Sankt Quirin 76.98 338 *e*P P 05 31 57.1 +0.6
comp=Z,14nm,0.8s,SNR=6.3
SILT Sile 77.01 323 ⇑P P 05 31 56.4 -0.1
ABTA Abfaltersbach 77.13 337 *i* P P 05 31 57.6 +0.4
comp=Z,20nm,0.9s,SNR=7.3
PRED Cave del Predi 77.16 336 IAmb IAmb 05 31 58.2
comp=Z,9.0nm,0.7s
PALK Pallekele 77.17 265 P P 05 31 57.7 -0.1
PALK Pallekele 77.17 265 P P 05 31 57.7 -0.1
PALK pmax pmax
comp=Z,14nm,0.8s
GCIS Gornji Cirnik 77.17 335 *e*P P 05 31 57.3 -0.1
DAVA Damuels 77.22 339 *i* P P 05 31 58.4 +0.5
comp=Z,16nm,1.0s
FETA Feichten 77.28 338 *i* P P 05 31 58.8 +0.5
comp=Z,5.4nm,0.8s,SNR=5.6
STAL STALIGIAL 77.53 337 IAmb IAmb 05 31 59.4
comp=Z,7.5nm,1.0s
GBRS Gornja Briga 77.69 335 *i* P P 05 31 60.0 -0.4
DAVOX Davos/Dischmat 77.70 339 LR LR 06 12 49.5
comp=Z,24nm,18.2s,baz=13,slow=41
CTI Castel Tesino 77.99 337 IAmb IAmb 05 32 02.4
comp=Z,11nm,0.7s
TUE Stuetta 78.11 339 P P 05 32 02.9 0.0
AS31 Alice Springs 78.89 203 P P 05 32 08.7 +1.6
ASAR Alice Springs 78.89 203 P P 05 32 08.5 +1.4
comp=Z,8.8nm,0.7s,baz=14,slow=5.5,SNR=98
comp=Z,8.8nm,0.7s
PDG Podgorica 79.32 331 ⇓P P 05 32 08.7 -0.6
PDG Podgorica 79.32 331 IAmb IAmb 05 32 09.3
comp=Z,13nm,0.8s
BNI Bardonecchia 80.03 340 IAmb IAmb 05 32 23.8
comp=Z,13nm,1.1s
CESX Cesi 80.99 336 IAmb IAmb 05 32 19.1
comp=Z,9.8nm,0.7s
MATE Matera 81.71 332 ⇓P P 05 32 21.9 -0.2
MMAI Mount Meron Ar 81.73 315 P P 05 32 22.0 -0.5
comp=Z,2.7nm,0.4s,baz=22,slow=11,SNR=4.8
MMAI LR LR 06 15 02.3
comp=Z,46nm,18.2s,baz=333,slow=40
comp=Z,2.7nm,0.4s
ASF Jabal al Asfar 81.80 313 LR LR 06 12 53.8
comp=Z,32nm,19.0s,baz=21,slow=39
CUC Castrocucco 82.57 332 IAmb IAmb 05 32 27.5
comp=Z,9.6nm,0.9s
TIP Timpagrande 83.05 331 ⇓P P 05 32 29.3 0.0
EIL Elat 84.80 314 LR LR 06 15 38.8
comp=Z,29nm,18.9s,baz=58,slow=39
RAYN Ar Rayn 84.88 302 P P 05 32 38.5 -0.3
RAYN IAmb IAmb 05 32 38.5
comp=Z,5.8nm,0.8s
RAYN Ar Rayn 84.88 302 P P 05 32 38.5 -0.3
RAYN pmax pmax
comp=Z,6.0nm,0.8s
STKA Stephens Creek 85.33 195 P P 05 32 42.1 +1.6
comp=Z,1.7nm,0.4s,baz=327,slow=8.4,SNR=5.5
comp=Z,1.7nm,0.4s
PBRG Braganca 85.33 349 *e*P P 05 32 41.2 +0.4
PGAV Gavieira, Arco 85.34 351 *e*P P 05 32 41.9 +1.0
POLO Lamas de Olo 85.88 350 *e*P P 05 32 44.3 +0.8
PVRL Vila Real 85.97 350 *e*P P 05 32 44.9 +1.0
MVO Moncorvo 86.00 350 *e*P P 05 32 44.9 +0.7
CMIG Matias Romero 86.05 67 LR LR 06 10 48.2
comp=Z,16nm,18.4s,baz=2.5,slow=35
PVIS Viseu 86.54 350 *e*P P 05 32 47.6 +0.8
MTE Manteigas 86.81 350 *e*P P 05 32 49.3 +1.2
ESDC Sonseca Array 87.09 347 P P 05 32 49.3 -0.2
comp=Z,4.2nm,0.7s,baz=2.3,slow=4.1,SNR=39
ESDC LR LR 06 18 00.9
comp=Z,37nm,19.1s,baz=358,slow=40
comp=Z,4.2nm,0.7s
PAB San Pablo 87.27 347 P P 05 32 50.3 -0.1
PAB IAmb IAmb 05 33 27.0
comp=Z,8.5nm,1.2s
PAB San Pablo 87.27 347 P P 05 32 50.3 -0.1
PAB pmax pmax
comp=Z,9.0nm,1.3s
KEST Kesra 88.31 336 P P 05 32 54.9 -0.5
comp=Z,7.5nm,0.7s,baz=346,slow=7.5,SNR=7.4
KEST LR LR 06 20 12.3
comp=Z,50nm,18.0s,baz=329,slow=41
comp=Z,7.5nm,0.7s
PARRA Arraiolos 88.43 350 *e*P P 05 32 54.9 -0.9
MDT Midelt 93.92 346 LR LR 06 19 01.5
comp=Z,22nm,21.8s,baz=338,slow=38
TORD Torodi Ar. Bea 111.82 336 PKiKP PKiKP 05 38 38.6 -0.1
comp=Z,0.7nm,0.5s,baz=21,slow=2.6,SNR=4.8
DBIC Dimbokro 119.55 342 PKP PKPdf 05 38 53.5 0.0
comp=Z,6.2nm,0.6s,baz=31,slow=1.1,SNR=14
H03N2 Juan Fernandez 134.84 89 T T 08 10 02.6
baz=314,slow=77
H03N1 Juan Fernandez 134.85 89 T T 08 10 04.0
baz=314,slow=77
H03N3 Juan Fernandez 134.85 89 T T 08 10 00.6
baz=314,slow=77
BOSA Boshof 138.52 287 PKP PKPdf 05 39 30.2 +1.0
comp=Z,2.4nm,0.9s,baz=45,slow=5.7,SNR=3.9
QSPA South Pole Qui 142.18 180 PKhKP PKPpre 05 39 27.4
comp=Z,3.3nm,0.8s,baz=266,slow=0.4,SNR=16
CPUP Villa Florida 142.30 60 PKhKP PKPpre 05 39 29.3
comp=Z,1.3nm,0.8s,baz=56,slow=14,SNR=2.9
PLCA Paso Flores 144.64 91 PKP PKPdf 05 39 39.5 -0.2
comp=Z,8.7nm,0.7s,baz=289,slow=4.3,SNR=49
NVL N'lazarevskaya 156.43 207 *e*PKIKP PKPdf 05 40 00.3 +3.6
NVL pmax pmax
comp=Z,54nm,2.9s

IDC ***12*** *05:33:47.7±0.8, 38.79N×97.21W, h0km, mb3.8/3, mbtmp3.8/8, ML3.6/6, MS2.8/2, Error ellipse: s-maj=10.8km s-min=9.0km az=118.0*
NEIC ***12*** *05:33:48.6±0.6, 38.74N±0.02×97.04W±0.03, h5km±2km, mb_Lg3.5/172, Error ellipse: s-maj=3.9km s-min=3.2km az=112.0*

ISC 12 05:33:47.0±0.6, 38.78N±0.04×97.08W±0.04, h10km, n141, σ1°69/104, mb3.8/3, Kansas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSU1	**Kansas State U**	**0.49**	**49**		**Pg**	**05 33 57.2**	**+0.7**
KSU1				Sg	**Sg**	**05 34 04.1**	**+1.2**
R32A	**Long Quarter,**	**1.32**	**255**		**Pg**	**05 34 12.8**	**+0.3**
R32A					**Sn**	**05 34 30.5**	**+1.1**
KAN08	**Anthony NE Sta**	**1.71**	**205**		**Pb**	**05 34 18.2**	**-0.3**
KAN01	**Argonia South**	**1.71**	**198**		**Pb**	**05 34 18.5**	**-0.1**
T35A	**Sooner Cattle**	**1.92**	**166**		**Pn**	**05 34 20.8**	**+1.1**
BLOK	**Blackwell**	**2.02**	**183**		**Pn**	**05 34 22.5**	**+1.4**
BLOK				IAmb_Lg		05 34 52.4	
	comp=Z,426nm,0.7s						
CBKS	**Cedar Bluff**	**2.07**	**272**		**Pb**	**05 34 23.8**	**-1.0**
OK051	**E0350 and S346**	**2.28**	**175**		**Pn**	**05 34 25.8**	**+1.0**
N35A	**Tabor**	**2.35**	**28**		**Pb**	**05 34 29.2**	**-0.3**
OK048	**Pawnee Station**	**2.37**	**177**		**Pn**	**05 34 26.9**	**+1.0**
OK048				IAmb_Lg		05 35 06.1	
	comp=Z,207nm,0.8s						
CROK	**Carrier**	**2.38**	**198**		**Pn**	**05 34 28.1**	**+1.9**
CROK				IAmb_Lg		05 35 06.7	
	comp=Z,206nm,0.8s						
NOKA	**Waynoka**	**2.60**	**215**		**Pn**	**05 34 31.1**	**+1.9**
NOKA				IAmb_Lg		05 35 15.6	
	comp=Z,229nm,1.1s						
QUOK	**Quay**	**2.62**	**173**		**Pn**	**05 34 30.6**	**+1.1**
OK038	**West end E0370**	**2.65**	**210**		**Pn**	**05 34 32.1**	**+2.3**
BGNE	**Belgrade**	**2.75**	**343**		**Pb**	**05 34 34.8**	**-1.5**
OK052	**Battle Ridge R**	**2.79**	**175**		**Pn**	**05 34 32.8**	**+1.0**
P38A	**Dawn**	**2.88**	**72**		**Pn**	**05 34 35.3**	**+2.2**
DEOK	**Depew**	**2.97**	**171**		**Pn**	**05 34 35.0**	**+0.7**
OK029	**Liberty Lake**	**3.00**	**186**		**Pn**	**05 34 35.8**	**+1.3**
TUL3	**Leonard**	**3.05**	**160**	IAmb_Lg		05 35 30.5	
	comp=Z,151nm,0.8s						
RLO	**Rose Lookout**	**3.08**	**147**		**Pn**	**05 34 36.3**	**+0.5**
S39A	**Bolivar**	**3.15**	**109**		**Pn**	**05 34 37.8**	**+1.0**
U38A	**Gravette**	**3.17**	**137**		**Pn**	**05 34 37.2**	**+0.2**
L34A	**Svendsen Farm,**	**3.23**	**9**		**Pn**	**05 34 40.3**	**+2.6**
ELIS	**Ellis County**	**3.29**	**215**		**Pn**	**05 34 41.1**	**+2.5**
OKCSW	**OKLAHOMA CITY**	**3.38**	**185**		**Pn**	**05 34 40.5**	**+0.6**
FNO	**Franklin**	**3.53**	**184**	Pn	**Pn**	**05 34 42.9**	**+1.0**
HHAR	**Hobbs**	**3.53**	**134**		**Pn**	**05 34 42.9**	**+0.9**
HHAR				IAmb_Lg		05 35 45.6	
	comp=Z,102nm,0.8s						
N38A	**Joes South For**	**3.58**	**55**		**Pn**	**05 34 44.1**	**+1.5**
W35A	**Tecumseh**	**3.63**	**177**		**Pn**	**05 34 44.4**	**+1.1**
R40A	**Maddies Statio**	**3.81**	**96**	IAmb_Lg		05 35 54.8	
	comp=Z,127nm,0.7s						
P40A	**Paris**	**3.98**	**78**		**Pn**	**05 34 49.7**	**+1.5**
P40A				IAmb_Lg		05 35 52.0	
	comp=Z,165nm,0.7s						
MGMO	**Mountain Grove**	**4.14**	**112**		**Pn**	**05 34 52.0**	**+1.7**
X34A	**Smith Ranch, M**	**4.22**	**188**		**Pn**	**05 34 52.7**	**+1.3**
WMOK	**Wichita Mounta**	**4.26**	**199**		**Pn**	**05 34 53.0**	**+1.0**
WMOK	**Wichita Mounta**	**4.26**	**199**	IAmb_Lg		05 36 04.3	
	comp=Z,84nm,0.7s						
SCIA	**State Center**	**4.30**	**42**	Pn	**Pn**	**05 34 54.6**	**+2.2**
SCIA				IAmb_Lg		05 36 08.1	
	comp=Z,184nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.33**	**275**	IAmb_Lg		05 36 11.6	
	comp=Z,90nm,0.8s						
K30B	**Basset**	**4.34**	**334**	IAmb_Lg		05 36 16.9	
	comp=Z,96nm,0.8s						
OGNE	**Ogallala**	**4.38**	**301**		**Pn**	**05 34 56.5**	**+2.8**
SMWD	**Samnorwood**	**4.46**	**216**		**Pn**	**05 34 56.0**	**+1.2**
CCM	**Cathedral Cave**	**4.64**	**97**		**Pn**	**05 34 58.4**	**+1.2**
CCM				IAmb_Lg		05 36 12.1	
	comp=Z,126nm,0.7s						
LOOK	**Love County**	**4.78**	**181**		**Pn**	**05 35 00.1**	**+0.9**
LOOK				IAmb_Lg		05 36 21.4	
	comp=Z,151nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.89**	**125**		**Pn**	**05 35 01.4**	**+0.8**
FCAR				IAmb_Lg		05 36 23.2	
	comp=Z,121nm,0.7s						
ECSD	**EROS Data Cent**	**4.96**	**4**		**Pn**	**05 35 05.0**	**+3.4**
ECSD	**EROS Data Cent**	**4.96**	**4**	Pn	**Pn**	**05 35 04.9**	**+3.3**
T42A	**Van Buren**	**5.05**	**108**	Pn	**Pn**	**05 35 03.9**	**+1.1**
T42A				IAmb_Lg		05 36 29.1	
	comp=Z,99nm,0.7s						
RTBA	**Rita Blanca**	**5.06**	**244**		**Pn**	**05 35 04.6**	**+1.5**
RTBA				IAmb_Lg		05 36 32.3	
	comp=Z,65nm,0.8s						
MIAR	**Mount Ida**	**5.08**	**145**		**Pn**	**05 35 03.8**	**+0.6**
MIAR				IAmb_Lg		05 36 29.3	
	comp=Z,60nm,0.8s						
WTFS	**Witchita Falls**	**5.13**	**193**	Pn	**Pn**	**05 35 04.8**	**+0.9**
WTFS				IAmb_Lg		05 36 43.4	
	comp=Z,62nm,1.1s						
PH02	**Texas Public H**	**5.16**	**230**	IAmb_Lg		05 36 33.7	
	comp=Z,227nm,1.2s						
N41A	**Harden Midland**	**5.17**	**66**		**Pn**	**05 35 05.9**	**+1.4**
N41A				IAmb_Lg		05 36 40.2	
	comp=Z,151nm,0.7s						
WHAR	**Wooly Hollow**	**5.18**	**131**		**Pn**	**05 35 04.8**	**+0.1**
WHAR				IAmb_Lg		05 36 38.5	
	comp=Z,142nm,0.8s						
FVM	**French Village**	**5.29**	**97**		**Pn**	**05 35 06.5**	**+0.4**
FVM				IAmb_Lg		05 36 34.8	
	comp=Z,106nm,0.8s						
SLM	**Saint Louis**	**5.36**	**89**	IAmb_Lg		05 36 48.6	
	comp=Z,84nm,0.7s						
AMTX	**Amarillo**	**5.36**	**225**		**Pn**	**05 35 08.5**	**+1.4**
AMTX				IAmb_Lg		05 36 48.2	
	comp=Z,130nm,0.8s						
LCAR	**Lake Charles**	**5.44**	**118**		**Pn**	**05 35 08.2**	**+0.1**
LCAR				IAmb_Lg		05 36 37.9	
	comp=Z,94nm,0.9s						
Z35A	**Perchaven, San**	**5.44**	**181**		**Pn**	**05 35 08.1**	**-0.1**
X40A	**Basin Creek Fa**	**5.48**	**140**		**Pn**	**05 35 09.3**	**+0.5**
X40A				IAmb_Lg		05 36 48.4	
	comp=Z,73nm,0.8s						
UALR	**University of**	**5.52**	**135**		**Pn**	**05 35 09.4**	**+0.1**
UALR				IAmb_Lg		05 36 50.7	
	comp=Z,85nm,0.9s						
L40A	**Anamosa**	**5.54**	**52**		**Pn**	**05 35 10.7**	**+1.1**
Z38A	**Mt. Pleasant**	**5.77**	**162**	Pn	**Pn**	**05 35 12.7**	**+0.1**
Z38A				IAmb_Lg		05 37 04.6	
	comp=Z,88nm,0.8s						
FW06	**Azle**	**5.81**	**184**		**Pn**	**05 35 13.5**	**+0.2**
FW06				IAmb_Lg		05 37 05.1	
	comp=Z,50nm,0.8s						
SUSD	**Miller**	**5.83**	**347**	IAmb_Lg		05 37 00.7	
	comp=Z,72nm,0.8s						
I37A	**Lemond, Waseca**	**5.92**	**27**	IAmb_Lg		05 37 02.9	
	comp=Z,97nm,0.9s						
DKNS	**Dickens**	**5.97**	**212**		**Pn**	**05 35 16.9**	**+1.3**
DKNS				IAmb_Lg		05 37 07.0	
	comp=Z,113nm,1.0s						
APMT	**Aspermont**	**5.98**	**205**		**Pn**	**05 35 16.7**	**+1.1**
WLAR	**White Oak Lake**	**6.01**	**147**		**Pn**	**05 35 16.6**	**+0.5**
WLAR				IAmb_Lg		05 36 59.9	
	comp=Z,78nm,0.8s						
PLPT	**Palo Pinto**	**6.04**	**190**		**Pn**	**05 35 16.8**	**+0.4**
PLPT				IAmb_Lg		05 37 01.1	
	comp=Z,51nm,0.8s						
CGM3	**Cape Girardeau**	**6.04**	**102**	IAmb_Lg		05 37 01.1	
	comp=Z,70nm,0.7s						
TREL	**Terrell**	**6.09**	**172**		**Pn**	**05 35 16.9**	**-0.3**
TREL				IAmb_Lg		05 37 07.7	
	comp=Z,68nm,0.9s						
PARMO	**Parma**	**6.18**	**108**		**Pn**	**05 35 19.2**	**+0.8**
S44A	**Carbondale**	**6.26**	**98**		**Pn**	**05 35 20.1**	**+0.8**
HDIL	**Hopedale**	**6.26**	**71**		**Pn**	**05 35 20.2**	**+0.7**
SIUC	**Southern Illin**	**6.28**	**97**	IAmb_Lg		05 37 13.8	
	comp=Z,112nm,0.8s						
FW13	**Cleburne**	**6.42**	**183**		**Pn**	**05 35 22.0**	**+0.3**
SN07	**Snyder 07**	**6.46**	**210**		**Pn**	**05 35 23.5**	**+1.2**
SN07				IAmb_Lg		05 37 20.8	
	comp=Z,55nm,0.8s						
CCAR	**Cane Creek**	**6.48**	**137**		**Pn**	**05 35 22.6**	**+0.3**
CCAR				IAmb_Lg		05 37 25.8	
	comp=Z,87nm,0.9s						
ABTX	**Abilene, Hawle**	**6.49**	**199**		**Pn**	**05 35 22.7**	**+0.1**
ABTX				IAmb_Lg		05 37 15.7	
	comp=Z,57nm,0.9s						
L42A	**Oliver, Polo**	**6.51**	**58**		**Pn**	**05 35 24.0**	**+1.1**
Z41A	**Richland Creek**	**6.51**	**147**	IAmb_Lg		05 37 26.6	
	comp=Z,44nm,0.9s						
JFWS	**Jewell Farm**	**6.62**	**49**		**Pn**	**05 35 25.9**	**+1.5**
JFWS				IAmb_Lg		05 37 27.3	
	comp=Z,101nm,0.8s						
MSTX	**Muleshoe**	**6.64**	**225**	IAmb_Lg		05 37 20.9	
	comp=Z,73nm,1.1s						
ISCO	**Idaho Springs**	**6.69**	**281**		**Pn**	**05 35 27.7**	**+2.0**
SDCO	**Great Sand Dun**	**6.70**	**264**	IAmb_Lg		05 37 19.0	
	comp=Z,48nm,1.0s						
POST	**Post**	**6.74**	**213**	IAmb_Lg		05 37 28.6	
	comp=Z,47nm,0.8s						
WHTX	**Lake Whitney,**	**6.78**	**183**		**Pn**	**05 35 26.3**	**-0.3**
OLIL	**Olney**	**7.02**	**88**		**Pn**	**05 35 29.7**	**-0.2**
I40A	**Norwalk**	**7.05**	**42**	Pn	**Pn**	**05 35 31.9**	**+1.6**
I40A				IAmb_Lg		05 37 37.5	
	comp=Z,50nm,0.8s						
F33A	**5 Mile Ranch,**	**7.08**	**4**		**Pn**	**05 35 33.3**	**+2.7**
129A	**Stewart Farms,**	**7.27**	**214**	IAmb_Lg		05 37 46.7	
	comp=Z,22nm,1.0s						
NATX	**Nacogdoches**	**7.28**	**163**	IAmb_Lg		05 37 46.2	
	comp=Z,38nm,0.9s						
M44A	**Midewin, Midew**	**7.40**	**67**	IAmb_Lg		05 37 42.8	
	comp=Z,80nm,1.0s						
OXF	**Oxford**	**7.50**	**122**	IAmb_Lg		05 37 58.1	
	comp=Z,60nm,0.8s						
128A	**Castleberry Fa**	**7.55**	**217**	IAmb_Lg		05 38 01.1	
	comp=Z,18nm,0.9s						
SGCY	**Sterling City**	**7.61**	**207**	IAmb_Lg		05 37 58.4	
	comp=Z,75nm,1.0s						
143A	**Socs Landing,**	**7.62**	**141**	IAmb_Lg		05 37 58.6	
	comp=Z,69nm,0.9s						
BRDY	**Brady**	**7.64**	**192**		**Pn**	**05 35 38.0**	**-0.4**
BRDY				IAmb_Lg		05 38 01.7	
	comp=Z,46nm,0.7s						
K43A	**Burlington**	**7.71**	**57**		**Pn**	**05 35 40.0**	**+0.6**
229A	**Bryant Ranch,**	**7.82**	**211**	IAmb_Lg		05 37 57.9	
	comp=Z,16nm,0.8s						
WVT	**Waverly**	**7.82**	**107**	IAmb_Lg		05 37 57.0	
	comp=Z,44nm,0.7s						
SFIN	**Lafayette**	**7.88**	**75**	Pn	**Pn**	**05 35 43.0**	**+1.4**
SFIN				IAmb_Lg		05 38 05.5	
	comp=Z,87nm,0.8s						
I42A	**Draeger Farm,**	**7.99**	**48**	Pn	**Pn**	**05 35 44.9**	**+1.8**
I42A				IAmb_Lg		05 38 03.3	
	comp=Z,50nm,1.0s						
435B	**Jarrell**	**7.99**	**183**	IAmb_Lg		05 38 22.0	
	comp=Z,42nm,0.8s						
T47A	**Sharon Grove**	**8.09**	**100**	IAmb_Lg		05 38 11.5	
	comp=Z,76nm,0.7s						
K22A	**Casper**	**8.14**	**301**	IAmb_Lg		05 38 22.1	
	comp=Z,60nm,0.9s						
E28A	**Huff**	**8.23**

	comp=Z,43nm,0.9s								
JCT	**Junction City**	**8.58**	**196**		lAmb_Lg			05 38 40.7	
	comp=Z,63nm,0.8s								
TPB06	**Permian Basin**	**8.71**	**217**		lAmb_Lg			05 38 33.2	
	comp=Z,43nm,0.9s								
MNHN	**Monahans**	**8.76**	**214**		lAmb_Lg			05 38 39.9	
	comp=Z,28nm,0.7s								
146A	**Union**	**8.95**	**131**		lAmb_Lg			05 38 46.2	
	comp=Z,48nm,0.8s								
H43A	**Windswept, Lux**	**8.99**	**48**		lAmb_Lg			05 38 46.0	
	comp=Z,47nm,0.8s								
P48A	**Milroy**	**9.09**	**82**				**Pn**	**05 35 57.8**	**-0.4**
X48A	**Hartselle**	**9.15**	**115**		lAmb_Lg			05 38 37.3	
	comp=Z,45nm,0.9s								
Z47A	**Carrollton**	**9.18**	**125**		lAmb_Lg			05 38 46.9	
	comp=Z,41nm,0.9s								
Y22A	**Socorro**	**9.32**	**242**		lAmb_Lg			05 38 58.9	
	comp=Z,39nm,1.1s								
TPB05	**Hovey Rd**	**9.37**	**215**		lAmb_Lg			05 39 05.0	
	comp=Z,38nm,1.0s								
AGMN	**Agassiz Nation**	**9.55**	**5**				**Pn**	**05 36 05.0**	**+0.4**
TPB01	**Permian Basin**	**9.56**	**217**		lAmb_Lg			05 39 00.7	
	comp=Z,38nm,0.9s								
EF04	**Eagle Ford 04**	**9.57**	**184**		lAmb_Lg			05 39 18.3	
	comp=Z,28nm,0.8s								
F42A	**Maple Grove Fa**	**9.62**	**41**		lAmb_Lg			05 38 53.4	
	comp=Z,25nm,0.8s								
MNTX	**Cornudas Mount**	**9.79**	**226**		Pn		**Pn**	**05 36 09.7**	**+1.8**
MNTX					lAmb_Lg			05 39 08.8	
	comp=Z,32nm,1.0s								
735A	**Kenedy**	**9.92**	**184**		lAmb_Lg			05 39 22.5	
	comp=Z,42nm,1.0s								
EYMN	**Ely**	**10.02**	**22**				**Pn**	**05 36 11.7**	**+0.8**
PDAR	**Pinedale Array**	**10.26**	**297**		Pn		**Pn**	**05 36 15.5**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=113,slow=13,SNR=8.0								
PDAR					Sn		**Sn**	**05 38 07.3**	**-2.4**
	comp=Z,0.3nm,0.3s,baz=116,slow=33,SNR=4.2								
PDAR					Lg		Lg	05 39 02.6	
	comp=Z,0.3nm,0.3s,baz=104,slow=35,SNR=3.4								
	comp=Z,0.5nm,0.5s								
TX31	**Lajitas Ar. Si**	**10.89**	**212**				**Pn**	**05 36 23.0**	**0.0**
TXAR	**Lajitas Array**	**10.89**	**212**		Pn		**Pn**	**05 36 21.9**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=31,slow=12,SNR=35								
TXAR					Sn		**Sn**	**05 38 19.8**	**-5.2**
	comp=Z,0.9nm,0.3s,baz=26,slow=15,SNR=5.5								
TXAR					Lg		Lg	05 39 22.2	
	comp=Z,0.6nm,0.3s,baz=360,slow=20,SNR=5.5								
TXAR					LR		LR	05 40 59.4	
	comp=Z,60nm,21.4s,baz=357,slow=40								
	comp=Z,0.7nm,0.4s								
TKL	**Tuckaleechee C**	**11.06**	**102**		Pn		**Pn**	**05 36 26.8**	**+1.6**
	comp=Z,0.5nm,0.3s,baz=260,slow=12,SNR=5.3								
TKL					Pg			05 37 12.7	
	comp=Z,0.6nm,0.3s,baz=284,slow=13,SNR=4.1								
TKL					Sn		**Sn**	**05 38 26.6**	**-2.5**
	comp=Z,0.5nm,0.3s,baz=42,slow=6.9,SNR=1.9								
TKL					Lg		Lg	05 39 27.3	
	comp=Z,2.3nm,0.3s,baz=16,slow=21,SNR=12								
	comp=Z,1.1nm,0.4s								
250A	**Grady**	**11.13**	**124**		Pn		**Pn**	**05 36 25.8**	**-0.5**
EPLO	**Experimental L**	**11.15**	**11**				**Pn**	**05 36 26.3**	**-0.2**
TBO	**Thunder Bay**	**11.31**	**27**		Pn		**Pn**	**05 36 28.8**	**+0.2**
ULM	**Lac du Bonnet**	**11.50**	**4**		Pn		**Pn**	**05 36 30.8**	**-0.3**
	comp=Z,1.1nm,0.3s,baz=180,slow=14,SNR=10								
ULM					Sn		**Sn**	**05 38 30.9**	**-8.7**
	comp=Z,0.8nm,0.3s,baz=257,slow=23,SNR=5.4								
ULM					Lg		Lg	05 39 39.9	
	comp=Z,0.5nm,0.3s,baz=98,slow=15,SNR=1.6								
	comp=Z,2.4nm,0.3s								
N51A	**Ashland**	**11.51**	**75**				**Pn**	**05 36 31.6**	**+0.2**
SADO	**Sadowa**	**14.65**	**60**		Pn		**Pn**	**05 37 14.7**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=278,slow=7.1,SNR=1.7								
SADO					Pg		P	05 38 14.6	+54
	comp=Z,0.4nm,0.3s,baz=264,slow=16,SNR=3.9								
SADO					Sn		Sn	05 39 47.7	-8.9
	comp=Z,0.3nm,0.3s,baz=157,slow=21,SNR=1.3								
SADO					Lg		Lg	05 41 19.1	
	comp=Z,0.5nm,0.3s,baz=14,slow=13,SNR=4.2								
	comp=Z,2.7nm,0.9s								
YKA	**Yellowknife Ar**	**26.03**	**341**	P			**P**	**05 39 22.4**	**+2.3**
	comp=Z,0.9nm,0.8s,baz=146,slow=9.0,SNR=14								
	comp=Z,0.9nm,0.8s								
ILAR	**Eielson Array**	**38.76**	**328**	P			**P**	**05 41 13.4**	**+2.2**
	comp=Z,1.7nm,0.8s,baz=107,slow=7.0,SNR=23								
	comp=Z,1.7nm,0.8s								
BVAR	**Borovoye Array**	**87.92**	**8**	P			**P**	**05 46 38.6**	**+1.8**
	comp=Z,0.4nm,0.5s,baz=356,slow=6.1,SNR=2.2								
	comp=Z,0.4nm,0.5s								

*IDC **12** 05:46:18.8±1.2, 52°.28N×159°.35E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=22.6km s-min=14.4km az=27.0*
*KRSC **12** 05:46:24.5±0.8, 52°.44N×159°.08E, h60km±7km, Ml3.9, Felt [III] at lighthouse Krugliy.*

ISC 12 05:46:25.9±1.0, 52°.42N±0°.05×159°.10E±0°.06, h52km±9km, n36, σ0s82/45, mb3.5/4, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**0.36**	**272**	*eP*			**Pn**	**05 46 35.9**	**+0.2**
RUS				*eS*			**Sn**	**05 46 43.2**	**+0.4**
MTVR	**Mutnovka**	**0.56**	**277**	*eP*			**Pn**	**05 46 38.5**	**+0.3**
MTVR				*eS*			**Sn**	**05 46 47.9**	**+0.9**
GRL	**Gorelyy**	**0.64**	**282**	*eP*			**Pn**	**05 46 39.9**	**+0.8**
GRL				*eS*			**Sn**	**05 46 50.7**	**+2.0**
DALK	**Dalny**	**0.65**	**341**	*eP*			**Pn**	**05 46 38.9**	**-0.2**
DALK				*eS*			**Sn**	**05 46 48.5**	**0.0**
PET	**Petropavlovsk**	**0.66**	**336**	*eP*			**Pn**	**05 46 39.0**	**-0.2**
PET				*eS*			**Sn**	**05 46 48.3**	**-0.5**
KRMR	**Karymshinskiy**	**0.72**	**305**	*eP*			**Pn**	**05 46 39.8**	**-0.1**
KRMR				*eS*			**Sn**	**05 46 50.4**	**+0.3**
ASAK	**Asacha**	**0.73**	**267**	*eP*			**Pn**	**05 46 40.7**	**+0.4**
ASAK				*eS*			**Sn**	**05 46 51.5**	**+0.8**
NLC	**Nalytchevo**	**0.77**	**11**	*eP*			**Pn**	**05 46 39.9**	**-0.6**
NLC				*eS*			**Sn**	**05 46 50.2**	**-1.0**
UGLR	**Uglovaya**	**0.81**	**348**	*eP*			**Pn**	**05 46 41.3**	**+0.1**
UGLR				*eS*			**Sn**	**05 46 52.8**	**+0.5**
SMAR	**Somma**	**0.86**	**348**	*eP*			**Pn**	**05 46 41.8**	**-0.2**
SMAR				*eS*			**Sn**	**05 46 53.5**	**-0.3**
SDLR	**Sedlovina**	**0.87**	**351**	*eP*			**Pn**	**05 46 41.7**	**-0.3**
SDLR				*eS*			**Sn**	**05 46 53.4**	**-0.5**
KDTR	**Khodutka, Kamc**	**0.88**	**226**	*eP*			**Pn**	**05 46 41.9**	**-0.1**
KDTR				*eS*			**Sn**	**05 46 53.5**	**-0.3**
SPN	**Mys Shipunski**	**0.88**	**39**	*eP*			**Pn**	**05 46 43.1**	**+1.0**
SPN				*eS*			**Sn**	**05 46 55.5**	**+1.6**
KRER	**Koryakskii**	**0.91**	**347**	*eP*			**Pn**	**05 46 42.8**	**+0.1**
KRER				*eS*			**Sn**	**05 46 55.1**	**+0.1**
KOK	**Koryaka**	**0.92**	**342**	*eP*			**Pn**	**05 46 43.0**	**+0.4**
KOK				*eS*			**Sn**	**05 46 55.4**	**+0.5**
KRX	**Arik**	**0.98**	**344**	*eP*			**Pn**	**05 46 43.6**	**+0.1**
KRX				*eS*			**Sn**	**05 46 56.2**	**-0.3**
PETK	**Petropavlovsk-**	**1.09**	**310**	Pg			**Pn**	**05 46 45.2**	**+0.3**
	76nm,0.3s,baz=112,slow=18,SNR=478								
PETK					Lg		Lg	05 46 59.8	
	49nm,0.3s,baz=129,slow=35,SNR=18								
APC	**Apacha**	**1.28**	**294**	*eP*			**Pn**	**05 46 48.0**	**+0.6**
APC				*eS*			**Sn**	**05 47 04.2**	**+0.6**
KII	**Karymskiy**	**1.63**	**7**	*eS*			**Sn**	**05 47 13.0**	**+0.9**
PAU	**Pauzhetka**	**1.71**	**237**	*eP*			**Pn**	**05 46 53.9**	**+0.6**
PAU				*eS*			**Sn**	**05 47 14.7**	**+0.8**
TUMD	**Tumrok D**	**2.89**	**15**	*eS*			**Sn**	**05 47 45.5**	**+2.5**
ESO	**Esso**	**3.52**	**356**	*eP*			**Pn**	**05 47 19.9**	**+1.8**
KBTR	**Krutoberegovo**	**4.37**	**28**	*eS*			**Sn**	**05 48 20.4**	**+1.1**
ILAR	**Eielson Array**	**29.72**	**44**	P			**P**	**05 52 25.8**	**-0.9**
	0.6nm,0.9s,baz=270,slow=7.7,SNR=4.6								
	0.6nm,0.9s								
H11N2	**WAKE ISLAND Hy**	**33.19**	**166**	T			T	06 28 39.8	
	baz=352,slow=76,SNR=42								
H11N3	**WAKE ISLAND Hy**	**33.20**	**166**	T			T	06 28 39.8	
	baz=352,slow=76,SNR=39								
H11N1	**WAKE ISLAND Hy**	**33.21**	**167**	T			T	06 28 39.8	
	baz=352,slow=76,SNR=46								
H11S1	**WAKE ISLAND Hy**	**34.37**	**167**	T			T	06 30 06.0	
	baz=351,slow=76,SNR=11								
H11S3	**WAKE ISLAND Hy**	**34.38**	**167**	T			T	06 30 03.7	
	baz=351,SNR=22								
H11S2	**WAKE ISLAND Hy**	**34.38**	**167**	T			T	06 30 03.2	
	baz=351,slow=76,SNR=8.4								
PDAR	**Pinedale Array**	**58.38**	**60**	P			**P**	**05 56 15.8**	**-0.2**
	0.6nm,0.7s,baz=324,slow=4.2,SNR=4.9								
	0.6nm,0.7s								
TXAR	**Lajitas Array**	**71.46**	**66**	P			**P**	**05 57 40.6**	**-0.3**
	0.4nm,0.5s,baz=296,slow=5.2,SNR=6.2								
	0.4nm,0.5s								
ASAR	**Alice Springs**	**78.90**	**203**	P			**P**	**05 58 23.1**	**-0.4**
	0.3nm,0.5s,baz=17,slow=4.9,SNR=5.0								
	0.3nm,0.5s								
H03N2	**Juan Fernandez**	**134.81**	**89**	T			T	08 35 52.1	
	baz=314,slow=77,SNR=8.2								
H03N1	**Juan Fernandez**	**134.82**	**89**	T			T	08 35 55.1	
	baz=314,slow=77,SNR=7.7								
H03N3	**Juan Fernandez**	**134.82**	**89**	T			T	08 35 52.3	
	baz=314,slow=77,SNR=8.3								

*NOU **12** 05:51:57.9, 41°.18S×173°.66E, h75km, MLv3.6/17, South Island, New Zealand*
*WEL **12** 05:51:59.1±0.5, 41°.2S±4°.×17°.4E±1°, h62km±4km, M3.2/34, ML3.1/18, MLv3.2/34, Error ellipse: s-maj=5.5km s-min=3.3km az=7.4, confirmed*

ISC 12 05:51:57.2±1.3, 41°.21S±0°.03×173°.63E±0°.03, h91km±6km, n98, σ1s08/113, South Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HAVS	**Havelock**	**0.14**	**117**	P			**Pn**	**05 52 10.4**	**+0.3**
HAVS				S			**Sn**	**05 52 18.6**	**-0.9**
NNZ	**Nelson**	**0.19**	**268**	P			**Pn**	**05 52 10.1**	**-0.1**
NNZ				S			**Sn**	**05 52 18.5**	**-1.4**
NLMS	**Nelson Nelmac**	**0.27**	**258**	S			**Sn**	**05 52 19.5**	**-0.9**
NELH	**Nelson Hospita**	**0.28**	**254**	P			**Pn**	**05 52 11.2**	**+0.6**
NELH				S			**Sn**	**05 52 20.2**	**-0.3**
QCCS	**Picton Queen C**	**0.31**	**103**	P			**Pn**	**05 52 11.1**	**+0.4**
QCCS				S			**Sn**	**05 52 20.2**	**-0.5**
BWRS	**Waikakaho Road**	**0.31**	**137**	P			**Pn**	**05 52 11.3**	**+0.6**
BWRS				S			**Sn**	**05 52 20.1**	**-0.7**
TUWZ	**Tuamarina**	**0.32**	**133**	P			**Pn**	**05 52 11.6**	**+0.8**
TUWZ				S			**Sn**	**05 52 20.6**	**-0.3**
MGCS	**Blenheim Marlb**	**0.38**	**141**	P			**Pn**	**05 52 12.3**	**+1.1**
MGCS				S			**Sn**	**05 52 22.2**	**+0.7**
BTWS	**Nelson Brightw**	**0.41**	**244**	P			**Pn**	**05 52 11.9**	**+0.6**
BTWS				S			**Sn**	**05 52 21.0**	**-0.9**
WVFS	**Wairau Valley**	**0.46**	**207**	P			**Pn**	**05 52 12.5**	**+0.8**
WVFS				S			**Sn**	**05 52 22.0**	**-0.5**
DUWZ	**D'Urville Isla**	**0.47**	**29**	P			**Pn**	**05 52 12.1**	**+0.3**
DUWZ				S			**Sn**	**05 52 22.3**	**-0.3**
MOTS	**Motueka DOC wo**	**0.47**	**280**	P			**Pn**	**05 52 12.1**	**+0.3**
MOTS				S			**Sn**	**05 52 21.7**	**-0.9**
TCW	**Tory Channel**	**0.49**	**90**	P			**Pn**	**05 52 12.9**	**+1.0**
TCW				S			**Sn**	**05 52 22.8**	**0.0**
TKNZ	**Takaka Hill**	**0.53**	**289**	P			**Pn**	**05 52 12.6**	**+0.3**
TKNZ				S			**Sn**	**05 52 22.3**	**-1.2**
SEDS	**Seddon Fire St**	**0.57**	**144**	S			**Sn**	**05 52 25.6**	**+1.6**
MRNZ	**Matariki Terra**	**0.68**	**254**	P			**Pn**	**05 52 14.1**	**+0.6**
MRNZ				S			**Sn**	**05 52 25.5**	**-0.3**
CMWZ	**Cape Campbell**	**0.70**	**141**	P			**Pn**	**05 52 15.3**	**+1.6**
THZ	**Tophouse**	**0.77**	**224**	P			**Pn**	**05 52 15.5**	**+0.9**
SNZO	**South Karori**	**0.82**	**97**	P			**Pn**	**05 52 15.6**	**+0.7**
SNZO	**South Karori**	**0.82**	**97**	P			**Sn**	**05 52 28.5**	**+0.4**
WEL	**Wellington**	**0.86**	**95**	P			**Pn**	**05 52 16.4**	**+1.0**
QRZ	**Quartz Range**	**0.92**	**295**	P			**Pn**	**05 52 15.9**	**-0.1**
QRZ	**Quartz Range**	**0.92**	**295**	P			**Sn**	**05 52 28.7**	**-1.3**
QRZ	**Quartz Range**	**0.92**	**295**	P			**Pn**	**05 52 16.1**	**+0.1**
QRZ				S			**Sn**	**05 52 28.5**	**-1.5**
BHW	**Baring Head**	**0.96**	**102**	P			**Pn**	**05 52 17.3**	**+0.8**
KIW	**Kapiti Island**	**1.03**	**71**	P			**Pn**	**05 52 18.3**	**+1.0**
CAW	**Cannon Point**	**1.09**	**85**	P			**Pn**	**05 52 18.7**	**+0.7**
KHZ	**Kahutara**	**1.21**	**183**	P			**Pn**	**05 52 20.4**	**+1.1**
KHZ	**Kahutara**	**1.21**	**183**	S			**Sn**	**05 52 35.6**	**-0.4**
KHZ	**Kahutara**	**1.21**	**183**	P			**Pn**	**05 52 20.6**	**+1.3**
OGWZ	**Otaki Gorge**	**1.23**	**72**	P			**Pn**	**05 52 20.5**	**+0.9**
MSWZ	**Moikau Station**	**1.24**	**100**	P			**Pn**	**05 52 20.3**	**+0.6**
PLWZ	**Palliser**	**1.28**	**107**	P			**Pn**	**05 52 21.0**	**+0.7**
PAWZ	**Paruwai Farm**	**1.37**	**98**	P			**Pn**	**05 52 21.7**	**+0.4**
MTW	**Mount Morrison**	**1.42**	**88**	P			**Pn**	**05 52 22.2**	**+0.3**
HOWZ	**Holdsworth Sta**	**1.46**	**78**	P			**Pn**	**05 52 22.9**	**+0.3**
DSZ	**Dennision Nort**	**1.47**	**248**	P			**Pn**	**05 52 23.0**	**+0.4**
MRZ	**Mangatainoka R**	**1.58**	**70**	P			**Pn**	**05 52 24.2**	**+0.2**
TMWZ	**Te Maipa**	**1.71**	**87**	P			**Pn**	**05 52 26.0**	**+0.3**
TIWZ	**Tintock**	**1.77**	**76**	P			**Pn**	**05 52 25.3**	**-1.1**
WAZ	**Wanganui**	**1.79**	**36**	P			**Pn**	**05 52 28.9**	**+2.2**
GVZ	**Greta Valley S**	**1.81**	**194**	P			**Pn**	**05 52 27.7**	**+0.8**
POWZ	**Post Office Ro**	**1.82**	**64**	P			**Pn**	**05 52 27.2**	**+0.1**
LTZ	**Lake Taylor**	**1.87**	**212**	P			**Pn**	**05 52 28.6**	**+0.9**
PRWZ	**Pori Road**	**1.90**	**71**	P			**Pn**	**05 52 26.4**	**-1.6**
PREZ	**Palmer Road**	**1.91**	**12**	P			**Pn**	**05 52 30.2**	**+1.9**
KHEZ	**Kahui Hut**	**1.94**	**9**	P			**Pn**	**05 52 29.4**	**+0.7**
KHEZ	**Kahui Hut**	**1.94**	**9**	S			**Sn**	**05 52 53.0**	**+0.4**
KHEZ	**Kahui Hut**	**1.94**	**9**	P			**Pn**	**05 52 30.4**	**+1.7**
NBEZ	**Newall Road No**	**1.95**	**6**	P			**Pn**	**05 52 30.5**	**+1.8**
CPWZ	**Castlepoint**	**1.97**	**82**	P			**Pn**	**05 52 29.4**	**+0.4**
BFZ	**Birch Farm**	**2.05**	**76**	S			**Sn**	**05 52 55.1**	**-0.1**
TSZ	**Takapari Road**	**2.12**	**58**	P			**Pn**	**05 52 31.1**	**+0.1**
DVHZ	**Dannevirke**	**2.13**	**66**	P			**Pn**	**05 52 29.6**	**-1.6**
INZ	**Inchbonnie**	**2.22**	**226**	P			**Pn**	**05 52 33.4**	**+1.1**
VRZ	**Vera Road**	**2.26**	**23**	P			**Pn**	**05 52 35.1**	**+2.3**
MTVZ	**Mangateitei**	**2.31**	**38**	P			**Pn**	**05 52 35.4**	**+1.9**
WNVZ	**Wahianoa**	**2.41**	**39**	P			**Pn**	**05 52 36.5**	**+1.5**
OXZ	**Oxford**	**2.42**	**209**	P			**Pn**	**05 52 35.9**	**+1.0**
MOVZ	**Moawhango**	**2.43**	**43**	P			**Pn**	**05 52 35.7**	**+0.5**
TUVZ	**Tukino**	**2.49**	**39**	P			**Pn**	**05 52 37.6**	**+1.6**
NGZ	**Ngauruhoe**	**2.53**	**37**	P			**Pn**	**05 52 38.1**	**+1.5**
SNVZ	**South Ngauruho**	**2.54**	**38**	P			**Pn**	**05 52 38.4**	**+1.6**
OKCZ	**Okains Bay**	**2.55**	**189**	P			**Pn**	**05 52 37.2**	**+0.6**
OTVZ	**Oturere**	**2.57**	**38**	P			**Pn**	**05 52 38.6**	**+1.4**
WTVZ	**West Tongariro**	**2.58**	**36**	P			**Pn**	**05 52 38.4**	**+1.2**
MQZ	**McQueen's Vall**	**2.59**	**196**	P			**Pn**	**05 52 36.5**	**-0.8**
KRHZ	**Kereru**	**2.62**	**54**	P			**Pn**	**05 52 37.4**	**-0.2**
TMVZ	**Te Maari**	**2.63**	**38**	P			**Pn**	**05 52 39.4**	**+1.5**
NTVZ	**North Tongarir**	**2.63**	**37**	P			**Pn**	**05 52 39.6**	**+1.7**
KATZ	**Kakaramea**	**2.74**	**36**	P			**Pn**	**05 52 41.2**	**+1.8**
MHCZ	**Mount Hutt**	**2.77**	**213**	P			**Pn**	**05 52 40.7**	**+1.0**
KWHZ	**Kaweka Forest**	**2.79**	**51**	P			**Pn**	**05 52 39.7**	**-0.2**
HIZ	**Hauiti**	**2.86**	**20**	P			**Pn**	**05 52 42.3**	**+1.5**
HIZ	**Hauiti**	**2.86**	**20**	S			**Sn**	**05 53 14.1**	**-0.2**
HIZ	**Hauiti**	**2.86**	**20**	P			**Pn**	**05 52 42.3**	**+1.5**
BKZ	**Black Stump Fm**	**3.00**	**48**	P			**Pn**	**05 52 42.7**	**-0.1**
BKZ	**Black Stump Fm**	**3.00**	**48**	P			**Pn**	**05 52 42.5**	**-0.3**
RPZ	**Rata Peaks**	**3.14**	**216**	P			**Pn**	**05 52 46.5**	**+1.8**
NMHZ	**Naumai**	**3.23**	**50**	P			**Pn**	**05 52 45.5**	**-0.3**
GCSZ	**Gaunt Creek Bo**	**3.23**	**228**	P			**Pn**	**05 52 46.9**	**+1.2**
MTHZ	**Maungataniwha**	**3.41**	**47**	P			**Pn**	**05 52 47.7**	**-0.7**
RAHZ	**Arahi**	**3.51**	**50**	P			**Pn**	**05 52 48.0**	**-1.6**
MUGZ	**Murupara**	**3.65**	**43**	P			**Pn**	**05 52 50.4**	**-1.1**
FOZ	**Fox Glacier**	**3.65**	**229**	P			**Pn**	**05 52 51.5**	**+0.1**
TMZ	**Timaru**	**3.71**	**210**	P			**Pn**	**05 52 52.4**	**0.0**
TOZ	**Tahuroa Road**	**3.77**	**23**	P			**Pn**	**05 52 54.8**	**+1.7**
URZ	**Urewera**	**3.99**	**43**	P			**Pn**	**05 52 54.5**	**-1.6**
URZ	**Urewera**	**3.99**	**43**	S			**Sn**	**05 53 39.7**	**-2.0**
URZ	**Urewera**	**3.99**	**43**	P			**Pn**	**05 52 54.4**	**-1.4**
MKAZ	**Moumahaki**	**4.27**	**17**	P			**Pn**	**05 53 01.3**	**+1.4**
ODZ	**Otahua Downs**	**4.41**	**209**	P			**Pn**	**05 53 03.1**	**+1.4**
ODZ	**Otahua Downs**	**4.41**	**209**	P			**Pn**	**05 53 01.7**	**0.0**
TWGZ	**Tauwhareparae**	**4.52**	**49**	P			**Pn**	**05 53 02.3**	**-1.1**
WIAZ	**Waiheke Island**	**4.56**	**15**	P			**Pn**	**05 53 05.8**	**+1.9**
JCZ	**Jackson Bay**	**4.57**	**230**	P			**Pn**	**05 53 04.1**	**0.0**
JCZ	**Jackson Bay**	**4.57**	**230**	P			**Pn**	**05 53 03.6**	**-0.5**
HAZ	**Te Kaha**	**4.72**	**44**	P			**Pn**	**05 53 05.0**	**-1.0**

*TAP **12** 06:07:06.6, 23°.85N×121°.55E, h10km, ML4.0, C*
*JMA **12** 06:07:06.2±0.2, 23°.8N±0°.3×12°.2E±1°, h5km±3km, MV3.1/11, TAIWAN REGION*

ISC 12 06:07:06.9±0.8, 23°.83N±0°.01×121°.59E±0°.02, h13km±4km, n155, σ0s80/248, 1C-15D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TEYL	**Yanliau Villag**	**0.04**	**16**	*iP*			**Pg**	**06 07 09.5**	**+0.1**
TEYL				*iS*			**Sg**	**06 07 11.8**	**+0.7**
SHUL	**Shoufeng**	**0.05**	**206**	*iP*			**Pg**	**06 07 09.3**	**-0.1**
SHUL				*iS*			**Sg**	**06 07 11.4**	**+0.3**
TEGC	**Jichi Village**	**0.13**	**199**	*iP*			**Pg**	**06 07 10.6**	**+0.3**
TEGC				*iS*			**Sg**	**06 07 13.8**	**+1.2**
ESL	**Shilin**	**0.14**	**262**	*iP*			**Pg**	**06 07 09.3**	**-1.1**
ESL				*iS*			**Sg**	**06 07 11.0**	**-2.0**
HWA	**Hwalien**	**0.14**	**7**	P			**Pg**	**06 07 10.6**	**+0.1**
HWA				S			**Sg**	**06 07 13.3**	**+0.3**
ETM	**Tongmen**	**0.16**	**327**	*iP*			**Pg**	**06 07 10.0**	**-0.7**
ETM				*iS*			**Sg**	**06 07 12.1**	**-1.3**
WARBT	**Fenglin Townsh**	**0.22**	**238**	*iP*			**Pg**	**06 07 10.7**	**-0.9**
WARBT				S			**Sg**	**06 07 13.4**	**-1.5**
LXIB	**Xiulin Townshi**	**0.25**	**320**	*iP*			**Pg**	**06 07 11.5**	**-0.8**
LXIB				S			**Sg**	**06 07 14.7**	**-1.2**
TWD	**Chiawan**	**0.25**	**2**	*iP*			**Pg**	**06 07 11.9**	**-0.2**
TWD				*iS*			**Sg**	**06 07 15.4**	**-0.3**
ETL	**Fush Village**	**0.33**	**6**	*iP*			**Pg**	**06 07 13.2**	**-0.3**
ETL				S			**Sg**	**06 07 18.1**	**0.0**
NACB	**Ninganchiao**	**0.34**	**1**	P			**Pg**	**06 07 13.3**	**-0.5**
NACB	**Ninganchiao**	**0.34**	**1**	P			**Pn**	**06 07 18.0**	**+0.5**
NACB	**Ninganchiao**	**0.34**	**1**	*iP*			**Pg**	**06 07 13.3**	**-0.5**
NACB				*iS*			**Sg**	**06 07 17.7**	**-0.8**
HGSD	**Ruisui**	**0.37**	**204**	P			**Pb**	**06 07 15.2**	**0.0**
ETLH	**Xiulin Townshi**	**0.39**	**346**	*iP*			**Pg**	**06 07 14.0**	**-0.7**
ETLH				S			**Sg**	**06 07 19.8**	**-0.1**
OWD	**Renai**	**0.40**	**288**	*iP*			**Pg**	**06 07 14.1**	**-0.8**
OWD				S			**Sg**	**06 07 19.3**	**-1.0**
EHYH	**Wanrong**	**0.40**	**213**	*iP*			**Pg**	**06 07 14.9**	**-0.1**
EHY	**Hungye**	**0.41**	**217**	P			**Pg**	**06 07 14.6**	**-0.4**
VWDT	**VWDT**	**0.42**	**259**	*iP*			**Pg**	**06 07 14.9**	**-0.3**
VWDT				S			**Sg**	**06 07 20.3**	**-0.4**
WHF	**Hehuan Shan**	**0.43**	**317**	*iP*			**Pg**	**06 07 14.8**	**-0.7**
WHF				S			**Sg**	**06 07 19.9**	**-1.5**
WUSB	**Renai**	**0.46**	**290**	*iP*			**Pg**	**06 07 15.5**	**-0.5**
WUSB				S			**Sg**	**06 07 22.2**	**0.0**
EAHA	**Aohua**	**0.51**	**16**	*iP*			**Pg**	**06 07 16.6**	**-0.4**
EAHA				S			**Sb**	**06 07 24.7**	**-0.4**
YULB	**Yu-li**	**0.51**	**211**	P			**Pg**	**06 07 16.6**	**-0.4**
YULB	**Yu-li**	**0.51**	**211**	S			**Sg**	**06 07 23.5**	**-0.3**
YULB	**Yu-li**	**0.51**	**211**	*iP*			**Pg**	**06 07 16.6**	**-0.4**
YULB				S			**Sg**	**06 07 24.1**	**+0.3**
FUSS	**Fushou**	**0.52**	**323**	*iP*			**

SLGT				S		Sn	06 07 46.0	+0.5
TWB1	**Santiao Chiao**	**1.23**	**17**	*eP*		**Pn**	**06 07 30.1**	**+0.4**
TWB1				*eS*		**Sn**	**06 07 46.3**	**+0.2**
WFSB	**Wu-fen Shan**	**1.25**	**8**	P		**Pg**	**06 07 30.7**	**-0.2**
WFSB				*eS*		**Sg**	**06 07 46.7**	**-0.4**
WSF	**Szhu**	**1.27**	**261**	*eP*		**Pn**	**06 07 30.4**	**+0.2**
WSF				*eS*		**Sn**	**06 07 49.0**	**+1.9**
TWS1	**Kuangyinshan**	**1.27**	**353**	*eP*		**Pg**	**06 07 31.8**	**+0.5**
TWS1				S		**Sn**	**06 07 49.5**	**+2.3**
SXI1	**Grass Mountain**	**1.28**	**12**	*eP*		**Pg**	**06 07 31.0**	**-0.6**
SXI1				S		**Sn**	**06 07 49.5**	**+1.9**
WSL	**Shuilin Townsh**	**1.28**	**256**	*eP*		**Pg**	**06 07 31.6**	**0.0**
WSL				S		**Sn**	**06 07 49.4**	**+1.9**
YM01	**YM01**	**1.31**	**359**	P		**Pg**	**06 07 31.6**	**-0.5**
YM01				S		**Sn**	**06 07 48.9**	**+0.7**
TNOU	**National Taiwa**	**1.32**	**7**	*eP*		**Pg**	**06 07 32.1**	**-0.3**
ZUZH	**Zhuzihu**	**1.32**	**358**	*eP*		**Pn**	**06 07 31.4**	**+0.3**
ZUZH				S		**Sg**	**06 07 48.9**	**-0.7**
NTST	**Danshui**	**1.33**	**355**	*eP*		**Pg**	**06 07 32.4**	**-0.1**
NTST				*eS*		**Sn**	**06 07 50.7**	**+2.0**
ANP	**Anpu**	**1.35**	**357**	*eP*		**Pb**	**06 07 31.9**	**-0.1**
ANP				*eS*		**Sn**	**06 07 50.1**	**+0.9**
YM08	**YM08**	**1.35**	**0**	*eP*		**Pn**	**06 07 31.1**	**-0.3**
CHN8	**Yiju**	**1.35**	**249**	*eP*		**Pb**	**06 07 32.1**	**+0.1**
CHN8				*eS*		**Sg**	**06 07 52.2**	**+1.7**
ECL	**Taimali**	**1.36**	**205**	*eP*		**Pn**	**06 07 30.5**	**-1.0**
JYNG	**Yonagunijimaku**	**1.39**	**63**	*eP*		**Pn**	**06 07 31.9**	**+0.1**
SSD	**Sandimen**	**1.39**	**219**	*eP*		**Pn**	**06 07 32.3**	**+0.3**
SSD				*eS*		**Sg**	**06 07 52.6**	**+0.8**
TSMG	**Majia**	**1.42**	**218**	*eP*		**Pb**	**06 07 33.3**	**+0.1**
YOJ	**Yonaguni jima**	**1.44**	**64**	P		**Pn**	**06 07 32.4**	**-0.2**
YOJ	**Yonaguni jima**	**1.44**	**64**	S		**Sg**	**06 07 53.1**	**-0.3**
YOJ	**Yonaguni jima**	**1.44**	**64**	*eP*		**Pn**	**06 07 32.9**	**+0.3**
YOJ				*eS*		**Sb**	**06 07 52.5**	**+0.6**
YOJ	**Yonaguni jima**	**1.44**	**64**	*eP*		**Pn**	**06 07 32.7**	**+0.1**
TWM1	**Shoushan**	**1.47**	**227**	*eP*		**Pg**	**06 07 36.2**	**+1.1**
MASBT	**Mashibuluo**	**1.50**	**216**	*eP*		**Pn**	**06 07 33.3**	**-0.1**
MASBT				*eS*		**Sg**	**06 07 56.2**	**+1.0**
TSCK	**Chigu Township**	**1.54**	**244**	P		**Pb**	**06 07 35.3**	**+0.1**
TSCK				*eS*		**Sg**	**06 07 56.3**	**-0.1**
EAST	**Anshuo**	**1.59**	**205**	*eP*		**Pn**	**06 07 35.0**	**+0.2**
TAW	**Tawu**	**1.60**	**204**	*eP*		**Pb**	**06 07 36.0**	**-0.2**
SSPT	**Xinbi**	**1.64**	**215**	*eP*		**Pn**	**06 07 35.8**	**+0.5**
WSSB	**Gushan**	**1.70**	**226**	*eP*		**Pg**	**06 07 39.7**	**+0.1**
SCZT	**Fangliau**	**1.71**	**212**	*eP*		**Pb**	**06 07 38.0**	**-0.1**
LAY	**Lan-yu**	**1.79**	**181**	*eP*		**Pn**	**06 07 34.8**	**-2.6**
LAY				*eS*		**Sn**	**06 07 59.0**	**-0.9**
LYUB	**Lan-yu**	**1.82**	**180**	*eP*		**Pn**	**06 07 34.4**	**-3.5**
PCYT	**Pengchaiyu**	**1.84**	**14**	*eP*		**Pb**	**06 07 39.9**	**-0.5**
WDGT	**Dungji**	**1.86**	**253**	*eP*		**Pn**	**06 07 38.4**	**+0.1**
WDGT				*eS*		**Sn**	**06 08 02.8**	**+1.2**
TWP	**Hsiaoliuchiu**	**1.86**	**218**	*eP*		**Pg**	**06 07 42.2**	**-0.4**
PHUB	**P'eng-hu**	**1.88**	**261**	P		**Pn**	**06 07 39.1**	**+0.5**
PHUB				S		**Sb**	**06 08 03.9**	**-0.3**
PNG	**Penghu**	**1.88**	**262**	P		**Pn**	**06 07 39.1**	**+0.4**
PNG				*eS*		**Sn**	**06 08 03.2**	**+0.9**
SMST	**Manzhou Townsh**	**1.93**	**201**	*eP*		**Pb**	**06 07 41.5**	**-0.4**
TWK1	**Hengchun**	**2.01**	**201**	*eP*		**Pn**	**06 07 41.5**	**+1.0**
TWKBT	**Hengchun**	**2.01**	**201**	*eP*		**Pb**	**06 07 43.6**	**+0.3**
IRIF	**Iriomote-Funau**	**2.02**	**75**	*eS*		**Sn**	**06 08 06.1**	**+0.4**
VCHM	**Qimei**	**2.08**	**253**	*eP*		**Pn**	**06 07 42.8**	**+1.5**
VCHM				*eS*		**Sb**	**06 08 09.4**	**-0.6**
VWUC	**VWUC**	**2.26**	**301**	*eP*		**Pn**	**06 07 43.5**	**-0.5**
VWUC				*eS*		**Sn**	**06 08 10.1**	**-1.6**
JIJ	**Ishigaki jima**	**2.40**	**77**	*eS*		**Sn**	**06 08 16.1**	**+1.2**
PTMZ	**Houxiangcun**	**2.55**	**299**	*eP*		**Pn**	**06 07 46.7**	**-1.2**
JISG	**Ishigakijimahi**	**2.60**	**73**	*eS*		**Sn**	**06 08 19.6**	**-0.3**
MATB	**Ma-tsu**	**2.75**	**328**	*eP*		**Pn**	**06 07 51.1**	**-0.5**
KNM	**Kinmen**	**2.94**	**282**	*eP*		**Pn**	**06 07 54.6**	**+1.4**
KNMB	**Chin-men Tao**	**2.99**	**283**	*eP*		**Pn**	**06 07 53.0**	**-0.9**
LYJJ	**Jianjiangzhen**	**3.17**	**329**	*eP*		**Pn**	**06 07 56.7**	**+0.3**
XPSS	**Dashiqiu**	**3.33**	**338**	*eP*		**Pn**	**06 07 58.7**	**+0.1**
AXDP	**Jialang**	**3.46**	**289**	*eP*		**Pn**	**06 07 59.9**	**-0.5**
ZPLA	**Ao Xicun**	**3.51**	**272**	*eP*		**Pn**	**06 08 01.0**	**-0.1**

WEL ***12*** *06:08:52.9±1.1,33.˚S±6.˚×17.˚8W±1.˚8, h100km, M4.6/13, mB4.8/7, ML4.7/13, MLv5.0/13, Mw(mB)4.1/7, Error ellipse: s-maj=24.3km s-min=4.6km az=105.3, confirmed*

IDC ***12*** *06:08:52.6±0.8, 32.˚38S×178.˚06W, h0km, mb4.4/6, mbtmp4.5/8, ML4.5/2, MS3.9/24, Error ellipse: s-maj=25.3km s-min=21.1km az=113.0*

NEIC ***12*** *06:08:54.9±1.2, 32.˚45S±0.˚1×178.˚1W±0.˚2, h10km±1km, mb4.6/19, Error ellipse: s-maj=22.1km s-min=18.1km az=105.0*

NOU ***12*** *06:08:58.9, 33.˚11S×177.˚57W, h193km, mb4.4/9, South of Kermadec Islands*

ISC 12 06:08:53.9±0.7, 32.˚57S±0.˚06×177.˚8W±0.˚1, h20km, n121, σ1s92/97, mb4.6/16, MS3.9/22, 2D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.30**	**358**	P	**Pn**	**06 09 42.9**	**-1.6**
GLKZ				S	**Sn**	**06 10 18.1**	**-5.0**
RAO	**Raoul Island**	**3.31**	**358**	Pn	**Pn**	**06 09 43.1**	**-1.5**
	68nm,0.3s,baz=103,slow=16,SNR=2.8						
RAO				Sn	**Sn**	**06 10 22.4**	**-1.0**
	110nm,0.3s,baz=279,slow=22,SNR=3.9 299nm,0.3s						
RAO	**Raoul Island**	**3.31**	**358**		**Pn**	**06 09 43.4**	**-1.2**
MXZ	**Matakaoa Point**	**5.92**	**212**	P	**Pn**	**06 10 20.3**	**-0.2**
MXZ	**Matakaoa Point**	**5.92**	**212**	S	**Sn**	**06 11 25.1**	**-2.7**
MXZ	**Matakaoa Point**	**5.92**	**212**	P	**Pn**	**06 10 20.6**	**+0.1**
WMGZ	**Waiomatatini S**	**6.09**	**210**	P	**Pn**	**06 10 23.5**	**+0.7**
WMGZ				S	**Sn**	**06 11 32.6**	**+0.7**
PKGZ	**Pakihiroa**	**6.28**	**212**	P	**Pn**	**06 10 24.4**	**-1.0**
HAZ	**Te Kaha**	**6.32**	**214**	P	**Pn**	**06 10 24.9**	**-1.0**
HAZ				S	**Sn**	**06 11 38.3**	**+0.7**
PUZ	**Puketiti**	**6.37**	**210**	P	**Pn**	**06 10 24.3**	**-2.3**
PUZ				S	**Sn**	**06 11 37.3**	**-1.6**
RUGZ	**Raukumara Rang**	**6.54**	**213**	P	**Pn**	**06 10 28.3**	**-0.8**
TWGZ	**Tauwhareparae**	**6.58**	**211**	P	**Pn**	**06 10 28.1**	**-1.4**
TWGZ				S	**Sn**	**06 11 43.2**	**-0.7**
CNGZ	**Carnagh Statio**	**6.75**	**208**	P	**Pn**	**06 10 32.0**	**+0.2**
MWZ	**Matawai**	**6.91**	**212**	P	**Pn**	**06 10 32.9**	**-1.2**
MWZ				S	**Sn**	**06 11 49.6**	**-2.5**
URZ	**Urewera**	**7.04**	**215**	Pn	**Pn**	**06 10 35.2**	**-0.6**
	4.9nm,0.3s,baz=12,slow=1.1,SNR=27						
URZ				Sn	**Sn**	**06 11 51.1**	**-4.2**
	5.7nm,0.3s,baz=250,slow=4.9,SNR=15 13nm,0.3s						
URZ	**Urewera**	**7.04**	**215**	P	**Pn**	**06 10 35.1**	**-0.7**
URZ	**Urewera**	**7.04**	**215**	S	**Sn**	**06 11 52.8**	**-2.5**
URZ	**Urewera**	**7.04**	**215**	P	**Pn**	**06 10 34.3**	**-1.5**
URZ				S	**Sn**	**06 11 52.7**	**-2.6**
PRGZ	**Paritu Road**	**7.25**	**208**	P	**Pn**	**06 10 37.6**	**-1.1**
MUGZ	**Murupara**	**7.38**	**216**	P	**Pn**	**06 10 39.4**	**-1.1**
RTZ	**Ruatahuna**	**7.39**	**214**	P	**Pn**	**06 10 40.5**	**-0.2**
KNZ	**Kokohu**	**7.42**	**209**	P	**Pn**	**06 10 40.0**	**-1.0**
KNZ				S	**Sn**	**06 12 00.3**	**-4.3**
MHGZ	**Mahia Peninsul**	**7.44**	**207**	P	**Pn**	**06 10 40.0**	**-1.3**
TOZ	**Tahuroa Road**	**7.54**	**225**	P	**Pn**	**06 10 44.8**	**+2.2**
RAHZ	**Arahi**	**7.58**	**212**	P	**Pn**	**06 10 43.8**	**+0.5**
MTHZ	**Maungataniwha**	**7.64**	**213**	P	**Pn**	**06 10 44.4**	**+0.3**
OUZ	**Omahuta**	**7.65**	**247**	P	**Pn**	**06 10 46.8**	**+2.7**
OUZ	**Omahuta**	**7.65**	**247**	P	**Pn**	**06 10 47.0**	**+2.9**
NMHZ	**Naumai**	**7.86**	**213**	P	**Pn**	**06 10 47.5**	**+0.4**
ARHZ	**Aropaoanui**	**7.91**	**211**	P	**Pn**	**06 10 46.7**	**-1.0**
BKZ	**Black Stump Fm**	**8.06**	**214**	P	**Pn**	**06 10 48.2**	**-1.1**
BKZ	**Black Stump Fm**	**8.06**	**214**	S	**Sn**	**06 12 16.8**	**-3.5**
BKZ	**Black Stump Fm**	**8.06**	**214**	P	**Pn**	**06 10 48.8**	**-1.0**
MCHZ	**McNeill Hill**	**8.19**	**212**	P	**Pn**	**06 10 51.8**	**+0.2**
KWHZ	**Kaweka Forest**	**8.30**	**213**	P	**Pn**	**06 10 53.0**	**-0.1**
KATZ	**Kakaramea**	**8.30**	**218**	P	**Pn**	**06 10 54.0**	**+0.8**
KAHZ	**Kahuranaki**	**8.40**	**209**	P	**Pn**	**06 10 50.7**	**-3.8**
MOVZ	**Moawhango**	**8.60**	**216**	P	**Pn**	**06 10 57.3**	**0.0**
BFZ	**Birch Farm**	**9.41**	**209**	P	**Pn**	**06 11 06.1**	**-2.2**
BFZ	**Birch Farm**	**9.41**	**209**	S	**Sn**	**06 12 45.8**	**-7.7**
BFZ	**Birch Farm**	**9.41**	**209**	P	**Pn**	**06 11 05.2**	**-3.1**
MRZ	**Mangatainoka R**	**9.68**	**212**	P	**Pn**	**06 11 09.1**	**-2.9**
CTZ	**Chatham Island**	**11.18**	**176**	S	Sn	06 13 27.5	-9.4
THZ	**Tophouse**	**11.80**	**216**	P	**Pn**	**06 11 41.8**	**+0.7**
RPZ	**Rata Peaks**	**14.16**	**215**	Sn	Sn	06 14 33.9	-16
	1.2nm,0.3s,baz=5.3,slow=22,SNR=1.9						
NIUE	**Niue**	**15.17**	**30**	Pn	**Pn**	**06 12 24.8**	**-2.3**
MSVF	**Nonsavu**	**15.25**	**345**	LR	LR	06 17 27.8	
	comp=Z,474nm,18.1s,baz=92,slow=34						
MLZ	**Mavora Lakes**	**16.81**	**216**	P	**Pn**	**06 12 47.6**	**-0.4**
OUENC	**Ouen Island, N**	**16.97**	**303**	Pn	**Pn**	**06 12 47.5**	**-2.7**
OUENC				IAmb	IAmb	06 12 56.8	
	comp=Z,40nm,1.1s						
DZM	**Mont Dzumac**	**17.48**	**303**	*eP*	Pn	06 12 43.7	-13
	comp=Z,53nm,1.6s						
DZM				*eLR*	LR	06 16 34.0	
	comp=Z,685nm,22.6s						
DZM	**Mont Dzumac**	**17.48**	**303**	Pn	**P**	**06 13 00.0**	**+2.3**
	comp=Z,0.5nm,0.3s,baz=127,slow=17,SNR=7.7						
DZM				LR	LR	06 18 38.8	
	comp=Z,1µm,18.4s,baz=132,slow=34						
RAR	**Rarotonga**	**19.61**	**59**	LR	LR	06 21 39.8	
	comp=Z,223nm,18.4s,baz=244,slow=39						
ARMA	**Armidale**	**26.14**	**266**	P	**P**	**06 14 26.3**	**-0.6**
TBI	**Tubuai**	**26.57**	**77**	*eLR*	LR	06 21 08.7	
	comp=Z,736nm,29.8s						
EIDS	**Eidsvold**	**28.11**	**277**	P	**P**	**06 14 44.5**	**0.0**
EIDS				IAmb	IAmb	06 14 48.0	
	comp=Z,9.8nm,0.8s						
PPT2	**Papeete2**	**29.46**	**66**	*eLR*	LR	06 22 25.7	
	comp=Z,128nm,24.5s						
PPT	**Papeete**	**29.47**	**66**	LR	LR	06 26 26.1	
	comp=Z,173nm,19.0s,baz=235,slow=36						
TOO	**Toolangi**	**30.35**	**250**	P	**P**	**06 15 03.5**	**-0.8**
HNR	**Honiara**	**30.90**	**313**	LR	LR	06 26 42.3	
	comp=Z,10nm,18.1s,baz=262,slow=35						
STKA	**Stephens Creek**	**34.24**	**260**	P	**P**	**06 15 39.6**	**+1.2**
	comp=Z,1.4nm,0.4s,baz=122,slow=11,SNR=3.4						
STKA				LR	LR	06 29 20.1	
	comp=Z,314nm,18.1s,baz=61,slow=36						
	comp=Z,1.4nm,0.4s						
CTA	**Charters Tower**	**34.39**	**282**	P	**P**	**06 15 40.5**	**+0.6**
	comp=Z,5.6nm,0.4s,baz=108,slow=9.1,SNR=11						
CTA				LR	LR	06 28 40.8	
	comp=Z,215nm,18.0s,baz=129,slow=35						
	comp=Z,5.6nm,0.4s						
CTAO	**Charters Tower**	**34.39**	**282**	P	**P**	**06 15 39.1**	**-0.7**
CTAO				IAmb	IAmb	06 15 53.8	
	comp=Z,7.1nm,0.8s						
BBOO	**Buckleboo**	**38.61**	**257**	P	**P**	**06 16 15.0**	**-0.8**
BBOO				IAmb	IAmb	06 16 39.4	
	comp=Z,9.8nm,1.1s						
COEN	**Coen**	**40.09**	**288**	P	**P**	**06 16 27.6**	**-0.7**
COEN				IAmb	IAmb	06 16 49.4	
	comp=Z,8.7nm,0.9s						
TAOE	**Nuku Hiva Isla**	**42.03**	**64**	*eLR*	LR	06 28 13.3	
	comp=Z,124nm,28.2s						
AS31	**Alice Springs**	**43.23**	**269**		**P**	**06 16 53.6**	**-0.4**
ASAR	**Alice Springs**	**43.23**	**269**	P	**P**	**06 16 53.3**	**-0.7**
	comp=Z,5.4nm,0.7s,baz=113,slow=7.9,SNR=36						
ASAR				LR	LR	06 33 51.1	
	comp=Z,110nm,19.1s,baz=107,slow=35						
	comp=Z,5.4nm,0.7s						
ASAR	**Alice Springs**	**43.23**	**269**	P	**P**	**06 16 52.7**	**-1.3**
WR8	**Warramunga Arr**	**44.27**	**274**		**P**	**06 17 01.7**	**-0.6**
WR8				IAmb	IAmb	06 17 03.7	
	comp=Z,9.9nm,0.6s						
WRA	**Warramunga Arr**	**44.41**	**274**	P	**P**	**06 17 02.7**	**-0.8**
	comp=Z,7.3nm,0.4s,baz=113,slow=8.0,SNR=65						
	comp=Z,7.3nm,0.4s						
WRA	**Warramunga Arr**	**44.41**	**274**	P	**P**	**06 17 02.4**	**-1.1**
WB0	**Warramunga Arr**	**44.45**	**274**		**P**	**06 17 03.1**	**-0.7**
FORT	**Forrest**	**45.72**	**257**		**P**	**06 17 12.8**	**-0.9**
VNDA	**Vanda**	**45.96**	**186**	LR	LR	06 33 01.8	
	comp=Z,94nm,18.6s,baz=344,slow=31						
JAY	**Jayapura**	**49.09**	**299**	LR	LR	06 38 24.5	
	comp=Z,60nm,18.5s,baz=320,slow=36						
MTN	**Manton Dam**	**50.54**	**281**	P	**P**	**06 17 50.5**	**-0.7**
MTN				IAmb	IAmb	06 17 59.6	
	comp=Z,5.0nm,0.7s						
KNRA	**Kununurra**	**51.09**	**276**		**P**	**06 17 54.7**	**-0.6**
KNRA				IAmb	IAmb	06 17 57.3	
	comp=Z,7.1nm,0.9s						
FITZ	**Fitzroy Crossi**	**52.58**	**271**	P	**P**	**06 18 05.5**	**-0.9**
	comp=Z,3.9nm,0.8s,baz=140,slow=5.8,SNR=12						
FITZ				LR	LR	06 40 29.2	
	comp=Z,281nm,18.2s,baz=109,slow=36						
	comp=Z,3.9nm,0.8s						
CASY	**Casey**	**53.32**	**209**	P	**P**	**06 18 14.0**	**+2.8**
CASY				IAmb	IAmb	06 18 33.2	
	comp=Z,11nm,1.1s						
MORW	**Morawa**	**56.12**	**255**	P	**P**	**06 18 31.9**	**-0.2**
MORW				IAmb	IAmb	06 18 45.9	
	comp=Z,8.4nm,1.1s						
MBWA	**Marble Bar**	**56.21**	**265**	P	**P**	**06 18 31.8**	**-0.9**
MBWA				IAmb	IAmb	06 18 37.8	
	comp=Z,5.1nm,0.9s						
QSPA	**South Pole Qui**	**57.54**	**180**	P	**P**	**06 18 45.6**	**+3.8**
	comp=Z,0.7nm,0.6s,baz=31,slow=0.2,SNR=7.1						
	comp=Z,0.7nm,0.6s						
QSPA	**South Pole Qui**	**57.54**	**180**	P	**P**	**06 18 45.8**	**+4.0**
BATI	**Baumata**	**58.14**	**279**	LR	LR	06 45 11.6	
	comp=Z,183nm,18.1s,baz=234,slow=38						
RPN	**Rapa Nui**	**58.70**	**104**	LR	LR	06 41 20.8	
	comp=Z,121nm,18.1s,baz=263,slow=33						
KAPI	**Kappang**	**64.20**	**281**	LR	LR	06 47 44.3	
	comp=Z,110nm,18.2s,baz=126,slow=36						
LEM	**Lembang**	**73.40**	**272**	LR	LR	06 53 30.4	
	comp=Z,135nm,19.1s,baz=194,slow=37						
VNA3	**Neumayer Olymp**	**76.13**	**176**	⇓P	P	06 20 52.8	+13
	comp=Z,23nm,0.7s						
VNA2	**Neumayer--Watz**	**76.56**	**177**	⇓P	P	06 20 54.8	+13
	baz=171,slow=5.2						
H03S2	**Juan Fernandez**	**79.11**	**123**	T	T	07 47 49.5	
	baz=243,slow=74						
H03S1	**Juan Fernandez**	**79.12**	**123**	T	T	07 47 50.8	
	baz=243,slow=74						
H03S3	**Juan Fernandez**	**79.13**	**123**	T	T	07 47 49.6	
	baz=243,slow=74						
H03N3	**Juan Fernandez**	**79.31**	**123**	T	T	07 48 06.9	
	baz=251,slow=74						
H03N2	**Juan Fernandez**	**79.31**	**123**	T	T	07 48 04.7	
	baz=251,slow=74						
H03N1	**Juan Fernandez**	**79.33**	**123**	T	T	07 48 08.0	
	baz=251,slow=74						
PLCA	**Paso Flores**	**80.89**	**133**	LR	LR	06 53 39.9	
	comp=Z,56nm,18.0s,baz=202,slow=33						
JNU	**Nakatsue**	**81.31**	**318**	LR	LR	06 55 23.7	
	comp=Z,38nm,18.3s,baz=54,slow=34						
KSRS	**Korea Array**	**86.13**	**320**	LR	LR	06 57 02.9	
	comp=Z,32nm,19.9s,baz=130,slow=34						
NVAR	**Mina Array Bea**	**89.70**	**43**	LR	LR	07 03 53.0	
	comp=Z,43nm,18.0s,baz=258,slow=37						
KLR	**Kul'dur**	**93.00**	**330**	LR	LR	07 02 37.5	
	comp=Z,46nm,19.3s,baz=190,slow=35						
CMIG	**Matias Romero**	**93.24**	**72**	LR	LR	06 56 57.0	
	comp=Z,40nm,19.0s,baz=178,slow=31						
CMAR	**Chiang Mai Arr**	**94.30**	**289**	LR	LR	07 07 59.2	
	comp=Z,19nm,18.4s,baz=160,slow=38						
MA2	**Magadan**	**95.43**	**345**	LR	LR	07 06 57.6	
	comp=Z,41nm,18.9s,baz=90,slow=37						
NEW	**Newport**	**97.01**	**36**	LR	LR	06 59 47.7	
	comp=Z,112nm,19.6s,baz=223,slow=32						
LPAZ	**La Paz**	**97.08**	**114**	LR	LR	07 02 40.3	
	comp=Z,26nm,18.0s,baz=183,slow=33						
MKAR	**Makanchi Array**	**119.30**	**309**	PKP	**PKiKP**	**06 27 42.0**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=148,slow=0.5,SNR=4.7						
MKAR	**Makanchi Array**	**119.30**	**309**		**PKiKP**	**06 27 42.8**	**+1.3**
ZALV	**Zalesovo Beam**	**119.77**	**318**	PKP	**PKiKP**	**06 27 42.9**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=134,slow=4.2,SNR=3.6						
KURK	**Kurchatov**	**122.68**	**313**		**PKiKP**	**06 27 49.6**	**+1.7**
KURBB	**Kurchatov Arra**	**122.71**	**313**	PKP	**PKiKP**	**06 27 48.4**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=110,slow=2.0,SNR=15						
BVAR	**Borovoye Array**	**128.08**	**315**	PKP	**PKiKP**	**06 27 59.3**	**+0.7**
	comp=Z,1.2nm,0.5s,baz=127,slow=5.9,SNR=7.0						
KBZ	**Khabaz**	**146.44**	**301**	PKPbc	**PKPab**	**06 28 34.3**	**+0.1**
	comp=Z,3.8nm,1.0s,baz=125,slow=2.6,SNR=9.1						
FINES	**FINESS Array B**	**147.24**	**339**	PKPbc	**PKPab**	**06 28 36.2**	**-0.5**
	comp=Z,7.3nm,0.5s,baz=51,slow=4.2,SNR=59						
FINES	**FINESS Array B**	**147.24**	**339**		**PKiKP**	**06 28 37.5**	**+0.1**
NB2	**NORSAR Subarra**	**150.92**	**351**	PKP	**PKiKP**	**06 28 46.1**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**150.92**	**351**	PKPbc	**PKiKP**	**06 28 45.0**	**0.0**
	comp=Z,1.6nm,0.7s,baz=17,slow=4.2,SNR=5.3						
HFS	**Hagfors**	**151.41**	**348**	PKPbc	**PKiKP**	**06 28 46.0**	**0.0**
	comp=Z,2.6nm,0.6s,baz=353,slow=4.8,SNR=6.6						
MMAI	**Mount Meron Ar**	**152.17**	**280**	PKPbc	**PKiKP**	**06 28 50.5**	**+2.0**
	comp=Z,2.4nm,0.5s,baz=114,slow=5.2,SNR=4.3						
AKASG	**Malin Array Be**	**153.12**	**320**	PKPbc	**PKiKP**	**06 28 51.1**	**+1.4**
	comp=Z,0.6nm,0.4s,baz=59,slow=2.2,SNR=7.0						
BRTR	**Keskin Array B**	**153.75**	**295**	PKPbc	**PKiKP**	**06 28 52.9**	**+1.2**
	comp=Z,1.2nm,0.5s,baz=113,slow=3.2,SNR=9.5						
TORD	**Torodi Ar. Bea**	**160.66**	**178**	PKPab	**PKPab**	**06 29 37.7**	**+3.2**
	comp=Z,0.8nm,0.6s,baz=199,slow=5.1,SNR=4.3						

ASRS ***12*** *06:10:49.0±0.8, 54.˚71N×83.˚77E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 12 06:10:51.7±1.8, 54.˚65N×83.˚85E, h0km, mbtmp2.6/3, ML2.1/3, Error ellipse: s-maj=15.5km s-min=9.9km az=7.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.90**	**141**	I	I	06 16 20.0	
	0.6nm,0.9s,baz=318,slow=333,SNR=36						
ZALV	**Zalesovo Beam**	**0.90**	**141**	Pg	Pg	06 11 08.0	-0.9
	1.8nm,0.3s,baz=324,slow=18,SNR=16						
ZALV				Lg	Lg	06 11 21.9	
	3.5nm,0.3s,baz=322,slow=28,SNR=13						
KURBB	**Kurchatov Arra**	**5.17**	**221**	Pn	Pn	06 12 11.3	+1.0
	baz=37,slow=16,SNR=1.8						
KURBB				Sn	Sn	06 13 09.5	-1.0
	baz=42,slow=30,SNR=2.4						
KURBB				Lg	Lg	06 13 36.3	
	baz=35,slow=31,SNR=4.8						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**7.93**	**188**	Pn	Pn	06 12 48.8	+0.7
	0.1nm,0.3s,baz=5.3,slow=12,SNR=2.5						
MKAR				Lg	Lg	06 15 04.0	
	0.1nm,0.3s,baz=11,slow=24,SNR=3.5						
	0.1nm,0.4s						
BVAR	**Borovoye Array**	**8.13**	**264**	Pn	Pn	06 12 49.2	-1.6
	baz=67,slow=16,SNR=1.2						
	0.3nm,0.3s						

IDC 12 06:12:49.9±3.2, 32.˚53S×178.˚28W, h0km, mb3.7/2, mbtmp3.7/3, ML3.6/1, Error ellipse: s-maj=73.8km s-min=37.6km az=115.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.85**	**212**	Pn	Pn	06 14 32.8	+1.2
	1.1nm,0.3s,baz=27,slow=16,SNR=1.4						
URZ				Sn	Sn	06 15 48.6	-1.6
	1.5nm,0.3s,baz=42,slow=19,SNR=9.4						
	5.9nm,0.6s						
ASAR	**Alice Springs**	**42.80**	**269**	P	P	06 20 49.4	-0.3
	0.2nm,0.3s,baz=108,slow=7.3,SNR=4.1						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**43.98**	**274**	P	P	06 20 59.2	0.0
	0.7nm,0.4s,baz=114,slow=8.1,SNR=7.5						
	0.7nm,0.4s						
FINES	**FINESS Array B**	**147.04**	**339**	PKPbc	PKPbc	06 32 33.0	-0.9
	2.0nm,0.7s,baz=29,slow=4.4,SNR=4.8						

UPP ***12*** *06:26:42.4±0.1, 67.˚84N×20.˚23E, h0km, ML2.5, Confirmed Induced event*

HEL ***12*** *06:26:43.1±0.2, 67.˚80N×20.˚18E, h0km, ML1.2, Suspected explosion*

**ISC 12 06:26:42.6±0.

ZALV				Lg	Lg	06 49 33.6		
	5.9nm,0.3s,baz=319,slow=29,SNR=23							
KURBB	**Kurchatov Arra**	**5.13**	**220**	Pn	Pn	06 50 20.2	+0.4	
	baz=41,slow=14,SNR=1.9							
KURBB				Pg	Pb	06 50 34.7	+2.3	
	baz=39,slow=15,SNR=4.9							
KURBB				Lg	Lg	06 51 42.1		
	baz=39,slow=30,SNR=1.4							
	0.2nm,0.3s							
MKAR	**Makanchi Array**	**7.91**	**187**	Pn	Pn	06 50 58.4	+0.3	
	0.1nm,0.3s,baz=8.6,slow=12,SNR=1.8							
MKAR				Lg	Lg	06 53 13.3		
	0.1nm,0.3s,baz=12,slow=28,SNR=2.0							
	0.1nm,0.3s							

IDC ***12*** *06:51:55.7±2.5, 30.˚44S×177.˚86W, h80km±14km, mb3.5/3, mbtmp3.9/4, Error ellipse: s-maj=54.9km s-min=16.2km az=104.0*

ISC 12 06:51:56.0±2.5, 30.˚4S±0.˚1×177.˚7W±0.˚4, h100km, n15, σ2§16/8, mb3.8/3, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.17**	**352**	P	**Pn**	**06 52 17.7**	**-0.6**
	334nm,0.3s,baz=222,slow=22,SNR=4.9						
RAO				S	**Sn**	**06 52 32.9**	**-2.3**
	1µm,0.3s,baz=135,slow=19,SNR=11						
URZ	**Urewera**	**8.90**	**207**	P	**Pn**	**06 54 02.3**	**+0.6**
	5.0nm,0.3s,baz=33,slow=11,SNR=7.6						
URZ				S	**Sn**	**06 55 36.6**	**-3.5**
	16nm,0.3s,baz=53,slow=23,SNR=16						
STKA	**Stephens Creek**	**34.69**	**257**	P	**P**	**06 58 38.0**	**+1.8**
	1.1nm,0.5s,baz=83,slow=8.1,SNR=3.5						
	1.1nm,0.5s						
ASAR	**Alice Springs**	**43.33**	**267**	P	**P**	**06 59 48.9**	**+0.6**
	0.2nm,0.3s,baz=105,slow=7.5,SNR=7.6						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**44.32**	**272**	P	**P**	**06 59 56.7**	**+0.5**
	0.8nm,0.5s,baz=111,slow=8.1,SNR=16						
	0.8nm,0.5s						
H03S2	**Juan Fernandez**	**80.27**	**123**	T	T	08 33 18.7	
	baz=238						
H03S1	**Juan Fernandez**	**80.28**	**123**	T	T	08 33 12.5	
	baz=238						
H03S3	**Juan Fernandez**	**80.28**	**123**	T	T	08 33 21.1	
	baz=238						
H03N3	**Juan Fernandez**	**80.46**	**123**	T	T	08 33 30.4	
	baz=236						
H03N2	**Juan Fernandez**	**80.46**	**123**	T	T	08 33 24.2	
	baz=236						
H03N1	**Juan Fernandez**	**80.47**	**123**	T	T	08 33 31.6	
	baz=236						
H10N3	**ASCENSION HYDR**	**38.70**	**154**	T	T	09 47 18.2	
	baz=203,slow=74,SNR=5.2						
H10N1	**ASCENSION HYDR**	**38.70**	**154**	T	T	09 47 08.4	
	baz=203,slow=74,SNR=7.7						
H10N2	**ASCENSION HYDR**	**38.71**	**154**	T	T	09 47 19.1	
	baz=203,slow=74,SNR=4.7						
FINES	**FINESS Array B**	**145.24**	**340**	PKPbc	**PKPab**	**07 11 22.2**	**+1.0**
	2.5nm,0.9s,baz=66,slow=3.5,SNR=6.4						

FUNV ***12*** *07:14:45.8, 6.˚79N×73.˚15W, h173km, MW4.0, Presumed earthquake*

RSNC ***12*** *07:14:47.8±0.0, 7.˚1N±1.˚7×7.˚3W±.˚, h148km±1km, M3.1, mB4.6, mb3.2, ML2.7, Mw(mB)3.8*

ISC 12 07:14:45.8±1.2, 6.˚88N±0.˚03×73.˚15W±0.˚04, h157km±7km, n42, σ1§37/77, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.28**	**187**	P	**Pn**	**07 15 07.7**	**+0.3**
BARC				S	**Sn**	**07 15 22.8**	**-1.1**
BRJC	**Barrancabermej**	**0.60**	**279**	P	**Pn**	**07 15 09.3**	**+0.9**
BRJC				S	**Sn**	**07 15 26.1**	**+0.5**
PAMC	**Pamplona, Colo**	**0.64**	**44**	P	**Pn**	**07 15 10.3**	**+1.1**
PAMC				S	**Sn**	**07 15 27.5**	**+0.4**
RUSC	**La Rusia**	**0.98**	**176**	P	**Pn**	**07 15 11.8**	**+0.2**
RUSC				S	**Sn**	**07 15 29.7**	**-1.7**
RUSC	**La Rusia**	**0.98**	**176**	*eP*	**Pn**	**07 15 12.0**	**+0.4**
RUSC				*eS*	**Sn**	**07 15 30.3**	**-1.0**
CAPV	**Capacho**	**1.28**	**40**	*eP*	**Pn**	**07 15 15.6**	**+1.6**
CAPV				*eS*	**Sn**	**07 15 36.7**	**+1.1**
PTBC	**PUERTO BERRIO,**	**1.34**	**256**	P	**Pn**	**07 15 14.2**	**-0.1**
PTBC				S	**Sn**	**07 15 35.1**	**-1.1**
OCAC	**Ocana**	**1.36**	**353**	P	**Pn**	**07 15 15.6**	**+0.9**
OCAC				S	**Sn**	**07 15 37.4**	**+0.5**
SPBC	**San Pablo de B**	**1.52**	**217**	P	**Pn**	**07 15 16.6**	**+0.4**
SPBC				S	**Sn**	**07 15 38.6**	**-1.0**
CHIC	**Chingaza**	**2.31**	**195**	P	**Pn**	**07 15 26.1**	**+0.7**
CHIC				S	**Sn**	**07 15 55.1**	**-0.7**
ROSC	**El Rosal**	**2.33**	**210**	P	**Pn**	**07 15 27.8**	**+2.1**
ROSC				S	**Sn**	**07 15 57.7**	**+1.3**
CVER	**Cruz Verde, Cu**	**2.52**	**202**	P	**Pn**	**07 15 29.4**	**+1.5**
CVER				S	**Sn**	**07 16 00.9**	**+0.5**
UREC	**San Jos de Ur**	**2.52**	**290**	P	**Pn**	**07 15 27.7**	**+0.2**
UREC				S	**Sn**	**07 15 58.2**	**-1.6**
SOCV	**Socops**	**2.67**	**58**	*eP*	**Pn**	**07 15 30.3**	**+1.0**
SOCV				*eS*	**Sn**	**07 16 02.1**	**-0.9**
GUY2C	**Guyana, Caldas**	**2.75**	**233**	P	**Pn**	**07 15 32.2**	**+1.4**
GUY2C				S	**Sn**	**07 16 07.4**	**+1.9**
VILC	**Villavicencio,**	**2.80**	**191**	P	**Pn**	**07 15 31.6**	**+0.5**
VILC				S	**Sn**	**07 16 05.5**	**-0.6**
CBOC	**Ciudad Bolivar**	**3.02**	**251**	P	**Pn**	**07 15 35.6**	**+1.7**
CBOC				S	**Sn**	**07 16 10.8**	**-0.3**
DBBC	**Dabeiba**	**3.04**	**273**	P	**Pn**	**07 15 35.4**	**+1.3**
DBBC				S	**Sn**	**07 16 10.4**	**-1.1**
ARGC	**Ariguani, Magd**	**3.16**	**340**	P	**Pn**	**07 15 37.8**	**+2.4**
ARGC				S	**Sn**	**07 16 16.5**	**+2.5**
SDV	**Santo Domingo**	**3.19**	**51**	P	**Pn**	**07 15 37.1**	**+1.1**
SDV				S	**Sn**	**07 16 14.1**	**-0.9**
SDV	**Santo Domingo**	**3.19**	**51**	*eP*	**Pn**	**07 15 36.9**	**+0.8**
SDV				*eS*	**Sn**	**07 16 13.9**	**-1.0**
MCQV	**Machiques**	**3.21**	**11**	*eP*	**Pn**	**07 15 36.4**	**+0.3**
MCQV				*eS*	**Sn**	**07 16 14.4**	**-0.8**
APAC	**Apartado, Choc**	**3.56**	**287**	P	**Pn**	**07 15 41.6**	**+1.1**
APAC				S	**Sn**	**07 16 21.6**	**-1.4**
PRAC	**Prado**	**3.59**	**209**	P	**Pn**	**07 15 41.5**	**+0.5**
PRAC				S	**Sn**	**07 16 23.0**	**-0.9**
SJCC	**San Jacinto, C**	**3.61**	**326**	P	**Pn**	**07 15 41.4**	**+0.1**
SJCC				S	**Sn**	**07 16 22.9**	**-1.6**
SJCC	**San Jacinto, C**	**3.61**	**326**	*eP*	**Pn**	**07 15 41.4**	**+0.1**
SJCC				*eS*	**Sn**	**07 16 22.7**	**-1.7**
PLMC	**San Jos del P**	**3.68**	**238**	P	**Pn**	**07 15 43.4**	**+1.2**
PLMC				S	**Sn**	**07 16 26.4**	**+0.3**
LCBC	**Los crdobas,**	**3.75**	**302**	P	**Pn**	**07 15 42.3**	**-0.7**
LCBC				S	**Sn**	**07 16 26.7**	**-0.8**
URMC	**La Uribe, Meta**	**3.81**	**199**	P	**Pn**	**07 15 44.5**	**+0.6**
URMC				S	**Sn**	**07 16 29.0**	**0.0**
YOTC	**Yotoco, Valle**	**4.29**	**228**	P	**Pn**	**07 15 50.6**	**+0.5**
YOTC				S	**Sn**	**07 16 39.7**	**-0.6**
MACC	**Macarena, Meta**	**4.75**	**188**	P	**Pn**	**07 15 55.7**	**-1.0**
MACC				S	**Sn**	**07 16 47.8**	**-3.2**
URIC	**Uribia, Colomb**	**4.93**	**13**	P	**Pn**	**07 15 58.0**	**-0.4**
URIC				S	**Sn**	**07 16 53.7**	**-1.4**
URIC	**Uribia, Colomb**	**4.93**	**13**	*eP*	**Pn**	**07 15 57.7**	**-0.7**
URIC				*eS*	**Sn**	**07 16 51.5**	**-3.7**
TEPV	**Terepaima**	**4.97**	**52**	*eP*	**Pn**	**07 15 58.4**	**-0.6**
JAMC	**Jamundi, Valle**	**5.06**	**224**	P	**Pn**	**07 16 01.4**	**+1.1**
	3.3nm,1.6s						
GARC	**Garzon, Huila**	**5.21**	**207**	P	**Pn**	**07 16 02.0**	**-0.4**
GARC				S	**Sn**	**07 16 58.8**	**-3.5**
MAPV	**Macapo**	**5.49**	**57**	*eP*	**Pn**	**07 16 05.6**	**-0.3**
POPC	**Popayan, Colom**	**5.56**	**219**	P	**Pn**	**07 16 08.2**	**+1.2**
	1.9nm,1.8s						
POPC				S	**Sn**	**07 17 10.0**	**-0.5**
	1.9nm,1.8s						
FLOC	**Florencia**	**5.82**	**206**	P	**Pn**	**07 16 10.2**	**-0.1**
	3.9nm,0.8s						
BENV	**Beln**	**6.29**	**60**	*eP*	**Pn**	**07 16 14.8**	**-1.6**
CACV	**CAICARA DEL OR**	**6.59**	**84**	*eP*	**Pn**	**07 16 24.8**	**+4.3**
TACV	**Tcata**	**6.87**	**61**	*eP*	**Pn**	**07 16 22.8**	**-1.4**

IDC ***12*** *07:27:35.5±0.6, 27.˚68S×13.˚26W, h0km, mb4.1/12, mbtmp4.1/12, MS4.4/56, Error ellipse: s-maj=25.3km s-min=17.0km az=152.0*

NEIC ***12*** *07:27:38.6±1.1, 27.˚6S±0.˚1×13.˚3W±0.˚1, h10km±1km, mb4.9/36, Error ellipse: s-maj=19.0km s-min=16.7km az=310.0*

GCMT ***12*** *07:27:41.6±0.1, 27.˚69S±0.˚01×13.˚44W±0.˚01, h12km, MW5.1/148, Moment Tensor Solution. s89,c108; s148,c265; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=5.98±.09; Mθθ 0.03±.09; Mϕϕ 5.95±.08; Mrθ 1.08±.29; Mθϕ -1.63±.08; Mϕr -0.63±.24; Best double couple: M₀6.30500×10¹⁶ NP1:φ=174.00000°, δ42.00000°, λ=-77.00000°. NP2:φ=337.00000°, δ50.00000°, λ=-101.00000°. Principal axes: T 6.4320, Plg4.0000°, Azm75.0000°; N -0.2580, Plg9.0000°, Azm344.0000°; P -6.1780, Plg80.0000°, Azm190.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 07:27:38.1±0.4, 27.˚59S±0.˚10×13.˚35W±0.˚08, h13km, n117, σ0§83/59, mb4.8/27, MS4.4/59, 1C-1D, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	**18.57**	**356**	T	T	07 51 01.6	
	baz=176,slow=74,SNR=67						
H10S3	**ASCENSION HYDR**	**18.58**	**356**	T	T	07 51 05.3	
	baz=44,slow=74,SNR=52						
H10N1	**ASCENSION HYDR**	**19.67**	**357**	T	T	07 52 25.7	
	baz=177,slow=74,SNR=5.0						
H10N3	**ASCENSION HYDR**	**19.68**	**357**	T	T	07 52 26.9	
	baz=177,slow=74						
H10N2	**ASCENSION HYDR**	**19.69**	**357**	T	T	07 52 31.1	
	baz=177						
WIN	**Windhoek**	**27.99**	**87**	P	**P**	**07 33 28.8**	**-0.2**
TSUM	**Tsumeb**	**29.53**	**80**	LR	LR	07 43 55.9	
	comp=Z,90µm,18.1s,baz=279,slow=33						
TSUM	**Tsumeb**	**29.53**	**80**	P	**P**	**07 33 42.9**	**+0.3**
SUR	**Sutherland**	**29.89**	**108**	LR	LR	07 42 59.9	
	comp=Z,2µm,21.3s,baz=266,slow=31						
RCBR	**Riachuelo**	**30.46**	**311**	LR	LR	07 42 60.0	
	comp=Z,187nm,20.4s,baz=116,slow=30						
RCBR	**Riachuelo**	**30.46**	**311**	P	**P**	**07 33 50.6**	**-0.2**
KOOLE	**Kule**	**30.61**	**89**	P	**P**	**07 33 51.7**	**-0.5**
KOOLE				IAmb	IAmb	07 34 00.1	
	comp=Z,14nm,0.9s						
VAO	**Valinhos**	**30.68**	**271**	P	**P**	**07 33 52.7**	**0.0**
GRTLG	**Ghanzi**	**31.99**	**87**	P	**P**	**07 34 04.5**	**+0.1**
GRTLG				IAmb	IAmb	07 34 07.6	
	comp=Z,24nm,1.6s						
KGCAE	**Kacgae**	**32.44**	**90**	P	**P**	**07 34 08.1**	**-0.2**
KGCAE				IAmb	IAmb	07 34 16.6	
	comp=Z,26nm,1.2s						
BOSA	**Boshof**	**33.97**	**101**	P	**P**	**07 34 19.1**	**-2.5**
	comp=Z,3.5nm,0.8s,baz=276,slow=7.3,SNR=5.9						
BOSA				LR	LR	07 45 49.4	
	comp=Z,2µm,20.1s,baz=267,slow=32						
	comp=Z,3.5nm,0.8s						
BOSA	**Boshof**	**33.97**	**101**	P	**P**	**07 34 21.4**	**-0.2**
BDFB	**Brasilia**	**34.23**	**283**	P	**P**	**07 34 23.8**	**-0.2**
	comp=Z,4.2nm,0.8s,baz=124,slow=8.5,SNR=7.7						
BDFB				LR	LR	07 45 51.6	
	comp=Z,1µm,20.8s,baz=130,slow=32						
	comp=Z,4.2nm,0.8s						
BDFB	**Brasilia**	**34.23**	**283**		**P**	**07 34 24.4**	**+0.4**
BDFB				IAmb	IAmb	07 34 25.8	
	comp=Z,14nm,1.2s						
LBTB	**Lobatse**	**34.91**	**95**	LR	LR	07 46 47.6	
	comp=Z,837nm,18.1s,baz=250,slow=33						
LBTB	**Lobatse**	**34.91**	**95**		**P**	**07 34 29.5**	**-0.3**
DBIC	**Dimbokro**	**35.04**	**15**	LR	LR	07 45 13.5	
	comp=Z,316nm,20.2s,baz=203,slow=30						
KHWEE	**KHWEE**	**35.57**	**90**	P	**P**	**07 34 34.5**	**-1.0**
TRCB	**Terra Rica**	**35.77**	**269**	P	**P**	**07 34 37.6**	**+0.6**
TRCB				IAmb	IAmb	07 34 43.6	
	comp=Z,33nm,1.5s						
KSANE	**Kasane**	**36.71**	**83**	P	**P**	**07 34 45.5**	**+0.2**
EDA	**Edea**	**38.55**	**40**	P	**P**	**07 35 01.6**	**+0.9**
EDA				IAmb	IAmb	07 35 03.7	
	comp=Z,30nm,1.8s						
CPUP	**Villa Florida**	**39.07**	**261**	P	**P**	**07 35 04.8**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=115,slow=5.2,SNR=3.1						
CPUP				LR	LR	07 49 14.7	
	comp=Z,923nm,18.8s,baz=104,slow=33						
	comp=Z,0.8nm,0.6s						
LSZ	**Lusaka**	**40.38**	**81**	LR	LR	07 50 34.5	
	comp=Z,2µm,18.2s,baz=256,slow=34						
LSZ	**Lusaka**	**40.38**	**81**		**P**	**07 35 15.9**	**-0.2**
TORD	**Torodi Ar. Bea**	**43.05**	**22**	P	**P**	**07 35 37.6**	**-0.1**
	comp=Z,4.1nm,1.2s,baz=203,slow=8.3,SNR=8.2						
	comp=Z,4.1nm,1.2s						
PTLB	**Pontes e Lacer**	**44.05**	**276**		**P**	**07 35 45.8**	**-0.1**
SNAA	**Sanae**	**44.51**	**175**	LR	LR	07 50 11.9	
	comp=Z,231nm,20.2s,baz=356,slow=30						
VILB	**Vilhena**	**46.03**	**279**	P	**P**	**07 36 01.8**	**+0.1**
VILB				IAmb	IAmb	07 36 22.1	
	comp=Z,12nm,1.1s						
CFA	**Coronel Fontan**	**47.48**	**251**	P	**P**	**07 36 12.3**	**-0.7**
	comp=Z,1.3nm,0.9s,baz=98,slow=12,SNR=5.4						
CFA				LR	LR	07 54 10.5	
	comp=Z,511nm,19.9s,baz=128,slow=34						
	comp=Z,1.3nm,0.9s						
PLCA	**Paso Flores**	**48.33**	**239**	P	**P**	**07 36 19.5**	**0.0**
	comp=Z,2.0nm,0.9s,baz=86,slow=4.5,SNR=5.8						
PLCA				LR	LR	07 52 56.2	
	comp=Z,283nm,21.2s,baz=101,slow=32						
	comp=Z,2.0nm,0.9s						
PLCA	**Paso Flores**	**48.33**	**239**	P	**P**	**07 36 20.3**	**+0.8**
PLCA				IAmb	IAmb	07 36 38.7	
	comp=Z,14nm,1.5s						
MT08	**Bocatoma Ro**	**48.66**	**248**	P	**P**	**07 36 22.8**	**+0.4**
ELIB	**Princess Elisa**	**48.73**	**166**	*dP*	**P**	**07 36 23.3**	**+1.2**
MT13	**San Alfonso**	**48.84**	**248**	P	**P**	**07 36 24.0**	**+0.4**
PMSA	**Palmer Station**	**48.91**	**206**	LR	LR	07 54 01.9	
	comp=Z,456nm,18.0s,baz=62,slow=32						
BO04	**La Punta**	**49.07**	**248**	P	**P**	**07 36 25.9**	**+0.7**
BO04				IAmb	IAmb	07 37 01.8	
	comp=Z,30nm,1.7s						
MT16	**CCHEN**	**49.08**	**248**	P	**P**	**07 36 25.6**	**+0.2**
MT16				IAmb	IAmb	07 36 35.5	
	comp=Z,29nm,1.4s						
BO02	**Sierra Bellavi**	**49.09**	**247**		**P**	**07 36 25.5**	**+0.1**
AC02	**Maricunga**	**49.24**	**257**		**P**	**07 36 27.7**	**+0.5**
AC02				IAmb	IAmb	07 36 37.5	
	comp=Z,14nm,1.3s						
CO03	**El Pedregal**	**49.69**	**252**	P	**P**	**07 36 29.9**	**-0.1**
CO03				IAmb	IAmb	07 36 40.0	
	comp=Z,38nm,2.0s						
GO09	**Cerro Castillo**	**49.78**	**225**		**P**	**07 36 31.1**	**+0.8**
MDP	**Montaynes ales**	**49.95**	**305**	LR	LR	07 54 58.7	
	comp=Z,415nm,21.9s,baz=143,slow=33						
MBAR	**Mbarara**	**50.04**	**65**	LR	LR	07 55 42.6	
	comp=Z,519nm,19.1s,baz=228,slow=34						
AC01	**Pan de Azucar**	**50.69**	**258**		**P**	**07 36 37.9**	**+0.2**
AC01				IAmb	IAmb	07 36 49.5	
	comp=Z,27nm,1.2s						
PB01	**IPOC Station P**	**51.22**	**264**	P	**P**	**07 36 42.5**	**+0.8**
PB01				IAmb	IAmb	07 36 47.0	
	comp=Z,45nm,1.8s						
BELA	**Belgrano 2**	**51.31**	**186**	P	**P**	**07 36 41.2**	**-0.3**
LPAZ	**La Paz**	**51.69**	**271**	P	**P**	**07 36 45.5**	**-0.3**
	comp=Z,1.1nm,0.9s,baz=90,slow=7.1,SNR=4.9						
LPAZ				LR	LR	07 57 06.8	
	comp=Z,738nm,20.1s,baz=106,slow=34						
	comp=Z,1.1nm,0.9s						
PB16	**IPOC Station P**	**52.16**	**268**	P	**P**	**07 36 49.3**	**-0.1**
PB16				IAmb	IAmb	07 36 55.2	
	comp=Z,31nm,1.9s						
KMBO	**Kilima Mbogo**	**55.09**	**70**	LR	LR	07 58 57.9	
	comp=Z,920nm,19.5s,baz=272,slow=34						
OPO	**Ambohidratompo**	**55.95**	**95**	LR	LR	07 59 16.8	
	comp=Z,417nm,19.6s,baz=32,slow=34						
LODK	**Lodwar**	**56.13**	**65**	P	**P**	**07 37 18.9**	**+1.1**
MAW	**Mawson**	**59.56**	**154**	LR	LR	07 59 49.6	
	comp=Z,139nm,18.1s,baz=280,slow=32						
MDT	**Midelt**	**60.65**	**8**	LR	LR	08 01 13.7	
	comp=Z,248nm,19.1s,baz=192,slow=33						
MD31	**MD31**	**60.68**	**8**		**P**	**07 37 49.4**	**+0.3**
NNA	**Nana**	**61.14**	**271**	LR	LR	08 03 24.1	
	comp=Z,734nm,19.6s,baz=122,slow=35						
FURI	**Furi**	**62.04**	**62**	LR	LR	08 03 55.4	
	comp=Z,263nm,18.4s,baz=203,slow=35						
QSPA	**South Pole Qui**	**62.63**	**180**	P	**P**	**07 38 01.6**	**-0.5**
	comp=Z,3.7nm,0.9s,baz=218,slow=4.7,SNR=7.3						
QSPA				LR	LR	08 02 02.4	
	comp=Z,212nm,18.0s,baz=197,slow=33						
	comp=Z,3.7nm,0.9s						
QSPA	**South Pole Qui**	**62.63**	**180**	P	**P**	**07 38 02.9**	**+0.8**
ATAH	**Atahualpa**	**64.63**	**275**	LR	LR	08 05 31.3	
	comp=Z,600nm,20.9s,baz=139,slow=35						
SDV	**Santo Domingo**	**66.22**	**295**	LR	LR	08 05 22.9	
	comp=Z,746nm,20.1s,baz=114,slow=34						
SDV	**Santo Domingo**	**66.22**	**295**		**P**	**07 38 25.2**	**-1.1**
SDV				IAmb	IAmb	07 38 28.5	
	comp=Z,10nm,1.1s						
KEST	**Kesra**	**66.53**	**20**	P	**P**	**07 38 27.0**	**-0.7**
	comp=Z,1.8nm,0.7s,baz=297,slow=5.9,SNR=3.7						
KEST				LR	LR	08 05 12.8	
	comp=Z,610nm,19.9s,baz=220,slow=34						
	comp=Z,1.8nm,0.7s						
ATD	**Arta Tunnel**	**66.89**	**62**	LR	LR	08 07 16.9	
	comp=Z,14nm,18.4s,baz=196,slow=36						
ROSC	**El Rosal**	**67.01**	**289**	LR	LR	08 06 03.4	
	comp=Z,694nm,21.8s,baz=153,slow=34						
ESDC	**Sonseca Array**	**67.49**	**8**	LR	LR	08 05 59.2	
	comp=Z,169nm,18.6s,baz=166,slow=34						
SJG	**San Juan**	**68.41**	**305**	LR	LR	08 08 24.5	
	comp=Z,229nm,19.4s,baz=100,slow=36						
VAE	**Valguarnera**	**69.78**	**23**	LR	LR	08 05 23.9	
	comp=Z,323nm,22.0s,baz=192,slow=32						
CEST	**Esterri de Car**	**71.13**	**11**	P	**P**	**07 38 56.4**	**+0.2**
CEST				IAmb	IAmb	07 39 06.4	
	comp=Z,14nm,1.2s						
TIP	**Timpagrande**	**72.13**	**24**	P	**P**	**07 39 03.2**	**+0.9**
TIP				IAmb	IAmb	07 39 10.1	
	comp=Z,18nm,1.4s						
IDI	**Anoyia**	**72.22**	**32**	LR	LR	08 10 42.7	
	comp=Z,82nm,19.1s,baz=230,slow=36						
EIL	**Elat**	**73.33**	**43**	LR	LR	08 11 46.8	
	comp=Z,262nm,18.2s,baz=241,slow=36						
VNDA	**Vanda**	**75.09**	**179**	LR	LR	08 07 54.9	
	comp=Z,272nm,21.7s,baz=165,slow=32						
MMAI	**Mount Meron Ar**	**76.01**	**41**	LR	LR	08 09 31.7	
	comp=Z,190nm,21.8s,baz=194,slow=33						
ASF	**Jabal al Asfar**	**76.28**	**42**	LR	LR	08 10 26.5	
	comp=Z,221nm,20.8s,baz=204,slow=34						
DAVOX	**Davos/Dischmat**	**76.95**	**16**	LR	LR	08 12 18.9	
	comp=Z,175nm,18.8s,baz=218,slow=35						
JTS	**Las Juntas de**	**78.82**	**288**	LR	LR	08 12 54.0	
	comp=Z,295nm,21.6s,baz=102,slow=34						
GERES	**GERESS Array B**	**79.85**	**18**	LR	LR	08 12 48.0	
	comp=Z,158nm,20.6s,baz=254,slow=34						
BRTR	**Keskin Array B**	**80.00**	**35**	P	**P**	**07 39 47.3**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=197,slow=3.9,SNR=5.4						
BRTR				LR	LR	08 17 09.9	
	comp=Z,40nm,18.5s,baz=258,slow=37						
	comp=Z,1.1nm,0.8s						
MLR	**Muntele Rosu**	**81.04**	**27**	LR	LR	08 15 49.4	
	comp=Z,118nm,19.2s,baz=215,slow=36						
VRAC	**Vranov**	**81.08**	**19**	LR	LR	08 15 41.5	
	comp=Z,286nm,18.1s,baz=212,slow=36						
PLOR	**Plostina**	**81.62**	**27**	⇑S	S	07 50 18.2	+11
RPN	**Rapa Nui**	**82.73**	**243**	LR	LR	08 14 15.5	
	comp=Z,346nm,18.3s,baz=90,slow=34						
EKA	**Eskdalemuir Ar**	**83.05**	**6**	LR	LR	08 15 02.2	
	comp=Z,108nm,18.1s,baz=188,slow=34						
APG	**El Apazote**	**85.83**	**289**	LR	LR	08 21 19.8	
	comp=Z,14nm,18.0s,baz=70,slow=38						
GNI	**Garni**	**86.35**	**41**	LR	LR	08 17 10.9	
	comp=Z,130nm,21.6s,baz=234,slow=34						
AKASG	**Malin Array Be**	**86.56**	**26**	P	**P**	**07 40 20.7**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=218,slow=5.3,SNR=4.3						
AKASG				LR	LR	08 18 38.7	
	comp=Z,67nm,19.7s,baz=240,slow=35						
	comp=Z,0.7nm,0.5s						
KBZ	**habaz**	**87.70**	**37**	LR	LR	08 21 50.3	
	comp=Z,78nm,18.0s,baz=212,slow=37						
HFS	**Hagfors**	**90.19**	**13**	LR	LR	08 20 48.8	
	comp=Z,140nm,18.0s,baz=216,slow=35						
NOA	**NORSAR Array B**	**90.55**	**12**	P	**P**	**07 40 40.6**	**+1.2**
	comp=Z,2.7nm,1.1s,baz=195,slow=5.1,SNR=2.1						
NOA				LR	LR	08 19 55.9	
	comp=Z,66nm,21.3s,baz=195,slow=35						
	comp=Z,2.7nm,1.1s						
CMIG	**Matias Romero**	**90.55**	**289**	LR	LR	08 21 11.8	
	comp=Z,181nm,20.6s,baz=124,slow=36						
TKL	**Tuckaleechee C**	**91.45**	**310**	LR	LR	08 15 01.0	
	comp=Z,68nm,20.4s,baz=154,slow=31						
BORG	**Borgarnes**	**92.25**	**357**	LR	LR	08 15 24.0	
	comp=Z,66nm,18.9s,baz=151,slow=31						
SADO	**Sadowa**	**93.68**	**319**	LR	LR	08 16 10.5	
	comp=Z,50nm,18.7s,baz=152,slow=31						
SCHQ	**Schefferville**	**94.03**	**332**	LR	LR	08 16 36.8	
	comp=Z,79nm,19.6s,baz=158,slow=31						
FINES	**FINESS Array B**	**94.28**	**18**	LR	LR	08 22 42.5	
	comp=Z,181nm,20.8s,baz=216,slow=35						
PALK	**Pallekele**	**96.90**	**85**	LR	LR	08 19 33.4	
	comp=Z,501nm,19.3s,baz=242,slow=32						
SFJD	**Kangerlussuaq**	**98.40**	**346**	LR	LR	08 16 02.7	
	comp=Z,78nm,20.5s,baz=154,slow=30						
TBI	**Tubuai**	**113.97**	**224**	*e*LR	LR	08 20 19.6	
	comp=Z,2µ

BRZS	**Berezniki**	**3.91**	**273**	Pg	**Pg**	**07 30 30.7**	**-0.9**
	0.7nm,0.3s							
BRZS				Lg	Lg	07 31 22.4		
	12nm,0.6s							
MK31	**Makanchi Array**	**3.95**	**142**	⇓Pn	**Pn**	**07 30 19.8**	**+1.3**
	0.1nm,0.2s,baz=329,slow=10,SNR=7.8							
MK31				⇑Pg	**Pb**	**07 30 29.4**	**+2.2**
	1.6nm,0.5s,baz=327,slow=14,SNR=24							
MK31				⇑Lg	Lg	07 31 23.6		
	15nm,0.6s,baz=331,slow=25,SNR=13							
MKAR	**Makanchi Array**	**3.95**	**142**	Pn	**Pn**	**07 30 21.0**	**+2.4**
	0.2nm,0.3s,baz=322,slow=12,SNR=6.3							
MKAR				Pg	**Pg**	**07 30 29.6**	**-2.8**
	0.6nm,0.3s,baz=323,slow=18,SNR=22							
MKAR				Sn	**Sn**	**07 31 07.7**	**+2.1**
	0.4nm,0.3s,baz=328,slow=13,SNR=4.3							
MKAR				Lg	Lg	07 31 22.2		
	1.2nm,0.3s,baz=330,slow=27,SNR=14							
	0.3nm,0.5s							
ZSN	**Zaisan**	**4.77**	**119**	Pg	**Pg**	**07 30 45.8**	**-2.2**
	3.9nm,0.3s							
ZSN				Lg	Lg	07 31 48.6		
	21nm,0.8s							
ZALV	**Zalesovo Beam**	**5.49**	**41**	Pn	**Pn**	**07 30 40.7**	**+1.2**
	0.2nm,0.3s,baz=232,slow=14,SNR=10							
ZALV				Lg	Lg	07 32 05.2		
	0.3nm,0.3s,baz=226,slow=29,SNR=3.9							
	1.8nm,0.5s							
I46RU	**ZALESOVO INFRA**	**5.49**	**41**	I	I	08 00 10.0		
	0.2nm,1.0s,baz=221,slow=321,SNR=5.6							
KNOS	**Konyrlen**	**5.61**	**177**	Pg	**Pg**	**07 31 03.1**	**-1.1**
	1.1nm,0.2s							
KNOS				Lg	Lg	07 32 17.8		
	5.9nm,0.5s							
DJR	**Jarkent**	**5.67**	**172**	Pg	**Pg**	**07 31 04.6**	**-0.8**
	3.3nm,0.9s							
DJR				Lg	Lg	07 32 20.5		
	4.7nm,0.7s							
ARXS	**Arharly**	**5.78**	**187**	Pg	**Pg**	**07 31 05.2**	**-2.2**
	1.6nm,0.6s							
ARXS				Lg	Lg	07 32 21.6		
	12nm,0.6s							
BLB	**Baldybastay**	**5.87**	**182**	Pg	**Pg**	**07 31 07.2**	**-1.9**
	5.0nm,0.5s							
BLB				Lg	Lg	07 32 24.9		
	34nm,0.9s							
BLB				S	**Sg**	**07 32 25.2**	**+0.2**
	18nm,0.8s							
BVA0	**Borovoye Array**	**6.05**	**304**	Sn	**Sn**	**07 31 57.3**	**+0.1**
	2.0nm,0.7s,baz=280,slow=35,SNR=10							
BVA0				⇑Lg	Lg	07 32 27.3		
	4.8nm,1.3s,baz=120,slow=26,SNR=4.8							
BVAR	**Borovoye Array**	**6.05**	**304**	Pn	**Pn**	**07 30 48.3**	**+0.9**
	baz=112,slow=14,SNR=1.3							
BVAR				Pg	**Pb**	**07 31 01.5**	**-1.4**
	baz=109,slow=15,SNR=2.0							
BVAR				Sn	**Sn**	**07 31 53.8**	**-3.5**
	0.1nm,0.3s,baz=112,slow=20,SNR=11							
BVAR				Lg	Lg	07 32 25.4		
	0.1nm,0.3s,baz=118,slow=25,SNR=6.3							
	0.2nm,0.3s							
KUU	**Kurty**	**6.29**	**196**	Pg	**Pg**	**07 31 15.7**	**-1.3**
	0.6nm,0.1s							
KUU				Lg	Lg	07 32 39.9		
	9.3nm,0.7s							
KPKS	**Kokpek**	**6.50**	**180**	Pg	**Pg**	**07 31 19.3**	**-1.8**
	0.4nm,0.2s							
UZB	**Uzynbulak**	**6.82**	**178**	Pg	**Pg**	**07 31 25.7**	**-1.5**
	4.6nm,0.4s							
SHLS	**Shalkode**	**6.82**	**176**	Pg	**Pg**	**07 31 26.4**	**-0.9**
	1.2nm,0.1s							
SATY	**Saty**	**6.91**	**182**	Lg	Lg	07 32 57.7		
	4.5nm,0.1s							
TNSS	**Tian-Shan**	**7.03**	**191**	Lg	Lg	07 33 04.8		
	1.9nm,0.7s							
KST	**Kastek**	**7.18**	**197**	Lg	Lg	07 33 07.9		
	7.4nm,0.8s							
AAK	**Ala-Archa**	**7.89**	**203**	Lg	Lg	07 33 26.5		
	0.2nm,0.3s,baz=279,slow=21,SNR=5.4							

SOME 12 07:31:32.5, 45.70N×79.07E, h15km, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	**1.46**	**159**	*eP*	Pn	07 31 58.8	+0.4
	1.0nm,0.2s						
DJR				*eS*	Sb	07 32 17.6	-0.2
	3.1nm,0.5s						
ARXS	**Arharly**	**1.73**	**211**	*eP*	Pb	07 32 03.9	-0.1
	1.5nm,0.6s						
ARXS				*eS*	Sb	07 32 26.4	+0.9
	24nm,0.8s						
KPKS	**Kokpek**	**2.25**	**187**	*eP*	Pg	07 32 14.6	-1.1
	0.4nm,0.2s						
KPKS				*eS*	Sg	07 32 45.1	+0.3
	2.3nm,0.3s						
SHLS	**Shalkode**	**2.56**	**174**	*eP*	Pg	07 32 20.0	-1.5
	0.9nm,0.1s						
SHLS				*eS*	Sg	07 32 54.3	-0.4
	5.3nm,0.3s						
TNSS	**Tian-Shan**	**3.07**	**210**	*eP*	Pb	07 32 27.7	+0.7
	0.5nm,0.2s						
TNSS				*eS*	Sb	07 33 07.0	+2.7
	3.1nm,0.6s						

NNC ***12*** *07:38:22.8±0.6, 50.05N×76.13E, h0km, mb2.7, mpv2.5, Error ellipse: s-maj=11.4km s-min=4.1km az=156.0, Suspected Mining explosion.*
IDC ***12*** *07:38:25.2±1.5, 50.10N×76.34E, h0km, mbtmp2.5/3, ML2.0/3, Error ellipse: s-maj=20.4km s-min=12.0km az=20.0*
ISC 12 07:38:24.2±3.0, 50.0N±0.2×76.3E±0.1, h0km, n8, σ1s12/8, 4C-1D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**1.59**	**66**	Pn	**Pn**	**07 38 52.5**	**-1.0**
	0.6nm,0.3s,baz=255,slow=15,SNR=39						
KURBB				Lg	Lg	07 39 14.0	
	0.6nm,0.3s,baz=263,slow=28,SNR=13						
KURBB	**Kurchatov Arra**	**1.59**	**66**	⇑P	**Pn**	**07 38 52.7**	**-0.9**
	4.5nm,0.6s						
KURBB				⇑S	**Sb**	**07 39 15.0**	**0.0**
	11nm,0.7s						
KURK	**Kurchatov**	**1.68**	**64**	⇑P	**Pn**	**07 38 53.8**	**-1.0**
	1.7nm,0.6s						
KURK				⇓S	**Sn**	**07 39 17.2**	**+0.2**
	2.7nm,0.6s						
BVAR	**Borovoye Array**	**4.75**	**312**	Pn	**Pn**	**07 39 38.1**	**+1.1**
	baz=122,slow=15,SNR=1.7						
BVAR				Lg	Lg	07 40 52.4	
	baz=113,slow=22,SNR=2.5						
	0.4nm,0.6s						
MK31	**Makanchi Array**	**5.14**	**126**	⇑Lg	Lg	07 41 09.0	
	0.9nm,0.7s,baz=311,slow=26,SNR=5.6						
MKAR	**Makanchi Array**	**5.14**	**126**	Pn	**Pn**	**07 39 43.9**	**+1.5**
	0.1nm,0.3s,baz=314,slow=13,SNR=1.8						
MKAR				Lg	Lg	07 41 07.5	
	0.2nm,0.3s,baz=316,slow=26,SNR=7.6						
	0.1nm,0.3s						
I46RU	**ZALESOVO INFRA**	**6.61**	**50**	I	I	08 20 40.0	
	baz=234,slow=314,SNR=3.1						
ZALV	**Zalesovo Beam**	**6.61**	**50**	Pn	**Pn**	**07 40 02.4**	**-0.1**
	0.2nm,0.3s,baz=245,slow=16,SNR=3.3						
	0.5nm,0.3s						

AFAD ***12*** *08:00:48.8, 39.00N×27.86E, h7km±2km, ML3.2*
ISK ***12*** *08:00:48.5, 39.01N×27.86E, h12km, ML3.6/42*
THE ***12*** *08:00:50.1, 39°N±2°×27.8E±°, h6km±14km, M3.1/14, MLh3.1/14*
ISC 12 08:00:49.1±0.8, 39.01N±0.02×27.86E±0.02, h11km±7km, n78, σ0s43/103, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.14**	**195**	P	**Pg**	**08 00 52.0**	**-0.4**
AKHS				S	**Sg**	**08 00 54.5**	**-0.2**
AKHS				IAML		08 00 55.0	
	comp=E,3μm,0.3s						
GORD	**Gordes-Manisa**	**0.27**	**112**	Pg	**Pg**	**08 00 54.6**	**0.0**
GORD				Sg	**Sg**	**08 00 59.1**	**+0.7**
SOMA	**Soma-Manisa**	**0.29**	**300**	Pg	**Pg**	**08 00 54.7**	**-0.3**
SOMA				Sg	**Sg**	**08 00 59.6**	**+0.6**
GOMA	**Golmarmara-Man**	**0.30**	**171**	Pg	**Pg**	**08 00 55.3**	**0.0**
GOMA				Sg	**Sg**	**08 01 00.1**	**+0.7**
KTTT	**Salihli**	**0.37**	**150**	P	**Pg**	**08 00 56.3**	**-0.2**
KTTT				S	**Sg**	**08 01 01.8**	**+0.4**
STEP	**BALIKESIR_Sava**	**0.38**	**344**	P	**Pg**	**08 00 55.7**	**-1.0**
STEP				S	**Sg**	**08 01 02.6**	**+0.7**
CAMT	**Merkez**	**0.50**	**239**	P	**Pg**	**08 00 58.8**	**0.0**
CAMT				S	**Sb**	**08 01 06.7**	**-0.4**
CAMT				IAML		08 01 09.0	
	comp=N,3μm,0.4s						
CAMT				IAML		08 01 10.0	
	comp=E,4μm,0.5s						
ZEDA	**zmir-Bergama**	**0.61**	**266**	P	**Pg**	**08 01 00.7**	**-0.3**
ZEDA				S	**Sb**	**08 01 09.9**	**-0.4**
ZEDA				IAML		08 01 13.0	
	comp=N,591nm,0.5s						
BALB	**Balikesir**	**0.63**	**2**	Pg	**Pg**	**08 01 00.9**	**-0.4**
BALB				Sg	**Sb**	**08 01 11.0**	**+0.1**
DEMI	**Demirci**	**0.67**	**87**	P	**Pg**	**08 01 02.1**	**0.0**
IZMD	**zmir-Dikili-**	**0.72**	**268**	P	**Pg**	**08 01 02.5**	**-0.6**
IZMD				S	**Sg**	**08 01 12.7**	**0.0**
BKES	**Balkesir-Mer**	**0.72**	**4**	P	**Pg**	**08 01 02.6**	**-0.5**
BKES				S	**Sb**	**08 01 13.4**	**-0.2**
BKES				IAML		08 01 19.0	
	comp=N,759nm,0.7s						
DKL	**Dikili**	**0.74**	**275**	Pg	**Pg**	**08 01 03.5**	**0.0**
DKL				Sg	**Sb**	**08 01 14.3**	**+0.1**
ODEM	**Odemis-Izmir**	**0.75**	**167**	Pg	**Pb**	**08 01 03.7**	**-0.5**
BALY	**Balya**	**0.75**	**346**	P	**Pg**	**08 01 03.2**	**-0.4**
BALY				S	**Sb**	**08 01 14.6**	**+0.1**
BALY				IAML		08 01 16.0	
	comp=E,770nm,0.4s						
BALY				IAML		08 01 20.0	
	comp=N,1μm,0.5s						
MANT	**Manisa**	**0.75**	**133**	P	**Pg**	**08 01 03.4**	**-0.4**
DURS	**Dursunbey**	**0.76**	**39**	P	**Pg**	**08 01 03.3**	**-0.5**
DURS				S	**Sb**	**08 01 15.1**	**+0.4**
DURS				IAML		08 01 19.0	
	comp=E,921nm,0.3s						
DURS				IAML		08 01 19.0	
	comp=N,716nm,0.7s						
BUHA	**Balikesir, Bur**	**0.78**	**309**	P	**Pb**	**08 01 04.5**	**-0.1**
KULA	**Kula-Manisa**	**0.80**	**128**	Pg	**Pg**	**08 01 04.1**	**-0.5**
KULA				Sg	**Sb**	**08 01 15.9**	**0.0**
DST	**Dursunbey**	**0.84**	**45**	Pg	**Pg**	**08 01 05.2**	**-0.1**
DUVT	**Torbali**	**0.85**	**202**	P	**Pb**	**08 01 05.5**	**-0.3**
BAGT	**Foa**	**0.86**	**246**	P	**Pb**	**08 01 06.0**	**0.0**
BAGT				S	**Sb**	**08 01 18.2**	**+0.6**
IZMR	**zmir-demi**	**0.88**	**175**	P	**Pb**	**08 01 06.1**	**-0.2**
IZMR				S	**Sg**	**08 01 16.6**	**-0.8**
SIMA	**Simav-Kutahya**	**0.88**	**85**	Pg	**Pb**	**08 01 06.1**	**-0.3**
SIMA				Sg	**Sb**	**08 01 18.4**	**+0.2**
SMAA	**Simav-Kutahya**	**0.88**	**84**	Pg	**Pg**	**08 01 06.9**	**-0.2**
SMAA				Sg	**Sb**	**08 01 19.1**	**+0.9**
BLCB	**Balcova**	**0.89**	**226**	P	**Pb**	**08 01 06.4**	**-0.2**
BLCB				S	**Sb**	**08 01 18.8**	**+0.3**
BLCB	**Balcova**	**0.89**	**226**	Pg	**Pg**	**08 01 06.1**	**-0.2**
KIRA	**zmir-Kiraz**	**0.92**	**152**	P	**Pg**	**08 01 06.3**	**-0.5**
KIRA				S	**Sb**	**08 01 18.9**	**-0.4**
FOCM	**Foa**	**0.93**	**252**	Pg	**Pb**	**08 01 06.9**	**-0.3**
USAK	**Uak-Merkez**	**0.95**	**108**	P	**Pg**	**08 01 07.1**	**-0.4**
SUSR	**Susurluk-Balik**	**0.97**	**10**	Pg	**Pg**	**08 01 07.1**	**-0.7**
YENI	**Yenice-Canakka**	**1.04**	**333**	Pg	**Pg**	**08 01 08.7**	**-0.4**
GONE	**Gonen-Balikesi**	**1.04**	**353**	Pg	**Pg**	**08 01 08.9**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**1.06**	**179**	Pg	**Pg**	**08 01 09.2**	**-0.3**
SHAP	**Saphane-Kutahy**	**1.06**	**89**	Pg	**Pb**	**08 01 09.5**	**0.0**
NAZL	**Nazilli-Aydin**	**1.10**	**162**	Pn	**Pg**	**08 01 09.7**	**-0.5**
KRBN	**Karaburun**	**1.10**	**248**	Pn	**Pg**	**08 01 09.8**	**-0.5**
CANM	**Can-anakkale**	**1.18**	**328**	Pn	**Pn**	**08 01 11.7**	**+0.2**
GMLD	**Gumuldur**	**1.19**	**219**	Pn	**Pn**	**08 01 11.9**	**+0.3**
GEDZ	**Gediz**	**1.21**	**88**	Pn	**Pg**	**08 01 11.9**	**-0.5**
KUSD	**Kusadasi-Aydin**	**1.23**	**202**	Pn	**Pb**	**08 01 11.2**	**-1.2**
PRK	**Paraskevi**	**1.26**	**281**	P	**Pn**	**08 01 12.8**	**+0.2**
PRK				S	**Sn**	**08 01 29.8**	**+0.4**
ORLT	**Orhaneli**	**1.31**	**37**	Pn	**Pn**	**08 01 13.2**	**-0.2**
KCTX	**Karacabey (Bur**	**1.31**	**17**	Pn	**Pn**	**08 01 12.6**	**-0.8**
TVSB	**Tavsanli**	**1.32**	**70**	Pn	**Pn**	**08 01 13.4**	**-0.2**
EDC	**Edincik**	**1.34**	**0**	Pn	**Pn**	**08 01 13.6**	**-0.1**
EZNE	**Ezine-Canakkal**	**1.38**	**303**	Pn	**Pn**	**08 01 14.4**	**+0.2**
BIGA	**Biga-Canakkale**	**1.38**	**337**	Pn	**Pn**	**08 01 14.5**	**+0.2**
GPNR	**Gulpinar-Canak**	**1.41**	**289**	Pn	**Pn**	**08 01 14.8**	**+0.1**
EZN	**Ezine**	**1.44**	**305**	P	**Pb**	**08 01 16.0**	**+0.1**
EZN				S	**Sg**	**08 01 35.3**	**-0.2**
EZN	**Ezine**	**1.44**	**305**	Pn	**Pn**	**08 01 15.3**	**+0.2**
KRBG	**Karabiga-Canak**	**1.45**	**343**	Pn	**Pn**	**08 01 15.1**	**-0.1**
COMU	**Canakkale**	**1.53**	**316**	Pn	**Pn**	**08 01 16.4**	**+0.1**
SMG	**Samos**	**1.53**	**212**	P	**Pb**	**08 01 17.4**	**0.0**
SMG				S	**Sg**	**08 01 38.4**	**+0.2**
CHOS	**Chios island**	**1.54**	**247**	P	**Pn**	**08 01 16.7**	**+0.1**
CHOS				S	**Sg**	**08 01 38.0**	**-0.7**
SIGR	**SIGRI**	**1.57**	**278**	P	**Pn**	**08 01 17.1**	**+0.2**
MDNY	**Mudanya-Bursa**	**1.57**	**30**	Pn	**Pn**	**08 01 17.0**	**+0.1**
LPK	**Lapseki**	**1.60**	**328**	Pn	**Pn**	**08 01 17.5**	**+0.2**
MRMT	**Marmara Adasi**	**1.60**	**353**	Pn	**Pn**	**08 01 17.6**	**+0.2**
MLSB	**Milas**	**1.71**	**182**	Pn	**Pn**	**08 01 18.9**	**0.0**
ARMT	**Armutlu**	**1.74**	**26**	Pn	**Pn**	**08 01 19.0**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.76**	**343**	Pn	**Pn**	**08 01 19.6**	**+0.1**
GAZK	**Gazikoy-TEKIRD**	**1.78**	**347**	Pn	**Pn**	**08 01 20.1**	**+0.3**
YER	**Yerkesik**	**1.90**	**170**	P	**Pn**	**08 01 22.0**	**+0.5**
YER	**Yerkesik**	**1.90**	**170**	Pn	**Pn**	**08 01 21.2**	**-0.3**
APMY	**Acipayam-Deniz**	**1.91**	**143**	Pn	**Pn**	**08 01 21.6**	**0.0**
GADA	**Gvkgeada**	**1.92**	**309**	P	**Pn**	**08 01 22.2**	**+0.5**
BODT	**Bodrum**	**1.99**	**193**	P	**Pn**	**08 01 23.6**	**+1.0**
BODT	**Bodrum**	**1.99**	**193**	Pn	**Pn**	**08 01 22.7**	**0.0**
ADVT	**Abdulvahap**	**2.03**	**45**	Pn	**Pn**	**08 01 23.5**	**+0.3**
BASM	**Basmaki-Afyon**	**2.04**	**122**	Pn	**Pn**	**08 01 23.3**	**-0.1**
SHUT	**Suhut-Afyon**	**2.15**	**101**	Pn	**Pn**	**08 01 25.2**	**+0.2**
ENEZ	**Enez**	**2.17**	**323**	P	**Pn**	**08 01 25.7**	**+0.6**
LIA	**Limnos Island**	**2.25**	**294**	P	**Pn**	**08 01 26.9**	**+0.7**
SMTH	**Samothraki Isl**	**2.31**	**310**	P	**Pn**	**08 01 27.8**	**+0.7**
ALN	**Alexandroupoli**	**2.34**	**324**	P	**Pn**	**08 01 28.2**	**+0.7**
FETY	**Fethiye**	**2.56**	**157**	P	**Pn**	**08 01 31.2**	**+0.7**
RDO	**Rodhopi**	**2.78**	**321**	P	**Pn**	**08 01 34.2**	**+0.7**

MOS ***12*** *08:03:13.3±1.0, 8.81S×110.58E, h59km, mb5.2/40, Error ellipse: s-maj=12.5km s-min=4.8km az=113.1*
DJA ***12*** *08:03:18.9±0.2, 9.2S×11.1E±°, h82km±2km, M5.1/67, mB5.6/25, mb5.0/48, MLv5.1/67, Mw(mB)5.1/25, MwMwp5.6/1, Mwpv5.7/1*
NEIC ***12*** *08:03:18.9±1.2, 8.90S±0.07×110.54E±0.07, h94km±6km, mb5.2/54, Error ellipse: s-maj=11.5km s-min=8.8km az=223.0*
IDC ***12*** *08:03:19.0±0.5, 8.79S×110.66E, h94km±4km, mb4.5/25, mbtmp4.8/29, MS3.3/5, Error ellipse: s-maj=13.5km s-min=7.7km az=50.0*
ISC 12 08:03:18.6±0.3, 8.94S±0.04×110.58E±0.04, h94km±2km, h94km:pP-P, n379, σ1s30/409, mb5.0/106, 10C-5D, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCJI	**Pacitan**	**0.95**	**38**	P	**Pn**	**08 03 36.8**	**-1.2**
PCJI				S	**Sn**	**08 03 50.6**	**-1.9**
UGM	**Wanagama**	**1.02**	**357**	P	**Pn**	**08 03 39.0**	**0.0**
UGM	**Wanagama**	**1.02**	**357**		**Pn**	**08 03 38.8**	**-0.1**
UGM				Sn	**Sn**	**08 03 53.1**	**-1.0**
UGM	**Wanagama**	**1.02**	**357**	P	**Pn**	**08 03 38.9**	**0.0**
UGM				S	**Sn**	**08 03 53.4**	**-0.7**
YOGI	**Yogyakarta**	**1.16**	**346**	P	**Pn**	**08 03 40.3**	**-0.1**
YOGI				S	**Sn**	**08 03 55.7**	**-1.0**
SNJI	**Sawahan-Nganju**	**1.64**	**45**	P	**Pn**	**08 03 47.1**	**+0.6**
SNJI				S	**Sn**	**08 04 08.0**	**+0.4**
SJI	**Sawahan**	**1.68**	**44**	P	**Pn**	**08 03 46.9**	**0.0**
SJI				S	**Sn**	**08 04 08.9**	**+0.6**
NGJI	**Ngawi**	**1.79**	**29**	P	**Pn**	**08 03 50.8**	**+2.6**
SMRI	**Semarang**	**1.89**	**356**	P	**Pn**	**08 03 51.1**	**+1.6**
SMRI	**Semarang**	**1.89**	**356**		**Pn**	**08 03 50.7**	**+1.3**
SMRI	**Semarang**	**1.89**	**356**	P	**Pn**	**08 03 50.8**	**+1.3**
SMRI				S	**Sn**	**08 04 16.5**	**+3.5**
KPJI	**Karang Pucung**	**2.29**	**314**	P	**Pn**	**08 03 55.1**	**+0.4**
KPJI				S	**Sn**	**08 04 25.0**	**+2.6**
CTJI	**Waduk Cacaban**	**2.37**	**324**	P	**Pn**	**08 03 56.5**	**+0.7**
CMJI	**Cimerak**	**2.41**	**298**	P	**Pn**	**08 03 55.4**	**-0.9**
CMJI				S	**Sn**	**08 04 24.0**	**-1.2**
TBJI	**Tambak Boyo**	**2.46**	**31**	P	**Pn**	**08 03 57.6**	**+0.7**
GMJI	**Gumukmas**	**2.91**	**77**	P	**Pn**	**08 04 02.8**	**-0.1**
BLJI	**Banyuglugur**	**3.21**	**68**	P	**Pn**	**08 04 07.5**	**+0.5**
BBJI	**Bungbulang**	**3.25**	**297**	P	**Pn**	**08 04 07.7**	**0.0**
BBJI	**Bungbulang**	**3.25**	**297**		**Pn**	**08 04 07.1**	**-0.6**
BBJI	**Bungbulang**	**3.25**	**297**	P	**Pn**	**08 04 07.3**	**-0.4**
JCJI	**Jatiwangi**	**3.35**	**317**	P	**Pn**	**08 04 07.2**	**-1.7**
JAGI	**Jajag, Banyuwa**	**3.56**	**83**	P	**Pn**	**08 04 11.2**	**-0.5**
JAGI	**Jajag, Banyuwa**	**3.56**	**83**		**Pn**	**08 04 11.1**	**-0.7**
JAGI	**Jajag, Banyuwa**	**3.56**	**83**	P	**Pn**	**08 04 11.3**	**-0.5**
LEM	**Lembang**	**3.61**	**305**	P	**Pn**	**08 04 13.7**	**+1.1**
	120nm,0.5s,baz=117,slow=10.0,SNR=24						
LEM				S	**Sn**	**08 04 55.7**	**+1.3**
	266nm,0.4s,baz=323,slow=11,SNR=4.7						
LEM				LR	LR	08 06 10.7	
	comp=Z,85nm,18.6s,baz=188,slow=48						
LEM	**Lembang**	**3.61**	**305**	P	**Pn**	**08 04 13.8**	**+1.2**
ABJI	**Asem Bagus**	**3.79**	**73**	P	**Pn**	**08 04 16.0**	**+1.2**
BYJI	**Banyuwangi**	**3.80**	**79**	P	**Pn**	**08 04 17.1**	**+2.1**
KMMI	**Kalianget**	**3.84**	**61**	P	**Pn**	**08 04 15.6**	**0.0**
RTBI	**Rangdo, Negare**	**4.34**	**84**	P	**Pn**	**08 04 23.2**	**+0.9**
SKJI	**Sukabumi**	**4.43**	**295**	P	**Pn**	**08 04 24.0**	**+0.5**
DBJI	**Dramaga**	**4.48**	**302**	P	**Pn**	**08 04 25.9**	**+1.7**
IGBI	**Denpasar**	**4.51**	**89**	P	**Pn**	**08 04 24.2**	**-0.4**
DNP	**Denpasar**	**4.58**	**87**	P	**Pn**	**08 04 26.0**	**+0.4**
SRBI	**Singaraja**	**4.66**	**80**	P	**Pn**	**08 04 29.9**	**+3.3**
KHKI	**Kahang-Kahang**	**5.00**	**84**	P	**Pn**	**08 04 31.6**	**+0.3**
	1.3nm2μm156nm,0.7s						
XMI	**Christmas Isla**	**5.05**	**252**	P	**Pn**	**08 04 29.9**	**-2.1**
CGJI	**Cibinong**	**5.37**	**295**	P	**Pn**	**08 04 37.3**	**+1.0**
KLNI	**Mataram**	**5.47**	**85**	P	**Pn**	**08 04 37.2**	**-0.5**
	1.0nm2μm84nm,0.7s						
TWSI	**Taliwang, Sumb**	**6.23**	**89**	P	**Pn**	**08 04 48.8**	**+0.8**
	1.0nm3μm88nm,0.6s						
TPI	**Tanjungpandan**	**6.80**	**334**	P	**Pn**	**08 04 56.1**	**+0.3**
	42nm,0.8s						
BBKI	**Banjar Baru**	**6.90**	**38**	P	**Pn**	**08 04 59.6**	**+2.5**
	0.6nm102nm,0.9s						
KASI	**Kota Agung**	**6.93**	**299**	P	**Pn**	**08 04 57.0**	**-0.5**
	0.7nm64nm,0.9s						
PLAI	**Plampang**	**7.11**	**90**	P	**Pn**	**08 04 59.9**	**-0.1**
PLAI	**Plampang**	**7.11**	**90**	P	**Pn**	**08 05 01.9**	**+1.9**
	0.7nm1μm95nm,0.7s						
KLSI		**7.18**	**306**	P	**Pn**	**08 05 02.6**	**+1.6**
LWLI	**Liwa**	**7.56**	**301**	P	**Pn**	**08 05 07.6**	**+1.4**
	87nm,0.4s						
DBNI	**Kabupaten Domp**	**7.65**	**87**	P	**Pn**	**08 05 08.3**	**+0.9**
	0.4nm43nm,0.5s						
MDSI	**Maura Dua**	**7.75**	**304**	P	**Pn**	**08 05 09.7**	**+1.0**
MNAI	**Manna**	**8.84**	**301**	P	**Pn**	**08 05 22.9**	**-0.7**
MNAI	**Manna**	**8.84**	**301**	Pn	**Pn**	**08 05 21.9**	**-1.7**
EGSI	**Enggano, Bengk**	**8.98**	**293**	P	**Pn**	**08 05 24.5**	**-1.0**
	4μm186nm,0.8s						
LBFI	**Labuhan Bajo,**	**9.21**	**88**	P	**Pn**	**08 05 29.8**	**+1.1**
KSI	**Kapahiang**	**9.52**	**303**	P	**Pn**	**08 05 33.1**	**+0.1**
KAPI	**Kappang**	**9.90**	**67**	P	**Pn**	**08 05 38.5**	**+0.4**
	23nm,0.8s,baz=236,slow=9.5,SNR=12						
KAPI				LR	LR	08 09 46.4	
	comp=Z,96nm,20.8s,baz=248,slow=40						
KAPI	**Kappang**	**9.90**	**67**		**Pn**	**08 05 38.6**	**+0.6**
KAPI	**Kappang**	**9.90**	**67**	P	**Pn**	**08 05 38.6**	**+0.6**
KAPI	**Kappang**	**9.90**	**67**	P	**Pn**	**08 05 39.8**	**+1.7**
MASI	**Maura Aman, Be**	**10.10**	**304**	P	**Pn**	**08 05 41.0**	**+0.2**
SPSI	**Sidrap Palu**	**10.38**	**62**	P	**Pn**	**08 05 46.6**	**+2.0**
TTSI	**Tana Toraja**	**10.89**	**58**	P	**Pn**	**08 05 52.6**	**+1.0**
	2μm121nm,0.6s						
EDFI	**Ende, Flores**	**10.98**	**90**	P	**Pn**	**08 05 51.3**	**-1.5**
	552nm23nm,0.6s						
SBUM	**Sibu**	**11.44**	**8**		**Pn**	**08 05 58.7**	**-0.2**
SBUM	**Sibu**	**11.44**	**8**	P	**Pn**	**08 06 02.2**	**+3.3**
BATI	**Baumata**	**12.96**	**97**	P	**Pn**	**08 06 19.9**	**+0.6**
	16nm,0.3s,baz=211,slow=5.9,SNR=1.4						
BATI				S	Sn	08 08 29.1	-13
	26nm,0.3s,baz=31,slow=12,SNR=2.5						
MPSI	**Mapaga**	**13.08**	**46**	P	**P**	**08 06 29.2**	**+1.7**
PPI	**Padang Panjang**	**13.19**	**309**	P	**P**	**08 06 32.4**	**+3.7**
SOEI	**Soe**	**13.53**	**95**	Pn	**Pn**	**08 06 25.8**	**-1.1**
SOEI

CTAO pmax pmax
comp=Z,86nm,1.5s
PZH PanZhiHua 36.27 347 P **P** **08 10 14.7 +1.6**
STKA Stephens Creek 36.72 133 P **P** **08 10 17.1 +0.3**
comp=Z,6.4nm,0.5s,baz=309,slow=7.7,SNR=35
STKA pP **pP** **08 10 40.9 +3.3**
comp=Z,3.7nm,0.6s,baz=317,slow=8.9,SNR=3.1
comp=Z,6.4nm,0.5s
STKA Stephens Creek 36.72 133 P **P** **08 10 17.5 +0.7**
STKA Stephens Creek 36.72 133 P **P** **08 10 17.6 +0.7**
STKA IAmb IAmb 08 10 18.4
comp=Z,46nm,0.9s
STKA Stephens Creek 36.72 133 P **P** **08 10 17.6 +0.7**
STKA pmax pmax
comp=Z,46nm,0.9s
H08S2 Diego Garcia H 37.70 269 T T 08 50 37.0
baz=94,slow=75,SNR=20
H08S3 Diego Garcia H 37.71 269 T T 08 50 37.8
baz=94,slow=75,SNR=26
H08S1 Diego Garcia H 37.72 269 T T 08 50 38.4
baz=94,slow=75,SNR=5.5
SHL Shillong 38.83 332 **P** **08 10 33.4 -1.5**
SHL IAmb IAmb 08 10 34.1
comp=Z,31nm,0.6s
SHL Shillong 38.83 332 P **P** **08 10 33.4 -1.5**
SHL pmax pmax
comp=Z,31nm,0.6s
ENH Enshi 39.00 358 **P** **08 10 34.6 -1.4**
ENH IAmb IAmb 08 10 36.8
comp=Z,12nm,0.6s
JOW Kunigami 39.49 25 P **P** **08 10 40.6 +0.5**
JOW Kunigami 39.49 25 **P** **08 10 39.4 -0.7**
JOW IAmb IAmb 08 10 41.1
comp=Z,55nm,1.2s
CMSA Cobar Meteorol 39.60 130 P **P** **08 10 42.4 +1.4**
CD2 Chengdu 40.16 351 P **P** **08 10 45.0 -0.7**
CD2 pmax pmax
comp=Z,40nm,0.5s
HYB Hyderabad 41.09 310 *e*P **P** **08 10 55.2 +1.8**
HYB *es*P **sP** **08 11 27.2 +1.6**
BRAT Ballarat 41.44 139 P **P** **08 10 56.7 +0.6**
NJ2 Nanjing 41.52 11 *e*P **P** **08 10 59.3 +2.6**
NJ2 pmax pmax
comp=Z,45nm,0.6s
TOO Toolangi 42.48 138 P **P** **08 11 05.1 +0.5**
TOO Toolangi 42.48 138 P **P** **08 11 05.1 +0.5**
TOO pmax pmax
comp=Z,4.0nm,1.2s
LSA Lhasa 42.73 335 P **P** **08 11 04.1 -3.1**
LSA pmax pmax
comp=Z,19nm,0.8s
XAN Xi'an 42.77 358 ⇓P **P** **08 11 06.5 -0.5**
XAN pmax pmax
comp=Z,44nm,0.7s
LYN LuoYang 43.29 2 P **P** **08 11 10.8 -0.3**
LYN pmax pmax
comp=Z,29nm,0.6s
EVN Everest 43.29 329 P **P** **08 11 09.8 -2.2**
EVN IAmb IAmb 08 11 13.1
comp=Z,14nm,0.4s
JSU Suzuyama 44.49 24 P **P** **08 11 19.8 -1.0**
JSU IAmb IAmb 08 11 21.9
comp=Z,15nm,0.7s
LZDM Lanzhou Array 45.13 352 P **P** **08 11 25.7 -0.4**
comp=Z,15nm,0.5s,baz=187,slow=10,SNR=26
comp=Z,15nm,0.5s
LZH Lanzhou 45.24 352 *e*P **P** **08 11 27.4 +0.6**
LZH pP pP 08 11 48.5 -0.5
LZH pmax pmax
comp=Z,41nm,1.3s
LZH L L
comp=Z,380nm,12.7s
LZH L L
comp=Z,490nm,12.7s
LZH L L
comp=Z,370nm,13.1s
TIA Tai'an 45.33 7 P **P** **08 11 26.0 -1.3**
TIA pmax pmax
comp=Z,16nm,0.6s
TIA L L
comp=Z,340nm,17.5s
TIA L L
comp=Z,260nm,11.2s
TIA L L
comp=Z,360nm,21.6s
HNS HongShan 46.26 5 ⇑P **P** **08 11 33.8 -0.8**
HNS pmax pmax
comp=Z,13nm,1.0s
JTU Tsushima 46.76 21 P **P** **08 11 37.9 -0.7**
GOMU GeErMu 47.29 343 P **P** **08 11 38.5 -4.6**
GOMU pmax pmax
comp=Z,6.0nm,0.6s
TJN Taejon 47.76 18 P **P** **08 11 45.9 -0.4**
TJN Taejon 47.76 18 P **P** **08 11 45.9 -0.4**
TJN pmax pmax
comp=Z,97nm,0.8s
JMN Monobe 47.86 26 P **P** **08 11 46.8 -0.4**
JMN IAmb IAmb 08 13 09.1
comp=Z,58nm,1.6s
KSRS Korea Array 48.93 18 P **P** **08 11 55.1 -0.1**
comp=Z,15nm,0.7s,baz=200,slow=8.4,SNR=39
comp=Z,15nm,0.7s
KS19 Wonju Array Si 48.95 18 P **P** **08 11 55.3 -0.2**
KS19 IAmb IAmb 08 13 10.3
comp=Z,36nm,1.2s
BJT Baijiatuau 48.99 6 P **P** **08 11 55.6 -0.1**
BJT Baijiatuau 48.99 6 **P** **08 11 54.9 -0.8**
BJT IAmb IAmb 08 11 56.0
comp=Z,24nm,0.8s
BJT Baijiatuau 48.99 6 P **P** **08 11 54.9 -0.8**
BJT pmax pmax
comp=Z,24nm,0.8s
BJT Baijiatuau 48.99 6 P **P** **08 11 55.4 -0.3**
BJT x x 08 12 10.2
BJT pP **pP** **08 12 17.8 -0.3**
BJT sP **sP** **08 12 28.7 +0.1**
BJI2 Beijing 48.99 6 P **P** **08 11 55.1 -0.6**
BJI2 pmax pmax
comp=Z,16nm,0.7s
GTA2 Gaotai 49.22 349 *e*P **P** **08 11 58.2 +0.6**
GTA2 pmax pmax
comp=Z,19nm,1.3s
GTA2 L L
comp=Z,440nm,17.8s
BTO2 Baotou 49.44 359 *e*P **P** **08 11 59.0 -0.3**
BTO2 pP **pP** **08 12 22.7 +1.0**
BTO2 sP **sP** **08 12 33.2 +1.0**
BTO2 pmax pmax
comp=Z,110nm,0.8s
BTO2 pmax pmax
comp=Z,980nm,6.3s
HHC Hu-ho-hao-te 49.55 1 ⇓*i*P **P** **08 12 00.1 0.0**
HHC pmax pmax
comp=Z,11nm,0.9s
HHC pmax pmax
comp=Z,240nm,6.1s
JGF Kuroka 51.00 28 P **P** **08 12 10.6 -0.4**
JGF Kuroka 51.00 28 P **P** **08 12 09.6 -1.4**
JGF IAmb IAmb 08 13 08.6
comp=Z,77nm,1.9s
MJAR Matsushiro Arr 52.16 28 P **P** **08 12 17.8 -1.9**
comp=Z,12nm,0.8s,baz=201,slow=8.0,SNR=23
comp=Z,12nm,0.8s
MJAR Matsushiro Arr 52.16 28 **P** **08 12 17.6 -2.1**
MJAR Matsushiro Arr 52.16 28 P **P** **08 12 17.6 -2.1**
MJAR pmax pmax
comp=Z,7.0nm,1.1s
XLT XiLinHaoTe 52.83 5 *e*P **P** **08 12 23.7 -0.8**
XLT pmax pmax
comp=Z,27nm,0.8s
XLT pmax pmax
comp=Z,350nm,5.4s
CN2 Changchun 54.20 13 *e*P **P** **08 12 33.0 -1.5**
CN2 pmax pmax
comp=Z,20nm,0.8s
DZM Mont Dzumac 55.11 111 LR LR 08 37 47.9
comp=Z,68nm,19.0s,baz=184,slow=38
NIL Nilore 55.24 322 P **P** **08 12 40.9 -1.3**
NIL Nilore 55.24 322 P **P** **08 12 40.9 -1.3**
NIL pmax pmax
comp=Z,45nm,0.8s
NIL Nilore 55.24 322 P **P** **08 12 41.1 -1.1**
YATNC Mamie plateau, 55.52 111 P **P** **08 12 45.2 +0.7**
MDJ Mudanjiang 56.01 16 P **P** **08 12 46.3 -1.2**
MDJ pmax pmax
comp=Z,12nm,1.0s
USRK Ussuriysk Ar. 56.34 18 P **P** **08 12 49.2 -0.6**
comp=Z,13nm,0.8s,baz=198,slow=5.5,SNR=14
comp=Z,13nm,0.8s
WMQ Urumqi 56.48 340 *e*P **P** **08 12 51.2 +0.3**
WMQ sP sP 08 13 31.0 +7.0
WMQ pmax pmax
comp=Z,24nm,1.1s
WMQ L L
comp=Z,280nm,23.5s
BNX BinXian 56.49 14 ⇓P **P** **08 12 50.0 -0.8**
BNX pmax pmax
comp=Z,35nm,0.7s
ULN Ulaanbaatar 56.64 357 P **P** **08 12 51.6 -0.5**
ULN Ulaanbaatar 56.64 357 *ce*P **P** **08 12 51.8 -0.3**
ULN pmax pmax
comp=Z,48nm,1.0s
ULN Ulaanbaatar 56.64 357 P **P** **08 12 52.0 -0.1**
ULN Ulaanbaatar 56.64 357 P **P** **08 12 51.5 -0.6**
ULN Ulaanbaatar 56.64 357 P **P** **08 12 51.9 -0.2**
ULN x x 08 13 11.2
ULN pP **pP** **08 13 15.1 0.0**
ULN sP **sP** **08 13 26.3 +0.8**
SONM Songino Array 56.65 357 P **P** **08 12 51.8 -0.3**
comp=Z,20nm,0.5s,baz=178,slow=8.5,SNR=129
comp=Z,20nm,0.5s
SONM Songino Array 56.65 357 **P** **08 12 51.8 -0.3**
WUS Wushi 57.64 332 **P** **08 12 58.3 -0.9**
WUS Wushi 57.64 332 P **P** **08 12 59.2 -0.1**
KSH2 Kashi 57.85 328 P **P** **08 12 59.4 -1.4**
KSH2 pmax pmax
comp=Z,39nm,0.6s
KBL Kabul 58.45 320 **P** **08 13 03.8 -1.3**
KBL Kabul 58.45 320 P **P** **08 13 03.8 -1.3**
KBL pmax pmax
comp=Z,64nm,1.6s
KBL Kabul 58.45 320 P **P** **08 13 03.8 -1.3**
SNR=8.8
TARG Taragay, Kyrgy 58.71 332 P **P** **08 13 06.8 -0.3**
TARG IAmb IAmb 08 13 15.7
comp=Z,15nm,0.9s
TARG Taragay, Kyrgy 58.71 332 P **P** **08 13 06.8 -0.3**
TARG pmax pmax
comp=Z,15nm,0.9s
JLN Jalan Bani Buh 58.91 303 P **P** **08 13 10.1 +1.8**
PRZ Przheval'sk 59.03 333 P **P** **08 13 09.6 +0.7**
SHLS Shalkode 59.09 334 *e*P **P** **08 13 08.0 -1.3**
SHLS pmax pmax
comp=Z,8.0nm,0.8s
SHLS Shalkode 59.09 334 *e*P **P** **08 13 08.0 -1.3**
comp=Z,8.4nm,0.8s
UZB Uzynbulak 59.27 334 *e*P **P** **08 13 10.3 -0.3**
UZB pmax pmax
comp=Z,8.0nm,0.5s
UZB Uzynbulak 59.27 334 *e*P **P** **08 13 10.3 -0.3**
comp=Z,8.0nm,0.5s
KDJ Kajisay 59.31 332 P **P** **08 13 11.0 +0.1**
KDJ Kajisay 59.31 332 P **P** **08 13 11.0 +0.1**
KDJ pmax pmax
comp=Z,48nm,1.0s
NRN Naryn 59.35 330 P **P** **08 13 10.7 -0.7**
NRN Naryn 59.35 330 P **P** **08 13 10.7 -0.7**
NRN pmax pmax
comp=Z,27nm,0.7s
ZAK Zakamensk 59.42 355 *e*P **P** **08 13 09.3 -2.1**
ZAK pmax pmax
comp=Z,7.0nm,1.4s
WBK Wadi Bani Khal 59.48 303 P **P** **08 13 13.3 +1.1**
SATY Saty 59.48 333 *e*P **P** **08 13 11.7 -0.3**
SATY pmax pmax
comp=Z,5.0nm,0.6s
SATY Saty 59.48 333 *e*P **P** **08 13 11.7 -0.3**
comp=Z,5.3nm,0.6s
MHTO MHTO 59.63 301 P **P** **08 13 13.3 +0.1**
KPKS Kokpek 59.68 334 *e*P **P** **08 13 13.0 -0.3**
KPKS Kokpek 59.68 334 *e*P **P** **08 13 13.0 -0.3**
ULHL Ulahol 59.85 331 P **P** **08 13 14.4 -0.2**
SNR=6.9
WSAR Wadi Sarin 60.03 303 P **P** **08 13 18.1 +2.1**
JMDO Jabal Madar 60.10 302 P **P** **08 13 18.4 +2.0**
TNSS Tian-Shan 60.13 332 *e*P **P** **08 13 16.1 -0.6**
TNSS Tian-Shan 60.13 332 *e*P **P** **08 13 16.2 -0.6**
MDOK Medeo 60.18 332 *e*P **P** **08 13 16.5 -0.3**
MDOK Medeo 60.18 332 *e*P **P** **08 13 16.5 -0.3**
BOOM Boomskoye usch 60.18 331 P **P** **08 13 16.2 -0.6**
BOOM IAmb IAmb 08 13 17.1
comp=Z,23nm,0.7s
BOOM Boomskoye usch 60.18 331 P **P** **08 13 16.2 -0.6**
BOOM pmax pmax
comp=Z,23nm,0.7s
AAA Alma-Ata 60.27 332 *e*P **P** **08 13 17.1 -0.2**
AAA Alma-Ata 60.27 332 *e*P **P** **08 13 17.2 -0.2**
OHH Osh 60.32 327 P **P** **08 13 15.5 -2.2**
KNGR Kungurtug, Tuv 60.38 350 *i*P **P** **08 13 16.5 -1.5**
KNGR pmax pmax
comp=Z,6.0nm,0.9s
SMDO Samad 60.44 303 P **P** **08 13 19.9 +1.1**
ARLS Aral 60.50 329 P **P** **08 13 18.8 -0.2**
SHAO Shalim 60.51 296 P **P** **08 13 21.3 +1.9**
ZSN Zaisan 60.61 340 *e*P **P** **08 13 19.6 +0.1**
ZSN pmax pmax
comp=Z,8.0nm,0.8s
ZSN Zaisan 60.61 340 *e*P **P** **08 13 19.6 +0.1**
comp=Z,8.0nm,0.8s
GAR Garm 60.62 325 **P** **08 13 18.3 -1.6**
TKM2 Tokmak 2 60.67 331 P **P** **08 13 19.8 -0.4**
SNR=59
TLY Talaya 60.67 355 P **P** **08 13 19.6 -0.2**
TLY Talaya 60.67 355 *ce*P **P** **08 13 20.5 +0.7**
TLY pmax pmax
comp=Z,12nm,1.7s
TLY Talaya 60.67 355 P **P** **08 13 20.4 +0.7**
UCH Uchtor 60.68 330 P **P** **08 13 20.5 -0.1**
SNR=15
HEH HeiHe 60.75 12 *e*P **P** **08 13 19.1 -1.2**
HEH pmax pmax
comp=Z,40nm,0.9s
KBK Karagaybulak 60.78 330 P **P** **08 13 21.1 +0.1**
SNR=23
ARSB Arslanbob 60.79 328 P **P** **08 13 20.3 -0.7**
ARSB IAmb IAmb 08 13 21.1
comp=Z,22nm,0.9s
ARSB Arslanbob 60.79 328 P **P** **08 13 20.3 -0.7**
ARSB pmax pmax
comp=Z,22nm,0.9s
KLR Kul'dur 60.83 16 *ce*P **P** **08 13 19.2 -1.7**
KLR pmax pmax
comp=Z,8.0nm,0.4s
MOY Mondy 60.93 353 *e*P **P** **08 13 21.5 -0.2**
MOY pmax pmax
comp=Z,18nm,1.4s
MK31 Makanchi Array 60.95 338 *ce*P **P** **08 13 21.2 -0.6**
MKAR Makanchi Array 60.95 338 P **P** **08 13 21.4 -0.5**
comp=Z,26nm,0.4s,baz=147,slow=7.5,SNR=343
comp=Z,26nm,0.4s
MKAR Makanchi Array 60.95 338 P **P** **08 13 21.5 -0.3**
SHAA Shahritus 60.96 322 **P** **08 13 19.3 -2.8**
SHAA IAmb IAmb 08 13 20.1
comp=Z,21nm,0.6s
AAK Ala-Archa 60.99 330 P **P** **08 13 21.6 -0.8**
SNR=14
AAK Ala-Archa 60.99 330 **P** **08 13 21.7 -0.7**
AAK IAmb IAmb 08 13 23.0
comp=Z,13nm,0.8s
AAK Ala-Archa 60.99 330 *i*P **P** **08 13 20.6 -1.7**
AAK pmax pmax
comp=Z,9.0nm,0.7s
AAK Ala-Archa 60.99 330 P **P** **08 13 21.7 -0.7**
AAK Ala-Archa 60.99 330 P **P** **08 13 22.2 -0.1**
AAK x x 08 13 34.2
AAK PcP **PcP** **08 14 03.6 -1.2**
BSY Bisya 61.01 302 P **P** **08 13 24.3 +1.6**
DRV Dumont d'Urvil 61.02 167 P **P** **08 13 22.8 +0.8**
DRV x x 08 13 26.7
DRV x x 08 13 29.5
DRV x x 08 13 32.4
DRV pP **pP** **08 13 46.1 +1.5**
DRV PcP **PcP** **08 14 03.1 -1.2**
FRU1 Bishkek 61.05 330 P **P** **08 13 22.3 -0.4**
FRU1 Bishkek 61.05 330 P **P** **08 13 22.3 -0.4**
FRU1 pmax pmax
comp=Z,48nm,0.8s
CHGR Chuyangaron 61.06 324 P **P** **08 13 20.7 -2.1**
CHGR Chuyangaron 61.06 324 P **P** **08 13 20.7 -2.1**
CHGR pmax pmax
comp=Z,77nm,1.3s
BTK Batken 61.06 326 P **P** **08 13 21.4 -1.4**
BTK IAmb IAmb 08 13 22.9
comp=Z,19nm,0.7s
BTK Batken 61.06 326 P **P** **08 13 21.4 -1.4**
BTK pmax pmax
comp=Z,19nm,0.7s
MAKZ Makanchi 61.08 338 P **P** **08 13 21.9 -0.8**
MAKZ IAmb IAmb 08 14 47.9
comp=Z,12nm,0.6s
MAKZ Makanchi 61.08 338 P **P** **08 13 21.9 -0.8**
MAKZ pmax pmax
comp=Z,12nm,0.6s
MLZ Mavora Lakes 61.09 137 P **P** **08 13 24.4 +1.5**
JCZ Jackson Bay 61.16 136 P **P** **08 13 24.2 +0.7**
JCZ Jackson Bay 61.16 136 P **P** **08 13 25.4 +1.9**
HOQ Hoqain 61.27 303 P **P** **08 13 25.1 +0.6**
EKS2 Erkin-Say 61.36 330 P **P** **08 13 24.8 -0.1**
SNR=33
USP Osepenovka 61.46 331 P **P** **08 13 24.8 -0.5**
SNR=12
SGDS Sogindy 61.54 331 *e*P **P** **08 13 25.8 -0.1**
WKZ Wanaka 61.54 136 P **P** **08 13 27.9 +2.0**
ARK Arkit 61.66 328 P **P** **08 13 26.4 -0.4**
DGZ Jazzator, Alta 61.81 343 *i*P **P** **08 13 27.9 +0.2**
DGZ pmax pmax
comp=Z,49nm,0.8s
ARQ Araqi 61.83 302 P **P** **08 13 30.3 +2.2**
TRKS Terek-Say 61.91 327 P **P** **08 13 27.6 -1.0**
DOK Doka 62.05 297 P **P** **08 13 30.6 +0.9**
WHFO Wadi Hawf 62.12 296 P **P** **08 13 32.4 +2.2**
SOHO SOHO 62.15 303 P **P** **08 13 31.6 +1.3**
H04N2 CROZET ISLANDS 62.16 222 T T 09 21 18.2
baz=71,slow=75,SNR=17
H04N1 CROZET ISLANDS 62.18 222 T T 09 21 17.5
baz=71,slow=75,SNR=14
H04N3 CROZET ISLANDS 62.18 222 T T 09 21 17.6
baz=71,slow=75,SNR=15
WVZ Waitaha Valley 62.26 134 P **P** **08 13 31.8 +1.1**
ABTO Aybut 62.34 295 P **P** **08 13 33.3 +1.5**
YSS Yuzhno-Sakhali 62.59 24 *e*P **P** **08 13 31.1 -1.6**
YSS pmax pmax
comp=Z,20nm,1.3s
RPZ Rata Peaks 62.65 135 P **P** **08 13 33.6 +0.2**
INZ Inchbonnie 62.68 134 P **P** **08 13 34.2 +0.7**
ALNE Al Ain 62.77 303 P **P** **08 13 36.4 +2.0**
UOSS Minazif 62.77 304 P **P** **08 13 34.4 -0.1**
UOSS IAmb IAmb 08 13 36.7
comp=Z,8.6nm,0.6s
UOSS Minazif 62.77 304 P **P** **08 13 36.0 +1.6**
DZA Taraz 62.77 328 *e*P **P** **08 13 34.0 -0.1**
DZA pmax pmax
comp=Z,6.0nm,0.4s
DZA Taraz 62.77 328 *e*P **P** **08 13 34.1 -0.1**
comp=Z,5.7nm,0.4s
ASHO Ashiyiah 62.78 304 P **P** **08 13 37.0 +2.5**
SNR=11
HATD Hatta, Dubai 62.78 304 P **P** **08 13 36.8 +2.3**
SNR=7.7
MDH Madha 62.84 304 P **P** **08 13 35.8 +0.9**
IUG Iuzhnay 62.93 327 *e*P **P** **08 13 35.1 -0.2**
IUG pmax pmax
comp=Z,9.0nm,0.6s
IUG Iuzhnay 62.93 327 *e*P **P** **08 13 35.2 -0.2**
comp=Z,8.6nm,0.6s
MASF Masafi 62.99 304 P **P** **08 13 38.2 +2.3**
BTLS Baital 63.01 332 *e*P **P** **08 13 35.5 0.0**
BTLS Baital 63.01 332 *e*P **P** **08 13 35.6 0.0**
QRZ Quartz Range 63.05 131 P **P** **08 13 37.9 +1.8**
QRZ Quartz Range 63.05 131 P **P** **08 13 38.0 +2.0**
BANOM Banah 63.11 305 P **P** **08 13 38.2 +1.5**
FAQ Al Faqa, Dubai 63.19 303 P **P** **08 13 39.0 +1.8**
NAZ Nazwa, Dubai 63.23 304 P **P** **08 13 39.7 +2.2**
OXZ Oxford 63.25 134 P **P** **08 13 38.1 +0.8**
LTZ Lake Taylor 63.29 133 P **P** **08 13 38.5 +0.9**
SHME Shamm 63.30 305 P **P** **08 13 39.6 +1.8**
KK31 Karatay Array 63.35 328 P **P** **08 13 36.5 -1.4**
KK31 Karatay Array 63.35 328 P **P** **08 13 36.5 -1.4**
KK31 pmax pmax
comp=Z,5.0nm,0.7s
KKAR Karatay Array 63.35 328 P **P** **08 13 36.5 -1.4**
KKAR Karatay Array 63.35 328 P **P** **08 13 36.5 -1.4**
ASUD Al Ashush, Dub 63.35 303 P **P** **08 13 40.9 +2.6**
THZ Tophouse 63.52 132 P **P** **08 13 41.3 +2.0**
ZEA Zeya 64.02 11 *e*P **P** **08 13 42.9 +0.9**
TSZ Takapari Road 65.48 130 P **P** **08 13 53.1 +1.1**
KURBB Kurchatov Arra 65.52 338 P **P** **08 13 51.2 -0.6**
comp=Z,8.3nm,0.6s,baz=152,slow=6.1,SNR=73
KURBB sP **sP** **08 14 25.6 +0.1**
comp=Z,1.5nm,0.6s,baz=148,slow=3.6,SNR=3.4
comp=Z,8.3nm,0.6s
JRN Qarnain Island 65.54 303 P **P** **08 13 54.5 +2.0**
KURK Kurchatov 65.56 338 P **P** **08 13 51.8 -0.3**
KURK IAmb IAmb 08 13 52.4
comp=Z,14nm,0.7s
KURK Kurchatov 65.56 338 P **P** **08 13 51.8 -0.3**
KURK pmax pmax
comp=Z,14nm,0.7s
KURK Kurchatov 65.56 338 P **P** **08 13 51.4 -0.8**
KURK Kurchatov 65.56 338 P **P** **08 13 51.8 -0.3**
KURK pP **pP** **08 14 16.5 +0.9**
KURK x x 08 14 20.5
KURK sP **sP** **08 14 26.0 +0.2**
BKZ Black Stump Fm 65.75 129 P **P** **08 13 54.2 +0.4**
BKZ Black Stump Fm 65.75 129 P **P** **08 13 54.7 +0.9**
RTZ Ruatahuna 66.05 128 P **P** **08 13 56.7 +0.9**
SLWR Sila 66.17 301 P **P** **08 13 58.9 +2.3**
ZAA0 Zalesovo Array 66.33 344 P **P** **08 13 56.3 -0.7**
ZAA0 IAmb IAmb 08 13 56.5
comp=Z,12nm,0.7s
ZALV Zalesovo Beam 66.33 344 P **P** **08 13 56.0 -1.0**
comp=Z,10.0nm,0.4s,baz=153,slow=4.4,SNR=66
comp=Z,10.0nm,0.4s
ZALV Zalesovo Beam 66.33 344 P **P** **08 13 56.1 -0.8**
ZALV Zalesovo Beam 66.33 344 P **P** **08 13 56.2 -0.8**
MWZ Matawai 66.44 128 P **P** **08 13 59.0 +0.8**
HAZ Te Kaha 66.57 127 P **P** **08 13 59.4 +0.5**
MAW Mawson 66.58 198 LR LR 08 40 51.2
comp=Z,64nm,18.3s,baz=166,slow=34
TRNA Turayna 66.83 302 P **P** **08 14 03.3 +2.6**
PUZ Puketiti 66.98 128 P **P** **08 14 03.4 +1.8**
SHMA Al-Shehemyia 67.47 303 P **P** **08 14 07.1 +2.3**
BVAR Borovoye Array 70.56 336 P **P** **08 14 22.9 -0.6**
comp=Z,5.1nm,0.6s,baz=146,slow=8.7,SNR=15
comp=Z,5.1nm,0.6s
BORK Borovoye 70.61 336 P **P** **08 14 22.9 -0.7**
BORK Borovoye 70.61 336 *ce*P **P** **08 14 23.3 -0.4**
BORK pmax pmax
comp=Z,15nm,2.5s
RAYN Ar Rayn 71.29 298 P **P** **08 14 31.9 +3.4**
RAYN Ar Rayn 71.29 298 P **P** **08 14 31.7 +3.2**
YAK Yakutsk 72.30 9 P **P** **08 14 33.5 -0.1**
YAK Yakutsk 72.30 9 *e*P **P** **08 14 33.1 -0.5**
YAK *e* 08 14 50.5
YAK *e**PP **pP** **08 14 58.5 +0.9**
YAK *e* 08 17 14.6
YAK *e*PPP PPP 08 18 58.9
YAK *e*S **S** **08 23 48.3 -0.8**
YAK *e* 08 24 30.0
YAK *e**SS **ScS** **08 24 33.7 +2.3**
YAK *e*SS **SS** **08 28 28.7 -0.5**
YAK pmax pmax
comp=Z,26nm,0.9s
YAK pmax pmax
comp=N,7.0nm,1.0s
YAK pmax pmax
comp=E,5.0nm,0.9s
YAK pmax pmax
comp=Z,228nm,4.1s
YAK pmax pmax
comp=N,187nm,4.2s
YAK pmax pmax
comp=E,203nm,4.6s
YAK smax smax
comp=N,132nm,3.7s
YAK smax smax
comp=E,104nm,3.6s
AB31 Akbulak array 72.91 328 P **P** **08 14 37.2 -0.3**
AB31 IAmb IAmb 08 14 38.5
comp=Z,14nm,0.5s
ABKAR Akbulak array 72.91 328 **P** **08 14 37.2 -0.3**
VNDA Vanda 73.43 170 P **P** **08 14 40.4 +0.2**
comp=Z,2.2nm,0.5s,baz=315,slow=6.8,SNR=16

comp=Z,2.2nm,0.5s
PETK Petropavlovsk- 73.61 27 P **P** **08 14 40.9 -0.7**
comp=Z,3.7nm,0.5s,baz=227,slow=6.9,SNR=10
PETK pP **pP** **08 15 03.3 -2.2**
comp=Z,16nm,1.1s,baz=131,slow=1.2,SNR=2.2
comp=Z,3.7nm,0.5s
MA2 Magadan 75.45 20 P **P** **08 14 51.4 -0.7**
comp=Z,13nm,0.8s
AKT Akhty 76.30 317 *e*P **P** **08 14 57.1 -0.4**
AKT *e* 08 15 08.0
AKT *e**PP **pP** **08 15 17.3 -4.0**
AKT pmax pmax
comp=Z,9.0nm,1.2s
ARTI Arti 77.97 333 P **P** **08 15 05.5 -0.8**
ARTI Arti 77.97 333 *d* iP **P** **08 15 05.5 -0.8**
ARTI *PP **pP** **08 15 27.6 -2.8**
ARTI 08 18 03.3
ARTI S **S** **08 24 51.9 -0.3**
ARTI SS **SS** **08 29 51.6 -3.8**
ARTI pmax pmax
comp=Z,30nm,2.5s
SEY Seymchan 78.49 18 *ce*P **P** **08 15 08.3 -0.7**
SEY pmax pmax
comp=Z,4.0nm,0.4s
KBZ Khabaz 80.47 317 P **P** **08 15 19.9 -0.3**
comp=Z,2.1nm,0.7s,baz=150,slow=5.8,SNR=6.9
comp=Z,2.1nm,0.7s
KBZ Khabaz 80.47 317 *ce*P **P** **08 15 20.1 -0.1**
KBZ pmax pmax
comp=Z,3.0nm,1.1s
KIV Kislovodsk 80.70 317 *e*P **P** **08 15 21.5 -0.1**
KIV pmax pmax
comp=Z,6.0nm,1.0s
QSPA South Pole Qui 81.06 180 P **P** **08 15 24.3 +1.1**
comp=Z,4.7nm,0.7s,baz=302,slow=0.6,SNR=24
comp=Z,4.7nm,0.7s
QSPA South Pole Qui 81.06 180 **P** **08 15 23.5 +0.3**
TIXI Tiksi 81.33 6 P **P** **08 15 23.2 -1.1**
TIXI Tiksi 81.33 6 *i* P **P** **08 15 23.1 -1.1**
TIXI pmax pmax
comp=Z,12nm,0.8s
TIXI Tiksi 81.33 6 P **P** **08 15 23.0 -1.3**
BOSA Boshof 81.70 242 P **P** **08 15 27.8 +0.4**
comp=Z,1.8nm,0.5s,baz=96,slow=4.7,SNR=8.9
comp=Z,1.8nm,0.5s
MMAI Mount Meron Ar 82.61 305 P **P** **08 15 33.6 +1.7**
comp=Z,0.8nm,0.3s,baz=111,slow=8.2,SNR=2.3
comp=Z,0.8nm,0.3s
KIRV Kirov 83.22 332 *ce*P **P** **08 15 35.3 +1.0**
NVL N'lazarevskaya 84.50 199 *e*P **P** **08 15 39.8 -0.9**
NVL *e* 08 18 58.0
NVL *e*PPP PPP **08 20 48.9**
NVL *e*S **SKSac** **08 25 54.1 -1.7**
NVL *e*SSS SSS 08 35 03.4
NVL pmax pmax
comp=Z,11nm,0.9s
NVL MLR MLR
comp=Z,460nm,20.0s
BR104 Keskin Array S 85.76 311 P **P** **08 15 48.3 +0.5**
BRTR Keskin Array B 85.77 311 P **P** **08 15 48.0 +0.2**
comp=Z,2.4nm,0.6s,baz=134,slow=6.9,SNR=13
BRTR pP **pP** **08 16 11.2 -0.9**
comp=Z,4.9nm,0.7s,baz=140,slow=6.5,SNR=9.6
comp=Z,2.4nm,0.6s
KLMR Klimovskoe 88.72 332 *e*P **P** **08 16 02.3 +1.0**
KLMR pmax pmax
comp=Z,25nm,1.5s
SNAA Sanae 88.72 197 P **P** **08 16 03.1 +1.7**
comp=Z,5.9nm,0.7s,baz=117,slow=7.7,SNR=6.8
comp=Z,5.9nm,0.7s
SNAA Sanae 88.72 197 P **P** **08 16 02.6 +1.2**
SNAA IAmb IAmb 08 16 04.2
comp=Z,8.7nm,0.9s
SNAA Sanae 88.72 197 P **P** **08 16 02.6 +1.2**
SNAA pmax pmax
comp=Z,9.0nm,0.9s
AK09 Malin Array Si 91.36 321 P **P** **08 16 13.7 -0.2**
AK07 Malin Array Si 91.40 321 P **P** **08 16 13.7 -0.4**
AKASG Malin Array Be 91.42 321 P **P** **08 16 14.3 +0.2**
comp=Z,0.6nm,0.4s,baz=84,slow=4.7,SNR=7.1
comp=Z,0.6nm,0.4s
AK02 Malin Array Si 91.42 321 P **P** **08 16 13.9 -0.3**
APA Apatity 93.35 338 ⇓ *e*P **P** **08 16 23.9 +1.2**
APA *e* 08 20 07.2
APA pmax pmax
comp=Z,6.0nm,1.4s
FINES FINESS Array B 95.16 331 P **P** **08 16 30.6 -0.5**
comp=Z,1.6nm,0.6s,baz=108,slow=6.2,SNR=8.8
comp=Z,1.6nm,0.6s
FINES FINESS Array B 95.16 331 *i* P **P** **08 16 32.9 +1.8**
FINES pmax pmax
comp=Z,2.0nm,0.6s
C16K Lisburne Hills 96.05 22 P **P** **08 16 34.9 -0.2**
C16K IAmb IAmb 08 17 04.9
comp=Z,9.8nm,1.6s
ARCES ARCESS Array B 96.59 339 P **P** **08 16 37.7 +0.2**
comp=Z,7.0nm,1.0s,baz=102,slow=5.5,SNR=5.8
comp=Z,7.0nm,1.0s
SPITS Spitsbergen Ar 99.56 348 P **Pdif** **08 16 49.8 -0.9**
comp=Z,2.8nm,0.6s,baz=90,slow=8.9,SNR=16
comp=Z,2.8nm,0.6s
PLCA Paso Flores 130.56 179 PKP **PKPdf** **08 22 19.5 +0.5**
comp=Z,1.1nm,1.0s,baz=225,slow=5.7,SNR=3.9
TXAR Lajitas Array 142.03 53 PKP **PKPdf** **08 22 39.0 -1.6**
comp=Z,0.1nm,0.4s,baz=340,slow=2.3,SNR=4.4
TXAR Lajitas Array 142.03 53 PKIKP **PKPdf** **08 22 39.0 -1.6**
CPUP Villa Florida 143.02 198 PKhKP PKPpre 08 22 39.5
comp=Z,1.4nm,0.6s,baz=114,slow=4.3,SNR=6.2
BDFB Brasilia 147.66 221 PKPbc **PKPbc** **08 22 54.9 +1.5**
comp=Z,3.7nm,0.5s,baz=128,slow=4.2,SNR=8.3
LPAZ La Paz 154.90 183 PKPab **PKPab** **08 23 27.9 +1.6**
comp=Z,3.5nm,0.6s,baz=105,slow=2.2,SNR=12

SDD ***12*** *08:03:25.7±2.2, 19°.78N×70°.29W, h23km±19km, MD2.9, ML2.3, MW2.7, Presumed earthquake*
OSPL ***12*** *08:03:27.8±1.6, 19°.60N×70°.40W, h0km±10km, ML1.9, Presumed earthquake*
ISC 12 08:03:25.0±1.3, 19.74N±0°.05×70.27W±0°.05, h23km±10km, n13, σ1^{s}48/22, 7C-6D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SODR	**Sosua Marina B**	**0.28**	**273**	⇓ *e*Pg		**Pb**	**08 03 30.6**	**-1.1**
SODR				⇓ *e*Sg		**Sb**	**08 03 36.6**	**+0.4**
SODR				IAML			08 03 37.1	
	comp=N,326nm,0.8s							
SFDR	**San Fco. de Ma**	**0.45**	**176**	⇑ *e*Pg		**Pb**	**08 03 34.1**	**-0.3**
SFDR				⇓ *e*Sg		**Sb**	**08 03 42.2**	**+1.5**
SFDR				IAML			08 03 42.9	
	comp=N,127nm,1.0s							
LUDR	**Luperon**	**0.66**	**284**	⇓ *e*Pg		**Pn**	**08 03 38.5**	**-0.4**
LUDR				⇑ *e*Sg		**Sb**	**08 03 46.1**	**-0.5**
DR08	**Loma La Naviza**	**0.81**	**163**	⇓ *e*Pg		**Pb**	**08 03 39.8**	**-0.7**
DR08				⇑ *e*Sg		**Sn**	**08 03 51.8**	**-0.6**
DR08				IAML			08 03 52.2	
	comp=N,914nm,0.2s							
LOPP1	**Punta Rusia, P**	**0.88**	**278**	*i* P		**Pn**	**08 03 41.9**	**-0.1**
LOPP1				*e*S		**Sn**	**08 03 53.5**	**-0.5**
LOPP1				IAML			08 03 54.2	
	comp=Z,45nm,1.5s							
REDR	**Restauracion**	**1.20**	**242**	⇓ *e*Pg		**Pb**	**08 03 48.4**	**+1.3**
REDR				⇑ *e*Sg		**Sb**	**08 04 06.6**	**+4.4**
REDR				IAML			08 04 09.6	
	comp=N,30nm,0.7s							
SDDR	**Presa de Saban**	**1.22**	**232**	*i* P		**Pn**	**08 03 45.6**	**-1.1**
SDDR				*e*S		**Sn**	**08 04 00.0**	**-2.4**
SDDR				IAML			08 04 01.9	
	comp=Z,7.7nm,3.4s							
HATOM	**Hato Mayor del**	**1.27**	**138**	⇑ *e*Pg		**Pb**	**08 03 48.5**	**+0.2**
HATOM				IAML			08 04 48.0	
	comp=N,29nm,4.5s							
SDD	**Santo Domingo**	**1.32**	**165**	*i* P		**Pb**	**08 03 49.9**	**+0.7**
SDD				*e*S		**Sb**	**08 04 05.9**	**+0.3**
BANI	**BANI**	**1.34**	**183**	⇑ *e*Pg		**Pb**	**08 03 49.2**	**-0.4**
BANI				⇑ *e*Sg		**Sb**	**08 04 07.0**	**+0.6**
BANI				IAML			08 04 13.9	
	comp=N,32nm,0.6s							
LONE3	**El Aguacate, B**	**1.59**	**225**	*i* P		**Pn**	**08 03 52.2**	**+0.3**
LONE3				IAML			08 04 14.1	
	comp=Z,11nm,2.3s							
LODU1	**El Espartillar**	**1.79**	**220**	*i* P		**Pb**	**08 03 56.5**	**-0.5**
LODU1				IAML			08 04 22.5	
	comp=Z,28nm,1.9s							
GRTK	**Grand Turk**	**1.94**	**336**	*e*S		**Sb**	**08 04 25.6**	**+2.2**
GRTK				IAML			08 04 27.0	
	comp=Z,52nm,1.2s							

IDC 12 08:14:21.1±25.0, 20°.53S×179°.34E, h462km±182km, mb2.9/3, mbtmp3.7/4, Error ellipse: s-maj=646.8km s-min=117.1km az=86.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.04**	**336**	P	P		08 15 29.5	-0.1
	11nm,0.4s,baz=150,slow=3.2,SNR=30							
STKA	**Stephens Creek**	**35.54**	**244**	P	P		08 20 38.0	-0.1
	0.6nm,0.4s,baz=84,slow=12,SNR=3.0							
	0.6nm,0.4s							
ASAR	**Alice Springs**	**42.09**	**257**	P	P		08 21 31.2	-0.3
	1.2nm,0.8s,baz=99,slow=7.5,SNR=9.4							
	1.2nm,0.8s							
WRA	**Warramunga Arr**	**42.13**	**263**	P	P		08 21 31.8	-0.1
	0.3nm,0.3s,baz=97,slow=7.5,SNR=12							
	0.3nm,0.3s							

FUNV ***12*** *08:18:53.4, 6°.14N×71°.98W, h4km, MW3.2, Presumed earthquake*
RSNC ***12*** *08:18:55.7±0.0, 6°N±1°×7°.2W±°, h10km±2km, M2.3, ML2.0*
ISC 12 08:18:52.8±1.5, 6°.23N±0°.04×72°.00W±0°.05, h8km±11km, n17, σ1^{s}17/30, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RUSC	**La Rusia**	**1.13**	**253**	P		**Pg**	**08 19 14.6**	**0.0**
RUSC				*S*		**Sg**	**08 19 29.4**	**+0.1**
RUSC	**La Rusia**	**1.13**	**253**	*e*P		**Pg**	**08 19 14.6**	**0.0**
RUSC				*e*S		**Sg**	**08 19 29.5**	**+0.2**
BARC	**Barichara**	**1.23**	**287**	P		**Pb**	**08 19 16.6**	**+0.1**
BARC				S		**Sb**	**08 19 32.8**	**+0.1**
PAMC	**Pamplona, Colo**	**1.31**	**328**	P		**Pn**	**08 19 18.3**	**+0.5**
PAMC				S		**Sb**	**08 19 35.0**	**-0.1**
CAPV	**Capacho**	**1.66**	**349**	*e*P		**Pb**	**08 19 23.4**	**-0.4**
CAPV				*e*S		**Sg**	**08 19 47.6**	**+1.3**
BRJC	**Barrancabermej**	**1.89**	**293**	P		**Pn**	**08 19 26.0**	**+0.6**
BRJC				S		**Sg**	**08 19 52.7**	**-0.9**
SPBC	**San Pablo de B**	**2.14**	**255**	P		**Pn**	**08 19 29.9**	**+1.0**
SPBC				S		**Sn**	**08 19 56.8**	**+1.0**
SOCV	**Socops**	**2.34**	**29**	*e*P		**Pn**	**08 19 32.7**	**+1.1**
SOCV				*e*S		**Sn**	**08 20 01.6**	**+1.1**
CHIC	**Chingaza**	**2.34**	**228**	P		**Pn**	**08 19 32.1**	**+0.1**
CHIC				S		**Sb**	**08 20 06.0**	**+1.2**
OCAC	**Ocana**	**2.39**	**327**	P		**Pn**	**08 19 34.1**	**+1.6**
OCAC				S		**Sg**	**08 20 08.2**	**-1.6**
PTBC	**PUERTO BERRIO,**	**2.46**	**277**	P		**Pn**	**08 19 32.2**	**-1.1**
PTBC				S		**Sn**	**08 20 02.6**	**-1.0**
VILC	**Villavicencio,**	**2.69**	**219**	P		**Pn**	**08 19 37.7**	**+1.1**
VILC				S		**Sn**	**08 20 07.5**	**-2.0**
SDV	**Santo Domingo**	**2.97**	**27**	P		**Pb**	**08 19 45.4**	**-0.7**
SDV				S		**Sn**	**08 20 17.6**	**+1.3**
GUY2C	**Guyana, Caldas**	**3.50**	**254**	P		**Pn**	**08 19 48.8**	**+0.9**
MAPV	**Macapo**	**5.01**	**44**	*e*P		**Pn**	**08 20 09.9**	**+0.9**
MAPV				*e*S		**Sn**	**08 21 03.6**	**-3.0**
CACV	**CAICARA DEL OR**	**5.58**	**76**	*e*P		Pn	08 20 22.7	+6.6
BENV	**Beln**	**5.72**	**49**	*e*P		**Pn**	**08 20 17.1**	**-1.1**

SNET ***12*** *08:31:12.9±0.8, 13°.62N×90°.00W, h48km±4km, ML3.0, Presumed earthquake*
CATAC ***12*** *08:31:13.2±0.7, 13°N±7°×9°0W±°, h49km±7km, M2.9/11, MLv2.9/11, Error ellipse: s-maj=14.2km s-min=9.5km az=9.0, confirmed*
GCG ***12*** *08:31:14.5±0.7, 13°.55N×90°.05W, h55km±9km, MD3.8, ML3.6, Presumed earthquake*
ISC 12 08:31:14.8±2.1, 13°.50N±0°.09×90°.00W±0°.07, h63km±11km, n41, σ0^{s}89/50, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
FAME	**Alcaldia de Sa**	**0.35**	**358**	P		**Pn**	**08 31 24.3**	**-1.3**
NUBE	**Las Nubes**	**0.46**	**28**	*i* P		**Pn**	**08 31 25.9**	**-0.8**
NUBE				IAML			08 31 38.8	
	comp=N,409nm,0.3s							
NUBE	**Las Nubes**	**0.46**	**28**	*e*P		**Pn**	**08 31 26.0**	**-0.8**
NUBE				*e*S		**Sn**	**08 31 35.5**	**0.0**
ESSJ	**San Jos, E**	**0.49**	**278**	*i* P		Pn	08 31 30.9	+4.0
CEVE	**Cerro Verde**	**0.49**	**48**	P		**Pn**	**08 31 26.5**	**-0.7**
CEVE	**Cerro Verde**	**0.49**	**48**	*e*P		**Pn**	**08 31 26.4**	**-0.8**
CEVE				*e*S		**Sn**	**08 31 38.1**	**+1.9**
SBLS	**San Blas**	**0.50**	**47**	*e*P		**Pn**	**08 31 26.6**	**-0.7**
SBLS				*e*P			08 31 26.6	
RTR	**El Retiro**	**0.53**	**41**	*e*P		**Pn**	**08 31 27.0**	**-0.4**
JAYA	**Jayaque - finc**	**0.56**	**74**	*i* P		**Pn**	**08 31 26.9**	**-0.8**
JAYA				*i* S		**Sn**	**08 31 36.8**	**-0.4**
JAYA				IAML			08 31 39.3	
	comp=N,7μm,0.2s							
JAYA	**Jayaque - finc**	**0.56**	**74**	*e*P		**Pn**	**08 31 27.1**	**-0.7**
JAYA				*e*S		**Sn**	**08 31 38.1**	**+0.9**
SLOZ	**Alcaldia de Sa**	**0.57**	**22**	P		**Pn**	**08 31 26.8**	**-1.0**
SLOZ				S		**Sn**	**08 31 38.0**	**+0.7**
SLOZ	**Alcaldia de Sa**	**0.57**	**22**	*e*P		**Pn**	**08 31 26.9**	**-0.9**
UNIC	**Universidad Ca**	**0.65**	**42**	P		**Pn**	**08 31 27.8**	**-0.9**
UNIC				S		**Sn**	**08 31 39.4**	**+0.4**
UNIC	**Universidad Ca**	**0.65**	**42**	*e*P		**Pn**	**08 31 27.8**	**-0.9**
PMON	**Piamonte**	**0.70**	**72**	*e*P		**Pn**	**08 31 28.9**	**-0.4**
BOQS	**Boqueron**	**0.74**	**71**	*e*P		**Pn**	**08 31 29.2**	**-0.7**
UEES	**Universidad Ev**	**0.77**	**73**	P		**Pn**	**08 31 29.9**	**-0.2**
UEES	**Universidad Ev**	**0.77**	**73**	*e*P		**Pn**	**08 31 29.8**	**-0.4**
UEES				*e*S		**Sn**	**08 31 42.6**	**+1.1**
PCG5	**San Vicente Pa**	**0.80**	**333**	*i* P		**Pn**	**08 31 32.7**	**+2.1**
UTEC	**Universidad Te**	**0.80**	**75**	P		**Pn**	**08 31 30.0**	**-0.5**
UTEC				S		**Sn**	**08 31 43.0**	**+0.8**
LOMA	**Loma Larga**	**0.82**	**80**	*e*P		**Pn**	**08 31 30.4**	**-0.4**
LOMA				*e*S		**Sn**	**08 31 43.9**	**+1.3**
FG16	**Alotenango, Sa**	**0.92**	**327**	*i* P		Pn	08 31 35.5	+3.3
FG16				*i* S		Sn	08 31 51.7	+6.8
FG16				IAML			08 31 54.9	
	comp=N,2μm,0.3s							
FG16				*e*			08 32 54.7	
FG8	**Yepocapa, Chim**	**0.93**	**324**	*i* P		Pn	08 31 35.9	+3.7
PAVA	**Las Pavas**	**1.06**	**78**	P		**Pn**	**08 31 33.7**	**-0.1**
MTO3	**Montecristo**	**1.09**	**35**	*i* P		**Pn**	**08 31 33.6**	**-0.8**
MTO3	**Montecristo**	**1.09**	**35**	*e*P		**Pn**	**08 31 33.5**	**-0.8**
MTO3				*e*S		**Sn**	**08 31 49.4**	**+0.5**
COEG	**Centro de Oper**	**1.10**	**83**	*e*P		**Pn**	**08 31 34.0**	**-0.2**
COEG				*e*S		**Sn**	**08 31 49.9**	**+1.1**
TECO	**Alcaldia de Te**	**1.19**	**88**	P		**Pn**	**08 31 34.8**	**-0.6**
TECO				S		**Sn**	**08 31 51.6**	**+0.8**
ESSG	**Sabana Grande**	**1.20**	**318**	*i* P		**Pn**	**08 31 34.1**	**-1.5**
LLGN	**La Laguna**	**1.22**	**57**	P		**Pn**	**08 31 34.9**	**-1.1**
LLGN				S		**Sn**	**08 31 52.0**	**+0.3**
ESQI	**Esquipulas**	**1.24**	**31**	P		**Pn**	**08 31 35.7**	**-0.4**
ESQI	**Esquipulas**	**1.24**	**31**	*e*P		**Pn**	**08 31 35.3**	**-0.8**
SCLA	**Alcaldia de Sa**	**1.25**	**80**	P		**Pn**	**08 31 36.0**	**-0.4**
P5NO	**Presa 5 de nov**	**1.30**	**68**	P		**Pn**	**08 31 35.9**	**-1.0**
P5NO				S		**Sn**	**08 31 53.7**	**+0.2**
P5NO	**Presa 5 de nov**	**1.30**	**68**	*e*P		**Pn**	**08 31 35.7**	**-1.2**
APG	**El Apazote**	**1.56**	**343**	*i* P		**Pn**	**08 31 39.9**	**-0.8**
STG5	**El Palmar, Qui**	**1.59**	**305**	*i* P		Pn	08 31 44.4	+3.6
STG2	**El Palmar, Qui**	**1.63**	**305**	*i* P		Pn	08 31 45.3	+3.9
STG2				IAML			08 32 12.1	
	comp=E,933nm,0.3s							
SARH	**Santa Rosa de**	**1.75**	**43**	P		**Pn**	**08 31 42.8**	**-0.2**
SARH	**Santa Rosa de**	**1.75**	**43**	*i* P		**Pn**	**08 31 43.0**	**0.0**
LCND	**La Caada**	**2.06**	**95**	P		**Pn**	**08 31 46.4**	**-0.8**

IDC ***12*** *08:40:04.1±2.2, 7°.17S×120°.73E, h470km±30km, mb2.9/4, mbtmp3.6/6, Error ellipse: s-maj=108.4km s-min=21.2km az=60.0*
ISC 12 08:40:05.6±1.2, 7°.2S±0°.2×121°.3E±0°.4, h500km, n7, σ2^{s}72/8, mb3.7/3, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.83**	**142**	P		**P**	**08 41 22.3**	**-0.4**
	82nm,0.3s,baz=129,slow=1.0,SNR=10							
BATI				S		**S**	**08 42 21.7**	**-3.8**
	42nm,0.4s,baz=230,slow=4.2,SNR=4.2							
FITZ	**Fitzroy Crossi**	**11.66**	**159**	P		**P**	**08 42 40.8**	**+0.2**
	3.0nm,0.6s,baz=328,slow=6.7,SNR=13							
WRA	**Warramunga Arr**	**17.94**	**136**	P		**P**	**08 43 48.3**	**+2.8**
	0.1nm,0.3s,baz=311,slow=9.9,SNR=2.3							
ASAR	**Alice Springs**	**20.40**	**145**	P		**P**	**08 44 11.5**	**+3.5**
	0.1nm,0.3s,baz=320,slow=8.6,SNR=4.9							
SONM	**Songino Array**	**56.33**	**348**	P		**P**	**08 48 58.9**	**+0.3**
	0.4nm,0.5s,baz=144,slow=5.4,SNR=2.3							
	0.4nm,0.5s							
MKAR	**Makanchi Array**	**63.91**	**331**	P		**P**	**08 49 48.7**	**-0.2**
	1.4nm,0.7s,baz=140,slow=7.1,SNR=14							
	1.4nm,0.7s							
ZALV	**Zalesovo Beam**	**68.18**	**338**	P		**P**	**08 50 13.9**	**-1.4**
	1.4nm,0.5s,baz=123,slow=5.5,SNR=5.8							
	1.4nm,0.5s							

IDC 12 08:56:27.2±1.9, 2°.30N×126°.15E, h0km, mb3.4/4, mbtmp3.4/4, MS3.6/1, Error ellipse: s-maj=196.5km s-min=22.1km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.52**	**160**	P	P		09 01 38.6	-0.5
	0.2nm,0.3s,baz=339,slow=10,SNR=11							
	0.2nm,0.3s							
ASAR	**Alice Springs**	**26.89**	**164**	P	P		09 02 10.4	+0.4
	0.1nm,0.4s,baz=345,slow=11,SNR=4.2							
	0.1nm,0.4s							
MKAR	**Makanchi Array**	**58.40**	**326**	P	P		09 06 24.9	+0.3
	0.2nm,0.3s,baz=120,slow=7.9,SNR=5.4							
MKAR				LR	LR		09 33 57.1	
	comp=Z,44nm,18.6s,baz=330,slow=38							
	0.2nm,0.3s							
KURBB	**Kurchatov Arra**	**62.63**	**328**	P	P		09 06 53.1	-0.3
	0.5nm,0.6s,baz=126,slow=6.1,SNR=4.8							
	0.5nm,0.6s							

DJA ***12*** *09:22:34.5±1.6, 5°S±11°×14°9E±°, h123km±12km, M5.6/12, mb4.7/12, mB5.0/2, MLv6.0/1, Mw(mB)4.4/2*
IDC ***12*** *09:22:38.4±0.6, 5.89S×149.37E, h130km±4km, mb3.8/15, mbtmp4.3/18, MS3.4/19, Error ellipse: s-maj=19.6km s-min=8.3km az=105.0*
GCMT ***12*** *09:22:39.8±0.2, 5.91S±0.02×149.19E±0.02, h142km±3km, MW4.9/109, Moment Tensor Solution. s28,c29; s109,c143; Duration: 0 Moment tensor: Scale 10¹⁶Nm; M_{rr}1.52±.11; $M_{\theta\theta}$-1.48±.13; $M_{\phi\phi}$-0.04±.12; $M_{r\theta}$2.42±.08; $M_{\theta\phi}$0.33±.16; $M_{r\phi}$0.36±.08; Best double couple: M_o2.88700×10¹⁶ NP1:ϕ$_s$297.00000°, δ18.00000°, λ120.00000°. NP2:ϕ$_s$85.00000°, δ74.00000°, λ81.00000°. Principal axes: T 2.9430, Plg59.0000°, Azm342.0000°; N -0.1160, Plg9.0000°, Azm88.0000°; P -2.8320, Plg29.0000°, Azm183.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***12*** *09:22:42.8±2.5, 5.85S±0.07×149.22E±0.09, h163km±6km, mb4.5/54 Error ellipse: s-maj=12.6km s-min=9.1km az=105.0*
ISC 12 09:22:41.1±0.4, 5.85S±0.04×149.20E±0.07, h150km, n141, σ1^{s}56/118, mb4.4/46, 1C, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.39**	**61**			**Pn**	**09 23 32.0**	**-1.4**
PMG	**Port Moresby**	**4.07**	**210**	P		**Pn**	**09 23 41.2**	**-1.0**
	262nm,0.7s,baz=33,slow=9.3,SNR=21							
PMG				S		**Sn**	**09 24 29.5**	**-0.2**
	2μm,0.8s,baz=49,slow=22,SNR=6.8							
PMG	**Port Moresby**	**4.07**	**210**	P		**Pn**	**09 23 41.3**	**-0.9**
PMG	**Port Moresby**	**4.07**	**210**	P		**Pn**	**09 23 40.9**	**-1.3**
PMG	**Port Moresby**	**4.07**	**210**	S		**Sn**	**09 24 30.0**	**+0.2**
PMG	**Port Moresby**	**4.07**	**210**	P		**Pn**	**09 23 41.0**	**-1.3**
PMG	**Port Moresby**	**4.07**	**210**	S		**Sn**	**09 24 30.2**	**+0.4**
PMG	**Port Moresby**	**4.07**	**210**			**Pn**	**09 23 41.6**	**-0.6**
PMG	**Port Moresby**	**4.07**	**210**	P		**Pn**	**09 23 40.9**	**-1.3**
MANU	**Manus Island**	**4.20**	**334**			**Pn**	**09 23 43.8**	**-0.2**
COEN	**Coen**	**10.00**	**216**	Pn		Pn	09 24 56.6	-4.5
MTSU	**Mount Surprise**	**13.10**	**201**	P		**Pn**	**09 25 45.2**	**+3.5**
CTA	**Charters Tower**	**14.44**	**191**	P		**Pn**	**09 25 57.1**	**-1.4**
	5.8nm,0.9s,baz=36,slow=15,SNR=11							
CTAO	**Charters Tower**	**14.44**	**191**	P		**P**	**09 26 02.6**	**+1.5**
CTAO	**Charters Tower**	**14.44**	**191**	P		**Pn**	**09 25 59.5**	**+1.0**
CTAO	**Charters Tower**	**14.44**	**191**	Pn		**Pn**	**09 25 59.1**	**+0.6**
QIS	**Mount Isa**	**17.33**	**212**	P		**P**	**09 26 33.7**	**+0.6**
QIS	**Mount Isa**	**17.33**	**212**	P		**P**	**09 26 33.9**	**+0.8**
AUNRC	**North Rockhamp**	**17.44**	**176**	P		**P**	**09 26 35.8**	**+1.5**
SIJI	**Sorong**	**18.57**	**285**	LR	LR		09 36 10.2	
	comp=Z,166nm,19.5s,baz=170,slow=43							
MTN	**Manton Dam**	**19.12**	**247**			**P**	**09 26 52.6**	**-0.1**
DRS	**Darwin Rock St**	**19.20**	**249**	P		P	09 26 44.7	-8.8
DRS	**Darwin Rock St**	**19.20**	**249**	P		**P**	**09 26 54.0**	**+0.5**
AUDHS	**Darwin High Sc**	**19.27**	**249**	P		P	09 26 45.4	-8.9
EIDS	**Eidsvold**	**19.49**	**175**	P		**P**	**09 26 57.6**	**+1.0**
EIDS	**Eidsvold**	**19.49**	**175**	P		**P**	**09 26 58.1**	**+1.5**
EIDS	**Eidsvold**	**19.49**	**175**			**P**	**09 26 58.3**	**+1.7**
GUMO	**Guam**	**19.79**	**347**	P		**P**	**09 27 00.5**	**+0.6**
	47nm,0.4s,baz=192,slow=20,SNR=1.8							
GUMO				LR	LR		09 33 15.3	
	comp=Z,83nm,19.3s,baz=146,slow=32							
WR8	**Warramunga Arr**	**20.01**	**224**			**P**	**09 27 02.2**	**-0.1**
SANVU	**Saraoutou**	**20.08**	**120**	P		**P**	**09 27 04.1**	**+1.0**
WRAB	**Tennant Creek**	**20.10**	**225**	P		**P**	**09 27 02.9**	**-0.3**
WRAB	**Tennant Creek**	**20.10**	**225**	P		**P**	**09 27 03.0**	**-0.3**
WRAB	**Tennant Creek**	**20.10**	**225**			**P**	**09 27 03.3**	**0.0**
WRA	**Warramunga Arr**	**20.12**	**225**	P		**P**	**09 27 02.9**	**-0.6**
	22nm,0.7s,baz=50,slow=11,SNR=172							
WRA				S		**S**	**09 30 40.5**	**-0.8**
	7.4nm,1.1s,baz=50,slow=21,SNR=11							
WRA				ScP		**ScP**	**09 34 36.8**	**+1.8**
	2.1nm,0.7s,baz=46,slow=2.4,SNR=9.8							
	22nm,0.7s							
QLP	**Quilpie**	**21.15**	**192**	P		**P**	**09 27 14.8**	**+0.4**
QLP	**Quilpie**	**21.15**	**192**	P		**P**	**09 27 15.2**	**+0.8**
KNRA	**Kununurra**	**22.30**	**242**			**P**	**09 27 25.8**	**-0.6**
AS31	**Alice Springs**	**23.03**	**218**			**P**	**09 27

URZ Urewera 41.02 146 LR LR 09 44 34.6
comp=Z,83nm,18.6s,baz=319,slow=32
HAZ Te Kaha 41.05 145 P P 09 30 13.6 +3.8
RTZ Ruatahuna 41.20 146 P P 09 30 12.4 +1.3
MWZ Matawai 41.30 146 P P 09 30 15.0 +3.1
BKZ Black Stump Fm 41.32 147 P P 09 30 14.0 +1.9
THZ Tophouse 41.52 153 P P 09 30 16.0 +2.3
PUZ Puketiti 41.54 145 P P 09 30 15.1 +1.3
INZ Inchbonnie 41.67 155 P P 09 30 15.6 +0.8
TSZ Takapari Road 41.70 149 P P 09 30 16.4 +1.3
JCZ Jackson Bay 41.77 159 P P 09 30 18.0 +2.3
MRZ Mangatainoka R 41.95 150 P P 09 30 17.9 +0.8
MSZ Milford Sound 41.99 160 P P 09 30 19.2 +1.8
LTZ Lake Taylor 42.06 154 P P 09 30 20.2 +2.1
BFZ Birch Farm 42.30 149 P P 09 30 20.3 +0.3
RPZ Rata Peaks 42.33 156 P P 09 30 21.4 +1.2
OXZ Oxford 42.41 155 P P 09 30 21.5 +0.7
GVZ Greta Valley S 42.55 154 P P 09 30 22.8 +0.9
MLZ Mavora Lakes 42.67 160 P P 09 30 24.0 +1.1
JGF Kuroka 42.71 346 IAmb IAmb 09 30 25.3
comp=Z,25nm,1.2s
TMZ Timaru 42.87 157 P P 09 30 24.8 +0.3
MQZ McQueen's Vall 42.98 155 P P 09 30 26.9 +1.6
WHZ Wether Hill Ro 43.08 161 P P 09 30 27.2 +1.1
ODZ Otahua Downs 43.29 158 P P 09 30 30.7 +2.8
MJAR Matsushiro Arr 43.41 347 P P 09 30 28.1 -0.9
comp=Z,4.0nm,0.7s,baz=164,slow=7.0,SNR=13
MJAR LR LR 09 45 46.5
comp=Z,66nm,20.1s,baz=180,slow=32
comp=Z,4.0nm,0.7s
MJAR Matsushiro Arr 43.41 347 P 09 30 28.8 -0.2
MAJO Matsushiro 43.41 347 P 09 30 28.6 -0.3
MAJO IAmb IAmb 09 30 30.6
comp=Z,14nm,0.9s
MJB9 Matsu-Tunnel 43.42 347 P P 09 30 29.6 +0.7
MJB9 IAmb IAmb 09 30 32.0
comp=Z,12nm,0.8s
APZ The Paps 43.92 161 P P 09 30 33.5 +0.5
KSRS Korea Array 47.44 337 P P 09 31 00.8 +0.2
comp=Z,1.9nm,0.7s,baz=156,slow=8.6,SNR=4.6
KSRS pP pP 09 31 31.1 -2.8
comp=Z,4.1nm,1.0s,baz=145,slow=8.6,SNR=4.5
comp=Z,1.9nm,0.7s
NJ2 Nanjing 47.50 324 eP P 09 31 03.1 +2.0
NJ2 pmax pmax
comp=Z,26nm,0.5s
USRK Ussuriysk Ar. 52.18 344 P P 09 31 36.7 +0.4
comp=Z,2.2nm,0.7s,baz=140,slow=7.6,SNR=2.9
comp=Z,2.2nm,0.7s
HNS HongShan 53.72 326 ↑P P 09 31 48.3 +0.6
HNS pmax pmax
comp=Z,8.0nm,1.8s
CMAR Chiang Mai Arr 55.12 297 P P 09 31 57.6 -0.5
comp=Z,0.9nm,0.3s,baz=124,slow=9.0,SNR=1.5
CMAR LR LR 09 57 27.2
comp=Z,14nm,18.9s,baz=100,slow=38
comp=Z,0.9nm,0.3s
PZH PanZhiHua 56.09 307 P P 09 32 07.8 +2.7
HHC Hu-ho-hao-te 57.88 327 eP P 09 32 21.2 +3.8
HHC pmax pmax
comp=Z,13nm,0.7s
PETK Petropavlovsk- 59.18 6 P P 09 32 26.9 +0.8
comp=Z,3.4nm,0.4s,baz=156,slow=6.2,SNR=14
comp=Z,3.4nm,0.4s
LZH Lanzhou 59.54 318 eP P 09 32 32.1 +3.0
LZH pmax pmax
comp=Z,10.0nm,1.2s
MA2 Magadan 65.23 1 LR LR 09 56 31.3
comp=Z,12nm,21.5s,baz=296,slow=31
SONM Songino Array 65.36 330 P P 09 33 08.0 +0.6
comp=Z,0.4nm,0.3s,baz=124,slow=5.6,SNR=3.8
SONM pP PcP 09 33 40.3 +1.9
comp=Z,0.8nm,0.6s,baz=156,slow=6.0,SNR=3.8
SONM LR LR 10 03 34.5
comp=Z,33nm,18.6s,baz=178,slow=38
comp=Z,0.4nm,0.3s
SONM Songino Array 65.36 330 IAmb IAmb 09 33 15.7
comp=Z,2.0nm,1.2s
TLY Talaya 69.24 332 LR LR 10 06 03.6
comp=Z,27nm,18.2s,baz=120,slow=38
YAK Yakutsk 69.34 350 LR LR 10 08 08.5
comp=Z,7.7nm,19.2s,baz=132,slow=39
VNDA Vanda 71.94 177 P P 09 33 46.7 -0.9
comp=Z,1.0nm,0.8s,baz=333,slow=6.9,SNR=2.1
VNDA pP pP 09 34 19.6 -3.3
comp=Z,3.9nm,0.9s,baz=309,slow=7.3,SNR=5.9
comp=Z,1.0nm,0.8s
VNDA Vanda 71.94 177 IAmb IAmb 09 34 21.4
comp=Z,8.4nm,1.1s
O14K Tigyukauivet M 75.83 24 IAmb IAmb 09 34 13.3
comp=Z,8.0nm,0.8s
O15K Ungalikthiuk R 76.37 24 IAmb IAmb 09 34 17.6
comp=Z,10nm,1.1s
L14K Kuka Creek 76.62 22 IAmb IAmb 09 34 17.4
comp=Z,12nm,0.8s
N15K Kwethluk River 76.87 23 P P 09 34 17.9 +1.6
N15K IAmb IAmb 09 34 18.4
comp=Z,8.6nm,1.0s
K15K Wolf Creek Mou 77.65 21 IAmb IAmb 09 34 23.7
comp=Z,4.7nm,0.7s
J16K Anvik River 78.61 21 P P 09 34 27.5 +1.7
KDAK Kodiak Island 78.75 28 LR LR 10 02 40.0
comp=Z,40nm,21.5s,baz=259,slow=30
MKAR Makanchi Array 78.78 320 P P 09 34 26.6 -0.7
comp=Z,0.2nm,0.3s,baz=95,slow=8.8,SNR=5.7
MKAR pP pP 09 35 00.4 -3.5
comp=Z,0.3nm,0.5s,baz=96,slow=7.6,SNR=2.2
MKAR LR LR 10 08 41.9
comp=Z,20nm,19.7s,baz=339,slow=35
comp=Z,0.2nm,0.3s
K17K Iditarod 79.10 22 IAmb IAmb 09 34 32.0
comp=Z,8.5nm,0.9s
L18K Granite Mounta 79.41 23 IAmb IAmb 09 34 33.4
comp=Z,5.8nm,0.8s
ZALV Zalesovo Beam 80.06 327 P P 09 34 30.1 -3.8
comp=Z,0.6nm,0.5s,baz=77,slow=3.1,SNR=3.6
ZALV LR LR 10 13 53.1
comp=Z,14nm,18.0s,baz=291,slow=38
L22K Petersville 81.91 24 IAmb IAmb 09 34 47.6
comp=Z,5.2nm,0.9s
C19K Lookout Ridge 82.59 16 IAmb IAmb 09 34 50.0
comp=Z,3.8nm,0.6s
RND Reindeer 83.10 24 IAmb IAmb 09 34 51.3
comp=Z,9.3nm,0.8s
MLY Manley 83.17 22 IAmb IAmb 09 34 51.2
comp=Z,4.8nm,0.9s
DHY Denali Highway 83.55 24 IAmb IAmb 09 34 54.0
comp=Z,4.3nm,0.8s
NEA2 Nenana 83.58 22 IAmb IAmb 09 34 53.2
comp=Z,4.0nm,0.7s
CCB Clear Creek Bu 84.09 23 IAmb IAmb 09 34 54.8
comp=Z,4.8nm,1.0s
QSPA South Pole Qui 84.11 180 P P 09 34 54.8 -0.2
comp=Z,2.1nm,0.7s,baz=232,slow=0.6,SNR=9.5
QSPA pP pP 09 35 26.7 -4.8
comp=Z,4.2nm,0.6s,baz=315,slow=1.0,SNR=8.0
QSPA LR LR 10 10 17.4
comp=Z,70nm,18.9s,baz=26,slow=34
comp=Z,2.1nm,0.7s
QSPA South Pole Qui 84.11 180 IAmb IAmb 09 35 28.7
comp=Z,7.4nm,0.8s
COLA College 84.17 22 P P 09 34 54.8 -0.2
COLA IAmb IAmb 09 34 55.5
comp=Z,4.5nm,0.8s
ILAR Eielson Array 84.50 23 P P 09 34 55.6 -1.2
comp=Z,3.5nm,0.8s,baz=255,slow=5.5,SNR=35
comp=Z,3.5nm,0.8s
J25K Salcha River, 85.02 23 IAmb IAmb 09 35 00.2
comp=Z,6.4nm,0.9s
D23K Nanushuk River 85.16 18 IAmb IAmb 09 35 06.6
comp=Z,6.4nm,1.1s
L29M L29M 87.45 26 IAmb IAmb 09 35 14.6
comp=Z,7.0nm,1.0s
K29M Barlow Dome 87.94 25 IAmb IAmb 09 35 15.7
comp=Z,4.2nm,0.9s
DLBC Dease Lake 90.13 31 LR LR 10 08 36.6
comp=Z,19nm,20.9s,baz=250,slow=31
NVAR Mina Array Bea 95.56 52 P P 09 35 48.3 -1.4
comp=Z,0.2nm,0.5s,baz=279,slow=3.7,SNR=2.1
comp=Z,0.2nm,0.5s
PFO Pinyon Flats O 96.82 57 LR LR 10 15 40.4
comp=Z,26nm,18.0s,baz=290,slow=33
YKA Yellowknife Ar 98.03 28 P P 09 35 57.9 -2.1
comp=Z,0.1nm,0.7s,baz=282,slow=4.9,SNR=4.1
YKA PKKPbc PKKPbc 09 52 29.4 -6.3
comp=Z,0.2nm,0.6s,baz=77,slow=2.5,SNR=4.5
comp=Z,0.1nm,0.7s

PLCA Paso Flores 121.03 145 PKP PKPdf 09 41 16.6 +0.2
comp=Z,0.5nm,0.4s,baz=293,slow=1.7,SNR=7.8
CLL Collm 121.97 329 *i* PKPdf PKPdf 09 41 17.6 -0.1
TORD Torodi Ar. Bea 147.16 285 PKPbc PKPdf 09 42 05.4 +0.2
comp=Z,0.6nm,0.4s,baz=48,slow=4.9,SNR=4.7
BDFB Brasilia 152.68 142 PKPbc PKPbc 09 42 21.7 +0.5
comp=Z,2.2nm,0.4s,baz=141,slow=3.6,SNR=4.1
BDFB pPKPbc pPKPdf 09 42 53.6 -0.4
comp=Z,5.6nm,0.8s,baz=125,slow=5.2,SNR=4.3

ASRS ***12*** *09:34:47.0±1.0, 53°.70N×88°.20E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 12 09:34:47.1±3.5, 53°.65N×88°.24E, h0km, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=30.5km s-min=19.0km az=53.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	2.05	280	I	I	09 51 10.0	
	baz=99,slow=299,SNR=2.2						
ZALV	Zalesovo Beam	2.05	280	Pg	Pb	09 35 24.3	-0.8
	1.8nm,0.3s,baz=98,slow=13,SNR=22						
ZALV				Lg	Lg	09 35 52.1	
	3.9nm,0.3s,baz=95,slow=25,SNR=21						
KURBB	Kurchatov Arra	6.70	247	Pn	Pn	09 36 26.8	+0.1
	0.1nm,0.3s,baz=60,slow=14,SNR=5.4						
KURBB				Lg	Lg	09 38 18.8	
	baz=60,slow=31,SNR=2.4						
	0.5nm,0.4s						
MKAR	Makanchi Array	7.85	211	Pn	Pn	09 36 44.1	+1.6
	0.1nm,0.3s,baz=31,slow=13,SNR=1.9						
MKAR				Lg	Lg	09 38 56.9	
	baz=30,slow=29,SNR=2.6						
	0.2nm,0.4s						

IDC 12 09:44:21.9±3.9, 19°.51S×175°.94W, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=431.2km s-min=36.0km az=160.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	46.63	256	P	P	09 52 52.6	+0.2
	0.6nm,0.9s,baz=93,slow=7.7,SNR=4.6						
	0.6nm,0.9s						
WRA	Warramunga Arr	46.66	261	P	P	09 52 52.3	-0.3
	0.2nm,0.3s,baz=97,slow=8.0,SNR=19						
	0.2nm,0.3s						
TXAR	Lajitas Array	84.90	57	P	P	09 56 59.2	0.0
	0.1nm,0.3s,baz=236,slow=4.1,SNR=1.9						
	0.1nm,0.3s						

NNC ***12*** *10:08:46.4±1.1, 50°.98N×75°.35E, h0km, mb3.0, mpv2.5, Error ellipse: s-maj=23.9km s-min=5.1km az=21.0, Suspected Mining explosion.*

IDC ***12*** *10:08:48.1±1.4, 51°.42N×75°.70E, h0km, mbtmp2.7/1, ML1.9/1, Error ellipse: s-maj=32.3km s-min=9.6km az=27.0*

ISC 12 10:08:43.8±1.4, 51°.2N±0°.2×75°.34E±0°.10, h0km, n9, σ0s19/6, 4C, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	Kurchatov Arra	2.09	104	Pg	Pg	10 09 23.9	0.0
	0.3nm,0.3s,baz=294,slow=17,SNR=11						
KURBB				Lg	Lg	10 09 50.3	
	0.2nm,0.3s,baz=300,slow=34,SNR=6.8						
KURBB	Kurchatov Arra	2.09	104	↑Pg	Pg	10 09 23.7	-0.3
	4.7nm,0.6s						
KURBB				↑Lg	Lg	10 09 52.0	
	33nm,0.7s						
KURK	Kurchatov	2.12	101	↑Pg	Pg	10 09 24.5	-0.1
	1.9nm,0.9s						
KURK				↑Lg	Lg	10 09 52.3	
	9.7nm,0.8s						
BVA0	Borovoye Array	3.57	303	Lg	Lg	10 10 43.8	
	6.1nm,1.2s,baz=114,slow=26,SNR=5.3						
BVAR	Borovoye Array	3.57	303	Pg	Pg	10 09 52.2	-0.1
	baz=111,slow=17,SNR=2.7						
BVAR				Lg	Lg	10 10 42.8	
	0.1nm,0.3s,baz=113,slow=25,SNR=7.0						
MK31	Makanchi Array	6.33	131	Lg	Lg	10 12 03.1	
	2.7nm,0.8s,baz=312,slow=24,SNR=4.4						
MKAR	Makanchi Array	6.33	131	Pg	Pb	10 10 35.0	+0.1
	0.1nm,0.3s,baz=323,slow=13,SNR=2.1						
ZALV	Zalesovo Beam	6.41	61	Pn	Pn	10 10 19.5	+0.1
	0.1nm,0.3s,baz=244,slow=14,SNR=2.5						
	0.5nm,0.6s						
I46RU	ZALESOVO INFRA	6.41	61	I	I	10 46 50.0	
	baz=245,slow=321,SNR=12						

IDC ***12*** *10:24:10.0±1.4, 13°.30N×87°.40W, h0km, mb3.4/3, mbtmp3.5/5, ML2.7/3, Error ellipse: s-maj=79.2km s-min=14.4km az=47.0*

SNET ***12*** *10:24:13.5±1.2, 12°.51N×88°.21W, h28km±8km, ML3.9, Presumed earthquake*

CATAC ***12*** *10:24:13.6±0.1, 13°N±1°×8°.8W±°, h41km, M4.2/59, MLv4.2/59, Error ellipse: s-maj=3.6km s-min=1.2km az=32.0, confirmed*

GCG ***12*** *10:24:17.5±1.0, 12°.75N×88°.47W, h14km±9km, MD4.5, Presumed earthquake*

ISC 12 10:24:10.6±1.2, 12°.48N±0°.03×88°.20W±0°.02, h15km±9km, n109, σ0s95/171, mb3.2/3, 5C-8D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
INTP	Intipuca	0.72	11	eP	Pn	10 24 27.1	+0.7
INTP				eS	Sn	10 24 37.3	0.0
CSGN	Cosiguina Volc	0.79	52	P	Pn	10 24 27.8	+0.4
CSGN				S	Sn	10 24 38.8	-0.3
LCND	La Caada	0.88	20	P	Pn	10 24 29.1	+0.6
LCND	La Caada	0.88	20	eP	Pn	10 24 29.1	+0.6
RANC	El Ranchito	0.95	355	P	Pn	10 24 30.6	+0.9
RANC				S	Sn	10 24 43.1	0.0
RANC	El Ranchito	0.95	355	eP	Pn	10 24 30.6	+0.9
RANC				eS	Sn	10 24 42.5	-0.6
CNRM	Centro Naciona	0.99	1	P	Pn	10 24 30.9	+0.8
CNRM				S	Sn	10 24 43.7	-0.1
CNRM	Centro Naciona	0.99	1	eP	Pn	10 24 30.8	+0.7
CNRM				eS	Sn	10 24 44.4	+0.6
PACA	Pacayal	0.99	353	⇓P	Pn	10 24 30.8	+0.6
PACA	Pacayal	0.99	353	eP	Pn	10 24 31.1	+0.9
PACA				eS	Sn	10 24 44.2	+0.2
TECA	Tecapa	1.05	344	eP	Pn	10 24 31.8	+0.7
CRIN	San Cristobal	1.14	79	P	Pg	10 24 33.3	+0.6
PQSS	Presa 15 de Se	1.19	343	P	Pg	10 24 33.6	0.0
PQSS				S	Sn	10 24 48.7	0.0
PQSS	Presa 15 de Se	1.19	343	eP	Pg	10 24 33.9	+0.3
PQSS				eS	Sg	10 24 49.4	+0.2
TECO	Alcaldia de Te	1.19	332	P	Pb	10 24 33.2	+0.1
TECO				S	Sb	10 24 47.7	-0.6
COEG	Centro de Oper	1.31	330	P	Pb	10 24 35.1	0.0
COEG	Centro de Oper	1.31	330	eP	Pb	10 24 35.2	0.0
COEG				eS	Sb	10 24 51.8	-0.1
QUEN	Al S del Volca	1.32	85	⇓P	Pn	10 24 33.6	-1.1
SCLA	Alcaldia de Sa	1.32	337	⇓P	Pg	10 24 35.8	-0.3
SCLA	Alcaldia de Sa	1.32	337	eP	Pg	10 24 35.9	-0.3
SCLA				eS	Sg	10 24 52.8	-0.5
TEL3	Telica 3	1.32	86	P	Pg	10 24 36.3	+0.1
HERN	Volcan Telica	1.34	84	↑P	Pb	10 24 35.5	-0.1
HERN				S	Sb	10 24 52.2	-0.4
TELN	Telica	1.34	85	P	Pb	10 24 35.4	-0.1
HOYN	Al Sur del Vol	1.34	85	↑P	Pb	10 24 35.6	0.0
HOYN				S	Sb	10 24 52.2	-0.5
POLN	Al Sur del Vol	1.36	83	↑P	Pb	10 24 35.9	0.0
POLN				S	Sn	10 24 52.9	-0.2
PAVA	Las Pavas	1.42	330	⇓P	Pb	10 24 37.0	+0.1
PAVA				S	Sn	10 24 54.7	+0.1
PAVA	Las Pavas	1.42	330	eP	Pb	10 24 37.1	+0.1
PAVA				eS	Sb	10 24 55.0	+0.1
CNGA	Al SSO del Vol	1.46	89	P	Pb	10 24 37.4	-0.2
CNGN	Cerro Negro	1.46	89	⇓P	Pb	10 24 37.4	-0.3
CNGN				S	Sn	10 24 55.2	-0.4
ILCN	San Idelfonso	1.46	86	P	Pb	10 24 37.4	-0.3
ILCN				S	Sn	10 24 55.5	-0.1
PANCS	Alcalda de	1.48	320	P	Pn	10 24 37.0	+0.2
PANCS				S	Sn	10 24 54.6	-1.3
LALI	Alcalda de L	1.48	313	P	Pn	10 24 37.1	+0.2
LALI	Alcalda de L	1.48	313	*i* P	Pn	10 24 37.0	+0.2
LALI				*i* S	Sn	10 24 52.8	-3.3
LALI	Alcalda de L	1.48	313	eP	Pn	10 24 37.0	+0.2
LALI				eS	Sn	10 24 54.3	-1.8
LOMA	Loma Larga	1.50	321	eP	Pn	10 24 37.8	+0.6
LOMA				eS	Sn	10 24 56.4	-0.2
UDBS	Universidad Do	1.54	323	P	Pn	10 24 38.4	+0.7
UDBS				S	Sn	10 24 57.2	-0.4
IGN	Direccin Gen	1.55	322	P	Pb	10 24 38.6	-0.5
IGN				S	Sn	10 24 57.7	-0.1
UTEC	Universidad Te	1.56	321	P	Pb	10 24 38.8	-0.5
UTEC				S	Sn	10 24 57.7	-0.3
SEMO	Seminario San	1.57	321	P	Pn	10 24 38.9	+0.7
SEMO				S	Sn	10 24 57.9	-0.5
P5NO	Presa 5 de nov	1.59	340	P	Pb	10 24 39.2	-0.7
P5NO	Presa 5 de nov	1.59	340	eP	Pb	10 24 39.3	-0.5
P5NO				eS	Sn	10 24 59.0	+0.3
UEES	Universidad Ev	1.59	321	P	Sn	10 24 38.9	+0.4
UEES				S	Sn	10 24 58.9	0.0
COPN	Copaltepe	1.60	101	P	Pn	10 24 39.0	+0.6
MOMN	Momotombo	1.62	92	⇑P	Pn	10 24 39.5	+0.8
MOMN				S	Sn	10 24 58.7	-0.7
PIC2	El Picacho	1.63	321	eP	Pb	10 24 40.1	-0.4
PIC2				eS	Sb	10 25 01.6	+0.6
BOQS	Boqueron	1.63	320	eP	Pb	10 24 40.1	-0.6
PMON	Piamonte	1.64	318	P	Pn	10 24 39.9	+0.8
PMON				S	Sn	10 25 00.1	+0.1
AESN	El Sauce Leon	1.67	76	S	Sn	10 25 00.2	-0.3
JAYA	Jayaque - finc	1.69	314	P	Pn	10 24 39.9	+0.1
JAYA				S	Sn	10 25 01.9	+0.6
JAYA	Jayaque - finc	1.69	314	*i* P	Pn	10 24 40.4	+0.6
JAYA	Jayaque - finc	1.69	314	eP	Pn	10 24 40.3	+0.4
CEDA	San Andres	1.76	319	S	Sn	10 25 03.7	+0.8
TGUH	Tegucigalpa,Un	1.81	30	P	Pb	10 24 42.5	-1.0
TGUH				S	Sn	10 25 04.4	+0.2
APYN	Apoyeque	1.82	98	P	Pn	10 24 42.3	+0.8
APYN				S	Sn	10 25 04.3	-0.1
LLGN	La Laguna	1.82	337	P	Pn	10 24 42.5	+0.8
LLGN				S	Sn	10 25 04.3	-0.3
INTHN	La Esperanza I	1.82	3	P	Pb	10 24 43.0	-1.0
INTHN				S	Sn	10 25 04.3	-0.5
APQ2	Apoyeque	1.85	99	P	Pn	10 24 42.9	+1.0
APQ2				S	Sn	10 25 05.2	+0.2
LIMN	Finca el Limon	1.88	72	⇓P	Pn	10 24 42.9	+0.5
LIMN				S	Sn	10 25 06.1	+0.2
ABCN	Banco Central	1.88	101	P	Pn	10 24 43.5	+1.2
ABCN				S	Sn	10 25 05.9	+0.1
ALLN	Telcor Managua	1.91	100	P	Pn	10 24 43.6	+0.9
ALLN				S	Sn	10 25 06.4	-0.1
TISN	Laguna Tiscapa	1.91	100	P	Pn	10 24 43.7	+0.9
UNAN	Cigeo UNAN	1.92	101	P	Pn	10 24 43.9	+1.0
UNAN				S	Sn	10 25 06.0	-0.7
CEVE	Cerro Verde	1.93	314	P	Pn	10 24 44.5	+1.3
CEVE	Cerro Verde	1.93	314	eP	Pb	10 24 44.7	-1.1
CEVE				eS	Sb	10 25 09.8	0.0
MGAN	Managua	1.93	100	P	Pn	10 24 43.9	+0.8
MGAN				S	Sn	10 25 06.9	-0.3
SBLS	San Blas	1.94	314	eP	Pn	10 24 44.4	+1.1
SBLS				eP	Pb	10 24 44.6	-1.3
YUSH	Yuscaran	1.97	42	⇑P	Pn	10 24 44.4	+0.8
YUSH				S	Sn	10 25 07.8	-0.4
UNIC	Universidad Ca	1.99	319	P	Pn	10 24 45.3	+1.4
UNIC				S	Sn	10 25 09.1	+0.5
RTR	El Retiro	1.99	315	eP	Pn	10 24 45.0	+0.9
AERN	Aeropuerto Man	2.01	99	S	Sn	10 25 09.1	0.0
MAS3	Al N del Volca	2.03	103	P	Pn	10 24 45.3	+0.9
MAS3				S	Sn	10 25 08.8	-0.7
OCON	Estacion meteo	2.03	56	P	Pn	10 24 44.9	+0.5
MASN	Masaya	2.06	104	P	Pb	10 24 46.4	-1.4
MASN				S	Sn	10 25 09.6	-0.7
NUBE	Las Nubes	2.09	313	⇓P	Pn	10 24 46.3	+1.0
NUBE	Las Nubes	2.09	313	*i* P	Pn	10 24 46.4	+1.0
NUBE				*i* S	Sn	10 25 10.2	-1.1
NUBE	Las Nubes	2.09	313	eP	Pn	10 24 46.4	+1.0
NUBE				eS	Sn	10 25 11.7	+0.4
NANN	Nandasmo	2.10	105	P	Pb	10 24 47.1	-1.4
NANN				S	Sn	10 25 11.7	+0.4
SLOZ	Alcaldia de Sa	2.18	315	P	Pn	10 24 48.0	+1.5
RCFN	Al S de San Ju	2.20	61	P	Pn	10 24 47.8	+1.0
RCFN				S	Sn	10 25 13.8	-0.1
MTO3	Montecristo	2.22	329	P	Pn	10 24 48.2	+1.1
MTO3	Montecristo	2.22	329	eP	Pn	10 24 48.4	+1.2
RCON	San Juan de Ri	2.23	63	P	Pn	10 24 47.2	0.0
FAME	Alcaldia de Sa	2.23	308	P	Pn	10 24 47.9	+0.8
NADN	Granada	2.24	109	P	Pn	10 24 48.3	+1.0
NADN				S	Sn	10 25 13.7	-1.0
RCVN	Varillal2	2.24	60	⇓P	Pn	10 24 48.2	+0.8
RCVN				S	Sn	10 25 14.7	-0.1
MATN	Matagalpa	2.26	78	P	Pn	10 24 47.2	-0.4
MATN				S	Sn	10 25 14.2	-1.1
RCPN	Sur Rio San Ju	2.30	63	P	Pn	10 24 49.2	+1.0
SARH	Santa Rosa de	2.35	347	P	Pn	10 24 50.7	+1.9
SARH	Santa Rosa de	2.35	347	*i* P	Pb	10 24 51.0	-1.7
ESQI	Esquipulas	2.35	332	P	Pn	10 24 49.8	+0.9
JAPN	Al SSO del Vol	2.64	111	P	Pn	10 24 53.5	+0.7
CONN	Concepcion	2.67	110	S	Sn	10 25 24.9	-0.6
CARN	Rivas	2.92	116	S	Sn	10 25 31.4	0.0
ACON	Acoyapa	3.00	99	P	Pn	10 24 58.4	+0.7
ACON				S	Sn	10 25 33.3	-0.2
ELI1	Hacienda Flor	3.17	125	S	Sn	10 25 37.9	+0.3
APG	El Apazote	3.34	319	Pn	Pn	10 25 05.8	+3.2
	0.1nm,0.3s,baz=124,slow=11,SNR=5.1						
APG				Sn	Sb	10 25 47.9	-2.4
	0.1nm,0.3s,baz=191,slow=13,SNR=3.6						
SIUN	Universidad Ur	3.55	69	P	Pn	10 25 06.6	+1.2
STG5	El Palmar, Qui	3.61	302	*i* P	Pb	10 25 13.4	-0.9
CMARA	Lajas Hojancha	3.66	132	P	Pn	10 25 08.6	+1.7
CMARA				S	Sn	10 25 48.9	-1.0
JTS	Las Juntas de	3.85	124	Pn	Pn	10 25 10.8	+1.3
	1.7nm,0.3s,baz=113,slow=22,SNR=10						
JTS				Pg	Pb	10 25 19.8	+1.3
	26nm,0.3s,baz=319,slow=17,SNR=30						
JTS				Sn	Sn	10 25 53.3	-1.3
	11nm,0.3s,baz=90,slow=22,SNR=7.9						
JTS				Lg	Lg	10 26 11.1	
	9.7nm,0.3s,baz=3.5,slow=24,SNR=11						
	4.1nm,0.4s						
RTAL	Retalhuleu	3.96	301	S	Sn	10 25 59.2	+1.9
PETF	Flores	4.70	340	*i* P	Pn	10 25 24.0	+3.0
BILN	Bilwi Airport	4.95	71	P	Pn	10 25 26.2	+1.7
OCHAL	Ojochal	5.59	127	S	Sn	10 26 37.5	-0.1
DRK0	Durika	5.82	123	P	Pn	10 25 36.9	+0.2
CMIG	Matias Romero	7.93	306	Pn	Pn	10 26 07.8	+2.4
	0.2nm,0.3s,baz=154,slow=8.5,SNR=3.7						
CMIG				Sn	Sn	10 27 37.2	+2.2
	0.4nm,0.3s,baz=300,slow=16,SNR=1.6						
	4.8nm,1.0s						
TXAR	Lajitas Array	22.09	322	P	P	10 29 05.3	-0.3
	1.9nm,0.6s,baz=137,slow=11,SNR=42						
	1.9nm,0.6s						
PDAR	Pinedale Array	35.40	332	P	P	10 31 03.9	-2.5
	0.2nm,0.6s,baz=142,slow=7.6,SNR=2.6						
	0.2nm,0.6s						
NVAR	Mina Array Bea	37.20	319	P	P	10 31 24.1	+2.3
	0.3nm,0.7s,baz=120,slow=8.1,SNR=1.8						
	0.3nm,0.7s						

DNK ***12*** *10:25:57.4±2.6, 63°.43N×22°.22W, h0km±123km, ML3.0, Presumed earthquake*

REY ***12*** *10:25:58.8, 63°.88N×22°.37W, h5km*

IDC ***12*** *10:25:59.0±0.5, 63°.94N×22°.30W, h0km, mb3.9/19, mbtmp3.9/24, ML3.5/5, MS4.0/75, Error ellipse: s-maj=11.5km s-min=9.2km az=140.0*

GCMT ***12*** *10:26:00.2±0.3, 63°.91N±0°.02×22°.35W±0°.04, h13km±1km, MW4.8/95, Moment Tensor Solution. s12,c12; s95,c133;

*GFZ **12** 10:26:02.2, 64˚.09N, 22˚.11W, h13km, MW4.8, Moment Tensor Solution. s29 Moment tensor: M_{rr}=1.79; $M_{\theta\theta}$=1.05; $M_{\phi\phi}$=0.74; $M_{r\theta}$=-0.34; $M_{r\phi}$=0.39; $M_{\theta\phi}$=-0.83; Fault plane solution: NP1:ϕ_{s}=41.00000°, δ=39.00000°, λ=-100.00000°. NP2:ϕ_{s}=241.00000°, δ=32.00000°, λ=-72.00000°. Principal axes: T 1.5000, Plg13.0000°, Azm139.0000°; N 0.5600, Plg9.0000°, Azm46.0000°; P -2.0600, Plg73.0000°, Azm284.0000°;*

ISC 12 10:25:59.9±0.3, 63.86N±0.03, 22.27W±0.02, h10km, n235, σ1ϕ85/151, mb4.6/88, MS4.0/71, 5D, Iceland region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
IGRV	**Grindav??k**	**0.08**	**269**	P		**Pg**	**10 26 00.0**	**-2.2**
IGRV				S		Sg	10 26 01.1	-2.9
IKRI	**Krysuvik**	**0.09**	**77**	P		**Pg**	**10 26 01.7**	**-0.7**
IKRI				S		Sg	10 26 04.0	-0.1
IVOG	**Vogar**	**0.12**	**333**	P		**Pg**	**10 26 01.0**	**-1.9**
IVOG				S		Sg	10 26 02.6	-2.3
IRNE	**Reykjanes**	**0.20**	**258**	P		**Pg**	**10 26 02.2**	**-1.9**
IRNE				S		Sg	10 26 04.8	-2.2
IKAS	**Kald??rsel**	**0.25**	**48**	P		**Pg**	**10 26 04.2**	**-0.8**
IKAS				S		Sg	10 26 07.8	-0.5
IVOS	**Vogsosar**	**0.25**	**91**	P		**Pg**	**10 26 04.5**	**-0.4**
IVOS				S		Sb	10 26 09.2	+0.9
ISAN	**Sandskeio**	**0.36**	**57**	P		**Pg**	**10 26 06.2**	**-1.0**
ISAN				S		Sg	10 26 12.0	0.0
IBJA	**Bjarnastaoir**	**0.43**	**78**	P		**Pg**	**10 26 07.6**	**-0.9**
IBJA				S		Sb	10 26 14.3	-1.9
IEDA	**Engidalur**	**0.45**	**59**	P		**Pg**	**10 26 07.4**	**-1.3**
IEDA				S		Sg	10 26 14.4	-0.2
IMOR	**Morastadir**	**0.50**	**27**	P		**Pg**	**10 26 07.7**	**-2.0**
IMOR				S		Sg	10 26 14.4	-1.8
IKRO	**Krokur**	**0.56**	**64**	P		**Pg**	**10 26 09.3**	**-1.5**
IKRO				S		Sg	10 26 17.6	-0.6
IHEI	**Heioarbar**	**0.57**	**52**	P		**Pg**	**10 26 09.3**	**-1.6**
IHEI				S		Sg	10 26 17.8	-0.7
ISOL	**Solvholt**	**0.59**	**83**	P		**Pg**	**10 26 10.0**	**-1.3**
ISOL				S		Sg	10 26 18.7	-0.3
IASM	**Asmuli**	**0.73**	**91**	P		**Pg**	**10 26 12.4**	**-1.6**
IASM				S		Sg	10 26 23.2	-0.4
ISAU	**Saurbar**	**0.83**	**80**	P		**Pg**	**10 26 13.8**	**-2.0**
ISAU				S		Sg	10 26 25.6	-1.0
BORG	**Borgarnes**	**0.98**	**24**	Pg		**Pg**	**10 26 15.6**	**-3.2**
	746nm,0.3s,baz=210,slow=3.4,SNR=4761							
BORG				Lg		Lg	10 26 28.7	
	2μm,0.3s,baz=305,slow=22,SNR=64							
BORG				LR		LR	10 26 29.6	
	comp=Z,2μm,18.6s,baz=349,slow=34							
BORG	**Borgarnes**	**0.98**	**24**			**Pg**	**10 26 15.4**	**-3.3**
IASB	**sbjarnarstai**	**0.98**	**24**	P		**Pg**	**10 26 15.5**	**-3.3**
IASB				S		**Sg**	**10 26 28.8**	**-2.8**
IVEY	**Vestmannaeyjar**	**0.99**	**116**	P		**Pg**	**10 26 16.5**	**-2.5**
IVEY				S		**Sg**	**10 26 30.5**	**-1.4**
IGYG	**Gygjarholskot**	**1.00**	**64**	P		**Pg**	**10 26 16.4**	**-2.7**
IGYG				S		**Sg**	**10 26 30.3**	**-1.7**
IBEY	**Bjarnarey**	**1.01**	**113**	P		**Pg**	**10 26 16.9**	**-2.5**
IBEY				S		**Sg**	**10 26 30.9**	**-1.6**
IHAU	**Haukadalur**	**1.02**	**83**	P		**Pg**	**10 26 16.8**	**-2.8**
IHAU				S		**Sg**	**10 26 31.5**	**-1.4**
IELE	**Ellidaey**	**1.02**	**114**	P		**Pg**	**10 26 15.1**	**-4.5**
IELE				S		**Sg**	**10 26 29.1**	**-3.7**
IMID	**Miomork**	**1.08**	**100**	P		**Pb**	**10 26 17.7**	**-2.9**
IMID				S		**Sg**	**10 26 32.6**	**-2.0**
IFED	**Fedgar**	**1.15**	**80**	P		**Pb**	**10 26 18.9**	**-2.9**
IHES	**Hestalda**	**1.21**	**80**	P		**Pn**	**10 26 19.9**	**-3.0**
IHES				S		**Sb**	**10 26 37.5**	**-1.0**
IESK	**Eystri-Skogar**	**1.30**	**104**	P		**Pn**	**10 26 20.6**	**-3.4**
IESK				S		**Sb**	**10 26 38.4**	**-2.6**
ISTE	**Stelbrattur**	**1.52**	**48**	P		**Pn**	**10 26 24.7**	**-2.5**
ISTE				S		**Sn**	**10 26 45.6**	**-1.5**
IRJU	**Rjupnafell**	**1.62**	**97**	P		**Pn**	**10 26 25.4**	**-3.1**
SCO	**Scoresbysund**	**6.66**	**1**			**Pn**	**10 27 37.9**	**+0.3**
SCO	**Scoresbysund**	**6.66**	**1**	*e*P		**Pn**	**10 27 38.8**	**+1.2**
SCO				*i* S		**Sn**	**10 28 57.3**	**+4.0**
SCO					IAML		10 29 23.0	
	comp=Z,75nm,0.9s							
ANGG	**Ammassalik, Gr**	**6.81**	**292**	Pn		**Pn**	**10 27 39.0**	**-0.7**
ANGG	**Ammassalik, Gr**	**6.81**	**292**	*i* P		**Pn**	**10 27 39.6**	**-0.1**
DBG	**Daneborg**	**10.52**	**3**	*i* P		**Pn**	**10 28 32.8**	**+2.3**
SUMG	**Summit**	**10.57**	**333**	Pn		**Pn**	**10 28 29.4**	**-2.1**
SUMG	**Summit**	**10.57**	**333**	*i* P		**Pn**	**10 28 32.1**	**+0.6**
SUMG				*e*S		**Sn**	**10 30 25.7**	**-4.2**
SUMG					IAML		10 31 18.7	
	comp=Z,15nm,1.2s							
SFJD	**Kangerlussuaq**	**12.15**	**298**	Pn		**Pn**	**10 28 52.0**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=76,slow=8.6,SNR=3.9							
SFJD				LR		LR	10 32 56.4	
	comp=Z,2μm,19.3s,baz=90,slow=34							
	comp=Z,8.2nm,0.9s							
EKA	**Eskdalemuir Ar**	**12.86**	**123**	Pn		**Pn**	**10 29 02.8**	**+0.3**
	baz=318,slow=13							
EKA				LR		LR	10 33 13.3	
	comp=Z,1μm,20.5s,baz=336,slow=34							
	comp=Z,3.7nm,0.6s							
NOA	**NORSAR Array B**	**15.63**	**85**	Pn		**P**	**10 29 41.2**	**-3.1**
	baz=292,slow=11,SNR=1.6							
NOA				LR		LR	10 35 33.1	
	comp=Z,310nm,18.1s,baz=290,slow=37							
	comp=Z,0.7nm,0.8s							
HFS	**Hagfors**	**17.13**	**86**	P		**P**	**10 30 02.7**	**+1.9**
	comp=Z,9.0nm,1.2s,baz=295,slow=17,SNR=1.9							
HFS				LR		LR	10 35 48.6	
	comp=Z,426nm,20.1s,baz=294,slow=34							
SPITS	**Spitsbergen Ar**	**18.45**	**24**	P		**Pn**	**10 30 15.4**	**+0.2**
	baz=186,slow=12							
	comp=Z,10nm,1.0s							
ARCES	**ARCESS Array B**	**19.27**	**52**	P		**Pn**	**10 30 26.4**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=282,slow=6.0,SNR=1.7							
ARCES				LR		LR	10 36 34.1	
	comp=Z,265nm,19.6s,baz=276,slow=33							
	comp=Z,3.7nm,1.0s							
ARCES	**ARCESS Array B**	**19.27**	**52**		IAmb	IAmb	10 30 49.2	
	comp=Z,44nm,1.5s							
TULEG	**Thule**	**19.45**	**329**			**Pn**	**10 30 25.9**	**-1.4**
BMRD	**Maredsous**	**19.79**	**121**	*d*P		**Pn**	**10 30 30.8**	**-0.8**
BGES	**Gesves**	**19.84**	**120**	*d*P		**Pn**	**10 30 32.8**	**+0.6**
	comp=Z,10nm,0.9s							
DOU	**Dourbes**	**19.89**	**121**	*d*P		**Pn**	**10 30 33.2**	**+0.5**
BTNL	**Ternell**	**20.09**	**118**	*d*P		Pn	10 30 35.9	+0.7
FRB	**Frobisher Bay**	**20.09**	**291**	P		Pn	10 30 34.0	-1.0
	comp=Z,3.6nm,0.9s,baz=62,slow=12,SNR=7.0							
FRB				LR		LR	10 37 50.7	
	comp=Z,679nm,19.6s,baz=70,slow=36							
	comp=Z,3.6nm,0.9s							
WLF	**Walferdange**	**20.83**	**120**	*d*P		Pn	10 30 42.5	-1.3
POIN	**Pond Inlet**	**21.54**	**318**			**P**	**10 30 48.4**	**-0.4**
FINES	**FINESS Array B**	**21.92**	**74**	P		**P**	**10 30 53.3**	**+0.4**
	comp=Z,8.0nm,0.9s,baz=311,slow=11,SNR=7.2							
FINES				LR		LR	10 38 34.3	
	comp=Z,297nm,19.4s,baz=289,slow=34							
	comp=Z,8.0nm,0.9s							
FINES	**FINESS Array B**	**21.92**	**74**	P		**P**	**10 30 54.0**	**+1.1**
FIA1	**FINESS Array S**	**21.92**	**74**	P		**P**	**10 30 56.4**	**+3.5**
CLL	**Collm**	**22.34**	**108**	P		**P**	**10 30 59.4**	**+1.8**
CLL					IAmb	IAmb	10 31 06.0	
	comp=Z,28nm,1.1s							
CLL	**Collm**	**22.34**	**108**	*i* P		**P**	**10 30 58.8**	**+1.2**
	comp=Z,132nm,2.1s							
CLL				*i* x		x	10 31 17.5	
CLL				*e*PPP		PPP	10 31 30.0	
CLL				AMS		AMS	10 39 00.0	
	comp=Z,500nm,19.6s							
ECH	**Echery**	**22.40**	**120**			**P**	**10 30 59.2**	**+1.0**
ECH					IAmb	IAmb	10 31 03.6	
	comp=Z,40nm,1.3s							
KUQ	**Kuujjuuaa**	**22.68**	**277**			**P**	**10 31 00.7**	**-0.4**
ILON	**Igloolik, Nuna**	**23.38**	**310**			**P**	**10 31 09.2**	**+1.0**
ILON					IAmb	IAmb	10 31 16.9	
	comp=Z,26nm,1.3s							
DRLN	**Deer Lake**	**23.89**	**249**			**P**	**10 31 14.8**	**+1.5**
DRLN					IAmb	IAmb	10 31 37.7	
	comp=Z,37nm,1.5s							
SCHQ	**Schefferville**	**23.96**	**269**	P		**P**	**10 31 14.8**	**+0.8**
	comp=Z,11nm,1.0s,baz=52,slow=11,SNR=14							
SCHQ				LR		LR	10 39 14.5	
	comp=Z,249nm,19.4s,baz=50,slow=33							
	comp=Z,11nm,1.0s							
SCHQ	**Schefferville**	**23.96**	**269**	P		**P**	**10 31 14.8**	**+0.8**
SENIN	**Lac Senin/Sane**	**23.99**	**123**			**P**	**10 31 15.8**	**+1.2**
SENIN					IAmb	IAmb	10 31 26.9	
	comp=Z,35nm,1.4s							
KHC	**Kasperske Hory**	**24.23**	**110**			**P**	**10 31 17.7**	**+1.1**
KHC					IAmb	IAmb	10 31 20.8	
	comp=Z,18nm,1.0s							
KHC	**Kasperske Hory**	**24.23**	**110**	*e*P		**P**	**10 31 20.0**	**+3.4**
DPC	**Dobruska-Polom**	**24.46**	**105**	*e*P		**P**	**10 31 21.3**	**+2.6**
GEC2	**GERESS Array S**	**24.51**	**111**			**P**	**10 31 20.8**	**+1.6**
GERES	**GERESS Array B**	**24.51**	**111**	LR		LR	10 41 14.6	
	comp=Z,430nm,19.5s,baz=306,slow=37							
DAVOX	**Davos/Dischmat**	**24.63**	**119**	LR		LR	10 40 11.6	
	comp=Z,565nm,21.1s,baz=270,slow=34							
TUE	**Stuetta**	**24.68**	**120**			**P**	**10 31 22.5**	**+1.6**
TUE					IAmb	IAmb	10 31 25.6	
	comp=Z,17nm,1.2s							
FUORN	**Ofenpass-Fuorn**	**24.91**	**118**			**P**	**10 31 26.6**	**+3.6**
FUORN					IAmb	IAmb	10 31 59.4	
	comp=Z,21nm,1.4s							
VRAC	**Vranov**	**25.36**	**107**	LR		LR	10 41 06.2	
	comp=Z,368nm,19.0s,baz=320,slow=36							
VRAC	**Vranov**	**25.36**	**107**	*e*P		**P**	**10 31 27.6**	**+0.8**
MORC	**Moravsky Berou**	**25.41**	**105**			**P**	**10 31 27.9**	**+0.5**
MORC					IAmb	IAmb	10 31 32.8	
	comp=Z,11nm,1.0s							
MORC	**Moravsky Berou**	**25.41**	**105**	*e*P		**P**	**10 31 28.7**	**+1.4**
KRUC	**Moravsky**	**25.47**	**107**	*e*P		**P**	**10 31 28.5**	**+0.7**
NACGM	**Naroch**	**25.90**	**87**	*e*P		**P**	**10 31 30.8**	**-0.8**
	comp=Z,21nm,0.8s,baz=310							
RES	**Resolute Bay**	**25.92**	**325**	LR		LR	10 41 26.9	
	comp=Z,415nm,19.8s,baz=45,slow=36							
RES	**Resolute Bay**	**25.92**	**325**			**P**	**10 31 32.7**	**+1.1**
CTI	**Castel Tesino**	**25.93**	**117**			**P**	**10 31 32.8**	**+0.8**
STAL	**STALIGIAL**	**26.17**	**116**		IAmb	IAmb	10 31 52.9	
	comp=Z,25nm,1.3s							
MODS	**Modra-Piesok**	**26.37**	**107**	*e*P		**P**	**10 31 41.8**	**+5.8**
TEOL	**Teolo**	**26.50**	**118**	P		**P**	**10 31 39.4**	**+2.2**
TEOL					IAmb	IAmb	10 31 43.8	
	comp=Z,15nm,0.8s							
ESDC	**Sonseca Array**	**26.53**	**147**	P		**P**	**10 31 38.4**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=343,slow=9.7,SNR=6.9							
ESDC				LR		LR	10 41 19.6	
	comp=Z,331nm,19.1s,baz=326,slow=35							
	comp=Z,1.3nm,0.7s							
PAB	**San Pablo**	**26.56**	**148**	P		**P**	**10 31 40.2**	**+2.4**
PAB					IAmb	IAmb	10 31 44.3	
	comp=Z,10.0nm,1.1s							
LANS	**Liptovska Anna**	**26.71**	**104**	*e*P		**P**	**10 31 43.3**	**+4.2**
STHS	**Stebnicka Huta**	**27.28**	**101**	*e*P		**P**	**10 31 48.0**	**+3.8**
MURB	**Monte Urbino**	**28.60**	**119**	IAmb		IAmb	10 31 60.0	
	comp=Z,16nm,0.9s							
BATG	**Bathurst New B**	**29.04**	**256**	P		**P**	**10 32 01.5**	**+1.7**
BATG					IAmb	IAmb	10 32 03.7	
	comp=Z,20nm,1.5s							
AKASG	**Malin Array Be**	**29.85**	**92**	P		**P**	**10 32 06.4**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=329,slow=9.8,SNR=1.8							
AKASG				LR		LR	10 43 34.8	
	comp=Z,260nm,21.3s,baz=266,slow=35							
	comp=Z,0.2nm,0.3s							
AKASG	**Malin Array Be**	**29.85**	**92**	IAmb		IAmb	10 32 08.1	
	comp=Z,2.2nm,0.9s							
OBN	**Obninsk**	**30.06**	**79**	LR		LR	10 45 21.2	
	comp=Z,106nm,18.5s,baz=338,slow=39							
BURAR	**Bucovina Array**	**30.38**	**100**	P		**P**	**10 32 13.2**	**+1.4**
BLKN	**Baker Lake**	**30.57**	**305**			**P**	**10 32 13.7**	**+0.6**
LMQ	**La Malbaie**	**30.68**	**261**		IAmb	IAmb	10 32 17.6	
	comp=Z,17nm,1.3s							
MLR	**Muntele Rosu**	**32.34**	**101**	LR		LR	10 46 32.1	
	comp=Z,237nm,20.3s,baz=330,slow=38							
MDT	**Midelt**	**32.97**	**152**	LR		LR	10 45 12.9	
	comp=Z,120nm,18.4s,baz=1.5,slow=35							
KIRV	**Kirov**	**33.21**	**65**	LR		LR	10 45 52.4	
	comp=Z,210nm,18.5s,baz=311,slow=36							
KEST	**Kesra**	**34.09**	**130**	P		**P**	**10 32 44.7**	**+0.3**
	comp=Z,2.4nm,0.7s,baz=309,slow=6.5,SNR=3.9							
KEST				LR		LR	10 45 46.5	
	comp=Z,335nm,18.6s,baz=1.2,slow=35							
	comp=Z,2.4nm,0.7s							
KEST	**Kesra**	**34.09**	**130**	IAmb		IAmb	10 33 00.8	
	comp=Z,6.4nm,0.9s							
VAE	**Valguarnera**	**34.33**	**123**	LR		LR	10 46 04.5	
	comp=Z,412nm,18.4s,baz=335,slow=35							
BELG	**Belogornoye**	**36.70**	**74**	LR		LR	10 47 57.8	
	comp=Z,113nm,18.3s,baz=298,slow=36							
SADO	**Sasowa**	**36.71**	**266**	LR		LR	10 46 50.6	
	comp=Z,228nm,18.2s,baz=64,slow=34							
YKA	**Yellowknife Ar**	**38.22**	**311**	P		**P**	**10 33 18.3**	**-1.0**
	comp=Z,1.6nm,0.9s,baz=44,slow=8.8,SNR=21							
YKA				PcP		**PcP**	**10 35 31.5**	**-1.8**
	comp=Z,0.1nm,0.4s,baz=63,slow=7.0,SNR=1.9							
YKA				LR		LR	10 48 43.6	
	comp=Z,707nm,19.1s,baz=62,slow=36							
	comp=Z,1.6nm,0.9s							
ARTI	**Arti**	**38.27**	**62**	LR		LR	10 48 40.4	
	comp=Z,246nm,18.4s,baz=44,slow=36							
FFC	**Flin Flon**	**39.09**	**295**			**P**	**10 33 26.4**	**-0.3**
EPLO	**Experimental L**	**39.37**	**284**	IAmb		IAmb	10 33 31.2	
	comp=Z,14nm,1.2s							
INK	**Inuvik**	**39.42**	**327**	LR		LR	10 50 32.7	
	comp=Z,423nm,18.6s,baz=29,slow=38							
ULM	**Lac du Bonnet**	**39.86**	**286**	P		**P**	**10 33 32.2**	**-0.9**
	comp=Z,4.4nm,1.0s,baz=47,slow=5.7,SNR=4.6							
ULM				LR		LR	10 48 56.2	
	comp=Z,258nm,21.0s,baz=34,slow=35							
	comp=Z,4.4nm,1.0s							
ULM	**Lac du Bonnet**	**39.86**	**286**	IAmb		IAmb	10 33 36.1	
	comp=Z,15nm,1.4s							
BRTR	**Keskin Array B**	**40.34**	**99**	P		**P**	**10 33 39.5**	**+2.0**
	comp=Z,1.3nm,0.8s,baz=327,slow=8.8,SNR=7.1							
BRTR				LR		LR	10 52 40.9	
	comp=Z,126nm,18.6s,baz=310,slow=40							
	comp=Z,1.3nm,0.8s							
IDI	**Anoyia**	**40.36**	**112**	LR		LR	10 52 00.7	
	comp=Z,136nm,19.1s,baz=302,slow=39							
KVAR	**Kislovodsk Arr**	**40.93**	**87**	LR		LR	10 50 44.9	
	comp=Z,213nm,19.9s,baz=280,slow=36							
KBZ	**Khabaz**	**41.20**	**87**	P		**P**	**10 33 46.3**	**+2.0**
	comp=Z,2.4nm,0.9s,baz=318,slow=14,SNR=3.8							
KBZ				LR		LR	10 50 59.2	
	comp=Z,277nm,21.1s,baz=324,slow=36							
	comp=Z,2.4nm,0.9s							
G40A	**Rib Lake**	**41.21**	**277**	IAmb		IAmb	10 33 47.8	
	comp=Z,11nm,1.2s							
AGMN	**Agassiz Nation**	**41.33**	**284**	IAmb		IAmb	10 33 48.9	
	comp=Z,12nm,1.2s							
N49A	**Columbus Grove**	**42.01**	**267**			**P**	**10 33 53.0**	**+2.0**
N49A					IAmb	IAmb	10 33 54.7	
	comp=Z,19nm,1.1s							
AKTO	**Aktyubinsk**	**42.52**	**69**	LR		LR	10 51 39.7	
	comp=Z,207nm,18.1s,baz=292,slow=36							
B21K	**Ikpikpuk River**	**42.67**	**338**	IAmb		IAmb	10 34 18.5	
	comp=Z,4.9nm,0.6s							
H27K	**Steamboat Moun**	**42.96**	**329**			**P**	**10 33 59.3**	**+0.8**
O48B	**Farmland**	**42.98**	**268**	IAmb		IAmb	10 34 02.2	
	comp=Z,20nm,1.3s							
F33A	**5 Mile Ranch,**	**43.42**	**282**	IAmb		IAmb	10 34 06.1	
	comp=Z,14nm,1.0s							
L40A	**Anamosa**	**44.20**	**275**	IAmb		IAmb	10 34 11.7	
	comp=Z,11nm,1.0s							
DAWY	**Dawson**	**44.24**	**326**	P		**P**	**10 34 09.4**	**+0.5**
GNI	**Garni**	**44.89**	**89**	LR		LR	10 53 46.9	
	comp=Z,214nm,19.6s,baz=338,slow=37							
E19K	**Redstone River**	**45.05**	**337**	IAmb		IAmb	10 34 17.2	
	comp=Z,5.2nm,0.8s							
G21K	**Allakaket**	**45.22**	**335**			**P**	**10 34 17.3**	**+0.7**
ECSD	**EROS Data Cent**	**45.23**	**281**			**P**	**10 34 17.5**	**+0.6**
ECSD					IAmb	IAmb	10 34 20.7	
	comp=Z,7.7nm,1.1s							
M29M	**Somme Creek**	**45.35**	**324**	IAmb		IAmb	10 34 20.4	
	comp=Z,8.9nm,0.9s							
ILAR	**Eielson Array**	**45.40**	**330**	P		**P**	**10 34 18.4**	**+0.4**
	comp=Z,0.9nm,0.8s,baz=29,slow=7.4,SNR=11							
ILAR				PcP		**PcP**	**10 35 56.6**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=9.3,slow=3.1,SNR=6.4							
ILAR				LR		LR	10 54 19.2	
	comp=Z,126nm,20.1s,baz=38,slow=38							
	comp=Z,0.9nm,0.8s							
BVAR	**Borovoye Array**	**45.40**	**58**	P		**P**	**10 34 19.9**	**+1.7**
	comp=Z,1.6nm,0.9s,baz=0.0,slow=6.1,SNR=4.3							
BVAR				LR		LR	10 53 40.2	
	comp=Z,114nm,18.5s,baz=315,slow=37							
	comp=Z,1.6nm,0.9s							
BCAR	**Beaver Creek A**	**45.67**	**326**	P		**P**	**10 34 21.4**	**+1.2**
L27K	**Beaver Creek,**	**45.68**	**326**	P		**P**	**10 34 21.9**	**+1.6**
L27K					IAmb	IAmb	10 34 22.6	
	comp=Z,6.2nm,1.0s							
IMAR	**Indian Mountai**	**45.74**	**335**	P		**P**	**10 34 21.5**	**+0.9**
H21K	**Melozitna Rive**	**45.85**	**334**	P		**P**	**10 34 21.9**	**+0.3**
H21K					IAmb	IAmb	10 34 25.7	
	comp=Z,5.2nm,1.0s							
TKL	**Tuckaleechee C**	**46.18**	**263**	LR		LR	10 51 55.3	
	comp=Z,190nm,21.3s,baz=34,slow=34							
DLBC	**Dease Lake**	**46.26**	**316**	LR		LR	10 52 44.3	
	comp=Z,187nm,20.0s,baz=2.0,slow=35							
P40A	**Paris**	**46.63**	**273**	IAmb		IAmb	10 34 30.7	
	comp=Z,11nm,1.1s							
G18K	**Tagagawik**	**46.71**	**337**			**P**	**10 34 28.7**	**+0.4**
G18K					IAmb	IAmb	10 34 33.5	
	comp=Z,6.5nm,1.2s							
MMAI	**Mount Meron Ar**	**46.75**	**103**	LR		LR	10 56 20.0	
	comp=Z,110nm,19.7s,baz=317,slow=39							
R40A	**Maddies Statio**	**47.74**	**272**	IAmb		IAmb	10 34 39.2	
	comp=Z,9.3nm,1.1s							
G16K	**Koyuk River**	**47.79**	**339**	IAmb		IAmb	10 34 42.7	
	comp=Z,6.0nm,1.1s							
ASF	**Jabal al Asfar**	**48.11**	**102**	LR		LR	10 57 15.6	
	comp=Z,75nm,19.1s,baz=346,slow=39							
T42A	**Van Buren**	**48.27**	**270**	IAmb		IAmb	10 34 43.1	
	comp=Z,10nm,1.2s							
MGMO	**Mountain Grove**	**48.69**	**272**	IAmb		IAmb	10 34 46.9	
	comp=Z,6.9nm,1.0s							
JTMT	**Jette**	**49.38**	**297**	P		**P**	**10 34 50.5**	**+1.2**
EIL	**Elat**	**49.44**	**106**	LR		LR	10 58 18.4	
	comp=Z,59nm,18.8s,baz=73,slow=39							
RLMT	**Red Lodge**	**49.49**	**292**	IAmb		IAmb	10 34 53.9	
	comp=Z,5.3nm,1.2s							
ZALV	**Zalesovo Beam**	**49.74**	**48**	LR		LR	10 59 07.1	
	comp=Z,39nm,19.1s,baz=322,slow=40							
YNE	**Yellowstone No**	**49.89**	**292**	IAmb		IAmb	10 34 56.8	
	comp=Z,5.5nm,1.1s							
NEW	**Newport**	**50.06**	**300**	LR		LR	10 55 52.3	
	comp=Z,259nm,18.7s,baz=30,slow=36							
U38A	**Gravette**	**50.22**	**273**			**P**	**10 34 55.9**	**+0.3**
U38A					IAmb	IAmb	10 34 57.3	
	comp=Z,9.1nm,1.1s							
KURK	**Kurchatov**	**50.29**	**54**	P		**P**	**10 34 56.7**	**+0.7**
KURK	**Kurchatov**	**50.29**	**54**	IAmb		IAmb	10 35 04.8	
	comp=Z,7.7nm,1.2s							
KURBB	**Kurchatov Arra**	**50.34**	**54**	P		**P**	**10 34 56.7**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=315,slow=7.1,SNR=1.4							
KURBB				LR		LR	10 56 24.4	
	comp=Z,155nm,18.4s,baz=176,slow=36							
	comp=Z,0.3nm,0.3s							
YHL	**Hebgen Lake**	**50.50**	**293**	IAmb		IAmb	10 35 02.5	
	comp=Z,15nm,1.5s							
DLMT	**Dillon**	**50.65**	**294**	IAmb		IAmb	10 35 08.1	
	comp=Z,6.8nm,1.2s							
BBB	**Bella Bella**	**50.80**	**310**	LR		LR	10 56 34.2	
	comp=Z,423nm,18.6s,baz=40,slow=36							
YPP	**Pitchstone Pla**	**50.82**	**292**	IAmb		IAmb	10 35 05.3	
	comp=Z,9.3nm,1.5s							
B08A	**Colville Reser**	**50.83**	**301**	IAmb		IAmb	10 35 04.0	
	comp=Z,15nm,1.4s							
C09A	**Chrisman Ranch**	**50.88**	**300**	IAmb		IAmb	10 35 04.2	
	comp=Z,14nm,1.4s							
X40A	**Basin Creek Fa**	**51.17**	**270**	IAmb		IAmb	10 35 05.6	
	comp=Z,9.2nm,1.0s							
MIAR	**Mount Ida**	**51.45**	**271**	IAmb		IAmb	10 35 08.0	
	comp=Z,13nm,1.1s							
BW06	**Boulder Array**	**51.54**	**290**	IAmb		IAmb	10 35 08.8	
	comp=Z,8.7nm,1.3s							
PD31	**Pinedale Array**	**51.54**	**290**	IAmb		IAmb	10 35 08.8	
	comp=Z,7.9nm,1.2s							
PDAR	**Pinedale Array**	**51.54**	**290**	P		**P**	**10 35 06.6**	**+0.8**
	comp=Z,3.2nm,0.9s,baz=55,slow=5.8,SNR=18							
PDAR				LR		LR	10 56 25.1	
	comp=Z,242nm,18.7s,baz=20,slow=36							
	comp=Z,3.2nm,

comp=Z,46nm,19.2s,baz=44,slow=37
LPIG La Paz 67.80 279 LR LR 11 06 27.7
comp=Z,200nm,18.1s,baz=20,slow=36
JTS Las Juntas de 68.95 250 LR LR 11 03 52.4
comp=Z,35nm,20.5s,baz=25,slow=33
HHC Hu-ho-hao-te 69.42 36 *eP* **P 10 37 07.9 0.0**
HHC pmax pmax
comp=Z,10.0nm,0.6s
FURI Furi 69.49 113 LR LR 11 09 34.9
comp=Z,71nm,20.8s,baz=43,slow=38
MBAR Mbarara 75.10 124 LR LR 11 12 23.8
comp=Z,76nm,18.0s,baz=313,slow=37
KSRS Korea Array 76.29 24 LR LR 11 13 44.6
comp=Z,52nm,18.9s,baz=345,slow=38
KMBO Kilima Mbogo 78.05 118 LR LR 11 15 33.2
comp=Z,86nm,18.9s,baz=100,slow=38
NJ2 Nanjing 79.59 33 *eP* **P 10 38 06.0 -0.9**
NJ2 pmax pmax
comp=Z,24nm,0.5s
PZH PanZhiHua 79.87 49 P **P 10 38 09.2 +0.5**
ATAH Atahualpa 82.28 236 LR LR 11 11 31.8
comp=Z,26nm,21.9s,baz=15,slow=33
CMAR Chiang Mai Arr 86.31 54 LR LR 11 20 43.1
comp=Z,29nm,18.5s,baz=345,slow=38
LPAZ La Paz 87.34 224 LR LR 11 14 32.3
comp=Z,36nm,19.5s,baz=159,slow=33
LSZ Lusaka 87.85 132 LR LR 11 20 37.9
comp=Z,129nm,18.1s,baz=357,slow=37
TSUM Tsumeb 88.38 143 LR LR 11 18 38.9
comp=Z,66nm,18.6s,baz=338,slow=36
PALK Pallekele 89.19 75 LR LR 11 24 15.1
comp=Z,51nm,18.8s,baz=338,slow=39
CPUP Villa Florida 94.02 211 LR LR 11 18 34.3
comp=Z,44nm,20.8s,baz=235,slow=34
LBTB Lobatse 96.16 137 LR LR 11 24 15.4
comp=Z,156nm,18.3s,baz=341,slow=36
BOSA Boshof 99.45 139 LR LR 11 24 49.8
comp=Z,71nm,21.6s,baz=18,slow=36
TAOE Nuku Hiva Isla 109.99 292 *e*LR LR 11 17 00.2
comp=Z,160nm,24.3s
PPT2 Papeete2 121.69 297 *e*LR LR 11 22 25.5
comp=Z,133nm,23.2s
TBI Tubuai 126.83 294 *e*LR LR 11 24 35.6
comp=Z,397nm,23.8s
ASAR Alice Springs 136.84 33 PKP **PKiKP 10 45 22.3 -1.7**
comp=Z,0.2nm,0.6s,baz=336,slow=2.3,SNR=5.1
QSPA South Pole Qui 153.78 180 PKPbc **PKiKP 10 45 58.3 +0.8**
comp=Z,0.4nm,0.6s,baz=273,slow=0.6,SNR=1.3

IDC 12 10:41:55.8±2.2, 6.88S×128.44E, h0km, mb3.4/1, mbtmp3.4/3, ML3.5/2, Error ellipse: s-maj=129.6km s-min=32.9km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.20**	**157**	Pn		Pn	10 45 17.4	-0.9
	0.2nm,0.3s,baz=335,slow=11,SNR=19							
WRA				Sn		Sn	10 47 42.5	-14
	0.3nm,0.3s,baz=338,slow=22,SNR=8.0							
	0.3nm,0.5s							
ASAR	**Alice Springs**	**17.50**	**163**	P		P	10 46 02.1	-0.6
	0.2nm,0.3s,baz=344,slow=9.2,SNR=30							
ASAR				S		Sn	10 49 04.1	-13
	0.3nm,0.6s,baz=348,slow=26,SNR=5.0							
	0.9nm,0.6s							
MKAR	**Makanchi Array**	**67.28**	**328**	P		P	10 52 52.4	0.0
	0.2nm,0.4s,baz=126,slow=7.9,SNR=2.4							
	0.2nm,0.4s							

*BGSI **12** 10:56:17.3±1.1, 23.74S×27.11E, h150km±19km, ML2.2*
PRE 12 10:56:16.4±1.1, 23.72S×27.49E, h0km, ML1.8, Suspected explosion, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LEPH	**Lephalale, Lim**	**0.32**	**116**	*e*P		Pg	10 56 22.9	+0.4
LEPH				*e*S		Sg	10 56 26.8	+0.1
LEPH				IAML			10 56 30.3	
	comp=Z,114nm,0.6s							
LPHEP	**Lephephe**	**1.53**	**283**	*i* P		Pn	10 56 43.6	-1.6
LPHEP				*i* S		Sg	10 57 01.2	-4.4
LPHEP				IAML			10 57 08.4	
	comp=N,18nm,0.4s							
LBTB	**Lobatse**	**2.15**	**233**	*e*P		Pn	10 56 54.2	+0.5
LBTB				*e*S		Sn	10 57 21.8	+0.6
LBTB				IAML			10 57 24.4	
	comp=Z,7.8nm,0.2s							
HRAO	**HartRAO**	**2.17**	**175**	*e*P		Pn	10 56 54.9	+0.9
HRAO				*e*S		Sn	10 57 21.7	0.0
HRAO				IAML			10 57 25.5	
	comp=Z,9.4nm,0.3s							
BROLN	**Tlhalogang**	**2.61**	**357**	*i* P		Pn	10 56 58.2	-1.8
BROLN				*i* S		Sn	10 57 29.2	-3.2
BROLN				IAML			10 57 37.0	
	comp=E,77nm,0.3s							
MUSN	**Musina, Limpop**	**2.61**	**57**	*e*P		Pn	10 57 00.1	+0.2
MUSN				*e*S		Sn	10 57 32.8	+0.5
MUSN				IAML			10 57 51.8	
	comp=Z,4.1nm,0.4s							
KDWAN	**Kaudwane**	**2.61**	**277**	*i* P		Pn	10 56 53.8	-6.2
KDWAN				*i* S		Sn	10 57 21.8	-11
KDWAN				IAML			10 57 49.2	
	comp=E,14nm,0.5s							
PRYS	**Parys**	**3.20**	**182**	*e*P		Pn	10 57 09.8	+1.7
PRYS				*e*S		Sn	10 57 47.5	+0.4
PRYS				IAML			10 58 05.7	
	comp=Z,4.3nm,0.5s							
BOSA	**Boshof**	**5.27**	**202**	*e*P		Pn	10 57 38.3	+1.7
BOSA				*e*S		Sn	10 58 36.5	-1.7
BOSA				IAML			10 59 05.7	
	comp=Z,2.7nm,0.5s							

*IDC **12** 11:07:11.7±0.8, 38.36N×142.05E, h54km±7km, mb3.5/9, mbtmp3.7/13, MS2.7/1, Error ellipse: s-maj=20.9km s-min=12.7km az=89.0*
*NIED **12** 11:07:12.3, 38.34N×141.86E, h46km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.86; $M_{\theta\theta}$-0.27; $M_{\phi\phi}$-4.60; $M_{r\theta}$-2.46; $M_{\theta\phi}$-1.78; $M_{\phi r}$4.01; Fault plane solution: $M_0$6.83000×10^{14} NP1: ϕ_s221.00000°, δ34.00000°, λ134.00000°. NP2: ϕ_s351.00000°, δ67.00000°, λ65.00000°.*
*JMA **12** 11:07:12.3±0.1, 38.3N±0.3×141.9E±0.6, h46km, MD3.7/32, MV4.0/32, E OFF MIYAGI PREF*
JMA Felt I J1 at E OFF MIYAGI PREF
ISC 12 11:07:10.8±0.8, 38.32N±0.07×141.97E±0.08, h41km, n33, σ1§26/29, mb3.7/11, 11D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**0.40**	**270**	⇓*i* P		**Pn**	**11 07 21.1**	**+0.9**
JIKH				A		A	11 07 21.1	
	comp=N,15nm,0.2s,comp=E,22nm,0.3s							
JIKH				⇓S		**Sn**	**11 07 27.2**	**+0.3**
JIO	**Ouri**	**0.51**	**286**	⇓*i* P		**Pn**	**11 07 22.3**	**+0.6**
JIO				⇓S		**Sn**	**11 07 29.2**	**-0.1**
JKMT	**Kesennumamotoy**	**0.63**	**322**	⇓*i* P		**Pn**	**11 07 24.1**	**+0.8**
JKMT				A		A	11 07 24.1	
	comp=N,6.0nm,0.3s,comp=E,9.0nm,0.8s							
JKMT				⇓*e*S		**Sn**	**11 07 32.3**	**0.0**
OFUJ	**Ofunato**	**0.80**	**343**	⇓*i* P		**Pn**	**11 07 26.5**	**+0.9**
OFUJ				A		A	11 07 26.5	
	comp=N,5.0nm,2.2s,comp=E,6.0nm,0.4s							
JMK	**Ichinoseki**	**0.86**	**318**	⇓*i* P		**Pn**	**11 07 27.3**	**+0.8**
JOU	**Okura**	**1.03**	**273**	⇓*i* P		**Pn**	**11 07 29.2**	**+0.5**
JMM	**Marumori**	**1.03**	**245**	⇓*i* P		**Pn**	**11 07 28.9**	**+0.1**
JOM	**Ohasama**	**1.27**	**336**	⇓*i* P		**Pn**	**11 07 33.2**	**+1.1**
MJAR	**Matsushiro Arr**	**3.48**	**241**	P		**Pn**	**11 08 04.0**	**+1.6**
	comp=E,4.5nm,0.3s,baz=49,slow=9.7,SNR=39							
MJAR				S		Sn	11 08 52.1	+10
	comp=E,3.6nm,0.4s,baz=97,slow=14,SNR=4.5							
MJAR				LR		LR	11 09 50.2	
	comp=E,115nm,19.6s,baz=76,slow=45							
ASAJ	**Asahikawa**	**5.82**	**4**	P		**Pn**	**11 08 36.1**	**+1.6**
	comp=E,1.6nm,0.3s,baz=190,slow=17,SNR=1.5							
ASAJ				S		**Sn**	**11 09 41.1**	**+1.2**
	comp=E,8.6nm,0.7s,baz=81,slow=32,SNR=2.5							
USRK	**Ussuriysk Ar.**	**9.54**	**311**	P		**Pn**	**11 09 26.3**	**+0.8**
	comp=E,1.7nm,0.5s,baz=126,slow=15,SNR=2.4							
KSRS	**Korea Array**	**11.14**	**270**	P		**Pn**	**11 09 48.1**	**+0.6**
	comp=E,0.4nm,0.4s,baz=80,slow=14,SNR=1.0							
H11N2	**WAKE ISLAND Hy**	**28.46**	**124**	T		T	11 43 15.1	
	baz=316,slow=76,SNR=151							
H11N1	**WAKE ISLAND Hy**	**28.46**	**124**	T		T	11 43 13.6	
	baz=316,slow=76,SNR=160							
H11N3	**WAKE ISLAND Hy**	**28.47**	**124**	T		T	11 43 14.3	
	baz=316,slow=76,SNR=163							
H11S1	**WAKE ISLAND Hy**	**29.21**	**126**	T		T	11 44 09.2	
	baz=318,slow=76,SNR=67							
H11S3	**WAKE ISLAND Hy**	**29.22**	**126**	T		T	11 44 09.3	
	baz=318,slow=76,SNR=102							
H11S2	**WAKE ISLAND Hy**	**29.23**	**126**	T		T	11 44 10.4	
	baz=318,slow=76,SNR=75							
ZALV	**Zalesovo Beam**	**41.39**	**311**	P		**P**	**11 14 52.6**	**-0.2**
	comp=E,0.8nm,0.5s,baz=95,slow=8.0,SNR=5.0							
	comp=E,0.8nm,0.5s							
MKAR	**Makanchi Array**	**43.82**	**301**	P		**P**	**11 15 12.3**	**-0.4**
	comp=E,1.1nm,0.7s,baz=88,slow=9.2,SNR=9.5							
	comp=E,1.1nm,0.7s							
KURBB	**Kurchatov Arra**	**45.57**	**307**	P		**P**	**11 15 26.3**	**-0.2**
	comp=E,6.1nm,0.2s,baz=82,slow=8.3,SNR=12							
ILAR	**Eielson Array**	**48.18**	**33**	pP		pP	11 15 59.9	+1.7
	comp=E,0.3nm,0.6s,baz=267,slow=6.1,SNR=2.4							
BVAR	**Borovoye Array**	**50.05**	**312**	P		**P**	**11 16 01.0**	**-0.2**
	comp=E,0.3nm,0.4s,baz=60,slow=6.8,SNR=1.8							
	comp=E,0.3nm,0.4s							
BATI	**Baumata**	**51.21**	**203**	LR		LR	11 38 27.2	
	comp=E,234nm,19.2s,baz=260,slow=37							
WRA	**Warramunga Arr**	**58.39**	**188**	P		**P**	**11 17 02.3**	**+0.2**
	comp=E,0.9nm,0.4s,baz=7.8,slow=7.7,SNR=33							
WRA				pP		**pP**	**11 17 15.6**	**+1.6**
	comp=E,1.0nm,0.8s,baz=3.1,slow=7.2,SNR=3.2							
	comp=E,0.9nm,0.4s							
ASAR	**Alice Springs**	**62.12**	**188**	P		**P**	**11 17 27.9**	**+0.4**
	comp=E,0.5nm,0.7s,baz=8.6,slow=7.3,SNR=12							
ASAR				pP		**pP**	**11 17 42.4**	**+2.8**
	comp=E,0.5nm,0.7s,baz=12,slow=5.5,SNR=2.1							
	comp=E,0.5nm,0.7s							
ARCES	**ARCESS Array B**	**62.95**	**339**	P		**P**	**11 17 31.3**	**-1.4**
	comp=E,4.6nm,1.1s,baz=39,slow=13,SNR=1.4							
	comp=E,4.6nm,1.1s							
HFS	**Hagfors**	**73.10**	**336**	P		**P**	**11 18 35.5**	**-1.0**
	comp=E,2.2nm,0.8s,baz=86,slow=8.8,SNR=1.5							
	comp=E,2.2nm,0.8s							
PDAR	**Pinedale Array**	**76.46**	**46**	P		**P**	**11 18 55.5**	**-1.1**
	comp=E,0.1nm,0.5s,baz=284,slow=6.2,SNR=1.7							
	comp=E,0.1nm,0.5s							
TXAR	**Lajitas Array**	**88.99**	**53**	P		**P**	**11 19 58.8**	**-2.8**
	comp=E,0.1nm,0.3s,baz=301,slow=3.4,SNR=1.7							
TXAR				pP		**pP**	**11 20 16.4**	**+2.4**
	comp=E,0.3nm,0.7s,baz=260,slow=2.4,SNR=3.9							
	comp=E,0.1nm,0.3s							
H03N2	**Juan Fernandez**	**146.70**	**94**	T		T	14 11 19.6	
	baz=291,slow=76,SNR=5.0							
H03N3	**Juan Fernandez**	**146.71**	**94**	T		T	14 11 23.6	
	baz=291,slow=76,SNR=4.3							
H03N1	**Juan Fernandez**	**146.72**	**94**	T		T	14 11 18.4	
	baz=291,slow=76,SNR=6.6							

*IDC **12** 11:16:59.2±2.1, 19.76S×175.54W, h226km±21km, mb3.8/5, mbtmp4.4/8, Error ellipse: s-maj=26.5km s-min=21.6km az=104.0*
*NEIC **12** 11:17:00.2±1.4, 19.4S±0.1×175.6W±0.1, h226km±11km, mb4.3/16, Error ellipse: s-maj=20.4km s-min=15.3km az=170.0*
ISC 12 11:16:59.3±0.8, 19.5S±0.1×175.57W±0.09, h223km, n26, σ1§34/28, mb4.2/11, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NIUE	**Niue**	**5.35**	**87**	Pn		**Pn**	**11 18 20.7**	**+2.1**
MSVF	**Nonsavu**	**6.29**	**285**	P		**Pn**	**11 18 33.4**	**+2.6**
	1.8nm,0.5s,baz=120,slow=16,SNR=4.1							
AFI	**Afiamalu**	**6.63**	**34**	P		**Pn**	**11 18 36.7**	**+1.7**
	5.7nm,0.2s,baz=214,slow=3.6,SNR=2.0							
AFI				S		**S**	**11 19 48.4**	**-2.9**
	14nm,0.3s,baz=61,slow=23,SNR=7.4							
MARNC	**Mare, Loyalty**	**15.49**	**260**	P		**Pn**	**11 20 26.5**	**-0.1**
OUENC	**Ouen Island, N**	**16.68**	**257**	P		**Pn**	**11 20 40.0**	**-0.8**
OUENC				IAmb		IAmb	11 20 41.6	
	comp=Z,13nm,0.8s							
DZM	**Mont Dzumac**	**17.01**	**258**	P		**Pn**	**11 20 44.5**	**-0.2**
	comp=Z,16nm,0.7s,baz=83,slow=19,SNR=24							
ONTNC	**Ouen Toro**	**17.03**	**257**	P		**Pn**	**11 20 44.0**	**-0.8**
URZ	**Urewera**	**19.76**	**197**	P		**P**	**11 21 09.5**	**-2.9**
	comp=Z,4.3nm,0.6s,baz=281,slow=5.2,SNR=9.8							
QRZ	**Quartz Range**	**23.58**	**203**	P		**P**	**11 21 50.0**	**+0.2**
THZ	**Tophouse**	**24.27**	**201**	P		**P**	**11 21 57.5**	**+1.3**
THZ				IAmb		IAmb	11 22 40.3	
	comp=Z,15nm,1.1s							
LTZ	**Lake Taylor**	**25.39**	**201**	P		**P**	**11 22 07.4**	**+1.1**
LTZ				IAmb		IAmb	11 22 13.9	
	comp=Z,20nm,1.4s							
EIDS	**Eidsvold**	**31.32**	**253**	P		**P**	**11 22 58.9**	**-0.1**
CTA	**Charters Tower**	**35.87**	**262**	P		**P**	**11 23 37.5**	**-0.8**
	comp=Z,3.6nm,0.5s,baz=81,slow=9.2,SNR=14							
	comp=Z,3.6nm,0.5s							
CTAO	**Charters Tower**	**35.87**	**262**	P		**P**	**11 23 38.3**	**0.0**
CTAO				IAmb		IAmb	11 24 06.0	
	comp=Z,22nm,1.1s							
WR8	**Warramunga Arr**	**46.86**	**261**	P		**P**	**11 25 06.9**	**-0.5**
AS31	**Alice Springs**	**46.98**	**255**	P		**P**	**11 25 08.7**	**+0.3**
ASAR	**Alice Springs**	**46.98**	**255**	P		**P**	**11 25 07.3**	**-1.0**
	comp=Z,2.5nm,0.5s,baz=98,slow=7.9,SNR=46							
ASAR				PcP		**PcP**	**11 26 37.1**	**0.0**
	comp=Z,0.3nm,0.8s,baz=90,slow=4.0,SNR=2.0							
	comp=Z,2.5nm,0.5s							
WB0	**Warramunga Ar**	**46.99**	**261**	P		**P**	**11 25 07.7**	**-0.8**
WB0				IAmb		IAmb	11 25 11.5	
	comp=Z,12nm,1.4s							
WRAB	**Tennant Creek**	**47.00**	**261**	P		**P**	**11 25 07.0**	**-1.6**
WRA	**Warramunga Arr**	**47.01**	**261**	P		**P**	**11 25 07.3**	**-1.3**
	comp=Z,1.2nm,0.7s,baz=95,slow=6.5,SNR=22							
	comp=Z,1.2nm,0.7s							
MTN	**Manton Dam**	**51.45**	**269**	P		**P**	**11 25 41.9**	**-0.3**
MTN				IAmb		IAmb	11 26 02.8	
	comp=Z,9.8nm,1.1s							
FORT	**Forrest**	**51.79**	**246**	P		**P**	**11 25 43.2**	**-1.4**
FORT				IAmb		IAmb	11 26 17.8	
	comp=Z,7.1nm,1.0s							
KNRA	**Kununurra**	**53.02**	**265**	P		**P**	**11 25 54.0**	**+0.3**
KNRA				IAmb		IAmb	11 26 19.3	
	comp=Z,9.6nm,1.2s							
SIJI	**Sorong**	**55.21**	**283**	P		**P**	**11 26 09.3**	**-0.3**
	comp=Z,5.2nm,0.5s,baz=123,slow=17,SNR=1.8							
	comp=Z,5.2nm,0.5s							
FITZ	**Fitzroy Crossi**	**55.43**	**261**	P		**P**	**11 26 11.2**	**+0.1**
	comp=Z,1.7nm,0.6s,baz=117,slow=5.3,SNR=6.3							
	comp=Z,1.7nm,0.6s							
BRTR	**Keskin Array B**	**147.79**	**315**	PKPbc		**PKiKP**	**11 36 19.2**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=72,slow=4.7,SNR=2.1							

IDC 12 11:35:56.5±2.2, 0.86S×124.97E, h0km, mb3.0/3, mbtmp3.1/3, Error ellipse: s-maj=287.4km s-min=28.6km az=63.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.07**	**155**	P		P	11 40 43.5	+1.0
	0.3nm,0.7s,baz=335,slow=9.7,SNR=10							
	0.3nm,0.7s							
ASAR	**Alice Springs**	**24.27**	**160**	P		P	11 41 14.5	-1.2
	0.4nm,0.5s,baz=339,slow=9.9,SNR=5.9							
	0.4nm,0.5s							
MKAR	**Makanchi Array**	**60.38**	**328**	P		P	11 46 07.9	+0.3
	0.1nm,0.4s,baz=145,slow=8.8,SNR=1.8							
	0.1nm,0.4s							

*GRAL **12** 12:06:20.3±0.3, 33.15N×35.19E, h0km±3km, MD2.7*
*GII **12** 12:06:20.5±0.0, 33.256N±0.007×35.173E±0.008, h0km, Mws2.4/5, confirmed*
ISC 12 12:06:20.6±1.1, 33.25N±0.03×35.19E±0.04, h11km±8km, n30, σ0§51/49, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ZRT	**Zar'it**	**0.17**	**149**	P		**Pg**	**12 06 24.2**	**-0.1**
ZRT				S		**Sg**	**12 06 27.4**	**+0.4**
MMC7	**Mount Meron ar**	**0.28**	**142**	P		**Pg**	**12 06 25.9**	**-0.4**
MMA0B	**Mount Meron ar**	**0.29**	**142**	P		**Pb**	**12 06 26.9**	**-1.1**
MMA0B				S		**Sb**	**12 06 32.4**	**-0.4**
YFTH	**Yftach**	**0.33**	**111**	P		**Pg**	**12 06 27.2**	**0.0**
YFTH				S		**Sb**	**12 06 33.4**	**-0.4**
MTLA	**Metula**	**0.33**	**84**	P		**Pg**	**12 06 27.2**	**0.0**
MTLA				S		**Sb**	**12 06 33.4**	**-0.5**
GOSH	**HaGoshrim**	**0.36**	**94**	P		**Pg**	**12 06 28.0**	**+0.1**
GOSH				S		**Sb**	**12 06 34.9**	**0.0**
GEM	**Giv'at Ha'Em**	**0.40**	**95**	P		**Pg**	**12 06 28.5**	**0.0**
GEM				S		**Sb**	**12 06 35.5**	**-0.3**
LVBS	**Lehavot Habash**	**0.40**	**105**	P		**Pg**	**12 06 28.0**	**-0.5**
LVBS				S		**Sb**	**12 06 35.7**	**-0.1**
AMID	**Amiad**	**0.43**	**137**	P		**Pg**	**12 06 29.3**	**+0.2**
AMID				S		**Sb**	**12 06 36.8**	**0.0**
KDZV	**Kedmat Zvi**	**0.48**	**117**	P		**Pg**	**12 06 30.1**	**+0.1**
KNHM	**Kefar Nahum**	**0.49**	**138**	P		**Pg**	**12 06 30.3**	**+0.1**
KNHM				S		**Sb**	**12 06 38.9**	**+0.5**
HDNS	**Had-Ness**	**0.49**	**130**	P		**Pb**	**12 06 31.2**	**-0.1**
HDNS				S		**Sb**	**12 06 38.9**	**+0.3**
BLGI	**Bet Lehem HaGe**	**0.51**	**180**	P		**Pb**	**12 06 31.3**	**-0.4**
QRWL	**Qaraoun**	**0.51**	**54**	*e*P		**Pg**	**12 06 30.5**	**-0.2**
BTOR	**Bet Oren**	**0.54**	**197**	P		**Pb**	**12 06 31.6**	**-0.5**
BTOR				S		**Sb**	**12 06 40.1**	**+0.3**
DQRL	**Deir Qamar**	**0.56**	**35**	*e*P		**Pg**	**12 06 31.7**	**+0.2**
KSHT	**Keshet**	**0.58**	**117**	P		**Pb**	**12 06 32.9**	**0.0**
KSHT				S		**Sb**	**12 06 41.8**	**+0.5**
RCY	**Rachaya**	**0.60**	**65**	*e*P		**Pg**	**12 06 31.9**	**-0.4**
RCY				*e*S		**Sg**	**12 06 40.3**	**+0.1**
HYGV	**Hayogev**	**0.63**	**179**	P		**Pb**	**12 06 33.4**	**-0.3**
OFRI	**`Ofer**	**0.65**	**195**	P		**Pb**	**12 06 33.5**	**-0.5**
OFRI				S		**Sb**	**12 06 43.3**	**+0.3**
GOLA	**Golan Heights**	**0.66**	**144**	P		**Pb**	**12 06 34.1**	**-0.1**
GOLA				S		**Sb**	**12 06 44.3**	**+1.0**
BHL	**Bhannes**	**0.76**	**30**	*e*P		**Pg**	**12 06 35.5**	**+0.1**
MMLI	**Mount Malkishu**	**0.83**	**166**	P		**Pb**	**12 06 36.6**	**-0.5**
MMLI				S		**Sb**	**12 06 49.3**	**+1.0**
ZAHL	**Zahle**	**0.84**	**43**	*e*P		**Pg**	**12 06 36.8**	**-0.1**
SLTI	**Sal'it**	**1.01**	**187**	P		**Pb**	**12 06 40.1**	**-0.1**
SLTI				S		**Sn**	**12 06 54.7**	**-0.3**
HWQ	**Hawqa**	**1.21**	**31**	*e*P		**Pg**	**12 06 43.2**	**-0.6**
HWQ				*e*S		**Sg**	**12 07 00.3**	**+0.7**
FKH	**Fakeheh**	**1.42**	**45**	*e*P		**Pn**	**12 06 46.7**	**+0.1**
BEIL	**Beino**	**1.54**	**32**	*e*P		**Pn**	**12 06 48.4**	**+0.4**
DSI	**Dead Sea**	**1.68**	**174**	P		**Pn**	**12 06 50.5**	**+0.5**
YTIR	**Yattir**	**1.88**	**182**	P		**Pn**	**12 06 53.7**	**+0.9**
YTIR				S		**Sg**	**12 07 19.3**	**-1.7**

*UPP **12** 12:06:40.9±0.1, 59.75N×14.23E, h0km, ML2.9, Suspected explosion*
*DNK **12** 12:06:41.6±1.4, 59.71N×14.25E, h0km, ML2.9(UPP), Explosion*
ISC 12 12:06:39.8±1.0, 59.75N±0.04×14.18E±0.03, h0km, n18, σ0§40/26, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NRAU	**Nora**	**0.47**	**112**	P		**Pg**	**12 06 49.5**	**+0.6**
	baz=280							
NRAU				S		**Sg**	**12 06 55.1**	**+0.2**
NRAU	**Nora**	**0.47**	**112**	P		**Pg**	**12 06 49.5**	**+0.6**
	baz=280							
NRAU				S		**Sg**	**12 06 55.1**	**+0.2**
ASKU	**Askersund**	**0.92**	**159**	P		**Pg**	**12 06 57.8**	**+0.3**
ASKU	**Askersund**	**0.92**	**159**	P		**Pg**	**12 06 57.8**	**+0.3**
FINU	**Finntorp**	**0.94**	**249**	P		**Pb**	**12 06 58.6**	**-0.2**
FINU				S		**Sb**	**12 07 11.7**	**-0.1**
FINU	**Finntorp**	**0.94**	**249**	P		**Pb**	**12 06 58.6**	**-0.2**
FINU				S		**Sb**	**12 07 11.7**	**-0.1**
NASU	**Vaermlandsnaes**	**0.97**	**212**	P		**Pb**	**12 06 59.1**	**-0.3**
NASU				S		**Sb**	**12 07 12.2**	**-0.5**
NASU	**Vaermlandsnaes**	**0.97**	**212**	P		**Pb**	**12 06 59.1**	**-0.3**
NASU				S		**Sb**	**12 07 12.2**	**-0.5**
FALU	**Falun**	**1.11**	**47**	P		**Pb**	**12 07 01.6**	**-0.2**
FALU				S		**Sb**	**12 07 16.2**	**-0.6**
FALU	**Falun**	**1.11**	**47**	P		**Pb**	**12 07 01.6**	**-0.2**
FALU				S		**Sb**	**12 07 16.2**	**-0.6**
BACU	**Backbrunna**	**1.48**	**85**	P		**Pb**	**12 07 08.1**	**0.0**
BACU	**Backbrunna**	**1.48**	**85**	P		**Pb**	**12 07 08.1**	**0.0**
OSTU	**Oestervaala**	**1.56**	**71**	P		**Pb**	**12 07 09.2**	**-0.3**
OSTU	**Oestervaala**	**1.56**	**71**	P		**Pb**	**12 07 09.2**	**-0.3**
FIBU	**Brunna**	**1.61**	**83**	P		**Pb**	**12 07 10.1**	**-0.2**
FIBU	**Brunna**	**1.61**	**83**	P		**Pb**	**12 07 10.1**	**-0.2**
NC602	**NORSAR Array S**	**1.64**	**308**	*e*P		**Pg**	**12 07 11.8**	**+0.6**
NB201	**NORSAR Array S**	**1.94**	**313**	*e*P		**Pg**	**12 07 17.2**	**+0.4**

*NOU **12** 12:11:20.7, 31.61S×177.03W, h331km, mb4.0/10, Kermadec Islands Region*
*WEL **12** 12:12:14.1±1.3, 35.5S±16.17×179.9E±1.5, h236km±27km, M4.0/14, ML3.8/10, MLv4.0/14, Error ellipse: s-maj=25.5km s-min=14.0km az=41.9, confirmed*
ISC 12 12:12:11.1±3.6, 34.6S±0.2×179.2E±0.2, h250km, n79, σ1§38/86, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MXZ	**Matakaoa Point**	**3.05**	**194**	P		**Pn**	**12 13 04.4**	**+0.4**
MXZ	**Matakaoa Point**	**3.05**	**194**	P		**Pn**	**12 13 05.7**	**+1.6**
MXZ				S		**S**	**12 13 44.9**	**-1.2**
WMGZ	**Waiomatatini S**	**3.28**	**191**	P		**Pn**	**12 13 08.2**	**+1.6**
WMGZ				S		**S**	**12 13 51.9**	**+1.3**
HAZ	**Te Kaha**	**3.36**	**200**	P		**Pn**	**12 13 08.9**	**+1.4**
HAZ				S

KIW	Kapiti Island	7.13	207	P	Pn	12 13 51.6 -1.6
MTW	Mount Morrison	7.18	203	P	Pn	12 13 52.9 -1.0
CAW	Cannon Point	7.29	206	P	Pn	12 13 53.6 -1.7
PAWZ	Paruwai Farm	7.41	203	P	Pn	12 13 55.8 -1.1
MSWZ	Moikau Station	7.50	204	P	Pn	12 13 56.3 -1.6
WEL	Wellington	7.55	207	P	Pn	12 13 57.3 -1.3
SNZO	South Karori	7.59	207	P	Pn	12 13 58.6 -0.5
PLWZ	Palliser	7.63	203	P	Pn	12 13 58.3 -1.4
TCW	Tory Channel	7.67	209	P	Pn	12 13 58.4 -1.8
TUWZ	Tuamarina	7.99	210	P	Pn	12 14 02.6 -1.6
QRZ	Quartz Range	8.17	219	P	Pn	12 14 08.5 +2.0
THZ	Tophouse	8.71	213	P	Pn	12 14 12.6 -0.8
KHZ	Kahutara	8.99	208	P	Pn	12 14 15.3 -1.4
KHZ	Kahutara	8.99	208	P	Pn	12 14 15.0 -1.7
GVZ	Greta Valley S	9.65	208	P	Pn	12 14 23.5 -1.7
LTZ	Lake Taylor	9.81	212	P	Pn	12 14 25.4 -1.8
MQZ	McQueen's Vall	10.43	207	P	Pn	12 14 32.3 -2.5
ODZ	Otahua Downs	12.34	210	P	Pn	12 14 52.3 -6.4

*KRNET **12** 12:24:47.8±0.1,41°.66N×74°.68E,h23km,mb2.8*
*SOME **12** 12:24:48.5,41°.67N×74°.73E,h5km*
*KNET **12** 12:24:49.8±0.5,41°.81N×74°.86E,h12km±2km,ml1.8,Error ellipse: s-maj=3.4km s-min=1.9km az=38.0*
*NNC **12** 12:24:50.2±1.2,41°.75N×74°.67E,h0km,mb3.4,mpv3.1, Error ellipse: s-maj=9.2km s-min=4.6km az=177.0*

ISC 12 12:24:48.3±1.2,41°.67N±0°.04×74.72E±0°.02,h9km±12km, n49,σ1s27/80,19C-8D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**0.35**	**302**	⇑	*iP*		**Pg**	**12 24 55.0**	**-0.4**
ARLS				⇑	*iS*		**Sg**	**12 25 00.3**	**+0.3**
UCH	**Uchtor**	**0.57**	**344**	⇑	P		**Pg**	**12 24 59.3**	**-0.2**
	24nm,0.2s,SNR=49								
UCH				⇓	S		**Sg**	**12 25 07.7**	**+0.5**
	29nm,0.2s								
UCH	**Uchtor**	**0.57**	**344**	⇑	*iP*		**Pg**	**12 24 59.2**	**-0.4**
UCH				⇑	*iS*		**Sg**	**12 25 07.9**	**+0.7**
AAK	**Ala-Archa**	**0.98**	**350**	⇑	P		**Pg**	**12 25 06.5**	**-0.6**
	4.6nm,0.3s,SNR=11								
AAK				⇓	S		**Sg**	**12 25 19.5**	**-0.4**
	12nm,0.5s								
AAK	**Ala-Archa**	**0.98**	**350**	⇑	P		**Pg**	**12 25 06.1**	**-1.1**
	2.0nm,0.5s								
AAK				⇑	S		**Sg**	**12 25 19.2**	**-0.6**
	4.5nm,0.6s								
AAK	**Ala-Archa**	**0.98**	**350**	⇑	*iP*		**Pg**	**12 25 06.3**	**-0.8**
AAK				⇑	*iS*		**Sg**	**12 25 19.5**	**-0.4**
NRN	**Naryn**	**0.99**	**104**	⇑	*iP*		**Pg**	**12 25 06.7**	**-0.7**
NRN				⇑	*iS*		**Sg**	**12 25 20.0**	**-0.2**
KBK	**Karagaybulak**	**1.00**	**10**	⇑	P		**Pg**	**12 25 06.8**	**-0.7**
	6.6nm,0.2s,SNR=13								
KBK				⇑	S		**Sg**	**12 25 19.6**	**-0.8**
	49nm,0.5s								
KBK	**Karagaybulak**	**1.00**	**10**	⇑	*iP*		**Pg**	**12 25 06.8**	**-0.7**
KBK				⇑	*iS*		**Sg**	**12 25 20.2**	**-0.3**
ULHL	**Ulahol**	**1.27**	**63**	⇑	P		**Pn**	**12 25 11.1**	**-1.4**
	6.3nm,0.2s,SNR=7.6								
ULHL				⇓	S		**Sb**	**12 25 27.7**	**-1.4**
	22nm,0.4s								
TKM2	**Tokmak 2**	**1.40**	**27**	⇓	P		**Pn**	**12 25 13.7**	**-0.7**
	2.4nm,0.2s,SNR=7.1								
TKM2				⇓	S		**Sb**	**12 25 31.4**	**-1.6**
	12nm,0.4s								
MRKS	**Merke**	**1.54**	**314**		P		**Pb**	**12 25 16.9**	**-0.3**
	3.4nm,0.4s								
MRKS					S		**Sg**	**12 25 37.5**	**-0.5**
	15nm,0.4s								
MRKS	**Merke**	**1.54**	**314**		*eP*		**Pb**	**12 25 16.9**	**-0.3**
	3.4nm,0.4s								
MRKS					*eS*		**Sb**	**12 25 37.2**	**+0.3**
	15nm,0.4s								
USP	**Ospenovka**	**1.60**	**354**	⇑	P		**Pb**	**12 25 17.8**	**-0.3**
	5.1nm,0.2s,SNR=6.1								
USP				⇓	S		**Sg**	**12 25 39.2**	**-0.6**
	26nm,0.5s								
KST	**Kastek**	**1.65**	**33**		P		**Pg**	**12 25 20.3**	**+0.4**
	1.8nm,0.2s								
KST					S		**Sg**	**12 25 43.0**	**+1.7**
	13nm,0.5s								
KST	**Kastek**	**1.65**	**33**		*eP*		**Pg**	**12 25 20.3**	**+0.4**
	1.8nm,0.2s								
KST					*eS*		**Sg**	**12 25 43.0**	**+1.7**
	13nm,0.5s								
DGS	**Degeres**	**1.75**	**26**		P		**Pg**	**12 25 22.1**	**+0.2**
	6.9nm,0.5s								
DGS					S		**Sg**	**12 25 45.6**	**+1.1**
	24nm,0.5s								
DGS	**Degeres**	**1.75**	**26**		*eP*		**Pg**	**12 25 22.1**	**+0.2**
	6.9nm,0.5s								
DGS					*eS*		**Sg**	**12 25 45.6**	**+1.1**
	24nm,0.5s								
MTBS	**Maitube**	**1.93**	**40**		Pg		**Pg**	**12 25 26.4**	**+1.2**
	13nm,0.4s								
MTBS					Lg		Lg	12 25 53.3	
	24nm,0.4s								
MTBS	**Maitube**	**1.93**	**40**		*eP*		**Pg**	**12 25 26.4**	**+1.2**
	13nm,0.4s								
MTBS					*eS*		**Sg**	**12 25 53.3**	**+3.0**
	24nm,0.4s								
IZV	**Izvestkoviy**	**1.95**	**45**		P		**Pg**	**12 25 25.1**	**-0.7**
	8.7nm,0.5s								
IZV					S		**Sg**	**12 25 51.0**	**-0.2**
	35nm,0.5s								
IZV	**Izvestkoviy**	**1.95**	**45**		*eP*		**Pg**	**12 25 25.1**	**-0.7**
	8.7nm,0.5s								
IZV					*eS*		**Sg**	**12 25 51.0**	**-0.2**
	35nm,0.5s								
TNSS	**Tian-Shan**	**2.14**	**50**		Pg		**Pg**	**12 25 29.7**	**+0.3**
	2.1nm,0.3s								
TNSS					Lg		Lg	12 25 58.8	
	5.1nm,0.6s								
TNSS	**Tian-Shan**	**2.14**	**50**		*eP*		**Pg**	**12 25 29.7**	**+0.3**
	2.1nm,0.3s								
TNSS					*eS*		**Sg**	**12 25 58.8**	**+1.7**
	5.1nm,0.6s								
KRBS	**Karabastau**	**2.14**	**19**		Pg		**Pg**	**12 25 28.4**	**-0.9**
	8.3nm,0.5s								
KRBS					Lg		Lg	12 25 56.6	
	22nm,0.5s								
KRBS	**Karabastau**	**2.14**	**19**		*eP*		**Pg**	**12 25 28.4**	**-0.9**
	8.3nm,0.5s								
KRBS					*eS*		**Sg**	**12 25 56.6**	**-0.5**
	22nm,0.5s								
MDOK	**Medeo**	**2.28**	**48**		Pg		**Pg**	**12 25 32.0**	**+0.1**
	17nm,0.6s								
MDOK					Lg		Lg	12 26 02.9	
	30nm,0.5s								
KOTS	**Kotyrbulak**	**2.36**	**48**		Pg		**Pg**	**12 25 33.0**	**-0.5**
	16nm,0.5s								
KOTS					Lg		Lg	12 26 04.7	
	58nm,0.6s								
KOTS	**Kotyrbulak**	**2.36**	**48**		*eP*		**Pg**	**12 25 33.0**	**-0.5**
	16nm,0.5s								
KOTS					*eS*		**Sg**	**12 26 04.7**	**+0.7**
	58nm,0.6s								
KTBS	**Karatobe**	**2.50**	**35**		Pg		**Pb**	**12 25 33.6**	**+0.2**
	3.5nm,0.3s								
KTBS					Lg		Lg	12 26 05.8	
	0.4nm,0.5s								
KTBS	**Karatobe**	**2.50**	**35**		*eP*		**Pb**	**12 25 33.6**	**+0.2**
	3.5nm,0.3s								
KTBS					*eS*		**Sb**	**12 26 05.8**	**+1.5**
	0.4nm,0.5s								
SATY	**Saty**	**3.06**	**62**		Pg		**Pg**	**12 25 45.4**	**-1.6**
	4.6nm,0.4s								
SATY					Lg		Lg	12 26 25.9	
	15nm,0.5s								
KURS	**Kuram**	**3.12**	**53**		Pg		**Pb**	**12 25 44.8**	**+0.7**
	5.4nm,0.5s								
KURS					Lg		Lg	12 26 24.7	
	6.1nm,0.6s								
BTLS	**Baital**	**3.40**	**352**		Pg		**Pb**	**12 25 50.4**	**+1.6**
	1.6nm,0.3s								
BTLS					Lg		Lg	12 26 34.7	
	2.2nm,0.4s								
BTLS	**Baital**	**3.40**	**352**		*eP*		**Pb**	**12 25 50.4**	**+1.6**
	1.6nm,0.3s								
BTLS					*eS*		**Sg**	**12 26 34.7**	**-2.8**
	2.2nm,0.4s								
ARXS	**Arharly**	**3.41**	**41**		Pg		**Pb**	**12 25 51.0**	**+2.0**
	2.6nm,0.4s								
ARXS					Lg		Lg	12 26 35.7	
	19nm,0.5s								
ARXS	**Arharly**	**3.41**	**41**		*eP*		**Pb**	**12 25 51.0**	**+2.0**
	2.6nm,0.4s								
ARXS					*eS*		**Sg**	**12 26 35.7**	**-2.1**
	19nm,0.5s								
KPKS	**Kokpek**	**3.43**	**57**		Pg		**Pb**	**12 25 50.5**	**+1.1**
	0.3nm,0.1s								
KPKS					Lg		Lg	12 26 34.5	
	17nm,0.5s								
KPKS	**Kokpek**	**3.43**	**57**		*eP*		**Pb**	**12 25 50.5**	**+1.1**
	0.3nm,0.1s								
KPKS					*eS*		**Sb**	**12 26 34.5**	**+3.3**
	17nm,0.5s								
KK31	**Karatay Array**	**3.43**	**296**	⇑	Pg		**Pb**	**12 25 50.2**	**+0.9**
	0.5nm,0.3s,baz=138,slow=29,SNR=6.9								
KK31					Lg		Lg	12 26 37.9	
	3.0nm,0.5s,baz=122,slow=28,SNR=5.5								
UZB	**Uzynbulak**	**3.51**	**64**		Pg		**Pg**	**12 25 53.3**	**-2.2**
	4.5nm,0.2s								
UZB					Lg		Lg	12 26 39.3	
	11nm,0.4s								
UZB	**Uzynbulak**	**3.51**	**64**		*eP*		**Pg**	**12 25 53.3**	**-2.2**
	4.5nm,0.2s								
UZB					*eS*		**Sg**	**12 26 39.3**	**-1.6**
	11nm,0.4s								
IUG	**Iuzhnay**	**3.53**	**279**		Pg		**Pg**	**12 25 55.4**	**-0.6**
	10nm,0.3s								
IUG					Lg		Lg	12 26 43.2	
	77nm,0.6s								
IUG	**Iuzhnay**	**3.53**	**279**		*eP*		**Pg**	**12 25 55.4**	**-0.6**
	10nm,0.3s								
IUG					*eS*		**Sg**	**12 26 43.2**	**+1.4**
	77nm,0.6s								
BLB	**Baldybastay**	**3.67**	**47**		Pg		**Pb**	**12 25 55.2**	**+1.8**
	12nm,0.5s								
BLB					Lg		Lg	12 26 43.0	
	12nm,0.6s								
BRLS	**Boroldoy**	**3.87**	**292**		Pg		**Pg**	**12 26 02.2**	**-0.2**
	0.6nm,0.2s								
BRLS					Lg		Lg	12 26 54.9	
	1.8nm,0.3s								
BRLS	**Boroldoy**	**3.87**	**292**		*eP*		**Pg**	**12 26 02.2**	**-0.2**
	0.6nm,0.2s								
BRLS					*eS*		**Sg**	**12 26 54.9**	**+2.4**
	1.8nm,0.3s								
PDGK	**Podgornoye**	**3.89**	**63**	⇓	Pg		**Pg**	**12 26 00.9**	**-2.0**
	3.8nm,0.7s								
PDGK				⇓	Lg		Lg	12 26 53.1	
	7.4nm,0.7s								
KNOS	**Konyrlen**	**4.23**	**49**		Pg		**Pb**	**12 26 05.6**	**+2.6**
	2.1nm,0.6s								
KNOS					Lg		Lg	12 27 00.3	
	7.0nm,0.5s								

*NNC **12** 12:30:18.3±1.1,50°.44N×73°.46E,h0km,mb3.0,mpv2.7, Error ellipse: s-maj=15.1km s-min=3.1km az=25.0, Suspected Mining explosion.*
*IDC **12** 12:30:20.0±1.9,50°.45N×73°.54E,h0km,mbtmp2.5/3, ML2.0/3, Error ellipse: s-maj=28.6km s-min=9.4km az=29.0*

ISC 12 12:30:16.4±1.9,50°.4N±0°.1×73°.2E±0°.1,h0km,n10,σ0s95/9, 4C-3D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BVA0	**Borovoye Array**	**3.17**	**327**		Pg		**Pg**	**12 31 17.0**	**-0.1**
	2.3nm,0.8s,baz=145,slow=18,SNR=5.4								
BVA0				⇑	Lg		Lg	12 32 00.2	
	4.1nm,0.8s,baz=140,slow=28,SNR=6.8								
BVAR	**Borovoye Array**	**3.17**	**327**		Pg		**Pg**	**12 31 17.5**	**+0.4**
	0.1nm,0.3s,baz=138,slow=15,SNR=8.9								
BVAR					Lg		Lg	12 32 00.6	
	0.3nm,0.3s,baz=138,slow=30,SNR=14								
KURBB	**Kurchatov Arra**	**3.40**	**84**		Pn		**Pn**	**12 31 11.6**	**+1.0**
	0.1nm,0.3s,baz=269,slow=13,SNR=5.2								
KURBB					Pg		**Pb**	**12 31 15.9**	**-1.6**
	0.2nm,0.3s,baz=272,slow=17,SNR=11								
KURBB					Lg		Lg	12 32 02.2	
	0.2nm,0.3s,baz=269,slow=27,SNR=4.9								
	0.3nm,0.4s								
KURBB	**Kurchatov Arra**	**3.40**	**84**	⇑	Pg		**Pb**	**12 31 17.2**	**-0.3**
	2.6nm,0.5s								
KURBB				⇑	Lg		Lg	12 32 01.6	
	32nm,0.8s								
KURK	**Kurchatov**	**3.46**	**82**	⇓	Pg		**Pb**	**12 31 18.7**	**+0.2**
	1.9nm,1.3s								
KURK				⇑	Lg		Lg	12 32 02.8	
	9.3nm,0.9s								
MAKZ	**Makanchi**	**6.83**	**118**	⇓	Lg		Lg	12 33 49.4	
	4.7nm,0.8s								
MK31	**Makanchi Array**	**7.01**	**117**	⇓	Lg		Lg	12 33 58.7	
	5.0nm,0.8s,baz=322,slow=28,SNR=5.1								
MKAR	**Makanchi Array**	**7.01**	**117**		Pn		**Pn**	**12 32 00.3**	**0.0**
	0.1nm,0.3s,baz=309,slow=13,SNR=2.7								
MKAR					Lg		Lg	12 33 49.8	
	0.2nm,0.3s,baz=307,slow=22,SNR=5.9								
	0.2nm,0.5s								
ZALV	**Zalesovo Beam**	**7.97**	**59**		Pn		**Pn**	**12 32 12.5**	**-0.9**
	0.1nm,0.3s,baz=240,slow=13,SNR=1.6								
ZALV					Sn		**Sn**	**12 33 45.2**	**+1.0**
	0.1nm,0.3s,baz=245,slow=20,SNR=2.8								
	0.2nm,0.3s								
I46RU	**ZALESOVO INFRA**	**7.98**	**59**		I		I	13 19 50.0	
	baz=244,slow=316,SNR=2.2								

*SKHL **12** 12:36:11.4±0.1,47°.50N×147°.40E,h486km±3km,mb4.4/4, msh4.2/3*
*IDC **12** 12:36:14.1±1.7,47°.92N×147°.00E,h439km±25km,mb2.7/3, mbtmp3.7/8,Error ellipse: s-maj=39.5km s-min=20.4km az=158.0*

ISC 12 12:36:13.5±0.8,47°.60N±0°.09×147°.26E±0°.09,h450km,n16, σ2s31/20,mb3.1/3,Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.41**	**170**		*eP*		**P**	**12 37 15.4**	**-1.1**
KUR						AMB	AMB	12 37 18.7	
	40nm,0.6s								
KUR					*eS*		**S**	**12 38 05.6**	**-1.9**
KUR						A	A	12 38 20.0	
	40nm,0.8s								
KUR						A	A	12 38 20.0	
	40nm,0.8s								
YSS	**Yuzhno-Sakhali**	**3.13**	**260**		*eP*		**P**	**12 37 21.1**	**-0.4**
YSS						AMB	AMB	12 37 23.6	
	30nm,0.4s								
YSS					*eS*		**S**	**12 38 16.6**	**-0.1**
YSS						A	A	12 38 17.0	
	10.0nm,0.6s								
YSS						A	A	12 38 17.0	
	10.0nm,0.6s								
YUK	**Yuzh-Kuril'sk**	**3.70**	**196**		*eP*		**P**	**12 37 24.8**	**-1.3**
YUK					*eS*		**S**	**12 38 24.0**	**-1.1**
SHO	**Shikotan**	**3.74**	**185**		*eP*		P	12 37 35.7	+9.2
SHO						AMB	AMB	12 37 36.5	
	20nm,0.3s								
SHO					*eS*		**S**	**12 38 32.4**	**+6.6**
SHO						A	A	12 38 34.9	
	20nm,0.5s								
SHO						A	A	12 38 34.9	
	50nm,0.5s								
NMR	**Nemuro--Hokkai**	**4.37**	**195**		*eP*		**P**	**12 37 30.3**	**-1.7**
NMR					*eS*		**S**	**12 38 31.9**	**-3.9**
TYV	**Tymovskoe**	**4.44**	**319**		*eP*		**P**	**12 37 32.0**	**-0.4**
ASAJ	**Asahikawa**	**4.77**	**225**		P		**P**	**12 37 37.4**	**+1.7**
	7.2nm,0.8s,baz=89,slow=4.3,SNR=7.3								
AKK	**Akkeshi**	**4.89**	**201**		*eP*		**P**	**12 37 35.1**	**-1.8**
SKR	**Severo-Kuril's**	**6.58**	**59**		*eP*		**P**	**12 37 52.7**	**-0.9**
PETK	**Petropavlovsk-**	**8.65**	**47**		P		**P**	**12 38 14.9**	**-0.9**
	7.3nm,1.0s,baz=266,slow=8.7,SNR=1.3								
KLR	**Kul'dur**	**10.44**	**285**		P		**P**	**12 38 34.2**	**-1.0**
	2.2nm,0.8s,baz=88,slow=10.0,SNR=6.3								
MJAR	**Matsushiro Arr**	**12.92**	**214**		P		**P**	**12 39 05.1**	**+2.7**
	3.0nm,0.8s,baz=28,slow=10.0,SNR=8.3								
KSRS	**Korea Array**	**17.44**	**242**		P		**P**	**12 39 50.8**	**+0.3**
	2.0nm,0.7s,baz=45,slow=9.9,SNR=5.6								
MKAR	**Makanchi Array**	**42.97**	**294**		P		**P**	**12 43 30.2**	**-1.1**
	0.1nm,0.4s,baz=60,slow=5.7,SNR=1.6								
	0.1nm,0.4s								
PDAR	**Pinedale Array**	**67.39**	**51**		P		**P**	**12 46 24.0**	**+1.0**
	0.3nm,0.6s,baz=230,slow=1.2,SNR=4.4								
	0.3nm,0.6s								
TXAR	**Lajitas Array**	**80.46**	**57**		P		**P**	**12 47 39.2**	**+1.7**
	0.3nm,0.5s,baz=285,slow=3.8,SNR=11								
	0.3nm,0.5s								

*SKHL **12** 12:38:26.3±0.1,45°.10N×151°.50E,h120km±6km,mb4.6/5, msh5.3/3*
*JMA **12** 12:38:26.6±1.1,46°N±5°×15°1E±1°0,h223km,MV3.6/12, KURILE ISLANDS REGION*

ISC 12 12:38:26.5±2.1,45°.0N±0°.2×151°.4E±0°.2,h100km,n19, σ2s02/25,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.54**	**276**		*eP*		**Pn**	**12 39 06.8**	**+0.8**
KUR						AMB	AMB	12 39 10.5	
	30nm,0.5s								
KUR					*eS*		**Sn**	**12 39 37.3**	**+0.9**
KUR						A	A	12 39 44.3	
	50nm,0.3s								
KUR						A	A	12 39 44.3	
	50nm,0.3s								
SHO	**Shikotan**	**3.50**	**252**		*eP*		Pn	12 39 33.6	+15
SHO						AMB	AMB	12 39 34.9	
	50nm,0.4s								
SHO					*eS*		Sn	12 40 17.0	+18
SHO						A	A	12 40 19.3	
	40nm,0.3s								
SHO						A	A	12 40 19.3	
	20nm,0.3s								
YUK	**Yuzh-Kuril'sk**	**4.11**	**258**		*eP*		**Pn**	**12 39 29.1**	**+2.0**
YUK						AMB	AMB	12 39 29.8	
	100nm,0.4s								
YUK					*eS*		**Sn**	**12 40 15.5**	**+1.3**
YUK						A	A	12 40 21.3	
	80nm,0.3s								
YUK						A	A	12 40 21.3	
	140nm,0.3s								
NEM2	**Nemuro 2**	**4.42**	**250**		*eP*		**Pn**	**12 39 33.4**	**+2.1**
NEM2					*eS*		**Sn**	**12 40 25.5**	**+3.8**
NMR	**Nemuro--Hokkai**	**4.43**	**250**		*eP*		**Pn**	**12 39 33.4**	**+1.9**
NMR					*i S*		**Sn**	**12 40 23.3**	**+1.4**
GLVR	**Golovnino**	**4.44**	**255**		*eP*		**Pn**	**12 39 33.1**	**+1.6**
GLVR						AMB	AMB	12 39 34.1	
	80nm,0.4s								
GLVR					*i S*		**Sn**	**12 40 23.3**	**+1.3**
GLVR						A	A	12 40 24.8	
	30nm,0.2s								
GLVR						A	A	12 40 24.8	
	20nm,0.2s								
JRA	**Rausu**	**4.65**	**259**		*eP*		**Pn**	**12 39 34.6**	**+0.1**
JNK	**Nakash**	**5.04**	**256**		*eP*		**Pn**	**12 39 40.2**	**+0.5**
AKK	**Akkeshi**	**5.17**	**249**		*eP*		**Pn**	**12 39 43.0**	**+1.6**
JAK	**Akkeshi**	**5.27**	**250**		*eP*		**Pn**	**12 39 43.5**	**+0.7**
JAK					*eS*		**Sn**	**12 40 43.3**	**+0.9**
JTKR	**Abashiri--Toko**	**5.49**	**261**		*eP*		**Pn**	**12 39 43.3**	**-2.5**
JAR	**Ashorobuto**	**5.79**	**255**		*eP*		**Pn**	**12 39 49.5**	**-0.3**
JOB	**Onbets**	**5.89**	**251**		*eP*		**Pn**	**12 39 50.9**	**-0.3**
JCH	**Churui**	**6.33**	**250**		*eP*		**Pn**	**12 39 56.0**	**-1.2**
JCH					*eS*		**Sn**	**12 41 05.0**	**-2.9**
JKK2	**Kamakawa 2**	**6.33**	**262**		*eP*		**Pn**	**12 39 53.9**	**-3.3**
SKR	**Severo-Kuril's**	**6.46**	**27**		*eP*		**Pn**	**12 39 58.6**	**-0.3**
JNBK	**Urakawa-nobuka**	**6.88**	**249**		*eP*		**Pn**	**12 40 02.3**	**-2.4**
PAU	**Pauzhetka**	**7.36**	**27**		*eP*		**Pn**	**12 40 11.6**	**+0.5**
JANG	**Nango**	**8.67**	**241**		*eS*		**Sn**	**12 42 00.8**	**-4.2**

IDC 12 12:39:45.8±631.0,53°.86N×34°.64E,h0km,Error ellipse: s-maj=276.6km s-min=71.4km az=30.0,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**3.22**	**26**		I		I	13 02 20.0	
	0.3nm,0.7s,baz=209,slow=314,SNR=2.3								
I31KZ	**AKTYUBINSK INF**	**14.75**	**94**		I		I	14 09 20.0	
	baz=291,slow=318,SNR=0.8								
I46RU	**ZALESOVO INFRA**	**29.06**	**69**		I		I	15 35 50.0	
	baz=295,slow=320,SNR=2.1								
I34MN	**SONGINO INFRAS**	**43.95**	**67**		I		I	17 05 10.0	
	baz=311,slow=321,SNR=0.5								

*MOS **12** 12:50:27.8±2.2,19°.38S×173°.04W,h16km,mb5.5/45, MS5.4/12,Error ellipse: s-maj=9.3km s-min=7.9km az=51.2*
*NEIC **12** 12:50:27.6±2.6,19°.11S±0°.08×172°.87W±0°.06,h10km±1km, mb5.4/278,Ms_20 5.5/618,Mww5.5/26,Error ellipse: s-maj=13.9km s-min=10.3km az=182.0*
*IDC **12** 12:50:27.4±0.4,19°.35S×173°.37W,h0km,mb4.9/21, mbtmp4.9/22,ML4.7/1,MS5.2/61,Error ellipse: s-maj=16.3km s-min=13.7km az=136.0*
*NOU **12** 12:50:28.2,19°.71S×172°.97W,h1km,mb5.4/95,Tonga Islands Region*
*BJI **12** 12:50:30.0,18°.74S×172°.98W,h9km,mB5.9/44,mb5.2/56, Ms5.5/55,Ms7 5.2/57*
*GFZ **12** 12:50:30.2,19°.31S×173°.35W,h34km,MW5.6,Moment Tensor Solution. s49 Moment tensor: Mrr2.70; Mθθ-0.83; Mϕϕ-1.87; Mrθ-0.72; Mrϕ-0.53; Mθϕ-1.64; Fault plane solution: NP1:ϕs203.00000°,δ63.00000°, λ90.00000°. NP2:ϕs22.00000°,δ26.00000°,λ89.00000°.*
*NEIC **12** 12:50:30.1,19°.27S×173°.12W,h26km*
*NEIC **12** 12:50:30.1,18°.87S×172°.59W,h26km,Moment Tensor Solution. Duration: 2s8 Moment tensor: Scale 10¹⁷Nm; Mrr2.24; Mθθ-0.20; Mϕϕ-2.04; Mrθ-0.74; Mrϕ-0.67; Mθϕ-0.12; Fault plane solution: Mo2.38000×10¹⁷ NP1: ϕs3.44000°,δ42.63000°,λ67.27000°. NP2:ϕs213.09000°, δ51.34000°,λ109.57000°. Principal axes: T 2.4531, Plg74.0000°, Azm183.0000°; N -0.1641, Plg15.0000°, Azm21.0000°; P -2.2891, Plg5.0000°, Azm289.0000°;*
*GCMT **12** 12:50:33.6±0.1,19°.35S±0°.01×172°.86W,h12km, MW5.5/157,Moment Tensor Solution. s122,c216; s157,c310; Duration: 1s4 Moment tensor: Scale 10¹⁷ Nm; Mrr1.62±.01; Mθθ-0.12±.02; Mϕϕ-1.51±.01; Mrθ0.58±.04; Mrϕ-0.63±.01; Mθϕ1.25±.04; Best double couple: Mo2.17900×10¹⁷ NP1:ϕs198.00000°,δ25.00000°, λ85.00000°. NP2:ϕs24.00000°,δ65.00000°,λ92.00000°. Principal axes: T 2.1140, Plg70.0000°, Azm299.0000°; N 0.1230, Plg2.0000°, Azm203.

MARNC **Mare, Loyalty** 17.95 260 Pn **Pn** 12 54 35.2 -3.3
MARNC IAmb IAmb 12 54 39.7
comp=Z,425nm,1.4s
DVP **Devils Point** 17.98 273 P **Pn** 12 54 38.9 -0.1
YATNC **Mamie plateau,** 19.04 259 P **P** 12 54 51.6 +0.6
OUENC **Ouen Island, N** 19.11 258 P **P** 12 54 51.9 +0.1
OUENC **Ouen Island, N** 19.11 258 P **P** 12 54 49.8 -2.0
SANVU **Saraoutou** 19.37 279 P **P** 12 54 54.7 0.0
SANVU **Saraoutou** 19.37 279 P **P** 12 54 51.0 -3.7
SANVU IAmb IAmb 12 54 56.9
comp=Z,269nm,1.3s
DZM **Mont Dzumac** 19.45 259 P **P** 12 54 53.3 -2.3
comp=Z,2.3nm,0.3s,baz=240,slow=16,SNR=25
comp=Z,100nm,1.0s
ONTNC **Ouen Toro** 19.46 258 P **Pn** 12 54 57.0 +0.1
ONTNC **Ouen Toro** 19.46 258 **P** 12 54 54.1 -1.5
GRZ **Great Barrier** 19.55 209 P **Pn** 12 54 59.9 +2.0
OUZ **Omahuta** 19.66 215 P **Pn** 12 55 00.5 +1.3
WCZ **Waipu Caves** 19.84 212 P **Pn** 12 55 03.3 +2.1
PUZ **Puketiti** 20.02 201 P Pn 12 55 07.8 +4.3
URZ **Urewera** 20.59 203 P **P** 12 55 08.1 +0.3
comp=Z,33nm,0.7s,baz=290,slow=2.3,SNR=34
URZ S **S** 12 58 54.4 -3.0
comp=Z,20nm,0.7s,baz=2.2,slow=22,SNR=5.5
comp=Z,33nm,0.7s
TOZ **Tahuroa Road** 20.77 207 Pn 12 55 12.3 +0.1
RTZ **Ruatahuna** 20.95 203 Pn 12 55 14.0 -0.4
RTZ **Ruatahuna** 20.95 203 P Pn 12 55 17.9 +3.4
RAHZ **Arahi** 21.18 202 P **P** 12 55 19.8 +5.5
MTHZ **Maungataniwha** 21.21 203 P **P** 12 55 18.5 +3.9
NMHZ **Naumai** 21.44 202 P **P** 12 55 20.6 +3.5
BKZ **Black Stump Fm** 21.62 203 P **P** 12 55 18.0 -0.9
BKZ **Black Stump Fm** 21.62 203 **P** 12 55 20.7 +1.8
BKZ **Black Stump Fm** 21.62 203 P **P** 12 55 20.5 +1.6
HIZ **Hauiti** 21.70 207 P **P** 12 55 22.9 +3.1
HIZ **Hauiti** 21.70 207 P **P** 12 55 24.0 +4.2
KATZ **Kakaramea** 21.75 205 P **P** 12 55 24.0 +3.6
MCHZ **McNeill Hill** 21.79 202 P **P** 12 55 25.4 +4.7
NTVZ **North Tongarir** 21.87 204 P **P** 12 55 24.4 +2.7
KWHZ **Kaweka Forest** 21.87 203 P **P** 12 55 22.5 +0.8
TMVZ **Te Maari** 21.87 204 P **P** 12 55 25.1 +3.4
ETVZ **East Tongariro** 21.89 204 P **P** 12 55 26.3 +4.4
WTVZ **West Tongariro** 21.91 205 P **P** 12 55 26.0 +3.8
OTVZ **Oturere** 21.93 204 P **P** 12 55 24.4 +2.1
TWVZ **Taurewa** 21.94 205 P **P** 12 55 27.3 +4.9
SNVZ **South Ngauruho** 21.96 204 P **P** 12 55 24.1 +1.4
NGZ **Ngauruhoe** 21.96 204 P **P** 12 55 28.1 +5.3
KAHZ **Kahuranaki** 22.04 201 P **P** 12 55 26.8 +3.3
KRHZ **Kereru** 22.08 202 P **P** 12 55 26.7 +2.7
MOVZ **Moawhango** 22.10 204 P **P** 12 55 27.6 +3.4
PKVZ **Pokaka** 22.16 205 P **P** 12 55 27.0 +2.3
PPT **Papeete** 22.22 89 P **P** 12 55 30.0 +4.4
comp=Z,113nm,1.0s,baz=133,slow=5.5,SNR=7.7
PPT LR LR 13 02 36.8
comp=Z,10µm,18.6s,baz=264,slow=32
comp=Z,113nm,1.0s
PPTF **Pamatai, Papee** 22.23 89 P **P** 12 55 27.2 +1.5
PXZ **Pawanui** 22.26 201 P **P** 12 55 30.2 +4.5
PNHZ **Pukenui** 22.38 202 P **P** 12 55 30.5 +3.3
TSZ **Takapari Road** 22.60 203 P **P** 12 55 33.6 +4.2
BFZ **Birch Farm** 23.05 201 P **P** 12 55 33.1 -1.0
BFZ **Birch Farm** 23.05 201 P **P** 12 55 36.7 +2.6
BFZ IAmb IAmb 12 55 44.0
comp=Z,57nm,0.7s
MRZ **Mangatainoka R** 23.27 203 **P** 12 55 37.0 +0.7
MSWZ **Moikau Station** 24.05 202 P **P** 12 55 45.9 +2.0
TCW **Tory Channel** 24.23 204 P **P** 12 55 46.6 +1.0
NNZ **Nelson** 24.59 205 P **P** 12 55 50.3 +1.5
NNZ IAmb IAmb 12 56 11.3
comp=Z,110nm,1.4s
QRZ **Quartz Range** 24.62 207 P **P** 12 55 48.6 -0.5
GVZ **Greta Valley S** 26.21 204 P **P** 12 56 05.2 +1.6
LTZ **Lake Taylor** 26.35 205 **P** 12 56 06.7 +1.9
LTZ IAmb IAmb 12 56 26.5
comp=Z,75nm,0.7s
INZ **Inchbonnie** 26.64 206 **P** 12 56 09.7 +2.3
OXZ **Oxford** 26.90 205 P **P** 12 56 11.5 +1.7
FOZ **Fox Glacier** 27.99 207 P **P** 12 56 20.5 +1.0
HNR **Honiara** 28.07 287 LR LR 13 05 39.6
comp=Z,140nm,20.1s,baz=194,slow=33
LBZ **Lake Benmore** 28.53 206 IAMs_20 IAMs_20 13 08 19.2
comp=Z,9µm,18.0s
JCZ **Jackson Bay** 28.87 208 P **P** 12 56 27.1 -0.4
TW1H **Toowoomba 1 Ha** 33.07 249 P **P** 12 57 05.0 +0.3
EIDS **Eidsvold** 33.70 253 **P** 12 57 07.7 -2.5
EIDS IAmb IAmb 12 57 08.6
comp=Z,39nm,1.2s
ARMA **Armidale** 33.79 244 P **P** 12 57 09.7 -1.2
comp=Z,33nm,1.6s
ARMA **Armidale** 33.79 244 P **P** 12 57 09.6 -1.4
ARMA IAmb IAmb 12 57 31.3
comp=Z,39nm,1.1s
SYDH **Sydney Hard Ro** 35.24 239 P **P** 12 57 23.3 0.0
AUDCS **Dubbo College** 36.64 242 P **P** 12 57 35.6 +0.2
CNB **Canberra Magne** 36.74 237 P **P** 12 57 36.8 +0.6
comp=Z,67nm,1.0s
CNB **Canberra Magne** 36.74 237 P **P** 12 57 35.8 -0.5
AULRC **Lightning Ridg** 36.78 247 P **P** 12 57 36.3 -0.3
AUDAR **Daramalan Coll** 36.90 237 P **P** 12 57 38.0 +0.4
AUMHS **Melrose High S** 36.97 237 P **P** 12 57 37.8 -0.4
AUMTS **Mt Stromlo** 37.03 237 P **P** 12 57 38.5 -0.2
CAN **Canberra** 37.03 237 P **P** 12 57 37.6 -1.1
comp=Z,55nm,1.0s
CAN **Canberra** 37.03 237 P **P** 12 57 38.8 +0.1
CAN **Canberra** 37.03 237 **P** 12 57 37.5 -1.2
CAN IAmb IAmb 12 57 40.6
comp=Z,62nm,1.1s
CAN **Canberra** 37.03 237 P **P** 12 57 37.5 -1.2
CAN pmax pmax
comp=Z,62nm,1.1s
YNG **Young** 37.26 239 P **P** 12 57 38.9 -1.7
comp=Z,20nm,0.9s
AUAYR **Ayr State High** 37.32 263 P **P** 12 57 41.7 +0.5
KRVT **Keravat (AS076** 37.35 289 LR LR 13 12 40.0
comp=Z,703nm,20.1s,baz=17,slow=36
CTA **Charters Tower** 38.34 262 P **P** 12 57 48.7 -1.2
comp=Z,2.4nm,0.8s
CTA **Charters Tower** 38.34 262 LR LR 13 12 42.1
comp=Z,4µm,20.6s,baz=86,slow=35
CTA **Charters Tower** 38.34 262 P **P** 12 57 47.1 -2.8
CTAO **Charters Tower** 38.34 262 P **P** 12 57 48.5 -1.4
CTAO **Charters Tower** 38.34 262 **P** 12 57 46.9 -3.1
CTAO IAmb IAmb 12 57 51.0
comp=Z,60nm,0.9s
CTAO **Charters Tower** 38.34 262 IAMs_20 IAMs_20 13 13 42.2
comp=Z,6µm,18.0s
CTAO **Charters Tower** 38.34 262 P **P** 12 57 46.9 -3.1
CTAO pmax pmax
comp=Z,60nm,0.9s
CTAO MLR MLR
comp=Z,6µm,18.0s
CMSA **Cobar Meteorol** 39.00 244 P **P** 12 57 53.0 -2.3
comp=Z,39nm,1.3s
CMSA **Cobar Meteorol** 39.00 244 P **P** 12 57 53.0 -2.3
PMG **Port Moresby** 39.84 279 LR LR 13 13 28.8
comp=Z,4µm,18.2s,baz=84,slow=35
PMG **Port Moresby** 39.84 279 P **P** 12 58 02.4 -0.1
PMG **Port Moresby** 39.84 279 P **P** 12 58 03.6 +1.1
PMG **Port Moresby** 39.84 279 P **P** 12 58 00.3 -2.1
PMG IAmb IAmb 12 58 03.4
comp=Z,71nm,0.9s
PMG **Port Moresby** 39.84 279 IAMs_20 IAMs_20 13 13 35.3
comp=Z,6µm,18.0s
PMG **Port Moresby** 39.84 279 P **P** 12 58 00.4 -2.1
PMG pmax pmax
comp=Z,71nm,0.9s
PMG MLR MLR
comp=Z,6µm,18.0s
PMG **Port Moresby** 39.84 279 P **P** 12 58 02.3 -0.2
comp=Z,82nm,1.0s
QLP **Quilpie** 39.90 252 P **P** 12 58 00.0 -2.9
comp=Z,39nm,0.7s
QLP **Quilpie** 39.90 252 P **P** 12 58 02.8 -0.1
CORO **Coronation Par** 40.30 228 P **P** 12 58 06.1 +0.1
TOO **Toolangi** 40.34 235 P **P** 12 58 05.5 -0.9
comp=Z,17nm,0.9s
TOO **Toolangi** 40.34 235 P **P** 12 58 04.8 -1.6
TOO **Toolangi** 40.34 235 P **P** 12 58 04.9 -1.6
TOO pmax pmax
comp=Z,13nm,0.9s
MTSU **Mount Surprise** 40.41 265 P **P** 12 58 03.8 -3.5
comp=Z,34nm,0.7s
MTSU **Mount Surprise** 40.41 265 P **P** 12 58 05.4 -1.9
TAU **Tasmania Unive** 40.71 226 P **P** 12 58 10.1 +0.8
TAU IAmb IAmb 12 59 02.1
comp=Z,154nm,1.7s
TAU **Tasmania Unive** 40.71 226 IAMs_20 IAMs_20 13 12 50.9
comp=Z,6µm,18.0s
TAU **Tasmania Unive** 40.71 226 P **P** 12 58 10.1 +0.8
TAU pmax pmax
comp=Z,154nm,1.7s
GEXS **Deakin Univers** 41.42 234 P **P** 12 58 15.5 +0.2
BRAT **Ballarat** 41.54 235 P **P** 12 58 16.2 0.0
COEN **Coen** 42.31 271 P **P** 12 58 22.8 -0.1
comp=Z,69nm,1.2s
COEN **Coen** 42.31 271 P **P** 12 58 21.2 -1.7
COEN **Coen** 42.31 271 **P** 12 58 20.4 -2.5
COEN IAmb IAmb 12 58 23.8
comp=Z,57nm,0.9s
STKA **Stephens Creek** 42.51 244 P **P** 12 58 22.3 -2.0
comp=Z,135nm,1.6s
STKA **Stephens Creek** 42.51 244 P **P** 12 58 20.8 -3.5
comp=Z,13nm,0.8s,baz=90,slow=8.8,SNR=19
STKA LR LR 13 14 39.4
comp=Z,6µm,19.1s,baz=81,slow=34
comp=Z,13nm,0.8s
STKA **Stephens Creek** 42.51 244 P **P** 12 58 22.9 -1.4
STKA **Stephens Creek** 42.51 244 **P** 12 58 22.1 -2.2
STKA IAmb IAmb 12 58 28.6
comp=Z,89nm,1.1s
STKA **Stephens Creek** 42.51 244 P **P** 12 58 22.1 -2.2
STKA pmax pmax
comp=Z,89nm,1.1s
ARPS **Mount Arapiles** 43.01 237 P **P** 12 58 28.5 +0.2
comp=Z,17nm,1.2s
INKA **Innaminka** 43.02 250 **P** 12 58 26.1 -2.5
KIP **Kipapa** 43.22 21 P **P** 12 58 31.8 +1.8
KIP **Kipapa** 43.22 21 P **P** 12 58 32.1 +2.1
KIP **Kipapa** 43.22 21*ce*P **P** 12 58 29.6 -0.4
KIP pmax pmax
comp=Z,125nm,1.3s
QIS **Mount Isa** 44.48 260 P **P** 12 58 38.0 -2.4
comp=Z,21nm,1.1s
QIS **Mount Isa** 44.48 260 P **P** 12 58 40.9 +0.5
AUMBR **Murray Bridge** 44.79 239 P **P** 12 58 42.5 -0.1
HTT **Hallett** 44.90 242 P **P** 12 58 42.6 -1.0
comp=Z,15nm,0.9s
HTT **Hallett** 44.90 242 P **P** 12 58 44.4 +0.8
HTT **Hallett** 44.90 242 P **P** 12 58 43.5 -0.1
AUJCS **Jamestown Cent** 45.14 242 P **P** 12 58 45.6 +0.1
AUMAR **Marden Senior** 45.29 240 P **P** 12 58 46.3 -0.3
BBOO **Buckleboo** 47.25 243 P **P** 12 59 01.5 -0.6
comp=Z,30nm,0.8s
BBOO **Buckleboo** 47.25 243 P **P** 12 59 02.1 0.0
BBOO **Buckleboo** 47.25 243 **P** 12 59 00.1 -1.9
BBOO IAmb IAmb 12 59 04.8
comp=Z,24nm,0.8s
MIDW **Midway** 47.64 355 IAMs_20 IAMs_20 13 17 58.3
comp=Z,4µm,20.0s
JAY **Jayapura** 48.34 285 LR LR 13 20 07.2
comp=Z,1µm,18.3s,baz=96,slow=37
JAY **Jayapura** 48.34 285 P **P** 12 59 09.8 -1.0
comp=Z,875nmcomp=Z,62nm,1.3s
GENI **Genyem** 48.79 284 P **P** 12 59 16.2 +2.0
GENI **Genyem** 48.79 284 P **P** 12 59 14.9 +0.7
comp=Z,3µmcomp=Z,108nm,1.0s
WR8 **Warramunga Arr** 49.31 260 **P** 12 59 14.7 -3.5
AS31 **Alice Springs** 49.38 255 IAmb IAmb 12 59 19.5
comp=Z,24nm,0.8s
ASAR **Alice Springs** 49.38 255 P **P** 12 59 15.2 -3.5
comp=Z,81nm,0.8s,baz=93,slow=7.0,SNR=116
ASAR PcP **PcP** 13 00 41.5 +0.3
comp=Z,9.4nm,0.8s,baz=110,slow=3.3,SNR=4.9
ASAR S **S** 13 06 17.8 -7.4
comp=Z,1.7nm,0.8s,baz=87,slow=15,SNR=6.2
ASAR LR LR 13 19 34.3
comp=Z,4µm,20.2s,baz=98,slow=36
comp=Z,81nm,0.8s
ASAR **Alice Springs** 49.38 255 **P** 12 59 15.6 -3.1
WRAB **Tennant Creek** 49.45 260 P **P** 12 59 16.8 -2.5
WRAB **Tennant Creek** 49.45 260 **P** 12 59 16.3 -3.0
WRAB **Tennant Creek** 49.45 260 IAMs_20 IAMs_20 13 20 20.6
comp=Z,4µm,20.0s
WRAB **Tennant Creek** 49.45 260 P **P** 12 59 16.3 -3.0
WRAB pmax pmax
comp=Z,101nm,1.6s
WRAB MLR MLR
comp=Z,4µm,20.0s
WRA **Warramunga Arr** 49.46 260 P **P** 12 59 15.0 -4.3
comp=Z,12nm,0.6s,baz=97,slow=7.8,SNR=138
WRA S **S** 13 06 18.9 -7.5
comp=Z,1.6nm,0.9s,baz=96,slow=14,SNR=5.3
comp=Z,12nm,0.6s
WRA **Warramunga Arr** 49.46 260 **P** 12 59 15.5 -3.9
WRA **Warramunga Arr** 49.46 260 P **P** 12 59 15.5 -3.9
WRA pmax pmax
comp=Z,10.0nm,1.6s
KDU **Kakadu** 52.72 269 P **P** 12 59 40.3 -3.5
comp=Z,27nm,0.7s
GUMO **Guam** 52.99 305 LR LR 13 21 00.6
comp=Z,751nm,19.5s,baz=114,slow=35
MTN **Manton Dam** 53.94 268 P **P** 12 59 49.5 -3.3
comp=Z,110nm,0.8s
MTN **Manton Dam** 53.94 268 **P** 12 59 49.7 -3.2
FORT **Forrest** 54.05 246 P **P** 12 59 51.6 -1.9
comp=Z,28nm,0.9s
FORT **Forrest** 54.05 246 **P** 12 59 51.1 -2.3
FORT IAmb IAmb 12 59 55.0
comp=Z,20nm,0.7s
DRS **Darwin Rock St** 54.27 269 P **P** 12 59 55.1 -0.1
WRKA **Warakurna** 54.31 253 P **P** 12 59 52.9 -2.6
comp=Z,41nm,0.9s
AUDHS **Darwin High Sc** 54.33 268 P **P** 12 59 56.0 +0.3
SAUI **Saumlaki** 55.16 274 P **P** 13 00 02.4 +0.7
SAUI **Saumlaki** 55.16 274 **P** 12 59 59.3 -2.4
SAUI **Saumlaki** 55.16 274 P **P** 13 00 02.3 +0.6
KNRA **Kununurra** 55.49 264 P **P** 13 00 01.5 -2.6
comp=Z,70nm,0.8s
KNRA **Kununurra** 55.49 264 **P** 13 00 01.5 -2.6
FAKI **Fak Fak** 55.98 280 P **P** 13 00 04.4 -3.2
FAKI IAmb IAmb 13 00 08.0
comp=Z,49nm,1.3s
SIJI **Sorong** 57.65 282 LR LR 13 25 19.9
comp=Z,1µm,18.2s,baz=123,slow=37
SIJI **Sorong** 57.65 282 P **P** 13 00 17.1 -2.4
SWI **Sorong** 57.66 282 P **P** 13 00 18.7 -0.8
FITZ **Fitzroy Crossi** 57.89 260 LR LR 13 25 02.8
comp=Z,2µm,18.8s,baz=99,slow=36
RPN **Rapa Nui** 58.37 110 LR LR 13 20 07.8
comp=Z,4µm,18.6s,baz=264,slow=30
VNDA **Vanda** 59.36 186 P **P** 13 00 32.0 +1.6
comp=Z,1.9nm,0.8s,baz=358,slow=7.4,SNR=5.8
VNDA LR LR 13 21 14.0
comp=Z,1µm,20.4s,baz=14,slow=31
comp=Z,1.9nm,0.8s
VNDA **Vanda** 59.36 186 P **P** 13 00 33.5 +3.1
VNDA IAmb IAmb 13 00 45.5
comp=Z,34nm,1.5s
VNDA **Vanda** 59.36 186 P **P** 13 00 33.5 +3.1
VNDA pmax pmax
comp=Z,34nm,1.5s
KRAI **Karang Ratu** 59.42 278 P **P** 13 00 31.4 -0.5
comp=Z,65nm,0.7s
SOEI **Soe** 61.26 269 P **P** 13 00 45.1 +0.5
SOEI **Soe** 61.26 269 P **P** 13 00 42.8 -1.7
SOEI **Soe** 61.26 269 P **P** 13 00 43.2 -1.4
BATI **Baumata** 61.70 269 P **P** 13 00 48.7 +1.3
comp=Z,1µmcomp=Z,52nm,0.9s
TNTI **Ternate** 61.88 282 P **P** 13 00 49.8 +1.2
TNTI **Ternate** 61.88 282 **P** 13 00 46.3 -2.3
TNTI **Ternate** 61.88 282 P **P** 13 00 48.1 -0.5
comp=Z,1µmcomp=Z,88nm,0.9s
SANI **Sanana** 62.12 278 P **P** 13 00 51.3 +1.1
SANI **Sanana** 62.12 278 P **P** 13 00 48.1 -2.1
comp=Z,2µmcomp=Z,1µmcomp=Z,70nm,0.9s
AUKUL **Kulin High Sch** 62.32 243 P **P** 13 00 51.5 +0.1
PSAC2 **Pilbara Seismi** 62.48 255 P **P** 13 00 52.0 -0.6
comp=Z,53nm,1.0s
PSAB3 **Pilbara Seismi** 62.52 255 P **P** 13 00 50.3 -2.5
comp=Z,64nm,1.0s
PSA00 **Pilbara Seismi** 62.53 255 P **P** 13 00 53.1 +0.2
comp=Z,72nm,1.0s
PSA00 **Pilbara Seismi** 62.53 255 P **P** 13 00 53.4 +0.5
PSA00 **Pilbara Seismi** 62.53 255 **P** 13 00 50.4 -2.6
PSAC1 **Pilbara Seismi** 62.57 255 P **P** 13 00 52.8 -0.4
comp=Z,63nm,1.0s
MBWA **Marble Bar** 62.72 256 P **P** 13 00 54.6 +0.4
MBWA **Marble Bar** 62.72 256 **P** 13 00 52.5 -1.7
MBWA **Marble Bar** 62.72 256 IAMs_20 IAMs_20 13 27 53.8
comp=Z,3µm,18.0s
KLBR **Kellerberrin** 62.78 244 P **P** 13 00 54.3 -0.1
comp=Z,208nm,0.9s
KLBR **Kellerberrin** 62.78 244 P **P** 13 00 55.7 +1.3
NWAO **Narrogin (SRO)** 63.06 242 LR LR 13 27 08.5
comp=Z,3µm,19.5s,baz=77,slow=35
NWAO **Narrogin (SRO)** 63.06 242 IAMs_20 IAMs_20 13 28 17.7
comp=Z,3µm,18.0s
MMRI **Maumere** 63.50 270 P **P** 13 00 59.3 -0.1
MMRI **Maumere** 63.50 270 P 13 00 54.7 -4.8
MMRI **Maumere** 63.50 270 P **P** 13 00 59.3 -0.1
comp=Z,2µmcomp=Z,60nm,1.0s
JCJ **Chichijima** 63.55 315 LR LR 13 24 20.2
comp=Z,3µm,20.9s,baz=142,slow=32
BLDU **Ballidu** 63.80 245 P **P** 13 01 00.4 -0.8
comp=Z,38nm,1.1s
EDFI **Ende, Flores** 63.98 270 P **P** 13 00 59.9 -2.9
comp=Z,779nmcomp=Z,51nm,1.0s
MUN **Mundaring** 64.04 243 P **P** 13 01 02.6 -0.1
comp=Z,81nm,0.9s
MUN **Mundaring** 64.04 243 P **P** 13 01 02.9 +0.2
MORW **Morawa** 64.60 246 P **P** 13 01 07.3 +0.8
comp=Z,59nm,0.6s
MORW **Morawa** 64.60 246 P **P** 13 01 06.7 +0.2
MORW **Morawa** 64.60 246 **P** 13 01 05.4 -1.1
WSI **Waingapu** 65.03 268 P **P** 13 01 10.7 +1.3
LBFI **Labuhan Bajo,** 65.76 269 P **P** 13 01 11.6 -2.6
WBSI **Waikabubak, Su** 65.89 268 P **P** 13 01 16.1 +1.0
comp=Z,63nm,1.2s
BSSI **Bau Bau, Buton** 65.91 272 P **P** 13 01 15.3 +0.1
comp=Z,1µmcomp=Z,51nm,1.5s
DAV **Davao City (W)** 66.03 287 LR LR 13 31 11.8
comp=Z,447nm,18.1s,baz=109,slow=37
KAPI **Kappang** 66.97 273 LR LR 13 28 48.1
comp=Z,506nm,21.1s,baz=136,slow=35
KAPI **Kappang** 66.97 273 P **P** 13 01 22.9 +0.9
KAPI **Kappang** 66.97 273 P **P** 13 01 24.6 +2.6
DBNI **Kabupaten Domp** 67.24 269 P **P** 13 01 22.2 -1.5
comp=Z,1µmcomp=Z,82nm,0.8s
SPSI **Sidrap Palu** 67.30 274 P **P** 13 01 23.7 -0.3
comp=Z,5µmcomp=Z,27nm,0.9s
PLAI **Plampang** 67.65 268 P **P** 13 01 26.8 +0.5
PLAI **Plampang** 67.65 268 **P** 13 01 25.9 -0.4
comp=Z,1µmcomp=Z,92nm,0.9s
TWSI **Taliwang, Sumb** 68.52 268 P **P** 13 01 31.7 -0.1
comp=Z,1µmcomp=Z,80nm,0.9s
MPSI **Mapaga** 68.65 278 P **P** 13 01 32.7 +0.1
comp=Z,1µmcomp=Z,56nm,0.8s
QSPA **South Pole Qui** 70.56 180 P **P** 13 01 45.1 +1.5
comp=Z,12nm,0.8s,baz=42,slow=1.3,SNR=33
QSPA LR LR 13 28 45.1
comp=Z,1µm,19.7s,baz=40,slow=32
comp=Z,12nm,0.8s
QSPA **South Pole Qui** 70.56 180 **P** 13 01 46.6 +3.0
QSPA **South Pole Qui** 70.56 180 IAMs_20 IAMs_20 13 37 32.1
comp=Z,2µm,18.0s
JAGI **Jajag, Banyuwa** 71.17 267 P **P** 13 01 47.7 -0.4
JAGI **Jajag, Banyuwa** 71.17 267 P **P** 13 01 47.4 -0.7
comp=Z,1µmcomp=Z,58nm,0.8s
MYLDM **Lahad Datu** 71.73 282 P **P** 13 01 52.4 +1.0
MYLDM **Lahad Datu** 71.73 282 P **P** 13 01 53.1 +1.7
comp=Z,2µmcomp=Z,68nm,2.0s
KMMI **Kalianget** 71.78 269 P **P** 13 01 53.2 +1.4
comp=Z,49nm,2.5s
BBKI **Banjar Baru** 72.10 273 P **P** 13 01 56.6 +2.9
comp=Z,3µmcomp=Z,36nm,0.5s
JGF **Kuroka** 72.26 319 P **P** 13 01 55.6 +1.4
INU **Inuyama** 72.31 319 P **P** 13 01 56.3 +1.9
INU **Inuyama** 72.31 319 **P** 13 01 51.7 -2.7
INU IAmb IAmb 13 01 57.0
comp=Z,50nm,1.3s
MJAR **Matsushiro Arr** 72.36 320 P **P** 13 01 52.5 -2.3
comp=Z,29nm,1.0s,baz=155,slow=5.8,SNR=26
MJAR LR LR 13 29 11.0
comp=Z,2µm,21.2s,baz=122,slow=32
comp=Z,29nm,1.0s
MJAR **Matsushiro Arr** 72.36 320 **P** 13 01 52.9 -1.9
MJAR IAmb IAmb 13 01 56.9
comp=Z,30nm,1.1s
MJAR **Matsushiro Arr** 72.36 320 P **P** 13 01 52.9 -1.9
MJAR pmax pmax
comp=Z,30nm,1.1s
MAJO **Matsushiro** 72.37 320 P **P** 13 01 56.3 +1.5
MAJO **Matsushiro** 72.37 320 P **P** 13 01 52.5 -2.3
MAJO IAmb IAmb 13 01 57.0
comp=Z,45nm,1.0s
MAJO **Matsushiro** 72.37 320 P **P** 13 01 52.5 -2.3
MAJO pmax pmax
comp=Z,45nm,1.0s
MJB9 **Matsu-Tunnel** 72.37 320 P **P** 13 01 53.1 -1.7
MJB9 IAmb IAmb 13 01 58.4
comp=Z,44nm,1.0s
SHEM **Shemya Is, Ala** 72.81 352 LR LR 13 28 39.2
comp=Z,3µm,21.3s,baz=125,slow=32
TGY **Tagaytay City** 73.15 292 LR LR 13 30 25.8
comp=Z,1µm,21.1s,baz=93,slow=33
UNV **Unalaska Valle** 73.26 4 P **P** 13 01 58.9 -0.7
baz=187
JOW **Kunigami** 73.28 307 LR LR 13 30 22.5
comp=Z,1µm,21.6s,baz=128,slow=33
JOW **Kunigami** 73.28 307 P **P** 13 02 02.9 +2.5
JMN **Monobe** 73.29 316 P **P** 13 02 02.5 +2.2
JMN **Monobe** 73.29 316 **P** 13 01 59.5 -0.9
SNJI **Sawahan-Nganju** 73.64 267 P **P** 13 02 03.1 +0.1
comp=Z,58nm,1.4s
SJI **Sawahan** 73.65 267 P **P** 13 02 02.3 -0.7
comp=Z,76nm,1.4s
FORD **Fort Ord Natur** 73.85 41 IAMs_20 IAMs_20 13 29 32.1
comp=Z,2µm,20.0s
JRSC **Jasper Ridge** 74.03 40 IAMs_20 IAMs_20 13 30 31.9
comp=Z,2µm,19.0s
PCJI **Pacitan** 74.06 267 P **P** 13 02 05.5 +0.2
SAO **San Andreas Ge** 74.11 41 P **P** 13 02 04.0 -1.0
SAO IAmb IAmb 13 02 12.6
comp=Z,31nm,1.2s
SAO IAMs_20 IAMs_20 13 29 57.9
comp=Z,3µm,20.0s
SAO **San Andreas Ge** 74.11 41 P **P** 13 02 04.0 -1.0
SAO pmax pmax
comp=Z,31nm,1.3s
KKM **Kota Kinabalu** 74.16 282 P **P** 13 02 06.9 +0.9
KKM **Kota Kinabalu** 74.16 282 IAmb IAmb 13 02 08.2
comp=Z,42nm,0.9s
KKM **Kota Kinabalu** 74.16 282 P **P** 13 02 07.4 +1.4
comp=Z,1µmcomp=Z,58nm,1.5s
JSU **Suzuyama** 74.29 312 P **P** 13 02 08.3 +2.0
MHC **Mount Hamilton** 74.36 40 IAMs_20 IAMs_20 13 30 42.4
comp=Z,3µm,18.0s
OSI **Osito Audit: C** 74.50 44 IAMs_20 IAMs_20 13 30 17.6
comp=Z,2µm,18.0s
FALS **False Pass** 74.51 6 P **P** 13 02 06.3 -0.6
baz=190
PASC **Pasadena Art C** 74.58 45 IAMs_20 IAMs_20 13 30 21.0
comp=Z,2µm,19.0s
KCPM **Cahto Peak** 74.75 37 IAMs_20 IAMs_20 13 27 59.5
comp=Z,3µm,21.0s
LPIG **La Paz** 74.84 57 LR LR 13 28 37.9
comp=Z,4µm,19.0s,baz=236,slow=30
CHNA **Chernabura Isl** 74.91 8 P **P** 13 02 09.1 -0.2
baz=193
JNU **Nakatsue** 74.94 314 LR LR 13 30 10.7
comp=Z,1µm,21.2s,baz=111,slow=32
TPO **Tropico Hills** 74.98 44 P **P** 13 02 05.8 -4.4
VES **Vestal, Richgr** 75.01 43 IAMs_20 IAMs_20 13 30 54.1
comp=Z,2µm,18.0s
BORC **Borrego Spring** 75.24 46 P **P** 13 02 07.6 -4.1
ASAJ **Asahikawa** 75.25 329 LR LR 13 30 51.7
comp=Z,2µm,20.7s,baz=166,slow=32
JCC **Jacoby Creek,** 75.26 36 IAMs_20 IAMs_20 13 31 01.9
comp=Z,3µm,19.0s
ISA **Isabella, Lake** 75.30 43 **P** 13 02 08.6 -3.5
ISA IAMs_20 IAMs_20 13 30 26.7
comp=Z,2µm,18.0s
ISA **Isabella, Lake** 75.30 43 P **P** 13 02 08.6 -3.5
ISA pmax pmax
comp=Z,16nm,1.1s
SDPT **Sand Point** 75.31 7 P **P** 13 02 11.5 0.0
baz=192
PFO **Pinyon Flats O** 75.41 46 LR LR 13 28 35.9
comp=Z,1µm,20.2s,baz=242,slow=30
PFO **Pinyon Flats O** 75.41 46 **P** 13 02 09.6 -3.2
PFO **Pinyon Flats O** 75.41 46 P **P** 13 02 09.6 -3.2
PFO pmax pmax
comp=Z,12nm,1.1s
CMB **Columbia Colle** 75.56 40 IAMs_20 IAMs_20 13 31 30.4
comp=Z,2µm,19.0s
KHBM **Hayfork Bally** 75.61 37 IAMs_20 IAMs_20 13 29 26.2

comp=Z,3µm,19.0s
LRMC Laurel Mtn Rad 75.70 44 P P 13 02 11.8 -2.7
LRMC IAMs_20 IAMs_20 13 30 49.4
comp=Z,2µm,18.0s
AFDM Forest Hills D 75.79 39 P 13 02 09.7 -5.1
CWC Cottonwood Cre 76.02 43 IAMs_20 IAMs_20 13 30 58.8
comp=Z,3µm,18.0s
N02D Trinity Center 76.11 37 IAMs_20 IAMs_20 13 28 43.4
comp=Z,3µm,20.0s
GLA Glamis 76.21 47 P P 13 02 14.6 -2.7
GLA Glamis 76.21 47 P P 13 02 14.6 -2.7
GLA pmax pmax
comp=Z,15nm,1.0s
TIN Tinemaha, Big 76.30 42 IAMs_20 IAMs_20 13 31 35.1
comp=Z,3µm,18.0s
M02C Callahan 76.30 36 IAMs_20 IAMs_20 13 31 02.5
comp=Z,3µm,19.0s
CTJI Waduk Cacaban 76.31 267 P P 13 02 19.4 +1.2
comp=Z,75nm,1.3s
PET Petropavlovsk 76.31 343 *e*P P 13 02 23.5 +6.2
PET *e*S **S 13 12 08.5 +7.3**
PET *e*PS PnS 13 12 57.0 +17
SPIA Saint Paul Isl 76.42 2 P P 13 02 17.0 -0.9
baz=183
KPJI Karang Pucung 76.44 267 P P 13 02 18.9 -0.1
comp=Z,59nm,0.8s
CHGN Chignik 76.50 8 P P 13 02 18.1 -0.2
baz=194
SBUM Sibu 76.57 277 P P 13 02 20.4 +0.7
SBUM Sibu 76.57 277 P P 13 02 19.6 -0.1
MPK Martis Peak 76.58 40 P P 13 02 14.7 -4.9
MPK IAmb IAmb 13 02 29.1
comp=Z,33nm,1.3s
YBH Yreka Blue Hor 76.61 36 LR LR 13 31 49.8
comp=Z,153nm,18.1s,baz=251,slow=32
YBH Yreka Blue Hor 76.61 36 P 13 02 14.1 -5.3
YBH Yreka Blue Hor 76.61 36 P P 13 02 14.1 -5.3
YBH pmax pmax
comp=Z,13nm,1.0s
IRM Iron Mountain 76.62 46 P P 13 02 17.0 -2.6
IRM IAmb IAmb 13 02 24.1
comp=Z,49nm,1.7s
HATC Hat Creek Radi 76.71 38 IAMs_20 IAMs_20 13 29 25.5
comp=Z,3µm,20.0s
113A Mohawk Valley, 76.79 48 P P 13 02 18.0 -2.5
FURC Furnace Creek, 76.82 43 IAMs_20 IAMs_20 13 31 36.1
comp=Z,3µm,19.0s
NVAR Mina Array Bea 77.09 41 P P 13 02 22.7 +0.3
comp=Z,13nm,0.9s,baz=228,slow=8.7,SNR=29
NVAR LR LR 13 31 40.3
comp=Z,2µm,18.5s,baz=241,slow=32
comp=Z,13nm,0.9s
YSS Yuzhno-Sakhali 77.26 331 P P 13 02 25.5 +2.7
YSS Yuzhno-Sakhali 77.26 331 P 13 02 18.9 -3.9
YSS Yuzhno-Sakhali 77.26 331 *e*P P **13 02 23.8 +1.0**
YSS *e*S **S 13 12 13.1 +1.3**
YSS pmax pmax
comp=Z,50nm,1.3s
YSS MLR MLR
comp=Z,1µm,16.0s
TPNV Topopah Spring 77.50 43 IAMs_20 IAMs_20 13 31 49.1
comp=Z,3µm,19.0s
TPUB Ta-pu 77.52 300 P P 13 02 25.9 +1.0
BBJI Bungbulang 77.61 266 P P 13 02 26.3 +0.6
BBJI Bungbulang 77.61 266 P 13 02 23.8 -1.9
BBJI Bungbulang 77.61 266 P P 13 02 26.0 +0.3
comp=Z,62nm,0.9s
V12A Nelson 77.71 45 P 13 02 23.6 -2.1
LEM Lembang 77.84 267 LR LR 13 37 14.4
comp=Z,924nm,19.8s,baz=168,slow=36
R16K Pilot Point 77.85 8 IAMs_20 IAMs_20 13 31 10.6
comp=Z,3µm,20.0s
R16K Pilot Point 77.85 8 P P 13 02 25.7 -0.1
baz=195
SHPR Sheep Range 77.95 44 P 13 02 24.5 -2.7
Q09A Carvers 78.03 41 P P 13 02 23.6 -4.0
Q09A IAmb IAmb 13 02 32.6
comp=Z,34nm,1.2s
R17L Mt. Peulik Vol 78.08 9 P P 13 02 27.4 +0.2
baz=196
PLK4 Peulik 4 78.08 9 P P 13 02 23.9 -3.4
PLK4 IAmb IAmb 13 02 31.2
comp=Z,34nm,0.8s
OHAK Old Harbor 78.19 11 P P 13 02 30.1 +2.4
OHAK Old Harbor 78.19 11 P P 13 02 27.9 +0.1
baz=199
TUC Tucson 78.66 50 P 13 02 27.9 -3.2
TUC Tucson 78.66 50 IAMs_20 IAMs_20 13 32 32.6
comp=Z,2µm,18.0s
TUC Tucson 78.66 50 P P 13 02 27.9 -3.2
TUC pmax pmax
comp=Z,23nm,1.2s
DBJI Dramaga 78.74 267 P P 13 02 33.6 +1.7
comp=Z,181nm,1.5s
KDAK Kodiak Island 78.85 11 LR LR 13 31 18.0
comp=Z,2µm,21.4s,baz=200,slow=31
KDAK Kodiak Island 78.85 11 IAMs_20 IAMs_20 13 30 24.0
comp=Z,2µm,22.0s
KDAK Kodiak Island 78.85 11 P P 13 02 31.5 +0.1
baz=200
PINE Pine Mountain 78.95 36 P 13 02 29.5 -3.1
Q16K King Salmon 79.05 9 P P 13 02 32.2 -0.3
baz=196,SNR=6.2
O14K Tigyukauivet M 79.06 6 P P 13 02 32.3 -0.1
baz=191
TPI Tanjungpandan 79.11 271 P P 13 02 36.0 +2.1
comp=Z,864nmcomp=Z,55nm,0.9s
O15K Ungalikthiuk R 79.14 7 IAmb IAmb 13 02 35.8
comp=Z,40nm,1.3s
O15K IAMs_20 IAMs_20 13 32 14.6
comp=Z,3µm,20.0s
O15K Ungalikthiuk R 79.14 7 P P 13 02 32.8 -0.2
baz=193
P16K Nushagak River 79.21 8 IAMs_20 IAMs_20 13 31 54.7
comp=Z,2µm,20.0s
P16K Nushagak River 79.21 8 P P 13 02 33.3 0.0
baz=195,SNR=30
319A Douglas 79.27 51 P P 13 02 32.3 -2.2
319A IAmb IAmb 13 02 41.9
comp=Z,30nm,1.1s
X16A Lo Mia Camp, P 79.31 48 P P 13 02 32.1 -2.7
WVOR Wild Horse Val 79.38 38 IAMs_20 IAMs_20 13 31 42.0
comp=Z,2µm,20.0s
KSRS Korea Array 79.40 316 P P 13 02 33.8 -1.1
comp=Z,9.1nm,0.9s,baz=139,slow=6.1,SNR=18
KSRS LR LR 13 32 59.0
comp=Z,848nm,21.0s,baz=125,slow=32
comp=Z,9.1nm,0.9s
KSAR Wonju Array Be 79.42 316 P P 13 02 33.7 -1.3
KSAR Wonju Array Be 79.42 316 P P 13 02 33.7 -1.3
P17K Kvichak River 79.58 9 P 13 02 32.2 -3.1
P17K IAMs_20 IAMs_20 13 32 37.4
comp=Z,2µm,20.0s
P17K Kvichak River 79.58 9 P P 13 02 35.2 -0.1
baz=196,SNR=12
Q20K Shuyak Island 79.66 11 P P 13 02 35.2 -0.5
baz=200
SYI Shuyak Island 79.66 11 IAMs_20 IAMs_20 13 31 00.6
comp=Z,2µm,20.0s
N14K Kuskokwak Cree 79.68 6 P P 13 02 33.5 -2.3
N14K IAmb IAmb 13 03 11.0
comp=Z,51nm,1.2s
N14K IAMs_20 IAMs_20 13 32 33.9
comp=Z,3µm,20.0s
N14K Kuskokwak Cree 79.68 6 P P 13 02 35.6 -0.2
baz=191
CGJI Cibinong 79.72 267 P P 13 02 38.1 +0.9
O16K Kokwok River B 79.75 8 IAmb IAmb 13 02 39.7
comp=Z,28nm,1.0s
O16K IAMs_20 IAMs_20 13 32 21.8
comp=Z,3µm,21.0s
O16K Kokwok River B 79.75 8 P P 13 02 35.7 -0.6
baz=194
Q19K Cape Douglas, 79.75 10 IAMs_20 IAMs_20 13 31 50.9
comp=Z,3µm,20.0s
Q19K Cape Douglas, 79.75 10 P P 13 02 35.3 -1.0
baz=199
M11K Mekoryuk 79.80 3 IAMs_20 IAMs_20 13 32 52.1
comp=Z,2µm,20.0s
M11K Mekoryuk 79.80 3 P P 13 02 35.6 -0.8
baz=187
U15A North Rim 79.82 46 P P 13 02 34.9 -2.7
HPIG 79.87 57 P P 13 02 32.4 -5.6
BELA Belgrano 2 79.89 172 P P 13 02 38.3 +1.3
I07A Izee 79.93 36 P P 13 02 36.1 -1.7
SZCU Shurtz Canyon 79.94 44 P P 13 02 35.1 -3.1
SZCU IAmb IAmb 13 02 43.0
comp=Z,55nm,1.8s
P18K Big Mountain, 79.94 9 IAMs_20 IAMs_20 13 32 49.0
comp=Z,3µm,20.0s
P18K Big Mountain, 79.94 9 P P 13 02 36.7 -0.7
baz=197,SNR=18
WUAZ Wupatki 79.95 47 P 13 02 33.4 -4.8
DUN6 Lazy B Ranch 80.01 50 P P 13 02 34.4 -4.2
DUN6 IAmb IAmb 13 02 45.5
comp=Z,58nm,1.1s
M13K Dall Lake 80.02 5 P P 13 02 34.1 -3.5
M13K IAMs_20 IAMs_20 13 32 24.9
comp=Z,3µm,21.0s
M13K Dall Lake 80.02 5 P P 13 02 37.3 -0.3
baz=189
O17K Koliganek Bris 80.05 8 P P 13 02 37.9 +0.1
baz=195,SNR=9.0
N15K Kwethluk River 80.08 6 P P 13 02 37.9 -0.2
baz=192
TYV Tymovskoe 80.20 333 *e*P **P 13 02 41.0 +2.1**
TYV pmax pmax
comp=Z,17nm,1.0s
TYV pmax pmax
comp=Z,900nm,3.3s
PMSA Palmer Station 80.26 156 LR LR 13 32 30.5
comp=Z,1µm,18.5s,baz=248,slow=31
PMSA Palmer Station 80.26 156 IAMs_20 IAMs_20 13 41 25.9
comp=Z,2µm,18.0s
PKCU Pink Cliffs 80.37 45 P P 13 02 39.2 -1.3
PKCU IAmb IAmb 13 02 51.5
comp=Z,36nm,1.2s
ELK Elko 80.37 41 LR LR 13 34 19.6
comp=Z,3µm,18.0s,baz=230,slow=33
ELK Elko 80.37 41 P 13 02 37.6 -2.8
ELK IAMs_20 IAMs_20 13 34 34.8
comp=Z,3µm,19.0s
ELK Elko 80.37 41 P P 13 02 37.6 -2.8
ELK pmax pmax
comp=Z,34nm,1.8s
O18K Koktuh Hills 80.39 9 P 13 02 37.1 -2.7
O18K IAmb IAmb 13 02 44.0
comp=Z,52nm,1.1s
O18K IAMs_20 IAMs_20 13 33 02.8
comp=Z,3µm,20.0s
O18K Koktuh Hills 80.39 9 P P 13 02 39.9 +0.1
baz=197,SNR=11
X18A Snowflake 80.42 48 P P 13 02 37.5 -3.3
M14K Bethel 80.47 5 P P 13 02 38.6 -1.5
M14K IAmb IAmb 13 02 46.4
comp=Z,64nm,1.1s
M14K IAMs_20 IAMs_20 13 32 26.8
comp=Z,2µm,21.0s
M14K Bethel 80.47 5 P P 13 02 40.8 +0.7
baz=191
P19K Oil Pt 80.51 10 IAMs_20 IAMs_20 13 32 35.9
comp=Z,3µm,21.0s
P19K Oil Pt 80.51 10 P P 13 02 40.3 -0.1
baz=199
N16K Nishlik Lake 80.52 7 P P 13 02 40.9 +0.4
baz=194
M15K Kasigluk River 80.53 6 P P 13 02 40.9 +0.4
baz=192
CNPM China Poot 80.73 11 IAMs_20 IAMs_20 13 32 27.8
comp=Z,2µm,21.0s
N17K Nushagak Hills 80.77 8 P P 13 02 41.2 -0.5
N17K IAMs_20 IAMs_20 13 33 24.8
comp=Z,2µm,20.0s
N17K Nushagak Hills 80.77 8 P P 13 02 42.1 +0.4
baz=195
HOM Homer 80.78 11 IAMs_20 IAMs_20 13 32 20.1
comp=Z,2µm,20.0s
HOM Homer 80.78 11 P P 13 02 41.8 0.0
baz=200
O19K Port Alsworth 80.85 9 P P 13 02 40.6 -1.5
O19K IAMs_20 IAMs_20 13 33 17.0
comp=Z,3µm,20.0s
O19K Port Alsworth 80.85 9 P P 13 02 42.1 0.0
baz=198,SNR=15
USRK Ussuriysk Ar. 80.93 323 P P 13 02 41.2 -1.8
comp=Z,2.6nm,0.7s,baz=88,slow=4.2,SNR=5.2
comp=Z,2.6nm,0.7s
121A Cookes Peak, D 80.95 51 P 13 02 39.2 -4.5
121A IAmb IAmb 13 02 59.2
comp=Z,58nm,1.6s
L14K Kuka Creek 80.99 5 IAMs_20 IAMs_20 13 37 58.6
comp=Z,2µm,20.0s
L14K Kuka Creek 80.99 5 P P 13 02 43.3 +0.4
baz=190
BRLK Bradley Lake 81.02 11 IAMs_20 IAMs_20 13 31 41.0
comp=Z,2µm,21.0s
BRSE Bradley Lake S 81.02 11 P P 13 02 43.8 +0.7
baz=201
M16K Timber Creek 81.04 7 P P 13 02 43.4 +0.2
baz=194
N18K Kilae Creek 81.09 8 P P 13 02 43.0 -0.5
N18K IAMs_20 IAMs_20 13 32 53.3
comp=Z,2µm,21.0s
N18K Kilae Creek 81.09 8 P P 13 02 43.7 +0.2
baz=196
MXC Moxie City 81.11 34 P P 13 02 42.0 -1.9
KASI Kota Agung 81.19 267 P P 13 02 46.2 +1.1
RED Redoubt Volcan 81.31 10 P P 13 02 40.3 -4.4
E07A Sunnyside 81.33 34 P P 13 02 42.3 -2.8
E07A IAmb IAmb 13 02 49.1
comp=Z,90nm,2.0s
BBB Bella Bella 81.35 26 LR LR 13 34 55.9
comp=Z,1µm,18.1s,baz=224,slow=33
HAWA Hanford 81.39 34 P 13 02 42.1 -3.3
N19K Bonanza Creek 81.42 9 P P 13 02 42.1 -3.2
N19K IAmb IAmb 13 02 49.7
comp=Z,58nm,1.4s
N19K IAMs_20 IAMs_20 13 33 24.0
comp=Z,3µm,20.0s
N19K Bonanza Creek 81.42 9 P P 13 02 44.8 -0.6
baz=198,SNR=9.4
L15K Ungalak Mounta 81.42 5 P P 13 02 45.2 0.0
baz=191
K13K Kusilvak Mount 81.43 4 IAMs_20 IAMs_20 13 33 00.3
comp=Z,2µm,20.0s
K13K Kusilvak Mount 81.43 4 P P 13 02 45.4 +0.2
baz=188
DUG Dugway, Tooele 81.57 42 P 13 02 44.4 -2.3
DUG IAMs_20 IAMs_20 13 34 29.7
comp=Z,2µm,19.0s
DUG Dugway, Tooele 81.57 42 P P 13 02 44.4 -2.3
DUG pmax pmax
comp=Z,10.0nm,1.3s
M17K Holitna River 81.58 7 IAMs_20 IAMs_20 13 33 30.4
comp=Z,3µm,21.0s
M17K Holitna River 81.58 7 P P 13 02 45.6 -0.5
baz=195
SEW Seward 81.60 12 P P 13 02 46.1 0.0
baz=203
MFID Camas Ranch 81.61 38 P 13 02 44.6 -2.2
WAH2 Wahluke Slope 81.61 34 P P 13 02 42.7 -3.8
Q23K Middleton Isla 81.61 13 P P 13 02 46.3 0.0
baz=206
BMO Blue Mountains 81.64 36 P 13 02 43.9 -3.0
BMO IAMs_20 IAMs_20 13 35 11.6
comp=Z,2µm,18.0s
BMO Blue Mountains 81.64 36 P P 13 02 43.9 -3.0
BMO pmax pmax
comp=Z,18nm,1.4s
L16K Owhat River 81.65 6 P P 13 02 46.1 -0.3
L16K IAmb IAmb 13 02 52.2
comp=Z,52nm,1.3s
L16K Owhat River 81.65 6 P P 13 02 46.7 +0.3
baz=193
HMU Henry Mountain 81.68 45 P P 13 02 43.8 -3.7
E08A Dider Farm, El 81.71 34 P P 13 02 44.5 -2.5
E08A IAmb IAmb 13 02 57.3
comp=Z,47nm,1.9s
MDSI Maura Dua 81.83 268 P P 13 02 48.3 -0.2
comp=Z,1µmcomp=Z,47nm,1.0s
M18K Stony River 81.88 8 P P 13 02 48.1 +0.5
baz=196
O22K Cooper Landing 81.90 11 P P 13 02 48.2 +0.5
baz=202
P23K Montague Islan 81.91 13 P P 13 02 48.0 +0.2
baz=204
CAPN Captain Cook N 81.91 11 P P 13 02 47.4 -0.4
baz=201
UNM Universidad Na 81.95 66 IAMs_20 IAMs_20 13 34 00.3
comp=Z,2µm,18.0s
CRAG Craig 81.97 22 P P 13 02 48.6 +0.4
baz=218
K15K Wolf Creek Mou 82.03 5 IAMs_20 IAMs_20 13 33 57.1
comp=Z,2µm,20.0s
K15K Wolf Creek Mou 82.03 5 P P 13 02 48.9 +0.5
baz=191
SPCR Spurr Chakacha 82.14 10 P P 13 02 49.3 +0.2
baz=200
D08A Wollman Farm, 82.14 34 P 13 02 45.6 -3.7
SPU Mount Spurr 82.15 10 P P 13 02 45.8 -3.3
L17K Donlin 82.20 7 P P 13 02 49.4 +0.2
baz=194
Y22A Socorro 82.25 50 P 13 02 46.2 -4.3
GO08 Villa O'Higgin 82.26 139 IAMs_20 IAMs_20 13 31 37.3
comp=Z,3µm,19.0s
USHA Ushuaia 82.29 146 LR LR 13 30 08.3
comp=Z,1µm,21.8s,baz=315,slow=29
J14K Nanvaranak Lak 82.32 4 P P 13 02 47.1 -2.7
J14K IAMs_20 IAMs_20 13 34 08.7
comp=Z,2µm,20.0s
J14K Nanvaranak Lak 82.32 4 P P 13 02 50.0 +0.2
baz=189
F10A Beach Ranch, E 82.37 36 P P 13 02 47.9 -2.8
F10A IAmb IAmb 13 02 54.2
comp=Z,74nm,2.0s
V35K Ketchikan 82.39 22 P P 13 02 51.1 +0.7
baz=219
CRNM Carthage 82.42 50 P P 13 02 47.8 -3.6
HIN Hinchinbrook I 82.46 13 IAMs_20 IAMs_20 13 32 46.6
comp=Z,2µm,20.0s
RC01 Rabbit Creek A 82.46 11 P P 13 02 51.5 +0.8
baz=202,SNR=5.8
L18K Granite Mounta 82.47 8 IAMs_20 IAMs_20 13 33 57.8
comp=Z,3µm,20.0s
L18K Granite Mounta 82.47 8 P P 13 02 51.8 +1.1
baz=196
U33K Whale Pass 82.48 21 P P 13 02 51.7 +0.8
baz=218
KAIM Kayak Island 82.49 14 P P 13 02 51.7 +0.8
baz=207
PLID Pearl Lake 82.51 37 IAMs_20 IAMs_20 13 33 31.9
comp=Z,2µm,20.0s
SIT Sitka 82.52 20 P P 13 02 51.5 +0.5
baz=216
HLID Hailey 82.52 39 P 13 02 47.2 -4.5
TXAR Lajitas Array 82.54 55 P P 13 02 53.3 +1.3
comp=Z,16nm,1.1s,baz=216,slow=6.2,SNR=26
TXAR LR LR 13 34 16.0
comp=Z,2µm,18.0s,baz=230,slow=32
comp=Z,16nm,1.1s
MDJ Mudanjiang 82.54 323 P P 13 02 53.9 +2.4
MDJ Mudanjiang 82.54 323 IAMs_20 IAMs_20 13 34 00.7
comp=Z,2µm,20.0s
MDJ Mudanjiang 82.54 323 P P 13 02 50.8 -0.7
MDJ PP **PP 13 05 55.7 -5.6**
MDJ pmax pmax
comp=Z,58nm,1.9s
MDJ L L
comp=Z,1µm,17.9s
MDJ L L
comp=Z,2µm,18.6s
MDJ L L
comp=Z,3µm,22.0s
H03S2 Juan Fernandez 82.58 123 T T 14 35 51.6
baz=249,slow=75,SNR=11
H03S1 Juan Fernandez 82.59 123 T T 14 35 51.4
baz=249,slow=75,SNR=12
H03S3 Juan Fernandez 82.59 123 T T 14 35 47.2
baz=249,slow=75,SNR=11
M20K Styx River 82.64 9 IAMs_20 IAMs_20 13 34 14.3
comp=Z,3µm,20.0s
M20K Styx River 82.64 9 P P 13 02 51.9 +0.2
baz=199
L19K White Mountain 82.67 8 P P 13 02 49.0 -2.9
L19K IAMs_20 IAMs_20 13 34 03.2
comp=Z,2µm,20.0s
L19K White Mountain 82.67 8 P P 13 02 52.4 +0.6
baz=197
EYAK Cordova Ski Ar 82.76 13 IAMs_20 IAMs_20 13 33 06.5
comp=Z,2µm,20.0s
EYAK Cordova Ski Ar 82.76 13 P P 13 02 52.8 +0.6
baz=206
K17K Iditarod 82.76 7 P P 13 02 49.5 -2.7
K17K Iditarod 82.76 7 P P 13 02 52.8 +0.6
baz=194
SUCK Suckling Hills 82.77 14 IAMs_20 IAMs_20 13 36 35.9
comp=Z,3µm,20.0s
GLI Glacier Island 82.78 12 IAMs_20 IAMs_20 13 32 38.0
comp=Z,2µm,21.0s
GLI Glacier Island 82.78 12 P P 13 02 52.9 +0.6
baz=205
PV05 Paradox Valley 82.85 46 P P 13 02 51.0 -2.6
PV05 IAmb IAmb 13 02 59.6
comp=Z,28nm,1.1s
GRNR Gornyy 82.92 330 *i*P **P 13 02 53.3 0.0**
GRNR pmax pmax
comp=Z,4.0nm,1.2s
GRNR MLR MLR
comp=N,490nm,17.0s
GRNR MLR MLR
comp=E,600nm,17.0s
BGLC Bering Glacier 82.93 14 P P 13 02 53.9 +0.9
baz=208
C09A Chrisman Ranch 82.95 34 P P 13 02 50.5 -3.0
C09A IAmb IAmb 13 02 57.4
comp=Z,53nm,1.8s
S31K Pelican 82.98 19 IAMs_20 IAMs_20 13 34 59.6
comp=Z,2µm,19.0s
S31K Pelican 82.98 19 P P 13 02 54.3 +0.9
baz=215
SKT Skwentna 82.99 10 P P 13 02 48.4 -5.1
SKT Skwentna 82.99 10 P P 13 02 54.7 +1.3
baz=200
NJ2 Nanjing 83.00 307 *e*P **P 13 02 54.9 +0.8**
NJ2 pmax pmax
comp=Z,19nm,0.5s
KNK Knik Glacier 83.00 12 P P 13 02 51.0 -2.5
KNK IAmb IAmb 13 03 03.8
comp=Z,52nm,1.4s
KNK Knik Glacier 83.00 12 P P 13 02 54.5 +1.0
baz=203
M22K Willow 83.01 11 P P 13 02 53.4 -0.1
baz=202
GAMB Gambell 83.02 1 P P 13 02 54.9 +1.4
baz=181
PMR Palmer 83.04 11 P P 13 02 56.1 +2.5
PMR Palmer 83.04 11 P P 13 02 51.0 -2.7
PMR IAmb IAmb 13 02 58.4
comp=Z,39nm,1.4s
PMR Palmer 83.04 11 P P 13 02 51.0 -2.7
PMR pmax pmax
comp=Z,39nm,1.4s
PMR Palmer 83.04 11 P P 13 02 54.8 +1.2
baz=203,SNR=6.1
PV17 East Wray Mesa 83.05 45 P P 13 02 53.8 -0.8
PV17 IAmb IAmb 13 03 02.5
comp=Z,37nm,1.4s
PV14 Lion Creek, Pa 83.06 45 P P 13 02 53.2 -1.4
PV14 IAmb IAmb 13 03 01.0
comp=Z,22nm,1.0s
PV18 Skein Mesa, Pa 83.07 45 P P 13 02 50.5 -4.2
BERG Berg Lake 83.07 14 IAMs_20 IAMs_20 13 33 01.9
comp=Z,2µm,20.0s
J16K Anvik River 83.09 6 IAMs_20 IAMs_20 13 34 19.0
comp=Z,3µm,21.0s
J16K Anvik River 83.09 6 P P 13 02 54.6 +0.7
baz=192
ANMO Albuquerque 83.11 49 LR LR 13 34 26.9
comp=Z,1µm,18.5s,baz=248,slow=32
ANMO Albuquerque 83.11 49 P 13 02 52.9 -2.0
ANMO Albuquerque 83.11 49 IAMs_20 IAMs_20 13 34 16.3
comp=Z,1µm,18.0s
ANMO Albuquerque 83.11 49 IAMs_20 IAMs_20 13 34 16.3
comp=Z,1µm,18.0s
ANMO Albuquerque 83.11 49 IAMs_20 IAMs_20 13 34 16.3
comp=Z,1µm,18.0s
ANMO Albuquerque 83.11 49 P P 13 02 52.9 -2.0
ANMO pmax pmax
comp=Z,13nm,1.2s
PV11 David Mesa, Pa 83.12 45 P P 13 02 50.4 -4.5
PV11 IAmb IAmb 13 03 03.0
comp=Z,43nm,1.2s
HWUT Hardware Ranch 83.14 42 P 13 02 53.2 -1.8
PV04 Paradox Valley 83.15 45 P P 13 02 52.4 -2.7
PV02 Paradox Valley 83.16 46 P P 13 02 51.7 -3.5
PV12 Saucer Basin, 83.18 45 P P 13 02 53.0 -2.3
PV21 Cone Mtn., Par 83.19 45 P P 13 02 51.1 -4.2
PV21 IAmb IAmb 13 03 02.3
comp=Z,22nm,1.1s
PV01 Paradox Valley 83.24 46 P P 13 02 50.0 -5.6

DIV	**Divide**	**83.28**	**13**	P	P	13 02 49.8	-5.2	
DIV				IAmb	IAmb	13 03 05.9		
	comp=Z,50nm,1.3s							
DIV				IAMs_20	IAMs_20	13 33 24.2		
	comp=Z,2µm,20.0s							
MESA	**MESA**	**83.30**	**15**	IAMs_20	IAMs_20	13 35 53.9		
	comp=Z,3µm,19.0s							
MESA	**MESA**	**83.30**	**15**	P	**P**	**13 02 55.3**	**0.0**	
	baz=210							
PV22	**Blue Mesa, Par**	**83.30**	**45**	P	**P**	**13 02 51.5**	**-4.4**	
PV22				IAmb	IAmb	13 03 00.7		
	comp=Z,61nm,1.8s							
PECS	**Pecos**	**83.32**	**54**	P	**P**	**13 02 53.9**	**-2.1**	
PV07	**Paradox Valley**	**83.34**	**45**	P	**P**	**13 02 52.0**	**-4.1**	
PV07				IAmb	IAmb	13 03 04.0		
	comp=Z,24nm,1.1s							
BMRM	**Bremner River**	**83.38**	**13**	P	**P**	**13 02 53.3**	**-2.2**	
BMRM				IAMs_20	IAMs_20	13 40 50.1		
	comp=Z,2µm,18.0s							
BMRM	**Bremner River**	**83.38**	**13**	P	**P**	**13 02 56.3**	**+0.8**	
	baz=207							
SML	**Sawmill**	**83.39**	**11**	P	**P**	**13 02 56.2**	**+0.7**	
	baz=204							
M23K	**Glacier View**	**83.49**	**12**	P	**P**	**13 02 57.2**	**+1.2**	
	baz=204							
CRQM	**Cirque**	**83.53**	**14**	IAMs_20	IAMs_20	13 36 32.1		
	comp=Z,2µm,20.0s							
CRQE	**Cirque**	**83.53**	**14**	P	**P**	**13 02 57.7**	**+1.3**	
	baz=208							
KLU	**Klutina**	**83.57**	**13**	IAMs_20	IAMs_20	13 33 13.1		
	comp=Z,2µm,21.0s							
KLU	**Klutina**	**83.57**	**13**	P	**P**	**13 02 57.6**	**+1.0**	
	baz=206							
CUT	**Chulitna**	**83.59**	**10**	P	**P**	**13 02 52.9**	**-3.6**	
CUT				IAMs_20	IAMs_20	13 34 23.6		
	comp=Z,2µm,21.0s							
CUT	**Chulitna**	**83.59**	**10**	P	**P**	**13 02 57.2**	**+0.7**	
	baz=202							
TGL	**Tana Glacier**	**83.60**	**14**	IAMs_20	IAMs_20	13 36 33.7		
	comp=Z,2µm,19.0s							
SCM	**Sheep Creek Mo**	**83.60**	**12**	P	**P**	**13 02 57.2**	**+0.5**	
	baz=204							
LL07	**Hotel Espejo d**	**83.63**	**133**	IAMs_20	IAMs_20	13 39 35.3		
	comp=Z,2µm,19.0s							
PCA	**Pinnacle**	**83.65**	**16**	IAMs_20	IAMs_20	13 35 55.3		
	comp=Z,2µm,20.0s							
PINM	**Pinnacle**	**83.65**	**16**	P	**P**	**13 02 58.0**	**+1.1**	
	baz=211							
I17K	**Unalakleet**	**83.67**	**5**	P	**P**	**13 02 53.7**	**-3.2**	
I17K				IAmb	IAmb	13 03 01.2		
	comp=Z,31nm,1.4s							
I17K				IAMs_20	IAMs_20	13 34 59.5		
	comp=Z,2µm,20.0s							
I17K	**Unalakleet**	**83.67**	**5**	P	**P**	**13 02 58.5**	**+1.6**	
	baz=192,SNR=6.6							
J18K	**Innoko River**	**83.67**	**7**	IAMs_20	IAMs_20	13 35 16.6		
	comp=Z,3µm,20.0s							
J18K	**Innoko River**	**83.67**	**7**	P	**P**	**13 02 58.0**	**+1.0**	
	baz=196							
PPLA	**Purkeypile**	**83.75**	**9**	P	**P**	**13 02 58.4**	**+0.9**	
	baz=200							
R32K	**Eaglecrest**	**83.76**	**19**	P	**P**	**13 02 57.9**	**+0.4**	
	baz=216							
GRNC	**Granite Creek**	**83.83**	**15**	IAMs_20	IAMs_20	13 36 02.0		
	comp=Z,2µm,20.0s							
NEW	**Newport**	**83.84**	**34**	LR	LR	13 36 04.1		
	comp=Z,5µm,18.3s,baz=223,slow=33							
NEW	**Newport**	**83.84**	**34**		**P**	**13 02 55.5**	**-2.7**	
NEW	**Newport**	**83.84**	**34**	P	**P**	**13 02 55.5**	**-2.7**	
NEW				pmax	pmax			
	comp=Z,24nm,1.8s							
RDMU	**Red Mountain**	**83.85**	**43**	P	**P**	**13 02 54.6**	**-4.1**	
RDMU				IAmb	IAmb	13 03 11.0		
	comp=Z,23nm,1.4s							
VRDI	**Verde Repeater**	**83.87**	**14**	IAMs_20	IAMs_20	13 33 18.0		
	comp=Z,2µm,20.0s							
K20K	**Telida**	**83.91**	**8**	P	**P**	**13 02 58.7**	**+0.6**	
	baz=198							
N25K	**Chitina, Valde**	**83.96**	**13**	P	**P**	**13 02 54.7**	**-3.9**	
N25K				IAmb	IAmb	13 03 02.6		
	comp=Z,23nm,1.1s							
N25K	**Chitina, Valde**	**83.96**	**13**	P	**P**	**13 02 59.3**	**+0.7**	
	baz=207,SNR=5.6							
ANM	**Nome**	**84.01**	**3**	P	**P**	**13 02 55.5**	**-3.1**	
ANM				IAmb	IAmb	13 03 22.1		
	comp=Z,35nm,1.4s							
ANM				IAMs_20	IAMs_20	13 35 33.4		
	comp=Z,2µm,20.0s							
ANM	**Nome**	**84.01**	**3**	P	**P**	**13 02 55.5**	**-3.1**	
ANM				pmax	pmax			
	comp=Z,35nm,1.4s							
ANM	**Nome**	**84.01**	**3**	P	**P**	**13 02 59.5**	**+0.9**	
	baz=187							
MAW	**Mawson**	**84.06**	**199**	P	P	13 03 04.0	+4.9	
	comp=Z,4.1nm,0.9s							
MAW	**Mawson**	**84.06**	**199**	P	**P**	**13 02 59.7**	**+0.7**	
	comp=Z,18nm,0.9s,baz=183,slow=2.9,SNR=5.6							
MAW				LR	LR	13 39 54.9		
	comp=Z,3µm,18.7s,baz=110,slow=35							
	comp=Z,18nm,0.9s							
MAW	**Mawson**	**84.06**	**199**	P	**P**	**13 03 01.3**	**+2.2**	
MAW	**Mawson**	**84.06**	**199**	P	**P**	**13 03 01.3**	**+2.2**	
MAW				pmax	pmax			
	comp=Z,8.0nm,1.3s							
AHID	**Auburn Hatcher**	**84.07**	**41**	P	**P**	**13 02 55.7**	**-4.0**	
AHID				IAmb	IAmb	13 03 03.8		
	comp=Z,23nm,1.4s							
AHID				IAMs_20	IAMs_20	13 36 17.6		
	comp=Z,2µm,18.0s							
M24K	**Tolsona, Glenn**	**84.08**	**12**	P	**P**	**13 03 00.2**	**+1.1**	
	baz=206							
LOGN	**Logan Glacier**	**84.09**	**15**	IAMs_20	IAMs_20	13 36 10.9		
	comp=Z,2µm,20.0s							
MCARA	**McCarthy VSAT**	**84.11**	**14**	IAMs_20	IAMs_20	13 37 49.2		
	comp=Z,2µm,19.0s							
MCARA	**McCarthy VSAT**	**84.11**	**14**	P	**P**	**13 03 00.0**	**+0.8**	
	baz=208							
CTG	**Chitna Glacier**	**84.14**	**15**	P	**P**	**13 03 00.7**	**+1.2**	
	baz=210							
CTGM	**Chitina Glacie**	**84.14**	**15**	IAMs_20	IAMs_20	13 36 22.0		
	comp=Z,2µm,20.0s							
BARN	**Barnard Glacie**	**84.14**	**15**	P	**P**	**13 02 56.4**	**-3.2**	
BARN				IAmb	IAmb	13 03 04.9		
	comp=Z,32nm,1.1s							
BARN				IAMs_20	IAMs_20	13 36 51.1		
	comp=Z,2µm,20.0s							
T35M	**Bob Quinn**	**84.15**	**22**	P	**P**	**13 03 00.6**	**+1.1**	
	baz=220							
MCMT	**McKenzie Canyo**	**84.17**	**38**	P	**P**	**13 02 55.7**	**-4.5**	
KLR	**Kul'dur**	**84.19**	**327**	LR	LR	13 36 09.6		
	comp=Z,1µm,20.4s,baz=150,slow=33							
KLR	**Kul'dur**	**84.19**	**327**	*ce*P	**P**	**13 03 01.5**	**+1.6**	
KLR				pmax	pmax			
	comp=Z,5.0nm,0.9s							
MA2	**Magadan**	**84.20**	**342**	LR	LR	13 38 24.1		
	comp=Z,897nm,19.4s,baz=154,slow=34							
MA2	**Magadan**	**84.20**	**342**	P	**P**	**13 03 01.9**	**+2.2**	
MA2	**Magadan**	**84.20**	**342**	*i* P	**P**	**13 03 00.5**	**+0.8**	
MA2				pmax	pmax			
	comp=Z,11nm,0.9s							
MYKOM	**Kota Tinggi**	**84.20**	**274**	P	**P**	**13 03 01.8**	**+1.0**	
MYKOM	**Kota Tinggi**	**84.20**	**274**	P	**P**	**13 03 04.3**	**+3.5**	
WAT6	**Susitna Watana**	**84.21**	**11**	P	**P**	**13 03 00.9**	**+1.0**	
	baz=204,SNR=7.9							
S22A	**4UR Ranch, Cre**	**84.23**	**47**	IAMs_20	IAMs_20	13 35 04.6		
	comp=Z,1µm,18.0s							
O28M	**Mount Upton**	**84.25**	**15**	IAMs_20	IAMs_20	13 36 44.1		
	comp=Z,2µm,19.0s							
O28M	**Mount Upton**	**84.25**	**15**	P	**P**	**13 03 00.6**	**+0.3**	
	baz=211							
H16K	**Elim**	**84.28**	**5**	P	**P**	**13 03 01.3**	**+1.3**	
	baz=190,SNR=33							
WAT1	**Susitna Watana**	**84.29**	**11**	P	**P**	**13 03 00.3**	**+0.2**	
	baz=203							
J19K	**Poorman**	**84.32**	**8**	IAMs_20	IAMs_20	13 35 25.6		
	comp=Z,3µm,20.0s							
J19K	**Poorman**	**84.32**	**8**	P	**P**	**13 03 00.5**	**+0.3**	
	baz=197							
DL2	**Dalian**	**84.36**	**315**	P	**P**	**13 03 00.6**	**-0.4**	
DL2				S	**S**	**13 13 28.2**	**+1.9**	
DL2				pmax	pmax			
	comp=Z,27nm,0.9s							
DL2				pmax	pmax			
	comp=Z,1µm,7.0s							
DL2				L	L			
	comp=Z,1µm,17.5s							
DL2				L	L			
	comp=Z,1µm,15.9s							
DL2				L	L			
	comp=Z,1µm,21.0s							
BNX	**BinXian**	**84.45**	**323**	⇓P	**P**	**13 03 03.7**	**+2.4**	
BNX				S	**S**	**13 13 24.8**	**-2.1**	
BNX				pmax	pmax			
	comp=Z,35nm,0.9s							
BNX				pmax	pmax			
	comp=Z,830nm,6.6s							
BNX				L	L			
	comp=Z,1µm,17.8s							
BNX				L	L			
	comp=Z,2µm,17.5s							
BNX				L	L			
	comp=Z,3µm,21.3s							
SKAG	**Skagway**	**84.48**	**18**	P	**P**	**13 03 01.6**	**+0.5**	
	baz=216							
O20A	**White River Ci**	**84.49**	**44**	P	P	13 02 56.8	-5.1	
O20A				IAmb	IAmb	13 03 06.4		
	comp=Z,38nm,1.4s							
CN2	**Changchun**	**84.51**	**320**	*e*P	**P**	**13 03 00.5**	**-1.1**	
CN2				*e*S	**S**	**13 13 32.4**	**+4.8**	
CN2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
CN2				pmax	pmax			
	comp=Z,700nm,6.0s							
CN2				L	L			
	comp=Z,200nm,16.0s							
CN2				L	L			
	comp=Z,300nm,16.0s							
CN2				L	L			
	comp=Z,200nm,15.0s							
G15K	**Niukluk**	**84.51**	**4**	P	**P**	**13 03 01.2**	**+0.1**	
	baz=189							
P30M	**Million Dollar**	**84.56**	**17**	P	**P**	**13 03 02.2**	**+0.6**	
	baz=214							
KTH	**Kantishna Hill**	**84.56**	**10**	P	**P**	**13 02 57.9**	**-3.7**	
TRF	**Thorofare Moun**	**84.57**	**10**	P	P	13 02 56.9	-4.8	
TRF				IAmb	IAmb	13 03 07.3		
	comp=Z,22nm,0.9s							
TRF	**Thorofare Moun**	**84.57**	**10**	P	**P**	**13 03 01.7**	**0.0**	
	baz=202,SNR=8.5							
S34M	**Telegraph Cree**	**84.57**	**21**	P	**P**	**13 02 59.3**	**-2.3**	
S34M				IAmb	IAmb	13 03 27.8		
	comp=Z,27nm,1.2s							
S34M	**Telegraph Cree**	**84.57**	**21**	P	**P**	**13 03 02.2**	**+0.6**	
	baz=219							
FXWY	**Fox Creek**	**84.59**	**40**	P	**P**	**13 03 00.6**	**-1.8**	
FXWY				IAmb	IAmb	13 03 06.7		
	comp=Z,36nm,1.7s							
FXWY				IAMs_20	IAMs_20	13 37 29.3		
	comp=Z,2µm,19.0s							
LL02	**Futaleuf**	**84.62**	**134**	IAMs_20	IAMs_20	13 33 15.5		
	comp=Z,3µm,19.0s							
DLMT	**Dillon**	**84.62**	**38**	P	**P**	**13 02 58.0**	**-4.4**	
DLMT				IAmb	IAmb	13 03 09.8		
	comp=Z,20nm,1.2s							
DLMT				IAMs_20	IAMs_20	13 35 01.9		
	comp=Z,2µm,20.0s							
CHUM	**Lake Minchumin**	**84.66**	**9**	P	**P**	**13 03 02.4**	**+0.5**	
	baz=200,SNR=11							
SNOW	**Snow King Moun**	**84.66**	**40**	IAMs_20	IAMs_20	13 36 28.2		
	comp=Z,2µm,19.0s							
MSO	**Missoula**	**84.70**	**36**	P	**P**	**13 02 58.5**	**-4.2**	
DHY	**Denali Highway**	**84.73**	**11**	P	**P**	**13 03 02.8**	**+0.2**	
	baz=204,SNR=5.4							
RND	**Reindeer**	**84.77**	**11**	IAMs_20	IAMs_20	13 34 26.6		
	comp=Z,2µm,22.0s							
H17K	**Granite Mounta**	**84.77**	**6**	P	**P**	**13 02 58.7**	**-3.8**	
H17K				IAmb	IAmb	13 03 06.0		
	comp=Z,39nm,1.4s							
H17K				IAMs_20	IAMs_20	13 35 32.6		
	comp=Z,2µm,20.0s							
H17K	**Granite Mounta**	**84.77**	**6**	P	**P**	**13 03 03.0**	**+0.6**	
	baz=193							
YUK8	**Steele Glacier**	**84.80**	**15**	P	**P**	**13 03 03.1**	**0.0**	
	baz=212,SNR=5.5							
MOOW	**Moose Ponds**	**84.82**	**40**	IAMs_20	IAMs_20	13 37 18.5		
	comp=Z,2µm,18.0s							
LOHW	**Long Hollow**	**84.83**	**40**	P	**P**	**13 03 01.5**	**-2.1**	
LOHW				IAmb	IAmb	13 03 31.7		
	comp=Z,27nm,1.7s							
LOHW				IAMs_20	IAMs_20	13 36 24.8		
	comp=Z,2µm,19.0s							
CMIG	**Matias Romero**	**84.84**	**70**	LR	LR	13 33 05.1		
	comp=Z,2µm,19.5s,baz=237,slow=30							
QIZ	**Qiongzhong**	**84.85**	**292**	P	**P**	**13 03 06.3**	**+2.4**	
QIZ				S	**S**	**13 13 33.0**	**+1.0**	
QIZ				SS	**SS**	**13 19 06.2**	**+1.3**	
QIZ				pmax	pmax			
	comp=Z,680nm,8.9s							
QIZ				L	L			
	comp=Z,190nm,19.5s							
QIZ				L	L			
	comp=Z,470nm,21.5s							
QIZ				L	L			
	comp=Z,490nm,21.2s							
F14K	**Arctic Creek**	**84.87**	**3**	P	**P**	**13 03 03.4**	**+0.4**	
	baz=186							
YUK6	**Outpost Mounta**	**84.87**	**16**	P	**P**	**13 03 03.6**	**+0.3**	
	baz=213							
TNA	**Tin City**	**84.89**	**2**	P	**P**	**13 03 00.5**	**-2.6**	
TNA				IAmb	IAmb	13 03 06.9		
	comp=Z,34nm,1.2s							
TNA				IAMs_20	IAMs_20	13 36 42.7		
	comp=Z,2µm,20.0s							
TNA	**Tin City**	**84.89**	**2**	P	**P**	**13 03 03.5**	**+0.4**	
	baz=185,SNR=7.6							
GCSA	**Galena City Sc**	**84.89**	**7**	P	**P**	**13 03 03.8**	**+0.7**	
	baz=195,SNR=14							
LRM	**Limekiln Ridge**	**84.97**	**38**	P	**P**	**13 03 00.3**	**-3.9**	
HYT	**Haines Junctio**	**85.00**	**17**	P	**P**	**13 03 00.8**	**-3.1**	
HYT				IAmb	IAmb	13 03 08.0		
	comp=Z,49nm,1.5s							
HYT	**Haines Junctio**	**85.00**	**17**	P	**P**	**13 03 03.8**	**-0.1**	
	baz=214,SNR=6.1							
PAX	**Paxson**	**85.00**	**12**	P	**P**	**13 03 00.3**	**-3.5**	
PAX				IAmb	IAmb	13 03 07.4		
	comp=Z,19nm,1.2s							
PAX	**Paxson**	**85.00**	**12**	P	**P**	**13 03 00.3**	**-3.5**	
PAX				pmax	pmax			
	comp=Z,19nm,1.2s							
PAX	**Paxson**	**85.00**	**12**	P	**P**	**13 03 04.0**	**+0.2**	
	baz=206							
M26K	**Nabesna, AK**	**85.01**	**13**	P	**P**	**13 03 00.7**	**-3.1**	
M26K	**Nabesna, AK**	**85.01**	**13**	P	**P**	**13 03 04.2**	**+0.4**	
	baz=208							
Q32M	**Nakina River**	**85.02**	**20**	P	**P**	**13 03 04.2**	**+0.1**	
	baz=218							
G16K	**Koyuk River**	**85.02**	**4**	IAMs_20	IAMs_20	13 36 14.2		
	comp=Z,2µm,20.0s							
G16K	**Koyuk River**	**85.02**	**4**	P	**P**	**13 03 03.8**	**+0.1**	
	baz=190							
BW06	**Boulder Array**	**85.03**	**41**	IAMs_20	IAMs_20	13 37 35.0		
	comp=Z,2µm,19.0s							
PDAR	**Pinedale Array**	**85.03**	**41**	P	**P**	**13 03 05.3**	**+0.7**	
	comp=Z,5.1nm,0.9s,baz=208,slow=3.0,SNR=19							
PDAR				LR	LR	13 37 10.2		
	comp=Z,1µm,18.1s,baz=240,slow=33							
	comp=Z,5.1nm,0.9s							
YUK3	**Moose Creek**	**85.05**	**15**	P	**P**	**13 03 04.8**	**+0.6**	
	baz=211,SNR=7.6							
MCK	**McKinley**	**85.06**	**10**	IAMs_20	IAMs_20	13 34 25.2		
	comp=Z,2µm,21.0s							
MCK	**McKinley**	**85.06**	**10**	P	**P**	**13 03 04.3**	**+0.3**	
	baz=203,SNR=18							
BPAW	**Bear Paw Mtn.**	**85.07**	**9**	IAMs_20	IAMs_20	13 35 51.4		
	comp=Z,3µm,20.0s							
BPAW	**Bear Paw Mtn.**	**85.07**	**9**	P	**P**	**13 03 03.6**	**-0.4**	
	baz=201,SNR=5.3							
P32M	**Atlin**	**85.07**	**19**	P	**P**	**13 03 04.9**	**+0.8**	
	baz=217							
YPP	**Pitchstone Pla**	**85.07**	**40**	P	**P**	**13 03 01.0**	**-3.9**	
H18K	**Honhosa River**	**85.13**	**6**	P	**P**	**13 03 01.0**	**-3.3**	
H18K				IAmb	IAmb	13 03 08.4		
	comp=Z,20nm,1.1s							
H18K	**Honhosa River**	**85.13**	**6**	P	**P**	**13 03 04.6**	**+0.4**	
	baz=194							
YUK4	**Talbot Arm**	**85.14**	**16**	P	**P**	**13 03 05.9**	**+1.3**	
	baz=213							
YHL	**Hebgen Lake**	**85.17**	**39**	P	**P**	**13 03 02.0**	**-3.3**	
YHL				IAmb	IAmb	13 03 10.8		
	comp=Z,26nm,1.1s							
F15K	**North Star Dit**	**85.19**	**3**	P	**P**	**13 03 00.2**	**-4.3**	
F15K				IAMs_20	IAMs_20	13 36 19.5		
	comp=Z,2µm,20.0s							
F15K	**North Star Dit**	**85.19**	**3**	P	**P**	**13 03 05.3**	**+0.8**	
	baz=188,SNR=10							
OZNA	**Ozona**	**85.22**	**55**	P	**P**	**13 03 01.4**	**-4.2**	
OZNA				IAmb	IAmb	13 03 19.4		
	comp=Z,53nm,1.9s							
M27K	**Edge Creek, AK**	**85.22**	**14**	P	**P**	**13 03 00.8**	**-4.2**	
M27K				IAMs_20	IAMs_20	13 37 48.8		
	comp=Z,2µm,20.0s							
M27K	**Edge Creek, AK**	**85.22**	**14**	P	**P**	**13 03 05.8**	**+0.8**	
	baz=210							
G17K	**Kiwalik Mounta**	**85.26**	**5**	P	**P**	**13 03 05.6**	**+0.6**	
	baz=192							
BOZ	**Bozeman (W)**	**85.32**	**38**	IAMs_20	IAMs_20	13 35 03.3		
	comp=Z,2µm,20.0s							
MSTX	**Muleshoe**	**85.33**	**52**	IAMs_20	IAMs_20	13 34 49.4		
	comp=Z,2µm,20.0s							
MENT	**Mentasta**	**85.33**	**13**	P	**P**	**13 03 08.7**	**+3.3**	
O30N	**Mendenhall**	**85.34**	**17**	IAMs_20	IAMs_20	13 36 27.9		
	comp=Z,2µm,20.0s							
O30N	**Mendenhall**	**85.34**	**17**	P	**P**	**13 03 06.6**	**+1.1**	
	baz=215							
DLBC	**Dease Lake**	**85.35**	**21**	LR	LR	13 36 38.5		
	comp=Z,998nm,18.7s,baz=213,slow=32							
DLBC	**Dease Lake**	**85.35**	**21**	P	**P**	**13 03 06.5**	**+0.8**	
	baz=220							
L26K	**Log Cabin Wild**	**85.49**	**13**	IAMs_20	IAMs_20	13 34 35.8		
	comp=Z,2µm,21.0s							
L26K	**Log Cabin Wild**	**85.49**	**13**	P	**P**	**13 03 07.5**	**+1.3**	
	baz=208,SNR=9.5							
BVCY	**Beaver Creek**	**85.51**	**14**	P	**P**	**13 03 07.1**	**+0.9**	
	baz=210,SNR=6.9							
HBVL	**Hebbronville**	**85.53**	**59**	P	**P**	**13 03 02.9**	**-4.3**	
WHY	**Whitehorse**	**85.59**	**18**	P	**P**	**13 03 06.9**	**+0.1**	
	baz=216							
LR05	**Currie**	**85.60**	**131**	P	**P**	**13 03 07.0**	**-0.4**	
T25A	**Trinidad**	**85.61**	**48**	IAMs_20	IAMs_20	13 36 05.5		
	comp=Z,1µm,18.0s							
N30M	**Aishikik Lake**	**85.64**	**16**	IAMs_20	IAMs_20	13 37 16.8		
	comp=Z,2µm,19.0s							
N30M	**Aishikik Lake**	**85.64**	**16**	P	**P**	**13 03 07.7**	**+0.7**	
	baz=214							
SGCY	**Sterling City**	**85.65**	**54**	P	**P**	**13 03 03.4**	**-4.4**	
K24K	**Donnelly Dome**	**85.70**	**12**	P	**P**	**13 03 05.4**	**-1.8**	
K24K				IAMs_20	IAMs_20	13 34 44.2		
	comp=Z,2µm,22.0s							
K24K	**Donnelly Dome**	**85.70**	**12**	P	**P**	**13 03 08.7**	**+1.5**	
	baz=206,SNR=12							
LYMT	**Lyon Mountain**	**85.71**	**37**	P	**P**	**13 03 04.4**	**-3.5**	
WHN	**Wuhan**	**85.76**	**304**	P	**P**	**13 03 08.9**	**+0.7**	
WHN				S	**S**	**13 13 45.8**	**+5.2**	
WHN				pmax	pmax			
	comp=Z,500nm,2.5s							
WHN				pmax	pmax			
	comp=Z,2µm,5.2s							
R33M	**Jennings River**	**85.78**	**20**	P	**P**	**13 03 08.8**	**+1.0**	
	baz=220							
RIDG	**Independent Ri**	**85.82**	**12**	P	**P**	**13 03 04.2**	**-3.6**	
RIDG				IAmb	IAmb	13 03 12.9		
	comp=Z,23nm,1.0s							
RIDG				IAMs_20	IAMs_20	13 34 57.5		
	comp=Z,2µm,21.0s							
RIDG	**Independent Ri**	**85.82**	**12**	P	**P**	**13 03 08.6**	**+0.8**	
	baz=207,SNR=8.3							
G18K	**Tagagawik**	**85.83**	**6**	P	**P**	**13 03 05.0**	**-2.7**	
G18K				IAmb	IAmb	13 03 11.8		
	comp=Z,22nm,0.9s							
G18K				IAMs_20	IAMs_20	13 36 14.5		
	comp=Z,3µm,21.0s							
G18K	**Tagagawik**	**85.83**	**6**	P	**P**	**13 03 08.8**	**+1.1**	
	baz=194							
NEA2	**Nenana**	**85.83**	**10**	P	**P**	**13 03 05.7**	**-2.1**	
NEA2				IAmb	IAmb	13 03 11.9		
	comp=Z,28nm,1.1s							
NEA2	**Nenana**	**85.83**	**10**	P	**P**	**13 03 08.8**	**+1.1**	
	baz=203,SNR=9.6							
P33M	**Teslin, Yukon**	**85.84**	**19**	P	**P**	**13 03 09.1**	**+1.1**	
	baz=218							
H20K	**Anotleneega Mo**	**85.85**	**7**	P	**P**	**13 03 09.4**	**+1.6**	
	baz=197,SNR=12							
L27K	**Beaver Creek,**	**85.85**	**14**	IAMs_20	IAMs_20	13 38 38.4		
	comp=Z,2µm,18.0s							
L27K	**Beaver Creek,**	**85.85**	**14**	P	**P**	**13 03 08.8**	**+0.8**	
	baz=210							
POST	**Post**	**85.87**	**53**	P	**P**	**13 03 04.6**	**-4.3**	
POST				IAmb	IAmb	13 03 40.4		
	comp=Z,35nm,1.1s							
DOT	**Dot Lake**	**85.90**	**12**	IAMs_20	IAMs_20	13 35 09.4		
	comp=Z,2µm,22.0s							
I21K	**Tanana**	**85.94**	**9**	P	**P**	**13 03 08.8**	**+0.6**	
	baz=200							
YNE	**Yellowstone No**	**85.95**	**39**	P	**P**	**13 03 06.5**	**-2.7**	
MLY	**Manley**	**85.98**	**9**	P	**P**	**13 03 07.2**	**-1.4**	
MLY				IAmb	IAmb	13 03 12.8		
	comp=Z,31nm,1.2s							
MLY				IAMs_20	IAMs_20	13 35 58.5		
	comp=Z,2µm,20.0s							
MLY	**Manley**	**85.98**	**9**	P	**P**	**13 03 09.2**	**+0.6**	
	baz=201,SNR=16							
N31M	**Braeburn, Yuko**	**86.01**	**17**	IAMs_20	IAMs_20	13 36 39.8		
	comp=Z,2µm,20.0s							
N31M	**Braeburn, Yuko**	**86.01**	**17**	P	**P**	**13 03 10.1**	**+1.3**	
	baz=215							
HDA	**Harding Lake**	**86.03**	**11**	P	**P**	**13 03 09.6**	**+0.8**	
	baz=205,SNR=24							
JCT	**Junction City**	**86.06**	**56**	IAMs_20	IAMs_20	13 36 54.3		
	comp=Z,2µm,18.0s							
CCB	**Clear Creek Bu**	**86.10**	**11**	P	**P**	**13 03 07.6**	**-1.4**	
M29M	**Somme Creek**	**86.11**	**15**	IAMs_20	IAMs_20	13 37 27.3		
	comp=Z,2µm,20.0s							
M29M	**Somme Creek**	**86.11**	**15**	P	**P**	**13 03 09.7**	**+0.3**	
	baz=213							
F17K	**Baldwin Pennin**	**86.14**	**5**	P	**P**	**13 03 06.0**	**-3.2**	
F17K				IAmb	IAmb	13 03 13.6		
	comp=Z,28nm,0.9s							
F17K				IAMs_20	IAMs_20	13 36 16.8		
	comp=

SN07 Snyder 07 86.34 53 P **P** **13 03 10.8 -0.3**
SN07 IAmb IAmb 13 03 15.3
comp=Z,52nm,1.6s
KVTX Kingsville 86.36 59 IAMs_20 IAMs_20 13 35 37.9
comp=Z,2µm,20.0s
IL31 86.37 11 P **P** **13 03 09.3 -1.0**
IL31 IAmb IAmb 13 03 13.5
comp=Z,38nm,1.3s
ILAR Eielson Array 86.37 11 P **P** **13 03 09.7 -0.8**
comp=Z,7.7nm,0.9s,baz=229,slow=6.0,SNR=62
ILAR LR LR 13 36 20.3
comp=Z,1µm,20.7s,baz=198,slow=32
comp=Z,7.7nm,0.9s
F18K Selawik 86.43 5 P **P** **13 03 11.2 +0.6**
baz=193,SNR=15
PLCA Paso Flores 86.44 132 P **P** **13 03 14.3 +2.6**
comp=Z,17nm,1.1s,baz=245,slow=5.8,SNR=11
PLCA LR LR 13 37 03.2
comp=Z,1µm,18.0s,baz=230,slow=32
comp=Z,17nm,1.1s
PLCA Paso Flores 86.44 132 P **P** **13 03 11.7 +0.1**
PLCA IAmb IAmb 13 03 17.9
comp=Z,48nm,1.4s
PLCA Paso Flores 86.44 132 P **P** **13 03 11.7 +0.1**
PLCA pmax pmax
comp=Z,48nm,1.5s
RLMT Red Lodge 86.46 39 P **P** **13 03 10.5 -1.1**
RLMT IAmb IAmb 13 03 32.6
comp=Z,35nm,1.9s
IMAR Indian Mountai 86.46 8 P **P** **13 03 10.5 -0.4**
RTBA Rita Blanca 86.48 49 P **P** **13 03 07.4 -4.4**
RTBA IAmb IAmb 13 03 16.6
comp=Z,29nm,1.4s
J25K Salcha River, 86.51 12 P **P** **13 03 10.0 -1.2**
J25K IAmb IAmb 13 03 15.3
comp=Z,24nm,1.0s
J25K Salcha River, 86.51 12 P **P** **13 03 11.9 +0.7**
baz=206,SNR=12
N32M Quiet Lake 86.51 18 P **P** **13 03 08.6 -2.7**
N32M IAmb IAmb 13 03 49.4
comp=Z,28nm,1.3s
N32M IAMs_20 IAMs_20 13 37 40.9
comp=Z,1µm,18.0s
N32M Quiet Lake 86.51 18 P **P** **13 03 11.9 +0.7**
baz=218
AMTX Amarillo 86.55 51 P **P** **13 03 09.8 -2.3**
DKNS Dickens 86.57 53 P **P** **13 03 09.1 -3.1**
SEY Seymchan 86.58 345 *ce*P **P** **13 03 11.3 -0.2**
SEY pmax pmax
comp=Z,44nm,1.0s
POKR Poker Plat Res 86.59 11 P **P** **13 03 11.9 +0.4**
baz=204
M30M Minto, Yukon 86.65 16 P **P** **13 03 09.2 -2.8**
M30M IAmb IAmb 13 03 56.5
comp=Z,36nm,1.6s
M30M IAMs_20 IAMs_20 13 37 33.5
comp=Z,2µm,20.0s
M30M Minto, Yukon 86.65 16 P **P** **13 03 12.2 +0.3**
baz=214,SNR=5.9
H22K Ishtalitna Cre 86.69 9 P **P** **13 03 11.1 -1.0**
H22K IAmb IAmb 13 03 16.1
comp=Z,23nm,1.0s
H22K Ishtalitna Cre 86.69 9 P **P** **13 03 12.3 +0.3**
baz=201
E17K Hotham Inlet 86.73 4 P **P** **13 03 12.6 +0.4**
baz=191,SNR=35
L29M L29M 86.76 15 P **P** **13 03 07.8 -4.6**
L29M L29M 86.76 15 P **P** **13 03 12.8 +0.4**
baz=213,SNR=22
F19K Shaleruckik Mo 86.83 6 P **P** **13 03 11.2 -1.4**
F19K IAmb IAmb 13 03 16.7
comp=Z,30nm,0.9s
F19K IAMs_20 IAMs_20 13 36 55.9
comp=Z,2µm,20.0s
F19K Shaleruckik Mo 86.83 6 P **P** **13 03 12.9 +0.3**
baz=195,SNR=42
M31M Drury Creek, Y 86.98 17 P **P** **13 03 10.0 -3.6**
M31M IAmb IAmb 13 03 26.7
comp=Z,39nm,1.7s
M31M IAMs_20 IAMs_20 13 38 18.4
comp=Z,2µm,19.0s
M31M Drury Creek, Y 86.98 17 P **P** **13 03 14.8 +1.2**
baz=216
G21K Allakaket 87.00 8 P **P** **13 03 12.9 -0.6**
G21K IAmb IAmb 13 03 17.3
comp=Z,31nm,1.1s
G21K IAMs_20 IAMs_20 13 36 49.5
comp=Z,2µm,21.0s
G21K Allakaket 87.00 8 P **P** **13 03 14.7 +1.2**
baz=199
BRDY Brady 87.02 55 P **P** **13 03 11.8 -2.7**
BRDY IAmb IAmb 13 03 18.7
comp=Z,54nm,1.8s
APMT Aspermont 87.03 53 P **P** **13 03 14.4 -0.1**
APMT IAmb IAmb 13 03 19.6
comp=Z,38nm,1.2s
WTLY Watson Lake, Y 87.04 20 P **P** **13 03 15.3 +1.4**
baz=221
HEH HeiHe 87.06 326 *e*P **P** **13 03 13.1 -1.0**
HEH pP **sP** **13 03 19.0 +1.2**
HEH S **S** **13 13 49.6 -2.7**
HEH sS **ScS** **13 13 57.8 -2.0**
HEH pmax pmax
comp=Z,32nm,1.9s
HEH pmax pmax
comp=Z,810nm,5.6s
HEH L L
comp=Z,1µm,19.3s
HEH L L
comp=Z,850nm,19.9s
HEH L L
comp=Z,2µm,18.6s
E18K Tukpahlearik C 87.16 5 P **P** **13 03 13.0 -1.2**
E18K IAmb IAmb 13 03 18.6
comp=Z,32nm,1.0s
E18K IAMs_20 IAMs_20 13 36 38.6
comp=Z,2µm,20.0s
E18K Tukpahlearik C 87.16 5 P **P** **13 03 15.6 +1.4**
baz=192
H24K Noodor Dome 87.18 10 P **P** **13 03 16.2 +1.7**
baz=204
F20K Avaraart Lake 87.25 7 P **P** **13 03 15.6 +1.0**
baz=196
D17K Noatak River 87.26 4 P **P** **13 03 16.4 +1.7**
baz=190,SNR=13
DAWY Dawson 87.27 14 P **P** **13 03 12.9 -2.1**
DAWY IAmb IAmb 13 03 19.6
comp=Z,31nm,1.1s
DAWY Dawson 87.27 14 P **P** **13 03 16.3 +1.4**
baz=212,SNR=20
FARO Faro, Yukon 87.30 17 P **P** **13 03 16.5 +1.5**
baz=217
PRP Porcupine Dome 87.30 11 P **P** **13 03 12.7 -2.4**
PRP Porcupine Dome 87.30 11 P **P** **13 03 16.6 +1.5**
baz=206,SNR=21
UBPT Khong Chiam 87.36 287 P **P** **13 03 17.5 +1.1**
BI02 San Fabin de 87.47 128 P **P** **13 03 15.0 -1.7**
BI02 IAmb IAmb 13 03 26.6
comp=Z,15nm,1.1s
E19K Redstone River 87.49 6 P **P** **13 03 14.8 -1.0**
E19K IAMs_20 IAMs_20 13 37 28.4
comp=Z,2µm,20.0s
E19K Redstone River 87.49 6 P **P** **13 03 17.3 +1.4**
baz=195
K29M Barlow Dome 87.53 15 P **P** **13 03 15.8 -0.4**
K29M IAMs_20 IAMs_20 13 38 50.7
comp=Z,2µm,19.0s
K29M Barlow Dome 87.53 15 P **P** **13 03 17.1 +0.8**
baz=213
I26K Coal Creek Min 87.55 12 P **P** **13 03 14.3 -1.8**
I26K IAMs_20 IAMs_20 13 36 01.3
comp=Z,2µm,22.0s
I26K Coal Creek Min 87.55 12 P **P** **13 03 17.0 +0.8**
baz=208
GO05 Hualane 87.60 126 P **P** **13 03 16.4 -0.9**
GO05 IAmb IAmb 13 03 43.5
comp=Z,20nm,1.1s
RDOG Red Dog Mine 87.62 4 IAMs_20 IAMs_20 13 37 26.9
comp=Z,2µm,21.0s
RDOG Red Dog Mine 87.62 4 P **P** **13 03 17.3 +0.8**
baz=190
G23K Bananza Creek 87.66 9 IAMs_20 IAMs_20 13 37 11.9
comp=Z,2µm,20.0s
G23K Bananza Creek 87.66 9 P **P** **13 03 17.7 +0.9**
baz=202,SNR=11
F21K Alatna River 87.68 7 IAMs_20 IAMs_20 13 37 11.4
comp=Z,2µm,20.0s
F21K Alatna River 87.68 7 P **P** **13 03 17.6 +0.9**
baz=199,SNR=6.2
ML02 Panimavida 87.70 127 IAMs_20 IAMs_20 13 36 14.8
comp=Z,2µm,19.0s
C16K Lisburne Hills 87.71 3 P **P** **13 03 13.6 -3.2**
C16K IAmb IAmb 13 03 20.4
comp=Z,27nm,1.5s
C16K IAMs_20 IAMs_20 13 37 09.2
comp=Z,2µm,21.0s
C16K Lisburne Hills 87.71 3 P **P** **13 03 17.8 +1.0**
baz=187
MAYO Mayo, Yukon 87.72 16 P **P** **13 03 17.8 +0.8**
baz=215
J29N Klondike Camp 87.88 14 IAMs_20 IAMs_20 13 39 39.8
comp=Z,2µm,19.0s
J29N Klondike Camp 87.88 14 P **P** **13 03 19.2 +1.3**
baz=213,SNR=7.6
C17K DeLong Mountai 88.02 4 P **P** **13 03 19.5 +1.2**
baz=189
G24K Hadweenzic Riv 88.04 10 P **P** **13 03 19.6 +1.1**
baz=204
ELIB Princess Elisa 88.10 185 *d*P **P** **13 03 21.0 +1.8**
comp=Z,12nm,0.9s
COLD Coldfoot 88.11 9 P **P** **13 03 14.7 -4.1**
COLD IAmb IAmb 13 03 31.9
comp=Z,53nm,2.0s
COLD Coldfoot 88.11 9 P **P** **13 03 20.1 +1.3**
baz=202
I27K Kandik River 88.12 12 P **P** **13 03 16.4 -2.6**
I27K IAmb IAmb 13 04 12.0
comp=Z,26nm,1.4s
I27K IAMs_20 IAMs_20 13 36 09.4
comp=Z,2µm,20.0s
I27K Kandik River 88.12 12 P **P** **13 03 20.4 +1.4**
baz=210
PLPT Palo Pinto 88.18 54 P **P** **13 03 17.1 -2.9**
C18K Utukok River 88.32 4 P **P** **13 03 16.0 -3.9**
C18K IAmb IAmb 13 03 23.2
comp=Z,16nm,1.2s
C18K IAMs_20 IAMs_20 13 37 50.4
comp=Z,2µm,21.0s
C18K Utukok River 88.32 4 P **P** **13 03 20.7 +0.8**
baz=191,SNR=7.1
I28M Miner Creek 88.34 13 P **P** **13 03 21.1 +1.1**
baz=211,SNR=7.6
E20K Nigu River 88.37 6 P **P** **13 03 20.6 +0.5**
baz=196,SNR=14
KULM Kulim 88.38 276 P **P** **13 03 22.2 +0.9**
KULM Kulim 88.38 276 P **P** **13 03 19.5 -1.8**
KULM IAmb IAmb 13 03 25.7
comp=Z,22nm,1.0s
KULM Kulim 88.38 276 P **P** **13 03 25.4 +4.1**
D19K Kuna River 88.42 5 P **P** **13 03 18.5 -1.8**
D19K IAmb IAmb 13 03 23.8
comp=Z,17nm,1.1s
D19K Kuna River 88.42 5 P **P** **13 03 21.4 +1.2**
baz=194
J30M Hart River 88.43 15 P **P** **13 03 18.4 -2.1**
J30M IAmb IAmb 13 03 24.5
comp=Z,17nm,1.2s
J30M Hart River 88.43 15 P **P** **13 03 21.7 +1.1**
baz=214,SNR=6.0
HNS HongShan 88.46 311 ⇑P **P** **13 03 21.1 0.0**
HNS PP **PP** **13 06 53.5 +4.0**
HNS SKS **SKSac** **13 13 50.1 +0.6**
HNS S **S** **13 14 05.9 -0.4**
HNS pmax pmax
comp=Z,25nm,1.3s
HNS pmax pmax
comp=Z,760nm,10.1s
HNS L L
comp=Z,650nm,20.5s
HNS L L
comp=Z,1µm,19.9s
HNS L L
comp=Z,2µm,21.6s
BO01 Tunca 88.48 126 P **P** **13 03 21.5 0.0**
MT01 Popeta 88.55 125 P **P** **13 03 19.8 -2.1**
MT01 IAMs_20 IAMs_20 13 36 50.2
comp=Z,2µm,18.0s
VA01 Torpederas 88.57 124 IAMs_20 IAMs_20 13 39 41.7
comp=Z,2µm,18.0s
BJI2 Beijing 88.60 313 P **P** **13 03 22.0 +0.2**
BJI2 sP **sP** **13 03 28.2 +2.7**
BJI2 PP **PP** **13 06 50.9 +0.3**
BJI2 pmax pmax
comp=Z,15nm,2.5s
BJI2 pmax pmax
comp=Z,400nm,6.9s
BJI2 L L
comp=Z,320nm,19.5s
BJI2 L L
comp=Z,270nm,22.3s
BJI2 L L
comp=Z,380nm,19.4s
BJT Baijiatuan 88.60 313 P **P** **13 03 23.9 +2.1**
BJT Baijiatuan 88.60 313 P **P** **13 03 19.8 -2.0**
BJT Baijiatuan 88.60 313 P **P** **13 03 19.8 -2.0**
BJT pmax pmax
comp=Z,126nm,2.0s
BILL Bilibino 88.62 352 P **P** **13 03 18.7 -2.5**
BILL Bilibino 88.62 352 IAMs_20 IAMs_20 13 37 43.6
comp=Z,2µm,21.0s
BILL Bilibino 88.62 352 *ce*P **P** **13 03 22.5 +1.3**
BILL pmax pmax
comp=Z,14nm,1.0s
I29M Ogilvie Camp, 88.62 14 P **P** **13 03 19.9 -1.4**
I29M IAmb IAmb 13 03 24.9
comp=Z,30nm,1.4s
I29M Ogilvie Camp, 88.62 14 P **P** **13 03 22.8 +1.4**
baz=213
WMOK Wichita Mounta 88.63 52 P **P** **13 03 18.4 -3.7**
WMOK Wichita Mounta 88.63 52 P **P** **13 03 18.4 -3.7**
WMOK pmax pmax
comp=Z,23nm,1.7s
TROLL Troll, Antarti 88.66 179 ⇑P **P** **13 03 26.5 +4.7**
KOTAN Kotaneelee Air 88.67 22 P **P** **13 03 23.6 +2.0**
baz=226,SNR=5.4
H27K Steamboat Moun 88.69 12 P **P** **13 03 20.0 -1.6**
H27K Steamboat Moun 88.69 12 P **P** **13 03 23.3 +1.7**
baz=210
EDM Edmonton 88.74 31 P **P** **13 03 21.1 -1.1**
EDM IAmb IAmb 13 03 45.8
comp=Z,35nm,1.3s
EDM Edmonton 88.74 31 P **P** **13 03 21.1 -1.1**
EDM pmax pmax
comp=Z,35nm,1.3s
VNA3 Neumayer Olymp 88.75 175 ⇑P P 13 03 27.4 +5.4
comp=Z,9.7nm,0.7s
E22K Anaktuvuk Pass 88.75 8 P **P** **13 03 19.9 -1.9**
E22K IAmb IAmb 13 03 49.5
comp=Z,34nm,1.7s
E22K IAMs_20 IAMs_20 13 37 55.8
comp=Z,2µm,20.0s
E22K Anaktuvuk Pass 88.75 8 P **P** **13 03 23.4 +1.5**
baz=200
D20K Etivluk River 88.77 6 P **P** **13 03 20.6 -1.3**
D20K IAmb IAmb 13 03 25.6
comp=Z,18nm,1.1s
D20K IAMs_20 IAMs_20 13 38 21.2
comp=Z,2µm,20.0s
D20K Etivluk River 88.77 6 P **P** **13 03 23.6 +1.6**
E21K Killik River 88.78 7 IAMs_20 IAMs_20 13 38 07.6
comp=Z,3µm,20.0s
MT09 Talagante 88.79 125 P **P** **13 03 22.8 -0.3**
MT09 IAmb IAmb 13 03 28.8
comp=Z,18nm,1.1s
MT09 IAMs_20 IAMs_20 13 36 39.4
comp=Z,2µm,18.0s
SNAA Sanae 88.80 177 P **P** **13 03 23.8 +1.5**
comp=Z,10nm,0.9s,baz=101,slow=1.9,SNR=8.4
SNAA LR LR 13 39 26.9
comp=Z,2µm,19.6s,baz=194,slow=33
comp=Z,10nm,0.9s
SNAA Sanae 88.80 177 P **P** **13 03 23.8 +1.5**
SNAA IAmb IAmb 13 03 48.6
comp=Z,17nm,1.1s
SNAA IAMs_20 IAMs_20 13 49 09.3
comp=Z,2µm,18.0s
SNAA Sanae 88.80 177 *i*P **P** **13 03 24.2 +1.9**
SNAA pmax pmax
comp=Z,20nm,1.3s
MT02 Curacav 88.87 125 IAMs_20 IAMs_20 13 36 58.6
comp=Z,2µm,18.0s
C19K Lookout Ridge 88.89 5 P **P** **13 03 22.0 -0.5**
C19K IAmb IAmb 13 03 27.6
comp=Z,23nm,1.0s
C19K Lookout Ridge 88.89 5 P **P** **13 03 24.3 +1.8**
baz=193
LYN LuoYang 88.89 307 P **P** **13 03 23.9 +0.6**
LYN SKS **SKSac** **13 13 54.9 +2.6**
LYN S **S** **13 14 08.0 -2.5**
LYN sS ScS 13 14 21.4 +5.6
LYN pmax pmax
comp=Z,31nm,1.1s
LYN pmax pmax
comp=Z,960nm,7.3s
LYN L L
comp=Z,430nm,14.4s
LYN L L
comp=Z,950nm,20.1s
LYN L L
comp=Z,2µm,20.1s
G26K Porcupine Rive 88.90 11 P **P** **13 03 22.8 +0.3**
G26K IAMs_20 IAMs_20 13 38 25.7
comp=Z,2µm,21.0s
G26K Porcupine Rive 88.90 11 P **P** **13 03 24.4 +1.9**
baz=208
I30M Mount Dempster 88.95 15 P **P** **13 03 21.6 -1.4**
I30M IAMs_20 IAMs_20 13 40 15.4
comp=Z,2µm,19.0s
I30M Mount Dempster 88.95 15 P **P** **13 03 24.1 +1.2**
baz=214
E23K Chandalar 88.97 9 P **P** **13 03 21.5 -1.5**
E23K Chandalar 88.97 9 P **P** **13 03 24.5 +1.5**
baz=202
HKT Hockley 88.97 58 IAMs_20 IAMs_20 13 36 54.0
comp=Z,2µm,20.0s
HKT Hockley 88.97 58 *i*P **P** **13 03 25.9 +2.2**
HKT pmax pmax
comp=Z,32nm,1.8s
BO04 La Punta 89.00 126 IAMs_20 IAMs_20 13 37 13.0
comp=Z,2µm,19.0s
VA06 Catapilco 89.02 124 IAMs_20 IAMs_20 13 40 27.3
comp=Z,1µm,18.0s
OGNE Ogallala 89.02 46 IAMs_20 IAMs_20 13 39 06.3
comp=Z,2µm,19.0s
E24K Your Creek 89.15 9 IAMs_20 IAMs_20 13 37 50.4
comp=Z,2µm,20.0s
E24K Your Creek 89.15 9 P **P** **13 03 25.0 +1.2**
baz=203
F25K Christian Rive 89.15 10 IAMs_20 IAMs_20 13 38 07.5
comp=Z,3µm,21.0s
F25K Christian Rive 89.15 10 P **P** **13 03 25.1 +1.3**
baz=206
ZEA Zeya 89.16 329 *e*P **P** **13 03 23.8 -0.2**
ZEA *e*S **S** **13 14 12.3 +0.1**
ZEA pmax pmax
comp=E,20nm,1.3s
ZEA pmax pmax
comp=N,10.0nm,1.0s
ZEA pmax pmax
comp=Z,40nm,1.1s
ZEA smax smax
comp=E,500nm,8.2s
G27K Doyon Strip 89.17 12 P **P** **13 03 21.4 -2.5**
G27K IAMs_20 IAMs_20 13 37 04.0
comp=Z,2µm,21.0s
G27K Doyon Strip 89.17 12 P **P** **13 03 24.9 +1.0**
baz=210
PSI Prapat 89.18 273 P **P** **13 03 25.8 +0.5**
PSI Prapat 89.18 273 P **P** **13 03 25.8 +0.5**
comp=Z,813nmcomp=Z,24nm,1.1s
RSSD Black Hills 89.18 42 P **P** **13 03 22.5 -2.2**
RSSD Black Hills 89.18 42 IAMs_20 IAMs_20 13 42 21.0
comp=Z,2µm,18.0s
RSSD Black Hills 89.18 42 P **P** **13 03 22.5 -2.2**
RSSD pmax pmax
comp=Z,6.0nm,0.9s
RSSD MLR MLR
comp=Z,2µm,18.0s
BMAR Burnt Mountain 89.19 11 P **P** **13 03 23.7 -0.2**
VNA2 Neumayer--Watz 89.24 175 ⇑P **P** **13 03 26.8 +2.4**
comp=Z,12nm,0.7s,baz=188,slow=4.8
MT03 Universidad Ad 89.27 125 IAMs_20 IAMs_20 13 37 13.0
comp=Z,1µm,19.0s
PEL Peldehue 89.27 125 IAMs_20 IAMs_20 13 41 18.2
comp=Z,2µm,18.0s
MT16 CCHEN 89.28 125 IAMs_20 IAMs_20 13 36 55.4
comp=Z,2µm,20.0s
MT13 San Alfonso 89.34 126 IAMs_20 IAMs_20 13 37 16.1
comp=Z,2µm,19.0s
C21K Knifeblade Rid 89.38 6 P **P** **13 03 25.9 +1.1**
baz=197
OK038 West end E0370 89.39 51 IAMs_20 IAMs_20 13 39 10.8
comp=Z,2µm,19.0s
CO04 Los Peladeros 89.47 124 IAMs_20 IAMs_20 13 37 06.2
comp=Z,2µm,19.0s
ENH Enshi 89.49 302 P **P** **13 03 27.8 +1.6**
ENH Enshi 89.49 302 P **P** **13 03 24.5 -1.7**
F26K Sheenjek River 89.50 11 P **P** **13 03 24.7 -0.7**
F26K IAMs_20 IAMs_20 13 38 50.6
comp=Z,2µm,20.0s
F26K Sheenjek River 89.50 11 P **P** **13 03 27.1 +1.8**
baz=207
TOLK Toolik Lake Re 89.52 8 P **P** **13 03 26.8 +1.4**
baz=202
E25K Arctic Village 89.64 10 P **P** **13 03 27.4 +1.4**
baz=206
MT08 Bocatoma Ro 89.66 125 IAMs_20 IAMs_20 13 37 15.6
comp=Z,2µm,18.0s
CBKS Cedar Bluff 89.67 48 IAMs_20 IAMs_20 13 39 19.8
comp=Z,1µm,18.0s
D23K Nanushuk River 89.68 8 P **P** **13 03 25.5 -0.7**
D23K IAmb IAmb 13 03 31.7
comp=Z,19nm,1.1s
D23K IAMs_20 IAMs_20 13 38 37.3
comp=Z,2µm,20.0s
D23K Nanushuk River 89.68 8 P **P** **13 03 27.6 +1.4**
baz=201
CO02 Combarbal 89.77 123 P **P** **13 03 25.7 -2.0**
EPYK Eagle Plains 89.83 14 P **P** **13 03 23.7 -3.3**
EPYK Eagle Plains 89.83 14 P **P** **13 03 28.2 +1.2**
baz=214,SNR=7.7
B21K Ikpikpuk River 89.84 6 P **P** **13 03 27.9 +1.0**
baz=198
A19K Wainwright 89.86 4 P **P** **13 03 28.2 +1.2**
baz=191
NVL N'lazarevskaya 89.90 182 *e*P **P** **13 03 25.7 -1.7**
NVL *e* 13 06 59.0
NVL *e*PPP PPP 13 08 56.1
NVL *e*S **SKSac** **13 13 56.3 -0.9**
NVL *e*SS **SS** **13 20 21.0 +5.8**
NVL *e*SSS SSS 13 23 56.3
NVL pmax pmax
comp=Z,78nm,1.2s
NVL MLR MLR
comp=Z,786nm,18.0s
H31M Peel River 89.92 15 P **P** **13 03 28.6 +1.2**
baz=216
GSI Gunungsitoli 89.95 271 P **P** **13 03 29.8 +1.0**
GSI Gunungsitoli 89.95 271 P **P** **13 03 28.6 -0.1**
GSI Gunungsitoli 89.95 271 P P 13 03 33.7 +4.9
B20K Meade River 89.97 5 IAMs_20 IAMs_20 13 39 14.0
comp=Z,3µm,20.0s
B20K Meade River 89.97 5 P **P** **13 03 28.1 +0.7**
baz=195
D24K Happy Valley 90.10 8 P **P** **13 03 24.8 -3.3**
D24K IAMs_20 IAMs_20 13 38 33.5
comp=Z,2µm,20.0s
D24K Happy Valley 90.10 8 P **P** **13 03 29.7 +1.6**
baz=203
CO03 El Pedregal 90.15 123 P **P** **13 03 28.7 -0.8**
CO03 IAmb IAmb 13 03 44.8
comp=Z,22nm,1.1s
F28M Old Crow 90.22 12 IAMs_20 IAMs_20 13 38 18.7
comp=Z,2µm,20.0s
F28M Old Crow 90.22 12 P **P** **13 03 30.2 +1.5**
baz=211
R32A Long Quarter, 90.23 49 IAMs_20 IAMs_20 13 42 36.7
comp=Z,2µm,18.0s
TIY Taiyuan 90.23 310 *e*P **P** **13 03 33.3 +3.7**
TIY S **S** **13 14 27.5 +4.5**
TIY SS **SS** **13 20 23.7 +0.6**
TIY pmax pmax
comp=Z,370nm,4.1s
TIY L L
comp=Z,430nm,15.1s
TIY L L
comp=Z,810nm,19.9s
TIY L L

comp=Z,1µm,20.6s
W35A Tecumseh 90.23 53 P **P** **13 03 27.2 -2.4**
W35A IAmb IAmb 13 03 58.2
comp=Z,50nm,1.6s
GO04 Tololo Observa 90.32 122 IAMs_20 IAMs_20 13 37 34.8
comp=Z,2µm,18.0s
GYA Guiyang 90.35 298 P **P** **13 03 30.0 -0.5**
GYA SKS **SKSac** **13 13 55.8 -5.7**
GYA S **SKKSac** **13 14 19.9 +4.6**
GYA pmax pmax
comp=Z,18nm,2.0s
GYA pmax pmax
comp=Z,590nm,9.1s
GYA L L
comp=Z,670nm,21.4s
E27K Coleen River 90.39 11 P **P** **13 03 27.0 -2.6**
E27K IAMs_20 IAMs_20 13 39 02.2
comp=Z,2µm,20.0s
E27K Coleen River 90.39 11 P **P** **13 03 31.3 +1.8**
baz=210,SNR=11
XLT XiLinHaoTe 90.42 317 *e*P **P** **13 03 32.8 +2.5**
XLT SKS **SKSac** **13 14 01.3 +0.3**
XLT sS ScS 13 14 32.2 +4.0
XLT pmax pmax
comp=Z,11nm,1.4s
XLT pmax pmax
comp=Z,440nm,7.0s
XLT L L
comp=Z,840nm,19.6s
XLT L L
comp=Z,980nm,18.5s
G30M tAoh Zraii Nji 90.45 14 P **P** **13 03 31.1 +1.3**
baz=215
C23K Itkillik River 90.50 8 P **P** **13 03 27.9 -2.0**
C23K IAmb IAmb 13 03 35.4
comp=Z,23nm,1.1s
C23K Itkillik River 90.50 8 P **P** **13 03 31.0 +1.1**
baz=201
D25K Kavik River 90.61 9 IAMs_20 IAMs_20 13 39 17.9
comp=Z,3µm,20.0s
D25K Kavik River 90.61 9 P **P** **13 03 31.3 +0.7**
baz=205
TGUH Tegucigalpa,Un 90.62 75 IAMs_20 IAMs_20 13 37 07.3
comp=Z,2µm,19.0s
C24K Franklin Bluff 90.64 8 P **P** **13 03 31.6 +1.0**
baz=203
B22K Teshekpuk Lake 90.66 6 IAMs_20 IAMs_20 13 39 42.1
comp=Z,3µm,21.0s
B22K Teshekpuk Lake 90.66 6 P **P** **13 03 31.8 +1.1**
baz=199
OK048 Pawnee Station 90.69 52 IAMs_20 IAMs_20 13 39 33.3
comp=Z,2µm,18.0s
HIA Hailar 90.72 323 IAMs_20 IAMs_20 13 39 48.3
comp=Z,2µm,20.0s
G31M Satah River 90.84 14 P **P** **13 03 30.0 -1.6**
G31M IAMs_20 IAMs_20 13 41 05.3
comp=Z,2µm,19.0s
G31M Satah River 90.84 14 P **P** **13 03 32.5 +0.9**
baz=216
LCO Las Campanas 90.85 121 P **P** **13 03 29.5 -3.6**
LCO Las Campanas 90.85 121 P **P** **13 03 29.5 -3.6**
LCO pmax pmax
comp=Z,46nm,1.4s
CO01 Juntas del Tor 90.96 122 P **P** **13 03 30.5 -3.0**
CO01 IAmb IAmb 13 03 56.2
comp=Z,24nm,1.2s
WRGLY Wrigley 91.06 20 P **P** **13 03 33.8 +1.1**
baz=226
F30M Barrier River 91.07 13 P **P** **13 03 33.5 +0.9**
baz=215
A22K Sinclair Lake 91.14 6 P **P** **13 03 33.6 +0.8**
baz=197
T35A Sooner Cattle 91.20 51 P **P** **13 03 30.4 -3.6**
T35A IAmb IAmb 13 03 40.6
comp=Z,22nm,1.1s
AC05 El Transito 91.26 121 P **P** **13 03 33.3 -1.5**
E29M Blow River 91.27 12 P **P** **13 03 30.4 -3.1**
E29M IAmb IAmb 13 03 46.0
comp=Z,46nm,2.0s
E29M IAMs_20 IAMs_20 13 38 08.6
comp=Z,2µm,21.0s
E29M Blow River 91.27 12 P **P** **13 03 34.4 +0.8**
baz=213
A21K Barrow 91.30 5 P **P** **13 03 34.4 +0.8**
baz=196
C27K Jago River 91.30 10 IAMs_20 IAMs_20 13 38 35.1
comp=Z,2µm,21.0s
TUL3 Leonard 91.34 52 IAMs_20 IAMs_20 13 39 00.7
comp=Z,2µm,19.0s
C26K Camden Bay 91.37 9 P **P** **13 03 34.9 +1.0**
baz=207
XAN Xi'an 91.38 306 ⇑P **P** **13 03 35.1 +0.1**
XAN pP sP 13 03 39.7 +1.0
XAN SKS **SKSac** **13 14 08.6 +1.7**
XAN S **S** **13 14 32.9 -0.8**
XAN sS sS 13 14 43.7 +5.5
XAN pmax pmax
comp=Z,16nm,2.3s
XAN pmax pmax
comp=Z,550nm,6.2s
XAN L L
comp=Z,750nm,18.6s
XAN L L
comp=Z,290nm,14.0s
XAN L L
comp=Z,610nm,21.3s
F31M Tsiigehtchic 91.39 14 IAMs_20 IAMs_20 13 41 59.6
comp=Z,2µm,19.0s
F31M Tsiigehtchic 91.39 14 P **P** **13 03 34.9 +0.8**
baz=217,SNR=32
441A DeRidder 91.39 58 IAMs_20 IAMs_20 13 45 14.9
comp=Z,2µm,18.0s
D27M Malcolm River 91.43 11 P **P** **13 03 31.7 -2.7**
D27M IAMs_20 IAMs_20 13 40 04.6
comp=Z,1µm,20.0s
D27M Malcolm River 91.43 11 P **P** **13 03 35.0 +0.6**
baz=210
ZON Zonda 91.46 124 P **P** **13 03 34.6 -0.9**
ZON IAmb IAmb 13 03 45.9
comp=Z,19nm,1.2s
ZON Zonda 91.46 124 P **P** **13 03 34.6 -0.9**
ZON pmax pmax
comp=Z,19nm,1.2s
JTS Las Juntas de 91.50 80 LR LR 13 35 44.6
comp=Z,2µm,19.4s,baz=268,slow=30
JTS Las Juntas de 91.50 80 P **P** **13 03 32.4 -3.5**
JTS IAmb IAmb 13 03 42.2
comp=Z,23nm,1.1s
JTS Las Juntas de 91.50 80 IAMs_20 IAMs_20 13 35 33.3
comp=Z,2µm,20.0s
JTS Las Juntas de 91.50 80 P **P** **13 03 32.4 -3.5**
JTS pmax pmax
comp=Z,23nm,1.1s
NNA Nana 91.68 103 LR LR 13 35 58.8
comp=Z,1µm,19.7s,baz=254,slow=30
AC06 Mina Casimiro 91.77 120 IAMs_20 IAMs_20 13 37 49.0
comp=Z,2µm,18.0s
CFA Coronel Fontan 91.78 124 LR LR 13 38 52.4
comp=Z,461nm,18.4s,baz=254,slow=32
TEIG Tepich 91.81 69 IAMs_20 IAMs_20 13 40 06.9
comp=Z,2µm,18.0s
ATAH Atahualpa 91.89 98 LR LR 13 37 03.0
comp=Z,2µm,18.1s,baz=282,slow=30
D28M Stokes Point 91.91 12 P **P** **13 03 37.4 +0.9**
baz=212
KSU1 Kansas State U 92.00 49 IAMs_20 IAMs_20 13 40 07.8
comp=Z,2µm,19.0s
AC01 Pan de Azucar 92.04 119 IAMs_20 IAMs_20 13 39 11.0
comp=Z,2µm,19.0s
HHC Hu-ho-hao-te 92.13 313 ⇓*i*P **P** **13 03 41.5 +3.1**
HHC sP pwP 13 03 50.3 -2.6
HHC S **S** **13 14 43.7 +3.4**
HHC pmax pmax
comp=Z,17nm,0.9s
HHC pmax pmax
comp=Z,470nm,7.6s
INK Inuvik 92.13 14 LR LR 13 43 03.1
comp=Z,1µm,18.1s,baz=221,slow=34
INK Inuvik 92.13 14 P **P** **13 03 34.4 -3.1**
INK IAmb IAmb 13 03 41.0
comp=Z,28nm,1.4s
INK Inuvik 92.13 14 P **P** **13 03 34.4 -3.1**
INK pmax pmax
comp=Z,28nm,1.4s
INK Inuvik 92.13 14 P **P** **13 03 38.3 +0.8**
baz=217,SNR=11
E28A Huff 92.40 41 IAMs_20 IAMs_20 13 41 23.0
comp=Z,2µm,19.0s
AC02 Maricunga 92.98 120 P **P** **13 03 41.1 -2.1**
AC02 IAmb IAmb 13 03 50.1
comp=Z,18nm,1.4s
AC02 IAMs_20 IAMs_20 13 41 55.1
comp=Z,2µm,19.0s
YAK Yakutsk 93.04 337 LR LR 13 42 10.6
comp=Z,614nm,20.1s,baz=114,slow=34
YAK Yakutsk 93.04 337 *e*P **P** **13 03 44.4 +2.5**
YAK pmax pmax
comp=Z,10.0nm,0.6s
YAK pmax pmax
comp=E,4.0nm,1.1s
PB10 IPOC Station P 93.09 116 IAMs_20 IAMs_20 13 38 23.7
comp=Z,2µm,18.0s
KMI2 Kunming 93.19 295 P **P** **13 03 44.5 +0.7**
KMI2 sP sP 13 03 49.1 +1.6
KMI2 S **S** **13 14 54.7 +4.0**
KMI2 SS **SS** **13 21 07.0 +0.4**
KMI2 pmax pmax
comp=Z,14nm,1.1s
KMI2 pmax pmax
comp=Z,410nm,9.1s
KMI2 L L
comp=Z,430nm,20.8s
KMI2 L L
comp=Z,540nm,19.5s
KMI2 L L
comp=Z,950nm,22.2s
BTO2 Baotou 93.27 312 *e*P **P** **13 03 47.0 +3.4**
BTO2 pP **pwP** **13 03 51.9 -6.2**
BTO2 sP sP 13 03 54.2 +6.8
BTO2 SKS **SKSac** **13 14 19.4 +2.1**
BTO2 S **S** **13 14 49.0 -1.4**
BTO2 sS **sS** **13 15 00.5 +5.5**
BTO2 pmax pmax
comp=Z,45nm,1.0s
BTO2 pmax pmax
comp=Z,1µm,9.9s
BTO2 L L
comp=Z,2µm,17.6s
BTO2 L L
comp=Z,1µm,17.8s
BTO2 L L
comp=Z,1µm,19.2s
L34A Svendsen Farm, 93.30 47 IAMs_20 IAMs_20 13 40 25.7
comp=Z,2µm,19.0s
MDND Maddock 93.62 40 IAMs_20 IAMs_20 13 43 16.2
comp=Z,2µm,18.0s
PB05 IPOC Station P 93.64 116 P **P** **13 03 42.7 -3.2**
YKA Yellowknife Ar 93.67 23 P **P** **13 03 45.2 +0.5**
comp=Z,1.4nm,1.0s,baz=251,slow=4.7,SNR=12
YKA PP **PP** **13 07 29.5 -0.6**
comp=Z,0.4nm,0.8s,baz=241,slow=8.7,SNR=4.6
YKA PKKPbc **PKKPbc** **13 20 54.8 +2.5**
comp=Z,0.1nm,0.3s,baz=15,slow=2.9,SNR=3.7
YKA LR LR 13 41 15.4
comp=Z,985nm,19.2s,baz=260,slow=32
comp=Z,1.4nm,1.0s
ECSD EROS Data Cent 93.84 45 P P 13 03 40.9 -5.1
ECSD IAmb IAmb 13 03 52.3
comp=Z,18nm,1.1s
S39A Bolivar 93.85 51 P P 13 03 41.0 -5.2
S39A IAMs_20 IAMs_20 13 41 49.0
comp=Z,2µm,19.0s
VBMS Vicksburg 94.05 57 IAMs_20 IAMs_20 13 40 33.2
comp=Z,2µm,20.0s
OTAV Otavalo 94.30 91 IAMs_20 IAMs_20 13 37 00.3
comp=Z,2µm,20.0s
CMAR Chiang Mai Arr 94.31 288 P **P** **13 03 48.6 -0.2**
comp=Z,8.5nm,0.9s,baz=106,slow=2.9,SNR=43
CMAR LR LR 13 43 14.1
comp=Z,467nm,20.8s,baz=90,slow=34
comp=Z,8.5nm,0.9s
CD2 Chengdu 94.32 301 P **P** **13 03 49.7 +1.1**
CD2 SKS **SKSac** **13 14 17.2 -6.1**
CD2 S **ScS** **13 15 01.0 -0.2**
CD2 pmax pmax
comp=Z,480nm,6.7s
CD2 L L
comp=Z,1µm,21.1s
CD2 L L
comp=Z,990nm,20.0s
PB07 IPOC Station P 94.35 115 IAMs_20 IAMs_20 13 37 18.9
comp=Z,2µm,19.0s
P38A Dawn 94.41 50 IAMs_20 IAMs_20 13 42 08.5
comp=Z,2µm,19.0s
CHTO Chiang Mai 94.43 288 P **P** **13 03 51.3 +2.0**
CHTO Chiang Mai 94.43 288 P **P** **13 03 47.0 -2.3**
CHTO IAmb IAmb 13 03 53.2
comp=Z,10nm,0.9s
CHTO Chiang Mai 94.43 288 P **P** **13 03 47.0 -2.3**
CHTO pmax pmax
comp=Z,10.0nm,0.9s
CHTO Chiang Mai 94.43 288 P **P** **13 03 52.0 +2.7**
PATCX Punta Patache 94.47 114 IAMs_20 IAMs_20 13 39 07.9
comp=Z,1µm,19.0s
PZH PanZhiHua 94.50 296 P **P** **13 03 52.0 +2.4**
PZH SKS **SKSac** **13 14 26.3 +1.6**
PZH S **S** **13 15 01.3 -0.6**
PZH pmax pmax
comp=Z,10.0nm,1.1s
PZH pmax pmax
comp=Z,280nm,8.2s
PZH L L
comp=Z,350nm,18.2s
PZH L L
comp=Z,360nm,19.4s
PZH L L
comp=Z,460nm,20.2s
TA01 Diego Aracena 94.54 114 IAMs_20 IAMs_20 13 40 45.9
comp=Z,1µm,19.0s
346A Big Creek Wild 94.60 58 IAMs_20 IAMs_20 13 42 24.1
comp=Z,1µm,19.0s
PB09 IPOC Station P 94.87 115 IAMs_20 IAMs_20 13 39 16.8
comp=Z,2µm,19.0s
F33A 5 Mile Ranch, 94.88 43 IAMs_20 IAMs_20 13 43 02.8
comp=Z,2µm,19.0s
N38A Joes South For 95.05 49 IAMs_20 IAMs_20 13 43 03.2
comp=Z,2µm,18.0s
C36M Paulatuk 95.18 16 IAMs_20 IAMs_20 13 42 55.9
comp=Z,2µm,19.0s
C36M Paulatuk 95.18 16 P **P** **13 03 52.3 +0.8**
baz=226
T42A Van Buren 95.27 53 IAMs_20 IAMs_20 13 40 44.9
comp=Z,2µm,20.0s
AF01 San Pedro de A 95.32 116 IAMs_20 IAMs_20 13 37 59.7
comp=Z,2µm,20.0s
146A Union 95.35 57 IAMs_20 IAMs_20 13 42 11.7
comp=Z,2µm,19.0s
Y45A Yeager Farm, C 95.38 56 IAMs_20 IAMs_20 13 41 35.3
comp=Z,2µm,18.0s
P40A Paris 95.44 50 IAMs_20 IAMs_20 13 42 40.9
comp=Z,2µm,19.0s
CIT Chita 95.49 323 *e*P **P** **13 03 52.2 -1.2**
CIT pmax pmax
comp=Z,89nm,2.9s
CCM Cathedral Cave 95.52 52 IAMs_20 IAMs_20 13 42 07.1
comp=Z,1µm,19.0s
LZH Lanzhou 96.00 306 *e*P **P** **13 03 56.6 +0.3**
LZH pP sP 13 04 01.2 +1.1
LZH pmax pmax
comp=Z,440nm,4.8s
LZH L L
comp=Z,640nm,17.5s
LZH L L
comp=Z,730nm,17.2s
LZH L L
comp=Z,980nm,17.2s
LZDM Lanzhou Array 96.07 306 LR LR 13 44 21.0
comp=Z,314nm,21.9s,baz=80,slow=34
AGMN Agassiz Nation 96.09 41 P **P** **13 03 53.0 -3.2**
AGMN IAmb IAmb 13 04 06.2
comp=Z,28nm,1.8s
I37A Lemond, Waseca 96.10 46 IAMs_20 IAMs_20 13 43 52.5
comp=Z,2µm,19.0s
PB18 Visviri 96.29 111 IAMs_20 IAMs_20 13 39 56.1
comp=Z,2µm,19.0s
BRAL Brewton 96.48 59 IAMs_20 IAMs_20 13 43 43.0
comp=Z,1µm,19.0s
N41A Harden Midland 96.71 49 IAMs_20 IAMs_20 13 46 29.3
comp=Z,2µm,18.0s
A36M Sachs Harbour 96.77 13 P **P** **13 03 55.8 -2.9**
A36M IAmb IAmb 13 04 03.7
comp=Z,14nm,0.8s
A36M IAMs_20 IAMs_20 13 45 32.0
comp=Z,2µm,19.0s
A36M Sachs Harbour 96.77 13 P **P** **13 03 58.8 +0.1**
baz=225,SNR=18
TNCH TengChong 96.78 294 P **P** **13 04 02.8 +2.7**
TNCH pP sP 13 04 05.0 +1.2
TNCH SKS **SKSac** **13 14 39.3 +2.4**
TNCH S **SKKSac** **13 15 11.6 +8.5**
TNCH sS sS 13 15 28.2 +1.9
TNCH pmax pmax
comp=Z,150nm,3.3s
TNCH L L
comp=Z,210nm,4.6s
TNCH L L
comp=Z,230nm,6.3s
TNCH L L
comp=Z,610nm,18.8s
ULM Lac du Bonnet 96.83 39 P **P** **13 04 01.2 +1.7**
comp=Z,1.0nm,0.4s,baz=6.4,slow=3.6,SNR=4.8
ULM LR LR 13 44 01.4
comp=Z,2µm,18.4s,baz=245,slow=33
comp=Z,1.0nm,0.4s
S44A Carbondale 96.88 53 IAMs_20 IAMs_20 13 43 26.3
comp=Z,1µm,19.0s
L40A Anamosa 96.91 48 IAMs_20 IAMs_20 13 44 56.4
comp=Z,1µm,19.0s
SPMN Marine on St. 96.92 45 P **P** **13 03 57.2 -2.8**
T45A Paducah 97.11 53 IAMs_20 IAMs_20 13 43 15.7
comp=Z,2µm,18.0s
LRAL Lakeview Retre 97.12 58 IAMs_20 IAMs_20 13 43 17.6
comp=Z,2µm,19.0s
P43A Skaggs, Pawnee 97.32 51 IAMs_20 IAMs_20 13 43 55.6
comp=Z,2µm,18.0s
451A Vernon 97.37 60 IAMs_20 IAMs_20 13 45 14.7
comp=Z,1µm,18.0s
Q44A Meyer Farm, Va 97.45 51 IAMs_20 IAMs_20 13 43 52.2
comp=Z,2µm,19.0s
X48A Hartselle 97.53 56 IAMs_20 IAMs_20 13 42 32.2
comp=Z,2µm,20.0s
ULN Ulaanbaatar 97.78 318 *i* P Pdif 13 04 04.5 +0.4
ULN pmax pmax
comp=Z,2.0nm,1.0s
JFWS Jewell Farm 97.87 47 IAMs_20 IAMs_20 13 46 54.8
comp=Z,1µm,18.0s
L42A Oliver, Polo 97.98 48 IAMs_20 IAMs_20 13 43 50.9
comp=Z,2µm,19.0s
LPAZ La Paz 97.98 110 LR LR 13 40 03.5
comp=Z,2µm,19.8s,baz=266,slow=30
SONM Songino Array 98.18 318 P **P** **13 04 05.4 -0.5**
comp=Z,0.3nm,0.4s,baz=114,slow=3.7,SNR=4.5
SONM PP **PP** **13 08 08.1 +2.5**
comp=Z,0.3nm,0.3s,baz=118,slow=5.7,SNR=4.0
SONM LR LR 13 44 23.2
comp=Z,597nm,21.1s,baz=104,slow=33
comp=Z,0.3nm,0.4s
SONM Songino Array 98.18 318 IAmb IAmb 13 04 13.7
comp=Z,14nm,2.0s
553A Crawfordville 98.32 61 IAMs_20 IAMs_20 13 46 48.0
comp=Z,2µm,18.0s
G40A Rib Lake 98.67 45 IAMs_20 IAMs_20 13 45 48.6
comp=Z,1µm,18.0s
152A Waverly Hall 98.83 59 IAMs_20 IAMs_20 13 44 54.1
comp=Z,1µm,18.0s
M44A Midewin, Midew 98.94 49 IAMs_20 IAMs_20 13 43 18.4
comp=Z,2µm,20.0s
P46A Rosedale 99.00 51 IAMs_20 IAMs_20 13 44 58.4
comp=Z,2µm,18.0s
TIXI Tiksi 99.06 344 P **Pdif** **13 04 06.4 -2.7**
TIXI IAmb IAmb 13 04 12.5
comp=Z,13nm,1.4s
TIXI Tiksi 99.06 344 *ce*P **Pdif** **13 04 08.6 -0.4**
TIXI pmax pmax
comp=Z,10.0nm,2.5s
I42A Draeger Farm, 99.11 47 IAMs_20 IAMs_20 13 45 19.4
comp=Z,1µm,19.0s
W50A Signal Mountai 99.11 56 IAMs_20 IAMs_20 13 43 11.1
comp=Z,2µm,20.0s
K43A Burlington 99.14 48 IAMs_20 IAMs_20 13 50 31.5
comp=Z,1µm,18.0s
L44A Lake County Fo 99.28 49 IAMs_20 IAMs_20 13 44 40.2
comp=Z,1µm,19.0s
X51A Calhoun 99.28 57 IAMs_20 IAMs_20 13 46 02.7
comp=Z,2µm,18.0s
061Z Ochoppi 100.02 66 IAMs_20 IAMs_20 13 45 17.0
comp=Z,1µm,18.0s
GOGA Godfrey 100.05 58 IAMs_20 IAMs_20 13 46 37.4
comp=Z,2µm,18.0s
H43A Windswept, Lux 100.07 46 IAMs_20 IAMs_20 13 45 39.7
comp=Z,1µm,19.0s
154A Montrose 100.11 59 IAMs_20 IAMs_20 13 45 28.1
comp=Z,1µm,19.0s
R49A Shelbyville 100.13 53 IAMs_20 IAMs_20 13 45 36.4
comp=Z,2µm,18.0s
GTA2 Gaotai 100.14 308 *e*P **Pdif** **13 04 18.8 +4.0**
GTA2 sP pwP 13 04 24.9 -4.4
GTA2 SKS **SKSac** **13 14 57.5 +4.3**
GTA2 pmax pmax
comp=Z,2.0nm,1.0s
GTA2 L L
comp=Z,530nm,19.0s
GTA2 L L
comp=Z,430nm,18.1s
GTA2 L L
comp=Z,850nm,20.9s
W52A Murphy 100.17 56 IAMs_20 IAMs_20 13 44 04.1
comp=Z,2µm,20.0s
MORE Moreh 100.20 292 IAMs_20 IAMs_20 13 44 39.8
comp=Z,461nm,21.0s
P48A Milroy 100.27 52 IAMs_20 IAMs_20 13 46 17.1
comp=Z,2µm,19.0s
O48B Farmland 100.70 51 IAMs_20 IAMs_20 13 45 07.3
comp=Z,1µm,18.0s
R50A Paris 100.76 53 IAMs_20 IAMs_20 13 44 06.3
comp=Z,2µm,20.0s
060A Indiantown 100.83 65 IAMs_20 IAMs_20 13 43 35.0
comp=Z,1µm,21.0s
I45A Fountain 101.00 47 IAMs_20 IAMs_20 13 45 12.5
comp=Z,1µm,19.0s
O49A Covington 101.28 51 IAMs_20 IAMs_20 13 46 55.8
comp=Z,1µm,19.0s
Q51A Peebles 101.70 53 IAMs_20 IAMs_20 13 46 08.1
comp=Z,2µm,18.0s
GLMI Grayling 102.33 47 IAMs_20 IAMs_20 13 46 13.6
comp=Z,2µm,20.0s
Q52A Bidwell 102.50 53 IAMs_20 IAMs_20 13 45 12.2
comp=Z,1µm,20.0s
M50A Fremont 102.55 50 IAMs_20 IAMs_20 13 46 42.2
comp=Z,2µm,18.0s
N51A Ashland 102.92 51 IAMs_20 IAMs_20 13 47 00.9
comp=Z,1µm,19.0s
E46A Sault Ste Mari 102.93 45 IAMs_20 IAMs_20 13 48 38.4
comp=Z,1µm,18.0s
O52A Adamsville 103.11 52 IAMs_20 IAMs_20 13 46 16.3
comp=Z,2µm,19.0s
K50A Casco 103.20 49 IAMs_20 IAMs_20 13 46 36.1
comp=Z,2µm,19.0s
Y58A Scranton 103.24 59 IAMs_20 IAMs_20 13 49 34.7
comp=Z,1µm,18.0s
U56A King 103.28 56 IAMs_20 IAMs_20 13 46 11.5
comp=Z,2µm,19.0s
W57A Gilead 103.29 57 IAMs_20 IAMs_20 13 46 49.9
comp=Z,2µm,19.0s
N53A Lisbon 104.02 51 IAMs_20 IAMs_20 13 47 21.2
comp=Z,1µm,20.0s
V58A Windy Hill, Pi 104.14 57 IAMs_20 IAMs_20 13 46 47.4
comp=Z,2µm,19.0s
MCWV Mont Chateau 104.49 53 IAMs_20 IAMs_20 13 46 32.9
comp=Z,2µm,20.0s
W59A Clinton 104.53 58 IAMs_20 IAMs_20 13 46 40.7
comp=Z,1µm,20.0s
SSPA Standing Stone 106.17 52 IAMs_20 IAMs_20 13 49 04.2
comp=Z,1µm,19.0s
SDDR Presa de Saban 106.71 75 IAMs_20 IAMs_20 13 44 47.6
comp=Z,2µm,21.0s
L56A Greenwood 106.71 51 IAMs_20 IAMs_20 13 52 40.3
comp=Z,1µm,19.0s
N58A Sunbury 107.08 52 IAMs_20 IAMs_20 13 50 00.3
comp=Z,1µm,19.0s
S61A Accomac 107.25 56 IAMs_20 IAMs_20 13 48 42.5
comp=Z,2µm,20.0s
PALK Pallekele 107.78 272 IAMs_20 IAMs_20 13 54 12.2
comp=Z,1µm,20.0s
BINY Binghamton 107.87 51 IAMs_20 IAMs_20 13 48 45.1
comp=Z,2µm,20.0s
PAL Palisades 109.20 52 IAMs_20 IAMs_20 13 49 10.6
comp=Z,2µm,20.0s
LONY Lake Ozonia 109.28 48 IAMs_20 IAMs_20 13 53 41.9
comp=Z,1µm,19.0s
TRY Troy 109.65 51 IAMs_20 IAMs_20 13 50 17.1
comp=Z,2µm,19.0s

WMQ **Urumqi** **109.89 311** Pdif **Pdif** **13 04 45.7 -12**
WMQ LR LR
comp=E,670nm,19.5s
WMQ LR LR
comp=Z,810nm,21.5s
J61A **Chester** **110.55 50** IAMs_20 IAMs_20 13 50 04.7
comp=Z,1μm,20.0s
M63A **Gales Ferry** **110.65 52** IAMs_20 IAMs_20 13 50 12.9
comp=Z,2μm,20.0s
SJG **San Juan** **111.20 78** IAMs_20 IAMs_20 13 49 43.9
comp=Z,930nm,18.0s
I62A **Tamworth** **111.49 50** IAMs_20 IAMs_20 13 51 19.6
comp=Z,1μm,19.0s
G62A **West of Eustis** **112.21 48** IAMs_20 IAMs_20 13 51 45.3
comp=Z,1μm,20.0s
HYB **Hyderabad** **112.63 281** *e*PKiKP **PKiKP** **13 09 04.1 -1.9**
HYB *e*PP **PP** **13 09 52.4 -0.8**
HYB *e*SKSac **SKSac** **13 15 47.7 -1.5**
ZALV **Zalesovo Beam** **112.71 321** PKiKP **PKiKP** **13 09 04.6 -0.5**
comp=Z,1.2nm,0.6s,baz=180,slow=0.1,SNR=8.0
E62A **Clayton Lake** **113.03 47** IAMs_20 IAMs_20 13 52 39.9
comp=Z,2μm,19.0s
PKME **Peaks-Kenny Pk** **113.09 48** IAMs_20 IAMs_20 13 52 21.5
comp=Z,1μm,19.0s
MKAR **Makanchi Array** **113.99 313** PKiKP **PKiKP** **13 09 06.7 -1.1**
comp=Z,2.8nm,0.8s,baz=78,slow=3.0,SNR=16
MKAR PKKPbc **PKKPab** **13 19 54.6 -0.4**
comp=Z,0.8nm,0.9s,baz=90,slow=1.2,SNR=5.3
MKAR **Makanchi Array** **113.99 313** **PKiKP** **13 09 05.5 -2.3**
HMDM **Hanimaadhoo** **114.72 269** IAMs_20 IAMs_20 13 58 06.5
comp=Z,1μm,20.0s
KURK **Kurchatov** **116.49 318** PKiKP **PKPdf** **13 09 12.4 0.0**
KURBB **Kurchatov Arra** **116.55 318** PKhKP PKPpre 13 09 05.5
comp=Z,0.1nm,0.2s,baz=87,slow=5.8,SNR=4.1
KURBB PKP **PKPdf** **13 09 12.3 -0.2**
comp=Z,2.9nm,0.9s,baz=92,slow=1.9,SNR=25
KURBB PP **PP** **13 10 17.7 -2.3**
comp=Z,1.3nm,1.1s,baz=93,slow=6.9,SNR=4.3
KURBB PKKPbc **PKKPab** **13 19 46.3 +2.8**
comp=Z,1.0nm,0.9s,baz=269,slow=4.0,SNR=9.0
KSH2 **Kashi** **118.53 305** PKP **PKiKP** **13 09 19.9 +2.9**
SPITS **Spitsbergen Ar** **121.12 358** PKP **PKPdf** **13 09 20.6 0.0**
comp=Z,18nm,0.8s,baz=308,slow=7.1,SNR=8.2
BVAR **Borovoye Array** **121.36 321** PKP **PKPdf** **13 09 21.4 -0.4**
comp=Z,6.2nm,0.8s,baz=81,slow=2.0,SNR=19
BORK **Borovoye** **121.40 321** **PKPdf** **13 09 20.6 -1.2**
BORK **Borovoye** **121.40 321** PKiKP **PKPdf** **13 09 20.6 -1.2**
GAR **Garm** **122.61 304** **PKPdf** **13 09 21.8 -3.0**
KBL **Kabul** **123.59 299** **PKPdf** **13 09 23.2 -3.6**
KBL **Kabul** **123.59 299** PKiKP **PKPdf** **13 09 23.3 -3.6**
ARTI **Arti** **127.14 327** *i* PKiKP **PKiKP** **13 09 36.5 +3.3**
ARTI 13 11 37.1
ARTI SP SP 13 21 31.6 -1.8
ARTI MLR MLR
comp=Z,1μm,22.0s
ABKAR **Akbulak array** **128.60 318** **PKPdf** **13 09 32.9 -2.8**
ARCES **ARCESS Array B** **128.72 352** PKP **PKPdf** **13 09 35.5 +0.1**
comp=Z,9.5nm,0.9s,baz=341,slow=2.6,SNR=4.8
APA **Apatity** **129.12 347** ⇓ *i* PKiKP **PKPdf** **13 09 36.0 -0.2**
APA *e* 13 11 40.6
APA pmax pmax
comp=Z,10.0nm,1.2s
AKTO **Aktyubinsk** **129.44 320** PKP **PKPdf** **13 09 37.6 +0.4**
comp=Z,2.0nm,0.6s,baz=67,slow=2.6,SNR=6.1
KIRV **Kirov** **130.39 332** PKP **PKPdf** **13 09 39.2 +0.5**
comp=Z,9.2nm,0.7s,baz=17,slow=2.5,SNR=3.6
KLMR **Klimovskoe** **132.78 339** *e*PKiKP **PKiKP** **13 09 44.4 0.0**
KLMR pmax pmax
comp=Z,13nm,1.1s
BELG **Belogornoye** **134.55 326** PKP **PKiKP** **13 09 47.8 -0.5**
comp=Z,23nm,0.9s,baz=333,slow=1.2,SNR=4.7
FINES **FINESS Array B** **136.03 347** PKP **PKPdf** **13 09 49.9 +0.6**
comp=Z,6.2nm,0.9s,baz=72,slow=6.2,SNR=6.3
FINES **FINESS Array B** **136.03 347** **PKPdf** **13 09 45.8 -3.5**
OBN **Obninsk** **138.02 335** ⇓ *e*PKiKP **PKPdf** **13 09 53.7 +0.5**
OBN *i* 13 09 56.9
OBN PPP PPP 13 15 44.0
OBN 13 16 54.0
OBN *e*PS **PS** **13 22 59.8 -10**
OBN SSS SSS 13 36 05.0
OBN pmax pmax
comp=Z,29nm,1.7s
NB2 **NORSAR Subarra** **138.41 357** PKP **PKiKP** **13 09 57.3 +1.4**
comp=Z,16nm,1.2s,baz=13,slow=4.0
NOA **NORSAR Array B** **138.41 357** PKP **PKPdf** **13 09 54.6 +0.8**
comp=Z,3.7nm,0.9s,baz=13,slow=4.1,SNR=5.0
LPSR **Galich'ya Gora** **138.74 331** *e*PKiKP **PKiKP** **13 09 57.3 +0.5**
LPSR pmax pmax
comp=Z,29nm,1.0s
MAK **Makhachkala** **138.81 314** *i* P **Pdif** **13 07 02.5 -4.0**
MAK *i* 13 09 52.4
MAK *e* 13 12 41.3
MAK *e* 13 17 01.4
MAK pmax pmax
comp=Z,19nm,0.3s
HFS **Hagfors** **139.15 355** PKP **PKPdf** **13 09 54.8 -0.4**
comp=Z,5.7nm,0.8s,baz=192,slow=1.4,SNR=4.1
AKT **Akhty** **139.18 312** *e*PKiKP **PKiKP** **13 09 57.5 -0.7**
AKT pmax pmax
comp=Z,11nm,1.0s
AKT MLR MLR
comp=Z,993nm,20.0s
VORR **Voronezh** **139.21 330** *e*PKHKP PKPpre 13 09 47.2
KBZ **Khabaz** **141.55 317** PKP **PKPdf** **13 09 58.3 -1.6**
comp=Z,2.0nm,1.0s,baz=114,slow=2.5,SNR=4.2
KIV **Kislovodsk** **141.58 317** IAMs_20 IAMs_20 14 18 50.7
comp=Z,793nm,20.0s
KIV **Kislovodsk** **141.58 317** *i* PKiKP **PKiKP** **13 10 04.2 +1.2**
KIV pmax pmax
comp=Z,8.0nm,1.0s
ERBR **Yeremizino-Bor** **142.05 321** *i* PKiKP **PKiKP** **13 10 04.9 +1.1**
ERBR pmax pmax
comp=Z,20nm,0.7s
LABN **Labinsk** **142.47 320** *i* PKiKP **PKiKP** **13 10 05.0 +0.3**
LABN pmax pmax
comp=Z,45nm,0.5s
KIBK **Kibwezi** **142.62 238** **PKPdf** **13 10 00.8 -2.1**
KIBK IAMs_20 IAMs_20 14 08 04.5
comp=Z,712nm,19.0s
SOC **Sochi** **143.63 319** *i* PKiKP **PKiKP** **13 10 12.1 +5.0**
SOC *e* 13 13 11.8
SOC *e*SS SS 13 31 51.6 -5.7
SOC *e*SSS SSS 13 37 23.2
SOC MLR MLR
comp=Z,1μm,22.0s
RAYN **Ar Rayn** **144.09 283** PKPbc 13 10 03.6 +0.4
RAYN **Ar Rayn** **144.09 283** PKiKP PKPbc 13 10 03.6 +0.4
RAYN MLR MLR
comp=Z,600nm,20.0s
AKASG **Malin Array Be** **144.27 336** PKhKP PKPpre 13 09 59.9
comp=Z,0.7nm,0.4s,baz=35,slow=3.1,SNR=23
AKASG PKP **PKPdf** **13 10 04.6 0.0**
comp=Z,4.4nm,0.8s,baz=35,slow=2.2,SNR=8.9
AKBB **Malin Array Si** **144.27 336** **PKPab** **13 10 01.2 -1.2**
AKBB **Malin Array Si** **144.27 336** PKiKP **PKPab** **13 10 01.3 -1.2**
AK04 **Malin Array Si** **144.28 336** PKP **PKPdf** **13 10 04.7 +0.1**
KIEV **Kiev** **144.28 336** **PKPab** **13 10 02.0 -0.5**
KIEV **Kiev** **144.28 336** PKiKP **PKPab** **13 10 02.0 -0.5**
GURO **Guroymak-BITLI** **144.31 310** **PKPab** **13 10 03.4 +0.2**
ANN **Anapa** **144.35 322** *i* PKiKP **PKiKP** **13 10 13.7 +5.2**
ANN pmax pmax
comp=Z,23nm,0.9s
AK07 **Malin Array Si** **144.40 336** PKP **PKPdf** **13 10 05.0 +0.2**
RNPP9 **Sopachiv** **144.88 339** PKP **PKPab** **13 10 04.6 -0.1**
RNPP8 **Varash** **144.96 339** PKP **PKPab** **13 10 04.7 -0.3**
RNPP5 **Staryi Chortor** **145.04 339** PKP **PKPab** **13 10 05.2 -0.1**
LUBAR **Lubar, Ukraine** **145.46 336** PKP **PKPbc** **13 10 06.3 -0.4**
BSEG **Bad Segeberg** **145.55 357** *e*PKPbc **PKiKP** **13 10 10.9 +0.3**
baz=7.9,slow=2.6
R9F13 **Warsaw-Wawer** **145.55 345** *e*PKP **PKiKP** **13 10 10.3 -0.4**
BEL **Belsk** **145.99 345** *e*PKP **PKiKP** **13 10 12.5 +0.8**
SIM **Simferopol'** **146.13 325** *e*PKP2 **PKiKP** **13 10 12.2 0.0**
SIM pmax pmax
comp=Z,74nm,0.8s
SIM pmax pmax
comp=Z,300nm,6.0s
SORM **Soroca** **146.64 334** ⇓ P **PKPbc** **13 10 10.8 +0.5**
SORM **Soroca** **146.64 334** ⇓ PKP2 **PKPbc** **13 10 10.8 +0.5**
SORM **Soroca** **146.64 334** PKP **PKPdf** **13 10 09.6 +0.9**
RUE **Ruedersdorf** **146.68 353** *e*PKPbc **PKiKP** **13 10 13.9 +0.9**
baz=7.9,slow=2.6
KMPD **K-Podol'skiy** **147.06 336** PKP **PKPdf** **13 10 09.9 +0.5**
KMPD PKP **pPKPdf** **13 10 10.5 -1.8**
FLTG **Flechtingen** **147.08 355** *e*PKPbc **PKiKP** **13 10 14.7 +0.8**
baz=7.9,slow=2.6

PURM **Purcari** **147.19 330** ⇑ P **PKPbc** **13 10 11.6 -0.4**
IBBN **Ibbenburen** **147.26 359** *e*PKPbc **PKiKP** **13 10 15.7 +1.4**
baz=7.9,slow=2.6
ASSE **Asse, Remlinge** **147.32 356** *e*PKPbc **PKiKP** **13 10 15.3 +1.0**
baz=7.9,slow=2.6
KWP **Kalwaria Pacla** **147.44 341** *e*PKP **PKiKP** **13 10 16.3 +1.5**
CLZ **Clausthal** **147.63 356** *e*PKPbc **PKiKP** **13 10 16.4 +1.3**
baz=7.9,slow=2.6
FURI **Furi** **147.65 255** IAMs_20 IAMs_20 14 14 12.6
comp=Z,906nm,20.0s
OJC **Ojcow** **147.72 345** *e*PKP **PKPab** **13 10 16.4 +0.8**
OJC **Ojcow** **147.72 345** PKP **PKPbc** **13 10 12.2 -1.1**
KSP **Ksiaz** **147.89 349** *e*PKP **PKiKP** **13 10 15.2 -0.5**
CLL **Collm** **147.93 353** *i* PKP2 **PKPbc** **13 10 14.8 +1.0**
CLL MLR MLR
comp=Z,1μm,19.1s
CLL **Collm** **147.93 353** *i* PKPbc **PKPbc** **13 10 14.8 +1.0**
CLL *i* x x 13 10 16.6
comp=Z,54nm,1.0s
CLL *i* x x 13 10 19.3
comp=Z,60nm,1.0s
CLL *i* x x 13 10 23.7
CLL *e*PKPlp 13 10 39.0
CLL *e*PP **PP** **13 13 41.0 +0.6**
CLL *e*PSKS 13 24 12.0
CLL *e*SSS SSS 13 38 18.0
CLL *e*SSSS 13 42 30.0
CLL AMS AMS 14 20 00.0
comp=Z,1μm,19.1s
CLL AMS AMS 14 23 00.0
comp=N,700nm,18.3s
CLL AMS AMS 14 23 00.0
comp=E,700nm,20.5s
CLL **Collm** **147.93 353** *e*PKPbc **PKPab** **13 10 17.1 +0.7**
baz=7.9,slow=2.6
GTTG **Gottingen** **147.95 357** *e*PKPbc **PKPab** **13 10 17.5 +1.1**
baz=7.9,slow=2.6
BZK **Bozkurt** **148.03 320** ⇑ P **PKiKP** **13 10 15.7 -0.5**
STHS **Stebnicka Huta** **148.07 342** *e*PKP2 **PKPab** **13 10 17.3 +0.3**
STHS **Stebnicka Huta** **148.07 342** *e*PKP **PKPab** **13 10 17.3 +0.3**
LODK **Lodwar** **148.08 244** **PKPbc** **13 10 15.7 +0.2**
LODK IAMs_20 IAMs_20 14 25 18.4
comp=Z,824nm,19.0s
BUG **Bochum–Univer** **148.14 360** *e*PKPbc **PKPab** **13 10 18.1 +1.0**
baz=7.9,slow=2.6
NEUB **Neuenburg** **148.15 354** *e*PKPbc **PKPab** **13 10 17.6 +0.4**
baz=7.9,slow=2.6
OSTC **Ostas** **148.18 349** *e*PKP2 **PKPab** **13 10 18.6 +1.2**
OSTC **Ostas** **148.18 349** ⇑ *e*PKP **PKPab** **13 10 18.6 +1.2**
BRG **Berggiesshubel** **148.23 352** *e*PKPbc **PKPab** **13 10 18.0 +0.4**
baz=7.9,slow=2.6
BURAR **Bucovina Array** **148.31 336** ⇑ P **PKiKP** **13 10 17.0 +0.3**
BURAR **Bucovina Array** **148.31 336** ⇑ PKP2 **PKiKP** **13 10 17.0 +0.3**
NIE **Niedzica** **148.33 343** *e*PKP **PKPab** **13 10 18.8 +0.7**
GAZ **Gaziantep** **148.36 310** **PKPab** **13 10 14.2 -1.3**
KASTN **Kahler Asten** **148.36 358** *e*PKPbc **PKPab** **13 10 18.4 +0.3**
baz=7.9,slow=2.6
DPC **Dobruska-Polom** **148.36 349** *e*PKP2 **PKiKP** **13 10 16.1 -0.6**
DPC **Dobruska-Polom** **148.36 349** ⇑ *e*PKP **PKiKP** **13 10 16.1 -0.6**
DPC *e*PKPAB **sPKPab** **13 10 22.0 0.0**
STEB **Steborice** **148.46 347** ⇑ *e*PKP **PKiKP** **13 10 16.2 -0.7**
BNN **Bunyan** **148.54 314** **PKPbc** **13 10 15.7 -0.4**
HSKC **Hora Svate Kat** **148.56 352** ⇑ *e*PKP **PKPab** **13 10 19.9 +0.9**
TESR **Tescani** **148.64 334** ⇑ P **Pn** **13 10 19.7 +3.2**
MORC **Moravsky Berou** **148.66 347** ⇑ P **PKPab** **13 10 19.2 -0.2**
MORC **Moravsky Berou** **148.66 347** ⇑ PKP2 **PKPab** **13 10 19.2 -0.2**
MORC **Moravsky Berou** **148.66 347** *e*PKP **PKiKP** **13 10 17.4 +0.1**
GHRR **148.67 332** ⇓ P **P** **13 10 16.9 -4.0**
TLCR **148.69 330** ⇑ P **PKPbc** **13 10 15.6 -0.3**
TLCR **148.69 330** ⇑ PKP2 **PKPbc** **13 10 15.6 -0.3**
UCC **Uccle** **148.71 3** *d*PKP **PKPbc** **13 10 19.5 0.0**
CIDE **Kastamonu/Cide** **148.71 321** ⇑ P **PKPbc** **13 10 16.5 +0.4**
MOX **Moxa** **148.72 354** *e*PKPbc **PKPab** **13 10 19.3 -0.3**
baz=7.9,slow=2.6
LANS **Liptovska Anna** **148.79 344** *e*PKP2 **PKiKP** **13 10 18.1 +0.5**
LANS **Liptovska Anna** **148.79 344** *e*PKP **PKiKP** **13 10 18.1 +0.5**
TANN **Tannenbergstha** **148.87 353** *e*PKPbc **PKPab** **13 10 19.8 -0.5**
baz=7.9,slow=2.6
BMR **Baia Mare** **148.89 338** ⇑ P **PKPab** **13 10 20.0 -0.4**
BMR **Baia Mare** **148.89 338** ⇑ PKP2 **PKPab** **13 10 20.0 -0.4**
MEM **Membach** **148.96 1** *d*PKP **PKiKP** **13 10 18.1 +0.2**
JURR **Jurilovca** **148.97 329** ⇑ P **PKiKP** **13 10 17.7 -0.3**
BSTI **Sart Tilman** **148.97 2** *d*PKP **PKPbc** **13 10 17.1 +0.6**
BTNL **Ternell** **148.98 1** *d*PKP **PKPab** **13 10 20.3 -0.3**
MAUC **Maruska** **148.99 346** ⇑ *e*PKP **PKiKP** **13 10 18.1 +0.1**
PRU **Pruhonice** **149.01 351** *e*PKP2 **PKiKP** **13 10 17.8 -0.2**
PRU **Pruhonice** **149.01 351** ⇑ *e*PKP **PKiKP** **13 10 17.8 -0.2**
CFR **Carcaliu** **149.01 330** ⇓ P **PKPbc** **13 10 16.6 -0.2**
CFR **Carcaliu** **149.01 330** ⇓ PKP2 **PKPbc** **13 10 16.6 -0.2**
VRI **Vrincioaia** **149.11 333** ⇓ P **PKPbc** **13 10 16.3 -0.8**
VRI **Vrincioaia** **149.11 333** ⇓ PKP2 **PKPbc** **13 10 16.3 -0.8**
TPGR **Topolog** **149.12 330** ⇓ P **PKPbc** **13 10 17.5 +0.3**
BCLA **Clavier** **149.13 2** *d*PKP **PKiKP** **13 10 19.4 +1.2**
BGES **Gesves** **149.15 2** *d*PKPdf **PKPdf** **13 10 12.9 +0.1**
BGES *d*PKP **PKiKP** **13 10 18.3 0.0**
PLOR **Plostina** **149.16 333** ⇓ P **P** **13 10 18.5 -4.1**
PLOR **Plostina** **149.16 333** ⇓ PKP2 **PKiKP** **13 10 18.5 0.0**
BHOU **Houvegnez** **149.21 1** *d*PKP **PKPbc** **13 10 17.5 +0.3**
BMRD **Maredsous** **149.22 3** *d*PKP **PKiKP** **13 10 19.6 +1.3**
VRAC **Vranov** **149.30 348** PKPbc **PKPbc** **13 10 15.9 -1.5**
comp=Z,11nm,0.9s,baz=60,slow=2.5,SNR=9.8
VRAC **Vranov** **149.30 348** ⇑ P **PKPab** **13 10 21.3 -0.7**
VRAC **Vranov** **149.30 348** *e*PKP **PKiKP** **13 10 19.6 +1.0**
MANZ **Manzenberg** **149.33 354** *e*PKPbc **PKPab** **13 10 21.1 -1.0**
baz=7.9,slow=2.6
TNS **Taunus Mts** **149.34 358** *e*PKPbc **PKPab** **13 10 21.0 -1.1**
baz=7.9,slow=2.6
COVR **Voineasa-Covas** **149.35 333** ⇑ P **P** **13 10 20.5 -1.9**
MBAR **Mbarara** **149.37 232** PKPbc **PKPbc** **13 10 17.1 -1.8**
MBAR **Mbarara** **149.37 232** IAMs_20 IAMs_20 14 22 04.7
comp=Z,956nm,18.0s
MBAR **Mbarara** **149.37 232** PKP2 **PKPbc** **13 10 17.1 -1.8**
RCHB **Rochefort** **149.39 2** *d*PKP **PKPdf** **13 10 15.5 +2.3**
TIRR **Tirgusor** **149.42 329** ⇑ P **PKiKP** **13 10 18.6 -0.4**
TIRR **Tirgusor** **149.42 329** **PKPdf** **13 10 14.5 +1.1**
TIRR **Tirgusor** **149.42 329** PKiKP **PKPdf** **13 10 14.5 +1.1**
DOU **Dourbes** **149.42 3** *d*PKP **PKPab** **13 10 20.8 -1.6**
JAVC **Velka Javorina** **149.50 346** *e*PKP **PKPab** **13 10 21.3 -1.6**
MESR **Meseseni** **149.53 338** ⇓ P **PKPab** **13 10 21.8 -1.1**
ROTZ **Rotzenmuhle** **149.53 353** *e*PKPbc **PKPab** **13 10 21.4 -1.5**
baz=7.9,slow=2.6
BR131 **Keskin Array S** **149.54 317** **PKPbc** **13 10 19.0 +0.5**
BR131 **Keskin Array S** **149.54 317** PKP2 **PKPbc** **13 10 19.0 +0.5**
BRTR **Keskin Array B** **149.54 317** PKPbc **PKPbc** **13 10 18.9 +0.3**
comp=Z,21nm,0.9s,baz=131,slow=2.8,SNR=20
BRTR **Keskin Array B** **149.54 317** **PKPbc** **13 10 16.9 -1.6**
BRTR **Keskin Array B** **149.54 317** PKP2 **PKPbc** **13 10 17.0 -1.6**
KRUC **Moravsky** **149.58 348** *e*PKP **PKiKP** **13 10 19.7 +0.5**
DOPR **Dopca** **149.60 334** ⇑ P **P** **13 10 18.6 -2.0**
ZVC **Zvikov** **149.60 351** ⇑ *e*PKP **PKiKP** **13 10 19.4 +0.2**
CJR **Cluj-Napoca** **149.67 337** ⇑ P **PKPab** **13 10 22.8 -0.8**
CJR **Cluj-Napoca** **149.67 337** ⇑ PKP2 **PKPab** **13 10 22.8 -0.8**
KIRS **Kirsehir-Merke** **149.68 316** ⇓ P **PKiKP** **13 10 19.6 -0.2**
GRF **Grafenberg Arr** **149.70 355** *e*PKPbc **PKiKP** **13 10 21.3 +1.9**
baz=7.9,slow=2.6
MLR **Muntele Rosu** **149.75 333** ⇑ P **P** **13 10 22.0 -4.2**
MLR **Muntele Rosu** **149.75 333** ⇑ PKP2 **PKiKP** **13 10 22.0 +2.2**
ISR **Istrita** **149.78 332** ⇑ P **PKPab** **13 10 22.3 -1.8**
ISR **Istrita** **149.78 332** ⇑ PKP2 **PKPab** **13 10 22.3 -1.8**
MANR **Mangalia** **149.80 328** ⇓ P **PKPbc** **13 10 18.5 -0.2**
PSZ **Piszkesteto** **149.81 343** ⇓ P **PKiKP** **13 10 21.8 +2.0**
PSZ **Piszkesteto** **149.81 343** ⇓ PKP2 **PKiKP** **13 10 21.8 +2.0**
MARR **Marisel-Cluj** **149.88 338** ⇑ P **Pn** **13 10 20.4 +7.5**
SMOL **Smolenice** **149.88 346** *e*PKP2 **PKPab** **13 10 23.6 -0.7**
WLF **Walferdange** **149.91 1** *d*PKP **PKPab** **13 10 23.3 -1.1**
WLF **Walferdange** **149.91 1** *e*PKPbc **PKPab** **13 10 23.1 -1.3**
baz=7.9,slow=2.6
DRGR **149.92 338** ⇑ PKP2 **PKiKP** **13 10 20.2 +0.1**
DRGR **149.92 338** ⇑ P **PKiKP** **13 10 20.2 +0.1**
ICOR **Ion Corvin** **149.96 329** ⇑ P **PKPab** **13 10 23.0 -1.8**
BORR **Bors** **149.97 340** ⇓ P **PKPdf** **13 10 16.0 +1.8**
KHC **Kasperske Hory** **149.99 351** *e*PKP2 **PKiKP** **13 10 19.9 -0.2**
KHC **Kasperske Hory** **149.99 351** ⇑ *e*PKP **PKiKP** **13 10 19.9 -0.2**
KHC *e*PKPAB **sPKPab** **13 10 28.4 -0.2**
MODS **Modra-Piesok** **150.04 346** *e*PKP2 **PKPab** **13 10 23.7 -1.3**
MODS **Modra-Piesok** **150.04 346** *e*PKP **PKPab** **13 10 23.7 -1.3**
WET **Wettzell** **150.07 352** *e*PKPbc **PKiKP** **13 10 22.7 +2.4**
baz=7.9,slow=2.6
VOIR **150.16 334** ⇑ P **P** **13 10 21.3 -4.9**
VOIR **150.16 334** ⇑ PKIKP **PKiKP** **13 10 21.3 +0.7**
CKRC **Cesky Krumlov** **150.18 350** *e*PKIKP **PKiKP** **13 10 20.4 -0.1**
CKRC **Cesky Krumlov** **150.18 350** ⇑ *e*PKP **PKiKP** **13 10 20.4 -0.1**

GEC2 **GERESS Array S** **150.25 351** *e*PKPbc **PKiKP** **13 10 23.3 +2.6**
baz=7.9,slow=2.6
GERES **GERESS Array B** **150.25 351** PKPbc **PKPbc** **13 10 20.3 +0.4**
comp=Z,15nm,1.0s,baz=236,slow=1.4,SNR=11
GERES **GERESS Array B** **150.25 351** **PKiKP** **13 10 21.2 +0.5**
GERES **GERESS Array B** **150.25 351** PKiKP **PKiKP** **13 10 21.2 +0.5**
BSZH **Besenyszg** **150.26 342** ⇑ P **PKPab** **13 10 23.8 -2.1**
TNR **Turnu Rosu** **150.30 335** ⇑ PKiKP **PKiKP** **13 10 23.1 +2.3**
TNR **Turnu Rosu** **150.30 335** ⇑ P **P** **13 10 23.1 -0.3**
SRO **Srobarova** **150.32 345** *e*PKiKP **PKPab** **13 10 24.9 -1.3**
SRO **Srobarova** **150.32 345** *e*PKP **PKPab** **13 10 24.9 -1.3**
ASF **Jabal al Asfar** **150.45 301** PKPbc **PKiKP** **13 10 21.4 -0.2**
comp=Z,19nm,0.9s,baz=133,slow=1.3,SNR=17
WINA **Alland / Wiene** **150.55 348** *i* pPKP **PKPab** **13 10 24.9 -2.2**
SNR=11
DEV **Deva** **150.63 337** ⇓ P **Pn** **13 10 25.2 +3.0**
DEV **Deva** **150.63 337** ⇓ PKIKP **PKPab** **13 10 25.2 -2.3**
LOT **Lotru** **150.67 336** ⇑ P **P** **13 10 24.2 -1.4**
STU **Stuttgart** **150.76 357** *e*PKPbc **PKiKP** **13 10 24.5 +2.9**
baz=7.9,slow=2.6
CONA **Conrad Observa** **150.76 348** *i* pPKP **PKPab** **13 10 25.1 -3.1**
comp=Z,38nm,1.0s,SNR=12
RONA **Rosalia, Austr** **150.90 347** *i* pPKP **PKPab** **13 10 25.5 -3.1**
comp=Z,48nm,1.0s,SNR=11
HUMR **Humele** **150.93 333** ⇓ P **PKiKP** **13 10 25.2 +3.1**
RAZG **Razgrad** **150.99 330** ⇑ P **PKiKP** **13 10 24.7 +2.4**
SILT **Sile** **151.09 323** ⇓ P **PKiKP** **13 10 23.3 +0.7**
GZR **Gura Zlata** **151.09 337** ⇑ PKIKP **PKPbc** **13 10 21.9 -0.1**
GZR **Gura Zlata** **151.09 337** ⇑ P **P** **13 10 21.9 -4.1**
MOA **Molln** **151.13 350** *i* pPKP **PKiKP** **13 10 25.4 +3.0**
comp=Z,24nm,1.0s,SNR=5.6
FUR **Furstenfeldbru** **151.21 354** *e*PKPbc **PKiKP** **13 10 25.9 +3.3**
baz=7.9,slow=2.6
BZS **Buzias** **151.32 338** ⇑ PKIKP **PKiKP** **13 10 25.6 +2.7**
BZS **Buzias** **151.32 338** ⇑ P Pn 13 10 25.6 +0.4
MMAI **Mount Meron Ar** **151.36 304** PKPbc **PKPbc** **13 10 23.1 +0.1**
comp=Z,26nm,0.8s,baz=16,slow=6.3,SNR=12
BIOA **Bad Ischl, Aus** **151.38 351** *i* pPKP **PKiKP** **13 10 25.5 +2.5**
comp=Z,26nm,1.0s
RJOB **Jochberg** **151.46 352** *e*PKPbc **PKiKP** **13 10 26.6 +3.5**
baz=7.9,slow=2.6
ARSA **Arzberg** **151.48 348** *i* pPKP **PKiKP** **13 10 25.9 +2.6**
comp=Z,17nm,1.1s
HERR **Herculane** **151.66 337** ⇑ P **PKiKP** **13 10 23.6 -0.1**
MORH **Mrgy, Hungar** **151.71 343** ⇑ P **Pn** **13 10 24.1 +4.9**
ELND **Elena** **151.78 330** ⇑ P **PKPbc** **13 10 22.3 -1.3**
LESA **Schwarzleotal** **151.78 352** *i* pPKP **PKiKP** **13 10 26.8 +2.9**
comp=Z,20nm,0.9s,SNR=6.3
UBR **Ueberruh** **151.79 356** *e*PKPbc **PKiKP** **13 10 27.4 +3.5**
baz=7.9,slow=2.6
RETA **Reutte** **151.93 355** *i* pPKP **PKiKP** **13 10 27.5 +3.3**
comp=Z,28nm,1.2s,SNR=5.4
PLVB **Pleven** **152.00 332** ⇓ P **PKPbc** **13 10 24.0 0.0**
WATA **Walderalm** **152.00 353** *i* pPKP **PKiKP** **13 10 27.6 +3.1**
comp=Z,33nm,1.0s,SNR=6.4
MDVR **Moldovita** **152.01 337** ⇑ P **PKiKP** **13 10 24.8 +0.4**
KBA **Koelnbreinsper** **152.03 351** *i* pPKP **PKiKP** **13 10 27.1 +2.6**
comp=Z,23nm,1.0s,SNR=7.0
MOTA **Moosalm** **152.04 354** *i* pPKP **PKiKP** **13 10 27.8 +3.3**
comp=Z,54nm,1.1s,SNR=11
WTTA **Wattenberg** **152.07 353** *i* pPKP **PKiKP** **13 10 28.0 +3.3**
comp=Z,52nm,1.0s,SNR=6.9
SOKA **Soboth** **152.13 348** *i* pPKP **PKiKP** **13 10 27.5 +2.9**
comp=Z,34nm,1.0s,SNR=10
CSS **Mathiatis** **152.15 309** IAMs_20 IAMs_20 14 24 16.4
comp=Z,886nm,20.0s
SQTA **Sankt Quirin** **152.15 354** *i* pPKP **PKiKP** **13 10 28.1 +3.4**
comp=Z,39nm,1.0s,SNR=7.2
DAVA **Damuels** **152.20 356** *i* pPKP **PKiKP** **13 10 28.3 +3.4**
comp=Z,43nm,1.0s,SNR=7.5
OBKA **Obir** **152.38 349** *i* PKiKP **PKiKP** **13 10 26.6 +1.4**
comp=Z,9.8nm,0.8s
FETA **Feichten** **152.40 355** *i* pPKP **PKiKP** **13 10 28.9 +3.6**
comp=Z,30nm,1.0s,SNR=7.2
MYKA **Terra Mystica** **152.42 350** *i* pPKP **PKiKP** **13 10 27.8 +2.6**
comp=Z,17nm,0.9s,SNR=5.9
ABTA **Abfaltersbach** **152.47 352** *i* pPKP **PKiKP** **13 10 28.2 +2.9**
comp=Z,51nm,0.9s,SNR=11
ISP **Isparta** **152.62 317** IAMs_20 IAMs_20 14 29 27.1
comp=Z,926nm,20.0s
DAVOX **Davos/Dischmat** **152.70 356** PKPbc **PKiKP** **13 10 26.8 +0.8**
comp=Z,21nm,0.8s,baz=342,slow=4.9,SNR=11
EIL **Elat** **152.77 297** PKPbc **PKPbc** **13 10 26.1 0.0**
comp=Z,24nm,0.9s,baz=308,slow=2.7,SNR=9.5
STAL **STALIGIAL** **152.92 351** **PKPdf** **13 10 22.1 +3.3**
ESDC **Sonseca Array** **157.77 23** PKPab **PKPab** **13 10 59.3 +1.3**
comp=Z,4.0nm,1.2s,baz=330,slow=4.1,SNR=6.1
DBIC **Dimbokro** **162.76 136** PKPab **PKPab** **13 11 21.9 +1.5**
comp=Z,5.0nm,1.0s,baz=44,slow=2.2,SNR=3.2
TORD **Torodi Ar. Bea** **171.84 140** PKP **PKPdf** **13 10 39.7 +1.3**
comp=Z,2.9nm,0.9s,baz=228,slow=1.9,SNR=9.6
TORD PKPab **sPKPab** **13 12 03.5 -1.0**
comp=Z,1.8nm,0.8s,baz=232,slow=5.9,SNR=4.3
TORD PP **PP** **13 15 56.4 +5.7**
comp=Z,0.3nm,0.3s,baz=248,slow=5.6,SNR=4.2

HEL ***12*** *13:05:47.9±0.2, 65°.70N×21°.89E, h0km, ML1.5, Explosion*
DNK ***12*** *13:05:48.9±0.5, 65°.69N×22°.13E, h0km, ML3.1(UPP), Explosion*
UPP ***12*** *13:05:48.3±0.1, 65°.69N×22°.13E, h0km, ML3.1, Suspected explosion*

ISC 12 13:05:47.8±0.7, 65°.75N±0°.02×22°.04E±0°.02, h0km, n42, σ0s 84/69, Sweden

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
SJUU	**Sjulsmark**	**0.30**	**217**	P	**Pg**		**13 05 53.8**	**+0.3**
SJUU				S	**Sg**		**13 05 58.0**	**+0.7**
SJUU	**Sjulsmark**	**0.30**	**217**	P	**Pg**		**13 05 53.8**	**+0.3**
SJUU				S	**Sg**		**13 05 58.0**	**+0.7**
KALU	**Kalix**	**0.56**	**77**	P	**Pg**		**13 05 58.5**	**0.0**
KALU				S	**Sg**		**13 06 05.9**	**+0.3**
KALU	**Kalix**	**0.56**	**77**	P	**Pg**

OUF					SG	**Sn**	13 06 43.4	**0.0**
RNF	**Rovaniemi**	**1.83**	**60**		PG	**Pb**	13 06 21.5	**-0.7**
RNF					SG	**Sg**	13 06 46.2	**-0.5**
RANF	**Ranua**	**1.97**	**80**		PB	**Pb**	13 06 23.3	**-1.2**
	baz=263							
RANF					SB	**Sb**	13 06 49.4	**-0.2**
LANU	**Lannavaara**	**2.31**	**360**		PG	**Pb**	13 06 29.4	**-0.9**
LANU					SG	**Sb**	13 07 00.0	**+0.6**
KU2	**Taivalkoski**	**2.56**	**88**		PB	**Pb**	13 06 33.1	**-1.4**
KU2					SB	**Sb**	13 07 07.0	**+0.5**
HUSU	**Husum**	**2.70**	**208**		SG	**Sn**	13 07 07.4	**+1.6**
VAF	**Ylistaro**	**2.73**	**174**		PG	**Pn**	13 06 34.4	**+1.6**
VAF					smax	smax	13 07 06.9	
	comp=Z,1.7nm,0.2s							
VAF					SB	**Sn**	13 07 07.9	**+1.5**
HEF	**Hetta**	**2.75**	**13**		smax	smax	13 07 10.6	
	comp=Z,0.8nm,0.2s							
HEF					SG	**Sb**	13 07 12.9	**+0.9**
MSF	**Maaselka**	**2.89**	**83**		PN	**Pn**	13 06 35.7	**+0.7**
	baz=272							
MSF					SN	**Sn**	13 07 12.0	**+1.6**
OLKF	**Oulanka, Finla**	**3.06**	**76**		PN	**Pn**	13 06 38.2	**+0.8**
OLKF					SN	**Sn**	13 07 16.5	**+1.8**
OLKF					smax	smax	13 07 19.9	
	comp=Z,0.8nm,0.2s							
KU6	**Riekki**	**3.24**	**81**		PN	**Pn**	13 06 41.2	**+1.4**
KU6					SN	**Sn**	13 07 20.4	**+1.4**
KIF	**Kilpisjarvi**	**3.31**	**352**		SG	**Sg**	13 07 32.5	**-1.5**
HEMU	**Hemsoen**	**3.54**	**211**		SB	**Sn**	13 07 27.1	**+0.6**
VRF	**Varrio**	**3.61**	**53**		SN	**Sn**	13 07 29.1	**+0.8**
RAJF	**Raja-Jooseppi**	**3.68**	**39**		SN	**Sn**	13 07 30.3	**+0.4**
ARA0	**ARCESS Array S**	**4.03**	**18**		SG	**Sg**	13 07 55.0	**-2.2**
KEV	**Kevo**	**4.45**	**23**		SN	**Sn**	13 07 49.0	**+0.2**
RAF	**Rauma**	**4.74**	**182**		SG	**Sb**	13 08 10.2	**+1.0**

*TEH **12** 13:57:23.0, 37.04N × 58.60E, h9km ± 31km, ML3.4, Presumed earthquake*
*IDC **12** 13:57:26.6 ± 7.3, 37.35N × 58.35E, h0km, mb3.2/3, mbtmp3.4/5, ML3.1/2, Error ellipse: s-maj=142.7km s-min=26.4km az=178.0*
ISC 12 13:57:24.0 ± 0.8, 37.03N ± 0.04 × 58.56E ± 0.05, h10km, n19, σ1§82/19, Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
IEMG	**Emamgholi**	**0.39**	**11**	Pg	**Pg**		**13 57 30.6**	**-1.3**
IEMG				Sg	**Sg**		**13 57 36.7**	**-0.4**
IAKL	**Akhelmad**	**0.46**	**159**	Pg	**Pb**		**13 57 32.6**	**-1.7**
IPAY	**Payeh**	**0.68**	**148**	Pg	**Pg**		**13 57 36.0**	**-1.2**
IKRD	**Kardeh**	**0.81**	**108**	Pg	**Pb**		**13 57 38.8**	**-1.5**
IMOG	**Moghan**	**1.11**	**145**	Pg	**Pg**		**13 57 43.9**	**-1.6**
IMYA	**Miami**	**1.42**	**118**	Pg	**Pb**		**13 57 49.3**	**-1.5**
JRKH	**Jarkhoshk**	**1.83**	**127**	Pn	**Pb**		**13 57 56.4**	**-1.2**
MRVT	**Maraveh tapeh**	**2.06**	**288**	Pn	**Pn**		**13 57 59.6**	**+0.8**
TAPT	**Tabas- Tapeh t**	**2.42**	**208**	Pn	**Pn**		**13 58 05.1**	**+1.3**
IMND	**Minoodasht**	**2.53**	**276**	Pn	**Pb**		**13 58 07.1**	**-2.4**
TKDS	**Koohdasht(Taba**	**3.60**	**199**	Pn	**Pn**		**13 58 21.6**	**+1.6**
IGLG	**Ghalogjhah**	**3.83**	**264**	Pn	**Pn**		**13 58 25.1**	**+1.8**
TPRV	**Parvadeh(Tabas**	**4.28**	**202**	Pn	**Pn**		**13 58 30.6**	**+1.3**
IFIR	**Firoozkooh**	**4.88**	**255**	Pn	**Pn**		**13 58 39.7**	**+1.9**
KBZ	**Khabaz**	**13.67**	**304**	Pn	**Pn**		**14 00 37.5**	**-0.4**
	0.1nm,0.3s,baz=96,slow=9.2,SNR=1.8 1.0nm,0.7s							
BVAR	**Borovoye Array**	**18.01**	**24**	P	**P**		**14 01 34.9**	**+0.1**
	0.1nm,0.3s,baz=230,slow=11,SNR=7.1 0.4nm,0.5s							
MKAR	**Makanchi Array**	**20.11**	**54**	P	Pn		14 01 59.8	+0.1
	0.3nm,0.5s,baz=246,slow=11,SNR=2.8 0.3nm,0.5s							
ZALV	**Zalesovo Beam**	**24.79**	**39**	P	**P**		**14 02 50.2**	**+4.3**
	0.3nm,0.4s,baz=238,slow=8.3,SNR=2.0 0.3nm,0.4s							
AKASG	**Malin Array Be**	**24.98**	**312**	P	**P**		**14 02 48.3**	**+0.7**
	0.8nm,0.5s,baz=105,slow=8.8,SNR=2.5 0.8nm,0.5s							

*IDC **12** 14:12:44.3 ± 0.9, 24.55N × 123.14E, h0km, mb3.6/9, mbtmp3.6/11, ML3.6/2, MS3.4/2, Error ellipse: s-maj=32.6km s-min=18.4km az=63.0*
*JMA **12** 14:12:53.0 ± 0.1, 25.1N × 123.3E ± 0.3, h59km ± 1km, MD3.7/16, MV3.7/16, NW OFF ISHIGAKIJIMA IS*
ISC 12 14:12:51.9 ± 0.8, 24.51N ± 0.07 × 123.31E ± 0.03, h61km ± 6km, n32, σ1§74/41, mb3.6/9, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.28**	**261**	P	**Pn**		**14 13 03.1**	**+1.2**
YOJ	**Yonaguni jima**	**0.28**	**261**	*i* P	**Pn**		**14 13 03.1**	**+1.2**
YOJ				A	A		14 13 03.1	
	comp=N,6.0nm,0.6s,comp=E,16nm,2.4s							
YOJ				S	**Sn**		**14 13 10.4**	**+1.2**
JYNG	**Yonagunijimaku**	**0.34**	**261**	*i* P	**Pn**		**14 13 03.5**	**+1.2**
JYNG				A	A		14 13 03.5	
	comp=N,10.0nm,0.4s,comp=E,19nm,2.1s							
JYNG				S	**Sn**		**14 13 10.7**	**+0.8**
IRIF	**Iriomote-Funau**	**0.42**	**114**	*i* P	**Pn**		**14 13 03.8**	**+0.8**
IRIF				A	A		14 13 03.8	
	comp=N,14nm,0.8s,comp=E,9.0nm,0.4s							
IRIF				S	**Sn**		**14 13 12.0**	**+0.8**
HATJ	**Hateruma jima**	**0.63**	**135**	P	**Pn**		**14 13 06.4**	**+1.0**
HATJ				S	**Sn**		**14 13 16.4**	**+1.2**
JKRS	**Kuro-shima**	**0.69**	**113**	*i* P	**Pn**		**14 13 07.0**	**+1.0**
JKRS				A	A		14 13 07.0	
	comp=N,11nm,2.1s,comp=E,10.0nm,2.4s							
JKRS				S	**Sn**		**14 13 17.6**	**+1.3**
JIJ	**Ishigaki jima**	**0.77**	**101**	*i* P	**Pn**		**14 13 07.5**	**+0.6**
JIJ				A	A		14 13 07.5	
	comp=N,7.0nm,0.5s,comp=E,6.0nm,1.9s							
JIJ				S	**Sn**		**14 13 18.3**	**+0.2**
JISG	**Ishigakijimahi**	**0.91**	**85**	*i* P	**Pn**		**14 13 09.7**	**+0.9**
JISG				A	A		14 13 09.7	
	comp=N,29nm,0.5s,comp=E,18nm,0.4s							
JISG				S	**Sn**		**14 13 21.8**	**+0.6**
JTJ	**Tarama**	**1.27**	**84**	P	**Pn**		**14 13 15.0**	**+1.5**
JTJ				S	**Sn**		**14 13 30.4**	**+0.8**
NACB	**Ninganchiao**	**1.60**	**258**	P	**Pn**		**14 13 19.1**	**+1.1**
TATO	**Taipei**	**1.73**	**286**	P	**Pn**		**14 13 22.3**	**+2.7**
YHNB	**Yeheng**	**1.77**	**276**	P	**Pn**		**14 13 22.5**	**+2.2**
JIKM	**Ikemajima**	**1.81**	**76**	P	**Pn**		**14 13 22.3**	**+1.7**
JIKM				*e*S	**Sn**		**14 13 45.0**	**+2.5**
JMJ2	**Miyako jima3**	**1.85**	**82**	P	**Pn**		**14 13 22.9**	**+1.7**
JMJ2				S	**Sn**		**14 13 45.3**	**+1.7**
JOGS	**Gusukube**	**1.92**	**82**	P	**Pn**		**14 13 24.1**	**+1.9**
YULB	**Yu-li**	**2.15**	**239**	P	**Pn**		**14 13 25.8**	**+0.4**
SSLB	**Suanglung**	**2.27**	**252**	P	**Pn**		**14 13 28.3**	**+1.2**
TWGBT	**Beinan**	**2.65**	**231**	P	**Pn**		**14 13 31.9**	**-0.3**
TPUB	**Ta-pu**	**2.73**	**244**	P	**Pn**		**14 13 36.0**	**+2.6**
JOW	**Kunigami**	**5.04**	**62**	Pn	**Pn**		**14 14 04.0**	**-0.9**
	comp=E,9.1nm,0.3s,baz=174,slow=11,SNR=23							
JOW				Sn	**Sn**		**14 15 07.5**	**+5.7**
	comp=E,4.5nm,0.3s,baz=328,slow=29,SNR=5.7 comp=E,25nm,0.3s							
JNU	**Nakatsue**	**10.84**	**36**	LR	LR		14 20 40.8	
	comp=E,102nm,18.4s,baz=27,slow=44							
KSRS	**Korea Array**	**13.49**	**16**	Pn	**Pn**		**14 15 56.5**	**-3.8**
	comp=E,0.1nm,0.3s,baz=194,slow=15,SNR=1.4 comp=E,0.5nm,0.5s							
SONM	**Songino Array**	**26.87**	**334**	P	**P**		**14 18 26.7**	**-0.2**
	comp=E,0.7nm,0.5s,baz=148,slow=10.0,SNR=5.0 comp=E,0.7nm,0.5s							
MKAR	**Makanchi Array**	**39.47**	**315**	P	**P**		**14 20 15.3**	**-1.0**
	comp=E,0.3nm,0.4s,baz=103,slow=8.6,SNR=9.6 comp=E,0.3nm,0.4s							
MA2	**Magadan**	**39.96**	**21**	LR	LR		14 39 10.7	
	comp=E,69nm,18.9s,baz=299,slow=40							
ZALV	**Zalesovo Beam**	**41.05**	**326**	P	**P**		**14 20 28.4**	**-0.8**
	comp=E,0.4nm,0.3s,baz=112,slow=10,SNR=3.1 comp=E,0.4nm,0.3s							
KURBB	**Kurchatov Arra**	**43.13**	**319**	P	**P**		**14 20 44.5**	**-1.6**
	comp=E,0.6nm,0.6s,baz=114,slow=7.4,SNR=7.7 comp=E,0.6nm,0.6s							
WRA	**Warramunga Arr**	**45.47**	**165**	P	**P**		**14 21 05.4**	**+0.3**
	comp=E,0.4nm,0.7s,baz=347,slow=8.8,SNR=5.9 comp=E,0.4nm,0.7s							
BVAR	**Borovoye Array**	**48.66**	**320**	P	**P**		**14 21 29.1**	**-0.6**
	comp=E,0.6nm,0.5s,baz=103,slow=7.3,SNR=6.3 comp=E,0.6nm,0.5s							
ASAR	**Alice Springs**	**48.98**	**167**	P	**P**		**14 21 33.9**	**+1.5**
	comp=E,0.2nm,0.7s,baz=350,slow=7.4,SNR=5.9 comp=E,0.2nm,0.7s							
FINES	**FINESS Array B**	**72.14**	**330**	P	**P**		**14 24 09.7**	**0.0**
	comp=E,2.1nm,0.8s,baz=92,slow=4.4,SNR=4.1							
	comp=E,2.1nm,0.8s							
YKA	**Yellowknife Ar**	**81.91**	**23**	P	**P**		**14 25 04.7**	**+0.1**
	comp=E,0.2nm,0.6s,baz=312,slow=6.1,SNR=5.7 comp=E,0.2nm,0.6s							

*IDC **12** 14:20:44.5 ± 1.8, 11.74N × 91.85E, h0km, mb3.5/5, mbtmp3.5/6, ML3.4/1, MS3.7/1, Error ellipse: s-maj=66.3km s-min=20.9km az=62.0*
ISC 12 14:20:48.9 ± 1.8, 11.8N ± 0.2 × 92.0E ± 0.2, h27km, n10, σ1§08/6, mb3.5/5, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**9.44**	**45**	Pn	**Pn**		**14 23 03.4**	**+0.2**
	0.1nm,0.3s,baz=229,slow=14,SNR=5.0 0.7nm,0.7s							
H08S3	**Diego Garcia H**	**27.35**	**226**	T	T		14 55 55.1	
	baz=45,slow=74,SNR=3.1							
H08S2	**Diego Garcia H**	**27.36**	**226**	T	T		14 55 57.1	
	baz=45,slow=74,SNR=4.1							
H08S1	**Diego Carcia H**	**27.37**	**226**	T	T		14 55 56.7	
	baz=45							
MKAR	**Makanchi Array**	**35.81**	**349**	P	**P**		**14 27 46.7**	**+0.7**
	0.4nm,0.7s,baz=155,slow=8.2,SNR=5.5 0.4nm,0.7s							
KURBB	**Kurchatov Arra**	**40.23**	**347**	P	**P**		**14 28 23.5**	**+0.3**
	0.4nm,0.8s,baz=161,slow=7.7,SNR=4.4 0.4nm,0.8s							
JNU	**Nakatsue**	**41.42**	**53**	LR	LR		14 45 51.5	
	comp=Z,86nm,18.3s,baz=314,slow=36							
ZALV	**Zalesovo Beam**	**42.41**	**354**	P	**P**		**14 28 39.5**	**-1.5**
	0.5nm,0.5s,baz=157,slow=7.8,SNR=2.0 0.5nm,0.5s							
WRA	**Warramunga Arr**	**52.31**	**127**	P	**P**		**14 29 58.1**	**-0.5**
	0.5nm,0.6s,baz=300,slow=9.9,SNR=10 0.5nm,0.6s							
ASAR	**Alice Springs**	**54.09**	**131**	P	**P**		**14 30 12.2**	**+0.6**
	0.4nm,0.4s,baz=308,slow=6.8,SNR=14 0.4nm,0.4s							

*KOLA **12** 14:21:25.5, 68.16N × 32.90E, h0km, ML1.7, Error ellipse: s-maj=3.3km s-min=1.6km az=100.0, Murmansk region, Monchegorsk district, Murmansk region, Olenegorsk district*
HEL 12 14:21:25.0 ± 0.5, 68.20N × 32.97E, h0km, ML1.5, Suspected explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
APA0	**Apatity Array**	**0.59**	**179**	P	Pg		14 21 35.0	-1.3
APA0				S	Sg		14 21 42.9	-1.1
APA	**Apatity**	**0.65**	**165**	P	Pg		14 21 35.9	-1.6
APA				S	Sg		14 21 45.0	-0.8
LVZ	**Lovozero**	**0.70**	**115**	S	Sg		14 21 46.8	-0.6
TERR	**Teriberka**	**1.28**	**37**	P	Pg		14 21 49.0	-0.4
TERR				S	Sb		14 22 06.8	+0.1
VRF	**Varrio**	**1.35**	**252**	PG	Pg		14 21 49.5	-1.3
	baz=71							
VRF				smax	smax		14 22 05.7	
	comp=Z,5.8nm,0.2s							
VRF				SG	Sg		14 22 06.4	-1.8
KVDA	**Kovda**	**1.51**	**182**	P	Pn		14 21 51.8	-1.5
KVDA				S	Sg		14 22 11.2	-2.2
RAJF	**Raja-Jooseppi**	**1.75**	**281**	PG	Pn		14 21 56.4	-0.2
RAJF				SG	Sn		14 22 18.8	-0.8
VADS	**Vadso**	**2.33**	**328**	S	Sn		14 22 33.1	-0.6
OLKF	**Oulanka, Finla**	**2.34**	**218**	PB	Pn		14 22 05.2	+0.5
OLKF				smax	smax		14 22 34.2	
	comp=Z,2.0nm,0.2s							
OLKF				SB	Sn		14 22 34.4	+0.4
KU6	**Riekki**	**2.49**	**210**	PB	Pn		14 22 07.2	+0.5
KU6				SN	Sn		14 22 37.6	-0.2
KU6				smax	smax		14 22 38.6	
	comp=Z,0.9nm,0.2s							
KEV	**Kevo**	**2.66**	**309**	PB	Pn		14 22 10.4	+1.4
KEV				SB	Sn		14 22 43.9	+2.0
MSF	**Maaselka**	**2.76**	**216**	PB	Pn		14 22 12.5	+2.0
MSF				SB	Sb		14 22 47.3	-2.3
KU1	**Kurvinen**	**2.97**	**209**	PB	Pn		14 22 14.6	+1.4
ARA0	**ARCESS Array S**	**3.02**	**300**	PB	Pn		14 22 15.2	+1.1
ARA0				SN	Sn		14 22 50.8	-0.1
ARCES	**ARCESS Array B**	**3.02**	**300**	P	Pn		14 22 14.9	+0.9
ARCES				S	Sn		14 22 50.6	-0.2
RNF	**Rovaniemi**	**3.12**	**243**	PN	Pn		14 22 15.7	+0.3
RNF				SN	Sn		14 22 52.4	-0.9
RANF	**Ranua**	**3.26**	**231**	PN	Pn		14 22 17.0	-0.3
RANF				SN	Sn		14 22 55.6	-1.2
HEF	**Hetta**	**3.47**	**278**	*e*P	Pn		14 22 27.0	-0.2
HEF	**Hetta**	**3.47**	**278**	PN	Pn		14 22 20.4	+0.2
HEF				SN	Sn		14 23 00.6	-1.2
KLF	**Kolari**	**3.57**	**258**	PN	Pn		14 22 21.8	+0.3
KTK1	**Kautokeino**	**3.66**	**287**	PN	Pn		14 22 23.5	+0.7
KTK1				SN	Sn		14 23 02.0	-4.7
TOF	**Tornio**	**3.99**	**242**	SN	Sn		14 23 11.8	-2.8
ERTU	**Ertsjaerv**	**4.48**	**253**	PN	Pn		14 22 33.7	-0.3
ERTU				SN	Sn		14 23 21.1	-5.7
OBF4	**Vikkela, Lumij**	**4.63**	**227**	SN	Sn		14 23 28.7	-1.7

*HEL **12** 14:22:10.3 ± 0.3, 67.89N × 20.04E, h0km, ML1.3, Suspected explosion*
UPP 12 14:22:11.0 ± 0.0, 67.85N × 20.21E, h0km, ML2.5, Confirmed Induced event, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.12**	**24**	P	Pg		14 22 13.5	+0.2
KUA				S	Sg		14 22 15.2	+0.4
RATU	**Laukkuluspa**	**0.23**	**264**	P	Pg		14 22 15.7	+0.2
RATU				S	Sg		14 22 19.0	+0.5
KOVU	**Salmi**	**0.38**	**357**	P	Pg		14 22 18.3	+0.1
KOVU				S	Sg		14 22 23.5	+0.4
NIKU	**Nikkaluokta**	**0.45**	**273**	P	Pg		14 22 19.6	+0.1
NIKU				S	Sg		14 22 25.8	+0.6
LANU	**Lannavaara**	**0.70**	**73**	P	Pg		14 22 24.4	-0.1
LANU				S	Sg		14 22 33.6	0.0
LANU	**Lannavaara**	**0.70**	**73**	PG	Pg		14 22 24.3	-0.2
	baz=260							
LANU				SG	Sg		14 22 33.4	-0.2
DUNU	**Dundret**	**0.74**	**169**	P	Pg		14 22 24.8	-0.4
DUNU				S	Sg		14 22 35.1	+0.3
MASU	**Masugnsbyn**	**0.79**	**119**	P	Pg		14 22 25.9	-0.1
MASU				S	Sg		14 22 36.5	+0.3
SALU	**Saltoluokta**	**0.80**	**235**	P	Pg		14 22 26.2	-0.1
KIF	**Kilpisjarvi**	**1.18**	**10**	*e*P	Pg		14 22 33.6	0.0
KIF	**Kilpisjarvi**	**1.18**	**10**	PN	Pg		14 22 33.9	+0.3
KIF				smax	smax		14 22 46.3	
	comp=Z,4.1nm,0.2s							
KIF				SN	Sg		14 22 49.2	+0.2
HEF	**Hetta**	**1.41**	**65**	smax	smax		14 22 53.9	
	comp=Z,1.7nm,0.2s							
HEF				SG	Sg		14 22 55.1	-1.1
ERTU	**Ertsjaerv**	**1.51**	**148**	PG	Pn		14 22 38.8	-0.5
	baz=328							
ERTU				SG	Sg		14 22 58.4	-1.1
KLF	**Kolari**	**1.57**	**111**	smax	smax		14 22 59.5	
	comp=Z,1.5nm,0.2s							
KLF				SN	Sb		14 23 01.2	+0.1
TOF	**Tornio**	**2.40**	**136**	PG	Pb		14 22 55.4	+0.4
TOF				smax	smax		14 23 23.6	
	comp=Z,1.4nm,0.2s							
TOF				SG	Sb		14 23 26.1	+0.9
ARA0	**ARCESS Array S**	**2.57**	**46**	PG	Pb		14 22 56.8	-1.2
RNF	**Rovaniemi**	**2.58**	**116**	SB	Sb		14 23 30.8	+0.6
RAJF	**Raja-Jooseppi**	**3.09**	**75**	SB	Sb		14 23 45.0	0.0
KEV	**Kevo**	**3.13**	**49**	SG	Sb		14 23 46.1	+0.2
RANF	**Ranua**	**3.18**	**122**	PN	Pn		14 23 01.6	-0.6
OBF8	**Ulkokalla**	**3.77**	**158**	PN	Pn		14 23 10.5	+0.2

IDC 12 14:26:15.0 ± 639.0, 53.72N × 34.74E, h0km, Error ellipse: s-maj=275.4km s-min=72.0km az=28.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**3.32**	**24**	I	I		14 48 00.0	
	0.4nm,0.8s,baz=206,slow=319,SNR=3.7							
I31KZ	**AKTYUBINSK INF**	**14.69**	**94**	I	I		15 53 20.0	
	baz=291,slow=318,SNR=1.3							
I46RU	**ZALESOVO INFRA**	**29.05**	**69**	I	I		17 23 00.0	
	baz=296,slow=323,SNR=0.9							

*AEIC **12** 14:28:49.7 ± 1.4, 67.34N ± 0.02 × 164.07W ± 0.07, h7km ± 6km, Error ellipse: s-maj=4.5km s-min=3.0km az=61.0*
*NEIC **12** 14:28:50.5 ± 1.0, 67.37N ± 0.01 × 164.05W ± 0.08, h10km ± 2km, ML3.4/74, ML3.4(AEIC), Error ellipse: s-maj=5.1km s-min=3.0km az=76.0*
*IDC **12** 14:28:50.7 ± 1.0, 67.72N × 164.30W, h0km, mb3.6/8, mbtmp3.7/11, ML3.6/3, Error ellipse: s-maj=36.1km s-min=13.9km az=32.0*
ISC 12 14:28:50.1 ± 0.6, 67.33N ± 0.03 × 164.08W ± 0.03, h10km, n154, σ1§19/155, mb3.5/8, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
D17K	**Noatak River**	**0.53**	**46**			**Pg**	**14 28 59.8**	**-0.6**
D17K						**Sg**	**14 29 06.5**	**-0.9**
RDOG	**Red Dog Mine**	**0.85**	**31**			**Pg**	**14 29 05.4**	**-1.1**
RDOG					Sn	**Sb**	**14 29 18.1**	**-0.4**
E17K	**Hotham Inlet**	**0.91**	**105**			**Pg**	**14 29 06.8**	**-0.8**
E17K						**Pb**	**14 29 07.1**	**-0.9**
E17K						**Sb**	**14 29 20.1**	**0.0**
C16K	**Lisburne Hills**	**1.06**	**334**			**Pn**	**14 29 11.1**	**+0.1**
C16K				IAML			14 29 25.5	
	comp=E,1μm,0.5s							
C16K	**Lisburne Hills**	**1.06**	**334**			**Sn**	**14 29 25.1**	**-0.6**
C17K	**DeLong Mountai**	**1.20**	**16**			**Pg**	**14 29 12.2**	**-0.8**
C17K						**Sn**	**14 29 28.9**	**-0.4**
E18K	**Tukpahlearik C**	**1.35**	**85**			**Pg**	**14 29 14.7**	**-1.2**
E18K						**Sn**	**14 29 32.1**	**-0.7**
E18K	**Tukpahlearik C**	**1.35**	**85**	IAML			14 29 36.1	
	comp=E,543nm,0.5s							
F17K	**Baldwin Pennin**	**1.43**	**127**			**Pb**	**14 29 16.1**	**-0.6**
F17K						**Sg**	**14 29 35.4**	**-0.6**
F15K	**North Star Dit**	**1.65**	**188**			**Pb**	**14 29 19.4**	**-1.1**
F15K						**Sb**	**14 29 40.8**	**-0.5**
F15K	**North Star Dit**	**1.65**	**188**	IAML			14 29 47.1	
	comp=N,366nm,0.7s							
F15K				IAML			14 29 47.3	
	comp=E,323nm,0.6s							
C18K	**Utukok River**	**1.71**	**38**			**Pb**	**14 29 20.3**	**-1.3**
C18K						**Sg**	**14 29 43.6**	**-1.4**
C18K	**Utukok River**	**1.71**	**38**	IAML			14 29 46.9	
	comp=N,495nm,0.7s							
F18K	**Selawik**	**1.89**	**111**			**Pb**	**14 29 22.8**	**-1.8**
F18K						**Sb**	**14 29 47.5**	**-0.7**
G16K	**Koyuk River**	**2.07**	**160**			**Pn**	**14 29 25.3**	**+0.6**
G16K						**Sb**	**14 29 53.0**	**-0.2**
G16K	**Koyuk River**	**2.07**	**160**	IAML			14 29 58.9	
	comp=N,290nm,0.8s							
G16K				IAML			14 30 03.2	
	comp=E,331nm,1.0s							
F14K	**Arctic Creek**	**2.07**	**207**			**Pb**	**14 29 25.6**	**-2.1**
G17K	**Kiwalik Mounta**	**2.30**	**142**			**Pn**	**14 29 28.2**	**+0.2**
G17K						**Pb**	**14 29 28.5**	**-3.0**
G17K						**Sb**	**14 29 58.4**	**-1.5**
G15K	**Niukluk**	**2.35**	**180**			**Pn**	**14 29 29.2**	**+0.6**
G15K						**Pb**	**14 29 29.4**	**-3.0**
TNA	**Tin City**	**2.36**	**223**			**Pn**	**14 29 29.2**	**+0.5**
TNA	**Tin City**	**2.36**	**223**			**Sb**	**14 30 01.3**	**-0.3**
C19K	**Lookout Ridge**	**2.44**	**41**			**Pn**	**14 29 30.3**	**+0.3**
C19K						**Sb**	**14 30 03.2**	**-1.0**
C19K	**Lookout Ridge**	**2.44**	**41**	IAML			14 30 18.0	
	comp=E,230nm,0.8s							
F19K	**Shaleruckik Mo**	**2.52**	**99**			**Pn**	**14 29 31.1**	**+0.2**
F19K						**Sn**	**14 30 02.6**	**+1.0**
D19K	**Kuna River**	**2.54**	**60**			**Pn**	**14 29 31.6**	**+0.3**
D19K	**Kuna River**	**2.54**	**60**	IAML			14 30 20.0	
	comp=E,215nm,1.1s							
D19K				IAML			14 30 21.4	
	comp=N,265nm,0.8s							
G18K	**Tagagawik**	**2.60**	**121**			**Pn**	**14 29 32.5**	**+0.4**
G18K						**Sn**	**14 30 04.7**	**+0.9**
E19K	**Redstone River**	**2.65**	**84**			**Pn**	**14 29 33.6**	**+0.8**
E19K	**Redstone River**	**2.65**	**84**	IAML			14 30 17.3	
	comp=N,236nm,0.6s							
E19K				IAML			14 30 21.0	
	comp=E,195nm,0.6s							
H16K	**Elim**	**2.81**	**164**			**Pn**	**14 29 35.7**	**+0.8**
H16K						**Sb**	**14 30 11.7**	**-2.9**
ANM	**Nome**	**2.83**	**191**			**Pn**	**14 29 36.3**	**+1.1**
ANM				IAML			14 30 24.4	
	comp=E,128nm,0.7s							
H17K	**Granite Mounta**	**2.94**	**143**			**Pn**	**14 29 37.7**	**+0.9**
H17K	**Granite Mounta**	**2.94**	**143**	IAML			14 30 26.3	
	comp=E,115nm,1.1s							
H17K				IAML			14 30 27.1	
	comp=N,150nm,0.9s							
G19K	**Purcell Mounta**	**3.02**	**110**			**Pn**	**14 29 37.9**	**+0.1**
G19K	**Purcell Mounta**	**3.02**	**110**	IAML			14 30

COLD			IAML			14 31 56.0	
	comp=N,16nm,0.8s						
K13K	Kusilvak Mount	5.43	183		Pn	14 30 11.7	+0.8
C23K	Itkillik River	5.53	57		Pn	14 30 12.7	+0.3
G23K	Bananza Creek	5.54	90		Pn	14 30 12.5	0.0
E23K	Chandalar	5.55	76		Pn	14 30 13.6	+0.8
TOLK	Toolik Lake Re	5.61	70		Pn	14 30 14.2	+0.8
L17K	Donlin	5.77	152		Pn	14 30 17.1	+1.4
K20K	Telida	5.78	129		Pn	14 30 17.0	+1.3
L15K	Ungalak Mounta	5.79	168		Pn	14 30 17.2	+1.3
MLY	Manley	5.88	107		Pn	14 30 18.1	+1.0
D24K	Happy Valley	5.96	65		Pn	14 30 19.1	+1.0
CHUM	Lake Minchumin	5.97	120		Pn	14 30 19.1	+0.8
E24K	Your Creek	5.98	76		Pn	14 30 19.3	+0.7
L16K	Owhat River	5.98	158		Pn	14 30 19.6	+1.1
L18K	Granite Mounta	6.02	145		Pn	14 30 20.9	+1.8
L14K	Kuka Creek	6.04	174		Pn	14 30 20.6	+1.2
C24K	Franklin Bluff	6.13	60		Pn	14 30 20.6	+0.1
BPAW	Bear Paw Mtn.	6.29	115		Pn	14 30 24.5	+1.6
I23K	Minto, Yukon-K	6.33	103		Pn	14 30 24.2	+0.9
L19K	White Mountain	6.50	138		Pn	14 30 27.0	+1.4
G24K	Hadweenzic Riv	6.53	88		Pn	14 30 26.3	+0.3
M17K	Holitna River	6.61	151		Pn	14 30 28.9	+1.7
H24K	Noodor Dome	6.62	96		Pn	14 30 27.7	+0.3
KTH	Kantishna Hill	6.66	119		Pn	14 30 28.7	+0.8
M14K	Bethel	6.67	171		Pn	14 30 29.5	+1.6
PPLA	Purkeypile	6.70	126		Pn	14 30 30.5	+2.0
NEA2	Nenana	6.71	107		Pn	14 30 29.5	+1.0
M16K	Timber Creek	6.71	158		Pn	14 30 29.7	+1.1
M15K	Kasigluk River	6.83	166		Pn	14 30 31.2	+1.1
D25K	Kavik River	6.85	65		Pn	14 30 29.8	+0.6
MDM	Murphy Dome	6.85	103		Pn	14 30 31.1	+0.7
M19K	Big River Lodg	6.85	138		Pn	14 30 31.5	+1.0
M18K	Stony River	6.86	145		Pn	14 30 31.7	+1.1
TRF	Thorofare Moun	6.94	118		Pn	14 30 33.7	+1.9
M13K	Dall Lake	6.95	177		Pn	14 30 33.9	+2.1
COLA	College	7.03	103		Pn	14 30 33.8	+0.9
M11K	Mekoryuk	7.04	189		Pn	14 30 33.6	+0.6
E25K	Arctic Village	7.07	75		Pn	14 30 33.8	+0.2
F25K	Christian Rive	7.08	79		Pn	14 30 34.3	+0.6
WRH	Wood River Hil	7.14	106		Pn	14 30 35.1	+0.7
M20K	Styx River	7.21	134		Pn	14 30 37.8	+2.4
MCK	McKinley	7.24	113		Pn	14 30 36.9	+1.1
N16K	Nishlik Lake	7.27	159		Pn	14 30 36.8	+0.6
N15K	Kwethluk River	7.40	164		Pn	14 30 39.5	+1.4
IL31		7.44	102		Pn	14 30 39.3	+0.8
ILAR	Eielson Array	7.44	102	Pn	Pn	14 30 39.0	+0.5
	comp=N,1.2nm,0.3s,baz=289,slow=13,SNR=58						
ILAR				Sn	Sn	14 31 59.3	-3.6
	comp=N,0.4nm,0.3s,baz=300,slow=24,SNR=7.4						
	comp=N,3.4nm,0.4s						
C26K	Camden Bay	7.45	61		Pn	14 30 38.5	-0.2
N17K	Nushagak Hills	7.47	153		Pn	14 30 40.1	+1.1
BM01	Burnt Mountain	7.53	80		Pn	14 30 40.5	+0.7
N18K	Kilae Creek	7.58	148		Pn	14 30 41.7	+1.3
SKT	Skwentna	7.59	129		Pn	14 30 42.6	+2.0
F26K	Sheenjek River	7.64	78		Pn	14 30 41.7	+0.4
PRP	Porcupine Dome	7.65	95		Pn	14 30 42.0	+0.5
SPNN	North Nagishla	7.75	135		Pn	14 30 44.7	+1.8
N19K	Bonanza Creek	7.77	143		Pn	14 30 44.9	+1.8
C27K	Jago River	7.82	64		Pn	14 30 43.5	-0.2
SPWE	Spurr West	7.86	135		Pn	14 30 46.6	+2.2
STLK	Strandline Lak	7.88	132		Pn	14 30 47.1	+2.5
G26K	Porcupine Rive	7.90	83		Pn	14 30 45.5	+0.6
WAT1	Susitna Watana	7.95	117		Pn	14 30 47.5	+1.9
O17K	Koliganek Bris	8.20	154		Pn	14 30 49.7	+0.8
O14K	Tigyukauivet M	8.21	170		Pn	14 30 50.3	+1.3
O16K	Kokwok River B	8.21	158		Pn	14 30 49.6	+0.6
WAT6	Susitna Watana	8.39	117		Pn	14 30 52.5	+0.8
DFR	Drift River	8.40	138		Pn	14 30 52.4	+0.5
O15K	Ungalikthiuk R	8.40	165		Pn	14 30 52.9	+1.1
O18K	Koktuh Hills	8.47	148		Pn	14 30 54.4	+1.7
E27K	Coleen River	8.55	74		Pn	14 30 53.5	-0.3
P18K	Big Mountain,	8.89	149		Pn	14 30 59.9	+1.4
F28M	Old Crow	9.27	77		Pn	14 31 04.1	+0.5
KDAK	Kodiak Island	10.93	146	Pn	Pn	14 31 29.4	+3.2
	comp=N,0.2nm,0.3s,baz=15,slow=4.6,SNR=8.0						
	comp=N,4.9nm,0.8s						
INK	Inuvik	11.52	71	Pn	Pn	14 31 34.6	+0.3
	comp=N,0.3nm,0.3s,baz=321,slow=6.6,SNR=6.3						
	comp=N,0.7nm,0.4s						
YKA	Yellowknife Ar	21.03	80	P	P	14 33 35.5	+2.0
	comp=N,0.7nm,0.5s,baz=308,slow=12,SNR=16						
	comp=N,0.7nm,0.5s						
PDAR	Pinedale Array	37.88	102	P	P	14 36 09.9	+2.9
	comp=N,0.3nm,0.7s,baz=343,slow=4.6,SNR=3.5						
	comp=N,0.3nm,0.7s						
ZALV	Zalesovo Beam	48.62	313	P	P	14 37 32.2	-1.1
	comp=N,1.1nm,0.7s,baz=14,slow=7.6,SNR=5.1						
	comp=N,1.1nm,0.7s						
FINES	FINESS Array B	51.31	354	P	P	14 37 53.2	-0.4
	comp=N,3.2nm,1.0s,baz=50,slow=7.3,SNR=3.4						
	comp=N,3.2nm,1.0s						
TXAR	Lajitas Array	51.95	105	P	P	14 38 01.4	+2.5
	comp=N,0.1nm,0.3s,baz=343,slow=4.5,SNR=4.5						
	comp=N,0.1nm,0.3s						
BVAR	Borovoye Array	53.23	322	P	P	14 38 08.6	+0.5
	comp=N,0.4nm,0.5s,baz=24,slow=3.9,SNR=2.9						
	comp=N,0.4nm,0.5s						
KURBB	Kurchatov Arra	53.34	315	P	P	14 38 08.3	-0.5
	comp=N,0.7nm,0.8s,baz=27,slow=6.8,SNR=6.7						
	comp=N,0.7nm,0.8s						
MKAR	Makanchi Array	55.73	310	P	P	14 38 26.2	-0.1
	comp=N,0.2nm,0.5s,baz=47,slow=7.1,SNR=3.5						
	comp=N,0.2nm,0.5s						

*RSNC **12** 15:10:23.9±0.0, 7°N±1°×7°3W±°, h150km±2km, M2.5, ML2.3*
*FUNV **12** 15:10:28.0, 7°.08N×73°.41W, h5km, MW2.8, Presumed earthquake*
ISC 12 15:10:22.5±1.6, **6°.88N**±0°.04×**73°.11W**±0°.05, **h156**km±9km, **n25**,σ1°**12/50**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.29	194	P	Pn	15 10 44.1	0.0
BARC				S	Sn	15 10 59.9	-0.7
PAMC	Pamplona, Colo	0.62	42	P	Pn	15 10 47.1	+1.3
PAMC				S	Sn	15 11 04.3	+0.8
BRJC	Barrancabermej	0.63	279	P	Pn	15 10 45.7	+0.5
BRJC				S	Sn	15 11 02.3	-0.3
RUSC	La Rusia	0.98	178	P	Pn	15 10 48.1	-0.2
RUSC				S	Sn	15 11 07.1	-0.9
RUSC	La Rusia	0.98	178	eP	Pn	15 10 49.8	+1.6
RUSC				eS	Sn	15 11 07.4	-0.6
CAPV	Capacho	1.26	39	eP	Pn	15 10 51.9	+1.4
CAPV				eS	Sn	15 11 11.6	-0.3
PTBC	PUERTO BERRIO,	1.38	256	P	Pn	15 10 50.6	-0.7
PTBC				S	Sn	15 11 12.2	-1.1
SPBC	San Pablo de B	1.54	218	P	Pn	15 10 53.1	0.0
SPBC				S	Sn	15 11 15.9	-0.7
NORC	Norcasia	2.18	233	P	Pn	15 11 00.1	0.0
NORC				S	Sn	15 11 28.3	-0.9
CHIC	Chingaza	2.31	195	P	Pn	15 11 02.3	+0.2
CHIC				S	Sn	15 11 32.2	-0.5
ROSC	El Rosal	2.35	211	P	Pn	15 11 04.5	+2.0
ROSC				S	Sn	15 11 33.3	-0.1
HELC	Santa Helena	2.49	254	eP	Pn	15 11 05.4	+1.2
HELC				eS	Sn	15 11 34.6	-1.8
UREC	San Jos de Ur	2.55	290	P	Pn	15 11 04.6	0.0
UREC				S	Sn	15 11 35.8	-1.3
GUY2C	Guyana, Caldas	2.78	234	P	Pn	15 11 09.2	+1.4
GUY2C				S	Sn	15 11 44.1	+1.4
VILC	Villavicencio,	2.81	192	P	Pn	15 11 08.4	+0.6
VILC				S	Sn	15 11 42.3	-0.7
PTGC	Puerto Gaitan,	2.83	160	P	Pn	15 11 07.7	-0.3
PTGC				S	Sn	15 11 40.9	-2.4
CBOC	Ciudad Bolivar	3.05	251	P	Pn	15 11 13.1	+2.2
CBOC				S	Sn	15 11 48.5	+0.1
DBBC	Dabeiba	3.08	273	P	Pn	15 11 12.0	+0.9
DBBC				S	Sn	15 11 47.8	-1.0
APAC	Apartado, Choc	3.58	287	P	Pn	15 11 18.0	+0.5
APAC				S	Sn	15 11 59.5	-0.8
PRAC	Prado	3.60	209	P	Pn	15 11 18.0	+0.1
PRAC				S	Sn	15 11 59.9	-1.0
SJCC	San Jacinto, C	3.63	326	P	Pn	15 11 18.1	-0.1
SJCC				S	Sn	15 12 02.2	+0.7
SJCC	San Jacinto, C	3.63	326	eP	Pn	15 11 18.4	+0.2
SJCC				eS	Sn	15 11 58.4	-3.1
ORTC	Ortega, Tolima	3.63	216	P	Pn	15 11 19.5	+1.3
ORTC				S	Sn	15 12 02.1	+0.6
PLMC	San Jos del P	3.71	238	P	Pn	15 11 20.0	+0.8
PLMC				S	Sn	15 12 04.2	+0.8
URMC	La Uribe, Meta	3.82	199	P	Pn	15 11 21.4	+0.7
URMC				S	Sn	15 12 04.6	-1.3

*GII **12** 15:10:53.9±0.0, 36°.348N±0°.003×23°.103E±0°.001, h0km, Mws4.0, confirmed*
*IDC **12** 15:10:59.0±1.0, 36°.41N×23°.21E, h0km, mb3.9/11, mbtmp3.8/17, ML3.4/6, Error ellipse: s-maj=20.2km s-min=14.6km az=21.0*
*AFAD **12** 15:10:58.0, 36°.80N×23°.02E, h15km, MW4.0*
*ISK **12** 15:10:59.5, 36°.40N×23°.09E, h5km, ML3.8/12*
*ATH **12** 15:11:01.0, 36°.37N×23°.16E, h9km±1km, ML3.6/63, Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
*THE **12** 15:11:01.3, 36°N±1°×2°3E±°, h3km±2km, M3.5/22, ML3.5/22*
*NEIC **12** 15:11:03.2±1.8, 36°.33N±0°.06×23°.12E±0°.06, h35km±5km, mb4.3/24, Error ellipse: s-maj=10.4km s-min=4.5km az=210.0*
ISC 12 15:11:00.6±0.7, **36°.36N**±0°.02×**23°.09E**±0°.02, **h16**km±4km, **n249**,σ1°**59/283**, **mb4.3/21**, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTHA	Kythira Island	0.11	191	P	Pg	15 11 04.2	+0.1
KTHA				S	Sg	15 11 06.4	0.0
KTHA	Kythira Island	0.11	191	P	Pg	15 11 04.3	+0.1
NPS1	Neapolis Lacon	0.15	352	P	Pg	15 11 04.5	-0.1
NPS1				S	Sg	15 11 07.0	-0.2
MNVA	Monemvasia	0.33	353	P	Pg	15 11 07.7	+0.2
MNVA				S	Sg	15 11 11.1	-0.4
VLI	Veliai	0.37	341	P	Pg	15 11 08.1	-0.2
VLI				S	Sg	15 11 12.6	-0.9
VLI	Veliai	0.37	341	P	Pg	15 11 08.2	-0.1
VLI				S	Sg	15 11 13.1	-0.5
MHLO	Agia Marina, M	1.11	73	P	Pb	15 11 22.3	+0.9
MHLO				S	Sn	15 11 37.3	+0.9
MHLO	Agia Marina, M	1.11	73	P	Pb	15 11 22.2	+0.9
MHLO				S	Sg	15 11 35.0	-1.5
CH01	Chania	1.14	138	P	Pg	15 11 22.5	0.0
CH01				S	Sg	15 11 36.1	-1.3
MILOS	Milos	1.14	70	P	Pn	15 11 23.2	+1.2
MILOS				S	Sg	15 11 36.7	-1.0
CHAN	Chania	1.15	137	P	Pg	15 11 22.4	-0.4
CHAN				S	Sg	15 11 37.5	-0.2
VLX	Vlachokerasia	1.15	331	P	Pg	15 11 22.1	-0.8
VLX				S	Sn	15 11 39.5	+1.7
IMMV	Iera Moni Meta	1.16	141	P	Pg	15 11 22.9	-0.1
IMMV				S	Sb	15 11 38.8	+1.8
IMMV	Iera Moni Meta	1.16	141	Pn	Pg	15 11 22.6	-0.3
IMMV				Sn	Sb	15 11 39.2	+2.2
IMMV	Iera Moni Meta	1.16	141	P	Pg	15 11 22.7	-0.3
IMMV				S	Sg	15 11 37.1	-1.0
CHNB	Souda	1.18	137	P	Pb	15 11 23.2	+0.6
CHNB				S	Sg	15 11 38.0	-0.8
MTHA	Methoni	1.20	293	P	Pb	15 11 23.5	+0.5
PYL	PYLOS	1.21	296	P	Pb	15 11 22.7	-0.3
PYL				S	Sn	15 11 40.5	+1.7
PYL	PYLOS	1.21	296	P	Pb	15 11 22.8	-0.3
PYL				S	Sn	15 11 40.5	+1.7
KNDR	Palaiochora Ch	1.21	159	Pn	Pb	15 11 23.6	+0.5
KNDR	Palaiochora Ch	1.21	159	P	Pb	15 11 23.4	+0.3
KNDR				S	Sb	15 11 39.0	+0.5
MET3	Ano Fanari,Met	1.22	5	P	Pb	15 11 23.4	+0.2
MET3				S	Sn	15 11 40.5	+1.4
NPLA	Nafplio	1.22	349	P	Pn	15 11 24.9	+1.8
ITM	Ithomi	1.24	311		Pb	15 11 23.2	-0.4
ITM					Sn	15 11 41.3	+1.6
ITM	Ithomi	1.24	311	P	Pb	15 11 23.3	-0.4
ITM				S	Sn	15 11 41.8	+2.1
ITM	Ithomi	1.24	311	Pn	Pb	15 11 23.2	-0.4
ITM				Sn	Sb	15 11 40.6	+1.2
ITM	Ithomi	1.24	311	P	Pb	15 11 23.1	-0.5
MET6	Megalochori,Me	1.24	10	P	Pb	15 11 24.0	+0.3
MET6				S	Sn	15 11 41.0	+1.2
PYL1	Pylos	1.25	297	P	Pn	15 11 23.8	+0.4
MET2	Kameni Chora,	1.26	9	P	Pn	15 11 24.4	+0.8
MET2				S	Sn	15 11 41.8	+1.6
MET5	Makryloggos,Me	1.27	10	P	Pb	15 11 24.9	+0.7
MET5				S	Sn	15 11 42.4	+1.8
MET4	Agioi Theodoro	1.28	11	P	Pn	15 11 24.9	+1.0
MET4				S	Sn	15 11 42.2	+1.5
ARS1	Argos	1.30	347	P	Pb	15 11 25.4	+0.7
ARS1				S	Sb	15 11 42.0	+0.4
VAM	Vamos	1.31	136	P	Pn	15 11 25.0	+0.6
VAM				S	Sn	15 11 44.3	+2.7
VAM	Vamos	1.31	136	P	Pn	15 11 24.9	+0.5
VAM				S	Sb	15 11 42.0	+0.5
LVRA	Laurium	1.55	30	P	Pn	15 11 28.5	+0.9
LVRA				S	Sn	15 11 47.6	+0.2
VLY	Voula,Athens	1.59	21	P	Pn	15 11 28.4	+0.3
VLY	Voula,Athens	1.59	21	P	Pn	15 11 28.4	+0.3
AMT	Artemida-Makis	1.61	317	P	Pn	15 11 29.8	+1.4
AMT				S	Sg	15 11 52.3	-0.1
AMT	Artemida-Makis	1.61	317	P	Pn	15 11 30.2	+1.8
AMT				S	Sb	15 11 51.0	+1.0
ZARO	Zacharo	1.61	315	P	Pn	15 11 29.8	+1.5
LTK	Loutraki	1.66	357	P	Pn	15 11 30.3	+1.2
LTK	Loutraki	1.66	357	P	Pn	15 11 30.4	+1.2
KIAA	Kiato	1.67	351	P	Pn	15 11 30.4	+1.2
GUR	Goura	1.68	339	P	Pn	15 11 30.6	+1.2
GUR				S	Sb	15 11 53.1	+0.9
GUR	Goura	1.68	339	P	Pb	15 11 31.4	+0.2
GUR				S	Sn	15 11 52.7	+2.0
ATH	Athens Observa	1.68	17	P	Pn	15 11 30.2	+0.9
ATH				S	Sn	15 11 51.6	+1.0
NOAC	Athens-Thissio	1.68	17	P	Pn	15 11 29.9	+0.6
ATHU	Athens Univers	1.69	19	P	Pn	15 11 30.0	+0.4
ATHU	Athens Univers	1.69	19	P	Pn	15 11 30.0	+0.4
ATHP	Athens-Neo Psi	1.72	18	P	Pn	15 11 29.7	-0.3
GVD	Gavdhos	1.73	152	P	Pb	15 11 33.8	+1.8
GVD	Gavdhos	1.73	152	Pn	Pb	15 11 33.4	+1.5
GVD	Gavdhos	1.73	152	P	Pn	15 11 32.1	+2.1
MAGU	Magoula	1.75	11	P	Pn	15 11 30.9	+0.7
PTL	Penteli	1.79	20	P	Pn	15 11 31.8	+0.9
PTL	Penteli	1.79	20	P	Pn	15 11 31.7	+0.8
VILL	Villia	1.81	6	P	Pn	15 11 31.8	+0.6
IDI	Anoyia	1.82	126	Pn	Pn	15 11 32.0	+0.7
	15nm,0.3s,baz=260,slow=11,SNR=62						
IDI				Sn	Sg	15 11 59.7	+0.6
	134nm,0.3s,baz=24,slow=19,SNR=12						
IDI	Anoyia	1.82	126		Pn	15 11 31.7	+0.4
IDI				Sn	Sn	15 11 53.4	-0.6
IDI	Anoyia	1.82	126	Pn	Pn	15 11 32.6	+1.3
IDI	Anoyia	1.82	126	P	Pn	15 11 31.4	+0.1
IDI				S	Sn	15 11 54.5	+0.5
SAP3	Santorini-Thir	1.82	87	P	Pn	15 11 32.9	+1.6
SAP3	Santorini-Thir	1.82	87	P	Pn	15 11 32.7	+1.4
THR5	Thira Island,	1.82	88	P	Pn	15 11 32.3	+1.0
THR9	Santorini-Faro	1.83	90	P	Pb	15 11 33.8	+0.1
THR9	Santorini-Faro	1.83	90	P	Pn	15 11 33.3	+1.9
KLV	Kalavryta, Ach	1.84	336	P	Pn	15 11 32.9	+1.4
KLV				S	Sn	15 11 56.2	+1.7
DION	Dionisos Attik	1.84	21	P	Pn	15 11 32.3	+0.8
DION	Dionisos Attik	1.84	21	P	Pn	15 11 32.1	+0.5
KLV1	Kalavrita	1.84	335	P	Pn	15 11 33.4	+1.8
STFN	Stefani	1.84	11	P	Pn	15 11 32.5	+0.8
VIL2	Platees	1.85	4	P	Pn	15 11 31.6	-0.1
SNT5	Nea Kammeni, S	1.86	88	P	Pn	15 11 33.1	+1.2
THR6	Thira Island,	1.86	90	P	Pn	15 11 32.4	+0.5
THR3	Thira Island,	1.87	88	P	Pn	15 11 33.4	+1.5
IACM	Heraklion	1.93	123	P	Pn	15 11 34.0	+1.3
THERA	Ancient Thera,	1.93	89	P	Pn	15 11 34.3	+1.5
THERA	Ancient Thera,	1.93	89	P	Pn	15 11 34.3	+1.5
DRO	Drossia	1.93	326	P	Pb	15 11 35.5	0.0
THR8	Santorini-Mono	1.93	88	P	Pn	15 11 34.5	+1.7
THR8	Santorini-Mono	1.93	88	P	Pn	15 11 33.7	+0.9
KARY	Karystos	1.98	33	P	Pn	15 11 34.6	+1.1
KARY	Karystos	1.98	33	P	Pn	15 11 34.6	+1.1
AIOA	Agios Ioannis,	2.00	336	P	Pn	15 11 35.6	+1.8
TEME	Temeni, Aigial	2.02	338	P	Pn	15 11 36.0	+2.0
TNSA	Tinos	2.04	54	P	Pn	15 11 34.5	+0.3
AGEO	AgiosGiorgios,	2.06	337	P	Pn	15 11 36.7	+2.1
RLS	Riolos of Patr	2.13	323	P	Pb	15 11 38.8	0.0
TRIZ	Trizonia	2.15	338	P	Pn	15 11 37.5	+1.7
KALE	Kalithea	2.16	340	P	Pn	15 11 37.9	+1.9
KALE	Kalithea	2.16	340	P	Pn	15 11 37.5	+1.4
DLFA	Delphi	2.16	348	P	Pn	15 11 37.3	+1.3
UPR	University Cam	2.18	332	P	Pn	15 11 38.8	+2.6
SERG	Sergoula	2.20	338	P	Pn	15 11 38.5	+1.9
MG00	Magoula, Dorid	2.24	336	P	Pn	15 11 39.4	+2.4
MALA	Malamata, Dori	2.25	335	P	Pn	15 11 39.0	+1.9
LTHK	Lithakia	2.25	307	P	Pn	15 11 39.7	+2.6
EFP	Efpalio	2.26	336	P	Pn	15 11 39.2	+1.8
AXS	Araxos	2.28	324	P	Pb	15 11 40.9	-0.5
LKR	Lokris	2.28	358	P	Pn	15 11 38.5	+0.8
LKR	Lokris	2.28	358	P	Pn	15 11 38.5	+0.8
AGRP	Agrapidokambos	2.30	332	P	Pn	15 11 39.9	+2.0
KYPS	Kipseli, Zakin	2.32	309	P	Pn	15 11 40.9	+2.8
ATAL	Atalanti	2.33	359	P	Pn	15 11 39.4	+1.1
NPS	Neapolis	2.33	117	P	Pn	15 11 39.4	+1.1
KYMI	Kymi, Euboea I	2.40	19	P	Pn	15 11 40.0	+0.7
ANX	Ano Chora	2.41	338	P	Pn	15 11 41.1	+1.6
ORTH	Orthonies,Zaky	2.42	309	P	Pn	15 11 42.2	+2.6
AXAR	Agios Charalam	2.42	352	P	Pn	15 11 41.5	+1.9
RTZL	Ratzakli, Kefa	2.52	313	P	Pn	15 11 43.5	+2.7
PVO	Paravola	2.57	332	P	Pn	15 11 43.8	+2.3
VLS	Valsamata	2.69	313	P	Pn	15 11 45.8	+2.5
VLS	Valsamata	2.69	313	P	Pn	15 11 45.6	+2.3
AGG	Agios Georgios	2.72	347	P	Pn	15 11 45.0	+1.3
AGG	Agios Georgios	2.72	347	P	Pn	15 11 45.0	+1.3
EVR	Evrytania	2.74	339	P	Pn	15 11 46.5	+2.4
MAKR	Makrakomi, Fth	2.75	344	P	Pn	15 11 46.4	+2.3
ZKR	Zakros	2.83	115	Pn	Pn	15 11 46.9	+1.7
ZKR	Zakros	2.83	115	P	Pn	15 11 45.3	+0.1
AOS2	Alonissos-2	2.84	12	P	Pn	15 11 45.6	+0.3
DMLN	Damoulianata-K	2.86	312	P	Pn	15 11 47.9	+2.3
FSK	Fiskardo	2.90	317	P	Pn	15 11 48.7	+2.6
NEO	Neokhori	2.94	2	P	Pn	15 11 47.0	+0.3
AMPL	Ampelaki	2.96	330	P	Pn	15 11 47.8	+3.1
EVGI	Lefkada Island	2.97	320	P	Pn	15 11 49.4	+2.3
DRAG	Dragano-Lefkad	3.06	320	P	Pn	15 11 51.1	+2.8
LKD2	Lefkada island	3.10	322	P	Pn	15 11 51.9	+3.0
CHOS	Chios island	3.11	49	P	Pn	15 11 49.6	+0.6
TSLK	Tsoukalades, L	3.12	323	P	Pn	15 11 51.7	+2.5
SMG	Samos	3.29	65	P	Pn	15 11 51.9	+0.4
ZEYE	Izmir, Urla-Ze	3.30	54	P	Pn	15 11 50.7	-1.0
THL	Klokotos Trika	3.31	345	P	Pn	15 11 53.3	+1.6
KARP	Karpathos	3.40	103		Pn	15 11 54.8	+1.6
KARP					Sn	15 12 33.5	+0.3
KARP	Karpathos	3.40	103		Pn	15 11 55.2	+2.1
KARP	Karpathos	3.40	103	P	Pn	15 11 54.7	+1.6
TYRN	Tyrnavos	3.41	349	P	Pn	15 11 54.0	+0.9
BODT	Bodrum	3.46	77	Pn	Pn	15 11 55.8	+1.9
KARB	zmir-Karabur	3.50	48	P	Pn	15 11 52.4	-2.0
PRMD	Pramanda	3.53	334	P	Pn	15 11 58.6	+3.8
GCAM	G?zelcaml?	3.58	67	Pn	Pn	15 11 57.3	+1.9
SIGR	SIGRI	3.59	37	Pn	Pn	15 11 56.5	+0.9
SIGR	SIGRI	3.59	37	P	Pn	15 11 56.0	+0.4
DAT	Datca	3.63	83	Pn	Pn	15 11 58.2	+1.8
DAT	Datca	3.63	83	P	Pn	15 11 58.1	+1.8
IGT	Igoumenitsa	3.84	326	P	Pn	15 12 01.8	+2.7
ARG	Arkhangelos	4.07	91		Pn	15 12 02.2	-0.1
ARG					Sn	15 12 51.9	+2.3
ARG	Arkhangelos	4.07	91	Pn	Pn	15 12 04.6	+2.3
ARG	Arkhangelos	4.07	91	P	Pn	15 12 03.9	+1.6
AYVA	Ayvalik	4.09	43	P	Pn	15 12 00.7	-1.9
AYDB	Zeytinkoy-Aydi	4.15	66	Pn	Pn	15 12 05.5	+2.1
TURN	Turunc	4.17	83	Pn	Pn	15 12 05.9	+2.3
HORT	Hortiatis	4.23	0	P	Pn	15 12 05.8	+1.4
KEK	Kerkira	4.23	323		Pn	15 12 06.1	+1.7
KEK					Sn	15 12 55.2	+1.6
KEK	Kerkira	4.23	323	Pn	Pn	15 12 06.5	+2.0
KEK	Kerkira	4.23	323	P	Pn	15 12 06.3	+1.8
YER	Yerkesik	4.24	78	Pn	Pn	15 12 06.1	+1.6
EZN	Ezine	4.30	35	P	Pn	15 12 02

	comp=Z,0.2nm,0.3s							
TORD	**Torodi Ar. Bea**	**30.06**	**225**	P	**P**	**15 17 08.7**	**-0.4**
TORD				IAmb	IAmb	15 17 12.8	
	comp=Z,3.5nm,0.5s							
CHGR	**Chuyangaron**	**36.32**	**72**	P	**P**	**15 18 03.6**	**-0.2**
CHGR				IAmb	IAmb	15 18 07.7	
	comp=Z,5.2nm,0.9s							
KKAR	**Karatay Array**	**36.69**	**65**	P	**P**	**15 18 06.3**	**-0.4**
BVAR	**Borovoye Array**	**36.76**	**48**	P	**P**	**15 18 07.1**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=258,slow=7.3,SNR=3.6							
	comp=Z,0.4nm,0.5s							
GAR	**Garm**	**37.15**	**71**	P	**P**	**15 18 10.4**	**-0.4**
GAR				IAmb	IAmb	15 18 19.1	
	comp=Z,3.6nm,0.9s							
BOOM	**Boomskoye usch**	**40.73**	**65**	P	**P**	**15 18 41.5**	**+0.7**
KURBB	**Kurchatov Arra**	**41.69**	**52**	P	**P**	**15 18 47.7**	**-0.7**
	comp=Z,0.8nm,0.4s,baz=276,slow=8.8,SNR=12							
	comp=Z,0.8nm,0.4s							
KURK	**Kurchatov**	**41.75**	**52**	P	**P**	**15 18 47.7**	**-1.2**
KURK	**Kurchatov**	**41.75**	**52**	IAmb	IAmb	15 18 52.8	
	comp=Z,4.5nm,1.4s							
SPB2	**Spitsbergen Ar**	**42.01**	**358**	P	**P**	**15 18 50.3**	**-0.4**
MKAR	**Makanchi Array**	**44.53**	**57**	P	**P**	**15 19 11.2**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=270,slow=7.9,SNR=23							
	comp=Z,0.8nm,0.3s							
MKAR	**Makanchi Array**	**44.53**	**57**	P	**P**	**15 19 10.7**	**-0.7**
ZAA0	**Zalesovo Array**	**45.40**	**47**	P	**P**	**15 19 16.8**	**-1.5**
ZAA0				IAmb	IAmb	15 19 21.7	
	comp=Z,1.8nm,0.4s							
ZALV	**Zalesovo Beam**	**45.40**	**47**	P	**P**	**15 19 16.9**	**-1.3**
	comp=Z,1.5nm,0.3s,baz=269,slow=9.5,SNR=7.5							
	comp=Z,1.5nm,0.3s							
ZALV	**Zalesovo Beam**	**45.40**	**47**	P	**P**	**15 19 16.2**	**-2.0**
SFJD	**Kangerlussuaq**	**50.82**	**331**	P	**P**	**15 19 58.8**	**-1.0**
LSZ	**Lusaka**	**51.59**	**174**	P	**P**	**15 20 04.8**	**-1.5**
LSZ				IAmb	IAmb	15 20 42.6	
	comp=Z,3.3nm,1.1s							
EVN	**Everest**	**53.75**	**80**	P	**P**	**15 20 20.9**	**-2.1**
EVN				IAmb	IAmb	15 20 39.0	
	comp=Z,2.7nm,0.8s							
SCHQ	**Schefferville**	**61.17**	**319**	P	**P**	**15 21 15.4**	**+1.1**
	comp=Z,0.9nm,0.3s,baz=57,slow=6.1,SNR=6.8							
	comp=Z,0.9nm,0.3s							
SCHQ	**Schefferville**	**61.17**	**319**	P	**P**	**15 21 14.7**	**+0.5**
L59A	**Walton**	**71.93**	**309**	P	**P**	**15 22 20.9**	**-2.4**
C27K	**Jago River**	**73.87**	**355**	P	**P**	**15 22 34.1**	**-0.1**
E29M	**Blow River**	**74.59**	**353**	P	**P**	**15 22 39.6**	**+1.1**
E29M				IAmb	IAmb	15 23 13.0	
	comp=Z,5.7nm,1.5s							
C18K	**Utukok River**	**75.25**	**2**	P	**P**	**15 22 43.7**	**+1.4**
YKA	**Yellowknife Ar**	**75.78**	**341**	P	**P**	**15 22 48.0**	**+2.7**
	comp=Z,0.1nm,0.5s,baz=41,slow=6.1,SNR=2.8							
	comp=Z,0.1nm,0.5s							
E19K	**Redstone River**	**76.50**	**0**	P	**P**	**15 22 49.6**	**+0.2**
E19K				IAmb	IAmb	15 22 55.6	
	comp=Z,2.0nm,0.8s							
GSI	**Gunungsitoli**	**76.75**	**98**	P	**P**	**15 22 50.6**	**-1.0**
I30M	**Mount Dempster**	**77.48**	**351**	P	**P**	**15 22 55.6**	**+0.6**
I30M				IAmb	IAmb	15 23 08.8	
	comp=Z,3.3nm,1.2s							
EYMN	**Ely**	**77.80**	**321**	P	**P**	**15 22 56.1**	**-0.9**
EYMN				IAmb	IAmb	15 22 57.0	
	comp=Z,4.6nm,1.1s							
IMAR	**Indian Mountai**	**77.95**	**359**	P	**P**	**15 22 56.6**	**-0.9**

*IDC **12** 15:18:00.9±2.2,6.73S×129.99E,h163km±24km,mb3.4/2, mbtmp3.9/7,MS2.8/1,Error ellipse: s-maj=37.4km s-min=20.1km az=91.0*

ISC 12 15:18:00.7±0.7,6.79S±0.05×129.84E±0.07,h150km,n19, σ3.41/22,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.87**	**129**	P	Pn	15 18 38.9	+4.6
SAUI	**Saumlaki**	**1.87**	**129**	S	**Sn**	**15 19 03.0**	**+2.8**
BNDI	**Bandanaira**	**2.25**	**2**	P	**Pn**	**15 18 41.9**	**+3.1**
DRS	**Darwin Rock St**	**5.70**	**170**	P	**Pn**	**15 19 26.1**	**+2.7**
DRS	**Darwin Rock St**	**5.70**	**170**	S	**Sn**	**15 20 29.4**	**+1.2**
SIJI	**Sorong**	**6.05**	**14**	P	**Pn**	**15 19 27.5**	**-0.6**
	4.4nm,0.3s,baz=193,slow=19,SNR=2.6						
SIJI				S	**Sn**	**15 20 30.3**	**-6.3**
	20nm,0.2s,baz=241,slow=23,SNR=21						
SOEI	**Soe**	**6.25**	**242**	P	**Pn**	**15 19 33.7**	**+2.8**
BATI	**Baumata**	**6.99**	**241**	P	**Pn**	**15 19 43.0**	**+2.3**
	26nm,0.4s,baz=267,slow=3.7,SNR=13						
BATI				S	**Sn**	**15 20 59.2**	**+0.2**
	19nm,0.4s,baz=65,slow=23,SNR=8.8						
JAY	**Jayapura**	**11.63**	**69**	LR	LR	15 26 06.8	
	comp=Z,47nm,18.6s,baz=274,slow=42						
FITZ	**Fitzroy Crossi**	**11.96**	**200**	P	**Pn**	**15 20 48.0**	**+1.5**
	0.9nm,0.4s,baz=19,slow=12,SNR=8.3						
FITZ				S	**Sn**	**15 22 52.5**	**-6.3**
	2.6nm,0.4s,baz=286,slow=18,SNR=5.9						
PLAI	**Plampang**	**12.12**	**260**	P	**Pn**	**15 20 49.6**	**+1.0**
WRA	**Warramunga Arr**	**13.79**	**162**	P	**Pn**	**15 21 08.0**	**-2.0**
	0.3nm,0.4s,baz=340,slow=14,SNR=15						
WRA				S	**Sn**	**15 23 35.1**	**-7.6**
	1.4nm,0.5s,baz=343,slow=21,SNR=8.6						
QIS	**Mount Isa**	**16.64**	**146**	P	**Pn**	**15 21 46.9**	**+1.6**
ASAR	**Alice Springs**	**17.23**	**167**	P	**Pn**	**15 21 52.8**	**+0.4**
	2.1nm,0.7s,baz=348,slow=11,SNR=56						
ASAR				S	**S**	**15 25 00.8**	**-2.9**
	0.3nm,0.4s,baz=356,slow=27,SNR=5.5						
KKM	**Kota Kinabalu**	**18.64**	**313**	P	**Pn**	**15 22 12.6**	**+3.4**
CMSA	**Cobar Meteorol**	**28.74**	**151**	P	**P**	**15 23 45.5**	**+1.4**
LUES	**Luesalemba Tem**	**35.85**	**99**	P	**P**	**15 24 49.4**	**+3.1**
MKAR	**Makanchi Array**	**67.96**	**327**	P	**P**	**15 28 43.0**	**-0.5**
	1.4nm,0.5s,baz=110,slow=7.5,SNR=12						
	1.4nm,0.5s						
KURBB	**Kurchatov Arra**	**72.25**	**329**	P	**P**	**15 29 07.5**	**-1.9**
	0.2nm,0.4s,baz=133,slow=5.2,SNR=4.4						
	0.2nm,0.4s						

IDC 12 15:19:16.9±289.0,54.24N×42.80E,h0km,Error ellipse: s-maj=123.7km s-min=84.3km az=142.0,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**4.04**	**310**	I	I	15 45 20.0	
	baz=127,slow=324,SNR=0.8						
I31KZ	**AKTYUBINSK INF**	**10.08**	**106**	I	I	16 17 40.0	
	baz=300,slow=304,SNR=0.6						
I46RU	**ZALESOVO INFRA**	**24.38**	**73**	I	I	17 48 40.0	
	baz=293,slow=320,SNR=1.4						

*IDC **12** 15:36:46.4±0.9,10.31S×161.63E,h73km±7km,mb3.9/7, mbtmp4.2/9,Error ellipse: s-maj=16.5km s-min=9.7km az=31.0*

*NOU **12** 15:36:47.3,10.39S×161.43E,h17km,MLv4.7/15, Solomon Islands*

*NEIC **12** 15:36:47.3±1.5,10.26S±0.09×161.57E±0.08,h71km±7km, mb4.5/32,Error ellipse: s-maj=14.8km s-min=8.2km az=219.0*

ISC 12 15:36:46.4±0.5,10.29S±0.05×161.57E±0.05,h61km,n60, σ1.53/67,mb4.5/18,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HURO	**Huro Makira**	**0.37**	**118**	P	**Pn**	**15 36 57.5**	**+0.4**
HURO	**Huro Makira**	**0.37**	**118**	S	**Sn**	**15 37 05.8**	**+0.8**
HNR	**Honiara**	**1.81**	**298**	P	**Pn**	**15 37 17.0**	**+1.7**
	25nm,0.4s,baz=45,slow=23,SNR=26						
HNR				S	**Sn**	**15 37 39.6**	**+2.4**
	66nm,0.5s,baz=73,slow=22,SNR=10						
HNR				LR	LR	15 38 14.1	
	comp=Z,6.4nm,20.3s,baz=240,slow=47						
HNR	**Honiara**	**1.81**	**298**	P	**Pn**	**15 37 16.9**	**+1.6**
HNR	**Honiara**	**1.81**	**298**	S	**Sn**	**15 37 39.9**	**+2.6**
HNR	**Honiara**	**1.81**	**298**		**Pn**	**15 37 16.6**	**+1.3**
HNR	**Honiara**	**1.81**	**298**	Sn	**Sn**	**15 37 38.1**	**+0.8**
NGOA	**Tingoa Renbel**	**1.94**	**230**	P	**Pn**	**15 37 16.5**	**-0.5**
NGOA	**Tingoa Renbel**	**1.94**	**230**	S	**Sn**	**15 37 38.9**	**-1.5**
SAVO	**Savo Central**	**2.07**	**303**	P	**Pn**	**15 37 20.8**	**+2.0**
TATA	**Tatamba Isabel**	**2.57**	**317**	P	**Pn**	**15 37 26.5**	**+0.8**
SANVU	**Saraoutou**	**7.51**	**134**	P	**Pn**	**15 38 35.4**	**+2.1**
SANVU	**Saraoutou**	**7.51**	**134**		**Pn**	**15 38 34.6**	**+1.3**
SANVU				Sn	**Sn**	**15 39 56.2**	**-0.9**
DZM	**Mont Dzumac**	**12.61**	**159**	P	**Pn**	**15 39 44.0**	**+0.9**
	3.4nm,0.8s,baz=61,slow=7.6,SNR=28						
DZM				S	**Sn**	**15 42 02.4**	**+0.5**
	2.1nm,0.8s,baz=90,slow=21,SNR=1.1						
MARNC	**Mare, Loyalty**	**12.74**	**152**	P	**Pn**	**15 39 48.9**	**+4.2**
MARNC	**Mare, Loyalty**	**12.74**	**152**		**Pn**	**15 39 42.1**	**-2.6**
OUENC	**Ouen Island, N**	**13.07**	**158**	P	**Pn**	**15 39 53.1**	**+3.8**
PATS	**Pohnpei**	**17.32**	**349**	P	**Pn**	**15 40 43.7**	**-0.4**
CTA	**Charters Tower**	**17.69**	**235**	P	**P**	**15 40 49.7**	**+0.9**
	13nm,1.0s,baz=70,slow=13,SNR=6.3						
CTA	**Charters Tower**	**17.69**	**235**	P	**P**	**15 40 51.5**	**+2.6**
CTAO	**Charters Tower**	**17.69**	**235**	P	**P**	**15 40 51.4**	**+2.6**
CTAO	**Charters Tower**	**17.69**	**235**	P	**P**	**15 40 49.0**	**+0.2**
CTAO				IAmb	IAmb	15 41 14.5	
	comp=Z,44nm,1.4s						
EIDS	**Eidsvold**	**18.00**	**212**	P	**P**	**15 40 51.6**	**-0.6**
EIDS				IAmb	IAmb	15 41 24.4	
	comp=Z,37nm,1.4s						
ARMA	**Armidale**	**22.06**	**203**	P	**P**	**15 41 39.3**	**+2.9**
ARMA	**Armidale**	**22.06**	**203**	P	**P**	**15 41 36.1**	**-0.3**
ARMA				IAmb	IAmb	15 42 04.3	
	comp=Z,22nm,1.4s						
INKA	**Innaminka**	**26.17**	**226**	P	**P**	**15 42 15.1**	**-0.1**
RAO	**Raoul Island**	**26.90**	**137**	P	**P**	**15 42 20.8**	**-1.0**
WB0	**Warramunga Arr**	**27.85**	**247**	P	**P**	**15 42 29.4**	**-1.0**
WB0				IAmb	IAmb	15 42 30.3	
	comp=Z,7.0nm,0.6s						
WRA	**Warramunga Arr**	**27.95**	**247**	P	**P**	**15 42 30.4**	**-0.9**
	comp=Z,5.0nm,0.7s,baz=76,slow=9.1,SNR=62						
WRA				pP	**pwP**	**15 42 49.0**	**-0.1**
	comp=Z,3.4nm,0.7s,baz=76,slow=9.4,SNR=8.3						
	comp=Z,5.0nm,0.7s						
WRA	**Warramunga Arr**	**27.95**	**247**	P	**P**	**15 42 28.8**	**-2.5**
AS31	**Alice Springs**	**29.54**	**240**	P	**P**	**15 42 43.6**	**-1.8**
ASAR	**Alice Springs**	**29.54**	**240**	P	**P**	**15 42 43.4**	**-2.1**
	comp=Z,0.7nm,0.5s,baz=64,slow=10,SNR=19						
ASAR				pP	**pwP**	**15 43 02.1**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=62,slow=10,SNR=3.7						
	comp=Z,0.7nm,0.5s						
TOO	**Toolangi**	**30.78**	**205**	P	**P**	**15 42 57.5**	**+1.3**
RTZ	**Ruatahuna**	**31.40**	**156**	P	**P**	**15 43 02.4**	**+0.7**
RTZ				IAmb	IAmb	15 43 23.6	
	comp=Z,19nm,1.1s						
BKZ	**Black Stump Fm**	**31.69**	**158**	P	**P**	**15 43 04.7**	**+0.5**
KNRA	**Kununurra**	**32.39**	**257**	P	**P**	**15 43 09.6**	**-0.9**
KNRA				IAmb	IAmb	15 43 10.8	
	comp=Z,15nm,0.9s						
BBOO	**Buckleboo**	**32.47**	**222**	P	**P**	**15 43 10.2**	**-0.9**
BBOO				IAmb	IAmb	15 43 37.2	
	comp=Z,21nm,1.5s						
MRZ	**Mangatainoka R**	**32.69**	**160**	P	**P**	**15 43 11.7**	**-1.2**
FITZ	**Fitzroy Crossi**	**35.63**	**253**	P	**P**	**15 43 37.4**	**-1.3**
	comp=Z,5.7nm,0.5s,baz=72,slow=8.5,SNR=27						
	comp=Z,5.7nm,0.5s						
PSA00	**Pilbara Seismi**	**41.53**	**249**	P	**P**	**15 44 26.7**	**-1.5**
PSA00				IAmb	IAmb	15 44 58.6	
	comp=Z,16nm,1.5s						
PSA00	**Pilbara Seismi**	**41.53**	**249**	P	**P**	**15 44 26.1**	**-2.0**
PSA00				IAmb	IAmb	15 44 46.2	
	comp=Z,34nm,1.4s						
MBWA	**Marble Bar**	**41.58**	**250**	P	**P**	**15 44 27.8**	**-0.8**
MORW	**Morawa**	**46.42**	**240**	P	**P**	**15 45 06.2**	**-1.0**
NWAO	**Narrogin (SRO)**	**46.53**	**234**	P	**P**	**15 45 07.7**	**-0.3**
JKA	**Kamikawa-asahi**	**56.83**	**344**	P	**P**	**15 46 23.4**	**-1.0**
INCN	**Inchon**	**57.71**	**327**	P	**P**	**15 46 29.4**	**-1.5**
VNDA	**Vanda**	**67.21**	**180**	P	**P**	**15 47 36.2**	**+2.5**
SBA	**Scott Base**	**67.60**	**179**	P	**P**	**15 47 37.5**	**+1.4**
O14K	**Tigyukauivet M**	**75.48**	**19**	P	**P**	**15 48 23.5**	**-0.2**
O14K				IAmb	IAmb	15 48 29.3	
	comp=Z,8.9nm,1.3s						
SONM	**Songino Array**	**75.67**	**325**	P	**P**	**15 48 24.8**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=143,slow=5.1,SNR=5.1						
	comp=Z,1.0nm,0.6s						
K15K	**Wolf Creek Mou**	**77.83**	**17**	P	**P**	**15 48 36.9**	**0.0**
K15K				IAmb	IAmb	15 48 58.1	
	comp=Z,14nm,1.5s						
L16K	**Owhat River**	**77.97**	**18**	P	**P**	**15 48 37.2**	**-0.5**
L16K				IAmb	IAmb	15 49 09.6	
	comp=Z,8.3nm,1.5s						
L18K	**Granite Mounta**	**79.21**	**19**	P	**P**	**15 48 45.1**	**+0.6**
L18K				IAmb	IAmb	15 49 05.5	
	comp=Z,5.1nm,1.0s						
QSPA	**South Pole Qui**	**79.71**	**180**	P	**P**	**15 48 46.2**	**-1.3**
	comp=Z,2.5nm,0.7s,baz=60,slow=1.1,SNR=8.5						
	comp=Z,2.5nm,0.7s						
QSPA	**South Pole Qui**	**79.71**	**180**	P	**P**	**15 48 46.6**	**-0.9**
QSPA				IAmb	IAmb	15 48 49.6	
	comp=Z,3.8nm,0.8s						
L19K	**White Mountain**	**79.76**	**19**	P	**P**	**15 48 47.3**	**-0.3**
IMAR	**Indian Mountai**	**82.85**	**17**	P	**P**	**15 49 03.9**	**+0.1**
ILAR	**Eielson Array**	**84.15**	**20**	P	**P**	**15 49 09.7**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=242,slow=5.1,SNR=14						
ILAR				pP	**pP**	**15 49 28.1**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=246,slow=4.9,SNR=4.7						
	comp=Z,0.3nm,0.5s						
M30M	**Minto, Yukon**	**86.61**	**24**	P	**P**	**15 49 23.4**	**+0.5**
M30M				IAmb	IAmb	15 50 02.6	
	comp=Z,5.3nm,1.4s						
YKA	**Yellowknife Ar**	**96.20**	**28**	P	**P**	**15 50 06.1**	**-1.4**
	comp=Z,0.2nm,0.7s,baz=267,slow=5.1,SNR=4.2						
YKA				pP	**pP**	**15 50 25.1**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=271,slow=5.1,SNR=3.9						
	comp=Z,0.2nm,0.7s						

*NEIC **12** 15:37:50.3±2.0,41.30S±0.09×85.78W±0.1,h10km±1km, mb4.7/78,Error ellipse: s-maj=19.4km s-min=15.8km az=279.0*

*IDC **12** 15:37:50.0±0.9,41.37S×85.77W,h0km,mb4.2/7, mbtmp4.2/9,ML3.3/2,MS3.6/8,Error ellipse: s-maj=29.9km s-min=21.4km az=107.0*

ISC 12 15:37:49.9±0.6,41.29S±0.08×85.78W±0.1,h10km,n102, σ1.16/85,mb4.6/36,MS3.6/8,West Chile Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H03S2	**Juan Fernandez**	**9.20**	**38**	T	T	15 49 38.0	
	baz=212,slow=73,SNR=246						
H03S1	**Juan Fernandez**	**9.20**	**38**	T	T	15 49 29.8	
	baz=212,slow=73,SNR=282						
H03S3	**Juan Fernandez**	**9.22**	**38**	T	T	15 49 34.4	
	baz=212,slow=73,SNR=428						
H03N3	**Juan Fernandez**	**9.52**	**37**	T	T	15 49 45.8	
	baz=206,slow=72,SNR=200						
H03N2	**Juan Fernandez**	**9.53**	**37**	T	T	15 49 53.0	
	baz=206,slow=72,SNR=338						
H03N1	**Juan Fernandez**	**9.54**	**37**	T	T	15 49 47.6	
	baz=206,slow=72,SNR=185						
GO06	**Curarrehue**	**11.02**	**86**	Pn	**Pn**	**15 40 26.9**	**-0.8**
PLCA	**Paso Flores**	**11.50**	**92**	Pn	**Pn**	**15 40 37.3**	**+3.1**
	baz=278,slow=14,SNR=2.8						
	2.6nm,1.1s						
PLCA	**Paso Flores**	**11.50**	**92**	Pn	**Pn**	**15 40 33.8**	**-0.5**
GO08	**Villa O'Higgin**	**11.78**	**132**	Pn	**Pn**	**15 40 37.9**	**-0.1**
MT09	**Talagante**	**13.90**	**62**		**Pn**	**15 41 08.2**	**+1.1**
BO04	**La Punta**	**14.03**	**64**	Pn	**Pn**	**15 41 11.8**	**+3.0**
MT02	**Curacav**	**14.12**	**60**		**Pn**	**15 41 13.5**	**+3.5**
VA06	**Catapilco**	**14.46**	**58**		**Pn**	**15 41 15.8**	**+1.1**
PEL	**Peldehue**	**14.48**	**61**		**Pn**	**15 41 16.7**	**+1.6**
MT08	**Bocatoma Ro**	**14.75**	**63**	Pn	**Pn**	**15 41 19.2**	**+0.4**
VA03	**San Esteban**	**14.81**	**60**	Pn	**Pn**	**15 41 20.5**	**+1.0**
CO04	**Los Peladeros**	**15.01**	**57**		**Pn**	**15 41 22.8**	**+0.4**
CO06	**Fray Jorge**	**15.56**	**52**		**Pn**	**15 41 28.8**	**-0.5**
CO06				IAmb	IAmb	15 41 35.8	
	comp=Z,42nm,1.3s						
CO02	**Combarbal**	**15.57**	**54**		**Pn**	**15 41 28.8**	**-0.8**
CO03	**El Pedregal**	**16.01**	**54**		**Pn**	**15 41 33.8**	**-1.5**
CO05	**La Serena**	**16.35**	**51**	Pn	**Pn**	**15 41 39.0**	**-0.5**
ZON	**Zonda**	**16.81**	**60**		**P**	**15 41 47.3**	**-0.3**
CO01	**Juntas del Tor**	**16.98**	**53**		**P**	**15 41 49.4**	**-0.3**
CFA	**Coronel Fontan**	**17.06**	**61**	P	**P**	**15 41 50.5**	**+0.2**
	comp=Z,2.0nm,0.3s,baz=201,slow=21,SNR=7.2						
	comp=Z,2.9nm,0.8s						
AC06	**Mina Casimiro**	**18.80**	**47**	P	**P**	**15 42 08.7**	**-0.8**
AC01	**Pan de Azucar**	**19.63**	**44**	P	**P**	**15 42 17.8**	**-0.8**
AC02	**Maricunga**	**19.89**	**49**		**P**	**15 42 21.4**	**-0.6**
PB14	**IPOC Station P**	**20.97**	**42**	P	**P**	**15 42 32.8**	**-0.7**
PB05	**IPOC Station P**	**22.55**	**40**		**P**	**15 42 50.3**	**0.0**
PB05				IAmb	IAmb	15 42 54.0	
	comp=Z,20nm,1.3s						
PB09	**IPOC Station P**	**23.92**	**41**	P	**P**	**15 43 03.8**	**-0.4**
PB09				IAmb	IAmb	15 43 30.8	
	comp=Z,22nm,1.5s						
PB01	**IPOC Station P**	**24.44**	**39**	P	**P**	**15 43 08.7**	**-0.2**
TA01	**Diego Aracena**	**24.53**	**37**	P	**P**	**15 43 09.4**	**-0.2**
TA01				IAmb	IAmb	15 43 11.0	
	comp=Z,38nm,1.4s						
PMSA	**Palmer Station**	**26.62**	**159**	LR	LR	15 49 43.2	
	comp=Z,150nm,20.7s,baz=314,slow=27						
PB16	**IPOC Station P**	**26.78**	**36**		**P**	**15 43 30.5**	**-0.2**
PB18	**Visviri**	**27.45**	**35**		**P**	**15 43 36.4**	**-0.3**
CPUP	**Villa Florida**	**27.78**	**66**	LR	LR	15 53 58.3	
	comp=Z,133nm,18.3s,baz=253,slow=35						
LPAZ	**La Paz**	**29.19**	**37**	P	**P**	**15 43 53.5**	**+1.1**
	comp=Z,2.8nm,0.8s,baz=204,slow=2.0,SNR=8.8						
LPAZ				LR	LR	15 53 25.6	
	comp=Z,53nm,18.4s,baz=192,slow=32						
	comp=Z,2.8nm,0.8s						
LPAZ	**La Paz**	**29.19**	**37**		**P**	**15 43 52.6**	**+0.3**
ATAH	**Atahualpa**	**34.64**	**13**	LR	LR	15 55 41.8	
	comp=Z,90nm,21.8s,baz=207,slow=31						
BDFB	**Brasilia**	**41.38**	**63**	P	**P**	**15 45 38.9**	**+2.3**
	comp=Z,0.9nm,0.3s,baz=182,slow=8.5,SNR=3.3						
BDFB				LR	LR	16 02 32.9	
	comp=Z,93nm,18.6s,baz=169,slow=36						
	comp=Z,0.9nm,0.3s						
BDFB	**Brasilia**	**41.38**	**63**	P	**P**	**15 45 37.0**	**+0.4**
OTAV	**Otavalo**	**41.86**	**11**	P	**P**	**15 45 40.8**	**0.0**
BELA	**Belgrano 2**	**42.06**	**166**	P	**P**	**15 45 41.0**	**-0.2**
BELA				IAmb	IAmb	15 45 45.0	
	comp=Z,8.6nm,0.9s						
ROSC	**El Rosal**	**47.08**	**16**	LR	LR	16 03 58.2	
	comp=Z,151nm,20.2s,baz=206,slow=33						
QSPA	**South Pole Qui**	**48.95**	**180**	P	**P**	**15 46 36.8**	**+0.7**
	comp=Z,4.2nm,0.9s,baz=123,slow=4.5,SNR=7.0						
	comp=Z,4.2nm,0.9s						
QSPA	**South Pole Qui**	**48.95**	**180**	P	**P**	**15 46 36.5**	**+0.3**
QSPA				IAmb	IAmb	15 46 46.1	
	comp=Z,13nm,1.2s						
BOAV	**Boa Vista**	**49.17**	**34**	P	**P**	**15 46 36.5**	**-1.6**
BOAV				IAmb	IAmb	15 46 37.6	
	comp=Z,6.2nm,1.0s						
SNAA	**Sanae**	**49.23**	**156**	LR	LR	16 02 45.4	
	comp=Z,75nm,21.7s,baz=295,slow=30						
SNAA	**Sanae**	**49.23**	**156**	P	**P**	**15 46 37.8**	**-0.3**
SNAA				IAmb	IAmb	15 46 40.7	
	comp=Z,9.8nm,1.2s						
SDV	**Santo Domingo**	**51.83**	**19**	LR	LR	16 07 11.1	
	comp=Z,60nm,20.6s,baz=76,slow=34						
SDV	**Santo Domingo**	**51.83**	**19**	P	**P**	**15 46 56.5**	**-1.9**
SDV				IAmb	IAmb	15 46 58.7	
	comp=Z,14nm,1.4s						
VNDA	**Vanda**	**54.61**	**194**	P	**P**	**15 47 18.9**	**+0.9**
	comp=Z,3.2nm,0.9s,baz=134,slow=2.4,SNR=5.7						
	comp=Z,3.2nm,0.9s						
VNDA	**Vanda**	**54.61**	**194**	P	**P**	**15 47 18.6**	**+0.6**
VNDA				IAmb	IAmb	15 47 21.5	
	comp=Z,8.6nm,1.3s						
MPOM	**Morne Pois Mar**	**60.05**	**28**	P	**P**	**15 47 56.2**	**-0.8**
CXM	**Morne La Croix**	**60.28**	**28**	P	**P**	**15 47 57.2**	**-1.6**
CXM				IAmb	IAmb	15 48 10.3	
	comp=Z,43nm,0.9s						
HPIG		**70.35**	**341**	P	**P**	**15 49 04.8**	**+0.8**
HPIG				IAmb	IAmb	15 49 07.1	
	comp=Z,8.6nm,1.0s						
451A	**Vernon**	**71.55**	**0**	P	**P**	**15 49 11.1**	**+0.2**
HNDO	**Hondo**	**71.57**	**348**	P	**P**	**15 49 11.5**	**+0.4**
DRIO	**Del Rio**	**71.69**	**346**		**P**	**15 49 12.1**	**+0.3**
DRIO				IAmb	IAmb	15 49 14.1	
	comp=Z,7.6nm,1.2s						
TXAR	**Lajitas Array**	**72.20**	**344**	P	**P**	**15 49 17.2**	**+2.2**
	comp=Z,3.1nm,0.8s,baz=164,slow=9.1,SNR=31						
	comp=Z,3.1nm,0.8s						
TXAR	**Lajitas Array**	**72.20**	**344**	P	**P**	**15 49 15.9**	**+0.9**
TX31	**Lajitas Ar. Si**	**72.20**	**344**		**P**	**15 49 15.5**	**+0.5**
TX31				IAmb	IAmb	15 49 18.1	
	comp=Z,5.1nm,0.9s						
SHEL	**Horse Pasture**	**72.22**	**96**	P	**P**	**15 49 15.9**	**+0.4**
SAND	**Sanderson**	**72.49**	**345**		**P**	**15 49 17.6**	**+0.9**
SAND				IAmb	IAmb	15 49 19.4	
	comp=Z,4.4nm,1.1s						
JCT	**Junction City**	**72.58**	**347**	P	**P**	**15 49 16.7**	**-0.5**
RAO	**Raoul Island**	**72.86**	**246**	P	**P**	**15 49 18.3**	**-0.8**
250A	**Grady**	**72.91**	**360**	P	**P**	**

baz=297,slow=74,SNR=35
H11S2 WAKE ISLAND Hy 23.65 107 T T 16 09 09.8
baz=297,slow=74,SNR=30
WRA Warramunga Arr 47.61 191 P P 15 47 09.4 +0.1
1.0nm,0.7s,baz=12,slow=8.5,SNR=7.9
1.0nm,0.7s
ASAR Alice Springs 51.33 190 P P 15 47 37.4 -0.4
0.2nm,0.7s,baz=15,slow=5.6,SNR=1.7
0.2nm,0.7s
ILAR Eielson Array 57.33 29 P P 15 48 20.9 -0.1
0.3nm,0.8s,baz=266,slow=6.2,SNR=4.1
0.3nm,0.8s

MOS ***12*** *15:44:01.7±1.8, 32.68N×85.37E, h10km, mb5.0/51, MS5.0/21, Error ellipse: s-maj=6.2km s-min=3.0km az=119.1*

NEIC ***12*** *15:44:02.8±1.4, 32.72N±0.06×85.33E±0.04, h10km±1km, mb5.0/115, Mww5.4/9, Error ellipse: s-maj=10.5km s-min=5.5km az=355.0*

NEIC ***12*** *15:44:02.8, 32.72N×85.34E, h30km*

NEIC ***12*** *15:44:02.8, 32.82N×85.46E, h30km, Moment Tensor Solution. Duration: 2s1 Moment tensor: Scale 10^17 Nm; Mrr=0.10; Mθθ=1.45; Mϕϕ=1.55; Mrθ=0.03; Mrϕ=0.30; Mθϕ=-0.27; Fault plane solution: M0=1.56000×10^17 NP1: ϕ=231.05000°, δ=81.99000°, λ=4.60000°. NP2: ϕ=140.41000°, δ=85.44000°, λ=171.97000°. Principal axes: T 1.6233, Plg=9.0000°, Azm=96.0000°; N -0.1380, Plg=81.0000°, Azm=291.0000°; P -1.4852, Plg=2.0000°, Azm=186.0000°;*

IDC ***12*** *15:44:03.0±0.5, 32.77N×85.44E, h0km, mb4.5/25, mbtmp4.6/30, ML4.5/4, MS4.8/70 Error ellipse: s-maj=16.2km s-min=10.8km az=39.0*

BJI ***12*** *15:44:03.8, 32.88N×85.55E, h10km, mB5.3/41, mb4.7/66, Ms5.2/78, Ms7 5.2/73*

NDI ***12*** *15:44:06.0±3.9, 32.75N×85.44E, h10km, mb5.0, ML4.7, MW4.9, Presumed earthquake*

GCMT ***12*** *15:44:06.8±0.1, 32.76N±0.01×85.53E±0.01, h26km, MW5.5/154, Moment Tensor Solution. s110,c159; s154,c290; Duration: 1s3 Moment tensor: Scale 10^17 Nm; Mrr=0.31±.03; Mθθ=1.70±.03; Mϕϕ=2.01±.03; Mrθ=0.49±.05; Mϕθ=0.51±.02; Mϕr=0.10±.05; Best double couple: M0=2.00100×10^17 NP1: ϕ=231.00000°, δ=77.00000°, λ=-12.00000°. NP2: ϕ=324.00000°, δ=78.00000°, λ=-167.00000°. Principal axes: T 2.0780, Plg=1.0000°, Azm=98.0000°; N -0.1590, Plg=73.0000°, Azm=5.0000°; P -1.9230, Plg=17.0000°, Azm=188.0000°; nsta=1 refers to body waves, cutoff=40s. nsta=2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 15:44:03.7±0.4, 32.69N±0.03×85.40E±0.03, h9km±2km, h9km:pP-P, n552, σ2=32/572, mb4.9/169, MS5.0/106, 25C-19D, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EVN	**Everest**	**4.87**	**165**		**Pn**	**Pn**	**15 45 21.3**	**+3.5**
EVN				Sn		**Sn**	**15 46 17.9**	**+3.2**
LSA	**Lhasa**	**5.76**	**120**		**Pn**	**Pn**	**15 45 33.5**	**+3.7**
LSA				Sn		**Sn**	**15 46 43.7**	**+7.5**
LSA	**Lhasa**	**5.76**	**120**	P	**Pn**	**Pn**	**15 45 33.5**	**+3.7**
LSA							15 46 43.7	
LSA	**Lhasa**	**5.76**	**120**	Pn	**Pn**	**Pn**	**15 45 31.2**	**+1.4**
LSA				Sn		**Sn**	**15 46 41.4**	**+5.2**
LSA				L		L		
	comp=E,32μm,14.1s							
GTK	**Tadong**	**6.03**	**152**	*e*P		**Pn**	**15 45 36.9**	**+3.7**
DDI	**Dehra Dun**	**6.70**	**251**	*e*P		**Pn**	**15 45 45.3**	**+2.9**
DDI				*e*S		**Sn**	**15 46 56.8**	**-2.1**
DDI				IAML			15 47 15.1	
	comp=E,504nm,0.7s							
DDI				IAML			15 47 15.4	
	comp=N,641nm,0.7s							
SMLA	**Simla**	**7.17**	**260**	*e*P		**Pn**	**15 45 50.6**	**+1.8**
SMLA				*e*S		**Sn**	**15 47 10.0**	**-0.4**
SMLA				IAML			15 47 20.4	
	comp=N,490nm,0.7s							
SMLA				IAML			15 47 23.7	
	comp=E,755nm,0.8s							
TAWA	**Tawang**	**7.56**	**131**	*e*P		**Pn**	**15 45 58.1**	**+3.7**
DHUB	**DHUBRI**	**7.76**	**148**	*e*P		**Pn**	**15 45 58.5**	**+1.6**
DHUB				*e*S		**Sn**	**15 47 23.7**	**-1.2**
DHUB				IAML			15 47 31.0	
	comp=E,494nm,0.7s							
DHUB				IAML			15 47 33.9	
	comp=N,484nm,0.7s							
GUWA	**GUWAHATI**	**8.48**	**138**	*e*P		**Pn**	**15 46 08.3**	**+1.5**
GUWA				*e*S		**Sn**	**15 47 40.2**	**-2.4**
GOMU	**GeErMu**	**8.53**	**63**	P		**Pn**	**15 46 08.4**	**+0.7**
GOMU				S		**Sn**	**15 47 42.1**	**-2.1**
GOMU				L		L		
	comp=N,7μm,6.8s							
GOMU				L		L		
	comp=N,6μm,5.5s							
GOMU				L		L		
	comp=N,7μm,6.7s							
SHL	**Shillong**	**9.08**	**140**			**Pn**	**15 46 14.5**	**-0.7**
SHL	**Shillong**	**9.08**	**140**	P		**Pn**	**15 46 14.5**	**-0.7**
SHL	**Shillong**	**9.08**	**140**	P		**Pn**	**15 46 16.2**	**+1.1**
	SNR=22							
SHL	**Shillong**	**9.08**	**140**	*e*P		**Pn**	**15 46 15.1**	**-0.1**
ITAN	**ITANAGAR**	**9.09**	**125**	*e*P		**Pn**	**15 46 17.6**	**+2.5**
PASG	**PASIGHAT**	**9.73**	**116**	*e*P		**Pn**	**15 46 25.0**	**+1.1**
WUS	**Wushi**	**9.82**	**332**			**Pn**	**15 46 24.6**	**-0.7**
MOKO	**MOKOCHONG**	**10.16**	**126**	*e*P		**Pn**	**15 46 31.4**	**+1.5**
AGT	**Agartala**	**10.17**	**148**	*e*P		**Pn**	**15 46 30.5**	**+0.7**
NIL	**Nilore**	**10.23**	**279**			**Pn**	**15 46 29.9**	**-0.9**
NIL	**Nilore**	**10.23**	**279**	P		**Pn**	**15 46 29.9**	**-0.9**
NIL	**Nilore**	**10.23**	**279**	P		**Pn**	**15 46 30.6**	**-0.2**
KSH2	**Kashi**	**10.25**	**312**	P		**Pn**	**15 46 32.9**	**+1.8**
KSH2				S		**Sn**	**15 48 29.6**	**+3.4**
KSH2				pmax		pmax		
	comp=N,33nm,1.5s							
KSH2				L		L		
	comp=N,9μm,9.6s							
KSH2				L		L		
	comp=N,13μm,9.3s							
KOHI	**KOHIMA**	**10.30**	**130**	*e*P		**Pn**	**15 46 32.2**	**+0.4**
BELO	**BELONIA**	**10.81**	**149**	*e*P		**Pn**	**15 46 42.1**	**+3.3**
IMP	**Imphal**	**10.84**	**134**	*e*P		**Pn**	**15 46 38.4**	**-0.8**
TARG	**Taragay, Kyrgy**	**10.86**	**328**			**Pn**	**15 46 38.2**	**-1.5**
TARG	**Taragay, Kyrgy**	**10.86**	**328**	P		**Pn**	**15 46 38.2**	**-1.5**
PRZ	**Przheval'sk**	**11.24**	**332**			**Pn**	**15 46 42.7**	**-2.0**
PRZ	**Przheval'sk**	**11.24**	**332**	P		**Pn**	**15 46 42.7**	**-2.0**
WMQ	**Urumqi**	**11.26**	**9**	*e*P		**Pn**	**15 46 45.4**	**+0.6**
WMQ				PP		**PnPn**	**15 46 58.4**	**+5.7**
WMQ				S		**Sn**	**15 48 58.5**	**+7.7**
WMQ				pmax		pmax		
	comp=N,30nm,2.1s							
WMQ				L		L		
	comp=N,8μm,13.3s							
WMQ				L		L		
	comp=N,6μm,12.7s							
WMQ				L		L		
	comp=N,5μm,16.9s							
AJM	**Ajmer**	**11.26**	**239**	*e*P		**Pn**	**15 46 46.8**	**+1.9**
AJM				*e*S		**Sn**	**15 48 46.1**	**-4.9**
AJM				IAML			15 48 54.2	
	comp=E,384nm,0.5s							
AJM				IAML			15 48 59.2	
	comp=N,474nm,1.2s							
BRDH	**Bariadhala**	**11.40**	**149**	LR		LR	15 52 12.7	
	comp=N,4μm,20.2s,baz=334,slow=43							
SHLS	**Shalkode**	**11.45**	**338**	*e*P		**Pn**	**15 46 46.0**	**-1.5**
SHLS				*e*S		**Sn**	**15 48 52.7**	**-2.8**
SHLS	**Shalkode**	**11.45**	**338**	*e*P		**Pn**	**15 46 46.1**	**-1.5**
SHLS				*e*S		**Sn**	**15 48 52.8**	**-2.8**
SHLS				*e*LQ		LQ	15 50 02.0	
KDJ	**Kajisay**	**11.46**	**328**			**Pn**	**15 46 45.6**	**-2.1**
KDJ	**Kajisay**	**11.46**	**328**	P		**Pn**	**15 46 45.6**	**-2.1**
MORE	**Moreh**	**11.49**	**135**			**Pn**	**15 46 46.8**	**-1.3**
NRN	**Naryn**	**11.51**	**322**			**Pn**	**15 46 47.3**	**-1.1**
NRN	**Naryn**	**11.51**	**322**	P		**Pn**	**15 46 47.3**	**-1.1**
UZB	**Uzynbulak**	**11.59**	**336**	*e*P		**Pn**	**15 46 49.5**	**+0.1**
UZB				*e*S		**Sn**	**15 48 59.3**	**+0.4**
UZB	**Uzynbulak**	**11.59**	**336**	*e*P		**Pn**	**15 46 49.6**	**+0.1**
UZB				*e*S		**Sn**	**15 48 59.4**	**+0.5**
UZB				*e*LQ		LQ	15 50 10.7	
SATY	**Saty**	**11.73**	**334**	*e*P		**Pn**	**15 46 51.7**	**+0.4**
SATY				*e*S		**Sn**	**15 49 02.8**	**+0.4**
SATY	**Saty**	**11.73**	**334**	*e*P		**Pn**	**15 46 51.8**	**+0.4**
SATY				*e*S		**Sn**	**15 49 02.9**	**+0.4**
SATY				*e*LQ		LQ	15 50 15.5	
BHPL	**Bhopal**	**11.76**	**219**	*e*P		**Pn**	**15 46 52.3**	**+0.6**
BHPL				IAML			15 49 17.4	
	comp=E,228nm,0.8s							
BHPL				IAML			15 49 25.4	
	comp=N,199nm,0.8s							
KPKS	**Kokpek**	**11.98**	**336**	*e*P		**Pn**	**15 46 55.0**	**+0.2**
KPKS				*e*S		**Sn**	**15 49 08.9**	**+0.3**
KPKS	**Kokpek**	**11.98**	**336**	*e*P		**Pn**	**15 46 55.0**	**+0.2**
KPKS				*e*S		**Sn**	**15 49 09.0**	**+0.3**
KPKS				*e*LQ		LQ	15 50 22.9	
ULHL	**Ulahol**	**11.99**	**325**	P		**Pn**	**15 46 57.2**	**+2.3**
	SNR=25							
SAIH	**SAIHA**	**12.18**	**145**	*e*P		**Pn**	**15 46 56.9**	**-0.7**
TNSS	**Tian-Shan**	**12.29**	**330**	*e*P		**Pn**	**15 46 59.5**	**+0.2**
TNSS	**Tian-Shan**	**12.29**	**330**	*e*P		**Pn**	**15 46 59.5**	**+0.2**
BOOM	**Boomskoye usch**	**12.32**	**325**			**Pn**	**15 46 57.0**	**-2.4**
BOOM	**Boomskoye usch**	**12.32**	**325**	P		**Pn**	**15 46 57.0**	**-2.4**
MDOK	**Medeo**	**12.35**	**330**	*e*P		**Pn**	**15 47 00.4**	**+0.5**
MDOK	**Medeo**	**12.35**	**330**	*e*P		**Pn**	**15 47 00.4**	**+0.5**
MDOK				*e*LQ		LQ	15 50 35.5	
AAA	**Alma-Ata**	**12.45**	**330**	*e*P		**Pn**	**15 47 01.7**	**+0.6**
AAA	**Alma-Ata**	**12.45**	**330**	*e*P		**Pn**	**15 47 01.7**	**+0.6**
TKM2	**Tokmak 2**	**12.81**	**326**	P		**Pn**	**15 47 08.1**	**+1.9**
	SNR=31							
UCH	**Uchtor**	**12.85**	**321**	P		**Pn**	**15 47 10.3**	**+3.3**
	SNR=42							
DRK	**Karamyk**	**12.91**	**305**			**Pn**	**15 47 05.1**	**-2.6**
DRK	**Karamyk**	**12.91**	**305**	P		**Pn**	**15 47 05.1**	**-2.6**
KBK	**Karagaybulak**	**12.93**	**323**	P		**Pn**	**15 47 10.7**	**+2.8**
	SNR=8.8							
ARSB	**Arslanbob**	**13.13**	**315**			**Pn**	**15 47 08.8**	**-1.8**
ARSB	**Arslanbob**	**13.13**	**315**	P		**Pn**	**15 47 08.8**	**-1.8**
AAK	**Ala-Archa**	**13.15**	**322**	Pn		**Pn**	**15 47 11.0**	**+2.2**
	comp=N,7.8nm,1.2s,baz=148,slow=10,SNR=14							
AAK				LR		LR	15 53 11.9	
	comp=N,3μm,21.6s,baz=138,slow=42							
AAK	**Ala-Archa**	**13.15**	**322**	P		**Pn**	**15 47 13.4**	**+2.6**
	SNR=9.7							
AAK	**Ala-Archa**	**13.15**	**322**			**Pn**	**15 47 08.3**	**-2.5**
AAK	**Ala-Archa**	**13.15**	**322**	*i* P		**Pn**	**15 47 11.4**	**+0.6**
AAK	**Ala-Archa**	**13.15**	**322**	P		**Pn**	**15 47 12.0**	**+1.2**
FRU1	**Bishkek**	**13.20**	**323**			**Pn**	**15 47 09.7**	**-1.7**
FRU1	**Bishkek**	**13.20**	**323**	P		**Pn**	**15 47 09.7**	**-1.7**
GTA2	**Gaotai**	**13.44**	**56**	P		**Pn**	**15 47 14.6**	**-0.1**
GTA2				*s*P		P	15 47 23.5	-0.7
GTA2				S		**Sn**	**15 49 42.0**	**-2.2**
GTA2				SS		**S**	**15 50 02.9**	**-5.3**
GTA2				pmax		pmax		
	comp=N,14nm,2.1s							
GTA2				pmax		pmax		
	comp=N,390nm,8.1s							
GTA2				L		L		
	comp=N,9μm,7.9s							
GTA2				L		L		
	comp=N,5μm,9.5s							
TDK	**Taldyqorghan**	**13.44**	**338**	*e*P		**Pn**	**15 47 15.0**	**+0.5**
TDK	**Taldyqorghan**	**13.44**	**338**	*e*P		**Pn**	**15 47 15.1**	**+0.5**
EKS2	**Erkin-Say**	**13.54**	**321**	P		**Pn**	**15 47 16.8**	**+0.6**
	SNR=16							
SGDS	**Sogindy**	**13.68**	**325**	*e*P		**Pn**	**15 47 18.5**	**+0.7**
SGDS				*e*S		**Sn**	**15 49 50.9**	**+1.0**
SGDS				*e*LQ		LQ	15 51 18.0	
GAR	**Garm**	**13.75**	**301**			**Pn**	**15 47 16.2**	**-2.8**
KBL	**Kabul**	**13.76**	**282**			**Pn**	**15 47 16.8**	**-2.4**
KBL	**Kabul**	**13.76**	**282**	P		**Pn**	**15 47 16.8**	**-2.4**
KBL	**Kabul**	**13.76**	**282**	P		**Pn**	**15 47 18.6**	**-0.6**
	SNR=33							
KBL				S		**Sn**	**15 49 53.8**	**+1.5**
TNCH	**TengChong**	**13.79**	**120**	⇑P		**Pn**	**15 47 17.7**	**-1.9**
TNCH				pP		P	15 47 21.3	-6.9
TNCH				sP			15 47 26.4	
TNCH				PP		**PnPn**	**15 47 29.7**	**+2.2**
TNCH				S		**Sn**	**15 49 51.7**	**-1.3**
TNCH				SS		**SnSn**	**15 50 08.1**	**+2.7**
TNCH				pmax		pmax		
	comp=N,19nm,0.8s							
TNCH				pmax		pmax		
	comp=N,160nm,3.6s							
TNCH				L		L		
	comp=N,13μm,16.7s							
TNCH				L		L		
	comp=N,14μm,12.3s							
BTK	**Batken**	**13.85**	**306**	Pn		**Pn**	**15 47 17.5**	**-2.8**
BTK	**Batken**	**13.85**	**306**	P		**Pn**	**15 47 17.5**	**-2.8**
AKL	**Akola**	**14.09**	**214**	*e*P		**Pn**	**15 47 25.6**	**+2.1**
AKL				IAmb		IAmb	15 47 27.4	
	comp=E,65nm,1.0s							
AKL				*e*S		**Sn**	**15 50 02.3**	**+2.2**
MK31	**Makanchi Array**	**14.29**	**351**	*ce*P		**Pn**	**15 47 25.4**	**-0.8**
MKAR	**Makanchi Array**	**14.29**	**351**	Pn		**Pn**	**15 47 25.4**	**-0.7**
	comp=Z,0.8nm,0.3s,baz=160,slow=11,SNR=70							
MKAR				LR		LR	15 53 59.2	
	comp=Z,3μm,20.8s,baz=162,slow=42							
	comp=E,16nm,0.8s							
MKAR	**Makanchi Array**	**14.29**	**351**			**Pn**	**15 47 22.6**	**-3.5**
MAKZ	**Makanchi**	**14.34**	**350**			**Pn**	**15 47 24.0**	**-2.9**
MAKZ	**Makanchi**	**14.34**	**350**	P		**Pn**	**15 47 24.0**	**-2.9**
CHGR	**Chuyangaron**	**14.48**	**299**			Pn	15 47 23.5	-5.4
CHGR	**Chuyangaron**	**14.48**	**299**	*i* P		**Pn**	**15 47 28.3**	**-0.6**
ZSN	**Zaisan**	**14.75**	**359**	*e*P		**Pn**	**15 47 32.5**	**0.0**
ZSN	**Zaisan**	**14.75**	**359**	*e*P		**Pn**	**15 47 32.5**	**0.0**
SHAA	**Shahritus**	**14.95**	**294**			Pn	15 47 30.2	-5.0
DZA	**Taraz**	**15.06**	**317**	*e*P		**Pn**	**15 47 37.8**	**+1.1**
DZA	**Taraz**	**15.06**	**317**	*e*P		**Pn**	**15 47 37.9**	**+1.2**
BTLS	**Baital**	**15.15**	**328**	*e*P		**Pn**	**15 47 38.6**	**+0.7**
BTLS	**Baital**	**15.15**	**328**	*e*P		**Pn**	**15 47 38.6**	**+0.7**
IUG	**Iuzhnay**	**15.41**	**312**	*e*P		**Pn**	**15 47 39.6**	**-1.9**
LZDM	**Lanzhou Array**	**15.46**	**73**	Pn		**Pn**	**15 47 42.4**	**+0.1**
	baz=263,slow=10							
LZDM				LR		LR	15 53 52.2	
	comp=Z,2μm,21.3s,baz=60,slow=38							
	comp=Z,41nm,0.7s							
PZH	**PanZhiHua**	**15.49**	**109**	P		**Pn**	**15 47 41.9**	**-0.6**
PZH				S		**Sn**	**15 50 34.3**	**0.0**
PZH				pmax		pmax		
	comp=Z,10.0nm,1.0s							
PZH				pmax		pmax		
	comp=Z,620nm,4.7s							
PZH				L		L		
	comp=Z,5μm,12.3s							
PZH				L		L		
	comp=Z,4μm,10.0s							
LZH	**Lanzhou**	**15.60**	**72**	*e*P		**P**	**15 47 48.4**	**+0.2**
LZH				*s*P		sP	15 47 57.1	+3.1
LZH				S		**Sn**	**15 50 39.3**	**+2.3**
LZH				pmax		pmax		
	comp=Z,53nm,1.3s							
LZH				pmax		pmax		
	comp=Z,550nm,4.4s							
LZH				L		L		
	comp=Z,7μm,10.3s							
LZH				L		L		
	comp=Z,9μm,11.7s							
KK31	**Karatay Array**	**15.67**	**316**			**Pn**	**15 47 42.4**	**-2.3**
KK31	**Karatay Array**	**15.67**	**316**	P		**Pn**	**15 47 42.4**	**-2.3**
KK31				pmax		pmax		
	comp=Z,11nm,0.7s							
KKAR	**Karatay Array**	**15.67**	**316**			**Pn**	**15 47 42.1**	**-2.6**
KKAR	**Karatay Array**	**15.67**	**316**	P		**Pn**	**15 47 42.1**	**-2.6**
CD2	**Chengdu**	**15.71**	**92**	P		**Pn**	**15 47 44.4**	**-0.9**
CD2				S		**Sn**	**15 50 43.2**	**+3.6**
CD2				pmax		pmax		
	comp=Z,50nm,1.0s							
CD2				pmax		pmax		
	comp=Z,690nm,5.0s							
CD2				L		L		
	comp=Z,9μm,9.7s							
CD2				L		L		
	comp=Z,8μm,8.7s							
BRLS	**Borolday**	**16.03**	**315**	*e*P		**Pn**	**15 47 49.0**	**-0.3**
BRLS	**Borolday**	**16.03**	**315**	*e*P		**Pn**	**15 47 49.1**	**-0.3**
HYB	**Hyderabad**	**16.42**	**204**	*e*P		**Pn**	**15 47 53.5**	**-0.9**
KMI2	**Kunming**	**16.93**	**112**	⇑P		**Pn**	**15 48 01.4**	**+0.3**
KMI2				S		**Sn**	**15 51 07.7**	**-1.8**
KMI2				pmax		pmax		
	comp=Z,47nm,0.8s							
KMI2				pmax		pmax		
	comp=Z,400nm,3.3s							
KMI2				L		L		
	comp=Z,5μm,10.4s							
KMI2				L		L		
	comp=Z,4μm,10.3s							
DGZ	**Jazzator, Alta**	**17.06**	**4**	*i* P		**Pn**	**15 48 01.6**	**-1.0**
DGZ				pmax		pmax		
	comp=Z,69nm,1.2s							
POO	**Poona**	**17.51**	**219**	*e*P		**P**	**15 48 11.8**	**+2.4**
POO				IAmb		IAmb	15 48 18.9	
	comp=Z,57nm,0.8s							
SEM	**Semipalatinsk**	**18.11**	**349**	*e*P		**Pn**	**15 48 15.1**	**-0.5**
SEM	**Semipalatinsk**	**18.11**	**349**	*e*P		**Pn**	**15 48 15.1**	**-0.5**
CHTO	**Chiang Mai**	**18.41**	**135**	P		**Pn**	**15 48 20.1**	**+0.9**
CHTO	**Chiang Mai**	**18.41**	**135**			**P**	**15 48 16.9**	**-2.3**
CHTO	**Chiang Mai**	**18.41**	**135**	P		**P**	**15 48 16.9**	**-2.3**
CHTO				pmax		pmax		
	comp=Z,25nm,0.8s							
CHTO	**Chiang Mai**	**18.41**	**135**	P		**Pn**	**15 48 20.1**	**+0.9**
CHTO				S		**S**	**15 51 48.6**	**-1.1**
CHTO	**Chiang Mai**	**18.41**	**135**	P		**P**	**15 48 18.4**	**-0.8**
	comp=Z,45nm,1.4s							
KURBB	**Kurchatov Arra**	**18.62**	**346**	P		**P**	**15 48 20.8**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=158,slow=11,SNR=42							
KURBB				LR		LR	15 56 19.1	
	comp=Z,2μm,20.3s,baz=165,slow=40							
	comp=Z,16nm,0.9s							
CM31	**Chiang Mai Arr**	**18.68**	**136**	P		**P**	**15 48 20.5**	**-1.8**
CM31	**Chiang Mai Arr**	**18.68**	**136**	P		**Pn**	**15 48 23.4**	**+0.8**
	SNR=34							
CM31				S		**S**	**15 51 54.7**	**-0.6**
CMAR	**Chiang Mai Arr**	**18.68**	**136**	P		**P**	**15 48 22.4**	**+0.2**
	comp=Z,0.9nm,0.3s,baz=318,slow=12,SNR=41							
CMAR				PcP		**PcP**	**15 52 52.0**	**+1.4**
	comp=Z,1.8nm,0.7s,baz=294,slow=2.2,SNR=9.4							
CMAR				LR		LR	15 55 14.2	
	comp=Z,3μm,20.8s,baz=310,slow=36							
CMAR				ScP		**ScP**	**15 56 34.5**	**+8.1**
	comp=Z,0.6nm,0.8s,baz=274,slow=2.4,SNR=4.6							
	comp=Z,18nm,0.8s							
CMAR	**Chiang Mai Arr**	**18.68**	**136**			**P**	**15 48 20.4**	**-1.8**
KURK	**Kurchatov**	**18.69**	**346**			**P**	**15 48 19.7**	**-2.5**
KURK	**Kurchatov**	**18.69**	**346**	*ce*P		**P**	**15 48 21.8**	**-0.4**
KURK				pmax		pmax		
	comp=Z,61nm,0.9s							
KURK	**Kurchatov**	**18.69**	**346**	P		**P**	**15 48 21.3**	**-0.9**
HRA	**Herat**	**19.37**	**281**			**P**	**15 48 29.5**	**-0.5**
HRA				IAmb		IAmb	15 48 34.1	
	comp=Z,287nm,2.0s							
GYA	**Guiyang**	**19.49**	**103**	P		**P**	**15 48 31.1**	**-0.2**
GYA				S		**Sn**	**15 52 06.1**	**-5.3**
GYA				pmax		pmax		
	comp=Z,59nm,1.0s							
GYA				pmax		pmax		
	comp=Z,2μm,3.7s							
GYA				L		L		
	comp=Z,3μm,13.2s							
GYA				L		L		
	comp=Z,2μm,7.6s							
GYA				L		L		
	comp=Z,8μm,10.6s							
XAN	**Xi'an**	**19.69**	**80**	⇑P		**P**	**15 48 32.2**	**-1.1**
XAN				pP		pP	15 48 36.1	-1.1
XAN				sP		sP	15 48 39.4	+0.3
XAN				S		**S**	**15 52 14.5**	**-0.9**
XAN				SS		**SnSn**	**15 52 30.3**	**+0.3**
XAN				pmax		pmax		
	comp=Z,14nm,0.8s							
XAN				pmax		pmax		
	comp=Z,700nm,6.9s							
XAN				L		L		
	comp=Z,7μm,8.9s							
XAN				L		L		
	comp=Z,6μm,10.3s							
XAN				L		L		
	comp=Z,7μm,9.6s							
BRZS	**Berezniki**	**19.69**	**335**	*e*P		**Pn**	**15 48 33.9**	**-0.6**
BRZS	**Berezniki**	**19.69**	**335**	*e*P		**Pn**	**15 48 34.0**	**-0.6**
KNGR	**Kungurtug, Tuv**	**20.01**	**23**	*i* P		**P**	**15 48 36.5**	**-0.2**
KNGR				pmax		pmax		
	comp=Z,28nm,0.7s							
ENH	**Enshi**	**20.67**	**90**			**P**	**15 48 43.3**	**-0.7**
ENH				IAmb		IAmb	15 48 48.3	
	comp=Z,59nm,0.9s							
BTO2	**Baotou**	**21.16**	**61**	*e*P		**P**	**15 48 48.8**	**-0.5**
BTO2				pP		**pP**	**15 48 52.8**	**-0.5**
BTO2				sP		**sP**	**15 48 56.0**	**+0.9**
BTO2				PP		**PnPn**	**15 49 11.5**	**+3.1**
BTO2				S		**S**	**15 52 42.0**	**-2.7**
BTO2				sS		Sn	15 52 48.8	-2.5
BTO2				SS		**SnSn**	**15 53 11.9**	**+5.7**
BTO2				pmax		pmax		
	comp=Z,47nm,0.8s							
BTO2				pmax		pmax		
	comp=Z,910nm,6.6s							
BTO2				L		L		
	comp=Z,29μm,12.5s							
BTO2				L		L		
	comp=Z,14μm,18.2s							
BTO2				L		L		
	comp=Z,19μm,15.8s							
ZAA0	**Zalesovo Array**	**21.25**	**359**			**P**	**15 48 48.5**	**-1.5**
ZAA0				IAmb		IAmb	15 49 01.7	
	comp=Z,45nm,1.0s							
ZALV	**Zalesovo Beam**	**21.25**	**359**	P		**P**	**15 48 49.7**	**-0.3**
	comp=Z,23nm,0.7s,baz=174,slow=12,SNR=32							
ZALV				LR		LR	15 58 38.2	
	comp=Z,2μm,18.1s,baz=186,slow=41							
	comp=Z,23nm,0.7s							
ZALV	**Zalesovo Beam**	**21.25**	**359**			**P**	**15 48 48.3**	**-1.7**
SONM	**Songino Array**	**21.93**	**40**	P		**P**	**15 48 57.9**	**+0.4**
	comp=Z,7.3nm,0.9s,baz=238,slow=8.4,SNR=23							
SONM				PcP		**PcP**	**15 52 57.5**	**+1.2**
	comp=Z,1.0nm,0.8s,baz=188,slow=4.4,SNR=2.9							
SONM				LR		LR	15 58 17.3	
	comp=Z,2μm,21.0s,baz=236,slow=39							
	comp=Z,7.3nm,0.9s							
SONM	**Songino Array**	**21.93**	**40**			**P**	**15 48 56.0**	**-1.5**
PBA	**Port Blair**	**22.00**	**160**	P		**P**	**15 48 57.1**	**-1.1**
PBA				IAmb		IAmb	15 49 16.6	

TLY	**Talaya**	**23.18**	**30**	*i* P		**P**	**15 49 09.8**	**-0.8**
TLY				pmax		pmax		
	comp=Z,4.0nm,0.6s							
TLY	**Talaya**	**23.18**	**30**	P		**P**	**15 49 11.3**	**+0.7**
IRK	**Irkutsk**	**23.86**	**29**	*e*P		**P**	**15 49 16.0**	**-1.3**
IRK				pmax		pmax		
	comp=Z,151nm,2.7s							
HNS	**HongShan**	**24.40**	**71**	⇑P		**P**	**15 49 23.2**	**+0.8**
HNS				S		**S**	**15 53 46.1**	**+4.0**
HNS				SS		**SnSn**	**15 54 27.1**	**+1.7**
HNS				pmax		pmax		
	comp=Z,22nm,0.8s							
HNS				L		L		
	comp=Z,12µm,17.7s							
HNS				L		L		
	comp=Z,3µm,18.0s							
WHN	**Wuhan**	**24.71**	**87**	P		**P**	**15 49 28.3**	**+3.0**
WHN				pmax		pmax		
	comp=Z,28nm,0.8s							
WHN				L		L		
	comp=Z,18µm,13.0s							
WHN				L		L		
	comp=Z,16µm,15.6s							
WHN				L		L		
	comp=Z,8µm,14.1s							
JASK	**Jask - Hormozg**	**24.92**	**261**	P		**P**	**15 49 28.5**	**+1.3**
AB31	**Akbulak array**	**25.19**	**319**			**P**	**15 49 27.0**	**-2.4**
AB31				IAmb		IAmb	15 49 38.0	
	comp=Z,20nm,0.7s							
ABKAR	**Akbulak array**	**25.19**	**319**			**P**	**15 49 28.8**	**-0.6**
JLN	**Jalan Bani Buh**	**25.29**	**252**	P		**P**	**15 49 33.8**	**+3.3**
	SNR=5.4							
JLN				P		**P**	**15 49 33.8**	**+3.3**
	SNR=5.4							
WSAR	**Wadi Sarin**	**25.39**	**255**	LR		LR	16 00 11.4	
	comp=Z,9.7nm,18.2s,baz=94,slow=38							
WSAR	**Wadi Sarin**	**25.39**	**255**	P		**P**	**15 49 34.5**	**+3.0**
WBK	**Wadi Bani Khal**	**25.41**	**253**	P		**P**	**15 49 34.6**	**+2.8**
PALK	**Pallekele**	**25.67**	**191**	LR		LR	16 00 20.9	
	comp=Z,1µm,19.1s,baz=352,slow=38							
PALK	**Pallekele**	**25.67**	**191**	P		**P**	**15 49 32.4**	**-1.6**
PALK				IAmb		IAmb	15 49 51.7	
	comp=Z,21nm,0.9s							
PALK	**Pallekele**	**25.67**	**191**	P		**P**	**15 49 32.4**	**-1.6**
PALK				pmax		pmax		
	comp=Z,21nm,1.0s							
PALK	**Pallekele**	**25.67**	**191**	P		**P**	**15 49 38.5**	**+4.4**
PALK	**Pallekele**	**25.67**	**191**	P		P	15 49 51.0	+17
BIDO	**Bidbid**	**25.68**	**256**	P		**P**	**15 49 36.9**	**+2.8**
BIDO				P		**P**	**15 49 36.9**	**+2.8**
BJT	**Baijiatuau**	**25.75**	**65**			**P**	**15 49 33.0**	**-1.6**
BJT				IAmb		IAmb	15 49 44.8	
	comp=Z,28nm,1.4s							
BJT	**Baijiatuau**	**25.75**	**65**	P		**P**	**15 49 33.0**	**-1.6**
BJT				pmax		pmax		
	comp=Z,28nm,1.4s							
BJI2	**Beijing**	**25.75**	**65**	P		**P**	**15 49 32.5**	**-2.1**
BJI2				pP		**pP**	**15 49 36.7**	**-2.2**
BJI2				sP		**sP**	**15 49 39.0**	**-1.7**
BJI2				S		**S**	**15 53 57.2**	**-6.5**
BJI2				pmax		pmax		
	comp=Z,67nm,6.8s							
BJI2				L		L		
	comp=Z,6µm,17.8s							
BJI2				L		L		
	comp=Z,2µm,15.5s							
BJI2				L		L		
	comp=Z,2µm,14.2s							
QIZ	**Qiongzhong**	**25.78**	**116**	P		**P**	**15 49 35.7**	**+0.6**
QIZ				S		**S**	**15 54 05.2**	**+0.7**
QIZ				pmax		pmax		
	comp=Z,330nm,4.4s							
QIZ				L		L		
	comp=Z,3µm,15.0s							
QIZ				L		L		
	comp=Z,1µm,15.8s							
QIZ				L		L		
	comp=Z,2µm,13.0s							
SMDO	**Samad**	**25.95**	**255**	P		**P**	**15 49 41.6**	**+4.9**
SMDO				P		**P**	**15 49 41.6**	**+4.9**
BANOM	**Banah**	**26.21**	**263**	P		**P**	**15 49 43.8**	**+4.9**
BANOM				P		**P**	**15 49 43.8**	**+4.9**
JMDO	**Jabal Madar**	**26.23**	**254**	P		**P**	**15 49 43.1**	**+3.9**
JMDO				P		**P**	**15 49 43.1**	**+3.9**
TIA	**Tai'an**	**26.33**	**73**	P		**P**	**15 49 41.3**	**+1.4**
TIA				S		**S**	**15 54 12.9**	**-0.1**
TIA				pmax		pmax		
	comp=Z,18nm,1.1s							
TIA				L		L		
	comp=Z,3µm,14.7s							
TIA				L		L		
	comp=Z,4µm,13.7s							
XLT	**XiLinHaoTe**	**26.41**	**56**	*e*P		**P**	**15 49 42.0**	**+1.4**
XLT				pmax		pmax		
	comp=Z,17nm,0.9s							
XLT				pmax		pmax		
	comp=Z,260nm,7.2s							
XLT				L		L		
	comp=Z,1µm,14.3s							
XLT				L		L		
	comp=Z,4µm,11.6s							
MASF	**Masafi**	**26.53**	**262**	P		**P**	**15 49 45.4**	**+3.5**
MASF				P		**P**	**15 49 45.4**	**+3.5**
UOSS	**Minazif**	**26.66**	**261**	P		**P**	**15 49 41.2**	**-1.8**
AKTO	**Aktyubinsk**	**26.86**	**319**	LR		LR	16 01 09.1	
	comp=Z,5µm,18.2s,baz=118,slow=38							
ASHO	**Ashiyiah**	**26.89**	**260**	P		**P**	**15 49 49.5**	**+4.4**
	SNR=7.2							
ASHO				P		**P**	**15 49 49.5**	**+4.4**
	SNR=7.2							
MHTO	**MHTO**	**27.03**	**251**	P		**P**	**15 49 48.6**	**+2.3**
NAZ	**Nazwa, Dubai**	**27.09**	**261**	P		**P**	**15 49 50.4**	**+3.5**
NAZ				P		**P**	**15 49 50.4**	**+3.5**
NJ2	**Nanjing**	**28.20**	**82**	*e*P		**P**	**15 49 54.7**	**-2.0**
NJ2				S		**S**	**15 54 50.0**	**+7.6**
NJ2				pmax		pmax		
	comp=Z,26nm,0.6s							
NJ2				L		L		
	comp=Z,14µm,14.2s							
NJ2				L		L		
	comp=Z,12µm,15.6s							
NJ2				L		L		
	comp=Z,13µm,16.1s							
UMZA	**Um Al Zommool**	**28.47**	**257**	P		**P**	**15 50 02.2**	**+2.9**
UMZA				P		**P**	**15 50 02.2**	**+2.9**
MZWR	**Madinat Zayed**	**29.08**	**260**	P		**P**	**15 50 08.3**	**+3.7**
MZWR				P		**P**	**15 50 08.3**	**+3.7**
JRN	**Qarnain Island**	**29.46**	**263**	P		**P**	**15 50 11.0**	**+3.0**
JRN				P		**P**	**15 50 11.0**	**+3.0**
SVE	**Sverdlovsk**	**29.55**	**332**	*e*P		**P**	**15 50 10.4**	**+2.0**
SVE				pmax		pmax		
	comp=Z,14nm,1.0s							
SVE				MLR		MLR		
	comp=Z,3µm,13.0s							
MZR	**Muzera**	**29.73**	**259**	P		**P**	**15 50 12.9**	**+2.5**
MZR				P		**P**	**15 50 12.9**	**+2.5**
DL2	**Dalian**	**29.89**	**68**	*e*P		**P**	**15 50 09.2**	**-2.5**
DL2				*e*S		**S**	**15 55 06.2**	**-2.7**
DL2				pmax		pmax		
	comp=Z,33nm,1.1s							
DL2				pmax		pmax		
	comp=Z,350nm,4.6s							
DL2				L		L		
	comp=Z,4µm,18.0s							
DL2				L		L		
	comp=Z,4µm,14.0s							
ARTI	**Arti**	**30.17**	**330**	LR		LR	16 02 17.6	
	comp=Z,2µm,20.2s,baz=131,slow=36							
ARTI	**Arti**	**30.17**	**330**	P		**P**	**15 50 12.8**	**-1.2**
ARTI	**Arti**	**30.17**	**330**	*c i* P		**P**	**15 50 17.7**	**+3.7**
ARTI							15 51 13.8	
ARTI							15 53 11.4	
ARTI				S		**S**	**15 55 18.8**	**+5.8**
ARTI				SS		**ScP**	**15 56 53.0**	**-4.4**
ARTI				pmax		pmax		
	comp=Z,8.0nm,1.1s							
ARTI				MLR		MLR		
	comp=Z,1µm,13.0s							
SSE	**Sheshan**	**30.34**	**83**	P		**P**	**15 50 17.0**	**+1.3**
SSE				S		**S**	**15 55 18.1**	**+2.0**
SSE				pmax		pmax		
	comp=Z,7.0nm,1.2s							
SSE				pmax		pmax		
	comp=Z,180nm,4.8s							
SSE				L		L		
	comp=Z,2µm,12.9s							
SSE				L		L		
	comp=Z,1µm,12.5s							
KULM	**Kulim**	**30.75**	**149**	P		**P**	**15 50 21.5**	**+2.0**
KULM	**Kulim**	**30.75**	**149**			**P**	**15 50 17.8**	**-1.7**
KULM				IAmb		IAmb	15 50 27.3	
	comp=Z,20nm,0.8s							
KULM	**Kulim**	**30.75**	**149**	P		**P**	**15 50 23.0**	**+3.5**
	comp=Z,29nm,1.2s							
TRNA	**Turayna**	**30.91**	**264**	P		**P**	**15 50 23.2**	**+2.3**
SAKB	**Bahrain**	**31.02**	**267**	P		**P**	**15 50 23.3**	**+1.5**
AKT	**Akhty**	**31.11**	**297**	*e*P		**P**	**15 50 22.9**	**+0.3**
AKT				*e*			15 51 24.5	
AKT				*e*			15 53 20.9	
AKT				pmax		pmax		
	comp=Z,28nm,0.7s							
AKT				MLR		MLR		
	comp=Z,2µm,18.0s							
SMRA	**Abu-Samra**	**31.24**	**264**	P		**P**	**15 50 25.0**	**+1.3**
	SNR=6.5							
DOK	**Doka**	**31.34**	**251**	P		**P**	**15 50 27.8**	**+3.1**
MAK	**Makhachkala**	**31.41**	**300**	*d i* P		**P**	**15 50 21.9**	**-3.1**
MAK				*e*S		**S**	**15 55 28.4**	**-4.2**
MAK				*e*SS		**SnSn**	**15 57 17.9**	**+1.6**
MAK				pmax		pmax		
	comp=Z,28nm,0.3s							
MAK				MLR		MLR		
	comp=Z,3µm,14.0s							
BOD	**Bodaibo**	**31.76**	**29**	*e*P		**P**	**15 50 31.2**	**+3.3**
BOD				pmax		pmax		
	comp=Z,18nm,1.2s							
WHFO	**Wadi Hawf**	**32.01**	**250**	P		**P**	**15 50 33.1**	**+2.5**
WHFO				P		**P**	**15 50 33.1**	**+2.5**
PSI	**Prapat**	**32.33**	**154**	P		P	15 50 39.2	+5.7
PSI	**Prapat**	**32.33**	**154**	P		**P**	**15 50 33.2**	**-0.3**
PSI				pmax		pmax		
	comp=Z,17nm,1.1s							
PSI	**Prapat**	**32.33**	**154**	P		P	15 50 40.6	+7.1
RPSI	**Rantau Prapat**	**32.43**	**154**	P		**P**	**15 50 33.2**	**-1.0**
RPSI				IAmb		IAmb	15 50 41.3	
	comp=Z,17nm,1.1s							
ABTO	**Aybut**	**32.70**	**250**	P		**P**	**15 50 40.3**	**+3.6**
ABTO				P		**P**	**15 50 40.3**	**+3.6**
CN2	**Changchun**	**33.05**	**59**	*e*P		**P**	**15 50 41.0**	**+1.5**
CN2				pmax		pmax		
	comp=Z,10.0nm,1.0s							
CN2				pmax		pmax		
	comp=Z,200nm,4.0s							
CN2				L		L		
	comp=Z,7µm,17.0s							
CN2				L		L		
	comp=Z,4µm,17.0s							
CN2				L		L		
	comp=Z,4µm,15.1s							
GSI	**Gunungsitoli**	**33.26**	**157**	P		P	15 50 47.3	+5.8
GSI	**Gunungsitoli**	**33.26**	**157**			**P**	**15 50 40.6**	**-0.9**
GSI	**Gunungsitoli**	**33.26**	**157**	P		**P**	**15 50 46.0**	**+4.5**
	comp=Z,42nm,0.8s							
GNI	**Garni**	**33.33**	**295**	LR		LR	16 06 16.9	
	comp=Z,1µm,19.3s,baz=94,slow=40							
GNI	**Garni**	**33.33**	**295**			**P**	**15 50 39.4**	**-2.7**
GNI	**Garni**	**33.33**	**295**	P		**P**	**15 50 39.4**	**-2.7**
GNI				pmax		pmax		
	comp=Z,56nm,1.0s							
BELG	**Belogornoye**	**33.57**	**317**	LR		LR	16 05 26.1	
	comp=Z,3µm,18.2s,baz=102,slow=38							
NCK	**Nalchik**	**34.30**	**301**	*i* P		**P**	**15 50 50.1**	**-0.3**
NCK				pmax		pmax		
	comp=Z,29nm,0.8s							
MNSI	**Mandailing Nat**	**34.42**	**154**	P		**P**	**15 50 55.2**	**+3.6**
	comp=Z,44nm,0.8s							
TJN	**Taejon**	**34.57**	**72**	P		**P**	**15 50 50.9**	**-1.8**
TJN	**Taejon**	**34.57**	**72**	P		**P**	**15 50 50.9**	**-1.8**
BNX	**BinXian**	**34.66**	**55**	⇑P		**P**	**15 50 55.4**	**+2.0**
BNX				pmax		pmax		
	comp=Z,7.0nm,1.2s							
GEVA	**Gevas**	**34.70**	**291**			**P**	**15 50 52.1**	**-2.0**
GEVA				IAmb		IAmb	15 51 02.4	
	comp=Z,24nm,1.0s							
KBZ	**Khabaz**	**34.82**	**301**	P		**P**	**15 50 54.6**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=129,slow=7.5,SNR=9.4							
KBZ				LR		LR	16 07 26.7	
	comp=Z,2µm,19.5s,baz=86,slow=40							
	comp=Z,1.6nm,0.8s							
KBZ	**Khabaz**	**34.82**	**301**	*c e* P		**P**	**15 50 56.4**	**+1.6**
KBZ				pmax		pmax		
	comp=Z,11nm,0.9s							
KSRS	**Korea Array**	**34.91**	**70**	P		**P**	**15 50 55.5**	**-0.1**
	comp=Z,3.7nm,0.8s,baz=272,slow=9.2,SNR=10							
KSRS				LR		LR	16 06 14.2	
	comp=Z,1µm,19.1s,baz=285,slow=38							
	comp=Z,3.7nm,0.8s							
NEUR	**Neytrino**	**34.94**	**300**	*i* P		**P**	**15 50 58.3**	**+2.2**
NEUR				pmax		pmax		
	comp=Z,20nm,1.6s							
KIV	**Kislovodsk**	**34.99**	**301**	P		**P**	**15 50 54.2**	**-2.3**
KIV	**Kislovodsk**	**34.99**	**301**	*e*P		**P**	**15 50 58.9**	**+2.5**
KIV				*e*S		**S**	**15 56 32.4**	**+4.0**
KIV				pmax		pmax		
	comp=Z,17nm,1.0s							
KIV				MLR		MLR		
	comp=Z,1µm,16.0s							
SHA1	**Shidzhatmaz**	**35.00**	**301**	*c e* P		**P**	**15 50 57.8**	**+1.1**
KIRV	**Kirov**	**35.38**	**328**	LR		LR	16 06 27.7	
	comp=Z,4µm,18.4s,baz=123,slow=38							
KIRV	**Kirov**	**35.38**	**328**	*i* P		**P**	**15 51 00.7**	**+1.2**
HEH	**HeiHe**	**35.48**	**48**	*e*P		**P**	**15 50 58.6**	**-1.8**
HEH				pmax		pmax		
	comp=Z,7.0nm,1.7s							
HEH				L		L		
	comp=Z,16µm,13.1s							
HEH				L		L		
	comp=Z,4µm,13.1s							
HEH				L		L		
	comp=Z,6µm,10.7s							
GURO	**Guroymak-BITLI**	**35.49**	**292**	P		**P**	**15 50 58.7**	**-2.1**
GURO				IAmb		IAmb	15 51 09.3	
	comp=Z,33nm,1.2s							
RAYN	**Ar Rayn**	**36.19**	**266**			**P**	**15 51 04.6**	**-2.3**
RAYN				IAmb		IAmb	15 51 15.6	
	comp=Z,17nm,0.9s							
RAYN	**Ar Rayn**	**36.19**	**266**	P		**P**	**15 51 04.6**	**-2.3**
RAYN				pmax		pmax		
	comp=Z,17nm,1.0s							
RAYN	**Ar Rayn**	**36.19**	**266**	P		**P**	**15 51 08.8**	**+2.0**
PDSI	**Padang**	**36.32**	**154**	P		P	15 51 13.5	+5.5
ZEA	**Zeya**	**36.34**	**42**	*e*P		**P**	**15 51 10.4**	**+2.7**
ZEA				pmax		pmax		
	comp=Z,10.0nm,1.1s							
ZEA				MLR		MLR		
	comp=E,2µm,11.0s							
ZEA				MLR		MLR		
	comp=Z,3µm,10.0s							
LABN	**Labinsk**	**36.44**	**302**	*e*P		**P**	**15 51 10.3**	**+1.5**
LABN				*e*S		**S**	**15 56 55.4**	**+4.9**
LABN				pmax		pmax		
	comp=Z,42nm,0.8s							
LABN				MLR		MLR		
	comp=Z,2µm,14.0s							
KOPT	**Kop Dagi**	**36.59**	**295**			**P**	**15 51 07.4**	**-3.0**
KOPT				IAmb		IAmb	15 51 21.0	
	comp=Z,29nm,1.1s							
ERBR	**Yeremizino-Bor**	**36.69**	**304**	*e*P		**P**	**15 51 12.1**	**+1.2**
ERBR				*e*S		**S**	**15 56 57.8**	**+3.6**
ERBR				pmax		pmax		
	comp=Z,12nm,0.6s							
ERBR				MLR		MLR		
	comp=N,10µm,19.0s							
VRH	**Novokhopyorsk**	**36.73**	**313**	*e*P		**P**	**15 51 14.2**	**+3.1**
VRH				pmax		pmax		
	comp=Z,8.0nm,0.8s							
SOC	**Sochi**	**37.12**	**301**	*e*P		**P**	**15 51 14.6**	**0.0**
SOC				*e*			15 52 39.3	
SOC				*e*S		**S**	**15 57 01.2**	**+0.3**
SOC				pmax		pmax		
	comp=Z,25nm,1.0s							
SOC				MLR		MLR		
	comp=Z,2µm,19.0s							
TGY	**Tagaytay City**	**37.26**	**111**	LR		LR	16 06 20.0	
	comp=Z,1µm,20.5s,baz=299,slow=36							
JOW	**Kunigami**	**37.48**	**87**	LR		LR	16 07 04.9	
	comp=Z,2µm,18.4s,baz=104,slow=37							
KLR	**Kul'dur**	**38.05**	**50**	*c e* P		**P**	**15 51 21.7**	**-0.6**
KLR				pmax		pmax		
	comp=Z,13nm,0.9s							
VORD	**Divnogorie**	**38.18**	**313**	*e*P		**P**	**15 51 26.4**	**+3.0**
VORD				pmax		pmax		
	comp=Z,10.0nm,1.2s							
VSR	**Storozhevoye**	**38.30**	**313**	*e*P		**P**	**15 51 26.3**	**+1.9**
VSR				pmax		pmax		
	comp=Z,10.0nm,1.3s							
ARPR	**Arapgir-MALATY**	**38.32**	**293**	P		**P**	**15 51 23.4**	**-1.5**
ARPR				IAmb		IAmb	15 51 44.0	
	comp=Z,68nm,1.2s							
VORR	**Voronezh**	**38.36**	**314**	*e*P		**P**	**15 51 20.8**	**-4.1**
VORR				pmax		pmax		
	comp=Z,41nm,0.4s							
LPSR	**Galich'ya Gora**	**38.72**	**315**	*e*P		**P**	**15 51 30.2**	**+2.3**
LPSR				pmax		pmax		
	comp=Z,10.0nm,0.7s							
ANN	**Anapa**	**38.79**	**302**	*e*P		**P**	**15 51 29.9**	**+1.3**
ANN				*e*S		**S**	**15 57 28.5**	**+2.4**
ANN				pmax		pmax		
	comp=Z,30nm,0.9s							
ANN				MLR		MLR		
	comp=Z,1µm,14.0s							
KKM	**Kota Kinabalu**	**39.06**	**126**	P		P	15 51 36.9	+5.6
KKM	**Kota Kinabalu**	**39.06**	**126**	P		**P**	**15 51 29.3**	**-2.0**
KKM				IAmb		IAmb	15 51 37.8	
	comp=Z,36nm,1.0s							
KKM	**Kota Kinabalu**	**39.06**	**126**	P		**P**	**15 51 32.7**	**+1.4**
	comp=Z,39nm,1.0s							
SBUM	**Sibu**	**39.22**	**135**	P		**P**	**15 51 35.0**	**+2.5**
SBUM	**Sibu**	**39.22**	**135**	P		**P**	**15 51 30.7**	**-1.8**
SBUM	**Sibu**	**39.22**	**135**	P		**P**	**15 51 37.1**	**+4.6**
	comp=Z,7.5nm,0.9s							
GAZ	**Gaziantep**	**39.43**	**290**	P		**P**	**15 51 31.8**	**-2.4**
GAZ				IAmb		IAmb	15 51 41.9	
	comp=Z,31nm,0.9s							
MOS	**Moscow**	**40.20**	**320**	*e*P		**P**	**15 51 40.3**	**+0.1**
MOS				MLR		MLR		
	comp=Z,2µm,14.0s							
BNN	**Bunyan**	**40.27**	**293**	P		**P**	**15 51 38.7**	**-2.6**
BNN				IAmb		IAmb	15 51 50.4	
	comp=Z,19nm,1.0s							
OBN	**Obninsk**	**40.64**	**318**	LR		LR	16 09 33.5	
	comp=Z,2µm,19.0s,baz=108,slow=38							
OBN	**Obninsk**	**40.64**	**318**	⇓*e*P		**P**	**15 51 44.1**	**+0.3**
OBN				*PP		**pP**	**15 51 46.0**	**-2.2**
OBN				*SP		**sP**	**15 51 48.0**	**-2.0**
OBN							15 53 24.0	
OBN				PPP		PPP	15 53 45.0	
OBN				pmax		pmax		
	comp=Z,21nm,1.5s							
OBN				MLR		MLR		
	comp=Z,2µm,19.0s							
YAK	**Yakutsk**	**40.65**	**30**	LR		LR	16 07 51.5	
	comp=Z,1µm,18.6s,baz=240,slow=35							
YAK	**Yakutsk**	**40.65**	**30**			**P**	**15 51 42.4**	**-1.5**
YAK				IAmb		IAmb	15 51 60.0	
	comp=Z,28nm,0.8s							
YAK	**Yakutsk**	**40.65**	**30**	*e*P		**P**	**15 51 45.9**	**+2.0**
YAK				*e**PP		**sP**	**15 51 52.8**	**+2.8**
YAK				*e*			15 53 18.7	
YAK				*e*			15 53 49.0	
YAK				*e*S		**S**	**15 57 54.3**	**+0.7**
YAK				*e**SS		**sS**	**15 58 03.2**	**+2.4**
YAK				*e*			16 01 52.1	
YAK				pmax		pmax		
	comp=Z,22nm,1.0s							
YAK				pmax		pmax		
	comp=N,4.0nm,0.9s							
YAK				pmax		pmax		
	comp=E,6.0nm,1.3s							
YAK				pmax		pmax		
	comp=Z,325nm,7.3s							
YAK				pmax		pmax		
	comp=N,253nm,8.2s							
YAK				pmax		pmax		
	comp=E,278nm,8.4s							
YAK				smax		smax		
	comp=N,226nm,4.3s							
YAK				smax		smax		
	comp=E,154nm,4.0s							
YAK				MLR		MLR		
	comp=Z,1µm,17.0s							
YAK				MLR		MLR		
	comp=N,493nm,13.0s							
YAK				MLR		MLR		
	comp=E,874nm,15.0s							
ASF	**Jabal al Asfar**	**40.66**	**283**	LR		LR	16 11 28.1	
	comp=E,2µm,20.4s,baz=64,slow=40							
KLMR	**Klimovskoe**	**40.88**	**328**	*e*P		**P**	**15 51 45.5**	**-0.3**
KLMR				*e*			15 53 20.1	
KLMR				pmax		pmax		
	comp=Z,37nm,1.5s							
KLMR				MLR		MLR		
	comp=Z,2µm,14.0s							
SIM	**Simferopol'**	**41.15**	**303**	*e*P		**P**	**15 51 50.8**	**+2.6**
SIM				pmax		pmax		
	comp=Z,59nm,0.9s							
GRNR	**Gornyy**	**41.23**	**49**	*e*P		**P**	**15 51 49.0**	**+0.2**
GRNR				MLR		MLR		
	comp=N,5µm,12.0s							
GRNR				MLR		MLR		
	comp=Z,2µm,15.0s							
MYLDM	**Lahad Datu**	**41.26**	**124**	P		**P**	**15 51 48.6**	**-0.7**
MYLDM				IAmb		IAmb	15 51 58.7	
	comp=Z,33nm,1.2s							
MYLDM	**Lahad Datu**	**41.26**	**124**	P		**P**	**15 51 53.4**	**+4.0**
	comp=Z,25nm,1.2s							
BZK	**Bozkurt**	**41.37**	**298**	⇓P		**P**	**15 51 53.4**	**+3.4**
BZK	**Bozkurt**	**41.37**	**298**	P		**P**	**15 51 48.2**	**-1.9**
BZK				IAmb		IAmb	15 51 56.9	
	comp=Z,24nm,0.9s							
KIRS	**Kirsehir-Merke**	**41.73**	**294**	⇓P		**P**	**15 51 55.0**	**+1.8**
BR131	**Keskin Array S**	**41.87**	**295**	P		**P**	**15 51 52.4**	**-2.0**
BR131				IAmb		IAmb	15 51 57.0	
	comp=Z,41nm,1.9s							
BR131	**Keskin Array S**	**41.87**	**295**	P		**P**	**15 51 52.4**	**-2.0**
BR131				pmax		pmax		
	comp=Z,41nm,1.9s							
BR131	**Keskin Array S**	**41.87**	**295**	P		**P**	**15 51 55.7**	**+1.3**
	SNR=7.6							
BRTR	**Keskin Array B**	**41.87**	**295**	P		**P**	**15 51 54.5**	**+0.2**
	comp=Z,2.7nm,0.7s,baz=116,slow=7.0,SNR=16							
BRTR				LR		LR	16 12 32.9	
	comp=Z,851nm,20.7s,baz=119,slow=41							
	comp=Z,2.7nm,0.7s							
BRTR	**Keskin Array B**	**41.87**	**295**	P		**P**	**15 51 52.2**	**-2.2**
EIL	**Elat**	**42.94**	**280**	LR		LR	16 13 59.3	
	comp=Z,3µm,18.0s,baz=82,slow=42							
MJB9	**Matsu-Tunnel**	**43.18**	**70**	P		**P**	**15 52 03.7**	**-1.2**
MAJO	**Matsushiro**	**43.18**	**70**	P		**P**	**15 52 03.0**	**-2.0**
MAJO	**Matsushiro**	**43.18**	**70**	P		**P**	**15 52 03.0**	**-2.0**
MAJO				pmax		pmax		
	comp=Z,11nm,1.0s							
MJAR	**Matsushiro Arr**	**43.18**	**70**	P		**P**	**15 52 04.3**	**-0.6**
	comp=Z,3.7nm,0.8s,baz=285,slow=9.4,SNR=9.1							
MJAR				PcP		**PcP**	**15 53 53.9**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=286,slow=2.0,SNR=4.5							
MJAR				LR		LR	16 11 46.2	
	comp=Z,411nm,18.6s,baz=265,slow=39							
	comp=Z,3.7nm,0.8s							
MJAR	**Matsushiro Arr**	**43.18**	**70**	P		**P**	**15 52 03.8**	**-1.2**
MDUB	**Mudurnu**	**43.63**	**296**	P		**P**	**15 52 07.7**	**-0.9**
MDUB				IAmb		IAmb	15 52 25.4	
	comp=Z,25nm,1.0s							
BORA	**Eskisehir**	**44.28**	**296**	P		**P**	**15 52 11.8**	**-2.0**
BORA				IAmb		IAmb	15 52 20.1	
	comp=Z,15nm,0.9s							
AKASG	**Malin Array Be**	**44.49**	**311**	P		**P**	**15 52 13.9**

LEM	**Lembang**	**44.63**	**148**	LR	LR	16 16 04.5		
	comp=Z,2µm,19.5s,baz=320,slow=43							
SORM	**Soroca**	**45.06**	**307**	⇑P	**P**	**15 52 19.5**	**-0.3**	
SORM	**Soroca**	**45.06**	**307**	⇑P	**P**	**15 52 19.5**	**-0.3**	
DAV	**Davao City (W)**	**45.16**	**115**	LR	LR	16 14 12.5		
	comp=Z,655nm,18.0s,baz=290,slow=40							
TYV	**Tymovskoe**	**45.18**	**49**	*e*P	**P**	**15 52 24.5**	**+3.8**	
TYV				pmax	pmax			
	comp=Z,9.0nm,1.3s							
TPGR	**Topolog**	**45.20**	**303**	⇑P	**P**	**15 52 24.3**	**+3.3**	
ELL	**Elmali**	**45.26**	**291**	P	**P**	**15 52 20.3**	**-1.4**	
ELL	**Elmali**	**45.26**	**291**	P	**P**	**15 52 20.3**	**-1.4**	
ELL				pmax	pmax			
	comp=Z,116nm,1.0s							
TIXI	**Tiksi**	**45.27**	**18**	LR	LR	16 11 36.6		
	comp=Z,2µm,19.9s,baz=249,slow=37							
TIXI	**Tiksi**	**45.27**	**18**	P	**P**	**15 52 19.3**	**-1.9**	
TIXI				IAmb	IAmb	15 52 26.0		
	comp=Z,24nm,1.1s							
TIXI	**Tiksi**	**45.27**	**18**	*ce*P	**P**	**15 52 21.3**	**+0.1**	
TIXI				pmax	pmax			
	comp=Z,58nm,2.5s							
YSS	**Yuzhno-Sakhali**	**45.31**	**54**	*e*P	**P**	**15 52 23.6**	**+1.8**	
YSS				*e*S	**S**	**15 59 01.5**	**-0.9**	
YSS				pmax	pmax			
	comp=Z,10.0nm,0.9s							
YSS				MLR	MLR			
	comp=N,1µm,16.0s							
YSS				MLR	MLR			
	comp=E,2µm,16.0s							
YSS				MLR	MLR			
	comp=Z,1µm,16.0s							
CFR	**Carcaliu**	**45.37**	**303**	⇑P	**P**	**15 52 24.9**	**+2.6**	
CFR	**Carcaliu**	**45.37**	**303**	⇑P	**P**	**15 52 24.9**	**+2.6**	
ASAJ	**Asahikawa**	**45.42**	**58**	LR	LR	16 11 06.9		
	comp=Z,2µm,19.9s,baz=282,slow=36							
CTJI	**Waduk Cacaban**	**45.51**	**146**	P	**P**	**15 52 27.4**	**+3.7**	
	comp=Z,55nm,0.9s							
BBKI	**Banjar Baru**	**45.51**	**137**	P	P	15 52 30.5	+6.8	
MNK	**Minsk**	**45.51**	**316**	*i* P	**P**	**15 52 21.0**	**-2.3**	
	comp=E,22nm,0.7s							
MNK				*i* P	**P**	**15 52 21.0**	**-2.3**	
	comp=N,28nm,1.0s							
MNK				*i* P	**P**	**15 52 21.0**	**-2.3**	
	comp=Z,8.0nm,0.7s,baz=95							
MNK				*i* PP	**PP**	**15 54 07.7**	**-1.9**	
MNK				*i* PPP	PPP	15 54 47.1		
MNK				*i* S	**S**	**15 59 03.7**	**-1.4**	
MNK				*i* SS	**SS**	**16 02 27.1**	**-1.2**	
MNK				*i* SSS	SSS	16 03 16.1		
MNK				*i* LQ	LQ	16 07 46.3		
MNK				*i* LR	LR	16 10 18.4		
MNK				*i* LRM	MLR	16 13 21.3		
	comp=Z,1µm,17.5s							
MNK				*i* LRM	MLR	16 13 21.6		
	comp=E,3µm,19.1s							
MNK				*i* LRM	MLR	16 13 52.1		
	comp=N,1µm,20.8s							
MNK	**Minsk**	**45.51**	**316**	*i* P	**P**	**15 52 21.0**	**-2.3**	
MNK				*i*		15 54 07.7		
MNK				*i* PPP	PPP	15 54 47.1		
MNK				*i* S	**S**	**15 59 03.6**	**-1.4**	
MNK				*i* SSS	SSS	16 03 16.1		
MNK				pmax	pmax			
	comp=Z,8.0nm,0.7s							
MNK				pmax	pmax			
	comp=E,22nm,0.7s							
MNK				pmax	pmax			
	comp=N,28nm,1.0s							
MNK				MLR	MLR			
	comp=Z,1µm,17.0s							
MNK				MLR	MLR			
	comp=E,3µm,19.0s							
MNK				MLR	MLR			
	comp=N,1µm,21.0s							
KPJI	**Karang Pucung**	**45.67**	**146**	P	P	15 52 31.7	+6.7	
MPSI	**Mapaga**	**45.73**	**128**	P	**P**	**15 52 29.5**	**+4.1**	
	comp=N,18nm,1.2s							
TOLI2	**Tolitoli**	**45.75**	**126**	P	**P**	**15 52 29.0**	**+3.3**	
TOLI2	**Tolitoli**	**45.75**	**126**	P	**P**	**15 52 23.9**	**-1.7**	
TOLI2				IAmb	IAmb	15 52 31.3		
	comp=Z,27nm,0.8s							
APA	**Apatity**	**45.92**	**335**	⇓*e*P	**P**	**15 52 25.5**	**-0.9**	
APA				*e*		15 54 02.7		
APA				*e*		15 54 12.8		
APA				pmax	pmax			
	comp=Z,9.0nm,1.7s							
APA				MLR	MLR			
	comp=Z,4µm,17.6s							
SMRI	**Semarang**	**46.15**	**144**	P	**P**	**15 52 26.2**	**-2.5**	
NACGM	**Naroch**	**46.18**	**317**	*e*P	**P**	**15 52 30.9**	**+2.4**	
	comp=Z,28nm,0.8s,baz=94							
VRI	**Vrincioaia**	**46.30**	**304**	⇓P	**P**	**15 52 31.8**	**+2.1**	
VRI	**Vrincioaia**	**46.30**	**304**	⇓P	**P**	**15 52 31.8**	**+2.1**	
TESR	**Tescani**	**46.30**	**305**	⇑P	**P**	**15 52 31.2**	**+1.5**	
ONER	**Baraj Valea Uz**	**46.49**	**305**	⇓P	**P**	**15 52 32.0**	**+0.8**	
COVR	**Voineasa-Covas**	**46.67**	**304**	⇓P	**P**	**15 52 35.1**	**+2.5**	
MLR	**Muntele Rosu**	**46.88**	**304**	LR	LR	16 15 39.4		
	comp=Z,3µm,19.0s,baz=74,slow=40							
MLR	**Muntele Rosu**	**46.88**	**304**	⇑P	**P**	**15 52 37.2**	**+2.8**	
MLR	**Muntele Rosu**	**46.88**	**304**	P	**P**	**15 52 32.4**	**-2.0**	
MLR				IAmb	IAmb	15 52 47.9		
	comp=Z,24nm,0.8s							
MLR	**Muntele Rosu**	**46.88**	**304**	P	**P**	**15 52 32.4**	**-2.0**	
MLR				pmax	pmax			
	comp=Z,24nm,0.8s							
BURAR	**Bucovina Array**	**47.20**	**307**	⇑P	**P**	**15 52 38.3**	**+1.5**	
BURAR	**Bucovina Array**	**47.20**	**307**	⇑P	**P**	**15 52 38.3**	**+1.5**	
BUR08	**Bucovina Ar. S**	**47.20**	**307**	P	**P**	**15 52 35.3**	**-1.6**	
BUR08				IAmb	IAmb	15 52 52.2		
	comp=Z,34nm,1.9s							
DOPR	**Dopca**	**47.22**	**305**	⇑P	**P**	**15 52 38.4**	**+1.5**	
ELND	**Elena**	**47.24**	**300**	⇓P	**P**	**15 52 40.3**	**+3.2**	
FIA1	**FINESS Array S**	**47.30**	**326**	P	**P**	**15 52 36.2**	**-1.1**	
FINES	**FINESS Array B**	**47.30**	**326**	P	**P**	**15 52 37.1**	**-0.2**	
	comp=Z,9.0nm,0.6s,baz=110,slow=6.6,SNR=30							
FINES				LR	LR	16 13 18.5		
	comp=Z,1µm,19.0s,baz=100,slow=37							
	comp=Z,9.0nm,0.6s							
FINES	**FINESS Array B**	**47.30**	**326**	P	**P**	**15 52 35.9**	**-1.4**	
FINES	**FINESS Array B**	**47.30**	**326**	*i* P	**P**	**15 52 36.2**	**-1.1**	
FINES				pmax	pmax			
	comp=Z,9.0nm,0.6s							
MMSI	**Mamuju**	**47.37**	**131**	P	**P**	**15 52 40.3**	**+1.9**	
SJI	**Sawahan**	**47.40**	**143**	P	**P**	**15 52 41.7**	**+3.1**	
	comp=Z,35nm,0.7s							
SNJI	**Sawahan-Nganju**	**47.44**	**143**	P	**P**	**15 52 41.3**	**+2.3**	
	comp=Z,25nm,1.0s							
VOIR		**47.52**	**304**	⇓P	**P**	**15 52 40.6**	**+1.3**	
VOIR		**47.52**	**304**	⇓P	**P**	**15 52 40.6**	**+1.3**	
ARR	**Arges**	**47.81**	**304**	⇓P	**P**	**15 52 43.6**	**+2.0**	
TTSI	**Tana Toraja**	**48.22**	**131**	P	**P**	**15 52 49.7**	**+4.8**	
KEV	**Kevo**	**48.87**	**337**	P	**P**	**15 52 48.0**	**-1.3**	
KEV	**Kevo**	**48.87**	**337**	P	**P**	**15 52 48.0**	**-1.3**	
KEV				pmax	pmax			
	comp=Z,206nm,1.9s							
SPSI	**Sidrap Palu**	**48.89**	**132**	P	P	15 52 55.4	+5.3	
	comp=Z,24nm,0.9s							
GZR	**Gura Zlata**	**49.11**	**304**	⇓P	**P**	**15 52 55.3**	**+3.7**	
GZR	**Gura Zlata**	**49.11**	**304**	⇓P	**P**	**15 52 55.3**	**+3.7**	
FURI	**Furi**	**49.17**	**252**	LR	LR	16 15 37.0		
	comp=Z,740nm,18.6s,baz=57,slow=38							
ARCES	**ARCESS Array B**	**49.31**	**336**	P	**P**	**15 52 52.2**	**-0.5**	
	comp=Z,21nm,0.9s,baz=57,slow=4.5,SNR=17							
ARCES				LR	LR	16 15 16.2		
	comp=Z,3µm,18.4s,baz=106,slow=38							
	comp=Z,21nm,0.9s							
ARCES	**ARCESS Array B**	**49.31**	**336**	P	**P**	**15 52 51.6**	**-1.1**	
ARCES	**ARCESS Array B**	**49.31**	**336**	P	**P**	**15 52 51.6**	**-1.1**	
ARCES				pmax	pmax			
	comp=Z,100nm,1.6s							
HERR	**Herculane**	**49.43**	**304**	⇓P	**P**	**15 52 53.9**	**-0.1**	
BLKB	**Belogradchik**	**49.45**	**302**	⇑P	**P**	**15 52 56.7**	**+2.5**	
KAPI	**Kappang**	**49.69**	**133**	LR	LR	16 17 08.7		
	comp=Z,380nm,19.5s,baz=296,slow=40							
KHKI	**Kahang-Kahang**	**49.95**	**139**	P	P	15 53 03.5	+5.3	
	comp=Z,23nm,1.0s							
LANS	**Liptovska Anna**	**50.86**	**309**	*e*P	P	15 53 11.0	+6.2	
LANS	**Liptovska Anna**	**50.86**	**309**	*e*P	P	15 53 11.0	+6.2	
BSSI	**Bau Bau, Buton**	**51.03**	**133**	P	**P**	**15 53 09.6**	**+3.3**	
	comp=Z,36nm,0.9s							
SEY	**Seymchan**	**51.03**	**33**	*i* P	**P**	**15 53 05.3**	**-0.5**	
SEY				pmax	pmax			
	comp=Z,9.0nm,1.0s							
SANI	**Sanana**	**51.62**	**124**	P	**P**	**15 53 14.7**	**+3.9**	
	comp=Z,18nm,0.9s							
OKC	**Ostrava-Krasne**	**51.63**	**310**	AMS	AMS	16 16 40.0		
	comp=Z,2µm,18.1s							
STEB	**Steborice**	**51.86**	**311**	*e*P	**P**	**15 53 15.3**	**+3.1**	
MORC	**Moravsky Berou**	**52.03**	**310**	P	**P**	**15 53 13.0**	**-0.5**	
MORC	**Moravsky Berou**	**52.03**	**310**	P	**P**	**15 53 13.0**	**-0.5**	
MORC				pmax	pmax			
	comp=Z,9.0nm,0.9s							
MORC	**Moravsky Berou**	**52.03**	**310**	*e*P	**P**	**15 53 15.7**	**+2.2**	
JAVC	**Velka Javorina**	**52.07**	**309**	*e*P	**P**	**15 53 17.2**	**+3.3**	
LBFI	**Labuhan Bajo,**	**52.50**	**135**	P	**P**	**15 53 19.5**	**+2.2**	
VRAC	**Vranov**	**52.70**	**310**	LR	LR	16 16 45.2		
	comp=Z,1µm,19.5s,baz=80,slow=37							
VRAC	**Vranov**	**52.70**	**310**	⇓P	**P**	**15 53 21.6**	**+3.1**	
VRAC	**Vranov**	**52.70**	**310**	⇓P	**P**	**15 53 21.6**	**+3.1**	
VRAC	**Vranov**	**52.70**	**310**	*e*P	**P**	**15 53 20.8**	**+2.3**	
DPC	**Dobruska-Polom**	**52.73**	**311**	*e*P	**P**	**15 53 22.4**	**+3.7**	
DPC				MLR	MLR			
	comp=Z,2µm,20.4s							
DPC	**Dobruska-Polom**	**52.73**	**311**	*e*P	**P**	**15 53 22.4**	**+3.7**	
DPC				AMS	AMS	16 17 30.0		
	comp=Z,2µm,20.4s							
OSTC	**Ostas**	**52.76**	**312**	*e*P	**P**	**15 53 22.4**	**+3.4**	
OSTC				MLR	MLR			
	comp=Z,2µm,15.9s							
OSTC	**Ostas**	**52.76**	**312**	*e*P	**P**	**15 53 22.4**	**+3.4**	
OSTC				AMS	AMS	16 16 20.0		
	comp=Z,2µm,15.9s							
CHVC	**Chvalec**	**52.86**	**312**	AMS	AMS	16 16 20.0		
	comp=Z,2µm,17.8s							
KRUC	**Moravsky**	**52.87**	**310**	*e*P	**P**	**15 53 22.1**	**+2.3**	
WBSI	**Waikabubak, Su**	**53.13**	**136**	P	**P**	**15 53 24.3**	**+2.3**	
	comp=Z,48nm,1.1s							
RONA	**Rosalia, Austr**	**53.16**	**308**	*ep*P	**P**	**15 53 23.8**	**+1.8**	
	comp=Z,5.5nm,1.2s							
HFS	**Hagfors**	**53.28**	**324**	P	**P**	**15 53 22.6**	**0.0**	
	comp=Z,8.3nm,0.8s,baz=89,slow=6.2,SNR=20							
HFS				LR	LR	16 16 53.0		
	comp=Z,1µm,20.4s,baz=90,slow=37							
	comp=Z,8.3nm,0.8s							
CONA	**Conrad Observa**	**53.41**	**308**	*ep*P	**P**	**15 53 24.6**	**+0.7**	
	comp=Z,8.9nm,0.9s							
TREC	**Trest**	**53.42**	**310**	AMS	AMS	16 16 40.0		
	comp=Z,2µm,16.3s							
ARSA	**Arzberg**	**53.76**	**308**	*ep*P	**P**	**15 53 25.9**	**-0.5**	
	comp=Z,3.0nm,1.0s							
PVCC	**Panska Ves**	**53.81**	**312**	*e*P	P	15 53 33.8	+7.2	
PVCC	**Panska Ves**	**53.81**	**312**	*e*P	P	15 53 33.8	+7.2	
SPB2	**Spitsbergen Ar**	**53.97**	**346**	P	**P**	**15 53 27.2**	**-0.1**	
SPB2				IAmb	IAmb	15 54 31.2		
	comp=Z,46nm,1.4s							
SPITS	**Spitsbergen Ar**	**53.97**	**346**	P	**P**	**15 53 28.0**	**+0.6**	
	comp=Z,5.0nm,0.9s,baz=107,slow=10.0,SNR=7.0							
SPITS				LR	LR	16 20 29.5		
	comp=Z,1µm,20.1s,baz=138,slow=41							
	comp=Z,5.0nm,0.9s							
SPITS	**Spitsbergen Ar**	**53.97**	**346**	P	**P**	**15 53 26.1**	**-1.3**	
SPITS				pmax	pmax			
	comp=Z,55nm,1.5s							
MMRI	**Maumere**	**54.04**	**133**	P	**P**	**15 53 27.9**	**-0.8**	
MMRI				IAmb	IAmb	15 53 43.8		
	comp=Z,25nm,1.0s							
NC405	**NORSAR Array S**	**54.20**	**325**	P	**P**	**15 53 26.2**	**-3.1**	
SOKA	**Soboth**	**54.20**	**307**	*ep*P	**P**	**15 53 30.5**	**+0.8**	
	comp=Z,11nm,1.0s							
ZVC	**Zvikov**	**54.23**	**310**	*e*P	**P**	**15 53 33.5**	**+3.8**	
ZVC				AMS	AMS	16 17 20.0		
	comp=Z,2µm,18.2s							
PEA0B	**Petropavlovsk-**	**54.31**	**45**	P	**P**	**15 53 29.1**	**-1.1**	
PEA0B	**Petropavlovsk-**	**54.31**	**45**	P	**P**	**15 53 29.1**	**-1.1**	
NC303	**NORSAR Array S**	**54.36**	**325**	P	**P**	**15 53 27.9**	**-2.6**	
NB2	**NORSAR Subarra**	**54.45**	**325**	P	**P**	**15 53 30.7**	**-0.5**	
	comp=Z,6.9nm,0.8s,baz=84,slow=7.4							
NOA	**NORSAR Array B**	**54.45**	**325**	P	**P**	**15 53 30.5**	**-0.7**	
	comp=Z,9.8nm,0.8s,baz=86,slow=7.1,SNR=20							
NOA				LR	LR	16 17 37.8		
	comp=Z,1µm,18.2s,baz=100,slow=37							
	comp=Z,9.8nm,0.8s							
MOA	**Molln**	**54.48**	**308**	*ep*P	**P**	**15 53 32.5**	**+0.9**	
	comp=Z,6.9nm,1.4s							
HSKC	**Hora Svate Kat**	**54.51**	**312**	AMS	AMS	16 17 30.0		
	comp=Z,2µm,16.2s							
OBKA	**Obir**	**54.57**	**307**	*ep*P	**P**	**15 53 32.1**	**-0.2**	
	comp=Z,4.1nm,0.8s							
NC204	**NORSAR Array S**	**54.65**	**325**	P	**P**	**15 53 30.8**	**-1.9**	
CLL	**Collm**	**54.66**	**313**	*e*S	**S**	**16 01 11.0**	**-1.7**	
CLL				*e*SS	SS	16 05 12.0	+17	
CLL				AMS	AMS	16 20 00.0		
	comp=Z,1µm,18.1s							
GEC2	**GERESS Array S**	**54.66**	**310**	IAmb	IAmb	15 53 38.4		
	comp=Z,8.2nm,0.9s							
GERES	**GERESS Array B**	**54.66**	**310**	P	**P**	**15 53 33.7**	**+0.8**	
	comp=Z,5.1nm,0.8s,baz=64,slow=6.1,SNR=6.1							
GERES				LR	LR	16 18 16.5		
	comp=Z,1µm,20.2s,baz=80,slow=38							
	comp=Z,5.1nm,0.8s							
KHC	**Kasperske Hory**	**54.68**	**310**	*i* P	**P**	**15 53 34.4**	**+1.3**	
KHC				pmax	pmax			
	comp=Z,5.0nm,0.8s							
KHC	**Kasperske Hory**	**54.68**	**310**	*e*P	**P**	**15 53 34.2**	**+1.1**	
KHC				AMS	AMS	16 17 20.0		
	comp=Z,2µm,18.8s							
BIOA	**Bad Ischl, Aus**	**54.93**	**308**	*ep*P	pP	15 53 38.3	-1.0	
	comp=Z,5.8nm,0.9s							
LODK	**Lodwar**	**55.08**	**249**	P	**P**	**15 53 34.0**	**-2.4**	
LODK	**Lodwar**	**55.08**	**249**	P	**P**	**15 53 38.8**	**+2.4**	
MYKA	**Terra Mystica**	**55.15**	**307**	*ep*P	**P**	**15 53 38.2**	**+1.6**	
	comp=Z,2.5nm,0.9s							
KBA	**Koelnbreinsper**	**55.25**	**308**	*ep*P	**P**	**15 53 37.1**	**-0.3**	
	comp=Z,3.6nm,1.2s							
LESA	**Schwarzleotal**	**55.62**	**308**	*ep*P	**P**	**15 53 40.7**	**+0.8**	
	comp=Z,5.4nm,0.9s							
ABTA	**Abfaltersbach**	**55.88**	**307**	*ep*P	**P**	**15 53 42.7**	**+0.9**	
	comp=Z,2.0nm,0.6s							
SOEI	**Soe**	**56.17**	**132**	P	**P**	**15 53 41.6**	**-2.6**	
SOEI	**Soe**	**56.17**	**132**	P	**P**	**15 53 48.6**	**+4.4**	
ROCAM	**Rodrigues Isla**	**56.25**	**205**	P	**P**	**15 53 42.4**	**-2.0**	
WTTA	**Wattenberg**	**56.35**	**308**	*ep*P	**P**	**15 53 47.0**	**+1.7**	
	comp=Z,3.8nm,0.5s							
WATA	**Walderalm**	**56.37**	**308**	*ep*P	**P**	**15 53 45.7**	**+0.4**	
	comp=Z,8.7nm,1.1s							
KMBO	**Kilima Mbogo**	**56.50**	**243**	LR	LR	16 16 48.3		
	comp=Z,600nm,21.0s,baz=74,slow=35							
SQTA	**Sankt Quirin**	**56.64**	**308**	*ep*P	**P**	**15 53 47.4**	**+0.1**	
	comp=Z,4.5nm,0.6s							
MOTA	**Moosalm**	**56.68**	**308**	*i* pP	**P**	**15 53 48.0**	**+0.4**	
	comp=Z,13nm,1.6s							
FAKI	**Fak Fak**	**56.72**	**119**	P	**P**	**15 53 46.4**	**-1.7**	
FAKI				IAmb	IAmb	15 54 22.4		
	comp=Z,20nm,1.0s							
BILL	**Bilibino**	**56.74**	**26**	P	**P**	**15 53 46.0**	**-1.5**	
BILL				IAmb	IAmb	15 53 59.0		
	comp=Z,14nm,1.2s							
BILL	**Bilibino**	**56.74**	**26**	*i* P	**P**	**15 53 48.6**	**+1.1**	
BILL				pmax	pmax			
	comp=Z,6.0nm,0.8s							
RETA	**Reutte**	**56.87**	**309**	*ep*P	**P**	**15 53 49.8**	**+0.9**	
	comp=Z,4.7nm,0.7s							
FETA	**Feichten**	**57.01**	**308**	*ep*P	**P**	**15 53 51.3**	**+1.4**	
	comp=Z,4.6nm,0.7s							
VAE	**Valguarnera**	**57.03**	**296**	LR	LR	16 23 45.4		
	comp=Z,456nm,19.2s,baz=84,slow=42							
GUMO	**Guam**	**57.18**	**95**	LR	LR	16 18 05.2		
	comp=Z,435nm,22.0s,baz=274,slow=36							
DAVA	**Damuels**	**57.50**	**309**	*ep*P	pP	15 53 56.1	-1.9	
	comp=Z,8.1nm,0.9s							
DAVOX	**Davos/Dischmat**	**57.63**	**308**	LR	LR	16 24 11.2		
	comp=Z,821nm,18.0s,baz=61,slow=42							
NOR	**Nord**	**59.62**	**350**	*i* P	**P**	**15 54 09.0**	**+1.6**	
MBAR	**Mbarara**	**61.18**	**249**	LR	LR	16 21 08.7		
	comp=Z,438nm,18.9s,baz=54,slow=36							
MBAR	**Mbarara**	**61.18**	**249**	P	**P**	**15 54 21.0**	**+1.7**	
KEST	**Kesra**	**61.45**	**296**	P	**P**	**15 54 20.8**	**0.0**	
	comp=Z,1.8nm,0.6s,baz=70,slow=17,SNR=4.8							
KEST				LR	LR	16 24 55.1		
	comp=Z,328nm,18.8s,baz=83,slow=40							
	comp=Z,1.8nm,0.6s							
KEST	**Kesra**	**61.45**	**296**	IAmb	IAmb	15 55 27.4		
	comp=Z,17nm,1.6s							
DAG	**Danmarks Havn**	**61.58**	**345**	*i* P	**P**	**15 54 23.0**	**+2.1**	
DAG				IAmb	IAmb	15 54 25.5		
	comp=Z,20nm,1.4s							
DBG	**Daneborg**	**62.91**	**343**	*i* P	**P**	**15 54 31.4**	**+1.6**	
DBG				IAmb	IAmb	15 54 35.7		
	comp=Z,6.4nm,0.9s							
MTN	**Manton Dam**	**62.91**	**128**	P	**P**	**15 54 29.0**	**-1.6**	
MTN				IAmb	IAmb	15 55 33.9		
	comp=Z,17nm,1.2s							
EKA	**Eskdalemuir Ar**	**63.05**	**320**	P	**P**	**15 54 32.9**	**+1.8**	
	comp=Z,8.6nm,0.8s,baz=74,slow=6.9,SNR=11							
EKA				LR	LR	16 23 59.7		
	comp=Z,1µm,18.9s,baz=68,slow=38							
	comp=Z,8.6nm,0.8s							
PSA00	**Pilbara Seismi**	**63.21**	**144**	P	**P**	**15 54 30.7**	**-1.7**	
PSA00	**Pilbara Seismi**	**63.21**	**144**	P	**P**	**15 54 30.5**	**-1.9**	
PSA00				IAmb	IAmb	15 54 39.9		
	comp=Z,160nm,2.0s							
FITZ	**Fitzroy Crossi**	**63.49**	**137**	LR	LR	16 26 52.7		
	comp=Z,330nm,18.1s,baz=314,slow=40							
KNRA	**Kununurra**	**63.50**	**132**	P	**P**	**15 54 33.4**	**-1.0**	
KNRA				IAmb	IAmb	15 55 00.7		
	comp=Z,20nm,1.1s							
SCO	**Scoresbysund**	**65.06**	**339**	*i* P	**P**	**15 54 48.3**	**+4.4**	
SCO				IAmb	IAmb	15 54 49.1		
	comp=Z,6.5nm,1.0s							
C16K	**Lisburne Hills**	**66.71**	**22**	P	**P**	**15 54 54.0**	**-0.6**	
C16K				IAmb	IAmb	15 54 59.6		
	comp=Z,9.5nm,1.0s							
NEEM	**North Greenlan**	**67.00**	**351**	*i* P	**P**	**15 54 56.4**	**-0.4**	
NEEM				IAmb	IAmb	15 55 02.1		
	comp=Z,12nm,0.7s							
BORG	**Borgarnes**	**67.58**	**334**	LR	LR	16 23 49.8		
	comp=Z,385nm,20.6s,baz=58,slow=35							
C18K	**Utukok River**	**67.82**	**21**	P	**P**	**15 54 59.8**	**-2.0**	
C18K				IAmb	IAmb	15 56 01.8		
	comp=Z,33nm,2.0s							
MORW	**Morawa**	**67.96**	**151**	P	**P**	**15 55 01.4**	**-1.6**	
C19K	**Lookout Ridge**	**68.05**	**21**	P	**P**	**15 55 01.2**	**-2.0**	
C19K				IAmb	IAmb	15 55 18.7		
	comp=Z,5.3nm,0.7s							
SUMG	**Summit**	**68.22**	**344**	*i* P	**P**	**15 55 06.0**	**+1.4**	
SUMG				IAmb	IAmb	15 55 12.4		
	comp=Z,44nm,1.2s							
E18K	**Tukpahlearik C**	**68.69**	**22**	P	**P**	**15 55 05.4**	**-1.8**	
E18K				IAmb	IAmb	15 55 21.7		
	comp=Z,6.2nm,0.8s							
F17K	**Baldwin Pennin**	**69.03**	**23**		**P**	**15 55 07.7**	**-1.6**	
B21K	**Ikpikpuk River**	**69.15**	**19**	P	**P**	**15 55 08.7**	**-1.3**	
B21K				IAmb	IAmb	15 55 25.6		
	comp=Z,7.1nm,0.8s							
ESDC	**Sonseca Array**	**69.57**	**305**	P	**P**	**15 55 15.4**	**+2.2**	
	comp=Z,1.5nm,0.7s,baz=57,slow=4.8,SNR=6.8							
ESDC				LR	LR	16 31 16.4		
	comp=Z,582nm,18.1s,baz=53,slow=41							
	comp=Z,1.5nm,0.7s							
TULEG	**Thule**	**69.84**	**354**	*i* P	**P**	**15 55 13.7**	**-0.4**	
TULEG				IAmb	IAmb	15 55 17.1		
	comp=Z,7.1nm,1.1s							
C23K	**Itkillik River**	**70.08**	**18**	P	**P**	**15 55 14.2**	**-1.5**	
C23K				IAmb	IAmb	15 55 25.5		
	comp=Z,10nm,0.8s							
WB0	**Warramunga Arr**	**70.10**	**131**	IAmb	IAmb	15 55 21.5		
	comp=Z,35nm,1.6s							
WRA	**Warramunga Arr**	**70.19**	**131**	P	**P**	**15 55 17.2**	**+0.1**	
	comp=Z,6.6nm,0.7s,baz=326,slow=6.4,SNR=77							
	comp=Z,6.6nm,0.7s							
WRA	**Warramunga Arr**	**70.19**	**131**	P	**P**	**15 55 15.8**	**-1.3**	
WRA	**Warramunga Arr**	**70.19**	**131**	P	**P**	**15 55 15.8**	**-1.3**	
WRAB	**Tennant Creek**	**70.19**	**131**	P	**P**	**15 55 15.4**	**-1.6**	
WRAB	**Tennant Creek**	**70.19**	**131**	P	**P**	**15 55 15.5**	**-1.6**	
WRAB				pmax	pmax			
	comp=Z,50nm,1.6s							
KULLO	**Kullorsuaq**	**70.20**	**350**	*i* P	**P**	**15 55 15.9**	**-0.5**	
KULLO				IAmb	IAmb	15 55 20.6		
	comp=Z,12nm,0.8s							
WR8	**Warramunga Arr**	**70.31**	**131**	IAmb	IAmb	15 55 25.3		
	comp=Z,13nm,0.9s							
NWAO	**Narrogin (SRO)**	**71.84**	**152**	LR	LR	16 29 47.8		
	comp=Z,426nm,20.5s,baz=322,slow=38							
NWAO	**Narrogin (SRO)**	**71.84**	**152**	P	**P**	**15 55 25.0**	**-1.8**	
NWAO	**Narrogin (SRO)**	**71.84**	**152**	P	**P**	**15 55 25.0**	**-1.8**	
NWAO				pmax	pmax			
	comp=Z,70nm,1.4s							
E24K	**Your Creek**	**71.

	comp=Z,83nm,1.1s							
BOSA	**Boshof**	**83.51**	**230**	P		**P**	**15 56 33.5**	**+1.3**
	comp=Z,6.7nm,0.8s,baz=25,slow=3.2,SNR=8.9							
BOSA				LR		LR	16 30 26.4	
	comp=Z,409nm,21.6s,baz=48,slow=33							
	comp=Z,6.7nm,0.8s							
BOSA	**Boshof**	**83.51**	**230**	P		**P**	**15 56 30.0**	**-2.2**
BOSA	**Boshof**	**83.51**	**230**	P		**P**	**15 56 30.0**	**-2.2**
BOSA				pmax		pmax		
	comp=Z,37nm,1.7s							
YKAW3	**Yellowknife Wh**	**83.72**	**9**	P		**P**	**15 56 30.6**	**-2.1**
YKAW3				IAmb		IAmb	15 56 39.1	
	comp=Z,12nm,0.7s							
YKA	**Yellowknife Ar**	**83.79**	**9**	P		**P**	**15 56 32.9**	**-0.1**
	comp=Z,3.5nm,0.8s,baz=337,slow=5.7,SNR=39							
	comp=Z,3.5nm,0.8s							
YKA	**Yellowknife Ar**	**83.79**	**9**	P		**P**	**15 56 31.3**	**-1.7**
YKA	**Yellowknife Ar**	**83.79**	**9**	*i* P		**P**	**15 56 34.9**	**+1.9**
YKA				pmax		pmax		
	comp=Z,6.0nm,0.7s							
YKAW1	**Yellowknife Wh**	**83.81**	**9**	IAmb		IAmb	15 56 39.6	
	comp=Z,16nm,0.8s							
DLBC	**Dease Lake**	**84.50**	**18**	LR		LR	16 38 14.4	
	comp=Z,302nm,20.9s,baz=290,slow=38							
EIDS	**Eidsvold**	**85.12**	**124**	P		**P**	**15 56 38.4**	**-1.8**
DBIC	**Dimbokro**	**86.66**	**276**	P		**P**	**15 56 48.9**	**+0.6**
	comp=Z,8.3nm,0.9s,baz=114,slow=5.7,SNR=7.7							
DBIC				LR		LR	16 40 01.4	
	comp=Z,747nm,18.1s,baz=64,slow=39							
	comp=Z,8.3nm,0.9s							
DBIC	**Dimbokro**	**86.66**	**276**			**P**	**15 56 46.7**	**-1.6**
DBIC	**Dimbokro**	**86.66**	**276**	P		**P**	**15 56 46.7**	**-1.6**
KUQ	**Kuujjuuaa**	**86.91**	**346**	P		**P**	**15 56 47.4**	**-1.3**
KUQ				IAmb		IAmb	15 56 54.0	
	comp=Z,6.2nm,0.9s							
SUR	**Sutherland**	**88.87**	**230**	LR		LR	16 34 59.9	
	comp=Z,430nm,18.8s,baz=46,slow=34							
FCC	**Fort Churchill**	**88.89**	**360**	P		**P**	**15 56 56.4**	**-1.7**
FCC				IAmb		IAmb	15 57 23.0	
	comp=Z,16nm,1.8s							
FCC	**Fort Churchill**	**88.89**	**360**	P		**P**	**15 56 56.4**	**-1.7**
FCC				pmax		pmax		
	comp=Z,16nm,1.8s							
SCHQ	**Schefferville**	**89.61**	**344**	LR		LR	16 41 13.9	
	comp=Z,315nm,21.5s,baz=22,slow=38							
BBB	**Bella Bella**	**90.53**	**20**	LR		LR	16 41 40.3	
	comp=Z,318nm,20.6s,baz=335,slow=38							
FFC	**Flin Flon**	**92.71**	**4**	P		**P**	**15 57 13.6**	**-2.4**
FFC				IAmb		IAmb	15 57 20.5	
	comp=Z,8.5nm,0.9s							
FFC	**Flin Flon**	**92.71**	**4**	P		**P**	**15 57 13.6**	**-2.4**
FFC				pmax		pmax		
	comp=Z,8.0nm,1.0s							
DZM	**Mont Dzumac**	**94.53**	**113**	*e*LR		LR	16 27 56.9	
	comp=Z,624nm,24.6s							
NEW	**Newport**	**96.92**	**15**	LR		LR	16 49 19.5	
	comp=Z,180nm,18.1s,baz=342,slow=40							
ULM	**Lac du Bonnet**	**97.42**	**1**	LR		LR	16 45 37.8	
	comp=Z,250nm,20.7s,baz=7.0,slow=38							
NVL	**N'lazarevskaya**	**115.35**	**201**	*i* PKIKP		**PKPdf**	**16 02 45.0**	**+0.3**
NVL				*e*			16 03 46.4	
NVL				*e*PPP		PPP	16 06 12.5	
NVL				*e*			16 09 57.7	
NVL				*e*SS		SS	16 19 47.5	+3.3
NVL				*e*SSS		SSS	16 24 04.2	
NVL				MLR		MLR		
	comp=Z,821nm,17.0s							
TXAR	**Lajitas Array**	**117.72**	**9**	PKP		**PKiKP**	**16 02 52.8**	**+1.9**
	comp=Z,0.2nm,0.4s,baz=222,slow=6.0,SNR=3.8							
QSPA	**South Pole Qui**	**122.48**	**180**	PKP		**PKiKP**	**16 02 59.5**	**+0.7**
	comp=Z,2.5nm,0.7s,baz=248,slow=1.8,SNR=15							
PPT2	**Papeete2**	**128.54**	**87**	*e*LR		LR	16 43 24.9	
	comp=Z,428nm,25.5s							
PPT2				*e*LR		LR	16 43 32.8	
	comp=Z,452nm,40.2s							
TAOE	**Nuku Hiva Isla**	**131.74**	**71**	*e*LR		LR	16 45 05.9	
	comp=Z,331nm,22.3s							
CPUP	**Villa Florida**	**147.07**	**271**	PKP		**PKPbc**	**16 03 46.3**	**-1.1**
	comp=Z,1.9nm,0.3s,baz=273,slow=2.3,SNR=4.9							
CPUP				PKPbc		**PKPab**	**16 03 48.9**	**0.0**
	comp=Z,2.3nm,0.3s,baz=68,slow=3.3,SNR=8.7							
LPAZ	**La Paz**	**151.02**	**298**	PKPbc		**PKiKP**	**16 04 00.8**	**+1.8**
	comp=Z,4.7nm,1.1s,baz=13,slow=6.7,SNR=7.4							
LPAZ	**La Paz**	**151.02**	**298**			**PKPdf**	**16 03 47.5**	**-5.1**
LPAZ	**La Paz**	**151.02**	**298**	PKIKP		**PKPdf**	**16 03 47.5**	**-5.1**

*IDC **12** 15:44:51.9±0.8, 16°.12S×178°.26E, h0km, mb4.1/9, mbtmp4.1/9, MS4.1/10, Error ellipse: s-maj=26.7km s-min=17.5km az=109.0*
*NEIC **12** 15:44:56.5±1.7, 16°.17S±0°.06×178°.33E±0°.09, h29km±5km, mb4.8/50, Error ellipse: s-maj=13.7km s-min=8.0km az=115.0*
*GCMT **12** 15:44:57.5±0.2, 16°.02S±0°.02×178°.21E±0°.01, h18km, MW5.0/101, Moment Tensor Solution. s41,c50; s101,c141; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=4.19±.20; Mθθ 1.22±.13; Mφφ 2.96±.13; Mrθ -0.10±.30; Mrφ 2.09±.07; Mθφ -0.12±.26; Best double couple: M~w~4.27500×10^16^ NP1:φ=213.00000°, δ=44.00000°, λ=-90.00000°. NP2:φ=34.00000°, δ=46.00000°, λ=-90.00000°. Principal axes: T 4.3570, Plg1.0000°, Azm124.0000°; N -0.1740, Plg0.0000°, Azm214.0000°; P -4.1930, Plg89.0000°, Azm316.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 15:44:54.3±0.5, 16°.14S±0°.06×178°.38E±0°.07, h17km, n76, σ1s 60/67, mb4.7/27, MS4.2/9, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**1.61**	**191**	Pn	**Pn**	**15 45 21.8**	**-0.2**
	35nm,0.3s,baz=104,slow=23,SNR=124						
MSVF				Sn	**Sg**	**15 45 45.3**	**-1.1**
	328nm,0.3s,baz=130,slow=20,SNR=15						
FUTU	**Fugatoga**	**3.84**	**62**	Pn	**Pn**	**15 45 53.1**	**+0.5**
SANVU	**Saraoutou**	**10.78**	**272**		**Pn**	**15 47 28.5**	**+0.6**
DZM	**Mont Dzumac**	**12.73**	**241**	*e*P	**P**	**15 48 02.3**	**-3.5**
	142nm,26.6s						
DZM				*e*S	**Sn**	**15 50 24.6**	**+8.5**
	2μm,27.1s						
DZM				*e*LR	LR	15 51 12.3	
	812nm,26.6s						
RAO	**Raoul Island**	**13.49**	**166**	LR	LR	15 51 29.6	
	comp=Z,396nm,21.3s,baz=65,slow=29						
HNR	**Honiara**	**19.16**	**288**	LR	LR	15 55 31.7	
	comp=Z,48nm,18.7s,baz=205,slow=34						
TOZ	**Tahuroa Road**	**21.66**	**186**	P	**P**	**15 49 42.9**	**-1.1**
TOZ				IAmb	IAmb	15 50 04.0	
	comp=Z,69nm,1.4s						
URZ	**Urewera**	**22.06**	**183**	LR	LR	15 57 08.9	
	comp=Z,608nm,19.2s,baz=6.0,slow=33						
BFZ	**Birch Farm**	**24.52**	**184**	P	**P**	**15 50 11.3**	**-1.6**
BFZ				IAmb	IAmb	15 50 20.9	
	comp=Z,26nm,1.0s						
NNZ	**Nelson**	**25.36**	**189**	P	**P**	**15 50 20.7**	**+0.3**
BHW	**Baring Head**	**25.36**	**186**	P	**P**	**15 50 21.2**	**+0.8**
BHW				IAmb	IAmb	15 50 38.0	
	comp=Z,47nm,1.3s						
THZ	**Tophouse**	**25.97**	**189**	P	**P**	**15 50 26.7**	**+0.7**
OXZ	**Oxford**	**27.63**	**190**	P	**P**	**15 50 42.0**	**+1.1**
OXZ				IAmb	IAmb	15 50 58.7	
	comp=Z,52nm,1.7s						
FOZ	**Fox Glacier**	**28.26**	**193**	P	**P**	**15 50 46.8**	**+0.3**
KRVT	**Keravat (AS076**	**28.43**	**292**	LR	LR	16 01 25.6	
	comp=Z,78nm,19.2s,baz=33,slow=35						
MLZ	**Mavora Lakes**	**30.39**	**194**	P	**P**	**15 51 06.5**	**+1.1**
PPT2	**Papeete2**	**30.68**	**97**	*e*S	**S**	**15 56 08.3**	**-2.3**
	comp=Z,152nm,24.2s						
PPT2				*e*LQ	LQ	15 57 44.7	
	comp=Z,792nm,26.2s						
PPT2				*e*LR	LR	15 58 52.4	
	comp=Z,1μm,29.2s						
PPT2				*e*LR	LR	15 59 01.6	
	comp=Z,691nm,33.2s						
CTA	**Charters Tower**	**30.76**	**258**	LR	LR	16 01 44.1	
	comp=Z,273nm,19.4s,baz=66,slow=33						
TBI	**Tubuai**	**31.06**	**109**	*e*S	**S**	**15 56 20.7**	**+4.4**
	comp=Z,901nm,26.5s						
TBI				*e*LR	LR	15 59 11.0	
	comp=Z,7μm,30.5s						
TBI				*e*LR	LR	15 59 19.0	
	comp=Z,2μm,30.0s						
TOO	**Toolangi**	**36.00**	**227**	P	**P**	**15 51 54.7**	**+0.2**
INKA	**Innaminka**	**36.63**	**245**	P	**P**	**15 52 00.2**	**+0.2**
STKA	**Stephens Creek**	**36.87**	**238**	P	**P**	**15 52 02.9**	**+0.9**
	comp=Z,5.9nm,0.8s,baz=66,slow=8.7,SNR=9.2						
STKA				LR	LR	16 05 07.0	
	comp=Z,203nm,21.7s,baz=80,slow=33						
	comp=Z,5.9nm,0.8s						
STKA	**Stephens Creek**	**36.87**	**238**	P	**P**	**15 52 02.2**	**+0.3**
TAOE	**Nuku Hiva Isla**	**41.07**	**85**	*e*LR	LR	16 03 37.9	
	comp=Z,669nm,26.5s						
BBOO	**Buckleboo**	**41.63**	**239**	P	**P**	**15 52 41.5**	**-0.3**
BBOO				IAmb	IAmb	15 52 57.7	
	comp=Z,23nm,1.4s						
WB0	**Warramunga Arr**	**41.92**	**258**	P	**P**	**15 52 43.0**	**-1.3**
WB0				IAmb	IAmb	15 53 03.0	
	comp=Z,42nm,1.8s						
WRA	**Warramunga Arr**	**41.96**	**258**	P	**P**	**15 52 42.6**	**-2.1**
	comp=Z,1.5nm,0.8s,baz=91,slow=8.1,SNR=7.5						
	comp=Z,1.5nm,0.8s						
AS31	**Alice Springs**	**42.35**	**252**	P	**P**	**15 52 45.6**	**-2.2**
ASAR	**Alice Springs**	**42.35**	**252**	P	**P**	**15 52 47.0**	**-0.8**
	comp=Z,2.2nm,0.8s,baz=82,slow=8.6,SNR=16						
	comp=Z,2.2nm,0.8s						
ASAR	**Alice Springs**	**42.35**	**252**	P	**P**	**15 52 46.0**	**-1.8**
MTN	**Manton Dam**	**45.79**	**268**	P	**P**	**15 53 15.0**	**-0.4**
MTN				IAmb	IAmb	15 53 29.9	
	comp=Z,35nm,1.7s						
KNRA	**Kununurra**	**47.62**	**263**	P	**P**	**15 53 27.8**	**-2.1**
FORT	**Forrest**	**48.02**	**243**	P	**P**	**15 53 32.8**	**0.0**
FORT				IAmb	IAmb	15 53 59.4	
	comp=Z,10nm,0.9s						
SOEI	**Soe**	**53.00**	**270**	P	**P**	**15 54 09.5**	**-1.3**
GIRL	**Giralia**	**60.47**	**253**	P	**P**	**15 55 02.0**	**-1.6**
VNDA	**Vanda**	**61.96**	**184**	P	**P**	**15 55 12.9**	**+0.1**
VNDA				IAmb	IAmb	15 55 15.4	
	comp=Z,16nm,1.7s						
SBA	**Scott Base**	**62.00**	**183**	P	**P**	**15 55 13.1**	**0.0**
MJAR	**Matsushiro Arr**	**64.68**	**325**	P	**P**	**15 55 30.9**	**-0.5**
	comp=Z,3.6nm,1.0s,baz=158,slow=7.3,SNR=5.1						
	comp=Z,3.6nm,1.0s						
MJAR	**Matsushiro Arr**	**64.68**	**325**	P	**P**	**15 55 30.4**	**-1.0**
MAJO	**Matsushiro**	**64.68**	**325**	P	**P**	**15 55 30.9**	**-0.6**
KKM	**Kota Kinabalu**	**65.33**	**285**	P	**P**	**15 55 36.0**	**-0.2**
AMKA	**Amchitka**	**67.23**	**1**	P	**P**	**15 55 48.3**	**+0.9**
YOJ	**Yonaguni jma**	**67.42**	**306**	P	**P**	**15 55 49.6**	**+0.4**
GSTR	**Great Sitkin T**	**68.12**	**4**	P	**P**	**15 55 52.9**	**-0.2**
JKA	**Kamikawa-asahi**	**68.29**	**333**	P	**P**	**15 55 54.2**	**-0.1**
KSRS	**Korea Array**	**71.36**	**320**	LR	LR	16 21 10.8	
	comp=Z,144nm,21.7s,baz=130,slow=31						
SDPT	**Sand Point**	**73.43**	**12**	P	**P**	**15 56 25.4**	**+0.1**
SPIA	**Saint Paul Isl**	**73.65**	**6**	P	**P**	**15 56 27.1**	**+0.5**
QSPA	**South Pole Qui**	**73.90**	**180**	P	**P**	**15 56 28.2**	**-0.1**
	comp=Z,5.4nm,1.0s,baz=36,slow=0.6,SNR=12						
	comp=Z,5.4nm,1.0s						
QSPA	**South Pole Qui**	**73.90**	**180**	P	**P**	**15 56 28.9**	**+0.7**
QSPA				IAmb	IAmb	15 56 45.1	
	comp=Z,18nm,1.1s						
KLR	**Kul'dur**	**77.06**	**331**	LR	LR	16 26 45.8	
	comp=Z,256nm,19.0s,baz=180,slow=33						
O19K	**Port Alsworth**	**79.20**	**13**	P	**P**	**15 56 58.3**	**+0.4**
BORC	**Borrego Spring**	**79.23**	**51**	P	**P**	**15 56 58.9**	**+0.1**
CWC	**Cottonwood Cre**	**79.52**	**47**	P	**P**	**15 57 01.2**	**+0.7**
CLC	**China Lake**	**79.56**	**48**	P	**P**	**15 57 02.2**	**+1.5**
N19K	**Bonanza Creek**	**79.72**	**13**	P	**P**	**15 57 02.7**	**+1.7**
N19K				IAmb	IAmb	15 57 15.7	
	comp=Z,23nm,1.7s						
MPMC	**Manual Prospec**	**79.75**	**48**	P	**P**	**15 57 01.7**	**-0.2**
MPMC				IAmb	IAmb	15 57 05.3	
	comp=Z,8.6nm,1.5s						
DSP	**Deep Springs**	**80.05**	**46**	P	**P**	**15 57 04.3**	**+1.3**
LHV	**Little Huntoon**	**80.11**	**45**	P	**P**	**15 57 04.1**	**+0.7**
LHV				IAmb	IAmb	15 57 26.0	
	comp=Z,13nm,1.6s						
NVAR	**Mina Array Bea**	**80.33**	**45**	P	**P**	**15 57 05.6**	**+0.7**
	comp=Z,0.9nm,0.8s,baz=239,slow=8.4,SNR=4.8						
	comp=Z,0.9nm,0.8s						
STLK	**Strandline Lak**	**80.93**	**14**	P	**P**	**15 57 08.1**	**+0.7**
STLK				IAmb	IAmb	15 57 14.6	
	comp=Z,16nm,1.6s						
RADR	**Rader Ridge**	**81.11**	**36**	P	**P**	**15 57 09.0**	**+0.3**
PRN	**Pahroc Range**	**82.11**	**48**	P	**P**	**15 57 14.8**	**+0.5**
PRN				IAmb	IAmb	15 57 19.8	
	comp=Z,9.1nm,1.3s						
U15A	**North Rim**	**83.67**	**49**		**P**	**15 57 22.6**	**0.0**
U15A				IAmb	IAmb	15 57 27.5	
	comp=Z,6.4nm,1.1s						
M26K	**Nabesna, AK**	**83.96**	**17**	P	**P**	**15 57 23.9**	**+0.6**
M26K				IAmb	IAmb	15 57 26.3	
	comp=Z,15nm,1.2s						
G19K	**Purcell Mounta**	**84.08**	**10**	P	**P**	**15 57 24.8**	**+1.2**
G19K				IAmb	IAmb	15 57 30.9	
	comp=Z,9.5nm,1.5s						
E18K	**Tukpahlearik C**	**84.75**	**8**	P	**P**	**15 57 27.2**	**+0.2**
E18K				IAmb	IAmb	15 57 30.5	
	comp=Z,5.4nm,1.1s						
ILAR	**Eielson Array**	**84.90**	**14**	P	**P**	**15 57 27.9**	**+0.1**
	comp=Z,2.8nm,1.0s,baz=234,slow=5.5,SNR=8.6						
	comp=Z,2.8nm,1.0s						
ILAR	**Eielson Array**	**84.90**	**14**	P	**P**	**15 57 27.3**	**-0.5**
CMAR	**Chiang Mai Arr**	**85.39**	**291**	P	**P**	**15 57 31.7**	**+0.3**
	comp=Z,1.3nm,0.9s,baz=118,slow=4.3,SNR=6.9						
	comp=Z,1.3nm,0.9s						
CMAR	**Chiang Mai Arr**	**85.39**	**291**	P	**P**	**15 57 30.0**	**-1.4**
LZDM	**Lanzhou Array**	**87.45**	**308**	LR	LR	16 36 15.4	
	comp=Z,99nm,18.7s,baz=105,slow=35						
PDAR	**Pinedale Array**	**88.22**	**45**	P	**P**	**15 57 47.0**	**+2.0**
	comp=Z,0.4nm,0.8s,baz=226,slow=5.0,SNR=3.0						
	comp=Z,0.4nm,0.8s						
PDAR	**Pinedale Array**	**88.22**	**45**	P	**P**	**15 57 45.4**	**+0.5**
INK	**Inuvik**	**91.02**	**16**	LR	LR	16 31 57.5	
	comp=Z,319nm,21.8s,baz=323,slow=31						
TIXI	**Tiksi**	**93.69**	**346**	LR	LR	16 34 13.8	
	comp=Z,144nm,20.0s,baz=218,slow=32						

IDC 12 15:48:35.4±2.6, 32°.54S×178°.25W, h0km, mb3.7/2, mbtmp3.8/3, ML3.7/1, MS4.0/1, Error ellipse: s-maj=69.9km s-min=43.0km az=125.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.85**	**212**	Pn	Pn	15 50 15.6	-1.5
	1.3nm,0.3s,baz=248,slow=2.5,SNR=15						
URZ				Sn	Sn	15 51 32.0	-3.7
	2.4nm,0.3s,baz=53,slow=24,SNR=13						
	3.5nm,0.3s						
MSVF	**Nonsavu**	**15.12**	**346**	LR	LR	15 56 23.1	
	comp=Z,538nm,18.0s,baz=112,slow=31						
ASAR	**Alice Springs**	**42.83**	**269**	P	P	15 56 35.6	+0.2
	0.3nm,0.5s,baz=108,slow=8.3,SNR=1.2						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**44.01**	**274**	P	P	15 56 45.0	0.0
	0.7nm,0.3s,baz=114,slow=8.1,SNR=10						
	0.7nm,0.3s						
KBZ	**Khabaz**	**146.09**	**301**	PKPbc	PKPdf	16 08 16.1	-0.1
	0.3nm,0.4s,baz=79,slow=3.8,SNR=3.6						
FINES	**FINESS Array B**	**147.07**	**339**	PKPbc	PKPbc	16 08 19.0	-0.5
	2.2nm,0.9s,baz=33,slow=5.3,SNR=5.8						

ATH 12 15:50:59.1, 38°.87N×21°.49E, h8km±2km, ML1.6/14, Latitude uncertainty: 0 km; Longitude uncertainty: 0 km, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMPL	**Ampelaki**	**0.22**	**285**	P	Pg	15 51 03.4	-0.2
AMPL				S	Sg	15 51 06.8	+0.2
PVO	**Paravola**	**0.25**	**173**	P	Pg	15 51 04.1	0.0
PVO				S	Sg	15 51 07.8	+0.4
EVR	**Evrytania**	**0.26**	**78**	P	Pg	15 51 04.4	+0.1
EVR				S	Sg	15 51 08.2	+0.5
ANX	**Ano Chora**	**0.43**	**129**	P	Pg	15 51 07.2	-0.4
ANX				S	Sb	15 51 14.6	-1.2
AGRP	**Agrapidokambos**	**0.50**	**159**	P	Pg	15 51 08.5	-0.3
AGRP				S	Sb	15 51 16.8	-0.9
TETR	**Tetrakomo, Epi**	**0.51**	**341**	P	Pg	15 51 09.2	+0.2
TETR				S	Sg	15 51 16.7	+1.0
MAKR	**Makrakomi, Fth**	**0.52**	**73**	P	Pg	15 51 09.4	+0.2
MAKR				S	Sb	15 51 17.6	-0.7
EFP	**Efpalio**	**0.55**	**143**	P	Pg	15 51 09.8	+0.1
EFP				S	Sb	15 51 18.2	-0.7
MALA	**Malamata, Dori**	**0.56**	**147**	P	Pb	15 51 10.8	-0.3
MG00	**Magoula, Dorid**	**0.57**	**141**	P	Pb	15 51 11.2	-0.2
TSLK	**Tsoukalades, L**	**0.65**	**267**	P	Pg	15 51 12.0	+0.3
TSLK				S	Sb	15 51 21.1	-0.9
LKD2	**Lefkada island**	**0.65**	**264**	P	Pg	15 51 12.0	+0.3
ZIRI	**Ziria, Aigiali**	**0.67**	**147**	P	Pb	15 51 13.0	0.0
AXS	**Araxos**	**0.67**	**188**	P	Pg	15 51 11.8	-0.3
AXS				S	Sb	15 51 21.7	-0.8
AGG	**Agios Georgios**	**0.68**	**76**	P	Pg	15 51 12.1	0.0
AGG				S	Sg	15 51 20.7	-0.2
TRIZ	**Trizonia**	**0.68**	**137**	P	Pg	15 51 12.3	+0.2
TRIZ				S	Sg	15 51 21.8	+0.8
EVGI	**Lefkada island**	**0.69**	**250**	P	Pg	15 51 12.8	+0.3
EVGI				S	Sb	15 51 22.8	-0.5
KALE	**Kalithea**	**0.70**	**133**	P	Pb	15 51 13.6	+0.1
KALE				S	Sb	15 51 23.1	-0.2
PRMD	**Pramanda**	**0.73**	**335**	P	Pg	15 51 13.2	0.0
PRMD				S	Sb	15 51 24.3	-0.1
RLS	**Riolos of Patr**	**0.81**	**181**	P	Pg	15 51 14.9	+0.3
THL	**Klokotos Trika**	**0.81**	**30**	P	Pg	15 51 15.0	+0.4
FSK	**Fiskardo**	**0.83**	**241**	P	Pg	15 51 15.1	0.0
DRO	**Drossia**	**0.93**	**169**	P	Pg	15 51 16.6	-0.3
RTZL	**Ratzakli, Kefa**	**0.97**	**216**	P	Pg	15 51 17.8	+0.1
KLV	**Kalavryta, Ach**	**0.97**	**147**	P	Pg	15 51 17.9	+0.2
TYRN	**Tyrnavos**	**1.02**	**34**	P	Pn	15 51 19.8	0.0
TYRN				S	Sb	15 51 33.0	+0.3
KPRO	**Kipourio**	**1.09**	**355**	P	Pn	15 51 21.0	+0.2
GUR	**Goura**	**1.15**	**144**	P	Pb	15 51 21.2	0.0

*INMG **12** 15:53:17.2±1.5, 43°.00N×1°.23W, h2km, ML2.4, Error ellipse: s-maj=3.0km s-min=2.4km az=23.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Pirineus (ESP)*
*MDD **12** 15:53:17.6±0.1, 42°.98N×1°.24W, h1km, mb_Lg2.9/53, Error ellipse: s-maj=1.8km s-min=1.0km az=1.0*
*LDG **12** 15:53:17.4±0.1, 43°.02N×1°.22W, h2km, Md3.1/2, Ml3.2/24, Error ellipse: s-maj=1.4km s-min=1.3km az=117.0*
*STR **12** 15:53:17.0±0.0, 42°.98N±0°.09×1°.23W±0°.09, h5km, MLv2.7/12, LOCSAT earthModelID pyrenees_taup-2.11 preliminary*

ISC 12 15:53:15.6±0.8, 43°.03N±0°.02×1°.22W±0°.02, h14km±5km, n73, σ1s 35/140, 1C-1D, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJPF	**Ste Jean**	**0.09**	**356**	*e*Pg	**Pg**	**15 53 19.4**	**+0.7**
SJPF				*e*Sg	**Sg**	**15 53 21.2**	**+0.4**
	4μm,0.3s						
EORO	**Oroz-Betelu**	**0.15**	**208**	||Pg	**Pg**	**15 53 18.9**	**-0.6**
EORO				Sg	**Sg**	**15 53 20.6**	**-1.5**
EORO				*i* IVmb_Lg		15 53 21.2	
OSSF	**Osses**	**0.23**	**352**	Pg	**Pb**	**15 53 22.0**	**+0.3**
OSSF				Sg	**Sb**	**15 53 25.4**	**-0.2**
ORDF	**Ordiarp**	**0.28**	**47**	Pg	**Pb**	**15 53 23.1**	**+0.7**
ORDF				Sg	**Sb**	**15 53 27.7**	**+0.7**
EARA	**Aranguren**	**0.37**	**227**	||Pg	**Pb**	**15 53 23.3**	**-0.6**
EARA				Sg	**Sb**	**15 53 28.2**	**-1.3**
EARA				*i* IVmb_Lg		15 53 30.1	
EARA	**Aranguren**	**0.37**	**227**	Pg	**Pb**	**15 53 23.4**	**-0.5**
EARA				Sg	**Sb**	**15 53 28.8**	**-0.7**
ATE	**Arette**	**0.38**	**81**	Pg	**Pb**	**15 53 24.7**	**+0.5**
ATE				Sg	**Sb**	**15 53 30.7**	**+0.8**
ETSF	**Etsaut**	**0.50**	**104**	*e*Pg	**Pb**	**15 53 25.9**	**+0.3**
ETSF				*e*Sg	**Sb**	**15 53 32.9**	**-0.4**
	158nm,0.2s						
CANF	**Canfranc**	**0.58**	**117**	Pg	**Pb**	**15 53 27.3**	**-0.2**
REYF	**Montagne du Re**	**0.60**	**85**	Pg	**Pb**	**15 53 28.4**	**+0.4**
URDF	**Urds**	**0.61**	**48**	Pg	**Pn**	**15 53 30.0**	**+0.1**
URDF				Sg	**Sn**	**15 53 40.2**	**+0.6**
TERF	**Tercis-les-Bai**	**0.66**	**6**	Pg	**Pn**	**15 53 30.6**	**+0.1**
TERF				Sg	**Sn**	**15 53 41.2**	**+0.5**
VIEF	**Viey**	**0.92**	**98**	Pg	**Pb**	**15 53 33.5**	**+0.1**
VIEF				Sn	**Sn**	**15 53 49.0**	**+1.7**
LABF	**Labassere**	**0.95**	**88**	Pg	**Pb**	**15 53 33.9**	**+0.1**
LABF				Sn	**Sn**	**15 53 50.0**	**+2.2**
ECHI	**Chisagues Biel**	**1.10**	**109**	Pg	**Pg**	**15 53 36.4**	**-0.4**
ECHI				Sg	**Sn**	**15 53 52.5**	**+0.8**
ECHI				*i* IVmb_Lg		15 53 57.6	
ECHI	**Chisagues Biel**	**1.10**	**109**	Pg	**Pg**	**15 53 36.4**	**-0.4**
ECHI				Sn	**Sn**	**15 53 54.2**	**+2.5**
MLZA	**Monlezun-d-Arm**	**1.13**	**44**	Pg	**Pn**	**15 53 38.4**	**+1.5**
EPF	**Esparros**	**1.14**	**89**	*e*Pg	**Pn**	**15 53 37.9**	**+0.7**
EPF				*e*Sg	**Sn**	**15 53 54.1**	**+1.5**
	63nm,0.2s						
ESAC	**San Caprasio**	**1.42**	**157**	Pg	**Pg**	**15 53 42.9**	**+0.1**
ESAC				Sg	**Sg**	**15 54 01.7**	**+0.5**
ESAC				*i* IVmb_Lg		15 54 04.5	
MELF	**Melles**	**1.46**	**95**	Pg	**Pg**	**15 53 43.6**	**-0.1**
CRAS	**Crastes**	**

PBRG					*i* IAML			15 55 12.8		
PBRG					*i* IAML			15 55 34.2		
EPON	**Pontenova**	**4.35**	**276**		Pn	**Pn**		**15 54 23.6**	**+2.4**	
EPON					Sn	**Sn**		**15 55 13.8**	**+2.0**	
EPON					*i* IVmb_Lg			15 55 34.1		
EIBI	**Ibiza**	**4.44**	**153**		Pn	**Pn**		**15 54 23.2**	**+0.8**	
EIBI					Sn	**Sn**		**15 55 12.1**	**-1.8**	
EIBI					*i* IVmb_Lg			15 55 27.9		
ETOS	**Mallorca**	**4.45**	**136**		Pn	**Pn**		**15 54 23.4**	**+0.8**	
ETOS					Sn	**Sn**		**15 55 15.0**	**+0.8**	
ETOS					*i* IVmb_Lg			15 55 32.6		
BGF	**Bois d'Agland**	**4.56**	**38**	*e*Pn		**Pn**		**15 54 25.2**	**+1.0**	
BGF				*e*Sn		**Sn**		**15 55 19.9**	**+2.9**	
	38nm,0.3s									
PSIM	**Granatula de C**	**4.62**	**205**		Pn	**Pn**		**15 54 25.7**	**+0.7**	
PSIM					Sn	**Sn**		**15 55 17.0**	**-1.5**	
VIVF	**Saint-Julien-l**	**4.63**	**65**	*e*Pn		**Pn**		**15 54 24.9**	**-0.2**	
VIVF				*e*Sn		**Sn**		**15 55 17.3**	**-1.4**	
	6.1nm,0.4s									
EPLA	**Plasencia**	**4.70**	**233**		Pn	**Pn**		**15 54 26.5**	**+0.5**	
EPLA					Sn	**Sn**		**15 55 19.1**	**-1.3**	
EPLA					*i* IVmb_Lg			15 55 45.3		
MVO	**Moncorvo**	**4.71**	**249**	*e*Pn		**Pn**		**15 54 27.8**	**+1.5**	
MVO				*e*Sn		**Sn**		**15 55 20.7**	**+0.1**	
MVO				*i* IAML				15 55 21.8		
MVO				*i* IAML				15 55 23.9		
MVO				*i* IAML				15 55 26.7		
AVF	**Avril sur Loir**	**4.97**	**39**	*e*Pn		**Pn**		**15 54 30.5**	**+0.8**	
AVF				*e*Sn		**Sn**		**15 55 27.0**	**0.0**	
	21nm,0.6s									
EAGO	**Agolada(Pontev**	**5.05**	**270**		Pn	**Pn**		**15 54 32.4**	**+1.4**	
EAGO					Sn	**Sn**		**15 55 32.1**	**+3.0**	
EAGO					*i* IVmb_Lg			15 55 46.2		
QUIF	**Quistinic**	**5.08**	**345**	*e*Pn		**Pn**		**15 54 32.2**	**+1.0**	
QUIF				*e*Sn		**Sn**		**15 55 27.8**	**-1.9**	
	4.1nm,0.2s									
SMF	**Signal de Mont**	**5.10**	**43**	*e*Pn		**Pn**		**15 54 32.7**	**+1.1**	
SMF				*e*Sn		**Sn**		**15 55 29.0**	**-1.3**	
	2.1nm,0.3s									
POLO	**Lamas de Olo**	**5.16**	**254**	*e*Pn		**Pn**		**15 54 34.2**	**+1.8**	
POLO				*e*Sn		**Sn**		**15 55 30.2**	**-1.5**	
POLO				*i* IAML				15 56 01.1		
POLO				*i* IAML				15 56 03.3		
POLO				*i* IAML				15 56 14.7		
SSF	**Saint Saulge**	**5.24**	**38**	*e*Pn		**Pn**		**15 54 34.6**	**+1.1**	
SSF				*e*Sn		**Sn**		**15 55 33.2**	**-0.5**	
	9.3nm,0.5s									
SGMF	**Saint Gilles**	**5.31**	**350**	*e*Pn		**Pn**		**15 54 35.6**	**+1.1**	
SGMF				*e*Sn		**Sn**		**15 55 34.0**	**-1.4**	
SGMF				*e*Sg		**Sg**		**15 56 04.3**	**-1.8**	
	3.6nm,0.3s									
PGAV	**Gavieira, Arco**	**5.32**	**261**	*e*Pn		**Pn**		**15 54 37.9**	**+3.2**	
GRR	**Gorron**	**5.37**	**3**	*e*Pn		**Pn**		**15 54 36.2**	**+1.0**	
GRR				*e*Sn		**Sn**		**15 55 34.3**	**-2.5**	
	3.0nm,0.2s									
EADA	**Adamuz**	**5.49**	**209**		Pn	**Pn**		**15 54 37.4**	**+0.5**	
EADA					Sn	**Sn**		**15 55 39.1**	**-0.6**	
EADA					*i* IVmb_Lg			15 55 56.4		
ROSF	**Rostrenen**	**5.50**	**346**	*e*Pn		**Pn**		**15 54 37.9**	**+0.8**	
ROSF				*e*Sn		**Sn**		**15 55 38.0**	**-2.1**	
	6.8nm,0.3s									
LOR	**Lormes**	**5.56**	**38**	*e*Pn		**Pn**		**15 54 39.2**	**+1.4**	
LOR				*e*Sn		**Sn**		**15 55 39.8**	**-1.7**	
	6.8nm,0.3s									
LDF	**La Druitiere**	**5.62**	**7**	*e*Pn		**Pn**		**15 54 38.3**	**-0.4**	
LDF				*e*Sn		**Sn**		**15 55 40.1**	**-2.9**	
	1.8nm,0.2s									
FLN	**La Foliniere**	**5.76**	**5**	*e*Sn		**Sn**		**15 55 44.4**	**-2.0**	
PMRV	**Marv??o**	**5.88**	**234**	*e*Pn		**Pn**		**15 54 43.4**	**+1.1**	
PMRV				*e*Sn		**Sn**		**15 55 48.7**	**-0.8**	
PMRV				*i* IAML				15 55 57.8		
PMRV				*i* IAML				15 56 26.3		
PMRV				*i* IAML				15 56 30.6		
ECAB	**El Cabril**	**5.89**	**214**		Pn	**Pn**		**15 54 42.9**	**+0.5**	
ECAB					Sn	**Sn**		**15 55 47.0**	**-2.7**	
ECAB					*i* IVmb_Lg			15 55 59.4		
PESTR	**Estremoz**	**6.37**	**231**	*e*Pn		**Pn**		**15 54 49.9**	**+0.9**	
PBAR	**Barrancos**	**6.56**	**224**	*e*Pn		**Pn**		**15 54 54.0**	**+2.3**	
PVAQ	**Vaqueiros**	**7.50**	**224**	*e*Pn		**Pn**		**15 55 05.9**	**+1.4**	

IDC ***12*** *16:11:00.6±2.3,32°.41N×85°.17E, h0km, mb3.3/4, mbtmp3.3/7, ML3.1/2, Error ellipse: s-maj=76.8km s-min=21.8km az=72.0*

ISC 12 16:11:03.0±2.1, 32°.5N±0°.2×85°.2E±0°.4, h16km, n7, σ0s70/7, mb3.3/4, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**14.49**	**352**	Pn		**Pn**	**16 14 27.5**	**+0.1**
	0.1nm,0.3s,baz=174,slow=14,SNR=5.2							
	0.2nm,0.5s							
CMAR	**Chiang Mai Arr**	**18.65**	**135**	P		**Pn**	**16 15 20.8**	**+0.2**
	0.4nm,0.3s,baz=312,slow=11,SNR=6.9							
KURBB	**Kurchatov Arra**	**18.81**	**347**	P		**Pn**	**16 15 23.0**	**+0.8**
	baz=156,slow=11,SNR=3.5							
	0.2nm,0.5s							
ZALV	**Zalesovo Beam**	**21.49**	**359**	P		**P**	**16 15 50.1**	**-0.8**
	0.5nm,0.5s,baz=192,slow=11,SNR=2.4							
	0.5nm,0.5s							
SONM	**Songino Array**	**22.24**	**40**	P		**P**	**16 15 59.4**	**+0.3**
	0.5nm,0.7s,baz=222,slow=12,SNR=1.7							
	0.5nm,0.7s							
WRA	**Warramunga Arr**	**70.19**	**131**	P		**P**	**16 22 14.6**	**-0.7**
	0.6nm,1.1s,baz=324,slow=6.1,SNR=5.5							
	0.6nm,1.1s							
ASAR	**Alice Springs**	**72.66**	**134**	P		**P**	**16 22 30.5**	**+0.4**
	0.4nm,0.9s,baz=320,slow=6.0,SNR=4.5							
	0.4nm,0.9s							

KRNET 12 16:15:48.7±0.1, 39°.40N×73°.44E, h18km, mb2.5, 3C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**0.61**	**4**	⇓*i*P		Pg	16 16 00.7	-0.3
SFK				⇓*i*S		Sg	16 16 09.2	-0.1
SALK	**Salom-Alik**	**1.51**	**11**	⇑*e*P		Pb	16 16 16.4	+0.1
ARSB	**Arslanbob**	**1.95**	**350**	⇑*i*P		Pb	16 16 24.1	+0.2
ARSB				⇑*i*S		Sg	16 16 50.0	-1.7

KRNET ***12*** *16:16:11.6±0.1,41°.50N×74°.49E, h11km, mb2.5*
SOME ***12*** *16:16:12.2,41°.53N×74°.48E, h5km*
NNC ***12*** *16:16:13.6±0.6,41°.60N×74°.44E, h0km, mb3.1, mpv3.0, Error ellipse: s-maj=3.9km s-min=2.8km az=170.0*
KNET ***12*** *16:16:13.4±0.8,41°.64N×74°.47E, h16km±3km, ml1.6, Error ellipse: s-maj=5.1km s-min=3.1km az=37.0*

ISC 12 16:16:12.1±1.1, 41°.53N±0°.03×74°.48E±0°.02, h10km±10km, n38, σ1s30/65, 21C-9D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ARLS	**Aral**	**0.35**	**341**	⇑*i*P		**Pg**	**16 16 19.1**	**0.0**
ARLS				⇑*i*S		**Sg**	**16 16 24.3**	**+0.5**
UCH	**Uchtor**	**0.69**	**2**	⇓P		**Pg**	**16 16 25.9**	**+0.2**
	7.0nm,0.2s,SNR=22							
UCH				⇓S		**Sg**	**16 16 34.5**	**-0.3**
	20nm,0.2s							
UCH	**Uchtor**	**0.69**	**2**	⇑*i*P		**Pg**	**16 16 25.7**	**0.0**
UCH				⇑*i*S		**Sb**	**16 16 35.8**	**-0.6**
SALK	**Salom-Alik**	**0.82**	**217**	⇑*i*P		**Pg**	**16 16 26.8**	**-1.1**
SALK				⇑*i*S		**Sg**	**16 16 37.4**	**-1.2**
JNKS	**Jany-Kuch**	**0.99**	**119**	⇑*i*P		**Pg**	**16 16 30.4**	**-0.8**
JNKS				⇑*i*S		**Sg**	**16 16 43.9**	**-0.2**
AAK	**Ala-Archa**	**1.10**	**1**	⇓P		**Pg**	**16 16 32.6**	**-0.8**
	5.2nm,0.3s,SNR=15							
AAK				⇑S		**Sg**	**16 16 46.9**	**-0.8**
	6.9nm,0.2s							
AAK	**Ala-Archa**	**1.10**	**1**	⇓P		**Pg**	**16 16 33.1**	**-0.3**
	0.7nm,0.4s							
AAK				⇑S		**Sb**	**16 16 47.8**	**-0.1**
	1.1nm,0.4s							
AAK	**Ala-Archa**	**1.10**	**1**	⇓*i*P		**Pg**	**16 16 32.9**	**-0.5**
AAK				⇓*i*S		**Sn**	**16 16 48.5**	**-0.7**
ARSB	**Arslanbob**	**1.14**	**260**	⇑*i*P		**Pb**	**16 16 33.4**	**-0.7**
ARSB				⇑*i*S		**Sb**	**16 16 49.1**	**+0.1**
KBK	**Karagaybulak**	**1.18**	**17**	⇑P		**Pb**	**16 16 34.2**	**-0.5**
	6.7nm,0.1s,SNR=18							
KBK				⇓S		**Sn**	**16 16 50.3**	**-0.7**
	23nm,0.2s							
EKS2	**Erkin-Say**	**1.24**	**335**	⇑P		**Pb**	**16 16 35.0**	**-0.7**
	1.0nm,0.1s,SNR=6.5							
EKS2				⇓S		**Sb**	**16 16 50.9**	**-1.0**
	0.6nm,0.1s							
ULHL	**Ulahol**	**1.50**	**61**	⇓P		**Pn**	**16 16 39.5**	**+0.3**
	2.5nm,0.1s,SNR=12							
ULHL				⇑S		**Sg**	**16 17 00.8**	**+0.4**
	12nm,0.2s							
MRKS	**Merke**	**1.53**	**323**	P		**Pb**	**16 16 40.7**	**+0.1**
	3.0nm,0.1s							
MRKS				S		**Sg**	**16 17 01.2**	**-0.1**
	8.0nm,0.2s							
MRKS	**Merke**	**1.53**	**323**	*e*P		**Pb**	**16 16 40.7**	**+0.1**
	3.0nm,0.1s							
MRKS				*e*S		**Sg**	**16 17 01.2**	**-0.1**
	8.0nm,0.2s							
TKM2	**Tokmak 2**	**1.62**	**31**	⇑P		**Pb**	**16 16 42.2**	**+0.1**
	2.8nm,0.2s,SNR=12							
TKM2				⇑S		**Sg**	**16 17 03.7**	**-0.5**
	6.6nm,0.1s							
USP	**Ospenovka**	**1.73**	**1**	⇑P		**Pb**	**16 16 44.1**	**0.0**
	8.3nm,0.2s,SNR=18							
USP				⇑S		**Sg**	**16 17 07.1**	**-0.7**
	4.1nm,0.2s							
KST	**Kastek**	**1.87**	**36**	P		**Pb**	**16 16 47.1**	**+0.6**
	1.9nm,0.2s							
KST				S		**Sg**	**16 17 12.3**	**+0.1**
	4.2nm,0.2s							
KST	**Kastek**	**1.87**	**36**	*e*P		**Pb**	**16 16 47.1**	**+0.6**
	1.9nm,0.2s							
KST				*e*S		**Sg**	**16 17 12.3**	**+0.1**
	4.2nm,0.2s							
DGS	**Degeres**	**1.96**	**29**	Pg		**Pb**	**16 16 48.7**	**+0.7**
	1.8nm,0.2s							
DGS				Lg		Lg	16 17 15.3	
	10nm,0.4s							
DGS	**Degeres**	**1.96**	**29**	*e*P		**Pb**	**16 16 48.7**	**+0.7**
	1.8nm,0.2s							
DGS				*e*S		**Sg**	**16 17 15.3**	**+0.2**
	10nm,0.4s							
MTBS	**Maitube**	**2.15**	**42**	Pg		**Pb**	**16 16 52.4**	**+1.2**
	2.0nm,0.2s							
MTBS				Lg		Lg	16 17 21.6	
	5.7nm,0.3s							
MTBS	**Maitube**	**2.15**	**42**	*e*P		**Pb**	**16 16 52.4**	**+1.2**
	2.0nm,0.2s							
MTBS				*e*S		**Sg**	**16 17 21.6**	**+0.3**
	5.7nm,0.3s							
KRBS	**Karabastau**	**2.34**	**22**	Pg		**Pb**	**16 16 55.8**	**-1.1**
	3.0nm,0.2s							
KRBS				Lg		Lg	16 17 27.4	
	14nm,0.3s							
KRBS	**Karabastau**	**2.34**	**22**	*e*P		**Pg**	**16 16 55.8**	**-1.1**
	3.0nm,0.2s							
KRBS				*e*S		**Sg**	**16 17 27.4**	**+0.3**
	14nm,0.3s							
KOTS	**Kotyrbulak**	**2.59**	**48**	Pg		**Pb**	**16 17 00.3**	**+1.5**
	6.5nm,0.3s							
KOTS				Lg		Lg	16 17 35.1	
	6.5nm,0.5s							
KOTS	**Kotyrbulak**	**2.59**	**48**	*e*P		**Pb**	**16 17 00.3**	**+1.5**
	6.5nm,0.3s							
KOTS				*e*S		**Sg**	**16 17 35.0**	**-0.3**
	6.5nm,0.5s							
KTBS	**Karatobe**	**2.72**	**36**	Pg		**Pb**	**16 17 02.1**	**+1.3**
	3.6nm,0.3s							
KTBS				Lg		Lg	16 17 38.1	
	0.4nm,0.2s							
KTBS	**Karatobe**	**2.72**	**36**	*e*P		**Pb**	**16 17 02.1**	**+1.3**
	3.6nm,0.3s							
KTBS				*e*S		**Sg**	**16 17 38.1**	**-1.4**
	0.4nm,0.2s							
KK31	**Karatay Array**	**3.33**	**299**	⇑Pg		**Pb**	**16 17 13.7**	**+2.4**
	0.4nm,0.2s,baz=128,slow=16,SNR=6.2							
KK31				⇑Lg		Lg	16 17 57.0	
	4.4nm,0.7s,baz=125,slow=29,SNR=8.8							
IUG	**Iuzhnay**	**3.38**	**282**	Pg		**Pb**	**16 17 14.7**	**+2.6**
	5.3nm,0.2s							
IUG				Lg		Lg	16 17 59.9	
	9.2nm,0.4s							
IUG	**Iuzhnay**	**3.38**	**282**	*e*P		**Pb**	**16 17 14.7**	**+2.6**
	5.3nm,0.2s							
IUG				*e*S		**Sg**	**16 17 59.9**	**-0.7**
	9.2nm,0.4s							
ARXS	**Arharly**	**3.64**	**41**	Pg		**Pb**	**16 17 18.6**	**+2.1**
	0.8nm,0.2s							
ARXS				Lg		Lg	16 18 06.2	
	5.9nm,0.7s							
ARXS	**Arharly**	**3.64**	**41**	*e*P		**Pb**	**16 17 18.6**	**+2.1**
	0.8nm,0.2s							
ARXS				*e*S		**Sg**	**16 18 06.2**	**-2.7**
	5.9nm,0.7s							
KPKS	**Kokpek**	**3.66**	**57**	Pg		**Pb**	**16 17 19.4**	**+2.4**
	0.2nm,0.1s							
KPKS				Lg		Lg	16 18 07.8	
	5.9nm,0.5s							
KPKS	**Kokpek**	**3.66**	**57**	*e*P		**Pb**	**16 17 19.4**	**+2.4**
	0.2nm,0.1s							
KPKS				*e*S		**Sg**	**16 18 07.8**	**-1.9**
	5.9nm,0.5s							
BRLS	**Borolday**	**3.75**	**295**	Pg		**Pb**	**16 17 21.5**	**+3.0**
	0.5nm,0.2s							
BRLS				Lg		Lg	16 18 11.4	
	2.6nm,0.3s							
BRLS	**Borolday**	**3.75**	**295**	*e*P		**Pb**	**16 17 21.5**	**+3.0**
	0.5nm,0.2s							
BRLS				*e*S		**Sg**	**16 18 11.4**	**-1.2**
	2.6nm,0.3s							
BLB	**Baldybastay**	**3.90**	**48**	Pg		**Pb**	**16 17 23.4**	**+2.3**
	2.0nm,0.3s							
BLB				Lg		Lg	16 18 14.6	
	4.5nm,0.5s							

MOS ***12*** *16:20:24.7±1.2,51°.19N×178°.86E, h35km, mb4.5/22, Error ellipse: s-maj=9.7km s-min=7.9km az=114.7*
AEIC ***12*** *16:20:25.2±2.0,51°.12N±0°.04×178°.80E±0°.06, h19km±3km, Error ellipse: s-maj=6.3km s-min=5.3km az=157.0*
NEIC ***12*** *16:20:26.6±1.9,51°.15N±0°.06×178°.83E±0°.06, h36km±4km, mb4.3/166, ML4.2/12, ML3.9(AEIC), Error ellipse: s-maj=8.3km s-min=4.9km az=191.0*
IDC ***12*** *16:20:27.1±0.6,51°.17N×178°.89E, h41km±5km, mb3.9/24, mbtmp4.2/27, ML4.4/3, Error ellipse: s-maj=16.6km s-min=10.3km az=167.0*

ISC 12 16:20:25.8±0.6, 51°.10N±0°.06×178°.82E±0°.03, h30km±3km, n423, σ1s09/391, mb4.3/96, 9C-1D, Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.41**	**48**			**Pb**	**16 20 33.9**	**-1.0**
AMKA						**Sb**	**16 20 40.0**	**-0.9**
AMKA				IAML			16 20 40.8	
	comp=E,15μm,0.3s							
AMKA				IAML			16 20 40.9	
	comp=N,14μm,0.8s							
LSSE	**Little Sitkin**	**0.85**	**349**			**Pn**	**16 20 41.4**	**-0.2**
LSPA	**Little Sitkin**	**0.87**	**350**			**Pn**	**16 20 41.7**	**-0.2**
LSPA						**Sb**	**16 20 53.6**	**-0.1**
LSNW	**Little Sitkin**	**0.89**	**348**			**Pn**	**16 20 41.7**	**-0.5**
CESW	**Semis' Southwe**	**0.92**	**30**			**Pn**	**16 20 42.5**	**-0.1**
CERB	**Semis' Cerberu**	**0.97**	**31**			**Pn**	**16 20 43.5**	**+0.1**
CERB						**Sb**	**16 20 57.7**	**+1.2**
CEPE	**Semis' Perret**	**1.01**	**31**			**Pb**	**16 20 44.5**	**-0.2**
CEAP	**Semis' Anvil P**	**1.02**	**27**			**Pn**	**16 20 44.2**	**+0.2**
GAKI	**Gareloi-Kavalg**	**1.55**	**72**			**Pn**	**16 20 51.5**	**+0.2**
GAKI						**Sn**	**16 21 10.7**	**+0.3**
GASW	**Gareloi Southw**	**1.60**	**64**			**Pn**	**16 20 52.2**	**+0.2**
GASW						**Sn**	**16 21 12.4**	**+0.7**
GALAA	**Gareloi Lava P**	**1.65**	**65**			**Pn**	**16 20 53.0**	**+0.4**
GANO	**Gareloi North**	**1.65**	**63**			**Pn**	**16 20 52.9**	**+0.2**
GANO						**Sb**	**16 21 15.0**	**-1.0**
GAEA	**Gareloi East**	**1.67**	**65**			**Pn**	**16 20 53.6**	**+0.7**
TANO	**Tanaga North**	**2.08**	**66**			**Pn**	**16 20 59.2**	**+0.7**
TANO						**Sb**	**16 21 26.0**	**-2.1**
TANO						LR	16 21 26.5	
TASE	**Tanaga Southea**	**2.10**	**68**			**Pn**	**16 20 59.9**	**+1.1**
TASE						**Sb**	**16 21 27.1**	**-1.7**
TAFP	**Tanaga Falls P**	**2.15**	**67**			**Pn**	**16 21 00.6**	**+1.0**
TAFL	**Tanaga Flats**	**2.16**	**71**			**Pn**	**16 21 00.5**	**+0.8**
TAFL						**Sb**	**16 21 28.4**	**-1.9**
TAFL						LR	16 21 29.0	
TAPA	**Tanaga Point A**	**2.22**	**70**			**Pn**	**16 21 01.4**	**+0.8**
TAPA						**Sn**	**16 21 28.6**	**+1.6**
KIMD	**Kanaga Island**	**2.56**	**74**			**Pn**	**16 21 06.0**	**+1.0**
KIMD						**Sn**	**16 21 37.0**	**+1.8**
KIKV	**Kanaga Island**	**2.62**	**71**			**Pn**	**16 21 07.4**	**+1.3**
KIKV						**Sb**	**16 21 41.0**	**-2.8**
KIWB	**Kanaga Island**	**2.63**	**72**			**Pn**	**16 21 07.2**	**+1.1**
KIWB						**Sn**	**16 21 38.6**	**+1.7**
KIWB				IAML			16 21 48.1	
	comp=N,938nm,0.7s							
KIWB				IAML			16 21 53.6	
	comp=E,1μm,0.9s							
ADK	**Adak**	**2.92**	**73**			**Pn**	**16 21 10.7**	**+0.7**
ADK				IAML			16 22 00.6	
	comp=E,797nm,0.9s							
ADK	**Adak**	**2.92**	**73**	P		**Pn**	**16 21 10.7**	**+0.7**
ADK							16 21 45.2	
ADAG	**Mount Adagdak**	**2.99**	**71**			**Pn**	**16 21 12.0**	**+0.9**
ETKA	**Kagalaska Isla**	**3.08**	**74**			**Pn**	**16 21 13.1**	**+0.8**
ETKA						**Sn**	**16 21 51.5**	**+3.5**
GSCK	**Great Sitkin C**	**3.26**	**72**			**Pn**	**16 21 15.5**	**+0.7**
GSTD	**Great Sitkin T**	**3.28**	**71**			**Pn**	**16 21 15.9**	**+0.8**
GSMY	**Great Sitkin M**	**3.33**	**72**			**Pn**	**16 21 16.5**	**+0.8**
GSMY						**Sn**	**16 21 57.6**	**+3.3**
GSTR	**Great Sitkin T**	**3.34**	**71**	Pn		**Pn**	**16 21 16.0**	**0.0**
GSTR				IAML			16 22 17.5	
	comp=E,676nm,0.7s							
SHEM	**Shemya Is, Ala**	**3.35**	**301**	P		**Pn**	**16 21 18.5**	**+2.6**
	comp=E,86nm,0.3s,baz=63,slow=2.8,SNR=28							
SHEM				S		**Sb**	**16 22 03.7**	**-0.9**
	comp=E,195nm,0.4s,baz=160,slow=23,SNR=9.5							
SHEM	**Shemya Is, Ala**	**3.35**	**301**	Pn		**Pn**	**16 21 14.8**	**-1.2**
SMY	**Shemya**	**3.35**	**301**			**Pn**	**16 21 14.8**	**-1.1**
SMY	**Shemya**	**3.35**	**301**	P		**Pn**	**16 21 14.9**	**-1.1**
GSIG	**Igitkin Island**	**3.40**	**73**			**Pn**	**16 21 17.2**	**+0.5**
GSIG						**Sn**	**16 21 59.6**	**+3.6**
KOWE	**Korovin West**	**4.49**	**71**			**Pn**	**16 21 32.4**	**+0.7**
KOKL	**Mount Kliuchef**	**4.51**	**72**			**Pn**	**16 21 32.8**	**+0.8**
KOKV	**Korovin Volcan**	**4.54**	**71**			**Pn**	**16 21 33.2**	**+0.8**
KOFP	**Korovin Flat P**	**4.56**	**72**			**Pn**	**16 21 33.5**	**+0.8**
SPIA	**Saint Paul Isl**	**8.84**	**42**	Pn		**Pn**	**16 22 31.2**	**0.0**
UNV	**Unalaska Valle**	**9.37**	**67**	Pn		**Pn**	**16 22 38.2**	**-0.3**
LVA	**Lava Point**	**9.70**	**66**	Pn		**Pn**	**16 22 42.7**	**-0.5**
AKUT	**Akutan**	**9.85**	**66**	Pn		**Pn**	**16 22 44.8**	**-0.3**
FALS	**False Pass**	**11.34**	**64**	Pn		**Pn**	**16 23 04.8**	**-0.8**
M11K	**Mekoryuk**	**12.52**	**36**	Pn		**Pn**	**16 23 20.1**	**-1.5**
SDPT	**Sand Point**	**13.10**	**63**	Pn		**Pn**	**16 23 27.4**	**-2.1**
PEA0B	**Petropavlovsk-**	**13.13**	**287**	Pn		**Pn**	**16 23 28.5**	**-1.5**
PEA0B	**Petropavlovsk-**	**13.13**	**287**	P		**Pn**	**16 23 28.5**	**-1.5**
PETK	**Petropavlovsk-**	**13.13**	**287**	P		**Pn**	**16 23 31.0**	**+1.0**
	comp=E,9.6nm,1.0s,baz=80,slow=19,SNR=8.1							
PETK	**Petropavlovsk-**	**13.13**	**287**	Pn		**Pn**	**16 23 28.4**	**-1.7**
PETK	**Petropavlovsk-**	**13.13**	**287**	P		**Pn**	**16 23 31.0**	**+1.0**
CNBA	**Chernabura Isl**	**13.52**	**66**	Pn		**Pn**	**16 23 34.1**	**-1.2**
O14K	**Tigyukauivet M**	**13.96**	**47**			**Pn**	**16 23 40.0**	**-1.2**
O14K	**Tigyukauivet M**	**13.96**	**47**	P		**P**	**16 23 47.4**	**-1.5**
	baz=243,SNR=6.0							
N14K	**Kuskokwak Cree**	**14.09**	**44**	Pn		**Pn**	**16 23 42.2**	**-0.8**
N14K	**Kuskokwak Cree**	**14.09**	**44**	P		**P**	**16 23 49.2**	**-1.1**
	baz=240							
K13K	**Kusilvak Mount**	**14.12**	**33**	Pn		**Pn**	**16 23 42.5**	**-0.9**
K13K	**Kusilvak Mount**	**14.12**	**33**	P		**P**	**16 23 49.6**	**-1.1**
	baz=227							
M14K	**Bethel**	**14.41**	**41**			**Pn**	**16 23 45.9**	**-1.5**
M14K	**Bethel**	**14.41**	**41**	P		**P**	**16 23 53.1**	**-0.8**
	baz=236							
CHGN	**Chignik**	**14.42**	**60**	Pn		**Pn**	**16 23 45.7**	**-1.8**
L14K	**Kuka Creek**	**14.47**	**38**	Pn		**Pn**	**16 23 46.8**	**-1.4**
L14K	**Kuka Creek**	**14.47**	**38**	P		**P**	**16 23 54.1**	**-0.4**
	baz=233							
O15K	**Ungalikthiuk R**	**14.59**	**48**			**Pn**	**16 23 49.9**	**+0.1**
O15K	**Ungalikthiuk R**	**14.59**	**48**	P		**P**	**16 23 55.6**	**-0.3**
	baz=246,SNR=8.0							
N15K	**Kwethluk River**	**14.91**	**44**			**Pn**	**16 23 53.4**	**-0.8**
N15K	**Kwethluk River**	**14.91**	**44**	P		**P**	**16 23 59.4**	**0.0**
	baz=242,SNR=8.2							
M15K	**Kasigluk River**	**14.91**	**42**	P		**P**	**16 23 59.5**	**0.0**
	baz=239							
J14K	**Nanvaranak Lak**	**15.05**	**32**			**Pn**	**16 23 55.1**	**-1.0**
J14K	**Nanvaranak Lak**	**15.05**	**32**	P		**P**	**16 24 01.4**	**+0.4**
	baz=227							
L15K	**Ungalak Mounta**	**15.13**	**38**	P		**P**	**16 24 02.6**	**+0.7**
	baz=234							
R16K	**Pilot Point**	**15.16**	**56**	P		**P**	**16 24

H17K **Granite Mounta** 17.72 30 P 16 24 31.8 +1.2
H17K **Granite Mounta** 17.72 30 P P 16 24 32.2 +1.6
baz=229
KDAK **Kodiak Island** 17.83 57 P Pn 16 24 27.8 -3.4
comp=Z,4.5nm,0.4s,baz=157,slow=1.0,SNR=37
KDAK **Kodiak Island** 17.83 57 P Pn 16 24 28.0 -3.2
KDAK IAmb IAmb 16 24 43.0
comp=Z,37nm,1.2s
KDAK **Kodiak Island** 17.83 57 P Pn 16 24 28.0 -3.2
KDAK pmax pmax
comp=Z,37nm,1.3s
G17K **Kiwalik Mounta** 17.88 28 P P 16 24 32.9 +0.6
baz=226
MA2 **Magadan** 17.95 309 P P 16 24 33.6 +0.5
comp=Z,0.2nm,0.3s,baz=67,slow=8.1,SNR=4.2
comp=Z,6.0nm,1.0s
MA2 **Magadan** 17.95 309 IAmb IAmb 16 24 35.7
comp=Z,18nm,1.3s
MA2 **Magadan** 17.95 309 *i* P P 16 24 33.4 +0.3
J18K **Innoko River** 17.96 37 P P 16 24 34.2 +0.9
baz=238
BILL **Bilibino** 18.07 345 Pn 16 24 32.2 -1.9
BILL **Bilibino** 18.07 345 *ce* P P 16 24 34.9 +0.5
BILL pmax pmax
comp=Z,8.0nm,0.9s
L19K **White Mountain** 18.09 42 P P 16 24 35.1 +0.5
baz=244
M19K **Big River Lodg** 18.16 43 P P 16 24 36.3 +0.8
baz=246
RED **Redoubt Volcan** 18.36 49 P Pn 16 24 37.8 -0.1
RED IAmb IAmb 16 24 41.5
comp=Z,29nm,1.0s
H18K **Honhosa River** 18.36 31 P Pn 16 24 38.7 +0.9
baz=231
F17K **Baldwin Pennin** 18.38 26 P Pn 16 24 38.8 +0.8
baz=223
SEY **Seymchan** 18.47 320 P Pn 16 24 38.9 -0.2
comp=Z,0.2nm,0.3s,baz=82,slow=13,SNR=4.2
comp=Z,1.0nm,0.5s
SEY **Seymchan** 18.47 320 *ce* P Pn 16 24 39.2 +0.1
SEY pmax pmax
comp=Z,3.0nm,1.3s
J19K **Poorman** 18.66 36 P Pn 16 24 41.5 +0.2
baz=238
M20K **Styx River** 18.70 44 P Pn 16 24 43.3 +1.3
baz=248
E17K **Hotham Inlet** 18.71 24 P Pn 16 24 43.2 +1.2
baz=221,SNR=12
G18K **Tagagawik** 18.75 29 P Pn 16 24 43.1 +0.6
baz=229
C16K **Lisburne Hills** 18.87 18 P Pn 16 24 43.4 -0.5
C16K IAmb IAmb 16 24 51.0
comp=Z,12nm,0.8s
C16K **Lisburne Hills** 18.87 18 P Pn 16 24 44.5 +0.6
baz=212
SPCR **Spurr Chakacha** 18.87 46 P Pn 16 24 44.8 +0.8
baz=251
D17K **Noatak River** 18.88 21 P Pn 16 24 44.3 +0.2
baz=217,SNR=8.4
K20K **Telida** 18.94 39 P Pn 16 24 44.8 0.0
baz=242
SPU **Mount Spurr** 18.94 47 P P 16 24 44.0 0.0
F18K **Selawik** 18.94 27 P Pn 16 24 45.3 +0.6
baz=226
STLK **Strandline Lak** 19.14 46 P P 16 24 46.0 -0.3
STLK IAmb IAmb 16 24 48.5
comp=Z,9.1nm,0.6s
RDOG **Red Dog Mine** 19.21 21 P Pn 16 24 47.7 -0.3
baz=217
E18K **Tukpahlearik C** 19.28 24 P Pn 16 24 49.5 +0.8
baz=222,SNR=17
G19K **Purcell Mounta** 19.40 30 P 16 24 49.4 +0.4
G19K IAmb IAmb 16 24 55.2
comp=Z,13nm,0.8s
G19K **Purcell Mounta** 19.40 30 P Pn 16 24 50.7 +0.4
baz=231,SNR=13
SKT **Skwentna** 19.45 45 IAmb IAmb 16 24 52.6
comp=Z,27nm,1.2s
SKT **Skwentna** 19.45 45 P Pn 16 24 51.1 +0.3
baz=250,SNR=11
C17K **DeLong Mountai** 19.49 20 P Pn 16 24 51.6 +0.2
baz=216,SNR=6.9
PPLA **Purkeypile** 19.51 42 IAmb IAmb 16 25 01.2
comp=Z,9.8nm,0.8s
PPLA **Purkeypile** 19.51 42 P Pn 16 24 51.3 -0.5
baz=246
SLKM **Skilak Lake** 19.60 49 P 16 24 49.4 -1.9
F19K **Shaleruckik Mo** 19.64 28 IAmb IAmb 16 24 53.5
comp=Z,13nm,0.8s
F19K **Shaleruckik Mo** 19.64 28 P Pn 16 24 52.8 -0.3
baz=228
H20K **Anotleneega Mo** 19.74 33 P Pn 16 24 53.9 -0.5
baz=236,SNR=13
CHUM **Lake Minchumin** 19.88 39 P Pn 16 24 55.3 -0.6
baz=244,SNR=11
L22K **Petersville** 19.97 43 IAmb IAmb 16 24 59.4
comp=Z,16nm,1.3s
RC01 **Rabbit Creek A** 19.98 48 P Pn 16 24 56.7 -0.5
baz=254
C18K **Utukok River** 20.07 21 P 16 24 56.0 -0.3
C18K **Utukok River** 20.07 21 P Pn 16 24 58.2 0.0
baz=219,SNR=20
E19K **Redstone River** 20.22 27 IAmb IAmb 16 25 04.8
comp=Z,10nm,0.9s
E19K **Redstone River** 20.22 27 P Pn 16 24 59.1 -0.8
baz=228,SNR=11
F20K **Avaraart Lake** 20.40 29 P P 16 25 00.5 +0.7
baz=231
IMAR **Indian Mountai** 20.41 33 P 16 25 00.2 +0.3
BPAW **Bear Paw Mtn.** 20.50 39 IAmb IAmb 16 25 05.5
comp=Z,10nm,1.1s
BPAW **Bear Paw Mtn.** 20.50 39 P P 16 25 01.5 +0.5
baz=245
TRF **Thorofare Moun** 20.52 41 IAmb IAmb 16 25 06.6
comp=Z,22nm,1.3s
TRF **Thorofare Moun** 20.52 41 P P 16 25 01.6 +0.3
baz=247
H21K **Melozitna Rive** 20.56 34 IAmb IAmb 16 25 03.3
comp=Z,10nm,0.7s
H21K **Melozitna Rive** 20.56 34 P P 16 25 02.2 +0.7
baz=239,SNR=13
I21K **Tanana** 20.61 36 P P 16 25 03.0 +0.9
baz=241
KNK **Knik Glacier** 20.67 47 P P 16 25 03.3 +0.5
baz=255
D19K **Kuna River** 20.71 24 P 16 25 02.4 -0.8
D19K IAmb IAmb 16 25 05.5
comp=Z,18nm,0.9s
D19K **Kuna River** 20.71 24 P P 16 25 03.7 +0.5
baz=224,SNR=6.4
G21K **Allakaket** 20.79 32 P P 16 25 04.9 +0.9
baz=236,SNR=6.1
C19K **Lookout Ridge** 20.80 22 IAmb IAmb 16 25 08.8
comp=Z,16nm,0.8s
C19K **Lookout Ridge** 20.80 22 P Pn 16 25 05.7 -1.0
baz=221
SML **Sawmill** 20.83 46 P P 16 25 05.5 +0.9
baz=254
MLY **Manley** 21.01 37 P P 16 25 06.9 +0.4
baz=243
WAT1 **Susitna Watana** 21.04 44 P P 16 25 07.2 +0.4
baz=251
E20K **Nigu River** 21.05 26 P P 16 25 07.5 +0.5
baz=228
M23K **Glacier View** 21.10 47 P P 16 25 08.0 +0.5
baz=255
GLI **Glacier Island** 21.18 49 P P 16 25 08.8 +0.5
baz=258
H22K **Ishtalitna Cre** 21.18 34 P P 16 25 08.4 +0.1
baz=240
MCK **McKinley** 21.19 41 P P 16 25 08.6 +0.2
baz=248
F21K **Alatna River** 21.20 30 P 16 25 07.9 -0.6
F21K IAmb IAmb 16 25 10.9
comp=Z,9.1nm,1.1s
F21K **Alatna River** 21.20 30 P P 16 25 09.3 +0.7
baz=234,SNR=7.5
D20K **Etivluk River** 21.25 25 P P 16 25 09.6 +0.5
baz=226,SNR=19
SCM **Sheep Creek Mo** 21.30 47 P P 16 25 09.9 +0.2
baz=255
WAT6 **Susitna Watana** 21.32 45 P P 16 25 09.8 -0.2
baz=253,SNR=6.9
A19K **Wainwright** 21.33 19 P P 16 25 10.5 +0.6
baz=217
NEA2 **Nenana** 21.46 39 P P 16 25 11.4 +0.1
baz=246,SNR=16
I23K **Minto, Yukon-K** 21.58 37 IAmb IAmb 16 25 27.0
comp=Z,12nm,1.4s
I23K **Minto, Yukon-K** 21.58 37 P P 16 25 12.5 0.0
baz=245
DHY **Denali Highway** 21.63 43 IAmb IAmb 16 25 15.3
comp=Z,13nm,0.7s
DHY **Denali Highway** 21.63 43 P P 16 25 13.3 +0.1
baz=252,SNR=6.3
KLU **Kluna** 21.87 48 P P 16 25 16.2 +0.4
baz=258
M24K **Tolsona, Glenn** 21.89 46 P P 16 25 16.2 +0.2
baz=256
CCB **Clear Creek Bu** 21.99 39 P 16 25 14.3 -2.6
B20K **Meade River** 22.04 22 IAmb IAmb 16 25 20.3
comp=Z,18nm,1.2s
B20K **Meade River** 22.04 22 P P 16 25 17.8 +0.3
baz=223
C21K **Knifeblade Rid** 22.04 25 P P 16 25 18.4 +0.9
baz=228,SNR=8.1
COLA **College** 22.06 39 P P 16 25 18.9 +1.2
COLA **College** 22.06 39 P P 16 25 18.9 +1.2
G23K **Bananza Creek** 22.07 33 P 16 25 17.4 -0.4
G23K IAmb IAmb 16 25 21.2
comp=Z,9.2nm,0.9s
G23K **Bananza Creek** 22.07 33 P P 16 25 17.9 +0.1
baz=240,SNR=12
HDA **Harding Lake** 22.25 40 P P 16 25 19.6 -0.1
baz=250
E22K **Anaktuvuk Pass** 22.25 29 P 16 25 19.3 -0.5
E22K IAmb IAmb 16 25 25.0
comp=Z,8.5nm,1.1s
E22K **Anaktuvuk Pass** 22.25 29 P P 16 25 20.1 +0.3
baz=235,SNR=8.5
COLD **Coldfoot** 22.27 32 P P 16 25 20.4 +0.4
baz=239,SNR=5.1
POKR **Poker Plat Res** 22.31 38 P P 16 25 20.4 0.0
baz=247
B21K **Ikpikpuk River** 22.40 24 IAmb IAmb 16 25 23.1
comp=Z,17nm,1.1s
B21K **Ikpikpuk River** 22.40 24 P P 16 25 21.8 +0.5
baz=228,SNR=14
IL31 22.40 39 IAmb IAmb 16 25 52.9
comp=Z,13nm,1.4s
ILAR **Eielson Array** 22.40 39 P P 16 25 18.9 -2.5
comp=Z,1.6nm,0.5s,baz=230,slow=7.8,SNR=33
comp=Z,1.6nm,0.5s
ILAR **Eielson Array** 22.40 39 *e* P P 16 25 20.3 -1.1
ILAR pmax pmax
comp=Z,1.0nm,0.5s
PAX **Paxson** 22.43 44 IAmb IAmb 16 25 40.5
comp=Z,16nm,1.3s
PAX **Paxson** 22.43 44 P P 16 25 21.5 -0.3
baz=255
H24K **Noodor Dome** 22.44 36 IAmb IAmb 16 25 23.9
comp=Z,14nm,1.0s
H24K **Noodor Dome** 22.44 36 P P 16 25 21.8 0.0
baz=245,SNR=9.6
N25K **Chitina, Valde** 22.51 48 P P 16 25 22.5 -0.3
baz=259
K24K **Donnelly Dome** 22.53 42 P P 16 25 22.4 -0.4
baz=252
E23K **Chandalar** 22.90 30 P P 16 25 26.4 -0.3
baz=238
RIDG **Independent Ri** 22.91 43 IAmb IAmb 16 25 59.2
comp=Z,7.0nm,0.9s
RIDG **Independent Ri** 22.91 43 P P 16 25 26.0 -0.8
baz=254
G24K **Hadweenzic Riv** 22.96 34 P P 16 25 27.8 +0.6
baz=244,SNR=17
J25K **Salcha River,** 22.96 40 P P 16 25 26.8 -0.5
baz=251
D23K **Nanushuk River** 23.08 28 IAmb IAmb 16 25 31.6
comp=Z,11nm,0.7s
D23K **Nanushuk River** 23.08 28 P P 16 25 28.5 0.0
baz=235
CRQE **Cirque** 23.09 51 P P 16 25 29.0 +0.2
baz=262
A21K **Barrow** 23.14 20 P P 16 25 28.7 -0.3
baz=222,SNR=6.2
B22K **Teshekpuk Lake** 23.19 24 IAmb IAmb 16 25 36.0
comp=Z,6.6nm,0.8s
B22K **Teshekpuk Lake** 23.19 24 P P 16 25 29.4 0.0
baz=228
MENT **Mentasta** 23.20 45 IAmb IAmb 16 25 53.8
comp=Z,9.0nm,1.1s
PRP **Porcupine Dome** 23.21 38 IAmb IAmb 16 25 30.9
comp=Z,5.9nm,0.6s
PRP **Porcupine Dome** 23.21 38 P P 16 25 29.7 -0.2
baz=249,SNR=6.5
MCARA **McCarthy VSAT** 23.22 49 P P 16 25 29.1 -0.8
baz=261
DOT **Dot Lake** 23.22 43 IAmb IAmb 16 25 32.5
comp=Z,6.6nm,0.9s
TOLK **Tolik Lake Re** 23.23 29 P P 16 25 29.5 -0.5
baz=237,SNR=8.4
E24K **Your Creek** 23.27 31 P P 16 25 30.3 -0.2
baz=240
A22K **Sinclair Lake** 23.27 21 P P 16 25 29.9 -0.4
baz=225
SCRK **Sand Creek** 23.34 42 P 16 25 28.8 -2.4
SCRK IAmb IAmb 16 25 31.9
comp=Z,5.5nm,0.6s
SCRK **Sand Creek** 23.34 42 P P 16 25 29.9 -1.4
baz=254,SNR=7.1
L26K **Log Cabin Wild** 23.38 45 P P 16 25 30.7 -0.9
baz=257
M26K **Nabesna, AK** 23.41 46 P P 16 25 30.9 -1.0
baz=259
C23K **Itkillik River** 23.61 26 P P 16 25 33.3 -0.3
C23K **Itkillik River** 23.61 26 P P 16 25 33.4 -0.3
baz=233,SNR=8.6
D24K **Happy Valley** 23.73 28 P P 16 25 34.4 -0.5
baz=237
YSS **Yuzhno-Sakhali** 23.85 274 *e* P P 16 25 38.0 +1.9
YSS pmax pmax
comp=Z,10.0nm,0.7s
M27K **Edge Creek, AK** 23.91 47 IAmb IAmb 16 25 37.6
comp=Z,7.7nm,0.9s
M27K **Edge Creek, AK** 23.91 47 P P 16 25 35.8 -1.0
baz=260
CTG **Chitna Glacier** 23.97 50 P P 16 25 36.5 -0.8
baz=264
F25K **Christian Rive** 23.99 33 P 16 25 37.1 -0.3
F25K IAmb IAmb 16 25 39.6
comp=Z,16nm,1.1s
F25K **Christian Rive** 23.99 33 P P 16 25 36.8 -0.6
baz=244,SNR=17
L27K **Beaver Creek,** 24.07 45 P P 16 25 37.5 -0.6
baz=259
I26K **Coal Creek Min** 24.07 39 P P 16 25 36.5 -1.5
baz=252
C24K **Franklin Bluff** 24.09 27 IAmb IAmb 16 25 41.1
comp=Z,10nm,0.9s
C24K **Franklin Bluff** 24.09 27 P P 16 25 37.9 -0.2
baz=236
E25K **Arctic Village** 24.25 32 IAmb IAmb 16 25 41.9
comp=Z,12nm,1.1s
E25K **Arctic Village** 24.25 32 P P 16 25 39.3 -0.4
baz=243,SNR=12
BMAR **Burnt Mountain** 24.30 34 P 16 25 40.0 -0.2
BVCY **Beaver Creek** 24.39 47 P P 16 25 40.2 -0.8
baz=261
G26K **Porcupine Rive** 24.39 35 P P 16 25 41.4 +0.4
baz=248
YUK3 **Moose Creek** 24.49 48 P P 16 25 40.8 -1.4
baz=263,SNR=7.3
O28M **Mount Upton** 24.51 51 P P 16 25 42.0 -0.5
baz=265
F26K **Sheenjek River** 24.56 34 P 16 25 41.4 -1.1
F26K IAmb IAmb 16 25 44.7
comp=Z,10nm,1.1s
F26K **Shenjek River** 24.56 34 P P 16 25 42.1 -0.4
baz=246,SNR=11
D25K **Kavik River** 24.57 29 IAmb IAmb 16 25 43.9
comp=Z,6.1nm,0.8s
D25K **Kavik River** 24.57 29 P P 16 25 42.8 +0.2
baz=240
YUK8 **Steele Glacier** 24.77 50 P P 16 25 44.2 -0.6
baz=265
I27K **Kandik River** 24.77 39 P P 16 25 43.8 -0.8
baz=253
H27K **Steamboat Moun** 25.00 38 P P 16 25 46.1 -0.4
baz=252
G27K **Doyon Strip** 25.13 36 P P 16 25 47.1 -0.6
baz=251
ASAJ **Asahikawa** 25.20 268 P P 16 25 49.7 +1.2
comp=Z,14nm,0.7s,baz=98,slow=6.5,SNR=10
comp=Z,14nm,0.7s
C26K **Camden Bay** 25.31 29 P P 16 25 49.3 +0.1
baz=241,SNR=16
YUK4 **Talbot Arm** 25.31 50 P P 16 25 49.7 +0.2
baz=266
DAWY **Dawson** 25.33 43 P 16 25 48.6 -0.9
DAWY **Dawson** 25.33 43 P P 16 25 49.7 +0.1
baz=259,SNR=8.6
I28M **Miner Creek** 25.41 40 IAmb IAmb 16 25 51.7
comp=Z,14nm,1.2s
I28M **Miner Creek** 25.41 40 P P 16 25 50.0 -0.3
baz=256
M29M **Somme Creek** 25.50 47 IAmb IAmb 16 25 54.2
comp=Z,9.5nm,1.1s
M29M **Somme Creek** 25.50 47 P P 16 25 51.0 -0.1
baz=263
C27K **Jago River** 25.54 30 IAmb IAmb 16 25 54.1
comp=Z,6.6nm,1.1s
C27K **Jago River** 25.54 30 P P 16 25 51.7 +0.4
baz=243
E27K **Coleen River** 25.64 33 IAmb IAmb 16 25 54.9
comp=Z,7.1nm,0.8s
E27K **Coleen River** 25.64 33 P P 16 25 52.5 +0.2
baz=248,SNR=12
L29M **L29M** 25.73 46 P P 16 25 52.1 -1.1
baz=262
F28M **Old Crow** 26.05 35 IAmb IAmb 16 25 59.3
comp=Z,11nm,0.9s
F28M **Old Crow** 26.05 35 P P 16 25 56.3 +0.3
baz=251,SNR=9.6
I29M **Ogilvie Camp,** 26.05 41 IAmb IAmb 16 25 57.4
comp=Z,4.7nm,0.6s
I29M **Ogilvie Camp,** 26.05 41 P P 16 25 55.9 -0.1
baz=258,SNR=5.3
K29M **Barlow Dome** 26.11 44 IAmb IAmb 16 26 12.1
comp=Z,5.0nm,0.8s
K29M **Barlow Dome** 26.11 44 P P 16 25 56.2 -0.5
baz=262
D27M **Malcolm River** 26.25 31 IAmb IAmb 16 25 58.7
comp=Z,4.3nm,0.6s
D27M **Malcolm River** 26.25 31 P P 16 25 58.4 +0.5
baz=247
M30M **Minto, Yukon** 26.28 47 P P 16 25 58.2 +0.1
baz=265
J30M **Hart River** 26.73 43 IAmb IAmb 16 26 37.0
comp=Z,8.0nm,1.4s
I30M **Mount Dempster** 26.82 41 P P 16 26 02.3 -0.8
baz=260
EPYK **Eagle Plains** 26.91 39 P P 16 26 03.1 -0.7
baz=257
E29M **Blow River** 27.00 34 IAmb IAmb 16 26 09.7
comp=Z,5.0nm,0.7s
E29M **Blow River** 27.00 34 P P 16 26 04.8 +0.3
baz=252
D28M **Stokes Point** 27.02 32 P P 16 26 05.5 +0.8
baz=250
WHY **Whitehorse** 27.12 51 P P 16 26 05.6 -0.2
baz=270
M31M **Drury Creek, Y** 27.38 48 P P 16 26 07.5 -0.5
baz=268
F30M **Barrier River** 27.55 36 P 16 26 08.7 -0.8
F30M IAmb IAmb 16 26 13.8
comp=Z,5.4nm,0.7s
F30M **Barrier River** 27.55 36 P P 16 26 09.4 -0.1
baz=256
G31M **Satah River** 27.98 38 P P 16 26 13.1 -0.2
baz=259
F31M **Tsiigehtchic** 28.28 37 P P 16 26 15.4 -0.5
baz=259
YAK **Yakutsk** 28.48 312 *ce* P P 16 26 16.4 -1.4
YAK pmax pmax
comp=Z,13nm,1.1s
INK **Inuvik** 28.54 35 P 16 26 17.2 -1.1
INK IAmb IAmb 16 26 24.1
comp=Z,4.1nm,0.8s
INK **Inuvik** 28.54 35 P P 16 26 17.2 -1.1
INK pmax pmax
comp=Z,4.0nm,0.8s
INK **Inuvik** 28.54 35 P P 16 26 17.5 -0.8
baz=257
CRAG **Craig** 28.59 62 P P 16 26 18.1 -0.7
KLR **Kul'dur** 29.81 285 P P 16 26 30.4 +0.7
comp=Z,6.6nm,0.5s,baz=69,slow=7.5,SNR=24
comp=Z,6.6nm,0.5s
KLR **Kul'dur** 29.81 285 *ce* P P 16 26 28.9 -0.8
KLR pmax pmax
comp=Z,10.0nm,1.0s
ZEA **Zeya** 31.00 295 *e* P P 16 26 39.6 -0.6
ZEA pmax pmax
comp=Z,10.0nm,0.8s
USRK **Ussuriysk Ar.** 31.84 276 P P 16 26 48.3 +0.7
comp=Z,1.8nm,0.8s,baz=72,slow=9.3,SNR=3.2
comp=Z,1.8nm,0.8s
A36M **Sachs Harbour** 32.05 29 P 16 26 49.6 +0.4
A36M **Sachs Harbour** 32.05 29 P P 16 26 48.8 -0.4
baz=260,SNR=5.4
H11N2 **WAKE ISLAND Hy** 32.69 201 T T 17 02 01.6
baz=19,slow=75,SNR=4.5
H11N3 **WAKE ISLAND Hy** 32.70 201 T T 17 02 11.8
baz=19,slow=75,SNR=5.0
H11N1 **WAKE ISLAND Hy** 32.71 201 T T 17 02 02.0
baz=19,slow=75,SNR=4.4
H11S1 **WAKE ISLAND Hy** 33.92 201 T T 17 03 34.9
baz=19,slow=76,SNR=5.4
H11S2 **WAKE ISLAND Hy** 33.93 201 T T 17 03 35.1
baz=19,slow=76,SNR=4.9
H11S3 **WAKE ISLAND Hy** 33.93 201 T T 17 03 32.5
baz=19,slow=76,SNR=3.4
YKAW3 **Yellowknife Wh** 36.48 46 P P 16 27 25.4 -2.2
YKA **Yellowknife Ar** 36.50 46 P P 16 27 27.2 -0.6
comp=Z,0.9nm,0.6s,baz=286,slow=9.1,SNR=17
YKA pP **pwP** 16 27 39.2 +2.9
comp=Z,1.4nm,0.7s,baz=288,slow=9.0,SNR=7.8
YKA PcP **PcP** 16 29 51.5 +0.6
comp=Z,0.4nm,0.7s,baz=286,slow=3.6,SNR=4.8
YKA ScP **ScP** 16 33 34.1 -0.8
comp=Z,0.1nm,0.4s,baz=291,slow=4.6,SNR=3.9
comp=Z,0.9nm,0.6s
KSRS **Korea Array** 38.14 269 P P 16 27 43.1 +1.1
comp=Z,2.0nm,0.8s,baz=58,slow=8.2,SNR=6.1
comp=Z,2.0nm,0.8s
KSRS **Korea Array** 38.14 269 *e* P P 16 27 43.7 +1.7
KSRS pmax pmax
comp=Z,2.0nm,0.7s
KSAR **Wonju Array Be** 38.17 269 P P 16 27 42.0 -0.3
KSAR **Wonju Array Be** 38.17 269 P P 16 27 42.0 -0.3
LON **Longmire** 38.33 73 P P 16 27 43.0 -0.6
LON IAmb IAmb 16 27 58.2
comp=Z,2.5nm,0.8s
LON **Longmire** 38.33 73 P P 16 27 43.0 -0.6
LON pmax pmax
comp=Z,3.0nm,0.8s
H04A **Detroit Lake** 39.14 76 P P 16 27 49.4 -1.0
EDM **Edmonton** 40.25 60 P P 16 27 57.4 -2.1
EDM IAmb IAmb 16 28 13.0
comp=Z,4.1nm,0.6s
EDM **Edmonton** 40.25 60 P P 16 27 57.4 -2.1
EDM pmax pmax
comp=Z,4.0nm,0.6s
NEW **Newport** 40.38 68 P 16 27 59.0 -1.6
NEW IAmb IAmb 16 28 02.0
comp=Z,6.4nm,1.3s
NEW **Newport** 40.38 68 P P 16 27 59.0 -1.6
NEW pmax pmax
comp=Z,6.0nm,1.3s
K05A **Summer Lake** 40.97 77 P P 16 28 06.5 +0.7
I07A **Izee** 41.09 75 P P 16 28 07.0 +0.4
I07A IAmb IAmb 16 28 13.8
comp=Z,10nm,1.5s
XLT **XiLinHaoTe** 41.83 286 *e* P P 16 28 13.3 +0.6
XLT pmax pmax
comp=Z,7.0nm,0.9s
XLT pmax pmax
comp=Z,390nm,6.0s
BMO **Blue Mountains** 42.01 73 P P 16 28 14.0 -0.1
BMO **Blue Mountains** 42.01 73 P P 16 28 14.0 -0.1
BMO pmax pmax
comp=Z,2.0nm,0.9s
JTMT **Jette** 42.29 67 P P 16 28 16.5 0.0
MSO **Missoula** 42.96 68 P P 16 28 20.1 -1.8
LYMT **Lyon Mountain** 43.85 67 P P 16 28 28.1 -1.2
PNTR **Pine Nut** 43.87 81 P P 16 28 29.8 +0.4
HLID **Hailey** 44.45 73 P 16 28 33.6 -0.4
HLID IAmb IAmb 16 28 35.7
comp=Z,5.5nm,1.2s
MCMT **McKenzie Canyo** 44.68 70 P P 16 28 34.5 -1.4
EGMT **Eagleton** 44.75 65 P P 16 28 35.4 -0.8
EGMT IAmb IAmb 16 28 47.5
comp=Z,3.9nm,0.9s

TLY	**Talaya**	**44.94**	**302**	*ce*	P		**P**	**16 28 37.7**	**+0.1**
TLY						pmax	pmax		
	comp=Z,3.0nm,0.9s								
BOZ	**Bozeman (W)**	**44.98**	**69**		P		**P**	**16 28 37.2**	**-0.9**
BOZ						IAmb	IAmb	16 28 50.3	
	comp=Z,2.0nm,0.7s								
BOZ	**Bozeman (W)**	**44.98**	**69**		P		**P**	**16 28 37.2**	**-0.9**
BOZ						pmax	pmax		
	comp=Z,2.0nm,0.7s								
NVAR	**Mina Array Bea**	**45.07**	**81**		P		**P**	**16 28 39.4**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=312,slow=7.5,SNR=2.7								
	comp=Z,0.6nm,0.6s								
SONM	**Songino Array**	**45.42**	**296**		P		**P**	**16 28 42.5**	**+0.9**
	comp=Z,2.4nm,0.6s,baz=61,slow=7.1,SNR=22								
SONM					PcP		**PcP**	**16 30 20.8**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=51,slow=3.0,SNR=3.4								
	comp=Z,2.4nm,0.6s								
SONM	**Songino Array**	**45.42**	**296**		P		**P**	**16 28 42.2**	**+0.6**
SONM						IAmb	IAmb	16 28 43.3	
	comp=Z,5.0nm,1.2s								
ELK	**Elko**	**45.58**	**76**		P		**P**	**16 28 43.5**	**+0.5**
ELK	**Elko**	**45.58**	**76**		P		**P**	**16 28 43.5**	**+0.5**
ELK						pmax	pmax		
	comp=Z,2.0nm,0.9s								
YHL	**Hebgen Lake**	**45.65**	**69**		P		**P**	**16 28 42.8**	**-0.9**
YHL						IAmb	IAmb	16 28 57.5	
	comp=Z,5.6nm,1.3s								
TULEG	**Thule**	**45.70**	**18**		P		**P**	**16 28 42.1**	**-1.1**
TULEG						IAmb	IAmb	16 29 16.0	
	comp=Z,2.4nm,0.9s								
POIN	**Pond Inlet**	**45.77**	**24**		P		**P**	**16 28 42.9**	**-0.9**
POIN						IAmb	IAmb	16 29 10.9	
	comp=Z,3.9nm,1.4s								
YHH	**Holmes Hill**	**45.88**	**69**				**P**	**16 28 45.0**	**-0.5**
HHC	**Hu-ho-hao-te**	**46.32**	**285**	*eP*			**P**	**16 28 48.8**	**+0.1**
HHC						pmax	pmax		
	comp=Z,8.0nm,0.6s								
FLWY	**Flagg Ranch**	**46.37**	**70**		P		**P**	**16 28 46.8**	**-2.5**
FLWY						IAmb	IAmb	16 28 51.0	
	comp=Z,2.2nm,0.8s								
ILON	**Igloolik, Nuna**	**46.41**	**29**				**P**	**16 28 47.5**	**-1.4**
ILON						IAmb	IAmb	16 28 48.8	
	comp=Z,2.2nm,0.6s								
HVU	**Hansel Valley**	**46.47**	**74**		P		**P**	**16 28 49.6**	**-0.3**
HVU	**Hansel Valley**	**46.47**	**74**		P		**P**	**16 28 49.7**	**-0.3**
HVU						pmax	pmax		
	comp=Z,10.0nm,1.3s								
RLMT	**Red Lodge**	**46.62**	**68**		IAmb		IAmb	16 28 52.8	
	comp=Z,2.7nm,0.8s								
FCC	**Fort Churchill**	**47.22**	**45**		P		**P**	**16 28 54.2**	**-1.2**
FCC						IAmb	IAmb	16 28 54.8	
	comp=Z,2.3nm,1.0s								
FCC	**Fort Churchill**	**47.22**	**45**		P		**P**	**16 28 54.2**	**-1.2**
FCC						pmax	pmax		
	comp=Z,2.0nm,1.0s								
TPNV	**Topopah Spring**	**47.27**	**81**		P		**P**	**16 28 55.5**	**-0.7**
TPNV						IAmb	IAmb	16 29 03.4	
	comp=Z,3.4nm,0.8s								
TPNV	**Topopah Spring**	**47.27**	**81**		P		**P**	**16 28 55.6**	**-0.7**
TPNV						pmax	pmax		
	comp=Z,3.0nm,0.9s								
PRN	**Pahroc Range**	**47.73**	**80**		IAmb		IAmb	16 29 04.8	
	comp=Z,3.6nm,0.9s								
PSUT	**Pine Spring**	**47.76**	**78**				**P**	**16 28 59.0**	**-1.1**
PSUT						IAmb	IAmb	16 29 20.3	
	comp=Z,2.5nm,0.7s								
BW06	**Boulder Array**	**47.81**	**71**		IAmb		IAmb	16 29 01.1	
	comp=Z,3.2nm,0.8s								
PD31	**Pinedale Array**	**47.81**	**71**		IAmb		IAmb	16 29 01.1	
	comp=Z,3.3nm,0.8s								
PDAR	**Pinedale Array**	**47.81**	**71**		P		**P**	**16 29 00.2**	**-0.3**
	comp=Z,2.9nm,0.7s,baz=296,slow=4.4,SNR=19								
PDAR					pP		**sP**	**16 29 12.6**	**+0.2**
	comp=Z,2.0nm,0.5s,baz=302,slow=3.1,SNR=11								
	comp=Z,2.9nm,0.7s								
PDAR	**Pinedale Array**	**47.81**	**71**				**P**	**16 28 59.6**	**-0.9**
BSUT	**Blindstream Ca**	**48.43**	**74**		P		**P**	**16 29 05.8**	**+0.4**
P18A	**Preston Nutter**	**49.30**	**74**		IAmb		IAmb	16 29 13.4	
	comp=Z,4.3nm,1.0s								
U15A	**North Rim**	**50.05**	**79**		IAmb		IAmb	16 29 19.6	
	comp=Z,2.8nm,0.7s								
SPITS	**Spitsbergen Ar**	**50.54**	**355**		P		**P**	**16 29 19.3**	**-1.3**
	comp=Z,1.6nm,0.4s,baz=55,slow=7.2,SNR=24								
	comp=Z,1.6nm,0.4s								
PV03	**Paradox Valley**	**51.01**	**75**		P		**P**	**16 29 24.2**	**-0.7**
PV01	**Paradox Valley**	**51.25**	**75**		IAmb		IAmb	16 29 27.5	
	comp=Z,2.9nm,0.8s								
S22A	**4UR Ranch, Cre**	**52.56**	**74**		IAmb		IAmb	16 29 38.3	
	comp=Z,2.5nm,0.9s								
ZALV	**Zalesovo Beam**	**53.12**	**313**		P		**P**	**16 29 39.3**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=43,slow=7.2,SNR=5.9								
	comp=Z,1.0nm,0.5s								
GTA2	**Gaotai**	**54.25**	**291**	*eP*			**P**	**16 29 49.5**	**+0.7**
GTA2					sP		sP	16 30 02.0	+1.7
GTA2						pmax	pmax		
	comp=Z,14nm,1.2s								
DGZ	**Jazzator, Alta**	**54.52**	**307**	*i* P			**P**	**16 29 50.2**	**-0.4**
DGZ						pmax	pmax		
	comp=Z,1.0nm,0.6s								
KURK	**Kurchatov**	**58.12**	**313**				**P**	**16 30 16.1**	**+0.1**
KURK	**Kurchatov**	**58.12**	**313**		P		**P**	**16 30 16.1**	**+0.1**
KURK						pmax	pmax		
	comp=Z,5.0nm,0.7s								
KURBB	**Kurchatov Arra**	**58.22**	**313**		P		**P**	**16 30 16.8**	**+0.1**
	comp=Z,5.2nm,0.6s,baz=43,slow=6.6,SNR=42								
	comp=Z,5.2nm,0.6s								
MK31	**Makanchi Array**	**59.02**	**307**	*ce*	P		**P**	**16 30 21.5**	**-0.9**
MKAR	**Makanchi Array**	**59.02**	**307**		P		**P**	**16 30 22.1**	**-0.4**
	comp=Z,1.3nm,0.5s,baz=52,slow=6.3,SNR=22								
	comp=Z,1.3nm,0.5s								
BVAR	**Borovoye Array**	**60.12**	**319**		P		**P**	**16 30 30.2**	**+0.4**
	comp=Z,5.9nm,0.5s,baz=54,slow=6.8,SNR=50								
	comp=Z,5.9nm,0.5s								
BORK	**Borovoye**	**60.13**	**319**	*ce*	P		**P**	**16 30 30.4**	**+0.4**
BORK						pmax	pmax		
	comp=Z,7.0nm,0.7s								
TXAR	**Lajitas Array**	**60.17**	**79**		P		**P**	**16 30 30.6**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=307,slow=5.5,SNR=8.2								
	comp=Z,0.5nm,0.5s								
PZH	**PanZhiHua**	**61.91**	**278**		P		**P**	**16 30 42.9**	**+0.4**
ARTI	**Arti**	**62.13**	**327**	*d* iP			**P**	**16 30 44.3**	**+0.9**
ARTI					S		**S**	**16 39 09.3**	**+3.1**
ARTI					SS		**SS**	**16 43 13.8**	**+5.5**
ARTI						pmax	pmax		
	comp=Z,8.0nm,0.6s								
FINES	**FINESS Array B**	**65.70**	**346**		P		**P**	**16 31 05.1**	**-1.7**
	comp=Z,1.7nm,0.8s,baz=29,slow=6.6,SNR=3.4								
	comp=Z,1.7nm,0.8s								
AAK	**Ala-Archa**	**65.87**	**308**	*ce*	P		**P**	**16 31 08.8**	**+0.3**
AAK						pmax	pmax		
	comp=Z,4.0nm,1.5s								
NOA	**NORSAR Array B**	**67.77**	**354**		P		**P**	**16 31 19.3**	**-0.8**
	comp=Z,0.7nm,0.6s,baz=8.0,slow=6.3,SNR=1.9								
	comp=Z,0.7nm,0.6s								
KSH2	**Kashi**	**67.94**	**305**		P		**P**	**16 31 22.0**	**+0.4**
KSH2						pmax	pmax		
	comp=Z,4.0nm,1.0s								
HFS	**Hagfors**	**68.47**	**352**		P		**P**	**16 31 22.6**	**-1.8**
	comp=Z,1.0nm,0.4s,baz=56,slow=9.2,SNR=6.6								
	comp=Z,1.0nm,0.4s								
CMAR	**Chiang Mai Arr**	**69.55**	**274**		P		**P**	**16 31 31.9**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=30,slow=7.3,SNR=9.0								
CMAR					pP		**pwP**	**16 31 44.5**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=30,slow=6.6,SNR=4.8								
	comp=Z,1.0nm,0.6s								
AKASG	**Malin Array Be**	**75.33**	**341**		P		**P**	**16 32 04.9**	**-0.7**
	comp=Z,1.3nm,0.4s,baz=23,slow=6.6,SNR=5.6								
	comp=Z,1.3nm,0.4s								
AKASG	**Malin Array Be**	**75.33**	**341**		IAmb		IAmb	16 32 22.1	
	comp=Z,4.9nm,1.4s								
KBZ	**Khabaz**	**78.09**	**329**		P		**P**	**16 32 21.0**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=23,slow=5.0,SNR=4.6								
	comp=Z,1.5nm,0.8s								
KBZ	**Khabaz**	**78.09**	**329**	*ce*	P		**P**	**16 32 22.3**	**+0.9**
KBZ						pmax	pmax		
	comp=Z,3.0nm,1.0s								
LANS	**Liptovska Anna**	**78.58**	**346**	*eP*			**P**	**16 32 25.9**	**+1.8**
LANS	**Liptovska Anna**	**78.58**	**346**	*eP*			**P**	**16 32 25.9**	**+1.8**
LANS	**Liptovska Anna**	**78.58**	**346**	*eP*			**P**	**16 32 25.9**	**+1.8**
MODS	**Modra-Piesok**	**79.64**	**348**	*eP*			**P**	**16 32 31.7**	**+1.8**
MODS	**Modra-Piesok**	**79.64**	**348**	*eP*			**P**	**16 32 31.7**	**+1.8**
WRA	**Warramunga Arr**	**80.79**	**222**		P		**P**	**16 32 35.6**	**-0.7**
	comp=Z,1.5nm,0.6s,baz=33,slow=5.2,SNR=27								
WRA					pP		**sP**	**16 32 47.9**	**0.0**
	comp=Z,3.8nm,0.7s,baz=33,slow=5.9,SNR=15								
	comp=Z,1.5nm,0.6s								
ASAR	**Alice Springs**	**84.29**	**221**		P		**P**	**16 32 54.5**	**0.0**
	comp=Z,1.0nm,0.7s,baz=22,slow=5.7,SNR=20								
ASAR					pP		**sP**	**16 33 06.9**	**+0.8**
	comp=Z,2.5nm,0.7s,baz=25,slow=5.0,SNR=17								
	comp=Z,1.0nm,0.7s								
BRTR	**Keskin Array B**	**84.55**	**334**		P		**P**	**16 32 56.4**	**+0.5**
	comp=Z,1.6nm,0.7s,baz=26,slow=2.2,SNR=11								
	comp=Z,1.6nm,0.7s								
BRTR	**Keskin Array B**	**84.55**	**334**		P		**P**	**16 32 56.2**	**+0.3**
H03N2	**Juan Fernandez**	**122.52**	**104**		T		T	18 53 52.5	
	baz=317,slow=78,SNR=14								
H03N1	**Juan Fernandez**	**122.53**	**104**		T		T	18 53 54.4	
	baz=317,slow=78,SNR=16								
H03N3	**Juan Fernandez**	**122.53**	**104**		T		T	18 53 49.2	
	baz=317,slow=78,SNR=18								
BOSA	**Boshof**	**150.02**	**308**		PKPbc		**PKPbc**	**16 40 13.1**	**0.0**
	comp=Z,2.4nm,0.7s,baz=45,slow=2.5,SNR=5.8								

ZUR 12 16:29:53.9, 46°.35N×8°.54E, h8km±1km, MLh1.5/9, 1C-3D, Error ellipse: s-maj=2773.6km s-min=518.2km az=114.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FUSIO	**Fusio**	**0.14**	**37**	↑Pg	Pg	16 29 57.6	+0.6
FUSIO				Sg	Sg	16 29 59.8	+0.6
BTNF	**Ladstafel, Nuf**	**0.18**	**318**	↓Pg	Pg	16 29 58.1	+0.4
BTNF				Sg	Sg	16 30 00.8	+0.5
SCAS2	**Camedo, Parato**	**0.20**	**165**	Sg	Sg	16 30 00.9	+0.3
GRIMS	**Grimsel Gerste**	**0.28**	**327**	Sg	Sg	16 30 03.8	+0.5
NALPS	**Val Nalps**	**0.29**	**30**	Pg	Pg	16 30 00.1	+0.4
PREO2	**Preonzo, Alpe**	**0.32**	**107**	↓Pg	Pg	16 30 00.5	+0.3
PREO2				Sg	Sg	16 30 04.8	+0.3
PREO4	**Preonzo, Alpe**	**0.32**	**107**	↓Pg	Pg	16 30 00.5	+0.3
PREO4				Sg	Sg	16 30 04.8	+0.2
SIMPL	**Simplonpass**	**0.38**	**254**	Sg	Sg	16 30 06.2	-0.1
A062A	**Arbedo Castion**	**0.43**	**112**	Sg	Sg	16 30 08.2	+0.3
BNALP	**Bannalp**	**0.53**	**351**	Sg	Sg	16 30 11.5	+0.2

*IDC **12** 16:30:44.8±1.8, 35°.84N×141°.09E, h0km, mb3.4/4, mbtmp3.4/6, ML2.9/2, MS3.6/1, Error ellipse: s-maj=47.7km s-min=24.9km az=70.0*
*JMA **12** 16:30:49.2±0.3, 35°.8N±0°.7×14°.1E±°, h32km±1km, MV3.1/30, NEAR CHOSHI CITY*
JMA Felt I J1 at NEAR CHOSHI CITY .
ISC 12 16:30:49.5±1.2, 35°.87N±0°.07×140°.98E±0°.08, h31km, n14, σ0°65/17, mb3.5/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIHU	**Itakohorinouch**	**0.38**	**284**	P		**16 30 58.5**	**-0.3**
JIHU				S		**16 31 05.4**	**+0.3**
JSMT	**Sammumatsuo**	**0.49**	**242**	*e*S		**16 31 07.5**	**-0.3**
JHYU	**Hitachinakayam**	**0.57**	**326**	P		**16 31 01.2**	**-0.2**
JHYU				S		**16 31 09.6**	**+0.7**
JYT	**Yasato**	**0.73**	**299**	P		**16 31 02.7**	**-0.9**
JYT				S		**16 31 12.5**	**-0.9**
JCCN	**Chibachonan**	**0.78**	**232**	P		**16 31 04.8**	**+0.3**
JHO	**Hitachi**	**0.81**	**336**	P		**16 31 04.3**	**-0.4**
JAG	**Ashikaga**	**1.35**	**295**	*i* P		**16 31 11.6**	**-0.6**
MJAR	**Matsushiro Arr**	**2.34**	**287**	Pn		**16 31 26.4**	**+0.6**
	0.3nm,0.3s,baz=105,slow=9.0,SNR=17						
MJAR				Sn		**16 32 00.1**	**+0.6**
	0.4nm,0.3s,baz=141,slow=15,SNR=6.7						
	2.2nm,0.3s						
ASAJ	**Asahikawa**	**8.33**	**8**	Pn		**16 32 47.9**	**-0.1**
	0.4nm,0.3s,baz=212,slow=11,SNR=7.2						
	9.3nm,1.0s						
PETK	**Petropavlovsk-**	**20.87**	**29**	LR	LR	16 42 04.7	
	comp=Z,162nm,21.9s,baz=358,slow=33						
MKAR	**Makanchi Array**	**44.45**	**303**	P		**16 38 57.1**	**-0.4**
	0.4nm,0.7s,baz=96,slow=9.9,SNR=3.7						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**46.45**	**309**	P		**16 39 13.8**	**+0.5**
	0.4nm,0.7s,baz=82,slow=8.1,SNR=4.1						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**55.86**	**188**	P		**16 40 23.2**	**-1.0**
	0.5nm,1.0s,baz=5.4,slow=7.1,SNR=1.9						
	0.5nm,1.0s						
ASAR	**Alice Springs**	**59.59**	**188**	P		**16 40 51.2**	**+0.9**
	0.3nm,0.9s,baz=8.8,slow=7.1,SNR=2.3						
	0.3nm,0.9s						

*CATAC **12** 16:55:36.6±0.4, 13°.N±2°.×8°.9W±°, h27km±2km, M3.7/24, MLv3.7/24, Error ellipse: s-maj=5.5km s-min=2.9km az=29.6, confirmed*
*SNET **12** 16:55:37.6±0.7, 13°.10N×89°.27W, h45km, ML3.6, Presumed earthquake*
*GCG **12** 16:55:38.5±0.6, 13°.14N×89°.36W, h45km±6km, MD3.9, ML3.9, Presumed earthquake*
ISC 12 16:55:34.9±1.5, 13°.04N±0°.06×89°.30W±0°.04, h15km±10km, n57, σ0°48/90, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.44**	**357**	P		**16 55 47.6**	**+0.8**
LALI	**Alcalda de L**	**0.44**	**357**	*i* P		**16 55 47.6**	**+0.8**
LALI				*i* S		**16 55 54.3**	**-0.2**
PANCS	**Alcalda de**	**0.58**	**11**	P		**16 55 49.0**	**+0.3**
PANCS	**Alcalda de**	**0.58**	**11**	*e*P		**16 55 49.0**	**+0.3**
PANCS				*e*S		**16 55 57.5**	**-0.4**
LOMA	**Loma Larga**	**0.61**	**12**	*i* P		**16 55 49.6**	**+0.4**
LOMA				*e*S		**16 55 58.5**	**-0.3**
LFRS	**El Faro**	**0.62**	**22**	*i* P		**16 55 49.6**	**+0.3**
JAYA	**Jayaque - finc**	**0.63**	**346**	P		**16 55 49.9**	**+0.4**
JAYA				S		**16 55 59.0**	**-0.2**
JAYA	**Jayaque - finc**	**0.63**	**346**	*i* P		**16 55 49.8**	**+0.4**
JAYA				*i* S		**16 55 58.5**	**-0.8**
JAYA				IAML		16 56 00.2	
	comp=N,12μm,0.2s						
JAYA	**Jayaque - finc**	**0.63**	**346**	*eP*		**16 55 49.7**	**+0.2**
JAYA				*e*S		**16 55 58.4**	**-0.9**
SEMO	**Seminario San**	**0.66**	**6**	P		**16 55 50.3**	**+0.5**
SEMO				S		**16 55 59.9**	**-0.1**
UTEC	**Universidad Te**	**0.66**	**8**	P		**16 55 50.4**	**+0.5**
UTEC				S		**16 56 00.4**	**+0.4**
PMON	**Piamonte**	**0.67**	**359**	P		**16 55 50.4**	**+0.4**
PMON	**Piamonte**	**0.67**	**359**	*i* P		**16 55 50.4**	**+0.4**
PMON				*e*S		**16 56 00.4**	**+0.2**
UEES	**Universidad Ev**	**0.67**	**5**	P		**16 55 50.5**	**+0.4**
UEES	**Universidad Ev**	**0.67**	**5**	*e*P		**16 55 50.4**	**+0.4**
UEES				*e*S		**16 56 00.5**	**+0.2**
IGN	**Direccin Gen**	**0.68**	**10**	P		**16 55 50.6**	**+0.5**
IGN				S		**16 56 00.8**	**+0.4**
IGN	**Direccin Gen**	**0.68**	**10**	*e*P		**16 55 50.6**	**+0.5**
UDBS	**Universidad Do**	**0.68**	**12**	P		**16 55 50.6**	**+0.5**
UDBS				S		**16 56 00.9**	**+0.4**
BOQS	**Boqueron**	**0.69**	**1**	*i* P		**16 55 50.8**	**+0.5**
COEG	**Centro de Oper**	**0.70**	**35**	P		**16 55 50.4**	**0.0**
COEG	**Centro de Oper**	**0.70**	**35**	*e*P		**16 55 50.4**	**0.0**
TECO	**Alcaldia de Te**	**0.70**	**46**	P		**16 55 50.2**	**-0.1**
TECO				S		**16 56 01.0**	**0.0**
PAVA	**Las Pavas**	**0.75**	**28**	P		**16 55 51.4**	**+0.2**
PAVA				S		**16 56 02.7**	**+0.4**
CEDA	**San Andres**	**0.76**	**353**	P		**16 55 51.6**	**+0.4**
CEDA				S		**16 56 02.6**	**+0.1**
CEDA	**San Andres**	**0.76**	**353**	*e*P		**16 55 51.6**	**+0.4**
CEVE	**Cerro Verde**	**0.84**	**338**	P		**16 55 53.0**	**+0.4**
SBLS	**San Blas**	**0.85**	**338**	*e*P		**16 55 53.2**	**+0.6**
SCLA	**Alcaldia de Sa**	**0.86**	**40**	P		**16 55 53.0**	**+0.4**
SCLA				S		**16 56 04.9**	**0.0**
TECA	**Tecapa**	**0.89**	**60**	*e*P		**16 55 53.3**	**+0.2**
PQSS	**Presa 15 de Se**	**0.92**	**51**	P		**16 55 53.5**	**+0.2**
PQSS				S		**16 56 06.4**	**+0.1**
UNIC	**Universidad Ca**	**0.96**	**345**	P		**16 55 54.6**	**+0.5**
UNIC				S		**16 56 08.0**	**+0.4**
NUBE	**Las Nubes**	**0.97**	**331**	P		**16 55 54.4**	**+0.2**
NUBE	**Las Nubes**	**0.97**	**331**	*i* P		**16 55 54.5**	**+0.2**
NUBE				*e*S		**16 56 07.2**	**-0.7**
PACA	**Pacayal**	**1.04**	**66**	P		**16 55 55.6**	**+0.6**
PACA				S		**16 56 09.7**	**+0.3**
RANC	**El Ranchito**	**1.06**	**68**	P		**16 55 56.1**	**+0.8**
RANC				S		**16 56 10.4**	**+0.5**
FAME	**Alcaldia de Sa**	**1.06**	**319**	P		**16 55 55.5**	**+0.1**
FAME				S		**16 56 08.9**	**-0.4**
P5NO	**Presa 5 de nov**	**1.07**	**29**	P		**16 55 55.7**	**+0.2**
P5NO				S		**16 56 10.2**	**+0.1**
P5NO	**Presa 5 de nov**	**1.07**	**29**	*i* P		**16 55 55.7**	**+0.2**
SLOZ	**Alcaldia de Sa**	**1.09**	**334**	P		**16 55 56.5**	**+0.8**
SLOZ				S		**16 56 11.4**	**+0.9**
BLLM	**Bellamira**	**1.10**	**69**	*e*P		**Pg**	**16 55 56.6**	**+0.3**
RBDL	**Robledal**	**1.13**	**340**	*e*P		**Pg**	**16 55 57.1**	**+0.3**
RBDL				*e*S		**Sn**	**16 56 12.7**	**+1.0**
LLGN	**La Laguna**	**1.17**	**17**	P		**Pg**	**16 55 57.1**	**-0.4**
LLGN				S		**Sn**	**16 56 12.7**	**+0.2**
CNRM	**Centro Naciona**	**1.18**	**68**	S		**Sg**	**16 56 13.6**	**+0.5**
INTP	**Intipuca**	**1.22**	**83**	*e*P		**Pn**	**16 55 57.7**	**+0.2**
INTP				*e*S		**Sb**	**16 56 13.1**	**-0.2**
MTO3	**Montecristo**	**1.35**	**357**	P		**Pb**	**16 55 59.9**	**-0.2**
MTO3				S		**Sn**	**16 56 17.1**	**-0.2**
MTO3	**Montecristo**	**1.35**	**357**	*i* P		**Pb**	**16 55 59.9**	**-0.2**
LCND	**La Caada**	**1.40**	**79**	P		**Pn**	**16 56 00.7**	**+0.8**
LCND	**La Caada**	**1.40**	**79**	*e*P		**Pn**	**16 56 00.4**	**+0.5**
CNCH	**Conchagua**	**1.44**	**81**	P		**Pn**	**16 56 01.1**	**+0.5**
CNCH				S		**Sn**	**16 56 19.8**	**+0.4**
CNCH	**Conchagua**	**1.44**	**81**	*e*P		**Pn**	**16 56 01.2**	**+0.5**
ESQI	**Esquipulas**	**1.51**	**358**	P		**Pb**	**16 56 02.3**	**-0.4**
ESQI				S		**Sb**	**16 56 21.3**	**-0.5**
CSGN	**Cosiguina Volc**	**1.69**	**92**	P		**Pn**	**16 56 04.9**	**+0.8**
CSGN				S		**Sn**	**16 56 25.5**	**-0.1**
SARH	**Santa Rosa de**	**1.80**	**17**	P		**Pb**	**16 56 06.6**	**-1.0**
SARH	**Santa Rosa de**	**1.80**	**17**	*i* P		**Pn**	**16 56 06.4**	**+0.9**
PKGN	**Cerro Pekin**	**2.29**	**99**	P		**Pn**	**16 56 12.5**	**+0.3**
PKGN				S		**Sn**	**16 56 39.9**	**-0.3**
HERN	**Volcan Telica**	**2.44**	**100**	P		**Pn**	**16 56 14.2**	**-0.1**
HERN				S		**Sn**	**16 56 43.2**	**-0.8**
YUSH	**Yuscaran**	**2.55**	**69**	P		**Pn**	**16 56 16.2**	**+0.3**

*IDC **12** 17:10:30.4±1.6, 32°.66N×85°.18E, h0km, mb3.3/4, mbtmp3.4/8, ML3.3/4, Error ellipse: s-maj=50.9km s-min=20.5km az=61.0*
ISC 12 17:10:33.0±1.3, 32°.7N±0°.2×85°.2E±0°.2, h16km, n8, σ0°71/8, mb3.3/4, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**13.04**	**322**	Pn		**17 13 37.3**	**-0.4**
	0.2nm,0.3s,baz=188,slow=6.8,SNR=5.9						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**14.23**	**352**	Pn		**17 13 53.3**	**-0.6**
	0.1nm,0.3s,baz=181,slow=12,SNR=5.0						
	0.5nm,0.8s						
KURBB	**Kurchatov Arra**	**18.56**	**347**	P		**17 14 49.1**	**-0.1**
	baz=161,slow=10,SNR=4.0						
	0.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**18.81**	**136**	P		**17 14 53.1**	**+0.6**
	0.2nm,0.3s,baz=317,slow=12,SNR=12						
	0.7nm,0.3s						
ZALV	**Zalesovo Beam**	**21.22**	**359**	P		**17 15 18.0**	**+0.1**
	0.3nm,0.4s,baz=170,slow=8.8,SNR=2.1						
	0.3nm,0.4s						
SONM	**Songino Array**	**22.00**	**40**	P		**17 15 27.0**	**+0.4**
	0.4nm,0.9s,baz=220,slow=11,SNR=3.7						
	0.4nm,0.9s						
FINES	**FINESS Array B**	**47.19**	**326**	P		**17 19 05.4**	**+0.8**
	2.4nm,0.9s,baz=101,slow=7.2,SNR=1.5						
	2.4nm,0.9s						
WRA	**Warramunga Arr**	**70.33**	**131**	P		**17 21 45.1**	**-0.9**
	0.4nm,0.8s,baz=325,slow=6.5,SNR=7.0						
	0.4nm,0.8s						

*MOS **12** 17:18:44.8±1.0, 37°.27N×136°.72E, h12km, mb5.6/82, MS5.0/37, Error ellipse: s-maj=5.7km s-min=3.4km az=118.3*
*IDC **12** 17:18:44.5±0.3, 37°.24N×136°.71E, h0km, mb5.1/42, mbtmp5.1/46, ML4.0/4, MS4.6/78, Error ellipse: s-maj=10.6km s-min=8.0km az=38.0*
*BJI **12** 17:18:45.1, 37°.21N×137°.33E, h42km, mB5.5/57, mb5.1/81, ML5.4/1, Ms5.5/94, Ms7 5.4/92*
*JMA **12** 17:18:46.8±0.1, 37°.3N±0°.2×136°.8E±0°.3, h12km, MD5.5/20, MW5.3/20, NOTO PENINSULA REGION*
JMA Felt V-VI J1 at NOTO PENINSULA REGION .
*NEIC **12** 17:18:46.7, 37°.28N×136°.85E, h16km*
*NEIC **12** 17:18:46.2±1.8, 37°.28N±0°.05×136°.88E±0°.05, h10km±1km, mb5.6/302, Mww5.3/21, Error ellipse: s-maj=8.6km s-min=6.8km az=25.0*
*NIED **12** 17:18:

comp=N,151nm,2.4s,comp=E,149nm,2.9s
JSD Sado 1.37 53 A A 17 19 11.6
comp=N,163nm,3.6s,comp=E,134nm,3.4s
JIZZ Izumozaki 1.50 78 A A 17 19 14.0
comp=N,324nm,3.4s,comp=E,361nm,4.4s
JIZZ S **Sb 17 19 34.0 +0.6**
JGK Kuni 1.56 114 A A 17 19 15.4
comp=N,194nm,2.6s,comp=E,137nm,3.7s
JYTA Yamagatataniai 1.63 184 P **Pn 17 19 15.4 +0.2**
JYTA A A 17 19 16.4
comp=N,59nm,3.8s,comp=E,67nm,1.1s
JGF Kuroka 1.67 166 P **Pn 17 19 16.0 +0.2**
JGF Kuroka 1.67 166 S **Sg 17 19 40.5 -0.1**
JGF Kuroka 1.67 166 **Pn 17 19 15.6 -0.2**
JGF Sn **Sb 17 19 39.5 +1.2**
JGF Kuroka 1.67 166 A A 17 19 17.1
comp=N,73nm,5.3s,comp=E,110nm,4.7s
JNT Takato 1.69 142 A A 17 19 17.4
comp=N,77nm,5.1s,comp=E,77nm,3.5s
JUON Uonuma 1.75 90 P **Pn 17 19 16.6 -0.2**
JUON A A 17 19 17.9
comp=N,50nm,5.4s,comp=E,70nm,8.1s
JUON S **Sn 17 19 39.4 +0.5**
JFM Mihama 1.84 203 A A 17 19 19.2
comp=N,40nm,4.2s,comp=E,54nm,2.5s
INU Inuyama 1.87 176 P **Pn 17 19 19.8 +1.2**
INU Inuyama 1.87 176 **Pn 17 19 18.4 -0.2**
JICN Ichinomiyachia 1.92 181 A A 17 19 20.7
comp=N,163nm,3.1s,comp=E,175nm,1.9s
JKT Katashina 1.96 103 ⇓P **Pn 17 19 20.2 +0.4**
JKT A A 17 19 21.1
comp=N,49nm,0.7s,comp=E,51nm,1.4s
JAO Obara 1.98 171 A A 17 19 21.6
comp=N,89nm,1.8s,comp=E,141nm,4.4s
JNY Yasuok 2.02 156 A A 17 19 22.4
comp=N,165nm,0.8s,comp=E,121nm,0.9s
JRY Ryogami san 2.03 126 A A 17 19 22.4
comp=N,53nm,5.4s,comp=E,48nm,3.1s
JNS Sasagawa 2.03 72 ⇓P **Pn 17 19 20.7 -0.1**
JNS A A 17 19 21.8
comp=N,84nm,2.1s,comp=E,89nm,2.1s
JEG Eigenji 2.12 191 A A 17 19 23.5
comp=N,36nm,5.6s,comp=E,44nm,6.8s
JKY Yasaka 2.14 222 P **Pn 17 19 22.0 -0.3**
JKY A A 17 19 23.3
comp=N,73nm,1.3s,comp=E,54nm,2.7s
JYN Shimob 2.19 141 P **Pn 17 19 24.2 +1.2**
JYN A A 17 19 24.7
comp=N,74nm,5.0s,comp=E,75nm,2.4s
JAG Ashikaga 2.22 110 ⇓P **Pn 17 19 24.3 +0.9**
JAG A A 17 19 25.0
comp=N,33nm,3.7s,comp=E,35nm,5.8s
JAW Awa shima 2.25 56 P **Pn 17 19 23.5 -0.3**
JAW A A 17 19 24.7
comp=N,87nm,4.2s,comp=E,111nm,3.6s
JFY Yanaizu 2.27 84 P **Pn 17 19 24.7 +0.7**
JFY A A 17 19 25.4
comp=N,59nm,4.4s,comp=E,63nm,3.4s
JWT Wachi 2.27 212 A A 17 19 25.4
comp=N,25nm,1.4s,comp=E,30nm,3.9s
JSSY Shinshiroyabe 2.36 167 A A 17 19 27.2
comp=N,34nm,5.0s,comp=E,90nm,3.8s
SHZ3 Shizuoka 3 2.41 153 A A 17 19 27.9
comp=N,64nm,3.6s,comp=E,75nm,2.0s
JKSM Kasumi 2.42 228 A A 17 19 27.2
comp=N,46nm,4.0s,comp=E,36nm,4.4s
JSB Shiboa 2.45 95 A A 17 19 28.2
comp=N,99nm,1.7s,comp=E,110nm,1.7s
HMMJ Hamamatsu 2 2.46 163 A A 17 19 28.6
comp=N,38nm,4.5s,comp=E,63nm,6.2s
JSGW Sagamiharawaka 2.48 130 A A 17 19 29.0
comp=N,38nm,4.2s,comp=E,30nm,4.1s
JFNN Fujinakano 2.50 144 A A 17 19 29.3
comp=N,133nm,4.1s,comp=E,126nm,5.4s
TSUJ Tsu 2 2.53 188 P **Pn 17 19 28.4 +0.7**
TSUJ A A 17 19 29.5
comp=N,44nm,0.8s,comp=E,62nm,1.0s
JAA Atsumi 2.59 175 A A 17 19 30.5
comp=N,40nm,4.5s,comp=E,82nm,4.6s
JYA Atsumi 2.63 58 A A 17 19 30.2
comp=N,65nm,2.7s,comp=E,82nm,1.0s
JOD2 Odawara 2 2.65 137 P **Pn 17 19 31.1 +1.8**
JOD2 A A 17 19 31.4
comp=N,45nm,2.9s,comp=E,48nm,5.1s
JYAR Yonezawaarcadi 2.69 74 A A 17 19 31.3
comp=N,128nm,1.8s,comp=E,96nm,1.2s
JYS Shirataka 2.72 68 P **Pn 17 19 30.8 +0.5**
JYS A A 17 19 31.7
comp=N,101nm,1.9s,comp=E,74nm,1.7s
JHE Heguri 2.74 201 P **Pn 17 19 31.5 +1.0**
JHE A A 17 19 32.3
comp=N,28nm,3.3s,comp=E,24nm,2.6s
JSG Sagara 2.76 157 P **Pn 17 19 32.5 +1.7**
JSG Sagara 2.76 157 Pn **Pn 17 19 31.3 +0.5**
JSG Sagara 2.76 157 A A 17 19 32.9
comp=N,184nm,5.5s,comp=E,189nm,2.3s
JKS Kasai 2.77 217 A A 17 19 32.5
comp=N,28nm,3.6s,comp=E,29nm,3.3s
JOTO OTAMA OYAMA 2.78 82 A A 17 19 32.7
comp=N,84nm,1.5s,comp=E,63nm,3.7s
TOK Tokyo 2.79 123 A A 17 19 33.3
comp=N,239nm,6.1s,comp=E,236nm,4.3s
JMIK Miki 2.83 212 A A 17 19 33.4
comp=N,60nm,0.9s,comp=E,43nm,1.8s
JIE Ise 2.83 183 P **Pn 17 19 32.7 +1.0**
JIE A A 17 19 33.8
comp=N,50nm,6.9s,comp=E,52nm,6.1s
JHTM Izuhatsuma 2.85 142 A A 17 19 34.2
comp=N,87nm,3.2s,comp=E,70nm,1.3s
JYT Yasato 2.85 109 A A 17 19 34.0
comp=N,23nm,5.3s,comp=E,22nm,8.1s
JTB Tobi-shima 2.89 46 A A 17 19 33.7
comp=N,54nm,3.7s,comp=E,61nm,4.0s
JFFD Fukushimafurud 2.95 91 A A 17 19 35.3
comp=N,25nm,6.8s,comp=E,19nm,17.0s
JIZS Izushimoda 2.98 146 A A 17 19 36.1
comp=N,50nm,6.0s,comp=E,46nm,5.7s
JYYZ Yamagatayuza 3.00 52 A A 17 19 35.5
comp=N,157nm,7.1s,comp=E,149nm,7.6s
JYO Yokosk 3.01 131 A A 17 19 36.5
comp=N,82nm,10.9s,comp=E,88nm,6.0s
JKN2 Miekihoku 3.02 189 P **Pn 17 19 34.7 +0.4**
JKN2 A A 17 19 36.4
comp=N,27nm,5.7s,comp=E,29nm,2.1s
JHO Hitachi 3.03 101 A A 17 19 36.4
comp=N,25nm,10.3s,comp=E,24nm,9.8s
TTO5 TONANKAI O.B.S 3.04 167 A A 17 19 37.0
comp=N,308nm,1.9s,comp=E,394nm,3.9s
JNTK Naratenkawa 3.05 196 A A 17 19 36.9
comp=N,18nm,4.3s,comp=E,33nm,1.8s
JOI OKI 3.05 253 A A 17 19 36.0
comp=N,25nm,3.3s,comp=E,25nm,4.6s
JKR Kurayoshi 3.08 234 A A 17 19 36.6
comp=N,26nm,4.0s,comp=E,35nm,4.7s
JHYU Hitachinakayam 3.11 105 A A 17 19 37.8
comp=N,28nm,6.2s,comp=E,23nm,2.3s
ONAJ Iwakimizuishiy 3.14 91 A A 17 19 38.0
comp=N,32nm,6.3s,comp=E,27nm,5.8s
JAD Aida 3.16 225 P **Pn 17 19 36.9 +0.6**
JAD A A 17 19 37.9
comp=N,21nm,9.0s,comp=E,18nm,11.0s
JAWN Awajishima-nag 3.17 211 A A 17 19 38.2
comp=N,37nm,3.7s,comp=E,24nm,5.5s
JWY Kouya 3.17 200 A A 17 19 38.5
comp=N,26nm,3.6s,comp=E,21nm,2.5s
JMM Marumori 3.18 77 P **Pn 17 19 37.2 +0.6**
JMM A A 17 19 38.4
comp=N,31nm,2.6s,comp=E,24nm,7.1s
JFK Kawauchi 3.20 86 A A 17 19 38.7
comp=N,21nm,2.6s,comp=E,26nm,3.0s
JIHU Itakohorinouch 3.20 112 A A 17 19 39.1
comp=N,103nm,5.0s,comp=E,127nm,3.9s
JOG3 Oga3 3.20 32 A A 17 19 42.9
comp=N,40nm,2.4s,comp=E,51nm,9.1s
JOU Okura 3.21 68 A A 17 19 38.7
comp=N,56nm,3.5s,comp=E,36nm,3.2s
JYK Kaneyama 3.23 57 P **Pn 17 19 37.8 +0.6**
JYK A A 17 19 38.8
comp=N,29nm,2.1s,comp=E,25nm,6.9s
JMST Minamisoumatoc 3.23 80 A A 17 19 39.2
comp=N,25nm,4.4s,comp=E,19nm,4.5s
JIM2 Oshima 3 3.25 140 A A 17 19 39.9
comp=N,57nm,3.4s,comp=E,48nm,3.4s
TTO4 TONANKAI O.B.S 3.25 170 A A 17 19 40.0
comp=N,202nm,2.9s,comp=E,350nm,2.2s
JCCN Chibachonan 3.28 123 A A 17 19 40.3
comp=N,132nm,5.7s,comp=E,129nm,8.5s

TATJ Tateyama 2 3.28 131 A A 17 19 40.3
comp=N,111nm,5.9s,comp=E,86nm,12.6s
JSMT Sammumatsuo 3.29 118 A A 17 19 40.4
comp=N,159nm,4.7s,comp=E,133nm,5.3s
JTHY Toshimahigashi 3.33 143 A A 17 19 41.2
comp=N,106nm,5.1s,comp=E,121nm,3.9s
I30JP ISUMI INFRASON 3.38 123 I I 17 32 50.0
baz=315,slow=315,SNR=1.0
TTO3 TONANKAI O.B.S 3.38 173 A A 17 19 41.7
comp=N,237nm,4.7s,comp=E,278nm,2.7s
JKUC kamogawauchiur 3.39 126 A A 17 19 41.9
comp=N,53nm,4.8s,comp=E,86nm,4.8s
JSKK Shikinejimakit 3.45 146 A A 17 19 42.9
comp=N,79nm,4.8s,comp=E,119nm,5.9s
JNIO Niijimaoohara 3.46 145 A A 17 19 43.0
comp=N,117nm,4.1s,comp=E,134nm,4.0s
JMMH Miemihama 3.46 192 A A 17 19 42.8
comp=N,14nm,1.6s,comp=E,23nm,8.3s
JOFO Osakifurukawao 3.48 65 A A 17 19 42.4
comp=N,191nm,3.7s,comp=E,162nm,4.1s
TTO2 TONANKAI O.B.S 3.48 178 A A 17 19 43.1
comp=N,204nm,4.0s,comp=E,217nm,5.7s
JYW Yuwa 3.50 48 A A 17 19 42.4
comp=N,58nm,2.3s,comp=E,50nm,5.3s
JCAJ Choshiashikaji 3.54 114 A A 17 19 44.0
comp=N,21nm,3.9s,comp=E,25nm,3.8s
JKO Kozu shima 3.55 148 A A 17 19 44.1
comp=N,102nm,3.2s,comp=E,159nm,4.0s
JNM Ikuma 3.55 242 A A 17 19 43.2
comp=N,43nm,3.5s,comp=E,26nm,2.8s
JTNC Tanabenakahech 3.55 197 P **Pn 17 19 41.6 -0.1**
JTNC A A 17 19 43.9
comp=N,28nm,3.1s,comp=E,55nm,2.4s
JWM Minabe 3.59 201 P **Pn 17 19 41.9 -0.2**
JWM A A 17 19 44.3
comp=N,24nm,3.4s,comp=E,26nm,1.5s
TTO1 TONANKAI O.B.S 3.59 181 A A 17 19 44.7
comp=N,185nm,7.3s,comp=E,194nm,5.1s
JRG Rokugo 3.67 53 A A 17 19 44.9
comp=N,33nm,3.2s,comp=E,28nm,0.5s
JISK Izumosakaura 3.67 243 A A 17 19 44.9
comp=N,30nm,3.5s,comp=E,16nm,3.5s
JJS Sakaide 3.71 221 A A 17 19 45.8
comp=N,16nm,4.0s,comp=E,18nm,2.9s
JIO Ouri 3.75 70 A A 17 19 46.3
comp=N,18nm,2.8s,comp=E,13nm,3.9s
JHS Saijyo 3.76 235 ⇓P **Pn 17 19 45.1 +0.5**
JHS A A 17 19 46.3
comp=N,16nm,5.0s,comp=E,17nm,3.4s
JIKH Ishinomakikobu 3.80 72 A A 17 19 47.1
comp=N,19nm,4.0s,comp=E,12nm,12.1s
JMYK Miyake Tsubota 3.83 145 A A 17 19 48.3
comp=N,74nm,5.8s,comp=E,78nm,4.7s
JMK Ichinoseki 3.84 62 P **Pn 17 19 46.9 +1.2**
JMK A A 17 19 47.5
comp=N,17nm,9.1s,comp=E,14nm,11.3s
JMAF Mimaanabuki 3.87 216 A A 17 19 48.1
comp=N,15nm,8.0s,comp=E,14nm,5.5s
JWKM Wakayamakushim 3.87 194 A A 17 19 48.5
comp=N,25nm,6.3s,comp=E,33nm,2.8s
JAI Aioi 3.95 211 A A 17 19 49.3
comp=N,20nm,10.4s,comp=E,22nm,8.2s
JJG Jouge 3.97 231 A A 17 19 49.3
comp=N,25nm,4.9s,comp=E,16nm,10.6s
JKMT Kesennumamotoy 3.97 65 A A 17 19 49.3
comp=N,15nm,3.6s,comp=E,12nm,2.4s
JNTW Noshirotokiwa 3.99 39 A A 17 19 49.2
comp=N,71nm,4.0s,comp=E,81nm,3.8s
JMKN Mikurajimanish 3.99 145 A A 17 19 50.5
comp=N,24nm,8.5s,comp=E,29nm,5.2s
JSZI Iwateshizukuis 4.07 51 A A 17 19 50.6
comp=N,56nm,3.5s,comp=E,43nm,4.6s
JGT2 ShimaneMisato 4.14 240 A A 17 19 51.5
comp=N,11nm,13.3s,comp=E,15nm,8.6s
JOM Ohasama 4.14 56 A A 17 19 51.6
comp=N,14nm,3.3s,comp=E,10.0nm,6.2s
JIW Iwasaki 4.16 35 P **Pn 17 19 50.5 +0.5**
JIW A A 17 19 51.6
comp=N,15nm,9.5s,comp=E,15nm,7.5s
JAH Hinai 4.18 44 P **Pn 17 19 51.4 +1.1**
JAH A A 17 19 51.9
comp=N,18nm,1.0s,comp=E,20nm,3.9s
OFUJ Ofunato 4.21 62 A A 17 19 52.7
comp=N,22nm,3.4s,comp=E,18nm,6.1s
JMN Monobe 4.26 216 P **Pn 17 19 53.4 +2.0**
JMN Monobe 4.26 216 **Pn 17 19 52.6 +1.1**
JMN Monobe 4.26 216 A A 17 19 53.6
comp=N,19nm,4.7s,comp=E,21nm,2.5s
JHHS Hirosakihyakuz 4.37 37 A A 17 19 54.6
comp=N,44nm,11.0s,comp=E,31nm,7.1s
JHT Toyohira 4.42 236 ⇓P **Pn 17 19 54.7 +1.0**
JHT A A 17 19 55.6
comp=N,14nm,3.1s,comp=E,12nm,7.5s
MRT2 Murotomisaki 2 4.43 211 A A 17 19 56.1
comp=N,16nm,11.6s,comp=E,22nm,6.3s
JKZ Kuzumaki 4.45 50 A A 17 19 55.9
comp=N,12nm,21.5s,comp=E,12nm,6.6s
MIYJ Miyakonagasawa 4.54 57 A A 17 19 57.3
comp=N,12nm,4.1s,comp=E,13nm,3.2s
JKHR Kochiharuno 4.62 218 A A 17 19 58.6
comp=N,28nm,4.1s,comp=E,19nm,7.5s
JET Tanbara 4.64 223 A A 17 19 58.9
comp=N,14nm,2.9s,comp=E,13nm,6.7s
JSI2 Shiura 2 4.72 35 A A 17 19 59.4
comp=N,10.0nm,4.3s,comp=E,14nm,12.2s
JHJ Hachijo jima 2 4.74 149 Pn **Pn 17 20 02.1 +4.1**
comp=E,53nm,0.3s,baz=260,slow=3.3,SNR=16.0
JHJ2 Mitsune 4.76 149 P **Pn 17 20 00.6 +2.3**
JHJ2 Mitsune 4.76 149 Pn Pb 17 20 04.9 -5.3
JHJ2 Mitsune 4.76 149 A A 17 20 01.2
comp=N,15nm,6.4s,comp=E,17nm,9.1s
JANG Nango 4.80 48 A A 17 20 00.8
comp=N,10.0nm,9.4s,comp=E,8.0nm,3.0s
JKEN Kujiedanarisaw 4.82 50 A A 17 20 01.0
comp=N,11nm,2.7s,comp=E,13nm,1.7s
JHIK Hikimi 4.83 238 A A 17 20 01.3
comp=N,13nm,3.2s,comp=E,10.0nm,8.8s
JTM Tenmabayashi 4.83 41 P **Pn 17 20 00.8 +1.5**
JOMM Oshimamatsumae 4.94 29 P **Pn 17 20 01.6 +0.9**
JKU Kubokawa 4.99 220 A A 17 20 03.9
comp=N,21nm,6.9s,comp=E,17nm,3.3s
JSR Shiriuchi 5.10 31 P **Pn 17 20 04.3 +1.4**
JSR A A 17 20 04.8
comp=N,12nm,8.0s,comp=E,9.0nm,9.0s
JNA Nagahama 5.12 226 A A 17 20 05.6
comp=N,13nm,4.9s,comp=E,11nm,6.8s
JARK Aomorirokkasho 5.15 41 A A 17 20 05.5
comp=N,11nm,3.8s,comp=E,12nm,3.8s
JKD Kudamatsu 5.15 234 A A 17 20 05.9
comp=N,14nm,3.3s,comp=E,12nm,11.1s
JHGM Hagimishima 5.24 244 A A 17 20 07.0
comp=N,13nm,6.4s,comp=E,11nm,12.6s
JOT Ohata 5.27 37 A A 17 20 07.1
comp=N,9.0nm,9.5s,comp=E,13nm,9.2s
UWA2 Uwa jima 2 5.30 222 A A 17 20 08.1
comp=N,17nm,4.0s,comp=E,11nm,9.4s
JAHD Aomorihigashid 5.32 39 A A 17 20 07.9
comp=N,14nm,6.9s,comp=E,14nm,12.9s
JTO Tosashimizu 5.48 219 A A 17 20 10.8
comp=N,13nm,4.9s,comp=E,14nm,5.3s
JTY Toyota 5.57 240 A A 17 20 11.6
comp=N,13nm,10.5s,comp=E,6.0nm,4.6s
JYM2 Yakumo 2 5.59 28 A A 17 20 11.4
comp=N,6.0nm,9.8s,comp=E,4.0nm,9.9s
JKI Kunimi 5.62 232 A A 17 20 12.5
comp=N,13nm,7.6s,comp=E,16nm,2.9s
JHST Hiyamasetana 5.69 23 A A 17 20 12.8
comp=N,8.0nm,3.8s,comp=E,9.0nm,3.5s
JUS Usuki 5.90 227 A A 17 20 16.4
comp=N,20nm,4.2s,comp=E,13nm,4.9s
JBEP Beppuamama 5.92 231 A A 17 20 16.6
comp=N,26nm,7.4s,comp=E,17nm,3.5s
JSH Shimam 5.94 23 P **Pn 17 20 16.0 +1.5**
JSKE Saikikamae 6.01 224 A A 17 20 18.1
comp=N,15nm,3.6s,comp=E,11nm,3.8s
JFA Akaike 6.07 237 A A 17 20 18.7
comp=N,12nm,8.7s,comp=E,11nm,6.6s
JNU Nakatsue 6.39 232 Pn **Pn 17 20 22.5 +1.8**
comp=E,18nm,0.3s,baz=48,slow=0.7,SNR=91.0
JNU Nakatsue 6.39 232 A A 17 20 23.2
comp=N,10.0nm,7.9s,comp=E,10.0nm,11.1s
JKIT Kitakata 6.39 226 A A 17 20 23.3
comp=N,13nm,6.3s,comp=E,13nm,7.1s
JTU Tsushima 6.64 248 P **Pn 17 20 25.1 +1.0**
JEM Erimo 6.81 43 P **Pn 17 20 29.4 +2.9**
VLA Vladivostok 7.02 329 *i* P **Pn 17 20 26.7 -2.6**
KSRS Korea Array 7.13 275 Pn **Pn 17 20 32.1 +1.2**

comp=E,5.5nm,0.3s,baz=90,slow=14,SNR=87.0
KSRS Sn **Sn 17 21 50.9 -0.8**
comp=E,3.6nm,0.3s,baz=84,slow=25,SNR=5.7
PSTR Posyet 7.15 321 *i* P **Pn 17 20 28.8 -2.3**
KSAR Wonju Array Be 7.16 274 **Pn 17 20 31.2 -0.1**
KSAR Wonju Array Be 7.16 274 P **Pn 17 20 31.2 -0.1**
KS19 Wonju Array Si 7.18 275 **Pn 17 20 32.1 +0.6**
TJN Taejon 7.67 267 P **Pn 17 20 40.4 +2.1**
TJN Taejon 7.67 267 **Pn 17 20 38.5 +0.2**
TJN Taejon 7.67 267 P **Pn 17 20 38.5 +0.2**
JSU Suzuyama 7.79 225 P **Pn 17 20 42.0 +2.1**
JSU Suzuyama 7.79 225 **Pn 17 20 41.0 +1.1**
TEY Ternei 7.81 359⇑ *e*P **Pn 17 20 41.0 +0.9**
TEY pmax pmax
comp=Z,10.0nm,1.0s
TEY MLR MLR
comp=E,100nm,11.0s
TEY MLR MLR
comp=Z,400nm,11.0s
TEY MLR MLR
comp=N,400nm,10.0s
USRK Ussuriysk Ar. 7.89 334 Pn **Pn 17 20 40.6 -0.7**
comp=N,1.8nm,0.3s,baz=142,slow=13,SNR=19.0
USRK Sn **Sn 17 22 15.5 +5.1**
comp=N,2.4nm,0.3s,baz=147,slow=25,SNR=5.3
comp=N,19nm,0.6s
ASAJ Asahikawa 8.14 30 Pn **Pn 17 20 46.7 +2.0**
comp=N,6.7nm,0.3s,baz=223,slow=13,SNR=48.0
ASAJ LR LR 17 23 54.5
comp=N,5μm,18.9s,baz=176,slow=38
comp=N,96nm,0.7s
JKA Kamikawa-asahi 8.14 30 Pn **Pn 17 20 48.1 +3.4**
INCN Inchon 8.16 275 P **Pn 17 20 48.1 +3.1**
INCN Inchon 8.16 275 **Pn 17 20 46.7 +1.7**
INCN Inchon 8.16 275 P **Pn 17 20 46.7 +1.7**
INCN Inchon 8.16 275 P **Pn 17 20 47.8 +2.8**
INCN S Sn 17 22 26.8 +10
JTN Tanegashima 3 8.18 218 P **Pn 17 20 48.0 +2.8**
JYAK Yakushimahirau 8.75 219 P **Pn 17 20 55.8 +2.7**
MDJ Mudanjiang 9.21 326 P **Pn 17 21 00.0 +0.6**
MDJ Mudanjiang 9.21 326 **Pn 17 20 58.3 -1.0**
MDJ Mudanjiang 9.21 326 P **Pn 17 21 00.2 +0.8**
MDJ PP **PnPn 17 21 08.0 +1.0**
MDJ S **Sn 17 22 40.0 -2.8**
MDJ pmax pmax
comp=N,28nm,0.9s
MDJ pmax pmax
comp=N,1μm,6.9s
MDJ L L
comp=N,19μm,13.1s
MDJ L L
comp=N,20μm,15.1s
MDJ L L
comp=N,22μm,15.1s
YUK Yuzh-Kuril'sk 9.64 42 *e*P **Pn 17 21 05.7 +0.5**
YUK *i* S **Sn 17 22 53.2 0.0**
YUK pmax pmax
comp=E,231nm,0.4s
YUK pmax pmax
comp=Z,533nm,0.4s
YUK pmax pmax
comp=N,229nm,0.3s
YUK pmax pmax
comp=Z,1μm,2.1s
YSS Yuzhno-Sakhali 10.66 22 P **Pn 17 21 22.1 +2.9**
YSS Yuzhno-Sakhali 10.66 22 **Pn 17 21 21.8 +2.7**
YSS Yuzhno-Sakhali 10.66 22*ve*P **Pn 17 21 22.0 +2.9**
YSS *e*S **Sn 17 23 19.3 +1.1**
YSS pmax pmax
comp=Z,1μm,5.1s
YSS MLR MLR
comp=Z,5μm,11.0s
YSS MLR MLR
comp=N,5μm,14.0s
YSS MLR MLR
comp=E,4μm,13.0s
CN2 Changchun 10.89 311 *e*P **Pn 17 21 25.4 +3.0**
CN2 *ep*P 17 21 33.3
CN2 *es*P 17 21 38.1
CN2 *e*S **Sn 17 23 29.5 +5.5**
CN2 pmax pmax
comp=E,40nm,0.9s
CN2 pmax pmax
comp=E,1μm,5.0s
CN2 L L
comp=E,10μm,15.0s
CN2 L L
comp=E,8μm,15.0s
CN2 L L
comp=E,7μm,14.6s
JCJ Chichijima 11.05 154 LR LR 17 25 49.2
comp=E,3μm,18.3s,baz=356,slow=38.0
BNX BinXian 11.07 323 ⇓P **Pn 17 21 26.3 +1.4**
BNX S **Sn 17 23 29.0 +0.5**
BNX pmax pmax
comp=E,39nm,1.1s
BNX pmax pmax
comp=E,1μm,7.8s
BNX L L
comp=E,14μm,11.8s
BNX L L
comp=E,13μm,12.0s
BNX L L
comp=E,12μm,14.1s
SNY Shenyang 11.25 298 ⇓P **Pn 17 21 29.4 +2.2**
SNY pmax pmax
comp=E,35nm,1.2s
SNY pmax pmax
comp=E,1μm,5.7s
SNY L L
comp=E,9μm,10.9s
SNY L L
comp=E,9μm,13.6s
SNY L L
comp=E,11μm,14.8s
KUR Kuril'sk 11.51 43 *e*P **Pn 17 21 29.1 -1.7**
KUR S **Sn 17 23 37.3 -1.7**
KUR pmax pmax
comp=Z,206nm,1.0s
KUR MLR MLR
comp=Z,4μm,15.0s
DL2 Dalian 12.13 283 P **Pn 17 21 42.4 +3.0**
DL2 *e*S **Sn 17 24 00.2 +5.8**
DL2 pmax pmax
comp=Z,98nm,0.8s
DL2 pmax pmax
comp=Z,2μm,8.0s
DL2 L L
comp=Z,7μm,12.3s
DL2 L L
comp=Z,18μm,15.1s
DL2 L L
comp=Z,24μm,12.8s
JMZ Minamidaito 2 12.34 205 Pn **Pn 17 21 38.2 -4.1**
UGL Uglegorsk 12.44 16⇓ *e*P **Pn 17 21 46.4 +2.9**
UGL pmax pmax
comp=Z,371nm,1.3s
UGL pmax pmax
comp=Z,4μm,9.0s
UGL MLR MLR
comp=Z,6μm,13.0s
UGL MLR MLR
comp=N,4μm,9.0s
UGL MLR MLR
comp=E,3μm,8.0s
KLR Kul'dur 12.56 344 Pn **Pn 17 21 45.3 +0.1**
comp=E,0.7nm,0.3s,baz=150,slow=11,SNR=26.0
KLR LR LR 17 26 24.0
comp=E,3μm,18.1s,baz=166,slow=37
comp=E,38nm,1.0s
JOW Kunigami 12.66 218 Pn **Pn 17 21 45.9 -0.8**
comp=E,0.8nm,0.3s,baz=89,slow=17,SNR=2.7
JOW LR LR 17 27 24.6
comp=E,6μm,19.2s,baz=50,slow=41
comp=E,21nm,1.0s
JOW Kunigami 12.66 218 P **Pn 17 21 49.5 +2.8**
JOW Kunigami 12.66 218 Pn **Pn 17 21 45.2 -1.5**
GRNR Gornyy 13.55 359⇑ *i*P **Pn 17 22 02.0 +3.4**
GRNR pmax pmax
comp=E,10.0nm,1.1s
GRNR pmax pmax
comp=N,70nm,1.2s
GRNR pmax pmax
comp=Z,70nm,1.2s
GRNR MLR MLR
comp=N,3μm,15.0s

GRNR MLR MLR
comp=E,4μm,15.0s
GRNR MLR MLR
comp=Z,4μm,15.0s
TYV Tymovskoe 14.25 15 *e*P **Pn 17 22 10.4 +2.2**
TYV *e*S **Sn 17 24 48.8 +2.8**
TYV pmax pmax
comp=Z,2μm,3.1s
TYV pmax pmax
comp=Z,302nm,1.3s
TYV smax smax
comp=N,600nm,4.9s
TYV smax smax
comp=E,1μm,4.9s
TYV smax smax
comp=N,24nm,2.0s
TYV smax smax
comp=E,29nm,2.0s
TYV MLR MLR
comp=E,4μm,15.0s
TYV MLR MLR
comp=Z,4μm,15.0s
SSE Sheshan 14.35 249 P **Pn 17 22 08.5 -1.1**
SSE S **Sn 17 24 47.0 -1.5**
SSE pmax pmax
comp=Z,49nm,0.8s
SSE pmax pmax
comp=Z,660nm,5.6s
SSE L L
comp=Z,3μm,13.3s
SSE L L
comp=Z,3μm,13.9s
HEH HeiHe 14.69 335 *e*P **Pn 17 22 15.4 +1.1**
HEH pP **P 17 22 22.2 +1.8**
HEH sP 17 22 26.6
HEH S **Sn 17 25 05.0 +8.2**
HEH sS **S 17 25 15.4 -0.2**
HEH pmax pmax
comp=Z,42nm,1.8s
HEH pmax pmax
comp=Z,780nm,4.5s
HEH L L
comp=Z,13μm,16.1s
HEH L L
comp=Z,21μm,15.7s
HEH L L
comp=Z,12μm,14.1s
NJ2 Nanjing 15.70 256 ⇑P **P 17 22 31.4 -0.3**
NJ2 S **S 17 25 29.3 -7.0**
NJ2 pmax pmax
comp=Z,120nm,1.1s
NJ2 pmax pmax
comp=Z,2μm,6.2s
NJ2 L L
comp=Z,14μm,18.0s
NJ2 L L
comp=Z,22μm,16.6s
NJ2 L L
comp=Z,21μm,14.2s
TIA Tai'an 15.87 272 P **Pn 17 22 31.7 +1.8**
TIA S **S 17 25 34.8 -5.1**
TIA pmax pmax
comp=Z,68nm,1.5s
TIA pmax pmax
comp=Z,2μm,4.7s
TIA L L
comp=Z,5μm,12.8s
TIA L L
comp=Z,8μm,15.7s
TIA L L
comp=Z,12μm,14.4s
BJI2 Beijing 16.42 286 P **Pn 17 22 36.5 -0.4**
BJI2 S **Sn 17 25 38.7 -0.1**
BJI2 pmax pmax
comp=Z,860nm,9.2s
BJI2 L L
comp=Z,2μm,12.3s
BJI2 L L
comp=Z,2μm,12.2s
BJI2 L L
comp=Z,4μm,12.4s
BJT Baijiatuan 16.42 286 P **P 17 22 39.0 -0.7**
BJT Baijiatuan 16.42 286 **Pn 17 22 36.4 -0.5**
BJT Baijiatuan 16.42 286 P **Pn 17 22 36.4 -0.5**
BJT pmax pmax
comp=Z,281nm,1.7s
OKH Okha 16.86 13 *de*P Pn 17 22 30.1 -12
OKH pmax pmax
comp=Z,1μm,9.4s
OKH MLR MLR
comp=E,2μm,7.0s
OKH MLR MLR
comp=Z,4μm,15.0s
OKH MLR MLR
comp=N,6μm,15.0s
XLT XiLinHaoTe 17.13 299 *e*P **P 17 22 50.1 +2.5**
XLT pP sP 17 22 55.6 +2.1
XLT sS sS 17 26 11.2 -0.8
XLT pmax pmax
comp=N,70nm,1.8s
XLT pmax pmax
comp=N,1μm,6.0s
XLT L L
comp=N,11μm,13.7s
XLT L L
comp=N,10μm,14.9s
HIA Hailar 17.29 320 P **P 17 22 50.7 +1.4**
HNS HongShan 17.63 277 ⇓P **P 17 22 55.7 +2.6**
HNS S **S 17 26 12.9 -2.9**
HNS SS **SnSn 17 26 34.6 +13**
HNS pmax pmax
comp=N,100nm,1.1s
HNS pmax pmax
comp=N,3μm,10.7s
HNS L L
comp=N,1μm,14.7s
HNS L L
comp=N,10μm,14.3s
HNS L L
comp=N,11μm,13.9s
ZEA Zeya 17.81 341 *e*P **P 17 22 55.0 0.0**
ZEA *e*S **Sn 17 26 03.1 -9.4**
ZEA pmax pmax
comp=E,600nm,9.1s
ZEA pmax pmax
comp=N,900nm,7.8s
ZEA pmax pmax
comp=Z,1μm,8.8s
ZEA pmax pmax
comp=N,50nm,0.9s
ZEA pmax pmax
comp=Z,130nm,1.0s
ZEA smax smax
comp=N,700nm,6.2s
ZEA smax smax
comp=E,1μm,7.4s
ZEA MLR MLR
comp=N,4μm,15.0s
ZEA MLR MLR
comp=Z,6μm,14.0s
TATO Taipei 17.93 231 P **P 17 22 59.2 +2.7**
TATO S **S 17 26 28.7 +6.7**
YHNB Yeheng 18.22 231 P **P 17 23 01.7 +1.9**
YHNB Yeheng 18.22 231 Pn **Pn 17 22 56.0 -3.6**
NACB Ninganchiao 18.45 229 P **P 17 22 58.8 -3.4**
SSLB Suanglung 19.13 230 P **Pn 17 23 12.4 +1.8**
SSLB Suanglung 19.13 230 P **P 17 23 07.2 -2.5**
YULB Yu-li 19.22 229 P **Pn 17 23 12.6 +1.0**
YULB Yu-li 19.22 229 P **P 17 23 09.2 -1.4**
TIY Taiyuan 19.39 279 *e*P **Pn 17 23 14.9 +1.1**
TIY S **S 17 26 51.5 -0.1**
TIY SS **SnSn 17 27 16.1 +11**
TIY pmax pmax
comp=Z,60nm,0.8s
TIY pmax pmax
comp=Z,1μm,6.5s
TIY L L
comp=Z,4μm,14.8s
TIY L L
comp=Z,13μm,14.1s
TIY L L
comp=Z,15μm,14.4s
TPUB Ta-pu 19.69 230 P **Pn 17 23 17.2 -0.1**
TPUB Ta-pu 19.69 230 P **P 17 23 15.9 +0.1**
TWGBT Beinan 19.78 228 P **Pn 17 23 18.4 0.0**
TWG Pinlang 19.79 228 P **P 17 23 16.3 -0.6**

WHN Wuhan 19.83 257 P **Pn 17 23 18.9 +0.1**
WHN S **Sn 17 27 07.3 +5.9**
WHN pmax pmax
comp=Z,180nm,1.2s
WHN pmax pmax
comp=Z,3μm,8.0s
WHN L L
comp=Z,14μm,11.7s
WHN L L
comp=Z,20μm,12.6s
WHN L L
comp=Z,32μm,14.2s
LYN LuoYang 19.94 270 P **Pn 17 23 19.5 -0.7**
LYN S **S 17 27 00.0 -2.4**
LYN sS pS 17 27 12.3 -3.2
LYN pmax pmax
comp=Z,33nm,0.9s
LYN pmax pmax
comp=Z,3μm,7.9s
LYN L L
comp=Z,6μm,15.1s
LYN L L
comp=Z,7μm,11.4s
LYN L L
comp=Z,9μm,12.2s
HHC Hu-ho-hao-te 19.97 288 ⇓*i*P **Pn 17 23 19.8 -0.8**
HHC S **S 17 26 55.5 -7.6**
HHC pmax pmax
comp=Z,40nm,1.2s
HHC L L
comp=Z,3μm,12.1s
HHC L L
comp=Z,7μm,13.2s
HHC L L
comp=Z,7μm,13.4s
KNMB Chin-men Tao 20.29 236 P **P 17 23 22.3 -0.1**
BTO2 Baotou 21.24 288 *e*P **P 17 23 34.8 +2.1**
BTO2 pP **sP 17 23 44.2 +5.5**
BTO2 sP pP 17 23 48.1 +11
BTO2 PP **PnPn 17 23 58.8 +6.6**
BTO2 S **S 17 27 25.3 -3.2**
BTO2 sS **pS 17 27 39.3 +2.2**
BTO2 SS **SnSn 17 28 01.7 +11**
BTO2 pmax pmax
comp=Z,38nm,1.3s
BTO2 pmax pmax
comp=Z,2μm,12.0s
BTO2 L L
comp=Z,6μm,11.8s
BTO2 L L
comp=Z,9μm,11.5s
BTO2 L L
comp=Z,13μm,12.6s
PEA0B Petropavlovsk- 21.51 36 P **P 17 23 33.8 -1.5**
PEA0B IAmb IAmb 17 23 41.8
comp=Z,465nm,1.9s
PEA0B Petropavlovsk- 21.51 36 P **P 17 23 33.8 -1.5**
PEA0B pmax pmax
comp=Z,465nm,1.9s
PETK Petropavlovsk- 21.51 36 P **P 17 23 34.6 -0.7**
comp=Z,48nm,1.0s,baz=222,slow=2.3,SNR=10
PETK LR LR 17 32 23.2
comp=Z,1μm,18.1s,baz=204,slow=38
comp=Z,48nm,1.0s
PET Petropavlovsk 21.91 37 P **P 17 23 40.5 +1.0**
PET Petropavlovsk 21.91 37 P **P 17 23 39.2 -0.3**
PET IAmb IAmb 17 23 42.9
comp=Z,709nm,1.8s
PET Petropavlovsk 21.91 37 *e*P **P 17 23 41.1 +1.6**
PET *e*S **S 17 27 41.7 +0.7**
PET pmax pmax
comp=Z,172nm,1.3s
PET pmax pmax
comp=Z,700nm,8.9s
PET MLR MLR
comp=Z,2μm,17.0s
PET MLR MLR
comp=Z,4μm,17.0s
PET Petropavlovsk 21.91 37 P **P 17 23 40.1 +0.6**
comp=Z,173nm,1.6s
CNSH ChangSha 22.02 253 P **P 17 23 41.9 +0.9**
CNSH S **S 17 27 41.7 -1.9**
CNSH pmax pmax
comp=Z,150nm,1.2s
CNSH L L
comp=Z,4μm,12.4s
CNSH L L
comp=Z,4μm,13.2s
CNSH L L
comp=Z,5μm,13.6s
CIT Chita 22.10 319 *e*P **P 17 23 40.8 -0.9**
CIT *e* 17 24 05.2
CIT *e* 17 24 15.0
CIT *e*S **S 17 27 46.7 +1.9**
CIT pmax pmax
comp=Z,354nm,1.9s
XAN Xi'an 22.91 270 ⇓P **P 17 23 49.3 -1.1**
XAN PP **PnPn 17 24 22.2 +7.3**
XAN PcP **PcP 17 27 41.2 +0.4**
XAN S **S 17 27 58.2 -1.7**
XAN pmax pmax
comp=Z,34nm,0.9s
XAN pmax pmax
comp=Z,1μm,6.8s
XAN L L
comp=Z,5μm,11.0s
XAN L L
comp=Z,8μm,13.7s
XAN L L
comp=Z,8μm,13.1s
ENH Enshi 23.75 261 P **P 17 23 57.6 -1.3**
ENH Enshi 23.75 261 IAmb IAmb 17 24 00.3
comp=Z,350nm,1.5s
GZH2 Guangzhou 24.08 242 P **P 17 24 03.1 +1.1**
GZH2 S **S 17 28 23.3 +4.2**
GZH2 L L
comp=Z,14μm,13.5s
GZH2 L L
comp=Z,12μm,13.0s
GZH2 L L
comp=Z,26μm,13.1s
MA2 Magadan 24.10 17 LR LR 17 33 32.2
comp=Z,1μm,20.2s,baz=190,slow=37
MA2 Magadan 24.10 17 P **P 17 24 00.9 -0.9**
MA2 Magadan 24.10 17 P **P 17 24 00.5 -1.4**
MA2 IAmb IAmb 17 24 03.0
comp=Z,180nm,1.0s
MA2 Magadan 24.10 17 *c i*P **P 17 24 01.2 -0.7**
MA2 pmax pmax
comp=Z,233nm,1.2s
MA2 MLR MLR
comp=Z,1μm,16.0s
MA2 Magadan 24.10 17 P **P 17 24 01.0 -0.9**
comp=Z,3μmcomp=Z,228nm,1.1s
ULN Ulaanbaatar 24.27 305 P **P 17 24 02.1 -1.7**
ULN IAmb IAmb 17 24 10.8
comp=Z,147nm,1.0s
ULN Ulaanbaatar 24.27 305 *c i*P **P 17 24 03.5 -0.3**
ULN pmax pmax
comp=Z,182nm,1.1s
ULN MLR MLR
comp=Z,5μm,14.0s
ULN Ulaanbaatar 24.27 305 P **P 17 24 03.3 -0.4**
ULN S **S 17 28 22.9 +0.9**
ULN Ulaanbaatar 24.27 305 P **P 17 24 03.1 -0.7**
ULN pP **pP 17 24 05.4 -2.7**
SZP Santa 24.35 221 P **P 17 24 05.6 +1.1**
GUMO Guam 24.60 161 LR LR 17 32 25.7
comp=Z,650nm,18.5s,baz=344,slow=33
GUMO Guam 24.60 161 P **P 17 24 07.5 +0.7**
GUMO Guam 24.60 161 P **P 17 24 05.8 -1.0**
GUMO Guam 24.60 161 P **P 17 24 05.8 -1.0**
GUMO pmax pmax
comp=Z,516nm,1.2s
SONM Songino Array 24.69 305 P **P 17 24 07.2 -0.4**
comp=Z,34nm,0.8s,baz=112,slow=9.7,SNR=102
SONM PcP **PcP 17 27 44.1 -0.3**
comp=Z,4.2nm,0.6s,baz=112,slow=2.0,SNR=7.9
SONM P3KPbc 17 57 15.4
comp=Z,0.7nm,0.8s,baz=245,slow=4.7,SNR=7.5
comp=Z,34nm,0.8s
SONM Songino Array 24.69 305 P **P 17 24 06.7 -0.9**
SONM IAmb IAmb 17 24 14.9
comp=Z,143nm,1.0s
SONM Songino Array 24.69 305 P **P 17 24 06.7 -0.9**
SONM 17 27 44.1

SONM pmax pmax
comp=Z,143nm,1.0s
YAK Yakutsk 25.23 352 LR LR 17 33 35.7
comp=Z,1μm,20.0s,baz=160,slow=35
YAK Yakutsk 25.23 352 P **P 17 24 11.6 -0.5**
YAK Yakutsk 25.23 352 *e*P **P 17 24 10.1 -2.0**
YAK *e**PP **sP 17 24 18.8 +0.5**
YAK *e* 17 27 43.9
YAK *e*S **S 17 28 34.6 -2.4**
YAK *e*SS **SnSn 17 29 28.5 +0.8**
YAK *e* 17 35 08.5
YAK pmax pmax
comp=Z,284nm,2.0s
YAK pmax pmax
comp=N,154nm,1.4s
YAK pmax pmax
comp=E,32nm,1.8s
YAK smax smax
comp=N,738nm,3.3s
YAK smax smax
comp=E,377nm,4.3s
YAK MLR MLR
comp=Z,5μm,15.0s
YAK MLR MLR
comp=N,3μm,16.0s
YAK MLR MLR
comp=E,625nm,15.0s
BOD Bodaibo 25.52 331 *e*P **P 17 24 12.5 -2.3**
BOD pmax pmax
comp=Z,89nm,1.8s
LZH Lanzhou 26.45 278 *e*P **P 17 24 22.8 -0.9**
LZH PP **PnPn 17 25 03.3 -0.2**
LZH PcP **PcP 17 27 49.9 +1.2**
LZH pmax pmax
comp=Z,130nm,1.3s
LZH pmax pmax
comp=Z,640nm,4.8s
LZH L L
comp=Z,5μm,13.4s
LZH L L
comp=Z,6μm,13.1s
LZH L L
comp=Z,9μm,13.1s
LZDM Lanzhou Array 26.59 277 P **P 17 24 24.1 -1.1**
comp=Z,69nm,0.9s,baz=74,slow=12,SNR=13
LZDM PcP **PcP 17 27 49.3 0.0**
comp=Z,10nm,0.6s,baz=238,slow=1.4,SNR=3.8
LZDM LR LR 17 35 09.0
comp=Z,1μm,21.6s,baz=85,slow=37
comp=Z,69nm,0.9s
IRK Irkutsk 27.31 314 *e*P **P 17 24 28.5 -2.6**
IRK pmax pmax
comp=Z,138nm,1.3s
SEY Seymchan 27.44 15 *ce*P **P 17 24 32.2 +0.1**
SEY pmax pmax
comp=Z,106nm,1.3s
SEY MLR MLR
comp=Z,1μm,16.0s
TLY Talaya 27.49 312 LR LR 17 35 57.2
comp=Z,2μm,18.1s,baz=112,slow=38
TLY Talaya 27.49 312 P **P 17 24 31.2 -1.6**
TLY IAmb IAmb 17 24 40.8
comp=Z,76nm,0.7s
TLY Talaya 27.49 312 *c i*P **P 17 24 32.3 -0.4**
TLY pmax pmax
comp=Z,89nm,0.8s
TLY MLR MLR
comp=Z,3μm,14.0s
TLY Talaya 27.49 312 P **P 17 24 32.8 +0.1**
TLY S **S 17 29 14.7 +1.7**
GYA Guiyang 27.71 256 ⇑P **P 17 24 33.5 -1.5**
GYA PcP **PcP 17 27 52.0 +0.2**
GYA S **S 17 29 13.8 -3.2**
GYA pmax pmax
comp=Z,52nm,1.3s
GYA pmax pmax
comp=Z,500nm,7.7s
GYA L L
comp=Z,5μm,13.8s
GYA L L
comp=Z,5μm,14.2s
GYA L L
comp=Z,10μm,14.1s
CD2 Chengdu 28.05 267 P **P 17 24 36.9 -1.0**
CD2 S **S 17 29 19.9 -2.3**
CD2 pmax pmax
comp=Z,70nm,0.9s
CD2 pmax pmax
comp=Z,580nm,7.8s
CD2 L L
comp=Z,9μm,12.7s
CD2 L L
comp=Z,10μm,15.0s
CD2 L L
comp=Z,10μm,14.3s
GTA2 Gaotai 29.06 286 *e*P **P 17 24 46.0 -1.0**
GTA2 PcP **PcP 17 27 55.4 +0.5**
GTA2 PcS **PcS 17 31 37.2 -0.6**
GTA2 pmax pmax
comp=Z,23nm,1.4s
GTA2 pmax pmax
comp=Z,450nm,7.8s
GTA2 L L
comp=Z,4μm,12.7s
GTA2 L L
comp=Z,4μm,12.7s
GTA2 L L
comp=Z,5μm,11.1s
MOY Mondy 29.06 311 *e*P **P 17 24 44.9 -2.0**
MOY pmax pmax
comp=Z,29nm,1.9s
QIZ Qiongzhong 29.79 240 P **P 17 24 55.5 +2.1**
QIZ S **S 17 29 51.5 +2.0**
QIZ pmax pmax
comp=Z,240nm,5.6s
QIZ L L
comp=Z,3μm,13.9s
QIZ L L
comp=Z,3μm,12.4s
QIZ L L
comp=Z,4μm,12.9s
SHEM Shemya Is, Ala 30.15 47 LR LR 17 35 56.4
comp=Z,531nm,21.2s,baz=300,slow=34
KNGR Kungurtug, Tuv 30.96 308 *i* P **P 17 25 02.4 -1.2**
KNGR pmax pmax
comp=Z,23nm,1.0s
KNGR MLR MLR
comp=Z,3μm,14.0s
KMI2 Kunming 31.41 257 ⇑P **P 17 25 07.3 -0.7**
KMI2 PP **PP 17 26 18.1 -0.8**
KMI2 S **S 17 30 10.7 -4.7**
KMI2 pmax pmax
comp=Z,50nm,1.2s
KMI2 pmax pmax
comp=Z,240nm,6.3s
KMI2 L L
comp=Z,4μm,14.0s
KMI2 L L
comp=Z,4μm,13.8s
KMI2 L L
comp=Z,5μm,14.0s
PZH PanZhiHua 31.53 260 P **P 17 25 07.5 -1.4**
PZH PcP **PcP 17 28 03.8 +2.2**
PZH S **S 17 30 13.9 -3.1**
PZH pmax pmax
comp=Z,30nm,0.9s
PZH pmax pmax
comp=Z,260nm,5.5s
PZH L L
comp=Z,3μm,13.9s
PZH L L
comp=Z,4μm,13.1s
PZH L L
comp=Z,5μm,13.7s
DAV Davao City (W) 31.73 202 LR LR 17 39 15.7
comp=Z,1μm,18.1s,baz=38,slow=39
GOMU GeErMu 33.53 281 P **P 17 25 25.3 -1.4**
GOMU PcP **PcP 17 28 06.5 -0.8**
GOMU S **S 17 30 46.3 -2.2**
GOMU pmax pmax
comp=Z,21nm,1.0s
GOMU L L
comp=Z,2μm,14.1s
GOMU L L
comp=Z,3μm,14.3s
GOMU L L

comp=Z,5µm,14.5s
TIXI Tiksi 34.74 356 LR LR 17 39 53.0
comp=Z,867nm,18.2s,baz=190,slow=37
TIXI Tiksi 34.74 356 P **P** **17 25 35.4 -0.9**
TIXI IAmb IAmb 17 25 36.4
comp=Z,93nm,1.0s
TIXI Tiksi 34.74 356*c i*P **P** **17 25 35.3 -1.0**
TIXI pmax pmax
comp=Z,122nm,1.1s
TIXI MLR MLR
comp=Z,770nm,13.0s
TNCH TengChong 34.78 261 ⇑P **P** **17 25 37.0 -0.4**
TNCH S **S** **17 31 02.8 -4.9**
TNCH pmax pmax
comp=Z,35nm,1.4s
TNCH pmax pmax
comp=Z,380nm,5.2s
TNCH L L
comp=Z,1µm,11.6s
TNCH L L
comp=Z,4µm,12.8s
TNCH L L
comp=Z,5µm,13.8s
BILL Bilibino 34.95 19 P **P** **17 25 37.0 -1.1**
BILL IAmb IAmb 17 25 40.1
comp=Z,208nm,1.5s
BILL Bilibino 34.95 19*ce*P **P** **17 25 37.5 -0.6**
BILL pmax pmax
comp=Z,159nm,1.5s
BILL MLR MLR
comp=Z,1µm,15.0s
MYLDM Lahad Datu 36.05 212 P **P** **17 25 49.6 +1.6**
MYLDM Lahad Datu 36.05 212 **P** **17 25 48.2 +0.2**
MYLDM IAmb IAmb 17 25 51.0
comp=Z,121nm,1.3s
TNTI Ternate 37.32 196 P **P** **17 25 59.1 +0.2**
TNTI Ternate 37.32 196 **P** **17 25 57.8 -1.1**
TNTI IAmb IAmb 17 26 06.0
comp=Z,218nm,1.8s
TNTI Ternate 37.32 196 P **P** **17 25 58.6 -0.3**
comp=Z,61nm,1.6s
DGZ Jazzator, Alta 37.33 306 *i*P **P** **17 25 57.7 -1.2**
DGZ pmax pmax
comp=Z,33nm,0.9s
DGZ MLR MLR
comp=Z,4µm,15.0s
WMQ Urumqi 37.50 296 *e*P **P** **17 26 03.0 +2.7**
WMQ PcP **PcP** **17 28 19.0 +0.6**
WMQ S **S** **17 31 51.5 +2.8**
WMQ pmax pmax
comp=Z,14nm,1.1s
WMQ L L
comp=Z,3µm,14.9s
WMQ L L
comp=Z,3µm,9.7s
WMQ L L
comp=Z,900nm,18.3s
CHTO Chiang Mai 37.86 252 P **P** **17 26 03.4 -0.1**
CHTO Chiang Mai 37.86 252 P **P** **17 26 02.2 -1.3**
CHTO Chiang Mai 37.86 252 P **P** **17 26 02.2 -1.3**
CHTO pmax pmax
comp=Z,22nm,0.9s
CHTO Chiang Mai 37.86 252 P **P** **17 26 03.8 +0.3**
CHTO Chiang Mai 37.86 252 P **P** **17 26 02.8 -0.7**
comp=Z,23nm,0.8s
MWPI Manokwari, Pap 38.05 185 P **P** **17 26 05.6 +0.5**
CM31 Chiang Mai Arr 38.08 251 P **P** **17 26 03.9 -1.5**
CM31 Chiang Mai Arr 38.08 251 P **P** **17 26 06.0 +0.7**
SNR=9.1
CMAR Chiang Mai Arr 38.08 251 P **P** **17 26 04.3 -1.0**
comp=Z,6.2nm,0.8s,baz=47,slow=7.0,SNR=50
CMAR PcP **PcP** **17 28 21.2 +0.7**
comp=Z,3.9nm,0.8s,baz=14,slow=2.2,SNR=6.0
CMAR LR LR 17 42 33.4
comp=Z,1µm,18.4s,baz=55,slow=38
comp=Z,6.2nm,0.8s
CMAR Chiang Mai Arr 38.08 251 *i*P **P** **17 26 05.3 0.0**
CMAR pmax pmax
comp=Z,6.0nm,0.8s
SWI Sorong 38.25 189 P **P** **17 26 06.1 -0.6**
SIJI Sorong 38.26 189 LR LR 17 40 18.2
comp=Z,862nm,20.1s,baz=354,slow=34
SIJI Sorong 38.26 189 P **P** **17 26 06.3 -0.5**
LSA Lhasa 38.57 273 P **P** **17 26 08.5 -1.5**
LSA Lhasa 38.57 273 P **P** **17 26 06.1 -3.9**
LSA S **S** **17 32 01.0 -5.0**
LSA pmax pmax
comp=Z,6.0nm,1.0s
LSA L L
comp=Z,1µm,12.6s
LSA L L
comp=Z,3µm,13.3s
LSA L L
comp=Z,4µm,13.2s
GTOI Gorontalo 38.59 203 P **P** **17 26 08.1 -1.5**
TOLI2 Tolitoli 38.88 206 P **P** **17 26 11.8 -0.3**
TOLI2 Tolitoli 38.88 206 P **P** **17 26 10.1 -2.0**
MRSI Marisa 39.08 204 P **P** **17 26 13.5 -0.2**
ZALV Zalesovo Beam 39.10 312 P **P** **17 26 10.9 -2.7**
comp=Z,5.2nm,0.8s,baz=96,slow=6.1,SNR=15
ZALV PcP **PcP** **17 28 22.3 -0.8**
comp=Z,18nm,0.7s,baz=96,slow=2.7,SNR=21
ZALV LR LR 17 40 45.6
comp=Z,532nm,21.1s,baz=94,slow=34
comp=Z,5.2nm,0.8s
ZALV Zalesovo Beam 39.10 312 *i*P **P** **17 26 12.0 -1.6**
ZALV pmax pmax
comp=Z,13nm,0.8s
ZSN Zaisan 39.12 302*c i*P **P** **17 26 12.4 -1.4**
ZSN *e*S **S** **17 32 12.6 -0.3**
ZSN Zaisan 39.12 302 ⇑*i*P **P** **17 26 12.5 -1.4**
ZSN *e*S **S** **17 32 12.6 -0.3**
JAY Jayapura 39.70 174 LR LR 17 41 49.3
comp=Z,555nm,18.7s,baz=1.0,slow=35
JAY Jayapura 39.70 174 P **P** **17 26 18.1 -0.8**
comp=Z,51nm,1.1s
GENI Genyem 39.73 175 P **P** **17 26 20.8 +1.7**
GENI Genyem 39.73 175 P **P** **17 26 18.4 -0.7**
SHL Shillong 39.79 266 P **P** **17 26 18.4 -1.4**
SHL pmax pmax
comp=Z,24nm,0.8s
SHL Shillong 39.79 266 P **P** **17 26 19.1 -0.8**
SNR=7.5
SPIA Saint Paul Isl 39.87 43 P **P** **17 26 19.6 -0.3**
baz=263
MPSI Mapaga 39.92 207 P **P** **17 26 20.6 -0.1**
SANI Sanana 40.36 197 P **P** **17 26 23.0 -1.4**
SANI Sanana 40.36 197 P **P** **17 26 22.5 -1.9**
comp=Z,1µmcomp=Z,63nm,1.4s
GAMB Gambell 40.47 32 P **P** **17 26 25.1 +0.4**
baz=254
APSI Ampana 40.48 204 P **P** **17 26 25.8 +0.4**
MK31 Makanchi Array 40.93 301*ce*P **P** **17 26 27.1 -1.8**
MKAR Makanchi Array 40.93 301 P **P** **17 26 26.8 -2.1**
comp=Z,10nm,0.8s,baz=92,slow=9.6,SNR=36
MKAR PcP **PcP** **17 28 27.9 -1.2**
comp=Z,9.2nm,0.8s,baz=86,slow=5.0,SNR=8.0
MKAR ScP **ScP** **17 32 17.8 -0.6**
comp=Z,1.4nm,0.8s,baz=71,slow=4.7,SNR=5.1
MKAR LR LR 17 43 31.0
comp=Z,1µm,18.4s,baz=82,slow=36
comp=Z,10nm,0.8s
MKAR Makanchi Array 40.93 301 P **P** **17 26 27.0 -1.9**
MKAR Makanchi Array 40.93 301 *i*P **P** **17 26 27.7 -1.2**
MKAR pmax pmax
comp=Z,8.0nm,0.6s
PCI Palu 41.09 206 P **P** **17 26 30.0 -0.4**
KRAI Karang Ratu 41.10 193 P **P** **17 26 30.0 -0.5**
NLAI Namlea 41.27 195 P **P** **17 26 32.7 +0.8**
comp=Z,1µmcomp=Z,1µmcomp=Z,55nm,1.7s
SBUM Sibu 41.37 219 P **P** **17 26 33.6 +0.8**
SBUM Sibu 41.37 219 **P** **17 26 30.5 -2.2**
BRDH Bariadhala 41.40 263 LR LR 17 46 34.4
comp=Z,1µm,18.8s,baz=80,slow=40
AAI Ambon 41.49 193 P **P** **17 26 34.2 +0.5**
UNV Unalaska Valle 41.81 48 P **P** **17 26 36.8 +0.9**
baz=270
SEM Semipalatinsk 41.94 307 *e*P **P** **17 26 35.2 -2.1**
SEM MLR MLR
comp=Z,2µm,14.0s
SEM Semipalatinsk 41.94 307 *e*P **P** **17 26 35.2 -2.1**
SEM LR LR 17 44 09.8
comp=Z,2µm,14.0s
BNDI Bandanaira 42.03 190 P **P** **17 26 39.0 +0.9**
BNDI Bandanaira 42.03 190 P **P** **17 26 38.1 0.0**
M11K Mekoryuk 42.34 38 P **P** **17 26 41.8 +1.6**
baz=263
TNA Tin City 42.50 30 P **P** **17 26 40.5 -1.0**
TNA Tin City 42.50 30 P **P** **17 26 42.2 +0.8**
baz=256,SNR=8.1
EVN Everest 42.75 273 P **P** **17 26 43.5 -1.3**
KURK Kurchatov 42.95 307 **PcP** **17 28 34.9 -0.7**
KURK Kurchatov 42.95 307 P **P** **17 26 42.7 -2.6**
KURK Kurchatov 42.95 307*ce*P **P** **17 26 43.3 -2.0**
KURK pmax pmax
comp=Z,54nm,0.9s
KURK MLR MLR
comp=Z,3µm,15.0s
KURK Kurchatov 42.95 307 P **P** **17 26 43.6 -1.7**
KURBB Kurchatov Arra 43.01 307 P **P** **17 26 43.9 -1.9**
comp=Z,21nm,0.7s,baz=85,slow=8.7,SNR=127
KURBB PcP **PcP** **17 28 34.9 -1.0**
comp=Z,11nm,0.8s,baz=87,slow=3.7,SNR=11
KURBB LR LR 17 44 44.0
comp=Z,870nm,19.9s,baz=72,slow=36
comp=Z,21nm,0.7s
F14K Arctic Creek 43.13 31 P **P** **17 26 47.8 +1.2**
baz=258
K13K Kusilvak Mount 43.27 36 P **P** **17 26 49.0 +1.3**
baz=263,SNR=27
ANM Nome 43.35 32 P **P** **17 26 49.3 +1.0**
ANM IAmb IAmb 17 26 51.1
comp=Z,189nm,1.6s
ANM Nome 43.35 32 P **P** **17 26 49.3 +1.0**
ANM pmax pmax
comp=Z,189nm,1.6s
ANM Nome 43.35 32 P **P** **17 26 49.8 +1.4**
baz=260,SNR=32
SHLS Shalkode 43.52 296*e*P **P** **17 26 46.1 -4.1**
SHLS Shalkode 43.52 296*e*P **P** **17 26 46.1 -4.1**
FALS False Pass 43.60 46 P **P** **17 26 51.6 +1.2**
baz=272
RABL Rabaul 43.60 158 P **P** **17 26 50.3 -0.5**
RABL IAmb IAmb 17 26 51.7
comp=Z,84nm,0.9s
KRVT Keravat (AS076 43.66 158 LR LR 17 43 12.7
comp=Z,51nm,21.9s,baz=298,slow=34
M13K Dall Lake 43.75 38 P **P** **17 26 53.4 +1.8**
baz=266
UZB Uzunbulak 43.84 297*e*P **P** **17 26 51.2 -1.5**
UZB Uzunbulak 43.84 297*e*P **P** **17 26 51.2 -1.5**
F15K North Star Dit 43.86 31 P **P** **17 26 53.7 +1.2**
baz=259,SNR=40
J14K Nanvaranak Lak 43.88 35 P **P** **17 26 53.7 +1.1**
baz=263,SNR=16
TDK Taldyqorghan 43.89 299*e*P **P** **17 26 51.5 -1.5**
TDK pmax pmax
comp=Z,59nm,1.9s
TDK MLR MLR
comp=Z,3µm,14.0s
TDK Taldyqorghan 43.89 299*e*P **P** **17 26 51.5 -1.5**
comp=Z,59nm,1.9s
TDK LR LR 17 45 20.7
comp=Z,3µm,14.4s
G15K Niukluk 43.99 32 P **P** **17 26 54.8 +1.4**
baz=260,SNR=76
KPKS Kokpek 44.01 297*e*P **P** **17 26 52.5 -1.5**
KPKS Kokpek 44.01 297*e*P **P** **17 26 52.6 -1.5**
L14K Kuka Creek 44.15 37 P **P** **17 26 55.9 +1.1**
baz=266
C16K Lisburne Hills 44.16 27 P **P** **17 26 54.8 +0.1**
baz=256
SATY Saty 44.29 297*e*P **P** **17 26 54.9 -1.5**
SATY Saty 44.29 297*e*P **P** **17 26 55.0 -1.5**
M14K Bethel 44.46 38 P **P** **17 26 58.5 +1.2**
baz=267
N14K Kuskwak Cree 44.56 39 P **P** **17 26 58.9 +0.9**
baz=268,SNR=8.1
H16K Elim 44.70 32 P **P** **17 27 00.2 +1.1**
baz=263
L15K Ungalak Mounta 44.74 37 P **P** **17 27 00.4 +0.9**
baz=266,SNR=12
G16K Koyuk River 44.75 31 P **P** **17 27 00.3 +0.8**
baz=262,SNR=43
O14K Tigyukauivet M 44.75 40 P **P** **17 27 00.6 +1.0**
baz=269,SNR=7.1
K15K Wolf Creek Mou 44.77 36 P **P** **17 27 01.1 +1.3**
baz=266,SNR=23
D17K Noatak River 44.86 28 P **P** **17 27 01.0 +0.7**
baz=259
KAPI Kappang 44.95 205 LR LR 17 46 04.2
comp=Z,324nm,21.5s,baz=12,slow=36
KAPI Kappang 44.95 205 P **P** **17 27 02.5 +0.8**
KAPI Kappang 44.95 205 P **P** **17 27 00.9 -0.8**
KAPI IAmb IAmb 17 27 02.8
comp=Z,75nm,1.1s
KAPI Kappang 44.95 205 P **P** **17 27 00.9 -0.8**
KAPI pmax pmax
comp=Z,75nm,1.1s
KAPI Kappang 44.95 205 P **P** **17 27 01.4 -0.3**
KAPI P **P** **17 27 01.4 -0.3**
KAPI S **S** **17 33 41.4 +1.9**
KAPI S **S** **17 33 41.4 +1.9**
C17K DeLong Mountai 44.98 27 P **P** **17 27 02.0 +0.6**
baz=258
RDOG Red Dog Mine 44.99 27 P **P** **17 27 00.7 -0.8**
RDOG Red Dog Mine 44.99 27 P **P** **17 27 02.0 +0.5**
baz=258
TARG Taragay, Kyrgy 45.04 295 P **P** **17 27 02.4 -0.3**
TARG pmax pmax
comp=Z,22nm,0.8s
M15K Kasigluk River 45.08 38 P **P** **17 27 03.2 +1.0**
baz=268
E17K Hotham Inlet 45.22 29 P **P** **17 27 04.0 +0.8**
baz=261
MDOK Medeo 45.24 297*e*P **P** **17 27 02.5 -1.4**
MDOK Medeo 45.24 297*e*P **P** **17 27 02.5 -1.4**
MDOK LR LR 17 46 19.6
SDPT Sand Point 45.26 46 P **P** **17 27 04.3 +0.6**
baz=274
J16K Anvik River 45.27 34 P **P** **17 27 04.9 +1.2**
baz=266
I17K Unalakleet 45.28 34 P **P** **17 27 05.0 +1.2**
baz=265
AAA Alma-Ata 45.32 297*e*P **P** **17 27 03.0 -1.5**
AAA pmax pmax
comp=Z,36nm,1.7s
AAA Alma-Ata 45.32 297*e*P **P** **17 27 03.1 -1.5**
comp=Z,36nm,1.7s
AAA LR LR 17 46 13.2
TNSS Tian-Shan 45.34 297*e*P **P** **17 27 03.1 -1.9**
TNSS Tian-Shan 45.34 297*e*P **P** **17 27 03.1 -1.9**
F17K Baldwin Pennin 45.35 30 P **P** **17 27 05.3 +1.0**
baz=262
N15K Kwethluk River 45.36 39 P **P** **17 27 05.6 +1.1**
baz=269
KDJ Kajisay 45.40 296 P **P** **17 27 04.6 -0.6**
KDJ pmax pmax
comp=Z,13nm,0.8s
G17K Kiwalik Mounta 45.47 31 P **P** **17 27 06.3 +1.0**
baz=263,SNR=50
O15K Ungalikthiuk R 45.49 40 P **P** **17 27 06.5 +1.0**
baz=270,SNR=21
L16K Owhat River 45.70 37 P **P** **17 27 07.9 +0.7**
baz=268
H17K Granite Mounta 45.72 32 P **P** **17 27 08.6 +1.3**
baz=264
C18K Utukok River 45.73 27 P **P** **17 27 07.7 +0.3**
baz=260,SNR=46
E18K Tukpahlearik C 45.75 29 P **P** **17 27 08.5 +1.1**
baz=261,SNR=44
CHNA Chernabura Isl 45.81 46 P **P** **17 27 09.1 +1.1**
baz=275
KULM Kulim 45.86 235 P **P** **17 27 10.1 +1.2**
KULM Kulim 45.86 235 **P** **17 27 08.2 -0.8**
KULM IAmb IAmb 17 27 10.8
comp=Z,60nm,1.3s
M16K Timber Creek 45.94 38 P **P** **17 27 10.0 +1.0**
baz=269,SNR=14
F18K Selawik 46.01 30 P **P** **17 27 10.4 +1.0**
baz=263
N16K Nishlik Lake 46.02 38 P **P** **17 27 10.8 +1.1**
baz=270,SNR=21
A19K Wainwright 46.07 25 P **P** **17 27 11.1 +1.1**
baz=258,SNR=33
BOOM Boomskoye usch 46.19 296 IAmb IAmb 17 28 48.5
comp=Z,60nm,0.8s
L17K Donlin 46.27 36 P **P** **17 27 13.2 +1.5**
baz=269,SNR=26
K17K Iditarod 46.29 35 P **P** **17 27 13.3 +1.5**
baz=268,SNR=21
G18K Tagagawik 46.33 31 P **P** **17 27 12.8 +0.7**
baz=265
O16K Kokwok River B 46.37 40 P **P** **17 27 13.3 +0.9**
baz=271
C19K Lookout Ridge 46.38 26 P **P** **17 27 13.4 +0.9**
baz=261
H18K Honhosa River 46.39 32 P **P** **17 27 13.5 +1.0**
baz=266,SNR=30
P16K Nushagak River 46.44 40 P **P** **17 27 12.8 -0.2**
P16K Nushagak River 46.44 40 P **P** **17 27 14.2 +1.3**
baz=272,SNR=15
MYKOM Kota Tinggi 46.55 229 P **P** **17 27 15.7 +1.3**
M17K Holitna River 46.67 37 P **P** **17 27 16.4 +1.6**
baz=270,SNR=16
R16K Pilot Point 46.73 42 P **P** **17 27 15.4 +0.1**
baz=274
F19K Shaleruckik Mo 46.77 30 P **P** **17 27 16.0 +0.5**
baz=265,SNR=37
N17K Nushagak Hills 46.81 38 P **P** **17 27 16.7 +0.9**
baz=271
BRZS Berezniki 46.82 307*e*P **P** **17 27 14.8 -1.3**
BRZS Berezniki 46.82 307*e*P **P** **17 27 14.9 -1.3**
D19K Kuna River 46.83 27 P **P** **17 27 16.7 +0.8**
baz=263
O17K Koliganek Bris 46.87 39 P **P** **17 27 17.5 +1.1**
baz=272
SGDS Sogindy 46.88 298*e*P **P** **17 27 15.3 -1.5**
BTLS Baital 46.90 300*e*P **P** **17 27 15.6 -1.2**
BTLS Baital 46.90 300*e*P **P** **17 27 15.7 -1.2**
PBA Port Blair 46.98 249 P **P** **17 27 18.4 +0.6**
G19K Purcell Mounta 46.99 31 P **P** **17 27 17.7 +0.5**
baz=266,SNR=26
GCSA Galena City Sc 47.00 32 P **P** **17 27 17.0 -0.2**
baz=268
J18K Innoko River 47.03 34 P **P** **17 27 18.2 +0.6**
baz=269,SNR=13
L18K Granite Mounta 47.03 36 P **P** **17 27 18.9 +1.3**
baz=270,SNR=19
E19K Redstone River 47.04 29 P **P** **17 27 18.5 +0.9**
baz=265
Q16K King Salmon 47.15 41 P **P** **17 27 19.2 +0.7**
baz=273
AAK Ala-Archa 47.19 297 LR LR 17 46 33.8
comp=Z,1µm,18.6s,baz=70,slow=36
AAK Ala-Archa 47.19 297 P **PcP** **17 28 50.6 0.0**
SNR=5.4
AAK Ala-Archa 47.19 297 P **P** **17 27 17.8 -1.5**
AAK Ala-Archa 47.19 297 P **P** **17 27 18.4 -0.9**
AAK Ala-Archa 47.19 297*ce*P **P** **17 27 18.0 -1.3**
AAK pmax pmax
comp=Z,11nm,1.0s
AAK MLR MLR
comp=Z,858nm,13.0s
AAK Ala-Archa 47.19 297 P **P** **17 27 18.5 -0.8**
P17K Kvichak River 47.23 40 P **P** **17 27 18.0 -1.1**
P17K Kvichak River 47.23 40 P **P** **17 27 20.3 +1.1**
baz=273,SNR=6.8
B20K Meade River 47.36 25 P **P** **17 27 20.8 +0.8**
baz=262
R17L Mt. Peulik Vol 47.38 42 P **P** **17 27 20.9 +0.5**
baz=275
D20K Etivluk River 47.40 27 P **P** **17 27 21.3 +0.9**
baz=264
KSH2 Kashi 47.41 292 P **P** **17 27 20.6 -0.5**
KSH2 pmax pmax
comp=Z,10.0nm,1.6s
KSH2 L L
comp=Z,1µm,11.7s
KSH2 L L
comp=Z,2µm,12.0s
KSH2 L L
comp=Z,3µm,11.7s
N18K Kilae Creek 47.44 38 P **P** **17 27 22.1 +1.3**
baz=272
M18K Stony River 47.45 37 P **P** **17 27 22.2 +1.3**
baz=272
E20K Nigu River 47.51 28 P **P** **17 27 22.3 +0.9**
baz=265
ARLS Aral 47.52 296 P **P** **17 27 21.6 -0.3**
ARLS pmax pmax
comp=Z,16nm,1.3s
J19K Poorman 47.52 34 P **P** **17 27 22.2 +0.8**
baz=269,SNR=27
Q17K Contact Creek 47.58 41 P **P** **17 27 21.8 -0.3**
baz=274
F20K Avaraart Lake 47.59 29 P **P** **17 27 22.8 +0.9**
baz=266
MMRI Maumere 47.63 200 P **P** **17 27 22.0 -0.8**
MMRI Maumere 47.63 200 P **P** **17 27 20.6 -2.1**
A21K Barrow 47.72 24 P **P** **17 27 23.6 +0.8**
baz=262,SNR=30
BVAR Borovoye Array 47.74 312 P **P** **17 27 21.5 -1.8**
comp=Z,4.0nm,0.8s,baz=97,slow=7.6,SNR=15
BVAR PcP **PcP** **17 28 52.1 -0.2**
comp=Z,10nm,0.7s,baz=64,slow=3.4,SNR=10
BVAR LR LR 17 48 56.2
comp=Z,569nm,19.0s,baz=77,slow=38
comp=Z,4.0nm,0.8s
BORK Borovoye 47.78 312 P **P** **17 27 21.2 -2.4**
BORK Borovoye 47.78 312*ce*P **P** **17 27 21.5 -2.1**
BORK pmax pmax
comp=Z,13nm,1.1s
BORK MLR MLR
comp=Z,1µm,14.0s
O18K Koktuh Hills 47.82 39 P **P** **17 27 24.9 +1.1**
baz=274,SNR=5.9
P18K Big Mountain, 47.84 40 P **P** **17 27 24.9 +0.9**
baz=274,SNR=7.5
H20K Anotleneega Mo 47.87 31 P **P** **17 27 25.0 +0.9**
baz=269
ACHA Angle Creek He 47.88 41 IAmb IAmb 17 27 25.5
comp=Z,114nm,2.0s
L19K White Mountain 47.89 36 P **P** **17 27 25.4 +1.1**
baz=272,SNR=12
C21K Knifeblade Rid 48.10 27 P **P** **17 27 27.0 +1.2**
baz=265,SNR=39
M19K Big River Lodg 48.12 36 P **P** **17 27 27.5 +1.4**
baz=272
N19K Bonanza Creek 48.13 38 P **P** **17 27 27.3 +1.1**
baz=273,SNR=5.7
B21K Ikpikpuk River 48.20 26 P **P** **17 27 27.5 +1.0**
baz=265,SNR=37
SOEI Soe 48.20 197 P **P** **17 27 27.6 +0.3**
SOEI Soe 48.20 197 P **P** **17 27 24.4 -2.8**
A22K Sinclair Lake 48.21 24 P **P** **17 27 27.5 +0.9**
baz=264
K20K Telida 48.22 34 P **P** **17 27 28.0 +1.2**
baz=271
O19K Port Alsworth 48.25 39 P **P** **17 27 27.7 +0.7**
baz=274
E21K Killik River 48.34 28 P **P** **17 27 28.3 +0.5**
baz=267
IMAR Indian Mountai 48.35 31 P **P** **17 27 27.6 -0.2**
G21K Allakaket 48.45 30 P **P** **17 27 29.3 +0.8**
baz=269
F21K Alatna River 48.48 29 P **P** **17 27 29.4 +0.6**
baz=268
ARSB Arslanbob 48.64 296 IAmb IAmb 17 27 59.3
comp=Z,56nm,1.4s
B22K Teshekpuk Lake 48.66 25 P **P** **17 27 30.7 +0.6**
baz=266
SII Sitkinak Islan 48.67 43 P **P** **17 27 30.3 -0.1**
baz=277
Q19K Cape Douglas, 48.69 40 P **P** **17 27 30.2 -0.3**
baz=276
M20K Styx River 48.72 36 P **P** **17 27 32.1 +1.4**
baz=274
H21K Melozitna Rive 48.73 31 P **P** **17 27 31.6 +0.8**
baz=270,SNR=20
P19K Oil Pt 48.84 39 P **P** **17 27 33.5 +1.8**
baz=275
PSI Prapat 48.85 235 P **P** **17 27 32.6 +0.2**
PSI Prapat 48.85 235 P **P** **17 27 32.4 0.0**
PSI pmax pmax
comp=Z,31nm,1.1s
CHUM Lake Minchumin 48.99 34 P **P** **17 27 34.2 +1.5**
baz=272,SNR=16
OHAK Old Harbor 49.08 43 P **P** **17 27 35.5 +2.1**
OHAK Old Harbor 49.08 43 P **P** **17 27 33.3 -0.2**
OHAK IAmb IAmb 17 27 34.9
comp=Z,177nm,2.0s
OHAK Old Harbor 49.08 43 P **P** **17 27 33.2 -0.2**
baz=277
I21K Tanana 49.09 32 P **P** **17 27 34.8 +1.3**
baz=272
PPLA Purkeypile 49.09 35 P **P** **17 27 34.9 +1.2**
baz=273,SNR=8.4
PLAI Plampang 49.18 205 P **P** **17 27 36.2 +1.5**

N20K Mount Spurr 49.20 37 P P 17 27 35.7 +1.2
baz=275
SPCR Spurr Chakacha 49.20 37 P P 17 27 35.8 +1.3
baz=275,SNR=13
ARK Arkit 49.23 297 P P 17 27 35.1 +0.1
ARK pmax pmax
comp=Z,25nm,1.3s
H22K Ishtalitna Cre 49.32 31 P P 17 27 36.6 +1.3
baz=272
DZA Taraz 49.35 298 *eP* P 17 27 34.4 -1.5
DZA Taraz 49.35 298 *eP* P 17 27 34.4 -1.5
Q20K Shuyak Island 49.38 41 P P 17 27 36.5 +0.7
baz=277
KDAK Kodiak Island 49.38 42 LR LR 17 50 33.9
comp=Z,465nm,19.7s,baz=232,slow=39
KDAK Kodiak Island 49.38 42 P P 17 27 34.8 -1.0
KDAK IAmb IAmb 17 27 39.6
comp=Z,104nm,1.6s
KDAK Kodiak Island 49.38 42 *i* P P 17 27 35.9 +0.1
KDAK pmax pmax
comp=Z,109nm,1.9s
KDAK MLR MLR
comp=Z,574nm,19.0s
KDAK Kodiak Island 49.38 42 P P 17 27 35.7 -0.1
baz=278
BKNI Bangkinang 49.42 230 P P 17 27 38.5 +1.9
SKT Skwentna 49.46 36 P P 17 27 36.6 +0.2
baz=275,SNR=7.4
BPAW Bear Paw Mtn. 49.56 33 P P 17 27 38.0 +0.9
baz=273,SNR=15
D23K Nanushuk River 49.56 27 P P 17 27 38.0 +1.0
baz=270,SNR=34
C23K Itkillik River 49.60 26 P P 17 27 38.3 +1.0
baz=269
MLY Manley 49.62 32 P P 17 27 38.6 +1.1
baz=273,SNR=20
HOM Homer 49.64 39 P P 17 27 37.9 +0.2
baz=277
DRS Darwin Rock St 49.71 188 P P 17 27 38.4 -0.2
AUDHS Darwin High Sc 49.72 188 P P 17 27 38.0 -0.8
COLD Coldfoot 49.76 29 P P 17 27 39.4 +0.9
baz=271,SNR=25
CAPN Captain Cook N 49.76 38 P P 17 27 39.6 +1.0
baz=276
L22K Petersville 49.77 35 IAmb IAmb 17 27 40.1
comp=Z,36nm,0.6s
KDU Kakadu 49.81 186 P P 17 27 39.0 -0.5
comp=Z,38nm,0.9s
G23K Bananza Creek 49.84 30 P P 17 27 40.2 +1.0
baz=272
PMBI Palembang 49.85 224 P P 17 27 41.6 +1.8
KKAR Karatay Array 49.87 299 P 17 27 37.5 -2.3
KKAR Karatay Array 49.87 299 P P 17 27 37.5 -2.3
TRKS Terek-Say 49.90 297 P P 17 27 39.1 -1.1
TRKS pmax pmax
comp=Z,27nm,1.1s
TRF Thorofare Moun 49.91 34 P P 17 27 40.2 +0.2
baz=275,SNR=9.1
E23K Chandalar 49.96 28 P P 17 27 41.3 +1.1
baz=271,SNR=38
TOLK Toolik Lake Re 49.97 27 P P 17 27 41.0 +0.8
baz=271,SNR=22
DRK Karamyk 50.07 294 IAmb IAmb 17 27 59.5
comp=Z,76nm,1.7s
BRSE Bradley Lake S 50.08 39 P P 17 27 41.2 +0.1
baz=277
MTN Manton Dam 50.09 187 P P 17 27 41.1 -0.4
comp=Z,256nm,0.8s
MTN Manton Dam 50.09 187 P P 17 27 40.7 -0.9
M22K Willow 50.15 36 P P 17 27 41.4 -0.1
baz=276
JAGI Jajag, Banyuwa 50.19 210 P P 17 27 43.4 +1.0
I23K Minto, Yukon-K 50.19 32 P P 17 27 43.0 +1.1
baz=274,SNR=14
D24K Happy Valley 50.23 27 P P 17 27 43.0 +0.9
baz=271
C24K Franklin Bluff 50.26 26 P P 17 27 42.9 +0.6
baz=271
NEA2 Nenana 50.36 33 P P 17 27 44.1 +0.9
baz=275,SNR=19
BRLS Boroldoy 50.36 299 *c i* P P 17 27 43.5 0.0
BRLS Boroldoy 50.36 299 ⇑ *i* P P 17 27 43.6 0.0
E24K Your Creek 50.38 28 P P 17 27 44.3 +0.9
baz=272
RC01 Rabbit Creek A 50.41 37 IAmb IAmb 17 27 44.8
comp=Z,68nm,1.2s
RC01 Rabbit Creek A 50.41 37 P P 17 27 43.6 0.0
baz=277,SNR=9.0
O22K Cooper Landing 50.49 38 P P 17 27 44.1 -0.1
baz=278
MCK McKinley 50.49 34 P P 17 27 44.5 +0.3
baz=276,SNR=14
IUG Iuzhnay 50.49 298 *c i* P P 17 27 43.3 -1.3
IUG pmax pmax
comp=Z,26nm,1.1s
IUG Iuzhnay 50.49 298 ⇑ *i* P P 17 27 43.3 -1.3
comp=Z,26nm,1.1s
BTK Batken 50.60 295 P P 17 27 44.2 -1.2
BTK pmax pmax
comp=Z,13nm,0.9s
PMR Palmer 50.64 36 P P 17 27 46.5 +1.3
PMR Palmer 50.64 36 P P 17 27 45.1 -0.1
baz=277,SNR=8.6
SEW Seward 50.68 38 IAmb IAmb 17 27 53.3
comp=Z,53nm,1.1s
SEW Seward 50.68 38 P P 17 27 45.6 0.0
baz=278
H24K Noodor Dome 50.76 31 P P 17 27 47.7 +1.4
baz=275,SNR=28
WAT1 Susitna Watana 50.76 35 P P 17 27 46.1 -0.2
baz=277
G24K Hadweenzic Riv 50.85 30 P P 17 27 48.3 +1.4
baz=274
COLA College 50.85 32 P P 17 27 48.0 +1.2
COLA College 50.85 32 P P 17 27 46.7 -0.1
COLA College 50.85 32 *i* P P 17 27 47.1 +0.3
COLA pmax pmax
comp=Z,84nm,1.7s
COLA MLR MLR
comp=Z,400nm,16.0s
COLA College 50.85 32 P P 17 27 47.6 +0.7
baz=276
GSI Gunungsitoli 50.86 235 P P 17 27 47.8 +0.3
KNK Knik Glacier 50.98 37 P P 17 27 48.4 +0.5
baz=278,SNR=8.1
SML Sawmill 50.99 36 P P 17 27 48.4 +0.4
baz=278,SNR=15
POKR Poker Plat Res 51.01 32 P P 17 27 49.1 +1.0
baz=276
NIL Nilore 51.09 286 P 17 27 47.9 -1.3
NIL Nilore 51.09 286 P P 17 27 47.9 -1.3
NIL pmax pmax
comp=Z,31nm,1.0s
NIL Nilore 51.09 286 P P 17 27 48.6 -0.6
D25K Kavik River 51.09 26 P P 17 27 49.3 +0.6
baz=273
WAT6 Susitna Watana 51.16 35 P P 17 27 49.5 +0.1
baz=277,SNR=8.9
HNR Honiara 51.21 150 LR LR 17 48 00.5
comp=Z,11nm,20.6s,baz=53,slow=34
UGM Wanagama 51.23 214 P P 17 27 49.8 -0.5
COEN Coen 51.25 172 P P 17 27 51.6 +1.3
comp=Z,103nm,2.5s
COEN Coen 51.25 172 P P 17 27 51.0 +0.7
COEN Coen 51.25 172 IAmb IAmb 17 28 09.8
comp=Z,120nm,1.7s
DHY Denali Highway 51.26 34 P P 17 27 50.2 +0.1
baz=277,SNR=13
M23K Glacier View 51.27 36 P P 17 27 50.3 +0.2
baz=278,SNR=8.0
ILAR Eielson Array 51.28 32 P P 17 27 49.9 -0.2
comp=Z,11nm,0.8s,baz=281,slow=6.4,SNR=109
ILAR PcP PcP 17 29 04.1 -0.8
comp=Z,5.7nm,0.8s,baz=272,slow=4.1,SNR=4.8
ILAR LR LR 17 51 04.9
comp=Z,304nm,18.7s,baz=262,slow=38
comp=Z,11nm,0.8s
ILAR Eielson Array 51.28 32 P 17 27 49.1 -1.0
HDA Harding Lake 51.29 33 P P 17 27 50.2 0.0
baz=277,SNR=25
SCM Sheep Creek Mo 51.46 36 P P 17 27 52.1 +0.5
baz=278,SNR=9.7
E25K Arctic Village 51.47 28 P P 17 27 52.8 +1.2
baz=275
F25K Christian Rive 51.49 29 P P 17 27 53.3 +1.5
baz=275
C26K Camden Bay 51.57 26 P P 17 27 53.7 +1.5
baz=274,SNR=38
P23K Montague Islan 51.71 38 P P 17 27 54.0 +0.7
baz=280
GLI Glacier Island 51.71 37 P P 17 27 53.6 +0.2
baz=279
PRP Porcupine Dome 51.76 31 P P 17 27 54.5 +0.7
baz=277,SNR=26
K24K Donnelly Dome 51.88 33 P P 17 27 54.6 0.0
baz=278,SNR=7.4
BMAR Burnt Mountain 51.91 29 P 17 27 56.0 +1.2
J25K Salcha River, 51.94 32 P P 17 27 54.4 -0.7
baz=278
M24K Tolsona, Glenn 51.95 36 P P 17 27 56.0 +0.8
baz=279,SNR=7.1
C27K Jago River 52.01 26 P P 17 27 56.6 +1.2
baz=275
F26K Sheenjek River 52.05 28 P P 17 27 57.5 +1.7
baz=276,SNR=60
PAX Paxson 52.14 34 P P 17 27 57.1 +0.4
baz=279
KLU Klutina 52.17 36 P P 17 27 57.6 +0.7
baz=280,SNR=12
G26K Porcupine Rive 52.28 29 P P 17 27 59.2 +1.8
baz=277,SNR=46
CHGR Chuyangaron 52.28 294 IAmb IAmb 17 28 03.3
comp=Z,79nm,1.0s
CHGR Chuyangaron 52.28 294 *i* P P 17 27 56.0 -2.1
CHGR pmax pmax
comp=Z,54nm,0.7s
CHGR MLR MLR
comp=Z,2µm,15.0s
RIDG Independent Ri 52.30 33 IAmb IAmb 17 29 10.9
comp=Z,63nm,1.2s
RIDG Independent Ri 52.30 33 P P 17 27 57.6 -0.2
baz=279,SNR=11
Q23K Middleton Isla 52.34 39 P P 17 27 58.8 +0.9
baz=281
EYAK Cordova Ski Ar 52.42 37 P P 17 27 59.7 +1.0
baz=281
SVE Sverdlovsk 52.59 318 *eP* P 17 27 58.8 -1.1
SVE pmax pmax
comp=Z,39nm,1.2s
SVE MLR MLR
comp=Z,2µm,14.0s
SCRK Sand Creek 52.63 33 P P 17 28 00.5 +0.1
baz=280,SNR=34
DOT Dot Lake 52.66 33 IAmb IAmb 17 28 01.9
comp=Z,151nm,2.0s
I26K Coal Creek Min 52.77 31 P P 17 28 00.9 -0.3
baz=279
N25K Chitina, Valde 52.78 36 P P 17 28 02.3 +0.9
baz=281,SNR=8.2
BMRM Bremner River 52.90 37 P P 17 28 03.1 +0.8
baz=281,SNR=9.2
MENT Mentasta 52.93 34 P P 17 28 03.9 +1.4
E27K Coleen River 52.94 28 P P 17 28 03.9 +1.4
baz=278
D27M Malcolm River 53.02 26 P P 17 28 04.3 +1.3
baz=278
L26K Log Cabin Wild 53.08 34 P P 17 28 04.6 +1.0
baz=281,SNR=16
G27K Doyon Strip 53.13 29 P P 17 28 05.4 +1.5
baz=279
KNRA Kununurra 53.17 190 P P 17 28 04.8 +0.3
comp=Z,114nm,0.9s
KNRA Kununurra 53.17 190 IAmb IAmb 17 28 05.6
comp=Z,91nm,0.9s
KAIM Kayak Island 53.20 38 P P 17 28 05.3 +0.9
baz=282
H27K Steamboat Moun 53.28 30 P P 17 28 06.4 +1.4
baz=280
I27K Kandik River 53.36 31 P P 17 28 06.7 +1.2
baz=280,SNR=25
M26K Nabesna, AK 53.36 35 P P 17 28 06.9 +1.2
baz=282
SHAA Shahritus 53.45 293 IAmb IAmb 17 28 54.1
comp=Z,61nm,0.9s
MCARA McCarthy VSAT 53.56 36 P P 17 28 08.2 +1.1
baz=282,SNR=9.2
CRQE Cirque 53.66 37 P P 17 28 08.9 +0.9
baz=280,SNR=7.8
F28M Old Crow 53.68 28 P P 17 28 09.3 +1.5
baz=280,SNR=48
BGLC Bering Glacier 53.71 38 P P 17 28 09.9 +1.8
baz=283
L27K Beaver Creek, 53.76 34 P P 17 28 09.8 +1.3
baz=282
BCAR Beaver Creek A 53.77 34 P 17 28 09.2 +0.5
D28M Stokes Point 53.79 26 P P 17 28 09.6 +1.1
baz=280,SNR=21
M27K Edge Creek, AK 53.88 35 P P 17 28 10.7 +1.2
baz=282,SNR=22
ARTI Arti 53.90 318 LR LR 17 50 35.6
comp=Z,331nm,18.3s,baz=72,slow=36
ARTI Arti 53.90 318 P 17 28 07.7 -1.9
ARTI IAmb IAmb 17 28 13.9
comp=Z,57nm,0.7s
ARTI Arti 53.90 318 *c i* P P 17 28 08.7 -0.9
ARTI 17 30 05.4
ARTI S S 17 35 46.5 +2.3
ARTI SS SKiKP 17 39 15.4 -6.9
ARTI pmax pmax
comp=Z,36nm,0.8s
ARTI MLR MLR
comp=Z,2µm,16.0s
KBL Kabul 53.94 289 P 17 28 08.5 -2.0
KBL Kabul 53.94 289 P P 17 28 08.5 -2.0
KBL pmax pmax
comp=Z,30nm,1.4s
KBL Kabul 53.94 289 P P 17 28 09.6 -0.9
SNR=14
I28M Miner Creek 54.07 31 P P 17 28 12.3 +1.4
baz=282
E29M Blow River 54.26 27 P P 17 28 13.5 +1.5
baz=282
BVCY Beaver Creek 54.33 35 P P 17 28 13.7 +1.0
baz=283,SNR=12
MESA MESA 54.35 37 P P 17 28 14.0 +1.0
baz=284
CTG Chitna Glacier 54.45 36 P P 17 28 14.7 +1.0
baz=284,SNR=8.0
HYB Hyderabad 54.59 265 *eP* P 17 28 14.9 -0.3
HYB *ePcP* PcP 17 29 17.8 -0.5
HYB *eScS* ScS 17 38 04.2 -0.2
DAWY Dawson 54.60 32 P P 17 28 15.3 +0.6
baz=283,SNR=5.8
YUK3 Moose Creek 54.67 35 P P 17 28 16.0 +0.7
baz=284,SNR=7.5
I29M Ogilvie Camp, 54.76 31 P P 17 28 16.7 +1.0
baz=283,SNR=24
J29N Klondike Camp 55.01 32 P P 17 28 18.8 +1.1
baz=284,SNR=10
ABKAR Akbulak array 55.02 309 P 17 28 15.7 -2.2
O28M Mount Upton 55.04 36 P P 17 28 19.0 +0.8
baz=284,SNR=6.2
YUK8 Steele Glacier 55.11 36 P P 17 28 19.7 +1.1
baz=285
EPYK Eagle Plains 55.15 29 P P 17 28 19.7 +1.1
baz=284,SNR=46
PINM Pinnacle 55.19 37 P P 17 28 19.9 +0.9
baz=285
G30M tAoh Zraii Nji 55.20 29 P P 17 28 19.8 +0.9
baz=284,SNR=96
F30M Barrier River 55.21 28 P P 17 28 20.4 +1.4
baz=284,SNR=70
L29M L29M 55.38 33 P P 17 28 22.1 +1.8
baz=285
M29M Somme Creek 55.41 34 P P 17 28 22.1 +1.5
baz=285,SNR=19
K29M Barlow Dome 55.46 32 P P 17 28 22.2 +1.3
baz=285,SNR=24
I30M Mount Dempster 55.58 31 P P 17 28 22.9 +1.2
baz=285,SNR=130
YUK4 Talbot Arm 55.62 36 P P 17 28 23.6 +1.3
baz=286,SNR=9.9
J30M Hart River 55.77 31 P P 17 28 24.3 +1.2
baz=286,SNR=22
AKTO Aktyubinsk 55.82 311 LR LR 17 53 06.6
comp=Z,856nm,18.1s,baz=84,slow=37
YUK6 Outpost Mounta 55.86 36 P P 17 28 25.5 +1.5
baz=286,SNR=12
INK Inuvik 55.86 27 LR LR 17 53 50.0
comp=Z,412nm,20.2s,baz=274,slow=38
INK Inuvik 55.86 27 P P 17 28 24.2 +0.6
baz=285,SNR=31
O29M Mount Kennedy 55.94 37 P P 17 28 25.9 +1.5
baz=286
G31M Satah River 55.96 28 P P 17 28 24.8 +0.5
baz=286
F31M Tsiigehtchic 56.01 28 P P 17 28 25.1 +0.5
baz=286,SNR=47
FITZ Fitzroy Crossi 56.03 193 LR LR 17 54 21.0
comp=Z,106nm,19.0s,baz=18,slow=38
M30M Minto, Yukon 56.12 34 P P 17 28 27.3 +1.7
baz=286,SNR=16
MAYO Mayo, Yukon 56.22 32 P P 17 28 27.7 +1.4
baz=286
H31M Peel River 56.24 30 P P 17 28 27.5 +1.1
baz=286
HYT Haines Junctio 56.30 36 P P 17 28 28.8 +1.8
baz=287,SNR=34
N30M Aishikik Lake 56.30 35 P P 17 28 28.2 +1.3
baz=287
WB0 Warramunga Arr 56.73 183 IAmb IAmb 17 28 31.0
comp=Z,79nm,0.9s
P30M Million Dollar 56.76 37 P P 17 28 31.8 +1.5
baz=288
N31M Braeburn, Yuko 56.90 35 P P 17 28 32.6 +1.5
baz=288,SNR=11
WRAB Tennant Creek 56.90 183 P P 17 28 31.1 -0.4
WRAB Tennant Creek 56.90 183 P 17 28 30.9 -0.6
WRAB IAmb IAmb 17 28 32.3
comp=Z,68nm,1.1s
WRAB Tennant Creek 56.90 183 P P 17 28 30.9 -0.6
WRAB pmax pmax
comp=Z,68nm,1.1s
WRA Warramunga Arr 56.91 183 P P 17 28 30.6 -1.0
comp=Z,65nm,1.0s,baz=356,slow=7.7,SNR=158
WRA PKPPKP P'P'df 17 58 28.1 +13
comp=Z,1.6nm,0.8s,baz=194,slow=2.2,SNR=8.5
comp=Z,65nm,1.0s
WRA Warramunga Arr 56.91 183 P 17 28 29.6 -2.0
WRA Warramunga Arr 56.91 183 P P 17 28 29.6 -2.0
WRA pmax pmax
comp=Z,7.0nm,1.0s
O30N Mendenhall 56.97 36 P P 17 28 32.9 +1.2
baz=288
M31M Drury Creek, Y 57.30 34 P P 17 28 35.1 +1.1
baz=289,SNR=14
A36M Sachs Harbour 57.43 21 P P 17 28 35.3 +0.7
baz=290,SNR=92
QIS Mount Isa 57.53 177 P P 17 28 35.9 0.0
comp=Z,119nm,1.1s
QIS Mount Isa 57.53 177 P P 17 28 35.9 0.0
WHY Whitehorse 57.57 36 P P 17 28 37.3 +1.3
baz=289,SNR=15
CTA Charters Tower 57.69 170 LR LR 17 54 38.2
comp=Z,251nm,18.2s,baz=348,slow=37
CTAO Charters Tower 57.69 170 P 17 28 37.2 +0.2
CTAO Charters Tower 57.69 170 P P 17 28 37.2 +0.2
CTAO pmax pmax
comp=Z,33nm,1.1s
FARO Faro, Yukon 57.75 34 P P 17 28 38.4 +1.2
baz=289,SNR=22
SKAG Skagway 57.76 37 P P 17 28 38.6 +1.5
baz=290
S31K Pelican 57.81 39 P P 17 28 39.0 +1.4
baz=290
KIP Kipapa 57.88 86 *ceP* P 17 28 39.5 +0.9
KIP pmax pmax
comp=Z,43nm,0.7s
KIRV Kirov 57.88 322 LR LR 17 56 37.5
comp=Z,505nm,19.9s,baz=63,slow=39
KIRV Kirov 57.88 322 *ceP* P 17 28 36.0 -2.0
N32M Quiet Lake 58.23 35 P P 17 28 41.5 +0.9
baz=290
P32M Atlin 58.48 37 P P 17 28 43.8 +1.4
baz=291,SNR=9.5
MMPY Sheldon Lake, 58.53 33 P P 17 28 44.2 +1.5
baz=291,SNR=14
R32K Eaglecrest 58.56 38 P P 17 28 44.4 +1.6
baz=291
SIT Sitka 58.59 40 P P 17 28 44.6 +1.6
baz=291
P33M Teslin, Yukon 58.69 36 P P 17 28 45.1 +1.3
baz=291,SNR=25
C36M Paulatuk 58.76 24 P P 17 28 44.5 +0.4
baz=293,SNR=40
S32K Killisnoo 58.82 39 P P 17 28 46.0 +1.4
baz=291
PALK Pallekele 58.89 254 LR LR 17 55 18.9
comp=Z,614nm,20.5s,baz=50,slow=37
PALK Pallekele 58.89 254 P P 17 28 44.9 -0.9
PALK Pallekele 58.89 254 P P 17 28 44.9 -0.9
PALK pmax pmax
comp=Z,17nm,0.8s
PALK Pallekele 58.89 254 P P 17 28 45.9 +0.1
HRA Herat 59.09 292 IAmb IAmb 17 29 36.7
comp=Z,71nm,1.9s
Q32M Nakina River 59.41 37 P P 17 28 50.2 +1.2
baz=292
SPB2 Spitsbergen Ar 59.61 348 P P 17 28 48.4 -1.4
SPB2 IAmb IAmb 17 28 54.0
comp=Z,73nm,1.1s
SPITS Spitsbergen Ar 59.61 348 P P 17 28 49.5 -0.4
comp=Z,21nm,0.8s,baz=101,slow=11,SNR=12
SPITS LR LR 17 56 42.4
comp=Z,659nm,18.9s,baz=34,slow=38
comp=Z,21nm,0.8s
SPITS Spitsbergen Ar 59.61 348 P P 17 28 48.2 -1.7
SPITS pmax pmax
comp=Z,90nm,1.3s
SANVU Saraoutou 59.67 146 P P 17 28 51.5 +0.6
SANVU Saraoutou 59.67 146 P P 17 28 50.7 -0.2
KBS Kingsbay 59.83 349 P P 17 28 49.9 -1.4
KBS IAmb IAmb 17 28 52.9
comp=Z,78nm,1.0s
KBS Kingsbay 59.83 349 *ceP* P 17 28 52.5 +1.2
KBS pmax pmax
comp=Z,71nm,1.3s
KBS Kingsbay 59.83 349 *i* P P 17 28 51.3 0.0
R33M Jennings River 59.86 36 P P 17 28 53.6 +1.6
baz=293
U33K Whale Pass 60.07 40 P 17 28 54.4 +1.2
U33K IAmb IAmb 17 28 55.8
comp=Z,58nm,1.0s
U33K Whale Pass 60.07 40 P P 17 28 55.1 +1.8
baz=293,SNR=5.1
TGTN Hyland Airport 60.25 33 P P 17 28 55.9 +1.4
baz=294,SNR=12
MBWA Marble Bar 60.27 198 P P 17 28 54.6 -0.4
comp=Z,71nm,1.4s
MBWA Marble Bar 60.27 198 P P 17 28 54.8 -0.2
MBWA Marble Bar 60.27 198 P 17 28 54.3 -0.7
MBWA Marble Bar 60.27 198 P P 17 28 54.3 -0.7
CRAG Craig 60.32 41 P P 17 28 56.5 +1.5
baz=293
WRAK Wrangell Islan 60.35 40 P P 17 28 56.6 +1.4
baz=293
S34M Telegraph Cree 60.36 38 P 17 28 56.7 +1.4
S34M Telegraph Cree 60.36 38 P P 17 28 57.0 +1.7
baz=294,SNR=6.9
LVZ Lovozero 60.42 335 *ceP* P 17 28 56.2 +0.6
LVZ pmax pmax
comp=Z,101nm,2.5s
LVZ MLR MLR
comp=Z,894nm,17.0s
HSPB Hornsund (broa 60.48 347 *eP* P 17 28 56.4 +0.6
WTLY Watson Lake, Y 60.58 35 P P 17 28 58.0 +1.2
baz=294,SNR=13
NOR Nord 60.61 356 *i* P P 17 28 56.4 -0.3
NOR IAmb IAmb 17 28 57.3
comp=Z,42nm,0.8s
PSAC1 Pilbara Seismi 60.61 198 P P 17 28 56.8 -0.5
comp=Z,57nm,1.4s
PSAC2 Pilbara Seismi 60.62 198 P P 17 28 56.9 -0.4
comp=Z,53nm,1.0s
AS31 Alice Springs 60.63 183 P 17 28 57.0 -0.4
ASAR Alice Springs 60.63 183 P P 17 28 57.3 -0.1
comp=Z,36nm,0.8s,baz=10,slow=7.2,SNR=273
ASAR PKPPKP P'P'df 17 58 22.6 +13
comp=Z,1.9nm,0.9s,baz=171,slow=2.3,SNR=8.9
comp=Z,36nm,0.8s
ASAR Alice Springs 60.63 183 P P 17 28 57.1 -0.3
PSA00 Pilbara Seismi 60.64 198 P P 17 28 57.5 0.0
comp=Z,69nm,2.1s
PSA00 Pilbara Seismi 60.64 198 P P 17 28 58.7 +1.2
PSA00 Pilbara Seismi 60.64 198 P 17 28 56.5 -1.0
PSA00 Pilbara Seismi 60.64 198 P P 17 28 56.5 -1.0
PSAB3 Pilbara Seismi 60.66 198 P P 17 28 57.6 0.0
comp=Z,67nm,1.6s
DLBC Dease Lake 60.69 37 P P 17 28 58.8 +1.2
comp=Z,15nm,0.8s,baz=274,slow=7.5,SNR=29
DLBC LR LR 17 57 08.9
comp=Z,293nm,18.9s,baz=276,slow=38

comp=Z,15nm,0.8s
DLBC Dease Lake 60.69 37 P P 17 28 59.3 +1.7
baz=294,SNR=17
ADZR Andozero 60.81 330 eP P 17 28 56.4 -1.8
ADZR pmax pmax
comp=Z,63nm,0.7s
ADZR MLR MLR
comp=Z,1µm,10.0s
DAH Dandelion 60.83 87 P P 17 29 00.6 +1.1
HMH Humu'ula Sheep 60.85 87 P P 17 29 00.3 +0.8
APA Apatity 61.00 335⇓ eP P 17 28 57.2 -2.2
APA pmax pmax
comp=Z,24nm,1.1s
APA MLR MLR
comp=Z,2µm,15.2s
BELG Belogornoye 61.16 316 LR LR 17 55 30.8
comp=Z,658nm,18.2s,baz=61,slow=36
BELG Belogornoye 61.16 316 *i* P P 17 28 58.4 -2.3
BELG pmax pmax
comp=Z,9.0nm,1.1s
BELG MLR MLR
comp=Z,120nm,15.0s
V35K Ketchikan 61.17 41 P P 17 29 01.9 +1.2
baz=294
T35M Bob Quinn 61.18 39 P P 17 29 03.0 +2.1
baz=295,SNR=14
WRGLY Wrigley 61.55 31 P 17 29 01.8 -1.4
WRGLY Wrigley 61.55 31 P P 17 29 04.3 +1.1
baz=297,SNR=10
AUNRC North Rockhamp 61.61 166 P P 17 29 05.1 +1.1
KLMR Klimovskoe 61.63 327 eP P 17 29 01.5 -2.3
KLMR *e* 17 31 17.6
KLMR pmax pmax
comp=Z,109nm,1.4s
KLMR MLR MLR
comp=Z,2µm,15.0s
U35K Hyder 61.74 40 P P 17 29 05.8 +1.2
baz=295
COCO West Island 61.89 225 P P 17 29 08.3 +2.2
COCO West Island 61.89 225 P P 17 29 06.3 +0.2
COCO West Island 61.89 225 P P 17 29 06.3 +0.2
COCO pmax pmax
comp=Z,182nm,1.1s
WRKA Warakurna 62.45 189 P P 17 29 10.0 +0.3
comp=Z,36nm,1.6s
ARCES ARCESS Array B 62.51 338 P P 17 29 09.6 -0.1
comp=Z,15nm,0.7s,baz=61,slow=9.9,SNR=12
ARCES LR LR 18 00 14.7
comp=Z,1µm,18.0s,baz=68,slow=40
comp=Z,15nm,0.7s
ARCES ARCESS Array B 62.51 338 P P 17 29 09.2 -0.4
ARCES ARCESS Array B 62.51 338 P P 17 29 09.2 -0.4
ARCES pmax pmax
comp=Z,149nm,1.7s
KOTAN Kotaneelee Air 62.72 34 P P 17 29 12.1 +1.0
baz=298,SNR=6.4
RES Resolute Bay 63.29 14 LR LR 18 01 01.8
comp=Z,319nm,18.3s,baz=341,slow=40
RES Resolute Bay 63.29 14 P P 17 29 13.9 -0.8
RES Resolute Bay 63.29 14 P P 17 29 13.9 -0.8
RES pmax pmax
comp=Z,104nm,0.9s
EIDS Eidsvold 63.68 166 P P 17 29 19.0 +1.2
comp=Z,41nm,0.9s
EIDS Eidsvold 63.68 166 P P 17 29 19.0 +1.2
EIDS Eidsvold 63.68 166 IAmb IAmb 17 29 19.4
comp=Z,36nm,0.9s
QLP Quilpie 63.84 173 P P 17 29 19.2 +0.3
comp=Z,133nm,1.1s
QLP Quilpie 63.84 173 P P 17 29 19.8 +0.9
BBB Bella Bella 64.43 43 P P 17 29 22.9 +0.3
comp=Z,13nm,0.9s,baz=289,slow=7.6,SNR=3.6
BBB LR LR 17 54 45.7
comp=Z,129nm,21.5s,baz=302,slow=34
comp=Z,13nm,0.9s
INKA Innaminka 64.72 176 IAmb IAmb 17 29 26.5
comp=Z,44nm,0.9s
MOS Moscow 64.90 322 eP P 17 29 23.6 -2.0
MOS *e* 17 30 04.9
MOS pmax pmax
comp=Z,119nm,1.2s
MOS MLR MLR
comp=E,1µm,16.0s
MOS MLR MLR
comp=Z,2µm,16.0s
VRH Novokhopyorsk 64.97 316 eP P 17 29 23.9 -2.2
VRH pmax pmax
comp=Z,20nm,0.8s
DZM Mont Dzumac 65.23 150 eP P 17 29 28.5 +0.3
comp=Z,149nm,1.2s
DZM *e*LR LR 17 48 55.1
comp=Z,712nm,23.2s
DZM Mont Dzumac 65.23 150 P P 17 29 28.7 +0.5
comp=Z,42nm,0.9s,baz=8.9,slow=7.2,SNR=22
comp=Z,42nm,0.9s
DAG Danmarks Havn 65.24 354 P P 17 29 27.1 -0.4
DAG pmax pmax
comp=Z,84nm,1.5s
DAG Danmarks Havn 65.24 354 *i* P P 17 29 27.1 -0.4
DAG IAmb IAmb 17 29 29.5
comp=Z,143nm,1.5s
TULEG Thule 65.35 6 IAmb IAmb 17 29 28.9
comp=Z,60nm,0.8s
TULEG Thule 65.35 6 *i* P P 17 29 27.9 -0.3
TULEG IAmb IAmb 17 29 28.5
comp=Z,65nm,0.9s
MARNC Mare, Loyalty 65.36 148 P P 17 29 30.1 +1.2
MARNC Mare, Loyalty 65.36 148 P 17 29 28.5 -0.4
MARNC IAmb IAmb 17 29 31.2
comp=Z,58nm,0.9s
YATNC Mamie plateau, 65.40 149 P P 17 29 30.0 +0.8
YKA Yellowknife Ar 65.44 29 P P 17 29 28.9 -0.1
comp=Z,7.7nm,0.7s,baz=309,slow=7.4,SNR=54
YKA PKPPKP **P'P'df** 17 58 09.3 -7.1
comp=Z,0.4nm,0.7s,baz=133,slow=1.9,SNR=6.2
YKA LR LR 17 59 19.4
comp=Z,292nm,19.7s,baz=306,slow=37
comp=Z,7.7nm,0.7s
YKA Yellowknife Ar 65.44 29 P P 17 29 28.4 -0.5
ONTNC Ouen Toro 65.45 150 P P 17 29 30.7 +1.3
ONTNC Ouen Toro 65.45 150 P 17 29 29.5 +0.1
MAK Makhachkala 65.45 306 *c* iP P 17 29 25.1 -4.2
MAK ePPP PPP 17 33 22.6
MAK eS S 17 38 07.8 -5.6
MAK pmax pmax
comp=Z,64nm,1.0s
MAK MLR MLR
comp=Z,2µm,15.0s
NEEM North Greenlan 65.49 2 *i* P P 17 29 29.3 -0.2
NEEM IAmb IAmb 17 29 30.4
comp=Z,124nm,1.0s
OBN Obninsk 65.73 322 LR LR 18 00 34.0
comp=Z,2µm,18.3s,baz=78,slow=38
OBN Obninsk 65.73 322 ⇓P P 17 29 31.4 +0.5
OBN Obninsk 65.73 322 P P 17 29 29.8 -1.1
OBN Obninsk 65.73 322 *ce* P P 17 29 29.6 -1.4
OBN *i* *PP pP 17 29 33.6 -2.0
OBN *i* *SP sP 17 29 34.6 -2.7
OBN *e* 17 29 59.5
OBN PPP PPP 17 33 38.0
OBN pmax pmax
comp=Z,128nm,1.6s
OBN MLR MLR
comp=Z,3µm,16.0s
OBN Obninsk 65.73 322 P P 17 29 29.7 -1.3
comp=Z,96nm,1.2s
LPSR Galich'ya Gora 65.79 319 eP P 17 29 29.7 -1.7
LPSR pmax pmax
comp=Z,60nm,1.5s
AKT Akhty 66.02 305 eP P 17 29 31.7 -1.5
AKT *e* 17 30 01.5
AKT ePPP PPP 17 33 39.4
AKT pmax pmax
comp=Z,54nm,1.0s
AKT MLR MLR
comp=Z,4µm,15.0s
VORR Voronezh 66.11 318 eP P 17 29 31.9 -1.6
VORR pmax pmax
comp=Z,42nm,0.4s
VSR Storozhevoye 66.36 317 eP P 17 29 33.6 -1.5
VSR pmax pmax
comp=Z,40nm,1.2s
FUTU Fugatoga 66.47 132 IAmb IAmb 17 29 38.4
comp=Z,38nm,0.9s
SEKA Sheki 66.50 305 P P 17 29 35.9 -0.4
JASK Jask - Hormozg 66.51 285 P P 17 29 36.6 +0.1
JASK S S 17 38 29.5 +2.5
LKRN Lenkeran, Azer 66.68 302 P P 17 29 37.4 +0.1
MNGR Mingechevir, A 66.79 304 P P 17 29 38.6 +0.6
FINES FINESS Array B 66.92 331 P P 17 29 37.5 -1.0
comp=Z,25nm,0.8s,baz=89,slow=5.8,SNR=37
FINES LR LR 18 00 51.1
comp=Z,680nm,18.4s,baz=51,slow=38
comp=Z,25nm,0.8s
MSVF Nonsavu 67.03 137 P P 17 29 41.2 +1.4
comp=Z,62nm,1.1s,baz=286,slow=4.0,SNR=23
MSVF LR LR 17 54 39.2
comp=Z,259nm,21.4s,baz=344,slow=32
comp=Z,62nm,1.1s
MSVF Nonsavu 67.03 137 P P 17 29 40.9 +1.1
MSVF Nonsavu 67.03 137 P P 17 29 41.4 +1.6
MSVF Nonsavu 67.03 137 P P 17 29 41.4 +1.6
MSVF pmax pmax
comp=Z,70nm,1.0s
AULRC Lightning Ridg 67.12 169 P P 17 29 41.4 +1.4
GOF Gofitskoye 67.22 310 *ce* P P 17 29 39.6 -1.1
JLN Jalan Bani Buh 67.27 281 P P 17 29 40.9 -0.4
SNR=5.2
WSAR Wadi Sarin 67.30 283 P P 17 29 41.6 +0.1
WSAR S S 17 38 36.9 +0.4
GANJ Ganja 67.36 304 P P 17 29 40.9 -0.8
WBK Wadi Bani Khal 67.36 282 P P 17 29 41.4 -0.6
SNR=5.3
WBK P P 17 29 41.4 -0.6
SNR=5.3
BIDO Bidbid 67.54 283 P P 17 29 43.5 +0.5
SNR=10
BANOM Banah 67.69 286 *i* P P 17 29 43.9 -0.1
SNR=6.8
BANOM Banah 67.69 286 P P 17 29 43.6 -0.4
DBG Daneborg 67.70 353 *i* P P 17 29 42.8 -0.4
DBG IAmb IAmb 17 29 44.0
comp=Z,28nm,1.0s
POIN Pond Inlet 67.75 11 IAmb IAmb 17 29 43.7
comp=Z,32nm,1.0s
SMDO Samad 67.84 283 P P 17 29 44.4 -0.7
SNR=13
SMDO P P 17 29 44.4 -0.7
SNR=13
KBZ Khabaz 67.99 309 P P 17 29 45.3 -0.2
comp=Z,12nm,0.8s,baz=42,slow=4.4,SNR=18
KBZ LR LR 18 01 12.3
comp=Z,540nm,19.3s,baz=68,slow=38
comp=Z,12nm,0.8s
KBZ Khabaz 67.99 309 *ce* P P 17 29 45.1 -0.4
KBZ pmax pmax
comp=Z,26nm,1.0s
KBZ MLR MLR
comp=Z,624nm,15.0s
KIV Kislovodsk 68.00 309 ⇓P P 17 29 45.6 -0.2
KIV Kislovodsk 68.00 309 P P 17 29 44.4 -1.4
KIV IAmb IAmb 17 29 57.6
comp=Z,50nm,0.8s
KIV Kislovodsk 68.00 309 *i* P P 17 29 45.6 -0.2
SNR=16
KIV Kislovodsk 68.00 309 eP P 17 29 44.9 -0.8
KIV pmax pmax
comp=Z,52nm,1.1s
KIV MLR MLR
comp=Z,548nm,17.0s
KIV Kislovodsk 68.00 309 P P 17 29 45.1 -0.7
KIV Kislovodsk 68.00 309 P P 17 29 45.0 -0.8
comp=Z,48nm,0.9s
MASF Masafi 68.08 286 P P 17 29 46.1 -0.5
SNR=7.9
MSFE Esma-Masafi 68.09 286 *i* P P 17 29 46.3 -0.2
SNR=7.0
SHA1 Shidzhatmaz 68.13 309 *i* P P 17 29 46.0 -0.8
HOQ Hoqain 68.14 284 P P 17 29 46.1 -0.7
SNR=13
HOQ P P 17 29 46.1 -0.7
SNR=13
FORT Forrest 68.15 188 P P 17 29 46.9 +0.4
comp=Z,45nm,1.2s
FORT Forrest 68.15 188 IAmb IAmb 17 29 47.7
comp=Z,49nm,1.2s
JMDO Jabal Madar 68.17 282 P P 17 29 46.3 -0.7
SNR=7.9
UOSS Minazif 68.28 285 P P 17 29 45.7 -1.9
UOSS Minazif 68.28 285 P P 17 29 46.1 -1.5
UOSS Minazif 68.28 285 P P 17 29 47.4 -0.3
UOSS P P 17 29 47.4 -0.3
CLRS Cowichan Lake 68.31 45 P P 17 29 48.6 +1.1
CLRS IAmb IAmb 17 29 49.9
comp=Z,64nm,1.2s
TRLG Trialeti 68.35 306 P P 17 29 46.3 -1.8
NEUR Neytrino 68.35 308 *i* P P 17 29 47.8 -0.3
NEUR pmax pmax
comp=Z,13nm,1.2s
NEUR MLR MLR
comp=Z,1µm,15.0s
HATD Hatta, Dubai 68.39 285 *i* P P 17 29 49.0 +0.6
SNR=11
HATD Hatta, Dubai 68.39 285 P P 17 29 48.1 -0.3
SNR=12
HATD P P 17 29 48.1 -0.3
SNR=12
ERBR Yeremizino-Bor 68.44 312 eP P 17 29 46.7 -1.6
ERBR pmax pmax
comp=Z,21nm,1.0s
SOHO SOHO 68.45 284 *i* P P 17 29 48.3 -0.4
SNR=7.3
SOHO SOHO 68.45 284 P P 17 29 48.0 -0.8
SOHO P P 17 29 48.0 -0.8
ASHO Ashiyiah 68.53 285 *i* P P 17 29 49.0 -0.3
SNR=14
ASHO Ashiyiah 68.53 285 P P 17 29 48.8 -0.4
SNR=10.0
ASHO P P 17 29 48.8 -0.4
SNR=10.0
GNI Garni 68.65 305 LR LR 18 01 38.8
comp=Z,386nm,19.8s,baz=67,slow=38
GNI Garni 68.65 305 P 17 29 49.4 -0.6
GNI IAmb IAmb 17 29 54.2
comp=Z,36nm,1.1s
GNI Garni 68.65 305 P P 17 29 49.4 -0.6
GNI pmax pmax
comp=Z,36nm,1.1s
NAX Nakhchivan 68.65 303 P P 17 29 49.9 0.0
NAZ Nazwa, Dubai 68.67 286 P P 17 29 49.7 -0.5
NAZ Nazwa, Dubai 68.67 286 P P 17 29 49.4 -0.7
NAZ P P 17 29 49.4 -0.7
BSY Bisya 68.67 283 P P 17 29 49.6 -0.6
SNR=12
BSY P P 17 29 49.6 -0.6
SNR=12
MORW Morawa 68.78 200 P P 17 29 50.6 +0.1
comp=Z,31nm,1.3s
MORW Morawa 68.78 200 P P 17 29 51.2 +0.7
MORW Morawa 68.78 200 IAmb IAmb 17 29 51.2
comp=Z,36nm,1.2s
FAQ Al Faqa, Dubai 68.85 286 P P 17 29 50.4 -0.8
LABN Labinsk 68.85 310 eP P 17 29 49.5 -1.5
LABN pmax pmax
comp=Z,20nm,0.7s
ARQ Araqi 68.88 284 P P 17 29 51.4 -0.2
SNR=11
STKA Stephens Creek 68.88 176 P P 17 29 51.5 +0.5
comp=Z,15nm,0.7s,baz=334,slow=6.9,SNR=30
STKA LR LR 18 01 40.6
comp=Z,146nm,18.1s,baz=3.2,slow=37
comp=Z,15nm,0.7s
STKA Stephens Creek 68.88 176 P P 17 29 51.7 +0.6
comp=Z,164nm,0.9s
STKA Stephens Creek 68.88 176 P P 17 29 51.8 +0.7
CMSA Cobar Meteorol 68.90 172 P P 17 29 52.4 +1.2
comp=Z,39nm,2.1s
CMSA Cobar Meteorol 68.90 172 P P 17 29 52.1 +0.9
MHTO MHTO 69.02 281 P P 17 29 51.7 -0.6
SNR=14
MHTO P P 17 29 51.7 -0.6
SNR=14
ALNE Al Ain 69.10 285 *i* P P 17 29 52.3 -0.6
SNR=11
ALNE Al Ain 69.10 285 P P 17 29 52.2 -0.6
SNR=15
KAAM Kaadhehdhoo 69.11 254 P P 17 29 54.6 +1.7
ASUD Al Ashush, Dub 69.12 286 P P 17 29 52.6 -0.3
ASUD Al Ashush, Dub 69.12 286 P P 17 29 52.2 -0.7
AJN Ajban 69.42 286 P P 17 29 53.7 -1.1
BBOO Buckleboo 69.68 181 P P 17 29 56.6 +0.6
comp=Z,120nm,1.2s
BBOO Buckleboo 69.68 181 P P 17 29 56.6 +0.6
UPNV Upernavik 69.92 4 *i* P P 17 29 56.9 -0.2
UPNV IAmb IAmb 17 29 57.0
comp=Z,37nm,1.0s
AUDCS Dubbo College 69.96 169 P P 17 29 59.3 +1.6
SOC Sochi 70.03 310 eP P 17 29 55.4 -2.8
SOC ePPP PPP 17 34 17.7
SOC *e*S S 17 39 07.2 -1.1
SOC *e*SS SS 17 43 42.1 +5.1
SOC pmax pmax
comp=Z,17nm,0.9s
SOC MLR MLR
comp=Z,759nm,13.0s
BLDU Ballidu 70.08 198 P P 17 29 57.5 -1.0
comp=Z,44nm,1.7s
AUJCS Jamestown Cent 70.08 178 P P 17 29 59.4 +0.9
MNK Minsk 70.26 324 *i* P P 17 29 59.4 -0.1
comp=E,45nm,1.2s
MNK *i* P P 17 29 59.4 -0.1
comp=N,40nm,1.1s
MNK *i* P P 17 29 59.4 -0.1
comp=Z,50nm,1.0s,baz=53
MNK *i* PcP PcP 17 30 20.9 -0.3
MNK *i* PP PP 17 32 32.9 -1.6
MNK *i* PPP PPP 17 34 17.6
MNK *i* S S 17 39 12.0 +1.3
MNK *i* SS SS 17 43 45.3 +5.3
MNK *i* SSS SSS 17 47 01.4
MNK *i* LQ LQ 17 56 05.0
MNK *i* LR LR 18 01 10.6
MNK *i* LRM MLR 18 03 39.5
comp=E,2µm,17.4s
MNK *i* LRM MLR 18 03 54.2
comp=Z,1µm,15.8s
MNK *i* LRM MLR 18 03 57.1
comp=N,2µm,17.1s
MNK Minsk 70.26 324 *i* P P 17 29 59.3 -0.1
MNK *i* 17 30 20.8
MNK *i* 17 32 32.8
MNK *i* PPP PPP 17 34 17.5
MNK *i* S S 17 39 11.9 +1.3
MNK *i* SS SS 17 43 45.3 +5.3
MNK pmax pmax
comp=Z,50nm,1.0s
MNK pmax pmax
comp=E,45nm,1.2s
MNK pmax pmax
comp=N,40nm,1.1s
MNK MLR MLR
comp=E,2µm,17.0s
MNK MLR MLR
comp=Z,1µm,16.0s
MNK MLR MLR
comp=N,2µm,17.0s
UMZA Um Al Zommool 70.27 284 P P 17 29 59.2 -0.9
UMZA P P 17 29 59.2 -0.9
HTT Hallett 70.32 178 P P 17 30 01.1 +1.1
comp=Z,31nm,1.4s
HTT Hallett 70.32 178 P P 17 30 00.9 +1.0
SUMG Summit 70.45 359 *i* P P 17 30 01.9 +1.1
SUMG IAmb IAmb 17 30 02.4
comp=Z,158nm,0.8s
MZWR Madinat Zayed 70.70 286 P P 17 30 01.6 -1.0
GEVA Gevas 70.72 304 IAmb IAmb 17 30 07.6
comp=Z,88nm,1.8s
ANN Anapa 70.74 312 eP P 17 30 01.8 -0.8
ANN pmax pmax
comp=Z,32nm,0.9s
KLBR Kellerberrin 70.75 197 P P 17 30 02.4 -0.2
comp=Z,72nm,1.0s
KLBR Kellerberrin 70.75 197 P P 17 30 02.9 +0.3
JRN Qarnain Island 70.85 287 P P 17 30 02.4 -1.1
B08A Colville Reser 71.23 43 IAmb IAmb 17 30 07.6
comp=Z,82nm,1.1s
GURO Guroymak-BITLI 71.27 304 IAmb IAmb 17 30 07.3
comp=Z,70nm,1.5s
NUUG Nuugaatsiaq 71.30 3 *i* P P 17 30 05.9 +0.4
NUUG IAmb IAmb 17 30 06.3
comp=Z,26nm,1.1s
MZR Muzera 71.42 285 *i* P P 17 30 05.9 -1.1
SNR=16
MZR Muzera 71.42 285 P P 17 30 06.2 -0.9
SNR=15
PABE Paberze 71.42 326 IAmb IAmb 17 30 11.8
comp=Z,60nm,0.9s
SCO Scoresbysund 71.51 353 IAmb IAmb 17 30 08.6
comp=Z,147nm,1.7s
SCO Scoresbysund 71.51 353 *i* P P 17 30 07.6 +0.8
SCO IAmb IAmb 17 30 08.2
comp=Z,30nm,0.8s
AUMAR Marden Senior 71.77 178 P P 17 30 09.8 +1.2
AK03 Malin Array Si 71.87 320 P P 17 30 07.7 -1.6
AKASG Malin Array Be 71.88 320 P P 17 30 08.2 -1.1
comp=Z,32nm,0.9s,baz=50,slow=6.4,SNR=81
AKASG LR LR 18 04 08.1
comp=Z,2µm,19.6s,baz=51,slow=38
comp=Z,32nm,0.9s
AKASG Malin Array Be 71.88 320 P P 17 30 08.0 -1.3
AKASG IAmb IAmb 17 30 09.8
comp=Z,41nm,1.1s
AKASG Malin Array Be 71.88 320 *i* P P 17 30 08.1 -1.3
AKASG pmax pmax
comp=Z,39nm,0.8s
AKBB Malin Array Si 71.88 320 IAmb IAmb 17 30 09.5
comp=Z,75nm,1.1s
AKBB Malin Array Si 71.88 320 *c* iP P 17 30 08.3 -1.0
AKBB pmax pmax
comp=Z,88nm,1.1s
AKBB MLR MLR
comp=Z,4µm,15.0s
AKBB Malin Array Si 71.88 320 P P 17 30 07.8 -1.5
AK01 Malin Array Si 71.89 320 P P 17 30 08.0 -1.4
KIEV Kiev 71.89 320 ⇓P P 17 30 08.6 -0.8
KIEV Kiev 71.89 320 P P 17 30 07.8 -1.6
KIEV IAmb IAmb 17 30 09.5
comp=Z,67nm,1.1s
KIEV Kiev 71.89 320 *i* P P 17 30 08.4 -1.0
SNR=20
KIEV Kiev 71.89 320 P P 17 30 07.8 -1.6
KIEV pmax pmax
comp=Z,67nm,1.1s
KIEV Kiev 71.89 320 P P 17 30 07.8 -1.6
comp=Z,281nm,1.3s
AK23 Malin Array Si 71.89 320 P P 17 30 08.0 -1.4
AK04 Malin Array Si 71.90 320 P P 17 30 08.1 -1.3
AK09 Malin Array Si 71.90 320 P P 17 30 08.1 -1.4
AK08 Malin Array Si 71.91 320 P P 17 30 08.1 -1.4
AK02 Malin Array Si 71.92 320 P P 17 30 08.2 -1.4
AK11 Malin Array Si 71.92 320 P P 17 30 08.2 -1.4
AK22 Malin Array Si 71.92 320 P P 17 30 08.2 -1.4
AK10 Malin Array Si 71.93 320 P P 17 30 08.3 -1.3
AK21 Malin Array Si 71.93 321 P P 17 30 08.3 -1.3
AK15 Malin Array Si 71.94 320 P P 17 30 08.3 -1.4
AK05 Malin Array Si 71.94 320 P P 17 30 08.3 -1.4
AK18 Malin Array Si 71.95 320 P P 17 30 08.4 -1.4
AK12 Malin Array Si 71.95 320 P P 17 30 08.4 -1.4
AK16 Malin Array Si 71.96 320 P P 17 30 08.4 -1.4
YNG Young 71.96 170 P P 17 30 11.3 +1.4
comp=Z,26nm,1.2s
AK06 Malin Array Si 71.96 320 P P 17 30 08.5 -1.4
AK20 Malin Array Si 71.97 321 P P 17 30 08.5 -1.4
AK17 Malin Array Si 71.98 320 P P 17 30 08.5 -1.4
AK19 Malin Array Si 71.98 320 P P 17 30 08.5 -1.4
AK07 Malin Array Si 71.98 320 P P 17 30 08.6 -1.4
AK14 Malin Array Si 71.98 320 P P 17 30 08.6 -1.4
AK13 Malin Array Si 72.02 320 P P 17 30 08.8 -1.4
NIAQ Niaqornat 72.03 4 *i* P P 17 30 10.7 +0.8
NIAQ IAmb IAmb 17 30 11.3
comp=Z,24nm,0.9s
SAATT Saattut 72.10 3 *i* P P 17 30 10.4 +0.1
SAATT IAmb IAmb 17 30 11.6
comp=Z,49nm,1.0s
NWAO Narrogin (SRO) 72.16 197 P P 17 30 11.1 0.0
comp=Z,68nm,1.5s
NWAO Narrogin (SRO) 72.16 197 P P 17 30 11.0 0.0
HFS Hagfors 72.37 334 P P 17 30 11.4 -0.7
comp=Z,8.6nm,0.6s,baz=72,slow=4.8,SNR=26
HFS LR LR 18 05 38.0
comp=Z,600nm,18.1s,baz=42,slow=39
comp=Z,8.6nm,0.6s
NEW Newport 72.48 42 P P 17 30 12.8 -0.2
comp=Z,35nm,0.8s,baz=310,slow=5.0,SNR=49
NEW LR LR 18 04 34.3
comp=Z,125nm,18.1s,baz=314,slow=38
comp=Z,35nm,0.8s

NEW	Newport	72.48	42	IAmb	IAmb	17 30 15.2					
	comp=Z,61nm,0.9s										
SHAO	Shalim	72.49	280	P	P	17 30 13.2	-0.4				
SHAO	Shalim	72.49	280	P	P	17 30 13.0	-0.6				
SMRA	Abu-Samra	72.50	288	P	P	17 30 12.5	-1.0				
	SNR=8.5										
MI28	MI28,Pidlybu	72.53	321	P	P	17 30 11.2	-2.0				
NB2	NORSAR Subarra	72.56	336	P	P	17 30 12.3	-1.0				
	comp=Z,37nm,1.0s,baz=42,slow=5.9										
NB2	NORSAR Subarra	72.56	336	P	P	17 30 12.3	-1.0				
NOA	NORSAR Array B	72.56	336	P	P	17 30 12.4	-0.9				
	comp=Z,9.3nm,0.8s,baz=42,slow=6.0,SNR=20										
NOA				LR	LR	18 03 39.3					
	comp=Z,406nm,18.2s,baz=50,slow=37										
	comp=Z,9.3nm,0.8s										
SIM	Simferopol'	72.61	313	*e*P	P	17 30 12.8	-1.0				
SIM				pmax	pmax						
	comp=Z,48nm,1.1s										
SIM				MLR	MLR						
	comp=Z,300nm,16.0s										
SUW	Suwalki	72.72	326	*e*P	P	17 30 13.6	-0.8				
SAQQ	Saqqaq	72.88	3	*i* P	P	17 30 14.6	-0.3				
SAQQ				IAmb	IAmb	17 30 15.9					
	comp=Z,302nm,2.2s										
AUDAR	Daramalan Coll	73.00	170	P	P	17 30 17.3	+1.2				
AUMTS	Mt Stromlo	73.05	170	P	P	17 30 17.5	+1.1				
CAN	Canberra	73.05	170	P	P	17 30 17.6	+1.3				
	comp=Z,32nm,1.4s										
CAN	Canberra	73.05	170	P	P	17 30 17.7	+1.3				
CAN	Canberra	73.05	170	IAmb	IAmb	17 30 18.7					
	comp=Z,78nm,1.5s										
CAN	Canberra	73.05	170	P	P	17 30 17.6	+1.3				
CAN				pmax	pmax						
	comp=Z,32nm,1.4s										
YBH	Yreka Blue Hor	73.06	50	P	P	17 30 17.2	+0.5				
	comp=Z,2.3nm,0.9s,baz=337,slow=1.8,SNR=39										
	comp=Z,2.3nm,0.9s										
AUMHS	Melrose High S	73.10	170	P	P	17 30 17.3	+0.6				
LUBAR	Lubar, Ukraine	73.10	320	P	P	17 30 15.9	-0.8				
RNPP9	Sopachiv	73.11	322	P	P	17 30 15.9	-0.7				
RNPP8	Varash	73.17	322	P	P	17 30 16.2	-0.8				
DMTO	DMTO	73.20	280	P	P	17 30 17.0	-0.7				
DMTO				P	P	17 30 17.0	-0.7				
RNPP5	Staryi Chortor	73.22	322	P	P	17 30 16.3	-1.0				
DOK	Doka	73.33	281	P	P	17 30 17.7	-0.9				
	SNR=14										
DOK				P	P	17 30 17.7	-0.9				
	SNR=14										
ARPR	Arapgir-MALATY	73.38	307	IAmb	IAmb	17 30 20.1					
	comp=Z,90nm,1.7s										
GDH	Godhavn	73.56	4	*i* P	P	17 30 18.8	-0.1				
GDH				IAmb	IAmb	17 30 19.1					
	comp=Z,52nm,1.3s										
ILULI	Ilulissat	73.71	3	*i* P	P	17 30 19.7	-0.2				
ILULI				IAmb	IAmb	17 30 20.8					
	comp=Z,58nm,1.1s										
ARPS	Mount Arapiles	73.77	176	P	P	17 30 21.3	+0.8				
	comp=Z,25nm,1.9s										
SORM	Soroca	73.90	319	⇑P	P	17 30 20.9	-0.4				
SORM	Soroca	73.90	319	P	P	17 30 21.0	-0.4				
SORM	Soroca	73.90	319	P	P	17 30 19.7	-1.6				
	comp=Z,39nm,1.4s										
RBK	Rabkut	73.90	280	P	P	17 30 21.0	-0.9				
	SNR=5.4										
RBK				P	P	17 30 21.0	-0.9				
	SNR=5.4										
WHFO	Wadi Hawf	74.01	281	P	P	17 30 21.4	-1.1				
	SNR=7.3										
WHFO				P	P	17 30 21.4	-1.1				
	SNR=7.3										
PURM	Purcari	74.06	317	P	P	17 30 21.6	-0.7				
NDNU	Novodnistrovsk	74.13	319	P	P	17 30 21.9	-0.8				
BZK	Bozkurt	74.42	311	⇑P	P	17 30 24.4	-0.1				
BZK	Bozkurt	74.42	311	IAmb	IAmb	17 30 25.5					
	comp=Z,128nm,1.9s										
BZK	Bozkurt	74.42	311	P	P	17 30 24.5	0.0				
	comp=Z,23nm,1.1s										
KMPD	K-Podol'skiy	74.61	320	P	P	17 30 24.3	-1.2				
KMPD				P	P	17 30 24.3	-1.2				
BRAT	Ballarat	74.69	174	P	P	17 30 26.7	+0.9				
ABTO	Aybut	74.70	280	P	P	17 30 25.4	-1.2				
	SNR=10.0										
ABTO				P	P	17 30 25.4	-1.2				
	SNR=10.0										
TOO	Toolangi	74.85	173	P	P	17 30 27.5	+0.7				
	comp=Z,7.0nm,1.8s										
PLID	Pearl Lake	75.01	44	IAmb	IAmb	17 30 33.6					
	comp=Z,45nm,0.9s										
LVV	L'vov	75.04	322	P	P	17 30 27.7	-0.3				
BNN	Bunyan	75.10	308	IAmb	IAmb	17 30 29.9					
	comp=Z,98nm,1.8s										
FFC	Flin Flon	75.46	31	P	P	17 30 30.0	-0.3				
FFC				IAmb	IAmb	17 30 31.5					
	comp=Z,60nm,0.8s										
FFC	Flin Flon	75.46	31	P	P	17 30 30.0	-0.3				
FFC				pmax	pmax						
	comp=Z,60nm,0.8s										
VLDR	Vladesti	75.46	317	⇑P	P	17 30 29.9	-0.5				
KSV	Kosov	75.49	320	P	P	17 30 29.8	-0.8				
STNU	Starunia	75.52	321	P	P	17 30 29.7	-1.1				
GIRR	Girov	75.61	318	⇑P	P	17 30 31.3	-0.1				
JURR	Jurilovca	75.70	316	⇑P	P	17 30 31.1	-0.7				
SHIU	Shidnytsya	75.76	322	P	P	17 30 31.1	-1.1				
KWP	Kalwaria Pacla	75.81	322	*e*P	P	17 30 33.1	+0.7				
KWP	Kalwaria Pacla	75.81	322	P	P	17 30 31.7	-0.7				
	comp=Z,67nm,1.5s										
TESR	Tescani	75.81	318	⇓P	P	17 30 32.1	-0.4				
TESR	Tescani	75.81	318	P	P	17 30 31.8	-0.7				
	comp=Z,47nm,1.8s										
CFR	Carcaliu	75.85	316	⇑P	P	17 30 32.0	-0.8				
CFR	Carcaliu	75.85	316	P	P	17 30 31.9	-0.8				
BURAR	Bucovina Array	75.86	320	⇑P	P	17 30 32.6	-0.2				
BURAR	Bucovina Array	75.86	320	P	P	17 30 31.5	-1.4				
BURAR	Bucovina Array	75.86	320	P	P	17 30 32.7	-0.2				
TPGR	Topolog	75.89	316	⇓P	P	17 30 32.0	-1.0				
SFJD	Kangerlussuaq	75.95	3	LR	LR	18 06 44.0					
	comp=Z,180nm,18.1s,baz=348,slow=38										
SFJD	Kangerlussuaq	75.95	3	P	P	17 30 31.6	-1.2				
SFJD	Kangerlussuaq	75.95	3	P	P	17 30 31.6	-1.2				
SFJD	Kangerlussuaq	75.95	3	*i* P	P	17 30 32.9	+0.1				
SFJD				IAmb	IAmb	17 30 33.3					
	comp=Z,39nm,1.1s										
BR131	Keskin Array S	75.97	309	IAmb	IAmb	17 30 34.7					
	comp=Z,61nm,1.2s										
BR131	Keskin Array S	75.97	309	⇑*i* P	P	17 30 33.0	-0.7				
BR131	Keskin Array S	75.97	309	P	P	17 30 33.2	-0.5				
	SNR=24										
BRTR	Keskin Array B	75.97	309	P	P	17 30 33.0	-0.7				
	comp=Z,22nm,1.0s,baz=98,slow=3.7,SNR=88										
BRTR				LR	LR	18 09 56.6					
	comp=Z,226nm,18.3s,baz=7.5,slow=40										
	comp=Z,22nm,1.0s										
BRTR	Keskin Array B	75.97	309	P	P	17 30 32.6	-1.0				
BR106	Keskin Array S	75.97	309	P	P	17 30 32.9	-0.8				
	comp=Z,251nmcomp=Z,27nm,1.2s										
BR104	Keskin Array S	75.97	309	P	P	17 30 32.9	-0.8				
	comp=Z,280nmcomp=Z,33nm,1.1s										
BR105	Keskin Array S	75.98	309	P	P	17 30 32.9	-0.9				
	comp=Z,323nmcomp=Z,36nm,1.1s										
ONER	Baraj Valea Uz	76.06	318	⇑P	P	17 30 34.0	0.0				
RAKU	Rahkiv	76.14	320	P	P	17 30 32.9	-1.4				
MEZ	Mezhgor'ye	76.15	321	P	P	17 30 33.9	-0.5				
KIRS	Kirsehir-Merke	76.15	309	⇓P	P	17 30 34.5	-0.2				
TIRR	Tirgusor	76.15	316	⇓P	P	17 30 34.3	-0.1				
TIRR	Tirgusor	76.15	316	P	P	17 30 34.3	-0.1				
TIRR	Tirgusor	76.15	316	P	P	17 30 33.7	-0.7				
	comp=Z,21nm,1.9s										
VRI	Vrincioaia	76.18	318	⇓P	P	17 30 34.7	0.0				
VRI	Vrincioaia	76.18	318	P	P	17 30 34.9	+0.3				
VRI	Vrincioaia	76.18	318	P	P	17 30 33.9	-0.7				
	comp=Z,33nm,1.6s										
PLOR	Plostina	76.23	318	⇓P	P	17 30 34.8	-0.1				
PLOR	Plostina	76.23	318	P	P	17 30 34.8	-0.1				
MANR	Mangalia	76.45	315	⇓P	P	17 30 36.0	-0.1				
BRIU	Brid	76.51	321	P	P	17 30 35.7	-0.7				
KORU	Korolevo	76.57	321	P	P	17 30 36.0	-0.7				
MUKU	Mukachevo	76.60	321	P	P	17 30 36.2	-0.7				
STHS	Stebnicka Huta	76.66	323	*e*P	P	17 30 37.1	-0.3				
STHS				pmax	pmax						
	comp=Z,14nm,1.2s										
STHS	Stebnicka Huta	76.66	323	*e*P	P	17 30 37.0	-0.3				
HOLU	Holmets	76.70	322	P	P	17 30 36.8	-0.7				
ICOR	Ion Corvin	76.70	316	⇓P	P	17 30 37.5	0.0				
BMR	Baia Mare	76.71	320	⇑P	P	17 30 38.0	+0.5				
BMR	Baia Mare	76.71	320	P	P	17 30 38.0	+0.5				
ISR	Istrita	76.76	317	P	P	17 30 38.2	+0.2				
	comp=Z,35nm,1.8s										
BERU	Beregovo	76.77	321	P	P	17 30 37.1	-0.7				
OJC	Ojcow	76.81	324	*e*P	P	17 30 38.1	+0.1				
OJC	Ojcow	76.81	324	P	P	17 30 37.4	-0.7				
	comp=Z,70nm,1.0s										
DOPR	Dopca	76.84	318	⇓P	P	17 30 38.9	+0.5				
MLR	Muntele Rosu	76.84	318	LR	LR	18 05 25.1					
	comp=Z,631nm,20.3s,baz=49,slow=36										
MLR	Muntele Rosu	76.84	318	⇑P	P	17 30 37.6	-0.9				
MLR	Muntele Rosu	76.84	318	P	P	17 30 37.6	-0.9				
MLR	Muntele Rosu	76.84	318	P	P	17 30 37.8	-0.7				
	comp=Z,16nm,2.0s										
BORG	Borgarnes	76.93	351	LR	LR	18 05 04.9					
	comp=Z,135nm,18.2s,baz=26,slow=36										
SAHE	Sakarya_HENDEK	76.97	312	⇓P	P	17 30 38.9	-0.4				
MDUB	Mudurnu	77.00	311	IAmb	IAmb	17 30 40.4					
	comp=Z,88nm,1.1s										
NIE	Niedzica	77.12	323	*e*P	P	17 30 41.0	+1.2				
NIE	Niedzica	77.12	323	P	P	17 30 39.7	-0.2				
	comp=Z,17nm,0.8s										
RAYN	Ar Rayn	77.20	290	P	P	17 30 39.3	-1.5				
RAYN				IAmb	IAmb	17 30 41.4					
	comp=Z,103nm,1.6s										
RAYN	Ar Rayn	77.20	290	*i* P	P	17 30 39.3	-1.5				
	SNR=20										
RAYN	Ar Rayn	77.20	290	P	P	17 30 39.3	-1.5				
RAYN				pmax	pmax						
	comp=Z,103nm,1.6s										
RAYN	Ar Rayn	77.20	290	P	P	17 30 40.0	-0.8				
FRB	Frobisher Bay	77.36	11	LR	LR	18 07 40.2					
	comp=Z,352nm,19.4s,baz=323,slow=38										
VOIR		77.36	318	⇑P	P	17 30 41.8	+0.4				
VOIR		77.36	318	P	P	17 30 41.7	+0.4				
VOIR		77.36	318	P	P	17 30 41.0	-0.4				
	comp=Z,7.1nm,2.1s										
ANGG	Ammassalik, Gr	77.40	358	*i* P	P	17 30 40.5	-0.6				
ANGG				IAmb	IAmb	17 30 41.7					
	comp=Z,32nm,1.0s										
MARR	Marisel-Cluj	77.56	320	⇑P	P	17 30 41.9	-0.6				
ARR	Arges	77.63	318	⇑P	P	17 30 43.5	+0.6				
DRGR		77.69	320	⇑P	P	17 30 43.1	-0.1				
DRGR		77.69	320	P	P	17 30 43.1	-0.1				
LANS	Liptovska Anna	77.70	323	*e*P	P	17 30 43.7	+0.6				
LANS				pmax	pmax						
	comp=Z,12nm,1.1s										
LANS	Liptovska Anna	77.70	323	*e*P	P	17 30 43.7	+0.6				
NVAR	Mina Array Bea	77.74	51	P	P	17 30 45.1	+1.4				
	comp=Z,29nm,0.7s,baz=297,slow=5.1,SNR=97										
	comp=Z,29nm,0.7s										
BORA	Eskisehir	77.81	311	IAmb	IAmb	17 30 44.7					
	comp=Z,40nm,1.0s										
STEB	Steborice	77.95	325	*e*P	P	17 30 44.7	+0.2				
STEB				*e*pP	pP	17 30 48.5	-0.7				
KSP	Ksiaz	77.97	326	*e*P	P	17 30 45.0	+0.4				
KSP	Ksiaz	77.97	326	P	P	17 30 44.2	-0.4				
	comp=Z,46nm,1.2s										
LOT	Lotru	78.03	319	⇑P	P	17 30 44.8	-0.4				
CTYL	Yalikoy Yolu	78.10	313	P	P	17 30 44.7	-0.7				
	comp=Z,950nmcomp=Z,31nm,1.4s										
MORC	Moravsky Berou	78.16	325	P	P	17 30 45.7	0.0				
MORC	Moravsky Berou	78.16	325	*e*P	P	17 30 45.2	-0.5				
BSEG	Bad Segeberg	78.19	331	*e*P	P	17 30 44.7	-0.9				
	comp=Z,6.6nm,0.8s,baz=41,slow=5.5										
OSTC	Ostas	78.21	326	*e*P	P	17 30 46.0	0.0				
OSTC				*e**PP	pP	17 30 49.9	-0.8				
OSTC				MLR	MLR						
	comp=Z,2μm,14.9s										
OSTC	Ostas	78.21	326	*e*P	P	17 30 46.0	0.0				
OSTC				*e*pP	pP	17 30 49.9	-0.8				
OSTC				AMS	AMS	18 09 00.0					
	comp=Z,2μm,14.9s										
CHVC	Chvalec	78.26	326	*e*P	P	17 30 46.1	-0.1				
CHVC	Chvalec	78.26	326	*e*P	P	17 30 46.1	-0.1				
KRLC	Kraliky	78.30	325	AMS	AMS	18 08 30.0					
	comp=Z,3μm,15.9s										
DPC	Dobruska-Polom	78.31	326	*e*P	P	17 30 47.0	+0.5				
DPC				*e**PP	pP	17 30 49.8	-1.4				
DPC				MLR	MLR						
	comp=Z,2μm,15.1s										
DPC	Dobruska-Polom	78.31	326	*e*P	P	17 30 47.0	+0.5				
DPC				*e*pP	pP	17 30 49.8	-1.4				
DPC				AMS	AMS	18 08 40.0					
	comp=Z,2μm,15.1s										
DPC	Dobruska-Polom	78.31	326	P	P	17 30 46.5	0.0				
	comp=Z,32nm,1.8s										
PSZ	Piszkesteto	78.34	322	⇑P	P	17 30 47.0	+0.2				
PSZ	Piszkesteto	78.34	322	P	P	17 30 47.0	+0.2				
UPC	Upice	78.34	326	*e*P	P	17 30 46.8	+0.2				
UPC				MLR	MLR						
	comp=Z,2μm,17.1s										
UPC	Upice	78.34	326	*e*P	P	17 30 46.8	+0.2				
UPC				AMS	AMS	18 09 10.0					
	comp=Z,2μm,17.1s										
ASF	Jabal al Asfar	78.35	301	LR	LR	18 09 06.6					
	comp=Z,306nm,19.4s,baz=20,slow=39										
ELND	Elena	78.54	316	⇑P	P	17 30 47.5	-0.4				
RAO	Raoul Island	78.54	141	LR	LR	18 00 42.8					
	comp=Z,354nm,19.2s,baz=126,slow=32										
GZR	Gura Zlata	78.59	319	⇓P	P	17 30 48.4	+0.1				
GZR	Gura Zlata	78.59	319	P	P	17 30 48.3	+0.1				
NUUK	Nuuk	78.70	4	*i* P	P	17 30 49.0	+0.6				
NUUK				IAmb	IAmb	17 30 49.8					
	comp=Z,113nm,1.1s										
JAVC	Velka Javorina	78.75	324	*e*P	P	17 30 49.9	+0.9				
MMAI	Mount Meron Ar	78.86	303	P	P	17 30 50.0	+0.1				
	comp=Z,17nm,1.0s,baz=38,slow=7.3,SNR=7.2										
MMAI				LR	LR	18 09 09.3					
	comp=Z,311nm,20.1s,baz=56,slow=38										
	comp=Z,17nm,1.0s										
BAND	Balkesir-Ban	78.92	312	⇓P	P	17 30 50.3	+0.3				
VRAC	Vranov	78.93	325	LR	LR	18 06 36.2					
	comp=Z,598nm,18.6s,baz=39,slow=36										
VRAC	Vranov	78.93	325	P	P	17 30 50.5	+0.6				
VRAC	Vranov	78.93	325	*e*P	P	17 30 50.0	+0.1				
PLVB	Pleven	78.93	317	⇑P	P	17 30 49.4	-0.6				
PVCC	Panska Ves	78.96	327	*e*P	P	17 30 50.4	+0.4				
PVCC	Panska Ves	78.96	327	*e*P	P	17 30 50.4	+0.4				
BRG	Berggiesshubel	78.98	327	*e*P	P	17 30 49.3	-0.8				
	comp=Z,11nm,0.8s,baz=41,slow=5.5										
FLTG	Flechtingen	79.04	329	*e*P	P	17 30 49.3	-1.1				
	comp=Z,12nm,0.9s,baz=41,slow=5.5										
CSS	Mathiatis	79.04	306	P	P	17 30 50.4	-0.4				
	comp=Z,37nm,1.5s										
BZS	Buzias	79.05	320	⇓P	P	17 30 50.4	-0.2				
BZS	Buzias	79.05	320	P	P	17 30 50.3	-0.2				
CLL	Collm	79.07	328	IAmb	IAmb	17 30 51.2					
	comp=Z,42nm,0.9s										
CLL	Collm	79.07	328	⇑*i* P	P	17 30 50.1	-0.5				
CLL				*e**PP	PcP	17 31 00.0	+0.9				
CLL				*e*S	S	17 40 50.0	+0.8				
CLL				pmax	pmax						
	comp=Z,45nm,0.9s										
CLL	Collm	79.07	328	⇑*i* P	P	17 30 50.1	-0.5				
	comp=Z,45nm,0.9s										
CLL				*i* x	x	17 30 53.7					
CLL				*e*pP	PcP	17 31 00.0	+0.9				
CLL				*e*PP	PP	17 33 39.0	-10				
CLL				*e*S	S	17 40 50.0	+0.8				
CLL				*e*PS	PnS	17 41 36.0	+4.3				
CLL				*e*SS	SS	17 46 00.0	+6.2				
CLL				*e*SSS	SSS	17 49 06.0					
CLL	Collm	79.07	328	*e*P	P	17 30 49.6	-1.0				
	comp=Z,29nm,0.8s,baz=41,slow=5.5										
CLL	Collm	79.07	328	P	P	17 30 49.8	-0.8				
	comp=Z,63nm,1.2s										
SMOL	Smolenice	79.11	324	*e*P	P	17 30 51.4	+0.5				
SMOL				pmax	pmax						
	comp=Z,18nm,1.2s										
HERR	Herculane	79.13	319	⇓P	P	17 30 50.7	-0.3				
SRO	Srobarova	79.18	323	*e*P	P	17 30 52.0	+0.7				
SRO				pmax	pmax						
	comp=Z,25nm,1.1s										
SRO	Srobarova	79.18	323	*e*P	P	17 30 52.0	+0.7				
KRUC	Moravsky	79.20	325	*e*P	P	17 30 51.2	-0.2				
MODS	Modra-Piesok	79.28	324	*e*P	P	17 30 52.1	+0.3				
MODS				pmax	pmax						
	comp=Z,67nm,1.2s										
MODS	Modra-Piesok	79.28	324	*e*P	P	17 30 52.1	+0.3				
ISA	Isabella, Lake	79.33	53	IAmb	IAmb	17 30 53.7					
	comp=Z,82nm,1.7s										
PRU	Pruhonice	79.37	326	*e*P	P	17 30 52.4	+0.1				
PRU				*e**PP	pP	17 30 55.4	-1.6				
PRU				MLR	MLR						
	comp=Z,2μm,16.3s										
PRU	Pruhonice	79.37	326	*e*P	P	17 30 52.4	+0.1				
PRU				*e*pP	pP	17 30 55.4	-1.6				
PRU				AMS	AMS	18 09 50.0					
	comp=Z,2μm,16.3s										
HSKC	Hora Svate Kat	79.40	327	*e*P	P	17 30 52.4	-0.1				
HSKC				*e*pP	pP	17 30 56.7	-0.5				
HSKC				AMS	AMS	18 11 00.0					
	comp=Z,3μm,13.9s										
TREC	Trest	79.45	325	AMS	AMS	18 09 20.0					
	comp=Z,4μm,12.7s										
BALB	Balikesir	79.50	312	IAmb	IAmb	17 30 54.1					
	comp=Z,201nm,2.0s										
NEUB	Neuenburg	79.66	328	*e*P	P	17 30 52.9	-0.9				
	comp=Z,20nm,0.8s,baz=41,slow=5.5										
CLZ	Clausthal	79.76	330	*e*P	P	17 30 53.1	-1.3				
	comp=Z,22nm,1.1s,baz=41,slow=5.5										
ALN	Alexandroupoli	79.76	314	P	P	17 30 54.7	+0.1				
ALN				pmax	pmax						
	comp=Z,18nm,1.6s										
MANT	Manisa	79.83	311	IAmb	IAmb	17 30 55.9					
	comp=Z,63nm,1.3s										
ZVC	Zvikov	79.92	326	*e*P	P	17 30 55.4	+0.1				
ZVC				AMS	AMS	18 10 10.0					
	comp=Z,3μm,16.5s										
DUG	Dugway, Tooele	79.92	47	P	P	17 30 57.1	+1.4				
DUG				pmax	pmax						
	comp=Z,78nm,1.3s										
LRMC	Laurel Mtn Rad	79.95	53	IAmb	IAmb	17 30 58.0					
	comp=Z,219nm,2.0s										
TANN	Tannenbergstha	79.96	328	*e*P	P	17 30 54.7	-0.8				
	comp=Z,7.7nm,1.0s,baz=41,slow=5.5										
MPLH	Magyarpolny	80.00	323	P	P	17 30 55.1	-0.7				
	comp=Z,54nm,1.5s										
WINA	Alland / Wiene	80.03	324	*i* P	P	17 30 56.1	+0.1				
	SNR=7.5										
BW06	Boulder Array	80.07	43	IAmb	IAmb	17 30 58.2					
	comp=Z,53nm,0.8s										
PD31	Pinedale Array	80.07	43	IAmb	IAmb	17 30 58.2					
	comp=Z,52nm,0.8s										
PDAR	Pinedale Array	80.07	43	P	P	17 30 56.9	+0.4				
	comp=Z,37nm,0.7s,baz=289,slow=2.1,SNR=136										
PDAR				PKKPbc	PKKPbc	17 49 40.5	+0.7				
	comp=Z,0.6nm,0.8s,baz=134,slow=4.3,SNR=4.9										
PDAR				LR	LR	18 07 02.4					
	comp=Z,96nm,20.9s,baz=335,slow=36										
	comp=Z,37nm,0.7s										
PDAR	Pinedale Array	80.07	43	P	P	17 30 56.6	+0.1				
NKC	Novy Kostel	80.10	327	AMS	AMS	18 11 30.0					
	comp=Z,2μm,12.8s										
ELL	Elmali	80.11	309	IAmb	IAmb	17 31 04.3					
	comp=Z,62nm,1.0s										
MORH	Mrgy, Hungar	80.14	322	⇑P	P	17 30 55.9	-0.6				
MORH	Mrgy, Hungar	80.14	322	P	P	17 30 55.5	-1.0				
	comp=Z,13nm,1.5s										
GTTG	Gottingen	80.15	330	*e*P	P	17 30 55.5	-1.0				
	comp=Z,43nm,1.2s,baz=41,slow=5.5										
MOX	Moxa	80.15	328	P	P	17 30 56.3	-0.2				
MOX				pmax	pmax						
	comp=Z,19nm,1.9s										
MOX	Moxa	80.15	328	*e*P	P	17 30 55.5	-1.0				
	comp=Z,9.3nm,1.0s,baz=41,slow=5

CRES Cresnjevec Ost 81.97 323 *i* P **P 17 31 05.4 -1.0**
KBA Koelnbreinsper 82.05 325 *i* P **P 17 31 06.5 -0.4**
comp=Z,25nm,0.9s,SNR=10
RSSD Black Hills 82.05 39 P **P 17 31 06.8 -0.2**
RSSD Black Hills 82.05 39 P **P 17 31 06.8 -0.2**
RSSD pmax pmax
comp=Z,282nm,2.0s
LESA Schwarzleotal 82.09 325 *i* P **P 17 31 06.9 -0.2**
comp=Z,26nm,0.9s,SNR=12
FUR Furstenfeldbru 82.16 327 *eP* **P 17 31 06.7 -0.6**
comp=Z,39nm,0.9s,baz=41,slow=5.5
MYKA Terra Mystica 82.24 324 *i* P **P 17 31 06.9 -0.9**
comp=Z,28nm,1.6s,SNR=8.0
BOJS Bojanci 82.30 323 *i* P **P 17 31 07.2 -0.8**
BAR Barrett 82.36 55 IAmb IAmb 17 31 09.9
comp=Z,39nm,0.9s
BTNL Ternell 82.42 331 *dP* **P 17 31 07.9 -0.7**
comp=Z,21nm,0.9s
BTNL *dP*P **PP 17 34 16.4 -0.4**
MEM Membach 82.44 331 *dP* **P 17 31 08.3 -0.4**
comp=Z,24nm,1.0s
CEY Cerknica 82.53 323 *i* P **P 17 31 08.2 -1.1**
OHR Ohrid 82.56 317 *i* P **P 17 31 09.6 0.0**
ROBS Robic 82.59 324 *eP* **P 17 31 07.5 -2.0**
STU Stuttgart 82.59 328 IAmb IAmb 17 31 10.3
comp=Z,30nm,0.9s
STU Stuttgart 82.59 328 *eP* **P 17 31 09.4 -0.1**
comp=Z,51nm,0.9s,baz=41,slow=5.5
BSTI Sart Tilman 82.64 331 *dP* **P 17 31 08.5 -1.1**
BHOU Houvegnez 82.65 331 *dP* **P 17 31 09.2 -0.5**
comp=Z,11nm,1.0s
WATA Walderalm 82.66 326 *i* P **P 17 31 09.7 -0.3**
comp=Z,10nm,0.8s
ABTA Abfaltersbach 82.67 325 *i* P **P 17 31 09.0 -1.1**
comp=Z,14nm,1.1s,SNR=5.1
TOZ Tahuroa Road 82.68 150 IAmb IAmb 17 31 12.9
comp=Z,56nm,1.0s
WTTA Wattenberg 82.68 326 *i* P **P 17 31 10.0 -0.2**
comp=Z,24nm,1.3s,SNR=6.2
KUQ Kuujjuaa 82.69 13 IAmb IAmb 17 31 10.7
comp=Z,122nm,1.6s
MOTA Moosalm 82.86 326 *i* P **P 17 31 10.7 -0.4**
comp=Z,31nm,1.1s,SNR=7.0
BCLA Clavier 82.87 331 *dP* **P 17 31 09.8 -1.1**
RETA Reutte 82.90 326 *i* P **P 17 31 11.1 -0.2**
comp=Z,35nm,0.9s,SNR=10
SQTA Sankt Quirin 82.91 326 *i* P **P 17 31 10.8 -0.5**
comp=Z,15nm,1.2s
BGES Gesves 82.98 331 *dP* **P 17 31 10.8 -0.7**
comp=Z,11nm,0.8s
UBR Ueberruh 83.04 327 *eP* **P 17 31 11.6 -0.3**
comp=Z,8.9nm,1.0s,baz=41,slow=5.5
RCHB Rochefort 83.11 331 *dP* **P 17 31 11.2 -0.9**
comp=Z,15nm,0.9s
WLF Walferdange 83.14 330 *dP* **P 17 31 11.8 -0.5**
WLF Walferdange 83.14 330 *eP* **P 17 31 12.2 -0.1**
comp=Z,10nm,0.8s,baz=41,slow=5.5
BMRD Maredsous 83.17 331 *dP* **P 17 31 11.8 -0.6**
comp=Z,19nm,1.1s
RAR Rarotonga 83.26 123 LR LR 18 03 55.0
comp=Z,282nm,18.8s,baz=310,slow=32
FETA Feichten 83.27 326 *i* P **P 17 31 12.6 -0.7**
comp=Z,19nm,1.0s,SNR=7.2
BFO Black Forest 83.30 328 P **P 17 31 11.9 -1.3**
BFO IAmb IAmb 17 31 13.8
comp=Z,43nm,0.9s
BFO Black Forest 83.30 328 P **P 17 31 11.9 -1.3**
BFO pmax pmax
comp=Z,43nm,0.9s
BFO Black Forest 83.30 328 *eP* **P 17 31 13.2 0.0**
comp=Z,28nm,0.9s,baz=41,slow=5.5
DOU Dourbes 83.40 331 *dP* **P 17 31 12.8 -0.8**
DAVA Damuels 83.44 327 *i* P **P 17 31 13.8 -0.3**
comp=Z,49nm,0.9s,SNR=12
CTI Castel Tesino 83.59 325 IAmb IAmb 17 31 14.4
comp=Z,25nm,1.0s
FUORN Ofenpass-Fuorn 83.78 326 IAmb IAmb 17 31 17.0
comp=Z,54nm,0.9s
URZ Urewera 83.78 149 P **P 17 31 14.9 -0.6**
comp=Z,19nm,0.8s,baz=2.6,slow=3.6,SNR=7.7
URZ LR LR 18 03 10.9
comp=Z,130nm,20.9s,baz=330,slow=32
comp=Z,19nm,0.8s
DAVOX Davos/Dischmat 83.83 326 LR LR 18 12 24.4
comp=Z,770nm,20.9s,baz=28,slow=38
ECH Echery 83.88 329 IAmb IAmb 17 31 16.6
comp=Z,32nm,1.0s
KEK Kerkira 84.08 316 IAmb IAmb 17 31 17.5
comp=Z,29nm,1.0s
TEOL Teolo 84.10 325 IAmb IAmb 17 31 22.4
comp=Z,22nm,0.8s
ISCO Idaho Springs 84.27 43 IAmb IAmb 17 31 24.9
comp=Z,94nm,1.8s
TUE Stuetta 84.30 327 IAmb IAmb 17 31 22.7
comp=Z,36nm,1.1s
TUE Stuetta 84.30 327 P **P 17 31 17.8 -0.8**
comp=Z,95nm,0.7s
BKZ Black Stump Fm 84.31 150 P **P 17 31 19.1 +0.8**
BKZ Black Stump Fm 84.31 150 IAmb IAmb 17 31 20.8
comp=Z,44nm,1.1s
SALO Salr 84.43 325 IAmb IAmb 17 31 19.1
comp=Z,40nm,0.8s
F33A 5 Mile Ranch, 84.48 34 IAmb IAmb 17 31 20.3
comp=Z,46nm,0.9s
ITM Ithomi 84.63 313 IAmb IAmb 17 31 20.1
comp=Z,53nm,0.9s
SGRT San Giovanni R 84.79 320 IAmb IAmb 17 31 21.4
comp=Z,46nm,1.1s
MATE Matera 85.09 319 ||P **P 17 31 22.2 -0.2**
FDMO Fiordimonte 85.17 322 IAmb IAmb 17 31 23.9
comp=Z,90nm,1.5s
MRZ Mangatainoka R 85.24 151 IAmb IAmb 17 31 24.3
comp=Z,72nm,1.2s
MURB Monte Urbino 85.28 323 IAmb IAmb 17 31 24.9
comp=Z,48nm,1.2s
CAMP Campotosto 85.39 322 IAmb IAmb 17 31 25.0
comp=Z,75nm,1.6s
AQU L'Aquila 85.53 322 P **P 17 31 25.2 +0.5**
AQU pmax pmax
comp=Z,469nm,1.8s
AQU L'Aquila 85.53 322 P **P 17 31 24.6 -0.1**
comp=Z,684nmcomp=Z,38nm,1.8s
PAOL Paolisi 85.92 320 IAmb IAmb 17 31 26.7
comp=Z,62nm,1.9s
ECSD EROS Data Cent 85.95 36 IAmb IAmb 17 31 27.7
comp=Z,32nm,0.8s
SCHQ Scheffervill 86.08 13 P **P 17 31 27.3 +0.2**
comp=Z,44nm,0.9s,baz=352,slow=5.1,SNR=70
SCHQ LR LR 18 11 56.0
comp=Z,245nm,19.9s,baz=344,slow=37
comp=Z,44nm,0.9s
ATD Arta Tunnel 86.29 282 LR LR 18 13 02.4
comp=Z,7.3nm,19.5s,baz=60,slow=38
OXZ Oxford 86.31 155 IAmb IAmb 17 31 29.3
comp=Z,29nm,1.1s
RPZ Rata Peaks 86.33 156 LR LR 18 04 35.7
comp=Z,331nm,19.6s,baz=26,slow=32
TUC Tucson 86.36 52 P **P 17 31 29.0 0.0**
TUC IAmb IAmb 17 31 31.2
comp=Z,116nm,1.9s
TUC Tucson 86.36 52 P **P 17 31 29.0 0.0**
TUC pmax pmax
comp=Z,116nm,2.0s
BNI Bardonecchia 86.58 327 IAmb IAmb 17 31 34.4
comp=Z,71nm,2.0s
LBZ Lake Benmore 86.65 157 IAmb IAmb 17 31 31.7
comp=Z,49nm,1.4s
ANMO Albuquerque 87.19 47 P **P 17 31 33.6 +0.5**
comp=Z,17nm,1.1s,baz=296,slow=5.6,SNR=39
comp=Z,17nm,1.1s
ANMO Albuquerque 87.19 47 P **P 17 31 33.3 +0.2**
ANMO IAmb IAmb 17 31 35.7
comp=Z,31nm,1.1s
ANMO Albuquerque 87.19 47 P **P 17 31 33.3 +0.2**
ANMO pmax pmax
comp=Z,31nm,1.2s
CEL Celeste 87.25 317 IAmb IAmb 17 31 37.0
comp=Z,24nm,0.9s
PPT Papeete 88.00 114 LR LR 18 05 06.9
comp=Z,156nm,21.0s,baz=323,slow=32
PPT2 Papeete2 88.01 114 *eLR* LR 17 59 11.1
comp=Z,2µm,31.8s
PPT2 *eLR* LR 17 59 21.3
comp=Z,960nm,31.0s
CBKS Cedar Bluff 88.12 41 IAmb IAmb 17 31 38.2
comp=Z,33nm,0.9s
I40A Norwalk 88.50 32 IAmb IAmb 17 31 40.2
comp=Z,30nm,0.9s
VAE Valguarnera 88.62 318 LR LR 18 18 18.4
comp=Z,382nm,18.1s,baz=186,slow=40
JFWS Jewell Farm 89.45 33 IAmb IAmb 17 31 44.5
comp=Z,92nm,1.8s
L40A Anamosa 89.71 34 IAmb IAmb 17 31 45.8
comp=Z,50nm,1.0s
TAOE Nuku Hiva Isla 89.75 101 *eLR* LR 18 00 03.6
comp=Z,984nm,33.5s
L42A Oliver, Polo 90.44 33 IAmb IAmb 17 31 49.1
comp=Z,85nm,1.7s
CROK Carrier 90.77 41 IAmb IAmb 17 31 50.9
comp=Z,42nm,1.1s
N41A Harden Midland 90.97 34 IAmb IAmb 17 31 52.0
comp=Z,49nm,1.1s
CORI Orista 91.05 328 IAmb IAmb 17 31 54.9
comp=Z,22nm,0.8s
FURI Furi 91.14 282 LR LR 18 17 22.1
comp=Z,208nm,18.6s,baz=33,slow=39
SN07 Snyder 07 91.73 45 IAmb IAmb 17 31 56.0
comp=Z,39nm,1.4s
TBI Tubuai 91.78 118 *eLR* LR 18 01 03.0
comp=Z,4µm,33.2s
TBI *eLR* LR 18 01 10.0
comp=Z,1µm,28.8s
SADO Sadowa 92.13 25 P **P 17 31 55.4 -0.5**
comp=Z,14nm,1.0s,baz=9.5,slow=6.4,SNR=8.2
SADO LR LR 18 16 52.0
comp=Z,176nm,18.7s,baz=344,slow=38
comp=Z,14nm,1.0s
SADO Sadowa 92.13 25 IAmb IAmb 17 31 56.4
comp=Z,24nm,1.0s
LPIG La Paz 92.20 57 LR LR 18 08 08.9
comp=Z,84nm,18.5s,baz=250,slow=32
S39A Bovar 92.22 38 IAmb IAmb 17 31 57.1
comp=Z,25nm,0.9s
R40A Maddies Statio 92.25 37 IAmb IAmb 17 31 57.8
comp=Z,56nm,1.4s
TUL3 Leonard 92.37 40 IAmb IAmb 17 31 58.6
comp=Z,30nm,0.7s
W35A Tecumseh 92.38 41 IAmb IAmb 17 31 58.7
comp=Z,29nm,0.7s
P43A Skaggs, Pawnee 92.43 34 IAmb IAmb 17 31 58.6
comp=Z,32nm,1.0s
RLO Rose Lookout 92.56 40 IAmb IAmb 17 31 59.5
comp=Z,54nm,1.4s
KEST Kesra 92.60 320 P **P 17 31 57.9 -0.5**
comp=Z,4.1nm,1.0s,baz=137,slow=12,SNR=3.8
KEST LR LR 18 16 32.8
comp=Z,380nm,18.1s,baz=37,slow=38
comp=Z,4.1nm,1.0s
U38A Gravette 92.67 39 IAmb IAmb 17 31 59.7
comp=Z,30nm,0.8s
TXAR Lajitas Array 92.82 50 P **P 17 32 00.2 +0.7**
comp=Z,16nm,0.8s,baz=297,slow=3.0,SNR=148
TXAR PKKPbc **PKKPbc 17 49 10.3 +1.2**
comp=Z,1.2nm,0.7s,baz=136,slow=6.8,SNR=11
comp=Z,16nm,0.8s
TXAR Lajitas Array 92.82 50 P **P 17 31 59.7 +0.2**
SFIN Lafayette 92.88 32 IAmb IAmb 17 32 00.9
comp=Z,23nm,0.9s
CCM Cathedral Cave 92.92 36 P **P 17 31 58.9 -0.8**
CCM IAmb IAmb 17 32 00.9
comp=Z,22nm,0.9s
CCM Cathedral Cave 92.92 36 P **P 17 31 58.9 -0.8**
CCM pmax pmax
comp=Z,22nm,0.9s
MGMO Mountain Grove 93.15 37 IAmb IAmb 17 32 01.7
comp=Z,20nm,0.9s
P46A Rosedale 93.46 33 IAmb IAmb 17 32 03.5
comp=Z,20nm,0.8s
LONY Lake Ozonia 93.71 22 IAmb IAmb 17 32 04.5
comp=Z,28nm,1.1s
OLIL Olney 93.80 34 IAmb IAmb 17 32 05.3
comp=Z,37nm,0.9s
T42A Van Buren 93.82 37 IAmb IAmb 17 32 05.1
comp=Z,24nm,1.0s
SIUC Southern Illin 94.14 35 IAmb IAmb 17 32 06.6
comp=Z,41nm,0.9s
NCB Newcomb 94.40 22 IAmb IAmb 17 32 07.9
comp=Z,7nm,0.8s
LCAR Lake Charles 94.56 37 IAmb IAmb 17 32 08.5
comp=Z,60nm,1.9s
MIAR Mount Ida 94.56 40 IAmb IAmb 17 32 08.8
comp=Z,29nm,0.8s
ESDC Sonseca Array 95.43 331 P **P 17 32 10.1 -1.1**
comp=Z,1.1nm,0.8s,baz=29,slow=3.3,SNR=5.8
ESDC PP **PP 17 36 02.7 +1.8**
comp=Z,0.9nm,0.8s,baz=20,slow=7.2,SNR=6.4
ESDC LR LR 18 20 37.7
comp=Z,443nm,18.3s,baz=20,slow=39
comp=Z,1.1nm,0.8s
WVT Waverly 96.07 35 P **P 17 32 13.3 -0.8**
WVT Waverly 96.07 35 P **P 17 32 13.3 -0.8**
WVT pmax pmax
comp=Z,10.0nm,0.9s
SSPA Standing Stone 96.22 26 P **P 17 32 14.0 -0.7**
SSPA IAmb IAmb 17 32 16.3
comp=Z,40nm,1.4s
HRV Adam Dziewonsk 96.52 21 P **P 17 32 15.3 -0.8**
HRV Adam Dziewonsk 96.52 21 P **P 17 32 15.3 -0.8**
HRV pmax pmax
comp=Z,35nm,1.1s
LODK Lodwar 97.08 280 P **P 17 32 16.4 -2.8**
LODK IAmb IAmb 17 32 20.2
comp=Z,21nm,1.8s
LODK Lodwar 97.08 280 P **P 17 32 19.0 -0.1**
SNR=5.0
SWET Sewanee 97.69 34 IAmb IAmb 17 32 22.1
comp=Z,14nm,1.0s
W50A Signal Mountai 97.98 34 IAmb IAmb 17 33 47.7
comp=Z,47nm,1.9s
TKL Tuckaleechee C 98.26 32 P **P 17 32 23.3 -0.7**
comp=Z,6.3nm,0.8s,baz=117,slow=1.2,SNR=7.8
TKL LR LR 18 21 13.2
comp=Z,172nm,18.6s,baz=330,slow=38
comp=Z,6.3nm,0.8s
TKL Tuckaleechee C 98.26 32 IAmb IAmb 17 32 24.6
comp=Z,9.7nm,0.9s
KMBO Kilima Mbogo 98.34 275 LR LR 18 18 29.9
comp=Z,135nm,19.7s,baz=100,slow=36
TORD Torodi Ar. Bea 114.54 311 PKP **PKiKP 17 37 25.5 -1.7**
comp=Z,3.1nm,0.9s,baz=299,slow=1.4,SNR=12
TORD PP **PP 17 38 27.7 +4.4**
comp=Z,2.0nm,1.0s,baz=20,slow=4.6,SNR=5.2
TORD PKKPbc **PKKPbc 17 48 07.6 +3.2**
comp=Z,1.0nm,0.8s,baz=232,slow=5.1,SNR=7.1
BROLN Tlhalogang 117.70 264 *i* P **PKPdf 17 37 31.8 -1.3**
MAW Mawson 118.17 205 PKP **PKPdf 17 37 32.4 0.0**
comp=Z,7.1nm,0.8s,baz=184,slow=1.5,SNR=3.8
KHWEE KHWEE 119.64 264 *i* P **PKPdf 17 37 35.0 -1.9**
LPHEP Lephephe 120.03 262 *i* P **PKPdf 17 37 36.0 -1.6**
KDWAN Kaudwane 120.99 263 *i* P **PKPdf 17 37 38.3 -1.1**
KGCAE Kacgae 122.67 265 *i* P **PKPdf 17 37 41.9 -0.8**
GRTLG Ghanzi 122.70 267 *i* P **PKPdf 17 37 42.1 -0.7**
BOSA Boshof 123.06 257 PKP **PKPdf 17 37 42.5 -0.7**
comp=Z,6.5nm,0.8s,baz=79,slow=1.4,SNR=9.1
DBIC Dimbokro 123.57 312 PKP **PKPdf 17 37 43.6 -1.0**
comp=Z,7.8nm,0.9s,baz=250,slow=4.8,SNR=7.1
KOOLE Kule 124.34 266 *i* P **PKPdf 17 37 44.4 -1.5**
TSUM Tsumeb 124.47 271 P **PKPdf 17 37 45.5 -0.8**
UREC San Jos de Ur 125.96 41 P **PKPdf 17 37 48.8 -0.4**
DBBC Dabeiba 126.21 42 P **PKiKP 17 37 50.2 0.0**
QSPA South Pole Qui 126.97 180 PKP **PKPdf 17 37 48.9 -0.6**
comp=Z,9.7nm,0.9s,baz=308,slow=2.0,SNR=15
QSPA South Pole Qui 126.97 180 **PKPdf 17 37 49.6 +0.1**
CBOC Ciudad Bolivar 127.28 43 P **PKPdf 17 37 51.8 -0.1**
SDV Santo Domingo 127.39 35 **PKPdf 17 37 50.8 -1.4**
SDV Santo Domingo 127.39 35 *eP* **PKPdf 17 37 51.0 -1.2**
BRJC Barrancabermej 127.54 40 P **PKiKP 17 37 52.5 -0.2**
PTBC PUERTO BERRIO 127.54 41 P **PKPdf 17 37 51.5 -0.7**
PLMC San Jos del P 127.93 44 P **PKPdf 17 37 53.1 0.0**
NORC Norcasia 128.15 42 P **PKPdf 17 37 52.8 -0.6**
GUY2C Guyana, Caldas 128.17 43 P **PKPdf 17 37 53.7 -0.3**
GR1C Gorgona, Isla 128.41 47 P **PKPdf 17 37 53.5 -0.4**
SPBC San Pablo de B 128.49 41 P **PKPdf 17 37 53.8 -0.3**
YOTC Yotoco, Valle 128.66 44 P **PKPdf 17 37 54.2 -0.3**
RUSC La Rusia 128.80 40 P **PKPdf 17 37 55.0 -0.2**
ROSC El Rosal 129.05 42 PKP **PKPdf 17 37 54.7 -0.9**
comp=Z,11nm,0.4s,baz=92,slow=2.4,SNR=10
ROSC El Rosal 129.05 42 P **PKiKP 17 37 56.4 +0.1**
JAMC Jamundi, Valle 129.10 45 P **PKPdf 17 37 55.3 -0.2**
ORTC Ortega, Tolima 129.33 43 P **PKPdf 17 37 55.0 -0.7**
CHIC Chingaza 129.54 41 P **PKPdf 17 37 56.1 -0.4**
POPC Popayan, Colom 129.65 46 P **PKPdf 17 37 55.8 -0.7**
PRAC Prado 129.69 43 P **PKPdf 17 37 56.0 -0.4**
URMC La Uribe, Meta 130.35 43 P **PKPdf 17 37 57.4 -0.3**
FLOC Florencia 131.02 45 P **PKPdf 17 37 59.1 +0.2**
NVL N'lazarevskaya 136.07 203 *e*PKIKP **PKiKP 17 38 15.1 +7.0**
NVL *e* 17 40 54.8
NVL *e*PPP PPP 17 43 51.9
SNAA Sanae 139.82 198 PKhKP PKPpre 17 38 05.4
comp=Z,8.7nm,1.0s,baz=149,slow=2.3,SNR=5.5
SNAA Sanae 139.82 198 PKPpre 17 38 04.2
SNAA Sanae 139.82 198 PKHKP PKPpre 17 38 04.2
VNA2 Neumayer--Watz 141.43 198 ||PKPdf **PKPdf 17 38 10.2 -6.2**
comp=Z,12nm,0.6s,baz=111,slow=3.4
ITTB Itaituba 145.32 22 *eP* **PKPbc 17 38 23.6 -1.1**
NBPS Pedro II - PI 147.29 357 *eP* **PKPdf 17 38 27.8 -0.6**
NPGB Novo Progresso 147.96 23 *eP* **PKPdf 17 38 28.6 -0.8**
RCBR Riachuelo 148.06 346 **PKPdf 17 38 25.6 -4.0**
RCBR Riachuelo 148.06 346 PKHKP PKPpre 17 38 25.6
PRPB Parauapebas 148.50 13 *eP* **PKPdf 17 38 28.9 -1.3**
LPAZ La Paz 149.62 53 PKP **PKPdf 17 38 33.4 +0.7**
comp=Z,15nm,0.9s,baz=330,slow=3.3,SNR=25
LPAZ PKPbc **PKPbc 17 38 36.9 -0.5**
comp=Z,15nm,0.9s,baz=337,slow=4.4,SNR=20
LPAZ La Paz 149.62 53 *eP* **PKPdf 17 38 29.9 -2.8**
NBMA Muriti-CE 150.01 351 *eP* **PKPdf 17 38 31.5 -1.3**
CLDB Colider 151.39 27 *eP* **PKPdf 17 38 34.6 -0.2**
VILB Vilhena 151.41 37 **PKPdf 17 38 35.6 +0.8**
VILB Vilhena 151.41 37 *eP* **PKPdf 17 38 34.2 -0.6**
SMTB Santa Maria do 151.48 9 *eP* **PKPdf 17 38 34.4 -0.6**
PDRB Porto dos Gac 151.72 29 *eP* **PKPdf 17 38 36.2 +0.9**
RTLS Leoncito 157.80 84 *eP* **PKPab 17 39 17.1 +0.8**
AUSP Uspallata 157.88 85 *eP* **PKPab 17 39 18.4 +1.8**
BDFB Brasilia 158.07 13 PKPab **PKPab 17 39 17.7 +0.4**
comp=Z,8.2nm,0.7s,baz=210,slow=0.7,SNR=8.1
BDFB Brasilia 158.07 13 **PKPab 17 39 18.1 +0.7**
PLCA Paso Flores 158.43 108 PKPab **PKPab 17 39 19.9 +1.3**
comp=Z,9.6nm,1.0s,baz=255,slow=4.6,SNR=8.1
ASAL Salagasta 158.44 85 *eP* **PKPab 17 39 20.3 +1.5**
ARCO CERRO ARCO 158.45 86 *eP* **PKPab 17 39 19.5 +0.5**
AAGR Agrelo 158.61 87 *eP* **PKPab 17 39 18.4 -1.2**
CPUP Villa Florida 163.78 52 PKP **PKPdf 17 38 50.1 +0.3**
comp=Z,2.1nm,0.3s,baz=3.3,slow=3.9,SNR=5.6
CPUP PKPab **PKPab 17 39 42.2 +0.1**
comp=Z,6.1nm,0.7s,baz=305,slow=4.9,SNR=11
CPUP Villa Florida 163.78 52 **PKPab 17 39 39.6 -2.4**
TRQA Tornquist 165.04 99 **PKPab 17 39 46.8 -0.7**
TRQA Tornquist 165.04 99 PKP2 **PKPab 17 39 46.8 -0.7**

JMA 12 17:19:47.4±0.1, 28°2N±0°2×129°7E±0°2, h12km±1km, MV1.0/4, NEAR AMAMI-OSHIMA ISLAND, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAM	**Amami Oshima**	**0.24**	**352**	P	Pg	17 19 52.6	+0.1
JAM				*eS*	Sg	17 19 56.4	+0.4
JAMN	**Amaminishikomi**	**0.42**	**280**	P	Pg	17 19 55.7	0.0
JAMN				*eS*	Sg	17 20 01.5	+0.1
JTK	**Tokunoshima**	**0.72**	**238**	*eP*	Pg	17 20 01.2	-0.2
JTK				*eS*	Sg	17 20 10.8	-0.1

IDC 12 17:58:43.4±2.3, 6°01S×145°73E, h114km±25km, mb3.2/7, mbtmp3.6/10, Error ellipse: s-maj=33.7km s-min=19.0km az=57.0

ISC 12 17:58:43.2±0.9, 6°0S±0°1×145°7E±0°2, h109km, n10, σ0s99/12, mb3.6/6, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.72**	**157**	P	**Pn**	**17 59 40.0**	**+1.2**
	29nm,0.3s,baz=313,slow=14,SNR=46						
PMG				S	**Sn**	**18 00 20.8**	**-1.0**
	47nm,0.7s,baz=144,slow=18,SNR=5.7						
JAY	**Jayapura**	**6.05**	**304**	P	**Pn**	**18 00 10.4**	**+0.1**
	2.8nm,0.3s,baz=134,slow=10.0,SNR=5.5						
WRA	**Warramunga Arr**	**17.76**	**217**	P	**P**	**18 02 41.7**	**-1.3**
	0.3nm,0.7s,baz=38,slow=10,SNR=1.5						
ASAR	**Alice Springs**	**20.96**	**212**	P	**P**	**18 03 16.7**	**-1.0**
	0.3nm,0.7s,baz=29,slow=11,SNR=2.4						
ASAR				pP	**pP**	**18 03 39.1**	**+0.8**
	0.4nm,0.7s,baz=31,slow=11,SNR=6.2						
	0.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**52.10**	**299**	P	**P**	**18 07 43.9**	**+1.2**
	0.6nm,0.5s,baz=124,slow=5.9,SNR=4.3						
	0.6nm,0.5s						
SONM	**Songino Array**	**63.75**	**332**	P	**P**	**18 09 02.8**	**-0.8**
	0.4nm,0.6s,baz=155,slow=6.2,SNR=4.4						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**76.65**	**321**	P	**P**	**18 10 22.0**	**-0.2**
	0.2nm,0.4s,baz=98,slow=7.7,SNR=8.1						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**78.30**	**328**	P	**P**	**18 10 30.2**	**-0.9**
	0.5nm,0.5s,baz=91,slow=5.8,SNR=2.7						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**80.43**	**323**	P	**P**	**18 10 43.3**	**+0.5**
	0.4nm,0.6s,baz=120,slow=4.4,SNR=5.2						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**85.94**	**23**	P	**P**	**18 11 10.7**	**-0.2**
	0.5nm,0.8s,baz=246,slow=5.1,SNR=4.7						
	0.5nm,0.8s						

IDC 12 17:58:46.6±1.8, 30°88S×177°62W, h0km, mb4.1/4, mbtmp4.0/5, ML3.2/1, MS4.1/2, Error ellipse: s-maj=45.4km s-min=23.6km az=117.0
NEIC 12 17:58:52.5±1.4, 30°72S±0°05×177°8W±0°2, h26km±3km, mb4.7/7, Error ellipse: s-maj=20.3km s-min=7.1km az=84.0

ISC 12 17:58:52.9±1.0, 30°75S±0°07×177°9W±0°2, h35km, n22, σ1s41/23, mb4.5/8, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.50**	**358**	Pn	**Pn**	**17 59 17.9**	**+0.6**
	222nm,0.3s,baz=146,slow=9.2,SNR=7.1						
RAO				Sn	**Sn**	**17 59 34.5**	**-1.1**
	645nm,0.3s,baz=321,slow=23,SNR=8.4						
RAO	**Raoul Island**	**1.50**	**358**		**Pn**	**17 59 18.0**	**+0.7**
URZ	**Urewera**	**8.56**	**208**	Pn	**Pn**	**18 00 52.9**	**-1.4**
	0.3nm,0.3s,baz=264,slow=4.2,SNR=9.8						
URZ				Sn	**Sn**	**18 02 31.9**	**+2.3**
	3.2nm,0.3s,baz=16,slow=23,SNR=13						
	6.2nm,0.8s						
RTZ	**Ruatahuna**	**8.92**	**207**	Pn	**Pn**	**18 01 00.0**	**+0.7**
RTZ				Sn	**Sn**	**18 02 34.5**	**-4.1**
BKZ	**Black Stump Fm**	**9.59**	**207**	Pn	**Pn**	**18 01 09.3**	**+0.9**
MRZ	**Mangatainoka R**	**11.23**	**207**	Pn	**Pn**	**18 01 30.1**	**-0.7**
CTA	**Charters Tower**	**33.99**	**280**	P	**P**	**18 05 35.0**	**+1.6**
	4.8nm,0.8s,baz=101,slow=10,SNR=1.6						
	4.8nm,0.8s						
CTAO	**Charters Tower**	**33.99**	**280**	P	**P**	**18 05 33.9**	**+0.5**
STKA	**Stephens Creek**	**34.53**	**257**	P	**P**	**18 05 38.5**	**+0.6**
	3.4nm,0.7s,baz=90,slow=9.4,SNR=5.5						
	3.4nm,0.7s						
STKA	**Stephens Creek**	**34.53**	**257**	P	**P**	**18 05 38.9**	**+0.9**
STKA				IAmb	IAmb	18 05 40.8	
	comp=Z,15nm,0.8s						
ASAR	**Alice Springs**	**43.22**	**267**	P	**P**	**18 06 50.9**	**0.0**
	comp=Z,0.3nm,0.5s,baz=104,slow=7.3,SNR=8.5						
	comp=Z,0.3nm,0.5s						
WR8	**Warramunga Arr**	**44.10**	**272**	P	**P**	**18 06 57.7**	**-0.3**
WR8				IAmb	IAmb	18 07 01.0	
	comp=Z,5.8nm,1.1s						
WRA	**Warramunga Arr**	**44.24**	**272**	P	**P**	**18 06 58.4**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=110,slow=8.1,SNR=26						
	comp=Z,1.0nm,0.4s						
WB0	**Warramunga Arr**	**44.27**	**273**	P	**P**	**18 06 58.5**	**-0.8**
WB0				IAmb	IAmb	18 07 20.7	
	comp=Z,13nm,1.4s						
QSPA	**South Pole Qui**	**59.36**	**180**	LR	LR	18 30 23.3	
	comp=Z,153nm,21.1s,baz=5.0,slow=32						
QSPA	**South Pole Qui**	**59.36**	**180**	P	**P**	**18 08 52.4**	**+1.1**
QSPA				IAmb	IAmb	18 09 36.9	
	comp=Z,8.1nm,1.4s						
BELA	**Belgrano 2**	**69.42**	**172**	P	**P**	**18 09 57.4**	**+0.6**
BELA				IAmb	IAmb	18 10 04.7	
	comp=Z,13nm,1.5s						
PMSA	**Palmer Station**	**71.89**	**156**	LR	LR	18 34 05.3	
	comp=Z,137nm,21.0s,baz=254,slow=30						
KURK	**Kurchatov**	**121.39**	**314**		**PKiKP**	**18 17 40.8**	**-1.3**
KURBB	**Kurchatov Arra**	**121.43**	**313**	PKP	**PKPdf**	**18 17 40.8**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=94,slow=2.6,SNR=5.3						
FINES	**FINESS Array B**	**145.52**	**340**	PKPbc	**PKPab**	**18 18 26.2**	**-0.7**
	comp=Z,1.5nm,0.3s,baz=50,slow=4.0,SNR=25						
AKASG	**Malin Array Be**	**151.66**	**322**	PKPbc	**PKiKP**	**18 18 42.7**	**-0.8**
	comp=Z,0.8nm,0.5s,baz=54,slow=2.6,SNR=4.4						

UPP ***12*** *18:23:41.9±0.1, 67°.83N×20°.19E, h0km, ML2.8, Confirmed Induced event*
DNK ***12*** *18:23:42.4±0.5, 67°.83N×20°.20E, h0km, ML2.8(UPP), Suspected explosion*
HEL ***12*** *18:23:43.8±0.8, 67°.83N×20°.25E, h0km, ML1.3, Suspected explosion*

ISC 12 18:23:42.3±0.8, **67°.83N**±0°.02×**20°.21E**±0°.02, **h0km**, **n25, σ0s80/43, Sweden**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.14**	**20**	P			**Pg**	**18 23 44.9**	**-0.1**
KUA				S			**Sg**	**18 23 47.0**	**+0.3**
KUA	**Kurravaara**	**0.14**	**20**	P			**Pg**	**18 23 44.9**	**-0.1**
KUA				S			**Sg**	**18 23 47.0**	**+0.3**
RATU	**Laukkuluspa**	**0.24**	**270**	P			**Pg**	**18 23 46.5**	**-0.3**
RATU				S			**Sg**	**18 23 50.1**	**+0.3**
RATU	**Laukkuluspa**	**0.24**	**270**	P			**Pg**	**18 23 46.5**	**-0.3**
RATU				S			**Sg**	**18 23 50.1**	**+0.3**
KOVU	**Salmi**	**0.40**	**357**	P			**Pg**	**18 23 49.6**	**-0.3**
KOVU				S			**Sg**	**18 23 54.7**	**-0.4**
KOVU	**Salmi**	**0.40**	**357**	P			**Pg**	**18 23 49.6**	**-0.3**
KOVU				S			**Sg**	**18 23 54.7**	**-0.4**
NIKU	**Nikkaluokta**	**0.45**	**276**	P			**Pg**	**18 23 50.3**	**-0.6**
NIKU				S			**Sg**	**18 23 56.5**	**-0.2**
NIKU	**Nikkaluokta**	**0.45**	**276**	P			**Pg**	**18 23 50.3**	**-0.6**
NIKU				S			**Sg**	**18 23 56.5**	**-0.2**
LANU	**Lannavaara**	**0.71**	**71**	P			**Pg**	**18 23 55.4**	**-0.5**
LANU				S			**Sg**	**18 24 05.0**	**-0.1**
LANU	**Lannavaara**	**0.71**	**71**	PG			**Pg**	**18 23 56.2**	**+0.3**
LANU				SG			**Sg**	**18 24 04.3**	**-0.7**
LANU	**Lannavaara**	**0.71**	**71**	P			**Pg**	**18 23 55.4**	**-0.5**
LANU				S			**Sg**	**18 24 05.0**	**-0.1**
DUNU	**Dundret**	**0.72**	**169**	S			**Sg**	**18 24 05.3**	**-0.1**
DUNU	**Dundret**	**0.72**	**169**	S			**Sg**	**18 24 05.3**	**-0.1**
KIF	**Kilpisjarvi** baz=175	**1.20**	**10**	PN			**Pb**	**18 24 05.8**	**-0.1**
KIF				SN			**Sb**	**18 24 21.4**	**-0.7**
KIF	comp=Z,3.0nm,0.2s			smax			smax	18 24 21.4	
HEF	**Hetta**	**1.42**	**64**	PG			**Pn**	**18 24 08.8**	**-0.5**
HEF	comp=Z,2.2nm,0.2s			smax			smax	18 24 26.1	
HEF				SN			**Sn**	**18 24 29.8**	**+1.1**
ERTU	**Ertsjaerv**	**1.49**	**148**	PG			**Pn**	**18 24 10.1**	**-0.2**
ERTU				SN			**Sn**	**18 24 32.7**	**+2.2**
KLF	**Kolari** baz=302	**1.56**	**111**	PG			**Pg**	**18 24 11.9**	**-0.3**
KLF	comp=Z,1.5nm,0.2s			smax			smax	18 24 30.2	
KLF				SG			**Sg**	**18 24 32.8**	**+0.5**
KTK1	**Kautokeino**	**1.63**	**42**	PG			**Pg**	**18 24 13.3**	**-0.3**
KTK1				SN			**Sg**	**18 24 36.9**	**+2.1**
KALU	**Kalix**	**2.33**	**146**	PG			**Pn**	**18 24 23.1**	**+1.2**
TOF	**Tornio**	**2.38**	**135**	PG			**Pb**	**18 24 26.0**	**0.0**
TOF	comp=Z,0.9nm,0.2s			smax			smax	18 24 54.3	
TOF				SG			**Sg**	**18 24 57.4**	**-1.4**
RNF	**Rovaniemi**	**2.57**	**116**	PB			**Pb**	**18 24 27.8**	**-1.3**
RNF				SB			**Sb**	**18 25 00.9**	**-0.3**
ARA0	**ARCESS Array S**	**2.59**	**46**	SG			**Sb**	**18 25 02.1**	**+0.3**
RAJF	**Raja-Jooseppi**	**3.10**	**74**	SG			**Sg**	**18 25 19.4**	**-2.3**
RANF	**Ranua**	**3.16**	**122**	SG			**Sg**	**18 25 24.3**	**+0.5**
OLKF	**Oulanka, Finla**	**3.90**	**109**	SG			**Sg**	**18 25 47.2**	**-0.2**

VIE ***12*** *18:32:31.6±0.7, 50°.32N×18°.96E, h0km, mb2.5/1, ml2.0/2, Error ellipse: s-maj=7.1km s-min=2.1km az=163.0 8 km NNW of Katowice Suspected Mining induced.*
IPEC ***12*** *18:32:32.2±0.2, 50°.24N×19°.00E, h1km, ML2.1/6, Error ellipse: s-maj=1.8km s-min=0.8km az=0.0*
PRU ***12*** *18:32:32.9, 50°.27N×18°.96E, h0km*

ISC 12 18:32:32.2±0.9, **50°.18N**±0°.05×**18°.93E**±0°.02, **h0km**, **n25, σ0s72/41, Poland**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.56**	**85**	*e*Pg			**Pg**	**18 32 42.1**	**-0.8**
OJC				*e*Sg			**Sg**	**18 32 49.9**	**-0.3**
OKC	**Ostrava-Krasne**	**0.61**	**237**	*e*PG			**Pb**	**18 32 46.0**	**+0.3**
STEB	**Steborice**	**0.79**	**253**	*e*PG			**Pb**	**18 32 48.8**	**0.0**
STEB	comp=Z,42nm,0.4s			*e*SG			**Sb**	**18 33 00.6**	**+0.7**
MORC	**Moravsky Berou** baz=63	**0.98**	**247**	*e*Pg			**Pb**	**18 32 52.3**	**+0.2**
MORC	24nm,0.4s,baz=63			*e*Sg			**Sb**	**18 33 05.2**	**-0.4**
ANAC	**Anensky vrch** baz=80	**1.00**	**265**	*e*Pg			**Pb**	**18 32 52.5**	**0.0**
ANAC	35nm,0.4s,baz=80			*e*Sg			**Sg**	**18 33 05.4**	**+0.9**
MAUC	**Maruska**	**1.08**	**222**	*e*PG			**Pn**	**18 32 54.9**	**+0.2**
LANS	**Liptovska Anna**	**1.08**	**161**	*e*PG			**Pb**	**18 32 54.2**	**+0.3**
LANS				*e*SG			**Sb**	**18 33 09.4**	**+0.8**
LANS				*e*LG			Lg	18 33 13.1	
LOSC	**Losov** baz=59	**1.15**	**242**	*e*Pg			**Pn**	**18 32 55.8**	**+0.2**
LOSC	30nm,0.4s,baz=59			*e*Sg			**Sb**	**18 33 10.6**	**+0.1**
NIE	**Niedzica**	**1.17**	**130**	*e*Pg			**Pb**	**18 32 55.4**	**+0.1**
NIE				*e*Sg			**Sn**	**18 33 13.4**	**+0.9**
KRLC	**Kraliky**	**1.39**	**267**	*e*SG			**Sn**	**18 33 18.4**	**+0.4**
JAVC	**Velka Javorina** baz=32	**1.55**	**212**	*e*Pn			**Pb**	**18 33 02.0**	**+0.1**
STHS	**Stebnicka Huta**	**1.68**	**116**	*e*PG			**Pn**	**18 33 03.2**	**+0.3**
STHS				*e*SG			**Sn**	**18 33 25.3**	**+0.2**
STHS				*e*LG			Lg	18 33 30.6	
DPC	**Dobruska-Polom**	**1.68**	**277**	*e*PG			**Pn**	**18 33 03.1**	**+0.1**
DPC				*e*SG			**Sb**	**18 33 26.2**	**+0.3**
VRAC	**Vranov** baz=58	**1.75**	**241**	*e*Pn			**Pn**	**18 33 04.6**	**+0.8**
VRAC	11nm,0.3s,baz=58			*e*Sg			**Sg**	**18 33 29.1**	**+0.8**
OSTC	**Ostas**	**1.78**	**283**	*e*SG			**Sg**	**18 33 30.1**	**+0.7**
KSP	**Ksiaz**	**1.81**	**293**	*e*Pg			**Pb**	**18 33 06.4**	**+0.1**
KSP				*e*Sg			**Sg**	**18 33 30.7**	**+0.3**
CHVC	**Chvalec**	**1.89**	**284**	*e*PG			**Pn**	**18 33 05.7**	**-0.1**
KECS	**Kecovo**	**1.98**	**148**	*e*PG			**Pb**	**18 33 09.5**	**+0.5**
KECS				*e*SN			**Sn**	**18 33 31.2**	**-1.2**
KECS				*e*LG			Lg	18 33 38.6	
KRUC	**Moravsky** baz=54	**1.99**	**237**	*e*Pn			**Pn**	**18 33 07.9**	**+0.8**
KRUC	11nm,0.6s,baz=54			*e*Sg			**Sg**	**18 33 36.6**	**+0.5**
PVCC	**Panska Ves**	**2.82**	**279**	*e*SG			**Sg**	**18 34 03.1**	**+0.4**
PRU	**Pruhonice**	**2.83**	**268**	*e*SG			**Sg**	**18 34 02.2**	**-1.0**
CONA	**Conrad Observa** 0.6nm,0.3s	**3.02**	**223**	*i* Pn			**Pn**	**18 33 21.0**	**-0.4**
CONA	1.0nm,0.3s			*e*Sg			**Sn**	**18 33 58.0**	**-0.3**
RONA	**Rosalia, Austr** 0.7nm,0.3s	**3.03**	**216**	*e*Pn			**Pn**	**18 33 22.3**	**+0.9**
RONA	1.2nm,0.3s			*e*Sn			**Sn**	**18 33 56.5**	**-1.8**
ZVC	**Zvikov**	**3.16**	**258**	*e*PG			**Pb**	**18 33 31.0**	**+1.8**
KHC	**Kasperske Hory**	**3.63**	**255**	*e*PG			**Pg**	**18 33 40.5**	**-1.3**
KHC				*e*SG			**Sg**	**18 34 28.1**	**-0.8**

IDC 12 18:37:09.9±1.4, **0°.85N×127°.00E, h0km, mb3.3/5, mbtmp3.4/5, MS3.5/1, Error ellipse: s-maj=143.9km s-min=20.4km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BATI	**Baumata** comp=Z,245nm,18.6s,baz=241,slow=45	**11.47**	**197**	LR			LR	18 45 41.3	
WRA	**Warramunga Arr** 0.4nm,0.5s,baz=340,slow=11,SNR=12 0.4nm,0.5s	**21.88**	**161**	P			P	18 42 03.7	-0.9
ASAR	**Alice Springs** 0.1nm,0.3s,baz=345,slow=11,SNR=8.2 0.1nm,0.3s	**25.27**	**165**	P			P	18 42 38.9	+0.7
SONM	**Songino Array** 0.1nm,0.5s,baz=149,slow=6.7,SNR=1.5 0.1nm,0.5s	**50.10**	**342**	P			P	18 46 07.6	+0.7
MKAR	**Makanchi Array** 0.3nm,0.3s,baz=120,slow=7.6,SNR=9.6 0.3nm,0.3s	**60.07**	**326**	P			P	18 47 18.8	-0.2
KURBB	**Kurchatov Arra** 0.3nm,0.3s,baz=116,slow=6.5,SNR=2.6 0.3nm,0.3s	**64.30**	**328**	P			P	18 47 46.6	-0.6

IDC ***12*** *18:39:13.3±1.8, 5°.66N×126°.75E, h0km, mb3.5/6, mbtmp3.5/6, Error ellipse: s-maj=116.1km s-min=18.5km az=67.0*
MAN ***12*** *18:39:18.0, 5°.41N×126°.46E, h1km, MS3.3*

ISC 12 18:39:15.3±1.0, **5°.5N**±0°.1×**126°.7E**±0°.1, **h10km**, **n12, σ1s99/17, mb3.4/6, Mindanao**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.16**	**300**	*e*P			**Pn**	**18 39 38.7**	**+1.1**
DDMP				*e*S			**Sn**	**18 39 55.5**	**+1.9**
GSPH	**General Santos**	**1.85**	**288**	*i* P			**Pn**	**18 39 46.7**	**-0.5**
DAV	**Davao City (W)** 43nm,0.3s,baz=218,slow=17,SNR=1.5	**1.91**	**324**	Pn			**Pn**	**18 39 46.9**	**-1.1**
DAV	48nm,0.3s,baz=112,slow=22,SNR=1.7			Sn			**Sb**	**18 40 16.9**	**+2.6**
KCP	**Kidapawan** 1.0nm,0.8s,baz=349,slow=10,SNR=1.0 1.0nm,0.8s	**2.19**	**312**	*e*P			**Pb**	**18 39 56.2**	**+1.0**
KCP				*e*S			**Sb**	**18 40 23.1**	**+0.7**
CTBH	**Cotabato--PC H**	**2.98**	**305**	*e*P			**Pn**	**18 40 00.6**	**-2.1**
CTBH				*i* S			**Sg**	**18 40 47.7**	**-3.5**
CGP	**Cagayan de Oro**	**3.54**	**326**	*e*P			**Pg**	**18 40 22.9**	**-0.3**
CGP				*e*S			**Sb**	**18 41 05.3**	**+4.1**
FITZ	**Fitzroy Crossi** 1.0nm,0.8s,baz=349,slow=10,SNR=1.0 1.0nm,0.8s	**23.49**	**183**	P			**P**	**18 44 26.0**	**+0.5**
WRA	**Warramunga Arr** 0.5nm,0.8s,baz=343,slow=9.1,SNR=5.3 0.5nm,0.8s	**26.39**	**164**	P			**P**	**18 44 52.9**	**+0.7**
ASAR	**Alice Springs** 0.2nm,0.7s,baz=349,slow=9.4,SNR=1.3 0.2nm,0.7s	**29.84**	**167**	P			**P**	**18 45 24.1**	**+1.0**
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=120,slow=8.8,SNR=3.5 0.2nm,0.5s	**56.09**	**325**	P			**P**	**18 48 53.8**	**-1.1**
KURBB	**Kurchatov Arra** 0.7nm,0.2s,baz=123,slow=6.4,SNR=3.1 0.7nm,0.2s	**60.24**	**327**	P			**P**	**18 49 22.6**	**-1.2**
BVAR	**Borovoye Array** 0.2nm,0.5s,baz=108,slow=7.2,SNR=1.7 0.2nm,0.5s	**65.83**	**327**	P			**P**	**18 49 59.2**	**-1.7**

IDC ***12*** *18:42:22.6±1.1, 5°.68N×126°.72E, h0km, mb3.7/7, mbtmp3.7/8, ML3.8/1, Error ellipse: s-maj=85.6km s-min=15.5km az=66.0*
MAN ***12*** *18:42:27.0, 5°.35N×126°.37E, h1km, MS3.5*
NEIC ***12*** *18:42:30.9±1.8, 5°.46N±0°.09×126°.3E±0°.2, h70km±11km, mb4.2/11, Error ellipse: s-maj=25.5km s-min=9.3km az=68.0*

ISC 12 18:42:24.5±0.7, **5°.45N**±0°.06×**126°.51E**±0°.08, **h10km**, **n31, σ1s98/35, mb4.0/14, Mindanao**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.03**	**309**	*e*P			**Pb**	**18 42 46.5**	**+2.1**
DDMP				*e*S			**Sg**	**18 42 58.9**	**+1.1**
GSPH	**General Santos**	**1.68**	**292**	*i* P			**Pn**	**18 42 52.9**	**-1.2**
GSPH				*i* S			**Sn**	**18 43 14.3**	**-1.5**
DAV	**Davao City (W)** baz=87,slow=20	**1.86**	**330**	Pn			**Pn**	**18 42 56.5**	**0.0**
DAV	95nm,0.3s,baz=90,slow=22,SNR=5.7			Sn			**Sb**	**18 43 25.8**	**+3.8**
DAV	**Davao City (W)**	**1.86**	**330**				**Pn**	**18 42 58.7**	**+2.2**
DAV							**Sn**	**18 43 22.5**	**+2.4**
KCP	**Kidapawan**	**2.10**	**318**	*i* P			**Pb**	**18 43 03.8**	**+1.1**
KCP				*i* S			**Sg**	**18 43 32.9**	**+0.8**
CTBH	**Cotabato--PC H**	**2.86**	**308**	*e*P			**Pb**	**18 43 14.8**	**-0.9**
CTBH				*i* S			**Sn**	**18 43 45.4**	**+0.6**
CGP	**Cagayan de Oro**	**3.49**	**329**	*e*P			**Pb**	**18 43 25.6**	**-0.8**
CGP				*e*S			**Sb**	**18 44 12.8**	**+3.9**
TNTI	**Ternate**	**4.72**	**170**	Pn			**Pn**	**18 43 40.2**	**+4.4**
TOLI2	**Tolitoli**	**7.16**	**233**	Pn			**Pn**	**18 44 10.8**	**+1.4**
SIJI	**Sorong** 1.2nm,0.3s,baz=320,slow=15,SNR=4.6 6.3nm,0.8s	**7.87**	**143**	Pn			**Pn**	**18 44 21.1**	**+2.0**
SBUM	**Sibu**	**14.56**	**259**	Pn			**Pn**	**18 45 50.0**	**-0.8**
KNRA	**Kununurra** comp=Z,19nm,1.3s	**21.11**	**174**	P			**P**	**18 47 10.5**	**+1.1**
KNRA				IAmb			IAmb	18 47 30.9	
FITZ	**Fitzroy Crossi** comp=Z,1.7nm,0.9s,baz=7.4,slow=11,SNR=1.7 comp=Z,1.7nm,0.9s	**23.41**	**182**	P			**P**	**18 47 34.9**	**+1.0**
WB0	**Warramunga Arr**	**26.23**	**163**	P			**P**	**18 47 57.5**	**-2.3**
WB0	comp=Z,11nm,1.4s			IAmb			IAmb	18 48 18.6	
WRA	**Warramunga Arr** comp=Z,1.7nm,1.1s,baz=343,slow=10.0,SNR=8.1 comp=Z,1.7nm,1.1s	**26.38**	**163**	P			**P**	**18 48 03.1**	**+1.9**
WRA	**Warramunga Arr**	**26.38**	**163**	P			**P**	**18 47 58.8**	**-2.5**
WR8	**Warramunga Arr**	**26.44**	**163**	P			**P**	**18 48 01.8**	**0.0**
WR8	comp=Z,14nm,1.4s			IAmb			IAmb	18 48 17.9	
AS31	**Alice Springs**	**29.82**	**166**	P			**P**	**18 48 30.2**	**-1.8**
ASAR	**Alice Springs** comp=Z,0.4nm,0.8s,baz=358,slow=9.2,SNR=4.4	**29.82**	**166**	P			**P**	**18 48 33.8**	**+1.8**
ASAR	comp=Z,0.2nm,0.9s,baz=336,slow=2.4,SNR=1.7 comp=Z,0.4nm,0.8s			PcP			**PcP**	**18 51 33.6**	**-1.9**
ASAR	**Alice Springs**	**29.82**	**166**	P			**P**	**18 48 29.5**	**-2.5**
CTAO	**Charters Tower**	**31.95**	**143**	P			**P**	**18 48 49.8**	**-1.0**
BJT	**Baijiatuau** comp=Z,2.1nm,0.9s	**35.66**	**346**	P			**P**	**18 49 21.2**	**-1.6**
BJT				IAmb			IAmb	18 49 33.0	
MK31	**Makanchi Array** comp=Z,1.0nm,0.9s	**56.03**	**325**	P			P	18 52 01.0	-2.6
MK31				IAmb			IAmb	18 52 16.8	
MKAR	**Makanchi Array** comp=Z,0.3nm,0.5s,baz=109,slow=7.8,SNR=7.3 comp=Z,0.3nm,0.5s	**56.03**	**325**	P			**P**	**18 52 02.6**	**-1.0**
MKAR	**Makanchi Array**	**56.03**	**325**	P			**P**	**18 52 01.8**	**-1.8**
KDJ	**Kajisay**	**56.93**	**318**	P			P	18 52 06.9	-3.4
KDJ	comp=Z,1.6nm,1.3s			IAmb			IAmb	18 52 36.7	
ZALV	**Zalesovo Beam** comp=Z,0.3nm,0.3s,baz=112,slow=8.8,SNR=2.3 comp=Z,0.3nm,0.3s	**58.97**	**333**	P			**P**	**18 52 22.6**	**-1.5**
KURBB	**Kurchatov Arra** comp=Z,1.0nm,0.6s,baz=116,slow=6.3,SNR=7.8 comp=Z,1.0nm,0.6s	**60.19**	**327**	P			**P**	**18 52 31.2**	**-1.4**
KURK	**Kurchatov**	**60.19**	**327**	P			P	18 52 30.0	-2.6
KURK	comp=Z,4.1nm,1.3s			IAmb			IAmb	18 52 35.1	
GAR	**Garm**	**60.62**	**312**	P			P	18 52 33.0	-2.9
BVAR	**Borovoye Array** comp=Z,0.8nm,0.7s,baz=116,slow=8.2,SNR=5.9 comp=Z,0.8nm,0.7s	**65.77**	**327**	P			**P**	**18 53 09.4**	**-0.3**

IDC ***12*** *18:45:56.3±3.8, 18°.60S×177°.56W, h494km±31km, mb3.1/4, mbtmp4.0/5, Error ellipse: s-maj=119.3km s-min=63.5km az=12.0*
NEIC ***12*** *18:45:58.9±1.0, 18°.5S±0°.3×177°.90W±0°.08, h496km±19km, mb4.4/6, Error ellipse: s-maj=44.0km s-min=5.0km az=191.0*

ISC 12 18:45:58.4±1.0, **18°.4S**±0°.2×**177°.9W**±0°.1, **h500km**, **n15, σ1s04/15, mb4.1/6, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu** 4.0nm,0.4s,baz=119,slow=19,SNR=8.7	**3.95**	**279**	P			**P**	**18 47 16.6**	**+0.1**
FUTU	**Fugatoga**	**4.09**	**356**	P			**P**	**18 47 18.1**	**+0.4**
NIUE	**Niue**	**7.55**	**96**	P			**P**	**18 47 50.4**	**+0.2**
HNR	**Honiara**	**23.29**	**290**	P			**P**	**18 50 26.0**	**-0.9**
CTAO	**Charters Tower**	**33.88**	**261**	P			**P**	**18 51 58.5**	**-0.6**
STKA	**Stephens Creek** 1.3nm,0.6s,baz=82,slow=7.1,SNR=1.8 1.3nm,0.6s	**38.85**	**242**	P			**P**	**18 52 40.1**	**+0.1**
STKA	**Stephens Creek** comp=Z,30nm,1.4s	**38.85**	**242**	IAmb			IAmb	18 53 03.6	
WRAB	**Tennant Creek**	**45.05**	**260**	P			**P**	**18 53 28.1**	**-1.1**
WRAB	comp=Z,10.0nm,1.4s			IAmb			IAmb	18 53 51.2	
WRA	**Warramunga Arr** comp=Z,0.6nm,0.5s,baz=99,slow=6.3,SNR=26	**45.05**	**260**	P			**P**	**18 53 28.9**	**-0.4**
WRA	comp=Z,0.2nm,0.8s,baz=83,slow=13,SNR=1.1 comp=Z,0.6nm,0.5s			S			**S**	**18 59 34.2**	**+2.6**
WRA	**Warramunga Arr**	**45.05**	**260**	P			**P**	**18 53 27.7**	**-1.6**
AS31	**Alice Springs**	**45.16**	**255**	P			**P**	**18 53 30.0**	**-0.1**
ASAR	**Alice Springs** comp=Z,4.5nm,0.4s,baz=89,slow=8.8,SNR=172 comp=Z,4.5nm,0.4s	**45.16**	**255**	P			**P**	**18 53 30.1**	**0.0**
ASAR	**Alice Springs**	**45.16**	**255**	P			**P**	**18 53 29.8**	**-0.4**
KNRA	**Kununurra**	**50.96**	**264**	P			**P**	**18 54 13.6**	**0.0**
KNRA	comp=Z,23nm,1.4s			IAmb			IAmb	18 54 49.7	
FITZ	**Fitzroy Crossi** comp=Z,0.9nm,0.6s,baz=84,slow=9.2,SNR=1.4 comp=Z,0.9nm,0.6s	**53.46**	**261**	P			**P**	**18 54 32.2**	**+0.6**

JMA ***12*** *18:48:55.6±0.2, 25°.N±2°.×122°.4E±0°.5, h102km±2km, MV2.7/17, NW OFF ISHIGAKIJIMA IS*
TAP ***12*** *18:48:55.5, 24°.72N×122°.44E, h104km, ML4.0, C*

ISC 12 18:48:55.7±1.3, **24°.68N**±0°.03×**122°.45E**±0°.02, **h103km**±6km, **n146, σ0s89/249, 20C-3D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.33**	**217**	*i* P			**Pn**	**18 49 11.0**	**+0.4**
EOS2				S			**Sn**	**18 49 23.4**	**+1.7**
EOS3	**EOS3**	**0.41**	**197**	P			**Pn**	**18 49 11.8**	**+0.7**
EOS3				*i* S			**Sn**	**18 49 24.6**	**+2.1**
EGS		**0.50**	**289**	P			**Pn**	**18 49 12.1**	**+0.3**
JYNG	**Yonagunijimaku**	**0.51**	**117**	*e*P			**Pn**	**18 49 11.9**	**+0.1**
JYNG				S			**Sn**	**18 49 23.9**	**0.0**
TWB1	**Santiao Chiao**	**0.53**	**308**	⇑*i*P			**Pn**	**18 49 12.0**	**-0.1**
TWC	**Suao**	**0.55**	**263**	⇓*i*P			**Pn**	**18 49 12.0**	**-0.2**
TWC				*i* S			**Sn**	**18 49 23.5**	**-1.0**
YOJ	**Yonaguni jima**	**0.55**	**113**	S			**Sn**	**18 49 24.5**	**0.0**
YOJ	**Yonaguni jima**	**0.55**	**113**	P			**Pn**	**18 49 12.1**	**-0.1**
YOJ	**Yonaguni jima**	**0.55**	**113**	⇑*i*P			**Pn**	**18 49 12.3**	**+0.1**
YOJ				*i* S			**Sn**	**18 49 24.6**	**0.0**
YOJ	**Yonaguni jima**	**0.55**	**113**	P			**Pn**	**18 49 12.3**	**+0.1**
YOJ				*e*S			**Sn**	**18 49 24.4**	**-0.2**
ESAO	**Su ao**	**0.56**	**259**	*e*P			**Pn**	**18 49 12.2**	**-0.1**
ESAO				*e*S			**Sn**	**18 49 23.7**	**-1.0**
EOS4	**EOS4**	**0.57**	**192**	*i* P			**Pn**	**18 49 12.1**	**+0.1**
EOS4				S			**Sn**	**18 49 25.2**	**+1.1**
TIPB	**Shuangxi**	**0.64**	**297**	⇑P			**Pn**	**18 49 12.9**	**0.0**
TIPB				*i* S			**Sn**	**18 49 24.5**	**-1.3**
ILA	**Ilan**	**0.65**	**278**	*i* P			**Pn**	**18 49 12.5**	**-0.4**
ILA				*e*S			**Sn**	**18 49 25.6**	**-0.2**
EWUT	**Wuta**	**0.66**	**249**	P			**Pn**	**18 49 13.3**	**+0.3**
EWUT				S			**Sn**	**18 49 26.0**	**+0.1**
SXI1	**Grass Mountain**	**0.67**	**308**	⇑*i*P			**Pn**	**18 49 13.1**	**-0.1**
SXI1				*e*S			**Sn**	**18 49 27.0**	**+0.7**
NDS	**Dongshan**	**0.67**	**266**	P			**Pn**	**18 49 13.4**	**+0.3**
NDS				*e*S			**Sn**	**18 49 25.7**	**-0.5**
TWE	**Neicheng**	**0.71**	**273**	⇑*i*P			**Pn**	**18 49 13.6**	**+0.1**
TWE				*i* S			**Sn**	**18 49 27.0**	**+0.1**
NWF	**Wu-fen Shan**	**0.72**	**303**	*i* P			**Pn**	**18 49 13.8**	**+0.1**
NWF				*i* S			**Sn**	**18 49 26.8**	**-0.4**
WFSB	**Wu-fen Shan**	**0.72**	**303**	⇑P			**Pn**	**18 49 13.8**	**+0.2**
WFSB				*i* S			**Sn**	**18 49 26.9**	**-0.1**
EAHA	**Aohua**	**0.74**	**242**	*e*P			**Pn**	**18 49 14.0**	**+0.2**
EAHA				*i* S			**Sn**	**18 49 27.4**	**+0.2**
TNOU	**National Taiwa**	**0.77**	**307**	P			**Pn**	**18 49 14.0**	**0.0**
TNOU				S			**Sn**	**18 49 27.6**	**-0.3**
FUSB	**Fushanzhiwuyua**	**0.79**	**276**	⇑P			**Pn**	**18 49 14.3**	**0.0**
FUSB				*i* S			**Sn**	**18 49 27.5**	**-0.8**
ENTT	**Nioudou**	**0.81**	**267**	*i* P			**Pn**	**18 49 14.9**	**+0.5**
ENTT				S			**Sn**	**18 49 29.1**	**+0.6**
TWA	**Mucha**	**0.84**	**291**	⇑*i*P			**Pn**	**18 49 14.6**	**-0.2**
TWA				*e*S			**Sn**	**18 49 28.2**	**-0.9**
LATG	**Datong**	**0.85**	**260**	P			**Pn**	**18 49 15.3**	**+0.3**
LATG				*e*S			**Sn**	**18 49 30.3**	**+0.9**
NDT	**Datong Townshi**	**0.86**	**265**	*e*P			**Pn**	**18 49 15.5**	**+0.6**
NDT				*e*S			**Sn**	**18 49 30.0**	**+0.6**
NWLT	**Wulai**	**0.87**	**277**	P			**Pn**	**18 49 14.9**	**-0.1**
NWLT				*e*S			**Sn**	**18 49 28.9**	**-0.7**
ETL	**Fush Village**	**0.92**	**236**	⇑P			**Pn**	**18 49 15.2**	**-0.3**
ETL				*e*S			**Sn**	**18 49 29.7**	**-0.7**
TATO	**Taipei**	**0.92**	**289**	P			**Pn**	**18 49 15.1**	**-0.4**
YM01	**YM01**	**0.93**	**300**	⇑P			**Pn**	**18 49 15.5**	**-0.1**
YM01				S			**Sn**	**18 49 29.9**	**-0.7**
NACB	**Ninganchiao**	**0.93**	**237**	P			**Pn**	**18 49 15.2**	**-0.4**
NACB	**Ninganchiao**	**0.93**	**237**	S			**Sn**	**18 49 30.6**	**0.0**
NACB	**Ninganchiao**	**0.93**	**237**	P			**Pn**	**18 49 15.2**	**-0.4**
NACB				*e*S			**Sn**	**18 49 29.9**	**-0.7**
TAP	**Taipei**	**0.93**	**293**	*i* P			**Pn**	**18 49 15.6**	**0.0**
TAP				*i* S			**Sn**	**18 49 29.5**	**-1.1**
YM08	**YM08**	**0.93**	**303**	⇑P			**Pn**	**18 49 15.3**	**-0.3**
YM08				S			**Sn**	**18 49 29.7**	**-1.0**
ZUZH	**Zhuzihu**	**0.95**	**300**	⇑P			**Pn**	**18 49 15.8**	**-0.1**
ZUZH				*i* S			**Sn**	**18 49 30.1**	**-1.0**
TWY	**Chenhua**	**0.97**	**308**	*i* P			**Pn**	**18 49 16.3**	**+0.2**
TWY				*i* S			**Sn**	**18 49 31.6**	**+0.2**
YHNB	**Yeheng**	**0.98**	**270**	P			**Pn**	**18 49 16.3**	**+0.1**
YHNB	**Yeheng**	**0.98**	**270**	S			**Sn**	**18 49 31.8**	**

EHY				*e*S		**Sn**	**18 49 41.9**	**-1.6**
TWQ1	**Liyutan**	**1.56**	**258**	*i* P		**Pn**	**18 49 23.4**	**+0.5**
TWQ1				*e*S		**Sn**	**18 49 43.9**	**+0.3**
JIJ	**Ishigaki jima**	**1.57**	**101**	P		**Pn**	**18 49 23.1**	**+0.1**
JIJ				S		**Sn**	**18 49 43.0**	**-0.8**
SMLT	**Sun Moon Lake**	**1.62**	**241**	⇑*i* P		**Pn**	**18 49 25.2**	**+1.5**
SMLT				*i* S		**Sn**	**18 49 47.2**	**+2.1**
SSLB	**Suanglung**	**1.63**	**237**	P		**Pn**	**18 49 24.9**	**+1.1**
SSLB	**Suanglung**	**1.63**	**237**	S		**Sn**	**18 49 46.3**	**+1.2**
SSLB	**Suanglung**	**1.63**	**237**	*e*P		**Pn**	**18 49 25.0**	**+1.1**
SSLB				*e*S		**Sn**	**18 49 45.4**	**+0.2**
ECBN	**Changbin**	**1.64**	**214**	*e*P		**Pn**	**18 49 23.4**	**-0.5**
ECBN				*e*S		**Sn**	**18 49 43.7**	**-1.5**
YULB	**Yu-li**	**1.66**	**220**	P		**Pn**	**18 49 23.5**	**-0.7**
YULB	**Yu-li**	**1.66**	**220**	P		**Pn**	**18 49 23.3**	**-0.9**
YULB				*e*S		**Sn**	**18 49 45.1**	**-0.6**
WDJ	**Dajia District**	**1.68**	**259**	*e*S		**Sn**	**18 49 46.6**	**+0.4**
TWF1	**Yuli**	**1.69**	**219**	*i* P		**Pn**	**18 49 24.0**	**-0.6**
JISG	**Ishigakijimahi**	**1.69**	**93**	P		**Pn**	**18 49 24.9**	**+0.4**
JISG				S		**Sn**	**18 49 46.0**	**-0.5**
WHYT	**Xinyi Township**	**1.76**	**236**	*e*P		**Pn**	**18 49 26.8**	**+1.4**
WHYT				S		**Sn**	**18 49 49.2**	**+1.2**
CHKH	**Chenggong**	**1.77**	**213**	P		**Pn**	**18 49 26.2**	**+0.7**
CHKH				S		**Sn**	**18 49 46.7**	**-1.4**
WJS	**Zhushan**	**1.79**	**242**	*i* P		**Pn**	**18 49 27.4**	**+1.6**
WJS				*i* S		**Sn**	**18 49 50.8**	**+2.2**
WNT	**Mingjian**	**1.80**	**244**	P		**Pn**	**18 49 27.1**	**+1.2**
WNT				*e*S		**Sn**	**18 49 51.3**	**+2.5**
FULB	**Fuli**	**1.82**	**216**	*e*P		**Pn**	**18 49 26.2**	**+0.1**
FULB				*i* S		**Sn**	**18 49 49.0**	**-0.3**
WCHH	**Zhanghua**	**1.83**	**251**	*e*S		**Sn**	**18 49 48.5**	**-0.9**
WCH1	**Changhua City**	**1.84**	**251**	*e*S		**Sn**	**18 49 50.0**	**+0.3**
CHKT	**Chengkung**	**1.86**	**212**	*i* P		**Pn**	**18 49 26.0**	**-0.7**
CHKT				*i* S		**Sn**	**18 49 48.1**	**-2.1**
ALS	**Alishan**	**1.90**	**233**	P		**Pn**	**18 49 28.5**	**+1.0**
EHD	**Haiduan**	**1.90**	**217**	*e*P		**Pn**	**18 49 27.7**	**+0.5**
EHD				*e*S		**Sn**	**18 49 51.9**	**+0.6**
ECS	**Chishang**	**1.94**	**216**	*e*P		**Pn**	**18 49 27.8**	**+0.1**
CHN5	**Tsauling**	**1.95**	**237**	*i* P		**Pn**	**18 49 28.9**	**+1.1**
CHN5				S		**Sn**	**18 49 53.5**	**+1.2**
ELDTW	**Lidau**	**1.98**	**222**	*i* P		**Pn**	**18 49 28.2**	**-0.1**
ELDTW				S		**Sn**	**18 49 52.4**	**-0.7**
WGK	**Gukeng**	**1.99**	**241**	*e*P		**Pn**	**18 49 30.1**	**+1.8**
WGK				*e*S		**Sn**	**18 49 55.7**	**+2.6**
WDL	**Douliou City**	**1.99**	**242**	*e*S		**Sn**	**18 49 55.9**	**+2.7**
WDLH	**Douliu**	**2.01**	**241**	*e*P		**Pn**	**18 49 29.7**	**+1.2**
WDLH				*i* S		**Sn**	**18 49 54.7**	**+1.2**
WRL	**Guolierlin Hig**	**2.04**	**248**	*e*P		**Pn**	**18 49 29.2**	**+0.2**
WRL				*i* S		**Sn**	**18 49 53.8**	**-0.6**
JTJ	**Tarama**	**2.05**	**91**	*e*S		**Sn**	**18 49 54.7**	**+0.3**
RLNB	**Erlin**	**2.06**	**248**	*e*P		**Pn**	**18 49 29.9**	**+0.7**
RLNB				*e*S		**Sn**	**18 49 55.2**	**+0.3**
WCKO	**Fanlu**	**2.09**	**234**	P		**Pn**	**18 49 30.8**	**+1.2**
WCKO				*i* S		**Sn**	**18 49 56.9**	**+1.3**
STYH	**Taoyuan**	**2.15**	**226**	*i* P		**Pn**	**18 49 31.7**	**+1.4**
STYH				*i* S		**Sn**	**18 49 57.1**	**+0.4**
TPUB	**Ta-pu**	**2.16**	**231**	P		**Pn**	**18 49 31.4**	**+0.9**
TPUB	**Ta-pu**	**2.16**	**231**	S		**Sn**	**18 49 58.9**	**+1.8**
TPUB	**Ta-pu**	**2.16**	**231**	*e*P		**Pn**	**18 49 31.6**	**+1.1**
TPUB				*i* S		**Sn**	**18 49 58.9**	**+1.8**
CHY	**Chiayi**	**2.19**	**238**	*e*P		**Pn**	**18 49 31.7**	**+0.8**
CHY				*i* S		**Sn**	**18 49 58.5**	**+0.6**
WTP	**Ta-pu**	**2.21**	**230**	*i* P		**Pn**	**18 49 31.9**	**+0.8**
WTP				*e*S		**Sn**	**18 49 59.5**	**+1.3**
TWGBT	**Beinan**	**2.24**	**214**	P		**Pn**	**18 49 30.7**	**-0.8**
TWGBT	**Beinan**	**2.24**	**214**	S		**Sn**	**18 49 57.7**	**-1.6**
TWGBT	**Beinan**	**2.24**	**214**	*e*P		**Pn**	**18 49 30.8**	**-0.8**
TWGBT				*e*S		**Sn**	**18 49 57.4**	**-1.6**
TWG	**Pinlang**	**2.24**	**215**	*e*P		**Pn**	**18 49 30.8**	**-0.8**
TWG				S		**Sn**	**18 49 57.2**	**-1.8**
TWK	**Hsinying**	**2.28**	**232**	*e*P		**Pn**	**18 49 33.0**	**+0.9**
TWK				S		**Sn**	**18 50 01.2**	**+1.1**
WSF	**Szhu**	**2.29**	**243**	P		**Pn**	**18 49 32.2**	**+0.1**
WSF				*e*S		**Sn**	**18 49 60.0**	**0.0**
CHN1	**Nanshi**	**2.31**	**230**	*i* P		**Pn**	**18 49 33.2**	**+0.8**
CHN1				*e*S		**Sn**	**18 50 02.6**	**+2.0**
SGST	**Jiashian**	**2.34**	**227**	*i* P		**Pn**	**18 49 33.6**	**+0.8**
SGST				*i* S		**Sn**	**18 50 02.4**	**+1.2**
WSL	**Shuilin Townsh**	**2.34**	**241**	*e*P		**Pn**	**18 49 33.2**	**+0.4**
WSL				*e*S		**Sn**	**18 50 01.1**	**-0.1**
SLGT	**Liugui**	**2.36**	**225**	*e*P		**Pn**	**18 49 34.6**	**+1.5**
CHN8	**Yiju**	**2.44**	**237**	P		**Pn**	**18 49 34.0**	**-0.1**
ECL	**Taimali**	**2.49**	**214**	P		**Pn**	**18 49 33.9**	**-0.9**
ECL				*e*S		**Sn**	**18 50 02.8**	**-2.0**
CHN3	**Shinhua**	**2.49**	**231**	*e*P		**Pn**	**18 49 35.8**	**+1.0**
SSD	**Sandimen**	**2.55**	**221**	*e*P		**Pn**	**18 49 36.8**	**+1.2**
SSD				S		**Sn**	**18 50 08.1**	**+1.9**
JMJ2	**Miyako jima3**	**2.62**	**88**	*e*S		**Sn**	**18 50 08.3**	**+0.5**
TSCK	**Chigu Township**	**2.65**	**235**	*i* P		**Pn**	**18 49 37.4**	**+0.5**
TSCK				*i* S		**Sn**	**18 50 08.4**	**-0.1**
MASBT	**Mashibuluo**	**2.65**	**219**	P		**Pn**	**18 49 38.0**	**+1.1**
MASBT				S		**Sn**	**18 50 09.7**	**+1.1**
MATB	**Ma-tsu**	**2.70**	**303**	*e*P		**Pn**	**18 49 38.0**	**+0.4**
EAST	**Anshuo**	**2.72**	**213**	*e*P		**Pn**	**18 49 37.4**	**-0.5**
VWUC	**VWUC**	**2.75**	**277**	*e*P		**Pn**	**18 49 37.8**	**-0.4**
LAY	**Lan-yu**	**2.76**	**198**	P		**Pn**	**18 49 37.9**	**-0.5**
LYUB	**Lan-yu**	**2.78**	**197**	*e*P		**Pn**	**18 49 36.3**	**-2.4**
SCZT	**Fangliau**	**2.85**	**217**	*e*P		**Pn**	**18 49 39.1**	**-0.4**
PNG	**Penghu**	**2.87**	**248**	P		**Pn**	**18 49 40.0**	**+0.2**
PHUB	**P'eng-hu**	**2.88**	**247**	*e*P		**Pn**	**18 49 39.6**	**-0.3**
WDGT	**Dungji**	**2.92**	**242**	P		**Pn**	**18 49 39.7**	**-0.8**
SMST	**Manzhou Townsh**	**3.04**	**210**	*e*P		**Pn**	**18 49 42.2**	**+0.2**
TWKBT	**Hengchun**	**3.12**	**209**	*e*P		**Pn**	**18 49 44.8**	**+1.7**
ZPLA	**Ao Xicun**	**4.35**	**261**	*e*P		**Pn**	**18 49 59.3**	**-0.4**
ZPLA				*e*S		**Sn**	**18 50 46.6**	**-2.8**

IDC ***12*** *18:56:04.0±1.7,5°.78N×126°.68E,h0km,mb3.3/4, mbtmp3.4/5,ML3.0/1,Error ellipse: s-maj=142.9km s-min=21.9km az=64.0*
MAN ***12*** *18:56:04.0,5°.21N×126°.73E,h9km,MS3.3*
ISC 12 18:56:05.8±1.4,5°.3N±0°.2×126°.5E±0°.3,h10km,n8,σ2ᵖ77/8, mb3.4/4,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.13**	**314**	*e*P	**Pn**	**18 56 27.7**	**0.0**
DDMP				*e*S	**Sb**	**18 56 44.6**	**+2.4**
CTBH	**Cotabato--PC H**	**2.96**	**310**	*e*P	Pn	18 56 39.8	-13
CTBH				*i* S	**Sn**	**18 57 25.9**	**-2.5**
CGP	**Cagayan de Oro**	**3.62**	**330**	*e*P	**Pb**	**18 57 12.2**	**+2.3**
CGP				*e*S	**Sb**	**18 57 54.9**	**+1.1**
SIJI	**Sorong**	**7.75**	**142**	Pn	Pn	18 58 02.5	+3.7
	0.2nm,0.3s,baz=315,slow=20,SNR=2.4 8.1nm,0.8s						
WRA	**Warramunga Arr**	**26.24**	**163**	P	**P**	**19 01 44.3**	**+3.0**
	0.3nm,0.5s,baz=344,slow=10.0,SNR=7.3 0.3nm,0.5s						
ASAR	**Alice Springs**	**29.68**	**166**	P	P	19 02 16.0	+4.0
	0.2nm,0.8s,baz=346,slow=9.1,SNR=1.6 0.2nm,0.8s						
MKAR	**Makanchi Array**	**56.16**	**325**	P	**P**	**19 05 43.0**	**-2.7**
	0.2nm,0.4s,baz=122,slow=7.5,SNR=4.9 0.2nm,0.4s						
BVAR	**Borovoye Array**	**65.90**	**327**	P	**P**	**19 06 49.9**	**-1.9**
	0.2nm,0.5s,baz=130,slow=8.1,SNR=2.3 0.2nm,0.5s						

NEIC ***12*** *19:03:39.9±1.8,20°.1S±0°.2×172°.57W±0°.10,h10km±2km, mb4.5/8,Error ellipse: s-maj=37.1km s-min=13.5km az=167.0*
IDC ***12*** *19:03:44.0±4.1,18°.88S×173°.90W,h0km,mb3.9/2, mbtmp3.9/2,Error ellipse: s-maj=210.5km s-min=61.6km az=149.0*
ISC 12 19:03:40.6±0.9,18°.9S±0°.4×172°.83W±0°.08,h21km,n14, σ1ᵖ44/14**,mb4.3/6,Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**2.76**	**94**		**Pn**	**19 04 23.1**	**-0.5**
NIUE				Sn	**Sn**	**19 04 55.6**	**-0.7**
RAR	**Rarotonga**	**12.49**	**103**		**Pn**	**19 06 37.9**	**+0.8**
CTAO	**Charters Tower**	**38.52**	**261**	P	**P**	**19 11 01.0**	**-0.8**
CTAO				IAmb	IAmb	19 11 31.8	
	comp=Z,19nm,1.4s						
WR8	**Warramunga Arr**	**49.51**	**260**	P	**P**	**19 12 28.3**	**-1.7**
WR8				IAmb	IAmb	19 12 30.8	
	comp=Z,4.7nm,1.2s						
AS31	**Alice Springs**	**49.63**	**255**	P	**P**	**19 12 30.0**	**-1.0**
ASAR	**Alice Springs**	**49.63**	**255**	P	**P**	**19 12 30.4**	**-0.5**
	comp=Z,1.7nm,0.7s,baz=90,slow=7.7,SNR=23						
ASAR				PcP	**PcP**	**19 13 55.1**	**+2.8**
	comp=Z,0.4nm,0.7s,baz=99,slow=5.5,SNR=1.3 comp=Z,1.7nm,0.7s						
WB0	**Warramunga Arr**	**49.64**	**260**	P	**P**	**19 12 30.3**	**-0.7**
WB0				IAmb	IAmb	19 12 59.3	
	comp=Z,2.5nm,1.1s						
WRA	**Warramunga Arr**	**49.66**	**260**	P	**P**	**19 12 30.1**	**-1.0**
	comp=Z,0.5nm,0.4s,baz=98,slow=7.8,SNR=24 comp=Z,0.5nm,0.4s						
WRA	**Warramunga Arr**	**49.66**	**260**	IAmb	IAmb	19 12 33.5	
	comp=Z,0.4nm,1.2s						
MTN	**Manton Dam**	**54.05**	**268**	P	**P**	**19 13 06.1**	**+2.1**
FORT	**Forrest**	**54.39**	**245**	P	**P**	**19 13 04.9**	**-1.3**
FORT				IAmb	IAmb	19 13 07.0	
	comp=Z,10nm,0.9s						
M16K	**Timber Creek**	**80.42**	**7**	P	P	19 15 57.0	+6.9
BUR08	**Bucovina Ar. S**	**147.77**	**337**	PKPdf	**PKPbc**	**19 23 22.8**	**-1.1**
BRTR	**Keskin Array B**	**149.15**	**318**	PKPbc	**PKPab**	**19 23 32.6**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=82,slow=2.0,SNR=4.3						

IDC ***12*** *19:08:16.2±2.1,21°.86S×67°.25W,h163km±19km,mb2.9/2, mbtmp3.8/5,Error ellipse: s-maj=33.2km s-min=19.6km az=86.0*
SJA ***12*** *19:08:17.4±0.7,21°.78S×67°.25W,h200km±8km,ML4.0, MW3.7*
SCB ***12*** *19:08:20.1±1.4,21°.80S×67°.31W,h168km±18km,MB4.9, ML4.1/2,Error ellipse: s-maj=5.9km s-min=4.4km az=0.0*
ISC 12 19:08:18.4±0.8,21°.82S±0°.04×67°.31W±0°.04,h197km±7km, n58,σ1ᵖ27/82,7C,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCB	**Mochara**	**1.66**	**70**	P	**Pn**	**19 08 53.5**	**-0.3**
YJA	**Yavi**	**1.70**	**102**	*e*P	**Pn**	**19 08 54.0**	**-0.2**
YJA				*e*S	**S**	**19 09 20.2**	**-1.7**
YJA	**Yavi**	**1.70**	**102**	P	**Pn**	**19 08 54.4**	**+0.2**
PB09	**IPOC Station P**	**1.80**	**270**	⇑*i*P	**Pn**	**19 08 55.8**	**+1.0**
PB09				*e*S	**S**	**19 09 24.0**	**+1.0**
PB09	**IPOC Station P**	**1.80**	**270**	*e*P	**Pn**	**19 08 55.2**	**+0.5**
PB09				*e*S	**S**	**19 09 24.0**	**+1.0**
PB09	**IPOC Station P**	**1.80**	**270**	P	**Pn**	**19 08 55.9**	**+1.1**
PB01	**IPOC Station P**	**2.17**	**290**	*e*P	**Pn**	**19 08 58.9**	**+0.3**
PB01				*e*S	**S**	**19 09 28.9**	**-0.9**
PB01				IAML		19 09 30.2	
	comp=N,818nm,0.2s						
PB01	**IPOC Station P**	**2.17**	**290**	*e*P	**Pn**	**19 08 58.5**	**-0.1**
PB01				*e*S	**S**	**19 09 30.0**	**+0.2**
PB01				IAML		19 09 30.9	
	comp=Z,346nm,0.1s						
PB01	**IPOC Station P**	**2.17**	**290**	P	**Pn**	**19 08 58.9**	**+0.3**
HJA	**Humahuaca**	**2.24**	**129**	*e*P	**Pn**	**19 09 00.6**	**+1.0**
PB06	**IPOC Station P**	**2.27**	**247**	*e*P	**Pn**	**19 09 00.6**	**+0.9**
PB06				*e*S	**S**	**19 09 32.1**	**+0.2**
PB06				IAML		19 09 33.6	
	comp=E,275nm,0.2s						
PB06	**IPOC Station P**	**2.27**	**247**	*e*P	**Pn**	**19 09 00.2**	**+0.4**
PB06				*e*S	**S**	**19 09 33.1**	**+1.1**
PB06	**IPOC Station P**	**2.27**	**247**	P	**Pn**	**19 09 00.7**	**+0.9**
PB03	**IPOC Station P**	**2.28**	**264**	*e*P	**Pn**	**19 09 00.2**	**+0.4**
PB03				*e*S	**S**	**19 09 31.3**	**-0.7**
PB03				IAML		19 09 31.8	
	comp=N,815nm,0.2s						
PB03	**IPOC Station P**	**2.28**	**264**	*e*P	Pn	19 08 43.3	-17
PB03				*e*P		19 08 59.9	
PB03				*e*S	**S**	**19 09 31.8**	**-0.2**
PB03				IAML		19 09 32.6	
	comp=Z,649nm,0.3s						
PB08	**IPOC Station P**	**2.40**	**314**	⇑*i*P	**Pn**	**19 09 02.2**	**+0.9**
PB08				*e*S	**S**	**19 09 34.1**	**-0.6**
PB08				IAML		19 09 36.4	
	comp=N,122nm,0.3s						
PB08	**IPOC Station P**	**2.40**	**314**	*e*P	**Pn**	**19 09 01.7**	**+0.3**
PB08	**IPOC Station P**	**2.40**	**314**	P	**Pn**	**19 09 02.4**	**+1.0**
PB02	**IPOC Station P**	**2.46**	**281**	⇑*i*P	**Pn**	**19 09 01.7**	**0.0**
PB02				*e*S	**S**	**19 09 33.7**	**-1.7**
PB02				IAML		19 09 36.9	
	comp=E,867nm,0.2s						
PB02	**IPOC Station P**	**2.46**	**281**	*e*P	**Pn**	**19 09 02.1**	**+0.4**
PB02				*e*S	**S**	**19 09 34.4**	**-1.0**
PB02				IAML		19 09 37.4	
	comp=Z,702nm,0.3s						
PB02	**IPOC Station P**	**2.46**	**281**	P	**Pn**	**19 09 02.1**	**+0.4**
PB02				S	**S**	**19 09 34.2**	**-1.2**
PB02				IAML		19 09 35.6	
	comp=Z,725nm,0.2s						
SALTA		**2.56**	**160**	⇑*i*P	**Pn**	**19 09 05.1**	**+1.9**
SALTA		**2.56**	**160**	*e*P	Pn	19 08 49.4	-14
GO01	**Chusmiza**	**2.77**	**320**	⇑*i*P	**Pn**	**19 09 06.0**	**+0.2**
GO01				IAML		19 09 47.5	
	comp=N,448nm,0.1s						
GO01	**Chusmiza**	**2.77**	**320**	*e*P	**Pn**	**19 09 05.9**	**+0.2**
GO01				*e*S	**S**	**19 09 47.1**	**+4.6**
GO01	**Chusmiza**	**2.77**	**320**	P	**Pn**	**19 09 06.4**	**+0.7**
HMBC	**Humberstone**	**2.85**	**302**	⇑*i*P	**Pn**	**19 09 05.9**	**-0.4**
HMBC				IAML		19 09 42.0	
	comp=N,529nm,0.3s						
HMBC	**Humberstone**	**2.85**	**302**	*e*P	**Pn**	**19 09 06.1**	**-0.2**
HMBC				*e*S	**S**	**19 09 42.6**	**-1.0**
HMBC				IAML		19 09 43.3	
	comp=Z,378nm,0.6s						
PB05	**IPOC Station P**	**2.87**	**248**	*e*P	**Pn**	**19 09 07.2**	**+0.7**
PB05				*e*S	**S**	**19 09 42.7**	**-1.2**
PB05				IAML		19 09 43.7	
	comp=E,128nm,0.3s						
PB05	**IPOC Station P**	**2.87**	**248**	*e*P	**Pn**	**19 09 07.2**	**+0.7**
PB05				*e*S	**S**	**19 09 43.3**	**-0.7**
PB11	**IPOC Station P**	**3.00**	**313**	⇑*i*P	**Pn**	**19 09 07.8**	**-0.3**
PB11				*e*S	**S**	**19 09 44.8**	**-2.0**
PB11				IAML		19 09 47.0	
	comp=N,311nm,0.2s						
PB11	**IPOC Station P**	**3.00**	**313**	*e*P	**Pn**	**19 09 07.7**	**-0.3**
PB11				*e*S	**S**	**19 09 45.5**	**-1.3**
PB11				IAML		19 09 46.5	
	comp=Z,141nm,0.2s						
PB11	**IPOC Station P**	**3.00**	**313**	P	**Pn**	**19 09 08.0**	**-0.1**
PB11				S	**S**	**19 09 44.5**	**-2.3**
PB11				IAML		19 09 46.4	
	comp=Z,327nm,0.2s						
TA02	**Huaiquique**	**3.05**	**300**	*e*P	**Pn**	**19 09 07.8**	**-0.6**
TA02				*e*S	**S**	**19 09 45.1**	**-2.5**
TA02	**Huaiquique**	**3.05**	**300**	*e*P	**Pn**	**19 09 07.9**	**-0.6**
TA02				*e*S	**S**	**19 09 47.1**	**-0.5**
TA02				IAML		19 09 51.7	
	comp=Z,281nm,0.1s						
SOEO	**Opoqueri**	**3.28**	**350**	P	**Pn**	**19 09 13.3**	**+1.5**
SLA	**San Lorenzo**	**3.33**	**150**	*e*P	**Pn**	**19 09 13.6**	**+1.6**
SLA	**San Lorenzo**	**3.33**	**150**	*e*P	**Pn**	**19 09 13.8**	**+1.8**
SLA				IAML		19 10 38.3	
	comp=Z,474nm,2.8s						
PB10	**IPOC Station P**	**3.44**	**240**	*e*P	**Pn**	**19 09 13.8**	**+0.6**
PB10				*e*S	**S**	**19 09 54.6**	**-1.4**
SOET	**ToroToro**	**3.94**	**21**	P	**Pn**	**19 09 19.9**	**+0.2**
PB14	**IPOC Station P**	**3.99**	**225**	*e*P	**Pn**	**19 09 20.9**	**+0.7**
PB14				*e*S	**S**	**19 10 08.2**	**-0.6**
PB14	**IPOC Station P**	**3.99**	**225**	P	**Pn**	**19 09 21.1**	**+0.9**
PB16	**IPOC Station P**	**4.03**	**329**	*e*P	**Pn**	**19 09 21.3**	**+0.2**
PB16				*e*S	**S**	**19 10 13.1**	**+2.9**
PB16	**IPOC Station P**	**4.03**	**329**	P	**Pn**	**19 09 21.9**	**+0.8**
AP01	**Chacalluta**	**4.46**	**320**	*e*P	**Pn**	**19 09 25.1**	**-0.8**
AP01				IAML		19 10 50.0	
	comp=Z,109nm,0.6s						
BBOJ	**La Paz, Jacaqu**	**4.89**	**350**	P	**Pn**	**19 09 33.2**	**+1.4**
SOEJ	**Jacaque**	**4.89**	**350**	P	**Pn**	**19 09 33.2**	**+1.4**
BBOE	**La Paz, Chanca**	**5.02**	**353**	P	**Pn**	**19 09 34.9**	**+1.4**
BBOD	**La Paz, Gloria**	**5.29**	**346**	P	**Pn**	**19 09 38.5**	**+1.4**
LPAZ	**La Paz**	**5.55**	**352**	P	**Pn**	**19 09 39.8**	**-0.7**
	comp=Z,7.0nm,0.4s,baz=172,slow=8.2,SNR=54						
LPAZ				S	**S**	**19 10 43.3**	**-1.9**
	comp=Z,1.7nm,0.5s,baz=40,slow=21,SNR=1.6						
LPAZ	**La Paz**	**5.55**	**352**	P	**Pn**	**19 09 41.2**	**+0.7**
SIV	**San Ignacio**	**8.27**	**47**	P	**Pn**	**19 10 12.0**	**-3.3**
	comp=Z,8.5nm,0.4s,baz=243,slow=11,SNR=50						
SIV				S		19 11 38.0	
	comp=Z,2.7nm,0.3s,baz=288,slow=15,SNR=7.4						
CFA	**Coronel Fontan**	**9.78**	**185**	P	**Pn**	**19 10 32.4**	**-2.5**
	comp=Z,2.9nm,0.4s,baz=305,slow=8.8,SNR=9.1						
TXAR	**Lajitas Array**	**61.75**	**324**	P	**P**	**19 18 16.7**	**+0.4**
	comp=Z,0.1nm,0.2s,baz=144,slow=8.5,SNR=1.7 comp=Z,0.1nm,0.2s						
TORD	**Torodi Ar. Bea**	**76.06**	**70**	P	**P**	**19 19 45.6**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=252,slow=6.3,SNR=2.0 comp=Z,0.2nm,0.4s						
ASAR	**Alice Springs**	**130.30**	**206**	PKP	**PKiKP**	**19 27 07.6**	**+0.8**
	comp=Z,0.4nm,0.9s,baz=162,slow=2.9,SNR=2.3						
WRA	**Warramunga Arr**	**133.41**	**209**	PKP	**PKiKP**	**19 27 13.4**	**+0.2**
	comp=Z,0.6nm,1.1s,baz=152,slow=2.0,SNR=4.8						
MKAR	**Makanchi Array**	**145.00**	**37**	PKPbc	**PKiKP**	**19 27 34.1**	**-1.9**
	comp=Z,0.6nm,0.6s,baz=317,slow=3.7,SNR=6.9						

IDC ***12*** *19:37:23.6±2.8,3°.58N×125°.91E,h144km±26km,mb3.7/9, mbtmp4.2/12,MS4.4/1,Error ellipse: s-maj=32.0km s-min=14.4km az=68.0*
NEIC ***12*** *19:37:24.5±1.5,3°.55N±0°.08×125°.82E±0°.10,h150km±8km, mb4.5/17,Error ellipse: s-maj=15.2km s-min=9.7km az=62.0*
MAN ***12*** *19:37:26.0,3°.53N×125°.83E,h150km,MS3.5*
DJA ***12*** *19:37:27.4±0.6,3°.N±6°×12°.6E±°,h142km±6km,M4.4/18, mB4.9/7,mb4.8/7,MLv4.5/18,Mw(mB)4.2/7*
ISC 12 19:37:24.6±0.5,3°.47N±0°.05×125°.88E±0°.08,h150km,n53, σ1ᵖ36/57**,mb4.5/15,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**0.41**	**302**	P	**Pn**	**19 37 47.8**	**+2.3**
MNI	**Manado**	**2.26**	**207**	P	**Pn**	**19 38 04.7**	**+1.8**
DDMP	**Don Marcelino,**	**2.62**	**356**	*e*P	**Pn**	**19 38 09.8**	**+2.5**
DDMP				*e*S	**Sn**	**19 38 40.9**	**+0.6**
GSPH	**General Santos**	**2.76**	**340**	*i* P	**Pn**	**19 38 10.9**	**+1.8**
GSPH				*i* S	**Sn**	**19 38 44.1**	**+0.5**
TNTI	**Ternate**	**3.06**	**151**	P	**Pn**	**19 38 14.1**	**+1.3**
TNTI				Sn	**Sn**	**19 38 50.7**	**+0.6**
TNTI	**Ternate**	**3.06**	**151**	P	**Pn**	**19 38 14.5**	**+1.7**
DAV	**Davao City (W)**	**3.59**	**355**	S	**Sn**	**19 39 01.3**	**-1.0**
	242nm,0.4s,baz=56,slow=19,SNR=2.5						
DMPH	**Davao City--Mi**	**3.61**	**354**	*i* P	Pn	19 38 23.4	+3.6
DMPH				*i* S	Sn	19 38 39.8	-23
GTOI	**Gorontalo**	**4.01**	**226**	P	**Pn**	**19 38 26.7**	**+1.6**
CTBH	**Cotabato--PC H**	**4.07**	**337**	*e*P	**Pn**	**19 38 27.4**	**+1.7**
CTBH				*i* S	**Sn**	**19 39 17.1**	**+3.8**
MRSI	**Marisa**	**4.93**	**233**	P	**Pn**	**19 38 39.2**	**+2.1**
CGP	**Cagayan de Oro**	**5.09**	**347**	*e*P	Pn	19 38 45.3	+6.0
CGP				*e*S	**Sn**	**19 39 39.1**	**+1.6**
LUWI	**Luwuk**	**5.45**	**215**		**Pn**	**19 38 45.1**	**+1.1**
LUWI	**Luwuk**	**5.45**	**215**	P	**Pn**	**19 38 45.7**	**+1.7**
TOLI2	**Tolitoli**	**5.60**	**245**		**Pn**	**19 38 46.4**	**+0.3**
APSI	**Ampana**	**6.06**	**224**	P	**Pn**	**19 38 54.2**	**+2.0**
	0.2nm787nm68nm,0.5s						
MPSI	**Mapaga**	**6.74**	**243**	P	**Pn**	**19 39 02.8**	**+1.6**
	0.1nm28nm,0.7s						
SIJI	**Sorong**	**6.90**	**129**	P	**Pn**	**19 39 03.3**	**-0.1**
	2.2nm,0.3s,baz=332,slow=16,SNR=7.5						
KRAI	**Karang Ratu**	**7.20**	**159**	P	**Pn**	**19 39 09.6**	**+2.3**
	123nm,0.5s						
KAPI	**Kappang**	**10.41**	**216**	P	**Pn**	**19 39 50.7**	**+0.6**
	15nm,0.7s,baz=4.2,slow=11,SNR=10						
KAPI	**Kappang**	**10.41**	**216**		**Pn**	**19 39 50.1**	**0.0**
SBUM	**Sibu**	**13.68**	**266**		**Pn**	**19 40 33.5**	**+0.9**
BATI	**Baumata**	**13.76**	**189**	P	**Pn**	**19 40 35.4**	**+1.8**
	6.1nm,0.3s,baz=336,slow=20,SNR=9.2						
**J

az=193.0
*IDC **12** 20:30:04.4±3.5, 17.°50S×178.°80W, h572^{km}, 20^{km}, mb2.9/3, mbtmp3.8/4, Error ellipse: s-maj=132.7km s-min=47.3km az=150.0*

ISC 12 20:30:00.0±1.6, 17.°7S±0.°2×178.°3W±0.°3, h547^{km}, n13, σ1$ 48/15, mb3.9/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUTU	**Fugatoga**	**3.40**	**3**	**P**	**P**	**20 31 19.7**	**+2.2**
MSVF	**Nonsavu**	**3.48**	**269**	P	**P**	**20 31 21.5**	**+3.5**
	9.2nm,0.6s,baz=99,slow=7.6,SNR=9.9						
PATS	**Pohnpei**	**33.60**	**315**	P	**P**	**20 35 53.8**	**-1.7**
STKA	**Stephens Creek**	**38.81**	**241**	P	**P**	**20 36 38.3**	**0.0**
	2.3nm,1.0s,baz=102,slow=14,SNR=3.1						
	2.3nm,1.0s						
STKA	**Stephens Creek**	**38.81**	**241**	P	**P**	**20 36 36.5**	**-1.7**
STKA				IAmb	IAmb	20 36 41.9	
	comp=Z,24nm,1.2s						
BBOO	**Buckleboo**	**43.58**	**241**	P	**P**	**20 37 16.4**	**+0.2**
BBOO				IAmb	IAmb	20 37 44.7	
	comp=Z,27nm,1.4s						
WR8	**Warramunga Arr**	**44.61**	**259**	P	**P**	**20 37 24.4**	**+0.1**
WR8				IAmb	IAmb	20 37 32.6	
	comp=Z,2.9nm,1.1s						
WRA	**Warramunga Arr**	**44.77**	**259**	P	**P**	**20 37 24.5**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=93,slow=7.3,SNR=8.1						
WRA				PcP	**PcP**	**20 38 56.6**	**+0.7**
	comp=Z,0.1nm,0.4s,baz=94,slow=3.3,SNR=1.1						
	comp=Z,0.2nm,0.5s						
AS31	**Alice Springs**	**44.94**	**254**	P	**P**	**20 37 26.7**	**-0.1**
AS31				IAmb	IAmb	20 37 27.6	
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**44.94**	**254**	P	**P**	**20 37 26.5**	**-0.3**
	comp=Z,3.6nm,0.5s,baz=92,slow=7.6,SNR=76						
ASAR				PcP	**PcP**	**20 38 56.4**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=106,slow=3.9,SNR=2.1						
	comp=Z,3.6nm,0.5s						
ASAR	**Alice Springs**	**44.94**	**254**	P	**P**	**20 37 25.9**	**-0.9**
CASY	**Casey**	**66.35**	**205**	P	**P**	**20 39 53.6**	**-0.7**
BRTR	**Keskin Array B**	**144.72**	**315**	PKP	**PKPab**	**20 48 35.3**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=69,slow=2.0,SNR=4.1						

*IDC **12** 20:36:03.2±1.2, 56.°13N×149.°23W, h0^{km}, mb3.6/9, mbtmp3.6/14, ML3.4/5, MS3.2/8, Error ellipse: s-maj=26.8km s-min=18.4km az=28.0*
*NEIC **12** 20:36:04.6±2.0, 56.°30N±0.°08×149.°3W±0.°1, h10km±1km, mb4.1/10, ML3.8/72, ML3.8(AEIC), Error ellipse: s-maj=12.9km s-min=9.4km az=175.0*
*AEIC **12** 20:36:07.2±3.9, 56.°13N±0.°09×149.°2W±0.°1, h12km±5km, Error ellipse: s-maj=13.1km s-min=8.5km az=176.0*

ISC 12 20:36:04.6±0.7, 56.°28N±0.°06×149.°30W±0.°05, h10^{km}, n162, σ1$ 12/165, mb3.8/12, MS3.2/4, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.35**	**311**	Pn	**Pn**	**20 36 43.3**	**+0.2**
	3.0nm,0.3s,baz=130,slow=9.3,SNR=80						
KDAK				Sn	**Sn**	**20 37 09.4**	**-2.5**
	15nm,0.3s,baz=204,slow=20,SNR=7.4						
KDAK				LR	LR	20 37 45.8	
	comp=Z,112nm,21.9s,baz=129,slow=41						
	11nm,0.5s						
KDAK	**Kodiak Island**	**2.35**	**311**		**Pn**	**20 36 42.6**	**-0.5**
KDAK	**Kodiak Island**	**2.35**	**311**		**Sn**	**20 37 09.6**	**-2.3**
OHAK	**Old Harbor**	**2.39**	**295**		**Sn**	**20 37 09.6**	**-3.4**
OHAK	**Old Harbor**	**2.39**	**295**		**Pn**	**20 36 42.6**	**-1.1**
OHAK				IAML		20 37 10.4	
	comp=N,337nm,0.7s						
SII	**Sitkinak Islan**	**2.73**	**278**		**Pn**	**20 36 48.0**	**-0.4**
SII					**Sn**	**20 37 18.2**	**-3.2**
SII	**Sitkinak Islan**	**2.73**	**278**	IAML		20 37 35.6	
	comp=E,265nm,0.7s						
SYI	**Shuyak Island**	**2.88**	**326**		**Sn**	**20 37 23.5**	**-1.4**
SYI	**Shuyak Island**	**2.88**	**326**		**Pn**	**20 36 50.3**	**-0.1**
CNPM	**China Poot**	**3.42**	**343**		**Pn**	**20 36 57.2**	**-0.7**
CNPM				IAML		20 37 43.9	
	comp=E,139nm,0.8s						
CNPM				IAML		20 37 45.4	
	comp=N,129nm,0.6s						
CNPM	**China Poot**	**3.42**	**343**		**Sn**	**20 37 35.6**	**-2.8**
MID	**Middleton Isla**	**3.53**	**25**	Pn	**Pn**	**20 36 58.4**	**-1.0**
MID				IAML		20 37 43.6	
	comp=N,184nm,0.9s						
MID				IAML		20 37 47.0	
	comp=E,204nm,0.9s						
Q19K	**Cape Douglas,**	**3.54**	**320**		**Sn**	**20 37 40.7**	**-0.8**
Q19K	**Cape Douglas,**	**3.54**	**320**		**Pn**	**20 37 00.5**	**+0.9**
BRSE	**Bradley Lake S**	**3.56**	**348**		**Pn**	**20 36 59.2**	**-0.6**
BRSE					**Sn**	**20 37 39.1**	**-2.8**
CHIR	**Chirikof Islan**	**3.58**	**265**		**Pn**	**20 36 59.4**	**-0.6**
CHIR					**Sn**	**20 37 37.6**	**-4.6**
CHIR	**Chirikof Islan**	**3.58**	**265**	Pn	**Pn**	**20 36 59.3**	**-0.7**
CHIR				IAML		20 37 40.8	
	comp=N,84nm,0.8s						
CHIR				IAML		20 37 54.3	
	comp=E,110nm,1.0s						
BRLK	**Bradley Lake**	**3.60**	**347**		**Sn**	**20 37 41.3**	**-1.6**
BRLK	**Bradley Lake**	**3.60**	**347**		**Pn**	**20 36 59.0**	**-1.3**
BRLK				IAML		20 37 48.4	
	comp=E,118nm,0.8s						
KAHG	**Katmai Hook Gl**	**3.61**	**310**		**Pn**	**20 37 00.9**	**+0.4**
KAHG					**Sn**	**20 37 42.8**	**-0.3**
HOM	**Homer**	**3.61**	**341**		**Pn**	**20 37 00.2**	**-0.3**
HOM					**Sn**	**20 37 00.5**	**0.0**
HOM					**Sn**	**20 37 41.5**	**-1.6**
KAWH	**Katmai**	**3.65**	**308**		**Pn**	**20 37 01.4**	**+0.2**
KAWH					**Sn**	**20 37 42.9**	**-1.4**
KARR	**Katmai Rainbow**	**3.68**	**310**		**Pn**	**20 37 01.8**	**+0.4**
KAKN	**Katmai Knife C**	**3.73**	**305**		**Pn**	**20 37 02.3**	**+0.2**
KAKN					**Sn**	**20 37 45.0**	**-1.1**
AUI	**Augustine Isla**	**3.78**	**326**		**Pn**	**20 37 02.6**	**-0.2**
AUI					**Pn**	**20 37 03.0**	**+0.2**
AUI					**Sn**	**20 37 46.3**	**-1.0**
AUJK	**Augustine Jueg**	**3.79**	**326**		**Pn**	**20 37 03.0**	**+0.1**
AUJK					**Sn**	**20 37 46.4**	**-1.1**
AGU	**Augustine-Summ**	**3.80**	**326**		**Pn**	**20 37 03.1**	**-0.1**
AGU					**Pn**	**20 37 03.4**	**+0.2**
ACHA	**Angle Creek He**	**3.81**	**303**		**Sn**	**20 37 46.3**	**-1.7**
ACHA	**Angle Creek He**	**3.81**	**303**		**Pn**	**20 37 03.4**	**+0.2**
KABU	**Katmai Buttres**	**3.81**	**304**		**Pn**	**20 37 03.5**	**+0.2**
SEW	**Seward**	**3.84**	**359**		**Sn**	**20 37 46.1**	**-2.7**
SEW	**Seward**	**3.84**	**359**		**Pn**	**20 37 02.5**	**-1.1**
P23K	**Montague Islan**	**3.87**	**14**		**Pn**	**20 37 03.2**	**-0.7**
P23K				IAML		20 37 51.1	
	comp=E,113nm,0.7s						
P23K				IAML		20 37 56.2	
	comp=N,133nm,0.6s						
P19K	**Oil Pt**	**3.98**	**330**		**Pn**	**20 37 04.8**	**-0.8**
P19K				IAML		20 37 57.5	
	comp=E,172nm,0.5s						
PLK3	**Peulik 3**	**4.07**	**293**		**Pn**	**20 37 05.9**	**-0.9**
CNTC	**Contact Creek**	**4.09**	**302**		**Pn**	**20 37 07.5**	**+0.2**
PLK4	**Peulik 4**	**4.10**	**292**		**Pn**	**20 37 06.5**	**-0.7**
PLK4					**Pn**	**20 37 06.7**	**-0.6**
PLK4	**Peulik 4**	**4.10**	**292**	IAML		20 37 54.1	
	comp=E,171nm,0.5s						
PLK4				IAML		20 38 02.4	
	comp=N,140nm,0.8s						
O22K	**Cooper Landing**	**4.22**	**357**		**Pn**	**20 37 08.1**	**-0.8**
O22K					**Pn**	**20 37 08.5**	**-0.4**
ILSW	**Iliamna Southw**	**4.24**	**333**		**Pn**	**20 37 08.4**	**-0.8**
ILSW				IAML		20 37 58.3	
	comp=E,108nm,0.7s						
ILSW				IAML		20 37 59.3	
	comp=N,127nm,0.7s						
SLKM	**Skilak Lake**	**4.27**	**354**		**Pn**	**20 37 08.6**	**-1.0**
SLKM				IAML		20 37 58.1	
	comp=E,122nm,0.4s						
SLKM				IAML		20 37 58.8	
	comp=N,116nm,0.4s						
PLBL	**Peulik Blue Cr**	**4.35**	**292**		**Pn**	**20 37 10.4**	**-0.3**
PLBL					**Pn**	**20 37 10.6**	**-0.1**
HIN	**Hinchinbrook I**	**4.39**	**18**		**Pn**	**20 37 10.7**	**-0.5**
P18K	**Big Mountain,**	**4.45**	**317**		**Pn**	**20 37 11.2**	**-0.8**
P18K					**Pn**	**20 37 11.8**	**-0.3**
KAIM	**Kayak Island**	**4.48**	**33**		**Pn**	**20 37 12.4**	**0.0**
RED	**Redoubt Volcan**	**4.54**	**338**		**Pn**	**20 37 12.3**	**-1.0**
RED				IAML		20 38 07.2	
	comp=E,96nm,0.8s						
RED				IAML		20 38 08.9	
	comp=N,90nm,0.8s						
EYAK	**Cordova Ski Ar**	**4.67**	**22**		**Pn**	**20 37 14.7**	**-0.4**
EYAK				IAML		20 38 09.4	
	comp=N,110nm,0.7s						
EYAK				IAML		20 38 18.9	
	comp=E,98nm,1.2s						
NCT	**North Crescent**	**4.70**	**338**		**Pn**	**20 37 14.5**	**-1.1**
NCT					**Pn**	**20 37 14.9**	**-0.6**
GLI	**Glacier Island**	**4.76**	**13**		**Pn**	**20 37 14.6**	**-1.6**
GLI					**Pn**	**20 37 15.7**	**-0.6**
GLI	**Glacier Island**	**4.76**	**13**	IAML		20 38 09.7	
	comp=N,56nm,1.0s						
GLI				IAML		20 38 14.7	
	comp=E,82nm,0.6s						
O18K	**Koktuh Hills**	**4.76**	**321**		**Pn**	**20 37 16.1**	**-0.2**
O18K	**Koktuh Hills**	**4.76**	**321**	IAML		20 38 13.9	
	comp=E,53nm,0.8s						
O18K				IAML		20 38 23.2	
	comp=N,82nm,0.8s						
RAGM	**Ragged Mountai**	**4.79**	**29**		**Pn**	**20 37 15.0**	**-1.7**
RAGM					**Pn**	**20 37 16.1**	**-0.6**
SUCH	**Suckling Hills**	**4.80**	**35**		**Pn**	**20 37 15.0**	**-1.8**
SUCK					**Pn**	**20 37 16.0**	**-0.8**
P17K	**Kvichak River**	**4.82**	**310**		**Pn**	**20 37 17.4**	**+0.4**
RC01	**Rabbit Creek A**	**4.83**	**357**		**Pn**	**20 37 16.4**	**-0.8**
RC01					**Pn**	**20 37 16.8**	**-0.5**
RC01	**Rabbit Creek A**	**4.83**	**357**	IAML		20 38 17.1	
	comp=E,66nm,0.6s						
RC01				IAML		20 38 24.4	
	comp=N,56nm,0.6s						
GOAT	**Goat Mountain**	**4.94**	**27**		**Pn**	**20 37 17.9**	**-0.8**
GOAT					**Pn**	**20 37 18.7**	**-0.1**
ANPB	**Aniakchak Plen**	**5.00**	**280**		**Pn**	**20 37 19.6**	**0.0**
CHGN	**Chignik**	**5.08**	**274**		**Pn**	**20 37 21.3**	**+0.7**
CHGN				IAML		20 38 18.4	
	comp=N,39nm,0.4s						
SPU	**Mount Spurr**	**5.12**	**345**		**Pn**	**20 37 20.7**	**-0.6**
KNK	**Knik Glacier**	**5.17**	**4**		**Pn**	**20 37 21.7**	**-0.2**
KNK	**Knik Glacier**	**5.17**	**4**	IAML		20 38 26.1	
	comp=E,52nm,0.7s						
KNK				IAML		20 38 37.3	
	comp=N,45nm,0.7s						
CKL	**Chakachamna La**	**5.18**	**343**		**Pn**	**20 37 22.0**	**-0.1**
DIV	**Divide**	**5.20**	**19**		**Pn**	**20 37 21.9**	**-0.5**
DIV	**Divide**	**5.20**	**19**	IAML		20 38 23.9	
	comp=N,36nm,0.9s						
BMRM	**Bremner River**	**5.30**	**26**	IAML		20 38 29.2	
	comp=N,71nm,1.1s						
PMR	**Palmer**	**5.33**	**1**		**Pn**	**20 37 23.2**	**-0.9**
PMR				IAML		20 38 25.2	
	comp=N,32nm,0.9s						
PMR				IAML		20 38 34.8	
	comp=E,39nm,0.7s						
STLK	**Strandline Lak**	**5.40**	**347**		**Pn**	**20 37 24.3**	**-0.8**
STLK				IAML		20 38 29.7	
	comp=N,39nm,0.5s						
STLK				IAML		20 38 39.2	
	comp=E,36nm,0.6s						
P16K	**Nushagak River**	**5.42**	**304**		**Pn**	**20 37 26.2**	**+0.9**
GHO	**Glory Hole Cre**	**5.52**	**2**		**Pn**	**20 37 26.8**	**+0.1**
CRQM	**Cirque**	**5.53**	**33**		**Pn**	**20 37 26.6**	**-0.4**
SML	**Sawmill**	**5.57**	**5**		**Pn**	**20 37 27.6**	**+0.2**
M23K	**Glacier View**	**5.59**	**8**		**Pn**	**20 37 27.9**	**+0.2**
TGL	**Tana Glacier**	**5.62**	**34**		**Pn**	**20 37 27.8**	**-0.5**
SCM	**Sheep Creek Mo**	**5.67**	**10**		**Pn**	**20 37 28.6**	**-0.1**
RKAV	**Rock Avalanche**	**5.82**	**43**		**Pn**	**20 37 30.6**	**-0.3**
VRDI	**Verde Repeater**	**5.82**	**29**		**Pn**	**20 37 30.9**	**-0.1**
N25K	**Chitina, Valde**	**5.87**	**23**		**Pn**	**20 37 31.6**	**0.0**
KIAG	**Kiagna River**	**5.90**	**35**		**Pn**	**20 37 31.7**	**-0.4**
N17K	**Nushagak Hills**	**5.94**	**319**		**Pn**	**20 37 32.4**	**-0.1**
GRNC	**Granite Creek**	**5.96**	**38**		**Pn**	**20 37 32.5**	**-0.5**
M24K	**Tolsona, Glenn**	**6.06**	**14**		**Pn**	**20 37 34.4**	**+0.2**
MCARA	**McCarthy WSAT**	**6.07**	**30**		**Pn**	**20 37 34.2**	**0.0**
PTPK	**Patty Peak**	**6.07**	**33**		**Pn**	**20 37 34.3**	**-0.2**
PCA	**Pinnacle**	**6.12**	**48**		**Pn**	**20 37 34.3**	**-0.7**
M18K	**Stony River**	**6.22**	**330**		**Pn**	**20 37 35.6**	**-0.7**
BARN	**Barnard Glacie**	**6.23**	**37**		**Pn**	**20 37 35.9**	**-0.7**
WASW	**Wrangell South**	**6.25**	**23**		**Pn**	**20 37 36.7**	**-0.2**
WACK	**Wrangell Chich**	**6.27**	**22**		**Pn**	**20 37 36.8**	**-0.4**
CTGM	**Chitina Glacie**	**6.28**	**38**		**Pn**	**20 37 36.8**	**-0.4**
LOGN	**Logan Glacier**	**6.29**	**40**		**Pn**	**20 37 37.3**	**-0.1**
L22K	**Petersville**	**6.31**	**354**		**Pn**	**20 37 38.1**	**+0.5**
SDPT	**Sand Point**	**6.37**	**266**		**Pn**	**20 37 38.1**	**-0.3**
N16K	**Nishlik Lake**	**6.52**	**314**		**Pn**	**20 37 40.5**	**+0.1**
O28M	**Mount Upton**	**6.56**	**43**		**Pn**	**20 37 40.7**	**-0.5**
L19K	**White Mountain**	**6.57**	**337**		**Pn**	**20 37 41.0**	**-0.1**
WAT7	**Susitna Watana**	**6.58**	**2**		**Pn**	**20 37 41.4**	**0.0**
WAT1	**Susitna Watana**	**6.58**	**3**		**Pn**	**20 37 41.6**	**+0.2**
M17K	**Holitna River**	**6.65**	**324**		**Pn**	**20 37 42.0**	**-0.2**
PAX	**Paxson**	**6.99**	**15**		**Pn**	**20 37 46.5**	**-0.4**
HAG	**Hagun Volcano**	**7.17**	**268**		**Pn**	**20 37 49.1**	**-0.3**
PN7A	**Pavlof North-7**	**7.20**	**269**		**Pn**	**20 37 49.0**	**-0.8**
S31K	**Pelican**	**7.31**	**71**		**Pn**	**20 37 49.7**	**-1.6**
KTH	**Kantishna Hill**	**7.34**	**354**		**Pn**	**20 37 51.8**	**0.0**
DTNA	**Dutton South F**	**7.41**	**267**		**Pn**	**20 37 51.6**	**-0.9**
DT1	**Dutton Round H**	**7.43**	**266**		**Pn**	**20 37 51.9**	**-1.0**
MCK	**McKinley**	**7.48**	**1**		**Pn**	**20 37 53.9**	**+0.2**
BVCY	**Beaver Creek**	**7.51**	**32**		**Pn**	**20 37 54.0**	**0.0**
SIT	**Sitka**	**7.74**	**78**		**Pn**	**20 37 54.8**	**-2.3**
BC01	**Beaver Creek A**	**7.78**	**26**		**Pn**	**20 37 57.7**	**0.0**
RIDG	**Independent Ri**	**7.81**	**15**		**Pn**	**20 37 58.4**	**+0.3**
BPAW	**Bear Paw Mtn.**	**7.89**	**355**		**Pn**	**20 37 58.7**	**-0.5**
K17K	**Iditarod**	**7.91**	**328**		**Pn**	**20 37 58.9**	**-0.6**
WRH	**Wood River Hil**	**8.24**	**4**		**Pn**	**20 38 03.3**	**-0.8**
ISNN	**Isanotski Nort**	**8.34**	**266**		**Pn**	**20 38 05.5**	**+0.1**
CCB	**Clear Creek Bu**	**8.43**	**4**		**Pn**	**20 38 06.1**	**-0.5**
IL31		**8.61**	**7**		**Pn**	**20 38 09.1**	**+0.1**
ILAR	**Eielson Array**	**8.61**	**7**	Pn	**Pn**	**20 38 08.4**	**-0.5**
	comp=E,0.8nm,0.3s,baz=192,slow=13,SNR=34						
ILAR				Sn	**Sn**	**20 39 42.4**	**-3.6**
	comp=E,0.4nm,0.3s,baz=187,slow=20,SNR=5.5						
ILAR				LR	LR	20 41 47.8	
	comp=E,134nm,19.5s,baz=94,slow=39						
	comp=E,1.8nm,0.3s						
COLA	**College**	**8.66**	**4**		**Pn**	**20 38 09.8**	**+0.2**
WHY	**Whitehorse**	**8.73**	**54**		**Pn**	**20 38 12.2**	**+1.3**
P32M	**Atlin**	**8.93**	**62**		**Pn**	**20 38 14.0**	**+0.5**
U33K	**Whale Pass**	**9.02**	**84**		**Pn**	**20 38 12.1**	**-2.6**
P33M	**Tesiin, Yukon**	**9.54**	**59**		**Pn**	**20 38 23.9**	**+2.1**
IMAR	**Indian Mountai**	**9.97**	**349**		**Pn**	**20 38 26.6**	**-1.0**
DLBC	**Dease Lake**	**10.63**	**70**	Pn	**Pn**	**20 38 37.2**	**+0.4**
	comp=E,0.4nm,0.3s,baz=264,slow=10,SNR=5.4						
DLBC				LR	LR	20 41 48.4	
	comp=E,129nm,20.7s,baz=292,slow=32						
	comp=E,0.8nm,0.3s						
COLD	**Coldfoot**	**11.00**	**358**		**Pn**	**20 38 41.2**	**-0.5**
G31M	**Satah River**	**12.80**	**27**		**Pn**	**20 39 07.8**	**+1.5**
BBB	**Bella Bella**	**13.04**	**99**	LR	LR	20 43 01.4	
	comp=E,129nm,19.3s,baz=302,slow=32						
C24K	**Franklin Bluff**	**13.50**	**1**		**Pn**	**20 39 16.9**	**+1.1**
INK	**Inuvik**	**14.05**	**25**	Pn	**Pn**	**20 39 25.7**	**+2.4**
	comp=E,0.2nm,0.3s,baz=223,slow=11,SNR=6.4						
	comp=E,3.1nm,0.9s						
INK	**Inuvik**	**14.05**	**25**		**Pn**	**20 39 23.6**	**+0.2**
YKA	**Yellowknife Ar**	**18.55**	**56**	P	**Pn**	**20 40 21.1**	**-0.1**
	comp=E,0.1nm,0.3s,baz=269,slow=11,SNR=7.3						
	comp=E,0.4nm,0.7s						
YKA	**Yellowknife Ar**	**18.55**	**56**	P	**Pn**	**20 40 22.4**	**+1.2**
YKAW3	**Yellowknife Wh**	**18.55**	**56**		**Pn**	**20 40 22.4**	**+1.1**
A36M	**Sachs Harbour**	**18.69**	**23**		**P**	**20 40 21.4**	**-1.1**
A36M				IAmb	IAmb	20 40 26.8	
	comp=Z,8.6nm,0.7s						
LTY	**Liberty**	**19.75**	**105**	P	**Pn**	**20 40 35.8**	**-0.2**
LTY				IAmb	IAmb	20 40 47.8	
	comp=Z,9.9nm,1.2s						
NEW	**Newport**	**21.10**	**99**	LR	LR	20 46 51.8	
	comp=Z,66nm,20.3s,baz=350,slow=31						
SHEM	**Shemya Is, Ala**	**21.38**	**276**	LR	LR	20 48 43.7	
	comp=Z,79nm,18.8s,baz=231,slow=36						
F10A	**Beach Ranch, E**	**22.41**	**104**	P	**P**	**20 41 04.3**	**+1.2**
F10A				IAmb	IAmb	20 41 19.6	
	comp=Z,8.8nm,1.3s						
I07A	**Izee**	**22.45**	**110**	P	**P**	**20 41 03.4**	**-0.2**
I07A				IAmb	IAmb	20 41 15.0	
	comp=Z,7.3nm,1.1s						
NVAR	**Mina Array Bea**	**27.22**	**118**	P	**P**	**20 41 48.7**	**+0.1**
	comp=Z,0.7nm,0.9s,baz=312,slow=8.5,SNR=1.9						
NVAR				LR	LR	20 50 45.9	
	comp=Z,62nm,18.4s,baz=287,slow=32						
	comp=Z,0.7nm,0.9s						
PDAR	**Pinedale Array**	**28.67**	**101**	P	**P**	**20 42 00.7**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=308,slow=3.9,SNR=2.8						
	comp=Z,0.1nm,0.3s						
DANC	**Danby, Needles**	**31.65**	**119**		**P**	**20 42 25.9**	**-1.8**
ULM	**Lac du Bonnet**	**31.82**	**78**	LR	LR	20 55 06.1	
	comp=Z,85nm,18.1s,baz=14,slow=36						
H11N2	**WAKE ISLAND Hy**	**48.87**	**240**	T	T	21 38 00.8	
	baz=29						
H11N3	**WAKE ISLAND Hy**	**48.88**	**240**	T	T	21 38 01.3	
	baz=29						
H11N1	**WAKE ISLAND Hy**	**48.89**	**240**	T	T	21 38 02.5	
	baz=29						
H11S1	**WAKE ISLAND Hy**	**50.01**	**239**	T	T	21 39 30.5	
	baz=29,slow=76,SNR=9.7						
H11S2	**WAKE ISLAND Hy**	**50.03**	**239**	T	T	21 39 28.2	
	baz=29,slow=76,SNR=6.9						
H11S3	**WAKE ISLAND Hy**	**50.03**	**239**	T	T	21 39 28.8	
	baz=29,slow=76,SNR=7.5						
SONM	**Songino Array**	**58.63**	**310**	P	**P**	**20 46 03.4**	**+1.8**
	comp=Z,0.7nm,0.8s,baz=41,slow=7.9,SNR=4.3						
	comp=Z,0.7nm,0.8s						
SONM	**Songino Array**	**58.63**	**310**	IAmb	IAmb	20 46 07.3	
	comp=Z,1.4nm,1.1s						
ZALV	**Zalesovo Beam**	**61.56**	**327**	P	**P**	**20 46 21.6**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=38,slow=7.3,SNR=1.9						
	comp=Z,0.4nm,0.5s						
FINES	**FINESS Array B**	**62.56**	**3**	P	**P**	**20 46 28.9**	**+1.0**
	comp=Z,1.4nm,0.7s,baz=358,slow=9.7,SNR=6.1						
	comp=Z,1.4nm,0.7s						
KURK	**Kurchatov**	**66.23**	**329**	P	**P**	**20 46 53.9**	**+1.7**
KURK	**Kurchatov**	**66.23**	**329**	IAmb	IAmb	20 47 16.5	
	comp=Z,4.6nm,1.4s						
BVAR	**Borovoye Array**	**66.28**	**335**	P	**P**	**20 46 54.3**	**+1.8**
	comp=Z,0.2nm,0.6s,baz=13,slow=8.1,SNR=1.5						
	comp=Z,0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**66.34**	**329**	P	**P**	**20 46 53.8**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=27,slow=6.5,SNR=1.7						
	comp=Z,0.2nm,0.4s						
MKAR	**Makanchi Array**	**68.59**	**325**	P	**P**	**20 47 07.9**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=33,slow=6.8,SNR=4.5						
	comp=Z,0.2nm,0.6s						
AKASG	**Malin Array Be**	**73.38**	**1**	P	**P**	**20 47 37.5**	**+1.3**
	comp=Z,0.6nm,0.5s,baz=0.9,slow=6.8,SNR=1.9						
	comp=Z,0.6nm,0.5s						
AKASG	**Malin Array Be**	**73.38**	**1**	IAmb	IAmb	20 47 37.8	
	comp=Z,2.2nm,0.9s						

*NIED **12** 20:49:33.3, 37.°30N×144.°30E, h51^{km}, MW3.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.44; $M_{\theta\theta}$-0.75; $M_{\phi\phi}$1.19; $M_{r\theta}$-0.56; $M_{\theta\phi}$-0.70; M_{rr}1.11; Fault plane solution: $M_0$1.61000×10^{14} NP1:$\phi_0$29.00000°, δ36.00000°, λ-18.00000°. NP2:$\phi_0$134.00000°, δ80.00000°, λ-125.00000°.*

JMA 12 20:49:33.3±0.3, 37.°3N±0.°8×14.°4E±°, h51^{km}, MV3.8/25, FAR E OFF NORTH HONSHU, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.46**	**295**	*eP*	Pn	20 50 12.1	+1.2
JIKH				S	Sn	20 50 41.1	+1.3
JIO	**Ouri**	**2.60**	**297**	P	Pn	20 50 14.2	+1.3
JIO				S	Sn	20 50 44.4	+1.1
JKMT	**Kesennumamotoy**	**2.69**	**305**	P	Pn	20 50 15.2	+1.1
JKMT				S	Sn	20 50 46.3	+0.8
JMK	**Ichinoseki**	**2.94**	**305**	*eP*	Pn	20 50 19.1	+1.6
JMK				S	Sn	20 50 52.7	+1.3
JOTO	**OTAMA OYAMA**	**3.17**	**276**	P	Pn	20 50 23.0	+2.4
JOTO				*eS*	Sn	20 50 59.4	+2.2
JOM	**Ohasama**	**3.21**	**313**	P	Pn	20 50 22.8	+1.6
JOM				S	Sn	20 50 59.6	+1.4
BSO1	**Boso 1**	**3.77**	**227**	*eP*	Pn	20 50 30.5	+2.0
BSO1				S	Sn	20 51 12.0	+0.7
JRY	**Ryogami san**	**4.53**	**255**	P	Pn	20 50 40.2	+0.9
JRY				S	Sn	20 51 31.0	+0.4
JOD2	**Odawara 2**	**4.68**	**246**	S	Sn	20 51 34.3	0.0
JCH	**Churui**	**5.36**	**353**	P	Pn	20 50 49.3	-1.3
JTKR	**Abashiri--Toko**	**6.67**	**358**	P	Pn	20 51 06.8	-1.8
JTKR				S	Sn	20 52 18.2	-5.0

*IDC **12** 20:50:53.7±2.6, 56.°01N×149.°14W, h

PLK4					Sn	20 52 44.0	-2.3	
PLK4	**Peulik 4**	**4.09**	**292**	IAML		20 52 48.1		
	comp=E,159nm,0.5s							
PLK4				IAML		20 53 04.6		
	comp=N,101nm,1.1s							
ILS	**Iliamna Low So**	**4.20**	**333**		Pn	20 52 00.1	+0.3	
O22K	**Cooper Landing**	**4.23**	**357**		Pn	20 51 59.0	-1.0	
ILSW	**Iliamna Southw**	**4.24**	**333**		Pn	20 52 00.3	-0.1	
ILSW					Sn	20 52 48.4	-1.5	
ILSW	**Iliamna Southw**	**4.24**	**333**	IAML		20 52 54.7		
	comp=N,96nm,0.7s							
ILSW				IAML		20 53 03.4		
	comp=E,84nm,0.7s							
PLK1	**Peulik 1**	**4.27**	**294**		Pn	20 52 00.4	-0.3	
SLKM	**Skilak Lake**	**4.27**	**354**		Pn	20 51 59.9	-0.9	
SLKM				IAML		20 52 49.9		
	comp=N,108nm,0.6s							
SLKM				IAML		20 52 52.8		
	comp=E,120nm,0.7s							
PLBL	**Peulik Blue Cr**	**4.35**	**292**		Pn	20 52 01.9	+0.1	
HIN	**Hinchinbrook I**	**4.39**	**19**		Pn	20 52 02.0	-0.4	
HIN				IAML		20 53 06.5		
	comp=N,138nm,1.0s							
P18K	**Big Mountain,**	**4.45**	**317**		Pn	20 52 02.8	-0.4	
PLK5	**Peulik 5**	**4.47**	**296**		Pn	20 52 03.4	-0.1	
KAIM	**Kayak Island**	**4.49**	**33**		Pn	20 52 03.5	-0.2	
RED	**Redoubt Volcan**	**4.54**	**338**		Pn	20 52 04.0	-0.5	
RED				IAML		20 53 02.3		
	comp=N,77nm,0.7s							
RED				IAML		20 53 03.1		
	comp=E,88nm,0.7s							
RDSO	**Redoubt South**	**4.57**	**338**		Pn	20 52 04.4	-0.5	
EYAK	**Cordova Ski Ar**	**4.68**	**22**		Pn	20 52 06.0	-0.3	
EYAK	**Cordova Ski Ar**	**4.68**	**22**	IAML		20 53 14.8		
	comp=E,82nm,0.9s							
NCT	**North Crescent**	**4.70**	**338**		Pn	20 52 06.6	-0.1	
GLI	**Glacier Island**	**4.76**	**13**	IAML		20 53 14.2		
	comp=E,64nm,0.8s							
GLI				IAML		20 53 16.7		
	comp=N,48nm,0.9s							
O18K	**Koktuh Hills**	**4.76**	**321**		Pn	20 52 07.6	+0.1	
O18K				IAML		20 53 10.1		
	comp=E,47nm,0.7s							
O18K				IAML		20 53 14.7		
	comp=N,61nm,0.7s							
RAGM	**Ragged Mountai**	**4.79**	**29**		Pn	20 52 07.4	-0.6	
RAGM					Pn	20 52 07.8	-0.1	
SUCK	**Suckling Hills**	**4.80**	**35**		Pn	20 52 07.9	-0.1	
SUCK					Pn	20 52 08.1	+0.1	
P17K	**Kvichak River**	**4.81**	**310**		Pn	20 52 08.8	+0.7	
RC01	**Rabbit Creek A**	**4.84**	**358**		Pn	20 52 07.8	-0.7	
RC01				IAML		20 53 11.3		
	comp=E,63nm,0.6s							
RC01				IAML		20 53 11.3		
	comp=N,52nm,1.1s							
GOAT	**Goat Mountain**	**4.95**	**27**		Pn	20 52 09.8	-0.2	
CHGN	**Chignik**	**5.07**	**274**		Pn	20 52 12.5	+0.8	
CHGN				IAML		20 53 12.2		
	comp=N,52nm,0.3s							
CHGN				IAML		20 53 18.6		
	comp=E,50nm,1.0s							
SPU	**Mount Spurr**	**5.13**	**345**		Pn	20 52 12.3	-0.2	
KNK	**Knik Glacier**	**5.17**	**5**	IAML		20 53 24.1		
	comp=N,32nm,1.1s							
KNK				IAML		20 53 26.8		
	comp=E,37nm,0.9s							
DIV	**Divide**	**5.21**	**19**		Pn	20 52 13.5	-0.1	
DIV	**Divide**	**5.21**	**19**	IAML		20 53 24.8		
	comp=N,33nm,0.8s							
N19K	**Bonanza Creek**	**5.30**	**331**	IAML		20 53 49.8		
	comp=E,29nm,1.1s							
BMRM	**Bremner River**	**5.31**	**26**		Pn	20 52 14.3	-0.7	
BMRM				IAML		20 53 21.4		
	comp=N,76nm,0.9s							
BMRM				IAML		20 53 39.9		
	comp=E,58nm,1.0s							
PMR	**Palmer**	**5.34**	**1**	IAML		20 53 17.9		
	comp=N,28nm,0.8s							
PMR				IAML		20 53 21.0		
	comp=E,36nm,0.9s							
SPNN	**North Nagishla**	**5.40**	**342**		Pn	20 52 16.5	+0.1	
P16K	**Nushagak River**	**5.42**	**304**		Pn	20 52 17.4	+1.0	
O17K	**Koliganek Bris**	**5.42**	**314**		Pn	20 52 16.6	+0.1	
MESA	**MESA**	**5.52**	**42**		Pn	20 52 17.2	-0.8	
GHO	**Glory Hole Cre**	**5.52**	**2**		Pn	20 52 18.2	+0.2	
KLU	**Klutina**	**5.52**	**17**		Pn	20 52 17.9	-0.1	
CRQM	**Cirque**	**5.54**	**33**		Pn	20 52 18.0	-0.3	
SML	**Sawmill**	**5.57**	**5**		Pn	20 52 19.0	+0.3	
N18K	**Kilae Creek**	**5.61**	**325**		Pn	20 52 19.0	-0.1	
TGL	**Tana Glacier**	**5.63**	**34**		Pn	20 52 19.4	0.0	
SCM	**Sheep Creek Mo**	**5.67**	**10**		Pn	20 52 20.6	+0.6	
O16K	**Kokwok River B**	**5.74**	**309**		Pn	20 52 21.6	+0.7	
RKAV	**Rock Avalanche**	**5.82**	**43**		Pn	20 52 22.7	+0.5	
VRDI	**Verde Repeater**	**5.83**	**29**		Pn	20 52 22.5	+0.2	
SKT	**Skwentna**	**5.84**	**350**		Pn	20 52 22.8	+0.5	
N25K	**Chitina, Valde**	**5.88**	**23**		Pn	20 52 23.3	+0.5	
KIAG	**Kiagna River**	**5.91**	**35**		Pn	20 52 23.2	-0.2	
N17K	**Nushagak Hills**	**5.94**	**319**		Pn	20 52 24.0	+0.3	
GRNC	**Granite Creek**	**5.97**	**38**		Pn	20 52 23.9	-0.3	
CNBA	**Chernabura Isl**	**6.01**	**260**		Pn	20 52 24.4	-0.3	
M24K	**Tolsona, Glenn**	**6.07**	**14**		Pn	20 52 25.7	+0.3	
MCARA	**McCarthy VSAT**	**6.07**	**30**		Pn	20 52 25.6	+0.2	
PTPK	**Patty Peak**	**6.08**	**33**		Pn	20 52 25.5	-0.2	
PCA	**Pinnacle**	**6.13**	**48**		Pn	20 52 26.0	-0.3	
M19K	**Big River Lodg**	**6.22**	**337**		Pn	20 52 27.7	+0.2	
M18K	**Stony River**	**6.22**	**330**		Pn	20 52 27.5	0.0	
BARN	**Barnard Glacie**	**6.24**	**37**		Pn	20 52 28.2	+0.3	
WACK	**Wrangell Chich**	**6.28**	**22**		Pn	20 52 28.5	0.0	
CTGM	**Chitina Glacie**	**6.28**	**38**		Pn	20 52 28.3	-0.1	
LOGN	**Logan Glacier**	**6.30**	**40**		Pn	20 52 29.3	+0.6	
L22K	**Petersville**	**6.32**	**354**		Pn	20 52 30.0	+1.2	
SDPT	**Sand Point**	**6.36**	**266**		Pn	20 52 28.9	-0.5	
O28M	**Mount Upton**	**6.57**	**43**		Pn	20 52 32.2	-0.3	
L19K	**White Mountain**	**6.57**	**337**		Pn	20 52 32.4	+0.1	
WAT7	**Susitna Watana**	**6.58**	**2**		Pn	20 52 32.5	0.0	
M17K	**Holitna River**	**6.65**	**324**		Pn	20 52 33.8	+0.4	
M16K	**Timber Creek**	**6.93**	**317**		Pn	20 52 37.8	+0.7	
PAX	**Paxson**	**6.99**	**15**		Pn	20 52 39.1	+1.0	
PS1A	**Pavlof South-1**	**7.05**	**268**		Pn	20 52 39.7	+0.8	
PS4A	**Pavlof South-4**	**7.13**	**268**		Pn	20 52 40.1	+0.1	
RND	**Reindeer**	**7.16**	**2**		Pn	20 52 40.6	+0.1	
HAG	**Hague Volcano**	**7.17**	**268**		Pn	20 52 40.2	-0.3	
PN7A	**Pavlof North-7**	**7.19**	**269**		Pn	20 52 41.2	+0.3	
S31K	**Pelican**	**7.32**	**71**		Pn	20 52 41.3	-1.2	
DT1	**Dutton Round H**	**7.43**	**266**		Pn	20 52 42.2	+0.2	
MCK	**McKinley**	**7.49**	**1**		Pn	20 52 45.7	+0.9	
K17K	**Iditarod**	**7.91**	**328**		Pn	20 52 50.3	-0.3	
WRH	**Wood River Hil**	**8.25**	**4**		Pn	20 52 55.4	+0.2	
ISNN	**Isanotski Nort**	**8.33**	**266**		Pn	20 52 56.5	+0.1	
CCB	**Clear Creek Bu**	**8.44**	**4**		Pn	20 52 58.4	+0.6	
ILAR	**Eielson Array**	**8.61**	**7**	Pn	Pn	20 52 59.9	-0.3	
	comp=E,0.3nm,0.3s,baz=187,slow=13,SNR=17							
ILAR					Sn	20 54 32.8	-4.5	
	comp=E,0.2nm,0.3s,baz=188,slow=21,SNR=6.9							
ILAR				LR	LR	20 56 29.7		
	comp=E,259nm,19.4s,baz=142,slow=38							
	comp=E,1.7nm,0.5s							
WHY	**Whitehorse**	**8.74**	**54**		Pn	20 53 01.5	-0.6	
P32M	**Atlin**	**8.93**	**62**		Pn	20 53 04.8	+0.1	
U33K	**Whale Pass**	**9.03**	**84**		Pn	20 53 04.1	-1.8	
I27K	**Kandik River**	**10.07**	**19**		Pn	20 53 22.0	+1.7	
DLBC	**Dease Lake**	**10.63**	**70**	Pn	Pn	20 53 26.5	-1.5	
	comp=E,0.1nm,0.3s,baz=288,slow=26,SNR=1.5							
DLBC				LR	LR	20 56 52.0		
	comp=E,252nm,20.3s,baz=276,slow=34							
	comp=E,0.8nm,0.3s							
COLD	**Coldfoot**	**11.00**	**358**		Pn	20 53 32.4	-0.5	
BBB	**Bella Bella**	**13.04**	**99**	LR	LR	20 57 53.0		
	comp=E,239nm,19.0s,baz=282,slow=32							
INK	**Inuvik**	**14.06**	**25**	Pn	Pn	20 54 16.5	+1.9	
	baz=220,slow=12,SNR=4.7							
INK				LR	LR	21 00 03.0		
	comp=E,105nm,21.5s,baz=260,slow=38							
	comp=E,2.0nm,0.9s							
INK	**Inuvik**	**14.06**	**25**		Pn	20 54 14.5	-0.2	
YKA	**Yellowknife Ar**	**18.56**	**56**	P	Pn	20 55 12.0	-0.5	
	comp=E,0.1nm,0.3s,baz=272,slow=12,SNR=7.0							
	comp=E,0.2nm,0.5s							
YKA	**Yellowknife Ar**	**18.56**	**56**	P	P	20 55 09.9	-2.3	
YKAW3	**Yellowknife Wh**	**18.56**	**56**		P	20 55 09.8	-2.6	
A36M	**Sachs Harbour**	**18.70**	**23**	P	Pn	20 55 15.1	+1.0	
A36M				IAmb	IAmb	20 55 38.8		
	comp=Z,9.3nm,0.8s							
NEW	**Newport**	**21.10**	**99**	LR	LR	21 02 36.2		
	comp=Z,130nm,19.8s,baz=287,slow=34							
SHEM	**Shemya Is, Ala**	**21.37**	**276**	LR	LR	21 03 57.5		
	comp=Z,60nm,18.4s,baz=306,slow=36							
YBH	**Yreka Blue Hor**	**22.52**	**119**	LR	LR	21 02 30.0		
	comp=Z,6.1nm,18.6s,baz=314,slow=31							
NVAR	**Mina Array Bea**	**27.22**	**118**	LR	LR	21 05 46.2		
	comp=Z,77nm,18.5s,baz=294,slow=33							
PDAR	**Pinedale Array**	**28.68**	**101**	LR	LR	21 06 16.3		
	comp=Z,59nm,18.6s,baz=346,slow=32							
PETK	**Petropavlovsk-**	**30.16**	**287**	LR	LR	21 10 10.0		
	comp=Z,53nm,18.2s,baz=63,slow=38							
MA2	**Magadan**	**31.05**	**301**	LR	LR	21 09 07.4		
	comp=Z,64nm,21.2s,baz=84,slow=35							
ULM	**Lac du Bonnet**	**31.82**	**78**	LR	LR	21 09 58.3		
	comp=Z,158nm,18.0s,baz=10.0,slow=36							
PFO	**Pinyon Flats O**	**31.97**	**121**	LR	LR	21 07 38.3		
	comp=Z,70nm,19.1s,baz=106,slow=32							
TXAR	**Lajitas Array**	**41.84**	**111**	LR	LR	21 15 06.0		
	comp=Z,48nm,18.5s,baz=347,slow=35							
ASAJ	**Asahikawa**	**43.48**	**284**	LR	LR	21 17 26.2		
	comp=Z,38nm,18.5s,baz=326,slow=36							
SADO	**Sadowa**	**44.17**	**74**	LR	LR	21 16 60.0		
	comp=Z,71nm,18.8s,baz=312,slow=36							
KLR	**Kul'dur**	**45.82**	**296**	LR	LR	21 20 53.9		
	comp=Z,43nm,18.1s,baz=338,slow=39							
TKL	**Tuckaleechee C**	**47.95**	**87**	LR	LR	21 19 38.9		
	comp=Z,153nm,18.3s,baz=342,slow=36							
H11N2	**WAKE ISLAND Hy**	**48.87**	**240**	T	T	21 52 41.7		
	baz=30							
H11N3	**WAKE ISLAND Hy**	**48.87**	**240**	T	T	21 52 42.9		
	baz=30							
H11N1	**WAKE ISLAND Hy**	**48.88**	**240**	T	T	21 52 43.4		
	baz=30							
H11S1	**WAKE ISLAND Hy**	**50.01**	**239**	T	T	21 54 14.1		
	baz=28,slow=76,SNR=5.3							
H11S2	**WAKE ISLAND Hy**	**50.02**	**239**	T	T	21 54 18.7		
	baz=28,slow=76,SNR=3.1							
H11S3	**WAKE ISLAND Hy**	**50.02**	**239**	T	T	21 54 17.5		
	baz=28,slow=76,SNR=3.8							
MJAR	**Matsushiro Arr**	**51.15**	**280**	LR	LR	21 21 05.0		
	comp=Z,26nm,21.2s,baz=40,slow=35							
KSRS	**Korea Array**	**56.05**	**288**	LR	LR	21 24 30.4		
	comp=Z,16nm,19.9s,baz=60,slow=36							
SONM	**Songino Array**	**58.63**	**310**	P	**P**	**21 00 53.5**	**+0.7**	
	comp=Z,0.5nm,0.7s,baz=34,slow=10,SNR=3.8							
	comp=Z,0.5nm,0.7s							
SONM	**Songino Array**	**58.63**	**310**	IAmb	IAmb	21 01 13.2		
	comp=Z,1.9nm,1.0s							
ZALV	**Zalesovo Beam**	**61.56**	**327**	P	**P**	**21 01 13.2**	**+0.7**	
	comp=Z,0.5nm,0.7s,baz=29,slow=6.6,SNR=1.6							
	comp=Z,0.5nm,0.7s							
FINES	**FINESS Array B**	**62.57**	**2**	P	**P**	**21 01 21.1**	**+2.0**	
	comp=Z,1.9nm,0.9s,baz=8.8,slow=10.0,SNR=4.5							
	comp=Z,1.9nm,0.9s							
ARTI	**Arti**	**65.47**	**343**	LR	LR	21 35 49.6		
	comp=Z,27nm,18.6s,baz=132,slow=41							
BVAR	**Borovoye Array**	**66.28**	**335**	LR	LR	21 34 03.0		
	comp=Z,44nm,18.1s,baz=347,slow=39							
MKAR	**Makanchi Array**	**68.59**	**325**	P	**P**	**21 02 00.5**	**+2.1**	
	comp=Z,0.2nm,0.6s,baz=34,slow=4.6,SNR=3.9							
MKAR				LR	LR	21 33 14.2		
	comp=Z,43nm,18.2s,baz=330,slow=37							
	comp=Z,0.2nm,0.6s							
AKASG	**Malin Array Be**	**73.39**	**1**	P	**P**	**21 02 28.9**	**+1.6**	
	comp=Z,0.4nm,0.4s,baz=1.1,slow=6.4,SNR=1.9							
	comp=Z,0.4nm,0.4s							
AKASG	**Malin Array Be**	**73.39**	**1**	IAmb	IAmb	21 02 37.3		
	comp=Z,5.0nm,1.4s							
PPT	**Papeete**	**73.55**	**180**	LR	LR	21 29 14.2		
	comp=Z,33nm,19.1s,baz=14,slow=31							

IDC ***12*** *21:03:40.0±2.0, 7˚.64S×123˚.93E, h0km, mb3.1/1, mbtmp3.1/3, ML3.5/2, Error ellipse: s-maj=198.9km s-min=31.7km az=58.0*

DJA ***12*** *21:03:54.0±0.3, 9˚.5±4˚×12˚.2E±˚, h56km±11km, M3.1/12, MLv3.1/12*

ISC 12 21:03:52.9±1.4, 9˚.02S±0˚.09×122˚.44E±0˚.07, h50km, n12, σ1♀99/11, Savu Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**0.43**	**333**	P	**Pn**	**21 04 05.5**	**+2.1**
EDFI	**Ende, Flores**	**0.79**	**290**	P	**Pn**	**21 04 09.7**	**+1.9**
BATI	**Baumata**	**1.69**	**134**	P	**Pn**	**21 04 22.2**	**+2.2**
WSI	**Waingapu**	**2.21**	**253**	P	**Pn**	**21 04 27.5**	**+0.4**
WSI				S	**Sn**	**21 04 54.4**	**+1.2**
LBFI	**Labuhan Bajo,**	**2.58**	**282**	P	**Pn**	**21 04 33.0**	**+0.9**
WBSI	**Waikabubak, Su**	**3.07**	**258**	P	**Pn**	**21 04 39.4**	**+0.5**
BSSI	**Bau Bau, Buton**	**3.45**	**326**	P	**Pn**	**21 04 43.6**	**-0.6**
DBNI	**Kabupaten Domp**	**4.11**	**277**	P	**Pn**	**21 04 54.9**	**+1.7**
PLAI	**Plampang**	**4.61**	**272**	P	**Pn**	**21 05 00.2**	**+0.2**
WRA	**Warramunga Arr**	**15.82**	**135**	Pn	Pn	21 07 25.8	-6.6
	0.2nm,0.3s,baz=316,slow=14,SNR=11						
WRA				Sn	Sn	21 10 12.2	-15
	0.2nm,0.3s,baz=314,slow=24,SNR=5.9						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**18.23**	**144**	P	**P**	**21 07 58.5**	**-3.6**
	0.1nm,0.3s,baz=322,slow=12,SNR=8.3						
	0.8nm,0.8s						
MKAR	**Makanchi Array**	**66.07**	**331**	P	P	21 14 25.8	-8.8
	0.1nm,0.5s,baz=133,slow=5.8,SNR=1.5						
	0.1nm,0.5s						

CATAC 12 21:13:19.5±0.6, 11˚.N±3˚×8˚.7W±˚, h23km±8km, M3.5/22, MLv3.5/22, Error ellipse: s-maj=7.9km s-min=4.1km az=23.4, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
COPN	**Copaltepe**	**1.12**	**24**	P	Pn	21 13 39.2	-0.5
SAPS	**Ciudad Sandino**	**1.19**	**32**	P	Pn	21 13 40.1	-0.7
SAPS				S	Sb	21 13 56.9	+0.4
NANN	**Nandasmo**	**1.20**	**49**	P	Pn	21 13 40.7	-0.2
MASN	**Masaya**	**1.21**	**47**	S	Sn	21 13 56.8	0.0
MAS3	**Al N del Volca**	**1.22**	**45**	P	Pb	21 13 41.9	0.0
MAS3				S	Sb	21 13 57.2	-0.1
UNAN	**Cigeo UNAN**	**1.22**	**39**	P	Pn	21 13 40.1	-1.1
UNAN				S	Sn	21 13 57.1	+0.1
TISN	**Laguna Tiscapa**	**1.25**	**38**	P	Pn	21 13 41.0	-0.5
APQ2	**Apoyeque**	**1.26**	**34**	P	Pn	21 13 40.8	-0.9
APQ2				S	Sn	21 13 57.5	-0.4
MGAN	**Managua**	**1.27**	**38**	P	Pn	21 13 41.2	-0.6
MGAN				S	Sn	21 13 58.1	+0.1
ALEN	**Leon**	**1.31**	**8**	S	Sb	21 14 00.5	+0.6
AERN	**Aeropuerto Man**	**1.31**	**41**	S	Sb	21 14 00.1	+0.1
MACN	**El Madrono**	**1.36**	**16**	P	Pn	21 13 43.3	+0.2
CNGN	**Cerro Negro**	**1.39**	**14**	P	Pn	21 13 44.0	+0.5
ROCN	**Rota Cerro Neg**	**1.39**	**12**	S	Sn	21 14 01.6	+0.4
CONN	**Concepcion**	**1.46**	**73**	P	Pn	21 13 44.2	-0.1
HOYN	**Al Sur del Vol**	**1.46**	**9**	P	Pn	21 13 43.6	-0.8
ILCN	**San Idelfonso**	**1.46**	**14**	P	Pn	21 13 44.0	-0.4
ILCN				S	Sb	21 14 04.3	+0.2
HERN	**Volcan Telica**	**1.47**	**8**	P	Pn	21 13 44.4	-0.1
HERN				S	Sn	21 14 03.7	+0.6
CARN	**Rivas**	**1.50**	**88**	S	Sb	21 14 04.8	-0.5
POLN	**Al Sur del Vol**	**1.51**	**9**	S	Sn	21 14 04.5	+0.5
PKGN	**Cerro Pekin**	**1.51**	**3**	P	Pn	21 13 45.3	+0.1
PKGN				S	Sn	21 14 04.7	+0.6
CRIN	**San Cristobal**	**1.54**	**0**	P	Pb	21 13 46.6	-0.8
CRIN				S	Sb	21 14 05.9	-0.6
BOAB	**BOACO BROADBAN**	**1.87**	**46**	P	Pn	21 13 50.0	0.0
BOAB				S	Sn	21 14 13.3	+0.3
CSGN	**Cosiguina Volc**	**1.88**	**345**	P	Pn	21 13 50.4	0.0
CSGN				S	Sn	21 14 12.7	-0.7
LIMN	**Finca el Limon**	**2.02**	**19**	P	Pn	21 13 51.5	-0.7
LIMN				S	Sn	21 14 16.9	+0.2
MATN	**Matagalpa**	**2.08**	**32**	P	Pn	21 13 51.9	-1.2
CNCH	**Conchagua**	**2.25**	**340**	P	Pn	21 13 57.1	+1.7
CNCH				S	Sn	21 14 21.9	-0.5
RCPN	**Sur Rio San Ju**	**2.54**	**21**	P	Pn	21 13 59.5	+0.1
YUSH	**Yuscaran**	**2.79**	**4**	P	Pn	21 14 04.5	+1.6

IDC ***12*** *21:14:26.1±2.2, 1˚.52N×126˚.12E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=185.4km s-min=28.3km az=65.0*

DJA ***12*** *21:14:30.8±1.3, 2˚.N±5˚×12˚.6E±˚, h35km±26km, M3.2/8, MLv3.2/8*

ISC 12 21:14:27.1±1.6, 1˚.7N±0˚.2×126˚.5E±0˚.2, h10km, n5, σ0♀76/5, mb3.3/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.25**	**138**	P	**Pb**	**21 14 51.1**	**+0.2**
MNI	**Manado**	**1.71**	**261**	P	**Pn**	**21 14 57.1**	**+0.1**
WRA	**Warramunga Arr**	**22.84**	**161**	P	**P**	**21 19 29.8**	**-0.9**
	0.4nm,0.4s,baz=338,slow=11,SNR=9.3						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**26.23**	**165**	P	**P**	**21 20 03.0**	**+0.5**
	0.1nm,0.4s,baz=337,slow=9.3,SNR=4.4						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**59.10**	**326**	P	**P**	**21 24 27.8**	**-0.1**
	0.1nm,0.3s,baz=122,slow=8.7,SNR=2.2						
	0.1nm,0.3s						

MOS ***12*** *22:00:46.4±1.0, 14˚.67N×119˚.19E, h12km, mb5.3/87, MS4.6/9, Error ellipse: s-maj=6.8km s-min=3.6km az=118.7*

IDC ***12*** *22:00:46.4±0.4, 14˚.69N×119˚.08E, h0km, mb4.9/36, mbtmp4.9/40, ML4.1/4, MS4.1/60, Error ellipse: s-maj=13.9km s-min=8.6km az=69.0*

BJI ***12*** *22:00:46.8, 14˚.54N×119˚.31E, h22km, mB5.3/50, mb4.8/78, Ms5.0/79, Ms7 4.7/75*

MAN ***12*** *22:00:47.0, 14˚.66N×118˚.94E, h33km, MS5.0*

GFZ ***12*** *22:00:48.8, 14˚.66N×119˚.13E, h16km, MW5.1, Moment Tensor Solution. s76 Moment tensor: Mrr-5.38; Mθθ0.94; Mφφ4.43; Mrθ-0.47; Mθφ-0.53; Mφr2.28; Fault plane solution: NP1:♀s170.00000°, δ57.00000°, λ-91.00000°. NP2:♀s352.00000°, δ32.00000°, λ-88.00000°.*

NEIC ***12*** *22:00:48.1±1.6, 14˚.72N±0˚.06×119˚.08E±0˚.06, h10km±1km, mb5.4/329, Mww5.3/40 Error ellipse: s-maj=10.7km s-min=8.5km az=215.0*

NEIC ***12*** *22:00:48.1, 14˚.81N×119˚.09E, h18km, Moment Tensor Solution. Duration: 2♀2 Moment tensor: Scale 10^{17}Nm; Mrr-0.71; Mθθ0.02; Mφφ0.69; Mrθ-0.20; Mθφ-0.03; Mφr0.73; Fault plane solution: M0 1.03000×10^{17} NP1:♀s5.35000°, δ22.25000°, λ-74.09000°. NP2:♀s168.23000°, δ68.64000°, λ-96.40000°. Principal axes: T 1.0139, Plg23.0000°, Azm263.0000°; N 0.0330, Plg6.0000°, Azm171.0000°; P -1.0469, Plg66.0000°, Azm67.0000°;*

GCMT ***12*** *22:00:48.9±0.1, 14˚.66N±0˚.01×118˚.98E±0˚.01, h13km, MW5.2/137, Moment Tension Solution. s76,c113; s137,c233; Duration: 1♀0 Moment tensor: Scale 10^{16} Nm; Mrr-5.80±.16; Mθθ-0.92±.09; Mφφ6.71±.12; Mrθ-1.95±.30; Mθφ-0.61±.07; Mφr3.68±.29; Best double couple: M0 7.56400×10^{16} NP1:♀s11.00000°, δ31.00000°, λ-65.00000°. NP2:♀s162.00000°, δ62.00000°, λ-105.00000°. Principal axes: T 7.8540, Plg16.0000°, Azm262.0000°; N -0.5850, Plg13.0000°, Azm169.0000°; P -7.2740, Plg69.0000°, Azm42.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***12*** *22:00:48.1, 14˚.71N×119˚.09E, h18km*

DJA ***12*** *22:00:53.0±0.6, 15˚.N±2˚×11˚.9E±˚, h38km±6km, M5.0/85, mb5.0/85, mB5.5/55, Mw(mB)5.0/55, MwMwp4.9/3, Mwp5.2/3*

ISC 12 22:00:48.9±0.5, 14˚.64N±0˚.03×119˚.14E±0˚.03, h16km±2km, h16km:pP-P,n1173,σ1♀44/1190, mb5.3/342, MS4.3/85, 34C-35D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**1.82**	**107**	Pn	**Pn**	**22 01 21.4**	**+1.7**
	4μm,0.3s,baz=280,slow=4.2,SNR=177						
TGY				Sn	**Sn**	**22 01 44.3**	**+1.8**
	3μm,0.3s,baz=253,slow=20,SNR=10						
TGY				LR	LR	22 02 01.4	
	comp=Z,8μm,20.2s,baz=210,slow=40						
TGY	**Tagaytay City**	**1.82**	**107**	*eP*	**Pn**	**22 01 21.5**	**+1.8**
PCPS	**Palayan City**	**1.86**	**89**	*eP*	**Pb**	**22 01 23.0**	**+0.5**
PCPS				*eS*	**Sg**	**22 01 49.7**	**+0.8**
BOAC	**Boac**	**2.88**	**114**	*eP*	**Pn**	**22 01 35.0**	**+0.9**
BOAC				*eS*	**Sn**	**22 02 10.9**	**+2.4**
SZP	**Santa**	**3.17**	**23**	P	**Pn**	**22 01 39.5**	**+1.4**
SIPP	**Brgy, Tapao**	**3.51**	**21**	*eP*	**Pn**	**22 01 41.6**	**-1.2**
SIPP				*i S*	**Sn**	**22 02 26.9**	**+2.8**
PIP	**Pasuquin**	**3.94**	**21**	*i P*	**Pn**	**22 01 48.5**	**-0.3**
PIP				*i S*	**Sn**	**22 02 37.5**	**+2.9**
IBAJ	**Ibajay, Aklan**	**4.07**	**133**

comp=Z,0.3nm,0.3s,baz=191,slow=16,SNR=3.9
JOW LR LR 22 10 13.8
comp=Z,358nm,18.4s,baz=234,slow=38
comp=Z,39nm,1.0s
JOW Kunigami 14.83 34 P **Pn** **22 04 19.5 +1.3**
JMZ Minamidaito 2 15.88 44 **Pn** **22 04 32.9 +1.0**
JMZ IAmb IAmb 22 04 37.2
comp=Z,360nm,1.4s
TNTI Ternate 16.00 149 P **Pn** **22 04 36.2 +2.7**
TNTI Ternate 16.00 149 Pn **Pn** **22 04 32.6 -0.9**
TNTI Ternate 16.00 149 P **P** **22 04 37.1 +0.2**
comp=Z,52nm,1.0s
WHN Wuhan 16.43 345 P **P** **22 04 42.0 +0.3**
WHN pmax pmax
comp=Z,310nm,1.6s
WHN pmax pmax
comp=Z,940nm,3.9s
WHN L L
comp=Z,3μm,12.5s
WHN L L
comp=Z,3μm,10.2s
WHN L L
comp=Z,6μm,13.9s
SSE Sheshan 16.49 6 P **P** **22 04 41.7 -0.6**
SSE S **Sn** **22 07 44.5 +2.0**
SSE pmax pmax
comp=Z,78nm,1.3s
SSE pmax pmax
comp=Z,290nm,3.5s
SSE L L
comp=Z,530nm,11.8s
SSE L L
comp=Z,260nm,11.8s
GYA Guiyang 16.56 317 P **P** **22 04 42.1 -1.1**
GYA S **Sn** **22 07 48.1 +3.6**
GYA pmax pmax
comp=Z,390nm,3.6s
GYA L L
comp=Z,2μm,10.6s
GYA L L
comp=Z,2μm,11.0s
GYA L L
comp=Z,2μm,16.5s
MMSI Mamuju 17.21 181 P P 22 05 02.9 +12
NJ2 Nanjing 17.34 359 *e*P **P** **22 04 52.0 +0.3**
NJ2 sP **pwP** **22 04 58.7 -2.4**
NJ2 pmax pmax
comp=Z,170nm,2.2s
NJ2 pmax pmax
comp=Z,2μm,6.2s
NJ2 L L
comp=Z,3μm,14.7s
NJ2 L L
comp=Z,5μm,11.8s
NJ2 L L
comp=Z,7μm,18.0s
TTSI Tana Toraja 17.58 178 P P 22 05 12.4 +18
SANI Sanana 17.91 157 P **Pn** **22 04 55.7 -1.9**
SANI Sanana 17.91 157 P **P** **22 05 00.4 +2.3**
comp=Z,54nm,0.8s
ENH Enshi 17.92 332 P **P** **22 04 59.1 +0.9**
ENH Enshi 17.92 332 **P** **22 04 57.0 -1.2**
PMSI Majene 18.02 181 P P 22 05 11.9 +13
BBKI Banjar Baru 18.48 194 P Pn 22 05 19.6 +15
SPSI Sidrap Palu 18.49 178 P **Pn** **22 05 07.5 +2.9**
comp=Z,1μmcomp=Z,33nm,1.0s
KMI2 Kunming 18.61 307 ⇑P **Pn** **22 05 08.9 +2.6**
KMI2 S **Sn** **22 08 33.9 -0.3**
KMI2 pmax pmax
comp=Z,22nm,2.7s
KMI2 pmax pmax
comp=Z,750nm,6.5s
KMI2 L L
comp=Z,2μm,13.8s
KMI2 L L
comp=Z,2μm,15.7s
KMI2 L L
comp=Z,2μm,13.3s
NLAI Namlea 19.43 155 P **Pn** **22 05 17.8 +1.8**
comp=Z,87nm,1.0s
SWI Sorong 19.52 141 P Pn 22 05 27.5 +10
SIJI Sorong 19.53 141 P **Pn** **22 05 18.2 +1.0**
comp=Z,2.4nm,0.3s,baz=330,slow=11,SNR=8.4
SIJI LR LR 22 13 35.2
comp=Z,322nm,21.1s,baz=344,slow=39
comp=Z,21nm,0.6s
SIJI Sorong 19.53 141 P Pn 22 05 27.5 +10
KAPI Kappang 19.53 178 P **Pn** **22 05 17.6 +0.4**
comp=Z,1.8nm,0.3s,baz=359,slow=6.5,SNR=7.8
KAPI LR LR 22 13 33.9
comp=Z,612nm,19.3s,baz=354,slow=39
comp=Z,6.2nm,0.3s
KAPI Kappang 19.53 178 P **Pn** **22 05 18.7 +1.5**
KAPI Kappang 19.53 178 P **P** **22 05 16.2 +0.3**
KAPI Kappang 19.53 178 *i* P **Pn** **22 05 19.1 +1.9**
KAPI pmax pmax
comp=Z,28nm,1.3s
KAPI Kappang 19.53 178 P Pn 22 05 25.5 +8.3
CMAR Chiang Mai Arr 19.73 284 P **Pn** **22 05 18.9 -0.7**
comp=Z,0.4nm,0.3s,baz=98,slow=8.3,SNR=68
CMAR PcP **PcP** **22 09 37.7 +1.0**
comp=Z,1.5nm,0.5s,baz=86,slow=0.4,SNR=6.3
CMAR LR LR 22 12 38.2
comp=Z,651nm,21.1s,baz=100,slow=36
comp=Z,110nm,1.3s
CMAR Chiang Mai Arr 19.73 284 **P** **22 05 17.8 -0.2**
CMAR **PcP** **22 09 37.4 +0.7**
CMAR Chiang Mai Arr 19.73 284 *i* P **Pn** **22 05 20.3 +0.7**
CMAR pmax pmax
comp=Z,66nm,1.1s
MKS Makassar 19.73 179 P **Pn** **22 05 23.0 +3.5**
comp=Z,2μmcomp=Z,118nm,1.0s
JSU Suzuyama 19.73 30 P **P** **22 05 18.2 +0.1**
JSU Suzuyama 19.73 30 P **P** **22 05 17.3 -0.8**
MYKOM Kota Tinggi 19.77 231 P **Pn** **22 05 21.2 +1.1**
MYKOM Kota Tinggi 19.77 231 **Pn** **22 05 20.0 -0.1**
MYKOM Kota Tinggi 19.77 231 P **Pn** **22 05 21.7 +1.6**
CHTO Chiang Mai 19.78 285 P **Pn** **22 05 20.2 0.0**
CHTO Chiang Mai 19.78 285 **Pn** **22 05 19.3 -0.9**
CHTO Chiang Mai 19.78 285 P **Pn** **22 05 19.3 -0.9**
CHTO pmax pmax
comp=Z,64nm,1.5s
CHTO Chiang Mai 19.78 285 P **Pn** **22 05 20.9 +0.7**
TPRI Tanjung Pinang 19.86 228 P **Pn** **22 05 23.3 +2.2**
comp=Z,3μmcomp=Z,64nm,1.8s
KRAI Karang Ratu 20.06 152 P Pn 22 05 24.8 +1.3
comp=Z,2μmcomp=Z,3μmcomp=Z,110nm,1.2s
PZH PanZhiHua 20.09 309 P **Pn** **22 05 24.3 +0.4**
PZH S **Sn** **22 09 07.3 -2.5**
PZH pmax pmax
comp=Z,30nm,1.3s
PZH pmax pmax
comp=Z,580nm,7.5s
PZH L L
comp=Z,2μm,11.6s
PZH L L
comp=Z,1μm,12.2s
PZH L L
comp=Z,930nm,14.3s
AAI Ambon 20.30 153 P Pn 22 05 35.4 +9.1
BSSI Bau Bau, Buton 20.69 176 P Pn 22 05 30.9 +0.1
comp=Z,1μmcomp=Z,43nm,1.4s
TPI Tanjungpandan 20.69 214 P Pn 22 05 34.4 +3.5
LYN LuoYang 20.72 344 P Pn 22 05 30.6 -0.6
LYN S **S** **22 09 16.5 -3.2**
LYN sS pS 22 09 33.0 +3.8
LYN pmax pmax
comp=Z,64nm,1.3s
LYN pmax pmax
comp=Z,2μm,4.1s
LYN L L
comp=Z,2μm,12.7s
LYN L L
comp=Z,4μm,13.6s
LYN L L
comp=Z,3μm,15.3s
DSRI Dabo 20.81 225 P Pn 22 05 36.2 +3.9
comp=Z,2μmcomp=Z,55nm,1.8s
JNU Nakatsue 21.27 28 P **P** **22 05 33.8 -1.0**
comp=Z,44nm,1.0s,baz=173,slow=6.6,SNR=11
JNU LR LR 22 14 29.3
comp=Z,366nm,19.7s,baz=202,slow=39
comp=Z,44nm,1.0s
XAN Xi'an 21.42 336 ⇓P **P** **22 05 36.5 +0.2**
XAN pP pwP 22 05 47.0 +1.5
XAN PP **PnPn** **22 06 04.5 +7.9**
XAN S **S** **22 09 33.0 -0.6**
XAN pmax pmax
comp=Z,19nm,1.6s
XAN pmax pmax
comp=Z,640nm,8.3s
XAN L L
comp=Z,2μm,11.0s
XAN L L
comp=Z,3μm,9.6s
XAN L L
comp=Z,840nm,14.3s
CD2 Chengdu 21.49 322 P **P** **22 05 38.5 +1.4**
CD2 sP pwP 22 05 43.9 -2.6
CD2 S **S** **22 09 35.7 +0.7**
CD2 pmax pmax
comp=Z,70nm,0.8s
CD2 pmax pmax
comp=Z,810nm,7.0s
CD2 L L
comp=Z,3μm,12.9s
CD2 L L
comp=Z,3μm,10.0s
CD2 L L
comp=Z,3μm,12.0s
TIA Tai'an 21.56 356 P **P** **22 05 37.7 -0.1**
TIA S **S** **22 09 37.1 +0.8**
TIA pmax pmax
comp=Z,100nm,1.1s
TIA pmax pmax
comp=Z,730nm,5.0s
TIA L L
comp=Z,1μm,14.0s
TIA L L
comp=Z,2μm,12.6s
TIA L L
comp=Z,2μm,14.0s
BNDI Bandanaira 21.82 150 P **P** **22 05 41.9 +1.2**
BNDI Bandanaira 21.82 150 P P 22 05 48.0 +7.3
JTU Tsushima 21.86 23 P **P** **22 05 41.8 +0.8**
TNCH TengChong 21.95 301 P **P** **22 05 44.5 +2.2**
TNCH sP pwP 22 05 50.0 -1.8
TNCH S **S** **22 09 47.7 +3.3**
TNCH pmax pmax
comp=Z,47nm,1.2s
TNCH L L
comp=Z,1μm,14.2s
TNCH L L
comp=Z,550nm,14.1s
TNCH L L
comp=Z,840nm,16.8s
KMMI Kalianget 22.15 194 P **P** **22 05 48.6 +4.4**
comp=Z,53nm,1.3s
TJN Taejon 22.87 17 P **P** **22 05 49.6 -2.1**
TJN Taejon 22.87 17 P **P** **22 05 48.0 -3.7**
TJN Taejon 22.87 17 P **P** **22 05 48.0 -3.7**
TJN pmax pmax
comp=Z,346nm,1.0s
LBFI Labuhan Bajo, 22.98 178 P **P** **22 05 54.2 +1.2**
DBNI Kabupaten Domp 23.00 182 P **P** **22 05 55.3 +2.0**
comp=Z,47nm,1.0s
BAKI Biak 23.01 132 P **P** **22 05 59.2 +5.8**
comp=Z,2μmcomp=Z,77nm,2.0s
HNS HongShan 23.01 351 ⇓P **P** **22 05 53.6 +0.4**
HNS S **S** **22 10 03.0 -0.2**
HNS SS **SnSn** **22 10 40.5 +4.6**
HNS pmax pmax
comp=Z,80nm,1.7s
HNS L L
comp=Z,2μm,14.5s
HNS L L
comp=Z,2μm,11.8s
HNS L L
comp=Z,2μm,14.7s
TSI Tuntungan 23.10 243 P **P** **22 05 57.2 +2.8**
comp=Z,4μmcomp=Z,107nm,0.8s
KHKI Kahang-Kahang 23.12 189 P P 22 06 03.8 +9.4
PSI Prapat 23.15 241 P **P** **22 05 55.9 +0.9**
PSI Prapat 23.15 241 P **P** **22 05 55.8 +0.8**
PSI pmax pmax
comp=Z,205nm,1.7s
PSI Prapat 23.15 241 P **P** **22 05 56.2 +1.2**
comp=Z,1μmcomp=Z,56nm,1.7s
RPSI Rantau Prapat 23.21 241 P **P** **22 05 55.8 +0.4**
RPSI IAmb IAmb 22 06 08.7
comp=Z,205nm,1.7s
JMN Monobe 23.23 33 **P** **22 05 54.6 -0.9**
JMN IAmb IAmb 22 06 08.4
comp=Z,103nm,1.0s
MMRI Maumere 23.32 172 P **P** **22 05 58.3 +1.8**
MMRI Maumere 23.32 172 **P** **22 05 57.0 +0.5**
MMRI Maumere 23.32 172 P **P** **22 06 00.5 +4.0**
comp=Z,3μmcomp=Z,52nm,1.6s
PLAI Plampang 23.35 183 P **P** **22 05 58.0 +1.2**
PLAI Plampang 23.35 183 P **P** **22 05 58.5 +1.7**
comp=Z,2μmcomp=Z,124nm,1.2s
EDFI Ende, Flores 23.37 174 P **P** **22 05 58.8 +1.7**
comp=Z,1μmcomp=Z,109nm,0.6s
SNJI Sawahan-Nganju 23.44 199 P **P** **22 06 03.7 +5.8**
comp=Z,41nm,1.0s
JAGI Jajag, Banyuwa 23.48 192 P **P** **22 06 00.0 +1.9**
JAGI Jajag, Banyuwa 23.48 192 **P** **22 05 57.6 -0.5**
JAGI IAmb IAmb 22 06 11.4
comp=Z,184nm,1.6s
JAGI Jajag, Banyuwa 23.48 192 P **P** **22 06 02.0 +3.9**
comp=Z,2μmcomp=Z,64nm,2.7s
IGBI Denpasar 23.64 190 P P 22 06 10.6 +11
CTJI Waduk Cacaban 23.66 205 P P 22 06 11.9 +12
INCN Inchon 23.71 15 P **P** **22 05 58.9 -1.4**
INCN IAmb IAmb 22 06 09.7
comp=Z,241nm,1.9s
INCN Inchon 23.71 15 P **P** **22 05 58.9 -1.4**
INCN pmax pmax
comp=Z,241nm,1.9s
MNSI Mandailing Nat 23.72 236 P **P** **22 06 01.9 +1.4**
comp=Z,1μmcomp=Z,57nm,1.5s
TIY Taiyuan 23.74 347 *e*P **P** **22 06 01.7 +1.1**
TIY S **S** **22 10 13.8 -1.6**
TIY SS **SnSn** **22 11 05.3 +11**
TIY pmax pmax
comp=Z,29nm,0.8s
TIY pmax pmax
comp=Z,460nm,4.0s
TIY L L
comp=Z,980nm,15.8s
TIY L L
comp=Z,1μm,12.4s
TIY L L
comp=Z,990nm,16.5s
LHMI Lhok Sumawe 23.75 249 P **P** **22 06 01.1 +0.4**
KCSI Kotacane, Aceh 23.78 244 P **P** **22 06 01.7 +0.6**
comp=Z,668nmcomp=Z,45nm,1.6s
KLSI 23.93 218 P **P** **22 06 04.0 +1.5**
KSAR Wonju Array Be 24.01 17 P **P** **22 06 01.8 -1.2**
KSAR Wonju Array Be 24.01 17 P **P** **22 06 01.8 -1.2**
KSRS Korea Array 24.03 17 P **P** **22 06 02.8 -0.4**
comp=Z,16nm,0.8s,baz=201,slow=11,SNR=26
KSRS LR LR 22 16 11.9
comp=Z,362nm,20.4s,baz=205,slow=39
comp=Z,16nm,0.8s
KPJI Karang Pucung 24.06 206 P **P** **22 06 09.3 +5.6**
comp=Z,44nm,0.8s
KS19 Wonju Array Si 24.06 17 P **P** **22 06 03.1 -0.4**
MDSI Maura Dua 24.10 219 P **P** **22 06 05.9 +1.8**
WBSI Waikabubak, Su 24.12 179 P **P** **22 06 04.9 +0.6**
comp=Z,1μmcomp=Z,107nm,1.1s
WSI Waingapu 24.17 177 P **P** **22 06 05.3 +0.6**
LEM Lembang 24.19 209 LR LR 22 17 53.3
comp=Z,462nm,18.9s,baz=18,slow=42
DL2 Dalian 24.28 5 P **P** **22 06 04.2 -1.3**
DL2 *e*S **S** **22 10 26.4 +2.7**
DL2 pmax pmax
comp=Z,44nm,1.0s
DL2 pmax pmax
comp=Z,780nm,6.1s
DL2 L L
comp=Z,1μm,15.1s
DL2 L L
comp=Z,1μm,13.0s
DL2 L L
comp=Z,1μm,16.0s
MASI Maura Aman, Be 24.34 225 P **P** **22 06 11.1 +4.8**
comp=Z,175nm,1.6s
DBJI Dramaga 24.37 211 P P 22 06 19.3 +13
LWLI Liwa 24.59 219 P **P** **22 06 13.5 +4.8**
comp=Z,2μmcomp=Z,107nm,1.2s
MLSI Meulaboh, Aceh 24.65 248 P P 22 06 22.6 +13
BBJI Bungbulang 24.73 208 P **P** **22 06 10.3 +0.4**
BBJI Bungbulang 24.73 208 P **P** **22 06 08.8 -1.1**
BBJI Bungbulang 24.73 208 P P 22 06 21.7 +12
SOEI Soe 24.76 168 P **P** **22 06 11.2 +1.0**
SOEI Soe 24.76 168 P **P** **22 06 09.4 -0.8**
SOEI Soe 24.76 168 P **P** **22 06 12.4 +2.2**
JCJ Chichijima 24.80 56 LR LR 22 15 03.8
comp=Z,676nm,18.8s,baz=261,slow=35
GUMO Guam 24.97 89 LR LR 22 15 28.7
comp=Z,1μm,19.1s,baz=242,slow=35
BATI Baumata 25.09 169 P **P** **22 06 14.2 +1.2**
comp=Z,56nm,0.6s,baz=287,slow=1.0,SNR=14
comp=Z,56nm,0.6s
BATI Baumata 25.09 169 P **P** **22 06 14.4 +1.4**
BSI Banda Aceh 25.14 251 P **P** **22 06 16.4 +2.8**
comp=Z,993nmcomp=Z,50nm,1.4s
LZDM Lanzhou Array 25.34 330 P **P** **22 06 16.4 +0.8**
comp=Z,4.3nm,0.4s,baz=159,slow=13,SNR=16
LZDM LR LR 22 16 45.4
comp=Z,526nm,19.0s,baz=75,slow=38
comp=Z,4.3nm,0.4s
LZH Lanzhou 25.37 330 *e*P **P** **22 06 16.9 +1.2**
LZH sP pwP 22 06 26.1 +1.0
LZH S **S** **22 10 48.0 +6.2**
LZH pmax pmax
comp=Z,42nm,1.2s
LZH pmax pmax
comp=Z,300nm,4.8s
LZH L L
comp=Z,3μm,13.1s
LZH L L
comp=Z,2μm,13.1s
LZH L L
comp=Z,3μm,13.1s
BJI2 Beijing 25.42 355 P **P** **22 06 15.8 -0.1**
BJI2 pP **sP** **22 06 20.2 -0.4**
BJI2 PP **PnPn** **22 06 53.8 +2.6**
BJI2 S **S** **22 10 41.8 -0.3**
BJI2 pmax pmax
comp=Z,16nm,1.2s
BJI2 pmax pmax
comp=Z,230nm,6.7s
BJI2 L L
comp=Z,310nm,15.9s
BJI2 L L
comp=Z,380nm,12.7s
BJI2 L L
comp=Z,420nm,15.3s
BJT Baijiatuau 25.42 355 P **P** **22 06 15.5 -0.4**
BJT Baijiatuau 25.42 355 P **P** **22 06 14.2 -1.6**
BJT IAmb IAmb 22 06 36.1
comp=Z,79nm,1.4s
BJT Baijiatuau 25.42 355 P **P** **22 06 14.3 -1.6**
BJT pmax pmax
comp=Z,79nm,1.4s
SAUI Saumlaki 25.50 151 P **P** **22 06 18.9 +2.1**
SAUI Saumlaki 25.50 151 P **P** **22 06 16.2 -0.6**
SAUI Saumlaki 25.50 151 P P 22 06 29.1 +12
PBA Port Blair 25.87 267 P **P** **22 06 19.0 -1.1**
PBA IAmb IAmb 22 06 39.7
comp=Z,93nm,1.3s
INU Inuyama 26.15 35 P **P** **22 06 22.1 -0.4**
INU Inuyama 26.15 35 **P** **22 06 21.5 -1.0**
INU IAmb IAmb 22 06 33.2
comp=Z,94nm,1.0s
JHJ Hachijo jima 2 26.27 42 LR LR 22 15 11.8
comp=Z,952nm,21.5s,baz=246,slow=33
JSG Sagara 26.33 37 P **P** **22 06 21.9 -2.2**
JGF Kuroka 26.52 35 P **P** **22 06 25.1 -0.8**
JGF Kuroka 26.52 35 **P** **22 06 24.6 -1.4**
JGF IAmb IAmb 22 06 38.8
comp=Z,72nm,0.9s
HHC Hu-ho-hao-te 26.94 347 ⇓ *i* P **P** **22 06 29.8 +0.1**
HHC pP sP 22 06 33.4 -1.1
HHC S **S** **22 11 07.5 +1.2**
HHC pmax pmax
comp=Z,18nm,1.5s
HHC pmax pmax
comp=Z,280nm,5.1s
HHC L L
comp=Z,930nm,16.1s
HHC L L
comp=Z,560nm,11.3s
HHC L L
comp=Z,860nm,17.8s
GENI Genyem 26.96 128 P **P** **22 06 30.1 0.0**
GENI Genyem 26.96 128 P **P** **22 06 34.0 +3.9**
comp=Z,53nm,1.1s
BRDH Bariadhala 27.21 291 LR LR 22 18 18.4
comp=Z,1μm,19.7s,baz=128,slow=39
BTO2 Baotou 27.24 345 *e*P **P** **22 06 35.2 +2.8**
BTO2 S **S** **22 11 07.4 -3.7**
BTO2 SS **SnSn** **22 12 27.3 +8.0**
BTO2 pmax pmax
comp=Z,68nm,1.0s
BTO2 pmax pmax
comp=Z,560nm,10.9s
BTO2 L L
comp=Z,1μm,13.1s
BTO2 L L
comp=Z,5μm,16.5s
BTO2 L L
comp=Z,2μm,13.6s
JAY Jayapura 27.33 127 LR LR 22 16 18.0
comp=Z,245nm,21.5s,baz=328,slow=34
MAJO Matsushiro 27.68 35 P **P** **22 06 35.1 -1.2**
MAJO Matsushiro 27.68 35 P **P** **22 06 34.2 -2.1**
MAJO IAmb IAmb 22 06 45.3
comp=Z,59nm,1.1s
MAJO Matsushiro 27.68 35 *i* P **P** **22 06 35.2 -1.1**
MAJO pmax pmax
comp=Z,70nm,1.3s
MJAR Matsushiro Arr 27.68 35 P **P** **22 06 35.1 -1.2**
comp=Z,11nm,0.9s,baz=213,slow=8.8,SNR=22
MJAR PcP **PcP** **22 09 53.8 +0.5**
comp=Z,1.0nm,0.4s,baz=154,slow=3.7,SNR=4.6
MJAR LR LR 22 16 30.0
comp=Z,674nm,22.0s,baz=214,slow=34
comp=Z,11nm,0.9s
MJAR Matsushiro Arr 27.68 35 **P** **22 06 34.5 -1.8**
MJB9 Matsu-Tunnel 27.68 34 P **P** **22 06 35.6 -0.7**
MJB9 IAmb IAmb 22 06 46.7
comp=Z,60nm,1.2s
SHL Shillong 27.75 297 P **P** **22 06 35.3 -2.0**
SHL IAmb IAmb 22 06 41.9
comp=Z,41nm,0.8s
SHL Shillong 27.75 297 P **P** **22 06 35.3 -2.0**
SHL pmax pmax
comp=Z,41nm,0.8s
XLT XiLinHaoTe 29.28 355 *e*P **P** **22 06 50.2 -0.4**
XLT pmax pmax
comp=Z,19nm,1.1s
XLT pmax pmax
comp=Z,220nm,6.0s
XLT L L
comp=Z,810nm,13.6s
XLT L L
comp=Z,780nm,15.5s
CN2 Changchun 29.57 9 *e*P **P** **22 06 56.8 +3.8**
CN2 *e*S **S** **22 11 45.5 -1.9**
CN2 pmax pmax
comp=Z,10.0nm,1.1s
CN2 pmax pmax
comp=Z,100nm,4.0s
CN2 L L
comp=Z,900nm,13.0s
CN2 L L
comp=Z,800nm,13.0s
CN2 L L
comp=Z,1μm,15.0s
PSTR Posyet 29.67 18 *i* P **P** **22 06 55.3 +1.4**
LSA Lhasa 29.84 305 P **P** **22 06 55.2 -0.9**
LSA Lhasa 29.84 305 P **P** **22 06 55.2 -0.9**
LSA pmax pmax
comp=Z,8.0nm,0.9s
LSA Lhasa 29.84 305 P **P** **22 06 54.1 -2.0**
LSA S **S** **22 11 53.3 +0.4**
LSA pmax pmax
comp=Z,5.0nm,1.1s
LSA L L
comp=Z,670nm,16.9s
LSA L L
comp=Z,230nm,14.4s
GTA2 Gaotai 30.04 329 P **P** **22 06 58.1 +0.7**
GTA2 pP pwP 22 07 07.9 +1.0
GTA2 PcP **PcP** **22 10 00.0 +0.7**

GTA2 S **S** **22 12 01.7 +6.5**
GTA2 pmax pmax
comp=Z,24nm,1.5s
GTA2 L L
comp=Z,1µm,13.6s
GTA2 L L
comp=Z,2µm,14.3s
GTA2 L L
comp=Z,3µm,13.3s
GOMU GeErMu 30.56 319 P **P** **22 07 02.2 -0.2**
GOMU PcP **PcP** **22 09 59.6 -1.5**
GOMU S **S** **22 12 03.5 -0.4**
GOMU pmax pmax
comp=Z,7.0nm,1.1s
GOMU L L
comp=Z,690nm,12.7s
GOMU L L
comp=Z,440nm,11.6s
GOMU L L
comp=Z,1µm,12.9s
MDJ Mudanjiang 31.18 14 P **P** **22 07 06.1 -1.1**
MDJ Mudanjiang 31.18 14 P **P** **22 07 07.8 +0.6**
MDJ pmax pmax
comp=Z,37nm,1.6s
USRK Ussuriysk Ar. 31.44 18 P **P** **22 07 09.2 -0.3**
comp=Z,8.8nm,0.5s,baz=198,slow=5.8,SNR=25
comp=Z,8.8nm,0.5s
BNX BinXian 31.78 11 ⇓P **P** **22 07 12.4 -0.1**
BNX S **S** **22 12 18.1 -3.9**
BNX pmax pmax
comp=Z,17nm,1.6s
BNX pmax pmax
comp=Z,340nm,6.0s
BNX L L
comp=Z,560nm,15.3s
BNX L L
comp=Z,820nm,12.6s
BNX L L
comp=Z,670nm,13.9s
EVN Everest 32.79 299 P **P** **22 07 21.9 -0.4**
FITZ Fitzroy Crossi 33.15 169 P **P** **22 07 26.4 +1.6**
comp=Z,2.5nm,0.7s,baz=331,slow=13,SNR=2.0
FITZ PcP **PcP** **22 10 08.2 +0.5**
comp=Z,2.4nm,0.6s,baz=341,slow=4.7,SNR=2.3
comp=Z,2.5nm,0.7s
ULN Ulaanbaatar 34.62 346*ceP* **P** **22 07 37.7 +0.2**
ULN pmax pmax
comp=Z,20nm,1.0s
ULN Ulaanbaatar 34.62 346 P **P** **22 07 37.4 -0.1**
SONM Songino Array 34.75 345 P **P** **22 07 38.5 -0.1**
comp=Z,16nm,0.9s,baz=164,slow=9.1,SNR=80
SONM PcP **PcP** **22 10 10.7 -1.4**
comp=Z,1.2nm,0.9s,baz=155,slow=3.5,SNR=4.1
comp=Z,16nm,0.9s
SONM Songino Array 34.75 345 P **P** **22 07 37.8 -0.8**
SONM Songino Array 34.75 345 P **P** **22 07 37.8 -0.8**
SONM 22 10 10.7
SONM pmax pmax
comp=Z,35nm,1.2s
ASAJ Asahikawa 35.54 30 P **P** **22 07 46.3 +1.0**
comp=Z,47nm,0.9s,baz=196,slow=7.1,SNR=14
ASAJ LR LR 22 22 04.3
comp=Z,432nm,21.7s,baz=330,slow=36
comp=Z,47nm,0.9s
ASAJ Asahikawa 35.54 30 P **P** **22 07 43.8 -1.5**
ASAJ pmax pmax
comp=Z,192nm,1.1s
JKA Kamikawa-asahi 35.54 30 **P** **22 07 43.8 -1.5**
MBWA Marble Bar 35.58 179 P **P** **22 07 44.9 -0.9**
MBWA IAmb IAmb 22 07 57.1
comp=Z,60nm,1.4s
PSA00 Pilbara Seismi 35.99 179 P **P** **22 07 50.6 +1.3**
PSA00 Pilbara Seismi 35.99 179 P **P** **22 07 48.3 -1.1**
PSA00 Pilbara Seismi 35.99 179 P **P** **22 07 48.4 -0.9**
PSA00 IAmb IAmb 22 07 59.6
comp=Z,155nm,2.0s
KLR Kul'dur 36.02 14 LR LR 22 24 02.2
comp=Z,343nm,18.4s,baz=196,slow=39
KLR Kul'dur 36.02 14*ceP* **P** **22 07 49.7 +0.4**
KLR pmax pmax
comp=Z,37nm,2.5s
HEH HeiHe 36.16 9 *eP* **P** **22 07 50.2 -0.3**
HEH pmax pmax
comp=Z,21nm,1.3s
PMG Port Moresby 36.64 129 P **P** **22 07 56.8 +1.8**
comp=Z,31nm,1.0s,baz=302,slow=8.7,SNR=3.6
comp=Z,31nm,1.0s
PMG Port Moresby 36.64 129 P **P** **22 07 55.2 +0.2**
PMG IAmb IAmb 22 07 59.9
comp=Z,73nm,1.2s
PMG Port Moresby 36.64 129 P **P** **22 07 55.2 +0.2**
PMG pmax pmax
comp=Z,73nm,1.2s
WB0 Warramunga Arr 37.34 156 P **P** **22 07 59.2 -1.7**
GIRL Giralia 37.36 187 P **P** **22 08 00.8 -0.1**
WRAB Tennant Creek 37.47 156 P **P** **22 08 00.1 -1.9**
WRAB Tennant Creek 37.47 156 P **P** **22 08 00.2 -1.8**
WRAB Tennant Creek 37.47 156 *i* P **P** **22 08 00.6 -1.4**
WRAB pmax pmax
comp=Z,29nm,0.9s
WRA Warramunga Arr 37.47 156 P **P** **22 08 01.2 -0.8**
comp=Z,18nm,0.7s,baz=336,slow=9.3,SNR=55
WRA PcP **PcP** **22 10 20.6 +0.2**
comp=Z,2.1nm,0.5s,baz=338,slow=2.9,SNR=5.2
comp=Z,18nm,0.7s
WRA Warramunga Arr 37.47 156 P **P** **22 08 01.1 -0.9**
WR8 Warramunga Arr 37.55 156 P **P** **22 08 01.1 -1.5**
CIT Chita 37.56 354 *eP* **P** **22 08 02.2 -0.3**
CIT *e* 22 08 11.8
CIT *e* 22 09 27.2
CIT pmax pmax
comp=Z,92nm,2.4s
KRVT Keravat (AS076 37.64 118 LR LR 22 21 55.8
comp=Z,61nm,20.9s,baz=144,slow=34
YSS Yuzhno-Sakhali 37.77 27 P **P** **22 08 04.7 +0.5**
YSS Yuzhno-Sakhali 37.77 27 P **P** **22 08 03.6 -0.6**
YSS Yuzhno-Sakhali 37.77 27 *eP* **P** **22 08 04.9 +0.7**
YSS *eS* **S** **22 13 49.1 -5.2**
YSS pmax pmax
comp=Z,70nm,1.3s
YSS MLR MLR
comp=E,600nm,18.0s
YSS MLR MLR
comp=Z,800nm,18.0s
ZAK Zakamensk 37.91 343 *eP* **P** **22 08 04.7 -0.8**
ZAK pmax pmax
comp=Z,17nm,1.6s
PALK Pallekele 38.39 263 LR LR 22 23 06.6
comp=Z,366nm,19.8s,baz=72,slow=35
GRNR Gornyy 38.66 18⇓*i*P **P** **22 08 11.9 +0.2**
GRNR pmax pmax
comp=N,8.0nm,1.1s
GRNR pmax pmax
comp=Z,10.0nm,1.0s
GRNR MLR MLR
comp=N,2µm,17.0s
TLY Talaya 38.99 345 LR LR 22 25 25.4
comp=N,257nm,19.3s,baz=144,slow=38
TLY Talaya 38.99 345*ceP* **P** **22 08 14.6 +0.1**
TLY pmax pmax
comp=Z,29nm,1.7s
HYB Hyderabad 39.05 280 *eP* **P** **22 08 14.7 -0.8**
UGL Uglegorsk 39.16 24 *eP* **P** **22 08 17.5 +1.6**
UGL pmax pmax
comp=Z,150nm,1.4s
PATS Pohnpei 39.21 97 P **P** **22 08 15.3 -1.5**
IRK Irkutsk 39.35 346 *eP* **P** **22 08 15.7 -1.8**
IRK pmax pmax
comp=Z,45nm,1.9s
ZEA Zeya 39.53 8 *eP* **P** **22 08 18.9 -0.1**
ZEA pmax pmax
comp=Z,20nm,1.0s
ZEA MLR MLR
comp=N,400nm,16.0s
ZEA MLR MLR
comp=Z,600nm,16.0s
WMQ Urumqi 39.56 324 *eP* **P** **22 08 20.9 +1.5**
WMQ sP pwP 22 08 31.8 +2.9
WMQ pmax pmax
comp=Z,14nm,1.1s
WMQ L L
comp=Z,2µm,9.3s
WMQ L L
comp=Z,2µm,15.1s
WMQ L L
comp=Z,860nm,15.1s

MOY Mondy 39.71 342 *eP* **P** **22 08 20.6 0.0**
MOY pmax pmax
comp=Z,45nm,1.8s
KNGR Kungurtug, Tuv 39.92 339 *i* P **P** **22 08 22.8 +0.4**
KNGR pmax pmax
comp=Z,30nm,1.2s
QIS Mount Isa 40.34 150 P **P** **22 08 26.1 0.0**
AS31 Alice Springs 40.71 159 P **P** **22 08 28.3 -0.8**
ASAR Alice Springs 40.71 159 P **P** **22 08 29.0 -0.1**
comp=Z,32nm,0.7s,baz=337,slow=6.7,SNR=165
ASAR PcP **PcP** **22 10 30.8 +0.1**
comp=Z,2.7nm,0.5s,baz=341,slow=2.6,SNR=3.4
comp=Z,32nm,0.7s
ASAR Alice Springs 40.71 159 **P** **22 08 28.4 -0.7**
TYV Tymovskoe 40.83 23 *eP* **P** **22 08 31.3 +1.6**
TYV *eS* **S** **22 14 47.0 +6.9**
TYV pmax pmax
comp=Z,30nm,1.6s
TYV pmax pmax
comp=Z,300nm,2.6s
TYV smax smax
comp=N,700nm,3.3s
TYV smax smax
comp=E,700nm,3.3s
MTSU Mount Surprise 40.95 142 P **P** **22 08 31.4 +0.3**
MEEK Meekatharra 41.03 181 P **P** **22 08 34.1 +2.4**
ZSN Zaisan 43.34 326*d i*P **P** **22 08 50.9 +0.6**
ZSN Zaisan 43.34 326⇓*i*P **P** **22 08 50.9 +0.6**
DGZ Jazzator, Alta 43.48 330 *i* P **P** **22 08 52.1 +0.5**
DGZ pmax pmax
comp=Z,27nm,1.2s
WUS Wushi 43.53 315 P **P** **22 08 50.6 -1.6**
CTA Charters Tower 43.61 142 LR LR 22 27 05.5
comp=Z,177nm,21.7s,baz=4.5,slow=36
SHLS Shalkode 44.25 318*d i*P **P** **22 08 56.3 -1.5**
SHLS Shalkode 44.25 318⇓*i*P **P** **22 08 56.4 -1.5**
MK31 Makanchi Array 44.39 324*ceP* **P** **22 08 59.5 +0.7**
MKAR Makanchi Array 44.39 324 P **P** **22 08 59.3 +0.5**
comp=Z,6.4nm,0.7s,baz=122,slow=8.7,SNR=66
MKAR PcP **PcP** **22 10 42.6 +0.1**
comp=Z,2.8nm,0.6s,baz=170,slow=2.1,SNR=10.0
MKAR LR LR 22 26 45.9
comp=Z,442nm,18.4s,baz=110,slow=35
comp=Z,6.4nm,0.7s
MKAR Makanchi Array 44.39 324 **P** **22 08 58.8 0.0**
MKAR Makanchi Array 44.39 324 *i* P **P** **22 08 59.2 +0.4**
MKAR pmax pmax
comp=Z,6.0nm,0.7s
UZB Uzynbulak 44.53 318 *eP* **P** **22 09 00.7 +0.6**
UZB Uzynbulak 44.53 318 *eP* **P** **22 09 00.8 +0.6**
MAKZ Makanchi 44.57 324 **P** **22 08 59.2 -1.1**
MAKZ Makanchi 44.57 324 P **P** **22 08 59.2 -1.1**
MAKZ pmax pmax
comp=Z,37nm,1.4s
PRZ Przheval'sk 44.64 317 P **P** **22 09 00.4 -0.7**
PRZ Przheval'sk 44.64 317 P **P** **22 09 00.4 -0.7**
PRZ pmax pmax
comp=Z,15nm,0.9s
TARG Taragay, Kyrgy 44.72 315 P **P** **22 09 00.8 -1.2**
TARG Taragay, Kyrgy 44.72 315 P **P** **22 09 00.8 -1.2**
TARG pmax pmax
comp=Z,56nm,1.9s
SATY Saty 44.89 317*d i*P **P** **22 09 03.6 +0.6**
SATY Saty 44.89 317⇓*i*P **P** **22 09 03.7 +0.6**
KPKS Kokpek 44.90 318 *eP* **P** **22 09 03.3 +0.3**
KPKS Kokpek 44.90 318 *eP* **P** **22 09 03.4 +0.3**
KDJ Kajisay 45.31 316 **P** **22 09 05.9 -0.5**
KDJ Kajisay 45.31 316 P **P** **22 09 05.9 -0.5**
KDJ pmax pmax
comp=Z,13nm,1.0s
KSH2 Kashi 45.31 311 P **P** **22 09 07.2 +0.7**
KSH2 pmax pmax
comp=Z,7.0nm,1.9s
KSH2 L L
comp=Z,440nm,13.1s
KSH2 L L
comp=Z,690nm,14.8s
KSH2 L L
comp=Z,790nm,14.1s
NIL Nilore 45.53 303 **P** **22 09 07.1 -1.0**
NIL Nilore 45.53 303 P **P** **22 09 07.1 -1.0**
NIL pmax pmax
comp=Z,33nm,1.2s
TDK Taldyqorghan 45.79 320 *eP* **P** **22 09 10.7 +0.8**
TDK pmax pmax
comp=Z,41nm,1.1s
TDK Taldyqorghan 45.79 320 *eP* **P** **22 09 10.8 +0.8**
comp=Z,41nm,1.1s
MDOK Medeo 45.83 317 *eP* **P** **22 09 11.4 +0.9**
MDOK Medeo 45.83 317 *eP* **P** **22 09 11.5 +0.9**
NRN Naryn 45.84 314 **P** **22 09 09.5 -1.3**
NRN Naryn 45.84 314 P **P** **22 09 09.5 -1.3**
NRN pmax pmax
comp=Z,13nm,1.0s
TNSS Tian-Shan 45.85 317 *eP* **P** **22 09 11.5 +0.6**
TNSS Tian-Shan 45.85 317 *eP* **P** **22 09 11.5 +0.6**
AAA Alma-Ata 45.94 317 *eP* **P** **22 09 12.3 +1.1**
AAA Alma-Ata 45.94 317 *eP* **P** **22 09 12.4 +1.1**
FORT Forrest 45.96 169 P **P** **22 09 10.7 -0.6**
KLBR Kellerberrin 45.98 182 P **P** **22 09 11.5 0.0**
ULHL Ulahol 45.99 315 P **P** **22 09 12.9 +1.0**
SNR=6.2
BOOM Boomskoye usch 46.30 316 **P** **22 09 13.3 -0.9**
BOOM Boomskoye usch 46.30 316 P **P** **22 09 13.3 -0.9**
BOOM pmax pmax
comp=Z,16nm,1.4s
TKM2 Tokmak 2 46.70 316 P **P** **22 09 18.3 +0.9**
SNR=8.6
HNR Honiara 47.00 118 LR LR 22 26 56.1
comp=Z,20nm,22.0s,baz=16,slow=33
KBK Karagaybulak 47.04 315 P **P** **22 09 21.2 +1.2**
SNR=14
INKA Innaminka 47.05 154 P **P** **22 09 19.9 0.0**
INKA IAmb IAmb 22 10 30.7
comp=Z,15nm,0.6s
UCH Uchtor 47.17 315 P **P** **22 09 22.8 +1.4**
SNR=11
CHMS Chumysh 47.30 316 P **P** **22 09 22.5 +0.6**
SNR=7.7
FRU1 Bishkek 47.31 315 P **P** **22 09 21.7 -0.3**
FRU1 Bishkek 47.31 315 P **P** **22 09 21.7 -0.3**
FRU1 pmax pmax
comp=Z,10.0nm,0.9s
AAK Ala-Archa 47.34 315 LR LR 22 28 22.0
comp=Z,315nm,21.2s,baz=115,slow=35
AAK Ala-Archa 47.34 315 P **P** **22 09 23.4 +1.1**
SNR=8.5
AAK Ala-Archa 47.34 315 P **P** **22 09 22.0 -0.3**
AAK Ala-Archa 47.34 315*ceP* **P** **22 09 23.8 +1.5**
AAK pmax pmax
comp=Z,20nm,1.7s
ZAA0 Zalesovo Array 47.54 333 **P** **22 09 21.0 -2.5**
ZAA0 IAmb IAmb 22 09 24.3
comp=Z,40nm,1.4s
ZALV Zalesovo Beam 47.54 333 P **P** **22 09 23.0 -0.5**
comp=Z,5.6nm,0.5s,baz=124,slow=7.7,SNR=38
ZALV PcP **PcP** **22 10 52.4 -1.0**
comp=Z,1.4nm,0.6s,baz=102,slow=3.6,SNR=1.7
comp=Z,5.6nm,0.5s
ZALV Zalesovo Beam 47.54 333 **P** **22 09 22.3 -1.2**
SGDS Sogindy 47.56 316 *eP* **P** **22 09 24.9 +1.0**
USP Ospenovka 47.58 316 P **P** **22 09 24.7 +0.7**
SNR=11
QLP Quilpie 47.68 149 P **P** **22 09 25.8 +0.9**
EKS2 Erkin-Say 47.84 315 P **P** **22 09 27.2 +1.0**
SNR=9.3
ARSB Arslanbob 47.92 313 P **P** **22 09 23.3 -3.5**
ARSB IAmb IAmb 22 10 56.7
comp=Z,36nm,1.6s
ARSB Arslanbob 47.92 313 P **P** **22 09 23.3 -3.5**
ARSB pmax pmax
comp=Z,36nm,1.6s
YAK Yakutsk 47.93 7 P **P** **22 09 25.6 -0.7**
comp=Z,70nm,0.9s,baz=199,slow=2.5,SNR=41
YAK LR LR 22 31 13.1
comp=Z,253nm,19.9s,baz=160,slow=38
comp=Z,70nm,0.9s
YAK Yakutsk 47.93 7 **P** **22 09 25.0 -1.3**
YAK Yakutsk 47.93 7*d i*P **P** **22 09 25.6 -0.7**
YAK *e* 22 10 53.9
YAK *e* 22 11 18.0
YAK *eS* **S** **22 16 18.6 -4.5**
YAK *e* 22 19 13.1
YAK *eSS* **SS** **22 19 49.2 -2.5**
YAK *eSSS* SSS 22 20 59.4

YAK pmax pmax
comp=Z,48nm,1.0s
YAK pmax pmax
comp=N,25nm,1.0s
YAK pmax pmax
comp=E,19nm,1.2s
YAK pmax pmax
comp=Z,146nm,2.8s
YAK pmax pmax
comp=N,63nm,2.8s
YAK pmax pmax
comp=E,133nm,3.2s
YAK smax smax
comp=N,176nm,3.7s
YAK smax smax
comp=E,158nm,3.3s
YAK MLR MLR
comp=Z,412nm,14.0s
YAK MLR MLR
comp=N,258nm,14.0s
YAK MLR MLR
comp=E,355nm,13.0s
DRK Karamyk 48.19 310 P **P** **22 09 28.7 -0.4**
DRK Karamyk 48.19 310 P **P** **22 09 28.7 -0.4**
DRK pmax pmax
comp=Z,12nm,1.0s
KURBB Kurchatov Arra 48.58 326 P **P** **22 09 31.9 +0.3**
comp=Z,24nm,1.1s,baz=122,slow=8.1,SNR=80
KURBB PcP **PcP** **22 10 56.5 -0.6**
comp=Z,2.7nm,0.8s,baz=135,slow=3.0,SNR=1.9
KURBB LR LR 22 28 36.1
comp=Z,322nm,18.5s,baz=160,slow=34
comp=Z,24nm,1.1s
KURK Kurchatov 48.58 327 **P** **22 09 31.2 -0.4**
KURK Kurchatov 48.58 327 P **P** **22 09 31.2 -0.4**
KURK 22 10 56.5
KURK pmax pmax
comp=Z,103nm,1.3s
BTLS Baital 48.58 318 *eP* **P** **22 09 32.6 +0.9**
BTLS Baital 48.58 318 *eP* **P** **22 09 32.7 +0.9**
PETK Petropavlovsk- 48.96 30 P **P** **22 09 34.3 -0.1**
comp=Z,44nm,0.9s,baz=233,slow=2.6,SNR=11
PETK LR LR 22 29 27.9
comp=Z,243nm,21.3s,baz=265,slow=35
comp=Z,44nm,0.9s
PETK Petropavlovsk- 48.96 30 P **P** **22 09 34.5 0.0**
PETK Petropavlovsk- 48.96 30 P **P** **22 09 34.5 0.0**
BTK Batken 49.08 311 P **P** **22 09 35.6 -0.1**
BTK Batken 49.08 311 P **P** **22 09 35.6 -0.1**
BTK pmax pmax
comp=Z,48nm,1.9s
KBL Kabul 49.13 303 P **P** **22 09 34.9 -1.5**
KBL Kabul 49.13 303 P **P** **22 09 34.9 -1.5**
KBL pmax pmax
comp=Z,20nm,1.2s
GAR Garm 49.16 309 **P** **22 09 35.8 -0.6**
GAR IAmb IAmb 22 10 09.0
comp=Z,41nm,1.3s
DZA Taraz 49.60 314 *eP* **P** **22 09 40.2 +0.6**
DZA Taraz 49.60 314 *eP* **P** **22 09 40.2 +0.6**
BBOO Buckleboo 49.88 161 P **P** **22 09 41.8 +0.1**
BBOO Buckleboo 49.88 161 P **P** **22 09 40.6 -1.1**
BBOO IAmb IAmb 22 09 53.7
comp=Z,58nm,1.1s
CHGR Chuyangaron 49.94 308 P **P** **22 09 41.9 -0.5**
CHGR IAmb IAmb 22 09 54.4
comp=Z,42nm,1.1s
CHGR Chuyangaron 49.94 308 P **P** **22 09 41.9 -0.5**
CHGR pmax pmax
comp=Z,42nm,1.1s
KK31 Karatay Array 50.24 314 P **P** **22 09 43.5 -1.0**
KK31 Karatay Array 50.24 314 P **P** **22 09 43.5 -1.0**
KK31 pmax pmax
comp=Z,13nm,1.0s
KKAR Karatay Array 50.24 314 P **P** **22 09 43.9 -0.6**
KKAR Karatay Array 50.24 314 P **P** **22 09 43.9 -0.6**
IUG luzhnay 50.27 313*d i*P **P** **22 09 45.5 +0.7**
IUG pmax pmax
comp=Z,23nm,1.2s
IUG luzhnay 50.27 313⇓*i*P **P** **22 09 45.6 +0.7**
comp=Z,23nm,1.2s
SHAA Shahritus 50.48 307 P **P** **22 09 45.0 -1.4**
SHAA IAmb IAmb 22 11 16.6
comp=Z,23nm,1.1s
EIDS Eidsvold 50.50 142 P **P** **22 09 45.9 -0.6**
EIDS IAmb IAmb 22 10 29.9
comp=Z,96nm,1.8s
MA2 Magadan 50.54 20 P **P** **22 09 46.6 +0.2**
comp=Z,72nm,1.0s,baz=207,slow=7.7,SNR=33
comp=Z,72nm,1.0s
MA2 Magadan 50.54 20 P **P** **22 09 46.3 -0.1**
MA2 Magadan 50.54 20 P **P** **22 09 46.1 -0.3**
MA2 Magadan 50.54 20*ceP* **P** **22 09 47.2 +0.8**
MA2 pmax pmax
comp=Z,117nm,1.0s
MA2 Magadan 50.54 20 P **P** **22 09 45.3 -1.1**
comp=Z,2µmcomp=Z,124nm,0.9s
BRLS Borolday 50.69 314 *eP* **P** **22 09 48.2 +0.4**
BRLS Borolday 50.69 314 *eP* **P** **22 09 48.2 +0.4**
STKA Stephens Creek 51.02 155 P **P** **22 09 50.0 -0.4**
comp=Z,3.8nm,0.5s,baz=334,slow=9.2,SNR=7.4
STKA LR LR 22 33 35.3
comp=Z,196nm,19.7s,baz=340,slow=38
comp=Z,3.8nm,0.5s
STKA Stephens Creek 51.02 155 P **P** **22 09 50.7 +0.4**
STKA Stephens Creek 51.02 155 P **P** **22 09 49.9 -0.4**
STKA IAmb IAmb 22 10 00.7
comp=Z,46nm,0.7s
STKA Stephens Creek 51.02 155 P **P** **22 09 49.9 -0.4**
STKA pmax pmax
comp=Z,46nm,0.7s
BRZS Berezniki 51.52 323 *eP* **P** **22 09 55.1 +1.1**
BRZS Berezniki 51.52 323 *eP* **P** **22 09 55.1 +1.1**
AULRC Lightning Ridg 51.91 148 P **P** **22 09 58.4 +1.4**
CMSA Cobar Meteorol 52.51 151 P **P** **22 10 02.4 +0.9**
SEY Seymchan 53.59 18 P **P** **22 10 09.2 +0.2**
comp=Z,9.3nm,0.9s,baz=232,slow=7.0,SNR=16
SEY LR LR 22 34 11.4
comp=Z,125nm,20.9s,baz=315,slow=37
comp=Z,9.3nm,0.9s
SEY Seymchan 53.59 18*ceP* **P** **22 10 10.3 +1.3**
SEY pmax pmax
comp=Z,70nm,2.5s
BVAR Borovoye Array 54.15 326 P **P** **22 10 13.8 +0.4**
comp=Z,9.6nm,0.5s,baz=115,slow=9.4,SNR=74
BVAR PcP **PcP** **22 11 16.4 -1.4**
comp=Z,6.5nm,0.9s,baz=115,slow=6.8,SNR=1.6
BVAR LR LR 22 32 51.1
comp=Z,152nm,19.1s,baz=116,slow=36
comp=Z,9.6nm,0.5s
BORK Borovoye 54.20 326 P **P** **22 10 12.6 -1.1**
BORK Borovoye 54.20 326*ceP* **P** **22 10 14.1 +0.4**
BORK pmax pmax
comp=Z,70nm,1.0s
HRA Herat 54.66 302 P **P** **22 10 16.8 -0.9**
SANVU Saraoutou 56.13 120 P **P** **22 10 27.1 -1.0**
SANVU IAmb IAmb 22 10 29.4
comp=Z,43nm,0.9s
CAN Canberra 57.18 151 P **P** **22 10 34.9 -0.5**
CAN IAmb IAmb 22 10 37.6
comp=Z,53nm,1.7s
CAN Canberra 57.18 151 P **P** **22 10 34.9 -0.5**
CAN pmax pmax
comp=Z,53nm,1.7s
TIXI Tiksi 57.29 4 LR LR 22 38 30.7
comp=Z,339nm,18.3s,baz=194,slow=40
TIXI Tiksi 57.29 4 P **P** **22 10 34.6 -1.0**
TIXI Tiksi 57.29 4*ceP* **P** **22 10 34.4 -1.1**
TIXI pmax pmax
comp=Z,81nm,1.0s
SHEM Shemya Is, Ala 57.50 36 LR LR 22 32 06.1
comp=Z,107nm,21.9s,baz=268,slow=33
DZM Mont Dzumac 59.00 127 *eP* **P** **22 10 47.3 -1.1**
comp=Z,62nm,1.2s
DZM *eS* **S** **22 18 52.3 -2.4**
comp=Z,95nm,35.0s
DZM *eSS* **SS** **22 22 48.0 -1.0**
comp=Z,182nm,27.2s
DZM *eLR* LR 22 28 10.4
comp=Z,576nm,28.2s
AB31 Akbulak array 59.04 319 P **P** **22 10 47.9 -0.3**
AB31 IAmb IAmb 22 11 00.4
comp=Z,35nm,0.9s
ABKAR Akbulak array 59.04 319 P **P** **22 10 48.2 0.0**
YATNC Mamie plateau, 59.34 127 P **P** **22 10 51.1 +0.5**
UOSS Minazif 59.66 291 P **P** **22 10 52.8 -0.1**

MARNC **Mare, Loyalty** 59.91 126 P P 22 10 53.4 -1.2
SVE **Sverdlovsk** 60.81 328 eP P 22 11 00.4 +0.2
SVE pmax pmax
comp=Z,75nm,1.0s
BILL **Bilibino** 61.29 18 P P 22 11 02.5 -0.8
BILL IAmb IAmb 22 11 04.6
comp=Z,46nm,1.3s
BILL **Bilibino** 61.29 18 i P P 22 11 02.8 -0.5
BILL pmax pmax
comp=Z,27nm,1.3s
ARTI **Arti** 61.86 327 P P 22 11 06.5 -0.7
ARTI IAmb IAmb 22 11 18.0
comp=Z,29nm,0.8s
ARTI **Arti** 61.86 327 c i P P 22 11 06.6 -0.7
ARTI 22 11 48.0
ARTI 22 13 23.9
ARTI S S 22 19 29.0 -1.2
ARTI pmax pmax
comp=Z,34nm,1.2s
LKRN **Lenkeran, Azer** 65.74 306 P P 22 11 34.9 +1.7
MSVF **Nonsavu** 66.40 117 P P 22 11 39.5 +1.7
MSVF **Nonsavu** 66.40 117 P P 22 11 36.7 -1.1
MSVF IAmb IAmb 22 11 51.5
comp=Z,48nm,1.3s
MSVF **Nonsavu** 66.40 117 P P 22 11 36.7 -1.1
MSVF pmax pmax
comp=Z,48nm,1.3s
AKT **Akhty** 66.57 309 eP P 22 11 38.9 +0.2
AKT e 22 12 07.6
AKT e 22 14 06.4
AKT ePPP PPP 22 15 39.0
AKT eS S 22 20 30.9 +1.5
AKT pmax pmax
comp=Z,27nm,1.0s
MAK **Makhachkala** 66.77 311 d i P P 22 11 35.2 -4.5
MAK e 22 14 06.7
MAK eS S 22 20 25.3 -6.2
MAK eSS SS 22 24 46.0 -3.2
MAK pmax pmax
comp=Z,44nm,1.0s
SEKA **Sheki** 66.97 309 P P 22 11 42.0 +0.8
MNGR **Mingechevir, A** 67.05 308 P P 22 11 43.0 +1.4
KIRV **Kirov** 67.07 328 ceP P 22 11 41.0 -0.3
BELG **Belogornoye** 67.26 321 i P P 22 11 42.9 +0.2
BELG pmax pmax
comp=Z,13nm,0.9s
SPIA **Saint Paul Isl** 67.32 34 P P 22 11 43.3 +0.4
baz=262
NIKH **Nikolski High** 67.62 38 P P 22 11 45.3 +0.3
baz=265
GANJ **Ganja** 67.63 308 P P 22 11 45.9 +0.6
GAMB **Gambell** 67.80 27 P P 22 11 45.2 -0.6
GAMB **Gambell** 67.80 27 P P 22 11 46.5 +0.7
baz=258
NAX **Nakhchivan** 68.29 307 P P 22 11 51.1 +1.5
GNI **Garni** 68.85 308 LR LR 22 45 41.4
comp=Z,56nm,20.4s,baz=92,slow=39
GNI **Garni** 68.85 308 P P 22 11 53.0 -0.2
GNI **Garni** 68.85 308 ceP P 22 11 54.9 +1.8
GNI pmax pmax
comp=Z,68nm,1.7s
GNI **Garni** 68.85 308 P P 22 11 52.1 -1.0
comp=Z,581nmcomp=Z,33nm,1.3s
RAYN **Ar Rayn** 69.51 290 P P 22 11 56.2 -1.2
RAYN **Ar Rayn** 69.51 290 P P 22 11 56.2 -1.2
RAYN pmax pmax
comp=Z,16nm,0.9s
NCK **Nalchik** 69.63 311 i P P 22 11 58.2 +0.5
NCK pmax pmax
comp=Z,9.0nm,1.0s
TNA **Tin City** 69.73 25 P P 22 11 58.6 +0.8
baz=260
M11K **Mekoryuk** 69.81 31 P P 22 11 57.2 -1.2
M11K **Mekoryuk** 69.81 31 P P 22 11 59.8 +1.4
baz=264
KBZ **Khabaz** 70.13 312 P P 22 12 00.9 +0.2
comp=Z,15nm,1.0s,baz=102,slow=3.8,SNR=25
KBZ LR LR 22 46 23.3
comp=Z,115nm,18.2s,baz=48,slow=39
comp=Z,15nm,1.0s
KBZ **Khabaz** 70.13 312 ceP P 22 12 01.3 +0.6
KIV **Kislovodsk** 70.28 312 ||P P 22 12 02.0 +0.2
KIV **Kislovodsk** 70.28 312 P P 22 11 59.2 -2.6
KIV **Kislovodsk** 70.28 312 eP P 22 12 01.8 0.0
KIV pmax pmax
comp=Z,36nm,1.0s
KIV MLR MLR
comp=Z,207nm,18.0s
NEUR **Neytrino** 70.29 311 i P P 22 12 03.8 +1.8
NEUR pmax pmax
comp=Z,11nm,1.1s
SHA1 **Shidzhatmaz** 70.31 312 ceP P 22 12 03.3 +1.1
F14K **Arctic Creek** 70.37 25 P P 22 12 03.1 +1.2
baz=262
ANM **Nome** 70.66 26 P P 22 12 02.6 -1.0
ANM IAmb IAmb 22 12 06.0
comp=Z,29nm,1.1s
ANM **Nome** 70.66 26 P P 22 12 02.6 -1.0
ANM pmax pmax
comp=Z,29nm,1.1s
ANM **Nome** 70.66 26 P P 22 12 04.6 +1.0
baz=263,SNR=9.8
K13K **Kusilvak Mount** 70.71 29 P P 22 12 04.5 +0.5
K13K IAmb IAmb 22 12 06.3
comp=Z,43nm,1.3s
K13K **Kusilvak Mount** 70.71 29 P P 22 12 04.8 +0.9
baz=265
VRH **Novokhopyorsk** 70.86 319 eP P 22 12 04.0 -1.1
VRH pmax pmax
comp=Z,50nm,1.4s
F15K **North Star Dit** 71.09 25 P P 22 12 06.8 +0.6
F15K IAmb IAmb 22 12 08.6
comp=Z,44nm,1.4s
F15K **North Star Dit** 71.09 25 P P 22 12 07.2 +1.0
baz=264
C16K **Lisburne Hills** 71.15 22 P P 22 12 06.9 +0.4
C16K IAmb IAmb 22 12 08.5
comp=Z,34nm,1.1s
C16K **Lisburne Hills** 71.15 22 P P 22 12 07.2 +0.7
baz=262
M13K **Dall Lake** 71.23 31 P P 22 12 08.0 +1.0
baz=266
G15K **Niukluk** 71.27 26 P P 22 12 07.9 +0.6
baz=264
J14K **Nanvaranak Lak** 71.29 28 P P 22 12 07.3 -0.1
J14K IAmb IAmb 22 12 09.6
comp=Z,44nm,1.3s
L14K **Kuka Creek** 71.61 30 P P 22 12 10.4 +1.1
baz=267
D17K **Noatak River** 71.92 23 P P 22 12 12.4 +1.2
baz=264
M14K **Bethel** 71.93 30 P 22 12 11.9 +0.6
M14K IAmb IAmb 22 12 13.4
comp=Z,34nm,0.9s
M14K **Bethel** 71.93 30 P P 22 12 12.1 +0.8
baz=268
C17K **DeLong Mountai** 71.97 22 P P 22 12 12.2 +0.7
baz=264
H16K **Elim** 72.01 26 P P 22 12 12.6 +0.8
baz=266,SNR=16
G16K **Koyuk River** 72.02 26 P P 22 12 11.4 -0.4
G16K IAmb IAmb 22 12 13.9
comp=Z,35nm,1.1s
G16K **Koyuk River** 72.02 26 P P 22 12 12.6 +0.9
baz=266,SNR=18
RDOG **Red Dog Mine** 72.03 23 P P 22 12 12.5 +0.7
baz=264
N14K **Kuskokwak Cree** 72.03 31 P P 22 12 12.1 +0.1
N14K **Kuskokwak Cree** 72.03 31 P P 22 12 12.8 +0.8
baz=268,SNR=8.1
KOPT **Kop Dagi** 72.11 308 P P 22 12 12.0 -1.2
L15K **Ungalak Mounta** 72.19 29 P P 22 12 13.5 +0.6
baz=268
K15K **Wolf Creek Mou** 72.20 29 P P 22 12 13.3 +0.4
K15K IAmb IAmb 22 12 15.4
comp=Z,36nm,1.1s
K15K **Wolf Creek Mou** 72.20 29 P P 22 12 14.1 +1.2
baz=268
O14K **Tigyukauivet M** 72.23 32 P P 22 12 13.7 +0.6
O14K IAmb IAmb 22 12 26.4
comp=Z,43nm,1.0s
O14K **Tigyukauivet M** 72.23 32 P P 22 12 13.8 +0.6
baz=269,SNR=7.3
KLMR **Klimovskoe** 72.28 330 eP P 22 12 11.2 -2.2
KLMR pmax pmax
comp=Z,35nm,1.2s
KLMR MLR MLR
comp=Z,817nm,17.0s
E17K **Hotham Inlet** 72.36 24 P P 22 12 14.9 +1.1
baz=266
VORD **Divnogorie** 72.40 319 eP P 22 12 13.5 -0.8
VORD pmax pmax
comp=Z,20nm,1.0s
VORR **Voronezh** 72.43 320 eP P 22 12 13.5 -1.0
VORR pmax pmax
comp=Z,10.0nm,0.3s
SOC **Sochi** 72.44 311 eP P 22 12 15.0 +0.2
SOC e 22 15 01.5
SOC ePPP PPP 22 16 43.3
SOC eS S 22 21 37.9 -0.4
SOC eSS SS 22 26 23.1 +6.5
SOC pmax pmax
comp=Z,23nm,1.0s
SOC MLR MLR
comp=Z,157nm,10.0s
VSR **Storozhevoye** 72.47 319 eP P 22 12 13.8 -1.0
VSR pmax pmax
comp=Z,30nm,1.3s
F17K **Baldwin Pennin** 72.54 24 P P 22 12 14.6 -0.2
F17K IAmb IAmb 22 12 17.2
comp=Z,53nm,1.4s
F17K **Baldwin Pennin** 72.54 24 P P 22 12 15.8 +1.0
baz=266
M15K **Kasigluk River** 72.55 31 P P 22 12 15.7 +0.6
baz=269
LPSR **Galich'ya Gora** 72.58 321 eP P 22 12 14.0 -1.4
LPSR pmax pmax
comp=Z,40nm,1.4s
SDPT **Sand Point** 72.64 36 P P 22 12 16.6 +1.0
baz=271
I17K **Unalakleet** 72.64 27 P 22 12 15.7 +0.2
I17K IAmb IAmb 22 12 18.1
comp=Z,51nm,1.1s
I17K **Unalakleet** 72.64 27 P P 22 12 16.8 +1.2
baz=268,SNR=14
J16K **Anvik River** 72.66 28 P P 22 12 16.4 +0.7
J16K IAmb IAmb 22 12 18.3
comp=Z,61nm,1.5s
J16K **Anvik River** 72.66 28 P P 22 12 16.9 +1.2
baz=268
C18K **Utukok River** 72.71 22 P P 22 12 15.8 -0.2
C18K **Utukok River** 72.71 22 P P 22 12 16.7 +0.7
baz=266,SNR=6.2
G17K **Kiwalik Mounta** 72.73 25 P P 22 12 17.2 +1.1
baz=267,SNR=18
N15K **Kwethluk River** 72.84 31 P P 22 12 17.6 +0.8
N15K **Kwethluk River** 72.84 31 P P 22 12 17.8 +1.0
baz=270
E18K **Tukpahlearik C** 72.85 23 P P 22 12 16.9 +0.2
E18K **Tukpahlearik C** 72.85 23 P P 22 12 17.8 +1.0
baz=267
A19K **Wainwright** 72.87 21 P P 22 12 18.2 +1.5
baz=265
ADZR **Andozero** 72.95 333 eP P 22 12 12.1 -5.2
ADZR pmax pmax
comp=Z,48nm,1.2s
O15K **Ungalikthiuk R** 72.97 32 P P 22 12 17.7 +0.1
O15K IAmb IAmb 22 12 30.9
comp=Z,54nm,1.1s
O15K **Ungalikthiuk R** 72.97 32 P P 22 12 18.3 +0.7
baz=270,SNR=13
H17K **Granite Mounta** 73.02 26 P P 22 12 18.4 +0.6
H17K IAmb IAmb 22 12 20.2
comp=Z,35nm,1.1s
H17K **Granite Mounta** 73.02 26 P P 22 12 19.0 +1.2
baz=268
L16K **Owhat River** 73.15 29 P 22 12 19.2 +0.6
L16K IAmb IAmb 22 12 20.8
comp=Z,56nm,1.2s
L16K **Owhat River** 73.15 29 P P 22 12 19.5 +0.8
baz=270
CHNA **Chernabura Isl** 73.16 37 P P 22 12 19.8 +1.0
baz=272
F18K **Selawik** 73.19 24 P P 22 12 19.7 +1.0
baz=268
MOS **Moscow** 73.27 324 eP P 22 12 17.8 -1.6
MOS pmax pmax
comp=Z,38nm,0.9s
C19K **Lookout Ridge** 73.32 22 P P 22 12 19.9 +0.4
C19K IAmb IAmb 22 12 22.0
comp=Z,44nm,1.1s
C19K **Lookout Ridge** 73.32 22 P P 22 12 20.9 +1.3
baz=267,SNR=8.8
M16K **Timber Creek** 73.40 30 P P 22 12 20.2 +0.1
M16K IAmb IAmb 22 12 22.3
comp=Z,48nm,1.1s
M16K **Timber Creek** 73.40 30 P P 22 12 20.9 +0.8
baz=270,SNR=16
N16K **Nishlik Lake** 73.50 31 P P 22 12 21.6 +0.9
baz=270
G18K **Tagagawik** 73.57 25 P P 22 12 20.9 -0.2
G18K IAmb IAmb 22 12 22.7
comp=Z,30nm,1.1s
G18K **Tagagawik** 73.57 25 P P 22 12 21.7 +0.6
baz=269
H18K **Honhosa River** 73.68 26 P P 22 12 21.4 -0.3
H18K IAmb IAmb 22 12 23.7
comp=Z,31nm,1.2s
H18K **Honhosa River** 73.68 26 P P 22 12 22.4 +0.7
baz=270
K17K **Iditarod** 73.71 28 P P 22 12 22.3 +0.4
K17K **Iditarod** 73.71 28 P P 22 12 23.1 +1.2
baz=270,SNR=29
L17K **Donlin** 73.71 29 P P 22 12 23.2 +1.3
baz=270,SNR=17
D19K **Kuna River** 73.83 22 P P 22 12 22.4 -0.2
D19K **Kuna River** 73.83 22 P P 22 12 23.3 +0.7
baz=269
O16K **Kokwok River B** 73.85 32 P P 22 12 22.9 +0.1
O16K **Kokwok River B** 73.85 32 P P 22 12 23.4 +0.7
baz=271
ARPR **Arapgir-MALATY** 73.85 307 P P 22 12 22.8 -0.7
OBN **Obninsk** 73.89 324 LR LR 22 47 58.2
comp=Z,173nm,18.7s,baz=188,slow=38
OBN **Obninsk** 73.89 324 eP P 22 12 22.6 -0.5
OBN **Obninsk** 73.89 324 ||eP P 22 12 23.1 0.0
OBN i *PP sP 22 12 26.4 -1.6
OBN e*SP pwP 22 12 29.5 -3.4
OBN i 22 12 41.2
OBN 22 15 05.0
OBN PPP PPP 22 16 59.0
OBN S S 22 21 56.0 +1.8
OBN PPS PPS 22 22 47.0
OBN SSS SSS 22 29 58.0
OBN pmax pmax
comp=Z,65nm,2.5s
OBN MLR MLR
comp=Z,315nm,17.0s
OBN **Obninsk** 73.89 324 P P 22 12 22.0 -1.1
comp=Z,34nm,1.8s
P16K **Nushagak River** 73.92 32 P P 22 12 23.3 -0.9
P16K **Nushagak River** 73.92 32 P P 22 12 23.8 +0.6
baz=272,SNR=6.0
F19K **Shaleruckik Mo** 73.94 24 P P 22 12 23.5 +0.4
baz=270
QRZ **Quartz Range** 74.07 141 P P 22 12 27.6 +3.3
M17K **Holitna River** 74.13 30 P P 22 12 25.7 +1.3
baz=271,SNR=15
E19K **Redstone River** 74.15 23 P P 22 12 25.2 +0.8
baz=270
R16K **Pilot Point** 74.19 34 P P 22 12 25.9 +1.2
baz=272
B20K **Meade River** 74.20 21 P P 22 12 24.8 +0.2
B20K IAmb IAmb 22 12 26.7
comp=Z,41nm,1.0s
B20K **Meade River** 74.20 21 P P 22 12 25.5 +0.9
baz=269
G19K **Purcell Mounta** 74.21 25 P P 22 12 24.9 +0.2
G19K IAmb IAmb 22 12 26.7
comp=Z,28nm,1.0s
G19K **Purcell Mounta** 74.21 25 P P 22 12 25.5 +0.7
baz=270,SNR=24
N17K **Nushagak Hills** 74.28 31 P P 22 12 25.6 +0.3
N17K **Nushagak Hills** 74.28 31 P P 22 12 26.6 +1.3
baz=272
GCSA **Galena City Sc** 74.32 26 P P 22 12 26.4 +1.0
baz=271
O17K **Koliganek Bris** 74.35 31 P P 22 12 26.4 +0.7
baz=272
D20K **Etivluk River** 74.39 22 P P 22 12 26.5 +0.7
baz=270
A21K **Barrow** 74.40 19 P P 22 12 26.3 +0.6
baz=269
J18K **Innoko River** 74.42 28 P P 22 12 25.0 -1.1
J18K **Innoko River** 74.42 28 P P 22 12 26.8 +0.7
baz=272,SNR=11
L18K **Granite Mounta** 74.46 29 P 22 12 26.2 -0.1
L18K IAmb IAmb 22 12 40.6
comp=Z,38nm,1.0s
L18K **Granite Mounta** 74.46 29 P P 22 12 27.5 +1.2
baz=272
E20K **Nigu River** 74.55 23 P P 22 12 27.6 +0.8
baz=271
P17K **Kvichak River** 74.71 32 P P 22 12 27.8 0.0
P17K **Kvichak River** 74.71 32 P P 22 12 28.9 +1.2
baz=273,SNR=31
F20K **Avaraart Lake** 74.74 24 P P 22 12 28.5 +0.7
baz=271
R17L **Mt. Peulik Vol** 74.84 34 P P 22 12 28.5 -0.1
baz=273
PLK4 **Peulik 4** 74.84 34 P 22 12 27.7 -1.0
PLK4 IAmb IAmb 22 12 41.1
comp=Z,29nm,0.9s
J19K **Poorman** 74.89 27 P 22 12 28.7 0.0
J19K IAmb IAmb 22 12 31.0
comp=Z,53nm,1.6s
J19K **Poorman** 74.89 27 P P 22 12 29.4 +0.6
baz=272
M18K **Stony River** 74.90 30 P P 22 12 29.8 +0.9
baz=273
N18K **Kilae Creek** 74.91 31 P 22 12 27.9 -1.1
N18K IAmb IAmb 22 12 31.4
comp=Z,67nm,1.5s
N18K **Kilae Creek** 74.91 31 P P 22 12 29.9 +0.9
baz=273,SNR=7.5
A22K **Sinclair Lake** 74.93 20 P P 22 12 29.6 +0.8
baz=271
GAZ **Gaziantep** 74.95 305 P P 22 12 29.4 -0.3
GAZ IAmb IAmb 22 12 31.8
comp=Z,31nm,1.2s
APA **Apatity** 74.96 337 ||eP P 22 12 27.5 -1.6
APA pmax pmax
comp=Z,10.0nm,1.1s
APA MLR MLR
comp=Z,2µm,5.4s
C21K **Knifeblade Rid** 75.04 22 P P 22 12 30.1 +0.6
baz=272
Q17K **Contact Creek** 75.05 33 P P 22 12 29.3 -0.7
baz=274
B21K **Ikpikpuk River** 75.09 21 P P 22 12 28.7 -1.0
B21K IAmb IAmb 22 12 31.9
comp=Z,39nm,1.1s
B21K **Ikpikpuk River** 75.09 21 P P 22 12 30.7 +0.9
baz=272,SNR=21
H20K **Anotleneega Mo** 75.14 25 P P 22 12 30.9 +0.8
baz=273
TOKA **Tokat** 75.14 308 P P 22 12 29.9 -0.9
O18K **Koktuh Hills** 75.30 31 P 22 12 30.3 -0.9
O18K **Koktuh Hills** 75.30 31 P P 22 12 32.2 +1.0
baz=274,SNR=21
P18K **Big Mountain,** 75.32 32 P 22 12 30.4 -1.0
P18K **Big Mountain,** 75.32 32 P P 22 12 31.7 +0.4
baz=274,SNR=9.5
L19K **White Mountain** 75.33 29 P 22 12 30.7 -0.7
L19K IAmb IAmb 22 12 45.6
comp=Z,50nm,1.0s
L19K **White Mountain** 75.33 29 P P 22 12 32.4 +1.1
baz=273
ACHA **Angle Creek He** 75.35 33 P P 22 12 30.2 -1.4
ACHA IAmb IAmb 22 12 43.6
comp=Z,54nm,1.2s
CHIR **Chirikof Islan** 75.37 36 P P 22 12 33.1 +1.5
baz=274
B22K **Teshekpuk Lake** 75.47 20 P P 22 12 31.1 -0.9
B22K **Teshekpuk Lake** 75.47 20 P P 22 12 32.5 +0.6
baz=273
M19K **Big River Lodg** 75.56 29 P P 22 12 33.7 +1.0
baz=274
URZ **Urewera** 75.56 136 LR LR 22 48 51.2
comp=Z,87nm,18.7s,baz=332,slow=38
IMAR **Indian Mountai** 75.58 25 P 22 12 31.6 -1.1
N19K **Bonanza Creek** 75.59 30 P P 22 12 32.5 -0.5
N19K **Bonanza Creek** 75.59 30 P P 22 12 33.9 +0.9
baz=274,SNR=19
K20K **Telida** 75.61 28 P 22 12 33.8 +0.8
K20K IAmb IAmb 22 12 47.5
comp=Z,36nm,1.0s
K20K **Telida** 75.61 28 P P 22 12 33.9 +1.0
baz=274
F21K **Alatna River** 75.61 24 P P 22 12 32.3 -0.6
F21K **Alatna River** 75.61 24 P P 22 12 33.2 +0.3
baz=273,SNR=5.6
G21K **Allakaket** 75.65 24 P P 22 12 32.2 -0.9
G21K IAmb IAmb 22 12 35.1
comp=Z,56nm,1.1s
G21K **Allakaket** 75.65 24 P P 22 12 33.9 +0.8
baz=274,SNR=32
O19K **Port Alsworth** 75.72 31 P 22 12 33.4 -0.2
O19K IAmb IAmb 22 12 47.1
comp=Z,33nm,0.9s
O19K **Port Alsworth** 75.72 31 P P 22 12 34.2 +0.7
baz=274,SNR=7.3
BNN **Bunyan** 75.81 307 P 22 12 33.1 -1.6
ASF **Jabal al Asfar** 75.88 300 LR LR 22 50 29.7
comp=Z,104nm,21.1s,baz=56,slow=39
H21K **Melozitna Rive** 75.99 25 P P 22 12 34.6 -0.4
H21K IAmb IAmb 22 12 37.4
comp=Z,58nm,1.2s
H21K **Melozitna Rive** 75.99 25 P P 22 12 35.9 +0.9
baz=274
SII **Sitkinak Islan** 76.11 35 P P 22 12 37.3 +1.4
baz=276
M20K **Styx River** 76.16 29 P P 22 12 36.3 +0.1
M20K **Styx River** 76.16 29 P P 22 12 37.3 +1.1
baz=275
Q19K **Cape Douglas,** 76.17 32 P P 22 12 35.1 -1.1
Q19K **Cape Douglas,** 76.17 32 P P 22 12 36.9 +0.6
baz=275
P19K **Oil Pt** 76.31 31 P P 22 12 37.8 +0.7
baz=276
ILSW **Iliamna Southw** 76.33 31 P P 22 12 36.5 -0.7
ILSW IAmb IAmb 22 12 49.4
comp=Z,34nm,1.1s
CHUM **Lake Minchumin** 76.35 27 P P 22 12 38.2 +1.1
baz=275,SNR=11
I21K **Tanana** 76.37 26 P P 22 12 37.2 0.0
I21K IAmb IAmb 22 12 39.6
comp=Z,42nm,1.1s
I21K **Tanana** 76.37 26 P P 22 12 38.3 +1.1
baz=275
C23K **Itkillik River** 76.47 21 P P 22 12 36.7 -0.9
C23K IAmb IAmb 22 14 16.9
comp=Z,40nm,0.8s
C23K **Itkillik River** 76.47 21 P P 22 12 38.4 +0.7
baz=275
RED **Redoubt Volcan** 76.47 31 P P 22 12 37.4 -0.6
PPLA **Purkeypile** 76.50 28 P 22 12 38.2 +0.1
PPLA **Purkeypile** 76.50 28 P P 22 12 38.8 +0.7
baz=276
D23K **Nanushuk River** 76.53 22 P P 22 12 37.5 -0.5
D23K **Nanushuk River** 76.53 22 P P 22 12 38.9 +0.9
baz=276,SNR=30
OHAK **Old Harbor** 76.53 34 P P 22 12 39.2 +1.0
OHAK **Old Harbor** 76.53 34 P 22 12 37.0 -1.2
OHAK IAmb IAmb 22 12 53.1
comp=Z,40nm,1.1s
OHAK **Old Harbor** 76.53 34 P P 22 12 38.3 +0.1
baz=276
H22K **Ishtalitna Cre** 76.56 25 P P 22 12 38.6 +0.3
H22K IAmb IAmb 22 12 40.9
comp=Z,36nm,1.1s
H22K **Ishtalitna Cre** 76.56 25 P P 22 12 39.4 +1.1
baz=276
SPCR **Spurr Chakacha** 76.66 30 P P 22 12 39.3 +0.2
baz=276,SNR=10
SPU **Mount Spurr** 76.74 30 P P 22 12 38.2 -1.3
SPU IAmb IAmb 22 12 52.5
comp=Z,25nm,0.9s
STLK **Strandline Lak** 76.81 30 P P 22 12 38.2 -1.6
KDAK **Kodiak Island** 76.85 33 LR LR 22 45 42.8
comp=Z,73nm,20.4s,baz=233,slow=35
KDAK **Kodiak Island** 76.85 33 P P 22 12 38.4 -1.6
KDAK **Kodiak Island** 76.85 33 P P 22 12 38.4 -1.6
KDAK pmax pmax
comp=Z,96nm,1.3s
KDAK **Kodiak Island** 76.85 33 P P 22 12 40.1 +0.1
baz=276

Q20K	**Shuyak Island**	**76.85**	**33**	P		**P**	**22 12 39.8**	**-0.3**
	baz=276								
COLD	**Coldfoot**	**76.89**	**24**	P		**P**	**22 12 39.9**	**-0.2**
COLD				IAmb		IAmb	22 12 42.3		
	comp=Z,30nm,1.3s								
COLD	**Coldfoot**	**76.89**	**24**	P		**P**	**22 12 40.8**	**+0.8**
	baz=276								
SKT	**Skwentna**	**76.90**	**29**			**P**	**22 12 39.5**	**-0.8**
SKT				IAmb		IAmb	22 12 53.1		
	comp=Z,40nm,1.0s								
SKT	**Skwentna**	**76.90**	**29**	P		**P**	**22 12 40.0**	**-0.3**
	baz=276,SNR=18								
BPAW	**Bear Paw Mtn.**	**76.91**	**27**			**P**	**22 12 40.1**	**-0.2**
BPAW	**Bear Paw Mtn.**	**76.91**	**27**	P		**P**	**22 12 41.0**	**+0.7**
	baz=276,SNR=19								
MLY	**Manley**	**76.91**	**26**			**P**	**22 12 39.7**	**-0.6**
MLY				IAmb		IAmb	22 12 54.7		
	comp=Z,50nm,1.2s								
MLY	**Manley**	**76.91**	**26**	P		**P**	**22 12 41.2**	**+0.9**
	baz=276,SNR=13								
TOLK	**Toolik Lake Re**	**76.96**	**22**	P		**P**	**22 12 41.2**	**+0.6**
	baz=277								
KTH	**Kantishna Hill**	**77.00**	**27**			**P**	**22 12 40.7**	**-0.2**
KTH				IAmb		IAmb	22 12 56.1		
	comp=Z,38nm,1.2s								
MMAI	**Mount Meron Ar**	**77.00**	**301**	LR		LR	22 52 12.7		
	comp=Z,112nm,19.5s,baz=95,slow=40								
E23K	**Chandalar**	**77.01**	**23**	P		**P**	**22 12 40.9**	**0.0**
E23K				IAmb		IAmb	22 12 46.0		
	comp=Z,41nm,1.2s								
E23K	**Chandalar**	**77.01**	**23**	P		**P**	**22 12 41.8**	**+0.9**
	baz=277,SNR=21								
G23K	**Bananza Creek**	**77.01**	**24**	P		**P**	**22 12 41.0**	**+0.2**
G23K				IAmb		IAmb	22 12 43.2		
	comp=Z,55nm,1.4s								
G23K	**Bananza Creek**	**77.01**	**24**	P		**P**	**22 12 41.8**	**+0.9**
	baz=277								
ILGA	**Ilgaz**	**77.13**	**309**	P		**P**	**22 12 40.3**	**-2.0**
C24K	**Franklin Bluff**	**77.14**	**21**	P		**P**	**22 12 41.2**	**-0.3**
C24K				IAmb		IAmb	22 12 43.2		
	comp=Z,55nm,1.1s								
C24K	**Franklin Bluff**	**77.14**	**21**	P		**P**	**22 12 41.9**	**+0.5**
	baz=277								
D24K	**Happy Valley**	**77.17**	**22**	P		**P**	**22 12 41.5**	**-0.2**
D24K				IAmb		IAmb	22 12 43.6		
	comp=Z,42nm,1.1s								
D24K	**Happy Valley**	**77.17**	**22**	P		**P**	**22 12 42.2**	**+0.6**
	baz=277								
L22K	**Petersville**	**77.19**	**28**			**P**	**22 12 41.3**	**-0.7**
CAPN	**Captain Cook N**	**77.22**	**30**	P		**P**	**22 12 42.8**	**+0.8**
	baz=277								
KIRS	**Kirsehir-Merke**	**77.26**	**307**	⇑P		**P**	**22 12 43.2**	**+0.4**
TRF	**Thorofare Moun**	**77.30**	**27**			**P**	**22 12 42.5**	**-0.2**
TRF				IAmb		IAmb	22 12 44.1		
	comp=Z,71nm,1.6s								
TRF	**Thorofare Moun**	**77.30**	**27**	P		**P**	**22 12 42.9**	**+0.2**
	baz=277,SNR=11								
BR131	**Keskin Array S**	**77.38**	**308**	P		**P**	**22 12 42.9**	**-0.7**
BR131	**Keskin Array S**	**77.38**	**308**	P		**P**	**22 12 42.9**	**-0.7**
BR131				pmax		pmax			
	comp=Z,14nm,1.5s								
BR104	**Keskin Array S**	**77.38**	**308**	P		**P**	**22 12 42.5**	**-1.1**
	comp=Z,56nmcomp=Z,6.6nm,0.9s								
BRTR	**Keskin Array B**	**77.38**	**308**	P		**P**	**22 12 43.3**	**-0.3**
	comp=Z,3.1nm,0.9s,baz=114,slow=5.5,SNR=12								
BRTR				LR		LR	22 51 01.4		
	comp=Z,87nm,20.6s,baz=30,slow=39								
	comp=Z,3.1nm,0.9s								
BRTR	**Keskin Array B**	**77.38**	**308**			**P**	**22 12 42.4**	**-1.2**
BRTR	**Keskin Array B**	**77.38**	**308**	*i* P		**P**	**22 12 43.5**	**-0.1**
BRTR				pmax		pmax			
	comp=Z,3.0nm,0.9s								
BR106	**Keskin Array S**	**77.40**	**308**	P		**P**	**22 12 42.5**	**-1.2**
	comp=Z,48nmcomp=Z,4.0nm,0.9s								
BR105	**Keskin Array S**	**77.40**	**308**	P		**P**	**22 12 42.5**	**-1.2**
	comp=Z,60nmcomp=Z,6.1nm,0.9s								
E24K	**Your Creek**	**77.43**	**23**	P		**P**	**22 12 42.9**	**-0.3**
E24K				IAmb		IAmb	22 12 45.2		
	comp=Z,35nm,1.1s								
E24K	**Your Creek**	**77.43**	**23**	P		**P**	**22 12 43.6**	**+0.4**
	baz=278								
CUT	**Chulitna**	**77.44**	**28**	P		**P**	**22 12 42.7**	**-0.5**
I23K	**Minto, Yukon-K**	**77.48**	**26**	P		**P**	**22 12 43.6**	**+0.2**
I23K				IAmb		IAmb	22 12 48.9		
	comp=Z,26nm,1.0s								
I23K	**Minto, Yukon-K**	**77.48**	**26**	P		**P**	**22 12 43.9**	**+0.5**
	baz=278,SNR=18								
BRLK	**Bradley Lake**	**77.48**	**31**	P		**P**	**22 12 42.3**	**-1.3**
BRSE	**Bradley Lake S**	**77.56**	**31**	P		**P**	**22 12 43.6**	**-0.5**
	baz=278								
M22K	**Willow**	**77.59**	**29**	P		**P**	**22 12 43.7**	**-0.4**
	baz=278								
ARA0	**ARCESS Array S**	**77.67**	**339**	*e*P		**P**	**22 12 44.6**	**+0.1**
ARCES	**ARCESS Array B**	**77.67**	**339**	P		**P**	**22 12 43.4**	**-1.1**
	comp=Z,4.2nm,0.5s,baz=84,slow=7.6,SNR=34								
	comp=Z,4.2nm,0.5s								
NEA2	**Nenana**	**77.68**	**26**	P		**P**	**22 12 44.5**	**-0.1**
NEA2				IAmb		IAmb	22 12 58.4		
	comp=Z,28nm,1.0s								
NEA2	**Nenana**	**77.68**	**26**	P		**P**	**22 12 44.5**	**-0.1**
	baz=278,SNR=11								
SLKM	**Skilak Lake**	**77.71**	**30**			**P**	**22 12 43.6**	**-1.3**
SLKM				IAmb		IAmb	22 12 57.2		
	comp=Z,47nm,1.2s								
MCK	**McKinley**	**77.86**	**27**			**P**	**22 12 44.6**	**-1.0**
MCK	**McKinley**	**77.86**	**27**	P		**P**	**22 12 44.6**	**-1.0**
MCK				pmax		pmax			
	comp=Z,73nm,1.0s								
MCK	**McKinley**	**77.86**	**27**	P		**P**	**22 12 45.4**	**-0.2**
	baz=278,SNR=26								
RC01	**Rabbit Creek A**	**77.87**	**30**	P		**P**	**22 12 45.2**	**-0.5**
RC01				IAmb		IAmb	22 12 58.9		
	comp=Z,44nm,1.1s								
RC01	**Rabbit Creek A**	**77.87**	**30**	P		**P**	**22 12 45.0**	**-0.7**
	baz=278								
EIL	**Elat**	**77.94**	**298**	LR		LR	22 52 40.8		
	comp=Z,145nm,19.5s,baz=64,slow=40								
RND	**Reindeer**	**77.94**	**27**	P		**P**	**22 12 45.2**	**-1.0**
RND	**Reindeer**	**77.94**	**27**	P		**P**	**22 12 45.2**	**-1.0**
RND				pmax		pmax			
	comp=Z,56nm,1.1s								
O22K	**Cooper Landing**	**77.96**	**30**	P		**P**	**22 12 45.3**	**-0.9**
O22K	**Cooper Landing**	**77.96**	**30**	P		**P**	**22 12 45.7**	**-0.5**
	baz=278								
H24K	**Noodor Dome**	**77.99**	**25**			**P**	**22 12 46.5**	**+0.1**
H24K				IAmb		IAmb	22 12 48.6		
	comp=Z,36nm,1.2s								
H24K	**Noodor Dome**	**77.99**	**25**	P		**P**	**22 12 47.3**	**+1.0**
	baz=279								
D25K	**Kavik River**	**78.01**	**21**	P		**P**	**22 12 46.5**	**+0.1**
D25K	**Kavik River**	**78.01**	**21**	P		**P**	**22 12 46.9**	**+0.5**
	baz=279								
G24K	**Hadweenzic Riv**	**78.02**	**24**	P		**P**	**22 12 46.4**	**-0.1**
G24K				IAmb		IAmb	22 12 48.7		
	comp=Z,37nm,1.1s								
G24K	**Hadweenzic Riv**	**78.02**	**24**	P		**P**	**22 12 47.2**	**+0.8**
	baz=279								
PMR	**Palmer**	**78.08**	**29**	P		**P**	**22 12 46.8**	**0.0**
PMR	**Palmer**	**78.08**	**29**	P		**P**	**22 12 45.9**	**-1.0**
PMR	**Palmer**	**78.08**	**29**	P		**P**	**22 12 45.9**	**-1.0**
PMR				pmax		pmax			
	comp=Z,42nm,0.8s								
PMR	**Palmer**	**78.08**	**29**	P		**P**	**22 12 46.6**	**-0.3**
	baz=279,SNR=7.3								
WRH	**Wood River Hil**	**78.11**	**26**	P		**P**	**22 12 46.2**	**-0.8**
WRH				IAmb		IAmb	22 12 49.0		
	comp=Z,24nm,1.0s								
SEW	**Seward**	**78.15**	**31**	P		**P**	**22 12 45.4**	**-1.9**
SEW	**Seward**	**78.15**	**31**	P		**P**	**22 12 46.8**	**-0.4**
	baz=279								
COLA	**College**	**78.15**	**26**	P		**P**	**22 12 47.6**	**+0.4**
COLA	**College**	**78.15**	**26**	P		**P**	**22 12 47.9**	**+0.7**
COLA	**College**	**78.15**	**26**	*i* P		**P**	**22 12 47.5**	**+0.4**
COLA				pmax		pmax			
	comp=Z,24nm,1.1s								
GHO	**Glory Hole Cre**	**78.15**	**29**	P		**P**	**22 12 46.7**	**-0.7**
GHO				IAmb		IAmb	22 13 04.4		
	comp=Z,39nm,1.0s								
WAT1	**Susitna Watana**	**78.16**	**28**	P		**P**	**22 12 46.7**	**-0.6**
	baz=279								
CCB	**Clear Creek Bu**	**78.21**	**26**	P		**P**	**22 12 46.4**	**-1.1**
POKR	**Poker Plat Res**	**78.29**	**26**	P		**P**	**22 12 47.9**	**-0.1**
	baz=279								
NE56	**Odesa**	**78.31**	**315**	P		**P**	**22 12 46.8**	**-1.6**
SPB2	**Spitsbergen Ar**	**78.37**	**348**	P		**P**	**22 12 46.6**	**-1.6**
SPB2				IAmb		IAmb	22 13 07.4		
	comp=Z,56nm,1.3s								
SPA0	**Spitsbergen Ar**	**78.37**	**348**	*e*P		**P**	**22 12 48.7**	**+0.5**
SPITS	**Spitsbergen Ar**	**78.37**	**348**	P		**P**	**22 12 48.6**	**+0.4**
	comp=Z,8.3nm,0.4s,baz=90,slow=8.3,SNR=117								
SPITS				LR		LR	22 52 19.8		
	comp=Z,362nm,18.4s,baz=47,slow=40								
	comp=Z,8.3nm,0.4s								
SPITS	**Spitsbergen Ar**	**78.37**	**348**	P		**P**	**22 12 48.1**	**-0.1**
SPITS				pmax		pmax			
	comp=Z,50nm,1.1s								
CSS	**Mathiatis**	**78.38**	**303**	P		**P**	**22 12 48.2**	**-1.0**
CSS				IAmb		IAmb	22 12 54.3		
	comp=Z,47nm,1.0s								
SML	**Sawmill**	**78.42**	**29**			**P**	**22 12 48.3**	**-0.5**
SML	**Sawmill**	**78.42**	**29**	P		**P**	**22 12 48.3**	**-0.5**
SML				pmax		pmax			
	comp=Z,115nm,1.2s								
SML	**Sawmill**	**78.42**	**29**	P		**P**	**22 12 49.1**	**+0.3**
	baz=279,SNR=18								
KNK	**Knik Glacier**	**78.43**	**29**	P		**P**	**22 12 48.6**	**-0.2**
KNK	**Knik Glacier**	**78.43**	**29**	P		**P**	**22 12 48.9**	**+0.1**
	baz=279,SNR=9.8								
E25K	**Arctic Village**	**78.50**	**22**	P		**P**	**22 12 49.8**	**+0.6**
	baz=280								
KTK1	**Kautokeino**	**78.56**	**339**	*e*P		**P**	**22 12 49.3**	**-0.1**
WAT6	**Susitna Watana**	**78.57**	**28**	P		**P**	**22 12 49.7**	**-0.1**
	baz=280,SNR=18								
F25K	**Christian Rive**	**78.57**	**23**	P		**P**	**22 12 49.9**	**+0.3**
F25K				IAmb		IAmb	22 12 52.0		
	comp=Z,27nm,1.1s								
F25K	**Christian Rive**	**78.57**	**23**	P		**P**	**22 12 50.6**	**+1.1**
	baz=280,SNR=24								
IL31		**78.58**	**26**	P		**P**	**22 12 48.4**	**-1.1**
ILAR	**Eielson Array**	**78.58**	**26**	P		**P**	**22 12 48.5**	**-1.1**
	comp=Z,3.9nm,0.9s,baz=266,slow=5.3,SNR=21								
ILAR				PP		**PP**	**22 15 44.5**	**-2.5**
	comp=Z,1.9nm,1.1s,baz=275,slow=8.5,SNR=3.7								
ILAR				LR		LR	22 49 00.7		
	comp=Z,79nm,20.6s,baz=276,slow=37								
	comp=Z,3.9nm,0.9s								
HDA	**Harding Lake**	**78.61**	**26**	P		**P**	**22 12 47.6**	**-2.2**
HDA				IAmb		IAmb	22 12 50.1		
	comp=Z,58nm,1.6s								
HDA	**Harding Lake**	**78.61**	**26**	P		**P**	**22 12 48.8**	**-0.9**
	baz=280,SNR=9.3								
FURI	**Furi**	**78.63**	**276**	LR		LR	22 48 06.9		
	comp=Z,85nm,18.0s,baz=72,slow=36								
DHY	**Denali Highway**	**78.65**	**28**	P		**P**	**22 12 50.3**	**+0.1**
DHY	**Denali Highway**	**78.65**	**28**	P		**P**	**22 12 50.0**	**-0.3**
	baz=280,SNR=8.6								
M23K	**Glacier View**	**78.71**	**29**	P		**P**	**22 12 50.3**	**-0.1**
	baz=280,SNR=6.3								
FIA1	**FINESS Array S**	**78.73**	**331**	P		**P**	**22 12 49.7**	**-0.7**
FINES	**FINESS Array B**	**78.73**	**331**	P		**P**	**22 12 49.7**	**-0.8**
	comp=Z,3.7nm,0.6s,baz=49,slow=6.0,SNR=39								
	comp=Z,3.7nm,0.6s								
FINES	**FINESS Array B**	**78.73**	**331**	P		**P**	**22 12 49.1**	**-1.3**
AK09	**Malin Array Si**	**78.75**	**319**	P		**P**	**22 12 49.5**	**-1.3**
AK08	**Malin Array Si**	**78.76**	**320**	P		**P**	**22 12 49.8**	**-1.0**
AKASG	**Malin Array Be**	**78.77**	**320**	P		**P**	**22 12 49.5**	**-1.4**
	comp=Z,7.4nm,0.9s,baz=69,slow=5.4,SNR=24								
AKASG				LR		LR	22 48 15.9		
	comp=Z,104nm,21.1s,baz=64,slow=36								
	comp=Z,7.4nm,0.9s								
AKASG	**Malin Array Be**	**78.77**	**320**			**P**	**22 12 49.8**	**-1.1**
AKASG	**Malin Array Be**	**78.77**	**320**	*i* P		**P**	**22 12 49.7**	**-1.2**
AKASG				pmax		pmax			
	comp=Z,9.0nm,0.9s								
AKBB	**Malin Array Si**	**78.77**	**320**			**P**	**22 12 49.7**	**-1.2**
AKBB	**Malin Array Si**	**78.77**	**320**	P		**P**	**22 12 49.7**	**-1.2**
AKBB				pmax		pmax			
	comp=Z,21nm,1.0s								
AKBB	**Malin Array Si**	**78.77**	**320**	P		**P**	**22 12 49.8**	**-1.1**
AK01	**Malin Array Si**	**78.78**	**320**	P		**P**	**22 12 49.8**	**-1.1**
KIEV	**Kiev**	**78.78**	**320**	P		**P**	**22 12 49.7**	**-1.3**
KIEV	**Kiev**	**78.78**	**320**	P		**P**	**22 12 49.7**	**-1.3**
KIEV				pmax		pmax			
	comp=Z,19nm,1.0s								
KIEV	**Kiev**	**78.78**	**320**	P		**P**	**22 12 49.9**	**-1.0**
	comp=Z,96nm,1.8s								
AK04	**Malin Array Si**	**78.81**	**320**	P		**P**	**22 12 50.0**	**-1.1**
HSPB	**Hornsund (broa**	**78.87**	**347**	*e*P		**P**	**22 12 51.0**	**+0.1**
C27K	**Jago River**	**78.87**	**21**	P		**P**	**22 12 50.8**	**-0.3**
C27K				IAmb		IAmb	22 12 53.4		
	comp=Z,50nm,1.1s								
C27K	**Jago River**	**78.87**	**21**	P		**P**	**22 12 51.8**	**+0.7**
	baz=282								
SCM	**Sheep Creek Mo**	**78.89**	**29**	P		**P**	**22 12 50.8**	**-0.7**
SCM	**Sheep Creek Mo**	**78.89**	**29**	P		**P**	**22 12 50.8**	**-0.7**
SCM				pmax		pmax			
	comp=Z,178nm,1.4s								
SCM	**Sheep Creek Mo**	**78.89**	**29**	P		**P**	**22 12 51.4**	**-0.1**
	baz=280,SNR=7.9								
AK20	**Malin Array Si**	**78.90**	**320**	P		**P**	**22 12 50.7**	**-0.9**
FYU	**Fort Yukon**	**78.92**	**24**	P		**P**	**22 12 50.1**	**-1.3**
FYU				IAmb		IAmb	22 12 54.3		
	comp=Z,36nm,1.3s								
MNK	**Minsk**	**78.95**	**324**	*i* P		**P**	**22 12 51.5**	**-0.4**
	comp=E,40nm,1.1s								
MNK				*i* P		**P**	**22 12 51.5**	**-0.4**
	comp=N,44nm,0.8s								
MNK				*i* P		**P**	**22 12 51.5**	**-0.4**
	comp=Z,19nm,1.0s,baz=80								
MNK				*i* PP		**PP**	**22 15 50.6**	**+0.2**
MNK				*i* PPP		PPP	22 17 38.5		
MNK				*i* S		**S**	**22 22 51.0**	**+1.1**
MNK				*i* SS		**SS**	**22 27 59.3**	**+4.5**
MNK				*i* SSS		SSS	22 31 23.0		
MNK				*i* LR		LR	22 47 50.7		
MNK				*i* LRM		MLR	22 49 44.2		
	comp=Z,304nm,16.5s								
MNK				*i* LRM		MLR	22 49 52.8		
	comp=N,608nm,17.6s								
MNK				*i* LRM		MLR	22 49 55.2		
	comp=E,1μm,21.9s								
MNK	**Minsk**	**78.95**	**324**	*i* P		**P**	**22 12 51.4**	**-0.4**
MNK				*i*			22 15 50.6		
MNK				*i* PPP		PPP	22 17 38.5		
MNK				*i* S		**S**	**22 22 50.9**	**+1.1**
MNK				*i* SS		**SS**	**22 27 59.2**	**+4.5**
MNK				*i* SSS		SSS	22 31 22.9		
MNK				pmax		pmax			
	comp=Z,19nm,1.0s								
MNK				pmax		pmax			
	comp=N,44nm,0.8s								
MNK				pmax		pmax			
	comp=E,40nm,1.1s								
MNK				MLR		MLR			
	comp=Z,304nm,17.0s								
MNK				MLR		MLR			
	comp=N,608nm,18.0s								
MNK				MLR		MLR			
	comp=E,1μm,22.0s								
BAL3X	**Bal3x, Balta**	**78.98**	**317**	P		**P**	**22 12 51.0**	**-1.1**
BMAR	**Burnt Mountain**	**79.00**	**23**	P		**P**	**22 12 52.0**	**0.0**
PRP	**Porcupine Dome**	**79.01**	**25**	P		**P**	**22 12 51.5**	**-0.6**
PRP	**Porcupine Dome**	**79.01**	**25**	P		**P**	**22 12 51.5**	**-0.6**
	baz=281								
PURM	**Purcari**	**79.03**	**315**	P		**P**	**22 12 51.5**	**-0.9**
	comp=E,74nm,1.0s								
MDUB	**Mudurnu**	**79.11**	**309**	P		**P**	**22 12 52.4**	**-0.7**
MDUB				IAmb		IAmb	22 13 16.7		
	comp=Z,43nm,1.2s								
F26K	**Sheenjek River**	**79.11**	**23**	P		**P**	**22 12 52.3**	**-0.3**
F26K				IAmb		IAmb	22 12 55.0		
	comp=Z,47nm,1.3s								
F26K	**Sheenjek River**	**79.11**	**23**	P		**P**	**22 12 53.2**	**+0.7**
	baz=282								
GLI	**Glacier Island**	**79.17**	**30**	P		**P**	**22 12 52.4**	**-0.5**
GLI	**Glacier Island**	**79.17**	**30**	P		**P**	**22 12 52.3**	**-0.6**
	baz=280								
P23K	**Montague Islan**	**79.18**	**31**	P		**P**	**22 12 52.1**	**-0.9**
P23K	**Montague Islan**	**79.18**	**31**	P		**P**	**22 12 52.2**	**-0.8**
	baz=280								
K24K	**Donnelly Dome**	**79.23**	**27**	P		**P**	**22 12 51.9**	**-1.3**
K24K				IAmb		IAmb	22 13 09.0		
	comp=Z,36nm,0.7s								
K24K	**Donnelly Dome**	**79.23**	**27**	P		**P**	**22 12 52.4**	**-0.8**
	baz=281,SNR=8.8								
J25K	**Salcha River,**	**79.25**	**26**	P		**P**	**22 12 51.7**	**-1.7**
J25K	**Salcha River,**	**79.25**	**26**	P		**P**	**22 12 52.5**	**-0.9**
	baz=281								
M24K	**Tolsona, Glenn**	**79.38**	**28**	P		**P**	**22 12 53.6**	**-0.5**
M24K	**Tolsona, Glenn**	**79.38**	**28**	P		**P**	**22 12 54.8**	**+0.7**
	baz=281,SNR=8.7								
G26K	**Porcupine Rive**	**79.41**	**23**	P		**P**	**22 12 53.7**	**-0.3**
G26K				IAmb		IAmb	22 13 00.1		
	comp=Z,35nm,1.1s								
G26K	**Porcupine Rive**	**79.41**	**23**	P		**P**	**22 12 55.0**	**+0.9**
	baz=282,SNR=25								
JETT	**Jettan, Norway**	**79.43**	**339**	*e*P		**P**	**22 12 55.5**	**+1.3**
PAX	**Paxson**	**79.53**	**28**	P		**P**	**22 12 54.1**	**-0.8**
PAX				IAmb		IAmb	22 12 59.5		
	comp=Z,32nm,1.1s								
PAX	**Paxson**	**79.53**	**28**	P		**P**	**22 12 54.1**	**-0.8**
PAX				pmax		pmax			
	comp=Z,32nm,1.1s								
PAX	**Paxson**	**79.53**	**28**	P		**P**	**22 12 55.3**	**+0.4**
	baz=282,SNR=18								
KLU	**Klutina**	**79.61**	**29**	P		**P**	**22 12 54.7**	**-0.7**
KLU	**Klutina**	**79.61**	**29**	P		**P**	**22 12 55.6**	**+0.2**
	baz=281								
RIDG	**Independent Ri**	**79.65**	**27**	P		**P**	**22 12 55.0**	**-0.5**
RIDG	**Independent Ri**	**79.65**	**27**	P		**P**	**22 12 55.5**	**0.0**
	baz=282,SNR=22								
MI28	**Mi28,Pidlybu**	**79.70**	**320**	P		**P**	**22 12 54.0**	**-2.0**
DIV	**Divide**	**79.76**	**29**	P		**P**	**22 12 55.2**	**-1.0**
DIV				IAmb		IAmb	22 13 09.9		
	comp=Z,41nm,1.0s								
SORM	**Soroca**	**79.77**	**317**	⇑P		**P**	**22 12 55.6**	**-0.8**
SORM	**Soroca**	**79.77**	**317**	P		**P**	**22 12 55.6**	**-0.8**
SORM	**Soroca**	**79.77**	**317**	P		**P**	**22 12 54.7**	**-1.7**
	comp=Z,49nm,1.0s								
BORA	**Eskisehir**	**79.78**	**309**	P		**P**	**22 12 54.0**	**-2.7**
Q23K	**Middleton Isla**	**79.81**	**31**	P		**P**	**22 12 56.7**	**+0.4**
	baz=281								
LUBAR	**Lubar, Ukraine**	**79.83**	**319**	P		**P**	**22 12 55.5**	**-1.2**
EYAK	**Cordova Ski Ar**	**79.88**	**30**	P		**P**	**22 12 57.5**	**+0.8**
	baz=282								
D27M	**Malcolm River**	**79.91**	**21**	P		**P**	**22 12 57.2**	**+0.4**
	baz=284								
E27K	**Coleen River**	**79.94**	**22**	P		**P**	**22 12 57.2**	**+0.2**
E27K				IAmb		IAmb	22 12 59.1		
	comp=Z,42nm,1.1s								
E27K	**Coleen River**	**79.94**	**22**	P		**P**	**22 12 57.7**	**+0.6**
	baz=284								
SCRK	**Sand Creek**	**79.97**	**26**			**P**	**22 12 56.5**	**-0.9**
SCRK				IAmb		IAmb	22 12 58.6		
	comp=Z,47nm,1.6s								
SCRK	**Sand Creek**	**79.97**	**26**	P		**P**	**22 12 57.2**	**-0.2**
	baz=283,SNR=16								
TLCR		**80.00**	**314**	⇓P		**P**	**22 12 57.5**	**-0.2**
TLCR		**80.00**	**314**	P		**P**	**22 12 57.5**	**-0.2**
DOT	**Dot Lake**	**80.01**	**27**	P		**P**	**22 12 57.0**	**-0.5**
I26K	**Coal Creek Min**	**80.02**	**25**	P		**P**	**22 12 56.6**	**-0.8**
I26K				IAmb		IAmb	22 12 58.8		
	comp=Z,46nm,1.1s								
I26K	**Coal Creek Min**	**80.02**	**25**	P		**P**	**22 12 57.6**	**+0.1**
	baz=283								
N25K	**Chitina, Valde**	**80.21**	**29**	P		**P**	**22 12 57.6**	**-1.0**
N25K				IAmb		IAmb	22 13 12.7		
	comp=Z,38nm,1.1s								
N25K	**Chitina, Valde**	**80.21**	**29**	P		**P**	**22 12 59.5**	**+0.8**
	baz=282,SNR=6.8								
MENT	**Mentasta**	**80.32**	**27**	P		**P**	**22 13 00.2**	**+1.1**
MENT	**Mentasta**	**80.32**	**27**	P		**P**	**22 12 57.6**	**-1.5**
NDNU	**Novodnistrovsk**	**80.33**	**318**	P		**P**	**22 12 58.5**	**-0.9**
TPGR	**Topolog**	**80.34**	**314**	⇑P		**P**	**22 12 59.1**	**-0.5**
BMRM	**Bremner River**	**80.35**	**29**	P		**P**	**22 12 57.1**	**-2.3**
BMRM				IAmb		IAmb	22 13 13.0		
	comp=Z,33nm,1.0s								
BMRM	**Bremner River**	**80.35**	**29**	P		**P**	**22 13 00.2**	**+0.9**
	baz=283								
TIRR	**Tirgusor**	**80.42**	**313**	⇓P		**P**	**22 13 00.3**	**+0.4**
TIRR	**Tirgusor**	**80.42**	**313**			**P**	**22 12 58.8**	**-1.2**
TIRR	**Tirgusor**	**80.42**	**313**	P		**P**	**22 12 58.8**	**-1.2**
TIRR				pmax		pmax			
	comp=Z,24nm,1.1s								
TIRR	**Tirgusor**	**80.42**	**313**	P		**P**	**22 12 59.1**	**-0.9**
	comp=Z,23nm,1.1s								
H27K	**Steamboat Moun**	**80.45**	**24**	P		**P**	**22 12 59.4**	**-0.4**
H27K				IAmb		IAmb	22 13 02.4		
	comp=Z,58nm,1.5s								
H27K	**Steamboat Moun**	**80.45**	**24**	P		**P**	**22 13 00.9**	**+1.1**
	baz=284,SNR=14								
L26K	**Log Cabin Wild**	**80.46**	**27**	P		**P**	**22 12 58.7**	**-1.2**
L26K	**Log Cabin Wild**	**80.46**	**27**	P		**P**	**22 13 00.6**	**+0.7**
	baz=283,SNR=7.2								
CFR	**Carcaliu**	**80.47**	**314**	⇑P		**P**	**22 13 00.1**	**-0.1**
CFR

comp=Z,54nm,1.1s
PRAR RASCA 81.33 317 ⇓P P 22 13 03.8 -1.0
PLOR Plostina 81.36 315 ⇓P P 22 13 05.3 +0.3
PLOR Plostina 81.36 315 P P 22 13 05.3 +0.3
ONER Baraj Valea Uz 81.43 316 ⇑P P 22 13 06.0 +0.6
NOR Nord 81.59 354 *i* P P 22 13 04.5 -1.1
NOR IAmb IAmb 22 13 06.5
comp=Z,12nm,0.8s
COVR Voineasa-Covas 81.67 315 ⇑P P 22 13 07.3 +0.7
STEI Steigen 81.69 338 *e*P P 22 13 05.5 -0.7
NEHR Nehoiu 81.69 315 ⇑P P 22 13 07.8 +0.9
BARN Barnard Glacie 81.72 29 P P 22 13 06.3 -0.6
BARN IAmb IAmb 22 13 21.2
comp=Z,24nm,0.9s
BVCY Beaver Creek 81.72 28 P P 22 13 07.8 +1.2
baz=286,SNR=8.8
SUW Suwalki 81.75 324 *e*P P 22 13 07.4 +0.5
SUW Suwalki 81.75 324 P P 22 13 05.8 -1.1
SUW Suwalki 81.75 324 P P 22 13 05.8 -1.1
GRNC Granite Creek 81.76 29 P P 22 13 06.3 -0.7
GRNC IAmb IAmb 22 13 09.4
comp=Z,28nm,1.1s
BALB Balikesir 81.77 309 P P 22 13 05.7 -1.6
BALB IAmb IAmb 22 13 08.2
comp=Z,36nm,1.3s
MESA MESA 81.81 30 P P 22 13 07.6 +0.2
baz=285
FAUS Fauske 81.84 338 *e*P P 22 13 07.0 0.0
KSV Kosov 81.89 318 P P 22 13 06.7 -1.1
CTG Chitna Glacier 81.89 29 P P 22 13 08.7 +1.0
baz=285
CTGM Chitina Glacie 81.89 29 P P 22 13 08.1 +0.4
CTGM IAmb IAmb 22 13 22.2
comp=Z,40nm,0.9s
DAWY Dawson 81.90 26 P 22 13 07.2 -0.3
DAWY IAmb IAmb 22 13 09.4
comp=Z,47nm,1.3s
DAWY Dawson 81.90 26 P P 22 13 08.2 +0.7
baz=287,SNR=16
MLR Muntele Rosu 81.92 315 ⇓P P 22 13 08.1 0.0
MLR Muntele Rosu 81.92 315 P 22 13 07.3 -0.8
MLR IAmb IAmb 22 13 40.5
comp=Z,82nm,1.7s
MLR Muntele Rosu 81.92 315 P P 22 13 07.3 -0.8
MLR pmax pmax
comp=Z,82nm,1.7s
MLR Muntele Rosu 81.92 315 P P 22 13 06.9 -1.2
comp=Z,26nm,1.4s
LOZB Loznitsa 81.92 313 ⇓P P 22 13 08.1 0.0
BURAR Bucovina Array 81.95 317 ⇓P P 22 13 08.2 0.0
BURAR Bucovina Array 81.95 317 P 22 13 07.3 -0.9
BURAR IAmb IAmb 22 13 20.1
comp=Z,24nm,0.8s
BURAR Bucovina Array 81.95 317 P P 22 13 08.2 0.0
BUR08 Bucovina Ar. S 81.95 317 P 22 13 07.3 -0.9
BUR08 IAmb IAmb 22 13 19.8
comp=Z,25nm,0.8s
I29M Ogilvie Camp, 81.97 24 P 22 13 07.3 -0.6
I29M IAmb IAmb 22 13 09.7
comp=Z,70nm,1.6s
I29M Ogilvie Camp, 81.97 24 P P 22 13 08.4 +0.5
baz=287,SNR=8.5
KIBK Kibwezi 81.97 265 P P 22 13 07.4 -1.5
YUK3 Moose Creek 82.08 28 P P 22 13 09.5 +0.7
baz=286
LOGN Logan Glacier 82.09 29 P P 22 13 07.4 -1.4
STNU Starunia 82.17 318 P P 22 13 08.2 -1.0
DOPR Dopca 82.20 315 ⇑P P 22 13 09.3 -0.2
LVV L'vov 82.21 319 P P 22 13 08.5 -0.9
F30M Barrier River 82.22 22 P P 22 13 08.6 -0.5
F30M IAmb IAmb 22 13 13.8
comp=Z,28nm,0.8s
F30M Barrier River 82.22 22 P P 22 13 09.4 +0.3
baz=289
G30M tAoh Zraii Nji 82.26 23 P P 22 13 08.3 -1.1
G30M IAmb IAmb 22 13 10.4
comp=Z,48nm,1.1s
G30M tAoh Zraii Nji 82.26 23 P P 22 13 09.2 -0.2
baz=289
EPYK Eagle Plains 82.28 23 P 22 13 08.8 -0.7
EPYK IAmb IAmb 22 13 10.7
comp=Z,35nm,1.2s
EPYK Eagle Plains 82.28 23 P P 22 13 09.4 -0.1
baz=289,SNR=9.4
J29N Klondike Camp 82.28 25 P P 22 13 09.8 +0.2
J29N Klondike Camp 82.28 25 P P 22 13 10.8 +1.2
baz=288,SNR=20
KMBO Kilima Mbogo 82.43 267 LR LR 22 49 28.3
comp=Z,154nm,18.1s,baz=68,slow=36
MORS Morshin 82.46 319 P P 22 13 10.0 -0.7
O28M Mount Upton 82.49 29 P P 22 13 10.8 -0.2
O28M IAmb IAmb 22 13 25.7
comp=Z,33nm,1.2s
O28M Mount Upton 82.49 29 P P 22 13 11.0 0.0
baz=286
ELND Elena 82.53 312 ⇑P P 22 13 10.7 -0.6
YUK8 Steele Glacier 82.54 29 P P 22 13 11.6 +0.3
baz=287
VOIR 82.55 315 ⇓P P 22 13 10.9 -0.5
VOIR 82.55 315 P P 22 13 10.9 -0.5
VOIR 82.55 315 P P 22 13 10.1 -1.3
comp=Z,5.6nm,1.1s
PINM Pinnacle 82.65 30 P P 22 13 12.4 +0.8
baz=286
L29M L29M 82.73 27 P P 22 13 12.4 +0.5
L29M L29M 82.73 27 P P 22 13 13.4 +1.5
baz=288,SNR=23
COPA Copaceanca 82.73 314 ⇓P P 22 13 12.2 0.0
K29M Barlow Dome 82.76 26 P P 22 13 11.9 -0.3
K29M IAmb IAmb 22 13 14.4
comp=Z,22nm,0.9s
K29M Barlow Dome 82.76 26 P P 22 13 12.9 +0.8
baz=288,SNR=15
INK Inuvik 82.77 21 LR LR 22 51 36.4
comp=Z,83nm,21.3s,baz=295,slow=37
INK Inuvik 82.77 21 P 22 13 10.9 -1.0
INK IAmb IAmb 22 13 13.2
comp=Z,44nm,1.3s
INK Inuvik 82.77 21 P P 22 13 10.9 -1.0
INK pmax pmax
comp=Z,45nm,1.3s
INK Inuvik 82.77 21 P P 22 13 11.9 0.0
baz=291,SNR=20
SHIU Shidnytsya 82.78 319 P P 22 13 11.4 -1.0
I30M Mount Dempster 82.78 24 P P 22 13 11.0 -1.3
I30M IAmb IAmb 22 13 13.9
comp=Z,36nm,1.1s
I30M Mount Dempster 82.78 24 P P 22 13 12.6 +0.3
baz=289
M29M Somme Creek 82.78 27 P P 22 13 12.2 -0.1
M29M IAmb IAmb 22 13 14.9
comp=Z,24nm,1.1s
M29M Somme Creek 82.78 27 P P 22 13 11.7 -0.6
baz=288,SNR=13
ARR Arges 82.85 315 ⇑P P 22 13 13.1 +0.2
MEZ Mezhgor'ye 82.85 318 P P 22 13 12.0 -0.8
ALN Alexandroupoli 82.87 310 P P 22 13 09.5 -3.5
ALN Alexandroupoli 82.87 310 P P 22 13 09.5 -3.5
ALN pmax pmax
comp=Z,22nm,1.5s
EZN Ezine 82.90 309 P P 22 13 12.3 -0.9
comp=Z,14nm,2.0s
G31M Satah River 83.00 22 P P 22 13 12.1 -1.0
G31M Satah River 83.00 22 P P 22 13 12.8 -0.3
baz=291,SNR=15
F31M Tsiigehtchic 83.01 22 P 22 13 12.5 -0.7
F31M IAmb IAmb 22 13 14.3
comp=Z,34nm,0.9s
F31M Tsiigehtchic 83.01 22 P P 22 13 13.1 -0.1
baz=291,SNR=29
J30M Hart River 83.02 25 P P 22 13 12.4 -1.0
J30M IAmb IAmb 22 13 41.9
comp=Z,25nm,1.3s
J30M Hart River 83.02 25 P P 22 13 13.8 +0.3
baz=289
YUK4 Talbot Arm 83.04 28 P P 22 13 14.7 +1.0
baz=288
LEIR Leirfjorden 83.08 337 *e*P P 22 13 13.0 -0.6
KWP Kalwaria Pacla 83.09 319 *e*P P 22 13 14.4 +0.4
KWP Kalwaria Pacla 83.09 319 P P 22 13 13.7 -0.3
comp=Z,42nm,1.5s
LODK Lodwar 83.13 272 P 22 13 14.5 -0.4
RDO Rodhopi 83.18 311 P P 22 13 13.2 -1.4
BRIU Brid 83.21 318 P P 22 13 13.5 -1.1
CJR Cluj-Napoca 83.23 316 ⇑P P 22 13 15.2 +0.4
CJR Cluj-Napoca 83.23 316 P P 22 13 15.2 +0.4
YUK6 Outpost Mounta 83.29 29 P P 22 13 16.0 +0.9
baz=288
PLVB Pleven 83.32 313 ⇓P P 22 13 15.2 -0.1
VLAD Vladila 83.33 314 ⇑P P 22 13 15.7 +0.4
H31M Peel River 83.38 23 P P 22 13 14.8 -0.4
H31M Peel River 83.38 23 P P 22 13 15.2 0.0
baz=291
O29M Mount Kennedy 83.39 29 P P 22 13 15.8 +0.4
baz=288
MUKU Mukachevo 83.40 318 P P 22 13 15.1 -0.5
LOT Lotru 83.42 315 ⇓P P 22 13 15.2 -0.7
M30M Minto, Yukon 83.48 27 P P 22 13 15.9 +0.1
M30M Minto, Yukon 83.48 27 P P 22 13 16.7 +0.9
baz=289,SNR=15
BERU Beregovo 83.48 318 P P 22 13 15.2 -0.8
MARR Marisel-Cluj 83.56 316 ⇓P P 22 13 16.2 -0.4
HOLU Holmets 83.58 318 P P 22 13 15.9 -0.6
UZHM Uzhgorod 83.61 318 P P 22 13 15.8 -0.8
BEL Belsk 83.70 322 *e*P P 22 13 16.6 -0.4
N30M Aishikik Lake 83.71 28 P P 22 13 16.7 -0.4
N30M Aishikik Lake 83.71 28 P P 22 13 17.8 +0.8
baz=289
HYT Haines Junctio 83.73 29 P 22 13 16.7 -0.5
HYT IAmb IAmb 22 13 19.8
comp=Z,56nm,1.6s
HYT Haines Junctio 83.73 29 P P 22 13 18.3 +1.1
baz=289
A36M Sachs Harbour 83.78 16 P 22 13 16.3 -0.8
A36M Sachs Harbour 83.78 16 P P 22 13 16.9 -0.2
baz=299,SNR=27
DRGR 83.80 317 ⇑P P 22 13 17.9 0.0
DRGR 83.80 317 P P 22 13 17.8 0.0
NSS Namsos 84.10 335 *e*P P 22 13 17.7 -1.2
GZR Gura Zlata 84.11 315 ⇓P P 22 13 19.5 +0.1
GZR Gura Zlata 84.11 315 P P 22 13 19.5 +0.1
P30M Million Dollar 84.21 29 P P 22 13 20.2 +0.6
baz=289
N31M Braeburn, Yuko 84.30 28 P 22 13 20.1 +0.1
N31M Braeburn, Yuko 84.30 28 P P 22 13 20.4 +0.5
baz=290,SNR=8.4
O30N Mendenhall 84.40 28 P 22 13 19.9 -0.7
O30N Mendenhall 84.40 28 P P 22 13 21.5 +0.9
baz=290
HERR Herculane 84.49 315 ⇑P P 22 13 21.0 -0.3
M31M Drury Creek, Y 84.66 27 P P 22 13 20.8 -1.0
M31M Drury Creek, Y 84.66 27 P P 22 13 22.5 +0.7
baz=291,SNR=12
NIE Niedzica 84.66 320 *e*P P 22 13 23.5 +1.4
NIE Niedzica 84.66 320 P P 22 13 21.0 -1.1
comp=Z,9.2nm,1.2s
OJC Ojcow 84.75 320 *e*P P 22 13 22.5 0.0
OJC Ojcow 84.75 320 P 22 13 21.2 -1.3
OJC Ojcow 84.75 320 P P 22 13 21.2 -1.3
OJC Ojcow 84.75 320 P P 22 13 21.5 -1.0
KECS Kecovo 84.80 319 *e*P P 22 13 23.6 +0.8
KECS pmax pmax
comp=Z,18nm,0.9s
KECS Kecovo 84.80 319 *e*P P 22 13 23.6 +0.8
BZS Buzias 84.84 316 ⇑P P 22 13 22.1 -0.9
BZS Buzias 84.84 316 P P 22 13 22.1 -0.9
HFS Hagfors 84.93 331 P P 22 13 22.3 -0.8
comp=Z,13nm,0.5s,baz=116,slow=3.4,SNR=65
comp=Z,13nm,0.5s
WHY Whitehorse 85.00 28 P 22 13 23.5 -0.2
WHY Whitehorse 85.00 28 P P 22 13 24.6 +1.0
baz=291,SNR=9.7
FARO Faro, Yukon 85.10 27 P P 22 13 23.6 -0.5
FARO Faro, Yukon 85.10 27 P P 22 13 24.9 +0.9
baz=292,SNR=18
SKAG Skagway 85.21 30 P P 22 13 25.6 +1.1
baz=291
LANS Liptovska Anna 85.26 319 *e*P P 22 13 26.8 +1.7
LANS pmax pmax
comp=Z,17nm,1.9s
LANS Liptovska Anna 85.26 319 *e*P P 22 13 26.8 +1.7
S31K Pelican 85.29 31 P P 22 13 25.6 +0.6
baz=290
VAY Valandovo 85.31 311 *i* P P 22 13 24.4 -1.1
PSZ Piszkesteto 85.34 318 ⇑P P 22 13 25.7 +0.1
PSZ Piszkesteto 85.34 318 P P 22 13 23.8 -1.8
PSZ IAmb IAmb 22 13 26.8
comp=Z,33nm,1.4s
PSZ Piszkesteto 85.34 318 P P 22 13 23.8 -1.8
PSZ pmax pmax
comp=Z,33nm,1.4s
GKP Gorka Klasztor 85.36 324 *e*P P 22 13 26.3 +0.9
C36M Paulatuk 85.42 19 P 22 13 24.4 -0.9
C36M Paulatuk 85.42 19 P P 22 13 25.2 -0.2
baz=300
DAG Danmarks Havn 85.46 351 *i* P P 22 13 24.1 -1.3
DAG IAmb IAmb 22 13 25.8
comp=Z,18nm,0.8s
NC405 NORSAR Array S 85.48 332 P P 22 13 24.0 -1.9
NC303 NORSAR Array S 85.59 332 P P 22 13 24.9 -1.6
N32M Quiet Lake 85.63 28 P P 22 13 26.7 0.0
N32M Quiet Lake 85.63 28 P P 22 13 27.5 +0.8
baz=292
NC602 NORSAR Array S 85.70 332 *e*P P 22 13 26.0 -1.0
NB2 NORSAR Subarra 85.74 332 P P 22 13 25.7 -1.5
comp=Z,15nm,0.7s,baz=69,slow=4.8
NB2 NORSAR Subarra 85.74 332 P P 22 13 25.7 -1.5
NOA NORSAR Array B 85.74 332 P P 22 13 25.6 -1.6
comp=Z,7.5nm,0.9s,baz=69,slow=5.0,SNR=10
comp=Z,7.5nm,0.9s
MMPY Sheldon Lake, 85.84 26 P P 22 13 28.1 +0.4
MMPY IAmb IAmb 22 13 30.1
comp=Z,51nm,1.3s
MMPY Sheldon Lake, 85.84 26 P P 22 13 28.6 +0.8
baz=294
P32M Atlin 85.93 29 P P 22 13 29.2 +0.9
baz=292
R32K Eaglecrest 86.03 31 P P 22 13 29.5 +0.9
baz=291
SIT Sitka 86.07 32 P P 22 13 29.4 +0.6
baz=291
STEB Steborice 86.08 321 *e*P P 22 13 29.4 +0.3
STEB *ex* x 22 13 39.7
P33M Teslin, Yukon 86.11 28 P 22 13 28.6 -0.5
P33M IAmb IAmb 22 13 31.4
comp=Z,32nm,1.3s
P33M Teslin, Yukon 86.11 28 P P 22 13 29.2 +0.1
baz=293,SNR=6.2
MAUC Maruska 86.22 320 *e*P P 22 13 30.6 +0.7
MAUC *ex* x 22 13 40.7
MORC Moravsky Berou 86.27 320 P 22 13 28.4 -1.7
MORC IAmb IAmb 22 13 31.6
comp=Z,37nm,1.5s
MORC Moravsky Berou 86.27 320 P P 22 13 28.4 -1.7
MORC pmax pmax
comp=Z,37nm,1.5s
MORC Moravsky Berou 86.27 320 *e*P P 22 13 30.2 +0.1
DOMB Dombas 86.28 334 *e*P P 22 13 29.4 -0.5
S32K Killisnoo 86.30 31 P P 22 13 30.7 +0.7
baz=291
SRO Srobarova 86.39 318 *e*P P 22 13 31.5 +0.8
SRO Srobarova 86.39 318 *e*P P 22 13 31.5 +0.8
JAVC Velka Javorina 86.48 320 *e*P P 22 13 32.3 +1.1
KRLC Kraliky 86.64 321 *e*P P 22 13 32.0 +0.1
KRLC Kraliky 86.64 321 *e*P P 22 13 32.0 +0.1
KRLC *ex* x 22 13 42.4
MORH Mrgy, Hungar 86.66 317 ⇓P P 22 13 31.2 -0.9
MORH Mrgy, Hungar 86.66 317 P P 22 13 31.1 -0.9
comp=Z,13nm,1.7s
KSP Ksiaz 86.69 322 *e*P P 22 13 32.5 +0.4
KSP Ksiaz 86.69 322 P P 22 13 31.0 -1.1
comp=Z,33nm,1.8s
SMOL Smolenice 86.74 319 *e*P P 22 13 33.4 +1.0
OSTC Ostas 86.83 321 *e*P P 22 13 33.4 +0.6
OSTC Ostas 86.83 321 *e*P P 22 13 33.4 +0.6
DPC Dobruska-Polom 86.83 321 *e*P P 22 13 33.1 +0.2
DPC Dobruska-Polom 86.83 321 *e*P P 22 13 33.1 +0.2
DPC Dobruska-Polom 86.83 321 P P 22 13 31.7 -1.2
comp=Z,11nm,1.4s
Q32M Nakina River 86.86 29 P P 22 13 33.7 +0.7
baz=293
MODS Modra-Piesok 86.88 319 *e*P P 22 13 33.6 +0.5
MODS pmax pmax
comp=Z,59nm,1.7s
MODS Modra-Piesok 86.88 319 *e*P P 22 13 33.6 +0.5
ITM Ithomi 86.90 307 P 22 13 31.8 -1.7
UPC Upice 86.97 321 *e*P P 22 13 33.3 -0.2
UPC Upice 86.97 321 *e*P P 22 13 33.3 -0.2
VRAC Vranov 87.01 320 LR LR 22 53 16.2
comp=Z,152nm,18.3s,baz=78,slow=36
VRAC Vranov 87.01 320 *e*P P 22 13 34.1 +0.4
MPLH Magyarpolny 87.09 318 P P 22 13 33.5 -0.6
comp=Z,58nm,1.6s
AKN Aaknes 87.10 334 *e*P P 22 13 33.4 -0.5
SKAR Skarslia 87.18 333 *e*P P 22 13 34.2 -0.2
KRUC Moravsky 87.21 320 *e*P P 22 13 34.7 0.0
R33M Jennings River 87.30 29 P P 22 13 35.6 +0.6
R33M IAmb IAmb 22 13 50.4
comp=Z,26nm,1.3s
R33M Jennings River 87.30 29 P P 22 13 35.9 +0.9
baz=294
PDG Podgorica 87.38 313 P 22 13 33.3 -2.3
U33K Whale Pass 87.55 32 P P 22 13 35.1 -0.9
baz=293
TGTN Hyland Airport 87.58 26 P P 22 13 35.9 -0.4
baz=297
DBG Daneborg 87.61 350 *i* P P 22 13 34.6 -1.5
DBG IAmb IAmb 22 13 37.5
comp=Z,16nm,1.2s
RONA Rosalia, Austr 87.72 319 *i* P P 22 13 36.7 -0.4
comp=Z,7.3nm,1.7s
KEK Kerkira 87.79 310 P P 22 13 35.0 -2.6
KEK IAmb IAmb 22 15 26.0
comp=Z,29nm,1.1s
CRAG Craig 87.80 33 P P 22 13 37.9 +0.6
baz=293
S34M Telegraph Cree 87.83 30 P P 22 13 36.5 -1.0
baz=294
CONA Conrad Observa 87.92 319 *e*PcP PcP 22 13 39.2 -0.8
comp=Z,10nm,1.7s
NEEM North Greenlan 87.92 358 *i* P P 22 13 38.0 +0.1
NEEM IAmb IAmb 22 13 39.1
comp=Z,84nm,1.2s
DLBC Dease Lake 88.14 29 LR LR 22 55 44.8
comp=Z,53nm,18.6s,baz=292,slow=37
DLBC Dease Lake 88.14 29 P P 22 13 37.8 -1.2
baz=295
RES Resolute Bay 88.34 9 LR LR 22 57 40.4
comp=Z,61nm,19.0s,baz=354,slow=39
RES Resolute Bay 88.34 9 P 22 13 39.0 -0.6
RES Resolute Bay 88.34 9 P P 22 13 39.0 -0.6
RES pmax pmax
comp=Z,42nm,1.3s
ARSA Arzberg 88.36 319 P P 22 13 39.5 -0.8
ARSA IAmb IAmb 22 13 41.7
comp=Z,45nm,2.0s
ARSA Arzberg 88.36 319 *e*PcP PcP 22 13 41.6 -0.4
comp=Z,5.0nm,0.9s
ZVC Zvikov 88.44 321 *e*P P 22 13 40.5 0.0
CLL Collm 88.47 323 P P 22 13 39.4 -1.2
CLL IAmb IAmb 22 14 10.6
comp=Z,28nm,1.5s
CLL Collm 88.47 323 *i* P P 22 13 39.5 -1.2
CLL pmax pmax
comp=Z,68nm,2.1s
CLL Collm 88.47 323 *i* P P 22 13 39.5 -1.2
comp=Z,68nm,2.1s
CLL *i* x x 22 13 50.0
CLL *e*pP **pwP** 22 13 56.0 +5.4
CLL *es*P sP 22 14 02.0 +16
CLL *e*SSS SSS 22 34 06.0
CLL Collm 88.47 323 P P 22 13 39.7 -0.9
comp=Z,14nm,1.5s
BLS5 Blasjo 88.57 332 *e*P P 22 13 40.8 -0.1
CKRC Cesky Krumlov 88.58 320 *e*P P 22 13 45.6 +4.3
CKRC *e* 22 13 51.7
CKRC Cesky Krumlov 88.58 320 *e*P P 22 13 45.6 +4.3
CKRC *ex* x 22 13 51.7
MBAR Mbarara 88.60 269 LR LR 22 51 22.2
comp=Z,158nm,19.8s,baz=78,slow=34
MBAR Mbarara 88.60 269 P P 22 13 41.5 -0.7
MBAR IAmb IAmb 22 13 54.6
comp=Z,22nm,1.6s
MBAR Mbarara 88.60 269 P P 22 13 41.5 -0.7
MBAR pmax pmax
comp=Z,22nm,1.6s
V35K Ketchikan 88.64 33 P P 22 13 41.4 +0.1
baz=294
T35M Bob Quinn 88.65 31 P P 22 13 40.8 -0.6
baz=295
WRGLY Wrigley 88.73 24 P P 22 13 40.6 -1.0
baz=301
SOKA Soboth 88.87 318 *e*PcP P 22 13 43.0 +0.3
comp=Z,5.2nm,1.4s
TULEG Thule 88.88 2 P 22 13 40.8 -1.2
TULEG IAmb IAmb 22 13 43.0
comp=Z,29nm,1.3s
TULEG Thule 88.88 2 *i* P P 22 13 41.0 -1.0
TULEG IAmb IAmb 22 13 42.7
comp=Z,29nm,1.3s
KHC Kasperske Hory 88.92 321 P P 22 13 42.3 -0.6
KHC IAmb IAmb 22 13 44.1
comp=Z,27nm,1.8s
KHC Kasperske Hory 88.92 321 *ce*P P 22 13 43.8 +0.9
KHC pmax pmax
comp=Z,8.0nm,1.7s
KHC Kasperske Hory 88.92 321 *e*P P 22 13 42.7 -0.2
KHC *ex* x 22 13 52.9
GEC2 GERESS Array S 88.95 320 P 22 13 42.3 -0.8
GERES GERESS Array B 88.95 320 P P 22 13 42.3 -0.8
comp=Z,0.8nm,0.6s,baz=46,slow=3.9,SNR=8.7
GERES LR LR 22 53 50.8
comp=Z,198nm,20.6s,baz=68,slow=36
comp=Z,0.8nm,0.6s
GERES GERESS Array B 88.95 320 P 22 13 41.7 -1.4
MOA Molln 88.95 319 *i* P P 22 13 43.3 +0.3
comp=Z,9.9nm,1.1s
OBKA Obir 89.24 318 *i* P P 22 13 45.6 +1.1
comp=Z,7.8nm,1.7s
KBA Koelnbreinsper 89.81 319 *i* PcP P 22 13 47.2 -0.1
comp=Z,2.4nm,0.8s
LESA Schwarzleotal 90.11 319 *i* P P 22 13 47.8 -0.7
comp=Z,7.1nm,1.2s
TIP Timpagrande 90.19 311 ⇓P P 22 13 49.5 +0.5
TIP Timpagrande 90.19 311 IAmb IAmb 22 14 00.4
comp=Z,27nm,1.5s
ABTA Abfaltersbach 90.47 319 *i* P P 22 13 49.1 -1.1
comp=Z,12nm,1.6s
STAL STALIGIAL 90.52 318 P 22 13 49.4 -1.0
CUC Castrocucco 90.61 312 P P 22 13 48.7 -2.2
WTTA Wattenberg 90.83 319 *i* P P 22 13 50.7 -1.3
comp=Z,21nm,1.2s,SNR=6.7
WATA Walderalm 90.84 320 *e*P P 22 13 51.8 -0.2
comp=Z,23nm,1.5s
KULLO Kullorsuaq 90.95 359 *i* P P 22 13 51.5 -0.3
KULLO IAmb IAmb 22 13 52.4
comp=Z,35nm,1.2s
SQTA Sankt Quirin 91.11 320 *e*P P 22 13 52.4 -0.9
comp=Z,17nm,1.2s,SNR=7.1
MOTA Moosalm 91.13 320 *e*PcP P 22 13 52.9 -0.5
comp=Z,13nm,1.2s
CEL Celeste 91.13 310 P 22 13 52.7 -0.7
CEL IAmb IAmb 22 14 04.7
comp=Z,23nm,1.0s
CEL Celeste 91.13 310 P P 22 13 52.4 -1.0
comp=Z,25nm,1.1s
INTR Introdacqua 91.27 314 P P 22 13 53.1 -0.9
GUMA Gualdo di Mace 91.28 315 P 22 13 53.6 -0.4
CTI Castel Tesino 91.28 318 P 22 13 52.9 -1.2
CTI Castel Tesino 91.28 318 P P 22 13 52.9 -1.2
CTI pmax pmax
comp=Z,9.0nm,1.2s
RETA Reutte 91.29 320 *e*PcP P 22 13 53.5 -0.5
comp=Z,10nm,1.5s
CAMP Campotosto 91.42 315 P P 22 13 52.9 -1.9
CAMP IAmb IAmb 22 14 19.1
comp=Z,18nm,1.3s
FDMO Fiordimonte 91.46 315 P P 22 13 53.5 -1.3
FDMO IAmb IAmb 22 13 56.0
comp=Z,28nm,1.4s
MAW Mawson 91.48 199 P P 22 13 55.0 +0.9
comp=Z,4.6nm,0.6s,baz=45,slow=5.7,SNR=2.1
MAW LR LR 22 51 05.8
comp=Z,83nm,18.2s,baz=65,slow=33
comp=Z,4.6nm,0.6s
MAW Mawson 91.48 199 P P 22 13 55.4 +1.3
MAW Mawson 91.48 199 P P 22 13 55.4 +1.3
MAW pmax pmax
comp=Z,3.0nm,1.0s
FETA Feichten 91.49 320 *i* PcP P 22 13 54.4 -0.6
comp=Z,14nm,1.2s
AQU L'Aquila 91.49 314 P P 22 13 53.8 -1.2
comp=Z,15nm,1.1s
NRCA Norcia 91.52 315 P 22 13 53.9 -1.2
NRCA IAmb IAmb 22 14 06.4

comp=Z,20nm,1.2s
TEOL Teolo 91.53 318 P P 22 13 53.9 -1.2
TEOL IAmb IAmb 22 13 56.1
comp=Z,28nm,1.4s
SUMG Summit 91.73 353 IAmb IAmb 22 13 57.4
comp=Z,31nm,1.3s
SUMG Summit 91.73 353 *i* P P **22 13 55.0 -0.9**
SUMG IAmb IAmb 22 13 57.6
comp=Z,12nm,0.8s
MURB Monte Urbino 91.76 316 P P **22 13 56.0 -0.2**
MURB IAmb IAmb 22 14 08.1
comp=Z,24nm,1.1s
BBB Bella Bella 91.87 35 LR LR 22 54 41.5
comp=Z,70nm,20.5s,baz=284,slow=35
DAVA Damuels 91.92 320 *i* P P **22 13 55.5 -1.6**
comp=Z,11nm,1.4s
FUORN Ofenpass-Fuorn 91.94 319 P P 22 13 56.3 -0.9
FUORN IAmb IAmb 22 13 58.5
comp=Z,20nm,1.1s
DAVOX Davos/Dischmat 92.12 320 P P **22 13 57.2 -0.8**
comp=Z,8.0nm,1.0s,baz=65,slow=1.5,SNR=7.8
comp=Z,8.0nm,1.0s
POIN Pond Inlet 92.13 5 P P 22 13 56.6 -0.7
SALO Salr 92.18 318 P P **22 13 57.6 -0.5**
SALO IAmb IAmb 22 14 09.4
comp=Z,14nm,0.8s
ZCCA Zocca 92.38 317 P P 22 13 58.4 -0.7
YKAW3 Yellowknife Wh 92.44 22 P P 22 13 58.4 -0.5
YKAW3 IAmb IAmb 22 14 00.6
comp=Z,27nm,1.3s
YKA Yellowknife Ar 92.49 22 P P **22 13 59.2 +0.2**
comp=Z,5.5nm,1.0s,baz=314,slow=5.5,SNR=59
YKA PP **PP 22 17 39.0 -0.7**
comp=Z,1.4nm,1.1s,baz=308,slow=8.9,SNR=4.7
YKA LR LR 22 58 35.3
comp=Z,56nm,20.6s,baz=336,slow=38
comp=Z,5.5nm,1.0s
YKA Yellowknife Ar 92.49 22 P P 22 13 58.7 -0.4
YKAW1 Yellowknife Wh 92.54 22 P P 22 13 59.0 -0.4
YKAW1 IAmb IAmb 22 14 01.0
comp=Z,30nm,1.4s
TUE Stuetta 92.58 319 P P 22 13 58.1 -2.0
TUE IAmb IAmb 22 14 12.2
comp=Z,14nm,1.2s
UPNV Upernavik 92.73 359 *i* P P **22 13 59.4 -0.6**
UPNV IAmb IAmb 22 14 01.1
comp=Z,22nm,1.1s
LSZ Lusaka 94.66 256 LR LR 22 55 20.8
comp=Z,272nm,18.7s,baz=103,slow=35
ILON Igloolik, Nuna 94.91 7 P P 22 14 08.8 -1.2
ILON IAmb IAmb 22 14 10.8
comp=Z,28nm,1.3s
EKA Eskdalemuir Ar 95.13 331 P P **22 14 09.5 -1.9**
comp=Z,3.4nm,0.9s,baz=76,slow=3.5,SNR=3.9
comp=Z,3.4nm,0.9s
VNDA Vanda 95.18 171 P P **22 14 10.4 -0.6**
comp=Z,0.8nm,0.7s,baz=346,slow=4.2,SNR=1.3
VNDA LR LR 22 59 34.9
comp=Z,82nm,18.1s,baz=333,slow=37
comp=Z,0.8nm,0.7s
VNDA Vanda 95.18 171 IAmb IAmb 22 14 42.9
comp=Z,17nm,1.6s
BORG Borgarnes 95.36 344 LR LR 23 01 22.3
comp=Z,170nm,19.1s,baz=37,slow=38
PPT Papeete 95.51 107 LR LR 22 49 17.7
comp=Z,203nm,22.0s,baz=324,slow=30
PPT2 Papeete2 95.52 107 *e*S **S 22 25 33.0 +2.3**
comp=Z,84nm,25.5s
PPT2 *e*SS **SS 22 31 59.5 +0.2**
comp=Z,181nm,21.2s
BLKN Baker Lake 96.83 15 P 22 14 16.9 -2.0
KEST Kesra 96.93 310 LR LR 23 06 33.9
comp=Z,81nm,18.5s,baz=23,slow=41
TBI Tubuai 96.93 112 *e*S **S 22 25 42.9 +0.4**
comp=Z,997nm,33.8s
TBI *e*SS **SS 22 32 12.3 -6.7**
comp=Z,747nm,25.0s
TBI *e*LR LR 22 45 39.1
comp=Z,2µm,26.5s
SFJD Kangerlussuaq 98.25 356 LR LR 23 00 18.3
comp=Z,95nm,19.9s,baz=356,slow=36
LBTB Lobatse 99.19 247 LR LR 22 56 15.8
comp=Z,138nm,19.5s,baz=65,slow=34
TAOE Nuku Hiva Isla 102.49 96 *e*LR LR 22 48 15.2
comp=Z,240nm,22.8s
PDAR Pinedale Array 107.50 35 PP **PP 22 19 37.1 +2.8**
comp=Z,2.2nm,1.1s,baz=336,slow=3.3,SNR=5.9
TORD Torodi Ar. Bea 112.20 291 PP **PP 22 20 12.7 +3.3**
comp=Z,2.6nm,1.2s,baz=106,slow=2.7,SNR=4.9
S39A Bolivar 119.67 29 PKPdf PKPdf 22 19 37.9 -0.8
R40A Maddies Statio 119.68 28 PKPdf **PKPdf 22 19 37.1 -1.5**
TXAR Lajitas Array 119.85 43 PKP **PKiKP 22 19 39.9 +0.4**
comp=Z,1.0nm,0.6s,baz=275,slow=0.9,SNR=13
TXAR PP **PP 22 21 05.5 +3.2**
comp=Z,1.7nm,1.1s,baz=308,slow=4.1,SNR=5.3
TXAR Lajitas Array 119.85 43 PKPdf 22 19 39.5 +0.1
DBIC Dimbokro 120.57 287 PKP **PKPdf 22 19 39.7 -1.3**
comp=Z,2.7nm,0.6s,baz=135,slow=5.9,SNR=5.1
WVT Waverly 123.44 26 PKPdf 22 19 45.8 -0.1
WVT Waverly 123.44 26 PKIKP **PKPdf 22 19 45.8 -0.1**
HDC Heredia 146.38 45 *e*P **PKPdf 22 20 26.4 -2.7**
COYC Coyhaique 147.74 165 PKPbc 22 20 34.2 +1.2
PLCA Paso Flores 152.66 164 PKPbc **PKPbc 22 20 44.6 -0.7**
comp=Z,3.9nm,0.7s,baz=224,slow=1.1,SNR=11
SDV Santo Domingo 154.70 23 PKPdf **PKPdf 22 20 42.0 -0.1**
SDV Santo Domingo 154.70 23 *e*P **PKPdf 22 20 39.9 -2.2**
OTAV Otavalo 157.17 51 *e*P **PKPdf 22 20 42.5 -3.3**
MT13 San Alfonso 159.15 157 PKPdf **PKPdf 22 20 46.3 -0.8**
CO03 El Pedregal 161.52 152 PKPab 22 21 33.1 -1.1
TEFE Tefe 168.34 19 *e*P **PKPdf 22 20 56.4 +0.4**
ITTB Itaituba 168.62 333 *e*P **PKPdf 22 20 55.9 -0.3**
LPAZ La Paz 172.80 104 PKP **PKPdf 22 20 59.5 +0.4**
comp=Z,2.1nm,0.9s,baz=30,slow=1.5,SNR=7.4
LPAZ PKPab **pPKPab 22 22 27.1 -1.9**
comp=Z,1.1nm,0.7s,baz=276,slow=4.4,SNR=2.7
LPAZ La Paz 172.80 104 PKPdf 22 21 00.1 +1.0
LPAZ La Paz 172.80 104 *e*P **PKPdf 22 20 57.0 -2.1**
BDQN Bodoquena, MS 173.01 214 *e*P **PKPdf 22 20 56.8 -1.5**
PDRB Porto dos Gac 174.98 306 *e*P **PKPdf 22 20 58.1 -1.1**

IDC ***12*** *22:04:44.4±1.3, 32.°12N×137.°96E, h0km, mb3.5/5, mbtmp3.5/5, MS4.1/2, Error ellipse: s-maj=47.6km s-min=26.6km az=78.0*
JMA ***12*** *22:05:25.0±0.3, 32.°2N×13.°9E±.°, h394km, MV3.7/22, FAR S OFF TOKAI DISTRICT*
ISC 12 22:05:24.1±1.0, 32.°4N±0.°1×138.°2E±0.°2, h400km, n16, σ1°68/15, mb2.9/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JHJ2	**Mitsune**	**1.54**	**61**	*e*P		**Pn**	**22 06 16.3**	**-1.1**
JMKN	**Mikurajimanish**	**1.91**	**37**	*e*P		**Pn**	**22 06 18.2**	**-1.2**
JOD2	**Odawara 2**	**2.98**	**14**	*e*P		**Pn**	**22 06 26.4**	**-0.7**
BSO3	**Boso 3**	**3.10**	**38**	*e*P		**Pn**	**22 06 26.3**	**-1.3**
BSO4	**Boso 4**	**3.16**	**33**	P		**Pn**	**22 06 27.2**	**-1.2**
BSO1	**Boso 1**	**3.25**	**45**	*e*P		**Pn**	**22 06 27.2**	**-1.5**
JRY	**Ryogami san**	**3.69**	**9**	*e*P		**Pn**	**22 06 33.0**	**-0.1**
JRY				*e*S		**S**	**22 07 27.3**	**-2.0**
JAG	**Ashikaga**	**4.18**	**14**	P		**Pn**	**22 06 36.4**	**-1.3**
JHO	**Hitachi**	**4.66**	**24**	*e*P		**Pn**	**22 06 41.1**	**-1.4**
SIJI	**Sorong**	**33.70**	**193**	LR		LR	22 23 11.2	
	comp=Z,217nm,20.9s,baz=42,slow=33							
MKAR	**Makanchi Array**	**44.53**	**306**	P		**P**	**22 12 57.7**	**-0.3**
	0.3nm,0.5s,baz=84,slow=9.4,SNR=2.0							
	0.3nm,0.5s							
KURBB	**Kurchatov Arra**	**46.94**	**311**	P		**P**	**22 13 16.1**	**-0.3**
	0.3nm,0.4s,baz=90,slow=9.6,SNR=4.4							
	0.3nm,0.4s							
WRA	**Warramunga Arr**	**52.14**	**185**	P		**P**	**22 13 54.5**	**-1.0**
	0.3nm,0.5s,baz=360,slow=7.6,SNR=5.1							
	0.3nm,0.5s							
ILAR	**Eielson Array**	**54.84**	**30**	P		**P**	**22 14 18.3**	**+4.0**
	0.3nm,0.5s,baz=283,slow=5.4,SNR=0.9							
	0.3nm,0.5s							
ASAR	**Alice Springs**	**55.87**	**185**	P		**P**	**22 14 22.0**	**0.0**
	0.9nm,1.0s,baz=6.3,slow=5.5,SNR=2.1							
	0.9nm,1.0s							
RAO	**Raoul Island**	**74.08**	**141**	LR		LR	22 46 23.1	
	comp=Z,148nm,18.5s,baz=120,slow=34							

IDC ***12*** *22:15:36.1±2.0, 32.°84N×130.°41E, h0km, mb3.6/7, mbtmp3.5/10, ML2.9/3, MS4.1/1, Error ellipse: s-maj=42.6km s-min=8.1km az=158.0*

JMA ***12*** *22:15:37.6±0.0, 32.°80N±0.°07×130.°6E±0.°1, h12km, MV3.8/20, NW KUMAMOTO PREF*
JMA Felt III J1 at NW KUMAMOTO PREF .
ISC 12 22:15:37.2±1.4, 32.°79N±0.°06×130.°48E±0.°08, h11km±9km, n15, σ0°59/16, mb3.8/7, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JTA	**Tamana**	**0.18**	**15**	P		**Pg**	**22 15 41.4**	**+0.3**
JTA				S		**Sg**	**22 15 44.0**	**+0.1**
JIU3	**Izumi3**	**0.37**	**130**	P		**Pg**	**22 15 44.3**	**-0.3**
JNU	**Nakatsue**	**0.47**	**46**	Pg		**Pg**	**22 15 45.8**	**-0.6**
	434nm,0.3s,baz=357,slow=6.0,SNR=2984							
JNU				Lg		Lg	22 15 51.8	
	1µm,0.3s,baz=296,slow=8.7,SNR=41							
JNU	**Nakatsue**	**0.47**	**46**	P		**Pg**	**22 15 46.0**	**-0.4**
JNU				S		**Sg**	**22 15 51.9**	**-0.8**
KSRS	**Korea Array**	**5.10**	**336**	Pn		**Pn**	**22 16 53.1**	**-0.4**
	0.3nm,0.3s,baz=156,slow=16,SNR=1.9							
	0.6nm,0.3s							
MJAR	**Matsushiro Arr**	**7.39**	**57**	Pn		**Pn**	**22 17 26.1**	**+1.1**
	0.1nm,0.3s,baz=243,slow=13,SNR=15							
	4.1nm,0.5s							
KLR	**Kul'dur**	**16.45**	**3**	Pn		**Pn**	**22 19 28.3**	**+0.5**
	0.1nm,0.3s,baz=177,slow=8.6,SNR=4.7							
	0.2nm,0.3s							
SONM	**Songino Array**	**23.59**	**317**	P		**P**	**22 20 48.1**	**+0.1**
	0.5nm,0.8s,baz=131,slow=8.8,SNR=4.1							
	0.5nm,0.8s							
CMAR	**Chiang Mai Arr**	**31.67**	**251**	P		**P**	**22 22 01.0**	**+0.2**
	0.4nm,0.3s,baz=54,slow=8.4,SNR=1.4							
	0.4nm,0.3s							
MKAR	**Makanchi Array**	**38.97**	**305**	P		**P**	**22 23 02.8**	**-0.5**
	0.2nm,0.7s,baz=97,slow=12,SNR=2.0							
	0.2nm,0.7s							
KURBB	**Kurchatov Arra**	**41.73**	**311**	P		**P**	**22 23 26.2**	**+0.1**
	0.2nm,0.7s,baz=94,slow=7.8,SNR=1.8							
	0.2nm,0.7s							
BVAR	**Borovoye Array**	**46.90**	**314**	P		**P**	**22 24 08.1**	**+0.7**
	0.6nm,0.6s,baz=97,slow=9.4,SNR=3.5							
	0.6nm,0.6s							
CTA	**Charters Tower**	**54.70**	**162**	LR		LR	22 48 11.7	
	comp=Z,184nm,19.6s,baz=54,slow=36							
FINES	**FINESS Array B**	**68.16**	**330**	P		**P**	**22 26 36.8**	**-0.2**
	4.9nm,1.0s,baz=80,slow=6.2,SNR=4.2							
	4.9nm,1.0s							
AKASG	**Malin Array Be**	**71.85**	**319**	P		**P**	**22 26 59.3**	**-0.6**
	0.3nm,0.3s,baz=59,slow=5.7,SNR=1.7							
	0.3nm,0.3s							

NEIC ***12*** *22:16:57.4±2.5, 3.°25S±0.°08×138.°99E±0.°07, h47km±9km, mb4.3/15, Error ellipse: s-maj=12.6km s-min=9.4km az=162.0*
IDC ***12*** *22:16:58.7±1.5, 3.°18S×139.°06E, h61km±16km, mb3.6/12, mbtmp4.1/17, MS4.1/1, Error ellipse: s-maj=15.8km s-min=11.2km az=138.0*
DJA ***12*** *22:17:01.1±0.2, 3.°5S±3.°×13.°9E±.°, h43km±4km, M5.0/36, mb4.9/36, mB5.6/9, MLv4.9/13, Mw4.7/18, Mw(mB)5.2/9*
ISC 12 22:16:57.4±0.5, 3.°23S±0.°06×139.°05E±0.°06, h46km, n75, σ1°90/69, mb3.8/15, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GENI	**Genyem**	**1.28**	**60**	P		Pn	22 17 22.8	+3.9
GENI	**Genyem**	**1.28**	**60**	P		Pn	22 17 22.6	+3.7
GENI				S		**Sn**	**22 17 39.2**	**+4.2**
JAY	**Jayapura**	**1.80**	**67**	P		Pn	22 17 28.6	+2.7
	297nm,0.4s,baz=225,slow=11,SNR=165							
JAY				S		**Sn**	**22 17 48.5**	**+0.8**
	343nm,0.4s,baz=69,slow=14,SNR=6.4							
JAY	**Jayapura**	**1.80**	**67**	P		Pn	22 17 28.9	+2.9
SRPI	**Serui, Papua**	**3.12**	**296**	P		**Pn**	**22 17 45.5**	**+1.5**
BAKI	**Biak**	**3.57**	**305**	P		**Pn**	**22 17 52.6**	**+2.3**
RKPI	**Ransiki, Papua**	**5.16**	**289**	P		**Pn**	**22 18 13.5**	**+1.4**
	1.7nm10µm253nm,0.7s							
KMPI	**Kaimana, Papua**	**5.35**	**265**	P		**Pn**	**22 18 18.6**	**+3.9**
MWPI	**Manokwari, Pap**	**5.50**	**294**	P		**Pn**	**22 18 19.7**	**+2.9**
	1.2nm170nm,0.7s							
SIJI	**Sorong**	**8.12**	**287**	P		**Pn**	**22 18 54.4**	**+1.6**
	26nm,0.3s,baz=88,slow=10,SNR=20							
SIJI	**Sorong**	**8.12**	**287**	P		**Pn**	**22 18 55.2**	**+2.4**
	1µm53nm,0.7s							
SWI	**Sorong**	**8.13**	**287**	P		**Pn**	**22 18 55.0**	**+2.1**
	78nm,0.7s							
MANU	**Manus Island**	**8.39**	**82**	Pn		**Pn**	**22 18 56.4**	**-0.1**
SAUI	**Saumlaki**	**9.04**	**238**	Pn		Pn	22 19 01.6	-3.7
KRAI	**Karang Ratu**	**10.64**	**269**	P		**Pn**	**22 19 30.7**	**+3.4**
	16nm,0.6s							
COEN	**Coen**	**11.41**	**159**	P		**Pn**	**22 19 41.0**	**+3.2**
COEN	**Coen**	**11.41**	**159**			**Pn**	**22 19 37.9**	**+0.1**
TNTI	**Ternate**	**12.34**	**289**	Pn		**Pn**	**22 19 49.9**	**-0.6**
MTN	**Manton Dam**	**12.35**	**219**			**Pn**	**22 19 49.5**	**-1.1**
SANI	**Sanana**	**13.10**	**275**	P		**Pn**	**22 20 01.6**	**+0.7**
SANI	**Sanana**	**13.10**	**275**	P		**Pn**	**22 20 02.5**	**+1.6**
	54nm,0.9s							
MTSU	**Mount Surprise**	**15.68**	**161**	P		**P**	**22 20 39.0**	**+0.3**
KNRA	**Kununurra**	**15.98**	**219**	P		**Pn**	**22 20 39.7**	**+0.5**
KNRA				IAmb		IAmb	22 21 10.9	
	comp=Z,25nm,0.8s							
SOEI	**Soe**	**16.05**	**245**	P		**P**	**22 20 43.8**	**+0.9**
SOEI	**Soe**	**16.05**	**245**			**Pn**	**22 20 37.8**	**-2.3**
SOEI	**Soe**	**16.05**	**245**	P		**P**	**22 20 44.1**	**+1.2**
LUWI	**Luwuk**	**16.41**	**277**	Pn		**Pn**	**22 20 41.8**	**-2.9**
BATI	**Baumata**	**16.77**	**245**	P		**Pn**	**22 20 50.1**	**+1.0**
	comp=Z,109nm,0.6s,baz=70,slow=1.5,SNR=30							
BATI	**Baumata**	**16.77**	**245**	P		**P**	**22 20 53.2**	**+2.4**
WB0	**Warramunga Arr**	**17.05**	**195**			**Pn**	**22 20 51.0**	**-1.6**
WB0				IAmb		IAmb	22 21 13.5	
	comp=Z,22nm,0.8s							
WR8	**Warramunga Arr**	**17.20**	**195**			**Pn**	**22 20 53.0**	**-1.5**
WR8				IAmb		IAmb	22 21 07.6	
	comp=Z,24nm,1.1s							
WRAB	**Tennant Creek**	**17.22**	**195**	P		**Pn**	**22 20 53.2**	**-1.5**
WRAB				IAmb		IAmb	22 21 15.0	
	comp=Z,26nm,0.8s							
WRA	**Warramunga Arr**	**17.23**	**195**	P		**Pn**	**22 20 54.4**	**-0.5**
	comp=Z,3.2nm,0.3s,baz=17,slow=13,SNR=38							
WRA				S		Sn	22 23 55.0	-11
	comp=Z,14nm,0.8s,baz=5.9,slow=23,SNR=8.1							
WRA	**Warramunga Arr**	**17.23**	**195**			**Pn**	**22 20 53.3**	**-1.6**
MMRI	**Maumere**	**17.56**	**251**	Pn		**Pn**	**22 20 56.4**	**-2.5**
MMRI				IAmb		IAmb	22 21 24.9	
	comp=Z,32nm,1.2s							
EDFI	**Ende, Flores**	**18.11**	**252**	P		**Pn**	**22 21 08.1**	**+2.3**
CTA	**Charters Tower**	**18.17**	**158**	P		**Pn**	**22 21 06.3**	**-0.1**
	comp=Z,14nm,1.2s,baz=352,slow=7.1,SNR=2.3							
BSSI	**Bau Bau, Buton**	**18.72**	**260**	P		**Pn**	**22 21 15.6**	**+2.5**
	comp=Z,37nm,0.8s							
TOLI2	**Tolitoli**	**18.76**	**283**	P		**Pn**	**22 21 15.1**	**+1.5**
TOLI2	**Tolitoli**	**18.76**	**283**	P		**P**	**22 21 12.2**	**-0.7**
TOLI2				IAmb		IAmb	22 21 21.6	
	comp=Z,34nm,0.9s							
TTSI	**Tana Toraja**	**19.20**	**270**	P		**Pn**	**22 21 21.7**	**+2.8**
	comp=Z,76nm,0.8s							
SPSI	**Sidrap Palu**	**19.26**	**267**	P		**Pn**	**22 21 20.7**	**+1.2**
	comp=Z,20nm,0.8s							
KAPI	**Kappang**	**19.33**	**264**	P		**P**	**22 21 18.8**	**-0.2**
	comp=Z,4.0nm,0.3s,baz=55,slow=11,SNR=5.3							
KAPI	**Kappang**	**19.33**	**264**			**Pn**	**22 21 22.7**	**+2.3**
KAPI	**Kappang**	**19.33**	**264**	P		**P**	**22 21 18.8**	**-0.2**
KAPI				IAmb		IAmb	22 21 46.3	
	comp=Z,16nm,1.3s							
KAPI	**Kappang**	**19.33**	**264**	P		**Pn**	**22 21 22.7**	**+2.3**
PCI	**Palu**	**19.34**	**276**	P		**Pn**	**22 21 23.7**	**+3.2**
	comp=Z,113nm,1.1s							
MPSI	**Mapaga**	**19.47**	**280**	P		**Pn**	**22 21 22.9**	**+0.9**
	comp=Z,17nm,0.8s							
FITZ	**Fitzroy Crossi**	**19.77**	**221**	P		**P**	**22 21 23.4**	**-0.4**
	comp=Z,8.1nm,0.9s,baz=48,slow=12,SNR=12							
FITZ				S			22 24 54.5	-10
	comp=Z,23nm,0.8s,baz=125,slow=7.6,SNR=8.2							
PMSI	**Majene**	**20.10**	**269**	P		Pn	22 21 30.6	+1.0
	comp=Z,74nm,0.8s							
MMSI	**Mamuju**	**20.12**	**271**	P		Pn	22 21 30.3	+0.5
	comp=Z,84nm,0.8s							
AS31	**Alice Springs**	**20.91**	**193**			**P**	**22 21 36.7**	**+0.6**
ASAR	**Alice Springs**	**20.91**	**193**	P		**P**	**22 21 37.4**	**+1.2**
	comp=Z,17nm,0.8s,baz=18,slow=10,SNR=59							
ASAR				S		**S**	**22 25 22.8**	**-4.2**
	comp=Z,8.4nm,0.8s,baz=12,slow=27,SNR=6.4							
	comp=Z,17nm,0.8s							
ASAR	**Alice Springs**	**20.91**	**193**			**P**	**22 21 36.6**	**+0.4**
ASAR						**S**	**22 25 25.6**	**-1.4**
PLAI	**Plampang**	**21.86**	**254**	P		**P**	**22 21 48.4**	**+2.0**
	comp=Z,26nm,0.8s							
BBKI	**Banjar Baru**	**24.17**	**269**	P		**P**	**22 22 13.3**	**+3.7**
	comp=Z,5µmcomp=Z,49nm,1.1s							
INKA	**Innaminka**	**24.43**	**176**	IAmb		IAmb	22 22 35.6	
	comp=Z,11nm,0.6s							
KMMI	**Kalianget**	**25.26**	**260**	P		**P**	**22 22 22.3**	**+2.8**
STKA	**Stephens Creek**	**28.59**	**175**	P		**P**	**22 22 49.6**	**+0.3**
	comp=Z,0.7nm,0.3s,baz=306,slow=14,SNR=2.0							
	comp=Z,0.7nm,0.3s							
DZM	**Mont Dzumac**	**32.52**	**127**	LR		LR	22 38 06.5	
	comp=Z,308nm,18.0s,baz=351,slow=39							
MJAR	**Matsushiro Arr**	**39.58**	**359**	P		**P**	**22 24 22.0**	**-2.2**
	comp=Z,0.7nm,0.5s,baz=178,slow=7.8,SNR=2.1							
	comp=Z,0.7nm,0.5s							
KSRS	**Korea Array**	**41.78**	**347**	P		**P**	**22 24 41.3**	**-1.1**
	comp=Z,0.7nm,0.5s,baz=159,slow=6.7,SNR=2.3							
	comp=Z,0.7nm,0.5s							
CMAR	**Chiang Mai Arr**	**44.99**	**300**	P		**P**	**22 25 08.8**	**+0.2**
	comp=Z,2.3nm,0.6s,baz=118,slow=6.4,SNR=18							
	comp=Z,2.3nm,0.6s							
KLR	**Kul'dur**	**52.63**	**354**	P		**P**	**22 26 06.1**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=161,slow=9.2,SNR=5.5							
	comp=Z,1.1nm,0.6s							
SONM	**Songino Array**	**58.33**	**335**	P		**P**	**22 26 46.4**	**-1.5**
	comp=Z,0.2nm,0.5s,baz=150,slow=9.3,SNR=1.9							
	comp=Z,0.2nm,0.5s							
MKAR	**Makanchi Array**	**70.41**	**322**	P		**P**	**22 28 07.1**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=104,slow=8.7,SNR=7.4							
	comp=Z,0.6nm,0.7s							
ZALV	**Zalesovo Beam**	**72.56**	**330**	P		**P**	**22 28 18.3**	**-1.2**
	comp=Z,0.4nm,0.5s,baz=110,slow=6.6,SNR=2.4							
	comp=Z,0.4nm,0.5s							
KURK	**Kurchatov**	**74.34**	**325**	P		**P**	**22 28 29.7**	**-0.4**
KURK	**Kurchatov**	**74.34**	**325**	IAmb		IAmb	22 29 00.3	
	comp=Z,3.4nm,1.2s							
KURBB	**Kurchatov Arra**	**74.35**	**325**	P		**P**	**22 28 29.7**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=117,slow=6.2,SNR=4.2							
	comp=Z,0.4nm,0.7s							
BVAR	**Borovoye Array**	**79.93**	**325**	P		**P**	**22 29 01.3**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=121,slow=5.7,SNR=5.0							
	comp=Z,0.9nm,0.7s							
ILAR	**Eielson Array**	**86.17**	**24**	P		**P**	**22 29 32.6**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=262,slow=4.2,SNR=8.2							
	comp=Z,0.7nm,0.7s							
TORD	**Torodi Ar. Bea**	**136.72**	**286**	PKP		**PKPdf**	**22 36 13.4**	**-2.4**
	comp=Z,0.5nm,0.6s,baz=123,slow=1.9,SNR=3.5							
LPAZ	**La Paz**	**146.86**	**127**	PKPbc		**PKPbc**	**22 36 36.1**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=257,slow=1.0,SNR=2.2							
SIV	**San Ignacio**	**152.42**	**134**	PKPbc		**PKiKP**	**22 36 49.5**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=187,slow=16,SNR=1.3							

NSSP ***12*** *22:24:31.7, 38.°33N×44.°60E, h10km, Ms3.1*
AZER ***12*** *22:24:32.4, 38.°49N×44.°55E, h4km, ml3.2*
AFAD ***12*** *22:24:33.1, 38.°41N×44.°51E, h9km±2km, ML2.9*
ISK ***12*** *22:24:33.3, 38.°43N×44.°48E, h5km, ML2.9/10*
TEH ***12*** *22:24:33.3, 38.°43N×44.°51E, h13km±999km, ML2.9, Presumed earthquake*
ISC 12 22:24:34.9±1.1, 38.°35N±0.°02×44.°45E±0.°02, h13km±9km, n76, σ1°66/121, 1C-3D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**311**	P		**Pg**	**22 24 43.1**	**-1.3**
YOVA	**Hakkari_Yksek**	**0.77**	**189**	P		**Pn**	**22 24 49.7**	**-2.0**
YOVA				S		**Sn**	**22 25 03.4**	**+0.1**
YOVA				IAML			22 25 10.0	
	comp=N,427nm,0.5s							
TVAN	**Van**	**0.84**	**282**	P		**Pb**	**22 24 50.2**	**-1.3**
TVAN				S		**Sn**	**22 25 03.3**	**-1.7**
TVAN				IAML			22 25 07.0	
	comp=N,377nm,0.5s							
ISHB	**Shabestar**	**0.92**	**94**	Pg		**Pb**	**22 24 49.6**	**-3.3**
VMUR	**Van-Muradiye**	**0.94**	**313**	P		**Pb**	**22 24 50.6**	**-2.5**
HAKT	**HAKKARI**	**0.99**	**217**	P		**Pn**	**22 24 53.1**	**-1.6**
HAKT	**HAKKARI**	**0.99**	**217**	P		**Pg**	**22 24 53.0**	**-1.1**
HAKT				S		**Sn**	**22 25 11.7**	**+3.1**
MAKU	**Maku**	**1.02**	**10**	Pg		**Pb**	**22 24 51.1**	**-3.4**
IMRD	**Marand**	**1.05**	**69**	Pg		**Pb**	**22 24 52.6**	**-2.4**
IMRD				Sg		**Sb**	**22 25 06.2**	**-2.5**
GEVA	**Gevas**	**1.09**	**268**	P		**Pb**	**22 24 54.3**	**-1.5**
GEVA				S		**Sg**	**22 25 11.3**	**+0.9**
GEVA				IAML			22 25 16.0	
	comp=N,153nm,0.5s							
ERCV	**ERCIS-VAN**	**1.10**	**308**	Pg		**Pn**	**22 24 54.8**	**-1.4**
ERCV	**ERCIS-VAN**	**1.10**	**308**	P		**Pn**	**22 24 54.3**	**-1.8**
AKDM	**Akdamar-Van**	**1.16**	**269**	Pn		**Pn**	**22 24 55.4**	**-1.6**
AKDM				Sn		**Sg**	**22 25 14.4**	**+2.1**
NAX	**Nakhchivan**	**1.16**	**45**	P		**Pn**	**22 24 54.4**	**-2.5**
NAX				S		**Sb**	**22 25 10.2**	**-1.7**
CUKT	**Cukurca**	**1.29**	**211**	Pn		**Pg**	**22 25 00.7**	**+0.9**
CUKT				Sn		**Sg**	**22 25 20.5**	**+4.0**
CUKT	**Cukurca**	**1.29**	**211**	P		**Pg**	**22 25 02.2**	**+2.4**
DYDN	**Diyadin**	**1.33**	**334**	P		**Pn**	**22 24 58.2**	**-1.2**
DYDN				S		**Sn**	**22 25 13.6**	**-3.5**
DYDN				IAML			22 25 21.0	
	comp=E,194nm,0.5s

ZRD	**Zardab**	**3.16**	**51**	P	**Pn**	**22 25 26.1 +1.7**
ZRD				S	**Sn**	**22 26 05.2 +3.3**
DGRG	**David-gareji**	**3.17**	**13**	P	**Pb**	**22 25 31.8 +0.6**
DGRG				S	**Sg**	**22 26 18.4 +1.5**
TRLG	**Trialeti**	**3.19**	**355**	P	**Pb**	**22 25 31.0 -0.7**
GLBA	**Clilabad**	**3.21**	**73**	P	**Pn**	**22 25 25.9 +0.9**
GLBA				S	**Sn**	**22 26 05.1 +2.1**
VSHL	**Vashlovani**	**3.24**	**27**	P	**Pb**	**22 25 33.4 +1.0**
VSHL				S	**Sg**	**22 26 18.9 -0.3**
DDFL	**Dedoflistskaro**	**3.35**	**22**	P	**Pg**	**22 25 36.9 -2.1**
DDFL				S	**Sg**	**22 26 26.0 +3.6**
ASTR	**Astara**	**3.41**	**85**	P	**Pn**	**22 25 30.1 +2.3**
ASTR				S	**Sn**	**22 26 11.3 +3.1**
LKRN	**Lenkeran, Azer**	**3.41**	**83**	P	**Pn**	**22 25 29.3 +1.5**
LKRN				S	**Sn**	**22 26 10.2 +2.0**
SEKA	**Sheki**	**3.55**	**36**	P	**Pn**	**22 25 31.7 +1.8**
SEKA				S	**Sn**	**22 26 12.5 +0.8**
QBL	**Gabala**	**3.68**	**44**	P	**Pn**	**22 25 33.0 +1.4**
QBL				S	**Sn**	**22 26 15.9 +1.1**
LGD	**Lagodekhi**	**3.74**	**21**	P	**Pb**	**22 25 40.4 -0.4**
ALIG	**Mtskhetisjvari**	**3.80**	**351**	P	**Pb**	**22 25 44.2 +2.3**
CHRG	**Chargali**	**3.99**	**5**	P	**Pb**	**22 25 46.1 +1.0**
XNQ	**Khinaliq**	**4.00**	**44**	P	**Pn**	**22 25 36.9 +0.7**
PQL	**Pirkuli**	**4.02**	**51**	P	**Pn**	**22 25 37.0 +0.6**
PQL				S	**Sn**	**22 26 24.8 +1.4**
GBS	**Qobustan**	**4.10**	**57**	S	**Sn**	**22 26 26.9 +1.6**
ATGJ	**Altiaghaj**	**4.28**	**53**	P	**Pn**	**22 25 40.9 +1.1**
SHTL	**Shatili**	**4.33**	**7**	P	**Pb**	**22 25 51.2 +0.2**

NEIC ***12*** *22:25:13.7±1.5, 19.°0S±0.°1×173.°06W±0.°07, h10km±1km, mb4.7/19, Error ellipse: s-maj=18.2km s-min=10.6km az=182.0*

IDC ***12*** *22:25:13.9±0.8, 18.°99S×173.°52W, h0km, mb4.1/12, mbtmp4.1/15, ML4.8/3, MS3.8/12, Error ellipse: s-maj=26.9km s-min=17.0km az=142.0*

ISC 12 22:25:17.8±0.6, 18.°97S±0.°09×173.°43W±0.°09, h28km, n56, σ1°81/47, mb4.4/20, MS3.8/11, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**3.32**	**92**		Pn	22 25 59.8	-8.2
NIUE				Sn	Sn	22 26 36.3	-10
AFI	**Afiamalu**	**5.28**	**18**	Pn	**Pn**	**22 26 33.5**	**-1.4**
	6.8nm,0.3s,baz=150,slow=8.1,SNR=4.9						
AFI				Sn	Sn	22 27 26.5	-8.4
	7.0nm,0.3s,baz=161,slow=19,SNR=1.3						
	22nm,0.4s						
FUTU	**Fugatoga**	**6.45**	**315**	Pn	**Pn**	**22 26 51.7**	**+0.6**
MSVF	**Nonsavu**	**8.18**	**277**	Pn	**Pn**	**22 27 11.8**	**-3.0**
	3.4nm,0.3s,baz=107,slow=19,SNR=7.5						
	2.2nm,0.5s						
MSVF	**Nonsavu**	**8.18**	**277**	Pn	**Pn**	**22 27 17.4**	**+2.5**
RAO	**Raoul Island**	**11.03**	**201**	Pn	**Pn**	**22 27 51.9**	**-1.9**
RAR	**Rarotonga**	**13.03**	**102**	LR	LR	22 32 54.6	
	comp=Z,347nm,18.6s,baz=272,slow=35						
RAR	**Rarotonga**	**13.03**	**102**		Pn	22 28 13.0	-8.1
DZM	**Mont Dzumac**	**19.10**	**257**	P	**P**	**22 29 38.0**	**-0.6**
	0.4nm,0.3s,baz=85,slow=20,SNR=7.4						
	2.8nm,0.7s						
URZ	**Urewera**	**20.91**	**201**	P	**P**	**22 29 56.4**	**-1.8**
	4.5nm,0.3s,baz=332,slow=16,SNR=7.6						
	4.5nm,0.3s						
THZ	**Tophouse**	**25.53**	**204**	P	**P**	**22 30 47.5**	**+3.4**
THZ				IAmb	IAmb	22 31 01.7	
	comp=Z,8.0nm,0.9s						
RPZ	**Rata Peaks**	**27.91**	**204**	LR	LR	22 42 32.9	
	comp=Z,323nm,18.6s,baz=77,slow=37						
FOZ	**Fox Glacier**	**28.26**	**206**	P	**P**	**22 31 11.8**	**+3.2**
FOZ				IAmb	IAmb	22 31 28.9	
	comp=Z,24nm,1.0s						
CTA	**Charters Tower**	**37.95**	**261**	P	**P**	**22 32 33.1**	**-0.2**
	comp=Z,3.0nm,0.4s,baz=85,slow=9.5,SNR=8.8						
	comp=Z,3.0nm,0.4s						
CTAO	**Charters Tower**	**37.95**	**261**	P	**P**	**22 32 33.2**	**-0.2**
CTAO				IAmb	IAmb	22 32 43.5	
	comp=Z,13nm,0.9s						
TOO	**Toolangi**	**40.27**	**234**	P	**P**	**22 32 53.9**	**+1.4**
STKA	**Stephens Creek**	**42.32**	**243**	P	**P**	**22 33 08.5**	**-1.0**
	comp=Z,0.7nm,0.4s,baz=87,slow=11,SNR=1.4						
	comp=Z,0.7nm,0.4s						
STKA	**Stephens Creek**	**42.32**	**243**	P	**P**	**22 33 09.1**	**-0.4**
STKA				IAmb	IAmb	22 33 26.6	
	comp=Z,16nm,0.9s						
BBOO	**Buckleboo**	**47.07**	**243**	P	**P**	**22 33 46.7**	**-0.6**
BBOO				IAmb	IAmb	22 34 02.9	
	comp=Z,16nm,1.1s						
WR8	**Warramunga Arr**	**48.94**	**260**	P	**P**	**22 34 02.4**	**+0.4**
WR8				IAmb	IAmb	22 34 17.4	
	comp=Z,3.8nm,0.9s						
AS31	**Alice Springs**	**49.06**	**255**	P	**P**	**22 34 03.5**	**+0.5**
ASAR	**Alice Springs**	**49.06**	**255**	P	**P**	**22 34 02.7**	**-0.2**
	comp=Z,3.1nm,0.6s,baz=91,slow=8.2,SNR=22						
ASAR				PcP	**PcP**	**22 35 27.1**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=86,slow=4.3,SNR=1.0						
ASAR				LR	LR	22 55 03.8	
	comp=Z,152nm,18.4s,baz=115,slow=36						
	comp=Z,3.1nm,0.6s						
ASAR	**Alice Springs**	**49.06**	**255**	P	**P**	**22 34 03.2**	**+0.3**
WB0	**Warramunga Arr**	**49.06**	**260**	P	**P**	**22 34 02.7**	**-0.2**
WB0				IAmb	IAmb	22 34 07.1	
	comp=Z,4.2nm,0.8s						
WRAB	**Tennant Creek**	**49.08**	**260**	P	**P**	**22 34 03.2**	**+0.1**
WRAB				IAmb	IAmb	22 34 04.5	
	comp=Z,5.4nm,1.1s						
WRA	**Warramunga Arr**	**49.09**	**260**	P	**P**	**22 34 02.6**	**-0.5**
	comp=Z,1.6nm,0.4s,baz=97,slow=7.1,SNR=52						
	comp=Z,1.6nm,0.4s						
WRA	**Warramunga Arr**	**49.09**	**260**	P	**P**	**22 34 03.1**	**-0.1**
SIJI	**Sorong**	**57.08**	**282**	P	**P**	**22 35 01.6**	**-0.5**
	comp=Z,5.2nm,0.6s,baz=148,slow=18,SNR=1.4						
SIJI				LR	LR	23 00 02.5	
	comp=Z,70nm,18.7s,baz=96,slow=37						
	comp=Z,5.2nm,0.6s						
FITZ	**Fitzroy Crossi**	**57.51**	**260**	P	**P**	**22 35 05.4**	**+0.3**
	comp=Z,3.8nm,0.9s,baz=111,slow=8.6,SNR=1.4						
	comp=Z,3.8nm,0.9s						
SOEI	**Soe**	**60.79**	**269**	P	**P**	**22 35 27.2**	**-0.8**
SOEI				IAmb	IAmb	22 35 42.7	
	comp=Z,15nm,0.6s						
TNTI	**Ternate**	**61.30**	**282**	P	**P**	**22 35 31.5**	**+0.2**
PSA00	**Pilbara Seismi**	**62.21**	**255**	P	**P**	**22 35 37.2**	**-0.2**
PSA00				IAmb	IAmb	22 35 40.6	
	comp=Z,3.2nm,1.1s						
MMRI	**Maumere**	**63.03**	**270**	P	**P**	**22 35 42.3**	**-0.6**
MMRI				IAmb	IAmb	22 35 51.6	
	comp=Z,11nm,0.5s						
LUWI	**Luwuk**	**64.93**	**278**	P	**P**	**22 35 54.7**	**-0.8**
DAV	**Davao City (W)**	**65.42**	**287**	LR	LR	23 04 34.6	
	comp=Z,31nm,18.0s,baz=122,slow=36						
QSPA	**South Pole Qui**	**71.10**	**180**	P	**P**	**22 36 33.7**	**+0.2**
	comp=Z,1.6nm,0.7s,baz=73,slow=1.9,SNR=6.6						
QSPA				LR	LR	23 05 08.5	
	comp=Z,81nm,19.1s,baz=8.0,slow=34						
	comp=Z,1.6nm,0.7s						
MJAR	**Matsushiro Arr**	**71.65**	**321**	P	**P**	**22 36 35.9**	**-1.1**
	comp=Z,1.8nm,0.8s,baz=164,slow=7.1,SNR=5.0						
MJAR				LR	LR	23 03 45.5	
	comp=Z,44nm,20.1s,baz=135,slow=32						
	comp=Z,1.8nm,0.8s						
SHEM	**Shemya Is, Ala**	**72.21**	**352**	LR	LR	23 03 06.4	
	comp=Z,78nm,20.9s,baz=188,slow=32						
JNU	**Nakatsue**	**74.22**	**314**	LR	LR	23 07 03.0	
	comp=Z,40nm,18.3s,baz=60,slow=34						
ASAJ	**Asahikawa**	**74.55**	**329**	LR	LR	23 06 07.7	
	comp=Z,40nm,20.3s,baz=123,slow=33						
TXAR	**Lajitas Array**	**82.63**	**56**	P	**P**	**22 37 39.4**	**+0.4**
	comp=Z,0.3nm,0.9s,baz=196,slow=11,SNR=5.1						
	comp=Z,0.3nm,0.9s						
KLR	**Kul'dur**	**83.48**	**327**	LR	LR	23 10 34.9	
	comp=Z,35nm,19.4s,baz=211,slow=33						
PDAR	**Pinedale Array**	**84.94**	**42**	P	**P**	**22 37 51.9**	**+1.2**
	comp=Z,0.4nm,0.8s,baz=247,slow=5.1,SNR=2.1						
	comp=Z,0.4nm,0.8s						
CMIG	**Matias Romero**	**85.11**	**70**	LR	LR	23 09 57.2	
	comp=Z,137nm,18.2s,baz=320,slow=32						
ILAR	**Eielson Array**	**85.93**	**11**	P	**P**	**22 37 56.4**	**+1.6**
	comp=Z,0.5nm,0.6s,baz=224,slow=6.0,SNR=11						
	comp=Z,0.5nm,0.6s						
ILAR	**Eielson Array**	**85.93**	**11**	P	**P**	**22 37 57.2**	**+2.4**
IMAR	**Indian Mountai**	**85.99**	**8**	P	**P**	**22 37 57.6**	**+2.6**
COLD	**Coldfoot**	**87.65**	**9**	P	**P**	**22 38 01.9**	**-1.3**
U49A	**Red Boiling Sp**	**99.22**	**55**	P	**Pdif**	**22 38 50.9**	**-6.2**
KURBB	**Kurchatov Array**	**115.83**	**318**	PKP	**PKiKP**	**22 43 58.5**	**+0.8**
	comp=Z,0.1nm,0.5s,baz=78,slow=2.2,SNR=1.5						

BRTR	**Keskin Array B**	**148.82**	**317**	PKPbc	**PKPbc**	**22 45 03.2 0.0**
	comp=Z,1.1nm,0.7s,baz=90,slow=1.4,SNR=7.2					
GERES	**GERESS Array B**	**149.64**	**351**	PKPbc	**PKiKP**	**22 45 06.1 +0.1**
	comp=Z,0.5nm,0.6s,baz=9.7,slow=4.4,SNR=2.0					
CONA	**Conrad Observa**	**150.14**	**347**	*e*PKiKP	**PKPab**	**22 45 14.6 +2.5**
	comp=Z,6.1nm,1.2s					
SQTA	**Sankt Quirin**	**151.56**	**353**	*e*PKP	**PKPab**	**22 45 15.3 -2.8**
	comp=Z,5.3nm,1.4s					
OBKA	**Obir**	**151.76**	**348**	*e*PKP	**PKiKP**	**22 45 13.0 +2.6**
	comp=Z,6.1nm,1.6s					
ABTA	**Abfaltersbach**	**151.87**	**351**	*e*PKP	**PKPab**	**22 45 15.9 -3.4**
	comp=Z,3.7nm,0.8s					

IDC 12 22:33:59.3±2.5, 5.°93S×129.°93E, h220km±37km, mb2.8/1, mbtmp3.6/5, Error ellipse: s-maj=66.6km s-min=19.0km az=84.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.21**	**15**	P	Pn	22 35 16.3	-0.6
	13nm,0.9s,baz=297,slow=23,SNR=8.3						
SIJI				S	S	22 36 11.4	-6.8
	7.6nm,0.2s,baz=217,slow=23,SNR=5.6						
FITZ	**Fitzroy Crossi**	**12.79**	**199**	P	Pn	22 36 51.7	-1.9
	1.6nm,0.8s,baz=24,slow=12,SNR=1.9						
WRA	**Warramunga Arr**	**14.57**	**163**	P	Pn	22 37 15.8	+0.2
	0.2nm,0.3s,baz=344,slow=12,SNR=6.6						
ASAR	**Alice Springs**	**18.04**	**168**	P	P	22 37 54.6	+0.2
	1.4nm,0.4s,baz=349,slow=11,SNR=19						
MKAR	**Makanchi Array**	**67.30**	**327**	P	P	22 44 30.9	+0.5
	0.2nm,0.6s,baz=134,slow=6.2,SNR=1.9						
	0.2nm,0.6s						

FUNV ***12*** *22:47:33.7, 6.°78N×73.°15W, h154km, MW3.2, Presumed earthquake*

RSNC ***12*** *22:47:34.0±0.0, 7.°1N±1.°7×7.°3W±.°, h144km±2km, M2.4, ML2.2*

ISC 12 22:47:32.6±1.4, 6.°84N±0.°04×73.°12W±0.°04, h150km±8km, n25, σ1°03/46, 1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.25**	**194**	P	**Pn**	**22 47 53.4**	**0.0**
BARC				S	**Sn**	**22 48 08.8**	**-0.3**
BRJC	**Barrancabermej**	**0.63**	**282**	P	**Pn**	**22 47 55.3**	**+0.6**
BRJC				S	**Sn**	**22 48 12.1**	**+0.6**
PAMC	**Pamplona, Colo**	**0.65**	**40**	P	**Pn**	**22 47 56.4**	**+1.0**
PAMC				S	**Sn**	**22 48 13.3**	**+0.6**
RUSC	**La Rusia**	**0.94**	**178**	P	**Pn**	**22 47 57.3**	**-0.2**
RUSC				S	**Sn**	**22 48 15.1**	**-1.3**
RUSC	**La Rusia**	**0.94**	**178**	*e*P	**Pn**	**22 47 57.3**	**-0.2**
RUSC				*e*S	**Sn**	**22 48 15.2**	**-1.2**
CAPV	**Capacho**	**1.30**	**38**	*i*P	**Pn**	**22 48 01.7**	**+1.3**
CAPV				*e*S	**Sn**	**22 48 22.0**	**+0.4**
PTBC	**PUERTO BERRIO,**	**1.36**	**258**	P	**Pn**	**22 48 00.3**	**-0.5**
PTBC				S	**Sn**	**22 48 21.2**	**-1.1**
SPBC	**San Pablo de B**	**1.51**	**219**	P	**Pn**	**22 48 02.3**	**-0.1**
SPBC				S	**Sn**	**22 48 24.0**	**-1.2**
NORC	**Norcasia**	**2.15**	**234**	P	**Pn**	**22 48 09.9**	**+0.3**
NORC				S	**Sn**	**22 48 36.6**	**-1.4**
CHIC	**Chingaza**	**2.28**	**196**	P	**Pn**	**22 48 11.3**	**-0.2**
CHIC				S	**Sn**	**22 48 40.6**	**-0.7**
ROSC	**El Rosal**	**2.32**	**211**	P	**Pn**	**22 48 13.6**	**+1.7**
HELC	**Santa Helena**	**2.48**	**255**	P	**Pn**	**22 48 15.5**	**+1.6**
HELC				S	**Sn**	**22 48 45.6**	**+0.1**
URIC	**San Jos de Ur**	**2.56**	**291**	P	**Pn**	**22 48 15.4**	**+0.9**
URIC				S	**Sn**	**22 48 46.0**	**-0.8**
SOCV	**Socops**	**2.67**	**57**	*e*P	**Pn**	**22 48 16.7**	**+0.9**
SOCV				*e*S	**Sn**	**22 48 49.0**	**-0.2**
GUY2C	**Guyana, Caldas**	**2.75**	**234**	P	**Pn**	**22 48 18.6**	**+1.3**
GUY2C				S	**Sn**	**22 48 53.2**	**+1.5**
VILC	**Villavicencio,**	**2.77**	**192**	P	**Pn**	**22 48 17.3**	**+0.1**
CBOC	**Ciudad Bolivar**	**3.03**	**252**	P	**Pn**	**22 48 22.0**	**+1.4**
CBOC				S	**Sn**	**22 48 58.5**	**+0.9**
SDV	**Santo Domingo**	**3.20**	**50**	*e*P	**Pn**	**22 48 23.4**	**+0.7**
SDV				*e*S	**Sn**	**22 49 00.1**	**-1.3**
ANIL	**Santa Ana**	**3.25**	**224**	P	**Pn**	**22 48 25.4**	**+1.8**
ANIL				S	**Sn**	**22 49 03.9**	**+1.0**
PRAC	**Prado**	**3.57**	**210**	P	**Pn**	**22 48 27.3**	**-0.1**
PRAC				S	**Sn**	**22 49 09.1**	**-0.7**
ORTC	**Ortega, Tolima**	**3.60**	**216**	P	**Pn**	**22 48 28.1**	**+0.3**
SJCC	**San Jacinto, C**	**3.66**	**326**	P	**Pn**	**22 48 28.2**	**-0.4**
SJCC				*e*P	**Pn**	**22 49 09.6**	**-2.4**
SJCC	**San Jacinto, C**	**3.66**	**326**	*e*P	**Pn**	**22 48 28.5**	**-0.1**
SJCC				*e*S	**Sn**	**22 49 09.9**	**-2.1**
URMC	**La Uribe, Meta**	**3.78**	**199**	P	**Pn**	**22 48 29.9**	**-0.3**
URMC				S	**Sn**	**22 49 14.9**	**+0.1**
YOTC	**Yotoco, Valle**	**4.28**	**229**	P	**Pn**	**22 48 36.2**	**-0.6**

IDC ***12*** *22:48:39.4±1.1, 10.°11S×160.°86E, h0km, mb4.1/11, mbtmp4.1/12, ML3.6/1, MS3.1/3, Error ellipse: s-maj=30.2km s-min=19.1km az=108.0*

ISC 12 22:48:45.4±1.0, 10.°15S±0.°1×160.°7E±0.°1, h37km, n21, σ0°58/14, mb4.1/11, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**0.99**	**312**	Pn	**Pn**	**22 49 02.7**	**0.0**
	9.2nm,0.3s,baz=54,slow=23,SNR=31						
HNR				Sn	**Sn**	**22 49 15.3**	**-0.1**
	18nm,0.3s,baz=139,slow=3.1,SNR=9.0						
HNR				LR	LR	22 49 33.2	
	comp=Z,30nm,19.0s,baz=170,slow=48						
DZM	**Mont Dzumac**	**13.13**	**156**	LR	LR	22 56 13.9	
	comp=Z,89nm,20.8s,baz=294,slow=35						
CTA	**Charters Tower**	**17.11**	**233**	P	**P**	**22 52 42.2**	**-0.9**
	0.1nm,0.3s,baz=61,slow=11,SNR=1.3						
CTA				LR	LR	22 57 58.6	
	comp=Z,69nm,18.5s,baz=63,slow=32						
	5.2nm,0.7s						
WRA	**Warramunga Arr**	**27.23**	**246**	P	**P**	**22 54 26.1**	**-0.1**
	1.9nm,0.8s,baz=73,slow=9.4,SNR=12						
	1.9nm,0.8s						
STKA	**Stephens Creek**	**27.98**	**216**	P	**P**	**22 54 32.7**	**0.0**
	0.5nm,0.4s,baz=342,slow=22,SNR=3.5						
	0.5nm,0.4s						
GUMO	**Guam**	**28.29**	**326**	LR	LR	23 04 42.7	
	comp=Z,41nm,20.5s,baz=70,slow=34						
ASAR	**Alice Springs**	**28.90**	**239**	P	**P**	**22 54 41.9**	**+0.8**
	0.6nm,0.8s,baz=63,slow=9.8,SNR=4.3						
	0.6nm,0.8s						
H11S2	**WAKE ISLAND Hy**	**29.01**	**12**	T	T	23 23 34.1	
	baz=194,slow=76,SNR=26						
H11S3	**WAKE ISLAND Hy**	**29.01**	**12**	T	T	23 23 32.3	
	baz=194,slow=76,SNR=19						
H11S1	**WAKE ISLAND Hy**	**29.03**	**12**	T	T	23 23 33.9	
	baz=194,slow=76,SNR=14						
H11N1	**WAKE ISLAND Hy**	**30.24**	**12**	T	T	23 25 01.5	
	baz=193,slow=76,SNR=34						
H11N3	**WAKE ISLAND Hy**	**30.25**	**12**	T	T	23 25 03.7	
	baz=193,slow=76,SNR=16						
H11N2	**WAKE ISLAND Hy**	**30.26**	**12**	T	T	23 25 04.1	
	baz=193,slow=76,SNR=43						
KSRS	**Korea Array**	**56.39**	**329**	P	**P**	**22 58 23.7**	**+0.6**
	1.7nm,0.6s,baz=159,slow=7.7,SNR=3.6						
	1.7nm,0.6s						
KLR	**Kul'dur**	**64.31**	**339**	P	**P**	**22 59 16.8**	**-0.2**
	2.3nm,1.0s,baz=187,slow=3.4,SNR=4.5						
	2.3nm,1.0s						
CMAR	**Chiang Mai Arr**	**67.19**	**295**	P	**P**	**22 59 36.9**	**+0.6**
	1.0nm,0.5s,baz=128,slow=5.0,SNR=6.3						
	1.0nm,0.5s						
MA2	**Magadan**	**69.89**	**355**	P	**P**	**22 59 52.4**	**+0.1**
	2.1nm,0.3s,baz=158,slow=19,SNR=4.6						
	2.1nm,0.3s						
SONM	**Songino Array**	**75.02**	**326**	P	**P**	**23 00 23.4**	**+0.2**
	1.1nm,0.7s,baz=146,slow=7.0,SNR=8.8						
	1.1nm,0.7s						
MAW	**Mawson**	**83.72**	**202**	P	**P**	**23 01 10.2**	**+0.1**
	4.2nm,0.3s,baz=56,slow=24,SNR=8.7						
	4.2nm,0.3s						
ILAR	**Eielson Array**	**84.25**	**20**	P	**P**	**23 01 12.7**	**-0.2**
	0.8nm,0.6s,baz=256,slow=5.1,SNR=14						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**89.45**	**318**	P	**P**	**23 01 37.5**	**-1.1**
	0.1nm,0.5s,baz=107,slow=7.9,SNR=2.0						
	0.1nm,0.5s						

IDC 12 22:53:34.9±6.7, 19.°43S×177.°16W, h552km±58km, mb3.0/4, mbtmp3.9/5, Error ellipse: s-maj=220.2km s-min=30.0km az=157.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.85**	**290**	P	P	22 55 03.7	0.0
	2.1nm,0.4s,baz=108,slow=14,SNR=4.3						
CTA	**Charters Tower**	**34.40**	**263**	P	P	22 59 36.5	-0.2
	8.0nm,1.0s,baz=78,slow=9.3,SNR=1.9						
	8.0nm,1.0s						
ASAR	**Alice Springs**	**45.54**	**256**	P	P	23 01 05.6	-0.2
	3.5nm,0.9s,baz=88,slow=8.6,SNR=18						
	3.5nm,0.9s						
WRA	**Warramunga Arr**	**45.54**	**261**	P	P	23 01 05.8	0.0
	0.7nm,0.4s,baz=98,slow=8.1,SNR=24						
	0.7nm,0.4s						
TXAR	**Lajitas Array**	**85.82**	**57**	P	P	23 05 16.5	-0.1
	0.1nm,0.5s,baz=240,slow=5.1,SNR=1.5						
	0.1nm,0.5s						

DJA 12 22:54:47.8±0.3, 3.°S±2.°×11.°9E±.°, h10km, M2.6/11, MLv2.6/11, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TTSI	**Tana Toraja**	**0.43**	**109**	P	Pg	22 54 56.5	+0.2
TTSI				S	Sg	22 55 03.0	+0.9
TTSI	**Tana Toraja**	**0.43**	**109**	P	Pg	22 54 56.0	-0.3
TTSI				S	Sg	22 55 02.8	+0.7
MMSI	**Mamuju**	**0.54**	**293**	P	Pb	22 54 58.9	-0.5
MMSI				S	Sb	22 55 07.4	+0.1
MMSI	**Mamuju**	**0.54**	**293**	P	Pg	22 54 57.8	-0.6
MMSI				S	Sb	22 55 07.1	-0.2
PMSI	**Majene**	**0.78**	**220**	P	Pb	22 55 04.0	+0.6
PMSI	**Majene**	**0.78**	**220**	P	Pg	22 55 03.1	+0.3
SPSI	**Sidrap Palu**	**1.12**	**161**	P	Pn	22 55 10.0	+0.5
SPSI	**Sidrap Palu**	**1.12**	**161**	P	Pb	22 55 09.0	-0.2
KAPI	**Kappang**	**2.13**	**171**	P	Pb	22 55 26.1	-0.4

NOU ***12*** *22:55:12.2, 39.°13S×174.°89E, h210km, MLv3.5/12, North Island, New Zealand*

WEL ***12*** *22:55:14.8±0.8, 39.°3S±6.°×17.°5E±.°, h191km±5km, M3.0/31, MLv3.0/31, Error ellipse: s-maj=8.0km s-min=7.3km az=19.1, confirmed*

ISC 12 22:55:08.7±1.8, 39.°01S±0.°07×174.°82E±0.°05, h234km±10km, n89, σ1°81/104, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PKVZ	**Pokaka**	**0.49**	**124**	P	**Pn**	**22 55 41.5**	**+1.7**
HIZ	**Hauiti**	**0.50**	**3**	P	**Pn**	**22 55 41.0**	**+1.2**
PREZ	**Palmer Road**	**0.61**	**237**	P	**Pn**	**22 55 42.3**	**+2.1**
MTVZ	**Mangateitei**	**0.63**	**127**	P	**Pn**	**22 55 42.1**	**+1.9**
NGZ	**Ngauruhoe**	**0.63**	**105**	P	**Pn**	**22 55 42.1**	**+1.7**
NGZ				S	**S**	**22 56 03.5**	**-1.7**
SNVZ	**South Ngauruho**	**0.66**	**105**	P	**Pn**	**22 55 42.4**	**+1.9**
SNVZ				S	**S**	**22 56 04.2**	**-1.3**
OTVZ	**Oturere**	**0.68**	**103**	P	**Pn**	**22 55 42.5**	**+1.9**
OTVZ				S	**S**	**22 56 03.7**	**-1.8**
KHEZ	**Kahui Hut**	**0.69**	**246**	P	**Pn**	**22 55 42.9**	**+2.3**
KHEZ	**Kahui Hut**	**0.69**	**246**	S	**S**	**22 56 05.2**	**-0.3**
KHEZ	**Kahui Hut**	**0.69**	**246**	P	**Pn**	**22 55 42.5**	**+1.9**
KHEZ				S	**S**	**22 56 04.7**	**-0.8**
TMVZ	**Te Maari**	**0.70**	**99**	P	**Pn**	**22 55 42.6**	**+1.9**
WAZ	**Wanganui**	**0.75**	**170**	P	**Pn**	**22 55 42.9**	**+2.2**
WAZ				S	**S**	**22 56 04.4**	**-1.5**
MOVZ	**Moawhango**	**0.82**	**119**	P	**Pn**	**22 55 42.6**	**+1.4**
MOVZ				S	**S**	**22 56 03.4**	**-3.2**
BKZ	**Black Stump Fm**	**1.31**	**97**	P	**Pn**	**22 55 45.8**	**+1.7**
KWHZ	**Kaweka Forest**	**1.31**	**109**	P	**Pn**	**22 55 46.3**	**+2.2**
KWHZ				S	**S**	**22 56 10.7**	**-1.1**
KRHZ	**Kereru**	**1.36**	**118**	P	**Pn**	**22 55 46.4**	**+2.0**
KRHZ				S	**S**	**22 56 10.5**	**-1.9**
TSZ	**Takapari Road**	**1.37**	**140**	P	**Pn**	**22 55 46.7**	**+2.2**
TSZ				S	**S**	**22 56 10.8**	**-1.8**
PNHZ	**Pukenui**	**1.40**	**131**	P	**Pn**	**22 55 45.4**	**+0.7**
PNHZ				S	**S**	**22 56 11.4**	**-1.6**
MCHZ	**McNeill Hill**	**1.52**	**107**	P	**Pn**	**22 55 48.3**	**+2.7**
MCHZ				S	**S**	**22 56 14.4**	**-0.2**
MTHZ	**Maungataniwha**	**1.58**	**85**	P	**Pn**	**22 55 48.0**	**+1.8**
MTHZ				S	**S**	**22 56 13.0**	**-2.6**
MUGZ	**Murupara**	**1.62**	**71**	P	**Pn**	**22 55 47.7**	**+1.3**
DVHZ	**Dannev

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMDM	**Guralp CMG5TDE**	**0.81**	**103**	*eP*	**Pn**	**23 01 29.8**	**+0.6**
DMDM				*eS*	**Sn**	**23 01 41.3**	**+0.1**
PSMG	**Mucurapo Girls**	**0.83**	**105**	*eS*	**Sn**	**23 01 41.6**	**-0.1**
TRN	**Trinidad (W)**	**0.96**	**104**	*eP*	**Pn**	**23 01 30.8**	**-0.2**
TRN				*eS*	**Sn**	**23 01 44.0**	**-0.4**
TRN	**Trinidad (W)**	**0.96**	**104**	*eP*	**Pn**	**23 01 31.3**	**+0.2**
TRN				*eS*	**Sn**	**23 01 43.9**	**-0.6**
GRFF	**Grenada Fort F**	**1.30**	**27**	*eP*	**Pn**	**23 01 35.3**	**-0.2**
GRFF				*eS*	**Sn**	**23 01 52.2**	**-0.1**
GRGR	**Grenville**	**1.42**	**29**	*eP*	**Pn**	**23 01 36.4**	**-0.5**
GRGR				*eS*	**Sn**	**23 01 54.6**	**-0.2**
GRGR	**Grenville**	**1.42**	**29**	*eP*	**Pn**	**23 01 36.6**	**-0.4**
GRGR				*eS*	**Sn**	**23 01 54.8**	**+0.1**
GRW	**Mount Saint Ca**	**1.44**	**28**	*eP*	**Pn**	**23 01 38.7**	**+1.4**
GRW				*eS*	**Sn**	**23 01 55.4**	**-0.1**
GRHS	**Sauteurs**	**1.50**	**28**	*eS*	**Sn**	**23 01 56.5**	**-0.4**
GRSS	**Sisters**	**1.58**	**27**	*eP*	**Pn**	**23 01 39.4**	**+0.3**
GRSS				*eS*	**Sn**	**23 01 58.7**	**-0.1**
PCRV	**Puerto La Cruz**	**2.35**	**253**	*eP*	**Pn**	**23 01 50.8**	**+1.3**
PCRV				*eS*	**Sn**	**23 02 15.6**	**-1.9**
BENV	**Beln**	**5.24**	**260**	*eP*	**Pn**	**23 02 29.3**	**+0.3**
CACV	**CAICARA DEL OR**	**5.29**	**232**	*eP*	Pn	23 02 25.1	-4.5
CACV				*eS*	Sn	23 03 16.7	-13

JMA ***12*** *23:35:39.9±0.2, 39.4N±0.7×14.4E, h11km±3km, MV3.2/21, FAR E OFF SANRIKU*

IDC ***12*** *23:35:59.0±10.0, 40.02N×140.30E, h0km, mb3.3/3, mbtmp3.2/4, ML2.0/1, Error ellipse: s-maj=212.8km s-min=40.1km az=85.0*

ISC 12 23:35:38.5±2.4, 39.5N±0.1×143.9E±0.2, h11km, n11, σ1§46/12, mb3.5/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.61**	**274**	P	**Pn**	**23 36 07.4**	**+0.6**
MIYJ				*eS*	**Sn**	**23 36 27.1**	**-0.5**
JTH	**Tanohata**	**1.63**	**287**	P	**Pn**	**23 36 08.4**	**+1.2**
OFUJ	**Ofunato**	**1.77**	**258**	P	**Pn**	**23 36 09.5**	**+0.3**
JOM	**Ohasama**	**2.01**	**271**	*eP*	**Pn**	**23 36 13.4**	**+0.9**
JMK	**Ichinoseki**	**2.14**	**257**	*eP*	**Pn**	**23 36 15.0**	**+0.8**
JIO	**Ouri**	**2.23**	**243**	P	**Pn**	**23 36 15.8**	**+0.3**
JYK	**Kaneyama**	**2.80**	**260**	*eP*	**Pn**	**23 36 24.5**	**+1.1**
MJAR	**Matsushiro Arr**	**5.36**	**239**	Pn	**Pn**	**23 36 59.5**	**+0.9**
MJAR	0.1nm,0.3s,baz=29,slow=11,SNR=4.8			Sn	Sn	23 37 39.7	-21
SONM	0.1nm,0.3s,baz=310,slow=18,SNR=1.3 3.3nm,0.8s **Songino Array**	**28.16**	**300**	P	**P**	**23 41 27.9**	**-3.0**
MKAR	0.2nm,0.2s,baz=98,slow=9.0,SNR=2.0 0.2nm,0.2s **Makanchi Array**	**44.52**	**300**	P	**P**	**23 43 51.0**	**+1.0**
KURBB	0.1nm,0.3s,baz=90,slow=6.5,SNR=1.6 0.1nm,0.3s **Kurchatov Arra**	**46.08**	**307**	P	**P**	**23 44 04.2**	**+1.9**
	0.4nm,0.6s,baz=82,slow=8.6,SNR=7.7 0.4nm,0.6s						

IDC ***12*** *23:44:26.5±1.9, 22.16S×67.34W, h156km±17km, mb3.7/11, mbtmp4.0/17, Error ellipse: s-maj=18.2km s-min=13.2km az=87.0*

SJA ***12*** *23:44:27.7±0.7, 22.21S×67.30W, h191km±7km, ML4.1, MW3.8*

NEIC ***12*** *23:44:28.9±2.0, 22.17S±0.02×67.5W±0.1, h206km±14km, mb4.3/7, ML4.1(GUC), Error ellipse: s-maj=17.2km s-min=1.9km az=94.0*

GUC ***12*** *23:44:28.0±0.7, 22.21S×67.33W, h202km±8km, ML4.1*

SCB ***12*** *23:44:29.8±1.4, 22.15S×67.31W, h162km±16km, MB5.4, ML4.3/3, Error ellipse: s-maj=5.6km s-min=3.8km az=0.0*

VAO ***12*** *23:44:37.5±0.5, 21.56S×66.76W, h216km±5km, mb3.9, Presumed earthquake*

ISC 12 23:44:28.8±0.6, 22.19S±0.04×67.36W±0.04, h189km±6km, n170, σ1§56/202, mb4.0/12, 9C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**1.07**	**225**		**Pn**	**23 44 59.5**	**+1.2**
YJA	**Yavi**	**1.71**	**90**	*eP*	**Pn**	**23 45 03.6**	**-0.5**
YJA	**Yavi**	**1.71**	**90**	*eP*	**Pn**	**23 45 03.6**	**-0.5**
YJA				*eS*	**Sn**	**23 45 29.0**	**-2.3**
YJA	**Yavi**	**1.71**	**90**	P	**Pn**	**23 45 03.7**	**-0.4**
PB09	**IPOC Station P**	**1.79**	**282**		**Pn**	**23 45 05.6**	**+1.0**
PB09				Sn	**Sn**	**23 45 33.4**	**+1.2**
PB09	**IPOC Station P**	**1.79**	**282**	↑*iP*	**Pn**	**23 45 05.5**	**+1.0**
PB09				*eS*	**Sn**	**23 45 32.9**	**+0.8**
PB09	**IPOC Station P**	**1.79**	**282**	*eP*	**Pn**	**23 45 04.9**	**+0.4**
PB09				*eS*	**Sn**	**23 45 33.6**	**+1.5**
PB09	**IPOC Station P**	**1.79**	**282**	P	**Pn**	**23 45 05.1**	**+0.6**
MOCB	**Mochara**	**1.86**	**60**	P	**Pn**	**23 45 04.4**	**-1.2**
PB06	**IPOC Station P**	**2.11**	**255**		**Pn**	**23 45 08.2**	**+0.3**
PB06				Sn	**Sn**	**23 45 38.1**	**-0.1**
PB06	**IPOC Station P**	**2.11**	**255**	↑*iP*	**Pn**	**23 45 08.3**	**+0.4**
PB06	comp=N,424nm,0.4s			IAML		23 45 44.3	
PB06	**IPOC Station P**	**2.11**	**255**	*eP*	**Pn**	**23 45 08.0**	**+0.1**
PB06				*eS*	**Sn**	**23 45 39.0**	**+0.9**
PB06	**IPOC Station P**	**2.11**	**255**	P	**Pn**	**23 45 08.6**	**+0.7**
PB03	**IPOC Station P**	**2.22**	**273**		**Pn**	**23 45 09.5**	**+0.4**
PB03				Sn	**Sn**	**23 45 40.0**	**-0.3**
PB03	**IPOC Station P**	**2.22**	**273**	↑*iP*	**Pn**	**23 45 09.3**	**+0.2**
PB03	comp=N,775nm,0.4s			IAML		23 45 41.0	
PB03	**IPOC Station P**	**2.22**	**273**	*eP*	**Pn**	**23 45 09.4**	**+0.4**
PB03				*eS*	**Sn**	**23 45 40.2**	**-0.1**
PB03	comp=Z,823nm,0.4s			IAML		23 45 41.2	
SALTA		**2.23**	**155**	*eP*	**Pn**	**23 45 10.8**	**+1.2**
SALTA		**2.23**	**155**	*eP*	**Pn**	**23 45 11.6**	**+2.0**
PB01	**IPOC Station P**	**2.28**	**300**		**Pn**	**23 45 09.9**	**+0.2**
PB01				Sn	**Sn**	**23 45 41.2**	**-0.2**
PB01	**IPOC Station P**	**2.28**	**300**	↑*iP*	**Pn**	**23 45 10.0**	**+0.2**
PB01	comp=N,1μm,0.3s			IAML		23 45 43.1	
PB01	**IPOC Station P**	**2.28**	**300**	*eP*	**Pn**	**23 45 10.0**	**+0.2**
PB01				*eS*	**Sn**	**23 45 41.5**	**+0.1**
PB01	comp=Z,488nm,0.3s			IAML		23 45 43.2	
PB01	**IPOC Station P**	**2.28**	**300**	P	**Pn**	**23 45 09.9**	**+0.2**
PB01				S	**Sn**	**23 45 40.4**	**-1.1**
PB01	comp=Z,806nm,0.3s			IAML		23 45 43.0	
PB07	**IPOC Station P**	**2.39**	**281**		**Pn**	**23 45 11.1**	**+0.1**
PB07				Sn	**Sn**	**23 45 43.2**	**-0.5**
PB07	**IPOC Station P**	**2.39**	**281**	*eP*	**Pn**	**23 45 11.5**	**+0.6**
PB07	comp=E,873nm,0.3s			IAML		23 45 44.9	
PB07	**IPOC Station P**	**2.39**	**281**	*eP*	**Pn**	**23 45 11.3**	**+0.3**
PB07				*eS*	**Sn**	**23 45 43.4**	**-0.3**
PB07	comp=Z,653nm,0.3s			IAML		23 45 44.9	
PB02	**IPOC Station P**	**2.51**	**290**		**Pn**	**23 45 12.4**	**+0.1**
PB02					**Sn**	**23 45 44.8**	**-1.3**
PB02	**IPOC Station P**	**2.51**	**290**	↑*iP*	**Pn**	**23 45 12.3**	**+0.1**
PB02	**IPOC Station P**	**2.51**	**290**	*eP*	**Pn**	**23 45 12.5**	**+0.3**
PB02				*eS*	**Sn**	**23 45 45.4**	**-0.7**
PB02	comp=Z,1μm,0.4s			IAML		23 45 46.6	
PB02	**IPOC Station P**	**2.51**	**290**	P	**Pn**	**23 45 12.6**	**+0.3**
PB02				S	**Sn**	**23 45 45.1**	**-1.0**
PB02	comp=Z,2μm,0.3s			IAML		23 45 46.7	
AOVT	**TarijaAcel**	**2.55**	**76**	P	**Pn**	**23 45 11.9**	**-1.0**
PB08	**IPOC Station P**	**2.63**	**320**		**Pn**	**23 45 14.8**	**+0.7**
PB08	**IPOC Station P**	**2.63**	**320**	↑*iP*	**Pn**	**23 45 14.9**	**+0.9**
PB08	comp=E,243nm,0.4s			IAML		23 45 50.9	
PB08	**IPOC Station P**	**2.63**	**320**	*eP*	**Pn**	**23 45 14.7**	**+0.7**
PB08				*eS*	**Sn**	**23 45 49.8**	**+0.6**
PB08	**IPOC Station P**	**2.63**	**320**	P	**Pn**	**23 45 15.0**	**+0.9**
PB05	**IPOC Station P**	**2.71**	**255**		**Pn**	**23 45 14.5**	**-0.1**
PB05	**IPOC Station P**	**2.71**	**255**	↑*iP*	**Pn**	**23 45 14.8**	**+0.2**
PB05	comp=E,270nm,0.3s			IAML		23 45 55.9	
PB05	**IPOC Station P**	**2.71**	**255**	*eP*	**Pn**	**23 45 14.9**	**+0.4**
PB05				*eS*	**Sn**	**23 45 49.2**	**-1.0**
PATCX	**Punta Patache**	**2.93**	**297**		**Pn**	**23 45 17.1**	**-0.1**
PATCX					**Sn**	**23 45 53.4**	**-1.5**
PATCX	**Punta Patache**	**2.93**	**297**	*eP*	**Pn**	**23 45 17.5**	**+0.3**
PATCX	**Punta Patache**	**2.93**	**297**	*eP*	**Pn**	**23 45 17.5**	**+0.3**
PATCX				*eS*	**Sn**	**23 45 54.1**	**-0.8**
PATCX	comp=Z,570nm,0.3s			IAML		23 45 55.2	
HMBC	**Humberstone**	**3.03**	**308**		**Pn**	**23 45 17.6**	**-0.8**
HMBC				Sn	**Sn**	**23 45 54.6**	**-2.4**
HMBC	**Humberstone**	**3.03**	**308**	*eP*	**Pn**	**23 45 18.1**	**-0.3**
HMBC				*eS*	**Sn**	**23 45 55.6**	**-1.4**
HMBC	comp=Z,536nm,0.4s			IAML		23 46 03.5	
GO01	**Chusmiza**	**3.04**	**325**		**Pn**	**23 45 19.5**	**+0.7**
GO01	**Chusmiza**	**3.04**	**325**	*eP*	**Pn**	**23 45 19.3**	**+0.4**
GO01	comp=E,442nm,0.2s			IAML		23 46 01.0	
GO01	**Chusmiza**	**3.04**	**325**	*eP*	**Pn**	**23 45 19.1**	**+0.2**
GO01				*eS*	**Sn**	**23 45 59.4**	**+1.5**
GO01	**Chusmiza**	**3.04**	**325**	P	**Pn**	**23 45 19.6**	**+0.7**
SLA	**San Lorenzo**	**3.04**	**146**	*eP*	**Pn**	**23 45 19.6**	**+1.0**
TA01	**Diego Aracena**	**3.08**	**301**		**Pn**	**23 45 18.5**	**-0.4**
TA01				Sn	**Sn**	**23 45 55.7**	**-2.3**
TA01	**Diego Aracena**	**3.08**	**301**	↑*eP*	**Pn**	**23 45 18.5**	**-0.4**
TA01	**Diego Aracena**	**3.08**	**301**	*eP*	**Pn**	**23 45 18.6**	**-0.4**
TA01				*eS*	**Sn**	**23 45 56.1**	**-1.9**
TA01	comp=Z,349nm,0.3s			IAML		23 45 58.2	
TA02	**Huaiquique**	**3.21**	**306**	*eP*	**Pn**	**23 45 19.8**	**-0.6**
TA02	**Huaiquique**	**3.21**	**306**	*eP*	**Pn**	**23 45 20.9**	**+0.4**
TA02				*eS*	**Sn**	**23 45 58.4**	**-2.5**
TA02	comp=Z,188nm,0.1s			IAML		23 46 02.7	
PB10	**IPOC Station P**	**3.23**	**245**		**Pn**	**23 45 20.2**	**-0.5**
PB10				Sn	**Sn**	**23 45 59.4**	**-1.7**
PB10	**IPOC Station P**	**3.23**	**245**	*eP*	**Pn**	**23 45 20.9**	**+0.2**
PB10				*eS*	**Sn**	**23 45 54.1**	**-7.0**
PB10				*eS*		23 45 59.8	
PB10	comp=Z,209nm,0.5s			IAML		23 46 02.3	
PB11	**IPOC Station P**	**3.23**	**318**		**Pn**	**23 45 20.6**	**-0.3**
PB11	**IPOC Station P**	**3.23**	**318**	*eP*	**Pn**	**23 45 20.5**	**-0.3**
PB11	**IPOC Station P**	**3.23**	**318**	*eP*	**Pn**	**23 45 20.5**	**-0.3**
PB11				*eS*	**Sn**	**23 46 00.7**	**-0.8**
PB11	comp=Z,209nm,0.3s			IAML		23 46 03.9	
PB11	**IPOC Station P**	**3.23**	**318**	P	**Pn**	**23 45 20.8**	**-0.1**
PB11				S	**Sn**	**23 45 59.3**	**-2.2**
PB11	comp=Z,505nm,0.2s			IAML		23 46 03.0	
PB14	**IPOC Station P**	**3.70**	**228**		**Pn**	**23 45 27.2**	**+0.5**
PB14				Sn	**Sn**	**23 46 10.6**	**-1.6**
PB14	**IPOC Station P**	**3.70**	**228**	*eP*	**Pn**	**23 45 27.4**	**+0.6**
PB14	**IPOC Station P**	**3.70**	**228**	*eP*	**Pn**	**23 45 27.0**	**+0.2**
PB14				*eS*	**Sn**	**23 46 10.9**	**-1.2**
PB14	comp=Z,215nm,0.2s			IAML		23 46 12.6	
PB14	**IPOC Station P**	**3.70**	**228**	P	**Pn**	**23 45 27.7**	**+0.9**
SOET	**ToroToro**	**4.31**	**20**	P	**Pn**	**23 45 33.8**	**-0.7**
PB16	**IPOC Station P**	**4.33**	**332**		**Pn**	**23 45 35.7**	**+0.6**
PB16	**IPOC Station P**	**4.33**	**332**	↑*eP*	**Pn**	**23 45 35.6**	**+0.6**
PB16	**IPOC Station P**	**4.33**	**332**	*eP*	**Pn**	**23 45 35.5**	**+0.5**
PB16	**IPOC Station P**	**4.33**	**332**	P	**Pn**	**23 45 36.1**	**+1.1**
AOEA	**Aiguile**	**4.46**	**27**	P	**Pn**	**23 45 35.7**	**-0.7**
PB12	**IPOC Station P**	**4.51**	**321**		**Pn**	**23 45 35.8**	**-1.1**
PB12	**IPOC Station P**	**4.51**	**321**	*eP*	**Pn**	**23 45 35.0**	**-1.9**
AC02	**Maricunga**	**4.90**	**199**		**Pn**	**23 45 42.3**	**+0.1**
AC01	**Pan de Azucar**	**4.93**	**216**		**Pn**	**23 45 41.8**	**-0.2**
PB13	**Visviri**	**4.99**	**336**		**Pn**	**23 45 42.1**	**-1.3**
PB18	**Visviri**	**4.99**	**336**	*eP*	**Pn**	**23 45 46.2**	**+2.8**
BBOE	**La Paz, Chanca**	**5.38**	**354**	P	**Pn**	**23 45 49.5**	**+1.0**
BBOD	**La Paz, Gloria**	**5.64**	**348**	P	**Pn**	**23 45 52.3**	**+0.4**
AC06	**Mina Casimiro**	**5.82**	**207**	Pn	**Pn**	**23 45 52.7**	**-0.9**
LPAZ	**La Paz**	**5.91**	**353**	P	**Pn**	**23 45 53.2**	**-2.3**
LPAZ	comp=Z,4.9nm,0.4s,baz=160,slow=11,SNR=19			S	**Sn**	**23 47 00.0**	**-3.7**
LPAZ	comp=Z,6.5nm,0.7s,baz=40,slow=9.1,SNR=4.8 **La Paz**	**5.91**	**353**		**Pn**	**23 45 54.5**	**-1.0**
LPAZ	**La Paz**	**5.91**	**353**	*eP*	**Pn**	**23 45 56.4**	**+0.9**
LPAZ	**La Paz**	**5.91**	**353**	P	**Pn**	**23 45 56.3**	**+0.9**
GO03	**Copiapo**	**5.98**	**205**	Pn	**Pn**	**23 45 55.1**	**-0.6**
AC05	**El Transito**	**7.12**	**201**		**Pn**	**23 46 09.5**	**-1.2**
LCO	**Las Campanas**	**7.43**	**203**		**Pn**	**23 46 13.2**	**-1.7**
CO01	**Juntas del Tor**	**8.14**	**197**	Pn	**Pn**	**23 46 22.6**	**-1.5**
SIV	**San Ignacio**	**8.56**	**45**	P	**Pn**	**23 46 25.9**	**-3.7**
SIV	comp=Z,35nm,0.3s,baz=223,slow=10,SNR=237			S	Sn	23 47 54.6	-11
MURT	comp=Z,33nm,0.6s,baz=291,slow=20,SNR=8.6 **Porto Murtinho**	**9.07**	**88**	*eP*	**Pn**	**23 46 37.3**	**+1.2**
CO03	**El Pedregal**	**9.12**	**198**	Pn	**Pn**	**23 46 35.2**	**-1.5**
CFA	**Coronel Fontan**	**9.41**	**185**	P	**Pn**	**23 46 39.7**	**-0.8**
CFA	comp=Z,0.8nm,0.4s,baz=352,slow=14,SNR=4.2			S	**Sn**	**23 48 19.8**	**-5.9**
CO02	comp=Z,1.9nm,0.4s,baz=158,slow=7.6,SNR=6.3 **Combarbal**	**9.55**	**199**	Pn	**Pn**	**23 46 40.3**	**-2.1**
CPUP	**Villa Florida**	**10.04**	**116**	P	**Pn**	**23 46 47.0**	**-1.8**
CPUP	**Villa Florida**	**10.04**	**116**	*eP*	**P**	**23 46 55.6**	**-1.7**
BDQN	**Bodoquena, MS**	**10.04**	**82**	*eP*	**Pn**	**23 46 48.3**	**-0.5**
PTLB	**Pontes e Lacer**	**10.27**	**51**		**Pn**	**23 46 49.6**	**-2.3**
PTLB	**Pontes e Lacer**	**10.27**	**51**	*eP*	**Pn**	**23 46 48.5**	**-3.4**
VA03	**San Esteban**	**10.91**	**194**		**Pn**	**23 47 01.7**	**+1.6**
AQDB	**Aquidauana**	**11.00**	**83**	Pn	**Pn**	**23 47 03.6**	**+2.4**
AQDB	**Aquidauana**	**11.00**	**83**	*eP*	**Pn**	**23 47 02.6**	**+1.3**
VILB	**Vilhena**	**11.44**	**38**		**Pn**	**23 47 05.4**	**-1.6**
VILB	**Vilhena**	**11.44**	**38**	*eP*	**Pn**	**23 47 05.1**	**-1.9**
AMBA	**Amambai (Brazi**	**11.46**	**96**	*eP*	**Pn**	**23 47 09.1**	**+2.0**
MT02	**Curacav**	**11.52**	**196**	Pn	**Pn**	**23 47 08.8**	**+1.0**
PSAL	**Palomas, Salto**	**12.43**	**138**	*eP*	**P**	**23 47 28.8**	**+5.0**
PP1B	**Ponte de Pedra**	**12.60**	**71**	*eP*	**Pn**	**23 47 21.1**	**-0.6**
SALV	**Santo Antonio**	**12.68**	**62**	*eP*	**Pn**	**23 47 21.2**	**-1.5**
BO02	**Sierra Bellavi**	**12.91**	**193**	P	**Pn**	**23 47 25.8**	**+0.2**
GO05	**Hualane**	**13.39**	**196**		**Pn**	**23 47 31.9**	**+0.4**
TRCB	**Terra Rica**	**13.63**	**95**	P	**P**	**23 47 37.2**	**-0.1**
TRCB	**Terra Rica**	**13.63**	**95**	*eP*	**P**	**23 47 37.0**	**-0.4**
PTGB	**Pitanga**	**14.27**	**103**	*eP*	**P**	**23 47 46.1**	**+1.7**
PDRB	**Porto dos Gac**	**14.62**	**46**	*eP*	**Pn**	**23 47 42.9**	**-4.2**
ITAB	**Concordia**	**14.72**	**113**		**P**	**23 47 49.2**	**-0.2**
BI02	**San Fabin de**	**14.82**	**192**		**P**	**23 47 50.5**	**0.0**
LDASE	**Londrina, Braz**	**15.03**	**98**	*eP*	**P**	**23 47 54.7**	**+1.8**
CLDB	**Colider**	**15.79**	**46**	*eP*	**Pn**	**23 47 59.3**	**-1.9**
ARAG	**Araguaiana, MT**	**16.05**	**69**	*eP*	**P**	**23 48 04.0**	**-0.2**
ITRB	**Iturama**	**16.08**	**84**	*eP*	**Pn**	**23 48 05.2**	**+0.5**
FRTB	**Fartura**	**16.46**	**97**	*eP*	**Pn**	**23 48 10.2**	**+0.9**
CNLB	**Canela**	**16.47**	**119**	*eP*	**Pn**	**23 48 14.3**	**+4.9**
TRQA	**Tornquist**	**16.48**	**165**	Pn	**Pn**	**23 48 09.9**	**+0.5**
TRQA	**Tornquist**	**16.48**	**165**	*eP*	**Pn**	**23 48 21.3**	**+12**
MAJ01	**Sao Joao Batis**	**17.45**	**111**	*eP*	**Pn**	**23 48 22.8**	**+2.0**
BB19B	**Bebedouro**	**17.55**	**90**	*eP*	**Pn**	**23 48 21.6**	**-0.6**
GO06	**Curarrehue**	**17.69**	**190**		**P**	**23 48 21.2**	**-0.9**
GO06	comp=Z,18nm,1.4s			IAmb	IAmb	23 48 27.3	
SNDB	**Serra Nova Dou**	**18.40**	**59**	*eP*	**P**	**23 48 28.7**	**-1.2**
IPMB	**Ipameri, GO**	**18.47**	**80**	*eP*	**P**	**23 48 30.4**	**-0.2**
PET01	**Itanhaem-SP**	**18.58**	**100**	*eP*	**P**	**23 48 31.9**	**+0.1**
PLCA	**Paso Flores**	**18.68**	**188**	P	**P**	**23 48 33.5**	**+0.7**
PLCA	comp=Z,1.6nm,0.9s,baz=340,slow=11,SNR=3.6 **Paso Flores**	**18.68**	**188**	P	**Pn**	**23 48 34.4**	**-1.0**
PLCA	comp=Z,12nm,1.4s			IAmb	IAmb	23 49 15.3	
PLCA	**Paso Flores**	**18.68**	**188**	*eP*	Pn	23 48 47.2	+12
TEFE	**Tefe**	**18.76**	**8**	*eP*	**P**	**23 48 33.3**	**-0.5**
VAO	**Valinhos**	**18.85**	**96**	P	**P**	**23 48 35.0**	**+0.1**
VAO	comp=Z,17nm,0.7s			IAmb	IAmb	23 48 35.9	
VAO	**Valinhos**	**18.85**	**96**	*eP*	**P**	**23 48 34.9**	**+0.1**
NPGB	**Novo Progresso**	**18.99**	**39**	*eP*	**P**	**23 48 35.0**	**-1.4**
BDFB	**Brasilia**	**19.42**	**74**	P	**P**	**23 48 40.8**	**-0.3**
BDFB	comp=Z,6.2nm,0.6s,baz=254,slow=11,SNR=12 **Brasilia**	**19.42**	**74**		**P**	**23 48 40.5**	**-0.5**
BDFB	comp=Z,11nm,1.0s			IAmb	IAmb	23 48 41.7	
PMNB	**Patos De Minas**	**19.95**	**83**	*eP*	**P**	**23 48 46.3**	**-0.4**
ITTB	**Itaituba**	**21.00**	**34**	*eP*	**P**	**23 48 55.9**	**-1.9**
BSCB	**Bom Sucesso**	**21.04**	**91**	*eP*	**P**	**23 48 58.4**	**+0.1**
DIAM	**Diamantina, MG**	**22.55**	**84**	*eP*	**P**	**23 49 12.9**	**-0.6**
JANB	**Januaria**	**22.95**	**76**	*eP*	**P**	**23 49 15.7**	**-1.2**
DUB01	**Friburgo-RJ**	**23.14**	**94**	*eP*	**P**	**23 49 20.6**	**+2.0**
SMTB	**Santa Maria do**	**23.17**	**58**	*eP*	**P**	**23 49 18.0**	**-0.8**
PRPB	**Parauapebas**	**23.26**	**49**	*eP*	**P**	**23 49 18.7**	**-0.9**
SDBA	**SAO DESIDERIO**	**23.52**	**69**	*eP*	**P**	**23 49 21.0**	**-1.1**
SJMB	**Sao Joao De Ma**	**24.76**	**87**	*eP*	**P**	**23 49 33.8**	**+0.5**
ALF01	**Guarapari-ES**	**24.84**	**91**	*eP*	**P**	**23 49 35.8**	**+1.8**
BOAV	**Boa Vista**	**25.33**	**16**	P	**P**	**23 49 37.0**	**-1.5**
BOAV	comp=Z,8.4nm,1.4s			IAmb	IAmb	23 49 45.0	
BOAV	**Boa Vista**	**25.33**	**16**	*eP*	**P**	**23 49 39.0**	**+0.6**
GUA01	**Guaratinga, BA**	**26.56**	**83**	*eP*	**P**	**23 49 49.8**	**+0.3**
MG05	**Puerto Natales**	**29.71**	**186**	P	**P**	**23 50 16.6**	**-0.4**
TXAR	**Lajitas Array**	**62.02**	**324**	P	**P**	**23 54 29.1**	**-0.3**
DBIC	comp=Z,0.2nm,0.7s,baz=143,slow=6.9,SNR=2.2 comp=Z,0.2nm,0.7s **Dimbokro**	**67.56**	**72**	P	**P**	**23 55 06.0**	**+0.7**
QSPA	comp=Z,2.7nm,0.8s,baz=269,slow=14,SNR=1.8 comp=Z,2.7nm,0.8s **South Pole Qui**	**68.01**	**180**	P	**P**	**23 55 09.4**	**+2.0**
PDAR	comp=Z,1.6nm,0.5s,baz=332,slow=0.7,SNR=12 comp=Z,1.6nm,0.5s **Pinedale Array**	**75.43**	**329**	P	**P**	**23 55 53.6**	**+1.6**
TORD	comp=Z,0.3nm,0.6s,baz=121,slow=5.0,SNR=2.4 comp=Z,0.3nm,0.6s **Torodi Ar. Bea**	**76.24**	**69**	P	**P**	**23 55 57.7**	**+0.7**
ULM	comp=Z,16nm,0.7s,baz=254,slow=5.3,SNR=132 **Lac du Bonnet**	**76.41**	**342**	P	**P**	**23 55 58.8**	**+1.7**
VNDA	comp=Z,1.7nm,0.5s,baz=132,slow=6.1,SNR=5.6 comp=Z,1.7nm,0.5s **Vanda**	**76.42**	**190**	P	**P**	**23 55 56.6**	**-0.3**
SCHQ	comp=Z,0.6nm,0.3s,baz=48,slow=2.6,SNR=6.4 comp=Z,0.6nm,0.3s **Schefferville**	**76.71**	**0**	P	**P**	**23 55 58.7**	**0.0**
TSUM	comp=Z,0.8nm,0.6s,baz=204,slow=5.9,SNR=3.5 comp=Z,0.8nm,0.6s **Tsumeb**	**78.47**	**106**	P	**P**	**23 56 11.1**	**+1.5**
BOSA	comp=Z,2.1nm,0.7s,baz=222,slow=9.1,SNR=3.6 comp=Z,2.1nm,0.7s **Boshof**	**81.86**	**117**	P	**P**	**23 56 29.4**	**+1.9**
ESDC	comp=Z,3.1nm,0.5s,baz=264,slow=4.7,SNR=16 comp=Z,3.1nm,0.5s **Sonseca Array**	**85.32**	**44**	P	**P**	**23 56 46.6**	**+2.0**
YKA	comp=Z,2.6nm,1.2s,baz=243,slow=7.1,SNR=6.0 comp=Z,2.6nm,1.2s **Yellowknife Ar**	**92.32**	**340**	P	**P**	**23 57 19.6**	**+2.6**
WRA	comp=Z,0.7nm,0.9s,baz=134,slow=3.5,SNR=12 comp=Z,0.7nm,0.9s **Warramunga Arr**	**133.06**	**208**	PKP	**PKiKP**	**00 03 24.4**	**+0.6**
KURBB	comp=Z,0.5nm,0.7s,baz=160,slow=2.0,SNR=5.2 **Kurchatov Arra**	**141.10**	**35**	PKP	**PKPdf**	**00 03 37.1**	**+0.7**
ZALV	comp=Z,0.3nm,0.3s,baz=305,slow=2.6,SNR=4.1 **Zalesovo Beam**	**141.94**	**27**	PKP	**PKPdf**	**00 03 38.4**	**+0.6**
MKAR	comp=Z,0.4nm,0.5s,baz=336,slow=3.3,SNR=4.5 **Makanchi Array**	**145.32**	**38**	PKPbc	**PKPab**	**00 03 45.9**	**+1.3**
HHC	comp=Z,1.7nm,0.8s,baz=300,slow=3.9,SNR=4.7 **Hu-ho-hao-te**	**161.37**	**3**	*eP*	**PKPdf**	**00 04 01.1**	**-6.0**
NJ2	**Nanjing**	**168.73**	**332**	*eP*	**PKPdf**	**00 04 10.0**	**-3.4**
NJ2	comp=Z,10.0nm,0.5s			pmax	pmax		
PZH	**PanZhiHua**	**169.18**	**64**	PKP	**PKPdf**	**00 04 09.2**	**-4.8**
PZH				PKP	**PKPdf**	**00 04 09.7**	**-4.3**

IDC 12 23:56:22.6±6.6, 17.81S×174.72W, h0km, mb4.2/2, mbtmp4.2/2, MS3.6/1, Error ellipse: s-maj=294.9km s-min=61.9km az=144.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.92**	**260**	LR	LR	00 18 08.4	
WRA	comp=Z,80nm,18.4s,baz=96,slow=35 **Warramunga Arr**	**48.10**	**259**	P	P	00 05 04.9	+0.3
ASAR	0.7nm,0.3s,baz=97,slow=7.7,SNR=44 0.7nm,0.3s **Alice Springs**	**48.19**	**254**	P	P	00 05 04.8	-0.5
BRTR	3.

KBK				⇑S		Sb	00 02 28.4	+1.0	
	78nm,0.3s								
KBK	**Karagaybulak**	**2.15**	**31**	⇑*i*P		Pn	00 01 57.4	-0.1	
KBK				⇑*i*S		Sn	00 02 25.0	+0.1	
BTK	**Batken**	**2.15**	**250**	⇓*i*P		Pn	00 01 56.7	-0.7	
BTK				⇓*i*S		Sn	00 02 23.9	-0.9	
FRU1	**Bishkek**	**2.18**	**23**	⇑*i*P		Pn	00 01 58.0	+0.3	
FRU1				⇑*i*S		Sn	00 02 25.9	+0.5	
CHMS	**Chumysh**	**2.39**	**23**	⇑P		Pb	00 02 03.5	-0.5	
	18nm,0.2s,SNR=27								
CHMS				⇑S		Sb	00 02 34.2	+0.2	
	80nm,0.8s								
CHMS	**Chumysh**	**2.39**	**23**	⇓*i*P		Pn	00 02 00.5	-0.1	
CHMS				⇓*i*S		Sn	00 02 30.3	-0.2	
BOOM	**Boomskoye usch**	**2.50**	**47**	⇓*i*P		Pn	00 02 02.3	0.0	
BOOM				⇓*i*S		Sn	00 02 33.3	-0.2	
ULHL	**Ulahol**	**2.53**	**55**	⇓P		Pb	00 02 05.6	-1.1	
	4.8nm,0.2s,SNR=9.9								
ULHL				⇑S		Sb	00 02 38.0	-0.4	
	19nm,0.2s								
ULHL	**Ulahol**	**2.53**	**55**	⇓*i*P		Pn	00 02 02.6	-0.1	
ULHL				⇓*i*S		Sn	00 02 34.1	-0.2	
USP	**Ospenovka**	**2.57**	**17**	⇑P		Pb	00 02 05.8	-1.5	
	7.0nm,0.2s,SNR=15								
USP				⇑S		Sb	00 02 38.2	-1.1	
	70nm,0.5s								
USP	**Ospenovka**	**2.57**	**17**	⇑*i*P		Pn	00 02 03.1	0.0	
USP				⇑*i*S		Sn	00 02 34.9	-0.2	
DZA	**Taraz**	**2.62**	**323**	Pg		Pb	00 02 07.3	-0.7	
	131nm,0.4s								
DZA				Lg		Lg	00 02 41.8		
	127nm,0.3s								
DZA	**Taraz**	**2.62**	**323**	*e*P		Pb	00 02 07.3	-0.7	
	131nm,0.4s								
DZA				*e*S		Sb	00 02 41.8	+1.1	
	127nm,0.3s								
TKM2	**Tokmak 2**	**2.64**	**36**	⇑P		Pb	00 02 07.2	-1.3	
	12nm,0.2s,SNR=35								
TKM2				⇓S		Sb	00 02 40.4	-1.1	
	7.3nm,0.3s								
TKM2	**Tokmak 2**	**2.64**	**36**	⇑*i*P		Pn	00 02 04.3	+0.1	
TKM2				⇑*i*S		Sn	00 02 36.8	-0.3	
CHMG	**Chimgan**	**2.71**	**287**	P		Pn	00 02 10.4	+0.8	
CHMG				S		Sg	00 02 46.2	-1.0	
CHRV	**Charvak**	**2.77**	**288**	P		Pn	00 02 07.0	+1.1	
SGDS	**Sogindy**	**2.78**	**18**	Pg		Pb	00 02 09.0	-1.7	
	1.5nm,0.7s								
SGDS				Lg		Lg	00 02 44.7		
	20nm,0.5s								
KST	**Kastek**	**2.91**	**39**	Pg		Pb	00 02 12.8	-0.2	
	4.1nm,0.6s								
KST				Lg		Lg	00 02 51.1		
	28nm,0.8s								
KST	**Kastek**	**2.91**	**39**	*e*P		Pb	00 02 12.8	-0.2	
	4.1nm,0.6s								
KST				*e*S		Sb	00 02 51.1	+2.0	
	28nm,0.3s								
TVKS	**Tavaksay**	**2.97**	**286**	S		Sb	00 02 51.9	+1.0	
DGS	**Degeres**	**2.98**	**35**	Pg		Pb	00 02 13.3	-0.8	
	9.5nm,0.7s								
DGS				Lg		Lg	00 02 52.1		
	29nm,0.6s								
DGS	**Degeres**	**2.98**	**35**	*e*P		Pb	00 02 13.3	-0.8	
	9.5nm,0.7s								
DGS				*e*S		Sb	00 02 52.1	+1.1	
	29nm,0.6s								
GAR	**Garm**	**3.02**	**234**	⇓*i*P		Pn	00 02 08.8	-0.6	
GAR				⇓*i*S		Sn	00 02 44.5	-1.8	
KDJ	**Kajisay**	**3.09**	**64**	⇑*i*P		Pn	00 02 10.5	+0.1	
KDJ				⇑*i*S		Sn	00 02 47.6	-0.4	
KK31	**Karatay Array**	**3.17**	**317**	⇑Pn		Pn	00 02 13.0	+1.6	
	0.5nm,0.2s,baz=132,slow=12,SNR=80								
KK31				⇓Pg		Pb	00 02 17.5	+0.1	
	5.2nm,0.3s,baz=132,slow=16,SNR=6.7								
KK31				Lg		Lg	00 02 60.0		
	12nm,0.4s,baz=135,slow=28,SNR=8.1								
MTBS	**Maitube**	**3.20**	**43**	Pg		Pb	00 02 18.8	+0.8	
	2.9nm,0.4s								
MTBS				Lg		Lg	00 03 01.5		
	31nm,0.7s								
MTBS	**Maitube**	**3.20**	**43**	*e*P		Pb	00 02 18.8	+0.8	
	2.9nm,0.4s								
MTBS				*e*S		Sg	00 03 01.5	-1.6	
	31nm,0.7s								
IZV	**Izvestkoviy**	**3.23**	**46**	Pg		Pb	00 02 19.1	+0.5	
	6.1nm,0.6s								
IZV				Lg		Lg	00 03 02.2		
	24nm,0.8s								
IZV	**Izvestkoviy**	**3.23**	**46**	*e*P		Pb	00 02 19.1	+0.5	
	6.1nm,0.6s								
IZV				*e*S		Sg	00 03 02.2	-1.9	
	24nm,0.8s								
KRBS	**Karabastau**	**3.32**	**29**	Pg		Pb	00 02 20.0	0.0	
	2.3nm,0.5s								
KRBS				Lg		Lg	00 03 03.2		
	28nm,1.2s								
KRBS	**Karabastau**	**3.32**	**29**	*e*P		Pb	00 02 20.0	0.0	
	2.3nm,0.5s								
KRBS				*e*S		Sb	00 03 03.2	+2.4	
	28nm,0.4s								
TARG	**Taragay, Kyrgy**	**3.40**	**73**	⇓*i*P		Pn	00 02 14.8	0.0	
TARG				⇓*i*S		Sn	00 02 55.0	-1.0	
TNSS	**Tian-Shan**	**3.42**	**48**	Pg		Pb	00 02 22.8	+0.8	
	1.7nm,0.6s								
TNSS				Lg		Lg	00 03 07.9		
	4.5nm,0.5s								
TNSS	**Tian-Shan**	**3.42**	**48**	*e*P		Pb	00 02 22.8	+0.8	
	1.7nm,0.6s								
TNSS				*e*S		Sg	00 03 07.9	-2.3	
	4.5nm,0.5s								
BRLS	**Borolday**	**3.50**	**311**	Pg		Pb	00 02 23.7	+0.7	
	8.1nm,0.3s								
BRLS				Lg		Lg	00 03 09.6		
	0.8nm,0.6s								
BRLS	**Borolday**	**3.50**	**311**	*e*P		Pb	00 02 23.7	+0.7	
	8.1nm,0.3s								
BRLS				*e*S		Sg	00 03 09.6	-2.9	
	18nm,0.3s								
MDOK	**Medeo**	**3.56**	**48**	Pg		Pb	00 02 24.9	+0.8	
	6.0nm,1.0s								
MDOK				Lg		Lg	00 03 12.0		
	30nm,1.0s								
KOTS	**Kotyrbulak**	**3.64**	**47**	Pg		Pb	00 02 26.9	+1.4	
	7.2nm,0.3s								
KOTS				Lg		Lg	00 03 15.5		
	32nm,0.7s								
KOTS	**Kotyrbulak**	**3.64**	**47**	*e*P		Pb	00 02 26.9	+1.4	
	7.2nm,0.3s								
KOTS				*e*S		Sg	00 03 15.5	-1.6	
	32nm,0.7s								
KTBS	**Karatobe**	**3.75**	**38**	Pg		Pb	00 02 28.3	+0.9	
	3.1nm,0.6s								
KTBS				Lg		Lg	00 03 17.8		
	10nm,0.9s								
KTBS	**Karatobe**	**3.75**	**38**	*e*P		Pb	00 02 28.3	+0.9	
	3.1nm,0.6s								
KTBS				*e*S		Sg	00 03 17.8	-3.1	
	10nm,0.9s								
CHGR	**Chuyangaron**	**3.96**	**238**	⇓*i*P		Pn	00 02 21.6	-0.6	
CHGR				⇓*i*S		Sn	00 03 06.9	-2.4	
PRZ	**Przheval'sk**	**4.06**	**64**	⇑*i*P		Pn	00 02 23.9	+0.2	
PRZ				⇑*i*S		Sn	00 03 10.8	-1.2	
BTLS	**Baital**	**4.25**	**6**	Pg		Pb	00 02 36.1	+0.4	
	3.0nm,1.7s								
BTLS				Lg		Lg	00 03 31.1		
	11nm,0.7s								
BTLS	**Baital**	**4.25**	**6**	*e*P		Pb	00 02 36.1	+0.4	
	3.0nm,1.7s								
BTLS				*e*S		Sb	00 03 31.1	+3.5	
	11nm,0.7s								
SATY	**Saty**	**4.32**	**57**	Pg		Pb	00 02 39.0	+2.0	
	2.5nm,0.7s								
SATY				Lg		Lg	00 03 36.4		
	10nm,0.7s								
KURS	**Kuram**	**4.40**	**51**	Pg		Pb	00 02 41.4	+3.0	
	3.3nm,0.7s								
KURS				Lg		Lg	00 03 39.9		
	5.0nm,0.9s								
ARXS	**Arharly**	**4.69**	**42**	Pg		Pb	00 02 44.5	+1.2	
	3.5nm,0.8s								
ARXS				Lg		Lg	00 03 45.8		
	11nm,0.6s								
ARXS	**Arharly**	**4.69**	**42**	*e*P		Pb	00 02 44.5	+1.2	
	3.5nm,0.8s								
ARXS				*e*S		Sb	00 03 45.8	+5.6	
	11nm,0.6s								
KPKS	**Kokpek**	**4.70**	**54**	Pg		Pb	00 02 46.4	+2.9	
	0.3nm,0.2s								
KPKS				Lg		Lg	00 03 48.6		
	14nm,1.0s								
KPKS	**Kokpek**	**4.70**	**54**	*e*P		Pb	00 02 46.4	+2.9	
	0.3nm,0.2s								
KPKS				*e*S		Sg	00 03 48.6	-2.7	
	14nm,1.0s								
UZB	**Uzynbulak**	**4.76**	**59**	Pg		Pb	00 02 46.0	+1.5	
	3.8nm,0.3s								
UZB				Lg		Lg	00 03 48.0		
	9.0nm,1.1s								
UZB	**Uzynbulak**	**4.76**	**59**	*e*P		Pb	00 02 46.0	+1.5	
	3.8nm,0.3s								
UZB				*e*S		Sb	00 03 48.0	+5.7	
	9.0nm,1.1s								
BLB	**Baldybastay**	**4.95**	**47**	Pg		Pb	00 02 49.1	+1.3	
	8.5nm,0.5s								
BLB				Lg		Lg	00 03 53.7		
	9.3nm,0.4s								
SHLS	**Shalkode**	**5.05**	**60**	Pg		Pg	00 02 55.8	-1.2	
	1.3nm,0.3s								
SHLS				Lg		Lg	00 04 04.8		
	10nm,1.2s								
SHLS	**Shalkode**	**5.05**	**60**	*e*P		Pg	00 02 55.8	-1.2	
	1.3nm,0.3s								
SHLS				*e*S		Sg	00 04 04.8	+2.4	
	10nm,1.2s								
KNOS	**Konyrlen**	**5.51**	**48**	Pg		Pb	00 03 00.6	+3.2	
	0.6nm,0.5s								
KNOS				Lg		Lg	00 04 12.9		
	2.6nm,0.8s								

IDC ***13*** *00:09:17.9±1.8, 6°23S×129°44E, h179km±19km, mb3.6/7, mbtmp4.5/13, Error ellipse: s-maj=21.0km s-min=12.5km az=62.0*
NEIC ***13*** *00:09:18.5±1.7, 6°18S±0°07×129°51E±0°08, h181km±8km, mb4.4/15, Error ellipse: s-maj=11.0km s-min=10.0km az=90.0*
DJA ***13*** *00:09:18.1±0.4, 6°S×3°×13°0E±°, h242km±8km, M4.6/25, mB5.2/10, mb4.5/10, MLv4.7/25, Mw(mB)4.6/10*

ISC 13 00:09:19.7±0.5, **6°36S**±0°05×**129°53E**±0°05, **h200**km, **n79,** σ1**873**/83, **mb4.1**/12, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.86**	**12**	P	**Pn**	**00 09 55.9**	**-0.9**
BNDI	**Bandanaira**	**1.86**	**12**	P	**Pn**	**00 09 56.7**	**-0.1**
SAUI	**Saumlaki**	**2.39**	**133**	P	**Pn**	**00 10 01.1**	**-1.2**
SAUI	**Saumlaki**	**2.39**	**133**		**Pn**	**00 10 02.9**	**+0.5**
SAUI	**Saumlaki**	**2.39**	**133**	P	**Pn**	**00 10 03.9**	**+1.6**
AAI	**Ambon**	**2.97**	**333**	P	Pn	00 10 13.6	+4.7
MSAI	**Masohi**	**3.05**	**349**	P	**Pn**	**00 10 09.2**	**-0.7**
KRAI	**Karang Ratu**	**3.22**	**339**	P	**Pn**	**00 10 12.8**	**+0.8**
NLAI	**Namlea**	**3.93**	**322**	P	**Pn**	**00 10 21.3**	**+0.7**
KMPI	**Kaimana, Papua**	**4.95**	**57**	P	**Pn**	**00 10 31.7**	**-1.7**
SANI	**Sanana**	**5.55**	**320**	P	**Pn**	**00 10 41.8**	**+0.7**
SANI	**Sanana**	**5.55**	**320**	S	**Sn**	**00 11 46.6**	**+1.1**
SANI	**Sanana**	**5.55**	**320**	P	**Pn**	**00 10 40.2**	**-0.9**
	0.2nm982nm61nm,0.8s						
SIJI	**Sorong**	**5.72**	**18**	P	**Pn**	**00 10 39.8**	**-3.6**
	60nm,0.3s,baz=249,slow=23,SNR=79						
SIJI				S	Sn	00 11 38.1	-11
	72nm,0.3s,baz=277,slow=15,SNR=14						
SIJI	**Sorong**	**5.72**	**18**	P	**Pn**	**00 10 39.8**	**-3.6**
SWI	**Sorong**	**5.72**	**18**	P	**Pn**	**00 10 39.9**	**-3.5**
DRS	**Darwin Rock St**	**6.19**	**167**	P	**Pn**	**00 10 49.9**	**+0.6**
DRS	**Darwin Rock St**	**6.19**	**167**	S	**Sn**	**00 11 57.6**	**-2.8**
SOEI	**Soe**	**6.21**	**237**	P	**Pn**	**00 10 51.2**	**+1.4**
SOEI	**Soe**	**6.21**	**237**	S	**Sn**	**00 12 02.0**	**+0.9**
SOEI	**Soe**	**6.21**	**237**		**Pn**	**00 10 49.8**	**0.0**
SOEI	**Soe**	**6.21**	**237**	P	**Pn**	**00 10 50.0**	**+0.2**
	0.5nm22nm,0.5s						
MTN	**Manton Dam**	**6.64**	**166**		**Pn**	**00 10 55.0**	**-0.2**
RKPI	**Ransiki, Papua**	**6.68**	**44**	P	**Pn**	**00 10 53.3**	**-2.5**
BATI	**Baumata**	**6.95**	**236**	P	**Pn**	**00 10 58.7**	**-0.7**
	24nm,0.3s,baz=306,slow=2.2,SNR=11						
BATI				S	**Sn**	**00 12 16.3**	**-2.1**
	95nm,0.5s,baz=97,slow=23,SNR=13						
BATI	**Baumata**	**6.95**	**236**	P	**Pn**	**00 10 59.2**	**-0.1**
	0.5nm45nm,0.5s						
MWPI	**Manokwari, Pap**	**7.02**	**40**	P	**Pn**	**00 10 57.9**	**-2.4**
	11um296nm,0.9s						
KNRA	**Kununurra**	**9.29**	**185**		**Pn**	**00 11 29.4**	**-0.3**
TOLI2	**Tolitoli**	**11.46**	**310**	P	**P**	**00 12 03.0**	**-0.3**
PLAI	**Plampang**	**11.90**	**257**	P	**P**	**00 12 08.2**	**-0.1**
FITZ	**Fitzroy Crossi**	**12.27**	**198**	P	**Pn**	**00 12 06.5**	**-1.5**
	29nm,0.4s,baz=32,slow=10,SNR=236						
FITZ				S	**Sn**	**00 14 17.7**	**-7.3**
	6.6nm,0.3s,baz=112,slow=15,SNR=4.1						
WB0	**Warramunga Arr**	**14.14**	**161**		**Pn**	**00 12 31.1**	**-0.4**
WRAB	**Tennant Creek**	**14.29**	**161**	P	**Pn**	**00 12 33.8**	**+0.6**
WRAB	**Tennant Creek**	**14.29**	**161**	P	**P**	**00 12 35.1**	**+0.4**
WRA	**Warramunga Arr**	**14.29**	**161**	P	**Pn**	**00 12 33.0**	**-0.3**
	2.8nm,0.3s,baz=335,slow=13,SNR=59						
WRA				S	**S**	**00 15 06.7**	**-5.7**
	11nm,0.6s,baz=335,slow=22,SNR=10						
WRA	**Warramunga Arr**	**14.29**	**161**		**Pn**	**00 12 33.6**	**+0.4**
WR8	**Warramunga Arr**	**14.36**	**161**		**Pn**	**00 12 33.6**	**-0.5**
COEN	**Coen**	**15.40**	**120**	P	**P**	**00 12 48.5**	**+1.4**
COEN	**Coen**	**15.40**	**120**	P	**P**	**00 12 47.4**	**+0.3**
COEN				IAmb	IAmb	00 12 49.2	
	comp=Z,26nm,0.7s						
QIS	**Mount Isa**	**17.17**	**146**	P	**Pn**	**00 13 08.9**	**+0.8**
MBWA	**Marble Bar**	**17.51**	**212**	P	**Pn**	**00 13 14.2**	**+2.2**
MBWA	**Marble Bar**	**17.51**	**212**	P	**P**	**00 13 11.4**	**+1.2**
MBWA				IAmb	IAmb	00 13 24.4	
	comp=Z,15nn,1.1s						
AS31	**Alice Springs**	**17.72**	**167**		**Pn**	**00 13 14.8**	**+0.4**
ASAR	**Alice Springs**	**17.72**	**167**	P	**Pn**	**00 13 14.2**	**-0.3**
	comp=Z,17nm,0.4s,baz=348,slow=11,SNR=281						
ASAR				S	**S**	**00 16 24.2**	**-1.8**
	comp=Z,4.4nm,0.8s,baz=349,slow=23,SNR=12						
ASAR	**Alice Springs**	**17.72**	**167**		**Pn**	**00 13 14.9**	**+0.4**
ASAR					**S**	**00 16 25.9**	**-0.2**
PMG	**Port Moresby**	**17.72**	**101**	P	**Pn**	**00 13 14.9**	**+0.3**
	comp=Z,40nn,0.9s,baz=320,slow=5.1,SNR=5.2						
PMG	**Port Moresby**	**17.72**	**101**		**Pn**	**00 13 14.8**	**+0.2**
PSA00	**Pilbara Seismi**	**17.79**	**211**	P	**Pn**	**00 13 14.9**	**-0.4**
PSA00	**Pilbara Seismi**	**17.79**	**211**	P	**P**	**00 13 14.4**	**+1.1**
PSA00	**Pilbara Seismi**	**17.79**	**211**	P	**P**	**00 13 14.6**	**+1.3**
PSA00				IAmb	IAmb	00 13 22.2	
	comp=Z,13nm,0.6s						
MTSU	**Mount Surprise**	**18.58**	**130**	P	**Pn**	**00 13 23.7**	**-0.9**
CTA	**Charters Tower**	**21.21**	**132**	P	**P**	**00 13 51.8**	**+1.6**
	comp=Z,11nn,0.7s,baz=297,slow=9.9,SNR=9.0						
	comp=Z,11nm,0.7s						
CTAO	**Charters Tower**	**21.21**	**132**	P	**P**	**00 13 51.7**	**+1.6**
CTAO				IAmb	IAmb	00 13 52.6	
	comp=Z,15nn,0.9s						
MYKOM	**Kota Tinggi**	**26.88**	**287**	P	**P**	**00 14 42.4**	**+0.1**
MYKOM				IAmb	IAmb	00 14 44.3	
	comp=Z,8.2nn,1.0s						
BBOO	**Buckleboo**	**27.01**	**168**	P	**P**	**00 14 46.7**	**+3.5**
BBOO	**Buckleboo**	**27.01**	**168**	P	**P**	**00 14 43.3**	**0.0**
BBOO				IAmb	IAmb	00 14 51.6	
	comp=Z,11nn,1.1s						
GD1S	**Gladstone Soft**	**27.11**	**132**	P	**P**	**00 14 46.4**	**+2.3**
STKA	**Stephens Creek**	**27.78**	**158**	P	**P**	**00 14 51.6**	**+1.6**
	comp=Z,1.2nn,0.3s,baz=319,slow=9.3,SNR=4.5						
	comp=Z,1.2nn,0.3s						
STKA	**Stephens Creek**	**27.78**	**158**	P	**P**	**00 14 50.9**	**+0.8**
HTT	**Hallett**	**28.32**	**163**	P	**P**	**00 14 58.6**	**+3.7**
DZM	**Mont Dzumac**	**38.90**	**117**	P	**P**	**00 16 26.9**	**+0.6**
	comp=Z,4.0nn,0.8s,baz=246,slow=20,SNR=2.2						
	comp=Z,4.0nn,0.8s						
YATNC	**Mamie plateau,**	**39.29**	**117**	P	**P**	**00 16 30.1**	**+0.7**
QRZ	**Quartz Range**	**51.45**	**139**	P	**P**	**00 18 05.2**	**+0.7**
KHZ	**Kahutara**	**52.90**	**140**	P	**P**	**00 18 17.2**	**+2.1**
BKZ	**Black Stump Fm**	**53.38**	**135**	P	**P**	**00 18 20.3**	**+1.5**
BKZ	**Black Stump Fm**	**53.38**	**135**	P	**P**	**00 18 19.6**	**+0.7**
BKZ				IAmb	IAmb	00 18 27.1	
	comp=Z,6.9nm,1.1s						
MRZ	**Mangatainoka R**	**53.41**	**137**	P	**P**	**00 18 20.4**	**+1.4**
MRZ				IAmb	IAmb	00 18 20.7	
	comp=Z,12nn,1.1s						
EVN	**Everest**	**53.51**	**312**	P	**P**	**00 18 19.5**	**-1.1**
EVN				IAmb	IAmb	00 18 20.5	
	comp=Z,3.1nm,0.6s						
PLWZ	**Palliser**	**53.61**	**138**	P	**P**	**00 18 21.4**	**+1.0**
SONM	**Songino Array**	**57.69**	**342**	P	**P**	**00 18 49.2**	**-0.2**
	comp=Z,0.4nn,0.7s,baz=152,slow=6.5,SNR=2.8						
	comp=Z,0.4nn,0.7s						
SONM	**Songino Array**	**57.69**	**342**	P	**P**	**00 18 49.0**	**-0.4**
MKAR	**Makanchi Array**	**67.43**	**327**	P	**P**	**00 19 53.6**	**-0.1**
	comp=Z,1.5nn,0.5s,baz=126,slow=7.8,SNR=28						
	comp=Z,1.5nn,0.5s						
MKAR	**Makanchi Array**	**67.43**	**327**	P	**P**	**00 19 53.5**	**-0.3**
ZALV	**Zalesovo Beam**	**70.80**	**334**	P	**P**	**00 20 13.0**	**-1.3**
	comp=Z,0.8nn,0.5s,baz=145,slow=5.6,SNR=4.5						
	comp=Z,0.8nn,0.5s						
ZALV	**Zalesovo Beam**	**70.80**	**334**	P	**P**	**00 20 13.2**	**-1.1**
KURBB	**Kurchatov Arra**	**71.72**	**329**	P	**P**	**00 20 19.6**	**-0.2**
	comp=Z,1.4nn,0.7s,baz=130,slow=4.9,SNR=20						
	comp=Z,1.4nn,0.7s						
KURK	**Kurchatov**	**71.73**	**329**	P	**P**	**00 20 19.4**	**-0.4**
LPAZ	**La Paz**	**151.51**	**142**	PKPbc	**PKiKP**	**00 28 52.8**	**+0.6**
	comp=Z,0.7nn,0.4s,baz=180,slow=1.0,SNR=3.2						
LPAZ	**La Paz**	**151.51**	**142**		**PKPbc**	**00 28 52.0**	**+0.2**

BEO ***13*** *00:23:10.6±0.5, 41°42N×19°58E, h7km±4km, ML2.4/10*
SKO ***13*** *00:23:10.2, 41°55N×19°43E, h2km*
TIR ***13*** *00:23:11.1, 41°56N×19°58E, h36km±2km, Ml2.5/5*
PDG ***13*** *00:23:11.2±0.1, 41°55N×19°62E, h11km, ML2.5/13, Error ellipse: s-maj=0.2km s-min=0.2km az=0.0*
RHSSO ***13*** *00:23:11.2±0.7, 41°45N×19°57E, h10km±2km, ML2.6/6*
THE ***13*** *00:23:12.2, 42°N±6°×1°9E±°, h16km, M2.2/8, MLh2.2/8*

ISC 13 00:23:11.2±1.0, **41°53N**±0°02×**19°56E**±0°02, **h11**km±8km, **n81,** σ0**893**/130, **12C-7D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.29**	**128**	Pg	**Pg**	**00 23 17.1**	**0.0**
TIR				Sg	**Sg**	**00 23 21.2**	**0.0**
TIR				AML	AML	00 23 21.2	
	3.8nm,0.3s						
ULC	**Ulcinj**	**0.49**	**332**	*e*Pg	**Pg**	**00 23 20.6**	**-0.3**
ULC				*i* Sg	**Sb**	**00 23 28.6**	**-0.7**
SDA	**Shkodra**	**0.53**	**355**	Pg	**Pg**	**00 23 21.5**	**0.0**
SDA				Sg	**Sb**	**00 23 30.1**	**0.0**
SDA				AML	AML	00 23 32.1	
	0.4nm,0.4s						
PHP	**Peshkopia**	**0.68**	**76**	Pg	**Pg**	**00 23 23.6**	**-0.9**
PHP				Sg	**Sb**	**00 23 33.8**	**-0.9**
PHP				AML	AML	00 23 39.2	
	1.0nm,0.3s						
DRME	**Dracevica, Mon**	**0.71**	**337**	*e*Pg	**Pg**	**00 23 24.5**	**-0.6**
DRME				*i* Sg	**Sb**	**00 23 35.8**	**+0.2**
DRME	**Dracevica, Mon**	**0.71**	**337**	*e*Pg	**Pg**	**00 23 24.8**	**-0.3**
DRME				*e*Sg	**Sn**	**00 23 37.3**	**-1.0**
BUM	**Brajici-Budva**	**0.92**	**328**	*e*Pg	**Pg**	**00 23 28.4**	**-0.5**
BUM				*i* Sg	**Sn**	**00 23 42.8**	**-0.6**
PDG	**Podgorica**	**0.93**	**346**	⇓P	**Pn**	**00 23 29.6**	**-0.6**
PDG				⇑S	**Sn**	**00 23 43.6**	**0.0**
PDG	**Podgorica**	**0.93**	**346**	Pg	**Pg**	**00 23 28.6**	**-0.5**
PDG				Sg	**Sn**	**00 23 42.5**	**-1.1**
PDG	**Podgorica**	**0.93**	**346**	*e*Pg	**Pg**	**00 23 28.8**	**-0.3**
PDG				*e*Sg	**Sn**	**00 23 45.1**	**+1.5**
PDG	**Podgorica**	**0.93**	**346**	*e*Pg	**Pg**	**00 23 28.4**	**-0.7**
PDG				*i* Sg	**Sn**	**00 23 42.9**	**-0.6**
PDG	**Podgorica**	**0.93**	**346**	*e*Pg	**Pg**	**00 23 28.6**	**-0.5**
PDG				*e*Sg	**Sn**	**00 23 43.0**	**-0.6**
OHR	**Ohrid**	**1.02**	**114**	*i* Pg	**Pg**	**00 23 30.5**	**-0.4**
OHR				*i* Sg	**Sn**	**00 23 46.4**	**+0.4**
VLO	**Vlora**	**1.06**	**183**	Pg	**Pn**	**00 23 32.6**	**+0.6**
VLO				Sg	**Sb**	**00 23 46.4**	**+1.0**
VLO				AML	AML	00 23 53.1	
	1.8nm,0.3s						
VLO	**Vlora**	**1.06**	**183**	P	**Pn**	**00 23 32.4**	**+0.4**
VLO				S	**Sn**	**00 23 47.6**	**+0.9**
PVY	**Plav**	**1.11**	**16**	*e*Pg	**Pg**	**00 23 31.1**	**-1.5**
PVY				*i* Sg	**Sn**	**00 23 48.1**	**-0.1**
CEME	**Cevo**	**1.12**	**335**	*e*Pg	**Pb**	**00 23 32.0**	**-0.8**
CEME				*i* Sg	**Sn**	**00 23 49.9**	**+1.4**
HCY	**Herceg Novi**	**1.21**	**320**	*e*Pg	**Pn**	**00 23 33.8**	**-0.4**
HCY				*i* Sg	**Sn**	**00 23 53.3**	**+2.7**
HCY	**Herceg Novi**	**1.21**	**320**	⇑*i*Pg	**Pg**	**00 23 35.1**	**+0.5**
HCY				*e*Sg	**Sn**	**00 23 52.4**	**+1.8**
KBN	**Korca**	**1.30**	**134**	Pg	**Pb**	**00 23 35.7**	**+0.1**
KBN				Sg	**Sn**	**00 23 52.8**	**+0.1**
KBN	**Korca**	**1.30**	**134**	P	**Pb**	**00 23 35.9**	**+0.3**
KBN				S	**Sg**	**00 23 54.3**	**+1.4

BLY	**Banja Luka**	**3.66**	**332**	*e*Pn		**Pn**	**00 24 08.1**	**+0.3**
BLY				*e*Sn		**Sn**	**00 24 52.2**	**+1.3**
HERR	**Herculane**	**3.95**	**31**	⇑P		**Pn**	**00 24 12.5**	**+0.7**
BZS	**Buzias**	**4.35**	**19**	⇓P		**Pn**	**00 24 17.7**	**+0.4**
BZS	**Buzias**	**4.35**	**19**	*e*Pn		**Pn**	**00 24 17.7**	**+0.4**
GZR	**Gura Zlata**	**4.52**	**30**	⇓P		**Pn**	**00 24 20.5**	**+0.8**
MORH	**Mrgy, Hungar**	**4.73**	**352**	⇑P		**Pn**	**00 24 23.6**	**+1.1**
MORH	**Mrgy, Hungar**	**4.73**	**352**	*e*Pn		**Pn**	**00 24 22.9**	**+0.4**
ELND	**Elena**	**4.90**	**71**	⇑P		**Pn**	**00 24 25.5**	**+0.7**

WEL 13 00:24:37.8±1.0,**32°S**±8'×**17°9E**±1'4,**h100**km,**M4.4/6, mB4.3/5, ML4.4/7, MLv4.5/6, Mw(mB)3.4/3, Error ellipse: s-maj=20.6km s-min=4.8km az=116.0, confirmed, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.95**	**51**	P		Pn	00 25 35.4	-0.8
GLKZ				S		Sn	00 26 22.7	+1.1
HAZ	**Te Kaha**	**5.99**	**186**	P		Pn	00 26 06.2	+2.3
WMGZ	**Waiomatatini S**	**6.02**	**181**	P		Pn	00 26 05.4	+1.1
WMGZ				S		Sn	00 27 11.7	-0.1
PKGZ	**Pakihiroa**	**6.08**	**184**	P		Pn	00 26 05.7	+0.5
PKGZ				S		Sn	00 27 12.9	-0.4
RUGZ	**Raukumara Rang**	**6.21**	**186**	P		Pn	00 26 07.9	+0.9
RUGZ				S		Sn	00 27 17.3	+0.7
TWGZ	**Tauwhareparae**	**6.39**	**184**	S		Sn	00 27 21.4	+0.4
URZ	**Urewera**	**6.57**	**190**	P		Pn	00 26 11.2	-0.6
URZ				S		Sn	00 27 27.4	+2.3
MWZ	**Matawai**	**6.59**	**187**	P		Pn	00 26 11.7	-0.3
MWZ				S		Sn	00 27 26.1	+0.4
RIGZ	**Rimuhau**	**6.94**	**185**	P		Pn	00 26 19.3	+2.5
RTZ	**Ruatahuna**	**6.94**	**190**	P		Pn	00 26 15.9	-0.9
TLZ	**Tolley Road**	**6.98**	**200**	P		Pn	00 26 17.9	+0.5
MTHZ	**Maungataniwha**	**7.19**	**191**	P		Pn	00 26 20.4	+0.1
RAHZ	**Arahi**	**7.22**	**189**	P		Pn	00 26 18.4	-2.2
MHGZ	**Mahia Peninsul**	**7.37**	**184**	P		Pn	00 26 20.8	-1.8
BKZ	**Black Stump Fm**	**7.55**	**192**	P		Pn	00 26 23.8	-1.4
OTVZ	**Oturere**	**7.73**	**197**	P		Pn	00 26 27.3	-0.4
SNVZ	**South Ngauruho**	**7.76**	**197**	P		Pn	00 26 27.5	-0.6
KRHZ	**Kereru**	**8.04**	**192**	P		Pn	00 26 28.9	-2.9
KAHZ	**Kahuranaki**	**8.11**	**189**	P		Pn	00 26 30.0	-2.8
PNHZ	**Pukenui**	**8.33**	**193**	P		Pn	00 26 31.5	-4.2
PXZ	**Pawanui**	**8.34**	**189**	P		Pn	00 26 32.3	-3.4
PRHZ	**Porangahau**	**8.61**	**190**	P		Pn	00 26 35.4	-4.0
BFZ	**Birch Farm**	**9.07**	**191**	P		Pn	00 26 40.1	-5.7

*IDC **13** 00:41:00.8±6.7, 4°.30N×123°.10E, h533km±87km, mb2.9/5, mbtmp4.0/6, Error ellipse: s-maj=111.0km s-min=22.5km az=61.0*

ISC 13 00:41:01.3±1.4,**4°3N**±0°.3×**123°4E**±0°.6,**h550**km,**n6,** σ1**°73/8, mb3.9/5, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**14.40**	**179**	P		**P**	**00 44 04.7**	**-0.1**
	29nm,0.6s,baz=45,slow=5.7,SNR=5.2							
FITZ	**Fitzroy Crossi**	**22.35**	**174**	P		**P**	**00 45 19.0**	**+0.3**
	2.6nm,0.8s,baz=343,slow=7.7,SNR=8.3							
	2.6nm,0.8s							
WRA	**Warramunga Arr**	**26.37**	**156**	P		**P**	**00 45 55.6**	**+1.3**
	1.5nm,0.4s,baz=335,slow=9.6,SNR=40							
WRA				S		**S**	**00 49 46.2**	**-3.1**
	0.4nm,0.9s,baz=328,slow=18,SNR=2.3							
	1.5nm,0.4s							
ASAR	**Alice Springs**	**29.61**	**160**	P		**P**	**00 46 24.4**	**+1.8**
	1.2nm,0.4s,baz=338,slow=7.0,SNR=24							
	1.2nm,0.4s							
MKAR	**Makanchi Array**	**55.24**	**327**	P		**P**	**00 49 42.1**	**-0.7**
	0.2nm,0.4s,baz=120,slow=7.5,SNR=6.4							
MKAR				PcP		**PcP**	**00 50 35.3**	**-0.1**
	0.3nm,0.6s,baz=124,slow=3.2,SNR=3.8							
	0.2nm,0.4s							
KURBB	**Kurchatov Arra**	**59.51**	**329**	P		**P**	**00 50 11.6**	**-0.2**
	0.4nm,0.6s,baz=121,slow=8.3,SNR=2.7							
	0.4nm,0.6s							

*NEIC **13** 01:25:06.7±2.1, 5°.4S±0°.1×147°.4E±0°.1, h156km±12km, mb4.1/5, Error ellipse: s-maj=17.6km s-min=13.4km az=47.0*
*IDC **13** 01:25:08.7±1.5, 5°.68S×147°.32E, h177km±14km, mb3.2/3, mbtmp3.8/6, Error ellipse: s-maj=28.8km s-min=12.4km az=107.0*

ISC 13 01:25:08.4±1.1,**5°.57S**±0°.08×**147°.3E**±0°.1,**h170**km,**n16,** σ1**°62/20, mb3.6/4, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.81**	**181**	P		**Pn**	**01 26 07.0**	**+0.1**
	88nm,0.3s,baz=31,slow=7.9,SNR=36							
PMG				S		**Sn**	**01 26 50.3**	**-2.2**
	36nm,0.5s,baz=186,slow=23,SNR=1.5							
PMG	**Port Moresby**	**3.81**	**181**			**Pn**	**01 26 07.5**	**+0.6**
PMG					Sn	**Sn**	**01 26 50.5**	**-2.0**
JAY	**Jayapura**	**7.21**	**295**	P		**Pn**	**01 26 51.2**	**-0.1**
	5.1nm,0.3s,baz=149,slow=12,SNR=4.2							
COEN	**Coen**	**9.26**	**205**	Pn		**Pn**	**01 27 20.5**	**+2.1**
CTAO	**Charters Tower**	**14.46**	**184**	P		**P**	**01 28 30.1**	**+2.7**
MTN	**Manton Dam**	**17.47**	**244**	P		**P**	**01 29 00.5**	**-0.2**
MTN				IAmb		IAmb	01 29 17.0	
	comp=Z,17nm,1.4s							
WR8	**Warramunga Arr**	**18.93**	**220**	P		**P**	**01 29 17.7**	**+1.1**
WR8				IAmb		IAmb	01 29 54.4	
	comp=Z,12nm,1.4s							
WRA	**Warramunga Arr**	**19.03**	**220**	P		**P**	**01 29 17.9**	**+0.4**
	comp=Z,1.1nm,0.5s,baz=48,slow=12,SNR=21							
WRA				S		**S**	**01 32 41.9**	**-2.8**
	comp=Z,1.2nm,0.9s,baz=50,slow=18,SNR=3.9							
WRA	**Warramunga Arr**	**19.03**	**220**	P		**P**	**01 29 17.4**	**-0.2**
AS31	**Alice Springs**	**22.12**	**214**	P		**P**	**01 29 51.5**	**+1.1**
ASAR	**Alice Springs**	**22.12**	**214**	P		**P**	**01 29 51.3**	**+1.0**
	comp=Z,2.4nm,0.8s,baz=49,slow=8.9,SNR=16							
ASAR				S		**S**	**01 33 41.2**	**-0.7**
	comp=Z,1.9nm,0.8s,baz=34,slow=20,SNR=9.1							
	comp=Z,2.4nm,0.8s							
COCO	**West Island**	**50.19**	**259**	P		**P**	**01 33 45.8**	**-1.5**
SONM	**Songino Array**	**64.16**	**331**	P		**P**	**01 35 26.2**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=132,slow=7.4,SNR=2.2							
	comp=Z,0.2nm,0.3s							
ILAR	**Eielson Array**	**84.99**	**23**	P		**P**	**01 37 22.9**	**-1.4**
	comp=Z,0.3nm,0.6s,baz=238,slow=4.7,SNR=6.9							
	comp=Z,0.3nm,0.6s							
ILAR	**Eielson Array**	**84.99**	**23**	P		**P**	**01 37 22.1**	**-2.2**
J25K	**Salcha River,**	**85.52**	**24**	P		**P**	**01 37 26.2**	**-0.9**
J25K				IAmb		IAmb	01 37 36.9	
	comp=Z,3.9nm,1.3s							

*IDC **13** 01:30:32.9±4.8, 6°.10S×104°.18E, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=195.6km s-min=26.9km az=52.0*
*DJA **13** 01:30:39.4±1.5, 6°S±5'×10°4E±°, h28km±14km, M3.5/15, MLv3.5/15*

ISC 13 01:30:36.9±1.2,**6°5S**±0°.1×**104°3E**±0°.1,**h35**km,**n17,** σ1**°99/14, mb3.7/5, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**0.97**	**14**	P		**Pn**	**01 30 55.1**	**+1.0**
CGJI	**Cibinong**	**1.43**	**96**	P		**Pn**	**01 31 00.8**	**+0.5**
LWLI	**Liwa**	**1.47**	**352**	P		**Pn**	**01 31 01.7**	**+0.7**
BLSI	**Bandar Lampung**	**1.47**	**42**	P		**Pn**	**01 31 01.9**	**+0.9**
KLSI		**1.83**	**15**	P		**Pn**	**01 31 08.8**	**+2.8**
MDSI	**Maura Dua**	**1.98**	**357**	P		**Pn**	**01 31 09.7**	**+1.8**
MNAI	**Manna**	**2.47**	**328**	P		**Pn**	**01 31 17.1**	**+2.3**
BBJI	**Bungbulang**	**3.50**	**106**	P		**Pn**	**01 31 29.8**	**+0.9**
CMAR	**Chiang Mai Arr**	**25.33**	**348**	P		**P**	**01 35 58.1**	**-2.5**
	1.7nm,0.4s,baz=187,slow=10,SNR=5.6							
	1.7nm,0.4s							
WRA	**Warramunga Arr**	**32.11**	**118**	P		**P**	**01 37 04.5**	**+3.3**
	0.4nm,0.9s,baz=309,slow=8.8,SNR=6.8							
	0.4nm,0.9s							
SONM	**Songino Array**	**54.11**	**2**	P		**P**	**01 39 56.8**	**-1.6**
	0.5nm,0.7s,baz=175,slow=8.8,SNR=4.2							
	0.5nm,0.7s							
MKAR	**Makanchi Array**	**56.52**	**342**	P		**P**	**01 40 14.2**	**-1.4**
	0.2nm,0.3s,baz=147,slow=9.6,SNR=6.4							
	0.2nm,0.3s							
H04N2	**CROZET ISLANDS**	**59.91**	**220**	T		T	02 45 16.6	
	baz=68,slow=76,SNR=27							
H04N1	**CROZET ISLANDS**	**59.92**	**220**	T		T	02 45 16.6	
	baz=68,slow=76,SNR=27							
H04N3	**CROZET ISLANDS**	**59.93**	**220**	T		T	02 45 15.3	
	baz=68,slow=76,SNR=26							
ZALV	**Zalesovo Beam**	**62.39**	**347**	P		**P**	**01 40 54.6**	**-1.4**
	0.7nm,0.3s,baz=157,slow=7.7,SNR=4.8							
	0.7nm,0.3s							
TXAR	**Lajitas Array**	**145.21**	**46**	PKPbc		**PKPdf**	**01 50 11.2**	**-0.5**
	0.1nm,0.5s,baz=340,slow=3.6,SNR=3.8							

*RSNC **13** 01:54:27.3±0.0, 7°N±1'×7°2W±°, h-1km±2km, M1.9, ML1.8, MLv2.5*
*FUNV **13** 01:54:27.0, 7°.19N×72°.42W, h98km, MW2.8, Presumed earthquake*

ISC 13 01:54:24.6±1.5,**6°.95N**±0°.04×**72°.09W**±0°.04,**h3**km±12km, **n14,** σ0**°83/24, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PAMC	**Pamplona, Colo**	**0.72**	**302**	P		**Pg**	**01 54 38.5**	**+0.1**
PAMC				S		**Sg**	**01 54 47.1**	**-0.6**
CAPV	**Capacho**	**0.93**	**346**	*e*P		**Pb**	**01 54 44.0**	**+0.5**
CAPV				*e*S		**Sb**	**01 54 55.8**	**-0.6**
RUSC	**La Rusia**	**1.45**	**223**	P		**Pn**	**01 54 52.4**	**+0.4**
RUSC				S		**Sg**	**01 55 10.6**	**-0.5**
RUSC	**La Rusia**	**1.45**	**223**	*e*P		**Pn**	**01 54 52.4**	**+0.4**
RUSC				*e*S		**Sg**	**01 55 10.8**	**-0.3**
BRJC	**Barrancabermej**	**1.64**	**271**	P		**Pn**	**01 54 54.8**	**+0.5**
BRJC				S		**Sn**	**01 55 15.4**	**-0.6**
OCAC	**Ocana**	**1.77**	**316**	P		**Pn**	**01 54 56.9**	**+0.7**
OCAC				S		**Sn**	**01 55 18.9**	**-0.3**
SOCV	**Socops**	**1.80**	**43**	*e*P		**Pn**	**01 54 57.0**	**+0.5**
SOCV				*e*S		**Sn**	**01 55 20.9**	**+1.0**
PTBC	**PUERTO BERRIO,**	**2.39**	**260**	P		**Pn**	**01 55 05.1**	**+0.5**
PTBC				S		**Sn**	**01 55 33.3**	**-1.1**
SDV	**Santo Domingo**	**2.40**	**37**	P		**Pb**	**01 55 08.1**	**-0.5**
SDV				S		**Sb**	**01 55 40.4**	**+1.7**
SDV	**Santo Domingo**	**2.40**	**37**	*e*P		**Pn**	**01 55 05.3**	**+0.3**
SDV				*e*S		**Sn**	**01 55 33.2**	**-1.8**
CHIC	**Chingaza**	**2.83**	**215**	P		**Pn**	**01 55 12.0**	**+1.0**
CHIC				S		**Sn**	**01 55 45.3**	**-0.5**
BENV	**Beln**	**5.35**	**56**	*e*P		**Pn**	**01 55 45.4**	**-0.1**
CACV	**CAICARA DEL OR**	**5.54**	**83**	*e*P		Pn	01 55 54.8	+6.9
TACV	**Tcata**	**5.92**	**57**	*e*P		**Pn**	**01 55 52.6**	**-0.7**

*VAO **13** 02:07:56.3±0.5, 19°.99S×69°.40W, h73km±3km, mb5.5, Presumed earthquake*
*MOS **13** 02:07:59.1±1.1, 19°.80S×69°.13W, h87km, mb5.7/11, Error ellipse: s-maj=12.9km s-min=7.4km az=107.0*
*SJA **13** 02:08:01.4±0.7, 19°.93S×69°.38W, h114km±2km, ML5.4, MW5.1*
*GFZ **13** 02:08:01.8, 20°.01S×69°.21W, h103km, MW5.1, Moment Tensor Solution. s57 Moment tensor: Mrr=2.83; Mθθ2.55; Mθφ0.27; Mrθ0.48; Mθφ-3.24; Mφr2.17; Fault plane solution: NP1:φs157.00000°, δ62.00000°, λ-45.00000°. NP2:φs272.00000°, δ50.00000°, λ-143.00000°. Principal axes: T 4.9600, Plg6.0000°, Azm217.0000°; N -0.3900, Plg38.0000°, Azm312.0000°; P -4.5600, Plg50.0000°, Azm118.0000°;*
*NEIC **13** 02:08:02.6, 19°.96S×69°.34W, h107km*
*NEIC **13** 02:08:02.2, 19°.95S×69°.27W, h100km*
*IDC **13** 02:08:02.6±0.3, 19°.86S×69°.12W, h109km±2km, mb4.9/17, mbtmp5.3/20, MS3.9/37, Error ellipse: s-maj=13.0km s-min=9.8km az=65.0*
*NEIC **13** 02:08:02.2±2.2, 19°.93S±0°.04×69°.27W±0°.07, h103km±3km, mb5.5/315, Mwr5.2/46, Mww5.2/39, Mww5.4(GUC), Error ellipse: s-maj=9.1km s-min=5.8km az=104.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr-1.83; Mθθ3.49; Mθφ-1.66; Mrθ-0.49; Mθφ-4.59; Mφr3.80; Fault plane solution: M₀6.70000×10¹⁶ NP1: φs160.16000°, δ77.98000°, λ-38.53000°. NP2: φs259.57000°, δ52.46000°, λ-164.78000°. Principal axes: T 6.8704, Plg16.0000°, Azm215.0000°; N -0.3606, Plg50.0000°, Azm326.0000°; P -6.5097, Plg35.0000°, Azm113.0000°;*
*NEIC **13** 02:08:02.2, 19°.95S×69°.38W, h100km, Moment Tensor Solution. Duration: 2s0 Moment tensor: Scale 10¹⁶Nm; Mrr-2.56; Mθθ5.15; Mφφ-2.60; Mrθ0.06; Mθφ-4.59; Mφr3.36; Fault plane solution: M₀7.23000×10¹⁶ NP1: φs255.26000°, δ58.91000°, λ-158.74000°. NP2: φs153.90000°, δ71.91000°, λ-32.90000°. Principal axes: T 7.4839, Plg8.0000°, Azm207.0000°; N -0.5373, Plg53.0000°, Azm308.0000°; P -6.9467, Plg36.0000°, Azm111.0000°;*
*BJI **13** 02:08:03.1, 19°.78S×69°.56W, h110km, mB5.6/9*
*GUC **13** 02:08:03.0±0.8, 19°.96S×69°.45W, h112km±3km, ML5.4*
*GCMT **13** 02:08:07.2±0.2, 20°.01S±0°.01×69°.26W±0°.01, h141km±1km, MW5.2/127, Moment Tensor Solution. s84, c107; s127, c208; Duration: 1s0 Moment tensor: Scale 10¹⁶ Nm; Mrr-3.38±.15; Mθθ4.77±.18; Mφφ-1.40±.22; Mrθ0.19±.12; Mθφ-6.02±.14; Mφr4.74±.14; Best double couple: M₀8.75900×10¹⁶ NP1:φs263.00000°, δ53.00000°, λ-157.00000°. NP2:φs159.00000°, δ72.00000°, λ-39.00000°. Principal axes: T 8.9300, Plg12.0000°, Azm215.0000°; N -0.3510, Plg48.0000°, Azm318.0000°; P -8.5890, Plg40.0000°, Azm115.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 02:08:01.8±0.3,**19°92S**±0°.02×**69°.26W**±0°.04,**h108**km±2km, **h108**km:**pP-P, n722, σ1956/689, mb5.4/220, 22C-14D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.24**	**155**	P		**Pn**	**02 08 18.8**	**+1.1**
PB08				S		**Sn**	**02 08 31.1**	**+1.8**
PB08	**IPOC Station P**	**0.24**	**155**			**Pn**	**02 08 18.7**	**+1.1**
PB08					Sn	**Sn**	**02 08 30.5**	**+1.2**
PB08	**IPOC Station P**	**0.24**	**155**	⇓*i*P		**Pn**	**02 08 18.6**	**+1.0**
PB08				*i* S		**Sn**	**02 08 30.4**	**+1.0**
PB08				IAML			02 08 32.2	
	comp=E,130μm,0.3s							
PB08	**IPOC Station P**	**0.24**	**155**	*e*P		**Pn**	**02 08 18.5**	**+1.0**
PB08				*e*S		**Sn**	**02 08 31.6**	**+2.2**
PB08				IAML			02 08 35.2	
	comp=Z,68μm,0.5s							
GO01	**Chusmiza**	**0.26**	**14**			**Pn**	**02 08 18.8**	**+1.0**
GO01					Sn	**Sn**	**02 08 31.1**	**+1.4**
GO01	**Chusmiza**	**0.26**	**14**	⇓*i*P		**Pn**	**02 08 18.6**	**+0.9**
GO01				*i* S		**Sn**	**02 08 31.0**	**+1.4**
GO01	**Chusmiza**	**0.26**	**14**	*e*P		**Pn**	**02 08 18.6**	**+0.9**
GO01				*e*S		**Sn**	**02 08 31.5**	**+1.9**
GO01				IAML			02 08 32.0	
	comp=Z,144μm,1.1s							
PB11	**IPOC Station P**	**0.41**	**293**			**Pn**	**02 08 18.6**	**+0.6**
PB11					Sn	**Sn**	**02 08 30.9**	**+0.8**
PB11	**IPOC Station P**	**0.41**	**293**	⇓*i*P		**Pn**	**02 08 18.6**	**+0.6**
PB11				*i* S		**Sn**	**02 08 30.6**	**+0.4**
PB11				IAML			02 08 32.3	
	comp=E,449μm,0.5s							
PB11	**IPOC Station P**	**0.41**	**293**	*e*P		**Pn**	**02 08 18.5**	**+0.5**
PB11				IAML			02 08 33.9	
	comp=Z,97μm,0.4s							
TA02	**Huaiquique**	**0.89**	**247**	*i* P		**Pn**	**02 08 21.8**	**+0.1**
TA02				*i* S		**Sn**	**02 08 36.2**	**-0.4**
TA02	**Huaiquique**	**0.89**	**247**	*e*P		**Pn**	**02 08 21.8**	**+0.1**
TA02				*e*S		**Sn**	**02 08 36.5**	**-0.1**
TA02				IAML			02 08 37.2	
	comp=Z,285μm,0.5s							
TA01	**Diego Aracena**	**1.08**	**233**			**Pn**	**02 08 23.5**	**-0.1**
TA01					Sn	**Sn**	**02 08 38.8**	**-1.3**
TA01	**Diego Aracena**	**1.08**	**233**	⇓*i*P		**Pn**	**02 08 23.5**	**-0.1**
TA01				IAML			02 08 40.7	
	comp=E,163μm,0.4s							
TA01	**Diego Aracena**	**1.08**	**233**	*e*P		**Pn**	**02 08 23.2**	**-0.4**
TA01				IAML			02 08 43.5	
	comp=Z,34μm,0.8s							
PB01	**IPOC Station P**	**1.14**	**191**			**Pn**	**02 08 24.9**	**+0.5**
PB01	**IPOC Station P**	**1.14**	**191**	⇑*i*P		**Pn**	**02 08 24.6**	**+0.2**
PB01				*i* S		**Sn**	**02 08 41.5**	**0.0**
PB01				IAML			02 08 43.6	
	comp=N,138μm,0.4s							
PB01	**IPOC Station P**	**1.14**	**191**	*e*P		**Pn**	**02 08 24.9**	**+0.5**
PB01				*e*S		**Sn**	**02 08 42.1**	**+0.6**
PB01				IAML			02 08 43.7	
	comp=Z,46μm,0.5s							
PATCX	**Punta Patache**	**1.23**	**223**			**Pn**	**02 08 25.3**	**-0.1**
PATCX					Sn	**Sn**	**02 08 41.8**	**-1.4**
PATCX	**Punta Patache**	**1.23**	**223**	⇓*i*P		**Pn**	**02 08 25.3**	**-0.1**
PATCX				*i* S		**Sn**	**02 08 41.7**	**-1.5**
PATCX				IAML			02 08 51.0	
	comp=E,50μm,0.7s							
PATCX	**Punta Patache**	**1.23**	**223**	*e*P		**Pn**	**02 08 25.1**	**-0.3**
PATCX				IAML			02 08 51.1	
	comp=Z,41μm,0.7s							
PX02	**IPOC Station P**	**1.30**	**317**	⇓*i*P		**Pn**	**02 08 25.6**	**-0.7**
PB02	**IPOC Station P**	**1.51**	**203**			**Pn**	**02 08 29.1**	**+0.3**
PB02	**IPOC Station P**	**1.51**	**203**	⇑*i*P		**Pn**	**02 08 29.0**	**+0.3**
PB02				*i* S		**Sn**	**02 08 48.4**	**-0.9**
PB02				IAML			02 08 50.3	
	comp=N,71μm,0.4s							
PB02	**IPOC Station P**	**1.51**	**203**	*e*P		**Pn**	**02 08 29.1**	**+0.3**
PB02				*e*S		**Sn**	**02 08 49.7**	**+0.4**
PB02				IAML			02 08 51.4	
	comp=Z,78μm,0.4s							
PB16	**IPOC Station P**	**1.59**	**352**			**Pn**	**02 08 31.9**	**+1.7**
PB16	**IPOC Station P**	**1.59**	**352**	⇑*i*P		**Pn**	**02 08 31.9**	**+1.7**
PB16				*i* S		**Sn**	**02 08 52.3**	**+0.5**
PB16				IAML			02 08 55.4	
	comp=N,66μm,0.5s							
PB16	**IPOC Station P**	**1.59**	**352**	*e*P		**Pn**	**02 08 31.7**	**+1.5**
PB16				*e*S		**Sn**	**02 08 54.1**	**+2.4**
PB16				IAML			02 08 58.0	
	comp=Z,32μm,0.4s							
PB12	**IPOC Station P**	**1.65**	**322**			**Pn**	**02 08 30.1**	**-0.3**
PB12	**IPOC Station P**	**1.65**	**322**	⇓*i*P		**Pn**	**02 08 30.5**	**+0.1**
PB12				*e*S		**Sn**	**02 08 51.2**	**-0.8**
PB12				IAML			02 08 53.4	
	comp=E,72μm,0.4s							
PB12	**IPOC Station P**	**1.65**	**322**	*e*P		**Pn**	**02 08 30.3**	**-0.1**
PB12				*e*S		**Sn**	**02 08 52.2**	**+0.1**
PB12				IAML			02 08 55.0	
	comp=Z,26μm,0.5s							
AP01	**Chacalluta**	**1.85**	**326**			**Pn**	**02 08 33.1**	**+0.4**
AP01	**Chacalluta**	**1.85**	**326**	⇓*i*P		**Pn**	**02 08 33.1**	**+0.4**
AP01				*i* S		**Sn**	**02 08 55.8**	**-0.6**
AP01	**Chacalluta**	**1.85**	**326**	*e*P		**Pn**	**02 08 33.2**	**+0.4**
AP01				*e*S		**Sn**	**02 08 56.2**	**-0.2**
AP01				IAML			02 08 57.3	
	comp=Z,54μm,0.9s							
PB09	**IPOC Station P**	**1.87**	**179**			**Pn**	**02 08 34.1**	**+0.9**
PB09	**IPOC Station P**	**1.87**	**179**	⇑*i*P		**Pn**	**02 08 34.1**	**+0.9**
PB09				*i* S		**Sn**	**02 08 58.1**	**+1.0**
PB09	**IPOC Station P**	**1.87**	**179**	*e*P		**Pn**	**02 08 34.1**	**+0.9**
PB09				*e*S		**Sn**	**02 08 58.9**	**+1.8**
PB09				IAML			02 09 02.8	
	comp=Z,28μm,0.5s							
PB07	**IPOC Station P**	**1.89**	**198**			**Pn**	**02 08 33.7**	**+0.2**
PB07	**IPOC Station P**	**1.89**	**198**	⇑*i*P		**Pn**	**02 08 33.6**	**+0.1**
PB07				*e*S		**Sn**	**02 08 56.5**	**-1.1**
PB07				IAML			02 09 02.0	
	comp=E,33μm,0.3s							
PB07	**IPOC Station P**	**1.89**	**198**	*e*P		**Pn**	**02 08 33.6**	**+0.1**
PB07				*e*S		**Sn**	**02 08 58.2**	**+0.6**
PB07				IAML			02 08 59.6	
	comp=Z,23μm,0.4s							
PB03	**IPOC Station P**	**2.17**	**192**	⇑*i*P		**Pn**	**02 08 37.1**	**+0.1**
PB03				*e*S		**Sn**	**02 09 02.5**	**-1.4**
PB03				IAML			02 09 09.4	
	comp=N,16μm,0.8s							
PB03	**IPOC Station P**	**2.17**	**192**	*e*P		**Pn**	**02 08 36.9**	**-0.1**
PB03				*e*S		**Sn**	**02 09 02.9**	**-1.0**
PB03				IAML			02 09 12.6	
	comp=Z,14μm,0.3s							
PB18	**Visviri**	**2.33**	**355**			**Pn**	**02 08 42.5**	**+3.0**
PB18	**Visviri**	**2.33**	**355**	⇑*i*P		**Pn**	**02 08 42.7**	**+3.2**
PB06	**IPOC Station P**	**2.79**	**186**			**Pn**	**02 08 44.9**	**-0.1**
PB06	**IPOC Station P**	**2.79**	**186**	⇑*i*P		**Pn**	**02 08 44.9**	**-0.1**
PB06				*i* S		**Sn**	**02 09 11.3**	**-7.1**
PB06	**IPOC Station P**	**2.79**	**186**	*e*P		**Pn**	**02 08 45.0**	**-0.1**
PB06				*e*S		**Sn**	**02 09 13.3**	**-5.0**
PB06				IAML			02 09 21.2	
	comp=Z,11μm,0.5s							
PB05	**IPOC Station P**	**3.05**	**197**			**Pn**	**02 08 47.7**	**-0.8**
PB05	**IPOC Station P**	**3.05**	**197**	⇑*i*P		**Pn**	**02 08 47.6**	**-0.8**
PB05	**IPOC Station P**	**3.05**	**197**	*e*P		**Pn**	**02 08 47.5**	**-1.0**
PB05				*e*S		**Sn**	**02 09 21.2**	**-3.2**
PB05				IAML			02 09 39.7	
	comp=Z,7μm,0.5s							
AF01	**San Pedro de A**	**3.18**	**162**			**Pn**	**02 08 52.1**	**+1.7**
AF01	**San Pedro de A**	**3.18**	**162**	*e*P		**Pn**	**02 08 51.8**	**+1.3**
AF01	**San Pedro de A**	**3.18**	**162**	*e*P		**Pn**	**02 08 53.1**	**+2.7**
AF01				*e*S		Sn	02 09 09.3	-19
AF01				IAML			02 10 19.1	
	comp=Z,17μm,0.8s							
I08BO	**LAS PENAS INFR**	**3.77**	**12**	P		**Pn**	**02 09 00.0**	**+1.5**
	baz=206,slow=20,SNR=3.0							
I08BO				I		I	02 24 38.8	

H03N1 T T 02 28 18.5
baz=32,slow=73,SNR=21
H03N2 Juan Fernandez 15.99 211 P **P** **02 11 41.2 -0.3**
baz=110,slow=14,SNR=778
H03N2 T T 02 28 18.6
baz=32,slow=73,SNR=33
H03N3 Juan Fernandez 15.99 211 P **Pn** **02 11 41.0 +0.7**
baz=110,slow=14,SNR=886
H03N3 T T 02 28 08.4
baz=32,slow=73,SNR=33
VA04 Juan Fernndez 16.10 210 **Pn** **02 11 41.5 -0.4**
H03S3 Juan Fernandez 16.29 210 P **P** **02 11 44.5 -0.4**
baz=20,slow=20,SNR=228
H03S1 Juan Fernandez 16.30 210 P **Pn** **02 11 44.6 +0.4**
baz=20,slow=20,SNR=155
H03S2 Juan Fernandez 16.31 210 P **Pn** **02 11 44.7 +0.5**
baz=20,slow=20,SNR=178
PTGB Pitanga 16.61 110 *e*P **Pn** **02 11 47.4 -0.9**
TEFE Tefe 16.93 16 *e*P **Pn** **02 11 51.2 -1.0**
ARAG Araguaiana, MT 17.13 79 *e*P **P** **02 11 52.5 -2.2**
LDASE Londrina, Braz 17.21 105 *e*P **P** **02 11 53.2 -2.4**
ITAB Concordia 17.30 118 P **P** **02 11 55.8 -0.7**
ITAB Concordia 17.30 118 *e*P **P** **02 11 53.9 -2.5**
CPSB Cacapava Do Su 17.70 129 *e*P **P** **02 11 58.8 -2.0**
ITRB Iturama 17.79 93 *e*P **P** **02 12 00.1 -1.8**
NPGB Novo Progresso 18.59 48 *e*P **P** **02 12 09.0 -1.8**
FRTB Fartura 18.62 104 *e*P **P** **02 12 09.9 -1.2**
MCRA Macar, Loja 18.64 325 P **P** **02 12 12.0 +0.7**
MACA Manacapuru-AM 18.64 28 P **P** **02 12 10.5 -0.8**
MACA Manacapuru-AM 18.64 28 *e*P **P** **02 12 10.2 -1.0**
SNDB Serra Nova Dou 18.98 68 *e*P **P** **02 12 13.5 -1.6**
TRQA Tornquist 19.15 162 P **P** **02 12 17.3 +0.7**
TRQA Tornquist 19.15 162 P **P** **02 12 17.3 +0.7**
CNLB Canela 19.15 123 *e*P **P** **02 12 15.3 -1.4**
BB19B Bebedouro 19.46 97 *e*P **P** **02 12 18.9 -1.3**
SGC2 Sao Gabriel da 19.77 7 P **P** **02 12 22.5 -1.1**
comp=Z,10µmcomp=Z,954nm,0.8s
MAJ01 Sao Joao Batis 19.97 116 *e*P **P** **02 12 23.8 -1.8**
IPMB Ipameri, GO 20.00 88 *e*P **P** **02 12 24.5 -1.6**
ITTB Itaituba 20.32 42 *e*P **P** **02 12 28.4 -1.0**
RCLB Rio Claro- Sao 20.41 101 *e*P **P** **02 12 28.4 -2.1**
SPB Sao Paulo 20.60 104 P **P** **02 12 30.7 -1.7**
SPB Sao Paulo 20.60 104 *e*P **P** **02 12 29.3 -3.1**
BDFB Brasilia 20.67 82 P **P** **02 12 31.2 -2.1**
comp=Z,82nm,0.6s,baz=257,slow=12,SNR=125
BDFB LR LR 02 22 24.6
comp=Z,478nm,18.3s,baz=256,slow=42
comp=Z,82nm,0.6s
PTLC Puerto Leguiza 20.69 344 P **P** **02 12 28.4 -5.1**
PLCA Paso Flores 20.77 183 P **P** **02 12 35.4 +1.1**
comp=Z,30nm,0.7s,baz=359,slow=12,SNR=65
PLCA PcP **PcP** **02 16 40.6 +1.3**
comp=Z,5.3nm,0.7s,baz=6.9,slow=5.3,SNR=3.2
comp=Z,30nm,0.7s
PLCA Paso Flores 20.77 183 *e*P **P** **02 12 30.5 -3.7**
PET01 Itanhaem-SP 20.82 106 *e*P **P** **02 12 33.6 -1.2**
VAO Valinhos 20.97 102 P **P** **02 12 34.5 -2.1**
VAO Valinhos 20.97 102 *e*P **P** **02 12 34.0 -2.5**
CASC Dorado de Casc 21.45 337 P **P** **02 12 44.1 +2.4**
comp=Z,5µmcomp=Z,524nm,0.9s
PMNB Patos De Minas 21.59 90 *e*P **P** **02 12 41.0 -2.3**
BONI La Bonita 21.81 337 P **P** **02 12 47.8 +2.1**
comp=Z,2µmcomp=Z,316nm,0.6s
OTAV Otavalo 21.97 335 P **P** **02 12 48.5 +1.0**
OTAV Otavalo 21.97 335 P **P** **02 12 48.5 +1.0**
OTAV Otavalo 21.97 335 P **P** **02 12 50.3 +2.8**
comp=Z,2µmcomp=Z,127nm,0.8s
OTAV Otavalo 21.97 335 *e*P **P** **02 12 44.2 -3.3**
CUSE Cuicocha Este 22.01 335 P **P** **02 12 51.7 +3.7**
PAC1 Pacto, Paraso 22.13 334 P **P** **02 12 53.6 +4.6**
TULM Tulcn-Chalpat 22.15 337 P **P** **02 12 52.3 +2.8**
comp=Z,3µmcomp=Z,277nm,0.6s
PARB Paraibuna 22.23 103 *e*P **P** **02 12 47.4 -2.5**
FLOC Florencia 22.27 343 P **P** **02 12 48.6 -1.7**
CMBC Cumbal 22.37 337 P **P** **02 12 55.0 +3.3**
MACC Macarena, Meta 22.39 348 P **P** **02 12 51.7 +0.2**
comp=Z,976nmcomp=Z,90nm,0.6s
GCUF Volcan Galeras 22.46 338 P **P** **02 12 55.2 +2.4**
comp=Z,4µmcomp=Z,427nm,0.8s
GARC Garzon, Huila 22.81 344 P **P** **02 12 54.1 -1.8**
BSCB Bom Sucesso 22.96 97 *e*P **P** **02 12 55.0 -2.3**
BBAC Balboa, Cauca 23.17 339 P **P** **02 13 00.5 +1.1**
comp=Z,2µmcomp=Z,226nm,0.8s
LL02 Futaleuf 23.30 185 P **P** **02 12 59.8 -0.3**
PRPB Parauapebas 23.32 57 *e*P **P** **02 12 58.9 -1.6**
POPC Popayan, Colom 23.48 341 P **P** **02 13 03.0 +0.8**
comp=Z,1µmcomp=Z,146nm,1.0s
URMC La Uribe, Meta 23.57 347 P **P** **02 13 00.4 -2.5**
SMTB Santa Maria do 23.66 65 *e*P **P** **02 13 02.9 -0.8**
BOAV Boa Vista 23.78 22 P **P** **02 13 04.5 -0.2**
BOAV Boa Vista 23.78 22 P **P** **02 13 04.3 -0.4**
comp=Z,2µmcomp=Z,196nm,0.7s
BOAV Boa Vista 23.78 22 *e*P **P** **02 13 03.5 -1.1**
JAMC Jamundi, Valle 24.12 342 P **P** **02 13 08.2 +0.2**
comp=Z,853nmcomp=Z,73nm,0.6s
DIAM Diamantina, MG 24.23 90 *e*P **P** **02 13 07.9 -1.0**
JANB Januaria 24.27 82 *e*P **P** **02 13 07.2 -2.0**
VILC Villavicencio, 24.28 349 P **P** **02 13 08.8 -0.5**
comp=Z,2µmcomp=Z,145nm,0.5s
ORTC Ortega, Tolima 24.40 345 P **P** **02 13 10.1 -0.2**
comp=Z,2µmcomp=Z,230nm,0.8s
GR1C Gorgona, Isla 24.40 338 P **P** **02 13 13.2 +2.9**
SDBA SAO DESIDERIO 24.54 76 *e*P **P** **02 13 09.9 -1.8**
YOTC Yotoco, Valle 24.75 343 P **P** **02 13 13.9 +0.2**
comp=Z,763nmcomp=Z,68nm,0.8s
CHIC Chingaza 24.79 349 P **P** **02 13 13.9 -0.4**
comp=Z,1µmcomp=Z,90nm,0.5s
ANIL Santa Ana 25.00 345 P **P** **02 13 15.7 -0.4**
ROSC El Rosal 25.10 348 P **P** **02 13 18.1 +1.0**
comp=Z,18nm,0.5s,baz=344,slow=5.9,SNR=15
ROSC LR LR 02 24 46.9
comp=Z,453nm,18.9s,baz=193,slow=40
comp=Z,18nm,0.5s
ROSC El Rosal 25.10 348 **P** **02 13 18.5 +1.4**
ROSC El Rosal 25.10 348 P **P** **02 13 18.5 +1.4**
ROSC El Rosal 25.10 348 P **P** **02 13 17.3 +0.2**
comp=Z,1µmcomp=Z,88nm,0.5s
DUB01 Friburgo-RJ 25.18 100 *e*P **P** **02 13 16.9 -0.6**
PLMC San Jos del P 25.62 344 P **P** **02 13 21.8 +0.4**
comp=Z,4µmcomp=Z,88nm,0.5s
COYC Coyhaique 25.69 185 **P** **02 13 21.2 -0.5**
GUY2C Guyana, Caldas 25.70 346 P **P** **02 13 23.1 +0.5**
comp=Z,826nmcomp=Z,82nm,0.7s
CAM01 Campos-RJ 25.85 99 *e*P **P** **02 13 22.3 -1.1**
SPBC San Pablo de B 25.85 349 P **P** **02 13 22.2 -1.3**
comp=Z,1µmcomp=Z,78nm,0.5s
NORC Norcasia 25.92 347 P **P** **02 13 23.8 -0.3**
comp=Z,831nmcomp=Z,86nm,0.6s
RUSC La Rusia 25.93 351 P **P** **02 13 25.2 +0.5**
comp=Z,5µmcomp=Z,464nm,0.5s
CBOC Ciudad Bolivar 26.47 345 P **P** **02 13 29.0 -0.2**
comp=Z,1µmcomp=Z,109nm,0.6s
SJMB Sao Joao De Ma 26.51 92 *e*P **P** **02 13 28.2 -1.2**
BARC Barichara 26.63 351 P **P** **02 13 30.3 -0.4**
comp=Z,3µmcomp=Z,294nm,0.6s
ALF01 Guarapari-ES 26.77 96 *e*P **P** **02 13 31.0 -0.7**
PTBC PUERTO BERRIO, 26.79 348 P **P** **02 13 29.6 -2.3**
BSFB Barra de Sao F 26.82 93 *e*P **P** **02 13 31.3 -0.9**
RIB01 Linhares ES 27.18 94 *e*P **P** **02 13 35.0 -0.5**
PAMC Pamplona, Colo 27.30 353 P **P** **02 13 36.3 -0.7**
comp=Z,2µmcomp=Z,125nm,0.6s
DBBC Dabeiba 27.63 345 P **P** **02 13 40.3 +0.8**
GUA01 Guaratinga, BA 28.15 88 *e*P **P** **02 13 43.2 -0.9**
PTAC Punta Ardita, 28.18 342 P **P** **02 13 44.8 +0.5**
comp=Z,4µmcomp=Z,130nm,0.9s
UREC San Jos de Ur 28.18 347 P **P** **02 13 43.3 -1.1**
comp=Z,1µmcomp=Z,48nm,0.5s
OCAC Ocana 28.27 351 P **P** **02 13 42.8 -2.4**
APAC Apartado, Choc 28.57 345 P **P** **02 13 48.3 +0.5**
comp=Z,893nmcomp=Z,63nm,0.6s
SDV Santo Domingo 28.66 357 LR LR 02 26 38.0
comp=Z,391nm,19.7s,baz=184,slow=39
SDV Santo Domingo 28.66 357 P **P** **02 13 48.3 -0.5**
SDV IAmb IAmb 02 13 57.1
comp=Z,61nm,0.7s
SDV Santo Domingo 28.66 357 P **P** **02 13 47.7 -1.1**
comp=Z,743nmcomp=Z,85nm,0.7s
SDV Santo Domingo 28.66 357 *e*P **P** **02 13 47.6 -1.1**
CMC01 Camacan, BA 28.68 86 *e*P **P** **02 13 48.0 -0.8**
MDP Montagnes des 29.76 35 LR LR 02 26 57.6
comp=Z,430nm,20.9s,baz=176,slow=38
ARGC Ariguani, Magd 30.00 350 P **P** **02 13 59.1 -1.3**
comp=Z,3µmcomp=Z,243nm,0.8s
SJCC San Jacinto, C 30.20 348 P **P** **02 14 00.8 -1.4**
comp=Z,3µmcomp=Z,232nm,0.8s

NBPS Pedro II - PI 31.18 64 *e*P **P** **02 14 10.6 -0.4**
SMRC Santa Marta, M 31.27 351 P **P** **02 14 08.1 -3.5**
BRU2 Volcan 31.45 334 P **P** **02 14 14.1 +0.7**
URIC Uribia, Colomb 31.54 355 P **P** **02 14 14.0 0.0**
comp=Z,552nmcomp=Z,53nm,0.7s
NBMA Muriti-CE 32.08 71 *e*P **P** **02 14 17.2 -1.7**
GRGR Grenville 32.72 14 P **P** **02 14 24.0 -0.3**
EFI East Falkland 32.89 167 P **P** **02 14 25.8 +0.4**
EFI IAmb IAmb 02 14 27.0
comp=Z,71nm,0.9s
EFI East Falkland 32.89 167 P **P** **02 14 25.8 +0.4**
EFI pmax pmax
comp=Z,71nm,1.0s
JTS Las Juntas de 33.77 331 LR LR 02 29 45.3
comp=Z,143nm,19.5s,baz=142,slow=39
JTS Las Juntas de 33.77 331 P **P** **02 14 34.2 +0.7**
JTS Las Juntas de 33.77 331 P **P** **02 14 34.2 +0.7**
JTS pmax pmax
comp=Z,23nm,0.9s
NBPA Parau_RN 34.27 70 *e*P **P** **02 14 36.4 -1.4**
MPOM Morne Pois Mar 35.14 14 P **P** **02 14 43.5 -1.7**
BIM Bigot 35.16 14 P **P** **02 14 43.9 -1.6**
RCBR Riachuelo 35.31 71 LR LR 02 30 48.3
comp=Z,245nm,18.3s,baz=244,slow=39
RCBR Riachuelo 35.31 71 P **P** **02 14 46.0 -0.9**
RCBR Riachuelo 35.31 71 P **P** **02 14 46.0 -0.9**
RCBR pmax pmax
comp=Z,110nm,0.6s
RCBR Riachuelo 35.31 71 *e*P **P** **02 14 46.3 -0.6**
RCBR Riachuelo 35.31 71 P **P** **02 14 46.4 -0.5**
RCBR x x 02 15 29.6
FDFM Morne la Roset 35.35 14 P **P** **02 14 45.6 -1.4**
CXM Morne La Croix 35.42 14 P **P** **02 14 46.4 -1.4**
CXM IAmb IAmb 02 14 51.7
comp=Z,134nm,0.7s
SVN Savane Anatole 35.45 14 P **P** **02 14 47.8 -0.1**
NBPV Pedro Velho 35.60 73 *e*P **P** **02 14 47.7 -1.6**
GDHS Morne Mazeau, 36.71 12 P **P** **02 14 57.5 -1.3**
GDHS IAmb IAmb 02 15 24.9
comp=Z,61nm,0.7s
GDSD La Dsirade Is 36.90 13 P **P** **02 14 59.5 -0.8**
GDSD IAmb IAmb 02 15 05.2
comp=Z,38nm,1.0s
RPN Rapa Nui 37.32 251 LR LR 02 26 45.4
comp=Z,162nm,18.3s,baz=94,slow=30
MLPR Magueyes Islan 37.72 3 P **P** **02 15 06.1 -1.0**
CRPR Cabo Rojo, PR 37.75 3 P **P** **02 15 06.2 -1.1**
CELP Cerrillos 37.85 4 P **P** **02 15 07.6 -0.6**
SJG San Juan 37.92 5 LR LR 02 32 05.5
comp=Z,168nm,19.7s,baz=192,slow=38
SJG San Juan 37.92 5 P **P** **02 15 07.3 -1.5**
SJG San Juan 37.92 5 P **P** **02 15 07.3 -1.5**
SJG pmax pmax
comp=Z,102nm,0.8s
SJG San Juan 37.92 5 P **P** **02 15 07.2 -1.5**
SJG pP **pP** **02 15 33.2 -1.3**
SJG sP **sP** **02 15 45.2 -2.1**
SJG x x 02 16 40.3
HUMP Col San Antoni 37.98 5 P **P** **02 15 07.9 -1.4**
ANWB Willy Bob 38.07 12 P **P** **02 15 07.9 -2.2**
BANI BANI 38.09 358 P **P** **02 15 11.7 +1.3**
ECPR Experimental S 38.11 4 P **P** **02 15 08.8 -1.6**
AOPR Arecibo Observ 38.11 4 P **P** **02 15 09.0 -1.4**
TGUH Tegucigalpa,Un 38.13 331 P **P** **02 15 11.0 +0.2**
TGUH IAmb IAmb 02 15 38.1
comp=Z,66nm,1.0s
CUPR Culebra, Puert 38.19 6 P **P** **02 15 09.4 -1.7**
CUPR IAmb IAmb 02 15 13.3
comp=Z,50nm,0.8s
SMRT St. Maarten 38.22 10 P **P** **02 15 09.4 -2.0**
SDDR Presa de Saban 38.71 357 P **P** **02 15 16.0 +0.5**
SDDR IAmb IAmb 02 15 22.6
comp=Z,37nm,0.5s
MTDJ Mount Denham 38.77 347 P **P** **02 15 16.2 +0.1**
MTDJ IAmb IAmb 02 15 21.8
comp=Z,58nm,0.8s
SC01 Santiago de lo 39.13 358 P **P** **02 15 18.6 -0.4**
MTO3 Montecristo 39.42 328 P **P** **02 15 21.3 -0.4**
MTO3 IAmb IAmb 02 15 49.4
comp=Z,65nm,1.0s
GTBY Guantanamo Bay 40.02 351 P **P** **02 15 26.7 +0.5**
CHIV Chivirico 40.27 350 P **P** **02 15 27.2 -1.1**
HOPE Hope Point 42.42 152 P **P** **02 15 46.8 +1.3**
HOPE Hope Point 42.42 152 P **P** **02 15 46.8 +1.3**
HOPE pmax pmax
comp=Z,142nm,0.9s
HOPE Hope Point 42.42 152 P **P** **02 15 47.4 +1.9**
HOPE pP **pP** **02 16 14.6 +3.1**
HOPE sP **sP** **02 16 26.0 +1.6**
TEIG Tepich 44.03 334 P **P** **02 15 58.9 -0.1**
CAMR Camarioca 44.33 344 P **P** **02 16 02.5 +1.3**
CMIG Matias Romero 44.57 324 LR LR 02 34 54.4
comp=Z,62nm,19.4s,baz=134,slow=36
PMSA Palmer Station 44.96 177 LR LR 02 36 05.7
comp=Z,102nm,18.8s,baz=113,slow=37
061Z Ochoppi 46.90 346 P **P** **02 16 22.4 +1.0**
DWPF Disney Wildern 49.18 346 P **P** **02 16 39.8 +0.9**
BBSR BB Station 52.18 5 P **P** **02 17 00.3 -1.2**
ZAIG Zacatecas 53.45 321 IAmb IAmb 02 17 40.0
comp=Z,37nm,0.9s
CSU Charleston Sou 53.61 349 P **P** **02 17 12.6 +0.7**
H10N3 ASCENSION HYDR 54.28 85 P **P** **02 17 17.5 +0.6**
baz=238,slow=6.3,SNR=15
H10N2 ASCENSION HYDR 54.30 85 P **P** **02 17 17.7 +0.6**
baz=238,slow=6.3,SNR=18
H10N1 ASCENSION HYDR 54.30 85 P **P** **02 17 17.5 +0.4**
baz=238,slow=6.3,SNR=18
ASCN Ascension 54.38 85 P **P** **02 17 17.7 -0.3**
Y58A Scranton 54.44 349 P **P** **02 17 18.4 +0.5**
GOGA Godfrey 54.74 345 IAmb IAmb 02 17 47.5
comp=Z,24nm,0.8s
HODGE Hodges 55.26 347 P **P** **02 17 24.1 +0.2**
LRAL Lakeview Retre 55.32 342 IAmb IAmb 02 17 53.5
comp=Z,26nm,0.8s
W57A Gilead 55.71 349 P **P** **02 17 27.0 0.0**
HKT Hockley 55.80 332 *i*P **P** **02 17 25.0 -2.7**
HKT pmax pmax
comp=Z,23nm,1.1s
Y49A Blount Mountai 55.92 343 IAmb IAmb 02 17 55.4
comp=Z,33nm,1.1s
833A Chaparral WMA, 56.12 328 IAmb IAmb 02 17 57.9
comp=Z,74nm,0.8s
BG3 Lake Jocassee 56.13 346 IAmb IAmb 02 17 58.1
comp=Z,36nm,1.0s
X51A Calhoun 56.18 345 IAmb IAmb 02 17 57.8
comp=Z,67nm,1.0s
W52A Murphy 56.46 346 IAmb IAmb 02 18 00.1
comp=Z,54nm,1.0s
X48A Hartselle 56.66 342 IAmb IAmb 02 18 00.9
comp=Z,50nm,0.9s
SACV Santiago Islan 56.72 56 P **P** **02 17 33.8 -0.9**
SACV IAmb IAmb 02 17 35.2
comp=Z,67nm,0.9s
SACV Santiago Islan 56.72 56 P **P** **02 17 34.0 -0.7**
SACV x x 02 18 02.6
V53A Saluda 56.76 347 IAmb IAmb 02 18 02.4
comp=Z,31nm,0.9s
NATX Nacogdoches 56.87 334 P **P** **02 17 36.0 +0.6**
TKL Tuckaleechee C 56.96 346 LR LR 02 43 26.0
comp=Z,83nm,19.8s,baz=168,slow=37
TKL Tuckaleechee C 56.96 346 P **P** **02 17 35.5 -0.5**
TKL IAmb IAmb 02 18 03.4
comp=Z,58nm,0.9s
TKL Tuckaleechee C 56.96 346 P **P** **02 17 35.5 -0.5**
TKL pmax pmax
comp=Z,58nm,0.9s
DRIO Del Rio 57.63 327 IAmb IAmb 02 18 08.7
comp=Z,49nm,0.9s
CCAR Cane Creek 57.68 338 IAmb IAmb 02 18 09.0
comp=Z,73nm,0.9s
TZTN Tazewell 57.76 346 IAmb IAmb 02 18 09.2
comp=Z,64nm,1.2s
V48A Smith Brothers 57.80 343 IAmb IAmb 02 18 09.2
comp=Z,78nm,0.9s
CLTN Cedars of Leba 58.00 344 IAmb IAmb 02 18 10.6
comp=Z,37nm,0.9s
JCT Junction City 58.09 329 IAmb IAmb 02 18 13.3
comp=Z,37nm,0.7s
R58B Mineral 58.14 352 IAmb IAmb 02 18 12.5
comp=Z,71nm,0.9s
CBN Corbin Frederi 58.32 352 IAmb IAmb 02 18 13.5
comp=Z,58nm,0.7s
BRDY Brady 58.37 330 IAmb IAmb 02 18 13.4
comp=Z,38nm,0.9s

WVT Waverly 58.45 342 P **P** **02 17 45.4 -1.0**
WVT IAmb IAmb 02 18 13.0
comp=Z,66nm,0.8s
WVT Waverly 58.45 342 P **P** **02 17 45.4 -1.0**
WVT pmax pmax
comp=Z,66nm,0.8s
WVT Waverly 58.45 342 P **P** **02 17 45.5 -0.8**
WVT pP **pP** **02 18 12.3 -1.0**
TXAR Lajitas Array 59.15 325 P **P** **02 17 51.9 +0.4**
comp=Z,2.4nm,0.9s,baz=146,slow=8.6,SNR=22
TXAR pP **pP** **02 18 18.1 -0.4**
comp=Z,8.0nm,0.7s,baz=147,slow=8.2,SNR=17
TXAR LR LR 02 42 04.8
comp=Z,81nm,18.4s,baz=136,slow=34
TXAR PKPPKP **P'P'df** **02 47 28.8 +6.6**
comp=Z,0.5nm,0.9s,baz=255,slow=2.5,SNR=3.8
TXAR Lajitas Array 59.15 325 P **P** **02 17 51.5 0.0**
WUPA West Chester U 59.84 354 P **P** **02 17 56.2 +0.4**
WUPA IAmb IAmb 02 18 24.2
comp=Z,40nm,0.9s
WCI Wyandotte Cave 60.02 345 P **P** **02 17 56.4 -0.7**
WCI IAmb IAmb 02 18 24.3
comp=Z,59nm,0.9s
WCI Wyandotte Cave 60.02 345 P **P** **02 17 56.4 -0.7**
WCI pmax pmax
comp=Z,59nm,0.9s
MCWV Mont Chateau 60.09 351 P **P** **02 17 58.3 +0.7**
TPB05 Hovey Rd 60.22 326 IAmb IAmb 02 18 26.7
comp=Z,53nm,0.7s
SHEL Horse Pasture 60.25 97 P **P** **02 17 60.0 +0.7**
SHEL Horse Pasture 60.25 97 P **P** **02 18 00.0 +0.7**
SHEL pmax pmax
comp=Z,133nm,0.8s
229A Bryant Ranch, 60.29 328 IAmb IAmb 02 18 27.1
comp=Z,52nm,0.8s
BELA Belgrano 2 60.35 172 P **P** **02 18 00.4 +1.5**
BELA IAmb IAmb 02 18 01.9
comp=Z,89nm,1.4s
SSPA Standing Stone 60.78 352 P **P** **02 18 02.6 +0.3**
SSPA IAmb IAmb 02 18 31.6
comp=Z,59nm,1.0s
SSPA Standing Stone 60.78 352 P **P** **02 18 02.5 +0.3**
SSPA pP **pP** **02 18 30.1 +0.3**
ACSO Alum Creek Sta 61.19 348 P **P** **02 18 04.5 -0.5**
CCM Cathedral Cave 61.26 340 P **P** **02 18 05.2 -0.3**
CCM IAmb IAmb 02 18 33.0
comp=Z,65nm,1.0s
CCM Cathedral Cave 61.26 340 P **P** **02 18 05.3 -0.3**
CCM pmax pmax
comp=Z,65nm,1.0s
CCM Cathedral Cave 61.26 340 P **P** **02 18 05.3 -0.3**
CCM pP **pP** **02 18 31.9 -0.8**
VNA3 Neumayer Olymp 61.67 162 ⇓P **P** **02 18 09.3 +1.3**
comp=Z,72nm,0.7s
VNA1 Neumayer--Stat 61.88 161 ⇓P **P** **02 18 11.1 +1.8**
comp=Z,62nm,0.7s
L61B Northampton 62.14 357 IAmb IAmb 02 18 40.6
comp=Z,113nm,1.4s
HRV Adam Dziewonsk 62.15 358 P **P** **02 18 12.2 +0.7**
HRV IAmb IAmb 02 18 40.9
comp=Z,81nm,1.0s
HRV Adam Dziewonsk 62.15 358 P **P** **02 18 12.2 +0.7**
HRV pmax pmax
comp=Z,81nm,1.0s
VNA2 Neumayer--Watz 62.24 161 ⇓P **P** **02 18 13.2 +1.4**
comp=Z,71nm,0.6s,baz=290,slow=7.5
K57A Scipio Center 62.70 354 IAmb IAmb 02 18 44.2
comp=Z,84nm,1.0s
P40A Paris 62.86 340 IAmb IAmb 02 18 43.8
comp=Z,59nm,0.9s
J57A Williamstown 63.32 355 IAmb IAmb 02 18 47.8
comp=Z,140nm,1.3s
P38A Dawn 63.43 339 IAmb IAmb 02 18 48.3
comp=Z,54nm,0.6s
NCB Newcomb 63.74 356 IAmb IAmb 02 18 51.7
comp=Z,75nm,1.2s
319A Douglas 63.84 322 IAmb IAmb 02 18 52.0
comp=Z,69nm,0.8s
121A Cookes Peak, D 63.86 324 IAmb IAmb 02 18 52.4
comp=Z,40nm,0.8s
SNAA Sanae 63.87 161 ⇓P **P** **02 18 23.9 +1.2**
comp=Z,2µm,0.6s
SNAA Sanae 63.87 161 P **P** **02 18 23.9 +1.2**
comp=Z,65nm,0.7s,baz=281,slow=6.3,SNR=73
SNAA LR LR 02 46 56.6
comp=Z,56nm,18.0s,baz=44,slow=36
comp=Z,65nm,0.7s
SNAA Sanae 63.87 161 P **P** **02 18 23.7 +1.1**
SNAA IAmb IAmb 02 18 24.9
comp=Z,88nm,0.8s
SNAA Sanae 63.87 161 *ce*P **P** **02 18 23.8 +1.2**
SNAA pmax pmax
comp=Z,103nm,0.9s
LBNH Lisbon 63.89 358 IAmb IAmb 02 18 53.2
comp=Z,91nm,1.2s
PECO Prince Edward 63.94 354 IAmb IAmb 02 18 52.5
comp=Z,129nm,1.1s
VT1 Waterbury 64.02 357 IAmb IAmb 02 18 53.0
comp=Z,85nm,1.6s
KSU1 Kansas State U 64.05 337 IAmb IAmb 02 18 51.8
comp=Z,60nm,0.9s
WVL Waterville 64.17 360 IAmb IAmb 02 18 54.0
comp=Z,192nm,1.9s
H62A Milan 64.20 358 IAmb IAmb 02 18 54.2
comp=Z,131nm,1.9s
R32A Long Quarter, 64.28 335 IAmb IAmb 02 18 53.8
comp=Z,84nm,0.8s
LONY Lake Ozonia 64.41 356 IAmb IAmb 02 18 56.1
comp=Z,87nm,1.1s
HAL Halifax 64.45 4 IAmb IAmb 02 18 59.2
comp=Z,28nm,0.9s
Y22A Socorro 64.49 326 IAmb IAmb 02 18 56.1
comp=Z,31nm,0.8s
FRNY Flat Rock 64.56 357 IAmb IAmb 02 18 57.2
comp=Z,108nm,1.2s
DELO Deloro Mine 64.58 353 IAmb IAmb 02 18 56.0
comp=Z,112nm,1.2s
DUN6 Lazy B Ranch 64.61 323 IAmb IAmb 02 18 57.1
comp=Z,83nm,0.8s
GGN Saint George 64.76 2 IAmb IAmb 02 18 58.6
comp=Z,133nm,2.0s
G65A Princeton 64.83 1 IAmb IAmb 02 18 35.9
comp=Z,36nm,0.7s
WBO Williamsburg 64.84 355 IAmb IAmb 02 18 58.7
comp=Z,121nm,1.1s
ANMO Albuquerque 65.00 327 P **P** **02 18 31.7 +1.0**
ANMO Albuquerque 65.00 327 P **P** **02 18 31.7 +1.0**
ANMO pmax pmax
comp=Z,18nm,0.7s
ANMO Albuquerque 65.00 327 P **P** **02 18 31.6 +1.0**
ANMO pP **pP** **02 18 58.6 +0.6**
SADO Sadowa 65.01 352 LR LR 02 47 59.1
comp=Z,119nm,20.3s,baz=180,slow=37
SADO Sadowa 65.01 352 IAmb IAmb 02 18 58.6
comp=Z,106nm,1.0s
CBKS Cedar Bluff 65.03 334 IAmb IAmb 02 18 59.5
comp=Z,96nm,0.9s
N35A Tabor 65.26 338 IAmb IAmb 02 18 59.6
comp=Z,92nm,0.8s
JFWS Jewell Farm 65.44 343 IAmb IAmb 02 19 00.9
comp=Z,85nm,0.8s
F64A Sherman 65.47 1 IAmb IAmb 02 18 44.0
comp=Z,32nm,0.6s
TROLL Troll, Antarti 65.59 161 P **P** **02 18 35.4 +1.5**
T25A Trinidad 65.72 330 IAmb IAmb 02 19 04.1
comp=Z,28nm,0.8s
E62A Clayton Lake 66.23 360 IAmb IAmb 02 18 45.4
comp=Z,24nm,0.7s
KSCO Kaye Shedlock' 66.43 332 IAmb IAmb 02 19 08.4
comp=Z,88nm,0.9s
D62A Allapoint, All 66.69 0 IAmb IAmb 02 18 52.0
comp=Z,40nm,0.6s
SDCO Great Sand Dun 66.73 329 IAmb IAmb 02 19 10.8
comp=Z,50nm,0.8s
BATG Bathurst New B 66.94 2 P **P** **02 18 43.0 +0.4**
BATG IAmb IAmb 02 18 52.9
comp=Z,20nm,0.6s
E46A Sault Ste Mari 67.37 349 IAmb IAmb 02 19 13.2
comp=Z,66nm,0.8s
LDAQ Lac Daran 67.59 359 IAmb IAmb 02 19 15.8
comp=Z,101nm,1.6s
OGNE Ogallala 67.78 334 IAmb IAmb 02 19 16.8
comp=Z,51nm,0.7s
MVCO Mesa Verde 67.80 327 IAmb IAmb 02 19 17.5
comp=Z,44nm,0.8s
WUAZ Wupatki 68.07 324 IAmb IAmb 02 19 20.4
comp=Z,62nm,0.9s

VLDQ Val d'Or 68.12 354 IAmb IAmb 02 19 19.1
comp=Z,113nm,1.0s
ECSD EROS Data Cent 68.13 339 IAmb IAmb 02 19 18.4
comp=Z,55nm,1.2s
SPMN Marine on St. 68.29 342 IAmb IAmb 02 19 19.0
comp=Z,48nm,0.8s
NVL N'lazarevskaya 68.42 159 *e*P **P** **02 18 48.8 -2.8**
NVL *e* 02 19 13.3
NVL *e*PPP PPP 02 23 00.3
NVL eS **S** **02 27 44.7 +0.4**
NVL *e*SS **SS** **02 32 10.8 +1.5**
NVL pmax pmax
comp=Z,12nm,1.0s
NVL MLR MLR
comp=Z,539nm,17.0s
PV01 Paradox Valley 68.54 328 IAmb IAmb 02 19 22.5
comp=Z,39nm,0.8s
DBIC Dimbokro 68.61 74 P **P** **02 18 53.1 -0.7**
comp=Z,108nm,0.6s,baz=264,slow=6.1,SNR=132
DBIC pP **pP** **02 19 21.4 -0.8**
comp=Z,54nm,0.6s,baz=249,slow=4.6,SNR=6.3
DBIC S **S** **02 27 44.6 -3.6**
comp=Z,5.5nm,0.9s,baz=283,slow=17,SNR=14
DBIC LR LR 02 49 11.4
comp=Z,140nm,18.1s,baz=230,slow=36
comp=Z,108nm,0.6s
DBIC Dimbokro 68.61 74 P **P** **02 18 52.9 -0.8**
DBIC Dimbokro 68.61 74 P **P** **02 18 52.9 -0.8**
DBIC *PP **pP** **02 19 21.4 -0.8**
DBIC pmax pmax
comp=Z,102nm,0.7s
DBIC Dimbokro 68.61 74 P **P** **02 18 53.0 -0.7**
DBIC pP **pP** **02 19 20.9 -1.3**
DBIC x x 02 19 22.8
PV15 Paradox Valley 68.66 328 IAmb IAmb 02 19 23.9
comp=Z,83nm,1.0s
PV02 Paradox Valley 68.68 327 IAmb IAmb 02 19 23.2
comp=Z,84nm,1.3s
PV18 Skein Mesa, Pa 68.80 327 IAmb IAmb 02 19 23.7
comp=Z,82nm,1.4s
PV19 Morning Glory 68.89 327 IAmb IAmb 02 19 24.3
comp=Z,59nm,1.6s
ICQ Pointe Anglais 69.15 1 P **P** **02 18 56.6 +0.3**
ICQ IAmb IAmb 02 19 26.6
comp=Z,39nm,0.8s
IRM Iron Mountain 69.28 320 P **P** **02 18 58.6 +1.1**
IRM IAmb IAmb 02 19 27.9
comp=Z,44nm,1.0s
DRLN Deer Lake 69.66 8 P **P** **02 18 59.3 -0.1**
DRLN IAmb IAmb 02 19 06.1
comp=Z,30nm,0.7s
PFO Pinyon Flats O 69.70 319 *ce*P **P** **02 18 59.7 -0.6**
PFO pmax pmax
comp=Z,26nm,1.0s
F33A 5 Mile Ranch, 69.90 340 IAmb IAmb 02 19 29.0
comp=Z,40nm,0.7s
O20A White River Ci 69.92 329 IAmb IAmb 02 19 30.9
comp=Z,40nm,1.0s
QSPA South Pole Qui 70.26 180 P **P** **02 19 03.9 +0.7**
comp=Z,35nm,0.8s,baz=178,slow=0.5,SNR=97
QSPA LR LR 02 50 22.6
comp=Z,70nm,19.4s,baz=190,slow=36
comp=Z,35nm,0.8s
QSPA South Pole Qui 70.26 180 P **P** **02 19 04.5 +1.3**
QSPA IAmb IAmb 02 19 06.1
comp=Z,88nm,1.2s
QSPA South Pole Qui 70.26 180 P **P** **02 19 05.0 +1.7**
SRU San Rafael Swe 70.28 327 IAmb IAmb 02 19 33.0
comp=Z,43nm,0.8s
ELS Elsinore Mount 70.33 319 P **P** **02 19 05.8 +1.8**
P18A Preston Nutter 70.53 328 IAmb IAmb 02 19 35.0
comp=Z,32nm,0.8s
TBO Thunder Bay 70.59 346 IAmb IAmb 02 19 33.5
comp=Z,66nm,1.2s
P17A Butcher Ranch, 70.66 327 IAmb IAmb 02 19 35.5
comp=Z,58nm,0.9s
RSSD Black Hills 71.24 334 P **P** **02 19 10.3 +0.9**
RSSD Black Hills 71.24 334 P **P** **02 19 10.4 +0.9**
RSSD pmax pmax
comp=Z,19nm,0.7s
RSSD Black Hills 71.24 334 P **P** **02 19 10.4 +0.9**
RSSD pP **pP** **02 19 37.9 +0.7**
BSUT Blindstream Ca 71.47 328 IAmb IAmb 02 19 40.8
comp=Z,34nm,0.8s
PSUT Pine Spring 71.62 325 IAmb IAmb 02 19 42.4
comp=Z,58nm,0.9s
AGMN Agassiz Nation 71.96 342 IAmb IAmb 02 19 41.8
comp=Z,38nm,0.7s
E28A Huff 72.03 338 IAmb IAmb 02 19 43.1
comp=Z,97nm,0.9s
ELIB Princess Elisa 72.03 161 *d*P **P** **02 19 15.0 +1.2**
DUG Dugway, Tooele 72.27 326 IAmb IAmb 02 19 45.6
comp=Z,51nm,1.1s
ACRG Accra 72.44 77 IAmb IAmb 02 19 18.9
comp=Z,45nm,0.7s
PDAR Pinedale Array 72.58 330 P **P** **02 19 17.9 +0.3**
comp=Z,1.6nm,0.8s,baz=141,slow=5.7,SNR=13
PDAR pP **pP** **02 19 45.1 -0.4**
comp=Z,4.1nm,0.5s,baz=134,slow=8.5,SNR=6.1
PDAR LR LR 02 53 18.2
comp=Z,29nm,20.9s,baz=142,slow=37
PDAR Pinedale Array 72.58 330 P **P** **02 19 17.5 -0.1**
EPLO Experimental L 72.61 344 IAmb IAmb 02 19 45.6
comp=Z,64nm,0.8s
SPUT South Promonto 72.90 327 IAmb IAmb 02 19 48.9
comp=Z,53nm,1.1s
ULM Lac du Bonnet 73.72 343 P **P** **02 19 23.5 -0.2**
comp=Z,19nm,0.7s,baz=152,slow=6.5,SNR=43
ULM pP **pP** **02 19 50.9 -0.9**
comp=Z,40nm,0.7s,baz=151,slow=6.3,SNR=9.4
ULM LR LR 02 54 38.0
comp=Z,37nm,19.0s,baz=184,slow=38
comp=Z,19nm,0.7s
ULM Lac du Bonnet 73.72 343 IAmb IAmb 02 19 52.0
comp=Z,47nm,0.7s
NVAR Mina Array Bea 74.05 322 P **P** **02 19 28.0 +1.7**
comp=Z,6.5nm,0.8s,baz=154,slow=6.5,SNR=26
NVAR pP **pP** **02 19 55.0 +0.8**
comp=Z,21nm,0.9s,baz=144,slow=6.6,SNR=12
comp=Z,6.5nm,0.8s
FLWY Flagg Ranch 74.13 330 IAmb IAmb 02 19 56.6
comp=Z,51nm,0.8s
LAO LASA Array 74.22 335 IAmb IAmb 02 19 56.4
comp=Z,69nm,1.2s
SCHQ Schefferville 74.48 1 P **P** **02 19 28.2 +0.1**
comp=Z,20nm,0.9s,baz=184,slow=5.1,SNR=32
SCHQ pP **pP** **02 19 56.6 0.0**
comp=Z,28nm,0.9s,baz=160,slow=4.5,SNR=7.5
SCHQ LR LR 02 54 02.7
comp=Z,46nm,18.9s,baz=182,slow=37
comp=Z,20nm,0.9s
SCHQ Schefferville 74.48 1 IAmb IAmb 02 19 57.4
comp=Z,69nm,1.2s
YNE Yellowstone No 74.52 331 IAmb IAmb 02 19 58.6
comp=Z,78nm,0.7s
PPT Papeete 75.37 256 LR LR 02 46 03.0
comp=Z,27nm,20.4s,baz=132,slow=30
PAHR Pah Rah Range 75.53 322 IAmb IAmb 02 20 05.6
comp=Z,83nm,1.1s
HLID Hailey 75.54 328 IAmb IAmb 02 20 05.6
comp=Z,49nm,1.0s
MFID Camas Ranch 76.15 327 IAmb IAmb 02 20 09.0
comp=Z,52nm,0.9s
ORV Oroville 76.67 321 IAmb IAmb 02 20 11.9
comp=Z,62nm,1.1s
TORD Torodi Ar. Bea 77.14 71 P **P** **02 19 43.1 -1.0**
comp=Z,80nm,0.6s,baz=244,slow=9.1,SNR=818
TORD pP **pP** **02 20 12.5 -0.5**
comp=Z,27nm,0.8s,baz=246,slow=9.5,SNR=3.4
TORD S **S** **02 29 21.2 -3.9**
comp=Z,5.5nm,0.8s,baz=245,slow=14,SNR=18
comp=Z,80nm,0.6s
PLID Pearl Lake 77.43 328 IAmb IAmb 02 20 16.2
comp=Z,52nm,0.9s
KUQ Kuujjuaa 77.74 0 IAmb IAmb 02 20 15.7
comp=Z,35nm,0.8s
BMO Blue Mountains 77.92 327 IAmb IAmb 02 20 18.3
comp=Z,49nm,1.1s
TIO Tiouine 78.09 51 P **P** **02 19 49.4 +0.1**
VNDA Vanda 78.34 190 P **P** **02 19 51.1 +1.4**
comp=Z,4.7nm,0.8s,baz=120,slow=6.8,SNR=14
comp=Z,4.7nm,0.8s
K05A Summer Lake 78.38 324 IAmb IAmb 02 20 21.8
comp=Z,40nm,1.0s
KHBM Hayfork Bally 78.39 321 IAmb IAmb 02 20 20.9
comp=Z,39nm,1.0s
YBH Yreka Blue Hor 78.77 322 LR LR 02 54 04.9
comp=Z,5.1nm,18.7s,baz=134,slow=35
PINE Pine Mountain 79.11 325 IAmb IAmb 02 20 25.2
comp=Z,37nm,0.9s
AVE Averroes 79.24 49 P **P** **02 19 55.9 +0.6**
AVE Averroes 79.24 49 P **P** **02 19 56.5 +1.2**
AVE IAmb IAmb 02 19 57.5
comp=Z,68nm,1.0s
WIN Windhoek 79.37 110 IAmb IAmb 02 19 58.2
comp=Z,42nm,0.8s
J04A Umpqua Nationa 79.39 324 IAmb IAmb 02 20 26.1
comp=Z,51nm,1.0s
FFC Flin Flon 79.44 341 P **P** **02 19 56.1 +0.2**
FFC Flin Flon 79.44 341 P **P** **02 19 56.1 +0.2**
FFC pmax pmax
comp=Z,16nm,1.0s
FFC Flin Flon 79.44 341 P **P** **02 19 56.0 +0.2**
FFC pP **pP** **02 20 24.3 0.0**
SUR Sutherland 79.66 121 LR LR 02 55 25.2
comp=Z,47nm,18.0s,baz=248,slow=36
SUR Sutherland 79.66 121 P **P** **02 19 59.6 +1.5**
SUR IAmb IAmb 02 20 00.0
comp=Z,40nm,0.8s
I05D Terrebonne, OR 79.69 325 IAmb IAmb 02 20 28.1
comp=Z,47nm,0.8s
G05A Wamic 80.27 326 IAmb IAmb 02 20 31.5
comp=Z,92nm,1.2s
C09A Chrisman Ranch 80.45 329 IAmb IAmb 02 20 32.5
comp=Z,126nm,1.4s
HOOD Mount Hood Mea 80.50 325 IAmb IAmb 02 20 35.4
comp=Z,40nm,1.0s
MORF Marmelete 80.57 45 *e*P **P** **02 20 03.4 +0.9**
MORF IAmb IAmb 02 20 04.7
comp=Z,35nm,1.1s
MORF Marmelete 80.57 45 *e*P **P** **02 20 04.0 +1.5**
MORF Marmelete 80.57 45 *e*P **P** **02 20 03.4 +0.9**
EPH Ephrata 80.80 328 IAmb IAmb 02 20 34.6
comp=Z,45nm,1.3s
TSUM Tsumeb 80.81 107 LR LR 02 54 15.3
comp=Z,67nm,18.6s,baz=277,slow=34
TSUM Tsumeb 80.81 107 P **P** **02 20 05.0 +0.6**
TSUM IAmb IAmb 02 20 06.1
comp=Z,89nm,0.8s
TSUM Tsumeb 80.81 107 P **P** **02 20 05.1 +0.8**
TSUM pP **pP** **02 20 34.3 +0.9**
MD01 Midelt array s 80.91 50 P **P** **02 20 05.2 +0.6**
IFR Ifrane 80.98 50 P **P** **02 20 05.4 +0.5**
PBDV Barranco-do-Ve 81.02 45 P **P** **02 20 05.7 +0.9**
PBDV Barranco-do-Ve 81.02 45 *e*P **P** **02 20 06.0 +1.1**
MESJ Messejana 81.15 45 *e*P **P** **02 20 06.1 +0.6**
MESJ IAmb IAmb 02 20 07.0
comp=Z,19nm,0.9s
MESJ Messejana 81.15 45 *e*P **P** **02 20 06.5 +1.0**
MESJ Messejana 81.15 45 *e*P **P** **02 20 06.1 +0.6**
PCVE Castro Verde 81.16 45 P **P** **02 20 06.3 +0.7**
PCVE Castro Verde 81.16 45 *e*P **P** **02 20 06.6 +1.1**
PCVE *e*pP **pP** **02 20 36.0 +1.3**
PVAQ Vaqueiros 81.25 45 *e*P **P** **02 20 06.7 +0.7**
EDA Edea 81.36 83 P **P** **02 20 07.5 +0.4**
MOE Montemor 81.45 44 *e*P **P** **02 20 07.8 +0.7**
EGRO El Granado 81.47 45 P **P** **02 20 07.7 +0.5**
PBEJ Beja 81.49 45 *e*P **P** **02 20 08.2 +0.9**
EVO Evora 81.67 44 P **P** **02 20 08.4 +0.2**
EVO Evora 81.67 44 *e*P **P** **02 20 08.8 +0.6**
EVO *e*pP **pP** **02 20 37.5 +0.1**
PSBE So Bento 81.71 43 *e*P **P** **02 20 09.4 +0.9**
PARRA Arraiolos 81.81 44 *e*P **P** **02 20 09.7 +0.8**
PARRA *e*pP **pP** **02 20 38.2 +0.1**
CNIL Conil 81.82 47 P **P** **02 20 09.2 +0.2**
PMTG Montargil 81.83 43 *e*P **P** **02 20 09.9 +0.9**
D05A Enumclaw 81.90 327 IAmb IAmb 02 20 39.6
comp=Z,82nm,0.9s
KOOLE Kule 81.96 111 *i*P **P** **02 20 10.5 +0.1**
CEU Ceuta 82.04 47 P **P** **02 20 09.8 -0.4**
PBAR Barrancos 82.12 45 *e*P **P** **02 20 11.0 +0.4**
PESTR Estremoz 82.13 44 P **P** **02 20 11.2 +0.6**
PESTR Estremoz 82.13 44 *e*P **P** **02 20 11.1 +0.5**
EMIN Mina Concepcio 82.14 45 P **P** **02 20 10.8 +0.1**
PSARD Sardoal 82.17 43 *e*P **P** **02 20 11.1 +0.2**
EDM Edmonton 82.20 335 IAmb IAmb 02 20 39.6
comp=Z,74nm,0.8s
PCAS Casmilo, Conde 82.20 43 *e*P **P** **02 20 11.4 +0.4**
ESPR Espera 82.22 46 P **P** **02 20 11.2 +0.2**
LKGWB Lokgwabe 82.50 113 IAmb IAmb 02 20 17.2
comp=Z,78nm,0.9s
IVI Ivigtut 82.61 10 *i*P **P** **02 20 13.0 +0.5**
IVI IAmb IAmb 02 20 13.9
comp=Z,43nm,1.0s
PVIS Viseu 82.95 42 *e*P **P** **02 20 14.8 -0.2**
MTE Manteigas 83.00 43 *e*P **P** **02 20 15.5 +0.3**
MTE *e*pP **pP** **02 20 45.1 +0.7**
NRS Narsarsuaq 83.05 11 *i*P **P** **02 20 15.0 +0.2**
NRS IAmb IAmb 02 20 20.1
comp=Z,30nm,1.1s
EMAL Malaga-Limoner 83.14 47 P **P** **02 20 16.3 +0.5**
A04D Lummi Island 83.26 328 IAmb IAmb 02 20 47.5
comp=Z,46nm,0.8s
GRTLG Ghanzi 83.38 110 *i*P **P** **02 20 17.8 +0.1**
GRTLG Ghanzi 83.38 110 IAmb IAmb 02 20 19.2
comp=Z,91nm,0.8s
PVRL Vila Real 83.38 42 *e*P **P** **02 20 17.4 +0.3**
POLO Lamas de Olo 83.38 42 *e*P **P** **02 20 17.5 +0.3**
POLO *e*pP **pP** **02 20 48.2 +1.9**
PCAB Cabril 83.42 41 *e*P **P** **02 20 17.6 +0.3**
PCAB *e*pP **pP** **02 20 48.7 +2.3**
PGC Sidney 83.59 327 IAmb IAmb 02 20 48.2
comp=Z,40nm,0.8s
MVO Moncorvo 83.75 42 *e*P **P** **02 20 19.5 +0.5**
MVO *e*pP **pP** **02 20 50.6 +2.4**
KGCAE Kacgae 83.77 112 *i*P **P** **02 20 19.7 +0.1**
KGCAE Kacgae 83.77 112 IAmb IAmb 02 20 21.3
comp=Z,101nm,1.1s
GRHM Grahamstown, E 83.83 123 IAmb IAmb 02 20 21.4
comp=Z,84nm,1.0s
LLLB Lillooet 84.09 329 IAmb IAmb 02 20 50.7
comp=Z,36nm,1.1s
PBRG Braganca 84.28 42 *e*P **P** **02 20 22.1 +0.4**
TAM Tamanrasset 84.41 63 P **P** **02 20 23.2 +0.3**
TAM IAmb IAmb 02 20 24.4
comp=Z,112nm,1.4s
TAM Tamanrasset 84.41 63 P **P** **02 20 23.2 +0.3**
TAM pmax pmax
comp=Z,112nm,1.4s
TAM Tamanrasset 84.41 63 P **P** **02 20 23.4 +0.6**
TAM pP **pP** **02 20 52.1 0.0**
BOSA Boshof 84.48 118 P **P** **02 20 23.3 0.0**
comp=Z,32nm,0.7s,baz=259,slow=4.4,SNR=69
BOSA LR LR 02 57 27.4
comp=Z,49nm,19.1s,baz=199,slow=35
comp=Z,32nm,0.7s
BOSA Boshof 84.48 118 P **P** **02 20 23.2 0.0**
BOSA IAmb IAmb 02 20 24.3
comp=Z,38nm,0.8s
BOSA Boshof 84.48 118 P **P** **02 20 23.2 0.0**
BOSA pmax pmax
comp=Z,38nm,0.8s
BOSA Boshof 84.48 118 P **P** **02 20 23.6 +0.3**
BOSA pP **pP** **02 20 52.8 +0.3**
PAB San Pablo 84.62 45 P **P** **02 20 23.5 0.0**
PAB San Pablo 84.62 45 P **P** **02 20 23.5 0.0**
PAB pmax pmax
comp=Z,22nm,0.8s
CCD Concordia, Ant 84.86 183 P **P** **02 20 25.8 +1.3**
NUUK Nuuk 84.93 8 *i*P **P** **02 20 25.2 +1.0**
NUUK IAmb IAmb 02 20 25.9
comp=Z,28nm,0.9s
ESDC Sonseca Array 84.95 45 P **P** **02 20 25.3 +0.3**
comp=Z,13nm,1.0s,baz=247,slow=5.6,SNR=34
ESDC pP **pP** **02 20 54.4 -0.1**
comp=Z,5.3nm,0.9s,baz=247,slow=5.0,SNR=3.3
ESDC LR LR 02 55 26.3
comp=Z,108nm,20.0s,baz=236,slow=34
comp=Z,13nm,1.0s
MAKGR Makgori 85.03 116 *i*P **P** **02 20 26.2 +0.2**
CBB Campbell River 85.44 328 P **P** **02 20 27.9 +0.7**
CBB IAmb IAmb 02 20 57.8
comp=Z,39nm,1.0s
KDWAN Kaudwane 85.72 113 *i*P **P** **02 20 29.5 0.0**
UCM Universidad Co 85.74 44 P **P** **02 20 28.9 -0.1**
CART Cartagena 85.92 48 P **P** **02 20 29.4 -0.5**
MAW Mawson 85.93 163 P **P** **02 20 27.7 -1.7**
comp=Z,9.8nm,1.4s
MAW Mawson 85.93 163 P **P** **02 20 30.4 +1.0**
comp=Z,24nm,0.8s,baz=194,slow=7.6,SNR=7.8
MAW LR LR 03 00 52.9
comp=Z,39nm,18.1s,baz=230,slow=37
comp=Z,24nm,0.8s
LBTB Lobatse 85.98 115 LR LR 02 56 33.9
comp=Z,99nm,18.8s,baz=232,slow=34
LBTB Lobatse 85.98 115 P **P** **02 20 30.8 +0.1**
LBTB IAmb IAmb 02 20 32.1
comp=Z,142nm,1.6s
LBTB Lobatse 85.98 115 P **P** **02 20 30.8 +0.1**
LBTB pmax pmax
comp=Z,142nm,1.7s
LBTB Lobatse 85.98 115 P **P** **02 20 30.8 +0.1**
LBTB pP **pP** **02 21 00.4 +0.3**
BLKN Baker Lake 86.49 349 IAmb IAmb 02 21 01.5
comp=Z,54nm,1.4s
LPHEP Lephephe 86.77 114 *i*P **P** **02 20 34.7 +0.1**
KHWEE KHWEE 86.89 112 *i*P **P** **02 20 35.4 +0.2**
SFJD Kangerlussuaq 87.77 7 LR LR 03 01 50.6
comp=Z,40nm,18.8s,baz=186,slow=37
SFJD Kangerlussuaq 87.77 7 *i*P **P** **02 20 38.8 +0.7**
SFJD IAmb IAmb 02 20 39.2
comp=Z,9.0nm,0.9s
SOOWA Sowa 88.05 111 *i*P **P** **02 20 41.1 +0.3**
KSANE Kasane 88.06 108 *i*P **P** **02 20 41.3 +0.4**
KSANE Kasane 88.06 108 P **P** **02 20 41.5 +0.6**
KSANE IAmb IAmb 02 20 42.9
comp=Z,52nm,0.8s
BBB Bella Bella 88.12 328 LR LR 03 06 06.4
comp=Z,22nm,18.9s,baz=114,slow=40
ANGG Ammassalik, Gr 88.60 13 *i*P **P** **02 20 42.5 +0.4**
ANGG IAmb IAmb 02 20 43.6
comp=Z,32nm,1.0s
BROLN Tlhalogang 88.83 112 *i*P **P** **02 20 44.7 +0.2**
ILON Igloolik, Nuna 89.50 356 P **P** **02 20 46.6 +0.4**
ILON IAmb IAmb 02 21 16.5
comp=Z,40nm,1.0s
YKAW1 Yellowknife Wh 89.55 341 P **P** **02 20 47.2 +0.6**
YKA Yellowknife Ar 89.60 341 P **P** **02 20 47.4 +0.6**
comp=Z,32nm,0.8s,baz=137,slow=3.9,SNR=626
YKA pP **pP** **02 21 15.6 -0.2**
comp=Z,48nm,0.8s,baz=138,slow=3.9,SNR=19
YKA PKKPbc **PKKPdf** **02 38 20.8 +1.7**
comp=Z,0.2nm,0.6s,baz=324,slow=4.0,SNR=5.5
YKA LR LR 03 04 55.0
comp=Z,84nm,18.1s,baz=116,slow=38
comp=Z,32nm,0.8s
GDH Godhavn 89.64 6 *i*P **P** **02 20 45.2 -1.7**
GDH IAmb IAmb 02 20 45.8
comp=Z,14nm,1.1s
CEST Esterri de Car 89.81 44 P **P** **02 20 48.5 +0.1**
ILULI Ilulissat 89.84 6 *i*P **P** **02 20 47.8 0.0**
ILULI IAmb IAmb 02 20 48.3
comp=Z,15nm,1.0s
SAQQ Saqqaq 90.52 6 *i*P **P** **02 20 51.8 +0.8**
SAQQ IAmb IAmb 02 20 53.1
comp=Z,13nm,0.8s
MAHO Mahon 90.64 48 P **P** **02 20 51.7 -0.5**
NIAQ Niaqornat 91.12 5 *i*P **P** **02 20 55.0 +1.3**
NIAQ IAmb IAmb 02 20 57.1
comp=Z,31nm,1.4s
SAATT Saattut 91.33 6 *i*P **P** **02 20 55.3 +0.7**
SAATT IAmb IAmb 02 20 55.9
comp=Z,17nm,0.9s
LSZ Lusaka 91.66 107 LR LR 03 01 22.1
comp=Z,88nm,19.2s,baz=179,slow=35
BORG Borgarnes 92.04 19 LR LR 03 00 25.1
comp=Z,33nm,19.9s,baz=249,slow=34
POIN Pond Inlet 92.58 357 P **P** **02 21 01.0 +0.6**
KEST Kesra 92.62 53 P **P** **02 21 02.1 +0.5**
comp=Z,6.8nm,0.8s,baz=282,slow=3.0,SNR=12
comp=Z,6.8nm,0.8s
DLBC Dease Lake 92.66 333 LR LR 03 07 38.9
comp=Z,40nm,18.2s,baz=116,slow=39
UPNV Upernavik 92.89 4 *i*P **P** **02 21 02.5 +0.6**
UPNV IAmb IAmb 02 21 03.1
comp=Z,7.9nm,0.8s
EKA Eskdalemuir Ar 93.45 32 P **P** **02 21 03.6 -1.2**
comp=Z,3.7nm,0.8s,baz=258,slow=5.9,SNR=4.0
comp=Z,3.7nm,0.8s
SUMG Summit 94.56 9 P **P** **02 21 10.6 +0.5**
SUMG Summit 94.56 9 IAmb IAmb 02 21 26.4
comp=Z,17nm,0.6s
SUMG Summit 94.56 9 *i*P **P** **02 21 11.1 +1.0**
SUMG IAmb IAmb 02 21 12.2
comp=Z,13nm,0.9s
KULLO Kullorsuaq 94.60 3 *i*P **P** **02 21 10.0 +0.3**
KULLO IAmb IAmb 02 21 11.0
comp=Z,8.8nm,0.9s
RES Resolute Bay 95.80 353 LR LR 03 07 58.7
comp=Z,33nm,18.9s,baz=11,slow=38
SCO Scoresbysund 96.00 14 *i*P **P** **02 21 14.9 -1.3**
TULEG Thule 96.25 0 IAmb IAmb 02 21 47.6
comp=Z,8.7nm,0.8s
TULEG Thule 96.25 0 *i*P **P** **02 21 17.8 +0.6**
TULEG IAmb IAmb 02 21 18.3
comp=Z,8.5nm,0.8s
ZCCA Zocca 96.98 45 IAmb IAmb 02 21 22.3
comp=Z,12nm,0.7s
VAE Valguarnera 97.05 53 LR LR 03 04 35.2
comp=Z,79nm,21.0s,baz=278,slow=35
DAVOX Davos/Dischmat 97.14 43 LR LR 03 05 35.5
comp=Z,72nm,18.1s,baz=252,slow=36
DAVA Damuels 97.32 42 *e*P **P** **02 21 22.9 -0.1**
comp=Z,8.2nm,1.6s
NEEM North Greenlan 97.76 4 *i*P Pdif 02 21 25.2 +0.7
FETA Feichten 97.77 43 *e*PcP Pdif 02 21 25.5 +0.5
comp=Z,1.7nm,0.8s
TEOL Teolo 97.80 45 IAmb IAmb 02 21 25.6
comp=Z,16nm,0.8s
MOTA Moosalm 98.12 43 *e*Pdiff Pdif 02 21 26.8 +0.3
comp=Z,5.2nm,1.3s
SQTA Sankt Quirin 98.14 43 *e*Pdiff **P** **02 21 26.5 -0.1**
comp=Z,6.2nm,0.8s
WTTA Wattenberg 98.43 43 *e*Pdiff **P** **02 21 27.9 0.0**
comp=Z,7.0nm,0.9s
ABTA Abfaltersbach 98.82 44 *i*Pdiff **P** **02 21 29.5 0.0**
comp=Z,1.3nm,0.6s
A36M Sachs Harbour 99.10 345 IAmb IAmb 02 21 31.1
comp=Z,12nm,0.8s
MBAR Mbarara 99.20 94 LR LR 03 06 55.0
comp=Z,34nm,18.3s,baz=266,slow=36
INK Inuvik 99.35 340 LR LR 03 10 11.9
comp=Z,70nm,20.1s,baz=267,slow=38
KBA Koelnbreinsper 99.47 43 *e*Pdiff **Pdif** **02 21 31.7 -0.9**
comp=Z,1.6nm,0.7s
MYKA Terra Mystica 99.52 44 *e*Pdiff **Pdif** **02 21 32.4 -0.3**
comp=Z,3.9nm,1.0s
OBKA Obir 100.07 44 *e*Pdiff **Pdif** **02 21 34.9 -0.2**
comp=Z,2.8nm,0.7s
MPLH Magyarpolny 102.23 44 P **Pdif** **02 21 44.3 -0.3**
ILAR Eielson Array 102.69 335 P **Pdif** **02 21 46.3 0.0**
comp=Z,0.3nm,0.7s,baz=150,slow=3.8,SNR=3.1
ILAR PP **pP** **02 26 03.2 +2.0**
comp=Z,1.8nm,1.2s,baz=101,slow=4.9,SNR=5.2
ILAR PKKPbc **PKKPbc** **02 37 45.0 -2.7**
comp=Z,0.5nm,0.6s,baz=301,slow=4.1,SNR=5.4
R9F13 Warsaw-Wawer 105.73 40 *e*P **Pdif** **02 22 03.1 +3.1**
R9F13 *e*SKS **SKSac** **02 32 25.7 -4.2**
ARCES ARCESS Array B 110.16 22 PKKPbc PKKPbc 02 37 21.1 -3.5
comp=Z,4.4nm,0.9s,baz=355,slow=1.5,SNR=3.7
AKASG Malin Array Be 110.47 42 PKiKP **PKiKP** **02 26 20.7 -0.6**
comp=Z,0.6nm,0.4s,baz=267,slow=2.7,SNR=5.6
BR131 Keskin Array S 112.19 54 *i*PKiKP **PKiKP** **02 26 24.7 -0.4**
BRTR Keskin Array B 112.19 54 PKiKP **PKiKP** **02 26 25.4 +0.3**
comp=Z,2.5nm,0.7s,baz=200,slow=2.4,SNR=18
BRTR PP **PP** **02 27 10.3 -1.3**
comp=Z,0.9nm,0.7s,baz=251,slow=7.7,SNR=5.4
OBN Obninsk 115.13 38 *e*PKiKP **PKPdf** **02 26 30.2 +0.2**
OBN *e* 02 27 00.6
OBN *e* 02 27 35.9
OBN pmax pmax
comp=Z,7.0nm,0.9s
KLMR Klimovskoe 116.33 31 *e*PKiKP **PKPdf** **02 26 31.5 -0.7**
KLMR pmax pmax
comp=Z,16nm,1.1s
SHA1 Shidzhatmaz 119.20 50 *c i*PKiKP **PKiKP** **02 26 39.3 +0.6**
KIV Kislovodsk 119.22 50 **PKiKP** **02 26 39.0 +0.5**
KIV Kislovodsk 119.22 50 *e*PKiKP **PKiKP** **02 26 38.5 0.0**
KIV pmax pmax
comp=Z,12nm,1.0s
KBZ Khabaz 119.38 50 PKP **PKiKP** **02 26 39.3 +0.7**
comp=Z,14nm,0.9s,baz=225,slow=2.0,SNR=47
KBZ Khabaz 119.38 50 *c i*PKiKP **PKiKP** **02 26 39.5 +0.9**
RAYN Ar Rayn 119.75 74 PKiKP **PKiKP** **02 26 41.0 +0.9**
RAYN Ar Rayn 119.75 74 PKiKP **PKiKP** **02 26 41.0 +0.9**
STKA Stephens Creek 120.61 210 PKP **PKiKP** **02 26 42.1 +0.5**
comp=Z,4.6nm,0.6s,baz=109,slow=1.3,SNR=9.8

GNI	**Garni**	**120.72**	**55**	PKP	**PKiKP**	**02 26 42.2**	**+0.5**
	comp=Z,4.8nm,0.6s,baz=321,slow=4.4,SNR=4.6						
GNI	**Garni**	**120.72**	**55**		**PKiKP**	**02 26 42.7**	**+1.1**
GNI	**Garni**	**120.72**	**55***c*	*i*PKIKP	**PKiKP**	**02 26 42.6**	**+0.9**
GNI				pmax	pmax		
	comp=Z,32nm,1.7s						
KIRV	**Kirov**	**121.67**	**33***c*	*i*PKIKP	**PKiKP**	**02 26 43.5**	**+0.9**
AKT	**Akhty**	**122.98**	**53**	*i*PKIKP	**PKiKP**	**02 26 46.1**	**+0.1**
AKT				*e*		02 27 14.8	
AKT				*e*		02 28 27.0	
AKT				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ARTI	**Arti**	**126.95**	**33**	*i*PKIKP	**PKiKP**	**02 26 53.7**	**+0.5**
ARTI						02 28 53.9	
ARTI						02 33 55.5	
ARTI				SS	SS	02 45 52.0	+1.3
TIXI	**Tiksi**	**127.19**	**353***c*	*i*PKIKP	**PKPdf**	**02 26 52.8**	**0.0**
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
H11S2	**WAKE ISLAND Hyl**	**27.34**	**278**	T	T	04 46 43.6	
	baz=101,slow=74,SNR=2199						
H11S1	**WAKE ISLAND Hyl**	**27.35**	**278**	T	T	04 46 41.7	
	baz=101,slow=74,SNR=692						
H11S3	**WAKE ISLAND Hyl**	**27.36**	**278**	T	T	04 46 44.9	
	baz=101,slow=74,SNR=706						
H11N3	**WAKE ISLAND Hyl**	**27.38**	**280**	T	T	04 46 50.8	
	baz=100,slow=74,SNR=201						
H11N2	**WAKE ISLAND Hyl**	**27.39**	**280**	T	T	04 46 35.8	
	baz=100,slow=74,SNR=175						
H11N1	**WAKE ISLAND Hyl**	**27.39**	**280**	T	T	04 46 52.0	
	baz=100,slow=74,SNR=224						
SEY	**Seymchan**	**128.52**	**337**	*e*PKIKP	**PKPdf**	**02 26 55.7**	**+0.2**
SEY				pmax	pmax		
	comp=Z,17nm,0.8s						
AKTO	**Aktyubinsk**	**128.67**	**41**	PKP	**PKiKP**	**02 26 57.5**	**+0.6**
	comp=Z,9.1nm,0.8s,baz=284,slow=1.8,SNR=29						
PETK	**Petropavlovsk-**	**131.10**	**324**	PKP	**PKiKP**	**02 27 02.1**	**+0.4**
	comp=Z,9.3nm,0.8s,baz=72,slow=6.4,SNR=5.4						
ASAR	**Alice Springs**	**131.14**	**209**	PKhKP	PKPpre	02 26 54.6	
	comp=Z,0.4nm,0.6s,baz=109,slow=1.8,SNR=4.4						
ASAR				PKP	**PKPdf**	**02 27 02.0**	**+0.2**
	comp=Z,8.0nm,0.5s,baz=132,slow=1.7,SNR=62						
ASAR				pPKP	pPKPdf	02 27 31.6	-0.5
	comp=Z,5.1nm,0.8s,baz=145,slow=2.3,SNR=5.8						
ASAR				SKPbc	**SKPbc**	**02 30 16.3**	**-0.6**
	comp=Z,4.9nm,1.0s,baz=145,slow=4.2,SNR=10.0						
WRA	**Warramunga Arr**	**134.13**	**212**	PKhKP	PKPpre	02 26 56.2	
	comp=Z,0.4nm,0.5s,baz=139,slow=3.7,SNR=9.2						
WRA				PKP	**PKPdf**	**02 27 07.9**	**+0.3**
	comp=Z,11nm,0.6s,baz=158,slow=1.8,SNR=74						
WRA				pPKP	pPKPdf	02 27 37.6	-0.2
	comp=Z,5.4nm,0.6s,baz=158,slow=1.9,SNR=5.9						
WRA				SKPbc	**SKPbc**	**02 30 26.8**	**-0.5**
	comp=Z,2.8nm,0.7s,baz=147,slow=3.1,SNR=5.6						
BORK	**Borovoye**	**134.63**	**33***c*	*i*PKIKP	**PKiKP**	**02 27 08.8**	**0.0**
BORK				pmax	pmax		
	comp=Z,16nm,1.7s						
BVAR	**Borovoye Array**	**134.67**	**33**	PKP	**PKPdf**	**02 27 07.8**	**+0.3**
	comp=Z,6.9nm,0.7s,baz=282,slow=2.9,SNR=32						
BVAR				pPKP	**pPKPdf**	**02 27 38.0**	**+0.1**
	comp=Z,3.8nm,0.8s,baz=325,slow=2.3,SNR=3.9						
PSA00	**Pilbara Seismi**	**137.81**	**193**		**PKPdf**	**02 27 14.8**	**+0.4**
CHGR	**Chuyangaron**	**139.62**	**53**	*i*PKIKP	**PKPdf**	**02 27 16.4**	**-0.8**
KURK	**Kurchatov**	**140.18**	**32***c*	*i*PKIKP	**PKiKP**	**02 27 19.0**	**-1.2**
KURK				pmax	pmax		
	comp=Z,17nm,1.3s						
KURBB	**Kurchatov Arra**	**140.19**	**32**	PKhKP	PKPpre	02 27 12.7	
	comp=Z,1.3nm,0.5s,baz=308,slow=3.2,SNR=10						
KURBB				PKP	**PKPdf**	**02 27 18.2**	**+0.5**
	comp=Z,6.6nm,0.8s,baz=300,slow=2.6,SNR=20						
KURBB				PP	**PP**	**02 30 17.9**	**+1.8**
	comp=Z,1.0nm,0.3s,baz=313,slow=6.3,SNR=4.0						
ZALV	**Zalesovo Beam**	**140.66**	**24**	PKhKP	PKPpre	02 27 12.0	
	comp=Z,9.6nm,0.7s,baz=311,slow=2.5,SNR=30						
ZALV				PKP	**PKPdf**	**02 27 18.8**	**+0.3**
	comp=Z,26nm,0.8s,baz=306,slow=3.4,SNR=27						
ZALV				SKPbc	**SKPbc**	**02 30 46.0**	**+0.8**
	comp=Z,3.7nm,0.8s,baz=304,slow=3.2,SNR=3.8						
AAK	**Ala-Archa**	**142.05**	**45**	PKhKP	PKPpre	02 27 17.6	
	comp=Z,9.6nm,0.9s,baz=24,slow=2.0,SNR=13						
AAK	**Ala-Archa**	**142.05**	**45**	*i*PKIKP	**PKPdf**	**02 27 18.9**	**-2.7**
BOD	**Bodaibo**	**142.08**	**357**	*e*PKHKP	PKPpre	02 27 15.3	
BOD				pmax	pmax		
	comp=Z,89nm,0.7s						
YSS	**Yuzhno-Sakhali**	**142.49**	**323**	*e*PKIKP	**PKPdf**	**02 27 22.7**	**+0.8**
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
GENI	**Genyem**	**143.46**	**236**	PKP	PKPbc	02 27 22.4	+0.2
GENI				PKP	**PKPdf**	**02 27 24.1**	**-0.6**
ZEA	**Zeya**	**143.94**	**343**	*e*PKIKP	PKPbc	02 27 23.1	+0.7
ZEA				pmax	pmax		
	comp=Z,20nm,1.4s						
KSH2	**Kashi**	**144.20**	**50**	PKP	**PKPdf**	**02 27 24.9**	**-0.6**
KSH2				pPKP	pPKPdf	02 27 55.5	-0.6
MAKZ	**Makanchi**	**144.36**	**35**		PKPbc	02 27 24.3	+0.3
MAKZ	**Makanchi**	**144.36**	**35**	PKIKP	PKPbc	02 27 24.3	+0.3
MK31	**Makanchi Array**	**144.54**	**34**	*i*PKIKP	PKPbc	02 27 24.9	+0.4
MKAR	**Makanchi Array**	**144.54**	**34**	PKP	PKPbc	02 27 24.9	+0.4
	comp=Z,27nm,0.8s,baz=301,slow=2.9,SNR=216						
MKAR				pPKP	pPKPdf	02 27 55.2	-0.9
	comp=Z,8.5nm,0.8s,baz=313,slow=3.0,SNR=2.7						
MKAR				SKKPbc	SKKPbc	02 38 56.6	-3.1
	comp=Z,0.2nm,0.7s,baz=164,slow=4.9,SNR=3.9						
DGZ	**Jazzator, Alta**	**144.95**	**27**	*i*PKIKP	**PKPdf**	**02 27 26.6**	**+0.2**
WUS	**Wushi**	**145.84**	**45**		**PKPbc**	**02 27 29.1**	**+0.2**
KLR	**Kul'dur**	**146.26**	**335**	*i*PKIKP	**PKPdf**	**02 27 28.7**	**+0.3**
GUMO	**Guam**	**146.76**	**264**	PKPbc	**PKPdf**	**02 27 31.0**	**+0.7**
	comp=Z,56nm,0.3s,baz=151,slow=0.8,SNR=3.5						
GUMO	**Guam**	**146.76**	**264**	PKIKP	**PKPdf**	**02 27 31.0**	**+0.7**
HEH	**HeiHe**	**146.96**	**340**	*e*PKPbc	**PKPdf**	**02 27 29.4**	**-0.2**
MOY	**Mondy**	**147.41**	**11**	*e*PKP2	**PKiKP**	**02 27 34.2**	**-1.0**
MOY				pmax	pmax		
	comp=Z,69nm,1.4s						
KMPI	**Kaimana, Papua**	**147.47**	**226**	PKP	**PKPdf**	**02 27 29.2**	**-2.4**
KMPI				PKP	**PKPab**	**02 27 37.4**	**+1.0**
BATI	**Baumata**	**147.47**	**204**	PKP	**PKPdf**	**02 27 29.2**	**-2.4**
BATI				PKP	**PKPab**	**02 27 37.7**	**+1.4**
SOEI	**Soe**	**147.64**	**206**	PKP	**PKPbc**	**02 27 34.0**	**-0.8**
SOEI	**Soe**	**147.64**	**206**	PKP	**PKPdf**	**02 27 29.5**	**-2.5**
SOEI				PKP	**PKiKP**	**02 27 36.5**	**-0.3**
TLY	**Talaya**	**147.82**	**8**		**PKiKP**	**02 27 35.4**	**-0.5**
TLY	**Talaya**	**147.82**	**8***c*	*i*PKP2	**PKPbc**	**02 27 34.9**	**+0.8**
TLY				pmax	pmax		
	comp=Z,64nm,1.3s						
PALK	**Pallekele**	**148.28**	**109**	PKP	**PKPdf**	**02 27 30.4**	**-2.5**
PALK				PKP	**PKiKP**	**02 27 37.3**	**-0.7**
MALK	**Mahakanadarawa**	**148.62**	**107**	PKP	**PKPdf**	**02 27 34.2**	**+0.8**
ZAK	**Zakamensk**	**149.03**	**9**	*e*PKIKP	**PKPdf**	**02 27 33.7**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,35nm,1.3s						
WMQ	**Urumqi**	**149.36**	**34**	*e*PKPbc	**PKPbc**	**02 27 38.6**	**+0.3**
WMQ				PKPab	**PKPab**	**02 27 48.3**	**+5.0**
WMQ				pPKP	pPKPbc	02 28 10.0	+1.2
WBSI	**Waikabubak, Su**	**149.41**	**197**	PKP	**PKPdf**	**02 27 32.4**	**-2.4**
WBSI				PKP	**PKiKP**	**02 27 41.4**	**+1.0**
HYB	**Hyderabad**	**149.43**	**89**	*e*PKPbc	**PKPbc**	**02 27 39.0**	**-0.2**
HYB				*e*PKiKP	**PKiKP**	**02 27 40.2**	**-0.1**
HYB				*e*SKSdf	**SKSdf**	**02 34 34.4**	**+1.1**
MMRI	**Maumere**	**149.45**	**203**	PKP	**PKPdf**	**02 27 32.4**	**-2.4**
MMRI				PKP	**PKPbc**	**02 27 39.8**	**+0.5**
EDFI	**Ende, Flores**	**149.54**	**202**	PKP	**PKPdf**	**02 27 35.4**	**+0.3**
USRK	**Ussuriysk Ar.**	**150.00**	**329**	PKPbc	**PKiKP**	**02 27 40.8**	**+0.2**
	comp=Z,42nm,0.8s,baz=15,slow=1.1,SNR=42						
USRK				pPKPbc	**pPKPbc**	**02 28 09.7**	**0.0**
	comp=Z,34nm,0.8s,baz=359,slow=1.7,SNR=8.8						
PLAI	**Plampang**	**150.60**	**194**	PKP	**PKPdf**	**02 27 34.2**	**-2.4**
PLAI				PKP	**PKPbc**	**02 27 42.4**	**+0.3**
DBNI	**Kabupaten Domp**	**150.79**	**195**	PKP	**PKPdf**	**02 27 34.5**	**-2.4**
DBNI				PKP	**PKiKP**	**02 27 42.9**	**-0.3**
MDJ	**Mudanjiang**	**150.81**	**332**	PKPbc	**PKPdf**	**02 27 36.8**	**+0.8**
BNX	**BinXian**	**150.81**	**336**	PKPbc	**PKPdf**	**02 27 35.0**	**-0.9**
MJAR	**Matsushiro Arr**	**150.82**	**310**	PKPbc	**PKiKP**	**02 27 42.8**	**+0.2**
	comp=Z,26nm,0.8s,baz=90,slow=1.6,SNR=52						
MJAR				pPKPbc	**pPKPbc**	**02 28 11.9**	**-0.1**
	comp=Z,16nm,0.8s,baz=87,slow=1.2,SNR=6.5						
MAJO	**Matsushiro**	**150.82**	**310**		**PKiKP**	**02 27 42.7**	**+0.1**
MAJO	**Matsushiro**	**150.82**	**310**	PKIKP	**PKiKP**	**02 27 42.7**	**+0.1**
AAI	**Ambon**	**150.94**	**218**	PKP	**PKPdf**	**02 27 34.7**	**-2.4**
AAI				PKP	**PKiKP**	**02 27 43.3**	**-0.2**
IGBI	**Denpasar**	**151.11**	**189**	PKP	**PKPdf**	**02 27 35.0**	**-2.4**
IGBI				PKP	**PKiKP**	**02 27 44.3**	**+0.5**
KRAI	**Karang Ratu**	**151.12**	**219**	PKP	**PKPdf**	**02 27 35.0**	**-2.4**
KRAI				PKP	**PKPbc**	**02 27 43.1**	**-0.2**
SIJI	**Sorong**	**151.16**	**227**	PKPbc	**PKiKP**	**02 27 43.9**	**-0.1**
	comp=Z,52nm,0.7s,baz=36,slow=5.2,SNR=13						
SIJI				pPKPbc	**pPKPbc**	**02 28 13.5**	**+0.1**
	comp=Z,8.7nm,0.4s,baz=3.8,slow=7.8,SNR=2.7						
SIJI	**Sorong**	**151.16**	**227**	PKP	**PKPdf**	**02 27 35.0**	**-2.5**
SIJI				PKP	**PKiKP**	**02 27 44.4**	**+0.4**
SWI	**Sorong**	**151.17**	**227**	PKP	**PKPdf**	**02 27 35.0**	**-2.5**
SWI				PKP	**PKiKP**	**02 27 44.8**	**+0.9**
KHKI	**Kahang-Kahang**	**151.49**	**190**	PKP	**PKPdf**	**02 27 35.6**	**-2.3**
KHKI				PKP	**PKPab**	**02 27 55.5**	**+2.9**
RTBI	**Rangdo, Negare**	**151.50**	**189**	PKP	**PKPdf**	**02 27 35.6**	**-2.4**
RTBI				PKP	**PKiKP**	**02 27 44.7**	**+0.1**
JAGI	**Jajag, Banyuwa**	**151.59**	**187**	PKP	**PKPdf**	**02 27 35.7**	**-2.4**
JAGI				PKP	**PKPbc**	**02 27 44.6**	**+0.2**
SONM	**Songino Array**	**151.93**	**6**	PKP	**PKPdf**	**02 27 38.9**	**+1.1**
	comp=Z,7.3nm,0.8s,baz=316,slow=1.1,SNR=49						
SONM				PKPbc	**PKiKP**	**02 27 45.1**	**+0.5**
	comp=Z,43nm,0.7s,baz=295,slow=1.1,SNR=131						
SONM				PKPab	**PKPab**	**02 27 54.6**	**+0.8**
	comp=Z,10nm,0.7s,baz=329,slow=2.8,SNR=7.9						
SONM				pPKPbc	**pPKPbc**	**02 28 14.9**	**+0.2**
	comp=Z,17nm,0.6s,baz=318,slow=0.8,SNR=5.3						
SONM	**Songino Array**	**151.93**	**6**		**PKiKP**	**02 27 45.4**	**+0.7**
ULN	**Ulaanbaatar**	**151.96**	**5**	PKP	**PKPdf**	**02 27 35.9**	**-2.0**
ULN				PKP	**PKPbc**	**02 27 39.1**	**-5.3**
PCJI	**Pacitan**	**152.06**	**181**	PKP	**PKPdf**	**02 27 36.4**	**-2.4**
PCJI				PKP	**PKiKP**	**02 27 46.2**	**+0.4**
BSSI	**Bau Bau, Buton**	**152.38**	**201**	PKP	**PKPdf**	**02 27 36.9**	**-2.4**
BSSI				PKP	**PKPbc**	**02 27 40.9**	**-5.3**
SNJI	**Sawahan-Nganju**	**152.45**	**182**	PKP	**PKPdf**	**02 27 37.0**	**-2.6**
SNJI				PKP	**PKiKP**	**02 27 48.8**	**+2.0**
SJI	**Sawahan**	**152.50**	**182**	PKP	**PKPdf**	**02 27 37.1**	**-2.5**
SJI				PKP	**PKiKP**	**02 27 47.4**	**+0.6**
BBJI	**Bungbulang**	**152.62**	**173**		**PKiKP**	**02 27 47.1**	**+0.1**
BBJI	**Bungbulang**	**152.62**	**173**	PKP	**PKPdf**	**02 27 37.2**	**-2.5**
BBJI				PKP	**PKiKP**	**02 27 47.5**	**+0.5**
KMMI	**Kalianget**	**153.01**	**187**	PKP	**PKPdf**	**02 27 37.8**	**-2.4**
KMMI				PKP	**PKiKP**	**02 27 48.8**	**+1.1**
CN2	**Changchun**	**153.20**	**336**	PKPbc	**PKPdf**	**02 27 38.8**	**-0.8**
SANI	**Sanana**	**153.53**	**216**	PKP	**PKPdf**	**02 27 44.3**	**+3.5**
SANI	**Sanana**	**153.53**	**216**	PKP	**PKPdf**	**02 27 38.5**	**-2.5**
SANI				PKP	**PKiKP**	**02 27 49.1**	**+0.3**
KAPI	**Kappang**	**153.68**	**201**		**PKiKP**	**02 27 50.1**	**+1.0**
KAPI	**Kappang**	**153.68**	**201**	PKIKP	**PKiKP**	**02 27 50.1**	**+1.0**
KAPI	**Kappang**	**153.68**	**201**	PKP	**PKPdf**	**02 27 38.8**	**-2.4**
KAPI				PKP	**PKiKP**	**02 27 50.2**	**+1.1**
SPSI	**Sidrap Palu**	**154.66**	**201**	PKP	**PKPdf**	**02 27 40.1**	**-2.5**
SPSI				PKP	**PKiKP**	**02 27 52.5**	**+1.4**
XLT	**XiLinHaoTe**	**155.68**	**351**	*e*PKP	**PKPdf**	**02 27 43.6**	**+0.4**
XLT				PKPab	**PKPab**	**02 28 11.0**	**+1.2**
LUWI	**Luwuk**	**156.06**	**211**	PKP	**PKPdf**	**02 27 39.8**	**-4.6**
LUWI	**Luwuk**	**156.06**	**211**	PKP	**PKPdf**	**02 27 41.0**	**-3.4**
KSRS	**Korea Array**	**156.99**	**323**	PKP	**PKPdf**	**02 27 44.8**	**-0.2**
	comp=Z,5.8nm,0.9s,baz=51,slow=1.2,SNR=12						
KSRS				PKPab	**PKPab**	**02 28 16.6**	**+1.1**
	comp=Z,7.7nm,0.8s,baz=58,slow=3.1,SNR=8.7						
KSRS				pPKPab	**pPKPab**	**02 28 45.4**	**+0.8**
	comp=Z,8.0nm,0.7s,baz=55,slow=4.4,SNR=6.8						
KSAR	**Wonju Array Be**	**157.02**	**323**		**PKPdf**	**02 27 45.9**	**+0.9**
KSAR	**Wonju Array Be**	**157.02**	**323**	PKIKP	**PKPdf**	**02 27 45.9**	**+0.9**
JNU	**Nakatsue**	**157.75**	**310**	PKPab	**PKPab**	**02 28 19.4**	**+0.3**
	comp=Z,1.9nm,0.3s,baz=36,slow=3.5,SNR=4.3						
GTA2	**Gaotai**	**158.33**	**24**	PKP	**PKPdf**	**02 27 47.9**	**+1.2**
GTA2				pPKP	pPKPdf	02 28 17.1	-0.2
BKNI	**Bangkinang**	**158.33**	**153**	PKP	**PKPdf**	**02 27 44.9**	**-2.4**
BKNI				PKP	**PKPdf**	**02 27 52.7**	**+5.4**
GOMU	**GeErMu**	**158.59**	**37**	PKP	**PKPdf**	**02 27 48.2**	**+0.7**
DL2	**Dalian**	**158.87**	**336**	PKP	**PKPdf**	**02 27 48.0**	**+0.8**
DL2				PKPab	**PKPab**	**02 28 23.6**	**0.0**
HHC	**Hu-ho-hao-te**	**159.13**	**358**	*e*PKP	**PKPdf**	**02 27 48.8**	**+1.2**
BTO2	**Baotou**	**159.23**	**2**	*e*PKP	**PKPdf**	**02 27 49.4**	**+1.6**
BTO2				PPMZ			
	comp=Z,350nm,5.2s						
BJI2	**Beijing**	**159.43**	**348**	PKP	**PKPdf**	**02 27 49.4**	**+1.6**
LSA	**Lhasa**	**159.75**	**57**	PKP	**PKPdf**	**02 27 47.3**	**-1.8**
HNS	**HongShan**	**162.24**	**350**	⇑PKP	**PKPdf**	**02 27 52.6**	**+1.7**
HNS				pPKP	**pPKPdf**	**02 28 22.3**	**+1.0**
LZH	**Lanzhou**	**162.79**	**19**	*e*PKP	**PKPdf**	**02 27 53.8**	**+2.0**
LZH				sPKP	sPKPdf	02 28 30.0	-3.8
TIA	**Tai'an**	**162.83**	**342**	PKP	**PKPdf**	**02 27 52.9**	**+1.3**
LZDM	**Lanzhou Array**	**162.87**	**20**	PKP	**PKPdf**	**02 27 53.2**	**+1.1**
	comp=Z,0.8nm,0.3s,baz=20,slow=4.7,SNR=5.4						
LYN	**LuoYang**	**165.35**	**354**	*e*PKP	**PKPdf**	**02 27 52.0**	**-1.9**
LYN				PKPab	**PKPab**	**02 28 52.3**	**+0.3**
XAN	**Xi'an**	**165.84**	**6**	⇑PKP	**PKPdf**	**02 27 55.9**	**+1.5**
NJ2	**Nanjing**	**165.90**	**331**	*e*PKP	**PKPdf**	**02 27 55.4**	**+1.0**
CD2	**Chengdu**	**167.38**	**29**	PKP	**PKPdf**	**02 27 55.0**	**-0.6**
CMAR	**Chiang Mai Arr**	**168.76**	**95**	PKP	**PKPdf**	**02 27 56.9**	**0.0**
	comp=Z,1.9nm,0.4s,baz=289,slow=2.2,SNR=23						
CMAR				PKPab	**PKPab**	**02 29 08.0**	**+0.1**
	comp=Z,7.9nm,0.8s,baz=254,slow=6.4,SNR=23						
CMAR				PP	**PP**	**02 32 60.0**	**+2.3**
	comp=Z,1.3nm,0.3s,baz=265,slow=5.4,SNR=6.4						
CHTO	**Chiang Mai**	**168.81**	**94**	PKP	**PKPdf**	**02 27 54.7**	**-2.2**
CHTO				PKP	**PKPdf**	**02 27 57.7**	**+0.8**
WHN	**Wuhan**	**168.93**	**344**	PKP	**PKPdf**	**02 27 58.4**	**+1.8**
PZH	**PanZhiHua**	**169.45**	**50**	PKP	**PKPdf**	**02 27 56.2**	**-1.0**
KMI2	**Kunming**	**170.97**	**53**	PKP	**PKPdf**	**02 27 59.4**	**+1.1**
GYA	**Guiyang**	**172.49**	**29**	PKP	**PKPdf**	**02 27 59.7**	**+0.9**
QIZ	**Qiongzhong**	**178.77**	**136**	PKP	**PKPdf**	**02 28 02.5**	**+2.1**
QIZ				PP	**PP**	**02 33 45.1**	**0.0**
QIZ				SS	SS	02 55 22.8	+5.2
QIZ				L	L		
	comp=Z,170nm,11.6s						
QIZ				L	L		
	comp=Z,120nm,11.7s						

*WEL **13** 02:12:53.0±0.5, 42°S±2°×17°4E±°, h7km±4km, M2.9/25, ML2.8/11, MLv2.9/25, Error ellipse: s-maj=3.5km s-min=2.9km az=109.2, confirmed*
*NOU **13** 02:12:56.3, 41°76S×173°91E, h8km, MLv3.6/7, South Island, New Zealand*

ISC 13 02:12:52.2±0.8, 41°64S±0°02×174°29E±0°02, h14km±5km, n74,σ1°15/83, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SDNS	**Seddon**	**0.12**	**260**	P	**Pg**	**02 12 55.7**	**+0.2**
SDNS				S	**Sg**	**02 12 58.4**	**+0.6**
CMWZ	**Cape Campbell**	**0.12**	**210**	P	**Pg**	**02 12 55.2**	**-0.4**
CMWZ				S	**Sg**	**02 12 57.7**	**-0.2**
SEDS	**Seddon Fire St**	**0.17**	**260**	P	**Pg**	**02 12 56.1**	**-0.1**
WDFS	**Ward Fire Stat**	**0.22**	**212**	P	**Pg**	**02 12 56.7**	**-0.3**
WDFS				S	**Sg**	**02 13 00.2**	**-0.2**
MGCS	**Blenheim Marlb**	**0.29**	**297**	P	**Pb**	**02 12 59.0**	**-0.2**
BWRS	**Waikakaho Road**	**0.36**	**305**	P	**Pb**	**02 13 00.2**	**0.0**
KEKS	**Kekerengu Vall**	**0.39**	**217**	P	**Pb**	**02 13 00.1**	**-0.8**
GLOS	**29 km south-we**	**0.41**	**239**	P	**Pg**	**02 13 00.1**	**-0.4**
QCCS	**Picton Queen C**	**0.42**	**331**	S	**Sb**	**02 13 07.8**	**+0.3**
TCW	**Tory Channel**	**0.43**	**358**	P	**Pb**	**02 13 02.2**	**+0.6**
MKVS	**Makara Village**	**0.49**	**39**	P	**Pn**	**02 13 03.9**	**-0.9**
BHW	**Baring Head**	**0.49**	**62**	P	**Pn**	**02 13 04.0**	**-0.8**
WEL	**Wellington**	**0.51**	**45**	P	**Pn**	**02 13 04.4**	**-0.6**
HAVS	**Havelock**	**0.53**	**314**	P	**Pb**	**02 13 03.4**	**+0.1**
PLWZ	**Palliser**	**0.72**	**84**	P	**Pn**	**02 13 08.5**	**+0.4**
MSWZ	**Moikau Station**	**0.75**	**73**	P	**Pn**	**02 13 08.8**	**+0.4**
CAW	**Cannon Point**	**0.79**	**48**	P	**Pn**	**02 13 09.2**	**+0.3**
NNZ	**Nelson**	**0.81**	**301**	P	**Pb**	**02 13 08.1**	**0.0**
DUWZ	**D'Urville Isla**	**0.89**	**341**	P	**Pn**	**02 13 10.0**	**-0.2**
DUWZ				S	**Sn**	**02 13 22.7**	**-0.2**
PAWZ	**Paruwai Farm**	**0.89**	**73**	P	**Pn**	**02 13 11.0**	**+0.6**
PAWZ				S	**Sn**	**02 13 25.3**	**+2.3**
KIW	**Kapiti Island**	**0.91**	**31**	P	**Pn**	**02 13 11.0**	**+0.5**
KIW				S	**Sn**	**02 13 24.6**	**+1.1**
KHZ	**Kahutara**	**0.95**	**216**	P	**Pb**	**02 13 10.4**	**-0.1**
KHZ	**Kahutara**	**0.95**	**216**	P	**Pb**	**02 13 10.6**	**+0.1**
KHZ				S	**Sb**	**02 13 24.1**	**+1.1**
MTW	**Mount Morrison**	**1.03**	**62**	P	**Pn**	**02 13 13.1**	**+0.9**
MTW				S	**Sn**	**02 13 28.5**	**+2.0**
THZ	**Tophouse**	**1.05**	**263**	P	**Pg**	**02 13 11.7**	**-0.7**
OGWZ	**Otaki Gorge**	**1.06**	**39**	P	**Pn**	**02 13 13.7**	**+1.1**
TRWZ	**Traveller**	**1.07**	**77**	P	**Pn**	**02 13 13.3**	**+0.4**
TKNZ	**Takaka Hill**	**1.17**	**301**	P	**Pn**	**02 13 14.5**	**+0.3**
MRNZ	**Matariki Terra**	**1.18**	**281**	P	**Pn**	**02 13 14.7**	**+0.4**
MRNZ				S	**Sn**	**02 13 30.8**	**+0.6**
HOWZ	**Holdsworth Sta**	**1.19**	**51**	P	**Pn**	**02 13 15.4**	**+1.0**
TMWZ	**Te Maipa**	**1.32**	**66**	P	**Pb**	**02 13 16.7**	**0.0**
MRZ	**Mangatainoka R**	**1.38**	**45**	P	**Pg**	**02 13 18.3**	**-0.4**
TIWZ	**Tintock**	**1.48**	**55**	P	**Pb**	**02 13 19.6**	**+0.1**
QRZ	**Quartz Range**	**1.56**	**301**	P	**Pg**	**02 13 21.3**	**-0.9**
QRZ	**Quartz Range**	**1.56**	**301**	P	**Pb**	**02 13 21.2**	**+0.3**
GVZ	**Greta Valley S**	**1.62**	**215**	P	**Pn**	**02 13 19.6**	**-0.7**
PRWZ	**Pori Road**	**1.67**	**50**	P	**Pb**	**02 13 22.3**	**-0.4**
BFZ	**Birch Farm**	**1.76**	**58**	P	**Pn**	**02 13 22.6**	**+0.4**
DSZ	**Denniston Nort**	**1.87**	**266**	P	**Pb**	**02 13 25.3**	**-0.8**
LTZ	**Lake Taylor**	**1.89**	**232**	P	**Pn**	**02 13 23.6**	**-0.4**
DVHZ	**Dannevirke**	**1.95**	**47**	P	**Pn**	**02 13 25.4**	**+0.5**
AMCZ	**Amberley**	**1.96**	**218**	P	**Pg**	**02 13 31.1**	**+1.4**
WAZ	**Wanganui**	**1.96**	**16**	P	**Pg**	**02 13 30.4**	**+0.7**
TSZ	**Takapari Road**	**2.03**	**39**	P	**Pn**	**02 13 27.3**	**+1.3**
KHEZ	**Kahui Hut**	**2.36**	**355**	P	**Pg**	**02 13 36.8**	**-0.6**
KHEZ	**Kahui Hut**	**2.36**	**355**	P	**Pg**	**02 13 36.2**	**-1.1**
MQZ	**McQueen's Vall**	**2.39**	**210**	P	**Pn**	**02 13 28.5**	**-2.4**
MTVZ	**Mangateitei**	**2.43**	**22**	P	**Pn**	**02 13 30.8**	**-0.7**
AKCZ	**Akaroa Harbour**	**2.45**	**204**	P	**Pn**	**02 13 29.8**	**-2.0**
MOVZ	**Moawhango**	**2.50**	**27**	P	**Pg**	**02 13 38.3**	**-1.7**
VRZ	**Vera Road**	**2.54**	**8**	P	**Pb**	**02 13 38.6**	**+1.0**
KRHZ	**Kereru**	**2.55**	**39**	P	**Pn**	**02 13 33.9**	**+0.8**
TUVZ	**Tukino**	**2.59**	**24**	P	**Pg**	**02 13 40.6**	**-1.2**
NGZ	**Ngauruhoe**	**2.66**	**22**	P	**Pg**	**02 13 41.9**	**-1.3**
SNVZ	**South Ngauruho**	**2.66**	**23**	P	**Pg**	**02 13 42.1**	**-1.1**
OTVZ	**Oturere**	**2.69**	**23**	P	**Pb**	**02 13 38.0**	**-2.2**
WTVZ	**West Tongariro**	**2.71**	**22**	P	**Pg**	**02 13 42.7**	**-1.5**
TWVZ	**

MCQV	Machiques	3.23	11	*e*P	Pn	02 32 35.4	+0.4
MCQV				*e*S	Sn	02 33 13.8	-0.7
ANIL	Santa Ana	3.25	224	P	Pn	02 32 37.0	+1.6
ANIL				S	Sn	02 33 16.4	+1.3
SJCC	San Jacinto, C	3.63	327	*e*P	Pn	02 32 40.6	+0.5
SJCC				*e*S	Sn	02 33 21.4	-2.2
URIC	Uribia, Colomb	4.95	13	P	Pn	02 32 56.5	-0.7
URIC	Uribia, Colomb	4.95	13	*e*P	Pn	02 32 56.9	-0.3
URIC				*e*S	Sn	02 33 51.4	-2.9
TEPV	Terepaima	4.99	51	*e*P	Pn	02 32 58.0	+0.2
JAMC	Jamundi, Valle 0.0nm3.7nm,0.8s	5.04	224	P	Pn	02 32 58.6	0.0
GARC	Garzon, Huila	5.19	207	P	Pn	02 33 00.4	-0.2
MAPV	Macapo	5.50	57	*e*P	Pn	02 33 04.2	-0.4
POPC	Popayan, Colom	5.54	220	P	Pn	02 33 08.1	+2.8
FLOC	Florencia	5.80	206	P	Pn	02 33 09.0	+0.5
BENV	Beln	6.30	60	*e*P	Pn	02 33 14.7	-0.4
TURV	Turiamo	6.35	55	*e*P	Pn	02 33 14.7	-1.0
CACV	CAICARA DEL OR	6.59	83	*e*P	Pn	02 33 25.4	+6.4
TACV	Tcata	6.88	61	*e*P	Pn	02 33 21.8	-1.0

IDC ***13*** *02:54:19.1±1.9,22.87S×177.32W,h185km±17km, mb3.9/13,mbtmp4.6/17,Error ellipse: s-maj=15.7km s-min=11.9km az=114.0*

NEIC ***13*** *02:54:21.4±2.4,23.09S±0.09×177.2W±0.1, h200km±6km, mb4.9/24,Error ellipse: s-maj=15.0km s-min=12.4km az=98.0*

NOU ***13*** *02:54:22.5,23.12S×176.71W,h255km,mb4.7/42,South of Fiji Islands*

ISC 13 02:54:20.5±0.3,23.04S±0.05×177.15W±0.06,h200km, n238,σ1§75/245,mb4.4/30,6C-6D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	6.23	186	P	Pn	Pn	02 55 51.9	+1.3
	266nm,0.2s,baz=101,slow=8.0,SNR=8.4							
RAO				S	Sn	Sn	02 57 03.6	+1.4
	1µm,0.2s,baz=106,slow=24,SNR=9.6							
RAO	Raoul Island	6.23	186	P	Pn	Pn	02 55 51.9	+1.3
RAO	Raoul Island	6.23	186	Pn	Pn	Pn	02 55 50.4	-0.3
RAO	Raoul Island	6.23	186	P	Pn	Pn	02 55 51.3	+0.7
RAO				S	Sn	Sn	02 57 02.6	+0.4
GLKZ	Green Lake	6.24	186	P	Pn	Pn	02 55 52.2	+1.4
GLKZ				S	Sn	Sn	02 57 02.8	+0.4
MSVF	Nonsavu	6.94	319	P	Pn	Pn	02 56 01.2	+1.2
	18nm,0.7s,baz=142,slow=10,SNR=14							
MSVF	Nonsavu	6.94	319	P	Pn		02 56 06.0	+6.0
MSVF	Nonsavu	6.94	319		Pn		02 56 05.7	+5.6
NIUE	Niue	7.81	61	P	Pn	Pn	02 56 11.8	+0.5
NIUE	Niue	7.81	61	S	Sn	Sn	02 57 35.2	-4.2
NIUE	Niue	7.81	61		Pn	Pn	02 56 13.0	+1.7
NIUE	Niue	7.81	61	P	Pn	Pn	02 56 14.1	+2.9
FUTU	Fugatoga	8.73	354		Pn	Pn	02 56 25.4	+2.0
AFI	Afiamalu 147nm,0.4s,baz=237,slow=1.1,SNR=29	10.41	30	P	Pn	Pn	02 56 42.5	-2.6
AFI				S	Sn		02 58 29.3	-12
	252nm,0.7s,baz=31,slow=22,SNR=7.3							
MARNC	Mare, Loyalty	13.81	274	P	P	P	02 57 32.0	+1.8
MARNC	Mare, Loyalty	13.81	274		P	P	02 57 30.9	+0.6
RTV	Rentapao	14.49	288	P	P	P	02 57 41.8	+4.0
OUZ	Omahuta	14.58	212	P	P	P	02 57 39.3	+0.7
OUZ	Omahuta	14.58	212	P	P	P	02 57 41.0	+2.4
DVP	Devils Point	14.73	288	P	P	P	02 57 44.3	+3.9
YATNC	Mamie plateau,	14.78	271	P	P	P	02 57 43.7	+2.7
WCZ	Waipu Caves	14.83	208	P	P	P	02 57 43.6	+2.3
FUNA	Funafuti	14.85	346	P	P	P	02 57 42.0	+0.2
MXZ	Matakaoa Point	15.00	194	P	P	P	02 57 42.5	-0.7
MXZ	Matakaoa Point	15.00	194	P	Pn	P	02 57 39.9	-2.7
MXZ				S	S	S	03 00 13.6	-15
ONTNC	Ouen Toro	15.16	270	P	P	P	02 57 49.0	+3.9
ONTNC	Ouen Toro	15.16	270		P	P	02 57 47.2	+2.1
DZM	Mont Dzumac 68nm,0.7s,baz=89,slow=18,SNR=60	15.19	270	P	P	P	02 57 47.9	+2.2
ABAZ	Army Bay	15.19	205	P	P	P	02 57 47.8	+2.4
WMGZ	Waiomatatini S	15.22	194	P	Pn	P	02 57 42.4	-2.9
WMGZ	Waiheke Island			S	S	S	03 00 17.6	-17
WIAZ	Waiheke Island	15.25	204	P	P	P	02 57 47.8	+1.8
HAZ	Te Kaha	15.30	195	P	Pn	P	02 57 41.7	-4.6
MBAZ	Motutapu North	15.31	205	P	P	P	02 57 48.9	+2.1
PKGZ	Pakihiroa	15.34	194	P	Pn	P	02 57 45.4	-1.3
PUZ	Puketiti	15.50	194	P	Pn	P	02 57 46.5	-2.1
RUGZ	Raukumara Rang	15.53	195	P	Pn	P	02 57 43.7	-5.4
WHRZ	Whale Island	15.61	198	P	P	P	02 57 52.0	+2.0
TWGZ	Tauwhareparae	15.66	194	P	P	P	02 57 48.1	-2.5
CNGZ	Carnagh Station	15.90	193	P	P	P	02 57 52.2	-1.0
EDRZ	Edgecumbe	15.91	198	P	Pn	P	02 57 54.8	+1.1
MWZ	Matawai	15.92	195	P	P	P	02 57 51.6	-1.8
TKGZ	Te Karaka	15.94	194	P	P	P	02 57 50.2	-3.4
TOZ	Tahuroa Road	15.95	202		P	P	02 57 52.7	-1.0
TOZ	Tahuroa Road	15.95	202	P	Pn	P	02 57 55.7	+1.6
URZ	Urewera 108nm,0.5s,baz=316,slow=2.0,SNR=66	15.95	197	P	P	P	02 57 52.8	-1.0
URZ				S	S		03 00 35.0	-16
	22nm,0.4s,baz=56,slow=23,SNR=9.9							
URZ	Urewera	15.95	197	P	P	P	02 57 52.8	-1.0
URZ	Urewera	15.95	197	P	P	P	02 57 49.7	-4.1
OMRZ	Omania	16.02	199	P	Pn	P	02 57 55.2	+0.2
RAGZ	Rawiri	16.10	196	P	Pn	P	02 57 55.0	-0.9
TARZ	Mount Tarawera	16.10	198	P	Pn	P	02 57 56.2	+0.2
RAR	Rarotonga 48nm,0.9s,baz=272,slow=6.7,SNR=6.1	16.20	87	P	Pn	P	02 57 58.2	+0.9
RAR	Rarotonga	16.20	87	P	Pn	P	02 57 57.1	-0.2
RIGZ	Rimuhau	16.21	194	P	P	P	02 57 55.4	-1.3
MUGZ	Murupara	16.25	197	P	P	P	02 57 55.3	-1.7
RTZ	Ruatahuna	16.32	197	P	P	P	02 57 53.7	-4.3
PRGZ	Paritu Road	16.39	199	P	P	P	02 57 57.4	-1.2
KNZ	Kokohu	16.54	194	P	P	P	02 57 58.6	-1.5
RAHZ	Arahi	16.58	196	P	P	P	02 57 59.4	-1.3
SANVU	Saraoutou	16.59	294	P	Pn	P	02 58 04.1	+2.2
MHGZ	Mahia Peninsul	16.61	194	P	P	P	02 57 60.0	-1.0
MRHZ	Matea Rd	16.68	198	P	P	P	02 58 00.8	-1.0
WHHZ	Waihua	16.69	195	P	P	P	02 58 01.5	-0.4
NMHZ	Naumai	16.82	196	P	P	P	02 58 01.2	-2.2
HIZ	Hauiti	16.88	202	P	P	P	02 58 03.3	-0.6
HIZ	Hauiti	16.88	202	P	Pn	P	02 58 03.9	-1.3
HIZ	Hauiti	16.88	202	P	Pn	P	02 58 05.2	0.0
RATZ	Rangitukua	16.90	199	P	P	P	02 58 03.9	-0.3
BKZ	Black Stump Fm	16.97	197	P	P	P	02 58 04.0	-1.0
BKZ	Black Stump Fm	16.97	197	P	P	P	02 58 02.1	-2.9
RITZ	Rihia Road	16.97	199	P	P	P	02 58 04.4	-0.6
KATZ	Kakaramea	17.02	199	P	Pn	P	02 58 06.0	-1.0
NTVZ	North Tongarir	17.14	199	P	P	P	02 58 06.0	-0.9
KRVZ	Karewarewa	17.15	199	P	P	P	02 58 05.9	-1.2
TMVZ	Te Maari	17.15	199	P	P	P	02 58 05.3	-1.7
ETVZ	East Tongariro	17.16	199	P	P	P	02 58 05.4	-1.8
MCHZ	McNeill Hill	17.18	196	P	Pn	P	02 58 07.6	-1.1
WTVZ	West Tongariro	17.18	199	P	P	P	02 58 05.9	-1.5
TWVZ	Taurewa	17.19	200	P	P	P	02 58 06.3	-1.2
OTVZ	Oturere	17.20	199	P	P	P	02 58 04.8	-2.8
KWHZ	Kaweka Forest	17.23	197	P	P	P	02 58 04.6	-3.3
SNVZ	South Ngauruho	17.23	199	P	P	P	02 58 06.1	-1.9
NGZ	Ngauruhoe	17.23	199	P	P	P	02 58 07.2	-0.8
COVZ	Chateau Observ	17.27	199	P	P	P	02 58 07.5	-0.9
CKHZ	Cape Kidnapper	17.28	195	P	P	P	02 58 06.2	-2.1
TUVZ	Tukino	17.30	199	P	P	P	02 58 07.0	-1.7
FWVZ	Far West T-bar	17.32	199	P	P	P	02 58 07.3	-1.8
WNVZ	Wahianoa	17.37	199	P	P	P	02 58 07.5	-2.0
MOVZ	Moawhango	17.40	199	P	P	P	02 58 07.0	-2.7
PKVZ	Pokaka	17.42	200	P	P	P	02 58 07.4	-2.5
KRHZ	Kereru	17.45	197	P	P	P	02 58 07.5	-2.7
KAHZ	Kahuranaki	17.46	198	P	P	P	02 58 08.5	-1.8
MTVZ	Mangateitei	17.47	199	P	P	P	02 58 10.5	-0.9
PXZ	Pawanui	17.69	195	P	P	P	02 58 10.5	-2.2
PNHZ	Pukenui	17.75	197	P	P	P	02 58 11.0	-2.5
KHEZ	Kahui Hut	17.87	203	P	P	P	02 58 14.2	-0.7
PRHZ	Porangahau	17.97	196	P	P	P	02 58 13.7	-2.2
DVHZ	Dannevirke	18.12	197	P	P	P	02 58 14.7	-2.8
ANWZ	Angora Road	18.19	196	P	P	P	02 58 17.5	-0.7
BFZ	Birch Farm	18.45	196	P	P	P	02 58 20.3	-0.8
SNZO	South Karori	19.46	199	P	P	P	02 58 30.9	-1.1
QRZ	Quartz Range	19.75	204	P	P	P	02 58 34.4	-0.7
QRZ	Quartz Range	19.75	204	P	P	P	02 58 33.0	-2.1
CTZ	Chatham Island	20.65	179	P	P	P	02 58 45.8	+1.2
DSZ	Denniston Nort	20.82	204	P	P	P	02 58 44.6	-1.9
KHZ	Kahutara	20.83	200	P	P	P	02 58 44.7	-1.8
RPZ	Rata Peaks	22.81	202	P	P	P	02 59 04.1	-1.9
JCZ	Jackson Bay	23.97	206	P	P	P	02 59 14.9	-1.7
ODZ	Otahua Downs	24.12	202	P	P	P	02 59 16.0	-1.8
SYZ	Scrubby Hill	25.93	202	P	P	P	02 59 32.2	-2.0
TATA	Tatamba Isabel	26.48	300	P	P	P	02 59 38.5	-0.9
ARMA	Armidale	28.78	248	P	P	P	03 00 01.5	+1.6
EIDS	Eidsvold	29.04	259	P	P	P	03 00 03.2	+1.1
EIDS				IAmb	IAmb	IAmb	03 00 11.2	
	comp=Z,47nm,1.4s							
CMSA	Cobar Meteorol	33.97	247	P	P	P	03 00 44.8	-0.3
CTA	Charters Tower	34.11	268	P	P	P	03 00 46.7	+0.2
CTAO	Charters Tower	34.11	268	P	P	P	03 00 46.7	+0.2
CTAO	Charters Tower	34.11	268	P	P	P	03 00 46.8	+0.2
CTAO	Charters Tower	34.11	268	P	P	P	03 00 47.0	+0.5
QLP	Quilpie	35.14	256	P	P	P	03 00 55.6	+0.3
MTSU	Mount Surprise	36.33	270	P	P	P	03 01 05.7	+0.2
PMG	Port Moresby	36.74	286	P	P	P	03 01 08.8	-0.1
PMG	Port Moresby	36.74	286	P	P	P	03 01 09.2	+0.3
PMG				pP	pP	pP	03 01 50.0	-0.3
PMG				sP	sP	sP	03 02 12.2	-0.8
STKA	Stephens Creek comp=Z,3.7nm,0.5s,baz=98,slow=10,SNR=9.5 comp=Z,3.7nm,0.5s	37.47	247	P	P	P	03 01 15.2	+0.4
STKA	Stephens Creek	37.47	247	P	P	P	03 01 15.3	+0.4
STKA	Stephens Creek	37.47	247	P	P	P	03 01 14.5	-0.4
COEN	Coen	38.59	276	P	P	P	03 01 24.6	+0.1
COEN	Coen	38.59	276	P	P	P	03 01 24.4	-0.1
HTT	Hallett	39.81	245	P	P	P	03 01 34.2	-0.2
QIS	Mount Isa	40.13	265	P	P	P	03 01 37.1	0.0
BBOO	Buckleboo	42.19	246	P	P	P	03 01 53.3	-0.5
BBOO	Buckleboo	42.19	246	P	P	P	03 01 53.5	-0.2
BBOO				IAmb	IAmb	IAmb	03 02 59.9	
	comp=Z,97nm,1.9s							
AS31	Alice Springs	44.76	259	P	P	P	03 02 13.5	-1.0
ASAR	Alice Springs comp=Z,13nm,0.8s,baz=96,slow=6.4,SNR=46	44.77	259	P	P	P	03 02 13.6	-0.9
ASAR				PcP	PcP	PcP	03 03 52.8	-0.3
	comp=Z,1.2nm,0.5s,baz=96,slow=3.9,SNR=4.7							
ASAR				S	S	S	03 08 27.1	-9.3
	comp=Z,0.6nm,0.7s,baz=96,slow=11,SNR=5.0 comp=Z,13nm,0.8s							
ASAR	Alice Springs	44.77	259	P	P	P	03 02 13.5	-1.0
WRAB	Tennant Creek	45.08	264	P	P	P	03 02 15.7	-1.3
WRAB	Tennant Creek	45.08	264	P	P	P	03 02 15.7	-1.3
WRAB	Tennant Creek	45.08	264	P	P	P	03 02 15.7	-1.3
WRAB				PcP	PcP	PcP	03 03 55.0	+0.8
WRA	Warramunga Arr comp=Z,5.3nm,0.4s,baz=89,slow=8.8,SNR=247	45.09	264	P	P	P	03 02 15.1	-1.9
WRA				S	S	S	03 08 32.8	-8.3
	comp=Z,0.8nm,0.8s,baz=96,slow=14,SNR=4.6 comp=Z,5.3nm,0.4s							
FORT	Forrest	49.06	249	P	P	P	03 02 46.0	-1.6
MTN	Manton Dam	50.02	272	P	P	P	03 02 53.4	-1.6
MTN				IAmb	IAmb	IAmb	03 04 13.3	
	comp=Z,28nm,1.4s							
DRV	Dumont d'Urvil	51.25	200	P	P	P	03 03 04.5	+1.2
DRV				PcP	PcP	PcP	03 04 15.8	+0.3
KNRA	Kununurra	51.32	268	P	P	P	03 03 03.8	-1.0
KNRA				IAmb	IAmb	IAmb	03 03 04.7	
	comp=Z,16nm,0.5s							
SBA	Scott Base	55.41	184	P	P	P	03 03 36.2	+2.7
VNDA	Vanda comp=Z,3.0nm,0.7s,baz=11,slow=7.5,SNR=14 comp=Z,3.0nm,0.7s	55.47	185	P	P	P	03 03 35.7	+1.8
VNDA	Vanda	55.47	185	P	P	P	03 03 35.4	+1.4
VNDA				IAmb	IAmb	IAmb	03 04 15.7	
	comp=Z,21nm,1.8s							
VNDA	Vanda	55.47	185	P	P	P	03 03 36.2	+2.3
VNDA				pP	pwP	pwP	03 04 19.9	-1.1
VNDA				PcP	PcP	PcP	03 04 32.2	+0.8
MEEK	Meekatharra	57.87	252	P	P	P	03 03 51.8	+0.1
PSA00	Pilbara Seismi	57.90	258	P	P	P	03 03 50.7	-1.2
PSA00				IAmb	IAmb	IAmb	03 03 55.1	
	comp=Z,68nm,1.9s							
MBWA	Marble Bar	58.11	259	P	P	P	03 03 50.7	-2.7
MBWA	Marble Bar comp=Z,19nm,1.0s	58.11	259	P	P	P	03 03 51.3	-2.0
MBWA				IAmb	IAmb	IAmb	03 03 54.6	
MBWA	Marble Bar comp=Z,4.8nm,0.8s,baz=100,slow=6.0,SNR=5.5 comp=Z,4.8nm,0.8s	58.11	259	P	P	P	03 03 52.1	-1.3
MBWA				pP	pP	pP	03 04 37.1	-0.9
BLDU	Ballidu	58.78	247	P	P	P	03 03 56.5	-1.4
MORW	Morawa	59.63	249	P	P	P	03 04 02.2	-1.6
CCD	Concordia, Ant	60.22	195	P	P	P	03 04 08.7	+1.2
PLAI	Plampang	63.71	271	P	P	P	03 04 29.8	-1.4
QSPA	South Pole Qui comp=Z,12nm,0.8s,baz=30,slow=0.6,SNR=31 comp=Z,12nm,0.8s	67.05	180	P	P	P	03 04 53.3	+1.4
QSPA	South Pole Qui	67.05	180	P	P	P	03 04 53.0	+1.1
QSPA				IAmb	IAmb	IAmb	03 04 53.8	
	comp=Z,10nm,0.7s							
QSPA	South Pole Qui	67.05	180	P	P	P	03 04 53.4	+1.4
MJAR	Matsushiro Arr comp=Z,2.5nm,0.5s,baz=155,slow=6.2,SNR=8.7 comp=Z,2.5nm,0.5s	72.71	324	P	P	P	03 05 24.6	-2.1
MJAR	Matsushiro Arr	72.71	324	P	P	P	03 05 25.5	-1.2
MAW	Mawson comp=Z,6.1nm,0.7s,baz=156,slow=7.6,SNR=8.2 comp=Z,6.1nm,0.7s	79.46	200	P	P	P	03 06 04.7	+0.5
MAW	Mawson	79.46	200	P	P	P	03 06 05.0	+0.8
USRK	Ussuriysk Ar. comp=Z,4.8nm,0.8s,baz=100,slow=6.0,SNR=5.5 comp=Z,4.8nm,0.8s	81.50	326	P	P	P	03 06 16.2	+0.9
NJ2	Nanjing	82.10	310	*e*P	P	P	03 06 20.5	+1.7
NJ2				pmax	pmax			
	comp=Z,22nm,0.5s							
NVAR	Mina Array Bea comp=Z,0.2nm,0.3s,baz=255,slow=5.3,SNR=5.4 comp=Z,0.2nm,0.3s	82.33	43	P	P	P	03 06 21.5	+1.4
H03S2	Juan Fernandez baz=247,slow=75,SNR=38	83.91	124	T	T		04 39 29.6	
H03S1	Juan Fernandez baz=247,slow=75,SNR=49	83.93	124	T	T		04 39 30.3	
H03S3	Juan Fernandez baz=247,slow=75,SNR=43	83.93	124	T	T		04 39 23.6	
ELIB	Princess Elisa comp=Z,6.8nm,0.8s	84.22	186	*d*P	P		03 06 29.5	+0.3
CN2	Changchun	84.78	322	P	P	P	03 06 34.8	+2.6
BNX	BinXian	84.94	325	⇑P	P	P	03 06 32.9	0.0
BNX				pmax	pmax			
	comp=Z,7.0nm,0.8s							
TROLL	Troll, Antarti	85.21	180	P	P	P	03 06 34.6	+0.4
VNA3	Neumayer Olymp comp=Z,1.8nm,0.4s	85.57	176	⇓P	P	P	03 06 36.1	+0.3
VNA2	Neumayer--Watz comp=Z,1.1nm,0.5s,baz=186,slow=1.7	86.02	177	⇓P	P	P	03 06 37.5	-0.4
VNA1	Neumayer--Stat comp=Z,0.4nm,0.2s	86.24	176	⇓P	P	P	03 06 42.4	+3.4
TXAR	Lajitas Array comp=Z,0.3nm,0.8s,baz=210,slow=7.2,SNR=4.2 comp=Z,0.3nm,0.8s	87.76	57	P	P	P	03 06 47.8	+0.7
SCM	Sheep Creek Mo	87.89	14	P	P	P	03 06 47.0	0.0
SCM				IAmb	IAmb	IAmb	03 09 12.0	
	comp=Z,48nm,1.6s							
PPLA	Purkeypile	87.90	11	P	P	P	03 06 47.5	+0.5
PPLA				IAmb	IAmb	IAmb	03 07 02.9	
	comp=Z,44nm,1.8s							
TRF	Thorofare Moun	88.75	12	P	P	P	03 06 51.1	0.0
TRF				IAmb	IAmb	IAmb	03 09 35.5	
	comp=Z,45nm,2.0s							
BCAR	Beaver Creek A	90.25	15	P	P	P	03 06 58.8	+0.9
PDAR	Pinedale Array comp=Z,0.6nm,0.8s,baz=204,slow=3.3,SNR=5.1 comp=Z,0.6nm,0.8s	90.26	43	P	P	P	03 06 58.7	0.0
IMAR	Indian Mountai	90.51	9	P	P	P	03 06 59.6	+0.5
ILAR	Eielson Array comp=Z,0.4nm,0.5s,baz=216,slow=5.5,SNR=9.5 comp=Z,0.4nm,0.5s	90.60	12	P	P	P	03 06 59.1	-0.3
G21K	Allakaket	91.05	9	P	P	P	03 07 03.2	+1.7
G21K				IAmb	IAmb	IAmb	03 08 51.9	
	comp=Z,22nm,2.0s							
HHC	Hu-ho-hao-te	91.68	314	*e*P	P	P	03 07 07.2	+2.0
HHC				pmax	pmax			
	comp=Z,11nm,0.6s							
HHC				pmax	pmax			
	comp=Z,77nm,4.5s							
CMAR	Chiang Mai Arr comp=Z,0.6nm,0.3s,baz=148,slow=3.4,SNR=7.0 comp=Z,0.6nm,0.3s	91.70	289	P	P	P	03 07 04.9	-0.8
PZH	PanZhiHua	92.59	298	P	P	P	03 07 10.6	+0.9
CD2	Chengdu	92.81	302	*e*P	P		03 07 11.0	+0.4
ZALV	Zalesovo Beam comp=Z,0.4nm,0.4s,baz=326,slow=0.5,SNR=3.6	112.95	321	PKiKP	PKiKP	PKiKP	03 12 30.8	-2.5
MKAR	Makanchi Array comp=Z,0.2nm,0.4s,baz=208,slow=1.4,SNR=5.4	113.50	313	PKiKP	PKiKP	PKiKP	03 12 33.0	-1.6
KURK	Kurchatov	116.38	317			PKPdf	03 12 38.8	-1.2
KURBB	Kurchatov Arra comp=Z,0.4nm,0.4s,baz=112,slow=1.6,SNR=6.4	116.43	316	PKP	PKPdf	PKPdf	03 12 39.0	-1.0
BVAR	Borovoye Array comp=Z,1.0nm,0.4s,baz=88,slow=1.9,SNR=7.5	121.51	319	PKP	PKPdf	PKPdf	03 12 49.2	-0.6
SPITS	Spitsbergen Ar comp=Z,5.5nm,0.7s,baz=81,slow=2.7,SNR=4.5	124.43	357	PKP	PKiKP	PKiKP	03 12 56.0	+0.9
ARCES	ARCESS Array B comp=Z,1.2nm,0.5s,baz=64,slow=2.8,SNR=8.0	131.55	350	PKP	PKiKP	PKiKP	03 13 09.2	-0.3
FINES	FINESS Array B comp=Z,2.5nm,0.9s,baz=353,slow=4.6,SNR=5.0	138.42	343	PKhKP	PKPpre	PKPpre	03 13 10.4	
FINES				PKP	PKPdf	PKPdf	03 13 22.0	+0.5
	comp=Z,1.5nm,0.5s,baz=97,slow=3.8,SNR=8.1							
HFS	Hagfors comp=Z,1.4nm,0.4s,baz=62,slow=3.5,SNR=9.6	142.16	351	PKhKP	PKPpre		03 13 22.3	
AK03	Malin Array Si	145.59	330	PKP	PKPdf	PKPdf	03 13 33.6	-1.0
AKASG	Malin Array Be comp=Z,10nm,0.6s,baz=44,slow=4.2,SNR=43	145.60	330	PKPbc	PKPdf	PKPdf	03 13 34.2	-0.4
AKASG	Malin Array Be	145.60	330			PKPdf	03 13 34.3	-0.3
AKBB	Malin Array Si	145.60	330	PKP	PKPdf	PKPdf	03 13 33.6	-1.0
AK01	Malin Array Si	145.61	330	PKP	PKPdf	PKPdf	03 13 33.6	-1.0
AK04	Malin Array Si	145.61	330	PKP	PKPdf	PKPdf	03 13 33.9	-0.7
KIEV	Kiev	145.61	330	PKP	PKPdf	PKPdf	03 13 33.6	-1.0
AK22	Malin Array Si	145.63	330	PKP	PKPdf	PKPdf	03 13 33.8	-0.9
AK21	Malin Array Si	145.63	330	PKP	PKPdf	PKPdf	03 13 33.8	-0.9
AK11	Malin Array Si	145.64	330	PKP	PKPdf	PKPdf	03 13 33.8	-0.9
AK17	Malin Array Si	145.69	330	PKP	PKPdf	PKPdf	03 13 34.1	-0.7
ARPR	Arapgir-MALATY	145.90	306			PKPab	03 13 37.5	-0.1
EKA	Eskdalemuir Ar comp=Z,1.1nm,0.6s,baz=342,slow=2.4,SNR=3.6	147.44	6	PKPbc	PKPbc	PKPbc	03 13 39.3	-1.0
SORM	Soroca	147.76	327	⇑P		PKPbc	03 13 41.1	-0.3
SORM	Soroca	147.76	327	PKP	PKPbc	PKPbc	03 13 39.6	-1.8
KIS	Kishinev	148.27	325	PKP	PKPdf	PKPdf	03 13 38.3	-0.9
BRTR	Keskin Array B comp=Z,3.1nm,0.7s,baz=138,slow=4.8,SNR=26	149.09	310	PKPbc	PKPbc	PKPbc	03 13 44.7	-0.7
KIRS	Kirsehir-Merke	149.12	309	⇓P		PKPbc	03 13 45.0	-0.4
KWP	Kalwaria Pacla	149.20	334	PKP		PKPdf	03 13 41.1	+0.4
MMAI	Mount Meron Ar comp=Z,5.8nm,0.4s,baz=66,slow=8.1,SNR=18	149.70	296	PKPbc	PKPbc	PKPbc	03 13 47.1	+0.1
CFR	Carcaliu	149.79	323	⇑P		PKPbc	03 13 46.2	-0.4
TPGR	Topolog	149.83	322	⇑P		PKPbc	03 13 46.5	-0.3
VRI	Vrincioaia	150.11	325	⇓P		PKPbc	03 13 46.7	-0.7
HOLU	Holmets	150.21	333	PKP		PKPdf	03 13 40.9	-1.3
MANR	Mangalia	150.36	321	⇑P		PKiKP	03 13 48.4	-0.3
CLL	Collm comp=Z,7.0nm,0.8s	150.70	347	*e*PKPbc	PKPbc	PKPbc	03 13 48.0	-0.6
CLL				*i* PKPab		PKPab	03 13 56.1	-0.2
	comp=Z,11nm,0.8s							
LANS	Liptovska Anna	150.82	337	*e*PKP	PKiKP	PKiKP	03 13 50.5	+0.9
LANS				*e*			03 13 56.3	
MORC	Moravsky Berou	150.92	340	*e*PKP	PKPab	PKPab	03 13 56.2	-1.1
VRAC	Vranov	151.62	341	*e*PKP	PKPab	PKPab	03 13 57.3	-2.9
JAVC	Velka Javorina	151.68	339	*e*PKP	PKPab	PKPab	03 13 58.6	-1.9
KRUC	Moravsky	151.90	341	*e*PKP	PKPab	PKPab	03 13 57.9	-3.5
MODS	Modra-Piesok	152.23	339	*e*PKP	PKPab	PKPab	03 13 59.8	-3.0
SRO	Srobarova	152.36	337	*e*PKP	PKPab	PKPab	03 14 04.3	+1.0
ELND	Elena	152.47	322	⇑P	PKiKP	PKiKP	03 13

PPT2	**Papeete2**	**40.77**	**96**	*e*S		S	03 28 10.6	+10
	comp=Z,43nm,20.5s							
PPT2				*e*LQ		LQ	03 31 27.3	
	comp=Z,218nm,25.2s							
PPT2				*e*LR		LR	03 33 15.0	
	comp=Z,137nm,31.0s							
PPT2				*e*LR		LR	03 33 17.1	
	comp=Z,176nm,26.2s							
PPT	**Papeete**	**40.77**	**96**	LR		LR	03 34 48.9	
	comp=Z,128nm,19.0s,baz=247,slow=31							
BATI	**Baumata**	**43.17**	**274**	LR		LR	03 39 25.0	
	comp=Z,170nm,19.5s,baz=177,slow=35							
KAPI	**Kappang**	**48.41**	**279**	P		**P**	**03 22 51.1**	**+0.7**
	comp=Z,3.9nm,0.3s,baz=156,slow=16,SNR=4.9							
	comp=Z,3.9nm,0.3s							
KAPI	**Kappang**	**48.41**	**279**	P		**P**	**03 22 51.4**	**+1.0**
KAPI				IAmb		IAmb	03 22 52.3	
	comp=Z,9.3nm,1.0s							
JCJ	**Chichijima**	**51.04**	**331**	LR		LR	03 43 54.9	
	comp=Z,50nm,19.9s,baz=144,slow=35							
TAOE	**Nuku Hiva Isla**	**51.53**	**87**	*e*S		**S**	**03 30 39.5**	**+4.3**
	comp=Z,96nm,23.9s							
TAOE				*e*SS		SS	03 34 23.6	+12
	comp=Z,54nm,24.2s							
TAOE				*e*LR		LR	03 38 35.7	
	comp=Z,238nm,25.7s							
KSRS	**Korea Array**	**66.49**	**326**	LR		LR	03 53 28.6	
	comp=Z,37nm,18.9s,baz=355,slow=36							
SHEM	**Shemya Is, Ala**	**70.55**	**4**	LR		LR	03 49 52.1	
	comp=Z,75nm,20.9s,baz=251,slow=30							
QSPA	**South Pole Qui**	**72.16**	**180**	P		**P**	**03 25 32.4**	**-0.1**
	comp=Z,4.7nm,0.9s,baz=55,slow=0.8,SNR=6.6							
QSPA				LR		LR	03 54 05.7	
	comp=Z,52nm,18.5s,baz=107,slow=33							
	comp=Z,4.7nm,0.9s							
QSPA	**South Pole Qui**	**72.16**	**180**	P		**P**	**03 25 33.0**	**+0.5**
QSPA				IAmb		IAmb	03 25 37.4	
	comp=Z,13nm,1.1s							
CMAR	**Chiang Mai Arr**	**76.49**	**295**	P		**P**	**03 25 59.8**	**+1.4**
	comp=Z,1.8nm,0.4s,baz=127,slow=4.1,SNR=15							
	comp=Z,1.8nm,0.4s							
CHTO	**Chiang Mai**	**76.63**	**295**	P		**P**	**03 26 00.0**	**+0.9**
MA2	**Magadan**	**78.39**	**351**	LR		LR	03 55 13.2	
	comp=Z,42nm,21.9s,baz=161,slow=32							
KDAK	**Kodiak Island**	**82.31**	**20**	LR		LR	03 59 18.1	
	comp=Z,50nm,18.1s,baz=189,slow=33							
N19K	**Bonanza Creek**	**84.15**	**18**	P		**P**	**03 26 38.7**	**-0.1**
RED	**Redoubt Volcan**	**84.34**	**19**	P		**P**	**03 26 39.4**	**-0.4**
L19K	**White Mountain**	**85.16**	**17**	P		**P**	**03 26 44.4**	**+0.7**
SONM	**Songino Array**	**85.18**	**324**	P		**P**	**03 26 44.9**	**+0.5**
	comp=Z,1.1nm,1.1s,baz=150,slow=5.7,SNR=5.7							
	comp=Z,1.1nm,1.1s							
BILL	**Bilibino**	**85.68**	**360**	P		**P**	**03 26 45.9**	**-0.3**
BILL				IAmb		IAmb	03 26 48.1	
	comp=Z,19nm,1.4s							
PFO	**Pinyon Flats O**	**88.61**	**54**	LR		LR	04 06 24.9	
	comp=Z,26nm,18.1s,baz=228,slow=36							
TLY	**Talaya**	**88.74**	**326**	LR		LR	04 06 30.1	
	comp=Z,9.5nm,18.7s,baz=126,slow=35							
NVAR	**Mina Array Bea**	**89.12**	**49**	P		**P**	**03 27 01.9**	**-1.9**
	comp=Z,0.5nm,0.7s,baz=244,slow=8.3,SNR=4.5							
NVAR				LR		LR	04 01 26.6	
	comp=Z,35nm,18.7s,baz=271,slow=32							
	comp=Z,0.5nm,0.7s							
PALK	**Pallekele**	**89.22**	**278**	LR		LR	04 10 21.6	
	comp=Z,40nm,18.1s,baz=92,slow=38							
BBB	**Bella Bella**	**89.23**	**34**	LR		LR	04 03 13.5	
	comp=Z,33nm,19.3s,baz=244,slow=33							
ILAR	**Eielson Array**	**89.43**	**18**	P		**P**	**03 27 01.4**	**-2.9**
	comp=Z,0.4nm,0.6s,baz=234,slow=5.0,SNR=8.0							
	comp=Z,0.4nm,0.6s							
ILAR	**Eielson Array**	**89.43**	**18**	P		**P**	**03 27 02.3**	**-2.0**
LPIG	**La Paz**	**90.29**	**65**	LR		LR	04 00 29.3	
	comp=Z,74nm,18.1s,baz=248,slow=31							
DLBC	**Dease Lake**	**91.59**	**28**	LR		LR	04 07 26.3	
	comp=Z,30nm,18.2s,baz=294,slow=35							
NEW	**Newport**	**93.78**	**40**	LR		LR	04 06 38.9	
	comp=Z,26nm,18.2s,baz=337,slow=34							
ANMO	**Albuquerque**	**96.86**	**56**	LR		LR	04 06 30.5	
	comp=Z,20nm,18.0s,baz=326,slow=32							
TXAR	**Lajitas Array**	**97.53**	**62**	P		**P**	**03 27 40.0**	**-2.7**
	comp=Z,0.2nm,0.7s,baz=249,slow=5.6,SNR=6.5							
	comp=Z,0.2nm,0.7s							
YKA	**Yellowknife Ar**	**100.21**	**27**	P		**Pdif**	**03 27 52.4**	**-1.2**
	comp=Z,0.1nm,0.4s,baz=268,slow=5.0,SNR=4.0							
KBA	**Koelnbreinsper**	**143.98**	**330**	*e*PKiKP		**PKiKP**	**03 33 46.5**	**-0.7**
	comp=Z,3.9nm,1.0s							
LESA	**Schwarzleotal**	**144.05**	**331**	*e*PKiKP		**PKiKP**	**03 33 46.5**	**-0.8**
	comp=Z,5.8nm,0.9s							
ABTA	**Abfaltersbach**	**144.61**	**330**	*e*PKiKP		**PKiKP**	**03 33 48.3**	**-0.2**
	comp=Z,7.9nm,1.4s							
WATA	**Walderalm**	**144.62**	**331**	*e*PKiKP		**PKiKP**	**03 33 48.4**	**-0.1**
	comp=Z,3.9nm,1.1s							
MOTA	**Moosalm**	**144.83**	**332**	*e*PKiKP		**PKiKP**	**03 33 49.0**	**+0.1**
	comp=Z,6.7nm,1.1s							
RETA	**Reutte**	**144.87**	**332**	*e*PKiKP		**PKiKP**	**03 33 49.2**	**+0.2**
	comp=Z,0.9nm,0.5s							
SQTA	**Sankt Quirin**	**144.87**	**332**	*e*PKiKP		**PKiKP**	**03 33 49.6**	**+0.6**
	comp=Z,10.0nm,1.6s							
FETA	**Feichten**	**145.24**	**332**	*e*PKiKP		**PKiKP**	**03 33 50.5**	**+0.7**
	comp=Z,7.7nm,1.0s							
DAVA	**Damuels**	**145.41**	**333**	*e*PKiKP		**PKiKP**	**03 33 51.0**	**+0.8**
	comp=Z,13nm,0.9s							
TORD	**Torodi Ar. Bea**	**165.58**	**253**	PKP		**PKPdf**	**03 34 13.8**	**+0.2**
	comp=Z,1.1nm,0.9s,baz=66,slow=0.2,SNR=5.0							
TORD				PKPab		**PKPab**	**03 35 12.9**	**+0.7**
	comp=Z,1.4nm,0.9s,baz=149,slow=2.9,SNR=5.3							

*UPA **13** 03:18:29.0±2.4, 8°.56N×83°.29W, h1km±14km, MW3.8, Presumed earthquake*
*UCR **13** 03:18:30.0±0.9, 8°.46N×83°.28W, h11km±3km, MW3.6, Presumed earthquake*
ISC 13 03:18:30.3±1.0, 8°.53N±0°.03×83°.28W±0°.03, h13km±7km, n34, σ0s94/46, 6C-1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PIRO	**Carate, Puerto**	**0.14**	**207**	↑*e*P		**Pg**	**03 18 32.9**	**-0.9**
EDAD	**Golfito**	**0.17**	**41**	↓*e*P		**Pg**	**03 18 34.3**	**0.0**
EDAD				*e*S		**Sg**	**03 18 37.9**	**+0.8**
NELY	**Ciudad Neily**	**0.35**	**69**	*e*P		**Pg**	**03 18 37.4**	**0.0**
VITO	**San Vito**	**0.42**	**46**	*e*P		**Pb**	**03 18 39.6**	**-0.1**
LPPC	**Paso Canoas**	**0.43**	**89**	*e*P		**Pb**	**03 18 39.3**	**-0.5**
FIMO	**Fila Mora**	**0.47**	**350**	*e*P		**Pn**	**03 18 43.0**	**+0.2**
PANP	**Palmar Norte**	**0.47**	**337**	*e*P		**Pb**	**03 18 40.0**	**-0.4**
LESP3	**La Esperanza,**	**0.49**	**104**	*e*P		**Pb**	**03 18 40.3**	**-0.5**
EDP2	**Potrero Grande**	**0.50**	**11**	*e*P		**Pb**	**03 18 40.9**	**0.0**
PTPM	**Petroterminale**	**0.51**	**129**	*e*P		**Pb**	**03 18 41.2**	**+0.1**
PTPA	**Petro Terminal**	**0.52**	**129**	*e*P		**Pb**	**03 18 41.1**	**-0.1**
MLIR3	**Monte Lirio, C**	**0.52**	**59**	↑*e*P		**Pb**	**03 18 41.2**	**-0.2**
SCLRA	**Santa Clara, W**	**0.57**	**58**	*e*P		**Pb**	**03 18 42.1**	**-0.3**
LIMO3	**Limones**	**0.58**	**136**	*e*P		**Pb**	**03 18 42.2**	**-0.2**
LIMO3				*e*S		**Sb**	**03 18 51.6**	**+0.9**
LMNES	**Limones**	**0.59**	**136**	*e*P		**Pb**	**03 18 42.2**	**-0.2**
ALCO	**Alturas Coton,**	**0.61**	**46**	↑*e*P		**Pb**	**03 18 42.3**	**-0.6**
ALCO				*e*S		**Sb**	**03 18 51.8**	**+0.4**
BRU2	**Volcan**	**0.64**	**65**	↑*e*P		**Pb**	**03 18 42.8**	**-0.6**
BRU2				*e*S		**Sb**	**03 18 52.5**	**+0.2**
BRU2	**Volcan**	**0.64**	**65**	↑*e*P		**Pb**	**03 18 42.7**	**-0.7**
EDPE	**Pejibaye, P**	**0.69**	**335**	*e*P		**Pb**	**03 18 43.7**	**-0.6**
DRK0	**Durika**	**0.73**	**2**	*e*P		**Pg**	**03 18 42.4**	**-2.2**
DRK0	**Durika**	**0.73**	**2**	*e*P		**Pg**	**03 18 42.4**	**-2.2**
PTAR3	**Potrerillos Ar**	**0.79**	**78**	*e*P		**Pg**	**03 18 45.2**	**-0.5**
PTAR3				*e*S		**Sb**	**03 18 57.0**	**+0.5**
DVD	**David**	**0.82**	**96**	*e*P		**Pg**	**03 18 45.6**	**-0.6**
DVD				*e*P		**Pb**	**03 18 46.3**	**-0.1**
DVD				*e*S		**Sb**	**03 18 57.1**	**-0.3**
DVD				*e*S		**Sg**	**03 18 57.2**	**+0.2**
BQTLY	**Boquete Panama**	**0.84**	**74**	*e*P		**Pg**	**03 18 45.7**	**-0.9**
LOCO3	**Loma Colorada,**	**0.85**	**98**	*e*P		**Pg**	**03 18 44.5**	**-2.4**
LOCO3				*e*S		**Sn**	**03 19 01.6**	**+1.1**
LNBQ3	**Los Naranjos,**	**0.87**	**72**	*e*P		**Pg**	**03 18 46.4**	**-0.7**
LNBQ3				*e*S		**Sb**	**03 19 00.4**	**+1.5**
PSOM3	**Paja de Sombre**	**0.95**	**80**	*e*P		**Pg**	**03 18 47.8**	**-1.0**
PSOM3				*e*S		**Sn**	**03 19 02.8**	**-0.2**
PBNVO	**Pueblo Nuevo,**	**1.13**	**71**	*e*P		**Pg**	**03 18 50.0**	**-2.1**
RBALA	**Bur**	**1.16**	**72**	*e*P		**Pg**	**03 18 50.8**	**-1.9**
CNI2	**El Empalme, Bo**	**1.20**	**42**	*e*P		**Pn**	**03 18 53.2**	**+0.5**
CNI2				*e*S		**Sn**	**03 19 09.5**	**+0.7**
LAES	**El Progreso Va**	**1.25**	**10**	*e*P		**Pg**	**03 18 53.9**	**-0.4**
ABRB	**Las Abras (San**	**1.53**	**344**	*e*P		**Pg**	**03 18 59.3**	**-0.5**
CVTV	**Tajo**	**1.54**	**342**	*e*P		**Pg**	**03 18 59.6**	**-0.4**
CVTQ	**Turrialba Volc**	**1.55**	**342**	*e*P		**Pg**	**03 19 00.6**	**+0.4**

IDC 13 03:18:54.2±2.3, 6°.74S×128°.81E, h0km, mb3.3/1, mbtmp3.8/4, ML3.8/3, Error ellipse: s-maj=88.6km s-min=29.7km az=75.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.71**	**195**	Pn		Pn	03 21 42.8	+0.2
	0.9nm,0.3s,baz=24,slow=12,SNR=21							
FITZ				Sn		Sn	03 23 40.2	-14
	0.2nm,0.3s,baz=115,slow=18,SNR=1.6							
	16nm,0.9s							
WRA	**Warramunga Arr**	**14.18**	**158**	Pn		Pn	03 22 16.9	+0.4
	0.4nm,0.3s,baz=342,slow=12,SNR=18							
WRA				Sn		Sn	03 24 39.5	-15
	0.4nm,0.3s,baz=333,slow=22,SNR=7.2							
	0.5nm,0.4s							
ASAR	**Alice Springs**	**17.53**	**164**	P		Pn	03 22 59.8	-0.4
	0.2nm,0.3s,baz=333,slow=10.0,SNR=8.5							
	1.3nm,0.7s							
MKAR	**Makanchi Array**	**67.37**	**327**	P		P	03 29 51.4	0.0
	0.2nm,0.5s,baz=133,slow=5.2,SNR=2.2							
	0.2nm,0.5s							

*IDC **13** 03:24:12.1±1.7, 0°.66N×122°.74E, h0km, mb3.4/3, mbtmp3.5/4, ML3.9/1, MS3.3/1, Error ellipse: s-maj=142.8km s-min=25.2km az=64.0*
*DJA **13** 03:24:30.8±0.4, 0°.N±3°×12°.2E±°, h173km±4km, M3.9/17, mb4.1/4, MLv3.8/17*
ISC 13 03:24:30.7±1.0, 0°.23N±0°.09×122°.36E±0°.07, h200km, n13, σ2s91/14, mb3.2/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MRSI	**Marisa**	**0.49**	**301**	P		**Pn**	**03 24 54.5**	**-3.3**
GTOI	**Gorontalo**	**0.76**	**58**	P		**Pn**	**03 24 57.1**	**-1.9**
GTOI				S		**Sn**	**03 25 16.5**	**-4.4**
LUWI	**Luwuk**	**1.32**	**162**	P		**Pn**	**03 25 01.9**	**-1.0**
LUWI				S		**Sn**	**03 25 23.3**	**-4.7**
APSI	**Ampana**	**1.34**	**212**	P		**Pn**	**03 25 01.7**	**-1.3**
MPSI	**Mapaga**	**2.47**	**273**	P		**Pn**	**03 25 13.1**	**-1.1**
MNI	**Manado**	**2.76**	**64**	P		**Pn**	**03 25 16.9**	**-0.6**
PCI	**Palu**	**2.77**	**246**	P		**Pn**	**03 25 16.3**	**-1.4**
SANI	**Sanana**	**4.27**	**122**	P		**Pn**	**03 25 34.9**	**-1.0**
LEM	**Lembang**	**16.30**	**244**	LR		LR	03 36 40.7	
	comp=Z,107nm,20.1s,baz=12,slow=44							
FITZ	**Fitzroy Crossi**	**18.49**	**170**	P		**Pn**	**03 28 34.5**	**-0.1**
	0.3nm,0.3s,baz=11,slow=10,SNR=1.7							
	1.9nm,0.8s							
WRA	**Warramunga Arr**	**23.23**	**150**	P		**P**	**03 29 23.5**	**+3.3**
	1.3nm,0.5s,baz=327,slow=10,SNR=16							
	1.3nm,0.5s							
ASAR	**Alice Springs**	**26.26**	**156**	P		**P**	**03 29 50.8**	**+3.0**
	0.3nm,0.6s,baz=340,slow=12,SNR=5.4							
	0.3nm,0.6s							
MKAR	**Makanchi Array**	**58.09**	**329**	P		**P**	**03 34 06.2**	**+3.1**
	0.2nm,0.4s,baz=126,slow=7.7,SNR=4.3							
	0.2nm,0.4s							

IDC 13 03:31:20.6±4.0, 17°.40N×121°.98E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=345.9km s-min=29.9km az=62.0, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**39.05**	**161**	P		P	03 38 49.7	+0.3
	0.5nm,0.6s,baz=342,slow=8.8,SNR=4.7							
	0.5nm,0.6s							
ASAR	**Alice Springs**	**42.45**	**164**	P		P	03 39 16.9	-0.6
	0.4nm,0.6s,baz=342,slow=7.9,SNR=4.7							
	0.4nm,0.6s							
MKAR	**Makanchi Array**	**43.88**	**321**	P		P	03 39 28.8	-0.1
	0.1nm,0.6s,baz=104,slow=6.1,SNR=1.3							
	0.1nm,0.6s							

WEL 13 03:32:14.4±1.2, 35°S±13°×17°9E±1°5, h223km±23km, M4.0/16, mB4.0/1, ML3.9/11, MLv4.0/16, Mw(mB)3.0/1, Error ellipse: s-maj=19.7km s-min=16.8km az=76.8, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MXZ	**Matakaoa Point**	**3.07**	**192**	P		Pn	03 33 06.1	0.0
MXZ				S		S	03 33 45.5	-1.2
WMGZ	**Waiomatatini S**	**3.31**	**190**	P		Pn	03 33 09.7	+0.9
HAZ	**Te Kaha**	**3.38**	**198**	P		Pn	03 33 09.6	0.0
HAZ				S		S	03 33 54.4	+1.6
PKGZ	**Pakihiroa**	**3.41**	**194**	P		Pn	03 33 10.9	+0.9
PUZ	**Puketiti**	**3.58**	**191**	P		Pn	03 33 12.0	0.0
PUZ				S		S	03 33 56.8	-0.5
RUGZ	**Raukumara Rang**	**3.60**	**199**	P		Pn	03 33 12.3	0.0
TWGZ	**Tauwhareparae**	**3.73**	**194**	P		Pn	03 33 15.1	+1.3
TWGZ				S		S	03 34 02.5	+1.9
MWZ	**Matawai**	**3.99**	**198**	P		Pn	03 33 17.2	+0.3
MWZ				S		S	03 34 06.3	+0.2
CNGZ	**Carnagh Statio**	**3.99**	**190**	P		Pn	03 33 18.5	+1.6
TKGZ	**Te Karaka**	**4.01**	**194**	P		Pn	03 33 17.6	+0.4
TKGZ				S		S	03 34 07.7	+1.2
URZ	**Urewera**	**4.04**	**203**	P		Pn	03 33 17.2	-0.2
URZ				S		S	03 34 07.9	+0.8
RIGZ	**Rimuhau**	**4.29**	**194**	P		Pn	03 33 20.2	-0.3
RIGZ				S		S	03 34 13.0	+0.3
MUGZ	**Murupara**	**4.35**	**205**	P		Pn	03 33 21.6	+0.2
RTZ	**Ruatahuna**	**4.41**	**202**	P		Pn	03 33 21.8	-0.3
OUZ	**Omahuta**	**4.59**	**260**	P		Pn	03 33 23.3	-1.0
KNZ	**Kokohu**	**4.61**	**194**	P		Pn	03 33 23.5	-0.9
RAHZ	**Arahi**	**4.65**	**200**	P		Pn	03 33 24.6	-0.4
RAHZ				S		S	03 34 21.3	+0.4
MTHZ	**Maungataniwha**	**4.67**	**202**	P		Pn	03 33 25.5	+0.3
MHGZ	**Mahia Peninsul**	**4.69**	**192**	P		Pn	03 33 25.3	-0.2
NMHZ	**Naumai**	**4.90**	**202**	P		Pn	03 33 28.1	-0.1
ARHZ	**Aropaoanui**	**5.00**	**199**	P		Pn	03 33 28.8	-0.6
BKZ	**Black Stump Fm**	**5.06**	**204**	P		Pn	03 33 29.4	-0.8
HIZ	**Hauiti**	**5.24**	**220**	P		Pn	03 33 34.4	+2.1
NTVZ	**North Tongarir**	**5.31**	**210**	P		Pn	03 33 33.2	-0.3
TMVZ	**Te Maari**	**5.32**	**210**	P		Pn	03 33 33.0	-0.4
KWHZ	**Kaweka Forest**	**5.32**	**203**	P		Pn	03 33 32.3	-1.1
ETVZ	**East Tongariro**	**5.33**	**210**	P		Pn	03 33 33.0	-0.6
OTVZ	**Oturere**	**5.37**	**210**	P		Pn	03 33 33.5	-0.7
SNVZ	**South Ngauruho**	**5.40**	**210**	P		Pn	03 33 33.9	-0.7
NGZ	**Ngauruhoe**	**5.41**	**210**	P		Pn	03 33 34.5	-0.1
TUVZ	**Tukino**	**5.46**	**210**	P		Pn	03 33 34.8	-0.6
KAHZ	**Kahuranaki**	**5.53**	**198**	P		Pn	03 33 34.8	-1.3
KRHZ	**Kereru**	**5.54**	**203**	P		Pn	03 33 34.5	-1.6
MOVZ	**Moawhango**	**5.54**	**208**	P		Pn	03 33 34.7	-1.6
PWZ	**Pawanui**	**5.75**	**198**	P		Pn	03 33 37.4	-1.5
PXZ	**Pawanui**	**5.76**	**198**	P		Pn	03 33 37.2	-1.7
PNHZ	**Pukenui**	**5.84**	**203**	P		Pn	03 33 38.0	-1.9
PRHZ	**Porangahau**	**6.04**	**198**	P		Pn	03 33 40.6	-1.9
TSZ	**Takapari Road**	**6.04**	**204**	P		Pn	03 33 40.1	-2.4
DVHZ	**Dannevirke**	**6.20**	**201**	P		Pn	03 33 42.4	-2.1
PRWZ	**Pori Road**	**6.49**	**202**	P		Pn	03 33 46.5	-1.8
BFZ	**Birch Farm**	**6.53**	**200**	P		Pn	03 33 46.4	-2.3
MRZ	**Mangatainoka R**	**6.71**	**204**	P		Pn	03 33 47.9	-3.2
TIWZ	**Tintock**	**6.72**	**202**	P		Pn	03 33 48.7	-2.5
HOWZ	**Holdsworth Sta**	**6.95**	**203**	P		Pn	03 33 50.6	-3.5
OGWZ	**Otaki Gorge**	**6.99**	**205**	P		Pn	03 33 51.2	-3.4

*SOME **13** 03:49:28.0, 41°.85N×78°.35E, h10km*
*KRNET **13** 03:49:28.4±0.1, 41°.85N×78°.31E, h17km, mb3.1*
*NNC **13** 03:49:29.1±0.9, 41°.87N×78°.34E, h0km, mb3.5, mpv3.4, Error ellipse: s-maj=6.1km s-min=3.2km az=169.0, Suspected Mining explosion.*
*KNET **13** 03:49:31.2±0.6, 41°.90N×78°.08E, h3km±3km, ml2.8, Error ellipse: s-maj=8.9km s-min=3.0km az=28.0*
ISC 13 03:49:28.9±1.0, 41°.86N±0°.04×78°.29E±0°.03, h0km, n54, σ1s39/94, 21C-16D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**0.38**	**250**	↑*e*P		**Pg**	**03 49 36.1**	**-0.2**
TARG				↑*e*S		**Sg**	**03 49 41.9**	**+0.6**
PRZ	**Przheval'sk**	**0.62**	**8**	↓*e*P		**Pg**	**03 49 40.9**	**0.0**
PRZ				↓*e*S		**Sb**	**03 49 49.9**	**-2.4**
KDJ	**Kajisay**	**0.87**	**288**	↓*e*P		**Pg**	**03 49 45.0**	**-0.5**
KDJ				↑*e*S		**Sg**	**03 49 57.1**	**+0.3**
SATY	**Saty**	**1.20**	**4**	P		**Pg**	**03 49 51.0**	**-0.9**
	13nm,0.4s							
SATY				S		**Sb**	**03 50 07.8**	**-0.9**

	40nm,0.2s							
UZB	**Uzynbulak**	**1.39**	**23**	P		**Pg**	**03 49 54.1**	**-1.5**
	10.0nm,0.4s							
UZB				S		**Sb**	**03 50 13.1**	**-1.2**
	16nm,0.3s							
UZB	**Uzynbulak**	**1.39**	**23**	*e*P		**Pg**	**03 49 54.1**	**-1.5**
	6.3nm,0.3s							
UZB				*e*S		**Sb**	**03 50 13.1**	**-1.2**
	16nm,0.3s							
TNSS	**Tian-Shan**	**1.54**	**320**	P		**Pg**	**03 49 57.9**	**-0.5**
	24nm,0.3s							
TNSS				S		**Sn**	**03 50 19.2**	**+0.4**
	25nm,0.3s							
TNSS	**Tian-Shan**	**1.54**	**320**	*e*P		**Pg**	**03 49 57.9**	**-0.5**
	24nm,0.3s							
TNSS				*e*S		**Sn**	**03 50 19.2**	**+0.4**
	25nm,0.3s							
SHLS	**Shalkode**	**1.56**	**34**	P		**Pg**	**03 50 01.1**	**+2.3**
	37nm,0.4s							
SHLS				S		**Sn**	**03 50 24.8**	**+5.8**
	31nm,0.6s							
SHLS	**Shalkode**	**1.56**	**34**	*e*P		**Pg**	**03 50 01.1**	**+2.3**
	37nm,0.2s							
SHLS				*e*S		**Sn**	**03 50 24.8**	**+5.8**
	31nm,0.6s							
ULHL	**Ulahol**	**1.57**	**285**	↑P		**Pn**	**03 49 58.0**	**-0.3**
	10nm,0.2s							
ULHL				↓S		**Sn**	**03 50 19.7**	**+0.3**
	32nm,0.2s							
ULHL	**Ulahol**	**1.57**	**285**	↑*e*P		**Pn**	**03 49 57.6**	**-0.7**
ULHL				↑*e*S		**Sn**	**03 50 19.0**	**-0.4**
MDOK	**Medeo**	**1.59**	**325**	Pg		**Pg**	**03 49 59.0**	**-0.4**
	73nm,0.2s							
MDOK				Lg		Lg	03 50 21.3	
	59nm,0.4s							
KOTS	**Kotyrbulak**	**1.62**	**328**	P		**Pb**	**03 49 59.5**	**-0.3**
	61nm,0.3s							
KOTS				S		**Sg**	**03 50 22.2**	**+1.1**
	119nm,0.3s							
KOTS	**Kotyrbulak**	**1.62**	**328**	*e*P		**Pb**	**03 49 59.5**	**-0.3**
	61nm,0.3s							
KOTS				*e*S		**Sg**	**03 50 22.2**	**+1.1**
	119nm,0.3s							
KURS	**Kuram**	**1.63**	**357**	P		**Pb**	**03 49 59.1**	**-0.8**
	22nm,0.3s							
KURS				S		**Sg**	**03 50 21.5**	**+0.4**
	25nm,0.4s							
KPKS	**Kokpek**	**1.63**	**10**	P		**Pb**	**03 49 58.7**	**-1.2**
	0.7nm,0.4s							
KPKS				S		**Sg**	**03 50 20.7**	**-0.6**
	16nm,0.4s							
KPKS	**Kokpek**	**1.63**	**10**	*e*P		**Pb**	**03 49 58.7**	**-1.2**
	0.7nm,0.4s							
KPKS				*e*S		**Sg**	**03 50 20.7**	**-0.6**
	16nm,0.4s							
IZV	**Izvestkoviy**	**1.71**	**314**	P		**Pb**	**03 50 01.0**	**-0.3**
	25nm,0.2s							
IZV				S		**Sg**	**03 50 24.8**	**+1.1**
	65nm,0.5s							
IZV	**Izvestkoviy**	**1.71**	**314**	*e*P		**Pb**	**03 50 01.0**	**-0.3**
	25nm,0.2s							
IZV				*e*S		**Sg**	**03 50 24.8**	**+1.1**
	65nm,0.5s							
NRN	**Naryn**	**1.77**	**257**	↓*e*P		**Pn**	**03 50 01.4**	**+0.3**
NRN				↓*e*S		**Sb**	**03 50 25.6**	**+0.4**
BOOM	**Boomskoye usch**	**1.85**	**291**	↑*e*P		**Pn**	**03 50 02.6**	**+0.5**
BOOM				↑*e*S		**Sb**	**03 50 27.5**	**-0.1**
MTBS	**Maitube**	**1.87**	**313**	Pg		**Pb**	**03 50 03.6**	**-0.3**
	22nm,0.2s							
MTBS				Lg		Lg	03 50 29.4	
	70nm,0.3s							
MTBS	**Mait

MRKS				*e*S		**Sg**	**03 51 30.4**	**-2.3**
	16nm,0.5s								
MK31	**Makanchi Array**	**5.70**	**29**	⇓Pn		**Pn**	**03 50 56.1**	**+1.2**
	0.2nm,0.3s,baz=205,slow=12,SNR=15								
MK31				⇓Pg		**Pg**	**03 51 13.8**	**-4.4**
	0.1nm,0.2s,baz=209,slow=16,SNR=6.3								
MK31				⇓Sn		**Sn**	**03 52 02.4**	**+1.3**
	1.0nm,0.6s								
MK31				Lg		Lg	03 52 28.0		
	0.5nm,0.4s,baz=208,slow=26,SNR=4.1								
KK31	**Karatay Array**	**5.88**	**285**	Pg		**Pg**	**03 51 22.7**	**+1.1**
	0.5nm,0.4s,baz=93,slow=15,SNR=5.3								
KK31				Lg		Lg	03 52 32.3		
	0.6nm,0.3s,baz=100,slow=24,SNR=10								

NEIC ***13*** *04:01:25.4±1.0, 19°.36N±0°.08×64°.94W±0°.04, h35km±2km, ML3.2/43, Md3.9/6(RSPR), Error ellipse: s-maj=12.8km s-min=5.8km az=174.0*

ISC 13 04:01:20.3±2.2, 19°.58N±0°.08×65°.13W±0°.07, h17km±12km, n32, σ1§35/36, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CUPR	**Culebra, Puert**	**1.28**	**187**			**Pn**	**04 01 43.0**	**-0.4**
CUPR				Sn		**Sb**	**04 01 57.7**	**-2.2**
CUPR				IAML			04 02 04.6	
	300nm,0.4s							
CUPR				IAML			04 02 05.6	
	344nm,0.6s							
HUMP	**Col San Antoni**	**1.59**	**206**			**Pb**	**04 01 48.9**	**-0.2**
HUMP				Sn		**Sn**	**04 02 08.6**	**+0.9**
HUMP				IAML			04 02 17.8	
	230nm,0.2s							
HUMP				IAML			04 02 20.8	
	242nm,0.2s							
ECPR	**Experimental S**	**1.72**	**223**			**Pb**	**04 01 52.0**	**+0.6**
ECPR				Sn		**Sg**	**04 02 15.6**	**-0.1**
ECPR				IAML			04 02 19.5	
	370nm,0.2s							
EMPR	**Esperanza - Ma**	**1.72**	**231**			**Pg**	**04 01 53.0**	**-0.5**
EMPR						**Sg**	**04 02 16.3**	**+0.5**
SJG	**San Juan**	**1.75**	**214**			**Pb**	**04 01 51.7**	**-0.3**
SJG				Sn		**Sb**	**04 02 14.7**	**+1.0**
PDPR	**Patillas Dam,**	**1.77**	**209**			**Pb**	**04 01 51.8**	**-0.5**
AOPR	**Arecibo Observ**	**1.97**	**232**			**Pb**	**04 01 56.0**	**+0.3**
UUPR	**Utuado, UPR, P**	**2.00**	**229**			**Pb**	**04 01 56.5**	**+0.2**
CELP	**Cerrillos**	**2.03**	**223**			**Pb**	**04 01 56.7**	**-0.1**
OBIP	**Obispado Ponce**	**2.08**	**223**			**Pb**	**04 01 57.3**	**-0.2**
OBIP	**Obispado Ponce**	**2.08**	**223**			**Sb**	**04 02 24.5**	**+1.5**
AGPR	**Aguadilla, PR**	**2.18**	**240**			**Pb**	**04 01 58.4**	**-0.8**
AGPR				IAML			04 03 03.3	
	110nm,2.2s							
AGPR				IAML			04 03 22.8	
	127nm,2.2s							
GBPR	**Guanica, Bosqu**	**2.30**	**226**			**Pb**	**04 02 01.4**	**0.0**
LSP	**Las Mesas**	**2.32**	**233**			**Pb**	**04 02 01.5**	**-0.2**
PRSN	**Puerto Rico Se**	**2.34**	**235**			**Pb**	**04 02 01.4**	**-0.7**
MLPR	**Magueyes Islan**	**2.42**	**229**			**Pb**	**04 02 02.4**	**-1.0**
MLPR				IAML			04 02 49.8	
	69nm,1.8s							
CRPR	**Cabo Rojo, PR**	**2.44**	**230**			**Pb**	**04 02 02.9**	**-0.9**
CRPR				IAML			04 02 46.9	
	77nm,1.1s							
CRPR	**Cabo Rojo, PR**	**2.44**	**230**			**Sb**	**04 02 33.7**	**0.0**
SMRT	**St. Maarten**	**2.47**	**128**	Pn		**Pn**	**04 01 59.6**	**-0.2**
SMRT				IAML			04 02 33.3	
	comp=E,283nm,0.3s							
SMRT				IAML			04 02 39.4	
	comp=N,219nm,0.3s							
IDE	**Isla Desecheo**	**2.52**	**242**			**Pb**	**04 02 04.3**	**-0.8**
SABA	**Saba**	**2.65**	**137**	Pn		**Pn**	**04 02 02.0**	**-0.2**
SABA				IAML			04 02 43.1	
	comp=N,187nm,0.6s							
DR12	**Loma Pena Alta**	**4.10**	**260**	Pn		**Pn**	**04 02 26.7**	**+4.5**
CBE	**Ff, Capester**	**4.84**	**136**	Pn		**Pn**	**04 02 31.7**	**-0.8**
BANI	**BANI**	**5.09**	**257**	Pn		Pn	04 02 41.2	+5.3
SDDR	**Presa de Saban**	**5.85**	**265**			Pn	04 02 52.2	+5.9
SDDR	**Presa de Saban**	**5.85**	**265**	*i* P		Pn	04 02 51.7	+5.4
MASC	**Masc**	**8.59**	**275**	*i* P		**Pn**	**04 03 26.1**	**+2.3**
MASC				*i* S		**Sn**	**04 04 57.8**	**-2.6**
QMBU	**Quimbuelo**	**9.13**	**275**	*i* P		**Pn**	**04 03 32.8**	**+1.5**
MOAC	**Moa**	**9.30**	**278**	*i* P		**Pn**	**04 03 34.9**	**+1.3**
RCC	**Rio Carpintero**	**9.96**	**274**	*i* P		**Pn**	**04 03 43.6**	**+0.9**
RCC				*i* S		**Sn**	**04 05 31.9**	**-2.2**
PINC	**Pinares de May**	**10.06**	**277**	*i* P		**Pn**	**04 03 44.9**	**+0.8**
YAR	**Yar**	**10.59**	**276**	*i* P		**Pn**	**04 03 52.6**	**+1.2**

IDC ***13*** *04:09:31.8±2.5, 19°.89S×70°.04W, h0km, mb3.5/4, mbtmp3.7/6, ML4.0/2, Error ellipse: s-maj=64.0km s-min=30.7km az=8.0*

SJA ***13*** *04:09:47.4±0.7, 19°.10S×69°.44W, h109km±3km, ML3.4, MW3.5*

GUC ***13*** *04:09:48.8±0.9, 19°.09S×69°.41W, h104km±4km, ML3.5*

ISC 13 04:09:48.6±0.8, 19°.11S±0°.03×69°.50W±0°.06, h106km±6km, n34, σ0§94/51, 4C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GO01	**Chusmiza**	**0.63**	**153**	*e*P		**Pn**	**04 10 06.2**	**-0.3**
GO01				*i* S		**Sn**	**04 10 19.8**	**-0.1**
GO01				IAML			04 10 20.4	
	comp=E,6μm,0.3s							
GO01	**Chusmiza**	**0.63**	**153**	*e*P		**Pn**	**04 10 05.6**	**-0.9**
GO01				*e*S		**Sn**	**04 10 20.3**	**+0.4**
GO01				IAML			04 10 20.7	
	comp=Z,1μm,0.2s							
PB11	**IPOC Station P**	**0.66**	**193**	⇑*i*P		**Pn**	**04 10 06.5**	**+0.1**
PB11				*i* S		**Sn**	**04 10 20.4**	**+0.6**
PB11				IAML			04 10 20.8	
	comp=N,4μm,0.3s							
PB11	**IPOC Station P**	**0.66**	**193**	*e*P		**Pn**	**04 10 06.5**	**+0.1**
PB11				IAML			04 10 20.4	
	comp=Z,1μm,0.3s							
PB11				*e*S		**Sn**	**04 10 20.5**	**+0.6**
PB16	**IPOC Station P**	**0.77**	**360**	⇓*i*P		**Pn**	**04 10 07.7**	**-0.2**
PB16				*i* S		**Sn**	**04 10 22.5**	**+0.3**
PB16				IAML			04 10 23.7	
	comp=N,969nm,0.6s							
PB16	**IPOC Station P**	**0.77**	**360**	*e*P		**Pn**	**04 10 07.7**	**-0.2**
PB16				*e*S		**Sn**	**04 10 22.9**	**+0.7**
PB16				IAML			04 10 23.9	
	comp=Z,405nm,0.6s							
PB12	**IPOC Station P**	**0.93**	**302**	⇑*i*P		**Pn**	**04 10 08.8**	**+0.1**
PB12				*i* S		**Sn**	**04 10 24.6**	**+0.7**
PB12				IAML			04 10 26.5	
	comp=E,797nm,0.1s							
PB12	**IPOC Station P**	**0.93**	**302**	*e*P		**Pn**	**04 10 09.0**	**+0.2**
PB12				*e*S		**Sn**	**04 10 24.9**	**+0.9**
PB12				IAML			04 10 27.7	
	comp=Z,426nm,0.3s							
PB08	**IPOC Station P**	**1.08**	**162**	⇓*i*P		**Pn**	**04 10 10.8**	**+0.1**
PB08				*i* S		**Sn**	**04 10 27.7**	**+0.4**
PB08				IAML			04 10 28.8	
	comp=E,2μm,0.2s							
PB08	**IPOC Station P**	**1.08**	**162**	*e*P		**Pn**	**04 10 10.7**	**0.0**
PB08				*e*S		**Sn**	**04 10 27.8**	**+0.5**
PB08				IAML			04 10 29.1	
	comp=Z,1μm,0.3s							
AP01	**Chacalluta**	**1.08**	**313**	⇑*i*P		**Pn**	**04 10 10.7**	**+0.3**
AP01				*i* S		**Sn**	**04 10 27.9**	**+1.1**
AP01				IAML			04 10 28.5	
	comp=N,2μm,0.3s							
AP01	**Chacalluta**	**1.08**	**313**	*e*P		**Pn**	**04 10 10.3**	**0.0**
AP01				*e*S		**Sn**	**04 10 28.0**	**+1.3**
AP01				IAML			04 10 32.1	
	comp=Z,763nm,0.1s							
TA02	**Huaiquique**	**1.30**	**207**	IAML			04 10 34.6	
	comp=N,1μm,0.1s							
TA02	**Huaiquique**	**1.30**	**207**	*e*P		**Pn**	**04 10 13.2**	**+0.4**
TA02				*e*S		**Sn**	**04 10 32.4**	**+1.4**
TA02				IAML			04 10 37.2	
	comp=Z,529nm,0.1s							
TA01	**Diego Aracena**	**1.58**	**204**	*e*P		**Pn**	**04 10 16.3**	**+0.2**
TA01				*i* S		**Sn**	**04 10 36.9**	**-0.2**
TA01				IAML			04 10 39.0	
	comp=E,260nm,0.1s							
TA01	**Diego Aracena**	**1.58**	**204**	*e*P		**Pn**	**04 10 13.8**	**-2.4**
TA01				*e*S		**Sn**	**04 10 38.3**	**+1.2**
TA01				IAML			04 10 39.1	
	comp=Z,138nm,0.2s							
PATCX	**Punta Patache**	**1.81**	**200**	*e*P		**Pn**	**04 10 18.8**	**-0.3**
PATCX				IAML			04 10 46.7	
	comp=E,219nm,0.6s							
PATCX	**Punta Patache**	**1.81**	**200**	*e*P		**Pn**	**04 10 19.2**	**+0.1**
PATCX				*e*S		**Sn**	**04 10 42.1**	**-0.1**
PATCX				IAML			04 10 52.3	
	comp=Z,153nm,0.5s							
PB01	**IPOC Station P**	**1.92**	**180**	⇑*i*P		**Pn**	**04 10 20.5**	**-0.1**
PB01				IAML			04 10 47.2	
	comp=E,309nm,0.4s							
PB01	**IPOC Station P**	**1.92**	**180**	*e*P		**Pn**	**04 10 20.7**	**+0.2**
PB01				*e*S		**Sn**	**04 10 46.3**	**+1.5**
PB01				IAML			04 10 48.7	
	comp=Z,166nm,0.2s							
PB02	**IPOC Station P**	**2.23**	**190**	*e*P		**Pn**	**04 10 24.7**	**+0.3**
PB02				IAML			04 11 01.0	
	comp=E,394nm,0.3s							
PB02	**IPOC Station P**	**2.23**	**190**	*e*P		**Pn**	**04 10 24.8**	**+0.3**
PB02				*e*S		**Sn**	**04 10 50.9**	**-1.0**
PB02				IAML			04 11 01.9	
	comp=Z,360nm,0.4s							
PB07	**IPOC Station P**	**2.63**	**188**	*e*P		**Pn**	**04 10 30.1**	**+0.3**
PB07				*e*S		**Sn**	**04 11 03.1**	**+1.8**
PB07				IAML			04 11 06.7	
	comp=Z,78nm,0.2s							
PB09	**IPOC Station P**	**2.68**	**175**	*e*P		**Pn**	**04 10 31.0**	**+0.5**
PB09				*e*S		**Sn**	**04 11 04.1**	**+1.5**
PB09				IAML			04 11 08.6	
	comp=Z,95nm,0.6s							
PB03	**IPOC Station P**	**2.93**	**185**	*e*P		**Pn**	**04 10 34.3**	**+0.6**
PB03				*e*S		Sn	04 10 56.6	-12
PB03				IAML			04 11 19.8	
	comp=Z,83nm,0.2s							
LPAZ	**La Paz**	**3.10**	**25**	Pn		**Pn**	**04 10 36.7**	**+0.3**
	comp=Z,5.2nm,0.3s,baz=187,slow=7.4,SNR=161							
	comp=Z,16nm,0.3s							
LPAZ	**La Paz**	**3.10**	**25**	*e*P		**Pn**	**04 10 37.1**	**+0.7**
PB06	**IPOC Station P**	**3.58**	**181**	*e*P		**Pn**	**04 10 42.8**	**+0.5**
PB06				*e*S		Sn	04 11 12.4	-12
PB06				IAML			04 11 51.1	
	comp=Z,52nm,0.4s							
PB05	**IPOC Station P**	**3.78**	**190**	*e*P		Pn	04 10 30.4	-15
PB05				IAML			04 11 45.9	
	comp=Z,28nm,1.0s							
SIV	**San Ignacio**	**8.62**	**70**	Pn		Pn	04 11 46.3	-4.3
	comp=Z,0.2nm,0.3s,baz=262,slow=9.7,SNR=21							
	comp=Z,2.6nm,0.3s							
BDFB	**Brasilia**	**20.79**	**84**	P		**P**	**04 14 20.1**	**-1.6**
	comp=Z,1.1nm,0.4s,baz=274,slow=8.9,SNR=3.8							
	comp=Z,1.1nm,0.4s							
TXAR	**Lajitas Array**	**58.36**	**325**	P		**P**	**04 19 30.7**	**-2.4**
	comp=Z,0.1nm,0.5s,baz=131,slow=7.8,SNR=2.7							
	comp=Z,0.1nm,0.5s							
TORD	**Torodi Ar. Bea**	**77.09**	**71**	P		**P**	**04 21 33.4**	**+2.5**
	comp=Z,0.2nm,0.4s,baz=239,slow=5.0,SNR=2.1							
	comp=Z,0.2nm,0.4s							
YKA	**Yellowknife Ar**	**88.76**	**341**	P		**P**	**04 22 29.6**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=138,slow=4.4,SNR=8.8							
	comp=Z,0.4nm,0.7s							

CRAAG ***13*** *04:26:30.9, 35°.43N×1°.08W, Ml2.8, Algrie 05km NE El-Malah*

CNRM ***13*** *04:26:37.3, 35°.51N×1°.64W, h48km, ML1.4*

MDD ***13*** *04:26:38.3±1.6, 35°.82N×1°.25W, h2km±7km, mb_Lg2.1/9, Error ellipse: s-maj=10.4km s-min=7.4km az=156.0*

ISC 13 04:26:30.8±1.2, 35°.56N±0°.02×1°.24W±0°.04, h12km±10km, n22, σ1§45/37, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OLHC	**Oulhaca**	**0.35**	**206**	P		**Pb**	**04 26 40.8**	**+1.9**
OSBL	**Sidi Abdelli**	**0.49**	**171**	P		**Pg**	**04 26 39.9**	**-0.4**
OBBL	**Beni Bahdel**	**0.88**	**194**	P		**Pg**	**04 26 49.4**	**+1.6**
OFRG	**Douar Fergoug**	**1.04**	**92**	P		**Pg**	**04 26 50.7**	**-0.2**
TAF	**Taforalt**	**1.22**	**233**	P		**Pb**	**04 26 54.5**	**+0.8**
TAF				S		**Sg**	**04 27 08.6**	**-1.5**
ENIJ	**Nijar**	**1.61**	**331**	Pn		**Pg**	**04 27 01.5**	**-0.2**
ENIJ				Sn		**Sg**	**04 27 22.2**	**-0.4**
ENIJ	**Nijar**	**1.61**	**331**	Pn		**Pg**	**04 27 02.0**	**+0.4**
ENIJ				Sg		**Sg**	**04 27 22.4**	**-0.1**
ENIJ				*i* lVmb_Lg			04 27 23.8	
JBK	**JBK**	**1.64**	**222**	P		**Pn**	**04 27 00.6**	**+1.0**
JBK				S		**Sn**	**04 27 19.1**	**-1.6**
EBER	**Berja**	**1.89**	**315**	Pn		**Pb**	**04 27 05.5**	**+0.3**
EBER	**Berja**	**1.89**	**315**	Pn		**Pg**	**04 27 07.8**	**+0.9**
EBER				*i* lVmb_Lg			04 27 11.6	
EBER				Sn		**Sg**	**04 27 30.2**	**-1.3**
CART	**Cartagena**	**2.03**	**5**	Pn		**Pb**	**04 27 07.5**	**0.0**
CART				Sn		**Sn**	**04 27 29.8**	**-0.1**
EMUR	**La Murta**	**2.27**	**360**	Pn		**Pb**	**04 27 12.4**	**+0.6**
EMUR				Sn		**Sn**	**04 27 36.5**	**+0.4**
EMUR	**La Murta**	**2.27**	**360**	Pn		**Pb**	**04 27 12.3**	**+0.6**
EMUR				Sn		**Sn**	**04 27 36.6**	**+0.5**
EMUR				*i* lVmb_Lg			04 27 38.7	
ELGU	**Los Guajares,**	**2.33**	**305**	Pn		**Pb**	**04 27 13.0**	**+0.3**
ELGU				Sn		**Sn**	**04 27 39.3**	**+1.7**
ELGU	**Los Guajares,**	**2.33**	**305**	Pn		**Pb**	**04 27 14.4**	**+1.7**
ELGU				Sn		**Sb**	**04 27 40.5**	**-1.0**
ELGU				*i* lVmb_Lg			04 27 43.9	
AKLM	**AKL**	**2.40**	**245**	P		**Pn**	**04 27 08.9**	**-1.0**
AKLM				S		**Sn**	**04 27 35.9**	**-3.3**
EQES	**Quesada**	**2.68**	**327**	Pn		**Pb**	**04 27 18.7**	**+0.1**
EQES				Sn		**Sn**	**04 27 47.3**	**+1.1**
EQES				*i* lVmb_Lg			04 27 56.8	
ETOB	**Tobarra**	**3.08**	**355**	Pn		**Pb**	**04 27 23.3**	**-2.3**
ETOB	**Tobarra**	**3.08**	**355**	Pn		**Pb**	**04 27 23.3**	**-2.3**
ETOB				Sn		**Sn**	**04 27 56.6**	**+0.4**
ETOB				*i* lVmb_Lg			04 28 05.8	
EBEN2	**Beniarda presa**	**3.22**	**15**	Sn		**Sn**	**04 28 00.2**	**+0.9**
EBEN2				*i* lVmb_Lg			04 28 08.6	
MDT	**Midelt**	**3.91**	**226**	P		**Pn**	**04 27 32.6**	**+1.9**
MDT				S		**Sn**	**04 28 14.3**	**-2.4**
MD31	**MD31**	**3.97**	**228**	P		**Pn**	**04 27 33.4**	**+1.9**
MD31				S		**Sn**	**04 28 15.1**	**-2.9**

UCR ***13*** *04:46:39.7±0.7, 8°.26N×82°.80W, h22km±3km, MW5.3, Fault plane solution: NP1:φs115.00000°, δ40.00000°, λ90.00000°., Presumed earthquake*

NEIC ***13*** *04:46:39.5, 8°.18N×82°.74W, h24km, Moment Tensor Solution. Duration: 1§3 Moment tensor: Scale 10¹⁶Nm; Mrr3.85; Mθθ-1.94; Mφφ-1.91; Mrθ 0.30; Mθφ 2.00; Mφr-0.22; Fault plane solution: M₀3.91000×10¹⁶ NP1: φs315.59000°, δ42.31000°, λ91.17000°. NP2: φs134.01000°, δ47.70000°, λ88.94000°. Principal axes: T 3.8701, Plg87.0000°, Azm28.0000°; N 0.0691, Plg1.0000°, Azm135.0000°; P -3.9391, Plg3.0000°, Azm225.0000°;*

GFZ ***13*** *04:46:39.5, 8°.32N×82°.78W, h27km, MW5.0, Moment Tensor Solution. s16 Moment tensor: Mrr3.57; Mθθ-1.93; Mφφ-1.64; Mrθ 0.43; Mθφ 2.30; Mφr 1.38; Fault plane solution: NP1:φs114.00000°, δ43.00000°, λ60.00000°. NP2:φs332.00000°, δ52.00000°, λ114.00000°. Principal axes: T 4.0900, Plg69.0000°, Azm301.0000°; N 0.0500, Plg19.0000°, Azm136.0000°; P -4.1400, Plg4.0000°, Azm44.0000°;*

NEIC ***13*** *04:46:39.5, 8°.28N×82°.84W, h24km*

MOS ***13*** *04:46:40.5±1.3, 8°.33N×82°.82W, h33km, mb5.3/23, Error ellipse: s-maj=11.6km s-min=6.3km az=119.3*

UPA ***13*** *04:46:40.6±2.6, 8°.33N×82°.77W, h13km±3km, ML5.0, MW5.2, Fault plane solution: NP1:φs118.00000°, δ51.00000°, λ58.00000°., Presumed earthquake*

NEIC ***13*** *04:46:40.7±2.2, 8°.31N±0°.05×82°.84W±0°.09, h19km±3km, mb5.1/677, Mww5.0/36, Error ellipse: s-maj=13.8km s-min=5.8km az=65.0*

IDC ***13*** *04:46:42.4±1.5, 8°.36N×82°.73W, h40km±14km, mb4.5/21, mbtmp4.7/28, ML3.1/4, MS4.2/49, Error ellipse: s-maj=17.9km s-min=8.3km az=48.0*

GCMT ***13*** *04:46:43.7±0.2, 8°.37N±0°.01×82°.86W±0°.02, h28km, MW5.1/103, Moment Tensor Solution. s79,c112; s103,c150; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr4.65±.16; Mθθ-2.59±.11; Mφφ-2.06±.12; Mrθ-0.82±.16; Mθφ 2.81±.07; Mφr-0.19±.20; Best double couple: M₀4.97700×10¹⁶ NP1:φs141.00000°, δ43.00000°, λ103.00000°. NP2:φs303.00000°, δ49.00000°, λ78.00000°. Principal axes: T 4.7840, Plg80.0000°, Azm149.0000°; N 0.3870, Plg9.0000°, Azm312.0000°; P -5.1710, Plg3.0000°, Azm42.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

CATAC ***13*** *04:46:43.3±0.3, 8°.N±2°×8°.3W±°, h5km±1km, M5.3/24, MLv5.3/24 Error ellipse: s-maj=5.0km s-min=2.3km az=11.3, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr1.55; Mθθ-1.46; Mφφ-0.08; Mrθ0.44; Mθφ 1.05; Mφr0.93; Fault plane solution: M₀2.10124×10¹⁶ NP1: φs91.00588°, δ51.88231°, λ48.84374°. NP2:φs325.77617°, δ53.67579°, λ129.98964°. Principal axes: T 2.1669, Plg58.7972°, Azm297.0762°; N -0.1381, Plg31.1827°, Azm119.3552°; P -2.0288, Plg1.0099°, Azm28.7439°; confirmed*

ISC 13 04:46:40.8±0.6, 8°.29N±0°.02×82°.83W±0°.02, h28km±3km, n1088, σ1§38/854, mb5.1/343, MS4.3/47, 37C-95D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PTPA	**Petro Terminal**	**0.09**	**206**	⇑*e*P		**Pb**	**04 46 44.7**	**-1.3**
PTPM	**Petroterminale**	**0.10**	**212**	⇑*i*P		**Pb**	**04 46 44.7**	**-1.2**
PTPM				*e*S		**Sb**	**04 46 49.0**	**-0.4**
LESP3	**La Esperanza,**	**0.13**	**18**	⇑*i*P		**Pb**	**04 46 44.5**	**-1.7**
LESP3				*e*S		**Sb**	**04 46 46.6**	**-3.2**
LIMO3	**Limones**	**0.19**	**191**	⇑*i*P		**Pb**	**04 46 45.6**	**-1.1**
LMNES	**Limones**	**0.19**	**190**	⇑*i*P		**Pb**	**04 46 45.5**	**-1.2**
LMNES	**Limones**	**0.19**	**190**	⇑*e*P		**Pb**	**04 46 45.5**	**-1.2**
LPPC	**Paso Canoas**	**0.25**	**358**	⇓*e*P		**Pb**	**04 46 46.0**	**-1.5**
LPPC				*e*S		**Sb**	**04 46 50.5**	**-1.5**
CDITO	**Canoas**	**0.29**	**351**	⇓P		**Pb**	**04 46 46.7**	**-1.4**
CDITO				S		**Sb**	**04 46 52.1**	**-0.8**
BAGA3	**Bagala, Chiriq**	**0.35**	**59**	⇓*i*P		**Pb**	**04 46 47.7**	**-1.2**
BAGA3				*e*S		**Sb**	**04 46 52.9**	**-1.4**
NELY	**Ciudad Neily**	**0.38**	**342**	*e*S		**Sb**	**04 46 54.7**	**-0.4**
NELY	**Ciudad Neily**	**0.38**	**342**	⇓*e*P		**Pb**	**04 46 47.9**	**-1.5**
NELY				*e*S		**Sb**	**04 46 54.3**	**-0.9**
DVD	**David**	**0.40**	**68**	⇓*i*P		**Pb**	**04 46 48.1**	**-1.5**
DVD				*e*S		**Sb**	**04 46 53.8**	**-1.8**
DVD				*e*S		**Sn**	**04 46 54.6**	**-2.8**
LOCO3	**Loma Colorada,**	**0.42**	**73**	⇓*e*P		**Pb**	**04 46 48.5**	**-1.5**
LOCO3				*e*S		**Sb**	**04 46 55.3**	**-0.9**
LOMA3	**Las Lomas, Chi**	**0.46**	**71**	⇓*e*P		**Pb**	**04 46 48.9**	**-1.6**
LOMA3				*e*S		**Sb**	**04 46 55.4**	**-1.7**
JEFFS	**S de V. Baru**	**0.48**	**37**	⇓*i*P		**Pb**	**04 46 49.6**	**-1.4**
JEFFS				*e*S		**Sb**	**04 46 57.1**	**-0.7**
JEFFS	**S de V. Baru**	**0.48**	**37**	⇓*e*P		**Pb**	**04 46 49.7**	**-1.2**
EDAD	**Golfito**	**0.49**	**318**	*e*P		**Pb**	**04 46 49.2**	**-2.0**
CLLRA	**Cordillera,**	**0.50**	**25**	⇓*i*P		**Pb**	**04 46 50.0**	**-1.4**
CLLRA				*e*S		**Sb**	**04 46 58.9**	**+0.4**
CLLRA	**Cordillera,**	**0.50**	**25**	⇓*e*P		**Pb**	**04 46 50.0**	**-1.4**
MLIR3	**Monte Lirio, C**	**0.50**	**1**	⇓*i*P		**Pb**	**04 46 50.5**	**-0.9**
MLIR3				*e*S		**Sb**	**04 46 58.5**	**-0.1**
CHIR3	**Chiriqui UPA,**	**0.51**	**78**	⇓*i*P		**Pb**	**04 46 49.6**	**-1.7**
CHIR3				*e*S		**Sb**	**04 46 56.6**	**-1.8**
PIRO	**Carate, Puerto**	**0.52**	**283**	Pg		**Pb**	**04 46 49.9**	**-1.5**
PIRO				Sg		**Sb**	**04 46 55.1**	**-3.6**
PIRO	**Carate, Puerto**	**0.52**	**283**	⇓P		**Pb**	**04 46 50.4**	**-1.1**
PIRO				S		**Sb**	**04 46 56.6**	**-2.1**
PIRO	**Carate, Puerto**	**0.52**	**283**	⇓*i*P		**Pb**	**04 46 50.4**	**-1.1**
PIRO				*e*S		**Sb**	**04 46 55.2**	**-3.5**
PIRO	**Carate, Puerto**	**0.52**	**283**	⇓*e*P		**Pb**	**04 46 50.3**	**-1.1**
PTAR3	**Potrerillos Ar**	**0.52**	**39**	⇓*i*P		**Pb**	**04 46 50.2**	**-1.4**
PTAR3				*e*S		**Sb**	**04 46 56.8**	**-2.2**
BRU2	**Volcan**	**0.52**	**15**	Pg		**Pb**	**04 46 49.8**	**-1.9**
BRU2				Sg		**Sb**	**04 46 56.8**	**-2.3**
BRU2	**Volcan**	**0.52**	**15**	⇓P		**Pb**	**04 46 50.4**	**-1.3**
BRU2				S		**Sb**	**04 46 58.2**	**-0.9**
BRU2	**Volcan**	**0.52**	**15**	*i* P		**Pb**	**04 46 50.2**	**-1.5**
BRU2				⇓*i*P		**Pb**	**04 46 50.4**	**-1.3**
BRU2				*e*S		**Sb**	**04 46 58.0**	**-1.1**
BRU2	**Volcan**	**0.52**	**15**	⇓*i*P		**Pb**	**04 46 50.4**	**-1.3**
BRU2				*e*S		**Sb**	**04 46 59.7**	**+0.6**
BRU2	**Volcan**	**0.52**	**15**	⇓*e*P		**Pb**	**04 46 50.4**	**-1.3**
RSRNO	**Rio Sereno**	**0.53**	**357**	⇓*e*P		**Pb**	**04 46 50.8**	**-1.0**
BGUAL	**Bijagual, Pana**	**0.54**	**66**	⇓*i*P		**Pb**	**04 46 50.1**	**-1.8**
BGUAL				*e*S		**Sb**	**04 46 57.9**	**-1.4**
SCLRA	**Santa Clara, W**	**0.55**	**5**	⇓*e*P		**Pb**	**04 46 51.0**	**-1.1**
SCLRA	**Santa Clara, W**	**0.55**	**5**	⇓*e*P		**Pb**	**04 46 51.0**	**-1.1**
VITO	**San Vito**	**0.55**	**345**	*e*P		**Pb**	**04 46 51.1**	**-1.0**
VITO				*e*S		**Sb**	**04 47 00.4**	**+0.7**
VITO	**San Vito**	**0.55**	**345**	⇓*e*P		**Pb**	**04 46 51.1**	**-1.0**
BQTLY	**Boquete Panama**	**0.59**	**38**	⇓*i*P		**Pb**

TAGO Cartago 1.91 326 eP Pn 04 47 12.4 +0.7
RESJ San Isidro (Tu 1.91 335↓eP Pn 04 47 12.4 +0.8
IRES Siquirres 1.92 340↓eP Pn 04 47 12.3 +0.7
ABRB Las Abras (San 1.92 333↓eP Pn 04 47 12.6 +0.7
RAFA San Farael, Vo 1.93 330 Pn 04 47 12.4 +0.4
RAFA San Farael, Vo 1.93 330↓eP Pn 04 47 12.4 +0.4
LCOCO El Coco 1.93 338↓eP Pn 04 47 12.8 +1.0
MARI3 Mariato, Verag 1.93 109↓eP Pn 04 47 12.8 +1.1
MARI3 eS Sb 04 47 37.9 -1.1
CVTV Tajo 1.94 332↓eP Pn 04 47 12.8 +0.7
CVTQ Turrialba Volc 1.94 332↓eP Pn 04 47 12.9 +0.6
VTR0 Volcan Turrial 1.95 332↓eP Pn 04 47 13.0 +0.5
CVTR Volcan Turrial 1.95 332↓eP Pn 04 47 12.9 +0.4
RVLA Villa Bonita 1.96 338 eP Pn 04 47 13.2 +0.9
VICA Volcano Irazu 1.96 329↓eP Pn 04 47 12.8 +0.1
TRIO Tres Rios 1.98 325 eP Pn 04 47 13.2 +0.6
ACOS Acosta 2.00 319 eP Pn 04 47 13.4 +0.5
CORON Coronado 2.04 325 eP Pn 04 47 14.4 +0.9
ECI Escuela Centro 2.04 324 eP Pn 04 47 14.2 +0.7
SJS3 Mercedes San J 2.04 324 eP Pn 04 47 14.3 +0.9
LUJA Lujan 2.04 323 eP Pn 04 47 14.7 +1.3
SJS Escuela Geolog 2.04 324 eP Pn 04 47 14.7 +1.2
CENT San Jose 2.05 323 eP Pb 04 47 16.0 -1.6
CVIMO Finca Echandi 2.05 328↓eP Pn 04 47 14.1 +0.5
LUPE Guadalupe 2.05 324 eP Pn 04 47 14.5 +0.9
PAVB Pavas, San Jos 2.08 322 eP Pn 04 47 15.4 +1.4
DOMI Santo Domingo 2.10 324 eP Pn 04 47 15.7 +1.4
SANTA Santa Ana 2.12 321 eP Pn 04 47 15.3 +0.8
HDC Heredia 2.13 323 Pn Pn 04 47 15.5 +0.8
HDC Heredia 2.13 323 eP Pn 04 47 15.6 +1.0
HDC Heredia 2.13 323 eP Pn 04 47 15.7 +1.0
HDC eS Sn 04 47 39.7 -0.5
HDC Heredia 2.13 323 eP Pn 04 47 15.1 +0.5
PURI Puriscal 2.13 317 eP Pn 04 47 15.7 +0.9
HEME Heredia, Merce 2.13 323 eP Pn 04 47 15.9 +1.2
PILE Guapiles 2.14 334↓eP Pn 04 47 15.6 +0.9
BELE Belen 2.15 321 eP Pn 04 47 15.6 +0.7
CACAO El Cacao, Vera 2.16 115↓eP Pn 04 47 14.6 -0.4
CACAO eS Sn 04 47 43.0 +2.1
CACAO i S Sb 04 47 45.6 -0.1
CRIS3 El Cristo, Coc 2.19 91↓eP Pn 04 47 14.6 -0.8
CRIS3 eS Sn 04 47 43.0 +1.4
BITO Garabito Jaco 2.21 307 eP Pn 04 47 15.9 +0.2
PESE3 Pese, Herrera 2.23 100 eP Pn 04 47 15.7 -0.2
PESE3 eS Sn 04 47 43.9 +1.5
CARI Cariari 2.25 337 eP Pn 04 47 17.6 +1.4
POAS San Pedro de P 2.26 322 eP Pn 04 47 18.0 +1.5
ATEO Atenas 2.28 318 eP Pn 04 47 17.3 +0.6
GREC Grecia 2.30 321 eP Pb 04 47 20.6 -1.2
SARCI Sarchi 2.34 320 eP Pn 04 47 18.9 +1.4
VPS8 V Poas 2.34 324 eP Pn 04 47 18.2 +0.4
CHIT3 Chitre 2.41 98↓eP Pn 04 47 17.9 -0.5
CHIT3 eS Sn 04 47 46.7 -0.2
RAMO San Ramon 2.41 318 eP Pn 04 47 19.8 +1.3
TRT2 Tortugero 2.43 338 ↓↓P Pn 04 47 19.5 +0.8
TRT2 S Sn 04 47 49.9 +2.4
TRT2 Tortugero 2.43 338↓↓i P Pn 04 47 19.3 +0.6
TRT2 eS Sb 04 47 51.6 -1.8
TRT2 Tortugero 2.43 338↓eP Pn 04 47 19.1 +0.5
ZARE Zarcero 2.44 321 eP Pn 04 47 21.3 +2.3
ARTO Ro Cuarto 2.46 326 eP Pn 04 47 20.1 +0.9
VPL1 V. Platanar 2.48 322↑eP Pn 04 47 20.7 +1.2
PNME Penonome 2.48 85↓eP Pn 04 47 19.6 +0.1
PNME i S Sb 04 47 52.2 -2.8
VPL3 V. Platanar 2.52 325 eP Pn 04 47 21.0 +1.1
TOSI3 Tonosi 2.52 110 eP Pn 04 47 21.1 +1.2
ROBF Roble, Puntare 2.53 312 eP Pn 04 47 20.7 +0.7
QUEU Ciudad Quesada 2.57 322 eP Pb 04 47 23.9 -2.5
AZU Azuero 2.58 101↓↓i P Pn 04 47 20.5 -0.2
AZU eS Sn 04 47 52.6 +1.4
AZU Azuero 2.58 101↓↓eP Pn 04 47 20.3 -0.4
PAQE Paquera 2.58 306 eP Pn 04 47 22.3 +1.6
ITAL Pital 2.58 327 eP Pn 04 47 22.7 +2.0
ENAS Puntarenas 2.60 310 eP Pn 04 47 21.2 +0.2
JCR1 Jicaral 2.74 305 eP Pn 04 47 22.7 -0.3
PCRI3 Pocri, Los San 2.76 103↓↓eP Pn 04 47 25.0 +1.8
PCRI3 eS Sb 04 48 02.6 -0.2
ACHO3 Achotines, Los 2.77 108↓↓eP Pn 04 47 24.2 +0.9
ACHO3 eS Sb 04 48 00.4 -2.8
FORC Fortuna 2.83 320 eP Pn 04 47 26.0 +1.8
VACR Volcan Arenal 2.84 320↑↑eP Pn 04 47 25.7 +1.4
ARE1 Arenal 1 2.85 319↑↑eP Pn 04 47 26.2 +1.6
VARE2 V. Arenal 2.85 319↑↑eP Pn 04 47 26.4 +1.8
CEDE Laguna Cedeo 2.87 320↑↑eP Pn 04 47 26.3 +1.6
COVE Coope Vega, Sa 2.87 327 ↑↑P Pn 04 47 26.4 +1.3
COVE S Sn 04 47 59.6 +1.1
PEDA3 Pedasi 2.88 105↓↓eP Pn 04 47 25.9 +1.1
PEDA3 eS Sb 04 48 05.0 -1.4
JUNT Juntas 2.89 313 eP Pn 04 47 25.8 +0.8
JTS Las Juntas de 2.89 314 P Pn 04 47 25.4 +0.3
comp=Z,578nm,0.3s,baz=126,slow=7.3,SNR=174
JTS S Sn 04 48 00.7 +1.7
comp=Z,968nm,0.3s,baz=77,slow=22,SNR=12
JTS LR LR 04 48 38.5
comp=Z,5µm,18.9s,baz=147,slow=40
JTS Las Juntas de 2.89 314 Pn Pn 04 47 25.8 +0.7
JTS Las Juntas de 2.89 314 ↑↑P Pn 04 47 25.7 +0.6
JTS S Sn 04 47 58.8 -0.2
JTS Las Juntas de 2.89 314 P Pn 04 47 25.7 +0.6
JTS Las Juntas de 2.89 314 eP Pn 04 47 25.3 +0.3
JTS eP Pb 04 47 25.9 -5.9
JTS eS Sn 04 48 00.9 +1.9
JTS eS Sb 04 48 03.3 -3.5
JTS Las Juntas de 2.89 314↑↑eP Pn 04 47 25.4 +0.3
TABAC Tabacon 2.92 319 eP Pn 04 47 27.3 +1.9
ZANG Zanguenga, Cho 3.00 77 eP Pn 04 47 25.9 -0.6
ZANG Zanguenga, Cho 3.00 77 eP Pn 04 47 26.1 -0.5
TILA Tilaran 3.03 316 eP Pn 04 47 29.9 +2.9
BCIP Isla Barro Col 3.08 73 Pn Pn 04 47 27.4 -0.3
BCIP Isla Barro Col 3.08 73 P Pn 04 47 27.4 -0.3
BCIP Isla Barro Col 3.08 73 P Pb 04 47 33.5 -1.5
BCIP S Sb 04 48 12.9 +0.6
BCIP Isla Barro Col 3.08 73 P Pn 04 47 27.1 -0.6
BCIP Isla Barro Col 3.08 73 eP Pn 04 47 27.0 -0.6
BCIP ↓↓eP Pn 04 47 27.1 -0.6
BCIP eS Sb 04 48 12.7 +0.5
BCIP eS Sb 04 48 14.7 +2.5
BCIP Isla Barro Col 3.08 73↓↓eP Pn 04 47 26.9 -0.8
CMARA Lajas Hojancha 3.09 304 ↓↓P Pn 04 47 28.7 +0.9
CMARA S Sn 04 48 04.3 +0.4
CMARA Lajas Hojancha 3.09 304 eP Pn 04 47 28.2 +0.4
CMARA Lajas Hojancha 3.09 304 eP Pn 04 47 28.2 +0.4
CHOR3 La Chorrera 3.09 78↑↑eP Pn 04 47 28.6 +0.8
MLIR Monte Lirio 3.09 72↑↑eP Pn 04 47 27.8 +0.1
QUEB Quebradon, Cot 3.09 319↑↑eP Pn 04 47 29.0 +1.2
NICO Nicoya 3.17 306 eP Pn 04 47 30.0 +1.1
GAMB1 Gamboa 3.19 75 eP Pn 04 47 29.4 +0.2
TENO El Achiote 3.20 319 eP Pn 04 47 32.2 +2.8
ARRA3 Arrajian, Pana 3.21 78↑↑eP Pn 04 47 29.7 +0.3
ARRA3 i S Sb 04 48 13.2 -2.6
PLVR Palo Verde 3.23 310 eP Pn 04 47 30.5 +0.7
JUD3 Juan Diaz 3 3.26 305↑↑eP Pn 04 47 30.8 +0.6
BAGA Bagaces 3.27 313 eP Pn 04 47 33.0 +2.7
TABO3 Taboga, Panama 3.28 81 eP Pn 04 47 30.6 +0.2
CUI Cuipilapa 3.30 316 eP Pn 04 47 32.7 +2.0
LCHIL Los Chiles 3.31 326 eP Pn 04 47 32.1 +1.4
FLAM Flamenco Islan 3.31 79 eP Pn 04 47 32.6 +1.8
FLAM eS Sb 04 48 18.8 -0.1
COLC Colonia 3.33 315 eP Pn 04 47 32.9 +1.8
UPA Univ. de Panam 3.33 78 eP Pn 04 47 30.9 -0.1
HORNC Hornillas 3.34 316 eP Pn 04 47 33.6 +2.2
SACU Santa Cruz 3.35 306 eP Pn 04 47 32.6 +1.2
VMAR Armenia, Volca 3.37 318 eP Pn 04 47 33.9 +2.1
MESS Mesas 3.38 316↑↑eP Pn 04 47 33.8 +2.0
DELF Filadelfia 3.44 309 eP Pn 04 47 34.3 +1.7
GPS2 Hotel Rincn d 3.49 315 eP Pn 04 47 36.1 +2.7
GPS3 Bodega del ICE 3.50 315 eP Pn 04 47 37.6 +4.1
GPS1 Guardaparques 3.51 315 eP Pn 04 47 36.3 +2.7
ALIBA Liberia Airpor 3.53 311 eP Pn 04 47 36.0 +2.2
VRLE La Escondida, 3.53 315 eP Pn 04 47 36.5 +2.6
VORI VORI 3.54 316 eP Pn 04 47 36.9 +2.8
LAPC Finca la Perla 3.56 314 eP Pn 04 47 35.4 +1.1
ELI1 Hacienda Flor 3.57 311 P Pn 04 47 36.1 +1.7
ELI1 S Sn 04 48 16.5 +1.0
ELI1 Hacienda Flor 3.57 311 eP Pn 04 47 37.0 +2.7
BUAI Buenos Aires 3.57 316↑↑eP Pn 04 47 36.6 +2.2
PEJA Penjamo Buenos 3.57 317 eP Pn 04 47 37.3 +2.9
CHPO Chepo, Panama 3.77 76↑↑eP Pn 04 47 37.3 +0.1
LCRUZ La Cruz 3.92 315 eP Pn 04 47 41.8 +2.6

CARN Rivas 3.92 318 ↑↑P Pn 04 47 41.1 +1.9
CARN S Sn 04 48 26.9 +2.7
CARN Rivas 3.92 318 eP Pn 04 47 39.4 +0.2
CNTA3 Canitas, Panam 4.00 76 eP Pn 04 47 40.6 +0.3
OMEN Al SSO del Vol 4.23 320 ↑↑P Pn 04 47 45.7 +2.3
CONN Concepcion 4.27 320 ↓↓P Pn 04 47 46.4 +2.4
MORN Al O del Volca 4.27 320 P Pn 04 47 45.3 +1.3
JAPN Al SSO del Vol 4.27 319 P Pn 04 47 46.1 +2.0
ACON Acoyapa 4.33 328 P Pn 04 47 46.7 +1.9
SAIC Isla e San And 4.37 14 P Pn 04 47 44.4 -0.9
TOTI Torti 4.51 82↓eP Pn 04 47 46.7 -0.7
NADN Granada 4.67 318 P Pn 04 47 50.7 +1.2
NANN Nandasmo 4.87 319 P Pn 04 47 53.3 +1.0
BOAB BOACO BROADBAN 4.99 326 Pn Pn 04 47 54.7 +0.8
BOAB BOACO BROADBAN 4.99 326 ↑↑P Pn 04 47 55.3 +1.4
PTAC Punta Ardita, 5.10 102 P Pn 04 47 53.6 -1.9
PTAC Punta Ardita, 5.10 102↓↓eP Pn 04 47 54.5 -0.9
PRVC Isla de Provid 5.26 16 P Pn 04 47 56.9 -0.7
comp=Z,1.4nmcomp=Z,7µmcomp=Z,5µmcomp=Z,303nm,0.9s
PRVC Isla de Provid 5.26 16↓↓eP Pn 04 47 56.8 -0.8
COPN Copaltepe 5.36 317 eP Pn 04 48 01.3 +2.4
CAP2 Capurgana 5.42 86 eP Pn 04 48 04.0 +4.2
CAPC Capurgana 5.43 86 P Pn 04 48 00.4 +0.4
comp=Z,2.0nmcomp=Z,4µmcomp=Z,291nm,0.9s
CNGN Cerro Negro 5.66 318 Pn Pn 04 48 04.9 +1.8
CNGN Cerro Negro 5.66 318 P Pn 04 48 05.2 +2.0
comp=Z,74µmcomp=Z,9µm,1.1s
SIUN Universidad Ur 5.72 341 Pn Pn 04 48 04.6 +0.6
BILN Bilwi Airport 5.75 355 Pn Pn 04 48 05.3 +0.9
SOLC Bahia Solano 5.75 110 P Pn 04 48 03.3 -1.1
RNCC Cayo Roncador, 5.91 27 P Pn 04 48 05.3 -1.2
comp=Z,6µmcomp=Z,311nm,0.7s
CRIN San Cristobal 6.04 317 P Pn 04 48 09.9 +1.5
comp=Z,11µmcomp=Z,2µm,0.9s
APAC Apartado, Choc 6.20 93 P Pn 04 48 11.2 +0.7
comp=Z,5µmcomp=Z,4µmcomp=Z,362nm,0.9s
LCBC Los crdobas, 6.41 84 P Pn 04 48 17.5 +4.0
SERC Banco Serrana, 6.43 22 P Pn 04 48 12.7 -1.1
comp=Z,228nm,1.5s
DBBC Dabeiba 6.68 100 P Pn 04 48 18.0 +0.8
CBOC Ciudad Bolivar 7.18 109 P Pn 04 48 23.5 -0.7
TGUH Tegucigalpa,Un 7.21 323 Pn Pn 04 48 27.1 +2.6
UREC San Jos de Ur 7.25 94 P Pn 04 48 26.0 +1.1
comp=Z,3µmcomp=Z,1µmcomp=Z,107nm,1.2s
UREC San Jos de Ur 7.25 94↓↓eP Pn 04 48 25.4 +0.5
PLMC San Jos del P 7.32 117 P Pn 04 48 24.7 -1.3
SJCC San Jacinto, C 7.72 77 P Pn 04 48 31.2 -0.3
comp=Z,6µmcomp=Z,1µmcomp=Z,141nm,0.8s
SJCC San Jacinto, C 7.72 77↑↑eP Pn 04 48 32.0 +0.5
SJCC eS Sn 04 49 58.1 0.0
YOTC Yotoco, Valle 7.73 123 P Pn 04 48 31.8 +0.1
JAMC Jamundi, Valle 7.93 129 P Pn 04 48 34.5 0.0
GUY2C Guyana, Caldas 8.01 112 P Pn 04 48 37.9 +2.0
comp=Z,1µmcomp=Z,180nm,0.8s
ANIL Santa Ana 8.29 117 P Pn 04 48 41.8 +2.3
comp=Z,2µmcomp=Z,111nm,0.5s
BBAC Balboa, Cauca 8.34 138 P Pn 04 48 42.3 +2.1
comp=Z,925nmcomp=Z,62nm,0.8s
POPC Popayan, Colom 8.37 133 P Pn 04 48 42.1 +1.5
comp=Z,700nmcomp=Z,71nm,1.1s
PTBC PUEBO BERRIO, 8.48 101 P Pn 04 48 43.1 +1.2
comp=Z,754nmcomp=Z,50nm,0.8s
ARGC Ariguani, Magd 8.62 79 P Pn 04 48 43.8 0.0
comp=Z,3µmcomp=Z,1µmcomp=Z,106nm,0.9s
CMBC Cumbal 8.84 145 P Pn 04 48 49.5 +2.3
comp=Z,4µmcomp=Z,124nm,0.8s
ESQI Esquipulas 8.92 315 Pn Pn 04 48 51.1 +3.0
SMRC Santa Marta, M 8.95 71 P Pn 04 48 46.0 -2.3
TULM Tulcn-Chalpat 9.04 146 P Pn 04 48 54.7 +4.7
comp=Z,992nmcomp=Z,131nm,1.0s
CUSE Cuyocha Este 9.07 151 P Pn 04 48 52.3 +1.9
comp=Z,1µmcomp=Z,78nm,0.8s
SPBC San Pablo de B 9.08 106 P Pn 04 48 51.3 +1.1
comp=Z,607nmcomp=Z,36nm,0.9s
BRJC Barrancabermej 9.10 98 P Pn 04 48 50.7 +0.3
comp=Z,2µmcomp=Z,107nm,0.9s
OTAV Otavalo 9.11 151 Pn Pn 04 48 55.0 +4.1
OTAV Otavalo 9.11 151 P Pn 04 48 55.0 +4.1
OTAV Otavalo 9.11 151 P Pn 04 48 54.3 +3.4
comp=Z,2µmcomp=Z,606nmcomp=Z,42nm,1.1s
OTAV Otavalo 9.11 151 eP Pn 04 48 50.8 -0.1
PRAC Prado 9.11 119 P Pn 04 48 52.3 +1.7
comp=Z,744nmcomp=Z,43nm,0.4s
ROSC El Rosal 9.12 112 P Pn 04 48 50.7 -0.3
comp=Z,2.8nm,0.3s,baz=324,slow=9.8,SNR=18
ROSC LR LR 04 52 01.9
comp=Z,3µm,19.7s,baz=287,slow=35
comp=Z,6.2nm,0.6s
ROSC El Rosal 9.12 112 Pn Pn 04 48 55.1 +4.1
ROSC El Rosal 9.12 112 P Pn 04 48 55.1 +4.1
ROSC El Rosal 9.12 112 P Pn 04 48 54.3 +3.3
BONI La Bonita 9.40 146 P Pn 04 48 59.6 +4.8
comp=Z,4µmcomp=Z,131nm,0.9s
OCAC Ocana 9.41 90 P Pn 04 48 54.4 -0.4
comp=Z,2µmcomp=Z,104nm,0.7s
GARC Garzon, Huila 9.49 129 P Pn 04 48 59.2 +3.3
comp=Z,908nmcomp=Z,43nm,0.7s
VILC Villavicencio, 9.98 114 P Pn 04 49 08.2 +5.6
APG El Apazote 10.02 312 P Pn 04 49 04.4 +1.2
comp=Z,0.4nm,0.3s,baz=141,slow=9.9,SNR=65
APG LR LR 04 53 16.9
comp=Z,164nm,21.0s,baz=70,slow=39
comp=Z,10nm,1.0s
PAMC Pamplona, Colo 10.08 95 P Pn 04 49 06.0 +1.7
comp=Z,367nmcomp=Z,49nm,0.9s
RTAL Retalhuleu 10.67 306 Pn Pn 04 49 15.4 +3.4
MACC Macarena, Meta 10.82 124 P Pn 04 49 16.8 +2.8
comp=Z,644nmcomp=Z,49nm,0.7s
PETF Flores 10.99 322 Pn Pn 04 49 20.2 +4.0
HUEH Huehuetenango 10.99 310 Pn Pn 04 49 18.5 +2.0
MTDJ Mount Denham 11.14 27 Pn Pn 04 49 18.8 +0.4
MTDJ Mount Denham 11.14 27 ↓↓P Pn 04 49 18.4 +1.0
STH Stony Hill 11.36 30 ↑↑P Pn 04 49 22.1 +0.7
PTLC Puerto Leguiza 11.36 135 P Pn 04 49 27.5 +6.1
SDV Santo Domingo 12.07 86 P Pn 04 49 31.3 0.0
comp=Z,0.6nm,0.3s,baz=260,slow=6.8,SNR=24
SDV S Sn 04 51 50.7 +5.5
comp=Z,35nm,0.8s,baz=31,slow=18,SNR=7.6
SDV LR LR 04 54 54.6
comp=Z,2µm,19.0s,baz=262,slow=41
comp=Z,16nm,0.8s
SDV Santo Domingo 12.07 86 P Pn 04 49 31.6 +0.3
comp=Z,2µmcomp=Z,578nmcomp=Z,47nm,0.7s
SDV Santo Domingo 12.07 86 eP Pn 04 49 31.1 -0.2
MCRA Macar, Loja 12.89 167 P Pn 04 49 45.2 +2.8
TEIG Tepich 12.99 337 eP Pn 04 49 45.2 +1.6
GTBY Guantanamo Bay 13.78 32 i P Pn 04 49 55.0 +0.7
NMDO Nuevo Mundo 14.37 31 Pn Pn 04 50 03.6 +1.1
CMIG Matias Romero 14.65 308 P Pn 04 50 07.0 +0.6
comp=Z,7.9nm,0.5s,baz=157,slow=7.7,SNR=15
SDDR Presa de Saban 15.44 45 Pn Pn 04 50 15.6 -1.3
SDDR IAmb IAmb 04 50 25.0
comp=Z,104nm,1.1s
ATAH Atahualpa 15.94 164 P Pn 04 50 24.9 +1.1
comp=Z,0.1nm,0.3s,baz=41,slow=12,SNR=4.1
ATAH LR LR 04 56 01.8
comp=Z,1µm,20.2s,baz=342,slow=35
comp=Z,4.4nm,0.8s
SDD Santo Domingo 16.12 50 Pn Pn 04 50 25.5 0.0
SC01 Santiago de lo 16.13 45 Pn Pn 04 50 27.1 +1.3
SC01 IAmb IAmb 04 50 35.1
comp=Z,282nm,1.2s
OBIP Obispado Ponce 18.52 57 Pn 04 50 55.9 +0.4
UUPR Utuado, UPR, P 18.53 56 P P 04 50 55.4 +0.1
UUPR IAmb IAmb 04 51 05.4
comp=Z,191nm,1.3s
AOPR Arecibo Observ 18.55 56 P P 04 50 55.6 +0.1
CELP Cerrillos 18.56 57 P P 04 50 54.6 -1.0
CELP IAmb IAmb 04 50 59.3
comp=Z,108nm,1.1s
ECPR Experimental S 18.86 56 P Pn 04 50 59.5 -0.1
ECPR IAmb IAmb 04 51 04.0
comp=Z,126nm,1.0s
SJG San Juan 18.93 57 P P 04 50 59.9 +0.2
comp=Z,96nm,0.8s,baz=256,slow=7.7,SNR=34
SJG LR LR 04 57 54.6
comp=Z,502nm,19.3s,baz=239,slow=36
SJG San Juan 18.93 57 Pn 04 51 00.4 -0.1
SJG IAmb IAmb 04 51 04.3
comp=Z,125nm,0.9s
SJG San Juan 18.93 57 P Pn 04 51 00.4 -0.1
SJG pmax pmax
comp=Z,125nm,0.9s
SJG San Juan 18.93 57 P Pn 04 51 01.4 +0.9
SJG San Juan 18.93 57 eP Pn 04 51 03.0 +2.5

SJG x x 04 54 37.3
CUPR Culebra, Puert 19.75 58 IAmb IAmb 04 51 20.3
comp=Z,159nm,1.1s
656A Willston 20.98 1 P P 04 51 23.1 +1.2
656A IAmb IAmb 04 51 29.3
comp=Z,86nm,1.2s
NNA Nana 21.00 163 P P 04 51 23.9 +1.6
comp=Z,27nm,0.9s,baz=335,slow=8.4,SNR=11
comp=Z,27nm,0.9s
NNA Nana 21.00 163 P P 04 51 23.2 +0.9
NNA Nana 21.00 163 P P 04 51 23.2 +0.9
NNA pmax pmax
comp=Z,41nm,1.0s
MOIG Morelia 21.08 304 P P 04 51 25.8 +2.4
MOIG IAmb IAmb 04 51 28.7
comp=Z,134nm,1.4s
SMRT St. Maarten 21.52 61 P P 04 51 29.1 +1.2
SMRT IAmb IAmb 04 51 31.6
comp=Z,138nm,1.1s
TEFE Tefe 21.60 122 eP P 04 51 29.0 +0.3
553A Crawfordville 21.84 356 P P 04 51 33.4 +2.2
553A IAmb IAmb 04 51 37.0
comp=Z,138nm,1.1s
TDBA Terre de Bas, 22.03 68 P P 04 51 34.5 +1.1
GDHS Morne Mazeau, 22.04 67 P P 04 51 34.4 +0.9
FDFM Morne la Roset 22.17 71 IAmb IAmb 04 51 39.7
comp=Z,115nm,1.1s
BIM Bigot 22.20 72 eP P 04 51 42.3 +7.1
BIM x x 04 55 48.8
456A Hilliard 22.34 2 P P 04 51 38.3 +1.8
456A IAmb IAmb 04 51 58.9
comp=Z,63nm,1.2s
451A Vernon 22.38 353 P P 04 51 39.2 +2.2
BOAV Boa Vista 22.96 104 P P 04 51 42.9 -0.3
BOAV IAmb IAmb 04 51 52.9
comp=Z,49nm,1.1s
BOAV Boa Vista 22.96 104 P P 04 51 43.2 0.0
BOAV Boa Vista 22.96 104 eP P 04 51 42.9 -0.3
352A Blakely 23.16 355 P P 04 51 46.5 +1.4
352A IAmb IAmb 04 51 49.1
comp=Z,79nm,1.0s
346A Big Creek Wild 23.80 346 IAmb IAmb 04 51 54.4
comp=Z,119nm,1.2s
ZAIG Zacatecas 23.81 309 P P 04 51 53.8 +2.0
154A Montrose 24.21 359 IAmb IAmb 04 51 57.5
comp=Z,62nm,0.7s
RGRS Roger Stewart 24.62 5 IAmb IAmb 04 52 02.3
comp=Z,84nm,1.1s
HKT Hockley 24.76 332 P P 04 52 00.2 +0.1
HKT IAmb IAmb 04 52 04.4
comp=Z,60nm,1.2s
HKT Hockley 24.76 332 P P 04 52 00.2 +0.1
HKT pmax pmax
comp=Z,60nm,1.2s
NHSC New Hope 24.82 5 IAmb IAmb 04 52 04.4
comp=Z,64nm,1.0s
MACA Manacapuru-AM 24.84 116 P P 04 52 01.1 0.0
MACA IAmb IAmb 04 52 08.7
comp=Z,73nm,0.9s
MACA Manacapuru-AM 24.84 116 eP P 04 52 00.5 -0.6
GOGA Godfrey 25.01 359 IAmb IAmb 04 52 05.3
comp=Z,41nm,1.1s
EF02 Christine 25.18 326 IAmb IAmb 04 52 08.7
comp=Z,78nm,1.2s
833A Chaparral WMA, 25.33 324 IAmb IAmb 04 52 36.6
comp=Z,88nm,1.5s
143A Socs Landing, 25.57 343 IAmb IAmb 04 52 11.9
comp=Z,72nm,1.1s
NATX Nacogdoches 25.82 336 P P 04 52 09.7 -0.1
NATX IAmb IAmb 04 52 14.5
comp=Z,75nm,1.1s
HNDO Hondo 26.18 326 IAmb IAmb 04 52 19.1
comp=Z,36nm,1.0s
X51A Calhoun 26.22 356 IAmb IAmb 04 52 15.2
comp=Z,51nm,1.3s
435B Jarrell 26.29 330 IAmb IAmb 04 52 27.7
comp=Z,50nm,1.0s
X48A Hartselle 26.33 352 IAmb IAmb 04 52 19.7
comp=Z,134nm,1.9s
237A Washetta, Mont 26.51 335 IAmb IAmb 04 52 19.6
comp=Z,63nm,1.1s
OXF Oxford 26.79 348 IAmb IAmb 04 52 20.2
comp=Z,80nm,1.1s
SWET Sewanee 26.95 354 IAmb IAmb 04 52 21.6
comp=Z,40nm,1.1s
WLAR White Oak Lake 27.00 341 P P 04 52 20.6 +0.1
CPCT Cooper Cave 27.08 357 IAmb IAmb 04 52 24.2
comp=Z,65nm,1.5s
TREL Terrell 27.25 335 IAmb IAmb 04 52 29.1
comp=Z,31nm,0.8s
TKL Tuckaleechee C 27.26 358 LR LR 05 02 58.7
comp=Z,749nm,20.7s,baz=190,slow=36
Z38A Mt. Pleasant 27.28 337 IAmb IAmb 04 52 24.1
comp=Z,61nm,0.9s
V48A Smith Brothers 27.57 353 IAmb IAmb 04 52 27.1
comp=Z,49nm,0.9s
UALR University of 27.77 343 IAmb IAmb 04 52 28.3
comp=Z,58nm,0.9s
MIAR Mount Ida 27.94 341 IAmb IAmb 04 52 29.7
comp=Z,46nm,1.1s
U56A King 28.02 4 P P 04 52 29.9 +0.3
WVT Waverly 28.09 351 P P 04 52 29.7 -0.5
WVT Waverly 28.09 351 P P 04 52 29.7 -0.5
WVT pmax pmax
comp=Z,18nm,0.8s
FW06 Azle 28.10 333 IAmb IAmb 04 52 31.0
comp=Z,30nm,1.1s
U49A Red Boiling Sp 28.23 355 IAmb IAmb 04 52 33.0
comp=Z,38nm,1.0s
Z35A Perchaven, San 28.27 334 IAmb IAmb 04 52 32.5
comp=Z,24nm,0.9s
OZNA Ozona 28.27 325 P P 04 52 31.5 -0.4
PLPT Palo Pinto 28.31 332 IAmb IAmb 04 52 32.9
comp=Z,52nm,1.3s
LPAZ La Paz 28.42 149 P P 04 52 34.6 +0.7
comp=Z,4.6nm,0.9s,baz=338,slow=11,SNR=15
LPAZ LR LR 05 05 36.7
comp=Z,515nm,18.4s,baz=312,slow=40
comp=Z,4.6nm,0.9s
LPAZ La Paz 28.42 149 eP P 04 52 34.8 +0.9
TXAR Lajitas Array 28.67 320 P P 04 52 36.2 +0.7
comp=Z,2.0nm,1.0s,baz=148,slow=8.0,SNR=13
TXAR PcP PcP 04 55 45.8 -0.2
comp=Z,3.2nm,0.8s,baz=151,slow=6.5,SNR=13
TXAR LR LR 05 05 34.8
comp=Z,240nm,20.1s,baz=120,slow=40
comp=Z,2.0nm,1.0s
TXAR Lajitas Array 28.67 320 P P 04 52 35.3 -0.2
FCAR Ozark Folk Cen 28.76 344 IAmb IAmb 04 52 36.8
comp=Z,49nm,1.0s
LOOK Love County 28.80 335 IAmb IAmb 04 52 37.6
comp=Z,49nm,0.9s
T47A Sharon Grove 28.84 353 IAmb IAmb 04 52 38.5
comp=Z,52nm,1.1s
WTFS Witchita Falls 29.18 333 IAmb IAmb 04 52 40.4
comp=Z,49nm,1.6s
CGM3 Cape Girardeau 29.54 349 IAmb IAmb 04 52 44.8
comp=Z,65nm,1.1s
PB16 IPOC Station P 29.54 154 IAmb IAmb 04 52 47.3
comp=Z,24nm,0.8s
T42A Van Buren 29.58 347 IAmb IAmb 04 52 44.0
comp=Z,52nm,1.0s
X34A Smith Ranch, M 29.60 334 IAmb IAmb 04 52 44.5
comp=Z,32nm,1.0s
HHAR Hobbs 29.65 342 P P 04 52 43.5 -0.6
ITTB Itaituba 29.80 114 eP P 04 52 45.7 0.0
TPB01 Permian Basin 29.85 322 IAmb IAmb 04 52 49.9
comp=Z,6.3nm,1.1s
S44A Carbondale 29.85 350 IAmb IAmb 04 52 46.8
comp=Z,44nm,1.1s
SIUC Southern Illin 29.86 350 IAmb IAmb 04 52 47.0
comp=Z,44nm,1.1s
R50A Paris 29.89 358 IAmb IAmb 04 52 48.6
comp=Z,54nm,1.2s
TUL3 Leonard 29.94 339 IAmb IAmb 04 52 46.7
comp=Z,26nm,0.8s
U38A Gravette 29.94 341 IAmb IAmb 04 52 47.0
comp=Z,27nm,1.1s
129A Stewart Farms, 29.97 327 IAmb IAmb 04 52 50.6
comp=Z,5.2nm,0.9s
WCI Wyandotte Cave 29.98 355 P P 04 52 46.6 -0.3
WCI Wyandotte Cave 29.98 355 P P 04 52 46.6 -0.3
WCI pmax pmax
comp=Z,68nm,1.0s
FNO Franklin 29.98 336 IAmb IAmb 04 52 47.7
comp=Z,56nm,1.3s
TPB06 Permian Basin 30.01 324 IAmb IAmb 04 52 50.7

comp=Z,7.5nm,0.8s
DEOK Depew 30.14 338 lAmb lAmb 04 52 48.2
comp=Z,36nm,1.1s
MDP Montagnes des 30.14 94 LR LR 05 05 26.8
comp=Z,1µm,20.2s,baz=274,slow=37
FVM French Village 30.36 348 lAmb lAmb 04 52 51.9
comp=Z,42nm,1.1s
OK052 Battle Ridge R 30.39 337 lAmb lAmb 04 52 50.3
comp=Z,45nm,0.9s
VHRN Van Horn 30.49 320 P **P** **04 52 51.9 +0.1**
QUOK Quay 30.51 338 lAmb lAmb 04 52 51.4
comp=Z,36nm,0.9s
Q52A Bidwell 30.55 1 lAmb lAmb 04 52 53.5
comp=Z,21nm,0.8s
CCM Cathedral Cave 30.60 347 P **P** **04 52 51.1 -1.3**
CCM Cathedral Cave 30.60 347 P **P** **04 52 51.1 -1.3**
CCM pmax pmax
comp=Z,68nm,1.1s
Q51A Peebles 30.61 359 lAmb lAmb 04 52 56.3
comp=Z,42nm,1.0s
Q54A Coxs Mills 30.62 3 lAmb lAmb 04 53 05.7
comp=Z,74nm,1.8s
PB11 IPOC Station P 30.74 155 lAmb lAmb 04 52 56.0
comp=Z,24nm,0.8s
Q56A Snyder Ridge, 30.80 6 lAmb lAmb 04 52 58.9
comp=Z,35nm,1.4s
VILB Vilhena 30.83 133 lAmb lAmb 04 52 55.4
comp=Z,18nm,0.8s
VILB Vilhena 30.83 133 *e*P **P** **04 52 54.5 -0.3**
GO01 Chusmiza 30.85 154 P **P** **04 52 56.3 +0.9**
GO01 lAmb lAmb 04 52 58.2
comp=Z,18nm,0.8s
Q44A Meyer Farm, Va 30.99 351 lAmb lAmb 04 52 56.6
comp=Z,54nm,1.0s
P51A Williamsport 31.06 360 lAmb lAmb 04 52 58.7
comp=Z,63nm,1.5s
R40A Maddies Statio 31.07 346 lAmb lAmb 04 52 57.0
comp=Z,28nm,1.2s
T35A Sooner Cattle 31.10 338 lAmb lAmb 04 52 57.1
comp=Z,32nm,0.8s
TA01 Diego Aracena 31.25 157 lAmb lAmb 04 53 00.7
comp=Z,30nm,1.0s
NPGB Novo Progresso 31.34 118 *e*P **P** **04 52 58.3 -0.9**
O52A Adamsville 31.71 1 lAmb lAmb 04 53 04.8
comp=Z,23nm,1.1s
O49A Covington 31.80 358 lAmb lAmb 04 53 05.0
comp=Z,37nm,1.1s
O53A New Philadelph 31.86 2 lAmb lAmb 04 53 07.0
comp=Z,20nm,1.0s
PB01 IPOC Station P 31.96 156 P **P** **04 53 06.1 +1.4**
PB01 lAmb lAmb 04 53 07.1
comp=Z,23nm,1.2s
SIV San Ignacio 32.34 138 LR LR 05 06 20.3
comp=Z,279nm,20.4s,baz=328,slow=36
PB07 IPOC Station P 32.42 157 lAmb lAmb 04 53 11.3
comp=Z,18nm,1.0s
N51A Ashland 32.50 1 lAmb lAmb 04 53 11.1
comp=Z,31nm,1.1s
SSPA Standing Stone 32.52 7 P **P** **04 53 09.4 +0.2**
N49A Columbus Grove 32.52 358 lAmb lAmb 04 53 10.9
comp=Z,37nm,1.1s
N47A Urbana 32.56 356 lAmb lAmb 04 53 09.8
comp=Z,42nm,1.1s
PDRB Porto dos Gac 32.63 127 *e*P **P** **04 53 09.3 -1.3**
P38A Dawn 32.65 345 lAmb lAmb 04 53 10.9
comp=Z,23nm,1.1s
PB09 IPOC Station P 32.73 156 lAmb lAmb 04 53 14.4
comp=Z,24nm,1.1s
PB03 IPOC Station P 32.76 157 P **P** **04 53 12.8 +1.1**
PB03 lAmb lAmb 04 53 14.2
comp=Z,20nm,0.8s
CLDB Colider 32.95 125 *e*P **P** **04 53 12.4 -1.0**
PTLB Pontes e Lacer 33.27 135 *e*P **P** **04 53 15.5 -0.7**
M44A Midewin, Midew 33.29 353 lAmb lAmb 04 53 15.7
comp=Z,46nm,1.1s
M57A Sunshine Farm, 33.30 8 lAmb lAmb 04 53 18.1
comp=Z,19nm,0.9s
RTBA Rita Blanca 33.38 330 lAmb lAmb 04 53 18.0
comp=Z,16nm,0.9s
121A Cookes Peak, D 33.43 320 lAmb lAmb 04 53 22.1
comp=Z,29nm,0.9s
Y22A Socorro 33.86 322 lAmb lAmb 04 53 25.1
comp=Z,27nm,1.1s
AF01 San Pedro de A 34.20 155 lAmb lAmb 04 53 27.9
comp=Z,30nm,0.9s
ANMO Albuquerque 34.26 324 LR LR 05 10 48.7
comp=Z,103nm,19.3s,baz=136,slow=42
ANMO Albuquerqu 34.26 324 P **P** **04 53 24.8 +0.1**
ANMO Albuquerque 34.26 324 *i* P **P** **04 53 25.0 +0.2**
ANMO pmax pmax
comp=Z,7.0nm,0.9s
T25A Trinidad 34.76 329 lAmb lAmb 04 53 31.1
comp=Z,24nm,1.3s
M65A Busby, Falmout 34.85 16 P **P** **04 53 30.3 +0.7**
baz=201
PB14 IPOC Station P 34.88 160 P **P** **04 53 31.6 +1.2**
JFWS Jewell Farm 35.10 351 lAmb lAmb 04 53 31.7
comp=Z,34nm,0.9s
TUC Tucson 35.27 317 P **P** **04 53 35.5 +2.1**
TUC lAmb lAmb 04 53 36.9
comp=Z,32nm,1.1s
TUC Tucson 35.27 317 P **P** **04 53 35.6 +2.1**
TUC pmax pmax
comp=Z,32nm,1.1s
KSCO Kaye Shedlock' 35.39 333 lAmb lAmb 04 53 35.6
comp=Z,21nm,0.9s
SDCO Great Sand Dun 35.79 328 lAmb lAmb 04 53 40.0
comp=Z,26nm,1.3s
PRPB Parauapebas 35.92 113 *e*P **P** **04 53 39.8 +0.7**
SALV Santo Antonio 36.05 132 *e*P **P** **04 53 38.9 -1.2**
I40A Norwalk 36.12 350 lAmb lAmb 04 53 40.2
comp=Z,43nm,1.1s
W18A Petrified Fore 36.34 321 lAmb lAmb 04 53 47.3
comp=Z,35nm,1.1s
SADO Sadowa 36.49 4 LR LR 05 08 46.7
comp=Z,478nm,19.5s,baz=234,slow=36
PIX Pinacate 36.72 313 lAmb lAmb 04 53 48.9
comp=Z,51nm,1.1s
I37A Lemond, Waseca 36.77 347 lAmb lAmb 04 53 45.6
comp=Z,42nm,1.2s
SLA San Lorenzo 36.90 153 *e*P **P** **04 53 49.0 +1.6**
MVCO Mesa Verde 37.03 325 lAmb lAmb 04 53 51.3
comp=Z,48nm,1.4s
SNDB Serra Nova Dou 37.26 122 *e*P **P** **04 53 49.8 -0.7**
ECSD EROS Data Cent 37.31 343 lAmb lAmb 04 53 50.5
comp=Z,42nm,1.2s
AC02 Maricunga 37.36 160 lAmb lAmb 04 53 55.0
comp=Z,35nm,1.2s
ISCO Idaho Springs 37.42 331 P **P** **04 53 51.9 0.0**
ISCO Idaho Springs 37.42 331 P **P** **04 53 51.9 0.0**
ISCO pmax pmax
comp=Z,11nm,1.0s
Y14A Wickenburg 37.73 317 lAmb lAmb 04 53 57.7
comp=Z,28nm,1.0s
PP1B Ponte de Pedra 37.74 133 *e*P **P** **04 53 54.0 -0.5**
SPMN Marine on St. 37.80 348 lAmb lAmb 04 53 54.7
comp=Z,58nm,1.1s
PV15 Paradox Valley 37.82 326 lAmb lAmb 04 53 57.6
comp=Z,41nm,1.3s
PV13 Radium Mtn., P 37.87 326 lAmb lAmb 04 53 58.5
comp=Z,49nm,1.2s
FSA Cafayete 37.91 155 *e*P **P** **04 53 57.2 +1.2**
PV03 Paradox Valley 37.96 326 lAmb lAmb 04 53 59.1
comp=Z,44nm,1.3s
PV05 Paradox Valley 37.97 325 lAmb lAmb 04 53 59.0
comp=Z,42nm,1.2s
PV07 Paradox Valley 37.98 326 lAmb lAmb 04 53 59.5
comp=Z,50nm,1.3s
PV11 David Mesa, Pa 38.00 326 lAmb lAmb 04 53 59.5
comp=Z,51nm,1.2s
PV16 Nyswonger Mesa 38.03 326 lAmb lAmb 04 53 59.7
comp=Z,44nm,1.2s
PV17 East Wray Mesa 38.04 326 lAmb lAmb 04 53 59.6
comp=Z,34nm,1.2s
PV19 Morning Glory 38.07 326 lAmb lAmb 04 53 59.9
comp=Z,62nm,1.2s
PV20 West Nyswonger 38.09 326 lAmb lAmb 04 53 60.0
comp=Z,51nm,1.1s
PV04 Paradox Valley 38.09 326 lAmb lAmb 04 54 00.3
comp=Z,49nm,1.3s
PV22 Blue Mesa, Par 38.12 326 lAmb lAmb 04 54 00.5
comp=Z,37nm,1.3s
PV10 Paradox Valley 38.15 326 lAmb lAmb 04 54 00.1
comp=Z,62nm,1.2s
PV23 Carpenter Ridg 38.19 326 lAmb lAmb 04 54 00.3
comp=Z,39nm,1.2s
BLYC Blythe 38.67 316 P **P** **04 54 04.1 +1.9**
BLYC lAmb lAmb 04 54 05.9
comp=Z,54nm,1.1s
MURT Porto Murtinho 38.70 141 *e*P **P** **04 54 01.6 -1.0**
ESJX Sierra Juarez 38.76 312 lAmb lAmb 04 54 07.5
comp=Z,87nm,1.9s
HMU Henry Mountain 38.82 324 lAmb lAmb 04 54 07.0
comp=Z,42nm,1.2s
AC05 El Transito 38.84 162 P **P** **04 54 05.2 +1.4**
AC05 lAmb lAmb 04 54 06.3
comp=Z,27nm,0.8s
LCO Las Campanas 38.88 163 P **P** **04 54 04.1 -0.2**
LCO Las Campanas 38.88 163 P **P** **04 54 04.1 -0.2**
LCO pmax pmax
comp=Z,31nm,1.4s
ARAG Araguaiana, MT 38.88 128 *e*P **P** **04 54 03.0 -1.2**
W13A Hualapai Mount 39.00 318 lAmb lAmb 04 54 09.2
comp=Z,37nm,1.2s
SMTB Santa Maria do 39.02 115 *e*P **P** **04 54 05.3 -0.1**
TINO Tinogasta 39.03 158 *e*P **P** **04 54 07.4 +2.0**
YUH Yuha Desert 39.07 313 lAmb lAmb 04 54 09.6
comp=Z,48nm,1.3s
AQDB Aquidauana 39.10 137 *e*P **P** **04 54 04.8 -1.1**
F33A 5 Mile Ranch, 39.17 345 lAmb lAmb 04 54 05.7
comp=Z,42nm,1.1s
BC3 Big Chuckawall 39.27 315 lAmb lAmb 04 54 11.1
comp=Z,130nm,1.8s
IRM Iron Mountain 39.32 316 lAmb lAmb 04 54 11.5
comp=Z,49nm,1.2s
VCA Vinchina 39.42 160 *e*P **P** **04 54 10.6 +2.0**
PKCU Pink Cliffs 39.43 322 lAmb lAmb 04 54 12.1
comp=Z,37nm,1.0s
SRU San Rafael Swe 39.49 325 lAmb lAmb 04 54 11.7
comp=Z,35nm,1.1s
BORC Borrego Spring 39.75 314 lAmb lAmb 04 54 15.0
comp=Z,37nm,1.2s
PMD Palm Desert 39.91 314 lAmb lAmb 04 54 16.2
comp=Z,34nm,1.0s
PFO Pinyon Flats O 39.95 314 LR LR 05 12 37.5
comp=Z,217nm,19.0s,baz=99,slow=39
PFO Pinyon Flats O 39.95 314 P **P** **04 54 15.3 +2.2**
PFO lAmb lAmb 04 54 16.8
comp=Z,33nm,1.1s
PFO Pinyon Flats O 39.95 314 P **P** **04 54 15.3 +2.2**
PFO pmax pmax
comp=Z,33nm,1.1s
DPP Dos Picos Cty 39.99 313 lAmb lAmb 04 54 16.7
comp=Z,39nm,1.3s
V12A Nelson 40.01 318 lAmb lAmb 04 54 17.0
comp=Z,36nm,1.1s
CPE Camp Elliot 40.05 313 lAmb lAmb 04 54 17.3
comp=Z,57nm,1.3s
DNR Dunn Ranch,Anz 40.05 314 lAmb lAmb 04 54 17.9
comp=Z,50nm,1.0s
K22A Casper 40.07 333 lAmb lAmb 04 54 15.4
comp=Z,27nm,0.9s
RSSD Black Hills 40.20 336 P **P** **04 54 16.6 +1.5**
RSSD lAmb lAmb 04 54 16.8
comp=Z,33nm,1.1s
RSSD Black Hills 40.20 336 P **P** **04 54 16.6 +1.5**
RSSD pmax pmax
comp=Z,33nm,1.1s
ACDV Cuesta del Vie 40.44 162 *e*P **P** **04 54 18.8 +1.7**
ACLC CERRO LA CRUZ 40.49 158 *e*P **P** **04 54 18.3 +0.7**
CO03 El Pedregal 40.61 164 P **P** **04 54 19.2 +0.8**
CO03 lAmb lAmb 04 54 20.8
comp=Z,33nm,1.1s
SHPR Sheep Range 40.66 319 P **P** **04 54 21.0 +2.0**
LDAQ Lac Daran 40.75 12 P **P** **04 54 19.3 0.0**
CO02 Combarbal 40.87 164 P **P** **04 54 21.8 +1.2**
CO02 lAmb lAmb 04 54 22.8
comp=Z,58nm,0.9s
SHOC Shoshone, Teco 41.06 317 lAmb lAmb 04 54 25.6
comp=Z,78nm,1.2s
GSC Goldstone, Bar 41.09 316 lAmb lAmb 04 54 26.2
comp=Z,57nm,1.1s
E28A Huff 41.11 341 lAmb lAmb 04 54 22.7
comp=Z,94nm,1.4s
CTU Camp Tracy 41.27 326 lAmb lAmb 04 54 26.4
comp=Z,35nm,1.0s
AMBA Amambai (Brazi 41.29 139 *e*P **P** **04 54 22.9 -1.1**
TCUT Toone Canyon 41.37 327 lAmb lAmb 04 54 27.5
comp=Z,46nm,1.0s
AGMN Agassiz Nation 41.37 347 lAmb lAmb 04 54 24.3
comp=Z,44nm,1.1s
AVFE Valle Fertil 41.44 160 *e*P **P** **04 54 25.8 +0.5**
PASC Pasadena Art C 41.47 314 lAmb lAmb 04 54 29.2
comp=Z,71nm,1.6s
GWY Greenwater Val 41.48 317 P **P** **04 54 27.6 +1.9**
GWY lAmb lAmb 04 54 29.1
comp=Z,30nm,1.0s
QSM Queen of Sheba 41.49 317 lAmb lAmb 04 54 29.2
comp=Z,64nm,1.2s
DUG Dugway, Tooele 41.53 325 P **P** **04 54 26.7 +0.7**
DUG Dugway, Tooele 41.53 325 P **P** **04 54 26.7 +0.7**
DUG pmax pmax
comp=Z,16nm,1.1s
PDAR Pinedale Array 41.60 330 P **P** **04 54 26.4 -0.3**
comp=Z,111nm,1.0s,baz=140,slow=9.5,SNR=55
PDAR PcP **PcP** **04 56 22.7 -0.8**
comp=Z,3.0nm,1.0s,baz=134,slow=4.3,SNR=4.8
PDAR LR LR 05 15 53.8
comp=Z,135nm,18.1s,baz=118,slow=42
comp=Z,111nm,1.0s
PDAR Pinedale Array 41.60 330 P **P** **04 54 26.5 -0.1**
BW06 Boulder Array 41.60 330 P **P** **04 54 25.6 -1.1**
TPNV Topopah Spring 41.63 318 lAmb lAmb 04 54 30.8
comp=Z,35nm,1.1s
H03N2 Juan Fernandez 41.66 175 T T 05 38 44.4
baz=354,slow=76,SNR=43
H03N1 Juan Fernandez 41.66 175 T T 05 38 45.3
baz=354,slow=76,SNR=53
CO04 Los Peladeros 41.67 165 P **P** **04 54 27.6 +0.2**
CO04 lAmb lAmb 04 54 29.4
comp=Z,32nm,1.0s
H03N3 Juan Fernandez 41.67 175 T T 05 38 44.1
baz=354,slow=76,SNR=52
S11A Rachel 41.71 320 lAmb lAmb 04 54 31.4
comp=Z,51nm,1.3s
HWUT Hardware Ranch 41.80 327 lAmb lAmb 04 54 29.8
comp=Z,53nm,0.9s
ZON Zonda 41.86 162 lAmb lAmb 04 54 31.1
comp=Z,47nm,1.4s
TPO Tropico Hills 41.86 314 lAmb lAmb 04 54 32.1
comp=Z,88nm,1.3s
BDFB Brasilia 41.88 125 P **P** **04 54 28.7 -0.5**
comp=Z,5.5nm,0.7s,baz=291,slow=9.8,SNR=11
BDFB LR LR 05 12 33.4
comp=Z,626nm,19.0s,baz=316,slow=37
comp=Z,5.5nm,0.7s
RTLS Leoncito 41.91 163 *e*P **P** **04 54 31.0 +1.7**
CLC China Lake 41.91 316 lAmb lAmb 04 54 32.5
comp=Z,54nm,1.2s
SPUT South Promonto 42.07 326 lAmb lAmb 04 54 32.4
comp=Z,34nm,1.1s
VA06 Catapilco 42.08 165 lAmb lAmb 04 54 32.3
comp=Z,36nm,1.1s
BGU Big Grassy Mou 42.14 325 lAmb lAmb 04 54 33.0
comp=Z,28nm,1.0s
EPLO Experimental L 42.25 349 lAmb lAmb 04 54 31.2
comp=Z,48nm,0.9s
AUSP Uspallata 42.28 163 *e*P **P** **04 54 34.7 +2.4**
CPUP Villa Florida 42.40 145 P **P** **04 54 31.7 -1.3**
comp=Z,4.1nm,0.9s,baz=345,slow=9.3,SNR=9.8
CPUP LR LR 05 14 47.4
comp=Z,201nm,18.1s,baz=310,slow=40
comp=Z,4.1nm,0.9s
CPUP Villa Florida 42.40 145 lAmb lAmb 04 54 33.2
comp=Z,37nm,1.9s
VA01 Torpederas 42.44 166 lAmb lAmb 04 54 35.0
comp=Z,56nm,1.0s
ISA Isabella, Lake 42.44 315 lAmb lAmb 04 54 37.1
comp=Z,39nm,1.1s
VA03 San Esteban 42.46 165 lAmb lAmb 04 54 36.0
comp=Z,45nm,0.9s
CWC Cottonwood Cre 42.58 317 lAmb lAmb 04 54 38.2
comp=Z,38nm,1.2s
SNOW Snow King Moun 42.71 330 lAmb lAmb 04 54 38.0
comp=Z,72nm,1.4s
ASAL Salagasta 42.78 163 *e*P **P** **04 54 37.9 +1.7**
PEL Peldehue 42.79 165 P **P** **04 54 36.4 +0.2**
PEL Peldehue 42.79 165 P **P** **04 54 36.4 +0.2**
PEL pmax pmax
comp=Z,25nm,1.2s
SDBA SAO DESIDERIO 42.94 118 *e*P **P** **04 54 37.0 -0.7**
ARCO CERRO ARCO 42.99 163 *e*P **P** **04 54 39.6 +1.7**
DSP Deep Springs 43.01 318 lAmb lAmb 04 54 41.6
comp=Z,46nm,1.1s
IPMB Ipameri, GO 43.01 128 *e*P **P** **04 54 37.0 -1.2**
MT05 Renca 43.01 165 lAmb lAmb 04 54 46.7
comp=Z,58nm,1.1s
FLWY Flagg Ranch 43.13 330 lAmb lAmb 04 54 40.8
comp=Z,36nm,0.8s
MT03 Universidad Ad 43.17 165 lAmb lAmb 04 54 42.2
comp=Z,34nm,1.1s
LAO LASA Array 43.19 336 lAmb lAmb 04 54 40.2
comp=Z,39nm,0.9s
ULM Lac du Bonnet 43.22 348 P **P** **04 54 38.0 -1.4**
comp=Z,36nm,0.8s,baz=157,slow=8.4,SNR=65
ULM LR LR 05 14 17.3
comp=Z,220nm,18.7s,baz=182,slow=38
comp=Z,36nm,0.8s
ULM Lac du Bonnet 43.22 348 lAmb lAmb 04 54 38.8
comp=Z,58nm,1.0s
ULM Lac du Bonnet 43.22 348 P **P** **04 54 38.0 -1.4**
RLMT Red Lodge 43.24 333 lAmb lAmb 04 54 41.0
comp=Z,37nm,0.8s
MT08 Bocatoma Ro 43.25 164 lAmb lAmb 04 54 43.8
comp=Z,54nm,0.8s
ELK Elko 43.29 324 LR LR 05 17 51.8
comp=Z,105nm,18.5s,baz=136,slow=43
MT09 Talagante 43.31 166 lAmb lAmb 04 54 42.5
comp=Z,32nm,1.1s
MT13 San Alfonso 43.46 165 lAmb lAmb 04 54 45.1
comp=Z,32nm,1.0s
RPN Rapa Nui 43.58 215 LR LR 05 08 19.1
comp=Z,315nm,18.5s,baz=46,slow=30
BO04 La Punta 43.61 165 lAmb lAmb 04 54 45.9
comp=Z,33nm,0.9s
NVAR Mina Array Bea 43.81 319 P **P** **04 54 46.2 +1.5**
comp=Z,13nm,0.9s,baz=130,slow=6.8,SNR=88
NVAR PcP **PcP** **04 56 31.6 +0.6**
comp=Z,2.4nm,0.8s,baz=137,slow=5.0,SNR=5.2
NVAR LR LR 05 16 42.1
comp=Z,322nm,18.3s,baz=114,slow=41
comp=Z,13nm,0.9s
LHV Little Huntoon 43.84 318 lAmb lAmb 04 54 48.5
comp=Z,51nm,1.1s
BO01 Tunca 43.88 166 lAmb lAmb 04 54 46.8
comp=Z,39nm,1.4s
YHL Hebgen Lake 43.93 331 lAmb lAmb 04 54 48.6
comp=Z,32nm,0.9s
GO05 Hualane 44.28 167 lAmb lAmb 04 54 49.6
comp=Z,20nm,0.8s
PMPB Monarch Peak 44.35 315 lAmb lAmb 04 54 51.7
comp=Z,58nm,1.2s
HLID Hailey 44.67 327 lAmb lAmb 04 54 53.1
comp=Z,19nm,0.8s
JANB Januaria 44.67 121 *e*P **P** **04 54 50.5 -1.2**
BOZ Bozeman (W) 44.70 331 lAmb lAmb 04 54 53.3
comp=Z,37nm,0.9s
DLMT Dillon 44.99 330 lAmb lAmb 04 54 57.1
comp=Z,49nm,1.1s
PNTR Pine Nut 45.02 319 lAmb lAmb 04 54 57.5
comp=Z,29nm,1.1s
ML02 Panimavida 45.11 167 lAmb lAmb 04 54 56.3
comp=Z,41nm,1.0s
PAHR Pah Rah Range 45.22 320 lAmb lAmb 04 54 58.7
comp=Z,28nm,1.2s
MFID Camas Ranch 45.34 326 lAmb lAmb 04 54 58.6
comp=Z,29nm,1.1s
MHC Mount Hamilton 45.49 316 lAmb lAmb 04 55 01.3
comp=Z,40nm,1.1s
EGMT Eagleton 45.70 335 lAmb lAmb 04 55 00.6
comp=Z,31nm,0.9s
PSAL Palomas, Salto 46.00 149 *e*P **P** **04 55 02.8 +0.9**
DRLN Deer Lake 46.03 23 P **P** **04 55 02.4 +0.6**
DRLN lAmb lAmb 04 55 23.1
comp=Z,32nm,1.2s
ITAB Concordia 46.17 141 P **P** **04 55 02.6 -0.7**
ITAB lAmb lAmb 04 55 03.3
comp=Z,29nm,0.8s
ITAB Concordia 46.17 141 *e*P **P** **04 55 02.4 -0.8**
PLID Pearl Lake 46.54 328 lAmb lAmb 04 55 07.6
comp=Z,31nm,1.1s
MSO Missoula 46.70 331 lAmb lAmb 04 55 08.4
comp=Z,21nm,0.9s
DIAM Diamantina, MG 46.81 125 *e*P **P** **04 55 08.2 -0.4**
VAO Valinhos 46.89 132 *e*P **P** **04 55 09.1 0.0**
BMO Blue Mountains 47.08 327 lAmb lAmb 04 55 11.2
comp=Z,17nm,1.0s
O02D Mt. Diablo Mer 47.68 318 lAmb lAmb 04 55 15.9
comp=Z,26nm,1.0s
CPSB Cacapava Do Su 47.71 145 *e*P **P** **04 55 14.9 -0.4**
F10A Beach Ranch, E 47.77 328 lAmb lAmb 04 55 18.6
comp=Z,14nm,0.8s
M03C McCloud 47.82 320 lAmb lAmb 04 55 18.1
comp=Z,21nm,0.9s
SCHQ Schefferville 48.15 12 P **P** **04 55 17.4 -0.9**
comp=Z,7.5nm,0.8s,baz=206,slow=7.2,SNR=14
SCHQ PcP **PcP** **04 56 44.5 -1.0**
comp=Z,4.9nm,0.8s,baz=231,slow=4.4,SNR=4.0
comp=Z,7.5nm,0.8s
SCHQ Schefferville 48.15 12 P **P** **04 55 17.5 -0.9**
LNOR Lincton Mounta 48.27 327 lAmb lAmb 04 55 23.6
comp=Z,28nm,1.6s
YBH Yreka Blue Hor 48.44 320 LR LR 05 18 44.2
comp=Z,11nm,19.1s,baz=116,slow=40
YBH Yreka Blue Hor 48.44 320 lAmb lAmb 04 55 21.4
comp=Z,14nm,1.1s
PINE Pine Mountain 48.50 323 lAmb lAmb 04 55 24.9
comp=Z,17nm,0.8s
YPT Yellepit 48.74 327 lAmb lAmb 04 55 23.6
comp=Z,20nm,1.0s
FFC Flin Flon 48.78 345 P **P** **04 55 22.4 -0.8**
FFC lAmb lAmb 04 55 24.1
comp=Z,38nm,1.5s
FFC Flin Flon 48.78 345 P **P** **04 55 22.4 -0.8**
FFC pmax pmax
comp=Z,38nm,1.5s
RCBR Riachuelo 48.85 105 LR LR 05 18 47.8
comp=Z,164nm,18.3s,baz=295,slow=40
CMC01 Camacan, BA 48.92 119 *e*P **P** **04 55 24.5 -0.3**
BBOR Butler Butte 49.04 321 lAmb lAmb 04 55 26.5
comp=Z,31nm,1.3s
I05D Terrebonne, OR 49.05 324 lAmb lAmb 04 55 28.0
comp=Z,13nm,0.9s
SJMB Sao Joao De Ma 49.05 123 *e*P **P** **04 55 24.6 -1.2**
E08A Dider Farm, El 49.08 327 lAmb lAmb 04 55 26.3
comp=Z,17nm,1.0s
G06A Carlson Farm, 49.17 325 lAmb lAmb 04 55 28.8
comp=Z,17nm,1.1s
WIFE Three Sisters- 49.17 323 lAmb lAmb 04 55 29.8
comp=Z,22nm,0.9s
F07A Phinny Hill Vi 49.17 326 lAmb lAmb 04 55 27.9
comp=Z,25nm,0.9s
GUA01 Guaratinga, BA 49.22 120 *e*P **P** **04 55 25.9 -1.2**
NEW Newport 49.24 330 LR LR 05 18 30.8
comp=Z,211nm,20.7s,baz=135,slow=39
NEW Newport 49.24 330 lAmb lAmb 04 55 27.7
comp=Z,17nm,1.1s
NEW Newport 49.24 330 P **P** **04 55 26.5 -0.4**
HAWA Hanford 49.27 327 lAmb lAmb 04 55 28.2
comp=Z,21nm,1.1s
LR05 Currie 49.30 169 lAmb lAmb 04 55 31.5
comp=Z,53nm,1.6s
I04A Tendick Farm, 49.38 323 lAmb lAmb 04 55 29.2
comp=Z,25nm,1.2s
BSFB Barra de Sao F 49.39 123 *e*P **P** **04 55 27.7 -0.7**
E07A Sunnyside 49.55 327 lAmb lAmb 04 55 30.6
comp=Z,15nm,0.8s
H04A Detroit Lake 49.74 324 lAmb lAmb 04 55 32.7
comp=Z,22nm,0.7s
MXC Moxie City 49.80 327 lAmb lAmb 04 55 33.0
comp=Z,18nm,0.9s
EPH Ephrata 49.91 328 lAmb lAmb 04 55 33.8
comp=Z,13nm,1.0s
H04D Lebanon 49.98 323 lAmb lAmb 04 55 34.4
comp=Z,16nm,0.7s
RIB01 Linhares ES 50.00 124 *e*P **P** **04 55 31.6 -1.4**
TRQA Tornquist 50.04 158 P **P** **04 55 32.0 -1.0**
TRQA lAmb lAmb 04 55 34.3
comp=Z,39nm,1.5s
TRQA Tornquist 50.04 158 P **P** **04 55 32.0 -1.0**
TRQA pmax pmax
comp=Z,39nm,1.5s
PLCA Paso Flores 50.07 168 P **P** **04 55 33.7 +0.4**
comp=Z,10nm,0.9s,baz=342,slow=8.5,SNR=26
comp=Z,10nm,0.9s
PLCA Paso Flores 50.07 168 P **P** **04 55 33.8 +0.5**
PLCA Paso Flores 50.07 168 P **P** **04 55 33.8 +0.5**
PLCA pmax pmax
comp=Z,92nm,2.0s
PLCA Paso Flores 50.07 168 *e*P **P** **04 55 33.8 +0.5**
CAM01 Campos-RJ 50.26 127 *e*P **P** **04 55 34.7 -0.3**

ALF01 Guarapari-ES 50.38 125 *e*P P 04 55 35.7 -0.2
KUQ Kuujjuuaa 50.94 10 P P 04 55 37.9 -1.6
D05A Enumclaw 51.09 326 IAmb IAmb 04 55 42.2
comp=Z,24nm,0.9s
LL02 Futaleuf 52.20 170 IAmb IAmb 04 55 50.7
comp=Z,32nm,1.0s
NLWA Neilton Lookou 52.25 326 IAmb IAmb 04 55 51.7
comp=Z,30nm,1.1s
A04D Lummi Island 52.39 328 IAmb IAmb 04 55 51.7
comp=Z,23nm,0.8s
B04A Port Angeles 52.43 327 IAmb IAmb 04 55 52.8
comp=Z,21nm,1.0s
LLLB Lillooet 53.13 330 IAmb IAmb 04 55 57.6
comp=Z,16nm,0.9s
COYC Coyhaique 54.47 171 IAmb IAmb 04 56 07.4
comp=Z,15nm,0.9s
CBB Campbell River 54.57 328 IAmb IAmb 04 56 08.9
comp=Z,24nm,1.1s
FRB Frobisher Bay 56.30 8 LR LR 05 20 43.5
comp=Z,543nm,18.3s,baz=201,slow=36
BLKN Baker Lake 56.72 353 P P 04 56 20.3 -1.4
BBB Bella Bella 57.21 329 LR LR 05 23 11.5
comp=Z,168nm,20.4s,baz=130,slow=38
YKAW1 Yellowknife Wh 58.80 343 IAmb IAmb 04 56 37.0
comp=Z,34nm,1.4s
YKA Yellowknife Ar 58.84 343 P P 04 56 35.8 -0.9
comp=Z,9.3nm,1.1s,baz=139,slow=6.5,SNR=73
YKA PcP PcP 04 57 25.2 -0.6
comp=Z,2.3nm,0.8s,baz=151,slow=3.5,SNR=8.4
comp=Z,9.3nm,1.1s
YKAW3 Yellowknife Wh 58.90 343 IAmb IAmb 04 56 37.7
comp=Z,30nm,1.3s
TAOE Nuku Hiva Isla 59.59 255 *e*S S 05 04 47.2 -4.4
comp=Z,93nm,28.6s
TAOE *e*SS SS 05 08 44.3 -3.3
TAOE comp=Z,74nm,27.9s *e*LR LR 05 14 07.6
comp=Z,167nm,24.2s
U35K Hyder 60.20 332 P P 04 56 46.4 +0.3
baz=123
KOTAN Kotaneelee Air 60.23 338 P P 04 56 47.0 +0.7
baz=131,SNR=8.7
T35M Bob Quinn 60.90 333 P P 04 56 51.5 +0.6
baz=124
CRAG Craig 61.46 330 P P 04 56 55.4 +0.7
baz=120
WRAK Wrangell Islan 61.57 331 P P 04 56 56.0 +0.6
baz=121
DLBC Dease Lake 61.61 334 LR LR 05 26 14.5
comp=Z,219nm,21.0s,baz=98,slow=38
DLBC Dease Lake 61.61 334 P P 04 56 56.7 +0.9
baz=124,SNR=6.4
U33K Whale Pass 61.79 331 P P 04 56 57.1 +0.2
baz=120
S34M Telegraph Cree 61.81 333 P P 04 56 57.7 +0.7
baz=123
WTLY Watson Lake, Y 62.07 336 P P 04 56 59.4 +0.6
baz=126,SNR=6.1
WRGLY Wrigley 62.11 341 IAmb IAmb 04 56 59.8
comp=Z,22nm,1.1s
WRGLY Wrigley 62.11 341 P P 04 56 58.8 -0.2
baz=133,SNR=8.6
R33M Jennings River 62.55 335 IAmb IAmb 04 57 04.1
comp=Z,22nm,1.4s
R33M Jennings River 62.55 335 P P 04 57 02.7 +0.6
baz=124
SFJD Kangerlussuaq 62.56 14 LR LR 05 23 51.7
comp=Z,307nm,21.2s,baz=220,slow=36
TGTN Hyland Airport 62.72 337 P P 04 57 03.5 +0.3
baz=128
Q32M Nakina River 62.88 334 P P 04 57 04.6 +0.2
baz=122
S32K Kilisnoo 63.16 332 P P 04 57 06.2 +0.2
baz=119
P33M Teslin, Yukon 63.78 335 P P 04 57 10.6 +0.4
P33M IAmb IAmb 04 57 12.0
comp=Z,16nm,1.2s
P33M Teslin, Yukon 63.78 335 P P 04 57 10.8 +0.5
baz=122,SNR=5.9
P32M Atlin 63.84 334 P P 04 57 11.2 +0.6
baz=121
S31K Pelican 64.17 332 P P 04 57 13.7 +1.0
baz=118
N32M Quiet Lake 64.40 336 IAmb IAmb 04 57 17.4
comp=Z,20nm,1.0s
N32M Quiet Lake 64.40 336 P P 04 57 14.8 +0.6
baz=122
POIN Pond Inlet 64.43 2 P P 04 57 12.7 -1.5
POIN IAmb IAmb 04 57 13.3
comp=Z,15nm,1.0s
SKAG Skagway 64.48 333 P P 04 57 15.1 +0.4
baz=120
WHY Whitehorse 64.89 335 P P 04 57 17.7 +0.2
baz=120
O30N Mendenhall 65.46 334 IAmb IAmb 04 57 23.1
comp=Z,14nm,1.1s
O30N Mendenhall 65.46 334 P P 04 57 21.8 +0.6
baz=119,SNR=7.4
M31M Drury Creek, Y 65.49 336 IAmb IAmb 04 57 23.1
comp=Z,17nm,1.2s
M31M Drury Creek, Y 65.49 336 P P 04 57 21.9 +0.6
baz=122,SNR=6.3
P30M Million Dollar 65.53 334 P P 04 57 22.5 +0.9
baz=118
N31M Braeburn, Yuko 65.69 335 IAmb IAmb 04 57 24.3
comp=Z,24nm,1.1s
N31M Braeburn, Yuko 65.69 335 P P 04 57 23.3 +0.7
baz=120
HYT Haines Junctio 66.10 334 P P 04 57 26.3 +1.0
baz=118
N30M Aishikik Lake 66.22 335 IAmb IAmb 04 57 28.4
comp=Z,12nm,1.1s
N30M Aishikik Lake 66.22 335 P P 04 57 27.1 +1.0
baz=119,SNR=5.6
O29M Mount Kennedy 66.33 333 P P 04 57 27.1 +0.2
baz=117
YUK6 Outpost Mounta 66.52 334 P P 04 57 28.3 +0.1
baz=117
M30M Minto, Yukon 66.64 336 IAmb IAmb 04 57 30.4
comp=Z,26nm,1.2s
M30M Minto, Yukon 66.64 336 P P 04 57 29.4 +0.7
baz=119,SNR=14
RES Resolute Bay 66.72 357 LR LR 05 27 51.9
comp=Z,288nm,18.1s,baz=186,slow=37
RES Resolute Bay 66.72 357 IAmb IAmb 04 57 28.7
comp=Z,23nm,0.9s
MAYO Mayo, Yukon 66.80 337 P P 04 57 30.7 +1.1
baz=121
YUK4 Talbot Arm 66.83 334 P P 04 57 30.8 +0.7
baz=117
PINM Pinnacle 66.99 333 P P 04 57 31.9 +0.9
baz=115
O28M Mount Upton 67.25 333 P P 04 57 33.8 +0.9
baz=115
M29M Somme Creek 67.26 335 IAmb IAmb 04 57 35.5
comp=Z,22nm,1.0s
M29M Somme Creek 67.26 335 P P 04 57 33.5 +0.8
baz=118
YUK8 Steele Glacier 67.29 334 P P 04 57 33.8 +0.8
baz=116
H31M Peel River 67.40 340 P P 04 57 34.1 +0.6
baz=123
L29M L29M 67.44 336 IAmb IAmb 04 57 36.2
comp=Z,20nm,1.0s
L29M L29M 67.44 336 P P 04 57 34.2 +0.5
baz=118
J30M Hart River 67.47 338 IAmb IAmb 04 57 36.2
comp=Z,26nm,1.2s
J30M Hart River 67.47 338 P P 04 57 34.9 +0.9
baz=120,SNR=18
K29M Barlow Dome 67.55 337 IAmb IAmb 04 57 36.8
comp=Z,19nm,0.9s
K29M Barlow Dome 67.55 337 P P 04 57 35.0 +0.4
baz=119
MESA MESA 67.80 332 P P 04 57 36.4 +0.1
baz=113
YUK3 Moose Creek 67.80 334 P P 04 57 37.0 +0.7
baz=115,SNR=6.1
I30M Mount Dempster 67.81 339 P P 04 57 37.0 +0.8
baz=121,SNR=34
CTG Chitna Glacier 67.84 333 P P 04 57 37.2 +0.8
baz=114
KULLO Kullorsuaq 67.87 7 *i* P P 04 57 35.2 -1.0
KULLO IAmb IAmb 04 57 35.5
comp=Z,20nm,1.1s
G31M Satah River 67.99 341 P P 04 57 37.6 +0.6
baz=123,SNR=28
F31M Tsiigehtchic 68.11 341 P P 04 57 38.3 +0.5
baz=124,SNR=20
J29N Klondike Camp 68.11 337 P P 04 57 38.7 +0.7
baz=119,SNR=13
BVCY Beaver Creek 68.25 335 P P 04 57 39.5 +0.7
baz=115
DAWY Dawson 68.38 337 P P 04 57 39.6 -0.1
DAWY IAmb IAmb 04 57 41.0
comp=Z,14nm,1.0s
DAWY Dawson 68.38 337 P P 04 57 39.7 0.0
baz=117,SNR=8.8
EPYK Eagle Plains 68.52 340 P P 04 57 41.2 +0.7
baz=121,SNR=11
INK Inuvik 68.53 342 P P 04 57 41.0 +0.5
baz=125,SNR=34
CRQE Cirque 68.55 333 P P 04 57 41.5 +0.6
baz=112
I29M Ogilvie Camp, 68.59 338 P P 04 57 41.5 +0.6
baz=119,SNR=8.4
TULEG Thule 68.64 3 *i* P P 04 57 39.4 -1.6
TULEG IAmb IAmb 04 57 40.5
comp=Z,29nm,1.0s
M27K Edge Creek, AK 68.65 335 IAmb IAmb 04 57 43.2
comp=Z,19nm,1.2s
M27K Edge Creek, AK 68.65 335 P P 04 57 42.7 +1.1
baz=114,SNR=7.0
G30M tAoh Zrail Nji 68.67 340 IAmb IAmb 04 57 46.4
comp=Z,14nm,1.1s
G30M tAoh Zrail Nji 68.67 340 P P 04 57 41.5 +0.1
baz=121
A36M Sachs Harbour 68.69 347 P P 04 57 40.6 -0.7
baz=134,SNR=37
MCARA McCarthy VSAT 68.76 333 P P 04 57 43.4 +1.4
baz=113
KAIM Kayak Island 68.85 332 P P 04 57 43.9 +1.3
baz=111
F30M Barrier River 68.86 341 P P 04 57 43.4 +0.9
baz=122
VRDI Verde Repeater 68.89 333 IAmb IAmb 04 57 44.7
comp=Z,21nm,1.3s
BCAR Beaver Creek A 68.91 335 P P 04 57 43.6 +0.6
L27K Beaver Creek, 68.92 335 P P 04 57 43.8 +0.7
baz=115,SNR=28
GLB Gilahina Butte 69.13 333 IAmb IAmb 04 57 46.7
comp=Z,22nm,1.2s
M26K Nabesna, AK 69.15 334 P P 04 57 45.2 +0.8
baz=113
I28M Miner Creek 69.23 338 IAmb IAmb 04 57 51.3
comp=Z,13nm,1.1s
I28M Miner Creek 69.23 338 P P 04 57 45.7 +0.7
baz=117
BMRM Bremner River 69.31 333 P P 04 57 46.6 +1.0
baz=111
SUMG Summit 69.53 13 *i* P P 04 57 46.2 -0.9
SUMG IAmb IAmb 04 57 47.2
comp=Z,16nm,0.8s
L26K Log Cabin Wild 69.54 335 P P 04 57 47.7 +0.8
baz=113,SNR=7.7
N25K Chitina, Valde 69.54 333 IAmb IAmb 04 57 49.5
comp=Z,33nm,1.4s
N25K Chitina, Valde 69.54 333 P P 04 57 48.2 +1.2
baz=111
Q23K Middleton Isla 69.60 331 P P 04 57 48.3 +1.1
baz=109
MENT Mentasta 69.66 335 IAmb IAmb 04 57 49.8
comp=Z,35nm,1.6s
EYAK Cordova Ski Ar 69.69 332 P P 04 57 49.0 +1.2
baz=110
I27K Kandik River 69.92 338 P P 04 57 50.4 +1.2
baz=116,SNR=39
E29M Blow River 69.95 341 P P 04 57 49.9 +0.7
baz=120,SNR=20
KLU Klutina 70.09 333 IAmb IAmb 04 57 52.3
comp=Z,18nm,1.2s
KLU Klutina 70.09 333 P P 04 57 51.2 +0.8
baz=110
H27K Steamboat Moun 70.17 338 P P 04 57 51.5 +0.8
baz=116
SCRK Sand Creek 70.18 336 P P 04 57 51.7 +0.8
baz=113,SNR=13
F28M Old Crow 70.22 340 IAmb IAmb 04 57 53.7
comp=Z,14nm,0.8s
F28M Old Crow 70.22 340 P P 04 57 51.5 +0.5
baz=118,SNR=30
P23K Montague Islan 70.29 331 P P 04 57 51.9 +0.5
baz=108
I26K Coal Creek Min 70.38 337 P P 04 57 52.6 +0.6
baz=114
M24K Tolsona, Glenn 70.42 334 P P 04 57 53.3 +1.0
baz=110
PAX Paxson 70.42 334 P P 04 57 52.9 +0.6
baz=111,SNR=7.7
GLI Glacier Island 70.42 332 P P 04 57 52.6 +0.3
baz=103
RIDG Independent Ri 70.44 335 P P 04 57 53.4 +0.9
baz=112,SNR=15
G27K Doyon Strip 70.47 339 P P 04 57 52.9 +0.4
baz=116
BORG Borgarnes 70.62 24 LR LR 05 26 52.4
comp=Z,228nm,18.8s,baz=240,slow=34
D28M Stokes Point 70.68 342 P P 04 57 54.5 +0.9
baz=120,SNR=16
PPT Papeete 70.75 248 LR LR 05 21 39.8
comp=Z,204nm,19.0s,baz=63,slow=30
PPT2 Papeete2 70.75 248 *e*P P 04 57 54.0 -1.1
PPT2 comp=Z,47nm,23.8s *e*S S 05 07 07.8 -0.7
PPT2 comp=Z,129nm,27.5s *e*SS SS 05 11 38.5 -2.7
PPT2 comp=Z,82nm,30.8s *e*LR LR 05 19 19.6
comp=Z,148nm,22.8s
SCM Sheep Creek Mo 70.84 333 P P 04 57 55.5 +0.6
baz=109
K24K Donnelly Dome 70.85 335 P P 04 57 55.6 +0.8
baz=111,SNR=8.4
J25K Salcha River, 70.98 336 P P 04 57 56.6 +0.9
baz=112
M23K Glacier View 71.01 333 P P 04 57 56.0 +0.1
baz=109
E27K Coleen River 71.06 340 IAmb IAmb 04 57 57.7
comp=Z,17nm,0.9s
E27K Coleen River 71.06 340 P P 04 57 56.5 +0.4
baz=116,SNR=19
NEEM North Greenlan 71.11 7 *i* P P 04 57 55.6 -1.0
NEEM IAmb IAmb 04 57 56.3
comp=Z,42nm,0.9s
KNK Knik Glacier 71.22 332 IAmb IAmb 04 57 59.6
comp=Z,34nm,1.2s
KNK Knik Glacier 71.22 332 P P 04 57 57.8 +0.7
baz=108,SNR=6.8
WAT6 Susitna Watana 71.27 334 P P 04 57 58.0 +0.4
baz=109,SNR=18
DHY Denali Highway 71.27 334 IAmb IAmb 04 57 59.0
comp=Z,17nm,1.4s
DHY Denali Highway 71.27 334 P P 04 57 57.7 +0.1
baz=109
SML Sawmill 71.28 333 P P 04 57 57.9 +0.3
baz=113,SNR=6.5
G26K Porcupine Rive 71.29 339 IAmb IAmb 04 57 59.0
comp=Z,12nm,0.8s
G26K Porcupine Rive 71.29 339 P P 04 57 57.8 +0.4
baz=114,SNR=11
SEW Seward 71.30 331 P P 04 57 58.0 +0.4
baz=106
D27M Malcolm River 71.34 341 IAmb IAmb 04 57 59.5
comp=Z,20nm,0.9s
D27M Malcolm River 71.34 341 P P 04 57 58.4 +0.6
baz=117
PRP Porcupine Dome 71.38 337 IAmb IAmb 04 57 59.9
comp=Z,17nm,1.1s
PRP Porcupine Dome 71.38 337 P P 04 57 58.8 +0.6
baz=112,SNR=7.5
O22K Cooper Landing 71.54 331 P P 04 57 59.3 +0.3
baz=106
HDA Harding Lake 71.54 336 P P 04 57 59.5 +0.4
baz=110,SNR=38
PMR Palmer 71.58 333 P P 04 57 59.8 +0.5
baz=107
IL31 71.64 336 IAmb IAmb 04 58 01.1
comp=Z,34nm,1.1s
ILAR Eielson Array 71.64 336 P P 04 57 59.8 +0.1
comp=Z,12nm,0.9s,baz=113,slow=4.3,SNR=88
ILAR PP PP 05 00 36.1 -2.6
comp=Z,3.8nm,1.1s,baz=101,slow=5.7,SNR=7.5
ILAR LR LR 05 31 11.2
comp=Z,121nm,21.9s,baz=84,slow=37
comp=Z,12nm,0.9s
ILAR Eielson Array 71.64 336 P P 04 57 59.3 -0.3
WAT1 Susitna Watana 71.70 334 P P 04 58 00.1 +0.1
baz=108
RC01 Rabbit Creek A 71.72 332 IAmb IAmb 04 58 06.2
comp=Z,37nm,1.3s
RC01 Rabbit Creek A 71.72 332 P P 04 58 00.7 +0.6
baz=106
F26K Sheenjek River 71.72 339 IAmb IAmb 04 58 02.0
comp=Z,15nm,0.8s
F26K Sheenjek River 71.72 339 P P 04 58 00.8 +0.7
baz=114,SNR=17
BMAR Burnt Mountain 71.77 339 P P 04 58 00.8 +0.4
SLKM Skilak Lake 71.78 331 IAmb IAmb 04 58 02.3
comp=Z,38nm,1.3s
BRSE Bradley Lake S 71.83 330 P P 04 58 01.4 +0.5
baz=105
POKR Poker Plat Res 71.98 336 P P 04 58 02.1 +0.5
baz=110
COLA College 72.07 336 P P 04 58 02.7 +0.6
COLA College 72.07 336 *i* P P 04 58 02.4 +0.3
COLA pmax pmax
comp=Z,18nm,1.0s
COLA College 72.07 336 P P 04 58 02.2 +0.1
baz=109
M22K Willow 72.08 333 IAmb IAmb 04 58 48.5
comp=Z,36nm,1.2s
M22K Willow 72.08 333 P P 04 58 02.7 +0.4
baz=106
MCK McKinley 72.15 335 IAmb IAmb 04 58 04.5
comp=Z,41nm,1.2s
MCK McKinley 72.15 335 P P 04 58 03.4 +0.7
baz=108,SNR=18
F25K Christian Rive 72.21 339 IAmb IAmb 04 58 05.4
comp=Z,20nm,0.9s
F25K Christian Rive 72.21 339 P P 04 58 03.9 +0.9
baz=112,SNR=24
HOM Homer 72.25 330 P P 04 58 03.9 +0.6
baz=104
TBI Tubuai 72.28 242 *e*S S 05 07 27.4 +1.6
comp=Z,544nm,31.2s
TBI *e*SS SS 05 12 04.3 -0.1
comp=Z,451nm,35.0s
TBI *e*LR LR 05 20 08.6
comp=Z,532nm,22.8s
KDAK Kodiak Island 72.28 328 LR LR 05 33 20.5
comp=Z,136nm,19.0s,baz=101,slow=39
KDAK Kodiak Island 72.28 328 P P 04 58 03.7 +0.2
baz=103
CAPN Captain Cook N 72.29 331 P P 04 58 03.6 +0.1
baz=105
CUT Chulitna 72.33 333 P P 04 58 04.1 +0.4
baz=106,SNR=6.1
Q20K Shuyak Island 72.37 329 P P 04 58 04.9 +0.8
baz=103
C27K Jago River 72.38 341 IAmb IAmb 04 58 05.8
comp=Z,19nm,0.9s
C27K Jago River 72.38 341 P P 04 58 04.7 +0.8
baz=115
E25K Arctic Village 72.38 340 IAmb IAmb 04 58 06.1
comp=Z,20nm,0.8s
E25K Arctic Village 72.38 340 P P 04 58 05.0 +0.9
baz=113
H24K Noodor Dome 72.40 337 IAmb IAmb 04 58 06.1
comp=Z,27nm,1.1s
H24K Noodor Dome 72.40 337 P P 04 58 04.8 +0.6
baz=110,SNR=15
NEA2 Nenana 72.47 336 IAmb IAmb 04 58 06.0
comp=Z,26nm,1.1s
NEA2 Nenana 72.47 336 P P 04 58 04.9 +0.3
baz=108,SNR=16
OHAK Old Harbor 72.53 327 IAmb IAmb 04 58 07.1
comp=Z,32nm,1.2s
OHAK Old Harbor 72.53 327 P P 04 58 05.8 +0.8
baz=102
G24K Hadweenzic Riv 72.55 338 IAmb IAmb 04 58 07.4
comp=Z,32nm,1.1s
G24K Hadweenzic Riv 72.55 338 P P 04 58 06.2 +1.1
baz=110,SNR=15
L22K Petersville 72.59 333 IAmb IAmb 04 58 06.9
comp=Z,19nm,1.3s
TRF Thorofare Moun 72.64 334 IAmb IAmb 04 58 07.5
comp=Z,33nm,1.2s
TRF Thorofare Moun 72.64 334 P P 04 58 06.2 +0.4
baz=107,SNR=8.8
I23K Minto, Yukon-K 72.76 336 P P 04 58 07.1 +0.8
baz=108,SNR=24
SKT Skwentna 72.79 333 IAmb IAmb 04 58 08.2
comp=Z,38nm,1.3s
SKT Skwentna 72.79 333 P P 04 58 06.9 +0.4
baz=105,SNR=12
SPU Mount Spurr 72.82 332 IAmb IAmb 04 58 08.3
comp=Z,24nm,1.2s
C26K Camden Bay 72.88 341 P P 04 58 07.9 +1.0
baz=114,SNR=42
SII Sitkinak Islan 72.88 327 P P 04 58 07.5 +0.3
baz=101
N20K Mount Spurr 72.90 332 P P 04 58 07.4 +0.1
baz=104
SPCR Spurr Chakacha 72.90 332 P P 04 58 07.7 +0.4
baz=104
KTH Kantishna Hill 72.94 334 IAmb IAmb 04 58 08.9
comp=Z,21nm,1.1s
P19K Oil Pt 73.03 330 P P 04 58 08.5 +0.5
baz=103
ILSW Iliamna Southw 73.06 330 IAmb IAmb 04 58 09.6
comp=Z,34nm,1.2s
Q19K Cape Douglas, 73.08 329 P P 04 58 08.7 +0.4
baz=102
D25K Kavik River 73.12 341 P P 04 58 09.0 +0.6
baz=112
BPAW Bear Paw Mtn. 73.12 335 P P 04 58 08.6 +0.1
baz=106,SNR=19
MLY Manley 73.29 336 IAmb IAmb 04 58 11.1
comp=Z,33nm,1.1s
MLY Manley 73.29 336 P P 04 58 09.8 +0.3
baz=107,SNR=16
PPLA Purkeypile 73.32 333 IAmb IAmb 04 58 11.2
comp=Z,44nm,1.3s
PPLA Purkeypile 73.32 333 P P 04 58 09.9 +0.1
baz=105,SNR=6.4
E24K Your Creek 73.39 339 P P 04 58 11.1 +1.0
baz=110,SNR=8.9
M20K Styx River 73.50 332 IAmb IAmb 04 58 12.3
comp=Z,32nm,1.3s
M20K Styx River 73.50 332 P P 04 58 10.8 0.0
baz=104
G23K Bananza Creek 73.51 338 P P 04 58 11.8 +1.0
baz=108,SNR=41
CHIR Chirikof Islan 73.54 326 P P 04 58 11.7 +0.6
baz=100
CHUM Lake Minchumin 73.63 334 P P 04 58 12.1 +0.7
baz=105,SNR=7.9
O19K Port Alsworth 73.68 330 IAmb IAmb 04 58 12.8
comp=Z,36nm,1.3s
O19K Port Alsworth 73.68 330 P P 04 58 11.6 -0.1
baz=102,SNR=7.1
COLD Coldfoot 73.73 338 IAmb IAmb 04 58 14.7
comp=Z,31nm,1.0s
COLD Coldfoot 73.73 338 P P 04 58 13.4 +1.4
baz=108,SNR=25
E23K Chandalar 73.78 339 P P 04 58 13.3 +0.9
baz=109,SNR=36
H22K Ishtalitna Cre 73.79 337 IAmb IAmb 04 58 13.9
comp=Z,25nm,1.2s
H22K Ishtalitna Cre 73.79 337 P P 04 58 12.6 +0.2
baz=106
I21K Tanana 73.83 336 P P 04 58 12.9 +0.3
baz=106,SNR=28
D24K Happy Valley 73.87 340 IAmb IAmb 04 58 14.4
comp=Z,23nm,1.2s
D24K Happy Valley 73.87 340 P P 04 58 13.2 +0.4
baz=110
N19K Bonanza Creek 73.89 331 IAmb IAmb 04 58 14.3
comp=Z,33nm,1.2s
N19K Bonanza Creek 73.89 331 P P 04 58 13.1 0.0
baz=102
TOLK Toolik Lake Re 73.96 340 P P 04 58 13.7 +0.4
baz=109,SNR=8.8
P18K Big Mountain, 73.97 330 IAmb IAmb 04 58 14.7
comp=Z,17nm,1.2s
P18K Big Mountain, 73.97 330 P P 04 58 13.4 -0.2
baz=101
C24K Franklin Bluff 74.02 341 P P 04 58 14.3 +0.6
baz=110,SNR=30
O18K Koktuh Hills 74.05 330 IAmb IAmb 04 58 15.3
comp=Z,36nm,1.2s
O18K Koktuh Hills 74.05 330 P P 04 58 14.2 +0.1
baz=101,SNR=8.1
M19K Big River Lodg 74.08 332 IAmb IAmb 04 58 17.1

	comp=Z,26nm,1.4s							
M19K	**Big River Lodg**	**74.08**	**332**	P	**P**	**04 58 14.5**	**+0.3**	
	baz=102							
Q17K	**Contact Creek**	**74.10**	**328**	P	**P**	**04 58 14.6**	**+0.2**	
	baz=100,SNR=9.2							
R17L	**Mt. Peulik Vol**	**74.24**	**328**	P	**P**	**04 58 15.7**	**+0.5**	
	baz=100							
K20K	**Telida**	**74.26**	**334**	IAmb	IAmb	04 58 16.4		
	comp=Z,31nm,1.2s							
K20K	**Telida**	**74.26**	**334**	P	**P**	**04 58 14.9**	**-0.2**	
	baz=103							
H21K	**Melozitna Rive**	**74.29**	**336**	IAmb	IAmb	04 58 16.5		
	comp=Z,17nm,1.1s							
H21K	**Melozitna Rive**	**74.29**	**336**	P	**P**	**04 58 15.4**	**+0.1**	
	baz=105							
L19K	**White Mountain**	**74.35**	**332**	P	**P**	**04 58 15.8**	**+0.1**	
	baz=102							
D23K	**Nanushuk River**	**74.44**	**340**	P	**P**	**04 58 17.1**	**+1.0**	
	baz=108							
N18K	**Kilae Creek**	**74.54**	**331**	IAmb	IAmb	04 58 18.1		
	comp=Z,32nm,1.2s							
N18K	**Kilae Creek**	**74.54**	**331**	P	**P**	**04 58 17.0**	**+0.1**	
	baz=101,SNR=8.4							
P17K	**Kvichak River**	**74.55**	**329**	P	**P**	**04 58 17.0**	**+0.2**	
	baz=100							
Q16K	**King Salmon**	**74.57**	**329**	P	**P**	**04 58 17.4**	**+0.4**	
	baz=100							
E22K	**Anaktuvuk Pass**	**74.59**	**339**	IAmb	IAmb	04 58 18.8		
	comp=Z,19nm,1.0s							
E22K	**Anaktuvuk Pass**	**74.59**	**339**	P	**P**	**04 58 17.6**	**+0.5**	
	baz=107							
M18K	**Stony River**	**74.67**	**332**	P	**P**	**04 58 17.5**	**0.0**	
	baz=101							
C23K	**Itkillik River**	**74.69**	**341**	P	**P**	**04 58 18.4**	**+0.9**	
	baz=108,SNR=35							
IMAR	**Indian Mountai**	**74.75**	**336**	P	**P**	**04 58 17.6**	**-0.3**	
G21K	**Allakaket**	**74.79**	**337**	P	**P**	**04 58 19.1**	**+0.9**	
	baz=104,SNR=59							
R16K	**Pilot Point**	**74.88**	**327**	P	**P**	**04 58 19.2**	**+0.4**	
	baz=98							
F21K	**Alatna River**	**74.96**	**338**	P	**P**	**04 58 20.2**	**+1.1**	
	baz=105,SNR=38							
O17K	**Koliganek Bris**	**74.97**	**330**	P	**P**	**04 58 19.7**	**+0.4**	
	baz=99,SNR=16							
J19K	**Poorman**	**75.07**	**334**	P	**P**	**04 58 19.8**	**-0.1**	
	baz=102,SNR=6.7							
H20K	**Anotleneega Mo**	**75.09**	**336**	P	**P**	**04 58 19.9**	**-0.1**	
	baz=103,SNR=15							
N17K	**Nushagak Hills**	**75.14**	**330**	IAmb	IAmb	04 58 21.8		
	comp=Z,26nm,1.1s							
N17K	**Nushagak Hills**	**75.14**	**330**	P	**P**	**04 58 20.7**	**+0.4**	
	baz=100,SNR=9.0							
CHGN	**Chignik**	**75.16**	**326**	P	**P**	**04 58 20.8**	**+0.3**	
	baz=97							
L18K	**Granite Mounta**	**75.20**	**332**	IAmb	IAmb	04 58 21.9		
	comp=Z,29nm,1.3s							
L18K	**Granite Mounta**	**75.20**	**332**	P	**P**	**04 58 20.7**	**+0.1**	
	baz=100							
P16K	**Nushagak River**	**75.31**	**329**	P	**P**	**04 58 21.6**	**+0.3**	
	baz=98,SNR=5.8							
M17K	**Holitna River**	**75.41**	**331**	IAmb	IAmb	04 58 23.1		
	comp=Z,19nm,1.0s							
M17K	**Holitna River**	**75.41**	**331**	P	**P**	**04 58 22.0**	**+0.2**	
	baz=100,SNR=5.8							
O16K	**Kokwok River B**	**75.45**	**329**	IAmb	IAmb	04 58 23.4		
	comp=Z,30nm,1.4s							
O16K	**Kokwok River B**	**75.45**	**329**	P	**P**	**04 58 22.0**	**0.0**	
	baz=98,SNR=6.9							
J18K	**Innoko River**	**75.45**	**334**	P	**P**	**04 58 22.2**	**+0.2**	
	baz=101,SNR=6.4							
CHNA	**Chernabura Isl**	**75.65**	**324**	P	**P**	**04 58 23.3**	**+0.1**	
	baz=96							
B22K	**Teshekpuk Lake**	**75.76**	**341**	P	**P**	**04 58 24.3**	**+0.6**	
	baz=106							
GCSA	**Galena City Sc**	**75.76**	**335**	P	**P**	**04 58 23.9**	**+0.1**	
	baz=101,SNR=7.4							
F20K	**Avaraart Lake**	**75.77**	**337**	IAmb	IAmb	04 58 25.6		
	comp=Z,22nm,1.1s							
F20K	**Avaraart Lake**	**75.77**	**337**	P	**P**	**04 58 24.6**	**+0.8**	
	baz=103,SNR=17							
N16K	**Nishlik Lake**	**75.91**	**330**	P	**P**	**04 58 25.3**	**+0.5**	
	baz=98,SNR=5.0							
C21K	**Knifeblade Rid**	**75.91**	**339**	P	**P**	**04 58 25.4**	**+0.8**	
	baz=104							
L17K	**Donlin**	**75.93**	**332**	P	**P**	**04 58 25.2**	**+0.4**	
	baz=99,SNR=10.0							
B21K	**Ikpikpuk River**	**75.97**	**340**	IAmb	IAmb	04 58 26.5		
	comp=Z,31nm,1.0s							
B21K	**Ikpikpuk River**	**75.97**	**340**	P	**P**	**04 58 25.3**	**+0.5**	
	baz=104							
K17K	**Iditarod**	**76.03**	**333**	IAmb	IAmb	04 58 26.7		
	comp=Z,20nm,1.1s							
K17K	**Iditarod**	**76.03**	**333**	P	**P**	**04 58 25.5**	**+0.2**	
	baz=99,SNR=8.3							
M16K	**Timber Creek**	**76.08**	**331**	P	**P**	**04 58 26.3**	**+0.6**	
	baz=98							
G19K	**Purcell Mounta**	**76.11**	**336**	P	**P**	**04 58 26.4**	**+0.7**	
	baz=101,SNR=42							
DAG	**Danmarks Havn**	**76.20**	**12**	*i* P	**P**	**04 58 24.1**	**-1.9**	
DAG				IAmb	IAmb	04 58 25.4		
	comp=Z,4.1nm,0.9s							
ESDC	**Sonseca Array**	**76.20**	**51**	P	**P**	**04 58 26.6**	**-0.3**	
	comp=Z,7.0nm,1.1s,baz=270,slow=5.3,SNR=13							
ESDC				LR	LR	05 29 03.9		
	comp=Z,157nm,18.4s,baz=282,slow=33							
	comp=Z,7.0nm,1.1s							
E20K	**Nigu River**	**76.20**	**338**	P	**P**	**04 58 27.3**	**+0.9**	
	baz=102							
SDPT	**Sand Point**	**76.21**	**325**	P	**P**	**04 58 26.7**	**+0.3**	
	baz=95							
O15K	**Ungalikthiuk R**	**76.27**	**329**	P	**P**	**04 58 27.7**	**+0.9**	
	baz=97							
L16K	**Owhat River**	**76.42**	**332**	IAmb	IAmb	04 58 29.8		
	comp=Z,32nm,1.1s							
L16K	**Owhat River**	**76.42**	**332**	P	**P**	**04 58 28.4**	**+0.8**	
	baz=98,SNR=18							
E19K	**Redstone River**	**76.43**	**338**	IAmb	IAmb	04 58 29.0		
	comp=Z,14nm,0.9s							
E19K	**Redstone River**	**76.43**	**338**	P	**P**	**04 58 27.9**	**+0.4**	
	baz=101,SNR=12							
A22K	**Sinclair Lake**	**76.43**	**341**	P	**P**	**04 58 28.3**	**+0.9**	
	baz=104							
H18K	**Honhosa River**	**76.45**	**335**	P	**P**	**04 58 29.1**	**+1.3**	
	baz=100,SNR=21							
D20K	**Etivluk River**	**76.46**	**339**	P	**P**	**04 58 28.2**	**+0.5**	
	baz=102							
F19K	**Shaleruckik Mo**	**76.52**	**337**	IAmb	IAmb	04 58 29.6		
	comp=Z,30nm,1.0s							
F19K	**Shaleruckik Mo**	**76.52**	**337**	P	**P**	**04 58 28.5**	**+0.5**	
	baz=101							
N15K	**Kwethluk River**	**76.52**	**330**	P	**P**	**04 58 28.7**	**+0.5**	
	baz=97							
G18K	**Tagagawik**	**76.70**	**336**	P	**P**	**04 58 30.1**	**+1.0**	
	baz=100,SNR=32							
M15K	**Kasigluk River**	**76.88**	**330**	P	**P**	**04 58 30.9**	**+0.7**	
	baz=96							
B20K	**Meade River**	**76.92**	**340**	P	**P**	**04 58 31.0**	**+0.8**	
	baz=102							
D19K	**Kuna River**	**76.95**	**339**	P	**P**	**04 58 31.2**	**+0.7**	
	baz=101							
A21K	**Barrow**	**77.02**	**341**	P	**P**	**04 58 31.5**	**+0.7**	
	baz=103							
H17K	**Granite Mounta**	**77.07**	**335**	IAmb	IAmb	04 58 33.4		
	comp=Z,17nm,1.1s							
H17K	**Granite Mounta**	**77.07**	**335**	P	**P**	**04 58 32.2**	**+1.0**	
	baz=98,SNR=5.6							
J16K	**Anvik River**	**77.15**	**333**	IAmb	IAmb	04 58 34.3		
	comp=Z,14nm,1.0s							
J16K	**Anvik River**	**77.15**	**333**	P	**P**	**04 58 33.0**	**+1.4**	
	baz=97,SNR=10							
DBIC	**Dimbokro**	**77.21**	**85**	P	**P**	**04 58 33.4**	**+0.4**	
	comp=Z,31nm,1.1s,baz=302,slow=7.0,SNR=14							
DBIC				LR	LR	05 30 30.9		
	comp=Z,133nm,20.6s,baz=294,slow=34							
	comp=Z,31nm,1.1s							
DBIC	**Dimbokro**	**77.21**	**85**	P	**P**	**04 58 33.0**	**0.0**	
DBIC	**Dimbokro**	**77.21**	**85**	P	**P**	**04 58 33.0**	**0.0**	
DBIC				pmax	pmax			
	comp=Z,50nm,1.2s							
F18K	**Selawik**	**77.21**	**336**	P	**P**	**04 58 32.5**	**+0.6**	
	baz=99,SNR=16							
I17K	**Unalakleet**	**77.27**	**334**	P	**P**	**04 58 33.7**	**+1.4**	
	baz=97,SNR=6.2							
N14K	**Kuskokwak Cree**	**77.29**	**330**	P	**P**	**04 58 33.2**	**+0.7**	
	baz=95,SNR=6.2							
EKA	**Eskdalemuir Ar**	**77.36**	**35**	P	**P**	**04 58 31.1**	**-1.9**	
	comp=Z,2.0nm,0.8s,baz=284,slow=3.6,SNR=3.6							
EKA				LR	LR	05 26 55.6		
	comp=Z,133nm,21.0s,baz=197,slow=31							
	comp=Z,2.0nm,0.8s							
L15K	**Ungalak Mounta**	**77.37**	**331**	P	**P**	**04 58 34.1**	**+1.2**	
	baz=96,SNR=12							
G17K	**Kiwalik Mounta**	**77.46**	**335**	P	**P**	**04 58 34.3**	**+0.9**	
	baz=98,SNR=16							
K15K	**Wolf Creek Mou**	**77.46**	**332**	IAmb	IAmb	04 58 36.0		
	comp=Z,22nm,1.0s							
K15K	**Wolf Creek Mou**	**77.46**	**332**	P	**P**	**04 58 34.8**	**+1.4**	
	baz=96,SNR=9.2							
M14K	**Bethel**	**77.50**	**330**	P	**P**	**04 58 35.0**	**+1.3**	
	baz=95,SNR=13							
C19K	**Lookout Ridge**	**77.59**	**339**	P	**P**	**04 58 35.4**	**+1.3**	
	baz=99							
E18K	**Tukpahlearik C**	**77.70**	**337**	IAmb	IAmb	04 58 36.2		
	comp=Z,19nm,1.1s							
E18K	**Tukpahlearik C**	**77.70**	**337**	P	**P**	**04 58 35.1**	**+0.4**	
	baz=98							
F17K	**Baldwin Pennin**	**77.82**	**336**	P	**P**	**04 58 36.1**	**+0.7**	
	baz=97							
FALS	**False Pass**	**77.86**	**324**	P	**P**	**04 58 36.4**	**+0.6**	
	baz=93							
L14K	**Kuka Creek**	**77.91**	**331**	P	**P**	**04 58 36.5**	**+0.6**	
	baz=95,SNR=5.2							
H16K	**Elim**	**78.02**	**334**	P	**P**	**04 58 37.7**	**+1.2**	
	baz=96,SNR=22							
C18K	**Utukok River**	**78.09**	**338**	IAmb	IAmb	04 58 38.6		
	comp=Z,35nm,1.1s							
C18K	**Utukok River**	**78.09**	**338**	P	**P**	**04 58 37.3**	**+0.4**	
	baz=98							
E17K	**Hotham Inlet**	**78.13**	**337**	P	**P**	**04 58 37.7**	**+0.6**	
	baz=97,SNR=29							
G16K	**Koyuk River**	**78.15**	**335**	IAmb	IAmb	04 58 39.6		
	comp=Z,28nm,1.2s							
G16K	**Koyuk River**	**78.15**	**335**	P	**P**	**04 58 38.3**	**+1.1**	
	baz=96,SNR=10							
M13K	**Dall Lake**	**78.16**	**330**	P	**P**	**04 58 38.5**	**+1.2**	
	baz=94,SNR=8.3							
A19K	**Wainwright**	**78.27**	**340**	P	**P**	**04 58 38.8**	**+1.1**	
	baz=98							
J14K	**Nanvaranak Lak**	**78.43**	**332**	P	**P**	**04 58 40.3**	**+1.5**	
	baz=94,SNR=20							
RDOG	**Red Dog Mine**	**78.65**	**338**	IAmb	IAmb	04 58 41.6		
	comp=Z,22nm,0.9s							
RDOG	**Red Dog Mine**	**78.65**	**338**	P	**P**	**04 58 40.6**	**+0.6**	
	baz=96							
D17K	**Noatak River**	**78.68**	**337**	P	**P**	**04 58 40.8**	**+0.7**	
	baz=96,SNR=17							
C17K	**DeLong Mountai**	**78.80**	**338**	P	**P**	**04 58 41.3**	**+0.5**	
	baz=96							
G15K	**Niukluk**	**78.82**	**335**	P	**P**	**04 58 42.2**	**+1.2**	
	baz=94,SNR=20							
K13K	**Kusilvak Mount**	**78.89**	**332**	IAmb	IAmb	04 58 43.6		
	comp=Z,24nm,1.1s							
K13K	**Kusilvak Mount**	**78.89**	**332**	P	**P**	**04 58 42.2**	**+0.8**	
	baz=93,SNR=7.2							
F15K	**North Star Dit**	**79.13**	**335**	P	**P**	**04 58 44.2**	**+1.6**	
	baz=94,SNR=21							
ANM	**Nome**	**79.36**	**334**	P	**P**	**04 58 44.9**	**+1.0**	
	baz=93,SNR=13							
C16K	**Lisburne Hills**	**79.58**	**338**	P	**P**	**04 58 45.8**	**+0.8**	
	baz=94,SNR=20							
UNV	**Unalaska Valle**	**79.64**	**323**	P	**P**	**04 58 46.5**	**+1.0**	
	baz=90							
F14K	**Arctic Creek**	**79.81**	**335**	P	**P**	**04 58 47.7**	**+1.4**	
	baz=92							
TNA	**Tin City**	**80.48**	**335**	P	**P**	**04 58 51.2**	**+1.3**	
	baz=91							
RAR	**Rarotonga**	**80.96**	**247**	LR	LR	05 27 01.7		
	comp=Z,132nm,20.2s,baz=82,slow=30							
GAMB	**Gambell**	**82.13**	**333**	P	**P**	**04 58 59.8**	**+1.1**	
	baz=87							
BMRD	**Maredsous**	**82.16**	**40**	*d*P	**P**	**04 59 01.0**	**+1.9**	
BMRD				*d*PP	**PP**	**05 02 09.5**	**+2.1**	
TORD	**Torodi Ar. Bea**	**82.86**	**78**	P	**P**	**04 59 03.3**	**-0.2**	
	comp=Z,9.8nm,0.9s,baz=255,slow=5.4,SNR=46							
	comp=Z,9.8nm,0.9s							
TORD	**Torodi Ar. Bea**	**82.86**	**78**	IAmb	IAmb	04 59 04.7		
	comp=Z,18nm,0.8s							
SPITS	**Spitsbergen Ar**	**83.83**	**12**	LR	LR	05 37 29.3		
	comp=Z,266nm,20.2s,baz=246,slow=36							
NOA	**NORSAR Array B**	**84.77**	**29**	P	**P**	**04 59 11.7**	**-0.7**	
	comp=Z,1.6nm,0.8s,baz=280,slow=4.7,SNR=3.9							
NOA				LR	LR	05 34 44.6		
	comp=Z,103nm,19.4s,baz=280,slow=34							
	comp=Z,1.6nm,0.8s							
TAM	**Tamanrasset**	**85.33**	**68**	P	**P**	**04 59 17.1**	**+1.0**	
TAM				IAmb	IAmb	04 59 18.2		
	comp=Z,22nm,1.1s							
TAM	**Tamanrasset**	**85.33**	**68**	P	**P**	**04 59 17.1**	**+1.0**	
TAM				pmax	pmax			
	comp=Z,22nm,1.1s							
DAVOX	**Davos/Dischmat**	**85.88**	**43**	LR	LR	05 33 11.0		
	comp=Z,140nm,18.9s,baz=259,slow=32							
HFS	**Hagfors**	**86.12**	**30**	LR	LR	05 35 55.8		
	comp=Z,180nm,19.9s,baz=282,slow=34							
VSL	**Villasalto**	**86.49**	**51**	P	**P**	**04 59 21.3**	**-0.1**	
VSL				IAmb	IAmb	04 59 47.2		
	comp=Z,13nm,1.1s							
KEST	**Kesra**	**86.98**	**55**	LR	LR	05 33 29.3		
	comp=Z,56nm,21.0s,baz=292,slow=32							
GERES	**GERESS Array B**	**88.10**	**41**	LR	LR	05 33 31.6		
	comp=Z,262nm,20.2s,baz=261,slow=32							
ARCES	**ARCESS Array B**	**88.59**	**20**	LR	LR	05 37 59.4		
	comp=Z,102nm,18.9s,baz=282,slow=35							
VRAC	**Vranov**	**89.87**	**40**	LR	LR	05 35 30.1		
	comp=Z,356nm,19.1s,baz=294,slow=33							
BILL	**Bilibino**	**90.01**	**339**	P	**P**	**04 59 38.0**	**+0.5**	
BILL	**Bilibino**	**90.01**	**339**	*e*P	**P**	**04 59 38.1**	**+0.5**	
BILL				pmax	pmax			
	comp=Z,29nm,1.0s							
MODS	**Modra-Piesok**	**90.52**	**41**	*e*P	**P**	**04 59 42.7**	**+2.4**	
MODS	**Modra-Piesok**	**90.52**	**41**	*e*P	**P**	**04 59 42.7**	**+2.4**	
VAE	**Valguarnera**	**90.72**	**52**	LR	LR	05 33 50.0		
	comp=Z,165nm,21.5s,baz=286,slow=31							
FINES	**FINESS Array B**	**91.64**	**27**	LR	LR	05 35 51.7		
	comp=Z,113nm,21.8s,baz=247,slow=32							
APA	**Apatity**	**92.05**	**20**	*e*P	**P**	**04 59 48.6**	**+1.6**	
APA				pmax	pmax			
	comp=Z,8.0nm,1.0s							
EDA	**Edea**	**92.41**	**86**	P	**P**	**04 59 50.4**	**+0.6**	
EDA				IAmb	IAmb	04 59 51.8		
	comp=Z,14nm,1.3s							
VNA3	**Neumayer Olymp**	**92.45**	**162**	P	**P**	**04 59 48.1**	**-0.6**	
VNA3	**Neumayer Olymp**	**92.45**	**162**	⇑P	**P**	**04 59 48.1**	**-0.6**	
	comp=Z,11nm,0.8s							
VNA2	**Neumayer--Watz**	**93.06**	**161**	P	**P**	**04 59 49.6**	**-1.9**	
	baz=297,slow=4.5							
VNA2	**Neumayer--Watz**	**93.06**	**161**	⇑P	**P**	**04 59 49.6**	**-1.9**	
	comp=Z,4.2nm,0.7s,baz=297,slow=4.5							
SNAA	**Sanae**	**94.67**	**162**	P	**P**	**04 59 58.4**	**-0.5**	
	comp=Z,3.5nm,0.7s,baz=248,slow=5.4,SNR=4.0							
	comp=Z,3.5nm,0.7s							
SNAA	**Sanae**	**94.67**	**162**	IAmb	IAmb	05 02 31.0		
	comp=Z,16nm,1.4s							
TROLL	**Troll, Antarti**	**96.38**	**162**	P	**P**	**05 00 07.2**	**+0.3**	
TROLL	**Troll, Antarti**	**96.38**	**162**	⇑P	**P**	**05 00 07.2**	**+0.3**	
MLR	**Muntele Rosu**	**97.02**	**42**	LR	LR	05 41 36.4		
	comp=Z,175nm,19.1s,baz=293,slow=34							
AKASG	**Malin Array Be**	**97.23**	**36**	LR	LR	05 40 34.7		
	comp=Z,174nm,20.0s,baz=262,slow=33							
TIXI	**Tiksi**	**97.52**	**350**	P	**P**	**05 00 11.2**	**-0.7**	
	comp=Z,7.2nm,0.9s,baz=52,slow=5.9,SNR=16							
TIXI				LR	LR	05 48 35.2		
	comp=Z,124nm,18.9s,baz=13,slow=38							
	comp=Z,7.2nm,0.9s							
TIXI	**Tiksi**	**97.52**	**350**	P	**P**	**05 00 10.9**	**-1.0**	
TIXI				IAmb	IAmb	05 00 12.0		
	comp=Z,8.0nm,0.9s							
TIXI	**Tiksi**	**97.52**	**350**	P	**P**	**05 00 10.9**	**-1.0**	
TIXI				pmax	pmax			
	comp=Z,8.0nm,0.9s							
SEY	**Seymchan**	**97.53**	**338**	P	**P**	**05 00 11.4**	**-0.7**	
	comp=Z,1.3nm,0.6s,baz=92,slow=4.8,SNR=6.0							
	comp=Z,1.3nm,0.6s							
QSPA	**South Pole Qui**	**98.28**	**180**	P	Pdif	05 00 15.6	+0.1	
	comp=Z,3.2nm,1.0s,baz=136,slow=1.9,SNR=7.0							
	comp=Z,3.2nm,1.0s							
QSPA	**South Pole Qui**	**98.28**	**180**	IAmb	IAmb	05 00 24.9		
	comp=Z,19nm,1.6s							
OBN	**Obninsk**	**99.32**	**30**	*e*P	**Pdif**	**05 00 21.6**	**+1.3**	
OBN				*e*		05 04 23.8		
OBN				*e*PPP	PPP	05 06 31.6		
OBN				pmax	pmax			
	comp=Z,5.0nm,0.9s							
OBN				MLR	MLR			
	comp=Z,168nm,17.0s							
H11S1	**WAKE ISLAND Hyl**	**06.46**	**292**	T	T	06 59 36.4		
	baz=73,slow=74,SNR=3.4							
H11S2	**WAKE ISLAND Hyl**	**06.46**	**292**	T	T	06 59 34.3		
	baz=73,slow=74,SNR=3.6							
H11S3	**WAKE ISLAND Hyl**	**06.47**	**292**	T	T	06 59 40.9		
	baz=73							
ZALV	**Zalesovo Beam**	**117.13**	**8**	PKP	**PKPdf**	**05 05 22.2**	**-1.1**	
	comp=Z,8.5nm,1.3s,baz=304,slow=1.1,SNR=8.6							
ZALV	**Zalesovo Beam**	**117.13**	**8**	PKP	**PKPdf**	**05 05 22.1**	**-1.2**	
KURK	**Kurchatov**	**119.08**	**13**	*c i* PKIKP	**PKiKP**	**05 05 27.2**	**0.0**	
KURK				pmax	pmax			
	comp=Z,7.0nm,2.5s							
KURBB	**Kurchatov Arra**	**119.14**	**13**	PKP	**PKPdf**	**05 05 26.8**	**-0.5**	
	comp=Z,2.9nm,0.9s,baz=335,slow=2.2,SNR=18							
MJAR	**Matsushiro Arr**	**121.09**	**322**	PKP	**PKPdf**	**05 05 31.0**	**-0.5**	
	comp=Z,3.5nm,0.9s,baz=211,slow=1.5,SNR=5.4							
MJAR	**Matsushiro Arr**	**121.09**	**322**	PKIKP	**PKPdf**	**05 05 31.0**	**-0.5**	
ULN	**Ulaanbaatar**	**123.41**	**352**	*c i* PKIKP	**PKiKP**	**05 05 36.0**	**0.0**	
ULN				pmax	pmax			
	comp=Z,7.0nm,1.7s							
SONM	**Songino Array**	**123.53**	**353**	PKP	**PKPdf**	**05 05 35.0**	**-1.0**	
	comp=Z,5.1nm,1.0s,baz=325,slow=1.4,SNR=25							
SONM				PP	**PP**	**05 07 15.9**	**-0.5**	
	comp=Z,3.7nm,1.2s,baz=355,slow=5.8,SNR=7.2							
MK31	**Makanchi Array**	**123.58**	**12**	*c i* PKIKP	**PKPdf**	**05 05 35.2**	**-0.8**	
MKAR	**Makanchi Array**	**123.58**	**12**	PKP	**PKPdf**	**05 05 34.9**	**-1.1**	
	comp=Z,2.3nm,0.8s,baz=5.0,slow=2.3,SNR=17							
EKS2	**Erkin-Say**	**124.98**	**21**	P	**PKiKP**	**05 05 39.7**	**+0.4**	
	SNR=5.6							
AAK	**Ala-Archa**	**125.26**	**20**	P	**PKiKP**	**05 05 40.0**	**+0.1**	
	SNR=5.2							
AAK	**Ala-Archa**	**125.26**	**20**	*c i* PKIKP	**PKiKP**	**05 05 40.3**	**+0.5**	
AAK				pmax	pmax			
	comp=Z,6.0nm,1.3s							
XLT	**XiLinHaoTe**	**125.30**	**343**	*e*PKP	**PKPdf**	**05 05 38.0**	**-1.4**	
TKM2	**Tokmak 2**	**125.38**	**19**	P	**PKiKP**	**05 05 40.0**	**-0.2**	
	SNR=5.2							
UCH	**Uchtor**	**125.62**	**21**	P	**PKiKP**	**05 05 41.1**	**+0.1**	
	SNR=8.8							
KSRS	**Korea Array**	**126.17**	**330**	PKP	**PKiKP**	**05 05 41.4**	**-0.2**	
	comp=Z,11nm,0.8s,baz=25,slow=0.9,SNR=23							
ULHL	**Ulahol**	**126.19**	**19**	P	**PKiKP**	**05 05 42.1**	**+0.4**	
	SNR=9.5							
WMQ	**Urumqi**	**127.43**	**9**	*e*PKP	**PKPdf**	**05 05 40.1**	**-3.4**	
WMQ				L	L			
	comp=Z,260nm,24.2s							
KSH2	**Kashi**	**128.72**	**22**	PKP	**PKPdf**	**05 05 46.1**	**-0.1**	
BJI2	**Beijing**	**128.82**	**341**	PKP	**PKPdf**	**05 05 45.6**	**-0.5**	
HHC	**Hu-ho-hao-te**	**129.34**	**346**	*e*PKP	**PKPdf**	**05 05 47.4**	**+0.1**	
BTO2	**Baotou**	**129.83**	**347**	*e*PKP	**PKPdf**	**05 05 43.6**	**-4.6**	
HNS	**HongShan**	**131.68**	**341**	⇑PKP	**PKiKP**	**05 05 52.6**	**0.0**	
GTA2	**Gaotai**	**132.41**	**357**	PKP	**PKPdf**	**05 05 52.8**	**-0.3**	
GTA2				sPKP	sPKPdf	05 06 01.9	-3.9	
GTA2				L	L			
	comp=Z,250nm,16.5s							
GTA2				L	L			
	comp=Z,210nm,16.8s							
GTA2				L	L			
	comp=Z,230nm,17.5s							
NJ2	**Nanjing**	**134.86**	**334**	*e*PKP	**PKPdf**	**05 05 57.8**	**+0.1**	
LZH	**Lanzhou**	**135.42**	**352**	*e*PKP	**PKPdf**	**05 05 56.3**	**-2.6**	
GOMU	**GeErMu**	**135.70**	**3**	PKP	**PKPdf**	**05 05 59.1**	**-0.6**	
XAN	**Xian**	**136.46**	**346**	⇓PKP	**PKPdf**	**05 06 00.8**	**0.0**	
ODC	**Chengdu**	**140.52**	**351**	PKP	**PKPdf**	**05 06 08.0**	**-0.3**	
ASAR	**Alice Springs**	**141.66**	**242**	PKhKP	PKPpre	05 06 04.6		
	comp=Z,3.3nm,0.6s,baz=116,slow=3.6,SNR=38							
ASAR				PKP	**PKPdf**	**05 06 10.6**	**+0.1**	
	comp=Z,5.1nm,0.8s,baz=96,slow=3.0,SNR=15							
WRA	**Warramunga Arr**	**142.23**	**248**	PKhKP	PKPpre	05 06 06.8		
	comp=Z,8.9nm,0.8s,baz=100,slow=2.6,SNR=49							
GYA	**Guiyang**	**144.25**	**345**	PKP	**PKPab**	**05 06 13.1**	**+0.2**	
PZH	**PanZhiHua**	**145.14**	**353**	PKPbc	**PKPdf**	**05 06 16.8**	**+0.1**	
MTN	**Manton Dam**	**146.33**	**259**		**PKPbc**	**05 06 19.6**	**-0.4**	
KMI2	**Kunming**	**146.33**	**351**	PKPbc	**PKPbc**	**05 06 19.8**	**-0.2**	
HYB	**Hyderabad**	**148.52**	**36**	*e*P	**PKPbc**	**05 06 25.4**	**-0.6**	
CMAR	**Chiang Mai Arr**	**153.37**	**356**	PKP	**PKPdf**	**05 06 30.4**	**+0.5**	
	comp=Z,6.2nm,0.8s,baz=304,slow=2.1,SNR=37							
CMAR				PKPbc	**PKPbc**	**05 06 36.5**	**-0.9**	
	comp=Z,11nm,0.9s,baz=2.4,slow=2.1,SNR=6.5							
CMAR				PP	**PP**	**05 10 23.6**	**+2.4**	
	comp=Z,0.5nm,0.3s,baz=353,slow=5.8,SNR=4.5							
CMAR	**Chiang Mai Arr**	**153.37**	**356**		**PKPdf**	**05 06 29.3**	**-0.5**	

IDC ***13*** *04:47:06.6±21.0, 37.78N×71.41E, h248km±147km, mb3.4/3, mbtmp3.9/5, Error ellipse: s-maj=262.2km s-min=82.9km az=166.0*

**ISC 13 04:46:50.6±2.4, 36.9N±0.2×71.6E±0.2, h150km, n7, σ0°91/8, mb4

WEL				S	Sn	05 00 49.0	-1.8
CAW	**Cannon Point**	**1.48**	**126**	P	Pn	05 00 27.7	+1.9
CAW				S	Sn	05 00 50.5	-1.2
VRZ	**Vera Road**	**1.49**	**42**	P	Pn	05 00 26.7	+0.7
VRZ				S	Sn	05 00 50.1	-1.7
BHW	**Baring Head**	**1.57**	**138**	P	Pn	05 00 28.3	+1.7
BHW				S	Sn	05 00 51.1	-2.0
THZ	**Tophouse**	**1.57**	**196**	P	Pn	05 00 28.6	+1.8
CMWZ	**Cape Campbell**	**1.60**	**160**	P	Pn	05 00 29.7	+2.8
MRZ	**Mangatainoka R**	**1.65**	**105**	P	Pn	05 00 29.0	+1.6
HOWZ	**Holdsworth Sta**	**1.68**	**113**	P	Pn	05 00 29.4	+1.7
PKVZ	**Pokaka**	**1.73**	**57**	P	Pn	05 00 29.4	+1.1
POWZ	**Post Office Ro**	**1.75**	**95**	P	Pn	05 00 29.9	+1.5
MTVZ	**Mangateitei**	**1.76**	**61**	P	Pn	05 00 29.6	+1.1
MSWZ	**Moikau Station**	**1.78**	**132**	P	Pn	05 00 30.4	+1.8
MTW	**Mount Morrison**	**1.79**	**121**	P	Pn	05 00 30.5	+1.8
TRVZ	**Turoa**	**1.85**	**60**	P	Pn	05 00 30.7	+1.0
PAWZ	**Paruwai Farm**	**1.86**	**128**	P	Pn	05 00 31.2	+1.7
WNVZ	**Wahianoa**	**1.87**	**61**	P	Pn	05 00 30.8	+1.0
MAVZ	**Matarangi**	**1.88**	**59**	P	Pn	05 00 31.2	+1.2
FWVZ	**Far West T-bar**	**1.88**	**59**	P	Pn	05 00 30.8	+0.9
PLWZ	**Palliser**	**1.88**	**135**	P	Pn	05 00 31.4	+1.7
WHVZ	**Whangaehu Hut**	**1.89**	**60**	P	Pn	05 00 31.2	+1.2
COVZ	**Chateau Observ**	**1.90**	**57**	P	Pn	05 00 31.1	+1.0
TIWZ	**Tintock**	**1.91**	**107**	P	Pn	05 00 31.8	+1.8
TSZ	**Takapari Road**	**1.91**	**85**	P	Pn	05 00 31.4	+1.4
TWVZ	**Taurewa**	**1.91**	**53**	P	Pn	05 00 30.9	+0.7
PRWZ	**Pori Road**	**1.93**	**100**	P	Pn	05 00 32.0	+1.9
TUVZ	**Tukino**	**1.94**	**60**	P	Pn	05 00 31.7	+1.2
MOVZ	**Moawhango**	**1.94**	**65**	P	Pn	05 00 31.1	+0.7
NGZ	**Ngauruhoe**	**1.96**	**57**	P	Pn	05 00 31.5	+0.9
DSZ	**Dennistone Nort**	**1.97**	**220**	P	Pn	05 00 32.4	+1.9
SNVZ	**South Ngauruho**	**1.97**	**58**	P	Pn	05 00 31.8	+1.0
WTVZ	**West Tongariro**	**1.98**	**56**	P	Pn	05 00 31.9	+1.0
OTVZ	**Oturere**	**2.00**	**58**	P	Pn	05 00 32.2	+1.0
TMWZ	**Te Maipa**	**2.02**	**116**	P	Pn	05 00 33.0	+1.8
KRVZ	**Karewarewa**	**2.03**	**56**	P	Pn	05 00 32.2	+0.9
TRWZ	**Traveller**	**2.03**	**125**	P	Pn	05 00 33.1	+1.9
HIZ	**Hauiti**	**2.03**	**32**	P	Pn	05 00 31.9	+0.6
HIZ	**Hauiti**	**2.03**	**32**	P	Sn	05 01 00.1	-1.2
HIZ	**Hauiti**	**2.03**	**32**	P	Pn	05 00 32.1	+0.8
NTVZ	**North Tongarir**	**2.05**	**57**	P	Pn	05 00 32.5	+0.9
ETVZ	**East Tongariro**	**2.05**	**58**	P	Pn	05 00 32.6	+1.1
DVHZ	**Dannevirke**	**2.06**	**92**	P	Pn	05 00 32.8	+1.4
TMVZ	**Te Maari**	**2.06**	**57**	P	Pn	05 00 32.7	+1.0
PNHZ	**Pukenui**	**2.11**	**82**	P	Pn	05 00 33.5	+1.4
KATZ	**Kakaramea**	**2.13**	**54**	P	Pn	05 00 33.5	+1.0
BFZ	**Birch Farm**	**2.15**	**103**	P	Pn	05 00 33.9	+1.4
BFZ	**Birch Farm**	**2.15**	**103**	P	Sn	05 01 01.5	-2.0
BFZ	**Birch Farm**	**2.15**	**103**	P	Pn	05 00 34.2	+1.7
KHZ	**Kahutara**	**2.17**	**179**	P	Pn	05 00 34.4	+1.8
KHZ	**Kahutara**	**2.17**	**179**	P	Sn	05 01 02.7	-1.2
KHZ	**Kahutara**	**2.17**	**179**	P	Pn	05 00 34.7	+2.1
CPWZ	**Castlepoint**	**2.17**	**109**	P	Pn	05 00 35.0	+2.4
RITZ	**Rihia Road**	**2.23**	**56**	P	Pn	05 00 34.8	+1.3
RATZ	**Rangitukua**	**2.25**	**53**	P	Pn	05 00 35.0	+1.5
WPHZ	**Waipukurau**	**2.28**	**86**	P	Pn	05 00 35.4	+1.5
ANWZ	**Angora Road**	**2.30**	**96**	P	Pn	05 00 35.9	+1.9
KRHZ	**Kereru**	**2.30**	**76**	P	Pn	05 00 35.3	+1.1
WATZ	**Wairara**	**2.32**	**49**	P	Pn	05 00 35.6	+1.2
KWHZ	**Kaweka Forest**	**2.41**	**71**	P	Pn	05 00 36.5	+1.1
PRHZ	**Porangahau**	**2.41**	**91**	P	Pn	05 00 37.0	+1.7
WHTZ	**Whakaora**	**2.48**	**51**	P	Pn	05 00 37.9	+1.7
TLZ	**Tolley Road**	**2.49**	**40**	P	Pn	05 00 36.9	+0.6
KUTZ	**Kaahu Road**	**2.53**	**47**	P	Pn	05 00 38.0	+1.3
BKZ	**Black Stump Fm**	**2.56**	**66**	P	Pn	05 00 37.5	+0.4
BKZ	**Black Stump Fm**	**2.56**	**66**	P	Pn	05 00 37.7	+0.7
PXZ	**Pawanui**	**2.60**	**86**	P	Pn	05 00 38.8	+1.4
MCHZ	**McNeill Hill**	**2.60**	**73**	P	Pn	05 00 39.0	+1.5
KAHZ	**Kahuranaki**	**2.65**	**81**	P	Pn	05 00 39.5	+1.5
MRHZ	**Matea Rd**	**2.67**	**59**	P	Pn	05 00 38.7	+0.3
LTZ	**Lake Taylor**	**2.69**	**199**	P	Pn	05 00 40.2	+1.8
WPRZ	**Whakapapatarin**	**2.70**	**51**	P	Pn	05 00 39.4	+0.8
GVZ	**Greta Valley S**	**2.74**	**187**	P	Pn	05 00 40.8	+1.8
ALRZ	**Allen Road**	**2.78**	**54**	P	Pn	05 00 40.0	+0.4
NMHZ	**Naumai**	**2.81**	**67**	P	Pn	05 00 41.6	+1.6
CKHZ	**Cape Kidnapper**	**2.83**	**79**	P	Pn	05 00 41.6	+1.6
PRRZ	**Plateau Road**	**2.85**	**53**	P	Pn	05 00 41.3	+0.9
HRRZ	**Handcock Road**	**2.86**	**50**	P	Pn	05 00 41.4	+0.9
ARHZ	**Aropaoanui**	**2.88**	**71**	P	Pn	05 00 41.9	+1.2
INZ	**Inchbonnie**	**2.91**	**211**	P	Pn	05 00 42.5	+1.5
MTHZ	**Maungataniwha**	**2.95**	**63**	P	Pn	05 00 42.1	+0.5
TOZ	**Tahuroa Road**	**2.97**	**33**	P	Pn	05 00 42.3	+0.6
AMCZ	**Amberley**	**2.99**	**192**	P	Pn	05 00 43.8	+1.9
NGZ	**Ngongotaha**	**3.00**	**43**	P	Pn	05 00 43.5	+1.3
RRRZ	**Republican Roa**	**3.03**	**52**	P	Pn	05 00 43.3	+0.8
RAHZ	**Arahi**	**3.09**	**66**	P	Pn	05 00 44.1	+1.0
TARZ	**Mount Tarawera**	**3.09**	**50**	P	Pn	05 00 44.1	+0.8
OMRZ	**Omania**	**3.10**	**47**	P	Pn	05 00 44.1	+0.7
MUGZ	**Murupara**	**3.10**	**56**	P	Pn	05 00 43.4	+0.1
WHHZ	**Waihua**	**3.12**	**69**	P	Pn	05 00 44.7	+1.1
RTZ	**Ruatahuna**	**3.16**	**60**	P	Pn	05 00 44.3	+0.1
OXZ	**Oxford**	**3.26**	**199**	P	Pn	05 00 46.2	+1.1
AWAZ	**Awhitu Peninsu**	**3.31**	**16**	P	Pn	05 00 47.8	+2.0
MKAZ	**Moumakai**	**3.40**	**23**	P	Pn	05 00 48.8	+1.8
WTAZ	**Waiatarua**	**3.42**	**15**	P	Pn	05 00 49.5	+2.3
URZ	**Urewera**	**3.45**	**56**	P	Pn	05 00 47.1	-0.4
URZ	**Urewera**	**3.45**	**56**	P	Pn	05 00 47.1	-0.4
KNZ	**Kokohu**	**3.46**	**71**	P	Pn	05 00 48.3	+0.7
OKCZ	**Okains Bay**	**3.49**	**185**	P	Pn	05 00 49.1	+1.2
MQZ	**McQueen's Vall**	**3.51**	**190**	P	Pn	05 00 48.8	+0.7
RAGZ	**Rawiri**	**3.52**	**61**	P	Pn	05 00 49.0	+0.6
RVAZ	**Riverhead Bore**	**3.58**	**151**	P	Pn	05 00 51.2	+2.1
MHCZ	**Mount Hutt**	**3.58**	**203**	P	Pn	05 00 50.1	+1.0
MHGZ	**Mahia Peninsul**	**3.58**	**74**	P	Pn	05 00 50.3	+1.1
RACZ	**Rakaia**	**3.62**	**196**	P	Pn	05 00 50.8	+1.3
AKCZ	**Akaroa Harbour**	**3.65**	**187**	P	Pn	05 00 51.0	+1.1
MBAZ	**Motutapu North**	**3.65**	**18**	P	Pn	05 00 52.0	+2.1
PRGZ	**Paritu Road**	**3.65**	**70**	P	Pn	05 00 50.7	+0.7
RIGZ	**Rimuhau**	**3.65**	**66**	P	Pn	05 00 50.5	+0.5
MWZ	**Matawai**	**3.68**	**60**	P	Pn	05 00 50.4	+0.1
WIAZ	**Waiheke Island**	**3.69**	**21**	P	Pn	05 00 52.6	+2.2
TKGZ	**Te Karaka**	**3.84**	**63**	P	Pn	05 00 52.9	+0.7
GCSZ	**Gaunt Creek Bo**	**3.87**	**217**	P	Pn	05 00 53.9	+1.3
WACZ	**Wakanui South**	**3.89**	**198**	P	Pn	05 00 54.3	+1.5
RPZ	**Rata Peaks**	**3.91**	**207**	P	Pn	05 00 54.4	+1.3
RPZ	**Rata Peaks**	**3.91**	**207**	P	Pn	05 00 54.2	+1.1
RUGZ	**Raukumara Rang**	**3.98**	**56**	P	Pn	05 00 53.3	-0.9
TWGZ	**Tauwhareparae**	**4.06**	**61**	P	Pn	05 00 55.5	+0.4
CNGZ	**Carnagh Static**	**4.07**	**66**	P	Pn	05 00 55.7	+1.2
ARCZ	**Arundel**	**4.08**	**204**	P	Pn	05 00 55.9	+0.8
HAZ	**Te Kaha**	**4.17**	**55**	P	Pn	05 00 55.5	-1.0
FOZ	**Fox Glacier**	**4.27**	**219**	P	Pn	05 00 58.5	+0.9
PKGZ	**Pakihiroa**	**4.30**	**58**	P	Pn	05 00 57.9	-0.2
PUZ	**Puketiti**	**4.30**	**61**	P	Pn	05 00 57.9	-0.2
WCZ	**Waipu Caves**	**4.36**	**9**	P	Pn	05 01 01.2	+2.4
TMZ	**Timaru**	**4.52**	**203**	P	Pn	05 01 02.0	+1.2
WMGZ	**Waiomatatini S**	**4.54**	**59**	P	Pn	05 01 00.8	-0.3
MXZ	**Matakaoa Point**	**4.62**	**56**	P	Pn	05 01 02.0	-0.1
MXZ	**Matakaoa Point**	**4.62**	**56**	P	Pn	05 01 02.1	0.0
LBZ	**Lake Benmore**	**4.80**	**209**	P	Pn	05 01 05.2	+0.8
OUZ	**Omahuta**	**5.02**	**1**	P	Pn	05 01 09.1	+1.9
JCZ	**Jackson Bay**	**5.17**	**221**	P	Pn	05 01 10.2	+1.0
JCZ	**Jackson Bay**	**5.17**	**221**	P	Pn	05 01 09.9	+0.7
ODZ	**Otahua Downs**	**5.23**	**203**	P	Pn	05 01 11.1	+1.3
ODZ	**Otahua Downs**	**5.23**	**203**	P	Pn	05 01 11.1	+1.3
WKZ	**Wanaka**	**5.64**	**214**	P	Pn	05 01 15.2	+0.1
EAZ	**Earnscleugh**	**5.85**	**210**	P	Pn	05 01 16.0	+1.2
MSZ	**Milford Sound**	**6.04**	**221**	P	Pn	05 01 21.4	+1.2
MLZ	**Mavora Lakes**	**6.46**	**216**	P	Pn	05 01 26.3	+0.6
WHZ	**Wether Hill Ro**	**6.94**	**214**	P	Pn	05 01 32.1	+0.1
APZ	**The Paps**	**7.69**	**209**	P	Pn	05 01 42.5	+0.7
CTZ	**Chatham Island**	**8.16**	**119**	P	Pn	05 01 47.9	+0.1
CTZ	**Chatham Island**	**8.16**	**119**	P	Pn	05 01 52.4	+4.6

*JSN **13** 05:05:40.9±0.7, 19°.05N×80°.75W, h30km±999km, MD4.2, Presumed earthquake*

*SSNC **13** 05:05:43.5±1.2, 19°.14N×80°.71W, h20km±10km, MD3.6, ML2.5, Presumed earthquake*

ISC 13 05:05:40.3±3.2, 19°.0N±0°.1×80°.8W±0°.2, h35km, n14, σ2s 43/19, 1C, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCCY	**Blossom Villag**	**0.94**	**45**	*i* P	**Pn**	**05 05 57.3**	**+0.3**
LCCY				*i* S	**Sn**	**05 06 06.4**	**-2.9**
CBCY	**The Bluff, Cay**	**1.22**	**53**	*i* P	**Pn**	**05 06 00.5**	**-0.4**
CBCY				*i* S	**Sn**	**05 06 12.5**	**-3.6**
				*e*Sg		05 06 15.6	
MGV	**Manicaragua**	**3.18**	**14**	*i* P	**Pn**	**05 06 28.6**	**+0.7**
MGV				IAML		05 07 06.7	
	comp=Z,9.5nm,0.5s						
MGV				IAML		05 07 06.7	
	comp=N,12nm,0.6s						
MTDJ	**Mount Denham**	**3.19**	**104**	*i* P	**Pn**	**05 06 27.9**	**-0.1**
MTDJ	**Mount Denham**	**3.19**	**104**	*i* P	**Pn**	**05 06 28.0**	**-0.1**
MTDJ				*i* S	**Sn**	**05 07 02.7**	**-2.2**
CCCC	**Cccc**	**3.59**	**52**	*i* P	Pn	05 06 40.0	+6.6
LMGC	**Las Mercedes**	**3.73**	**73**	*i* P	**Pn**	**05 06 37.2**	**+1.9**
LMGC				*i* S	**Sn**	**05 07 15.6**	**-2.4**
STH	**Stony Hill**	**3.89**	**103**	⇑*i* P	**Pn**	**05 06 38.0**	**+0.3**
CHIV	**Chivirico**	**4.24**	**76**	*i* P	**Pn**	**05 06 43.6**	**+1.1**
YAR	**Yar**	**4.39**	**71**	*i* P	**Pn**	**05 06 47.5**	**+3.0**
HLGC	**Holguin**	**4.83**	**66**	*i* P	**Pn**	**05 06 53.8**	**+3.2**
RCC	**Rio Carpintero**	**4.91**	**78**	*i* P	**Pn**	**05 06 52.3**	**+0.7**
RCC				*i* S	**Sn**	**05 07 45.0**	**-2.2**
PINC	**Pinares de May**	**4.94**	**72**	*i* P	**Pn**	**05 06 54.1**	**+2.1**
PINC				*i* S	**Sn**	**05 07 51.8**	**+3.9**
GTBY	**Guantanamo Bay**	**5.44**	**79**	*i* P	**Pn**	**05 07 02.5**	**+3.6**

*IDC **13** 05:07:26.4±9.1, 16°.55S×168°.03E, h158km±88km, mb3.9/3, mbtmp4.3/4, MS3.6/4, Error ellipse: s-maj=176.0km s-min=71.4km az=97.0*

*NEIC **13** 05:07:30.3±0.8, 17°.10S±0°.05×168°.5E±0°.1, h219km±10km, mb4.5/7, Error ellipse: s-maj=20.9km s-min=6.2km az=101.0*

*NOU **13** 05:07:31.0, 17°.24S×168°.42E, h214km, MLv3.5/10, Vanuatu Islands*

ISC 13 05:07:29.9±1.3, 17°.14S±0°.07×168°.5E±0°.2, h200km, n27, σ2s 54/24, mb4.5/8, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**0.64**	**204**	P	**Pn**	**05 08 01.0**	**+3.4**
DVP	**Devils Point**	**0.64**	**204**	S	**Sn**	**05 08 24.9**	**+5.7**
RTV	**Rentapao**	**0.65**	**183**	P	**Pn**	**05 08 01.4**	**+3.8**
SANVU	**Saraoutou**	**2.07**	**324**	P	**Pn**	**05 08 11.4**	**+2.2**
SANVU	**Saraoutou**	**2.07**	**324**	Pn	**Pn**	**05 08 10.8**	**+1.5**
MARNC	**Mare, Loyalty**	**4.34**	**185**	P	**Pn**	**05 08 36.4**	**+0.5**
MARNC	**Mare, Loyalty**	**4.34**	**185**	S	**Sn**	**05 09 26.5**	**-1.4**
MARNC	**Mare, Loyalty**	**4.34**	**185**		**Pn**	**05 08 36.3**	**+0.5**
YATNC	**Mamie plateau,**	**5.11**	**197**	P	**Pn**	**05 08 47.9**	**+2.2**
DZM	**Mont Dzumac**	**5.26**	**201**	P	**Pn**	**05 08 49.3**	**+1.6**
	5.5nm,0.4s,baz=164,slow=20,SNR=33						
DZM				S	**Sn**	**05 09 54.4**	**+5.1**
	8.7nm,0.8s,baz=166,slow=23,SNR=2.4						
OUENC	**Ouen Island, N**	**5.47**	**196**	Pn	**Pn**	**05 08 52.4**	**+2.1**
ONTNC	**Ouen Toro**	**5.48**	**200**	Pn	**Pn**	**05 08 51.8**	**+1.4**
AFI	**Afiamalu**	**19.31**	**83**	LR	LR	05 17 35.0	
	comp=Z,48nm,18.9s,baz=28,slow=31						
CTAO	**Charters Tower**	**21.25**	**259**	P	**P**	**05 12 00.3**	**-0.3**
BKZ	**Black Stump Fm**	**23.04**	**164**	P	**P**	**05 12 16.9**	**-0.6**
BKZ				IAmb	IAmb	05 12 36.3	
	comp=Z,26nm,1.5s						
MRZ	**Mangatainoka R**	**24.23**	**167**	P	**P**	**05 12 26.8**	**-1.5**
MRZ				IAmb	IAmb	05 12 54.1	
	comp=Z,13nm,1.2s						
STKA	**Stephens Creek**	**28.41**	**234**	P	**P**	**05 13 05.6**	**-0.3**
	comp=Z,2.0nm,0.4s,baz=63,slow=10,SNR=3.5						
	comp=Z,2.0nm,0.4s						
WRA	**Warramunga Arr**	**32.44**	**260**	P	**P**	**05 13 39.1**	**-2.4**
	comp=Z,0.4nm,0.3s,baz=88,slow=8.9,SNR=7.0						
	comp=Z,0.4nm,0.3s						
WRA	**Warramunga Arr**	**32.44**	**260**	P	**P**	**05 13 39.4**	**-2.1**
AS31	**Alice Springs**	**32.98**	**253**	P	**P**	**05 13 44.6**	**-1.6**
AS31				IAmb	IAmb	05 13 45.5	
	comp=Z,7.1nm,0.4s						
ASAR	**Alice Springs**	**32.98**	**253**	P	**P**	**05 13 45.0**	**-1.2**
	comp=Z,8.4nm,0.4s,baz=79,slow=9.1,SNR=128						
	comp=Z,8.4nm,0.4s						
ASAR	**Alice Springs**	**32.98**	**253**	P	**P**	**05 13 44.4**	**-1.7**
KNRA	**Kununurra**	**38.07**	**266**	P	**P**	**05 14 27.6**	**-2.0**
KNRA				IAmb	IAmb	05 15 07.0	
	comp=Z,23nm,1.2s						
SIJI	**Sorong**	**40.01**	**290**	LR	LR	05 31 41.5	
	comp=Z,70nm,21.9s,baz=143,slow=37						
QSPA	**South Pole Qui**	**72.90**	**180**	P	**P**	**05 18 35.4**	**-1.6**
QSPA				IAmb	IAmb	05 18 53.5	
	comp=Z,7.7nm,1.4s						
MAW	**Mawson**	**80.09**	**202**	LR	LR	05 49 56.8	
	comp=Z,36nm,20.9s,baz=230,slow=32						
TLY	**Talaya**	**88.62**	**326**	LR	LR	05 57 34.9	
	comp=Z,94nm,21.8s,baz=358,slow=34						

*ASRS **13** 05:25:45.0±0.9, 54°.60N×86°.63E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 13 05:25:46.7±3.7, 54°.59N×86°.67E, h0km, mbtmp2.6/2, ML2.2/2, Error ellipse: s-maj=31.7km s-min=17.4km az=51.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.26**	**240**	I	I	05 32 36.3	
	baz=58,slow=338,SNR=1.8						
ZALV	**Zalesovo Beam**	**1.26**	**240**	Pg	Pg	05 26 09.7	-1.2
	0.4nm,0.3s,baz=54,slow=17,SNR=7.7						
ZALV				Lg	Lg	05 26 27.4	
	0.6nm,0.3s,baz=58,slow=29,SNR=6.1						
KURBB	**Kurchatov Arra**	**6.35**	**235**	Pn	Pn	05 27 23.4	+1.9
	baz=54,slow=14,SNR=4.4						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**8.29**	**201**	Pn	Pn	05 27 48.1	0.0
	baz=24,slow=12,SNR=1.5						
	0.1nm,0.4s						

IDC 13 05:39:46.4±1.7, 2°.75N×127°.02E, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=119.8km s-min=20.2km az=70.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.76**	**184**	P	P	05 44 30.1	+1.1
	2.9nm,0.9s,baz=4.8,slow=12,SNR=2.4						
	2.9nm,0.9s						
WRA	**Warramunga Arr**	**23.67**	**163**	P	P	05 44 59.8	0.0
	2.7nm,0.6s,baz=340,slow=10,SNR=19						
	2.7nm,0.6s						
ASAR	**Alice Springs**	**27.10**	**166**	P	P	05 45 30.5	-0.6
	0.2nm,0.3s,baz=344,slow=10,SNR=5.5						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**58.52**	**325**	P	P	05 49 44.7	0.0
	0.2nm,0.4s,baz=119,slow=8.1,SNR=5.8						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**62.72**	**328**	P	P	05 50 13.2	0.0
	0.5nm,0.5s,baz=119,slow=7.6,SNR=5.2						
	0.5nm,0.5s						

*IDC **13** 05:42:33.7±1.0, 60°.85S×26°.83W, h0km, mb4.0/6, mbtmp4.1/7, ML4.2/1, MS3.3/5, Error ellipse: s-maj=36.3km s-min=21.2km az=69.0*

ISC 13 05:42:34.4±0.8, 61°.0S±0°.1×26°.3W±0°.2, h10km, n24, σ3s 87/19, mb3.9/5, MS3.3/4, 7C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**12.13**	**151**	⇑P	**Pn**	**05 45 30.8**	**+3.9**
	comp=Z,42nm,0.3s						
VNA3	**Neumayer Olymp**	**12.24**	**154**	⇑P	**Pn**	**05 45 32.1**	**+3.6**
	comp=Z,26nm,0.4s						
VNA3				⇑S	**Sn**	**05 47 39.2**	**-5.6**
VNA2	**Neumayer--Watz**	**12.53**	**151**	⇑P	**Pn**	**05 45 35.8**	**+3.4**
	comp=Z,6.0nm,0.3s,baz=309,slow=14						
VNA2				⇑S	**Sn**	**05 47 50.3**	**-1.5**
	baz=306,slow=20						
SNAA	**Sanae**	**14.13**	**149**	⇑P	**Pn**	**05 45 58.2**	**+3.9**
	comp=Z,82nm,0.3s						
SNAA				⇑S	**Sn**	**05 48 25.6**	**-5.4**
SNAA	**Sanae**	**14.13**	**149**	Pn	**Pn**	**05 45 57.4**	**+3.1**
	comp=Z,1.2nm,0.3s,baz=325,slow=19,SNR=13						
SNAA				Sn	**Sn**	**05 48 26.9**	**-4.1**
	comp=Z,0.5nm,0.3s,baz=289,slow=19,SNR=1.8						
SNAA				LR	LR	05 50 22.4	
	comp=Z,87nm,18.8s,baz=9.0,slow=33						
	comp=Z,3.2nm,0.3s						
TROLL	**Troll, Antarti**	**15.72**	**146**	P	**P**	**05 46 20.3**	**+0.5**
TROLL				S	**Sn**	**05 49 01.3**	**-8.5**
QSPA	**South Pole Qui**	**29.26**	**180**	P	**P**	**05 48 37.7**	**+1.4**
	comp=Z,1.8nm,1.1s,baz=205,slow=2.2,SNR=8.9						
QSPA				LR	LR	06 00 10.4	
	comp=Z,96nm,18.7s,baz=172,slow=36						
	comp=Z,1.8nm,1.1s						
PLCA	**Paso Flores**	**33.60**	**287**	P	**P**	**05 49 13.5**	**-1.1**
	comp=Z,1.4nm,0.9s,baz=157,slow=7.7,SNR=3.8						
	comp=Z,1.4nm,0.9s						
CPUP	**Villa Florida**	**40.53**	**315**	P	**P**	**05 50 11.0**	**-2.4**
	comp=Z,0.8nm,0.3s,baz=144,slow=7.6,SNR=4.2						
	comp=Z,0.8nm,0.3s						
VNDA	**Vanda**	**41.66**	**183**	P	**P**	**05 50 25.2**	**+3.0**
	comp=Z,1.1nm,0.8s,baz=180,slow=7.1,SNR=2.8						
VNDA				LR	LR	06 08 11.2	
	comp=Z,30nm,18.6s,baz=161,slow=37						
	comp=Z,1.1nm,0.8s						
H04S2	**CROZET ISLANDS**	**45.29**	**109**	T	T	06 40 23.4	
	baz=224,slow=75,SNR=10						
H04S3	**CROZET ISLANDS**	**45.30**	**109**	T	T	06 40 24.4	
	baz=224,slow=75,SNR=11						
H04S1	**CROZET ISLANDS**	**45.31**	**109**	T	T	06 40 24.8	
	baz=224,slow=75,SNR=10						
LBTB	**Lobatse**	**50.19**	**68**	LR	LR	06 08 35.4	
	comp=Z,20nm,18.4s,baz=218,slow=31						
H10S2	**ASCENSION HYDR**	**52.63**	**15**	T	T	06 48 37.3	
	baz=187,slow=74,SNR=6.5						
H10S3	**ASCENSION HYDR**	**52.64**	**15**	T	T	06 48 37.6	
	baz=33,slow=74,SNR=6.2						
LPAZ	**La Paz**	**53.68**	**307**	P	**P**	**05 51 56.0**	**-0.9**
	comp=Z,1.4nm,0.5s,baz=136,slow=5.2,SNR=9.0						
	comp=Z,1.4nm,0.5s						
H10N1	**ASCENSION HYDR**	**53.75**	**15**	T	T	06 50 01.4	
	baz=192,SNR=2.9						
H10N3	**ASCENSION HYDR**	**53.75**	**15**	T	T	06 50 01.3	
	baz=192,SNR=6.2						
H10N2	**ASCENSION HYDR**	**53.77**	**15**	T	T	06 50 06.3	
	baz=192,SNR=5.4						
MDP	**Montagnes des**	**69.01**	**332**	LR	LR	06 20 32.4	
	comp=Z,21nm,20.1s,baz=153,slow=33						
TORD	**Torodi Ar. Bea**	**77.17**	**28**	P	**P**	**05 54 29.4**	**+1.4**
	comp=Z,1.7nm,0.6s,baz=202,slow=7.5,SNR=12						
	comp=Z,1.7nm,0.6s						
YKA	**Yellowknife Ar**	**140.05**	**314**	PKP	**PKiKP**	**06 02 02.8**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=128,slow=1.7,SNR=6.4						
ILAR	**Eielson Array**	**153.53**	**304**	PKPbc	**PKPbc**	**06 02 30.1**	**-1.3**
	comp=Z,0.3nm,0.7s,baz=132,slow=1.3,SNR=4.1						

IDC 13 05:48:11.5±8.4, 18°.75S×177°.10W, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=373.6km s-min=36.1km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.71**	**260**	P	P	05 56 34.6	-0.2
	0.3nm,0.8s,baz=95,slow=8.4,SNR=1.3						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**45.77**	**255**	P	P	05 56 35.1	-0.1
	0.8nm,0.5s,baz=89,slow=8.7,SNR=13						
	0.8nm,0.5s						
ILAR	**Eielson Array**	**86.43**	**12**	P	P	06 00 55.4	-0.1
	0.4nm,0

WAT6				Pb	06 21 28.6	-0.7	
WAT6				Sb	06 21 44.6	-1.0	
WAT6				Sg	06 21 44.9	-0.9	
MDM	**Murphy Dome**	**1.26 337**		Pn	06 21 28.7	-0.4	
MDM				Sb	06 21 45.3	-0.3	
DOT	**Dot Lake**	**1.35 95**		Pn	06 21 29.8	-0.6	
DOT			IAML		06 21 50.1		
	comp=N,2μm,0.3s						
DOT			IAML		06 21 50.8		
	comp=E,2μm,0.2s						
DOT	**Dot Lake**	**1.35 95**		Sb	06 21 48.0	-0.2	
SCRK	**Sand Creek**	**1.38 81**		Pn	06 21 30.2	-0.6	
SCRK			IAML		06 21 50.4		
	comp=N,2μm,0.4s						
SCRK			IAML		06 21 50.8		
	comp=E,2μm,0.4s						
SCRK	**Sand Creek**	**1.38 81**		Sb	06 21 49.0	-0.1	
TRF	**Thorofare Moun**	**1.47 258**		Pn	06 21 33.1	+1.0	
TRF			IAML		06 21 53.2		
	comp=E,3μm,0.5s						
TRF	**Thorofare Moun**	**1.47 258**		Sn	06 21 51.4	-0.2	
I23K	**Minto, Yukon-K**	**1.67 325**		Pn	06 21 34.7	0.0	
I23K			IAML		06 22 00.0		
	comp=N,2μm,0.4s						
I23K	**Minto, Yukon-K**	**1.67 325**		Sn	06 21 56.9	+0.7	
KTH	**Kantishna Hill**	**1.73 263**		Pn	06 21 35.9	+0.3	
KTH			IAML		06 22 02.6		
	comp=E,1μm,0.4s						
KTH			IAML		06 22 03.6		
	comp=N,2μm,0.6s						
MENT	**Mentasta**	**1.75 118**		Pn	06 21 36.8	+1.1	
BPAW	**Bear Paw Mtn.**	**1.75 282**		Pn	06 21 35.3	-0.5	
BPAW			IAML		06 22 04.7		
	comp=E,1μm,0.4s						
M24K	**Tolsona, Glenn**	**1.75 166**		Pn	06 21 37.8	+2.0	
PRP	**Porcupine Dome**	**1.85 21**		Pn	06 21 37.8	+0.5	
L26K	**Log Cabin Wild**	**1.85 113**		Pn	06 21 37.0	-0.2	
SCM	**Sheep Creek Mo**	**1.98 183**		Pn	06 21 39.8	+0.8	
SCM			IAML		06 22 07.8		
	comp=E,1μm,0.7s						
MLY	**Manley**	**2.01 310**		Pn	06 21 39.4	0.0	
CUT	**Chulitna**	**2.02 227**		Pn	06 21 40.1	+0.8	
M23K	**Glacier View**	**2.04 189**		Pn	06 21 40.6	+0.8	
H24K	**Noodor Dome**	**2.07 351**		Pn	06 21 40.6	+0.3	
SML	**Sawmill**	**2.08 197**		Pn	06 21 41.4	+1.0	
SML	**Sawmill**	**2.08 197**	IAML		06 22 12.4		
	comp=E,1μm,0.8s						
L22K	**Petersville**	**2.11 234**		Pn	06 21 41.9	+1.1	
L22K			IAML		06 22 12.3		
	comp=E,906nm,0.5s						
L22K			IAML		06 22 17.1		
	comp=N,917nm,0.4s						
WAZA	**Wrangell Mount**	**2.19 141**		Pn	06 21 43.6	+1.5	
GHO	**Glory Hole Cre**	**2.21 203**		Pn	06 21 43.0	+0.9	
GHO			IAML		06 22 15.6		
	comp=E,1μm,1.1s						
GHO			IAML		06 22 16.9		
	comp=N,1μm,0.6s						
WACK	**Wrangell Chich**	**2.22 144**		Pn	06 21 43.6	+1.2	
I26K	**Coal Creek Min**	**2.27 47**		Pn	06 21 42.9	-0.1	
CHUM	**Lake Minchumin**	**2.32 274**		Pn	06 21 43.2	-0.4	
M26K	**Nabesna, AK**	**2.33 125**		Pn	06 21 44.6	+0.8	
M26K	**Nabesna, AK**	**2.33 125**	IAML		06 22 19.7		
	comp=N,1μm,0.7s						
KLU	**Klutina**	**2.38 166**		Pn	06 21 46.5	+2.0	
KLU	**Klutina**	**2.38 166**	IAML		06 22 19.5		
	comp=E,831nm,0.3s						
KLU			IAML		06 22 19.6		
	comp=N,598nm,0.3s						
PMR	**Palmer**	**2.41 204**		Pn	06 21 45.4	+0.6	
PMR	**Palmer**	**2.41 204**	IAML		06 22 21.0		
	comp=N,709nm,0.4s						
PMR			IAML		06 22 21.7		
	comp=E,864nm,0.5s						
PPLA	**Purkeypile**	**2.47 251**		Pn	06 21 46.3	+0.4	
PPLA	**Purkeypile**	**2.47 251**	IAML		06 22 28.3		
	comp=N,692nm,0.8s						
PPLA			IAML		06 22 28.3		
	comp=E,766nm,0.9s						
L27K	**Beaver Creek,**	**2.48 105**		Pn	06 21 45.2	-0.6	
KNK	**Knik Glacier**	**2.48 195**		Pn	06 21 47.6	+1.8	
KNK	**Knik Glacier**	**2.48 195**	IAML		06 22 22.0		
	comp=N,880nm,0.7s						
N25K	**Chitina, Valde**	**2.48 151**		Pn	06 21 47.5	+1.6	
M22K	**Willow**	**2.48 216**		Pn	06 21 46.8	+0.9	
BCAR	**Beaver Creek A**	**2.49 105**		Pn	06 21 45.3	-0.7	
I21K	**Tanana**	**2.53 305**		Pn	06 21 46.5	0.0	
I21K			IAML		06 22 28.4		
	comp=N,477nm,0.7s						
I21K			IAML		06 22 33.2		
	comp=E,545nm,0.7s						
SKT	**Skwentna**	**2.74 230**		Pn	06 21 50.5	+1.2	
SKT			IAML		06 22 32.3		
	comp=E,576nm,0.9s						
DIV	**Divide**	**2.75 167**		Pn	06 21 52.0	+2.4	
DIV	**Divide**	**2.75 167**	IAML		06 22 33.9		
	comp=N,392nm,0.6s						
M27K	**Edge Creek, AK**	**2.78 119**		Pn	06 21 50.9	+0.9	
M27K			IAML		06 22 40.1		
	comp=E,441nm,0.6s						
M27K			IAML		06 22 42.3		
	comp=N,514nm,1.0s						
H22K	**Ishtalitna Cre**	**2.79 321**		Pn	06 21 50.5	+0.4	
H22K			IAML		06 22 33.9		
	comp=N,407nm,0.5s						
H22K			IAML		06 22 33.9		
	comp=E,408nm,0.4s						
GLB	**Gilahina Butte**	**2.81 146**		Pn	06 21 52.1	+1.7	
FYU	**Fort Yukon**	**2.88 15**		Pn	06 21 52.1	+0.7	
G24K	**Hadweenzic Riv**	**2.92 357**		Pn	06 21 52.1	+0.3	
GLI	**Glacier Island**	**2.93 180**		Pn	06 21 54.5	+2.5	
GLI	**Glacier Island**	**2.93 180**	IAML		06 22 40.4		
	comp=E,340nm,0.5s						
GLI			IAML		06 22 42.1		
	comp=N,253nm,0.6s						
I27K	**Kandik River**	**2.96 50**		Pn	06 21 52.7	+0.2	
RC01	**Rabbit Creek A**	**2.99 206**		Pn	06 21 55.5	+2.7	
MCARA	**McCarthy VSAT**	**3.07 140**		Pn	06 21 56.9	+3.0	
MCARA	**McCarthy VSAT**	**3.07 140**	IAML		06 22 48.5		
	comp=N,368nm,1.0s						
MCARA			IAML		06 22 49.5		
	comp=E,290nm,0.8s						
BMRM	**Bremner River**	**3.07 157**		Pn	06 21 56.0	+2.1	
BMRM	**Bremner River**	**3.07 157**	IAML		06 22 44.3		
	comp=N,227nm,0.9s						
H21K	**Melozitna Rive**	**3.08 310**		Pn	06 21 53.9	-0.2	
H21K	**Melozitna Rive**	**3.08 310**	IAML		06 22 42.0		
	comp=E,435nm,0.4s						
VRDI	**Verde Repeater**	**3.08 145**		Pn	06 21 56.5	+2.3	
BVCY	**Beaver Creek**	**3.15 113**		Pn	06 21 55.0	-0.1	
K20K	**Telida**	**3.15 265**		Pn	06 21 54.7	-0.4	
K20K			IAML		06 22 45.2		
	comp=N,443nm,0.7s						
K20K			IAML		06 22 46.9		
	comp=E,282nm,0.5s						
G23K	**Bananza Creek**	**3.17 338**		Pn	06 21 55.7	+0.4	
STLK	**Strandline Lak**	**3.19 226**		Pn	06 21 55.6	+0.1	
STLK			IAML		06 22 47.0		
	comp=E,300nm,0.6s						
STLK			IAML		06 22 49.4		
	comp=N,281nm,0.6s						
EYAK	**Cordova Ski Ar**	**3.32 169**		Pn	06 21 58.3	+1.0	
M20K	**Styx River**	**3.38 238**		Pn	06 21 59.3	+1.1	
M20K	**Styx River**	**3.38 238**	IAML		06 22 54.2		
	comp=E,315nm,0.5s						
M20K			IAML		06 22 56.1		
	comp=N,251nm,0.5s						
PTPK	**Pattly Peak**	**3.39 139**		Pn	06 22 00.1	+1.7	
H27K	**Steamboat Moun**	**3.39 42**		Pn	06 21 58.6	+0.2	
H27K	**Steamboat Moun**	**3.39 42**	IAML		06 22 54.4		
	comp=N,362nm,1.0s						
H27K			IAML		06 22 56.9		
	comp=E,362nm,0.9s						
SPCG	**Spurr Capps Gl**	**3.40 224**		Pn	06 21 58.4	-0.2	
DAWY	**Dawson**	**3.41 82**		Pn	06 21 58.0	-0.5	
HIN	**Hinchinbrook I**	**3.43 175**		Pn	06 22 00.2	+1.4	
HIN			IAML		06 22 52.7		
	comp=N,181nm,1.1s						
HIN			IAML		06 22 58.3		
	comp=E,229nm,0.9s						
G26K	**Porcupine Rive**	**3.45 22**		Pn	06 21 59.4	+0.3	
G26K	**Porcupine Rive**	**3.45 22**	IAML		06 23 01.5		
	comp=N,379nm,0.8s						
I28M	**Miner Creek**	**3.49 59**		Pn	06 22 00.2	+0.4	
I28M	**Miner Creek**	**3.49 59**	IAML		06 23 00.8		
	comp=N,327nm,0.8s						
SPU	**Mount Spurr**	**3.50 223**		Pn	06 22 02.0	+2.1	
SPCN	**Chakachatna No**	**3.50 225**		Pn	06 22 02.4	+2.5	
YUK2	**White River**	**3.51 122**		Pn	06 22 00.1	+0.1	
BALM	**Baldy**	**3.54 139**		Pn	06 22 03.4	+2.9	
SPNN	**North Nagishla**	**3.56 229**		Pn	06 22 02.4	+1.5	
CRQM	**Cirque**	**3.57 147**		Pn	06 22 03.5	+2.6	
CRQM	**Cirque**	**3.57 147**	IAML		06 23 03.7		
	comp=N,181nm,0.7s						
CRQM			IAML		06 23 07.3		
	comp=E,200nm,1.0s						
CKL	**Chakachamna La**	**3.57 225**		Pn	06 22 03.5	+2.5	
SPWE	**Spurr West**	**3.59 227**		Pn	06 22 02.8	+1.7	
IMAR	**Indian Mountai**	**3.59 311**		Pn	06 22 00.3	-0.6	
RAGM	**Ragged Mountai**	**3.61 161**		Pn	06 22 02.1	+0.8	
SLKM	**Skilak Lake**	**3.62 205**		Pn	06 22 04.3	+2.9	
SLKM	**Skilak Lake**	**3.62 205**	IAML		06 23 02.8		
	comp=N,244nm,0.8s						
KIAG	**Kiagna River**	**3.63 141**		Pn	06 22 02.8	+1.0	
TGL	**Tana Glacier**	**3.65 145**		Pn	06 22 02.6	+0.7	
TGL	**Tana Glacier**	**3.65 145**	IAML		06 23 08.1		
	comp=E,144nm,0.8s						
YUK3	**Moose Creek**	**3.66 121**		Pn	06 22 02.2	0.0	
COLD	**Coldfoot**	**3.68 341**		Pn	06 22 02.7	+0.5	
COLD			IAML		06 23 03.6		
	comp=E,141nm,1.3s						
BARN	**Barnard Glacie**	**3.73 135**		Pn	06 22 04.1	+0.9	
H20K	**Anotleneega Mo**	**3.76 300**		Pn	06 22 03.0	-0.4	
J19K	**Poorman**	**3.78 277**		Pn	06 22 03.1	-0.5	
J19K			IAML		06 23 09.5		
	comp=E,219nm,0.7s						
J19K			IAML		06 23 15.0		
	comp=N,194nm,1.1s						
G27K	**Doyon Strip**	**3.78 35**		Pn	06 22 03.8	+0.1	
G27K	**Doyon Strip**	**3.78 35**	IAML		06 23 21.6		
	comp=E,150nm,0.8s						
BMAR	**Burnt Mountain**	**3.79 15**		Pn	06 22 04.0	+0.2	
BM01	**Burnt Mountain**	**3.81 15**		Pn	06 22 04.1	0.0	
G21K	**Allakaket**	**3.84 318**		Pn	06 22 04.7	+0.1	
G21K			IAML		06 23 08.1		
	comp=N,182nm,1.1s						
G21K			IAML		06 23 13.9		
	comp=E,228nm,0.8s						
M19K	**Big River Lodg**	**3.85 244**		Pn	06 22 05.3	+0.7	
M19K	**Big River Lodg**	**3.85 244**	IAML		06 23 07.1		
	comp=E,239nm,0.5s						
M19K			IAML		06 23 16.3		
	comp=N,199nm,0.5s						
F25K	**Christian Rive**	**3.85 8**		Pn	06 22 05.3	+0.6	
F25K	**Christian Rive**	**3.85 8**	IAML		06 23 08.8		
	comp=E,126nm,0.5s						
SEW	**Seward**	**3.88 198**		Pn	06 22 06.9	+2.0	
SEW			IAML		06 23 06.8		
	comp=N,161nm,0.8s						
SEW			IAML		06 23 06.9		
	comp=E,145nm,0.9s						
L19K	**White Mountain**	**3.90 249**		Pn	06 22 06.2	+0.8	
L19K			IAML		06 23 12.5		
	comp=E,194nm,0.7s						
L19K			IAML		06 23 14.0		
	comp=N,198nm,1.1s						
CTGM	**Chitina Glacie**	**3.91 134**		Pn	06 22 08.2	+2.7	
J29N	**Klondike Camp**	**3.94 76**		Pn	06 22 06.8	+0.8	
GRNC	**Granite Creek**	**3.96 139**		Pn	06 22 06.9	+0.5	
L29M	**L29M**	**4.08 96**		Pn	06 22 07.3	-0.5	
RDT	**Redoubt**	**4.09 220**		Pn	06 22 08.7	+0.7	
KAIM	**Kayak Island**	**4.09 161**		Pn	06 22 10.0	+2.1	
F26K	**Sheenjek River**	**4.09 16**		Pn	06 22 08.6	+0.6	
F26K	**Sheenjek River**	**4.09 16**	IAML		06 23 24.5		
	comp=E,108nm,1.1s						
I29M	**Ogilvie Camp,**	**4.09 64**	IAML		06 23 21.4		
	comp=E,199nm,0.8s						
LOGN	**Logan Glacier**	**4.12 134**		Pn	06 22 09.5	+1.0	
M29M	**Somme Creek**	**4.14 105**		Pn	06 22 08.6	-0.2	
M29M	**Somme Creek**	**4.14 105**	IAML		06 23 18.0		
	comp=E,162nm,0.5s						
M29M			IAML		06 23 18.4		
	comp=N,175nm,0.7s						
DFR	**Drift River**	**4.15 222**		Pn	06 22 09.5	+0.7	
K29M	**Barlow Dome**	**4.24 85**		Pn	06 22 09.2	-0.9	
K29M	**Barlow Dome**	**4.24 85**	IAML		06 23 23.2		
	comp=E,162nm,0.6s						
RDSO	**Redoubt South**	**4.28 221**		Pn	06 22 11.3	+0.6	
J18K	**Innoko River**	**4.31 270**		Pn	06 22 09.8	-1.1	
J18K			IAML		06 23 23.7		
	comp=N,135nm,0.8s						
J18K			IAML		06 23 23.7		
	comp=E,95nm,0.6s						
RED	**Redoubt Volcan**	**4.32 221**		Pn	06 22 12.9	+1.7	
E24K	**Your Creek**	**4.33 353**		Pn	06 22 12.1	+0.9	
F21K	**Alatna River**	**4.34 325**		Pn	06 22 12.2	+0.8	
E25K	**Arctic Village**	**4.38 7**		Pn	06 22 12.7	+0.8	
E25K	**Arctic Village**	**4.38 7**	IAML		06 23 05.6		
	comp=E,80nm,0.6s						
E23K	**Chandalar**	**4.40 347**		Pn	06 22 13.3	+1.0	
BRSE	**Bradley Lake S**	**4.43 205**		Pn	06 22 15.3	+2.8	
N19K	**Bonanza Creek**	**4.57 232**		Pn	06 22 15.0	+0.3	
L18K	**Granite Mounta**	**4.66 254**		Pn	06 22 15.0	-0.6	
CNPM	**China Poot**	**4.72 207**		Pn	06 22 19.4	+2.7	
E22K	**Anaktuvuk Pass**	**4.76 338**		Pn	06 22 18.3	+1.2	
J30M	**Hart River**	**4.77 76**		Pn	06 22 18.0	+0.7	
J30M	**Hart River**	**4.77 76**	IAML		06 23 46.7		
	comp=E,143nm,0.7s						
ILSW	**Iliamna Southw**	**4.78 220**		Pn	06 22 21.2	+3.7	
ILS	**Iliamna Low So**	**4.78 219**		Pn	06 22 21.0	+3.5	
M30M	**Minto, Yukon**	**4.82 100**		Pn	06 22 16.6	-1.4	
M30M			IAML		06 23 41.8		
	comp=E,74nm,0.8s						
I30M	**Mount Dempster**	**4.84 68**		Pn	06 22 18.4	+0.1	
F28M	**Old Crow**	**4.85 35**		Pn	06 22 18.4	+0.1	
F28M			IAML		06 23 43.3		
	comp=N,73nm,1.2s						
F28M			IAML		06 23 49.4		
	comp=E,81nm,1.0s						
G19K	**Purcell Mounta**	**4.85 303**		Pn	06 22 18.3	-0.1	
G19K	**Purcell Mounta**	**4.85 303**	IAML		06 23 38.4		
	comp=N,111nm,0.6s						
G19K			IAML		06 23 42.3		
	comp=E,92nm,0.9s						
F20K	**Avaraart Lake**	**4.86 316**		Pn	06 22 19.4	+0.9	
F20K	**Avaraart Lake**	**4.86 316**	IAML		06 23 41.7		
	comp=N,65nm,0.8s						
E27K	**Coleen River**	**4.94 25**		Pn	06 22 20.0	+0.4	
YUK6	**Outpost Mounta**	**4.97 121**		Pn	06 22 20.3	+0.1	
O19K	**Port Alsworth**	**4.97 227**		Pn	06 22 20.8	+0.8	
MAYO	**Mayo, Yukon**	**4.98 87**		Pn	06 22 20.2	0.0	
H18K	**Honhosa River**	**5.06 291**		Pn	06 22 21.6	+0.3	
EPYK	**Eagle Plains**	**5.08 55**		Pn	06 22 21.9	+0.3	
P19K	**Oil Pt**	**5.08 218**		Pn	06 22 21.9	+3.9	
N18K	**Kilae Creek**	**5.17 237**		Pn	06 22 23.3	+0.6	
N30M	**Aishikik Lake**	**5.18 112**		Pn	06 22 23.1	+0.2	
K17K	**Iditarod**	**5.18 263**		Pn	06 22 23.2	+0.3	
G18K	**Tagagawik**	**5.36 298**		Pn	06 22 25.3	-0.1	
L17K	**Donlin**	**5.38 257**		Pn	06 22 25.4	-0.2	
F19K	**Shaleruckik Mo**	**5.41 309**		Pn	06 22 26.2	+0.2	
D24K	**Happy Valley**	**5.42 353**		Pn	06 22 27.4	+1.3	
O18K	**Koktuh Hills**	**5.52 228**		Pn	06 22 29.4	+1.8	
G30M	**tAoh Zraii Nji**	**5.55 50**		Pn	06 22 27.6	-0.3	
D25K	**Kavik River**	**5.55 3**		Pn	06 22 29.7	+1.6	
E19K	**Redstone River**	**5.58 316**		Pn	06 22 29.4	+1.2	
H17K	**Granite Mounta**	**5.68 287**		Pn	06 22 29.3	-0.5	
N31M	**Braeburn, Yuko**	**5.71 109**		Pn	06 22 29.7	-0.4	
N17K	**Nushagak Hills**	**5.76 240**		Pn	06 22 31.8	+0.9	
H31M	**Peel River**	**5.80 64**		Pn	06 22 31.0	-0.4	
SYI	**Shuyak Island**	**5.80 209**		Pn	06 22 34.1	+2.6	
Q19K	**Cape Douglas,**	**5.82 216**		Pn	06 22 32.7	+1.0	
P18K	**Big Mountain,**	**5.89 225**		Pn	06 22 35.6	+3.0	
E29M	**Blow River**	**5.92 35**		Pn	06 22 33.6	+0.6	
O30N	**Mendenhall**	**5.96 116**		Pn	06 22 33.0	-0.7	
C24K	**Franklin Bluff**	**5.98 355**		Pn	06 22 35.3	+1.5	
D27M	**Malcolm River**	**5.98 21**		Pn	06 22 35.0	+1.1	
F18K	**Selawik**	**5.99 304**		Pn	06 22 34.5	+0.6	
M31M	**Drury Creek, Y**	**6.00 100**		Pn	06 22 34.1	0.0	
C27K	**Jago River**	**6.00 11**		Pn	06 22 35.9	+1.8	
I17K	**Unalakleet**	**6.02 277**		Pn	06 22 34.9	+0.5	
L16K	**Owhat River**	**6.07 255**		Pn	06 22 33.9	-1.1	
J16K	**Anvik River**	**6.07 271**		Pn	06 22 34.2	-0.8	
G17K	**Kiwalik Mounta**	**6.07 292**		Pn	06 22 35.5	+0.5	
C26K	**Camden Bay**	**6.20 7**		Pn	06 22 38.4	+1.5	
G31M	**Satah River**	**6.20 54**		Pn	06 22 36.0	-0.8	
C23K	**Itkillik River**	**6.22 349**		Pn	06 22 38.2	+1.1	
O17K	**Koliganek Bris**	**6.23 234**		Pn	06 22 38.2	+0.9	
N16K	**Nishlik Lake**	**6.41 244**		Pn	06 22 40.6	+0.8	
KARR	**Katmai Rainbow**	**6.47 218**		Pn	06 22 41.1	+0.5	
WHY	**Whitehorse**	**6.51 113**		Pn	06 22 41.2	-0.1	
KDAK	**Kodiak Island**	**6.61 206**	LR	LR	06 25 19.5		
	comp=N,94nm,21.5s,baz=30,slow=37						
F31M	**Tsiigehtchic**	**6.62 51**		Pn	06 22 42.0	-0.5	
H16K	**Elim**	**6.66 284**		Pn	06 22 43.4	+0.2	
E18K	**Tukpahlearik C**	**6.67 309**		Pn	06 22 44.0	+0.8	
O16K	**Kokwok River B**	**6.72 236**		Pn	06 22 44.8	+0.8	
K15K	**Wolf Creek Mou**	**6.74 264**		Pn	06 22 44.1	-0.1	
G16K	**Koyuk River**	**6.76 290**		Pn	06 22 44.7	+0.2	
KABU	**Katmai Buttres**	**6.83 219**		Pn	06 22 46.1	+2.6	
ANCK	**Angle Creek**	**6.95 220**		Pn	06 22 48.2	+1.1	
L15K	**Unggalek Mounta**	**6.95 259**		Pn	06 22 47.0	-0.2	
E17K	**Hotham Inlet**	**6.96 305**		Pn	06 22 47.8	+0.5	
CNTC	**Contact Creek**	**7.00 222**		Pn	06 22 49.1	+1.1	
B22K	**Teshekpuk Lake**	**7.01 342**		Pn	06 22 49.0	+1.1	
INK	**Inuvik**	**7.12 45**		Pn	06 22 49.2	-0.2	
OHAK	**Old Harbor**	**7.27 208**		Pn	06 22 52.9	+1.4	
DLBC	**Dease Lake**	**9.83 115**	LR	LR	06 27 37.1		
	comp=N,56nm,19.2s,baz=93,slow=40						
C36M	**Paulatuk**	**10.66 49**		Pn	06 23 36.9	-0.9	
A36M	**Sachs Harbour**	**11.53 35**	Pn	Pn	06 23 49.0	-0.8	
YKA	**Yellowknife Ar**	**14.65 80**	Pn	Pn	06 24 31.7	-0.6	
	comp=N,0.2nm,0.3s,baz=289,slow=13,SNR=19						
	comp=N,0.8nm,0.7s						
YKAW1	**Yellowknife Wh**	**14.70 80**		Pn	06 24 32.2	-0.9	
PDAR	**Pinedale Array**	**30.06 116**	P	P	06 27 20.5	+5.8	
	comp=N,0.3nm,0.9s,baz=319,slow=10,SNR=2.5						
	comp=N,0.3nm,0.9s						

MEX ***13*** *06:54:36.0±0.7, 15°.46N×93°.71W, h70*$^{km}_{\pm 13}$*, MD4.2*
CATAC ***13*** *06:54:36.7±0.4, 16°.N±2°×9°.4W±°, h57*$^{km}_{\pm 5}$*, M4.1/15, MLv4.1/15, Error ellipse: s-maj=6.7km s-min=3.4km az=49.2, confirmed*
GCG ***13*** *06:54:37.6±1.9, 15°.59N×93°.45W, h36*$^{km}_{\pm 70}$*, MD4.3, ML4.3, Presumed earthquake*

ISC 13 06:54:35.4±1.2, 15°.58N±0°.04×93°.57W±0°.03, h82$^{km}_{\pm 9}$**, n52, σ1ᵖ83/86, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PCIG		**0.36**	**69**	*eP*		**Pn**	**06 54 47.8**	**-0.4**
PCIG				*eS*		**Sn**	**06 54 57.2**	**-0.5**
CARR	**Arriaga**	**0.75**	**334**	*eP*		**Pn**	**06 54 51.8**	**+0.2**
CARR				*i* S		**Sn**	**06 55 04.2**	**+0.5**
TGIG		**1.27**	**20**	*i* P		**Pn**	**06 54 58.4**	**+0.4**
TGIG				*eS*		**Sn**	**06 55 14.8**	**-0.1**
TGIG		**1.27**	**20**	*i* P		**Pn**	**06 54 58.4**	**+0.4**
TGIG				*i* S		**Sn**	**06 55 14.0**	**-0.8**
TGIG					IAML		06 55 19.5	
	comp=E,414nm,0.3s							
TGBT	**Tuxtla Gutierr**	**1.28**	**21**	*eP*		**Pn**	**06 54 58.4**	**+0.4**
TGBT				*i* S		**Sn**	**06 55 15.2**	**+0.2**
PATR	**El Naranjo**	**1.37**	**109**	*eP*		**Pn**	**06 54 59.1**	**-0.1**
PATR				*i* S		**Sn**	**06 55 17.1**	**-0.2**
PAVE	**Pavencul**	**1.40**	**106**	*eP*		**Pn**	**06 54 59.8**	**+0.1**
PAVE				*i* S		**Sn**	**06 55 18.7**	**+0.7**
THIG		**1.42**	**118**	*eP*		**Pn**	**06 55 00.2**	**+0.5**
THIG				*i* S		**Sn**	**06 55 18.2**	**0.0**
THIG		**1.42**	**118**	*i* P		**Pn**	**06 55 00.6**	**+0.8**
THIG				*i* S		**Sn**	**06 55 16.3**	**-1.8**
CHUJ	**Union Juarez**	**1.49**	**109**	*eP*		**Pn**	**06 55 00.8**	**-0.1**
CHUJ				*i* S		**Sn**	**06 55 20.0**	**0.0**
CCIG	**Comitan**	**1.55**	**63**	*eP*		**Pn**	**06 55 02.3**	**+0.8**
CCIG				*i* S		**Sn**	**06 55 20.6**	**-0.7**
CCIG	**Comitan**	**1.55**	**63**	P		**Pn**	**06 55 02.1**	**+0.5**
CCIG	**Comitan**	**1.55**	**63**	*i* P		**Pn**	**06 55 02.3**	**+0.8**
SMCA	**Catarina**	**1.61**	**116**	*i* P		**Pn**	**06 55 01.9**	**-0.3**
SMCA				*i* S		**Sn**	**06 55 21.2**	**-1.3**
CMIG	**Matias Romero**	**1.97**	**320**	*eP*		**Pn**	**06 55 06.6**	**-0.3**
CMIG				*eS*		**Sn**	**06 55 29.1**	**-1.9**
HUEH	**Huehuetenango**	**2.01**	**97**	*eP*		**Pn**	**06 55 08.8**	**+1.2**
HUEH				*eS*		**Sn**	**06 55 34.8**	**+2.5**
HUEH	**Huehuetenango**	**2.01**	**97**	P		**Pn**	**06 55 08.7**	**+1.0**
HUEH				S		**Sn**	**06 55 33.4**	**+1.2**
HUEH	**Huehuetenango**	**2.01**	**97**	*i* P		**Pn**	**06 55 09.0**	**+1.3**
HUEH				*i* S		**Sn**	**06 55 35.3**	**+3.1**
HUEH					IAML		06 55 46.0	
	comp=N,2μm,0.4s							
RTAL	**Retalhuleu**	**2.09**	**120**	*eP*		**Pn**	**06 55 09.6**	**+1.1**
RTAL				*eS*		**Sn**	**06 55 34.0**	**+0.1**
RTAL	**Retalhuleu**	**2.09**	**120**	P		**Pn**	**06 55 09.5**	**+0.9**
RTAL				S		**Sn**	**06 55 35.0**	**+1.1**
STG2	**El Palmar, Qui**	**2.40**	**118**

1.2nm,0.6s,baz=109,slow=16,SNR=12
BVA0 ⇑Lg Lg 06 56 18.9
3.0nm,0.6s,baz=114,slow=24,SNR=6.2
BVAR Borovoye Array 2.69 297 Pg **Pn 06 55 43.5 +1.2**
0.1nm,0.3s,baz=109,slow=17,SNR=10
BVAR Lg Lg 06 56 18.1
0.4nm,0.3s,baz=115,slow=27,SNR=18
KURBB Kurchatov Arra 2.91 114 Pg **Pb 06 55 49.3 -1.2**
baz=301,slow=18,SNR=7.6
KURBB Lg Lg 06 56 29.9
0.1nm,0.3s,baz=294,slow=30,SNR=9.5
KURBB Kurchatov Arra 2.91 114 ⇑Pg **Pb 06 55 50.0 -0.5**
1.6nm,0.6s
KURBB ⇑Lg Lg 06 56 28.4
27nm,0.7s
KURK Kurchatov 2.92 112 ⇑Pg **Pg 06 55 52.9 -0.8**
0.2nm,0.6s
KURK ⇑Lg Lg 06 56 29.8
7.2nm,0.8s
I46RU ZALESOVO INFRA 6.65 68 I I 07 34 40.0
baz=256,slow=321,SNR=6.4
ZALV Zalesovo Beam 6.65 68 Pn **Pn 06 56 38.2 +1.5**
baz=256,slow=12,SNR=4.6
0.5nm,0.5s
MK31 Makanchi Array 7.26 131 ⇓Sn **Sn 06 58 07.6 -0.7**
0.3nm,0.5s
MK31 ⇑Lg Lg 06 58 44.0
2.9nm,0.8s,baz=326,slow=25,SNR=4.6
MKAR Makanchi Array 7.26 131 Pn **Pn 06 56 46.7 +1.6**
baz=303,slow=13,SNR=1.9
MKAR Lg Lg 06 58 47.2
0.1nm,0.3s,baz=324,slow=27,SNR=7.9
0.2nm,0.8s
AAK Ala-Archa 9.25 179 Lg Lg 06 59 51.3
0.2nm,0.3s,baz=168,slow=20,SNR=4.5

IDC 13 06:59:57.8±3.0, 54.19N×86.32E, h0km, mbtmp2.4/2, ML2.2/2, Error ellipse: s-maj=22.1km s-min=13.2km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.91**	**255**	I		I	07 05 26.9	
	baz=74,slow=338,SNR=7.5							
ZALV	**Zalesovo Beam**	**0.91**	**255**	Pg		Pg	07 00 13.5	-1.8
	0.9nm,0.3s,baz=74,slow=17,SNR=13							
ZALV				Lg		Lg	07 00 28.9	
	1.2nm,0.3s,baz=77,slow=30,SNR=11							
KURBB	**Kurchatov Arra**	**5.95**	**236**	Pn		Pn	07 01 28.6	+1.5
	baz=56,slow=14,SNR=1.9							
	0.1nm,0.3s							
MKAR	**Makanchi Array**	**7.83**	**201**	Pn		Pn	07 01 54.1	+1.1
	0.1nm,0.3s,baz=24,slow=13,SNR=1.8							
	0.1nm,0.3s							

NAO ***13*** *07:01:52.9, 30.76N×47.13E, h33km, MB4.5*
MOS ***13*** *07:02:02.8±1.1, 32.71N×47.32E, h12km, mb5.0/43, Error ellipse: s-maj=5.3km s-min=3.6km az=95.9*
NEIC ***13*** *07:02:04.6±1.2, 32.68N±0.06×47.36E±0.09, h10km±1km, mb4.9/63, Error ellipse: s-maj=12.7km s-min=10.4km az=256.0*
ISN ***13*** *07:02:04.4±0.8, 32.79N×47.38E, h7km±4km, ML4.2, Presumed earthquake*
TEH ***13*** *07:02:04.6, 32.77N×47.34E, h9km±29km, ML4.6, Presumed earthquake*
SGS ***13*** *07:02:05.8, 32.97N×47.37E, h7km, Ml4.8*
THR ***13*** *07:02:05.0±0.0, 32.83N×47.34E, h10km±15km, ML4.6, Presumed earthquake*
IDC ***13*** *07:02:06.4±1.9, 32.82N×47.32E, h20km±10km, mb4.3/27, mbtmp4.5/34, ML3.7/8, MS3.6/27, Error ellipse: s-maj=14.5km s-min=11.2km az=178.0*
OMAN ***13*** *07:02:10.5±0.9, 32.62N×47.85E, h16km±8km, mb4.8/39, Error ellipse: s-maj=7.9km s-min=4.5km az=105.0*
DSN ***13*** *07:02:12.0±1.2, 32.42N×47.73E, h30km, mb5.2/3, Error ellipse: s-maj=15.4km s-min=11.9km az=49.0*
ISC 13 07:02:04.8±0.8, 32.68N±0.03×47.35E±0.02, h15km±4km, n493, σ1s54/510, mb4.7/116, MS3.6/25, 22C-26D, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IBDR	**Badra**	**1.27**	**290**	*e*Pg		**Pg**	**07 02 29.0**	**-0.3**
IBDR				*e*Sg		**Sn**	**07 02 46.0**	**+1.2**
IBDR				AML		AML	07 02 51.6	
	comp=N,7μm,0.5s							
IBDR				AML		AML	07 02 52.7	
	comp=E,6μm,0.7s							
IDOB	**Doab**	**1.31**	**32**	Pg		**Pn**	**07 02 28.5**	**-0.2**
IDOB				Sg		**Sn**	**07 02 45.9**	**-0.2**
RAFI	**Al-Rafai**	**1.41**	**228**	*e*Pg		**Pg**	**07 02 33.0**	**+1.0**
RAFI				*e*Sg		**Sg**	**07 02 55.0**	**+4.6**
RAFI				AML		AML	07 02 59.9	
	comp=E,4μm,0.5s							
RAFI				AML		AML	07 03 12.1	
	comp=N,3μm,0.2s							
GTMR	**Gotvand**	**1.50**	**97**	*e*Pg		**Pg**	**07 02 34.7**	**+1.0**
GTMR				IAML			07 02 59.0	
	comp=Z,15μm,1.0s							
KCHF	**Cheshme Sefid,**	**1.62**	**351**	Pg		**Pn**	**07 02 32.9**	**0.0**
AHWZ	**Ahwaz**	**1.73**	**140**	Pn		**Pg**	**07 02 38.1**	**0.0**
IGHG	**Ghaleghazi**	**1.77**	**339**	Pg		**Pb**	**07 02 35.9**	**-1.2**
IGHG				Sg		**Sg**	**07 03 01.5**	**-0.5**
BDRS	**Dareh Seyedi**	**1.81**	**45**	Pg		**Pb**	**07 02 37.8**	**+0.1**
IBZA	**Bozab**	**1.84**	**13**	Pg		**Pb**	**07 02 37.1**	**-1.2**
GLG1	**Gilan-e-Gharb**	**1.87**	**320**	Pg		**Pb**	**07 02 37.3**	**-1.5**
AMIS	**Naft Sefid**	**1.93**	**121**	Pn		**Pg**	**07 02 40.6**	**-1.2**
IALM	**Almabolaq**	**2.28**	**17**	Pn		**Pn**	**07 02 43.4**	**+1.2**
KHMZ	**Khomeyn**	**2.43**	**63**	*e*Pn		**Pb**	**07 02 46.7**	**-1.6**
KHMZ				IAML			07 03 28.7	
	comp=Z,3μm,1.0s							
BHD	**Baghdad**	**2.57**	**284**	*e*Pn		**Pb**	**07 02 48.0**	**-2.5**
BHD				*e*Sn		**Sb**	**07 03 20.0**	**-1.8**
BHD				AML		AML	07 03 42.0	
	comp=E,2μm,0.5s							
JHBN	**Jahan bin**	**2.84**	**98**	Pn		**Pb**	**07 02 52.8**	**-2.5**
ASAO	**Ashtian**	**2.91**	**49**	*e*Pn		**Pn**	**07 02 53.1**	**+2.3**
ASAO				IAML			07 03 43.5	
	comp=Z,2μm,1.0s							
IPIR	**Pirpir**	**2.99**	**89**	Pn		**Pb**	**07 02 54.9**	**-3.0**
ZNGN	**Zangian**	**3.02**	**100**	Pn		**Pn**	**07 02 55.1**	**+2.8**
IBRJ	**Brojen**	**3.40**	**102**	Pn		**Pn**	**07 03 00.3**	**+2.8**
KBD	**Kabd**	**3.50**	**175**	P		**Pb**	**07 03 03.0**	**-3.4**
KBD				S		**Sb**	**07 03 46.3**	**-2.5**
QAMS	**Qamsar**	**3.55**	**72**	Pn		**Pn**	**07 03 02.2**	**+2.6**
IKLH	**Kolahrood**	**3.61**	**79**	Pn		**Pn**	**07 03 03.1**	**+2.7**
IKRK	**Kirkuk**	**3.69**	**318**	*e*Pn		**Pn**	**07 03 03.0**	**+1.7**
IKRK				*e*Sn		**Sn**	**07 03 46.0**	**+1.4**
IKRK				AML		AML	07 04 07.4	
	comp=E,662nm,0.6s							
IKRK				AML		AML	07 04 10.4	
	comp=N,854nm,0.8s							
GHVR	**GHOM**	**3.75**	**60**	*e*Pn		**Pn**	**07 03 04.8**	**+2.6**
GHVR				IAML			07 05 30.9	
	comp=Z,390nm,1.0s							
IQOM	**Qom**	**3.78**	**54**	Pn		**Pn**	**07 03 04.4**	**+1.7**
SRSL	**SARDASHT**	**3.87**	**336**	*e*Pn		**Pn**	**07 03 05.0**	**+1.1**
KLNJ	**Kolanjah**	**3.97**	**114**	*e*Pn		**Pn**	**07 03 08.6**	**+3.1**
KLNJ				IAML			07 04 38.8	
	comp=Z,900nm,1.0s							
KLNJ	**Kolanjah**	**3.97**	**114**	Pn		**Pn**	**07 03 08.2**	**+2.7**
ZNJK	**Zanjan**	**4.13**	**15**	*e*Pn		**Pn**	**07 03 09.2**	**+1.6**
ZNJK				IAML			07 03 43.1	
	comp=Z,4.6nm,1.0s							
IVRN	**Varamin**	**4.32**	**56**	Pn		**Pn**	**07 03 12.0**	**+2.0**
SRFHA	**Rafha**	**4.33**	**214**	P		**Pn**	**07 03 13.8**	**+3.7**
KFJS2	**Khafji**	**4.41**	**168**	P		**Pn**	**07 03 15.2**	**+4.1**
KFJS2				S		**Sn**	**07 04 07.3**	**+5.2**
CHTH	**Charan**	**4.49**	**43**	*e*Pn		**Pn**	**07 03 13.7**	**+1.2**
CHTH				IAML			07 04 49.7	
	comp=Z,140nm,1.0s							
KFJS1	**Al Wafrah**	**4.50**	**173**	P		**Pn**	**07 03 16.8**	**+4.4**
KFJS1				S		**Sn**	**07 04 10.0**	**+5.5**
NASN	**Na'in**	**4.60**	**87**	*e*Pn		**Pn**	**07 03 16.3**	**+2.2**
NASN				IAML			07 04 42.5	
	comp=Z,280nm,1.0s							
GIDE	**GILAN DEYLAMAN**	**4.73**	**26**	*e*Pn		**Pn**	**07 03 17.5**	**+1.7**
GIDE				IAML			07 04 49.0	
	comp=Z,530nm,1.0s							
KAZ2	**Kazeron-Fars-I**	**4.79**	**128**	Pn		**Pn**	**07 03 19.9**	**+3.3**
QYSM	**Um Kedad**	**4.82**	**185**	P		**Pn**	**07 03 12.3**	**-4.5**
DAMV	**Damavand**	**4.83**	**51**	*e*Pn		**Pn**	**07 03 18.6**	**+1.4**
DAMV				IAML			07 03 27.5	
	comp=Z,5.2nm,1.0s							
SHI	**Shiraz**	**5.36**	**123**	Pn		**Pn**	**07 03 27.7**	**+3.4**
RQBS	**RQBS**	**5.45**	**193**	P		**Pn**	**07 03 29.0**	**+3.5**
DSBU	**Dashti - Bushe**	**5.46**	**141**	Pn		**Pn**	**07 03 28.8**	**+3.1**
ASYS		**5.78**	**208**	P		**Pn**	**07 03 32.0**	**+2.0**
NARAR	**Arar**	**5.82**	**256**	P		**Pn**	**07 03 31.7**	**+1.1**
WANAN	**Al Wanan**	**5.84**	**170**	P		**Pn**	**07 03 34.8**	**+4.0**
YZKH	**Yazd**	**6.12**	**91**	*e*Pn		**Pn**	**07 03 36.6**	**+1.8**
YZKH				IAML			07 05 09.9	
	comp=Z,90nm,1.0s							
GRMI	**Germi**	**6.14**	**4**	*e*Pn		**Pn**	**07 03 36.3**	**+1.3**
GRMI				IAML			07 05 42.6	
	comp=Z,41nm,1.0s							
ARIRA	**AirJ**	**6.56**	**168**	P		**Pn**	**07 03 43.7**	**+3.0**
ARIRA				S		**Sn**	**07 04 56.5**	**+1.3**
GEVA	**Gevas**	**6.62**	**329**			**Pn**	**07 03 42.4**	**+0.7**
SAKB	**Bahrain**	**7.23**	**157**	P		**Pn**	**07 03 53.0**	**+3.1**
GURO	**Guroymak-BITLI**	**7.29**	**325**			**Pn**	**07 03 50.7**	**-0.1**
SHMA	**Al-Shehemyia**	**7.49**	**154**	P		**Pn**	**07 03 56.9**	**+3.4**
SHMA				S		**Sn**	**07 05 20.3**	**+2.1**
GNI	**Garni**	**7.75**	**345**	Pn		**Pn**	**07 03 57.7**	**+0.5**
	comp=Z,1.1nm,0.3s,baz=167,slow=20,SNR=4.0							
GNI				LR		LR	07 07 36.2	
	comp=Z,193nm,21.3s,baz=160,slow=43							
	comp=Z,8.6nm,0.7s							
GNI	**Garni**	**7.75**	**345**			**Pn**	**07 03 58.4**	**+1.2**
GNI	**Garni**	**7.75**	**345**	P		**Pn**	**07 03 58.4**	**+1.2**
SHRO	**Shahrood**	**7.89**	**63**	*e*Pn		**Pn**	**07 04 00.9**	**+1.9**
SHRO				IAML			07 04 56.4	
	comp=Z,2.6nm,1.0s							
SHOFU	**Shofu**	**7.96**	**164**	P		**Pn**	**07 04 02.0**	**+2.1**
TABS	**Tabas**	**8.25**	**81**	*e*Pn		**Pn**	**07 04 05.4**	**+1.4**
SLWS		**8.36**	**159**	P		**Pn**	**07 04 07.7**	**+2.2**
SMRA	**Abu-Samra**	**8.47**	**158**	P		**Pn**	**07 04 10.2**	**+3.3**
	SNR=12							
SMRA				S		**Sn**	**07 05 43.2**	**+1.0**
TRNA	**Turayna**	**8.61**	**156**	P		**Pn**	**07 04 12.1**	**+3.3**
	SNR=25							
KARS	**Kars**	**8.65**	**338**	Pn		**Pn**	**07 04 10.7**	**+1.3**
KARS	**Kars**	**8.65**	**338**	P		**Pn**	**07 04 10.7**	**+1.3**
MRVT	**Maraveh tapeh**	**8.71**	**53**	*e*Pn		**Pn**	**07 04 14.0**	**+3.7**
AKT	**Akhty**	**8.79**	**2**	*e*P		**Pn**	**07 04 12.9**	**+1.5**
AKT				pmax		pmax		
	comp=Z,15nm,0.7s							
AKT				MLR		MLR		
	comp=Z,735nm,11.0s							
ASF	**Jabal al Asfar**	**8.85**	**270**	Pn		**Pn**	**07 04 11.0**	**-1.2**
	comp=Z,1.8nm,0.3s,baz=88,slow=9.8,SNR=13							
ASF				LR		LR	07 08 42.0	
	comp=Z,341nm,18.1s,baz=67,slow=45							
	comp=Z,4.9nm,0.3s							
JRN	**Qarnain Island**	**9.09**	**147**	P		**Pn**	**07 04 17.5**	**+2.1**
JRN				S		**Sn**	**07 05 57.9**	**+0.5**
KOPT	**Kop Dagi**	**9.18**	**325**	Pn		**Pn**	**07 04 17.2**	**+0.4**
TRLG	**Trialeti**	**9.22**	**345**	P		**Pn**	**07 04 20.0**	**+2.7**
SHBH2	**SHBH2**	**9.23**	**157**	P		**Pn**	**07 04 19.8**	**+2.4**
SHBH2				S		**Sn**	**07 05 58.3**	**-2.7**
SBZV	**Sabzevar**	**9.24**	**64**	*e*Pn		**Pn**	**07 04 19.3**	**+1.6**
RAYN	**Ar Rayn**	**9.26**	**191**			**Pn**	**07 04 18.6**	**+0.7**
RAYN	**Ar Rayn**	**9.26**	**191**	*i* P		**Pn**	**07 04 18.1**	**+0.2**
	SNR=21							
RAYN	**Ar Rayn**	**9.26**	**191**	P		**Pn**	**07 04 18.6**	**+0.7**
SLWR	**Sila**	**9.38**	**155**	P		**Pn**	**07 04 21.5**	**+2.0**
SLWR				S		**Sn**	**07 06 06.0**	**+1.2**
BJRD	**Bojnurd**	**9.63**	**56**	*e*Pn		**Pn**	**07 04 25.4**	**+2.4**
ARPR	**Arapgir-MALATY**	**9.72**	**314**			**Pn**	**07 04 24.4**	**+0.3**
GHWR	**Ruwais**	**9.95**	**149**	P		**Pn**	**07 04 31.0**	**+3.8**
GHWR				S		**Sn**	**07 06 19.1**	**+0.5**
MMAI	**Mount Meron Ar**	**10.06**	**275**	Pn		**Pn**	**07 04 29.6**	**+0.8**
	comp=Z,1.1nm,0.3s,baz=131,slow=11,SNR=5.8							
GHAJ	**Ghor Haditha**	**10.10**	**265**	Pn		**Pn**	**07 04 29.7**	**+0.5**
SHME	**Shamm**	**10.12**	**128**	*i* P		**Pn**	**07 04 30.1**	**+0.6**
	SNR=15							
SHME	**Shamm**	**10.12**	**128**	P		**Pn**	**07 04 31.2**	**+1.8**
	SNR=15							
SHME				S		**Sn**	**07 06 21.0**	**-1.7**
MAK	**Makhachkala**	**10.27**	**1**	*e*P		**Pn**	**07 04 34.2**	**+2.7**
MAK				*e*S		**Sn**	**07 06 29.7**	**+3.4**
MAK				pmax		pmax		
	comp=Z,170nm,0.3s							
MAK				MLR		MLR		
	comp=Z,472nm,5.0s							
BANOM	**Banah**	**10.30**	**128**	*i* P		**Pn**	**07 04 32.3**	**+0.2**
	SNR=32							
BANOM				S		**Sn**	**07 06 22.2**	**-5.3**
BANOM	**Banah**	**10.30**	**128**	P		**Pn**	**07 04 33.0**	**+0.8**
BANOM				S		**Sn**	**07 06 24.7**	**-2.7**
AJN	**Ajban**	**10.50**	**138**	*i* P		**Pn**	**07 04 37.0**	**+2.3**
	SNR=12							
AJN	**Ajban**	**10.50**	**138**	P		**Pn**	**07 04 36.9**	**+2.1**
NAZ	**Nazwa, Dubai**	**10.57**	**134**	*i* P		**Pn**	**07 04 37.1**	**+1.4**
	SNR=19							
NAZ	**Nazwa, Dubai**	**10.57**	**134**	P		**Pn**	**07 04 37.8**	**+2.1**
	SNR=19							
NAZ				S		**Sn**	**07 06 32.6**	**-1.2**
MZWR	**Madinat Zayed**	**10.58**	**145**	P		**Pn**	**07 04 37.5**	**+1.7**
MASF	**Masafi**	**10.60**	**131**	P		**Pn**	**07 04 37.7**	**+1.6**
	SNR=30							
MSFE	**Esma-Masafi**	**10.61**	**131**	*i* P		**Pn**	**07 04 36.3**	**0.0**
	SNR=32							
ASUD	**Al Ashush, Dub**	**10.64**	**137**	P		**Pn**	**07 04 38.7**	**+2.0**
ASUD	**Al Ashush, Dub**	**10.64**	**137**	P		**Pn**	**07 04 38.5**	**+1.8**
FAQ	**Al Faqa, Dubai**	**10.71**	**135**	P		**Pn**	**07 04 38.7**	**+1.0**
FAQ	**Al Faqa, Dubai**	**10.71**	**135**	P		**Pn**	**07 04 39.8**	**+2.2**
MDH	**Madha**	**10.74**	**131**	*i* P		**Pn**	**07 04 38.2**	**+0.2**
	SNR=31							
MDH	**Madha**	**10.74**	**131**	P		**Pn**	**07 04 39.5**	**+1.5**
	SNR=30							
SHRT	**Shahrakht**	**10.89**	**81**	*e*Pn		**Pn**	**07 04 42.0**	**+1.8**
UOSS	**Minazif**	**10.93**	**133**			**Pn**	**07 04 39.4**	**-1.3**
UOSS	**Minazif**	**10.93**	**133**	*i* P		**Pn**	**07 04 40.5**	**-0.2**
	SNR=14							
HATD	**Hatta, Dubai**	**10.97**	**133**	*i* P		**Pn**	**07 04 41.9**	**+0.6**
	SNR=28							
HATD	**Hatta, Dubai**	**10.97**	**133**	P		**Pn**	**07 04 43.0**	**+1.7**
	SNR=28							
ASHO	**Ashiyiah**	**11.03**	**134**	*i* P		**Pn**	**07 04 43.0**	**+0.9**
	SNR=26							
ASHO				S		**Sn**	**07 06 40.1**	**-5.2**
ASHO	**Ashiyiah**	**11.03**	**134**	P		**Pn**	**07 04 43.5**	**+1.4**
	SNR=26							
EIL	**Elat**	**11.04**	**258**	LR		LR	07 10 02.4	
	comp=Z,495nm,19.1s,baz=64,slow=43							
MZR	**Muzera**	**11.05**	**149**	P		**Pn**	**07 04 44.4**	**+2.1**
NEUR	**Neytrino**	**11.19**	**342**	*e*P		**Pn**	**07 04 42.7**	**-1.6**
ALNE	**Al Ain**	**11.33**	**137**	P		**Pn**	**07 04 47.4**	**+1.3**
ALNE	**Al Ain**	**11.33**	**137**	P		**Pn**	**07 04 47.5**	**+1.4**
JASK	**Jask - Hormozg**	**11.41**	**124**	P		**Pn**	**07 04 49.2**	**+2.0**
	SNR=7.9							
KBZ	**Khabaz**	**11.57**	**344**	Pn		**Pn**	**07 04 52.4**	**+3.0**
	comp=Z,0.1nm,0.3s,baz=173,slow=10.0,SNR=9.9							
KBZ				LR		LR	07 09 58.8	
	comp=Z,212nm,19.2s,baz=142,slow=41							
	comp=Z,3.8nm,0.8s							
SHA1	**Shidzhatmaz**	**11.64**	**343**	*e*P		**Pn**	**07 04 47.8**	**-2.7**
SOHO	**SOHO**	**11.73**	**134**	*i* P		**Pn**	**07 04 51.2**	**-0.4**
	SNR=24							
SOHO	**SOHO**	**11.73**	**134**	P		**Pn**	**07 04 51.8**	**+0.2**
KIV	**Kislovodsk**	**11.84**	**343**	Pn		**Pn**	**07 04 54.2**	**+1.1**
KIV	**Kislovodsk**	**11.84**	**343**	*e*P		**Pn**	**07 04 54.1**	**+1.0**
KIV				pmax		pmax		
	comp=Z,16nm,1.1s							
KIV				MLR		MLR		
	comp=Z,78nm,13.0s							
UMZA	**Um Al Zommool**	**12.09**	**143**	P		**Pn**	**07 04 56.9**	**+0.4**
VSLR	**Vesyoloye**	**12.21**	**334**	*e*P		**Pn**	**07 04 55.2**	**-2.9**
ARQ	**Araqi**	**12.33**	**137**	P		**Pn**	**07 05 01.0**	**+1.1**
	SNR=25							
SOC	**Sochi**	**12.43**	**333**	*e*P		**Pn**	**07 05 02.2**	**+1.1**
SOC				*e*S		**Sn**	**07 07 20.0**	**+0.7**
SOC				pmax		pmax		
	comp=Z,22nm,0.9s							
SOC				MLR		MLR		
	comp=Z,333nm,14.0s							
HRA	**Herat**	**12.54**	**78**	Pn		**Pn**	**07 05 03.3**	**+0.4**
HOQ	**Hoqain**	**12.61**	**133**	P		**Pn**	**07 05 04.1**	**+0.4**
	SNR=18							
BR104	**Keskin Array S**	**13.10**	**306**	P		**Pn**	**07 05 10.8**	**+0.4**
	comp=Z,4.8nm,1.3s							
BR131	**Keskin Array S**	**13.11**	**306**			**Pn**	**07 05 10.5**	**-0.1**
BR131	**Keskin Array S**	**13.11**	**306**	P		**Pn**	**07 05 10.5**	**-0.1**
BRTR	**Keskin Array B**	**13.11**	**306**	Pn		**Pn**	**07 05 13.1**	**+2.5**
	comp=Z,0.1nm,0.3s,baz=131,slow=13,SNR=9.7							
BRTR				LR		LR	07 10 30.4	
	comp=Z,56nm,18.9s,baz=112,slow=39							
	comp=Z,1.9nm,0.8s							
BRTR	**Keskin Array B**	**13.11**	**306**	Pn		**Pn**	**07 05 10.3**	**-0.2**
BR105	**Keskin Array S**	**13.12**	**306**	P		**Pn**	**07 05 11.1**	**+0.4**
	comp=Z,7.5nm,1.1s							
BR106	**Keskin Array S**	**13.13**	**306**	P		**Pn**	**07 05 11.2**	**+0.4**
	comp=Z,5.7nm,0.9s							
BIDO	**Bidbid**	**13.17**	**131**	P		**Pn**	**07 05 11.6**	**+0.4**
BSY	**Bisya**	**13.18**	**136**	P		**Pn**	**07 05 11.8**	**+0.4**
	SNR=44							
SMDO	**Samad**	**13.46**	**133**	P		**Pn**	**07 05 15.3**	**0.0**
	SNR=29							
WSAR	**Wadi Sarin**	**13.69**	**131**	P		**Pn**	**07 05 18.1**	**-0.3**
	SNR=21							
JMDO	**Jabal Madar**	**14.00**	**134**	P		**Pn**	**07 05 22.5**	**-0.2**
	SNR=6.5							
WBK	**Wadi Bani Khal**	**14.36**	**131**	P		**Pn**	**07 05 27.2**	**-0.4**
	SNR=14							
JLN	**Jalan Bani Buh**	**14.97**	**131**	P		**Pn**	**07 05 34.6**	**-1.3**
	SNR=9.2							
MHTO	**MHTO**	**15.00**	**138**	P		**Pn**	**07 05 35.4**	**-0.8**
	SNR=30							
MDUB	**Mudurnu**	**15.12**	**306**	Pn		**Pn**	**07 05 38.5**	**+0.7**
DOK	**Doka**	**15.27**	**155**	P		**Pn**	**07 05 37.6**	**-2.2**
	SNR=23							
WHFO	**Wadi Hawf**	**15.79**	**157**	P		**Pn**	**07 05 45.0**	**-1.7**
	SNR=8.1							
ABTO	**Aybut**	**16.17**	**159**	P		**Pn**	**07 05 49.3**	**-2.3**
	SNR=10							
RBK	**Rabkut**	**16.32**	**156**	P		**Pn**	**07 05 51.9**	**-1.6**
	SNR=10							
MANT	**Manisa**	**16.34**	**296**			**Pn**	**07 05 53.8**	**-0.1**
SHAO	**Shalim**	**16.38**	**151**	*i* P		**Pn**	**07 05 53.9**	**-0.4**
	SNR=20							
SHAO	**Shalim**	**16.38**	**151**	P		**Pn**	**07 05 53.2**	**-1.1**
	SNR=12							
DMTO	**DMTO**	**16.39**	**153**	P		**Pn**	**07 05 52.5**	**-1.9**
	SNR=18							
SILT	**Sile**	**16.48**	**306**	⇑P		**P**	**07 05 56.7**	**-1.3**
SHAA	**Shahritus**	**17.67**	**68**	P		**P**	**07 06 11.7**	**+0.4**
SHAA				IAmb		IAmb	07 06 16.1	
	comp=Z,153nm,1.5s							
KBL	**Kabul**	**18.16**	**78**			**Pn**	**07 06 16.5**	**-0.1**
KBL	**Kabul**	**18.16**	**78**	P		**Pn**	**07 06 16.5**	**-0.1**
KBL				pmax		pmax		
	comp=Z,43nm,1.3s							
KBL	**Kabul**	**18.16**	**78**	P		**P**	**07 06 18.7**	**+1.8**
	SNR=17							
CHGR	**Chuyangaron**	**18.68**	**65**	P		**P**	**07 06 22.3**	**-0.1**
CHGR				IAmb		IAmb	07 06 28.0	
	comp=Z,47nm,1.0s							
CHGR	**Chuyangaron**	**18.68**	**65**	⇓*e*P		**Pn**	**07 06 22.7**	**-0.1**
CHGR				pmax		pmax		
	comp=Z,47nm,1.0s							
IDI	**Anoyia**	**18.80**	**284**	P		**Pn**	**07 06 25.0**	**+0.7**
	comp=Z,1.5nm,0.3s,baz=98,slow=12,SNR=8.8							
	comp=Z,42nm,0.8s							
ALN	**Alexandroupoli**	**18.90**	**302**	P		**P**	**07 06 22.9**	**-1.8**
ALN	**Alexandroupoli**	**18.90**	**302**	P		**P**	**07 06 22.9**	**-1.8**
ALN				pmax		pmax		
	comp=Z,14nm,1.3s							
VRH	**Novokhopyorsk**	**18.97**	**349**	*e*P		**P**	**07 06 23.3**	**-2.1**
VRH				pmax		pmax		
	comp=Z,70nm,0.7s							
AB31	**Akbulak array**	**19.05**	**26**			**Pn**	**07 06 26.9**	**-0.2**
AB31	**Akbulak array**	**19.05**	**26**	*i* P		**P**	**07 06 26.2**	**-0.1**
AB31				pmax		pmax		
	comp=Z,20nm,0.7s							
ABKAR	**Akbulak array**	**19.05**	**26**	P		**Pn**	**07 06 26.9**	**-0.2**
TPGR	**Topolog**	**19.07**	**315**	⇓P		**Pn**	**07 06 27.2**	**-0.2**
VORD	**Divnogorie**	**19.22**	**344**	*e*P		**P**	**07 06 26.1**	**-2.0**
VORD				pmax		pmax		
	comp=Z,40nm,1.0s							
RDO	**Rodhopi**	**19.35**	**302**			**Pn**	**07 06 30.2**	**-0.5**
CFR	**Carcaliu**	**19.42**	**316**	⇑P		**Pn**	**07 06 31.4**	**-0.1**
CFR	**Carcaliu**	**19.42**	**316**	P		**Pn**	**07 06 31.4**	**-0.1**
AKTO	**Aktyubinsk**	**19.42**	**21**	P		**P**	**07 06 30.0**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=206,slow=8.6,SNR=28							
AKTO				LR		LR	07 16 07.5	
	comp=Z,177nm,18.2s,baz=124,slow=44							
	comp=Z,12nm,0.7s							
AKTO	**Aktyubinsk**	**19.42**	**21**	P		**P**	**07 06 30.0**	**-0.3**
VSR	**Storozhevoye**	**19.48**	**344**	*e*P		**P**	**07 06 29.5**	**-1.4**
VSR				pmax		pmax		
	comp=Z,30nm,0.6s							
GAR	**Garm**	**19.64**	**65**			**P**	**07 06 33.1**	**+0.2**
GAR				IAm

ARSB Arslanbob 22.16 60 P **P** **07 06 59.6 -0.6**
ARSB pmax pmax
comp=Z,27nm,0.8s
AK07 Malin Array Si 22.32 328 P **P** **07 07 01.2 -0.5**
AK09 Malin Array Si 22.34 329 P **P** **07 07 00.8 -1.0**
AK10 Malin Array Si 22.34 329 P **P** **07 07 00.7 -1.2**
AK06 Malin Array Si 22.35 329 P **P** **07 07 00.9 -1.1**
AK08 Malin Array Si 22.36 329 P **P** **07 07 01.0 -1.1**
AK05 Malin Array Si 22.38 329 P **P** **07 07 01.7 -0.6**
AK02 Malin Array Si 22.40 329 P **P** **07 07 02.2 -0.3**
AK12 Malin Array Si 22.41 329 P **P** **07 07 02.2 -0.5**
AK14 Malin Array Si 22.43 328 P **P** **07 07 02.6 -0.2**
AKASG Malin Array Be 22.43 329 P **P** **07 07 01.1 -1.6**
comp=Z,14nm,0.8s,baz=138,slow=9.4,SNR=25
comp=Z,14nm,0.8s
AKBB Malin Array Si 22.43 329 P **P** **07 07 01.7 -1.1**
AKBB IAmb IAmb 07 07 04.8
comp=Z,30nm,0.8s
AKBB Malin Array Si 22.43 329⇑ *e*P **P** **07 07 02.9 +0.1**
AKBB pmax pmax
comp=Z,34nm,0.8s
AKBB Malin Array Si 22.43 329 P **P** **07 07 02.0 -0.8**
KIEV Kiev 22.43 329⇓P **P** **07 07 02.9 +0.1**
KIEV Kiev 22.43 329 P **P** **07 07 00.9 -1.9**
KIEV IAmb IAmb 07 07 04.9
comp=Z,26nm,0.8s
KIEV Kiev 22.43 329 P **P** **07 07 00.9 -1.9**
KIEV pmax pmax
comp=Z,27nm,0.8s
KIEV Kiev 22.43 329 P **P** **07 07 01.7 -1.1**
comp=Z,156nm,0.9s
AK13 Malin Array Si 22.43 328 P **P** **07 07 02.3 -0.6**
AK11 Malin Array Si 22.43 329 P **P** **07 07 02.2 -0.7**
AK03 Malin Array Si 22.45 329 P **P** **07 07 02.5 -0.5**
BURAR Bucovina Array 22.45 318⇓P **P** **07 07 03.8 +0.6**
BURAR Bucovina Array 22.45 318 P **P** **07 07 02.0 -1.2**
BURAR Bucovina Array 22.45 318 P **P** **07 07 03.8 +0.6**
AK16 Malin Array Si 22.45 329 P **P** **07 07 02.7 -0.4**
AK15 Malin Array Si 22.46 329 P **P** **07 07 02.8 -0.4**
AK04 Malin Array Si 22.47 329 P **P** **07 07 02.8 -0.4**
BUR08 Bucovina Ar. S 22.47 318 P **P** **07 07 03.5 0.0**
AK17 Malin Array Si 22.49 329 P **P** **07 07 03.0 -0.4**
AK18 Malin Array Si 22.51 329 P **P** **07 07 03.2 -0.5**
AK19 Malin Array Si 22.53 329 P **P** **07 07 03.5 -0.4**
AK22 Malin Array Si 22.54 329 P **P** **07 07 03.5 -0.5**
LUBAR Lubar, Ukraine 22.55 326 P **P** **07 07 03.7 -0.4**
AK20 Malin Array Si 22.55 329 P **P** **07 07 04.1 0.0**
AK21 Malin Array Si 22.56 329 P **P** **07 07 04.2 0.0**
GZR Gura Zlata 22.82 311⇓P **P** **07 07 07.6 +0.4**
GZR Gura Zlata 22.82 311 P **P** **07 07 07.6 +0.4**
MI29 MI29, Kamyanyy 22.84 327 P **P** **07 07 07.4 +0.2**
comp=Z,130nm,0.9s
MI30 MI30,Zelenitsa 22.92 328 P **P** **07 07 07.2 -0.8**
comp=Z,78nm,0.8s
EKS2 Erkin-Say 23.09 57 P **P** **07 07 11.4 +1.4**
SNR=7.1
MARR Marisel-Cluj 23.19 314⇓P **P** **07 07 12.5 +1.5**
MDVR Moldovita 23.27 309⇓P **P** **07 07 12.1 +0.4**
DRGR 23.49 314⇓P **P** **07 07 14.5 +0.6**
DRGR 23.49 314 P **P** **07 07 14.5 +0.6**
UCH Uchtor 23.49 58 P **P** **07 07 16.9 +2.5**
SNR=8.9
AAK Ala-Archa 23.59 57 LR LR 07 17 47.6
comp=Z,245nm,18.6s,baz=250,slow=40
AAK Ala-Archa 23.59 57 P **P** **07 07 17.1 +2.0**
SNR=8.7
AAK Ala-Archa 23.59 57 P **P** **07 07 15.5 +0.4**
AAK Ala-Archa 23.59 57 *i* P **P** **07 07 16.7 +1.7**
SNR=9.3
AAK Ala-Archa 23.59 57⇑ *e*P **P** **07 07 16.5 +1.4**
AAK pmax pmax
comp=Z,9.0nm,0.9s
AAK Ala-Archa 23.59 57 P **P** **07 07 17.8 +2.7**
OBN Obninsk 23.68 344 P **P** **07 07 14.9 -0.7**
comp=Z,23nm,0.4s,baz=128,slow=9.2,SNR=5.1
comp=Z,23nm,0.4s
OBN Obninsk 23.68 344 P **P** **07 07 14.4 -1.2**
OBN Obninsk 23.68 344 *d i* P **P** **07 07 14.4 -1.2**
OBN *e* PPP PPP 07 07 50.1
OBN *e* 07 10 58.7
OBN pmax pmax
comp=Z,32nm,1.0s
OBN MLR MLR
comp=Z,205nm,18.0s
KSH2 Kashi 23.69 66 P **P** **07 07 18.1 +2.0**
KSH2 pP sP 07 07 21.1 -1.8
KSH2 pmax pmax
comp=Z,25nm,0.8s
KSH2 L L
comp=Z,360nm,11.3s
KSH2 L L
comp=Z,570nm,13.1s
KSH2 L L
comp=Z,640nm,17.5s
USP Ospenovka 23.77 56 P **P** **07 07 18.8 +2.1**
SNR=13
CHMS Chumysh 23.87 57 P **P** **07 07 19.3 +1.6**
SNR=9.3
KBK Karagaybulak 23.92 57 P **P** **07 07 20.7 +2.5**
SNR=12
SGDS Sogindy 23.92 55 *e*P **P** **07 07 18.2 +0.1**
MOS Moscow 24.04 346 *e*P **P** **07 07 18.4 -0.6**
MOS *e*S **S** **07 11 33.3 -2.2**
MOS pmax pmax
comp=Z,50nm,1.0s
BTLS Baital 24.06 51 *e*P **P** **07 07 19.4 +0.1**
BTLS Baital 24.06 51 *e*P **P** **07 07 19.4 +0.1**
RNPP5 Staryi Chortor 24.31 326 P **P** **07 07 21.2 -0.4**
SHIU Shidnytsya 24.37 320 P **P** **07 07 21.4 -0.8**
NRN Naryn 24.39 61 P **P** **07 07 22.9 +0.1**
NRN IAmb IAmb 07 07 27.9
comp=Z,29nm,0.9s
NRN Naryn 24.39 61 P **P** **07 07 22.9 +0.1**
NRN pmax pmax
comp=Z,29nm,0.9s
RNPP8 Varash 24.40 326 P **P** **07 07 21.8 -0.5**
RNPP9 Sopachiv 24.43 326 P **P** **07 07 22.2 -0.5**
TKM2 Tokmak 2 24.45 57 P **P** **07 07 25.2 +2.0**
SNR=16
HOLU Holmets 24.54 318 P **P** **07 07 23.2 -0.5**
ULHL Ulahol 24.74 59 P **P** **07 07 28.3 +2.4**
SNR=8.6
ARTI Arti 24.92 15 LR LR 07 18 32.2
comp=Z,55nm,18.4s,baz=210,slow=40
ARTI Arti 24.92 15 P **P** **07 07 26.3 -0.7**
ARTI IAmb IAmb 07 07 35.8
comp=Z,20nm,0.8s
ARTI Arti 24.92 15 *d i* P **P** **07 07 26.7 -0.3**
ARTI 07 07 56.9
ARTI 07 10 56.7
ARTI S **S** **07 11 51.8 +2.2**
ARTI pmax pmax
comp=Z,28nm,1.1s
FURI Furi 24.99 201 LR LR 07 17 47.7
comp=Z,175nm,19.7s,baz=357,slow=38
TNSS Tian-Shan 25.44 57 *e*P **P** **07 07 32.0 -0.3**
TNSS Tian-Shan 25.44 57 *e*P **P** **07 07 32.0 -0.3**
AAA Alma-Ata 25.46 57 *e*P **P** **07 07 32.3 +0.2**
AAA pmax pmax
comp=Z,30nm,0.7s
AAA Alma-Ata 25.46 57 *e*P **P** **07 07 32.3 +0.2**
comp=Z,30nm,0.7s
TIP Timpagrande 25.53 293⇑P **P** **07 07 33.6 +0.7**
MDOK Medeo 25.54 57 *e*P **P** **07 07 33.0 0.0**
MDOK Medeo 25.54 57 *e*P **P** **07 07 33.0 0.0**
KECS Kecovo 25.62 316 *e*P **P** **07 07 36.4 +2.9**
KECS Kecovo 25.62 316 *e*P **P** **07 07 36.4 +2.9**
PSZ Piszkesteto 25.71 314⇓P **P** **07 07 35.5 +1.1**
PSZ Piszkesteto 25.71 314 P **P** **07 07 35.3 +0.9**
PSZ IAmb IAmb 07 07 40.5
comp=Z,22nm,0.9s
PSZ Piszkesteto 25.71 314 P **P** **07 07 35.3 +0.9**
PSZ pmax pmax
comp=Z,22nm,0.9s
PSZ Piszkesteto 25.71 314 *e*P **P** **07 07 36.6 +2.2**
MATE Matera 25.74 297⇓P **P** **07 07 35.1 +0.4**
MATE Matera 25.74 297 *e*P **P** **07 07 34.8 +0.2**
TARG Taragay, Kyrgy 25.78 61 P **P** **07 07 35.4 -0.1**
TARG IAmb IAmb 07 07 41.5
comp=Z,85nm,1.8s
TARG Taragay, Kyrgy 25.78 61 P **P** **07 07 35.4 -0.1**
TARG pmax pmax
comp=Z,85nm,1.8s
MORH Mrgy, Hungar 25.80 310⇓P **P** **07 07 36.3 +1.2**

MNK Minsk 25.81 333 *i* P **P** **07 07 32.9 -2.3**
comp=E,39nm,1.0s
MNK *i* P **P** **07 07 32.9 -2.3**
comp=N,51nm,1.0s
MNK *i* P **P** **07 07 32.9 -2.3**
comp=Z,74nm,1.0s,baz=140
MNK *i* PP **PnPn** **07 08 09.3 -2.7**
MNK *i* PPP PPP 07 08 17.8
MNK *i* S **S** **07 12 02.6 -1.2**
MNK *i* SSS SSS 07 13 13.9
MNK *i* LQ LQ 07 15 46.8
MNK *i* LR LR 07 17 38.7
MNK *i* LRM MLR 07 19 11.9
comp=N,859nm,21.0s
MNK *i* LRM MLR 07 19 12.7
MNK *i* LRM MLR 07 19 19.7
comp=Z,179nm,18.2s
MNK Minsk 25.81 333 *i* P **P** **07 07 32.8 -2.3**
MNK *i* PPP PPP 07 08 17.8
MNK *i* S **S** **07 12 02.6 -1.2**
MNK pmax pmax
comp=E,39nm,1.0s
MNK pmax pmax
comp=Z,74nm,1.0s
MNK pmax pmax
comp=N,51nm,1.0s
MNK MLR MLR
comp=N,859nm,21.0s
MNK MLR MLR
comp=Z,179nm,18.0s
KIRV Kirov 25.95 2 *d i* P **P** **07 07 36.1 -0.2**
CEL Celeste 26.14 291 P **P** **07 07 39.3 +0.9**
CEL IAmb IAmb 07 07 55.3
comp=Z,23nm,0.9s
NIE Niedzica 26.18 318 *e*P **P** **07 07 41.9 +3.3**
BORK Borovoye 26.21 32 P **P** **07 07 38.7 -0.1**
BORK IAmb IAmb 07 07 42.1
comp=Z,16nm,0.8s
BORK Borovoye 26.21 32 *c e*P **P** **07 07 39.0 +0.2**
BORK pmax pmax
comp=Z,19nm,0.9s
BVAR Borovoye Array 26.23 32 P **P** **07 07 39.2 +0.3**
comp=Z,18nm,0.7s,baz=226,slow=8.0,SNR=89
BVAR PcP **PcP** **07 11 05.9 +0.6**
comp=Z,2.4nm,0.7s,baz=194,slow=2.5,SNR=5.2
BVAR ScP **ScP** **07 14 43.5 -1.0**
comp=Z,2.2nm,0.5s,baz=234,slow=3.8,SNR=8.0
BVAR LR LR 07 19 22.1
comp=Z,79nm,21.2s,baz=235,slow=40
comp=Z,18nm,0.7s
CUC Castrocucco 26.34 295 P **P** **07 07 40.7 +0.6**
PRZ Przheval'sk 26.36 59 P **P** **07 07 41.2 +0.8**
PRZ IAmb IAmb 07 07 46.5
comp=Z,53nm,1.4s
PRZ Przheval'sk 26.36 59 P **P** **07 07 41.3 +0.8**
PRZ pmax pmax
comp=Z,53nm,1.4s
SATY Saty 26.48 58 *e*P **P** **07 07 41.8 +0.3**
SATY pmax pmax
comp=Z,17nm,0.9s
SATY Saty 26.48 58 *e*P **P** **07 07 41.8 +0.3**
comp=Z,17nm,0.9s
LANS Liptovska Anna 26.53 317 *e*P **P** **07 07 43.7 +2.0**
LANS Liptovska Anna 26.53 317 *e*P **P** **07 07 43.7 +2.0**
NACGM Naroch 26.53 333 *e*P **P** **07 07 43.4 +1.8**
comp=Z,70nm,0.8s,baz=138
WUS Wushi 26.74 62 P **P** **07 07 44.1 +0.3**
WUS IAmb IAmb 07 07 51.7
comp=Z,16nm,1.1s
KPKS Kokpek 26.77 57 *e*P **P** **07 07 44.0 -0.1**
KPKS Kokpek 26.77 57 *e*P **P** **07 07 44.0 -0.1**
OJC Ojcow 26.86 319 *e*P **P** **07 07 45.8 +1.1**
OJC Ojcow 26.86 319 P **P** **07 07 45.2 +0.5**
OJC Ojcow 26.86 319 P **P** **07 07 45.2 +0.5**
UZB Uzynbulak 26.94 58 *e*P **P** **07 07 46.0 +0.3**
UZB pmax pmax
comp=Z,6.0nm,0.6s
UZB Uzynbulak 26.94 58 *e*P **P** **07 07 46.0 +0.3**
comp=Z,6.2nm,0.6s
TDK Taldyqorghan 26.97 54 *e*P **P** **07 07 46.2 +0.5**
TDK pmax pmax
comp=Z,17nm,0.7s
TDK Taldyqorghan 26.97 54 *e*P **P** **07 07 46.2 +0.5**
comp=Z,18nm,0.7s
SHLS Shalkode 27.26 58 *e*P **P** **07 07 51.5 +3.0**
SHLS pmax pmax
comp=Z,15nm,1.3s
SHLS Shalkode 27.26 58 *e*P **P** **07 07 51.5 +3.0**
comp=Z,15nm,1.3s
ISAL Salakas 27.28 333 *e*P **P** **07 07 49.9 +1.5**
SUW Suwalki 27.39 328 *e*P **P** **07 07 49.5 +0.2**
SUW Suwalki 27.39 328 P **P** **07 07 49.2 -0.2**
SUW Suwalki 27.39 328 P **P** **07 07 49.2 -0.2**
JAVC Velka Javorina 27.45 315 *e*P **P** **07 07 52.2 +2.1**
RONA Rosalia, Austr 27.84 312 *e*pP pP 07 07 55.9 -2.5
comp=Z,8.0nm,1.1s
MORC Moravsky Berou 27.93 317 P **P** **07 07 54.4 +0.1**
MORC Moravsky Berou 27.93 317 P **P** **07 07 54.4 +0.1**
MORC pmax pmax
comp=Z,9.0nm,0.9s
MORC Moravsky Berou 27.93 317 *e*P **P** **07 07 54.9 +0.6**
WINA Alland / Wiene 28.13 312 *e*pP pP 07 07 58.0 -2.9
comp=Z,7.7nm,1.0s
ARSA Arzberg 28.18 310 *e*pP pP 07 07 59.8 -1.5
comp=Z,2.0nm,0.6s
VRAC Vranov 28.29 315 *e*P **P** **07 08 00.1 +2.6**
KLMR Klimovskoe 28.65 352 *e*P **P** **07 07 58.3 -2.3**
KLMR pmax pmax
comp=Z,27nm,0.8s
DPC Dobruska-Polom 28.89 317 *e*P **P** **07 08 03.4 +0.5**
DPC Dobruska-Polom 28.89 317 *e*P **P** **07 08 03.4 +0.5**
KURBB Kurchatov Arra 29.09 43 P **P** **07 08 04.9 +0.3**
comp=Z,8.6nm,0.8s,baz=248,slow=8.9,SNR=7.2
KURBB ScP **ScP** **07 14 52.7 -0.6**
comp=Z,1.8nm,0.7s,baz=244,slow=4.0,SNR=14
KURBB LR LR 07 21 29.1
comp=Z,88nm,21.5s,baz=174,slow=40
comp=Z,8.6nm,0.8s
KSP Ksiaz 29.12 318 *e*P **P** **07 08 02.8 -2.1**
KSP Ksiaz 29.12 318 P **P** **07 08 09.4 +4.5**
UPC Upice 29.14 317 *e*P P 07 08 09.7 +4.7
UPC Upice 29.14 317 *e*P P 07 08 09.7 +4.7
CHVC Chvalec 29.15 317 *e*P **P** **07 08 06.0 +0.9**
CHVC Chvalec 29.15 317 *e*P **P** **07 08 06.0 +0.9**
MOA Molln 29.18 311 *e*P **P** **07 08 06.5 +1.1**
comp=Z,4.8nm,0.8s
KURK Kurchatov 29.19 43 P **P** **07 08 05.7 +0.3**
KURK IAmb IAmb 07 08 07.3
comp=Z,10nm,0.8s
KURK Kurchatov 29.19 43 *d i* P **P** **07 08 06.7 +1.3**
KURK pmax pmax
comp=Z,14nm,0.9s
VSU Vasula 29.31 338⇑ *e*P **P** **07 08 06.3 -0.1**
VSU pmax pmax
comp=Z,22nm,0.8s
KBA Koelnbreinsper 29.53 309 *e*P **P** **07 08 09.8 +1.0**
comp=Z,5.5nm,0.7s
MAKZ Makanchi 29.87 52 P **P** **07 08 11.3 -0.2**
MAKZ Makanchi 29.87 52 P **P** **07 08 11.3 -0.2**
MAKZ pmax pmax
comp=Z,7.0nm,1.2s
GERES GERESS Array B 29.87 313 P **P** **07 08 12.5 +0.8**
comp=Z,0.9nm,0.7s,baz=137,slow=13,SNR=4.6
GERES ScP **ScP** **07 14 55.3 -0.7**
comp=Z,0.2nm,0.3s,baz=87,slow=2.8,SNR=3.9
comp=Z,0.9nm,0.7s
ABTA Abfaltersbach 29.99 308 *e*pP pP 07 08 15.3 -2.2
comp=Z,2.1nm,0.5s
LESA Schwarzleotal 30.07 310 *e*pP pP 07 08 15.1 -3.1
comp=Z,3.7nm,0.9s
MK31 Makanchi Array 30.07 52 *c i* P **P** **07 08 14.3 +0.9**
MKAR Makanchi Array 30.07 52 P **P** **07 08 14.3 +1.0**
comp=Z,10.0nm,0.7s,baz=249,slow=7.7,SNR=112
MKAR PcP **PcP** **07 11 15.9 +1.0**
comp=Z,0.7nm,0.8s,baz=192,slow=1.7,SNR=2.3
MKAR ScP **ScP** **07 14 55.2 -1.4**
comp=Z,1.2nm,0.9s,baz=264,slow=3.7,SNR=4.7
MKAR LR LR 07 21 10.6
comp=Z,40nm,18.7s,baz=257,slow=38
comp=Z,10.0nm,0.7s
MKAR Makanchi Array 30.07 52 P **P** **07 08 14.5 +1.1**
ARBE Arbavere 30.32 338 *e*P **P** **07 08 15.1 -0.2**
CTI Castel Tesino 30.39 307 P **P** **07 08 16.4 +0.1**
CTI IAmb IAmb 07 08 19.8
comp=Z,6.7nm,0.8s

CTI Castel Tesino 30.39 307 P **P** **07 08 16.4 +0.1**
CTI pmax pmax
comp=Z,7.0nm,0.8s
WTTA Wattenberg 30.70 309 *e*P **P** **07 08 19.8 +0.6**
comp=Z,6.8nm,0.8s
WATA Walderalm 30.76 309 *e*pP pP 07 08 21.8 -2.6
comp=Z,8.0nm,0.8s
SQTA Sankt Quirin 30.98 309 *e*P **P** **07 08 21.7 +0.3**
comp=Z,7.4nm,0.9s
MOTA Moosalm 31.08 309 *i* P **P** **07 08 22.7 +0.3**
comp=Z,3.9nm,0.7s
CLL Collm 31.20 317 *e*P **P** **07 08 24.0 +0.8**
CLL Collm 31.20 317 *e*P **P** **07 08 24.0 +0.8**
CLL *ex* x 07 08 41.0
FETA Feichten 31.24 308 *e*P **P** **07 08 23.7 -0.2**
comp=Z,9.5nm,1.3s
KEST Kesra 31.45 286 P **P** **07 08 27.4 +1.7**
comp=Z,5.3nm,0.9s,baz=329,slow=4.4,SNR=5.3
comp=Z,5.3nm,0.9s
DAVA Damuels 31.87 308 *e*P **P** **07 08 29.5 +0.1**
comp=Z,6.7nm,0.8s
FIA1 FINESS Array S 31.91 341 P **P** **07 08 28.9 -0.4**
FINES FINESS Array B 31.91 341 P **P** **07 08 29.0 -0.4**
comp=Z,5.0nm,0.5s,baz=146,slow=9.1,SNR=30
FINES ScP **ScP** **07 15 01.4 -0.9**
comp=Z,3.2nm,0.8s,baz=201,slow=8.1,SNR=3.4
comp=Z,5.0nm,0.5s
FINES FINESS Array B 31.91 341 P **P** **07 08 29.2 -0.1**
FINES FINESS Array B 31.91 341 P **P** **07 08 29.0 -0.4**
JOF Joensuu 31.93 346 *e*P **P** **07 08 28.4 -1.0**
ZSN Zaisan 31.94 51 *e*P **P** **07 08 30.1 +0.3**
ZSN Zaisan 31.94 51 *e*P **P** **07 08 30.1 +0.3**
KEF Keuruu 32.84 341 *e*P **P** **07 08 37.0 -0.4**
RAF Rauma 32.89 337 *e*P **P** **07 08 35.3 -2.6**
SUF Sumiainen 32.95 342 *e*P **P** **07 08 37.5 -0.9**
WMQ Urumqi 33.28 59 *e*P **P** **07 08 46.3 +4.6**
WMQ pmax pmax
comp=Z,16nm,1.5s
SENIN Lac Senin/Sane 33.42 306 P **P** **07 08 43.2 +0.2**
BNI Bardonecchia 33.65 304 P **P** **07 08 45.8 +0.8**
BNI IAmb IAmb 07 08 48.6
comp=Z,22nm,1.0s
BNI Bardonecchia 33.65 304 P **P** **07 08 45.8 +0.8**
BNI pmax pmax
comp=Z,22nm,1.0s
ZAA0 Zalesovo Array 34.00 40 P **P** **07 08 48.3 +0.6**
ZAA0 IAmb IAmb 07 08 53.8
comp=Z,13nm,0.7s
ZALV Zalesovo Beam 34.00 40 P **P** **07 08 48.0 +0.3**
comp=Z,12nm,0.7s,baz=245,slow=9.0,SNR=36
ZALV LR LR 07 25 05.9
comp=Z,48nm,18.9s,baz=266,slow=41
comp=Z,12nm,0.7s
ZALV Zalesovo Beam 34.00 40 P **P** **07 08 48.0 +0.3**
ZALV Zalesovo Beam 34.00 40 P **P** **07 08 48.1 +0.4**
DGZ Jazzator, Alta 34.14 48⇑ *e*P **P** **07 08 50.1 +0.9**
DGZ pmax pmax
comp=Z,6.0nm,0.6s
VAF Ylistaro 34.15 340 *e*P **P** **07 08 48.1 -0.8**
EVN Everest 34.26 87 P **P** **07 08 51.8 +0.8**
HFS Hagfors 35.26 331 P **P** **07 08 58.5 -0.1**
comp=Z,20nm,0.7s,baz=120,slow=8.8,SNR=34
comp=Z,20nm,0.7s
APA Apatity 35.88 351⇓ *e*P **P** **07 09 01.5 -2.2**
APA pmax pmax
comp=Z,10.0nm,0.9s
APA MLR MLR
comp=Z,1μm,4.4s
LVZ Lovozero 36.03 352 P **P** **07 09 05.2 +0.2**
LVZ Lovozero 36.03 352 P **P** **07 09 05.3 +0.2**
LVZ pmax pmax
comp=Z,107nm,1.5s
NC405 NORSAR Array S 36.63 332 P **P** **07 09 09.9 -0.3**
NC405 IAmb IAmb 07 10 11.3
comp=Z,34nm,1.4s
MBAR Mbarara 36.63 209 LR LR 07 25 29.2
comp=Z,77nm,20.4s,baz=50,slow=38
MBAR Mbarara 36.63 209⇑ *e*P **P** **07 09 07.5 -3.4**
MBAR pmax pmax
comp=Z,5.0nm,0.3s
NB2 NORSAR Subarra 36.79 331 P **P** **07 09 10.6 -1.0**
comp=Z,8.9nm,1.0s,baz=126,slow=8.6
NOA NORSAR Array B 36.79 331 P **P** **07 09 10.8 -0.8**
comp=Z,3.7nm,0.9s,baz=123,slow=8.4,SNR=6.5
NOA LR LR 07 26 50.8
comp=Z,57nm,19.0s,baz=285,slow=40
comp=Z,3.7nm,0.9s
NC204 NORSAR Array S 37.10 331 P **P** **07 09 14.1 -0.3**
KEV Kevo 38.84 349 P **P** **07 09 28.9 +0.2**
KEV Kevo 38.84 349 P **P** **07 09 28.9 +0.2**
KEV pmax pmax
comp=Z,248nm,1.9s
ARCES ARCESS Array B 38.90 348 P **P** **07 09 28.2 -1.1**
comp=Z,1.7nm,0.5s,baz=153,slow=8.2,SNR=13
ARCES PcP **PcP** **07 11 40.1 +0.2**
comp=Z,3.5nm,0.8s,baz=134,slow=5.2,SNR=1.6
ARCES ScP **ScP** **07 15 28.0 +0.5**
comp=Z,4.8nm,1.0s,baz=98,slow=2.5,SNR=4.7
comp=Z,1.7nm,0.5s
ARCES ARCESS Array B 38.90 348 P **P** **07 09 29.3 0.0**
ARCES ARCESS Array B 38.90 348 P **P** **07 09 29.3 0.0**
ARCES pmax pmax
comp=Z,164nm,2.0s
GOMU GeErMu 39.00 71 P **P** **07 09 31.1 0.0**
GOMU pmax pmax
comp=Z,7.0nm,1.1s
SHL Shillong 39.32 89 P **P** **07 09 33.9 +0.3**
SHL IAmb IAmb 07 09 38.6
comp=Z,40nm,1.2s
SHL Shillong 39.32 89 P **P** **07 09 33.9 +0.3**
SHL pmax pmax
comp=Z,41nm,1.2s
KAAM Kaadhehdhoo 40.10 138 P **P** **07 09 41.5 +1.6**
KNGR Kungurtug, Tuv 40.68 49⇑ *i* P **P** **07 09 46.1 +1.5**
KNGR pmax pmax
comp=Z,14nm,0.8s
ESDC Sonseca Array 41.54 295 P **P** **07 09 52.0 +0.3**
comp=Z,2.8nm,1.1s,baz=74,slow=8.7,SNR=5.7
comp=Z,2.8nm,1.1s
EKA Eskdalemuir Ar 41.63 318 P **P** **07 09 51.7 -0.4**
comp=Z,6.1nm,0.8s,baz=106,slow=8.7,SNR=8.5
comp=Z,6.1nm,0.8s
GTA2 Gaotai 42.40 65 *e*P **P** **07 10 00.3 +1.5**
GTA2 pP sP 07 10 03.8 -2.0
GTA2 pmax pmax
comp=Z,8.0nm,1.3s
TLY Talaya 44.61 48 LR LR 07 30 42.6
comp=Z,97nm,19.0s,baz=296,slow=38
TORD Torodi Ar. Bea 45.92 256 P **P** **07 10 27.2 +0.1**
comp=Z,4.4nm,0.8s,baz=73,slow=4.6,SNR=19
TORD LR LR 07 30 54.1
comp=Z,550nm,20.2s,baz=314,slow=38
comp=Z,4.4nm,0.8s
LZDM Lanzhou Array 46.11 70 P **P** **07 10 28.7 -0.1**
comp=Z,2.5nm,0.5s,baz=289,slow=4.5,SNR=4.7
comp=Z,2.5nm,0.5s
LZH Lanzhou 46.20 69 *e*P **P** **07 10 29.9 +0.6**
LZH pP sP 07 10 33.8 -2.5
LZH pmax pmax
comp=Z,18nm,1.3s
SONM Songino Array 46.42 53 P **P** **07 10 31.4 +0.6**
comp=Z,1.1nm,0.5s,baz=281,slow=10.0,SNR=10.0
SONM PcP **PcP** **07 12 05.5 0.0**
comp=Z,0.9nm,0.7s,baz=262,slow=4.9,SNR=3.9
SONM ScP **ScP** **07 15 57.8 -0.5**
comp=Z,0.3nm,0.4s,baz=264,slow=4.0,SNR=4.3
comp=Z,1.1nm,0.5s
SONM Songino Array 46.42 53 P **P** **07 10 30.6 -0.3**
SONM IAmb IAmb 07 10 36.0
comp=Z,8.8nm,1.5s
SONM Songino Array 46.42 53 P **P** **07 10 30.6 -0.3**
SONM pmax pmax
comp=Z,9.0nm,1.5s
ULN Ulaanbaatar 46.86 53 P **P** **07 10 35.2 +0.9**
ULN IAmb IAmb 07 10 40.8
comp=Z,11nm,0.9s
ULN Ulaanbaatar 46.86 53 P **P** **07 10 35.3 +0.9**
ULN pmax pmax
comp=Z,11nm,0.9s
ULN Ulaanbaatar 46.86 53 P **P** **07 10 35.2 +0.9**
ULN Ulaanbaatar 46.86 53 P **P** **07 10 35.6 +1.2**
PZH PanZhiHua 47.27 83 P **P** **07 10 38.6 +0.8**
SPB2 Spitsbergen Ar 47.55 352 P **P** **07 10 39.6 +0.5**
SPITS Spitsbergen Ar 47.56 352 P **P** **07 10 39.6 +0.4**
comp=Z,5.9nm,0.6s,baz=126,slow=11,SNR=24
comp=Z,5.9nm,0.6s

SPITS	**Spitsbergen Ar**	**47.56**	**352**	P		**P**	**07 10 39.5**	**+0.4**
SPITS				pmax		pmax		
	comp=Z,143nm,2.0s							
CHTO	**Chiang Mai**	**48.05**	**94**	P		**P**	**07 10 43.8**	**+0.1**
	comp=Z,6.0nm,0.8s							
CMAR	**Chiang Mai Arr**	**48.21**	**94**	P		**P**	**07 10 45.9**	**+0.9**
	comp=Z,2.5nm,0.4s,baz=294,slow=8.5,SNR=5.5							
CMAR				ScP		**ScP**	**07 16 06.5**	**+0.3**
	comp=Z,1.4nm,0.3s,baz=298,slow=4.7,SNR=5.9							
CMAR				LR		LR	07 36 13.2	
	comp=Z,27nm,19.2s,baz=310,slow=42							
	comp=Z,2.5nm,0.4s							
XAN	**Xi'an**	**50.74**	**71**	⇓P		**P**	**07 11 04.8**	**+0.6**
XAN				pP		sP	07 11 08.8	-2.5
XAN				pmax		pmax		
	comp=Z,10.0nm,0.8s							
HHC	**Hu-ho-hao-te**	**51.07**	**61**	*eP*		**P**	**07 11 07.3**	**+0.7**
HHC				pmax		pmax		
	comp=Z,7.0nm,0.5s							
HHC				pmax		pmax		
	comp=Z,150nm,5.7s							
HHC				L		L		
	comp=Z,180nm,13.9s							
HHC				L		L		
	comp=Z,170nm,13.7s							
HHC				L		L		
	comp=Z,81nm,13.2s							
LSZ	**Lusaka**	**51.08**	**204**	LR		LR	07 33 19.3	
	comp=Z,55nm,21.9s,baz=161,slow=37							
LSZ	**Lusaka**	**51.08**	**204**	P		**P**	**07 11 06.6**	**-0.3**
LSZ	**Lusaka**	**51.08**	**204**	P		**P**	**07 11 06.6**	**-0.3**
LSZ				pmax		pmax		
	comp=Z,5.0nm,0.8s							
BORG	**Borgarnes**	**51.91**	**329**	LR		LR	07 37 05.7	
	comp=Z,42nm,18.9s,baz=94,slow=40							
DBG	**Daneborg**	**52.80**	**342**	*i* P		**P**	**07 11 19.9**	**+1.0**
DBG				IAmb		IAmb	07 11 20.9	
	comp=Z,2.8nm,0.8s							
DAG	**Danmarks Havn**	**53.00**	**345**	*i* P		**P**	**07 11 19.7**	**-0.6**
DAG				IAmb		IAmb	07 11 20.6	
	comp=Z,2.2nm,0.6s							
LYN	**LuoYang**	**53.40**	**69**	P		**P**	**07 11 24.9**	**+1.0**
LYN				pmax		pmax		
	comp=Z,29nm,0.8s							
NOR	**Nord**	**54.14**	**351**	*i* P		**P**	**07 11 28.4**	**-0.3**
NOR				IAmb		IAmb	07 11 28.6	
	comp=Z,6.0nm,0.9s							
VOI	**Vohitsoka**	**54.28**	**181**	P		**P**	**07 11 30.9**	**+0.5**
BJI2	**Beijing**	**54.68**	**61**	P		**P**	**07 11 33.3**	**+0.1**
BJI2				pmax		pmax		
	comp=Z,3.0nm,0.8s							
DBIC	**Dimbokro**	**54.87**	**254**	LR		LR	07 37 08.3	
	comp=Z,87nm,20.1s,baz=70,slow=38							
TIXI	**Tiksi**	**56.70**	**22**	*d iP*		**P**	**07 11 47.1**	**-0.1**
TIXI				pmax		pmax		
	comp=Z,14nm,0.9s							
SUMG	**Summit**	**57.93**	**339**	*i* P		**P**	**07 11 56.9**	**+0.6**
SUMG				IAmb		IAmb	07 11 57.4	
	comp=Z,3.5nm,0.8s							
YAK	**Yakutsk**	**58.20**	**33**	LR		LR	07 42 08.4	
	comp=Z,58nm,18.2s,baz=278,slow=41							
YAK	**Yakutsk**	**58.20**	**33**	⇑*eP*		**P**	**07 11 58.1**	**+0.2**
YAK				pmax		pmax		
	comp=Z,10.0nm,0.5s							
ZEA	**Zeya**	**58.66**	**43**	*eP*		**P**	**07 12 01.7**	**+0.4**
GRTLG	**Ghanzi**	**59.26**	**209**	P		**P**	**07 12 07.2**	**+1.3**
NJ2	**Nanjing**	**59.27**	**70**	*eP*		**P**	**07 12 05.0**	**-0.8**
NJ2				pmax		pmax		
	comp=Z,27nm,0.5s							
HEH	**HeiHe**	**59.64**	**47**	*eP*		**P**	**07 12 08.4**	**+0.3**
HEH				pmax		pmax		
	comp=Z,8.0nm,1.1s							
NEEM	**North Greenlan**	**60.18**	**346**	*i* P		**P**	**07 12 11.3**	**-0.4**
NEEM				IAmb		IAmb	07 12 14.3	
	comp=Z,2.4nm,0.6s							
KGCAE	**Kacgae**	**60.21**	**207**	P		**P**	**07 12 12.6**	**+0.1**
KGCAE				IAmb		IAmb	07 12 18.2	
	comp=Z,13nm,0.8s							
CN2	**Changchun**	**60.23**	**55**	P		**P**	**07 12 13.4**	**+1.1**
CN2				pmax		pmax		
	comp=Z,10.0nm,1.5s							
BNX	**BinXian**	**60.95**	**52**	⇓P		**P**	**07 12 16.1**	**-1.1**
BNX				pmax		pmax		
	comp=Z,6.0nm,1.0s							
LBTB	**Lobatse**	**61.00**	**203**	LR		LR	07 37 52.0	
	comp=Z,52nm,18.0s,baz=32,slow=35							
LBTB	**Lobatse**	**61.00**	**203**	P		**P**	**07 12 17.8**	**+0.1**
LBTB				IAmb		IAmb	07 12 24.2	
	comp=Z,8.1nm,0.9s							
LBTB	**Lobatse**	**61.00**	**203**	P		**P**	**07 12 17.8**	**+0.1**
LBTB				pmax		pmax		
	comp=Z,8.0nm,0.9s							
KOOLE	**Kule**	**61.13**	**209**	P		**P**	**07 12 18.5**	**-0.2**
KOOLE				IAmb		IAmb	07 12 24.8	
	comp=Z,14nm,0.9s							
LKGWB	**Lokgwabe**	**61.73**	**207**	P		**P**	**07 12 20.6**	**-2.1**
KLR	**Kul'dur**	**62.63**	**47**	⇓*iP*		**P**	**07 12 27.6**	**-0.8**
KLR				pmax		pmax		
	comp=Z,16nm,2.5s							
KSRS	**Korea Array**	**64.19**	**61**	P		**P**	**07 12 38.5**	**-0.5**
	comp=Z,2.9nm,0.6s,baz=284,slow=8.0,SNR=7.1							
KSRS				LR		LR	07 44 29.7	
	comp=Z,54nm,19.1s,baz=230,slow=40							
	comp=Z,2.9nm,0.6s							
BOSA	**Boshof**	**64.46**	**202**	P		**P**	**07 12 42.3**	**+1.6**
	comp=Z,6.9nm,0.8s,baz=0.7,slow=7.9,SNR=8.5							
	comp=Z,6.9nm,0.8s							
SEY	**Seymchan**	**67.81**	**28**	⇑*eP*		**P**	**07 13 02.7**	**+1.0**
SEY				pmax		pmax		
	comp=Z,23nm,0.7s							
POIN	**Pond Inlet**	**68.48**	**345**			**P**	**07 13 06.0**	**+0.2**
POIN				IAmb		IAmb	07 13 23.5	
	comp=Z,13nm,1.7s							
MA2	**Magadan**	**68.72**	**32**			**P**	**07 13 07.8**	**+0.3**
MA2	**Magadan**	**68.72**	**32**	*c iP*		**P**	**07 13 07.6**	**+0.1**
MA2				pmax		pmax		
	comp=Z,15nm,0.9s							
MA2	**Magadan**	**68.72**	**32**	P		**P**	**07 13 06.8**	**-0.7**
MA2				pP		**pP**	**07 13 10.6**	**-2.1**
JOW	**Kunigami**	**68.89**	**71**	LR		LR	07 47 04.9	
	comp=Z,44nm,21.6s,baz=34,slow=39							
SUR	**Sutherland**	**69.39**	**204**	LR		LR	07 44 52.5	
	comp=Z,56nm,18.2s,baz=38,slow=37							
BILL	**Bilibino**	**69.85**	**21**			**P**	**07 13 15.0**	**+0.5**
BILL				IAmb		IAmb	07 13 16.4	
	comp=Z,13nm,1.1s							
BILL	**Bilibino**	**69.85**	**21**	⇓*iP*		**P**	**07 13 14.9**	**+0.5**
BILL				pmax		pmax		
	comp=Z,15nm,1.2s							
MTKI	**Muara Teweh, K**	**71.74**	**103**	P		**P**	**07 13 23.3**	**-3.4**
SCHQ	**Schefferville**	**76.21**	**327**	P		**P**	**07 13 52.5**	**+0.2**
	comp=Z,3.9nm,0.9s,baz=68,slow=12,SNR=5.4							
	comp=Z,3.9nm,0.9s							
JCJ	**Chichijima**	**79.63**	**65**	LR		LR	07 53 03.2	
	comp=Z,23nm,19.7s,baz=352,slow=38							
G19K	**Purcell Mounta**	**79.71**	**10**	P		**P**	**07 14 11.6**	**+0.1**
G19K				IAmb		IAmb	07 14 12.4	
	comp=Z,7.0nm,0.9s							
F30M	**Barrier River**	**80.00**	**1**	P		**P**	**07 14 13.0**	**0.0**
F30M				IAmb		IAmb	07 14 14.6	
	comp=Z,26nm,1.4s							
IMAR	**Indian Mountai**	**80.32**	**9**	P		**P**	**07 14 15.1**	**+0.3**
G26K	**Porcupine Rive**	**80.33**	**4**	P		**P**	**07 14 15.5**	**+0.7**
G26K				IAmb		IAmb	07 14 20.7	
	comp=Z,7.4nm,0.9s							
COLA	**College**	**82.05**	**6**	⇑*eP*		**P**	**07 14 23.9**	**-0.1**
COLA				pmax		pmax		
	comp=Z,28nm,3.5s							
ILAR	**Eielson Array**	**82.23**	**6**	P		**P**	**07 14 24.6**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=320,slow=3.6,SNR=12							
	comp=Z,0.9nm,0.8s							
K29M	**Barlow Dome**	**83.73**	**2**	P		**P**	**07 14 33.0**	**0.0**
K29M				IAmb		IAmb	07 14 38.4	
	comp=Z,3.9nm,0.9s							
YKA	**Yellowknife Ar**	**84.06**	**352**	P		**P**	**07 14 34.2**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=10.0,slow=6.0,SNR=24							
	comp=Z,1.1nm,0.8s							
YKA	**Yellowknife Ar**	**84.06**	**352**	P		**P**	**07 14 34.0**	**-0.5**
R33M	**Jennings River**	**88.26**	**359**	P		**P**	**07 14 56.1**	**+0.7**
ULM	**Lac du Bonnet**	**91.25**	**337**	P		**P**	**07 15 09.5**	**+0.1**
	comp=Z,2.4nm,0.8s,baz=44,slow=5.6,SNR=4.1							
	comp=Z,2.4nm,0.8s							
WRA	**Warramunga Arr**	**98.08**	**108**	P		Pdif	07 15 43.4	+2.3
	comp=Z,0.3nm,0.6s,baz=305,slow=4.8,SNR=2.8							
	comp=Z,0.3nm,0.6s							
QSPA	**South Pole Qui**	**122.51**	**180**	PKP		**PKiKP**	**07 20 59.3**	**+0.4**

comp=Z,2.7nm,0.8s,baz=294,slow=1.5,SNR=13

ASRS ***13*** *07:05:09.0±1.1,53.54N×87.68E,h0km,M2.4(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 13 07:05:11.8±3.4,53.52N×87.78E,h0km,mbtmp2.5/2,
ML2.3/2,Error ellipse: s-maj=34.1km s-min=18.3km
az=54.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.81**	**285**	I	I	07 14 30.0	
	baz=101,slow=340,SNR=2.8						
ZALV	**Zalesovo Beam**	**1.81**	**285**	Pn	Pn	07 05 44.0	-0.3
	0.4nm,0.3s,baz=105,slow=14,SNR=5.0						
ZALV				Lg	Lg	07 06 09.5	
	1.2nm,0.3s,baz=105,slow=24,SNR=12						
KURBB	**Kurchatov Arra**	**6.40**	**247**	Pn	Pn	07 06 47.7	+0.4
	baz=59,slow=15,SNR=4.5						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**7.60**	**210**	Pn	Pn	07 07 05.0	+1.2
	0.1nm,0.3s,baz=31,slow=14,SNR=4.1						
	0.1nm,0.3s						

TAP ***13*** *07:15:30.8,24.07N×122.89E,h29km,ML3.0,D*
JMA ***13*** *07:15:31.1±0.1,24.0N±2.2°×122.9E±0.6,h43km±3km,*
MV2.4/12,NW OFF ISHIGAKIJIMA IS

ISC 13 07:15:30.1±1.1,23.99N±0.04°×122.89E±0.02,h28km±11km,
n52,σ0.973/87,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.46**	**6**	P	**Pb**	**07 15 39.8**	**-0.1**
JYNG				*eS*	**Sn**	**07 15 46.1**	**-2.1**
YOJ	**Yonaguni jima**	**0.48**	**13**	*i* P	**Pb**	**07 15 40.0**	**-0.1**
YOJ				*i* S	**Sb**	**07 15 46.5**	**-0.6**
YOJ	**Yonaguni jima**	**0.48**	**13**	P	**Pb**	**07 15 40.1**	**-0.1**
YOJ				*eS*	**Sb**	**07 15 46.6**	**-0.4**
EOS4	**EOS4**	**0.54**	**284**	*eP*	**Pn**	**07 15 42.2**	**+0.6**
EOS4				*eS*	**Sn**	**07 15 49.7**	**0.0**
EOS3	**EOS3**	**0.60**	**300**	*eP*	**Pn**	**07 15 43.4**	**+0.7**
EOS2	**EOS2**	**0.74**	**305**	*eP*	**Pn**	**07 15 45.7**	**+1.1**
EOS2				*eS*	**Sn**	**07 15 55.5**	**+0.5**
HATJ	**Hateruma jima**	**0.84**	**85**	P	**Pn**	**07 15 46.7**	**+0.6**
IRIF	**Iriomote-Funau**	**0.84**	**66**	*eP*	**Pn**	**07 15 45.7**	**-0.4**
IRIF				S	**Sn**	**07 15 57.3**	**-0.2**
JKRS	**Kuro-shima**	**1.05**	**76**	*eP*	**Pn**	**07 15 49.1**	**+0.1**
JKRS				*eS*	**Sb**	**07 16 04.5**	**+1.4**
EAHA	**Aohua**	**1.11**	**288**	P	**Pn**	**07 15 49.3**	**-0.5**
EWUT	**Wuta**	**1.11**	**294**	*eP*	**Pb**	**07 15 51.5**	**+0.7**
ESAO	**Su ao**	**1.12**	**302**	P	**Pn**	**07 15 50.1**	**+0.1**
TWC	**Suao**	**1.14**	**303**	*i* P	**Pn**	**07 15 50.6**	**+0.4**
TWC				S	**Sn**	**07 16 04.2**	**-0.6**
ENA	**Nanau**	**1.14**	**293**	*eP*	**Pb**	**07 15 51.0**	**-0.2**
ENA				*eS*	**Sn**	**07 16 04.9**	**-0.1**
JIJ	**Ishigaki jima**	**1.20**	**72**	*eP*	**Pn**	**07 15 51.0**	**-0.1**
JIJ				*eS*	**Sn**	**07 16 06.8**	**+0.3**
NACB	**Ninganchiao**	**1.20**	**279**	*eP*	**Pn**	**07 15 50.8**	**-0.3**
NACB				*eS*	**Sn**	**07 16 06.5**	**+0.1**
SHUL	**Shoufeng**	**1.23**	**261**	*eS*	**Sn**	**07 16 08.0**	**+0.7**
NDS	**Dongshan**	**1.25**	**301**	P	**Pb**	**07 15 53.0**	**-0.1**
NDS				S	**Sb**	**07 15 59.5**	**+0.7**
ETM	**Tongmen**	**1.28**	**269**	*eP*	**Pn**	**07 15 52.1**	**-0.1**
ETM				*eS*	**Sn**	**07 16 08.4**	**-0.1**
ETLH	**Xiulin Townshi**	**1.31**	**280**	P	**Pn**	**07 15 52.9**	**+0.3**
ETLH				*eS*	**Sn**	**07 16 09.1**	**-0.2**
TWB1	**Santiao Chiao**	**1.31**	**321**	P	**Pn**	**07 15 53.0**	**+0.4**
TWB1				*eS*	**Sb**	**07 16 10.2**	**-0.3**
LATG	**Datong**	**1.36**	**294**	*eP*	**Pb**	**07 15 54.9**	**-0.1**
ENTT	**Nioudou**	**1.37**	**298**	P	**Pb**	**07 15 54.9**	**-0.3**
EGFH	**Guangfu**	**1.38**	**257**	*eP*	**Pn**	**07 15 53.6**	**0.0**
EGFH				S	**Sn**	**07 16 10.8**	**-0.1**
TIPB	**Shuangxi**	**1.38**	**315**	P	**Pn**	**07 15 54.0**	**+0.4**
TIPB				*eS*	**Sb**	**07 16 12.1**	**-0.5**
WARBT	**Fenglin Townsh**	**1.41**	**259**	*eP*	**Pn**	**07 15 53.6**	**-0.3**
WARBT				*eS*	**Sn**	**07 16 11.7**	**+0.1**
FUSB	**Fushanzhiwuyua**	**1.42**	**303**	*eP*	**Pb**	**07 15 55.9**	**-0.1**
FUSB				*eS*	**Sb**	**07 16 15.9**	**+2.3**
JISG	**Ishigakijimahi**	**1.42**	**65**	*eP*	**Pn**	**07 15 54.5**	**+0.3**
JISG				*eS*	**Sn**	**07 16 11.8**	**-0.2**
HGSD	**Ruisui**	**1.44**	**250**	*eS*	**Sn**	**07 16 11.9**	**-0.3**
SXI1	**Grass Mountain**	**1.44**	**320**	P	**Pn**	**07 15 54.8**	**+0.3**
SXI1				*eS*	**Sb**	**07 16 13.5**	**-0.8**
NNS	**Nan Shan**	**1.46**	**288**	*eP*	**Pn**	**07 15 55.2**	**+0.4**
NWF	**Wu-fen Shan**	**1.48**	**317**	*eP*	**Pn**	**07 15 55.6**	**+0.6**
WFSB	**Wu-fen Shan**	**1.48**	**317**	*eP*	**Pn**	**07 15 55.6**	**+0.7**
WFSB				*eS*	**Sb**	**07 16 14.5**	**-0.9**
ECBN	**Changbin**	**1.48**	**243**	*eS*	**Sn**	**07 16 12.9**	**-0.5**
NWLT	**Wulai**	**1.49**	**302**	*eP*	**Pb**	**07 15 56.8**	**-0.4**
NWLT				*eS*	**Sb**	**07 16 16.2**	**+0.5**
WHF	**Hehuan Shan**	**1.50**	**276**	*eS*	**Sn**	**07 16 14.6**	**+0.2**
EHYH	**Wanrong**	**1.50**	**251**	*eS*	**Sn**	**07 16 13.5**	**-0.4**
EHY	**Hungye**	**1.52**	**252**	P	**Pn**	**07 15 55.9**	**+0.5**
EHY				*eS*	**Sn**	**07 16 14.5**	**+0.1**
FUSS	**Fushou**	**1.53**	**280**	*eP*	**Pn**	**07 15 56.1**	**+0.3**
YHNB	**Yeheng**	**1.54**	**296**	P	**Pn**	**07 15 57.0**	**+1.1**
YHNB				*eS*	**Sn**	**07 16 15.4**	**+0.4**
NSK	**Sanguang**	**1.56**	**296**	*eP*	**Pn**	**07 15 57.5**	**-0.9**
OWD	**Renai**	**1.57**	**269**	*eP*	**Pn**	**07 15 56.8**	**+0.5**
OWD				S	**Sn**	**07 16 15.9**	**+0.1**
YULB	**Yu-li**	**1.58**	**248**	*eP*	**Pn**	**07 15 55.5**	**-0.9**
YULB				*eS*	**Sn**	**07 16 15.6**	**-0.3**
CHKH	**Chenggong**	**1.59**	**240**	*eP*	**Pn**	**07 15 55.6**	**-0.7**
CHKH				S	**Sn**	**07 16 14.4**	**-1.6**
TWT	**Tachien**	**1.59**	**280**	*eP*	**Pn**	**07 15 58.2**	**+1.6**
TWT				*eS*	**Sn**	**07 16 17.4**	**+1.0**
TWF1	**Yuli**	**1.59**	**247**	*eP*	**Pn**	**07 15 56.9**	**+0.3**
TWF1				*eS*	**Sn**	**07 16 15.9**	**-0.3**
VWDT	**VWDT**	**1.62**	**262**	*eP*	**Pn**	**07 15 57.3**	**+0.5**
VWDT				*eS*	**Sn**	**07 16 17.2**	**+0.3**
WUSB	**Renai**	**1.62**	**270**	*eP*	**Pn**	**07 15 58.4**	**+1.3**
WUSB				*eS*	**Sn**	**07 16 17.4**	**+0.3**
CHKT	**Chengkung**	**1.66**	**238**	*eP*	**Pn**	**07 15 58.0**	**+0.7**
CHKT				*eS*	**Sn**	**07 16 16.1**	**-1.6**
FULB	**Fuli**	**1.67**	**242**	*eP*	**Pn**	**07 15 57.6**	**+0.1**
FULB				*eS*	**Sn**	**07 16 17.0**	**-1.0**
YM01	**YM01**	**1.67**	**314**	*eS*	**Sb**	**07 16 18.9**	**-1.9**
EHD	**Haiduan**	**1.76**	**242**	*eP*	**Pb**	**07 16 01.7**	**-0.1**
EHD				*eS*	**Sn**	**07 16 19.2**	**-1.1**

IDC ***13*** *07:24:14.1±1.6,53.95N×160.48E,h0km,mb3.6/4,*
mbtmp3.6/4,Error ellipse: s-maj=60.0km s-min=19.9km
az=152.0
KRSC ***13*** *07:24:17.0±0.8,53.48N×160.67E,h43km±11km,Ml4.1*

ISC 13 07:24:18.3±1.2,53.46N±0.05°×160.70E±0.06,h42km±14km,
n32,σ0.887/53,mb3.3/4,Near east coast of Kamchatka
Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.54**	**229**	*eP*	**Pn**	**07 24 29.6**	**0.0**
SPN				*eS*	**Sn**	**07 24 37.3**	**-0.4**
NLC	**Nalytchevo**	**0.86**	**251**	*eP*	**Pn**	**07 24 33.8**	**-0.1**
NLC				*eS*	**Sn**	**07 24 45.1**	**-0.2**
KII	**Karymskiy**	**0.94**	**308**	*eP*	**Pn**	**07 24 34.8**	**-0.3**
KII				*eS*	**Sn**	**07 24 47.0**	**-0.4**
SDLR	**Sedlovina**	**1.10**	**261**	*eP*	**Pn**	**07 24 37.4**	**+0.1**
SDLR				*eS*	**Sn**	**07 24 51.6**	**+0.1**
UGLR	**Uglovaya**	**1.15**	**258**	*eP*	**Pn**	**07 24 38.4**	**+0.4**
UGLR				*eS*	**Sn**	**07 24 53.2**	**+0.5**
SMAR	**Somma**	**1.15**	**261**	*eP*	**Pn**	**07 24 38.1**	**0.0**
SMAR				*eS*	**Sn**	**07 24 53.0**	**+0.2**
KRER	**Koryakskii**	**1.18**	**263**	*eP*	**Pn**	**07 24 38.9**	**+0.4**
KRER				*eS*	**Sn**	**07 24 53.9**	**+0.5**
AVH	**Avacha**	**1.19**	**261**	*eP*	**Pn**	**07 24 38.9**	**+0.4**
AVH				*eS*	**Sn**	**07 24 54.3**	**+0.8**
KRX	**Arik**	**1.23**	**266**	*eP*	**Pn**	**07 24 39.2**	**0.0**
KRX				*eS*	**Sn**	**07 24 54.3**	**-0.3**
DALK	**Dalny**	**1.25**	**251**	*eP*	**Pn**	**07 24 39.1**	**-0.1**
DALK				*eS*	**Sn**	**07 24 54.3**	**-0.4**
KOK	**Koryaka**	**1.25**	**263**	*eP*	**Pn**	**07 24 39.5**	**+0.2**
KOK				*eS*	**Sn**	**07 24 55.0**	**0.0**
MKZ	**Mys Kozlova**	**1.26**	**29**	*eP*	**Pn**	**07 24 39.1**	**-0.3**
MKZ				*eS*	**Sn**	**07 24 53.9**	**-1.1**
PET	**Petropavlovsk**	**1.30**	**251**	*eP*	**Pn**	**07 24 40.0**	**0.0**
PET				*eS*	**Sn**	**07 24 55.8**	**-0.4**
INSR	**Institute**	**1.32**	**253**	*eP*	**Pn**	**07 24 40.1**	**-0.1**
INSR				*eS*	**Sn**	**07 24 56.8**	**+0.2**
GNL	**Ganaly**	**1.66**	**279**	*eP*	**Pn**	**07 24 45.3**	**+0.3**
KRMR	**Karymshinskiy**	**1.67**	**249**	*eP*	**Pn**	**07 24 45.5**	**+0.5**
KRMR				*eS*	**Sn**	**07 25 05.6**	**+0.4**
RUS	**Russkaya**	**1.68**	**233**	*eP*	**Pn**	**07 24 45.0**	**0.0**
RUS				*eS*	**Sn**	**07 25 04.5**	**-0.8**
TUMD	**Tumrok D**	**1.76**	**354**	*eP*	**Pn**	**07 24 46.6**	**+0.4**
TUMD				*eS*	**Sn**	**07 25 06.9**	**-0.5**
MTVR	**Mutnovka**	**1.81**	**238**	*eP*	**Pn**	**07 24 47.8**	**+0.7**
MTVR				*eS*	**Sn**	**07 25 08.6**	**-0.2**
GRL	**Gorelyy**	**1.83**	**241**	*eP*	**Pn**	**07 24 48.2**	**+0.9**
GRL				*eS*	**Sn**	**07 25 10.0**	**+0.8**
PETK	**Petropavlovsk-**	**1.83**	**260**	Pn	**Pn**	**07 24 47.9**	**+0.6**
	14nm,0.3s,baz=74,slow=20,SNR=373						
PETK				Sn	**Sn**	**07 25 10.9**	**+1.6**
	20nm,0.3s,baz=84,slow=21,SNR=5.6						
PETK				LR	LR	07 25 49.4	
	comp=Z,93nm,18.3s,baz=28,slow=51						
ASAK	**Asacha**	**2.01**	**239**	*eP*	**Pn**	**07 24 50.9**	**+1.1**
ASAK				*eS*	**Sn**	**07 25 15.3**	**+1.6**
APC	**Apacha**	**2.20**	**257**	*eP*	**Pn**	**07 24 53.8**	**+1.5**
KDTR	**Khodutka, Kamc**	**2.30**	**225**	*eP*	**Pn**	**07 24 54.8**	**+1.1**
KMNR	**Kamenistaya**	**2.32**	**354**	*eP*	**Pn**	**07 24 56.0**	**+2.0**
ESO	**Esso**	**2.73**	**336**	*eP*	**Pn**	**07 25 00.4**	**+0.9**
KBTR	**Krutoberegovo**	**3.02**	**23**	*eP*	**Pn**	**07 25 05.0**	**+1.6**
SMKR	**Semkarok**	**3.16**	**8**	*eP*	**Pn**	**07 25 08.0**	**+2.5**
ILAR	**Eielson Array**	**28.30**	**46**	P	**P**	**07 30 06.5**	**-1.0**
	0.5nm,0.8s,baz=267,slow=8.2,SNR=6.4						
	0.5nm,0.7s						
YKA	**Yellowknife Ar**	**42.65**	**43**	P	**P**	**07 32 10.0**	**-0.1**
	0.2nm,0.6s,baz=300,slow=8.8,SNR=4.5						
	0.2nm,0.6s						
FINES	**FINESS Array B**	**59.93**	**337**	P	**P**	**07 34 17.7**	**-1.8**
	2.6nm,0.8s,baz=19,slow=5.9,SNR=6.0						
	2.6nm,0.8s						
TXAR	**Lajitas Array**	**70.16**	**67**	P	**P**	**07 35 27.8**	**+1.3**
	0.2nm,0.6s,baz=295,slow=4.2,SNR=2.1						
	0.2nm,0.6s						

ASRS ***13*** *07:54:44.0±0.8,53.52N×87.53E,h0km,M2.3(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 13 07:54:47.5±3.1,53.47N×87.43E,h0km,mbtmp2.6/2,
ML2.3/2,Error ellipse: s-maj=29.7km s-min=15.9km
az=61.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.62**	**288**	I	I	08 03 40.0	
	baz=104,slow=342,SNR=11						
ZALV	**Zalesovo Beam**	**1.62**	**288**	Pg	Pn	07 55 17.6	+0.3
	0.6nm,0.3s,baz=105,slow=15,SNR=8.6						
ZALV				Lg	Lg	07 55 39.0	
	1.6nm,0.3s,baz=108,slow=27,SNR=9.7						
KURBB	**Kurchatov Arra**	**6.19**	**246**	Pn	Pn	07 56 19.3	-0.6
	baz=62,slow=14,SNR=2.5						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**7.46**	**208**	Pn	Pn	07 56 39.1	+1.7
	0.1nm,0.3s,baz=28,slow=15,SNR=5.2						
	0.1nm,0.3s						

IDC ***13*** *07:55:36.2±2.3,5.12S×129.44E,h180km±29km,mb3.6/4,*
mbtmp4.3/8,Error ellipse: s-maj=43.0km s-min=12.9km
az=82.0

ISC 13 07:55:36.6±0.8,5.24S±0.06°×129.6E±0.2,h200km,n8,
σ2.841/11,mb3.8/4,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.66**	**21**	P	**Pn**	**07 56 46.5**	**-0.3**
	52nm,0.3s,baz=108,slow=23,SNR=15						
SIJI				S	**Sn**	**07 57 38.9**	**-3.2**
	73nm,0.2s,baz=77,slow=21,SNR=9.5						
FITZ	**Fitzroy Crossi**	**13.35**	**196**	P	**Pn**	**07 58 38.1**	**-0.3**
	2.5nm,0.6s,baz=21,slow=9.1,SNR=14						
FITZ				S	**S**	**08 01 03.1**	**-4.2**
	2.0nm,0.8s,baz=41,slow=9.7,SNR=2.3						
WRA	**Warramunga Arr**	**15.34**	**163**	P	**P**	**07 59 04.4**	**+1.1**
	6.1nm,0.5s,baz=334,slow=13,SNR=50						
WRA				S	**S**	**08 01 50.5**	**-2.9**
	1.2nm,0.6s,baz=5.2,slow=22,SNR=5.0

ASRS ***13*** *08:05:05.0±0.9, 53°.53N×87°.66E, h0km, M2.9(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC ***13*** *08:05:07.9±2.8, 53°.55N×87°.66E, h0km, mbtmp2.9/2, ML2.7/2, Error ellipse: s-maj=23.0km s-min=14.0km az=61.0*
NNC ***13*** *08:05:16.2±5.5, 53°.27N×87°.17E, h0km, mb2.9, mpv2.6, Error ellipse: s-maj=51.4km s-min=36.1km az=174.0, Suspected Mining explosion.*

ISC 13 08:04:58.2±2.6, 52°.29N±0°.08×87°.6E±0°.1, h0km, n7, σ2s 04/11, 4C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**2.37**	**316**	I	I	08 14 45.2	
	baz=101,slow=336,SNR=4.2						
ZALV	**Zalesovo Beam**	**2.37**	**316**	Pg	**Pn**	**08 05 38.7**	**+0.4**
	1.9nm,0.3s,baz=105,slow=16,SNR=12						
ZALV				Lg	Lg	08 06 03.4	
	4.4nm,0.3s,baz=107,slow=26,SNR=14						
KURK	**Kurchatov**	**5.84**	**258**	⇑Pn	**Pg**	**08 06 46.4**	**-3.6**
	0.1nm,0.5s						
KURK				⇓Sn	**Sb**	**08 07 54.0**	**+2.8**
	0.2nm,0.5s						
KURK				⇑Lg	Lg	08 08 26.4	
	1.8nm,0.7s						
KURBB	**Kurchatov Arra**	**5.92**	**257**	Pn	**Pb**	**08 06 43.0**	**+0.8**
	0.1nm,0.3s,baz=62,slow=14,SNR=6.0						
KURBB				Sn	**Sb**	**08 07 54.4**	**+0.7**
	baz=47,slow=15,SNR=1.9						
KURBB				Lg	Lg	08 08 31.4	
	0.1nm,0.3s,baz=59,slow=30,SNR=7.2						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**5.92**	**257**	⇓Pn	**Pb**	**08 06 44.8**	**+2.5**
	1.0nm,0.5s						
KURBB				⇑Sn	**Sb**	**08 07 53.8**	**+0.1**
	2.1nm,0.5s						
KURBB				⇓Lg	Lg	08 08 25.0	
	8.1nm,0.8s						
MK31	**Makanchi Array**	**6.50**	**214**	Pn	**Pg**	**08 07 01.3**	**-1.4**
	0.1nm,0.3s,baz=27,slow=11,SNR=9.1						
MK31				Sn	**Sg**	**08 08 27.1**	**+0.3**
	0.2nm,0.4s,baz=30,slow=28,SNR=4.0						
MK31				⇑Lg	Lg	08 09 08.1	
	0.7nm,0.6s,baz=35,slow=30,SNR=4.6						
MKAR	**Makanchi Array**	**6.50**	**214**	Pn	**Pg**	**08 07 01.0**	**-1.6**
	0.2nm,0.3s,baz=30,slow=14,SNR=9.8						
MKAR				Sn	**Sg**	**08 08 26.4**	**-0.4**
	0.1nm,0.3s,baz=26,slow=27,SNR=5.4						
MKAR				Lg	Lg	08 09 08.8	
	0.1nm,0.3s,baz=29,slow=30,SNR=8.7						
	0.3nm,0.3s						

IDC 13 08:13:24.1±2.1, 24°.45N×95°.10E, h0km, mb3.7/4, mbtmp3.7/4, MS3.6/4, Error ellipse: s-maj=85.3km s-min=28.8km az=61.0, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**24.55**	**338**	P	P	08 18 45.7	+0.2
	3.7nm,0.6s,baz=148,slow=9.7,SNR=48						
	3.7nm,0.6s						
SONM	**Songino Array**	**25.01**	**18**	P	P	08 18 49.8	0.0
	0.4nm,0.6s,baz=194,slow=10,SNR=3.7						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**29.11**	**338**	P	P	08 19 26.2	-0.3
	0.9nm,0.5s,baz=144,slow=9.6,SNR=8.9						
	0.9nm,0.5s						
JHJ	**Hachijo jima 2**	**39.86**	**67**	LR	LR	08 38 04.0	
	comp=Z,61nm,19.8s,baz=82,slow=37						
WRA	**Warramunga Arr**	**58.37**	**136**	P	P	08 23 21.4	-0.1
	0.2nm,0.5s,baz=316,slow=7.1,SNR=1.7						
	0.2nm,0.5s						
MLR	**Muntele Rosu**	**58.62**	**310**	LR	LR	08 55 34.3	
	comp=Z,61nm,19.1s,baz=316,slow=43						
FINES	**FINESS Array B**	**58.82**	**328**	LR	LR	08 50 15.8	
	comp=Z,140nm,18.7s,baz=277,slow=38						
KRVT	**Keravat (AS076**	**62.27**	**109**	LR	LR	08 50 13.9	
	comp=Z,11nm,20.8s,baz=210,slow=36						

NNC ***13*** *08:21:16.8±3.8, 51°.19N×82°.09E, h0km, mb2.5, mpv2.1, Error ellipse: s-maj=29.4km s-min=11.5km az=46.0, Suspected Mining explosion.*
IDC ***13*** *08:21:20.7±1.4, 51°.37N×81°.78E, h0km, mbtmp2.1/2, ML1.8/2, Error ellipse: s-maj=16.6km s-min=11.1km az=141.0*

ISC 13 08:21:14.2±1.1, 50°.86N±0°.06×82°.9E±0°.1, h0km, n7, σ0s 35/7, 3C-3D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURK	**Kurchatov**	**2.69**	**269**	⇑Pg	**Pn**	**08 21 58.7**	**0.0**
	0.4nm,0.5s						
KURK				⇓Lg	Lg	08 22 28.4	
	1.8nm,0.6s						
KURBB	**Kurchatov Arra**	**2.75**	**267**	Pg	**Pn**	**08 21 59.9**	**+0.4**
	0.1nm,0.3s,baz=71,slow=18,SNR=11						
KURBB				Lg	Lg	08 22 30.6	
	0.2nm,0.3s,baz=73,slow=34,SNR=8.8						
KURBB	**Kurchatov Arra**	**2.75**	**267**	⇓Pg	**Pn**	**08 21 59.3**	**-0.3**
	0.7nm,0.3s,baz=74,slow=16						
KURBB				⇑Lg	Lg	08 22 29.3	
	13nm,0.8s,baz=71,slow=31						
ZALV	**Zalesovo Beam**	**3.32**	**21**	Pn	**Pb**	**08 22 13.6**	**-0.3**
	0.3nm,0.3s,baz=213,slow=15,SNR=5.7						
ZALV				Pg	**Pg**	**08 22 18.1**	**+0.3**
	0.3nm,0.3s,baz=223,slow=15,SNR=4.7						
ZALV				Lg	Lg	08 23 00.3	
	0.4nm,0.3s,baz=215,slow=25,SNR=4.6						
	1.0nm,0.5s						
I46RU	**ZALESOVO INFRA**	**3.32**	**21**	I	I	08 38 30.0	
	0.1nm,0.9s,baz=217,slow=332,SNR=15						
MK31	**Makanchi Array**	**4.09**	**185**	⇑Sn	**Sb**	**08 23 17.3**	**+0.3**
	0.3nm,0.6s						
MK31				⇓Lg	Lg	08 23 38.2	
	0.9nm,0.5s,baz=13,slow=29,SNR=3.5						
MKAR	**Makanchi Array**	**4.09**	**185**	Pn	**Pg**	**08 22 32.5**	**0.0**
	0.1nm,0.3s,baz=354,slow=12,SNR=2.7						
MKAR				Lg	Lg	08 23 46.4	
	0.3nm,0.3s,baz=9.3,slow=28,SNR=8.9						
	0.1nm,0.4s						

ASRS ***13*** *08:22:27.0±1.4, 53°.78N×91°.05E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 13 08:22:35.2±4.9, 53°.37N×90°.73E, h0km, mbtmp2.7/3, ML2.1/2, Error ellipse: s-maj=48.0km s-min=29.0km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**3.56**	**282**	Pn	Pn	08 23 33.2	+1.6
	0.4nm,0.3s,baz=95,slow=16,SNR=4.7						
ZALV				Lg	Lg	08 24 27.5	
	1.0nm,0.3s,baz=94,slow=26,SNR=7.1						
	0.8nm,0.3s						
KURBB	**Kurchatov Arra**	**8.02**	**255**	Pn	Pn	08 24 32.7	0.0
	baz=62,slow=14,SNR=3.8						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**8.53**	**223**	Pn	Pn	08 24 40.2	+0.3
	0.1nm,0.5s,baz=39,slow=9.3,SNR=1.3						
MKAR				Lg	Lg	08 27 06.8	
	baz=46,slow=29						
I34MN	**SONGINO INFRAS**	**11.41**	**113**	I	I	09 30 00.0	
	baz=306,slow=318,SNR=0.3						

PGC ***13*** *08:26:31.1±0.1, 59°.90N×140°.72W, h2km, ML2.6/25, ML2.5(AEIC), 65km northwest of Yakutat, Ak Southeastern Alaska*
ANF ***13*** *08:26:32.5±0.2, 60°.07N×140°.65W, h4km±1km, ML2.8/27, Error ellipse: s-maj=2.0km s-min=1.2km az=177.0*
AEIC ***13*** *08:26:33.2±2.0, 60°.10N±0°.02×140°.68W±0°.02, h3km±6km, Error ellipse: s-maj=3.1km s-min=0.8km az=198.0*
NEIC ***13*** *08:26:33.2±1.9, 60°.08N±0°.02×140°.62W±0°.03, h10km±1km, ML2.5/70, ML2.3(AEIC), Error ellipse: s-maj=3.0km s-min=2.7km az=43.0*

ISC 13 08:26:33.4±0.9, 60°.06N±0°.02×140°.66W±0°.01, h11km±6km, n154, σ1s 07/220, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCA	**Pacific**	**0.20**	**80**	Pg	**Pg**	**08 26 37.2**	**-0.5**
PCA				Sg	**Sg**	**08 26 41.4**	**+0.7**
PCA	**Pinnacle**	**0.20**	**80**	P	**Pg**	**08 26 37.2**	**-0.5**
PCA				S	**Sg**	**08 26 41.4**	**+0.7**
PINM	**Pinnacle**	**0.20**	**81**	P	**Pg**	**08 26 37.2**	**-0.5**
	baz=270						
PINM				S	**Sg**	**08 26 40.9**	**+0.2**
	baz=270						
RKAV	**Rock Avalanche**	**0.42**	**305**		**Pg**	**08 26 41.0**	**-0.6**
RKAV	**Rock Avalanche**	**0.42**	**305**	P	**Pg**	**08 26 41.2**	**-0.5**
RKAV				S	**Sg**	**08 26 47.9**	**+0.6**
MESA	**MESA**	**0.66**	**281**		**Pb**	**08 26 46.9**	**-0.2**
MESA				IAML		08 27 07.0	
	comp=E,267nm,0.6s						
MESA	**MESA**	**0.66**	**281**	P	**Pg**	**08 26 45.2**	**-1.0**
MESA	**MESA**	**0.66**	**281**	P	**Pg**	**08 26 46.5**	**+0.3**
	baz=97,SNR=71						
MESA				Sb	**Sb**	**08 26 57.0**	**+0.7**
	baz=97						
YKU2	**Yakutat**	**0.74**	**138**	Pg	**Pg**	**08 26 46.8**	**-0.9**
YKU2				Sg	**Sb**	**08 26 59.2**	**+0.7**
O28M	**Mount Upton**	**0.75**	**18**		**Pg**	**08 26 47.1**	**-0.8**
O28M				IAML		08 26 59.9	
	comp=E,210nm,0.5s						
O28M				IAML		08 27 01.8	
	comp=N,300nm,0.6s						
O28M	**Mount Upton**	**0.75**	**18**		**Sg**	**08 26 57.8**	**+0.1**
O28M	**Mount Upton**	**0.75**	**18**	P	**Pg**	**08 26 46.6**	**-1.2**
O28M				S	**Sb**	**08 26 58.5**	**-0.5**
O28M	**Mount Upton**	**0.75**	**18**	P	**Pg**	**08 26 47.0**	**-0.8**
	baz=200,SNR=324						
O28M				S	**Sg**	**08 26 57.6**	**-0.1**
	baz=200						
LOGN	**Logan Glacier**	**0.78**	**347**		**Pg**	**08 26 47.8**	**-0.7**
LOGN				Sg	**Sb**	**08 26 60.0**	**+0.1**
LOGN				IAML		08 27 02.5	
	comp=N,329nm,0.5s						
LOGN	**Logan Glacier**	**0.78**	**347**	P	**Pg**	**08 26 47.3**	**-1.2**
LOGN				S	**Sb**	**08 26 59.4**	**-0.4**
GRNC	**Granite Creek**	**0.86**	**321**		**Pg**	**08 26 49.2**	**-0.8**
GRNC				IAML		08 27 05.5	
	comp=N,208nm,0.7s						
GRNC	**Granite Creek**	**0.86**	**321**		**Sg**	**08 27 01.5**	**+0.1**
GRNC	**Granite Creek**	**0.86**	**321**	P	**Pg**	**08 26 48.9**	**-1.2**
GRNC				S	**Sb**	**08 27 02.6**	**+0.4**
CYK	**Cape Yakataga**	**0.92**	**272**		**Pg**	**08 26 50.4**	**-0.6**
CTGM	**Chitina Glacie**	**0.96**	**340**		**Pg**	**08 26 50.8**	**-1.1**
CTGM				IAML		08 27 07.5	
	comp=E,140nm,0.5s						
CTGM	**Chitina Glacie**	**0.96**	**340**		**Sg**	**08 27 04.4**	**-0.1**
CTGM	**Chitina Glacie**	**0.96**	**340**	P	**Pg**	**08 26 50.7**	**-1.3**
CTGM				S	**Sb**	**08 27 04.7**	**-0.4**
CTG	**Chitna Glacier**	**0.97**	**340**	P	**Pg**	**08 26 50.7**	**-1.3**
	baz=159,SNR=471						
CTG				S	**Sb**	**08 27 04.6**	**-0.5**
	baz=159						
BARK	**Barkley Ridge**	**0.98**	**291**		**Pg**	**08 26 51.9**	**-0.3**
BARK					**Sb**	**08 27 06.9**	**+1.5**
O29M	**Mount Kennedy**	**1.07**	**76**		**Pg**	**08 26 52.3**	**-1.5**
O29M					**Sg**	**08 27 02.7**	**-0.5**
O29M	**Mount Kennedy**	**1.07**	**76**	P	**Pg**	**08 26 51.6**	**-2.3**
O29M				S	**Sg**	**08 27 07.2**	**-0.5**
O29M	**Mount Kennedy**	**1.07**	**76**	P	**Pg**	**08 26 52.0**	**-1.9**
	baz=260						
O29M				S	**Sg**	**08 27 07.5**	**-0.3**
	baz=260						
BARN	**Barnard Glacie**	**1.12**	**334**		**Pg**	**08 26 53.4**	**-1.4**
BARN				IAML		08 27 11.3	
	comp=E,94nm,0.4s						
BARN	**Barnard Glacie**	**1.12**	**334**		**Sg**	**08 27 08.4**	**-0.9**
KIAG	**Kiagna River**	**1.21**	**316**		**Pg**	**08 26 54.7**	**-1.9**
KIAG					**Sg**	**08 27 11.2**	**-1.1**
KIAG	**Kiagna River**	**1.21**	**316**	P	**Pg**	**08 26 54.4**	**-2.1**
KIAG				S	**Sb**	**08 27 12.3**	**+0.3**
BALM	**Baldy**	**1.28**	**320**		**Pg**	**08 26 55.9**	**-2.2**
BALM	**Baldy**	**1.28**	**320**	P	**Pg**	**08 26 55.8**	**-2.2**
BALM				S	**Sn**	**08 27 15.2**	**+0.5**
TGL	**Tana Glacier**	**1.28**	**304**		**Pg**	**08 26 56.0**	**-2.0**
TGL	**Tana Glacier**	**1.28**	**304**		**Sg**	**08 27 14.2**	**-0.5**
YUK8	**Steele Glacier**	**1.30**	**19**	P	**Pg**	**08 26 56.7**	**-1.6**
YUK8	**Steele Glacier**	**1.30**	**19**	P	**Pg**	**08 26 56.8**	**-1.6**
	baz=201,SNR=52						
YUK8				S	**Sg**	**08 27 14.7**	**-0.5**
	baz=201						
BGLC	**Bering Glacier**	**1.32**	**274**		**Pn**	**08 26 57.3**	**-0.4**
BGLC	**Bering Glacier**	**1.32**	**274**	P	**Pn**	**08 26 57.6**	**-0.1**
	baz=90						
BGLC				S	**Sn**	**08 27 17.4**	**+2.1**
	baz=90						
YUK7	**Dusty Glacier**	**1.34**	**68**		**Pg**	**08 26 57.6**	**-1.5**
YUK7	**Dusty Glacier**	**1.34**	**68**	P	**Pg**	**08 26 57.1**	**-1.9**
YUK7				S	**Sg**	**08 27 15.7**	**-0.8**
CRQE	**Cirque**	**1.39**	**301**	P	**Pn**	**08 26 58.1**	**-0.8**
	baz=118						
CRQE				S	**Sn**	**08 27 18.3**	**+0.9**
	baz=118						
CRQM	**Cirque**	**1.42**	**301**		**Pn**	**08 26 58.0**	**-1.2**
CRQM				IAML		08 27 20.1	
	comp=E,68nm,0.6s						
CRQM				IAML		08 27 26.8	
	comp=N,86nm,0.8s						
YUK6	**Outpost Mounta**	**1.44**	**51**		**Pn**	**08 26 59.4**	**-0.2**
YUK6	**Outpost Mounta**	**1.44**	**51**	P	**Pn**	**08 26 59.0**	**-0.7**
YUK6				S	**Sn**	**08 27 19.5**	**+0.9**
YUK6	**Outpost Mounta**	**1.44**	**51**	P	**Pn**	**08 26 59.5**	**-0.2**
	baz=234,SNR=442						
YUK6				S	**Sb**	**08 27 19.1**	**+0.4**
	baz=234						
PTPK	**Patty Peak**	**1.44**	**322**		**Pn**	**08 26 58.5**	**-1.1**
PTPK	**Patty Peak**	**1.44**	**322**	P	**Pn**	**08 26 58.3**	**-1.4**
BRWY	**Burwash Landin**	**1.54**	**31**	Pn	**Pn**	**08 27 00.8**	**0.0**
BRWY				Sn	**Sg**	**08 27 22.9**	**+0.2**
BERG	**Berg Lake**	**1.56**	**284**		**Pn**	**08 27 00.6**	**-0.4**
SUCK	**Suckling Hills**	**1.56**	**272**	Pn	**Pn**	**08 27 01.4**	**+0.2**
SUCK				IAML		08 27 52.9	
	comp=E,39nm,1.2s						
YUK4	**Talbot Arm**	**1.62**	**37**	Pn	**Pg**	**08 27 04.4**	**-0.1**
YUK4	**Talbot Arm**	**1.62**	**37**	Pb	**Pg**	**08 27 04.6**	**+0.2**
	baz=219,SNR=225						
YUK3	**Moose Creek**	**1.72**	**3**		**Pn**	**08 27 04.3**	**+0.8**
YUK3	**Moose Creek**	**1.72**	**3**	Pn	**Pn**	**08 27 04.0**	**+0.5**
YUK3				Sn	**Sg**	**08 27 28.6**	**-0.1**
YUK3	**Moose Creek**	**1.72**	**3**	Pb	**Pn**	**08 27 04.5**	**+0.9**
	baz=184,SNR=339						
YUK3				Sb	**Sg**	**08 27 28.6**	**-0.1**
	baz=184						
YUK2	**White River**	**1.73**	**357**		**Pn**	**08 27 04.1**	**+0.5**
YUK2	**White River**	**1.73**	**357**	Pn	**Pn**	**08 27 04.0**	**+0.4**
YUK2				Sn	**Sg**	**08 27 28.1**	**-1.0**
HYT	**Haines Junctio**	**1.74**	**63**		**Pn**	**08 27 03.6**	**-0.1**
HYT	**Haines Junctio**	**1.74**	**63**	Pn	**Pn**	**08 27 03.5**	**-0.2**
HYT				Sn	**Sb**	**08 27 27.4**	**+0.1**
HYT	**Haines Junctio**	**1.74**	**63**	P	**Pn**	**08 27 03.6**	**-0.1**
	baz=246,SNR=136						
HYT				S	**Sn**	**08 27 27.1**	**+1.2**
	baz=246						
YUK5	**Granite Creek**	**1.75**	**51**		**Pn**	**08 27 04.7**	**+0.9**
YUK5	**Granite Creek**	**1.75**	**51**	Pn	**Pn**	**08 27 03.5**	**-0.3**
YUK5				Sn	**Sb**	**08 27 28.0**	**+0.5**
MCARA	**McCarthy VSAT**	**1.76**	**320**		**Pn**	**08 27 03.8**	**-0.1**
MCARA				IAML		08 27 34.4	
	comp=N,68nm,0.4s						
MCARA				IAML		08 27 35.8	
	comp=E,77nm,0.6s						
MCARA	**McCarthy VSAT**	**1.76**	**320**	Pn	**Pn**	**08 27 03.5**	**-0.3**
MCARA				Sn	**Sb**	**08 27 28.8**	**+1.0**
MCARA	**McCarthy VSAT**	**1.76**	**320**	P	**Pn**	**08 27 03.6**	**-0.3**
	baz=137,SNR=186						
MCARA				Sb	**Sg**	**08 27 29.5**	**-0.5**
	baz=137						
VRDI	**Verde Repeater**	**1.81**	**312**		**Pn**	**08 27 04.0**	**-0.6**
VRDI				IAML		08 27 37.7	
	comp=N,38nm,0.6s						
P30M	**Million Dollar**	**1.85**	**87**	Pn	**Pn**	**08 27 04.5**	**-0.7**
P30M				Sn	**Sn**	**08 27 28.7**	**+0.1**
P30M	**Million Dollar**	**1.85**	**87**	P	**Pn**	**08 27 04.9**	**-0.3**
	baz=271						
P30M				S	**Sn**	**08 27 29.8**	**+1.2**
	baz=271						
KAIM	**Kayak Island**	**1.90**	**267**	Pn	**Pn**	**08 27 05.4**	**-0.3**
KAIM				IAML		08 27 34.0	
	comp=E,32nm,0.9s						
KAIM				IAML		08 28 18.9	
	comp=N,34nm,1.2s						
KAIM	**Kayak Island**	**1.90**	**267**	P	**Pn**	**08 27 05.8**	**+0.1**
	baz=83						
RAGM	**Ragged Mountai**	**2.03**	**281**		**Pn**	**08 27 07.7**	**0.0**
GLB	**Gilahina Butte**	**2.08**	**313**		**Pn**	**08 27 08.1**	**-0.1**
GLB				IAML		08 27 45.7	
	comp=N,24nm,0.6s						
BMRM	**Bremner River**	**2.15**	**297**		**Pn**	**08 27 09.1**	**-0.2**
BMRM	**Bremner River**	**2.15**	**297**	P	**Pn**	**08 27 09.1**	**-0.2**
	baz=113						
BMRM				S	**Sn**	**08 27 37.9**	**+1.9**
	baz=113						
N30M	**Aishikik Lake**	**2.24**	**50**		**Pn**	**08 27 10.4**	**-0.1**
N30M				IAML		08 27 47.4	
	comp=N,19nm,0.7s						
N30M				IAML		08 27 47.5	
	comp=E,21nm,0.7s						
N30M	**Aishikik Lake**	**2.24**	**50**	Pn	**Pn**	**08 27 10.1**	**-0.4**
N30M				Sn	**Sn**	**08 27 39.3**	**+1.1**
N30M	**Aishikik Lake**	**2.24**	**50**	P	**Pn**	**08 27 10.5**	**-0.1**
	baz=234,SNR=63						
N30M				S	**Sn**	**08 27 39.1**	**+0.9**
	baz=234						
BVCY	**Beaver Creek**	**2.36**	**358**		**Pn**	**08 27 13.3**	**+1.2**
BVCY	**Beaver Creek**	**2.36**	**358**	Pn	**Pn**	**08 27 13.0**	**+0.8**
BVCY				Sn	**Sb**	**08 27 43.8**	**-1.3**
BVCY	**Beaver Creek**	**2.36**	**358**	P	**Pn**	**08 27 12.5**	**+0.4**
	baz=178						
BVCY				Sb	**Sg**	**08 27 47.0**	**-2.2**
	baz=178						
O30N	**Mendenhall**	**2.37**	**71**		**Pn**	**08 27 12.1**	**-0.2**
O30N	**Mendenhall**	**2.37**	**71**	Pn	**Pn**	**08 27 11.2**	**-1.1**
O30N				Sn	**Sn**	**08 27 42.2**	**+0.7**
O30N	**Mendenhall**	**2.37**	**71**	P	**Pn**	**08 27 12.0**	**-0.2**
	baz=255,SNR=36						
O30N				S	**Sn**	**08 27 42.3**	**+0.9**
	baz=255						
M27K	**Edge Creek, AK**	**2.38**	**346**		**Pn**	**08 27 13.7**	**+1.2**
M27K				IAML		08 27 52.7	
	comp=N,33nm,0.9s						
M27K				IAML		08 27 56.2	
	comp=E,29nm,1.0s						
M27K	**Edge Creek, AK**	**2.38**	**346**	P	**Pn**	**08 27 12.7**	**+0.2**
	baz=165						
M27K				Sb	**Sg**	**08 27 47.8**	**-1.9**
	baz=165						
N25K	**Chitina, Valde**	**2.48**	**310**		**Pn**	**08 27 14.3**	**+0.5**
N25K				IAML		08 28 01.8	
	comp=N,16nm,0.8s						
N25K	**Chitina, Valde**	**2.48**	**310**	Pn	**Pn**	**08 27 14.1**	**+0.3**
N25K				Sn	**Sn**	**08 27 44.6**	**+0.6**
N25K	**Chitina, Valde**	**2.48**	**310**	P	**Pn**	**08 27 14.3**	**+0.5**
	baz=127						
N25K				S	**Sn**	**08 27 46.2**	**+2.2**
	baz=127						
EYAK	**Cordova Ski Ar**	**2.58**	**283**	Pn	**Pn**	**08 27 14.8**	**-0.3**
EYAK	**Cordova Ski Ar**	**2.58**	**283**	P	**Pn**	**08 27 14.8**	**-0.3**
	baz=98						
M26K	**Nabesna, AK**	**2.60**	**335**	P	**Pn**	**08 27 16.1**	**+0.6**
	baz=153						
M26K				Sb	**Sb**	**08 27 53.5**	**+1.4**
	baz=153						
M29M	**Somme Creek**	**2.61**	**23**		**Pn**	**08 27 16.6**	**+1.0**
M29M				IAML		08 27 57.8	
	comp=N,13nm,0.9s						
M29M				IAML		08 27 58.4	
	comp=E,21nm,0.5s						
M29M	**Somme Creek**	**2.61**	**23**	Pn	**Pn**	**08 27 15.5**	**-0.2**
M29M				Sn	**Sn**	**08 27 49.7**	**+2.3**
M29M	**Somme Creek**	**2.61**	**23**	P	**Pn**	**08 27 16.3**	**+0.7**
	baz=205,SNR=61						
M29M				Sb	**Sb**	**08 27 54.3**	**+1.9**
	baz=205						
DIV	**Divide**	**2.74**	**295**	Pn	**Pn**	**08 27 17.3**	**-0.1**
DIV				IAML		08 27 56.6	
	comp=N,14nm,0.9s						
DIV	**Divide**	**2.74**	**295**	Sn	**Sn**	**08 27 50.1**	**-0.4**
SKAG	**Skagway**	**2.76**	**100**	S	**Sn**	**08 27 53.1**	**+2.2**
	baz=286						
N31M	**Braeburn, Yuko**	**2.79**	**57**		**Pn**	**08 27 18.4**	**+0.5**
N31M				IAML		08 28 06.6	
	comp=E,30nm,0.8s						
N31M				IAML		08 28 08.6	
	comp=N,21nm,1.1s						
N31M	**Braeburn, Yuko**	**2.79**	**57**	Sn	**Sn**	**08 27 52.6**	**+1.0**
N31M	**Braeburn, Yuko**	**2.79**	**57**	P	**Pn**	**08 27 17.8**	**-0.1**
	baz=242						
N31M				Sb	**Sg**	**08 28 00.6**	**-2.2**
	baz=242						
WHY	**Whitehorse**	**2.93**	**76**		**Pn**	**08 27 19.8**	**-0.3**
WHY	**Whitehorse**	**2.93**	**76**	Pn	**Pn**	**08 27 19.2**	**-0.8**
WHY				Sn	**Sn**	**08 27 55.1**	**-0.2**
WHY	**Whitehorse**	**2.93**	**76**	P	**Pn**	**08 27 19.7**	**-0.3**
	baz=261,SNR=48						
WHY				S	**Sn**	**08 27 56.2**	**+0.9**
	baz=261						
KLU	**Klutina**	**2.96**	**301**		**Pn**	**08 27 21.0**	**+0.7**
KLU	**Klutina**	**2.96**	**301**	P	**Pn**	**08 27 20.5**	**+0.2**
	baz=116						
KLU				S	**Sn**	**08 27 57.5**	**+1.7**
	baz=116						
BCAR	**Beaver Creek A**	**3.06**	**350**	Pn	**Pn**	**08 27 22.4**	**+0.6**
L27K	**Beaver Creek,**	**3.06**	**350**	Pn	**Pn**	**08 27 21.1**	**-0.6**
L27K				Sn	**Sn**	**08 28 00.1**	**+1.7**
L27K	**Beaver Creek,**	**3.06**	**350**	P	**Pn**	**08 27 21.8**	**0.0**
	baz=169						
L27K				Sb	**Sg**	**08 28 09.1**	**-2.5**
	baz=169						
M30M	**Minto, Yukon**	**3.13**	**35**		**Pn**	**08 27 23.1**	**+0.4**
M30M				IAML		08 28 14.3	
	comp=E,10nm,0.7s						
M30M				IAML		08 28 16.1	
	comp=N,11nm,0.7s						
M30M	**Minto, Yukon**	**3.13**	**35**	Pn	**Pn**	**08 27 22.6**	**-0.1**
M30M				Sg	**Sg**	**08 28 12.4**	**-1.6**
M30M	**Minto, Yukon**	**3.13**	**35**	P	**Pn**	**08 27 23.1**	**+0.4**
	baz=219,SNR=16						
M30M				S	**Sn**	**08 28 01.8**	**+1.6**
	baz=219						
L26K	**Log Cabin Wild**	**3.24**	**338**		**Pn**	**08 27 24.6**	**+0.4**
L26K				IAML		08 28 14.4	
	comp=N,11nm,1.1s						
L26K				IAML		08 28 22.0	
	comp=E,11nm,0.5s						
L26K	**Log C

	comp=E,10nm,1.0s							
K29M	**Barlow Dome**	**4.07**	**20**	Pn	**Pn**	**08 27 36.1**	**+0.4**
K29M				Sn	**Sn**	**08 28 24.0**	**+0.6**
K29M	**Barlow Dome**	**4.07**	**20**	P	**Pn**	**08 27 37.0**	**+1.3**
	baz=203,SNR=20						
K29M				S	**Sn**	**08 28 24.4**	**+1.0**
	baz=203						
SML	**Sawmill**	**4.13**	**298**	Pn	**Pn**	**08 27 36.4**	**-0.1**
RIDG	**Independent Ri**	**4.19**	**334**	Pn	**Pn**	**08 27 37.3**	**+0.1**
MAYO	**Mayo, Yukon**	**4.20**	**30**	Sn	**Sn**	**08 28 27.5**	**+1.1**
SCRK	**Sand Creek**	**4.23**	**340**	Pn	**Pn**	**08 27 37.8**	**-0.1**
SCRK	**Sand Creek**	**4.23**	**340**	P	**Pn**	**08 27 37.9**	**+0.1**
	baz=157						
GHO	**Glory Hole Cre**	**4.38**	**297**	Pn	**Pn**	**08 27 38.5**	**-1.4**
J29N	**Klondike Camp**	**4.55**	**13**	Pn	**Pn**	**08 27 42.4**	**+0.2**
J29N				Sn	**Sn**	**08 28 36.3**	**+1.2**
RC01	**Rabbit Creek A**	**4.60**	**287**	Pn	**Pn**	**08 27 42.5**	**-0.3**
SLKM	**Skilak Lake**	**4.78**	**279**	Pn	**Pn**	**08 27 45.1**	**-0.3**
R33M	**Jennings River**	**4.95**	**94**	Sn	**Sn**	**08 28 44.2**	**-0.8**
J30M	**Hart River**	**4.96**	**22**		**Pn**	**08 27 48.2**	**+0.3**
J30M	**Hart River**	**4.96**	**22**	Pn	**Pn**	**08 27 48.0**	**+0.2**
J30M				Sn	**Sn**	**08 28 46.1**	**+0.9**
J30M	**Hart River**	**4.96**	**22**	P	**Pn**	**08 27 49.2**	**+1.3**
	baz=206,SNR=10						
I28M	**Miner Creek**	**5.42**	**3**	Pn	**Pn**	**08 27 55.1**	**+1.0**
I28M	**Miner Creek**	**5.42**	**3**	Pn	**Pn**	**08 27 54.5**	**+0.3**
L22K	**Petersville**	**5.46**	**301**	Pn	**Pn**	**08 27 55.2**	**+0.5**
KTH	**Kantishna Hill**	**5.99**	**310**	Pn	**Pn**	**08 28 03.2**	**+1.2**
H27K	**Steamboat Moun**	**6.20**	**357**	Pn	**Pn**	**08 28 05.2**	**+0.3**
BMAR	**Burnt Mountain**	**7.59**	**348**	Pn	**Pn**	**08 28 25.1**	**+1.2**
F26K	**Sheenjek River**	**7.81**	**350**	Pn	**Pn**	**08 28 27.2**	**+0.2**

IDC ***13*** *08:32:58.6±1.6,34.45N×132.09E,h0m,mb3.4/2, mbtmp3.3/4,ML2.6/2,Error ellipse: s-maj=29.7km s-min=23.0km az=110.0*

NIED ***13*** *08:32:58.4,34.67N×131.98E,h11km,MW3.6,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr1.58; Mθθ0.58; Mφφ-2.16; Mrθ-0.97; Mθφ-1.05; Mφr-0.55; Fault plane solution: M0.43000×10¹⁴ NP1: φs349.00000°,δ42.00000°,λ43.00000°. NP2: φs225.00000°,δ63.00000°,λ124.00000°.*

JMA ***13*** *08:32:58.4±0.0,34.67N±0.09×131.98E±0.09,h11km, MV3.8/20,SW SHIMANE PREF*

JMA Felt III J1 at SW SHIMANE PREF .

ISC 13 08:32:59.2±1.0,34°62N±0°05×132°00E±0°04,h11km±7km, n9,σ2ᵗ19/14,3D,Western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
JHIK	**Hikimi**	**0.11**	**211**	P		**Pg**	**08 33 01.8**	**-0.2**
JHIK				S		**Sg**	**08 33 04.0**	**0.0**
JHT	**Toyohira**	**0.35**	**83**	⇓P		**Pg**	**08 33 05.7**	**-0.6**
JHT				⇓*e*S		**Sg**	**08 33 10.8**	**-0.2**
JGT2	**ShimaneMisato**	**0.61**	**44**	*i* P		**Pg**	**08 33 09.6**	**-1.5**
JGT2				S		**Sg**	**08 33 17.5**	**-1.6**
JHGM	**Hagimishima**	**0.72**	**283**	⇓*i* P		**Pg**	**08 33 11.8**	**-1.4**
JNU	**Nakatsue**	**1.76**	**212**	Pn		**Pn**	**08 33 29.9**	**+0.2**
	56nm,0.3s,baz=20,slow=4.9,SNR=280							
JNU				Sn		**Sb**	**08 33 54.1**	**+0.4**
	25nm,0.3s,baz=178,slow=8.7,SNR=6.3							
JNU				LR		LR	08 34 03.3	
	comp=Z,92nm,19.1s,baz=182,slow=39							
KSRS	**Korea Array**	**4.34**	**312**	Pn		**Pn**	**08 34 09.2**	**+4.0**
	0.5nm,0.3s,baz=144,slow=13,SNR=3.0							
KSRS				Sn		**Sn**	**08 34 52.4**	**-3.4**
	1.4nm,0.3s,baz=126,slow=18,SNR=1.0							
	0.8nm,0.3s							
MJAR	**Matsushiro Arr**	**5.41**	**68**	Pn		**Pn**	**08 34 22.4**	**+2.5**
	0.1nm,0.3s,baz=249,slow=13,SNR=11							
	2.9nm,0.5s							
SONM	**Songino Array**	**23.21**	**312**	P		**P**	**08 38 08.4**	**+2.1**
	0.4nm,0.6s,baz=132,slow=8.8,SNR=3.8							
	0.4nm,0.6s							
WRA	**Warramunga Arr**	**54.31**	**177**	P		**P**	**08 42 24.3**	**-1.4**
	0.6nm,0.7s,baz=354,slow=8.2,SNR=5.1							
	0.6nm,0.7s							

IDC ***13*** *09:04:41.9±0.9,2.92N×126.42E,h0km,mb4.1/8, mbtmp4.1/8,MS2.7/6,Error ellipse: s-maj=57.0km s-min=15.5km az=75.0*

DJA ***13*** *09:04:47.5±0.8,3.3N±3.3°×12.7E±°,h12km±7km,M4.5/24, mb4.8/19,mB5.1/9,MLv4.4/24,Mw(mB)4.5/9*

NEIC ***13*** *09:04:48.2±1.1,2.99N±0.06×126.41E±0.07,h45km±7km, mb4.6/33,Error ellipse: s-maj=11.2km s-min=7.8km az=63.0*

MAN ***13*** *09:04:49.0,2.96N×126.30E,h60km,MS3.7*

ISC 13 09:04:49.3±0.4,2°98N±0°04×126°42E±0°06,h63km,n78, σ1ᵗ75/78,mb4.3/23,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
SGSI	**Sangihe**	**1.14**	**308**	P		**Pn**	**09 05 09.9**	**+0.6**
SGSI				S		**Sn**	**09 05 24.8**	**+0.7**
GAMI	**Galela, Maluku**	**1.77**	**130**	P		**Pn**	**09 05 16.2**	**-1.6**
MNI	**Manado**	**2.19**	**226**	P		**Pn**	**09 05 23.7**	**+0.2**
TNTI	**Ternate**	**2.38**	**157**	Pn		**Pn**	**09 05 24.2**	**-1.8**
TNTI				Sn		**Sn**	**09 05 56.7**	**+2.5**
TNTI	**Ternate**	**2.38**	**157**	P		**Pn**	**09 05 25.2**	**-0.9**
DDMP	**Don Marcelino,**	**3.19**	**347**	*e*P		**Pn**	**09 05 38.0**	**+1.0**
DDMP				*e*S		**Sn**	**09 06 07.6**	**-6.3**
GTOI	**Gorontalo**	**4.12**	**236**	P		**Pn**	**09 05 50.7**	**+0.9**
DAV	**Davao City (W)**	**4.15**	**348**	LR		LR	09 07 48.5	
	comp=Z,83nm,19.6s,baz=169,slow=44							
DAV	**Davao City (W)**	**4.15**	**348**	Sn		**Sn**	**09 06 35.9**	**-1.7**
KCP	**Kidapawan**	**4.22**	**342**	*e*P		**Pn**	**09 05 55.9**	**+4.7**
KCP				*e*S		**Sn**	**09 06 44.4**	**+5.1**
CTBH	**Cotabato--PC H**	**4.74**	**333**	*e*P		Pn	09 06 06.4	+8.1
CTBH				*i* S		Sn	09 06 29.9	-22
SANI	**Sanana**	**5.01**	**185**	P		**Pn**	**09 06 02.0**	**0.0**
	0.2nm1μm30nm,0.8s							
MRSI	**Marisa**	**5.12**	**241**	P		**Pn**	**09 06 05.5**	**+2.0**
LUWI	**Luwuk**	**5.41**	**222**	Pn		**Pn**	**09 06 04.6**	**-2.8**
LUWI	**Luwuk**	**5.41**	**222**	P		**Pn**	**09 06 10.2**	**+2.8**
	0.8nm243nm,0.9s							
TOLI2	**Tolitoli**	**5.93**	**252**	Pn		**Pn**	**09 06 13.8**	**-0.8**
TOLI2				Sn		**Sn**	**09 07 18.1**	**-3.1**
APSI	**Ampana**	**6.13**	**231**	P		**Pn**	**09 06 19.5**	**+2.1**
	2μm197nm,1.2s							
NLAI	**Namlea**	**6.21**	**174**	P		**Pn**	**09 06 18.1**	**-0.3**
	0.2nm1μm43nm,1.0s							
KRAI	**Karang Ratu**	**6.55**	**162**	P		**Pn**	**09 06 24.6**	**+1.4**
	0.3nm21nm,0.4s							
MPSI	**Mapaga**	**7.03**	**248**	P		**Pn**	**09 06 31.0**	**+1.4**
	0.1nm785nm26nm,0.7s							
MYLDM	**Lahad Datu**	**8.20**	**286**	Pn		**Pn**	**09 06 43.8**	**-1.8**
MYLDM	**Lahad Datu**	**8.20**	**286**	P		**Pn**	**09 06 48.4**	**+2.8**
TTSI	**Tana Toraja**	**8.90**	**228**	P		**Pn**	**09 06 57.8**	**+2.5**
	109nm,1.2s							
SPSI	**Sidrap Palu**	**9.57**	**224**	P		**Pn**	**09 07 07.0**	**+2.5**
	23nm,1.0s							
KAPI	**Kappang**	**10.36**	**220**	LR		LR	09 11 43.1	
	comp=Z,70nm,21.8s,baz=24,slow=41							
SOEI	**Soe**	**12.83**	**190**	Pn		**Pn**	**09 07 47.0**	**-2.0**
DBNI	**Kabupaten Domp**	**13.98**	**215**	P		**Pn**	**09 08 07.6**	**+3.2**
	14nm,0.5s							
SBUM	**Sibu**	**14.19**	**268**	Pn		**Pn**	**09 08 06.3**	**-0.9**
PLAI	**Plampang**	**14.55**	**216**	P		**Pn**	**09 08 14.8**	**+2.9**
MTN	**Manton Dam**	**16.40**	**164**	Pn		**Pn**	**09 08 33.3**	**-2.3**
JAGI	**Jajag, Banyuwa**	**16.70**	**227**	Pn		**Pn**	**09 08 37.0**	**-2.4**
KNRA	**Kununurra**	**18.68**	**173**	P		**P**	**09 09 02.3**	**-0.2**
KNRA				IAmb		IAmb	09 09 03.8	
	comp=Z,15nm,0.7s							
FITZ	**Fitzroy Crossi**	**20.95**	**182**	P		**P**	**09 09 26.7**	**-0.5**
	comp=Z,8.0nm,0.6s,baz=16,slow=7.8,SNR=28							
	comp=Z,8.0nm,0.6s							
JMZ	**Minamidaito 2**	**23.18**	**11**	P		**P**	**09 09 49.0**	**-1.7**
COEN	**Coen**	**23.64**	**136**	P		**P**	**09 09 54.6**	**-0.6**
COEN				IAmb		IAmb	09 10 16.1	
	comp=Z,11nm,1.2s							
JOW	**Kunigami**	**23.79**	**4**	LR		LR	09 18 33.6	
	comp=Z,16nm,22.0s,baz=9.0,slow=35							
WB0	**Warramunga Arr**	**23.92**	**161**	P		**P**	**09 09 56.9**	**-0.7**
WB0				IAmb		IAmb	09 10 04.3	
	comp=Z,10nm,0.6s							
WRA	**Warramunga Arr**	**24.07**	**161**	P		**P**	**09 09 58.3**	**-0.6**
	comp=Z,2.6nm,0.3s,baz=337,slow=10,SNR=41							
	comp=Z,2.6nm,0.3s							
WRA	**Warramunga Arr**	**24.07**	**161**	P		**P**	**09 09 57.5**	**-1.5**
WR8	**Warramunga Arr**	**24.13**	**161**			**P**	**09 09 59.5**	**-0.1**
WR8				IAmb		IAmb	09 10 08.0	
	comp=Z,10nm,0.9s							
PSA00	**Pilbara Seismi**	**25.23**	**194**	P		**P**	**09 10 10.0**	**+0.5**
PSA00				IAmb		IAmb	09 10 11.7	
	comp=Z,17nm,0.9s							
RABL	**Rabaul**	**26.69**	**105**	P		**P**	**09 10 22.7**	**-0.2**
AS31	**Alice Springs**	**27.46**	**165**	P		**P**	**09 10 29.7**	**0.0**
ASAR	**Alice Springs**	**27.46**	**165**	P		**P**	**09 10 29.6**	**-0.1**
	comp=Z,1.1nm,0.3s,baz=341,slow=9.1,SNR=48							
	comp=Z,1.1nm,0.3s							
ASAR	**Alice Springs**	**27.46**	**165**	P		**P**	**09 10 30.0**	**+0.3**
JCJ	**Chichijima**	**28.34**	**31**	LR		LR	09 19 39.2	
	comp=Z,6.0nm,20.5s,baz=230,slow=32							
MORW	**Morawa**	**33.38**	**197**	P		**P**	**09 11 21.9**	**+0.1**
MORW				IAmb		IAmb	09 11 23.8	
	comp=Z,28nm,1.4s							
INKA	**Innaminka**	**33.51**	**157**	P		**P**	**09 11 23.5**	**+0.5**
FORT	**Forrest**	**33.60**	**177**	P		**P**	**09 11 24.3**	**+0.6**
FORT				IAmb		IAmb	09 11 43.3	
	comp=Z,13nm,0.9s							
JGF	**Kuroka**	**34.01**	**16**	P		**P**	**09 11 27.2**	**0.0**
JGF				IAmb		IAmb	09 12 08.5	
	comp=Z,24nm,1.4s							
INCN	**Inchon**	**34.34**	**0**	P		**P**	**09 11 28.7**	**-1.4**
MJAR	**Matsushiro Arr**	**35.13**	**17**	P		**P**	**09 11 37.5**	**+0.6**
	comp=Z,3.1nm,0.9s,baz=183,slow=8.8,SNR=5.8							
MJAR				LR		LR	09 29 46.6	
	comp=Z,8.8nm,18.4s,baz=203,slow=43							
	comp=Z,3.1nm,0.9s							
MJAR	**Matsushiro Arr**	**35.13**	**17**	P		**P**	**09 11 36.5**	**-0.4**
BBOO	**Buckleboo**	**36.74**	**166**	P		**P**	**09 11 51.5**	**+0.8**
NWAO	**Narrogin (SRO)**	**36.75**	**193**	P		**P**	**09 11 50.5**	**-0.3**
EIDS	**Eidsvold**	**36.96**	**141**	P		**P**	**09 11 52.6**	**0.0**
EIDS				IAmb		IAmb	09 12 21.0	
	comp=Z,31nm,1.4s							
STKA	**Stephens Creek**	**37.54**	**159**	P		**P**	**09 11 57.3**	**-0.2**
	comp=Z,4.6nm,0.8s,baz=320,slow=4.8,SNR=4.9							
	comp=Z,4.6nm,0.8s							
STKA	**Stephens Creek**	**37.54**	**159**	P		**P**	**09 11 57.1**	**-0.4**
SONM	**Songino Array**	**47.91**	**342**	P		**P**	**09 13 24.0**	**+2.6**
	comp=Z,0.8nm,0.6s,baz=166,slow=8.9,SNR=4.6							
SONM				LR		LR	09 37 00.8	
	comp=Z,23nm,19.6s,baz=225,slow=40							
	comp=Z,0.8nm,0.6s							
SONM	**Songino Array**	**47.91**	**342**	P		**P**	**09 13 21.8**	**+0.3**
PETK	**Petropavlovsk-**	**56.24**	**22**	P		**P**	**09 14 24.2**	**+1.2**
MKAR	**Makanchi Array**	**58.00**	**326**	P		**P**	**09 14 36.5**	**+0.9**
	comp=Z,0.4nm,0.4s,baz=125,slow=7.1,SNR=9.1							
	comp=Z,0.4nm,0.4s							
MKAR	**Makanchi Array**	**58.00**	**326**	P		**P**	**09 14 35.6**	**0.0**
MAKZ	**Makanchi**	**58.18**	**326**	P		**P**	**09 14 37.2**	**+0.4**
MAKZ				IAmb		IAmb	09 15 21.0	
	comp=Z,2.5nm,0.7s							
AIS	**Amsterdam Isla**	**60.72**	**223**	P		**P**	**09 14 54.6**	**+0.1**
ZAA0	**Zalesovo Array**	**61.12**	**333**	P		**P**	**09 14 56.6**	**-0.2**
ZAA0				IAmb		IAmb	09 15 07.1	
	comp=Z,3.5nm,1.4s							
ZALV	**Zalesovo Beam**	**61.12**	**333**	P		**P**	**09 14 57.2**	**+0.3**
KURBB	**Kurchatov Arra**	**62.21**	**328**	P		**P**	**09 15 04.6**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=130,slow=5.7,SNR=6.1							
	comp=Z,0.5nm,0.3s							
KURK	**Kurchatov**	**62.21**	**328**	P		**P**	**09 15 05.0**	**+0.7**
KURK				IAmb		IAmb	09 15 22.5	
	comp=Z,2.2nm,0.8s							
SHEM	**Shemya Is, Ala**	**63.27**	**30**	P		**P**	**09 15 12.1**	**+0.8**
SMY	**Shemya**	**63.27**	**30**	P		**P**	**09 15 11.9**	**+0.6**
HRA	**Herat**	**67.12**	**306**	P		**P**	**09 15 36.9**	**-0.1**
HRA				IAmb		IAmb	09 16 06.7	
	comp=Z,1.9nm,0.5s							
TIXI	**Tiksi**	**68.60**	**1**	P		**P**	**09 15 44.7**	**-0.5**
TIXI				IAmb		IAmb	09 16 15.4	
	comp=Z,2.2nm,0.6s							
AB31	**Akbulak array**	**72.54**	**321**	P		**P**	**09 16 09.8**	**+0.2**
ABKAR	**Akbulak array**	**72.54**	**321**	P		**P**	**09 16 10.1**	**+0.5**
M11K	**Mekoryuk**	**76.38**	**28**	P		**P**	**09 16 30.9**	**-0.7**
M11K				IAmb		IAmb	09 16 32.2	
	comp=Z,35nm,1.4s							
SKT	**Skwentna**	**83.65**	**28**	P		**P**	**09 17 13.2**	**+2.3**
SKT				IAmb		IAmb	09 17 21.6	
	comp=Z,5.7nm,1.3s							
L22K	**Petersville**	**84.05**	**28**	P		**P**	**09 17 14.1**	**+1.1**
L22K				IAmb		IAmb	09 17 23.4	
	comp=Z,6.3nm,1.3s							

SKHL ***13*** *09:07:29.8±0.4,42.70N×145.10E,h75km±8km,mb4.8/4*

MOS ***13*** *09:07:29.1±0.9,42.70N×145.05E,h72km,mb4.4/1,Error ellipse: s-maj=18.9km s-min=10.9km az=83.7*

JMA ***13*** *09:07:31.6±0.1,42.9N±0.4×144.9E±0.4,h56km,MV3.8/39, OFF NEMURO PENINSULA*

JMA Felt I J1 at OFF NEMURO PENINSULA .

IDC ***13*** *09:07:33.0±2.9,42.72N×144.84E,h83km±23km,mb3.4/6, mbtmp3.7/9,MS2.9/1,Error ellipse: s-maj=25.9km s-min=24.0km az=31.0*

ISC 13 09:07:30.8±0.9,42°80N±0°07×144°97E±0°04,h57km±6km, n41,σ1ᵗ15/54,mb3.5/6,1C,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
AKK	**Akkeshi**	**0.24**	**337**	*e*P		**Pn**	**09 07 40.2**	**+0.1**
AKK				*e*S		**Sn**	**09 07 46.4**	**-0.4**
JAK	**Akkeshi**	**0.28**	**315**	P		**Pn**	**09 07 40.4**	**-0.1**
JAK				S		**Sn**	**09 07 46.7**	**-0.7**
JKHN	**Kushirohamanak**	**0.32**	**26**	*i* P		**Pn**	**09 07 41.4**	**+0.7**
JKHN				S		**Sn**	**09 07 47.9**	**0.0**
NMR	**Nemuro--Hokkai**	**0.80**	**44**	↑*i* PN		**Pn**	**09 07 46.1**	**0.0**
NMR				*i* S		**Sn**	**09 07 56.8**	**-0.5**
NMR	**Nemuro--Hokkai**	**0.80**	**44**	*i* P		**Pn**	**09 07 46.2**	**+0.1**
NMR				*i* S		**Sn**	**09 07 56.7**	**-0.5**
NEM2	**Nemuro 2**	**0.80**	**45**	*i* P		**Pn**	**09 07 46.2**	**0.0**
NEM2				S		**Sn**	**09 07 56.8**	**-0.5**
JNK	**Nakash**	**0.81**	**347**	*i* P		**Pn**	**09 07 45.4**	**-0.9**
JNK				S		**Sn**	**09 07 55.5**	**-2.1**
JOB	**Onbets**	**0.84**	**278**	P		**Pn**	**09 07 46.5**	**-0.2**
JOB				S		**Sn**	**09 07 57.6**	**-0.7**
JAR	**Ashorobuto**	**1.01**	**300**	*i* P		**Pn**	**09 07 48.4**	**-0.5**
JAR				S		**Sn**	**09 07 59.9**	**-2.3**
GLVR	**Golovnino**	**1.02**	**23**	*e*PN		**Pn**	**09 07 49.2**	**+0.2**
GLVR				*i* S		**Sn**	**09 08 02.7**	**+0.2**
GLVR				pmax	pmax			
	comp=N,88nm,0.1s							
GLVR				pmax	pmax			
	comp=Z,647nm,0.1s							
GLVR				smax	smax			
	comp=E,5μm,0.3s							
GLVR				smax	smax			
	comp=N,2μm,0.4s							
GLVR	**Golovnino**	**1.02**	**23**	*e*P		**Pn**	**09 07 49.2**	**+0.2**
GLVR				AMB	AMB		09 07 50.5	
	comp=N,600nm,0.4s							
GLVR				*i* S		**Sn**	**09 08 02.5**	**0.0**
GLVR				A	A		09 08 03.6	
	comp=N,2μm,0.4s							
GLVR				A	A		09 08 03.6	
	comp=N,3μm,0.4s							
JRA	**Rausu**	**1.15**	**5**	*i* P		**Pn**	**09 07 50.4**	**-0.2**
JRA				S		**Sn**	**09 08 04.3**	**-1.2**
JCH	**Churui**	**1.20**	**262**	P		**Pn**	**09 07 51.2**	**-0.1**
JCH				S		**Sn**	**09 08 06.3**	**-0.3**
RUSJ	**Misakicho**	**1.32**	**9**	*e*PN		**Pn**	**09 07 53.2**	**+0.2**
RUSJ				*i* S		**Sn**	**09 08 09.1**	**-0.6**
YUK	**Yuzh-Kuril'sk**	**1.40**	**27**	*e*PN		**Pn**	**09 07 54.6**	**+0.6**
YUK				*i* S		**Sn**	**09 08 11.6**	**+0.1**
YUK				pmax	pmax			
	comp=Z,508nm,0.2s							
YUK				pmax	pmax			
	comp=N,130nm,0.1s							
YUK				pmax	pmax			
	comp=E,127nm,0.1s							
YUK				smax	smax			
	comp=N,2μm,0.5s							
YUK				smax	smax			
	comp=E,2μm,0.3s							
YUK	**Yuzh-Kuril'sk**	**1.40**	**27**	*e*P		**Pn**	**09 07 53.5**	**-0.5**
YUK				AMB	AMB		09 07 55.5	
	comp=E,450nm,0.4s							
YUK				*e*S		**Sn**	**09 08 11.0**	**-0.5**
YUK				A	A		09 08 12.4	
	comp=E,2μm,0.5s							
YUK				A	A		09 08 12.4	
	comp=E,2μm,0.5s							
JTKR	**Abashiri--Toko**	**1.41**	**327**	*i* P		**Pn**	**09 07 54.1**	**-0.1**
JTKR				S		**Sn**	**09 08 10.9**	**-0.7**
SHO	**Shikotan**	**1.73**	**51**	*e*P		Pn	09 08 09.2	+11
SHO				AMB	AMB		09 08 10.5	
	comp=E,150nm,0.2s							
SHO				*e*S		Sn	09 08 28.8	+9.3
SHO				A	A		09 08 31.4	
	comp=E,510nm,0.4s							
SHO				A	A		09 08 31.4	
	comp=E,710nm,0.4s							
JKA	**Kamikawa-asahi**	**2.17**	**308**	*e*P		**Pn**	**09 08 06.0**	**+1.4**
ASAJ	**Asahikawa**	**2.18**	**308**	P		**Pn**	**09 08 06.0**	**+1.4**
	comp=E,75nm,0.3s,baz=157,slow=8.7,SNR=96							
ASAJ				S		**Sn**	**09 08 33.7**	**+3.3**
	comp=E,161nm,0.5s,baz=42,slow=27,SNR=10							
KUR	**Kuril'sk**	**3.21**	**40**	*e*PN		**Pn**	**09 08 20.1**	**+1.4**
KUR				*i* S		**Sn**	**09 08 56.3**	**+0.6**
KUR	**Kuril'sk**	**3.21**	**40**	*e*P		**Pn**	**09 08 18.5**	**-0.2**
KUR				AMB	AMB		09 08 23.7	
	comp=E,60nm,0.3s							
KUR				*e*S		**Sn**	**09 08 54.7**	**-1.0**
KUR				A	A		09 09 10.1	
	comp=E,140nm,0.3s							
KUR				A	A		09 09 10.1	
	comp=E,100nm,0.3s							
MJAR	**Matsushiro Arr**	**8.13**	**222**	P		**Pn**	**09 09 26.6**	**+0.3**
	comp=E,1.4nm,0.6s,baz=34,slow=13,SNR=5.5							
KLR	**Kul'dur**	**11.21**	**310**	P		**Pn**	**09 10 11.0**	**+2.7**
	comp=E,1.7nm,0.8s,baz=117,slow=14,SNR=4.4							
KLR				LR		LR	09 14 45.6	
	comp=E,60nm,18.1s,baz=159,slow=39							
KLR	**Kul'dur**	**11.21**	**310**	PN		**Pn**	**09 10 11.0**	**+2.7**
KLR	**Kul'dur**	**11.21**	**310**	*e*P		**Pn**	**09 10 09.0**	**+0.8**
SONM	**Songino Array**	**27.39**	**294**	P		**P**	**09 13 10.8**	**0.0**
	comp=E,0.9nm,0.8s,baz=78,slow=7.5,SNR=4.0							
	comp=E,0.9nm,0.8s							
H11N2	**WAKE ISLAND Hy**	**29.50**	**134**	T		T	09 44 36.6	
	baz=327,slow=76,SNR=252							
H11N1	**WAKE ISLAND Hy**	**29.51**	**134**	T		T	09 44 38.6	
	baz=327,slow=76,SNR=154							
H11N3	**WAKE ISLAND Hy**	**29.51**	**134**	T		T	09 44 39.1	
	baz=327,slow=76,SNR=169							
H11S1	**WAKE ISLAND Hy**	**30.41**	**136**	T		T	09 45 47.3	
	baz=328,slow=76,SNR=284							
H11S3	**WAKE ISLAND Hy**	**30.42**	**136**	T		T	09 45 50.1	
	baz=328,slow=76,SNR=205							
H11S2	**WAKE ISLAND Hy**	**30.43**	**136**	T		T	09 45 46.7	
	baz=328,slow=76,SNR=200							
ZALV	**Zalesovo Beam**	**40.31**	**308**	PcP		**PcP**	**09 17 04.9**	**+0.1**
	comp=E,0.8nm,0.5s,baz=112,slow=2.9,SNR=4.7							
ILAR	**Eielson Array**	**43.19**	**36**	P		**P**	**09 15 25.6**	**-0.2**
	comp=E,0.4nm,0.5s,baz=282,slow=8.8,SNR=11							
	comp=E,0.4nm,0.5s							
MKAR	**Makanchi Array**	**43.62**	**298**	P		**P**	**09 15 29.0**	**-0.4**
	comp=E,0.4nm,0.6s,baz=80,slow=11,SNR=1.7							
	comp=E,0.4nm,0.6s							
KURK	**Kurchatov**	**44.75**	**304**	P		**P**	**09 15 36.5**	**-1.8**
KURK	**Kurchatov**	**44.75**	**304**	*e*P		**P**	**09 15 36.5**	**-1.8**
KURBB	**Kurchatov Arra**	**44.83**	**304**	P		**P**	**09 15 36.5**	**-2.5**
	comp=E,0.4nm,0.4s,baz=336,slow=39,SNR=1.6							
	comp=E,0.4nm,0.4s							
FINES	**FINESS Array B**	**64.99**	**332**	P		**P**	**09 18 03.2**	**-1.2**
	comp=E,1.1nm,0.6s,baz=63,slow=8.8,SNR=4.2							
	comp=E,1.1nm,0.6s							
PDAR	**Pinedale Array**	**71.74**	**48**	P		**P**	**09 18 48.1**	**+1.0**
	comp=E,0.6nm,0.8s,baz=215,slow=0.2,SNR=4.8							
	comp=E,0.6nm,0.8s							

WEL 13 09:11:20.9±1.5,35°S±30°×18°0W±4°4,h100km,M3.2/2, ML3.5/6,MLv3.2/2,Error ellipse: s-maj=68.4km s-min=11.1km az=124.4,confirmed,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**3.56**	**205**	P		Pn	09 12 14.1	0.0
PKGZ	**Pakihiroa**	**3.73**	**209**	P		Pn	09 12 16.4	-0.1
HAZ	**Te Kaha**	**3.76**	**213**	P		Pn	09 12 17.4	+0.6
HAZ				S		Sn	09 13 02.6	+2.5
PUZ	**Puketiti**	**3.84**	**205**	P		Pn	09 12 17.2	-0.7
RUGZ	**Raukumara Rang**	**3.98**	**212**	P		Pn	09 12 19.8	-0.1
TWGZ	**Tauwhareparae**	**4.04**	**207**	P		Pn	09 12 21.0	+0.4
TWGZ				S		Sn	09 13 07.5	+0.6

JMA ***13*** *10:13:33.0₀0.9,48˚N₀7˚×15˚6E₀1˚0,h3ᵏᵐ,MV4.6/14, FAR FIELD*

ISC 13 10:13:28.2₀0.3,50˚27N₀0˚05×154˚20E₀0˚05,h206ᵏᵐ, n316,σ1$42/321,mb4.2/97,11C-8D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	h m s	ISC
				Op				
SKR	**Severo-Kuril's**	**1.29**	**71**	*e*P	**Pn**		**10 14 01.8**	**+1.2**
SKR				*e*S	**S**		**10 14 27.5**	**+1.9**
SKR				pmax	pmax			
	comp=Z,558nm,0.8s							
SKR				smax	smax			
	comp=E,606nm,0.7s							
SKR				smax	smax			
	comp=N,1μm,0.9s							
SKR	**Severo-Kuril's**	**1.29**	**71**	*e*P	**Pn**		**10 14 02.2**	**+1.6**
SKR				*e*S	**S**		**10 14 27.9**	**+2.3**
PAU	**Pauzhetka**	**2.04**	**53**	PN	**Pn**		**10 14 08.2**	**+0.7**
PAU	**Pauzhetka**	**2.04**	**53**	*e*P	**Pn**		**10 14 08.3**	**+0.7**
MIPR	**Malaya Ipel'ka**	**2.57**	**38**	PN	**Pn**		**10 14 14.2**	**+1.1**
MIPR				S	**S**		**10 14 50.5**	**+2.6**
MIPR	**Malaya Ipel'ka**	**2.57**	**38**	*e*P	**Pn**		**10 14 14.3**	**+1.1**
MIPR				*e*S	**S**		**10 14 50.5**	**+2.6**
KDTR	**Khodutka, Kamc**	**2.89**	**56**	PN	**Pn**		**10 14 16.8**	**+0.1**
KDTR				S	**S**		**10 14 52.1**	**-2.2**
KDTR	**Khodutka, Kamc**	**2.89**	**56**	*e*P	**Pn**		**10 14 16.9**	**+0.1**
KDTR				*e*S	**S**		**10 14 52.2**	**-2.2**
ASAK	**Asacha**	**3.14**	**46**	PN	**Pn**		**10 14 21.0**	**+1.2**
ASAK	**Asacha**	**3.14**	**46**	*e*P	**Pn**		**10 14 21.0**	**+1.2**
APC	**Apacha**	**3.23**	**34**	PN	**Pn**		**10 14 21.5**	**+0.8**
APC				S	**S**		**10 15 02.8**	**+1.3**
APC	**Apacha**	**3.23**	**34**	*e*P	**Pn**		**10 14 21.6**	**+0.8**
APC				*e*S	**S**		**10 15 02.9**	**+1.3**
GRL	**Gorelyy**	**3.33**	**45**	PN	**Pn**		**10 14 23.8**	**+1.7**
GRL	**Gorelyy**	**3.33**	**45**	*e*P	**Pn**		**10 14 23.8**	**+1.7**
MTVR	**Mutnovka**	**3.34**	**47**	PN	**Pn**		**10 14 23.5**	**+1.4**
MTVR	**Mutnovka**	**3.34**	**47**	*e*P	**Pn**		**10 14 23.5**	**+1.4**
RUS	**Russkaya**	**3.46**	**50**	PN	**Pn**		**10 14 24.1**	**+0.6**
RUS				S	**S**		**10 15 05.1**	**-1.3**
RUS	**Russkaya**	**3.46**	**50**	*e*P	**Pn**		**10 14 24.2**	**+0.6**
RUS				*e*S	**S**		**10 15 05.2**	**-1.3**
KRMR	**Karymshinskiy**	**3.55**	**42**	PN	**Pn**		**10 14 25.3**	**+0.8**
KRMR	**Karymshinskiy**	**3.55**	**42**	*e*P	**Pn**		**10 14 25.4**	**+0.8**
PEA0B	**Petropavlovsk-**	**3.58**	**36**	Pn	**Pn**		**10 14 26.3**	**+1.4**
PEA0B	**Petropavlovsk-**	**3.58**	**36**	⇓*i*PN	**Pn**		**10 14 26.1**	**+1.2**
PETK	**Petropavlovsk-**	**3.58**	**36**	P	**Pn**		**10 14 26.3**	**+1.4**
	comp=N,24nm,0.5s,baz=216,slow=10,SNR=86							
PETK	**Petropavlovsk-**	**3.58**	**36**		**Pn**		**10 14 25.5**	**+0.6**
PETK	**Petropavlovsk-**	**3.58**	**36**	PN	**Pn**		**10 14 25.5**	**+0.6**
PET	**Petropavlovsk**	**3.91**	**44**		**Pn**		**10 14 29.1**	**+0.2**
PET	**Petropavlovsk**	**3.91**	**44**	*e*PN	**Pn**		**10 14 29.6**	**+0.7**
PET				*e*S	**S**		**10 15 16.5**	**+0.2**
PET				pmax	pmax			
	comp=Z,49nm,0.2s							
PET				smax	smax			
	comp=E,178nm,0.7s							
PET				smax	smax			
	comp=N,191nm,0.5s							
PET	**Petropavlovsk**	**3.91**	**44**	*e*P	**Pn**		**10 14 29.7**	**+0.8**
PET				*e*S	**S**		**10 15 17.3**	**+1.0**
INSR	**Institute**	**3.92**	**43**	PN	**Pn**		**10 14 30.1**	**+1.1**
INSR	**Institute**	**3.92**	**43**	*e*P	**Pn**		**10 14 30.2**	**+1.1**
DALK	**Dalny**	**3.96**	**44**	PN	**Pn**		**10 14 30.3**	**+0.8**
DALK				S	**S**		**10 15 16.6**	**-0.7**
DALK	**Dalny**	**3.96**	**44**	*e*P	**Pn**		**10 14 30.3**	**+0.8**
DALK				*e*S	**S**		**10 15 16.6**	**-0.7**
KOK	**Koryaka**	**4.09**	**41**	PN	**Pn**		**10 14 32.7**	**+1.5**
KOK	**Koryaka**	**4.09**	**41**	*e*P	**Pn**		**10 14 32.8**	**+1.5**
UGLR	**Uglovaya**	**4.11**	**43**	PN	**Pn**		**10 14 33.5**	**+1.9**
UGLR				S	**S**		**10 15 21.5**	**+0.5**
UGLR	**Uglovaya**	**4.11**	**43**	*e*P	**Pn**		**10 14 33.5**	**+1.9**
UGLR				*e*S	**S**		**10 15 21.5**	**+0.5**
AVH	**Avacha**	**4.12**	**42**	PN	**Pn**		**10 14 33.4**	**+1.8**
AVH	**Avacha**	**4.12**	**42**	*e*P	**Pn**		**10 14 33.4**	**+1.8**
GNL	**Ganaly**	**4.13**	**33**	PN	**Pn**		**10 14 32.8**	**+0.9**
GNL	**Ganaly**	**4.13**	**33**	*e*P	**Pn**		**10 14 32.8**	**+0.9**
SMAR	**Somma**	**4.14**	**42**	PN	**Pn**		**10 14 33.4**	**+1.4**
SMAR				S	**S**		**10 15 22.4**	**+0.6**
SMAR	**Somma**	**4.14**	**42**	*e*P	**Pn**		**10 14 33.5**	**+1.4**
SMAR				*e*S	**S**		**10 15 22.5**	**+0.6**
KRX	**Arik**	**4.14**	**40**	PN	**Pn**		**10 14 33.7**	**+1.7**
KRX	**Arik**	**4.14**	**40**	*e*P	**Pn**		**10 14 33.7**	**+1.7**
KRER	**Koryakskii**	**4.15**	**41**	PN	**Pn**		**10 14 34.0**	**+2.0**
KRER	**Koryakskii**	**4.15**	**41**	*e*P	**Pn**		**10 14 34.1**	**+2.0**
SDLR	**Sedlovina**	**4.19**	**42**	PN	**Pn**		**10 14 33.6**	**+1.1**
SDLR				S	**S**		**10 15 23.0**	**+0.3**
SDLR	**Sedlovina**	**4.19**	**42**	*e*P	**Pn**		**10 14 33.7**	**+1.1**
SDLR				*e*S	**S**		**10 15 23.0**	**+0.3**
NLC	**Nalytchevo**	**4.32**	**46**	PN	**Pn**		**10 14 33.4**	**-0.6**
NLC				S	**S**		**10 15 22.0**	**-3.4**
NLC	**Nalytchevo**	**4.32**	**46**	*e*P	**Pn**		**10 14 33.5**	**-0.6**
NLC				*e*S	**S**		**10 15 22.0**	**-3.4**
SPN	**Mys Shipunski**	**4.60**	**50**	PN	**Pn**		**10 14 37.2**	**-0.3**
SPN	**Mys Shipunski**	**4.60**	**50**	*e*P	**Pn**		**10 14 37.3**	**-0.3**
SPN				*e*S	**S**		**10 15 25.7**	**-6.1**
KII	**Karymskiy**	**4.96**	**39**	PN	**Pn**		**10 14 43.1**	**+0.9**
KII	**Karymskiy**	**4.96**	**39**	*e*P	**Pn**		**10 14 43.2**	**+0.9**
ESO	**Esso**	**6.28**	**24**	PN	**Pn**		**10 15 01.4**	**+2.5**
ESO	**Esso**	**6.28**	**24**	*e*P	**Pn**		**10 15 01.5**	**+2.5**
MKZ	**Mys Kozlova**	**6.29**	**44**	PN	**Pn**		**10 14 57.8**	**-1.3**
MKZ	**Mys Kozlova**	**6.29**	**44**	*e*P	**Pn**		**10 14 57.8**	**-1.3**
KMNR	**Kamenistaya**	**6.59**	**31**	PN	**Pn**		**10 15 04.9**	**+1.9**
KMNR	**Kamenistaya**	**6.59**	**31**	*e*P	**Pn**		**10 15 05.0**	**+1.9**
KUR	**Kuril'sk**	**6.60**	**223**	*e*PN	**Pn**		**10 15 07.5**	**+4.2**
KUR				*e*S	**S**		**10 16 24.6**	**+6.1**
KUR				smax	smax			
	comp=N,115nm,0.6s							
KUR				smax	smax			
	comp=E,56nm,0.4s							
SRDR	**Sredinnyy**	**6.90**	**27**	PN	**Pn**		**10 15 08.9**	**+1.9**
SRDR	**Sredinnyy**	**6.90**	**27**	*e*P	**Pn**		**10 15 08.9**	**+1.9**
KLY	**Klyuchi**	**7.18**	**30**	PN	**Pn**		**10 15 12.2**	**+1.7**
KLY	**Klyuchi**	**7.18**	**30**	*e*P	**Pn**		**10 15 12.3**	**+1.7**
TYV	**Tymovskoe**	**7.38**	**279**	*e*PN	**Pn**		10 15 29.5	+16
TYV				pmax	pmax			
	comp=Z,7.0nm,1.1s							
TYV				pmax	pmax			
	comp=Z,300nm,2.9s							
SMKR	**Semkarok**	**7.67**	**32**	PN	**Pn**		**10 15 17.2**	**+0.3**
SMKR	**Semkarok**	**7.67**	**32**	*e*P	**Pn**		**10 15 17.2**	**+0.3**
KBG	**Krutoberegovo**	**7.87**	**37**	PN	**Pn**		**10 15 19.5**	**+0.1**
KBG	**Krutoberegovo**	**7.87**	**37**	*e*P	**Pn**		**10 15 19.5**	**+0.1**
KBTR	**Krutoberegovo**	**7.88**	**38**	PN	**Pn**		**10 15 18.1**	**-1.5**
KBTR	**Krutoberegovo**	**7.88**	**38**	*e*P	**Pn**		**10 15 18.1**	**-1.5**
YSS	**Yuzhno-Sakhali**	**8.28**	**251**	Pn	**Pn**		**10 15 24.7**	**-0.2**
YSS	**Yuzhno-Sakhali**	**8.28**	**251**	*e*PN	**Pn**		**10 15 27.1**	**+2.2**
YSS				pmax	pmax			
	comp=Z,30nm,1.1s							
YUK	**Yuzh-Kuril'sk**	**8.44**	**225**	*e*PN	**Pn**		**10 15 27.1**	**+0.1**
YUK				pmax	pmax			
	comp=N,157nm,0.3s							
YUK				pmax	pmax			
	comp=Z,1μm,0.3s							
YUK				pmax	pmax			
	comp=E,173nm,0.4s							
RUSJ	**Misakicho**	**8.67**	**228**	PN	**Pn**		**10 15 31.3**	**+1.3**
BKI	**Bering**	**8.68**	**51**	PN	**Pn**		**10 15 28.8**	**-1.2**
BKI	**Bering**	**8.68**	**51**	*e*P	**Pn**		**10 15 28.9**	**-1.2**
GLVR	**Golovnino**	**8.82**	**225**	*e*PN	**Pn**		**10 15 33.4**	**+1.4**
GLVR				*i* S	**S**		**10 17 09.1**	**-2.0**
GLVR				pmax	pmax			
	comp=N,33nm,0.2s							
GLVR				pmax	pmax			
	comp=Z,167nm,0.2s							
GLVR				pmax	pmax			
	comp=E,35nm,0.1s							
JRA	**Rausu**	**8.85**	**228**	P	**Pn**		**10 15 33.4**	**+1.0**
NEM2	**Nemuro 2**	**9.01**	**223**	P	**Pn**		**10 15 32.4**	**-2.1**
NEM2				S			10 17 07.7	-8.0
NMR	**Nemuro--Hokkai**	**9.02**	**223**	*e*PN	**Pn**		**10 15 32.2**	**-2.3**
JNK	**Nakash**	**9.31**	**228**	P	**Pn**		**10 15 40.0**	**+1.6**
JTKR	**Abashiri--Toko**	**9.43**	**232**	P	**Pn**		**10 15 41.8**	**+2.0**
PALN	**Palana**	**9.44**	**18**	PN	**Pn**		**10 15 41.5**	**+1.7**
PALN	**Palana**	**9.44**	**18**	*e*P	**Pn**		**10 15 41.5**	**+1.7**
MA2	**Magadan**	**9.53**	**349**	P	**Pn**		**10 15 42.2**	**+1.3**
	comp=E,1.6nm,0.6s,baz=129,slow=7.4,SNR=3.6							
MA2	**Magadan**	**9.53**	**349**		**Pn**		**10 15 39.5**	**-1.5**
MA2	**Magadan**	**9.53**	**349**	PN	**Pn**		**10 15 39.5**	**-1.5**
JAK	**Akkeshi**	**9.78**	**226**	P	**Pn**		**10 15 43.0**	**-1.3**
JAK				S	S		10 17 25.5	-8.3
JAR	**Ashorobuto**	**9.98**	**230**	P	**Pn**		**10 15 48.0**	**+0.9**
JAR				*e*S	**S**		**10 17 35.4**	**-3.5**
JKA	**Kamikawa-asahi**	**10.01**	**236**		**Pn**		**10 15 51.0**	**+3.7**
ASAJ	**Asahikawa**	**10.01**	**236**	P	**P**		**10 15 51.8**	**-3.4**
	comp=E,97nm,0.7s,baz=68,slow=11,SNR=55							
JKK2	**Kamakawa 2**	**10.09**	**235**	*e*P	**Pn**		**10 15 51.6**	**+3.1**
JOB	**Onbets**	**10.25**	**228**	P	**Pn**		**10 15 50.1**	**-0.3**
JOB				*e*S	**S**		**10 17 37.7**	**-7.6**
OSSR	**Ossora**	**10.34**	**26**	PN	**Pn**		**10 15 50.2**	**-1.2**
OSSR	**Ossora**	**10.34**	**26**	*e*P	**Pn**		**10 15 50.2**	**-1.2**
JCH	**Churui**	**10.70**	**228**	P	**Pn**		**10 15 53.8**	**-2.4**
JCH				*e*S	S		10 17 45.0	-11
JNBK	**Urakawa-nobuka**	**11.24**	**229**	P	**Pn**		**10 16 00.5**	**-2.7**
JEW	**Eniwo**	**11.49**	**235**	Pn	**Pn**		**10 16 07.1**	**+0.8**
SHEM	**Shemya Is, Ala**	**12.64**	**71**	P	**P**		**10 16 22.4**	**-1.9**
	comp=E,82nm,1.0s,baz=267,slow=18,SNR=1.8							
SHEM	**Shemya Is, Ala**	**12.64**	**71**	Pn	**Pn**		**10 16 20.6**	**-0.1**
SEY	**Seymchan**	**12.73**	**356**	P	**P**		**10 16 22.6**	**-2.6**
	comp=E,1.0nm,0.5s,baz=174,slow=11,SNR=5.5							
SEY	**Seymchan**	**12.73**	**356**	⇑*i*PN	**P**		**10 16 22.5**	**-2.6**
SEY				pmax	pmax			
	comp=Z,4.0nm,1.3s							
JANG	**Nango**	**13.31**	**227**	P	Pn		10 16 24.8	-4.5
KLR	**Kul'dur**	**14.54**	**275**	⇑*e*P	**P**		**10 16 46.1**	**+1.3**
	comp=E,5.2nm,0.8s,baz=76,slow=12,SNR=13							
KLR	**Kul'dur**	**14.54**	**275**	⇑*e*P	**P**		**10 16 46.1**	**+0.7**
USRK	**Ussuriysk Ar.**	**16.23**	**257**	P	**Pn**		**10 17 04.5**	**-0.4**
	comp=E,3.2nm,0.6s,baz=53,slow=12,SNR=9.1							
ZEA	**Zeya**	**16.91**	**292**	*e*P	**Pn**		**10 17 13.0**	**+0.2**
HEH	**HeiHe**	**17.10**	**280**	*e*P	**Pn**		**10 17 14.4**	**-0.7**
HEH				pmax	pmax			
	comp=Z,27nm,0.9s							
JYT	**Yasato**	**17.31**	**221**	P	**P**		**10 17 16.9**	**+0.9**
MDJ	**Mudanjiang**	**17.54**	**261**		**P**		**10 17 18.9**	**+0.5**
MDJ				IAmb	IAmb		10 17 19.7	
	comp=Z,12nm,0.8s							
YAK	**Yakutsk**	**17.89**	**320**	P	**Pn**		**10 17 21.8**	**-2.4**
	comp=Z,22nm,0.5s,baz=10,slow=1.0,SNR=5.3							
YAK	**Yakutsk**	**17.89**	**320**	P	**Pn**		**10 17 21.9**	**-2.4**
YAK	**Yakutsk**	**17.89**	**320**	*c i*P	**Pn**		**10 17 22.3**	**-1.9**
YAK				pmax	pmax			
	comp=Z,24nm,0.6s							
MJB9	**Matsu-Tunnel**	**17.93**	**226**	P	**P**		**10 17 22.9**	**+0.2**
MAJO	**Matsushiro**	**17.93**	**226**		**P**		**10 17 23.4**	**+0.7**
MAJO	**Matsushiro**	**17.93**	**226**	⇓*e*P	**Pn**		**10 17 24.8**	**-0.1**
MAJO				pmax	pmax			
	comp=Z,31nm,0.7s							
MJAR	**Matsushiro Arr**	**17.93**	**226**	P	**Pn**		**10 17 24.5**	**-0.5**
	comp=Z,14nm,0.7s,baz=21,slow=12,SNR=38							
MJAR	**Matsushiro Arr**	**17.93**	**226**	P	**P**		**10 17 22.1**	**-0.6**
MJAR	**Matsushiro Arr**	**17.93**	**226**	P	**P**		**10 17 22.2**	**-0.6**
MJAR				pmax	pmax			
	comp=Z,15nm,0.7s							
KIWB	**Kanaga Island**	**18.03**	**74**	P	**P**		**10 17 24.2**	**+0.5**
BNX	**BinXian**	**18.45**	**266**	⇑P	**Pn**		**10 17 29.8**	**-1.1**
BNX				pmax	pmax			
	comp=Z,7.0nm,1.7s							
BILL	**Bilibino**	**18.80**	**14**	P	**P**		**10 17 31.8**	**-0.1**
BILL				IAmb	IAmb		10 17 36.2	
	comp=Z,4.5nm,0.5s							
BILL	**Bilibino**	**18.80**	**14**	⇓*e*P	**P**		**10 17 31.7**	**-0.1**
BILL				pmax	pmax			
	comp=Z,9.0nm,1.3s							
JGF	**Kuroka**	**19.09**	**226**	P	**P**		**10 17 36.7**	**+1.3**
INU	**Inuyama**	**19.46**	**226**		**P**		**10 17 40.7**	**+1.5**
JMN	**Monobe**	**22.27**	**230**	P	**P**		**10 18 09.2**	**+0.8**
KSRS	**Korea Array**	**22.73**	**246**	P	**P**		**10 18 14.7**	**+2.3**
	comp=Z,3.1nm,0.7s,baz=46,slow=9.4,SNR=9.0							
	comp=Z,3.1nm,0.7s							
TIXI	**Tiksi**	**24.33**	**341**	P	**P**		**10 18 26.2**	**-0.4**
TIXI	**Tiksi**	**24.33**	**341**	⇑*e*P	**P**		**10 18 26.6**	**+0.1**
TNA	**Tin City**	**24.75**	**38**	P	**P**		**10 18 30.0**	**-0.4**
ANM	**Nome**	**25.48**	**41**	P	**P**		**10 18 37.7**	**+0.7**
ANM				IAmb	IAmb		10 19 20.5	
	comp=Z,7.6nm,1.2s							
ANM	**Nome**	**25.48**	**41**	P	**P**		**10 18 37.7**	**+0.7**
ANM				pmax	pmax			
	comp=Z,8.0nm,1.2s							
M14K	**Bethel**	**26.44**	**50**	P	**P**		**10 18 46.7**	**+1.1**
N15K	**Kwethluk River**	**27.34**	**51**	P	**P**		**10 18 54.5**	**+0.7**
N15K				IAmb	IAmb		10 18 55.2	
	comp=Z,6.5nm,0.7s							
P16K	**Nushagak River**	**28.44**	**54**	P	**P**		**10 19 04.5**	**+1.1**
G18K	**Tagagawik**	**28.53**	**39**	IAmb	IAmb		10 19 05.1	
	comp=Z,6.6nm,0.8s							
H18K	**Honhosa River**	**28.53**	**41**	IAmb	IAmb		10 19 05.0	
	comp=Z,5.2nm,0.8s							
M17K	**Holitna River**	**28.66**	**49**	IAmb	IAmb		10 19 07.1	
	comp=Z,7.0nm,0.7s							
E19K	**Redstone River**	**29.38**	**36**	IAmb	IAmb		10 19 12.5	
	comp=Z,3.9nm,0.6s							
O18K	**Koktuh Hills**	**29.81**	**52**	P	**P**		**10 19 16.5**	**+1.0**
O18K				IAmb	IAmb		10 19 59.7	
	comp=Z,8.9nm,1.5s							
P18K	**Big Mountain,**	**29.83**	**53**	P	**P**		**10 19 16.6**	**+0.9**
P18K				IAmb	IAmb		10 19 19.1	
	comp=Z,9.2nm,1.4s							
ACHA	**Angle Creek He**	**29.90**	**55**	P	**P**		**10 19 16.6**	**+0.1**
ACHA				IAmb	IAmb		10 19 19.7	
	comp=Z,13nm,1.5s							
ULN	**Ulaanbaatar**	**30.58**	**284**	⇑*e*P	**P**		**10 19 21.8**	**-0.8**
G21K	**Allakaket**	**30.69**	**38**	IAmb	IAmb		10 19 24.2	
	comp=Z,4.6nm,0.8s							
HHC	**Hu-ho-hao-te**	**30.92**	**269**	*e*P	**P**		**10 19 24.8**	**-0.9**
HHC				pmax	pmax			
	comp=Z,4.0nm,0.6s							
HHC				pmax	pmax			
	comp=Z,94nm,4.9s							
SONM	**Songino Array**	**31.00**	**284**	P	**P**		**10 19 26.0**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=62,slow=7.3,SNR=2.5							
	comp=Z,0.3nm,0.4s							
SONM	**Songino Array**	**31.00**	**284**	P	**P**		**10 19 25.4**	**-0.9**
SONM	**Songino Array**	**31.00**	**284**	P	**P**		**10 19 25.4**	**-0.9**
SONM				pmax	pmax			
	comp=Z,2.0nm,1.3s							
PPLA	**Purkeypile**	**31.11**	**46**	P	**P**		**10 19 28.2**	**+1.1**
PPLA				IAmb	IAmb		10 19 28.9	
	comp=Z,11nm,1.3s							
I21K	**Tanana**	**31.22**	**41**	P	**P**		**10 19 28.6**	**+0.7**
SPU	**Mount Spurr**	**31.26**	**49**	P	**P**		**10 19 29.6**	**+1.2**
SPU				IAmb	IAmb		10 19 30.1	
	comp=Z,6.6nm,1.2s							
STLK	**Strandline Lak**	**31.35**	**48**	P	**P**		**10 19 30.0**	**+0.9**
STLK				IAmb	IAmb		10 19 30.8	
	comp=Z,4.4nm,0.7s							
TLY	**Talaya**	**31.35**	**292**	P	**P**		**10 19 30.2**	**+1.1**
TLY	**Talaya**	**31.35**	**292**	⇓*i*P	**P**		**10 19 29.8**	**+0.7**
TLY				pmax	pmax			
	comp=Z,4.0nm,1.5s							
KDAK	**Kodiak Island**	**31.41**	**55**	P	**P**		**10 19 29.4**	**-0.2**
KDAK	**Kodiak Island**	**31.41**	**55**	⇑*i*P	**P**		**10 19 32.2**	**+2.6**
SKT	**Skwentna**	**31.46**	**47**	P	**P**		**10 19 30.7**	**+0.7**
H22K	**Ishtalitna Cre**	**31.50**	**40**	IAmb	IAmb		10 19 32.0	
	comp=Z,4.6nm,0.8s							
E22K	**Anaktuvuk Pass**	**31.52**	**35**	IAmb	IAmb		10 19 32.1	
	comp=Z,4.7nm,0.9s							
BPAW	**Bear Paw Mtn.**	**31.63**	**43**	P	**P**		**10 19 32.4**	**+0.9**
BPAW				IAmb	IAmb		10 19 35.6	
	comp=Z,5.7nm,0.9s							
KTH	**Kantishna Hill**	**31.67**	**44**	P	**P**		**10 19 32.9**	**+1.0**
KTH				IAmb	IAmb		10 19 33.5	
	comp=Z,4.1nm,0.8s							
L22K	**Petersville**	**31.78**	**46**	P	**P**		**10 19 33.1**	**+0.2**
L22K				IAmb	IAmb		10 19 33.6	
	comp=Z,4.9nm,0.7s							
CNPM	**China Poot**	**31.84**	**52**	P	**P**		**10 19 33.1**	**-0.3**
TRF	**Thorofare Moun**	**31.96**	**44**		**P**		**10 19 34.9**	**+0.4**
TRF				IAmb	IAmb		10 19 35.6	
	comp=Z,5.6nm,1.0s							
BRLK	**Bradley Lake**	**31.99**	**51**	P	**P**		**10 19 34.1**	**-0.5**
BRLK				IAmb	IAmb		10 19 56.5	
	comp=Z,12nm,1.3s							
COLD	**Coldfoot**	**32.05**	**37**		**P**		**10 19 34.7**	**-0.3**
COLD				IAmb	IAmb		10 19 35.9	
	comp=Z,8.7nm,1.2s							
C23K	**Itkillik River**	**32.18**	**32**	IAmb	IAmb		10 19 37.0	
	comp=Z,7.9nm,0.8s							
SLKM	**Skilak Lake**	**32.22**	**50**	P	**P**		**10 19 36.5**	**-0.2**
SLKM				IAmb	IAmb		10 20 09.7	
	comp=Z,14nm,1.4s							
I23K	**Minto, Yukon-K**	**32.33**	**41**	P	**P**		**10 19 38.1**	**+0.7**
RC01	**Rabbit Creek A**	**32.39**	**49**	P	**P**		**10 19 38.5**	**+0.4**
RC01				IAmb	IAmb		10 20 03.1	
	comp=Z,7.9nm,1.3s							
NEA2	**Nenana**	**32.46**	**42**	P	**P**		**10 19 39.0**	**+0.4**
NEA2				IAmb	IAmb		10 19 40.0	
	comp=Z,17nm,1.5s							
MCK	**McKinley**	**32.55**	**44**	P	**P**		**10 19 40.0**	**+0.5**
MCK				IAmb	IAmb		10 19 40.4	
	comp=Z,4.6nm,0.8s							
MCK	**McKinley**	**32.55**	**44**	P	**P**		**10 19 40.0**	**+0.5**
MCK				pmax	pmax			
	comp=Z,5.0nm,0.8s							
RND	**Reindeer**	**32.60**	**44**		**P**		**10 19 40.0**	**0.0**
RND				IAmb	IAmb		10 19 40.4	
	comp=Z,7.6nm,0.9s							
RND	**Reindeer**	**32.60**	**44**	P	**P**		**10 19 40.0**	**0.0**
RND				pmax	pmax			
	comp=Z,8.0nm,0.9s							
PMR	**Palmer**	**32.63**	**48**	P	**P**		**10 19 40.5**	**+0.4**
PMR				IAmb	IAmb		10 19 53.8	
	comp=Z,10nm,1.4s							
PMR	**Palmer**	**32.63**	**48**	P	**P**		**10 19 40.5**	**+0.4**
PMR				pmax	pmax			
	comp=Z,10.0nm,1.4s							
SEW	**Seward**	**32.66**	**51**	P	**P**		**10 19 40.5**	**+0.1**
D24K	**Happy Valley**	**32.72**	**34**	IAmb	IAmb		10 19 41.6	
	comp=Z,4.8nm,0.7s							
E24K	**Your Creek**	**32.76**	**36**	IAmb	IAmb		10 19 42.4	
	comp=Z,7.4nm,0.7s							
WRH	**Wood River Hil**	**32.88**	**42**	IAmb	IAmb		10 19 44.0	
	comp=Z,9.0nm,0.8s							
COLA	**College**	**32.97**	**42**	*d i*P	**P**		**10 19 43.2**	**+0.2**
COLA				pmax	pmax			
	comp=Z,12nm,0.9s							
SML	**Sawmill**	**32.98**	**47**		**P**		**10 19 43.7**	**+0.4**
SML	**Sawmill**	**32.98**	**47**	P	**P**		**10 19 43.7**	**+0.4**
SML				pmax	pmax			
	comp=Z,16nm,0.8s							
CCB	**Clear Creek Bu**	**33.00**	**42**	IAmb	IAmb		10 19 44.4	
	comp=Z,9.8nm,1.2s							
G24K	**Hadweenzic Riv**	**33.10**	**38**	IAmb	IAmb		10 19 45.8	
	comp=Z,6.8nm,0.7s							
HDA	**Harding Lake**	**33.38**	**42**	IAmb	IAmb		10 19 47.1	
	comp=Z,5.3nm,0.5s							
IL31		**33.39**	**42**	P	**P**		**10 19 46.8**	**+0.1**
IL31				IAmb	IAmb		10 19 47.9	
	comp=Z,14nm,1.3s							
ILAR	**Eielson Array**	**33.39**	**42**	P	**P**		**10 19 46.6**	**-0.1**
	comp=Z,3.9nm,0.6s,baz=267,slow=5.8,SNR=84							
	comp=Z,3.9nm,0.6s							
PRP	**Porcupine Dome**	**33.92**	**40**		**P**		**10 19 52.2**	**+0.7**
K24K	**Donnelly Dome**	**33.94**	**44**	P	**P**		**10 19 51.4**	**-0.2**
K24K				IAmb	IAmb		10 19 52.2	
	comp=Z,11nm,0.9s							
FYU	**Fort Yukon**	**34.00**	**39**		**P**		**10 19 52.8**	**+0.9**
FYU				IAmb	IAmb		10 19 54.5	
	comp=Z,5.9nm,0.8s							
J25K	**Salcha River,**	**34.05**	**42**	IAmb	IAmb		10 19 52.7	
	comp=Z,3.6nm,0.6s							
BMAR	**Burnt Mountain**	**34.23**	**37**	P	**P**		**10 19 54.9**	**+0.9**
C27K	**Jago River**	**34.55**	**33**	IAmb	IAmb		10 19 58.4	
	comp=Z,5.5nm,0.8s							
G26K	**Porcupine Rive**	**34.56**	**38**	IAmb	IAmb		10 20 03.3	
	comp=Z,4.4nm,0.5s

KK31					pmax	pmax			
	comp=Z,2.0nm,0.9s								
KKAR	**Karatay Array**	**54.98**	**297**		P	**P**	**10 22 37.6**	**-0.2**	
KKAR	**Karatay Array**	**54.98**	**297**		P	**P**	**10 22 37.6**	**-0.2**	
AB31	**Akbulak array**	**56.75**	**309**			**P**	**10 22 50.2**	**-0.1**	
ABKAR	**Akbulak array**	**56.75**	**309**		P	**P**	**10 22 50.1**	**-0.2**	
PLID	**Pearl Lake**	**57.12**	**58**			**P**	**10 22 54.4**	**+1.2**	
SUMG	**Summit**	**57.13**	**5**		P	**P**	**10 22 53.1**	**+0.1**	
SUMG	**Summit**	**57.13**	**5**		P	**P**	**10 22 53.1**	**+0.1**	
SUMG					pmax	pmax			
	comp=Z,5.0nm,1.3s								
FFC	**Flin Flon**	**57.60**	**42**		P	**P**	**10 22 57.1**	**+1.0**	
FFC	**Flin Flon**	**57.60**	**42**		P	**P**	**10 22 57.1**	**+1.0**	
FFC					pmax	pmax			
	comp=Z,2.0nm,0.8s								
GAR	**Garm**	**57.72**	**294**			**P**	**10 22 57.4**	**0.0**	
FCC	**Fort Churchill**	**57.94**	**35**		P	**P**	**10 22 58.5**	**+0.2**	
FCC					IAmb	IAmb	10 22 58.6		
	comp=Z,3.2nm,0.5s								
FCC	**Fort Churchill**	**57.94**	**35**		P	**P**	**10 22 58.5**	**+0.2**	
FCC					pmax	pmax			
	comp=Z,3.0nm,0.5s								
CHGR	**Chuyangaron**	**58.63**	**294**		P	**P**	**10 23 03.3**	**-0.3**	
CHGR	**Chuyangaron**	**58.63**	**294**		P	**P**	**10 23 03.3**	**-0.3**	
BOZ	**Bozeman (W)**	**59.11**	**55**		P	**P**	**10 23 08.4**	**+1.5**	
BOZ	**Bozeman (W)**	**59.11**	**55**		P	**P**	**10 23 08.4**	**+1.5**	
BOZ					pmax	pmax			
	comp=Z,1.0nm,1.1s								
SHAA	**Shahritus**	**59.97**	**294**		P	**P**	**10 23 12.8**	**0.0**	
SHAA					IAmb	IAmb	10 23 30.3		
	comp=Z,7.9nm,1.2s								
YHH	**Holmes Hill**	**60.06**	**55**		P	**P**	**10 23 15.2**	**+1.6**	
NVAR	**Mina Array Bea**	**60.22**	**65**		P	**P**	**10 23 14.7**	**+0.1**	
	comp=Z,0.4nm,0.6s,baz=310,slow=7.4,SNR=2.8								
	comp=Z,0.4nm,0.6s								
FIA1	**FINESS Array S**	**61.16**	**334**		P	**P**	**10 23 19.6**	**-0.7**	
FINES	**FINESS Array B**	**61.16**	**334**		P	**P**	**10 23 18.6**	**-1.8**	
	comp=Z,0.9nm,0.4s,baz=48,slow=5.7,SNR=7.4								
	comp=Z,0.9nm,0.4s								
FINES	**FINESS Array B**	**61.16**	**334**		P	**P**	**10 23 18.8**	**-1.5**	
FINES	**FINESS Array B**	**61.16**	**334**	*i*	P	**P**	**10 23 18.2**	**-2.1**	
FINES					pmax	pmax			
	comp=Z,2.0nm,0.8s								
PD31	**Pinedale Array**	**62.13**	**56**		P	**P**	**10 23 26.8**	**-0.6**	
PDAR	**Pinedale Array**	**62.13**	**56**		P	**P**	**10 23 27.9**	**+0.5**	
	comp=Z,0.9nm,0.7s,baz=340,slow=2.1,SNR=10								
	comp=Z,0.9nm,0.7s								
PDAR	**Pinedale Array**	**62.13**	**56**		P	**P**	**10 23 28.8**	**+1.4**	
OBN	**Obninsk**	**62.82**	**325**	*e*	P	**P**	**10 23 31.2**	**-0.2**	
OBN				*e*			10 24 08.1		
OBN				*e**	PP	**pP**	**10 24 17.7**	**-0.7**	
OBN				*e**	SP	**sP**	**10 24 42.7**	**+2.0**	
OBN				*e*			10 25 53.3		
OBN					pmax	pmax			
	comp=Z,5.0nm,0.9s								
COEN	**Coen**	**64.68**	**192**		P	**P**	**10 23 44.0**	**0.0**	
HMU	**Henry Mountain**	**64.86**	**60**		P	**P**	**10 23 43.6**	**-1.8**	
MMRI	**Maumere**	**64.92**	**215**		P	**P**	**10 23 45.3**	**-0.3**	
MTN	**Manton Dam**	**66.02**	**205**		P	**P**	**10 23 52.9**	**+0.3**	
KUQ	**Kuujjuuaa**	**66.47**	**23**		P	**P**	**10 23 53.8**	**-1.2**	
KUQ					IAmb	IAmb	10 24 33.3		
	comp=Z,6.2nm,1.3s								
ECSD	**EROS Data Cent**	**67.95**	**48**		P	**P**	**10 24 05.2**	**+0.7**	
ECSD					IAmb	IAmb	10 24 16.2		
	comp=Z,5.5nm,1.3s								
KBZ	**Khabaz**	**68.94**	**314**		P	**P**	**10 24 10.6**	**-0.1**	
	comp=Z,1.7nm,0.8s,baz=24,slow=2.4,SNR=5.8								
	comp=Z,1.7nm,0.8s								
KBZ	**Khabaz**	**68.94**	**314**	*i*	P	**P**	**10 24 11.5**	**+0.9**	
KBZ					pmax	pmax			
	comp=Z,9.0nm,2.5s								
AKBB	**Malin Array Si**	**69.02**	**326**	*e*	P	**P**	**10 24 13.6**	**+2.6**	
AKBB					pmax	pmax			
	comp=Z,12nm,1.5s								
SHA1	**Shidzhatmaz**	**69.04**	**314**	*e*	P	**P**	**10 24 13.8**	**+2.2**	
SCHQ	**Schefferville**	**69.79**	**24**		P	**P**	**10 24 15.2**	**-0.5**	
	comp=Z,1.9nm,0.3s,baz=341,slow=5.1,SNR=22								
	comp=Z,1.9nm,0.3s								
SCHQ	**Schefferville**	**69.79**	**24**		P	**P**	**10 24 15.4**	**-0.3**	
SCHQ					IAmb	IAmb	10 24 47.2		
	comp=Z,8.6nm,1.4s								
WB0	**Warramunga Arr**	**71.90**	**200**		P	**P**	**10 24 29.7**	**+1.0**	
WB0					IAmb	IAmb	10 24 31.3		
	comp=Z,6.3nm,1.1s								
WR0	**Warramunga Arr**	**72.05**	**199**		P	**P**	**10 24 30.7**	**+1.1**	
WR0					IAmb	IAmb	10 24 31.1		
	comp=Z,4.3nm,0.8s								
WR8	**Warramunga Arr**	**72.06**	**199**		P	**P**	**10 24 30.7**	**+1.1**	
WR8					IAmb	IAmb	10 25 10.0		
	comp=Z,9.1nm,1.4s								
WRAB	**Tennant Creek**	**72.07**	**200**	*e*	P	**P**	**10 24 30.8**	**+1.1**	
WRAB					pmax	pmax			
	comp=Z,7.0nm,0.8s								
WRA	**Warramunga Arr**	**72.08**	**200**		P	**P**	**10 24 30.6**	**+0.8**	
	comp=Z,2.8nm,0.4s,baz=18,slow=6.2,SNR=85								
	comp=Z,2.8nm,0.4s								
WRA	**Warramunga Arr**	**72.08**	**200**		IAmb	IAmb	10 24 31.1		
	comp=Z,0.3nm,0.9s								
TX31	**Lajitas Ar. Si**	**75.17**	**62**		P	**P**	**10 24 49.8**	**+1.9**	
TXAR	**Lajitas Array**	**75.17**	**62**		P	**P**	**10 24 48.6**	**+0.7**	
	comp=Z,0.5nm,0.5s,baz=292,slow=5.0,SNR=5.7								
	comp=Z,0.5nm,0.5s								
TXAR	**Lajitas Array**	**75.17**	**62**		P	**P**	**10 24 48.9**	**+0.9**	
TXAR	**Lajitas Array**	**75.17**	**62**		P	**P**	**10 24 48.9**	**+0.9**	
LMQ	**La Malbaie**	**75.27**	**29**		P	**P**	**10 24 48.2**	**+0.1**	
AS31	**Alice Springs**	**75.78**	**199**		P	**P**	**10 24 53.0**	**+1.8**	
ASAR	**Alice Springs**	**75.78**	**199**		P	**P**	**10 24 52.9**	**+1.7**	
	comp=Z,2.9nm,0.7s,baz=12,slow=5.1,SNR=39								
	comp=Z,2.9nm,0.7s								
ASAR	**Alice Springs**	**75.78**	**199**		P	**P**	**10 24 53.1**	**+1.9**	
ASAR	**Alice Springs**	**75.78**	**199**		P	**P**	**10 24 53.1**	**+1.9**	
BR131	**Keskin Array S**	**76.31**	**317**		P	**P**	**10 24 53.0**	**-1.2**	
BR131	**Keskin Array S**	**76.31**	**317**		P	**P**	**10 24 53.1**	**-1.2**	
BR131					pmax	pmax			
	comp=Z,2.0nm,1.1s								
BRTR	**Keskin Array B**	**76.31**	**317**		P	**P**	**10 24 53.8**	**-0.5**	
BRTR	**Keskin Array B**	**76.31**	**317**		P	**P**	**10 24 53.8**	**-0.5**	
E62A	**Clayton Lake**	**76.35**	**29**		P	**P**	**10 24 54.5**	**+0.3**	
E62A					IAmb	IAmb	10 24 57.7		
	comp=Z,10nm,1.2s								
BATG	**Bathurst New B**	**76.81**	**27**		P	**P**	**10 24 57.3**	**+0.6**	
BATG					IAmb	IAmb	10 25 36.9		
	comp=Z,8.2nm,1.3s								
PSA00	**Pilbara Seismi**	**77.72**	**213**		P	**P**	**10 25 03.3**	**+1.3**	
INKA	**Innaminka**	**78.58**	**192**		P	**P**	**10 25 08.6**	**+2.0**	
FORT	**Forrest**	**83.96**	**202**		P	**P**	**10 25 36.5**	**+1.7**	
QSPA	**South Pole Qui**	**140.01**	**180**		PKP	**PKiKP**	**10 32 32.4**	**-0.6**	
	comp=Z,1.1nm,0.6s,baz=239,slow=2.8,SNR=6.2								
QSPA	**South Pole Qui**	**140.01**	**180**			**PKiKP**	**10 32 32.9**	**-0.1**	
MT13	**San Alfonso**	**143.66**	**80**		PKPdf	**PKPdf**	**10 32 38.9**	**+0.7**	
BI02	**San Fabin de**	**144.87**	**85**		PKPbc	**PKPdf**	**10 32 40.2**	**0.0**	
PLCA	**Paso Flores**	**147.66**	**90**		PKPbc	**PKPbc**	**10 32 48.4**	**+0.7**	
	comp=Z,0.8nm,0.5s,baz=307,slow=3.1,SNR=6.1								
PLCA	**Paso Flores**	**147.66**	**90**		PKPbc	**PKiKP**	**10 32 48.9**	**-0.7**	
PLCA	**Paso Florres**	**147.66**	**90**		PKP2	**PKiKP**	**10 32 48.9**	**-0.7**	
NVL	**N'lazarevskaya**	**153.13**	**207**	*e*	PKIKP	**PKiKP**	**10 33 00.2**	**+0.4**	
NVL					pmax	pmax			
	comp=Z,23nm,1.6s								

*IDC **13** 10:22:12.2±2.8, 0.°00S×124.°27E, h89km±29km, mb3.4/5, mbtmp3.8/8, MS2.6/1, Error ellipse: s-maj=22.7km s-min=18.2km az=58.0*
*DJA **13** 10:22:12.0±0.4, 0.°7N±2.°2×12.°4E±.°, h28km±4km, M4.5/43, mb4.7/21, mB5.1/10, MLv4.5/43, Mw(mB)4.4/10*
*NEIC **13** 10:22:13.1±1.2, 0.°01S±0.°07×124.°30E±0.°02, h98km±9km, mb4.7/17, Error ellipse: s-maj=10.8km s-min=1.8km az=188.0*

ISC 13 10:22:10.8±0.5, **0.°08N**±0.°06×**124.°38E**±0.°05, **h73km, n65,** σ1ᵍ**93/68, mb4.3**/14, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**1.44**	**19**	P		P	**Pn**	**10 22 36.0**	**+0.9**
LUWI	**Luwuk**	**1.95**	**235**	Pn		Pn	**Pn**	**10 22 43.3**	**+1.4**
LUWI				Sn		Sn	**Sn**	**10 23 10.6**	**+5.1**
LUWI	**Luwuk**	**1.95**	**235**	P		P	**Pn**	**10 22 44.1**	**+2.2**
LUWI				S		S	**Sn**	**10 23 10.5**	**+4.9**
MRSI	**Marisa**	**2.47**	**279**	P		P	**Pn**	**10 22 48.1**	**-0.8**
SANI	**Sanana**	**2.66**	**143**	P		P	**Pn**	**10 22 49.9**	**-1.6**
APSI	**Ampana**	**2.90**	**250**	P		P	**Pn**	**10 22 57.4**	**+2.7**
TNTI	**Ternate**	**3.07**	**77**	Sn		Sn	**Sn**	**10 23 37.6**	**+4.9**
TNTI	**Ternate**	**3.07**	**77**	P		P	**Pn**	**10 22 57.3**	**+0.2**
TOLI2	**Tolitoli**	**3.74**	**286**			**Pn**		**10 23 07.0**	**+0.9**
TOLI2						Sn	**Sn**	**10 23 48.4**	**-0.7**
SGSI	**Sangihe**	**3.77**	**18**	P		P	**Pn**	**10 23 06.3**	**-0.3**
NLAI	**Namlea**	**4.27**	**140**	P		P	**Pn**	**10 23 13.4**	**-0.1**
MPSI	**Mapaga**	**4.49**	**273**	P		P	**Pn**	**10 23 19.8**	**+3.5**
PCI	**Palu**	**4.64**	**258**	P		P	**Pn**	**10 23 21.7**	**+3.2**
KKSI	**Kolaka, Sulawe**	**5.02**	**213**	P		P	**Pn**	**10 23 24.5**	**+0.8**
	0.3nm65nm,0.6s								
KRAI	**Karang Ratu**	**5.25**	**130**	P		P	**Pn**	**10 23 28.3**	**+1.5**
	0.5nm66nm,0.5s								
AAI	**Ambon**	**5.34**	**134**	P		P	**Pn**	**10 23 28.9**	**+0.8**
	0.4nm2µm82nm,0.5s								
TTSI	**Tana Toraja**	**5.51**	**236**	P		P	**Pn**	**10 23 32.3**	**+1.9**
	0.8nm2µm166nm,0.6s								
MSAI	**Masohi**	**5.68**	**127**	P		P	**Pn**	**10 23 35.2**	**+2.5**
SPSI	**Sidrap Palu**	**6.11**	**229**	P		P	**Pn**	**10 23 40.6**	**+2.1**
	0.4nm2µm88nm,0.4s								
MMSI	**Mamuju**	**6.12**	**243**	P		P	**Pn**	**10 23 41.0**	**+2.3**
	0.1nm603nm39nm,0.7s								
PMSI	**Majene**	**6.51**	**237**	P		P	**Pn**	**10 23 46.6**	**+2.5**
	0.3nm48nm,1.0s								
KAPI	**Kappang**	**6.85**	**222**	P		P	**Pn**	**10 23 50.3**	**+1.6**
	9.5nm,0.3s,baz=33,slow=4.9,SNR=9.7								
KAPI						S	**Sn**	**10 25 02.3**	**-2.9**
	5.4nm,0.4s,baz=66,slow=20,SNR=1.1								
KAPI	**Kappang**	**6.85**	**222**	P		P	**Pn**	**10 23 50.5**	**+1.8**
	0.0nm9.2nm,0.7s								
SIJI	**Sorong**	**6.95**	**98**	P		P	**Pn**	**10 23 53.1**	**+2.9**
	9.5nm,0.5s,baz=53,slow=23,SNR=8.0								
SIJI	**Sorong**	**6.95**	**98**	P		P	**Pn**	**10 23 52.4**	**+2.2**
	0.1nm24nm,1.1s								
DAV	**Davao City (W)**	**7.05**	**10**	LR		LR		10 27 01.7	
	comp=Z,50nm,21.2s,baz=159,slow=40								
BNDI	**Bandanaira**	**7.17**	**130**	P		P	**Pn**	**10 23 53.7**	**+0.6**
	86nm,0.8s								
MKS	**Makassar**	**7.19**	**223**	P		P	**Pn**	**10 23 54.9**	**+1.6**
	0.2nm37nm,0.7s								
BSSI	**Bau Bau, Buton**	**7.29**	**212**	P		P	**Pn**	**10 23 57.1**	**+2.3**
	0.3nm803nm56nm,0.5s								
MYLDM	**Lahad Datu**	**7.75**	**311**	Pn		Pn	**Pn**	**10 24 03.3**	**+2.2**
MMRI	**Maumere**	**8.91**	**194**	Pn		Pn	**Pn**	**10 24 16.1**	**-0.8**
EDFI	**Ende, Flores**	**9.17**	**197**	P		Pn	**Pn**	**10 24 22.3**	**+1.8**
SOEI	**Soe**	**9.77**	**181**	Pn		Pn	**Pn**	**10 24 27.7**	**-1.0**
KKM	**Kota Kinabalu**	**10.07**	**306**	P		P	**Pn**	**10 24 34.5**	**+1.6**
	15nm,1.5s								
SAUI	**Saumlaki**	**10.57**	**139**	P		P	**Pn**	**10 24 41.6**	**+2.0**
MTN	**Manton Dam**	**14.48**	**153**	Pn		Pn	**Pn**	**10 25 32.5**	**+0.3**
FITZ	**Fitzroy Crossi**	**18.10**	**176**	P		P	**P**	**10 26 16.0**	**-0.9**
	1.2nm,0.6s,baz=359,slow=9.1,SNR=7.2								
WB0	**Warramunga Arr**	**22.03**	**154**	P		P	**P**	**10 26 58.2**	**-1.3**
WB0						IAmb	IAmb	10 27 17.2	
	comp=Z,10nm,1.4s								
WRAB	**Tennant Creek**	**22.16**	**154**	P		P	**P**	**10 27 00.1**	**-0.8**
WRA	**Warramunga Arr**	**22.16**	**154**	P		P	**P**	**10 26 59.0**	**-1.9**
	comp=Z,0.6nm,0.6s,baz=334,slow=11,SNR=11								
	comp=Z,0.6nm,0.6s								
WRA	**Warramunga Arr**	**22.16**	**154**	P		P	**P**	**10 26 58.6**	**-2.4**
WR8	**Warramunga Arr**	**22.24**	**154**	P		P	**P**	**10 27 01.3**	**-0.6**
PMG	**Port Moresby**	**24.56**	**113**	P		P	**P**	**10 27 23.2**	**-0.9**
PMG						IAmb	IAmb	10 27 34.9	
	comp=Z,30nm,1.1s								
AS31	**Alice Springs**	**25.35**	**159**	P		P	**P**	**10 27 28.5**	**-2.7**
ASAR	**Alice Springs**	**25.35**	**159**	P		P	**P**	**10 27 31.8**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=336,slow=8.3,SNR=14								
	comp=Z,0.8nm,0.6s								
ASAR	**Alice Springs**	**25.35**	**159**	P		P	**P**	**10 27 29.6**	**-1.6**
LHMI	**Lhok Sumawe**	**27.86**	**281**	P		P	**P**	**10 27 51.3**	**-2.6**
LHMI						IAmb	IAmb	10 28 03.4	
	comp=Z,102nm,1.1s								
RABL	**Rabaul**	**28.09**	**99**	P		P	**P**	**10 27 55.9**	**-0.1**
RABL						IAmb	IAmb	10 28 24.5	
	comp=Z,43nm,0.5s								
STKA	**Stephens Creek**	**35.72**	**154**	P		P	**P**	**10 29 01.9**	**-0.7**
KSAR	**Wonju Array Be**	**37.32**	**5**	P		P	**P**	**10 29 16.4**	**+0.3**
MGBR	**Mount Gambier**	**40.48**	**160**	P		P	**P**	**10 29 41.3**	**-1.2**
CAN	**Canberra**	**42.05**	**149**	P		P	**P**	**10 29 53.8**	**-1.7**
CAN						IAmb	IAmb	10 30 16.8	
	comp=Z,35nm,1.5s								
DZM	**Mont Dzumac**	**46.52**	**121**	P		P	**P**	**10 30 30.6**	**-0.9**
DZM						IAmb	IAmb	10 31 04.7	
	comp=Z,31nm,1.4s								
ONTNC	**Ouen Toro**	**46.62**	**121**	P		P	**P**	**10 30 31.3**	**-0.8**
MKAR	**Makanchi Array**	**59.28**	**328**	P		P	**P**	**10 32 05.0**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=127,slow=7.9,SNR=15								
	comp=Z,0.9nm,0.3s								
MKAR	**Makanchi Array**	**59.28**	**328**	P		P	**P**	**10 32 05.2**	**+0.2**
MAKZ	**Makanchi**	**59.45**	**327**	P		P	**P**	**10 32 06.0**	**-0.2**
MAKZ						IAmb	IAmb	10 32 23.8	
	comp=Z,1.4nm,0.6s								
ZALV	**Zalesovo Beam**	**62.82**	**335**	P		P	**P**	**10 32 27.7**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=120,slow=8.7,SNR=2.6								
	comp=Z,0.3nm,0.3s								
ZALV	**Zalesovo Beam**	**62.82**	**335**	P		P	**P**	**10 32 27.8**	**-0.9**
KURBB	**Kurchatov Arra**	**63.59**	**329**	P		P	**P**	**10 32 32.9**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=137,slow=6.3,SNR=7.8								
	comp=Z,0.4nm,0.3s								
KURK	**Kurchatov**	**63.60**	**329**	P		P	**P**	**10 32 33.7**	**-0.2**
KURK						IAmb	IAmb	10 32 34.2	
	comp=Z,2.4nm,0.4s								
AB31	**Akbulak array**	**73.51**	**322**	P		P	**P**	**10 33 35.3**	**-0.5**
AB31						IAmb	IAmb	10 34 05.8	
	comp=Z,3.6nm,1.4s								
ABKAR	**Akbulak array**	**73.51**	**322**	P		P	**P**	**10 33 34.2**	**-1.6**
LVA	**Lava Point**	**78.10**	**34**	P		P	**P**	**10 34 01.2**	**-0.7**
TORD	**Torodi Ar. Bea**	**121.71**	**285**	PKP		**PKiKP**		**10 40 58.3**	**+0.7**
	comp=Z,1.4nm,0.3s,baz=63,slow=1.6,SNR=1.8								

IDC 13 10:32:35.6±8.0, **7.°51S×128.°41E, h170km±83km, mb3.0**/1, **mbtmp3.7**/5, **Error ellipse: s-maj=93.0km s-min=29.1km az=46.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.41**	**240**	P		P	Pn	10 33 55.2	+0.5
	47nm,0.4s,baz=284,slow=0.5,SNR=7.6								
BATI						S	Sn	10 34 50.0	-6.8
	12nm,0.3s,baz=94,slow=14,SNR=1.4								
FITZ	**Fitzroy Crossi**	**10.87**	**194**	P		P	Pn	10 35 05.2	-1.5
	1.2nm,0.3s,baz=20,slow=9.4,SNR=12								
FITZ						S	Sn	10 36 58.3	-9.0
	2.0nm,0.3s,baz=122,slow=23,SNR=7.3								
WRA	**Warramunga Arr**	**13.63**	**156**	P		P	Pn	10 35 41.1	-1.1
	0.4nm,0.9s,baz=336,slow=12,SNR=14								
WRA						S	Sn	10 38 01.3	-12
	0.7nm,0.5s,baz=331,slow=22,SNR=8.9								
ASAR	**Alice Springs**	**16.91**	**162**	P		P	Pn	10 36 23.6	+1.1
	1.2nm,0.5s,baz=338,slow=10,SNR=29								
ASAR						S	S	10 39 21.0	-8.3
	0.2nm,0.8s,baz=320,slow=16,SNR=3.1								
MKAR	**Makanchi Array**	**67.80**	**328**	P		P		10 43 15.3	+0.1
	0.1nm,0.3s,baz=136,slow=9.3,SNR=2.0								
	0.1nm,0.3s								

IDC 13 10:37:37.8±7.2, **20.°11S×178.°55E, h0km, mb3.6**/3, **mbtmp3.6**/3, **Error ellipse: s-maj=314.6km s-min=39.6km az=146.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**41.45**	**262**	P		P	P	10 45 25.9	-0.7
	0.4nm,0.8s,baz=96,slow=8.1,SNR=7.7								
	0.4nm,0.8s								
ASAR	**Alice Springs**	**41.46**	**257**	P		P	P	10 45 27.0	+0.3
	1.1nm,0.7s,baz=92,slow=8.3,SNR=17								
	1.1nm,0.7s								
ILAR	**Eielson Array**	**88.69**	**14**	P		P	P	10 50 32.6	0.0
	0.3nm,0.6s,baz=226,slow=4.9,SNR=4.0								
	0.3nm,0.6s								

*NEIC **13** 10:48:10.2±1.2, 6.°45N±0.°09×92.°60E±0.°04, h10km±1km, mb4.3/21, Error ellipse: s-maj=16.7km s-min=3.9km az=202.0*
*IDC **13** 10:48:13.9±1.1, 6.°57N×92.°73E, h39km±7km, mb3.4/6, mbtmp3.8/8, ML4.3/2, Error ellipse: s-maj=40.7km s-min=15.5km az=60.0*
*DJA **13** 10:48:16.0±0.6, 6.°N±6.°×9.°3E±.°, h56km±44km, M4.3/14, mb3.9/7, mB5.5/3, MLv4.3/14, Mw(mB)5.0/3*

ISC 13 10:48:11.8±0.5, **6.°42N**±0.°07×**92.°72E**±0.°06, **h26km, n54,** σ1ᵍ**95/55, mb4.2**/16, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**2.72**	**110**	P		P	**Pn**	**10 48 53.7**	**-0.2**
BSI						S	**Sn**	**10 49 23.8**	**-2.2**
MLSI	**Meulaboh, Aceh**	**4.25**	**120**	P		P	**Pn**	**10 49 14.5**	**-0.3**
MLSI						S	**Sn**	**10 50 01.5**	**-2.1**
LHMI	**Lhok Sumawe**	**4.37**	**106**	P		P	**Pn**	**10 49 17.0**	**+0.5**
LHMI						S	**Sn**	**10 50 05.2**	**-1.5**
TPTI		**5.44**	**125**	P		P	**Pn**	**10 49 30.1**	**-1.2**
	0.1nm13nm,0.5s								
KCSI	**Kotacane, Aceh**	**5.80**	**120**	P		P	**Pn**	**10 49 38.7**	**+2.5**
	8.6nm,0.7s								
GSI	**Gunungsitoli**	**7.02**	**136**	Pn		Pn	**Pn**	**10 49 52.9**	**-0.1**
PSI	**Prapat**	**7.16**	**120**	P		P	**Pn**	**10 49 56.2**	**+1.3**
	0.0nm8.0nm,0.8s								
KULM	**Kulim**	**7.97**	**98**	Pn		Pn	**Pn**	**10 50 06.3**	**+0.3**
KULM	**Kulim**	**7.97**	**98**	P		P	**Pn**	**10 50 05.7**	**-0.3**
	0.0nm6.6nm,1.3s								
PALK	**Pallekele**	**11.96**	**275**	Pn		Pn	**Pn**	**10 51 02.2**	**+1.4**
	1.2nm,0.3s,baz=91,slow=11,SNR=4.5								
PALK						Sn	Sn	10 53 03.3	-10
	1.6nm,0.3s,baz=182,slow=22,SNR=7.5								
	2.5nm,0.3s								
PALK	**Pallekele**	**11.96**	**275**	Pn		Pn	Pn	10 50 56.8	-4.0
CMAR	**Chiang Mai Arr**	**13.41**	**26**	Pn		Pn	**Pn**	**10 51 21.8**	**+1.2**
	0.5nm,0.3s,baz=231,slow=14,SNR=39								
	3.6nm,0.7s								
CMAR	**Chiang Mai Arr**	**13.41**	**26**	Pn		Pn	**Pn**	**10 51 20.2**	**-0.3**
CHTO	**Chiang Mai**	**13.73**	**26**	Pn		Pn	**Pn**	**10 51 24.7**	**-0.2**
COCO	**West Island**	**18.94**	**168**	P		P	**P**	**10 52 30.3**	**-0.6**
COCO						IAmb	IAmb	10 52 45.6	
	comp=Z,62nm,1.4s								
EVN	**Everest**	**22.14**	**346**	P		P	**P**	**10 53 05.7**	**-0.6**
H08S3	**Diego Garcia H**	**24.54**	**236**	T		T		11 19 35.6	
	baz=56,slow=76,SNR=492								
H08S2	**Diego Garcia H**	**24.54**	**236**	T		T		11 19 28.4	
	baz=56,slow=76,SNR=170								
H08S1	**Diego Carcia H**	**24.56**	**236**	T		T		11 19 29.3	
	baz=56,slow=76,SNR=163								
TWG	**Pinlang**	**31.81**	**56**	P		P	**P**	**10 54 35.8**	**+1.3**
YHNB	**Yeheng**	**32.91**	**53**	P		P	**P**	**10 54 44.3**	**+0.1**
MSEY	**Mahe Island**	**38.78**	**254**	P		P	**P**	**10 55 33.0**	**-1.6**
MSEY						IAmb	IAmb	10 55 55.5	
	comp=Z,8.7nm,0.8s								
ARSB	**Arslanbob**	**38.95**	**336**	P		P	**P**	**10 55 35.7**	**-0.2**
ARSB						IAmb	IAmb	10 55 52.3	
	comp=Z,6.0nm,0.8s								
MKAR	**Makanchi Array**	**41.21**	**349**	P		P	**P**	**10 55 53.7**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=162,slow=9.2,SNR=5.0								
MKAR					pP	**sP**		**10 56 04.0**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=171,slow=8.4,SNR=6.1								
	comp=Z,0.2nm,0.5s								
MKAR	**Makanchi Array**	**41.21**	**349**	P		P	**P**	**10 55 54.0**	**-0.4**
KKAR	**Karatay Array**	**41.45**	**335**	P		P	**P**	**10 55 56.3**	**-0.1**
SONM	**Songino Array**	**42.89**	**14**	P		P	**P**	**10 56 06.4**	**-1.8**
	comp=Z,0.3nm,0.4s,baz=190,slow=7.0,SNR=2.3								
	comp=Z

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMIS	**Naft Sefid**	**1.05**	**316**	Pg	**Pn**	**11 24 08.0**	**-0.2**
KLNJ	**Kolanjah**	**1.25**	**85**	Pg	**Pn**	**11 24 11.6**	**+0.4**
AHWZ	**Ahwaz**	**1.35**	**289**	Pg	**Pn**	**11 24 14.9**	**+2.7**
ZNGN	**Zangian**	**1.35**	**27**	Pg	**Pn**	**11 24 12.7**	**+0.2**
IBRJ	**Brojen**	**1.39**	**44**	Pg	**Pn**	**11 24 13.7**	**+0.8**
JHBN	**Jahan bin**	**1.40**	**19**	Pg	**Pn**	**11 24 13.3**	**+0.1**
KAZ2	**Kazeron-Fars-I**	**1.84**	**134**	Pn	**Pb**	**11 24 25.1**	**+2.5**
SHI	**Shiraz**	**2.41**	**121**	Pn	**Pn**	**11 24 31.2**	**+4.2**
DSBU	**Dashti - Bushe**	**2.72**	**159**	Pn	**Pn**	**11 24 35.5**	**+4.4**
IZEF	**Zefreh**	**2.72**	**43**	Pn	**Pn**	**11 24 33.2**	**+1.9**
BDRS	**Dareh Seyedi**	**3.22**	**341**	Pn	**Pn**	**11 24 39.4**	**+1.2**
IDOB	**Doab**	**3.32**	**331**	Pn	**Pn**	**11 24 40.4**	**+0.9**
TAFT	**Taft - Yazd**	**3.55**	**76**	Pn	**Pn**	**11 24 45.1**	**+2.5**
ANAR	**Anarak**	**3.81**	**52**	Pn	**Pn**	**11 24 48.1**	**+2.0**
ICHK	**Chekchek**	**3.88**	**69**	Pn	**Pn**	**11 24 49.5**	**+2.3**
DOBD	**Dorbid, Yazd**	**3.89**	**73**	Pn	**Pn**	**11 24 49.6**	**+2.3**
IGHG	**Ghaleghazi**	**4.55**	**320**	Pn	**Pn**	**11 24 58.3**	**+1.8**
HGHA	**Hamedan- Ghaye**	**4.69**	**347**	Pn	**Pn**	**11 25 00.1**	**+1.7**
IBAF	**Bafgh**	**4.70**	**80**	Pn	**Pn**	**11 25 00.8**	**+2.4**
QABG	**Abgarm-Qazvin**	**4.81**	**355**	Pn	**Pn**	**11 25 01.3**	**+1.3**
BANOM	**Banah**	**7.35**	**131**	P	**Pn**	**11 25 34.3**	**-0.5**
BANOM				S	**Sn**	**11 26 52.8**	**-4.5**
MSFE	**Esma-Masafi**	**7.67**	**135**	P	**Pn**	**11 25 38.8**	**-0.3**
ASUD	**Al Ashush, Dub**	**7.76**	**142**	P	**Pn**	**11 25 41.2**	**+0.8**
MDH	**Madha**	**7.79**	**134**	P	**Pn**	**11 25 40.8**	**0.0**
ASHO	**Ashiyiah**	**8.12**	**138**	P	**Pn**	**11 25 45.2**	**-0.1**
MZR	**Muzera**	**8.42**	**158**	P	**Pn**	**11 25 49.9**	**+0.6**
RAYN	**Ar Rayn**	**8.43**	**210**	P	**Pn**	**11 25 48.4**	**-1.3**
ALNE	**Al Ain**	**8.45**	**143**	P	**Pn**	**11 25 51.3**	**+1.5**
SOHO	**SOHO**	**8.81**	**138**	P	**Pn**	**11 25 53.7**	**-1.1**
GNI	**Garni**	**10.21**	**336**	LR	LR	11 30 50.9	
	comp=Z,42nm,19.2s,baz=218,slow=41						
ASF	**Jabal al Asfar**	**11.37**	**280**	Pn	Pn	11 26 27.9	-2.0
	0.6nm,0.3s,baz=68,slow=6.1,SNR=5.8						
ASF				Sn	Sn	11 28 27.6	-8.3
	0.6nm,0.3s,baz=90,slow=20,SNR=2.3						
KBZ	**Khabaz**	**14.03**	**338**	Pn	**Pn**	**11 27 07.6**	**+1.6**
	0.1nm,0.3s,baz=129,slow=8.1,SNR=3.7						
	1.0nm,0.8s						
BRTR	**Keskin Array B**	**16.07**	**308**	Pn	**Pn**	**11 27 33.1**	**-0.2**
	0.2nm,0.3s,baz=123,slow=13,SNR=4.9						
	0.9nm,0.5s						
AKTO	**Aktyubinsk**	**20.38**	**15**	P	**P**	**11 28 23.6**	**+0.1**
	2.1nm,0.4s,baz=215,slow=3.5,SNR=8.0						
	2.1nm,0.4s						
AKASG	**Malin Array Be**	**25.18**	**328**	P	**P**	**11 29 09.8**	**-2.2**
	0.3nm,0.3s,baz=113,slow=7.3,SNR=4.5						
	0.3nm,0.3s						
BVAR	**Borovoye Array**	**26.57**	**28**	P	**P**	**11 29 25.2**	**+0.6**
	3.0nm,0.4s,baz=232,slow=7.3,SNR=16						
	3.0nm,0.4s						
KURBB	**Kurchatov Arra**	**28.88**	**39**	P	**P**	**11 29 46.0**	**+0.7**
	0.8nm,0.6s,baz=240,slow=9.4,SNR=5.6						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**29.39**	**48**	P	**P**	**11 29 51.1**	**+1.2**
	0.6nm,0.4s,baz=245,slow=8.3,SNR=15						
	0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**33.90**	**37**	P	**P**	**11 30 30.0**	**+0.6**
	1.6nm,0.5s,baz=251,slow=9.8,SNR=11						
	1.6nm,0.5s						
FINES	**FINESS Array B**	**34.38**	**340**	P	**P**	**11 30 32.0**	**-1.4**
	4.8nm,1.1s,baz=160,slow=6.6,SNR=8.2						
	4.8nm,1.1s						
HFS	**Hagfors**	**37.95**	**331**	P	**P**	**11 31 03.1**	**-0.9**
	1.6nm,0.7s,baz=104,slow=12,SNR=1.1						
	1.6nm,0.7s						
NOA	**NORSAR Array B**	**39.47**	**331**	P	**P**	**11 31 16.8**	**0.0**
	1.6nm,1.0s,baz=117,slow=7.3,SNR=1.4						
	1.6nm,1.0s						
CMAR	**Chiang Mai Arr**	**45.72**	**94**	P	**P**	**11 32 07.0**	**-1.1**
	0.9nm,0.3s,baz=296,slow=7.5,SNR=4.2						
	0.9nm,0.3s						
TORD	**Torodi Ar. Bea**	**47.86**	**259**	P	P	11 32 21.7	-3.2
	0.3nm,0.5s,baz=57,slow=7.7,SNR=2.4						
	0.3nm,0.5s						
SPITS	**Spitsbergen Ar**	**49.65**	**351**	P	**P**	**11 32 37.2**	**-0.6**
	3.3nm,0.8s,baz=167,slow=7.2,SNR=5.3						
	3.3nm,0.8s						
KSRS	**Korea Array**	**62.98**	**61**	P	**P**	**11 34 11.2**	**-2.2**
	1.8nm,0.7s,baz=287,slow=5.6,SNR=5.5						
	1.8nm,0.7s						
YKA	**Yellowknife Ar**	**86.12**	**353**	P	P	11 36 24.8	-2.4
	0.1nm,0.4s,baz=16,slow=5.3,SNR=5.7						
	0.1nm,0.4s						
RCBR	**Riachuelo**	**89.57**	**263**	LR	LR	12 17 54.6	
	comp=Z,8.9nm,18.2s,baz=72,slow=36						

*KRNET **13** 11:41:45.9±0.1, 43°.93N×69°.25E, mb3.3*
*SOME **13** 11:41:46.9, 43°.67N×69°.70E*
*NNC **13** 11:41:48.4±1.1, 43°.61N×69°.76E, h0km, mb3.5, mpv3.1,*
Error ellipse: s-maj=6.1km s-min=5.4km az=141.0,
Suspected Mining explosion.
ISC 13 11:41:50.5±2.1, 43°.55N±0°.07×69°.72E±0°.09, h0km, n24,
σ1§40/37, 7C-16D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRLS	**Boroldaу**	**0.53**	**171**	P	**Pb**	**11 42 03.0**	**+0.4**
	3.3nm,0.8s						
BRLS				S	**Sn**	**11 42 15.1**	**+0.1**
	16nm,0.5s						
KK31	**Karatay Array**	**0.73**	**128**	P	**Pg**	**11 42 02.6**	**-1.9**
	5.2nm,0.5s,baz=319,slow=17,SNR=30						
KK31				⇑S	**Sg**	**11 42 13.4**	**-0.5**
	34nm,0.6s,baz=306,slow=29,SNR=65						
IUG	**Iuzhnay**	**1.42**	**171**	P	**Pn**	**11 42 17.0**	**-0.7**
	28nm,0.8s						
IUG				S	**Sn**	**11 42 38.8**	**+1.6**
	59nm,0.6s						
TRKS	**Terek-Say**	**2.28**	**152**	⇑*i*P	**Pb**	**11 42 30.9**	**-1.6**
TRKS				⇑*i*S	**Sb**	**11 43 03.6**	**+2.3**
MNAS	**Manas**	**2.30**	**117**	⇑*i*P	**Pn**	**11 42 29.9**	**+0.1**
MNAS				⇑*i*S	**Sb**	**11 43 02.2**	**+0.2**
ARK	**Arkit**	**2.41**	**136**	⇓*i*P	**Pn**	**11 42 31.9**	**+0.6**
ARK				⇓*i*S	**Sb**	**11 43 05.4**	**+0.3**
MRKS	**Merke**	**2.69**	**106**	Pg	**Pb**	**11 42 37.3**	**-2.2**
	6.5nm,0.7s						
MRKS				Lg	Lg	11 43 13.8	
	13nm,0.8s						
EKS2	**Erkin-Say**	**3.10**	**105**	⇓*i*P	**Pn**	**11 42 40.4**	**-0.4**
EKS2				⇓*i*S	**Sn**	**11 43 20.4**	**+1.8**
ARSB	**Arslanbob**	**3.28**	**132**	⇓*i*P	**Pn**	**11 42 44.1**	**+0.8**
ARSB				⇓*i*S	**Sn**	**11 43 26.3**	**+3.2**
BTLS	**Baital**	**3.44**	**63**	Pg	**Pb**	**11 42 52.2**	**-0.1**
BTLS				Lg	Lg	11 43 38.7	
	12nm,0.8s						
USP	**Ospenovka**	**3.50**	**93**	⇓*i*P	**Pn**	**11 42 44.9**	**-1.2**
USP				⇓*i*S	**Sn**	**11 43 28.0**	**-0.2**
SGDS	**Sogindy**	**3.57**	**90**	Pg	**Pb**	**11 42 52.9**	**-1.7**
	2.9nm,0.9s						
SGDS				Lg	Lg	11 43 40.1	
	5.1nm,0.7s						
AAK	**Ala-Archa**	**3.61**	**103**	⇓Pg	**Pb**	**11 42 52.7**	**-2.6**
	3.3nm,0.6s						
AAK				⇓Lg	Lg	11 43 42.1	
	3.6nm,0.6s						
AAK	**Ala-Archa**	**3.61**	**103**	⇑*i*P	**Pn**	**11 42 47.4**	**-0.5**
AAK				⇑*i*S	**Sn**	**11 43 32.4**	**+1.1**
UCH	**Uchtor**	**3.76**	**109**	⇓*i*P	**Pn**	**11 42 50.0**	**-0.2**
UCH				⇓*i*S	**Sn**	**11 43 37.1**	**+1.7**
ARLS	**Aral**	**3.79**	**115**	⇓*e*P	**Pn**	**11 42 50.4**	**+0.1**
ARLS				⇓*e*S	**Sn**	**11 43 37.7**	**+2.1**
KBK	**Karagaybulak**	**3.93**	**101**	⇓*e*P	**Pn**	**11 42 51.6**	**-0.6**
KBK				⇓*e*S	**Sn**	**11 43 39.9**	**+0.7**
KRBS	**Karabastau**	**4.33**	**86**	Pg	**Pb**	**11 43 06.5**	**-0.9**
	4.3nm,0.8s						
KRBS				Lg	Lg	11 44 03.2	
	3.0nm,0.8s						
DGS	**Degeres**	**4.42**	**92**	Pg	**Pb**	**11 43 09.7**	**+0.7**
	2.7nm,0.6s						
DGS				Lg	Lg	11 44 08.8	
	10nm,0.6s						
KST	**Kastek**	**4.58**	**94**	Pg	**Pb**	**11 43 12.0**	**+0.2**
	2.9nm,0.9s						
KST				Lg	Lg	11 44 12.7	
	8.4nm,0.7s						
KTBS	**Karatobe**	**5.06**	**86**	Pg	**Pb**	**11 43 21.8**	**+2.0**
	4.4nm,1.0s						
KTBS				Lg	Lg	11 44 30.7	
IZV	**Izvestkoviy**	**5.06**	**93**	Pg	**Pb**	**11 43 20.8**	**+0.9**
	1.5nm,0.5s						
IZV				Lg	Lg	11 44 28.4	
	4.0nm,0.6s						
ARXS	**Arharly**	**5.90**	**81**	Pg	**Pb**	**11 43 36.4**	**+2.2**
	1.6nm,0.7s						
ARXS				Lg	Lg	11 44 54.7	
	3.4nm,1.2s						
BLB	**Baldybastay**	**6.36**	**82**	Pg	**Pb**	**11 43 42.1**	**+0.1**
	3.6nm,0.4s						
BLB				Lg	Lg	11 45 04.6	
	4.4nm,1.3s						

*TAP **13** 11:54:05.1, 24°.06N×121°.50E, h23km, ML3.6, B*
*JMA **13** 11:54:05.1±0.2, 24°.0N±0°.8×12°2E±°, h22km, MV3.0/12,*
TAIWAN REGION
ISC 13 11:54:05.4±0.8, 24°.05N±0°.01×121°.53E±0°.02, h23km±4km,
n150, σ0§89/253, 5C-6D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.07**	**62**	⇓*i*P	**Pb**	**11 54 09.5**	**0.0**
TWD				*i*S	**Sb**	**11 54 12.6**	**+0.2**
ETM	**Tongmen**	**0.09**	**202**	⇓*i*P	**Pb**	**11 54 09.9**	**-0.2**
ETM				S	**Sb**	**11 54 12.5**	**-0.1**
HWA	**Hwalien**	**0.10**	**135**	⇓*i*P	**Pb**	**11 54 10.1**	**+0.3**
HWA				S	**Sb**	**11 54 14.1**	**+1.3**
NACB	**Ninganchiao**	**0.14**	**26**	⇓*i*P	**Pb**	**11 54 09.8**	**-0.4**
NACB				*i*S	**Sb**	**11 54 13.2**	**-0.2**
ETL	**Fush Village**	**0.14**	**38**	⇓*i*P	**Pb**	**11 54 09.9**	**-0.3**
ETL				*i*S	**Sb**	**11 54 13.3**	**-0.2**
ETLH	**Xiulin Townshi**	**0.17**	**345**	⇑*i*P	**Pb**	**11 54 10.2**	**-0.3**
ETLH				*e*S	**Sb**	**11 54 13.7**	**-0.4**
TEYL	**Yanliau Villag**	**0.19**	**160**	*i*P	**Pb**	**11 54 10.6**	**-0.1**
ESL	**Shilin**	**0.25**	**201**	⇓*i*P	**Pb**	**11 54 11.0**	**-0.6**
ESL				*i*S	**Sb**	**11 54 15.1**	**-0.6**
SHUL	**Shoufeng**	**0.26**	**173**	P	**Pb**	**11 54 11.8**	**+0.1**
SHUL				*e*S	**Sb**	**11 54 17.1**	**+1.2**
WHF	**Hehuan Shan**	**0.26**	**292**	⇑*i*P	**Pb**	**11 54 11.4**	**-0.6**
WHF				S	**Sb**	**11 54 15.7**	**-0.9**
EHP	**Heping Village**	**0.33**	**37**	*e*P	**Pb**	**11 54 12.7**	**0.0**
EHP				S	**Sb**	**11 54 18.3**	**+0.6**
FUSS	**Fushou**	**0.33**	**308**	⇑*i*P	**Pb**	**11 54 12.7**	**-0.3**
FUSS				*i*S	**Sb**	**11 54 17.8**	**-0.2**
OWD	**Renai**	**0.34**	**254**	⇑*i*P	**Pb**	**11 54 12.5**	**-0.5**
OWD				*i*S	**Sb**	**11 54 17.1**	**-1.0**
TEGC	**Jichi Village**	**0.34**	**178**	P	**Pb**	**11 54 13.1**	**+0.3**
EAHA	**Aohua**	**0.34**	**34**	P	**Pb**	**11 54 12.6**	**-0.4**
EAHA				S	**Sb**	**11 54 17.9**	**-0.1**
WARBT	**Fenglin Townsh**	**0.35**	**202**	*i*P	**Pb**	**11 54 12.2**	**-0.9**
WARBT				*e*S	**Sb**	**11 54 17.1**	**-1.3**
WUSB	**Renai**	**0.38**	**262**	*i*P	**Pb**	**11 54 13.3**	**-0.3**
WUSB				S	**Sb**	**11 54 18.5**	**-0.8**
TWT	**Tachien**	**0.38**	**303**	*i*P	**Pb**	**11 54 13.6**	**-0.1**
TWT				S	**Sb**	**11 54 19.0**	**-0.4**
TDCB	**Techi**	**0.40**	**301**	*i*P	**Pb**	**11 54 13.6**	**-0.3**
TDCB				*i*S	**Sb**	**11 54 19.0**	**-0.8**
NNSB	**Datong**	**0.40**	**341**	⇑*i*P	**Pb**	**11 54 13.7**	**-0.4**
NNSB				S	**Sb**	**11 54 19.1**	**-0.8**
NNS	**Nan Shan**	**0.42**	**340**	*i*P	**Pb**	**11 54 13.8**	**-0.5**
NNS				*i*S	**Sb**	**11 54 19.2**	**-1.1**
EWUT	**Wuta**	**0.46**	**30**	*e*P	**Pb**	**11 54 14.6**	**-0.3**
EWUT				S	**Sb**	**11 54 20.7**	**-0.6**
VWDT	**VWDT**	**0.46**	**231**	*i*P	**Pb**	**11 54 14.7**	**-0.2**
VWDT				*i*S	**Sb**	**11 54 21.2**	**0.0**
LATG	**Datong**	**0.49**	**360**	*e*P	**Pb**	**11 54 14.9**	**-0.5**
LATG				S	**Sb**	**11 54 21.6**	**-0.6**
NDT	**Datong Townshi**	**0.55**	**359**	*e*P	**Pb**	**11 54 16.3**	**-0.2**
NDT				*e*S	**Sb**	**11 54 24.1**	**+0.1**
HGSD	**Ruisui**	**0.56**	**190**	*e*P	**Pb**	**11 54 16.7**	**0.0**
WCS	**Beigang Elemen**	**0.56**	**271**	*i*P	**Pb**	**11 54 16.2**	**-0.5**
EHY	**Hungye**	**0.57**	**199**	*e*P	**Pb**	**11 54 16.0**	**-0.8**
EHY				*e*S	**Sb**	**11 54 24.1**	**-0.4**
EHYH	**Wanrong**	**0.58**	**197**	P	**Pb**	**11 54 16.2**	**-0.7**
EHYH				*e*S	**Sb**	**11 54 24.3**	**-0.3**
WHP	**Taichung City**	**0.58**	**293**	P	**Pb**	**11 54 16.7**	**-0.3**
WHP				*i*S	**Sb**	**11 54 24.5**	**-0.5**
SSLB	**Suanglung**	**0.59**	**244**	P	**Pb**	**11 54 16.3**	**-0.8**
SSLB				S	**Sb**	**11 54 23.8**	**-1.2**
ENTT	**Nioudou**	**0.59**	**3**	*e*P	**Pb**	**11 54 16.9**	**-0.3**
ENTT				*e*S	**Sb**	**11 54 23.6**	**-1.5**
SMLT	**Sun Moon Lake**	**0.60**	**254**	*i*P	**Pb**	**11 54 16.7**	**-0.6**
SMLT				*e*S	**Sb**	**11 54 24.7**	**-0.7**
ESAO	**Su ao**	**0.60**	**29**	P	**Pb**	**11 54 17.0**	**-0.3**
ESAO				S	**Sb**	**11 54 25.0**	**-0.3**
NDS	**Dongshan**	**0.61**	**16**	*i*P	**Pb**	**11 54 17.0**	**-0.5**
NDS				*e*S	**Sb**	**11 54 25.1**	**-0.5**
TWC	**Suao**	**0.63**	**28**	*i*P	**Pb**	**11 54 17.8**	**-0.1**
TWC				S	**Sb**	**11 54 25.3**	**-0.9**
TYC	**Yuchr**	**0.63**	**257**	P	**Pb**	**11 54 17.1**	**-0.7**
TYC				S	**Sb**	**11 54 25.6**	**-0.6**
YHNB	**Yeheng**	**0.64**	**347**	*e*P	**Pb**	**11 54 17.5**	**-0.4**
YHNB				S	**Sb**	**11 54 25.5**	**-1.0**
NSK	**Sanguang**	**0.65**	**346**	*i*P	**Pb**	**11 54 17.9**	**-0.3**
NSK				*i*S	**Sb**	**11 54 25.8**	**-1.0**
TWE	**Neicheng**	**0.68**	**11**	P	**Pb**	**11 54 18.5**	**-0.2**
TWE				*e*S	**Sb**	**11 54 27.9**	**+0.1**
YULB	**Yu-li**	**0.69**	**198**	*e*P	**Pb**	**11 54 16.9**	**-1.8**
NFF	**Wufeng Townshi**	**0.69**	**327**	*i*P	**Pb**	**11 54 18.7**	**-0.2**
NFF				*e*S	**Sb**	**11 54 27.2**	**-0.8**
WHYT	**Xinyi Township**	**0.71**	**241**	*i*P	**Pb**	**11 54 18.9**	**-0.3**
WHYT				S	**Sn**	**11 54 29.2**	**-1.1**
FUSB	**Fushanzhiwuyua**	**0.71**	**4**	*i*P	**Pb**	**11 54 18.9**	**-0.4**
FUSB				*e*S	**Sb**	**11 54 28.1**	**-0.5**
EYUL	**Yuli**	**0.72**	**195**	*e*P	**Pb**	**11 54 19.3**	**0.0**
TWF1	**Yuli**	**0.72**	**197**	*e*P	**Pb**	**11 54 18.9**	**-0.4**
TWF1				*e*S	**Sn**	**11 54 29.3**	**-1.3**
EOS4	**EOS4**	**0.72**	**84**	*e*P	**Pb**	**11 54 19.1**	**0.0**
EOS4				S	**Sn**	**11 54 30.2**	**0.0**
NWLT	**Wulai**	**0.73**	**358**	*e*P	**Pb**	**11 54 19.1**	**-0.3**
NWLT				S	**Sb**	**11 54 28.2**	**-0.8**
ECBN	**Changbin**	**0.73**	**186**	*e*P	**Pb**	**11 54 17.5**	**-2.0**
ECBN				*e*S	**Sb**	**11 54 29.4**	**+0.3**
EOS2	**EOS2**	**0.74**	**60**	*e*P	**Pn**	**11 54 20.7**	**+0.3**
TWQ1	**Liyutan**	**0.75**	**294**	*e*P	**Pn**	**11 54 20.3**	**-0.4**
TWQ1				S	**Sn**	**11 54 30.7**	**-0.7**
NSTT	**Nanjuang**	**0.76**	**320**	*i*P	**Pb**	**11 54 19.5**	**-0.4**
NSTT				*e*S	**Sb**	**11 54 29.4**	**-0.4**
LIOB	**Emei**	**0.76**	**322**	*i*P	**Pn**	**11 54 20.2**	**-0.5**
LIOB				S	**Sb**	**11 54 30.4**	**+0.5**
EOS3	**EOS3**	**0.76**	**72**	*e*P	**Pn**	**11 54 20.9**	**+0.3**
WJS	**Zhushan**	**0.77**	**253**	*i*P	**Pn**	**11 54 20.6**	**-0.3**
WJS				S	**Sn**	**11 54 31.6**	**-0.1**
TCU	**Taichung**	**0.79**	**277**	*e*P	**Pn**	**11 54 21.1**	**0.0**
TCU				*e*S	**Sn**	**11 54 32.6**	**+0.5**
WNT	**Mingjian**	**0.79**	**258**	*e*P	**Pn**	**11 54 21.0**	**-0.2**
WNT				*i*S	**Sn**	**11 54 32.5**	**+0.2**
KSHI	**Guanxi Townshi**	**0.79**	**336**	*e*P	**Pn**	**11 54 21.4**	**+0.1**
KSHI				S	**Sn**	**11 54 31.9**	**-0.5**
NMLH	**Miaoli**	**0.83**	**306**	P	**Pn**	**11 54 22.0**	**+0.4**
NMLH				S	**Sn**	**11 54 32.7**	**-0.6**
ALS	**Alishan**	**0.85**	**231**	P	**Pn**	**11 54 21.6**	**-0.7**
ALS				S	**Sn**	**11 54 33.4**	**-0.8**
CHKH	**Chenggong**	**0.86**	**188**	*e*P	**Pb**	**11 54 20.3**	**-1.4**
CHKH				S	**Sb**	**11 54 32.2**	**-0.6**
WDJ	**Dajia District**	**0.86**	**290**	*e*P	**Pn**	**11 54 22.6**	**+0.4**
WDJ				*e*S	**Sn**	**11 54 34.6**	**+0.5**
FULB	**Fuli**	**0.87**	**194**	*e*P	**Pb**	**11 54 21.3**	**-0.6**
EGS		**0.88**	**25**	*e*P	**Pn**	**11 54 23.9**	**+1.5**
WCHH	**Zhanghua**	**0.89**	**272**	P	**Pn**	**11 54 22.8**	**+0.2**
WCHH				S	**Sn**	**11 54 36.2**	**+1.5**
SBCB	**Hsinchu**	**0.89**	**326**	*e*P	**Pn**	**11 54 23.1**	**+0.5**
SBCB				*e*S	**Sn**	**11 54 36.5**	**+1.6**
WCH1	**Changhua City**	**0.90**	**272**	*e*P	**Pn**	**11 54 22.6**	**0.0**
WCH1				*e*S	**Sn**	**11 54 36.0**	**+1.0**
CHN5	**Tsauling**	**0.90**	**240**	*e*P	**Pn**	**11 54 22.7**	**-0.1**
CHN5				S	**Sn**	**11 54 35.4**	**+0.3**
HSN	**Hsinchu**	**0.91**	**326**	*e*P	**Pn**	**11 54 23.6**	**+0.8**
HSN				S	**Sn**	**11 54 36.2**	**+1.0**
NHDH	**Xindian Distri**	**0.91**	**360**	*e*P	**Pn**	**11 54 22.7**	**-0.1**
NHDH				S	**Sn**	**11 54 35.7**	**+0.4**
TWA	**Mucha**	**0.93**	**3**	*e*P	**Pn**	**11 54 23.1**	**0.0**
TWA				S	**Sn**	**11 54 35.4**	**-0.4**
EHD	**Haiduan**	**0.94**	**198**	*e*P	**Pb**	**11 54 22.3**	**-0.8**
EHD				*e*S	**Sn**	**11 54 35.3**	**-0.8**
CHKT	**Chengkung**	**0.95**	**189**	*e*P	**Pb**	**11 54 21.9**	**-1.4**
CHKT				*e*S	**Sb**	**11 54 35.0**	**-0.5**
WGK	**Gukeng**	**0.95**	**248**	*e*P	**Pn**	**11 54 23.4**	**-0.1**
WGK				*e*S	**Sn**	**11 54 37.1**	**+0.8**
TIPB	**Shuangxi**	**0.96**	**16**	*e*P	**Pn**	**11 54 23.6**	**+0.1**
TIPB				*e*S	**Sn**	**11 54 36.1**	**-0.5**
NCUH	**Zhongli**	**0.97**	**341**	*e*P	**Pn**	**11 54 24.1**	**+0.5**
NCUH				*e*S	**Sn**	**11 54 38.3**	**+1.6**
WDLH	**Douliu**	**0.97**	**249**	*e*P	**Pn**	**11 54 24.1**	**+0.3**
WDLH				*e*S	**Sn**	**11 54 37.6**	**+0.8**
ELDTW	**Lidau**	**0.97**	**209**	*e*P	**Pb**	**11 54 22.9**	**-0.9**
ELDTW				*e*S	**Sb**	**11 54 35.7**	**-0.5**
ECS	**Chishang**	**0.99**	**197**	*e*P	**Pn**	**11 54 24.3**	**+0.3**
WCKO	**Fanlu**	**1.04**	**235**	*e*P	**Pb**	**11 54 25.2**	**+0.4**
WCKO				S	**Sn**	**11 54 41.2**	**+2.7**
NWF	**Wu-fen Shan**	**1.04**	**13**	*e*P	**Pb**	**11 54 25.2**	**+0.3**
NWF				*e*S	**Sn**	**11 54 39.0**	**+0.3**
TWB1	**Santiao Chiao**	**1.04**	**24**	*e*P	**Pb**	**11 54 24.9**	**0.0**
TWB1				*e*S	**Sn**	**11 54 38.8**	**+0.2**
WFSB	**Wu-fen Shan**	**1.04**	**13**	*e*P	**Pb**	**11 54 25.0**	**+0.1**
WFSB				S	**Sn**	**11 54 39.6**	**+1.0**
TWS1	**Kuangyinshan**	**1.05**	**355**	*e*P	**Pb**	**11 54 25.6**	**+0.6**
TWS1				*e*S	**Sn**	**11 54 40.5**	**+1.7**
WRL	**Guolierlin Hig**	**1.06**	**262**	*e*P	**Pb**	**11 54 25.2**	**0.0**
WRL				*e*S	**Sn**	**11 54 40.1**	**+1.0**
RLNB	**Erlin**	**1.08**	**262**	*e*P	**Pb**	**11 54 25.4**	**-0.1**
RLNB				*e*S	**Sn**	**11 54 40.7**	**+1.3**
SXI1	**Grass Mountain**	**1.09**	**17**	*e*P	**Pb**	**11 54 26.4**	**+0.7**
SXI1				*e*S	**Sn**	**11 54 40.8**	**+1.0**
YM01	**YM01**	**1.09**	**2**	*e*P	**Pb**	**11 54 26.3**	**+0.5**
YM01				*e*S	**Sn**	**11 54 40.9**	**+1.0**
WTK	**Tuku**	**1.10**	**251**	*e*P	**Pb**	**11 54 26.4**	**+0.5**
WTK				*e*S	**Sn**	**11 54 41.5**	**+1.5**
TPUB	**Ta-pu**	**1.11**	**228**	*e*P	**Pb**	**11 54 25.9**	**0.0**
TPUB				*e*S	**Sn**	**11 54 41.1**	**+0.9**
ZUZH	**Zhuzihu**	**1.11**	**1**	*e*P	**Pb**	**11 54 26.5**	**+0.5**
ZUZH				*e*S	**Sn**	**11 54 40.3**	**0.0**
STYH	**Taoyuan**	**1.11**	**219**	*e*P	**Pb**	**11 54 25.7**	**-0.3**
STYH				*e*S	**Sb**	**11 54 39.6**	**-0.5**
NTST	**Danshui**	**1.11**	**356**	*e*P	**Pb**	**11 54 26.8**	**+0.7**
NTST				S	**Sn**	**11 54 42.0**	**+1.8**
TNOU	**National Taiwa**	**1.12**	**11**	*e*P	**Pb**	**11 54 26.5**	**+0.4**
ANP	**Anpu**	**1.13**	**360**	*e*P	**Pb**	**11 54 27.2**	**+0.7**
YM08	**YM08**	**1.14**	**3**	*e*P	**Pn**	**11 54 25.8**	**-0.2**
CHY	**Chiayi**	**1.15**	**242**	*e*P	**Pb**	**11 54 27.2**	**+0.5**
CHY				S	**Sn**	**11 54 42.8**	**+1.7**
WTP	**Ta-pu**	**1.16**	**227**	*i*P	**Pb**	**11 54 27.1**	**+0.3**
WTP				*e*S	**Sn**	**11 54 43.3**	**+1.9**
LONT	**Longtian**	**1.19**	**198**	*e*P	**Pb**	**11 54 26.8**	**-0.6**
TWK	**Hsinying**	**1.23**	**231**	*i*P	**Pb**	**11 54 28.3**	**+0.3**
TWK				*e*S	**Sb**	**11 54 45.4**	**+1.9**
CHN1	**Nanshi**	**1.26**	**227**	*e*P	**Pb**	**11 54 28.8**	**+0.4**
CHN1				*e*S	**Sb**	**11 54 46.6**	**+2.3**
WSF	**Szhu**	**1.26**	**251**	*e*P	**Pb**	**11 54 28.3**	**-0.3**
WSF				*e*S	**Sb**	**11 54 45.5**	**+1.1**
TWG	**Pinlang**	**1.29**	**199**	*e*P	**Pn**	**11 54 27.8

	comp=E,12nm,0.5s						
ARPR	**Arapgir-MALATY**	**0.81 319**	Pg	**Pb**	**11 55 32.3**	**+0.8**
AKCD	**Akcadag**	**0.89 258**	P	**Pg**	**11 55 33.8**	**+0.8**
AKCD			S	**Sn**	**11 55 47.1**	**+1.0**
AKCD			IAML		11 55 49.0	
	comp=N,43nm,0.3s					
AKCD			IAML		11 55 49.0	
	comp=E,30nm,0.2s					
AZEY	**Adyaman-Merk**	**0.91 222**	P	**Pn**	**11 55 34.4**	**+0.6**
AZEY			S	**Sn**	**11 55 47.1**	**+0.6**
AZEY			IAML		11 55 50.0	
	comp=E,6.8nm,0.4s					
AZEY			IAML		11 55 51.0	
	comp=N,12nm,1.2s					
DYBB	**Diyarbakir**	**1.03 121**	Pg	**Pb**	**11 55 35.3**	**+0.2**

*SOME **13** 11:58:08.8, 44.45N×82.13E, h10km*
*NNC **13** 11:58:12.6±1.6, 44.51N×81.86E, h0km, mb2.6, mpv2.7, Error ellipse: s-maj=23.5km s-min=6.7km az=125.0*
ISC 13 11:58:08.1±1.4, 44.39N±0.09×82.3E±0.1, h10km, n14, σ1§05/21, 1C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**1.72 237**		P	**Pb**	**11 58 39.9**	**+0.1**
	1.7nm,0.3s						
KTMS				S	**Sb**	**11 59 02.3**	**+0.8**
	10.0nm,0.2s						
KTMS	**Ketmen**	**1.72 237**		*e*P	**Pb**	**11 58 39.9**	**+0.1**
	1.7nm,0.3s						
KTMS				*e*S	**Sb**	**11 59 02.3**	**+0.8**
	10.0nm,0.2s						
PDGK	**Podgornoye**	**2.32 244**		⇓Pg	**Pb**	**11 58 50.2**	**+0.2**
	0.8nm,0.5s						
PDGK				⇓Lg	Lg	11 59 20.6	
	7.1nm,0.6s						
MK31	**Makanchi Array**	**2.40 359**		⇓Pn	**Pb**	**11 58 52.9**	**+1.4**
	0.2nm,0.2s,baz=139,slow=19,SNR=34						
MK31				⇑Lg	Lg	11 59 26.1	
	3.1nm,0.4s,baz=173,slow=27,SNR=14						
SHLS	**Shalkode**	**2.42 240**		Pg	**Pn**	**11 58 48.1**	**+0.2**
	4.9nm,0.2s						
SHLS				Lg	Lg	11 59 16.2	
	33nm,0.7s						
SHLS	**Shalkode**	**2.42 240**		*e*P	**Pn**	**11 58 48.1**	**+0.2**
	4.9nm,0.2s						
SHLS				*e*S	**Sn**	**11 59 16.2**	**-1.5**
	33nm,0.7s						
UZB	**Uzynbulak**	**2.70 244**		Pg	**Pb**	**11 58 57.1**	**+0.4**
	2.7nm,0.5s						
UZB				Lg	Lg	11 59 31.6	
	5.1nm,0.4s						
UZB	**Uzynbulak**	**2.70 244**		*e*P	**Pb**	**11 58 57.1**	**+0.4**
	2.7nm,0.5s						
UZB				*e*S	**Sb**	**11 59 31.6**	**+1.7**
	5.1nm,0.4s						
BLB	**Baldybastay**	**2.79 265**		Pg	**Pb**	**11 58 56.4**	**-1.7**
	9.1nm,0.1s						
BLB				Lg	Lg	11 59 30.2	
	15nm,0.4s						
KPKS	**Kokpek**	**2.79 252**		Pg	**Pb**	**11 58 57.3**	**-0.9**
	0.3nm,0.3s						
KPKS				Lg	Lg	11 59 31.6	
	14nm,0.5s						
KPKS	**Kokpek**	**2.79 252**		*e*P	**Pb**	**11 58 58.5**	**+0.3**
	0.1nm,0.2s						
KPKS				*e*S	**Sb**	**11 59 34.0**	**+1.4**
	17nm,0.2s						
SATY	**Saty**	**3.14 246**		Pg	**Pb**	**11 59 05.7**	**+1.5**
	1.3nm,0.1s						
SATY				Lg	Lg	11 59 46.1	
	7.7nm,0.2s						
ARXS	**Arharly**	**3.24 268**		*e*P	**Pb**	**11 59 05.5**	**-0.3**
	1.3nm,0.2s						
ARXS				*e*S	**Sb**	**11 59 46.5**	**+1.2**
	5.2nm,0.3s						
ZSN	**Zaisan**	**3.53 29**		*e*P	**Pg**	**11 59 14.5**	**-1.3**
	2.1nm,0.1s						
ZSN				*e*S	**Sg**	**12 00 01.4**	**-0.1**
	2.1nm,0.1s						

*IDC **13** 12:02:34.4±1.3, 25.85S×68.62W, h0km, mb3.8/1, mbtmp3.8/1, Error ellipse: s-maj=153.1km s-min=60.5km az=142.0*
*GUC **13** 12:02:48.1±0.7, 25.65S×68.74W, h111km±7km, ML3.3*
ISC 13 12:02:47.9±0.9, 25.62S±0.05×68.74W±0.07, h100km, n19, σ1§23/21, 2C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AC02	**Maricunga**	**1.26 196**		⇑*i*P	**Pn**	**12 03 13.7**	**+1.9**
AC02				*e*S	**Sn**	**12 03 32.4**	**+2.6**
AC01	**Pan de Azucar**	**1.75 252**		⇑*i*P	**Pn**	**12 03 18.5**	**+1.1**
AC01				*e*S	**Sn**	**12 03 41.1**	**+1.3**
AC01				IAML		12 03 47.3	
	comp=E,456nm,0.3s						
AC06	**Mina Casimiro**	**2.26 220**		*e*P	**Pn**	**12 03 24.7**	**+0.8**
AC06				IAML		12 03 57.2	
	comp=N,130nm,0.3s						
GO03	**Copiapo**	**2.38 214**		*e*P	**Pn**	**12 03 25.9**	**+0.4**
GO03				IAML		12 04 00.2	
	comp=E,140nm,0.2s						
SALTA		**2.58 58**		*e*P	**Pn**	**12 03 30.0**	**+1.4**
PB10	**IPOC Station P**	**2.67 321**		*e*P	**Pn**	**12 03 30.5**	**+1.2**
PB10				IAML		12 04 12.5	
	comp=N,87nm,0.2s						
PB06	**IPOC Station P**	**3.00 345**		*e*P	**Pn**	**12 03 35.4**	**+1.5**
PB06				IAML		12 04 16.0	
	comp=N,71nm,0.3s						
PB05	**IPOC Station P**	**3.06 334**		*e*P	**Pn**	**12 03 35.7**	**+1.0**
PB05				IAML		12 04 20.9	
	comp=E,105nm,0.6s						
AC04	**Llanos de Chal**	**3.31 218**		*e*P	**Pn**	**12 03 37.4**	**-0.5**
AC05	**El Transito**	**3.48 203**		*e*P	**Pn**	**12 03 40.6**	**+0.3**
PB03	**IPOC Station P**	**3.67 345**		*e*P	**Pn**	**12 03 43.4**	**+0.5**
PB09	**IPOC Station P**	**3.83 353**		*e*P	**Pn**	**12 03 46.5**	**+1.5**
PB07	**IPOC Station P**	**4.01 345**		*e*P	**Pn**	**12 03 47.7**	**+0.1**
TORD	**Torodi Ar. Bea**	**78.62 69**		P	**P**	**12 14 38.4**	**-0.8**
	comp=E,0.6nm,0.6s,baz=238,slow=7.4,SNR=3.6						
	comp=E,0.6nm,0.6s						
ASAR	**Alice Springs**	**126.32 206**		PKP	**PKPdf**	**12 21 39.1**	**-0.6**
	comp=E,0.5nm,0.8s,baz=145,slow=2.8,SNR=4.3						
WRA	**Warramunga Arr**	**129.46 209**		PKP	**PKiKP**	**12 21 45.5**	**-1.0**
	comp=E,0.4nm,0.7s,baz=149,slow=1.6,SNR=1.7						
KURBB	**Kurchatov Arra**	**144.61 36**		PKP	**PKPdf**	**12 22 12.1**	**-0.4**
	comp=E,0.3nm,0.8s,baz=297,slow=3.3,SNR=4.5						
ZALV	**Zalesovo Beam**	**145.56 28**		PKPbc	**PKPbc**	**12 22 13.7**	**-0.6**
	comp=E,0.8nm,0.4s,baz=293,slow=2.2,SNR=4.6						
MKAR	**Makanchi Array**	**148.78 40**		PKPbc	**PKiKP**	**12 22 23.9**	**-1.2**
	comp=E,0.5nm,0.7s,baz=297,slow=2.8,SNR=5.3						

*NOU **13** 12:07:18.4, 33.47S×179.72E, h341km, mb3.7/6, South of Kermadec Islands*
WEL 13 12:07:12.4±1.2, 33˚S±11˚×18˚0E±3˚1, h300km, M3.9/9, mB4.4/9, MLv4.1/9, Mw(mB)3.6/6, Error ellipse: s-maj=41.1km s-min=10.8km az=103.9, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.90 193**		P	Pn	12 08 29.5	+0.8
MXZ	**Matakaoa Point**	**4.90 193**		P	Pn	12 08 28.8	0.0
WMGZ	**Waiomatatini S**	**5.13 192**		P	Pn	12 08 31.5	+0.1
HAZ	**Te Kaha**	**5.21 197**		P	Pn	12 08 32.1	-0.1
HAZ				S	S	12 09 38.2	+1.8
PKGZ	**Pakihiroa**	**5.24 194**		P	Pn	12 08 32.6	-0.1
PUZ	**Puketiti**	**5.41 192**		P	Pn	12 08 34.0	-0.6
PUZ				S	S	12 09 40.2	-0.5
RUGZ	**Raukumara Rang**	**5.43 197**		P	Pn	12 08 35.0	0.0
RUGZ				S	S	12 09 40.9	-0.5
TWGZ	**Tauwhareparae**	**5.56 194**		P	Pn	12 08 36.7	+0.2
TWGZ				S	S	12 09 45.8	+1.7
MWZ	**Matawai**	**5.82 197**		P	Pn	12 08 39.5	0.0
MWZ				S	S	12 09 49.4	-0.2
URZ	**Urewera**	**5.86 201**		P	Pn	12 08 39.8	-0.2
URZ	**Urewera**	**5.86 201**		P	Pn	12 08 39.7	-0.3
URZ				S	S	12 09 50.4	-0.1
RAGZ	**Rawiri**	**6.00 198**		P	Pn	12 08 41.9	+0.2
RIGZ	**Rimuhau**	**6.12 195**		P	Pn	12 08 43.2	+0.1
MUGZ	**Murupara**	**6.17 202**		P	Pn	12 08 43.9	+0.3
PRGZ	**Paritu Road**	**6.30 193**		P	Pn	12 08 45.7	+0.4
RAHZ	**Arahi**	**6.48 199**		P	Pn	12 08 46.9	-0.5
MHGZ	**Mahia Peninsul**	**6.52 193**		P	Pn	12 08 48.2	+0.3
NMHZ	**Naumai**	**6.73 200**		P	Pn	12 08 50.4	-0.1
ARHZ	**Aropaoanui**	**6.83 198**		P	Pn	12 08 51.0	-0.6
BKZ	**Black Stump Fm**	**6.88 201**		P	Pn	12 08 52.4	+0.1
BKZ	**Black Stump Fm**	**6.88 201**		P	Pn	12 08 51.6	-0.7
NTVZ	**North Tongarir**	**7.10 206**		P	Pn	12 08 55.3	+0.3
TMVZ	**Te Maari**	**7.11 206**		P	Pn	12 08 55.1	0.0
ETVZ	**East Tongariro**	**7.12 206**		P	Pn	12 08 55.2	-0.1
KWHZ	**Kaweka Forest**	**7.14 201**		P	Pn	12 08 54.9	-0.6
OTVZ	**Oturere**	**7.16 206**		P	Pn	12 08 55.9	0.0
SNVZ	**South Ngauruho**	**7.19 206**		P	Pn	12 08 56.2	0.0
PXZ	**Pawanui**	**7.59 197**		P	Pn	12 08 58.7	-2.1
BFZ	**Birch Farm**	**8.36 198**		P	Pn	12 09 08.6	-1.7
QRZ	**Quartz Range**	**9.88 214**		P	Pn	12 09 28.0	-0.9
	34nm,2.0s						
KHZ	**Kahutara**	**10.79 205**		P	Pn	12 09 38.3	-1.7

*IDC **13** 12:29:52.3±1.7, 54.61N×168.49E, h0km, mb3.4/2, mbtmp3.5/4, ML3.3/2, Error ellipse: s-maj=45.0km s-min=24.1km az=177.0*
*KRSC **13** 12:29:53.2±0.5, 54.56N×168.30E, h62km±11km, Ml3.7*
ISC 13 12:29:54.8±0.9, 54.7N±0.1×168.33E±0.06, h24km, n27, σ1§51/26, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**1.46 293**		*e*P	**Pb**	**12 30 19.4**	**-1.9**
BKI				*e*S	**Sb**	**12 30 38.1**	**-1.3**
KBTR	**Krutoberegovo**	**3.50 298**		*e*P	**Pn**	**12 30 48.3**	**+0.7**
KBTR				*e*S	**Sn**	**12 31 29.2**	**+1.0**
SHEM	**Shemya Is, Ala**	**3.94 117**		Pn	**Pn**	**12 30 52.1**	**-1.5**
	12nm,0.3s,baz=22,slow=2.4,SNR=5.2						
SHEM				Sn	**Sn**	**12 31 37.6**	**-1.4**
	5.5nm,0.3s,baz=270,slow=19,SNR=1.6						
	32nm,0.4s						
KII	**Karymskiy**	**5.23 267**		*e*P	**Pn**	**12 31 12.9**	**+1.4**
KII				*e*S	**Sn**	**12 32 10.0**	**-1.0**
OSSR	**Ossora**	**5.43 330**		*e*P	Pn	12 31 16.8	+2.8
SDLR	**Sedlovina**	**5.75 260**		*e*P	**Pn**	**12 31 19.4**	**+0.8**
UGLR	**Uglovaya**	**5.80 259**		*e*P	**Pn**	**12 31 20.2**	**+0.9**
AVH	**Avacha**	**5.83 260**		*e*P	**Pn**	**12 31 20.7**	**+1.0**
KRX	**Arik**	**5.86 261**		*e*P	**Pn**	**12 31 20.9**	**+0.8**
KOK	**Koryaka**	**5.88 260**		*e*P	**Pn**	**12 31 21.5**	**+1.1**
DALK	**Dalny**	**5.90 258**		*e*P	**Pn**	**12 31 20.8**	**+0.2**
TILK	**Tilichiki**	**5.92 349**		*e*P	Pn	12 31 23.7	+3.0
PET	**Petropavlovsk**	**5.96 258**		*e*P	**Pn**	**12 31 22.2**	**+0.8**
PET				*e*S	**Sn**	**12 32 28.0**	**-0.8**
GNL	**Ganaly**	**6.18 265**		*e*P	**Pn**	**12 31 25.6**	**+1.2**
KRMR	**Karymshinskiy**	**6.32 257**		*e*P	**Pn**	**12 31 27.0**	**+0.6**
MTVR	**Mutnovka**	**6.43 254**		*e*P	**Pn**	**12 31 29.2**	**+1.3**
MTVR				*e*S	**Sn**	**12 32 38.4**	**-2.1**
GRL	**Gorelyy**	**6.46 255**		*e*P	**Pn**	**12 31 29.4**	**+1.0**
PETK	**Petropavlovsk-**	**6.48 260**		Pn	**Pn**	**12 31 29.9**	**+1.5**
	0.5nm,0.3s,baz=74,slow=19,SNR=16						
PETK				Sn	**Sn**	**12 32 45.6**	**+4.1**
	0.3nm,0.3s,baz=85,slow=23,SNR=1.4						
	3.5nm,0.7s						
ASAK	**Asacha**	**6.62 254**		*e*P	**Pn**	**12 31 31.9**	**+1.3**
ILAR	**Eielson Array**	**24.20 47**		P	**P**	**12 35 08.8**	**-0.2**
	0.5nm,0.6s,baz=256,slow=7.7,SNR=11						
	0.5nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**34.89 182**		T	T	13 13 22.2	
	baz=1.7,slow=76,SNR=268						
H11N3	**WAKE ISLAND Hy**	**34.90 182**		T	T	13 13 25.9	
	baz=1.7,slow=76,SNR=222						
H11N1	**WAKE ISLAND Hy**	**34.91 182**		T	T	13 13 24.8	
	baz=1.7,slow=76,SNR=213						
H11S1	**WAKE ISLAND Hy**	**36.11 183**		T	T	13 14 56.6	
	baz=1.6,slow=76,SNR=89						
H11S3	**WAKE ISLAND Hy**	**36.12 183**		T	T	13 14 58.1	
	baz=1.6,slow=76,SNR=40						
H11S2	**WAKE ISLAND Hy**	**36.13 183**		T	T	13 15 00.9	
	baz=1.6,slow=76,SNR=164						
TXAR	**Lajitas Array**	**65.52 74**		P	**P**	**12 40 38.1**	**+2.0**
	0.3nm,0.6s,baz=289,slow=3.8,SNR=3.6						
	0.3nm,0.6s						

WEL 13 12:34:03.6±1.0, 37˚S±9˚×18˚0E±˚, h75km±43km, M3.5/30, ML3.4/15, MLv3.5/30, Error ellipse: s-maj=12.9km s-min=10.5km az=49.4, confirmed, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.45 228**		P	Pn	12 34 26.9	-1.1
WMGZ	**Waiomatatini S**	**1.57 219**		P	Pn	12 34 29.8	+0.2
PKGZ	**Pakihiroa**	**1.79 224**		P	Pn	12 34 32.5	+0.1
PUZ	**Puketiti**	**1.85 217**		P	Pn	12 34 33.1	-0.2
PUZ				S	Sn	12 34 56.8	+0.9
HAZ	**Te Kaha**	**1.89 232**		P	Pn	12 34 33.3	-0.5
TWGZ	**Tauwhareparae**	**2.07 220**		P	Pn	12 34 36.5	+0.3
TWGZ				S	Sn	12 35 03.0	+1.8
RUGZ	**Raukumara Rang**	**2.09 228**		P	Pn	12 34 37.1	+0.5
CNGZ	**Carnagh Statio**	**2.21 211**		P	Pn	12 34 38.6	+0.5
TKGZ	**Te Karaka**	**2.33 217**		P	Pn	12 34 39.6	-0.2
TKGZ				S	Sn	12 35 08.3	+0.8
MWZ	**Matawai**	**2.42 224**		P	Pn	12 34 40.9	-0.1
MWZ				S	Sn	12 35 09.7	-0.1
WHRZ	**Whale Island**	**2.48 239**		P	Pn	12 34 43.3	+1.6
RIGZ	**Rimuhau**	**2.59 215**		P	Pn	12 34 42.6	-0.6
RIGZ				S	Sn	12 35 14.0	+0.3
RAGZ	**Rawiri**	**2.60 222**		P	Pn	12 34 43.2	-0.3
RAGZ				S	Sn	12 35 14.3	+0.2
URZ	**Urewera**	**2.62 230**		P	Pn	12 34 43.2	-0.4
URZ				S	Sn	12 35 14.2	-0.2
PRGZ	**Paritu Road**	**2.71 211**		P	Pn	12 34 44.3	-0.7
EDRZ	**Edgecumbe**	**2.77 236**		P	Pn	12 34 45.7	0.0
KNZ	**Kokohu**	**2.89 212**		P	Pn	12 34 46.2	-1.0
MHGZ	**Mahia Peninsul**	**2.90 208**		P	Pn	12 34 46.7	-0.8
RTZ	**Ruatahuna**	**2.93 226**		P	Pn	12 34 47.6	-0.3
TGRZ	**Tauranga**	**2.94 246**		P	Pn	12 34 47.7	-0.2
LIRZ	**Lichensteins R**	**2.96 241**		P	Pn	12 34 49.0	+0.7
MUGZ	**Murupara**	**2.96 230**		P	Pn	12 34 47.8	-0.6
TARZ	**Mount Tarawera**	**2.99 236**		P	Pn	12 34 49.0	+0.2
KARZ	**Kaharoa**	**3.07 241**		P	Pn	12 34 49.7	-0.1
RAHZ	**Arahi**	**3.08 220**		P	Pn	12 34 49.5	-0.5
WHHZ	**Waihua**	**3.13 217**		P	Pn	12 34 51.1	+0.5
MTHZ	**Maungataniwha**	**3.17 224**		P	Pn	12 34 51.7	+0.6
PRRZ	**Plateau Road**	**3.21 233**		P	Pn	12 34 51.2	-0.5
ALRZ	**Allen Road**	**3.28 232**		P	Pn	12 34 52.3	-0.3
NMHZ	**Naumai**	**3.37 221**		P	Pn	12 34 53.6	-0.2
ARHZ	**Aropaoanui**	**3.39 217**		P	Pn	12 34 53.8	-0.3
TOZ	**Tahuroa Road**	**3.50 250**		P	Pn	12 34 55.4	-0.2
BKZ	**Black Stump Fm**	**3.58 223**		P	Pn	12 34 55.8	-0.9
WIAZ	**Waiheke Island**	**3.64 266**		P	Pn	12 34 57.8	+0.4
MKAZ	**Moumakai**	**3.64 261**		P	Pn	12 34 57.6	+0.2
MCHZ	**McNeill Hill**	**3.68 218**		P	Pn	12 34 57.4	-0.6
KWHZ	**Kaweka Forest**	**3.81 221**		P	Pn	12 34 58.5	-1.3
ETAZ	**East Tamaki Re**	**3.81 263**		P	Pn	12 35 00.4	+0.6
MBAZ	**Motutapu North**	**3.83 266**		P	Pn	12 35 00.8	+0.8
KAHZ	**Kahuranaki**	**3.87 214**		P	Pn	12 34 58.8	-1.9
KRHZ	**Kereru**	**4.00 219**		P	Pn	12 35 01.1	-1.3
TMVZ	**Te Maari**	**4.01 230**		P	Pn	12 35 01.9	-0.8
NTVZ	**North Tongarir**	**4.02 230**		P	Pn	12 35 02.1	-0.7
ETVZ	**East Tongariro**	**4.02 230**		P	Pn	12 35 02.0	-0.8
KRVZ	**Karewarewa**	**4.04 231**		P	Pn	12 35 03.0	0.0
AWAZ	**Awhitu Peninsu**	**4.05 262**		P	Pn	12 35 04.2	+1.2
OTVZ	**Oturere**	**4.07 230**		P	Pn	12 35 02.6	-0.9
PXZ	**Pawanui**	**4.07 212**		P	Pn	12 35 00.9	-2.5
RVAZ	**Riverhead Bore**	**4.08 266**		P	Pn	12 35 04.6	+1.1
WTAZ	**Waiatarua**	**4.09 264**		P	Pn	12 35 05.0	+1.4
SNVZ	**South Ngauruho**	**4.09 230**		P	Pn	12 35 03.0	-0.9
NGZ	**Ngauruhoe**	**4.11 230**		P	Pn	12 35 03.3	-0.8
TWVZ	**Taurewa**	**4.15 232**		P	Pn	12 35 04.8	+0.2
MOVZ	**Moawhango**	**4.17 226**		P	Pn	12 35 03.7	-1.1
HIZ	**Hauiti**	**4.27 242**		P	Pn	12 35 07.0	+0.9
PNHZ	**Pukenui**	**4.29 218**		P	Pn	12 35 04.3	-2.1
WPHZ	**Waipukurau**	**4.29 215**		P	Pn	12 35 04.2	-2.2
WCZ	**Waipu Caves**	**4.34 277**		P	Pn	12 35 07.6	+0.6
PRHZ	**Porangahau**	**4.37 212**		P	Pn	12 35 04.8	-2.6
TSZ	**Takapari Road**	**4.52 219**		P	Pn	12 35 07.2	-2.2
VRZ	**Vera Road**	**4.62 235**		P	Pn	12 35 11.5	+0.6
POWZ	**Post Office Ro**	**4.87 218**		P	Pn	12 35 12.3	-1.9
BFZ	**Birch Farm**	**4.88 212**		P	Pn	12 35 11.2	-3.2
PRWZ	**Pori Road**	**4.89 215**		P	Pn	12 35 12.3	-2.3
TIWZ	**Tintock**	**5.11 214**		P	Pn	12 35 15.4	-2.2
MRZ	**Mangatainoka R**	**5.16 217**		P	Pn	12 35 15.6	-2.7
OGWZ	**Otaki Gorge**	**5.48 218**		P	Pn	12 35 19.8	-2.8
CAW	**Cannon Point**	**5.75 217**		P	Pn	12 35 22.8	-3.6
PAWZ	**Paruwai Farm**	**5.80 213**		P	Pn	12 35 22.9	-4.2
MRNZ	**Matariki Terra**	**7.20 226**		P	Pn	12 35 42.3	-3.8
THZ	**Tophouse**	**7.35 223**		P	Pn	12 35 44.3	-3.9
CTZ	**Chatham Island**	**7.68 159**		P	Pn	12 35 53.0	+0.3
LTZ	**Lake Taylor**	**8.40 220**		P	Pn	12 35 59.3	-3.2

*IDC **13** 12:38:01.0±0.9, 0.74N×126.48E, h0km, mb4.0/7, mbtmp4.0/8, ML4.1/1, MS3.4/1, Error ellipse: s-maj=39.8km s-min=16.4km az=72.0*
*DJA **13** 12:38:05.5±0.2, 1.1N±2×12.6E±˚, h10km, M4.1/21, mB5.0/3, mb4.3/6, MLv3.9/21, Mw(mB)4.4/3*
*NEIC **13** 12:38:07.4±2.2, 0.63N±0.09×126.43E±0.06, h41km±8km, mb4.2/14, Error ellipse: s-maj=13.1km s-min=8.6km az=171.0*
ISC 13 12:38:07.5±0.6, 0.63N±0.07×126.29E±0.07, h47km, n39, σ1§19/38, mb4.1/14, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.09 83**		P	**Pn**	**12 38 23.9**	**-2.5**
TNTI	**Ternate**	**1.09 83**		P	**Pn**	**12 38 27.2**	**+0.9**
MNI	**Manado**	**1.66 299**		P	**Pn**	**12 38 32.6**	**-1.5**
MNI				S	**Sn**	**12 38 53.0**	**-1.3**
SANI	**Sanana**	**2.68 186**		P	**Pn**	**12 38 46.6**	**-1.5**
GTOI	**Gorontalo**	**3.28 270**		P	**Pn**	**12 38 58.3**	**+2.0**
LUWI	**Luwuk**	**3.89 245**		Pn	**Pn**	**12 39 05.5**	**+0.8**
KRAI	**Karang Ratu**	**4.45 152**		P	**Pn**	**12 39 15.2**	**+2.7**
APSI	**Ampana**	**4.88 252**		P	**Pn**	**12 39 18.3**	**-0.1**
TOLI2	**Tolitoli**	**5.53 275**		Pn	**Pn**	**12 39 28.2**	**+0.9**
TTSI	**Tana Toraja**	**7.42 241**		P	**Pn**	**12 39 53.1**	**-0.2**
SPSI	**Sidrap Palu**	**7.95 235**		P	**Pn**	**12 40 01.1**	**+0.5**
	15nm,0.4s						
KAPI	**Kappang**	**8.61 229**		Pn	**Pn**	**12 40 10.5**	**+1.0**
	1.9nm,0.3s,baz=7.9,slow=7.2,SNR=5.1						
	6.1nm,0.4s						
KAPI	**Kappang**	**8.61 229**		P	**Pn**	**12 40 10.9**	**+1.4**
MYLDM	**Lahad Datu**	**8.99 300**		Pn	**Pn**	**12 40 16.9**	**+2.1**
MTN	**Manton Dam**	**14.22 160**		Pn	**Pn**	**12 41 26.8**	**+0.5**
KNRA	**Kununurra**	**16.39 172**			**Pn**	**12 41 54.7**	**+0.3**
KNRA				IAmb	IAmb	12 42 00.6	
	comp=E,7.2nm,0.9s						
WB0	**Warramunga Arr**	**21.77 159**			**P**	**12 42 55.1**	**-0.3**
WB0				IAmb	IAmb	12 42 59.8	
	comp=E,8.0nm,0.7s						
WRAB	**Tennant Creek**	**21.91 159**		P	**P**	**12 42 56.8**	**-0.1**
WRAB				IAmb	IAmb	12 43 01.5	
	comp=E,5.1nm,0.7s						
WRA	**Warramunga Arr**	**21.91 159**		P	**P**	**12 42 56.5**	**-0.5**
	comp=E,5.5nm,0.7s,baz=343,slow=11,SNR=22						
	comp=E,5.5nm,0.7s						
WRA	**Warramunga Arr**	**21.91 159**		P	**P**	**12 42 55.0**	**-2.0**
WR8	**Warramunga Arr**	**21.98 159**			**P**	**12 42 57.5**	**-0.2**
WR8				IAmb	IAmb	12 43 04.8	
	comp=E,9.9nm,1.0s						
PSA00	**Pilbara Seismi**	**22.95 196**		P	**P**	**12 43 07.1**	**-0.8**
PSA00				IAmb	IAmb	12 43 09.9	
	comp=E,13nm,1.1s						
PSA00	**Pilbara Seismi**	**22.95 196**		P	**P**	**12 43 07.1**	**-0.8**
PSA00				IAmb	IAmb	12 43 28.5	
	comp=E,2.8nm,1.1s						
AS31	**Alice Springs**	**25.26 163**		P	**P**	**12 43 30.0**	**+0.6**
ASAR	**Alice Springs**	**25.26 163**		P	**P**	**12 43 30.2**	**+0.8**
	comp=E,2.6nm,0.6s,baz=345,slow=12,SNR=58						
	comp=E,2.6nm,0.6s						
STKA	**Stephens Creek**	**35.43 157**		P	**P**	**12 44 58.4**	**-0.9**
	comp=E,1.5nm,0.4s,baz=344,slow=7.2,SNR=5.2						
	comp=E,1.5nm,0.4s						
STKA	**Stephens Creek**	**35.43 157**		IAmb	IAmb	12 44 59.0	
	comp=E,37nm,1.4s						
MJAR	**Matsushiro Arr**	**37.40 16**		P	**P**	**12 45 16.4**	**+0.3**
	comp=E,0.6nm,0.5s,baz=179,slow=9.4,SNR=4.7						
	comp=E,0.6nm,0.5s						
BRDH	**Bariadhala**	**40.18 306**		LR	LR	13 05 02.9	
	comp=Z,46nm,18.2s,baz=182,slow=40						
MKAR	**Makanchi Array**	**59.86 327**		P	**P**	**12 48 08.5**	**+0.1**
	comp=E,0.6nm,0.4s,baz=119,slow=8.2,SNR=13						
	comp=E,0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**64.11 328**		P	**P**	**12 48 36.2**	**-0.6**

GRAF				*e*S	Sn	12 44 17.9	-3.5	
GRAF				IAML		12 44 51.4		
	comp=Z,1.6nm,0.5s							
BRAK	**Brakfontein**	**7.87**	**222**	*e*P	Pn	12 43 04.3	+0.8	
BRAK				⇓*e*Pg	Pg	12 43 39.2	+0.8	
BRAK				*e*S	Sn	12 44 29.9	-3.5	
BRAK				IAML		12 44 41.4		
	comp=N,1.4nm,0.4s							
ROOI	**Rooidraai Farm**	**8.03**	**216**	*e*P	Pn	12 43 06.7	+1.0	
ROOI				*e*S	Sn	12 44 33.4	-3.9	
ROOI				IAML		12 45 22.1		
	comp=Z,3.1nm,0.8s							
GRAN	**Grantham**	**8.67**	**223**	*e*P	Pn	12 43 15.9	+1.4	
GRAN				*e*S	Sn	12 44 49.0	-4.1	
GRAN				IAML		12 45 30.6		
	comp=Z,1.9nm,0.9s							
MERW	**Merweville**	**9.33**	**223**	*e*P	Pn	12 43 24.9	+1.5	
MERW				*e*S	Sn	12 45 05.2	-4.0	
MERW				IAML		12 45 26.2		
	comp=Z,1.4nm,0.6s							
SUR	**Sutherland**	**9.59**	**227**	*e*P	Pn	12 43 28.0	+0.9	
SUR				*e*S	Sn	12 45 11.0	-4.7	
SUR				IAML		12 45 33.6		
	comp=Z,1.5nm,1.2s							

*IDC **13** 13:06:37.7±0.4,33˚.10N×139˚.65E,h0km,mb4.1/20, mbtmp4.2/26,ML4.1/5,MS3.4/24,Error ellipse: s-maj=13.3km s-min=6.7km az=11.0*
*MOS **13** 13:06:39.0±1.0,33˚.10N×139˚.66E,h17km,mb4.6/32,Error ellipse: s-maj=12.7km s-min=5.9km az=108.9*
*NIED **13** 13:06:40.6,33˚.26N×139˚.50E,h11km,MW4.4,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; Mrr=2.95; Mθθ1.79; Mφφ 1.16; Mrθ 1.82; Mθφ -2.04; Mφr 1.65; Fault plane solution: M0 4.03000×10^{15} NP1: φs158.00000°,δ50.00000°,λ-47.00000°. NP2: φs282.00000°,δ56.00000°,λ-129.00000°.*
*JMA **13** 13:06:40.6±0.2,33˚.3N±0˚.3×13˚.9E±˚,h11km±3km, MD4.4/30,MV4.3/30,NEAR HACHIJOJIMA ISLAND*
JMA Felt II J1 at NEAR HACHIJOJIMA ISLAND .
*NEIC **13** 13:06:41.3±0.8,33˚.31N±0˚.05×139˚.53E±0˚.05,h10km±1km, mb4.7/171,Error ellipse: s-maj=12.0km s-min=3.1km az=219.0*
ISC 13 13:06:41.0±0.9,33˚.27N±0˚.03×139˚.65E±0˚.05,h14km±5km, n480,σ1s34/404,mb4.6/124,MS3.4/22,9C-16D,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**0.18**	**143**	Pn	**Pb**	**13 06 47.0**	**+0.8**
	6μm,0.3s,baz=17,slow=6.3,SNR=468						
JHJ2	**Mitsune**	**0.21**	**138**	P	**Pb**	**13 06 47.3**	**+0.7**
JHJ2	**Mitsune**	**0.21**	**138**		**Pb**	**13 06 47.4**	**+0.7**
JHJ2				Sg	**Sg**	**13 06 51.7**	**+2.9**
JHJ2	**Mitsune**	**0.21**	**138**	P	**Pb**	**13 06 46.9**	**+0.2**
JHJ2				A	A	13 06 46.9	
	comp=N,152nm,1.1s,comp=E,132nm,1.0s						
JHJ2				S	**Sg**	**13 06 51.4**	**+2.6**
JHCJ	**Hachijojimakas**	**0.23**	**148**	⇓P	**Pb**	**13 06 47.0**	**0.0**
JHCJ				A	A	13 06 47.0	
	comp=N,88nm,0.7s,comp=E,91nm,0.7s						
JHCJ				⇓S	**Sg**	**13 06 51.4**	**+1.9**
JMKN	**Mikurajimanish**	**0.62**	**355**	*i* P	**Pg**	**13 06 53.0**	**-0.3**
JMKN				A	A	13 06 53.0	
	comp=N,28nm,7.1s,comp=E,29nm,2.7s						
JMKN				S	**Sb**	**13 07 01.8**	**-0.5**
JMYK	**Miyake Tsubota**	**0.80**	**354**	*i* P	**Pg**	**13 06 55.7**	**-0.8**
JMYK				A	A	13 06 55.7	
	comp=N,29nm,5.5s,comp=E,22nm,3.1s						
JMYK				S	**Sb**	**13 07 07.5**	**+0.2**
JAOM	**Aogashimamukai**	**0.81**	**173**	⇓*i*P	**Pb**	**13 06 56.5**	**-0.3**
JAOM				A	A	13 06 56.5	
	comp=N,43nm,0.6s,comp=E,51nm,1.4s						
JAOM				⇓*e*S	**Sb**	**13 07 08.3**	**+0.6**
JKO	**Kozu shima**	**1.01**	**335**	*i* P	**Pg**	**13 06 58.5**	**-2.0**
JKO				A	A	13 06 58.5	
	comp=N,17nm,6.7s,comp=E,21nm,2.5s						
JSKK	**Shikinejimakit**	**1.12**	**341**	*e*P	**Pn**	**13 07 02.3**	**-0.1**
JSKK				A	A	13 07 02.3	
	comp=N,14nm,5.5s,comp=E,14nm,3.6s						
JNIO	**Niijimaoohara**	**1.13**	**344**	*e*P	**Pb**	**13 07 02.1**	**-0.2**
JNIO				A	A	13 07 02.1	
	comp=N,19nm,1.7s,comp=E,23nm,1.7s						
JTHY	**Toshimahigashi**	**1.29**	**347**	*i* P	**Pn**	**13 07 03.5**	**-1.1**
JTHY				A	A	13 07 03.5	
	comp=N,19nm,6.7s,comp=E,19nm,1.9s						
JIM2	**Oshima 3**	**1.46**	**353**	P	**Pn**	**13 07 05.9**	**-1.1**
JIM2				A	A	13 07 05.9	
	comp=N,12nm,1.7s,comp=E,13nm,3.7s						
JIZS	**Izushimoda**	**1.58**	**336**	P	**Pn**	**13 07 07.3**	**-1.3**
JIZS				A	A	13 07 07.3	
	comp=N,5.0nm,3.1s,comp=E,4.0nm,1.3s						
JIZS				S	**Sn**	**13 07 28.1**	**-0.8**
JHTM	**Izuhatsuma**	**1.77**	**343**	A	A	13 07 11.2	
	comp=N,8.0nm,1.0s,comp=E,8.0nm,4.3s						
JSG	**Sagara**	**1.86**	**319**	P	**Pn**	**13 07 12.4**	**0.0**
JSG	**Sagara**	**1.86**	**319**		**Pn**	**13 07 11.6**	**-0.9**
JGF	**Kuroka**	**3.00**	**321**	P	**Pn**	**13 07 27.8**	**-0.4**
JGF	**Kuroka**	**3.00**	**321**	S	**Sn**	**13 08 03.7**	**-0.3**
JGF	**Kuroka**	**3.00**	**321**		**Pn**	**13 07 27.6**	**-0.7**
INU	**Inuyama**	**3.01**	**314**	P	**Pn**	**13 07 27.8**	**-0.5**
INU	**Inuyama**	**3.01**	**314**		**Pn**	**13 07 27.2**	**-1.1**
MJA0	**Matsu Arr-Jizo**	**3.46**	**341**	*e*P	**Pn**	**13 07 38.0**	**+3.4**
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	**Matsushiro Arr**	**3.47**	**340**	Pn	**Pn**	**13 07 36.3**	**+1.6**
	comp=Z,39nm,0.8s,baz=157,slow=13,SNR=48						
MJAR	**Matsushiro Arr**	**3.47**	**340**		**Pn**	**13 07 34.1**	**-0.6**
MAJO	**Matsushiro**	**3.48**	**340**		**Pn**	**13 07 34.7**	**0.0**
MAJO	**Matsushiro**	**3.48**	**340**	P	**Pn**	**13 07 34.7**	**0.0**
MJB9	**Matsu-Tunnel**	**3.48**	**340**		**Pn**	**13 07 35.8**	**+1.0**
JMN	**Monobe**	**4.84**	**277**	P	**Pn**	**13 07 52.6**	**-0.9**
JMN	**Monobe**	**4.84**	**277**		**Pn**	**13 07 52.7**	**-0.9**
JCJ	**Chichijima**	**6.53**	**160**	Pn	**Pn**	**13 08 12.2**	**-4.5**
	comp=Z,14nm,0.3s,baz=269,slow=19,SNR=7.9						
JCJ				Sn	**Sn**	**13 09 28.1**	**-2.9**
	comp=Z,6.4nm,0.3s,baz=240,slow=20,SNR=1.4						
JCJ				LR	LR	13 10 42.1	
	comp=Z,196nm,19.7s,baz=4.0,slow=38 comp=Z,52nm,0.5s						
JCJ	**Chichijima**	**6.53**	**160**	P	**Pn**	**13 08 15.3**	**-1.4**
JCJ	**Chichijima**	**6.53**	**160**	Pn	**Pn**	**13 08 15.3**	**-1.4**
JNU	**Nakatsue**	**7.36**	**271**	Pn	**Pn**	**13 08 27.2**	**-0.8**
	comp=Z,6.8nm,0.3s,baz=97,slow=3.6,SNR=47 comp=Z,27nm,0.4s						
JSU	**Suzuyama**	**7.97**	**260**	P	**Pn**	**13 08 36.2**	**-0.3**
JSU	**Suzuyama**	**7.97**	**260**		**Pn**	**13 08 35.7**	**-0.8**
JTU	**Tsushima**	**8.62**	**281**	P	**Pn**	**13 08 44.6**	**-0.7**
JEM	**Erimo**	**9.16**	**17**	P	**Pn**	**13 08 53.6**	**+0.8**
JMZ	**Minamidaito 2**	**10.43**	**227**	P	**Pn**	**13 09 10.5**	**+0.3**
JMZ	**Minamidaito 2**	**10.43**	**227**		**Pn**	**13 09 10.9**	**+0.7**
KSRS	**Korea Array**	**10.45**	**297**	Pn	**Pn**	**13 09 13.5**	**+3.2**
	comp=Z,0.1nm,0.3s,baz=117,slow=14,SNR=2.0						
KSRS				LR	LR	13 13 31.1	
	comp=Z,162nm,18.0s,baz=115,slow=39						
ASAJ	**Asahikawa**	**11.07**	**11**	Pn	**Pn**	**13 09 18.5**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=230,slow=7.0,SNR=8.8						
ASAJ				Sn	**Sn**	**13 11 16.4**	**-6.1**
	comp=Z,0.2nm,0.3s,baz=66,slow=19,SNR=2.0						
ASAJ				LR	LR	13 13 46.7	
	comp=Z,179nm,18.0s,baz=150,slow=38 comp=Z,8.5nm,0.8s						
JKA	**Kamikawa-asahi**	**11.07**	**11**	Pn	**Pn**	**13 09 18.0**	**-0.9**
VLA	**Vladivostok**	**11.57**	**330**	⇓*e*P	**Pn**	**13 09 28.6**	**+2.9**
VLA				pmax	pmax		
	comp=Z,38nm,1.2s						
JOW	**Kunigami**	**11.75**	**240**	Pn	**Pn**	**13 09 27.2**	**-1.1**
	comp=Z,3.2nm,0.3s,baz=106,slow=20,SNR=13						
JOW				LR	LR	13 13 37.5	
	comp=Z,193nm,21.1s,baz=332,slow=36 comp=Z,7.4nm,0.3s						
JOW	**Kunigami**	**11.75**	**240**	P	**Pn**	**13 09 28.8**	**+0.5**
JOW	**Kunigami**	**11.75**	**240**	Pn	**Pn**	**13 09 27.6**	**-0.7**
YSS	**Yuzhno-Sakhali**	**13.87**	**9**	*e*P	**Pn**	**13 09 55.4**	**-1.7**
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				MLR	MLR		
	comp=Z,600nm,18.0s						
KLR	**Kul'dur**	**17.00**	**342**	P	**P**	**13 10 40.2**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=178,slow=12,SNR=2.9						
KLR				LR	LR	13 16 39.9	
	comp=Z,120nm,19.7s,baz=158,slow=35						
	comp=Z,1.0nm,0.6s						
TYV	**Tymovskoe**	**17.72**	**6**	*e*P	**P**	**13 10 50.5**	**+2.5**
TYV				*e*S	**S**	**13 14 10.4**	**-1.1**
TYV				pmax	pmax		
	comp=Z,200nm,2.4s						
TYV				pmax	pmax		
	comp=Z,15nm,1.1s						
TYV				smax	smax		
	comp=N,500nm,4.3s						
TYV				smax	smax		
	comp=E,400nm,4.3s						
TYV				smax	smax		
	comp=N,9.0nm,2.1s						
TYV				smax	smax		
	comp=E,13nm,2.1s						
HEH	**HeiHe**	**19.23**	**336**	*e*P	**Pn**	**13 11 10.1**	**+4.5**
HEH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GUMO	**Guam**	**20.16**	**165**	LR	LR	13 17 19.7	
	comp=Z,112nm,21.1s,baz=320,slow=32						
HNS	**HongShan**	**20.74**	**289**	⇑P	Pn	13 11 24.3	+0.7
HNS				S	**S**	**13 15 05.5**	**-6.9**
HNS				pmax	pmax		
	comp=Z,12nm,1.5s						
HNS				LR	LR		
	comp=N,470nm,16.1s						
HNS				LR	LR		
	comp=E,220nm,15.2s						
HNS				LR	LR		
	comp=Z,250nm,16.3s						
WHN	**Wuhan**	**21.64**	**270**	P	**P**	**13 11 32.8**	**+1.9**
ZEA	**Zeya**	**22.29**	**340**	*e*P	**P**	**13 11 38.5**	**+0.8**
ZEA				pmax	pmax		
	comp=N,10.0nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
PETK	**Petropavlovsk-**	**23.68**	**28**	LR	LR	13 22 00.4	
	comp=Z,48nm,20.4s,baz=213,slow=39						
XAN	**Xi'an**	**25.55**	**280**	⇑P	P	13 11 57.8	-12
XAN				pmax	pmax		
	comp=Z,11nm,1.2s						
XAN				LR	LR		
	comp=N,250nm,15.8s						
ENH	**Enshi**	**25.78**	**272**		**P**	**13 12 10.5**	**-1.0**
MA2	**Magadan**	**27.33**	**12**	LR	LR	13 23 48.0	
	comp=N,78nm,18.7s,baz=136,slow=38						
MA2	**Magadan**	**27.33**	**12**	P	**P**	**13 12 26.3**	**+1.0**
MA2	**Magadan**	**27.33**	**12**	⇓*e*P	**P**	**13 12 26.0**	**+0.8**
MA2				pmax	pmax		
	comp=Z,13nm,1.7s						
H11N2	**WAKE ISLAND Hy**	**27.76**	**112**	T	T	13 41 09.6	
	baz=305,slow=75,SNR=499						
H11N1	**WAKE ISLAND Hy**	**27.77**	**112**	T	T	13 41 11.0	
	baz=305,slow=75,SNR=464						
H11N3	**WAKE ISLAND Hy**	**27.78**	**112**	T	T	13 41 11.9	
	baz=305,slow=75,SNR=375						
H11S3	**WAKE ISLAND Hy**	**28.32**	**115**	T	T	13 41 56.7	
	baz=307,slow=75,SNR=105						
H11S1	**WAKE ISLAND Hy**	**28.32**	**115**	T	T	13 41 51.5	
	baz=307,slow=75,SNR=107						
H11S2	**WAKE ISLAND Hy**	**28.34**	**115**	T	T	13 41 55.0	
	baz=307,slow=75,SNR=90						
ULN	**Ulaanbaatar**	**28.49**	**310**	P	**P**	**13 12 33.8**	**-2.1**
ULN	**Ulaanbaatar**	**28.49**	**310**	⇓*e*P	**P**	**13 12 37.2**	**+1.3**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
SONM	**Songino Array**	**28.90**	**310**	P	**P**	**13 12 38.4**	**-1.1**
	comp=Z,1.6nm,1.0s,baz=121,slow=9.2,SNR=7.6						
SONM				LR	LR	13 23 12.3	
	comp=Z,69nm,18.9s,baz=68,slow=34 comp=Z,1.6nm,1.0s						
SONM	**Songino Array**	**28.90**	**310**	P	**P**	**13 12 40.0**	**+0.5**
SONM	**Songino Array**	**28.90**	**310**	P	**P**	**13 12 40.0**	**+0.5**
SONM				pmax	pmax		
	comp=Z,6.0nm,1.2s						
DAV	**Davao City (W)**	**29.15**	**210**	LR	LR	13 22 34.4	
	comp=Z,55nm,20.0s,baz=360,slow=33						
YAK	**Yakutsk**	**29.48**	**350**	LR	LR	13 24 26.8	
	comp=Z,92nm,21.1s,baz=103,slow=36						
YAK	**Yakutsk**	**29.48**	**350**	P	**P**	**13 12 43.8**	**-0.5**
YAK	**Yakutsk**	**29.48**	**350**	*de*P	**P**	**13 12 42.7**	**-1.6**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.5s						
TLY	**Talaya**	**31.87**	**316**	LR	LR	13 24 56.5	
	comp=Z,37nm,18.6s,baz=108,slow=34						
TLY	**Talaya**	**31.87**	**316**	⇓*e*P	**P**	**13 13 07.1**	**+1.5**
TLY				pmax	pmax		
	comp=Z,9.0nm,1.4s						
MYLDM	**Lahad Datu**	**34.19**	**220**	P	**P**	**13 13 27.3**	**+1.1**
SIJI	**Soung**	**34.86**	**195**	LR	LR	13 24 39.6	
	comp=Z,26nm,19.0s,baz=247,slow=31						
KNGR	**Kungurtug, Tuv**	**35.25**	**312**	⇑*e*P	**P**	**13 13 36.6**	**+1.5**
KNGR				pmax	pmax		
	comp=Z,6.0nm,1.3s						
JAY	**Jayapura**	**35.60**	**178**	LR	LR	13 24 08.5	
	comp=Z,75nm,21.5s,baz=324,slow=30						
BILL	**Bilibino**	**38.04**	**16**	⇑*e*P	**P**	**13 13 58.6**	**+0.1**
TIXI	**Tiksi**	**38.87**	**355**	LR	LR	13 31 46.6	
	comp=Z,70nm,19.0s,baz=66,slow=39						
TIXI	**Tiksi**	**38.87**	**355**		**P**	**13 14 05.4**	**-0.1**
TIXI	**Tiksi**	**38.87**	**355**	⇑*i*P	**P**	**13 14 05.0**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**39.23**	**258**	P	**P**	**13 14 08.9**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=61,slow=8.4,SNR=5.1 comp=Z,0.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**39.23**	**258**	P	**P**	**13 14 09.0**	**-0.2**
SPIA	**Saint Paul Isl**	**41.36**	**39**	P	**P**	**13 14 27.1**	**+0.8**
	baz=257						
NIKH	**Nikolski High**	**41.39**	**46**	P	**P**	**13 14 27.7**	**+1.1**
	baz=263						
DGZ	**Jazzator, Alta**	**41.54**	**309**	⇓*e*P	**P**	**13 14 28.1**	**0.0**
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.2s						
P08K	**Saint George I**	**41.61**	**40**	P	**P**	**13 14 29.1**	**+0.8**
	baz=258						
GAMB	**Gambell**	**42.69**	**29**	P	**P**	**13 14 37.9**	**+0.9**
	baz=248						
UNV	**Unalaska Valle**	**42.89**	**45**	P	**P**	**13 14 39.1**	**+0.3**
	baz=264						
ZAA0	**Zalesovo Array**	**43.48**	**315**		**P**	**13 14 42.9**	**-0.7**
ZALV	**Zalesovo Beam**	**43.48**	**315**	P	**P**	**13 14 42.8**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=99,slow=9.8,SNR=6.8						
ZALV				PcP	**PcP**	**13 16 28.8**	**-2.7**
	comp=Z,1.8nm,0.8s,baz=97,slow=3.6,SNR=5.1 comp=Z,0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**43.48**	**315**		**P**	**13 14 43.2**	**-0.4**
M11K	**Mekoryuk**	**44.14**	**35**	P	**P**	**13 14 49.4**	**+0.6**
	baz=257						
FALS	**False Pass**	**44.78**	**43**	P	**P**	**13 14 54.6**	**+0.6**
	baz=266						
TNA	**Tin City**	**44.84**	**28**	P	**P**	**13 14 55.6**	**+1.2**
TNA				IAmb	IAmb	13 15 05.9	
	comp=Z,18nm,1.4s						
TNA	**Tin City**	**44.84**	**28**	P	**P**	**13 14 55.1**	**+0.8**
	baz=250						
MK31	**Makanchi Array**	**44.99**	**305**	P	**P**	**13 14 55.0**	**-0.9**
MK31	**Makanchi Array**	**44.99**	**305**	P	**P**	**13 14 55.0**	**-0.9**
MK31				pmax	pmax		
	comp=Z,4.0nm,1.4s						
MKAR	**Makanchi Array**	**44.99**	**305**	P	**P**	**13 14 55.4**	**-0.5**
	comp=Z,1.7nm,0.9s,baz=88,slow=9.2,SNR=12 comp=Z,1.7nm,0.9s						
MKAR	**Makanchi Array**	**44.99**	**305**	P	**P**	**13 14 55.9**	**0.0**
MKAR	**Makanchi Array**	**44.99**	**305**	*e*P	**P**	**13 14 56.0**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
K13K	**Kusilvak Mount**	**45.22**	**33**	P	**P**	**13 14 58.3**	**+0.9**
	baz=257						
F14K	**Arctic Creek**	**45.45**	**28**	P	**P**	**13 14 59.6**	**+0.4**
	baz=252						
M13K	**Dall Lake**	**45.54**	**36**	P	**P**	**13 15 00.6**	**+0.7**
	baz=260						
ANM	**Nome**	**45.57**	**30**	P	**P**	**13 15 02.1**	**+1.9**
ANM				IAmb	IAmb	13 15 02.9	
	comp=Z,8.3nm,1.1s						
ANM	**Nome**	**45.57**	**30**	P	**P**	**13 15 02.1**	**+1.9**
ANM				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ANM	**Nome**	**45.57**	**30**	P	**P**	**13 15 01.1**	**+0.9**
	baz=254						
J14K	**Nanvaranak Lak**	**45.90**	**32**	P	**P**	**13 15 02.9**	**+0.1**
	baz=258						
L14K	**Kuka Creek**	**46.02**	**34**	P	**P**	**13 15 04.5**	**+0.8**
	baz=260						
F15K	**North Star Dit**	**46.18**	**28**	P	**P**	**13 15 05.7**	**+0.7**
	baz=254						
G15K	**Niukluk**	**46.23**	**29**	P	**P**	**13 15 06.1**	**+0.7**
	baz=255						
M14K	**Bethel**	**46.27**	**35**	P	**P**	**13 15 06.2**	**+0.5**
	baz=261						
N14K	**Kuskokwak Cree**	**46.28**	**37**	P	**P**	**13 15 06.4**	**+0.6**
	baz=262						
O14K	**Tigyukauivet M**	**46.41**	**37**	P	**P**	**13 15 08.4**	**+1.6**
	baz=263						
SDPT	**Sand Point**	**46.50**	**43**	P	**P**	**13 15 07.9**	**+0.3**
	baz=268						
L15K	**Ungalak Mounta**	**46.65**	**34**	P	**P**	**13 15 08.9**	**+0.3**
	baz=261						
C16K	**Lisburne Hills**	**46.72**	**25**	P	**P**	**13 15 10.1**	**+1.0**
	baz=251						
K15K	**Wolf Creek Mou**	**46.73**	**33**	P	**P**	**13 15 10.0**	**+0.7**
	baz=260						
M15K	**Kasigluk River**	**46.88**	**36**	P	**P**	**13 15 11.1**	**+0.6**
	baz=262						
H16K	**Elim**	**46.89**	**30**	P	**P**	**13 15 11.1**	**+0.6**
	baz=257						
CHNA	**Chernabura Isl**	**46.99**	**44**	P	**P**	**13 15 11.4**	**-0.1**
	baz=269						
G16K	**Koyuk River**	**47.02**	**29**	P	**P**	**13 15 12.0**	**+0.5**
	baz=256						
COEN	**Coen**	**47.08**	**175**	P	**P**	**13 15 13.2**	**+0.7**
N15K	**Kwethluk River**	**47.11**	**36**	P	**P**	**13 15 12.4**	**+0.1**
	baz=263						
O15K	**Ungalikthiuk R**	**47.13**	**38**	P	**P**	**13 15 13.2**	**+0.7**
O15K				IAmb	IAmb	13 15 30.3	
	comp=Z,9.6nm,1.2s						
O15K	**Ungalikthiuk R**	**47.13**	**38**	P	**P**	**13 15 12.2**	**-0.3**
	baz=264						
KURK	**Kurchatov**	**47.20**	**311**		**P**	**13 15 12.7**	**-0.5**
KURK	**Kurchatov**	**47.20**	**311**	P	**P**	**13 15 12.7**	**-0.5**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KURBB	**Kurchatov Arra**	**47.26**	**311**	P	**P**	**13 15 12.8**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=89,slow=7.9,SNR=9.8						
KURBB				PcP	**PcP**	**13 16 45.6**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=86,slow=4.8,SNR=4.2 comp=Z,0.5nm,0.4s						
J16K	**Anvik River**	**47.33**	**32**	P	**P**	**13 15 14.0**	**0.0**
	baz=260						
D17K	**Noatak River**	**47.35**	**26**	P	**P**	**13 15 13.8**	**-0.2**
	baz=254						
I17K	**Unalakleet**	**47.40**	**31**	IAmb	IAmb	13 15 17.2	
	comp=Z,7.0nm,1.0s						
I17K	**Unalakleet**	**47.40**	**31**	P	**P**	**13 15 14.5**	**0.0**
	baz=259						
RDOG	**Red Dog Mine**	**47.51**	**25**	P	**P**	**13 15 15.8**	**+0.4**
	baz=253						
C17K	**DeLong Mountai**	**47.54**	**25**	P	**P**	**13 15 16.4**	**+0.7**
	baz=253						
L16K	**Owhat River**	**47.60**	**34**	P	**P**	**13 15 16.7**	**+0.6**
	baz=262						
E17K	**Hotham Inlet**	**47.65**	**27**	P	**P**	**13 15 17.2**	**+0.8**
	baz=255						
CHGN	**Chignik**	**47.70**	**42**	P	**P**	**13 15 17.0**	**0.0**
	baz=268						
F17K	**Baldwin Pennin**	**47.71**	**28**	P	**P**	**13 15 17.1**	**+0.2**
	baz=256						
G17K	**Kiwalik Mounta**	**47.74**	**29**	P	**P**	**13 15 16.9**	**-0.3**
	baz=258						
M16K	**Timber Creek**	**47.76**	**35**	P	**P**	**13 15 16.9**	**-0.5**
	baz=264						
N16K	**Nishlik Lake**	**47.79**	**36**	P	**P**	**13 15 18.0**	**+0.3**
	baz=264						
H17K	**Granite Mounta**	**47.93**	**30**	IAmb	IAmb	13 15 46.3	
	comp=Z,11nm,1.5s						
H17K	**Granite Mounta**	**47.93**	**30**	P	**P**	**13 15 19.3**	**+0.6**
	baz=259						
O16K	**Kokwok River B**	**48.05**	**37**	P	**P**	**13 15 20.3**	**+0.7**
	baz=266						
P16K	**Nushagak River**	**48.06**	**38**	P	**P**	**13 15 19.5**	**-0.2**
	baz=266						
E18K	**Tukpahlearik C**	**48.19**	**27**	IAmb	IAmb	13 15 25.4	
	comp=Z,8.4nm,1.2s						
E18K	**Tukpahlearik C**	**48.19**	**27**	P	**P**	**13 15 20.9**	**+0.3**
	baz=256						
R16K	**Pilot Point**	**48.21**	**40**	P	**P**	**13 15 20.6**	**-0.2**
	baz=268						
L17K	**Donlin**	**48.21**	**34**	P	**P**	**13 15 21.1**	**+0.3**
	baz=263						
K17K	**Iditarod**	**48.28**	**33**	IAmb	IAmb	13 15 24.7	
	comp=Z,8.5nm,1.0s						
K17K	**Iditarod**	**48.28**	**33**	P	**P**	**13 15 22.1**	**+0.8**
	baz=263						
C18K	**Utukok River**	**48.29**	**25**	P	**P**	**13 15 21.2**	**-0.2**
	baz=255						
F18K	**Selawik**	**48.37**	**28**	P	**P**	**13 15 22.9**	**+0.9**
	baz=258						
M17K	**Holitna River**	**48.53**	**35**	P	**P**	**13 15 22.9**	**-0.5**
	baz=265						
O17K	**Koliganek Bris**	**48.57**	**37**	P	**P**	**13 15 22.8**	**-0.8**
	baz=266						
N17K	**Nushagak Hills**	**48.58**	**36**	P	**P**	**13 15 22.8**	**-0.9**
	baz=266						
H18K	**Honhosa River**	**48.62**	**30**	IAmb	IAmb	13 15 26.2	
	comp=Z,6.0nm,0.9s						
H18K	**Honhosa River**	**48.62**	**30**	P	**P**	**13 15 23.9**	**-0.1**
	baz=260						
G18K	**Tagagawik**	**48.63**	**29**	P	**P**	**13 15 23.5**	**-0.5**
	baz=260,SNR=7.0						
Q16K	**King Salmon**	**48.74**	**39**	P	**P**	**13 15 24.0**	**-0.9**
	baz=268						
A19K	**Wainwright**	**48.77**	**23**	P	**P**	**13 15 24.0**	**-0.9**
	baz=253						
P17K	**Kvichak River**	**48.87**	**38**	P	**P**	**13 15 24.8**	**-1.1**
	baz=268						
L18K	**Granite Mounta**	**48.97**	**34**	P	**P**	**13 15 26.4**	**-0.3**
	baz=265						
C19K	**Lookout Ridge**	**48.97**	**25**	P	**P**	**13 15 25.9**	**-0.8**
	baz=256						
J18K	**Innoko River**	**49.09**	**32**	P	**

baz=272
M20K **Styx River** 50.62 34 P P 13 15 39.6 +0.3
baz=268
C21K **Knifeblade Rid** 50.67 25 P P 13 15 40.1 +0.6
baz=261
G21K **Allakaket** 50.78 28 P P 13 15 40.7 +0.2
baz=264
B21K **Ikpikpuk River** 50.80 24 IAmb IAmb 13 15 42.9
comp=Z,9.4nm,0.8s
B21K **Ikpikpuk River** 50.80 24 P P 13 15 40.5 0.0
baz=260
F21K **Alatna River** 50.87 27 P P 13 15 42.1 +1.0
baz=263
KDAK **Kodiak Island** 50.89 40 LR LR 13 38 58.0
comp=Z,17nm,18.0s,baz=247,slow=38
KDAK **Kodiak Island** 50.89 40⇓ *i*P P 13 15 41.3 0.0
KDAK pmax pmax
comp=Z,30nm,1.6s
KDAK **Kodiak Island** 50.89 40 P P 13 15 41.4 0.0
baz=272
A22K **Sinclair Lake** 50.94 23 P P 13 15 41.3 -0.2
baz=259
Q20K **Shuyak Island** 50.96 39 P P 13 15 41.8 -0.1
baz=271
H21K **Melozitna Rive** 50.99 30 IAmb IAmb 13 15 44.5
comp=Z,6.9nm,0.9s
H21K **Melozitna Rive** 50.99 30 P P 13 15 42.8 +0.8
baz=265,SNR=7.1
N20K **Mount Spurr** 51.04 35 P P 13 15 43.0 +0.5
baz=270
SPCR **Spurr Chakacha** 51.04 35 P P 13 15 42.9 +0.4
baz=270
CHUM **Lake Minchumin** 51.08 32 P P 13 15 42.2 -0.4
baz=267
AAK **Ala-Archa** 51.08 301⇓ *e*P P 13 15 44.6 +1.4
AAK pmax pmax
comp=Z,8.0nm,2.7s
PPLA **Purkeypile** 51.09 33 P P 13 15 43.4 +0.4
baz=268
I21K **Tanana** 51.29 30 IAmb IAmb 13 15 53.0
comp=Z,16nm,1.4s
I21K **Tanana** 51.29 30 P P 13 15 44.8 +0.6
baz=266,SNR=5.9
B22K **Teshekpuk Lake** 51.33 24 P P 13 15 45.1 +0.7
baz=261
SKT **Skwentna** 51.38 34 P P 13 15 45.2 +0.2
baz=270
CAPN **Captain Cook N** 51.56 36 P P 13 15 46.4 +0.2
baz=271
H22K **Ishtalitna Cre** 51.59 29 P P 13 15 47.2 +0.6
baz=266
E22K **Anaktuvuk Pass** 51.61 26 IAmb IAmb 13 15 54.8
comp=Z,8.1nm,1.0s
E22K **Anaktuvuk Pass** 51.61 26 P P 13 15 47.6 +0.9
baz=264,SNR=6.6
BPAW **Bear Paw Mtn.** 51.67 32 P P 13 15 47.7 +0.5
baz=268
BRSE **Bradley Lake S** 51.78 37 P P 13 15 47.6 -0.5
baz=272
MLY **Manley** 51.81 30 IAmb IAmb 13 15 50.7
comp=Z,5.5nm,0.8s
MLY **Manley** 51.81 30 P P 13 15 47.9 -0.3
baz=268
TRF **Thorofare Moun** 51.97 32 P P 13 15 49.4 -0.1
baz=269
CUT **Chulitna** 51.97 34 P P 13 15 49.0 -0.3
baz=270
BVAR **Borovoye Array** 52.10 314 PcP PcP 13 17 01.7 -0.6
comp=Z,1.2nm,0.7s,baz=116,slow=3.4,SNR=3.6
D23K **Nanushuk River** 52.10 25 P P 13 15 50.7 +0.4
baz=265
BORK **Borovoye** 52.14 314⇑ *e*P P 13 15 51.4 +0.6
BORK pmax pmax
comp=Z,22nm,3.8s
COLD **Coldfoot** 52.15 28 P P 13 15 50.8 +0.2
baz=266
G23K **Bananza Creek** 52.19 28 P P 13 15 50.9 -0.1
baz=267
C23K **Itkillik River** 52.21 24 IAmb IAmb 13 15 53.8
comp=Z,18nm,1.4s
C23K **Itkillik River** 52.21 24 P P 13 15 51.0 0.0
baz=264
RC01 **Rabbit Creek A** 52.24 35 P P 13 15 50.7 -0.7
baz=272
O22K **Cooper Landing** 52.27 36 P P 13 15 51.4 -0.2
baz=272
I23K **Minto, Yukon-K** 52.40 30 P P 13 15 52.0 -0.4
baz=269
SEW **Seward** 52.42 37 P P 13 15 52.8 +0.1
baz=273
E23K **Chandalar** 52.42 27 IAmb IAmb 13 15 55.8
comp=Z,8.3nm,0.9s
E23K **Chandalar** 52.42 27 P P 13 15 52.6 -0.2
baz=266,SNR=7.7
TOLK **Toolik Lake Re** 52.48 26 P P 13 15 53.0 -0.1
baz=266
NEA2 **Nenana** 52.52 31 IAmb IAmb 13 15 56.1
comp=Z,13nm,0.9s
NEA2 **Nenana** 52.52 31 P P 13 15 53.5 +0.1
baz=270,SNR=5.1
PMR **Palmer** 52.52 35 IAmb IAmb 13 15 58.2
comp=Z,11nm,1.3s
PMR **Palmer** 52.52 35 P P 13 15 53.6 +0.1
baz=272
MCK **McKinley** 52.57 32 IAmb IAmb 13 15 57.4
comp=Z,6.9nm,1.0s
MCK **McKinley** 52.57 32 P P 13 15 54.0 +0.2
baz=270
RND **Reindeer** 52.61 32 P 13 15 55.1 +0.9
RND IAmb IAmb 13 15 57.4
comp=Z,9.6nm,1.2s
RND **Reindeer** 52.61 32 P P 13 15 55.1 +0.9
RND pmax pmax
comp=Z,10.0nm,1.2s
WAT1 **Susitna Watana** 52.76 33 P P 13 15 55.2 -0.1
baz=271
D24K **Happy Valley** 52.78 25 IAmb IAmb 13 15 57.6
comp=Z,12nm,0.8s
D24K **Happy Valley** 52.78 25 P P 13 15 55.3 0.0
baz=266
E24K **Your Creek** 52.85 27 IAmb IAmb 13 16 04.5
comp=Z,10nm,1.4s
E24K **Your Creek** 52.85 27 P P 13 15 55.7 -0.1
baz=268
KNK **Knik Glacier** 52.85 35 P P 13 15 55.8 -0.2
baz=273
C24K **Franklin Bluff** 52.87 25 P P 13 15 55.5 -0.4
baz=266
SML **Sawmill** 52.89 34 P P 13 15 55.4 -0.9
baz=272
H24K **Noodor Dome** 53.03 29 P P 13 15 56.8 -0.5
baz=270
COLA **College** 53.04 31⇓ *e*P P 13 15 58.7 +1.5
COLA pmax pmax
comp=Z,16nm,2.3s
COLA **College** 53.04 31 P P 13 15 56.9 -0.3
baz=270
CCB **Clear Creek Bu** 53.06 31 P 13 15 58.4 +1.0
CCB IAmb IAmb 13 16 02.6
comp=Z,10nm,1.5s
WAT6 **Susitna Watana** 53.14 34 P P 13 15 57.9 -0.4
baz=272
WRA **Warramunga Arr** 53.15 186 P P 13 15 55.8 -2.8
comp=Z,1.7nm,0.6s,baz=5.0,slow=7.6,SNR=23
comp=Z,1.7nm,0.6s
WRA **Warramunga Arr** 53.15 186 *e*P P 13 15 54.1 -4.5
WRA pmax pmax
comp=Z,2.0nm,0.6s
M23K **Glacier View** 53.18 35 P P 13 15 58.6 +0.3
baz=273
G24K **Hadweenzic Riv** 53.20 28 P P 13 15 57.9 -0.5
baz=270
POKR **Poker Plat Res** 53.21 30 P P 13 15 58.1 -0.4
baz=271
DHY **Denali Highway** 53.29 33 P P 13 15 59.5 +0.2
baz=272
SCM **Sheep Creek Mo** 53.37 34 P P 13 16 00.0 +0.2
baz=273
HDA **Harding Lake** 53.44 31 IAmb IAmb 13 16 01.6
comp=Z,6.8nm,0.9s
HDA **Harding Lake** 53.44 31 P P 13 16 00.5 +0.3
baz=272,SNR=5.4
ILAR **Eielson Array** 53.45 31 P P 13 16 00.5 +0.1
comp=Z,2.8nm,0.8s,baz=273,slow=6.2,SNR=34
comp=Z,2.8nm,0.8s
P23K **Montague Islan** 53.45 37 P P 13 15 59.3 -1.0
baz=275
GLI **Glacier Island** 53.54 36 P P 13 16 00.3 -0.7
baz=274
D25K **Kavik River** 53.66 25 IAmb IAmb 13 16 03.8
comp=Z,6.5nm,0.8s
D25K **Kavik River** 53.66 25 P P 13 16 00.7 -1.2
baz=269
KK31 **Karatay Array** 53.83 302 P P 13 16 03.2 -0.2
KK31 **Karatay Array** 53.83 302 P P 13 16 03.2 -0.2
KK31 pmax pmax
comp=Z,7.0nm,1.4s
KKAR **Karatay Array** 53.83 302 P P 13 16 03.3 -0.1
KKAR **Karatay Array** 53.83 302 P P 13 16 03.3 -0.1
M24K **Tolsona, Glenn** 53.89 34 P P 13 16 01.5 -2.2
baz=274
F25K **Christian Rive** 53.91 27 IAmb IAmb 13 16 06.7
comp=Z,6.5nm,1.0s
F25K **Christian Rive** 53.91 27 P P 13 16 02.1 -1.6
baz=270
E25K **Arctic Village** 53.94 27 IAmb IAmb 13 16 06.7
comp=Z,5.3nm,0.9s
E25K **Arctic Village** 53.94 27 P P 13 16 03.1 -0.8
baz=270
K24K **Donnelly Dome** 53.97 32 P P 13 16 03.6 -0.6
baz=273
PRP **Porcupine Dome** 54.01 30 P P 13 16 04.0 -0.5
baz=272
KLU **Klutina** 54.06 35 P P 13 16 04.3 -0.6
baz=275
J25K **Salcha River,** 54.11 31 P P 13 16 04.6 -0.6
baz=273
PAX **Paxson** 54.16 33 P P 13 16 05.6 -0.1
baz=274
C26K **Camden Bay** 54.19 24 P P 13 16 05.1 -0.5
baz=270
EYAK **Cordova Ski Ar** 54.23 36 P P 13 16 06.3 +0.3
baz=276
BMAR **Burnt Mountain** 54.33 27 P P 13 16 08.3 +1.5
RIDG **Independent Ri** 54.39 32 P P 13 16 07.0 -0.3
baz=274
F26K **Sheenjek River** 54.49 27 IAmb IAmb 13 16 10.8
comp=Z,5.7nm,0.8s
F26K **Sheenjek River** 54.49 27 P P 13 16 07.6 -0.3
baz=272
C27K **Jago River** 54.60 25 IAmb IAmb 13 16 11.1
comp=Z,6.0nm,0.8s
C27K **Jago River** 54.60 25 P P 13 16 08.8 +0.1
baz=271
G26K **Porcupine Rive** 54.65 28 IAmb IAmb 13 16 17.1
comp=Z,8.4nm,1.3s
G26K **Porcupine Rive** 54.65 28 P P 13 16 08.9 -0.1
baz=273
N25K **Chitina, Valde** 54.68 35 P P 13 16 09.5 0.0
baz=276
BMRM **Bremner River** 54.74 35 P P 13 16 09.6 -0.3
baz=276
SCRK **Sand Creek** 54.75 32 IAmb IAmb 13 16 11.8
comp=Z,4.9nm,0.9s
SCRK **Sand Creek** 54.75 32 P P 13 16 09.8 -0.1
baz=275,SNR=5.4
KAIM **Kayak Island** 54.95 37 P P 13 16 11.5 +0.2
baz=277
MENT **Mentasta** 54.96 33 IAmb IAmb 13 16 13.7
comp=Z,5.7nm,0.9s
L26K **Log Cabin Wild** 55.12 33 IAmb IAmb 13 16 14.9
comp=Z,6.0nm,0.8s
L26K **Log Cabin Wild** 55.12 33 P P 13 16 12.4 -0.1
baz=276
M26K **Nabesna, AK** 55.35 34 IAmb IAmb 13 16 17.2
comp=Z,9.8nm,1.4s
M26K **Nabesna, AK** 55.35 34 P P 13 16 13.5 -0.7
baz=277
E27K **Coleen River** 55.43 26 P P 13 16 14.3 -0.4
baz=274
MCARA **McCarthy VSAT** 55.46 35 P P 13 16 14.9 0.0
baz=277
G27K **Doyon Strip** 55.50 28 P P 13 16 15.4 +0.2
baz=275
CRQE **Cirque** 55.50 36 P P 13 16 15.9 +0.4
baz=278
D27M **Malcolm River** 55.59 25 P P 13 16 16.2 +0.4
baz=274
H27K **Steamboat Moun** 55.60 29 IAmb IAmb 13 16 22.4
comp=Z,10nm,1.5s
H27K **Steamboat Moun** 55.60 29 P P 13 16 16.2 +0.3
baz=277
I27K **Kandik River** 55.62 30 P P 13 16 16.3 +0.2
baz=276
L27K **Beaver Creek,** 55.81 33 IAmb IAmb 13 16 20.2
comp=Z,5.8nm,1.1s
L27K **Beaver Creek,** 55.81 33 P P 13 16 17.6 +0.2
baz=277,SNR=6.9
BCAR **Beaver Creek A** 55.83 33 P 13 16 19.2 +1.5
M27K **Edge Creek, AK** 55.87 34 IAmb IAmb 13 16 20.3
comp=Z,6.1nm,0.9s
M27K **Edge Creek, AK** 55.87 34 P P 13 16 17.3 -0.7
baz=278
CHGR **Chuyangaron** 56.03 297⇑ *e*P P 13 16 22.3 +2.7
CHGR pmax pmax
comp=Z,34nm,3.2s
F28M **Old Crow** 56.12 27 IAmb IAmb 13 16 22.7
comp=Z,11nm,1.5s
F28M **Old Crow** 56.12 27 P P 13 16 19.0 -0.6
baz=276
CTG **Chitna Glacier** 56.32 35 P P 13 16 20.5 -0.9
baz=279
BVCY **Beaver Creek** 56.33 33 P P 13 16 21.0 -0.3
baz=278
I28M **Miner Creek** 56.34 30 IAmb IAmb 13 16 23.5
comp=Z,5.0nm,0.8s
I28M **Miner Creek** 56.34 30 P P 13 16 20.8 -0.5
baz=277
D28M **Stokes Point** 56.37 25 P P 13 16 20.3 -1.0
baz=276
YUK3 **Moose Creek** 56.62 34 P P 13 16 22.6 -0.8
baz=279
DAWY **Dawson** 56.75 31 P P 13 16 23.8 -0.4
baz=278
E29M **Blow River** 56.78 26 P P 13 16 23.4 -0.8
baz=277
AS31 **Alice Springs** 56.88 186 P P 13 16 25.0 -0.5
ASAR **Alice Springs** 56.88 186 P P 13 16 23.1 -2.3
comp=Z,1.0nm,0.6s,baz=4.2,slow=7.3,SNR=21
comp=Z,1.0nm,0.6s
ASAR **Alice Springs** 56.88 186 P P 13 16 25.1 -0.4
ASAR **Alice Springs** 56.88 186 P P 13 16 25.1 -0.4
O28M **Mount Upton** 56.91 35 P P 13 16 24.6 -1.0
baz=280
PINM **Pinnacle** 57.00 36 P P 13 16 25.2 -0.8
baz=280
I29M **Ogilvie Camp,** 57.02 30 IAmb IAmb 13 16 28.2
comp=Z,7.5nm,0.9s
I29M **Ogilvie Camp,** 57.02 30 P P 13 16 25.1 -1.0
baz=279,SNR=7.3
YUK8 **Steele Glacier** 57.02 35 P P 13 16 25.2 -1.3
baz=280
J29N **Klondike Camp** 57.20 31 P P 13 16 26.5 -0.9
baz=279
M29M **Somme Creek** 57.43 33 IAmb IAmb 13 16 32.2
comp=Z,6.6nm,0.8s
M29M **Somme Creek** 57.43 33 P P 13 16 27.7 -1.4
baz=280
L29M **L29M** 57.46 32 P P 13 16 27.8 -1.5
baz=280
EPYK **Eagle Plains** 57.51 28 P P 13 16 28.4 -1.1
baz=279,SNR=9.7
YUK4 **Talbot Arm** 57.55 34 P P 13 16 30.0 -0.1
baz=281
K29M **Barlow Dome** 57.60 31 IAmb IAmb 13 16 33.1
comp=Z,5.6nm,0.8s
K29M **Barlow Dome** 57.60 31 P P 13 16 29.6 -0.8
baz=279
G30M **tAoh Zrai Nji** 57.61 28 IAmb IAmb 13 16 32.1
comp=Z,11nm,1.0s
G30M **tAoh Zrai Nji** 57.61 28 P P 13 16 29.7 -0.6
baz=279
F30M **Barrier River** 57.67 27 P P 13 16 30.4 -0.2
baz=279
YUK6 **Outpost Mounta** 57.76 35 P P 13 16 31.5 -0.1
baz=281
O29M **Mount Kennedy** 57.78 36 P P 13 16 31.8 +0.2
baz=282
I30M **Mount Dempster** 57.85 30 P P 13 16 31.9 -0.1
baz=280
J30M **Hart River** 57.98 30 P P 13 16 33.0 0.0
baz=281
M30M **Minto, Yukon** 58.17 33 IAmb IAmb 13 16 36.8
comp=Z,4.9nm,0.8s
M30M **Minto, Yukon** 58.17 33 P P 13 16 33.9 -0.3
baz=282
HYT **Haines Junctio** 58.19 35 IAmb IAmb 13 16 37.8
comp=Z,9.5nm,1.0s
HYT **Haines Junctio** 58.19 35 P P 13 16 33.7 -0.8
baz=282
N30M **Aishikik Lake** 58.26 34 P P 13 16 34.0 -0.9
baz=282
MAYO **Mayo, Yukon** 58.36 32 P P 13 16 34.0 -1.5
baz=282
ARTI **Arti** 58.37 320 *d i*P P 13 16 40.0 +4.4
ARTI 13 17 21.8
ARTI 13 18 40.7
ARTI S S 13 24 49.4 +12
ARTI pmax pmax
comp=Z,11nm,1.3s
G31M **Satah River** 58.38 28 IAmb IAmb 13 16 37.0
comp=Z,7.4nm,0.8s
G31M **Satah River** 58.38 28 P P 13 16 34.1 -1.4
baz=281
INK **Inuvik** 58.39 26 IAmb IAmb 13 16 37.0
comp=Z,4.6nm,0.8s
INK **Inuvik** 58.39 26 P P 13 16 34.5 -1.1
baz=281,SNR=5.5
F31M **Tsiigehtchic** 58.48 27 IAmb IAmb 13 16 44.1
comp=Z,13nm,1.4s
F31M **Tsiigehtchic** 58.48 27 P P 13 16 34.8 -1.4
baz=281,SNR=6.3
H31M **Peel River** 58.57 29 P P 13 16 34.9 -2.0
baz=282
P30M **Million Dollar** 58.61 36 P P 13 16 35.8 -1.5
baz=283
N31M **Braeburn, Yuko** 58.87 34 P P 13 16 38.1 -1.0
baz=283
O30N **Mendenhall** 58.88 35 P P 13 16 38.9 -0.3
baz=283
ABKAR **Akbulak array** 59.30 311 P 13 16 41.7 -0.5
M31M **Drury Creek, Y** 59.34 33 IAmb IAmb 13 16 44.9
comp=Z,5.4nm,0.9s
M31M **Drury Creek, Y** 59.34 33 P P 13 16 42.1 -0.2
baz=284
WHY **Whitehorse** 59.48 35 P P 13 16 43.2 -0.3
baz=284
S31K **Pelican** 59.49 38 P P 13 16 41.8 -1.6
baz=285
SKAG **Skagway** 59.57 36 P P 13 16 43.3 -0.6
baz=285
AKTO **Aktyubinsk** 60.15 313 P P 13 16 47.7 -0.4
comp=Z,0.7nm,0.3s,baz=74,slow=7.3,SNR=3.6
comp=Z,0.7nm,0.3s
SIT **Sitka** 60.20 39 P P 13 16 47.7 -0.6
baz=286
N32M **Quiet Lake** 60.21 34 P P 13 16 47.0 -1.4
baz=286
R32K **Eaglecrest** 60.28 37 P P 13 16 48.4 -0.5
baz=286
A36M **Sachs Harbour** 60.28 21 P P 13 16 47.7 -0.9
baz=286,SNR=8.5
P32M **Atlin** 60.33 36 P P 13 16 48.3 -0.9
baz=286
S32K **Killisnoo** 60.48 38 P P 13 16 49.3 -0.8
baz=286
P33M **Teslin, Yukon** 60.59 35 P P 13 16 49.6 -1.4
baz=286
Q32M **Nakina River** 61.22 36 P P 13 16 53.9 -1.6
baz=287
C36M **Paulatuk** 61.45 24 P P 13 16 55.4 -1.2
baz=289
U33K **Whale Pass** 61.64 39 P P 13 16 56.2 -1.9
baz=288
R33M **Jennings River** 61.72 36 P P 13 16 57.0 -1.8
baz=288
CRAG **Craig** 61.84 40 P P 13 16 57.2 -2.2
baz=288
WRAK **Wrangell Islan** 61.96 39 P P 13 16 59.1 -1.1
baz=289
S34M **Telegraph Cree** 62.11 37 P P 13 17 00.4 -0.8
baz=289
DLBC **Dease Lake** 62.49 36 P P 13 17 01.8 -2.1
baz=289
WTLY **Watson Lake, Y** 62.53 34 P P 13 17 02.5 -1.6
baz=289
V35K **Ketchikan** 62.70 40 P P 13 17 03.3 -1.9
baz=290
T35M **Bob Quinn** 62.87 38 P P 13 17 05.8 -0.6
baz=290
KOTAN **Kotaneelee Air** 64.74 33 P P 13 17 16.9 -1.7
baz=293
STKA **Stephens Creek** 64.82 178 P P 13 17 16.6 -2.7
comp=Z,4.9nm,0.9s,baz=341,slow=11,SNR=3.7
comp=Z,4.9nm,0.9s
STKA **Stephens Creek** 64.82 178 *e*P P 13 17 17.3 -2.0
STKA pmax pmax
comp=Z,5.0nm,0.9s
BBB **Bella Bella** 65.79 42 LR LR 13 45 26.8
comp=Z,17nm,18.0s,baz=197,slow=35
RES **Resolute Bay** 66.60 14 LR LR 13 51 51.2
comp=Z,23nm,18.1s,baz=20,slow=41
RES **Resolute Bay** 66.60 14 P P 13 17 30.4 +0.4
RES pmax pmax
comp=Z,8.0nm,0.9s
RES **Resolute Bay** 66.60 14 P P 13 17 30.7 +0.4
YKA **Yellowknife Ar** 67.79 29 P P 13 17 38.0 -0.1
comp=Z,1.3nm,0.9s,baz=300,slow=6.9,SNR=16
comp=Z,1.3nm,0.9s
YKA **Yellowknife Ar** 67.79 29 *e*P P 13 17 37.8 -0.3
YKA pmax pmax
comp=Z,1.0nm,0.9s
AKT **Akhty** 70.17 307 *e*P P 13 17 53.6 +0.2
AKT pmax pmax
comp=Z,10.0nm,0.6s
OBN **Obninsk** 70.25 324 *e*P P 13 17 54.5 +1.0
OBN *e* 13 20 28.0
OBN pmax pmax
comp=Z,6.0nm,1.1s
FINES **FINESS Array B** 71.47 332 P P 13 17 59.4 -1.4
comp=Z,4.1nm,0.8s,baz=349,slow=3.9,SNR=5.9
comp=Z,4.1nm,0.8s
FINES **FINESS Array B** 71.47 332 P P 13 18 00.9 +0.1
FINES **FINESS Array B** 71.47 332 *e*P P 13 18 01.1 +0.3
FINES pmax pmax
comp=Z,4.0nm,0.8s
KBZ **Khabaz** 72.26 311 P P 13 18 05.7 -0.2
comp=Z,2.0nm,0.9s,baz=45,slow=0.5,SNR=6.0
comp=Z,2.0nm,0.9s
KBZ **Khabaz** 72.26 311 *e*P P 13 18 07.1 +1.2
KBZ pmax pmax
comp=Z,3.0nm,0.9s
KIV **Kislovodsk** 72.28 311 *e*P P 13 18 06.2 0.0
KIV pmax pmax
comp=Z,6.0nm,1.0s
SHA1 **Shidzhatmaz** 72.41 311⇓ *e*P P 13 18 08.5 +1.4
MXC **Moxie City** 72.88 45 IAmb IAmb 13 18 13.2
comp=Z,4.0nm,0.7s
VSU **Vasula** 72.96 330⇑ *e*P P 13 18 08.0 -1.7
VSU pmax pmax
comp=Z,76nm,1.9s
EDM **Edmonton** 73.20 37 IAmb IAmb 13 18 13.0
comp=Z,9.2nm,1.1s
ILON **Igloolik, Nuna** 73.26 14 IAmb IAmb 13 18 17.3
comp=Z,6.8nm,1.1s
BLKN **Baker Lake** 73.41 22 IAmb IAmb 13 18 12.9
comp=Z,6.3nm,0.9s
C09A **Chrisman Ranch** 73.44 43 IAmb IAmb 13 18 14.4
comp=Z,4.8nm,0.6s
D08A **Wollman Farm,** 73.45 44 IAmb IAmb 13 18 14.4
comp=Z,3.8nm,0.7s
E08A **Dider Farm, El** 73.66 45 IAmb IAmb 13 18 15.8
comp=Z,3.7nm,0.7s
NEW **Newport** 73.85 43 LR LR 13 47 41.3
comp=Z,12nm,20.8s,baz=345,slow=33
PINE **Pine Mountain** 73.90 48 P 13 18 16.3 +0.5
PINE IAmb IAmb 13 18 18.3
comp=Z,8.5nm,0.8s
E09A **Wood Farm, Sta** 74.18 45 P P 13 18 18.2 +1.0
E09A IAmb IAmb 13 18 18.9
comp=Z,5.1nm,0.8s
MNK **Minsk** 74.80 326 *i*P P 13 18 21.7 +1.1
comp=E,30nm,0.8s
MNK *i*P P 13 18 21.7 +1.1
comp=N,21nm,0.7s
MNK *i*P P 13 18 21.7 +1.1
comp=Z,16nm,0.7s,baz=54
MNK *i* PP PP 13 21 10.5 +3.2
MNK *i* PPP PPP 13 22 58.0
MNK *i* S S 13 28 01.2 +4.5
MNK *i* SS SS 13 32 51.9 +8.4
MNK *i* SSS SSS 13 36 14.2
MNK *i* LQ LQ 13 47 11.3

MNK *i* LRM MLR 13 54 41.0
comp=N,127nm,17.5s
MNK *i* LRM MLR 13 54 60.0
comp=Z,141nm,18.5s
MNK *i* LRM MLR 13 55 05.7
comp=E,97nm,15.2s
MNK Minsk 74.80 326 *i* P **P** **13 18 21.6 +1.1**
MNK *i* 13 21 10.5
MNK *i* PPP PPP 13 22 57.9
MNK *i* S **S** **13 28 01.1 +4.5**
MNK *i* SS **SS** **13 32 51.9 +8.4**
MNK pmax pmax
comp=N,21nm,0.7s
MNK pmax pmax
comp=Z,16nm,0.7s
MNK pmax pmax
comp=E,30nm,0.8s
MNK MLR MLR
comp=N,127nm,17.0s
MNK MLR MLR
comp=Z,141nm,19.0s
MNK MLR MLR
comp=E,97nm,15.0s
AKASG Malin Array Be 76.38 322 P **P** **13 18 28.7 -1.0**
comp=E,0.2nm,0.3s,baz=45,slow=5.6,SNR=4.9
comp=E,0.2nm,0.3s
AKASG Malin Array Be 76.38 322 *i* P **P** **13 18 29.6 -0.1**
HFS Hagfors 76.91 335 P **P** **13 18 30.8 -1.7**
comp=E,2.7nm,0.8s,baz=65,slow=6.8,SNR=4.2
comp=E,2.7nm,0.8s
NB2 NORSAR Subarra 77.09 337 P **P** **13 18 32.7 -0.9**
comp=Z,1.7nm,0.7s,baz=44,slow=5.9
NOA NORSAR Array B 77.09 337 P **P** **13 18 32.5 -1.1**
comp=Z,2.4nm,0.8s,baz=43,slow=5.8,SNR=6.3
NOA LR LR 13 55 08.5
comp=Z,46nm,19.5s,baz=350,slow=38
comp=Z,2.4nm,0.8s
NOA NORSAR Array B 77.09 337 *eP* **P** **13 18 32.0 -1.6**
NOA pmax pmax
comp=Z,2.0nm,0.8s
FFC Flin Flon 77.66 31 **P** **13 18 36.9 +0.1**
FFC IAmb IAmb 13 18 38.1
comp=Z,5.5nm,1.1s
FFC Flin Flon 77.66 31 P **P** **13 18 36.9 +0.1**
FFC pmax pmax
comp=Z,6.0nm,1.1s
FCC Fort Churchill 78.01 25 P **P** **13 18 38.6 -0.1**
FCC IAmb IAmb 13 18 45.7
comp=Z,6.6nm,1.2s
FCC Fort Churchill 78.01 25 P **P** **13 18 38.6 -0.1**
FCC pmax pmax
comp=Z,7.0nm,1.2s
NVAR Mina Array Bea 78.43 52 P **P** **13 18 42.6 +0.9**
comp=Z,2.3nm,0.7s,baz=295,slow=5.4,SNR=22
NVAR LR LR 13 46 44.3
comp=Z,32nm,20.9s,baz=298,slow=31
comp=Z,2.3nm,0.7s
SFJD Kangerlussuaq 79.74 4 LR LR 13 57 22.8
comp=Z,62nm,18.0s,baz=16,slow=38
H17A Grant Village 79.78 43 IAmb IAmb 13 18 52.5
comp=Z,5.1nm,0.7s
BR131 Keskin Array S 80.25 311⇑ *eP* **P** **13 18 49.9 -1.7**
BRTR Keskin Array B 80.25 311 P **P** **13 18 50.5 -1.1**
comp=Z,2.5nm,1.1s,baz=127,slow=3.3,SNR=6.3
comp=Z,2.5nm,1.1s
BRTR Keskin Array B 80.25 311 *eP* **P** **13 18 51.8 +0.2**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
TPO Tropico Hills 80.44 55 IAmb IAmb 13 18 54.2
comp=Z,8.8nm,0.7s
FURC Furnace Creek, 80.47 53 IAmb IAmb 13 18 54.1
comp=Z,6.3nm,0.8s
S11A Rachel 80.54 51 IAmb IAmb 13 19 00.2
comp=Z,4.5nm,0.8s
TPNV Topopah Spring 80.60 52 IAmb IAmb 13 18 54.9
comp=Z,6.7nm,0.8s
QSM Queen of Sheba 80.75 53 IAmb IAmb 13 18 55.4
comp=Z,7.8nm,0.7s
GWY Greenwater Val 80.76 53 IAmb IAmb 13 18 55.6
comp=Z,6.4nm,0.8s
HWUT Hardware Ranch 80.86 46 IAmb IAmb 13 18 56.7
comp=Z,5.3nm,0.9s
PDAR Pinedale Array 81.35 44 P **P** **13 18 57.5 0.0**
comp=Z,1.1nm,0.6s,baz=262,slow=2.0,SNR=17
comp=Z,1.1nm,0.6s
PDAR Pinedale Array 81.35 44 P **P** **13 18 57.8 +0.3**
TCRU Three Creeks R 82.09 49 IAmb IAmb 13 19 04.1
comp=Z,5.2nm,0.7s
PFO Pinyon Flats O 82.36 55 LR LR 13 46 43.1
comp=Z,53nm,20.7s,baz=306,slow=29
LCMT Little Creek M 82.53 50 IAmb IAmb 13 19 05.3
comp=Z,4.5nm,0.8s
MTPU Mount Pierson 82.60 49 IAmb IAmb 13 19 06.4
comp=Z,3.7nm,0.7s
Q16A Castle Valley 82.71 48 IAmb IAmb 13 19 08.3
comp=Z,4.5nm,0.6s
P18A Preston Nutter 82.85 47 IAmb IAmb 13 19 07.9
comp=Z,4.9nm,0.6s
K22A Casper 83.17 43 IAmb IAmb 13 19 07.7
comp=Z,3.5nm,0.7s
ULM Lac du Bonnet 83.44 32 *eP* **P** **13 19 07.9 -0.1**
ULM pmax pmax
comp=Z,1.0nm,0.4s
U15A North Rim 83.49 51 IAmb IAmb 13 19 11.6
comp=Z,4.2nm,0.9s
PV22 Blue Mesa, Par 84.42 47 IAmb IAmb 13 19 19.7
comp=Z,4.9nm,0.9s
PV04 Paradox Valley 84.43 47 IAmb IAmb 13 19 15.1
comp=Z,5.6nm,0.8s
Y14A Wickenburg 84.50 53 IAmb IAmb 13 19 14.9
comp=Z,3.9nm,0.8s
KHC Kasperske Hory 84.97 328⇓ *iP* **P** **13 19 16.2 +0.3**
KHC pmax pmax
comp=Z,8.0nm,1.8s
DAVOX Davos/Dischmat 88.38 328 LR LR 14 01 04.2
comp=Z,53nm,18.0s,baz=76,slow=37
PH02 Texas Public H 90.62 46 IAmb IAmb 13 20 14.6
comp=Z,56nm,0.4s
TX31 Lajitas Ar. Si 93.58 51 IAmb IAmb 13 19 58.3
comp=Z,3.6nm,0.8s
TXAR Lajitas Array 93.58 51 P **P** **13 19 57.7 +0.5**
comp=Z,3.2nm,0.7s,baz=293,slow=3.3,SNR=46
comp=Z,3.2nm,0.7s
LPAZ La Paz 149.77 63 PKPbc **PKPbc** **13 26 32.0 +0.1**
comp=Z,4.5nm,0.9s,baz=335,slow=4.0,SNR=11
LPAZ La Paz 149.77 63 **PKPbc** **13 26 32.3 +0.4**
LPAZ La Paz 149.77 63 PKP2 **PKPbc** **13 26 32.3 +0.4**
SIV San Ignacio 154.57 52 PKP **PKPdf** **13 26 33.7 +0.2**
comp=Z,0.3nm,0.3s,baz=294,slow=4.2,SNR=1.7
SIV PKPbc **PKPbc** **13 26 40.7 -1.3**
comp=Z,0.9nm,0.7s,baz=240,slow=5.2,SNR=4.8

IDC ***13*** *13:10:01.0±0.6, 16°.36S×67°.10E, h0km, mb4.3/18, mbtmp4.3/19, ML3.8/1, MS4.0/56, Error ellipse: s-maj=19.9km s-min=16.8km az=60.0*
NEIC ***13*** *13:10:03.3±1.2, 16°.36S±0°.10×67°.18E±0°.09, h10km±1km, mb4.8/59, Error ellipse: s-maj=18.0km s-min=14.0km az=145.0*
GCMT ***13*** *13:10:05.3±0.2, 16°.20S±0°.01×66°.97E±0°.01, h16km±1km, MW5.0/120, Moment Tensor Solution. s45,c52; s120,c184; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.58±.11; Mθθ-3.61±.09; Mϕϕ4.19±.11; Mrθ-0.69±.30; Mθϕ1.32±.09; Mϕr-1.17±.33; Best double couple: Mo4.30800×10¹⁶ NP1:ϕs144.00000°, δ74.00000°, λ177.00000°. NP2:ϕs235.00000°, δ87.00000°, λ16.00000°. Principal axes: T 4.7120, Plg14.0000°, Azm100.0000°; N -0.8040, Plg74.0000°, Azm246.0000°; P -3.9040, Plg9.0000°, Azm8.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 13:10:03.3±0.4, 16°.42S±0°.08×67°.18E±0°.06, h13km, n181, σ1s18/126, mb4.7/61, MS4.0/58, 1C, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ROCAM	**Rodrigues Isla**	**4.91**	**227**	Pn	**Pn**	**13 11 17.8**	**+1.0**
H08S1	**Diego Carcia H**	**10.14**	**31**	T	T	13 22 35.0	
	baz=211,slow=75,SNR=2147						
H08S2	**Diego Garcia H**	**10.15**	**31**	T	T	13 22 37.1	
	baz=211,slow=75,SNR=1309						
H08S3	**Diego Garcia H**	**10.16**	**31**	T	T	13 22 38.6	
	baz=211,slow=75,SNR=2714						
MSEY	**Mahe Island**	**16.38**	**314**	P	**Pn**	**13 13 53.5**	**+0.3**
MSEY				IAmb	IAmb	13 13 54.3	
	comp=Z,137nm,1.6s						
ABPO	**Ambohimpanom**	**19.18**	**259**	P	**Pn**	**13 14 27.8**	**-0.1**
ABPO				IAmb	IAmb	13 14 29.8	
	comp=Z,62nm,1.3s						
OPO	**Ambohidratompo**	**19.19**	**261**	P	**P**	**13 14 26.1**	**-1.0**
	baz=70,slow=8.4,SNR=5.2						
	comp=Z,6.9nm,0.8s						
VOI	**Vohitsoka**	**20.01**	**251**	P	**P**	**13 14 35.6**	**-0.4**
VOI				IAmb	IAmb	13 14 36.4	
	comp=Z,60nm,1.7s						
PALK	**Pallekele**	**27.08**	**31**	LR	LR	13 24 29.8	
	comp=Z,242nm,18.8s,baz=210,slow=32						
PALK	**Pallekele**	**27.08**	**31**	P	**P**	**13 15 44.5**	**-1.5**
KIBK	**Kibwezi**	**31.90**	**293**	P	**P**	**13 16 28.3**	**-0.5**
KIBK				IAmb	IAmb	13 17 37.6	
	comp=Z,17nm,1.8s						
H04N2	**CROZET ISLANDS**	**32.31**	**200**	T	T	13 50 39.5	
	baz=29,slow=75,SNR=640						
H04N1	**CROZET ISLANDS**	**32.31**	**200**	T	T	13 50 40.1	
	baz=29,slow=75,SNR=496						
H04N3	**CROZET ISLANDS**	**32.33**	**200**	T	T	13 50 38.1	
	baz=29,slow=75,SNR=442						
KMBO	**Kilima Mbogo**	**33.17**	**294**	LR	LR	13 26 48.9	
	comp=Z,374nm,21.8s,baz=100,slow=30						
GSI	**Gunungsitoli**	**34.79**	**62**		**P**	**13 16 54.4**	**+0.4**
GSI				IAmb	IAmb	13 17 02.0	
	comp=Z,24nm,1.1s						
ATD	**Arta Tunnel**	**36.75**	**318**	LR	LR	13 30 38.2	
	comp=Z,18nm,19.1s,baz=136,slow=34						
LODK	**Lodwar**	**37.12**	**299**	P	**P**	**13 17 13.5**	**-0.5**
LSZ	**Lusaka**	**37.49**	**266**	LR	LR	13 30 52.3	
	comp=Z,539nm,20.6s,baz=126,slow=33						
LSZ	**Lusaka**	**37.49**	**266**	P	**P**	**13 17 16.4**	**-0.8**
LSZ				IAmb	IAmb	13 17 19.6	
	comp=Z,39nm,1.9s						
FURI	**Furi**	**37.79**	**310**	LR	LR	13 31 14.4	
	comp=Z,226nm,19.9s,baz=140,slow=34						
MBAR	**Mbarara**	**39.20**	**290**	LR	LR	13 30 56.4	
	comp=Z,672nm,20.5s,baz=110,slow=32						
LBTB	**Lobatse**	**39.69**	**251**	LR	LR	13 31 45.2	
	comp=Z,411nm,18.6s,baz=92,slow=33						
KSANE	**Kasane**	**40.12**	**262**	P	**P**	**13 17 38.7**	**-0.6**
KSANE				IAmb	IAmb	13 17 41.9	
	comp=Z,38nm,1.7s						
BOSA	**Boshof**	**40.39**	**245**	P	**P**	**13 17 43.2**	**+1.8**
	comp=Z,3.1nm,0.9s,baz=78,slow=3.0,SNR=4.8						
BOSA				LR	LR	13 30 26.9	
	comp=Z,227nm,19.7s,baz=87,slow=30						
BOSA	**Boshof**	**40.39**	**245**	P	**P**	**13 17 41.8**	**+0.4**
BOSA				IAmb	IAmb	13 18 28.1	
	comp=Z,28nm,1.6s						
MYKOM	**Kota Tinggi**	**40.48**	**67**		**P**	**13 17 42.3**	**+0.1**
MYKOM				IAmb	IAmb	13 17 52.3	
	comp=Z,13nm,0.8s						
LEM	**Lembang**	**40.67**	**81**	LR	LR	13 30 49.7	
	comp=Z,390nm,21.9s,baz=219,slow=31						
UOSS	**Minazif**	**42.49**	**345**	P	**P**	**13 17 57.7**	**-0.7**
GRTLG	**Ghanzi**	**43.65**	**256**	P	**P**	**13 18 08.4**	**+0.3**
GRTLG				IAmb	IAmb	13 19 13.9	
	comp=Z,17nm,1.3s						
SUR	**Sutherland**	**44.76**	**240**	LR	LR	13 33 07.5	
	comp=Z,183nm,18.6s,baz=86,slow=31						
BRDH	**Bariadhala**	**45.65**	**32**	LR	LR	13 37 47.4	
	comp=Z,310nm,18.4s,baz=178,slow=36						
CM31	**Chiang Mai Arr**	**46.68**	**43**	P	**P**	**13 18 31.8**	**-0.2**
CM31				IAmb	IAmb	13 18 39.7	
	comp=Z,7.5nm,1.0s						
CMAR	**Chiang Mai Arr**	**46.68**	**43**	P	**P**	**13 18 32.4**	**+0.3**
	comp=Z,2.1nm,0.9s,baz=231,slow=8.3,SNR=19						
	comp=Z,2.1nm,0.9s						
CMAR	**Chiang Mai Arr**	**46.68**	**43**		**P**	**13 18 31.9**	**-0.2**
TSUM	**Tsumeb**	**47.17**	**259**	LR	LR	13 36 08.4	
	comp=Z,288nm,20.9s,baz=150,slow=33						
NWAO	**Narrogin (SRO)**	**47.91**	**120**	LR	LR	13 34 45.9	
	comp=Z,315nm,19.5s,baz=271,slow=31						
EVN	**Everest**	**48.05**	**24**		**P**	**13 18 42.7**	**-0.5**
EVN				IAmb	IAmb	13 18 58.8	
	comp=Z,13nm,1.0s						
SHL	**Shillong**	**48.17**	**30**		**P**	**13 18 43.6**	**-0.1**
SBUM	**Sibu**	**48.27**	**71**		**P**	**13 18 44.8**	**+0.2**
SBUM				IAmb	IAmb	13 18 46.9	
	comp=Z,12nm,1.2s						
PSA00	**Pilbara Seismi**	**49.88**	**105**		**P**	**13 18 54.7**	**-2.1**
PSA00				IAmb	IAmb	13 18 59.1	
	comp=Z,17nm,1.3s						
PSA00	**Pilbara Seismi**	**49.88**	**105**	P	**P**	**13 18 54.9**	**-1.9**
PSA00				IAmb	IAmb	13 19 05.5	
	comp=Z,28nm,1.2s						
KBL	**Kabul**	**50.71**	**2**	P	**P**	**13 19 03.1**	**+0.1**
MAW	**Mawson**	**51.22**	**182**	P	**P**	**13 19 07.0**	**+0.7**
	comp=Z,7.3nm,1.1s,baz=341,slow=7.4,SNR=4.8						
MAW				LR	LR	13 35 16.1	
	comp=Z,173nm,21.6s,baz=9.0,slow=30						
	comp=Z,7.3nm,1.1s						
MAW	**Mawson**	**51.22**	**182**	P	**P**	**13 19 06.9**	**+0.7**
LSA	**Lhasa**	**51.36**	**27**	P	**P**	**13 19 08.2**	**-0.1**
LSA	**Lhasa**	**51.36**	**27**	P	**P**	**13 19 06.0**	**-2.3**
KAPI	**Kappang**	**52.74**	**84**	LR	LR	13 38 22.1	
	comp=Z,252nm,21.6s,baz=244,slow=32						
KAPI	**Kappang**	**52.74**	**84**	P	**P**	**13 19 17.6**	**-0.7**
QIZ	**Qiongzhong**	**54.79**	**52**	P	**P**	**13 19 34.5**	**+1.2**
QIZ				S	**S**	**13 27 18.0**	**+3.9**
QIZ				L	L		
	comp=Z,330nm,17.3s						
QIZ				L	L		
	comp=Z,180nm,16.3s						
BATI	**Baumata**	**55.17**	**91**	LR	LR	13 39 32.3	
	comp=Z,148nm,21.5s,baz=249,slow=32						
GAR	**Garm**	**55.21**	**3**		**P**	**13 19 35.8**	**-0.3**
GAR				IAmb	IAmb	13 19 38.3	
	comp=Z,13nm,1.1s						
EIL	**Elat**	**55.38**	**326**	LR	LR	13 39 35.9	
	comp=Z,219nm,21.6s,baz=225,slow=32						
FITZ	**Fitzroy Crossi**	**55.65**	**101**	LR	LR	13 40 00.1	
	comp=Z,415nm,21.0s,baz=250,slow=32						
KSH2	**Kashi**	**55.83**	**8**	P	**P**	**13 19 41.6**	**+1.0**
KSH2				pmax	pmax		
	comp=Z,11nm,1.0s						
SOEI	**Soe**	**55.85**	**91**		**P**	**13 19 41.0**	**-0.2**
ASF	**Jabal al Asfar**	**56.36**	**329**	LR	LR	13 41 22.3	
	comp=Z,129nm,20.0s,baz=165,slow=33						
MMAI	**Mount Meron Ar**	**57.78**	**328**	LR	LR	13 41 39.3	
	comp=Z,98nm,20.5s,baz=148,slow=33						
NRN	**Naryn**	**58.14**	**8**	P	**P**	**13 19 56.1**	**-1.0**
IUG	**Iuzhnay**	**58.34**	**2**	*eP*	**P**	**13 19 59.2**	**+1.1**
	comp=Z,7.6nm,0.8s						
WUS	**Wushi**	**58.41**	**11**	P	**P**	**13 19 58.1**	**-0.7**
WUS				IAmb	IAmb	13 20 58.7	
	comp=Z,8.4nm,1.3s						
GOMU	**GeErMu**	**58.50**	**26**	P	**P**	**13 20 00.9**	**+1.1**
GOMU				pmax	pmax		
	comp=Z,3.0nm,1.1s						
DZA	**Taraz**	**59.14**	**4**	*eP*	**P**	**13 20 05.0**	**+1.3**
	comp=Z,6.4nm,0.6s						
AAK	**Ala-Archa**	**59.15**	**6**	LR	LR	13 44 11.1	
	comp=Z,167nm,19.2s,baz=210,slow=35						
AAK	**Ala-Archa**	**59.15**	**6**	P	**P**	**13 20 03.4**	**-0.6**
KK31	**Karatay Array**	**59.31**	**3**	P	**P**	**13 20 04.2**	**-0.6**
KKAR	**Karatay Array**	**59.31**	**3**	P	**P**	**13 20 04.0**	**-0.9**
GURO	**Guroymak-BITLI**	**59.55**	**337**	P	**P**	**13 20 06.3**	**-0.4**
GURO				IAmb	IAmb	13 20 15.2	
	comp=Z,8.6nm,0.8s						
EDA	**Edea**	**59.81**	**284**		**P**	**13 20 07.8**	**-1.1**
EDA				IAmb	IAmb	13 20 15.3	
	comp=Z,12nm,1.0s						
TNSS	**Tian-Shan**	**59.84**	**8**	*eP*	**P**	**13 20 10.1**	**+1.1**
MDOK	**Medeo**	**59.98**	**8**	*eP*	**P**	**13 20 10.7**	**+1.1**
AAA	**Alma-Ata**	**60.01**	**8**	*eP*	**P**	**13 20 11.1**	**+1.3**
GNI	**Garni**	**60.04**	**340**	P	**P**	**13 20 10.9**	**+0.8**
	comp=Z,24nm,1.1s						
SATY	**Saty**	**60.08**	**9**	*eP*	**P**	**13 20 11.3**	**+1.0**
	comp=Z,7.5nm,0.9s						
UZB	**Uzynbulak**	**60.27**	**10**	*eP*	**P**	**13 20 12.4**	**+0.9**
SHLS	**Shalkode**	**60.35**	**10**	*eP*	**P**	**13 20 13.9**	**+1.8**
	comp=Z,11nm,1.3s						
KPKS	**Kokpek**	**60.52**	**10**	*eP*	**P**	**13 20 14.5**	**+1.2**
TGY	**Tagaytay City**	**61.15**	**63**	LR	LR	13 46 25.6	
	comp=Z,53nm,18.3s,baz=267,slow=36						
ENH	**Enshi**	**61.77**	**41**		**P**	**13 20 21.3**	**-0.6**
ENH	**Enshi**	**61.77**	**41**		**P**	**13 20 21.2**	**-0.6**
ENH				IAmb	IAmb	13 20 29.7	
	comp=Z,12nm,1.0s						
TDK	**Taldyqorghan**	**61.98**	**9**	*eP*	**P**	**13 20 24.1**	**+1.1**
DAV	**Davao City (W)**	**62.31**	**73**	LR	LR	13 45 42.0	
	comp=Z,106nm,20.8s,baz=298,slow=34						
ASAR	**Alice Springs**	**62.62**	**108**	P	**P**	**13 20 28.2**	**+0.3**
	comp=Z,5.4nm,0.9s,baz=266,slow=6.3,SNR=25						
ASAR				LR	LR	13 44 23.0	
	comp=Z,627nm,19.9s,baz=274,slow=33						
	comp=Z,5.4nm,0.9s						
ASAR	**Alice Springs**	**62.62**	**108**	P	**P**	**13 20 27.9**	**0.0**
AS31	**Alice Springs**	**62.62**	**108**		**P**	**13 20 27.5**	**-0.5**
LZH	**Lanzhou**	**62.69**	**33**	*eP*	P	13 20 35.6	+7.4
LZH				pP	pwP	13 20 41.1	+6.1
LZH				pmax	pmax		
	comp=Z,15nm,1.4s						
GTA2	**Gaotai**	**63.40**	**28**	*eP*	**P**	**13 20 32.8**	**+0.1**
GTA2				pmax	pmax		
	comp=Z,5.0nm,1.2s						
WRA	**Warramunga Arr**	**63.53**	**104**	P	**P**	**13 20 34.7**	**+0.7**
	comp=Z,8.6nm,1.0s,baz=265,slow=6.2,SNR=29						
	comp=Z,8.6nm,1.0s						
WRA	**Warramunga Arr**	**63.53**	**104**		**P**	**13 20 34.5**	**+0.6**
WRAB	**Tennant Creek**	**63.54**	**104**	P	**P**	**13 20 33.1**	**-0.9**
KBZ	**Khabaz**	**63.86**	**341**	P	**P**	**13 20 37.5**	**+2.1**
	comp=Z,3.0nm,0.9s,baz=158,slow=4.9,SNR=6.3						
KBZ				LR	LR	13 46 27.7	
	comp=Z,58nm,19.9s,baz=172,slow=34						
XAN	**Xi'an**	**64.02**	**38**⇑	P	P	13 20 42.3	+5.4
XAN				pmax	pmax		
	comp=Z,16nm,1.0s						
BRTR	**Keskin Array B**	**64.02**	**332**	P	**P**	**13 20 36.5**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=151,slow=7.9,SNR=9.6						
BRTR				LR	LR	13 47 03.5	
	comp=Z,87nm,19.2s,baz=94,slow=35						
	comp=Z,0.9nm,0.6s						
BRTR	**Keskin Array B**	**64.02**	**332**		**P**	**13 20 36.9**	**0.0**
BR106	**Keskin Array S**	**64.04**	**332**	P	**P**	**13 20 38.6**	**+1.6**
	comp=Z,57nmcomp=Z,6.3nm,1.1s						
MAKZ	**Makanchi**	**64.33**	**11**		**P**	**13 20 38.3**	**-0.3**
MAKZ				IAmb	IAmb	13 20 46.9	
	comp=Z,5.2nm,1.1s						
MK31	**Makanchi Array**	**64.38**	**11**	P	**P**	**13 20 38.4**	**-0.5**
MK31				IAmb	IAmb	13 20 45.8	
	comp=Z,11nm,1.6s						
MKAR	**Makanchi Array**	**64.38**	**11**	P	**P**	**13 20 38.4**	**-0.5**
	comp=Z,1.8nm,0.8s,baz=213,slow=7.0,SNR=20						
MKAR				LR	LR	13 46 37.9	
	comp=Z,104nm,21.8s,baz=158,slow=34						
	comp=Z,1.8nm,0.8s						
MKAR	**Makanchi Array**	**64.38**	**11**		**P**	**13 20 37.9**	**-1.0**
SIJI	**Sorong**	**64.94**	**83**	LR	LR	13 45 45.6	
	comp=Z,76nm,21.9s,baz=242,slow=33						
ZSN	**Zaisan**	**65.53**	**13**	*eP*	**P**	**13 20 47.1**	**+0.7**
ABKAR	**Akbulak array**	**65.70**	**355**		**P**	**13 20 46.4**	**-1.0**
AKTO	**Aktyubinsk**	**67.05**	**354**	P	**P**	**13 20 53.4**	**-2.6**
	comp=Z,1.7nm,0.3s,baz=160,slow=2.6,SNR=9.7						
AKTO				LR	LR	13 48 56.5	
	comp=Z,30nm,18.6s,baz=106,slow=35						
	comp=Z,1.7nm,0.3s						
KURBB	**Kurchatov Arra**	**67.50**	**8**	P	**P**	**13 20 58.0**	**-0.8**
	comp=Z,2.7nm,0.8s,baz=206,slow=6.8,SNR=25						
KURBB				LR	LR	13 48 50.0	
	comp=Z,84nm,20.3s,baz=174,slow=34						
	comp=Z,2.7nm,0.8s						
KURK	**Kurchatov**	**67.60**	**8**		**P**	**13 20 59.2**	**-0.3**
KURK				IAmb	IAmb	13 21 07.2	
	comp=Z,5.5nm,0.9s						
SNAA	**Sanae**	**68.26**	**199**	LR	LR	13 45 50.3	
	comp=Z,74nm,18.2s,baz=49,slow=32						
STKA	**Stephens Creek**	**68.47**	**118**	LR	LR	13 46 12.8	
	comp=Z,283nm,22.0s,baz=223,slow=32						
BVAR	**Borovoye Array**	**69.22**	**2**	P	**P**	**13 21 09.1**	**-0.5**
	comp=Z,3.1nm,0.8s,baz=163,slow=7.3,SNR=12						
BVAR				LR	LR	13 49 58.5	
	comp=Z,46nm,18.1s,baz=182,slow=35						
	comp=Z,3.1nm,0.8s						
BORK	**Borovoye**	**69.23**	**2**		P	**13 21 09.5**	**-0.2**
BORK				IAmb	IAmb	13 21 15.0	
	comp=Z,5.5nm,0.8s						
BTO2	**Baotou**	**69.32**	**33**	*eP*	**P**	**13 21 11.3**	**+0.6**
BTO2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BTO2				pmax	pmax		
	comp=Z,390nm,4.3s						
TIRR	**Tirgusor**	**70.14**	**332**	P	**P**	**13 21 16.8**	**+1.4**
	comp=Z,7.7nm,1.1s						
TORD	**Torodi Ar. Bea**	**71.07**	**290**	P	**P**	**13 21 19.9**	**-1.9**
	comp=Z,1.7nm,1.0s,baz=178,slow=2.4,SNR=6.3						
	comp=Z,1.7nm,1.0s						
TORD	**Torodi Ar. Bea**	**71.07**	**290**	P	**P**	**13 21 20.6**	**-1.2**
ZAA0	**Zalesovo Array**	**71.70**	**11**	IAmb	IAmb	13 21 31.4	
	comp=Z,21nm,1.6s						
ZALV	**Zalesovo Beam**	**71.70**	**11**	P	**P**	**13 21 24.1**	**-0.7**
	comp=Z,4.4nm,0.7s,baz=205,slow=6.6,SNR=18						
ZALV				LR	LR	13 53 01.4	
	comp=Z,56nm,18.2s,baz=208,slow=36						
	comp=Z,4.4nm,0.7s						
VRI	**Vrincioaia**	**71.98**	**332**	P	**P**	**13 21 28.0**	**+1.3**
	comp=Z,23nm,1.2s						
MLR	**Muntele Rosu**	**72.06**	**331**	LR	LR	13 52 20.2	
	comp=Z,75nm,19.1s,baz=100,slow=35						
VOIR		**72.45**	**330**	P	**P**	**13 21 30.8**	**+1.3**
	comp=Z,7.6nm,0.9s						
ARTI	**Arti**	**72.91**	**355**	P	**P**	**13 21 31.6**	**-0.3**
	comp=Z,3.1nm,0.7s,baz=202,slow=5.4,SNR=4.2						
	comp=Z,3.1nm,0.7s						
ARTI	**Arti**	**72.91**	**355**	P	**P**	**13 21 31.5**	**-0.4**
ARTI				IAmb	IAmb	13 21 50.3	
	comp=Z,6.8nm,0.8s						
SONM	**Songino Array**	**72.94**	**26**	P	**P**	**13 21 33.5**	**+1.0**
	comp=Z,1.9nm,0.8s,baz=216,slow=7.7,SNR=8.1						
SONM				LR	LR	13 52 31.7	
	comp=Z,131nm,19.7s,baz=204,slow=35						
	comp=Z,1.9nm,0.8s						
SONM	**Songino Array**	**72.94**	**26**	P	**P**	**13 21 32.5**	**0.0**
SORM	**Soroca**	**73.01**	**334**	P	**P**	**13 21 34.0**	**+1.3**
	comp=Z,12nm,2.1s						
JOW	**Kunigami**	**73.24**	**55**	LR	LR	13 51 13.5	
	comp=Z,39nm,19.9s,baz=296,slow=34						
JAY	**Jayapura**	**73.49**	**88**	LR	LR	13 53 08.2	
	comp=Z,46nm,20.7s,baz=234,slow=35						
QSPA	**South Pole Qui**	**73.66**	**180**	P	**P**	**13 21 36.3**	**-0.2**
	comp=Z,2.4nm,0.9s,baz=315,slow=13,SNR=2.7						
QSPA				LR	LR	13 50 23.0	
	comp=Z,97nm,19.4s,baz=294,slow=33						
	comp=Z,2.4nm,0.9s						
QSPA	**South Pole Qui**	**73.66**	**180**	IAmb	IAmb	13 21 54.3	
	comp=Z,9.8nm,1.1s						
QSPA	**South Pole Qui**	**73.66**	**180**	P	**P**	**13 21 37.3**	**+0.7**
BURAR	**Bucovina Array**	**73.98**	**332**	P	**P**	**13 21 38.3**	**-0.3**
KMPD	**K-Podol'skiy**	**74.15**	**333**	P	**P**	**13 21 41.0**	**+1.7**
CTA	**Charters Tower**	**74.52**	**107**	LR	LR	13 51 49.6	
	comp=Z,272nm,20.4s,baz=234,slow=34						
AK09	**Malin Array Si**	**74.58**	**336**	P	**P**	**13 21 42.9**	**+1.1**
AK10	**Malin Array Si**	**74.58**	**336**	P	**P**	**13 21 42.9**	**+1.1**
AK06	**Malin Array Si**	**74.59**	**336**	P	**P**	**13 21 42.7**	**+0.8**
AK08	**Malin Array Si**	**74.61**	**336**	P	**P**	**13 21 43.1**	**+1.1**
AK05	**Malin Array Si**	**74.62**	**336**	P	**P**	**13 21 43.2**	**+1.2**
AK02	**Malin Array Si**	**74.64**	**336**	P	**P**	**13 21 43.3**	**+1.1**
LUBAR	**Lubar, Ukraine**	**74.64**	**335**	P	**P**	**13 21 44.2**	**+2.0**
AK12	**Malin Array Si**	**74.65**	**336**	P	**P**	**13 21 43.7**	**+1.4**
AK14	**Malin Array Si**	**74.

KSRS				LR	LR	13 55 13.3		
	comp=Z,50nm,20.1s,baz=235,slow=35							
	comp=Z,1.5nm,0.9s							
MODS	**Modra-Piesok**	**78.30**	**329**	*e*P	P	13 22 08.5	+5.4	
CN2	**Changchun**	**80.12**	**39**	P	P	**13 22 16.3**	**+3.3**	
CLL	**Collm**	**82.31**	**329**	*e*P	P	**13 22 27.0**	**+2.5**	
	comp=Z,5.0nm,0.8s							
GUMO	**Guam**	**82.34**	**73**	LR	LR	13 54 52.5		
	comp=Z,36nm,20.0s,baz=164,slow=33							
FINES	**FINESS Array B**	**84.20**	**341**	LR	LR	13 58 42.7		
	comp=Z,75nm,19.0s,baz=54,slow=35							
MDT	**Midelt**	**84.20**	**306**	LR	LR	13 58 11.0		
	comp=Z,117nm,21.8s,baz=113,slow=34							
MD31	**MD31**	**84.34**	**306**	P	P	**13 22 35.7**	**+0.1**	
MD31				IAmb	IAmb	13 25 34.7		
	comp=Z,13nm,1.8s							
MJAR	**Matsushiro Arr**	**85.14**	**50**	P	P	**13 22 37.9**	**-1.5**	
	comp=Z,9nm,1.0s,baz=228,slow=3.8,SNR=4.5							
	comp=Z,2.9nm,1.0s							
MJAR	**Matsushiro Arr**	**85.14**	**50**	P	P	**13 22 39.1**	**-0.3**	
ESDC	**Sonseca Array**	**86.52**	**313**	P	P	**13 22 46.6**	**+0.4**	
	comp=Z,0.8nm,0.8s,baz=119,slow=3.9,SNR=6.5							
ESDC				LR	LR	14 00 05.4		
	comp=Z,58nm,21.0s,baz=121,slow=35							
	comp=Z,0.8nm,0.8s							
KLR	**Kul'dur**	**86.68**	**36**	LR	LR	14 03 52.3		
	comp=Z,51nm,18.0s,baz=243,slow=37							
RPZ	**Rata Peaks**	**88.47**	**135**	LR	LR	13 54 22.0		
	comp=Z,97nm,21.6s,baz=98,slow=30							
HNR	**Honiara**	**90.00**	**100**	LR	LR	14 03 13.8		
	comp=Z,7.3nm,18.9s,baz=308,slow=35							
ASAJ	**Asahikawa**	**91.20**	**44**	LR	LR	14 04 23.6		
	comp=Z,24nm,19.0s,baz=144,slow=36							
DZM	**Mont Dzumac**	**92.20**	**114**	*e*LR	LR	13 52 56.1		
	comp=Z,268nm,24.7s							
YAK	**Yakutsk**	**92.23**	**25**	LR	LR	14 04 17.2		
	comp=Z,99nm,19.6s,baz=260,slow=35							
URZ	**Urewera**	**94.83**	**132**	LR	LR	13 59 38.8		
	comp=Z,115nm,18.5s,baz=262,slow=31							
TIXI	**Tiksi**	**97.03**	**16**	LR	LR	14 08 00.3		
	comp=Z,73nm,20.9s,baz=239,slow=36							
SPITS	**Spitsbergen Ar**	**98.62**	**351**	LR	LR	14 10 12.1		
	comp=Z,36nm,19.8s,baz=180,slow=37							
ILAR	**Eielson Array**	**126.48**	**17**	PKP	**PKPdf**	**13 29 04.8**	**-0.8**	
	comp=Z,0.8nm,0.9s,baz=306,slow=2.9,SNR=6.1							
TBI	**Tubuai**	**126.66**	**137**	*e*LR	LR	14 08 42.5		
	comp=Z,185nm,24.0s							
PPT2	**Papeete2**	**130.47**	**131**	*e*LR	LR	14 10 29.9		
	comp=Z,127nm,26.0s							
PPT2				*e*LR	LR	14 10 30.7		
	comp=Z,132nm,32.2s							
YKA	**Yellowknife Ar**	**133.97**	**1**	PKP	**PKPdf**	**13 29 19.8**	**-0.1**	
	comp=Z,0.2nm,0.8s,baz=356,slow=2.8,SNR=3.8							
YKA				PP	**PP**	**13 31 49.0**	**-0.5**	
	comp=Z,0.2nm,0.7s,baz=348,slow=7.0,SNR=5.3							
PINE	**Pine Mountain**	**151.86**	**13**	PKPab	**PKPab**	**13 30 06.0**	**-1.3**	
PDAR	**Pinedale Array**	**153.60**	**355**	PKPbc	**PKPbc**	**13 30 01.0**	**-1.3**	
	comp=Z,1.1nm,0.5s,baz=93,slow=2.3,SNR=7.4							

*NOU **13** 13:11:41.3,20˚.57S×178˚.22W,h480km,mb4.4/11, Fiji Islands Region*
*IDC **13** 13:12:11.0±2.9,23˚.04S×179˚.11E,h519km±32km,mb3.2/5, mbtmp4.3/7, Error ellipse: s-maj=24.4km s-min=18.8km az=160.0*
*NEIC **13** 13:12:14.8±0.8,23˚.09S±0˚.08×179˚.2E±0˚.1,h562km±9km, mb4.4/14, Error ellipse: s-maj=18.0km s-min=11.2km az=104.0*
ISC 13 13:12:14.9±0.5, 23˚.15S±0˚.08×179˚.19E±0˚.09, h579km±9km, n47, σt1s85/46, mb4.2/12, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.49**	**349**	P	**P**	**13 13 48.5**	**-2.3**
	10.0nm,0.4s,baz=268,slow=23,SNR=16						
MSVF	**Nonsavu**	**5.49**	**349**		**P**	**13 13 48.6**	**-2.2**
FUTU	**Fugatoga**	**9.15**	**17**	P	**P**	**13 14 23.7**	**-1.3**
MARNC	**Mare, Loyalty**	**10.46**	**277**	P	**P**	**13 14 36.7**	**-1.3**
NIUE	**Niue**	**10.94**	**70**	P	**P**	**13 14 42.1**	**-0.7**
AFI	**Afiamalu**	**12.56**	**45**	P	**P**	**13 14 56.0**	**-3.5**
	23nm,0.6s,baz=178,slow=13,SNR=4.5						
OUZ	**Omahuta**	**12.98**	**201**	P	**P**	**13 15 05.1**	**+1.7**
	42nm,1.0s						
SANVU	**Saraoutou**	**13.65**	**302**	P	**P**	**13 15 08.6**	**-2.1**
MXZ	**Matakaoa Point**	**14.39**	**183**	P	**P**	**13 15 15.1**	**-2.6**
	46nm,1.0s						
URZ	**Urewera**	**15.17**	**186**	P	**P**	**13 15 21.9**	**-3.2**
	10.0nm,0.3s,baz=273,slow=2.5,SNR=23						
URZ				S	**S**	**13 17 54.2**	**-6.6**
	9.2nm,0.6s,baz=23,slow=23,SNR=10						
URZ	**Urewera**	**15.17**	**186**	P	**P**	**13 15 22.3**	**-2.8**
	41nm,0.8s						
HIZ	**Hauiti**	**15.76**	**193**	P	**P**	**13 15 30.7**	**-0.1**
	33nm,1.5s						
BKZ	**Black Stump Fm**	**16.13**	**188**	P	**P**	**13 15 32.0**	**-2.4**
BFZ	**Birch Farm**	**17.66**	**187**	P	**P**	**13 15 46.1**	**-2.0**
	34nm,1.2s						
QRZ	**Quartz Range**	**18.50**	**196**	P	**P**	**13 15 56.4**	**+0.6**
	48nm,1.0s						
SNZO	**South Karori**	**18.50**	**191**	P	**P**	**13 15 55.2**	**-0.6**
	32nm,1.4s						
KHZ	**Kahutara**	**19.79**	**192**	P	**P**	**13 16 06.6**	**-0.8**
	22nm,1.6s						
OXZ	**Oxford**	**20.98**	**195**	P	**P**	**13 16 20.2**	**+2.0**
OXZ				IAmb	IAmb	13 16 32.1	
	comp=Z,15nm,1.1s						
JCZ	**Jackson Bay**	**22.56**	**200**	P	**P**	**13 16 32.5**	**0.0**
	comp=Z,28nm,0.9s						
CTAO	**Charters Tower**	**30.73**	**269**	P	**P**	**13 17 44.9**	**+0.7**
BBOO	**Buckleboo**	**39.06**	**246**	P	**P**	**13 18 53.0**	**-0.2**
AS31	**Alice Springs**	**41.42**	**260**	P	**P**	**13 19 12.4**	**+0.2**
ASAR	**Alice Springs**	**41.43**	**260**	P	**P**	**13 19 11.9**	**-0.2**
	comp=Z,2.7nm,0.7s,baz=89,slow=8.3,SNR=21						
	comp=Z,2.7nm,0.7s						
ASAR	**Alice Springs**	**41.43**	**260**	P	**P**	**13 19 12.0**	**-0.2**
WRA	**Warramunga Arr**	**41.72**	**266**	P	**P**	**13 19 13.6**	**-0.9**
	comp=Z,2.1nm,0.6s,baz=90,slow=5.7,SNR=78						
	comp=Z,2.1nm,0.6s						
WRA	**Warramunga Arr**	**41.72**	**266**	P	**P**	**13 19 13.6**	**-0.9**
KNRA	**Kununurra**	**47.95**	**269**	P	**P**	**13 20 02.3**	**+0.1**
KNRA				IAmb	IAmb	13 20 13.6	
	comp=Z,20nm,1.4s						
HUH	**Hualalai**	**49.05**	**32**	P	**P**	**13 20 10.3**	**-0.2**
MBWA	**Marble Bar**	**54.77**	**260**	P	**P**	**13 20 51.4**	**0.0**
MBWA				IAmb	IAmb	13 20 56.6	
	comp=Z,21nm,1.2s						
QSPA	**South Pole Qui**	**66.93**	**180**	P	**P**	**13 22 12.5**	**+2.0**
	comp=Z,2.6nm,0.6s,baz=195,slow=0.2,SNR=11						
	comp=Z,2.6nm,0.6s						
QSPA	**South Pole Qui**	**66.93**	**180**	P	**P**	**13 22 12.7**	**+2.2**
QSPA				IAmb	IAmb	13 22 22.4	
	comp=Z,14nm,1.5s						
BELA	**Belgrano 2**	**77.27**	**173**	P	**P**	**13 23 11.1**	**+1.3**
BELA				IAmb	IAmb	13 23 29.9	
	comp=Z,37nm,1.5s						
MAW	**Mawson**	**78.19**	**201**	P	**P**	**13 23 16.9**	**+2.0**
NVAR	**Mina Array Bea**	**84.73**	**44**	P	**P**	**13 23 50.8**	**+1.8**
	comp=Z,0.7nm,0.8s,baz=217,slow=7.6,SNR=4.6						
	comp=Z,0.7nm,0.8s						
GHO	**Glory Hole Cre**	**88.41**	**15**	P	**P**	**13 24 06.7**	**+1.0**
GHO				IAmb	IAmb	13 24 22.1	
	comp=Z,7.1nm,1.3s						
TX31	**Lajitas Ar. Si**	**90.67**	**58**	P	**P**	**13 24 17.2**	**+0.3**
TX31				IAmb	IAmb	13 24 20.7	
	comp=Z,2.8nm,1.3s						
TXAR	**Lajitas Array**	**90.67**	**58**	P	**P**	**13 24 18.4**	**+1.4**
	comp=Z,0.5nm,0.8s,baz=193,slow=5.1,SNR=5.3						
	comp=Z,0.5nm,0.8s						
TXAR	**Lajitas Array**	**90.67**	**58**	P	**P**	**13 24 17.5**	**+0.6**
BSUT	**Blindstream Ca**	**90.78**	**46**	P	**P**	**13 24 19.1**	**+1.5**
BSUT				IAmb	IAmb	13 24 20.4	
	comp=Z,4.1nm,1.0s						
IMAR	**Indian Mountai**	**91.21**	**11**	P	**P**	**13 24 19.9**	**+1.5**
FINES	**FINESS Array B**	**137.50**	**341**	PKP	**PKPdf**	**13 30 33.4**	**+0.5**
	comp=Z,5.8nm,1.1s,baz=72,slow=2.4,SNR=4.1						
FINES	**FINESS Array B**	**137.50**	**341**		**PKPdf**	**13 30 33.6**	**+0.6**
HFS	**Hagfors**	**141.66**	**348**	PKhKP	PKPpre	13 30 35.8	
	comp=Z,0.7nm,0.3s,baz=57,slow=5.3,SNR=8.5						
AKASG	**Malin Array Be**	**143.94**	**327**	PKP	PKPbc	13 30 43.8	-0.5
	comp=Z,0.8nm,0.3s,baz=42,slow=3.8,SNR=5.5						
AKASG	**Malin Array Be**	**143.94**	**327**		**PKPdf**	**13 30 44.8**	**-0.1**
MMAI	**Mount Meron Ar**	**146.71**	**295**	PKPbc	**PKiKP**	**13 30 54.8**	**-0.2**
	comp=Z,1.2nm,0.4s,baz=47,slow=6.2,SNR=6.0						
EKA	**Eskdalemuir Ar**	**147.81**	**3**	PKPbc	**PKPbc**	**13 30 55.5**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=8.2,slow=3.1,SNR=4.5						

*NOU **13** 13:29:04.5, 38˚.00S×176˚.05E, h296km, MLv3.8/20, North Island, New Zealand*
*WEL **13** 13:29:08.3±0.7, 38˚S±5˚×17˚6E±1˚, h265km±6km, M3.6/97, MLv3.6/97, Error ellipse: s-maj=6.8km s-min=6.1km az=23.2, confirmed*
ISC 13 13:29:01.5±1.5, 37˚.87S±0˚.08×175˚.94E±0˚.06, h315km±9km, n176, σt1s89/187, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMRZ	**Kaimai**	**0.03**	**1**	P	**Pn**	**13 29 42.7**	**+1.3**
KARZ	**Kaharoa**	**0.28**	**122**	P	**Pn**	**13 29 43.0**	**+1.6**
NGRZ	**Ngongotaha**	**0.30**	**140**	P	**Pn**	**13 29 43.2**	**+1.8**
UTU	**Utuhina**	**0.36**	**147**	P	**Pn**	**13 29 43.4**	**+1.9**
LIRZ	**Lichensteins R**	**0.38**	**111**	P	**Pn**	**13 29 43.1**	**+1.6**
TOZ	**Tahuroa Road**	**0.38**	**292**	P	**Pn**	**13 29 43.2**	**+1.6**
OMRZ	**Omania**	**0.41**	**125**	P	**Pn**	**13 29 43.3**	**+1.6**
OPRZ	**Ohinepanea**	**0.49**	**87**	P	**Pn**	**13 29 42.7**	**+1.0**
HLRZ	**Highlands Stat**	**0.50**	**140**	P	**Pn**	**13 29 43.8**	**+2.1**
HSRZ	**Hossack Road**	**0.50**	**152**	P	**Pn**	**13 29 43.8**	**+2.1**
TLZ	**Tolley Road**	**0.56**	**215**	P	**Pn**	**13 29 44.0**	**+2.1**
TARZ	**Mount Tarawera**	**0.58**	**129**	P	**Pn**	**13 29 43.8**	**+1.7**
HRRZ	**Handcock Road**	**0.58**	**153**	P	**Pn**	**13 29 43.7**	**+1.7**
KUTZ	**Kaahu Road**	**0.62**	**188**	P	**Pn**	**13 29 43.8**	**+1.7**
RRRZ	**Republican Roa**	**0.65**	**136**	P	**Pn**	**13 29 43.7**	**+1.5**
WPRZ	**Whakapapataran**	**0.67**	**165**	P	**Pn**	**13 29 44.0**	**+1.8**
EDRZ	**Edgecumbe**	**0.67**	**111**	P	**Pn**	**13 29 43.7**	**+1.3**
PRRZ	**Plateau Road**	**0.72**	**151**	P	**Pn**	**13 29 44.0**	**+1.6**
PRRZ				S	**S**	**13 30 12.6**	**-2.4**
ALRZ	**Allen Road**	**0.76**	**155**	P	**Pn**	**13 29 44.3**	**+1.8**
WATZ	**Wairara**	**0.85**	**191**	P	**Pn**	**13 29 44.8**	**+1.9**
WATZ				S	**S**	**13 30 14.5**	**-1.3**
MUGZ	**Murupara**	**0.89**	**133**	P	**Pn**	**13 29 44.3**	**+1.3**
MUGZ				S	**S**	**13 30 13.5**	**-2.6**
MKAZ	**Moumakai**	**0.98**	**321**	P	**Pn**	**13 29 45.2**	**+1.8**
URZ	**Urewera**	**1.00**	**113**	P	**Pn**	**13 29 44.3**	**+0.9**
URZ	**Urewera**	**1.00**	**113**	S	**S**	**13 30 14.0**	**-2.9**
URZ	**Urewera**	**1.00**	**113**	P	**Pn**	**13 29 44.4**	**+0.9**
URZ				S	**S**	**13 30 13.6**	**-3.3**
RATZ	**Rangitukua**	**1.00**	**188**	P	**Pn**	**13 29 45.2**	**+1.8**
MRHZ	**Matea Rd**	**1.03**	**159**	P	**Pn**	**13 29 45.1**	**+1.5**
HIZ	**Hauiti**	**1.07**	**233**	P	**Pn**	**13 29 46.0**	**+2.2**
HIZ	**Hauiti**	**1.07**	**233**	P	**Pn**	**13 29 45.9**	**+2.2**
RTZ	**Ruatahuna**	**1.11**	**133**	P	**Pn**	**13 29 45.5**	**+1.5**
RTZ				S	**S**	**13 30 16.0**	**-1.9**
RITZ	**Rihia Road**	**1.11**	**183**	P	**Pn**	**13 29 46.1**	**+2.2**
KATZ	**Kakaramea**	**1.12**	**190**	P	**Pn**	**13 29 45.9**	**+1.8**
KBAZ	**Karaka Road Bo**	**1.14**	**312**	P	**Pn**	**13 29 46.0**	**+1.9**
MTHZ	**Maungataniwha**	**1.21**	**144**	P	**Pn**	**13 29 46.4**	**+1.9**
MTHZ				S	**S**	**13 30 16.6**	**-2.2**
ETAZ	**East Tamaki Re**	**1.22**	**318**	P	**Pn**	**13 29 46.2**	**+1.6**
NTVZ	**North Tongarir**	**1.24**	**190**	P	**Pn**	**13 29 46.6**	**+1.8**
KRVZ	**Karewarewa**	**1.25**	**191**	P	**Pn**	**13 29 46.7**	**+1.9**
WIAZ	**Waiheke Island**	**1.25**	**329**	P	**Pn**	**13 29 46.5**	**+1.7**
TMVZ	**Te Maari**	**1.26**	**188**	P	**Pn**	**13 29 46.8**	**+2.0**
TMVZ				S	**S**	**13 30 17.2**	**-2.2**
TWVZ	**Taurewa**	**1.26**	**198**	P	**Pn**	**13 29 46.6**	**+1.8**
WTVZ	**West Tongariro**	**1.27**	**192**	P	**Pn**	**13 29 46.8**	**+1.9**
ETVZ	**East Tongariro**	**1.28**	**188**	P	**Pn**	**13 29 46.9**	**+1.9**
OTVZ	**Oturere**	**1.31**	**189**	P	**Pn**	**13 29 47.1**	**+1.9**
OTVZ				S	**S**	**13 30 17.9**	**-2.1**
AWAZ	**Awhitu Peninsu**	**1.31**	**308**	P	**Pn**	**13 29 46.9**	**+1.9**
RAGZ	**Rawiri**	**1.32**	**119**	P	**Pn**	**13 29 47.2**	**+2.1**
RAGZ				S	**S**	**13 30 18.1**	**-1.8**
NGZ	**Ngauruhoe**	**1.33**	**191**	P	**Pn**	**13 29 47.2**	**+2.0**
MWZ	**Matawai**	**1.33**	**111**	P	**Pn**	**13 29 46.6**	**+1.4**
MWZ				S	**S**	**13 30 17.9**	**-2.1**
SNVZ	**South Ngauruho**	**1.33**	**190**	P	**Pn**	**13 29 47.1**	**+1.8**
BKZ	**Black Stump Fm**	**1.36**	**162**	P	**Pn**	**13 29 47.0**	**+1.7**
BKZ	**Black Stump Fm**	**1.36**	**162**	S	**S**	**13 30 18.4**	**-1.9**
BKZ	**Black Stump Fm**	**1.36**	**162**	P	**Pn**	**13 29 47.2**	**+1.9**
COVZ	**Chateau Observ**	**1.36**	**193**	P	**Pn**	**13 29 47.2**	**+1.8**
EPAZ	**Eden Park BICE**	**1.38**	**316**	P	**Pn**	**13 29 47.0**	**+1.6**
RUGZ	**Raukumara Rang**	**1.38**	**94**	P	**Pn**	**13 29 46.3**	**+0.8**
RAHZ	**Arahi**	**1.38**	**140**	P	**Pn**	**13 29 47.9**	**+2.6**
MBAZ	**Motutapu North**	**1.38**	**323**	P	**Pn**	**13 29 47.1**	**+1.7**
NMHZ	**Naumai**	**1.40**	**151**	P	**Pn**	**13 29 48.5**	**+2.9**
HBAZ	**Herne Bay Bore**	**1.40**	**316**	P	**Pn**	**13 29 47.4**	**+1.8**
TUVZ	**Tukino**	**1.41**	**189**	P	**Pn**	**13 29 47.7**	**+2.0**
FWVZ	**Far West T-bar**	**1.42**	**192**	P	**Pn**	**13 29 47.7**	**+1.9**
WTAZ	**Waiatarua**	**1.44**	**310**	P	**Pn**	**13 29 47.9**	**+2.1**
WHVZ	**Whangaehu Hut**	**1.44**	**191**	P	**Pn**	**13 29 47.8**	**+1.9**
TRVZ	**Turoa**	**1.46**	**192**	P	**Pn**	**13 29 48.2**	**+2.1**
HAZ	**Te Kaha**	**1.46**	**86**	P	**Pn**	**13 29 46.6**	**+0.7**
HAZ				S	**S**	**13 30 18.2**	**-3.1**
WNVZ	**Wahianoa**	**1.48**	**190**	P	**Pn**	**13 29 48.1**	**+2.0**
PKVZ	**Pokaka**	**1.49**	**198**	P	**Pn**	**13 29 47.9**	**+1.8**
MOVZ	**Moawhango**	**1.54**	**185**	P	**Pn**	**13 29 48.1**	**+1.7**
RVAZ	**Riverhead Bore**	**1.54**	**315**	P	**Pn**	**13 29 48.2**	**+1.8**
ABAZ	**Army Bay**	**1.55**	**325**	P	**Pn**	**13 29 48.5**	**+2.0**
MTVZ	**Mangateitei**	**1.56**	**194**	P	**Pn**	**13 29 48.5**	**+2.0**
VRZ	**Vera Road**	**1.56**	**216**	P	**Pn**	**13 29 48.8**	**+2.4**
WHHZ	**Waihua**	**1.57**	**140**	P	**Pn**	**13 29 49.1**	**+2.6**
KWHZ	**Kaweka Forest**	**1.60**	**166**	P	**Pn**	**13 29 49.2**	**+2.5**
TKGZ	**Te Karaka**	**1.61**	**111**	P	**Pn**	**13 29 49.3**	**+2.5**
ARHZ	**Aropaoanui**	**1.62**	**150**	P	**Pn**	**13 29 49.5**	**+2.7**
TWGZ	**Tauwhareparae**	**1.64**	**101**	P	**Pn**	**13 29 49.5**	**+2.4**
RIGZ	**Rimuhau**	**1.66**	**121**	P	**Pn**	**13 29 49.7**	**+2.6**
GRZ	**Great Barrier**	**1.66**	**346**	P	**Pn**	**13 29 48.8**	**+1.6**
MCNZ	**McNeill Hill**	**1.68**	**160**	P	**Pn**	**13 29 50.0**	**+2.8**
PKGZ	**Pakihiroa**	**1.69**	**91**	P	**Pn**	**13 29 49.2**	**+1.9**
KNZ	**Kokohu**	**1.78**	**131**	P	**Pn**	**13 29 50.2**	**+2.3**
KRHZ	**Kereru**	**1.80**	**169**	P	**Pn**	**13 29 50.3**	**+2.2**
PUZ	**Puketiti**	**1.84**	**97**	P	**Pn**	**13 29 50.3**	**+1.9**
PRGZ	**Paritu Road**	**1.85**	**125**	P	**Pn**	**13 29 51.1**	**+2.6**
CNGZ	**Carnagh Statio**	**1.89**	**110**	P	**Pn**	**13 29 51.9**	**+3.2**
MXZ	**Matakaoa Point**	**1.90**	**81**	P	**Pn**	**13 29 50.7**	**+1.9**
MXZ	**Matakaoa Point**	**1.90**	**81**	S	**S**	**13 30 24.7**	**-1.9**
MXZ	**Matakaoa Point**	**1.90**	**81**	P	**Pn**	**13 29 50.5**	**+1.7**
WMGZ	**Waiomatatini S**	**1.96**	**89**	P	**Pn**	**13 29 51.4**	**+2.1**
LREZ	**Lake Rotokare**	**1.99**	**217**	P	**Pn**	**13 29 53.0**	**+3.5**
CKHZ	**Cape Kidnapper**	**1.99**	**154**	P	**Pn**	**13 29 52.2**	**+2.7**
MHGZ	**Mahia Peninsul**	**2.00**	**130**	P	**Pn**	**13 29 52.3**	**+2.7**
WAZ	**Wanganui**	**2.02**	**201**	P	**Pn**	**13 29 52.0**	**+2.3**
PREZ	**Palmer Road**	**2.03**	**223**	P	**Pn**	**13 29 52.5**	**+2.8**
PNHZ	**Pukenui**	**2.05**	**174**	P	**Pn**	**13 29 52.0**	**+2.1**
KAHZ	**Kahuranaki**	**2.06**	**159**	P	**Pn**	**13 29 52.7**	**+2.8**
KHEZ	**Kahui Hut**	**2.07**	**226**	P	**Pn**	**13 29 53.3**	**+3.1**
KHEZ	**Kahui Hut**	**2.07**	**226**	S	**S**	**13 30 29.9**	**+0.8**
KHEZ	**Kahui Hut**	**2.07**	**226**	P	**Pn**	**13 29 53.2**	**+3.1**
NBEZ	**Newall Road No**	**2.14**	**229**	P	**Pn**	**13 29 53.8**	**+3.2**
TSZ	**Takapari Road**	**2.19**	**180**	P	**Pn**	**13 29 53.0**	**+2.0**
WPHZ	**Waipukurau**	**2.23**	**170**	P	**Pn**	**13 29 53.6**	**+2.3**
NMEZ	**Namu Road**	**2.23**	**226**	P	**Pn**	**13 29 54.2**	**+2.9**
PXZ	**Pawanui**	**2.27**	**162**	P	**Pn**	**13 29 54.2**	**+2.5**
WCZ	**Waipu Caves**	**2.31**	**326**	P	**Pn**	**13 29 54.1**	**+2.0**
OHWZ	**Ohakea**	**2.38**	**192**	P	**Pn**	**13 29 55.2**	**+2.7**
DVHZ	**Dannevirke**	**2.43**	**176**	P	**Pn**	**13 29 54.9**	**+1.9**
PRHZ	**Porangahau**	**2.45**	**167**	P	**Pn**	**13 29 55.7**	**+2.5**
POWZ	**Post Office Ro**	**2.52**	**183**	P	**Pn**	**13 29 55.6**	**+1.9**
ANWZ	**Angora Road**	**2.62**	**171**	P	**Pn**	**13 29 57.3**	**+2.7**
PRWZ	**Pori Road**	**2.68**	**180**	P	**Pn**	**13 29 57.4**	**+2.2**
MRZ	**Mangatainoka R**	**2.80**	**186**	P	**Pn**	**13 29 57.8**	**+1.5**
BFZ	**Birch Farm**	**2.82**	**175**	P	**Pn**	**13 29 58.4**	**+2.0**
BFZ	**Birch Farm**	**2.82**	**175**	P	**Pn**	**13 29 58.5**	**+2.1**
TIWZ	**Tintock**	**2.90**	**181**	P	**Pn**	**13 29 59.1**	**+1.8**
OGWZ	**Otaki Gorge**	**3.00**	**191**	P	**Pn**	**13 29 59.9**	**+1.8**
HOWZ	**Holdsworth Sta**	**3.04**	**186**	P	**Pn**	**13 30 00.2**	**+1.6**
CPWZ	**Castlepoint**	**3.04**	**176**	P	**Pn**	**13 30 01.2**	**+2.6**
KIW	**Kapiti Island**	**3.09**	**195**	P	**Pn**	**13 30 00.6**	**+1.5**
TMWZ	**Te Maipa**	**3.23**	**181**	P	**Pn**	**13 30 02.2**	**+1.8**
OUZ	**Omahuta**	**3.25**	**324**	P	**Pn**	**13 30 02.7**	**+1.9**
OUZ	**Omahuta**	**3.25**	**324**	P	**Pn**	**13 30 02.8**	**+2.1**
MTW	**Mount Morrison**	**3.30**	**186**	P	**Pn**	**13 30 02.6**	**+1.4**
CAW	**Cannon Point**	**3.30**	**192**	P	**Pn**	**13 30 02.5**	**+1.4**
DUWZ	**D'Urville Isla**	**3.32**	**208**	P	**Pn**	**13 30 02.6**	**+1.2**
WEL	**Wellington**	**3.53**	**195**	P	**Pn**	**13 30 05.1**	**+1.7**
PAWZ	**Paruwai Farm**	**3.53**	**186**	P	**Pn**	**13 30 04.9**	**+1.4**
TRWZ	**Traveller**	**3.53**	**183**	P	**Pn**	**13 30 05.4**	**+1.9**
SNZO	**South Karori**	**3.57**	**195**	P	**Pn**	**13 30 04.6**	**+0.9**
SNZO	**South Karori**	**3.57**	**195**	S	**S**	**13 30 52.6**	**-1.1**
TCW	**Tory Channel**	**3.58**	**201**	P	**Pn**	**13 30 05.3**	**+1.4**
MSWZ	**Moikau Station**	**3.58**	**188**	P	**Pn**	**13 30 05.1**	**+1.1**
BHW	**Baring Head**	**3.63**	**193**	P	**Pn**	**13 30 05.6**	**+1.2**
PLWZ	**Palliser**	**3.73**	**188**	P	**Pn**	**13 30 06.9**	**+1.3**
TUWZ	**Tuamarina**	**3.87**	**203**	P	**Pn**	**13 30 08.7**	**+1.7**
NNZ	**Nelson**	**3.88**	**210**	P	**Pn**	**13 30 08.0**	**+0.9**
TKNZ	**Takaka Hill**	**3.91**	**215**	P	**Pn**	**13 30 08.2**	**+0.7**
QRZ	**Quartz Range**	**3.96**	**221**	P	**Pn**	**13 30 08.4**	**+0.4**
QRZ	**Quartz Range**	**3.96**	**221**	P	**Pn**	**13 30 08.4**	**+0.4**
CMWZ	**Cape Campbell**	**4.10**	**198**	P	**Pn**	**13 30 11.8**	**+2.4**
MRNZ	**Matariki Terra**	**4.30**	**214**	P	**Pn**	**13 30 12.0**	**+0.4**
THZ	**Tophouse**	**4.54**	**210**	P	**Pn**	**13 30 15.2**	**+0.9**
KHZ	**Kahutara**	**4.90**	**201**	P	**Pn**	**13 30 19.6**	**+1.3**
KHZ	**Kahutara**	**4.90**	**201**	P	**S**	**13 31 18.4**	**-1.7**
KHZ	**Kahutara**	**4.90**	**201**	P	**Pn**	**13 30 19.8**	**+1.5**
DSZ	**Denniston Nort**	**5.01**	**218**	P	**Pn**	**13 30 20.0**	**+0.3**
GVZ	**Greta Valley S**	**5.55**	**203**	P	**Pn**	**13 30 27.1**	**+1.2**
LTZ	**Lake Taylor**	**5.65**	**209**	P	**Pn**	**13 30 27.9**	**+0.9**
AMCZ	**Amberley**	**5.86**	**204**	P	**Pn**	**13 30 30.7**	**+1.3**
INZ	**Inchbonnie**	**5.94**	**214**	P	**Pn**	**13 30 30.7**	**+0.3**
OXZ	**Oxford**	**6.21**	**207**	P	**Pn**	**13 30 34.2**	**+0.7**
OKCZ	**Okains Bay**	**6.24**	**200**	P	**Pn**	**13 30 35.7**	**+1.8**
MQZ	**McQueen's Vall**	**6.34**	**202**	P	**Pn**	**13 30 35.5**	**+0.5**
AKCZ	**Akaroa Harbour**	**6.42**	**200**	P	**Pn**	**13 30 37.8**	**+1.7**
RACZ	**Rakaia**	**6.52**	**205**	P	**Pn**	**13 30 38.0**	**+0.8**
WVZ	**Waitaha Valley**	**6.54**	**216**	P	**Pn**	**13 30 38.1**	**+0.7**
MHCZ	**Mount Hutt**	**6.56**	**209**	P	**Pn**	**13 30 38.4**	**+0.6**
WACZ	**Wakanui South**	**6.81**	**206**	P	**Pn**	**13 30 41.8**	**+1.1**
GCSZ	**Gaunt Creek Bo**	**6.92**	**216**	P	**Pn**	**13 30 42.4**	**+0.5**
RPZ	**Rata Peaks**	**6.92**	**211**	P	**Pn**	**13 30 42.7**	**+0.8**
RPZ	**Rata Peaks**	**6.92**	**211**	P	**Pn**	**13 30 42.9**	**+1.0**
ARCZ	**Arundel**	**7.06**	**209**	P	**Pn**	**13

PMTG				*i* IAML			15 22 55.2	
PMTG				*i* IAML			15 22 55.2	
PMTG				*i* IAML			15 22 58.8	
ELAN	**Lanestosa**	**3.01**	**63**	Pn	**Pn**		**15 22 05.7**	**+1.6**
ELAN				Sn	**Sn**		**15 22 41.4**	**+1.7**
ELAN				Sg	**Sg**		**15 22 53.5**	**-0.5**
ELAN				*i* IVmb_Lg			15 22 56.8	
PESTR	**Estremoz**	**3.07**	**187**	*e*Sg	**Sg**		**15 22 55.0**	**-1.0**
PESTR				*i* IAML			15 22 58.5	
PESTR				*i* IAML			15 22 58.9	
PESTR				*i* IAML			15 23 04.0	
PAB	**San Pablo**	**3.17**	**138**	Pn	**Pn**		**15 22 06.9**	**+0.6**
PAB				Sn	**Sn**		**15 22 44.3**	**+0.7**
PAB				Sg	**Sg**		**15 22 56.4**	**-2.6**
PAB				*i* IVmb_Lg			15 23 03.9	
PARRA	**Arraiolos**	**3.18**	**193**	*e*Sg	**Sg**		**15 22 57.7**	**-1.8**
PARRA				*i* IAML			15 23 00.2	
PARRA				*i* IAML			15 23 02.3	
PARRA				*i* IAML			15 23 05.5	
MOE	**Montemor**	**3.53**	**196**	*e*Sg	**Sg**		**15 23 09.5**	**-1.0**
MOE				*i* IAML			15 23 11.2	
MOE				*i* IAML			15 23 12.6	
MOE				*i* IAML			15 23 13.7	

NIED ***13*** *15:27:04.4, 39˚.14N×142˚.93E, h26km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.48; $M_{\theta\theta}$1.04; $M_{\phi\phi}$-2.52; $M_{r\theta}$2.30; $M_{\theta\phi}$-0.83; $M_{\phi r}$4.16; Fault plane solution: $M_0$5.24000×10^{14} NP1: ϕ_s161.00000°, δ16.00000°, λ43.00000°. NP2: ϕ_s30.00000°, δ79.00000°, λ102.00000°.*
JMA ***13*** *15:27:04.4±0.2, 39˚.1N±0˚.4×142˚.9E±0˚.9, h26km±2km, MV3.8/38, FAR E OFF SANRIKU*
IDC ***13*** *15:27:07.5±2.8, 39˚.16N×142˚.98E, h48km±25km, mb3.6/8, mbtmp3.8/11, ML3.1/3, MS2.9/5, Error ellipse: s-maj=30.2km s-min=22.4km az=99.0*

ISC 13 15:27:02.7±1.0, 38˚.99N±0˚.06×142˚.93E±0˚.07, h16km, n35, σ0s99/27, mb3.8/9, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OFUJ	**Ofunato**	**0.98**	**276**	P		**Pn**	**15 27 22.4**	**+0.5**
MIYJ	**Miyakonagasawa**	**1.04**	**305**	*i* P		**Pb**	**15 27 22.0**	**-0.4**
JKMT	**Kesennumamotoy**	**1.15**	**261**	P		**Pg**	**15 27 25.4**	**+0.5**
JKMT				*e*S		**Sg**	**15 27 40.1**	**+0.2**
JTH	**Tanohata**	**1.25**	**319**	*e*P		**Pn**	**15 27 24.8**	**-0.8**
JMK	**Ichinoseki**	**1.33**	**269**	P		**Pg**	**15 27 28.1**	**-0.3**
JMK				*e*S		**Sg**	**15 27 45.3**	**-0.4**
JIO	**Ouri**	**1.35**	**247**	P		**Pg**	**15 27 28.7**	**0.0**
JOM	**Ohasama**	**1.36**	**291**	P		**Pb**	**15 27 27.6**	**-0.2**
JANG	**Nango**	**1.76**	**322**	*e*P		**Pn**	**15 27 32.0**	**-0.5**
JRG	**Rokugo**	**1.83**	**284**	*e*P		**Pb**	**15 27 35.2**	**-0.6**
JOU	**Okura**	**1.88**	**251**	*e*P		**Pb**	**15 27 37.1**	**+0.5**
JYK	**Kaneyama**	**2.00**	**269**	P		**Pb**	**15 27 38.5**	**-0.3**
JMM	**Marumori**	**2.02**	**237**	*e*P		**Pb**	**15 27 38.8**	**-0.2**
JAH	**Hinai**	**2.14**	**305**	*e*P		**Pn**	**15 27 38.8**	**+1.0**
MJAR	**Matsushiro Arr**	**4.47**	**238**	P		Pn	15 28 15.0	+5.2
	0.6nm,0.3s,baz=35,slow=13,SNR=29							
MJAR					LR	LR	15 30 07.8	
	comp=Z,78nm,19.7s,baz=156,slow=39 5.4nm,0.4s							
ASAJ	**Asahikawa**	**5.13**	**357**	P		**Pn**	**15 28 19.2**	**+0.4**
	1.1nm,0.3s,baz=227,slow=14,SNR=11 6.5nm,0.9s							
JHJ	**Hachijo jima 2**	**6.39**	**204**	P		**Pn**	**15 28 37.3**	**+1.2**
	29nm,0.3s,baz=203,slow=24,SNR=13							
JHJ				S		**Sn**	**15 29 45.0**	**-3.8**
	59nm,0.7s,baz=252,slow=20,SNR=1.3							
KSRS	**Korea Array**	**11.90**	**267**	LR		LR	15 34 03.8	
	comp=Z,320nm,20.9s,baz=65,slow=35							
KLR	**Kul'dur**	**12.99**	**326**	P		**Pn**	**15 30 07.0**	**+0.4**
	baz=189,slow=19,SNR=1.9							
KLR					LR	LR	15 34 49.4	
	comp=Z,63nm,18.2s,baz=87,slow=36 0.4nm,0.4s							
SONM	**Songjino Array**	**27.75**	**301**	P		**P**	**15 32 51.0**	**+0.3**
	0.6nm,0.7s,baz=94,slow=8.5,SNR=3.5 0.6nm,0.7s							
H11N2	**WAKE ISLAND Hy**	**28.22**	**126**	T		T	16 03 32.7	
	baz=318,slow=75,SNR=47							
H11N1	**WAKE ISLAND Hy**	**28.23**	**126**	T		T	16 03 33.6	
	baz=318,slow=75,SNR=39							
H11N3	**WAKE ISLAND Hy**	**28.24**	**126**	T		T	16 03 34.1	
	baz=318,slow=75,SNR=42							
H11S1	**WAKE ISLAND Hy**	**29.02**	**128**	T		T	16 04 36.1	
	baz=318							
H11S3	**WAKE ISLAND Hy**	**29.02**	**128**	T		T	16 04 39.1	
	baz=318,slow=74,SNR=4.1							
H11S2	**WAKE ISLAND Hy**	**29.03**	**128**	T		T	16 04 36.7	
	baz=318,slow=74,SNR=3.3							
SIJI	**Sorong**	**41.09**	**198**	LR		LR	15 49 04.8	
	comp=Z,35nm,18.7s,baz=309,slow=32							
ZALV	**Zalesovo Beam**	**41.51**	**311**	P		**P**	**15 34 49.0**	**0.0**
	1.0nm,0.4s,baz=86,slow=8.7,SNR=6.3 1.0nm,0.4s							
MKAR	**Makanchi Array**	**44.12**	**301**	P		**P**	**15 35 09.6**	**-0.6**
	1.3nm,0.8s,baz=83,slow=9.9,SNR=11 1.3nm,0.8s							
KURBB	**Kurchatov Arra**	**45.77**	**307**	P		**P**	**15 35 23.4**	**+0.2**
	3.8nm,0.6s,baz=80,slow=8.5,SNR=23 3.8nm,0.6s							
ILAR	**Eielson Array**	**47.20**	**33**	P		**P**	**15 35 33.6**	**-0.7**
	0.3nm,0.8s,baz=268,slow=9.0,SNR=4.3 0.3nm,0.8s							
BVAR	**Borovoye Array**	**50.16**	**311**	P		**P**	**15 35 57.9**	**+0.6**
	1.1nm,0.7s,baz=77,slow=9.7,SNR=2.4 1.1nm,0.7s							
DLBC	**Dease Lake**	**56.35**	**39**	LR		LR	16 00 53.6	
	comp=Z,13nm,20.3s,baz=286,slow=36							
WRA	**Warramunga Arr**	**59.17**	**189**	P		**P**	**15 37 04.2**	**+1.4**
	0.4nm,0.8s,baz=6.8,slow=6.9,SNR=4.6 0.4nm,0.8s							
ASAR	**Alice Springs**	**62.90**	**189**	P		P	15 37 34.2	+6.1
	0.3nm,0.8s,baz=14,slow=7.2,SNR=3.1							
HFS	**Hagfors**	**72.79**	**336**	P		**P**	**15 38 30.4**	**+0.3**
	3.0nm,0.9s,baz=28,slow=6.5,SNR=2.0 3.0nm,0.9s							

SOME ***13*** *15:28:45.6, 40˚.40N×71˚.47E, h5km*
NNC ***13*** *15:28:46.7±5.9, 40˚.27N×71˚.02E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=43.7km s-min=16.2km az=13.0*
KRNET ***13*** *15:28:47.7±0.1, 40˚.47N×71˚.47E, h16km, mb2.8*
ISU ***13*** *15:28:54, 40˚.48N×71˚.40E, h30km*

ISC 13 15:28:46.9±0.8, 40˚.48N±0˚.02×71˚.49E±0˚.02, h10km, n36, σ1s39/63, 21C-10D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FRG	**Fergana**	**0.25**	**115**	S		**Sb**	**15 29 00.4**	**+2.4**
MINT	**Mingtut**	**0.39**	**268**	P		**Pb**	**15 28 55.4**	**-0.5**
MINT				S		**Sb**	**15 29 01.3**	**-0.7**
KSNS	**Kasansay**	**0.68**	**2**	P		**Pn**	**15 29 05.6**	**+3.0**
KSNS				S		**Sn**	**15 29 15.7**	**+2.4**
CHDK	**Chadak**	**0.74**	**312**	P		**Pb**	**15 29 03.2**	**-0.4**
CHDK				S		**Sb**	**15 29 12.8**	**+0.6**
TSTA	**Tashata**	**0.76**	**82**	P		**Pn**	**15 29 03.8**	**+0.1**
TSTA				S		**Sn**	**15 29 16.0**	**+0.7**
OHH	**Osh**	**0.99**	**87**	⇓*i*P		**Pn**	**15 29 06.8**	**-0.1**
OHH				⇓*i*S		**Sn**	**15 29 20.5**	**-0.5**
DRK	**Karamyk**	**1.03**	**166**	⇓*i*P		**Pn**	**15 29 07.2**	**-0.5**
DRK				⇓*i*S		**Sb**	**15 29 21.1**	**+0.5**
TRKS	**Terek-Say**	**1.08**	**346**	⇑*i*P		**Pg**	**15 29 07.1**	**-0.6**
TRKS				⇑*i*S		**Sb**	**15 29 21.6**	**-0.4**
ARK	**Arkit**	**1.36**	**15**	⇓*i*P		**Pg**	**15 29 13.7**	**+0.6**
ARK				⇓*i*S		**Sg**	**15 29 32.7**	**+1.9**
ARSB	**Arslanbob**	**1.41**	**53**	⇑*i*P		**Pg**	**15 29 14.6**	**+0.6**
ARSB				⇑*i*S		**Sg**	**15 29 34.2**	**+1.9**
CHMG	**Chimgan**	**1.55**	**314**	P		**Pg**	**15 29 16.7**	**+0.1**
CHMG				S		**Sg**	**15 29 38.2**	**+1.6**
SFK	**Sufi-Kurgan**	**1.61**	**106**	⇑*i*P		**Pg**	**15 29 18.1**	**+0.3**
SFK				⇑*i*S		**Sg**	**15 29 40.1**	**+1.3**
CHRV	**Charvak**	**1.64**	**315**	P		**Pg**	**15 29 18.2**	**-0.2**
CHRV				S		**Sg**	**15 29 40.8**	**+1.1**
GAR	**Garm**	**1.73**	**212**	⇑*i*P		**Pg**	**15 29 19.6**	**-0.5**
GAR				⇑*i*S		**Sg**	**15 29 42.8**	**+0.2**
TVKS	**Tavaksay**	**1.77**	**309**	P		**Pg**	**15 29 20.5**	**-0.3**
TVKS				S		**Sg**	**15 29 44.5**	**+0.8**
SALK	**Salom-Alik**	**1.82**	**76**	⇓*i*P		**Pg**	**15 29 21.7**	**-0.1**
SALK				⇓*i*S		**Sg**	**15 29 46.5**	**+1.1**
NZBK	**Nazarbek**	**1.94**	**293**	S		**Sg**	**15 29 51.8**	**+2.4**
IUG	**Iuzhnay** 77nm,0.3s	**1.99**	**327**	Pg		**Pg**	**15 29 24.6**	**-0.5**
IUG					Lg	Lg	15 29 52.9	
	56nm,0.3s							
IUG	**Iuzhnay** 77nm,0.3s	**1.99**	**327**	*e*P		**Pg**	**15 29 24.6**	**-0.5**
IUG				*e*S		**Sg**	**15 29 52.8**	**+1.9**
	56nm,0.3s							
MNAS	**Manas**	**2.15**	**21**	⇑*i*P		**Pg**	**15 29 26.8**	**-1.2**
MNAS				⇑*i*S		**Sg**	**15 29 55.5**	**-0.3**
ARLS	**Aral**	**2.55**	**56**	⇓*i*P		**Pb**	**15 29 32.3**	**-0.5**
ARLS				⇓*i*S		**Sb**	**15 30 04.8**	**+0.6**
CHGR	**Chuyangaron**	**2.56**	**225**	⇑*i*P		**Pb**	**15 29 32.1**	**-0.9**
CHGR				⇑*i*S		**Sb**	**15 30 04.4**	**-0.2**
MRKS	**Merke** 3.9nm,0.7s	**2.61**	**29**	Pg		**Pg**	**15 29 35.9**	**-1.0**
MRKS					Lg	Lg	15 30 12.0	
	10nm,0.5s							
MRKS	**Merke** 1.6nm,0.3s	**2.61**	**29**	*e*P		**Pg**	**15 29 35.9**	**-1.0**
MRKS				*e*S		**Sg**	**15 30 12.0**	**+1.3**
	24nm,0.3s							
KK31	**Karatay Array**	**2.72**	**345**	⇑Pg		**Pg**	**15 29 37.3**	**-1.7**
	6.2nm,0.5s,baz=172,slow=18,SNR=7.8							
KK31				⇑Lg		Lg	15 30 15.6	
	2.7nm,0.2s,baz=150,slow=26,SNR=6.4							
EKS2	**Erkin-Say**	**2.77**	**38**	⇑*i*P		**Pb**	**15 29 35.6**	**-1.0**
EKS2				⇑*i*S		**Sb**	**15 30 10.3**	**-0.4**
BRLS	**Boroldoy** 6.5nm,0.6s	**2.83**	**335**	Pg		**Pb**	**15 29 36.3**	**-1.2**
BRLS					Lg	Lg	15 30 11.9	
	8.6nm,0.4s							
BRLS	**Boroldoy** 6.5nm,0.6s	**2.83**	**335**	*e*P		**Pb**	**15 29 35.8**	**-1.7**
BRLS				*e*S		**Sb**	**15 30 11.9**	**-0.3**
	9.6nm,0.3s							
UCH	**Uchtor**	**2.87**	**52**	⇑*i*P		**Pb**	**15 29 37.0**	**-1.5**
UCH				⇑*i*S		**Sb**	**15 30 13.2**	**-0.6**
AAK	**Ala-Archa** 1.4nm,0.8s	**3.12**	**45**	⇑Pg		**Pg**	**15 29 49.7**	**+3.0**
AAK				⇑Sn		**Sg**	**15 30 27.3**	**+0.2**
	1.3nm,0.5s							
AAK				⇑Lg		Lg	15 30 37.9	
	3.6nm,0.6s							
KST	**Kastek** 1.2nm,0.3s	**4.21**	**51**	Pg		**Pg**	**15 30 06.3**	**-1.3**
KST					Lg	Lg	15 31 04.2	
	5.2nm,0.9s							
KST	**Kastek** 0.9nm,0.1s	**4.21**	**51**	*e*P		**Pg**	**15 30 06.1**	**-1.5**
KST				*e*S		**Sg**	**15 31 03.4**	**+1.2**
	5.1nm,0.4s							
KRBS	**Karabastau** 1.0nm,0.8s	**4.47**	**43**	Pg		**Pg**	**15 30 09.6**	**-3.0**
KRBS					Lg	Lg	15 31 09.8	
	4.7nm,0.9s							
KRBS	**Karabastau** 1.0nm,0.8s	**4.47**	**43**	*e*P		**Pg**	**15 30 09.6**	**-3.0**
KRBS				*e*S		**Sg**	**15 31 09.8**	**-0.8**
	4.7nm,0.9s							
KTBS	**Karatobe** 0.6nm,0.9s	**5.04**	**48**	Pg		**Pg**	**15 30 20.5**	**-2.8**
KTBS					Lg	Lg	15 31 28.5	
	1.7nm,1.0s							
KTBS	**Karatobe** 0.6nm,0.6s	**5.04**	**48**	*e*P		**Pg**	**15 30 20.5**	**-2.8**
KTBS				*e*S		**Sg**	**15 31 28.5**	**0.0**
	1.7nm,0.5s							

IDC ***13*** *15:39:52.5±1.6, 55˚.47S×156˚.64E, h0km, mb4.1/3, mbtmp4.1/3, MS3.4/11, Error ellipse: s-maj=95.5km s-min=41.1km az=44.0*

ISC 13 15:39:55.3±1.7, 54˚.8S±0˚.6×157˚.7E±0˚.6, h10km, n25, σ1s43/7, mb4.0/3, MS3.4/11, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VNDA	**Vanda**	**22.91**	**178**	LR		LR	15 51 40.3	
	comp=Z,67nm,20.2s,baz=342,slow=32							
STKA	**Stephens Creek**	**25.56**	**327**	LR		LR	15 54 45.0	
	comp=Z,97nm,18.6s,baz=200,slow=34							
ASAR	**Alice Springs**	**35.74**	**321**	P		**P**	**15 46 54.8**	**+0.6**
	5.6nm,0.9s,baz=160,slow=8.6,SNR=27							
ASAR					LR	LR	16 00 03.4	
	comp=Z,70nm,20.6s,baz=134,slow=34 5.6nm,0.9s							
WRA	**Warramunga Arr**	**39.01**	**324**	P		**P**	**15 47 21.2**	**-0.7**
	1.8nm,0.9s,baz=155,slow=7.1,SNR=9.0 1.8nm,0.9s							
RAR	**Rarotonga**	**46.24**	**61**	LR		LR	16 04 30.0	
	comp=Z,52nm,20.0s,baz=290,slow=31							
JAY	**Jayapura**	**53.88**	**339**	LR		LR	16 11 04.6	
	comp=Z,36nm,18.5s,baz=261,slow=34							
SIJI	**Sorong**	**57.90**	**328**	LR		LR	16 16 22.4	
	comp=Z,27nm,18.6s,baz=56,slow=38							
KAPI	**Kappang**	**58.25**	**314**	LR		LR	16 15 24.1	
	comp=Z,21nm,18.0s,baz=194,slow=36							
LEM	**Lembang**	**62.24**	**301**	LR		LR	16 14 00.1	
	comp=Z,42nm,20.2s,baz=179,slow=33							
H03S2	**Juan Fernandez**	**79.28**	**135**	T		T	17 19 13.5	
	baz=208,slow=74,SNR=582							
H03S1	**Juan Fernandez**	**79.28**	**135**	T		T	17 19 13.0	
	baz=208,slow=74,SNR=563							
H03S3	**Juan Fernandez**	**79.29**	**135**	T		T	17 19 14.2	
	baz=208,slow=74,SNR=580							
H03N3	**Juan Fernandez**	**79.61**	**135**	T		T	17 19 26.5	
	baz=216,slow=76,SNR=114							
H03N2	**Juan Fernandez**	**79.62**	**135**	T		T	17 19 31.0	
	baz=216,slow=76,SNR=87							
H03N1	**Juan Fernandez**	**79.62**	**135**	T		T	17 19 25.3	
	baz=216,slow=76,SNR=85							
H08S2	**Diego Garcia H**	**81.03**	**269**	T		T	17 21 56.6	
	baz=144,slow=76,SNR=43							
H08S1	**Diego Garcia H**	**81.05**	**269**	T		T	17 21 57.9	
	baz=144,slow=76,SNR=31							
H08S3	**Diego Garcia H**	**81.05**	**269**	T		T	17 21 57.7	
	baz=144,slow=76,SNR=109							
JCJ	**Chichijima**	**82.60**	**346**	LR		LR	16 29 13.9	
	comp=Z,76nm,18.1s,baz=154,slow=36							
CMAR	**Chiang Mai Arr**	**88.33**	**306**	P		**P**	**15 52 47.3**	**+0.3**
	0.6nm,0.7s,baz=170,slow=2.9,SNR=4.6							
CMAR					LR	LR	16 30 09.2	
	comp=Z,19nm,21.0s,baz=15,slow=34 0.6nm,0.7s							
PALK	**Pallekele**	**88.45**	**285**	LR		LR	16 30 38.1	
	comp=Z,25nm,18.1s,baz=136,slow=35							
KURBB	**Kurchatov Arra**	**123.96**	**311**	PKP		**PKPdf**	**15 58 50.1**	**-2.4**
	0.4nm,0.8s,baz=164,slow=1.8,SNR=4.1							
ILAR	**Eielson Array**	**126.53**	**26**	PKP		**PKiKP**	**15 58 58.1**	**+0.6**
	1.7nm,1.1s,baz=232,slow=4.0,SNR=7.6							
RES	**Resolute Bay**	**146.27**	**27**	PKPbc		**PKPbc**	**15 59 34.5**	**+0.2**
	1.8nm,1.0s,baz=268,slow=6.6,SNR=6.1							
AKASG	**Malin Array Be**	**149.11**	**284**	PKPbc		**PKPdf**	**15 59 39.5**	**+1.0**
	0.2nm,0.3s,baz=112,slow=1.9,SNR=1.3							

WEL 13 15:46:01.6±1.1, 31˚.5S±14˚.×17˚.9E±5˚.0, h500km, M4.0/8, mB4.0/9, ML4.2/9, MLv4.4/8, Mw(mB)3.0/5, Error ellipse: s-maj=66.6km s-min=10.0km az=103.0, confirmed, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WMGZ	**Waiomatatini S**	**6.46**	**187**	P		P	15 47 41.9	-0.4
HAZ	**Te Kaha**	**6.48**	**192**	P		P	15 47 42.5	0.0
HAZ				S		S	15 49 04.9	-0.2
PKGZ	**Pakihiroa**	**6.54**	**190**	P		P	15 47 43.7	+0.5
RUGZ	**Raukumara Rang**	**6.71**	**192**	P		P	15 47 44.7	-0.1
RUGZ				S		S	15 49 08.7	-0.8
PUZ	**Puketiti**	**6.72**	**188**	P		P	15 47 43.7	-1.2
PUZ				S		S	15 49 08.8	-0.8
TWGZ	**Tauwhareparae**	**6.86**	**190**	P		P	15 47 46.6	+0.3
TWGZ				S		S	15 49 13.3	+1.1
MWZ	**Matawai**	**7.09**	**192**	P		P	15 47 48.2	-0.4
MWZ				S		S	15 49 15.9	-0.4
URZ	**Urewera**	**7.10**	**195**	P		P	15 47 48.0	-0.7
URZ				S		S	15 49 16.3	-0.2
RAGZ	**Rawiri**	**7.27**	**193**	P		P	15 47 51.6	+1.2
MUGZ	**Murupara**	**7.39**	**197**	P		P	15 47 52.0	+0.4
RIGZ	**Rimuhau**	**7.41**	**190**	P		P	15 47 52.7	+0.8
RIGZ				S		S	15 49 23.3	+1.0
MTHZ	**Maungataniwha**	**7.73**	**195**	P		P	15 47 55.3	+0.1
MTHZ				S		S	15 49 29.5	+1.1
RAHZ	**Arahi**	**7.74**	**194**	P		P	15 47 55.8	+0.6
RAHZ				S		S	15 49 29.1	+0.6
NMHZ	**Naumai**	**7.97**	**195**	P		P	15 47 57.2	-0.4
BKZ	**Black Stump Fm**	**8.11**	**197**	P		P	15 47 57.7	-1.4
BKZ				S		S	15 49 35.0	-0.6
MCHZ	**McNeill Hill**	**8.33**	**195**	P		P	15 48 01.2	-0.1
KAHZ	**Kahuranaki**	**8.63**	**193**	P		P	15 48 04.4	-0.1
KAHZ				S		S	15 49 47.3	+2.0

TRN 13 15:51:35.7, 12.99N×59.13W, h52km, MD3.7, 1D, South-west of Barbuda., Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MCLT	**Moule a Chique**	**1.90**	**292**	*e*P		Pn	15 52 06.6	+0.9
MCLT				*e*S		Sn	15 52 30.5	+2.0
SLAC	**Saint Lucia, A**	**1.94**	**298**	*e*P		Pn	15 52 07.4	+1.2
SLAC				*e*S		Sn	15 52 30.6	+1.1
SLBI	**Saint Lucia, B**	**2.07**	**300**	*e*P		Pn	15 52 08.8	+0.8
SLBI				*e*S		Sn	15 52 34.3	+1.8
SVB	**Belmont**	**2.08**	**278**	*e*P		Pn	15 52 09.6	+1.4
SVB				*e*S		Sn	15 52 35.3	+2.3
GCMP	**Grenada, Carri**	**2.29**	**258**	*e*P		Pn	15 52 12.0	+1.0
BIM	**Bigot**	**2.42**	**309**	*e*P		Pn	15 52 13.9	+1.0
BIM				*e*S		Sn	15 52 43.2	+1.9
ILAM	**Ilet Lapin Mar**	**2.45**	**317**	*e*P		Pn	15 52 14.4	+1.2
ILAM				*e*S		Sn	15 52 41.8	-0.3
GRIC	**Isle de Caille**	**2.49**	**254**	*e*P		Pn	15 52 15.5	+1.7
GRSS	**Sisters**	**2.51**	**255**	*e*P		Pn	15 52 15.2	+1.1
GRSS				*e*S		Sn	15 52 44.6	+1.0
GRW	**Mount Saint Ca**	**2.60**	**252**	*e*P		Pn	15 52 18.5	+3.1
GRW				*e*S		Sn	15 52 47.5	+1.7
GRGR	**Grenville**	**2.60**	**251**	*e*P		Pn	15 52 16.8	+1.4
GRGR				*e*S		Sn	15 52 45.9	+0.1
SVN	**Savane Anatole**	**2.70**	**313**	*e*P		Pn	15 52 18.3	+1.6
SVN				*e*S		Sn	15 52 50.0	+1.7
GRFF	**Grenada Fort F**	**2.71**	**250**	*e*P		Pn	15 52 19.0	+2.2
GRFF				*e*S		Sn	15 52 48.9	+0.5
TRN	**Trinidad (W)**	**3.21**	**224**	*e*P		Pn	15 52 24.8	+1.1
DSLB	**Salisbury**	**3.30**	**318**	⇓*e*P		Pn	15 52 26.8	+2.0
DSLB				*e*S		Sn	15 53 03.6	+0.8
TBG	**Guadaloupe-3**	**3.75**	**320**	*e*P		Pn	15 52 33.2	+2.2
TBG				*e*S		Sn	15 53 14.8	+0.9
MMLZ	**Guadeloupe Bro**	**3.91**	**321**	*e*P		Pn	15 52 35.3	+2.1
MMLZ				*e*S		Sn	15 53 18.7	+0.8
DHSZ	**Broadband at M**	**4.14**	**322**	*e*S		Sn	15 53 23.1	-0.5
ANWB	**Willy Bob**	**5.31**	**332**	*e*S		Sn	15 53 51.7	-0.7

IDC ***13*** *16:18:59.8±1.4, 28˚.82S×177˚.51W, h66km±10km, mb3.8/10, mbtmp4.1/10, MS3.7/4, Error ellipse: s-maj=26.4km s-min=21.9km az=58.0*

ISC 13 16:18:58.2±0.6, 29.0S±0˚.1×177˚.3W±0˚.1, h50km, n39, σ2s29/27, mb4.2/12, MS3.6/3, 2C, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RAO	**Raoul Island**	**0.64**	**243**	LR		LR	16 18 59.9	
	comp=Z,216nm,20.3s,baz=156,slow=0.2							
RAO				P		**Pn**	**16 19 13.9**	**+2.8**
	3µm,0.3s,baz=83,slow=3.7,SNR=62							
RAO				S		**Sn**	**16 19 24.4**	**+4.0**
	27µm,0.3s,baz=111,slow=22,SNR=43							
URZ	**Urewera**	**10.39**	**205**	P		Pn	16 21 18.8	-5.6
	11nm,1.1s,baz=263,slow=5.7,SNR=15							
URZ				S		**Sn**	**16 23 13.0**	**-6.4**
	7.5nm,0.3s,baz=237,slow=20,SNR=11							
MSVF	**Nonsavu**	**11.97**	**338**	LR		LR	16 25 17.3	
	comp=Z,95nm,20.8s,baz=331,slow=32							
CTA	**Charters Tower**	**34.23**	**277**	LR		LR	16 37 46.4	
	comp=Z,65nm,18.2s,baz=70,slow=33							
ASAR	**Alice Springs**	**43.84**	**265**	P		**P**	**16 26 58.3**	**-1.4**
	1.0nm,0.4s,baz=105,slow=7.6,SNR=55							
ASAR				PcP		**PP**	**16 28 42.2**	**-0.2**
	0.4nm,0.6s,baz=98,slow=4.4,SNR=1.6							
ASAR					LR	LR	16 44 19.1	
	comp=Z,69nm,18.1s,baz=111,slow=35 1.0nm,0.4s							
WRA	**Warramunga Arr**	**44.70**	**270**	P		**P**	**16 27 05.1**	**-1.4**
	1.2nm,0.5s,baz=109,slow=8.0,SNR=12							
WRA				PcP		**PcP**	**16 28 47.1**	**-1.3**
	0.2nm,0.6s,baz=102,slow=3.2,SNR=1.1 1.2nm,0.5s							
QSPA	**South Pole Qui**	**61.15**	**180**	P		**P**	**16 29 09.0**	**+1.8**
	4.6nm,0.8s,baz=44,slow=1.3,SNR=20 4.6nm,0.8s							
MJAR	**Matsushiro Arr**	**77.43**	**325**	P		**P**	**16 30 45.3**	**-2.7**
	0.5nm,0.4s,baz=152,slow=5.7,SNR=4.3 0.5nm,0.4s							
TROLL	**Troll, Antarti**	**79.31**	**180**	P		**P**	**16 30 59.1**	**+0.9**
VNA3	**Neumayer Olymp**	**79.69**	**176**	⇑P		**P**	**16 31 01.4**	**+1.3**
	comp=Z,5.7nm,0.6s					

WDLM	**Western Deep L**	**1.52**	**261**	*e*P	Pn	16 20 29.8	+0.2
WDLM				*e*S	Sn	16 20 50.8	+0.6
WDLM				IAML		16 20 56.3	
	comp=Z,96nm,0.3s						
PRYS	**Parys**	**1.72**	**244**	*e*P	Pb	16 20 33.3	-0.3
PRYS				*e*S	Sg	16 20 56.7	+0.4
PRYS				IAML		16 21 02.2	
	comp=Z,101nm,0.6s						
SNKL	**Senekal, Frees**	**2.39**	**209**	*e*P	Pn	16 20 42.5	+1.0
SNKL				*e*S	Sn	16 21 13.3	+1.6
SNKL				IAML		16 21 20.0	
	comp=Z,60nm,0.3s						
LEPH	**Lephalale, Lim**	**2.60**	**333**	*e*P	Pn	16 20 45.0	+0.7
LEPH				*e*S	Sn	16 21 17.0	+0.3
LEPH				IAML		16 21 30.0	
	comp=Z,52nm,0.3s						
LBTB	**Lobatse**	**3.37**	**289**	*e*P	Pn	16 20 55.5	+0.6
LBTB				*e*S	Sn	16 21 35.7	0.0
LBTB				IAML		16 21 50.2	
	comp=Z,62nm,0.7s						
PMBG	**Pietermaritzbu**	**3.54**	**160**	*e*P	Pn	16 20 57.2	0.0
PMBG				*e*S	Sn	16 21 39.4	-0.5
PMBG				IAML		16 21 52.5	
	comp=Z,42nm,0.3s						
MAKGR	**Makgori**	**3.88**	**275**	*i* P	Pn	16 21 01.8	-0.2
MAKGR				*i* S	Sn	16 21 52.1	+3.6
MAKGR				IAML		16 22 11.1	
	comp=E,136nm,0.5s						
MUSN	**Musina, Limpop**	**3.94**	**10**	*e*P	Pn	16 21 04.4	+1.7
MUSN				*e*S	Sn	16 21 49.3	-0.5
MUSN				IAML		16 21 57.9	
	comp=N,19nm,0.8s						
LPHEP	**Lephephe**	**4.07**	**313**	*i* P	Pn	16 21 02.8	-1.8
LPHEP				*i* S	Sn	16 21 51.1	-1.9
LPHEP				IAML		16 22 11.7	
	comp=E,17nm,0.6s						
BOSA	**Boshof**	**4.18**	**234**	*e*P	Pn	16 21 07.1	+1.0
BOSA				*e*S	Sn	16 21 55.2	-0.6
BOSA				IAML		16 22 17.5	
	comp=Z,20nm,0.8s						
KSTD	**Kokstad**	**4.42**	**178**	*e*P	Pn	16 21 10.6	+1.2
KSTD				*e*S	Sn	16 22 01.0	-0.7
KSTD				IAML		16 22 25.1	
	comp=Z,12nm,0.3s						
KDWAN	**Kaudwane**	**4.91**	**304**	*i* P	Pn	16 21 14.6	-1.4
KDWAN				*i* S	Sn	16 22 13.1	-0.5
KDWAN				IAML		16 22 41.6	
	comp=E,29nm,0.8s						
BROLN	**Tlhalogang**	**5.31**	**342**	*i* P	Pn	16 21 16.4	-5.3
BROLN				IAML		16 22 56.2	
	comp=E,17nm,0.5s						
KHWEE	**KHWEE**	**5.38**	**321**	*i* P	Pn	16 21 18.1	-4.5
SOOWA	**Sowa**	**6.19**	**334**	*i* P	Pn	16 21 28.2	-5.5
SOOWA				*i* S	Sn	16 22 36.5	-8.8
SOOWA				IAML		16 23 23.8	
	comp=E,41nm,0.9s						
KGCAE	**Kacgae**	**7.10**	**296**	*i* P	Pn	16 21 42.9	-3.3
GRAF	**Camdeboo Natio**	**7.29**	**212**	*e*P	Pn	16 21 49.8	+1.1
GRAF				*e*S	Sn	16 23 09.2	-2.9
GRAF				IAML		16 23 23.3	
	comp=Z,2.6nm,0.4s						
UPI	**Upington**	**7.31**	**251**	*e*P	Pn	16 21 49.9	+0.9
UPI				*e*S	Sn	16 23 09.9	-2.9
UPI				IAML		16 23 52.0	
	comp=Z,5.3nm,0.8s						
BFON	**Badsfontein, M**	**7.33**	**219**	*e*P	Pn	16 21 51.2	+1.8
BFON				*e*S	Sn	16 23 10.2	-3.1
BFON				IAML		16 23 55.8	
	comp=Z,11nm,0.6s						
BRAK	**Brakfontein**	**7.78**	**223**	*e*P	Pn	16 21 57.3	+1.7
BRAK				*e*S	Sn	16 23 20.6	-3.9
BRAK				IAML		16 23 23.1	
	comp=Z,2.7nm,0.4s						
ROOI	**Rooidraai Farm**	**7.93**	**216**	*e*P	Pn	16 21 59.5	+1.9
ROOI				*e*S	Sn	16 23 24.9	-3.2
ROOI				IAML		16 23 28.4	
	comp=Z,2.4nm,0.4s						
GRAN	**Grantham**	**8.59**	**223**	*e*P	Pn	16 22 07.9	+1.3
GRAN				*e*S	Sn	16 23 39.9	-4.4
GRAN				IAML		16 23 53.0	
	comp=Z,2.4nm,0.6s						
FRAZ	**Fraserburg**	**8.83**	**228**	*e*P	Pn	16 22 11.0	+1.0
FRAZ				*e*S	Sn	16 23 46.3	-4.0
FRAZ				IAML		16 23 52.3	
	comp=Z,2.3nm,0.4s						
MERW	**Merweville**	**9.24**	**224**	*e*P	Pn	16 22 17.3	+1.7
MERW				*e*S	Sn	16 23 55.5	-4.8
MERW				IAML		16 24 12.7	
	comp=Z,2.3nm,0.4s						

*AZER **13** 16:20:23.5,38°.32N×44°.68E,h10km, ml2.5*
*TEH **13** 16:20:25.4,38°.43N×44°.55E,h10km±89km,ML2.5, Presumed earthquake*
*AFAD **13** 16:20:25.9,38°.38N×44°.42E,h5km±1km,ML2.6*
*ISK **13** 16:20:27.3,38°.42N×44°.60E,h8km,ML2.8/5*

ISC 13 16:20:25.7±1.1,**38°.41N**±0°.02×**44°.57E**±0°.02,**h8**km±10km, **n37,**σ1§**59**/53,**Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.52**	**299**	P	**Pg**	**16 20 34.9**	**-0.9**
OZAP				S	**Sg**	**16 20 41.4**	**-1.2**
OZAP				IAML		16 20 45.0	
	comp=E,471nm,0.8s						
ISHB	**Shabestar**	**0.83**	**98**	Pg	**Pg**	**16 20 41.0**	**-0.7**
YOVA	**Hakkari_Yksek**	**0.85**	**195**	P	**Pg**	**16 20 41.6**	**-0.5**
TVAN	**Van**	**0.92**	**278**	P	**Pg**	**16 20 41.8**	**-1.6**
TVAN				S	**Sg**	**16 20 55.5**	**+0.1**
TVAN				IAML		16 21 06.0	
	comp=N,199nm,0.6s						
IMRD	**Marand**	**0.94**	**71**	Pg	**Pg**	**16 20 43.7**	**-0.1**
VANB	**Van**	**0.94**	**282**	Pg	**Pn**	**16 20 45.9**	**+0.5**
VANB				Sg	**Sn**	**16 20 59.1**	**0.0**
MAKU	**Maku**	**0.95**	**5**	Pg	**Pg**	**16 20 42.9**	**-1.1**
VMUR	**Van-Muradiye**	**0.97**	**307**	P	**Pg**	**16 20 42.8**	**-1.5**
VMUR				S	**Sg**	**16 20 56.3**	**-0.7**
NAX	**Nakhchivan**	**1.05**	**43**	P	**Pg**	**16 20 45.6**	**-0.3**
NAX				S	**Sn**	**16 21 00.9**	**-0.8**
HAKT	**HAKKARI**	**1.09**	**219**	P	**Pg**	**16 20 45.1**	**-1.5**
HAKT	**HAKKARI**	**1.09**	**219**	P	**Pg**	**16 20 45.4**	**-1.2**
HAKT				S	**Sb**	**16 21 02.2**	**+0.8**
GEVA	**Gevas**	**1.19**	**266**	P	**Pb**	**16 20 46.3**	**-2.4**
GEVA				S	**Sb**	**16 21 02.0**	**-2.3**
ORD	**Ordubad**	**1.23**	**65**	P	**Pb**	**16 20 48.8**	**-0.4**
ORD				S	**Sn**	**16 21 07.1**	**+1.0**
SBZ	**Shahbuz**	**1.25**	**38**	P	**Pn**	**16 20 49.0**	**-0.6**
SBZ				S	**Sn**	**16 21 08.8**	**+2.3**
ITBZ	**Tabriz**	**1.25**	**98**	Pg	**Pn**	**16 20 48.9**	**-0.7**
DYDN	**Diyadin**	**1.32**	**329**	P	**Pn**	**16 20 50.5**	**-0.2**
HYR	**Heyderabad**	**1.32**	**9**	P	**Pg**	**16 20 52.3**	**+1.1**
HYR				S	**Sg**	**16 21 13.6**	**+5.2**
CUKT	**Cukurca**	**1.39**	**214**	Pn	**Pg**	**16 20 53.6**	**+1.3**
CUKT				Sn	**Sg**	**16 21 13.2**	**+2.8**
CUKT	**Cukurca**	**1.39**	**214**	P	**Pg**	**16 20 54.7**	**+2.4**
ADCV	**BITLIS_Adilcev**	**1.50**	**286**	P	**Pn**	**16 20 53.1**	**0.0**
IGDI	**IGDIR**	**1.50**	**345**	P	**Pb**	**16 20 54.2**	**+0.3**
IGDI	**IGDIR**	**1.50**	**345**	P	**Pg**	**16 20 54.5**	**0.0**
IGDI				S	**Sg**	**16 21 17.6**	**+3.5**
PERV	**Siirt/Pervari-**	**1.66**	**254**	P	**Pg**	**16 20 58.1**	**+0.5**
AGRB	**Hanur-Agry**	**1.69**	**314**	Pn	**Pb**	**16 20 57.0**	**-0.2**
AGRB				Sn	**Sg**	**16 21 20.6**	**+0.5**
DORK	**Agr/Tutak/Do**	**1.70**	**305**	P	**Pb**	**16 20 56.9**	**-0.4**
MLAZ	**Malazgirt-MUS**	**1.74**	**295**	Pn	**Pb**	**16 20 58.8**	**+0.8**
GNI	**Garni**	**1.74**	**4**	Pn	**Pb**	**16 20 58.5**	**+0.5**
KOTA	**Agri, Merkez-K**	**1.75**	**323**	P	**Pb**	**16 20 58.3**	**+0.2**
BLIS	**Bitlis-Merkez**	**1.93**	**271**	P	**Pb**	**16 21 00.7**	**-0.5**
SIRN	**Sirnak**	**1.93**	**242**	P	**Pb**	**16 21 02.2**	**+1.0**
IHRS	**Heris**	**1.95**	**92**	Pn	**Pb**	**16 21 01.6**	**+0.1**
SRTM	**Siirt_Merkez**	**2.13**	**259**	P	**Pb**	**16 21 04.7**	**+0.2**
GDB	**GEDABAY**	**2.48**	**21**	P	**Pb**	**16 21 08.5**	**-2.1**
GDB				S	**Sb**	**16 21 42.9**	**+1.5**
GANJ	**Ganja**	**2.61**	**31**	P	**Pb**	**16 21 11.8**	**-0.9**
GANJ				S	**Sb**	**16 21 43.6**	**-1.4**
GRMI	**Germi**	**2.63**	**80**	Pn	**Pb**	**16 21 10.9**	**-2.3**
YRD	**Yardimli**	**2.92**	**79**	P	**Pb**	**16 21 15.6**	**-2.5**
YRD				S	**Sb**	**16 21 50.8**	**-3.2**
LRK	**Lerik**	**2.97**	**84**	P	**Pb**	**16 21 19.4**	**+0.5**

*BER **13** 16:20:57.1±0.6,70°.92N×7°.04W,h10km±181km, ML3.0,*
Mw4.1,Confirmed Earthquake

ISC 13 16:20:44.0±0.9,**71°.64N**±0°.05×**6°.39W**±0°.06,**h10**km,**n12,** σ2§**17/19,4D,Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNE	**Jan Mayen East**	**0.90**	**224**	*i* P	**Pn**	**16 21 04.7**	**+2.0**
JNE				*e*S	**Sg**	**16 21 10.9**	**-2.0**
JNE				IAML		16 21 12.3	
	comp=Z,2μm,0.3s						
JNW	**Jan Mayen West**	**0.90**	**228**	*i* P	**Pn**	**16 21 05.3**	**+2.7**
JNW				*e*S	**Sg**	**16 21 11.9**	**-1.0**
JNW				IAML		16 21 12.2	
	comp=Z,2μm,0.3s						
JMIC	**Jan Mayen**	**0.95**	**227**	*i* P	**Pn**	**16 21 05.5**	**+2.1**
JMIC				*e*S	**Sg**	**16 21 12.4**	**-2.1**
JMIC				IAML		16 21 12.9	
	comp=Z,1μm,0.2s						
JMI	**Jan Mayen**	**1.04**	**228**	*i* P	**Pn**	**16 21 06.9**	**+2.3**
JMI				*e*S	**Sg**	**16 21 15.0**	**-2.5**
JMI				IAML		16 21 17.2	
	comp=Z,413nm,0.5s						
DBG	**Daneborg**	**4.86**	**310**	*e*P	**Pb**	**16 22 11.7**	**+2.6**
DBG				*e*S	**Sb**	**16 23 05.0**	**-2.4**
DBG	**Daneborg**	**4.86**	**310**	*i* P	**Pb**	**16 22 10.9**	**+1.9**
DBG				*i* S	**Sb**	**16 23 04.3**	**-3.1**
DAG	**Danmarks Havn**	**6.13**	**333**	*e*P	**Pb**	**16 22 32.2**	**+1.6**
DAG				*e*S	**Sb**	**16 23 42.3**	**-1.6**
DAG	**Danmarks Havn**	**6.13**	**333**	*i* P	**Pb**	**16 22 32.3**	**+1.6**
DAG				*i* S	**Sb**	**16 23 42.4**	**-1.6**
LOF	**Lofoten**	**7.70**	**107**	IAML		16 24 24.2	
	comp=Z,7.7nm,0.7s						
LOF				*e*		16 26 02.3	
HSPB	**Hornsund (broa**	**7.95**	**38**	*e*P	**Pb**	**16 23 01.0**	**-0.6**
VAGH	**Vaagaholmen**	**8.53**	**116**	*e*S	**Sn**	**16 24 22.2**	**-1.2**
VAGH				IAML		16 24 57.7	
	comp=Z,6.4nm,0.7s						
VAGH				*e*		16 26 16.2	
LEIR	**Leirfjorden**	**8.93**	**119**	*e*S	**Sn**	**16 24 32.6**	**-0.5**
LEIR				IAML		16 24 46.0	
	comp=Z,3.2nm,0.6s						
LEIR				*e*		16 26 28.8	

*JSN **13** 16:48:44.1±1.1,19°.18N×81°.11W,h0km±999km,MD4.2, Presumed earthquake*
*SSNC **13** 16:48:44.9±2.0,18°.80N×81°.38W,h25km±38km,MD3.6, ML2.9,Presumed earthquake*

ISC 13 16:48:45.5±3.4,**18°.8N**±0°.1×**81°.3W**±0°.2,**h35**km,**n11,** σ1§**88/18,1D,North of Honduras**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCCY	**Blossom Villag**	**1.42**	**54**	*e*P	**Pn**	**16 49 07.8**	**-1.0**
LCCY				*e*S	**Sn**	**16 49 25.1**	**-1.2**
LCCY				IAML		16 49 29.6	
	comp=N,161nm,0.2s						
LCCY				IAML		16 49 35.2	
	comp=E,190nm,0.7s						
CBCY	**The Bluff, Cay**	**1.71**	**58**	*e*P	**Pn**	**16 49 11.2**	**-1.6**
CBCY				*e*S	**Sn**	**16 49 31.5**	**-2.0**
CBCY				IAML		16 49 38.4	
	comp=N,97nm,0.2s						
CBCY				IAML		16 49 39.8	
	comp=E,144nm,0.3s						
MGV	**Manicaragua**	**3.48**	**21**	*e*P	**Pn**	**16 49 36.1**	**-1.0**
MGV				*e*S	**Sn**	**16 50 16.2**	**-0.9**
MTDJ	**Mount Denham**	**3.63**	**99**	*e*P	**Pn**	**16 49 39.1**	**-0.2**
MTDJ				*e*S	**Sn**	**16 50 19.2**	**-1.8**
CAIB	**Caibarien**	**4.02**	**25**	*e*P	**Pn**	**16 49 45.3**	**+0.7**
CAIB				*e*S	**Sn**	**16 50 31.1**	**+0.8**
CCCC	**Cccc**	**4.07**	**54**	*e*P	**Pn**	**16 49 49.2**	**+4.0**
CCCC				*e*S	Sn	16 50 40.6	+8.9
LMGC	**Las Mercedes**	**4.24**	**73**	*e*P	**Pn**	**16 49 49.1**	**+1.5**
LMGC				*e*S	**Sn**	**16 50 35.6**	**-0.2**
LMGC				*e*Sg		16 50 38.5	
STH	**Stony Hill**	**4.33**	**99**	*i* P	**Pn**	**16 49 49.1**	**+0.2**
CHIV	**Chivírico**	**4.75**	**75**	*e*P	**Pn**	**16 49 57.2**	**+2.5**
CHIV				*e*S	**Sn**	**16 50 47.0**	**-1.5**
YAR	**Yar**	**4.90**	**71**	*e*P	**Pn**	**16 49 57.0**	**+0.3**
QMBU	**Quimbuelo**	**6.27**	**77**	*e*P	**Pn**	**16 50 18.9**	**+3.3**

*JMA **13** 16:56:29.3±0.2,25°.N±2°.×123°.1E±0°.6,h147km±2km, MV3.5/18,NW OFF ISHIGAKIJIMA IS*
*IDC **13** 16:56:31.6±3.4,25°.40N×123°.48E,h189km±38km,mb3.2/9, mbtmp3.7/11,Error ellipse: s-maj=35.8km s-min=12.9km az=63.0*

ISC 13 16:56:27.3±0.8,**25°.28N**±0°.09×**123°.06E**±0°.07,**h142**km±9km, **n22,**σ1§**28/33,mb3.6/9,Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.82**	**183**	P	**Pn**	**16 56 50.6**	**+0.8**
YOJ				S	**Sn**	**16 57 06.6**	**-0.3**
JYNG	**Yonagunijimaku**	**0.83**	**187**	P	**Pn**	**16 56 50.7**	**+0.8**
JYNG				S	**Sn**	**16 57 06.9**	**-0.2**
IRIF	**Iriomote-Funau**	**1.12**	**147**	*i* P	**Pn**	**16 56 52.6**	**+0.2**
JISG	**Ishigakijimahi**	**1.33**	**121**	*i* P	**Pn**	**16 56 55.3**	**+0.8**
JISG				S	**Sn**	**16 57 14.8**	**-0.4**
JIJ	**Ishigaki jima**	**1.34**	**132**	*i* P	**Pn**	**16 56 55.0**	**+0.4**
JIJ				S	**Sn**	**16 57 13.7**	**-1.7**
JKRS	**Kuro-shima**	**1.35**	**140**	*i* P	**Pn**	**16 56 55.3**	**+0.6**
JKRS				S	**Sn**	**16 57 14.4**	**-1.2**
HATJ	**Hateruma jima**	**1.40**	**151**	P	**Pn**	**16 56 55.5**	**+0.3**
HATJ				eS	**Sn**	**16 57 15.3**	**-1.1**
JTJ	**Tarama**	**1.62**	**113**	P	**Pn**	**16 56 58.8**	**+1.2**
JTJ				S	**Sn**	**16 57 20.8**	**0.0**
JIKM	**Ikemajima**	**2.02**	**100**	P	**Pn**	**16 57 04.3**	**+2.2**
JIKM				S	**Sn**	**16 57 29.9**	**+1.0**
JMJ2	**Miyako jima3**	**2.13**	**104**	*e*P	**Pn**	**16 57 05.2**	**+1.8**
JMJ2				S	**Sn**	**16 57 31.8**	**+0.6**
JOGS	**Gusukube**	**2.19**	**103**	P	**Pn**	**16 57 06.4**	**+2.2**
JOGS				S	**Sn**	**16 57 33.7**	**+1.1**
JOW	**Kunigami**	**4.94**	**71**	P	**Pn**	**16 57 40.5**	**+0.7**
	7.2nm,0.3s,baz=272,slow=16,SNR=26						
JOW				S	**Sn**	**16 58 33.5**	**-2.8**
	7.4nm,0.6s,baz=274,slow=19,SNR=1.4						
KSRS	**Korea Array**	**12.83**	**18**	P	**Pn**	**16 59 23.4**	**-1.0**
	0.5nm,0.8s,baz=208,slow=13,SNR=1.5						
SONM	**Songino Array**	**26.08**	**334**	P	**P**	**17 01 48.4**	**+0.7**
	0.3nm,0.5s,baz=146,slow=9.0,SNR=2.4						
	0.3nm,0.5s						
PETK	**Petropavlovsk-**	**38.01**	**34**	P	**P**	**17 03 28.8**	**-2.7**
	5.0nm,1.0s,baz=250,slow=9.5,SNR=1.2						
	5.0nm,1.0s						
MKAR	**Makanchi Array**	**38.77**	**314**	P	**P**	**17 03 39.2**	**+1.4**
	0.7nm,0.5s,baz=99,slow=10,SNR=16						
	0.7nm,0.5s						
ZALV	**Zalesovo Beam**	**40.28**	**326**	P	**P**	**17 03 50.5**	**+0.3**
	0.6nm,0.5s,baz=104,slow=10.0,SNR=2.9						
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**42.39**	**319**	P	**P**	**17 04 08.7**	**+1.2**
	0.5nm,0.5s,baz=116,slow=7.8,SNR=3.2						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**46.27**	**165**	P	**P**	**17 04 38.1**	**-0.5**
	0.9nm,0.5s,baz=347,slow=8.7,SNR=22						
	0.9nm,0.5s						
BVAR	**Borovoye Array**	**47.92**	**320**	P	**P**	**17 04 52.0**	**+0.8**
	0.3nm,0.4s,baz=113,slow=6.7,SNR=3.7						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**49.78**	**167**	P	**P**	**17 05 05.5**	**0.0**
	0.4nm,0.7s,baz=355,slow=7.2,SNR=8.0						
	0.4nm,0.7s						
KBZ	**Khabaz**	**66.13**	**309**	P	**P**	**17 07 00.2**	**+1.0**
	1.1nm,0.8s,baz=63,slow=2.3,SNR=3.6						
	1.1nm,0.8s						

IDC 13 17:07:39.0±3.1,**21°.38N**×**143°.16E,h501**km±107km, **mb2.4/3,mbtmp3.5/4,Error ellipse: s-maj=352.6km s-min=24.1km az=75.0,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.76**	**351**	P	P	17 09 13.1	0.0
	11nm,0.4s,baz=309,slow=19,SNR=1.3						
WRA	**Warramunga Arr**	**41.97**	**192**	P	P	17 14 45.6	0.0
	0.3nm,0.5s,baz=14,slow=8.5,SNR=15						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**45.67**	**192**	P	P	17 15 14.2	-0.2
	0.3nm,0.5s,baz=13,slow=6.4,SNR=9.1						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**54.90**	**313**	P	P	17 16 21.8	-0.1
	0.2nm,0.6s,baz=101,slow=7.5,SNR=1.9						
	0.2nm,0.6s						

*IDC **13** 17:12:04.5±2.5,33°.09N×139°.70E,h14km±21km,mb3.1/2, mbtmp3.3/4,ML3.0/2,Error ellipse: s-maj=32.0km s-min=10.9km az=159.0*
*JMA **13** 17:12:05.5±0.1,33°.3N±0°.3×14°.0E±°,h20km±2km, MV3.3/30,NEAR HACHIJOJIMA ISLAND*

ISC 13 17:12:05.6±0.9,**33°.30N**±0°.05×**139°.7E**±0°.1,**h30**km±8km, **n21,**σ1§**08/21,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**0.20**	**157**	Pn	**Pb**	**17 12 11.7**	**-0.1**
	1μm,0.3s,baz=108,slow=24,SNR=627						
JHJ				Sn	**Sb**	**17 12 16.4**	**+0.4**
	baz=174,slow=19						
JHJ2	**Mitsune**	**0.21**	**151**	P	**Pb**	**17 12 11.7**	**-0.3**
JHJ2				*e*S	**Sb**	**17 12 16.2**	**-0.1**
JHCJ	**Hachijojimakas**	**0.24**	**159**	*i* P	**Pb**	**17 12 11.8**	**-0.5**
JHCJ				*e*S	**Sb**	**17 12 16.1**	**-0.8**
JMKN	**Mikurajimanish**	**0.60**	**352**	P	**Pn**	**17 12 17.6**	**-0.4**
JMKN				*e*S	**Sn**	**17 12 26.4**	**-0.2**
JMYK	**Miyake Tsubota**	**0.77**	**351**	*e*P	**Pn**	**17 12 20.2**	**-0.2**
JMYK				S	**Sn**	**17 12 32.1**	**+1.3**
JAOM	**Aogashimamukai**	**0.83**	**176**	*e*P	**Pn**	**17 12 21.2**	**-0.1**
JKO	**Kozu shima**	**1.00**	**333**	P	**Pb**	**17 12 23.5**	**-0.9**
JTHY	**Toshimahigashi**	**1.27**	**345**	P	**Pb**	**17 12 28.3**	**-0.5**
JIM2	**Oshima 3**	**1.43**	**351**	*e*P	**Pb**	**17 12 30.8**	**-0.8**
JIZS	**Izushimoda**	**1.57**	**335**	P	**Pb**	**17 12 32.4**	**-1.5**
JIZS				*e*S	**Sn**	**17 12 51.6**	**+1.0**
KTJ3	**Kamata3**	**1.71**	**343**	*e*P	**Pb**	**17 12 34.8**	**-1.5**
MJAR	**Matsushiro Arr**	**3.46**	**340**	Pn	**Pn**	**17 13 00.3**	**+3.0**
	0.2nm,0.3s,baz=156,slow=13,SNR=20						
	5.2nm,0.7s						
JNU	**Nakatsue**	**7.39**	**271**	Pn	**Pn**	**17 13 52.0**	**+0.6**
	0.5nm,0.3s,baz=110,slow=6.8,SNR=8.2						
	5.2nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**27.74**	**112**	T	T	17 46 55.9	
	baz=305,slow=75,SNR=29						
H11N1	**WAKE ISLAND Hy**	**27.75**	**112**	T	T	17 46 56.3	
	baz=305,slow=75,SNR=27						
H11N3	**WAKE ISLAND Hy**	**27.76**	**112**	T	T	17 46 53.0	
	baz=305,slow=75,SNR=36						
H11S3	**WAKE ISLAND Hy**	**28.30**	**115**	T	T	17 47 39.6	
	baz=307,slow=75,SNR=21						
H11S1	**WAKE ISLAND Hy**	**28.30**	**115**	T	T	17 47 40.0	
	baz=307,slow=75,SNR=24						
H11S2	**WAKE ISLAND Hy**	**28.32**	**115**	T	T	17 47 42.5	
	baz=307,slow=75,SNR=18						
WRA	**Warramunga Arr**	**53.19**	**186**	P	**P**	**17 21 20.7**	**-0.2**
	0.2nm,0.5s,baz=11,slow=6.7,SNR=4.6						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**56.92**	**186**	P	**P**	**17 21 47.4**	**-0.4**
	0.2nm,0.7s,baz=7.6,slow=6.9,SNR=1.9						
	0.2nm,0.7s						

*ISN **13** 17:20:27.8±1.4,34°.39N×45°.82E,h23km±9km,ML3.0, Presumed earthquake*
*TEH **13** 17:20:29.6,34°.21N×46°.01E,h5km,ML2.9,Presumed earthquake*

ISC 13 17:20:27.9±1.4,**34°.33N**±0°.05×**45°.85E**±0°.05,**h11**km±11km, **n11,**σ1§**44/16,Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLG1	**Gilan-e-Gharb**	**0.22**	**167**	Pg	**Pg**	**17 20 32.4**	**-0.1**
IDHR	**Dehrash**	**0.58**	**50**	Pg	**Pn**	**17 20 41.6**	**-0.7**
IDHR				Sg	**Sn**	**17 20 50.9**	**-1.0**
IGHG	**Ghaleghazi**	**0.59**	**90**	Pg	**Pg**	**17 20 38.7**	**-0.7**
KCHF	**Cheshme Sefid,**	**0.99**	**93**	Pg	**Pn**	**17 20 47.5**	**-0.4**
IBDR	**Badra**	**1.22**	**177**	*e*Pg	**Pb**	**17 20 51.0**	**+0.1**
IBDR				*e*Sg	**Sg**	**17 21 07.5**	**+0.4**
IBDR				AML	AML	17 21 11.0	
	comp=E,273nm,0.4s						
IBDR				AML	AML	17 21 11.1	
	comp=N,211nm,0.5s						
SNQR	**Sonqor, Kerman**	**1.56**	**70**	Pg	**Pg**	**17 21 00.8**	**+3.0**
BHD	**Baghdad**	**1.62**	**230**	*e*Pn	**Pb**	**17 20 58.0**	**+0.3**
BHD				*e*Sn	**Sn**	**17 21 18.5**	**+1.3**
BHD				AML	AML	17 21 20.3	
	comp=E,235nm,0.5s						
IKRK	**Kirkuk**	**1.64**	**311**	*e*Pn	**Pn**	**17 20 56.1**	**-0.6**
IKRK				*e*Sn	**Sn**	**17 21 17.0**	**-0.8**
IKRK				AML	AML	17 21 22.0	
	comp=N,278nm,0.4s						
IKRK				AML	AML	17 21 27.2	
	comp=E,227nm,0.6s						
IBZA	**Bozab**	**1.67**	**85**	Pg	**Pg**	**17 21 01.9**	**+2.0**
IALM	**Almabolaq**	**1.98**	**74**	Pn	**Pg**	**17 21 05.8**	**-0.2**
RAFI	**Al-Rafai**	**2.61**	**175**	*e*Pn	**Pb**	**17 21 12.5**	**-2.1**
RAFI				*e*Sn	**Sn**	**17 21 43.0**	**+1.3**

*IDC **13** 17:20:33.8±7.5,21°.76N×143°.69E,h0km,mb3.5/5, mbtmp3.5/5,MS2.8/1,Error ellipse: s-maj=308.1km s-min=23.1km az=77.0*

ISC 13 17:20:36.7±10.0,**21°.9N**±0°.6×**14°.4E**±°,**h35**km,**n7,**σ0§**62/6, mb3.6/5,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res

RLS S Sb 17 26 44.4 0.0
RLS Riolos of Patr 0.79 36 P Pb 17 26 33.9 -0.4
RLS S Sb 17 26 44.8 +0.3
KFL1 Kefalonia,Entr 0.80 338 P Pb 17 26 34.3 -0.1
ARG2 Argostoli 0.81 338 P Pb 17 26 33.9 -0.7
ARG2 S Sn 17 26 46.3 -0.6
ARG2 Argostoli 0.81 338 P Pb 17 26 34.4 -0.3
ARG2 S Sb 17 26 45.8 +0.6
PYL1 Pylos 0.83 128 P Pb 17 26 35.0 +0.1
SMHA Samh 0.84 348 P Pb 17 26 34.8 -0.4
DRO Drossia 0.85 51 P Pb 17 26 34.8 -0.5
DRO S Sb 17 26 46.8 +0.6
DRO Drossia 0.85 51 P Pb 17 26 34.6 -0.6
DRO S Sb 17 26 47.2 +1.0
AXS Araxos 0.87 27 P Pb 17 26 35.5 0.0
AXS S Sn 17 26 48.0 -0.2
PYL PYLOS 0.87 127 P Pb 17 26 36.3 +0.7
ITM Ithomi 0.87 106 P Pb 17 26 35.4 -0.2
ITM S Sn 17 26 49.0 +0.6
ITM Ithomi 0.87 106 P Pb 17 26 35.5 -0.2
MTHA Methoni 0.90 132 P Pn 17 26 37.8 +1.2
DMLN Damoulianata-K 0.91 334 P Pb 17 26 36.5 +0.2
DMLN S Sn 17 26 50.6 +1.3
DMLN Damoulianata-K 0.91 334 P Pb 17 26 36.4 +0.2
MSL1 Messolongi 1.04 24 P Pb 17 26 40.0 +1.4
PATG Patra B 1.06 39 P Pb 17 26 39.8 +1.0
FSK Fiskardo 1.06 347 P Pb 17 26 39.1 +0.2
PATC Patra C 1.10 39 P Pb 17 26 40.5 +1.0
UPR University Cam 1.12 40 P Pb 17 26 41.0 +1.1
KLV1 Kalavrita 1.15 58 P Pn 17 26 40.4 +0.2
AGRP Agrapidokambos 1.18 34 P Pb 17 26 41.7 +0.8
KLV Kalavryta, Ach 1.19 58 P Pn 17 26 40.3 -0.4
EVGI Lefkada Island 1.21 352 P Pb 17 26 41.5 +0.1
ZIRI Ziria, Aigiali 1.22 44 P Pb 17 26 42.4 +0.7
MALA Malamata, Dori 1.25 39 P Pb 17 26 42.8 +0.7
AGEO AgiosGiorgios, 1.26 48 P Pb 17 26 42.4 +0.1
GUR Goura 1.27 66 P Pn 17 26 41.8 -0.1
DRAG Dragano-Lefkad 1.28 349 P Pn 17 26 42.1 +0.2
EFP Efpalio 1.29 39 P Pb 17 26 43.1 +0.3
NYDR Nydri-Lefkada 1.29 354 P Pb 17 26 42.8 -0.1
NYDR Nydri-Lefkada 1.29 354 P Pb 17 26 43.4 +0.5
PVO Paravola 1.30 23 P Pb 17 26 42.9 0.0
PVO S Sb 17 27 01.7 +2.6
PVO Paravola 1.30 23 P Pb 17 26 43.6 +0.7
MG00 Magoula, Dorid 1.30 40 P Pb 17 26 43.6 +0.6
TRIZ Trizonia 1.33 45 P Pb 17 26 44.0 +0.4
SERG Sergoula 1.36 43 P Pb 17 26 44.1 +0.1
SERG Sergoula 1.36 43 P Pb 17 26 44.4 +0.4
LKD2 Lefkada island 1.37 353 P Pn 17 26 43.6 +0.3
LKD2 Lefkada island 1.37 353 P Pb 17 26 44.6 +0.4
KALE Kalithea 1.39 46 P Pb 17 26 44.4 +0.9
TSLK Tsoukalades, L 1.41 353 P Pb 17 26 45.8 +0.9
TSLK Tsoukalades, L 1.41 353 P Pb 17 26 45.0 +0.2
ANX Ano Chora 1.43 35 P Pb 17 26 46.9 +1.6
ANX Ano Chora 1.43 35 P Pb 17 26 45.1 -0.1
ARS1 Argos 1.49 81 P Pb 17 26 46.6 +0.4
AMPL Ampelaki 1.52 10 P Pn 17 26 46.1 +0.9
DLFA Delphi 1.66 50 P Pb 17 26 48.6 -0.5
EVR Evrytania 1.66 26 P Pb 17 26 48.5 -0.7
LTK Loutraki 1.76 70 P Pb 17 26 50.4 -0.5
VLI Veliai 1.79 113 P Pb 17 26 51.5 +0.2
MAKR Makrakomi, Fth 1.87 32 P Pb 17 26 52.0 -0.7
MET3 Ano Fanari,Met 1.88 85 P Pb 17 26 52.0 -0.8
AXAR Agios Charalam 1.94 46 P Pb 17 26 53.1 -0.9
TETR Tetrakomo, Epi 1.94 9 P Pb 17 26 53.3 -0.7
MET2 Kameni Chora, 1.96 84 P Pn 17 26 53.1 +1.8
AGG Agios Georgios 1.96 35 P Pb 17 26 53.4 -0.9
MET6 Megalochori,Me 1.98 84 P Pn 17 26 53.5 -1.0
MET5 Makryloggos,Me 1.98 84 P Pn 17 26 53.5 +1.8
MET1 Methana Town, 2.00 85 P Pb 17 26 54.0 -0.9
MET4 Agioi Theodoro 2.02 84 P Pb 17 26 54.4 -0.7
VIL2 Platees 2.05 67 P Pb 17 26 54.9 -0.9
LKR Lokris 2.08 53 P Pb 17 26 55.2 -1.0
KTHA Kythira Island 2.11 123 P Pb 17 26 56.0 -0.7
PRMD Pramanda 2.11 5 P Pb 17 26 55.6 -1.2
ATAL Atalanti 2.12 53 P Pn 17 26 55.4 +2.0
IGT Igoumenitsa 2.15 349 P Pn 17 26 55.5 +1.6
MAGU Magoula 2.19 72 P Pn 17 26 56.2 +1.8
STFN Stefani 2.24 70 P Pn 17 26 57.1 +1.9
THL Klokotos Trika 2.32 22 P Pn 17 26 58.0 +1.8
VLY Voula,Athens 2.36 79 P Pn 17 26 58.4 +1.6
ATHU Athens Univers 2.37 76 P Pn 17 26 59.0 +2.1
PTL Penteli 2.45 74 P Pn 17 27 00.3 +2.3
DION Dionisos Attik 2.51 74 P Pn 17 27 01.1 +2.2
TYRN Tyrnavos 2.52 25 P Pn 17 27 01.2 +2.4
KPRO Kipourio 2.56 8 P Pn 17 27 01.2 +1.6
NEO Neokhori 2.63 44 P Pn 17 27 02.8 +2.2
KYMI Kymi, Euboea I 2.82 64 P Pn 17 27 04.9 +1.8
KARY Karystos 2.89 77 P Pn 17 27 05.7 +1.6
AOS2 Alonissos-2 2.90 53 P Pn 17 27 06.4 +2.2
NEST Nestorio 2.99 3 P Pn 17 27 07.5 +1.9
BRTR Keskin Array B 10.26 73 Pn Pn 17 28 43.6 -1.7
baz=256,slow=13,SNR=1.9
0.5nm,0.9s
ASF Jabal al Asfar 14.16 107 LR LR 17 37 03.0
comp=Z,17nm,19.6s,baz=38,slow=46
AKASG Malin Array Be 14.55 22 LR LR 17 36 20.8
comp=Z,84nm,18.4s,baz=282,slow=41
HFS Hagfors 23.19 351 P **P** **17 31 22.4 -1.9**
4.4nm,0.9s,baz=152,slow=13,SNR=1.2
4.4nm,0.9s
BELG Belogornoye 23.96 43 P **P** **17 31 31.9 +0.1**
3.1nm,0.7s,baz=289,slow=20,SNR=2.0
3.1nm,0.7s
EKA Eskdalemuir Ar 24.21 325 P **P** **17 31 33.6 -0.6**
1.8nm,0.8s,baz=132,slow=8.4,SNR=3.6
1.8nm,0.8s
BVAR Borovoye Array 37.39 49 P **P** **17 33 30.1 -0.4**
0.1nm,0.3s,baz=260,slow=5.7,SNR=2.5
0.1nm,0.3s
KURBB Kurchatov Arra 42.46 53 P **P** **17 34 10.4 -2.1**
0.4nm,0.3s,baz=282,slow=8.7,SNR=6.9
0.4nm,0.3s
MKAR Makanchi Array 45.46 58 P P 17 34 33.6 -3.1
0.1nm,0.5s,baz=285,slow=7.6,SNR=4.8
0.1nm,0.5s
ZALV Zalesovo Beam 45.99 48 P **P** **17 34 39.4 -1.4**
0.3nm,0.4s,baz=265,slow=8.5,SNR=4.8
0.3nm,0.4s
INK Inuvik 72.85 350 LR LR 18 11 07.4
comp=Z,11nm,19.7s,baz=343,slow=37

*TEH **13** 17:38:54.5,27°.15N×55°.00E,h18km±13km,ML3.1, Presumed earthquake*
*OMAN **13** 17:38:57.0±0.6,27°.15N×55°.04E,h15km,mb3.1/3, ml3.0/14,Error ellipse: s-maj=6.5km s-min=3.0km az=171.0*
ISC 13 17:38:56.6±1.1,27°.21N±0°.06×55°.06E±0°.04,h17km,n38, σ0§60/42,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GENO	**Geno**	**1.01**	**79**	Pg		**Pb**	**17 39 15.0**	**-0.8**
IBND	**Bandar-abas**	**1.34**	**80**	Pg		**Pn**	**17 39 20.5**	**-0.1**
IBND				Sg		**Sg**	**17 39 40.9**	**+0.9**
SHME	**Shamm**	**1.51**	**140**	P		**Pb**	**17 39 23.0**	**-1.1**
KHL1	**Khalili_Fars**	**1.62**	**286**	Pg		**Pn**	**17 39 24.1**	**-0.2**
LMD1	**Lamerd**	**1.69**	**275**	Pg		**Pn**	**17 39 25.3**	**0.0**
BANOM	**Banah**	**1.70**	**139**	P		**Pn**	**17 39 25.4**	**-0.1**
JHRM	**Jahrom**	**1.84**	**315**	Pn		**Pn**	**17 39 27.6**	**+0.1**
MDH	**Madha**	**2.21**	**149**	P		**Pn**	**17 39 32.5**	**+0.1**
MDH				S		**Sn**	**17 39 58.6**	**-0.7**
UOSS	**Minazif**	**2.48**	**155**	P		**Pn**	**17 39 36.6**	**+0.4**
FAQ	**Al Faqa, Dubai**	**2.50**	**169**	P		**Pn**	**17 39 37.7**	**+1.1**
HATD	**Hatta, Dubai**	**2.57**	**158**	P		**Pn**	**17 39 38.0**	**+0.6**
ASHO	**Ashiyiah** SNR=63	**2.67**	**160**	P		**Pn**	**17 39 39.4**	**+0.5**
JASK	**Jask - Hormozg**	**2.85**	**117**	P		**Pn**	**17 39 41.9**	**+0.6**
JASK	**Jask - Hormozg**	**2.85**	**117**	Pn		**Pn**	**17 39 40.8**	**-0.5**
ALNE	**Al Ain**	**3.21**	**169**	P		**Pn**	**17 39 47.4**	**+1.2**
SOHO	**SOHO**	**3.34**	**156**	P		**Pn**	**17 39 48.3**	**+0.3**
KHGB	**Koh Gabri**	**3.39**	**21**	Pn		**Pn**	**17 39 49.8**	**+0.8**
CHMN	**Cheshme madani**	**3.43**	**39**	Pn		**Pn**	**17 39 50.3**	**+0.7**
KBAM	**BAM**	**3.56**	**57**	Pn		**Pn**	**17 39 51.7**	**+0.6**
ARQ	**Araqi** SNR=10	**4.08**	**161**	P		**Pn**	**17 39 58.9**	**+0.7**
HOQ	**Hoqain**	**4.15**	**150**	P		**Pn**	**17 39 59.2**	**0.0**
IMEH	**Mehriz**	**4.18**	**355**	Pn		**Pn**	**17 39 59.9**	**+0.1**
TRNA	**Turayna** SNR=8.5	**4.25**	**235**	S		**Sn**	**17 40 50.6**	**+0.9**
MZR	**Muzera**	**4.43**	**199**	P		**Pn**	**17 40 03.7**	**+0.7**
MZR				S		**Sn**	**17 40 54.7**	**+0.5**
SMRA	**Abu-Samra**	**4.53**	**238**	P		**Pn**	**17 40 03.6**	**-0.8**
SMRA				S		**Sn**	**17 40 56.4**	**-0.2**
TAFT	**Taft - Yazd**	**4.56**	**350**	Pn		**Pn**	**17 40 05.3**	**+0.3**
BSY	**Bisya**	**4.86**	**156**	P		**Pn**	**17 40 09.2**	**+0.3**
SMDO	**Samad**	**4.95**	**146**	P		**Pn**	**17 40 10.1**	**-0.1**
WSAR	**Wadi Sarin** SNR=6.1	**5.11**	**140**	P		**Pn**	**17 40 12.6**	**+0.2**
JMDO	**Jabal Madar**	**5.56**	**149**	P		**Pn**	**17 40 18.6**	**+0.1**
NGCH	**Negor - Chabah**	**5.76**	**107**	P		**Pn**	**17 40 21.8**	**+0.5**
WBK	**Wadi Bani Khal** SNR=6.2	**5.80**	**141**	P		**Pn**	**17 40 21.7**	**-0.2**
WBK	**Wadi Bani Khal**	**5.80**	**141**	Pn		**Pn**	**17 40 21.6**	**-0.2**
JLN	**Jalan Bani Buh**	**6.41**	**141**	P		**Pn**	**17 40 30.0**	**-0.3**
SRVN	**Saravan**	**6.54**	**87**	Pn		**Pn**	**17 40 32.4**	**+0.3**
MHTO	**MHTO** SNR=9.9	**6.75**	**156**	P		**Pn**	**17 40 34.9**	**0.0**
DOK	**Doka**	**8.60**	**186**	P		**Pn**	**17 41 00.7**	**+0.5**
SHAO	**Shalim**	**9.16**	**177**	P		**Pn**	**17 41 09.1**	**+1.0**

IDC 13 17:57:16.4±3.0,47°.52N×92°.56W,h0km,mb2.7/1, mbtmp2.9/3,ML0.7/1,Error ellipse: s-maj=36.1km s-min=15.0km az=82.0,Minnesota

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ULM	**Lac du Bonnet**	**3.50**	**323**	Pn		Pn	17 58 10.7	-1.3
	0.1nm,0.3s,baz=136,slow=16,SNR=1.7							
ULM				Pg		Pb	17 58 18.6	-0.5
	0.5nm,0.3s,baz=143,slow=15,SNR=9.3							
ULM				Lg		Lg	17 59 04.1	
	0.7nm,0.3s,baz=11,slow=14,SNR=4.8							
	0.7nm,0.3s							
I10CA	**LAC DU BONNET**	**3.52**	**321**	I		I	18 21 45.9	
	0.1nm,0.8s,baz=136,slow=337,SNR=0.5							
PDAR	**Pinedale Array**	**12.90**	**255**	Pn		Pn	18 00 18.9	-2.3
	0.4nm,0.7s,baz=72,slow=11,SNR=4.8							
PDAR				Lg		Lg	18 03 52.4	
	0.1nm,0.3s,baz=70,slow=31,SNR=3.3							
TXAR	**Lajitas Array**	**20.10**	**209**	P		P	18 01 51.4	-0.2
	0.4nm,0.8s,baz=25,slow=12,SNR=2.6							
	0.4nm,0.8s							

*NEIC **13** 18:11:07.9±1.6,16°.05S±0°.2×168°.4E±0°.2,h544km±17km, mb4.6/10,Error ellipse: s-maj=25.5km s-min=22.2km az=148.0*
*IDC **13** 18:11:22.5±46.0,17°.52S×167°.17E,h570km±319km, mb2.8/3,mbtmp3.9/4,Error ellipse: s-maj=998.9km s-min=94.4km az=72.0*
ISC 13 18:11:00.9±7.5,15°.65S±0°.4×169°.1E±0°.8,h550km,n22, σ1§45/18,mb4.2/6,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SANVU	**Saraoutou**	**1.88**	**274**	P		P	18 12 14.6	+4.5
DZM	**Mont Dzumac**	**6.93**	**201**	P		**P**	**18 12 50.2**	**+1.9**
	6.3nm,0.5s,baz=62,slow=17,SNR=4.6							
DZM	**Mont Dzumac**	**6.93**	**201**	P		**P**	**18 12 49.2**	**+0.9**
OUENC	**Ouen Island, N**	**7.12**	**197**	P		**P**	**18 12 49.9**	**-0.2**
ONTNC	**Ouen Toro**	**7.14**	**200**	P		**P**	**18 12 51.2**	**+1.0**
FUNA	**Funafuti**	**12.08**	**56**	P		P	18 13 55.9	+16
EIDS	**Eidsvold**	**19.49**	**237**	P		**P**	**18 14 54.5**	**+2.1**
EIDS				IAmb		IAmb	18 15 06.5	
	comp=Z,33nm,1.5s							
ARMA	**Armidale**	**21.81**	**224**	P		**P**	**18 15 11.9**	**-1.5**
TCW	**Tory Channel**	**25.91**	**171**	P		P	18 15 54.3	+4.8
INKA	**Innaminka**	**28.95**	**241**	P		**P**	**18 16 16.1**	**-0.2**
STKA	**Stephens Creek**	**29.85**	**232**	P		**P**	**18 16 21.2**	**-2.9**
	comp=Z,1.9nm,0.5s,baz=61,slow=9.6,SNR=4.1							
	comp=Z,1.9nm,0.5s							
STKA	**Stephens Creek**	**29.85**	**232**	P		**P**	**18 16 23.5**	**-0.6**
WB0	**Warramunga Arr**	**33.33**	**258**	P		**P**	**18 16 53.7**	**-0.3**
WRA	**Warramunga Arr**	**33.39**	**257**	P		**P**	**18 16 55.1**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=90,slow=8.5,SNR=5.6							
	comp=Z,0.3nm,0.4s							
WRA	**Warramunga Arr**	**33.39**	**257**	P		**P**	**18 16 54.1**	**-0.3**
ASAR	**Alice Springs**	**34.08**	**251**	P		**P**	**18 17 00.7**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=82,slow=9.2,SNR=16							
	comp=Z,0.9nm,0.5s							
BBOO	**Buckleboo**	**34.51**	**234**	P		**P**	**18 17 01.4**	**-2.3**
BBOO				IAmb		IAmb	18 17 10.2	
	comp=Z,30nm,1.4s							
KNRA	**Kununurra**	**38.84**	**264**	P		**P**	**18 17 37.7**	**-1.8**
KNRA				IAmb		IAmb	18 17 40.7	
	comp=Z,18nm,1.2s							
TNTI	**Ternate**	**44.36**	**288**	P		P	18 18 26.2	+3.1
MMRI	**Maumere**	**46.30**	**273**	P		**P**	**18 18 39.1**	**+1.2**
PSA00	**Pilbara Seismi**	**46.95**	**255**	P		**P**	**18 18 42.7**	**-0.1**
PSA00				IAmb		IAmb	18 18 44.2	
	comp=Z,22nm,1.4s							
GIRL	**Giralia**	**52.12**	**253**	P		**P**	**18 19 20.8**	**+0.1**

*DJA **13** 18:36:23.5±2.7,12°.N×21°.×12°.4E±°,h99km±16km,M5.8/17, mB5.6/8,mb5.1/17,MLv6.8/1,Mw(mB)5.2/8,MwMwp4.9/2, Mwp5.2/2*
*IDC **13** 18:37:31.8±0.7,6°.62N×124°.95E,h0km,mb3.9/13, mbtmp3.9/14,ML3.8/1,MS3.0/9,Error ellipse: s-maj=14.7km s-min=9.7km az=140.0*
*NEIC **13** 18:37:34.4±1.8,6°.70N±0°.06×125°.09E±0°.06,h25km±5km, mb4.4/40,Error ellipse: s-maj=10.8km s-min=6.7km az=137.0*
*MAN **13** 18:37:34.0,6°.80N×125°.00E,h9km,MS4.2*
MAN INTENSITY IV - KIDAPAWAN CITY; MAKILALA AND M"LANG COTABATO; . INTENSITY III - COLUMBIO SULTAN KUDARAT; MAGPET COTABATO; . INTENSITY II - MATALAM COTABATO.
ISC 13 18:37:33.9±0.9,6°.79N±0°.03×125°.10E±0°.04,h23km±7km, n100,σ1§79/103,mb4.2/30,MS2.8/6,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KCP	**Kidapawan**	**0.22**	**358**	*i* P		**Pb**	**18 37 39.5**	**-0.2**
KCP				*i* S		**Sb**	**18 37 44.0**	**+0.3**
DMPH	**Davao City--Mi**	**0.50**	**54**	*i* P		**Pn**	**18 37 45.9**	**+0.1**
DMPH				*i* S		**Sn**	**18 37 55.1**	**+1.3**
DAV	**Davao City (W)**	**0.56**	**59**	Pg		**Pn**	**18 37 46.8**	**+0.4**
	2µm,0.3s,baz=257,slow=8.3,SNR=229							
DAV				Lg		Lg	18 37 57.2	
	3µm,0.3s,baz=14,slow=23,SNR=13							
DAV	**Davao City (W)**	**0.56**	**59**			**Pn**	**18 37 47.1**	**+0.6**
DAV						**Sn**	**18 37 54.3**	**-0.8**
DAV	**Davao City (W)**	**0.56**	**59**	P		**Pn**	**18 37 46.9**	**+0.4**
DAV				S		**Sn**	**18 37 57.5**	**+2.4**
GSPH	**General Santos**	**0.71**	**192**	*e*P		**Pn**	**18 37 49.1**	**+0.4**
GSPH				*i* S		**Sn**	**18 38 00.6**	**+1.6**
DDMP	**Don Marcelino,**	**0.91**	**138**	*e*P		**Pn**	**18 37 52.8**	**+1.4**
DDMP				*i* S		**Sn**	**18 38 06.6**	**+2.8**
CTBH	**Cotabato--PC H**	**0.95**	**297**	*i* P		**Pb**	**18 37 50.1**	**-1.6**
CTBH				*i* S		**Sb**	**18 38 00.4**	**-3.4**
CGP	**Cagayan de Oro**	**1.71**	**346**	*i* P		**Pn**	**18 38 03.0**	**+0.7**
CGP				*i* S		**Sb**	**18 38 26.1**	**+0.5**
DCPH	**Dipolog City**	**2.48**	**316**	*i* P		**Pb**	**18 38 17.3**	**-0.7**
DCPH				*i* S		**Sb**	**18 38 54.8**	**+6.6**
TSSP	**Tandag City**	**2.50**	**26**	*e*P		**Pb**	**18 38 16.0**	**-2.1**
TSSP				*e*S		**Sn**	**18 38 40.4**	**-2.6**
SCPH	**Surigao**	**3.00**	**7**	*e*P		**Pn**	**18 38 21.7**	**+1.5**
SGSI	**Sangihe**	**3.11**	**172**	P		**Pn**	**18 38 24.3**	**+2.6**
LLP	**Lapu-Lapu**	**3.68**	**342**	*e*P		**Pb**	**18 38 34.1**	**-4.2**
LLP				*i* S		**Sb**	**18 39 21.2**	**-1.4**
PLP	**Palo**	**4.35**	**358**	*e*P		**Pn**	**18 38 40.5**	**+1.7**
PLP				*e*S		**Sn**	**18 39 26.4**	**-2.5**
RCP	**Roxas**	**5.28**	**334**	*e*P		**Pn**	**18 38 53.7**	**+2.2**
TNTI	**Ternate**	**6.39**	**159**	Pn		**Pn**	**18 39 04.6**	**-2.2**
TNTI	**Ternate** 34nm,0.6s	**6.39**	**159**	P		Pn	18 39 15.2	+8.4
GTOI	**Gorontalo** 1µm123nm,0.6s	**6.45**	**199**	P		**Pn**	**18 39 07.7**	**0.0**
MYLDM	**Lahad Datu**	**6.75**	**257**	Pn		**Pn**	**18 39 10.5**	**-1.2**
MRSI	**Marisa** 893nm82nm,0.5s	**7.01**	**207**	P		**Pn**	**18 39 17.9**	**+2.6**
TOLI2	**Tolitoli**	**7.09**	**218**	Pn		**Pn**	**18 39 14.3**	**-2.1**
LUWI	**Luwuk**	**8.12**	**197**	Pn		**Pn**	**18 39 28.0**	**-2.5**
APSI	**Ampana**	**8.38**	**204**	P		Pn	18 39 40.6	+6.4
SANI	**Sanana** 22nm,0.7s	**8.82**	**174**	P		**Pn**	**18 39 42.1**	**+1.9**
SWI	**Sorong**	**9.78**	**141**	P		**Pn**	**18 39 49.8**	**-3.5**
SIJI	**Sorong** 0.9nm,0.3s,baz=347,slow=20,SNR=6.1	**9.79**	**141**	Pn		**Pn**	**18 39 55.0**	**+1.6**
SIJI				LR		LR	18 43 52.6	
	comp=Z,87nm,19.7s,baz=248,slow=39							
	1.7nm,0.4s							
SIJI	**Sorong**	**9.79**	**141**	P		**Pn**	**18 39 57.8**	**+4.4**
NLAI	**Namlea** 41nm,0.6s	**10.16**	**169**	P		**Pn**	**18 39 58.9**	**+0.4**
KRAI	**Karang Ratu**	**10.56**	**162**	P		**Pn**	**18 40 07.2**	**+3.1**
KAPI	**Kappang** comp=Z,58nm,18.1s,baz=37,slow=44	**12.88**	**205**	LR		LR	18 46 49.4	
SOEI	**Soe**	**16.45**	**183**	Pn		**Pn**	**18 41 22.1**	**-1.5**
SOEI				IAmb		IAmb	18 41 28.7	
	comp=Z,40nm,1.4s							
BATI	**Baumata**	**16.94**	**185**	Pn		**P**	**18 41 32.6**	**+1.1**
	comp=Z,3.0nm,0.3s,baz=63,slow=1.9,SNR=9.5							
BATI				LR		LR	18 47 58.7	
	comp=Z,65nm,19.9s,baz=22,slow=37							
JOW	**Kunigami**	**20.16**	**8**	LR		LR	18 49 31.6	
	comp=Z,42nm,21.3s,baz=286,slow=35							
MTN	**Manton Dam**	**20.40**	**163**	P		**P**	**18 42 07.1**	**-2.4**
MTN				IAmb		IAmb	18 42 37.6	
	comp=Z,34nm,1.5s							
GUMO	**Guam**	**20.59**	**69**	LR		LR	18 48 50.3	
	comp=Z,14nm,20.8s,baz=192,slow=33							
KNRA	**Kununurra**	**22.61**	**171**	P		**P**	**18 42 31.9**	**-1.3**
KNRA				IAmb		IAmb	18 42 42.7	
	comp=Z,16nm,0.8s							
JNU	**Nakatsue**	**26.75**	**11**	LR		LR	18 53 08.8	
	comp=Z,22nm,20.9s,baz=220,slow=35							
COEN	**Coen**	**27.33**	**139**	P		**P**	**18 43 15.4**	**-2.0**
COEN				IAmb		IAmb	18 43 34.6	
	comp=Z,18nm,1.1s							
WB0	**Warramunga Arr**	**27.93**	**161**	P		**P**	**18 43 21.9**	**-0.9**
WB0				IAmb		IAmb	18 43 46.5	
	comp=Z,8.7nm,1.1s							
GSI	**Gunungsitoli**	**27.98**	**260**	P		**P**	**18 43 22.4**	**-0.8**
GSI				IAmb		IAmb	18 43 36.5	
	comp=Z,5.8nm,0.8s							
CMAR	**Chiang Mai Arr**	**27.99**	**297**	P		**P**	**18 43 24.3**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=111,slow=9.0,SNR=1.5							
	comp=Z,0.1nm,0.3s							
CMAR	**Chiang Mai Arr**	**27.99**	**297**	P		**P**	**18 43 23.5**	**+0.2**
WRA	**Warramunga Arr**	**28.07**	**161**	P		**P**	**18 43 23.6**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=340,slow=9.2,SNR=14							
	comp=Z,1.1nm,0.7s							
WRA	**Warramunga Arr**	**28.07**	**161**	P		**P**	**18 43 22.9**	**-1.2**
PSA00	**Pilbara Seismi**	**28.65**	**190**	P		**P**	**18 43 27.5**	**-1.6**
KSRS	**Korea Array**	**30.64**	**4**	LR		LR	18 56 21.4	
	comp=Z,22nm,21.3s,baz=200,slow=37							
AS31	**Alice Springs**	**31.46**	**164**	P		**P**	**18 43 52.5**	**-1.6**
ASAR	**Alice Springs**	**31.47**	**164**	P		**P**	**18 43 54.5**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=343,slow=7.0,SNR=11							
	comp=Z,0.5nm,0.5s							
ASAR	**Alice Springs**	**31.47**	**164**	P		**P**	**18 43 52.7**	**-1.3**
MJAR	**Matsushiro Arr**	**31.95**	**20**	P		**P**	**18 43 58.2**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=182,slow=8.8,SNR=2.4							
MJAR				LR		LR	18 56 27.2	
	comp=Z,38nm,19.9s,baz=176,slow=35							
MJAR	**Matsushiro Arr**	**31.95**	**20**	P		**P**	**18 43 58.1**	**-0.1**
MORW	**Morawa**	**36.70**	**193**	P		**P**	**18 44 37.6**	**-1.7**
FORT	**Forrest**	**37.46**	**176**	P		**P**	**18 44 45.0**	**-0.8**
INKA	**Innaminka**	**37.51**	**157**	P		**P**	**18 44 45.0**	**-1.3**
INKA				IAmb		IAmb	18 44 57.9	
	comp=Z,5.7nm,1.3s							
USRK	**Ussuriysk Ar.**	**37.75**	**8**	P		**P**	**18 44 51.2**	**+3.0**
	comp=Z,3.5nm,0.8s,baz=232,slow=7.1,SNR=4.6							
	comp=Z,3.5nm,0.8s							
JEW	**Eniwo**	**38.70**	**19**	P		**P**	**18 44 56.5**	**+0.3**
ASAJ	**Asahikawa**	**40.22**	**20**	P		**P**	**18 45 12.4**	**+3.6**
	comp=Z,15nm,1.0s,baz=158,slow=5.4,SNR=3.5							
	comp=Z,15nm,1.0s							
JKA	**Kamikawa-asahi**	**40.22**	**20**	P		**P**	**18 45 09.4**	**+0.6**
BBOO	**Buckleboo**	**40.73**	**166**	P		**P**	**18 45 12.1**	**-1.1**
STKA	**Stephens Creek**	**41.55**	**159**	P		**P**	**18 45 20.3**	**+0.4**
	comp=Z,2.3nm,0.6s,baz=322,slow=5.3,SNR=5.0							
	comp=Z,2.3nm,0.6s							
STKA	**Stephens Creek**	**41.55**	**159**	P		**P**	**18 45 19.5**	**-0.5**
EVN	**Everest**	**41.90**	**305**	P		**P**	**18 45 23.6**	**-0.1**
KLR	**Kul'dur**	**42.67**	**6**	P		**P**	**18 45 30.3**	**+1.5**
	comp=Z,1.3nm,0.7s,baz=186,slow=2.8,SNR=6.0							
	comp=Z,1.3nm,0.7s							
SONM	**Songino Array**	**43.90**	**342**	P		**P**	**18 45 41.8**	**+2.7**
	comp=Z,0.2nm,0.3s,baz=170,slow=10,SNR=1.9							
	comp=Z,0.2nm,0.3s							
SONM	**Songino Array**	**43.90**	**342**	P		**P**	**18 45 40.0**	**+0.9**
ARMA	**Armidale**	**44.90**	**147**	P		**P**	**18 45 46.5**	**-0.6**
CAN	**Canberra**	**47.55**	**153**	P		**P**	**18 46 05.8**	**-2.1**
TLY	**Talaya**	**48.14**	**342**	LR		LR	19 08 48.3	
	comp=Z,29nm,18.3s,baz=142,slow=39							
DZM	**Mont Dzumac**	**49.63**	**126**	P		**P**	**18 46 23.1**	**-1.1**
PEA0B	**Petropavlovsk-**	**53.27**	**24**	P		**P**	**18 46 51.4**	**+0.5**
PETK	**Petropavlovsk-**	**53.27**	**24**	P		**P**	**18 46 53.9**	**+3.0**
	comp=Z,5.4nm,0.9s,baz=120,slow=5.6,SNR=4.7							
	comp=Z,5.4nm,0.9s							
PETK	**Petropavlovsk-**	**53.27**	**24**	P		**P**	**18 46 52.3**	**+1.4**
MK31	**Makanchi Array**	**54.13**	**325**	P		**P**	**18 46 58.3**	**+0.9**
MKAR	**Makanchi Array**	**54.13**	**325**	P		**P**	**18 46 59.5**

KMBO Kilima Mbogo 3.90 340 Pn Pn 18 38 44.9 +1.6
baz=180,slow=15
KMBO Lg Lg 18 39 42.3
baz=233,slow=18
I32KE NAIROBI INFRAS 3.96 334 Pn Pn 18 38 46.3 +2.1
baz=151,slow=31
LODK Lodwar 8.80 339 Pn 18 39 52.3 +1.8
MBAR Mbarara 8.88 298 Pn Pn 18 39 50.9 -0.8
42nm,0.3s,baz=319,slow=12,SNR=35
MBAR Sn **Sn 18 41 24.6 -7.4**
125nm,0.3s,baz=56,slow=22,SNR=6.9
MBAR Lg Lg 18 42 18.8
132nm,0.3s,baz=218,slow=21,SNR=12
MBAR Mbarara 8.88 298 Pn 18 39 50.8 -0.9
FURI Furi 13.63 0 LR LR 18 46 16.7
comp=Z,380nm,20.3s,baz=201,slow=38
FURI Furi 13.63 0 Pn Pn 18 40 55.8 -1.2
LSZ Lusaka 14.56 224 Pn Pn 18 41 08.1 -1.4
0.7nm,0.3s,baz=46,slow=12,SNR=14
LSZ Lg Lg 18 45 11.7
6.4nm,0.3s,baz=351,slow=6.4,SNR=9.9
LSZ LR LR 18 46 48.7
comp=Z,1μm,18.0s,baz=52,slow=38
11nm,0.9s
LSZ Lusaka 14.56 224 Pn 18 41 07.8 -1.7
OPO Ambohidratompo 16.05 149 Pn Pn 18 41 28.7 -0.5
baz=303,slow=13,SNR=5.6
OPO Sn **Sn 18 44 20.8 -6.6**
0.3nm,0.3s,baz=272,slow=12,SNR=5.3
5.4nm,0.7s
ABPO Ambohimpanom 16.44 150 Pn Pn 18 41 33.5 -0.8
ATD Arta Tunnel 16.80 15 LR LR 18 48 20.4
comp=Z,14nm,18.0s,baz=150,slow=38
ATD Arta Tunnel 16.80 15 Pn Pn 18 41 38.3 -0.3
MSEY Mahe Island 16.85 90 Pn 18 41 38.4 -1.0
KSANE Kasane 18.40 224 *i* P **P 18 42 00.8 +2.3**
KSANE IAML 18 47 41.4
comp=N,72nm,0.7s
VOI Vohitsoka 18.76 156 P P 18 41 55.3 -7.2
BROLN Tlhalogang 19.51 213 *i* P **P 18 42 08.9 -1.9**
BROLN *i* S **S 18 45 58.1 +6.6**
BROLN IAML 18 48 00.8
comp=N,21nm,0.8s
SOOWA Sowa 19.72 216 *i* P **P 18 42 10.8 -2.3**
SOOWA *i* S **Sn 18 46 05.3 +9.0**
SOOWA IAML 18 48 32.2
comp=N,103nm,0.8s
LPHEP Lephephe 22.14 212 *i* P **P 18 42 35.5 -3.7**
LPHEP *i* S **S 18 46 46.0 +2.6**
LPHEP IAML 18 49 30.8
comp=E,17nm,0.8s
KDWAN Kaudwane 22.82 215 *i* P **P 18 42 43.4 -3.1**
KDWAN *i* S **S 18 47 00.1 +4.2**
KDWAN IAML 18 50 03.9
comp=N,33nm,0.9s
GRTLG Ghanzi 23.53 224 *i* P **P 18 42 51.6 -2.2**
GRTLG IAML 18 50 26.9
comp=N,10nm,0.9s
GRTLG Ghanzi 23.53 224 P **P 18 42 52.5 -1.3**
GRTLG IAmb IAmb 18 43 07.2
comp=Z,27nm,0.9s
LBTB Lobatse 23.63 211 P 18 42 53.4 -1.3
LBTB IAmb IAmb 18 43 06.6
comp=Z,34nm,0.8s
KGCAE Kacgae 23.90 220 *i* P **P 18 42 54.5 -2.9**
KGCAE IAML 18 50 46.5
comp=E,34nm,1.0s
KGCAE Kacgae 23.90 220 P 18 42 55.8 -1.6
KGCAE IAmb IAmb 18 43 13.8
comp=Z,57nm,1.1s
TSUM Tsumeb 24.96 233 LR LR 18 53 05.3
comp=Z,548nm,19.0s,baz=46,slow=37
TSUM Tsumeb 24.96 233 P **P 18 43 05.7 -1.5**
KOOLE Kule 25.32 223 *i* P **P 18 43 08.0 -2.4**
KOOLE IAML 18 51 29.3
comp=E,26nm,0.8s
KOOLE Kule 25.32 223 P **P 18 43 08.8 -1.6**
LKGWB Lokgwabe 25.44 219 P **P 18 43 06.8 -4.6**
BOSA Boshof 26.82 207 P **P 18 43 23.3 -0.6**
comp=E,2.5nm,0.6s,baz=38,slow=8.4,SNR=10
BOSA LR LR 18 55 07.4
comp=E,53nm,18.7s,baz=28,slow=39
comp=E,2.5nm,0.6s
BOSA Boshof 26.82 207 P 18 43 22.8 -1.1
BOSA IAmb IAmb 18 44 00.0
comp=Z,14nm,0.9s
WIN Windhoek 27.24 228 P **P 18 43 25.7 -2.1**
SUR Sutherland 32.06 209 LR LR 18 57 41.7
comp=Z,167nm,18.1s,baz=24,slow=38
SUR Sutherland 32.06 209 P P 18 44 09.1 -1.3
UOSS Minazif 34.20 29 P **P 18 44 27.1 -1.9**
UOSS IAmb IAmb 18 44 44.3
comp=Z,20nm,1.2s
EIL Elat 34.47 354 LR LR 18 57 37.3
comp=Z,67nm,21.7s,baz=239,slow=35
ASF Jabal al Asfar 36.83 358 LR LR 18 59 57.8
comp=Z,188nm,18.2s,baz=192,slow=36
MMAI Mount Meron Ar 37.75 356 P 18 44 59.6 +0.2
comp=Z,0.2nm,0.3s,baz=161,slow=8.7,SNR=1.5
MMAI LR LR 18 59 20.2
comp=Z,46nm,18.6s,baz=172,slow=34
comp=Z,0.2nm,0.3s
TORD Torodi Ar. Bea 40.74 296 P 18 45 25.0 +0.4
comp=Z,3.4nm,0.9s,baz=130,slow=8.1,SNR=17
TORD PcP **PcP 18 47 24.5 -1.6**
comp=Z,1.0nm,0.7s,baz=145,slow=2.5,SNR=3.8
comp=Z,3.4nm,0.9s
TORD Torodi Ar. Bea 40.74 296 P P 18 45 24.1 -0.6
KARP Karpathos 41.56 346 P P 18 45 30.7 -0.4
TAM Tamanrasset 42.38 312 P P 18 45 36.2 -2.0
CRZF Crozet Islands 43.02 167 P P 18 45 40.8 -2.0
PALK Pallekele 43.73 74 LR LR 19 00 11.8
comp=Z,183nm,21.9s,baz=264,slow=31
BR131 Keskin Array S 44.56 355 P 18 45 55.5 0.0
BRTR Keskin Array B 44.56 355 P P 18 45 57.2 +1.8
comp=Z,4.3nm,0.9s,baz=174,slow=10,SNR=24
BRTR PcP **PcP 18 47 37.4 -1.1**
comp=Z,1.2nm,0.9s,baz=179,slow=5.6,SNR=4.4
comp=Z,4.3nm,0.9s
BRTR Keskin Array B 44.56 355 P 18 45 55.7 +0.2
ITM Ithomi 44.58 341 P **P 18 45 55.7 +0.3**
ITM IAmb IAmb 18 45 57.9
comp=Z,22nm,0.9s
DBIC Dimbokro 44.83 284 LR LR 19 05 42.6
comp=Z,150nm,18.3s,baz=138,slow=38
DBIC Dimbokro 44.83 284 P P 18 45 57.5 -0.3
DBIC IAmb IAmb 18 46 24.3
comp=Z,23nm,1.6s
SHEL Horse Pasture 44.87 252 P P 18 45 57.1 -1.1
HRA Herat 44.94 28 P 18 45 59.2 +0.5
HRA IAmb IAmb 18 46 12.0
comp=Z,18nm,1.3s
BORA Eskisehir 45.11 351 P P 18 46 00.0 +0.3
BORA IAmb IAmb 18 46 03.0
comp=Z,11nm,1.2s
GNI Garni 45.11 7 P P 18 45 59.4 -0.5
GNI IAmb IAmb 18 46 24.0
comp=Z,41nm,1.9s
MDUB Mudurnu 45.58 352 P P 18 46 03.8 +0.3
MDUB IAmb IAmb 18 46 07.2
comp=Z,13nm,0.9s
ALN Alexandroupoli 46.93 347 P P 18 46 14.6 +0.7
VAE Valguarnera 47.72 334 LR LR 19 08 07.9
comp=Z,70nm,20.9s,baz=269,slow=38
KBZ Khabaz 48.49 4 P P 18 46 27.5 +1.6
comp=Z,1.3nm,0.9s,baz=217,slow=10,SNR=2.6
KBZ LR LR 19 07 33.5
comp=Z,97nm,18.8s,baz=193,slow=37
comp=Z,1.3nm,0.9s
KBL Kabul 48.56 34 P P 18 46 27.2 +0.1
KIV Kislovodsk 48.70 4 P P 18 46 28.0 +0.2
KVAR Kislovodsk Arr 48.70 4 LR LR 19 07 01.8
comp=Z,74nm,20.4s,baz=73,slow=36
KEST Kesra 48.78 328 LR LR 19 09 17.1
comp=Z,198nm,18.5s,baz=304,slow=39
SHAA Shahritus 50.35 31 P P 18 46 41.0 +0.6
SHAA IAmb IAmb 18 46 53.8
comp=Z,12nm,0.9s
MLR Muntele Rosu 51.35 349 P P 18 46 48.0 +0.1
CHGR Chuyangaron 51.71 31 P P 18 46 51.1 +0.4
GAR Garm 52.56 31 P 18 46 58.0 +0.9
NRCA Norcia 52.75 337 P P 18 46 59.0 +0.6
NRCA IAmb IAmb 18 47 00.4
comp=Z,11nm,1.1s
GUMA Gualdo di Mace 52.86 337 P P 18 46 59.2 +0.1
GUMA IAmb IAmb 18 47 00.8
comp=Z,12nm,0.9s
FDMO Fiordimonte 52.93 337 P P 18 47 00.5 +0.8
FDMO IAmb IAmb 18 47 01.6
comp=Z,12nm,1.3s
MURB Monte Urbino 53.35 336 P P 18 47 03.0 +0.3
BURAR Bucovina Array 53.53 349 P 18 47 05.0 +1.0
BURAR IAmb IAmb 18 47 18.8
comp=Z,13nm,0.9s
BUR08 Bucovina Ar. S 53.56 349 P 18 47 05.0 +0.7
BTK Batken 53.61 31 P 18 47 04.8 +0.1
BTK IAmb IAmb 18 47 18.5
comp=Z,14nm,1.1s
DRK Karamyk 53.69 32 P P 18 47 06.1 +0.6
IUG Iuzhnay 54.81 28 *eP* **P 18 47 15.3 +1.8**
comp=Z,4.6nm,0.8s
PSZ Piszkesteto 55.03 345 P P 18 47 15.3 +0.4
PSZ IAmb IAmb 18 47 28.4
comp=Z,13nm,0.9s
MDT Midelt 55.47 316 LR LR 19 12 58.3
comp=Z,168nm,18.8s,baz=100,slow=38
KSH2 Kashi 55.50 35 P P 18 47 20.6 +2.0
KSH2 sP sP 18 47 29.8 +6.5
KSH2 pmax pmax
comp=Z,6.0nm,1.2s
ARSB Arslanbob 55.65 31 P P 18 47 19.4 -0.2
ARSB IAmb IAmb 18 47 32.3
comp=Z,8.8nm,1.0s
KK31 Karatay Array 55.77 28 P 18 47 21.1 +0.7
KK31 IAmb IAmb 18 47 34.7
comp=Z,12nm,1.1s
KKAR Karatay Array 55.77 28 P P 18 47 21.1 +0.7
AKASG Malin Array Be 55.89 353 P P 18 47 20.9 0.0
comp=Z,1.2nm,0.6s,baz=175,slow=6.0,SNR=5.1
comp=Z,1.2nm,0.6s
DZA Taraz 56.00 29 *eP* **P 18 47 23.4 +1.4**
comp=Z,8.7nm,1.4s
CTI Castel Tesino 56.02 338 P P 18 47 22.1 -0.1
LANS Liptovska Anna 56.27 345 *eP* **P 18 47 26.4 +2.6**
LANS *e* 18 47 34.1
EVN Everest 56.77 52 P P 18 47 27.3 -1.2
EVN IAmb IAmb 18 47 40.9
comp=Z,15nm,0.8s
AB31 Akbulak array 56.98 17 P 18 47 28.5 -0.3
AB31 IAmb IAmb 18 47 40.9
comp=Z,11nm,1.2s
ABKAR Akbulak array 56.98 17 P P 18 47 28.8 0.0
OJC Ojcow 57.18 346 P 18 47 30.2 0.0
NRN Naryn 57.32 33 P P 18 47 31.3 -0.5
NRN IAmb IAmb 18 47 45.2
comp=Z,12nm,1.0s
MORC Moravsky Berou 57.36 344 P 18 47 31.6 +0.1
MORC IAmb IAmb 18 47 34.1
comp=Z,8.3nm,0.9s
MORC Moravsky Berou 57.36 344 *eP* **P 18 47 32.9 +1.4**
AAK Ala-Archa 57.38 31 P P 18 47 31.9 -0.1
CKRC Cesky Krumlov 57.47 341 *eP* **P 18 47 33.7 +1.4**
GEC2 GERESS Array S 57.69 341 P P 18 47 34.1 +0.2
GEC2 IAmb IAmb 18 47 36.0
comp=Z,11nm,1.1s
GERES GERESS Array B 57.69 341 P P 18 47 34.6 +0.6
comp=Z,1.9nm,0.8s,baz=130,slow=8.0,SNR=8.8
GERES LR LR 19 16 01.5
comp=Z,29nm,18.0s,baz=246,slow=40
comp=Z,1.9nm,0.8s
KRLC Kraliky 57.84 344 *eP* **P 18 47 35.8 +0.9**
KHC Kasperske Hory 57.98 341 P P 18 47 35.9 0.0
KHC IAmb IAmb 18 47 37.5
comp=Z,9.8nm,1.1s
KHC Kasperske Hory 57.98 341 *eP* **P 18 47 36.8 +0.9**
SENIN Lac Senin/Sane 58.02 335 P P 18 47 36.2 -0.3
SENIN IAmb IAmb 18 48 02.7
comp=Z,21nm,1.7s
TARG Taragay, Kyrgy 58.51 34 P P 18 47 39.8 -0.4
TARG IAmb IAmb 18 47 53.2
comp=Z,9.8nm,0.9s
BRDH Bariadhala 58.60 60 LR LR 19 12 28.3
comp=Z,106nm,18.0s,baz=240,slow=36
TNSS Tian-Shan 58.94 32 *eP* **P 18 47 44.4 +1.3**
WUS Wushi 58.95 35 P P 18 47 42.5 -0.5
WUS IAmb IAmb 18 47 56.1
comp=Z,10nm,1.1s
AAA Alma-Ata 59.04 32 *eP* **P 18 47 45.1 +1.6**
MDOK Medeo 59.08 32 *eP* **P 18 47 45.5 +1.7**
ESDC Sonseca Array 59.10 323 P P 18 47 45.1 +1.2
comp=Z,2.0nm,0.8s,baz=132,slow=5.8,SNR=11
ESDC LR LR 19 15 38.5
comp=Z,99nm,21.3s,baz=55,slow=38
comp=Z,2.0nm,0.8s
GSI Gunungsitoli 59.26 86 P P 18 47 44.4 -1.0
GSI IAmb IAmb 18 47 49.9
comp=Z,10nm,1.0s
SATY Saty 59.73 33 *eP* **P 18 47 49.9 +1.5**
comp=Z,5.9nm,1.3s
SHL Shillong 59.88 57 P P 18 47 48.2 -1.5
CLL Collm 60.05 342 *eP* **P 18 47 51.0 +0.8**
UZB Uzynbulak 60.13 33 *eP* **P 18 47 52.4 +1.3**
SHLS Shalkode 60.38 33 *eP* **P 18 47 55.8 +3.1**
comp=Z,4.3nm,1.0s
LSA Lhasa 60.94 52 P P 18 47 55.8 -1.5
TDK Taldyqorghan 61.05 31 *eP* **P 18 47 58.9 +1.7**
WLF Walferdange 61.11 337 P P 18 47 57.8 +0.4
BRZS Berezniki 62.04 24 *eP* **P 18 48 05.6 +1.8**
ARTI Arti 63.13 12 P P 18 48 10.2 -0.6
BORK Borovoye 63.58 21 P P 18 48 13.5 -0.4
BORK IAmb IAmb 18 48 26.1
comp=Z,15nm,1.4s
BVAR Borovoye Array 63.58 21 P P 18 48 14.5 +0.6
comp=Z,2.6nm,0.7s,baz=197,slow=4.5,SNR=14
comp=Z,2.6nm,0.7s
CM31 Chiang Mai Arr 63.81 67 P P 18 48 14.5 -1.6
CM31 IAmb IAmb 18 48 29.4
comp=Z,9.8nm,1.4s
CMAR Chiang Mai Arr 63.81 67 P P 18 48 17.6 +1.4
comp=Z,2.0nm,0.9s,baz=260,slow=7.9,SNR=20
comp=Z,2.0nm,0.9s
CMAR Chiang Mai Arr 63.81 67 P P 18 48 15.3 -0.9
CHTO Chiang Mai 63.91 66 P P 18 48 16.2 -0.5
CHTO IAmb IAmb 18 48 30.9
comp=Z,4.0nm,0.9s
MAKZ Makanchi 64.12 32 P P 18 48 17.6 0.0
MAKZ IAmb IAmb 18 48 30.9
comp=Z,14nm,1.1s
MK31 Makanchi Array 64.27 32 P P 18 48 18.8 +0.2
MK31 IAmb IAmb 18 48 31.8
comp=Z,12nm,1.1s
MKAR Makanchi Array 64.27 32 P P 18 48 19.4 +0.8
comp=Z,4.8nm,0.8s,baz=227,slow=6.5,SNR=30
MKAR LR LR 19 18 04.8
comp=Z,62nm,18.7s,baz=252,slow=38
comp=Z,4.8nm,0.8s
MKAR Makanchi Array 64.27 32 P P 18 48 18.9 +0.3
MAW Mawson 64.84 170 P P 18 48 23.2 +1.3
comp=Z,6.4nm,0.8s,baz=309,slow=10,SNR=5.1
MAW LR LR 19 12 46.0
comp=Z,38nm,18.4s,baz=42,slow=32
comp=Z,6.4nm,0.8s
MAW Mawson 64.84 170 P P 18 48 22.1 +0.2
KURBB Kurchatov Arra 65.03 27 P P 18 48 24.3 +0.9
comp=Z,5.9nm,0.9s,baz=228,slow=7.3,SNR=29
KURBB LR LR 19 18 33.6
comp=Z,75nm,20.8s,baz=168,slow=38
comp=Z,5.9nm,0.9s
KURK Kurchatov 65.14 27 P P 18 48 24.6 +0.5
WMQ Urumqi 65.52 37 *eP* **P 18 48 28.3 +1.4**
WMQ pmax pmax
comp=Z,8.0nm,1.5s
ZSN Zaisan 66.05 32 *eP* **P 18 48 31.7 +1.5**
GOMU GeErMu 66.50 47 P P 18 48 35.1 +1.4
GOMU pmax pmax
comp=Z,10.0nm,1.1s
FINES FINESS Array B 66.78 354 P P 18 48 34.5 0.0
comp=Z,5.0nm,1.0s,baz=184,slow=7.5,SNR=5.3
comp=Z,5.0nm,1.0s
HFS Hagfors 67.66 347 P P 18 48 40.5 +0.4
comp=Z,4.1nm,0.9s,baz=113,slow=11,SNR=6.2
comp=Z,4.1nm,0.9s
ELIB Princess Elisa 67.72 185 *dP* **P 18 48 41.9 +1.4**
comp=Z,4.1nm,0.9s
PZH PanZhiHua 68.53 59 P P 18 48 48.9 +2.4
LEM Lembang 68.67 95 LR LR 19 15 25.1
comp=Z,39nm,19.5s,baz=216,slow=33
NOA NORSAR Array B 69.04 346 P P 18 48 49.3 +0.5
comp=Z,1.2nm,0.7s,baz=150,slow=6.0,SNR=4.0
comp=Z,1.2nm,0.7s
EKA Eskdalemuir Ar 69.12 336 P P 18 48 50.5 +1.1
comp=Z,2.6nm,0.6s,baz=134,slow=6.5,SNR=10
comp=Z,2.6nm,0.6s
ESK Eskdalemuir 69.13 336 P P 18 48 50.1 +0.7
ZAA0 Zalesovo Array 70.13 27 P P 18 48 55.2 -0.3
ZAA0 IAmb IAmb 18 49 08.1
comp=Z,11nm,1.0s
ZALV Zalesovo Beam 70.13 27 P P 18 48 55.7 +0.1
comp=Z,5.6nm,0.8s,baz=235,slow=5.2,SNR=24
comp=Z,5.6nm,0.8s
ZALV Zalesovo Beam 70.13 27 P P 18 48 55.5 -0.1
TROLL Troll, Antarti 70.74 191 P P 18 49 02.2 +2.9
GTA2 Gaotai 71.41 46 *eP* **P 18 49 05.0 +1.1**
GTA2 sP sP 18 49 13.9 +5.2
GTA2 pmax pmax
comp=Z,4.0nm,1.3s
SNAA Sanae 71.60 193 P P 18 49 06.4 +2.0
comp=Z,4.2nm,0.8s,baz=0.0,slow=2.0,SNR=3.7
comp=Z,4.2nm,0.8s
SNAA Sanae 71.60 193 P P 18 49 05.0 +0.6
SNAA IAmb IAmb 18 50 47.8
comp=Z,15nm,1.4s
VNA2 Neumayer--Watz 72.14 194 ⇑P P 18 49 09.5 +1.9
comp=Z,3.4nm,0.6s,baz=41,slow=4.1
VNA3 Neumayer Olymp 72.92 195 ⇑P P 18 49 14.4 +2.2
comp=Z,5.7nm,0.8s
ARCES ARCESS Array B 74.74 355 P P 18 49 23.0 +0.2
comp=Z,5.3nm,1.0s,baz=167,slow=4.5,SNR=4.5
comp=Z,5.3nm,1.0s
XAN Xi'an 76.60 54 ⇓P P 18 49 33.9 -0.4
XAN pmax pmax
comp=Z,10.0nm,1.3s
NWAO Narrogin (SRO) 77.88 122 P P 18 49 39.6 -1.9
SONM Songino Array 78.95 39 P P 18 49 49.2 +2.0
comp=Z,1.0nm,0.6s,baz=240,slow=6.4,SNR=5.8
SONM LR LR 19 29 05.8
comp=Z,36nm,18.2s,baz=216,slow=39
comp=Z,1.0nm,0.6s
SONM Songino Array 78.95 39 P P 18 49 47.2 -0.1
BTO2 Baotou 79.14 47 *eP* **P 18 49 50.0 +1.6**
BTO2 pmax pmax
comp=Z,13nm,1.0s
ULN Ulaanbaatar 79.38 40 P P 18 49 49.3 -0.2
PSA00 Pilbara Seismi 80.14 111 P P 18 49 53.5 -0.7
HHC Hu-ho-hao-te 80.41 47 *eP* **P 18 49 57.9 +2.6**
HHC sP PcP 18 50 08.3 +6.0
HHC pmax pmax
comp=Z,8.0nm,0.7s
HHC pmax pmax
comp=Z,33nm,5.3s
MYLDM Lahad Datu 80.44 84 P P 18 49 55.5 -0.3
KAPI Kappang 80.82 94 LR LR 19 25 18.9
comp=Z,27nm,18.1s,baz=257,slow=35
NJ2 Nanjing 84.34 57 *eP* **P 18 50 16.3 +0.5**
QSPA South Pole Qui 85.23 180 P P 18 50 20.4 +0.5
comp=Z,3.4nm,1.0s,baz=207,slow=4.5,SNR=4.8
comp=Z,3.4nm,1.0s
QSPA South Pole Qui 85.23 180 P P 18 50 19.5 -0.3
QSPA IAmb IAmb 18 50 57.8
comp=Z,12nm,1.6s
BDFB Brasilia 85.44 255 LR LR 19 26 27.5
comp=Z,56nm,18.4s,baz=355,slow=34
FITZ Fitzroy Crossi 85.74 108 P P 18 50 24.6 +1.4
comp=Z,5.3nm,1.0s,baz=277,slow=8.1,SNR=4.1
comp=Z,5.3nm,1.0s
CN2 Changchun 91.05 46 P P 18 50 50.8 +2.8
VNDA Vanda 92.14 170 LR LR 19 31 11.5
comp=Z,56nm,18.2s,baz=228,slow=35
KSRS Korea Array 92.39 53 LR LR 19 31 51.6
comp=Z,21nm,21.9s,baz=275,slow=35
ASAR Alice Springs 92.96 114 P P 18 50 58.8 +1.5
comp=Z,1.1nm,0.8s,baz=258,slow=3.9,SNR=5.0
ASAR LR LR 19 29 36.6
comp=Z,93nm,18.5s,baz=278,slow=34
comp=Z,1.1nm,0.8s
ASAR Alice Springs 92.96 114 P P 18 50 56.6 -0.8
CPUP Villa Florida 93.16 243 P P 18 50 59.7 +1.6
comp=Z,1.1nm,0.4s,baz=90,slow=8.1,SNR=3.8
comp=Z,1.1nm,0.4s
CPUP Villa Florida 93.16 243 P P 18 50 56.2 -1.9
WRA Warramunga Arr 93.78 110 P P 18 51 01.8 +0.6
comp=Z,2.2nm,1.0s,baz=266,slow=3.1,SNR=9.9
comp=Z,2.2nm,1.0s
WRA Warramunga Arr 93.78 110 P P 18 50 59.6 -1.5
WB0 Warramunga Arr 93.85 110 P P 18 51 01.5 0.0
WR8 Warramunga Arr 93.93 110 P P 18 51 00.5 -1.4
TIXI Tiksi 94.64 19 LR LR 19 39 09.4
comp=Z,73nm,19.8s,baz=199,slow=39
TIXI Tiksi 94.64 19 P P 18 51 04.3 +0.4
TIXI IAmb IAmb 18 51 16.6
comp=Z,3.9nm,0.9s
YAK Yakutsk 94.75 28 LR LR 19 37 08.3
comp=Z,36nm,18.9s,baz=278,slow=38
YAK Yakutsk 94.75 28 P P 18 51 03.8 -0.7
STKA Stephens Creek 98.46 123 LR LR 19 28 32.0
comp=Z,48nm,18.1s,baz=205,slow=31
YKA Yellowknife Ar 119.14 346 PKP PKPdf 18 56 31.8 -0.3
comp=Z,0.2nm,0.6s,baz=24,slow=1.9,SNR=5.5
ILAR Eielson Array 120.04 3 PKP PKPdf 18 56 33.0 -0.7
comp=Z,0.7nm,0.9s,baz=328,slow=3.2,SNR=5.0
PDAR Pinedale Array 132.82 328 PKP PKPdf 18 56 58.5 -0.7
comp=Z,0.6nm,0.8s,baz=24,slow=7.9,SNR=4.5
TXAR Lajitas Array 136.77 309 PKP PKPdf 18 57 08.0 +1.2
comp=Z,0.7nm,0.8s,baz=44,slow=2.3,SNR=5.8
NVAR Mina Array Bea 140.49 331 PKP PKiKP 18 57 15.4 -0.7
comp=Z,1.3nm,0.7s,baz=348,slow=4.4,SNR=6.2

IDC ***13*** *19:35:41.0±1.0, 46°.81N×81°.04W, h0km, mb3.0/1, mbtmp3.5/4, ML2.1/2, Error ellipse: s-maj=15.6km s-min=8.1km az=60.0*
OTT ***13*** *19:35:42.4±0.0, 46°.67N×81°.34W, h1km, MN3.5/17, Mining related event, Sudbury, On 8km northeast from Onaping Falls, On Mining induced.*

ISC 13 19:35:40.8±0.9, 46.71N±0°.03×81°.36W±0°.04, h0km, n22, σ1ᵍ08/38, 1D, Ontario

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
SUBO	**Sudbury**	**0.18**	**122**	⇓PG		**Pg**	**19 35 45.3**	**+1.0**
SUBO				SG		**Sg**	**19 35 47.3**	**+0.8**
SUBO				Trac			19 35 47.4	
	comp=Z,1μm,0.1s							
TOBO	**Tobermory, Bru**	**1.49**	**185**	PG		**Pn**	**19 36 08.5**	**-0.2**
TOBO				SG		**Sg**	**19 36 27.7**	**-0.8**
TOBO				Trac			19 36 33.1	
	comp=Z,36nm,0.1s							
KLBO	**Killbear Provi**	**1.57**	**149**	PG		**Pn**	**19 36 09.4**	**-0.4**
KLBO				SG		**Sn**	**19 36 29.4**	**-1.4**
KLBO				Trac			19 36 29.9	
	comp=Z,182nm,0.2s							
KIPQ	**Kipawa,Quebec**	**1.58**	**86**	PG		**Pn**	**19 36 10.6**	**+0.5**
KIPQ				SG		**Sn**	**19 36 31.3**	**0.0**
KIPQ				Trac			19 36 33.0	
	comp=Z,175nm,0.1s							
BUKO	**Buck Lake**	**1.86**	**132**	PN		**Pn**	**19 36 14.4**	**+0.6**
BUKO				SN		**Sn**	**19 36 38.5**	**+0.4**
BUKO				Trac			19 36 40.9	
	comp=Z,103nm,0.2s							
KILO	**Kirkland Lake**	**2.10**	**31**	PN		**Pn**	**19 36 18.3**	**+1.0**
KILO				SN		**Sb**	**19 36 46.3**	**-0.2**
KILO				Trac			19 36 49.2	
	comp=Z,53nm,0.1s							
BMRO	**Meriville Lake**	**2.11**	**177**	PN		**Pn**	**19 36 18.1**	**+0.7**
BMRO				SN		**Sn**	**19 36 44.7**	**+0.3**
BMRO				Trac			19 36 49.0	
	comp=Z,62nm,0.2s							
SADO	**Sadowa**	**2.48**	**141**	Pn		**Pn**	**19 36 23.1**	**+0.7**
	19nm,0.3s,baz=346,slow=16,SNR=72							
SADO				Lg		Lg	19 36 55.6	
	38nm,0.3s,baz=76,slow=20,SNR=29							
SADO	**Sadowa**	**2.48**	**141**	PN		**Pn**	**19 36 22.9**	**+0.4**
SADO				SN		**Sn**	**19 36 52.9**	**-0.5**
SADO				Trac			19 36 57.8	
	comp=Z,94nm,0.2s							
BWLO	**Walkerton**	**2.59**	**177**	PN		**Pn**	**19 36 24.2**	**+0.2**
BWLO				SN		**Sn**	**19 36 55.8**	**-0.4**
BWLO				Trac			19 37 03.6	
	comp=Z,24nm,0.1s							
BASO	**Ashfield**	**2.70**	**185**	PN		**Pn**	**19 36 25.6**	**+0.1**
BASO				Trac			19 37 10.7	
	comp=Z,39nm,0.1s							
CHRO	**Chalk River**	**2.83**	**102**	PN		**Pn**	**19 36 28.0**	**+0.8**
CHRO				SN		**Sn**	**19 37 02.0**	**-0.1**
CHRO				Trac			19 37 09.6	
	comp=Z,53nm,0.1s							
KAPO	**Kapuskasing**	**2.85**	**345**	PN		**Pn**	**19 36 28.8**	**+1.3**

KAPO				SN	Sn	19 37 03.8	+1.2	
KAPO				Trac		19 37 16.8		
	comp=Z,76nm,0.3s							
VLDQ	Val d'Or	3.00	61	PN	Pn	19 36 28.6	-1.0	
VLDQ				SN	Sn	19 37 03.0	-3.2	
VLDQ				LG	Lg	19 37 10.6		
VLDQ				Trac		19 37 11.1		
	comp=Z,72nm,0.3s							
PEMO	Pembroke	3.03	108	PN	Pn	19 36 30.6	+0.5	
PEMO				SN	Sn	19 37 06.6	-0.4	
PEMO				Trac		19 37 22.3		
	comp=Z,61nm,0.2s							
ACTO	Acton	3.23	163	PN	Pn	19 36 35.4	+2.6	
ACTO				SN	Sn	19 37 10.9	-0.9	
ACTO				Trac		19 37 21.7		
	comp=Z,28nm,0.1s							
DELO	Deloro Mine	3.42	129	PN	Pn	19 36 35.3	0.0	
DELO				SN	Sn	19 37 15.2	-1.2	
DELO				LG	Lg	19 37 26.7		
DELO				Trac		19 37 32.2		
	comp=Z,29nm,0.2s							
PLVO	Plevna	3.42	118	PN	Pn	19 36 35.7	+0.3	
PLVO				SN	Sn	19 37 15.8	-0.8	
PLVO				Trac		19 37 33.1		
	comp=Z,53nm,0.2s							
WLVO	Wesleyville	3.48	142	PN	Pn	19 36 36.8	+0.7	
WLVO				SN	Sn	19 37 16.8	-1.1	
WLVO				Trac		19 37 25.8		
	comp=Z,46nm,0.2s							
ULM	Lac du Bonnet	10.27	295	Pn	Pn	19 38 07.1	-2.2	
	0.6nm,0.3s,baz=100,slow=10,SNR=5.4							
ULM				Sn	Sn	19 39 52.4	-13	
	0.3nm,0.3s,baz=217,slow=20,SNR=1.7							
ULM				Lg	Lg	19 40 56.2		
	0.8nm,0.3s,baz=15,slow=22,SNR=5.2							
	2.0nm,0.4s							
SCHQ	Schefferville	12.25	43	Pn	Pn	19 38 29.6	-6.9	
	baz=225,slow=11,SNR=2.0							
SCHQ				Sn	Sn	19 40 38.4	-15	
	0.6nm,0.3s,baz=204,slow=20,SNR=5.2							
SCHQ				Lg	Lg	19 41 51.0		
	1.1nm,0.3s,baz=119,slow=14,SNR=3.8							
	1.4nm,0.8s							
YKA	Yellowknife Ar	24.52	322	P	P	19 41 01.8	+0.2	
	0.2nm,0.5s,baz=110,slow=9.3,SNR=5.3							
	0.2nm,0.5s							

NEIC ***13*** *19:39:30.2±1.1, 19°.13S×0°.07×177°.7W×0°.2, h544km±9km, mb4.0/14, Error ellipse: s-maj=21.8km s-min=8.6km az=104.0*
IDC ***13*** *19:39:32.5±5.8, 19°.21S×178°.17W, h542km±48km, mb3.0/4, mbtmp3.9/5, Error ellipse: s-maj=218.5km s-min=29.3km az=158.0*

ISC 13 19:39:29.8±0.7, **19°.19S**±0°.10×**177°.8W**±0°.1, **h532km, n21, σ1§40/21, mb3.9/10, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.16	290	P	P	19 40 53.0	+1.2
	3.2nm,0.3s,baz=105,slow=9.2,SNR=11						
FUTU	Fugatoga	4.86	357	P	P	19 40 58.0	+0.4
FUTU				S	S	19 42 11.2	+2.2
NIUE	Niue	7.48	90	P	P	19 41 19.9	-2.0
MXZ	Matakaoa Point	18.61	190	P	P	19 43 16.1	+2.2
CTA	Charters Tower	33.79	262	P	P	19 45 27.5	-0.3
	7.9nm,1.1s,baz=66,slow=12,SNR=1.6						
	7.9nm,1.1s						
CTAO	Charters Tower	33.79	262	P	P	19 45 27.8	0.0
COEN	Coen	37.67	272	P	P	19 45 59.9	-0.1
COEN				IAmb	IAmb	19 46 09.2	
	comp=Z,15nm,1.2s						
WR8	Warramunga Arr	44.79	261	P	P	19 46 55.6	-0.9
WR8				IAmb	IAmb	19 46 56.0	
	comp=Z,9.1nm,1.4s						
WB0	Warramunga Arr	44.92	261	P	P	19 46 56.6	-0.8
WB0				IAmb	IAmb	19 47 01.1	
	comp=Z,5.3nm,1.3s						
WRA	Warramunga Arr	44.94	261	P	P	19 46 56.9	-0.7
	comp=Z,0.7nm,0.3s,baz=96,slow=8.1,SNR=40						
	comp=Z,0.7nm,0.3s						
WRA	Warramunga Arr	44.94	261	IAmb	IAmb	19 47 02.7	
	comp=Z,0.2nm,1.1s						
AS31	Alice Springs	44.98	255	P	P	19 46 57.4	-0.5
AS31				IAmb	IAmb	19 47 09.0	
	comp=Z,1.2nm,1.1s						
ASAR	Alice Springs	44.98	255	P	P	19 46 57.5	-0.4
	comp=Z,1.3nm,0.7s,baz=88,slow=8.3,SNR=15						
	comp=Z,1.3nm,0.7s						
MIDW	Midway	47.13	1	P	P	19 47 14.3	+0.3
CASY	Casey	65.20	205	P	P	19 49 18.4	+0.2
JMN	Monobe	69.91	319	P	P	19 49 45.1	-2.5
QSPA	South Pole Qui	70.87	180	P	P	19 49 52.6	-0.2
PEA0B	Petropavlovsk-	75.05	345	P	P	19 50 15.5	-1.3
PLK4	Peulik 4	78.60	12	P	P	19 50 36.0	-0.2
PLK4				IAmb	IAmb	19 50 38.1	
	comp=Z,27nm,1.2s						
M14K	Bethel	80.69	8	P	P	19 50 46.9	0.0
M14K				IAmb	IAmb	19 51 02.5	
	comp=Z,3.9nm,1.1s						
TXAR	Lajitas Array	86.23	57	P	P	19 51 18.5	+3.1
	comp=Z,0.2nm,0.6s,baz=205,slow=4.6,SNR=2.6						
	comp=Z,0.2nm,0.6s						

IDC 13 19:45:47.7±2.1, **4°.72N×124°.55E, h0km, mb3.5**/3, **mbtmp3.5**/3, **Error ellipse: s-maj=210.5km s-min=26.9km az=64.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	26.33	159	P	P	19 51 26.0	+0.5
	0.4nm,0.3s,baz=338,slow=9.3,SNR=20						
	0.4nm,0.3s						
ASAR	Alice Springs	29.66	162	P	P	19 51 54.5	-0.8
	0.1nm,0.3s,baz=339,slow=7.6,SNR=5.3						
	0.1nm,0.3s						
MKAR	Makanchi Array	55.51	326	P	P	19 55 24.6	0.0
	0.1nm,0.4s,baz=122,slow=7.1,SNR=4.7						
	0.1nm,0.4s						

ISK ***13*** *19:51:23.2, 34°.51N×33°.33E, h2km, ML2.7/8*
GII ***13*** *19:51:25.6±0.0, 34°.670N±0°.002×33°.542E±0°.001, h0km, Mws2.1, confirmed*
NIC ***13*** *19:51:27.3, 34°.68N×33°.42E, h17km±3km, Ml1.8/10*

ISC 13 19:51:26.8±1.0, **34°.63N**±0°.03×**33°.43E**±0°.03, **h14**km±7km, **n27, σ0§56/46, 2C-1D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASGA	Asgata	0.21	316	⇑*i*P	Pb	19 51 32.0	-0.4
ASGA				S	Sg	19 51 35.5	+0.7
ASGA				AML	AML	19 51 37.0	
	2.1nm,0.3s						
ASGA				AML	AML	19 51 37.2	
	2.9nm,0.3s						
CSS	Mathiatis	0.34	347	⇓*i*P	Pg	19 51 33.8	0.0
CSS				S	Sg	19 51 39.0	+0.5
CSS				AML	AML	19 51 39.5	
	0.6nm,0.6s						
CSS				AML	AML	19 51 42.4	
	0.5nm,0.3s						
CSS	Mathiatis	0.34	347	P	Pg	19 51 33.0	-0.8
CSS				S	Sg	19 51 38.8	+0.3
MVOU	Mavrovouni	0.42	24	P	Pg	19 51 35.3	+0.1
MVOU				S	Sb	19 51 43.0	+0.9
MVOU				AML	AML	19 51 43.9	
	0.3nm,0.3s						
MVOU				AML	AML	19 51 45.5	
	0.2nm,0.4s						
APOL	The Sanctuary	0.47	275	P	Pg	19 51 36.5	+0.4
APOL				S	Sb	19 51 43.2	-0.3
APOL				AML	AML	19 51 45.1	
	0.4nm,0.2s						
APOL				AML	AML	19 51 45.6	
	0.3nm,0.2s						
XYLS	Xyliatos	0.49	321	⇑*e*P	Pg	19 51 35.6	-0.9
XYLS				S	Sg	19 51 42.3	-0.9
XYLS				AML	AML	19 51 43.7	
	0.4nm,0.3s						
XYLS				AML	AML	19 51 44.6	
	0.4nm,0.2s						
ATHAL	Athalassa	0.51	357	P	Pg	19 51 36.6	-0.2
ATHAL				S	Sn	19 51 48.6	+0.5
ATHAL				AML	AML	19 51 51.0	
	0.9nm,0.5s						
TROD	Troodos	0.56	304	P	Pb	19 51 37.5	-0.9
TROD				S	Sb	19 51 46.3	-0.1
TROD				AML	AML	19 51 51.6	
	0.2nm,0.6s						
TROD				AML	AML	19 51 53.1	
	0.1nm,0.3s						
LFK	Lefkose	0.65	8	Pg	Pb	19 51 39.3	-0.7
LFK				Sg	Sn	19 51 51.2	-0.6
NATA	Nata	0.72	282	P	Pg	19 51 41.7	+0.9
NATA				S	Sn	19 51 52.8	-0.6
NATA				AML	AML	19 51 59.7	
	0.2nm,0.5s						
ALFC	Alefka	0.86	308	P	Pb	19 51 42.7	-0.8
ALFC				S	Sg	19 51 55.0	+0.3
ALFC				AML	AML	19 51 57.2	
	0.2nm,0.5s						
ALFC				AML	AML	19 51 59.7	
	0.3nm,0.5s						
AKMS	Akamas	0.97	293	P	Pb	19 51 45.6	+0.1
AKMS				S	Sn	19 51 59.8	+0.1
AKMS				AML	AML	19 52 01.2	
	0.2nm,0.6s						
AKMS				AML	AML	19 52 03.2	
	0.1nm,0.4s						
TEKE	Tekeli-Mersin	1.53	351	Pn	Pn	19 51 54.0	+0.3
TISA	Tisan-Mersin	1.54	8	Pn	Pn	19 51 54.4	+0.6
IKL	Isikli	1.61	7	Pn	Pn	19 51 55.4	+0.5
TEVE	Tevekalti-Mers	1.80	0	Pn	Pn	19 51 58.2	+0.7
KEBE	Keben-Mersin	1.82	7	Pn	Pn	19 51 58.6	+0.8
GAZI	Gazipasa	1.84	331	Pn	Pn	19 51 57.8	-0.1
HNTI	Hanita	2.12	136	P	Pn	19 52 01.5	-0.3
HNTI				S	Sn	19 52 28.3	+0.3
MMC7	Mount Meron ar	2.29	134	P	Pn	19 52 04.3	0.0
MMA0B	Mount Meron ar	2.31	134	P	Pn	19 52 04.3	-0.1
MMA0B				S	Sn	19 52 33.0	+0.3
GEM	Giv'at Ha'Em	2.34	127	P	Pn	19 52 04.1	-0.8
GEM				S	Sn	19 52 33.2	-0.1
NATI	Neve Ativ	2.36	125	P	Pn	19 52 04.5	-0.6
NATI				S	Sn	19 52 34.1	+0.3
OFRI	`Ofer	2.39	147	P	Pn	19 52 05.4	-0.2
OFRI				S	Sn	19 52 35.2	+0.5
HDMB	Hadim	2.45	342	Pn	Pn	19 52 06.9	+0.4
KSHT	Keshet	2.58	129	P	Pn	19 52 07.5	-0.7
KSHT				S	Sn	19 52 39.9	+0.5
HMDT	Nahal Hemdat	2.95	143	P	Pn	19 52 13.4	+0.1
HMDT				S	Sn	19 52 49.3	+0.8

NEIC ***13*** *20:06:33.7±1.4, 17°.92N±0°.03×66°.95W±0°.01, h11km±3km, ML3.6/35, Md3.3/5(RSPR), Error ellipse: s-maj=4.2km s-min=1.5km az=197.0*
OSPL ***13*** *20:06:33.6±0.4, 17°.81N×66°.96W, h2km±999km, ML3.1, Presumed earthquake*
SDD ***13*** *20:06:34.7±2.4, 17°.94N×66°.95W, h0km±14km, MD2.8, ML3.2, MW3.1, Presumed earthquake*

ISC 13 20:06:32.6±1.3, **17°.87N**±0°.06×**66°.95W**±0°.02, **h7**km±9km, **n29, σ1§07/48, 10C-2D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLPR	Magueyes Islan	0.13	318		Pg	20 06 34.4	-0.9
MLPR				Sg	Sg	20 06 36.3	-0.9
MLPR				IAML		20 06 37.0	
	22μm,0.4s						
MLPR	Magueyes Islan	0.13	318	⇑*i*P	Pg	20 06 34.6	-0.7
MLPR				⇑*i*S	Sg	20 06 36.6	-0.6
MLPR				IAML		20 06 36.6	
	comp=N,8μm,0.5s						
CRPR	Cabo Rojo, PR	0.20	312		Pg	20 06 38.0	+1.4
CRPR				Sg	Sg	20 06 41.0	+1.7
CRPR				IAML		20 06 42.3	
	comp=N,8μm,0.3s						
CRPR				IAML		20 06 42.6	
	comp=N,8μm,0.4s						
CRPR	Cabo Rojo, PR	0.20	312	*i*P	Pg	20 06 38.2	+1.6
CRPR				*e*S	Sg	20 06 41.2	+1.9
CRPR				IAML		20 06 41.5	
	comp=Z,7μm,0.2s						
OBIP	Obispado Ponce	0.37	63		Pg	20 06 40.7	+0.9
OBIP				Sg	Sg	20 06 45.8	+1.1
OBIP	Obispado Ponce	0.37	63	*i*P	Pg	20 06 40.8	+0.9
OBIP				*e*S	Sg	20 06 46.3	+1.6
OBIP				IAML		20 06 46.9	
	comp=Z,1μm,0.1s						
PRSN	Puerto Rico Se	0.39	332		Pg	20 06 41.0	+0.8
PRSN				Sg	Sg	20 06 45.9	+0.6
PRSN				IAML		20 06 48.4	
	comp=Z,13μm,0.2s						
PRSN				IAML		20 06 50.5	
	comp=Z,9μm,0.2s						
PRSN	Puerto Rico Se	0.39	332	⇑*i*P	Pg	20 06 41.1	+1.0
PRSN				*i*S	Sg	20 06 45.1	-0.2
PRSN				IAML		20 06 47.4	
	comp=N,7μm,0.3s						
CELP	Cerrillos	0.41	60		Pg	20 06 41.4	+0.9
CELP				Sg	Sg	20 06 47.0	+1.1
CELP	Cerrillos	0.41	60	⇓*i*P	Pg	20 06 41.5	+0.9
CELP				⇑*i*S	Sg	20 06 46.2	+0.3
CELP				IAML		20 06 47.8	
	comp=N,1μm,0.2s						
UUPR	Utuado, UPR, P	0.44	30		Pg	20 06 41.5	+0.4
UUPR				Sg	Sg	20 06 46.2	-0.7
AOPR	Arecibo Observ	0.51	22		Pg	20 06 42.7	+0.3
AOPR				Sg	Sg	20 06 48.3	-0.8
AOPR				IAML		20 06 50.8	
	comp=N,5μm,0.3s						
AOPR	Arecibo Observ	0.51	22	⇑*i*P	Pg	20 06 42.7	+0.3
AOPR				⇑*i*S	Sg	20 06 49.2	+0.1
AOPR				IAML		20 06 50.7	
	comp=N,5μm,0.3s						
AGPR	Aguadilla, PR	0.61	346		Pg	20 06 44.8	+0.4
AGPR				Sg	Sg	20 06 51.8	-0.6
AGPR	Aguadilla, PR	0.61	346	⇑*i*P	Pg	20 06 44.9	+0.5
AGPR				⇑*i*S	Sg	20 06 51.6	-0.8
AGPR				IAML		20 06 55.6	
	comp=N,1μm,0.3s						
ECPR	Experimental S	0.71	51		Pg	20 06 46.4	+0.1
ECPR					Sg	20 06 55.8	+0.1
ECPR				IAML		20 06 57.3	
	comp=N,6μm,0.2s						
SJG	San Juan	0.80	73		Pg	20 06 48.2	+0.3
SJG				Sg	Sg	20 06 58.4	0.0
SJG	San Juan	0.80	73	IAML		20 07 00.8	
	comp=N,1μm,0.4s						
SJG	San Juan	0.80	73	⇓*i*P	Pg	20 06 48.3	+0.3
SJG				⇑*i*S	Sg	20 06 59.3	+0.9
SJG	San Juan	0.80	73	*i*P	Pg	20 06 48.3	+0.3
SJG				*e*S	Sg	20 06 59.4	+1.0
SJG				IAML		20 07 00.1	
	comp=Z,659nm,0.6s						
HUMP	Col San Antoni	1.08	75		Pg	20 06 52.9	-0.5
HUMP				IAML		20 07 12.1	
	comp=Z,895nm,0.2s						
CUPR	Culebra, Puert	1.65	74		Pn	20 07 02.7	+0.7
CUPR				Sn	Sn	20 07 24.0	+0.6
DR12	Loma Pena Alta	2.48	292		Pn	20 07 12.9	-0.6
HATOM	Hato Mayor del	2.48	292	*i*P	Pn	20 07 16.4	+2.9
HATOM				⇑*i*S	Sn	20 07 44.2	0.0
HATOM				IAML		20 08 03.9	
	comp=N,58nm,1.1s						
BANI	BANI	3.28	280	Pn	Pn	20 07 23.2	-1.4
SMRT	St. Maarten	3.69	87	Pn	Pn	20 07 28.0	-2.2
SDDR	Presa de Saban	4.26	286	Pn	Pn	20 07 37.6	-0.4
GDHS	Morne Mazeau,	5.21	107	Pn	Pn	20 07 48.1	-3.0
BIM	Bigot	6.56	120	Pn	Pn	20 08 07.7	-2.0

GCG ***13*** *20:17:55.9±1.8, 16°.11N×93°.78W, h96km±35km, MD4.1, Presumed earthquake*
MEX ***13*** *20:17:55.5±0.9, 16°.00N×93°.90W, h108km±8km, MD4.2*
IDC ***13*** *20:17:56.1±1.8, 16°.47N×93°.53W, h84km±34km, mb3.3/2, mbtmp3.5/4, Error ellipse: s-maj=144.3km s-min=7.0km az=28.0*

ISC 13 20:17:54.4±0.9, **16°.04N**±0°.04×**93°.84W**±0°.03, **h111**km±7km, **n60, σ2§46/116, Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CARR	Arriaga	0.22	342	*e*P	Pn	20 18 09.4	-0.6
CARR				*e*S	Sn	20 18 20.5	-1.1
PCIG		0.69	119	*e*P	Pn	20 18 12.2	-0.6
PCIG				*e*S	Sn	20 18 25.8	-0.7
TGIG		1.01	43	*e*P	Pn	20 18 15.2	-0.7
TGIG				*e*S	Sn	20 18 30.2	-1.8
TGIG		1.01	43	*e*P	Pn	20 18 15.3	-0.5
TGIG				*e*S	Sn	20 18 30.0	-2.0
TGBT	Tuxtla Gutierr	1.03	45	*e*P	Pn	20 18 14.9	-1.1
TGBT				*e*S	Sn	20 18 30.4	-1.9
CMIG	Matias Romero	1.45	316	P	Pn	20 18 20.6	-0.1
	93nm,0.3s,baz=158,slow=6.1,SNR=451						
CMIG				S	Sn	20 18 39.4	-1.2
	255nm,0.3s,baz=43,slow=21,SNR=185						
CMIG	Matias Romero	1.45	316	*e*P	Pn	20 18 20.7	0.0
CMIG				*e*S	Sn	20 18 39.7	-0.9
CCIG	Comitan	1.66	81	*e*P	Pn	20 18 22.6	-0.7
CCIG				*e*S	Sn	20 18 45.4	+0.1
CCIG	Comitan	1.66	81	*e*P	Pn	20 18 23.9	+0.6
CCIG				*e*S	Sn	20 18 45.5	+0.2
PATR	El Naranjo	1.80	120	*e*P	Pn	20 18 25.2	0.0
PATR				*e*S	Sn	20 18 48.8	+0.2
PAVE	Pavencul	1.81	117	*e*P	Pn	20 18 25.8	+0.4
PAVE				*e*S	Sn	20 18 49.4	+0.6
THIG		1.89	126	*e*P	Pn	20 18 25.5	-0.6
THIG				*e*S	Sn	20 18 50.6	+0.3
THIG		1.89	126	*e*P	Pn	20 18 26.6	+0.5
THIG				*e*S	Sn	20 18 50.3	0.0
CHUJ	Union Juarez	1.92	119	*e*P	Pn	20 18 26.8	+0.1
CHUJ				*e*S	Sn	20 18 50.3	-1.0
TUIG	Tuzandepetl	2.06	344	*e*P	Pn	20 18 27.4	-0.8
TUIG				*e*S	Sn	20 18 54.1	+0.1
SMCA	Catarina	2.07	124	*e*P	Pn	20 18 28.8	+0.4
SMCA				*e*S	Sn	20 18 54.4	+0.1
HUIG	Huatulco	2.20	263	*e*P	Pn	20 18 28.5	-1.5
HUIG				*e*S	Sn	20 18 54.2	-3.1
HUIG	Huatulco	2.20	263	*e*P	Pn	20 18 28.1	-1.9
HUIG				*e*S	Sn	20 18 53.3	-3.9
HUEH	Huehuetenango	2.37	107	*e*P	Pn	20 18 30.6	-1.8
HUEH				*e*S	Sn	20 19 00.2	-1.2
NEUV	Arroyo Zacate	2.51	312	*e*P	Pn	20 18 32.9	-1.1
NEUV				*e*S	Sn	20 19 01.6	-2.7
RTAL	Retalhuleu	2.56	126	*e*P	Pn	20 18 35.4	+0.6
RTAL				*e*S	Sn	20 19 06.0	+0.3
PMUV	Sontecomapan	2.77	334	*e*P	Pn	20 18 34.7	-2.9
PMUV				*e*S	Sn	20 19 05.4	-5.4
STG2	El Palmar, Qui	2.87	123	*e*P	Pn	20 18 35.3	-3.5
STG2				*e*S	Sn	20 19 05.2	-7.8
STG8	El Palmar, Qui	2.88	123	*e*P	Pn	20 18 35.3	-3.8
STG8				*e*S	Sn	20 19 07.2	-6.3
STG5	El Palmar, Qui	2.91	124	*e*P	Pn	20 18 36.1	-3.3
STG5				*e*S	Sn	20 19 06.3	-7.6
OXLC	Oaxaca	2.93	291	*e*P	Pn	20 18 40.4	+0.7
OXLC				*e*S	Sn	20 19 13.1	-1.4
OXBJ	Oaxaca	2.95	291	*e*P	Pn	20 18 41.3	+1.3
OXBJ				*e*S	Sn	20 19 15.4	+0.4
VHO	Vista Hermosa	2.96	291	*e*P	Pn	20 18 39.8	-0.3
VHO				*e*S	Sn	20 19 14.3	-0.9
PEIG	Puerto Escondi	3.18	270	*e*P	Pn	20 18 41.8	-1.1
PEIG				*e*S	Sn	20 19 18.3	-1.9
APG	El Apazote	3.42	107	P	Pn	20 18 45.7	-0.5
	2.1nm,0.3s,baz=175,slow=12,SNR=30						
APG				S	Sn	20 19 24.6	-1.7
	10.0nm,0.3s,baz=85,slow=16,SNR=28						
APG	El Apazote	3.42	107	*e*P	Pn	20 18 46.0	-0.2
APG				*e*S	Sn	20 19 24.5	-1.7
YOIG	Yosondua	3.65	283	*e*P	Pn	20 18 49.7	+0.3
YOIG				*e*S	Sn	20 19 28.6	-3.2
TOIG	Toxpalan	3.70	304	*e*P	Pn	20 18 49.8	-0.1
TOIG				*e*S	Sn	20 19 31.9	-0.9
SCIG	Sabancuy	3.86	41	*e*P	Pn	20 18 50.1	-1.8
SCIG				*e*S	Sn	20 19 32.6	-3.8
SCIG	Sabancuy	3.86	41	*e*P	Pn	20 18 51.6	-0.3
SCIG				*e*S	Sn	20 19 35.3	-1.1
PETF	Flores	3.91	77	*e*P	Pn	20 18 52.3	-0.3
PETF				*e*S	Sn	20 19 33.8	-4.0
PETF	Flores	3.91	77	*e*P	Pn	20 18 52.9	+0.3
PETF				*e*S	Sn	20 19 36.4	-1.3
TXIG	Tlaxiaco	3.95	288	*e*P	Pn	20 18 54.8	+1.4
TXIG				*e*S	Sn	20 19 35.9	-3.2
TPIG	Tehuac#an	4.11	306	*e*P	Pn	20 18 53.7	-1.8
TPIG				*e*S	Sn	20 19 39.6	-3.2
PNIG	Pinotepa	4.13	275	*e*P	Pn	20 18 54.9	-0.8
PNIG				*e*S	Sn	20 19 38.2	-4.8
HLIG	Huajuapan de L	4.19	296	*e*P	Pn	20 18 57.6	+1.1
HLIG				*e*S	Sn	20 19 43.1	-1.6
JAUV	Jalcomulco	4.35	320	*e*P	Pn	20 18 57.2	-1.3
JAUV				*e*S	Sn	20 19 45.3	-3.0
LVIG	Laguna Verde	4.41	327	*e*P	Pn	20 18 58.2	-1.1
LVIG				*e*S	Sn	20 19 44.6	-5.1
FTIG	Fresnillo de T	4.51	295	*e*P	Pn	20 19 02.7	+2.0
FTIG				*e*S	Sn	20 19 51.2	-1.0
MGIG	Malinaltepec	4.75	285	*e*P	Pn	20 19 03.4	-0.6
MGIG				*e*S	Sn	20 19 54.7	-3.3
TLIG	Tlapa	4.77	289	*e*P	Pn	20 19 05.5	+1.2
TLIG				*e*S	Sn	20 19 56.8	-1.9
CRIG	Cruz Grande	5.12	278	*e*P	Pn	20 19 08.2	-0.1
CRIG				*e*S	Sn	20 20 03.0	-4.0
CXUV	Coxquihui	5.44	320	*e*P	Pn	20 19 13.1	-0.2
CXUV				*e*S	Sn	20 20 12.7	-1.9
PPM	Popocatepetl	5.47	304	*e*P	Pn	20 19 17.9	+3.8
PPM				*e*S	Sn	20 20 12.5	-3.5
DAIG	Los Arroyos	5.66	281	*e*P	Pn	20 19 16.0	-0.2
DAIG				*e*S	Sn	20 20 14.8	-5.1
YAIG	Yautepec	5.72	300	*e*P	Pn	20 19 19.1	+1.9
YAIG				*e*S	Sn	20 20 18.2	-3.5
MEIG	Mezcala	5.84	290	*e*P	Pn	20 19 19.2	+0.5
MEIG				*e*S	Sn	20 20 20.8	-3.6
PLIG	Platanillo	5.89	294	*e*P	Pn	20 19 21.5	+2.0
PLIG				*e*S	Sn	20 20 22.3	-3.4
CAIG	El Cayaco	6.24	280	*e*P	Pn	20 19 24.4	+0.3
CAIG				*e*S	Sn	20 20 28.0	-6.1
ARIG	Puente Sto Nin	6.61	291	*e*P	Pn	20 19 31.4	+2.3
ARIG				*e*S	Sn	20 20 39.5	-3.5
ZIIG	Zihuatanejo	7.46	283	*e*P	Pn	20 19 41.5	+0.8
ZIIG				*e*S	Sn	20 21 05.5	+1.7
CEGR	Campo Tres	10.11	291	*e*P	Pn	20 20 20.5	+3.8
TXAR	Lajitas Array	16.02	327	P	P	20 21 36.1	+1.2
	0.9nm,0.8s,baz=149,slow=14,SNR=9.3						
NVAR	Mina Arroyo Bea	30.97	321	P	P	20 24 05.1	+3.6
	0.9nm,0.7s,baz=146,slow=7.6,SNR=6.7						
	0.9nm,0.7s						
YKA	Yellowknife Ar	48.65	347	P	P	20 26 27.5	+0.6

	2.4nm,0.3s,baz=50,slow=8.7,SNR=5.1						
SIJI				LR	LR	20 26 33.9	
	comp=Z,111nm,18.1s,baz=54,slow=48 11nm,0.3s						
JAY	**Jayapura**	**6.23**	**79**	Pn	**Pn**	**20 24 41.2**	**-0.1**
	1.8nm,0.3s,baz=242,slow=15,SNR=5.3 6.5nm,0.7s						
KAPI	**Kappang**	**14.84**	**264**	LR	LR	20 33 26.9	
	comp=Z,21nm,20.6s,baz=108,slow=42						
WRA	**Warramunga Arr**	**16.13**	**181**	Pn	**Pn**	**20 26 53.0**	**-3.2**
	0.1nm,0.3s,baz=3.0,slow=13,SNR=7.7						
WRA				Sn	**Sn**	**20 29 53.7**	**-0.8**
	0.1nm,0.3s,baz=7.8,slow=23,SNR=4.6						
FITZ	**Fitzroy Crossi**	**16.76**	**211**	Pn	**Pn**	**20 27 05.3**	**+1.2**
	0.3nm,0.3s,baz=48,slow=14,SNR=6.5						
FITZ				Sn	Sn	20 30 01.1	-8.6
	0.1nm,0.3s,baz=335,slow=2.7,SNR=2.0 1.1nm,0.4s						
ASAR	**Alice Springs**	**19.85**	**182**	P	**Pn**	**20 27 43.5**	**+1.7**
	4.1nm,0.7s,baz=6.5,slow=11,SNR=59						
ASAR				LR	LR	20 37 03.1	
	comp=Z,88nm,19.4s,baz=350,slow=42 4.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**41.44**	**303**	P	**P**	**20 30 56.8**	**+0.9**
	0.2nm,0.4s,baz=122,slow=6.8,SNR=4.1 0.2nm,0.4s						
SONM	**Songino Array**	**56.97**	**338**	P	**P**	**20 32 53.4**	**-0.9**
	0.1nm,0.3s,baz=141,slow=5.5,SNR=2.2 0.1nm,0.3s						
MKAR	**Makanchi Array**	**68.12**	**324**	P	**P**	**20 34 10.1**	**+1.3**
	0.7nm,0.6s,baz=112,slow=7.8,SNR=12 0.7nm,0.6s						
ZALV	**Zalesovo Beam**	**70.78**	**331**	P	**P**	**20 34 24.2**	**-0.9**
	0.4nm,0.5s,baz=109,slow=7.8,SNR=1.8 0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**72.21**	**326**	P	**P**	**20 34 34.6**	**+0.9**
	0.3nm,0.7s,baz=120,slow=5.4,SNR=5.4 0.3nm,0.7s						
BVAR	**Borovoye Array**	**77.81**	**326**	P	**P**	**20 35 06.7**	**+0.7**
	0.3nm,0.5s,baz=108,slow=9.3,SNR=4.0 0.3nm,0.5s						

*NORS **13** 20:26:55.5, 42˚.90N × 46˚.18E, h2km, MPVA3.7*
*MOS **13** 20:26:56.2, 42˚.91N × 46˚.16E, h6km, MPVA3.8*
*DRS **13** 20:26:57.9, 42˚.92N × 46˚.17E, h6km,*
ISC 13 20:26:57.8±0.8, 42˚.95N±0˚.03 × 46˚.17E±0˚.02, h4km±6km, n33, σ1§20/69, 1C-1D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVE	**Vedeno**	**0.03**	**279**	*i* Pg	**Pg**	**20 26 58.5**	**-0.3**
	33μm,0.1s						
DVE				*e*Sg	**Sg**	**20 26 59.2**	**-0.3**
	79μm,0.1s						
BTLR	**Botlikh**	**0.29**	**172**	*e*Pg	**Pg**	**20 27 03.3**	**-0.2**
	115nm,0.2s						
BTLR				*e*Sg	**Sg**	**20 27 07.6**	**+0.3**
	911nm,0.3s						
DLMR	**Dylym**	**0.36**	**71**	*e*Pg	**Pb**	**20 27 05.9**	**-0.9**
	252nm,0.2s						
DLMR				*e*Sg	**Sb**	**20 27 12.3**	**-0.5**
	2μm,0.4s						
GROC	**Groznyy**	**0.37**	**313**	*e*Pg	**Pb**	**20 27 06.6**	**-0.4**
	208nm,0.2s						
GROC				*e*Sg	**Sb**	**20 27 12.2**	**-0.8**
	1μm,0.4s						
DBC	**Dubki**	**0.49**	**82**	*e*Pg	**Pg**	**20 27 08.1**	**+0.8**
	34nm,0.3s						
DBC				*e*Sg	**Sb**	**20 27 16.2**	**-0.4**
	235nm,0.4s						
UNCR	**Uncukul**	**0.52**	**117**	*e*Pg	**Pg**	**20 27 08.4**	**+0.6**
	77nm,0.2s						
UNCR				*e*Sg	**Sb**	**20 27 16.4**	**-1.1**
	658nm,0.4s						
KRNR	**Karanay**	**0.56**	**103**	*e*Pg	**Pg**	**20 27 09.1**	**+0.5**
	26nm,0.2s						
KRNR				*e*Sg	**Sb**	**20 27 18.0**	**-0.6**
	215nm,0.3s						
XNZR	**Khunzakh**	**0.57**	**136**	*e*Pg	**Pg**	**20 27 09.5**	**+0.7**
	37nm,0.3s						
XNZR				*e*Sg	**Sb**	**20 27 18.1**	**-0.9**
	187nm,0.6s						
ARKR	**Arakani**	**0.70**	**120**	*e*Pg	**Pg**	**20 27 11.9**	**+0.7**
	38nm,0.2s						
ARKR				*e*Sg	**Sb**	**20 27 22.6**	**-0.1**
	179nm,0.4s						
BUJR	**Buynaksk**	**0.70**	**100**	*e*Pg	**Pb**	**20 27 12.5**	**-0.1**
	411nm,0.4s						
BUJR				*e*Sg	**Sb**	**20 27 23.6**	**+0.8**
	419nm,0.4s						
GNBR	**Gunib**	**0.81**	**133**	*e*Pg	**Pb**	**20 27 14.2**	**-0.4**
	46nm,0.2s						
GNBR				*e*Sg	**Sb**	**20 27 25.9**	**0.0**
	466nm,0.6s						
TLTR	**Tlyarata**	**0.86**	**171**	*i* Pg	**Pg**	**20 27 14.4**	**+0.2**
	14nm,0.2s						
TLTR				*e*Sg	**Sg**	**20 27 26.1**	**+0.7**
	108nm,0.5s						
KMGR	**Komgaron**	**0.96**	**277**	*e*Pg	**Pn**	**20 27 17.7**	**-0.5**
KMGR				*e*Sg	**Sn**	**20 27 32.2**	**-0.1**
MAK	**Makhachkala**	**0.98**	**89**	*e*Pg	**Pb**	**20 27 17.8**	**+0.4**
	163nm,0.3s						
MAK				*e*Sg	**Sn**	**20 27 32.1**	**-0.6**
	171nm,0.4s						
KMKR	**Kumukh**	**1.07**	**140**	*e*Pg	**Pb**	**20 27 18.8**	**-0.2**
	43nm,0.3s						
KMKR				*e*Sg	**Sb**	**20 27 34.1**	**+0.7**
	488nm,0.4s						
VLKR	**Vladikavkaz**	**1.10**	**275**	*e*Pg	**Pb**	**20 27 19.7**	**+0.3**
VLKR				*e*Sg	**Sn**	**20 27 37.5**	**+1.9**
SGKR	**Sergokala**	**1.21**	**114**	*e*Pg	**Pg**	**20 27 21.0**	**+0.1**
	30nm,0.3s						
SGKR				*e*Sg	**Sn**	**20 27 38.1**	**-0.2**
	59nm,0.4s						
GUDG	**Gudauri**	**1.34**	**249**	*e*Pg	**Pg**	**20 27 22.6**	**-0.9**
GUDG				*e*Sg	**Sg**	**20 27 39.9**	**-0.8**
URKR	**Urkarakh**	**1.34**	**125**	*e*Pg	**Pb**	**20 27 24.2**	**+0.7**
URKR				*e*Pg	**Pb**	**20 27 24.2**	**+0.7**
	29nm,0.5s						
URKR				*e*Sg	**Sn**	**20 27 43.2**	**+1.5**
	97nm,0.6s						
URKR				*e*Sg	**Sn**	**20 27 43.2**	**+1.5**
LACR	**Lac**	**1.38**	**265**	*e*Pg	**Pn**	**20 27 23.7**	**-0.2**
LACR				*i* Sg	**Sn**	**20 27 42.8**	**+0.1**
ARNR	**Ardon**	**1.40**	**280**	*e*Pg	**Pg**	**20 27 24.6**	**0.0**
ARNR				*e*Sg	**Sn**	**20 27 45.7**	**+2.7**
KORR	**Kora**	**1.54**	**276**	*e*Pg	**Pg**	**20 27 27.6**	**+0.2**
KORR				*e*Sg	**Sg**	**20 27 49.3**	**+1.8**
PRTR	**Priterechnaya**	**1.59**	**301**	*e*Pg	**Pg**	**20 27 28.3**	**+0.1**
PRTR				*e*Sg	**Sg**	**20 27 51.1**	**+2.2**
STDR	**Stavd-Durt**	**1.59**	**286**	*e*Pg	**Pg**	**20 27 28.2**	**-0.1**
STDR				*e*Sg	**Sg**	**20 27 51.9**	**+2.9**
LSNR	**Lesken**	**1.74**	**282**	*e*Pg	**Pg**	**20 27 30.5**	**+0.1**
LSNR				*e*Sg	**Sg**	**20 27 54.8**	**+1.0**
AKT	**Akhty**	**1.88**	**141**	*e*Pg	**Pn**	**20 27 29.6**	**-1.2**
	16nm,0.2s						
AKT				*e*Pg	**Pb**	**20 27 31.6**	**-1.1**
AKT				*e*Sg	**Sn**	**20 27 55.0**	**+0.1**
	75nm,0.3s						
AKT				*e*Sg	**Sg**	**20 27 58.6**	**+0.5**
DIGR	**Digorskoe uzhe**	**1.90**	**269**	*e*Pg	**Pb**	**20 27 32.4**	**-0.8**
DIGR				*e*Sg	**Sb**	**20 27 57.2**	**-0.1**
NCK	**Nalchik**	**1.96**	**287**	*e*Pg	**Pb**	**20 27 34.5**	**+0.5**
NCK				*e*Sg	**Sg**	**20 28 00.5**	**-0.2**
KSMR	**Kasumkent**	**1.98**	**132**	*i* Pg	**Pn**	**20 27 33.3**	**+1.1**
	34nm,0.4s						
KSMR				*e*Sg	**Sb**	**20 27 59.7**	**+0.1**
	103nm,0.4s						
KBTC	**Kuba-Taba**	**2.19**	**294**	*e*Pg	**Pb**	**20 27 38.1**	**+0.1**
KBTC				*e*Sg	**Sg**	**20 28 07.3**	**-0.8**
PYA1	**Pyatigorsk**	**2.49**	**297**	*e*Pn	**Pn**	**20 27 40.8**	**+1.6**
NEUR	**Neytrino**	**2.56**	**278**	*e*Pn	**Pn**	**20 27 42.0**	**+1.8**
NEUR				*e*Sn	**Sb**	**20 28 14.2**	**-2.0**
AB31	**Akbulak array**	**11.45**	**52**	⇓P	**Pn**	**20 29 42.9**	**+0.9**
	2.7nm,1.5s,baz=249,slow=12,SNR=5.8						
AB31				⇑S	**Sn**	**20 31 44.5**	**-5.7**
	0.6nm,0.6s,baz=250,slow=26,SNR=5.6						

*JMA **13** 20:39:27.5±0.1, 38˚.8N±0˚.3 × 142˚.4E±0˚.8, h41km±2km, MV3.7/32, E OFF MIYAGI PREF*
*IDC **13** 20:39:33.6±3.7, 38˚.48N × 142˚.02E, h88km±32km, mb3.0/6, mbtmp3.4/8, MS2.3/1, Error ellipse: s-maj=37.3km s-min=19.5km az=78.0*
ISC 13 20:39:26.8±1.6, 38.71N±0˚.05 × 142˚.6E±0˚.1, h37km±2km, n25, σ1§11/26, mb3.4/6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.78**	**299**	*i* P	**Pn**	**20 39 40.9**	**-0.3**
OFUJ				S	**Sn**	**20 39 50.4**	**-1.3**
JKMT	**Kesennumamotoy**	**0.85**	**277**	*i* P	**Pn**	**20 39 41.9**	**-0.3**
JIO	**Ouri**	**0.97**	**255**	*i* P	**Pn**	**20 39 43.9**	**0.0**
JIO				S	**Sn**	**20 39 55.4**	**-1.1**
JMK	**Ichinoseki**	**1.07**	**284**	*i* P	**Pn**	**20 39 45.1**	**-0.1**
JOM	**Ohasama**	**1.24**	**308**	P	**Pn**	**20 39 47.7**	**+0.1**
JOM				S	**Sn**	**20 40 02.4**	**-0.6**
JTH	**Tanohata**	**1.34**	**337**	P	**Pn**	**20 39 48.8**	**-0.2**
JTH				*e*S	**Sn**	**20 40 04.4**	**-1.0**
JOU	**Okura**	**1.52**	**257**	P	**Pn**	**20 39 51.8**	**+0.4**
JOU				S	**Sn**	**20 40 10.1**	**+0.2**
JMM	**Marumori**	**1.62**	**239**	*i* P	**Pn**	**20 39 53.1**	**+0.4**
JMM				*e*S	**Sn**	**20 40 12.2**	**-0.2**
JRG	**Rokugo**	**1.64**	**295**	P	**Pn**	**20 39 53.9**	**+0.8**
JRG				*e*S	**Sn**	**20 40 12.6**	**-0.3**
MJAR	**Matsushiro Arr**	**4.07**	**239**	P	**Pn**	**20 40 28.9**	**+2.4**
	4.1nm,0.5s,baz=32,slow=13,SNR=30						
ASAJ	**Asahikawa**	**5.40**	**0**	P	**Pn**	**20 40 46.4**	**+1.6**
	1.4nm,0.3s,baz=156,slow=25,SNR=1.3						
ASAJ				S	**Sn**	**20 41 46.4**	**+0.7**
	5.7nm,1.0s,baz=86,slow=31,SNR=1.1						
JHJ	**Hachijo jima 2**	**6.01**	**203**	P	**Pn**	**20 40 54.2**	**+1.0**
	92nm,0.6s,baz=39,slow=15,SNR=7.0						
JHJ				S	**Sn**	**20 41 57.7**	**-3.0**
	148nm,1.0s,baz=65,slow=20,SNR=2.3						
KSRS	**Korea Array**	**11.60**	**268**	LR	LR	20 46 07.4	
	comp=Z,15nm,19.1s,baz=45,slow=35						
H11N2	**WAKE ISLAND Hy**	**28.30**	**125**	T	T	21 15 41.2	
	baz=317,slow=75,SNR=37						
H11N1	**WAKE ISLAND Hy**	**28.31**	**125**	T	T	21 15 49.0	
	baz=317,slow=75,SNR=27						
H11N3	**WAKE ISLAND Hy**	**28.32**	**125**	T	T	21 15 43.8	
	baz=317,slow=75,SNR=22						
H11S1	**WAKE ISLAND Hy**	**29.08**	**127**	T	T	21 16 44.5	
	baz=318,slow=76,SNR=4.0						
H11S3	**WAKE ISLAND Hy**	**29.08**	**127**	T	T	21 16 45.4	
	baz=318,slow=76,SNR=6.2						
H11S2	**WAKE ISLAND Hy**	**29.10**	**127**	T	T	21 16 41.7	
	baz=318,slow=76,SNR=3.8						
ZALV	**Zalesovo Beam**	**41.47**	**311**	P	**P**	**20 47 10.4**	**+0.6**
	0.3nm,0.4s,baz=81,slow=8.5,SNR=1.5 0.3nm,0.4s						
MKAR	**Makanchi Array**	**44.01**	**301**	P	**P**	**20 47 29.8**	**-0.8**
	0.1nm,0.2s,baz=91,slow=6.5,SNR=2.3 0.1nm,0.2s						
KURBB	**Kurchatov Arra**	**45.70**	**307**	P	**P**	**20 47 43.1**	**-0.8**
	0.4nm,0.4s,baz=80,slow=8.0,SNR=5.7 0.4nm,0.4s						
ILAR	**Eielson Array**	**47.60**	**33**	P	P	20 48 03.1	+4.5
	0.2nm,0.6s,baz=272,slow=8.2,SNR=1.8 0.2nm,0.6s						
WRA	**Warramunga Arr**	**58.85**	**189**	P	**P**	**20 49 21.1**	**-0.7**
	0.2nm,0.5s,baz=6.1,slow=7.2,SNR=5.0 0.2nm,0.5s						
ASAR	**Alice Springs**	**62.58**	**189**	P	**P**	**20 49 47.1**	**0.0**
	0.2nm,0.7s,baz=12,slow=6.1,SNR=1.3 0.2nm,0.7s						

*SOME **13** 20:46:56.2, 39˚.88N × 77˚.23E, h5km*
*KRNET **13** 20:46:57.7±0.1, 39˚.88N × 77˚.30E, h16km, mb3.2*
*NNC **13** 20:46:57.5±1.4, 39˚.88N × 77˚.28E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=9.1km s-min=7.1km az=167.0*
ISC 13 20:47:01.0±1.6, 39˚.98N±0˚.07 × 77˚.30E±0˚.04, h10km, n58, σ1§48/85, 24C-11D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNKS	**Jany-Kuch**	**1.67**	**311**	⇑*i* P	**Pn**	**20 47 29.7**	**-0.8**
JNKS				⇑*i* S	**Sb**	**20 47 53.3**	**+0.2**
NRN	**Naryn**	**1.76**	**326**	⇑*i* P	**Pn**	**20 47 31.8**	**0.0**
NRN				⇑*i* S	**Sg**	**20 47 57.1**	**-0.4**
TARG	**Taragay, Kyrgy**	**1.79**	**12**	⇓*i* P	**Pn**	**20 47 32.7**	**+0.3**
TARG				⇓*i* S	**Sg**	**20 47 58.5**	**-0.1**
KDJ	**Kajisay**	**2.15**	**358**	⇓*i* P	**Pn**	**20 47 38.2**	**+1.1**
KDJ				⇓*i* S	**Sb**	**20 48 07.6**	**+0.6**
ULHL	**Ulahol**	**2.40**	**341**	P	**Pn**	**20 47 41.4**	**+0.8**
	SNR=6.8						
ULHL	**Ulahol**	**2.40**	**341**	⇑*i* P	**Pn**	**20 47 41.7**	**+1.1**
ULHL				⇑*i* S	**Sb**	**20 48 13.5**	**-0.7**
BOOM	**Boomskoye usch**	**2.71**	**338**	⇑*i* P	**Pn**	**20 47 45.9**	**+1.1**
BOOM				⇑*i* S	**Sb**	**20 48 20.9**	**-2.1**
SALK	**Salom-Alik**	**2.80**	**290**	⇑*i* P	**Pn**	**20 47 46.2**	**+0.1**
SALK				⇑*i* S	**Sn**	**20 48 21.8**	**+1.8**
SFK	**Sufi-Kurgan**	**2.92**	**272**	⇓*i* P	**Pn**	**20 47 47.5**	**-0.2**
SFK				⇓*i* S	**Sn**	**20 48 24.0**	**+1.1**
ARLS	**Aral**	**2.94**	**311**	⇑*e*P	**Pn**	**20 47 48.3**	**+0.4**
ARLS				⇑*e*S	**Sn**	**20 48 25.6**	**+2.3**
TNSS	**Tian-Shan**	**3.07**	**355**	Pg	**Pb**	**20 47 56.6**	**+0.7**
	2.0nm,0.6s						
TNSS				Lg	Lg	20 48 39.7	
	2.0nm,0.4s						
TNSS	**Tian-Shan**	**3.07**	**355**	*e*P	**Pb**	**20 47 56.6**	**+0.7**
	2.0nm,0.3s						
TNSS				*e*S	**Sg**	**20 48 39.7**	**+0.2**
	2.0nm,0.3s						
UCH	**Uchtor**	**3.08**	**318**	⇑*i* P	**Pn**	**20 47 50.9**	**+0.8**
UCH				⇑*i* S	**Sn**	**20 48 29.7**	**+2.5**
IZV	**Izvestkoviy**	**3.10**	**351**	Pg	**Pb**	**20 47 53.9**	**-2.4**
	3.1nm,0.6s						
IZV				Lg	Lg	20 48 35.6	
	8.3nm,0.3s						
IZV	**Izvestkoviy**	**3.10**	**351**	*e*P	**Pb**	**20 47 53.9**	**-2.4**
	3.1nm,0.3s						
IZV				*e*S	**Sb**	**20 48 35.6**	**+1.4**
	8.3nm,0.2s						
MDOK	**Medeo**	**3.19**	**357**	Pg	**Pb**	**20 47 57.1**	**-0.7**
	5.9nm,0.5s						
MDOK				Lg	Lg	20 48 40.8	
	7.2nm,0.8s						
SATY	**Saty**	**3.19**	**15**	Pg	**Pb**	**20 47 57.7**	**-0.1**
	11nm,0.9s						
SATY				Lg	Lg	20 48 41.7	
	12nm,0.6s						
TKM2	**Tokmak 2**	**3.21**	**337**	P	**Pb**	**20 47 55.8**	**-2.3**
	SNR=6.9						
TKM2	**Tokmak 2**	**3.21**	**337**	⇓*i* P	**Pn**	**20 47 52.8**	**+1.2**
TKM2				⇓*i* S	**Sn**	**20 48 32.9**	**+2.9**
KBK	**Karagaybulak**	**3.21**	**327**	P	**Pb**	**20 47 58.8**	**+0.7**
	SNR=8.0						
KBK	**Karagaybulak**	**3.21**	**327**	⇓*i* P	**Pn**	**20 47 52.7**	**+1.1**
KBK				⇓*i* S	**Sn**	**20 48 32.8**	**+2.8**
MTBS	**Maitube**	**3.21**	**349**	Pg	**Pb**	**20 47 58.0**	**-0.2**
	2.2nm,0.3s						
MTBS				Lg	Lg	20 48 42.6	
	5.3nm,0.4s						
MTBS	**Maitube**	**3.21**	**349**	*e*P	**Pb**	**20 47 58.0**	**-0.2**
	2.2nm,0.3s						
MTBS				*e*S	**Sg**	**20 48 42.6**	**-1.7**
	5.3nm,0.4s						
KST	**Kastek**	**3.22**	**342**	Pg	**Pb**	**20 47 58.9**	**+0.5**
	4.3nm,0.6s						
KST				Lg	Lg	20 48 44.0	
	6.3nm,0.5s						
KST	**Kastek**	**3.22**	**342**	*e*P	**Pb**	**20 47 58.9**	**+0.5**
	4.3nm,0.6s						
KST				*e*S	**Sg**	**20 48 44.0**	**-0.5**
	6.3nm,0.5s						
KNDC	**Almaty**	**3.25**	**356**	⇑Pg	**Pb**	**20 47 59.5**	**+0.7**
	16nm,0.6s						
KNDC				⇑Lg	Lg	20 48 43.8	
	21nm,0.5s						
KOTS	**Kotyrbulak**	**3.25**	**358**	Pg	**Pb**	**20 47 58.9**	**-0.1**
	8.0nm,0.3s						
KOTS				Lg	Lg	20 48 44.0	
	23nm,0.3s						
KOTS	**Kotyrbulak**	**3.25**	**358**	*e*P	**Pb**	**20 47 58.9**	**-0.1**
	8.0nm,0.3s						
KOTS				*e*S	**Sg**	**20 48 44.0**	**-1.5**
	28nm,0.2s						
AAK	**Ala-Archa**	**3.39**	**322**	P	**Pb**	**20 48 02.0**	**+0.7**
	SNR=5.4						
AAK	**Ala-Archa**	**3.39**	**322**	⇑Pg	**Pb**	**20 48 00.6**	**-0.7**
	1.8nm,0.6s						
AAK				⇑Lg	Lg	20 48 46.1	
	9.8nm,0.9s						
AAK	**Ala-Archa**	**3.39**	**322**	⇑*i* P	**Pn**	**20 47 55.2**	**+1.0**
AAK				⇑*i* S	**Sn**	**20 48 36.9**	**+2.4**
UZB	**Uzynbulak**	**3.42**	**22**	Pg	**Pb**	**20 48 01.4**	**-0.4**
	5.3nm,0.8s						
UZB				Lg	Lg	20 48 48.4	
	5.3nm,0.6s						
UZB	**Uzynbulak**	**3.42**	**22**	*e*P	**Pb**	**20 48 01.4**	**-0.4**
	5.3nm,0.8s						
UZB				*e*S	**Sg**	**20 48 48.4**	**-2.4**
	5.3nm,0.6s						
DGS	**Degeres**	**3.46**	**341**	Pg	**Pb**	**20 48 02.8**	**+0.4**
	7.4nm,0.5s						
DGS				Lg	Lg	20 48 51.1	
	8.5nm,0.4s						
DGS	**Degeres**	**3.46**	**341**	*e*P	**Pb**	**20 48 02.8**	**+0.4**
	7.4nm,0.3s						
DGS				*e*S	**Sg**	**20 48 51.1**	**-0.8**
	8.5nm,0.4s						
KURS	**Kuram**	**3.57**	**10**	Pg	**Pb**	**20 48 04.6**	**+0.4**
	4.0nm,0.6s						
KURS				Lg	Lg	20 48 53.7	
	5.6nm,0.6s						
SHLS	**Shalkode**	**3.57**	**26**	Pg	**Pg**	**20 48 06.9**	**-2.4**
	9.2nm,0.6s						
SHLS				Lg	Lg	20 48 57.9	
	8.5nm,0.5s						
SHLS	**Shalkode**	**3.57**	**26**	*e*P	**Pg**	**20 48 06.9**	**-2.4**
	9.2nm,0.3s						
SHLS				*e*S	**Sg**	**20 48 57.9**	**+2.3**
	8.5nm,0.5s						
KPKS	**Kokpek**	**3.63**	**16**	Pg	**Pb**	**20 48 05.7**	**+0.3**
	0.4nm,0.5s						
KPKS				Lg	Lg	20 48 55.6	
	11nm,0.4s						
KPKS	**Kokpek**	**3.63**	**16**	*e*P	**Pb**	**20 48 05.7**	**+0.3**
	0.4nm,0.5s						
KPKS				*e*S	**Sg**	**20 48 55.6**	**-2.2**
	11nm,0.4s						
PDGK	**Podgornoye**	**3.73**	**25**	⇑Pg	**Pb**	**20 48 06.0**	**-1.0**
	3.5nm,0.7s						
PDGK				⇓Lg	Lg	20 48 57.4	
	7.7nm,0.7s						
KTBS	**Karatobe**	**3.76**	**353**	Pg	**Pb**	**20 48 07.6**	**+0.1**
	5.1nm,0.7s						
KTBS				Lg	Lg	20 48 59.2	
	1.8nm,0.3s						
KTBS	**Karatobe**	**3.76**	**353**	*e*P	**Pb**	**20 48 07.6**	**+0.1**
	5.1nm,0.7s						
KTBS				*e*S	**Sg**	**20 48 59.2**	**-2.4**
	1.8nm,0.3s						
EKS2	**Erkin-Say**	**3.77**	**316**	P	**Pn**	**20 48 02.7**	**+3.4**
	SNR=7.6						
USP	**Ospenovka**	**3.90**	**328**	P	**Pb**	**20 48 10.8**	**+1.0**
	SNR=5.2						
USP	**Ospenovka**	**3.90**	**328**	⇑*i* P	**Pn**	**20 48 02.1**	**+1.1**
USP				⇑*i* S	**Sn**	**20 48 49.2**	**+2.4**
KRBS	**Karabastau**	**3.91**	**342**	Pg	**Pb**	**20 48 10.5**	**+0.5**
	2.3nm,0.6s						
KRBS				Lg	Lg	20 49 04.0	
	4.2nm,0.4s						
KRBS	**Karabastau**	**3.91**	**342**	*e*P	**Pb**	**20 48 10.5**	**+0.5**
	2.3nm,0.6s						
KRBS				*e*S	**Sg**	**20 49 04.0**	**-2.4**
	4.2nm,0.4s						
SGDS	**Sogindy**	**4.00**	**331**	Pg	**Pb**	**20 48 12.8**	**+1.1**
	2.7nm,0.6s						
SGDS				Lg	Lg	20 49 07.6	
	3.2nm,0.4s						
MRKS	**Merke**	**4.13**	**313**	Pg	**Pb**	**20 48 14.3**	**+0.5**
	1.8nm,0.3s						
MRKS				Lg	Lg	20 49 10.6	
	4.2nm,0.5s						
MRKS	**Merke**	**4.13**	**313**	*e*P	**Pb**	**20 48 14.3**	**+0.5**
	1.8nm,0.2s						
MRKS				*e*S	**Sg**	**20 49 10.6**	**-2.9**
	4.2nm,0.3s						
BLB	**Baldybastay**	**4.21**	**12**	Pg	**Pb**	**20 48 15.9**	**+0.8**
	6.8nm,0.7s						
BLB				Lg	Lg	20 49 13.6	
	7.5nm,0.4s						
ARXS	**Arharly**	**4.25**	**5**	Pg	**Pb**	**20 48 16.3**	**+0.4**
	4.5nm,0.7s						
ARXS				Lg	Lg	20 49 14.3	
	6.4nm,0.4s						
ARXS	**Arharly**	**4.25**	**5**	*e*P	**Pb**	**20 48 16.3**	**+0.4**
	4.5nm,0.7s						
ARXS				*e*S	**Sg**	**20 49 14.3**	**-3.2**
	6.4nm,0.4s						
KNOS	**Konyrlen**	**4.59**	**17**	Pg	**Pb**	**20 48 23.4**	**+1.6**
	2.7nm,0.8s						
KNOS				Lg	Lg	20 49 26.0	
	2.0nm,0.6s						
DJR	**Jarkent**	**4.73**	**22**	Pg	**Pb**	**20 48 26.1**	**+2.1**
	2.4nm,0.8s						
DJR				Lg	Lg	20 49 31.0	
	3.3nm,0.5s						
DJR	**Jarkent**	**4.73**	**22**	*e*P	**Pb**	**20 48 26.1**	**+2.1**
	2.4nm,0.8s						
DJR				*e*S	**Sg**	**20 49 31.0**	**-1.7**
	3.3nm,0.5s						
KK31	**Karatay Array**	**5.97**	**304**	⇑Lg	Lg	20 50 06.5	
	1.6nm,0.7s,baz=126,slow=28						

*IDC **13** 20:49:53.9±3.0, 32˚.73S × 178˚.71W, h0km, mb3.6/2, mbtmp3.8/3, ML3.6/1, Error ellipse: s-maj=69.7km s-min=45.1km az=119.0*
*WEL **13** 20:49:54.8±1.0, 33˚.5±8˚ × 17˚.8W±1˚.7, h12km, M4.2/8, mB4.7/6, ML4.3/12, MLv4.3/8, Mw(mB)3.9/6, Error ellipse: s-maj=24.2km s-min=6.4km az=111.1, confirmed*
ISC 13 20:49:55.1±1.6, 33˚.07S±0˚.09 × 177˚.9W±0˚.2, h35km, n24, σ1§37/31, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.79**	**360**	P	**Pn**	**20 50 51.6**	**+0.6**
MXZ	**Matakaoa Point**	**5.45**	**214**	P	**Pn**	**20 51

az=164.0

ISC 13 21:11:49.9±1.6, 44°10N±0°08×148°33E±0°10, h44km±14km, n38, σ1§38/43, mb3.6/8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**1.11**	**258**	*e*P	Pn	21 12 18.4	+9.5
SHO				AMB	AMB	21 12 20.7	
	70nm,0.3s						
SHO				*e*S	Sn	21 12 31.7	+8.6
SHO				A	A	21 12 34.0	
	250nm,0.4s						
SHO				A	A	21 12 34.0	
	270nm,0.4s						
KUR	**Kuril'sk**	**1.18**	**344**	*e*PN	**Pn**	**21 12 07.5**	**-2.4**
KUR				*i* S	**Sn**	**21 12 22.4**	**-2.4**
KUR	**Kuril'sk**	**1.18**	**344**	*e*P	**Pn**	**21 12 09.5**	**-0.4**
KUR				AMB	AMB	21 12 11.6	
	130nm,0.4s						
KUR				*i* S	**Sn**	**21 12 24.3**	**-0.5**
KUR				A	A	21 12 26.1	
	610nm,0.4s						
KUR				A	A	21 12 26.1	
	810nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.78**	**269**	PN	**Pn**	**21 12 16.5**	**-1.7**
YUK				S	**Sn**	**21 12 38.8**	**-0.8**
YUK				pmax	pmax		
	comp=N,59nm,0.2s						
YUK				pmax	pmax		
	comp=E,111nm,0.2s						
YUK				pmax	pmax		
	comp=Z,193nm,0.2s						
YUK				smax	smax		
	comp=E,533nm,0.4s						
YUK				smax	smax		
	comp=N,414nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.78**	**269**	*e*P	**Pn**	**21 12 17.0**	**-1.2**
YUK				AMB	AMB	21 12 19.1	
	comp=N,150nm,0.4s						
YUK				*e*S	**Sn**	**21 12 37.7**	**-1.9**
YUK				A	A	21 12 42.1	
	comp=N,480nm,0.3s						
YUK				A	A	21 12 42.1	
	comp=N,610nm,0.3s						
NEM2	**Nemuro 2**	**2.02**	**249**	*e*P	**Pn**	**21 12 20.8**	**-0.5**
NEM2				*e*S	**Sn**	**21 12 43.7**	**-1.6**
NMR	**Nemuro--Hokkai**	**2.03**	**250**	*e*PN	**Pn**	**21 12 20.6**	**-0.9**
NMR				*i* S	**Sn**	**21 12 43.8**	**-1.8**
NMR	**Nemuro--Hokkai**	**2.03**	**250**	*e*P	**Pn**	**21 12 20.9**	**-0.6**
NMR				*e*S	**Sn**	**21 12 43.8**	**-1.8**
GLVR	**Golovnino**	**2.07**	**261**	PN	**Pn**	**21 12 21.9**	**-0.1**
GLVR				*i* S	**Sn**	**21 12 46.3**	**-0.2**
GLVR				pmax	pmax		
	comp=N,58nm,0.2s						
GLVR				pmax	pmax		
	comp=Z,95nm,0.2s						
GLVR				smax	smax		
	comp=E,282nm,0.6s						
GLVR				smax	smax		
	comp=N,246nm,0.5s						
GLVR	**Golovnino**	**2.07**	**261**	*e*P	**Pn**	**21 12 21.9**	**-0.1**
GLVR				AMB	AMB	21 12 25.0	
	comp=N,100nm,0.2s						
GLVR				*i* S	**Sn**	**21 12 46.3**	**-0.2**
GLVR				A	A	21 12 47.5	
	comp=N,250nm,0.5s						
GLVR				A	A	21 12 47.5	
	comp=N,280nm,0.5s						
RUSJ	**Misakicho**	**2.22**	**271**	*e*PN	**Pn**	**21 12 24.2**	**0.0**
RUSJ				S	**Sn**	**21 12 52.0**	**+1.6**
JRA	**Rausu**	**2.32**	**267**	*e*P	**Pn**	**21 12 26.4**	**-0.9**
JRA				*e*S	**Sn**	**21 12 54.3**	**+1.4**
JNK	**Nakash**	**2.67**	**260**	*e*P	**Pn**	**21 12 30.9**	**+0.6**
AKK	**Akkeshi**	**2.76**	**248**	*e*P	**Pn**	**21 12 31.5**	**-0.1**
JAK	**Akkeshi**	**2.87**	**249**	*e*P	**Pn**	**21 12 32.8**	**-0.3**
JTKR	**Abashiri--Toko**	**3.19**	**269**	*e*P	**Pn**	**21 12 38.3**	**+0.8**
JAR	**Ashorobuto**	**3.41**	**258**	*e*P	**Pn**	**21 12 41.8**	**+1.3**
JCH	**Churui**	**3.92**	**249**	*e*P	**Pn**	**21 12 49.0**	**+1.6**
JCH				*e*S	**Sn**	**21 13 32.5**	**+0.3**
JKA	**Kamikawa-asahi**	**4.13**	**272**	*e*P	**Pn**	**21 12 53.7**	**+3.3**
ASAJ	**Asahikawa**	**4.13**	**272**	P	**Pn**	**21 12 53.7**	**+3.3**
	comp=N,8.5nm,0.6s,baz=94,slow=14,SNR=8.9						
SKR	**Severo-Kuril's**	**8.44**	**36**	*e*P	**Pn**	**21 13 51.2**	**+1.8**
PETK	**Petropavlovsk-**	**10.93**	**31**	P	**Pn**	**21 14 23.9**	**+0.4**
	comp=N,12.1nm,0.6s,baz=201,slow=12,SNR=4.8						
H11N2	**WAKE ISLAND Hy**	**28.83**	**142**	T	T	21 48 36.6	
	baz=333,slow=76,SNR=15						
H11N1	**WAKE ISLAND Hy**	**28.84**	**142**	T	T	21 48 37.9	
	baz=333,slow=76,SNR=13						
H11N3	**WAKE ISLAND Hy**	**28.84**	**142**	T	T	21 48 38.1	
	baz=333,slow=76,SNR=19						
H11S1	**WAKE ISLAND Hy**	**29.82**	**143**	T	T	21 49 39.5	
	baz=333,slow=76,SNR=27						
H11S3	**WAKE ISLAND Hy**	**29.82**	**143**	T	T	21 49 47.2	
	baz=333,slow=76,SNR=20						
H11S2	**WAKE ISLAND Hy**	**29.83**	**143**	T	T	21 49 46.7	
	baz=333,slow=76,SNR=16						
ILAR	**Eielson Array**	**40.70**	**36**	P	**P**	**21 19 26.1**	**+0.5**
	comp=N,0.6nm,0.8s,baz=271,slow=8.1,SNR=8.0						
	comp=N,0.6nm,0.8s						
MKAR	**Makanchi Array**	**45.18**	**298**	P	**P**	**21 20 02.2**	**0.0**
	comp=N,0.5nm,0.9s,baz=73,slow=8.1,SNR=4.2						
	comp=N,0.5nm,0.9s						
MKAR	**Makanchi Array**	**45.18**	**298**	*e*P	**P**	**21 20 02.2**	**0.0**
INK	**Inuvik**	**45.66**	**31**	P	**P**	**21 20 06.6**	**+1.0**
	comp=N,0.6nm,0.6s,baz=270,slow=6.1,SNR=2.2						
	comp=N,0.6nm,0.6s						
YKA	**Yellowknife Ar**	**55.03**	**34**	P	**P**	**21 21 16.9**	**+0.5**
	comp=N,0.2nm,0.5s,baz=306,slow=7.3,SNR=3.9						
	comp=N,0.2nm,0.5s						
YKA	**Yellowknife Ar**	**55.03**	**34**	P	**P**	**21 21 17.0**	**+0.5**
FINES	**FINESS Array B**	**64.95**	**333**	P	**P**	**21 22 22.7**	**-1.8**
	comp=N,4.8nm,1.1s,baz=28,slow=7.3,SNR=3.9						
	comp=N,4.8nm,1.1s						
HFS	**Hagfors**	**69.69**	**338**	P	**P**	**21 22 53.3**	**-1.2**
	comp=N,1.1nm,0.6s,baz=38,slow=8.0,SNR=1.6						
	comp=N,1.1nm,0.6s						
EKA	**Eskdalemuir Ar**	**78.03**	**344**	P	**P**	**21 23 42.3**	**-1.1**
	comp=N,0.4nm,0.4s,baz=34,slow=6.0,SNR=1.7						
	comp=N,0.4nm,0.4s						
TXAR	**Lajitas Array**	**81.74**	**57**	P	**P**	**21 24 04.4**	**+0.4**
	comp=N,0.4nm,0.7s,baz=310,slow=4.0,SNR=5.1						
	comp=N,0.4nm,0.7s						

*NEIC **13** 21:13:31.5±1.9, 20°8S±0°1×177°63W±0°09, h464km±6km, mb4.1/30, Error ellipse: s-maj=17.7km s-min=12.7km az=178.0*

*IDC **13** 21:13:33.5±2.1, 20°82S×177°80W, h484km±20km, mb3.5/12, mbtmp4.4/15, Error ellipse: s-maj=21.9km s-min=12.4km az=97.0*

ISC 13 21:13:30.2±0.5, 20°78S±0°08×177°63W±0°09, h450km, n76, σ1§45/77, mb3.9/26, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.08**	**306**	P	**P**	**21 14 58.8**	**+3.2**
	53nm,0.5s,baz=135,slow=10,SNR=38						
FUTU	**Fugatoga**	**6.45**	**356**	P	**P**	**21 15 11.6**	**+2.3**
NIUE	**Niue**	**7.44**	**78**	P	**P**	**21 15 20.7**	**+1.1**
DZM	**Mont Dzumac**	**14.89**	**262**	P	**P**	**21 16 41.5**	**+1.2**
	6.9nm,1.0s,baz=103,slow=18,SNR=2.1						
DZM	**Mont Dzumac**	**14.89**	**262**	P	**P**	**21 16 38.9**	**-1.5**
WCZ	**Waipu Caves**	**16.66**	**203**	P	**P**	**21 17 04.1**	**+5.3**
MXZ	**Matakaoa Point**	**17.09**	**191**	P	**P**	**21 17 05.2**	**+1.9**
WMGZ	**Waiomatatini S**	**17.32**	**191**	P	**P**	**21 17 08.6**	**+2.9**
HAZ	**Te Kaha**	**17.38**	**192**	P	**P**	**21 17 09.2**	**+2.8**
PKGZ	**Pakihiroa**	**17.43**	**191**	P	**P**	**21 17 09.0**	**+2.1**
PUZ	**Puketiti**	**17.60**	**191**	P	**P**	**21 17 10.2**	**+1.5**
RUGZ	**Raukumara Rang**	**17.60**	**192**	P	**P**	**21 17 10.5**	**+1.7**
TWGZ	**Tauwhareparae**	**17.75**	**191**	P	**P**	**21 17 13.3**	**+3.0**
MWZ	**Matawai**	**17.99**	**192**	P	**P**	**21 17 14.3**	**+1.6**
URZ	**Urewera**	**18.00**	**194**	P	**P**	**21 17 13.5**	**+0.7**
	5.9nm,0.3s,baz=252,slow=2.7,SNR=22						
URZ				S	**S**	**21 20 11.1**	**-4.4**
	4.7nm,0.7s,baz=59,slow=21,SNR=6.4						
URZ	**Urewera**	**18.00**	**194**	P	**P**	**21 17 13.4**	**+0.6**
MUGZ	**Murupara**	**18.29**	**194**	P	**P**	**21 17 15.9**	**+0.3**
MTHZ	**Maungataniwha**	**18.63**	**194**	P	**P**	**21 17 19.9**	**+1.0**
NMHZ	**Naumai**	**18.88**	**193**	P	**P**	**21 17 22.0**	**+0.7**
BKZ	**Black Stump Fm**	**19.01**	**194**	P	**P**	**21 17 21.9**	**-0.5**
TMVZ	**Te Maari**	**19.16**	**196**	P	**P**	**21 17 24.7**	**+0.9**
OTVZ	**Oturere**	**19.21**	**196**	P	**P**	**21 17 25.1**	**+0.7**
KWHZ	**Kaweka Forest**	**19.27**	**194**	P	**P**	**21 17 25.0**	**+0.1**
PNHZ	**Pukenui**	**19.79**	**194**	P	**P**	**21 17 30.3**	**+0.7**
THZ	**Tophouse**	**22.40**	**199**	P	**P**	**21 17 54.0**	**+0.7**
THZ				IAmb	IAmb	21 18 04.2	
	comp=Z,2.8nm,1.0s						
CTA	**Charters Tower**	**33.81**	**265**	P	**P**	**21 19 32.6**	**-0.9**
	comp=Z,1.8nm,0.5s,baz=68,slow=16,SNR=1.1						
	comp=Z,1.8nm,0.5s						
TOO	**Toolangi**	**36.02**	**234**	P	**P**	**21 19 50.3**	**-1.6**
TOO				IAmb	IAmb	21 20 03.3	
	comp=Z,3.4nm,0.9s						
COEN	**Coen**	**37.95**	**274**	P	**P**	**21 20 08.1**	**0.0**
COEN				IAmb	IAmb	21 20 22.1	
	comp=Z,4.9nm,1.1s						
STKA	**Stephens Creek**	**37.98**	**245**	P	**P**	**21 20 08.2**	**0.0**
	comp=Z,1.8nm,0.5s,baz=93,slow=12,SNR=3.0						
	comp=Z,1.8nm,0.5s						
STKA	**Stephens Creek**	**37.98**	**245**	P	**P**	**21 20 08.6**	**+0.4**
BBOO	**Buckleboo**	**42.74**	**244**	P	**P**	**21 20 46.5**	**+0.1**
BBOO				IAmb	IAmb	21 20 48.1	
	comp=Z,17nm,1.1s						
WR8	**Warramunga Arr**	**44.76**	**262**	P	**P**	**21 21 01.5**	**-0.9**
AS31	**Alice Springs**	**44.79**	**257**	P	**P**	**21 21 02.8**	**+0.1**
ASAR	**Alice Springs**	**44.79**	**257**	P	**P**	**21 21 02.5**	**-0.2**
	comp=Z,3.1nm,0.4s,baz=96,slow=7.9,SNR=70						
ASAR				PcP	**PcP**	**21 22 36.3**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=105,slow=3.6,SNR=9.6						
	comp=Z,3.1nm,0.4s						
WRAB	**Tennant Creek**	**44.90**	**262**	P	**P**	**21 21 02.2**	**-1.3**
WRA	**Warramunga Arr**	**44.91**	**262**	P	**P**	**21 21 02.6**	**-1.0**
	comp=Z,0.6nm,0.2s,baz=95,slow=6.8,SNR=49						
WRA				PcP	**PcP**	**21 22 36.0**	**0.0**
	comp=Z,0.6nm,0.7s,baz=98,slow=2.8,SNR=2.6						
	comp=Z,0.6nm,0.2s						
WRA	**Warramunga Arr**	**44.91**	**262**	P	**P**	**21 21 02.4**	**-1.2**
FORT	**Forrest**	**49.50**	**247**	P	**P**	**21 21 38.4**	**+0.1**
FORT				IAmb	IAmb	21 21 38.6	
	comp=Z,23nm,1.1s						
MTN	**Manton Dam**	**49.51**	**271**	P	**P**	**21 21 37.1**	**-1.4**
MTN				IAmb	IAmb	21 21 38.3	
	comp=Z,12nm,1.1s						
KNRA	**Kununurra**	**50.99**	**266**	P	**P**	**21 21 49.1**	**-0.3**
KNRA				IAmb	IAmb	21 21 50.2	
	comp=Z,4.9nm,0.8s						
FITZ	**Fitzroy Crossi**	**53.34**	**262**	P	**P**	**21 22 06.0**	**-0.3**
	comp=Z,3.2nm,0.8s,baz=102,slow=8.0,SNR=6.1						
	comp=Z,3.2nm,0.8s						
SOEI	**Soe**	**56.86**	**272**	P	**P**	**21 22 31.9**	**+0.5**
SOEI				IAmb	IAmb	21 22 44.4	
	comp=Z,10nm,0.8s						
MBWA	**Marble Bar**	**58.13**	**257**	P	**P**	**21 22 39.5**	**-0.4**
MBWA				IAmb	IAmb	21 22 41.0	
	comp=Z,14nm,1.0s						
MORW	**Morawa**	**60.05**	**248**	P	**P**	**21 22 52.0**	**-0.6**
QSPA	**South Pole Qui**	**69.29**	**180**	P	**P**	**21 23 53.1**	**+2.2**
	comp=Z,3.4nm,0.6s,baz=331,slow=0.6,SNR=13						
	comp=Z,3.4nm,0.6s						
QSPA	**South Pole Qui**	**69.29**	**180**		**P**	**21 23 52.6**	**+1.7**
QSPA	**South Pole Qui**	**69.29**	**180**	P	**P**	**21 23 51.5**	**+0.5**
QSPA				IAmb	IAmb	21 23 53.9	
	comp=Z,3.5nm,0.7s						
INU	**Inuyama**	**70.46**	**322**	P	**P**	**21 23 58.8**	**+0.6**
INU				IAmb	IAmb	21 24 18.0	
	comp=Z,8.8nm,1.1s						
MJAR	**Matsushiro Arr**	**70.64**	**324**	P	**P**	**21 23 58.9**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=160,slow=6.4,SNR=6.0						
	comp=Z,0.8nm,0.5s						
MJAR	**Matsushiro Arr**	**70.64**	**324**	P	**P**	**21 23 58.4**	**-0.9**
KIWB	**Kanaga Island**	**72.32**	**0**	P	**P**	**21 24 08.5**	**-0.3**
KIWB				IAmb	IAmb	21 24 09.0	
	comp=Z,7.9nm,0.7s						
ADK	**Adak**	**72.35**	**1**	P	**P**	**21 24 08.4**	**-0.5**
YSS	**Yuzhno-Sakhali**	**76.30**	**333**	P	**P**	**21 24 31.6**	**+0.1**
PEA0B	**Petropavlovsk-**	**76.63**	**345**	P	**P**	**21 24 31.2**	**-1.9**
PETK	**Petropavlovsk-**	**76.63**	**345**	P	**P**	**21 24 32.0**	**-1.1**
	comp=Z,8.0nm,0.9s,baz=95,slow=5.6,SNR=5.6						
	comp=Z,8.0nm,0.9s						
PETK	**Petropavlovsk-**	**76.63**	**345**	P	**P**	**21 24 32.3**	**-0.9**
MNAI	**Manna**	**78.58**	**270**	P	**P**	**21 24 44.3**	**-0.5**
KMRM	**Mail Ridge**	**78.75**	**39**	P	**P**	**21 24 44.6**	**-0.5**
KLR	**Kul'dur**	**82.94**	**329**	P	**P**	**21 25 07.2**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=349,slow=5.2,SNR=4.5						
	comp=Z,1.1nm,0.8s						
GSI	**Gunungsitoli**	**85.59**	**273**	P	**P**	**21 25 21.4**	**+0.8**
LENM	**Lemitar**	**86.57**	**52**	P	**P**	**21 25 24.7**	**-0.3**
KTH	**Kantishna Hill**	**86.62**	**12**	P	**P**	**21 25 23.9**	**-0.5**
KTH				IAmb	IAmb	21 25 23.9	
	comp=Z,2.5nm,1.2s						
J20K	**Nowinta River**	**86.63**	**10**	P	**P**	**21 25 24.3**	**0.0**
TRF	**Thorofare Moun**	**86.65**	**12**	P	**P**	**21 25 24.2**	**-0.4**
TRF				IAmb	IAmb	21 25 26.5	
	comp=Z,2.9nm,1.0s						
SEY	**Seymchan**	**86.72**	**347**	P	**P**	**21 25 24.6**	**-0.1**
	comp=Z,3.9nm,0.6s,baz=152,slow=5.6,SNR=16						
	comp=Z,3.9nm,0.6s						
IL31		**88.51**	**13**	P	**P**	**21 25 32.7**	**-0.4**
IL31				IAmb	IAmb	21 25 52.1	
	comp=Z,1.1nm,0.8s						
ILAR	**Eielson Array**	**88.51**	**13**	P	**P**	**21 25 32.6**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=218,slow=5.6,SNR=8.2						
	comp=Z,0.6nm,0.6s						
ILAR	**Eielson Array**	**88.51**	**13**	P	**P**	**21 25 32.9**	**-0.2**
CMAR	**Chiang Mai Arr**	**90.53**	**289**	P	**P**	**21 25 44.9**	**+1.2**
	comp=Z,1.0nm,0.3s,baz=108,slow=4.3,SNR=4.1						
	comp=Z,1.0nm,0.3s						
KURBB	**Kurchatov Arra**	**114.49**	**317**	PKP	PKPdf	21 31 17.1	-0.8
	comp=Z,0.2nm,0.5s,baz=100,slow=1.5,SNR=2.5						
BVAR	**Borovoye Array**	**119.52**	**320**	PKP	**PKPdf**	**21 31 26.3**	**-1.3**
	comp=Z,0.7nm,0.4s,baz=166,slow=3.0,SNR=4.5						
AKASG	**Malin Array Be**	**143.43**	**331**	PKP	PKPab	21 32 09.2	-1.0
	comp=Z,2.3nm,0.5s,baz=44,slow=4.3,SNR=19						
EKA	**Eskdalemuir Ar**	**145.25**	**6**	PKPbc	**PKPbc**	**21 32 16.0**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=0.8,slow=3.1,SNR=2.3						
BRTR	**Keskin Array B**	**147.28**	**312**	PKPbc	**PKPbc**	**21 32 21.6**	**-0.9**
	comp=Z,1.2nm,0.6s,baz=139,slow=4.5,SNR=8.4						
MMAI	**Mount Meron Ar**	**148.25**	**299**	PKPbc	**PKPbc**	**21 32 25.1**	**-0.1**
	comp=Z,1.2nm,0.4s,baz=50,slow=7.8,SNR=9.9						
GERES	**GERESS Array B**	**150.56**	**345**	PKPbc	**PKPbc**	**21 32 27.6**	**-2.7**
	comp=Z,0.4nm,0.6s,baz=4.8,slow=1.6,SNR=3.7						

*IDC **13** 21:19:13.5±3.5, 52°93N×172°43W, h0km, mb3.6/3, mbtmp3.7/5, ML4.0/2, MS2.9/2, Error ellipse: s-maj=65.6km s-min=45.7km az=125.0*

*NEIC **13** 21:19:45.0±1.7, 53°4N±0°2×170°2W±0°1, h212km±12km, mb3.8/58, ML3.7/12, ML3.3(AEIC), Error ellipse: s-maj=26.1km s-min=8.1km az=161.0*

*AEIC **13** 21:19:45.8±1.9, 53°3N±0°1×170°1W±0°1, h211km±7km, Error ellipse: s-maj=21.6km s-min=7.9km az=160.0*

ISC 13 21:19:45.3±0.8, 53°3N±0°1×170°20W±0°05, h208km±8km, n150, σ1§33/166, mb3.3/3, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**0.89**	**114**		**Pn**	**21 20 14.5**	**-0.6**
NIKH					**S**	**21 20 37.9**	**-0.2**
NIKH				IAML		21 20 39.0	
	comp=E,665nm,0.6s						
NIKH				IAML		21 20 39.0	
	comp=N,792nm,0.6s						
OKSP	**Okmok Steeple**	**1.15**	**93**		**Pn**	**21 20 16.4**	**-0.6**
OKSP					**S**	**21 20 41.5**	**+0.3**
OKER	**Okmok East Rim**	**1.29**	**84**		**Pn**	**21 20 17.7**	**-0.4**
OKER					**S**	**21 20 44.7**	**+1.5**
MAPS	**Pakushin South**	**2.00**	**75**		**Pn**	**21 20 24.1**	**-0.2**
MAPS					**S**	**21 20 53.5**	**-0.8**
MGOD	**Makushin Gods**	**2.04**	**76**		**Pn**	**21 20 24.6**	**-0.1**
MGOD					**S**	**21 20 55.1**	**0.0**
MREP	**Makushin Rep't**	**2.11**	**76**		**Pn**	**21 20 25.5**	**-0.1**
UNV	**Unalaska Valle**	**2.26**	**75**		**Pn**	**21 20 26.7**	**-0.3**
UNV					**S**	**21 20 58.7**	**-0.4**
KOFP	**Korovin Flat P**	**2.59**	**247**		**Pn**	**21 20 30.5**	**-0.3**
KOFP					**S**	**21 21 06.5**	**+0.8**
KOKV	**Korovin Volcan**	**2.59**	**250**		**Pn**	**21 20 30.6**	**-0.2**
KOKV					**S**	**21 21 05.5**	**-0.2**
KOKL	**Mount Kliuchef**	**2.63**	**249**		**Pn**	**21 20 31.2**	**0.0**
KOKL					**S**	**21 21 06.5**	**+0.1**
AKUT	**Akutan**	**2.75**	**71**	Pn	**Pn**	**21 20 32.3**	**-0.1**
AKUT				IAML		21 21 35.3	
	comp=N,92nm,1.2s						
GSIG	**Igitkin Island**	**3.74**	**251**		**Pn**	**21 20 44.0**	**-0.2**
GSIG					**S**	**21 21 28.7**	**-1.1**
GSTR	**Great Sitkin T**	**3.77**	**253**	Pn	**Pn**	**21 20 44.9**	**+0.3**
GSTR				IAML		21 21 38.4	
	comp=E,112nm,1.1s						
GSMY	**Great Sitkin M**	**3.79**	**252**		**Pn**	**21 20 45.0**	**+0.2**
GSMY					**S**	**21 21 32.2**	**+1.1**
GSTD	**Great Sitkin T**	**3.84**	**253**		**Pn**	**21 20 45.7**	**+0.3**
GSTD					**S**	**21 21 32.4**	**+0.3**
GSSP	**Great Sitkin S**	**3.84**	**254**		**Pn**	**21 20 45.5**	**+0.1**
GSCK	**Great Sitkin C**	**3.87**	**252**		**S**	**21 21 31.7**	**-0.9**
ETKA	**Kagalaska Isla**	**4.06**	**251**		**S**	**21 21 37.8**	**+0.8**
ADAG	**Mount Adagdak**	**4.13**	**253**		**Pn**	**21 20 49.5**	**+0.6**
ADAG					**S**	**21 21 39.2**	**+0.8**
ADK	**Adak**	**4.21**	**252**		**Pn**	**21 20 49.8**	**-0.1**
ADK					**S**	**21 21 39.6**	**-0.7**
KIRH	**Kanaga Island**	**4.44**	**254**		**Pn**	**21 20 53.0**	**+0.2**
KIWB	**Kanaga Island**	**4.49**	**254**		**Pn**	**21 20 53.8**	**+0.4**
KIWB					**S**	**21 21 45.6**	**-1.0**
KIWB				IAML		21 21 49.6	
	comp=N,62nm,0.4s						
KIWB				IAML		21 21 49.6	
	comp=E,63nm,0.6s						
KIKV	**Kanaga Island**	**4.49**	**254**		**Pn**	**21 20 53.8**	**+0.3**
KIKV					**S**	**21 21 46.9**	**+0.2**
KIMD	**Kanaga Island**	**4.58**	**253**		**Pn**	**21 20 54.8**	**+0.3**
KIMD					**S**	**21 21 48.7**	**+0.2**
SDPT	**Sand Point**	**6.03**	**67**	Pn	**Pn**	**21 21 11.3**	**-1.6**
CNBA	**Chernabura Isl**	**6.42**	**72**	Pn	**Pn**	**21 21 17.5**	**-0.4**
AMKA	**Amchitka**	**6.72**	**257**	Pn	**Pn**	**21 21 21.8**	**-0.2**
CHGN	**Chignik**	**7.43**	**62**	Pn	**Pn**	**21 21 31.0**	**+0.1**
N14K	**Kuskokwak Cree**	**8.10**	**32**	Pn	**Pn**	**21 21 37.1**	**-2.5**
O15K	**Ungalikthiuk R**	**8.22**	**40**	Pn	**Pn**	**21 21 39.8**	**-1.3**
M14K	**Bethel**	**8.68**	**28**		**Pn**	**21 21 44.0**	**-3.1**
N15K	**Kwethluk River**	**8.81**	**35**	Pn	**Pn**	**21 21 47.1**	**-1.7**
P16K	**Nushagak River**	**8.88**	**45**	Pn	**Pn**	**21 21 49.0**	**-0.7**
PLK4	**Peulik 4**	**8.96**	**56**	Pn	**Pn**	**21 21 49.5**	**-1.3**
L14K	**Kuka Creek**	**8.99**	**24**	Pn	**Pn**	**21 21 48.0**	**-3.1**
K13K	**Kusilvak Mount**	**9.12**	**17**	Pn	**Pn**	**21 21 50.4**	**-2.4**
O16K	**Kokwok River B**	**9.17**	**42**	Pn	**Pn**	**21 21 52.3**	**-1.2**
M16K	**Timber Creek**	**9.82**	**34**	Pn	**Pn**	**21 22 00.5**	**-1.3**
K15K	**Wolf Creek Mou**	**10.09**	**24**	Pn	**Pn**	**21 22 03.8**	**-1.6**
N17K	**Nushagak Hills**	**10.11**	**39**	Pn	**Pn**	**21 22 04.6**	**-1.0**
L16K	**Owhat River**	**10.17**	**30**	Pn	**Pn**	**21 22 03.8**	**-2.6**
P18K	**Big Mountain,**	**10.27**	**48**	Pn	**Pn**	**21 22 06.4**	**-1.4**
O18K	**Koktuh Hills**	**10.52**	**46**	Pn	**Pn**	**21 22 09.9**	**-1.0**
KDAK	**Kodiak Island**	**10.91**	**59**	Pn	**Pn**	**21 22 11.7**	**-4.2**
	comp=E,0.7nm,0.3s,baz=172,slow=1.1,SNR=22						
KDAK				Sn	**S**	**21 24 24.8**	**+7.0**
	comp=E,0.1nm,0.3s,baz=327,slow=15,SNR=1.5						
	comp=E,2.5nm,0.2s						
P19K	**Oil Pt**	**11.29**	**49**	Pn	**Pn**	**21 22 21.1**	**+0.3**
K17K	**Iditarod**	**11.30**	**29**	Pn	**Pn**	**21 22 19.9**	**-1.0**
N19K	**Bonanza Creek**	**11.35**	**42**	Pn	**Pn**	**21 22 21.4**	**-0.2**
L18K	**Granite Mounta**	**11.43**	**34**	Pn	**Pn**	**21 22 21.0**	**-1.5**
ILSW	**Iliamna Southw**	**11.48**	**48**	Pn	**Pn**	**21 22 22.0**	**-1.4**
RED	**Redoubt Volcan**	**11.86**	**46**	Pn	**Pn**	**21 22 27.8**	**-0.2**
M19K	**Big River Lodg**	**12.03**	**38**	Pn	**Pn**	**21 22 29.0**	**-1.1**
L19K	**White Mountain**	**12.04**	**37**	Pn	**Pn**	**21 22 29.3**	**-0.9**
CNPM	**China Poot**	**12.16**	**52**	Pn	**Pn**	**21 22 30.8**	**-1.0**
J18K	**Innoko River**	**12.34**	**29**		**Pn**	**21 22 34.6**	**+0.5**
BRLK	**Bradley Lake**	**12.42**	**51**	Pn	**Pn**	**21 22 32.5**	**-2.6**
M20K	**Styx River**	**12.49**	**40**	Pn	**Pn**	**21 22 35.0**	**-1.0**
SPU	**Mount Spurr**	**12.54**	**44**		**Pn**	**21 22 37.2**	**+0.6**
F15K	**North Star Dit**	**12.72**	**10**		**Pn**	**21 22 39.6**	**+0.9**
STLK	**Strandline Lak**	**12.80**	**43**		**Pn**	**21 22 40.2**	**+0.4**
SLKM	**Skilak Lake**	**13.03**	**49**	Pn	**Pn**	**21 22 40.5**	**-2.1**
J19K	**Poorman**	**13.06**	**29**	Pn	**Pn**	**21 22 42.5**	**-0.5**
K20K	**Telida**	**13.09**	**34**	Pn	**Pn**	**21 22 41.9**	**-1.5**
SKT	**Skwentna**	**13.18**	**42**	Pn	**Pn**	**21 22 44.3**	**-0.2**
SEW	**Seward**	**13.22**	**51**	Pn	**Pn**	**21 22 42.1**	**-2.8**
H18K	**Honhosa River**	**13.28**	**22**		**Pn**	**21 22 46.3**	**+0.6**
PPLA	**Purkeypile**

CTGM	**Chitina Glacier**	**17.30**	**52**	P		**P**	**21 23 33.1**	**+0.2**
G24K	**Hadweenzic Riv**	**17.41**	**31**	P		**P**	**21 23 33.8**	**0.0**
G24K				IAmb		IAmb	21 23 34.1	
	comp=Z,3.2nm,0.7s							
LOGN	**Logan Glacier**	**17.43**	**53**	P		**P**	**21 23 33.8**	**-0.4**
LOGN				IAmb		IAmb	21 23 51.5	
	comp=Z,4.6nm,1.1s							
M27K	**Edge Creek, AK**	**17.43**	**48**	P		**Pn**	**21 23 35.2**	**-0.8**
M27K				IAmb		IAmb	21 23 49.1	
	comp=Z,5.7nm,1.2s							
PCA	**Pinnacle**	**17.66**	**56**	P		**P**	**21 23 36.5**	**-0.1**
L27K	**Beaver Creek,**	**17.69**	**45**	P		**P**	**21 23 37.0**	**+0.1**
L27K				IAmb		IAmb	21 23 42.4	
	comp=Z,3.3nm,1.1s							
BCAR	**Beaver Creek A**	**17.71**	**45**	P		**P**	**21 23 36.1**	**-1.0**
E23K	**Chandalar**	**17.72**	**26**	P		**P**	**21 23 37.5**	**+0.2**
E23K				IAmb		IAmb	21 23 40.5	
	comp=Z,3.6nm,0.8s							
O28M	**Mount Upton**	**17.81**	**53**	P		**P**	**21 23 38.1**	**-0.4**
O28M				IAmb		IAmb	21 23 51.2	
	comp=Z,3.2nm,0.8s							
E24K	**Your Creek**	**18.03**	**27**	P		**P**	**21 23 40.8**	**+0.2**
E24K				IAmb		IAmb	21 23 41.2	
	comp=Z,3.6nm,0.7s							
I26K	**Coal Creek Min**	**18.09**	**38**	P		**P**	**21 23 40.0**	**-1.3**
I26K				IAmb		IAmb	21 23 40.6	
	comp=Z,4.1nm,1.0s							
D23K	**Nanushuk River**	**18.14**	**23**	P		**P**	**21 23 41.7**	**0.0**
D23K				IAmb		IAmb	21 23 41.9	
	comp=Z,2.6nm,0.8s							
BILL	**Bilibino**	**18.51**	**332**	P		**P**	**21 23 45.3**	**-0.4**
O29M	**Mount Kennedy**	**18.52**	**55**	P		**P**	**21 23 46.0**	**0.0**
O29M				IAmb		IAmb	21 23 49.2	
	comp=Z,2.6nm,0.7s							
F25K	**Christian Rive**	**18.52**	**30**	P		**P**	**21 23 45.6**	**-0.4**
F25K				IAmb		IAmb	21 23 55.6	
	comp=Z,2.2nm,0.8s							
I27K	**Kandik River**	**18.80**	**38**	P		**P**	**21 23 48.1**	**-0.8**
I27K				IAmb		IAmb	21 23 52.8	
	comp=Z,4.6nm,1.1s							
C23K	**Itkillik River**	**18.83**	**21**	P		**P**	**21 23 48.3**	**-0.8**
HYT	**Haines Junctio**	**19.11**	**54**	P		**P**	**21 23 52.2**	**-0.2**
HYT				IAmb		IAmb	21 23 55.2	
	comp=Z,3.5nm,1.1s							
H27K	**Steamboat Moun**	**19.13**	**36**	P		**P**	**21 23 50.2**	**-2.2**
MA2	**Magadan**	**22.20**	**302**	LR		LR	21 33 06.9	
	comp=Z,27nm,18.6s,baz=88,slow=39							
INK	**Inuvik**	**22.83**	**35**	P		**P**	**21 24 28.2**	**-1.7**
	comp=Z,1.9nm,0.4s,baz=256,slow=7.4,SNR=22							
	comp=Z,1.9nm,0.4s							
YKA	**Yellowknife Ar**	**30.00**	**50**	P		**P**	**21 25 34.5**	**+0.5**
	comp=Z,0.1nm,0.4s,baz=280,slow=8.4,SNR=2.5							
	comp=Z,0.1nm,0.4s							
TXAR	**Lajitas Array**	**53.23**	**89**	P		**P**	**21 28 43.6**	**+1.2**
	comp=Z,0.3nm,0.4s,baz=300,slow=5.3,SNR=7.0							
	comp=Z,0.3nm,0.4s							
APG	**El Apazote**	**71.99**	**89**	LR		LR	22 04 25.3	
	comp=Z,8.1nm,19.1s,baz=108,slow=37							

NEIC ***13*** *21:37:47.7±1.1,5°.30S±0°.06×129°.64E±0°.08,h182km±2km, mb4.3/25, Error ellipse: s-maj=12.1km s-min=8.4km az=89.0*

IDC ***13*** *21:37:51.5±1.7,5°.31S×129°.68E,h219km±19km,mb3.6/10, mbtmp4.3/15, Error ellipse: s-maj=23.1km s-min=14.7km az=94.0*

DJA ***13*** *21:37:52.8±0.1,5°.2S×13°.0E±°,h234km±3km,M4.6/27, mB5.1/9,mb4.4/27,MLv4.8/24,Mw(mB)4.4/9*

ISC 13 21:37:52.4±0.5,5°.47S±0°.04×129°.73E±0°.05,h250km,n84, σ2s29/88,mb4.0/16,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.96**	**11**	P	**Pn**	**21 38 25.7**	**-1.5**
BNDI	**Bandanaira**	**0.96**	**11**	P	**Pn**	**21 38 25.7**	**-1.5**
AAI	**Ambon**	**2.34**	**319**	P	**Pn**	**21 38 37.0**	**-1.1**
KRAI	**Karang Ratu**	**2.52**	**328**	P	**Pn**	**21 38 38.7**	**-1.2**
KRAI				S	**S**	**21 39 11.3**	**-6.1**
SAUI	**Saumlaki**	**2.94**	**148**	Pn	Pn	21 38 37.0	-7.3
SAUI				Sn	**S**	**21 39 17.0**	**-8.4**
SAUI	**Saumlaki**	**2.94**	**148**	P	**Pn**	**21 38 46.0**	**+1.7**
NLAI	**Namlea**	**3.43**	**310**	P	**Pn**	**21 38 50.6**	**+0.9**
KMPI	**Kaimana, Papua**	**4.35**	**66**	P	**Pn**	**21 39 00.2**	**-0.2**
KMPI				S	**S**	**21 39 46.9**	**-7.5**
SIJI	**Sorong**	**4.82**	**19**	P	**Pn**	**21 39 02.9**	**-3.2**
	38nm,0.2s,baz=26,slow=22,SNR=11						
SIJI				S	S	21 39 50.1	-15
	52nm,0.2s,baz=264,slow=9.1,SNR=6.5						
SIJI	**Sorong**	**4.82**	**19**	P	**Pn**	**21 39 03.7**	**-2.4**
SWI	**Sorong**	**4.83**	**19**	P	**Pn**	**21 39 03.5**	**-2.6**
SANI	**Sanana**	**5.05**	**312**	P	**Pn**	**21 39 07.0**	**-1.8**
SANI	**Sanana**	**5.05**	**312**	P	**Pn**	**21 39 06.4**	**-2.4**
RKPI	**Ransiki, Papua**	**5.93**	**49**	P	**Pn**	**21 39 19.8**	**+0.1**
RKPI				S	**S**	**21 40 24.4**	**-5.2**
MWPI	**Manokwari, Pap**	**6.23**	**44**	P	**Pn**	**21 39 24.3**	**+0.8**
	1.6nm80nm,0.8s						
TNTI	**Ternate**	**6.63**	**339**	Pn	Pn	21 39 18.4	-10
SOEI	**Soe**	**6.89**	**231**	P	**Pn**	**21 39 33.1**	**+1.3**
SOEI	**Soe**	**6.89**	**231**	S	**S**	**21 40 50.5**	**-1.0**
SOEI	**Soe**	**6.89**	**231**	Pn	Pn	21 39 26.5	-5.3
SOEI	**Soe**	**6.89**	**231**	P	**Pn**	**21 39 32.3**	**+0.5**
	0.4nm23nm,0.5s						
DRS	**Darwin Rock St**	**7.01**	**171**	P	**Pn**	**21 39 34.2**	**+0.9**
DRS	**Darwin Rock St**	**7.01**	**171**	S	**S**	**21 40 53.1**	**-1.1**
MTN	**Manton Dam**	**7.46**	**169**	Pn	Pn	21 39 38.3	-0.6
MTN				Sn	**S**	**21 41 01.6**	**-2.8**
BATI	**Baumata**	**7.63**	**232**	P	**Pn**	**21 39 41.6**	**+0.5**
	33nm,0.5s,baz=58,slow=4.6,SNR=9.5						
BATI				S	**S**	**21 41 01.4**	**-7.1**
	87nm,0.7s,baz=160,slow=6.2,SNR=16						
BATI	**Baumata**	**7.63**	**232**	P	**Pn**	**21 39 40.9**	**-0.2**
	0.3nm1µm55nm,0.8s						
BAKI	**Biak**	**7.66**	**57**	P	**Pn**	**21 39 44.0**	**+2.6**
	0.4nm70nm,1.6s						
EDFI	**Ende, Flores**	**8.62**	**247**	P	**Pn**	**21 39 56.0**	**+2.4**
	17nm,1.3s						
KNRA	**Kununurra**	**10.19**	**185**	Pn	**Pn**	**21 40 12.7**	**-0.6**
LBFI	**Labuhan Bajo,**	**10.21**	**252**	P	**Pn**	**21 40 13.8**	**+0.1**
WBSI	**Waikabubak, Su**	**11.05**	**247**	P	**Pn**	**21 40 23.0**	**-1.3**
	25nm,0.8s						
TOLI2	**Tolitoli**	**11.07**	**306**	P	**P**	**21 40 27.7**	**-1.0**
DBNI	**Kabupaten Domp**	**11.72**	**254**	P	**Pn**	**21 40 32.9**	**+0.2**
	18nm,0.4s						
PLAI	**Plampang**	**12.32**	**254**	P	**Pn**	**21 40 40.4**	**+0.4**
PLAI	**Plampang**	**12.32**	**254**	P	**Pn**	**21 40 40.1**	**+0.1**
	58nm,0.8s						
FITZ	**Fitzroy Crossi**	**13.17**	**197**	P	**Pn**	**21 40 51.0**	**+0.6**
	11nm,0.3s,baz=7.6,slow=11,SNR=47						
FITZ				S	**S**	**21 43 13.3**	**-3.5**
	9.9nm,0.7s,baz=129,slow=21,SNR=4.4						
WB0	**Warramunga Arr**	**14.92**	**163**	P	**P**	**21 41 11.5**	**+0.1**
WB0				IAmb	IAmb	21 41 13.9	
	comp=Z,14nm,0.9s						
WRAB	**Tennant Creek**	**15.06**	**163**	P	**Pn**	**21 41 14.8**	**+1.4**
WRAB	**Tennant Creek**	**15.06**	**163**	Pn	**P**	**21 41 12.6**	**-0.4**
WRAB				IAmb	IAmb	21 41 15.7	
	comp=Z,11nm,0.8s						
WRA	**Warramunga Arr**	**15.07**	**163**	P	**Pn**	**21 41 14.1**	**+0.6**
	comp=Z,8.1nm,0.8s,baz=335,slow=14,SNR=97						
WRA				S	**S**	**21 43 57.2**	**-2.6**
	comp=Z,4.5nm,0.5s,baz=336,slow=23,SNR=8.4						
WRA	**Warramunga Arr**	**15.07**	**163**		**P**	**21 41 13.3**	**+0.2**
WR8	**Warramunga Arr**	**15.13**	**163**		**P**	**21 41 13.8**	**0.0**
WR8				IAmb	IAmb	21 41 34.0	
	comp=Z,10nm,0.7s						
MYLDM	**Lahad Datu**	**15.41**	**313**		**P**	**21 41 14.3**	**-2.6**
MYLDM				IAmb	IAmb	21 41 28.3	
	comp=Z,22nm,1.1s						
JAGI	**Jajag, Banyuwa**	**15.74**	**258**		**P**	**21 41 18.7**	**-1.8**
KMMI	**Kalianget**	**15.75**	**263**	P	**Pn**	**21 41 23.3**	**+1.7**
	comp=Z,4µmcomp=Z,80nm,1.1s						
BLJI	**Banyuglugur**	**16.18**	**261**	P	**Pn**	**21 41 32.3**	**+5.5**
KKM	**Kota Kinabalu**	**17.69**	**310**	P	**P**	**21 41 39.3**	**-2.6**
QIS	**Mount Isa**	**17.80**	**148**	P	**Pn**	**21 41 47.3**	**+1.5**
MBWA	**Marble Bar**	**18.36**	**211**	P	**P**	**21 41 49.3**	**+0.3**
AS31	**Alice Springs**	**18.53**	**168**	P	**P**	**21 41 52.4**	**+1.5**
AS31				IAmb	IAmb	21 41 59.8	
	comp=Z,6.9nm,0.4s						
ASAR	**Alice Springs**	**18.53**	**168**	P	**Pn**	**21 41 54.4**	**0.0**
	comp=Z,10nm,0.4s,baz=352,slow=12,SNR=64						
ASAR				S	**S**	**21 45 10.5**	**+1.6**
	comp=Z,12nm,0.9s,baz=348,slow=19,SNR=26						
PSA00	**Pilbara Seismi**	**18.65**	**210**	P	**Pn**	**21 41 54.5**	**-1.2**
PSA00	**Pilbara Seismi**	**18.65**	**210**	P	**P**	**21 41 52.2**	**+0.1**
PSA00				IAmb	IAmb	21 41 55.6	
	comp=Z,14nm,0.9s						
PSA00	**Pilbara Seismi**	**18.65**	**210**	P	**P**	**21 41 52.6**	**+0.5**
PSA00				IAmb	IAmb	21 41 55.3	
	comp=Z,33nm,0.8s						
KPJI	**Karang Pucung**	**20.75**	**264**	P	Pn	21 42 18.3	-2.1
	comp=Z,28nm,0.6s						
BBJI	**Bungbulang**	**22.02**	**264**		**P**	**21 42 23.9**	**-3.0**
BBJI				IAmb	IAmb	21 42 29.9	
	comp=Z,12nm,0.9s						
UBSI	**University, Be**	**27.42**	**272**	P	P	21 43 24.1	+8.6
CMAR	**Chiang Mai Arr**	**38.56**	**309**	P	**P**	**21 44 52.1**	**+0.6**
	comp=Z,2.7nm,0.6s,baz=142,slow=7.6,SNR=28						
	comp=Z,2.7nm,0.6s						
CMAR	**Chiang Mai Arr**	**38.56**	**309**		**P**	**21 44 50.5**	**-1.0**
CHTO	**Chiang Mai**	**38.76**	**309**		**P**	**21 44 53.8**	**+0.6**
CHTO				IAmb	IAmb	21 44 55.0	
	comp=Z,6.6nm,0.9s						
CHTO	**Chiang Mai**	**38.76**	**309**	P	**P**	**21 44 54.3**	**+1.1**
	comp=Z,8.4nm,0.9s						
MJAR	**Matsushiro Arr**	**42.54**	**10**	P	**P**	**21 45 23.5**	**-0.2**
	comp=Z,2.0nm,0.6s,baz=187,slow=10.0,SNR=7.8						
	comp=Z,2.0nm,0.6s						
MJAR	**Matsushiro Arr**	**42.54**	**10**	P	**P**	**21 45 23.6**	**-0.1**
KSRS	**Korea Array**	**42.73**	**358**	P	**P**	**21 45 25.6**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=173,slow=8.0,SNR=2.5						
	comp=Z,1.0nm,0.6s						
SONM	**Songino Array**	**56.91**	**341**	P	**P**	**21 47 12.3**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=158,slow=6.9,SNR=3.5						
	comp=Z,0.4nm,0.5s						
SONM	**Songino Array**	**56.91**	**341**	P	**P**	**21 47 12.2**	**+0.6**
PETK	**Petropavlovsk-**	**62.97**	**19**	P	**P**	**21 47 54.3**	**+1.9**
	comp=Z,14nm,1.1s,baz=199,slow=4.1,SNR=3.2						
	comp=Z,14nm,1.1s						
MKAR	**Makanchi Array**	**66.81**	**327**	P	**P**	**21 48 18.8**	**+1.5**
	comp=Z,2.4nm,0.7s,baz=126,slow=7.7,SNR=6.6						
	comp=Z,2.4nm,0.7s						
MKAR	**Makanchi Array**	**66.81**	**327**	P	**P**	**21 48 18.3**	**+0.9**
KSH2	**Kashi**	**66.81**	**317**	P	**P**	**21 48 19.0**	**+1.3**
KSH2				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MAKZ	**Makanchi**	**66.99**	**326**	P	**P**	**21 48 19.2**	**+0.7**
YAK	**Yakutsk**	**67.31**	**360**	P	**P**	**21 48 21.0**	**+1.0**
ZALV	**Zalesovo Beam**	**70.10**	**334**	P	**P**	**21 48 38.4**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=138,slow=5.2,SNR=5.8						
	comp=Z,0.9nm,0.3s						
ZALV	**Zalesovo Beam**	**70.10**	**334**	P	**P**	**21 48 37.8**	**+0.4**
GAR	**Garm**	**70.40**	**315**	P	**P**	**21 48 40.6**	**+0.8**
GAR				IAmb	IAmb	21 48 42.6	
	comp=Z,4.7nm,0.9s						
BTK	**Batken**	**70.50**	**316**	P	**P**	**21 48 40.8**	**+0.5**
KURBB	**Kurchatov Arra**	**71.07**	**328**	P	**P**	**21 48 44.8**	**+1.4**
	comp=Z,2.9nm,0.7s,baz=129,slow=5.1,SNR=38						
	comp=Z,2.9nm,0.7s						
KURK	**Kurchatov**	**71.08**	**328**	P	**P**	**21 48 44.8**	**+1.4**
KURK				IAmb	IAmb	21 48 46.0	
	comp=Z,2.7nm,0.7s						
KK31	**Karatay Array**	**72.02**	**319**	P	**P**	**21 48 49.8**	**+0.6**
KKAR	**Karatay Array**	**72.02**	**319**	P	**P**	**21 48 50.0**	**+0.7**
BVAR	**Borovoye Array**	**76.63**	**328**	P	**P**	**21 49 17.0**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=111,slow=3.6,SNR=2.5						
	comp=Z,0.4nm,0.3s						
M16K	**Timber Creek**	**85.84**	**28**	P	**P**	**21 50 05.1**	**+1.4**
RAYN	**Ar Rayn**	**86.88**	**294**	P	**P**	**21 50 11.0**	**+1.4**
RAYN				IAmb	IAmb	21 50 11.9	
	comp=Z,3.1nm,0.7s						
ILAR	**Eielson Array**	**92.09**	**25**	P	**P**	**21 50 36.5**	**+3.5**
	comp=Z,0.5nm,0.9s,baz=269,slow=6.0,SNR=3.1						
	comp=Z,0.5nm,0.9s						
ILAR	**Eielson Array**	**92.09**	**25**	P	**P**	**21 50 35.0**	**+2.0**

UCR ***13*** *21:53:47.0±0.3,9°.24N×84°.88W,h5km±15km,MW4.3, Presumed earthquake*

CATAC ***13*** *21:53:48.4±0.5,9°.N±3°×8°.5W±°, h6km±2km, M3.9/11, MLv3.9/11, Error ellipse: s-maj=7.6km s-min=3.4km az=26.4, confirmed*

UPA ***13*** *21:53:49.8±3.5,9°.45N×84°.64W,h28km±58km, MW3.9, Presumed earthquake*

ISC 13 21:53:46.0±1.4,9°.17N±0°.05×84°.81W±0°.05,h17km±10km, n28,σ1s22/39,1C-1D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAQE	**Paquera**	**0.66**	**349**	*e*P	**Pb**	**21 53 59.0**	**-0.1**
PAQE				eS	**Sb**	**21 54 07.9**	**-0.1**
QUEP	**Quepos**	**0.69**	**67**	P	**Pn**	**21 54 03.3**	**+2.3**
QUEP				S	**Sn**	**21 54 11.7**	**+0.5**
ACOS	**Acosta**	**0.89**	**45**	*e*P	**Pn**	**21 54 04.0**	**+0.1**
LCR2	**La Lucha 2**	**0.97**	**54**	P	**Pn**	**21 54 05.7**	**+0.6**
LCR2				S	**Sn**	**21 54 19.7**	**+1.1**
CMARA	**Lajas Hojancha**	**1.04**	**324**	P	**Pb**	**21 54 05.6**	**-0.1**
CMARA				S	**Sg**	**21 54 19.8**	**-0.2**
CMARA	**Lajas Hojancha**	**1.04**	**324**	*i* P	**Pb**	**21 54 04.9**	**-0.8**
HDC	**Heredia**	**1.07**	**39**	*e*P	**Pg**	**21 54 07.0**	**+0.2**
CORON	**Coronado**	**1.13**	**45**	*e*P	**Pg**	**21 54 08.2**	**+0.3**
JTS	**Las Juntas de**	**1.13**	**353**	P	**Pb**	**21 54 06.4**	**-0.7**
JTS				S	**Sb**	**21 54 21.3**	**-0.2**
JTS	**Las Juntas de**	**1.13**	**353**	*i* P	**Pb**	**21 54 06.5**	**-0.7**
JTS				*i* S	**Sb**	**21 54 17.7**	**-3.8**
JTS	**Las Juntas de**	**1.13**	**353**	*e*P	**Pb**	**21 54 06.4**	**-0.7**
OCHAL	**Ojochal**	**1.15**	**93**	P	**Pg**	**21 54 09.3**	**+1.1**
OCHAL				S	**Sg**	**21 54 24.3**	**+1.1**
VTR0	**Volcan Turrial**	**1.33**	**51**	*e*P	**Pg**	**21 54 11.8**	**0.0**
DRK0	**Durika**	**1.54**	**86**	*i* P	**Pn**	**21 54 12.0**	**-0.9**
DRK0	**Durika**	**1.54**	**86**	*e*P	**Pn**	**21 54 12.6**	**-0.3**
PIRO	**Carate, Puerto**	**1.64**	**117**	*i* P	**Pg**	**21 54 17.6**	**+0.1**
ELI1	**Hacienda Flor**	**1.65**	**333**	P	**Pb**	**21 54 15.9**	**0.0**
TRT2	**Tortugero**	**1.74**	**37**	P	**Pb**	**21 54 17.6**	**+0.1**
TRT2				S	**Sg**	**21 54 40.3**	**-1.8**
TRT2	**Tortugero**	**1.74**	**37**	*i* P	**Pb**	**21 54 17.4**	**-0.1**
ALCO	**Alturas Coton,**	**1.96**	**96**	*e*P	**Pb**	**21 54 21.3**	**0.0**
MLIR3	**Monte Lirio, C**	**1.99**	**101**	*e*P	**Pg**	**21 54 24.7**	**+0.4**
MLIR3				*i* S	**Sn**	**21 54 41.9**	**-1.7**
BRU2	**Volcan**	**2.12**	**100**	P	**Pg**	**21 54 26.0**	**-0.8**
BRU2				S	**Sb**	**21 54 51.7**	**+1.4**
BRU2	**Volcan**	**2.12**	**100**	*e*P	**Pb**	**21 54 25.2**	**+1.1**
BRU2				*i* S	**Sn**	**21 54 47.0**	**+0.1**
OMEN	**Al SSO del Vol**	**2.47**	**341**	P	**Pb**	**21 54 30.3**	**+0.4**
LOMA3	**Las Lomas, Chi**	**2.50**	**107**	*e*P	**Pn**	**21 54 24.9**	**-1.0**
CONN	**Concepcion**	**2.52**	**341**	P	**Pb**	**21 54 30.0**	**-0.8**
BOAB	**BOACO BROADBAN**	**3.37**	**346**	P	**Pn**	**21 54 41.2**	**+3.3**
AZU	**Azuero**	**4.69**	**107**	*e*P	**Pb**	**21 55 06.2**	**-1.5**

DJA 13 21:55:53.9±0.5,6°.S±7°.×10°.3E±°,h158km±9km,M3.8/20, mB4.8/1,mb3.9/6,MLv3.7/20,Mw(mB)4.0/1,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**1.41**	**9**	P	Pn	21 56 22.3	-0.9
LWLI	**Liwa**	**1.52**	**61**	P	Pn	21 56 24.9	+0.5
KASI	**Kota Agung**	**1.77**	**82**	P	Pn	21 56 26.3	-0.7
KASI				S	Sn	21 56 51.8	-0.6
MDSI	**Maura Dua**	**1.92**	**49**	P	Pn	21 56 31.3	+2.7
UBSI	**University, Be**	**2.04**	**347**	P	Pn	21 56 29.3	-0.7
KSI	**Kapahiang**	**2.10**	**356**	P	Pn	21 56 31.6	+0.8
KLSI		**2.26**	**62**	P	Pn	21 56 35.7	+3.2
CGJI	**Cibinong**	**3.06**	**106**	P	Pn	21 56 40.0	-2.4
KRJI	**Kerinci**	**3.86**	**341**	P	Pn	21 56 58.9	+6.2
PPSI	**Pulau Pagai**	**4.03**	**318**	P	Pn	21 56 52.5	-2.3
BBJI	**Bungbulang**	**5.17**	**109**	P	Pn	21 57 08.2	-1.6
	0.1nm13nm,0.6s						

IDC ***13*** *21:57:50.3±0.8,36°.88N×27°.40E,h0km,mb3.8/7, mbtmp3.7/14,ML3.6/4,MS3.1/17, Error ellipse: s-maj=18.7km s-min=15.2km az=162.0*

AFAD ***13*** *21:57:51.5,36°.93N×27°.32E,h24km±1km,MW3.9*

ATH ***13*** *21:57:52.9,36°.92N×27°.24E,h26km±5km, Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*

ISK ***13*** *21:57:52.2,36°.98N×27°.37E,h11km,ML3.8/25*

THE ***13*** *21:57:52.4,37°.N±1°×2°.7E±°,h13km±2km,M3.6/18, MLh3.6/18*

GII ***13*** *21:57:53.7±0.0,36°.440N±0°.002×27°.361E±0°.001,h0km, Mws4.1, confirmed*

ISC 13 21:57:52.0±0.7,36°.94N±0°.02×27°.37E±0°.02,h16km±4km, n169,σ1s74/206,mb3.7/7,MS3.1/8,6C-7D,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BODA	**Bodrum-Mula**	**0.11**	**28**	Pg	**Pg**	**21 57 54.8**	**-0.8**
BODA				Sg	**Sg**	**21 57 56.9**	**-1.0**
BODT	**Bodrum**	**0.13**	**340**	P	**Pb**	**21 57 56.5**	**+0.3**
BODT				S	**Sg**	**21 57 58.2**	**-0.2**
YKAV	**Yalikavak-Bodr**	**0.20**	**340**	Pg	**Pg**	**21 57 56.3**	**-0.5**
YKAV				Sg	**Sg**	**21 57 59.2**	**-0.8**
YAZI	**Mula-Dat§a-**	**0.27**	**165**	P	**Pg**	**21 57 58.3**	**+0.5**
YAZI				S	**Sg**	**21 58 01.3**	**-0.5**
YAZI				IAML		21 58 03.0	
	comp=E,7µm,0.6s						
YAZI				IAML		21 58 04.0	
	comp=N,9µm,0.3s						
DAT	**Datca**	**0.27**	**141**	P	**Pg**	**21 57 58.3**	**+0.4**
DAT				S	**Sg**	**21 58 02.4**	**+0.4**
DAT	**Datca**	**0.27**	**141**	Pg	**Pb**	**21 57 58.8**	**+0.3**
DAT				Sg	**Sb**	**21 58 03.4**	**+0.5**
DAT	**Datca**	**0.27**	**141**	P	**Pg**	**21 57 58.4**	**+0.5**
DATC	**Datca-Mugla**	**0.30**	**127**	Pg	**Pb**	**21 57 59.3**	**+0.4**
DATC				Sg	**Sb**	**21 58 04.5**	**+1.0**
KLNA	**Kalymnos**	**0.32**	**274**	P	**Pg**	**21 57 58.9**	**+0.3**
KLNA				S	**Sg**	**21 58 03.6**	**+0.4**
DIDI	**Didim-Aydin**	**0.45**	**347**	Pg	**Pg**	**21 58 01.1**	**0.0**
MLSB	**Milas**	**0.48**	**42**	Pg	**Pg**	**21 58 01.7**	**0.0**
MLSB				Sg	**Sg**	**21 58 08.5**	**+0.2**
DDIM	**Aydin, Didim**	**0.53**	**349**	P	**Pg**	**21 58 02.5**	**0.0**
TURN	**Turunc**	**0.72**	**103**	Pg	**Pg**	**21 58 06.3**	**+0.1**
TURN	**Turunc**	**0.72**	**103**	P	**Pg**	**21 58 06.2**	**+0.1**
YER	**Yerkesik**	**0.76**	**75**	P	**Pg**	**21 58 06.8**	**0.0**
YER				S	**Sb**	**21 58 18.2**	**+1.2**
YER	**Yerkesik**	**0.76**	**75**	Pg	**Pb**	**21 58 07.4**	**+0.5**
GCAM	**G?zelcaml?**	**0.77**	**352**	Pg	**Pg**	**21 58 06.5**	**-0.5**
GCAM	**G?zelcaml?**	**0.77**	**352**	P	**Pg**	**21 58 06.7**	**-0.3**
GCAM				S	**Sg**	**21 58 17.7**	**+0.5**
GCAM				IAML		21 58 25.0	
	comp=N,4µm,0.3s						
MULA	**Mugla, Merkez-**	**0.83**	**67**	P	**Pg**	**21 58 08.3**	**+0.2**
AYDN	**Tasoluk**	**0.83**	**29**	P	**Pg**	**21 58 07.9**	**-0.3**
AYDN				S	**Sg**	**21 58 17.9**	**-1.2**
AYDN				IAML		21 58 23.0	
	comp=N,4µm,0.4s						
AYDN				IAML		21 58 23.0	
	comp=E,4µm,0.4s						
RODB	**Rodos**	**0.84**	**125**	P	**Pb**	**21 58 09.3**	**+1.1**
RODB				S	**Sn**	**21 58 22.6**	**+1.4**
SMG	**Samos**	**0.88**	**331**	P	**Pg**	**21 58 08.4**	**-0.6**
SMG				S	**Sg**	**21 58 20.8**	**+0.2**
SMG	**Samos**	**0.88**	**331**	P	**Pg**	**21 58 08.5**	**-0.6**
SMG				S	**Sg**	**21 58 20.3**	**-0.4**
KUSD	**Kusadasi-Aydin**	**0.92**	**356**	Pg	**Pg**	**21 58 09.7**	**-0.2**
ARG	**Arkhangelos**	**0.94**	**139**	P	**Pb**	**21 58 10.7**	**+0.8**
ARG				S	**Sn**	**21 58 23.8**	**+0.1**
ARG	**Arkhangelos**	**0.94**	**139**	Pg	**Pn**	**21 58 11.3**	**+0.7**
ARG	**Arkhangelos**	**0.94**	**139**	P	**Pn**	**21 58 11.2**	**+0.7**
ARG				S	**Sn**	**21 58 24.7**	**+1.0**
AYDB	**Zeytinkoy-Aydi**	**1.09**	**22**	Pg	**Pb**	**21 58 12.8**	**+0.2**
ESEN	**Aydn-Nazilli**	**1.16**	**42**	P	**Pb**	**21 58 14.8**	**+0.3**
ESEN				S	**Sb**	**21 58 28.6**	**+0.1**
ESEN				IAML		21 58 33.0	
	comp=N,634nm,0.5s						
ESEN				IAML		21 58 34.0	
	comp=E,1µm,0.6s						
DGB	**zmir**	**1.18**	**341**	P	**Pn**	**21 58 13.6**	**-0.2**
GMLD	**Gumuldur**	**1.19**	**343**	Pn	**Pn**	**21 58 14.7**	**+0.7**
NAZL	**Nazilli-Aydin**	**1.26**	**35**	Pn	**Pn**	**21 58 15.4**	**+0.4**
DUVT	**Torbali**	**1.28**	**3**	P	**Pn**	**21 58 15.6**	**+0.4**
IZMR	**zmir-demi**	**1.28**	**21**	P	**Pn**	**21 58 15.9**	**+0.7**
IZMR				S	**Sb**	**21 58 32.4**	**+0.3**
IZMR				IAML		21 58 38.0	
	comp=N,750nm,0.6

PLVB	**Pleven**	**6.78**	**343**	⇑P		**Pn**	**21 59 31.2**	**+0.5**
MPEP	**Malo Peshtene**	**6.99**	**338**	P		**Pn**	**21 59 35.3**	**+1.7**
HNTI	**Hanita**	**7.47**	**119**	P		**Pn**	**21 59 40.1**	**-0.1**
HNTI				S		**Sn**	**22 01 02.4**	**-2.2**
OFRI	**`Ofer**	**7.60**	**122**	P		**Pn**	**21 59 41.9**	**-0.2**
OFRI				S		**Sn**	**22 01 05.2**	**-2.8**
MMC7	**Mount Meron ar**	**7.66**	**118**	P		**Pn**	**21 59 42.4**	**-0.5**
MMA0B	**Mount Meron ar**	**7.67**	**118**	P		**Pn**	**21 59 42.9**	**-0.2**
MMA0B				S		**Sn**	**22 01 07.7**	**-1.9**
MMAI	**Mount Meron Ar**	**7.67**	**118**	Pn		**Pn**	**21 59 41.9**	**-1.2**
	1.9nm,0.3s,baz=320,slow=13,SNR=28							
MMAI				Sn				
	7.4nm,0.3s,baz=334,slow=27,SNR=11					**Sn**	**22 01 04.5**	**-5.1**
BLGI	**Bet Lehem HaGe**	**7.68**	**121**	P		**Pn**	**21 59 42.4**	**-0.7**
BLGI				S		**Sn**	**22 01 07.5**	**-2.3**
GEM	**Giv'at Ha'Em**	**7.75**	**116**	P		**Pn**	**21 59 44.0**	**-0.1**
GEM				S		**Sn**	**22 01 10.7**	**-0.8**
NATI	**Neve Ativ**	**7.78**	**116**	P		**Pn**	**21 59 44.4**	**-0.1**
NATI				S		**Sn**	**22 01 10.7**	**-1.4**
SLTI	**Sal'it**	**7.87**	**124**	P		**Pn**	**21 59 44.9**	**-0.9**
SLTI				S		**Sn**	**22 01 11.0**	**-3.6**
TPGR	**Topolog**	**7.95**	**5**	⇓P		**Pn**	**21 59 47.0**	**+0.2**
KSHT	**Keshet**	**7.98**	**117**	P		**Pn**	**21 59 47.4**	**+0.1**
KSHT				S		**Sn**	**22 01 15.2**	**-2.0**
MMLI	**Mount Malkishu**	**8.01**	**122**	P		**Pn**	**21 59 47.4**	**-0.3**
MMLI				S		**Sn**	**22 01 15.2**	**-2.7**
SALP	**Salfit**	**8.08**	**125**	P		**Pn**	**21 59 47.6**	**-1.0**
SALP				S		**Sn**	**22 01 16.7**	**-3.0**
HMDT	**Nahal Hemdat**	**8.19**	**122**	P		**Pn**	**21 59 49.4**	**-0.7**
HMDT				S		**Sn**	**22 01 19.5**	**-2.9**
AMAZ	**Amatzia**	**8.25**	**129**	P		**Pn**	**21 59 49.9**	**-1.1**
AMAZ				S		**Sn**	**22 01 19.7**	**-4.2**
UJAP	**Al Uja**	**8.33**	**124**	P		**Pn**	**21 59 50.9**	**-1.2**
UJAP				S		**Sn**	**22 01 22.5**	**-3.3**
KZIT	**Kziot**	**8.38**	**134**	P		**Pn**	**21 59 52.4**	**-0.4**
KZIT				S		**Sn**	**22 01 22.0**	**-5.2**
YTIR	**Yattir**	**8.49**	**129**	P		**Pn**	**21 59 53.1**	**-1.2**
YTIR				S		**Sn**	**22 01 25.7**	**-4.2**
DSI	**Dead Sea**	**8.52**	**127**	P		**Pn**	**21 59 53.4**	**-1.3**
DSI				S		**Sn**	**22 01 27.0**	**-3.5**
MLR	**Muntele Rosu**	**8.61**	**353**	Pn		**Pn**	**21 59 57.8**	**+1.8**
	0.3nm,0.3s,baz=188,slow=11,SNR=3.1							
MLR				LR		LR	22 03 50.2	
	comp=Z,133nm,19.4s,baz=113,slow=42 2.3nm,0.6s							
TIP	**Timpagrande**	**8.66**	**288**	⇓P		**Pn**	**21 59 58.9**	**+2.2**
MSBI	**Mazada**	**8.68**	**128**	P		**Pn**	**21 59 55.4**	**-1.4**
MSBI				S		**Sn**	**22 01 30.2**	**-4.1**
MDVR	**Moldovita**	**8.93**	**333**	⇓P		**Pn**	**22 00 01.4**	**+1.1**
IDAN	**Idan**	**8.96**	**131**	P		**Pn**	**21 59 59.1**	**-1.5**
IDAN				S		**Sn**	**22 01 36.5**	**-4.7**
ZFRI	**Zfri**	**9.10**	**132**	P		**Pn**	**22 00 00.6**	**-1.9**
ZFRI				S		**Sn**	**22 01 40.0**	**-4.7**
GZR	**Gura Zlata**	**9.13**	**339**	⇑P		**Pn**	**22 00 03.9**	**+0.9**
PRNI	**Paran**	**9.14**	**134**	P		**Pn**	**22 00 01.4**	**-1.9**
PRNI				S		**Sn**	**22 01 41.0**	**-4.9**
KRMI	**Paran Flat**	**9.16**	**136**	P		**Pn**	**22 00 01.1**	**-2.4**
KRMI				S		**Sn**	**22 01 40.7**	**-5.6**
ASF	**Jabal al Asfar**	**9.18**	**118**	Pn		**Pn**	**22 00 04.0**	**+0.1**
	0.5nm,0.3s,baz=295,slow=5.0,SNR=7.3							
ASF				Sn		**Sn**	**22 01 41.4**	**-5.5**
	0.2nm,0.3s,baz=231,slow=17,SNR=1.6 1.1nm,0.3s							
HRFI	**Mount Harif**	**9.40**	**135**	P		**Pn**	**22 00 05.2**	**-1.6**
HRFI				S		**Sn**	**22 01 47.0**	**-5.1**
EIL	**Elat**	**9.63**	**137**	Pn		**Pn**	**22 00 08.7**	**-1.2**
	0.9nm,0.3s,baz=282,slow=0.3,SNR=8.1							
EIL				Sn		**Sn**	**22 01 51.3**	**-6.5**
	2.6nm,0.3s,baz=331,slow=13,SNR=7.5							
EIL				LR		LR	22 06 00.3	
	comp=Z,49nm,18.2s,baz=72,slow=51 7.5nm,0.8s							
EIL	**Elat**	**9.63**	**137**	P		**Pn**	**22 00 07.7**	**-2.2**
EIL				S		**Sn**	**22 01 52.7**	**-5.0**
BZS	**Buzias**	**9.69**	**335**	⇓P		**Pn**	**22 00 10.7**	**+0.1**
MARR	**Marisel-Cluj**	**10.23**	**343**	⇑P		**Pn**	**22 00 18.5**	**+0.3**
DRGR		**10.44**	**342**	⇓P		**Pn**	**22 00 21.3**	**+0.3**
KVAR	**Kislovodsk Arr**	**13.61**	**54**	LR		LR	22 07 58.7	
	comp=Z,72nm,20.2s,baz=85,slow=45							
AKASG	**Malin Array Be**	**13.82**	**5**	LR		LR	22 07 31.1	
	comp=Z,56nm,20.2s,baz=168,slow=42							
GNI	**Garni**	**13.97**	**71**	LR		LR	22 07 43.7	
	comp=Z,52nm,20.0s,baz=270,slow=42							
VRAC	**Vranov**	**14.63**	**331**	LR		LR	22 08 16.0	
	comp=Z,86nm,21.3s,baz=140,slow=43							
GERES	**GERESS Array B**	**15.52**	**324**	Pn		**P**	**22 01 34.3**	**-0.2**
	0.1nm,0.3s,baz=131,slow=14,SNR=2.5							
GERES				LR		LR	22 08 14.8	
	comp=Z,33nm,18.5s,baz=116,slow=40							
DAVOX	**Davos/Dischmat**	**16.29**	**313**	LR		LR	22 08 43.5	
	comp=Z,95nm,18.7s,baz=120,slow=40							
FINES	**FINESS Array B**	**24.54**	**359**	P		**P**	**22 03 11.0**	**+0.5**
	2.6nm,0.8s,baz=175,slow=18,SNR=2.0 2.6nm,0.8s							
ESDC	**Sonseca Array**	**24.67**	**286**	P		**P**	**22 03 12.6**	**+0.5**
	1.3nm,1.0s,baz=99,slow=8.5,SNR=4.8 1.3nm,1.0s							
HFS	**Hagfors**	**24.81**	**344**	LR		LR	22 14 10.6	
	comp=Z,68nm,18.9s,baz=324,slow=39							
KIRV	**Kirov**	**26.01**	**27**	LR		LR	22 15 30.7	
	comp=Z,46nm,19.8s,baz=100,slow=41							
NOA	**NORSAR Array B**	**26.20**	**342**	LR		LR	22 15 40.8	
	comp=Z,49nm,18.6s,baz=15,slow=41							
FURI	**Furi**	**29.74**	**157**	LR		LR	22 16 31.1	
	comp=Z,33nm,18.1s,baz=12,slow=38							
TORD	**Torodi Ar. Bea**	**33.00**	**231**	P		**P**	**22 04 27.1**	**+0.7**
	2.2nm,0.5s,baz=32,slow=6.5,SNR=27 2.2nm,0.5s							
BVAR	**Borovoye Array**	**33.83**	**48**	P		**P**	**22 04 34.4**	**+1.1**
	0.5nm,0.8s,baz=243,slow=6.3,SNR=2.7 0.5nm,0.8s							
MBAR	**Mbarara**	**37.48**	**174**	LR		LR	22 23 06.3	
	comp=Z,35nm,18.3s,baz=330,slow=40							
KURBB	**Kurchatov Arra**	**38.62**	**53**	P		**P**	**22 05 15.8**	**+1.6**
	1.1nm,0.7s,baz=278,slow=8.9,SNR=13 1.1nm,0.7s							
MKAR	**Makanchi Array**	**41.31**	**58**	P		**P**	**22 05 38.4**	**+1.6**
	1.1nm,0.6s,baz=268,slow=8.8,SNR=15 1.1nm,0.6s							
ZALV	**Zalesovo Beam**	**42.49**	**48**	P		**P**	**22 05 47.2**	**+1.0**
	0.9nm,0.5s,baz=280,slow=8.1,SNR=5.8 0.9nm,0.5s							
SFJD	**Kangerlussuaq**	**51.99**	**331**	LR		LR	22 30 04.3	
	comp=Z,35nm,18.2s,baz=328,slow=37							
TSUM	**Tsumeb**	**56.59**	**191**	LR		LR	22 34 10.1	
	comp=Z,29nm,18.8s,baz=312,slow=39							
TIXI	**Tiksi**	**58.87**	**21**	LR		LR	22 36 59.8	
	comp=Z,9.4nm,18.3s,baz=298,slow=40							
CMAR	**Chiang Mai Arr**	**64.62**	**85**	P		**P**	**22 08 29.2**	**+0.2**
	2.7nm,0.3s,baz=308,slow=7.8,SNR=6.9							

*PRE **13** 22:28:15.7±0.9, 26.°90S×26.°75E, h2km, ML2.3, Presumed earthquake*

*BGSI **13** 22:28:19.0±1.5, 26.°84S×26.°86E, h0km±43km, ML2.5*

ISC 13 22:28:16.8±1.4**, 26.°91S**±0.°03×**26.°77E**±0.°04**, h14**km±11km**, n23,σ1°54/45, South Africa**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PRYS	**Parys**	**0.53**	**91**	*e*P		**Pg**	**22 28 27.0**	**-0.2**
PRYS				*e*S		**Sg**	**22 28 34.1**	**-0.2**
PRYS				IAML			22 28 41.3	
	comp=Z,81nm,0.2s							
WDLM	**Western Deep L**	**0.76**	**50**	*e*P		**Pg**	**22 28 30.9**	**-0.7**
WDLM				*e*S		**Sg**	**22 28 41.0**	**-0.7**
WDLM				IAML			22 28 41.1	
	comp=Z,222nm,0.2s							
HRAO	**HartRAO**	**1.31**	**39**	*e*P		**Pg**	**22 28 41.4**	**-0.6**
HRAO				*e*S		**Sg**	**22 28 58.4**	**+0.4**
HRAO				IAML			22 29 01.2	
	comp=Z,50nm,0.3s							
SNKL	**Senekal, Frees**	**1.62**	**147**	*e*P		**Pn**	**22 28 46.4**	**+1.2**
SNKL				*e*S		**Sn**	**22 29 08.3**	**+2.3**
SNKL				IAML			22 29 11.9	
	comp=Z,62nm,0.4s							
MAKGR	**Makgori**	**2.08**	**301**	*i* P		**Pn**	**22 28 54.4**	**+3.0**
MAKGR				*i* S		**Sn**	**22 29 20.4**	**+3.2**
MAKGR				IAML			22 29 22.8	
	comp=N,304nm,0.6s							
BOSA	**Boshof**	**2.16**	**218**	*e*P		**Pn**	**22 28 53.5**	**+1.0**
BOSA				*e*S		**Sn**	**22 29 20.7**	**+1.5**
BOSA				IAML			22 29 25.9	
	comp=Z,17nm,0.5s							
LBTB	**Lobatse**	**2.17**	**331**	*e*P		**Pn**	**22 28 53.8**	**+1.3**
LBTB				*e*S		**Sn**	**22 29 20.1**	**+0.8**
LBTB				IAML			22 29 23.9	
	comp=Z,64nm,0.5s							
LEPH	**Lephalale, Lim**	**3.18**	**17**	*e*P		**Pn**	**22 29 07.4**	**+0.9**
LEPH				*e*S		**Sn**	**22 29 45.0**	**+0.6**
LEPH				IAML			22 30 00.6	
	comp=Z,13nm,0.3s							
LPHEP	**Lephephe**	**3.63**	**347**	*i* P		**Pn**	**22 29 13.8**	**+1.0**
LPHEP				*i* S		**Sn**	**22 29 54.4**	**-1.0**
LPHEP				IAML			22 30 13.6	
	comp=E,15nm,0.3s							
KDWAN	**Kaudwane**	**4.00**	**331**	*i* P		**Pn**	**22 29 19.5**	**+1.6**
KDWAN				*i* S		**Sn**	**22 30 03.6**	**-1.0**
KDWAN				IAML			22 30 24.9	
	comp=N,45nm,0.3s							
PMBG	**Pietermaritzbu**	**4.19**	**129**	*e*P		**Pn**	**22 29 21.8**	**+1.3**
PMBG				*e*S		**Sn**	**22 30 09.8**	**+0.5**
PMBG				IAML			22 30 28.7	
	comp=Z,8.2nm,0.4s							
UPI	**Upington**	**5.10**	**252**	*e*P		**Pn**	**22 29 34.6**	**+1.6**
UPI				*e*S		**Sn**	**22 30 31.4**	**-0.3**
UPI				IAML			22 30 56.2	
	comp=Z,8.5nm,0.3s							
BFON	**Badsfontein, M**	**5.56**	**208**	*e*P		**Pn**	**22 29 41.2**	**+1.9**
BFON				*e*S		**Sn**	**22 30 42.8**	**-0.3**
BFON				IAML			22 31 10.8	
	comp=Z,7.1nm,0.5s							
GRAF	**Camdeboo Natio**	**5.70**	**200**	*e*P		**Pn**	**22 29 42.9**	**+1.7**
GRAF				*e*S		**Sn**	**22 30 45.9**	**-0.6**
GRAF				IAML			22 31 18.1	
	comp=Z,3.8nm,0.7s							
KGCAE	**Kacgae**	**5.79**	**313**	*i* P		**Pn**	**22 29 43.1**	**+0.6**
KGCAE				*i* S		**Sn**	**22 30 46.8**	**-1.9**
KGCAE				IAML			22 31 22.4	
	comp=N,14nm,0.5s							
BROLN	**Tlhalogang**	**5.81**	**5**	*i* P		**Pn**	**22 29 43.5**	**+0.7**
BROLN				*i* S		**Sn**	**22 30 46.1**	**-3.2**
BROLN				IAML			22 31 16.4	
	comp=N,3.3nm,0.5s							
BRAK	**Brakfontein**	**5.91**	**214**	*e*P		**Pn**	**22 29 46.0**	**+1.9**
BRAK				*e*S		**Sn**	**22 30 50.7**	**-1.0**
BRAK				IAML			22 31 27.9	
	comp=Z,3.5nm,0.4s							
ROOI	**Rooidraai Farm**	**6.23**	**206**	*e*P		**Pn**	**22 29 50.5**	**+2.1**
ROOI				*e*S		**Sn**	**22 30 58.1**	**-1.3**
ROOI				IAML			22 31 30.6	
	comp=N,5.0nm,0.6s							
SOOWA	**Sowa**	**6.34**	**355**	*i* P		**Pn**	**22 29 50.1**	**+0.1**
GRHM	**Grahamstown, E**	**6.35**	**183**	*e*P		**Pn**	**22 29 51.3**	**+1.2**
GRHM				*e*S		**Sn**	**22 31 01.6**	**-0.9**
GRHM				IAML			22 31 46.1	
	comp=Z,2.7nm,0.7s							
GRAN	**Grantham**	**6.70**	**216**	*e*P		**Pn**	**22 29 56.4**	**+1.5**
GRAN				*e*S		**Sn**	**22 31 09.5**	**-1.5**
GRAN				IAML			22 31 49.2	
	comp=Z,2.5nm,0.4s							
FRAZ	**Fraserburg**	**6.84**	**222**	*e*P		**Pn**	**22 29 59.1**	**+2.2**
FRAZ				*e*S		**Sn**	**22 31 12.8**	**-1.9**
FRAZ				IAML			22 31 32.7	
	comp=N,1.9nm,0.3s							
MERW	**Merweville**	**7.33**	**217**	*e*P		**Pn**	**22 30 05.1**	**+1.6**
MERW				*e*S		**Sn**	**22 31 24.8**	**-1.8**
MERW				IAML			22 31 42.3	
	comp=Z,2.2nm,0.6s							

*IDC **13** 22:37:29.8±0.7, 37.°55N×117.°76W, h0km, mb3.7/7, mbtmp3.6/10, ML3.7/3, MS3.0/7, Error ellipse: s-maj=13.2km s-min=6.0km az=64.0*

*REN **13** 22:37:29.8±0.7, 37.°54N±0.°01×117.°74W±0.°01, h6km±3km, Error ellipse: s-maj=1.7km s-min=1.6km az=61.0*

*NEIC **13** 22:37:29.8±0.7, 37.°54N±0.°01×117.°764W±0.°009, h5km±1km, ML3.7/178, Mwr3.7/40, ML4.0/6(REN), Error ellipse: s-maj=2.7km s-min=2.1km az=206.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr-3.87; Mθθ-0.53; Mϕϕ4.40; Mrθ-0.96; Mθϕ2.67; Mϕr1.51; Fault plane solution: M₀5.25000×10¹⁴ NP1:φs48.51000°, δ45.03000°, λ-51.74000°. NP2:φs180.38000°, δ56.25000°, λ-121.80000°. Principal axes: T 5.6745, Plg6.0000°, Azm292.0000°; N -0.9764, Plg26.0000°, Azm199.0000°; P -4.6980, Plg63.0000°, Azm35.0000°;*

*NEIC **13** 22:37:29.9, 37.°54N×117.°75W, h7km*

ISC 13 22:37:29.8±1.1**, 37.°54N**±0.°02×**117.°74W**±0.°02**, h6**km±8km**, n87,σ0°70/61, mb3.8/6, MS3.1/4, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DSP	**Deep Springs**	**0.25**	**227**	Pg		**Pg**	**22 37 34.8**	**+0.2**
DSP				Sg		**Sg**	**22 37 38.5**	**+0.6**
DSP				IAML			22 37 38.9	
	comp=N,26μm,0.3s							
LCH	**Last Change Ra**	**0.32**	**166**			**Pg**	**22 37 36.0**	**0.0**
LCH						**Sg**	**22 37 40.5**	**+0.3**
GMN	**Gold Mountain**	**0.45**	**122**			**Pg**	**22 37 38.9**	**+0.3**
GMN				Sg		**Sg**	**22 37 44.7**	**+0.2**
GMN				IAML			22 37 46.0	
	comp=E,7μm,0.6s							
GMN				IAML			22 37 46.0	
	comp=N,8μm,0.7s							
GRAC	**Grapevine Rang**	**0.62**	**151**			**Pg**	**22 37 41.9**	**+0.2**
GRAC				Sg		**Sg**	**22 37 50.2**	**+0.3**
GRAC				IAML			22 37 51.7	
	comp=E,6μm,0.3s							
GRAC				IAML			22 37 57.8	
	comp=N,5μm,0.6s							
TIN	**Tinemaha, Big**	**0.62**	**219**			**Pg**	**22 37 41.8**	**0.0**
TIN				Sg		**Sg**	**22 37 50.3**	**+0.4**
TIN				IAML			22 37 55.7	
	comp=N,8μm,0.5s							
TIN				IAML			22 37 59.8	
	comp=E,6μm,0.7s							
SGV	**South Grapevin**	**0.80**	**134**			**Pg**	**22 37 45.1**	**0.0**
SGV						**Sg**	**22 37 55.9**	**+0.5**
LHV	**Little Huntoon**	**0.93**	**320**			**Pg**	**22 37 47.7**	**+0.1**
LHV				Sg		**Sg**	**22 37 59.3**	**-0.4**
NV11	**Mina Array Sit**	**0.95**	**340**			**Pg**	**22 37 47.8**	**-0.2**
NV11	**Mina Array Sit**	**0.95**	**340**	IAML			22 38 05.1	
	comp=E,3μm,0.9s							
NV11				IAML			22 38 06.3	
	comp=N,2μm,0.7s							
NV08	**Mina Array Sit**	**0.97**	**332**			**Pg**	**22 37 48.3**	**-0.2**
NVAR	**Mina Array Bea**	**0.99**	**334**	Pg		**Pg**	**22 37 48.3**	**-0.5**
	comp=N,998nm,0.3s,baz=155,slow=15,SNR=8316							
NVAR				Lg		Lg	22 38 02.2	
	comp=N,1μm,0.3s,baz=130,slow=40,SNR=9.1							
NVAR				LR		LR	22 38 10.4	
	comp=N,170nm,19.3s,baz=93,slow=44							
NV09	**Mina Array Sit**	**1.01**	**333**			**Pg**	**22 37 48.9**	**-0.2**
MDYM	**Dry Creek**	**1.01**	**277**			**Pg**	**22 37 49.1**	**-0.1**
MDPB	**Devils Postpil**	**1.06**	**275**			**Pg**	**22 37 49.7**	**-0.5**
MDPB				Sg		**Sg**	**22 38 03.5**	**-0.5**
MDPB				IAML			22 38 06.2	
	comp=N,1μm,0.6s							
MDPB				IAML			22 38 12.3	
	comp=E,1μm,0.7s							
CWC	**Cottonwood Cre**	**1.13**	**194**			**Pg**	**22 37 50.8**	**-0.7**
CWC				Sg		**Sg**	**22 38 05.5**	**-0.6**
WCT	**Wildcat Mounta**	**1.16**	**130**			**Pg**	**22 37 51.6**	**-0.5**
WCT				Sg		**Sg**	**22 38 07.6**	**-0.4**
KCC	**Kaiser Creek**	**1.27**	**261**			**Pg**	**22 37 53.3**	**-0.9**
KCC						**Sg**	**22 38 09.6**	**-1.1**
FURC	**Furnace Creek,**	**1.28**	**146**			**Pn**	**22 37 53.8**	**-0.4**
FURC				Sg		**Sb**	**22 38 11.5**	**+0.6**
TPNV	**Topopah Spring**	**1.33**	**116**			**Pn**	**22 37 54.9**	**-0.2**
TPNV						**Sn**	**22 38 13.7**	**+0.5**
Q09A	**Carvers**	**1.36**	**19**			**Pn**	**22 37 55.5**	**0.0**
Q09A						**Sn**	**22 38 14.1**	**+0.1**
SDH	**Striped Hills**	**1.44**	**128**			**Pn**	**22 37 56.6**	**+0.2**
NSP	**Numbskull Pass**	**1.47**	**123**			**Pn**	**22 37 56.8**	**-0.1**
JRC2	**Joshua Ridge**	**1.56**	**182**			**Pn**	**22 37 58.7**	**+0.6**
S11A	**Rachel**	**1.59**	**86**			**Pb**	**22 37 59.5**	**-0.1**
GWY	**Greenwater Val**	**1.60**	**147**			**Pn**	**22 37 58.5**	**-0.3**
GWY						**Sn**	**22 38 20.3**	**+0.5**
GWY				IAML			22 38 27.4	
	comp=E,1μm,0.7s							
GWY				IAML			22 38 28.9	
	comp=N,1μm,0.5s							
MCY	**Mercury**	**1.67**	**121**			**Pn**	**22 37 59.8**	**+0.1**
CLC	**China Lake**	**1.73**	**176**			**Pn**	**22 38 00.6**	**+0.3**
R11B	**Troy Canyon, C**	**1.89**	**64**			**Pn**	**22 38 02.0**	**-0.7**

ISA	**Isabella, Lake**	**1.96**	**198**			**Pn**	**22 38 03.6**	**0.0**
VES	**Vestal, Richgr**	**2.01**	**213**	IAML			22 38 35.7	
	comp=N,527nm,0.3s							
VES				IAML			22 38 39.3	
	comp=E,535nm,0.7s							
SHOC	**Shoshone, Teco**	**2.02**	**144**	IAML			22 38 41.1	
	comp=N,1μm,0.9s							
CCCA	**Chr Cany lake**	**2.04**	**171**	IAML			22 38 37.8	
	comp=E,655nm,0.8s							
CCCA				IAML			22 38 44.5	
	comp=N,566nm,0.5s							
PNTR	**Pine Nut**	**2.13**	**317**			**Pn**	**22 38 06.2**	**+0.2**
PNTR	**Pine Nut**	**2.13**	**317**	IAML			22 38 50.2	
	comp=N,773nm,0.7s							
PRN	**Pahroc Range**	**2.15**	**93**			**Pn**	**22 38 06.2**	**0.0**
CMB	**Columbia Colle**	**2.15**	**284**			**Pn**	**22 38 06.4**	**+0.2**
CMB	**Columbia Colle**	**2.15**	**284**	IAML			22 38 41.3	
	comp=N,379nm,0.7s							
SHPR	**Sheep Range**	**2.31**	**116**			**Pn**	**22 38 08.8**	**+0.3**
SHPR	**Sheep Range**	**2.31**	**116**	IAML			22 38 46.2	
	comp=N,280nm,0.8s							
SHPR				IAML			22 38 48.9	
	comp=E,290nm,0.6s							
GSC	**Goldstone, Bar**	**2.36**	**161**	IAML			22 38 47.0	
	comp=E,354nm,0.6s							
GSC				IAML			22 38 48.2	
	comp=N,328nm,1.2s							
MPK	**Martis Peak**	**2.51**	**315**	IAML			22 38 56.7	
	comp=E,450nm,0.7s							
MPK				IAML			22 38 57.2	
	comp=N,593nm,0.6s							
PAHR	**Pah Rah Range**	**2.52**	**330**			**Pn**	**22 38 12.5**	**+1.1**
PAHR	**Pah Rah Range**	**2.52**	**330**	IAML			22 38 50.4	
	comp=N,308nm,0.9s							
PAHR				IAML			22 38 53.3	
	comp=E,316nm,0.9s							
MTPC	**Mountain Pass**	**2.71**	**139**	IAML			22 39 01.3	
	comp=E,349nm,0.9s							
MTPC				IAML			22 39 01.7	
	comp=N,270nm,0.9s							
PKD	**Bear Valley Ra**	**2.75**	**236**	IAML			22 39 04.2	
	comp=N,349nm,0.8s							
PKD				IAML			22 39 06.5	
	comp=E,310nm,1.1s							
PMPB	**Monarch Peak**	**2.79**	**243**	IAML			22 39 04.4	
	comp=N,539nm,1.0s							
V12A	**Nelson**	**2.95**	**127**	IAML			22 39 03.4	
	comp=N,294nm,0.6s							
V12A				IAML			22 39 05.7	
	comp=E,280nm,0.6s							
MHC	**Mount Hamilton**	**3.11**	**268**	IAML			22 39 14.8	
	comp=N,386nm,0.6s							
MHC				IAML			22 39 17.2	
	comp=E,252nm,0.8s							
HULI	**Fort Hunter Li**	**3.19**	**243**	IAML			22 39 25.6	
	comp=E,272nm,1.4s							
ORV	**Oroville**	**3.57**	**305**			**Pn**	**22 38 26.6**	**+1.0**
JRSC	**Jasper Ridge**	**3.58**	**269**	IAML			22 39 41.0	
	comp=N,121nm,2.3s							
JRSC				IAML			22 39 56.1	
	comp=E,128nm,2.5s							
SUTB	**Sutter Butte**	**3.60**	**299**	IAML			22 39 35.8	
	comp=N,219nm,0.7s							
ELK	**Elko**	**3.75**	**31**	Pn		**Pn**	**22 38 29.2**	**+0.9**
	comp=N,3.4nm,0.3s,baz=216,slow=9.2,SNR=50							
ELK				Lg		Lg	22 39 27.7	
	comp=N,5.4nm,0.3s,baz=246,slow=19,SNR=3.5 comp=N,8.9nm,0.3s							
ELK	**Elko**	**3.75**	**31**			**Pn**	**22 38 28.6**	**+0.3**
ELK	**Elko**	**3.75**	**31**	IAML			22 39 30.7	
	comp=N,110nm,0.5s							
ELK				IAML			22 39 31.1	
	comp=N,77nm,0.5s							
CVS	**Carmenet Viney**	**3.81**	**284**	IAML			22 39 04.1	
	comp=N,87nm,2.2s							
CVS				IAML			22 39 44.7	
	comp=E,105nm,1.5s							
MNRC	**McLaughlin Min**	**3.94**	**291**	IAML			22 39 54.2	
	comp=N,94nm,1.2s							
MNRC				IAML			22 40 13.2	
	comp=E,91nm,2.1s							
W13A	**Hualapai Mount**	**3.96**	**127**	IAML			22 39 48.5	
	comp=E,113nm,0.8s							
IRM	**Iron Mountain**	**3.98**	**147**	IAML			22 39 44.4	
	comp=E,106nm,1.1s							
IRM				IAML			22 39 45.4	
	comp=N,65nm,1.4s							
PFO	**Pinyon Flats O**	**4.06**	**165**	Pn		**Pn**	**22 38 34.2**	**+1.7**
	comp=N,3.4nm,0.3s,baz=358,slow=15,SNR=18							
PFO				Lg		Lg	22 39 38.4	
	comp=N,1.3nm,0.3s,baz=71,slow=22,SNR=8.9							
PFO				LR		LR	22 40 15.4	
	comp=N,87nm,21.1s,baz=46,slow=41 comp=N,7.8nm,0.3s							
DNR	**Dunn Ranch,Anz**	**4.07**	**167**	IAML			22 39 52.8	
	comp=N,105nm,1.0s							
DNR				IAML			22 39 55.6	
	comp=E,121nm,1.1s							
O03E	**Payn

SONM	**Songino Array**	**86.33**	**332**	P	**P**	**22 50 13.5**	**+0.8**	
	comp=E,0.5nm,0.6s,baz=35,slow=3.6,SNR=4.6							
	comp=E,0.5nm,0.6s							
BVAR	**Borovoye Array**	**89.53**	**355**	P	**P**	**22 50 28.2**	**+0.4**	
	comp=E,0.4nm,0.5s,baz=12,slow=7.4,SNR=3.3							
	comp=E,0.4nm,0.5s							
KURBB	**Kurchatov Arra**	**91.05**	**350**	P	**P**	**22 50 35.1**	**+0.2**	
	comp=E,0.7nm,0.8s,baz=16,slow=4.9,SNR=5.4							
	comp=E,0.7nm,0.8s							
MKAR	**Makanchi Array**	**94.14**	**346**	P	**P**	**22 50 48.3**	**-1.0**	
	comp=E,0.3nm,0.7s,baz=32,slow=4.1,SNR=3.0							
	comp=E,0.3nm,0.7s							

IDC 13 22:46:38.7±1.8, 0.84N×126.03E, h0km, mb3.2/4, mbtmp3.2/4, MS3.0/1, Error ellipse: s-maj=177.5km s-min=23.9km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**14.11**	**339**	LR	LR	22 56 59.2	
	comp=Z,67nm,20.3s,baz=335,slow=44						
WRA	**Warramunga Arr**	**22.20**	**159**	P	P	22 51 36.4	-0.4
	0.4nm,0.4s,baz=337,slow=10,SNR=11						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**25.53**	**163**	P	P	22 52 09.7	+0.4
	0.3nm,0.6s,baz=350,slow=10,SNR=1.5						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**59.54**	**327**	P	P	22 56 44.0	0.0
	0.2nm,0.5s,baz=129,slow=7.0,SNR=2.3						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**63.80**	**328**	P	P	22 57 12.6	0.0
	0.2nm,0.4s,baz=123,slow=6.8,SNR=2.6						
	0.2nm,0.4s						

TEH 13 22:47:52.5, 34.53N×44.99E, h10km, ML2.5, Presumed earthquake
ISN 13 22:47:54.1±0.7, 34.56N×44.99E, h25km±17km, ML2.5, Presumed earthquake
ISC 13 22:47:53.8±1.1, 34.54N±0.06×44.99E±0.05, h10km, n6, σ0.93/10, Iraq

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLG1	**Gilan-e-Gharb**	**0.87**	**119**	Pg	**Pg**	**22 48 09.4**	**-1.2**
GLG1				Sg	**Sg**	**22 48 22.1**	**+0.1**
IKRK	**Kirkuk**	**1.01**	**328**	*e*Pg	**Pg**	**22 48 13.0**	**-0.3**
IKRK				*e*Sg	**Sg**	**22 48 26.0**	**-0.5**
IKRK				AML	AML	22 48 33.7	
	comp=E,247nm,0.4s						
IKRK				AML	AML	22 48 34.6	
	comp=N,105nm,0.4s						
IDHR	**Dehrash**	**1.16**	**82**	Pg	**Pg**	**22 48 15.2**	**-1.0**
BHD	**Baghdad**	**1.36**	**202**	*e*Pg	**Pn**	**22 48 19.0**	**+0.1**
BHD				*e*Sg	**Sn**	**22 48 37.0**	**0.0**
BHD				AML	AML	22 48 39.2	
	comp=E,184nm,0.6s						
IBDR	**Badra**	**1.63**	**151**	*e*Pn	**Pn**	**22 48 23.0**	**+0.5**
IBDR				*e*Sn	**Sn**	**22 48 45.0**	**+1.5**
IBDR				AML	AML	22 48 47.9	
	comp=N,35nm,0.4s						
IBDR				AML	AML	22 48 49.1	
	comp=E,43nm,0.5s						
KCHF	**Cheshme Sefid,**	**1.72**	**98**	Pg	**Pn**	**22 48 24.9**	**+0.9**

IDC 13 22:54:32.0±1.4, 60.08N×153.02W, h83km±19km, mb3.7/9, mbtmp4.1/14, MS2.4/2, Error ellipse: s-maj=20.0km s-min=9.6km az=112.0
NEIC 13 22:54:34.0±0.9, 60.02N±0.04×152.87W±0.07, h118km±2km, ML3.9/196, ML3.8(AEIC), Error ellipse: s-maj=5.4km s-min=5.0km az=120.0
ANF 13 22:54:34.7±0.1, 60.04N×152.86W, h107km±1km, ML4.0/92, Error ellipse: s-maj=1.2km s-min=0.9km az=7.0
AEIC 13 22:54:35.2±0.8, 60.01N±0.02×152.85W±0.07, h112km±4km, Error ellipse: s-maj=5.5km s-min=2.3km az=119.0
ISC 13 22:54:34.8±0.6, 60.02N±0.03×152.86W±0.02, h120km±5km, n466, σ1.36/530, mb4.2/10, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ILS	**Iliamna Low So**	**0.12**	**240**		**Pn**	**22 54 50.0**	**-1.4**
ILS					**Sn**	**22 55 02.6**	**-1.2**
ILSW	**Iliamna Southw**	**0.15**	**256**		**Pn**	**22 54 49.9**	**-1.5**
ILSW				Sn	**Sn**	**22 55 02.6**	**-1.3**
ILSW				IAML		22 55 03.6	
	comp=N,1μm,0.3s						
RED	**Redoubt Volcan**	**0.41**	**6**		**Pn**	**22 54 51.5**	**-0.8**
RED				Sn	**Sn**	**22 55 03.8**	**-1.7**
RED				IAML		22 55 04.3	
	comp=N,1μm,0.6s						
RED				IAML		22 55 04.4	
	comp=E,4μm,0.8s						
P19K	**Oil Pt**	**0.41**	**207**		**Pn**	**22 54 51.1**	**-1.1**
P19K				Sn	**Sn**	**22 55 03.7**	**-1.7**
P19K				IAML		22 55 05.5	
	comp=E,5μm,0.6s						
P19K	**Oil Pt**	**0.41**	**207**	P	**Pn**	**22 54 51.1**	**-1.1**
	baz=25,SNR=30						
P19K				S	**Sn**	**22 55 03.4**	**-2.1**
	baz=25						
RDSO	**Redoubt South**	**0.44**	**8**		**Pn**	**22 54 51.4**	**-1.2**
RDSO					**Sn**	**22 55 04.1**	**-1.9**
DFR	**Drift River**	**0.58**	**8**		**Pn**	**22 54 52.2**	**-1.1**
DFR					**Sn**	**22 55 05.9**	**-1.5**
RDT	**Redoubt**	**0.60**	**22**		**Pn**	**22 54 52.4**	**-1.1**
RDT					**Sn**	**22 55 05.7**	**-1.9**
AU22	**Augustine Moun**	**0.70**	**201**		**Sn**	**22 55 07.2**	**-1.3**
AUF	**Augustine Flow**	**0.70**	**206**		**Pn**	**22 54 52.9**	**-1.2**
AUF					**Sn**	**22 55 07.5**	**-1.2**
AUL	**Augustine Lava**	**0.70**	**205**		**Pn**	**22 54 53.1**	**-1.0**
AUL					**Sn**	**22 55 07.8**	**-0.9**
HOM	**Homer**	**0.71**	**120**		**Pn**	**22 54 53.9**	**-0.3**
HOM				Sn	**Sn**	**22 55 07.9**	**-0.9**
HOM	**Homer**	**0.71**	**120**	P	**Pn**	**22 54 53.6**	**-0.5**
	baz=303,SNR=31						
HOM				S	**Sn**	**22 55 07.9**	**-0.9**
	baz=303						
AUW	**Augustine West**	**0.72**	**206**		**Pn**	**22 54 53.3**	**-1.0**
AUW					**Sn**	**22 55 07.6**	**-1.3**
AUCH	**Augustine Cone**	**0.72**	**205**		**Pn**	**22 54 53.3**	**-1.1**
AUCH					**Sn**	**22 55 07.9**	**-1.2**
AUJK	**Augustine Jueg**	**0.72**	**203**		**Sn**	**22 55 07.7**	**-1.3**
AUI	**Augustine Isla**	**0.74**	**203**		**Sn**	**22 55 07.6**	**-1.7**
O19K	**Port Alsworth**	**0.75**	**284**		**Pn**	**22 54 53.5**	**-1.0**
O19K				Sn	**Sn**	**22 55 07.8**	**-1.5**
O19K				IAML		22 55 08.8	
	comp=N,4μm,0.5s						
O19K	**Port Alsworth**	**0.75**	**284**	P	**Pn**	**22 54 53.5**	**-1.0**
	baz=101,SNR=150						
O19K				S	**Sn**	**22 55 07.9**	**-1.5**
	baz=101						
CNPM	**China Poot**	**0.96**	**120**		**Pn**	**22 54 55.7**	**-0.7**
CNPM				Sn	**Sn**	**22 55 11.7**	**-1.1**
BRLK	**Bradley Lake**	**1.03**	**103**		**Pn**	**22 54 56.6**	**-0.4**
BRLK				Sn	**Sn**	**22 55 12.5**	**-1.4**
BRLK				IAML		22 55 14.4	
	comp=E,2μm,0.4s						
BRSE	**Bradley Lake S**	**1.10**	**104**		**Pn**	**22 54 57.1**	**-0.7**
BRSE					**Sn**	**22 55 13.9**	**-1.3**
BRSE	**Bradley Lake S**	**1.10**	**104**	P	**Pn**	**22 54 57.2**	**-0.6**
	baz=287,SNR=698						
BRSE				S	**Sn**	**22 55 13.4**	**-1.9**
	baz=287						
CAPN	**Captain Cook N**	**1.13**	**48**		**Pn**	**22 54 59.2**	**+1.1**
CAPN	**Captain Cook N**	**1.13**	**48**	P	**Pn**	**22 54 59.2**	**+1.1**
	baz=230,SNR=42						
CAPN				S	**Sn**	**22 55 16.4**	**+0.6**
	baz=230						
N19K	**Bonanza Creek**	**1.13**	**315**		**Pn**	**22 54 57.3**	**-0.8**
N19K					**Sn**	**22 55 14.5**	**-1.5**
N19K	**Bonanza Creek**	**1.13**	**315**	IAML		22 55 15.2	
	comp=E,2μm,0.7s						
N19K				IAML		22 55 15.8	
	comp=N,893nm,1.2s						
N19K	**Bonanza Creek**	**1.13**	**315**	P	**Pn**	**22 54 57.4**	**-0.8**
	baz=133,SNR=248						
N19K				S	**Sn**	**22 55 14.0**	**-2.1**
	baz=133						
Q19K	**Cape Douglas,**	**1.16**	**200**		**Pn**	**22 54 57.1**	**-1.3**
Q19K				Sn	**Sn**	**22 55 14.9**	**-1.5**
Q19K				IAML		22 55 17.7	
	comp=N,1μm,0.6s						
Q19K				IAML		22 55 22.1	
	comp=E,2μm,0.7s						
Q19K	**Cape Douglas,**	**1.16**	**200**	P	**Pn**	**22 54 57.2**	**-1.3**
	baz=19,SNR=67						
Q19K				S	**Sn**	**22 55 14.6**	**-1.8**
	baz=19						
O18K	**Koktuh Hills**	**1.19**	**263**		**Pn**	**22 54 57.8**	**-1.0**
O18K				IAML		22 55 15.9	
	comp=E,1μm,0.9s						
O18K	**Koktuh Hills**	**1.19**	**263**		**Sn**	**22 55 15.3**	**-1.7**
O18K	**Koktuh Hills**	**1.19**	**263**	P	**Pn**	**22 54 57.7**	**-1.0**
	baz=80,SNR=273						
O18K				S	**Sn**	**22 55 15.2**	**-1.7**
	baz=80						
N20K	**Mount Spurr**	**1.23**	**15**	P	**Pn**	**22 54 58.5**	**-0.7**
	baz=196						
N20K				S	**Sn**	**22 55 16.0**	**-1.8**
	baz=196						
SPCR	**Spurr Chakacha**	**1.23**	**15**		**Pn**	**22 54 58.6**	**-0.6**
SPCR					**Sn**	**22 55 17.0**	**-0.8**
SPCR	**Spurr Chakacha**	**1.23**	**15**	P	**Pn**	**22 54 58.6**	**-0.6**
	baz=196,SNR=244						
SPCR				S	**Sn**	**22 55 16.1**	**-1.7**
	baz=196						
SPU	**Mount Spurr**	**1.23**	**18**		**Pn**	**22 54 58.6**	**-0.6**
SPBG	**Spurr Blockage**	**1.27**	**11**		**Sn**	**22 55 17.9**	**-0.7**
SPCP	**Crater Peak Br**	**1.30**	**15**		**Pn**	**22 54 59.7**	**-0.4**
SPCP					**Sn**	**22 55 18.4**	**-0.9**
SPCG	**Spurr Capps Gl**	**1.34**	**18**		**Sn**	**22 55 18.6**	**-1.5**
P18K	**Big Mountain,**	**1.35**	**243**		**Pn**	**22 54 59.3**	**-1.3**
P18K				IAML		22 55 18.6	
	comp=E,593nm,1.1s						
P18K	**Big Mountain,**	**1.35**	**243**		**Sn**	**22 55 18.1**	**-2.0**
P18K	**Big Mountain,**	**1.35**	**243**	P	**Pn**	**22 54 59.3**	**-1.3**
	baz=60,SNR=29						
P18K				S	**Sn**	**22 55 17.9**	**-2.2**
	baz=60						
SLKM	**Skilak Lake**	**1.40**	**68**		**Pn**	**22 54 60.0**	**-1.1**
SLKM	**Skilak Lake**	**1.40**	**68**		**Sn**	**22 55 19.1**	**-2.0**
Q20K	**Shuyak Island**	**1.43**	**170**	P	**Pn**	**22 55 00.3**	**-1.1**
	baz=351,SNR=80						
Q20K				S	**Sn**	**22 55 19.9**	**-1.7**
	baz=351						
SYI	**Shuyak Island**	**1.43**	**170**		**Pn**	**22 55 00.3**	**-1.1**
SYI				IAML		22 55 20.8	
	comp=N,2μm,0.6s						
SYI				IAML		22 55 22.4	
	comp=E,2μm,0.6s						
SYI	**Shuyak Island**	**1.43**	**170**		**Sn**	**22 55 20.1**	**-1.4**
STLK	**Strandline Lak**	**1.57**	**18**		**Pn**	**22 55 02.6**	**-0.4**
STLK				IAML		22 55 27.1	
	comp=E,510nm,0.4s						
STLK				IAML		22 55 27.1	
	comp=N,646nm,0.5s						
O22K	**Cooper Landing**	**1.63**	**72**		**Pn**	**22 55 03.0**	**-0.7**
O22K	**Cooper Landing**	**1.63**	**72**	P	**Pn**	**22 55 03.0**	**-0.7**
	baz=256,SNR=142						
O22K				S	**Sn**	**22 55 23.8**	**-1.9**
	baz=256						
N18K	**Kilae Creek**	**1.65**	**295**		**Sn**	**22 55 24.1**	**-2.0**
N18K	**Kilae Creek**	**1.65**	**295**		**Pn**	**22 55 02.8**	**-1.1**
N18K				IAML		22 55 24.7	
	comp=N,549nm,0.8s						
N18K	**Kilae Creek**	**1.65**	**295**	P	**Pn**	**22 55 02.9**	**-0.9**
	baz=112,SNR=146						
N18K				S	**Sn**	**22 55 24.1**	**-2.0**
	baz=112						
SEW	**Seward**	**1.71**	**86**		**Pn**	**22 55 03.8**	**-0.8**
SEW				IAML		22 55 26.1	
	comp=N,838nm,0.6s						
SEW				IAML		22 55 28.8	
	comp=E,937nm,0.8s						
SEW	**Seward**	**1.71**	**86**	P	**Pn**	**22 55 03.8**	**-0.8**
	baz=270,SNR=106						
SEW				S	**Sn**	**22 55 25.5**	**-1.8**
	baz=270						
M20K	**Styx River**	**1.88**	**356**		**Pn**	**22 55 06.5**	**-0.2**
M20K	**Styx River**	**1.88**	**356**	P	**Pn**	**22 55 06.6**	**-0.1**
	baz=176						
RC01	**Rabbit Creek A**	**1.88**	**54**		**Pn**	**22 55 06.1**	**-0.6**
RC01	**Rabbit Creek A**	**1.88**	**54**	P	**Pn**	**22 55 06.0**	**-0.6**
	baz=237,SNR=56						
RC01				S	**Sn**	**22 55 29.8**	**-1.3**
	baz=237						
P17K	**Kvichak River**	**2.00**	**247**		**Pn**	**22 55 07.5**	**-0.6**
P17K	**Kvichak River**	**2.00**	**247**	IAML		22 55 33.1	
P17K	comp=E,561nm,1.0s			IAML		22 55 44.3	
	comp=N,605nm,1.2s						
P17K	**Kvichak River**	**2.00**	**247**	P	**Pn**	**22 55 07.6**	**-0.6**
	baz=63,SNR=44						
P17K				S	**Sn**	**22 55 32.6**	**-1.0**
	baz=63						
M19K	**Big River Lodg**	**2.04**	**339**		**Pn**	**22 55 08.1**	**-0.5**
M19K	**Big River Lodg**	**2.04**	**339**	P	**Pn**	**22 55 08.1**	**-0.5**
	baz=158						
M19K				S	**Sn**	**22 55 33.2**	**-1.3**
	baz=158						
KAKN	**Katmai Knife C**	**2.06**	**214**		**Pn**	**22 55 08.2**	**-0.9**
KAKN					**Sn**	**22 55 32.9**	**-2.4**
SKT	**Skwentna**	**2.07**	**18**		**Pn**	**22 55 08.5**	**-0.6**
SKT				IAML		22 55 38.3	
	comp=E,590nm,0.6s						
SKT				IAML		22 55 38.7	
	comp=N,517nm,0.5s						
SKT	**Skwentna**	**2.07**	**18**	P	**Pn**	**22 55 08.5**	**-0.6**
	baz=199,SNR=117						
SKT				S	**Sn**	**22 55 34.7**	**-0.7**
	baz=199						
M18K	**Stony River**	**2.07**	**317**		**Pn**	**22 55 08.3**	**-0.8**
M18K					**Sn**	**22 55 33.8**	**-1.6**
M18K	**Stony River**	**2.07**	**317**	P	**Pn**	**22 55 08.3**	**-0.8**
	baz=134						
M18K				S	**Sn**	**22 55 33.7**	**-1.6**
	baz=134						
O17K	**Koliganek Bris**	**2.15**	**265**		**Pn**	**22 55 09.2**	**-0.8**
O17K	**Koliganek Bris**	**2.15**	**265**	P	**Pn**	**22 55 09.2**	**-0.8**
	baz=81,SNR=51						
O17K				S	**Sn**	**22 55 33.5**	**-3.5**
	baz=81						
M22K	**Willow**	**2.20**	**36**	P	**Pn**	**22 55 10.2**	**-0.4**
	baz=219						
M22K				S	**Sn**	**22 55 37.5**	**-0.6**
	baz=219						
N17K	**Nushagak Hills**	**2.22**	**285**		**Pn**	**22 55 10.1**	**-0.8**
N17K					**Sn**	**22 55 35.2**	**-3.3**
N17K	**Nushagak Hills**	**2.22**	**285**	P	**Pn**	**22 55 10.1**	**-0.8**
	baz=101,SNR=76						
N17K				S	**Sn**	**22 55 34.6**	**-3.9**
	baz=101						
KDAK	**Kodiak Island**	**2.25**	**176**	P	**Pn**	**22 55 09.5**	**-1.8**
	comp=N,352nm,0.4s,baz=24,slow=7.1,SNR=1017						
KDAK				S	**Sn**	**22 55 36.1**	**-3.1**
	comp=N,278nm,0.3s,baz=188,slow=9.4,SNR=14						
KDAK				LR	LR	22 56 13.5	
	comp=N,54nm,21.7s,baz=268,slow=44						
KDAK	**Kodiak Island**	**2.25**	**176**		**Pn**	**22 55 09.2**	**-2.1**
KDAK				IAML		22 55 38.4	
	comp=N,693nm,0.5s						
KDAK				IAML		22 55 39.0	
	comp=N,673nm,0.3s						
KDAK	**Kodiak Island**	**2.25**	**176**	P	**Pn**	**22 55 09.4**	**-1.9**
	baz=356						
KDAK				S	**Sn**	**22 55 36.4**	**-2.8**
	baz=356						
Q16K	**King Salmon**	**2.36**	**237**	P	**Pn**	**22 55 12.6**	**-0.1**
	baz=53,SNR=18						
Q16K				S	**Sn**	**22 55 40.4**	**-1.4**
	baz=53						
L19K	**White Mountain**	**2.38**	**337**		**Pn**	**22 55 12.2**	**-0.7**
L19K				IAML		22 55 41.9	
	comp=N,235nm,0.9s						
L19K				IAML		22 55 43.2	
	comp=E,237nm,1.0s						
L19K	**White Mountain**	**2.38**	**337**	P	**Pn**	**22 55 12.3**	**-0.7**
	baz=155,SNR=338						
L19K				S	**Sn**	**22 55 40.4**	**-1.9**
	baz=155						
PMR	**Palmer**	**2.42**	**48**	P	**Pn**	**22 55 11.8**	**-1.6**
PMR	**Palmer**	**2.42**	**48**	S	**Sn**	**22 55 40.8**	**-2.2**
PMR	**Palmer**	**2.42**	**48**		**Pn**	**22 55 11.9**	**-1.4**
PMR	**Palmer**	**2.42**	**48**	IAML		22 55 41.5	
	comp=E,1μm,0.4s						
PMR				IAML		22 55 41.6	
	comp=N,801nm,0.3s						
PMR	**Palmer**	**2.42**	**48**	P	**Pn**	**22 55 11.9**	**-1.4**
	baz=231,SNR=22						
PMR				S	**Sn**	**22 55 39.8**	**-3.3**
	baz=231						
KNK	**Knik Glacier**	**2.58**	**55**		**Pn**	**22 55 14.9**	**-0.6**
KNK	**Knik Glacier**	**2.58**	**55**	P	**Pn**	**22 55 14.1**	**-1.4**
	baz=240,SNR=28						
KNK				S	**Sn**	**22 55 44.2**	**-2.6**
	baz=240						
GHO	**Glory Hole Cre**	**2.61**	**46**		**Pn**	**22 55 14.7**	**-1.3**
M17K	**Holitna River**	**2.64**	**304**		**Pn**	**22 55 15.5**	**-0.8**
M17K	**Holitna River**	**2.64**	**304**	IAML		22 56 03.9	
	comp=N,364nm,0.8s						
M17K	**Holitna River**	**2.64**	**304**	P	**Pn**	**22 55 15.6**	**-0.8**
	baz=119,SNR=41						
M17K				S	**Sn**	**22 55 45.2**	**-3.1**
	baz=119						
O16K	**Kokwok River B**	**2.68**	**263**		**Pn**	**22 55 16.3**	**-0.5**
O16K	**Kokwok River B**	**2.68**	**263**	P	**Pn**	**22 55 16.3**	**-0.5**
	baz=78,SNR=44						
CUT	**Chulitna**	**2.70**	**27**		**Pn**	**22 55 16.4**	**-0.7**
CUT	**Chulitna**	**2.70**	**27**	P	**Pn**	**22 55 16.5**	**-0.5**
	baz=209,SNR=23						
CUT				S	**Sn**	**22 55 48.3**	**-1.4**
	baz=209						
L22K	**Petersville**	**2.71**	**21**		**Pn**	**22 55 16.8**	**-0.5**
L22K	**Petersville**	**2.71**	**21**	IAML		22 55 51.8	
	comp=E,686nm,0.5s						
L22K				IAML		22 55 52.0	
	comp=N,455nm,0.6s						
P23K	**Montague Islan**	**2.74**	**88**		**Pn**	**22 55 17.1**	**-0.5**
P23K				IAML		22 55 50.8	
	comp=N,883nm,0.5s						
P23K				IAML		22 55 51.9	
	comp=E,607nm,0.3s						
P23K	**Montague Islan**	**2.74**	**88**	P	**Pn**	**22 55 17.2**	**-0.5**
	baz=273,SNR=81						
P23K				S	**Sn**	**22 55 49.2**	**-1.4**
	baz=273						
P16K	**Nushagak River**	**2.79**	**251**		**Pn**	**22 55 18.3**	**0.0**
P16K	**Nushagak River**	**2.79**	**251**	IAML		22 55 54.0	
	comp=E,286nm,0.9s						
P16K				IAML		22 56 06.9	
	comp=N,293nm,1.0s						
P16K	**Nushagak River**	**2.79**	**251**	P	**Pn**	**22 55 18.4**	**+0.1**
	baz=66,SNR=53						
P16K				S	**Sn**	**22 55 50.9**	**-0.9**
	baz=66						
OHAK	**Old Harbor**	**2.81**	**185**	P	**Pn**	**22 55 16.7**	**-1.8**
OHAK	**Old Harbor**	**2.81**	**185**	S	**Sn**	**22 55 48.6**	**-3.6**
OHAK	**Old Harbor**	**2.81**	**185**		**Pn**	**22 55 16.4**	**-2.2**
OHAK	**Old Harbor**	**2.81**	**185**	IAML		22 55 49.7	
	comp=N,318nm,0.8s						
OHAK				IAML		22 55 50.7	
	comp=E,285nm,0.6s						
OHAK	**Old Harbor**	**2.81**	**185**	P	**Pn**	**22 55 16.4**	**-2.2**
	baz=4.3,SNR=71						
OHAK				S	**Sn**	**22 55 48.2**	**-4.0**
	baz=4.3						
SML	**Sawmill**	**2.85**	**49**		**Pn**	**22 55 17.7**	**-1.4**
SML				IAML		22 55 57.9	
	comp=N,771nm,0.6s						
SML				IAML		22 56 01.3	
	comp=E,744nm,0.7s						
SML	**Sawmill**	**2.85**	**49**	P	**Pn**	**22 55 17.6**	**-1.4**
	baz=233,SNR=35						
SML				S	**Sn**	**22 55 49.6**	**-3.5**
	baz=233						
L18K	**Granite Mounta**	**2.89**	**322**		**Pn**	**22 55 18.9**	**-0.6**
L18K	**Granite Mounta**	**2.89**	**322**	P	**Pn**	**22 55 18.8**	**-0.6**
	baz=138,SNR=40						
PPLA	**Purkeypile**	**2.91**	**6**		**Pn**	**22 55 20.0**	**+0.1**
PPLA	**Purkeypile**	**2.91**	**6**	P	**Pn**	**22 55 20.1**	**+0.2**
	baz=187,SNR=131						
PPLA				S	**Sn**	**22 55 53.8**	**-0.8**
	baz=187						
PLK3	**Peulik 3**	**2.93**	**219**		**Pn**	**22 55 19.9**	**-0.3**
N16K	**Nishlik Lake**	**2.98**	**281**		**Pn**	**22 55 20.4**	**-0.3**
N16K	**Nishlik Lake**	**2.98**	**281**	P	**Pn**	**22 55 20.5**	**-0.3**
	baz=96,SNR=54						
N16K				S	**Sn**	**22 55 53.1**	**-3.1**
	baz=96						
GLI	**Glacier Island**	**2.98**	**71**		**Pn**	**22 55 18.4**	**-2.3**
GLI	**Glacier Island**	**2.98**	**71**	IAML		22 55 54.4	
	comp=N,455nm,0.6s						
GLI	**Glacier Island**	**2.98**	**71**	P	**Pn**	**22 55 20.0**	**-0.8**
	baz=256						
GLI				S	**Sn**	**22 55 52.8**	**-3.5**
	baz=256						
PLK4	**Peulik 4**	**3.00**	**219**		**Pn**	**22 55 20.7**	**-0.4**
PLK4	**Peulik 4**	**3.00**	**219**	IAML		22 55 58.7	
	comp=E,184nm,0.5s						
PLK4				IAML		22 56 02.6	
	comp=N,297nm,0.9s						
R17L	**Mt. Peulik Vol**	**3.01**	**219**	P	**Pn**	**22 55 20.7**	**-0.4**
	baz=35						
R17L				S	**Sn**	**22 55 56.0**	**-0.8**
	baz=35						
M23K	**Glacier View**	**3.08**	**52**	P	**Pn**	**22 55 20.6**	**-1.4**
	baz=237,SNR=46						
M23K				S	**Sn**	**22 55 55.4**	**-3.1**
	baz=237						
PLBL	**Peulik Blue Cr**	**3.10**	**223**		**Pn**	**22 55 22.3**	**0.0**
M16K	**Timber Creek**	**3.18**	**291**		**Pn**	**22 55 22.9**	**-0.5**
M16K	**Timber Creek**	**3.18**	**291**	P	**Pn**	**22 55 22.9**	**-0.5**
	baz=105,SNR=14						
HIN	**Hinchinbrook I**	**3.20**	**80**		**Pn**	**22 55 21.7**	**-1.9**
HIN	**Hinchinbrook I**	**3.20**	**80**	IAML		22 56 00.9	
	comp=N,462nm,0.9s						
HIN				IAML		22 56 02.9	
	comp=E,594nm,0.7s						
SCM	**Sheep Creek Mo**	**3.26**	**54**	P	**Pn**	**22 55 23.2**	**-1.2**
	baz=239,SNR=36						
SCM				S	**Sn**	**22 55 60.0**	**-2.8**
	baz=239						
Q23K	**Middleton Isla**	**3.35**	**97**	P	**Pn**	**22 55 24.8**	**-0.8**
	baz=283						
MID	**Middleton Isla**	**3.35**	**97**		**Pn**	**22 55 25.3**	**-0.3**
MID				IAML		22 56 06.8	
	comp=N,178nm,0.5s						
MID				IAML		22 56 30.7	
	comp=E,207nm,1.1s						
L17K	**Donlin**	**3.39**	**311**		**Pn**	**22 55 25.2**	**-0.9**
L17K	**Donlin**	**3.39**	**311**	P	**Pn**	**22 55 25.2**	**-0.9**
	baz=126,SNR=34						
L17K				S	**Sn**	**22 56 02.9**	**-2.9**
	baz=126						
K20K	**Telida**	**3.40**	**351**		**Pn**	**22 55 26.1**	**-0.2**
K20K	**Telida**	**3.40**	**351**	P	**Pn**	**22 55 26.2**	**0.0**
	baz=170,SNR=204						
K20K				S	**Sn**	**22 56 04.1**	**-2.0**
	baz=170						
R16K	**Pilot Point**	**3.47**	**227**	Pn	**Pn**	**22 55 26.8**	**-0.4**
R16K				IAML		22 56 09.9	
	comp=N,224nm,0.7s						
R16K				IAML		22 56 24.6	
	comp=E,205nm,0.9s						
R16K	**Pilot Point**	**3.47**	**227**	P	**Pn**	**22 55 27.1**	**0.0**
	baz=42						
WAT1	**Susitna Watana**	**3.50**	**34**	P	**Pn**	**22 55 26.9**	**-0.7**
	baz=218		

N15K	**Kwethluk River**	3.63	276	P		Pn	22 55 29.6	+0.4		
	baz=89,SNR=59									
O15K	**Ungalikthiuk R**	3.64	260			Pn	22 55 29.8	+0.4		
O15K	**Ungalikthiuk R**	3.64	260	P		Pn	22 55 29.8	+0.4		
	baz=73,SNR=69									
L16K	**Owhat River**	3.65	301			Pn	22 55 28.6	-1.0		
L16K	**Owhat River**	3.65	301	P		Pn	22 55 28.8	-0.7		
	baz=114,SNR=13									
TRF	**Thorofare Moun**	3.66	18	IAML			22 56 12.7			
	comp=E,223nm,0.6s									
TRF				IAML			22 56 13.9			
	comp=N,260nm,0.4s									
TRF	**Thorofare Moun**	3.66	18	P		Pn	22 55 29.0	-0.8		
	baz=201,SNR=154									
KTH	**Kantishna Hill**	3.67	14			Pn	22 55 29.1	-0.8		
KTH				IAML			22 56 13.7			
	comp=N,241nm,0.8s									
KTH				IAML			22 56 13.8			
	comp=E,180nm,0.9s									
DIV	**Divide**	3.67	69			Pn	22 55 29.7	-0.2		
DIV				IAML			22 56 12.0			
	comp=E,181nm,0.6s									
DIV				IAML			22 56 12.7			
	comp=N,383nm,0.3s									
KLU	**Klutina**	3.71	64			Pn	22 55 29.1	-1.4		
KLU	**Klutina**	3.71	64	P		Pn	22 55 29.0	-1.5		
	baz=250,SNR=36									
KLU				S		Sn	22 56 10.0	-3.5		
	baz=250									
K17K	**Iditarod**	3.77	318			Pn	22 55 30.6	-0.5		
K17K	**Iditarod**	3.77	318	IAML			22 56 15.9			
	comp=N,139nm,1.1s									
K17K				IAML			22 56 16.3			
	comp=E,155nm,1.1s									
K17K	**Iditarod**	3.77	318	P		Pn	22 55 30.5	-0.5		
	baz=133,SNR=29									
K17K				S		Sn	22 56 12.0	-2.7		
	baz=133									
M24K	**Tolsona, Glenn**	3.87	54			Pn	22 55 31.5	-0.9		
M24K	**Tolsona, Glenn**	3.87	54	P		Pn	22 55 31.6	-0.8		
	baz=240,SNR=49									
M24K				S		Sn	22 56 15.8	-1.4		
	baz=240									
CHUM	**Lake Minchumin**	3.89	4			Pn	22 55 32.2	-0.5		
CHUM	**Lake Minchumin**	3.89	4	P		Pn	22 55 32.2	-0.5		
	baz=184,SNR=59									
RND	**Reindeer**	3.90	28	IAML			22 56 16.8			
	comp=E,167nm,0.4s									
RND				IAML			22 56 19.5			
	comp=N,143nm,0.4s									
J18K	**Innoko River**	3.92	334			Pn	22 55 32.5	-0.6		
J18K	**Innoko River**	3.92	334	P		Pn	22 55 32.5	-0.6		
	baz=150									
J18K				S		Sn	22 56 15.7	-2.6		
	baz=150									
M15K	**Kasigluk River**	3.95	283			Pn	22 55 33.2	-0.3		
M15K	**Kasigluk River**	3.95	283	P		Pn	22 55 32.5	-1.0		
	baz=96,SNR=13									
DHY	**Denali Highway**	4.04	38	P		Pn	22 55 33.9	-0.9		
	baz=223,SNR=103									
DHY				S		Sn	22 56 19.1	-2.3		
	baz=223									
MCK	**McKinley**	4.17	25	IAML			22 56 25.4			
	comp=N,146nm,0.4s									
MCK				IAML			22 56 26.4			
	comp=E,141nm,0.4s									
MCK	**McKinley**	4.17	25	P		Pn	22 55 36.0	-0.4		
	baz=208,SNR=160									
MCK				S		Sn	22 56 21.9	-2.4		
	baz=208									
BPAW	**Bear Paw Mtn.**	4.19	11			Pn	22 55 35.4	-1.4		
BPAW				IAML			22 56 23.1			
	comp=N,80nm,0.6s									
BPAW				IAML			22 56 59.2			
	comp=E,71nm,0.7s									
BPAW	**Bear Paw Mtn.**	4.19	11	P		Pn	22 55 35.7	-1.0		
	baz=193,SNR=34									
BMRM	**Bremner River**	4.19	73			Pn	22 55 35.2	-1.6		
BMRM				IAML			22 56 29.9			
	comp=N,207nm,0.5s									
BMRM				IAML			22 56 34.2			
	comp=E,170nm,0.4s									
BMRM	**Bremner River**	4.19	73	P		Pn	22 55 36.2	-0.6		
	baz=261,SNR=75									
BMRM				S		Sn	22 56 21.6	-3.4		
	baz=261									
J19K	**Poorman**	4.20	343	P		Pn	22 55 36.4	-0.4		
	baz=161,SNR=113									
J20K	**Nowinta River**	4.22	352			Pn	22 55 37.0	-0.1		
J20K	**Nowinta River**	4.22	352	P		Pn	22 55 37.0	-0.1		
	baz=171									
KAIM	**Kayak Island**	4.24	88			Pn	22 55 36.9	-0.5		
KAIM				IAML			22 56 26.4			
	comp=E,176nm,0.7s									
KAIM				IAML			22 56 32.7			
	comp=N,201nm,0.5s									
KAIM	**Kayak Island**	4.24	88	P		Pn	22 55 37.1	-0.3		
	baz=275,SNR=12									
KAIM				S		Sn	22 56 24.7	-1.4		
	baz=275									
O14K	**Tigyukauivet M**	4.33	263			Pn	22 55 39.1	+0.4		
O14K	**Tigyukauivet M**	4.33	263	P		Pn	22 55 39.0	+0.4		
	baz=76,SNR=22									
N25K	**Chitina, Valde**	4.35	65	IAML			22 56 28.2			
	comp=E,248nm,0.6s									
N25K				IAML			22 56 29.2			
	comp=N,243nm,0.5s									
N25K	**Chitina, Valde**	4.35	65	P		Pn	22 55 37.8	-1.1		
	baz=252,SNR=37									
N25K				S		Sn	22 56 25.4	-3.4		
	baz=252									
N14K	**Kuskokwak Cree**	4.44	273			Pn	22 55 40.4	+0.4		
N14K	**Kuskokwak Cree**	4.44	273	IAML			22 57 03.9			
	comp=E,60nm,1.2s									
N14K	**Kuskokwak Cree**	4.44	273	P		Pn	22 55 40.5	+0.4		
	baz=85,SNR=31									
L15K	**Ungalak Mounta**	4.54	295			Pn	22 55 40.8	-0.6		
L15K	**Ungalak Mounta**	4.54	295	P		Pn	22 55 41.0	-0.4		
	baz=107									
SUCK	**Suckling Hills**	4.55	85			Pn	22 55 41.2	-0.4		
SUCK	**Suckling Hills**	4.55	85	IAML			22 56 33.1			
	comp=E,67nm,0.4s									
SUCK				IAML			22 56 34.7			
	comp=N,119nm,0.5s									
M14K	**Bethel**	4.58	283	P		Pn	22 55 42.1	+0.2		
	baz=95,SNR=19									
BERG	**Berg Lake**	4.58	81			Pn	22 55 41.0	-1.1		
WACK	**Wrangell Chich**	4.60	61			Pn	22 55 40.9	-1.5		
PAX	**Paxson**	4.62	47	IAML			22 56 34.8			
	comp=E,191nm,0.5s									
PAX	**Paxson**	4.62	47	P		Pn	22 55 41.8	-0.7		
	baz=234,SNR=52									
PAX				S		Sn	22 56 31.7	-3.5		
	baz=234									
GLB	**Gilahina Butte**	4.67	68	IAML			22 56 36.2			
	comp=N,196nm,0.8s									
GLB				IAML			22 56 36.6			
	comp=E,168nm,0.7s									
CHGN	**Chignik**	4.75	221			Pn	22 55 43.4	-0.8		
CHGN	**Chignik**	4.75	221	IAML			22 56 38.7			
	comp=N,113nm,0.5s									
CHGN				IAML			22 56 39.9			
	comp=E,102nm,0.4s									
CHGN	**Chignik**	4.75	221	P		Pn	22 55 43.5	-0.6		
	baz=36,SNR=6.0									
K15K	**Wolf Creek Mou**	4.78	302			Pn	22 55 44.3	-0.3		
K15K	**Wolf Creek Mou**	4.78	302	P		Pn	22 55 44.3	-0.3		
	baz=114									
VRDI	**Verde Repeater**	4.79	71			Pn	22 55 43.4	-1.5		
VRDI	**Verde Repeater**	4.79	71	IAML			22 56 40.6			
	comp=E,71nm,0.5s									
BGLC	**Bering Glacier**	4.80	85	P		Pn	22 55 44.5	-0.3		
	baz=273									
BGLC				S		Sn	22 56 37.8	-1.5		
	baz=273									
CRQM	**Cirque**	4.88	77	IAML			22 56 39.2			
	comp=E,164nm,0.7s									
CRQM				IAML			22 56 41.2			
	comp=N,168nm,0.4s									
CRQE	**Cirque**	4.90	77	P		Pn	22 55 45.6	-0.8		
	baz=266,SNR=38									
CRQE				S		Sn	22 56 37.8	-4.3		
	baz=266									
NEA2	**Nenana**	4.92	19	IAML			22 56 41.2			
	comp=N,42nm,1.1s									
NEA2				IAML			22 56 43.4			
	comp=E,45nm,0.6s									
NEA2	**Nenana**	4.92	19	P		Pn	22 55 45.4	-1.1		
	baz=203,SNR=258									
J16K	**Anvik River**	4.94	315			Pn	22 55 45.8	-0.9		
J16K	**Anvik River**	4.94	315	IAML			22 57 11.4			
	comp=E,36nm,1.0s									
J16K	**Anvik River**	4.94	315	P		Pn	22 55 46.0	-0.6		
	baz=128,SNR=14									
WRH	**Wood River Hil**	4.99	24	IAML			22 56 42.7			
	comp=E,79nm,0.4s									
WRH				IAML			22 56 43.0			
	comp=N,98nm,0.6s									
L14K	**Kuka Creek**	5.01	290			Pn	22 55 48.0	+0.3		
L14K	**Kuka Creek**	5.01	290	IAML			22 57 18.7			
	comp=E,35nm,1.0s									
L14K	**Kuka Creek**	5.01	290	P		Pn	22 55 48.2	+0.6		
	baz=101,SNR=19									
MCARA	**McCarthy VSAT**	5.02	70			Pn	22 55 46.9	-1.0		
MCARA	**McCarthy VSAT**	5.02	70	P		Pn	22 55 47.8	-0.1		
	baz=259,SNR=16									
MCARA				S		Sn	22 56 42.7	-2.1		
	baz=259									
TGL	**Tana Glacier**	5.03	77			Pn	22 55 47.5	-0.6		
TGL	**Tana Glacier**	5.03	77	IAML			22 56 45.6			
	comp=E,119nm,0.4s									
TGL				IAML			22 56 48.2			
	comp=N,103nm,0.7s									
K24K	**Donnelly Dome**	5.06	38			Pn	22 55 48.7	+0.3		
K24K	**Donnelly Dome**	5.06	38	P		Pn	22 55 49.0	+0.6		
	baz=225,SNR=68									
K24K				S		Sn	22 56 44.8	-0.9		
	baz=225									
VNHG	**Veniaminof 1**	5.07	224			Pn	22 55 48.9	+0.3		
GCSA	**Galena City Sc**	5.10	340			Pn	22 55 48.5	-0.3		
GCSA	**Galena City Sc**	5.10	340	P		Pn	22 55 48.4	-0.5		
	baz=157,SNR=5.5									
MLY	**Manley**	5.13	10	P		Pn	22 55 48.1	-1.2		
	baz=192,SNR=111									
BARK	**Barkley Ridge**	5.19	81			Pn	22 55 49.4	-0.8		
I21K	**Tanana**	5.20	4			Pn	22 55 49.0	-1.2		
I21K	**Tanana**	5.20	4	IAML			22 57 36.3			
	comp=E,38nm,1.2s									
I21K	**Tanana**	5.20	4	P		Pn	22 55 49.7	-0.5		
	baz=185									
CYK	**Cape Yakataga**	5.20	85			Pn	22 55 50.0	-0.3		
HDA	**Harding Lake**	5.20	30	P		Pn	22 55 49.3	-1.0		
	baz=215,SNR=50									
HDA				S		Sn	22 56 45.7	-3.4		
	baz=215									
CCB	**Clear Creek Bu**	5.21	25	IAML			22 56 48.1			
	comp=N,79nm,0.6s									
CCB				IAML			22 56 49.5			
	comp=E,97nm,0.6s									
M13K	**Dall Lake**	5.25	279			Pn	22 55 51.5	+0.6		
M13K	**Dall Lake**	5.25	279	P		Pn	22 55 51.9	+1.1		
	baz=90,SNR=12									
VNKR	**Veniaminof 5**	5.29	224			Pn	22 55 50.9	-0.6		
RIDG	**Independent Ri**	5.32	42	P		Pn	22 55 51.4	-0.5		
	baz=229,SNR=52									
RIDG				S		Sn	22 56 48.8	-3.2		
	baz=229									
M26K	**Nabesna, AK**	5.33	59			Pn	22 55 52.2	+0.1		
M26K	**Nabesna, AK**	5.33	59	IAML			22 56 54.1			
	comp=E,102nm,0.6s									
M26K	**Nabesna, AK**	5.33	59	P		Pn	22 55 52.5	+0.4		
	baz=248,SNR=24									
M26K				S		Sn	22 56 49.4	-2.9		
	baz=248									
I17K	**Unalakleet**	5.36	320	P		Pn	22 55 51.9	-0.5		
	baz=133,SNR=6.5									
I23K	**Mio, Yukon-K**	5.40	16	IAML			22 57 09.0			
	comp=E,29nm,0.8s									
I23K				IAML			22 57 27.2			
	comp=N,44nm,0.7s									
I23K	**Minto, Yukon-K**	5.40	16	P		Pn	22 55 52.2	-0.6		
	baz=199,SNR=309									
COLA	**College**	5.40	23	P		Pn	22 55 52.3	-0.6		
COLA	**College**	5.40	23	P		Pn	22 55 52.0	-0.9		
	baz=208									
COLA				S		Sn	22 56 50.3	-3.5		
	baz=208									
L26K	**Log Cabin Wild**	5.46	52	P		Pn	22 55 53.5	-0.3		
	baz=241,SNR=5.8									
MESA	**MESA**	5.46	84	P		Pn	22 55 53.9	-0.1		
	baz=273,SNR=31									
MESA				S		Sn	22 56 52.5	-3.2		
	baz=273									
ILAR	**Eielson Array**	5.52	28	P		Pn	22 55 52.9	-1.6		
	comp=N,40nm,0.4s,baz=215,slow=14,SNR=576									
ILAR				S		Sn	22 56 52.1	-4.6		
	comp=N,26nm,0.4s,baz=216,slow=22,SNR=11									
H20K	**Anotleneega Mo**	5.57	351			Pn	22 55 55.0	-0.3		
H20K	**Anotleneega Mo**	5.57	351	P		Pn	22 55 54.8	-0.5		
	baz=170,SNR=111									
H21K	**Melozitna Rive**	5.66	0			Pn	22 55 55.5	-1.0		
H21K	**Melozitna Rive**	5.66	0	P		Pn	22 55 55.4	-1.0		
	baz=180,SNR=70									
POKR	**Poker Plat Res**	5.70	24	P		Pn	22 55 55.8	-1.1		
	baz=209									
POKR				S		Sn	22 56 58.4	-2.6		
	baz=209									
H18K	**Honhosa River**	5.75	336			Pn	22 55 56.9	-0.7		
H18K	**Honhosa River**	5.75	336	P		Pn	22 55 56.4	-1.2		
	baz=151									
SCRK	**Sand Creek**	5.76	43	P		Pn	22 55 56.5	-1.4		
	baz=231,SNR=23									
H19K	**Roundabout Mou**	5.77	345			Pn	22 55 57.4	-0.5		
H19K	**Roundabout Mou**	5.77	345	P		Pn	22 55 57.4	-0.5		
	baz=162,SNR=19									
CTG	**Chitna Glacier**	5.77	76	P		Pn	22 55 58.2	0.0		
	baz=266,SNR=70									
J25K	**Salcha River,**	5.78	34			Pn	22 55 57.4	-0.8		
J25K	**Salcha River,**	5.78	34	P		Pn	22 55 57.1	-1.1		
	baz=221,SNR=68									
J25K				S		Sn	22 56 58.3	-4.8		
	baz=221									
M27K	**Edge Creek, AK**	5.81	61			Pn	22 55 58.1	-0.5		
M27K	**Edge Creek, AK**	5.81	61	P		Pn	22 55 59.0	+0.5		
	baz=251,SNR=9.9									
J14K	**Nanvanak Lak**	5.82	303	P		Pn	22 55 59.0	+0.4		
	baz=113,SNR=6.0									
H17K	**Granite Mounta**	5.92	330			Pn	22 55 59.6	-0.3		
H17K	**Granite Mounta**	5.92	330	P		Pn	22 55 58.9	-1.0		
	baz=143									
H17K				S		Sn	22 57 04.0	-2.4		
	baz=143									
H22K	**Ishtalitna Cre**	5.94	6	P		Pn	22 55 59.3	-0.9		
	baz=187,SNR=62									
K13K	**Kusilvak Mount**	6.05	294	P		Pn	22 56 02.9	+1.1		
	baz=103,SNR=8.2									
L27K	**Beaver Creek,**	6.09	55			Pn	22 56 01.1	-1.2		
L27K	**Beaver Creek,**	6.09	55	P		Pn	22 56 01.9	-0.5		
	baz=245									
YUK2	**White River**	6.13	68			Pn	22 56 02.0	-0.8		
SDPT	**Sand Point**	6.21	224	P		Pn	22 56 01.8	-2.1		
SDPT	**Sand Point**	6.21	224	S		Sn	22 57 10.1	-3.4		
SDPT	**Sand Point**	6.21	224			Pn	22 56 02.5	-1.4		
H24K	**Noodor Dome**	6.27	19			Pn	22 56 03.7	-0.9		
H24K	**Noodor Dome**	6.27	19	P		Pn	22 56 03.5	-1.2		
	baz=204,SNR=36									
BVCY	**Beaver Creek**	6.27	62			Pn	22 56 05.0	+0.2		
BVCY	**Beaver Creek**	6.27	62	P		Pn	22 56 04.5	-0.3		
	baz=253,SNR=7.0									
YUK3	**Moose Creek**	6.30	68			Pn	22 56 04.8	-0.5		
YUK3	**Moose Creek**	6.30	68	P		Pn	22 56 05.3	-0.1		
	baz=260,SNR=20									
YUK3				S		Sn	22 57 12.7	-3.3		
	baz=260									
PINM	**Pinnacle**	6.32	84	P		Pn	22 56 05.3	-0.1		
	baz=275,SNR=22									
PINM				S		Sn	22 57 12.4	-3.8		
	baz=275									
O28M	**Mount Upton**	6.33	78			Pn	22 56 06.1	+0.4		
O28M	**Mount Upton**	6.33	78	P		Pn	22 56 05.8	+0.1		
	baz=269,SNR=139									
O28M				S		Sn	22 57 13.7	-3.0		
	baz=269									
H16K	**Elim**	6.37	321	P		Pn	22 56 05.5	-0.4		
	baz=132									
G19K	**Purcell Mounta**	6.44	344			Pn	22 56 06.3	-0.6		
G19K	**Purcell Mounta**	6.44	344	P		Pn	22 56 06.4	-0.6		
	baz=161									
G18K	**Tagagawik**	6.46	338			Pn	22 56 06.6	-0.6		
G18K	**Tagagawik**	6.46	338	P		Pn	22 56 06.6	-0.6		
	baz=153,SNR=8.4									
PRP	**Porcupine Dome**	6.46	28	P		Pn	22 56 06.2	-1.2		
	baz=215,SNR=50									
PRP				S		Sn	22 57 16.4	-3.3		
	baz=215									
G21K	**Allakaket**	6.53	358			Pn	22 56 07.7	-0.5		
G21K	**Allakaket**	6.53	358	P		Pn	22 56 07.5	-0.7		
	baz=177									
G17K	**Kiwalik Mounta**	6.56	330	P		Pn	22 56 08.6	0.0		
	baz=143									
YUK8	**Steele Glacier**	6.56	73	P		Pn	22 56 09.1	+0.2		
	baz=265,SNR=50									
M11K	**Mekoryuk**	6.66	279	P		Pn	22 56 09.9	0.0		
	baz=87									
YKU2	**Yakutat**	6.68	89	P		Pn	22 56 10.1	-0.1		
PS4A	**Pavlof South-4**	6.72	230			Pn	22 56 10.7	-0.1		
G23K	**Bananza Creek**	6.84	10			Pn	22 56 11.3	-1.0		
G23K	**Bananza Creek**	6.84	10	P		Pn	22 56 11.8	-0.6		
	baz=192,SNR=127									
I26K	**Coal Creek Min**	6.93	36			Pn	22 56 12.0	-1.6		
I26K	**Coal Creek Min**	6.93	36	P		Pn	22 56 11.9	-1.6		
	baz=225									
G16K	**Koyuk River**	6.93	325	P		Pn	22 56 13.0	-0.6		
	baz=137									
G22K	**Bettles**	6.96	4	P		Pn	22 56 13.4	-0.6		
	baz=186									
DT1	**Dutton Round H**	7.06	230			Pn	22 56 14.7	-0.7		
YUK4	**Talbot Arm**	7.11	73	P		Pn	22 56 16.5	+0.4		
	baz=265,SNR=6.4									
G24K	**Hadweenzic Riv**	7.13	18			Pn	22 56 14.8	-1.4		
G24K	**Hadweenzic Riv**	7.13	18	P		Pn	22 56 14.8	-1.4		
	baz=202,SNR=15									
O29M	**Mount Kennedy**	7.13	82			Pn	22 56 16.0	-0.5		
O29M	**Mount Kennedy**	7.13	82	P		Pn	22 56 16.4	-0.1		
	baz=274,SNR=15									
F20K	**Avaraart Lake**	7.17	351			Pn	22 56 16.6	-0.2		
F20K	**Avaraart Lake**	7.17	351	P		Pn	22 56 16.3	-0.5		
	baz=168,SNR=88									
G15K	**Niukluk**	7.18	319			Pn	22 56 16.5	-0.5		
G15K	**Niukluk**	7.18	319	P		Pn	22 56 16.7	-0.3		
	baz=129									
F19K	**Shaleruckik Mo**	7.19	344			Pn	22 56 16.8	-0.2		
F19K	**Shaleruckik Mo**	7.19	344	P		Pn	22 56 16.9	-0.1		
	baz=160									
YUK6	**Outpost Mounta**	7.22	76			Pn	22 56 17.3	-0.5		
YUK6	**Outpost Mounta**	7.22	76	P		Pn	22 56 17.8	0.0		
	baz=269,SNR=9.6									
F21K	**Alatna River**	7.24	358			Pn	22 56 17.6	-0.2		
F21K	**Alatna River**	7.24	358	P		Pn	22 56 18.0	+0.2		
	baz=178,SNR=20									
F18K	**Selawik**	7.28	338			Pn	22 56 17.9	-0.3		
F18K	**Selawik**	7.28	338	P		Pn	22 56 18.5	+0.3		
	baz=152,SNR=7.0									
COLD	**Coldfoot**	7.33	8	P		Pn	22 56 18.6	-0.4		
	baz=191,SNR=40									
YUK7	**Dusty Glacier**	7.34	80			Pn	22 56 18.8	-0.5		
M29M	**Somme Creek**	7.36	65			Pn	22 56 19.2	-0.3		
M29M	**Somme Creek**	7.36	65	P		Pn	22 56 19.5	0.0		
	baz=257,SNR=13									
ANM	**Nome**	7.40	313			Pn	22 56 20.3	+0.4		
ANM	**Nome**	7.40	313	P		Pn	22 56 19.9	0.0		
	baz=122									
FYU	**Fort Yukon**	7.41	24			Pn	22 56 19.1	-0.9		
F17K	**Baldwin Pennin**	7.47	333	P		Pn	22 56 20.4	-0.5		
	baz=146									
DAWY	**Dawson**	7.51	52	P		Pn	22 56 21.0	-0.5		
	baz=244									
I27K	**Kandik River**	7.60	38			Pn	22 56 21.3	-1.4		
I27K	**Kandik River**	7.60	38	P		Pn	22 56 21.7	-1.0		
	baz=228,SNR=11									
HYT	**Haines Junctio**	7.64	77			Pn	22 56 23.1	-0.2		
HYT	**Haines Junctio**	7.64	77	P		Pn	22 56 23.1	-0.2		
	baz=271									
L29M	**L29M**	7.68	60			Pn	22 56 23.3	-0.5		
L29M	**L29M**	7.68	60	P		Pn	22 56 23.2	-0.6		
	baz=253									
E19K	**Redstone River**	7.71	347			Pn	22 56 24.2	+0.1		
E19K	**Redstone River**	7.71	347	P		Pn	22 56 24.0	-0.1		
	baz=163									
F15K	**North Star Dit**	7.84	322			Pn	22 56 25.6	-0.3		
F15K	**North Star Dit**	7.84	322	P		Pn	22 56 25.5	-0.3		
	baz=131									
F24K	**Squaw Lake**	7.84	14			Pn	22 56 25.4	-0.6		
F24K	**Squaw Lake**	7.84	14	P		Pn	22 56 25.3	-0.6		
	baz=199,SNR=21									
N30M	**Aishikik Lake**	7.86	73			Pn	22 56 24.6	-1.6		
N30M	**Aishikik Lake**	7.86	73	P		Pn	22 56 25.2	-1.0		
	baz=267,SNR=8.1									
P30M	**Million Dollar**	7.96	82			Pn	22 56 27.1	-0.4		
P30M	**Million Dollar**	7.96	82	P		Pn	22 56 27.7	+0.3		
	baz=276									
I28M	**Miner Creek**	8.04	42			Pn	22 56 27.5	-1.2		
I28M	**Miner Creek**	8.04	42	P		Pn	22 56 27.8	-0.9		
	baz=234,SNR=19									
G26K	**Porcupine Rive**	8.05	26	P		Pn	22 56 27.8	-0.7		
	baz=215,SNR=6.8									
H27K	**Steamboat Moun**	8.06	35	P		Pn	22 56 27.9	-1.0		
	baz=255,SNR=15									
E17K	**Hotham Inlet**	8.13	334			Pn	22 56 29.7	0.0		
E17K	**Hotham Inlet**	8.13	334	P		Pn	22 56 29.5	-0.2		
	baz=146,SNR=8.6									
M30M	**Minto, Y

D24K	**Happy Valley**	9.33	9			Pn		22 56 46.2	+0.2
D24K	**Happy Valley**	9.33	9	P		Pn		22 56 45.2	-0.8
	baz=193								
C18K	**Utukok River**	9.38	341	P		Pn		22 56 46.3	-0.3
	baz=153								
F28M	**Old Crow**	9.52	31	P		Pn		22 56 46.5	-2.0
	baz=223,SNR=6.5								
E27K	**Coleen River**	9.54	26			Pn		22 56 47.2	-1.7
E27K	**Coleen River**	9.54	26	P		Pn		22 56 47.0	-1.9
	baz=216,SNR=9.7								
C19K	**Lookout Ridge**	9.56	345	P		Pn		22 56 48.1	-1.0
	baz=159								
R32K	**Eaglecrest**	9.58	93	P		Pn		22 56 49.5	+0.1
	baz=288								
C17K	**DeLong Mountai**	9.59	337	P		Pn		22 56 48.4	-1.0
	baz=147								
SIT	**Sitka**	9.63	100	P		Pn		22 56 49.3	-0.7
SIT	**Sitka**	9.63	100	P		Pn		22 56 49.3	-0.7
	baz=295								
JIS	**Juneau Island**	9.65	92	P		Pn		22 56 51.3	+1.1
JIS	**Juneau Island**	9.65	92			Pn		22 56 51.3	+1.1
P32M	**Atlin**	9.65	84			Pn		22 56 49.8	-0.6
P32M	**Atlin**	9.65	84	P		Pn		22 56 50.2	-0.2
	baz=281,SNR=7.1								
EPYK	**Eagle Plains**	9.66	42	P		Pn		22 56 50.3	0.0
	baz=236,SNR=5.4								
UNV	**Unalaska Valle**	9.68	236			Pn		22 56 50.4	-0.3
MNAT	**Makushin Natee**	9.72	237			Pn		22 56 50.5	-0.9
D25K	**Kavik River**	9.74	14			Pn		22 56 50.5	-1.0
D25K	**Kavik River**	9.74	14	P		Pn		22 56 50.3	-1.1
	baz=200,SNR=49								
N32M	**Quiet Lake**	9.79	75	P		Pn		22 56 51.5	-0.7
	baz=272								
S32K	**Killisnoo**	9.84	97			Pn		22 56 52.8	+0.1
S32K	**Killisnoo**	9.84	97	P		Pn		22 56 52.9	+0.1
	baz=293								
C24K	**Franklin Bluff**	9.90	8	P		Pn		22 56 52.7	-0.9
	baz=192								
C23K	**Itkillik River**	9.90	5			Pn		22 56 52.7	-0.9
C23K	**Itkillik River**	9.90	5	P		Pn		22 56 53.1	-0.5
	baz=187,SNR=6.0								
P33M	**Teslin, Yukon**	10.00	80			Pn		22 56 54.2	-0.9
P33M	**Teslin, Yukon**	10.00	80	P		Pn		22 56 54.9	-0.2
	baz=278,SNR=13								
G30M	**tAoh Zraii Nji**	10.17	40	P		Pn		22 56 55.7	-1.6
	baz=235								
B20K	**Meade River**	10.19	352			Pn		22 56 56.5	-1.0
B20K	**Meade River**	10.19	352	P		Pn		22 56 56.3	-1.2
	baz=168								
H31M	**Peel River**	10.22	48	P		Pn		22 56 56.6	-1.3
	baz=244								
E28M	**Babbage River**	10.35	28	P		Pn		22 56 58.0	-1.6
	baz=220								
B22K	**Teshekpuk Lake**	10.37	359	P		Pn		22 56 58.5	-1.4
	baz=178								
C27K	**Jago River**	10.39	18	P		Pn		22 56 59.2	-0.9
	baz=206								
C26K	**Camden Bay**	10.48	15	P		Pn		22 57 00.7	-0.7
	baz=202								
Q32M	**Nakina River**	10.52	87	P		Pn		22 57 02.0	-0.1
	baz=285,SNR=8.8								
D27M	**Malcolm River**	10.54	24	P		Pn		22 57 01.5	-0.9
	baz=214								
E29M	**Blow River**	10.60	31	P		Pn		22 57 02.2	-0.8
	baz=225,SNR=8.3								
F30M	**Barrier River**	10.68	37	P		Pn		22 57 03.8	-0.3
	baz=233								
MMPY	**Sheldon Lake,**	10.69	67	P		Pn		22 57 04.2	-0.1
	baz=266								
R33M	**Jennings River**	11.06	84	P		Pn		22 57 09.6	+0.1
	baz=283,SNR=10								
D28M	**Stokes Point**	11.09	27	P		Pn		22 57 09.3	-0.3
	baz=220								
U33K	**Whale Pass**	11.15	102			Pn		22 57 10.1	-0.3
U33K	**Whale Pass**	11.15	102	P		Pn		22 57 10.1	-0.3
	baz=299,SNR=5.1								
F31M	**Tsiigehtchic**	11.23	40	P		Pn		22 57 10.5	-0.9
	baz=238,SNR=6.9								
WRAK	**Wrangell Islan**	11.39	99	Pn		Pn		22 57 13.1	-0.5
S34M	**Telegraph Cree**	11.40	91			Pn		22 57 15.4	+1.6
S34M	**Telegraph Cree**	11.40	91	P		Pn		22 57 15.0	+1.2
	baz=290,SNR=8.9								
CRAG	**Craig**	11.47	105	Pn		Pn		22 57 14.5	-0.1
CRAG	**Craig**	11.47	105	P		Pn		22 57 14.6	-0.1
	baz=302								
INK	**Inuvik**	11.78	37	P		Pn		22 57 18.2	-0.5
	comp=N,3.6nm,0.7s,baz=238,slow=17,SNR=18								
INK	**Inuvik**	11.78	37			Pn		22 57 17.9	-0.8
INK	**Inuvik**	11.78	37	P		Pn		22 57 17.9	-0.8
	baz=235,SNR=7.4								
DLBC	**Dease Lake**	11.79	88	P		Pn		22 57 18.8	-0.2
	comp=N,2.3nm,0.3s,baz=254,slow=9.8,SNR=36								
DLBC				S		Sn		22 59 28.0	-0.5
	comp=N,1.5nm,0.5s,baz=113,slow=25,SNR=2.1								
DLBC	**Dease Lake**	11.79	88	P		Pn		22 57 19.4	+0.4
	baz=288,SNR=10								
T35M	**Bob Quinn**	12.19	95	P		Pn		22 57 24.5	+0.3
	baz=294								
A36M	**Sachs Harbour**	16.20	31	P		Pn		22 58 13.8	-1.3
	baz=237								
YKA	**Yellowknife Ar**	18.38	66	P		P		22 58 40.9	+1.0
	comp=N,0.6nm,0.5s,baz=281,slow=10,SNR=14								
NEW	**Newport**	23.69	104	LR		LR		23 08 49.1	
	comp=N,14nm,21.0s,baz=212,slow=36								
PETK	**Petropavlovsk-**	27.53	278	P		P		23 00 09.8	+0.1
	comp=N,12nm,1.2s,baz=71,slow=12,SNR=1.6								
	comp=N,12nm,1.2s								
PDAR	**Pinedale Array**	31.33	104	P		P		23 00 46.0	+2.3
	comp=N,0.3nm,0.7s,baz=338,slow=7.4,SNR=2.9								
	comp=N,0.3nm,0.7s								
SPITS	**Spitsbergen Ar**	41.89	3	P		P		23 02 12.9	+0.4
	comp=N,1.1nm,0.4s,baz=32,slow=8.5,SNR=9.2								
	comp=N,1.1nm,0.4s								
KSRS	**Korea Array**	53.24	283	P		P		23 03 41.9	+1.3
	comp=N,2.6nm,0.6s,baz=29,slow=8.3,SNR=6.7								
	comp=N,2.6nm,0.6s								
SONM	**Songino Array**	54.84	306	P		P		23 03 53.7	+1.5
	comp=N,2.7nm,0.7s,baz=41,slow=7.3,SNR=19								
	comp=N,2.7nm,0.7s								
ZALV	**Zalesovo Beam**	57.40	324	P		P		23 04 10.4	+0.3
	comp=N,1.4nm,0.6s,baz=24,slow=6.4,SNR=5.7								
	comp=N,1.4nm,0.6s								
HHC	**Hu-ho-hao-te**	58.24	297	*e*P		P		23 04 18.3	+2.0
HHC				pmax		pmax			
	comp=Z,7.0nm,0.6s								
HHC				pmax		pmax			
	comp=Z,72nm,4.0s								
BVAR	**Borovoye Array**	62.09	332	P		P		23 04 42.1	-0.1
	comp=Z,1.3nm,0.5s,baz=28,slow=5.8,SNR=11								
	comp=Z,1.3nm,0.5s								
KURBB	**Kurchatov Arra**	62.16	326	P		P		23 04 42.7	0.0
	comp=Z,0.6nm,0.5s,baz=30,slow=6.5,SNR=5.3								
	comp=Z,0.6nm,0.5s								
MKAR	**Makanchi Array**	64.46	321	P		P		23 04 57.1	-0.9
	comp=Z,0.3nm,0.5s,baz=37,slow=6.2,SNR=6.7								
	comp=Z,0.3nm,0.5s								

*IDC **13** 22:55:17.9±1.3, 15°.48N×147°.76E, h0km, mb3.9/10, mbtmp3.9/10, MS2.6/2, Error ellipse: s-maj=40.7km s-min=21.7km az=90.0*

ISC 13 22:55:22.4±1.3, 15°.4N±0°.2×147°.7E±0°.3, h29km, n15, σ0s53/11, mb4.1/10, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	3.33	237	LR	LR	22 56 56.9	
	comp=Z,31nm,20.9s,baz=93,slow=29						
H11S3	**WAKE ISLAND Hy**	18.38	78	T	T	23 18 32.6	
	baz=262,slow=74,SNR=13						
H11S1	**WAKE ISLAND Hy**	18.39	78	T	T	23 18 32.9	
	baz=262,slow=74,SNR=7.1						
H11S2	**WAKE ISLAND Hy**	18.40	78	T	T	23 18 37.8	
	baz=262,slow=74,SNR=8.3						
WRA	**Warramunga Arr**	37.55	201	P	P	23 02 34.2	-0.1
	1.2nm,0.8s,baz=25,slow=9.5,SNR=6.1						
	1.2nm,0.8s						
ASAR	**Alice Springs**	41.15	199	P	P	23 03 04.5	+0.1
	0.5nm,0.8s,baz=26,slow=7.9,SNR=5.3						
	0.5nm,0.8s						
LZDM	**Lanzhou Array**	44.18	306	P	P	23 03 29.6	+0.4
	1.7nm,0.4s,baz=149,slow=6.9,SNR=5.1						
	1.7nm,0.4s						
CMAR	**Chiang Mai Arr**	46.66	281	P	P	23 03 49.1	+0.4
	1.6nm,0.5s,baz=85,slow=6.4,SNR=14						
	1.6nm,0.5s						
ZALV	**Zalesovo Beam**	61.77	323	P	P	23 05 37.5	-0.8
	0.3nm,0.3s,baz=114,slow=7.9,SNR=1.9						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	62.12	315	P	P	23 05 41.0	+0.1
	0.6nm,0.5s,baz=90,slow=8.5,SNR=14						
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	65.03	319	P	P	23 05 59.8	-0.2
	3.2nm,0.8s,baz=98,slow=6.7,SNR=27						
KURBB				LR	LR	23 34 08.5	
	comp=Z,17nm,21.4s,baz=171,slow=36						
	3.2nm,0.8s						
ILAR	**Eielson Array**	65.72	25	P	P	23 06 04.8	+0.6
	0.1nm,0.6s,baz=272,slow=7.4,SNR=1.9						
	0.1nm,0.6s						
BVAR	**Borovoye Array**	70.22	321	P	P	23 06 32.6	0.0
	1.3nm,0.6s,baz=90,slow=7.4,SNR=10.0						
	1.3nm,0.6s						
FINES	**FINESS Array B**	90.64	336	P	P	23 08 21.1	-0.9
	2.1nm,0.7s,baz=57,slow=4.9,SNR=13						
	2.1nm,0.7s						
DBIC	**Dimbokro**	145.07	307	PKPbc	PKPab	23 14 57.6	+0.1
	4.8nm,0.8s,baz=45,slow=1.4,SNR=5.4						

*IDC **13** 23:04:08.9±2.9, 1°.13N×98°.59E, h0km, mb3.7/7, mbtmp3.7/7, Error ellipse: s-maj=130.1km s-min=20.8km az=56.0*

*DJA **13** 23:04:24.1±0.3, 2°N±3°×9°9E±°, h84km±8km, M3.6/24, mB4.7/1, mb3.6/1, MLv3.6/24, Mw(mB)3.9/1*

ISC 13 23:04:22.5±0.9, 1°.56N±0°.06×98°.91E±0°.08, h100km, n15, σ1s74/16, mb3.6/7, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	1.01	138	P	Pn	23 04 43.8	+0.8
PSI	**Prapat**	1.24	1	P	Pn	23 04 46.1	+0.3
GSI	**Gunungsitoli**	1.35	259	P	Pn	23 04 48.2	+1.2
PBSI	**Pulau Batu**	1.72	201	P	Pn	23 04 52.0	+0.5
KCSI	**Kotacane, Aceh**	2.26	330	P	Pn	23 04 59.6	+1.1
TPTI		2.42	315	P	Pn	23 05 02.1	+1.6
PDSI	**Padang**	2.90	148	P	Pn	23 05 08.3	+1.3
BSI	**Banda Aceh**	5.32	317	P	Pn	23 05 40.4	+0.8
BSI				S	Sn	23 06 35.7	-4.0
WRA	**Warramunga Arr**	40.79	123	P	P	23 11 52.8	-1.6
	0.8nm,0.6s,baz=302,slow=9.0,SNR=9.8						
	0.8nm,0.6s						
ASAR	**Alice Springs**	42.26	129	P	P	23 12 04.0	-2.4
	0.2nm,0.5s,baz=303,slow=9.0,SNR=1.7						
	0.2nm,0.5s						
SONM	**Songino Array**	46.55	7	P	P	23 12 41.9	+1.7
	0.3nm,0.3s,baz=196,slow=8.2,SNR=4.4						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	47.33	345	P	P	23 12 47.5	+1.3
	0.2nm,0.4s,baz=158,slow=8.0,SNR=8.7						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	51.85	344	P	P	23 13 21.4	+1.1
	0.8nm,0.3s,baz=153,slow=6.3,SNR=1.0						
	0.8nm,0.3s						
ZALV	**Zalesovo Beam**	53.50	350	P	P	23 13 33.5	+1.0
	0.7nm,0.3s,baz=157,slow=6.1,SNR=4.3						
	0.7nm,0.3s						
BVAR	**Borovoye Array**	56.49	340	P	P	23 13 53.6	-0.4
	0.3nm,0.5s,baz=152,slow=6.5,SNR=2.0						
	0.3nm,0.5s						

*HEL **13** 23:11:53.5±0.3, 67°.17N×20°.63E, h0km, ML1.0, Explosion*

UPP 13 23:11:54.1±0.1, 67°.17N×20°.68E, h0km, ML2.2, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	0.06	222	P	Pg	23 11 54.9	-0.4
DUNU				S	Sg	23 11 56.1	0.0
DUNU	**Dundret**	0.06	222	P	Pg	23 11 55.5	+0.3
	baz=40						
DUNU				S	Sg	23 11 56.5	+0.4
MASU	**Masugnsbyn**	0.59	60	P	Pg	23 12 04.5	-0.9
MASU				S	Sg	23 12 12.2	-0.8
MASU	**Masugnsbyn**	0.59	60	P	Pg	23 12 05.3	-0.1
MASU				S	Sg	23 12 13.0	0.0
RATU	**Laukkuluspa**	0.78	328	P	Pg	23 12 07.5	-1.5
RATU				S	Sg	23 12 18.1	-1.1
RATU	**Laukkuluspa**	0.78	328	P	Pg	23 12 08.5	-0.5
RATU				S	Sg	23 12 19.4	+0.3
KUA	**Kurravaara**	0.80	351	P	Pg	23 12 08.1	-1.3
KUA	**Kurravaara**	0.80	351	P	Pg	23 12 09.2	-0.2
KUA				S	Sg	23 12 19.7	-0.1
ERTU	**Ertsjaerv**	0.86	135	P	Pg	23 12 09.0	-1.6
ERTU				S	Sg	23 12 21.2	-0.4
ERTU	**Ertsjaerv**	0.86	135	P	Pg	23 12 10.0	-0.6
ERTU	**Ertsjaerv**	0.86	135	PG	Pg	23 12 09.0	-1.5
	baz=311						
ERTU				SB	Sg	23 12 21.8	+0.2
SALU	**Saltoluokta**	0.87	285	P	Sg	23 12 09.5	-1.2
SALU				S	Sg	23 12 21.4	-0.6
SALU	**Saltoluokta**	0.87	285	P	Sg	23 12 10.4	-0.3
SALU				S	Sg	23 12 22.1	+0.1
NIKU	**Nikkaluokta**	0.94	319	P	Pg	23 12 10.6	-1.5
NIKU	**Nikkaluokta**	0.94	319	P	Pg	23 12 11.7	-0.5
HARU	**Harads**	1.02	173	P	Pg	23 12 12.0	-1.5
HARU	**Harads**	1.02	173	P	Pg	23 12 12.9	-0.7
LANU	**Lannavaara**	1.02	29	P	Pg	23 12 11.9	-1.7
LANU	**Lannavaara**	1.02	29	P	Pg	23 12 13.2	-0.3
LANU	**Lannavaara**	1.02	29	PB	Pg	23 12 12.4	-1.2
LANU				SN	Sb	23 12 29.5	+1.0
KOVU	**Salmi**	1.08	350	P	Pg	23 12 13.0	-1.8
KOVU	**Salmi**	1.08	350	P	Pg	23 12 14.2	-0.6
KLF	**Kolari**	1.28	85	PG	Pg	23 12 16.7	-2.0
	baz=271						
KLF				smax	smax	23 12 32.6	
	comp=Z,0.7nm,0.2s						
KLF				SG	Sg	23 12 33.9	-1.3
HEF	**Hetta**	1.69	41	PG	Pn	23 12 23.9	-0.9
	baz=220						
HEF				smax	smax	23 12 44.3	
	comp=Z,0.7nm,0.2s						
HEF				SN	Sn	23 12 46.3	-0.8
KALU	**Kalix**	1.70	139	P	Pn	23 12 24.3	-0.6
SJUU	**Sjulsmark**	1.71	167	P	Pn	23 12 24.3	-0.8
TOF	**Tornio**	1.82	125	PG	Pn	23 12 26.5	-0.1
TOF				smax	smax	23 12 48.2	
	comp=Z,0.7nm,0.2s						
TOF				SG	Sb	23 12 51.6	+0.1
KIF	**Kilpisjarvi**	1.85	1	PG	Pn	23 12 27.7	+0.8
KIF				SG	Sn	23 12 47.3	-3.6
KIF				smax	smax	23 12 49.7	
	comp=Z,1.8nm,0.2s						
KTK1	**Kautokeino**	2.09	26	PG	Pn	23 12 31.1	+0.9
KTK1				SN	Sn	23 12 53.1	-3.8
RNF	**Rovaniemi**	2.18	102	PG	Pn	23 12 32.7	+1.1
RNF				SG	Sb	23 13 01.5	-0.3
RANF	**Ranua**	2.70	113	SG	Sb	23 13 16.5	-0.4

*NOU **13** 23:12:41.8, 44°.16S×170°.08E, h0km, MLv4.2/18, South Island, New Zealand*

*WEL **13** 23:12:41.9±0.3, 44°S±2°×17°0E±°, h5km, M4.0/39, ML3.7/11, MLv4.0/39, Error ellipse: s-maj=2.6km s-min=2.5km az=79.6, confirmed*

ISC 13 23:12:42.2±0.9, 44°.14S±0°.02×170°.04E±0°.02, h13km±7km, n98, σ1s29/106, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWAS	**Twizel Area Sc**	0.13	160	P	Pg	23 12 46.2	+0.7
TWAS				S	Sg	23 12 48.7	+0.8
LBZ	**Lake Benmore**	0.27	157	P	Pb	23 12 48.8	-0.2
LBZ				S	Sb	23 12 52.9	-0.7
MCNS	**Mount Cook Ann**	0.40	6	P	Pg	23 12 49.4	-0.8
MCNS				S	Sg	23 12 54.5	-1.1
MECS	**Makarora Emerg**	0.59	260	P	Pg	23 12 53.5	-0.2
MECS				S	Sg	23 13 00.7	-0.8
FOZ	**Fox Glacier**	0.62	345	P	Pg	23 12 53.5	-0.8
FOZ				S	Sg	23 13 00.7	-1.8
FGPS	**Fox Glacier Pa**	0.67	359	P	Pg	23 12 54.5	-0.7
TMZ	**Timaru**	0.74	110	P	Pg	23 12 57.2	+0.3
FJDS	**Franz Josef DO**	0.75	8	P	Pg	23 12 56.2	-0.6
HDWS	**Haast DOC Work**	0.76	289	P	Pg	23 12 56.6	-0.3
HDWS				S	Sg	23 13 06.0	-0.9
ARCZ	**Arundel**	0.84	78	P	Pg	23 12 58.6	+0.2
ARCZ				S	Sg	23 13 09.4	-0.1
GCSZ	**Gaunt Creek Bo**	0.84	14	P	Pg	23 12 57.6	-0.9
GCSZ	**Gaunt Creek Bo**	0.84	14	P	Pg	23 12 57.8	-0.7
GCSZ				S	Sg	23 13 07.1	-2.4

RPZ	**Rata Peaks**	0.85	61	P		Pg		23 12 58.1	-0.4
RPZ	**Rata Peaks**	0.85	61	S		Sg		23 13 09.4	-0.2
RPZ	**Rata Peaks**	0.85	61	P		Pg		23 12 58.3	-0.3
WNPS	**Wanaka Nationa**	0.85	229	P		Pg		23 12 58.7	+0.1
PEEC	**Peel Forest**	0.89	77	P		Pb		23 12 59.6	+0.1
JCZ	**Jackson Bay**	0.90	273	P		Pg		23 12 59.6	-0.1
JCZ	**Jackson Bay**	0.90	273	S		Sg		23 13 11.3	-0.2
JCZ	**Jackson Bay**	0.90	273	P		Sg		23 12 59.4	-0.2
JCZ				S		Sg		23 13 10.5	-1.0
NSBS	**Neils Beach**	1.00	277	P		Pg		23 13 01.3	-0.2
WKZ	**Wanaka**	1.01	226	P		Pg		23 13 01.3	-0.3
ODZ	**Otahua Downs**	1.01	155	P		Pg		23 13 00.3	-1.3
ODZ	**Otahua Downs**	1.01	155	S		Sg		23 13 13.0	-1.7
ODZ	**Otahua Downs**	1.01	155	P		Pg		23 13 01.4	-0.2
ODZ				S		Sn		23 13 15.9	-0.2
MAYC	**Mayfield Schoo**	1.05	73	P		Pn		23 13 02.6	+0.1
WVZ	**Waitaha Valley**	1.18	26	P		Pb		23 13 03.5	-0.8
EAZ	**Earnscleugh**	1.21	205	P		Pb		23 13 05.1	+0.2
MHCZ	**Mount Hutt**	1.26	62	P		Pb		23 13 06.0	+0.2
WACZ	**Wakanui South**	1.31	82	P		Pb		23 13 07.0	+0.3
RACZ	**Rakaia**	1.57	76	P		Pn		23 13 10.3	+0.5
MSZ	**Milford Sound**	1.61	250	P		Pn		23 13 11.2	+1.0
OXZ	**Oxford**	1.66	62	P		Pn		23 13 11.3	+0.2
INZ	**Inchbonnie**	1.74	36	P		Pb		23 13 13.5	-0.6
HHSZ	**Highcliff Hill**	1.79	167	P		Pb		23 13 15.6	+0.7
MLZ	**Mavora Lakes**	1.84	227	P		Pn		23 13 13.9	+0.4
TUZ	**Tuapeka**	1.84	189	P		Pn		23 13 13.4	-0.1
MQZ	**McQueen's Vall**	1.94	78	P		Pn		23 13 15.0	+0.2
AKCZ	**Akaroa Harbour**	2.09	84	P		Pn		23 13 17.2	+0.2
LTZ	**Lake Taylor**	2.12	51	P		Pn		23 13 18.1	+0.8
AMCZ	**Amberley**	2.12	64	P		Pn		23 13 18.1	+0.7
OKCZ	**Okains Bay**	2.22	80	P		Pn		23 13 19.7	+1.0
WHZ	**Weths Hill Ro**	2.30	219	P		Pn		23 13 19.4	-0.4
DCZ	**Deep Cove**	2.45	236	P		Pn		23 13 22.1	+0.3
GVZ	**Greta Valley S**	2.47	63	P		Pn		23 13 22.5	+0.3
SYZ	**Scrubby Hill**	2.48	194	P		Pn		23 13 22.1	-0.2
SYZ	**Scrubby Hill**	2.48	194	P		Pb		23 13 25.2	-1.5
DSZ	**Denniston Nort**	2.72	29	P		Pn		23 13 26.4	+0.8
APZ	**The Paps**	3.06	207	P		Pn		23 13 29.3	-1.0
KHZ	**Kahutara**	3.08	57	P		Pn		23 13 31.1	+0.6
KHZ	**Kahutara**	3.08	57	P		Pn		23 13 30.8	+0.3
PYZ	**Puysegur Point**	3.12	228	P		Pn		23 13 34.1	+2.9
PYZ	**Puysegur Point**	3.12	228	P		Pn		23 13 32.4	+1.2
THZ	**Tophouse**	3.17	43	P		Pn		23 13 32.6	+0.8
MRNZ	**Matariki Terra**	3.39	37	P		Pn		23 13 36.0	+1.2
TKNZ	**Takaka Hill**	3.78	36	P		Pn		23 13 40.2	+0.1
QRZ	**Quartz Range**	3.79	30	P		Pn		23 13 41.3	+1.0
QRZ	**Quartz Range**	3.79	30	S		Sn		23 14 25.8	+1.1
QRZ	**Quartz Range**	3.79	30	P		Pn		23 13 41.1	+0.9
NNZ	**Nelson**	3.82	41	P		Pn		23 13 41.5	+0.9
TUWZ	**Tuamarina**	3.95	48	P		Pn		23 13 44.9	+2.5
TCW	**Tory Channel**	4.28	48	P		Pn		23 13 48.2	+1.1
DUWZ	**D'Urville Isla**	4.40	42	P		Pn		23 13 49.9	+1.2
SNZO	**South Karori**	4.45	52	P		Pn		23 13 50.6	+1.3
PLWZ	**Palliser**	4.61	58	P		Pn		23 13 51.7	+0.1
MSWZ	**Moikau Station**	4.70	56	P		Pn		23 13 51.9	-1.0
CAW	**Cannon Point**	4.79	53	P		Pn		23 13 53.8	-0.2
PAWZ	**Paruwai Farm**	4.83	57	P		Pn		23 13 54.2	-0.4
KIW	**Kapiti Island**	4.87	49	P		Pn		23 13 55.1	0.0
TRWZ	**Traveller**	4.98	59	P		Pn		23 13 56.7	0.0
MTW	**Mount Morrison**	5.01	55	P		Pn		23 13 56.8	-0.2
OGWZ	**Otaki Gorge**	5.04	51	P		Pn		23 13 57.1	-0.3
HOWZ	**Holdsworth Sta**	5.18	53	P		Pn		23 13 59.3	-0.2
TMWZ	**Te Maipa**	5.27	57	P		Pn		23 14 00.5	-0.2
MRZ	**Mangatainoka R**	5.37	52	P		Pn		23 14 01.1	-1.0
TIWZ	**Tintock**	5.47	54	P		Pn		23 14 03.2	-0.3
NMEZ	**Namu Road**	5.52	33	P		Pn		23 14 07.3	+3.2
KHEZ	**Kahui Hut**	5.68	33	P		Pn		23 14 09.4	+3.1
KHEZ	**Kahui Hut**	5.68	33	S		Sn		23 15 13.1	+1.7
KHEZ	**Kahui Hut**	5.68	33	P		Pn		23 14 09.5	+3.1
PREZ	**Palmer Road**	5.70	34	P		Pn		23 14 09.9	+3.4
BFZ	**Birch Farm**	5.75	55	P		Pn		23 14 06.8	-0.4
BFZ	**Birch Farm**	5.75	55	P		Pn		23 14 06.4	-0.8
DVHZ	**Dannevirke**	5.95	52	P		Pn		23 14 08.8	-1.2
VRZ	**Vera Road**	6.13	37	P		Pn		23 14 16.9	+4.5
PK

H01W2	Cape Leeuwin H baz=259	46.15	110	T	T	00 12 16.6	
H01W3	Cape Leeuwin H baz=259	46.15	110	T	T	00 12 16.6	
H01W1	Cape Leeuwin H baz=259	46.16	110	T	T	00 12 16.6	
LEM	Lembang comp=Z,36nm,19.5s,baz=310,slow=32	51.69	73	LR	LR	23 42 05.8	
SNAA	Sanae comp=Z,126nm,21.8s,baz=2.5,slow=30	51.83	201	LR	LR	23 40 52.3	
QSPA	South Pole Qui	58.99	180	P	P	23 24 40.2	+0.4
QSPA	comp=Z,6.4nm,1.0s,baz=263,slow=3.0,SNR=13			LR	LR	23 46 59.2	
QSPA	comp=Z,106nm,20.6s,baz=253,slow=33 comp=Z,6.4nm,1.0s			LR	LR	23 46 59.2	
QSPA	South Pole Qui	58.99	180	P	P	23 24 40.3	+0.5
BRDH	Bariadhala comp=Z,61nm,20.2s,baz=198,slow=33	62.18	35	LR	LR	23 48 48.1	
VNDA	Vanda comp=Z,30nm,21.1s,baz=248,slow=34	62.60	166	LR	LR	23 49 58.5	
CMAR	Chiang Mai Arr comp=Z,1.2nm,0.6s,baz=220,slow=6.7,SNR=12	62.70	44	P	P	23 25 05.4	0.0
CMAR				LR	LR	23 47 28.1	
	comp=Z,63nm,21.5s,baz=240,slow=31 comp=Z,1.2nm,0.6s						
KAPI	Kappang comp=Z,22nm,20.8s,baz=208,slow=31	62.76	79	LR	LR	23 47 13.0	
EIL	Elat comp=Z,61nm,20.4s,baz=238,slow=32	64.58	337	LR	LR	23 49 18.5	
ASAR	Alice Springs comp=Z,0.7nm,0.5s,baz=241,slow=6.0,SNR=12 comp=Z,0.7nm,0.5s	66.05	104	P	P	23 25 27.2	-0.3
ASF	Jabal al Asfar comp=Z,53nm,18.3s,baz=189,slow=34	66.29	340	LR	LR	23 52 09.6	
MMAI	Mount Meron Ar comp=Z,33nm,18.2s,baz=167,slow=34	67.52	339	LR	LR	23 52 53.4	
WRA	Warramunga Arr comp=Z,1.2nm,0.7s,baz=241,slow=5.6,SNR=17 comp=Z,1.2nm,0.7s	68.02	101	P	P	23 25 40.1	0.0
STKA	Stephens Creek comp=Z,45nm,21.6s,baz=203,slow=31	68.87	115	LR	LR	23 50 18.4	
TORD	Torodi Ar. Bea comp=Z,1.0nm,0.8s,baz=149,slow=5.3,SNR=6.2 comp=Z,1.0nm,0.8s	70.21	300	P	P	23 25 53.8	+0.2
DBIC	Dimbokro comp=Z,34nm,21.1s,baz=175,slow=34	71.33	290	LR	LR	23 54 43.5	
GNI	Garni comp=Z,41nm,18.3s,baz=186,slow=36	72.13	349	LR	LR	23 57 16.2	
BRTR	Keskin Array B comp=Z,0.6nm,0.7s,baz=170,slow=9.3,SNR=5.1	74.27	340	P	P	23 26 17.8	+0.3
BRTR				LR	LR	23 55 34.4	
	comp=Z,27nm,20.7s,baz=160,slow=33 comp=Z,0.6nm,0.7s						
KKAR	Karatay Array	74.71	9	P	P	23 26 20.6	+0.8
AAK	Ala-Archa comp=Z,36nm,18.6s,baz=218,slow=34	74.87	12	LR	LR	23 57 14.5	
KBZ	Khabaz comp=Z,1.4nm,0.9s,baz=225,slow=5.7,SNR=3.2	75.92	348	P	P	23 26 28.5	+1.7
KBZ				LR	LR	23 58 35.7	
	comp=Z,42nm,21.5s,baz=162,slow=35 comp=Z,1.4nm,0.9s						
KVAR	Kislovodsk Arr comp=Z,24nm,21.2s,baz=76,slow=35	76.18	348	LR	LR	23 58 52.4	
AB31	Akbulak array	80.07	1	P	P	23 26 50.3	+0.6
AB31	comp=Z,3.3nm,0.9s			IAmb	IAmb	23 27 00.4	
ABKAR	Akbulak array	80.07	1	P	P	23 26 50.2	+0.5
MKAR	Makanchi Array comp=Z,0.3nm,0.6s,baz=206,slow=5.9,SNR=4.1	80.48	16	P	P	23 26 52.0	0.0
MKAR				LR	LR	23 59 49.6	
	comp=Z,43nm,21.1s,baz=208,slow=34 comp=Z,0.3nm,0.6s						
KEST	Kesra	81.08	321	LR	LR	00 03 15.8	
	comp=Z,74nm,19.6s,baz=316,slow=36						
AKTO	Aktyubinsk comp=Z,35nm,18.1s,baz=186,slow=35	81.25	360	LR	LR	00 02 36.3	
KURBB	Kurchatov Arra comp=Z,0.8nm,0.9s,baz=209,slow=5.7,SNR=7.5 comp=Z,0.8nm,0.9s	83.31	13	P	P	23 27 07.3	+0.6
KURK	Kurchatov	83.42	13	P	P	23 27 07.3	0.0
KURK	Kurchatov comp=Z,3.8nm,1.2s	83.42	13	IAmb	IAmb	23 27 11.7	
BVAR	Borovoye Array comp=Z,1.3nm,0.9s,baz=203,slow=6.1,SNR=4.1	84.46	7	P	P	23 27 12.8	+0.2
BVAR				LR	LR	00 03 03.3	
	comp=Z,39nm,18.2s,baz=205,slow=34 comp=Z,1.3nm,0.9s						
AKASG	Malin Array Be comp=Z,0.3nm,0.5s,baz=156,slow=5.0,SNR=2.7 comp=Z,0.3nm,0.5s	85.58	342	P	P	23 27 17.5	-0.8
ARTI	Arti comp=Z,26nm,18.5s,baz=202,slow=35	87.21	360	LR	LR	00 05 15.2	
MDT	Midelt comp=Z,40nm,18.1s,baz=129,slow=37	87.32	311	LR	LR	00 08 17.1	
ZALV	Zalesovo Beam comp=Z,0.3nm,0.3s,baz=235,slow=5.2,SNR=4.5	87.74	15	P	P	23 27 27.9	-0.8
ZALV				LR	LR	00 04 11.0	
	comp=Z,23nm,18.0s,baz=67,slow=34 comp=Z,0.3nm,0.3s						
GERES	GERESS Array B comp=Z,0.2nm,0.5s,baz=151,slow=6.2,SNR=2.2 comp=Z,0.2nm,0.5s	89.20	332	P	P	23 27 35.2	-0.7
TLY	Talaya comp=Z,54nm,20.2s,baz=184,slow=34	91.46	26	LR	LR	00 06 19.3	
PLCA	Paso Flores comp=Z,41nm,18.1s,baz=126,slow=33	94.42	216	LR	LR	00 06 02.3	
NOA	NORSAR Array B comp=Z,12nm,18.6s,baz=100,slow=36	99.66	339	LR	LR	00 14 07.0	
ILAR	Eielson Array comp=Z,0.2nm,0.5s,baz=296,slow=3.6,SNR=4.4	142.82	18	PKP	PKPdf	23 34 11.8	-1.3
YKA	Yellowknife Ar comp=Z,1.7nm,0.7s,baz=356,slow=3.3,SNR=32	148.37	354	PKPbc	PKPbc	23 34 26.1	+0.1
ULM	Lac du Bonnet comp=Z,3.4nm,0.8s,baz=63,slow=2.0,SNR=5.6	153.10	322	PKPbc	PKPbc	23 34 37.2	-0.4

*NOU **13** 23:41:15.1, 39˚.12S×174˚.82E, h223km, MLv3.6/18, North Island, New Zealand*
*WEL **13** 23:41:18.2±0.7, 39˚S±6˚×17˚5E±˚, h202km±5km, M3.2/65, ML2.3/6, MLv3.2/65, Error ellipse: s-maj=7.9km s-min=6.0km az=14.1, confirmed*
ISC 13 23:41:12.8±1.8**, 39˚.04S**±0˚.06×**174˚.86E**±0˚.05**, h242**km±10**km, n137,** σ1**53**/156**, North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VRZ	Vera Road	0.12	224	P	Pn	23 41 45.2	+1.3
VRZ				S	S	23 42 06.6	-1.9
TWVZ	Taurewa	0.45	94	P	Pn	23 41 45.9	+1.2
PKVZ	Pokaka	0.45	123	P	Pn	23 41 46.0	+1.3
PKVZ				S	S	23 42 07.7	-2.0
HIZ	Hauiti	0.53	359	P	Pn	23 41 45.9	+1.0
HIZ	Hauiti	0.53	359	S	S	23 42 09.4	-0.7
HIZ	Hauiti	0.53	359	P	Pn	23 41 45.9	+1.0
LREZ	Lake Rotokare	0.55	220	P	Pn	23 41 46.8	+1.9
COVZ	Chateau Observ	0.55	107	P	Pn	23 41 46.4	+1.4
COVZ				S	S	23 42 08.1	-2.2
WTVZ	West Tongariro	0.57	98	P	Pn	23 41 46.5	+1.4
FWVZ	Far West T-bar	0.58	112	P	Pn	23 41 46.7	+1.4
MTVZ	Mangateitei	0.58	126	P	Pn	23 41 46.5	+1.4
NGZ	Ngauruhoe	0.59	103	P	Pn	23 41 46.7	+1.5
KRVZ	Karewarewa	0.61	95	P	Pn	23 41 46.6	+1.4
SNVZ	South Ngauruho	0.62	104	P	Pn	23 41 46.9	+1.6
PREZ	Palmer Road	0.62	241	P	Pn	23 41 47.1	+2.0
PREZ				S	S	23 42 11.1	+0.5
NTVZ	North Tongarir	0.64	95	P	Pn	23 41 46.9	+1.5
OTVZ	Oturere	0.64	101	P	Pn	23 41 47.1	+1.7
OTVZ				S	S	23 42 09.0	-1.9
NEZ	North Egmont	0.64	249	P	Pn	23 41 47.4	+2.1
WNVZ	Wahianoa	0.64	117	P	Pn	23 41 47.1	+1.7
WNVZ				S	S	23 42 08.8	-2.3
KATZ	Kakaramea	0.65	84	P	Pn	23 41 47.0	+1.5
KATZ				S	S	23 42 09.1	-1.9
TUVZ	Tukino	0.66	110	P	Pn	23 41 47.0	+1.6
TMVZ	Te Maari	0.66	97	P	Pn	23 41 47.1	+1.6
TMVZ				S	S	23 42 09.0	-2.1
ETVZ	East Tongariro	0.67	98	P	Pn	23 41 47.1	+1.6
ETVZ				S	S	23 42 09.0	-2.1
KHEZ	Kahui Hut	0.70	249	P	Pn	23 41 47.3	+1.8
KHEZ	Kahui Hut	0.70	249	S	S	23 42 11.2	-0.1
KHEZ	Kahui Hut	0.70	249	P	Pn	23 41 47.4	+1.9
WAZ	Wanganui	0.72	172	P	Pn	23 41 47.5	+2.0
WATZ	Wairara	0.76	64	P	Pn	23 41 47.3	+1.5
MOVZ	Moawhango	0.78	118	P	Pn	23 41 47.0	+1.2
MOVZ				S	S	23 42 08.8	-3.1
NBEZ	Newall Road No	0.81	253	P	Pn	23 41 47.2	+1.3
NMEZ	Namu Road	0.85	244	P	Pn	23 41 48.2	+2.1
MRHZ	Matea Rd	1.23	81	P	Pn	23 41 49.2	+0.8
KWHZ	Kaweka Forest	1.27	108	P	Pn	23 41 50.6	+2.0
BKZ	Black Stump Fm	1.27	96	P	Pn	23 41 50.0	+1.3
KRHZ	Kereru	1.31	118	P	Pn	23 41 50.7	+1.8
TSZ	Takapari Road	1.32	140	P	Pn	23 41 50.9	+1.9
PNHZ	Pukenui	1.35	130	P	Pn	23 41 51.0	+1.8
TOZ	Tahuroa Road	1.40	21	P	Pn	23 41 50.7	+1.1
MCHZ	McNeill Hill	1.48	106	P	Pn	23 41 52.4	+2.3
MCHZ				S	S	23 42 18.9	-0.6
NMHZ	Naumai	1.52	93	P	Pn	23 41 52.5	+2.0
NMHZ				S	S	23 42 19.6	-0.5
POWZ	Post Office Ro	1.52	153	P	Pn	23 41 52.1	+1.7
TARZ	Mount Tarawera	1.52	58	P	Pn	23 41 51.8	+1.2
MTHZ	Maungataniwha	1.56	84	P	Pn	23 41 51.8	+1.0
MTHZ				S	S	23 42 17.6	-3.0
WPHZ	Waipukurau	1.59	130	P	Pn	23 41 52.9	+1.9
WPHZ				S	S	23 42 19.5	-1.6
DVHZ	Dannevirke	1.61	142	P	Pn	23 41 52.8	+1.6
DVHZ				S	S	23 42 18.9	-2.4
ARHZ	Aropaoanui	1.67	98	P	Pn	23 41 53.6	+1.9
ARHZ				S	S	23 42 20.9	-1.3
MRZ	Mangatainoka R	1.71	161	P	Pn	23 41 53.5	+1.5
RTZ	Ruatahuna	1.71	76	P	Pn	23 41 53.0	+0.9
KAHZ	Kahuranaki	1.73	116	P	Pn	23 41 54.5	+2.2
KAHZ				S	S	23 42 22.0	-1.2
PRWZ	Pori Road	1.73	151	P	Pn	23 41 54.1	+2.0
RAHZ	Arahi	1.74	87	P	Pn	23 41 53.9	+1.6
RAHZ				S	S	23 42 21.2	-2.1
OGWZ	Otaki Gorge	1.79	172	P	Pn	23 41 54.5	+1.9
KIW	Kapiti Island	1.82	179	P	Pn	23 41 54.5	+1.6
CKHZ	Cape Kidnapper	1.82	110	P	Pn	23 41 55.1	+2.2
PRHZ	Porangahau	1.83	132	P	Pn	23 41 55.0	+2.0
PRHZ				S	S	23 42 23.4	-1.4
PXZ	Pawanui	1.83	123	P	Pn	23 41 55.0	+2.0
ANWZ	Angora Road	1.88	139	P	Pn	23 41 55.5	+2.1
DUWZ	D'Urville Isla	1.90	202	P	Pn	23 41 55.4	+1.7
TIWZ	Tintock	1.90	156	P	Pn	23 41 55.3	+1.6
HOWZ	Holdsworth Sta	1.92	165	P	Pn	23 41 55.2	+1.4
URZ	Urewera	1.93	67	P	Pn	23 41 54.3	+0.5
URZ	Urewera	1.93	67	P	Pn	23 41 54.4	+0.5
MKAZ	Moumakai	1.95	7	P	Pn	23 41 55.8	+1.6
BFZ	Birch Farm	1.95	147	P	Pn	23 41 55.5	+1.4
BFZ	Birch Farm	1.95	147	S	S	23 42 25.6	-1.1
BFZ	Birch Farm	1.95	147	P	Pn	23 41 55.6	+1.5
AWAZ	Awhitu Peninsu	1.98	355	P	Pn	23 41 55.8	+1.3
CAW	Cannon Point	2.07	176	P	Pn	23 41 56.8	+1.7
CPWZ	Castlepoint	2.13	152	P	Pn	23 41 57.8	+2.1
MTW	Mount Morrison	2.17	167	P	Pn	23 41 57.4	+1.3
KNZ	Kokohu	2.19	90	P	Pn	23 41 58.0	+1.7
MWZ	Matawai	2.20	72	P	Pn	23 41 57.3	+0.8
TMWZ	Te Maipa	2.21	159	P	Pn	23 41 58.0	+1.5
TCW	Tory Channel	2.21	192	P	Pn	23 41 58.4	+1.9
WEL	Wellington	2.24	182	P	Pn	23 41 58.4	+1.6
SNZO	South Karori	2.27	183	P	Pn	23 41 58.4	+1.4
SNZO	South Karori	2.27	183	S	S	23 42 30.6	-1.4
MBAZ	Motutapu North	2.27	1	P	Pn	23 41 59.0	+1.8
RIGZ	Rimuhau	2.29	82	P	Pn	23 41 58.8	+1.5
PRGZ	Paritu Road	2.36	88	P	Pn	23 41 59.8	+1.8
BHW	Baring Head	2.36	180	P	Pn	23 41 59.3	+1.4
MHGZ	Mahia Peninsul	2.37	94	P	Pn	23 42 00.0	+1.9
PAWZ	Paruwai Farm	2.38	170	P	Pn	23 41 59.6	+1.4
MSWZ	Moikau Station	2.39	173	P	Pn	23 41 59.6	+1.4
TRWZ	Traveller	2.44	165	P	Pn	23 42 00.3	+1.6
NNZ	Nelson	2.45	207	P	Pn	23 42 00.4	+1.6
RUGZ	Raukumara Rang	2.46	65	P	Pn	23 41 59.1	0.0
TKNZ	Takaka Hill	2.47	216	P	Pn	23 42 00.1	+1.1
TUWZ	Tuamarina	2.49	196	P	Pn	23 42 01.4	+2.0
QRZ	Quartz Range	2.53	224	P	Pn	23 42 00.5	+0.9
QRZ	Quartz Range	2.53	224	P	S	23 42 35.7	-1.0
QRZ	Quartz Range	2.53	224	P	Pn	23 42 00.6	+0.9
PLWZ	Palliser	2.54	173	P	Pn	23 42 01.1	+1.3
TWGZ	Tauwhareparae	2.59	71	P	Pn	23 42 02.5	+2.0
HAZ	Te Kaha	2.63	62	P	Pn	23 42 00.8	0.0
CNGZ	Carnagh Statio	2.67	79	P	Pn	23 42 03.0	+1.8
CMWZ	Cape Campbell	2.75	190	P	Pn	23 42 04.3	+2.3
PKGZ	Pakihiroa	2.79	66	P	Pn	23 42 03.1	+0.7
PUZ	Puketiti	2.83	71	P	Pn	23 42 04.0	+1.0
MRNZ	Matariki Terra	2.85	214	P	Pn	23 42 04.2	+1.1
WMGZ	Waiomatatini S	3.04	67	P	Pn	23 42 05.9	+0.7
MXZ	Matakaoa Point	3.09	62	P	Pn	23 42 07.3	+1.6
MXZ	Matakaoa Point	3.09	62	P	Pn	23 42 06.7	+1.0
THZ	Tophouse	3.10	208	P	Pn	23 42 07.2	+1.3
KHZ	Kahutara	3.52	196	P	Pn	23 42 12.0	+1.6
KHZ	Kahutara	3.52	196	P	S	23 42 54.4	-1.7
KHZ	Kahutara	3.52	196	P	Pn	23 42 12.0	+1.6
DSZ	Denniston Nort	3.57	220	P	Pn	23 42 12.0	+0.9
GVZ	Greta Valley S	4.16	199	P	Pn	23 42 19.1	+1.1
LTZ	Lake Taylor	4.22	207	P	Pn	23 42 20.0	+1.2
AMCZ	Amberley	4.46	201	P	Pn	23 42 22.5	+1.0
INZ	Inchbonnie	4.50	214	P	Pn	23 42 22.7	+0.7
OXZ	Oxford	4.78	206	P	Pn	23 42 26.1	+0.6
OKCZ	Okains Bay	4.87	196	P	Pn	23 42 27.6	+1.0
MQZ	McQueen's Vall	4.95	199	P	Pn	23 42 27.7	+0.2
AKCZ	Akaroa Harbour	5.04	196	P	Pn	23 42 29.5	+0.8
WVZ	Waitaha Valley	5.09	216	P	Pn	23 42 30.1	+0.8
RACZ	Rakaia	5.11	203	P	Pn	23 42 30.2	+0.7
MHCZ	Mount Hutt	5.13	208	P	Pn	23 42 30.5	+0.7
WACZ	Wakanui South	5.40	204	P	Pn	23 42 34.1	+1.1
GCSZ	Gaunt Creek Bo	5.47	217	P	Pn	23 42 34.3	+0.3
RPZ	Rata Peaks	5.48	210	P	Pn	23 42 34.8	+0.7
RPZ	Rata Peaks	5.48	210	S	S	23 43 37.9	-1.1
RPZ	Rata Peaks	5.48	210	P	Pn	23 42 34.8	+0.7
ARCZ	Arundel	5.63	208	P	Pn	23 42 36.5	+0.8
FOZ	Fox Glacier	5.88	219	P	Pn	23 42 39.4	+0.3
TMZ	Timaru	6.07	207	P	Pn	23 42 42.8	+1.3
LBZ	Lake Benmore	6.38	212	P	Pn	23 42 46.1	+0.7
ODZ	Otahua Downs	6.77	206	P	Pn	23 42 51.6	+1.3
ODZ	Otahua Downs	6.77	206	P	Pn	23 42 51.5	+1.2
JCZ	Jackson Bay	6.78	220	P	Pn	23 42 50.4	-0.2
JCZ	Jackson Bay	6.78	220	P	Pn	23 42 50.6	0.0
WKZ	Wanaka	7.24	215	P	Pn	23 42 56.9	+0.7
EAZ	Earnscleugh	7.43	212	P	Pn	23 42 59.2	+0.5
TUZ	Tuapeka	7.91	208	P	Pn	23 43 06.5	+1.7
MLZ	Mavora Lakes	8.06	216	P	Pn	23 43 08.2	+1.6
APZ	The Paps	9.27	211	P	Pn	23 43 23.8	+1.7

IDC 13 23:41:24.1±1.9**, 4˚.33N×126˚.90E, h0**km**, mb3.6/4, mbtmp3.6/4, MS3.3/1, Error ellipse: s-maj=159.3km s-min=22.4km az=66.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr 0.7nm,0.5s,baz=343,slow=10.0,SNR=8.5 0.7nm,0.5s	25.21	163	P	P	23 46 51.7	0.0
ASAR	Alice Springs 0.3nm,0.3s,baz=352,slow=7.6,SNR=5.8 0.3nm,0.3s	28.65	167	P	P	23 47 22.7	0.0
MKAR	Makanchi Array 0.2nm,0.4s,baz=114,slow=8.0,SNR=7.8 0.2nm,0.4s	57.16	325	P	P	23 51 13.2	+0.4
YAK	Yakutsk comp=Z,26nm,19.6s,baz=264,slow=38	57.61	2	LR	LR	00 18 24.3	
KURBB	Kurchatov Arra 0.3nm,0.5s,baz=131,slow=6.5,SNR=1.7 0.3nm,0.5s	61.33	327	P	P	23 51 40.9	-0.6

*IDC **13** 23:51:58.3±2.4, 34˚.07N×22˚.84E, h0km, mb4.1/6, mbtmp3.8/12, ML1.2/2, MS3.5/6, Error ellipse: s-maj=42.4km s-min=19.4km az=18.0*
*THE **13** 23:52:11.0, 35˚N×74˚×2˚3E±3˚8, h11km±30km, MLh2.7/3*
ISC 13 23:51:59.0±1.3**, 34˚.0N**±0˚.1×**22˚.81E**±0˚.07**, h10**km**, n27,** σ1**9**/24**, mb4.0/6, MS3.8/6, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GVD	Gavdhos	1.38	50	P	Pn	23 52 24.2	-0.2
IMMV	Iera Moni Meta	1.79	32	P	Pn	23 52 29.8	-0.2
VAM	Vamos	1.85	38	P	Pn	23 52 31.0	+0.1
IDI	Anoyia 2.9nm,0.3s,baz=255,slow=11,SNR=26	2.18	52	Pn	Pn	23 52 35.8	+0.4
IDI					Sn	Sn	23 53 02.4	0.0
	2.7nm,0.3s,baz=278,slow=21,SNR=3.7 7.5nm,0.3s						
IDI	Anoyia	2.18	52	P	Pn	23 52 36.8	+1.5
KTHA	Kythira Island	2.31	5	P	Pn	23 52 38.9	+1.7
NPS	Neapolis	2.66	60	P	Pn	23 52 44.0	+2.0
VLI	Veliai	2.76	2	P	Pn	23 52 44.8	+1.4
PYL	PYLOS	3.06	344	P	Pn	23 52 47.4	-0.2
THERA	Ancient Thera,	3.26	41	P	Pn	23 52 49.3	-0.8
VAE	Valguarnera 0.2nm,0.3s,baz=164,slow=20,SNR=1.5	7.68	300	Pn	Pn	23 53 53.3	+2.3
VAE					Sn	Sn	23 55 18.1	+0.1
	0.4nm,0.3s,baz=88,slow=15,SNR=1.9 2.3nm,0.5s						
BRTR	Keskin Array B 0.8nm,0.8s,baz=236,slow=13,SNR=5.1	10.42	53	Pn	Pn	23 54 29.1	+0.5
MMAI	Mount Meron Ar 0.3nm,0.3s,baz=270,slow=12,SNR=6.2	10.56	92	Pn	Pn	23 54 30.0	-0.5
EIL	Elat 6.1nm,0.9s,baz=344,slow=18,SNR=1.2	11.18	109	Pn	Pn	23 54 39.1	+0.2
EIL					Sn	Sn	23 56 44.3	+0.4
	0.2nm,0.3s,baz=239,slow=20,SNR=1.1						
AKASG	Malin Array Be 0.9nm,0.7s,baz=206,slow=9.4,SNR=5.4	17.39	14	P	Pn	23 56 01.2	-0.4
HFS	Hagfors 1.9nm,0.6s,baz=188,slow=5.5,SNR=1.8 1.9nm,0.6s	26.87	350	P	P	23 57 39.4	-0.3
FINES	FINESS Array B 8.6nm,1.3s,baz=199,slow=10,SNR=3.7 8.6nm,1.3s	27.59	3	P	P	23 57 45.5	-0.6
MBAR	Mbarara comp=Z,23nm,18.7s,baz=300,slow=35	35.17	166	LR	LR	00 12 31.1	
ARCES	ARCESS Array B 1.4nm,0.7s,baz=183,slow=7.9,SNR=3.8 1.4nm,0.7s	35.67	2	P	P	23 58 55.5	-1.5
KURBB	Kurchatov Arra 0.6nm,0.3s,baz=272,slow=8.6,SNR=2.6 0.6nm,0.3s	43.39	50	P	P	00 00 01.8	+0.3
MKAR	Makanchi Array 0.8nm,0.3s,baz=268,slow=7.5,SNR=24 0.8nm,0.3s	46.06	55	P	P	00 00 23.6	+0.7
ZALV	Zalesovo Beam 0.6nm,0.3s,baz=270,slow=8.1,SNR=3.5 0.6nm,0.3s	47.24	45	P	P	00 00 31.7	-0.4
BRDH	Bariadhala comp=Z,83nm,18.4s,baz=166,slow=40	60.64	81	LR	LR	00 31 55.2	
FRB	Frobisher Bay comp=Z,20nm,18.8s,baz=133,slow=39	60.71	329	LR	LR	00 31 35.4	
NEW	Newport comp=Z,35nm,18.5s,baz=338,slow=39	90.66	335	LR	LR	00 50 14.8	
ELK	Elko comp=Z,34nm,19.1s,baz=332,slow=38	96.22	329	LR	LR	00 53 02.8	
NVAR	Mina Array Bea comp=Z,26nm,18.9s,baz=277,slow=37	99.44	330	LR	LR	00 53 14.9	

*ATH **14** 00:00:00.9, 36˚.95N×27˚.32E, h15km±6km, ML3.1/2, Latitude uncertainty: 4 km; Longitude uncertainty: 7 km*
*ISK **14** 00:00:01.1, 36˚.97N×27˚.38E, h5km±8km, ML2.8/25*
*AFAD **14** 00:00:01.6, 37˚.00N×27˚.42E, h21km±3km, ML2.9*
*THE **14** 00:00:02.7, 37˚N±3˚×2˚7E±˚, h9km±5km, M2.7/9, MLh2.7/9*
ISC 14 00:00:01.3±0.8**, 36˚.99N**±0˚.02×**27˚.40E**±0˚.02**, h13**km±5km**, n72,** σ0**50**/87**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BODA	Bodrum-Mula	0.05	27	Pg	Pg	00 00 03.6	-0.1
BODA				Sg	Sg	00 00 05.1	-0.3
BODT	Bodrum	0.10	312	P	Pb	00 00 05.2	0.0
BODT				S	Sg	00 00 07.3	+0.9
BODT	Bodrum	0.10	312	Pg	Pb	00 00 05.2	0.0
YKAV	Yalikavak-Bodr	0.16	323	Pg	Pg	00 00 05.0	-0.1
YKAV				Sg	Sg	00 00 08.1	+0.3
DAT	Datca	0.30	152	Pg	Pg	00 00 07.1	-0.4
DAT				Sg	Sg	00 00 11.6	0.0
DATC	Datca-Mugla	0.31	139	Pg	Pg	00 00 07.7	0.0
YAZI	Mula-Datşa-	0.32	173	P	Pg	00 00 07.0	-0.7
DIDI	Didim-Aydin	0.40	341	Pg	Pg	00 00 09.9	+0.6
MLSB	Milas	0.42	45	Pg	Pb	00 00 10.4	-0.3
MLSB				Sg	Sb	00 00 17.3	+0.3
DDIM	Aydin, Didim	0.48	344	P	Pg	00 00 11.1	+0.3
TURN	Turunc	0.71	108	Pg	Pg	00 00 15.4	+0.4
TURN				Sg	Sn	00 00 26.5	-1.3
TURN	Turunc	0.71	108	P	Pg	00 00 14.9	-0.1
YER	Yerkesik	0.72	78	P	Pb	00 00 15.9	+0.2
YER				S	Sb	00 00 26.1	+0.6
YER	Yerkesik	0.72	78	Pg	Pb	00 00 15.6	-0.1
GCAM	G?zelcaml?	0.72	349	Pg	Pb	00 00 15.6	-0.1
GCAM	G?zelcaml?	0.72	349	P	Pb	00 00 15.8	+0.2
GCAM				S	Sb	00 00 26.2	+0.7
GCAM				IAML		00 00 28.0	
	comp=N,546nm,0.3s						
AYDN	Tasoluk	0.77	30	P	Pb	00 00 16.6	+0.1
AYDN				S	Sb	00 00 26.5	-0.5
AYDN				IAML		00 00 30.0	
	comp=E,457nm,0.3s						
AYDN				IAML		00 00 32.0	
	comp=N,488nm,0.6s						
SMG	Samos	0.84	328	P	Pg	00 00 17.2	-0.4
SMG				S	Sb	00 00 29.2	+0.1
SMG	Samos	0.84	328

14nm,0.4s,baz=18,slow=20,SNR=2.1
9.1nm,0.3s
FITZ **Fitzroy Crossi** **11.26 196** P Pn 00 07 20.5 -1.1
0.4nm,0.3s,baz=16,slow=10,SNR=26
FITZ S Sn 00 09 15.9 -10
1.5nm,0.3s,baz=117,slow=21,SNR=6.2
1.2nm,0.4s
WRA **Warramunga Arr** **13.75 158** P Pn 00 07 54.1 -0.9
0.1nm,0.3s,baz=336,slow=12,SNR=5.0
WRA S Sn 00 10 19.6 -6.7
0.5nm,0.3s,baz=344,slow=21,SNR=4.4
0.2nm,0.3s
ASAR **Alice Springs** **17.08 164** P P 00 08 38.8 +1.2
0.2nm,0.3s,baz=340,slow=12,SNR=9.2
0.7nm,0.5s
MKAR **Makanchi Array** **67.75 327** P P 00 15 32.1 0.0
0.2nm,0.5s,baz=118,slow=7.6,SNR=4.9
0.2nm,0.5s

*NEIC **14** 00:08:01.7±1.6,21°.52S±0°.06×66°.68W±0°.08, h197km±7km, mb4.2/5, ML4.0(GUC), Error ellipse: s-maj=11.4km s-min=8.0km az=74.0*
*GUC **14** 00:08:01.9±0.7,21°.39S×66°.85W, h213km±9km, ML4.0*
*IDC **14** 00:08:01.3±1.3,21°.41S×66°.74W, h208km±14km, mb3.2/3, mbtmp3.8/8, Error ellipse: s-maj=23.0km s-min=12.6km az=83.0*
*SCB **14** 00:08:02.7±1.5,21°.48S×66°.87W, h211km±11km, MB4.3, ML4.1/3, Error ellipse: s-maj=6.1km s-min=4.1km az=0.0*
*SJA **14** 00:08:02.2±2.1,21°.38S×66°.95W, h223km±30km, ML3.5, MW3.7*

ISC 14 00:08:01.7±0.7,**21°.45S**±0°.05×**66°.84W**±0°.04,**h218**km±6km, **n98**,σ1§**54**/113,**mb3.5/3**,**3C-2D**,**Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MOCB	**Mochara**	**1.14**	**80**	P		**Pn**	**00 08 35.6**	**+0.8**
MOCB				S		**S**	**00 09 00.2**	**-0.2**
MOCB				IAML			00 09 00.8	
	2µm,0.4s							
YJA	**Yavi**	**1.43**	**121**	⇓*e*P		**Pn**	**00 08 38.1**	**+1.1**
YJA	**Yavi**	**1.43**	**121**	*i* P		**Pn**	**00 08 38.4**	**+1.3**
YJA				IAML			00 09 11.3	
	comp=Z,13nm,0.7s							
YJA	**Yavi**	**1.43**	**121**	P		**Pn**	**00 08 38.3**	**+1.3**
AF01	**San Pedro de A**	**1.94**	**219**	Pn		**Pn**	**00 08 40.8**	**-0.5**
AF01	**San Pedro de A**	**1.94**	**219**	*e*P		**Pn**	**00 08 42.9**	**+1.6**
AF01				IAML			00 09 17.0	
	comp=E,190nm,0.8s							
PB09	**IPOC Station P**	**2.26**	**261**			**Pn**	**00 08 44.4**	**0.0**
PB09				Sn		**S**	**00 09 18.2**	**+0.8**
PB09	**IPOC Station P**	**2.26**	**261**	*e*P		**Pn**	**00 08 45.8**	**+1.4**
PB09				*e*S		**S**	**00 09 18.7**	**+1.2**
PB09	**IPOC Station P**	**2.26**	**261**	*i* P		**Pn**	**00 08 46.2**	**+1.8**
PB09				IAML			00 09 21.6	
	comp=Z,54nm,0.4s							
PB09	**IPOC Station P**	**2.26**	**261**	P		**Pn**	**00 08 46.0**	**+1.6**
PB01	**IPOC Station P**	**2.50**	**279**			**Pn**	**00 08 46.6**	**-0.3**
PB01				Sn		**S**	**00 09 22.0**	**+0.1**
PB01	**IPOC Station P**	**2.50**	**279**	*e*P		**Pn**	**00 08 47.9**	**+1.0**
PB01				IAML			00 09 22.8	
	comp=N,270nm,0.2s							
PB01	**IPOC Station P**	**2.50**	**279**	*i* P		**Pn**	**00 08 46.9**	**0.0**
PB01				IAML			00 09 24.2	
	comp=Z,181nm,0.2s							
PB01	**IPOC Station P**	**2.50**	**279**	P		**Pn**	**00 08 48.0**	**+1.1**
PB01				S		**S**	**00 09 22.1**	**+0.3**
PB01				IAML			00 09 22.7	
	comp=Z,295nm,0.2s							
PB08	**IPOC Station P**	**2.52**	**301**			**Pn**	**00 08 48.3**	**+0.9**
PB08				Sn		**S**	**00 09 23.7**	**+0.9**
PB08	**IPOC Station P**	**2.52**	**301**	*e*P		**Pn**	**00 08 48.5**	**+1.0**
PB08				*e*S		**S**	**00 09 23.4**	**+0.6**
PB08				IAML			00 09 25.3	
	comp=E,246nm,0.9s							
PB08	**IPOC Station P**	**2.52**	**301**	*i* P		**Pn**	**00 08 48.0**	**+0.6**
PB08				IAML			00 09 24.9	
	comp=Z,81nm,0.7s							
PB08	**IPOC Station P**	**2.52**	**301**	P		**Pn**	**00 08 48.6**	**+1.2**
PB03	**IPOC Station P**	**2.77**	**257**			**Pn**	**00 08 50.5**	**+0.5**
PB03				Sn		**S**	**00 09 24.9**	**-2.4**
PB03	**IPOC Station P**	**2.77**	**257**	*e*P		**Pn**	**00 08 51.0**	**+1.1**
PB03				*e*S		**S**	**00 09 26.4**	**-0.9**
PB03				IAML			00 09 26.6	
	comp=N,232nm,0.2s							
PB03	**IPOC Station P**	**2.77**	**257**	*i* P		**Pn**	**00 08 50.4**	**+0.5**
PB03				IAML			00 09 32.1	
	comp=Z,196nm,0.4s							
SALTA		**2.80**	**171**	⇓*e*P		**Pn**	**00 08 52.7**	**+2.1**
SALTA				*e*S		**S**	**00 09 31.6**	**+2.9**
SALTA		**2.80**	**171**	*i* P		**Pn**	**00 08 53.3**	**+2.7**
SALTA				IAML			00 09 44.2	
	comp=Z,30nm,1.1s							
PB06	**IPOC Station P**	**2.82**	**243**			**Pn**	**00 08 52.4**	**+1.9**
PB06	**IPOC Station P**	**2.82**	**243**	*e*P		**Pn**	**00 08 52.6**	**+2.1**
PB06				*e*S		**S**	**00 09 28.2**	**-0.3**
PB06				IAML			00 09 32.8	
	comp=N,167nm,0.4s							
PB06	**IPOC Station P**	**2.82**	**243**	*i* P		**Pn**	**00 08 52.1**	**+1.6**
PB06				IAML			00 09 33.9	
	comp=Z,79nm,0.1s							
PB06	**IPOC Station P**	**2.82**	**243**	P		**Pn**	**00 08 52.0**	**+1.5**
GO01	**Chusmiza**	**2.83**	**308**			**Pn**	**00 08 51.5**	**+0.7**
GO01	**Chusmiza**	**2.83**	**308**	*e*P		**Pn**	**00 08 51.6**	**+0.7**
GO01				*e*S		**S**	**00 09 31.8**	**+2.8**
GO01				IAML			00 09 35.0	
	comp=N,371nm,0.1s							
GO01	**Chusmiza**	**2.83**	**308**	*i* P		**Pn**	**00 08 51.1**	**+0.3**
GO01				IAML			00 09 35.4	
	comp=Z,76nm,0.1s							
GO01	**Chusmiza**	**2.83**	**308**	P		**Pn**	**00 08 51.6**	**+0.7**
PB07	**IPOC Station P**	**2.85**	**264**			**Pn**	**00 08 51.6**	**+0.8**
PB07	**IPOC Station P**	**2.85**	**264**	*e*P		**Pn**	**00 08 51.6**	**+0.8**
PB07				IAML			00 09 28.2	
	comp=E,232nm,0.2s							
PB07	**IPOC Station P**	**2.85**	**264**	*i* P		**Pn**	**00 08 51.0**	**+0.2**
PB07				IAML			00 09 31.2	
	comp=Z,129nm,0.1s							
PB02	**IPOC Station P**	**2.85**	**272**			**Pn**	**00 08 50.6**	**-0.1**
PB02	**IPOC Station P**	**2.85**	**272**	⇑*e*P		**Pn**	**00 08 51.2**	**+0.5**
PB02				IAML			00 09 28.4	
	comp=N,527nm,0.4s							
PB02	**IPOC Station P**	**2.85**	**272**	*i* P		**Pn**	**00 08 50.7**	**-0.1**
PB02				IAML			00 09 30.7	
	comp=Z,426nm,0.2s							
PB02	**IPOC Station P**	**2.85**	**272**	P		**Pn**	**00 08 51.4**	**+0.7**
PB02				S		**S**	**00 09 27.5**	**-1.3**
PB02				IAML			00 09 28.2	
	comp=Z,393nm,0.5s							
SOEO	**Opoqueri**	**3.03**	**341**	P		**Pn**	**00 08 55.1**	**+1.9**
PB11	**IPOC Station P**	**3.12**	**302**			**Pn**	**00 08 54.1**	**+0.2**
PB11	**IPOC Station P**	**3.12**	**302**	*e*P		**Pn**	**00 08 54.1**	**+0.2**
PB11	**IPOC Station P**	**3.12**	**302**	*i* P		**Pn**	**00 08 53.5**	**-0.5**
PB11				IAML			00 09 35.9	
	comp=Z,224nm,0.2s							
PB11	**IPOC Station P**	**3.12**	**302**	P		**Pn**	**00 08 54.2**	**+0.2**
PATCX	**Punta Patache**	**3.15**	**281**			**Pn**	**00 08 54.5**	**+0.3**
PATCX	**Punta Patache**	**3.15**	**281**	*e*P		**Pn**	**00 08 54.5**	**+0.3**
PATCX	**Punta Patache**	**3.15**	**281**	*i* P		**Pn**	**00 08 54.1**	**-0.1**
PATCX				IAML			00 09 37.0	
	comp=Z,84nm,0.2s							
TA01	**Diego Aracena**	**3.24**	**285**	*e*P		**Pn**	**00 08 54.8**	**-0.3**
TA01				IAML			00 09 34.9	
	comp=E,158nm,0.3s							
TA01	**Diego Aracena**	**3.24**	**285**	*i* P		**Pn**	**00 08 53.6**	**-1.5**
TA01				IAML			00 09 38.2	
	comp=Z,56nm,0.2s							
PB05	**IPOC Station P**	**3.41**	**245**			**Pn**	**00 08 57.8**	**+0.5**
PB05	**IPOC Station P**	**3.41**	**245**	⇑*e*P		**Pn**	**00 08 57.8**	**+0.5**
PB05	**IPOC Station P**	**3.41**	**245**	*i* P		**Pn**	**00 08 57.4**	**+0.1**
PB05				IAML			00 09 43.2	
	comp=Z,64nm,0.4s							
SOET	**ToroToro**	**3.45**	**17**	P		**Pn**	**00 08 58.8**	**+0.8**
SLA	**San Lorenzo**	**3.48**	**160**	*e*P		**Pn**	**00 09 00.1**	**+1.9**
SLA	**San Lorenzo**	**3.48**	**160**	*i* P		**Pn**	**00 09 01.7**	**+3.5**
SLA				IAML			00 09 53.5	
	comp=Z,14nm,0.9s							
PB16	**IPOC Station P**	**3.98**	**321**			**Pn**	**00 09 04.6**	**0.0**
PB16	**IPOC Station P**	**3.98**	**321**	⇑*e*P		**Pn**	**00 09 05.8**	**+1.2**
PB16	**IPOC Station P**	**3.98**	**321**	*i* P		**Pn**	**00 09 05.2**	**+0.6**
PB16				IAML			00 09 56.1	
	comp=Z,57nm,0.8s							
PB16	**IPOC Station P**	**3.98**	**321**	P		**Pn**	**00 09 06.0**	**+1.4**
PB10	**IPOC Station P**	**4.00**	**238**			**S**	**00 09 51.0**	**-2.2**
PB10	**IPOC Station P**	**4.00**	**238**	*e*P		**Pn**	**00 09 04.2**	**0.0**
PB10	**IPOC Station P**	**4.00**	**238**	*i* P		**Pn**	**00 09 04.2**	**0.0**
PB10				IAML			00 10 00.8	
	comp=Z,30nm,0.4s							
PB12	**IPOC Station P**	**4.32**	**310**			**Pn**	**00 09 07.1**	**-1.2**
PB12	**IPOC Station P**	**4.32**	**310**	*i* P		**Pn**	**00 09 06.6**	**-1.7**
PB12				IAML			00 10 04.9	
	comp=Z,54nm,0.1s							
AP01	**Chacalluta**	**4.49**	**312**	*i* P		**Pn**	**00 09 09.9**	**-0.4**
AP01				IAML			00 10 04.9	
	comp=Z,122nm,0.1s							
PB14	**IPOC Station P**	**4.56**	**225**			**Pn**	**00 09 11.3**	**0.0**
PB14	**IPOC Station P**	**4.56**	**225**	*i* P		**Pn**	**00 09 11.2**	**-0.2**
PB14				IAML			00 10 06.8	
	comp=Z,136nm,0.5s							
PB14	**IPOC Station P**	**4.56**	**225**	P		**Pn**	**00 09 11.4**	**0.0**
PB18	**Visviri**	**4.57**	**327**			**Pn**	**00 09 13.8**	**+1.9**
BBOJ	**La Paz, Jacaqu**	**4.63**	**344**	P		**Pn**	**00 09 14.8**	**+2.3**
SOEJ	**Jacaque**	**4.63**	**344**	P		**Pn**	**00 09 14.8**	**+2.3**
FSA	**Cafayete**	**4.71**	**170**	*i* P		**Pn**	**00 09 15.8**	**+2.7**
BBOE	**La Paz, Chanca**	**4.73**	**347**	P		**Pn**	**00 09 15.7**	**+1.8**
BBOD	**La Paz, Gloria**	**5.06**	**341**	P		**Pn**	**00 09 19.6**	**+1.6**
LPAZ	**La Paz**	**5.27**	**346**	P		**Pn**	**00 09 21.6**	**+0.9**
	comp=Z,13nm,0.5s,baz=142,slow=6.8,SNR=52							
LPAZ				S		**S**	**00 10 21.1**	**-1.8**
	comp=Z,22nm,1.0s,baz=313,slow=15,SNR=8.4							
LPAZ	**La Paz**	**5.27**	**346**	*i* P		**Pn**	**00 09 22.1**	**+1.4**
LPAZ				IAML			00 10 25.8	
	comp=Z,14nm,1.1s							
AC02	**Maricunga**	**5.76**	**201**			**Pn**	**00 09 26.2**	**-0.4**
AC01	**Pan de Azucar**	**5.81**	**216**			**Pn**	**00 09 26.1**	**-0.7**
AC06	**Mina Casimiro**	**6.70**	**208**	Pn		**Pn**	**00 09 36.8**	**-1.5**
GO03	**Copiapo**	**6.86**	**206**	Pn		**Pn**	**00 09 39.2**	**-1.0**
SIV	**San Ignacio**	**7.70**	**46**	P		**Pn**	**00 09 49.6**	**-1.6**
	comp=Z,21nm,0.8s,baz=229,slow=12,SNR=89							
SIV				S		**S**	**00 11 12.8**	**-6.0**
	comp=Z,3.5nm,0.8s,baz=236,slow=14,SNR=3.4							
PTLB	**Pontes e Lacer**	**9.44**	**52**			**Pn**	**00 10 12.5**	**-1.0**
CPUP	**Villa Florida**	**9.97**	**121**	P		**Pn**	**00 10 20.6**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=304,slow=12,SNR=6.3							
CO03	**El Pedregal**	**9.97**	**199**	Pn		**Pn**	**00 10 19.2**	**-1.2**
CFA	**Coronel Fontan**	**10.19**	**187**	P		**Pn**	**00 10 22.6**	**-0.6**
	comp=Z,1.7nm,0.4s,baz=66,slow=22,SNR=18							
CFA				S		**S**	**00 12 10.9**	**-6.7**
	comp=Z,1.5nm,0.4s,baz=307,slow=20,SNR=6.0							
VILB	**Vilhena**	**10.56**	**38**			**Pn**	**00 10 28.7**	**+0.6**
BO01	**Tunca**	**13.43**	**195**	P		**P**	**00 11 06.0**	**0.0**
BI02	**San Fabin de**	**15.65**	**193**	IAmb		IAmb	00 11 34.7	
	comp=Z,12nm,0.9s							
LR05	**Currie**	**19.23**	**192**	P		**P**	**00 12 11.0**	**+1.4**
PLCA	**Paso Flores**	**19.48**	**188**	P		**P**	**00 12 13.0**	**+0.6**
	comp=Z,1.5nm,0.5s,baz=343,slow=9.0,SNR=9.1							
PLCA	**Paso Flores**	**19.48**	**188**	P		**P**	**00 12 13.6**	**+1.3**
PLCA				IAmb		IAmb	00 12 16.9	
	comp=Z,12nm,1.3s							
TXAR	**Lajitas Array**	**61.71**	**324**	P		**P**	**00 17 58.0**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=150,slow=8.6,SNR=3.8							
	comp=Z,0.3nm,0.7s							
P18A	**Preston Nutter**	**73.03**	**326**	P		**P**	**00 19 10.8**	**+2.6**
P18A				IAmb		IAmb	00 19 11.3	
	comp=Z,2.5nm,0.7s							
CCUT	**Cedar City**	**73.21**	**323**	P		**P**	**00 19 11.6**	**+2.4**
TORD	**Torodi Ar. Bea**	**75.53**	**69**	P		**P**	**00 19 22.1**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=242,slow=8.0,SNR=6.8							
	comp=Z,0.9nm,0.7s							
YKA	**Yellowknife Ar**	**91.79**	**340**	P		**P**	**00 20 45.5**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=132,slow=3.8,SNR=8.8							
	comp=Z,0.4nm,0.7s							
WRA	**Warramunga Arr**	**133.94**	**208**	PKP		**PKPdf**	**00 26 54.0**	**+0.3**
	comp=Z,0.1nm,0.5s,baz=148,slow=1.9,SNR=1.1							
ZALV	**Zalesovo Beam**	**141.07**	**27**	PKP		**PKiKP**	**00 27 07.6**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=316,slow=23,SNR=2.7							
MKAR	**Makanchi Array**	**144.44**	**37**	PKP		**PKPdf**	**00 27 12.3**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=318,slow=3.8,SNR=15							

*NEIC **14** 00:13:45.9±1.6, 16°.18N±0°.06×120°.1E±0°.1, h37km±7km, mb4.5/34, Error ellipse: s-maj=16.9km s-min=7.6km az=75.0*
*MAN **14** 00:13:46.0, 16°.25N×119°.71E, h31km, MS4.6*
MAN INTENSITY IV - BANI AND SUAL PANGASINAN; . INTENSITY III - ALAMINOS CITY BOLINAO AND LINGAYEN PANGASINAN; . INTENSITY II - DAGUPAN CITY AND SAN CARLOS CITY PANGASINAN; . INTENSITY I - BAGUIO CITY; VILLASIS PANGASINAN.
*IDC **14** 00:13:53.5±1.2, 16°.07N×120°.05E, h115km±12km, mb3.6/22, mbtmp4.0/23, MS3.2/20, Error ellipse: s-maj=20.6km s-min=10.5km az=70.0*
*DJA **14** 00:14:02.0±1.6, 16°N×10°×12°0E±°, h204km±14km, M5.1/27, mb4.5/27, mB5.8/11, Mw(mB)5.3/11, MwMwp6.2/1, Mwp6.2/1*

ISC 14 00:13:47.5±0.4,**16°.29N**±0°.05×**120°.07E**±0°.07,**h50**km,**n106**, σ1§**86**/90,**mb4.4**/48,**MS3.2**/18,**1D**,**Luzon**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TGY	**Tagaytay City**	**2.33**	**159**	P		**Pn**	**00 14 27.1**	**+3.6**
	3µm,0.8s,baz=286,slow=1.8,SNR=40							
TGY				S		**Sn**	**00 14 56.2**	**+5.2**
	4µm,0.7s,baz=261,slow=17,SNR=11							
TGY				LR		LR	00 15 32.5	
	comp=Z,458nm,19.0s,baz=206,slow=46							
TGY	**Tagaytay City**	**2.33**	**159**	*e*P		Pn	00 14 28.1	+4.6
TGY				*e*S		**Sn**	**00 14 57.7**	**+6.7**
GQP	**Guinayangan**	**3.30**	**136**	*e*P		Pn	00 14 28.3	-8.4
GQP				*e*S		**Sn**	**00 15 17.0**	**+2.2**
RCP	**Roxas**	**5.37**	**151**	*e*P		Pn	00 15 11.7	+6.5
TWG	**Pinlang**	**6.56**	**8**	Pn		**Pn**	**00 15 20.1**	**-1.3**
TPUB	**Ta-pu**	**6.99**	**4**	Pn		**Pn**	**00 15 27.3**	**0.0**
YULB	**Yu-li**	**7.16**	**9**	Pn		**Pn**	**00 15 26.9**	**-2.7**
SSLB	**Suanglung**	**7.50**	**6**	Pn		**Pn**	**00 15 33.9**	**-0.5**
NACB	**Ninganchiao**	**7.97**	**10**	Pn		**Pn**	**00 15 39.6**	**-1.1**
KNMB	**Chin-men Tao**	**8.28**	**349**	Pn		**Pn**	**00 15 44.1**	**-0.9**
YHNB	**Yeheng**	**8.42**	**8**	Pn		**Pn**	**00 15 45.0**	**-2.0**
QIZ	**Qiongzhong**	**10.12**	**287**	P		**Pn**	**00 16 11.4**	**+1.2**
QIZ				S		**Sn**	**00 18 02.8**	**+0.4**
QIZ				LR		LR		
	comp=N,240nm,9.4s							
QIZ				LR		LR		
	comp=E,310nm,13.7s							
QIZ				LR		LR		
	comp=Z,410nm,17.3s							
MYLDM	**Lahad Datu**	**11.15**	**188**	P		Pn	00 16 36.7	+12
JOW	**Kunigami**	**12.96**	**35**	LR		LR	00 22 30.3	
	comp=Z,65nm,18.5s,baz=284,slow=39							
TOLI2	**Tolitoli**	**15.10**	**177**			**Pn**	**00 17 12.2**	**-5.6**
SBUM	**Sibu**	**15.78**	**210**			**Pn**	**00 17 22.4**	**-4.1**
SBUM	**Sibu**	**15.78**	**210**	P		**P**	**00 17 30.8**	**+1.2**
APSI	**Ampana**	**17.17**	**175**	P		P	00 17 54.5	+10
	comp=Z,37nm,0.8s							
MMSI	**Mamuju**	**18.90**	**184**	P		**Pn**	**00 18 05.8**	**+0.7**
	comp=Z,56nm,1.0s							
JNU	**Nakatsue**	**19.40**	**28**	P		**Pn**	**00 18 12.4**	**+1.5**
	comp=Z,111nm,0.8s,baz=147,slow=7.5,SNR=4.0							
JNU				LR		LR	00 25 53.2	
	comp=Z,49nm,19.4s,baz=210,slow=37							
CMAR	**Chiang Mai Arr**	**20.28**	**279**	P		**P**	**00 18 20.8**	**+1.7**
	comp=Z,4.2nm,0.7s,baz=93,slow=8.0,SNR=28							
CMAR				LR		LR	00 26 13.8	
	comp=Z,143nm,19.7s,baz=100,slow=36							
	comp=Z,4.2nm,0.7s							
CHTO	**Chiang Mai**	**20.30**	**280**	P		**P**	**00 18 21.3**	**+1.9**
BBKI	**Banjar Baru**	**20.30**	**195**	P		**P**	**00 18 19.8**	**+0.5**
XAN	**Xi'an**	**20.32**	**332**	⇓P		Pn	00 18 26.0	+4.1
XAN				sP		sP	00 18 37.9	+0.7
XAN				pmax		pmax		
	comp=Z,6.0nm,1.0s							
XAN				LR		LR		
	comp=N,210nm,8.9s							
XAN				LR		LR		
	comp=E,260nm,12.4s							
XAN				LR		LR		
	comp=Z,180nm,12.4s							
KAPI	**Kappang**	**21.17**	**181**	P		**P**	**00 18 27.8**	**-0.9**
	comp=Z,5.3nm,0.5s,baz=84,slow=22,SNR=2.1							
KAPI				LR		LR	00 28 26.8	
	comp=Z,43nm,18.9s,baz=7.5,slow=42							
	comp=Z,5.3nm,0.5s							
KSRS	**Korea Array**	**22.19**	**17**	P		**P**	**00 18 42.5**	**+3.0**
	comp=Z,1.4nm,0.5s,baz=306,slow=49,SNR=2.8							
KSRS				LR		LR	00 28 26.3	
	comp=Z,46nm,19.8s,baz=195,slow=39							
	comp=Z,1.4nm,0.5s							
TPI	**Tanjungpandan**	**22.56**	**214**	P		**P**	**00 18 44.2**	**+0.6**
	comp=Z,19nm,1.1s							
JCJ	**Chichijima**	**23.15**	**59**	LR		LR	00 26 55.6	
	comp=Z,40nm,21.9s,baz=170,slow=34							
GUMO	**Guam**	**24.11**	**93**	LR		LR	00 26 31.7	
	comp=Z,65nm,21.3s,baz=61,slow=31							
LZDM	**Lanzhou Array**	**24.42**	**326**	P		**P**	**00 19 02.5**	**+0.7**
	comp=Z,1.0nm,0.3s,baz=36,slow=33,SNR=1.2							
	comp=Z,1.0nm,0.3s							
BKNI	**Bangkinang**	**24.57**	**232**	P		**P**	**00 19 06.7**	**+3.7**
DBNI	**Kabupaten Domp**	**24.70**	**184**	P		**P**	**00 19 05.3**	**+1.2**
	comp=Z,22nm,0.9s							
BLJI	**Banyuglugur**	**24.73**	**195**	P		**P**	**00 19 04.6**	**+0.3**
	comp=Z,39nm,0.7s							
PSI	**Prapat**	**24.75**	**239**	P		**P**	**00 19 04.9**	**+0.2**
	comp=Z,9.3nm,1.0s							
EDFI	**Ende, Flores**	**24.93**	**176**	P		P	00 19 23.8	+17
PLAI	**Plampang**	**25.06**	**185**	P		**P**	**00 19 08.4**	**+1.0**
	comp=Z,47nm,1.0s							
SNJI	**Sawahan-Nganju**	**25.30**	**200**	P		**P**	**00 19 10.4**	**+0.7**
	comp=Z,24nm,0.9s							
MNSI	**Mandailing Nat**	**25.40**	**235**	P		**P**	**00 19 10.6**	**+0.1**
	comp=Z,20nm,0.9s							
KLSI		**25.79**	**217**	P		**P**	**00 19 13.7**	**-0.3**
MJAR	**Matsushiro Arr**	**25.81**	**35**	LR		LR	00 28 07.9	
	comp=Z,37nm,21.3s,baz=188,slow=33							
MDSI	**Maura Dua**	**25.95**	**219**	P		**P**	**00 19 15.0**	**-0.4**
	comp=Z,14nm,1.0s							
LEM	**Lembang**	**26.07**	**209**	LR		LR	00 31 12.8	
	comp=Z,44nm,18.6s,baz=356,slow=40							
BATI	**Baumata**	**26.57**	**172**	LR		LR	00 31 21.0	
	comp=Z,76nm,19.7s,baz=44,slow=40							
MTN	**Manton Dam**	**30.95**	**159**	P		**P**	**00 19 57.6**	**-2.3**
SONM	**Songino Array**	**33.41**	**343**	P		**P**	**00 20 22.9**	**+1.5**
	comp=Z,0.6nm,0.5s,baz=169,slow=9.3,SNR=5.2							
SONM				LR		LR	00 34 44.6	
	comp=Z,48nm,20.2s,baz=225,slow=37							
	comp=Z,0.6nm,0.5s							
SONM	**Songino Array**	**33.41**	**343**	P		**P**	**00 20 22.2**	**+0.8**
ASAJ	**Asahikawa**	**33.66**	**30**	LR		LR	00 34 16.9	
	comp=Z,46nm,20.2s,baz=52,slow=36							
KLR	**Kul'dur**	**34.20**	**14**	LR		LR	00 35 41.8	
	comp=Z,45nm,18.4s,baz=200,slow=38							
FITZ	**Fitzroy Crossi**	**34.61**	**171**	P		**P**	**00 20 29.8**	**-2.2**
	comp=Z,6.3nm,1.2s,baz=57,slow=10,SNR=6.0							
	comp=Z,6.3nm,1.2s							
MBWA	**Marble Bar**	**37.22**	**181**	P		**P**	**00 20 52.2**	**-2.0**
PSA00	**Pilbara Seismi**	**37.63**	**180**	P		**P**	**00 20 55.7**	**-2.0**
PSA00				IAmb		IAmb	00 20 56.9	
	comp=Z,12nm,1.0s							
PSA00	**Pilbara Seismi**	**37.63**	**180**	P		**P**	**00 20 55.8**	**-2.0**
PSA00				IAmb		IAmb	00 20 56.9	
	comp=Z,20nm,1.0s							
TLY	**Talaya**	**37.66**	**343**	LR		LR	00 38 48.1	
	comp=Z,33nm,18.9s,baz=149,slow=40							
WB0	**Warramunga Arr**	**38.50**	**158**	P		**P**	**00 21 02.6**	**-2.5**
WB0				IAmb		IAmb	00 21 08.2	
	comp=Z,9.2nm,1.1s							
WRA	**Warramunga Arr**	**38.64**	**158**	P		**P**	**00 21 03.5**	**-2.8**
	comp=Z,1.5nm,0.6s,baz=327,slow=10,SNR=17							
	comp=Z,1.5nm,0.6s							
WRA	**Warramunga Arr**	**38.64**	**158**	P		**P**	**00 21 03.5**	**-2.8**
WR8	**Warramunga Arr**	**38.71**	**158**	P		**P**	**00 21 04.9**	**-2.0**
WR8				IAmb		IAmb	00 21 31.1	
	comp=Z,18nm,1.5s							
PALK	**Pallekele**	**39.50**	**262**	LR		LR	00 36 38.8	
	comp=Z,52nm,18.2s,baz=71,slow=35							
AS31	**Alice Springs**	**41.95**	**161**	P		**P**	**00 21 32.4**	**-1.3**
ASAR	**Alice Springs**	**41.95**	**161**	P		**P**	**00 21 31.7**	**-2.0**
	comp=Z,3.0nm,0.4s,baz=338,slow=7.1,SNR=26							
	comp=Z,3.0nm,0.4s							
MKAR	**Makanchi Array**	**43.61**	**322**	P		**P**	**00 21 48.0**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=122,slow=9.8,SNR=6.8							
	comp=Z,0.3nm,0.3s							
MKAR	**Makanchi Array**	**43.61**	**322**	P		**P**	**00 21 47.4**	**+0.6**
YAK	**Yakutsk**	**46.19**	**6**	LR		LR	00 44 26.0	
	comp=Z,27nm,20.1s,baz=104,slow=40							
ZALV	**Zalesovo Beam**	**46.49**	**332**	P		**P**	**00

HFS	**Hagfors**	**83.92**	**331**	P	**P**	**00 26 11.3**	**-0.7**
	comp=Z,1.3nm,0.6s,baz=59,slow=5.9,SNR=1.7						
	comp=Z,1.3nm,0.6s						
NOA	**NORSAR Array B**	**84.69**	**332**	P	**P**	**00 26 15.3**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=77,slow=7.7,SNR=3.3						
NOA				LR	LR	01 09 07.3	
	comp=Z,15nm,20.2s,baz=355,slow=39						
	comp=Z,0.6nm,0.6s						
NC204	**NORSAR Array S**	**84.79**	**333**	P	**P**	**00 26 14.7**	**-1.7**
RES	**Resolute Bay**	**86.58**	**9**	P	**P**	**00 26 25.1**	**+0.2**
RES				IAmb	IAmb	00 26 42.5	
	comp=Z,2.8nm,0.9s						
YKA	**Yellowknife Ar**	**90.62**	**22**	P	**P**	**00 26 43.2**	**-1.1**
	comp=Z,0.2nm,0.7s,baz=315,slow=5.1,SNR=5.5						
	comp=Z,0.2nm,0.7s						

*SJA **14** 00:14:29.1±1.0,23.°95S×66.°78W,h230km±5km,ML3.9, MW3.7*
*IDC **14** 00:14:30.0±1.6,23.°80S×66.°70W,h190km±15km,mb3.5/6, mbtmp4.0/11,Error ellipse: s-maj=18.7km s-min=12.7km az=87.0*
*GUC **14** 00:14:32.0±0.6,23.°82S×66.°78W,h208km±5km,ML4.5*
*VAO **14** 00:14:32.9±3.1,23.°66S×66.°66W,h225km±14km,mb4.3, Presumed earthquake*

ISC 14 00:14:30.1±0.5,23.°89S±0.°04×66.°82W±0.°04,h200km,n76, σ1°63/97,mb3.9/5,13C-2D,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SALTA		**0.56**	**127**	⇓*i*	P		**Pn**	**00 15 00.3**	**+2.3**
SALTA					*e*S		**Sn**	**00 15 22.8**	**+3.1**
SALTA		**0.56**	**127**	*e*	P		**Pn**	**00 15 00.4**	**+2.3**
SALTA					*e*S		**Sn**	**00 15 22.9**	**+3.1**
SLA	**San Lorenzo**	**1.46**	**125**	⇓*e*	P		**Pn**	**00 15 05.9**	**+2.2**
SLA	**San Lorenzo**	**1.46**	**125**	*e*	P		**Pn**	**00 15 05.8**	**+2.2**
SLA					*e*S		**Sn**	**00 15 32.5**	**+2.8**
HJA	**Humahuaca**	**1.46**	**63**	*e*	P		**Pn**	**00 15 05.9**	**+1.9**
AF01	**San Pedro de A**	**1.55**	**307**	*e*	P		**Pn**	**00 15 07.8**	**+3.1**
AF01	**San Pedro de A**	**1.55**	**307**	*e*	P		**Pn**	**00 15 07.6**	**+2.9**
YJA	**Yavi**	**2.09**	**36**	⇑*e*	P		**Pn**	**00 15 12.1**	**+2.0**
YJA	**Yavi**	**2.09**	**36**	*e*	P		**Pn**	**00 15 12.0**	**+2.0**
FSA	**Cafayete**	**2.34**	**161**	*e*	P		**Pn**	**00 15 13.7**	**+1.3**
PB06	**IPOC Station P**	**2.79**	**294**	⇑*i*	P		**Pn**	**00 15 19.5**	**+2.1**
PB06					*e*S		**Sn**	**00 15 55.3**	**+1.0**
PB06					IAML			00 15 56.2	
	comp=N,468nm,0.2s								
PB06	**IPOC Station P**	**2.79**	**294**	*e*	P		**Pn**	**00 15 19.5**	**+2.1**
PB06					*e*S		**Sn**	**00 15 56.7**	**+2.4**
PB06					IAML			00 15 57.4	
	comp=Z,202nm,0.3s								
PB09	**IPOC Station P**	**3.05**	**313**	⇑*i*	P		**Pn**	**00 15 22.9**	**+2.3**
PB09					*e*S		**Sn**	**00 16 01.3**	**+1.3**
PB09					IAML			00 16 03.5	
	comp=N,939nm,0.1s								
PB09	**IPOC Station P**	**3.05**	**313**	*e*	P		**Pn**	**00 15 22.8**	**+2.2**
PB09					*e*S		**Sn**	**00 16 01.9**	**+1.9**
PB09					IAML			00 16 02.4	
	comp=Z,214nm,1.1s								
AHML	**Horco Molle**	**3.18**	**155**	*e*	P		Pn	00 15 11.0	-11
PB03	**IPOC Station P**	**3.26**	**304**	⇑*i*	P		**Pn**	**00 15 24.7**	**+1.6**
PB03					*e*S		**Sn**	**00 16 03.9**	**-0.5**
PB03					IAML			00 16 05.6	
	comp=E,398nm,0.6s								
PB03	**IPOC Station P**	**3.26**	**304**	*e*	P		**Pn**	**00 15 24.7**	**+1.6**
PB03					IAML			00 16 07.9	
	comp=Z,267nm,0.1s								
PB05	**IPOC Station P**	**3.27**	**288**	*e*	P		**Pn**	**00 15 24.5**	**+1.4**
PB05					*e*S		**Sn**	**00 16 06.2**	**+1.7**
PB05					IAML			00 16 09.8	
	comp=Z,128nm,0.3s								
PB14	**IPOC Station P**	**3.35**	**257**	⇑*i*	P		**Pn**	**00 15 25.6**	**+1.3**
PB14					*e*S		**Sn**	**00 16 06.0**	**-0.5**
PB14	**IPOC Station P**	**3.35**	**257**	*e*	P		**Pn**	**00 15 25.5**	**+1.3**
PB14					*e*S		**Sn**	**00 16 07.1**	**+0.6**
PB14					IAML			00 16 09.4	
	comp=Z,212nm,0.5s								
PB10	**IPOC Station P**	**3.44**	**275**	⇑*i*	P		**Pn**	**00 15 26.6**	**+1.6**
PB10	**IPOC Station P**	**3.44**	**275**	*e*	P		**Pn**	**00 15 26.6**	**+1.6**
PB10					*e*S		**Sn**	**00 16 08.6**	**+0.7**
PB10					IAML			00 16 10.8	
	comp=Z,102nm,0.4s								
PB07	**IPOC Station P**	**3.55**	**307**	⇑*i*	P		**Pn**	**00 15 27.9**	**+1.4**
PB07					IAML			00 16 11.2	
	comp=N,430nm,0.4s								
PB07	**IPOC Station P**	**3.55**	**307**	*e*	P		**Pn**	**00 15 27.9**	**+1.4**
PB07					IAML			00 16 11.5	
	comp=Z,236nm,0.3s								
AC02	**Maricunga**	**3.60**	**215**	⇑*e*	P		**Pn**	**00 15 29.2**	**+1.7**
PB01	**IPOC Station P**	**3.75**	**318**	⇑*i*	P		**Pn**	**00 15 29.9**	**+0.9**
PB01				⇑*e*	P			00 15 30.0	
PB01					*e*S		**Sn**	**00 16 14.8**	**-0.3**
PB01					IAML			00 16 16.3	
	comp=E,316nm,0.2s								
PB01	**IPOC Station P**	**3.75**	**318**	*e*	P		**Pn**	**00 15 30.1**	**+1.2**
PB01					IAML			00 16 19.2	
	comp=Z,184nm,0.2s								
PB02	**IPOC Station P**	**3.82**	**311**	⇑*e*	P		**Pn**	**00 15 30.7**	**+0.9**
PB02					IAML			00 16 18.4	
	comp=E,302nm,0.4s								
PB02	**IPOC Station P**	**3.82**	**311**	*e*	P		**Pn**	**00 15 30.8**	**+0.9**
PB02					*e*S		**Sn**	**00 16 15.8**	**-0.8**
PB02					IAML			00 16 20.4	
	comp=Z,347nm,0.2s								
AC01	**Pan de Azucar**	**4.10**	**236**	⇑*e*	P		**Pn**	**00 15 33.2**	**+0.1**
AC01	**Pan de Azucar**	**4.10**	**236**	*e*	P		**Pn**	**00 15 33.2**	**+0.1**
AC01					*e*S		**Sn**	**00 16 21.1**	**-1.5**
AC01					IAML			00 16 23.2	
	comp=Z,87nm,0.5s								
PB08	**IPOC Station P**	**4.31**	**329**	⇑*e*	P		**Pn**	**00 15 37.6**	**+1.4**
PB08					*e*S		**Sn**	**00 16 28.1**	**0.0**
PB08					IAML			00 16 31.2	
	comp=E,128nm,0.1s								
PB08	**IPOC Station P**	**4.31**	**329**	*e*	P		**Pn**	**00 15 37.9**	**+1.7**
PB08					*e*S		**Sn**	**00 16 28.6**	**+0.5**
PB08					IAML			00 16 32.8	
	comp=Z,79nm,0.5s								
PATCX	**Punta Patache**	**4.34**	**314**	*e*	P		**Pn**	**00 15 36.3**	**+0.1**
PATCX	**Punta Patache**	**4.34**	**314**	*e*	P		**Pn**	**00 15 36.0**	**-0.2**
PATCX					IAML			00 16 27.9	
	comp=Z,78nm,0.9s								
PATCX					*e*S		**Sn**	**00 16 28.0**	**-0.2**
TA01	**Diego Aracena**	**4.54**	**316**	*e*	P		**Pn**	**00 15 36.8**	**-1.8**
TA01					*e*S		**Sn**	**00 16 32.4**	**-0.2**
TA01					IAML			00 16 35.4	
	comp=Z,48nm,0.2s								
AC06	**Mina Casimiro**	**4.70**	**222**	*e*	P		**Pn**	**00 15 40.3**	**-0.4**
GO01	**Chusmiza**	**4.74**	**332**	*e*	P		**Pn**	**00 15 42.9**	**+1.1**
GO01					IAML			00 16 43.3	
	comp=Z,50nm,0.3s								
GO03	**Copiapo**	**4.80**	**219**	*e*	P		**Pn**	**00 15 41.7**	**-0.3**
GO03	**Copiapo**	**4.80**	**219**	*e*	P		**Pn**	**00 15 41.9**	**-0.2**
GO03					IAML			00 16 40.7	
	comp=Z,77nm,0.6s								
PB11	**IPOC Station P**	**4.88**	**327**	*e*	P		**Pn**	**00 15 43.2**	**0.0**
PB11					*e*S		**Sn**	**00 16 38.7**	**-2.0**
PB11					IAML			00 16 42.7	
	comp=Z,125nm,0.4s								
LPAZ	**La Paz**	**7.66**	**351**	P			**Pn**	**00 16 19.6**	**+0.1**
	comp=Z,1.2nm,0.4s,baz=136,slow=5.3,SNR=9.1								
LPAZ					S		**Sn**	**00 17 44.3**	**-2.3**
	comp=Z,1.4nm,0.6s,baz=269,slow=22,SNR=1.4								
CFA	**Coronel Fontan**	**7.79**	**189**	P			**Pn**	**00 16 20.4**	**-0.2**
	comp=Z,1.1nm,0.3s,baz=336,slow=12,SNR=21								
CFA					S		**Sn**	**00 17 42.9**	**-5.7**
	comp=Z,3.4nm,0.3s,baz=151,slow=21,SNR=12								
CPUP	**Villa Florida**	**8.94**	**108**	P			**Pn**	**00 16 34.6**	**-1.0**
	comp=Z,2.6nm,0.7s,baz=289,slow=13,SNR=9.9								
SIV	**San Ignacio**	**9.54**	**36**	P			**Pn**	**00 16 42.1**	**-1.4**
	comp=Z,3.5nm,0.6s,baz=208,slow=10,SNR=14								
SIV					S		**Sn**	**00 18 28.3**	**-2.0**
	comp=Z,0.6nm,0.5s,baz=282,slow=17,SNR=1.4								
PTGB	**Pitanga**	**13.48**	**97**	*e*	P		**P**	**00 17 36.8**	**+0.5**
ITAB	**Concordia**	**13.67**	**107**	*e*	P		**P**	**00 17 38.1**	**-0.2**
LDASE	**Londrina, Braz**	**14.40**	**91**	*e*	P		**Pn**	**00 17 44.5**	**-0.6**
ITRB	**Iturama**	**15.85**	**78**	*e*	P		**Pn**	**00 18 02.7**	**0.0**
ARAG	**Araguaiana, MT**	**16.29**	**63**	*e*	P		**P**	**00 18 06.3**	**-1.0**
MAJ01	**Sao Joao Batis**	**16.44**	**106**	*e*	P		**P**	**00 18 08.6**	**-0.3**
CLDB	**Colider**	**16.67**	**41**	*e*	P		**P**	**00 18 10.2**	**-1.3**
RCLB	**Rio Claro- Sao**	**17.80**	**89**	*e*	P		**P**	**00 18 22.6**	**-1.3**
VAO	**Valinhos**	**18.25**	**91**	*e*	P		**P**	**00 18 26.9**	**-1.8**
IPMB	**Ipameri, GO**	**18.34**	**75**	*e*	P		**P**	**00 18 29.6**	**-0.3**
SNDB	**Serra Nova Dou**	**18.92**	**54**	*e*	P		**P**	**00 18 34.9**	**-1.1**
BDFB	**Brasilia**	**19.50**	**69**	P			**P**	**00 18 41.8**	**-0.6**
	comp=Z,22nm,0.6s,baz=242,slow=11,SNR=41								
JANB	**Januaria**	**22.95**	**72**	*e*	P		**P**	**00 19 15.5**	**-1.7**
SMTB	**Santa Maria do**	**23.70**	**54**	*e*	P		**P**	**00 19 23.2**	**-0.8**
SDBA	**SAO DESIDERIO**	**23.71**	**65**	*e*	P		**P**	**00 19 22.6**	**-1.5**
BSFB	**Barra de Sao F**	**24.69**	**83**	*e*	P		**P**	**00 19 30.6**	**-2.4**
RIB01	**Linhares ES**	**24.98**	**85**	*e*	P		**P**	**00 19 34.1**	**-1.4**
GUA01	**Guaratinga, BA**	**26.34**	**79**	*e*	P		**P**	**00 19 46.0**	**-1.8**
CMC01	**Camacan, BA**	**27.04**	**77**	*e*	P		**P**	**00 19 52.9**	**-1.2**
NBPS	**Pedro II - PI**	**31.21**	**56**	*e*	P		**P**	**00 20 29.1**	**-1.9**
NBPV	**Pedro Velho**	**34.91**	**65**	*e*	P		**P**	**00 21 02.1**	**-0.9**
TXAR	**Lajitas Array**	**63.68**	**324**	P			**P**	**00 24 41.8**	**+1.4**
	comp=Z,0.3nm,0.7s,baz=161,slow=5.3,SNR=4.8								
	comp=Z,0.3nm,0.7s								
QSPA	**South Pole Qui**	**66.32**	**180**	P			**P**	**00 24 58.1**	**+1.1**
	comp=Z,1.1nm,0.5s,baz=314,slow=1.3,SNR=14								
	comp=Z,1.1nm,0.5s								
TORD	**Torodi Ar. Bea**	**76.38**	**69**	P			**P**	**00 25 57.2**	**-0.6**
	comp=Z,1.6nm,0.6s,baz=270,slow=4.7,SNR=17								
	comp=Z,1.6nm,0.6s								
PDAR	**Pinedale Array**	**77.13**	**329**	P			**P**	**00 26 02.8**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=141,slow=9.4,SNR=1.9								
	comp=Z,0.2nm,0.5s								
ULM	**Lac du Bonnet**	**78.17**	**341**	P			**P**	**00 26 07.4**	**+0.4**
	comp=Z,1.2nm,0.5s,baz=221,slow=7.7,SNR=2.0								
	comp=Z,1.2nm,0.5s								
MAW	**Mawson**	**81.50**	**163**	P			**P**	**00 26 27.8**	**+3.1**
	comp=Z,3.4nm,0.4s,baz=136,slow=2.1,SNR=12								
	comp=Z,3.4nm,0.4s								
ASAR	**Alice Springs**	**128.62**	**205**	PKP			**PKiKP**	**00 33 14.5**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=130,slow=1.2,SNR=4.1								
WRA	**Warramunga Arr**	**131.80**	**207**	PKP			**PKiKP**	**00 33 21.4**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=142,slow=1.9,SNR=2.2								
ZALV	**Zalesovo Beam**	**143.22**	**28**	PKP		PKPbc		00 33 38.5	+0.9
	comp=Z,0.7nm,0.6s,baz=299,slow=2.1,SNR=4.2								
MKAR	**Makanchi Array**	**146.34**	**40**	PKPbc			**PKPbc**	**00 33 46.8**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=303,slow=3.3,SNR=11								

*IDC **14** 00:16:30.2±5.5,36.°98N×69.°83E,h53km±48km,mb3.2/6, mbtmp3.6/11,ML3.4/5,Error ellipse: s-maj=38.1km s-min=23.8km az=17.0*

ISC 14 00:16:28.7±1.2,37.°0N±0.°1×69.°6E±0.°1,h37km,n21, σ1°45/24,mb3.4/5,1C-3D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.14**	**6**	⇓P			**Pn**	**00 17 57.2**	**+0.4**
	0.7nm,0.4s,baz=193,slow=14,SNR=11								
KK31				⇓S			**Sn**	**00 19 04.6**	**-1.2**
	3.0nm,0.3s,baz=196,slow=25								
UCH	**Uchtor**	**6.44**	**34**	P			**Pn**	**00 18 02.6**	**+1.3**
	SNR=8.5								
AAK	**Ala-Archa**	**6.76**	**32**	P			**Pn**	**00 18 07.2**	**+1.7**
	4.3nm,0.3s,baz=188,slow=5.0,SNR=67								
AAK					S		**Sn**	**00 19 21.2**	**-0.1**
	4.8nm,0.4s,baz=122,slow=20,SNR=9.1								
	8.6nm,0.3s								
AAK	**Ala-Archa**	**6.76**	**32**	P			**Pn**	**00 18 07.1**	**+1.7**
	SNR=21								
AAK	**Ala-Archa**	**6.76**	**32**	⇑P			**Pn**	**00 18 06.6**	**+1.1**
	0.9nm,0.3s								
AAK					⇓S		**Sn**	**00 19 21.0**	**-0.3**
	4.9nm,0.6s								
KBK	**Karagaybulak**	**6.97**	**34**	P			**Pn**	**00 18 11.1**	**+2.6**
	SNR=12								
CHMS	**Chumysh**	**7.17**	**32**	P			**Pn**	**00 18 12.5**	**+1.6**
	SNR=17								
USP	**Ospenovka**	**7.29**	**29**	P			**Pn**	**00 18 13.2**	**+0.6**
	SNR=5.9								
ULHL	**Ulahol**	**7.31**	**42**	P			**Pn**	**00 18 14.5**	**+1.4**
	SNR=5.5								
TKM2	**Tokmak 2**	**7.48**	**36**	P			**Pn**	**00 18 16.8**	**+1.3**
	SNR=20								
MKAR	**Makanchi Array**	**13.57**	**40**	P			**Pn**	**00 19 38.3**	**-0.3**
	0.1nm,0.3s,baz=236,slow=13,SNR=5.7								
	0.4nm,0.7s								
KURBB	**Kurchatov Arra**	**15.04**	**22**	P			**Pn**	**00 19 54.8**	**-3.6**
	0.3nm,0.5s,baz=213,slow=13,SNR=3.0								
AKTO	**Aktyubinsk**	**15.82**	**332**	P			**P**	**00 20 11.2**	**-0.8**
	0.4nm,0.3s,baz=164,slow=9.4,SNR=8.7								
	2.2nm,0.5s								
BVAR	**Borovoye Array**	**16.04**	**2**	P			**P**	**00 20 13.0**	**-1.3**
	baz=156,slow=8.4,SNR=5.6								
	0.6nm,0.4s								
ZALV	**Zalesovo Beam**	**19.95**	**27**	P			**P**	**00 20 56.2**	**-1.1**
	0.3nm,0.3s,baz=214,slow=10,SNR=6.1								
	0.7nm,0.3s								
ARTI	**Arti**	**20.83**	**342**	P			**P**	**00 21 07.3**	**+0.5**
	1.6nm,0.7s,baz=284,slow=4.9,SNR=3.1								
	1.6nm,0.7s								
KBZ	**Khabaz**	**21.41**	**297**	P			**P**	**00 21 14.2**	**+1.0**
	1.0nm,0.9s,baz=191,slow=12,SNR=2.4								
	1.0nm,0.9s								
NOA	**NORSAR Array B**	**43.33**	**323**	P			**P**	**00 24 27.6**	**+0.8**
	0.4nm,0.6s,baz=107,slow=6.8,SNR=2.1								
	0.4nm,0.6s								
YKA	**Yellowknife Ar**	**80.80**	**2**	P			**P**	**00 28 38.3**	**+0.3**
	0.2nm,0.5s,baz=1.9,slow=6.1,SNR=2.5								
	0.2nm,0.5s								
WRA	**Warramunga Arr**	**83.18**	**121**	P			**P**	**00 28 50.3**	**-0.9**
	0.2nm,0.5s,baz=313,slow=5.2,SNR=1.7								
	0.2nm,0.5s								
ASAR	**Alice Springs**	**85.43**	**124**	P			**P**	**00 29 01.4**	**-1.2**
	0.3nm,0.5s,baz=309,slow=4.3,SNR=5.7								
	0.3nm,0.5s								

*IDC **14** 00:34:01.7±2.3,33.°90N×22.°98E,h0km,mb3.7/6, mbtmp3.7/13,ML2.8/5,MS3.0/3,Error ellipse: s-maj=42.2km s-min=18.2km az=18.0*

ISC 14 00:34:04.4±1.3,33.°8N±0.°1×22.°98E±0.°06,h19km,n15, σ0°94/16,mb3.8/6,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IDI	**Anoyia**	**2.17**	**46**	Pn			**Pn**	**00 34 39.7**	**+0.2**
	14nm,0.3s,baz=258,slow=10,SNR=37								
IDI					Sn		**Sn**	**00 35 05.9**	**-0.1**
	2.9nm,0.3s,baz=248,slow=14,SNR=4.0								
VAE	**Valguarnera**	**7.89**	**300**	Pn			**Pn**	**00 35 57.7**	**-0.4**
	0.7nm,0.3s,baz=19,slow=21,SNR=1.6								
VAE					Sn		**Sn**	**00 37 28.6**	**+1.6**
	1.0nm,0.3s,baz=152,slow=23,SNR=2.3								
	1.7nm,0.3s								
BRTR	**Keskin Array B**	**10.40**	**52**	Pn			**Pn**	**00 36 33.3**	**+0.8**
	0.1nm,0.3s,baz=233,slow=12,SNR=6.8								
	0.9nm,0.8s								
MMAI	**Mount Meron Ar**	**10.41**	**91**	Pn			**Pn**	**00 36 32.4**	**-0.3**
	0.7nm,0.4s,baz=274,slow=12,SNR=6.7								
MMAI					Sn		**Sn**	**00 38 30.4**	**+1.5**
	0.5nm,0.3s,baz=251,slow=22,SNR=2.5								
EIL	**Elat**	**10.98**	**109**	Pn			**Pn**	**00 36 40.0**	**-0.5**
	0.2nm,0.3s,baz=100,slow=11,SNR=2.3								
	10.0nm,0.9s								
ASF	**Jabal al Asfar**	**11.79**	**94**	Pn			**Pn**	**00 36 52.6**	**+0.9**
	0.2nm,0.3s,baz=191,slow=10.0,SNR=2.8								
	2.6nm,0.9s								
GERES	**GERESS Array B**	**16.56**	**338**	Pn			**Pn**	**00 37 55.4**	**-0.2**
	baz=142,slow=11,SNR=2.3								
	0.5nm,0.8s								
AKASG	**Malin Array Be**	**17.51**	**13**	LR		LR	LR	00 44 31.4	
	comp=Z,35nm,18.0s,baz=187,slow=36								
HFS	**Hagfors**	**27.05**	**350**	P			**P**	**00 39 43.8**	**-1.5**
	2.0nm,0.9s,baz=160,slow=9.6,SNR=1.3								
	2.0nm,0.9s								
NOA	**NORSAR Array B**	**28.31**	**348**	P			**P**	**00 39 56.8**	**+0.2**
	0.7nm,0.9s,baz=162,slow=11,SNR=1.6								
NOA					LR		LR	00 52 48.6	
	comp=Z,19nm,19.3s,baz=5.0,slow=40								
	0.7nm,0.9s								
KURBB	**Kurchatov Arra**	**43.38**	**50**	P			**P**	**00 42 05.0**	**-0.4**
	0.5nm,0.6s,baz=274,slow=8.5,SNR=5.9								
	0.5nm,0.6s								
MKAR	**Makanchi Array**	**46.03**	**55**	P			**P**	**00 42 27.1**	**+0.5**
	0.5nm,0.3s,baz=267,slow=7.8,SNR=27								
	0.5nm,0.3s								
ZALV	**Zalesovo Beam**	**47.25**	**45**	P			**P**	**00 42 34.7**	**-1.3**
	0.7nm,0.5s,baz=272,slow=8.7,SNR=4.8								
	0.7nm,0.5s								
FRB	**Frobisher Bay**	**60.93**	**329**	LR		LR	LR	01 11 58.5	
	comp=Z,27nm,19.2s,baz=148,slow=37								
SONM	**Songino Array**	**61.74**	**49**	P			**P**	**00 44 21.3**	**-0.3**
	0.5nm,0.8s,baz=263,slow=6.0,SNR=3.5								
	0.5nm,0.8s								

IDC 14 00:57:19.9±3.4,49.°05S×124.°59E,h0km,mb3.9/2,
mbtmp3.9/2,MS3.3/7,Error ellipse: s-maj=85.2km s-min=77.1km az=149.0,Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**21.40**	**43**	LR			LR	01 09 03.9	
	comp=Z,59nm,21.6s,baz=209,slow=33								
ASAR	**Alice Springs**	**26.38**	**20**	P			P	01 02 58.0	+0.1
	1.0nm,1.0s,baz=199,slow=9.7,SNR=6.3								
	1.0nm,1.0s								
FITZ	**Fitzroy Crossi**	**30.89**	**2**	LR			LR	01 16 48.1	
	comp=Z,34nm,18.5s,baz=116,slow=38								
VNDA	**Vanda**	**31.90**	**166**	LR			LR	01 15 39.2	
	comp=Z,79nm,18.9s,baz=332,slow=34								
CTA	**Charters Tower**	**33.71**	**39**	LR			LR	01 16 53.4	
	comp=Z,47nm,21.9s,baz=230,slow=35								
BATI	**Baumata**	**38.73**	**359**	LR			LR	01 21 40.6	
	comp=Z,100nm,18.1s,baz=220,slow=38								
QSPA	**South Pole Qui**	**41.07**	**180**	LR			LR	01 20 55.8	
	comp=Z,38nm,18.3s,baz=16,slow=34								
DZM	**Mont Dzumac**	**42.62**	**66**	LR			LR	01 19 46.9	
	comp=Z,49nm,21.5s,baz=18,slow=32								
CMAR	**Chiang Mai Arr**	**70.97**	**334**	P			P	01 08 39.2	+0.1
	0.9nm,0.4s,baz=183,slow=5.8,SNR=4.5								
	0.9nm,0.4s								
H10S2	**ASCENSION HYDR**	**112.07**	**224**	T			T	03 17 28.6	
	baz=150,slow=74,SNR=7.1								
H10S3	**ASCENSION HYDR**	**112.09**	**224**	T			T	03 17 39.9	
	baz=70,slow=74,SNR=5.3								
YKA	**Yellowknife Ar**	**145.43**	**45**	PKPbc			PKPdf	01 16 57.6	-0.9
	0.8nm,0.9s,baz=278,slow=3.6,SNR=6.9								

*OSPL **14** 01:15:58.4±3.6,18.°87N×72.°32W,h129km±343km,ML2.0, Presumed earthquake*

SDD 14 01:15:59.6±2.0,18.°22N×70.°33W,h20km±13km,MD3.3, ML1.7,MW2.6,9C-1D,Presumed earthquake,Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BANI	**BANI**	**0.17**	**350**	*e*	Pg		Pb	01 16 03.4	-1.1
BANI				⇑*e*	Sg		Sb	01 16 07.9	0.0
BANI					IAML			01 16 08.9	
	comp=N,142nm,0.3s								
SDD	**Santo Domingo**	**0.46**	**59**	⇑*e*	Sg		Sb	01 16 14.8	-0.6
SDD					IAML			01 16 15.5	
	comp=N,29nm,0.6s								
PODR	**Polo**	**0.91**	**267**	⇑*e*	Pg		Pb	01 16 15.2	-1.6
PODR				⇑*e*	Sg		Sb	01 16 29.1	+0.5
PODR					IAML			01 16 30.5	
	comp=N,34nm,0.3s								
PODR	**Polo**	**0.91**	**267**	*i*	P		Pb	01 16 15.5	-1.3
PODR					*e*S		Sn	01 16 29.6	-0.4
HATOM	**Hato Mayor del**	**1.06**	**58**	⇑*e*	Pg		Pb	01 16 17.7	-1.5
HATOM				⇑*e*	Sg		Sb	01 16 32.9	+0.1
HATOM					IAML			01 16 46.0	
	comp=N,21nm,2.0s								
LODU1	**El Espartillar**	**1.10**	**277**	*e*	S		Sn	01 16 35.9	+1.5
LODU1				⇓*i*	Pn		Pb	01 16 41.1	+21
LONE3	**El Aguacate, B**	**1.14**	**290**	*i*	P		Pn	01 16 18.8	-1.8
LONE3					IAML			01 16 36.7	
	comp=Z,5.6nm,1.6s								
SDDR	**Presa de Saban**	**1.19**	**310**	⇑*e*	Pg		Pn	01 16 19.4	-1.8
SDDR				⇑*e*	Sg		Sn	01 16 36.6	-0.1
SDDR					IAML			01 16 57.6	
	comp=N,14nm,3.0s								
SDDR	**Presa de Saban**	**1.19**	**310**	*i*	P		Pn	01 16 20.6	-0.5
SDDR				

PB06	**IPOC Station P**	**2.75**	**295**			**Pn**	**01 28 15.4**	**+3.0**
PB06					Sn	**Sn**	**01 28 50.5**	**+1.6**
PB06	**IPOC Station P**	**2.75**	**295**⇂	*eP*		**Pn**	**01 28 15.4**	**+3.0**
PB06				*eS*		**Sn**	**01 28 50.9**	**+2.0**
PB06				IAML			01 28 52.3	
	comp=E,772nm,0.1s							
PB06	**IPOC Station P**	**2.75**	**295**	*eP*		**Pn**	**01 28 14.9**	**+2.4**
PB06				IAML			01 28 55.1	
	comp=Z,369nm,0.2s							
PB09	**IPOC Station P**	**3.03**	**314**			**Pn**	**01 28 18.8**	**+3.1**
PB09	**IPOC Station P**	**3.03**	**314**	*eP*		**Pn**	**01 28 18.8**	**+3.1**
PB09				IAML			01 29 00.1	
	comp=E,364nm,0.3s							
PB09	**IPOC Station P**	**3.03**	**314**	*eP*		**Pn**	**01 28 18.6**	**+2.9**
PB09				*eS*		**Sn**	**01 28 57.9**	**+3.0**
PB09				IAML			01 29 00.1	
	comp=Z,466nm,0.2s							
AHML	**Horco Molle**	**3.18**	**154**⇃	*eP*		Pn	01 28 07.4	-10
AHML	**Horco Molle**	**3.18**	**154**	*eP*		Pn	01 28 07.5	-10
PB05	**IPOC Station P**	**3.23**	**288**			**Pn**	**01 28 20.4**	**+2.4**
PB05	**IPOC Station P**	**3.23**	**288**	*eP*		**Pn**	**01 28 20.5**	**+2.5**
PB05				*eS*		**Sn**	**01 28 59.1**	**+0.1**
PB05				IAML			01 29 02.7	
	comp=N,231nm,0.3s							
PB05	**IPOC Station P**	**3.23**	**288**	*eP*		**Pn**	**01 28 20.5**	**+2.4**
PB05				*eS*		**Sn**	**01 29 01.6**	**+2.6**
PB05				IAML			01 29 02.4	
	comp=Z,192nm,0.6s							
PB03	**IPOC Station P**	**3.23**	**305**			**Pn**	**01 28 20.7**	**+2.6**
PB03	**IPOC Station P**	**3.23**	**305**⇂	*eP*		**Pn**	**01 28 20.5**	**+2.4**
PB03				*eS*		**Sn**	**01 29 00.0**	**+0.8**
PB03	**IPOC Station P**	**3.23**	**305**	*eP*		**Pn**	**01 28 20.0**	**+1.9**
PB03				IAML			01 29 02.0	
	comp=Z,500nm,0.2s							
PB14	**IPOC Station P**	**3.29**	**257**			**Pn**	**01 28 21.4**	**+2.5**
PB14	**IPOC Station P**	**3.29**	**257**⇂	*eP*		**Pn**	**01 28 21.4**	**+2.5**
PB14				IAML			01 29 05.3	
	comp=N,82nm,0.2s							
PB14	**IPOC Station P**	**3.29**	**257**	*eP*		**Pn**	**01 28 20.7**	**+1.8**
PB14				IAML			01 29 06.4	
	comp=Z,151nm,0.3s							
PB10	**IPOC Station P**	**3.39**	**276**			**Pn**	**01 28 22.5**	**+2.7**
PB10	**IPOC Station P**	**3.39**	**276**⇂	*eP*		**Pn**	**01 28 22.5**	**+2.7**
PB10				IAML			01 29 06.3	
	comp=N,156nm,0.4s							
PB10	**IPOC Station P**	**3.39**	**276**	*eP*		**Pn**	**01 28 21.9**	**+2.1**
PB10				*eS*		**Sn**	**01 29 04.9**	**+2.6**
PB07	**IPOC Station P**	**3.52**	**308**			**Pn**	**01 28 23.8**	**+2.2**
PB07	**IPOC Station P**	**3.52**	**308**⇂	*eP*		**Pn**	**01 28 23.9**	**+2.2**
PB07				*eS*		**Sn**	**01 29 05.7**	**+0.1**
PB07	**IPOC Station P**	**3.52**	**308**	*eP*		**Pn**	**01 28 23.3**	**+1.6**
PB07				IAML			01 29 12.0	
	comp=Z,326nm,0.8s							
AC02	**Maricunga**	**3.55**	**214**			**Pn**	**01 28 24.9**	**+2.8**
AC02	**Maricunga**	**3.55**	**214**⇂	*eP*		**Pn**	**01 28 24.8**	**+2.7**
AC02	**Maricunga**	**3.55**	**214**	*eP*		**Pn**	**01 28 25.0**	**+2.8**
AC02				*eS*		**Sn**	**01 29 08.3**	**+1.7**
PB01	**IPOC Station P**	**3.74**	**319**			**Pn**	**01 28 26.0**	**+1.8**
PB01	**IPOC Station P**	**3.74**	**319**	*eP*		**Pn**	**01 28 26.3**	**+2.1**
PB01	**IPOC Station P**	**3.74**	**319**	*eP*		**Pn**	**01 28 25.9**	**+1.8**
PB01				*eS*		**Sn**	**01 29 11.1**	**+0.9**
PB01				IAML			01 29 12.2	
	comp=Z,329nm,0.2s							
PB02	**IPOC Station P**	**3.80**	**312**			**Pn**	**01 28 26.7**	**+1.8**
PB02	**IPOC Station P**	**3.80**	**312**⇂	*eP*		**Pn**	**01 28 26.6**	**+1.6**
PB02	**IPOC Station P**	**3.80**	**312**	*eP*		**Pn**	**01 28 26.9**	**+1.9**
PB02				*eS*		**Sn**	**01 29 12.1**	**+0.5**
PB02				IAML			01 29 15.6	
	comp=Z,904nm,0.2s							
AC01	**Pan de Azucar**	**4.04**	**236**			**Pn**	**01 28 29.2**	**+1.4**
AC01	**Pan de Azucar**	**4.04**	**236**	*eP*		**Pn**	**01 28 29.0**	**+1.3**
AC01	**Pan de Azucar**	**4.04**	**236**	*eP*		**Pn**	**01 28 29.0**	**+1.3**
AC01				*eS*		**Sn**	**01 29 17.0**	**+0.4**
AC01				IAML			01 29 17.6	
	comp=Z,155nm,0.3s							
TINO	**Tinogasta**	**4.18**	**188**	*eP*		**Pn**	**01 28 32.3**	**+2.7**
TINO				*eS*		**Sn**	**01 29 26.7**	**+6.7**
PB08	**IPOC Station P**	**4.31**	**330**			**Pn**	**01 28 34.0**	**+2.4**
PB08	**IPOC Station P**	**4.31**	**330**	*eP*		**Pn**	**01 28 34.0**	**+2.4**
PB08				*eS*		**Sn**	**01 29 24.4**	**+1.0**
PB08	**IPOC Station P**	**4.31**	**330**	*eP*		**Pn**	**01 28 33.5**	**+2.0**
PB08				*eS*		**Sn**	**01 29 24.8**	**+1.4**
PB08				IAML			01 29 29.2	
	comp=Z,84nm,0.2s							
TA01	**Diego Aracena**	**4.52**	**317**			**Pn**	**01 28 35.8**	**+1.9**
TA01	**Diego Aracena**	**4.52**	**317**	*eP*		**Pn**	**01 28 36.2**	**+2.4**
TA01				*eS*		**Sn**	**01 29 27.0**	**-0.7**
TA01	**Diego Aracena**	**4.52**	**317**	*eP*		**Pn**	**01 28 35.9**	**+2.0**
TA01				*eS*		**Sn**	**01 29 25.6**	**-2.1**
AC06	**Mina Casimiro**	**4.64**	**222**			**Pn**	**01 28 36.4**	**+1.1**
AC06	**Mina Casimiro**	**4.64**	**222**	*eP*		**Pn**	**01 28 36.5**	**+1.1**
GO01	**Chusmiza**	**4.74**	**333**			**Pn**	**01 28 38.9**	**+1.8**
GO01	**Chusmiza**	**4.74**	**333**	*eP*		**Pn**	**01 28 38.5**	**+1.4**
GO01				*eS*		**Sn**	**01 29 35.0**	**+1.6**
GO01				IAML			01 29 37.2	
	comp=Z,82nm,0.5s							
GO03	**Copiapo**	**4.75**	**219**			**Pn**	**01 28 37.9**	**+1.1**
GO03	**Copiapo**	**4.75**	**219**	*eP*		**Pn**	**01 28 37.5**	**+0.7**
GO03	**Copiapo**	**4.75**	**219**	*eP*		**Pn**	**01 28 37.7**	**+1.0**
GO03				*eS*		**Sn**	**01 29 33.2**	**+0.3**
GO03				IAML			01 29 36.2	
	comp=Z,171nm,0.3s							
PB11	**IPOC Station P**	**4.87**	**328**			**Pn**	**01 28 39.5**	**+1.0**
PB11	**IPOC Station P**	**4.87**	**328**	*eP*		**Pn**	**01 28 38.5**	**0.0**
PB11				*eS*		**Sn**	**01 29 35.1**	**-0.8**
PB11				IAML			01 29 39.3	
	comp=Z,140nm,0.3s							
VCA	**Vinchina**	**4.95**	**194**	*eP*		**Pn**	**01 28 41.9**	**+2.6**
VCA				*eS*		**Sn**	**01 29 41.1**	**+3.5**
AC04	**Llanos de Chal**	**5.70**	**221**			**Pn**	**01 28 49.1**	**+0.3**
AC05	**El Transito**	**5.77**	**211**			**Pn**	**01 28 50.8**	**+0.9**
PB16	**IPOC Station P**	**6.07**	**336**			**Pn**	**01 28 55.4**	**+1.1**
LCO	**Las Campanas**	**6.12**	**213**			**Pn**	**01 28 54.8**	**+0.3**
PB12	**IPOC Station P**	**6.18**	**328**	Pn		**Pn**	**01 28 56.0**	**+0.9**
CO01	**Juntas del Tor**	**6.68**	**205**	Pn		**Pn**	**01 29 04.1**	**+2.3**
PB18	**Visviri**	**6.75**	**338**			**Pn**	**01 29 04.5**	**+1.5**
LPAZ	**La Paz**	**7.68**	**351**	P		**Pn**	**01 29 16.5**	**+1.3**
	comp=Z,5.2nm,0.3s,baz=166,slow=4.3,SNR=63							
LPAZ				S		**Sn**	**01 30 42.9**	**+0.5**
	comp=Z,1.7nm,0.6s,baz=353,slow=24,SNR=2.1							
LPAZ	**La Paz**	**7.68**	**351**			**Pn**	**01 29 16.2**	**+1.0**
LPAZ	**La Paz**	**7.68**	**351**	*eP*		**Pn**	**01 29 16.5**	**+1.3**
CO03	**El Pedregal**	**7.68**	**205**	Pn		**Pn**	**01 29 14.3**	**-0.3**
CFA	**Coronel Fontan**	**7.75**	**189**	P		**Pn**	**01 29 15.5**	**0.0**
	comp=Z,3.5nm,0.3s,baz=18,slow=14,SNR=44							
CFA				S		**Sn**	**01 30 38.4**	**-4.8**
	comp=Z,4.9nm,0.3s,baz=168,slow=15,SNR=11							
ZON	**Zonda**	**7.77**	**191**			**Pn**	**01 29 15.4**	**-0.3**
CPUP	**Villa Florida**	**8.98**	**108**	P		**Pn**	**01 29 30.1**	**-1.4**
	comp=Z,1.6nm,0.7s,baz=292,slow=12,SNR=5.7							
VA03	**San Esteban**	**9.39**	**199**	Pn		**Pn**	**01 29 37.5**	**+0.6**
SIV	**San Ignacio**	**9.59**	**36**	P		**Pn**	**01 29 41.7**	**+2.1**
	comp=Z,1.2nm,0.3s,baz=230,slow=12,SNR=12							
SIV				S		**Sn**	**01 31 29.7**	**+2.8**
	comp=Z,1.3nm,0.9s,baz=132,slow=21,SNR=2.1							
MT13	**San Alfonso**	**10.24**	**196**	Pn		**Pn**	**01 29 48.7**	**+0.8**
BO02	**Sierra Bellavi**	**11.36**	**197**	Pn		**Pn**	**01 30 02.8**	**+0.6**
TRCB	**Terra Rica**	**13.14**	**88**	P		**Pn**	**01 30 27.3**	**+2.5**
TRCB	**Terra Rica**	**13.14**	**88**	*eP*		**Pn**	**01 30 26.8**	**+2.0**
BI02	**San Fabin de**	**13.26**	**196**	Pn		**Pn**	**01 30 26.4**	**+0.2**
ITAB	**Concordia**	**13.72**	**107**			**Pn**	**01 30 34.0**	**+2.1**
LDASE	**Londrina, Braz**	**14.46**	**91**	*eP*		**Pn**	**01 30 42.3**	**+1.1**
TRQA	**Tornquist**	**14.71**	**165**			**Pn**	**01 30 44.1**	**0.0**
ARAG	**Araguaiana, MT**	**16.35**	**63**	*eP*		**P**	**01 31 02.7**	**-0.7**
BB19B	**Bebedouro**	**17.20**	**94**	*eP*		**P**	**01 31 13.2**	**+0.5**
VAO	**Valinhos**	**18.30**	**91**	P		**P**	**01 31 23.5**	**-1.2**
VAO	**Valinhos**	**18.30**	**91**	*eP*		**P**	**01 31 23.6**	**-1.1**
IPMB	**Ipameri, GO**	**18.40**	**75**	*eP*		**P**	**01 31 25.2**	**-0.6**
SNDB	**Serra Nova Dou**	**18.98**	**54**	*eP*		**P**	**01 31 30.6**	**-1.4**
BDFB	**Brasilia**	**19.55**	**69**	P		**P**	**01 31 38.1**	**-0.2**
	comp=Z,9.6nm,0.7s,baz=241,slow=11,SNR=24							
BDFB	**Brasilia**	**19.55**	**69**	P		**P**	**01 31 37.5**	**-0.9**
BDFB				IAmb		IAmb	01 31 38.9	
	comp=Z,11nm,0.8s							
JANB	**Januaria**	**23.00**	**72**	*eP*		**P**	**01 32 11.5**	**-1.6**
SMTB	**Santa Maria do**	**23.76**	**54**	*eP*		**P**	**01 32 19.4**	**-0.5**
SDBA	**SAO DESIDERIO**	**23.77**	**65**	*eP*		**P**	**01 32 18.8**	**-1.3**
GUA01	**Guaratinga, BA**	**26.40**	**79**	*eP*		**P**	**01 32 42.5**	**-1.3**
BOAV	**Boa Vista**	**26.88**	**14**	P		**P**	**01 32 46.5**	**-1.4**
BOAV				IAmb		IAmb	01 32 54.5	
	comp=Z,4.1nm,1.1s							
NBPS	**Pedro II - PI**	**31.27**	**56**	*eP*		**P**	**01 33 24.7**	**-2.2**
DBIC	**Dimbokro**	**67.67**	**72**	P		**P**	**01 38 00.2**	**-1.3**
DBIC				IAmb		IAmb	01 38 19.1	
	comp=Z,4.6nm,1.0s							
TORD	**Torodi Ar. Bea**	**76.44**	**69**	P		**P**	**01 38 52.8**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=253,slow=6.1,SNR=17							
	comp=Z,0.9nm,0.5s							
MKAR	**Makanchi Array**	**146.39**	**40**	PKPbc		**PKPbc**	**01 46 44.2**	**+1.4**
	comp=Z,0.6nm,0.7s,baz=298,slow=2.6,SNR=6.6							
HHC	**Hu-ho-hao-te**	**163.06**	**4**	*eP*		**PKPdf**	**01 47 00.8**	**-3.3**
PZH	**PanZhiHua**	**169.38**	**74**	PKP		**PKPdf**	**01 47 06.3**	**-3.2**

GCG ***14*** *01:28:34.6±1.5, 13°.77N×91°.67W, h34km±16km, MD3.7, Presumed earthquake*
SNET ***14*** *01:28:35.0±1.5, 13°.80N×91°.57W, h25km, ML3.1, Presumed earthquake*
ISC 14 01:28:40.5±3.2, 13°.9N±0°.2×91°.3W±0°.2, h35km, n14, σ2s19/17, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG5	**El Palmar, Qui**	**0.50**	**358**	*i* P	**Pn**	**01 28 51.5**	**+0.1**
STG2	**El Palmar, Qui**	**0.54**	**355**	*i* P	**Pn**	**01 28 51.6**	**-0.2**
STG8	**El Palmar, Qui**	**0.55**	**358**	*i* P	**Pn**	**01 28 52.5**	**+0.3**
ESSG	**Sabana Grande**	**0.68**	**45**	*i* P	**Pn**	**01 28 52.6**	**-1.2**
FG8	**Yepocapa, Chim**	**0.83**	**64**	*i* P	**Pn**	**01 28 52.2**	**-3.6**
FG16	**Alotenango, Sa**	**0.88**	**65**	*i* P	**Pn**	**01 28 53.2**	**-3.3**
SOKI	**Kika Raxquin**	**0.92**	**355**	*i* P	**Pn**	**01 28 54.5**	**-2.8**
SOKI				*i* S	**Sn**	**01 29 09.5**	**-0.1**
PCG5	**San Vicente Pa**	**0.98**	**71**	*i* P	**Pn**	**01 28 54.5**	**-3.4**
APG	**El Apazote**	**1.38**	**37**	*i* P	**Pn**	**01 29 04.1**	**+0.6**
NUBE	**Las Nubes**	**1.50**	**90**	*i* P	**Pn**	**01 29 03.7**	**-1.5**
NUBE	**Las Nubes**	**1.50**	**90**	*eP*	**Pn**	**01 29 04.2**	**-0.9**
NUBE				*eS*	**Sn**	**01 29 25.7**	**+2.0**
CEVE	**Cerro Verde**	**1.66**	**92**	*eP*	**Pn**	**01 29 06.7**	**-0.6**
CEVE				*eS*	**Sn**	**01 29 30.8**	**+3.3**
JAYA	**Jayaque - finc**	**1.84**	**97**	*eS*	**Sn**	**01 29 33.8**	**+1.9**
MTO3	**Montecristo**	**1.97**	**75**	*eP*	**Pn**	**01 29 11.8**	**+0.2**

OSPL ***14*** *01:42:41.1±0.9, 18°.68N×71°.67W, h5km±34km, ML1.0, Presumed earthquake*
SDD ***14*** *01:42:42.7±1.6, 18°.59N×71°.43W, h18km±11km, MD2.5, ML1.2, MW1.9, Presumed earthquake*
ISC 14 01:42:42.2±1.0, 18°.59N±0°.03×71°.34W±0°.08, h13km±8km, n8, σ0s67/15, 7C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LONE3	**El Aguacate, B**	**0.12**	**278**	*i* P	**Pg**	**01 42 45.1**	**-0.4**
LONE3				*eS*	**Sg**	**01 42 48.0**	**+0.2**
LONE3				IAML		01 42 48.8	
	comp=Z,29nm,0.3s						
NEDR	**Neiba UASD**	**0.13**	**216**⇂	*eSg*	**Sg**	**01 42 48.4**	**+0.5**
NEDR				IAML		01 42 48.8	
	comp=N,84nm,0.3s						
LODU1	**El Espartillar**	**0.27**	**209**	*i* P	**Pg**	**01 42 47.8**	**0.0**
LODU1				*eS*	**Sb**	**01 42 53.2**	**-0.2**
LODU1				IAML		01 42 54.0	
	comp=Z,19nm,1.2s						
SDDR	**Presa de Saban**	**0.39**	**7**⇂	*ePg*	**Pg**	**01 42 49.7**	**-0.5**
SDDR				IAML		01 42 56.6	
	comp=N,12nm,1.8s						
SDDR				⇂*eSg*	**Sg**	**01 42 56.7**	**+1.2**
SDDR	**Presa de Saban**	**0.39**	**7**	*i* P	**Pg**	**01 42 49.2**	**-0.9**
SDDR				*eS*	**Sg**	**01 42 56.3**	**+0.8**
SDDR				IAML		01 42 57.9	
	comp=Z,7.7nm,3.1s						
PODR	**Polo**	**0.42**	**173**⇂	*ePg*	**Pg**	**01 42 50.4**	**-0.4**
PODR				⇂*eSg*	**Sb**	**01 42 58.1**	**0.0**
PODR				IAML		01 43 10.7	
	comp=N,31nm,2.8s						
PODR	**Polo**	**0.42**	**173**	*i* P	**Pg**	**01 42 50.3**	**-0.4**
PODR				*eS*	**Sb**	**01 42 58.0**	**0.0**
REDR	**Restauracion**	**0.58**	**355**⇂	*ePg*	**Pn**	**01 42 55.6**	**-0.5**
REDR				⇂*eSg*	**Sn**	**01 43 06.2**	**+0.8**
REDR				IAML		01 43 21.2	
	comp=N,9.2nm,1.9s						

MDD ***14*** *02:08:55.2±0.3, 37°.56N×1°.62W, h0km, mb_Lg2.4/25, Error ellipse: s-maj=2.1km s-min=1.5km az=148.0*
SFS ***14*** *02:08:55.3, 37°.57N×1°.59W, h2km, ML2.6/12, ML2.3/14, MLv2.1/14*
CNRM ***14*** *02:09:00.1, 37°.08N×2°.31W, h0km, ML2.0*
ISC 14 02:08:53.7±0.8, 37°.54N±0°.02×1°.60W±0°.02, h11km±5km, n45, σ0s89/95, Spain

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLOR	**Lorca, Murcia**	**0.13**	**328**	Pg	**Pg**	**02 08 58.6**	**-0.1**
TLOR				Sg	**Sg**	**02 08 58.6**	**-0.6**
TLOR	**Lorca, Murcia**	**0.13**	**328**	Pg	**Pg**	**02 08 58.6**	**-0.1**
TLOR				Sg	**Sg**	**02 08 58.3**	**-0.9**
TLOR				Sg	Sg	02 08 58.6	-0.6
TLOR	**Lorca, Murcia**	**0.13**	**328**	Pg	**Pg**	**02 08 58.8**	**-0.1**
ELOR	**Lorca, Murcia**	**0.15**	**309**	Pg	**Pg**	**02 08 57.2**	**0.0**
ELOR				Sg	**Sg**	**02 08 58.8**	**-0.9**
EXMAZ	**Mazarron**	**0.24**	**77**	Pg	**Pg**	**02 08 59.8**	**+1.1**
EXMAZ				Sg	**Sg**	**02 09 03.3**	**+1.3**
EXAHM	**Alhama Murcia,**	**0.33**	**24**	Pg	**Pb**	**02 09 00.8**	**-0.8**
EXAHM				Sg	**Sg**	**02 09 05.4**	**+0.7**
EMUR	**La Murta**	**0.41**	**44**	Pg	**Pb**	**02 09 02.3**	**-0.8**
EMUR				Sg	**Sg**	**02 09 07.8**	**+0.4**
EMUR	**La Murta**	**0.41**	**44**	Pg	**Pb**	**02 09 02.3**	**-0.8**
EMUR				Sg	**Sg**	**02 09 08.0**	**+0.7**
EMUR				*i* lVmb_Lg		02 09 09.5	
CART	**Cartagena**	**0.48**	**85**	Pg	**Pb**	**02 09 03.9**	**-0.2**
CART				Sg	**Sb**	**02 09 11.2**	**0.0**
EXBUL	**Bullas, Murcia**	**0.50**	**354**	Pg	**Pg**	**02 09 03.5**	**-0.1**
EXBUL				Sg	**Sb**	**02 09 11.1**	**-1.0**
EXTPC	**Torre Pacheco**	**0.55**	**68**	Pg	**Pb**	**02 09 05.5**	**+0.2**
EXTPC				Sg	**Sb**	**02 09 13.1**	**-0.1**
ENIJ	**Nijar**	**0.75**	**221**	Pg	**Pb**	**02 09 08.9**	**+0.1**
ENIJ				Sg	**Sb**	**02 09 19.6**	**+0.6**
ENIJ	**Nijar**	**0.75**	**221**	Pg	**Pb**	**02 09 08.9**	**+0.1**
ENIJ				Sg	**Sg**	**02 09 18.3**	**+0.4**
ENIJ				*i* lVmb_Lg		02 09 22.3	
ETOB	**Tobarra**	**1.10**	**2**	Pg	**Pb**	**02 09 14.8**	**0.0**
ETOB				Sg	**Sn**	**02 09 30.4**	**-0.1**
ETOB	**Tobarra**	**1.10**	**2**	Pg	**Pn**	**02 09 15.5**	**+0.4**
ETOB				*i* lVmb_Lg		02 09 17.2	
ETOB				Sg	**Sb**	**02 09 29.5**	**+0.2**
EQES	**Quesada**	**1.20**	**283**	Pg	**Pn**	**02 09 18.0**	**+1.5**
EQES				Sg	**Sn**	**02 09 32.9**	**+0.1**
EQES				*i* lVmb_Lg		02 09 36.4	
EBER	**Berja**	**1.22**	**238**	Pg	**Pn**	**02 09 17.1**	**+0.3**
EBER	**Berja**	**1.22**	**238**	Pg	**Pn**	**02 09 17.1**	**+0.3**
EBER				Sg	**Sn**	**02 09 33.7**	**+0.4**
EBER				*i* lVmb_Lg		02 10 12.6	
E0802	**Ubeda,Jaen**	**1.49**	**289**	Pg	**Pg**	**02 09 21.9**	**-0.3**
E0802				Sg	**Sg**	**02 09 41.3**	**-0.3**
EQUE	**Quentar**	**1.50**	**258**	Pg	**Pb**	**02 09 22.0**	**+0.3**
EQUE				Sg	**Sg**	**02 09 41.7**	**-0.5**
EQTA	**Presa de Quent**	**1.51**	**258**	Pn	**Pg**	**02 09 22.6**	**-0.1**
EQTA				Sn	**Sg**	**02 09 43.2**	**+1.0**
EBEN2	**Beniarda presa**	**1.58**	**44**	Pg	**Pb**	**02 09 22.8**	**-0.3**
EBEN2				Sg	**Sg**	**02 09 43.9**	**-0.8**
EBEN2				*i* lVmb_Lg		02 10 05.4	
ELGU	**Los Guajares,**	**1.75**	**248**	Pn	**Pn**	**02 09 25.0**	**+0.8**
ELGU	**Los Guajares,**	**1.75**	**248**	Pn	**Pb**	**02 09 25.3**	**-0.7**
ELGU				Sn	**Sb**	**02 09 48.1**	**0.0**
ELGU				*i* lVmb_Lg		02 10 04.6	
EVIV	**Cofrentes, Val**	**1.76**	**12**	Pn	**Pg**	**02 09 26.8**	**-0.7**
EVIV				Sn	**Sb**	**02 09 48.7**	**+0.5**
EVIV				*i* lVmb_Lg		02 09 54.9	
EGOR	**Sierra Gorda,**	**2.05**	**259**	Pn	**Pb**	**02 09 30.9**	**-0.1**
EGOR	**Sierra Gorda,**	**2.05**	**259**	Pn	**Pb**	**02 09 30.5**	**-0.5**
EGOR				Pg	**Pg**	**02 09 33.3**	**+0.3**
EGOR				Sn	**Sb**	**02 09 56.1**	**-0.5**
EGOR				*i* lVmb_Lg		02 10 55.5	
ECHE	**Chera**	**2.10**	**13**	Pg	**Pg**	**02 09 33.8**	**-0.2**
ECHE	**Chera**	**2.10**	**13**	Pn	**Pn**	**02 09 29.9**	**+1.0**
ECHE				*i* lVmb_Lg		02 09 32.8	
ECHE				Pg	**Pg**	**02 09 33.9**	**-0.2**
ECHE				Sn	**Sb**	**02 09 57.0**	**-1.0**
ECHE				Sg	**Sg**	**02 10 02.5**	**+1.2**
PSIM	**Granatula de C**	**2.12**	**308**	Pn	**Pn**	**02 09 30.2**	**+0.9**
PSIM				Pg	**Pg**	**02 09 33.8**	**-0.6**
PSIM				Sn	**Sn**	**02 09 55.8**	**+0.1**
PSIM				Sg	**Sg**	**02 10 01.8**	**-0.3**
EADA	**Adamuz**	**2.44**	**286**	Pn	**Pn**	**02 09 34.4**	**+0.8**
EADA				Sn	**Sn**	**02 10 04.5**	**+1.2**
EADA	**Adamuz**	**2.44**	**286**	Pn	**Pn**	**02 09 34.2**	**+0.6**
EADA				Sn	**Sn**	**02 10 04.2**	**+0.8**
EADA				Sg	**Sg**	**02 10 12.4**	**+0.4**
EADA				*i* lVmb_Lg		02 10 15.4	
EIBI	**Ibiza**	**2.75**	**56**	Pn	**Pn**	**02 09 38.0**	**+0.2**
EIBI				Sn	**Sn**	**02 10 09.7**	**-1.2**
TAF	**Taforalt**	**2.80**	**194**	P	**Pn**	**02 09 39.0**	**+0.5**
TAF				S	**Sn**	**02 10 08.3**	**-4.1**
ESBB	**Sonseca Array**	**2.82**	**320**	Pn	**Pn**	**02 09 39.8**	**+1.0**
ESBB				Sn	**Sn**	**02 10 14.6**	**+1.8**
ESBB				*i* lVmb_Lg		02 10 26.9	
ESDC	**Sonseca Array**	**2.82**	**320**	Pn	**Pn**	**02 09 39.6**	**+0.8**
ESDC				Pg	**Pb**	**02 09 45.0**	**+0.9**
ESDC				Sn	**Sn**	**02 10 14.1**	**+1.3**
ESDC				Sg	**Sg**	**02 10 23.8**	**-0.6**
ESDC				*i* lVmb_Lg		02 10 26.9	
E1302	**La Puebla de C**	**2.93**	**263**	Pn	**Pn**	**02 09 41.4**	**+1.0**
E1302				Sn	**Sn**	**02 10 18.1**	**+2.5**
E1302				*i* lVmb_Lg		02 11 23.0	
PAB	**San Pablo**	**2.94**	**314**	Pn	**Pn**	**02 09 40.7**	**+0.2**
PAB				Sn	**Sn**	**02 10 15.0**	**-0.9**
PAB				Sg	**Sg**	**02 10 27.3**	**-0.8**
PAB				*i* lVmb_Lg		02 10 29.4	
UCM	**Universidad Co**	**3.04**	**336**	Pg	**Pg**	**02 09 51.8**	**-0.2**
UCM				Sg	**Sg**	**02 10 30.9**	**-0.6**
ECAB	**El Cabril**	**3.07**	**281**	Pn	**Pn**	**02 09 42.3**	**+0.1**
ECAB				Sn	**Sn**	**02 10 19.1**	**+0.2**
ECAB	**El Cabril**	**3.07**	**281**	Pn	**Pn**	**02 09 42.4**	**+0.1**
ECAB				Sn	**Sn**	**02 10 19.2**	**+0.2**
ECAB				Sg	**Sg**	**02 10 31.1**	**-1.3**
ECAB				*i* lVmb_Lg		02 10 35.3	
YEBES	**Yebes (Guadala**	**3.19**	**339**	Sn	**Sn**	**02 10 22.8**	**+0.8**
YEBES				Sg	**Sg**	**02 10 36.2**	**-0.1**
ETOR	**Torete**	**3.29**	**354**	Pn	**Pn**	**02 09 46.2**	**+0.9**
ETOR				Pg	**Pg**	**02 09 55.2**	**-1.6**
ETOR				Sg	**Sg**	**02 10 39.8**	**+0.4**
ETOR				*i* lVmb_Lg		02 11 16.1	
JBK	**JBK**	**3.30**	**194**	P	**Pn**	**02 09 46.5**	**+1.0**
JBK				S	**Sn**	**02 10 22.7**	**-2.1**
PVAQ	**Vaqueiros**	**4.87**	**270**	P	**Pn**	**02 10 06.9**	**0.0**

IDC ***14*** *02:17:43.7±2.4, 8°.31S×108°.89E, h0km, mb3.6/6, mbtmp3.6/6, MS3.9/1, Error ellipse: s-maj=114.5km s-min=21.0km az=53.0*
DJA ***14*** *02:17:50.6±0.2, 9°.5S±2°×10°.9E±°, h10km, M4.3/43, mb4.4/12, mB5.3/4, MLv4.2/43, Mw(mB)4.8/4*
NEIC ***14*** *02:17:53.4±0.9, 8°.3S±0°.1×108°.91E±0°.05, h77km±9km, mb4.5/8, Error ellipse: s-maj=21.6km s-min=4.7km az=194.0*
ISC 14 02:17:50.7±0.8, 8°.67S±0°.09×108°.83E±0°.06, h55km, n57, σ1s82/50, mb3.5/8, Jawa

| Code | Station Name | Δ° | AZ° | Phase ID

s-min=10.4km az=85.0

ISC 14 02:48:44.7±0.7, 2°73'S±0'.05×128°89'E±0'.06, h35km, n35, σ1°45/34, mb3.9/6, MS3.0/4, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.61**	**176**	P	**Pn**	**02 48 57.5**	**+0.5**
KRAI	**Karang Ratu**	**0.77**	**220**	P	**Pn**	**02 48 59.7**	**+0.6**
AAI	**Ambon**	**1.18**	**216**	P	**Pn**	**02 49 07.6**	**+2.9**
NLAI	**Namlea**	**1.86**	**254**	P	**Pn**	**02 49 14.6**	**+0.5**
BNDI	**Bandanaira**	**2.05**	**150**	P	**Pn**	**02 49 19.2**	**+2.5**
SANI	**Sanana**	**2.98**	**283**	P	**Pn**	**02 49 27.9**	**-1.6**
SWI	**Sorong**	**3.01**	**52**	P	**Pn**	**02 49 30.1**	**+0.2**
SWI				S	**Sn**	**02 50 04.1**	**-0.7**
SIJI	**Sorong**	**3.01**	**52**	P	**Pn**	**02 49 30.1**	**+0.1**
	9.0nm,0.3s,baz=84,slow=9.8,SNR=27						
SIJI				S	**Sn**	**02 50 06.8**	**+2.0**
	118nm,0.5s,baz=60,slow=21,SNR=14						
SIJI				LR	LR	02 51 00.8	
	comp=Z,229nm,18.6s,baz=209,slow=45						
	26nm,0.3s						
SIJI	**Sorong**	**3.01**	**52**	P	**Pn**	**02 49 29.6**	**-0.4**
SIJI				S	**Sn**	**02 50 04.8**	**0.0**
LUWI	**Luwuk**	**6.34**	**285**	Pn	**Pn**	**02 50 16.6**	**+0.9**
APSI	**Ampana**	**7.46**	**284**	P	**Pn**	**02 50 30.9**	**-0.2**
KAPI	**Kappang**	**9.39**	**256**	LR	LR	02 54 59.3	
	comp=Z,76nm,18.2s,baz=328,slow=39						
MTN	**Manton Dam**	**10.29**	**168**	Pn	**Pn**	**02 51 11.3**	**+1.3**
JAY	**Jayapura**	**11.80**	**89**	LR	LR	02 57 40.2	
	comp=Z,94nm,20.3s,baz=308,slow=46						
KNRA	**Kununurra**	**12.87**	**181**	Pn	**Pn**	**02 51 46.5**	**+1.3**
MYLDM	**Lahad Datu**	**13.02**	**307**	Pn	**Pn**	**02 51 47.8**	**+0.4**
FITZ	**Fitzroy Crossi**	**15.60**	**192**	P	**Pn**	**02 52 22.9**	**+0.8**
	0.3nm,0.3s,baz=25,slow=7.7,SNR=9.6						
	2.1nm,0.6s						
WRA	**Warramunga Arr**	**17.92**	**163**	P	**Pn**	**02 52 49.1**	**-2.2**
	0.4nm,0.3s,baz=347,slow=12,SNR=12						
WRA				S	**Sn**	**02 56 07.6**	**-2.6**
	1.2nm,0.8s,baz=344,slow=21,SNR=2.8						
	2.7nm,0.6s						
WRA	**Warramunga Arr**	**17.92**	**163**	P	**Pn**	**02 52 49.3**	**-2.0**
WR8	**Warramunga Arr**	**17.98**	**163**		**Pn**	**02 52 51.4**	**-0.7**
WR8				IAmb	IAmb	02 53 08.1	
	comp=Z,13nm,1.4s						
MBWA	**Marble Bar**	**20.37**	**205**	P	**P**	**02 53 17.5**	**-1.0**
PSA00	**Pilbara Seismi**	**20.69**	**204**	P	**P**	**02 53 21.5**	**-0.5**
PSA00				IAmb	IAmb	02 53 44.5	
	comp=Z,21nm,1.2s						
PSA00	**Pilbara Seismi**	**20.69**	**204**	P	**P**	**02 53 21.8**	**-0.2**
PSA00				IAmb	IAmb	02 53 22.7	
	comp=Z,12nm,1.4s						
AS31	**Alice Springs**	**21.37**	**167**		**P**	**02 53 29.5**	**+0.2**
AS31				IAmb	IAmb	02 53 40.1	
	comp=Z,5.7nm,0.6s						
ASAR	**Alice Springs**	**21.37**	**167**	P	**P**	**02 53 29.2**	**-0.1**
	comp=Z,9.0nm,0.5s,baz=351,slow=12,SNR=200						
ASAR				S	**S**	**02 57 20.8**	**-4.1**
	comp=Z,3.2nm,0.9s,baz=350,slow=22,SNR=8.9						
	comp=Z,9.0nm,0.5s						
ASAR	**Alice Springs**	**21.37**	**167**		**P**	**02 53 29.1**	**-0.2**
LEM	**Lembang**	**21.58**	**258**	LR	LR	03 03 08.8	
	comp=Z,96nm,19.5s,baz=234,slow=40						
JNU	**Nakatsue**	**35.71**	**3**	LR	LR	03 09 32.0	
	comp=Z,15nm,19.2s,baz=220,slow=35						
KSRS	**Korea Array**	**39.99**	**359**	LR	LR	03 11 39.7	
	comp=Z,8.8nm,20.8s,baz=125,slow=34						
PALK	**Pallekele**	**49.10**	**282**	LR	LR	03 20 00.1	
	comp=Z,24nm,18.4s,baz=119,slow=38						
MKAR	**Makanchi Array**	**64.08**	**326**	P	**P**	**02 59 16.0**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=116,slow=6.6,SNR=3.5						
	comp=Z,0.3nm,0.7s						
MKAR	**Makanchi Array**	**64.08**	**326**	P	**P**	**02 59 15.7**	**+0.4**
KURBB	**Kurchatov Arra**	**68.32**	**328**	P	**P**	**02 59 43.1**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=128,slow=5.5,SNR=4.7						
	comp=Z,0.3nm,0.6s						
KURK	**Kurchatov**	**68.32**	**328**	P	**P**	**02 59 43.7**	**+1.3**
KURK				IAmb	IAmb	03 00 01.4	
	comp=Z,1.7nm,0.9s						
BVAR	**Borovoye Array**	**73.89**	**328**	P	**P**	**03 00 17.0**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=123,slow=5.3,SNR=2.2						
	comp=Z,0.5nm,0.7s						

KRNET 14 02:57:53.7±0.1, 39°83N×77°02E, mb2.8, 10C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNKS	**Jany-Kuch**	**1.62**	**319**	⇑*e*P	Pn	02 58 23.2	-0.6
JNKS				⇑*e*S	Sn	02 58 44.8	-0.7
NRN	**Naryn**	**1.78**	**335**	⇓*e*P	Pn	02 58 26.3	+0.3
NRN				⇓*e*S	Sb	02 58 50.1	-0.3
TARG	**Taragay, Kyrgy**	**1.99**	**17**	⇑*e*P	Pn	02 58 29.5	+0.5
TARG				⇑*e*S	Sn	02 58 55.5	+0.6
KDJ	**Kajisay**	**2.30**	**3**	⇑*e*P	Pn	02 58 33.5	+0.4
KDJ				⇑*e*S	Sn	02 59 02.7	+0.5
ULHL	**Ulahol**	**2.48**	**347**	⇑*e*P	Pn	02 58 36.2	+0.6
ULHL				⇑*e*S	Sn	02 59 07.2	+0.4
SFK	**Sufi-Kurgan**	**2.71**	**275**	⇑*e*P	Pn	02 58 39.3	+0.6
SFK				⇑*e*S	Sn	02 59 12.7	+0.4

*SOME **14** 02:58:39.5, 41°43N×77°12E, h15km*
*NNC **14** 02:58:40.5±2.0, 41°40N×77°11E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=13.5km s-min=10.8km az=12.0*

ISC 14 02:58:36.3±3.4, 41°3N±0°.1×77°14E±0°.05, h7km±17km, n23, σ1°10/39, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNSS	**Tian-Shan**	**1.76**	**355**	*e*P	**Pg**	**02 59 10.1**	**+0.1**
	0.9nm,0.4s						
TNSS				*e*S	**Sg**	**02 59 32.0**	**-0.8**
	3.8nm,0.4s						
IZV	**Izvestkoviy**	**1.79**	**348**	P	**Pg**	**02 59 11.8**	**+1.1**
	0.6nm,0.2s						
IZV				S	**Sg**	**02 59 35.0**	**+1.1**
	15nm,0.4s						
IZV	**Izvestkoviy**	**1.79**	**348**	*e*P	**Pg**	**02 59 11.4**	**+0.7**
	0.6nm,0.2s						
IZV				*e*S	**Sg**	**02 59 34.3**	**+0.4**
	15nm,0.4s						
MDOK	**Medeo**	**1.88**	**358**	Pg	**Pg**	**02 59 13.3**	**+1.0**
	2.3nm,0.3s						
MDOK				Lg	Lg	02 59 37.9	
	22nm,0.4s						
MTBS	**Maitube**	**1.92**	**344**	P	**Pb**	**02 59 11.8**	**+0.2**
	0.3nm,0.1s						
MTBS				S	**Sb**	**02 59 35.2**	**-0.6**
	12nm,0.3s						
MTBS	**Maitube**	**1.92**	**344**	*e*P	**Pb**	**02 59 11.8**	**+0.2**
	0.3nm,0.1s						
MTBS				*e*S	**Sb**	**02 59 34.9**	**-0.8**
	12nm,0.3s						
KOTS	**Kotyrbulak**	**1.95**	**359**	P	**Pg**	**02 59 15.3**	**+1.6**
	3.7nm,0.3s						
KOTS				S	**Sg**	**02 59 40.2**	**+1.3**
	47nm,0.6s						
KOTS	**Kotyrbulak**	**1.95**	**359**	*e*P	**Pg**	**02 59 14.2**	**+0.6**
	3.7nm,0.3s						
KOTS				*e*S	**Sg**	**02 59 39.5**	**+0.6**
	47nm,0.6s						
KST	**Kastek**	**1.96**	**334**	P	**Pg**	**02 59 13.7**	**-0.2**
	0.6nm,0.2s						
KST				S	**Sg**	**02 59 38.4**	**-1.0**
	7.0nm,0.3s						
KST	**Kastek**	**1.96**	**334**	*e*P	**Pg**	**02 59 13.7**	**-0.2**
	2.1nm,0.3s						
KST				*e*S	**Sg**	**02 59 38.4**	**-1.0**
	7.0nm,0.3s						
SATY	**Saty**	**2.01**	**28**	P	**Pb**	**02 59 14.1**	**+0.9**
	0.3nm,0.2s						
SATY				S	**Sg**	**02 59 39.1**	**-1.7**
	11nm,0.4s						
DGS	**Degeres**	**2.20**	**333**	Pg	**Pb**	**02 59 17.8**	**+1.3**
	1.6nm,0.4s						
DGS				Lg	Lg	02 59 45.2	
	8.0nm,0.4s						
DGS	**Degeres**	**2.20**	**333**	*e*P	**Pb**	**02 59 16.5**	**0.0**
	1.6nm,0.4s						
DGS				*e*S	**Sb**	**02 59 43.3**	**-0.7**
	8.0nm,0.4s						
UZB	**Uzynbulak**	**2.33**	**36**	*e*P	**Pb**	**02 59 18.8**	**+0.1**
	2.6nm,0.1s						
UZB				*e*S	**Sb**	**02 59 47.0**	**-0.7**
	4.2nm,0.6s						
KURS	**Kuram**	**2.33**	**19**	Pg	**Pg**	**02 59 20.4**	**-0.5**
	2.8nm,0.5s						
KURS				Lg	Lg	02 59 50.1	
	6.9nm,0.8s						
KTBS	**Karatobe**	**2.45**	**352**	Pg	**Pg**	**02 59 22.8**	**-0.4**
	1.4nm,0.6s						
KTBS				Lg	Lg	02 59 54.9	
	0.4nm,0.5s						
KTBS	**Karatobe**	**2.45**	**352**	*e*P	**Pg**	**02 59 23.3**	**+0.1**
	1.4nm,0.6s						
KTBS				*e*S	**Sg**	**02 59 54.8**	**-0.2**
	0.4nm,0.5s						
KPKS	**Kokpek**	**2.46**	**27**	*e*P	**Pb**	**02 59 22.1**	**+1.2**
	0.2nm,0.1s						
KPKS				*e*S	**Sg**	**02 59 52.7**	**-2.6**
	4.4nm,0.5s						
KRBS	**Karabastau**	**2.64**	**336**	Pg	**Pg**	**02 59 25.8**	**-1.1**
	1.0nm,0.2s						
KRBS				Lg	Lg	02 59 58.7	
	8.9nm,0.4s						
KRBS	**Karabastau**	**2.64**	**336**	*e*P	**Pb**	**02 59 25.6**	**+1.7**
	1.0nm,0.2s						
KRBS				*e*S	**Sg**	**02 59 59.0**	**-2.1**
	8.9nm,0.4s						
ARXS	**Arharly**	**2.97**	**10**	Pg	**Pg**	**02 59 33.1**	**-0.1**
	0.7nm,0.5s						
ARXS				Lg	Lg	03 00 11.6	
	6.5nm,0.4s						
ARXS	**Arharly**	**2.97**	**10**	*e*P	**Pg**	**02 59 33.1**	**-0.1**
	0.4nm,0.2s						
ARXS				*e*S	**Sg**	**03 00 11.6**	**-0.1**
	6.5nm,0.4s						
BLB	**Baldybastay**	**2.98**	**19**	Pg	**Pb**	**02 59 32.0**	**+2.3**
	1.7nm,0.2s						
BLB				Lg	Lg	03 00 09.4	
	7.7nm,0.6s						

DJA 14 02:58:53.5±0.2, 3°S±2°×12°9E±°, h10km, M3.8/15, mb4.1/2, MLv3.6/15, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.78**	**183**	P	Pg	02 59 07.3	-1.3
KRAI	**Karang Ratu**	**0.95**	**217**	P	Pg	02 59 11.4	-0.4
AAI	**Ambon**	**1.36**	**215**	P	Pb	02 59 19.0	-0.1
NLAI	**Namlea**	**1.99**	**250**	P	Pn	02 59 26.7	-0.5
NLAI				S	Sn	02 59 52.4	+0.3
BNDI	**Bandanaira**	**2.16**	**154**	P	Pn	02 59 29.8	+0.2
SWI	**Sorong**	**2.84**	**54**	P	Pn	02 59 39.4	+0.4
SWI				S	Sn	03 00 14.6	+1.3
SIJI	**Sorong**	**2.84**	**54**	P	Pn	02 59 39.4	+0.4
SANI	**Sanana**	**3.02**	**280**	P	Pn	02 59 43.1	+1.7
GTOI	**Gorontalo**	**6.75**	**298**	P	Pn	03 00 36.8	+4.1
	0.1nm7.1nm,1.2s						
APSI	**Ampana**	**7.50**	**282**	P	Pn	03 00 42.9	-0.1

*SDD **14** 03:03:12.9±2.4, 17°.81N×66°.75W, h13km±201km, MD2.9, ML2.1, MW2.4, Presumed earthquake*
*OSPL **14** 03:03:15.1±0.5, 17°.85N×66°.73W, h2km±999km, ML1.7, Presumed earthquake*

ISC 14 03:03:14.5±1.6, 17°.89N±0°.08×66°.77W±0°.04, h8km±12km, n8, σ0°88/15, 9C-1D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OBIP	**Obispado Ponce**	**0.21**	**46**	*i* P	**Pg**	**03 03 19.0**	**+0.2**
OBIP				*e*S	**Sg**	**03 03 22.3**	**+0.5**
OBIP				IAML		03 03 22.5	
	comp=Z,149nm,0.1s						
MLPR	**Magueyes Islan**	**0.27**	**286**	⇑*e*P	**Pg**	**03 03 18.5**	**-1.4**
MLPR				⇑*e*Sg	**Sg**	**03 03 22.8**	**-0.8**
MLPR				IAML		03 03 24.9	
	comp=N,65nm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.34**	**289**	*i* P	**Pg**	**03 03 22.0**	**+0.7**
CRPR				*e*S	**Sg**	**03 03 27.6**	**+1.7**
CRPR				IAML		03 03 29.0	
	comp=Z,128nm,0.2s						
AOPR	**Arecibo Observ**	**0.45**	**2**	⇓*e*Pg	**Pg**	**03 03 23.0**	**-0.3**
AOPR				⇑*e*Sg	**Sg**	**03 03 28.4**	**-0.8**
AOPR				IAML		03 03 33.1	
	comp=N,189nm,0.2s						
PRSN	**Puerto Rico Se**	**0.48**	**312**	⇓*e*Pg	**Pg**	**03 03 24.3**	**+0.4**
PRSN				⇑*e*Sg	**Sg**	**03 03 30.4**	**+0.2**
PRSN				IAML		03 03 33.2	
	comp=N,280nm,0.2s						
SJG	**San Juan**	**0.63**	**70**	*i* P	**Pg**	**03 03 26.3**	**-0.3**
SJG				IAML		03 03 37.1	
	comp=Z,43nm,0.3s						
AGPR	**Aguadilla, PR**	**0.66**	**330**	⇑*e*Pg	**Pg**	**03 03 26.9**	**-0.3**
AGPR				⇑*e*Sg	**Sg**	**03 03 36.2**	**+0.4**
AGPR				IAML		03 03 45.0	
	comp=N,53nm,1.4s						
HATOM	**Hato Mayor del**	**2.64**	**290**	⇑*e*Pg	**Pn**	**03 03 57.6**	**+0.3**
HATOM				⇑*e*Sg	**Sb**	**03 04 33.9**	**-0.7**
HATOM				IAML		03 04 40.8	
	comp=N,13nm,3.0s						

TRN 14 03:29:05.7, 18°.87N×63°.25W, h0km, MD3.6, Far North of Anguilla., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMRT	**St. Maarten**	**0.83**	**169**	*e*P	Pn	03 29 26.2	+1.5
SMRT				*e*S	Sn	03 29 40.9	+3.2
SABA	**Saba**	**1.24**	**180**	*e*P	Pn	03 29 32.8	+2.4
SABA				*e*S	Sn	03 29 52.7	+4.9
SKI	**Saint Kitts**	**1.60**	**162**	*e*P	Pg	03 29 38.6	+2.1
SKI				*e*S	Sg	03 30 03.3	+6.0
ANWB	**Willy Bob**	**1.83**	**131**	*e*P	Pg	03 29 40.8	-0.1

*IDC **14** 03:34:31.7±2.4, 5°.84S×128°.65E, h274km±29km, mb3.1/4, mbtmp4.0/8, Error ellipse: s-maj=52.4km s-min=16.4km az=82.0*
*DJA **14** 03:34:32.1±0.3, 6°S±3°×12°9E±°, h321km±5km, M4.2/25, mB4.8/6, mb4.4/11, MLv4.3/25, Mw(mB)4.1/6*

ISC 14 03:34:33.4±0.7, 5°.79S±0°.05×128°.98E±0°.08, h300km, n21, σ2°14/27, mb3.5/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.56**	**36**	P	**Pn**	**03 35 17.2**	**+0.3**
BNDI				S	**S**	**03 35 53.7**	**+2.1**
AAI	**Ambon**	**2.23**	**339**	P	**Pn**	**03 35 22.9**	**+0.8**
MSAI	**Masohi**	**2.42**	**359**	P	**Pn**	**03 35 24.9**	**+1.1**
KRAI	**Karang Ratu**	**2.52**	**347**	P	**Pn**	**03 35 25.1**	**+0.4**
NLAI	**Namlea**	**3.15**	**323**	P	**Pn**	**03 35 32.5**	**+1.8**
NLAI				S	**S**	**03 36 17.8**	**+1.3**
SAUI	**Saumlaki**	**3.17**	**134**	P	**Pn**	**03 35 31.2**	**+0.3**
SANI	**Sanana**	**4.76**	**321**	P	**Pn**	**03 35 47.4**	**-0.9**
KMPI	**Kaimana, Papua**	**5.16**	**66**	P	**Pn**	**03 35 51.4**	**-1.4**
	0.8nm202nm,0.8s						
SIJI	**Sorong**	**5.39**	**25**	P	**Pn**	**03 35 55.3**	**-0.2**
	18nm,0.4s,baz=159,slow=24,SNR=9.4						
SIJI				S	**S**	**03 36 57.9**	**-3.8**
	23nm,0.2s,baz=70,slow=24,SNR=16						
SIJI	**Sorong**	**5.39**	**25**	P	**Pn**	**03 35 54.9**	**-0.7**
	0.3nm2μm22nm,0.5s						
SWI	**Sorong**	**5.39**	**25**	P	**Pn**	**03 35 54.9**	**-0.7**
	0.4nm33nm,0.4s						
SOEI	**Soe**	**6.11**	**230**	P	**Pn**	**03 36 03.1**	**-1.1**
	0.3nm2μm42nm,0.5s						
BATI	**Baumata**	**6.86**	**230**	P	**Pn**	**03 36 11.8**	**-1.3**
FITZ	**Fitzroy Crossi**	**12.66**	**195**	P	**Pn**	**03 37 21.1**	**-2.9**
	3.0nm,0.5s,baz=10,slow=8.2,SNR=20						
FITZ				S	**S**	**03 39 43.4**	**-1.1**
	1.2nm,0.3s,baz=196,slow=19,SNR=1.5						
WRA	**Warramunga Arr**	**15.00**	**160**	P	**Pn**	**03 37 50.8**	**-1.2**
	2.0nm,0.4s,baz=334,slow=13,SNR=25						
WRA				S	**S**	**03 40 42.0**	**+7.7**
	0.5nm,0.3s,baz=343,slow=20,SNR=4.7						
ASAR	**Alice Springs**	**18.40**	**166**	P	**P**	**03 38 28.0**	**+0.6**
	4.6nm,0.4s,baz=346,slow=12,SNR=71						
ASAR				S	**S**	**03 41 39.6**	**-2.0**
	2.5nm,1.0s,baz=350,slow=23,SNR=8.2						
SONM	**Songino Array**	**56.98**	**342**	P	**P**	**03 43 49.2**	**+0.9**
	0.3nm,0.5s,baz=134,slow=6.2,SNR=2.4						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**66.66**	**327**	P	**P**	**03 44 52.5**	**+0.1**
	0.6nm,0.4s,baz=115,slow=8.6,SNR=13						
	0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**70.06**	**334**	P	**P**	**03 45 12.8**	**-0.3**
	0.5nm,0.5s,baz=120,slow=7.0,SNR=2.1						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**70.95**	**329**	P	**P**	**03 45 18.8**	**+0.2**
	0.4nm,0.5s,baz=127,slow=4.4,SNR=5.7						
	0.4nm,0.5s						
TXAR	**Lajitas Array**	**125.16**	**58**	PKP	**PKiKP**	**03 53 00.6**	**+1.0**
	0.1nm,0.9s,baz=294,slow=2.2,SNR=1.4						

*MOS **14** 04:10:30.8, 43°.07N×44°.30E, h11km, MPVA3.7*
*NORS **14** 04:10:31.3, 43°.07N×44°.32E, h10km, MPVA3.9*
*DRS **14** 04:10:35.0, 42°.97N×44°.60E, h30km*

ISC 14 04:10:32.6±0.7, 43°.07N±0°.02×44°.32E±0°.01, h12km±4km, n76, σ0°78/149, 2C-4D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARNR	**Ardon**	**0.12**	**348**	*e*Pg	**Pg**	**04 10 35.1**	**-0.6**
ARNR				*e*Sg	**Sg**	**04 10 37.7**	**-0.2**
ARNR	**Ardon**	**0.12**	**348**	⇓*i*PG	**Pg**	**04 10 35.2**	**-0.5**
KORR	**Kora**	**0.18**	**276**	*e*Pg	**Pg**	**04 10 36.6**	**0.0**
KORR				*e*Sg	**Sg**	**04 10 39.8**	**+0.2**
KORR	**Kora**	**0.18**	**276**	⇑*i*PG	**Pg**	**04 10 36.8**	**+0.1**
KORR				*e*S	**Sg**	**04 10 41.3**	**+1.8**
LACR	**Lac**	**0.24**	**184**	*e*Pg	**Pg**	**04 10 38.1**	**+0.5**
LACR				*e*Sg	**Sg**	**04 10 43.1**	**+2.0**
LACR	**Lac**	**0.24**	**184**	⇓*i*PG	**Pg**	**04 10 38.2**	**+0.5**
LACR				*e*S	**Sg**	**04 10 43.4**	**+2.3**
VLKR	**Vladikavkaz**	**0.27**	**94**	*e*Pg	**Pg**	**04 10 38.0**	**-0.1**
VLKR				*e*Sg	**Sg**	**04 10 41.8**	**0.0**
VLKR	**Vladikavkaz**	**0.27**	**94**	*e*PG	**Pg**	**04 10 38.3**	**+0.2**
VLKR				*e*S	**Sb**	**04 10 43.0**	**-0.9**
BTKR	**Batakoyurt**	**0.35**	**28**	*e*Pg	**Pg**	**04 10 39.4**	**-0.2**
BTKR				*e*Sg	**Sb**	**04 10 45.5**	**-0.8**
BTKR	**Batakoyurt**	**0.35**	**28**	*e*PG	**Pg**	**04 10 39.4**	**-0.2**
BTKR				*e*S	**Sb**	**04 10 45.5**	**-0.8**
STDR	**Stavd-Durt**	**0.36**	**329**	*e*Pg	**Pg**	**04 10 39.8**	**0.0**
STDR				*e*Sg	**Sb**	**04 10 46.7**	**+0.2**
STDR	**Stavd-Durt**	**0.36**	**329**	⇓*i*PG	**Pg**	**04 10 39.9**	**+0.2**
STDR				*e*S	**Sb**	**04 10 50.3**	**+3.8**
KMGR	**Komgaron**	**0.40**	**91**	*e*Pg	**Pg**	**04 10 41.1**	**+0.5**
KMGR				*e*Sg	**Sg**	**04 10 45.9**	**-0.1**
KMGR	**Komgaron**	**0.40**	**91**	*e*PG	**Pb**	**04 10 41.6**	**-0.1**
KMGR				*e*S	**Sb**	**04 10 48.0**	**+0.1**
LSNR	**Lesken**	**0.42**	**301**	*e*Pg	**Pb**	**04 10 41.3**	**-0.7**
LSNR				*e*Sg	**Sb**	**04 10 47.8**	**-0.5**
LSNR	**Lesken**	**0.42**	**301**	*e*PG	**Pb**	**04 10 41.3**	**-0.7**
LSNR				*e*S	**Sb**	**04 10 47.8**	**-0.5**
DIGR	**Digorskoe uzhe**	**0.56**	**253**	*e*Pg	**Pg**	**04 10 43.6**	**0.0**
DIGR				*e*Sg	**Sb**	**04 10 52.1**	**-0.6**
DIGR	**Digorskoe uzhe**	**0.56**	**253**	⇓*i*PG	**Pg**	**04 10 43.7**	**0.0**
DIGR				*e*S	**Sb**	**04 10 52.7**	**0.0**
GUDG	**Gudauri**	**0.61**	**169**	*e*Pg	**Pg**	**04 10 44.7**	**+0.2**
GUDG				*e*Sg	**Sb**	**04 10 54.2**	**+0.1**
GUDG	**Gudauri**	**0.61**	**169**	⇑*i*PG	**Pb**	**04 10 44.9**	**-0.5**
GUDG				*e*S	**Sb**	**04 10 54.8**	**+0.8**
NCK	**Nalchik**	**0.68**	**309**	*e*Pg	**Pb**	**04 10 46.5**	**0.0**
NCK				*e*Sg	**Sb**	**04 10 57.1**	**+1.3**
NCK	**Nalchik**	**0.68**	**309**	*e*PG	**Pb**	**04 10 46.5**	**0.0**
NCK				*e*S	**Sb**	**04 10 57.1**	**+1.3**
PRTR	**Priterechnaya**	**0.69**	**358**	*e*Pg	**Pb**	**04 10 46.7**	**+0.2**
PRTR				*e*Sg	**Sb**	**04 10 57.1**	**+1.1**
PRTR	**Priterechnaya**	**0.69**	**358**	*e*PG	**Pb**	**04 10 46.7**	**+0.2**
PRTR				*e*S	**Sb**	**04 10 57.1**	**+1.1**
KBTC	**Kuba-Taba**	**1.00**	**319**	*e*Pg	**Pb**	**04 10 52.0**	**+0.1**
KBTC				*e*Sg	**Sn**	**04 11 06.9**	**+0.3**
KBTC	**Kuba-Taba**	**1.00**	**319**	*e*PG	**Pb**	**04 10 52.0**	**+0.1**
KBTC				*e*S	**Sn**	**04 11 06.9**	**+0.3**
GROC	**Groznyy**	**1.09**	**82**	*e*Pg	**Pn**	**04 10 54.0**	**+0.3**
GROC				*e*Sg	**Sn**	**04 11 09.4**	**+0.6**
GROC	**Groznyy**	**1.09**	**82**	*e*PG	**Pn**	**04 10 54.0**	**+0.3**
GROC				*e*S	**Sn**	**04 11 09.4**	**+0.6**
NEUR	**Neytrino**	**1.20**	**280**	*e*Pg	**Pb**	**04 10 54.9**	**-0.5**
NEUR				*e*Sg	**Sg**	**04 11 10.9**	**-0.3**
NEUR	**Neytrino**	**1.20**	**280**	*e*PG	**Pb**	**04 10 55.0**	**-0.2**
NEUR				*e*S	**Sn**	**04 11 11.5**	**-0.2**
KBZ	**Khabaz**	**1.23**	**303**	*e*Pg	**Pn**	**04 10 55.3**	**-0.3**
KBZ				*e*Sg	**Sb**	**04 11 11.3**	**-0.2**
KBZ	**Khabaz**	**1.23**	**303**	*e*PG	**Pn**	**04 10 55.3**	**-0.3**
KBZ				*e*S	**Sb**	**04 11 11.3**	**-0.2**
DVE	**Vedeno**	**1.33**	**94**	*e*Pg	**Pn**	**04 10 56.9**	**-0.2**
DVE				*e*Sg	**Sn**	**04 11 15.1**	**+0.3**
DVE	**Vedeno**	**1.33**	**94**	*e*PG	**Pn**	**04 10 56.9**	**-0.2**
DVE				*e*S	**Sn**	**04 11 15.1**	**+0.3**
PYA1	**Pyatigorsk**	**1.33**	**319**	*e*Pg	**Pn**	**04 10 56.6**	**-0.5**
PYA1				*e*Sg	**Sb**	**04 11 14.7**	**0.0**
PYA1	**Pyatigorsk**	**1.33**	**319**	*e*PG	**Pn**	**04 10 56.6**	**-0.5**
PYA1				*e*S	**Sb**	**04 11 14.7**	**0.0**
SHA1	**Shidzhatmaz**	**1.38**	**300**	*e*Pg	**Pn**	**04 10 58.0**	**0.0**
SHA1				*e*Sg	**Sb**	**04 11 16.3**	**0.0**
SHA1	**Shidzhatmaz**	**1.38**	**300**	*e*P

comp=N,23nm,1.1s
MNK *i* P **Pn** **04 14 13.2 -0.4**
comp=Z,34nm,9.9s,baz=129
MNK *i* PP **sP** **04 14 21.6 -1.0**
MNK *i* PPP PPP 04 14 29.2
MNK *i* S **Sn** **04 17 08.2 +0.8**
MNK *i* SS **S** **04 17 22.4 0.0**
MNK *i* SSS SSS 04 17 35.0
MNK *i* LQ LQ 04 18 24.8
MNK *i* LR LR 04 20 02.4
MNK *i* LRM MLR 04 21 03.3
comp=E,162nm,18.4s
MNK *i* LRM MLR 04 21 07.5
comp=N,114nm,17.8s
MNK *i* LRM MLR 04 22 31.1
comp=Z,21nm,8.5s
MNK Minsk 15.71 322 *i* P **Pn** **04 14 13.1 -0.4**
MNK *i* S **Sn** **04 17 08.2 +0.8**
MNK pmax pmax
comp=N,23nm,1.1s
MNK pmax pmax
comp=E,9.0nm,0.7s
MNK MLR MLR
comp=E,162nm,18.0s
MNK MLR MLR
comp=N,114nm,18.0s
MNK MLR MLR
comp=Z,21nm,9.0s

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*KOLA **14** 04:11:50.2, 67°.63N×33°.64E, h0km, ML1.6, Error ellipse: s-maj=3.6km s-min=2.1km az=100.0, Khibiny Massif*
HEL 14 04:11:47.3±0.9, 67°.69N×34°.16E, h0km, ML1.5, Suspected explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APA	**Apatity**	**0.31**	**247**	P	Pg	04 11 52.0	-1.3
APA				S	Sg	04 11 53.8	-3.5
APA0	**Apatity Array**	**0.45**	**260**	P	Pg	04 11 54.5	-1.5
APA0				S	Sg	04 11 58.4	-3.4
KVDA	**Kovda**	**1.12**	**207**	P	Pg	04 12 08.1	-0.7
KVDA				S	Sg	04 12 21.1	-2.1
TERR	**Teriberka**	**1.56**	**13**	P	Pg	04 12 18.3	+1.1
TERR				S	Sg	04 12 42.0	+4.7
VRF	**Varrio**	**1.73**	**274**	PG	Pn	04 12 17.8	-0.9
VRF				SG	Sn	04 12 37.9	-3.5
VRF				smax	smax	04 12 39.1	
comp=Z,4.3nm,0.2s							
OLKF	**Oulanka, Finla**	**2.32**	**236**	PG	Pb	04 12 28.4	-1.5
OLKF				smax	smax	04 12 56.0	
comp=Z,1.5nm,0.2s							
OLKF				SG	Sb	04 12 57.7	-1.4
RAJF	**Raja-Jooseppi**	**2.33**	**292**	PB	Pn	04 12 27.6	+0.7
RAJF				SN	Sn	04 12 55.7	-0.4
KU6	**Riekki** baz=48	**2.37**	**227**	PG	Pn	04 12 29.1	+1.7
KU6				smax	smax	04 12 57.5	
comp=Z,1.1nm,0.2s							
KU6				SG	Sb	04 13 00.8	+0.1
MSF	**Maaselka**	**2.70**	**231**	PG	Pb	04 12 35.2	-1.3
MSF				SG	Sb	04 13 10.7	+0.7
VADS	**Vadso**	**2.99**	**327**	P	Pn	04 12 37.8	+1.9
VADS				S	Sn	04 13 13.7	+1.3
KEV	**Kevo**	**3.33**	**312**	PB	Pn	04 12 43.1	+2.5
KEV				SN	Sn	04 13 21.2	+0.5
RNF	**Rovaniemi**	**3.36**	**255**	PN	Pn	04 12 41.8	+0.9
RNF				SN	Sn	04 13 20.4	-1.0
RANF	**Ranua**	**3.36**	**243**	SB	Sb	04 13 28.4	-0.6
ARA0	**ARCESS Array S**	**3.67**	**304**	PN	Pn	04 12 45.6	+0.4
ARA0				SN	Sn	04 13 28.2	-0.9
ARCES	**ARCESS Array B**	**3.67**	**304**	P	Pn	04 12 45.1	-0.1
ARCES				S	Sn	04 13 27.3	-1.8
KLF	**Kolari**	**3.95**	**268**	PG	Pb	04 12 59.1	+1.4
HEF	**Hetta** baz=96	**4.01**	**285**	PG	Pb	04 13 00.8	+2.2
OUL	**Oulu**	**4.23**	**236**	SN	Sn	04 13 38.7	-4.1
KTK1	**Kautokeino**	**4.26**	**293**	SN	Sn	04 13 42.1	-1.5
LANU	**Lannavaara**	**4.61**	**280**	PB	Pb	04 13 06.0	-3.0

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*NIED **14** 04:25:35.4, 37°.14N×143°.33E, h58km, MW3.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}=0.40; $M_{\theta\theta}$=0.64; $M_{\phi\phi}$=1.04; $M_{r\theta}$=-0.06; $M_{\theta\phi}$=0.71; $M_{\phi r}$=0.41; Fault plane solution: $M_0$1.18000×10^{14} NP1:ϕ_s65.00000°, δ67.00000°, λ-7.00000°. NP2:ϕ_s158.00000°, δ84.00000°, λ-157.00000°.*
JMA 14 04:25:35.4±0.2, 37°.1N±0°.6×14°.3E±°, h58km, MV3.6/32, FAR E OFF FUKUSHIMA PREF, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**1.88**	**309**	P	Pn	04 26 05.8	+0.6
JIKH				*e*S	Sn	04 26 28.9	+1.1
JFK	**Kawauchi**	**1.97**	**277**	*e*P	Pn	04 26 07.0	+0.6
JFK				*e*S	Sn	04 26 30.2	+0.1
ONAJ	**Iwakimizuishiy**	**2.02**	**270**	*e*P	Pn	04 26 07.5	+0.3
ONAJ				*e*S	Sn	04 26 31.5	+0.1
JMST	**Minamisoumatoc**	**2.03**	**287**	*e*P	Pn	04 26 08.0	+0.8
JMST				*e*S	Sn	04 26 32.0	+0.6
JIO	**Ouri**	**2.04**	**310**	*e*P	Pn	04 26 08.3	+0.9
JIO				*e*S	Sn	04 26 32.3	+0.5
JOTO	**OTAMA OYAMA**	**2.42**	**281**	*e*P	Pn	04 26 14.5	+1.9
JOTO				*e*S	Sn	04 26 42.8	+1.7
JMK	**Ichinoseki**	**2.46**	**318**	*e*P	Pn	04 26 13.6	+0.6
JMK				*e*S	Sn	04 26 42.1	+0.2
JOM	**Ohasama**	**2.83**	**326**	*e*P	Pn	04 26 19.3	+1.2
JOM				*e*S	Sn	04 26 51.9	+1.0
JYK	**Kaneyama**	**2.94**	**308**	*e*P	Pn	04 26 21.1	+1.5
JYK				*e*S	Sn	04 26 55.3	+1.5
BSO1	**Boso 1**	**3.13**	**218**	*e*P	Pn	04 26 22.4	+0.6
BSO1				*e*S	Sn	04 26 59.0	+1.4
JAG	**Ashikaga**	**3.19**	**258**	*e*P	Pn	04 26 24.4	+1.4
JAW	**Awa shima**	**3.49**	**293**	*e*P	Pn	04 26 30.3	+3.2
JANG	**Nango**	**3.52**	**337**	*e*P	Pn	04 26 28.9	+1.2
JRY	**Ryogami san**	**3.74**	**254**	*e*P	Pn	04 26 31.8	+1.2
JHJ2	**Mitsune**	**4.94**	**217**	*e*P	Pn	04 26 48.5	+1.4
JCH	**Churui**	**5.47**	**0**	*e*P	Pn	04 26 53.6	-0.6

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*NEIC **14** 04:25:36.9±1.2, 17°.86N±0°.04×66°.94W±0°.01, h10km±1km, ML2.5/35, Md2.9/5(RSPR), Error ellipse: s-maj=6.5km s-min=2.3km az=5.0*
*SDD **14** 04:25:37.8±2.0, 17°.92N×66°.98W, h7km±13km, MD2.8, ML2.3, MW2.4, Presumed earthquake*
*OSPL **14** 04:25:37.8±0.3, 17°.88N×66°.92W, h12km±3km, ML2.1, Presumed earthquake*
ISC 14 04:25:37.0±1.1, 17°.89N±0°.06×66°.92W±0°.02, h10km±6km, n28, σ0°.73/42, 7C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.10**	**26**		**Pg**	**04 25 40.3**	**+0.8**
GBPR					**Sg**	**04 25 41.9**	**+0.5**
MLPR	**Magueyes Islan**	**0.14**	**305**		**Pg**	**04 25 38.8**	**-1.4**
MLPR					**Sg**	**04 25 41.2**	**-1.2**
MLPR				IAML		04 25 41.5	
1µm,0.3s							
MLPR				IAML		04 25 41.9	
2µm,0.2s							
MLPR	**Magueyes Islan**	**0.14**	**305**	*e*Pg	**Pg**	**04 25 38.8**	**-1.4**
MLPR				*e*Sg	**Sg**	**04 25 41.3**	**-1.2**
MLPR				IAML		04 25 41.9	
comp=N,595nm,0.1s							
CRPR	**Cabo Rojo, PR**	**0.21**	**303**		**Pg**	**04 25 42.4**	**+0.9**
CRPR					**Sg**	**04 25 45.4**	**+1.0**
CRPR	**Cabo Rojo, PR**	**0.21**	**303**	IAML		04 25 45.8	
comp=N,2µm,0.2s							
CRPR				IAML		04 25 46.2	
comp=N,939nm,0.2s							
CRPR	**Cabo Rojo, PR**	**0.21**	**303**	*i* P	**Pg**	**04 25 42.3**	**+0.9**
CRPR				*e*S	**Sg**	**04 25 45.4**	**+1.0**
CRPR				IAML		04 25 45.7	
comp=Z,2µm,0.2s							
LSP	**Las Mesas**	**0.32**	**332**		**Pg**	**04 25 43.9**	**+0.4**
LSP					**Sg**	**04 25 48.5**	**+0.7**
OBIP	**Obispado Ponce**	**0.34**	**63**		**Pg**	**04 25 44.1**	**+0.3**
OBIP					**Sg**	**04 25 49.0**	**+0.7**
OBIP	**Obispado Ponce**	**0.34**	**63**	IAML		04 25 49.3	
comp=N,80nm,0.2s							
OBIP	**Obispado Ponce**	**0.34**	**63**	*i* P	**Pg**	**04 25 44.1**	**+0.3**
OBIP				*e*S	**Sg**	**04 25 48.9**	**+0.7**
OBIP				IAML		04 25 49.2	
comp=Z,118nm,0.6s							
CELP	**Cerrillos**	**0.38**	**61**		**Pg**	**04 25 44.8**	**+0.4**
CELP				Sg	**Sg**	**04 25 50.0**	**+0.5**
CELP				IAML		04 25 50.3	
comp=Z,246nm,0.2s							
PRSN	**Puerto Rico Se**	**0.39**	**327**		**Pg**	**04 25 44.9**	**+0.2**
PRSN				IAML		04 25 50.9	
comp=Z,826nm,0.2s							
PRSN	**Puerto Rico Se**	**0.39**	**327**	⇑*e*Pg	**Pg**	**04 25 44.9**	**+0.2**
PRSN				⇑*e*Sg	**Sg**	**04 25 48.4**	**-1.4**
PRSN				IAML		04 25 50.8	
comp=N,688nm,0.3s							
UUPR	**Utuado, UPR, P**	**0.41**	**28**		**Pg**	**04 25 44.8**	**-0.3**
AOPR	**Arecibo Observ**	**0.48**	**20**		**Pg**	**04 25 46.1**	**-0.3**
AOPR	**Arecibo Observ**	**0.48**	**20**	⇓*e*Pg	**Pg**	**04 25 46.1**	**-0.3**
AOPR				⇓*e*Sg	**Sg**	**04 25 51.9**	**-0.9**
AOPR				IAML		04 25 53.2	
comp=N,706nm,0.2s							
AGPR	**Aguadilla, PR**	**0.60**	**343**		**Pg**	**04 25 48.4**	**-0.3**
AGPR				IAML		04 25 56.2	
comp=N,163nm,0.3s							
AGPR	**Aguadilla, PR**	**0.60**	**343**	⇑*e*Pg	**Pg**	**04 25 48.4**	**-0.3**
AGPR				⇑*e*Sg	**Sg**	**04 25 55.9**	**-0.7**
AGPR				IAML		04 25 56.9	
comp=N,87nm,0.3s							
ECPR	**Experimental S**	**0.68**	**51**		**Pg**	**04 25 49.8**	**-0.5**
ECPR				IAML		04 25 59.9	
comp=N,286nm,0.2s							
ECPR				IAML		04 26 01.0	
comp=N,280nm,0.2s							
EMPR	**Esperanza - Ma**	**0.69**	**33**		**Pg**	**04 25 50.5**	**0.0**
EMPR					**Sg**	**04 25 59.5**	**0.0**
IDE	**Isla Desecheo**	**0.72**	**313**		**Pg**	**04 25 51.0**	**+0.1**
IDE					**Sg**	**04 26 00.8**	**+0.4**
SJG	**San Juan**	**0.77**	**73**		**Pg**	**04 25 51.4**	**-0.5**
SJG	**San Juan**	**0.77**	**73**	IAML		04 26 03.2	
comp=N,116nm,0.3s							
SJG	**San Juan**	**0.77**	**73**	*i* P	**Pg**	**04 25 51.4**	**-0.5**
SJG				*e*S	**Sg**	**04 26 01.6**	**-0.3**
SJG				IAML		04 26 02.6	
comp=Z,68nm,0.3s							
PDPR	**Patillas Dam,**	**0.87**	**81**		**Pg**	**04 25 53.5**	**-0.2**
HUMP	**Col San Antoni**	**1.05**	**76**		**Pg**	**04 25 56.3**	**-0.9**
HUMP					**Sg**	**04 26 10.1**	**-0.9**
CUPR	**Culebra, Puert**	**1.61**	**75**	Pn	**Pn**	**04 26 05.6**	**+0.1**
HATOM	**Hato Mayor del**	**2.50**	**291**	⇑*e*Pg	**Pb**	**04 26 22.5**	**+0.5**
HATOM				⇑*e*Sg	**Sb**	**04 26 52.5**	**-0.4**
HATOM				IAML		04 27 07.8	
comp=N,17nm,2.2s							

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*IDC **14** 04:34:30.0±0.8, 33°.14N×139°.88E, h0km, mb3.7/11, mbtmp3.6/12, ML2.6/1, MS2.9/6, Error ellipse: s-maj=19.3km s-min=6.3km az=149.0*
*NIED **14** 04:34:32.5, 33°.28N×139°.59E, h24km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}=0.84; $M_{\theta\theta}$=4.77; $M_{\phi\phi}$=5.61; $M_{r\theta}$=-3.73; $M_{\theta\phi}$=-4.64; $M_{\phi r}$=3.26; Fault plane solution: $M_0$8.44000×10^{14} NP1:ϕ_s26.00000°, δ56.00000°, λ1.00000°. NP2:ϕ_s296.00000°, δ89.00000°, λ146.00000°.*
*JMA **14** 04:34:32.5±0.1, 33°.3N±0°.4×14°.0E±°, h24km±2km, MV3.4/36, NEAR HACHIJOJIMA ISLAND*
JMA Felt I J1 at NEAR HACHIJOJIMA ISLAND .
ISC 14 04:34:32.7±1.1, 33°.29N±0°.04×139°.56E±0°.07, h13km±7km, n37, σ1s14/35, mb3.6/11, MS2.7/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**0.25**	**132**	Pn	**Pg**	**04 34 38.8**	**+0.7**
2µm,0.3s,baz=334,slow=22,SNR=280							
JHJ				Sn	**Sg**	**04 34 42.4**	**+0.7**
8µm,0.3s,baz=91,slow=22,SNR=80							
JHJ2	**Mitsune**	**0.28**	**130**	*i* P	**Pb**	**04 34 38.7**	**-0.8**
JHJ2				*e*S	**Sg**	**04 34 42.7**	**+0.4**
JHCJ	**Hachijojimakas**	**0.29**	**138**	*i* P	**Pb**	**04 34 38.8**	**-1.1**
JHCJ				*e*S	**Sg**	**04 34 43.0**	**+0.2**
JMKN	**Mikurajimanish**	**0.60**	**2**	*i* P	**Pg**	**04 34 44.5**	**0.0**
JMKN				*e*S	**Sg**	**04 34 53.2**	**+0.7**
JMYK	**Miyake Tsubota**	**0.77**	**359**	P	**Pg**	**04 34 47.1**	**-0.5**
JMYK				*e*S	**Sg**	**04 34 57.5**	**-0.2**
JAOM	**Aogashimamukai**	**0.84**	**168**	*e*P	**Pn**	**04 34 48.1**	**-2.2**
JKO	**Kozu shima**	**0.96**	**338**	P	**Pb**	**04 34 50.1**	**-1.2**
JKO				*e*S	**Sb**	**04 35 02.9**	**-1.0**
JTHY	**Toshimahigashi**	**1.25**	**350**	P	**Pn**	**04 34 55.0**	**-0.9**
JIM2	**Oshima 3**	**1.43**	**356**	*e*P	**Pn**	**04 34 57.5**	**-1.0**
JIM2				*e*S	**Sn**	**04 35 15.4**	**-1.7**
JIZS	**Izushimoda**	**1.53**	**338**	P	**Pn**	**04 34 58.9**	**-0.9**
KTJ3	**Kamata3**	**1.69**	**346**	P	**Pn**	**04 35 01.7**	**-0.3**
BSO3	**Boso 3**	**1.70**	**27**	*e*P	**Pn**	**04 35 01.3**	**-0.6**
BSO3				*e*S	**Sn**	**04 35 23.2**	**-0.2**
JSG	**Sagara**	**1.79**	**321**	*e*P	**Pn**	**04 35 03.0**	**-0.4**
JSG				*e*S	**Sn**	**04 35 25.6**	**-0.4**
MJAR	**Matsushiro Arr**	**3.43**	**341**	Pn	**Pn**	**04 35 27.0**	**+1.1**
0.5nm,0.3s,baz=155,slow=14,SNR=20							
MJAR				Sn	**Sb**	**04 36 13.2**	**-1.8**
0.3nm,0.3s,baz=145,slow=14,SNR=4.7 7.4nm,0.6s							
JNU	**Nakatsue**	**7.28**	**271**	LR	LR	04 39 11.0	
comp=Z,88nm,19.1s,baz=54,slow=37							
KSRS	**Korea Array**	**10.37**	**297**	LR	LR	04 40 44.5	
comp=Z,48nm,19.4s,baz=135,slow=35							
KLR	**Kul'dur**	**16.96**	**342**	LR	LR	04 45 04.3	
comp=Z,32nm,18.1s,baz=314,slow=37							
GUMO	**Guam**	**20.20**	**165**	LR	LR	04 45 02.3	
comp=Z,33nm,18.8s,baz=96,slow=32							
H11N2	**WAKE ISLAND Hy**	**27.84**	**112**	T	T	05 09 22.8	
baz=305,slow=75,SNR=141							
H11N1	**WAKE ISLAND Hy**	**27.85**	**112**	T	T	05 09 26.4	
baz=305,slow=75,SNR=120							
H11N3	**WAKE ISLAND Hy**	**27.86**	**112**	T	T	05 09 24.1	
baz=305,slow=75,SNR=116							
H11S3	**WAKE ISLAND Hy**	**28.39**	**115**	T	T	05 10 07.0	
baz=307,slow=75,SNR=29							
H11S1	**WAKE ISLAND Hy**	**28.40**	**114**	T	T	05 10 07.2	
baz=307,slow=75,SNR=27							
H11S2	**WAKE ISLAND Hy**	**28.41**	**114**	T	T	05 10 06.7	
baz=307,slow=75,SNR=22							
CMAR	**Chiang Mai Arr**	**39.16**	**258**	LR	LR	04 58 02.7	
comp=Z,8.0nm,18.4s,baz=330,slow=36							
MKAR	**Makanchi Array**	**44.92**	**305**	P	**P**	**04 42 47.0**	**-0.3**
0.3nm,0.8s,baz=87,slow=7.7,SNR=2.7 0.3nm,0.8s							
KURBB	**Kurchatov Arra**	**47.19**	**311**	P	**P**	**04 43 05.8**	**+0.8**
0.2nm,0.3s,baz=83,slow=6.6,SNR=4.0 0.2nm,0.3s							
WRA	**Warramunga Arr**	**53.17**	**186**	P	**P**	**04 43 49.8**	**-0.7**
0.3nm,0.4s,baz=4.7,slow=7.6,SNR=8.1 0.3nm,0.4s							
ILAR	**Eielson Array**	**53.47**	**31**	P	**P**	**04 43 52.1**	**-0.2**
0.3nm,0.7s,baz=283,slow=6.4,SNR=4.0 0.3nm,0.7s							
ASAR	**Alice Springs**	**56.90**	**186**	P	**P**	**04 44 15.4**	**-2.0**
0.4nm,0.8s,baz=11,slow=7.9,SNR=4.3 0.4nm,0.8s							
FINES	**FINESS Array B**	**71.42**	**332**	P	**P**	**04 45 54.2**	**+1.9**
2.9nm,0.9s,baz=191,slow=5.8,SNR=3.6 2.9nm,0.9s							
HFS	**Hagfors**	**76.86**	**335**	P	**P**	**04 46 25.7**	**+1.5**
3.6nm,1.0s,baz=136,slow=20,SNR=1.8 3.6nm,1.0s							
NOA	**NORSAR Array B**	**77.04**	**337**	P	**P**	**04 46 26.4**	**+1.2**
0.5nm,0.7s,baz=239,slow=15,SNR=1.9 0.5nm,0.7s							
SFJD	**Kangerlussuaq**	**79.73**	**4**	LR	LR	05 24 36.2	
comp=Z,18nm,18.1s,baz=63,slow=38							
BRTR	**Keskin Array B**	**80.18**	**311**	P	**P**	**04 46 44.8**	**+1.7**
0.3nm,0.6s,baz=342,slow=14,SNR=1.7 0.3nm,0.6s							
GERES	**GERESS Array B**	**85.07**	**327**	P	**P**	**04 47 10.0**	**+1.7**
0.2nm,0.3s,baz=267,slow=37,SNR=1.5 0.2nm,0.3s							
TXAR	**Lajitas Array**	**93.62**	**51**	P	**P**	**04 47 49.0**	**-0.2**
0.2nm,0.7s,baz=225,slow=1.6,SNR=3.7 0.2nm,0.7s							

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*NOU **14** 04:52:03.9, 38°.86S×175°.25E, h217km, MLv3.6/19, North Island, New Zealand*
*WEL **14** 04:52:07.3±0.7, 39°.5±8°×17°.5E±°, h191km±6km, M3.1/52, ML2.4/6, MLv3.1/52, Error ellipse: s-maj=11.1km s-min=6.6km az=157.6, confirmed*
ISC 14 04:52:01.3±2.0, 38°.73S±0°.07×175°.24E±0°.05, h234km±11km, n92, σ1s78/107, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWVZ	**Taurewa**	**0.37**	**156**	P	**Pn**	**04 52 33.6**	**+1.4**
TWVZ				S	**S**	**04 52 54.4**	**-2.1**
HIZ	**Hauiti**	**0.37**	**306**	P	**Pn**	**04 52 33.4**	**+1.3**
HIZ	**Hauiti**	**0.37**	**306**	S	**S**	**04 52 55.9**	**-0.2**
HIZ	**Hauiti**	**0.37**	**306**	P	**Pn**	**04 52 33.7**	**+1.6**
WATZ	**Wairara**	**0.39**	**87**	P	**Pn**	**04 52 33.9**	**+1.7**
WATZ				S	**S**	**04 52 54.6**	**-1.7**
KATZ	**Kakaramea**	**0.43**	**124**	P	**Pn**	**04 52 33.8**	**+1.5**
RATZ	**Rangitukua**	**0.44**	**108**	P	**Pn**	**04 52 33.8**	**+1.6**
WTVZ	**West Tongariro**	**0.47**	**145**	P	**Pn**	**04 52 34.1**	**+1.7**
WTVZ				S	**S**	**04 52 55.1**	**-1.8**
NTVZ	**North Tongarir**	**0.50**	**137**	P	**Pn**	**04 52 34.4**	**+1.9**
COVZ	**Chateau Observ**	**0.52**	**153**	P	**Pn**	**04 52 34.3**	**+1.7**
COVZ				S	**S**	**04 52 55.4**	**-1.8**
NGZ	**Ngauruhoe**	**0.52**	**148**	P	**Pn**	**04 52 34.4**	**+1.7**
NGZ				S	**S**	**04 52 55.7**	**-1.6**
TMVZ	**Te Maari**	**0.53**	**137**	P	**Pn**	**04 52 34.3**	**+1.7**
TMVZ				S	**S**	**04 52 55.4**	**-1.8**
RITZ	**Rihia Road**	**0.54**	**117**	P	**Pn**	**04 52 34.4**	**+1.8**
OTVZ	**Oturere**	**0.54**	**143**	P	**Pn**	**04 52 34.5**	**+1.8**
VRZ	**Vera Road**	**0.54**	**224**	P	**Pn**	**04 52 34.0**	**+1.5**
ETVZ	**East Tongariro**	**0.55**	**138**	P	**Pn**	**04 52 34.3**	**+1.6**
ETVZ				S	**S**	**04 52 55.4**	**-1.9**
SNVZ	**South Ngauruho**	**0.55**	**146**	P	**Pn**	**04 52 34.5**	**+1.7**
PKVZ	**Pokaka**	**0.56**	**172**	P	**Pn**	**04 52 34.3**	**+1.6**
FWVZ	**Far West T-bar**	**0.58**	**155**	P	**Pn**	**04 52 34.6**	**+1.7**
WHVZ	**Whangaehu Hut**	**0.61**	**154**	P	**Pn**	**04 52 34.9**	**+1.9**
WHVZ				S	**S**	**04 52 57.0**	**-1.0**
TRVZ	**Turoa**	**0.61**	**157**	P	**Pn**	**04 52 34.8**	**+1.8**
TUVZ	**Tukino**	**0.62**	**149**	P	**Pn**	**04 52 34.8**	**+1.8**
WNVZ	**Wahianoa**	**0.66**	**155**	P	**Pn**	**04 52 34.9**	**+1.8**
WNVZ				S	**S**	**04 52 56.8**	**-1.4**
MTVZ	**Mangateitei**	**0.68**	**165**	P	**Pn**	**04 52 34.9**	**+1.8**
MTVZ				S	**S**	**04 52 56.4**	**-1.8**
MOVZ	**Moawhango**	**0.78**	**150**	P	**Pn**	**04 52 35.0**	**+1.4**
ALRZ	**Allen Road**	**0.88**	**79**	P	**Pn**	**04 52 35.1**	**+1.1**
HRRZ	**Handcock Road**	**0.89**	**68**	P	**Pn**	**04 52 35.8**	**+1.6**
MRHZ	**Matea Rd**	**0.93**	**97**	P	**Pn**	**04 52 35.6**	**+1.3**
MRHZ				S	**S**	**04 52 57.2**	**-2.9**
DREZ	**Durham Road**	**0.93**	**240**	P	**Pn**	**04 52 36.2**	**+1.9**
LREZ	**Lake Rotokare**	**0.98**	**222**	P	**Pn**	**04 52 36.6**	**+2.1**
TOZ	**Tahuroa Road**	**1.02**	**12**	P	**Pn**	**04 52 36.6**	**+1.7**
PREZ	**Palmer Road**	**1.04**	**234**	P	**Pn**	**04 52 37.0**	**+2.1**
WAZ	**Wanganui**	**1.04**	**191**	P	**Pn**	**04 52 37.0**	**+2.1**
BKZ	**Black Stump Fm**	**1.07**	**114**	P	**Pn**	**04 52 36.2**	**+1.1**
BKZ	**Black Stump Fm**	**1.07**	**114**	S	**S**	**04 52 59.5**	**-2.1**
BKZ	**Black Stump Fm**	**1.07**	**114**	P	**Pn**	**04 52 36.8**	**+1.6**
BKZ				S	**S**	**04 52 59.4**	**-2.3**
RRRZ	**Republican Roa**	**1.07**	**69**	P	**Pn**	**04 52 36.6**	**+1.4**
KHEZ	**Kahui Hut**	**1.11**	**239**	P	**Pn**	**04 52 37.3**	**+1.9**
KHEZ	**Kahui Hut**	**1.11**	**239**	S	**S**	**04 53 02.5**	**+0.4**
KHEZ	**Kahui Hut**	**1.11**	**239**	P	**Pn**	**04 52 37.3**	**+1.9**
TARZ	**Mount Tarawera**	**1.11**	**64**	P	**Pn**	**04 52 37.1**	**+1.6**
KWHZ	**Kaweka Forest**	**1.15**	**127**	P	**Pn**	**04 52 37.7**	**+2.0**
KWHZ				S	**S**	**04 53 01.2**	**-1.4**
NBEZ	**Newall Road No**	**1.20**	**243**	P	**Pn**	**04 52 38.1**	**+2.2**
MUGZ	**Murupara**	**1.23**	**78**	P	**Pn**	**04 52 37.2**	**+1.0**
MUGZ				S	**S**	**04 53 01.0**	**-2.3**
MTHZ	**Maungataniwha**	**1.26**	**96**	P	**Pn**	**04 52 38.0**	**+1.6**
MTHZ				S	**S**	**04 53 01.8**	**-2.0**
KRHZ	**Kereru**	**1.26**	**136**	P	**Pn**	**04 52 38.3**	**+1.9**
NMHZ	**Naumai**	**1.27**	**107**	P	**Pn**	**04 52 39.2**	**+2.6**
EDRZ	**Edgecumbe**	**1.33**	**63**	P	**Pn**	**04 52 38.4**	**+1.5**
MCHZ	**McNeill Hill**	**1.34**	**123**	P	**Pn**	**04 52 39.6**	**+2.7**
RTZ	**Ruatahuna**	**1.37**	**86**	P	**Pn**	**04 52 38.6**	**+1.3**
PNHZ	**Pukenui**	**1.39**	**148**	P	**Pn**	**04 52 39.3**	**+1.9**
TSZ	**Takapari Road**	**1.44**	**157**	P	**Pn**	**04 52 39.6**	**+2.0**
RAHZ	**Arahi**	**1.45**	**98**	P	**Pn**	**04 52 39.9**	**+2.1**
ARPZ	**Aropaoanui**	**1.47**	**112**	P	**Pn**	**04 52 40.2**	**+2.4**
OHWZ	**Ohakea**	**1.47**	**178**	P	**Pn**	**04 52 40.3**	**+2.5**
URZ	**Urewera**	**1.54**	**73**	P	**Pn**	**04 52 39.3**	**+0.8**
URZ	**Urewera**	**1.54**	**73**	P	**Pn**	**04 52 39.4**	**+1.0**
KAHZ	**Kahuranaki**	**1.65**	**130**	P	**Pn**	**04 52 41.9**	**+2.5**
CKHZ	**Cape Kidnapper**	**1.70**	**124**	P	**Pn**	**04 52 42.3**	**+2.6**
POWZ	**Post Office Ro**	**1.71**	**166**	P	**Pn**	**04 52 41.6**	**+1.8**
RAGZ	**Rawiri**	**1.72**	**83**	P	**Pn**	**04 52 41.6**	**+1.5**
DVHZ	**Dannevirke**	**1.72**	**156**	P	**Pn**	**04 52 41.7**	**+1.8**
PXZ	**Pawanui**	**1.81**	**136**	P	**Pn**	**04 52 42.7**	**+2.1**
MWZ	**Matawai**	**1.84**	**78**	P	**Pn**	**04 52 42.4**	**+1.3**
PRHZ	**Porangahau**	**1.87**	**145**	P	**Pn**	**04 52 43.3**	**+2.1**
PRWZ	**Pori Road**	**1.91**	**163**	P	**Pn**	**04 52 43.6**	**+2.0**
KNZ	**Kokohu**	**1.92**	**99**	P	**Pn**	**04 52 43.6**	**+1.9**
MRZ	**Mangatainoka R**	**1.94**	**172**	P	**Pn**	**04 52 43.5**	**+1.6**
ANWZ	**Angora Road**	**1.97**	**151**	P	**Pn**	**04 52 44.3**	**+2.1**
RIGZ	**Rimuhau**	**1.97**	**90**	P	**Pn**	**04 52 44.1**	**+1.9**

PB18	**Visviri**	**0.94**	**7**			**Pn**	**05 01 12.6**	**+1.4**
PB18	**Visviri**	**0.94**	**7**	*i*	P	**Pn**	**05 01 12.8**	**+1.6**
PB18					*eS*	**Sn**	**05 01 30.6**	**+2.3**
GO01	**Chusmiza**	**1.20**	**162**			**Pn**	**05 01 14.9**	**+1.4**
GO01	**Chusmiza**	**1.20**	**162**	⇓*i*	P	**Pn**	**05 01 15.1**	**+1.4**
GO01					*eS*	**Sn**	**05 01 34.6**	**+1.9**
GO01					IAML		05 01 38.1	
	comp=N,4μm,0.3s							
GO01	**Chusmiza**	**1.20**	**162**	*eP*		**Pn**	**05 01 15.1**	**+1.4**
GO01					*eS*	**Sn**	**05 01 35.0**	**+2.3**
GO01					IAML		05 01 35.7	
	comp=Z,1μm,0.2s							
PB11	**IPOC Station P**	**1.23**	**183**			**Pn**	**05 01 14.7**	**+1.0**
PB11	**IPOC Station P**	**1.23**	**183**	*i*	P	**Pn**	**05 01 14.4**	**+0.8**
PB11					*eS*	**Sn**	**05 01 33.7**	**+1.0**
PB11					IAML		05 01 34.6	
	comp=E,3μm,0.3s							
PB11	**IPOC Station P**	**1.23**	**183**	*eP*		**Pn**	**05 01 14.3**	**+0.7**
PB11					*eS*	**Sn**	**05 01 34.1**	**+1.3**
PB11					IAML		05 01 34.5	
	comp=Z,1μm,0.3s							
PB08	**IPOC Station P**	**1.66**	**166**			**Pn**	**05 01 19.5**	**+0.8**
PB08	**IPOC Station P**	**1.66**	**166**	*i*	P	**Pn**	**05 01 20.2**	**+1.6**
PB08					*eS*	**Sn**	**05 01 43.1**	**+1.5**
PB08					IAML		05 01 44.2	
	comp=E,1μm,0.2s							
PB08	**IPOC Station P**	**1.66**	**166**	*eP*		**Pn**	**05 01 19.5**	**+0.8**
PB08					*eS*	**Sn**	**05 01 43.2**	**+1.5**
PB08					IAML		05 01 44.2	
	comp=Z,954nm,0.6s							
TA02	**Huaiquique**	**1.81**	**196**	*eP*		**Pn**	**05 01 20.0**	**0.0**
TA02	**Huaiquique**	**1.81**	**196**	*eP*		**Pn**	**05 01 21.0**	**+1.0**
TA02					*eS*	**Sn**	**05 01 43.9**	**-0.1**
TA02					IAML		05 01 50.2	
	comp=Z,796nm,0.1s							
PX03	**IPOC Station P**	**1.87**	**181**	*eP*		**Pn**	**05 01 20.9**	**+0.1**
PX03					IAML		05 01 52.5	
	comp=N,1μm,0.2s							
TA01	**Diego Aracena**	**2.10**	**195**			**Pn**	**05 01 23.5**	**-0.1**
TA01	**Diego Aracena**	**2.10**	**195**	*eP*		**Pn**	**05 01 23.4**	**-0.2**
TA01	**Diego Aracena**	**2.10**	**195**	*eP*		**Pn**	**05 01 23.8**	**+0.1**
TA01					*eS*	Sn	05 01 41.3	-9.2
TA01					*eS*		05 01 49.5	
PATCX	**Punta Patache**	**2.34**	**193**			**Pn**	**05 01 27.3**	**+0.5**
PATCX	**Punta Patache**	**2.34**	**193**	*eP*		**Pn**	**05 01 27.2**	**+0.5**
PATCX	**Punta Patache**	**2.34**	**193**	*eP*		**Pn**	**05 01 27.3**	**+0.5**
PATCX					*eS*	**Sn**	**05 01 55.8**	**-0.3**
PATCX					IAML		05 02 04.6	
	comp=Z,227nm,0.3s							
PB01	**IPOC Station P**	**2.51**	**178**			**Pn**	**05 01 29.1**	**+0.2**
PB01	**IPOC Station P**	**2.51**	**178**	*eP*		**Pn**	**05 01 29.6**	**+0.8**
PB01					IAML		05 02 01.2	
	comp=E,794nm,0.3s							
PB01	**IPOC Station P**	**2.51**	**178**	*eP*		**Pn**	**05 01 29.0**	**+0.2**
PB01					*eS*	**Sn**	**05 02 00.0**	**+0.3**
PB01					IAML		05 02 01.4	
	comp=Z,255nm,0.1s							
LPAZ	**La Paz**	**2.63**	**32**	P		**Pn**	**05 01 32.5**	**+1.7**
	comp=Z,32nm,0.4s,baz=210,slow=3.3,SNR=341							
LPAZ	**La Paz**	**2.63**	**32**			**Pn**	**05 01 32.2**	**+1.4**
LPAZ	**La Paz**	**2.63**	**32**	*eP*		**Pn**	**05 01 32.5**	**+1.7**
LPAZ	**La Paz**	**2.63**	**32**	*eP*		**Pn**	**05 01 32.6**	**+1.7**
LPAZ					*eS*	**Sn**	**05 02 03.9**	**+0.6**
PB02	**IPOC Station P**	**2.79**	**186**			**Pn**	**05 01 34.0**	**+1.5**
PB02	**IPOC Station P**	**2.79**	**186**	*eP*		**Pn**	**05 01 33.2**	**+0.7**
PB02					IAML		05 02 14.4	
	comp=E,554nm,0.2s							
PB02	**IPOC Station P**	**2.79**	**186**	*eP*		**Pn**	**05 01 33.0**	**+0.5**
PB02					*eS*	**Sn**	**05 02 06.2**	**-0.2**
PB02					IAML		05 02 22.8	
	comp=Z,495nm,0.2s							
PB07	**IPOC Station P**	**3.20**	**185**			**Pn**	**05 01 38.0**	**+0.2**
PB07	**IPOC Station P**	**3.20**	**185**	*eP*		**Pn**	**05 01 38.4**	**+0.6**
PB07					IAML		05 02 26.5	
	comp=E,313nm,0.5s							
PB07	**IPOC Station P**	**3.20**	**185**	*eP*		**Pn**	**05 01 38.2**	**+0.4**
PB07					*eS*	**Sn**	**05 02 14.5**	**-1.3**
PB07					IAML		05 02 27.2	
	comp=Z,223nm,0.3s							
PB09	**IPOC Station P**	**3.27**	**174**			**Pn**	**05 01 39.7**	**+0.9**
PB09	**IPOC Station P**	**3.27**	**174**	*eP*		**Pn**	**05 01 40.1**	**+1.3**
PB09					IAML		05 02 40.8	
	comp=E,221nm,0.6s							
PB09	**IPOC Station P**	**3.27**	**174**	*eP*		**Pn**	**05 01 39.7**	**+0.9**
PB09					*eS*	**Sn**	**05 02 18.0**	**+0.4**
PB09					IAML		05 02 49.5	
	comp=Z,178nm,0.6s							
PB03	**IPOC Station P**	**3.51**	**182**			**Pn**	**05 01 42.2**	**+0.4**
PB03	**IPOC Station P**	**3.51**	**182**	*eP*		**Pn**	**05 01 42.3**	**+0.4**
PB03	**IPOC Station P**	**3.51**	**182**	*eP*		**Pn**	**05 01 42.1**	**+0.2**
PB03					*eS*	**Sn**	**05 02 22.0**	**-1.1**
PB03					IAML		05 02 29.8	
	comp=Z,148nm,0.2s							
PB06	**IPOC Station P**	**4.16**	**180**			**Pn**	**05 01 50.6**	**+0.1**
PB06	**IPOC Station P**	**4.16**	**180**	*eP*		**Pn**	**05 01 50.9**	**+0.3**
PB06					*eS*	**Sn**	**05 02 36.0**	**-2.6**
PB06					IAML		05 02 42.5	
	comp=Z,124nm,0.3s							
PB05	**IPOC Station P**	**4.34**	**187**			**Pn**	**05 01 52.3**	**-0.6**
PB05	**IPOC Station P**	**4.34**	**187**	*eP*		**Pn**	**05 01 52.7**	**-0.3**
PB05					*eS*	**Sn**	**05 02 41.3**	**-1.7**
PB05					IAML		05 02 45.8	
	comp=Z,74nm,0.3s							
AF01	**San Pedro de A**	**4.60**	**164**	Pn		**Pn**	**05 01 58.4**	**+1.9**
PB10	**IPOC Station P**	**5.04**	**190**	Pn		**Pn**	**05 02 01.6**	**-0.6**
PB10	**IPOC Station P**	**5.04**	**190**	*eP*		**Pn**	**05 02 01.2**	**-1.0**
PB10					*eS*	**Sn**	**05 02 57.8**	**-1.8**
PB14	**IPOC Station P**	**6.12**	**187**	Pn		**Pn**	**05 02 15.0**	**-1.9**
AC01	**Pan de Azucar**	**7.64**	**187**	Pn		**Pn**	**05 02 35.6**	**-1.6**
AC02	**Maricunga**	**8.28**	**177**	Pn		**Pn**	**05 02 46.0**	**-0.3**
SIV	**San Ignacio**	**8.52**	**74**	P		**Pn**	**05 02 47.1**	**-2.0**
	comp=Z,5.5nm,0.5s,baz=251,slow=11,SNR=35							
SIV					S	**Sn**	**05 04 17.9**	**-5.9**
	comp=Z,3.3nm,0.7s,baz=329,slow=22,SNR=8.0							
NNA	**Nana**	**9.55**	**312**	Pn		**Pn**	**05 03 00.4**	**-2.6**
VILB	**Vilhena**	**10.60**	**60**			**Pn**	**05 03 16.0**	**-1.2**
VILB	**Vilhena**	**10.60**	**60**	*eP*		**Pn**	**05 03 14.8**	**-2.4**
MURT	**Porto Murtinho**	**11.68**	**107**	*eP*		**Pn**	**05 03 28.8**	**-2.6**
CFA	**Coronel Fontan**	**13.08**	**175**	P		**Pn**	**05 03 47.3**	**-2.3**
	comp=Z,1.3nm,0.9s,baz=52,slow=12,SNR=2.0							
SALV	**Santo Antonio**	**13.54**	**81**	*eP*		**Pn**	**05 03 55.9**	**+0.3**
CPUP	**Villa Florida**	**13.74**	**127**	P		**Pn**	**05 03 56.6**	**-1.5**
	comp=Z,0.7nm,0.5s,baz=285,slow=12,SNR=6.2							
CPUP	**Villa Florida**	**13.74**	**127**	Pn		**Pn**	**05 03 59.4**	**+1.3**
PP1B	**Ponte de Pedra**	**14.02**	**89**	*eP*		**Pn**	**05 04 02.6**	**+0.8**
PDRB	**Porto dos Gac**	**14.19**	**63**	*eP*		**Pn**	**05 04 04.5**	**+0.5**
CLDB	**Colider**	**15.36**	**62**	*eP*		**Pn**	**05 04 19.3**	**+0.7**
TRCB	**Terra Rica**	**16.43**	**108**			**P**	**05 04 32.7**	**+0.4**
TRCB					IAmb	IAmb	05 04 33.9	
	comp=Z,26nm,1.4s							
PSAL	**Palomas, Salto**	**16.56**	**141**	*eP*		**Pn**	**05 04 33.1**	**-0.2**
ITAB	**Concordia**	**18.26**	**121**	P		**P**	**05 04 52.7**	**+0.3**
ITAB					IAmb	IAmb	05 05 16.8	
	comp=Z,25nm,1.5s							
ITAB	**Concordia**	**18.26**	**121**	*eP*		**P**	**05 04 52.9**	**+0.5**
SNDB	**Serra Nova Dou**	**18.81**	**72**	*eP*		**P**	**05 04 57.9**	**-0.6**
CPSB	**Cacapava Do Su**	**18.84**	**132**	*eP*		**P**	**05 04 58.8**	**0.0**
FRTB	**Fartura**	**19.31**	**108**	*eP*		**P**	**05 05 03.0**	**-0.9**
BB19B	**Bebedouro**	**19.98**	**101**	*eP*		**P**	**05 05 09.9**	**-1.3**
TRQA	**Tornquist**	**20.57**	**163**	P		**P**	**05 05 18.6**	**+1.3**
TRQA					IAmb	IAmb	05 05 19.8	
	comp=Z,9.6nm,0.8s							
BDFB	**Brasilia**	**20.82**	**85**	P		**P**	**05 05 21.4**	**+1.0**
	comp=Z,3.4nm,0.6s,baz=261,slow=8.9,SNR=9.0							
	comp=Z,3.4nm,0.6s							
BDFB	**Brasilia**	**20.82**	**85**	P		**P**	**05 05 21.5**	**+1.1**
SMTB	**Santa Maria do**	**23.41**	**69**	*eP*		**P**	**05 05 45.3**	**-1.2**
JANB	**Januaria**	**24.44**	**86**	*eP*		**P**	**05 05 54.4**	**-1.4**
SDBA	**SAO DESIDERIO**	**24.55**	**79**	*eP*		**P**	**05 05 56.2**	**-0.6**
DIAM	**Diamantina, MG**	**24.59**	**94**	*eP*		**P**	**05 05 57.5**	**+0.3**
TXAR	**Lajitas Array**	**57.84**	**325**	P		**P**	**05 10 27.5**	**+0.4**
	comp=Z,2.0nm,0.7s,baz=145,slow=6.9,SNR=3.7							
	comp=Z,0.2nm,0.7s							
TXAR	**Lajitas Array**	**57.84**	**325**	P		**P**	**05 10 27.4**	**+0.2**
DBIC	**Dimbokro**	**68.54**	**75**	P		**P**	**05 11 38.5**	**+0.4**
	comp=Z,3.3nm,0.5s,baz=285,slow=3.9,SNR=7.2							
	comp=Z,3.3nm,0.5s							
DBIC	**Dimbokro**	**68.54**	**75**	P		**P**	**05 11 36.9**	**-1.2**
PDAR	**Pinedale Array**	**71.22**	**330**	P		**P**	**05 11 55.1**	**+1.0**
	comp=Z,0.4nm,0.8s,baz=120,slow=8.8,SNR=3.2							
	comp=Z,0.4nm,0.8s							
TORD	**Torodi Ar. Bea**	**76.99**	**71**	P		**P**	**05 12 27.4**	**-0.6**
	comp=Z,1.6nm,0.4s,baz=251,slow=5.5,SNR=21							
TORD					pP	**pP**	**05 13 01.5**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=254,slow=7.7,SNR=3.3							
	comp=Z,1.6nm,0.4s							
ESDC	**Sonseca Array**	**84.18**	**45**	P		**P**	**05 13 06.7**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=241,slow=4.5,SNR=2.1							
	comp=Z,0.4nm,0.8s							
YKA	**Yellowknife Ar**	**88.18**	**341**	P		**P**	**05 13 26.0**	**+1.2**
	comp=Z,0.5nm,0.5s,baz=137,slow=4.0,SNR=9.9							
YKA					pP	**pP**	**05 13 58.3**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=136,slow=4.0,SNR=3.2							
	comp=Z,0.5nm,0.5s							

NEIC ***14*** *05:15:17.1±1.2,6.17S±0.10×148.78E±0.01,h60km±8km, mb4.5/20,Error ellipse: s-maj=18.6km s-min=10.2km az=129.0*
IDC ***14*** *05:15:18.1±2.2,6.25S×148.89E,h71km±18km,mb4.0/4, mbtmp4.4/7,MS3.1/7,Error ellipse: s-maj=38.7km s-min=13.1km az=119.0*

ISC 14 05:15:16.5±0.6,6.15S±0.08×148.92E±0.09,h60km,n44, σ1s13/41,mb4.6/12,MS3.1/6,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
PMG	**Port Moresby**	**3.67**	**208**	P		**Pn**		**05 16 11.3**	**+0.5**
	140nm,0.4s,baz=50,slow=6.5,SNR=53								
PMG						S	**Sn**	**05 16 52.3**	**-0.6**
	210nm,0.3s,baz=198,slow=22,SNR=18								
PMG	**Port Moresby**	**3.67**	**208**			**Pn**		**05 16 11.7**	**+0.9**
RABL	**Rabaul**	**3.77**	**59**	Pn		**Pn**		**05 16 12.2**	**0.0**
JAY	**Jayapura**	**8.95**	**293**	LR		LR		05 21 06.9	
	comp=Z,80nm,21.8s,baz=74,slow=39								
COEN	**Coen**	**9.60**	**216**	Pn		**Pn**		**05 17 30.3**	**-1.7**
CTA	**Charters Tower**	**14.09**	**190**	P		**Pn**		**05 18 34.7**	**+1.5**
	9.1nm,1.1s,baz=12,slow=12,SNR=2.5								
CTAO	**Charters Tower**	**14.09**	**190**	Pn		**Pn**		**05 18 33.6**	**+0.4**
MTN	**Manton Dam**	**18.75**	**248**	P		**P**		**05 19 29.6**	**-1.1**
EIDS	**Eidsvold**	**19.22**	**174**	P		**P**		**05 19 35.3**	**-0.5**
EIDS						IAmb	IAmb	05 20 09.8	
	comp=Z,28nm,1.4s								
WB0	**Warramunga Arr**	**19.56**	**225**			**P**		**05 19 39.1**	**-0.4**
WB0						IAmb	IAmb	05 19 40.4	
	comp=Z,14nm,0.8s								
WR8	**Warramunga Arr**	**19.61**	**224**			**P**		**05 19 39.6**	**-0.5**
WR8						IAmb	IAmb	05 19 41.0	
	comp=Z,14nm,0.6s								
WRA	**Warramunga Arr**	**19.71**	**225**	P		**P**		**05 19 41.3**	**+0.1**
	comp=Z,14nm,0.6s,baz=51,slow=11,SNR=69								
WRA						S	**Sn**	**05 23 27.1**	**+3.0**
	comp=Z,2.2nm,0.7s,baz=44,slow=17,SNR=5.2								
WRA	**Warramunga Arr**	**19.71**	**225**			**P**		**05 19 40.2**	**-1.1**
KNRA	**Kununurra**	**21.92**	**243**			**P**		**05 20 03.9**	**-1.0**
KNRA						IAmb	IAmb	05 20 06.2	
	comp=Z,11nm,0.7s								
AS31	**Alice Springs**	**22.62**	**218**			**P**		**05 20 11.9**	**-0.7**
ASAR	**Alice Springs**	**22.62**	**218**	P		**P**		**05 20 12.4**	**-0.2**
	comp=Z,7.3nm,0.6s,baz=55,slow=9.8,SNR=94								
ASAR						S	**S**	**05 24 15.2**	**-1.1**
	comp=Z,2.7nm,0.8s,baz=31,slow=24,SNR=9.3								
	comp=Z,7.3nm,0.6s								
ASAR	**Alice Springs**	**22.62**	**218**	P		**P**		**05 20 11.6**	**-1.0**
DZM	**Mont Dzumac**	**23.18**	**135**	LR		LR		05 27 59.4	
	comp=Z,150nm,18.9s,baz=275,slow=33								
DZM	**Mont Dzumac**	**23.18**	**135**	P		**P**		**05 20 17.8**	**-0.5**
DZM						IAmb	IAmb	05 20 34.7	
	comp=Z,39nm,1.5s								
FITZ	**Fitzroy Crossi**	**25.63**	**240**	P		**P**		**05 20 41.0**	**+0.4**
	comp=Z,59nm,0.9s,baz=51,slow=10,SNR=50								
FITZ						LR	LR	05 31 12.6	
	comp=Z,50nm,21.2s,baz=75,slow=37								
KAPI	**Kappang**	**29.05**	**271**	LR		LR		05 34 12.4	
	comp=Z,50nm,20.8s,baz=64,slow=39								
MSVF	**Nonsavu**	**30.68**	**115**	LR		LR		05 31 42.7	
	comp=Z,48nm,19.0s,baz=322,slow=32								
MBWA	**Marble Bar**	**31.96**	**239**	P		**P**		**05 21 36.5**	**-0.5**
MORW	**Morawa**	**38.51**	**230**	P		**P**		**05 22 32.4**	**-0.8**
BBJI	**Bungbulang**	**40.99**	**266**	P		**P**		**05 22 53.0**	**-1.0**
BBJI						IAmb	IAmb	05 22 54.9	
	comp=Z,8.1nm,0.6s								
GVZ	**Greta Valley S**	**42.40**	**154**	P		**P**		**05 23 05.3**	**+0.2**
KSRS	**Korea Array**	**47.60**	**337**	LR		LR		05 42 50.7	
	comp=Z,6.0nm,19.4s,baz=205,slow=35								
CMAR	**Chiang Mai Arr**	**55.01**	**297**	LR		LR		05 51 41.9	
	comp=Z,7.8nm,18.1s,baz=50,slow=40								
PETK	**Petropavlovsk-**	**59.50**	**6**	P		**P**		**05 25 15.1**	**+1.8**
	comp=Z,8.4nm,1.0s,baz=160,slow=6.7,SNR=4.2								
	comp=Z,8.4nm,1.0s								
PETK	**Petropavlovsk-**	**59.50**	**6**	P		**P**		**05 25 13.4**	**+0.1**
VNDA	**Vanda**	**71.66**	**177**	P		**P**		**05 26 30.9**	**-0.4**
L14K	**Kuka Creek**	**77.00**	**22**	P		**P**		**05 27 04.6**	**+2.1**
L14K						IAmb	IAmb	05 27 28.8	
	comp=Z,11nm,1.4s								
K15K	**Wolf Creek Mou**	**78.03**	**21**	P		**P**		**05 27 10.2**	**+1.9**
MKAR	**Makanchi Array**	**78.83**	**320**	P		**P**		**05 27 13.3**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=131,slow=4.0,SNR=2.1								
MKAR	**Makanchi Array**	**78.83**	**320**	P		**P**		**05 27 13.6**	**+0.4**
J16K	**Anvik River**	**78.99**	**21**	P		**P**		**05 27 16.1**	**+2.5**
J16K						IAmb	IAmb	05 27 20.9	
	comp=Z,9.4nm,1.4s								
Q19K	**Cape Douglas,**	**79.25**	**26**	P		**P**		**05 27 15.7**	**+0.5**
L18K	**Granite Mounta**	**79.79**	**23**	P		**P**		**05 27 20.0**	**+2.0**
CNPM	**China Poot**	**80.62**	**27**	P		**P**		**05 27 23.7**	**+1.1**
CNPM						IAmb	IAmb	05 27 43.1	
	comp=Z,11nm,1.2s								
QSPA	**South Pole Qui**	**83.82**	**180**	P		**P**		**05 27 39.4**	**0.0**
	comp=Z,2.0nm,0.8s,baz=315,slow=0.7,SNR=7.4								
	comp=Z,2.0nm,0.8s								
QSPA	**South Pole Qui**	**83.82**	**180**	P		**P**		**05 27 39.9**	**+0.6**
QSPA						IAmb	IAmb	05 27 41.0	
	comp=Z,2.9nm,0.9s								
ILAR	**Eielson Array**	**84.88**	**23**	P		**P**		**05 27 44.3**	**-0.2**
	comp=Z,1.3nm,0.7s,baz=254,slow=5.1,SNR=16								
	comp=Z,1.3nm,0.7s								
TORD	**Torodi Ar. Bea**	**146.97**	**285**	PKPbc		**PKPbc**		**05 34 53.4**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=64,slow=1.6,SNR=16								
BDFB	**Brasilia**	**152.61**	**142**	PKPbc		**PKPbc**		**05 35 07.8**	**+0.3**
	comp=Z,1.5nm,0.5s,baz=353,slow=22,SNR=4.9								

WEL 14 05:25:46.8±1.5,33.5S±22.2×17.9E±2.7,h395km±38km, MLv4.0/7,Error ellipse: s-maj=36.0km s-min=28.0km az=67.7,confirmed,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
MXZ	**Matakaoa Point**	**4.36**	**190**	P		Pn		05 27 02.8	+0.8
HAZ	**Te Kaha**	**4.64**	**194**	P		Pn		05 27 04.9	+0.1
HAZ				S		S		05 28 07.9	-0.3
WCZ	**Waipu Caves**	**4.84**	**235**	P		Pn		05 27 06.9	0.0
RUGZ	**Raukumara Rang**	**4.86**	**195**	P		Pn		05 27 06.5	-0.7
RUGZ				S		S		05 28 12.8	+0.2
PUZ	**Puketiti**	**4.87**	**189**	P		Pn		05 27 07.9	+0.8
MWZ	**Matawai**	**5.25**	**195**	P		Pn		05 27 10.7	-0.5
MWZ				S		S		05 28 19.8	0.0
URZ	**Urewera**	**5.28**	**199**	P		Pn		05 27 11.0	-0.4
URZ				S		S		05 28 21.5	+1.2
RIGZ	**Rimuhau**	**5.56**	**192**	P		Pn		05 27 14.0	-0.5
RTZ	**Ruatahuna**	**5.65**	**198**	P		Pn		05 27 15.1	-0.3
KNZ	**Kokohu**	**5.89**	**192**	P		Pn		05 27 18.3	+0.4
RAHZ	**Arahi**	**5.91**	**197**	P		Pn		05 27 18.1	-0.1
BKZ	**Black Stump Fm**	**6.30**	**200**	P		Pn		05 27 22.2	-0.3
KWHZ	**Kaweka Forest**	**6.56**	**199**	P		Pn		05 27 25.2	-0.1
OTVZ	**Oturere**	**6.56**	**205**	P		Pn		05 27 25.7	+0.2
SNVZ	**South Ngauruho**	**6.59**	**205**	P		Pn		05 27 26.2	-0.3
KRHZ	**Kereru**	**6.78**	**199**	P		Pn		05 27 27.2	-0.5
KAHZ	**Kahuranaki**	**6.79**	**196**	P		P		05 27 28.3	-0.3
PXZ	**Pawanui**	**7.02**	**195**	P		Pn		05 27 30.6	+0.1
PRHZ	**Porangahau**	**7.30**	**196**	P		Pn		05 27 33.2	-0.4
BFZ	**Birch Farm**	**7.79**	**197**	P		Pn		05 27 38.5	-0.6
MRZ	**Mangatainoka R**	**7.95**	**201**	P		Pn		05 27 39.6	-1.3
OGWZ	**Otaki Gorge**	**8.21**	**202**	P		Pn		05 27 42.4	-1.6
KIW	**Kapiti Island**	**8.34**	**203**	P		Pn		05 27 44.3	-1.2
CAW	**Cannon Point**	**8.51**	**202**	P		Pn		05 27 45.8	-1.6
MSWZ	**Moikau Station**	**8.74**	**200**	P		Pn		05 27 49.2	-0.8
TCW	**Tory Channel**	**8.87**	**205**	P		Pn		05 27 50.1	-1.4
PLWZ	**Palliser**	**8.88**	**200**	P		Pn		05 27 50.7	-1.0

SOME ***14*** *05:33:38.3,39.35N×75.72E,h10km*
NNC ***14*** *05:33:40.2±0.7,39.33N×76.03E,h0km,mb3.6,mpv3.2, Error ellipse: s-maj=13.0km s-min=4.9km az=94.0*
KRNET ***14*** *05:33:46.6±0.1,39.63N×75.15E,h19km,mb3.1*

ISC 14 05:33:42.0±2.5,39.3N±0.1×75.24E±0.06,h3km±17km,n19, σ1s91/33,14C-4D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
SFK	**Sufi-Kurgan**	**1.51**	**298**	⇑*eP*			**Pg**	**05 34 11.6**	**+0.6**
SFK				⇑*eS*			**Sb**	**05 34 29.9**	**-0.6**
JNKS	**Jany-Kuch**	**1.77**	**10**	⇑*eP*			**Pb**	**05 34 14.2**	**-1.1**
JNKS				⇑*eS*			**Sn**	**05 34 34.5**	**-2.5**
SALK	**Salom-Alik**	**1.91**	**326**	⇑*eP*			**Pb**	**05 34 16.7**	**-0.9**
SALK				⇑*eS*			**Sn**	**05 34 38.7**	**-1.7**
NRN	**Naryn**	**2.21**	**15**	⇓*eP*			**Pb**	**05 34 21.7**	**-1.0**
NRN				⇓*eS*			**Sn**	**05 34 47.3**	**-0.5**
ARSB	**Arslanbob**	**2.65**	**320**	⇑*eP*			**Pb**	**05 34 28.3**	**-1.9**
ARSB				⇑*eS*			**Sn**	**05 34 58.7**	**+0.1**
UCH	**Uchtor**	**2.97**	**350**	⇑*eP*			**Pn**	**05 34 32.2**	**+1.7**
UCH				⇑*eS*			**Sn**	**05 35 05.6**	**-1.2**
TARG	**Taragay, Kyrgy**	**3.12**	**38**	⇓*eP*			**Pb**	**05 34 36.0**	**-2.2**
TARG				⇓*eS*			**Sn**	**05 35 11.9**	**+1.6**
BOOM	**Boomskoye usch**	**3.23**	**9**	⇑*eP*			**Pn**	**05 34 36.0**	**+2.3**
BOOM				⇑*eS*			**Sn**	**05 35 12.0**	**-0.8**
AAK	**Ala-Archa**	**3.38**	**351**	⇑*eP*			**Pn**	**05 34 37.7**	**+1.9**
AAK				⇑*eS*			**Sn**	**05 35 15.1**	**-1.3**
KST	**Kastek**	**3.78**	**8**	Pg			**Pb**	**05 34 47.7**	**-1.7**
	4.1nm,0.7s								
KST				Lg		Lg		05 35 38.0	
	12nm,0.7s								
KST	**Kastek**	**3.78**	**8**	*eP*			**Pb**	**05 34 47.7**	**-1.7**
	4.1nm,0.7s								
KST				*eS*			**Sb**	**05 35 37.6**	**+2.0**
	12nm,0.7s								
MTBS	**Maitube**	**3.93**	**13**	Pg			**Pb**	**05 34 49.7**	**-2.2**
	4.5nm,0.6s								
MTBS				Lg		Lg		05 35 41.2	
	5.9nm,0.4s								
MTBS	**Maitube**	**3.93**	**13**	*eP*			**Pb**	**05 34 49.7**	**-2.2**
	4.5nm,0.6s								
MTBS				*eS*			**Sb**	**05 35 41.2**	**+1.4**
	5.9nm,0.4s								
TNSS	**Tian-Shan**	**3.95**	**19**	Pg			**Pb**	**05 34 49.3**	**-3.2**
	0.6nm,0.3s								
TNSS				Lg		Lg		05 35 40.6	
	1.1nm,0.6s								
TNSS	**Tian-Shan**	**3.95**	**19**	*eP*			**Pb**	**05 34 49.3**	**-3.2**
	0.6nm,0.3s								
TNSS				*eS*			**Sb**	**05 35 40.6**	**-0.1**
	1.1nm,0.6s								
DGS	**Degeres**	**3.96**	**6**	Pg			**Pb**	**05 34 51.7**	**-0.7**
	4.2nm,0.4s								
DGS				Lg		Lg		05 35 44.9	
	12nm,0.6s								
DGS	**Degeres**	**3.96**	**6**	*eP*			**Pb**	**05 34 50.1**	**-2.3**
	4.2nm,0.4s								
DGS				*eS*			**S

TRN	**Trinidad (W)**	**2.77**	**56**⇑	*eP*	**Pn**	**05 44 46.3**	**+0.6**
TRN				*eS*	**Sb**	**05 45 25.4**	**+0.6**
FUNV	**FUNVISIS**	**3.32**	**294**	*eP*	**Pn**	**05 44 56.3**	**+2.9**
FUNV				*eS*	**Sn**	**05 45 33.2**	**+0.2**
GRFF	**Grenada Fort F**	**3.53**	**34**	*eP*	**Pn**	**05 44 57.0**	**+0.8**
GRFF				*eS*	**Sn**	**05 45 40.1**	**+2.1**
GRGR	**Grenville**	**3.64**	**34**	*eS*	**Sn**	**05 45 39.7**	**-1.1**
GRGR	**Grenville**	**3.64**	**34**⇑	*eP*	**Pn**	**05 44 58.1**	**+0.4**
GRGR				*eS*	**Sn**	**05 45 43.1**	**+2.3**
GRW	**Mount Saint Ca**	**3.66**	**34**	*eP*	**Pn**	**05 45 00.8**	**+2.7**
GRW				*eS*	**Sn**	**05 45 44.7**	**+3.3**
GRSS	**Sisters**	**3.80**	**33**	*eP*	**Pn**	**05 45 00.8**	**+0.8**
GRSS				*eS*	**Sn**	**05 45 46.3**	**+1.5**
GCMP	**Grenada, Carri**	**4.06**	**34**	*eP*	**Pn**	**05 45 04.0**	**+0.5**
GCMP				*eS*	**Sn**	**05 45 54.7**	**+3.7**
SVB	**Belmont**	**4.81**	**30**	*eP*	**Pn**	**05 45 16.7**	**+2.9**
SVB				*eS*	**Sn**	**05 46 07.6**	**-2.1**
SVB	**Belmont**	**4.81**	**30**	*eP*	**Pn**	**05 45 16.4**	**+2.6**
SVB				*eS*	**Sn**	**05 46 09.3**	**-0.3**
MCLT	**Moule a Chique**	**5.34**	**31**	*eP*	**Pn**	**05 45 22.2**	**+1.1**
MCLT				*eS*	**Sn**	**05 46 23.1**	**+0.4**
SLBI	**Saint Lucia, B**	**5.59**	**29**	*eP*	**Pn**	**05 45 25.2**	**+0.7**
SLBI				*eS*	**Sn**	**05 46 32.0**	**+3.2**
BBGH	**Gun Hill**	**5.74**	**45**	*eP*	**Pn**	**05 45 30.6**	**+4.0**
BIM	**Bigot**	**5.98**	**26**	*eP*	**Pn**	**05 45 30.9**	**+1.0**
SVN	**Savane Anatole**	**6.23**	**24**	*eP*	**Pn**	**05 45 34.4**	**+0.9**
SVN				*eS*	**Sn**	**05 46 45.8**	**+0.9**
DSLB	**Salisbury**	**6.69**	**20**	*eP*	**Pn**	**05 45 41.9**	**+2.2**
SDV	**Santo Domingo**	**6.81**	**269**	Pn	**Pn**	**05 45 43.1**	**+1.6**
	6.3nm,0.3s,baz=97,slow=8.1,SNR=33						
SDV				Sn	**Sn**	**05 46 58.3**	**-1.1**
	17nm,0.3s,baz=11,slow=21,SNR=3.9						
SDV				Lg	Lg	05 47 44.4	
	27nm,0.3s,baz=224,slow=14,SNR=4.4						
SDV				LR	LR	05 48 39.0	
	comp=Z,109nm,21.2s,baz=80,slow=40						
	14nm,0.3s						
SDV	**Santo Domingo**	**6.81**	**269**	P	**Pn**	**05 45 42.9**	**+1.3**
	1µm65nm,0.4s						
SDV	**Santo Domingo**	**6.81**	**269**	*eP*	**Pn**	**05 45 43.0**	**+1.5**
SDV				*eS*	**Sn**	**05 47 03.9**	**+4.6**
SDV	**Santo Domingo**	**6.81**	**269**	*eP*	**Pn**	**05 45 44.1**	**+2.6**
SDV				*eS*	**Sn**	**05 46 56.4**	**-3.0**
DWS	**Wesley**	**6.85**	**20**	*eP*	**Pn**	**05 45 43.5**	**+1.6**
TBG	**Guadaloupe-3**	**7.01**	**17**⇑	*eP*	**Pn**	**05 45 46.2**	**+2.1**
MMLZ	**Guadeloupe Bro**	**7.19**	**16**	*eP*	**Pn**	**05 45 48.3**	**+1.8**
DHSZ	**Broadband at M**	**7.38**	**15**	*eP*	**Pn**	**05 45 50.3**	**+1.1**
BOAV	**Boa Vista**	**7.39**	**154**	*eP*	**Pn**	**05 45 48.8**	**-0.6**
BOAV				*eS*	**Sn**	**05 47 15.0**	**+1.7**
DSDZ	**La Diserade, G**	**7.62**	**20**	*eP*	**Pn**	**05 45 55.2**	**+2.7**
URIC	**Uribia, Colomb**	**8.52**	**288**	P	**Pn**	**05 46 05.9**	**+1.1**
	15nm,0.9s						
SJG	**San Juan**	**9.26**	**346**	Pn	**Pn**	**05 46 12.9**	**-1.9**
	0.8nm,0.3s,baz=53,slow=23,SNR=1.3						
SJG				Sn	**Sn**	**05 47 55.5**	**-3.6**
	1.5nm,0.3s,baz=10,slow=20,SNR=1.8						
SJG				LR	LR	05 49 47.7	
	comp=Z,27nm,21.2s,baz=164,slow=38						
	3.6nm,0.7s						
OCAC	**Ocana**	**9.51**	**266**	P	**Pn**	**05 46 19.5**	**+0.9**
	2µm164nm,0.6s						
BARC	**Barichara**	**9.68**	**256**	P	**Pn**	**05 46 22.8**	**+1.8**
	744nm51nm,0.5s						
RUSC	**La Rusia**	**9.80**	**252**	P	**Pn**	**05 46 24.2**	**+1.4**
	846nm31nm,1.0s						
SPBC	**San Pablo de B**	**10.81**	**252**	P	**Pn**	**05 46 37.1**	**+0.8**
	518nm60nm,0.7s						
CHIC	**Chingaza**	**10.87**	**247**	P	**Pn**	**05 46 38.9**	**+1.5**
	870nm37nm,0.7s						
PTBC	**PUERTO BERRIO,**	**10.92**	**257**	P	**Pn**	**05 46 36.9**	**-0.8**
	259nm24nm,0.7s						
VILC	**Villavicencio,**	**11.06**	**244**	P	**Pn**	**05 46 40.7**	**+0.9**
	2µm163nm,0.6s						
CVER	**Cruz Verde, Cu**	**11.22**	**247**	P	**Pn**	**05 46 43.3**	**+1.0**
	1µm110nm,0.7s						
SJCC	**San Jacinto, C**	**11.31**	**275**	P	**Pn**	**05 46 43.8**	**+0.6**
	55nm,0.8s						
ROSC	**El Rosal**	**11.32**	**249**	Pn	Pn	05 46 48.5	+4.9
	3.3nm,0.3s,baz=101,slow=17,SNR=6.0						
ROSC				Lg	Lg	05 50 07.0	
	6.6nm,0.3s,baz=179,slow=22,SNR=4.8						
ROSC				LR	LR	05 51 28.1	
	comp=Z,231nm,20.5s,baz=29,slow=39						
	10nm,0.3s						
ROSC	**El Rosal**	**11.32**	**249**	P	**Pn**	**05 46 46.6**	**+3.0**
	587nm43nm,0.7s						
MDP	**Montagnes des**	**11.71**	**109**	Pn	**Pn**	**05 46 45.2**	**-3.3**
	0.9nm,0.3s,baz=295,slow=13,SNR=13						
MDP				Sn	Sn	05 48 49.2	-10
	1.8nm,0.3s,baz=66,slow=17,SNR=2.3						
MDP				Lg	Lg	05 50 02.4	
	1.2nm,0.3s,baz=240,slow=22,SNR=3.7						
MDP				LR	LR	05 51 28.9	
	comp=Z,71nm,19.0s,baz=328,slow=39						
	26nm,1.2s						
URMC	**La Uribe, Meta**	**12.07**	**242**	P	**Pn**	**05 46 53.2**	**-0.4**
	465nm42nm,0.7s						
GUY2C	**Guyana, Caldas**	**12.16**	**252**	P	**Pn**	**05 46 56.2**	**+1.0**
	501nm44nm,0.6s						
MACC	**Macarena, Meta**	**12.20**	**236**	P	**Pn**	**05 46 55.3**	**0.0**
	36nm,0.6s						
PRAC	**Prado**	**12.30**	**245**	P	**Pn**	**05 46 58.4**	**+1.7**
	56nm,0.6s						
MACA	**Manacapuru-AM**	**12.56**	**166**	*eP*	**Pn**	**05 46 59.6**	**-0.6**
MACA				*eS*	**Sn**	**05 49 23.4**	**+3.2**
TEFE	**Tefe**	**12.56**	**184**	*eP*	**Pn**	**05 47 01.5**	**+1.3**
TEFE				*eS*	**Sn**	**05 49 25.6**	**+5.3**
CBOC	**Ciudad Bolivar**	**12.59**	**256**	P	**Pn**	**05 47 00.6**	**-0.1**
	31nm,0.7s						
PLMC	**San Jos del P**	**13.13**	**252**	P	**Pn**	**05 47 12.0**	**+4.0**
	25nm,1.0s						
JAMC	**Jamundi, Valle**	**14.12**	**246**	P	**Pn**	**05 47 22.4**	**+0.6**
	11nm,0.9s						
POPC	**Popayan, Colom**	**14.42**	**244**	P	**Pn**	**05 47 27.2**	**+1.3**
	9.0nm,0.8s						
ITTB	**Itaituba**	**15.58**	**149**	*eP*	**Pn**	**05 47 37.5**	**-3.6**
ITTB				*eS*	**Sn**	**05 50 23.6**	**-10**
OTAV	**Otavalo**	**17.09**	**240**	*eP*	**Pn**	**05 48 00.8**	**-0.2**
OTAV				*eS*	**S**	**05 51 17.6**	**-3.7**
NPGB	**Novo Progresso**	**18.09**	**152**	*eP*	**Pn**	**05 48 10.8**	**-2.0**
HDC	**Heredia**	**20.11**	**274**	*eP*	**P**	**05 48 34.8**	**-0.9**
PRPB	**Parauapebas**	**20.56**	**137**	*eS*	**S**	**05 52 28.4**	**-2.2**
CLDB	**Colider**	**21.36**	**158**	*eP*	**P**	**05 48 48.8**	**-0.2**
CLDB				*eS*	**S**	**05 52 49.9**	**+3.6**
PDRB	**Porto dos Gac**	**21.73**	**161**	*eP*	**P**	**05 48 52.4**	**-0.5**
PDRB				*eS*	**S**	**05 52 57.0**	**+3.5**
VILB	**Vilhena**	**22.19**	**171**	*eP*	**P**	**05 48 56.0**	**-1.9**
VILB				*eS*	**S**	**05 53 04.3**	**+1.8**
SMTB	**Santa Maria do**	**24.02**	**138**	*eP*	**P**	**05 49 13.5**	**-3.1**
SMTB				*eS*	**S**	**05 53 31.9**	**-2.1**
SNDB	**Serra Nova Dou**	**24.32**	**149**	*eP*	**P**	**05 49 17.9**	**-1.4**
LPAZ	**La Paz**	**25.60**	**190**	P	**P**	**05 49 33.6**	**+2.0**
	1.0nm,0.6s,baz=346,slow=6.7,SNR=3.8						
	1.0nm,0.6s						
BDFB	**Brasilia**	**29.10**	**148**	P	**P**	**05 50 04.0**	**+1.5**
	1.6nm,0.6s,baz=311,slow=12,SNR=3.7						
BDFB				LR	LR	06 01 05.3	
	comp=Z,63nm,19.1s,baz=216,slow=35						
	1.6nm,0.6s						
NBPA	**Parau_RN**	**30.37**	**118**	*eP*	P	05 50 09.0	-4.7
AQDB	**Aquidauana**	**30.44**	**165**	*eP*	**P**	**05 50 14.1**	**-0.1**
JANB	**Januaria**	**30.77**	**141**	*eP*	**P**	**05 50 14.9**	**-2.3**
TKL	**Tuckaleechee C**	**32.14**	**328**	LR	LR	06 04 26.2	
	comp=Z,19nm,19.0s,baz=142,slow=38						
CPUP	**Villa Florida**	**35.77**	**170**	P	**P**	**05 51 00.6**	**-0.1**
	1.1nm,0.8s,baz=346,slow=5.3,SNR=4.4						
	1.1nm,0.8s						
TXAR	**Lajitas Array**	**42.45**	**304**	P	**P**	**05 51 58.8**	**+2.1**
	0.2nm,0.5s,baz=101,slow=7.6,SNR=1.4						
	0.2nm,0.5s						
SCHQ	**Schefferville**	**45.67**	**357**	P	**P**	**05 52 22.2**	**+0.1**
	1.9nm,0.9s,baz=197,slow=7.6,SNR=2.0						
	1.9nm,0.9s						
ANMO	**Albuquerque**	**46.71**	**310**	LR	LR	06 14 46.0	
	comp=Z,14nm,18.4s,baz=24,slow=39						
TRQA	**Tornquist**	**46.94**	**178**	*eP*	**P**	**05 52 31.9**	**-0.4**
ULM	**Lac du Bonnet**	**48.90**	**333**	P	**P**	**05 52 45.9**	**-1.4**
	2.3nm,0.5s,baz=133,slow=6.2,SNR=3.5						
	2.3nm,0.5s						
PLCA	**Paso Flores**	**49.98**	**187**	*eP*	**P**	**05 52 53.5**	**-2.3**
PLCA				*eS*	**S**	**06 00 08.4**	**+1.9**
PDAR	**Pinedale Array**	**52.18**	**318**	P	**P**	**05 53 13.4**	**+0.9**
	0.2nm,0.6s,baz=116,slow=13,SNR=3.0						
	0.2nm,0.6s						
NVAR	**Mina Array Bea**	**56.84**	**310**	P	**P**	**05 53 48.5**	**+2.0**
	0.2nm,0.3s,baz=107,slow=6.7,SNR=1.9						
	0.2nm,0.3s						
BORG	**Borgarnes**	**62.95**	**19**	LR	LR	06 18 36.4	
	comp=Z,15nm,20.3s,baz=256,slow=33						
YKA	**Yellowknife Ar**	**64.62**	**337**	P	**P**	**05 54 37.4**	**-1.4**
	0.4nm,0.6s,baz=111,slow=6.3,SNR=6.5						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**78.90**	**334**	P	**P**	**05 56 04.3**	**-0.4**
	0.2nm,0.6s,baz=97,slow=5.6,SNR=4.7						
	0.2nm,0.6s						
ARTI	**Arti**	**99.29**	**29**	LR	LR	06 39 33.1	
	comp=Z,34nm,20.9s,baz=216,slow=34						

IDC 14 06:19:52.1±4.6, **7.71S**×**129.50E, h64**km±29km, **mb3.0**/1, **mbtmp3.4**/3, **ML3.6**/2, **Error ellipse: s-maj=252.1km s-min=34.2km az=66.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.04**	**159**	P	Pn	06 22 53.0	-1.4
	0.3nm,0.3s,baz=336,slow=14,SNR=7.9						
WRA				S	Sn	06 25 12.5	-5.3
	1.4nm,0.4s,baz=338,slow=22,SNR=9.4						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**16.42**	**166**	P	P	06 23 40.2	-0.1
	0.3nm,0.3s,baz=346,slow=11,SNR=18						
ASAR				S	Sn	06 26 34.3	-5.8
	0.8nm,0.6s,baz=347,slow=25,SNR=6.3						
ASAR				ScP	ScP	06 31 56.2	-0.8
	0.4nm,0.5s,baz=347,slow=1.4,SNR=9.0						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**68.55**	**327**	P	P	06 30 48.0	0.0
	0.1nm,0.3s,baz=120,slow=6.8,SNR=2.5						
	0.1nm,0.3s						

IDC 14 06:41:09.3±1.1, 25.61S×70.71E, h0km, mb3.9/9, mbtmp3.9/9, Error ellipse: s-maj=35.1km s-min=24.3km az=23.0

ISC 14 06:41:11.0±1.2, **25.6S**±0.3×**70.7E**±0.2, **h10**km, **n18, σ0**6**4**/9, **mb3.9**/9, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**17.95**	**6**	T	T	07 04 15.0	
	baz=187,slow=76,SNR=6.8						
H08S2	**Diego Garcia H**	**17.95**	**6**	T	T	07 04 15.4	
	baz=187,slow=76,SNR=10						
H08S3	**Diego Garcia H**	**17.97**	**6**	T	T	07 04 16.2	
	baz=187,slow=76,SNR=21						
H04N2	**CROZET ISLANDS**	**25.48**	**212**	T	T	07 12 36.5	
	baz=43,slow=73,SNR=472						
H04N1	**CROZET ISLANDS**	**25.49**	**212**	T	T	07 12 32.7	
	baz=43,slow=73,SNR=556						
H04N3	**CROZET ISLANDS**	**25.50**	**212**	T	T	07 12 34.1	
	baz=43,slow=73,SNR=508						
H01W2	**Cape Leeuwin H**	**38.37**	**114**	T	T	07 29 13.7	
	baz=276						
H01W3	**Cape Leeuwin H**	**38.37**	**114**	T	T	07 29 16.7	
	baz=276						
H01W1	**Cape Leeuwin H**	**38.39**	**114**	T	T	07 29 17.5	
	baz=276						
BOSA	**Boshof**	**40.40**	**255**	P	**P**	**06 48 50.0**	**+0.4**
	1.6nm,0.8s,baz=124,slow=7.3,SNR=3.2						
	1.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**51.70**	**35**	P	**P**	**06 50 19.6**	**+1.1**
	1.5nm,0.3s,baz=229,slow=6.3,SNR=8.6						
	1.5nm,0.3s						
ASAR	**Alice Springs**	**56.97**	**103**	P	**P**	**06 50 57.0**	**0.0**
	0.7nm,0.6s,baz=251,slow=6.5,SNR=12						
	0.7nm,0.6s						
WRA	**Warramunga Arr**	**58.45**	**99**	P	**P**	**06 51 06.9**	**-0.5**
	1.2nm,0.6s,baz=252,slow=7.4,SNR=7.7						
	1.2nm,0.6s						
MKAR	**Makanchi Array**	**72.83**	**8**	P	**P**	**06 52 39.5**	**-0.1**
	0.6nm,0.8s,baz=189,slow=4.7,SNR=6.0						
	0.6nm,0.8s						
KBZ	**Khabaz**	**73.58**	**339**	P	**P**	**06 52 43.8**	**-0.3**
	1.2nm,0.8s,baz=334,slow=2.5,SNR=2.1						
	1.2nm,0.8s						
BRTR	**Keskin Array B**	**73.64**	**331**	P	**P**	**06 52 44.1**	**-0.6**
	0.4nm,0.4s,baz=157,slow=6.7,SNR=3.8						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**76.22**	**5**	P	**P**	**06 52 58.9**	**-0.3**
	0.8nm,0.8s,baz=197,slow=5.9,SNR=6.2						
	0.8nm,0.8s						
ZALV	**Zalesovo Beam**	**80.17**	**8**	P	**P**	**06 53 20.5**	**-0.5**
	0.5nm,0.4s,baz=194,slow=4.2,SNR=2.2						
	0.5nm,0.4s						

IDC 14 06:45:07.7±0.8, 25.86S×70.42E, h0km, mb3.9/10, mbtmp3.9/10, MS3.5/3, Error ellipse: s-maj=24.2km s-min=22.3km az=22.0

ISC 14 06:45:09.2±0.8, **25.9S**±0.2×**70.4E**±0.2, **h10**km, **n19, σ1**0**1**/10, **mb3.9**/9, **MS3.5**/3, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**18.20**	**6**	T	T	07 08 14.6	
	baz=188						
H08S2	**Diego Garcia H**	**18.21**	**7**	T	T	07 08 12.1	
	baz=188						
H08S3	**Diego Garcia H**	**18.22**	**6**	T	T	07 08 11.3	
	baz=188,slow=76						
H04N2	**CROZET ISLANDS**	**25.15**	**212**	T	T	07 16 39.1	
	baz=43,slow=73,SNR=209						
H04N1	**CROZET ISLANDS**	**25.16**	**212**	T	T	07 16 41.3	
	baz=43,slow=73,SNR=234						
H04N3	**CROZET ISLANDS**	**25.17**	**212**	T	T	07 16 37.5	
	baz=43,slow=73,SNR=217						
BOSA	**Boshof**	**40.09**	**256**	P	**P**	**06 52 45.1**	**-0.1**
	2.5nm,0.9s,baz=146,slow=7.8,SNR=4.2						
	2.5nm,0.9s						
NWAO	**Narrogin (SRO)**	**41.12**	**111**	LR	LR	07 07 16.1	
	comp=Z,88nm,18.8s,baz=174,slow=32						
CMAR	**Chiang Mai Arr**	**52.03**	**35**	P	**P**	**06 54 18.4**	**-0.7**
	1.0nm,0.3s,baz=223,slow=6.4,SNR=7.7						
	1.0nm,0.3s						
ASAR	**Alice Springs**	**57.17**	**103**	P	**P**	**06 54 56.8**	**+0.2**
	0.5nm,0.5s,baz=251,slow=6.5,SNR=14						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**58.67**	**98**	P	**P**	**06 55 07.9**	**+0.7**
	1.2nm,0.7s,baz=251,slow=7.2,SNR=11						
	1.2nm,0.7s						
QSPA	**South Pole Qui**	**64.29**	**180**	P	**P**	**06 55 44.3**	**-0.3**
	0.9nm,0.7s,baz=252,slow=3.2,SNR=6.4						
	0.9nm,0.7s						
JAY	**Jayapura**	**71.17**	**84**	LR	LR	07 25 54.0	
	comp=Z,30nm,21.3s,baz=286,slow=34						
MKAR	**Makanchi Array**	**73.09**	**8**	P	**P**	**06 56 40.5**	**+1.1**
	0.7nm,0.8s,baz=181,slow=4.9,SNR=6.8						
	0.7nm,0.8s						
BRTR	**Keskin Array B**	**73.71**	**331**	P	**P**	**06 56 42.9**	**-0.5**
	0.8nm,0.7s,baz=122,slow=4.7,SNR=3.8						
	0.8nm,0.7s						
KURBB	**Kurchatov Arra**	**76.47**	**5**	P	**P**	**06 57 00.2**	**+1.4**
	0.6nm,0.6s,baz=203,slow=6.3,SNR=6.0						
	0.6nm,0.6s						
TORD	**Torodi Ar. Bea**	**77.28**	**291**	P	**P**	**06 57 04.8**	**+0.5**
	1.0nm,0.9s,baz=197,slow=4.7,SNR=4.3						
	1.0nm,0.9s						
ZALV	**Zalesovo Beam**	**80.43**	**9**	P	**P**	**06 57 19.1**	**-1.5**
	0.6nm,0.6s,baz=212,slow=5.1,SNR=1.6						
	0.6nm,0.6s						
GUMO	**Guam**	**82.30**	**71**	LR	LR	07 34 33.9	
	comp=Z,14nm,18.2s,baz=94,slow=36						

IDC 14 06:45:48.5±2.7, 26.02S×70.13E, h0km, mb4.0/6, mbtmp4.0/6, MS3.7/4, Error ellipse: s-maj=81.5km s-min=31.1km az=42.0

ISC 14 06:45:50.3±2.7, **26.0S**±0.5×**70.2E**±0.4, **h10**km, **n19, σ0**8**4**/6, **mb4.0**/6, **MS3.6**/4, **Indian Ocean Triple Junction**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**18.41**	**7**	T	T	07 08 52.9	
	baz=187,slow=76						
H08S2	**Diego Garcia H**	**18.42**	**7**	T	T	07 08 51.4	
	baz=187,slow=76						
H08S3	**Diego Garcia H**	**18.43**	**7**	T	T	07 08 52.4	
	baz=187						
H04N2	**CROZET ISLANDS**	**24.87**	**211**	T	T	07 17 25.2	
	baz=42						
H04N1	**CROZET ISLANDS**	**24.88**	**211**	T	T	07 17 29.8	
	baz=42						
H04N3	**CROZET ISLANDS**	**24.89**	**211**	T	T	07 17 27.7	
	baz=42						
H01W2	**Cape Leeuwin H**	**38.66**	**114**	T	T	07 34 10.7	
	baz=269						
H01W3	**Cape Leeuwin H**	**38.66**	**114**	T	T	07 34 10.5	
	baz=269						
H01W1	**Cape Leeuwin H**	**38.67**	**114**	T	T	07 34 08.1	
	baz=269						
FURI	**Furi**	**46.29**	**314**	LR	LR	07 10 30.2	
	comp=Z,53nm,18.1s,baz=168,slow=32						
CMAR	**Chiang Mai Arr**	**52.32**	**35**	P	**P**	**06 55 03.0**	**+0.5**
	1.5nm,0.3s,baz=224,slow=7.3,SNR=7.8						
	1.5nm,0.3s						
ASAR	**Alice Springs**	**57.36**	**102**	P	**P**	**06 55 38.9**	**-0.3**
	0.5nm,0.5s,baz=255,slow=6.8,SNR=4.6						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**58.88**	**98**	P	**P**	**06 55 50.2**	**+0.3**
	1.3nm,0.9s,baz=252,slow=6.8,SNR=3.0						
	1.3nm,0.9s						
SNAA	**Sanae**	**60.19**	**200**	LR	LR	07 15 08.3	
	comp=Z,36nm,21.0s,baz=68,slow=29						
MKAR	**Makanchi Array**	**73.31**	**9**	P	**P**	**06 57 21.1**	**-0.8**
	1.2nm,0.8s,baz=200,slow=6.4,SNR=6.7						
	1.2nm,0.8s						
BRTR	**Keskin Array B**	**73.76**	**331**	P	**P**	**06 57 25.4**	**+0.6**
	0.4nm,0.3s,baz=145,slow=4.5,SNR=4.1						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**76.67**	**5**	P	**P**	**06 57 40.3**	**-0.9**
	1.1nm,0.8s,baz=203,slow=6.4,SNR=6.8						
	1.1nm,0.8s						
TLY	**Talaya**	**82.78**	**20**	LR	LR	07 33 00.3	
	comp=Z,30nm,20.8s,baz=202,slow=34						
JHJ	**Hachijo jima 2**	**88.53**	**52**	LR	LR	07 32 27.9	
	comp=Z,120nm,20.8s,baz=100,slow=32						

SDD 14 07:13:34.9±0.7, 18.26N×72.09W, h12km±14km, MD2.5, ML1.5, MW2.1, Presumed earthquake
OSPL 14 07:13:34.6±0.7, 18.32N×72.04W, h4km±172km, ML1.3, Presumed earthquake

ISC 14 07:13:33.8±2.4, **18.20N**±0.06×**72.0W**±0.1, **h20**km±7km, **n8, σ0**6**5**/16, **8C, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIDR	**Jimani**	**0.32**	**25**⇑	*e*Pg	**Pb**	**07 13 41.1**	**+0.2**
JIDR			⇑	*e*Sg	**Sg**	**07 13 45.5**	**-0.2**
JIDR				IAML		07 13 46.9	
	comp=N,52nm,0.1s						
LOBH	**Bahia de las A**	**0.47**	**134**	*i* P	**Pn**	**07 13 45.6**	**+0.1**
LOBH				*e*S	**Sn**	**07 13 53.0**	**-0.2**
LOBH				IAML		07 13 56.5	
	comp=Z,15nm,1.1s						
LODU1	**El Espartillar**	**0.52**	**72**	*i* P	**Pb**	**07 13 44.3**	**+0.1**
LODU1				*e*S	**Sg**	**07 13 51.4**	**0.0**
LODU1				IAML		07 13 55.9	
	comp=Z,49nm,0.3s						
NEDR	**Neiba UASD**	**0.62**	**62**⇑	*e*Pg	**Pg**	**07 13 46.1**	**0.0**
NEDR			⇑	*e*Sg	**Sb**	**07 13 54.6**	**+0.5**
NEDR				IAML		07 13 59.6	
	comp=N,18nm,1.3s						
LONE3	**El Aguacate, B**	**0.65**	**51**	*i* P	**Pb**	**07 13 46.0**	**-0.6**
LONE3				*e*S	**Sb**	**07 13 54.0**	**-1.3**
LONE3				IAML		07 13 58.0	
	comp=Z,16nm,1.1s						
PODR	**Polo**	**0.68**	**92**⇑	*e*Pg	**Pn**	**07 13 49.4**	**+0.9**
PODR			⇑	*e*Sg	**Sn**	**07 13 59.5**	**+0.9**
PODR				IAML		07 14 02.1	
	comp=N,47nm,1.6s						
PODR	**Polo**	**0.68**	**92**	*i* P	**Pn**	**07 13 47.8**	**-0.7**
PODR				*e*S	**Sn**	**07 13 58.1**	**-0.4**
SDDR	**Presa de Saban**	**1.03**	**40**⇑	*e*Pg	**Pn**	**07 13 53.4**	**+0.2**
SDDR			⇑	*e*Sg	**Sg**	**07 14 08.1**	**+0.6**
SDDR				IAML		07 14 12.3	
	comp=N,12nm,1.1s						

TEH 14 07:14:16.7, 38.38N×44.23E, h10km±990km, ML2.7, Presumed earthquake
AFAD 14 07:14:18.1, 38.38N×44.44E, h7km±1km, ML2.5
AZER 14 07:14:19.6, 38.49N×44.41E, h30km, ml2.6
ISK 14 07:14:21.9, 38.58N×44.48E, h20km, ML2.3/6

ISC 14 07:14:20.7±1.1, **38.50N**±0.03×**44.41E**±0.02, **h11**km±10km, **n21, σ1**5**45**/37, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.36**	**296**	P	**Pg**	**07 14 27.1**	**-1.0**
OZAP				S	**Sg**	**07 14 31.9**	**-1.0**
OZAP				IAML		07 14 35.0	
	comp=E,629nm,0.4s						
OZAP				IAML		07 14 36.0	
	comp=N,456nm,0.5s						
TVAN	**Van**	**0.79**	**272**	P	**Pb**	**07 14 34.2**	**-2.3**
TVAN				S	**Sg**	**07 14 48.0**	**+1.7**
TVAN				IAML		07 14 55.0	
	comp=N,139nm,0.5s						
TVAN				IAML		07 14 56.0	
	comp=E,141nm,0.4s		

FUTU	Fugatoga	3.89	0	P		P	07 20 54.1	-2.4		
AFI	Afiamalu	7.46	56	P		P	07 21 22.9	-3.5		
AFI				S		S	07 22 52.1	-7.6		
NIUE	Niue	7.82	98	P		P	07 21 28.8	-0.9		
NIUE	Niue	7.82	98	P		P	07 21 29.9	+0.3		
NIUE				S		S	07 23 11.3	+5.5		
RAO	Raoul Island	10.98	179	S		S	07 23 55.6	-6.9		
	255nm,0.3s,baz=114,slow=20,SNR=3.7									
DZM	Mont Dzumac	14.99	253	P		P	07 22 39.5	-1.3		
	7.4nm,0.9s,baz=90,slow=19,SNR=6.6									
RAR	Rarotonga	17.53	103	P		P	07 23 04.6	+0.4		
	27nm,0.8s,baz=247,slow=8.6,SNR=9.3									
RAR	Rarotonga	17.53	103	P		P	07 23 05.0	+0.8		
RAR	Rarotonga	17.53	103			P	07 23 04.6	+0.4		
OUZ	Omahuta	18.46	202	P		P	07 23 15.4	+2.9		
WCZ	Waipu Caves	18.86	199	P		P	07 23 18.6	+2.5		
HAZ	Te Kaha	19.79	190	P		P	07 23 23.7	-0.8		
URZ	Urewera	20.39	191	P		P	07 23 27.0	-2.9		
	15nm,0.7s,baz=53,slow=4.3,SNR=11									
URZ				S		S	07 26 39.7	-2.0		
	5.1nm,0.8s,baz=210,slow=20,SNR=2.2									
URZ	Urewera	20.39	191	P		P	07 23 28.2	-1.7		
URZ	Urewera	20.39	191	P		P	07 23 27.1	-2.9		
MWZ	Matawai	20.39	190	P		P	07 23 28.0	-2.0		
BKZ	Black Stump Fm	21.39	192	P		P	07 23 35.8	-3.1		
PXZ	Pawanui	22.16	190	P		P	07 23 39.8	-5.9		
MRZ	Mangatainoka R	23.01	192	P		P	07 23 50.7	-2.6		
MSWZ	Moikau Station	23.80	192	P		P	07 23 58.8	-1.5		
TCW	Tory Channel	23.82	194	P		P	07 23 57.0	-3.4		
QRZ	Quartz Range	23.92	198	P		P	07 24 01.7	+0.3		
PLWZ	Palliser	23.95	192	P		P	07 24 00.9	-0.8		
NNZ	Nelson	24.05	196	P		P	07 24 01.6	-0.8		
THZ	Tophouse	24.68	196	P		P	07 24 07.5	-0.6		
DSZ	Denniston Nort	24.98	198	P		P	07 24 09.9	-0.8		
KHZ	Kahutara	25.14	195	P		P	07 24 10.2	-1.8		
KHZ	Kahutara	25.14	195	P		P	07 24 10.6	-1.4		
GVZ	Greta Valley S	25.78	195	P		P	07 24 16.3	-1.5		
LTZ	Lake Taylor	25.80	196	P		P	07 24 16.2	-1.8		
INZ	Inchbonnie	25.98	198	P		P	07 24 18.8	-0.7		
INZ				IAmb		IAmb	07 24 19.3			
	comp=Z,13nm,1.0s									
INZ	Inchbonnie	25.98	198	P		P	07 24 19.3	-0.2		
MQZ	McQueen's Vall	26.57	195	P		P	07 24 23.8	-0.8		
PPT	Papeete	27.17	93	P		P	07 24 30.4	+0.1		
	comp=Z,13nm,0.5s,baz=303,slow=2.5,SNR=5.6									
	comp=Z,13nm,0.5s									
JCZ	Jackson Bay	28.02	200	P		P	07 24 37.8	+0.3		
PMG	Port Moresby	34.78	280	P		P	07 25 35.7	+0.5		
PMG	Port Moresby	34.78	280			P	07 25 35.5	+0.3		
COEN	Coen	37.38	271			P	07 25 56.6	0.0		
COEN				IAmb		IAmb	07 25 57.7			
	comp=Z,16nm,0.8s									
STKA	Stephens Creek	38.72	242	P		P	07 26 07.5	+0.3		
	comp=Z,4.3nm,0.6s,baz=95,slow=9.4,SNR=9.0									
	comp=Z,4.3nm,0.6s									
WR8	Warramunga Arr	44.69	260			P	07 26 53.5	-0.8		
WRAB	Tennant Creek	44.83	260	P		P	07 26 54.6	-0.8		
WB1	Warramunga Ar.	44.83	260	P		P	07 26 54.7	-0.7		
WRA	Warramunga Arr	44.84	260	P		P	07 26 54.9	-0.6		
	comp=Z,9.4nm,0.7s,baz=96,slow=7.1,SNR=107									
WRA				PcP		PcP	07 28 25.0	+0.6		
	comp=Z,2.9nm,0.7s,baz=92,slow=3.5,SNR=6.4									
WRA				ScP		ScP	07 31 22.9	+1.7		
	comp=Z,0.6nm,0.9s,baz=88,slow=3.5,SNR=2.5									
WRA				S		S	07 32 50.0	-1.3		
	comp=Z,0.7nm,0.7s,baz=110,slow=14,SNR=3.5									
	comp=Z,9.4nm,0.7s									
WRA	Warramunga Arr	44.84	260			P	07 26 54.4	-1.1		
AS31	Alice Springs	44.96	255			P	07 26 56.0	-0.5		
AS31				IAmb		IAmb	07 26 57.4			
	comp=Z,14nm,0.6s									
ASAR	Alice Springs	44.97	255	P		P	07 26 56.4	-0.1		
	comp=Z,48nm,0.6s,baz=87,slow=8.7,SNR=692									
ASAR				PcP		PcP	07 28 25.4	+0.6		
	comp=Z,3.5nm,0.5s,baz=93,slow=3.4,SNR=10									
ASAR				ScP		ScP	07 31 23.1	+1.4		
	comp=Z,0.8nm,0.7s,baz=102,slow=4.6,SNR=6.1									
ASAR				S		S	07 32 51.9	-1.0		
	comp=Z,3.6nm,1.0s,baz=93,slow=14,SNR=13									
	comp=Z,48nm,0.6s									
ASAR	Alice Springs	44.97	255			P	07 26 55.8	-0.7		
KNRA	Kununurra	50.73	264			P	07 27 38.5	-0.7		
KNRA				IAmb		IAmb	07 27 39.6			
	comp=Z,16nm,0.7s									
SIJI	Sorong	52.57	283	P		P	07 27 52.3	-0.3		
	comp=Z,64nm,0.7s,baz=84,slow=7.1,SNR=12									
	comp=Z,64nm,0.7s									
FITZ	Fitzroy Crossi	53.24	261	P		P	07 27 57.0	-0.3		
	comp=Z,3.1nm,0.5s,baz=110,slow=8.6,SNR=4.1									
	comp=Z,3.1nm,0.5s									
SOEI	Soe	56.34	270	P		P	07 28 20.1	+1.0		
VNDA	Vanda	60.16	185	P		P	07 28 45.2	+1.7		
	comp=Z,1.5nm,0.6s,baz=354,slow=7.0,SNR=9.5									
	comp=Z,1.5nm,0.6s									
MJAR	Matsushiro Arr	68.32	323	P		P	07 29 35.2	-0.6		
	comp=Z,13nm,0.7s,baz=158,slow=6.2,SNR=32									
	comp=Z,13nm,0.7s									
MJAR	Matsushiro Arr	68.32	323			P	07 29 34.9	-0.9		
MAJO	Matsushiro	68.32	323	P		P	07 29 35.3	-0.5		
MAJO	Matsushiro	68.32	323			P	07 29 34.9	-0.8		
MAJO				IAmb		IAmb	07 29 35.8			
	comp=Z,15nm,0.6s									
MJB9	Matsu-Tunnel	68.33	323			P	07 29 36.3	+0.5		
MJB9				IAmb		IAmb	07 29 37.2			
	comp=Z,14nm,0.6s									
UGM	Wanagama	69.91	268			P	07 29 45.3	-0.5		
SHEM	Shemya Is, Ala	70.98	355	P		P	07 29 49.8	-1.3		
	comp=Z,78nm,1.0s,baz=267,slow=5.2,SNR=4.5									
	comp=Z,78nm,1.0s									
ASAJ	Asahikawa	71.68	331	P		P	07 29 57.1	+1.7		
	comp=Z,10nm,0.6s,baz=191,slow=7.3,SNR=9.1									
	comp=Z,10nm,0.6s									
QSPA	South Pole Qui	71.83	180	P		P	07 29 57.4	+1.2		
	comp=Z,13nm,0.8s,baz=308,slow=0.3,SNR=67									
	comp=Z,13nm,0.8s									
QSPA	South Pole Qui	71.83	180			P	07 29 57.2	+1.0		
QSPA				IAmb		IAmb	07 29 58.6			
	comp=Z,17nm,0.9s									
BBJI	Bungbulang	72.76	268			P	07 30 01.5	-0.9		
BBJI				IAmb		IAmb	07 30 02.8			
	comp=Z,12nm,0.7s									
LEM	Lembang	72.97	268	P		P	07 30 04.7	+0.9		
	comp=Z,29nm,0.6s,baz=103,slow=11,SNR=4.8									
	comp=Z,29nm,0.6s									
FALS	False Pass	73.86	9	P		P	07 30 08.1	+0.5		
	baz=194									
PETK	Petropavlovsk-	74.05	345	P		P	07 30 08.8	0.0		
	comp=Z,17nm,0.7s,baz=102,slow=7.9,SNR=13									
	comp=Z,17nm,0.7s									
CHNA	Chernabura Isl	74.46	11	P		P	07 30 11.3	+0.3		
	baz=198									
SDPT	Sand Point	74.80	10	P		P	07 30 13.4	+0.5		
	baz=197									
KSRS	Korea Array	75.11	318	P		P	07 30 16.3	+1.2		
	comp=Z,2.7nm,0.6s,baz=127,slow=6.5,SNR=9.5									
	comp=Z,2.7nm,0.6s									
SPIA	Saint Paul Isl	75.40	4	P		P	07 30 16.3	+0.2		
	baz=188									
CHIR	Chirikof Islan	76.18	13	P		P	07 30 20.5	0.0		
	baz=202									
USRK	Ussuriysk Ar.	77.03	326	P		P	07 30 26.4	+1.0		
	comp=Z,4.4nm,0.7s,baz=111,slow=8.2,SNR=4.3									
	comp=Z,4.4nm,0.7s									
SII	Sitkinak Islan	77.17	13	P		P	07 30 26.0	0.0		
	baz=203									
R16K	Pilot Point	77.42	11	P		P	07 30 27.3	0.0		
	baz=200									
R17L	Mt. Peulik Vol	77.71	12	P		P	07 30 28.9	+0.1		
	baz=201									
OHAK	Old Harbor	77.97	14	P		P	07 30 30.3	+0.1		
OHAK	Old Harbor	77.97	14	P		P	07 30 29.8	-0.4		
OHAK				IAmb		IAmb	07 30 31.2			
	comp=Z,18nm,0.9s									
OHAK	Old Harbor	77.97	14	P		P	07 30 30.4	+0.2		
	baz=204									
NJ2	Nanjing	78.35	309	*e*P		P	07 30 34.0	+1.2		
NJ2				pmax		pmax				
	comp=Z,49nm,0.7s									
Q17K	Contact Creek	78.40	12	P		P	07 30 32.6	0.0		
	baz=202									
O14K	Tigyukauivet M	78.42	9	P		P	07 30 32.5	-0.1		
	baz=196									
O15K	Ungalikthiuk R	78.57	9	P		P	07 30 33.5	+0.1		
	baz=198									
MDJ	Mudanjiang	78.60	325	P		P	07 30 35.3	+1.4		
MDJ	Mudanjiang	78.60	325			P	07 30 34.6	+0.8		
MDJ				IAmb		IAmb	07 30 36.0			
	comp=Z,28nm,0.9s									
MDJ	Mudanjiang	78.60	325	P		P	07 30 34.8	+0.9		
MDJ				pmax		pmax				
	comp=Z,38nm,0.9s									
YBH	Yreka Blue Hor	78.60	39	P		P	07 30 35.7	+1.6		
	comp=Z,0.1nm,0.5s,baz=185,slow=2.7,SNR=9.6									
Q16K	King Salmon	78.64	11	P		P	07 30 33.8	+0.1		
	baz=201									
KDAK	Kodiak Island	78.64	14	P		P	07 30 33.9	+0.1		
	baz=205									
P16K	Nushagak River	78.73	10	P		P	07 30 34.0	-0.2		
	baz=200									
M11K	Mekoryuk	78.92	6	P		P	07 30 35.7	+0.5		
	baz=192									
N14K	Kuskokwak Cree	79.01	8	P		P	07 30 35.7	0.0		
	baz=196,SNR=8.7									
P17K	Kvichak River	79.16	11			P	07 30 35.7	-0.7		
P17K	Kvichak River	79.16	11	P		P	07 30 36.2	-0.3		
	baz=201									
O16K	Kokwok River B	79.25	10	P		P	07 30 36.4	-0.5		
	baz=199,SNR=5.2									
M13K	Dall Lake	79.27	7	P		P	07 30 37.5	+0.5		
	baz=194									
Q20K	Shuyak Island	79.44	13	P		P	07 30 38.2	+0.2		
	baz=205									
Q19K	Cape Douglas,	79.46	13	P		P	07 30 38.0	-0.2		
	baz=204									
NVAR	Mina Array Bea	79.47	44	P		P	07 30 40.0	+1.1		
	comp=Z,1.6nm,0.6s,baz=224,slow=8.7,SNR=13									
	comp=Z,1.6nm,0.6s									
N15K	Kwethluk River	79.48	9	P		P	07 30 38.4	+0.2		
	baz=197									
P18K	Big Mountain,	79.57	12			P	07 30 37.9	-0.8		
P18K				IAmb		IAmb	07 30 39.1			
	comp=Z,27nm,0.8s									
P18K	Big Mountain,	79.57	12	P		P	07 30 38.3	-0.5		
	baz=202									
O17K	Koliganek Bris	79.59	11	P		P	07 30 38.8	+0.1		
	baz=200									
M14K	Bethel	79.77	8	P		P	07 30 39.9	+0.2		
	baz=196									
M15K	Kasigluk River	79.89	9	P		P	07 30 40.5	+0.2		
	baz=197									
N16K	Nishlik Lake	79.97	10	P		P	07 30 41.1	+0.3		
	baz=199									
O18K	Koktuh Hills	80.01	12	P		P	07 30 40.8	-0.1		
	baz=202									
P19K	Oil Pt	80.21	13	P		P	07 30 41.9	-0.1		
	baz=204									
L14K	Kuka Creek	80.25	7	P		P	07 30 42.6	+0.5		
	baz=195									
N17K	Nushagak Hills	80.28	10	P		P	07 30 42.3	0.0		
	baz=200									
M16K	Timber Creek	80.46	9	P		P	07 30 43.8	+0.6		
	baz=198									
O19K	Port Alsworth	80.50	12			P	07 30 43.2	-0.2		
O19K	Port Alsworth	80.50	12	P		P	07 30 43.3	-0.2		
	baz=203									
BNX	BinXian	80.51	325	⇑P		P	07 30 44.5	+0.6		
BNX				pmax		pmax				
	comp=Z,26nm,0.8s									
KLR	Kul'dur	80.52	329	P		P	07 30 43.7	-0.1		
	comp=Z,3.2nm,0.8s,baz=110,slow=3.0,SNR=5.9									
	comp=Z,3.2nm,0.8s									
HOM	Homer	80.56	13	P		P	07 30 43.7	-0.1		
	baz=205									
K13K	Kusilvak Mount	80.60	6	P		P	07 30 44.3	+0.4		
	baz=193									
N18K	Kilae Creek	80.65	11	P		P	07 30 44.4	+0.1		
	baz=201									
L15K	Ungalak Mounta	80.73	8	P		P	07 30 44.9	+0.2		
	baz=196									
BRLK	Bradley Lake	80.82	14	P		P	07 30 45.0	-0.2		
BRLK				IAmb		IAmb	07 30 45.9			
	comp=Z,14nm,0.7s									
BRSE	Bradley Lake S	80.83	14	P		P	07 30 45.2	0.0		
	baz=206									
WHN	Wuhan	81.01	306	P		P	07 30 48.0	+1.2		
N19K	Bonanza Creek	81.03	11	P		P	07 30 46.1	-0.3		
	baz=203									
L16K	Owhat River	81.04	9	P		P	07 30 46.9	+0.7		
	baz=198									
M17K	Hotina River	81.06	10	P		P	07 30 47.4	+1.1		
	baz=200									
K15K	Wolf Creek Mou	81.32	8			P	07 30 48.4	+0.8		
K15K	Wolf Creek Mou	81.32	8	P		P	07 30 48.5	+0.8		
	baz=196,SNR=15									
M18K	Stony River	81.42	11	P		P	07 30 48.7	+0.5		
	baz=201									
SEW	Seward	81.45	14	P		P	07 30 48.1	-0.3		
	baz=207									
J14K	Nanvaranak Lak	81.52	7	P		P	07 30 49.1	+0.5		
	baz=194									
MA2	Magadan	81.57	345	P		P	07 30 47.4	-1.6		
	comp=Z,8.3nm,0.7s,baz=144,slow=6.2,SNR=10.0									
	comp=Z,8.3nm,0.7s									
MA2	Magadan	81.57	345	P		P	07 30 48.2	-0.8		
L17K	Donlin	81.62	9	P		P	07 30 49.8	+0.6		
	baz=199									
TIA	Tai'an	81.66	312	P		P	07 30 50.9	+0.9		
TIA				pmax		pmax				
	comp=Z,9.0nm,0.6s									
O22K	Cooper Landing	81.72	14	P		P	07 30 49.6	-0.1		
	baz=207									
BELA	Belgrano 2	81.82	173	P		P	07 30 50.7	+0.6		
BELA				IAmb		IAmb	07 30 51.9			
	comp=Z,16nm,0.7s									
N20K	Mount Spurr	81.84	12	P		P	07 30 49.9	-0.6		
	baz=205,SNR=7.8									
SPCR	Spurr Chakacha	81.84	12	P		P	07 30 49.9	-0.5		
	baz=205									
P23K	Montague Islan	81.84	15	P		P	07 30 50.0	-0.4		
	baz=209									
I07A	Izee	81.89	38	P		P	07 30 51.9	+0.7		
GAMB	Gambell	81.89	3	P		P	07 30 50.7	+0.3		
	baz=186									
L18K	Granite Mounta	81.96	10			P	07 30 51.5	+0.6		
L18K				IAmb		IAmb	07 30 52.6			
	comp=Z,13nm,0.7s									
L18K	Granite Mounta	81.96	10	P		P	07 30 51.6	+0.7		
	baz=200									
K17K	Iditarod	82.17	9	P		P	07 30 52.4	+0.4		
	baz=199									
L19K	White Mountain	82.24	11	P		P	07 30 52.7	+0.4		
L19K	White Mountain	82.24	11	P		P	07 30 52.5	+0.1		
	baz=202,SNR=7.4									
RC01	Rabbit Creek A	82.26	13	P		P	07 30 52.1	-0.3		
	baz=207,SNR=6.0									
M20K	Styx River	82.28	12	P		P	07 30 52.4	-0.2		
	baz=204									
J16K	Anvik River	82.39	8			P	07 30 53.2	+0.1		
J16K				IAmb		IAmb	07 30 54.4			
	comp=Z,12nm,0.7s									
J16K	Anvik River	82.39	8	P		P	07 30 53.8	+0.7		
	baz=197,SNR=10.0									
KAIM	Kayak Island	82.55	16	P		P	07 30 54.5	+0.6		
	baz=212									
SKT	Skwentna	82.68	12	P		P	07 30 54.1	-0.5		
	baz=205									
GLI	Glacier Island	82.69	15	P		P	07 30 54.1	-0.5		
	baz=210									
ELK	Elko	82.70	43	P		P	07 30 56.1	+0.6		
	comp=Z,2.3nm,0.8s,baz=262,slow=3.9,SNR=12									
	comp=Z,2.3nm,0.8s									
EYAK	Cordova Ski Ar	82.73	15	P		P	07 30 54.6	-0.2		
	baz=211									
M22K	Willow	82.77	13	P		P	07 30 54.6	-0.3		
	baz=207									
KNK	Knik Glacier	82.84	14	P		P	07 30 55.2	-0.2		
	baz=208,SNR=8.0									
PMR	Palmer	82.84	14	P		P	07 30 54.7	-0.6		
PMR	Palmer	82.84	14	P		P	07 30 54.9	-0.4		
	baz=208,SNR=10									
G08A	Pilot Rock	82.89	38			P	07 30 56.8	+0.6		
I17K	Unalakleet	82.96	8	P		P	07 30 56.3	+0.4		
	baz=197									
SIT	Sitka	83.07	22	P		P	07 30 56.3	-0.2		
	baz=220									
ANM	Nome	83.11	6	P		P	07 30 56.9	+0.3		
	baz=192									
J18K	Innoko River	83.12	10	P		P	07 30 56.6	-0.1		
J18K				IAmb		IAmb	07 30 58.0			
	comp=Z,17nm,0.8s									
J18K	Innoko River	83.12	10	P		P	07 30 57.0	+0.3		
	baz=200,SNR=18									
U33K	Whale Pass	83.17	24	P		P	07 30 57.0	-0.1		
	baz=223									
V35K	Ketchikan	83.18	25	P		P	07 30 56.7	-0.5		
	baz=224									
SML	Sawmill	83.21	14	P		P	07 30 56.8	-0.5		
	baz=208									
HEH	HeiHe	83.32	328	*e*P		P	07 30 58.5	+0.5		
HEH				pmax		pmax				
	comp=Z,12nm,1.2s									
CUT	Chulitna	83.33	13	P		P	07 30 57.3	-0.4		
	baz=206,SNR=9.6									
M23K	Glacier View	83.34	14	P		P	07 30 57.6	-0.3		
	baz=209									
BMRM	Bremner River	83.39	16	P		P	07 30 58.0	-0.2		
	baz=212									
PPLA	Purkeypile	83.39	12	P		P	07 30 57.9	-0.3		
PPLA	Purkeypile	83.39	12	P		P	07 30 57.9	-0.3		
	baz=205									
MESA	MESA	83.44	17	P		P	07 30 59.2	+0.6		
	baz=214									
S31K	Pelican	83.45	21	P		P	07 30 57.9	-0.5		
	baz=220									
K20K	Telida	83.46	11	P		P	07 30 58.5	0.0		
	baz=203									
SCM	Sheep Creek Mo	83.47	14	P		P	07 30 58.2	-0.4		
SCM	Sheep Creek Mo	83.47	14	P		P	07 30 58.5	-0.1		
	baz=209,SNR=12									
H16K	Elim	83.50	7	P		P	07 30 58.8	+0.2		
	baz=195,SNR=13									
KLU	Klutina	83.51	15	P		P	07 30 58.8	0.0		
	baz=211									
CRQE	Cirque	83.60	16	P		P	07 30 59.4	+0.1		
	baz=213,SNR=6.9									
S32K	Killisnoo	83.65	22	P		P	07 30 59.9	+0.5		
	baz=221									
G15K	Niukluk	83.66	6	P		P	07 30 59.8	+0.4		
	baz=193									
WRAK	Wrangell Islan	83.69	24	P		P	07 31 00.0	+0.4		
	baz=223									
J19K	Poorman	83.79	10	P		P	07 31 00.4	+0.3		
	baz=201									
TNA	Tin City	83.89	4	P		P	07 31 00.5	+0.1		
	baz=190									
F14K	Arctic Creek	83.92	5	P		P	07 31 00.9	+0.3		
	baz=191									
HNS	HongShan	83.93	312	⇓P		P	07 31 02.1	+0.8		
HNS				pmax		pmax				
	comp=Z,9.0nm,1.0s									
N25K	Chitina, Valde	83.93	15	P		P	07 31 01.0	+0.1		
	baz=212,SNR=16									
M24K	Tolsona, Glenn	83.98	14	P		P	07 31 01.4	+0.3		
	baz=210,SNR=6.9									
WAT6	Susitna Watana	84.03	14	P		P	07 31 01.1	-0.3		
	baz=209,SNR=22									
H17K	Granite Mounta	84.07	8	P		P	07 31 01.3	0.0		
	baz=197									
WAT1	Susitna Watana	84.07	13	P		P	07 31 01.2	-0.3		
	baz=208									
SEY	Seynchan	84.14	347	P		P	07 31 01.7	0.0		
	comp=Z,14nm,0.6s,baz=146,slow=5.9,SNR=57									
	comp=Z,14nm,0.6s									
MCARA	McCarthy VSAT	84.15	16	P		P	07 31 02.0	+0.2		
	baz=213									
PSI	Prapat	84.18	275	P		P	07 31 03.4	+0.1		
BJI2	Beijing	84.19	315	P		P	07 31 03.3	+0.7		
BJI2				pmax		pmax				
	comp=Z,4.0nm,1.1s									
J20K	Nowinta River	84.21	10	P		P	07 31 02.4	+0.3		
	baz=203,SNR=11									
G16K	Koyuk River	84.22	7	P		P	07 31 02.7	+0.6		
	baz=195									
TRF	Thorofare Moun	84.26	12	P		P	07 31 01.7	-0.8		
	baz=206,SNR=30									
CTG	Chitna Glacier	84.26	17	P		P	07 31 02.7	+0.1		
	baz=215,SNR=7.8									
CHUM	Lake Minchumin	84.26	11	P		P	07 31 01.6	-0.7		
	baz=205,SNR=12									
F15K	North Star Dit	84.30	6	P		P	07 31 02.6	+0.1		
	baz=193									
GCSA	Galena City Sc	84.31	9	P		P	07 31 02.8	+0.3		
	baz=200									
O28M	Mount Upton	84.43	18	P		P	07 31 03.2	-0.4		
	baz=216,SNR=8.2									
H18K	Honhosa River	84.48	8	P		P	07 31 03.7	+0.3		
	baz=199									
G17K	Kiwalik Mounta	84.52	7	P		P	07 31 03.2	-0.4		
	baz=197									
O29M	Mount Kennedy	84.53	19	P		P	07 31 04.0	+0.1		
	baz=217									
DHY	Denali Highway	84.54	14	P		P	07 31 03.6	-0.3		
	baz=209,SNR=6.1									
ENH	Enshi	84.67	304	P		P	07 31 06.0	+0.8		
BPAW	Bear Paw Mtn.	84.71	12	P		P	07 31 04.3	-0.2		
	baz=206,SNR=5.0									
MCK	McKinley	84.79	13	P		P	07 31 04.7	-0.3		
	baz=208,SNR=9.8									
P30M	Million Dollar	84.88	19	P		P	07 31 06.2	+0.6		
	baz=219									
PAX	Paxson	84.89	14	P		P	07 31 05.3	-0.2		
	baz=211,SNR=5.5									
YUK8	Steele Glacier	84.97	18	P		P	07 31 06.5

baz=212
ILAR Eielson Array 86.13 13 P P 07 31 10.6 -0.8
comp=Z,3.7nm,0.4s,baz=221,slow=4.8,SNR=109
comp=Z,3.7nm,0.4s
F19K Shaleruckik Mo 86.15 8 P P 07 31 11.2 -0.1
baz=199,SNR=9.0
H22K Ishtalitna Cre 86.26 11 P P 07 31 11.8 -0.1
baz=205
M29M Somme Creek 86.27 17 P P 07 31 12.5 +0.3
baz=217,SNR=7.2
P33M Teslin, Yukon 86.31 21 P P 07 31 12.9 +0.5
baz=223
N31M Braeburn, Yuko 86.31 19 P P 07 31 12.9 +0.6
baz=220
POKR Poker Plat Res 86.32 12 P P 07 31 11.5 -0.7
baz=209
J25K Salcha River, 86.33 14 P P 07 31 12.2 -0.1
baz=211,SNR=14
R33M Jennings River 86.35 22 P P 07 31 13.4 +0.8
baz=224
E18K Tukpahlearik C 86.37 7 P P 07 31 12.8 +0.4
baz=197
D17K Noatak River 86.39 6 P P 07 31 13.1 +0.7
baz=194
G21K Allakaket 86.47 10 P P 07 31 13.3 +0.4
baz=203
F20K Avaraart Lake 86.64 9 P P 07 31 13.7 +0.1
baz=201,SNR=5.7
XAN Xi'an 86.67 307 ⇑P P 07 31 16.3 +1.7
XAN pmax pmax
comp=Z,29nm,1.0s
RDOG Red Dog Mine 86.75 6 P P 07 31 14.0 -0.2
baz=194
C16K Lisburne Hills 86.75 5 P P 07 31 14.2 0.0
baz=192
E19K Redstone River 86.81 8 P P 07 31 14.7 +0.2
baz=200,SNR=15
M30M Minto, Yukon 86.85 18 P P 07 31 15.1 +0.3
baz=219,SNR=15
H24K Noodor Dome 86.86 12 P P 07 31 14.5 -0.4
baz=209
L29M L29M 86.89 17 P P 07 31 15.6 +0.6
baz=218,SNR=6.2
N32M Quiet Lake 86.91 20 P P 07 31 15.7 +0.6
baz=222
PRP Porcupine Dome 87.07 13 P P 07 31 15.3 -0.6
baz=211
F21K Alatna River 87.13 9 P P 07 31 16.2 +0.2
baz=203
C17K DeLong Mountai 87.14 5 P P 07 31 16.1 +0.1
baz=194
G23K Bananza Creek 87.24 11 P P 07 31 16.9 +0.3
baz=207
M31M Drury Creek, Y 87.28 19 P P 07 31 16.9 0.0
baz=221
DAWY Dawson 87.31 16 P P 07 31 17.3 +0.4
baz=216,SNR=7.9
PDAR Pinedale Array 87.39 43 P P 07 31 18.9 +0.9
comp=Z,1.6nm,0.7s,baz=221,slow=2.9,SNR=20
comp=Z,1.6nm,0.7s
I26K Coal Creek Min 87.42 14 P P 07 31 17.7 +0.3
baz=213,SNR=5.0
C18K Utukok River 87.49 6 P P 07 31 18.5 +0.8
baz=196
K29M Barlow Dome 87.64 17 P P 07 31 19.1 +0.5
baz=218,SNR=8.8
WTLY Watson Lake, Y 87.64 22 P P 07 31 19.3 +0.7
baz=226
COLD Coldfoot 87.67 11 P P 07 31 19.0 +0.5
baz=206
HHC Hu-ho-hao-te 87.69 314 eP P 07 31 18.1 -1.2
HHC pmax pmax
comp=Z,17nm,0.5s
HHC pmax pmax
comp=Z,100nm,4.5s
D19K Kuna River 87.69 7 P P 07 31 18.4 -0.2
baz=199
G24K Hadweenzic Riv 87.70 12 P P 07 31 18.7 0.0
baz=209
E20K Nigu River 87.71 8 P P 07 31 18.9 +0.2
baz=201
MAYO Mayo, Yukon 87.90 18 P P 07 31 20.4 +0.8
baz=220,SNR=12
J29N Klondike Camp 87.94 16 P P 07 31 20.6 +0.7
baz=218
I27K Kandik River 88.02 14 P P 07 31 20.2 0.0
baz=214
D20K Etivluk River 88.08 8 P P 07 31 20.5 +0.1
baz=200
C19K Lookout Ridge 88.10 7 P P 07 31 20.6 +0.1
baz=198
KMI2 Kunming 88.22 297 P P 07 31 23.6 +1.3
KMI2 pmax pmax
comp=Z,9.0nm,0.8s
E22K Anaktuvuk Pass 88.23 10 P P 07 31 21.2 0.0
baz=205
I28M Miner Creek 88.30 15 P P 07 31 21.8 +0.2
baz=216
E23K Chandalar 88.52 10 P P 07 31 22.7 +0.1
baz=207,SNR=7.8
J30M Hart River 88.54 17 P P 07 31 23.0 +0.2
baz=219
H27K Steamboat Moun 88.56 14 P P 07 31 23.1 +0.4
baz=214,SNR=5.1
I29M Ogilvie Camp, 88.64 16 P P 07 31 23.1 0.0
baz=218
G26K Porcupine Rive 88.67 13 P P 07 31 23.7 +0.6
baz=212,SNR=8.6
E24K Your Creek 88.73 11 P P 07 31 23.9 +0.4
baz=208,SNR=6.0
C21K Knifeblade Rid 88.73 8 P P 07 31 23.8 +0.3
baz=202
F25K Christian Rive 88.84 12 P P 07 31 24.3 +0.3
baz=211
A19K Wainwright 89.01 6 P P 07 31 25.3 +0.7
baz=196
G27K Doyon Strip 89.01 14 P P 07 31 25.0 +0.2
baz=214
I30M Mount Dempster 89.03 16 P P 07 31 25.2 +0.2
baz=219
TOLK Toolik Lake Re 89.05 10 P P 07 31 25.2 +0.2
baz=207
D23K Nanushuk River 89.16 10 P P 07 31 25.7 +0.3
baz=206
B21K Ikpikpuk River 89.19 8 P P 07 31 25.9 +0.4
baz=202
F26K Sheenjek River 89.22 12 P P 07 31 26.3 +0.5
baz=212
B20K Meade River 89.23 7 P P 07 31 26.2 +0.5
baz=200
CMAR Chiang Mai Arr 89.24 290 P P 07 31 28.7 +1.8
comp=Z,4.2nm,0.8s,baz=108,slow=2.9,SNR=27
comp=Z,4.2nm,0.8s
CMAR Chiang Mai Arr 89.24 290 P P 07 31 27.1 +0.1
E25K Arctic Village 89.31 12 P P 07 31 26.5 +0.4
baz=211
CHTO Chiang Mai 89.36 290 P P 07 31 28.8 +1.3
CHTO Chiang Mai 89.36 290 P P 07 31 28.0 +0.5
CHTO IAmb IAmb 07 31 29.5
comp=Z,5.9nm,0.8s
KOTAN Kotaneelee Air 89.42 24 P P 07 31 27.1 +0.3
baz=230
PZH PanZhiHua 89.54 298 P P 07 31 28.8 +0.5
D24K Happy Valley 89.63 10 P P 07 31 28.3 +0.7
baz=208
EPYK Eagle Plains 89.83 15 P P 07 31 28.7 +0.1
baz=219
C23K Itkillik River 89.96 9 P P 07 31 29.5 +0.5
baz=206
TROLL Troll, Antarti 89.99 180 P P 07 31 30.3 +0.8
B22K Teshekpuk Lake 90.02 8 P P 07 31 29.4 +0.2
baz=203
H31M Peel River 90.02 17 P P 07 31 29.8 +0.3
baz=221
F28M Old Crow 90.07 14 P P 07 31 29.7 0.0
baz=216
C24K Franklin Bluff 90.15 10 P P 07 31 30.4 +0.5
baz=208
E27K Coleen River 90.17 13 P P 07 31 30.3 +0.2
baz=214
D25K Kavik River 90.20 11 P P 07 31 30.0 -0.2
baz=210
SNAA Sanae 90.28 179 ⇑P P 07 31 31.2 +0.4
comp=Z,53nm,0.5s
SNAA Sanae 90.28 179 P P 07 31 30.9 +0.1
comp=Z,3.4nm,0.7s,baz=202,slow=12,SNR=2.4
comp=Z,3.4nm,0.7s
VNA3 Neumayer Olymp 90.41 176 ⇑P P 07 31 32.5 +1.1
comp=Z,12nm,0.6s
G30M tAoh Zraii Nji 90.44 15 P P 07 31 31.5 +0.1
baz=219
A21K Barrow 90.54 7 P P 07 31 31.6 -0.1
baz=200
VNA2 Neumayer--Watz 90.85 177 ⇑P P 07 31 34.9 +1.5
comp=Z,10nm,0.6s,baz=188,slow=4.9
PLCA Paso Flores 90.92 134 P P 07 31 35.9 +1.4
comp=Z,2.8nm,1.0s,baz=247,slow=5.8,SNR=5.0
comp=Z,2.8nm,1.0s
C27K Jago River 90.95 11 P P 07 31 33.9 +0.2
baz=212
C26K Camden Bay 90.98 11 P P 07 31 34.4 +0.6
baz=211
F30M Barrier River 91.03 15 P P 07 31 34.4 +0.3
baz=209
VNA1 Neumayer--Stat 91.08 177 ⇑P P 07 31 36.0 +1.6
comp=Z,18nm,1.1s
E29M Blow River 91.14 14 P P 07 31 34.8 +0.2
baz=218
D27M Malcolm River 91.17 12 P P 07 31 34.9 +0.2
baz=215
LZH Lanzhou 91.30 308 eP P 07 31 35.1 -1.2
LZH pmax pmax
comp=Z,23nm,1.3s
LZDM Lanzhou Array 91.36 307 P P 07 31 36.1 -0.6
comp=Z,1.0nm,0.3s,baz=23,slow=8.0,SNR=3.6
comp=Z,1.0nm,0.3s
F31M Tsiigehtchic 91.42 16 P P 07 31 35.9 +0.1
baz=222
WRGLY Wrigley 91.62 22 P P 07 31 36.8 0.0
baz=231
D28M Stokes Point 91.70 13 P P 07 31 37.2 +0.1
baz=217
INK Inuvik 92.12 15 P P 07 31 39.1 +0.1
baz=222
SONM Songino Array 93.97 319 P P 07 31 48.8 +0.6
comp=Z,0.9nm,0.6s,baz=130,slow=4.0,SNR=8.0
comp=Z,0.9nm,0.6s
YKA Yellowknife Ar 94.50 25 P P 07 31 50.0 -0.1
comp=Z,0.8nm,0.6s,baz=253,slow=4.7,SNR=14
comp=Z,0.8nm,0.6s
GTA2 Gaotai 95.51 310 eP P 07 31 55.8 +0.5
GTA2 pmax pmax
comp=Z,5.0nm,1.4s
WMQ Urumqi 105.34 312 Pdif Pdif 07 32 40.1 +1.1
MKAR Makanchi Array 109.55 314 PKiKP PKiKP 07 36 56.2 -0.6
comp=Z,0.7nm,0.5s,baz=153,slow=1.2,SNR=14
KURBB Kurchatov Arra 112.29 318 PKiKP PKiKP 07 37 01.1 -0.7
comp=Z,1.0nm,0.6s,baz=82,slow=2.3,SNR=5.5
BVAR Borovoye Array 117.26 321 PKP PKPdf 07 37 10.9 -0.4
comp=Z,2.0nm,0.5s,baz=104,slow=0.8,SNR=7.5
ARCES ARCESS Array B 126.57 350 PKP PKPdf 07 37 28.4 -0.5
comp=Z,5.8nm,0.9s,baz=28,slow=4.1,SNR=6.4
FINES FINESS Array B 133.56 344 PKhKP PKPpre 07 37 36.7
comp=Z,2.9nm,0.9s,baz=294,slow=1.9,SNR=3.7
FINES PKP **PKPdf 07 37 41.4 -0.7**
comp=Z,3.8nm,1.0s,baz=90,slow=1.4,SNR=2.0
FINES SKPab **SKPab 07 40 19.1 -0.3**
comp=Z,3.1nm,0.8s,baz=352,slow=4.2,SNR=4.2
NOA NORSAR Array B 136.72 353 PKhKP PKPpre 07 37 37.8
comp=Z,0.9nm,0.7s,baz=263,slow=2.2,SNR=3.6
NOA PKP **PKPdf 07 37 47.8 -0.3**
comp=Z,2.0nm,1.0s,baz=14,slow=4.0,SNR=3.2
HFS Hagfors 137.28 351 PKhKP PKPpre 07 37 38.0
comp=Z,3.0nm,0.9s,baz=92,slow=7.2,SNR=8.4
HFS PKP **PKPdf 07 37 48.7 -0.4**
comp=Z,1.8nm,0.7s,baz=57,slow=5.3,SNR=1.7
HFS SKP **SKPdf 07 40 29.4 +0.8**
comp=Z,3.5nm,0.9s,baz=90,slow=9.4,SNR=1.3
AKASG Malin Array Be 140.96 332 PKhKP PKPpre 07 37 49.7
comp=Z,1.1nm,0.5s,baz=43,slow=4.3,SNR=13
AKASG SKPbc **SKPbc 07 40 38.8 +1.0**
comp=Z,0.2nm,0.4s,baz=31,slow=3.8,SNR=4.4
LAWE Loch Awe, Argy 141.63 7 eP PKPdf 07 37 52.8 -4.2
LUBAR Lubar, Ukraine 142.18 333 PKP PKPdf 07 37 53.9 -4.3
EKA Eskdalemuir Ar 142.76 5 PKhKP PKPpre 07 37 56.0
comp=Z,0.8nm,0.5s,baz=335,slow=3.2,SNR=5.5
SORM Soroca 143.20 330 ⇓P PKPab 07 37 58.2 +0.1
SORM Soroca 143.20 330 PKP PKPab 07 37 57.8 -0.4
BEL Belsk 143.29 340 ePKP PKPdf 07 37 59.7 -0.4
NDNU Novodnistrovsk 143.32 331 PKP PKPab 07 37 58.1 -0.6
KMPD K-Podol'skiy 143.75 332 PKP PKPbc 07 37 59.7 -0.5
KMPD PKP PKPab 07 37 59.8 -0.5
KIS Kishinev 143.76 328 PKP PKPbc 07 37 59.6 -0.7
BSEG Bad Segeberg 143.76 352 ePKPbc PKPab 07 38 00.2 0.0
baz=14,slow=2.7
LVV L'vov 143.80 336 PKP PKPbc 07 38 00.4 +0.1
HPK Haverah Park 144.23 4 eP PKPbc 07 38 00.8 -0.7
MORS Morshin 144.40 335 PKP PKPbc 07 38 02.6 +0.4
KWP Kalwaria Pacla 144.47 337 ePKP PKPab 07 38 03.0 0.0
WME Myndd Eilian 144.57 6 eP PKPbc 07 38 02.7 +0.1
WLF1 Llynfaes 144.67 7 eP PKPdf 07 38 02.1 -0.3
OJC Ojcow 145.00 340 ePKP PKPbc 07 38 04.1 +0.1
BURAR Bucovina Array 145.02 332 ⇓P PKPab 07 38 05.0 -0.4
FLTG Flechtingen 145.18 350 ePKPbc PKPbc 07 38 04.6 +0.2
baz=14,slow=2.7
STHS Stebnicka Huta 145.18 338 ePKP PKPbc 07 38 04.7 +0.1
BRTR Keskin Array B 145.19 315 PKPbc PKPbc 07 38 04.8 -0.3
comp=Z,6.3nm,0.7s,baz=116,slow=3.4,SNR=26
BRTR SKPbc **SKiKP 07 40 49.9 +0.9**
comp=Z,0.8nm,0.6s,baz=132,slow=2.6,SNR=3.8
IWEX Carrickbyrne, 145.25 9 eP PKPbc 07 38 05.0 +0.4
UZHM Uzhgorod 145.44 336 PKP PKPbc 07 38 05.3 0.0
ASSE Asse, Remlinge 145.46 350 ePKPbc PKPbc 07 38 05.6 +0.5
baz=14,slow=2.7
KSP Ksiaz 145.49 344 ePKP PKPab 07 38 06.5 -0.5
NIE Niedzica 145.52 339 ePKP PKPab 07 38 06.8 -0.3
HLM1 Long Mynd 145.57 5 eP PKPbc 07 38 04.9 -0.7
BMR Baia Mare 145.72 334 ⇓P PKPbc 07 38 07.0 +0.9
OSTC Ostas 145.77 344 ⇑ePKP PKPab 07 38 07.8 -0.3
CHVC Chvalec 145.78 344 ⇑ePKP PKPab 07 38 07.4 -0.7
CLZ Clausthal 145.79 351 ePKPbc PKPbc 07 38 07.0 +0.8
baz=14,slow=2.7
CLL Collm 145.83 348 ⇓iPKPbc PKPbc 07 38 06.8 +0.5
comp=Z,32nm,0.8s
CLL Collm 145.83 348 ePKPbc PKPbc 07 38 06.7 +0.5
baz=14,slow=2.7
OKC Ostrava-Krasne 145.86 341 ⇑ePKP PKPbc 07 38 07.1 +0.6
UPC Upice 145.87 344 ⇑ePKP PKPbc 07 38 07.3 +0.8
STEB Stebetice 145.88 342 ⇑ePKP PKPbc 07 38 07.3 +0.7
DPC Dobruska-Polom 145.93 343 ⇑ePKP PKPbc 07 38 07.7 +1.0
LANS Liptovska Anna 146.03 339 ePKP PKPab 07 38 08.8 -0.4
BRG Berggiesshubel 146.03 346 ePKPbc PKPbc 07 38 07.5 +0.6
baz=14,slow=2.7
KRLC Kraliky 146.05 343 ⇑ePKP PKPbc 07 38 07.8 +0.7
MCH1 Michaelchurch 146.08 5 eP PKPbc 07 38 06.6 -0.4
MORC Moravsky Berou 146.09 342 ⇑P PKPbc 07 38 07.1 -0.1
MORC Moravsky Berou 146.09 342 ePKP PKPbc 07 38 07.2 0.0
GTTG Gottingen 146.14 351 ePKPbc PKPbc 07 38 07.7 +0.5
baz=14,slow=2.7
NEUB Neuenburg 146.16 349 ePKPbc PKPbc 07 38 07.8 +0.5
baz=14,slow=2.7
PVCC Panska Ves 146.21 345 ⇑ePKP PKPbc 07 38 08.4 +1.0
MONM Monmouth 146.25 5 eP PKPbc 07 38 07.4 -0.1
RICC Richard 146.31 346 ⇑ePKP PKPbc 07 38 08.7 +1.0
MMAI Mount Meron Ar 146.54 303 PKPbc PKPbc 07 38 09.4 +0.4
comp=Z,8.1nm,0.6s,baz=46,slow=6.0,SNR=12
KASTN Kahler Asten 146.69 353 ePKPbc PKPbc 07 38 09.2 +0.5
baz=14,slow=2.7
PRU Pruhonice 146.72 345 ⇑ePKP PKPbc 07 38 09.4 +0.6
MOX Moxa 146.73 349 ePKPbc PKPbc 07 38 09.3 +0.4
baz=14,slow=2.7
PLN Plauen 146.78 348 ePKPbc PKPbc 07 38 09.6 +0.6
baz=14,slow=2.7
VRAC Vranov 146.79 342 ⇓P PKPbc 07 38 09.8 +0.8
VRAC Vranov 146.79 342 ePKP PKPbc 07 38 09.4 +0.3
JAVC Velka Javorina 146.87 341 ePKP PKiKP 07 38 10.8 -0.4
PSZ Piszkesteto 146.93 338 ⇓P PKPbc 07 38 09.7 +0.2
NKC Novy Kostel 146.96 348 ⇑ePKP PKPbc 07 38 10.3 +0.8
KRUC Moravsky 147.07 342 ePKP PKPbc 07 38 10.0 +0.2
MANZ Manzenberg 147.26 348 ePKPbc PKPbc 07 38 11.1 +0.8
baz=14,slow=2.7
MODS Modra-Piesok 147.42 341 ePKP PKiKP 07 38 12.1 -0.2
UCC Uccle 147.44 357 dPKP PKPbc 07 38 11.1 +0.4
ROTZ Rotzenmuhle 147.45 348 ePKPbc PKPbc 07 38 11.5 +0.8
baz=14,slow=2.7
MEM Memba 147.52 355 dPKP PKPbc 07 38 11.5 +0.6
BTNL Ternell 147.53 355 dPKP PKPbc 07 38 11.6 +0.6
SRO Srobarova 147.57 339 ePKP PKiKP 07 38 12.7 +0.1
BSTI Sart Tilman 147.58 356 dPKP PKiKP 07 38 12.0 -0.6
TNS Taunus Mts 147.65 352 ePKPbc PKPbc 07 38 12.1 +0.8
baz=14,slow=2.7
KHC Kasperske Hory 147.75 346 ⇑ePKP PKPbc 07 38 12.4 +0.8
KHC ePKPAB **PKPab 07 38 16.9 +0.8**
BCLA Clavier 147.76 356 dPKP PKPab 07 38 15.8 -0.3
BHOU Houvegnez 147.78 355 dPKiKP PKiKP 07 38 12.5 -0.5
BGES Gesves 147.81 356 dPKP PKPbc 07 38 11.9 +0.3
BGES dPKPab **PKPab 07 38 16.2 -0.1**
CKRC Cesky Krumlov 147.86 344 ⇑ePKP PKiKP 07 38 13.5 +0.3
BMRD Maredsous 147.91 357 dPKP PKPbc 07 38 12.6 +0.7
GEC2 GERESS Array S 147.99 345 ePKPbc PKPbc 07 38 12.8 +0.5
baz=14,slow=2.7
GERES GERESS Array B 147.99 345 PKPbc PKPbc 07 38 12.8 +0.5
comp=Z,5.8nm,0.6s,baz=11,slow=2.7,SNR=43
RCHB Rochefort 148.03 356 dPKP PKPbc 07 38 12.1 -0.1
ELND Elena 148.07 326 ⇑P PKPab 07 38 18.6 +1.0
DOU Dourbes 148.13 357 dPKiKP PKPbc 07 38 13.0 +0.6
DOU dPKP **PKPab 07 38 17.4 -0.2**
CONA Conrad Observa 148.25 342 iPKiKP PKiKP 07 38 13.9 -0.2
comp=Z,16nm,1.2s,SNR=7.0
CONA iPKP **PKPab 07 38 18.6 +0.3**
comp=Z,10nm,0.8s
RONA Rosalia, Austr 148.32 341 iPKiKP PKiKP 07 38 13.9 -0.3
comp=Z,11nm,0.9s,SNR=6.9
PLVB Pleven 148.41 327 ⇓P PKiKP 07 38 14.1 -0.4
BAND Balkesir-Ban 148.44 320 ⇓P PKPbc 07 38 12.8 -0.8
WLF Walferdange 148.45 355 dPKP PKiKP 07 38 14.4 0.0
MOA Molln 148.76 344 ePKiKP PKPbc 07 38 14.7 +0.6
comp=Z,7.0nm,0.9s
MOA ePKP **PKPab 07 38 20.9 +0.6**
comp=Z,9.0nm,1.1s
MORH Mrgy, Hungar 148.83 337 ⇓P PKPbc 07 38 14.4 +0.2
ARSA Arzberg 148.96 342 iPKP PKPbc 07 38 14.7 +0.1
comp=Z,4.7nm,1.1s
BIOA Bad Ischl, Aus 149.07 344 ePKiKP PKPbc 07 38 15.3 +0.5
comp=Z,9.7nm,1.2s
BIOA iPKP **PKPab 07 38 21.8 +0.2**
comp=Z,12nm,0.7s
BFO Black Forest 149.51 351 ePKPbc PKPbc 07 38 16.3 +0.4
baz=14,slow=2.7
LESA Schwarzleotal 149.56 345 iPKiKP PKPbc 07 38 16.4 +0.2
comp=Z,7.2nm,0.8s
LESA iPKP **PKPab 07 38 24.2 +0.5**
comp=Z,6.8nm,0.7s
SOKA Soboth 149.62 342 iPKP PKPbc 07 38 16.1 -0.2
comp=Z,6.8nm,0.8s
SOKA iPKP **PKPab 07 38 24.2 +0.2**
comp=Z,8.5nm,1.3s
KBA Koelnbreinsper 149.72 344 ePKPbc PKPbc 07 38 16.2 -0.4
comp=Z,8.2nm,0.6s
KBA iPKP **PKPab 07 38 24.4 -0.1**
comp=Z,13nm,0.7s
UBR Ueberruh 149.86 349 ePKPbc PKPbc 07 38 16.9 +0.1
baz=14,slow=2.7
WATA Walderalm 149.89 347 iPKiKP PKPbc 07 38 17.2 +0.2
comp=Z,7.3nm,0.6s
OBKA Obir 149.91 342 ePKP PKPbc 07 38 16.5 -0.5
comp=Z,2.4nm,0.7s
RETA Reutte 149.92 348 iPKiKP PKPbc 07 38 17.3 +0.3
comp=Z,6.7nm,0.8s
WTTA Wattenberg 149.95 347 iPKiKP PKPbc 07 38 17.6 +0.4
comp=Z,17nm,0.6s,SNR=6.7
MOTA Moosalm 149.98 347 iPKiKP PKPbc 07 38 17.5 +0.2
comp=Z,13nm,0.9s,SNR=5.9
MOTA iPKP **PKPab 07 38 25.1 -0.5**
comp=Z,11nm,0.9s
MYKA Terra Mystica 150.05 344 iPKP PKPbc 07 38 17.0 -0.3
comp=Z,9.0nm,0.6s
MYKA iPKP **PKPab 07 38 25.5 -0.3**
comp=Z,5.4nm,0.5s
SQTA Sankt Quirin 150.08 347 iPKiKP PKPbc 07 38 17.8 +0.4
comp=Z,11nm,0.7s
ABTA Abfaltersbach 150.23 345 iPKP PKPbc 07 38 17.6 -0.2
comp=Z,17nm,0.7s,SNR=8.6
DAVA Damuels 150.28 349 iPKiKP PKPbc 07 38 18.2 +0.3
comp=Z,13nm,1.1s
FETA Feichten 150.37 348 iPKiKP PKiKP 07 38 18.6 0.0
comp=Z,9.4nm,0.7s
ESDC Sonseca Array 158.03 12 PKPab PKPab 07 38 59.9 -0.2
comp=Z,1.9nm,0.9s,baz=351,slow=3.9,SNR=8.1
TORD Torodi Ar. Bea 174.95 178 PKPab PKPab 07 40 15.7 +0.6
comp=Z,0.6nm,0.8s,baz=201,slow=3.8,SNR=2.9

NEIC ***14*** *07:27:07.5±1.3, 13°.6S±0°.1×167°.3E±0°.2, h196km±8km, mb4.1/13, Error ellipse: s-maj=22.2km s-min=14.2km az=75.0*
IDC ***14*** *07:27:07.1±2.4, 13°.62S×167°.23E, h192km±20km, mb3.8/16, mbtmp4.3/17, Error ellipse: s-maj=20.4km s-min=12.6km az=89.0*

ISC 14 07:27:08.2±0.5, 13°.65S±0°.06×167°.04E±0°.09, h200km, n47, σ0.994/54, mb4.2/21, 1C-1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	1.79	175		Pn	07 27 44.2	-0.4
MARNC	Mare, Loyalty	7.85	173	Pn	Pn	07 28 59.5	+0.1
HNR	Honiara	8.12	300	Pn	Pn	07 29 02.9	-0.1
DZM	Mont Dzumac	8.40	184	P	Pn	07 29 06.9	+0.3
	5.1nm,0.8s,baz=292,slow=21,SNR=6.5						
DZM				S	Sn	07 30 40.9	-0.3
	baz=208,slow=18						
DZM	Mont Dzumac	8.40	184		Pn	07 29 06.8	+0.1
MSVF	Nonsavu	11.35	112	P	P	07 29 53.0	+2.3
	9.1nm,0.6s,baz=260,slow=13,SNR=7.7						
EIDS	Eidsvold	19.01	230	P	Pn	07 31 17.1	-1.0
CTA	Charters Tower	20.89	249	P	P	07 31 36.4	+1.2
	5.6nm,0.8s,baz=88,slow=12,SNR=6.3						
	5.6nm,0.8s						
CTAO	Charters Tower	20.89	249	P	P	07 31 36.3	+1.2
ARMA	Armidale	21.92	218	P	P	07 31 47.3	+1.5
ARMA				IAmb	IAmb	07 32 00.6	
	comp=Z,16nm,1.1s						
MSWZ	Moikau Station	28.58	167	P	P	07 32 44.1	-1.4
STKA	Stephens Creek	29.54	228	P	P	07 32 55.5	+1.3
	comp=Z,2.1nm,0.4s,baz=58,slow=8.5,SNR=7.3						
STKA				PcP	PcP	07 35 54.3	+0.1
	comp=Z,1.3nm,0.3s,baz=53,slow=5.1,SNR=3.7						
	comp=Z,2.1nm,0.4s						
TOO	Toolangi	30.59	215	P	P	07 33 04.1	+0.7
TOO				IAmb	IAmb	07 33 29.2	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	31.89	254	P	P	07 33 15.6	+0.7
	comp=Z,0.6nm,0.5s,baz=83,slow=8.9,SNR=7.5						
WRA				PcP	PcP	07 36 01.0	+0.3
	comp=Z,1.3nm,0.6s,baz=84,slow=3.2,SNR=7.3						
	comp=Z,0.6nm,0.5s						
WRA	Warramunga Arr	31.89	254	P	P	07 33 15.9	+1.0
AS31	Alice Springs	32.86	247	P	P	07 33 23.8	+0.3
ASAR	Alice Springs	32.86	247	P	P	07 33 23.9	+0.5
	comp=Z,2.0nm,0.5s,baz=73,slow=9.7,SNR=24						
ASAR				PcP	PcP	07 36 03.5	+0.1
	comp=Z,1.3nm,0.6s,baz=83,slow=2.5,SNR=11						
ASAR				S	S	07 38 24.6	-1.5
	comp=Z,0.8nm,0.7s,baz=81,slow=17,SNR=4.9						
ASAR				ScP	ScP	07 39 29.3	+0.7
	comp=Z,2.5nm,1.0s,baz=81,slow=3.3,SNR=10						
	comp=Z,2.0nm,0.5s						
ASAR	Alice Springs	32.86	247	P	P	07 33 23.1	-0.4
ASAJ	Asahikawa	61.66	340	P	P	07 37 04.5	-0.2
	comp=Z,4.7nm,0.7s,baz=261,slow=13,SNR=1.8						
	comp=Z,4.7nm,0.7s						
KSRS	Korea Array	62.73	326	P	P	07 37 12.6	+0.6
	comp=Z,1.2nm,0.8s,baz=157,slow=9.3,SNR=4.1						
	comp=Z,1.2nm,0.8s						
VNDA	Vanda	63.93	181	P	P	07 37 19.6	+0.2
	comp=Z,0.9nm,0.4s,baz=355,slow=9.1,SNR=6.6						
	comp=Z,0.9nm,0.4s						
VNDA	Vanda	63.93	181	P	P	07 37 19.4	+0.1
VNDA				IAmb	IAmb	07 37 19.9	
	comp=Z,3.0nm,1.2s						
PETK	Petropavlovsk-	66.97	354	P	P	07 37 38.7	-0.4
	comp=Z,3.1nm,0.7s,baz=143,slow=5.2,SNR=4.2						
	comp=Z,3.1nm,0.7s						
KLR	Kul'dur	69.93	336	P	P	07 37 58.3	+0.8
	comp=Z,1.9nm,0.6s,baz=133,slow=1.8,SNR=8.6						
	comp=Z,1.9nm,0.6s						
CMAR	Chiang Mai Arr	74.31	294	P	P	07 38 25.2	+1.1
	comp=Z,2.2nm,0.3s,baz=116,slow=5.4,SNR=8.4						
	comp=Z,2.2nm,0.3s						
CMAR	Chiang Mai Arr	74.31	294	P	P	07 38 24.9	+0.7
QSPA	South Pole Qui	76.37	180	P	P	07 38 35.1	-0.1
	comp=Z,4.5nm,0.7s,baz=308,slow=1.2,SNR=28						
	comp=Z,4.5nm,0.7s						
QSPA	South Pole Qui	76.37	180	P	P	07 38 35.0	-0.3
QSPA				IAmb	IAmb	07 38 36.0	
	comp=Z,5.4nm,0.9s						
M16K	Timber Creek	79.18	16	P	P	07 38 49.5	-0.9
K15K	Wolf Creek Mou	79.61	14	P	P	07 38 52.2	-0.5
K15K				IAmb	IAmb	07 38 54.8	

	comp=Z,3.5nm,1.1s						
L19K	**White Mountain**	**81.27 17**	P		**P**	**07 39 02.2**	**+0.6**
L19K			IAmb		IAmb	07 39 37.0	
	comp=Z,5.0nm,1.3s						
SONM	**Songino Array**	**81.50 324**	P		**P**	**07 39 03.9**	**+0.6**
	comp=Z,0.6nm,0.4s,baz=140,slow=6.4,SNR=7.1						
	comp=Z,0.6nm,0.4s						
SONM	**Songino Array**	**81.50 324**	P		**P**	**07 39 02.3**	**-1.0**
MAW	**Mawson**	**82.80 202**	P		**P**	**07 39 10.1**	**+0.5**
	comp=Z,4.1nm,0.6s,baz=102,slow=4.7,SNR=11						
	comp=Z,4.1nm,0.6s						
MAW	**Mawson**	**82.80 202**	P		**P**	**07 39 10.1**	**+0.5**
MAW			IAmb		IAmb	07 39 12.1	
	comp=Z,2.6nm,1.4s						
ILAR	**Eielson Array**	**85.57 18**	P		**P**	**07 39 22.3**	**-1.2**
	comp=Z,0.7nm,0.6s,baz=238,slow=5.3,SNR=11						
	comp=Z,0.7nm,0.6s						
ILAR	**Eielson Array**	**85.57 18**	P		**P**	**07 39 21.7**	**-1.8**
TROLL	**Troll, Antarti**	**93.91 185**	P		**P**	**07 40 00.1**	**-2.8**
VNA3	**Neumayer Olymp**	**95.28 181**	⇓P		**P**	**07 40 07.8**	**-1.2**
	comp=Z,3.4nm,0.5s						
VNA2	**Neumayer--Watz**	**95.55 182**	⇑P		**P**	**07 40 09.7**	**-0.5**
	comp=Z,4.3nm,0.6s,baz=176,slow=4.1						
MKAR	**Makanchi Array**	**96.27 317**	P		**P**	**07 40 14.1**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=93,slow=6.5,SNR=12						
	comp=Z,1.3nm,0.6s						
ZALV	**Zalesovo Beam**	**96.39 324**	P		**P**	**07 40 13.5**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=89,slow=5.9,SNR=2.0						
	comp=Z,0.5nm,0.3s						
ARCES	**ARCESS Array B**	**119.16 345**	PKP		**PKPdf**	**07 45 31.3**	**-1.4**
	comp=Z,1.6nm,0.6s,baz=25,slow=3.2,SNR=9.0						
FINES	**FINESS Array B**	**124.64 338**	PKP		**PKPdf**	**07 45 42.8**	**-0.6**
	comp=Z,4.9nm,0.9s,baz=46,slow=4.6,SNR=5.1						
NOA	**NORSAR Array B**	**129.53 345**	PKP		**PKPdf**	**07 45 52.1**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=42,slow=2.4,SNR=1.7						
KEST	**Kesra**	**150.24 322**	PKPbc		**PKiKP**	**07 46 36.2**	**-0.5**
	comp=Z,7.1nm,0.6s,baz=0.1,slow=2.8,SNR=7.7						
TORD	**Torodi Ar. Bea**	**165.73 270**	PKP		**PKPdf**	**07 46 49.5**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=218,slow=1.8,SNR=5.1						
TORD			PKPab		**PKPab**	**07 47 50.6**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=113,slow=3.2,SNR=3.3						

IDC 14 07:29:32.3±7.1, 8°13S×119°98E, h158km±76km, mb3.6/3, mbtmp3.9/5, Error ellipse: s-maj=158.8km s-min=28.7km az=52.0, Flores region

Code	Station Name	Δ° AZ°	Phase	ID	Time	Res
			Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.34 151**	P	Pn	07 32 10.1	+0.3
	0.9nm,0.5s,baz=331,slow=8.3,SNR=13					
FITZ			S	Sn	07 34 08.2	-7.2
	1.8nm,0.4s,baz=204,slow=18,SNR=8.3					
WRA	**Warramunga Arr**	**18.20 132**	P	P	07 33 32.8	-0.6
	0.6nm,0.4s,baz=303,slow=12,SNR=12					
WRA			S	S	07 36 51.3	-2.3
	0.6nm,0.7s,baz=315,slow=20,SNR=2.6					
ASAR	**Alice Springs**	**20.42 141**	P	P	07 33 57.2	-0.1
	1.7nm,0.4s,baz=315,slow=8.9,SNR=22					
ASAR			S	S	07 37 33.3	-4.1
	0.2nm,0.6s,baz=317,slow=20,SNR=1.9					
	1.7nm,0.4s					
STKA	**Stephens Creek**	**31.03 143**	P	P	07 35 35.5	+0.3
	1.8nm,0.3s,baz=321,slow=10.0,SNR=5.7					
	1.8nm,0.3s					
MKAR	**Makanchi Array**	**64.13 332**	P	P	07 39 49.7	0.0
	0.5nm,0.4s,baz=146,slow=7.5,SNR=7.8					
	0.5nm,0.4s					

*NOU **14** 07:42:03.1, 38°.35S×176°.33E, h181km, MLv3.7/18, North Island, New Zealand*
*WEL **14** 07:42:06.3±0.6, 38°.3S×17°.6E±°, h145km±4km, M3.2/78, MLv3.2/78, Error ellipse: s-maj=3.8km s-min=3.4km az=164.0, confirmed*

ISC 14 07:42:00.8±1.5, 38°.21S±0°.04×176°.25E±0°.04, h190km±8km, n153, σ1§66/181, North Island

Code	Station Name	Δ° AZ°	Phase	ID	Time	Res
			Op	ISC	h m s	ISC
HLRZ	**Highlands Stat**	**0.09 118**	P	**Pn**	**07 42 27.3**	**+1.4**
HSRZ	**Hossack Road**	**0.10 182**	P	**Pn**	**07 42 27.0**	**+1.1**
NGRZ	**Ngongotaha**	**0.12 335**	P	**Pn**	**07 42 26.8**	**+0.9**
OMRZ	**Omania**	**0.14 43**	P	**Pn**	**07 42 26.4**	**+0.5**
HRRZ	**Handcock Road**	**0.18 172**	P	**Pn**	**07 42 27.0**	**+1.0**
KARZ	**Kaharoa**	**0.19 359**	P	**Pn**	**07 42 26.8**	**+0.7**
PRRZ	**Plateau Road**	**0.31 159**	P	**Pn**	**07 42 27.2**	**+1.0**
PRRZ			S	**Sn**	**07 42 43.5**	**-2.5**
KMRZ	**Kaimai**	**0.44 326**	P	**Pn**	**07 42 27.5**	**+0.9**
KMRZ			S	**Sn**	**07 42 44.7**	**+1.8**
KUTZ	**Kaahu Road**	**0.44 230**	P	**Pn**	**07 42 27.8**	**+1.3**
TGRZ	**Tauranga**	**0.48 1**	P	**Pn**	**07 42 27.5**	**+0.7**
TGRZ			S	**Sn**	**07 42 44.5**	**-2.2**
TLZ	**Tolley Road**	**0.57 258**	P	**Pn**	**07 42 28.4**	**+1.3**
MRHZ	**Matea Rd**	**0.64 168**	P	**Pn**	**07 42 28.7**	**+1.2**
MRHZ			S	**Sn**	**07 42 45.4**	**-2.8**
WATZ	**Wairara**	**0.64 219**	P	**Pn**	**07 42 28.9**	**+1.4**
WATZ			S	**Sn**	**07 42 46.9**	**-1.3**
URZ	**Urewera**	**0.68 95**	P	**Pn**	**07 42 28.4**	**+0.8**
URZ	**Urewera**	**0.68 95**	P	**Pn**	**07 42 28.3**	**+0.8**
URZ			S	**Sn**	**07 42 45.3**	**-2.9**
RTZ	**Ruatahuna**	**0.70 126**	P	**Pn**	**07 42 29.1**	**+1.3**
RTZ			S	**Sn**	**07 42 47.1**	**-1.6**
RATZ	**Rangitukua**	**0.76 210**	P	**Pn**	**07 42 29.5**	**+1.4**
TOZ	**Tahuroa Road**	**0.76 309**	P	**Pn**	**07 42 29.2**	**+1.1**
MTHZ	**Maungataniwha**	**0.79 144**	P	**Pn**	**07 42 29.9**	**+1.6**
MTHZ			S	**Sn**	**07 42 47.8**	**-1.9**
RITZ	**Rihia Road**	**0.83 202**	P	**Pn**	**07 42 30.3**	**+1.9**
KATZ	**Kakaramea**	**0.88 209**	P	**Pn**	**07 42 30.4**	**+1.5**
RAGZ	**Rawiri**	**0.96 108**	P	**Pn**	**07 42 31.1**	**+1.8**
RAGZ			S	**Sn**	**07 42 50.4**	**-1.1**
RAHZ	**Arahi**	**0.96 137**	P	**Pn**	**07 42 31.5**	**+2.2**
RAHZ			S	**Sn**	**07 42 50.6**	**-0.9**
BKZ	**Black Stump Fm**	**0.97 169**	P	**Pn**	**07 42 31.5**	**+2.1**
BKZ	**Black Stump Fm**	**0.97 169**	S	**Sn**	**07 42 50.2**	**-1.6**
BKZ	**Black Stump Fm**	**0.97 169**	P	**Pn**	**07 42 31.0**	**+1.5**
BKZ			S	**Sn**	**07 42 49.7**	**-2.1**
NMHZ	**Naumai**	**0.99 154**	P	**Pn**	**07 42 32.1**	**+2.5**
NMHZ			S	**Sn**	**07 42 51.7**	**-0.3**
NTVZ	**North Tongarir**	**1.00 207**	P	**Pn**	**07 42 31.3**	**+1.6**
TMVZ	**Te Maari**	**1.00 205**	P	**Pn**	**07 42 31.2**	**+1.5**
TMVZ			S	**Sn**	**07 42 50.9**	**-1.3**
KRVZ	**Karewarewa**	**1.00 208**	P	**Pn**	**07 42 31.3**	**+1.6**
MWZ	**Matawai**	**1.01 98**	P	**Pn**	**07 42 31.1**	**+1.4**
MWZ			S	**Sn**	**07 42 50.0**	**-2.0**
ETVZ	**East Tongariro**	**1.02 204**	P	**Pn**	**07 42 31.4**	**+1.6**
ETVZ			S	**Sn**	**07 42 51.4**	**-1.1**
WTVZ	**West Tongariro**	**1.04 210**	P	**Pn**	**07 42 31.6**	**+1.6**
OTVZ	**Oturere**	**1.06 205**	P	**Pn**	**07 42 32.0**	**+1.9**
OTVZ			S	**Sn**	**07 42 51.9**	**-1.2**
TWVZ	**Taurewa**	**1.07 216**	P	**Pn**	**07 42 31.8**	**+1.6**
SNVZ	**South Ngauruho**	**1.09 206**	P	**Pn**	**07 42 32.1**	**+1.7**
SNVZ			S	**Sn**	**07 42 52.8**	**-0.7**
NGZ	**Ngauruhoe**	**1.09 208**	P	**Pn**	**07 42 32.4**	**+2.0**
COVZ	**Chateau Observ**	**1.13 209**	P	**Pn**	**07 42 32.3**	**+1.6**
HIZ	**Hauiti**	**1.14 254**	P	**Pn**	**07 42 32.3**	**+1.8**
HIZ			S	**Sn**	**07 42 53.4**	**-0.2**
RUGZ	**Raukumara Rang**	**1.15 78**	P	**Pn**	**07 42 31.3**	**+0.4**
RUGZ			S	**Sn**	**07 42 50.8**	**-3.2**
TUVZ	**Tukino**	**1.16 204**	P	**Pn**	**07 42 32.0**	**+1.1**
WHHZ	**Waihua**	**1.16 139**	P	**Pn**	**07 42 33.4**	**+2.7**
WHHZ			S	**Sn**	**07 42 53.3**	**-0.7**
FWVZ	**Far West T-bar**	**1.18 207**	P	**Pn**	**07 42 33.0**	**+1.8**
WHVZ	**Whangaehu Hut**	**1.19 206**	P	**Pn**	**07 42 32.8**	**+1.6**
ARHZ	**Aropaoanui**	**1.20 151**	P	**Pn**	**07 42 33.6**	**+2.5**
ARHZ			S	**Sn**	**07 42 54.2**	**-0.4**
TRVZ	**Turoa**	**1.22 207**	P	**Pn**	**07 42 33.4**	**+2.0**
KWHZ	**Kaweka Forest**	**1.22 174**	P	**Pn**	**07 42 33.3**	**+2.0**
KWHZ			S	**Sn**	**07 42 54.3**	**-0.8**
WNVZ	**Wahianoa**	**1.23 204**	P	**Pn**	**07 42 33.2**	**+1.8**
MOVZ	**Moawhango**	**1.26 198**	P	**Pn**	**07 42 33.1**	**+1.5**
TKGZ	**Te Karaka**	**1.28 101**	P	**Pn**	**07 42 33.7**	**+2.1**
TKGZ			S	**Sn**	**07 42 54.6**	**-1.0**
MCHZ	**McNeill Hill**	**1.28 164**	P	**Pn**	**07 42 34.4**	**+2.6**
MCHZ			S	**Sn**	**07 42 55.8**	**-0.1**
RIGZ	**Rimuhau**	**1.29 113**	P	**Pn**	**07 42 34.0**	**+2.2**
PKVZ	**Pokaka**	**1.29 213**	P	**Pn**	**07 42 33.6**	**+1.8**
PKVZ			S	**Sn**	**07 42 55.3**	**-0.7**
HAZ	**Te Kaha**	**1.29 70**	P	**Pn**	**07 42 32.5**	**+0.7**
MTVZ	**Mangateitei**	**1.32 207**	P	**Pn**	**07 42 34.1**	**+1.9**
TWGZ	**Tauwhareparae**	**1.36 89**	P	**Pn**	**07 42 34.6**	**+2.1**
TWGZ			S	**Sn**	**07 42 56.6**	**-0.4**
KNZ	**Kokohu**	**1.38 127**	P	**Pn**	**07 42 34.7**	**+2.2**
MKAZ	**Moumakai**	**1.40 322**	P	**Pn**	**07 42 34.3**	**+1.6**
KRHZ	**Kereru**	**1.44 176**	P	**Pn**	**07 42 35.1**	**+2.0**
KRHZ			S	**Sn**	**07 42 57.0**	**-1.3**
PRGZ	**Paritu Road**	**1.47 120**	P	**Pn**	**07 42 35.7**	**+2.4**
VRZ	**Vera Road**	**1.48 231**	P	**Pn**	**07 42 35.8**	**+2.3**
PKGZ	**Pakihiroa**	**1.48 77**	P	**Pn**	**07 42 35.2**	**+1.7**
KBAZ	**Karaka Road Bo**	**1.55 315**	P	**Pn**	**07 42 35.8**	**+1.6**
CNGZ	**Carnagh Statio**	**1.56 101**	P	**Pn**	**07 42 37.0**	**+2.8**
CKHZ	**Cape Kidnapper**	**1.58 156**	P	**Pn**	**07 42 37.1**	**+2.7**
PUZ	**Puketiti**	**1.59 86**	P	**Pn**	**07 42 36.0**	**+1.5**
PUZ			S	**Sn**	**07 42 58.6**	**-1.9**
MHGZ	**Mahia Peninsul**	**1.60 127**	P	**Pn**	**07 42 37.3**	**+2.7**
ETAZ	**East Tamaki Re**	**1.64 320**	P	**Pn**	**07 42 36.6**	**+1.7**
KAHZ	**Kahuranaki**	**1.66 163**	P	**Pn**	**07 42 37.8**	**+2.6**
WIAZ	**Waiheke Island**	**1.67 328**	P	**Pn**	**07 42 37.0**	**+1.7**
PNHZ	**Pukenui**	**1.70 181**	P	**Pn**	**07 42 37.5**	**+1.9**
AWAZ	**Awhitu Peninsu**	**1.71 311**	P	**Pn**	**07 42 37.3**	**+1.7**
MXZ	**Matakaoa Point**	**1.75 69**	P	**Pn**	**07 42 38.6**	**+2.6**
MXZ	**Matakaoa Point**	**1.75 69**	P	**Sn**	**07 43 04.0**	**+0.7**
MXZ	**Matakaoa Point**	**1.75 69**	P	**Pn**	**07 42 37.9**	**+1.9**
WMGZ	**Waiomatatini S**	**1.75 78**	P	**Pn**	**07 42 38.0**	**+1.9**
MBAZ	**Motutapu North**	**1.79 323**	P	**Pn**	**07 42 38.3**	**+1.8**
WAZ	**Wanganui**	**1.83 212**	P	**Pn**	**07 42 39.0**	**+2.1**
WTAZ	**Waiatarua**	**1.84 313**	P	**Pn**	**07 42 38.9**	**+1.9**
WPHZ	**Waipukurau**	**1.86 175**	P	**Pn**	**07 42 39.2**	**+2.1**
TSZ	**Takapari Road**	**1.86 187**	P	**Pn**	**07 42 39.1**	**+1.9**
DREZ	**Durham Road**	**1.88 238**	P	**Pn**	**07 42 40.2**	**+2.9**
PXZ	**Pawanui**	**1.88 166**	P	**Pn**	**07 42 39.7**	**+2.4**
LREZ	**Lake Rotokare**	**1.91 229**	P	**Pn**	**07 42 40.5**	**+2.9**
PREZ	**Palmer Road**	**1.99 235**	P	**Pn**	**07 42 41.5**	**+3.0**
KHEZ	**Kahui Hut**	**2.06 237**	P	**Pn**	**07 42 42.1**	**+2.8**
KHEZ	**Kahui Hut**	**2.06 237**	S	**Sn**	**07 43 10.9**	**+1.7**
KHEZ	**Kahui Hut**	**2.06 237**	P	**Pn**	**07 42 42.0**	**+2.8**
PRHZ	**Porangahau**	**2.08 172**	P	**Pn**	**07 42 41.6**	**+2.2**
DVHZ	**Dannevirke**	**2.09 182**	P	**Pn**	**07 42 41.3**	**+1.8**
OHWZ	**Ohakea**	**2.12 200**	P	**Pn**	**07 42 42.2**	**+2.3**
NBEZ	**Newall Road No**	**2.14 240**	P	**Pn**	**07 42 42.9**	**+2.9**
POWZ	**Post Office Ro**	**2.21 190**	P	**Pn**	**07 42 42.6**	**+1.8**
ANWZ	**Angora Road**	**2.25 176**	P	**Pn**	**07 42 43.6**	**+2.3**
PRWZ	**Pori Road**	**2.35 185**	P	**Pn**	**07 42 44.4**	**+2.0**
BFZ	**Birch Farm**	**2.47 180**	P	**Pn**	**07 42 45.5**	**+1.8**
BFZ	**Birch Farm**	**2.47 180**	S	**Sn**	**07 43 16.2**	**-1.1**
BFZ	**Birch Farm**	**2.47 180**	P	**Pn**	**07 42 45.5**	**+1.8**
MRZ	**Mangatainoka R**	**2.50 192**	P	**Pn**	**07 42 45.6**	**+1.5**
TIWZ	**Tintock**	**2.58 186**	P	**Pn**	**07 42 46.7**	**+1.7**
CPWZ	**Castlepoint**	**2.70 181**	P	**Pn**	**07 42 48.6**	**+2.3**
WCZ	**Waipu Caves**	**2.73 325**	P	**Pn**	**07 42 49.1**	**+2.3**
OGWZ	**Otaki Gorge**	**2.74 197**	P	**Pn**	**07 42 48.3**	**+1.6**
HOWZ	**Holdsworth Sta**	**2.75 192**	P	**Pn**	**07 42 48.1**	**+1.2**
KIW	**Kapiti Island**	**2.84 201**	P	**Pn**	**07 42 49.1**	**+1.0**
TMWZ	**Te Maipa**	**2.91 185**	P	**Pn**	**07 42 50.2**	**+1.3**
MTW	**Mount Morrison**	**3.00 191**	P	**Pn**	**07 42 50.9**	**+1.0**
CAW	**Cannon Point**	**3.04 197**	P	**Pn**	**07 42 51.5**	**+1.1**
DUWZ	**D'Urville Isla**	**3.15 214**	P	**Pn**	**07 42 52.6**	**+0.9**
TRWZ	**Traveller**	**3.21 188**	P	**Pn**	**07 42 53.6**	**+1.1**
PAWZ	**Paruwai Farm**	**3.23 191**	P	**Pn**	**07 42 53.6**	**+0.9**
WEL	**Wellington**	**3.28 200**	P	**Pn**	**07 42 54.2**	**+1.0**
MSWZ	**Moikau Station**	**3.29 193**	P	**Pn**	**07 42 54.3**	**+0.8**
SNZO	**South Karori**	**3.32 201**	P	**Pn**	**07 42 54.5**	**+0.8**
SNZO	**South Karori**	**3.32 201**	S	**Sn**	**07 43 33.4**	**-1.8**
TCW	**Tory Channel**	**3.36 206**	P	**Pn**	**07 42 54.9**	**+0.7**
BHW	**Baring Head**	**3.37 198**	P	**Pn**	**07 42 55.2**	**+0.8**
PLWZ	**Palliser**	**3.44 193**	P	**Pn**	**07 42 56.0**	**+0.7**
OUZ	**Omahuta**	**3.67 324**	P	**Pn**	**07 43 01.1**	**+3.0**
OUZ	**Omahuta**	**3.67 324**	P	**Pn**	**07 43 01.0**	**+3.0**
TUWZ	**Tuamarina**	**3.67 208**	P	**Pn**	**07 42 59.3**	**+1.3**
NNZ	**Nelson**	**3.73 215**	P	**Pn**	**07 42 59.3**	**+0.6**
TKNZ	**Takaka Hill**	**3.80 221**	P	**Pn**	**07 42 60.0**	**+0.3**
CMWZ	**Cape Campbell**	**3.87 203**	P	**Pn**	**07 43 02.1**	**+1.6**
QRZ	**Quartz Range**	**3.89 227**	P	**Pn**	**07 43 01.1**	**+0.3**
QRZ	**Quartz Range**	**3.89 227**	P	**Pn**	**07 43 00.8**	**+0.1**
MRNZ	**Matariki Terra**	**4.17 219**	P	**Pn**	**07 43 04.4**	**0.0**
THZ	**Tophouse**	**4.38 215**	P	**Pn**	**07 43 07.5**	**+0.4**
KHZ	**Kahutara**	**4.69 205**	P	**Pn**	**07 43 11.5**	**+0.7**
KHZ	**Kahutara**	**4.69 205**	S	**Sn**	**07 44 04.9**	**-1.1**
KHZ	**Kahutara**	**4.69 205**	P	**Pn**	**07 43 11.5**	**+0.7**
DSZ	**Denniston Nort**	**4.91 223**	P	**Pn**	**07 43 13.3**	**-0.5**
GVZ	**Greta Valley S**	**5.35 206**	P	**Pn**	**07 43 19.9**	**+0.5**
LTZ	**Lake Taylor**	**5.48 212**	P	**Pn**	**07 43 20.7**	**-0.5**
AMCZ	**Amberley**	**5.67 208**	P	**Pn**	**07 43 23.6**	**+0.1**
INZ	**Inchbonnie**	**5.81 218**	P	**Pn**	**07 43 24.5**	**-0.9**
OKCZ	**Okains Bay**	**6.01 203**	P	**Pn**	**07 43 28.3**	**+0.3**
OXZ	**Oxford**	**6.03 211**	P	**Pn**	**07 43 27.8**	**-0.5**
MQZ	**McQueen's Vall**	**6.13 205**	P	**Pn**	**07 43 28.7**	**-0.8**
AKCZ	**Akaroa Harbour**	**6.20 203**	P	**Pn**	**07 43 29.0**	**-0.1**
RACZ	**Rakaia**	**6.33 208**	P	**Pn**	**07 43 31.7**	**-0.4**
MHCZ	**Mount Hutt**	**6.39 212**	P	**Pn**	**07 43 32.2**	**-0.8**
WACZ	**Wakanui South**	**6.63 209**	P	**Pn**	**07 43 35.7**	**-0.3**
RPZ	**Rata Peaks**	**6.76 214**	P	**Pn**	**07 43 38.9**	**+1.1**
RPZ	**Rata Peaks**	**6.76 214**	P	**Pn**	**07 43 37.8**	**0.0**
ARCZ	**Arundel**	**6.89 212**	P	**Pn**	**07 43 39.0**	**-0.5**
FOZ	**Fox Glacier**	**7.21 220**	P	**Pn**	**07 43 43.1**	**-0.6**
TMZ	**Timaru**	**7.32 211**	P	**Pn**	**07 43 44.3**	**-0.9**
ODZ	**Otahua Downs**	**8.02 210**	P	**Pn**	**07 43 54.4**	**+0.3**
ODZ	**Otahua Downs**	**8.02 210**	P	**Pn**	**07 43 54.2**	**+0.1**
JCZ	**Jackson Bay**	**8.12 221**	P	**Pn**	**07 43 56.9**	**+1.2**
JCZ	**Jackson Bay**	**8.12 221**	P	**Pn**	**07 43 55.9**	**+0.2**
WKZ	**Wanaka**	**8.55 217**	P	**Pn**	**07 44 01.9**	**+0.7**

*IDC **14** 07:55:39.8±0.7, 27°.93N×127°.93E, h0km, mb3.9/11, mbtmp3.9/16, ML3.3/5, MS3.6/52, Error ellipse: s-maj=24.0km s-min=11.6km az=81.0*
*NIED **14** 07:55:39.7, 28°.10N×128°.00E, h14km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=2.63; Mθθ4.37; Mϕϕ-1.74; Mrθ-0.80; Mθϕ1.15; Mϕr0.77; Fault plane solution: M₀3.97000×10¹⁵ NP1: ϕs229.00000°, δ50.00000°, λ-137.00000°. NP2: ϕs108.00000°, δ59.00000°, λ-50.00000°.*
*JMA **14** 07:55:39.7±0.2, 28°.1N±0°.4×128°.0E±0°.5, h14km±2km, MV3.8/16, NW OFF OKINAWAJIMA IS*
*NEIC **14** 07:55:42.7±2.2, 27°.90N±0°.02×128°.01E±0°.09, h10km±1km, mb4.4/22, Error ellipse: s-maj=13.2km s-min=3.9km az=256.0*

ISC 14 07:55:41.3±1.3, 27°.96N±0°.04×128°.09E±0°.04, h5km±9km, n120, σ1§33/86, mb4.3/24, MS3.7/49, 2C-1D, Ryukyu Islands

Code	Station Name	Δ° AZ°	Phase	ID	Time	Res
			Op	ISC	h m s	ISC
JOKE	**Okinoerabujima**	**0.73 145**	P	**Pb**	**07 55 56.5**	**-0.1**
JOKE			*e*S	**Sn**	**07 56 08.3**	**-1.6**
JTK	**Tokunoshima**	**0.78 103**	P	**Pg**	**07 55 56.5**	**+0.2**
JTK			*e*S	**Sb**	**07 56 08.5**	**+0.3**
JIH	**Iheya**	**0.93 187**	*i* P	**Pg**	**07 55 59.2**	**+0.1**
JIH			*e*S	**Sn**	**07 56 13.2**	**-1.6**
JYRO	**Yoronjima**	**0.98 161**	*i* P	**Pb**	**07 56 00.7**	**-0.1**
JYRO			S	**Sn**	**07 56 15.6**	**-0.5**
JAMN	**Amaminishikomi**	**1.00 73**	*i* P	**Pg**	**07 55 59.2**	**-1.2**
JAMN			*e*S	**Sg**	**07 56 13.2**	**-0.2**
JOW	**Kunigami**	**1.14 172**	Pn	**Pb**	**07 56 02.9**	**-0.6**
	272nm,0.3s,baz=60,slow=10,SNR=173					
JOW			Sn	**Sn**	**07 56 20.0**	**+0.1**
	109nm,0.3s,baz=317,slow=15,SNR=3.6					
JOW	**Kunigami**	**1.14 172**	Pn	**Pb**	**07 56 02.9**	**-0.6**
JOW			Sn	**Sn**	**07 56 18.5**	**-1.4**
JOW	**Kunigami**	**1.14 172**	*i* P	**Pb**	**07 56 02.9**	**-0.6**
JOW			*e*S	**Sn**	**07 56 19.5**	**-0.3**
JAM	**Amami Oshima**	**1.41 71**	P	**Pn**	**07 56 05.7**	**-2.0**
JAM			*e*S	**Sn**	**07 56 24.8**	**-1.7**
JNTH	**Nagotoyohara**	**1.44 183**	P	**Pn**	**07 56 07.3**	**-0.8**
JNTH			*e*S	**Sg**	**07 56 27.2**	**-0.3**
JTAJ	**Takarajima**	**1.54 39**	*e*P	**Pn**	**07 56 06.2**	**-3.2**
JAGN	**Aguni-jima**	**1.56 209**	*e*P	**Pn**	**07 56 08.8**	**-0.9**
JZK	**Kikaishima**	**1.70 78**	*e*P	**Pn**	**07 56 11.1**	**-0.5**
JJT3	**Tamagusuku3**	**1.83 189**	*e*P	**Pb**	**07 56 14.2**	**-1.1**
JKE	**Kume jima 2**	**2.00 216**	*e*P	**Pn**	**07 56 15.8**	**0.0**
JMZ	**Minamidaito 2**	**3.52 127**	Pn	**Pn**	**07 56 37.5**	**+0.9**
JSU	**Suzuyama**	**4.09 30**		**Pn**	**07 56 46.5**	**+2.0**
JNU	**Nakatsue**	**5.68 24**	Pn	**Pn**	**07 57 08.2**	**+1.8**
	2.2nm,0.3s,baz=203,slow=7.5,SNR=14					
JNU			LR	LR	07 59 21.7	
	comp=Z,501nm,20.2s,baz=212,slow=38					
	58nm,0.9s					
NACB	**Ninganchiao**	**6.95 239**	Pn	**Pn**	**07 57 22.8**	**-1.1**
JMN	**Monobe**	**7.60 39**	Pn	**Pn**	**07 57 33.1**	**+0.3**
SSLB	**Suanglung**	**7.65 239**	Pn	**Pn**	**07 57 34.0**	**+0.5**
KSRS	**Korea Array**	**9.47 359**	Pn	**Pn**	**07 57 57.4**	**-1.0**
	baz=184,slow=16,SNR=1.8					
KSRS			LR	LR	08 01 35.8	
	comp=Z,532nm,19.1s,baz=190,slow=38					
	0.3nm,0.3s					
JHJ	**Hachijo jima 2**	**11.31 60**	LR	LR	08 02 48.2	
	comp=Z,164nm,20.9s,baz=16,slow=37					
MJAR	**Matsushiro Arr**	**12.10 42**	Pn	**Pn**	**07 58 36.3**	**+1.9**
	baz=248,slow=13,SNR=4.2					
MJAR			LR	LR	08 03 00.9	
	comp=Z,199nm,20.9s,baz=225,slow=36					
	0.7nm,0.5s					
HNS	**HongShan**	**14.67 313**	⇓P	**P**	**07 59 13.3**	**-2.6**
HNS			pmax	pmax		
	comp=Z,9.0nm,1.1s					
HNS			LR	LR		
	comp=N,840nm,14.8s					
HNS			LR	LR		
	comp=E,1μm,15.3s					
HNS			LR	LR		
	comp=Z,500nm,12.2s					
TGY	**Tagaytay City**	**15.31 207**	LR	LR	08 05 28.8	
	comp=Z,223nm,18.9s,baz=286,slow=39					
ENH	**Enshi**	**16.42 283**	Pn	**Pn**	**07 59 31.1**	**-1.5**
USRK	**Ussuriysk Ar.**	**16.50 10**	Pn	**Pn**	**07 59 33.8**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=197,slow=9.0,SNR=5.4					
	comp=Z,2.4nm,0.7s					
MDJ	**Mudanjiang**	**16.66 4**	Pn	**Pn**	**07 59 36.8**	**+1.2**
XAN	**Xi'an**	**17.51 295**	⇑P	**P**	**07 59 48.1**	**+0.6**
XAN			pP	sP	07 59 51.8	+2.5
XAN			pmax	pmax		
	comp=Z,6.0nm,1.2s					
XAN			LR	LR		
	comp=N,1μm,15.1s					
XAN			LR	LR		
	comp=E,550nm,16.9s					
XAN			LR	LR		
	comp=Z,380nm,13.1s					
BNX	**BinXian**	**17.75 358**	⇑P	**P**	**07 59 51.0**	**+1.0**
BNX			pmax	pmax		
	comp=Z,7.0nm,1.0s					
XLT	**XiLinHaoTe**	**18.61 332**	*e*P	**Pn**	**08 00 02.4**	**+2.6**
XLT			PcS	**PcS**	**08 08 07.5**	**+2.2**
XLT			pmax	pmax		
	comp=Z,14nm,1.5s					
XLT			pmax	pmax		
	comp=Z,97nm,4.7s					
XLT			LR	LR		
	comp=N,38nm,16.0s					
XLT			LR	LR		
	comp=E,300nm,11.6s					
XLT			LR	LR		
	comp=Z,420nm,13.4s					
HHC	**Hu-ho-hao-te**	**18.70 318**	*e*P	**Pn**	**08 00 03.9**	**+2.9**
HHC			pmax	pmax		
	comp=Z,8.0nm,0.6s					
HHC			pmax	pmax		
	comp=Z,110nm,3.5s					
HHC			LR	LR		
	comp=N,460nm,11.0s					
HHC			LR	LR		
	comp=E,500nm,10.0s					
HHC			LR	LR		
	comp=Z,310nm,11.6s					
QIZ	**Qiongzhong**	**18.93 246**	P	**P**	**08 00 03

KURK				IAmb	IAmb	08 03 47.0		
	comp=Z,3.3nm,0.6s							
KURBB	**Kurchatov Arra**	**43.53**	**315**	P	**P**	**08 03 44.7**	**-1.1**	
	comp=Z,2.0nm,0.7s,baz=100,slow=8.9,SNR=3.7							
	comp=Z,2.0nm,0.7s							
TIXI	**Tiksi**	**43.73**	**0**	LR	LR	08 22 18.3		
	comp=Z,159nm,20.2s,baz=190,slow=36							
NRN	**Naryn**	**44.26**	**302**	P	**P**	**08 03 51.9**	**-0.4**	
NRN				IAmb	IAmb	08 03 57.5		
	comp=Z,3.3nm,0.9s							
WB0	**Warramunga Arr**	**47.84**	**172**	P	**P**	**08 04 20.9**	**+0.7**	
WB0				IAmb	IAmb	08 04 23.1		
	comp=Z,4.2nm,0.9s							
WRA	**Warramunga Arr**	**48.00**	**172**	P	**P**	**08 04 20.1**	**-1.4**	
	comp=Z,2.8nm,0.7s,baz=350,slow=7.6,SNR=29							
	comp=Z,2.8nm,0.7s							
WRA	**Warramunga Arr**	**48.00**	**172**	P	**P**	**08 04 20.1**	**-1.4**	
KK31	**Karatay Array**	**48.33**	**304**	P	**P**	**08 04 24.3**	**+0.4**	
KK31				IAmb	IAmb	08 04 27.5		
	comp=Z,9.4nm,1.4s							
KKAR	**Karatay Array**	**48.33**	**304**		**P**	**08 04 24.9**	**+1.0**	
GAR	**Garm**	**48.71**	**299**		**P**	**08 04 27.8**	**+0.8**	
BVAR	**Borovoye Array**	**48.91**	**317**	P	**P**	**08 04 26.2**	**-2.0**	
	comp=Z,3.1nm,0.9s,baz=106,slow=11,SNR=5.4							
BVAR				LR	LR	08 26 33.8		
	comp=Z,227nm,18.5s,baz=101,slow=38							
	comp=Z,3.1nm,0.9s							
BORK	**Borovoye**	**48.96**	**317**	P	**P**	**08 04 28.6**	**+0.1**	
PALK	**Pallekele**	**49.25**	**255**	LR	LR	08 26 48.7		
	comp=Z,55nm,19.4s,baz=84,slow=38							
KBL	**Kabul**	**50.30**	**293**	P	**P**	**08 04 37.8**	**-1.5**	
SHAA	**Shahritus**	**50.59**	**297**		**P**	**08 04 40.6**	**-0.6**	
SHAA				IAmb	IAmb	08 04 46.3		
	comp=Z,38nm,1.4s							
CTA	**Charters Tower**	**50.90**	**158**	LR	LR	08 26 06.5		
	comp=Z,34nm,19.8s,baz=31,slow=36							
AS31	**Alice Springs**	**51.63**	**173**	P	**P**	**08 04 49.2**	**+0.2**	
ASAR	**Alice Springs**	**51.63**	**173**	P	**P**	**08 04 48.8**	**-0.2**	
	comp=Z,0.8nm,0.5s,baz=4.4,slow=12,SNR=22							
ASAR				LR	LR	08 25 02.5		
	comp=Z,38nm,21.9s,baz=294,slow=34							
	comp=Z,0.8nm,0.5s							
ASAR	**Alice Springs**	**51.63**	**173**	P	**P**	**08 04 50.2**	**+1.2**	
K13K	**Kusilvak Mount**	**55.06**	**32**	P	**P**	**08 05 14.9**	**+1.1**	
K13K				IAmb	IAmb	08 05 37.3		
	comp=Z,2.8nm,1.0s							
AB31	**Akbulak array**	**55.38**	**312**	P	**P**	**08 05 16.4**	**+0.1**	
AB31				IAmb	IAmb	08 05 19.6		
	comp=Z,8.6nm,1.4s							
ABKAR	**Akbulak array**	**55.38**	**312**	P	**P**	**08 05 15.7**	**-0.6**	
J14K	**Nanvaranak Lak**	**55.65**	**31**	P	**P**	**08 05 19.8**	**+1.8**	
ARTI	**Arti**	**56.07**	**321**	LR	LR	08 31 44.3		
	comp=Z,78nm,18.1s,baz=200,slow=39							
KIRV	**Kirov**	**60.77**	**324**	LR	LR	08 34 23.1		
	comp=Z,138nm,18.7s,baz=94,slow=38							
STKA	**Stephens Creek**	**60.88**	**167**	P	**P**	**08 05 53.9**	**-1.1**	
	comp=Z,2.4nm,0.7s,baz=339,slow=6.7,SNR=5.2							
STKA				LR	LR	08 33 06.6		
	comp=Z,16nm,19.5s,baz=26,slow=37							
	comp=Z,2.4nm,0.7s							
DZM	**Mont Dzumac**	**62.02**	**139**	*e*LR	LR	08 24 22.6		
	comp=Z,100nm,23.1s							
DZM	**Mont Dzumac**	**62.02**	**139**	LR	LR	08 31 56.9		
	comp=Z,53nm,18.6s,baz=347,slow=35							
ILAR	**Eielson Array**	**62.98**	**29**	P	**P**	**08 06 08.6**	**-0.2**	
	comp=Z,0.4nm,0.8s,baz=242,slow=4.6,SNR=5.3							
	comp=Z,0.4nm,0.8s							
SPITS	**Spitsbergen Ar**	**67.11**	**348**	LR	LR	08 38 16.7		
	comp=Z,42nm,18.4s,baz=29,slow=38							
GNI	**Garni**	**67.79**	**305**	LR	LR	08 38 05.4		
	comp=Z,52nm,18.4s,baz=62,slow=38							
KBZ	**Khabaz**	**67.98**	**309**	LR	LR	08 38 43.7		
	comp=Z,46nm,18.1s,baz=321,slow=38							
ARCES	**ARCESS Array B**	**68.36**	**338**	LR	LR	08 42 39.0		
	comp=Z,84nm,21.9s,baz=80,slow=41							
FINES	**FINESS Array B**	**71.30**	**330**	LR	LR	08 41 58.6		
	comp=Z,129nm,18.9s,baz=38,slow=39							
DLBC	**Dease Lake**	**72.49**	**33**	LR	LR	08 40 09.1		
	comp=Z,24nm,20.4s,baz=62,slow=37							
RES	**Resolute Bay**	**73.88**	**11**	LR	LR	08 43 40.0		
	comp=Z,33nm,18.6s,baz=10,slow=39							
AKASG	**Malin Array Be**	**74.14**	**319**	LR	LR	08 42 16.4		
	comp=Z,112nm,19.7s,baz=22,slow=38							
BRTR	**Keskin Array B**	**75.88**	**308**	LR	LR	08 43 02.7		
	comp=Z,21nm,21.3s,baz=34,slow=38							
YKA	**Yellowknife Array**	**77.01**	**25**	P	**P**	**08 07 33.4**	**-1.5**	
	comp=Z,0.5nm,0.9s,baz=299,slow=6.5,SNR=8.4							
YKA				LR	LR	08 46 14.6		
	comp=Z,23nm,18.5s,baz=336,slow=39							
	comp=Z,0.5nm,0.9s							
HFS	**Hagfors**	**77.24**	**332**	LR	LR	08 45 25.6		
	comp=Z,80nm,19.1s,baz=62,slow=39							
MMAI	**Mount Meron Ar**	**77.41**	**301**	LR	LR	08 46 06.8		
	comp=Z,29nm,18.3s,baz=92,slow=39							
NOA	**NORSAR Array B**	**77.71**	**334**	LR	LR	08 44 53.2		
	comp=Z,60nm,18.2s,baz=10.0,slow=38							
MLR	**Muntele Rosu**	**78.43**	**315**	LR	LR	08 45 35.3		
	comp=Z,58nm,19.9s,baz=51,slow=38							
RPZ	**Rata Peaks**	**81.48**	**150**	LR	LR	08 43 11.6		
	comp=Z,53nm,18.8s,baz=93,slow=35							
VRAC	**Vranov**	**81.93**	**322**	LR	LR	08 46 42.4		
	comp=Z,64nm,18.3s,baz=60,slow=37							
GERES	**GERESS Array B**	**83.75**	**323**	LR	LR	08 49 12.7		
	comp=Z,80nm,18.1s,baz=74,slow=38							
BORG	**Borgarnes**	**84.57**	**347**	LR	LR	08 46 47.3		
	comp=Z,17nm,21.6s,baz=39,slow=36							
SFJD	**Kangerlussuaq**	**85.34**	**359**	LR	LR	08 47 44.2		
	comp=Z,37nm,19.0s,baz=356,slow=37							
DAVOX	**Davos/Dischmat**	**87.05**	**323**	LR	LR	08 51 46.2		
	comp=Z,74nm,19.1s,baz=70,slow=39							
EKA	**Eskdalemuir Ar**	**87.16**	**335**	LR	LR	08 51 00.2		
	comp=Z,81nm,18.6s,baz=13,slow=38							
FRB	**Frobisher Bay**	**87.68**		LR	LR	08 48 15.0		
	comp=Z,40nm,21.6s,baz=304,slow=36							
PPT	**Papeete**	**91.57**	**109**	LR	LR	08 42 24.0		
	comp=Z,19nm,20.9s,baz=342,slow=31							
PPT2	**Papeete2**	**91.58**	**109**	*e*LR	LR	08 38 08.1		
	comp=Z,44nm,23.5s							
PDAR	**Pinedale Array**	**91.89**	**38**	P	**P**	**08 08 51.5**	**+0.3**	
	comp=Z,0.5nm,0.9s,baz=321,slow=3.4,SNR=3.9							
	comp=Z,0.5nm,0.9s							
PFO	**Pinyon Flats O**	**93.45**	**49**	LR	LR	08 44 36.4		
	comp=Z,19nm,20.8s,baz=225,slow=31							
TBI	**Tubuai**	**94.41**	**114**	*e*LR	LR	08 39 24.5		
	comp=Z,310nm,34.8s							
TAOE	**Nuku Hiva Isla**	**95.63**	**97**	*e*LR	LR	08 39 45.9		
	comp=Z,43nm,31.1s							
ESDC	**Sonseca Array**	**99.25**	**325**	LR	LR	09 00 23.9		
	comp=Z,65nm,19.8s,baz=56,slow=39							

IDC 14 08:01:35.1±2.7, 32°.51N×84°.97E, h0km, mb3.3/3, mbtmp3.4/5, ML2.6/1, Error ellipse: s-maj=79.4km s-min=29.3km az=76.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**18.72**	**347**	P	P	08 05 53.8	-1.3
	baz=158,slow=10.0,SNR=2.8						
	0.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**18.80**	**135**	P	P	08 05 54.9	-1.4
	0.6nm,0.3s,baz=330,slow=14,SNR=5.3						
SONM	**Songino Array**	**22.31**	**40**	P	P	08 06 35.1	+0.8
	0.4nm,0.7s,baz=236,slow=12,SNR=2.2						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**70.35**	**131**	P	P	08 12 51.0	0.0
	0.3nm,0.6s,baz=318,slow=6.1,SNR=5.5						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**72.81**	**134**	P	P	08 13 06.4	+0.7
	0.3nm,0.7s,baz=321,slow=5.9,SNR=3.0						
	0.3nm,0.7s						

IDC 14 08:19:51.8±4.0, 34°.76N×139°.15E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=143.7km s-min=23.4km az=73.0
JMA 14 08:20:02.5±0.2, 36°.3N±0°.6×138°.3E±0°.8, h181km±1km, MV2.4/43, EASTERN NAGANO PREF
ISC 14 08:20:01.9±1.5, 36°.32N±0°.08×138°.28E±0°.09, h184km±9km, n14, σ0°.36/19, mb3.2/3, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNG	**Nsakai**	**0.17**	**300**	P	**Pn**	**08 20 26.6**	**+0.2**
JNG				*e*S	**Sn**	**08 20 44.8**	**-0.4**
MJAR	**Matsushiro Arr**	**0.23**	**346**	Pg	**Pn**	**08 20 26.4**	**0.0**
	1.4nm,0.3s,baz=163,slow=2.7,SNR=77						
MJAR				Lg	Lg	08 20 45.0	
	0.2nm,0.3s,baz=83,slow=30,SNR=10						
MAT	**Matsushiro**	**0.23**	**345**	P	**Pn**	**08 20 26.4**	**+0.1**
MAT				S	**Sn**	**08 20 44.6**	**-0.7**
JRY	**Ryogami san**	**0.59**	**121**	P	**Pn**	**08 20 28.2**	**+0.7**
JRY				S	**Sn**	**08 20 47.6**	**+0.3**
JYN	**Shimob**	**0.85**	**165**	P	**Pn**	**08 20 29.2**	**+0.1**
JYN				S	**Sn**	**08 20 50.0**	**0.0**
JAG	**Ashikaga**	**0.95**	**84**	P	**Pn**	**08 20 29.7**	**+0.1**
JNY	**Yasuok**	**1.02**	**199**	P	**Pn**	**08 20 30.5**	**+0.2**
JNY				*e*S	**Sn**	**08 20 52.2**	**+0.1**
JOD2	**Odawara 2**	**1.25**	**148**	P	**Pn**	**08 20 32.2**	**+0.2**
JSZ	**Suzu**	**1.34**	**327**	P	**Pn**	**08 20 33.0**	**+0.3**
JYTA	**Yamagatataniai**	**1.45**	**240**	P	**Pn**	**08 20 34.2**	**+0.5**
JYTA				S	**Sn**	**08 20 58.2**	**-0.1**
HMMJ	**Hamamatsu 2**	**1.53**	**197**	P	**Pn**	**08 20 34.5**	**-0.1**
HMMJ				S	**Sn**	**08 20 59.3**	**-0.4**
SONM	**Songino Array**	**26.13**	**306**	P	P	08 25 41.1	+22
	0.2nm,0.3s,baz=122,slow=11,SNR=1.7						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**42.36**	**302**	P	P	08 27 59.4	+22
	0.3nm,0.9s,baz=92,slow=7.5,SNR=2.4						
	0.3nm,0.9s						
WRA	**Warramunga Arr**	**56.08**	**184**	P	**P**	**08 29 21.9**	**-0.1**
	0.2nm,0.5s,baz=2.2,slow=7.6,SNR=4.7						
	0.2nm,0.5s						

UCR 14 08:22:42.2±0.6, 11°.40N×85°.84W, h175km±6km, MW3.5, Presumed earthquake
CATAC 14 08:22:44.2±0.5, 11°.N±4°.×8°.6W±°, h170km±3km, M2.7/15, MLv2.7/15, Error ellipse: s-maj=12.5km s-min=5.2km az=59.2, confirmed
ISC 14 08:22:43.9±2.4, 11°.33N±0°.07×85°.6W±0°.1, h179km±14km, n38, σ0°.96/46, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CARN	**Rivas**	**0.15**	**153**	P	**Pn**	**08 23 07.5**	**-0.1**
CARN				S	**Sn**	**08 23 27.1**	**+1.3**
CARN	**Rivas**	**0.15**	**153**	*e*P	**Pn**	**08 23 06.3**	**-1.4**
OMEN	**Al SSO del Vol**	**0.19**	**350**	P	**Pn**	**08 23 07.1**	**-0.6**
JAPN	**Al SSO del Vol**	**0.21**	**338**	P	**Pn**	**08 23 08.3**	**+0.6**
CONN	**Concepcion**	**0.24**	**353**	P	**Pn**	**08 23 07.7**	**-0.1**
LCRUZ	**La Cruz**	**0.25**	**188**	*e*P	**Pn**	**08 23 07.1**	**-0.8**
LCRUZ				*e*S	**Sn**	**08 23 26.3**	**+0.1**
PEJA	**Penjamo Buenos**	**0.51**	**147**	*e*P	**Pn**	**08 23 08.8**	**+0.2**
BUAI	**Buenos Aires**	**0.52**	**150**	*e*P	**Pn**	**08 23 08.8**	**+0.1**
LAPC	**Finca la Perla**	**0.58**	**164**	*e*P	**Pn**	**08 23 08.4**	**-0.6**
NADN	**Granada**	**0.60**	**314**	P	**Pn**	**08 23 08.3**	**-0.7**
NADN				S	**Sn**	**08 23 28.3**	**-0.1**
CLARA	**Aguas Claras**	**0.68**	**143**	*e*P	**Pn**	**08 23 09.6**	**+0.1**
ELI1	**Hacienda Flor**	**0.68**	**177**	P	**Pn**	**08 23 09.8**	**+0.4**
ELI1				S	**Sn**	**08 23 30.1**	**+1.0**
VMAR	**Armenia, Volca**	**0.69**	**137**	*e*P	**Pn**	**08 23 09.0**	**-0.6**
MESS	**Mesas**	**0.70**	**146**	*e*P	**Pn**	**08 23 09.7**	**+0.1**
ALIBA	**Liberia Airpor**	**0.73**	**176**	*e*P	**Pn**	**08 23 09.6**	**-0.2**
ACON	**Acoyapa**	**0.76**	**33**	P	**Pn**	**08 23 09.6**	**-0.3**
ACON				S	**Sn**	**08 23 28.4**	**-1.6**
COLC	**Colonia**	**0.76**	**150**	*e*P	**Pn**	**08 23 10.0**	**+0.1**
NANN	**Nandasmo**	**0.80**	**320**	P	**Pn**	**08 23 11.7**	**+1.6**
NANN				S	**Sn**	**08 23 32.5**	**+2.1**
MAS3	**Al N del Volca**	**0.90**	**321**	P	**Pn**	**08 23 10.8**	**0.0**
QUEB	**Quebradon, Cot**	**0.98**	**135**	*e*P	**Pn**	**08 23 12.0**	**+0.5**
UNAN	**Cigeo UNAN**	**1.02**	**320**	P	**Pn**	**08 23 11.7**	**0.0**
TISN	**Laguna Tiscapa**	**1.05**	**321**	P	**Pn**	**08 23 11.6**	**-0.3**
BOAB	**BOACO BROADBAN**	**1.12**	**356**	P	**Pn**	**08 23 11.6**	**-0.8**
JUD3	**Juan Diaz 3**	**1.15**	**177**	*e*P	**Pn**	**08 23 12.5**	**-0.4**
SAPS	**Ciudad Sandino**	**1.16**	**317**	P	**Pn**	**08 23 12.7**	**0.0**
NICO	**Nicoya**	**1.19**	**173**	*e*P	**Pn**	**08 23 12.9**	**-0.2**
JTS	**Las Juntas de**	**1.21**	**148**	P	**Pn**	**08 23 13.1**	**-0.1**
JTS				S	**Sn**	**08 23 34.5**	**-1.4**
JTS	**Las Juntas de**	**1.21**	**148**	*e*P	**Pn**	**08 23 11.3**	**-1.9**
JUNT	**Juntas**	**1.21**	**149**	*e*P	**Pn**	**08 23 12.6**	**-0.6**
ARE1	**Arenal 1**	**1.22**	**135**	*e*P	**Pn**	**08 23 14.1**	**+0.8**
FORC	**Fortuna**	**1.25**	**133**	*e*P	**Pn**	**08 23 14.3**	**+0.8**
COPN	**Copaltepe**	**1.29**	**311**	P	**Pn**	**08 23 13.1**	**-0.8**
CMARA	**Lajas Hojancha**	**1.31**	**173**	P	**Pn**	**08 23 13.7**	**-0.4**
CMARA				S	**Sn**	**08 23 36.1**	**-1.4**
CMARA	**Lajas Hojancha**	**1.31**	**173**	*e*P	**Pn**	**08 23 13.8**	**-0.3**
PIEC	**Cerro El Cedra**	**2.34**	**136**	*e*P	**Pn**	**08 23 23.5**	**-1.5**
QUEP	**Quepos**	**2.35**	**143**	S	**Sn**	**08 23 58.8**	**+2.1**
SAJE	**San Jernim**	**2.84**	**134**	*e*P	**Pn**	**08 23 32.6**	**+1.8**
DRK0	**Durika**	**3.09**	**131**	P	**Pn**	**08 23 32.9**	**-0.9**

SOME 14 09:27:35.2, 40°.60N×79°.57E, h10km
KRNET 14 09:27:36.3±0.1, 40°.65N×79°.16E, mb2.3
NNC 14 09:27:36.9±2.7, 40°.62N×79°.61E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=63.6km s-min=18.2km az=75.0
ISC 14 09:27:36.9±3.3, 40°.6N±0°.1×79°.3E±0°.2, h10km, n9, σ1°.41/15, 4C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.56**	**315**	⇓*i*P	**Pn**	**09 28 03.9**	**-1.3**
TARG				⇓*i*S	**Sn**	**09 28 24.0**	**-1.7**
KDJ	**Kajisay**	**2.18**	**314**	⇑*i*P	**Pn**	**09 28 13.6**	**+0.2**
KDJ				⇑*i*S	**Sn**	**09 28 41.0**	**+0.5**
SATY	**Saty**	**2.51**	**345**	Pg	**Pg**	**09 28 24.2**	**-0.8**
	2.0nm,0.3s						
SATY				Lg	Lg	09 28 59.3	
	4.4nm,0.3s						
UZB	**Uzynbulak**	**2.52**	**356**	Pg	**Pg**	**09 28 23.4**	**-1.8**
	3.7nm,0.1s						
UZB				Lg	Lg	09 28 58.3	
	3.1nm,0.3s						
UZB	**Uzynbulak**	**2.52**	**356**	*e*P	**Pg**	**09 28 23.4**	**-1.8**
	3.7nm,0.1s						
UZB				*e*S	**Sg**	**09 28 58.3**	**+0.5**
	3.1nm,0.3s						
KPKS	**Kokpek**	**2.86**	**351**	Pg	**Pg**	**09 28 30.5**	**-1.3**
	0.3nm,0.2s						
KPKS				Lg	Lg	09 29 10.0	
	2.9nm,0.2s						
KPKS	**Kokpek**	**2.86**	**351**	*e*P	**Pg**	**09 28 30.5**	**-1.3**
	0.3nm,0.2s						
KPKS				*e*S	**Sg**	**09 29 10.0**	**+1.1**
	2.9nm,0.2s						
BOOM	**Boomskoye usch**	**3.12**	**308**	⇑*i*P	**Pn**	**09 28 26.7**	**+0.3**
BOOM				⇑*i*S	**Sn**	**09 29 03.6**	**-0.2**
ARXS	**Arharly**	**3.73**	**344**	*e*P	**Pb**	**09 28 45.6**	**+2.6**
	0.9nm,0.6s						
ARXS				*e*S	**Sg**	**09 29 36.4**	**-0.5**
	3.8nm,0.5s						

DJA 14 09:28:10.5±0.6, 3°.S±3°.×12°.8E±°, h11km±6km, M4.1/17, mB5.8/3, mb5.0/6, MLv3.6/17, Mw(mB)5.3/3, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRAI	**Karang Ratu**	**0.79**	**133**	P	Pg	09 28 25.5	-0.3
NLAI	**Namlea**	**0.84**	**237**	P	Pg	09 28 26.6	-0.2
NLAI				S	Sn	09 28 40.5	-0.2
AAI	**Ambon**	**0.98**	**157**	P	Pg	09 28 28.4	-1.0
MSAI	**Masohi**	**1.25**	**117**	P	Pb	09 28 34.3	+0.2
SANI	**Sanana**	**1.96**	**292**	P	Pn	09 28 42.1	-1.6
SWI	**Sorong**	**3.94**	**61**	P	Pn	09 29 10.5	-0.4
SIJI	**Sorong**	**3.94**	**61**	P	Pn	09 29 11.3	+0.3
MNI	**Manado**	**5.14**	**325**	P	Pn	09 29 28.5	+1.0
	11μm119nm,0.5s						
APSI	**Ampana**	**6.43**	**287**	P	Pn	09 29 46.2	+1.0
	0.2nm898nm46nm,0.8s						

IDC 14 09:33:01.7±1.8, 5°.79S×129°.86E, h0km, mb3.5/1, mbtmp3.5/5, ML3.3/4, Error ellipse: s-maj=62.0km s-min=24.0km az=89.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.09**	**16**	Pn	Pn	09 34 17.9	-1.3
	1.0nm,0.3s,baz=221,slow=20,SNR=1.3						
SIJI				Sn	Sn	09 35 09.2	-10
	1.3nm,0.3s,baz=257,slow=23,SNR=5.7						
	2.8nm,0.3s						
FITZ	**Fitzroy Crossi**	**12.91**	**198**	Pn	Pn	09 36 06.5	0.0
	0.1nm,0.3s,baz=18,slow=13,SNR=2.4						
FITZ				Sn	Sn	09 38 34.3	+3.3
	0.1nm,0.3s,baz=72,slow=19,SNR=1.5						
	2.4nm,0.9s						
WRA	**Warramunga Arr**	**14.73**	**163**	Pn	Pn	09 36 29.9	-1.5
	0.1nm,0.3s,baz=339,slow=14,SNR=6.4						
WRA				Sn	Sn	09 39 09.2	-6.2
	0.1nm,0.3s,baz=348,slow=23,SNR=4.6						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**18.19**	**168**	P	Pn	09 37 15.8	-0.1
	0.1nm,0.3s,baz=347,slow=9.3,SNR=11						
	1.3nm,0.9s						
MKAR	**Makanchi Array**	**67.14**	**327**	P	P	09 43 57.9	+0.5
	0.3nm,0.6s,baz=121,slow=6.9,SNR=3.7						
	0.3nm,0.6s						

TRN 14 09:34:37.7, 9°.06N×63°.94W, h3km, MD4.2, Venezuela., Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPP	**Pointe-a-Pierr**	**2.76**	**63**	*e*P	Pn	09 35 23.3	+0.5
DMDM	**Guralp CMG5TDE**	**2.87**	**55**	*e*P	Pn	09 35 24.6	+0.3
DMDM				*e*S	Sn	09 35 59.8	+0.4
TRN	**Trinidad (W)**	**2.96**	**58**	*e*P	Pn	09 35 25.7	0.0
TRN				*e*S	Sn	09 36 02.3	+0.6
GRGR	**Grenville**	**3.79**	**36**	*e*P	Pn	09 35 37.9	+0.7
GRGR				*e*S	Sn	09 36 17.9	-4.5
GRSS	**Sisters**	**3.95**	**35**	*e*P	Pn	09 35 41.1	+1.8
GRSS				*e*S	Sn	09 36 25.7	-0.5
GCMP	**Grenada, Carri**	**4.21**	**36**	*e*P	Pn	09 35 44.0	+1.1
GCMP				*e*S	Sn	09 36 30.4	-2.2
SVB	**Belmont**	**4.95**	**32**	*e*S	Sn	09 36 50.2	-0.7
MCLT	**Moule a Chique**	**5.48**	**32**	*e*S	Sn	09 37 01.8	-2.2

IDC 14 09:39:54.8±2.4, 7°.65S×158°.88E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=49.0km s-min=27.2km az=46.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.06**	**149**	Pn	Pn	09 40 31.4	+0.7
	baz=331,slow=19						
HNR				Sn	Sn	09 40 56.4	-0.8
	2.0nm,0.3s,baz=280,slow=20,SNR=7.3						
WRA	**Warramunga Arr**	**26.74**	**240**	P	P	09 45 36.3	0.0
	1.3nm,0.8s,baz=66,slow=9.0,SNR=8.9						
	1.3nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**27.09**	**16**	T	T	10 14 22.4	
	baz=195,slow=76						
H11S2	**WAKE ISLAND Hy**	**27.09**	**16**	T	T	10 14 25.8	
	baz=195,slow=76						
H11S1	**WAKE ISLAND Hy**	**27.11**	**16**	T	T	10 14 12.9	
	baz=195,slow=76						
ASAR	**Alice Springs**	**28.77**	**234**	P	P	09 45 54.5	0.0
	0.6nm,0.8s,baz=66,slow=8.9,SNR=6.7						
	0.6nm,0.8s						
MKAR	**Makanchi Array**	**86.45**	**318**	P	P	09 52 39.4	0.0
	0.3nm,0.8s,baz=107,slow=1.5,SNR=2.6						
	0.3nm,0.8s						

AFAD 14 09:47:17.7, 37°.41N×35°.93E, h7km±1km, MW3.5
ISK 14 09:47:18.6, 37°.50N×36°.03E, h5km, ML3.6/38
ISC 14 09:47:19.7±1.2, 37°.50N±0°.03×36°.01E±0°.02, h2km±13km, n43, σ0°.78/54, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.15**	**263**	Pg	**Pg**	**09 47 22.2**	**-0.3**
KOZT				Sg	**Sg**	**09 47 24.9**	**+0.4**
ANDN	**Andirin**	**0.28**	**73**	P	**Pg**	**09 47 25.4**	**+0.4**
ANDN				S	**Sb**	**09 47 30.8**	**-1.9**
ANDN				IAML		09 47 31.0	
	comp=N,2μm,0.6s						
ANDN				IAML		09 47 33.0	
	comp=E,1μm,0.4s						
SAIM	**ADANA**	**0.48**	**7**	P	**Pg**	**09 47 28.9**	**0.0**
SAIM				S	**Sb**	**09 47 37.5**	**-1.1**
SAIM				IAML		09 47 40.0	
	comp=N,5μm,0.2s						
SAIM				IAML		09 47 40.0	
	comp=E,4μm,0.2s						
KAMA	**Osmaniye**	**0.61**	**121**	P	**Pg**	**09 47 30.2**	**-1.2**
KAMA				S	**Sg**	**09 47 38.8**	**-0.4**
KAMA				IAML		09 47 43.0	
	comp=N,564nm,0.6s						
KAMA				IAML		09 47 44.0	
	comp=E,645nm,0.3s						
KMRS	**Kahramanmaras**	**0.71**	**89**	Pg	**Pg**	**09 47 32.9**	**-0.3**
KMRS				Sg	**Sb**	**09 47 43.6**	**-1.3**
KHMR	**Kahramanmara**	**0.73**	**102**	P	**Pg**	**09 47 33.0**	**-0.7**
KHMR				S	**Sg**	**09 47 44.2**	**+1.1**
KHMR				IAML		09 47 46.0	
	comp=E,569nm,0.8s						
KHMR				IAML		09 47 50.0	
	comp=N,612nm,0.7s						
KAHM	**Kahramanmaras,**	**0.78**	**88**	P	**Pg**	**09 47 34.1**	**-0.4**
KAHM				S	**Sg**	**09 47 45.5**	**+0.9**
KAHM				IAML		09 47 50

plane solution: NP1:ϕ_s171.00000°,δ60.00000°, λ-103.00000°. NP2:ϕ_s17.00000°,δ31.00000°, λ-67.00000°. Principal axes: T 5.7600, Plg14.0000°, Azm271.0000°; N -0.0400, Plg11.0000°, Azm177.0000°; P -5.7300, Plg70.0000°, Azm51.0000°;

*IPGP **14** 10:01:17.0,27.42S×175.69W,h16km,Mw6.3,Fault plane solution: NP1:ϕ_s6.00000°,δ37.00000°,λ-86.00000°. NP2:ϕ_s181.00000°,δ53.00000°,λ-93.00000°.*

*NEIC **14** 10:01:17.1±1.6,27.37S±0.07×175.61W±0.09,h11km±1km, mb6.1/657,Ms_20 6.5/751,Mwb6.2/174,Mww6.4/42,Error ellipse: s-maj=14.7km s-min=9.7km az=127.0,Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-1.90; $M_{\theta\theta}$-0.82; $M_{\phi\phi}$2.72; $M_{r\theta}$-0.05; $M_{\theta\phi}$0.32; $M_{\phi r}$0.91; Fault plane solution: M_o2.60000×10^{18} NP1: ϕ_s179.89000°,δ55.86000°,λ-96.86000°. NP2:ϕ_s12.00000°, δ34.74000°,λ-80.01000°. Principal axes: T 2.9158, Plg11.0000°, Azm275.0000°; N -0.8354, Plg6.0000°, Azm184.0000°; P -2.0804, Plg78.0000°, Azm66.0000°;*

*ISC-PP **14** 10:01:17,27.37S×175.61W,h14km,Mwppsm6.6, Moment Tensor Solution. s25 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.63±.14; $M_{\theta\theta}$-0.01±.17; $M_{\phi\phi}$0.63±.17; $M_{r\theta}$-0.13±.09; $M_{\theta\phi}$0.29±.26; $M_{\phi r}$-0.03±.10; Fault plane solution: M_o1.10000×10^{19} NP1:ϕ_s6.80000°,δ33.00000°, λ285.50000°. NP2:ϕ_s168.50000°,δ58.40000°, λ-99.80000°.*

*NEIC **14** 10:01:17.1,27.56S×175.18W,h14km,Moment Tensor Solution. Duration: 7s9 Moment tensor: Scale 10^{18}Nm; M_{rr}-3.90; $M_{\theta\theta}$-0.34; $M_{\phi\phi}$4.24; $M_{r\theta}$-1.07; $M_{\theta\phi}$0.19; $M_{\phi r}$0.73; Fault plane solution: M_o4.29000×10^{18} NP1:ϕ_s17.54000°, δ42.33000°,λ-66.68000°. NP2:ϕ_s167.29000°,δ51.80000°, λ-109.83000°. Principal axes: T 4.3101, Plg5.0000°, Azm271.0000°; N -0.0432, Plg15.0000°, Azm180.0000°; P -4.2669, Plg74.0000°, Azm18.0000°;*

*NEIC **14** 10:01:17.1,27.36S×175.63W,h14km*

*GCMT **14** 10:01:22.0±0.0,27.45S×175.38W,h12km,MW6.4/164, Moment Tensor Solution. s164,c389; s163,c715; Duration: 3s8 Moment tensor: Scale 10^{18}Nm; M_{rr}-4.25±.01; $M_{\theta\theta}$-0.98±.02; $M_{\phi\phi}$5.23±.01; $M_{r\theta}$-0.45±.04; $M_{\theta\phi}$0.40±.01; $M_{\phi r}$0.15±.04; Best double couple: M_o4.78600×10^{18} NP1:ϕ_s12.00000°,δ45.00000°, λ-79.00000°. NP2:ϕ_s176.00000°,δ46.00000°, λ-101.00000°. Principal axes: T 5.2570, Plg1.0000°, Azm274.0000°; N -0.9420, Plg8.0000°, Azm184.0000°; P -4.3150, Plg82.0000°, Azm9.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=125s. Triangular moment-rate function*

*BGR **14** 10:01:57.6,18.49S×176.64W,h10km,Ms6.7*

ISC 14 10:01:16.9±0.2,27.69S±0.03×175.70W±0.03,h14km, h14km:pP-P,n2275,σ1994/1923,mb6.2/475,MS6.5/494, 47C-93D,Kermadec islands region

Code	Station Name	Δ°	Az°	Phase	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.50**	**231**	Pn	**Pb**		**10 02 00.2**	**-1.4**
	5µm,0.3s,baz=67,slow=9.2,SNR=67							
RAO				Sn	**Sb**		**10 02 31.6**	**-0.5**
	26µm,0.3s,baz=103,slow=20,SNR=9.9							
	24µm,0.2s							
RAO	**Raoul Island**	**2.50**	**231**	P	**Pn**		**10 01 58.8**	**+1.7**
RAO	**Raoul Island**	**2.50**	**231**	S	**Sb**		**10 02 32.3**	**+0.1**
RAO	**Raoul Island**	**2.50**	**231**		**Pb**		**10 02 00.2**	**-1.4**
RAO					**Sb**		**10 02 32.1**	**0.0**
RAO	**Raoul Island**	**2.50**	**231**	P	**Pb**		**10 02 00.1**	**-1.4**
RAO	**Raoul Island**	**2.50**	**231**	P	**Pb**		**10 02 00.1**	**-1.5**
RAO				S	**Sb**		**10 02 32.5**	**+0.3**
NIUE	**Niue**	**10.08**	**33**	P	Pn		10 03 32.0	-9.3
	comp=Z,2µm,0.8s,comp=Z,0.0nm							
NIUE	**Niue**	**10.08**	**33**		Pn		10 03 32.3	-9.0
NIUE	**Niue**	**10.08**	**33**	P	Pn		10 03 31.1	-10
NIUE	**Niue**	**10.08**	**33**	P	Pn		10 03 32.1	-9.2
MXZ	**Matakaoa Point**	**11.06**	**206**	P	**Pn**		**10 03 51.5**	**-3.2**
MXZ	**Matakaoa Point**	**11.06**	**206**	P	**Pn**		**10 03 50.7**	**-4.0**
WMGZ	**Waiomatatini S**	**11.25**	**205**	P	**Pn**		**10 03 53.5**	**-3.7**
PKGZ	**Pakihiroa**	**11.42**	**206**	P	**Pn**		**10 03 54.8**	**-4.8**
HAZ	**Te Kaha**	**11.44**	**207**	P	**Pn**		**10 03 55.2**	**-4.6**
HAZ				S	**Sn**		**10 06 03.4**	**-4.0**
MSVF	**Nonsavu**	**11.46**	**329**	Pn	**Pn**		**10 04 00.7**	**+0.5**
	comp=Z,7.8nm,0.3s,baz=152,slow=12,SNR=95							
MSVF	**Nonsavu**	**11.46**	**329**	P	**Pn**		**10 04 00.8**	**+0.5**
MSVF	**Nonsavu**	**11.46**	**329**	P	**Pn**		**10 04 01.1**	**+0.9**
PUZ	**Puketiti**	**11.53**	**205**	P	Pn		10 03 55.8	-5.3
RUGZ	**Raukumara Rang**	**11.66**	**207**	P	**Pn**		**10 03 58.5**	**-4.5**
TWGZ	**Tauwhareparae**	**11.73**	**205**	P	Pn		10 03 59.1	-4.8
MYRZ	**Mayor Island**	**11.73**	**213**	P	**Pn**		**10 04 07.7**	**+3.8**
WCZ	**Waipu Caves**	**11.80**	**223**	P	**Pn**		**10 04 06.9**	**+2.1**
OUZ	**Omahuta**	**11.82**	**228**	P	**Pn**		**10 04 04.5**	**-0.6**
OUZ	**Omahuta**	**11.82**	**228**	P	**Pn**		**10 04 06.7**	**+1.6**
OUZ	**Omahuta**	**11.82**	**228**	P	Pn		10 04 10.4	+5.4
OUZ				S	**Sn**		**10 06 21.9**	**+5.1**
WHRZ	**Whale Island**	**11.86**	**209**	P	**Pn**		**10 04 05.3**	**-0.4**
CNGZ	**Carnagh Statio**	**11.91**	**204**	P	Pn		10 04 01.4	-4.9
TKGZ	**Te Karaka**	**12.01**	**205**	P	Pn		10 04 02.7	-4.9
MWZ	**Matawai**	**12.04**	**206**	P	Pn		10 04 02.4	-5.7
MWZ				S	**Sn**		**10 06 19.3**	**-2.9**
OPRZ	**Ohinepanea**	**12.04**	**211**	P	**Pn**		**10 04 06.2**	**-1.9**
OPRZ				S	**Sn**		**10 06 19.8**	**-2.3**
URZ	**Urewera**	**12.14**	**208**	Pn	**Pn**		**10 04 05.2**	**-4.3**
	comp=Z,5.5nm,0.3s,baz=271,slow=2.3,SNR=22							
URZ	**Urewera**	**12.14**	**208**	P	**Pn**		**10 04 05.2**	**-4.3**
URZ	**Urewera**	**12.14**	**208**	S	**Sn**		**10 06 21.7**	**-2.9**
URZ	**Urewera**	**12.14**	**208**	P	Pn		10 04 03.6	-5.9
URZ	**Urewera**	**12.14**	**208**	P	Pn		10 04 04.1	-5.3
URZ				S	**Sn**		**10 06 20.3**	**-4.3**
EDRZ	**Edgecumbe**	**12.17**	**209**	P	**Pn**		**10 04 10.4**	**+0.4**
RAGZ	**Rawiri**	**12.22**	**206**	P	**Pn**		**10 04 06.1**	**-4.5**
RIGZ	**Rimuhau**	**12.27**	**205**	P	**Pn**		**10 04 06.7**	**-4.6**
KMRZ	**Kaimai**	**12.32**	**213**	P	**Pn**		**10 04 11.5**	**-0.5**
OMRZ	**Omania**	**12.34**	**211**	P	**Pn**		**10 04 10.0**	**-2.2**
TARZ	**Mount Tarawera**	**12.38**	**210**	P	**Pn**		**10 04 13.8**	**+1.0**
NGRZ	**Ngongotaha**	**12.41**	**211**	P	**Pn**		**10 04 14.0**	**+0.8**
PRGZ	**Paritu Road**	**12.42**	**204**	P	**Pn**		**10 04 08.9**	**-4.3**
TOZ	**Tahuroa Road**	**12.45**	**214**	P	**Pn**		**10 04 16.1**	**+2.4**
TOZ				S	**Sn**		**10 06 35.5**	**+3.3**
HLRZ	**Highlands Stat**	**12.46**	**210**	P	**Pn**		**10 04 16.9**	**+3.0**
RRRZ	**Republican Roa**	**12.46**	**210**	P	**Pn**		**10 04 16.7**	**+2.8**
MUGZ	**Murupara**	**12.47**	**208**	P	Pn		10 04 07.6	-6.4
RTZ	**Ruatahuna**	**12.50**	**207**	P	Pn		10 04 09.3	-5.1
RTZ				S	**Sn**		**10 06 31.5**	**-2.0**
HSRZ	**Hossack Road**	**12.56**	**210**	P	**Pn**		**10 04 15.5**	**+0.3**
KNZ	**Kokohu**	**12.58**	**204**	P	**Pn**		**10 04 11.2**	**-4.2**
HRRZ	**Handcock Road**	**12.61**	**210**	P	**Pn**		**10 04 17.1**	**+1.2**
MHGZ	**Mahia Peninsul**	**12.62**	**203**	P	Pn		10 04 10.0	-5.9
PRRZ	**Plateau Road**	**12.65**	**210**	P	**Pn**		**10 04 15.0**	**-1.4**
RAHZ	**Arahi**	**12.71**	**206**	P	Pn		10 04 12.0	-5.4
ALRZ	**Allen Road**	**12.72**	**210**	P	**Pn**		**10 04 13.5**	**-3.9**
MTHZ	**Maungataniwha**	**12.76**	**207**	P	**Pn**		**10 04 13.5**	**-4.4**
WPRZ	**Whakapapatarin**	**12.77**	**210**	P	**Pn**		**10 04 18.5**	**+0.4**
WHHZ	**Waihua**	**12.79**	**206**	P	**Pn**		**10 04 14.6**	**-3.8**
KUTZ	**Kaahu Road**	**12.90**	**211**	P	**Pn**		**10 04 20.0**	**+0.2**
TLZ	**Tolley Road**	**12.90**	**212**	P	**Pn**		**10 04 18.5**	**-1.4**
MRHZ	**Matea Rd**	**12.92**	**209**	P	Pn		10 04 17.6	-2.5
NMHZ	**Naumai**	**12.98**	**207**	P	Pn		10 04 16.0	-5.0
WHTZ	**Whakaora**	**12.98**	**210**	P	**Pn**		**10 04 25.6**	**+4.6**
ARHZ	**Aropaoanui**	**13.05**	**206**	P	Pn		10 04 16.9	-4.9
WATZ	**Wairara**	**13.12**	**211**	P	**Pn**		**10 04 21.5**	**-1.3**
BKZ	**Black Stump Fm**	**13.17**	**208**	P	**Pn**		**10 04 19.0**	**-4.5**
BKZ	**Black Stump Fm**	**13.17**	**208**	S	**Sn**		**10 06 46.8**	**-3.0**
BKZ	**Black Stump Fm**	**13.17**	**208**	P	Pn		10 04 15.8	-7.7
BKZ	**Black Stump Fm**	**13.17**	**208**	P	Pn		10 04 16.8	-6.7
RATZ	**Rangitukua**	**13.23**	**210**	P	**Pn**		**10 04 25.2**	**+0.9**
RITZ	**Rihia Road**	**13.28**	**210**	P	**Pn**		**10 04 24.5**	**-0.5**
MCHZ	**McNeill Hill**	**13.32**	**206**	P	**Pn**		**10 04 20.8**	**-4.8**
KATZ	**Kakaramea**	**13.35**	**210**	P	**Pn**		**10 04 24.8**	**-1.3**
CKHZ	**Cape Kidnapper**	**13.36**	**205**	P	**Pn**		**10 04 21.9**	**-4.2**
HIZ	**Hauiti**	**13.38**	**214**	P	**Pn**		**10 04 24.2**	**-2.1**
HIZ	**Hauiti**	**13.38**	**214**		**Pn**		**10 04 26.8**	**+0.5**
HIZ	**Hauiti**	**13.38**	**214**	P	**Pn**		**10 04 24.0**	**-2.3**
HIZ	**Hauiti**	**13.38**	**214**	P	**Pn**		**10 04 25.6**	**-0.8**
KWHZ	**Kaweka Forest**	**13.41**	**207**	P	Pn		10 04 20.9	-6.0
NTVZ	**North Tongarir**	**13.46**	**210**	P	**Pn**		**10 04 25.3**	**-2.3**
TMVZ	**Te Maari**	**13.46**	**210**	P	**Pn**		**10 04 23.6**	**-4.0**
KRVZ	**Karewarewa**	**13.47**	**210**	P	**Pn**		**10 04 27.3**	**-0.4**
ETVZ	**East Tongariro**	**13.47**	**210**	P	**Pn**		**10 04 24.4**	**-3.4**
FUTU	**Fugatoga**	**13.50**	**350**		**Pn**		**10 04 23.6**	**-4.5**
WTVZ	**West Tongariro**	**13.51**	**210**	P	**Pn**		**10 04 25.7**	**-2.6**
OTVZ	**Oturere**	**13.52**	**210**	P	**Pn**		**10 04 25.1**	**-3.4**
TWVZ	**Taurewa**	**13.54**	**211**	P	**Pn**		**10 04 28.3**	**-0.4**
SNVZ	**South Ngauruho**	**13.55**	**210**	P	**Pn**		**10 04 25.3**	**-3.5**
KAHZ	**Kahuranaki**	**13.56**	**205**	P	Pn		10 04 21.4	-7.4
NGZ	**Ngauruhoe**	**13.56**	**210**	P	**Pn**		**10 04 27.4**	**-1.6**
COVZ	**Chateau Observ**	**13.60**	**210**	P	**P**		**10 04 34.3**	**-4.1**
TUVZ	**Tukino**	**13.61**	**210**	P	**Pn**		**10 04 30.4**	**+0.8**
KRHZ	**Kereru**	**13.62**	**207**	P	Pn		10 04 22.5	-7.2
FWVZ	**Far West T-bar**	**13.64**	**210**	P	**Pn**		**10 04 30.8**	**+0.7**
MOVZ	**Moawhango**	**13.68**	**209**	P	**Pn**		**10 04 25.9**	**-4.7**
WNVZ	**Wahianoa**	**13.68**	**210**	P	**Pn**		**10 04 30.9**	**+0.3**
PKVZ	**Pokaka**	**13.76**	**210**	P	**Pn**		**10 04 31.2**	**-0.4**
PXZ	**Pawanui**	**13.77**	**205**	P	Pn		10 04 25.2	-6.4
VRZ	**Vera Road**	**13.90**	**212**	P	**Pn**		**10 04 32.9**	**-0.6**
PNHZ	**Pukenui**	**13.92**	**207**	P	Pn		10 04 26.2	-7.6
WPHZ	**Waipukurau**	**13.96**	**206**	P	Pn		10 04 28.5	-5.8
PRHZ	**Porangahau**	**14.06**	**205**	P	Pn		10 04 29.2	-6.4
TSZ	**Takapari Road**	**14.14**	**207**	P	**Pn**		**10 04 32.7**	**-4.1**
AFI	**Afiamalu**	**14.19**	**16**	Pn	Pn		10 04 28.2	-9.4
	comp=Z,20nm,0.3s,baz=212,slow=1.0,SNR=20							
AFI				Sn	Sn		10 06 53.3	-22
	comp=Z,118nm,0.3s,baz=44,slow=19,SNR=6.3							
AFI				LR	LR		10 11 45.8	
	comp=Z,20µm,19.0s,baz=192,slow=45							
DREZ	**Durham Road**	**14.22**	**214**	P	**Pn**		**10 04 41.3**	**+3.4**
DVHZ	**Dannevirke**	**14.26**	**206**	P	Pn		10 04 31.1	-7.3
ANWZ	**Angora Road**	**14.29**	**205**	P	Pn		10 04 32.8	-6.0
WAZ	**Wanganui**	**14.30**	**210**	P	**Pn**		**10 04 37.1**	**-1.9**
LREZ	**Lake Rotokare**	**14.34**	**212**	P	**Pn**		**10 04 39.1**	**-0.3**
PREZ	**Palmer Road**	**14.36**	**213**	P	**Pn**		**10 04 41.6**	**+1.8**
KHEZ	**Kahui Hut**	**14.40**	**214**	P	**Pn**		**10 04 38.2**	**-2.2**
KHEZ	**Kahui Hut**	**14.40**	**214**	P	**Pn**		**10 04 40.8**	**+0.4**
NBEZ	**Newall Road No**	**14.45**	**214**	P	**P**		**10 04 44.5**	**-3.2**
NFK	**Norfolk Island**	**14.47**	**261**	P	**Pn**		**10 04 42.4**	**+1.1**
NFK				S	**S**		**10 07 33.7**	**-7.5**
POWZ	**Post Office Ro**	**14.50**	**207**	P	**Pn**		**10 04 37.5**	**-4.3**
PRWZ	**Pori Road**	**14.56**	**206**	P	Pn		10 04 37.6	-5.0
BFZ	**Birch Farm**	**14.56**	**205**	P	Pn		10 04 36.5	-6.1
BFZ	**Birch Farm**	**14.56**	**205**	P	Pn		10 04 33.9	-8.7
BFZ	**Birch Farm**	**14.56**	**205**	P	Pn		10 04 35.1	-7.4
CPWZ	**Castlepoint**	**14.78**	**205**	P	**Pn**		**10 04 44.6**	**-0.9**
TIWZ	**Tintock**	**14.78**	**206**	P	Pn		10 04 38.1	-7.5
MRZ	**Mangatainoka R**	**14.81**	**207**	P	Pn		10 04 37.2	-8.7
HOWZ	**Holdsworth Sta**	**15.03**	**206**	P	Pn		10 04 40.4	-8.6
TMWZ	**Te Maipa**	**15.07**	**205**	P	**Pn**		**10 04 42.6**	**-6.8**
OGWZ	**Otaki Gorge**	**15.10**	**208**	P	Pn		10 04 40.7	-9.1
KIW	**Kapiti Island**	**15.25**	**208**	P	Pn		10 04 43.1	-8.7
MTW	**Mount Morrison**	**15.26**	**206**	P	Pn		10 04 43.4	-8.6
CAW	**Cannon Point**	**15.39**	**207**	P	Pn		10 04 44.2	-9.4
TRWZ	**Traveller**	**15.40**	**205**	P	**Pn**		**10 04 48.3**	**-5.4**
PAWZ	**Paruwai Farm**	**15.48**	**206**	P	Pn		10 04 46.8	-8.1
MSWZ	**Moikau Station**	**15.58**	**206**	P	Pn		10 04 48.3	-7.8
DUWZ	**D'Urville Isla**	**15.63**	**210**	P	**Pn**		**10 04 50.6**	**-6.1**
WEL	**Wellington**	**15.66**	**208**	P	**Pn**		**10 04 51.9**	**-5.3**
PLWZ	**Palliser**	**15.71**	**206**	P	**Pn**		**10 04 51.0**	**-6.9**
SNZO	**South Karori**	**15.71**	**208**	P	**Pn**		**10 04 51.2**	**-6.5**
SNZO	**South Karori**	**15.71**	**208**	P	**Pn**		**10 04 51.1**	**-6.6**
BHW	**Baring Head**	**15.72**	**207**	P	Pn		10 04 50.6	-7.3
TCW	**Tory Channel**	**15.80**	**209**	P	Pn		10 04 49.3	-10
RAR	**Rarotonga**	**15.87**	**70**	Pn	Pn		10 04 50.9	-9.0
	comp=Z,79nm,0.3s,baz=238,slow=7.2,SNR=101							
RAR				LR	LR		10 10 24.1	
	comp=Z,95µm,18.1s,baz=246,slow=35							
RAR	**Rarotonga**	**15.87**	**70**	P	Pn		10 04 51.4	-8.5
RAR	**Rarotonga**	**15.87**	**70**		Pn		10 04 50.5	-9.4
RAR				IAmb	IAmb		10 05 04.7	
	comp=Z,891nm,0.7s							
RAR	**Rarotonga**	**15.87**	**70**	P	Pn		10 04 50.5	-9.4
RAR				pmax	pmax			
	comp=Z,891nm,0.7s							
RAR	**Rarotonga**	**15.87**	**70**	P	Pn		10 04 51.1	-8.8
MARNC	**Mare, Loyalty**	**16.03**	**289**	P	**P**		**10 05 06.2**	**+0.8**
MARNC	**Mare, Loyalty**	**16.03**	**289**		**Pn**		**10 05 01.8**	**-0.2**
CTZ	**Chatham Island**	**16.03**	**182**	P	**Pn**		**10 04 58.6**	**-3.3**
CTZ	**Chatham Island**	**16.03**	**182**	P	**Pn**		**10 04 58.4**	**-3.5**
TUWZ	**Tuamarina**	**16.13**	**209**	P	Pn		10 04 55.8	-7.3
NNZ	**Nelson**	**16.21**	**211**	P	Pn		10 04 56.8	-7.4
TKNZ	**Takaka Hill**	**16.25**	**212**	P	**Pn**		**10 04 60.0**	**-4.8**
CMWZ	**Cape Campbell**	**16.28**	**208**	P	**Pn**		**10 05 04.4**	**-0.7**
QRZ	**Quartz Range**	**16.30**	**213**	P	**Pn**		**10 05 02.5**	**-2.9**
QRZ	**Quartz Range**	**16.30**	**213**	P	**Pn**		**10 05 01.0**	**-4.4**
QRZ	**Quartz Range**	**16.30**	**213**	P	**Pn**		**10 04 59.8**	**-5.6**
MRNZ	**Matariki Terra**	**16.64**	**212**	P	Pn		10 05 02.4	-7.3
OUENC	**Ouen Island, N**	**16.66**	**284**	P	**P**		**10 05 15.8**	**+3.4**
YATNC	**Mamie plateau,**	**16.75**	**286**	P	**P**		**10 05 15.6**	**+2.1**
THZ	**Tophouse**	**16.86**	**211**	P	**Pn**		**10 05 05.8**	**-6.7**
ONTNC	**Ouen Toro**	**17.03**	**284**	P	**P**		**10 05 19.8**	**+3.3**
KHZ	**Kahutara**	**17.11**	**208**	P	**Pn**		**10 05 12.7**	**-2.9**
KHZ	**Kahutara**	**17.11**	**208**	P	Pn		10 05 06.2	-9.4
KHZ	**Kahutara**	**17.11**	**208**	P	Pn		10 05 06.9	-8.7
DZM	**Mont Dzumac**	**17.13**	**285**	P	**P**		**10 05 20.0**	**+2.3**
	comp=Z,326nm,0.7s,baz=102,slow=16,SNR=54							
DZM				LR	LR		10 09 12.1	
	comp=Z,65µm,21.0s,baz=110,slow=28							
DZM	**Mont Dzumac**	**17.13**	**285**	P	**P**		**10 05 19.9**	**+2.2**
RTV	**Rentapao**	**17.62**	**301**	P	**P**		**10 05 25.1**	**+2.0**
DVP	**Devils Point**	**17.85**	**300**	P	**P**		**10 05 28.6**	**+3.1**
DVP	**Devils Point**	**17.85**	**300**	P	**P**		**10 05 27.7**	**+2.2**
AMCZ	**Amberley**	**18.11**	**208**	P	**Pn**		**10 05 25.1**	**-2.8**
AKCZ	**Akaroa Harbour**	**18.58**	**207**	P	**P**		**10 05 30.1**	**-3.4**
RACZ	**Rakaia**	**18.77**	**208**	P	**P**		**10 05 33.6**	**-1.9**
WACZ	**Wakanui South**	**19.07**	**208**	P	**P**		**10 05 37.3**	**-1.6**
RPZ	**Rata Peaks**	**19.23**	**210**	P	**P**		**10 05 38.4**	**-2.3**
	comp=Z,94nm,0.6s,baz=190,slow=1.4,SNR=39							
RPZ	**Rata Peaks**	**19.23**	**210**	P	**P**		**10 05 36.7**	**-4.0**
RPZ	**Rata Peaks**	**19.23**	**210**	P	**P**		**10 05 36.7**	**-4.0**
FUNA	**Funafuti**	**19.66**	**345**	P	**P**		**10 05 42.7**	**-2.7**
SANVU	**Saraoutou**	**20.00**	**304**	P	**P**		**10 05 49.6**	**+0.4**
SANVU	**Saraoutou**	**20.00**	**304**		**P**		**10 05 47.4**	**-1.7**
ODZ	**Otahua Downs**	**20.47**	**209**	P	**P**		**10 05 51.7**	**-2.4**
JCZ	**Jackson Bay**	**20.57**	**213**	P	**P**		**10 05 52.7**	**-2.6**
TUZ	**Tuapeka**	**21.62**	**209**	P	**P**		10 06 14.7	+8.2
LHI	**Lord Howe Isla**	**22.25**	**254**	P	**P**		**10 06 18.2**	**+4.7**
LHI	**Lord Howe Isla**	**22.25**	**254**		**P**		**10 06 14.7**	**+1.3**
LHI	**Lord Howe Isla**	**22.25**	**254**	P	**P**		10 06 21.1	+7.6
SYZ	**Scrubby Hill**	**22.29**	**208**	P	**P**		**10 06 11.7**	**-2.0**
PPTF	**Pamatai, Papee**	**26.08**	**73**	P	**P**		**10 06 45.9**	**-4.5**
PPT	**Papeete**	**26.08**	**73**	P	**P**		**10 06 50.0**	**-0.3**
	comp=Z,173nm,1.0s,baz=120,slow=2.7,SNR=12							
PPT				S	S		10 11 34.4	+13
	comp=Z,30nm,1.0s,baz=252,slow=19,SNR=1.7							
PPT				LR	LR		10 15 17.5	
	comp=Z,57µm,18.1s,baz=248,slow=32							
	comp=Z,173nm,1.0s							
ARMA	**Armidale**	**28.63**	**257**	P	**P**		**10 07 15.8**	**+2.5**
	comp=Z,129nm,1.0s,comp=Z,0.0nm							
ARMA	**Armidale**	**28.63**	**257**	P	**P**		**10 07 13.8**	**+0.6**
ARMA	**Armidale**	**28.63**	**257**		**P**		**10 07 14.1**	**+0.9**
RIV	**Riverview**	**29.05**	**250**	P	**P**		**10 07 17.6**	**+0.9**
MGCD	**Mangrove Creek**	**29.06**	**251**	P	**P**		**10 07 19.9**	**+3.0**
	comp=Z,149nm,0.7s							
MGCD	**Mangrove Creek**	**29.06**	**251**	P	**P**		**10 07 17.9**	**+1.0**
HNR	**Honiara**	**29.26**	**304**	LR	LR		10 18 13.8	
	comp=Z,3µm,18.3s,baz=224,slow=35							
HNR	**Honiara**	**29.26**	**304**	P	**P**		**10 07 20.0**	**+1.2**
SYDH	**Sydney Hard Ro**	**29.39**	**250**	P	**P**		**10 07 20.8**	**+1.0**
EIDS	**Eidsvold**	**29.76**	**267**	P	**P**		**10 07 24.1**	**+1.0**
	comp=Z,95nm,1.0s,comp=Z,0.0nm							
EIDS	**Eidsvold**	**29.76**	**267**	P	**P**		**10 07 25.0**	**+1.9**
EIDS	**Eidsvold**	**29.76**	**267**		**P**		**10 07 23.6**	**+0.4**
TATA	**Tatamba Isabel**	**30.07**	**305**	P	**P**		**10 07 24.5**	**-1.4**
CNB	**Canberra Magne**	**30.62**	**247**	P	**P**		**10 07 32.1**	**+1.3**
	comp=Z,180nm,1.3s,comp=Z,0.0nm							
CNB	**Canberra Magne**	**30.62**	**247**	P	**P**		**10 07 31.3**	**+0.5**
CAN	**Canberra**	**30.92**	**247**	P	**P**		**10 07 35.8**	**+2.4**
	comp=Z,151nm,1.2s,comp=Z,0.0nm							
CAN	**Canberra**	**30.92**	**247**	P	**P**		**10 07 35.8**	**+2.4**
CAN	**Canberra**	**30.92**	**247**		**P**		**10 07 34.5**	**+1.1**
CAN				IAmb	IAmb		10 07 40.3	
	comp=Z,497nm,1.7s							
CAN				IAMs_20	IAMs_20		10 20 03.4	
	comp=Z,107µm,18.0s							
CAN	**Canberra**	**30.92**	**247**	P	**P**		**10 07 34.5**	**+1.1**
CAN				pmax	pmax			
	comp=Z,497nm,1.7s							
CAN				MLR	MLR			
	comp=Z,107µm,18.0s							
MILA	**Mila**	**30.97**	**243**	P	**P**		**10 07 35.7**	**+1.9**
	comp=Z,46nm,1.4s,comp=Z,0.0nm							
MILA	**Mila**	**30.97**	**243**	P	**P**		**10 07 35.7**	**+1.9**
YNG	**Young**	**31.36**	**249**	P	**P**		**10 07 39.3**	**+2.1**
	comp=Z,103nm,1.9s							
RMQ	**Roma**	**31.60**	**264**	P	**P**		**10 07 41.7**	**+2.3**
	comp=Z,50nm,1.3s							
GLAD	**Gladstone**	**32.53**	**236**	P	**P**		**10 07 49.1**	**+1.7**
MOO	**Moorlands**	**33.46**	**234**	P	**P**		**10 07 58.0**	**+2.5**
	comp=Z,468nm,1.3s,comp=Z,0.0nm							
MOO	**Moorlands**	**33.46**	**234**	P	**P**		**10 07 55.5**	**0.0**
MOO	**Moorlands**	**33.46**	**234**	P	**P**		**10 07 58.0**	**+2.5**
TAU	**Tasmania Unive**	**33.48**	**233**	P	**P**		**10 07 55.6**	**-0.1**
TAU	**Tasmania Unive**	**33.48**	**233**		**P**		**10 07 57.6**	**+1.9**
TAU	**Tasmania Unive**	**33.48**	**233**	IAMs_20	IAMs_20		10 20 06.9	
	comp=Z,78µm,19.0s							
TAU	**Tasmania Unive**	**33.48**	**233**	P	**P**		**10 07 57.6**	**+1.9**
TAU				pmax	pmax			
	comp=Z,1µm,1.6s							
TAU				MLR	MLR			
	comp=Z,78µm,19.0s							
CMSA	**Cobar Meteorol**	**33.66**	**254**	P	**P**		**10 07 57.6**	**+0.2**
	comp=Z,399nm,1.3s,comp=Z,0.0nm							
CMSA	**Cobar Meteorol**	**33.66**	**254**	P	**P**		**10 07 58.4**	**+1.0**
TOO	**Toolangi**	**33.93**	**243**	P	**P**		**10 08 01.5**	**+1.8**
	comp=Z,60nm,1.4s,comp=Z,0.0nm							
TOO	**Toolangi**	**33.93**	**243**		**P**		**10 08 01.2**	**+1.5**
TOO	**Toolangi**	**33.93**	**243**	P	**P**		**10 08 01.3**	**+1.5**
TOO				pmax	pmax			
	comp=Z,75nm,1.2s							
XMAS	**Kiritimati**	**34.39**	**34**	P	**P**		**10 08 02.0**	**-1.8**
XMAS				IAmb	IAmb		10 08 04.6	
	comp=Z,370

DRS **Darwin Rock St** 52.02 276 P P 10 10 27.2 +0.9
KNRA **Kununurra** 52.59 271 P P 10 10 29.7 -0.8
comp=Z,201nm,0.7s,comp=Z,0.0nm
KNRA **Kununurra** 52.59 271 P 10 10 30.4 -0.1
KNRA IAmb IAmb 10 10 34.4
comp=Z,148nm,0.8s
SRPI **Serui, Papua** 52.60 291 P P 10 10 29.3 -1.3
comp=Z,20μmcomp=Z,9μmcomp=Z,270nm,0.6s
BAKI **Biak** 53.09 291 P P 10 10 33.9 -0.3
comp=Z,28μmcomp=Z,12μmcomp=Z,359nm,0.7s
KMBL **Kambalda** 53.80 250 P P 10 10 38.6 -0.6
comp=Z,63nm,1.1s,comp=Z,0.0nm
FITZ **Fitzroy Crossi** 54.45 267 S S 10 18 16.7 -6.0
comp=Z,8.5nm,1.1s,baz=87,slow=19,SNR=1.7
RKPI **Ransiki, Papua** 54.51 290 P P 10 10 42.9 -1.8
MWPI **Manokwari, Pap** 54.95 290 P P 10 10 48.3 +0.5
comp=Z,29μmcomp=Z,11μmcomp=Z,164nm,1.1s
GUMO **Guam** 56.07 312 LR LR 10 35 29.8
comp=Z,9μm,18.1s,baz=137,slow=37
GUMO **Guam** 56.07 312 P P 10 10 55.6 -0.2
GUMO **Guam** 56.07 312 P 10 10 55.3 -0.5
GUMO IAmb IAmb 10 11 10.6
comp=Z,318nm,1.0s
GUMO **Guam** 56.07 312 P P 10 10 55.3 -0.5
GUMO pmax pmax
comp=Z,318nm,1.0s
RKGY **Rocky Gully** 57.09 245 P P 10 11 02.3 -0.6
comp=Z,253nm,1.7s,comp=Z,0.0nm
KLBR **Kellerberrin** 57.17 249 P P 10 11 03.4 -0.2
comp=Z,334nm,1.2s
KLBR **Kellerberrin** 57.17 249 P P 10 11 03.9 +0.3
NWAO **Narrogin (SRO)** 57.27 247 P P 10 11 04.8 +0.5
comp=Z,140nm,1.6s,comp=Z,0.0nm
NWAO **Narrogin (SRO)** 57.27 247 P P 10 11 03.9 -0.3
comp=Z,86nm,1.2s,baz=117,slow=7.0,SNR=18
NWAO **Narrogin (SRO)** 57.27 247 P P 10 11 04.5 +0.3
NWAO **Narrogin (SRO)** 57.27 247 P 10 11 05.2 +1.0
NWAO IAmb IAmb 10 11 10.0
comp=Z,229nm,1.4s
NWAO **Narrogin (SRO)** 57.27 247 IAMs_20 IAMs_20 10 36 00.1
comp=Z,54μm,18.0s
NWAO **Narrogin (SRO)** 57.27 247 P P 10 11 05.2 +1.0
NWAO pmax pmax
comp=Z,229nm,1.4s
NWAO MLR MLR
comp=Z,54μm,18.0s
NWAO **Narrogin (SRO)** 57.27 247 P P 10 11 05.4 +1.2
NWAO P P 10 11 05.4 +1.2
NWAO S S 10 18 54.9 -5.1
NWAO S S 10 18 54.9 -5.1
SIJI **Sorong** 57.30 288 LR LR 10 36 19.1
comp=Z,23μm,18.4s,baz=104,slow=37
SIJI **Sorong** 57.30 288 P P 10 11 03.9 -0.8
comp=Z,22μmcomp=Z,10μmcomp=Z,468nm,1.1s
SWI **Sorong** 57.31 288 P P 10 11 03.4 -1.3
comp=Z,27μmcomp=Z,12μmcomp=Z,631nm,0.9s
MEEK **Meekatharra** 57.80 255 P P 10 11 07.9 -0.2
MSAI **Masohi** 58.00 284 P P 10 11 05.9 -3.7
comp=Z,23μmcomp=Z,8μmcomp=Z,161nm,0.8s
RPN **Rapa Nui** 58.24 106 LR LR 10 31 02.6
comp=Z,21μm,20.0s,baz=262,slow=31
BLDU **Ballidu** 58.28 250 P P 10 11 11.6 +0.2
PSA00 **Pilbara Seismi** 58.34 261 P P 10 11 10.4 -1.5
comp=Z,132nm,0.9s
PSA00 **Pilbara Seismi** 58.34 261 P P 10 11 12.4 +0.5
PSA00 **Pilbara Seismi** 58.34 261 P 10 11 11.1 -0.8
MUN **Mundaring** 58.34 248 P P 10 11 12.0 +0.2
AAI **Ambon** 58.46 284 P P 10 11 11.6 -1.2
comp=Z,18μmcomp=Z,9μmcomp=Z,172nm,1.3s
CASY **Casey** 58.47 207 P P 10 11 14.1 +2.0
KRAI **Karang Ratu** 58.47 284 P P 10 11 11.6 -1.3
comp=Z,7μmcomp=Z,156nm,0.9s
MBWA **Marble Bar** 58.58 261 P P 10 11 13.9 +0.3
MBWA **Marble Bar** 58.58 261 P P 10 11 13.2 -0.4
MBWA IAmb IAmb 10 11 16.2
comp=Z,137nm,0.8s
MBWA **Marble Bar** 58.58 261 P P 10 11 14.7 +1.1
MBWA P P 10 11 14.7 +1.1
MBWA S S 10 19 07.6 -10
MBWA S S 10 19 07.6 -10
SOEI **Soe** 59.04 275 P P 10 11 17.2 +0.2
SOEI **Soe** 59.04 275 P P 10 11 17.7 +0.7
comp=Z,24μmcomp=Z,9μmcomp=Z,451nm,0.9s
MORW **Morawa** 59.27 251 P P 10 11 17.7 -0.6
MORW **Morawa** 59.27 251 IAmb IAmb 10 11 20.5
comp=Z,205nm,1.4s
BATI **Baumata** 59.37 274 LR LR 10 38 03.7
comp=Z,76μm,18.1s,baz=130,slow=37
BATI **Baumata** 59.37 274 P P 10 11 19.2 0.0
comp=Z,20μmcomp=Z,8μmcomp=Z,161nm,0.9s
NLAI **Namlea** 59.63 283 P P 10 11 20.0 -0.9
comp=Z,20μmcomp=Z,9μmcomp=Z,226nm,1.1s
SANI **Sanana** 61.18 284 P P 10 11 29.9 -1.6
SANI **Sanana** 61.18 284 P P 10 11 31.3 -0.3
SANI **Sanana** 61.18 284 P P 10 11 30.0 -1.6
comp=Z,26μmcomp=Z,10μmcomp=Z,186nm,0.6s
MMRI **Maumere** 61.33 275 P 10 11 31.5 -1.1
MMRI IAMs_20 IAMs_20 10 39 57.7
comp=Z,36μm,18.0s
MMRI **Maumere** 61.33 275 P P 10 11 31.8 -0.7
comp=Z,21μmcomp=Z,8μmcomp=Z,186nm,1.1s
TNTI **Ternate** 61.47 287 P 10 11 32.2 -1.3
TNTI IAmb IAmb 10 11 52.7
comp=Z,150nm,0.8s
TNTI **Ternate** 61.47 287 P P 10 11 31.0 -2.5
comp=Z,217nm,1.0s
EDFI **Ende, Flores** 61.76 275 P P 10 11 34.9 -0.7
comp=Z,18μmcomp=Z,6μmcomp=Z,125nm,1.1s
BASI **Baing, Sumba** 62.10 273 P P 10 11 37.4 -0.3
comp=Z,16μmcomp=Z,10μmcomp=Z,568nm,0.8s
QSPA **South Pole Qui** 62.42 180 P P 10 11 41.6 +2.3
comp=Z,606nm,1.0s,baz=52,slow=1.7,SNR=281
QSPA PKPPKP P'P'df 10 40 38.5 -12
comp=Z,18nm,1.1s,baz=222,slow=0.9,SNR=7.5
comp=Z,606nm,1.0s
QSPA **South Pole Qui** 62.42 180 P P 10 11 41.9 +2.6
QSPA **South Pole Qui** 62.42 180 IAMs_20 IAMs_20 10 36 42.2
comp=Z,32μm,19.0s
WSI **Waingapu** 62.59 273 P P 10 11 41.5 +0.5
GIRL **Giralia** 62.85 257 P 10 11 43.5 +0.8
GIRL IAmb IAmb 10 12 02.6
comp=Z,194nm,1.0s
WBSI **Waikabubak, Su** 63.40 273 P P 10 11 46.1 -0.4
LBFI **Labuhan Bajo,** 63.47 274 P P 10 11 46.1 -0.8
MNI **Manado** 63.96 287 P P 10 11 48.4 -1.7
comp=Z,19μmcomp=Z,15μmcomp=Z,251nm,0.8s
BSSI **Bau Bau, Buton** 64.00 277 P P 10 11 49.2 -1.2
comp=Z,20μmcomp=Z,7μmcomp=Z,175nm,1.0s
LUWI **Luwuk** 64.46 283 P P 10 11 52.5 -0.9
LUWI **Luwuk** 64.46 283 P P 10 11 52.7 -0.7
LUWI **Luwuk** 64.46 283 P P 10 11 53.3 -0.1
comp=Z,22μmcomp=Z,7μmcomp=Z,322nm,0.9s
SGSI **Sangihe** 64.57 289 P P 10 11 55.8 +1.7
DBNI **Kabupaten Domp** 64.86 274 P P 10 11 55.3 -0.7
comp=Z,17μmcomp=Z,7μmcomp=Z,97nm,0.6s
KAPI **Kappang** 65.17 278 LR LR 10 41 39.7
comp=Z,11μm,18.1s,baz=134,slow=37
KAPI **Kappang** 65.17 278 P P 10 11 57.2 -0.8
KAPI **Kappang** 65.17 278*d* *i*P P 10 11 57.9 -0.2
KAPI pmax pmax
comp=Z,67nm,1.1s
KAPI MLR MLR
comp=Z,12μm,18.0s
KAPI **Kappang** 65.17 278 P P 10 11 58.4 +0.3
KAPI P P 10 11 58.4 +0.3
KAPI S S 10 20 37.7 -3.4
KAPI S S 10 20 37.7 -3.4
KAPI **Kappang** 65.17 278 P P 10 11 56.6 -1.5
PLAI **Plampang** 65.19 273 P P 10 11 57.1 -1.1
PLAI **Plampang** 65.19 273 P P 10 11 57.6 -0.6
comp=Z,22μmcomp=Z,8μmcomp=Z,291nm,0.9s
MKS **Makassar** 65.33 277 P P 10 11 56.9 -2.2
comp=Z,9μmcomp=Z,200nm,1.3s
APSI **Ampana** 65.50 283 P P 10 12 00.2 0.0
comp=Z,192nm,1.0s
SPSI **Sidrap Palu** 65.65 279 P P 10 11 59.9 -1.3
DDMP **Don Marcelino,** 65.74 291 *e*P P 10 11 59.2 -2.5
MRSI **Marisa** 65.94 284 P P 10 12 01.7 -1.3
comp=Z,17μmcomp=Z,5μmcomp=Z,135nm,0.7s
TWSI **Taliwang, Sumb** 66.02 273 P P 10 12 02.0 -1.5
comp=Z,21μmcomp=Z,8μmcomp=Z,193nm,1.1s
TTSI **Tana Toraja** 66.05 280 P P 10 12 02.5 -1.2
comp=Z,27μmcomp=Z,7μmcomp=Z,206nm,1.7s
PMSI **Majene** 66.62 279 P P 10 12 06.6 -0.8
comp=Z,22μmcomp=Z,9μmcomp=Z,185nm,1.0s
MMSI **Mamuju** 67.01 279 P P 10 12 10.2 +0.3
comp=Z,21μmcomp=Z,6μmcomp=Z,143nm,0.8s
PCI **Palu** 67.07 282 P P 10 12 10.2 -0.1
comp=Z,27μmcomp=Z,11μmcomp=Z,204nm,1.1s
TOLI2 **Tolitoli** 67.26 284 P P 10 12 11.2 -0.3
TOLI2 **Tolitoli** 67.26 284 P P 10 12 09.9 -1.6
KHKI **Kahang-Kahang** 67.31 272 P P 10 12 11.7 -0.1
comp=Z,20μmcomp=Z,7μmcomp=Z,195nm,1.0s
IGBI **Denpasar** 67.52 272 P P 10 12 13.0 -0.1
DNP **Denpasar** 67.53 272 P P 10 12 13.0 -0.1
comp=Z,272nm,1.7s
MPSI **Mapaga** 67.64 283 P P 10 12 13.2 -0.6
comp=Z,15μmcomp=Z,122nm,1.0s
JCJ **Chichijima** 67.85 320 LR LR 10 37 44.2
comp=Z,6μm,20.8s,baz=136,slow=32
JCJ **Chichijima** 67.85 320 P P 10 12 15.4 +0.6
JCJ **Chichijima** 67.85 320 P P 10 12 13.8 -1.1
RTBI **Rangdo, Negare** 67.86 272 P P 10 12 13.5 -1.8
comp=Z,24μmcomp=Z,9μmcomp=Z,256nm,1.3s
CGP **Cagayan de Oro** 67.89 293 *e*P P 10 12 16.4 +1.0
SCPH **Surigao** 68.00 295 *e*P P 10 12 15.6 -0.4
JAGI **Jajag, Banyuwa** 68.56 272 P P 10 12 18.4 -1.2
JAGI **Jajag, Banyuwa** 68.56 272 P P 10 12 17.8 -1.8
comp=Z,21μmcomp=Z,9μmcomp=Z,461nm,1.5s
ABJI **Asem Bagus** 68.78 272 P P 10 12 21.2 +0.2
comp=Z,13μmcomp=Z,293nm,1.5s
DCPH **Dipolog City** 69.06 292 *i*P P 10 12 23.4 +0.7
KMMI **Kalianget** 69.35 273 P P 10 12 24.5 -0.1
comp=Z,26μmcomp=Z,11μmcomp=Z,559nm,1.3s
BLJI **Banyuglugur** 69.37 272 P P 10 12 24.5 -0.2
comp=Z,24μmcomp=Z,10μmcomp=Z,224nm,1.0s
BKB **Balikpapan** 69.46 280 IAMs_20 IAMs_20 10 45 09.5
comp=Z,29μm,18.0s
BKB **Balikpapan** 69.46 280 P P 10 12 26.8 +1.5
comp=Z,12μmcomp=Z,166nm,0.9s
LLP **Lapu-Lapu** 69.53 294 *i*P P 10 12 25.9 +0.3
BBKI **Banjar Baru** 70.22 277 P P 10 12 28.8 -1.1
comp=Z,23μmcomp=Z,332nm,0.9s
SNJI **Sawahan-Nganju** 70.98 271 P P 10 12 35.2 +0.4
comp=Z,24μmcomp=Z,9μmcomp=Z,376nm,1.3s
SJI **Sawahan** 71.00 271 P P 10 12 34.5 -0.3
comp=Z,14μmcomp=Z,513nm,0.9s
RCP **Roxas** 71.22 294 *e*P P 10 12 35.3 -0.6
MYLDM **Lahad Datu** 71.30 286 IAmb IAmb 10 13 14.5
comp=Z,210nm,1.3s
MYLDM **Lahad Datu** 71.30 286 P P 10 12 37.6 +1.2
comp=Z,12μmcomp=Z,115nm,1.2s
PCJI **Pacitan** 71.31 270 P P 10 12 37.2 +0.6
TBJI **Tambak Boyo** 71.33 272 P P 10 12 37.0 +0.3
comp=Z,14μmcomp=Z,210nm,0.9s
NGJI **Ngawi** 71.43 271 P P 10 12 37.9 +0.6
comp=Z,495nm,1.3s
UGM **Wanagama** 72.02 270 P P 10 12 40.7 -0.2
UGM **Wanagama** 72.02 270 IAMs_20 IAMs_20 10 46 34.7
comp=Z,23μm,18.0s
UGM **Wanagama** 72.02 270 P P 10 12 41.2 +0.3
comp=Z,21μmcomp=Z,9μmcomp=Z,202nm,1.1s
BELA **Belgrano 2** 72.19 172 P P 10 12 41.4 +0.6
BELA IAmb IAmb 10 12 44.1
comp=Z,415nm,1.5s
YOGI **Yogyakarta** 72.27 270 P P 10 12 42.3 0.0
comp=Z,23μmcomp=Z,11μmcomp=Z,660nm,1.0s
SMRI **Semarang** 72.48 271 P P 10 12 43.7 +0.1
SMRI IAmb IAmb 10 13 26.6
comp=Z,220nm,0.9s
SMRI **Semarang** 72.48 271 P P 10 12 44.1 +0.5
comp=Z,13μmcomp=Z,289nm,0.9s
CTJI **Waduk Cacaban** 73.61 271 P P 10 12 50.7 +0.4
comp=Z,11μmcomp=Z,614nm,1.1s
KKM **Kota Kinabalu** 73.69 286 P P 10 12 51.3 +0.5
KKM **Kota Kinabalu** 73.69 286 P P 10 12 50.4 -0.4
KKM IAmb IAmb 10 12 53.2
comp=Z,177nm,1.0s
KPJI **Karang Pucung** 73.69 270 P P 10 12 50.9 +0.1
comp=Z,25μmcomp=Z,9μmcomp=Z,266nm,0.7s
JMZ **Minamidaito 2** 73.74 311 P P 10 12 52.4 +1.7
JHJ **Hachijo jima 2** 73.78 322 LR LR 10 45 44.8
comp=Z,11μm,18.1s,baz=145,slow=36
PMSA **Palmer Station** 73.90 156 LR LR 10 39 19.6
comp=Z,36μm,19.5s,baz=298,slow=31
PMSA **Palmer Station** 73.90 156 P P 10 12 53.2 +2.1
PMSA IAmb IAmb 10 13 19.2
comp=Z,188nm,1.1s
PMSA **Palmer Station** 73.90 156 IAMs_20 IAMs_20 10 39 18.5
comp=Z,35μm,20.0s
TGY **Tagaytay City** 74.10 296 LR LR 10 41 07.1
comp=Z,5μm,21.1s,baz=135,slow=32
BBJI **Bungbulang** 74.77 269 P P 10 12 56.9 -0.2
BBJI **Bungbulang** 74.77 269 P P 10 12 56.3 -0.9
BBJI IAmb IAmb 10 13 00.7
comp=Z,155nm,0.8s
BBJI **Bungbulang** 74.77 269 P P 10 12 56.5 -0.6
comp=Z,234nm,0.8s
LEM **Lembang** 75.08 270 P P 10 12 59.0 -0.1
XMI **Christmas Isla** 75.19 266 P P 10 13 00.0 +0.5
SBUM **Sibu** 75.34 281 P P 10 13 00.4 0.0
SBUM **Sibu** 75.34 281 P P 10 13 00.4 0.0
MAW **Mawson** 75.54 200 P P 10 13 03.0 +2.5
comp=Z,280nm,1.0s,baz=113,slow=6.9,SNR=66
comp=Z,280nm,1.0s
MAW **Mawson** 75.54 200 P P 10 13 03.2 +2.6
MAW **Mawson** 75.54 200 P P 10 13 03.2 +2.6
MAW pmax pmax
comp=Z,124nm,1.3s
JSG **Sagara** 75.82 322 P P 10 13 04.2 +1.6
SKJI **Sukabumi** 75.94 269 P P 10 13 03.1 -0.7
DBJI **Dramaga** 75.97 270 P P 10 13 04.2 +0.2
comp=Z,25μmcomp=Z,858nm,1.7s
TNG **Tangerang** 76.23 270 P P 10 13 04.4 -1.1
comp=Z,583nm,1.3s
TNG P **pP** 10 13 05.4 -1.8
MG04 **Isla Riesco** 76.34 143 IAMs_20 IAMs_20 10 39 30.4
comp=Z,27μm,20.0s
MG05 **Puerto Natales** 76.38 141 IAmb IAmb 10 13 11.8
comp=Z,194nm,0.9s
JOW **Kunigami** 76.39 310 P P 10 13 07.2 +1.2
MG03 **Isla Dawson** 76.46 144 IAmb IAmb 10 13 09.4
comp=Z,362nm,1.3s
MG03 IAMs_20 IAMs_20 10 39 59.6
comp=Z,35μm,20.0s
GO10 **Punta Arenas** 76.48 143 IAMs_20 IAMs_20 10 39 44.1
comp=Z,29μm,20.0s
GO09 **Cerro Castillo** 76.66 141 IAmb IAmb 10 13 13.6
comp=Z,303nm,1.1s
SBJI **Serang** 76.72 270 P P 10 13 07.0 -1.2
comp=Z,23μmcomp=Z,16μmcomp=Z,271nm,1.3s
CGJI **Cibinong** 76.88 269 P P 10 13 08.8 -0.3
TPI **Tanjungpandan** 76.90 274 P P 10 13 09.7 +0.5
comp=Z,24μmcomp=Z,8μmcomp=Z,250nm,1.3s
INU **Inuyama** 76.96 322 P P 10 13 09.1 +0.1
INU **Inuyama** 76.96 322 IAmb IAmb 10 13 25.3
comp=Z,227nm,1.0s
JGF **Kuroka** 76.96 322 P P 10 13 09.0 -0.1
JGF **Kuroka** 76.96 322 IAmb IAmb 10 13 28.8
comp=Z,187nm,0.8s
MJAR **Matsushiro Arr** 77.21 323 P P 10 13 09.6 -0.9
comp=Z,99nm,0.8s,baz=159,slow=5.7,SNR=62
MJAR PKPPKP **P'P'df** 10 40 20.0 +4.7
comp=Z,4.4nm,1.1s,baz=341,slow=2.7,SNR=5.2
MJAR LR LR 10 42 13.0
comp=Z,11μm,21.5s,baz=130,slow=32
comp=Z,99nm,0.8s
MJAR **Matsushiro Arr** 77.21 323 P P 10 13 10.0 -0.5
MJAR IAmb IAmb 10 13 28.8
comp=Z,216nm,1.1s
MJAR **Matsushiro Arr** 77.21 323 P P 10 13 10.0 -0.5
MJAR pmax pmax
comp=Z,216nm,1.1s
MAJO **Matsushiro** 77.21 323 P P 10 13 10.4 -0.1
MAJO **Matsushiro** 77.21 323 P P 10 13 09.8 -0.7
MAJO IAmb IAmb 10 13 26.6
comp=Z,204nm,0.9s
MAJO **Matsushiro** 77.21 323 P P 10 13 09.8 -0.7
MAJO pmax pmax
comp=Z,204nm,0.9s
MJB9 **Matsu-Tunnel** 77.22 323 IAmb IAmb 10 13 28.0
comp=Z,205nm,0.9s
MG01 **Puerto William** 77.37 146 IAMs_20 IAMs_20 10 39 56.8
comp=Z,23μm,20.0s
JMN **Monobe** 77.56 319 P P 10 13 13.5 +1.0
MG02 **Cerro Sombrero** 77.62 143 IAMs_20 IAMs_20 10 40 19.4
comp=Z,28μm,20.0s
GO08 **Villa O'Higgin** 77.84 138 IAmb IAmb 10 13 18.0
comp=Z,177nm,1.2s
GO08 IAMs_20 IAMs_20 10 40 32.8
comp=Z,30μm,20.0s
BLSI **Bandar Lampung** 77.84 270 P P 10 13 14.6 +0.1
comp=Z,16μmcomp=Z,8μmcomp=Z,274nm,0.9s
JSU **Suzuyama** 78.08 315 P P 10 13 15.7 +0.3
AY03 **Cochrane** 78.39 137 IAmb IAmb 10 13 23.8
comp=Z,261nm,1.1s
KLI **Kotabumi** 78.41 271 P P 10 13 17.5 -0.2
comp=Z,13μmcomp=Z,7μmcomp=Z,442nm,1.1s
KASI **Kota Agung** 78.43 270 P P 10 13 17.5 -0.3
comp=Z,17μmcomp=Z,7μmcomp=Z,439nm,1.0s
PPBI **Pangkal Pinang** 78.51 274 P P 10 13 18.2 -0.1
KLSI 78.60 271 P P 10 13 17.7 -1.1
AMKA **Amchitka** 78.84 357 IAmb IAmb 10 13 21.1
comp=Z,201nm,0.8s
JNU **Nakatsue** 78.92 317 LR LR 10 43 37.5
comp=Z,6μm,21.1s,baz=125,slow=32
TWGBT **Beinan** 79.02 303 P P 10 13 20.1 -0.7
LWLI **Liwa** 79.05 270 P P 10 13 20.5 -0.9
comp=Z,20μmcomp=Z,12μmcomp=Z,500nm,0.9s
JEM **Erimo** 79.08 330 P P 10 13 21.9 +1.3
MDSI **Maura Dua** 79.18 271 P P 10 13 20.8 -1.1
comp=Z,7μmcomp=Z,236nm,1.2s
YULB **Yu-li** 79.19 304 P P 10 13 20.9 -0.8
ADK **Adak** 79.23 359 P P 10 13 20.8 -0.4
ADK **Adak** 79.23 359 P P 10 13 20.5 -0.7
ADK **Adak** 79.23 359 P P 10 13 20.5 -0.7
ADK pmax pmax
comp=Z,530nm,1.0s
PMBI **Palembang** 79.37 272 IAMs_20 IAMs_20 10 51 17.3
comp=Z,32μm,19.0s
NACB **Ninganchiao** 79.44 304 IAMs_20 IAMs_20 10 48 39.7
comp=Z,16μm,18.0s
COYC **Coyhaique** 79.50 136 IAmb IAmb 10 13 27.4
comp=Z,440nm,1.2s
COYC **Coyhaique** 79.50 136 IAMs_20 IAMs_20 10 41 19.6
comp=Z,17μm,19.0s
YUK **Yuzh-Kuril'sk** 79.58 333 *e*P P 10 13 24.0 +0.7
YUK *e* 10 13 30.7
YUK *e* 10 16 23.7
YUK *e*PPP PPP 10 18 18.6
YUK *e*S **S** 10 23 27.8 +3.2
YUK *e*SS **SS** 10 28 36.7 +3.2
YUK *e*SSS SSS 10 31 56.1
YUK MLR MLR
comp=Z,16μm,19.0s
YUK MLR MLR
comp=N,10μm,17.0s
TPUB **Ta-pu** 79.64 303 P P 10 13 23.3 -0.9
TPUB **Ta-pu** 79.64 303 IAmb IAmb 10 13 26.6
comp=Z,243nm,0.9s
GO07 **Milladeo Hill,** 79.67 133 IAmb IAmb 10 13 28.1
comp=Z,304nm,1.1s
SSLB **Suanglung** 79.68 304 P P 10 13 23.9 -0.5
SSLB **Suanglung** 79.68 304 IAmb IAmb 10 13 25.9
comp=Z,230nm,0.9s
SSLB IAMs_20 IAMs_20 10 48 20.2
comp=Z,16μm,18.0s
AY01 **Puyuhuapi** 79.70 135 IAmb IAmb 10 13 31.7
comp=Z,343nm,1.2s
ELIB **Princess Elisa** 79.76 186 *d*P P 10 13 25.5 +1.2
comp=Z,218nm,1.3s
KUR **Kuril'sk** 79.80 335 *e*P P 10 13 23.1 -1.3
KUR *e* 10 16 23.9
KUR *e*S **S** 10 23 29.1 +2.3
KUR *i*SS **SS** 10 28 35.6 -1.1
KUR SSS SSS 10 32 02.1
KUR pmax pmax
comp=Z,651nm,1.5s
KUR pmax pmax
comp=Z,10μm,8.8s
KUR MLR MLR
comp=N,21μm,17.0s
KUR MLR MLR
comp=Z,17μm,17.0s
YHNB **Yeheng** 79.89 305 P P 10 13 26.3 +0.7
YHNB **Yeheng** 79.89 305 IAmb IAmb 10 13 28.2
comp=Z,452nm,1.2s
TATO **Taipei** 80.00 305 P P 10 13 25.7 -0.3
TATO **Taipei** 80.00 305 IAMs_20 IAMs_20 10 48 55.1
comp=Z,22μm,18.0s
TATO **Taipei** 80.00 305 P P 10 13 27.5 +1.4
TATO P P 10 13 27.5 +1.4
SYO **Syowa Base** 80.19 192 ⇓ *i*P P 10 13 27.4 +1.0
SYO **Syowa Base** 80.19 192 ⇑ *i*PcP **PcP** 10 13 34.2 +0.5
SYO **Syowa Base** 80.19 192 ⇓ *i*PKiKP **PKiKP** 10 18 57.4 +1.8
MNAI **Manna** 80.33 270 P P 10 13 28.7 +0.5
MNAI **Manna** 80.33 270 P P 10 13 28.0 -0.2
comp=Z,24μmcomp=Z,13μmcomp=Z,382nm,1.0s
VA04 **Juan Fernndez** 80.43 123 IAMs_20 IAMs_20 10 41 37.3
comp=Z,23μm,19.0s
EGSI **Enggano, Bengk** 80.48 269 P P 10 13 29.7 +0.7
comp=Z,11μmcomp=Z,428nm,0.9s
SHEM **Shemya Is, Ala** 80.57 354 LR LR 10 42 33.1
comp=Z,12μm,21.7s,baz=177,slow=31
SMY **Shemya** 80.57 354 IAmb IAmb 10 13 30.0
comp=Z,334nm,1.0s
TROLL **Troll, Antarti** 80.57 179 ⇑P P 10 13 30.1 +1.5
LL05 **Los Muermos** 80.61 132 IAMs_20 IAMs_20 10 41 42.7
comp=Z,28μm,20.0s
DSRI **Dabo** 80.67 274 P P 10 13 29.5 -0.5
comp=Z,22μmcomp=Z,8μmcomp=Z,201nm,1.7s
JTU **Tsushima** 80.78 317 P P 10 13 31.2 +1.2
SNAA **Sanae** 80.79 178 ⇑P P 10 13 30.7 +0.9
comp=Z,4μm,1.0s
SNAA **Sanae** 80.79 178 P P 10 13 30.5 +0.8
comp=Z,235nm,1.1s,baz=200,slow=4.7,SNR=45
comp=Z,235nm,1.1s
SNAA **Sanae** 80.79 178 P P 10 13 30.7 +0.9
SNAA IAmb IAmb 10 13 37.0
comp=Z,360nm,1.2s
SNAA IAMs_20 IAMs_20 10 50 41.5
comp=Z,22μm,18.0s
SNAA **Sanae** 80.79 178 P P 10 13 30.7 +0.9
SNAA pmax pmax
comp=Z,360nm,1.2s
SNAA MLR MLR
comp=Z,22μm,18.0s
LL02 **Futaleuf** 80.80 134 IAmb IAmb 10 13 34.1
comp=Z,398nm,1.2s
LL02 IAMs_20 IAMs_20 10 42 04.9
comp=Z,29μm,20.0s
LL01 **San Ignacio de** 80.83 133 IAmb IAmb 10 13 46.8
comp=Z,192nm,1.3s
VNA3 **Neumayer Olymp** 80.86 175 ⇑P P 10 13 30.8 +0.7
comp=Z,176nm,0.9s
JMBI **JAMBI** 80.97 273 P P 10 13 32.0 +0.4
KSI **Kapahiang** 80.97 271 P P 10 13 31.3 -0.4
JKA **Kamikawa-asahi** 81.01 331 IAmb IAmb 10 13 34.6
comp=Z,300nm,1.0s
ASAJ **Asahikawa** 81.01 331 LR LR 10 49 39.4
comp=Z,22μm,18.1s,baz=175,slow=36
UBSI **University, Be** 81.20 270 P P 10 13 33.3 +0.5
comp=Z,23μmcomp=Z,13μmcomp=Z,664nm,1.3s
VNA2 **Neumayer--Watz** 81.32 176 ⇑P P 10 13 33.5 +1.1
comp=Z,208nm,1.1s,baz=187,slow=4.1
TPRI **Tanjung Pinang** 81.37 276 P P 10 13 34.1 +0.4
comp=Z,23μmcomp=Z,170nm,1.0s
LR04 **Corral** 81.37 130 IAmb IAmb 10 13 36.7
comp=Z,257nm,1.1s
LR04 IAMs_20 IAMs_20 10 41 49.8
comp=Z,19μm,20.0s
LPIG **La Paz** 81.39 57 LR LR 10 43 23.7
comp=Z,38μm,18.3s,baz=234,slow=31
SLBS **Sierra La Lagu** 81.42 58 P P 10 13 33.4 -0.4
SLBS **Sierra La Lagu** 81.42 58 P P 10 13 34.3 +0.4
MASI **Maura Aman, Be** 81.52 271 P P 10 13 34.4 -0.2
VNA1 **Neumayer--Stat** 81.53 176 ⇑P P 10 13 35.2 +1.6
comp=Z,271nm,1.0s
UNV **Unalaska Valle** 81.58 5 P P 10 13 33.9 +0.1
UNV **Unalaska Valle** 81.58 5 P P 10 13 32.7 -1.1
baz=188,SNR=8.6
NVL **N'lazarevskaya** 81.68 183 *e*P P 10 13 33.4 -0.9
NVL *e* 10 16 40.3
NVL *e*S **S** 10 23 47.2 +1.1
NVL *e*SS **SS** 10 29 06.2 +3.9
NVL *e*SSS SSS 10 32 33.8
NVL pmax pmax
comp=Z,26nm,1.3s
NVL MLR MLR
comp=Z,1μm,17.1s
TJX **Tijuana** 81.80 47 IAmb IAmb 10 13 40.9
comp=Z,327nm,1.2s
SRIG **Santa Rosalia** 81.86 54 IAmb IAmb 10 13 37.6
comp=Z,231nm,1.2s
PKD **Bear Valley Ra** 81.90 42 IAmb IAmb 10 13 38.6
comp=Z,183nm,1.0s
JRSC **Jasper Ridge** 81.90 40 IAmb IAmb 10 13 38.2
comp=Z,288nm,1.1s

SKR	**Severo-Kuril's**	**81.91**	**342**	*e*P		**P**		**10 13 31.0**	**-4.6**
SKR				*e*S		**S**		**10 23 49.1**	**+0.4**
SKR				pmax	pmax				
	comp=Z,9µm,7.0s								
SKR				smax	smax				
	comp=N,7µm,13.7s								
SKR				smax	smax				
	comp=E,9µm,14.7s								
SKR				MLR	MLR				
	comp=Z,13µm,15.0s								
SAO	**San Andreas Ge**	**81.92**	**41**	IAmb	IAmb	10 13 38.8			
	comp=Z,189nm,1.1s								
PMPB	**Monarch Peak**	**81.93**	**42**	IAmb	IAmb	10 13 38.7			
	comp=Z,238nm,1.1s								
MCCM	**Marconi Confer**	**82.05**	**39**	IAmb	IAmb	10 13 44.5			
	comp=Z,262nm,1.4s								
QZH2	**Quanzhou**	**82.10**	**303**	⇓*i*P		**P**		**10 13 37.9**	**+0.7**
QZH2				S		**S**		**10 23 52.8**	**+1.0**
QZH2				pmax	pmax				
	comp=Z,600nm,1.1s								
QZH2				pmax	pmax				
	comp=Z,13µm,8.2s								
QZH2				L	L				
	comp=Z,7µm,16.8s								
QZH2				L	L				
	comp=Z,5µm,18.6s								
QZH2				L	L				
	comp=Z,13µm,17.5s								
OSI	**Osito Audit: C**	**82.11**	**44**	IAmb	IAmb	10 13 39.2			
	comp=Z,181nm,1.2s								
PASC	**Pasadena Art C**	**82.16**	**45**	IAmb	IAmb	10 13 39.5			
	comp=Z,138nm,1.1s								
COCO	**West Island**	**82.22**	**260**	IAMs_20	IAMs_20	10 51 29.0			
	comp=Z,26µm,19.0s								
COCO	**West Island**	**82.22**	**260**	P	**P**	**10 13 40.9**		**+2.8**	
COCO				P	**P**	**10 13 40.9**		**+2.8**	
COCO				S	**S**	**10 23 54.5**		**+1.0**	
COCO				S	**S**	**10 23 54.5**		**+1.0**	
COCO	**West Island**	**82.22**	**260**	P	**P**	**10 13 38.7**		**+0.5**	
	comp=Z,13µmcomp=Z,6µmcomp=Z,218nm,1.4s								
MWC	**Mount Wilson**	**82.27**	**45**	IAmb	IAmb	10 13 40.4			
	comp=Z,157nm,1.1s								
MYKOM	**Kota Tinggi**	**82.37**	**276**	P	**P**	**10 13 39.4**		**+0.5**	
MYKOM	**Kota Tinggi**	**82.37**	**276**	P	**P**	**10 13 39.5**		**+0.5**	
	comp=Z,22µmcomp=Z,8µmcomp=Z,270nm,1.7s								
HOPS	**Hopland Field**	**82.54**	**39**	IAmb	IAmb	10 13 42.9			
	comp=Z,279nm,1.3s								
GDXM	**Geysers**	**82.57**	**39**	IAmb	IAmb	10 13 43.4			
	comp=Z,169nm,1.2s								
KRJI	**Kerinci**	**82.69**	**271**	P	**P**	**10 13 40.5**		**-0.3**	
KCPM	**Cahto Peak**	**82.75**	**38**	IAmb	IAmb	10 13 43.0			
	comp=Z,175nm,1.2s								
DNR	**Dunn Ranch,Anz**	**82.75**	**46**	IAmb	IAmb	10 13 43.3			
	comp=Z,220nm,1.1s								
GO06	**Curarrehue**	**82.83**	**131**	IAMs_20	IAMs_20	10 46 34.4			
	comp=Z,15µm,18.0s								
PLCA	**Paso Flores**	**82.86**	**132**	P	**P**	**10 13 42.4**		**+1.1**	
	comp=Z,215nm,1.1s,baz=233,slow=5.5,SNR=64								
PLCA				PKKPbc	**PKKPbc**	**10 32 05.3**		**+1.0**	
	comp=Z,8.8nm,1.0s,baz=82,slow=2.7,SNR=8.6								
PLCA				PKPPKP		10 40 08.8			
	comp=Z,14nm,1.2s,baz=128,slow=3.4,SNR=5.1								
PLCA				LR	LR	10 43 37.6			
	comp=Z,24µm,19.7s,baz=244,slow=31								
	comp=Z,215nm,1.1s								
PLCA	**Paso Flores**	**82.86**	**132**	P	**P**	**10 13 42.2**		**+0.9**	
PLCA	**Paso Flores**	**82.86**	**132**	P	**P**	**10 13 42.2**		**+0.9**	
PLCA				pmax	pmax				
	comp=Z,370nm,1.2s								
PLCA	**Paso Flores**	**82.86**	**132**	*e*P	**P**	**10 13 42.2**		**+0.9**	
FALS	**False Pass**	**82.88**	**7**	IAMs_20	IAMs_20	10 47 15.7			
	comp=Z,17µm,20.0s								
FALS	**False Pass**	**82.88**	**7**	P	**P**	**10 13 40.3**		**-0.3**	
	baz=191								
CPBX	**Cerro Prieto**	**82.88**	**48**	IAmb	IAmb	10 13 45.8			
	comp=Z,140nm,1.0s								
PFO	**Pinyon Flats O**	**82.89**	**46**	LR	LR	10 45 24.1			
	comp=Z,55µm,18.2s,baz=238,slow=32								
PFO	**Pinyon Flats O**	**82.89**	**46**	P	**P**	**10 13 41.4**		**0.0**	
PFO				IAmb	IAmb	10 13 43.3			
	comp=Z,126nm,1.1s								
PFO	**Pinyon Flats O**	**82.89**	**46**	P	**P**	**10 13 41.4**		**0.0**	
PFO				pmax	pmax				
	comp=Z,126nm,1.2s								
ISA	**Isabella, Lake**	**82.96**	**44**	IAmb	IAmb	10 13 44.4			
	comp=Z,231nm,1.1s								
KMPM	**Mount Pierce**	**82.98**	**37**	IAMs_20	IAMs_20	10 48 55.7			
	comp=Z,25µm,18.0s								
BI05	**Punta Hualpn**	**83.05**	**128**	IAmb	IAmb	10 13 51.0			
	comp=Z,320nm,1.4s								
YSS	**Yuzhno-Sakhali**	**83.22**	**333**	P	**P**	**10 13 43.7**		**+1.1**	
YSS	**Yuzhno-Sakhali**	**83.22**	**333**	P	**P**	**10 13 43.0**		**+0.5**	
YSS	**Yuzhno-Sakhali**	**83.22**	**333**	*k*e*k*P		**P**		**10 13 43.6**	**+1.0**
YSS				*e*S		**SKSac**		**10 24 02.5**	**-1.5**
YSS				pmax	pmax				
	comp=Z,580nm,0.8s								
YSS				pmax	pmax				
	comp=Z,10µm,10.4s								
YSS				pmax	pmax				
	comp=N,2µm,9.7s								
YSS				pmax	pmax				
	comp=E,1µm,9.2s								
YSS				smax	smax				
	comp=N,4µm,9.0s								
YSS				smax	smax				
	comp=E,11µm,9.0s								
YSS				MLR	MLR				
	comp=Z,8µm,17.0s								
YSS				MLR	MLR				
	comp=E,6µm,18.0s								
TJN	**Taejon**	**83.25**	**317**	P	**P**	**10 13 43.6**		**+0.7**	
JCC	**Jacoby Creek,**	**83.31**	**37**	IAmb	IAmb	10 14 18.1			
	comp=Z,300nm,1.4s								
JCC				IAMs_20	IAMs_20	10 48 06.6			
	comp=Z,18µm,18.0s								
LRMC	**Laurel Mtn Rad**	**83.32**	**44**	IAmb	IAmb	10 13 45.6			
	comp=Z,126nm,1.0s								
CNBA	**Chernabura Isl**	**83.33**	**9**	IAMs_20	IAMs_20	10 53 50.9			
	comp=Z,16µm,18.0s								
CHNA	**Chernabura Isl**	**83.34**	**9**	P	**P**	**10 13 43.1**		**+0.2**	
CHNA	**Chernabura Isl**	**83.34**	**9**	P	**P**	**10 13 43.1**		**+0.2**	
	baz=194,SNR=7.5								
CMB	**Columbia Colle**	**83.40**	**41**	IAmb	IAmb	10 13 46.3			
	comp=Z,215nm,1.1s								
PET	**Petropavlovsk**	**83.42**	**345**	*e*P		**P**		**10 13 44.1**	**+0.7**
PET				*e*				10 16 53.5	
PET				*e*S		**SKSac**		**10 24 05.6**	**+0.6**
PET				*e*SS		**SS**		**10 29 28.3**	**-2.1**
PET				pmax	pmax				
	comp=Z,116nm,1.0s								
PET				pmax	pmax				
	comp=Z,7µm,10.6s								
PET				pmax	pmax				
	comp=Z,8µm,10.2s								
PET				pmax	pmax				
	comp=Z,4µm,10.7s								
PET				pmax	pmax				
	comp=Z,3µm,9.7s								
PET				smax	smax				
	comp=E,4µm,10.6s								
PET				smax	smax				
	comp=E,6µm,5.8s								
PET				smax	smax				
	comp=N,5µm,12.1s								
PET				smax	smax				
	comp=N,5µm,13.8s								
SUTB	**Sutter Butte**	**83.42**	**39**	IAMs_20	IAMs_20	10 45 42.7			
	comp=Z,20µm,19.0s								
KHMM	**Horse Mountain**	**83.51**	**37**	IAmb	IAmb	10 13 47.0			
	comp=Z,117nm,1.1s								
KHMM				IAMs_20	IAMs_20	10 52 19.8			
	comp=Z,22µm,18.0s								
CCCA	**Chr Cany lake**	**83.55**	**44**	IAmb	IAmb	10 13 47.0			
	comp=Z,196nm,1.1s								
KRPM	**Rodgers**	**83.56**	**37**	IAMs_20	IAMs_20	10 48 06.1			
	comp=Z,24µm,19.0s								
BC3	**Big Chuckawall**	**83.56**	**47**	IAmb	IAmb	10 13 47.8			
	comp=Z,214nm,1.1s								
GLA	**Glamis**	**83.59**	**48**	IAmb	IAmb	10 13 47.8			
	comp=Z,208nm,1.1s								
GLA				IAMs_20	IAMs_20	10 44 41.0			
	comp=Z,29µm,19.0s								
CLC	**China Lake**	**83.60**	**44**	IAmb	IAmb	10 13 47.0			
	comp=Z,224nm,1.2s								
KSRS	**Korea Array**	**83.63**	**318**	P	**P**	**10 13 45.9**		**+1.0**	
	comp=Z,61nm,0.8s,baz=140,slow=5.7,SNR=118								
KSRS				LR	LR	10 50 54.1			
	comp=Z,3µm,18.0s,baz=135,slow=36								
	comp=Z,61nm,0.8s								
KHBM	**Hayfork Bally**	**83.64**	**37**	IAmb	IAmb	10 13 47.5			
	comp=Z,159nm,1.1s								
KHBM				IAMs_20	IAMs_20	10 48 28.1			
	comp=Z,23µm,18.0s								
KSAR	**Wonju Array Be**	**83.64**	**318**	P	**P**	**10 13 45.5**		**+0.5**	
KSAR	**Wonju Array Be**	**83.64**	**318**	P	**P**	**10 13 45.5**		**+0.5**	
PPSI	**Pulau Pagai**	**83.67**	**270**	P	**P**	**10 13 45.6**		**-0.1**	
AFDM	**Forest Hills D**	**83.69**	**40**	IAmb	IAmb	10 13 47.6			
	comp=Z,166nm,1.1s								
KS19	**Wonju Array Si**	**83.69**	**318**	P	**P**	**10 13 44.6**		**-0.6**	
SDPT	**Sand Point**	**83.72**	**9**	P	**P**	**10 13 44.7**		**-0.2**	
SDPT	**Sand Point**	**83.72**	**9**	P	**P**	**10 13 45.2**		**+0.3**	
	baz=194,SNR=7.4								
PEA0B	**Petropavlovsk-**	**83.72**	**344**	P	**P**	**10 13 44.7**		**-0.3**	
PEA0B	**Petropavlovsk-**	**83.72**	**344**	P	**P**	**10 13 44.7**		**-0.3**	
PEA0B				pmax	pmax				
	comp=Z,269nm,1.0s								
PETK	**Petropavlovsk-**	**83.72**	**344**	P	**P**	**10 13 45.0**		**0.0**	
	comp=Z,178nm,0.8s,baz=116,slow=5.9,SNR=87								
PETK				LR	LR	10 45 07.2			
	comp=Z,14µm,21.3s,baz=151,slow=32								
	comp=Z,178nm,0.8s								
PETK	**Petropavlovsk-**	**83.72**	**344**	P	**P**	**10 13 44.6**		**-0.4**	
GSC	**Goldstone, Bar**	**83.75**	**45**	IAmb	IAmb	10 13 48.3			
	comp=Z,165nm,1.0s								
ORV	**Oroville**	**83.81**	**39**	IAmb	IAmb	10 13 47.8			
	comp=Z,142nm,1.2s								
SSE	**Sheshan**	**83.88**	**310**	P	**P**	**10 13 47.4**		**+1.1**	
SSE				S	**S**	**10 24 11.8**		**+2.2**	
SSE				pmax	pmax				
	comp=Z,51nm,1.2s								
SSE				pmax	pmax				
	comp=Z,5µm,7.8s								
SSE				L	L				
	comp=Z,2µm,18.8s								
SSE				L	L				
	comp=Z,2µm,17.0s								
MDPB	**Devils Postpil**	**83.90**	**42**	IAmb	IAmb	10 13 49.2			
	comp=Z,156nm,1.1s								
EFI	**East Falkland**	**83.95**	**146**	P	**P**	**10 13 47.0**		**+0.5**	
EFI	**East Falkland**	**83.95**	**146**	*ce*P	**P**	**10 13 47.1**		**+0.6**	
EFI				pmax	pmax				
	comp=Z,863nm,1.1s								
EFI				MLR	MLR				
	comp=Z,9µm,17.0s								
EFI	**East Falkland**	**83.95**	**146**	P	**P**	**10 13 47.3**		**+0.8**	
HKC	**Hong Kong Obse**	**83.98**	**299**	⇑P	**P**	**10 13 49.0**		**+2.0**	
PDSI	**Padang**	**84.11**	**272**	P	**P**	**10 13 46.1**		**-1.9**	
	comp=Z,14µmcomp=Z,6µmcomp=Z,250nm,1.0s								
113A	**Mohawk Valley,**	**84.12**	**48**	IAmb	IAmb	10 13 50.9			
	comp=Z,303nm,1.7s								
N02D	**Trinity Center**	**84.13**	**37**	IAMs_20	IAMs_20	10 48 55.3			
	comp=Z,18µm,18.0s								
BKNI	**Bangkinang**	**84.17**	**273**	P	**P**	**10 13 47.7**		**-0.6**	
BKNI	**Bangkinang**	**84.17**	**273**	IAMs_20	IAMs_20	10 55 02.4			
	comp=Z,26µm,18.0s								
BKNI	**Bangkinang**	**84.17**	**273**	P	**P**	**10 13 48.2**		**-0.1**	
	comp=Z,23µmcomp=Z,10µmcomp=Z,500nm,1.2s								
KBO	**Bosley Butte**	**84.21**	**36**	IAMs_20	IAMs_20	10 48 24.1			
	comp=Z,20µm,18.0s								
BLYC	**Blythe**	**84.23**	**47**	IAmb	IAmb	10 13 50.3			
	comp=Z,140nm,1.1s								
214A	**Organ Pipe Nat**	**84.26**	**50**	IAmb	IAmb	10 13 52.8			
	comp=Z,175nm,1.4s								
M02C	**Callahan**	**84.35**	**37**	IAMs_20	IAMs_20	10 48 32.9			
	comp=Z,18µm,18.0s								
PPI	**Padang Panjang**	**84.38**	**272**	P	**P**	**10 13 47.4**		**-2.0**	
	comp=Z,16µmcomp=Z,5µmcomp=Z,105nm,1.0s								
DSP	**Deep Springs**	**84.39**	**43**	IAmb	IAmb	10 13 51.6			
	comp=Z,152nm,1.1s								
GWY	**Greenwater Val**	**84.41**	**44**	IAmb	IAmb	10 13 51.0			
	comp=Z,166nm,1.1s								
TEY	**Ternei**	**84.42**	**328**	⇓*e*P		**P**		**10 13 49.8**	**+1.1**
TEY				pmax	pmax				
	comp=N,30nm,1.0s								
TEY				pmax	pmax				
	comp=Z,30nm,1.0s								
TEY				pmax	pmax				
	comp=E,100nm,9.8s								
TEY				pmax	pmax				
	comp=N,200nm,9.7s								
TEY				pmax	pmax				
	comp=Z,700nm,9.5s								
TEY				MLR	MLR				
	comp=E,100nm,18.0s								
TEY				MLR	MLR				
	comp=N,100nm,17.0s								
TEY				MLR	MLR				
	comp=Z,200nm,18.0s								
INCN	**Inchon**	**84.42**	**318**	P	**P**	**10 13 48.8**		**-0.1**	
INCN				IAmb	IAmb	10 13 57.5			
	comp=Z,148nm,1.2s								
INCN	**Inchon**	**84.42**	**318**	P	**P**	**10 13 48.8**		**-0.1**	
INCN				pmax	pmax				
	comp=Z,149nm,1.3s								
INCN	**Inchon**	**84.42**	**318**	P	**P**	**10 13 49.2**		**+0.2**	
INCN				P	**P**	**10 13 49.2**		**+0.2**	
INCN				S	**S**	**10 24 18.2**		**+3.4**	
INCN				S	**S**	**10 24 18.2**		**+3.4**	
BI02	**San Fabin de**	**84.43**	**129**	IAmb	IAmb	10 13 54.2			
	comp=Z,216nm,1.1s								
BI02				IAMs_20	IAMs_20	10 43 55.7			
	comp=Z,17µm,20.0s								
FURC	**Furnace Creek,**	**84.47**	**44**	IAmb	IAmb	10 13 51.3			
	comp=Z,171nm,1.2s								
LHV	**Little Huntoon**	**84.65**	**42**	IAmb	IAmb	10 13 52.5			
	comp=Z,221nm,1.2s								
SPIA	**Saint Paul Isl**	**84.65**	**3**	P	**P**	**10 13 49.6**		**0.0**	
	baz=185								
MTPC	**Mountain Pass**	**84.66**	**45**	IAmb	IAmb	10 13 53.4			
	comp=Z,238nm,1.1s								
BEKR	**Beckworth**	**84.66**	**39**	IAmb	IAmb	10 13 52.2			
	comp=Z,132nm,1.2s								
YBH	**Yreka Blue Hor**	**84.66**	**37**	LR	LR	10 47 51.4			
	comp=Z,1µm,18.1s,baz=251,slow=33								
YBH	**Yreka Blue Hor**	**84.66**	**37**	IAmb	IAmb	10 14 13.6			
	comp=Z,175nm,1.2s								
GO05	**Hualane**	**84.80**	**127**	IAMs_20	IAMs_20	10 43 43.4			
	comp=Z,16µm,20.0s								
WCT	**Wildcat Mounta**	**84.83**	**44**	IAmb	IAmb	10 13 54.6			
	comp=Z,212nm,1.5s								
K02D	**Willamette Mer**	**84.84**	**36**	IAmb	IAmb	10 13 54.0			
	comp=Z,136nm,1.1s								
NVAR	**Mina Array Bea**	**84.88**	**42**	P	**P**	**10 13 51.7**		**+0.2**	
	comp=Z,135nm,0.9s,baz=221,slow=6.9,SNR=277								
NVAR				PKKP	**PKKPdf**	**10 31 47.1**		**-7.0**	
	comp=Z,1.9nm,1.1s,baz=166,slow=3.1,SNR=3.6								
NVAR				PKKPbc	**PKKPbc**	**10 32 02.1**		**+1.1**	
	comp=Z,3.3nm,0.9s,baz=94,slow=2.1,SNR=8.8								
NVAR				PKPPKP	**P'P'df**	**10 39 58.3**		**-4.0**	
	comp=Z,1.4nm,0.9s,baz=37,slow=3.1,SNR=3.8								
NVAR				LR	LR	10 47 47.5			
	comp=Z,79µm,18.1s,baz=238,slow=33								
	comp=Z,135nm,0.9s								
CHIR	**Chirikof Islan**	**84.92**	**11**	P	**P**	**10 13 51.0**		**0.0**	
CHIR	**Chirikof Islan**	**84.92**	**11**	P	**P**	**10 13 51.2**		**+0.2**	
	baz=198								
CHIR				S	**S**	**10 24 23.5**		**+4.6**	
	baz=198								
CHGN	**Chignik**	**84.94**	**10**	P	**P**	**10 13 51.1**		**0.0**	
	baz=195,SNR=7.2								
CHGN				S	**S**	**10 24 22.9**		**+3.9**	
	baz=195								
J01E	**Myrtle Point**	**85.04**	**35**	IAmb	IAmb	10 13 54.7			
	comp=Z,196nm,1.0s								
PAHR	**Pah Rah Range**	**85.11**	**40**	IAmb	IAmb	10 13 54.9			
	comp=Z,158nm,1.0s								
GZH2	**Guangzhou**	**85.11**	**300**	P	**P**	**10 13 54.4**		**+1.6**	
GZH2				PP	**PP**	**10 17 12.3**		**+1.9**	
GZH2				S	**SKSac**	**10 24 17.0**		**-0.3**	
GZH2				pmax	pmax				
	comp=Z,430nm,1.2s								
GZH2				L	L				
	comp=Z,2µm,15.1s								
GZH2				L	L				
	comp=Z,4µm,16.9s								
GZH2				L	L				
	comp=Z,12µm,32.9s								
SISI	**Saibi**	**85.14**	**271**	P	**P**	**10 13 53.5**		**+0.3**	
	comp=Z,13µmcomp=Z,205nm,1.0s								
TPNV	**Topopah Spring**	**85.16**	**44**	IAmb	IAmb	10 13 55.2			
	comp=Z,181nm,1.1s								
UGL	**Uglegorsk**	**85.21**	**334**	*e*P	**P**	**10 13 52.6**		**0.0**	
UGL				*e*S	**S**	**10 24 23.7**		**+1.7**	
UGL				*e*SS	**SS**	**10 29 54.0**		**-3.0**	
UGL				pmax	pmax				
	comp=Z,200nm,1.0s								
UGL				pmax	pmax				
	comp=Z,10µm,10.0s								
UGL				smax	smax				
	comp=E,10µm,9.2s								
UGL				smax	smax				
	comp=N,9µm,7.3s								
UGL				MLR	MLR				
	comp=N,3µm,17.0s								
L04D	**Klamath Falls**	**85.22**	**37**	IAmb	IAmb	10 13 55.5			
	comp=Z,219nm,1.0s								
V12A	**Nelson**	**85.25**	**45**	IAmb	IAmb	10 13 55.8			
	comp=Z,128nm,1.2s								
VLA	**Vladivostok**	**85.34**	**324**	*i*P	**P**	**10 13 53.5**		**+0.1**	
VLA				pmax	pmax				
	comp=Z,86nm,1.2s								
VLA				MLR	MLR				
	comp=Z,8µm,18.0s								
Y14A	**Wickenburg**	**85.34**	**48**	IAmb	IAmb	10 13 56.4			
	comp=Z,191nm,1.0s								
W13A	**Hualapai Mount**	**85.48**	**46**	IAmb	IAmb	10 13 57.4			
	comp=Z,120nm,1.0s								
BBOR	**Butler Butte**	**85.49**	**36**	IAmb	IAmb	10 14 07.9			
	comp=Z,112nm,1.1s								
SHPR	**Sheep Range**	**85.55**	**45**	IAmb	IAmb	10 13 58.7			
	comp=Z,155nm,1.4s								
MNSI	**Mandailing Nat**	**85.68**	**273**	P	**P**	**10 13 54.6**		**-1.3**	
	comp=Z,6µmcomp=Z,171nm,0.7s								
QIZ	**Qiongzhong**	**85.69**	**294**	P	**P**	**10 13 57.0**		**+1.2**	
QIZ	**Qiongzhong**	**85.69**	**294**	P	**P**	**10 13 56.9**		**+1.2**	
QIZ				PP	**PP**	**10 17 17.6**		**+2.4**	
QIZ				S	**S**	**10 24 25.6**		**-2.6**	
QIZ				pmax	pmax				
	comp=Z,130nm,1.8s								
QIZ				pmax	pmax				
	comp=Z,9µm,8.2s								
QIZ				L	L				
	comp=Z,3µm,23.5s								
QIZ				L	L				
	comp=Z,2µm,20.7s								
QIZ				L	L				
	comp=Z,8µm,38.9s								
BO01	**Tunca**	**85.71**	**127**	IAmb	IAmb	10 13 58.5			
	comp=Z,208nm,1.3s								
BO01				IAMs_20	IAMs_20	10 44 19.5			
	comp=Z,21µm,19.0s								
I03D	**Drain, OR**	**85.72**	**35**	IAmb	IAmb	10 13 57.5			
	comp=Z,218nm,1.2s								
BO02	**Sierra Bellavi**	**85.72**	**127**	IAMs_20	IAMs_20	10 44 22.9			
	comp=Z,16µm,20.0s								
I02E	**Swisshome, OR**	**85.76**	**35**	IAmb	IAmb	10 14 25.2			
	comp=Z,274nm,1.5s								
K04D	**Chiloquin, OR**	**85.79**	**37**	IAmb	IAmb	10 13 58.3			
	comp=Z,183nm,1.0s								
TUC	**Tucson**	**85.84**	**50**	P	**P**	**10 13 56.6**		**+0.3**	
TUC	**Tucson**	**85.84**	**50**	IAMs_20	IAMs_20	10 51 03.0			
	comp=Z,18µm,18.0s								
TUC	**Tucson**	**85.84**	**50**	P	**P**	**10 13 56.6**		**+0.3**	
TUC				pmax	pmax				
	comp=Z,246nm,1.0s								
TUC				MLR	MLR				
	comp=Z,18µm,18.0s								
TUC	**Tucson**	**85.84**	**50**	P	**P**	**10 13 57.3**		**+0.9**	
MT01	**Popeta**	**85.86**	**126**	IAMs_20	IAMs_20	10 44 14.4			
	comp=Z,24µm,20.0s								
SII	**Sitkinak Islan**	**85.88**	**12**	P	**P**	**10 13 56.0**		**+0.2**	
SII	**Sitkinak Islan**	**85.88**	**12**	IAMs_20	IAMs_20	10 49 55.0			
	comp=Z,22µm,20.0s								
SII	**Sitkinak Islan**	**85.88**	**12**	P	**P**	**10 13 56.3**		**+0.5**	
	baz=199								
SII				S	**S**	**10 24 31.1**		**+2.7**	
	baz=199								
S11A	**Rachel**	**85.91**	**44**	IAmb	IAmb	10 13 59.2			
	comp=Z,162nm,1.0s								
VA01	**Torpederas**	**86.00**	**125**	IAMs_20	IAMs_20	10 43 56.3			
	comp=Z,30nm,20.0s								
USRK	**Ussuriysk Ar.**	**86.05**	**325**	P	**P**	**10 13 57.9**		**+1.0**	
	comp=Z,216nm,1.0s,baz=116,slow=4.4,SNR=120								
USRK				PKKPbc	**PKKPbc**	**10 31 58.7**		**+0.5**	
	comp=Z,6.9nm,1.1s,baz=279,slow=4.0,SNR=7.5								
	comp=Z,216nm,1.0s								
NJ2	**Nanjing**	**86.05**	**309**	⇓P	**P**	**10 13 58.3**		**+1.1**	
NJ2				PP	**PP**	**10 17 18.0**		**+0.2**	
NJ2				S	**S**	**10 24 32.8**		**+1.7**	
NJ2				SS	**SS**	**10 30 12.6**		**+2.6**	
NJ2				pmax	pmax				
	comp=Z,300nm,1.3s								
NJ2				pmax	pmax				
	comp=Z,29µm,9.1s								
NJ2				L	L				
	comp=Z,17µm,17.5s								
NJ2				L	L				
	comp=Z,6µm,17.1s								
NJ2				L	L				
	comp=Z,14µm,16.7s								
MOIG	**Morelia**	**86.08**	**66**	IAmb	IAmb	10 14 02.5			
	comp=Z,209nm,1.1s								
MT09	**Talagante**	**86.09**	**126**	IAMs_20	IAMs_20	10 44 30.6			
	comp=Z,22µm,20.0s								
EDS3	**Malargue**	**86.19**	**129**	*e*P	**P**	**10 13 59.0**		**+0.7**	
MT02	**Curacav**	**86.25**	**126**	IAmb	IAmb	10 14 08.1			
	comp=Z,269nm,1.1s								
MT02				IAMs_20	IAMs_20	10 44 34.7			
	comp=Z,32µm,20.0s								
BO04	**La Punta**	**86.26**	**126**	IAmb	IAmb	10 14 05.0			
	comp=Z,200nm,1.2s								
BO04				IAMs_20	IAMs_20	10 44 26.9			
	comp=Z,21µm,20.0s								
BUCK	**Buck Mountain**	**86.26**	**35**	IAmb	IAmb	10 14 01.5			
	comp=Z,276nm,1.2s								
I04A	**Tendick Farm,**	**86.27**	**36**	IAmb	IAmb	10 14 00.8			
	comp=Z,204nm,1.3s								
R16K	**Pilot Point**	**86.28

PEL **Peldehue** 86.64 126 P **P** 10 14 00.8 +0.4
X16A **Lo Mia Camp, P** 86.66 48 IAmb IAmb 10 14 03.6
comp=Z,216nm,1.0s
OHAK **Old Harbor** 86.67 12 P **P** 10 13 59.8 +0.2
OHAK **Old Harbor** 86.67 12 P **P** 10 13 59.8 +0.2
baz=200,SNR=22
OHAK S **S** 10 24 39.9 +3.9
baz=200
WIFE **Three Sisters-** 86.76 36 IAmb IAmb 10 14 03.9
comp=Z,253nm,1.4s
KULM **Kulim** 86.82 278 P **P** 10 14 01.9 +0.4
KULM **Kulim** 86.82 278 IAMs_20 IAMs_20 10 57 17.2
comp=Z,15μm,19.0s
KULM **Kulim** 86.82 278 P **P** 10 14 01.5 0.0
comp=Z,21μmcomp=Z,6μmcomp=Z,384nm,1.7s
G03D **McMinnville, O** 86.83 34 IAmb IAmb 10 14 04.2
comp=Z,174nm,1.3s
VA03 **San Esteban** 86.93 125 IAmb IAmb 10 14 04.7
comp=Z,191nm,1.2s
VA03 IAMs_20 IAMs_20 10 44 44.6
comp=Z,26μm,21.0s
MT08 **Bocatoma Ro** 86.96 126 IAMs_20 IAMs_20 10 44 49.9
comp=Z,24μm,20.0s
CO04 **Los Peladeros** 86.99 125 IAmb IAmb 10 14 06.9
comp=Z,152nm,1.1s
CO04 IAMs_20 IAMs_20 10 44 45.2
comp=Z,23μm,21.0s
H04A **Detroit Lake** 87.01 35 IAmb IAmb 10 14 04.4
comp=Z,122nm,1.1s
LCMT **Little Creek M** 87.07 45 IAmb IAmb 10 14 05.2
comp=Z,101nm,1.0s
RPSI **Rantau Prapat** 87.14 275 P **P** 10 14 02.8 -0.3
RPSI IAMs_20 IAMs_20 10 59 16.0
comp=Z,28μm,18.0s
TLIG **Tlapa** 87.15 69 IAmb IAmb 10 14 06.9
comp=Z,279nm,1.4s
PSI **Prapat** 87.19 275 P **P** 10 14 03.3 -0.1
PSI **Prapat** 87.19 275 P **P** 10 14 02.8 -0.6
PSI pmax pmax
comp=Z,796nm,1.2s
PSI **Prapat** 87.19 275 P **P** 10 14 02.2 -1.2
comp=Z,15μmcomp=Z,7μmcomp=Z,586nm,1.1s
I05D **Terrebonne, OR** 87.20 36 IAmb IAmb 10 14 05.8
comp=Z,181nm,1.3s
F03A **Seaside** 87.20 33 IAmb IAmb 10 14 25.2
comp=Z,161nm,1.3s
Q17K **Contact Creek** 87.21 10 P **P** 10 14 02.1 -0.3
baz=198
Q17K S **S** 10 24 41.8 +0.3
baz=198
G04A **Mulino** 87.22 35 IAmb IAmb 10 14 30.9
comp=Z,117nm,0.9s
U15A **North Rim** 87.31 46 IAmb IAmb 10 14 06.8
comp=Z,175nm,1.0s
KDAK **Kodiak Island** 87.33 12 LR LR 10 50 43.8
comp=Z,12μm,18.4s,baz=205,slow=34
KDAK **Kodiak Island** 87.33 12 P **P** 10 14 02.7 -0.1
KDAK IAmb IAmb 10 14 04.8
comp=Z,127nm,1.1s
KDAK **Kodiak Island** 87.33 12 IAMs_20 IAMs_20 10 50 41.3
comp=Z,17μm,19.0s
KDAK **Kodiak Island** 87.33 12*d i* P **P** 10 14 02.9 +0.1
KDAK pmax pmax
comp=Z,158nm,1.2s
KDAK **Kodiak Island** 87.33 12 P **P** 10 14 03.1 +0.3
baz=200
KDAK S **S** 10 24 44.5 +2.1
baz=200
KDAK **Kodiak Island** 87.33 12 P **P** 10 14 03.3 +0.5
WVOR **Wild Horse Val** 87.35 38 IAmb IAmb 10 14 26.3
comp=Z,105nm,1.1s
WUAZ **Wupatki** 87.36 47 IAmb IAmb 10 14 06.3
comp=Z,176nm,1.1s
WUAZ IAMs_20 IAMs_20 10 47 07.7
comp=Z,25μm,19.0s
CO02 **Combarbal** 87.40 124 IAMs_20 IAMs_20 10 45 15.0
comp=Z,17μm,20.0s
RADR **Rader Ridge** 87.44 33 IAmb IAmb 10 15 01.4
comp=Z,204nm,1.3s
O14K **Tigyukauivet M** 87.44 7 IAMs_20 IAMs_20 10 53 36.2
comp=Z,18μm,19.0s
O14K **Tigyukauivet M** 87.44 7 P **P** 10 14 03.8 +0.5
baz=193
O14K S **S** 10 24 46.1 +2.7
baz=193
Q16K **King Salmon** 87.49 10 P **P** 10 14 03.7 +0.1
baz=197,SNR=33
Q16K S **S** 10 24 46.7 +2.8
baz=197
SZCU **Shurtz Canyon** 87.52 45 IAmb IAmb 10 14 07.1
comp=Z,125nm,1.1s
UNM **Universidad Na** 87.53 67 IAMs_20 IAMs_20 10 44 28.8
comp=Z,16μm,20.0s
O15K **Ungalikthiuk R** 87.53 8 IAMs_20 IAMs_20 10 57 04.7
comp=Z,16μm,19.0s
O15K **Ungalikthiuk R** 87.53 8 P **P** 10 14 03.6 -0.2
baz=194,SNR=14
O15K S **S** 10 24 47.2 +2.9
baz=194
MDJ **Mudanjiang** 87.57 324 P **P** 10 14 05.2 +0.9
MDJ **Mudanjiang** 87.57 324 IAMs_20 IAMs_20 10 50 44.0
comp=Z,16μm,20.0s
MDJ **Mudanjiang** 87.57 324 P **P** 10 14 05.1 +0.8
MDJ S **S** 10 24 48.4 +3.1
MDJ sS ScS 10 24 55.6 +3.5
MDJ pmax pmax
comp=Z,160nm,1.2s
MDJ pmax pmax
comp=Z,12μm,7.8s
MDJ L L
comp=Z,12μm,19.9s
MDJ L L
comp=Z,6μm,19.9s
MDJ L L
comp=Z,21μm,19.1s
F04D **Rainier, OR** 87.58 34 IAmb IAmb 10 14 07.1
comp=Z,259nm,1.3s
P16K **Nushagak River** 87.64 9 IAMs_20 IAMs_20 10 56 35.5
comp=Z,15μm,18.0s
P16K **Nushagak River** 87.64 9 P **P** 10 14 03.8 -0.4
baz=196,SNR=37
GSI **Gunungsitoli** 87.69 273 P **P** 10 14 07.5 +1.8
GSI **Gunungsitoli** 87.69 273 P **P** 10 14 06.3 +0.6
X18A **Snowflake** 87.71 49 IAmb IAmb 10 14 10.4
comp=Z,186nm,1.4s
CO03 **El Pedregal** 87.81 124 P **P** 10 14 06.2 0.0
TSI **Tuntungan** 87.83 275 P **P** 10 14 05.8 -0.6
comp=Z,18μmcomp=Z,10μmcomp=Z,614nm,1.2s
G05A **Wamic** 87.84 35 IAmb IAmb 10 14 51.2
comp=Z,144nm,1.2s
CO05 **La Serena** 87.88 123 IAmb IAmb 10 14 08.7
comp=Z,135nm,1.1s
CO05 IAMs_20 IAMs_20 10 45 05.6
comp=Z,18μm,20.0s
WISH **Wishkah** 87.95 33 IAmb IAmb 10 14 52.2
comp=Z,227nm,1.3s
AAGR **Agrelo** 88.00 126 ⇓*e* P **P** 10 14 08.2 +1.1
P17K **Kvichak River** 88.02 10 P **P** 10 14 05.8 -0.2
baz=197,SNR=41
121A **Cookes Peak, D** 88.04 52 IAmb IAmb 10 14 09.7
comp=Z,107nm,1.1s
N14K **Kuskokwak Cree** 88.05 7 IAMs_20 IAMs_20 10 57 42.3
comp=Z,15μm,19.0s
N14K **Kuskokwak Cree** 88.05 7 P **P** 10 14 07.0 +0.8
baz=192,SNR=117
AUSP **Uspallata** 88.05 126 *e* P **P** 10 14 09.0 +1.4
J08A **Circle Bar Ran** 88.06 38 IAmb IAmb 10 14 09.6
comp=Z,135nm,1.1s
GO04 **Tololo Observa** 88.08 123 IAmb IAmb 10 14 09.8
comp=Z,101nm,1.1s
M11K **Mekoryuk** 88.09 5 IAMs_20 IAMs_20 10 52 29.6
comp=Z,16μm,19.0s
M11K **Mekoryuk** 88.09 5 P **P** 10 14 08.1 +1.7
baz=188,SNR=11
NLWA **Neilton Lookou** 88.10 32 P **P** 10 14 06.7 -0.1
NLWA IAmb IAmb 10 14 08.6
comp=Z,148nm,1.4s
CNSH **ChangSha** 88.11 303 P **P** 10 14 09.1 +1.8
CNSH SKS **SKSac** 10 24 28.8 -6.9
CNSH S **S** 10 24 53.9 +2.7
CNSH pmax pmax
comp=Z,31nm,1.0s
CNSH L L
comp=Z,5μm,17.6s
CNSH L L
comp=Z,4μm,17.0s
CNSH L L
comp=Z,6μm,18.4s
Q20K **Shuyak Island** 88.14 12 P **P** 10 14 07.0 +0.3
baz=200,SNR=23
Q20K S **S** 10 24 53.6 +3.5
baz=200
SYI **Shuyak Island** 88.14 12 IAmb IAmb 10 14 08.6
comp=Z,184nm,1.1s
O16K **Kokwok River B** 88.17 9 IAMs_20 IAMs_20 10 56 53.4
comp=Z,13μm,18.0s
O16K **Kokwok River B** 88.17 9 P **P** 10 14 06.0 -0.8
baz=196
O16K S **S** 10 24 52.7 +2.4
baz=196
ELK **Elko** 88.19 41 LR LR 10 50 09.4
comp=Z,84μm,18.0s,baz=227,slow=33
ELK **Elko** 88.19 41 P **P** 10 14 07.4 -0.3
ELK **Elko** 88.19 41 P **P** 10 14 07.4 -0.3
ELK pmax pmax
comp=Z,62nm,1.1s
Q19K **Cape Douglas,** 88.22 11 IAMs_20 IAMs_20 10 51 32.9
comp=Z,18μm,19.0s
Q19K **Cape Douglas,** 88.22 11 P **P** 10 14 07.0 -0.1
baz=199,SNR=13
Q19K S **S** 10 24 54.0 +3.1
baz=199
ASAL **Salagasta** 88.25 126 *e* P **P** 10 14 09.3 +1.1
RTLS **Leoncito** 88.33 125 *e* P **P** 10 14 10.1 +1.2
WHN **Wuhan** 88.36 306 ⇓*i* P **P** 10 14 09.6 +1.2
WHN SKS **SKSac** 10 24 33.5 -3.6
WHN S **S** 10 24 53.5 +0.1
WHN pmax pmax
comp=Z,530nm,1.2s
WHN L L
comp=Z,27μm,21.2s
WHN L L
comp=Z,7μm,14.1s
WHN L L
comp=Z,22μm,19.7s
M13K **Dall Lake** 88.36 6 P **P** 10 14 09.2 +1.5
baz=191,SNR=22
M13K S **S** 10 24 57.5 +5.4
baz=191
DL2 **Dalian** 88.36 316 P **P** 10 14 09.0 +0.8
DL2 S **S** 10 24 59.6 +6.5
DL2 pmax pmax
comp=Z,210nm,1.2s
DL2 pmax pmax
comp=Z,9μm,8.7s
DL2 L L
comp=Z,4μm,18.0s
DL2 L L
comp=Z,7μm,16.9s
DL2 L L
comp=Z,9μm,17.3s
P18K **Big Mountain,** 88.39 10 IAmb IAmb 10 14 09.0
comp=Z,88nm,1.0s
P18K **Big Mountain,** 88.39 10 P **P** 10 14 07.4 -0.6
baz=198,SNR=46
P18K S **S** 10 24 54.8 +2.2
baz=198
N15K **Kwethluk River** 88.47 8 IAMs_20 IAMs_20 10 54 07.4
comp=Z,16μm,20.0s
N15K **Kwethluk River** 88.47 8 P **P** 10 14 09.2 +1.0
baz=194
N15K S **S** 10 24 56.2 +3.0
baz=194
O17K **Koliganek Bris** 88.48 9 P **P** 10 14 08.0 -0.2
baz=196
O17K S **S** 10 24 55.9 +2.7
baz=196
EPT **El Paso** 88.51 53 IAMs_20 IAMs_20 10 48 16.8
comp=Z,21μm,18.0s
GULI **GuiLin** 88.52 300 P **P** 10 14 12.0 +2.7
GULI S **S** 10 24 54.3 -0.9
GULI pmax pmax
comp=Z,99nm,1.9s
GULI L L
comp=Z,3μm,18.4s
GULI L L
comp=Z,4μm,17.9s
GULI L L
comp=Z,5μm,18.8s
KCSI **Kotacane, Aceh** 88.54 275 P **P** 10 14 07.9 -1.9
comp=Z,13μmcomp=Z,5μmcomp=Z,160nm,0.9s
TCRU **Three Creeks R** 88.54 44 IAmb IAmb 10 14 12.5
comp=Z,97nm,1.1s
GNW **Green Mountain** 88.72 33 IAmb IAmb 10 14 12.4
comp=Z,120nm,1.1s
LCO **Las Campanas** 88.74 122 P **P** 10 14 10.7 -0.2
LCO IAmb IAmb 10 14 13.7
comp=Z,145nm,1.2s
LCO **Las Campanas** 88.74 122 IAMs_20 IAMs_20 10 49 40.6
comp=Z,24μm,18.0s
LCO **Las Campanas** 88.74 122 P **P** 10 14 10.7 -0.2
LCO pmax pmax
comp=Z,145nm,1.3s
LCO **Las Campanas** 88.74 122 P **P** 10 14 11.2 +0.3
B04A **Port Angeles** 88.75 32 IAmb IAmb 10 14 12.4
comp=Z,203nm,1.2s
GRNR **Gornyy** 88.81 332 ⇓*i* P **P** 10 14 11.4 +1.3
GRNR pmax pmax
comp=E,20nm,1.0s
GRNR pmax pmax
comp=N,30nm,1.2s
GRNR pmax pmax
comp=Z,110nm,1.1s
M14K **Bethel** 88.83 7 P **P** 10 14 10.5 +0.6
baz=192,SNR=48
M14K S **S** 10 25 01.4 +5.0
baz=192
O18K **Koktuh Hills** 88.84 10 P **P** 10 14 09.8 -0.2
O18K **Koktuh Hills** 88.84 10 P **P** 10 14 10.0 0.0
baz=198,SNR=114
O18K S **S** 10 24 58.7 +1.9
baz=198
AC04 **Llanos de Chal** 88.88 121 IAmb IAmb 10 14 15.9
comp=Z,156nm,1.1s
AC04 IAMs_20 IAMs_20 10 46 34.0
comp=Z,23μm,20.0s
H02S2 **DAWSON INLET T** 88.88 24 P **P** 10 14 12.9 +2.6
SNR=9.1
M15K **Kasigluk River** 88.91 7 P **P** 10 14 11.1 +0.8
baz=193
M15K S **S** 10 25 00.8 +3.5
baz=193
N16K **Nishlik Lake** 88.93 8 P **P** 10 14 11.1 +0.7
baz=195,SNR=43
N16K S **S** 10 25 01.9 +4.3
baz=195
TPTI 88.94 274 P **P** 10 14 11.5 -0.1
comp=Z,18μmcomp=Z,8μmcomp=Z,345nm,0.9s
P19K **Oil Pt** 88.97 11 IAmb IAmb 10 14 12.2
comp=Z,161nm,1.1s
P19K **Oil Pt** 88.97 11 P **P** 10 14 10.4 -0.2
baz=200,SNR=18
P19K S **S** 10 24 59.3 +1.3
baz=200
NKL **Nikolayevsk** 88.98 335 *e* P **P** 10 14 10.7 -0.1
NKL *e*S **SKSac** 10 24 39.1 -0.6
NKL pmax pmax
comp=N,134nm,0.9s
NKL pmax pmax
comp=E,210nm,1.1s
NKL pmax pmax
comp=Z,1μm,1.1s
NKL smax smax
comp=E,1μm,10.0s
NKL smax smax
comp=N,2μm,7.2s
NKL MLR MLR
comp=E,39μm,18.0s
NKL MLR MLR
comp=N,17μm,17.0s
NKL MLR MLR
comp=Z,50μm,17.0s
F07A **Phinny Hill Vi** 89.00 35 IAmb IAmb 10 14 13.0
comp=Z,90nm,1.1s
CLRS **Cowichan Lake** 89.00 31 IAmb IAmb 10 14 13.3
comp=Z,155nm,1.1s
SNY **Shenyang** 89.02 319 ⇓P **P** 10 14 11.5 +0.2
SNY S **S** 10 25 05.8 +6.6
SNY pmax pmax
comp=Z,87nm,1.4s
SNY pmax pmax
comp=Z,6μm,8.3s
SNY L L
comp=Z,2μm,17.3s
SNY L L
comp=Z,5μm,17.3s
SNY L L
comp=Z,7μm,17.8s
VHRN **Van Horn** 89.05 54 IAmb IAmb 10 14 36.6
comp=Z,147nm,1.2s
AROD **Rodeo** 89.06 124 *e* P **P** 10 14 12.4 0.0
G08A **Pilot Rock** 89.09 36 IAmb IAmb 10 14 14.0
comp=Z,135nm,1.0s
ACCO **Cerro Coronel** 89.14 124 *e* P **P** 10 14 12.0 -0.7
AC05 **El Transito** 89.16 122 IAmb IAmb 10 14 18.2
comp=Z,217nm,1.1s
AC05 IAMs_20 IAMs_20 10 45 55.4
comp=Z,22μm,20.0s
N17K **Nushagak Hills** 89.19 9 P **P** 10 14 11.5 -0.2
baz=196
N17K S **S** 10 25 03.1 +3.2
baz=196
PGC **Sidney** 89.19 32 IAmb IAmb 10 14 14.5
comp=Z,172nm,1.0s
CFA **Coronel Fontan** 89.20 126 LR LR 10 46 40.7
comp=Z,12μm,19.8s,baz=205,slow=30
CNPM **China Poot** 89.21 12 IAMs_20 IAMs_20 10 52 01.2
comp=Z,22μm,20.0s
TX31 **Lajitas Ar. Si** 89.22 56 IAmb IAmb 10 14 14.8
comp=Z,112nm,1.1s
TXAR **Lajitas Array** 89.22 56 P **P** 10 14 12.8 +0.1
comp=Z,56nm,1.0s,baz=212,slow=4.4,SNR=220
TXAR PKKP **PKKPdf** 10 31 45.9 +0.2
comp=Z,0.8nm,0.9s,baz=104,slow=4.2,SNR=3.9
TXAR LR LR 10 48 19.7
comp=Z,27μm,18.3s,baz=232,slow=32
comp=Z,56nm,1.0s
CN2 **Changchun** 89.23 322 ⇓P **P** 10 14 12.5 +0.3
CN2 *e*S **S** 10 25 00.0 -1.1
CN2 pmax pmax
comp=Z,60nm,1.2s
CN2 pmax pmax
comp=Z,5μm,7.0s
CN2 L L
comp=Z,3μm,17.0s
CN2 L L
comp=Z,2μm,17.0s
CN2 L L
comp=Z,3μm,18.0s
HOM **Homer** 89.26 12 IAMs_20 IAMs_20 10 52 14.4
comp=Z,19μm,20.0s
HOM **Homer** 89.26 12 P **P** 10 14 12.3 +0.4
baz=201,SNR=6.5
HOM S **S** 10 25 03.1 +2.5
baz=201
MNTX **Cornudas Mount** 89.26 53 IAmb IAmb 10 14 15.9
comp=Z,215nm,1.6s
MNTX IAMs_20 IAMs_20 10 47 26.9
comp=Z,14μm,19.0s
MXC **Moxie City** 89.28 35 IAmb IAmb 10 14 14.4
comp=Z,134nm,1.1s
DUG **Dugway, Tooele** 89.29 43 P **P** 10 14 12.0 -0.8
DUG **Dugway, Tooele** 89.29 43 P **P** 10 14 12.0 -0.8
DUG pmax pmax
comp=Z,56nm,1.4s
O19K **Port Alsworth** 89.30 10 P **P** 10 14 12.0 -0.1
baz=199,SNR=177
O19K S **S** 10 25 01.2 +0.2
baz=199
ACDV **Cuesta del Vie** 89.32 124 *e* P **P** 10 14 14.0 +0.5
L14K **Kuka Creek** 89.34 6 P **P** 10 14 13.2 +0.9
baz=192,SNR=52
L14K S **S** 10 25 05.2 +4.0
baz=192
Y22A **Socorro** 89.40 51 IAmb IAmb 10 14 16.3
comp=Z,141nm,1.1s
M16K **Timber Creek** 89.44 8 IAMs_20 IAMs_20 10 58 13.1
comp=Z,17μm,18.0s
M16K **Timber Creek** 89.44 8 P **P** 10 14 14.1 +1.3
baz=195,SNR=56
M16K S **S** 10 25 04.3 +2.0
baz=195
BNX **BinXian** 89.47 324 ⇓P **P** 10 14 13.0 -0.3
BNX PP **PP** 10 17 41.8 -3.2
BNX S **S** 10 25 01.6 -1.6
BNX pmax pmax
comp=Z,150nm,1.2s
BNX pmax pmax
comp=Z,7μm,8.4s
BNX L L
comp=Z,5μm,18.7s
BNX L L
comp=Z,10μm,20.6s
BNX L L
comp=Z,14μm,20.4s
BRLK **Bradley Lake** 89.50 12 IAMs_20 IAMs_20 10 52 27.4
comp=Z,18μm,19.0s
BRSE **Bradley Lake S** 89.51 12 P **P** 10 14 13.5 +0.3
baz=202,SNR=113
BRSE S **S** 10 25 04.6 +1.6
baz=202
N18K **Kilae Creek** 89.52 10 P **P** 10 14 13.2 0.0
baz=197
N18K S **S** 10 25 05.4 +2.3
baz=197
Q16A **Castle Valley** 89.52 45 IAmb IAmb 10 14 17.9
comp=Z,132nm,1.4s
HAWA **Hanford** 89.53 35 P **P** 10 14 13.2 -0.4
HAWA IAmb IAmb 10 14 16.2
comp=Z,203nm,1.2s
LTY **Liberty** 89.55 34 IAmb IAmb 10 14 15.4
comp=Z,104nm,1.1s
MFID **Camas Ranch** 89.55 39 P **P** 10 14 13.3 -0.6
ACAN **Cantantal** 89.60 127 *e* P **P** 10 14 14.3 -0.2
TIA **Tai'an** 89.63 312 P **P** 10 14 15.4 +1.1
TIA PP **PP** 10 17 46.1 -0.5
TIA S **S** 10 25 06.3 +1.1
TIA pmax pmax
comp=Z,370nm,1.0s
TIA pmax pmax
comp=Z,11μm,6.9s
TIA L L
comp=Z,3μm,17.2s
TIA L L
comp=Z,4μm,15.8s
TIA L L
comp=Z,5μm,21.3s
BMO **Blue Mountains** 89.67 37 IAmb IAmb 10 14 17.3
comp=Z,160nm,1.6s
BMO IAMs_20 IAMs_20 10 54 14.0
comp=Z,14μm,18.0s
KLR **Kul'dur** 89.74 329 LR LR 10 50 30.8
comp=Z,14μm,20.1s,baz=146,slow=33
KLR **Kul'dur** 89.74 329 *de* P **P** 10 14 15.4 +0.9
KLR pmax pmax
comp=Z,172nm,1.0s
KLR MLR MLR
comp=Z,8μm,17.0s
K13K **Kusilvak Mount** 89.75 5 IAMs_20 IAMs_20 10 51 49.2
comp=Z,16μm,20.0s
K13K **Kusilvak Mount** 89.75 5 P **P** 10 14 14.8 +0.7
baz=190
K13K S **S** 10 25 06.8 +1.7
baz=190
BBB **Bella Bella** 89.77 27 LR LR 10 49 48.5
comp=Z,22μm,18.3s,baz=230,slow=32
RED **Redoubt Volcan** 89.77 11 IAmb IAmb 10 14 15.9
comp=Z,143nm,1.1s
L15K **Ungalak Mounta** 89.79 7 P **P** 10 14 14.6 +0.2
baz=192,SNR=60
L15K S **S** 10 25 07.7 +2.2
baz=192
ALPN **Alpine** 89.80 55 IAmb IAmb 10 14 17.6
comp=Z,155nm,1.1s
GO03 **Copiapo** 89.83 121 IAmb IAmb 10 14 25.4
comp=Z,154nm,1.5s
GO03 IAMs_20 IAMs_20 10 46 24.1
comp=Z,22μm,20.0s
E08A **Dider Farm, El** 89.84 35 IAmb IAmb 10 14 17.3
comp=Z,106nm,1.1s
AC06 **Mina Casimiro** 89.86 121 IAmb IAmb 10 14 19.1
comp=Z,156nm,1.4s
AC06 IAMs_20 IAMs_20 10 47 04.9
comp=Z,22μm,19.0s
N19K **Bonanza Creek** 89.86 10 IAMs_20 IAMs_20 10 53 06.5
comp=Z,15μm,19.0s
N19K **Bonanza Creek** 89.86 10 P **P** 10 14 14.7 -0.2
baz=199
N19K S **S** 10 25 07.0 +0.5
baz=199
TRQA **Tornquist** 89.88 134 P **P** 10 14 16.5 +0.8

TRQA IAmb IAmb 10 14 19.1
comp=Z,257nm,1.2s
TRQA Tornquist 89.88 134 P **P** **10 14 16.5 +0.8**
TRQA pmax pmax
comp=Z,257nm,1.3s
CMIG Matias Romero 89.98 71 LR LR 10 46 22.6
comp=Z,11µm,18.9s,baz=252,slow=30
M17K Holitna River 90.00 9 IAMs_20 IAMs_20 10 58 10.9
comp=Z,15µm,19.0s
M17K Holitna River 90.00 9 P **P** **10 14 16.4 +1.0**
baz=196
M17K S **S** **10 25 09.0 +1.5**
baz=196
TPB01 Permian Basin 90.00 55 IAmb IAmb 10 14 40.7
comp=Z,100nm,1.2s
L16K Owhat River 90.04 8 IAMs_20 IAMs_20 10 58 34.1
comp=Z,14µm,18.0s
L16K Owhat River 90.04 8 P **P** **10 14 16.3 +0.8**
baz=194,SNR=62
L16K S **S** **10 25 11.0 +3.2**
baz=194
SRU San Rafael Swe 90.04 45 IAmb IAmb 10 14 18.8
comp=Z,153nm,1.2s
LHMI Lhok Sumawe 90.06 276 IAMs_20 IAMs_20 10 59 05.1
comp=Z,23µm,19.0s
LHMI Lhok Sumawe 90.06 276 P **P** **10 14 17.3 +0.5**
comp=Z,380nm,0.9s
SEW Seward 90.09 13 IAmb IAmb 10 14 17.9
comp=Z,165nm,1.1s
SEW IAMs_20 IAMs_20 10 52 22.5
comp=Z,21µm,19.0s
SEW Seward 90.09 13 P **P** **10 14 15.8 0.0**
baz=203,SNR=33
SEW S **S** **10 25 08.7 +0.4**
baz=203
MLSI Meulaboh, Aceh 90.09 275 P **P** **10 14 16.6 -0.4**
comp=Z,18µmcomp=Z,8µmcomp=Z,385nm,1.3s
Q23K Middleton Isla 90.12 15 P **P** **10 14 16.3 +0.3**
baz=206
Q23K S **S** **10 25 09.9 +1.3**
baz=206
MID Middleton Isla 90.12 15 IAMs_20 IAMs_20 10 55 53.4
comp=Z,25µm,18.0s
EPH Ephrata 90.15 34 IAmb IAmb 10 14 18.8
comp=Z,131nm,1.0s
SPUT South Promonto 90.19 42 IAmb IAmb 10 14 18.8
comp=Z,130nm,1.2s
HVU Hansel Valley 90.28 42 IAmb IAmb 10 14 20.6
comp=Z,147nm,1.2s
AC01 Pan de Azucar 90.30 120 P **P** **10 14 17.5 -0.3**
AC01 IAmb IAmb 10 14 22.6
comp=Z,162nm,1.3s
AC01 Pan de Azucar 90.30 120 P **P** **10 14 18.6 +0.8**
ANMO Albuquerque 90.31 50 LR LR 10 49 12.5
comp=Z,17µm,18.5s,baz=238,slow=32
ANMO Albuquerque 90.31 50 P **P** **10 14 17.5 -0.2**
ANMO IAmb IAmb 10 14 20.2
comp=Z,129nm,1.1s
ANMO Albuquerque 90.31 50 IAMs_20 IAMs_20 10 49 39.2
comp=Z,20µm,18.0s
ANMO Albuquerque 90.31 50 IAMs_20 IAMs_20 10 49 38.6
comp=Z,20µm,18.0s
ANMO Albuquerque 90.31 50 IAMs_20 IAMs_20 10 49 38.6
comp=Z,20µm,18.0s
ANMO Albuquerque 90.31 50*ce*P **P** **10 14 18.0 +0.2**
ANMO pmax pmax
comp=Z,139nm,1.0s
ANMO MLR MLR
comp=Z,18µm,18.0s
M18K Stony River 90.31 9 P **P** **10 14 17.3 +0.5**
baz=198
M18K S **S** **10 25 10.8 +0.5**
baz=198
SLKM Skilak Lake 90.32 12 IAMs_20 IAMs_20 10 52 35.5
comp=Z,14µm,19.0s
TPB05 Hovey Rd 90.32 55 IAmb IAmb 10 14 20.2
comp=Z,126nm,1.1s
PV05 Paradox Valley 90.34 46 IAmb IAmb 10 14 20.6
comp=Z,172nm,1.1s
K15K Wolf Creek Mou 90.39 7 IAMs_20 IAMs_20 10 55 31.1
comp=Z,15µm,19.0s
K15K Wolf Creek Mou 90.39 7 P **P** **10 14 18.2 +1.0**
baz=192
K15K S **S** **10 25 14.7 +3.7**
baz=192
CAPN Captain Cook N 90.39 12 P **P** **10 14 18.6 +1.4**
baz=202,SNR=13
CAPN S **S** **10 25 13.3 +2.3**
baz=202
O22K Cooper Landing 90.39 13 IAMs_20 IAMs_20 10 52 42.3
comp=Z,18µm,19.0s
O22K Cooper Landing 90.39 13 P **P** **10 14 17.7 +0.5**
baz=203,SNR=31
O22K S **S** **10 25 10.8 -0.2**
baz=203
P23K Montague Islan 90.41 14 IAMs_20 IAMs_20 10 56 53.0
comp=Z,26µm,18.0s
P23K Montague Islan 90.41 14 P **P** **10 14 17.6 +0.2**
baz=205,SNR=21
P23K S **S** **10 25 11.3 0.0**
baz=205
F10A Beach Ranch, E 90.45 36 IAmb IAmb 10 14 19.6
comp=Z,175nm,1.0s
CRAG Craig 90.46 23 P **P** **10 14 16.5 -1.2**
CRAG Craig 90.46 23 IAmb IAmb 10 14 21.0
comp=Z,161nm,1.0s
CRAG Craig 90.46 23 P **P** **10 14 18.5 +0.8**
baz=217,SNR=11
CRAG S **S** **10 25 14.7 +2.7**
baz=217
PLID Pearl Lake 90.53 38 IAmb IAmb 10 14 20.6
comp=Z,172nm,1.1s
PV17 East Wray Mesa 90.55 46 IAmb IAmb 10 14 20.9
comp=Z,109nm,1.1s
PV10 Paradox Valley 90.55 46 IAmb IAmb 10 14 20.8
comp=Z,216nm,1.2s
MRA San Martin 90.56 127*e*P **P** **10 14 18.6 -0.5**
PV18 Skein Mesa, Pa 90.56 46 IAmb IAmb 10 14 21.0
comp=Z,169nm,1.1s
PV14 Lion Creek, Pa 90.56 46 IAmb IAmb 10 14 21.1
comp=Z,135nm,1.2s
PV13 Radium Mtn., P 90.57 46 IAmb IAmb 10 14 21.0
comp=Z,101nm,1.1s
PV16 Nyswonger Mesa 90.59 46 IAmb IAmb 10 14 22.0
comp=Z,309nm,1.8s
L17K Donlin 90.59 8 P **P** **10 14 19.2 +1.1**
baz=195,SNR=41
L17K S **S** **10 25 18.5 +5.5**
baz=195
N20K Mount Spurr 90.60 11 P **P** **10 14 17.7 -0.6**
baz=201,SNR=100
SPCR Spurr Chakacha 90.60 11 P **P** **10 14 17.7 -0.6**
baz=201,SNR=41
SPCR S **S** **10 25 18.5 +5.3**
baz=201
PV03 Paradox Valley 90.61 46 IAmb IAmb 10 14 23.4
comp=Z,117nm,1.2s
PV11 David Mesa, Pa 90.61 46 IAmb IAmb 10 14 22.0
comp=Z,240nm,1.4s
PV23 Carpenter Ridg 90.61 46 IAmb IAmb 10 14 21.4
comp=Z,176nm,1.1s
J14K Nanvaranak Lak 90.64 6 IAMs_20 IAMs_20 10 52 15.9
comp=Z,15µm,20.0s
J14K Nanvaranak Lak 90.64 6 P **P** **10 14 18.6 +0.2**
baz=191,SNR=19
J14K S **S** **10 25 19.4 +6.2**
baz=191
PV02 Paradox Valley 90.65 46 IAmb IAmb 10 14 21.4
comp=Z,208nm,1.1s
PV04 Paradox Valley 90.65 46 IAmb IAmb 10 14 21.5
comp=Z,101nm,1.1s
PV21 Cone Mtn., Par 90.70 46 IAmb IAmb 10 14 21.8
comp=Z,96nm,1.0s
PV01 Paradox Valley 90.72 47 IAmb IAmb 10 14 21.6
comp=Z,110nm,1.0s
BSUT Blindstream Ca 90.74 44 IAmb IAmb 10 14 22.2
comp=Z,100nm,1.1s
VCA Vinchina 90.75 123*e*P **P** **10 14 22.0 +1.9**
TPB06 Permian Basin 90.78 54 IAmb IAmb 10 14 22.7
comp=Z,158nm,1.9s
PV07 Paradox Valley 90.84 46 IAmb IAmb 10 14 22.3
comp=Z,93nm,1.0s
V35K Ketchikan 90.88 23 IAmb IAmb 10 14 22.7
comp=Z,152nm,1.1s
V35K Ketchikan 90.88 23 P **P** **10 14 20.6 +1.0**
baz=218,SNR=13
V35K S **S** **10 25 19.4 +3.7**
baz=218
L18K Granite Mounta 90.89 9 IAmb IAmb 10 14 22.2
comp=Z,99nm,1.1s
L18K Granite Mounta 90.89 9 P **P** **10 14 20.2 +0.7**
baz=197,SNR=44
L18K S **S** **10 25 18.4 +2.8**
baz=197
PV15 Paradox Valley 90.89 46 IAmb IAmb 10 14 22.4
comp=Z,92nm,1.0s
RC01 Rabbit Creek A 90.95 12 P **P** **10 14 19.9 +0.1**
baz=203,SNR=138
B08A Colville Reser 90.96 34 IAmb IAmb 10 14 21.4
comp=Z,91nm,1.1s
HIN Hinchinbrook I 90.97 14 IAmb IAmb 10 14 21.7
comp=Z,174nm,1.1s
HIN IAMs_20 IAMs_20 10 55 22.6
comp=Z,22µm,19.0s
U33K Whale Pass 90.98 22 P **P** **10 14 21.3 +1.3**
baz=217,SNR=22
KAIM Kayak Island 91.01 15 IAMs_20 IAMs_20 10 55 08.8
comp=Z,19µm,18.0s
KAIM Kayak Island 91.01 15 P **P** **10 14 20.9 +0.8**
baz=207,SNR=12
SIT Sitka 91.03 21 P **P** **10 14 20.1 -0.1**
SIT Sitka 91.03 21 IAmb IAmb 10 14 23.2
comp=Z,189nm,1.1s
SIT Sitka 91.03 21 P **P** **10 14 20.9 +0.6**
baz=215,SNR=14
AC02 Maricunga 91.06 121 IAmb IAmb 10 14 32.1
comp=Z,113nm,1.1s
AC02 IAMs_20 IAMs_20 10 47 52.8
comp=Z,26µm,20.0s
M20K Styx River 91.09 10 IAMs_20 IAMs_20 10 58 23.9
comp=Z,19µm,18.0s
M20K Styx River 91.09 10 P **P** **10 14 20.4 -0.2**
baz=200
M20K S **S** **10 25 22.5 +4.8**
baz=200
HOPE Hope Point 91.11 157 IAMs_20 IAMs_20 10 50 58.5
comp=Z,21µm,19.0s
L19K White Mountain 91.11 10 IAmb IAmb 10 14 23.7
comp=Z,180nm,1.4s
L19K White Mountain 91.11 10 P **P** **10 14 21.0 +0.4**
baz=198
C09A Chrisman Ranch 91.12 35 IAmb IAmb 10 14 22.6
comp=Z,183nm,1.2s
K17K Iditarod 91.16 8 IAMs_20 IAMs_20 10 59 08.6
K17K Iditarod 91.16 8 P **P** **10 14 21.3 +0.5**
baz=195
GAMB Gambell 91.20 2 P **P** **10 14 21.5 +0.6**
baz=184,SNR=56
PB14 IPOC Station P 91.23 119 P **P** **10 14 22.9 +0.3**
PB14 IPOC Station P 91.23 119 IAMs_20 IAMs_20 10 47 15.1
comp=Z,19µm,20.0s
MA2 Magadan 91.24 344 LR LR 10 52 52.8
comp=Z,11µm,19.2s,baz=160,slow=34
MA2 Magadan 91.24 344 P **P** **10 14 20.2 -1.0**
MA2 IAmb IAmb 10 14 23.0
comp=Z,71nm,0.9s
MA2 Magadan 91.24 344*de*P **P** **10 14 21.0 -0.2**
MA2 pmax pmax
comp=Z,88nm,1.0s
MA2 MLR MLR
comp=Z,11µm,18.0s
MA2 Magadan 91.24 344 P **P** **10 14 19.2 -2.0**
comp=Z,4µmcomp=Z,101nm,0.8s
EYAK Cordova Ski Ar 91.27 14 P **P** **10 14 21.3 0.0**
EYAK Cordova Ski Ar 91.27 14 IAmb IAmb 10 14 23.6
comp=Z,154nm,1.0s
EYAK Cordova Ski Ar 91.27 14 P **P** **10 14 21.4 +0.1**
baz=206,SNR=31
GLI Glacier Island 91.28 14 IAMs_20 IAMs_20 10 57 20.8
comp=Z,18µm,18.0s
GLI Glacier Island 91.28 14 P **P** **10 14 21.2 -0.1**
baz=205,SNR=55
SUCK Suckling Hills 91.29 15 IAMs_20 IAMs_20 10 55 08.2
comp=Z,23µm,18.0s
ACLC CERRO LA CRUZ 91.31 124*e*P **P** **10 14 21.6 -1.1**
RAGM Ragged Mountai 91.36 15 IAmb IAmb 10 14 24.4
comp=Z,139nm,1.1s
BGLC Bering Glacier 91.45 16 P **P** **10 14 23.4 +1.3**
baz=208
J16K Anvik River 91.45 7 IAMs_20 IAMs_20 10 55 54.3
comp=Z,15µm,19.0s
J16K Anvik River 91.45 7 P **P** **10 14 22.7 +0.6**
baz=193
SKT Skwentna 91.45 11 IAMs_20 IAMs_20 10 53 19.4
comp=Z,15µm,20.0s
SKT Skwentna 91.45 11 P **P** **10 14 21.1 -1.0**
baz=201,SNR=28
RTAL Retalhuleu 91.46 74 IAmb IAmb 10 14 59.9
comp=Z,126nm,1.1s
WRAK Wrangell Islan 91.49 22 P **P** **10 14 23.6 +1.2**
baz=218,SNR=29
M22K Willow 91.49 12 IAMs_20 IAMs_20 10 53 17.4
comp=Z,20µm,19.0s
M22K Willow 91.49 12 P **P** **10 14 22.3 +0.1**
baz=202
KNK Knik Glacier 91.49 13 IAMs_20 IAMs_20 10 52 56.4
comp=Z,16µm,19.0s
KNK Knik Glacier 91.49 13 P **P** **10 14 22.8 +0.4**
baz=204,SNR=106
S31K Pelican 91.50 20 IAmb IAmb 10 14 25.4
comp=Z,166nm,1.0s
S31K Pelican 91.50 20 P **P** **10 14 23.3 +0.9**
baz=214,SNR=27
ODSA Odessa 91.52 54 IAmb IAmb 10 14 25.6
comp=Z,209nm,1.3s
PMR Palmer 91.53 12 P **P** **10 14 22.2 -0.2**
PMR Palmer 91.53 12 IAmb IAmb 10 14 24.6
comp=Z,172nm,1.1s
PMR Palmer 91.53 12 P **P** **10 14 22.6 +0.2**
baz=203,SNR=90
BERG Berg Lake 91.59 15 IAMs_20 IAMs_20 10 55 28.1
comp=Z,21µm,18.0s
T33K Petersburg 91.60 22 P **P** **10 14 24.3 +1.4**
baz=217,SNR=7.4
S32K Killisnoo 91.60 21 P **P** **10 14 23.8 +0.9**
baz=216,SNR=9.2
TMB01 Midkiff 91.62 55 IAmb IAmb 10 14 25.5
comp=Z,44nm,1.1s
S22A 4UR Ranch, Cre 91.63 48 IAMs_20 IAMs_20 10 49 35.7
comp=Z,25µm,19.0s
BSI Banda Aceh 91.64 275 P **P** **10 14 23.0 -1.2**
comp=Z,13µmcomp=Z,6µmcomp=Z,408nm,1.5s
AANI Anillaco 91.65 124*e*P **P** **10 14 24.3 +0.1**
PB10 IPOC Station P 91.69 118 IAmb IAmb 10 14 30.2
comp=Z,103nm,1.2s
GHO Glory Hole Cre 91.73 12 IAMs_20 IAMs_20 10 53 14.8
comp=Z,14µm,19.0s
ENH Enshi 91.76 303 P **P** **10 14 25.0 +0.6**
DIV Divide 91.78 14 IAMs_20 IAMs_20 10 56 09.2
comp=Z,19µm,18.0s
MESA MESA 91.82 16 IAMs_20 IAMs_20 10 52 03.3
comp=Z,25µm,19.0s
MESA MESA 91.82 16 P **P** **10 14 25.1 +0.9**
baz=210,SNR=55
128A Castleberry Fa 91.83 54 IAmb IAmb 10 14 26.6
comp=Z,82nm,1.2s
AHID Auburn Hatcher 91.87 42 IAmb IAmb 10 14 27.2
comp=Z,186nm,1.1s
LYN LuoYang 91.87 308 P **P** **10 14 25.9 +1.1**
LYN pP sP 10 14 30.3 +3.2
LYN sP pwP 10 14 33.9 -4.3
LYN PP **PP** **10 18 08.9 +4.5**
LYN S **S** **10 25 23.3 -2.5**
LYN SS **SS** **10 31 39.8 +5.1**
LYN pmax pmax
comp=Z,86nm,1.2s
LYN pmax pmax
comp=Z,10µm,8.1s
LYN L L
comp=Z,6µm,20.3s
LYN L L
comp=Z,6µm,18.2s
LYN L L
comp=Z,8µm,19.9s
SML Sawmill 91.88 13 IAmb IAmb 10 14 45.7
comp=Z,101nm,1.0s
SML IAMs_20 IAMs_20 10 53 26.6
comp=Z,17µm,19.0s
SML Sawmill 91.88 13 P **P** **10 14 24.3 +0.1**
baz=204,SNR=15
BMRM Bremner River 91.89 15 P **P** **10 14 24.8 +0.5**
baz=207,SNR=68
833A Chaparral WMA, 91.90 59 IAmb IAmb 10 14 26.9
comp=Z,90nm,1.1s
U35K Hyder 91.90 24 IAMs_20 IAMs_20 10 51 54.7
comp=Z,13µm,19.0s
U35K Hyder 91.90 24 P **P** **10 14 24.9 +0.6**
baz=219
HNS HongShan 91.90 312 ⇓P **P** **10 14 25.8 +1.0**
HNS S **S** **10 25 30.8 +4.9**
HNS SS **SS** **10 31 39.8 +4.8**
HNS pmax pmax
comp=Z,190nm,1.1s
HNS pmax pmax
comp=Z,7µm,10.1s
HNS L L
comp=Z,9µm,17.1s
HNS L L
comp=Z,5µm,17.7s
HNS L L
comp=Z,8µm,18.2s
CCIG Comitan 91.91 73 IAmb IAmb 10 14 53.3
comp=Z,154nm,1.4s
TCA Tanti 91.95 127*e*P **P** **10 14 26.3 +0.7**
229A Bryant Ranch, 91.97 55 IAmb IAmb 10 14 27.1
comp=Z,66nm,1.1s
GYA Guiyang 91.98 299 P **P** **10 14 26.5 +0.9**
GYA PP **PP** **10 18 07.3 +1.8**
GYA S **S** **10 25 25.3 -2.1**
GYA pmax pmax
comp=Z,83nm,1.2s
GYA pmax pmax
comp=Z,6µm,7.9s
GYA L L
comp=Z,4µm,19.8s
GYA L L
comp=Z,4µm,18.9s
GYA L L
comp=Z,6µm,18.4s
M23K Glacier View 91.98 13 P **P** **10 14 24.8 +0.2**
baz=205,SNR=46
HUEH Huehuetenango 92.00 74 IAmb IAmb 10 14 29.5
comp=Z,191nm,1.4s
NEW Newport 92.00 35 LR LR 10 52 17.7
comp=Z,48µm,18.1s,baz=230,slow=33
NEW Newport 92.00 35 P **P** **10 14 24.7 -0.4**
R31K City Hall, Gus 92.02 20 P **P** **10 14 25.8 +1.0**
baz=215
I17K Unalakleet 92.03 7 IAMs_20 IAMs_20 10 56 29.6
comp=Z,13µm,19.0s
I17K Unalakleet 92.03 7 P **P** **10 14 25.5 +0.8**
baz=193,SNR=12
CRQM Cirque 92.04 15 IAmb IAmb 10 14 27.6
comp=Z,153nm,1.0s
CRQM IAMs_20 IAMs_20 10 55 34.3
comp=Z,18µm,19.0s
CRQE Cirque 92.05 15 P **P** **10 14 25.6 +0.5**
baz=208,SNR=62
CUT Chulitna 92.07 12 IAMs_20 IAMs_20 10 53 45.8
comp=Z,25µm,19.0s
CUT Chulitna 92.07 12 P **P** **10 14 24.7 -0.3**
baz=202,SNR=70
O20A White River Ci 92.07 45 IAmb IAmb 10 14 27.7
comp=Z,75nm,1.1s
KLU Klutina 92.08 14 IAmb IAmb 10 14 27.4
comp=Z,74nm,1.0s
KLU IAMs_20 IAMs_20 10 52 48.0
comp=Z,16µm,19.0s
KLU Klutina 92.08 14 P **P** **10 14 25.6 +0.4**
baz=206,SNR=41
J18K Innoko River 92.08 8 P **P** **10 14 25.5 +0.5**
baz=197
L22K Petersville 92.09 11 IAMs_20 IAMs_20 10 53 49.2
comp=Z,27µm,20.0s
SCM Sheep Creek Mo 92.10 13 IAMs_20 IAMs_20 10 53 03.5
comp=Z,14µm,19.0s
SCM Sheep Creek Mo 92.10 13 P **P** **10 14 25.6 +0.3**
baz=205,SNR=93
TGL Tana Glacier 92.11 15 IAMs_20 IAMs_20 10 55 35.0
comp=Z,18µm,18.0s
PCA Pinnacle 92.18 17 IAmb IAmb 10 14 28.1
comp=Z,96nm,1.0s
PCA IAMs_20 IAMs_20 10 52 03.8
comp=Z,21µm,19.0s
PINM Pinnacle 92.18 17 P **P** **10 14 26.1 +0.4**
baz=211,SNR=17
NNA Nana 92.19 105 LR LR 10 48 03.7
comp=Z,5µm,19.1s,baz=250,slow=30
NNA Nana 92.19 105*de*P **P** **10 14 26.9 0.0**
NNA pmax pmax
comp=Z,158nm,1.1s
NNA Nana 92.19 105 P **P** **10 14 28.2 +1.3**
PPLA Purkeypile 92.20 11 IAMs_20 IAMs_20 10 59 10.2
comp=Z,18µm,18.0s
PPLA Purkeypile 92.20 11 P **P** **10 14 24.5 -1.3**
baz=201,SNR=8.9
129A Stewart Farms, 92.28 54 IAmb IAmb 10 14 29.1
comp=Z,78nm,1.1s
R32K Eaglecrest 92.28 20 P **P** **10 14 26.7 +0.7**
baz=216,SNR=7.8
ANM Nome 92.30 4 IAMs_20 IAMs_20 10 53 19.8
comp=Z,14µm,20.0s
ANM Nome 92.30 4 P **P** **10 14 26.6 +0.6**
baz=189,SNR=19
PB05 IPOC Station P 92.30 117 IAMs_20 IAMs_20 10 47 37.4
comp=Z,17µm,20.0s
JIS Juneau Island 92.32 20 P **P** **10 14 26.6 +0.4**
MSTX Muleshoe 92.33 53 IAmb IAmb 10 14 28.8
comp=Z,99nm,1.0s
MSTX IAMs_20 IAMs_20 10 50 50.1
comp=Z,17µm,19.0s
K20K Telida 92.34 10 P **P** **10 14 25.9 -0.4**
baz=199,SNR=27
GRNC Granite Creek 92.35 16 IAMs_20 IAMs_20 10 52 11.3
comp=Z,18µm,19.0s
VRDI Verde Repeater 92.39 15 IAmb IAmb 10 14 29.1
comp=Z,106nm,1.0s
VRDI IAMs_20 IAMs_20 10 52 52.2
comp=Z,14µm,19.0s
BESE Bessie Mountai 92.42 20 IAmb IAmb 10 14 29.6
comp=Z,95nm,1.0s
BJI2 Beijing 92.42 314 P **P** **10 14 28.0 +0.8**
BJI2 S **S** **10 25 35.3 +4.8**
BJI2 pmax pmax
comp=Z,60nm,0.9s
BJI2 pmax pmax
comp=Z,3µm,3.8s
BJI2 L L
comp=Z,4µm,16.2s
BJI2 L L
comp=Z,2µm,18.1s
BJI2 L L
comp=Z,4µm,16.7s
BJT Baijiatuau 92.42 314 P **P** **10 14 27.9 +0.7**
BJT Baijiatuau 92.42 314 IAmb IAmb 10 14 30.0
comp=Z,108nm,1.0s
FXWY Fox Creek 92.43 41 IAmb IAmb 10 14 30.6
comp=Z,135nm,1.2s
SGCY Sterling City 92.44 55 IAmb IAmb 10 14 28.5
comp=Z,81nm,1.1s
N25K Chitina, Valde 92.47 14 IAMs_20 IAMs_20 10 57 04.3
comp=Z,20µm,18.0s
N25K Chitina, Valde 92.47 14 P **P** **10 14 27.2 +0.2**
baz=207,SNR=61
HEH HeiHe 92.48 327*e*P **P** **10 14 27.1 -0.1**
HEH pP **sP** **10 14 32.9 +3.4**
HEH S **S** **10 25 34.9 +4.4**
HEH sS sS 10 25 44.8 +11
HEH pmax pmax
comp=Z,83nm,0.9s
HEH pmax pmax
comp=Z,4µm,5.8s
HEH L L
comp=Z,6µm,22.4s
HEH L L
comp=Z,7µm,22.3s
HEH L L
comp=Z,12µm,22.1s
GLB Gilahina Butte 92.49 15 IAMs_20 IAMs_20 10 57 54.0
comp=Z,18µm,18.0s
M24K Tolsona, Glenn 92.58 13 P **P** **10 14 28.5 +1.0**
baz=206,SNR=21
LOGN Logan Glacier 92.62 16 IAmb IAmb 10 14 30.1
comp=Z,121nm,1.0s
LOGN IAMs_20 IAMs_20 10 52 38.3
comp=Z,19µm,19.0s
H16K Elim 92.62 6 P **P** **10 14 27.6 +0.2**
baz=192,SNR=65
MCARA McCarthy VSAT 92.62 15 IAMs_20 IAMs_20 10 52 50.4
comp=Z,13µm,19.0s
MCARA McCarthy VSAT 92.62 15 P **P** **10 14 28.4 +0.9**
baz=209,SNR=97

T35M Bob Quinn 92.65 23 IAmb IAmb 10 14 31.9
comp=Z,125nm,1.5s
T35M Bob Quinn 92.65 23 P **P** **10 14 28.9 +1.0**
baz=219,SNR=18
CTG Chitna Glacier 92.66 16 P **P** **10 14 28.4 +0.4**
baz=210,SNR=76
CTGM Chitina Glacie 92.66 16 IAmb IAmb 10 14 30.8
comp=Z,105nm,0.9s
CTGM IAMs_20 IAMs_20 10 52 21.4
comp=Z,13µm,19.0s
KVTX Kingsville 92.66 60 IAMs_20 IAMs_20 10 53 48.7
comp=Z,19µm,18.0s
BARN Barnard Glacie 92.66 16 IAMs_20 IAMs_20 10 52 30.5
comp=Z,13µm,19.0s
JCT Junction City 92.68 57 IAmb IAmb 10 14 30.0
comp=Z,85nm,1.1s
WAT6 Susitna Watana 92.70 13 P **P** **10 14 27.9 -0.2**
baz=205,SNR=76
J19K Poorman 92.73 9 IAMs_20 IAMs_20 10 59 46.1
comp=Z,14µm,19.0s
J19K Poorman 92.73 9 P **P** **10 14 28.4 +0.3**
baz=198,SNR=33
APG El Apazote 92.74 75 LR LR 10 47 48.1
comp=Z,450nm,19.6s,baz=246,slow=30
MSO Missoula 92.75 37 IAmb IAmb 10 14 30.7
comp=Z,98nm,1.4s
MSO IAMs_20 IAMs_20 10 56 01.3
comp=Z,26µm,18.0s
POST Post 92.77 54 IAmb IAmb 10 14 30.3
comp=Z,99nm,1.0s
WAT1 Susitna Watana 92.77 12 P **P** **10 14 28.3 0.0**
baz=204
O28M Mount Upton 92.78 17 IAMs_20 IAMs_20 10 52 53.5
comp=Z,22µm,20.0s
O28M Mount Upton 92.78 17 P **P** **10 14 29.1 +0.5**
baz=211,SNR=44
PDAR Pinedale Array 92.78 42 P **P** **10 14 28.4 -0.8**
comp=Z,33nm,1.0s,baz=207,slow=3.0,SNR=119
PDAR PKKP **PKKPdf** **10 31 36.9 -3.4**
comp=Z,0.7nm,0.9s,baz=90,slow=5.9,SNR=3.7
PDAR PKKPbc **PKKPbc** **10 31 43.5 +1.9**
comp=Z,3.2nm,0.9s,baz=76,slow=3.1,SNR=8.8
PDAR SKKP 10 35 06.2
comp=Z,0.4nm,0.7s,baz=97,slow=4.5,SNR=3.7
PDAR PKPPKP **P'P'df** **10 39 50.4 +2.5**
comp=Z,0.9nm,1.0s,baz=88,slow=4.7,SNR=4.7
PDAR LR LR 10 52 42.7
comp=Z,30µm,18.0s,baz=235,slow=33
comp=Z,33nm,1.0s
PDAR Pinedale Array 92.78 42 P **P** **10 14 28.0 -1.1**
O29M Mount Kennedy 92.79 18 IAmb IAmb 10 14 31.4
comp=Z,84nm,1.2s
O29M IAMs_20 IAMs_20 10 52 13.1
comp=Z,15µm,19.0s
O29M Mount Kennedy 92.79 18 P **P** **10 14 29.5 +0.9**
baz=212,SNR=27
NUBE Las Nubes 92.82 76 P **P** **10 14 30.0 +0.3**
G15K Niukluk 92.82 5 P **P** **10 14 28.3 -0.1**
baz=190,SNR=112
PB06 IPOC Station P 92.88 117 IAMs_20 IAMs_20 10 48 04.6
comp=Z,17µm,20.0s
HAYD Hayden 92.91 45 IAMs_20 IAMs_20 10 53 04.4
comp=Z,14µm,18.0s
YPP Pitchstone Pla 92.94 41 IAmb IAmb 10 14 34.4
comp=Z,85nm,1.3s
JAYA Jayaque - finc 92.99 76 P **P** **10 14 28.3 -2.2**
SKAG Skagway 93.00 19 IAmb IAmb 10 14 32.7
comp=Z,105nm,1.2s
SKAG Skagway 93.00 19 P **P** **10 14 30.5 +1.2**
baz=215,SNR=22
KTH Kantishna Hill 93.02 11 IAmb IAmb 10 14 31.0
comp=Z,63nm,1.0s
KTH IAMs_20 IAMs_20 10 59 45.9
comp=Z,24µm,18.0s
YFT Old Faithful 93.03 40 IAmb IAmb 10 14 33.7
comp=Z,93nm,1.0s
TRF Thorofare Moun 93.03 11 IAmb IAmb 10 14 32.2
comp=Z,70nm,1.0s
TRF Thorofare Moun 93.03 11 P **P** **10 14 29.4 -0.2**
baz=202,SNR=49
MCRA Macar, Loja 93.07 97 P **P** **10 14 31.2 +0.2**
comp=Z,8µmcomp=Z,2µmcomp=Z,72nm,1.2s
PB03 IPOC Station P 93.07 117 IAMs_20 IAMs_20 10 47 47.8
comp=Z,17µm,20.0s
S34M Telegraph Cree 93.07 22 IAmb IAmb 10 14 32.9
comp=Z,89nm,1.0s
S34M Telegraph Cree 93.07 22 P **P** **10 14 31.0 +1.2**
baz=218,SNR=37
P30M Million Dollar 93.08 18 P **P** **10 14 30.8 +1.0**
baz=214
CHUM Lake Minchumin 93.11 10 P **P** **10 14 29.0 -0.8**
baz=201,SNR=26
J20K Nowinta River 93.11 9 P **P** **10 14 29.7 -0.1**
baz=199
H17K Granite Mounta 93.13 7 IAMs_20 IAMs_20 10 57 05.8
comp=Z,15µm,19.0s
H17K Granite Mounta 93.13 7 P **P** **10 14 29.6 -0.3**
baz=194,SNR=27
PB07 IPOC Station P 93.13 116 IAmb IAmb 10 14 34.9
comp=Z,130nm,1.2s
PB07 IAMs_20 IAMs_20 10 47 40.4
comp=Z,14µm,20.0s
TNA Tin City 93.14 3 IAmb IAmb 10 14 32.1
comp=Z,114nm,1.0s
TNA Tin City 93.14 3 P **P** **10 14 30.5 +0.7**
baz=187,SNR=47
F14K Arctic Creek 93.14 4 P **P** **10 14 30.3 +0.4**
baz=188
H17A Grant Village 93.14 41 IAmb IAmb 10 14 34.1
comp=Z,88nm,1.1s
ATAH Atahualpa 93.15 100 LR LR 10 48 14.9
comp=Z,23µm,19.4s,baz=239,slow=30
DHY Denali Highway 93.22 12 IAmb IAmb 10 14 33.5
comp=Z,111nm,1.5s
DHY IAMs_20 IAMs_20 10 59 06.1
comp=Z,17µm,18.0s
DHY Denali Highway 93.22 12 P **P** **10 14 30.7 +0.2**
baz=205,SNR=25
RND Reindeer 93.25 12 IAMs_20 IAMs_20 10 54 10.8
comp=Z,15µm,20.0s
BOZ Bozeman (W) 93.26 39 IAmb IAmb 10 14 33.5
comp=Z,130nm,1.0s
YNR Norris Junctio 93.27 40 IAmb IAmb 10 14 37.0
comp=Z,104nm,1.3s
GCSA Galena City Sc 93.29 8 P **P** **10 14 31.1 +0.5**
baz=197,SNR=26
YUK8 Steele Glacier 93.32 16 P **P** **10 14 32.0 +0.8**
baz=211,SNR=36
G16K Koyuk River 93.35 6 P **P** **10 14 31.3 +0.5**
baz=192,SNR=32
735A Kenedy 93.37 59 IAmb IAmb 10 14 34.3
comp=Z,112nm,1.0s
735A IAMs_20 IAMs_20 10 48 57.4
comp=Z,15µm,20.0s
PATCX Punta Patache 93.39 115 IAMs_20 IAMs_20 10 47 29.1
comp=Z,16µm,21.0s
YUK6 Outpost Mounta 93.39 17 P **P** **10 14 32.1 +0.6**
baz=213
F15K North Star Dit 93.48 5 IAMs_20 IAMs_20 10 54 36.0
comp=Z,15µm,20.0s
F15K North Star Dit 93.48 5 P **P** **10 14 31.5 0.0**
baz=190
DKNS Dickens 93.49 54 IAmb IAmb 10 14 35.3
comp=Z,77nm,1.2s
TA01 Diego Aracena 93.50 115 IAMs_20 IAMs_20 10 47 50.9
comp=Z,15µm,21.0s
PAX Paxson 93.50 13 IAMs_20 IAMs_20 10 53 46.6
comp=Z,14µm,19.0s
PAX Paxson 93.50 13 P **P** **10 14 31.4 -0.3**
baz=206,SNR=26
H18K Honhosa River 93.51 7 IAMs_20 IAMs_20 10 57 06.7
comp=Z,13µm,19.0s
H18K Honhosa River 93.51 7 P **P** **10 14 31.6 0.0**
baz=195
BPAW Bear Paw Mtn. 93.52 11 IAMs_20 IAMs_20 11 00 11.1
comp=Z,19µm,18.0s
BPAW Bear Paw Mtn. 93.52 11 P **P** **10 14 30.5 -1.2**
baz=202
HYT Haines Junctio 93.52 18 P **P** **10 14 32.1 +0.2**
baz=213,SNR=27
M26K Nabesna, AK 93.52 15 IAmb IAmb 10 14 38.7
comp=Z,101nm,1.2s
M26K IAMs_20 IAMs_20 10 56 54.2
comp=Z,16µm,19.0s
M26K Nabesna, AK 93.52 15 P **P** **10 14 32.2 +0.4**
baz=209,SNR=42
MCK McKinley 93.53 12 IAmb IAmb 10 14 34.0
comp=Z,124nm,1.1s

MCK IAMs_20 IAMs_20 10 54 21.4
comp=Z,18µm,19.0s
MCK McKinley 93.53 12 P **P** **10 14 31.5 -0.3**
baz=204,SNR=91
Q32M Nakina River 93.53 21 P **P** **10 14 33.1 +1.0**
baz=218,SNR=16
CMBY CAMPBELL BAY 93.54 276 *e*P P 10 14 12.0 -21
CMBY IAmb IAmb 10 14 37.8
comp=Z,136nm,1.2s
CMBY IAMs_20 IAMs_20 10 29 45.1
comp=Z,16µm,18.5s
YUK3 Moose Creek 93.57 16 P **P** **10 14 32.7 +0.4**
baz=211,SNR=107
AMTX Amarillo 93.58 52 IAMs_20 IAMs_20 10 51 31.1
comp=Z,23µm,19.0s
P32M Atlin 93.59 20 P **P** **10 14 32.7 +0.6**
baz=216,SNR=26
TIY Taiyuan 93.59 311 P **P** **10 14 35.0 +2.3**
TIY S **S** **10 25 41.0 -0.1**
TIY pmax pmax
comp=Z,63nm,0.7s
TIY pmax pmax
comp=Z,5µm,8.4s
TIY L L
comp=Z,4µm,16.4s
TIY L L
comp=Z,4µm,16.7s
TIY L L
comp=Z,6µm,17.5s
YMP Mirror Lake Pl 93.59 41 IAmb IAmb 10 15 00.1
comp=Z,148nm,1.3s
PB09 IPOC Station P 93.61 117 IAMs_20 IAMs_20 10 47 56.0
comp=Z,16µm,20.0s
G17K Kiwalik Mounta 93.61 6 P **P** **10 14 31.7 -0.3**
baz=193,SNR=24
I20K Naaghedeneel 93.65 9 P **P** **10 14 32.8 +0.6**
baz=199
PH02 Texas Public H 93.66 52 IAmb IAmb 10 14 37.1
comp=Z,134nm,1.3s
YUK4 Talbot Arm 93.66 17 P **P** **10 14 33.1 +0.4**
baz=212,SNR=12
RTBA Rita Blanca 93.66 51 IAmb IAmb 10 14 34.1
comp=Z,89nm,1.2s
M27K Edge Creek, AK 93.74 15 IAmb IAmb 10 14 35.7
comp=Z,142nm,1.1s
M27K IAMs_20 IAMs_20 10 58 43.9
comp=Z,14µm,19.0s
M27K Edge Creek, AK 93.74 15 P **P** **10 14 33.8 +0.9**
baz=210,SNR=94
PB01 IPOC Station P 93.81 116 IAmb IAmb 10 16 04.4
comp=Z,64nm,0.6s
SEY Seymchan 93.82 346 LR LR 10 51 40.1
comp=Z,10µm,21.1s,baz=156,slow=32
SEY Seymchan 93.82 346 *ce*P **P** **10 14 33.3 +0.3**
SEY pmax pmax
comp=Z,140nm,1.0s
SEY MLR MLR
comp=Z,6µm,18.0s
FSA Cafayete 93.83 122 *e*P **P** **10 14 35.5 +1.0**
AF01 San Pedro de A 93.84 118 IAMs_20 IAMs_20 10 48 08.2
comp=Z,15µm,20.0s
DLBC Dease Lake 93.85 22 LR LR 10 51 21.9
comp=Z,7µm,19.6s,baz=202,slow=32
DLBC Dease Lake 93.85 22 P **P** **10 14 33.8 +0.4**
baz=220,SNR=42
O30N Mendenhall 93.86 18 IAMs_20 IAMs_20 10 51 41.4
comp=Z,16µm,20.0s
O30N Mendenhall 93.86 18 P **P** **10 14 33.9 +0.5**
baz=214,SNR=50
HMBC Humberstone 93.88 115 IAMs_20 IAMs_20 10 48 02.1
comp=Z,16µm,20.0s
APMT Aspermont 93.89 54 IAmb IAmb 10 14 37.3
comp=Z,75nm,1.2s
L26K Log Cabin Wild 94.00 14 IAMs_20 IAMs_20 10 57 21.8
comp=Z,20µm,18.0s
L26K Log Cabin Wild 94.00 14 P **P** **10 14 34.3 +0.3**
baz=208,SNR=20
BVCY Beaver Creek 94.03 15 P **P** **10 14 34.4 +0.3**
baz=210,SNR=18
XAN Xi'an 94.10 306 ⇓P **P** **10 14 36.3 +1.1**
XAN pP sP 10 14 41.3 +3.8
XAN sP pwP 10 14 43.1 -5.5
XAN SKS **SKSac** **10 25 09.3 -0.6**
XAN S **ScS** **10 25 49.1 +2.0**
XAN SS **SS** **10 32 07.1 +0.3**
XAN pmax pmax
comp=Z,60nm,1.3s
XAN pmax pmax
comp=Z,7µm,9.3s
XAN L L
comp=Z,2µm,18.0s
XAN L L
comp=Z,10µm,16.1s
XAN L L
comp=Z,7µm,16.5s
WHY Whitehorse 94.11 19 IAmb IAmb 10 14 37.1
comp=Z,68nm,1.0s
WHY Whitehorse 94.11 19 P **P** **10 14 35.4 +0.7**
baz=216,SNR=22
N30M Aishikik Lake 94.16 17 P **P** **10 14 35.3 +0.5**
baz=214,SNR=20
LCND La Caada 94.17 77 P **P** **10 14 38.0 +2.2**
K24K Donnelly Dome 94.19 13 IAmb IAmb 10 14 37.0
comp=Z,114nm,1.0s
K24K IAMs_20 IAMs_20 10 54 38.8
comp=Z,19µm,19.0s
K24K Donnelly Dome 94.19 13 P **P** **10 14 35.0 +0.2**
baz=206,SNR=48
G18K Tagagawik 94.20 7 IAMs_20 IAMs_20 10 57 47.9
comp=Z,15µm,19.0s
G18K Tagagawik 94.20 7 P **P** **10 14 34.5 -0.2**
baz=195,SNR=33
H20K Anotleneega Mo 94.26 9 P **P** **10 14 35.7 +0.6**
baz=198
R33M Jennings River 94.29 21 P **P** **10 14 36.5 +1.0**
baz=219
NEA2 Nenana 94.30 11 IAMs_20 IAMs_20 10 54 56.7
comp=Z,25µm,20.0s
NEA2 Nenana 94.30 11 P **P** **10 14 34.4 -0.8**
baz=203,SNR=9.9
RIDG Independent Ri 94.32 13 IAMs_20 IAMs_20 10 54 50.2
comp=Z,17µm,19.0s
RIDG Independent Ri 94.32 13 P **P** **10 14 35.5 +0.1**
baz=207,SNR=34
PB11 IPOC Station P 94.33 115 IAMs_20 IAMs_20 10 48 25.1
comp=Z,16µm,20.0s
P33M Teslin, Yukon 94.36 20 P **P** **10 14 35.7 0.0**
baz=217,SNR=25
WRH Wood River Hil 94.36 12 IAmb IAmb 10 14 37.1
comp=Z,154nm,1.1s
L27K Beaver Creek, 94.37 15 IAMs_20 IAMs_20 10 58 57.5
comp=Z,12µm,18.0s
L27K Beaver Creek, 94.37 15 P **P** **10 14 36.0 +0.3**
baz=210
BCAR Beaver Creek A 94.38 15 P **P** **10 14 35.3 -0.4**
DOT Dot Lake 94.40 14 IAMs_20 IAMs_20 10 59 03.3
comp=Z,18µm,18.0s
KMI2 Kunming 94.43 296 ⇓P **P** **10 14 38.9 +1.8**
KMI2 S **S** **10 25 51.5 +2.2**
KMI2 pmax pmax
comp=Z,48nm,1.4s
KMI2 pmax pmax
comp=Z,4µm,8.0s
KMI2 L L
comp=Z,2µm,18.5s
KMI2 L L
comp=Z,5µm,19.1s
KMI2 L L
comp=Z,7µm,23.6s
MLY Manley 94.43 10 IAMs_20 IAMs_20 11 02 32.1
comp=Z,13µm,18.0s
MLY Manley 94.43 10 P **P** **10 14 35.0 -0.9**
baz=202,SNR=19
CM31 Chiang Mai Arr 94.43 288 P **P** **10 14 40.8 +3.8**
CM31 P **P** **10 14 40.8 +3.8**
CM31 S **SKSac** **10 25 15.8 +3.6**
CM31 S **SKSac** **10 25 15.8 +3.6**
CMAR Chiang Mai Arr 94.43 288 P **P** **10 14 38.9 +1.9**
comp=Z,24nm,0.9s,baz=132,slow=2.8,SNR=73
CMAR PKKPbc **PKKPbc** **10 31 37.9 +2.1**
comp=Z,2.5nm,0.8s,baz=286,slow=4.1,SNR=10
CMAR PKPPKP 10 39 46.6
comp=Z,1.0nm,0.8s,baz=283,slow=3.4,SNR=6.5
comp=Z,24nm,0.9s
CMAR Chiang Mai Arr 94.43 288 P **P** **10 14 38.5 +1.5**
F17K Baldwin Pennin 94.48 6 P **P** **10 14 36.1 +0.2**
baz=193,SNR=12

HDA Harding Lake 94.51 12 IAmb IAmb 10 14 37.7
comp=Z,80nm,1.0s
HDA IAMs_20 IAMs_20 10 59 59.3
comp=Z,13µm,18.0s
HDA Harding Lake 94.51 12 P **P** **10 14 35.9 -0.3**
baz=205,SNR=79
N31M Braeburn, Yuko 94.54 18 IAmb IAmb 10 14 38.9
comp=Z,65nm,1.0s
N31M IAMs_20 IAMs_20 10 52 31.2
comp=Z,15µm,19.0s
N31M Braeburn, Yuko 94.54 18 P **P** **10 14 36.8 +0.4**
baz=215,SNR=29
PB08 IPOC Station P 94.54 115 P **P** **10 14 38.0 0.0**
PB08 IPOC Station P 94.54 115 IAMs_20 IAMs_20 10 48 13.6
comp=Z,14µm,20.0s
K22A Casper 94.56 44 IAmb IAmb 10 14 38.9
comp=Z,127nm,1.1s
CCB Clear Creek Bu 94.57 12 IAmb IAmb 10 14 38.5
comp=Z,191nm,1.5s
CCB IAMs_20 IAMs_20 10 59 30.9
comp=Z,13µm,18.0s
CHTO Chiang Mai 94.59 289 P **P** **10 14 39.2 +1.5**
CHTO Chiang Mai 94.59 289 P **P** **10 14 40.1 +2.4**
CHTO P **P** **10 14 40.1 +2.4**
CHTO S **SKSac** **10 25 16.4 +3.3**
CHTO S **SKSac** **10 25 16.4 +3.3**
CHTO Chiang Mai 94.59 289 P **P** **10 14 37.8 +0.1**
comp=Z,13µmcomp=Z,4µmcomp=Z,82nm,1.0s
CRZF Crozet Islands 94.59 211 P **P** **10 14 39.1 +1.8**
CRZF IAmb IAmb 10 14 45.5
comp=Z,137nm,1.4s
G19K Purcell Mounta 94.61 7 IAMs_20 IAMs_20 11 01 26.9
comp=Z,12µm,18.0s
G19K Purcell Mounta 94.61 7 P **P** **10 14 36.4 -0.2**
baz=196
M29M Somme Creek 94.64 16 IAMs_20 IAMs_20 10 53 26.7
comp=Z,23µm,19.0s
M29M Somme Creek 94.64 16 P **P** **10 14 37.0 0.0**
baz=213,SNR=45
XLT XiLinHaoTe 94.67 318 *e*P **P** **10 14 38.3 +0.7**
XLT pP sP 10 14 42.8 +2.9
XLT sP pwP 10 14 46.3 -4.9
XLT sS sS 10 25 59.1 +6.0
XLT pmax pmax
comp=Z,63nm,1.1s
XLT pmax pmax
comp=Z,3µm,9.0s
XLT L L
comp=Z,5µm,19.2s
XLT L L
comp=Z,5µm,20.7s
H21K Melozitna Rive 94.70 9 IAMs_20 IAMs_20 10 56 20.3
comp=Z,15µm,20.0s
H21K Melozitna Rive 94.70 9 P **P** **10 14 37.1 +0.1**
baz=200
SCRK Sand Creek 94.70 13 IAMs_20 IAMs_20 10 59 13.4
comp=Z,15µm,18.0s
SCRK Sand Creek 94.70 13 P **P** **10 14 37.5 +0.2**
baz=208,SNR=20
GO01 Chusmiza 94.75 115 IAmb IAmb 10 15 06.5
comp=Z,80nm,1.4s
GO01 IAMs_20 IAMs_20 10 48 29.2
comp=Z,14µm,20.0s
I23K Minto, Yukon-K 94.76 11 P **P** **10 14 36.5 -0.8**
baz=203,SNR=37
COLA College 94.77 12 P **P** **10 14 36.6 -0.7**
COLA College 94.77 12 P **P** **10 14 36.7 -0.6**
COLA IAmb IAmb 10 14 38.6
comp=Z,75nm,1.0s
COLA IAMs_20 IAMs_20 10 54 59.1
comp=Z,15µm,20.0s
COLA College 94.77 12 P **P** **10 14 36.7 -0.6**
COLA pmax pmax
comp=Z,75nm,1.0s
COLA College 94.77 12 P **P** **10 14 36.8 -0.6**
baz=204
COLA College 94.77 12 P **P** **10 14 36.9 -0.5**
F18K Selawik 94.78 6 P **P** **10 14 36.8 -0.5**
baz=194,SNR=24
H04N3 CROZET ISLANDS 94.82 211 P **P** **10 14 40.7 +2.7**
baz=23,slow=28,SNR=5.0
H04N2 CROZET ISLANDS 94.82 211 P P 10 14 42.9 +4.9
baz=23,slow=28,SNR=4.7
H04N1 CROZET ISLANDS 94.83 211 P **P** **10 14 42.5 +4.4**
baz=23,slow=28,SNR=7.5
IL31 94.85 12 IAmb IAmb 10 14 39.9
comp=Z,128nm,1.4s
ILAR Eielson Array 94.85 12 P **P** **10 14 37.0 -0.8**
comp=Z,54nm,1.1s,baz=220,slow=4.1,SNR=116
ILAR PP **PP** **10 18 22.0 -5.1**
comp=Z,12nm,1.1s,baz=203,slow=5.2,SNR=5.0
ILAR PKiKP **PKiKP** **10 19 19.9 +0.1**
comp=Z,2.0nm,0.8s,baz=233,slow=3.0,SNR=5.0
ILAR PKPPKP **P'P'df** **10 39 46.6 +5.2**
comp=Z,1.0nm,1.0s,baz=320,slow=2.9,SNR=5.8
ILAR LR LR 10 55 23.8
comp=Z,7µm,18.1s,baz=193,slow=34
comp=Z,54nm,1.1s
ILAR Eielson Array 94.85 12 P **P** **10 14 37.0 -0.8**
ZEA Zeya 94.89 330 *e*P **P** **10 14 38.6 +0.4**
ZEA *e* 10 18 27.0
ZEA *e*S **S** **10 25 45.3 -6.2**
ZEA *e*PS PS 10 27 11.1 +1.1
ZEA *e*SS **SS** **10 32 25.8 +8.7**
ZEA pmax pmax
comp=N,20nm,1.2s
ZEA pmax pmax
comp=Z,40nm,1.0s
ZEA pmax pmax
comp=E,500nm,11.1s
ZEA pmax pmax
comp=N,400nm,11.7s
ZEA pmax pmax
comp=Z,2µm,8.8s
ZEA pmax pmax
comp=E,600nm,8.9s
ZEA pmax pmax
comp=N,500nm,7.6s
ZEA pmax pmax
comp=Z,1µm,7.7s
ZEA smax smax
comp=E,4µm,8.3s
ZEA smax smax
comp=N,4µm,8.4s
PLPT Palo Pinto 94.94 56 IAmb IAmb 10 14 41.5
comp=Z,118nm,1.6s
SLA San Lorenzo 94.95 121 *e*P **P** **10 14 40.1 +0.5**
J25K Salcha River, 95.00 13 IAMs_20 IAMs_20 10 59 53.1
comp=Z,17µm,18.0s
J25K Salcha River, 95.00 13 P **P** **10 14 38.5 -0.1**
baz=207
N32M Quiet Lake 95.03 19 P **P** **10 14 39.1 +0.3**
baz=217
TGUH Tegucigalpa,Un 95.05 77 P **P** **10 14 40.9 +0.9**
TGUH Tegucigalpa,Un 95.05 77 P **P** **10 14 39.6 -0.4**
comp=Z,7µmcomp=Z,2µmcomp=Z,42nm,1.3s
POKR Poker Plat Res 95.07 12 P **P** **10 14 38.0 -0.8**
baz=205
H22K Ishtalitna Cre 95.14 10 P **P** **10 14 38.5 -0.5**
baz=202
M30M Minto, Yukon 95.17 17 IAMs_20 IAMs_20 10 53 59.9
comp=Z,20µm,19.0s
M30M Minto, Yukon 95.17 17 P **P** **10 14 39.2 -0.2**
baz=214,SNR=30
WHTX Lake Whitney, 95.17 57 IAmb IAmb 10 15 03.0
comp=Z,109nm,1.9s
PB16 IPOC Station P 95.19 114 IAmb IAmb 10 14 47.3
comp=Z,158nm,1.3s
F19K Shaleruckik Mo 95.20 7 P **P** **10 14 39.2 -0.1**
baz=196,SNR=54
L29M L29M 95.28 16 IAMs_20 IAMs_20 10 54 14.7
comp=Z,23µm,19.0s
L29M L29M 95.28 16 P **P** **10 14 40.7 +0.8**
baz=213,SNR=66
WTFS Witchita Falls 95.31 55 IAmb IAmb 10 14 43.0
comp=Z,116nm,1.4s
JTS Las Juntas de 95.36 81 LR LR 10 49 20.0
comp=Z,16µm,18.4s,baz=242,slow=30
JTS Las Juntas de 95.36 81 P **P** **10 14 41.3 0.0**
JTS IAmb IAmb 10 14 44.9
comp=Z,72nm,1.1s
JTS Las Juntas de 95.36 81 IAMs_20 IAMs_20 10 50 28.1
comp=Z,17µm,18.0s
JTS Las Juntas de 95.36 81 P **P** **10 14 41.3 0.0**
JTS pmax pmax
comp=Z,72nm,1.1s
JTS Las Juntas de 95.36 81 P **P** **10 14 40.8 -0.6**

comp=Z,7µmcomp=Z,3µmcomp=Z,79nm,1.2s
HKT Hockley 95.41 59 P **P** **10 14 40.3 -0.7**
HKT IAMs_20 IAMs_20 10 50 43.4
comp=Z,18µm,20.0s
HKT Hockley 95.41 59 P **P** **10 14 40.3 -0.7**
HKT Hockley 95.41 59 P **P** **10 14 41.2 +0.1**
G21K Allakaket 95.42 9 P **P** **10 14 40.3 -0.1**
baz=200
E18K Tukpahlearik C 95.49 6 P **P** **10 14 40.2 -0.5**
baz=193,SNR=51
M31M Drury Creek, Y 95.51 18 IAMs_20 IAMs_20 10 53 11.8
comp=Z,17µm,19.0s
M31M Drury Creek, Y 95.51 18 P **P** **10 14 40.7 -0.2**
baz=216,SNR=18
WTLY Watson Lake, Y 95.55 22 P **P** **10 14 41.3 +0.2**
baz=221,SNR=17
D17K Noatak River 95.56 5 P **P** **10 14 41.3 +0.3**
baz=191
F20K Avaraart Lake 95.64 8 P **P** **10 14 41.4 +0.1**
baz=198
H24K Noodor Dome 95.65 11 P **P** **10 14 40.0 -1.4**
baz=204
BOAB BOACO BROADBAN 95.71 79 IAMs_20 IAMs_20 10 48 06.1
comp=Z,21µm,20.0s
HIA Hailar 95.72 324 IAMs_20 IAMs_20 10 54 51.7
comp=Z,18µm,20.0s
RCFN Al S de San Ju 95.73 78 P P 10 14 49.3 +6.2
ELIS Ellis County 95.77 52 IAmb IAmb 10 14 47.0
comp=Z,171nm,1.4s
PRP Porcupine Dome 95.78 12 IAmb IAmb 10 14 43.9
comp=Z,63nm,1.0s
PRP IAMs_20 IAMs_20 10 55 58.8
comp=Z,13µm,19.0s
PRP Porcupine Dome 95.78 12 P **P** **10 14 42.1 -0.1**
baz=207,SNR=34
DAWY Dawson 95.79 15 P **P** **10 14 42.3 +0.1**
baz=212,SNR=24
HHC Hu-ho-hao-te 95.82 313 *e*P **P** **10 14 43.6 +0.7**
HHC PP **PP** **10 18 33.0 -2.3**
HHC SKS **SKSac** **10 25 19.0 +0.1**
HHC S **S** **10 25 57.1 -3.4**
HHC SS **SS** **10 32 32.4 +1.2**
HHC pmax pmax
comp=Z,44nm,1.1s
HHC pmax pmax
comp=Z,2µm,4.6s
HHC L L
comp=Z,4µm,15.9s
HHC L L
comp=Z,4µm,15.3s
HHC L L
comp=Z,7µm,15.5s
E19K Redstone River 95.86 7 IAMs_20 IAMs_20 11 02 25.8
comp=Z,12µm,19.0s
E19K Redstone River 95.86 7 P **P** **10 14 42.4 0.0**
baz=196,SNR=53
PZH PanZhiHua 95.86 297 P **P** **10 14 46.3 +2.8**
PZH SKS **SKSac** **10 25 13.6 -6.2**
PZH S **ScS** **10 26 02.3 +0.1**
PZH SS **SS** **10 32 35.6 +3.3**
PZH pmax pmax
comp=Z,40nm,1.4s
PZH pmax pmax
comp=Z,3µm,8.3s
PZH L L
comp=Z,7µm,16.5s
PZH L L
comp=Z,6µm,18.4s
PZH L L
comp=Z,10µm,16.7s
RDOG Red Dog Mine 95.92 5 IAMs_20 IAMs_20 10 55 33.6
comp=Z,15µm,20.0s
RDOG Red Dog Mine 95.92 5 P **P** **10 14 42.7 +0.1**
baz=191,SNR=19
HDC Heredia 95.97 82 IAMs_20 IAMs_20 10 48 34.2
comp=Z,13µm,19.0s
C16K Lisburne Hills 95.98 4 IAmb IAmb 10 14 45.7
comp=Z,119nm,1.8s
C16K IAMs_20 IAMs_20 10 55 47.0
comp=Z,13µm,20.0s
C16K Lisburne Hills 95.98 4 P **P** **10 14 42.9 +0.1**
baz=189
K29M Barlow Dome 96.05 16 IAMs_20 IAMs_20 10 54 59.0
comp=Z,22µm,20.0s
K29M Barlow Dome 96.05 16 P **P** **10 14 43.3 -0.1**
baz=213,SNR=54
I26K Coal Creek Min 96.05 13 IAMs_20 IAMs_20 10 55 45.0
comp=Z,14µm,19.0s
I26K Coal Creek Min 96.05 13 P **P** **10 14 43.8 +0.6**
baz=209
F21K Alatna River 96.09 9 P **P** **10 14 43.5 +0.1**
baz=200
G23K Bananza Creek 96.10 10 P **P** **10 14 43.7 +0.2**
baz=203
X34A Smith Ranch, M 96.17 54 IAmb IAmb 10 14 47.6
comp=Z,103nm,1.3s
MAYO Mayo, Yukon 96.25 17 IAmb IAmb 10 14 59.2
comp=Z,52nm,0.9s
MAYO Mayo, Yukon 96.25 17 P **P** **10 14 44.3 +0.2**
baz=215,SNR=6.1
PAC1 Pacto, Paraso 96.25 93 P **P** **10 14 44.9 -0.7**
comp=Z,2µmcomp=Z,22nm,1.4s
C17K DeLong Mountai 96.32 5 P **P** **10 14 44.6 +0.1**
baz=197
LOOK Love County 96.35 55 IAmb IAmb 10 16 21.1
comp=Z,90nm,1.7s
CD2 Chengdu 96.37 301 P **P** **10 14 46.8 +1.2**
CD2 pP sP 10 14 50.3 +2.3
CD2 SKS **SKSac** **10 25 16.9 -5.2**
CD2 S **ScS** **10 26 08.4 +2.3**
CD2 SS **SS** **10 32 40.6 +1.4**
CD2 pmax pmax
comp=Z,60nm,0.8s
CD2 L L
comp=Z,7µm,16.9s
CD2 L L
comp=Z,12µm,18.2s
CD2 L L
comp=Z,10µm,16.7s
BILL Bilibino 96.38 353 P **P** **10 14 44.1 -0.6**
BILL Bilibino 96.38 353 *de*P **P** **10 14 44.6 0.0**
BILL pmax pmax
comp=Z,135nm,1.0s
BILL MLR MLR
comp=Z,8µm,17.0s
J29N Klondike Camp 96.39 15 P **P** **10 14 45.7 +0.8**
baz=213,SNR=25
G24K Hadweenzic Riv 96.50 11 IAMs_20 IAMs_20 10 56 53.8
comp=Z,18µm,19.0s
G24K Hadweenzic Riv 96.50 11 P **P** **10 14 44.9 -0.4**
baz=205
OTAV Otavalo 96.54 93 P **P** **10 14 47.3 0.0**
OTAV Otavalo 96.54 93 P **P** **10 14 47.3 0.0**
OTAV pmax pmax
comp=Z,25nm,1.2s
OTAV Otavalo 96.54 93 P **P** **10 14 48.8 +1.5**
OTAV Otavalo 96.54 93 P **P** **10 14 47.7 +0.4**
comp=Z,6µmcomp=Z,2µmcomp=Z,18nm,1.4s
OTAV Otavalo 96.54 93 *e*P **P** **10 14 48.6 +1.3**
COLD Coldfoot 96.55 10 P **P** **10 14 45.8 +0.3**
baz=203,SNR=14
CUSE Cuicocha Este 96.61 93 P **P** **10 14 46.9 -0.7**
comp=Z,3µmcomp=Z,29nm,1.7s
I27K Kandik River 96.62 14 IAMs_20 IAMs_20 10 58 57.1
comp=Z,17µm,18.0s
I27K Kandik River 96.62 14 P **P** **10 14 45.8 -0.1**
baz=210,SNR=15
C18K Utukok River 96.64 5 IAMs_20 IAMs_20 10 56 17.5
comp=Z,12µm,19.0s
C18K Utukok River 96.64 5 P **P** **10 14 45.9 0.0**
baz=193
PBA Port Blair 96.68 280 *e*P P 10 14 26.9 -20
PBA IAmb IAmb 10 15 07.8
comp=Z,228nm,1.5s
PBA IAMs_20 IAMs_20 10 28 34.8
comp=Z,11µm,18.3s
E20K Nigu River 96.75 7 P **P** **10 14 46.7 +0.3**
baz=197,SNR=14
D19K Kuna River 96.77 6 IAMs_20 IAMs_20 10 59 22.9
comp=Z,16µm,19.0s
D19K Kuna River 96.77 6 P **P** **10 14 46.6 +0.1**
baz=196
FYU Fort Yukon 96.77 12 IAMs_20 IAMs_20 11 01 47.0
comp=Z,12µm,18.0s
FNO Franklin 96.80 54 IAmb IAmb 10 14 50.1
comp=Z,119nm,1.2s
I28M Miner Creek 96.85 14 IAMs_20 IAMs_20 11 00 37.0
comp=Z,17µm,18.0s
I28M Miner Creek 96.85 14 P **P** **10 14 47.4 +0.4**
baz=211,SNR=32
BTO2 Baotou 96.86 313 *e*P **P** **10 14 49.8 +2.1**
BTO2 S **S** **10 26 13.0 +3.4**
BTO2 pmax pmax
comp=Z,22nm,0.6s
BTO2 L L
comp=Z,10µm,16.7s
BTO2 L L
comp=Z,5µm,18.2s
BTO2 L L
comp=Z,12µm,18.3s
RSSD Black Hills 96.88 44 P **P** **10 14 47.0 -0.8**
RSSD Black Hills 96.88 44 P **P** **10 14 47.0 -0.8**
RSSD pmax pmax
comp=Z,246nm,1.1s
RSSD Black Hills 96.88 44 P **P** **10 14 47.5 -0.3**
CBKS Cedar Bluff 96.92 50 IAMs_20 IAMs_20 10 57 51.2
comp=Z,23µm,18.0s
PSAL Palomas, Salto 96.94 130 *e*P **P** **10 14 49.6 +1.3**
J30M Hart River 96.95 16 P **P** **10 14 47.9 +0.4**
baz=214,SNR=24
LAO LASA Array 96.96 41 IAmb IAmb 10 14 50.2
comp=Z,98nm,1.2s
SIUN Universidad Ur 97.06 78 IAmb IAmb 10 16 09.2
comp=Z,21nm,0.4s
W35A Tecumseh 97.13 54 IAmb IAmb 10 15 28.0
comp=Z,112nm,1.8s
D20K Etivluk River 97.14 7 P **P** **10 14 48.0 -0.1**
baz=197,SNR=9.5
I29M Ogilvie Camp, 97.14 15 P **P** **10 14 48.1 -0.1**
baz=213,SNR=10
KOTAN Kotaneelee Air 97.16 23 P **P** **10 14 47.8 -0.6**
baz=224,SNR=5.7
E22K Anaktuvuk Pass 97.17 9 IAMs_20 IAMs_20 10 57 40.4
comp=Z,15µm,20.0s
E22K Anaktuvuk Pass 97.17 9 P **P** **10 14 48.0 -0.3**
baz=201
E21K Killik River 97.18 8 IAMs_20 IAMs_20 11 02 39.7
comp=Z,12µm,19.0s
E21K Killik River 97.18 8 P **P** **10 14 48.1 -0.3**
baz=199
H27K Steamboat Moun 97.19 13 IAMs_20 IAMs_20 11 00 44.0
comp=Z,17µm,18.0s
H27K Steamboat Moun 97.19 13 P Pdif 10 14 48.7 +0.1
baz=210
DGPR DIGLIPUR 97.20 281 IAmb IAmb 10 14 27.6
comp=Z,68nm,0.9s
DGPR *e*P P 10 14 28.1 -21
C19K Lookout Ridge 97.22 6 IAMs_20 IAMs_20 10 59 59.9
comp=Z,13µm,19.0s
C19K Lookout Ridge 97.22 6 P **P** **10 14 48.5 -0.1**
baz=194
TULM Tulcn-Chalpat 97.35 93 P **P** **10 14 50.6 -0.4**
LPAZ La Paz 97.37 113 P Pdif 10 14 52.3 +1.0
comp=Z,26nm,1.2s,baz=240,slow=2.7,SNR=19
LPAZ PKKP **PKKPdf** **10 31 29.4 -0.7**
comp=Z,3.2nm,0.9s,baz=56,slow=2.5,SNR=6.5
LPAZ LR LR 10 50 41.0
comp=Z,10µm,21.3s,baz=230,slow=30
comp=Z,26nm,1.2s
LPAZ La Paz 97.37 113 P **P** **10 14 51.1 -0.2**
LPAZ La Paz 97.37 113 P **P** **10 14 51.1 -0.2**
LPAZ pmax pmax
comp=Z,43nm,1.2s
LPAZ La Paz 97.37 113 *e*P Pdif 10 14 52.0 +0.7
G26K Porcupine Rive 97.38 12 IAMs_20 IAMs_20 10 57 27.1
comp=Z,15µm,19.0s
G26K Porcupine Rive 97.38 12 P Pdif 10 14 49.3 0.0
baz=208
E23K Chandalar 97.41 10 P **P** **10 14 49.4 0.0**
baz=203
R32A Long Quarter, 97.43 51 IAmb IAmb 10 14 52.5
comp=Z,75nm,1.1s
R32A IAMs_20 IAMs_20 10 54 12.6
comp=Z,21µm,19.0s
BONI La Bonita 97.45 93 P Pdif 10 14 52.7 +1.4
KAN01 Argonia South 97.47 52 IAmb IAmb 10 14 54.5
comp=Z,78nm,1.2s
I30M Mount Dempster 97.47 16 IAMs_20 IAMs_20 10 55 36.6
comp=Z,18µm,20.0s
I30M Mount Dempster 97.47 16 P **P** **10 14 49.6 -0.3**
baz=214,SNR=39
OK052 Battle Ridge R 97.58 53 IAmb IAmb 10 14 53.1
comp=Z,60nm,1.3s
E24K Your Creek 97.59 10 P Pdif 10 14 50.7 +0.4
baz=204
F25K Christian Rive 97.62 11 IAMs_20 IAMs_20 11 04 40.4
comp=Z,15µm,18.0s
F25K Christian Rive 97.62 11 P Pdif 10 14 51.5 +1.1
baz=207,SNR=18
BMAR Burnt Mountain 97.66 12 P Pdif 10 14 50.7 +0.1
G27K Doyon Strip 97.67 13 IAMs_20 IAMs_20 10 56 18.6
comp=Z,16µm,20.0s
G27K Doyon Strip 97.67 13 P **P** **10 14 50.6 0.0**
baz=210
OK048 Pawnee Station 97.69 53 IAMs_20 IAMs_20 10 54 03.8
comp=Z,15µm,19.0s
C21K Knifeblade Rid 97.76 7 P Pdif 10 14 51.6 +0.6
baz=199,SNR=19
TNCH TengChong 97.77 294 ⇓P Pdif 10 14 53.8 +1.5
TNCH PP **PP** **10 18 56.3 +5.6**
TNCH S S 10 26 08.1 -10
TNCH pmax pmax
comp=Z,64nm,0.4s
TNCH pmax pmax
comp=Z,3µm,7.9s
TNCH L L
comp=Z,2µm,14.6s
TNCH L L
comp=Z,4µm,17.3s
TNCH L L
comp=Z,7µm,18.5s
441A DeRidder 97.80 59 IAMs_20 IAMs_20 10 54 25.7
comp=Z,18µm,19.0s
OK051 E0350 and S346 97.81 53 IAMs_20 IAMs_20 10 54 16.0
comp=Z,16µm,19.0s
TOLK Toolik Lake Re 97.95 9 P Pdif 10 14 52.1 +0.2
baz=203,SNR=10
GCUF Volcan Galeras 97.97 93 P Pdif 10 14 54.7 +0.8
comp=Z,8µmcomp=Z,2µmcomp=Z,24nm,1.4s
F26K Sheenjek River 97.97 12 IAMs_20 IAMs_20 10 59 50.8
comp=Z,14µm,18.0s
F26K Shnjek River 97.97 12 P Pdif 10 14 52.6 +0.6
baz=208
D23K Nanushuk River 98.10 9 IAMs_20 IAMs_20 10 58 27.0
comp=Z,12µm,19.0s
D23K Nanushuk River 98.10 9 P Pdif 10 14 54.1 +1.6
baz=202
E25K Arctic Village 98.11 11 IAMs_20 IAMs_20 11 04 57.3
comp=Z,15µm,18.0s
E25K Arctic Village 98.11 11 P Pdif 10 14 53.4 +0.9
baz=207,SNR=26
A19K Wainwright 98.17 5 P **P** **10 14 52.6 -0.1**
baz=193
B21K Ikpikpuk River 98.22 7 IAMs_20 IAMs_20 11 03 26.3
comp=Z,14µm,19.0s
B21K Ikpikpuk River 98.22 7 P Pdif 10 14 53.0 +0.1
baz=199
T35A Sooner Cattle 98.23 53 IAMs_20 IAMs_20 10 54 28.2
comp=Z,18µm,19.0s
TUL3 Leonard 98.27 54 IAMs_20 IAMs_20 10 53 48.3
comp=Z,21µm,19.0s
B20K Meade River 98.33 6 IAMs_20 IAMs_20 11 00 26.1
comp=Z,16µm,19.0s
B20K Meade River 98.33 6 P Pdif 10 14 53.5 +0.1
baz=196
EPYK Eagle Plains 98.34 15 P Pdif 10 14 53.9 +0.2
baz=214,SNR=21
BBAC Balboa, Cauca 98.43 92 P Pdif 10 14 55.7 +0.1
comp=Z,6µmcomp=Z,2µmcomp=Z,17nm,1.4s
H31M Peel River 98.44 16 IAMs_20 IAMs_20 10 56 06.2
comp=Z,21µm,19.0s
H31M Peel River 98.44 16 Pdiff **P** **10 14 53.3 -0.8**
baz=216
D24K Happy Valley 98.53 9 IAMs_20 IAMs_20 11 03 17.6
comp=Z,16µm,18.0s
D24K Happy Valley 98.53 9 Pdiff Pdif 10 14 54.9 +0.5
baz=204
F28M Old Crow 98.72 13 IAMs_20 IAMs_20 11 01 50.5
comp=Z,18µm,18.0s
F28M Old Crow 98.72 13 Pdiff Pdif 10 14 55.5 +0.3
baz=212
LZH Lanzhou 98.74 306 *e*P Pdif 10 14 58.0 +1.7
LZH pP sP 10 15 03.9 +5.2
LZH PP **PP** **10 18 59.4 +1.5**
LZH S **S** **10 26 21.0 -4.8**
LZH pmax pmax
comp=Z,23nm,1.3s
LZH L L
comp=Z,6µm,18.2s
LZH L L
comp=Z,6µm,18.6s
LZH L L
comp=Z,8µm,19.9s
LZDM Lanzhou Array 98.78 306 P **P** **10 14 56.4 -0.3**
comp=Z,4.5nm,0.7s,baz=108,slow=4.8,SNR=7.7
LZDM LR LR 10 57 46.2
comp=Z,4µm,19.4s,baz=135,slow=34
comp=Z,4.5nm,0.7s
E27K Coleen River 98.87 12 IAMs_20 IAMs_20 10 58 21.5
comp=Z,17µm,19.0s
E27K Coleen River 98.87 12 Pdiff **P** **10 14 55.9 -0.1**
baz=210
C23K Itkillik River 98.92 9 IAMs_20 IAMs_20 10 58 47.7
comp=Z,15µm,19.0s
C23K Itkillik River 98.92 9 Pdiff Pdif 10 14 56.6 +0.5
baz=202
G30M tAoh Zraii Nji 98.96 15 Pdiff **P** **10 14 56.3 -0.1**
baz=215
B22K Teshekpuk Lake 99.04 7 IAmb IAmb 10 15 08.8
comp=Z,78nm,1.5s
B22K Teshekpuk Lake 99.04 7 Pdiff **Pdif** **10 14 56.4 -0.2**
baz=200
D25K Kavik River 99.06 10 IAMs_20 IAMs_20 10 58 40.4
comp=Z,19µm,20.0s
D25K Kavik River 99.06 10 Pdiff **Pdif** **10 14 56.5 -0.3**
baz=206
C24K Franklin Bluff 99.07 9 IAMs_20 IAMs_20 10 57 26.8
comp=Z,12µm,19.0s
C24K Franklin Bluff 99.07 9 Pdiff **Pdif** **10 14 56.4 -0.3**
baz=204
POPC Popayan, Colom 99.17 92 P **Pdif** **10 14 58.6 -0.3**
comp=Z,6µmcomp=Z,955nmcomp=Z,14nm,1.4s
KSU1 Kansas State U 99.19 51 IAMs_20 IAMs_20 10 59 40.4
comp=Z,21µm,18.0s
SAIC Isla e San And 99.20 81 P **Pdif** **10 14 59.2 +0.6**
BGNE Belgrade 99.25 48 IAMs_20 IAMs_20 10 58 26.6
comp=Z,18µm,18.0s
BCIP Isla Barro Col 99.36 85 P **Pdif** **10 14 57.6 -1.8**
comp=Z,6µmcomp=Z,1µmcomp=Z,31nm,1.5s
JAMC Jamundi, Valle 99.48 91 P **Pdif** **10 14 57.2 -3.1**
A22K Sinclair Lake 99.50 7 Pdiff **Pdif** **10 14 58.8 +0.2**
baz=198
U38A Gravette 99.52 54 IAmb IAmb 10 19 01.6
comp=Z,77nm,1.9s
U38A IAMs_20 IAMs_20 10 55 11.5
comp=Z,15µm,18.0s
YAK Yakutsk 99.53 337 LR LR 11 00 56.5
comp=Z,6µm,18.1s,baz=134,slow=36
YAK Yakutsk 99.53 337 *d*P **Pdif** **10 14 58.2 -0.7**
YAK *e*PP **sP** **10 15 01.6 +0.4**
YAK *e* 10 18 58.1
YAK *e*PPP PPP 10 21 07.3
YAK *e*S **SKSac** **10 25 36.6 +0.1**
YAK *e*SS **SS** **10 33 14.4 -7.7**
YAK *e*SSS SSS 10 37 10.4
YAK pmax pmax
comp=Z,85nm,1.1s
YAK pmax pmax
comp=N,11nm,1.2s
YAK pmax pmax
comp=E,13nm,1.4s
YAK pmax pmax
comp=Z,3µm,7.4s
YAK pmax pmax
comp=N,1µm,7.8s
YAK pmax pmax
comp=E,1µm,8.4s
YAK smax smax
comp=N,686nm,7.3s
YAK smax smax
comp=E,637nm,7.1s
YAK MLR MLR
comp=Z,11µm,24.0s
YAK MLR MLR
comp=N,6µm,21.0s
YAK MLR MLR
comp=E,7µm,23.0s
WRGLY Wrigley 99.57 21 Pdiff **Pdif** **10 14 59.0 -0.1**
baz=225
F30M Barrier River 99.58 14 IAMs_20 IAMs_20 11 02 12.2
comp=Z,13µm,18.0s
F30M Barrier River 99.58 14 Pdiff **Pdif** **10 14 58.4 -0.6**
baz=215
FLOC Florencia 99.64 93 P **Pdif** **10 15 02.2 +1.5**
FLOC Florencia 99.64 93 P **Pdif** **10 15 00.1 -0.6**
comp=Z,5µmcomp=Z,1µmcomp=Z,26nm,1.4s
A21K Barrow 99.64 6 Pdiff **Pdif** **10 14 58.9 -0.4**
baz=197
PTLC Puerto Leguiza 99.74 95 P **Pdif** **10 14 58.8 -2.4**
C27K Jago River 99.76 11 IAMs_20 IAMs_20 11 06 09.9
comp=Z,11µm,18.0s
C27K Jago River 99.76 11 Pdiff **Pdif** **10 15 00.3 +0.4**
baz=208
E29M Blow River 99.77 13 IAMs_20 IAMs_20 10 57 43.3
comp=Z,16µm,19.0s
E29M Blow River 99.77 13 Pdiff **Pdif** **10 14 59.1 -0.8**
baz=213
C26K Camden Bay 99.82 10 Pdiff **Pdif** **10 15 00.4 +0.4**
baz=207
F31M Tsiigehtchic 99.90 15 IAmb IAmb 10 15 02.4
comp=Z,84nm,1.1s
F31M IAMs_20 IAMs_20 10 57 11.9
comp=Z,16µm,19.0s
F31M Tsiigehtchic 99.90 15 Pdiff **Pdif** **10 15 00.4 0.0**
baz=217
D27M Malcolm River 99.91 12 IAMs_20 IAMs_20 10 59 15.8
comp=Z,15µm,18.0s
D27M Malcolm River 99.91 12 Pdiff **Pdif** **10 15 01.4 +0.8**
baz=211
CPUP Villa Florida 100.04 127 P **Pdif** **10 15 05.0 +2.7**
comp=Z,3.3nm,0.8s,baz=231,slow=8.3,SNR=6.0
CPUP PKKPbc **PKKPbc** **10 31 20.1 -0.2**
comp=Z,5.4nm,1.0s,baz=13,slow=2.8,SNR=6.8
CPUP Villa Florida 100.04 127 P **Pdif** **10 15 05.0 +2.7**
GARC Garzon, Huila 100.06 93 P **Pdif** **10 15 02.5 -0.4**
comp=Z,6µmcomp=Z,1µmcomp=Z,12nm,1.4s
YOTC Yotoco, Valle 100.12 91 P **Pdif** **10 15 03.4 +0.4**
comp=Z,4µmcomp=Z,1µmcomp=Z,17nm,1.4s
CPSB Cacapava Do Su 100.15 132 *e*P **Pdif** **10 15 04.6 +1.9**
PTAC Punta Ardita, 100.25 87 P **Pdif** **10 15 00.9 -2.5**
D28M Stokes Point 100.40 13 Pdiff **Pdif** **10 15 03.1 +0.5**
baz=213
VBMS Vicksburg 100.50 59 IAMs_20 IAMs_20 10 54 42.1
comp=Z,18µm,20.0s
PLMC San Jos del P 100.60 90 P **Pdif** **10 15 04.2 -0.8**
comp=Z,857nmcomp=Z,8.1nm,1.4s
INK Inuvik 100.64 15 Pdiff **Pdif** **10 15 03.5 -0.3**
baz=217
N35A Tabor 100.67 49 IAMs_20 IAMs_20 10 56 16.3
comp=Z,18µm,19.0s
L34A Svendsen Farm, 100.69 48 IAMs_20 IAMs_20 10 53 14.6
comp=Z,14µm,20.0s
S39A Bolivar 100.84 53 IAMs_20 IAMs_20 10 56 22.4
comp=Z,13µm,18.0s
LKP Lekhapani 100.94 295 *e*P Pdif 10 14 47.8 -18
LKP IAMs_20 IAMs_20 10 28 29.3
comp=Z,8µm,17.2s
SAIH SAIHA 101.22 290 *e*P Pdif 10 14 50.4 -17
CBOC Ciudad Bolivar 101.27 89 P **Pdif** **10 15 07.8 -0.3**
comp=Z,1µmcomp=Z,14nm,1.3s
PRAC Prado 101.29 92 P **Pdif** **10 15 06.6 -1.5**
comp=Z,1µmcomp=Z,23nm,0.9s
IMP Imphal 101.42 292 *e*P **Pdif** **10 14 52.4 -16**
IMP IAMs_20 IAMs_20 10 29 37.1
comp=Z,9µm,17.5s
MACC Macarena, Meta 101.49 94 P **Pdif** **10 15 07.0 -2.0**
comp=Z,3µmcomp=Z,23nm,0.5s
URMC La Uribe, Meta 101.53 92 P **Pdif** **10 15 06.6 -2.6**
P38A Dawn 101.55 51 IAMs_20 IAMs_20 10 56 31.0
comp=Z,16µm,19.0s
GUY2C Guyana, Caldas 101.56 90 P **Pdif** **10 15 10.9 +1.1**
MOKO MOKOCHONG 101.58 294 *e*P Pdif 10 14 50.6 -19
DBBC Dabeiba 101.61 88 P **Pdif** **10 15 06.6 -2.9**
KOHI KOHIMA 101.66 293 *e*P **Pdif** **10 14 53.5 -16**
KOHI IAMs_20 IAMs_20 10 28 45.8
comp=Z,17µm,17.5s
APAC Apartado, Choc 101.68 87 P **Pdif** **10 15 08.7 -1.0**
comp=Z,6µmcomp=Z,1µmcomp=Z,12nm,1.1s
146A Union 101.79 59 IAMs_20 IAMs_20 10 55 52.3
comp=Z,18µm,20.0s
R40A Maddies Statio 101.85 53 IAMs_20 IAMs_20 10 57 03.2

	comp=Z,18µm,18.0s									
Y45A	**Yeager Farm, C**	**101.94**	**58**		IAMs_20	IAMs_20	10 54 35.3			
	comp=Z,12µm,20.0s									
JORH	**JORHAT**	**101.97**	**294**	*eP*		**Pdif**	**10 14 54.6**	**-16**		
ULN	**Ulaanbaatar**	**102.11**	**318**	P		**Pdif**	**10 15 10.9**	**-0.1**		
ULN				S		**SKSac**	**10 25 51.1**	**+1.0**		
YKA	**Yellowknife Ar**	**102.14**	**25**	P		**Pdif**	**10 15 10.4**	**-0.2**		
	comp=Z,3.8nm,0.9s,baz=246,slow=4.6,SNR=42									
YKA				PKiKP		**PKiKP**	**10 19 34.7**	**+2.0**		
	comp=Z,3.9nm,1.0s,baz=254,slow=2.3,SNR=8.5									
YKA				PKKPbc		**PKKPbc**	**10 31 16.6**	**+0.8**		
	comp=Z,1.8nm,0.9s,baz=35,slow=2.6,SNR=10.0									
YKA				PKPPKP		**P'P'df**	**10 39 34.0**	**+5.5**		
	comp=Z,0.6nm,0.9s,baz=33,slow=2.9,SNR=5.3									
T42A	**Van Buren**	**102.15**	**55**		IAMs_20	IAMs_20	10 56 02.3			
	comp=Z,21µm,18.0s									
N38A	**Joes South For**	**102.27**	**50**		IAMs_20	IAMs_20	10 56 55.9			
	comp=Z,21µm,19.0s									
ROSC	**El Rosal**	**102.31**	**91**	P		**Pdif**	**10 15 08.7**	**-4.3**		
CVER	**Cruz Verde, Cu**	**102.38**	**91**	P		**Pdif**	**10 15 12.8**	**-0.6**		
	comp=Z,2µmcomp=Z,45nm,0.7s									
CCM	**Cathedral Cave**	**102.48**	**54**		IAMs_20	IAMs_20	10 55 57.3			
	comp=Z,19µm,20.0s									
SONM	**Songino Array**	**102.49**	**318**	P		**Pdif**	**10 15 11.6**	**-1.0**		
	comp=Z,8.6nm,1.2s,baz=132,slow=4.0,SNR=21									
SONM				PKKPbc		**PKKPbc**	**10 31 14.9**	**+0.4**		
	comp=Z,13nm,1.1s,baz=257,slow=2.8,SNR=15									
VILC	**Villavicencio,**	**102.53**	**92**	P		**Pdif**	**10 15 09.8**	**-3.9**		
UREC	**San Jos de Ur**	**102.54**	**88**	P		**Pdif**	**10 15 12.0**	**-1.6**		
	comp=Z,4µmcomp=Z,906nmcomp=Z,6.5nm,1.2s									
ITAN	**ITANAGAR**	**102.57**	**294**	*eP*		**Pdif**	**10 14 56.9**	**-17**		
ITAN					IAMs_20	IAMs_20	10 29 17.2			
	comp=Z,16µm,17.7s									
ZIRO	**ZIRO**	**102.63**	**294**	*eP*		Pdif	10 14 56.7	-17		
ZIRO					IAMs_20	IAMs_20	10 29 19.9			
	comp=Z,10µm,16.0s									
CHIC	**Chingaza**	**102.73**	**91**	P		**Pdif**	**10 15 09.8**	**-5.1**		
Z47A	**Carrollton**	**102.78**	**59**		IAMs_20	IAMs_20	10 56 50.5			
	comp=Z,22µm,19.0s									
BELO	**BELONIA**	**102.82**	**290**	*eP*		Pdif	10 14 56.8	-18		
SPBC	**San Pablo de B**	**102.89**	**90**	P		**Pdif**	**10 15 14.0**	**-1.3**		
PTBC	**PUERTO BERRIO**	**102.95**	**89**	P		**Pdif**	**10 15 14.0**	**-1.4**		
	comp=Z,4µmcomp=Z,767nmcomp=Z,12nm,1.1s									
ITAB	**Concordia**	**103.08**	**130**	*eP*		**Pdif**	**10 15 18.6**	**+2.8**		
TEZP	**TEZPUR**	**103.10**	**293**	*eP*		**Pdif**	**10 15 00.1**	**-16**		
TEZP					IAMs_20	IAMs_20	10 29 48.8			
	comp=Z,11µm,18.9s									
AGT	**Agartala**	**103.25**	**290**	*eP*		**Pdif**	**10 15 00.5**	**-16**		
SHL	**Shillong**	**103.42**	**292**	*eP*		Pdif	10 15 00.2	-17		
SHL					IAMs_20	IAMs_20	10 29 49.7			
	comp=Z,13µm,17.6s									
FFC	**Flin Flon**	**103.43**	**35**		IAMs_20	IAMs_20	11 02 18.7			
	comp=Z,13µm,19.0s									
LRAL	**Lakeview Retre**	**103.53**	**60**		IAMs_20	IAMs_20	10 57 36.5			
	comp=Z,18µm,19.0s									
I37A	**Lemond, Waseca**	**103.55**	**47**		IAMs_20	IAMs_20	10 58 58.3			
	comp=Z,21µm,19.0s									
C36M	**Paulatuk**	**103.70**	**17**		IAMs_20	IAMs_20	10 57 50.3			
	comp=Z,16µm,20.0s									
C36M	**Paulatuk**	**103.70**	**17**		Pdiff	**Pdif**	**10 15 17.1**	**-0.2**		
	baz=226									
BRJC	**Barrancabermej**	**103.78**	**89**	P		**Pdif**	**10 15 19.7**	**+0.6**		
SJCC	**San Jacinto, C**	**103.80**	**86**	P		**Pdif**	**10 15 17.2**	**-2.0**		
	comp=Z,2µmcomp=Z,16nm,2.8s									
AMBA	**Amambai (Brazi**	**103.80**	**125**	*eP*		**Pdif**	**10 15 20.8**	**+1.7**		
RUSC	**La Rusia**	**103.88**	**91**	P		**Pdif**	**10 15 18.5**	**-1.6**		
X48A	**Hartselle**	**104.07**	**58**		IAMs_20	IAMs_20	10 56 31.6			
	comp=Z,12µm,19.0s									
L40A	**Anamosa**	**104.18**	**50**		IAMs_20	IAMs_20	10 58 24.3			
	comp=Z,21µm,18.0s									
TAWA	**Tawang**	**104.26**	**294**	*eP*		Pdif	10 15 04.3	-17		
Y49A	**Blount Mountai**	**104.31**	**59**		IAMs_20	IAMs_20	10 57 17.1			
	comp=Z,15µm,19.0s									
P43A	**Skaggs, Pawnee**	**104.36**	**53**		IAMs_20	IAMs_20	11 02 16.6			
	comp=Z,13µm,18.0s									
Q44A	**Meyer Farm, Va**	**104.42**	**54**		IAMs_20	IAMs_20	10 58 12.2			
	comp=Z,15µm,19.0s									
ULM	**Lac du Bonnet**	**104.70**	**41**		Pdiff	**Pdif**	**10 15 21.0**	**-1.3**		
	comp=Z,5.0nm,1.0s,baz=341,slow=1.4,SNR=4.5									
ULM				PKKPbc		**PKKPbc**	**10 31 08.0**	**+0.2**		
	comp=Z,7.1nm,1.0s,baz=130,slow=3.0,SNR=5.9									
V48A	**Smith Brothers**	**104.75**	**57**		IAMs_20	IAMs_20	11 02 41.6			
	comp=Z,18µm,18.0s									
PAMC	**Pamplona, Colo**	**104.87**	**89**	P		**Pdif**	**10 15 23.0**	**-1.5**		
HDIL	**Hopedale**	**104.89**	**52**		IAMs_20	IAMs_20	10 57 55.5			
	comp=Z,19µm,19.0s									
PTLB	**Pontes e Lacer**	**105.08**	**117**	*eP*		**Pdif**	**10 15 26.3**	**+1.5**		
DHUB	**DHUBRI**	**105.16**	**292**	*eP*		Pdif	10 15 07.4	-17		
DHUB					IAMs_20	IAMs_20	10 30 18.4			
	comp=Z,10µm,20.1s									
JFWS	**Jewell Farm**	**105.19**	**49**		IAMs_20	IAMs_20	11 03 41.8			
	comp=Z,20µm,18.0s									
L42A	**Oliver, Polo**	**105.22**	**50**		IAMs_20	IAMs_20	11 02 34.8			
	comp=Z,18µm,18.0s									
A36M	**Sachs Harbour**	**105.28**	**14**		IAMs_20	IAMs_20	11 00 36.0			
	comp=Z,13µm,19.0s									
A36M	**Sachs Harbour**	**105.28**	**14**		PKiKP	**PKiKP**	**10 19 38.9**	**+0.7**		
	baz=225									
I40A	**Norwalk**	**105.33**	**48**		IAMs_20	IAMs_20	10 55 47.5			
	comp=Z,15µm,20.0s									
PALK	**Pallekele**	**105.36**	**270**		IAMs_20	IAMs_20	11 05 11.4			
	comp=Z,13µm,18.0s									
PALK	**Pallekele**	**105.36**	**270**	P		**Pdif**	**10 15 26.3**	**+0.1**		
GOMU	**GeErMu**	**105.38**	**303**	Pdif		**Pdif**	**10 15 27.6**	**+1.5**		
GOMU				PP		**PP**	**10 19 47.6**	**-0.6**		
GOMU				SKS		**SKSac**	**10 26 07.3**	**+1.0**		
GOMU				SS		**SS**	**10 34 45.1**	**0.0**		
GOMU				L		L				
	comp=Z,2µm,18.3s									
GOMU				L		L				
	comp=Z,3µm,18.3s									
GOMU				L		L				
	comp=Z,5µm,18.8s									
ZAK	**Zakamensk**	**105.45**	**319**	*eP*		**Pdif**	**10 15 26.0**	**+0.3**		
ZAK				pmax		pmax				
	comp=Z,10.0nm,1.2s									
DGAR	**Diego Garcia**	**105.55**	**253**		IAMs_20	IAMs_20	11 04 08.8			
	comp=Z,19µm,18.0s									
VILB	**Vilhena**	**105.62**	**114**	*eP*		**Pdif**	**10 15 30.2**	**+2.9**		
U49A	**Red Boiling Sp**	**105.83**	**57**		IAMs_20	IAMs_20	10 58 12.1			
	comp=Z,18µm,20.0s									
P46A	**Rosedale**	**106.00**	**53**		IAMs_20	IAMs_20	11 05 20.9			
	comp=Z,12µm,18.0s									
MALK	**Mahakanadarawa**	**106.00**	**271**	P		**Pdif**	**10 15 30.3**	**+1.4**		
MALK				PP		**PP**	**10 19 52.0**	**-0.6**		
M44A	**Midewin, Midew**	**106.09**	**51**		IAMs_20	IAMs_20	10 57 56.1			
	comp=Z,19µm,20.0s									
Y52A	**Lilburn**	**106.11**	**60**		IAMs_20	IAMs_20	10 58 55.8			
	comp=Z,17µm,19.0s									
LDASE	**Londrina, Braz**	**106.26**	**128**	*eP*		**Pdif**	**10 15 32.0**	**+2.0**		
BWNR	**Bhubaneshwar**	**106.36**	**285**	*eP*		Pdif	10 15 10.1	-20		
SFIN	**Lafayette**	**106.37**	**53**		IAMs_20	IAMs_20	10 59 12.6			
	comp=Z,21µm,19.0s									
154A	**Montrose**	**106.37**	**61**		IAMs_20	IAMs_20	11 04 07.9			
	comp=Z,10µm,18.0s									
I42A	**Draeger Farm,**	**106.46**	**49**		IAMs_20	IAMs_20	11 04 56.6			
	comp=Z,15µm,18.0s									
W52A	**Murphy**	**106.68**	**59**		IAMs_20	IAMs_20	10 57 44.8			
	comp=Z,20µm,20.0s									
GTK	**Tadong**	**106.81**	**292**	*eP*		Pdif	10 15 14.0	-18		
GTK					IAMs_20	IAMs_20	10 29 55.5			
	comp=Z,15µm,17.9s									
PP1B	**Ponte de Pedra**	**107.13**	**121**	*eP*		**Pdif**	**10 15 35.5**	**+1.5**		
H43A	**Windswept, Lux**	**107.44**	**49**		IAMs_20	IAMs_20	11 03 16.5			
	comp=Z,13µm,18.0s									
VIS	**Vishakhapatnam**	**107.50**	**281**	*eP*		Pdif	10 15 15.9	-20		
VIS					IAMs_20	IAMs_20	10 30 28.9			
	comp=Z,13µm,18.1s									
TZTN	**Tazewell**	**107.51**	**58**		IAMs_20	IAMs_20	11 03 01.5			
	comp=Z,17µm,18.0s									
SALV	**Santo Antonio**	**107.51**	**119**	*eP*		**Pdif**	**10 15 37.6**	**+1.9**		
O48B	**Farmland**	**107.70**	**53**		IAMs_20	IAMs_20	11 04 00.9			
	comp=Z,9µm,18.0s									
JMUI	**Jamui**	**107.86**	**289**	*eP*		Pdif	10 15 18.6	-18		
RAGD	**RAYAGADA**	**108.00**	**283**[1]	*eP*		Pdif	10 15 20.0	-18		
O49A	**Covington**	**108.26**	**54**		IAMs_20	IAMs_20	11 00 33.8			
	comp=Z,17µm,18.0s									
MDRS	**Chennai**	**108.28**	**275**	*eP*		Pdif	10 15 20.3	-19		
MDRS					IAMs_20	IAMs_20	10 29 50.2			
	comp=Z,10µm,17.3s									
I45A	**Fountain**	**108.31**	**49**		IAMs_20	IAMs_20	11 01 00.5			
	comp=Z,14µm,19.0s									
N49A	**Columbus Grove**	**108.63**	**53**		IAMs_20	IAMs_20	11 04 56.4			
	comp=Z,18µm,18.0s									
GAYA	**Gaya**	**108.65**	**289**	*eP*		Pdif	10 15 22.3	-18		
SPB	**Sao Paulo**	**108.66**	**131**		IAMs_20	IAMs_20	11 03 33.5			
	comp=Z,14µm,18.0s									
KMSC	**Kings Mountain**	**108.68**	**60**		IAMs_20	IAMs_20	11 00 26.7			
	comp=Z,19µm,19.0s									
JHSG	**JHARSUGUGA**	**108.72**	**285**	*eP*		Pdif	10 15 22.7	-18		
U54A	**Nelsons Funny**	**108.80**	**58**		IAMs_20	IAMs_20	11 04 18.7			
	comp=Z,11µm,18.0s									
NHSC	**New Hope**	**108.84**	**62**		IAMs_20	IAMs_20	11 02 00.4			
	comp=Z,14µm,19.0s									
Y57A	**Sumter**	**109.00**	**61**		IAMs_20	IAMs_20	11 01 05.4			
	comp=Z,19µm,19.0s									
KAAM	**Kaadhehdhoo**	**109.03**	**260**		IAMs_20	IAMs_20	11 07 18.7			
	comp=Z,18µm,18.0s									
TRD	**Trivandrum**	**109.23**	**270**	*eP*		Pdif	10 15 25.2	-18		
VJD	**Vijayawada**	**109.35**	**279**	*eP*		Pdif	10 15 26.3	-17		
AAM	**Ann Arbor**	**109.48**	**52**		IAMs_20	IAMs_20	11 06 57.6			
	comp=Z,17µm,18.0s									
Y58A	**Scranton**	**109.52**	**61**		IAMs_20	IAMs_20	11 01 42.3			
	comp=Z,16µm,19.0s									
KOD	**Kodaikanal**	**109.53**	**272**	*eP*		Pdif	10 15 26.7	-18		
M50A	**Fremont**	**109.60**	**53**		IAMs_20	IAMs_20	11 08 21.1			
	comp=Z,11µm,18.0s									
S54A	**Dingess, Beckl**	**109.63**	**57**		IAMs_20	IAMs_20	10 59 44.4			
	comp=Z,16µm,20.0s									
W57A	**Gilead**	**109.71**	**60**		IAMs_20	IAMs_20	11 01 10.0			
	comp=Z,13µm,18.0s									
U56A	**King**	**109.82**	**59**		IAMs_20	IAMs_20	11 01 22.9			
	comp=Z,15µm,19.0s									
N51A	**Ashland**	**109.91**	**54**		IAMs_20	IAMs_20	11 01 44.4			
	comp=Z,13µm,19.0s									
X58A	**Rowland**	**110.00**	**61**		IAMs_20	IAMs_20	11 01 14.0			
	comp=Z,12µm,19.0s									
BLA	**Blacksburg**	**110.09**	**58**		IAMs_20	IAMs_20	11 04 07.8			
	comp=Z,12µm,18.0s									
BLSP	**Bilaspur**	**110.21**	**285**	*eP*		Pdif	10 15 27.9	-20		
K50A	**Casco**	**110.35**	**52**		IAMs_20	IAMs_20	11 03 35.9			
	comp=Z,13µm,18.0s									
Y60A	**Bolivia**	**110.69**	**62**		IAMs_20	IAMs_20	11 02 01.2			
	comp=Z,13µm,19.0s									
VLK	**Valmikinagar**	**110.72**	**291**	*eP*		Pdif	10 15 31.2	-18		
W59A	**Clinton**	**110.91**	**60**		IAMs_20	IAMs_20	11 02 24.8			
	comp=Z,10µm,19.0s									
S57A	**Dark Hollow, R**	**111.37**	**58**		IAMs_20	IAMs_20	11 07 19.7			
	comp=Z,14µm,18.0s									
ALBI	**Allahabad**	**111.72**	**288**	*eP*		Pdif	10 15 32.2	-22		
T59A	**Double "B" Far**	**112.18**	**59**		IAMs_20	IAMs_20	11 02 09.2			
	comp=Z,14µm,19.0s									
R58B	**Mineral**	**112.24**	**58**		IAMs_20	IAMs_20	11 06 15.8			
	comp=Z,13µm,18.0s									
NGP	**Nagpur**	**112.56**	**283**[1]	*eP*		Pdif	10 15 35.2	-23		
CBN	**Corbin Frederi**	**112.70**	**58**		IAMs_20	IAMs_20	11 04 43.8			
	comp=Z,13µm,19.0s									
BNDA	**BANDA**	**113.03**	**288**	*eP*		Pdif	10 15 39.7	-20		
WMQ	**Urumqi**	**113.12**	**309**	PKP		**PKiKP**	**10 19 54.0**	**+0.1**		
WMQ				PP		**PP**	**10 20 45.6**	**+1.7**		
WMQ				SS		SS	10 36 33.4	+5.1		
WMQ				PPMZ						
	comp=Z,2µm,7.5s									
WMQ				L		L				
	comp=Z,4µm,18.5s									
WMQ				L		L				
	comp=Z,4µm,18.5s									
WMQ				L		L				
	comp=Z,4µm,18.5s									
BDFB	**Brasilia**	**113.49**	**124**	PKiKP		**PKiKP**	**10 19 55.7**	**+0.3**		
	comp=Z,3.7nm,0.8s,baz=223,slow=9.2,SNR=5.0									
BDFB				PKKPbc		**PKKPbc**	**10 30 38.4**	**-0.5**		
	comp=Z,5.9nm,0.9s,baz=45,slow=6.1,SNR=6.3									
LATR	**Latur**	**113.70**	**279**	*eP*		Pdif	10 15 44.0	-19		
S61A	**Accomac**	**113.82**	**59**		IAMs_20	IAMs_20	11 07 32.7			
	comp=Z,12µm,18.0s									
J55A	**Hilton**	**113.86**	**52**		IAMs_20	IAMs_20	11 09 26.8			
	comp=Z,18µm,18.0s									
ITTB	**Itaituba**	**114.00**	**109**	*eP*		**Pdif**	**10 16 06.2**	**+1.7**		
R61A	**Willards**	**114.26**	**58**		IAMs_20	IAMs_20	11 07 20.3			
	comp=Z,14µm,18.0s									
JHNI	**Jhansi**	**114.47**	**287**	*eP*		Pdif	10 15 45.2	-21		
PTH	**Pithoragarh**	**114.53**	**292**	*eP*		Pdif	10 15 46.9	-20		
K57A	**Scipio Center**	**114.63**	**53**		IAMs_20	IAMs_20	11 07 56.3			
	comp=Z,16µm,18.0s									
BHPL	**Bhopal**	**114.71**	**284**	*eP*		Pdif	10 15 48.3	-19		
BHPL					IAMs_20	IAMs_20	10 30 42.8			
	comp=Z,11µm,19.9s									
BINY	**Binghamton**	**114.87**	**54**		IAMs_20	IAMs_20	11 06 25.6			
	comp=Z,17µm,18.0s									
P61A	**Hammonton**	**115.05**	**57**		IAMs_20	IAMs_20	11 04 34.0			
	comp=Z,17µm,19.0s									
J57A	**Williamstown**	**115.18**	**53**		IAMs_20	IAMs_20	11 10 58.7			
	comp=Z,13µm,18.0s									
GUNA	**GUNA**	**115.28**	**286**	*eP*		Pdif	10 15 48.7	-21		
KAD	**Karad**	**115.34**	**277**	*eP*		Pdif	10 15 50.5	-20		
TKRD	**Thakurdwara**	**115.50**	**291**	*eP*		Pdif	10 15 50.0	-21		
VOI	**Vohitsoka**	**115.83**	**224**		IAMs_20	IAMs_20	11 00 58.9			
	comp=Z,11µm,19.0s									
ZSN	**Zaisan**	**115.98**	**312**	*e*PKiKP		**PKPdf**	**10 19 59.0**	**-0.2**		
ZSN				*e*			10 21 02.2			
ZSN	**Zaisan**	**115.98**	**312**	*e*PKP		**PKPdf**	**10 19 59.0**	**-0.2**		
ZSN				*e*PP		**PP**	**10 21 02.3**	**-1.6**		
J59A	**Piesco**	**116.25**	**53**		IAMs_20	IAMs_20	11 09 51.9			
	comp=Z,15µm,18.0s									
LONY	**Lake Ozonia**	**116.47**	**52**		IAMs_20	IAMs_20	11 04 44.6			
	comp=Z,18µm,19.0s									
DDI	**Dehra Dun**	**116.53**	**292**	*eP*		Pdif	10 15 55.7	-20		
DDI					IAMs_20	IAMs_20	10 29 28.1			
	comp=Z,12µm,19.8s									
TRY	**Troy**	**116.66**	**54**		IAMs_20	IAMs_20	11 05 34.1			
	comp=Z,14µm,19.0s									
SONA	**Sohna**	**116.70**	**289**	*eP*		Pdif	10 15 56.7	-19		
NDI	**New Delhi**	**116.71**	**290**	*eP*		Pdif	10 15 57.4	-19		
KLP	**Kalpa**	**116.73**	**293**	*eP*		Pdif	10 15 57.0	-20		
ZAA0	**Zalesovo Array**	**117.33**	**319**			**PKPdf**	**10 20 00.5**	**-1.1**		
ZALV	**Zalesovo Beam**	**117.33**	**319**	PKP		**PKPdf**	**10 20 00.4**	**-1.1**		
	comp=Z,58nm,1.0s,baz=155,slow=1.3,SNR=74									
ZALV				PKKPbc		**PKKPab**	**10 30 27.2**	**+0.3**		
	comp=Z,2.2nm,0.8s,baz=270,slow=4.4,SNR=4.1									
ZALV	**Zalesovo Beam**	**117.33**	**319**			**PKPdf**	**10 20 00.6**	**-0.9**		
ZALV	**Zalesovo Beam**	**117.33**	**319**	PKiKP		**PKPdf**	**10 20 00.6**	**-0.9**		
MK31	**Makanchi Array**	**117.55**	**311***c*	*i*PKiKP		**PKPdf**	**10 20 01.3**	**-0.9**		
MKAR	**Makanchi Array**	**117.55**	**311**	PKP		**PKPdf**	**10 20 01.3**	**-0.9**		
	comp=Z,33nm,0.7s,baz=90,slow=2.4,SNR=83									
MKAR				PKKPbc		**PKKPab**	**10 30 27.0**	**+0.6**		
	comp=Z,9.8nm,1.0s,baz=283,slow=3.7,SNR=10									
MKAR	**Makanchi Array**	**117.55**	**311**			**PKPdf**	**10 20 01.0**	**-1.2**		
J61A	**Chester**	**117.60**	**53**		IAMs_20	IAMs_20	11 04 55.8			
	comp=Z,11µm,19.0s									
VT1	**Waterbury**	**117.68**	**52**		IAMs_20	IAMs_20	11 11 43.7			
	comp=Z,12µm,18.0s									
ABPO	**Ambohimpanom**	**117.68**	**227**		IAMs_20	IAMs_20	11 03 08.9			
	comp=Z,10µm,19.0s									
MAKZ	**Makanchi**	**117.77**	**311**			**PKPdf**	**10 20 02.0**	**-0.6**		
MAKZ	**Makanchi**	**117.77**	**311**	PKiKP		**PKPdf**	**10 20 02.0**	**-0.6**		
HNH	**Hanover**	**117.87**	**53**		IAMs_20	IAMs_20	11 12 31.9			
	comp=Z,13µm,18.0s									
SUR	**Sutherland**	**118.23**	**196**			**PKiKP**	**10 20 05.0**	**+0.5**		
SUR	**Sutherland**	**118.23**	**196**		IAMs_20	IAMs_20	11 10 53.4			
	comp=Z,14µm,18.0s									
BIM	**Bigot**	**118.24**	**88**			**PKiKP**	**10 20 04.9**	**+0.4**		
LBNH	**Lisbon**	**118.24**	**52**		IAMs_20	IAMs_20	11 14 19.6			
	comp=Z,10µm,18.0s									
POIN	**Pond Inlet**	**118.47**	**20**			**PKPdf**	**10 20 02.1**	**-1.1**		
I62A	**Tamworth**	**118.58**	**53**		IAMs_20	IAMs_20	11 05 25.6			
	comp=Z,12µm,20.0s									
M65A	**Busby, Falmout**	**118.58**	**56**	PKiKP		**PKPdf**	**10 20 03.8**	**-0.4**		
	baz=257									
SHLS	**Shalkode**	**118.76**	**306**	*e*PKiKP		**PKPdf**	**10 20 03.8**	**-1.0**		
SHLS				*e*			10 21 19.9			
SHLS	**Shalkode**	**118.76**	**306**	*e*PKP		**PKPdf**	**10 20 03.9**	**-1.0**		
SHLS				*e*PP		**PP**	**10 21 19.9**	**-3.6**		
H62A	**Milan**	**118.85**	**52**		IAMs_20	IAMs_20	11 05 20.6			
	comp=Z,12µm,20.0s									
UZB	**Uzunbulak**	**119.07**	**306**	*e*PKiKP		**PKPdf**	**10 20 04.9**	**-0.5**		
UZB				*e*			10 21 24.0			
UZB	**Uzunbulak**	**119.07**	**306**	*e*PKP		**PKPdf**	**10 20 04.9**	**-0.5**		
UZB				*e*PP		**PP**	**10 21 24.0**	**-1.7**		
I63A	**Otisfield**	**119.15**	**53**		IAMs_20	IAMs_20	11 11 05.7			
	comp=Z,11µm,18.0s									
POGA	**Pongola**	**119.28**	**208**	P		**PKiKP**	**10 20 07.7**	**+1.4**		
KPKS	**Kokpek**	**119.38**	**306**	*e*PKiKP		**PKPdf**	**10 20 05.5**	**-0.4**		
KPKS	**Kokpek**	**119.38**	**306**	*e*PKP		**PKPdf**	**10 20 05.5**	**-0.4**		
G62A	**West of Eustis**	**119.41**	**52**			**PKiKP**	**10 20 06.5**	**+0.6**		
SATY	**Saty**	**119.50**	**306**	*e*PKiKP		**PKPdf**	**10 20 05.9**	**-0.3**		
SATY				*e*			10 21 27.1			
SATY	**Saty**	**119.50**	**306**	*e*PKP		**PKPdf**	**10 20 06.0**	**-0.3**		
SATY				*e*PP		**PP**	**10 21 27.2**	**-1.4**		
WVL	**Waterville**	**119.90**	**52**		IAMs_20	IAMs_20	11 06 29.4			
	comp=Z,14µm,19.0s									
MDOK	**Medeo**	**120.49**	**306**	*e*PKiKP		**PKPdf**	**10 20 07.7**	**-0.5**		
MDOK				*e*			10 21 33.9			
MDOK	**Medeo**	**120.49**	**306**	*e*PKP		**PKPdf**	**10 20 07.8**	**-0.5**		
MDOK				*e*PP		**PP**	**10 21 33.9**	**-1.6**		
MDOK				LR		LR	11 12 11.6			
BOSA	**Boshof**	**120.52**	**201**	PKP		**PKiKP**	**10 20 10.2**	**+1.3**		
	comp=Z,60nm,1.0s,baz=158,slow=2.5,SNR=38									
BOSA				PKKPbc		**PKKPbc**	**10 30 15.8**	**+1.4**		
	comp=Z,7.0nm,0.8s,baz=341,slow=3.4,SNR=11									
BOSA	**Boshof**	**120.52**	**201**			**PKiKP**	**10 20 09.3**	**+0.4**		
BOSA	**Boshof**	**120.52**	**201**	P		**PKiKP**	**10 20 09.8**	**+0.9**		
TNSS	**Tian-Shan**	**120.54**	**306**	*e*PKiKP		**PKPdf**	**10 20 07.9**	**-0.7**		
TNSS				*e*			10 21 34.4			
TNSS	**Tian-Shan**	**120.54**	**306**	*e*PKP		**PKPdf**	**10 20 08.0**	**-0.7**		
TNSS				*e*PP		**PP**	**10 21 34.4**	**-1.7**		
AAA	**Alma-Ata**	**120.60**	**306**	*e*PKiKP		**PKPdf**	**10 20 07.8**	**-0.5**		
AAA	**Alma-Ata**	**120.60**	**306**	*e*PKP		**PKPdf**	**10 20 07.9**	**-0.4**		
AAA				LR		LR	11 12 57.4			
	comp=Z,15µm,20.5s									
KURK	**Kurchatov**	**120.60**	**315**			**PKPdf**	**10 20 07.1**	**-0.8**		
KURK	**Kurchatov**	**120.60**	**315***c*	*i*PKiKP		**PKPdf**	**10 20 07.1**	**-0.8**		
KURK				pmax		pmax				
	comp=Z,220nm,1.3s							

SPA0	**Spitsbergen Ar**	**129.13**	**357**	*e*PKPdf	**PKPdf**	**10 20 23.7**	**+0.2**
SPA0				*e*PP	**PP**	**10 22 31.6**	**-0.2**
SPA0				*e*		10 23 45.2	
SPA0				*e*SP	SP	10 32 37.9	+0.2
SPA0				*e*SS	**SS**	**10 39 52.9**	**+2.0**
SPA0				IVMs_BB	IVMs_BB	11 10 58.8	
	comp=Z,2µm,18.9s						
SPITS	**Spitsbergen Ar**	**129.13**	**357**	PKP	**PKPdf**	**10 20 23.6**	**0.0**
	comp=Z,155nm,1.1s,baz=80,slow=4.6,SNR=25						
SPB2	**Spitsbergen Ar**	**129.13**	**357**		**PKPdf**	**10 20 23.5**	**-0.1**
NGCH	**Negor - Chabah**	**129.47**	**281**	P	**PKiKP**	**10 20 27.6**	**+1.2**
	SNR=17						
SUMG	**Summit**	**129.56**	**15**	PKP	**PKPdf**	**10 20 23.9**	**-1.1**
SUMG	**Summit**	**129.56**	**15**		**PKPdf**	**10 20 24.1**	**-0.8**
SUMG				IAMs_20	IAMs_20	11 20 05.4	
	comp=Z,11µm,19.0s						
SUMG	**Summit**	**129.56**	**15**	PKIKP	**PKPdf**	**10 20 24.2**	**-0.8**
SUMG	**Summit**	**129.56**	**15**	*i* P	**PKPdf**	**10 20 25.2**	**+0.2**
DAG	**Danmarks Havn**	**129.63**	**7**	*i* P	**PKPdf**	**10 20 24.0**	**-0.5**
JLN	**Jalan Bani Buh**	**130.05**	**277**	P	**PKiKP**	**10 20 28.0**	**+0.3**
	SNR=42						
HSPB	**Hornsund (broa**	**130.32**	**357**	*e*PKPdf	**PKiKP**	**10 20 27.5**	**+0.9**
HSPB				*e*PP	**PP**	**10 22 38.1**	**-1.5**
HSPB	**Hornsund (broa**	**130.32**	**357**	*e*P	**PKiKP**	**10 20 26.7**	**+0.1**
KSANE	**Kasane**	**130.47**	**206**	*i* P	**PKiKP**	**10 20 29.4**	**+0.5**
WBK	**Wadi Bani Khal**	**130.58**	**277**	P	**PKiKP**	**10 20 29.1**	**+0.3**
	SNR=12						
MHTO	**MHTO**	**130.96**	**275**	P	**PKiKP**	**10 20 29.4**	**-0.1**
	SNR=33						
DQM	**DQM**	**130.99**	**273**	P	**PKiKP**	**10 20 31.1**	**+1.4**
	SNR=9.1						
SVE	**Sverdlovsk**	**131.01**	**323**	*i* PKIKP	**PKPdf**	**10 20 28.0**	**+0.4**
SVE				*e*		10 22 41.7	
SVE				pmax	pmax		
	comp=Z,132nm,1.4s						
SVE				MLR	MLR		
	comp=Z,10µm,20.0s						
SVE				MLR	MLR		
	comp=E,7µm,19.0s						
WSAR	**Wadi Sarin**	**131.06**	**278**	P	**PKiKP**	**10 20 30.0**	**+0.3**
	SNR=14						
JMDO	**Jabal Madar**	**131.27**	**276**	P	**PKiKP**	**10 20 29.9**	**-0.2**
	SNR=23						
LSZ	**Lusaka**	**131.41**	**211**	IAMs_20	IAMs_20	11 18 37.2	
	comp=Z,14µm,19.0s						
LSZ	**Lusaka**	**131.41**	**211**	P	**PKPdf**	**10 20 27.1**	**-2.8**
SMDO	**Samad**	**131.52**	**277**	P	**PKiKP**	**10 20 31.0**	**+0.2**
	SNR=30						
BIDO	**Bidbid**	**131.59**	**278**	P	**PKiKP**	**10 20 31.2**	**+0.4**
	SNR=12						
DBG	**Daneborg**	**131.63**	**9**	*i* P	**PKPdf**	**10 20 28.0**	**-0.3**
TSUM	**Tsumeb**	**131.65**	**197**	PKP	**PKiKP**	**10 20 31.2**	**-0.1**
	comp=Z,25nm,1.0s,baz=141,slow=4.4,SNR=16						
TSUM				PP	**PP**	**10 22 50.2**	**+2.0**
	comp=Z,33nm,1.1s,baz=156,slow=6.9,SNR=9.3						
TSUM	**Tsumeb**	**131.65**	**197**		**PKiKP**	**10 20 31.7**	**+0.5**
TSUM	**Tsumeb**	**131.65**	**197**	P	**PKiKP**	**10 20 31.7**	**+0.5**
BSY	**Bisya**	**132.18**	**276**	P	**PKiKP**	**10 20 32.0**	**0.0**
	SNR=17						
HOQ	**Hoqain**	**132.32**	**278**	P	**PKiKP**	**10 20 34.0**	**+1.7**
	SNR=19						
ARTI	**Arti**	**132.33**	**322**	IAMs_20	IAMs_20	11 20 41.0	
	comp=Z,10µm,20.0s						
ARTI	**Arti**	**132.33**	**322**	*i* PKIKP	**PKiKP**	**10 20 32.3**	**+1.1**
ARTI						10 22 52.6	
ARTI				PPP	PPP	10 25 40.3	
ARTI				MLR	MLR		
	comp=Z,10µm,19.0s						
JASK	**Jask - Hormozg**	**132.45**	**281**	P	**PKiKP**	**10 20 33.9**	**+1.5**
	SNR=11						
BJO1	**Bjornoya**	**132.51**	**355**	*e*PKPdf	**PKiKP**	**10 20 30.9**	**-0.1**
BJO1				*e*PP	**PP**	**10 22 54.0**	**+0.3**
BJO1				IVMs_BB	IVMs_BB	11 11 36.0	
	comp=Z,2µm,3.5s						
ARQ	**Araqi**	**132.95**	**277**	P	**PKPdf**	**10 20 32.8**	**+0.4**
	SNR=14						
RBK	**Rabkut**	**133.09**	**269**	P	**PKPdf**	**10 20 33.0**	**+0.2**
	SNR=9.1						
SOHO	**SOHO**	**133.16**	**278**	*i* P	**PKPdf**	**10 20 31.6**	**-1.1**
	SNR=34						
SOHO	**SOHO**	**133.16**	**278**	P	**PKPdf**	**10 20 33.0**	**+0.3**
DOK	**Doka**	**133.56**	**270**	P	**PKPdf**	**10 20 33.4**	**-0.2**
	SNR=9.1						
WHFO	**Wadi Hawf**	**133.63**	**269**	P	**PKPdf**	**10 20 33.7**	**-0.1**
	SNR=6.3						
UOSS	**Minazif**	**133.67**	**279**		**PKPdf**	**10 20 33.4**	**-0.2**
UOSS	**Minazif**	**133.67**	**279**	*i* P	**PKPdf**	**10 20 32.5**	**-1.2**
	SNR=15						
UOSS	**Minazif**	**133.67**	**279**	P	**PKPdf**	**10 20 33.6**	**-0.1**
MDH	**Madha**	**133.68**	**279**	*i* P	**PKPdf**	**10 20 32.3**	**-1.4**
	SNR=10						
MDH	**Madha**	**133.68**	**279**	P	**PKiKP**	**10 20 35.0**	**0.0**
	SNR=14						
HATD	**Hatta, Dubai**	**133.70**	**279**	*i* P	**PKPdf**	**10 20 32.9**	**-0.8**
	SNR=18						
HATD	**Hatta, Dubai**	**133.70**	**279**	P	**PKPdf**	**10 20 33.5**	**-0.2**
	SNR=36						
ASHO	**Ashiyiah**	**133.73**	**279**	*i* P	**PKPdf**	**10 20 33.2**	**-0.6**
	SNR=18						
ASHO	**Ashiyiah**	**133.73**	**279**	P	**PKPdf**	**10 20 33.2**	**-0.6**
	SNR=32						
MSFE	**Esma-Masafi**	**133.81**	**280**	*i* P	**PKPdf**	**10 20 33.5**	**-0.5**
	SNR=16						
MASF	**Masafi**	**133.82**	**280**	P	**PKPdf**	**10 20 34.1**	**+0.1**
	SNR=25						
ALNE	**Al Ain**	**133.83**	**278**	*i* P	**PKPdf**	**10 20 33.4**	**-0.6**
	SNR=16						
ALNE	**Al Ain**	**133.83**	**278**	P	**PKPdf**	**10 20 34.0**	**0.0**
	SNR=24						
BANOM	**Banah**	**133.83**	**280**	*i* P	**PKPdf**	**10 20 33.4**	**-0.5**
	SNR=10						
BANOM	**Banah**	**133.83**	**280**	P	**PKiKP**	**10 20 34.9**	**-0.4**
ABTO	**Aybut**	**133.84**	**268**	P	**PKPdf**	**10 20 34.8**	**+0.6**
	SNR=8.6						
UMZA	**Um Al Zommool**	**133.97**	**276**	P	**PKiKP**	**10 20 36.7**	**+1.1**
ANGG	**Ammassalik, Gr**	**133.97**	**23**	IAMs_20	IAMs_20	11 20 12.7	
	comp=Z,14µm,18.0s						
SHME	**Shamm**	**134.00**	**280**	P	**PKPdf**	**10 20 34.3**	**+0.1**
FAQ	**Al Faqa, Dubai**	**134.15**	**279**	*i* P	**PKPdf**	**10 20 33.2**	**-1.4**
	SNR=13						
FAQ	**Al Faqa, Dubai**	**134.15**	**279**	P	**PKPdf**	**10 20 35.1**	**+0.5**
	SNR=8.2						
NAZ	**Nazwa, Dubai**	**134.15**	**279**	*i* P	**PKPdf**	**10 20 33.9**	**-0.6**
	SNR=17						
NAZ	**Nazwa, Dubai**	**134.15**	**279**	P	**PKPdf**	**10 20 34.6**	**0.0**
	SNR=18						
UMQ	**Umm Al-Quwin**	**134.29**	**280**	P	**PKiKP**	**10 20 36.4**	**+0.2**
ASUD	**Al Ashush, Dub**	**134.35**	**278**	*i* P	**PKPdf**	**10 20 35.0**	**+0.1**
	SNR=14						
ASUD	**Al Ashush, Dub**	**134.35**	**278**	P	**PKPdf**	**10 20 35.0**	**+0.1**
	SNR=8.7						
AJN	**Ajban**	**134.63**	**278**	*i* P	**PKPdf**	**10 20 34.8**	**-0.6**
	SNR=6.7						
AJN	**Ajban**	**134.63**	**278**	P	**PKPdf**	**10 20 36.0**	**+0.5**
	SNR=6.4						
SCO	**Scoresbysund**	**134.63**	**12**	IAMs_20	IAMs_20	11 18 04.4	
	comp=Z,8µm,19.0s						
SCO	**Scoresbysund**	**134.63**	**12**	*i* P	**PKiKP**	**10 20 34.8**	**-0.7**
VADS	**Vadso**	**135.16**	**348**	*e*PKPdf	**PKiKP**	**10 20 35.8**	**-0.7**
VADS				*e*PP	**PP**	**10 23 11.9**	**+1.3**
VADS				*e*SKPdf	**SKPab**	**10 24 09.0**	**-0.4**
VADS				*e*		10 33 07.9	
VADS				*e*SS	**SS**	**10 41 07.5**	**+3.2**
VADS				IVMs_BB	IVMs_BB	11 05 16.2	
	comp=Z,3µm,4.0s						
MZWR	**Madinat Zayed**	**135.39**	**277**	P	**PKiKP**	**10 20 39.3**	**+0.9**
MZR	**Muzera**	**135.53**	**275**	*i* P	**PKPdf**	**10 20 36.5**	**-0.8**
	SNR=18						
MZR	**Muzera**	**135.53**	**275**	P	**PKPdf**	**10 20 37.1**	**-0.1**
	SNR=26						
HAMF	**Hammerfest**	**135.61**	**351**	*e*PKPdf	**PKPdf**	**10 20 36.5**	**+0.6**
HAMF				*e*PP	**PP**	**10 23 14.1**	**+0.6**
HAMF				*e*SKPdf	**SKPab**	**10 24 11.7**	**+0.3**
HAMF				*e*SP	**SP**	**10 33 34.3**	**+0.9**
HAMF				*e*SS	**SS**	**10 41 12.0**	**+2.3**
HAMF				IVMs_BB	IVMs_BB	11 08 25.8	
	comp=Z,4µm,4.4s						
KIBK	**Kibwezi**	**135.89**	**233**	PKP	**PKiKP**	**10 20 39.4**	**-0.5**
KIBK	**Kibwezi**	**135.89**	**233**	IAMs_20	IAMs_20	11 20 23.2	
	comp=Z,10µm,18.0s						
KIBK	**Kibwezi**	**135.89**	**233**	P	**PKPdf**	**10 20 36.6**	**-1.7**
	SNR=13						
KEV	**Kevo**	**135.89**	**349**		**PKPdf**	**10 20 36.8**	**+0.4**
KEV				IAMs_20	IAMs_20	11 30 04.2	
	comp=Z,8µm,19.0s						
KEV	**Kevo**	**135.89**	**349**	PKIKP	**PKPdf**	**10 20 36.8**	**+0.4**
JMIC	**Jan Mayen**	**136.06**	**6**	*e*PKPdf	**PKPdf**	**10 20 37.3**	**+0.5**
JNE	**Jan Mayen East**	**136.07**	**6**	*e*PP	**PP**	**10 23 17.4**	**+1.1**
JNE				*e*SKPdf	**SKPab**	**10 24 12.9**	**-0.5**
JMI	**Jan Mayen**	**136.09**	**6**	*e*PKPdf	**PKiKP**	**10 20 38.3**	**-0.1**
JMI				*e*PP	**PP**	**10 23 17.4**	**+0.9**
KIRV	**Kirov**	**136.17**	**328***c*	*i* PKIKP	**PKPdf**	**10 20 38.0**	**+0.8**
ARA0	**ARCESS Array S**	**136.34**	**349**	*e*PKPdf	**PKPdf**	**10 20 37.3**	**-0.1**
ARA0				*e*PP	**PP**	**10 23 16.4**	**-1.7**
ARA0				*e*SKPdf	**SKPab**	**10 24 12.5**	**-2.1**
ARA0				*e*SP	**SP**	**10 33 40.6**	**+1.1**
ARA0				*e*SS	**SS**	**10 41 19.4**	**+1.0**
ARA0				IVMs_BB	IVMs_BB	11 10 59.6	
	comp=Z,3µm,9.2s						
ARCES	**ARCESS Array B**	**136.34**	**349**	PKP	**PKPdf**	**10 20 37.5**	**+0.2**
	comp=Z,3.1nm,0.5s,baz=64,slow=2.1,SNR=13						
ARCES	**ARCESS Array B**	**136.34**	**349**		**PKPdf**	**10 20 37.7**	**+0.4**
ARCES	**ARCESS Array B**	**136.34**	**349**	PKIKP	**PKPdf**	**10 20 37.7**	**+0.4**
APA	**Apatity**	**136.40**	**344**	*i* PKIKP	**PKPdf**	**10 20 37.1**	**-0.3**
APA				*e*		10 23 16.8	
APA				pmax	pmax		
	comp=Z,38nm,1.0s						
JRN	**Qarnain Island**	**136.61**	**278**	P	**PKiKP**	**10 20 41.0**	**+0.1**
TRO	**Tromso**	**137.16**	**353**	*e*PKPdf	**PKiKP**	**10 20 40.0**	**-0.6**
TRO				*e*PP	**PP**	**10 23 22.7**	**-0.5**
TRO				*e*SP	SP	10 33 45.7	-0.7
TRO				*e*SS	**SS**	**10 41 27.7**	**-0.4**
TRO				IVMs_BB	IVMs_BB	11 10 53.7	
	comp=Z,3µm,4.6s						
KTK1	**Kautokeino**	**137.17**	**350**	*e*PKPdf	**PKiKP**	**10 20 40.9**	**+0.2**
KTK1				*e*PP	**PP**	**10 23 23.0**	**-0.2**
KTK1				*e*SS	SS	10 41 29.9	+1.6
KTK1				IVMs_BB	IVMs_BB	11 13 40.5	
	comp=Z,2µm,5.7s						
SLWR	**Sila**	**137.41**	**276**	P	**PKiKP**	**10 20 42.8**	**+0.3**
ADZR	**Andozero**	**137.69**	**338**	*e*PKIKP	**PKPdf**	**10 20 38.3**	**-1.6**
SMRA	**Abu-Samra**	**138.34**	**277**	P	**PKPdf**	**10 20 41.8**	**-0.5**
	SNR=6.0						
SHMA	**Al-Shehemyia**	**138.49**	**279**	P	**PKiKP**	**10 20 44.2**	**-0.5**
LOF	**Lofoten**	**139.15**	**355**	*e*PKPdf	**PKPdf**	**10 20 42.8**	**+0.3**
LOF				*e*PP	**PP**	**10 23 35.7**	**+0.3**
LOF				*e*SKPdf	**SKPbc**	**10 24 17.5**	**+0.2**
STEI	**Steigen**	**139.19**	**354**	*e*PKPdf	**PKPdf**	**10 20 41.1**	**-1.4**
STEI				*e*PP	**PP**	**10 23 34.6**	**-1.1**
STEI				*e*SKPdf	**SKPbc**	**10 24 18.5**	**+1.1**
STEI				IVMs_BB	IVMs_BB	11 07 59.3	
	comp=Z,3µm,4.6s						
KLMR	**Klimovskoe**	**139.26**	**334**	*e*PKIKP	**PKPdf**	**10 20 40.4**	**-2.5**
KLMR				*e*		10 23 33.8	
KLMR				pmax	pmax		
	comp=Z,283nm,1.4s						
BORG	**Borgarnes**	**139.51**	**17**	IAMs_20	IAMs_20	11 22 15.4	
	comp=Z,12µm,19.0s						
BELG	**Belogornoye**	**139.51**	**320**	*i* PKIKP	**PKPdf**	**10 20 43.8**	**+0.2**
FAUS	**Fauske**	**139.72**	**353**	*e*PKPdf	**PKPdf**	**10 20 42.6**	**-0.9**
FAUS				*e*PP	**PP**	**10 23 38.3**	**-0.7**
FAUS				*e*SKPdf	**SKPbc**	**10 24 18.6**	**-0.2**
FAUS				IVMs_BB	IVMs_BB	11 12 18.4	
	comp=Z,4µm,4.8s						
H10N3	**ASCENSION HYDR**	**140.27**	**150**	T	T	12 58 12.1	
	baz=204,slow=75,SNR=9.0						
H10N1	**ASCENSION HYDR**	**140.28**	**150**	T	T	12 58 12.4	
	baz=204,slow=75,SNR=139						
H10N2	**ASCENSION HYDR**	**140.29**	**150**	T	T	12 58 13.4	
	baz=204,slow=75,SNR=114						
ATD	**Arta Tunnel**	**140.49**	**254**	IAMs_20	IAMs_20	11 23 09.9	
	comp=Z,12µm,18.0s						
VAGH	**Vaagaholmen**	**140.55**	**354**	*e*PKPdf	**PKPdf**	**10 20 45.5**	**+0.4**
VAGH				*e*PP	**PP**	**10 23 44.1**	**+0.1**
VAGH				*e*SS	SS	10 42 09.7	+1.8
VAGH				IVMs_BB	IVMs_BB	11 10 45.4	
	comp=Z,5µm,4.5s						
STOK	**Stokkvaagen**	**140.96**	**354**	*e*PKPdf	**PKPdf**	**10 20 44.4**	**-1.4**
STOK				*e*PP	**PP**	**10 23 46.9**	**+0.4**
STOK				*e*SKPdf	**SKPbc**	**10 24 21.3**	**-0.8**
STOK				IVMs_BB	IVMs_BB	11 11 33.3	
	comp=Z,4µm,4.5s						
MOR8	**Moi Rana**	**140.98**	**353**	*e*PKPdf	**PKPdf**	**10 20 44.4**	**-1.5**
MOR8				*e*PP	**PP**	**10 23 44.9**	**-1.8**
MOR8				*e*SKPdf	**SKPdf**	**10 24 20.4**	**+0.1**
MOR8				*e*SS	**SS**	**10 42 12.0**	**-1.1**
MOR8				IVMs_BB	IVMs_BB	11 09 30.5	
	comp=Z,3µm,4.6s						
LEIR	**Leirfjorden**	**141.17**	**354**	*e*PKPdf	**PKPdf**	**10 20 44.0**	**-2.2**
LEIR				*e*PP	**PP**	**10 23 47.6**	**-0.2**
LEIR				*e*SKPdf	**SKPbc**	**10 24 22.1**	**-0.6**
LEIR				*e*SS	**SS**	**10 42 16.5**	**+1.4**
LEIR				IVMs_BB	IVMs_BB	11 12 30.1	
	comp=Z,3µm,4.7s						
LODK	**Lodwar**	**141.78**	**236**		**PKPdf**	**10 20 47.4**	**-1.6**
LODK				IAMs_20	IAMs_20	11 24 37.7	
	comp=Z,8µm,18.0s						
LODK	**Lodwar**	**141.78**	**236**	P	**PKPdf**	**10 20 46.8**	**-2.3**
	SNR=12						
MAK	**Makhachkala**	**142.03**	**305***c*	*i* PKHKP	PKPpre	10 20 44.0	
MAK				*e*		10 23 50.4	
MAK				*e*PPP	PPP	10 26 58.2	
MAK				*e*		10 27 48.5	
MAK				*e*SS	SS	10 42 25.5	-2.0
MAK				*e*SSS	SSS	10 47 47.7	
MAK				pmax	pmax		
	comp=Z,655nm,1.3s						
AKT	**Akhty**	**142.08**	**303**	*e*PKHKP	PKPpre	10 20 41.4	
AKT				*e*		10 27 59.8	
AKT				pmax	pmax		
	comp=Z,176nm,1.3s						
MBAR	**Mbarara**	**142.11**	**226**		**PKPdf**	**10 20 46.9**	**-2.9**
MBAR	**Mbarara**	**142.11**	**226**	IAMs_20	IAMs_20	11 23 12.2	
	comp=Z,9µm,18.0s						
MBAR	**Mbarara**	**142.11**	**226**	PKIKP	**PKPdf**	**10 20 46.9**	**-2.9**
MBAR				MLR	MLR		
	comp=Z,9µm,18.0s						
MBAR	**Mbarara**	**142.11**	**226**	P	**PKPdf**	**10 20 45.9**	**-3.9**
FURI	**Furi**	**142.58**	**247**	PKP	**PKiKP**	**10 20 53.1**	**-0.7**
	comp=Z,60nm,0.3s,baz=187,slow=4.9,SNR=14						
FURI	**Furi**	**142.58**	**247**	IAMs_20	IAMs_20	11 26 37.6	
	comp=Z,11µm,18.0s						
RAYN	**Ar Rayn**	**142.73**	**273**		**PKPdf**	**10 20 46.9**	**-3.5**
RAYN	**Ar Rayn**	**142.73**	**273**	IAMs_20	IAMs_20	11 24 37.2	
	comp=Z,7µm,19.0s						
RAYN	**Ar Rayn**	**142.73**	**273**	*i* P	**PKPdf**	**10 20 46.9**	**-3.5**
	SNR=11						
RAYN	**Ar Rayn**	**142.73**	**273**	PKIKP	**PKPdf**	**10 20 46.9**	**-3.5**
RAYN				MLR	MLR		
	comp=Z,7µm,19.0s						
RAYN	**Ar Rayn**	**142.73**	**273**	P	**PKPdf**	**10 20 47.7**	**-2.7**
NSS	**Namsos**	**142.82**	**355**	*e*PKPdf	**PKPdf**	**10 20 46.4**	**-2.8**
NSS				*e*PP	**PP**	**10 23 57.8**	**-0.1**
MOS	**Moscow**	**143.15**	**329**	*i* PKIKP	PKPbc	10 20 46.3	-0.7
MOS				*e*		10 28 00.9	
MOS				pmax	pmax		
	comp=Z,214nm,1.3s						
MOS				pmax	pmax		
	comp=N,134nm,1.2s						
MOS				pmax	pmax		
	comp=Z,3µm,5.6s						
FINES	**FINESS Array B**	**143.23**	**343**	PKhKP	PKPpre	10 20 45.9	
	comp=Z,26nm,0.6s,baz=56,slow=3.8,SNR=133						
PUL	**Pulkovo**	**143.31**	**338**	*i* PKIKP	**PKPdf**	**10 20 49.6**	**-0.6**
VRH	**Novokhopyorsk**	**143.35**	**320**	*e*PKIKP	PKPab	10 20 46.9	+0.4
VRH				pmax	pmax		
	comp=Z,180nm,1.1s						
VRH				MLR	MLR		
	comp=Z,5µm,17.0s						
OBN	**Obninsk**	**144.00**	**329**	⇑P	**PKPdf**	**10 20 50.7**	**-0.9**
OBN	**Obninsk**	**144.00**	**329**	IAMs_20	IAMs_20	11 25 43.6	
	comp=Z,8µm,22.0s						
OBN	**Obninsk**	**144.00**	**329***d*	*i* PKHKP	PKPpre	10 20 47.8	
OBN				*i* SSS	SSS	10 48 14.0	
OBN				pmax	pmax		
	comp=Z,273nm,1.2s						
OBN	**Obninsk**	**144.00**	**329**	PKPdf	PKPbc	10 20 49.3	-0.1
LPSR	**Galich'ya Gora**	**144.22**	**324**	*e*PKIKP	**PKPab**	**10 20 49.6**	**-0.2**
LPSR				pmax	pmax		
	comp=Z,320nm,1.0s						
LPSR				MLR	MLR		
	comp=Z,8µm,19.0s						
GNI	**Garni**	**144.50**	**301**	PKP	PKPbc	10 20 52.3	+0.6
	comp=Z,75nm,0.9s,baz=178,slow=2.2,SNR=44						
GNI	**Garni**	**144.50**	**301**	PKPdf	PKPbc	10 20 52.0	+0.2
VORR	**Voronezh**	**144.53**	**322**	*e*PKIKP	**PKPab**	**10 20 50.1**	**-0.9**
VORR				pmax	pmax		
	comp=Z,200nm,0.6s						
GOF	**Gofitskoye**	**144.71**	**310***d*	*i* PKIKP	PKPbc	10 20 52.1	+0.1
VSR	**Storozhevoye**	**144.78**	**321**	*e*PKIKP	**PKPab**	**10 20 51.1**	**-0.8**
VSR				*e*		10 24 05.7	
VSR				pmax	pmax		
	comp=Z,600nm,1.3s						
VSR				MLR	MLR		
	comp=Z,4µm,17.0s						
VORD	**Divnogorie**	**144.82**	**321**	*e*PKIKP	**PKPab**	**10 20 51.9**	**-0.2**
VORD				pmax	pmax		
	comp=Z,890nm,0.9s						
MOL	**Molde**	**145.05**	**357**	*e*PKPab	**PKPab**	**10 20 52.7**	**+0.2**
MOL				*e*PP	**PP**	**10 24 06.8**	**-4.4**
KBZ	**Khabaz**	**145.16**	**308**	PKPbc	**PKPab**	**10 20 53.5**	**0.0**
	comp=Z,110nm,0.9s,baz=68,slow=1.3,SNR=63						
KBZ	**Khabaz**	**145.16**	**308***d*	*i* PKIKP	**PKPdf**	**10 20 53.8**	**-0.1**
KIV	**Kislovodsk**	**145.25**	**308**	⇓P	**PKPdf**	**10 20 54.3**	**0.0**
KIV	**Kislovodsk**	**145.25**	**308**	IAMs_20	IAMs_20	11 32 44.9	
	comp=Z,9µm,19.0s						
KIV	**Kislovodsk**	**145.25**	**308**	*i* P	**PKPbc**	**10 20 53.4**	**-0.5**
	SNR=71						
KIV	**Kislovodsk**	**145.25**	**308**	*i* PKP2	**PKPbc**	**10 20 52.4**	**-1.6**
KIV				*e*SS	SS	10 42 58.7	-6.0
KIV				pmax	pmax		
	comp=Z,301nm,1.1s						
KIV	**Kislovodsk**	**145.25**	**308**	PKPdf	**PKPbc**	**10 20 53.7**	**-0.3**
SHA1	**Shidzhatmaz**	**145.33**	**308***d*	*i* PKIKP	**PKPbc**	**10 20 54.2**	**-0.2**
AKN	**Aaknes**	**145.46**	**358**	*e*PKPbc	**PKPdf**	**10 20 53.6**	**-0.3**
AKN				*e*PP	**PP**	**10 24 14.4**	**+0.7**
VSU	**Vasula**	**145.49**	**339***d*	*i* PKP2	**PKPdf**	**10 20 52.8**	**-1.2**
DOMB	**Dombas**	**145.50**	**356**	*e*PKPbc	**PKPdf**	**10 20 53.6**	**-0.4**
DOMB				*e*PP	**PP**	**10 24 14.2**	**+0.3**
FOO	**Floro**	**146.09**	**359**	*e*PKPdf	**PKPdf**	**10 20 55.2**	**+0.3**
FOO				*e*PP	**PP**	**10 24 18.4**	**+1.1**
ERBR	**Yeremizino-Bor**	**146.22**	**312**	*i* PKP2	**PKPab**	**10 20 57.8**	**+0.3**
ERBR				pmax	pmax		
	comp=Z,3µm,1.1s						
ERBR				pmax	pmax		
	comp=Z,6µm,1.4s						
NB2	**NORSAR Subarra**	**146.32**	**354**	PKP	**PKPdf**	**10 20 55.6**	**+0.1**
	comp=Z,459nm,1.4s,baz=10,slow=3.2						
NOA	**NORSAR Array B**	**146.32**	**354**	PKPbc	**PKPbc**	**10 20 56.1**	**-0.6**
	comp=Z,213nm,0.9s,baz=11,slow=2.4,SNR=206						
LABN	**Labinsk**	**146.41**	**310**	*i* PKP2	**PKPab**	**10 20 58.4**	**+0.1**
LABN				pmax	pmax		
	comp=Z,487nm,1.2s						
LABN				pmax	pmax		
	comp=Z,24µm,7.7s						
HYA	**Hoyanger**	**146.50**	**358**	*e*PKPdf	**PKPdf**	**10 20 56.2**	**+0.6**
HYA				*e*PP	**PP**	**10 24 20.7**	**+1.0**
NC602	**NORSAR Array S**	**146.59**	**354**	*e*PKPdf	**PKPdf**	**10 20 56.5**	**+0.6**
NC602				*e*PP	**PP**	**10 24 21.3**	**+1.0**
SUE	**Sulen**	**146.63**	**360**	*e*PKPdf	**PKPdf**	**10 20 56.5**	**+0.6**
SKAR	**Skarslia**	**146.90**	**356**	*e*PKPdf	**PKPdf**	**10 20 57.0**	**+0.6**
SKAR				*e*PP	**PP**	**10 24 23.0**	**+0.8**
HFS	**Hagfors**	**146.93**	**351**	PKPbc	**PKPbc**	**10 20 57.4**	**-0.9**
	comp=Z,230nm,0.8s,baz=291,slow=1.3,SNR=94						
KHAM	**Kharkiv**	**147.00**	**321**	PKPab	**PKiKP**	**10 21 01.3**	**-0.2**
ASK	**Askoy**	**147.20**	**359**	*e*PKPdf	**PKPdf**	**10 20 57.5**	**+0.7**
BER	**Bergen**	**147.30**	**359**	*e*PKPdf	**PKPdf**	**10 20 57.9**	**+0.9**
LRW	**Lerwick**	**147.34**	**5**	*e*P	**PKPdf**	**10 20 56.3**	**-0.8**
SOC	**Sochi**	**147.42**	**309**	*i* PKIKP	**PKPdf**	**10 20 57.0**	**-0.8**
SOC				pmax	pmax		
	comp=Z,281nm,1.0s						
SOC				MLR	MLR		
	comp=Z,5µm,21.0s						
OSL	**Oslo**	**147.46**	**354**	*e*PKPdf	**PKPdf**	**10 20 58.3**	**+1.0**
ODD1	**Odda**	**147.74**	**358**	*e*PKPbc	**PKPbc**	**10 21 00.8**	**+0.1**
KONO	**Kongsberg**	**147.84**	**355**		**PKPdf**	**10 20 58.6**	**+0.6**
KONO	**Kongsberg**	**147.84**	**355**	IAMs_20	IAMs_20	11 27 34.5	
	comp=Z,8µm,21.0s						
KONO	**Kong

RNPP8	Varash	151.32	331	PKPdf	PKPdf	10 21 03.8	+0.1		
IDGL	Inch Island, C	151.32	14	PKPdf	PKPdf	10 21 04.0	+0.4		
IDGL				PKP	pPKPdf	10 21 05.1	-0.3		
IDGL	Inch Island, C	151.32	14	*e*P	PKPdf	10 21 04.5	+0.9		
RNPP5	Staryi Chortor	151.38	331	PKPdf	PKPdf	10 21 03.8	-0.1		
HAMD	Hammershus, De	151.41	347	*i* P	PKPdf	10 21 05.3	+1.5		
COP	Copenhagen	151.41	350	*i* P	PKPdf	10 21 05.8	+2.1		
ASF	Jabal al Asfar	151.46	287	PKP	PKPdf	10 21 05.2	+0.5		
	comp=Z,24nm,1.1s,baz=214,slow=1.4,SNR=12								
ASF				PKPbc	PKiKP	10 21 11.1	-0.2		
	comp=Z,183nm,1.0s,baz=89,slow=1.0,SNR=66								
LUBAR	Lubar, Ukraine	151.46	327	PKPdf	PKPdf	10 21 03.1	-0.9		
PSBA	Serra de Santa	151.47	59	*e*PKP	PKiKP	10 21 11.2	+0.1		
BSD	Bornholm Skovb	151.53	347	*i* P	PKPdf	10 21 06.3	+2.4		
ADH	Angra Heroismo	151.56	59	*e*PKP	PKiKP	10 21 11.2	0.0		
PAGU	Agualva, Azore	151.57	59	*e*PKP	PKiKP	10 21 11.2	-0.1		
CLGH	Cloghs, Cushen	151.60	13	*e*P	PKPdf	10 21 02.2	-1.8		
PSCM	Serra do Cume	151.64	59	*e*PKP	PKiKP	10 21 11.6	+0.2		
NE56	Odesa	151.78	319	PKPab	PKPbc	10 21 10.3	-0.6		
BAL3X	Bal3x, Balta	151.78	323	PKPab	PKiKP	10 21 11.7	+0.4		
EKA	Eskdalemuir Ar	151.85	9	PKP	PKPdf	10 21 04.7	+0.3		
	comp=Z,43nm,1.2s,baz=338,slow=1.8,SNR=16								
EKA				PKPbc	PKiKP	10 21 11.2	0.0		
	comp=Z,24nm,0.6s,baz=336,slow=1.3,SNR=28								
ESK	Eskdalemuir	151.86	9	*e*P	PKPdf	10 21 05.0	+0.6		
ESK	Eskdalemuir	151.86	9		PKPdf	10 21 04.9	+0.4		
ESK	Eskdalemuir	151.86	9	IAMs_20	IAMs_20	11 28 45.6			
	comp=Z,11µm,19.0s								
ESK	Eskdalemuir	151.86	9	PKiKP	PKPdf	10 21 04.9	+0.4		
NEWG	New Galloway	151.90	10	*e*P	PKPdf	10 21 04.2	-0.3		
BZK	Bozkurt	151.93	308	⇑P	PKPdf	10 21 06.3	+1.3		
BZK	Bozkurt	151.93	308		PKiKP	10 21 12.1	+0.3		
BZK	Bozkurt	151.93	308	PKPab	PKiKP	10 21 12.1	+0.3		
BEIL	Beino	151.93	292	*e*P	PKiKP	10 21 12.5	+0.4		
GAL1	Galloway	152.06	11	*e*P	PKPdf	10 21 04.5	-0.3		
HWQ	Hawqa	152.15	292	*e*P	PKiKP	10 21 12.8	+0.1		
ZAHL	Zahle	152.24	291	*e*P	PKiKP	10 21 14.4	+1.5		
RCY	Rachaya	152.30	290	*e*P	PKiKP	10 21 13.5	+0.4		
SORM	Soroca	152.32	324	⇓P	PKPdf	10 21 05.6	+0.2		
SORM	Soroca	152.32	324	PKiKP	PKPdf	10 21 05.5	+0.2		
SORM	Soroca	152.32	324	PKPab	PKPbc	10 21 12.2	+0.1		
IGLA	Glengowla, Co	152.37	18	PKPdf	PKPdf	10 21 05.5	+0.3		
IGLA				PKP	pPKPdf	10 21 06.9	-0.1		
BHL	Bhannes	152.43	291	*e*P	PKiKP	10 21 13.4	+0.2		
QRWL	Qaraoun	152.43	290	*e*P	PKiKP	10 21 13.8	+0.5		
R9F13	Warsaw-Wawer	152.44	337	*e*PKPdf	PKPdf	10 21 05.9	+0.5		
R9F13				*e*SKS	SKSdf	10 28 14.7	+2.6		
PURM	Purcari	152.45	320	PKPab	PKiKP	10 21 12.9	+0.2		
EDMD	Edmundbyers	152.50	8	*e*P	PKPdf	10 21 06.4	+1.0		
DQRL	Deir Qamar	152.51	290	*e*P	PKiKP	10 21 14.0	+0.6		
ILTH	Belurgan, Co L	152.54	14	PKPdf	PKPdf	10 21 05.6	+0.1		
ILTH				PKP	PKPbc	10 21 11.6	-0.8		
GHAJ	Ghor Haditha	152.59	285	IAMs_20	IAMs_20	11 30 28.2			
	comp=Z,7µm,20.0s								
CIDE	Kastamonu/Cide	152.69	309	⇑P	PKPdf	10 21 07.2	+1.2		
MMAI	Mount Meron Ar	152.69	289	PKPbc	PKiKP	10 21 14.5	+0.7		
	comp=Z,224nm,0.9s,baz=39,slow=5.5,SNR=70								
GKP	Gorka Klasztor	152.70	343	*e*PKPdf	PKPdf	10 21 05.8	0.0		
GKP				*e*PP	PP	10 24 54.9	-1.0		
BEL	Belsk	152.88	337	*e*PKPdf	PKPdf	10 21 05.7	-0.3		
BEL				*e*PP	PP	10 24 55.6	-1.4		
KIRS	Kirsehir-Merke	152.88	303	⇑P	PKPdf	10 21 07.3	+0.7		
BR131	Keskin Array S	152.92	304	P	PKPdf	10 21 05.8	-1.0		
	SNR=93								
BRTR	Keskin Array B	152.92	304	PKP	PKPdf	10 21 05.5	-1.2		
	comp=Z,11nm,1.0s,baz=126,slow=1.7,SNR=39								
BRTR				PKPbc	PKiKP	10 21 14.2	0.0		
	comp=Z,97nm,0.9s,baz=116,slow=3.4,SNR=45								
BRTR				PKPab	PKPab	10 21 24.9	-0.3		
	comp=Z,63nm,0.9s,baz=64,slow=3.4,SNR=11								
BR104	Keskin Array S	152.92	304	PKPdf	PKPdf	10 21 05.7	-1.0		
BR106	Keskin Array S	152.93	304	PKPdf	PKPdf	10 21 05.1	-1.7		
BR105	Keskin Array S	152.94	304	PKPdf	PKPdf	10 21 05.2	-1.6		
PDA	Ponta Delgada	152.97	61	*e*PKP	PKiKP	10 21 15.1	+1.0		
KMPD	K-Podol'skiy	153.00	326	PKPdf	PKPdf	10 21 04.9	-1.4		
KMPD				PKPdf	pPKPdf	10 21 05.1	-3.0		
EIL	Elat	153.07	282	PKP	PKPdf	10 21 07.3	+0.2		
	comp=Z,67nm,1.2s,baz=102,slow=2.9,SNR=13								
EIL				PKPbc	pPKPbc	10 21 15.7	-0.5		
	comp=Z,86nm,1.0s,baz=81,slow=2.0,SNR=6.2								
CMLA	Cha da Macela	153.07	60	*e*PKP	PKPbc	10 21 13.3	-0.9		
PGRON	Lagoa das Cont	153.19	60	*e*PKP	PKiKP	10 21 15.6	+0.9		
LVV	L'vov	153.22	331	PKPdf	PKPdf	10 21 06.1	-0.6		
DSB	Dublin	153.27	14	PKP	PKPdf	10 21 05.8	-0.8		
DSB	Dublin	153.27	14	PKPdf	PKPdf	10 21 06.9	+0.3		
DSB				PKP	PKiKP	10 21 14.9	+0.7		
DSB	Dublin	153.27	14	IAMs_20	IAMs_20	11 31 24.1			
	comp=Z,10µm,18.0s								
VAL	Valentia	153.43	20	PKP	PKPdf	10 21 05.7	-1.1		
VAL	Valentia	153.43	20	PKP	PKiKP	10 21 15.1	+0.5		
PSMN	Pico do Norte,	153.60	62	*e*PKP	PKPdf	10 21 08.9	+1.3		
TLCR		153.81	318	⇓P	PKPdf	10 21 08.8	+1.2		
TLCR		153.81	318	PKiKP	PKPdf	10 21 08.8	+1.2		
VLDR	Vladesti	153.86	320	⇑P	PKPdf	10 21 08.6	+1.2		
KWP	Kalwaria Pacla	153.93	332	*e*PKPdf	PKPdf	10 21 06.7	-1.1		
KWP				*e*PP	PP	10 24 57.3	-5.8		
KWP	Kalwaria Pacla	153.93	332	PKPdf	PKPdf	10 21 06.6	-1.1		
IWEX	Carrickbyrne,	153.98	16	PKP	PKiKP	10 21 16.0	+0.3		
SCTR	Scanteiesti	154.01	320	⇑P	PKPdf	10 21 09.1	+1.2		
NEGRR	Negrea	154.16	320	⇑P	PKPdf	10 21 08.4	+0.3		
GORT1	Trebel	154.19	350	*e*PKPbc	PKPab	10 21 30.3	+0.6		
	baz=14,slow=4.3								
CFR	Carcaliu	154.21	319	⇑P	PKPdf	10 21 08.4	+0.2		
CFR	Carcaliu	154.21	319	PKiKP	PKPdf	10 21 08.3	+0.2		
TPGR	Topolog	154.23	318	⇓P	PKPdf	10 21 09.4	+1.1		
TESR	Tescani	154.25	323	⇑P	PKPdf	10 21 07.9	-0.3		
BURAR	Bucovina Array	154.26	326	⇑P	PKPdf	10 21 08.8	+0.5		
BURAR	Bucovina Array	154.26	326		PKPdf	10 21 08.1	-0.2		
BURAR	Bucovina Array	154.26	326	PKiKP	PKPdf	10 21 08.8	+0.5		
PANC	Panciu	154.37	321	⇑P	PKPdf	10 21 09.4	+1.0		
MEZ	Mezhgor'ye	154.42	330	PKPdf	PKPdf	10 21 08.4	0.0		
TIRR	Tirgusor	154.45	317	⇑P	PKPdf	10 21 08.8	+0.2		
TIRR	Tirgusor	154.45	317	IAMs_20	IAMs_20	11 45 20.2			
	comp=Z,9µm,19.0s								
TIRR	Tirgusor	154.45	317	PKiKP	PKPdf	10 21 08.7	+0.2		
TIRR	Tirgusor	154.45	317	PKPdf	PKPdf	10 21 07.7	-0.8		
OJC	Ojcow	154.57	336	*e*PKPdf	PKPdf	10 21 08.1	-0.5		
OJC				*e*PP	PP	10 25 00.4	-6.2		
VRI	Vrincioaia	154.61	322	⇑P	PKPdf	10 21 09.3	+0.5		
VRI	Vrincioaia	154.61	322	PKiKP	PKPdf	10 21 09.2	+0.5		
VRI	Vrincioaia	154.61	322	PKPdf	PKPdf	10 21 09.3	+0.5		
HLM1	Long Mynd	154.62	10	*e*P	PKPdf	10 21 11.0	+2.4		
PLOR	Plostina	154.66	322	⇓P	PKPdf	10 21 10.2	+1.3		
PLOR	Plostina	154.66	322	PKiKP	PKPdf	10 21 10.2	+1.3		
STHS	Stebnicka Huta	154.69	334	*e*PKiKP	PKPdf	10 21 09.5	+0.7		
STHS				*e*		10 21 18.4			
STHS	Stebnicka Huta	154.69	334	*e*PKP	PKPdf	10 21 09.5	+0.7		
STHS				*e*		10 21 18.4			
STHS				*e*		10 21 33.0			
UZHM	Uzhgorod	154.87	331	PKPdf	PKPdf	10 21 10.2	+1.2		
HOLU	Holmets	154.91	331	PKPdf	PKPdf	10 21 08.6	-0.4		
ICOR	Ion Corvin	155.00	317	⇑P	PKPdf	10 21 10.3	+1.0		
BERU	Beregovo	155.02	330	PKPdf	PKPdf	10 21 09.7	+0.5		
BMR	Baia Mare	155.04	328	⇑P	PKPdf	10 21 09.8	+0.5		
BMR	Baia Mare	155.04	328	PKiKP	PKPdf	10 21 09.8	+0.5		
NIE	Niedzica	155.05	335	*e*PKPdf	PKPdf	10 21 09.3	0.0		
NIE				*e*PP	PP	10 25 05.2	-4.2		
NIE	Niedzica	155.05	335	PKPdf	PKPdf	10 21 09.1	-0.2		
PSN	Preselentsi	155.06	316	*e*P	PKPdf	10 21 10.8	+1.4		
NEHR	Nehoiu	155.11	321	⇓P	PKPdf	10 21 10.5	+1.0		
KSP	Ksiaz	155.14	342	*e*PKPdf	PKPdf	10 21 09.2	-0.2		
KSP				*e*PP	PP	10 25 07.8	-1.8		
KSP	Ksiaz	155.14	342	PKPdf	PKPdf	10 21 09.0	-0.3		
ISR	Istrita	155.16	320	⇓P	PKPdf	10 21 09.3	-0.4		
ISR	Istrita	155.16	320	PKiKP	PKPdf	10 21 09.2	-0.4		
SILT	Sile	155.25	309	⇓P	PKPdf	10 21 09.6	-0.2		
DOPR	Dopca	155.27	323	⇑P	PKPdf	10 21 10.4	+0.7		
MLR	Muntele Rosu	155.27	322	⇓P	PKPdf	10 21 10.0	+0.1		
MLR	Muntele Rosu	155.27	322	IAMs_20	IAMs_20	11 42 19.9			
	comp=Z,10µm,20.0s								
MLR	Muntele Rosu	155.27	322	PKiKP	PKPdf	10 21 09.9	+0.1		
MLR	Muntele Rosu	155.27	322	PKPdf	PKPdf	10 21 09.0	-0.9		
IBBN	Ibbenburen	155.27	355	*e*PKPbc	PKPab	10 21 34.7	+0.3		
	baz=14,slow=4.3								
MONM	Monmouth	155.29	11	*e*P	PKPdf	10 21 11.0	+1.5		
OSTC	Ostas	155.42	342	*e*PKiKP	PKPdf	10 21 10.7	+1.0		
OSTC				MLR	MLR				
	comp=Z,7µm,17.6s								
OSTC	Ostas	155.42	342	*e*PKPDF	PKPdf	10 21 10.7	+1.0		
OSTC				*e*PKPAB	pPKPab	10 21 36.3	-0.6		
OSTC				*e*PP	PP	10 25 02.7	-8.5		
OSTC				*e*SKKS		10 35 32.3			
OSTC				AMS	AMS	11 45 00.0			
	comp=Z,7µm,17.6s								
CHVC	Chvalec	155.44	342	*e*PKP2	PKPab	10 21 36.4	+1.1		
CHVC				MLR	MLR				
	comp=Z,8µm,19.7s								
CHVC	Chvalec	155.44	342	*e*PKPAB	PKPab	10 21 36.4	+1.1		
CHVC				*ex*	x	10 25 53.5			
CHVC				AMS	AMS	11 38 40.0			
	comp=Z,8µm,19.7s								
CLZ	Clausthal	155.44	351	*e*PKPbc	PKPab	10 21 35.7	+0.4		
	baz=14,slow=4.3								
OKC	Ostrava-Krasne	155.46	338	*e*PKP2	PKPab	10 21 36.9	+1.5		
OKC				MLR	MLR				
	comp=Z,10µm,18.7s								
OKC	Ostrava-Krasne	155.46	338	*e*PKPAB	PKPab	10 21 36.9	+1.5		
OKC				*e*PP	PP	10 25 03.3	-8.2		
OKC				AMS	AMS	11 38 50.0			
	comp=Z,10µm,18.7s								
STEB	Steborice	155.50	339	*e*PKPAB	PKPab	10 21 34.2	-1.4		
STEB				*ex*	x	10 25 50.8			
CLL	Collm	155.50	347	*i* PKIKP	PKPdf	10 21 09.1	-0.7		
CLL				*i*		10 21 35.1			
CLL				pmax	pmax				
	comp=Z,135nm,1.6s								
CLL				pmax	pmax				
	comp=Z,151nm,1.1s								
CLL				MLR	MLR				
	comp=Z,15µm,19.1s								
CLL	Collm	155.50	347	*i* PKPdf	PKPdf	10 21 09.1	-0.7		
	comp=Z,135nm,1.6s								
CLL				*i* PKPdif	pPKPbc	10 21 20.3	-0.4		
	comp=Z,92nm,1.1s								
CLL				*i* PKPab	PKPab	10 21 35.1	-0.4		
	comp=Z,151nm,1.1s								
CLL				*ex*	x	10 21 57.0			
CLL				*e*PP	PP	10 25 09.0	-2.6		
CLL				*ex*	x	10 25 54.0			
CLL				*e*PPP	PPP	10 28 42.0			
CLL				*e*SKKSac	SKKSac	10 31 54.0	-7.2		
CLL				*e*PSKS		10 35 30.0			
CLL				*e*SKKSdf	SKKSdf	10 36 42.0	-11		
CLL				*ex*	x	10 37 42.0			
CLL				*e*PPS	PPS	10 38 21.0			
CLL				*ex*	x	10 40 24.0			
CLL				*ex*	x	10 41 24.0			
CLL				*e*SS	SS	10 44 56.0	-0.3		
CLL				*ex*	x	10 46 42.0			
CLL				*e*SSS	SSS	10 50 53.0			
CLL				*e*SSSS		10 54 42.0			
CLL				AMS	AMS	11 37 00.0			
	comp=N,10µm,18.5s								
CLL				AMS	AMS	11 37 00.0			
	comp=E,7µm,18.8s								
CLL				AMS	AMS	11 37 00.0			
	comp=Z,15µm,19.1s								
CLL	Collm	155.50	347	*e*PKPbc	PKPab	10 21 35.4	-0.1		
	baz=14,slow=4.3								
UPC	Upice	155.52	342	*e*PKP2	PKPab	10 21 37.0	+1.4		
UPC				MLR	MLR				
	comp=Z,9µm,18.2s								
UPC	Upice	155.52	342	*e*PKPAB	PKPab	10 21 37.0	+1.4		
UPC				*e*PP	PP	10 25 06.5	-5.3		
UPC				*e*SKKS		10 35 30.1			
UPC				AMS	AMS	11 38 30.0			
	comp=Z,9µm,18.2s								
DPC	Dobruska-Polom	155.58	341	*e*PKIKP	PKPdf	10 21 10.7	+0.7		
DPC				MLR	MLR				
	comp=Z,8µm,17.8s								
DPC	Dobruska-Polom	155.58	341	*e*PKPDF	PKPdf	10 21 10.7	+0.7		
DPC				*e*PKPAB	pPKPab	10 21 37.2	-0.4		
DPC				*e*PP	PP	10 25 05.4	-6.7		
DPC				*ex*	x	10 25 54.0			
DPC				AMS	AMS	11 43 20.0			
	comp=Z,8µm,17.8s								
DPC	Dobruska-Polom	155.58	341	PKPdf	PKPdf	10 21 09.4	-0.6		
EDA	Edea	155.58	194		PKPdf	10 21 10.8	-0.3		
LANS	Liptovska Anna	155.58	335	*e*PKIKP	PKPdf	10 21 11.1	+1.0		
LANS	Liptovska Anna	155.58	335	*e*PKP	PKPdf	10 21 11.0	+1.0		
LANS				*e*		10 21 36.8			
SULR		155.59	320	⇓P	PKPdf	10 21 09.8	-0.3		
CJR	Cluj-Napoca	155.68	326	⇑P	PKPdf	10 21 11.5	+1.2		
CJR	Cluj-Napoca	155.68	326	PKIKP	PKPdf	10 21 11.5	+1.2		
MDB	Medias	155.68	325	⇑P	PKPdf	10 21 11.3	+1.0		
MDB	Medias	155.68	325	PKIKP	PKPdf	10 21 11.2	+1.0		
KRLC	Kraliky	155.69	340	*e*PKP2	PKPab	10 21 37.5	+1.1		
KRLC				MLR	MLR				
	comp=Z,6µm,19.6s								
KRLC	Kraliky	155.69	340	*e*PKPAB	PKPab	10 21 37.5	+1.1		
KRLC				AMS	AMS	11 36 50.0			
	comp=Z,6µm,19.6s								
BRG	Berggiesshubel	155.71	345	*e*PKPbc	PKPab	10 21 36.3	-0.1		
	baz=14,slow=4.3								
MORC	Moravsky Berou	155.71	339	⇓P	PKPdf	10 21 10.4	+0.1		
MORC	Moravsky Berou	155.71	339	PKIKP	PKPdf	10 21 10.3	+0.1		
MORC	Moravsky Berou	155.71	339	*e*PKP	PKPdf	10 21 10.6	+0.4		
MORC				*e*		10 21 36.6			
MORC				*e*PP	PP	10 25 08.9	-4.1		
KECS	Kecovo	155.73	333	*e*PKIKP	PKPdf	10 21 11.9	+1.7		
KECS	Kecovo	155.73	333	*e*PKP	PKPdf	10 21 11.9	+1.7		
KECS				*e*		10 21 38.4			
PRD	Provadia	155.76	316	*e*P	PKPdf	10 21 11.9	+1.5		
NEF	NEVSHA	155.78	316	*e*P	PKPdf	10 21 12.5	+2.0		
VOIR		155.79	323	⇓P	PKPdf	10 21 11.4	+0.8		
VOIR		155.79	323	PKIKP	PKPdf	10 21 11.3	+0.8		
VOIR		155.79	323	PKPdf	PKPdf	10 21 10.3	-0.2		
PVCC	Panska Ves	155.88	344	*e*PKP2	PKPab	10 21 38.7	+1.6		
PVCC				MLR	MLR				
	comp=Z,7µm,18.8s								
PVCC	Panska Ves	155.88	344	*e*PKPAB	PKPab	10 21 38.7	+1.6		
PVCC				*ex*	x	10 25 57.1			
PVCC				AMS	AMS	11 37 20.0			
	comp=Z,7µm,18.8s								
MARR	Marisel-Cluj	155.94	327	⇓P	PKPdf	10 21 10.4	-0.3		
MAUC	Maruska	155.98	338	*e*PKPDF	PKPdf	10 21 11.3	+0.8		
MAUC				*e*PKPAB	PKPab	10 21 38.1	+0.5		
RICC	Richard	155.98	345	AMS	AMS	11 38 10.0			
	comp=Z,13µm,18.3s								
DRGR		156.05	328	⇑P	PKPdf	10 21 10.3	-0.5		
DRGR		156.05	328	PKIKP	PKPdf	10 21 10.2	-0.5		
ARR	Arges	156.06	323	⇓P	PKPdf	10 21 11.7	+0.8		
LOZB	Loznitsa	156.15	317	⇓P	PKPdf	10 21 11.3	+0.4		
PRU	Pruhonice	156.39	343	*e*PKP2	PKPab	10 21 39.3	0.0		
PRU				MLR	MLR				
	comp=Z,8µm,19.0s								
PRU	Pruhonice	156.39	343	*e*PKPAB	PKPab	10 21 39.3	0.0		
PRU				*e*PP	PP	10 25 10.5	-6.0		
PRU				AMS	AMS	11 40 30.0			
	comp=Z,8µm,19.0s								
HUMR	Humele	156.40	321	⇓P	PKPdf	10 21 12.0	+0.8		
MOX	Moxa	156.40	348	eL	L	11 38 27.2			
	comp=Z,12µm,18.3s								
VRAC	Vranov	156.42	340	⇓P	PKPdf	10 21 11.8	+0.7		
VRAC	Vranov	156.42	340	PKIKP	PKPdf	10 21 11.8	+0.7		
VRAC	Vranov	156.42	340	*e*PKP	PKPdf	10 21 11.2	+0.1		
VRAC				*e*		10 21 39.8			
VRAC				*e*PP	PP	10 25 14.2	-2.6		
PSZ	Piszkesteto	156.42	333	⇓P	PKPdf	10 21 10.9	-0.3		
PSZ	Piszkesteto	156.42	333		PKPdf	10 21 10.7	-0.5		
PSZ	Piszkesteto	156.42	333	PKIKP	PKPdf	10 21 10.7	-0.5		
PLN	Plauen	156.46	347	*e*PKPbc	PKPab	10 21 39.7	+0.1		
	baz=14,slow=4.3								
LOT	Lotru	156.46	324	⇑P	PKPdf	10 21 11.4	0.0		
JAVC	Velka Javorina	156.46	338	*e*PKP	PKPdf	10 21 12.5	+1.3		
JAVC				*e*		10 21 41.3			
JAVC				*e*PP	PP	10 25 13.4	-3.8		
SZH	Strazhitsa	156.58	317	*e*P	PKPdf	10 21 12.8	+1.3		
NKC	Novy Kostel	156.64	347	*e*PP	PP	10 25 15.1	-2.8		
NKC				AMS	AMS	11 38 10.0			
	comp=Z,8µm,19.3s								
BAND	Balkesir-Ban	156.65	309	⇑P	PKPdf	10 21 12.0	+0.3		
JMB	Yambol	156.66	315	*e*P	PKPdf	10 21 12.4	+0.8		
KRUC	Moravsky	156.70	340	*e*PKP	PKPdf	10 21 11.4	-0.1		
KRUC				*e*		10 21 41.3			
KRUC				*e*PP	PP	10 25 14.3	-4.0		
TREC	Trest	156.76	341	AMS	AMS	11 39 10.0			
	comp=Z,16µm,17.6s								
ELND	Elena	156.83	317	⇑P	PKPdf	10 21 12.0	+0.2		
SMOL	Smolenice	156.84	337	*e*PKIKP	PKPdf	10 21 12.0	+0.3		
BEBN	Eben Emael	156.90	358	*d*PKPdf	PKPdf	10 21 11.3	-0.3		
BEBN				*d*PKP	PKPab	10 21 40.9	-0.6		
UCC	Uccle	156.92	360	*d*PKPdf	PKPdf	10 21 11.9	+0.3		
UCC				*d*PKP	PKPab	10 21 41.1	-0.4		
ZVC	Zvikov	156.98	343	*e*PP	PP	10 25 15.6	-4.2		
ZVC				AMS	AMS	11 39 50.0			
	comp=Z,11µm,18.4s								
GZR	Gura Zlata	157.01	325	⇑P	PKPdf	10 21 11.7	-0.4		
GZR	Gura Zlata	157.01	325	PKIKP	PKPdf	10 21 11.6	-0.4		
MODS	Modra-Piesok	157.01	337	*e*PKIKP	PKPdf	10 21 12.5	+0.6		
MODS	Modra-Piesok	157.01	337	*e*PKP	PKPdf	10 21 12.5	+0.6		
MODS				*e*		10 21 44.4			
MEM	Membach	157.07	357	*d*PKPdf	PKPdf	10 21 11.7	-0.2		
MEM				*d*PKP	PKPab	10 21 41.8	-0.4		
BTNL	Ternell	157.09	357	*d*PKPdf	PKPdf	10 21 11.8	-0.1		
BTNL				*d*PKP	PKPab	10 21 42.1	-0.2		
BSTI	Sart Tilman	157.11	358	*d*PKPdf	PKPdf	10 21 11.8	-0.1		
BSTI				*d*PKP	PKPab	10 21 41.7	-0.7		
SRO	Srobarova	157.12	335	*e*PKP2	PKPab	10 21 44.9	+2.4		
SRO	Srobarova	157.12	335	*e*PKP	PKPab	10 21 44.9	+2.4		
ROTZ	Rotzenmuhle	157.13	347	*e*PKPbc	PKPab	10 21 42.7	+0.2		
	baz=14,slow=4.3								
PVL	Pavlikeni	157.14	318	*e*P	PKPdf	10 21 13.6	+1.4		
TNS	Taunus Mts	157.27	353	*e*PKPbc	PKPab	10 21 43.2	0.0		
	baz=14,slow=4.3								
BCLA	Clavier	157.28	358	*d*PKPdf	PKPdf	10 21 12.9	+0.7		
BCLA				*d*PKP	PKPab	10 21 42.4	-0.7		
PLVB	Pleven	157.31	319	⇓P	PKPdf	10 21 12.7	+0.3		
BGES	Gesves	157.32	359	*d*PKPdf	PKPdf	10 21 12.1	-0.1		
BGES				*d*PKP	PKPab	10 21 42.7	-0.6		
BHOU	Houvegnez	157.32	357	*d*PKPdf	PKPdf	10 21 12.1	-0.1		
BHOU				*d*PKP	PKPab	10 21 43.0	-0.4		
DBIC	Dimbokro	157.37	156	PKP	PKPdf	10 21 13.8	+0.4		
	comp=Z,64nm,1.1s,baz=181,slow=1.7,SNR=4.8								
DBIC				PKPab	PKPab	10 21 45.2	+0.8		
	comp=Z,57nm,0.9s,baz=238,slow=4.7,SNR=6.5								
GRF	Grafenberg Arr	157.39	348	*e*PKPbc	PKPab	10 21 44.0	+0.4		
	baz=14,slow=4.3								
GRF				*e*L	L	11 39 08.2			
	comp=Z,11µm,18.0s								
BMRD	Maredsous	157.41	359	*d*PKPdf	PKPdf	10 21 12.2	-0.1

ECH	**Echery**	**159.38**	**355**		IAMs_20	IAMs_20	11 34 52.9		
	comp=Z,11μm,20.0s								
OBKA	**Obir**	**159.54**	**339**	*e*PKP	**PKPdf**		**10 21 14.2**	**-0.9**	
	comp=Z,3μm,6.1s								
OBKA				*e*PKP	**PKPab**		**10 21 52.7**	**-0.5**	
	comp=Z,1μm,4.4s								
OBKA				*e*PP	**PP**		**10 25 30.9**	**-3.2**	
	comp=Z,3μm,7.1s								
WATA	**Walderalm**	**159.57**	**346**	*e*PKP	**PKPdf**		**10 21 14.3**	**-0.9**	
	comp=Z,3μm,5.9s,SNR=18								
WATA				*e*PKP	**PKPab**		**10 21 53.0**	**-0.3**	
	comp=Z,2μm,4.7s,SNR=6.3								
WATA				*e*PP	**PP**		**10 25 30.3**	**-3.8**	
	comp=Z,7μm,9.0s								
WATA	**Walderalm**	**159.57**	**346**	*e*P	**PKPab**		**10 21 53.0**	**-0.3**	
	comp=Z,2μm,4.7s,SNR=6.3								
RETA	**Reutte**	**159.59**	**347**	*e*PKP	**PKPdf**		**10 21 14.3**	**-0.9**	
	comp=Z,3μm,7.0s,SNR=5.5								
RETA				*e*PKP	**PKPab**		**10 21 52.9**	**-0.4**	
	comp=Z,2μm,5.5s								
RETA				*e*PP	**PP**		**10 25 31.1**	**-3.1**	
	comp=Z,6μm,8.3s								
WTTA	**Wattenberg**	**159.62**	**346**	*e*PKP	**PKPdf**		**10 21 14.7**	**-0.7**	
	comp=Z,998nm,3.0s,SNR=35								
WTTA				*i* PKP	**PKPab**		**10 21 53.8**	**+0.1**	
	comp=Z,2μm,4.3s								
WTTA				*e*PP	**PP**		**10 25 30.4**	**-4.1**	
	comp=Z,6μm,9.2s								
MOTA	**Moosalm**	**159.66**	**347**	*e*PKP	**PKPdf**		**10 21 14.4**	**-1.0**	
	comp=Z,830nm,3.2s,SNR=24								
MOTA				*e*PKP	**PKPab**		**10 21 53.5**	**-0.3**	
	comp=Z,1μm,3.6s								
MOTA				*e*PP	**PP**		**10 25 29.9**	**-4.7**	
	comp=Z,6μm,9.7s								
MYKA	**Terra Mystica**	**159.70**	**341**	*e*PKP	**PKPdf**		**10 21 13.8**	**-1.5**	
	comp=Z,2μm,6.5s								
MYKA				*e*PKP	**PKPab**		**10 21 53.1**	**-0.7**	
	comp=Z,334nm,2.0s,SNR=5.7								
MYKA				*e*PP	**PP**		**10 25 28.7**	**-6.1**	
	comp=Z,4μm,7.4s								
MYKA	**Terra Mystica**	**159.70**	**341**	*e*P	**PKPab**		**10 21 53.1**	**-0.7**	
	comp=Z,334nm,2.0s,SNR=5.7								
SQTA	**Sankt Quirin**	**159.76**	**346**	*e*PKP	**PKPdf**		**10 21 14.7**	**-0.7**	
	comp=Z,2μm,5.5s,SNR=20								
SQTA				*e*PKP	**PKPab**		**10 21 53.8**	**-0.4**	
	comp=Z,1μm,4.4s								
SQTA				*e*PP	**PP**		**10 25 29.9**	**-5.2**	
	comp=Z,5μm,6.3s								
CRES	**Cresnjevec Ost**	**159.84**	**337**	*e*PKPdf	**PKPdf**		**10 21 14.4**	**-1.0**	
ABTA	**Abfaltersbach**	**159.90**	**343**	*e*PKP	**PKPdf**		**10 21 14.7**	**-0.9**	
	comp=Z,386nm,2.6s,SNR=17								
ABTA				*e*PKP	**PKPab**		**10 21 54.0**	**-0.7**	
	comp=Z,203nm,1.2s,SNR=6.3								
ABTA				*e*PP	**PP**		**10 25 29.2**	**-6.7**	
	comp=Z,5μm,8.4s								
ABTA	**Abfaltersbach**	**159.90**	**343**	*e*P	**PKPab**		**10 21 54.0**	**-0.7**	
	comp=Z,203nm,1.2s,SNR=6.3								
DAVA	**Damuels**	**159.95**	**349**	*e*PKP	**PKPdf**		**10 21 15.0**	**-0.7**	
	comp=Z,3μm,6.2s								
DAVA				*i* PKP	**PKPab**		**10 21 54.5**	**-0.4**	
	comp=Z,2μm,5.6s								
DAVA				*e*PP	**PP**		**10 25 33.4**	**-2.8**	
	comp=Z,5μm,9.2s								
LJU	**Ljubljana**	**159.96**	**339**	*e*PKPdf	**PKPdf**		**10 21 14.9**	**-0.6**	
LJU				*e*PP	**PP**		**10 25 34.5**	**-1.7**	
LJU				*e*SS	SS		10 45 55.7	+11	
FETA	**Feichten**	**160.05**	**347**	*e*PKP	**PKPdf**		**10 21 14.8**	**-1.0**	
	comp=Z,785nm,3.0s,SNR=33								
FETA				*e*PKP	**PKPab**		**10 21 55.1**	**-0.4**	
	comp=Z,294nm,1.7s								
FETA				*e*PP	**PP**		**10 25 33.2**	**-3.5**	
	comp=Z,6μm,8.3s								
VISS	**Visnje**	**160.07**	**338**	*e*PKPdf	**PKPdf**		**10 21 14.5**	**-1.2**	
VISS				*e*PKPab	**PKPab**		**10 21 54.7**	**-0.8**	
VISS				*e*PP	**PP**		**10 25 35.8**	**-1.0**	
BLY	**Banja Luka**	**160.09**	**332**	||*i*P	**PKPdf**	**10 21 16.7**	**+1.1**	
PLE	**Pljevlja**	**160.18**	**326**	||*i*PKP	**PKPdf**	**10 21 14.7**	**-1.3**	
BOJS	**Bojanci**	**160.19**	**337**	*i* PKPdf	**PKPdf**		**10 21 14.2**	**-1.5**	
BOJS				*e*			10 35 58.9		
BOJS				*e*SS	SS		10 45 56.7	+10	
IVA	**Berane**	**160.26**	**324**	||*i*PKP	**PKPdf**	**10 21 14.9**	**-1.2**	
PVY	**Plav**	**160.42**	**323**	||*i*PKP	**PKPdf**	**10 21 14.5**	**-1.8**	
KOME	**Kolasin**	**160.47**	**325**	||*i*PKP	**PKPdf**	**10 21 15.4**	**-0.9**	
UPM	**Unac-Piva**	**160.52**	**326**	||*i*PKP	**PKPdf**	**10 21 15.1**	**-1.4**	
FUORN	**Ofenpass-Fuorn**	**160.52**	**348**			**PKPdf**	**10 21 15.8**	**-0.7**	
PMOZ	**Porto Moniz, M**	**160.75**	**69**	*e*PKPdf	**PKPdf**		**10 21 18.1**	**+1.2**	
PMOZ				*e*PP	**PP**		**10 25 43.6**	**+1.5**	
PMOZ				*e*LR	LR		11 16 07.2		
PMOZ				*i* IAMs_20	IAMs_20		11 30 31.4		
	comp=Z,12μm,18.0s								
IDI	**Anoyia**	**160.89**	**298**	PKP	**PKPdf**		**10 21 17.0**	**+0.1**	
	comp=Z,68nm,1.1s,baz=172,slow=3.4,SNR=10								
IDI				PKPab	**PKPab**		**10 21 57.8**	**-1.7**	
	comp=Z,37nm,0.8s,baz=329,slow=0.9,SNR=4.6								
IDI				PP	**PP**		**10 25 43.0**	**+0.3**	
	comp=Z,7.2nm,0.8s,baz=84,slow=6.1,SNR=4.3								
PDG	**Podgorica**	**160.90**	**324**	||*i*P	**PKPdf**	**10 21 16.4**	**-0.3**	
PDG	**Podgorica**	**160.90**	**324**	||*i*PKP	**PKPdf**	**10 21 16.1**	**-0.5**	
BRY	**Bratogost**	**160.92**	**326**	||*i*PKP	**PKPdf**	**10 21 15.7**	**-1.1**	
OHR	**Ohrid**	**160.94**	**319**	*i* P	**PKPdf**		**10 21 16.8**	**0.0**	
CEME	**Cevo**	**160.99**	**325**	||*i*PKP	**PKPdf**	**10 21 15.6**	**-1.2**	
PMAR	**Madeira**	**161.00**	**70**	*e*PKPdf	**PKPdf**		**10 21 19.1**	**+1.8**	
PMAR				*e*tx	tx		10 21 19.4		
DRME	**Dracevica, Mon**	**161.11**	**324**	||*i*PKP	**PKPdf**	**10 21 15.2**	**-1.7**	
BUM	**Brajici-Budva**	**161.18**	**325**	||*i*PKP	**PKPdf**	**10 21 16.2**	**-0.8**	
ULC	**Ulcinj**	**161.24**	**323**	||*i*PKP	**PKPdf**	**10 21 15.8**	**-1.3**	
HCY	**Herceg Novi**	**161.28**	**326**	||*i*PKP	**PKPdf**	**10 21 16.0**	**-1.1**	
PMPST	**Porto Santo, M**	**161.42**	**68**	*e*PKPdf	**PKPdf**		**10 21 17.8**	**+0.3**	
PGAV	**Gavieira, Arco**	**162.44**	**33**	*e*PKPdf	**PKPdf**		**10 21 19.3**	**+0.9**	
PGAV				*e*PKPab	**PKPab**		**10 22 06.2**	**+0.2**	
PGAV				*e*SS			10 52 49.6		
PGAV				*e*LQ	LQ		11 25 08.2		
PGAV				*i* IAMs_20	IAMs_20		11 34 00.3		
	comp=Z,15μm,18.0s								
PCAB	**Cabril**	**162.75**	**33**	*e*PKPdf	**PKPdf**		**10 21 20.0**	**+1.4**	
PCAB				*e*PKPab	**sPKPab**		**10 22 10.9**	**+1.3**	
POLO	**Lamas de Olo**	**163.12**	**33**	*e*pPKPdf	**pPKPdf**		**10 21 20.6**	**-0.2**	
POLO				*e*PKPab	**PKPab**		**10 22 07.8**	**-1.2**	
PVRL	**Vila Real**	**163.24**	**33**	*e*PKPdf	**PKPdf**		**10 21 20.8**	**+1.6**	
PVRL				*e*PKPab	**PKPab**		**10 22 09.7**	**+0.2**	
PVRL				*e*PP	**PP**		**10 25 52.9**	**-1.2**	
PBRG	**Braganca**	**163.27**	**30**	*e*PKPdf	**PKPdf**		**10 21 17.5**	**-1.6**	
PBRG				*e*PKPab	**PKPab**		**10 22 09.4**	**-0.2**	
PBRG				*e*PP	**PP**		**10 25 52.6**	**-1.6**	
MATE	**Matera**	**163.51**	**325**	↑P	**PKPdf**		**10 21 19.4**	**+0.1**	
PVIS	**Viseu**	**163.57**	**35**	*e*PKPdf	**PKPdf**		**10 21 20.6**	**+1.1**	
PVIS				*e*PKPab	**PKPab**		**10 22 11.4**	**+0.4**	
PVIS				*e*PP	**PP**		**10 25 56.7**	**+0.8**	
MVO	**Moncorvo**	**163.65**	**32**	*e*PKPdf	**PKPdf**		**10 21 21.0**	**+1.4**	
MVO				*e*PKPab	**PKPab**		**10 22 11.7**	**+0.4**	
MVO				*e*PP	**PP**		**10 25 57.7**	**+1.4**	
MVO				*e*SS	SS		10 46 22.9	-0.5	
MVO				*e*LR	LR		11 24 13.2		
MVO				*i* IAMs_20	IAMs_20		11 33 47.3		
	comp=Z,12μm,18.0s								
PCAS	**Casmilo, Conde**	**163.74**	**37**	*e*PKPdf	**PKPdf**		**10 21 20.6**	**+1.0**	
PCAS				*e*PKPab	**PKPab**		**10 22 11.3**	**-0.4**	
PCAS				*e*PP	**PP**		**10 25 57.7**	**+0.8**	
PSBE	**So Bento**	**163.96**	**39**	*e*PKPdf	**PKPdf**		**10 21 21.9**	**+2.0**	
PSBE				*e*PKPab	**PKPab**		**10 22 12.9**	**+0.2**	
PSBE				*e*PP	**PP**		**10 25 57.7**	**-0.4**	
MTE	**Manteigas**	**163.99**	**35**	*e*PKPdf	**PKPdf**		**10 21 21.1**	**+1.3**	
MTE				*e*PKPab	**PKPab**		**10 22 13.3**	**+0.5**	
MTE				*e*LR	LR		11 23 48.7		
MTE				*i* IAMs_20	IAMs_20		11 34 37.9		
	comp=Z,12μm,18.0s								
PMAFR	**Mafra**	**164.05**	**42**	*e*PKPdf	**PKPdf**		**10 21 21.0**	**+1.1**	
PMAFR				*e*PP	**PP**		**10 26 00.0**	**+1.4**	
PSARD	**Sardoal**	**164.25**	**38**	*e*PKPdf	**PKPdf**		**10 21 20.9**	**+0.8**	
PSARD				*e*PKPab	**PKPab**		**10 22 12.4**	**-1.5**	
LIS	**Lisbon**	**164.28**	**42**	*e*PKPdf	**PKPdf**		**10 21 20.5**	**+0.4**	
LIS				*e*PP	**PP**		**10 26 00.1**	**+0.2**	
LIS				IAMs_20	IAMs_20		11 36 14.9		
	comp=Z,16μm,20.8s								
LIS	**Lisbon**	**164.28**	**42**	*e*PKPdf	**PKPdf**		**10 21 22.3**	**+2.2**	
LIS	**Lisbon**	**164.28**	**42**	*e*PKIKP	**PKPdf**		**10 21 20.5**	**+0.4**	
LIS				*e*			10 26 00.1		
PCBR	**Castelo Branco**	**164.44**	**36**	*e*PKPdf	**PKPdf**		**10 21 21.3**	**+1.1**	
PCBR				*e*PKPab	**PKPab**		**10 22 12.5**	**-2.2**	
PMTG	**Montargil**	**164.58**	**39**	*e*PKPdf	**PKPdf**		**10 21 20.7**	**+0.4**	
PMTG				*e*PKPab	**PKPab**		**10 22 14.5**	**-0.9**	
PMRV	**Marv??o**	**164.78**	**37**	*e*PKPdf	**PKPdf**		**10 21 21.6**	**+1.1**	
PMRV				*e*PKPab	**PKPab**		**10 22 15.8**	**-0.5**	
PMRV				*e*LR	LR		11 24 00.2		
PMRV				*i* IAMs_20	IAMs_20		11 38 42.8		
	comp=Z,8μm,18.0s								
PARRA	**Arraiolos**	**164.86**	**40**	*e*PKPdf	**PKPdf**		**10 21 21.7**	**+1.1**	
PARRA				*e*PKPab	**PKPab**		**10 22 16.0**	**-0.7**	
PARRA				*e*PP	**PP**		**10 26 03.8**	**+1.0**	
MOE	**Montemor**	**164.88**	**41**	*e*PKPdf	**PKPdf**		**10 21 21.7**	**+1.1**	
MOE				*e*PKPab	**PKPab**		**10 22 16.6**	**-0.1**	
MOE				*e*PP	**PP**		**10 26 05.7**	**+2.7**	
EVO	**Evora**	**165.07**	**40**	PKP	**PKPdf**		**10 21 21.5**	**+0.7**	
EVO	**Evora**	**165.07**	**40**	*e*PKPdf	**PKPdf**		**10 21 22.0**	**+1.2**	
EVO				*e*PKPab	**PKPab**		**10 22 17.8**	**+0.2**	
EVO				*e*PP	**PP**		**10 26 05.8**	**+1.8**	
PESTR	**Estremoz**	**165.08**	**39**	*e*PKPdf	**PKPdf**		**10 21 22.2**	**+1.4**	
PESTR				*e*PKPab	**PKPab**		**10 22 14.6**	**-3.0**	
PESTR				*e*PP	**PP**		**10 26 05.7**	**+1.8**	
PTEO	**Sao Teotonio**	**165.28**	**45**	*e*PKPdf	**PKPdf**		**10 21 22.4**	**+1.4**	
PTEO				*e*PKPab	**PKPab**		**10 22 15.8**	**-2.8**	
PTEO				*e*PP	**PP**		**10 26 07.0**	**+1.8**	
TOA0	**Torodi Ar. Sit**	**165.33**	**170**	P	**PKPdf**		**10 21 21.9**	**+0.3**	
	SNR=12								
TORD	**Torodi Ar. Bea**	**165.33**	**170**	PKP	**PKPdf**		**10 21 21.4**	**-0.3**	
	comp=Z,70nm,1.2s,baz=244,slow=2.0,SNR=94								
TORD				PKPab	**pPKPab**		**10 22 20.2**	**-0.6**	
	comp=Z,169nm,1.0s,baz=200,slow=5.3,SNR=21								
MESJ	**Messejana**	**165.41**	**43**	*e*PKPdf	**PKPdf**		**10 21 21.4**	**+0.3**	
MESJ				*e*PP	**PP**		**10 26 06.0**	**+0.2**	
MESJ				IAMs_20	IAMs_20		11 31 59.0		
	comp=Z,17μm,17.3s								
MESJ	**Messejana**	**165.41**	**43**	*e*PKPdf	**PKPdf**		**10 21 21.9**	**+0.8**	
MESJ				*e*PKPab	**PKPab**		**10 22 18.9**	**-0.2**	
MESJ	**Messejana**	**165.41**	**43**	*e*PKIKP	**PKPdf**		**10 21 21.4**	**+0.3**	
MESJ				*e*			10 26 06.0		
PFVI	**Vila Bisbo**	**165.47**	**46**	*e*PKPdf	**PKPdf**		**10 21 22.9**	**+1.7**	
PFVI				*e*PKPab	**PKPab**		**10 22 19.8**	**+0.4**	
MORF	**Marmelete**	**165.47**	**45**	*e*PKPdf	**PKPdf**		**10 21 21.5**	**+0.3**	
MORF				*e*PP	**PP**		**10 26 06.4**	**+0.1**	
MORF				IAMs_20	IAMs_20		11 35 07.5		
	comp=Z,13μm,16.5s								
MORF	**Marmelete**	**165.47**	**45**	*e*PKPdf	**PKPdf**		**10 21 22.9**	**+1.7**	
MORF				*e*PKPab	**PKPab**		**10 22 19.4**	**-0.1**	
MORF				*e*PP	**PP**		**10 26 07.7**	**+1.4**	
MORF	**Marmelete**	**165.47**	**45**	*e*PKIKP	**PKPdf**		**10 21 21.5**	**+0.3**	
MORF				*e*			10 26 06.4		
PBEJ	**Beja**	**165.50**	**42**	*e*PKPdf	**PKPdf**		**10 21 23.2**	**+2.0**	
PBEJ				*e*PKPab	**PKPab**		**10 22 18.6**	**-0.9**	
PCVE	**Castro Verde**	**165.65**	**43**	*e*PKPdf	**PKPdf**		**10 21 22.6**	**+1.3**	
PCVE				*e*PKPab	**PKPab**		**10 22 19.0**	**-1.2**	
PCVE				*e*PP	**PP**		**10 26 07.6**	**+0.6**	
PBAR	**Barrancos**	**165.87**	**39**	*e*PKPdf	**PKPdf**		**10 21 22.5**	**+1.0**	
PBAR				*e*PKPab	**PKPab**		**10 22 19.9**	**-1.2**	
UCM	**Universidad Co**	**165.95**	**24**	PKP	**PKPdf**		**10 21 22.5**	**+1.0**	
PBDV	**Barranco-do-Ve**	**165.96**	**44**	*e*PKPdf	**PKPdf**		**10 21 23.2**	**+1.6**	
PBDV				*e*PKPab	**PKPab**		**10 22 21.1**	**-0.5**	
PVAQ	**Vaqueiros**	**165.99**	**43**	*e*PKPdf	**PKPdf**		**10 21 21.9**	**+0.3**	
PVAQ				*e*PKPab	**PKPab**		**10 22 20.8**	**-0.9**	
PVAQ				*e*LR	LR		11 24 58.1		
PVAQ				*e*LQ	LQ		11 25 03.5		
PVAQ				*i* IAMs_20	IAMs_20		11 33 07.5		
	comp=Z,14μm,18.0s								
ESDC	**Sonseca Array**	**166.22**	**28**	PKP	**PKPdf**		**10 21 22.5**	**+0.7**	
	comp=Z,31nm,1.1s,baz=341,slow=2.4,SNR=70								
ESDC				PKPab	**PKPab**		**10 22 22.4**	**-0.2**	
	comp=Z,31nm,1.0s,baz=319,slow=4.1,SNR=16								
SFS	**San Fernando**	**167.52**	**43**	PKP	**PKPdf**		**10 21 24.3**	**+1.6**	
CNIL	**Conil**	**167.68**	**43**	PKP	**PKPdf**		**10 21 24.6**	**+1.7**	
MAHO	**Mahon**	**167.82**	**0**	PKP	**PKPdf**		**10 21 23.1**	**+0.2**	
EMAL	**Malaga-Limoner**	**168.32**	**37**	PKP	**PKPdf**		**10 21 23.1**	**-0.2**	
AVR	**Averroes**	**168.46**	**58**	PKP	**PKPdf**		**10 21 23.9**	**+0.4**	
CART	**Cartagena**	**169.17**	**23**	PKP	**PKPdf**		**10 21 23.6**	**-0.2**	
CART	**Cartagena**	**169.17**	**23**		**PKPab**		**10 22 35.2**	**-0.3**	
TIO	**Tiouine**	**169.41**	**69**	PKP	**PKPdf**		**10 21 24.9**	**+0.5**	
IFR	**Ifrane**	**170.02**	**52**	PKP	**PKPdf**		**10 21 26.0**	**+1.3**	
CAEH	**'Ain El Ouahch**	**170.68**	**347**	P	**PKPdf**		**10 21 27.0**	**+2.2**	
KEST	**Kesra**	**170.90**	**333**	PKP	**PKPdf**		**10 21 25.5**	**+0.5**	
	comp=Z,23nm,1.1s,baz=274,slow=2.7,SNR=9.0								
KEST				PKPab	**PKPab**		**10 22 42.9**	**-0.5**	
	comp=Z,28nm,0.8s,baz=352,slow=2.3,SNR=8.5								
DFRA	**Djebel Bou Aff**	**171.06**	**352**	P	**PKPdf**		**10 21 26.9**	**+1.8**	
CKFL	**Kef-Lekhel**	**171.07**	**347**	P	**PKPdf**		**10 21 26.2**	**+1.1**	

*JMA **14** 10:01:53.2±0.2,23.˚9N±0.˚9×122.˚3E±0.˚4, h12km, MV2.7/13, TAIWAN REGION*

*TAP **14** 10:01:54.4,24.˚03N×122.˚23E, h24km, ML2.9, C*

ISC 14 10:01:54.1±0.9,24°01'N±0.'02×122°23'E±0.'02, h26km±7km, n80,σ0s58/124, 5C-3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EOS4	**EOS4**	**0.14**	**36**	↑*i*P			**Pb**	**10 01 58.8**	**-0.1**
EOS4				*i* S			**Sb**	10 02 02.2	+0.1
EOS3	**EOS3**	**0.29**	**16**	||*i*P		**Pb**	10 02 00.8	-0.2
EOS3				S			**Sb**	10 02 06.0	+0.3
EOS2	**EOS2**	**0.41**	**1**	||*i*P		**Pb**	10 02 02.9	0.0
EOS2				*i* S			**Sb**	10 02 09.1	+0.3
EAHA	**Aohua**	**0.55**	**306**	*e*P			**Pb**	10 02 04.9	-0.3
EAHA				S			**Sb**	10 02 12.9	+0.1
ETL	**Fush Village**	**0.57**	**286**	*e*P			**Pb**	10 02 06.0	+0.4
ETL				S			**Sn**	10 02 14.5	-0.7
TWD	**Chiawan**	**0.58**	**278**	*i* P			**Pn**	10 02 07.0	+0.3
TWD				*i* S			**Sb**	10 02 14.0	+0.4
TEYL	**Yanliau Villag**	**0.59**	**257**	*e*S			**Sn**	10 02 15.7	0.0
EWUT	**Wuta**	**0.60**	**317**	*e*P			**Pb**	10 02 05.3	-0.8
EWUT				*e*S			**Sb**	10 02 13.5	-0.7
NACB	**Ninganchiao**	**0.60**	**286**	P			**Pb**	10 02 05.3	-0.8
NACB	**Ninganchiao**	**0.60**	**286**	S			**Sb**	10 02 13.0	-1.2
NACB	**Ninganchiao**	**0.60**	**286**	↑*i*P			**Pb**	10 02 05.9	-0.1
NACB				S			**Sb**	10 02 14.7	+0.5
SHUL	**Shoufeng**	**0.65**	**251**	*e*P			**Pb**	10 02 07.2	+0.4
ETM	**Tongmen**	**0.67**	**267**	P			**Pb**	10 02 07.1	-0.2
ETM				S			**Sb**	10 02 16.6	+0.4
TWC	**Suao**	**0.69**	**330**	*i* P			**Pb**	10 02 06.4	-1.2
TWC				*i* S			**Sb**	10 02 15.3	-1.5
ETLH	**Xiulin Townshi**	**0.71**	**287**	*e*P			**Pb**	10 02 07.8	-0.1
ETLH				*i* S			**Sb**	10 02 17.5	+0.1
ESL	**Shilin**	**0.75**	**256**	*i* P			**Pb**	10 02 07.9	-0.6
ESL				*i* S			**Sb**	10 02 18.3	-0.1
NDS	**Dongshan**	**0.78**	**323**	*e*P			**Pb**	10 02 08.9	-0.2
NDS				S			**Sb**	10 02 18.4	-1.0
JYNG	**Yonagunijimaku**	**0.79**	**56**	*e*P			**Pb**	10 02 08.4	-0.9
JYNG				*e*S			**Sb**	10 02 19.7	+0.1
WARBT	**Fenglin Townsh**	**0.82**	**250**	P			**Pb**	10 02 09.1	-0.7
WARBT				*e*S			**Sb**	10 02 21.0	+0.5
LATG	**Datong**	**0.83**	**310**	*e*P			**Pb**	10 02 09.6	-0.4
LATG				S			**Sn**	10 02 21.6	-0.1
YOJ	**Yonaguni jima**	**0.85**	**57**	||P		**Pb**	10 02 10.3	+0.1
YOJ				*i* S			**Sn**	10 02 22.6	+0.6
YOJ	**Yonaguni jima**	**0.85**	**57**	*e*P			**Pb**	10 02 10.3	+0.1
YOJ				*e*S			**Sn**	10 02 21.7	-0.4
ENTT	**Nioudou**	**0.87**	**317**	*i* P			**Pb**	10 02 10.7	0.0
ENTT				*i* S			**Sb**	10 02 21.2	-0.8
ILA	**Ilan**	**0.87**	**330**	*e*S			**Sn**	10 02 22.5	-0.1
TWE	**Neicheng**	**0.88**	**325**	↑*i*P			**Pb**	10 02 10.5	-0.2
TWE				*i* S			**Sn**	10 02 22.4	-0.3
NNSB	**Datong**	**0.88**	**299**	↑P			**Pb**	10 02 10.5	-0.3
NNSB				*e*S			**Sb**	10 02 22.0	-0.2
NDT	**Datong Townshi**	**0.88**	**313**	*e*P			**Pn**	10 02 11.2	+0.3
NDT				*e*S			**Sb**	10 02 22.0	-0.2
WHF	**Hehuan Shan**	**0.89**	**279**	P			**Pb**	10 02 11.2	0.0
WHF				*e*S			**Sb**	10 02 22.6	-0.3
NNS	**Nan Shan**	**0.89**	**299**	↑*i*P			**Pb**	10 02 10.8	-0.3
NNS				*e*S			**Sb**	10 02 22.7	+0.1
HGSD	**Ruisui**	**0.90**	**235**	*e*P			**Pb**	10 02 10.2	-0.8
HGSD				*e*S			**Sb**	10 02 21.8	-0.8
FUSS	**Fushou**	**0.93**	**285**	*e*P			**Pb**	10 02 11.8	0.0
FUSS				*i* S			**Sn**	10 02 24.8	+0.4
FUSB	**Fushanzhiwuyua**	**0.95**	**322**	*e*P			**Pn**	10 02 12.7	+0.8
FUSB				*e*S			**Sn**	10 02 25.3	+0.7
EHYH	**Wanrong**	**0.95**	**238**	*e*P			**Pb**	10 02 10.8	-1.2
OWD	**Renai**	**0.96**	**267**	*e*P			**Pb**	10 02 11.9	-0.4
OWD				*i* S			**Sb**	10 02 24.1	-0.5
ECBN	**Changbin**	**0.99**	**226**	*e*P			**Pn**	10 02 11.7	-0.6
TDCB	**Techi**	**1.01**	**284**	*e*P			**Pn**	10 02 13.1	+0.4
TDCB				*e*S			**Sb**	10 02 26.1	+0.1
NWLT	**Wulai**	**1.01**	**320**	*e*P			**Pb**	10 02 13.5	+0.4
NWLT				*e*S			**Sb**	10 02 25.8	-0.2
WUSB	**Renai**	**1.01**	**270**	*e*P			**Pn**	10 02 12.8	-0.1
WUSB				*e*S			**Sn**	10 02 26.6	+0.3
YHNB	**Yeheng**	**1.02**	**311**	P			**Pb**	10 02 13.4	+0.2
YHNB	**Yeheng**	**1.02**	**311**	S			**Sn**	10 02 26.6	+0.2
YHNB	**Yeheng**	**1.02**	**311**	P			**Pn**	10 02 13.0	+0.2
YHNB				S			**Sb**	10 02 24.7	-1.5
TWB1	**Santiao Chiao**	**1.02**	**348**	*e*S			**Sn**	10 02 26.5	+0.2
TIPB	**Shuangxi**	**1.03**	**339**	*e*P			**Pb**	10 02 13.6	+0.2
TIPB				*e*S			**Sb**	10 02 25.6	-0.9
NSK	**Sanguang**	**1.04**	**310**	*i* P			**Pn**	10 02 12.9	-0.1
NSK				*i* S			**Sb**	10 02 25.7	-1.0
YULB	**Yu-li**	**1.05**	**235**	P			**Pn**	10 02 12.5	-0.7
YULB	**Yu-li**	**1.05**	**235**	S			**Sb**	10 02 27.3	+0.4
YULB	**Yu-li**	**1.05**	**235**	*e*P			**Pn**	10 02 13.1	-0.1
YULB				*e*S			**Sb**	10 02 26.9	-0.1
TWF1	**Yuli**	**1.07**	**233**	P			**Pn**	10 02 12.9	-0.6
TWF1				*e*S			**Sb**	10 02 27.6	0.0
SXI1	**Grass Mountain**	**1.13**	**344**	*e*P			**Pb**	10 02 14.7	-0.4
TWA	**Mucha**	**1.13**	**329**	P			**Pb**	10 02 14.9	-0.2
FULB	**Fuli**	**1.17**	**227**	*e*P			**Pn**	10 02 14.5	-0.4
TATO	**Taipei**	**1.18**	**325**	P			**Pb**	10 02 15.5	-0.3
SSLB	**Suanglung**	**1.18**	**260**	P			**Pn**	10 02 15.8	+0.7
SSLB	**Suanglung**	**1.18**	**260**	S			**Sb**	10 02 31.3	+0.4
SSLB	**Suanglung**	**1.18**	**260**	*e*P			**Pb**	10 02 16.3	+0.3
SSLB				*e*S			**Sn**	10 02 30.7

MTHZ Maungataniwha 2.90 217 P Pn 10 05 59.5 -0.3
WHHZ Waihua 2.91 209 P Pn 10 05 59.1 -0.8
GRZ Great Barrier 2.93 275 P Pn 10 05 59.7 -0.5
ALRZ Allen Road 2.95 226 P Pn 10 06 00.4 -0.1
WPRZ Whakapapatarin 3.03 229 P Pn 10 06 01.9 +0.2
TOZ Tahuroa Road 3.08 247 Pn Pn 10 05 59.6 -2.7
TOZ Tahuroa Road 3.08 247 P Pn 10 06 01.4 -0.9
MRHZ Matea Rd 3.10 222 P Pn 10 06 02.2 -0.4
NMHZ Naumai 3.11 215 P Pn 10 06 02.5 -0.2
ARHZ Aropaoanui 3.16 211 P Pn 10 06 02.4 -1.0
WIAZ Waiheke Island 3.17 265 P Pn 10 06 03.4 -0.2
MKAZ Moumakai 3.19 259 P Pn 10 06 03.3 -0.4
KUTZ Kaahu Road 3.22 232 P Pn 10 06 04.8 +0.5
WHTZ Whakaora 3.22 229 P Pn 10 06 05.1 +0.5
BKZ Black Stump Fm 3.31 217 P Pn 10 06 05.1 -0.4
BKZ Black Stump Fm 3.31 217 S Sn 10 06 42.5 -1.1
BKZ Black Stump Fm 3.31 217 P Pn 10 06 04.7 -0.7
TLZ Tolley Road 3.32 237 P Pn 10 06 06.3 +0.6
ETAZ East Tamaki Re 3.35 262 P Pn 10 06 06.1 +0.1
MBAZ Motutapu North 3.36 265 P Pn 10 06 06.2 0.0
KBAZ Karaka Road Bo 3.40 260 P Pn 10 06 07.1 +0.5
WATZ Wairara 3.41 230 P Pn 10 06 07.0 +0.2
ABAZ Army Bay 3.41 268 P Pn 10 06 06.9 +0.1
MCHZ McNeill Hill 3.44 212 P Pn 10 06 06.5 -0.7
CKHZ Cape Kidnapper 3.47 206 P Pn 10 06 05.5 -2.2
RATZ Rangitukua 3.49 228 P Pn 10 06 08.1 +0.2
EPAZ Eden Park BICE 3.49 263 P Pn 10 06 08.5 +0.6
HBAZ Herne Bay Bore 3.50 264 P Pn 10 06 08.5 +0.5
RITZ Rihia Road 3.51 226 P Pn 10 06 08.3 +0.1
KWHZ Kaweka Forest 3.55 215 P Pn 10 06 07.9 -0.8
AWAZ Awhitu Peninsu 3.59 261 P Pn 10 06 09.7 +0.5
KATZ Kakaramea 3.60 226 P Pn 10 06 09.7 +0.1
RVAZ Riverhead Bore 3.62 265 P Pn 10 06 10.1 +0.5
WTAZ Waiataroa 3.63 263 P Pn 10 06 10.3 +0.5
KAHZ Kahuranaki 3.67 207 P Pn 10 06 08.0 -2.4
TMVZ Te Maari 3.69 225 P Pn 10 06 10.6 -0.2
NTVZ North Tongariro 3.70 226 P Pn 10 06 10.4 -0.4
ETVZ East Tongariro 3.70 225 P Pn 10 06 10.4 -0.5
KRVZ Karewarewa 3.71 226 P Pn 10 06 11.0 -0.1
KRHZ Kereru 3.75 214 P Pn 10 06 10.1 -1.3
OTVZ Oturere 3.75 225 P Pn 10 06 11.1 -0.5
WTVZ West Tongariro 3.76 226 P Pn 10 06 11.6 0.0
SNVZ South Ngauruho 3.78 225 P Pn 10 06 11.6 -0.3
NGZ Ngauruhoe 3.79 225 P Pn 10 06 11.7 -0.5
TWVZ Taurewa 3.82 228 P Pn 10 06 12.5 0.0
TUVZ Tukino 3.83 224 P Pn 10 06 12.0 -0.6
COVZ Chateau Observ 3.84 226 P Pn 10 06 12.2 -0.6
MOVZ Moawhango 3.87 222 P Pn 10 06 11.5 -1.6
WCZ Waipu Caves 3.87 278 P Pn 10 06 13.6 +0.3
WHVZ Whangaehu Hut 3.87 224 P Pn 10 06 12.5 -0.9
FWVZ Far West T-bar 3.87 225 P Pn 10 06 13.0 -0.3
MAVZ Matarangi 3.88 225 P Pn 10 06 12.9 -0.5
HIZ Hauiti 3.88 238 P Pn 10 06 14.6 +1.4
HIZ Hauiti 3.88 238 P Pn 10 06 14.6 +1.4
PXZ Pawanui 3.88 206 P Pn 10 06 10.6 -2.6
WNVZ Wahianoa 3.90 224 P Pn 10 06 12.6 -1.0
TRVZ Turoa 3.91 224 P Pn 10 06 12.9 -0.9
MTVZ Mangateitei 4.01 224 P Pn 10 06 14.4 -0.6
PKVZ Pokaka 4.01 226 P Pn 10 06 15.3 +0.2
PNHZ Pukenui 4.04 213 P Pn 10 06 12.7 -2.8
WPHZ Waipukurau 4.07 210 P Pn 10 06 13.6 -2.2
PRHZ Porangahau 4.17 207 P Pn 10 06 14.0 -3.2
TSZ Takapari Road 4.27 214 P Pn 10 06 16.5 -2.1
VRZ Vera Road 4.27 232 P Pn 10 06 19.5 +1.0
DVHZ Dannevirke 4.38 211 P Pn 10 06 17.0 -3.1
ANWZ Angora Road 4.40 207 P Pn 10 06 17.5 -2.8
MHEZ Mangahewa 4.52 235 P Pn 10 06 24.5 +2.5
WAZ Wangaehu 4.54 224 P Pn 10 06 22.0 -0.2
POWZ Post Office Ro 4.62 213 P Pn 10 06 21.3 -2.1
OUZ Omahuta 4.64 285 P Pn 10 06 24.3 +0.7
OUZ Omahuta 4.64 285 S Sn 10 07 18.5 +2.3
OUZ Omahuta 4.64 285 P Pn 10 06 23.5 -0.1
DREZ Durham Road 4.67 234 P Pn 10 06 25.7 +1.8
PRWZ Pori Road 4.67 210 P Pn 10 06 21.5 -2.6
BFZ Birch Farm 4.68 207 P Pn 10 06 20.8 -3.3
BFZ Birch Farm 4.68 207 S Sn 10 07 13.6 -3.4
BFZ Birch Farm 4.68 207 mB
OHWZ Ohakea 4.69 218 P Pn 10 06 23.4 -0.8
LREZ Lake Rotokare 4.69 230 P Pn 10 06 25.0 +0.7
PREZ Palmer Road 4.78 233 P Pn 10 06 28.0 +2.5
NEZ North Egmont 4.78 234 mB
PKE Pukeiti 4.81 235 mB
KHEZ Kahui Hut 4.84 234 P Pn 10 06 29.2 +2.7
KHEZ Kahui Hut 4.84 234 P Pn 10 06 28.7 +2.2
CPWZ Castlepoint 4.89 206 mB
TIWZ Tintock 4.90 210 P Pn 10 06 23.9 -3.2
NBEZ Newall Road No 4.93 235 P Pn 10 06 30.7 +3.2
MRZ Mangatainoka R 4.93 213 P Pn 10 06 24.8 -2.8
NMEZ Namu Road 5.00 234 P Pn 10 06 31.9 +3.4
HOWZ Holdsworth Sta 5.15 212 P Pn 10 06 27.5 -3.1
TMWZ Te Maipa 5.18 208 mB
OGWZ Otaki Gorge 5.24 214 P Pn 10 06 29.0 -2.8
MTW Mount Morrison 5.37 210 mB
KIW Kapiti Island 5.39 216 P Pn 10 06 30.8 -3.1
TRWZ Traveller 5.51 208 mB
CAW Cannon Point 5.52 213 mB
PAWZ Paruwai Farm 5.59 209 mB
MSWZ Moikau Station 5.69 210 mB
WEL Wellington 5.79 214 P Pn 10 06 36.5 -2.9
PLWZ Palliser 5.82 210 mB
SNZO South Karori 5.84 214 P Pn 10 06 41.4 +1.4
BHW Baring Head 5.85 213 Pn Pn 10 06 36.4 -3.7
BHW Baring Head 5.85 213 P Pn 10 06 37.7 -2.4
DUWZ D'Urville Isla 5.85 222 P Pn 10 06 42.3 +2.1
TCW Tory Channel 5.97 217 mB
TUWZ Tuamarina 6.29 218 mB
CMWZ Cape Campbell 6.41 215 mB
NNZ Nelson 6.43 222 P Pn 10 06 47.5 -0.6
TKNZ Takaka Hill 6.54 225 P Pn 10 06 46.7 -2.9
QRZ Quartz Range 6.66 228 P Pn 10 06 51.5 +0.2
QRZ Quartz Range 6.66 228 P Pn 10 06 48.3 -2.9
MRNZ Matariki Terra 6.90 224 P Pn 10 06 51.7 -2.8
THZ Tophouse 7.07 221 P Pn 10 06 55.9 -1.0
KHZ Kahutara 7.25 214 P Pn 10 06 57.6 -1.7
DSZ Denniston Nort 7.66 225 P Pn 10 07 01.9 -3.1
CTZ Chatham Island 7.89 157 P Pn 10 07 04.1 -4.0
CTZ Chatham Island 7.89 157 Pn Pn 10 07 05.0 -3.1
CTZ Chatham Island 7.89 157 P Pn 10 07 05.4 -2.7
GVZ Greta Valley S 7.91 214 Pn Pn 10 07 05.3 -3.1
LTZ Lake Taylor 8.13 215 P Pn 10 07 07.6 -3.8
MNZS Menzies Bay Ba 8.47 212 P Pn 10 07 10.1 -5.9
OKCZ Okains Bay 8.51 211 mB
INZ Inchbonnie 8.52 221 P Pn 10 07 14.5 -2.1
OXZ Oxford 8.65 216 P Pn 10 07 14.9 -3.6
MQZ McQueen's Vall 8.67 213 P Pn 10 07 13.4 -5.3
AKCZ Akaroa Harbour 8.69 211 mB
WVZ Waitaha Valley 9.13 222 P Pn 10 07 24.6 -0.5
WACZ Wakanui South 9.22 215 mB
RPZ Rata Peaks 9.42 218 P Pn 10 07 24.3 -4.8
122nm,0.5s,baz=26,slow=0.1,SNR=7.1
RPZ S Sn 10 09 02.7 -11
264nm,0.5s,baz=185,slow=6.7,SNR=3.6
RPZ Rata Peaks 9.42 218 P Pn 10 07 27.3 -1.7
RPZ Rata Peaks 9.42 218 Pn Pn 10 07 24.1 -5.0
RPZ Rata Peaks 9.42 218 P Pn 10 07 27.1 -2.0
GCSZ Gaunt Creek Bo 9.52 222 P Pn 10 07 27.6 -2.8
ARCZ Arundel 9.53 217 mB
TMZ Timaru 9.94 216 P Pn 10 07 31.0 -5.1
FOZ Fox Glacier 9.94 223 P Pn 10 07 32.3 -3.8
LBZ Lake Benmore 10.34 218 P Pn 10 07 36.5 -5.0
ODZ Otahua Downs 10.61 214 P Pn 10 07 42.8 -2.4
ODZ Otahua Downs 10.61 214 Pn Pn 10 07 40.6 -4.6
ODZ Otahua Downs 10.61 214 P Pn 10 07 40.3 -5.0
JCZ Jackson Bay 10.86 223 P Pn 10 07 50.0 +1.3
JCZ Jackson Bay 10.86 223 P Pn 10 07 46.8 -2.0
HHSZ Highcliff Hill 11.29 212 P Pn 10 07 51.0 -3.5
EAZ Earnscleugh 11.38 217 P Pn 10 07 50.8 -5.0
MSZ Milford Sound 11.72 223 P Pn 10 07 58.5 -1.9
TUZ Tuapeka 11.77 214 P Pn 10 07 58.3 -2.7
NFK Norfolk Island 11.99 306 P Pn 10 08 05.6 +1.5
comp=Z,956nm,1.4s,comp=Z,0.0nm
SYZ Scrubby Hill 12.43 214 P Pn 10 08 09.8 -0.3
APZ The Paps 13.18 215 P Pn 10 08 17.7 -2.6
PYZ Puysegur Point 13.36 220 P Pn 10 08 22.0 -0.7
PYZ Puysegur Point 13.36 220 Pn Pn 10 08 17.9 -4.8
YATNC Mamie plateau, 17.91 320 P P 10 09 20.2 -0.6
DZM Mont Dzumac 18.13 319 P Pn 10 09 24.4 +0.6
comp=Z,22nm,0.8s,baz=139,slow=14,SNR=1.1
DZM Mont Dzumac 18.13 319 P Pn 10 09 23.8 +0.1
DZM Mont Dzumac 18.13 319 P 10 09 23.1 -0.2

MSVF Nonsavu 18.77 357 P P 10 09 29.5 -0.9
comp=Z,36nm,0.7s,baz=213,slow=15,SNR=7.8
MSVF Nonsavu 18.77 357 P P 10 09 29.9 -0.6
MSVF Nonsavu 18.77 357 P 10 09 29.8 -0.6
MSVF Nonsavu 18.77 357 P P 10 09 29.8 -0.6
MSVF pmax pmax
comp=Z,29nm,0.8s
RTV Rentapao 20.92 330 P P 10 09 53.8 +0.1
DVP Devils Point 21.08 330 P P 10 09 58.6 +3.2
SANVU Saraoutou 23.53 330 P P 10 10 20.4 -0.5
SANVU Saraoutou 23.53 330 P P 10 10 20.4 -0.5
SANVU IAmb IAmb 10 10 26.6
comp=Z,206nm,0.7s
ARMA Armidale 23.65 277 P P 10 10 26.3 +4.3
comp=Z,123nm,1.5s
MILA Mila 23.92 260 P P 10 10 26.5 +2.1
comp=Z,41nm,1.4s
AFI Afiamalu 24.00 22 P P 10 10 26.4 +1.2
comp=Z,56nm,0.8s,baz=256,slow=17,SNR=1.8
comp=Z,56nm,0.8s
CAN Canberra 24.34 264 P P 10 10 31.2 +3.0
comp=Z,95nm,1.7s
YNG Young 25.05 266 P P 10 10 39.4 +4.7
comp=Z,82nm,1.5s
TAU Tasmania Unive 25.13 246 P P 10 10 38.1 +2.8
EIDS Eidsvold 26.37 287 P P 10 10 50.6 +3.9
comp=Z,61nm,1.7s
EIDS Eidsvold 26.37 287 P P 10 10 44.4 -2.3
TOO Toolangi 26.74 258 P P 10 10 51.2 +1.2
comp=Z,49nm,1.2s
TOO Toolangi 26.74 258 P P 10 10 50.5 +0.5
TOO Toolangi 26.74 258 P P 10 10 50.5 +0.5
TOO pmax pmax
comp=Z,95nm,1.4s
BRAT Ballarat 27.97 257 P P 10 11 02.9 +2.0
CMSA Cobar Meteorol 28.02 270 P P 10 11 06.7 +5.3
comp=Z,94nm,1.6s
ARPS Mount Arapiles 29.75 258 P P 10 11 21.5 +4.8
comp=Z,61nm,1.5s
STKA Stephens Creek 31.21 267 P P 10 11 29.7 0.0
HTT Hallett 32.88 263 P P 10 11 46.8 +2.5
TATA Tatamba Isabel 33.07 323 P P 10 11 47.0 +0.9
BBOO Buckleboo 35.35 263 P P 10 12 05.6 -0.2
BBOO Buckleboo 35.35 263 P P 10 12 06.4 +0.7
BBOO Buckleboo 35.35 263 P P 10 12 05.4 -0.4
BBOO IAmb IAmb 10 12 09.8
comp=Z,93nm,1.3s
COEN Coen 39.16 296 P P 10 12 37.4 -0.8
COEN Coen 39.16 296 P P 10 12 38.6 +0.5
COEN Coen 39.16 296 P P 10 12 38.4 +0.2
COEN IAmb IAmb 10 12 44.0
comp=Z,111nm,0.9s
RABL Rabaul 40.61 316 P P 10 12 51.7 +1.5
AS31 Alice Springs 40.78 275 P P 10 12 51.1 -0.5
AS31 IAmb IAmb 10 12 56.6
comp=Z,48nm,0.7s
ASAR Alice Springs 40.78 275 P P 10 12 51.4 -0.2
comp=Z,111nm,0.7s,baz=120,slow=8.0,SNR=19
ASAR PcP PcP 10 14 50.8 -1.0
comp=Z,3.7nm,0.6s,baz=108,slow=3.9,SNR=0.9
ASAR S S 10 18 56.5 -1.7
comp=Z,3.6nm,0.8s,baz=117,slow=16,SNR=4.2
comp=Z,111nm,0.7s
ASAR Alice Springs 40.78 275 P P 10 12 51.1 -0.5
WR8 Warramunga Arr 42.20 281 P P 10 13 02.4 -0.8
WRAB Tennant Creek 42.33 281 P P 10 13 03.9 -0.4
WRA Warramunga Arr 42.34 281 P P 10 13 03.2 -1.1
comp=Z,34nm,0.6s,baz=121,slow=7.6,SNR=14
WRA PcP PcP 10 14 55.5 -1.4
comp=Z,6.0nm,0.7s,baz=129,slow=2.9,SNR=1.9
WRA S S 10 19 18.0 -3.2
comp=Z,4.8nm,1.0s,baz=122,slow=14,SNR=5.3
comp=Z,34nm,0.6s
WRA Warramunga Arr 42.34 281 P P 10 13 01.6 -2.7
WRA Warramunga Arr 42.34 281 P P 10 13 01.6 -2.7
WRA pmax pmax
comp=Z,7.0nm,1.0s
FORT Forrest 42.44 262 P P 10 13 04.9 -0.1
FORT Forrest 42.44 262 P P 10 13 04.5 -0.6
FORT IAmb IAmb 10 13 13.0
comp=Z,89nm,0.7s
WRKA Warakurna 44.65 270 P P 10 13 21.9 -1.0
KMBL Kambalda 47.13 259 P P 10 13 41.6 -0.7
CASY Casey 48.58 210 P P 10 13 52.7 -0.3
NWAO Narrogin (SRO) 50.18 255 P P 10 14 05.3 -0.4
NWAO Narrogin (SRO) 50.18 255 P P 10 14 04.0 -1.6
comp=Z,20nm,0.7s,baz=114,slow=7.6,SNR=7.9
comp=Z,20nm,0.7s
NWAO Narrogin (SRO) 50.18 255 P P 10 14 08.9 +3.2
NWAO Narrogin (SRO) 50.18 255 P P 10 14 04.2 -1.5
NWAO IAmb IAmb 10 14 10.0
comp=Z,136nm,1.4s
NWAO Narrogin (SRO) 50.18 255 P P 10 14 04.2 -1.5
NWAO pmax pmax
comp=Z,136nm,1.5s
KLBR Kellerberrin 50.29 257 P P 10 14 05.5 -1.0
KLBR Kellerberrin 50.29 257 P P 10 14 05.1 -1.4
MUN Mundaring 51.34 256 P P 10 14 13.4 -1.1
MUN Mundaring 51.34 256 P P 10 14 13.3 -1.1
BLDU Ballidu 51.50 257 P P 10 14 14.5 -1.1
BLDU Ballidu 51.50 257 P P 10 14 14.5 -1.1
MEEK Meekatharra 51.70 263 P P 10 14 16.1 -1.1
MEEK Meekatharra 51.70 263 P P 10 14 16.1 -1.1
MORW Morawa 52.68 259 P P 10 14 23.6 -0.9
MORW Morawa 52.68 259 P P 10 14 23.0 -1.4
MORW Morawa 52.68 259 P P 10 14 23.1 -1.4
MORW IAmb IAmb 10 14 30.4
comp=Z,61nm,0.8s
PSAB3 Pilbara Seismi 53.09 269 P P 10 14 26.4 -1.1
PSA00 Pilbara Seismi 53.11 269 P P 10 14 26.0 -1.7
PSA00 IAmb IAmb 10 14 32.3
comp=Z,40nm,0.9s
PSA00 Pilbara Seismi 53.11 269 P P 10 14 25.9 -1.8
PSA00 IAmb IAmb 10 14 30.6
comp=Z,58nm,1.3s
MBWA Marble Bar 53.41 270 P P 10 14 29.4 -0.5
QSPA South Pole Qui 53.57 180 P P 10 14 33.1 +2.5
comp=Z,37nm,0.9s,baz=80,slow=6.1,SNR=2.4
comp=Z,37nm,0.9s
QSPA South Pole Qui 53.57 180 P P 10 14 32.6 +2.0
QSPA IAmb IAmb 10 14 52.5
comp=Z,117nm,1.1s
SIJI Sorong 56.66 298 P P 10 14 53.4 0.0
comp=Z,41nm,0.8s,baz=151,slow=8.3,SNR=4.3
comp=Z,41nm,0.8s
GIRL Giralia 57.09 265 P P 10 14 56.1 -0.2
GIRL IAmb IAmb 10 15 50.8
comp=Z,114nm,1.4s
SANI Sanana 59.71 292 P P 10 15 14.8 +0.1
OVEH Oceanview Est 60.30 28 P P 10 15 20.3 +1.7
OVEH IAmb IAmb 10 15 22.6
comp=Z,252nm,1.5s
HLP Hilina Pali 60.60 28 P P 10 15 22.0 +1.4
DES Desert 60.60 28 P P 10 15 22.7 +2.0
KHLU Kahalu`u 60.65 27 P P 10 15 22.4 +1.4
KHLU IAmb IAmb 10 15 39.4
comp=Z,78nm,0.9s
HPAH Hawaii Prepara 61.12 27 P P 10 15 25.2 +1.0
DHH Diamond Head 61.52 25 P P 10 15 27.9 +1.2
DHH Diamond Head 61.52 25 P P 10 15 27.9 +1.2
KEKH Kekaha 61.58 22 P P 10 15 27.9 +0.8
KIP Kipapa 61.60 24 P P 10 15 28.2 +0.9
KIP Kipapa 61.60 24 P P 10 15 28.2 +0.9
KIP pmax pmax
comp=Z,341nm,1.9s
PLAI Plampang 61.80 280 P P 10 15 30.4 +1.5
BELA Belgrano 2 64.02 173 P P 10 15 43.7 +0.9
BELA IAmb IAmb 10 15 45.5
comp=Z,44nm,0.8s
MAW Mawson 65.70 202 P P 10 15 54.5 +0.7
comp=Z,6.1nm,0.7s,baz=120,slow=6.4,SNR=0.9
comp=Z,6.1nm,0.7s
MAW Mawson 65.70 202 P P 10 15 54.2 +0.5
MAW Mawson 65.70 202 P P 10 15 54.2 +0.5
MAW pmax pmax
comp=Z,12nm,1.3s
UGM Wanagama 68.11 276 P P 10 16 09.2 -0.8
UGM Wanagama 68.11 276 P P 10 16 08.8 -1.1
UGM IAmb IAmb 10 16 29.3
comp=Z,86nm,0.8s
ELIB Princess Elisa 70.45 188 dP P 10 16 24.9 +1.2
comp=Z,57nm,0.9s
BBJI Bungbulang 70.68 275 P P 10 16 25.1 -0.7
BBJI Bungbulang 70.68 275 P P 10 16 24.7 -1.1
BBJI IAmb IAmb 10 16 42.2
comp=Z,198nm,1.8s
TROLL Troll, Antarti 71.71 181 ⇑PP P 10 16 32.8 +1.5
SNAA Sanae 72.06 179 P P 10 16 34.3 +1.0
comp=Z,37nm,1.2s,baz=201,slow=10,SNR=6.9
comp=Z,37nm,1.2s
SNAA Sanae 72.06 179 P P 10 16 34.0 +0.7
SNAA Sanae 72.06 179 P P 10 16 34.0 +0.7
SNAA pmax pmax
comp=Z,40nm,1.0s
SNAA Sanae 72.06 179 ⇑PP P 10 16 34.7 +1.4
comp=Z,224nm,0.5s
VNA3 Neumayer Olymp 72.32 177 ⇑PP P 10 16 36.0 +1.2
comp=Z,71nm,0.7s
KKM Kota Kinabalu 72.34 292 P P 10 16 34.7 -1.2
KKM Kota Kinabalu 72.34 292 P P 10 16 35.2 -0.7
KKM IAmb IAmb 10 16 35.7
comp=Z,34nm,0.7s
VNA2 Neumayer--Watz 72.72 178 ⇑PP P 10 16 38.7 +1.6
comp=Z,51nm,0.7s,baz=176,slow=6.1
TGY Tagaytay City 74.40 301 P P 10 16 46.6 -1.2
comp=Z,99nm,0.3s,baz=156,slow=10.0,SNR=1.6
comp=Z,99nm,0.3s
MNAI Manna 76.26 275 P P 10 16 57.7 -0.9
PLCA Paso Flores 80.07 134 P P 10 17 21.2 +1.8
comp=Z,4.6nm,0.8s,baz=232,slow=5.8,SNR=4.3
comp=Z,4.6nm,0.8s
PLCA Paso Flores 80.07 134 P P 10 17 21.4 +2.0
PLCA Paso Flores 80.07 134 P P 10 17 21.4 +2.0
PLCA pmax pmax
comp=Z,74nm,1.9s
YULB Yu-li 80.77 308 P P 10 17 23.3 +0.2
YULB Yu-li 80.77 308 P P 10 17 21.4 -1.8
YULB IAmb IAmb 10 18 26.4
comp=Z,101nm,1.6s
SSLB Suanglung 81.27 308 P P 10 17 24.4 -1.4
SSLB Suanglung 81.27 308 P P 10 17 24.0 -1.8
SSLB IAmb IAmb 10 17 24.9
comp=Z,38nm,0.7s
JGF Kuroka 81.60 327 P P 10 17 27.1 -0.2
JGF Kuroka 81.60 327 P P 10 17 25.7 -1.6
MJAR Matsushiro Arr 82.02 328 P P 10 17 28.7 -0.7
comp=Z,11nm,0.9s,baz=153,slow=5.1,SNR=7.3
comp=Z,11nm,0.9s
MJAR Matsushiro Arr 82.02 328 P P 10 17 28.2 -1.2
MJAR Matsushiro Arr 82.02 328 P P 10 17 28.2 -1.2
MJAR pmax pmax
comp=Z,14nm,1.0s
MAJO Matsushiro 82.02 328 P P 10 17 29.3 -0.2
MAJO Matsushiro 82.02 328 P P 10 17 29.3 -0.2
MAJO pmax pmax
comp=Z,24nm,0.9s
MJB9 Matsu-Tunnel 82.03 328 P P 10 17 30.3 +0.8
BO02 Sierra Bellavi 83.77 129 P P 10 17 40.7 +1.8
MT01 Popeta 84.07 128 P P 10 17 41.7 +1.3
MT01 IAmb IAmb 10 17 42.9
comp=Z,26nm,0.8s
JKA Kamikawa-asahi 86.85 335 P P 10 17 54.4 +0.8
ASAJ Asahikawa 86.85 335 P P 10 17 54.4 +0.8
ASAJ pmax pmax
comp=Z,147nm,1.9s
KSRS Korea Array 87.54 322 P P 10 17 57.2 +0.1
comp=Z,18nm,0.7s,baz=138,slow=5.6,SNR=22
comp=Z,18nm,0.7s
KSAR Wonju Array Be 87.55 322 P P 10 17 57.5 +0.3
KSAR Wonju Array Be 87.55 322 P P 10 17 57.5 +0.3
KS19 Wonju Array Si 87.61 322 P P 10 17 57.7 +0.2
KS19 IAmb IAmb 10 18 03.6
comp=Z,36nm,1.1s
ADK Adak 88.15 3 P P 10 17 59.3 -0.3
ADK Adak 88.15 3 P P 10 17 59.3 -0.3
ADK pmax pmax
comp=Z,305nm,2.0s
YSS Yuzhno-Sakhali 89.29 336 eP P 10 18 05.6 +0.5
USRK Ussuriysk Ar. 91.01 328 P P 10 18 13.3 +0.1
comp=Z,19nm,0.8s,baz=145,slow=3.6,SNR=11
comp=Z,19nm,0.8s
PEA0B Petropavlovsk- 91.21 347 P P 10 18 13.9 -0.1
PEA0B Petropavlovsk- 91.21 347 P P 10 18 13.9 -0.1
PETK Petropavlovsk- 91.21 347 P P 10 18 13.9 -0.1
comp=Z,19nm,0.6s,baz=109,slow=5.8,SNR=23
comp=Z,19nm,0.6s
ESJX Sierra Juarez 91.34 50 P P 10 18 18.7 +3.3
ESJX IAmb IAmb 10 18 31.8
comp=Z,70nm,1.9s
DPP Dos Picos Cty 91.41 49 IAmb IAmb 10 18 34.5
comp=Z,11nm,0.8s
BORC Borrego Spring 91.92 49 P P 10 18 20.4 +2.6
BORC IAmb IAmb 10 18 38.7
comp=Z,13nm,0.9s
CLC China Lake 92.97 47 P P 10 18 25.2 +2.6
CLC IAmb IAmb 10 18 55.1
comp=Z,29nm,1.8s
CLC China Lake 92.97 47 P P 10 18 25.2 +2.6
CLC pmax pmax
comp=Z,29nm,1.8s
CMAR Chiang Mai Arr 93.19 291 P P 10 18 24.1 +0.2
comp=Z,10nm,0.8s,baz=148,slow=3.9,SNR=9.7
comp=Z,10nm,0.8s
CMAR Chiang Mai Arr 93.19 291 P P 10 18 23.8 -0.2
KHBM Hayfork Bally 93.31 40 P P 10 18 26.0 +1.8
KHBM IAmb IAmb 10 18 46.9
comp=Z,87nm,2.0s
CHTO Chiang Mai 93.40 291 P P 10 18 26.1 +1.1
CHTO IAmb IAmb 10 18 26.4
comp=Z,54nm,1.4s
CHTO Chiang Mai 93.40 291 P P 10 18 26.1 +1.1
CHTO pmax pmax
comp=Z,54nm,1.5s
HMBC Humberstone 93.84 119 P P 10 18 29.5 +2.2
M02C Callahan 94.03 40 P P 10 18 29.0 +1.5
M02C IAmb IAmb 10 18 52.1
comp=Z,63nm,1.9s
NVAR Mina Array Bea 94.38 44 P P 10 18 31.6 +2.3
comp=Z,2.6nm,0.8s,baz=257,slow=5.6,SNR=2.9
comp=Z,2.6nm,0.8s
LPAZ La Paz 97.72 117 P Pdif 10 18 47.9 +2.3
comp=Z,4.0nm,0.8s,baz=202,slow=5.1,SNR=3.8
comp=Z,4.0nm,0.8s
ILAR Eielson Array 104.47 14 PKiKP PKiKP 10 23 28.4 -0.9
comp=Z,1.1nm,0.5s,baz=280,slow=3.1,SNR=9.9
CIT Chita 105.07 324 eP Pdif 10 19 07.4 -9.3
CIT pmax pmax
comp=Z,233nm,7.2s
ULN Ulaanbaatar 105.73 318 c iP Pdif 10 19 33.3 +13
ULN pmax pmax
comp=Z,13nm,1.0s
HYB Hyderabad 108.47 278 ePdif Pdif 10 19 32.7 +0.1
HYB ePKiKP PKiKP 10 23 41.3 +3.1
HYB esPKiKP sPKiKP 10 23 58.9 -2.4
HYB eSKSac SKSac 10 30 08.5 +1.0
HYB IVMs_BB IVMs_BB 11 12 39.1
comp=Z,6µm,17.2s
IRK Irkutsk 109.75 321 eP Pdif 10 19 37.5 +0.1
IRK pmax pmax
comp=Z,85nm,3.2s
BOSA Boshof 110.66 204 PKKPbc PKKPbc 10 34 40.1 -0.4
comp=Z,2.3nm,0.9s,baz=346,slow=4.4,SNR=3.6
MOY Mondy 111.12 319 eP Pdif 10 19 43.0 -0.7
MOY pmax pmax
comp=Z,29nm,2.0s
YKA Yellowknife Ar 112.03 27 PKiKP PKiKP 10 23 43.6 +0.1
comp=Z,0.7nm,0.5s,baz=272,slow=2.0,SNR=11
YKA PKKPbc PKKPbc 10 34 33.9 -3.0
comp=Z,0.5nm,0.5s,baz=36,slow=3.7,SNR=7.6
TIXI Tiksi 113.53 345 c iP Pdif 10 19 42.5 -11
TIXI pmax pmax
comp=Z,15nm,1.7s
ULM Lac du Bonnet 114.21 45 PKiKP PKPdf 10 23 48.0 -0.1
comp=Z,1.5nm,0.6s,baz=166,slow=5.6,SNR=2.9
ULM Lac du Bonnet 114.21 45 i PKiKP PKPdf 10 23 48.0 -0.1
TKL Tuckaleechee C 115.20 63 PKPdf PKiKP 10 23 51.5 +1.0
TKL Tuckaleechee C 115.20 63 PKiKP PKiKP 10 23 51.5 +1.0
EYMN Ely 115.70 48 PKPdf PKPdf 10 23 50.8 -0.2
FCC Fort Churchill 118.88 36 PKiKP 10 23 57.7 +0.9
FCC Fort Churchill 118.88 36 PKiKP PKiKP 10 23 57.7 +0.9
MKAR Makanchi Array 119.75 308 PKP PKPdf 10 23 57.0 -1.9
comp=Z,2.6nm,0.7s,baz=119,slow=1.4,SNR=3.0
MKAR PKKPbc PKKPbc 10 34 10.3 +0.9
comp=Z,3.2nm,1.0s,baz=279,slow=4.0,SNR=5.8
MKAR Makanchi Array 119.75 308 PKiKP PKPdf 10 23 57.0 -1.9
BLKN Baker Lake 120.18 30 PKPdf 10 23 59.0 -0.1
ZALV Zalesovo Beam 120.91 317 PKP PKPdf 10 23 58.4 -2.4
comp=Z,2.1nm,0.6s,baz=72,slow=4.7,SNR=4.7
ZALV PKKPbc PKKPbc 10 34 05.6 +0.4
comp=Z,4.1nm,1.0s,baz=289,slow=4.4,SNR=4.4
KURK Kurchatov 123.41 312 PKiKP PKPdf 10 24 04.2 -1.5

KURBB **Kurchatov Arra 123.43 311** PKP **PKPdf** **10 24 04.2 -1.6**
comp=Z,8.2nm,0.6s,baz=114,slow=1.8,SNR=20
KURBB PKKPbc **PKKPbc** **10 33 55.4 +0.1**
comp=Z,3.1nm,1.0s,baz=269,slow=3.4,SNR=5.1
BVAR Borovoye Array 128.93 313 PKP **PKPdf** **10 24 15.3 -1.0**
comp=Z,5.6nm,0.6s,baz=177,slow=1.8,SNR=6.4
SCHQ Schefferville 132.37 46 PKP **PKiKP** **10 24 23.8 0.0**
comp=Z,2.8nm,0.7s,baz=276,slow=4.1,SNR=5.4
SCHQ SKPbc **SKPab** **10 27 45.4 0.0**
comp=Z,5.2nm,0.8s,baz=277,slow=4.6,SNR=6.3
SPITS Spitsbergen Ar 137.63 355 PKhKP PKPpre 10 24 22.5
comp=Z,10.0nm,0.9s,baz=350,slow=2.5,SNR=2.0
SPITS PKP **PKPdf** **10 24 31.7 -0.2**
comp=Z,8.5nm,0.6s,baz=45,slow=3.1,SNR=10
SPITS SKPbc **SKPbc** **10 27 59.7 -0.6**
comp=Z,8.7nm,0.7s,baz=73,slow=5.0,SNR=7.5
HOPEN Hopen 138.28 351 *e*PKPdf **PKiKP** **10 24 34.9 -0.3**
VADS Vadso 142.66 343 *e*PKPdf **PKPdf** **10 24 37.8 -3.4**
HAMF Hammerfest 143.43 347 *e*PKPdf PKPbc 10 24 39.5 -0.5
ARA0 ARCESS Array S 143.97 345 *e*PKPdf PKPbc 10 24 41.9 +0.3
ARCES ARCESS Array B 143.97 345 PKhKP PKPpre 10 24 31.7
comp=Z,14nm,1.0s,baz=9.2,slow=1.5,SNR=3.6
ARCES PKP PKPbc 10 24 41.5 -0.1
comp=Z,8.2nm,0.5s,baz=35,slow=2.4,SNR=26
KTK1 Kautokeino 144.87 345 *e*PKPbc **PKPab** **10 24 44.1 -0.3**
JETT Jettan, Norway 144.96 347 *e*PKPbc **PKPab** **10 24 44.9 +0.2**
TRO Tromso 145.15 348 *e*PKPbc **PKPbc** **10 24 44.7 -0.5**
KBZ Khabaz 146.06 296 PKPbc **PKPdf** **10 24 48.2 +0.3**
comp=Z,15nm,1.1s,baz=90,slow=7.1,SNR=1.4
STEI Steigen 147.28 349 *e*PKPdf **PKPbc** **10 24 50.9 -0.7**
LOF Lofoten 147.34 350 *e*PKPbc **PKPbc** **10 24 52.7 +0.9**
FAUS Fauske 147.77 348 *e*PKPdf **PKPbc** **10 24 52.0 -0.9**
ASF Jabal al Asfar 148.61 273 PKPbc **PKPbc** **10 24 55.4 -1.1**
comp=Z,4.2nm,0.7s,baz=37,slow=5.1,SNR=1.5
VAGH Vaagaholmen 148.69 349 *e*PKPdf **PKPbc** **10 24 53.9 -1.5**
RAUS Rausandaksla 148.84 348 *e*PKPdf **PKPbc** **10 24 54.8 -1.0**
KONS Konsvik 148.92 349 *e*PKPdf **PKPbc** **10 24 55.2 -0.8**
MOR8 Moi Rana 149.01 348 *e*PKPdf **PKPbc** **10 24 54.5 -1.8**
STOK Stokkvaagen 149.09 349 *e*PKPdf **PKPbc** **10 24 55.5 -0.9**
LEIR Leirfjorden 149.28 349 *e*PKPdf **PKPbc** **10 24 56.1 -0.8**
EIL Elat 149.30 268 PKPbc **PKPbc** **10 24 58.2 +0.1**
comp=Z,25nm,0.8s,baz=72,slow=4.2,SNR=5.4
FIA1 FINESS Array S 149.86 334 PKPbc **PKPbc** **10 24 58.0 -0.5**
FINES FINESS Array B 149.86 334 PKPbc **PKPbc** **10 24 57.3 -1.1**
comp=Z,46nm,0.6s,baz=45,slow=4.1,SNR=28
FINES FINESS Array B 149.86 334 **PKPbc** **10 24 57.6 -0.8**
DBIC Dimbokro 150.04 172 PKPbc **PKiKP** **10 25 01.0 -0.2**
comp=Z,10nm,0.5s,baz=187,slow=4.0,SNR=7.1
MMAI Mount Meron Ar 150.06 274 **PKPbc** **10 24 60.0 0.0**
comp=Z,6.6nm,0.4s,baz=78,slow=6.6,SNR=15
NSS Namsos 150.94 349 *e*PKPbc **PKPbc** **10 24 59.8 -1.1**
CSS Mathiatis 152.24 277 **PKiKP** **10 25 05.3 +0.2**
BR131 Keskin Array S 152.73 287 **PKPdf** **10 24 57.0 -1.9**
BR131 Keskin Array S 152.73 287 PKiKP **PKPdf** **10 24 57.0 -1.9**
BRTR Keskin Array B 152.73 287 PKPbc **PKPbc** **10 25 05.2 -0.9**
comp=Z,9.7nm,0.8s,baz=112,slow=3.9,SNR=9.7
MOL Molde 153.43 351 *e*PKPbc **PKPbc** **10 25 06.0 -0.6**
DOMB Dombas 153.73 349 *e*PKPbc **PKPbc** **10 25 07.2 -0.2**
DOMB *e* 10 25 20.1
AKN Aaknes 153.88 352 *e*PKPbc **PKiKP** **10 25 07.7 0.0**
AKASG Malin Array Be 154.21 313 PKPbc **PKPbc** **10 25 07.4 -1.3**
comp=Z,9.4nm,0.5s,baz=56,slow=2.7,SNR=11
NB2 NORSAR Subarra154.31 346 PKP **PKPbc** **10 25 08.1 -0.5**
comp=Z,2.3nm,0.5s,baz=17,slow=2.6
NB2 NORSAR Subarra154.31 346 PKP **PKPbc** **10 25 08.1 -0.5**
NOA NORSAR Array B 154.31 346 PKPbc **PKPbc** **10 25 07.8 -0.8**
comp=Z,4.3nm,0.7s,baz=17,slow=1.7,SNR=5.8
NOA PKPab **PKPab** **10 25 21.4 -1.5**
comp=Z,5.8nm,0.6s,baz=24,slow=3.4,SNR=6.5
NC602 NORSAR Array S 154.53 346 *e* **PKiKP** **10 25 10.2 +1.2**
HFS Hagfors 154.60 343 PKP **PKPdf** **10 25 00.7 0.0**
comp=Z,9.8nm,0.8s,baz=103,slow=3.1,SNR=7.0
HFS PKPbc **PKPbc** **10 25 08.9 -0.3**
comp=Z,10nm,0.7s,baz=69,slow=4.8,SNR=3.0
HFS PKPab **sPKPdf** **10 25 22.9 -0.9**
comp=Z,9.0nm,0.6s,baz=56,slow=3.8,SNR=5.1
FOO Floro 154.65 353 *e*PKPbc **PKPbc** **10 25 09.2 0.0**
BORA Eskisehir 155.19 287 PKPdf 10 25 13.0 +11
TORD Torodi Ar. Bea 156.57 186 PKPab **PKPab** **10 25 34.0 +0.4**
comp=Z,18nm,0.8s,baz=193,slow=4.5,SNR=6.5
MANT Manisa 156.58 284 **PKPab** **10 25 33.6 0.0**
EKA Eskdalemuir Ar 161.16 4 PKPab **PKPab** **10 25 52.5 0.0**
comp=Z,5.9nm,0.7s,baz=360,slow=2.7,SNR=7.2
ITM Ithomi 161.71 279 **PKPab** **10 25 55.7 -0.1**
GERES GERESS Array B 163.71 323 PKPab **PKPab** **10 26 03.8 -0.3**
comp=Z,6.6nm,0.8s,baz=38,slow=3.7,SNR=7.7
BFO Black Forest 166.41 333 **PKPab** **10 26 13.6 -2.3**
BFO Black Forest 166.41 333 PKP2 **PKPab** **10 26 13.6 -2.3**
VAE Valguarnera 167.70 279 PKPab **PKPab** **10 26 23.4 +1.2**
comp=Z,13nm,0.9s,baz=0.0,slow=0.0,SNR=3.2
KEST Kesra 171.65 267 PKPab **PKPab** **10 26 39.7 0.0**
comp=Z,10.0nm,0.6s,baz=63,slow=3.7,SNR=7.4
ESDC Sonseca Array 176.07 37 PKP **PKPdf** **10 25 19.2 0.0**
comp=Z,1.2nm,0.8s,baz=325,slow=1.2,SNR=1.8
ESDC PKPab **PKPab** **10 26 59.7 +0.6**
comp=Z,1.7nm,0.7s,baz=332,slow=3.3,SNR=1.2

*DJA **14** 10:18:04.5±0.6,3°N±3°×12°8E±°, h13km±4km, M4.3/18, mb4.5/6, MLv4.3/18, MwMwp5.8/2, Mwp5.9/2*
*NEIC **14** 10:18:06.2±1.1,2°86N±0°06×128°3E±0°1, h40km±9km, mb4.2/14, Error ellipse: s-maj=16.9km s-min=8.8km az=100.0*
*IDC **14** 10:18:08.0±4.9,2°77N×128°30E, h61km±48km, mb3.6/6, mbtmp4.0/7, ML4.2/1, Error ellipse: s-maj=63.2km s-min=18.6km az=74.0*
ISC 14 10:18:05.4±0.7,2°86N±0°07×128°29E±0°09, h35km, n36, σ0s91/38, mb4.2/11, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.27**	**204**	Pn	**Pn**	**10 18 40.8**	**+0.4**
TNTI	**Ternate**	**2.27**	**204**	P	**Pn**	**10 18 41.1**	**+0.7**
SGSI	**Sangihe**	**2.87**	**287**	P	**Pn**	**10 18 50.1**	**+1.4**
MNI	**Manado**	**3.72**	**248**	P	**Pn**	**10 19 01.1**	**+0.7**
SWI	**Sorong**	**4.74**	**141**	P	**Pn**	**10 19 15.3**	**+0.8**
SIJI	**Sorong**	**4.75**	**141**	P	**Pn**	**10 19 16.6**	**+2.0**
	10nm,0.3s,baz=263,slow=23,SNR=23						
SIJI				S	**Sn**	**10 20 09.4**	**+0.9**
	7.8nm,0.4s,baz=19,slow=23,SNR=8.7						
	21nm,0.2s						
SIJI	**Sorong**	**4.75**	**141**	P	**Pn**	**10 19 16.4**	**+1.8**
SANI	**Sanana**	**5.39**	**205**	P	**Pn**	**10 19 24.0**	**+0.7**
GTOI	**Gorontalo**	**5.71**	**247**	P	**Pn**	**10 19 28.6**	**+0.8**
	0.2nm22nm,0.7s						
LUWI	**Luwuk**	**6.74**	**235**	Pn	**Pn**	**10 19 41.5**	**-0.4**
LUWI	**Luwuk**	**6.74**	**235**	P	**Pn**	**10 19 43.7**	**+1.8**
	39nm,1.2s						
MRSI	**Marisa**	**6.77**	**250**	P	**Pn**	**10 19 42.4**	**+0.1**
TOLI2	**Tolitoli**	**7.70**	**257**	Pn	**Pn**	**10 19 54.7**	**-0.4**
SOEI	**Soe**	**13.15**	**198**	Pn	**Pn**	**10 21 10.2**	**+0.2**
MTN	**Manton Dam**	**15.85**	**170**	Pn	**Pn**	**10 21 46.3**	**+0.2**
MTN				IAmb	IAmb	10 22 01.5	
	comp=Z,11nm,1.1s						
SBUM	**Sibu**	**16.05**	**269**	Pn	**Pn**	**10 21 49.4**	**+0.7**
KNRA	**Kununurra**	**18.42**	**179**	P	**P**	**10 22 17.5**	**-0.4**
KNRA				IAmb	IAmb	10 22 36.0	
	comp=Z,16nm,1.1s						
TPUB	**Ta-pu**	**21.63**	**341**	P	**P**	**10 22 53.3**	**+0.6**
WB0	**Warramunga Arr**	**23.27**	**165**	P	**P**	**10 23 09.7**	**-0.4**
WRAB	**Tennant Creek**	**23.42**	**166**	P	**P**	**10 23 11.1**	**-0.4**
WRAB				IAmb	IAmb	10 23 11.8	
	comp=Z,7.0nm,0.7s						
WRA	**Warramunga Arr**	**23.43**	**166**	P	**P**	**10 23 11.0**	**-0.6**
	comp=Z,7.2nm,0.7s,baz=344,slow=10,SNR=27						
	comp=Z,7.2nm,0.7s						
WRA	**Warramunga Arr**	**23.43**	**166**	P	**P**	**10 23 09.8**	**-1.8**
WR8	**Warramunga Arr**	**23.48**	**165**	P	**P**	**10 23 11.5**	**-0.6**
PSA00	**Pilbara Seismi**	**25.65**	**198**	P	**P**	**10 23 32.3**	**+0.3**
ASAR	**Alice Springs**	**26.93**	**169**	P	**P**	**10 23 42.6**	**-0.9**
	comp=Z,1.1nm,0.9s,baz=351,slow=7.3,SNR=5.5						
ASAR				PcP	**PcP**	**10 27 04.2**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=350,slow=2.5,SNR=4.8						
	comp=Z,1.1nm,0.9s						
ASAR	**Alice Springs**	**26.93**	**169**	P	**P**	**10 23 43.6**	**0.0**
STKA	**Stephens Creek**	**36.79**	**161**	P	**P**	**10 25 09.5**	**-0.4**
	comp=Z,3.1nm,0.9s,baz=338,slow=6.4,SNR=4.4						
	comp=Z,3.1nm,0.9s						
STKA	**Stephens Creek**	**36.79**	**161**	P	**P**	**10 25 09.6**	**-0.4**
USRK	**Ussuriysk Ar.**	**41.30**	**4**	P	**P**	**10 25 47.1**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=172,slow=8.4,SNR=4.3						
	comp=Z,0.7nm,0.4s						
JKA	**Kamikawa-asahi**	**43.00**	**15**	P	**P**	**10 25 60.0**	**-1.4**
JKA				IAmb	IAmb	10 26 09.9	

comp=Z,7.8nm,1.1s
MKAR Makanchi Array 59.16 325 P **P** **10 28 03.3 +0.5**
comp=Z,0.8nm,0.5s,baz=110,slow=8.1,SNR=5.3
comp=Z,0.8nm,0.5s
MKAR Makanchi Array 59.16 325 P **P** **10 28 02.7 0.0**
MAKZ Makanchi 59.34 325 P **P** **10 28 04.2 +0.1**
MAKZ IAmb IAmb 10 28 18.5
comp=Z,2.5nm,0.9s
KURBB Kurchatov Arra 63.31 327 P **P** **10 28 31.8 +1.0**
comp=Z,0.4nm,0.6s,baz=128,slow=6.1,SNR=1.8
comp=Z,0.4nm,0.6s
KURK Kurchatov 63.31 327 P **P** **10 28 31.2 +0.5**
KURK IAmb IAmb 10 28 44.3
comp=Z,3.4nm,1.1s
VNDA Vanda 82.37 173 P **P** **10 30 22.1 -1.1**
VNDA IAmb IAmb 10 30 24.5
comp=Z,1.4nm,1.1s

*NEIC **14** 10:22:02.7±0.8, 19°089N±0°008×66°81W±0°04, h35km±2km, ML3.5/39, Md3.4/5(RSPR), Error ellipse: s-maj=5.7km s-min=3.1km az=81.0*
*SDD **14** 10:22:03.2±2.4, 19°03N×66°69W, h49km±41km, MD3.6, ML3.2, MW3.5, Presumed earthquake*
*OSPL **14** 10:22:03.1±0.3, 18°99N×66°82W, h88km±999km, ML3.0, Presumed earthquake*
ISC 14 10:22:03.4±1.6, 19°02N±0°07×66°82W±0°04, h32km±11km, n31, σ0s78/48, 10C-1D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**0.60**	**153**		**Pb**	**10 22 15.9**	**+0.3**
EMPR					**Sn**	**10 22 25.0**	**+0.5**
AGPR	**Aguadilla, PR**	**0.61**	**207**		**Pb**	**10 22 15.2**	**-0.6**
AGPR				Sn	**Sb**	**10 22 24.1**	**-0.2**
AGPR				IAML		10 22 26.4	
	2µm,0.3s						
AGPR				IAML		10 22 29.3	
	1µm,0.3s						
AGPR	**Aguadilla, PR**	**0.61**	**207**	↑*e*Pg	**Pb**	**10 22 15.4**	**-0.4**
AGPR				↑*e*Sg	**Sb**	**10 22 23.9**	**-0.3**
AGPR				IAML		10 22 25.4	
	comp=N,899nm,0.3s						
AOPR	**Arecibo Observ**	**0.67**	**175**		**Pn**	**10 22 16.5**	**-0.3**
AOPR				Sn	**Sb**	**10 22 26.4**	**+0.6**
AOPR				IAML		10 22 29.9	
	comp=N,2µm,0.3s						
AOPR				IAML		10 22 32.1	
	comp=N,4µm,0.2s						
AOPR	**Arecibo Observ**	**0.67**	**175**	↑*e*Pg	**Pn**	**10 22 16.7**	**-0.1**
AOPR				↑*e*Sg	**Sb**	**10 22 26.1**	**+0.2**
AOPR				IAML		10 22 29.8	
	comp=N,2µm,0.3s						
UUPR	**Utuado, UPR, P**	**0.77**	**173**		**Pn**	**10 22 17.8**	**-0.3**
UUPR				Sn	**Sn**	**10 22 27.9**	**-0.7**
ECPR	**Experimental S**	**0.82**	**148**		**Pn**	**10 22 18.4**	**-0.4**
ECPR				Sn	**Sb**	**10 22 30.5**	**+0.5**
ECPR				IAML		10 22 34.6	
	comp=N,3µm,0.3s						
PRSN	**Puerto Rico Se**	**0.85**	**201**		**Pn**	**10 22 18.9**	**-0.3**
PRSN	**Puerto Rico Se**	**0.85**	**201**	↑*e*Pg	**Pn**	**10 22 19.0**	**-0.3**
PRSN				↑*e*Sg	**Sb**	**10 22 31.9**	**+1.0**
PRSN				IAML		10 22 33.9	
	comp=N,2µm,0.2s						
LSP	**Las Mesas**	**0.88**	**197**		**Pn**	**10 22 19.3**	**-0.3**
LSP					**Sb**	**10 22 32.3**	**+0.7**
IDE	**Isla Desecheo**	**0.88**	**225**		**Pn**	**10 22 19.3**	**-0.4**
IDE					**Sn**	**10 22 31.2**	**-0.3**
CELP	**Cerrillos**	**0.96**	**166**		**Pn**	**10 22 20.9**	**+0.1**
CELP				IAML		10 22 35.9	
	comp=N,734nm,0.3s						
OBIP	**Obispado Ponce**	**0.99**	**168**		**Pn**	**10 22 21.3**	**+0.1**
OBIP					**Sn**	**10 22 34.9**	**+0.8**
OBIP	**Obispado Ponce**	**0.99**	**168**	*i* P	**Pn**	**10 22 21.5**	**+0.3**
OBIP				*e*S	**Sn**	**10 22 34.8**	**+0.8**
OBIP				IAML		10 22 37.6	
	comp=Z,249nm,0.5s						
GBPR	**Guanica, Bosqu**	**1.04**	**183**		**Pn**	**10 22 22.3**	**+0.5**
GBPR					**Sn**	**10 22 36.1**	**+0.9**
CRPR	**Cabo Rojo, PR**	**1.04**	**195**	Pn	**Pn**	**10 22 21.7**	**-0.2**
CRPR				IAML		10 22 39.5	
	comp=Z,706nm,0.3s						
CRPR				IAML		10 22 40.4	
	comp=Z,601nm,0.4s						
CRPR	**Cabo Rojo, PR**	**1.04**	**195**		**Sn**	**10 22 35.7**	**+0.4**
CRPR	**Cabo Rojo, PR**	**1.04**	**195**	*i* P	**Pn**	**10 22 21.9**	**0.0**
CRPR				*e*S	**Sn**	**10 22 35.9**	**+0.5**
CRPR				IAML		10 22 36.8	
	comp=Z,396nm,0.2s						
MLPR	**Magueyes Islan**	**1.06**	**192**		**Pn**	**10 22 19.7**	**-2.5**
MLPR	**Magueyes Islan**	**1.06**	**192**	↑*e*Pg	**Pn**	**10 22 19.7**	**-2.5**
MLPR				↑*e*Sg	**Sn**	**10 22 34.2**	**-1.7**
MLPR				IAML		10 22 37.8	
	comp=N,110nm,0.2s						
SJG	**San Juan**	**1.10**	**145**		**Pn**	**10 22 22.5**	**-0.1**
SJG				IAML		10 22 42.1	
	comp=N,576nm,0.3s						
SJG	**San Juan**	**1.10**	**145**	*i* P	**Pn**	**10 22 22.6**	**-0.1**
SJG				*e*S	**Sn**	**10 22 37.1**	**+0.3**
SJG				IAML		10 22 41.5	
	comp=Z,248nm,0.4s						
PDPR	**Patillas Dam,**	**1.25**	**143**		**Pn**	**10 22 24.6**	**-0.1**
PDPR				IAML		10 22 45.5	
	comp=Z,496nm,0.2s						
HUMP	**Col San Antoni**	**1.27**	**133**		**Sn**	**10 22 40.7**	**-0.2**
HUMP	**Col San Antoni**	**1.27**	**133**	Pn	**Pn**	**10 22 24.4**	**-0.6**
HUMP				IAML		10 22 48.8	
	comp=Z,483nm,0.2s						
CUPR	**Culebra, Puert**	**1.62**	**116**		**Pn**	**10 22 28.8**	**-1.0**
HIDR	**Higuey Centro**	**1.85**	**257**	↑*e*Pg	**Pn**	**10 22 33.2**	**+0.2**
HIDR				↑*e*Sg	**Sn**	**10 22 55.3**	**+0.1**
HIDR				IAML		10 23 08.8	
	comp=N,240nm,0.2s						
SMDR	**Samana, DR**	**2.26**	**277**		**Pn**	**10 22 37.4**	**-1.2**
DR12	**Loma Pena Alta**	**2.44**	**265**		**Pn**	**10 22 41.6**	**+0.5**
HATOM	**Hato Mayor del**	**2.44**	**265**	↑*e*Pg	**Pn**	**10 22 41.5**	**+0.4**
HATOM				IAML		10 23 22.7	
	comp=N,79nm,0.6s						
SDDR	**Presa de Saban**	**4.23**	**270**		**Pn**	**10 23 06.7**	**+0.9**
SDDR				IAML		10 24 18.7	
	comp=N,84nm,0.7s						
SDDR				IAML		10 24 19.4	
	comp=N,108nm,0.9s						

IDC 14 10:29:44.8±5.3, 20°19S×178°68W, h620km±33km, mb2.7/4, mbtmp3.7/5, Error ellipse: s-maj=133.1km s-min=30.9km az=137.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.95**	**308**	P	P	10 31 11.6	-0.1
	7.5nm,1.1s,baz=114,slow=20,SNR=5.8						
STKA	**Stephens Creek**	**37.35**	**244**	P	P	10 36 06.4	-0.4
	0.6nm,0.3s,baz=27,slow=13,SNR=6.0						
	0.6nm,0.3s						
ASAR	**Alice Springs**	**43.97**	**256**	P	P	10 36 59.5	+0.2
	0.6nm,0.5s,baz=91,slow=7.5,SNR=11						
	0.6nm,0.5s						
WRA	**Warramunga Arr**	**44.02**	**262**	P	P	10 36 59.6	0.0
	0.3nm,0.3s,baz=97,slow=7.5,SNR=11						
	0.3nm,0.3s						
ILAR	**Eielson Array**	**88.15**	**13**	P	P	10 41 30.5	0.0
	0.5nm,0.9s,baz=203,slow=6.7,SNR=3.1						
	0.5nm,0.9s						

*IDC **14** 10:33:59.4±2.1, 41°04N×140°18E, h88km±27km, mb3.3/3, mbtmp3.5/5, Error ellipse: s-maj=49.7km s-min=18.2km az=116.0*
*JMA **14** 10:34:09.4±0.2, 38°4N±0°5×142°3E±0°9, h31km±2km, MV3.5/35, E OFF MIYAGI PREF*
ISC 14 10:34:11.0±1.4, 38°48N±0°06×142°18E±0°10, h35km, n13, σ2s27/19, mb3.8/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.58**	**253**	*i* P	**Pn**	**10 34 21.5**	**-1.4**
JIKH				S	**Sn**	**10 34 29.7**	**-1.5**
JKMT	**Kesennumamotoy**	**0.64**	**301**	*i* P	**Pn**	**10 34 23.2**	**-0.5**
JKMT				S	**Sn**	**10 34 32.8**	**+0.2**
JIO	**Ouri**	**0.65**	**268**	*i* P	**Pn**	**10 34 23.0**	**-0.8**
JIO				S	**Sn**	**10 34 32.2**	**-0.6**
OFUJ	**Ofunato**	**0.72**	**327**	*i* P	**Pn**	**10 34 24.1**	**-0.6**
JMK	**Ichinoseki**	**0.89**	**302**	*i* P	**Pn**	**10 34 26.9**	**-0.1**
JOU	**Okura**	**1.20**	**265**	P	**Pn**	**10 34 31.4**	**+0.1**
JOU				*e*S	**Sn**	**10 34 47.6**	**+1.3**
JOM	**Ohasama**	**1.21**	**325**	*i* P	**Pn**	**10 34 31.7**	**+0.3**
JOM				S	**Sn**	**10 34 47.7**	**+1.2**
JMM	**Marumori**	**1.25**	**241**	*i* P	**Pn**	**10 34 30.8**	**-1.3**
JMM				S	**Sn**	**10 34 46.4**	**-1.3**
MJAR	**Matsushiro Arr**	**3.70**	**240**	P	**Pn**	**10 35 08.5**	**+2.8**
	0.9nm,0.6s,baz=60,slow=8.6,SNR=8.1						
MJAR				S	**Sn**	**10 35 55.6**	**+7.5**
	0.9nm,0.3s,baz=82,slow=18,SNR=4.1						
ASAJ	**Asahikawa**	**5.64**	**3**	S	**Pn**	**10 35 33.6**	**+1.3**
	4.0nm,0.8s,baz=209,slow=15,SNR=7.3						
CMAR	**Chiang Mai Arr**	**42.46**	**254**	P	P	10 41 40.0	-23
	0.3nm,0.3s,baz=51,slow=8.4,SNR=1.2						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**58.58**	**189**	P	**P**	**10 44 02.6**	**-1.7**
	0.4nm,0.5s,baz=6.7,slow=6.7,SNR=6.3						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**62.30**	**189**	P	**P**	**10 44 28.2**	**-1.5**
	0.6nm,0.7s,baz=5.6,slow=5.1,SNR=5.5						
	0.6nm,0.7s						

*SNET **14** 10:34:44.1±2.6, 12°45N×89°63W, h12km, ML3.3, Presumed earthquake*
*CATAC **14** 10:34:46.4±0.7, 13°N±3°×8°9W±°, h2km±3km, M3.9/22, mb5.1/1, MLv3.3/22, Error ellipse: s-maj=7.8km s-min=3.5km az=30.8, confirmed*
*GCG **14** 10:34:58.5±0.3, 13°38N×89°64W, h32km±2km, MD4.2, Presumed earthquake*
ISC 14 10:34:45.9±1.9, 12°53N±0°07×89°50W±0°07, h15km±10km, n42, σ0s83/63, 2C-5D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.97**	**10**	P	**Pg**	**10 35 04.5**	**-0.2**
LALI				S	**Sg**	**10 35 17.2**	**-0.2**
LALI	**Alcalda de L**	**0.97**	**10**	*i* P	**Pn**	**10 35 06.4**	**+1.4**
LALI	**Alcalda de L**	**0.97**	**10**	*e*P	**Pg**	**10 35 04.7**	**0.0**
JAYA	**Jayaque - finc**	**1.12**	**3**	⇓P	**Pb**	**10 35 06.8**	**-0.3**
JAYA				S	**Sg**	**10 35 22.7**	**+0.5**
JAYA	**Jayaque - finc**	**1.12**	**3**	*i* P	**Pb**	**10 35 06.4**	**-0.7**
JAYA	**Jayaque - finc**	**1.12**	**3**	*e*P	**Pb**	**10 35 06.3**	**-0.7**
JAYA				*e*S	**Sb**	**10 35 19.3**	**-2.3**
LOMA	**Loma Larga**	**1.15**	**16**	P	**Pb**	**10 35 07.7**	**0.0**
LOMA				S	**Sb**	**10 35 21.7**	**-0.8**
PMON	**Piamonte**	**1.19**	**9**	⇓P	**Pn**	**10 35 08.0**	**-0.2**
PMON				S	**Sb**	**10 35 24.4**	**+0.9**
UEES	**Universidad Ev**	**1.21**	**12**	P	**Pn**	**10 35 09.1**	**+0.7**
UEES				S	**Sb**	**10 35 24.4**	**+0.4**
BOQS	**Boqueron**	**1.22**	**10**	*e*P	**Pn**	**10 35 08.3**	**-0.3**
TECO	**Alcaldia de Te**	**1.22**	**35**	⇓P	**Pn**	**10 35 08.0**	**-0.6**
TECO				S	**Sb**	**10 35 23.1**	**-1.3**
UDBS	**Universidad Do**	**1.22**	**16**	S	**Sb**	**10 35 25.2**	**+0.7**
COEG	**Centro de Oper**	**1.24**	**29**	P	**Pn**	**10 35 08.3**	**-0.5**
COEG				S	**Sb**	**10 35 23.8**	**-1.2**
CEVE	**Cerro Verde**	**1.29**	**355**	P	**Pn**	**10 35 09.3**	**-0.4**
CEVE				S	**Sg**	**10 35 28.6**	**+0.7**
CEVE	**Cerro Verde**	**1.29**	**355**	*e*P	**Pn**	**10 35 09.1**	**-0.7**
PAVA	**Las Pavas**	**1.30**	**25**	P	**Pn**	**10 35 09.3**	**-0.3**
PAVA				S	**Sb**	**10 35 25.4**	**-1.3**
SCLA	**Alcaldia de Sa**	**1.39**	**33**	⇓P	**Pn**	**10 35 10.9**	**+0.1**
SCLA				S	**Sn**	**10 35 27.9**	**-1.0**
NUBE	**Las Nubes**	**1.39**	**349**	*i* P	**Pn**	**10 35 09.9**	**-1.1**
FAME	**Alcaldia de Sa**	**1.40**	**339**	P	**Pg**	**10 35 12.4**	**-0.4**
FAME				S	**Sg**	**10 35 31.9**	**+0.8**
PQSS	**Presa 15 de Se**	**1.42**	**40**	⇓P	**Pn**	**10 35 11.0**	**-0.3**
PQSS				S	**Sn**	**10 35 28.3**	**-1.5**
PACA	**Pacayal**	**1.48**	**51**	⇑P	**Pn**	**10 35 12.3**	**+0.1**
PACA				S	**Sn**	**10 35 31.0**	**-0.3**
SLOZ	**Alcaldia de Sa**	**1.51**	**350**	P	**Pg**	**10 35 14.9**	**-0.2**
P5NO	**Presa 5 de nov**	**1.62**	**26**	⇑P	**Pn**	**10 35 14.1**	**+0.2**
P5NO				S	**Sn**	**10 35 35.6**	**+1.0**
LLGN	**La Laguna**	**1.71**	**18**	P	**Pn**	**10 35 16.1**	**+0.8**
LLGN				S	**Sn**	**10 35 37.9**	**+0.9**
CNCH	**Conchagua**	**1.79**	**65**	*e*P	**Pn**	**10 35 16.8**	**+0.4**
MTO3	**Montecristo**	**1.86**	**4**	P	**Pn**	**10 35 17.8**	**+0.3**
MTO3				S	**Sb**	**10 35 43.4**	**+0.4**
MTO3	**Montecristo**	**1.86**	**4**	*i* P	**Pn**	**10 35 17.6**	**+0.1**
ESQI	**Esquipulas**	**2.02**	**4**	P	**Pn**	**10 35 20.3**	**+0.6**
ESQI				S	**Sb**	**10 35 47.7**	**+0.2**
ESQI	**Esquipulas**	**2.02**	**4**	*e*P	**Pn**	**10 35 19.8**	**+0.1**
SARH	**Santa Rosa de**	**2.34**	**18**	P	**Pn**	**10 35 25.7**	**+1.7**
SARH				S	**Sn**	**10 35 54.8**	**+2.1**
SARH	**Santa Rosa de**	**2.34**	**18**	*i* P	**Pn**	**10 35 25.1**	**+1.1**
HERN	**Volcan Telica**	**2.61**	**88**	P	**Pn**	**10 35 27.9**	**+0.2**
HERN				S	**Sn**	**10 35 59.1**	**-0.1**
POLN	**Al Sur del Vol**	**2.63**	**87**	S	**Sn**	**10 35 59.0**	**0.0**
CNGN	**Cerro Negro**	**2.74**	**90**	P	**Pn**	**10 36 30.7**	**+1.3**

LUWI **Luwuk** 6.76 236 P Pn 10 44 17.7 +2.4
1.8nm227nm,0.7s
MRSI **Marisa** 6.80 250 P Pn 10 44 15.7 -0.2
MWPI **Manokwari, Pap** 6.81 123 P Pn 10 44 16.0 +0.1
0.8nm145nm,0.8s
RKPI **Ransiki, Papua** 7.25 126 P Pn 10 44 24.9 +2.9
0.9nm189nm,0.9s
SCPH **Surigao** 7.48 338 eP Pn 10 44 27.5 +2.3
DCPH **Dipolog City** 7.58 319 eP Pn 10 44 31.9 +5.4
APSI **Ampana** 7.64 241 P Pn 10 44 28.2 +0.8
173nm,0.7s
TOLI2 **Tolitoli** 7.74 258 P Pn 10 44 26.8 -2.0
TOLI2 **Tolitoli** 7.74 258 Pn 10 44 26.7 -2.0
LLP **Lapu-Lapu** 8.62 330 eP Pn 10 44 44.1 +3.3
LLP eS Sn 10 46 14.3 -2.5
MPSI **Mapaga** 8.79 254 P Pn 10 44 44.0 +0.9
0.4nm92nm,1.1s
PLP **Palo** 8.94 338 eP Pn 10 44 54.0 +8.9
KKSI **Kolaka, Sulawe** 9.64 224 P Pn 10 44 51.5 -3.2
MYLDM **Lahad Datu** 10.09 284 P Pn 10 45 00.3 -0.6
MYLDM **Lahad Datu** 10.09 284 Pn 10 45 01.4 +0.5
MYLDM **Lahad Datu** 10.09 284 P Pn 10 45 01.0 +0.1
185nm,1.1s
RCP **Roxas** 10.31 328 eP Pn 10 45 06.8 +3.0
TTSI **Tana Toraja** 10.32 236 P Pn 10 45 05.3 +1.3
196nm,0.8s
SPSI **Sidrap Palu** 10.90 232 P Pn 10 45 11.4 -0.6
104nm,0.8s
KAPI **Kappang** 11.58 228 P Pn 10 45 21.6 +0.3
20nm,0.6s,baz=27,slow=2.6,SNR=8.8
KAPI S Sn 10 47 28.7 -0.5
4.5nm,0.3s,baz=58,slow=18,SNR=1.5
KAPI **Kappang** 11.58 228 Pn Pn 10 45 19.1 -2.2
KAPI **Kappang** 11.58 228 P Pn 10 45 22.2 +0.9
KKM **Kota Kinabalu** 12.51 285 Pn 10 45 33.1 -0.9
MMRI **Maumere** 12.90 208 P P 10 45 51.2 +2.5
GENI **Genyem** 12.99 114 P P 10 45 56.7 +7.1
SOEI **Soe** 13.13 198 P P 10 45 47.8 -3.5
129nm,1.0s
JAY **Jayapura** 13.45 113 P P 10 45 54.2 -0.6
21nm,0.8s,baz=58,slow=5.0,SNR=5.7
BATI **Baumata** 13.75 200 P Pn 10 45 53.1 +2.2
46nm,0.5s,baz=338,slow=0.6,SNR=6.3
BATI **Baumata** 13.75 200 P P 10 45 55.6 -2.5
84nm,1.2s
LBFI **Labuhan Bajo,** 14.03 217 P P 10 46 03.6 +2.4
WSI **Waingapu** 14.77 213 P P 10 46 25.0 +16
BBKI **Banjar Baru** 14.86 245 P P 10 46 17.2 +6.7
DBNI **Kabupaten Domp** 15.05 222 P P 10 46 14.5 +2.0
BASI **Baing, Sumba** 15.08 211 P P 10 46 31.7 +19
WBSI **Waikabubak, Su** 15.25 216 P P 10 46 15.5 +0.6
111nm,1.3s
PLAI **Plampang** 15.64 222 P P 10 46 17.9 -1.2
PLAI **Plampang** 15.64 222 P P 10 46 19.2 +0.1
255nm,1.3s
MTN **Manton Dam** 15.80 170 P Pn 10 46 16.6 -1.3
comp=Z,38nm,0.8s
MTN **Manton Dam** 15.80 170 P Pn 10 46 19.1 +1.2
comp=Z,38nm,0.8s
MTN **Manton Dam** 15.80 170 P Pn 10 46 16.9 -1.0
SBUM **Sibu** 16.11 269 P Pn 10 46 22.5 +0.7
SBUM **Sibu** 16.11 269 Pn Pn 10 46 20.6 -1.1
SBUM **Sibu** 16.11 269 P P 10 46 24.2 -0.1
comp=Z,43nm,1.1s
TWSI **Taliwang, Sumb** 16.19 225 P P 10 46 26.9 +1.6
comp=Z,104nm,1.3s
KHKI **Kahang-Kahang** 16.87 229 P P 10 46 36.0 +3.3
comp=Z,205nm,1.3s
DNP **Denpasar** 17.37 229 P P 10 46 42.3 +4.0
KMMI **Kalianget** 17.37 236 P P 10 46 39.9 +1.6
comp=Z,157nm,1.1s
RTBI **Rangdo, Negare** 17.43 230 P P 10 46 43.0 +4.0
comp=Z,108nm,0.8s
IGBI **Denpasar** 17.51 229 P P 10 46 42.7 +2.9
ABJI **Asem Bagus** 17.58 233 P P 10 46 46.0 +5.4
JAGI **Jajag, Banyuwa** 18.05 231 P Pn 10 46 48.2 +2.3
JAGI **Jajag, Banyuwa** 18.05 231 P P 10 46 43.8 -2.0
JAGI IAmb IAmb 10 46 52.1
comp=Z,122nm,1.0s
JAGI **Jajag, Banyuwa** 18.05 231 P P 10 46 45.7 -0.1
comp=Z,150nm,1.1s
BLJI **Banyuglugur** 18.07 234 P Pn 10 46 47.2 +1.1
comp=Z,161nm,0.7s
KNRA **Kununurra** 18.38 179 P Pn 10 46 50.6 +0.8
comp=Z,47nm,0.7s
KNRA **Kununurra** 18.38 179 P Pn 10 46 51.1 +1.3
comp=Z,47nm,0.7s
KNRA **Kununurra** 18.38 179 P Pn 10 46 50.5 +0.6
SJI **Sawahan** 19.58 238 P P 10 47 02.8 +0.2
comp=Z,98nm,0.5s
SNJI **Sawahan-Nganju** 19.61 237 P Pn 10 47 04.2 -0.6
comp=Z,58nm,0.8s
NGJI **Ngawi** 19.65 239 P Pn 10 47 11.8 +6.7
PCJI **Pacitan** 20.31 237 P Pn 10 47 11.7 -1.3
UGM **Wanagama** 20.72 239 P Pn 10 47 16.5 -1.4
UGM **Wanagama** 20.72 239 P P 10 47 13.4 -1.6
UGM IAmb IAmb 10 47 20.8
comp=Z,42nm,0.9s
UGM **Wanagama** 20.72 239 P Pn 10 47 24.5 +6.6
FITZ **Fitzroy Crossi** 20.95 187 P P 10 47 16.7 -0.7
comp=Z,5.4nm,0.7s,baz=40,slow=5.8,SNR=7.5
comp=Z,5.4nm,0.7s
TPI **Tanjungpandan** 21.41 255 P P 10 47 25.3 +2.9
comp=Z,43nm,1.0s
YULB **Yu-li** 21.56 342 P P 10 47 21.5 -2.4
YULB **Yu-li** 21.56 342 P P 10 47 21.5 -2.4
TPUB **Ta-pu** 21.69 341 P P 10 47 22.4 -2.9
TPUB **Ta-pu** 21.69 341 P P 10 47 22.6 -2.7
TPUB IAmb IAmb 10 47 37.0
comp=Z,65nm,0.9s
KPJI **Karang Pucung** 21.83 242 P P 10 47 25.9 -1.0
comp=Z,71nm,0.8s
COEN **Coen** 22.23 139 P P 10 47 33.7 +2.5
comp=Z,20nm,0.8s
COEN **Coen** 22.23 139 P P 10 47 32.6 +1.4
comp=Z,20nm,0.8s
COEN **Coen** 22.23 139 P P 10 47 31.6 +0.4
COEN **Coen** 22.23 139 P P 10 47 31.5 +0.3
PMG **Port Moresby** 22.34 123 P P 10 47 31.6 -0.8
BBJI **Bungbulang** 23.03 244 P P 10 47 39.4 -0.3
BBJI **Bungbulang** 23.03 244 P 10 47 38.3 -1.5
BBJI **Bungbulang** 23.03 244 P P 10 47 39.6 -0.1
comp=Z,33nm,0.7s
WB0 **Warramunga Arr** 23.22 165 P P 10 47 41.9 +0.5
WRAB **Tennant Creek** 23.37 166 P P 10 47 43.5 +0.6
WRAB **Tennant Creek** 23.37 166 P P 10 47 43.4 +0.6
WRA **Warramunga Arr** 23.37 166 P P 10 47 42.2 -0.7
comp=Z,3.9nm,0.9s,baz=109,slow=4.5,SNR=15
WRA S S 10 51 50.9 -1.3
comp=Z,1.2nm,0.8s,baz=346,slow=18,SNR=2.8
WRA ScP ScP 10 55 02.3 -0.4
comp=Z,0.8nm,0.5s,baz=341,slow=3.0,SNR=9.0
WRA **Warramunga Arr** 23.37 166 P P 10 47 42.0 -0.9
WR8 **Warramunga Arr** 23.43 165 P 10 47 43.8 +0.4
DSRI **Dabo** 23.98 263 P P 10 47 56.5 +7.9
QIZ **Qiongzhong** 24.23 313 P P 10 47 50.8 -0.1
CGJI **Cibinong** 24.47 247 P P 10 47 53.5 +0.4
comp=Z,174nm,0.9s
MYKOM **Kota Tinggi** 24.49 268 P P 10 47 52.9 -0.4
MYKOM **Kota Tinggi** 24.49 268 P P 10 48 06.0 +13
KLSI 24.74 253 P P 10 47 57.2 +1.6
MDSI **Maura Dua** 25.21 253 P P 10 48 02.1 +2.3
comp=Z,51nm,1.0s
KASI **Kota Agung** 25.21 251 P P 10 48 15.8 +16
MBWA **Marble Bar** 25.27 199 P P 10 47 58.7 -1.7
PSAC2 **Pilbara Seismi** 25.60 198 P P 10 48 02.7 -0.5
comp=Z,48nm,0.9s
PSAC2 **Pilbara Seismi** 25.60 198 P P 10 48 02.5 -0.7
comp=Z,48nm,0.9s
PSAC1 **Pilbara Seismi** 25.60 199 P P 10 48 03.2 -0.1
comp=Z,51nm,0.9s
PSA00 **Pilbara Seismi** 25.62 199 P P 10 48 03.4 0.0
comp=Z,45nm,0.9s
PSA00 **Pilbara Seismi** 25.62 199 P P 10 48 03.6 +0.1
comp=Z,45nm,0.9s
PSA00 **Pilbara Seismi** 25.62 199 P P 10 48 04.8 +1.3
PSA00 **Pilbara Seismi** 25.62 199 P P 10 48 02.4 -1.1
PSA00 IAmb IAmb 10 48 04.3
comp=Z,34nm,0.8s
PSA00 **Pilbara Seismi** 25.62 199 P P 10 48 03.0 -0.5
PSA00 IAmb IAmb 10 48 04.2
comp=Z,18nm,0.8s
PSAB3 **Pilbara Seismi** 25.64 198 P P 10 48 03.9 +0.3
comp=Z,42nm,1.0s
PSAB3 **Pilbara Seismi** 25.64 198 P P 10 48 03.7 +0.1
comp=Z,42nm,1.0s
QIS **Mount Isa** 25.72 155 P P 10 48 06.2 +1.7
comp=Z,55nm,0.7s
QIS **Mount Isa** 25.72 155 P P 10 48 05.4 +1.0
comp=Z,55nm,0.7s
QIS **Mount Isa** 25.72 155 P P 10 48 05.6 +1.2
MTSU **Mount Surprise** 26.10 143 P P 10 48 11.4 +3.5
comp=Z,8.8nm,0.8s
MTSU **Mount Surprise** 26.10 143 P P 10 48 11.4 +3.5
comp=Z,8.8nm,0.9s
MTSU **Mount Surprise** 26.10 143 P P 10 48 08.6 +0.7
AS31 **Alice Springs** 26.87 169 P P 10 48 14.1 -0.7
ASAR **Alice Springs** 26.88 169 P P 10 48 14.7 -0.1
comp=Z,6.5nm,0.7s,baz=349,slow=7.4,SNR=47
ASAR pP pP 10 48 27.8 +0.1
comp=Z,9.9nm,0.8s,baz=356,slow=8.1,SNR=5.3
ASAR PcP PcP 10 51 36.4 0.0
comp=Z,3.1nm,0.5s,baz=357,slow=2.2,SNR=8.4
ASAR S S 10 52 49.6 +1.5
comp=Z,0.4nm,0.8s,baz=348,slow=22,SNR=1.5
ASAR ScP ScP 10 55 12.4 -0.1
comp=Z,1.3nm,0.6s,baz=346,slow=2.9,SNR=8.0
comp=Z,6.5nm,0.7s
ASAR **Alice Springs** 26.88 169 P P 10 48 14.2 -0.6
CTAO **Charters Tower** 28.77 143 P P 10 48 30.1 -1.6
CTAO IAmb IAmb 10 48 49.9
comp=Z,32nm,1.2s
PSI **Prapat** 29.38 271 P P 10 48 39.6 +2.2
NJ2 **Nanjing** 30.42 344 eP P 10 48 48.4 +2.2
NJ2 pmax pmax
comp=Z,15nm,0.5s
MEEK **Meekatharra** 30.75 197 P P 10 48 48.4 -0.9
comp=Z,19nm,0.7s
MEEK **Meekatharra** 30.75 197 P P 10 48 48.9 -0.4
comp=Z,19nm,0.7s
JMN **Monobe** 31.19 9 P P 10 48 53.3 +0.2
ENH **Enshi** 32.63 329 P P 10 49 05.3 -0.4
ENH IAmb IAmb 10 49 21.8
comp=Z,20nm,0.9s
ENH **Enshi** 32.63 329 P P 10 49 05.4 -0.3
ENH pP pP 10 49 18.2 +0.5
ENH sP sP 10 49 23.8 +0.5
INKA **Innaminka** 32.65 159 P P 10 49 05.3 -0.6
CMAR **Chiang Mai Arr** 32.72 300 P P 10 49 07.0 +0.4
comp=Z,2.4nm,0.8s,baz=121,slow=7.3,SNR=20
CMAR pP pP 10 49 19.2 +0.5
comp=Z,10nm,0.8s,baz=117,slow=7.3,SNR=15
comp=Z,2.4nm,0.8s
CMAR **Chiang Mai Arr** 32.72 300 P P 10 49 05.8 -0.8
CHTO **Chiang Mai** 32.87 301 P P 10 49 06.8 -1.1
CHTO IAmb IAmb 10 49 22.3
comp=Z,15nm,0.8s
CHTO **Chiang Mai** 32.87 301 P P 10 49 09.8 +1.9
comp=Z,21nm,0.9s
INU **Inuyama** 33.36 13 P P 10 49 11.7 -0.3
FORT **Forrest** 33.41 180 P P 10 49 12.0 -0.4
FORT IAmb IAmb 10 49 19.5
comp=Z,14nm,0.9s
JGF **Kuroka** 33.68 13 P P 10 49 14.6 -0.2
MORW **Morawa** 33.83 200 P P 10 49 14.4 -1.7
comp=Z,14nm,1.5s
MORW **Morawa** 33.83 200 P P 10 49 15.4 -0.8
comp=Z,31nm,1.0s
MORW **Morawa** 33.83 200 P P 10 49 15.3 -0.8
MORW IAmb IAmb 10 49 15.9
comp=Z,22nm,1.1s
KSAR **Wonju Array Be** 34.46 359 P P 10 49 21.9 +0.3
KSRS **Korea Array** 34.47 359 P P 10 49 21.2 -0.4
comp=Z,3.4nm,0.6s,baz=177,slow=9.7,SNR=14
KSRS pP pP 10 49 34.0 -0.1
comp=Z,9.6nm,0.9s,baz=176,slow=11,SNR=9.4
comp=Z,3.4nm,0.6s
PZH **PanZhiHua** 34.72 315 P P 10 49 26.8 +2.7
MAJO **Matsushiro** 34.77 14 P P 10 49 22.6 -1.7
MAJO IAmb IAmb 10 49 37.3
comp=Z,14nm,0.8s
MAJO **Matsushiro** 34.77 14 P P 10 49 22.1 -2.2
MAJO pP pP 10 49 35.2 -1.4
MAJO sP pwP 10 49 40.8 +0.1
MJAR **Matsushiro Arr** 34.77 14 P P 10 49 21.9 -2.4
comp=Z,8.6nm,1.0s,baz=182,slow=10.0,SNR=20
MJAR pP pP 10 49 35.5 -1.1
comp=Z,11nm,0.7s,baz=186,slow=9.1,SNR=12
comp=Z,8.6nm,1.0s
MJAR **Matsushiro Arr** 34.77 14 P P 10 49 22.3 -2.0
MJB9 **Matsu-Tunnel** 34.78 14 P P 10 49 23.8 -0.5
MJB9 IAmb IAmb 10 49 38.7
comp=Z,13nm,0.8s
TIA **Tai'an** 34.81 344 P P 10 49 25.5 +0.9
TIA pmax pmax
comp=Z,6.0nm,0.3s
EIDS **Eidsvold** 35.66 143 P P 10 49 31.2 -0.8
KLBR **Kellerberrin** 35.67 196 P P 10 49 31.6 -0.4
comp=Z,55nm,1.0s
KLBR **Kellerberrin** 35.67 196 P P 10 49 31.2 -0.8
XAN **Xi'an** 35.96 332 ⇓P P 10 49 34.0 -0.6
XAN pmax pmax
comp=Z,15nm,1.1s
BBOO **Buckleboo** 36.18 169 P P 10 49 36.4 0.0
HNS **HongShan** 36.63 342 ⇑P P 10 49 39.8 -0.3
HNS pmax pmax
comp=Z,9.0nm,0.7s
STKA **Stephens Creek** 36.73 161 P P 10 49 41.4 +0.4
comp=Z,138nm,0.8s
STKA **Stephens Creek** 36.73 161 P P 10 49 41.5 +0.4
comp=Z,138nm,0.8s
STKA **Stephens Creek** 36.73 161 P P 10 49 41.6 +0.5
comp=Z,25nm,0.7s,baz=337,slow=8.1,SNR=36
STKA pP pP 10 49 53.8 -0.7
comp=Z,9.9nm,0.6s,baz=348,slow=6.7,SNR=4.3
comp=Z,25nm,0.7s
STKA **Stephens Creek** 36.73 161 P P 10 49 41.4 +0.4
NWAO **Narrogin (SRO)** 37.07 196 P P 10 49 44.0 0.0
NWAO IAmb IAmb 10 50 08.9
comp=Z,19nm,0.8s
BJI2 **Beijing** 38.64 345 P P 10 49 56.3 -0.8
BJI2 pmax pmax
comp=Z,3.0nm,1.2s
BJT **Baijiatuan** 38.64 345 P P 10 49 56.9 -0.3
BJT IAmb IAmb 10 50 11.2
comp=Z,14nm,0.6s
ARMA **Armidale** 39.83 148 P P 10 50 07.3 -0.1
LZDM **Lanzhou Array** 40.09 328 P P 10 50 09.4 -0.2
comp=Z,0.9nm,0.3s,baz=162,slow=10,SNR=4.7
LZDM pP pP 10 50 22.6 +0.7
comp=Z,20nm,0.8s,baz=162,slow=12,SNR=4.2
comp=Z,0.9nm,0.3s
LZH **Lanzhou** 40.11 329 eP P 10 50 11.0 +1.4
LZH pP pwP 10 50 24.1 -2.7
LZH pmax pmax
comp=Z,18nm,1.3s
H11S3 **WAKE ISLAND Hy** 40.65 65 T T 11 33 38.9
baz=252,slow=75,SNR=27
H11S2 **WAKE ISLAND Hy** 40.66 65 T T 11 33 35.0
baz=252,slow=75,SNR=20
H11S1 **WAKE ISLAND Hy** 40.66 65 T T 11 33 34.8
baz=252,slow=75,SNR=19
HHC **Hu-ho-hao-te** 40.78 340 eP P 10 50 17.9 +2.9
HHC pmax pmax
comp=Z,6.0nm,0.6s
H11N1 **WAKE ISLAND Hy** 41.21 63 T T 11 34 12.9
baz=250,slow=75,SNR=80
H11N2 **WAKE ISLAND Hy** 41.23 63 T T 11 34 11.8
baz=250,slow=75,SNR=27
H11N3 **WAKE ISLAND Hy** 41.23 63 T T 11 34 12.3
baz=250,slow=75,SNR=53
USRK **Ussuriysk Ar.** 41.34 4 P P 10 50 19.5 +0.1
comp=Z,16nm,0.6s,baz=181,slow=7.6,SNR=23
comp=Z,16nm,0.6s
MDJ **Mudanjiang** 41.64 1 P P 10 50 21.3 -0.6
MDJ IAmb IAmb 10 50 36.1
comp=Z,42nm,1.1s
MDJ **Mudanjiang** 41.64 1 P P 10 50 21.9 0.0
MDJ pmax pmax
comp=Z,27nm,1.0s
SHL **Shillong** 41.71 306 P P 10 50 22.7 -0.3
SHL IAmb IAmb 10 50 41.5
comp=Z,28nm,0.9s
BNX **BinXian** 42.76 359 ⇑P P 10 50 30.5 -0.5
BNX pmax pmax
comp=Z,5.0nm,0.9s
GTA2 **Gaotai** 44.79 328 P P 10 50 47.8 +0.2
GTA2 pmax pmax
comp=Z,7.0nm,1.2s
GOMU **GeErMu** 45.40 321 P P 10 50 53.3 +0.6
GOMU pmax pmax
comp=Z,16nm,1.2s
EVN **Everest** 46.82 306 P 10 51 03.5 -1.0
HEH **HeiHe** 47.27 359 eP P 10 51 05.9 -0.9
HEH pmax pmax
comp=Z,7.0nm,0.8s
ULN **Ulaanbaatar** 48.49 341 P P 10 51 16.2 -0.3
ULN IAmb IAmb 10 51 31.3
comp=Z,15nm,1.1s
ULN **Ulaanbaatar** 48.49 341 P P 10 51 19.6 +3.2
SONM **Songino Array** 48.68 340 P P 10 51 16.9 -0.9
comp=Z,1.3nm,0.7s,baz=157,slow=7.9,SNR=6.6
SONM pP pP 10 51 30.2 -0.3
comp=Z,4.0nm,0.7s,baz=159,slow=9.2,SNR=12
SONM ScP ScP 10 56 33.0 -0.4
comp=Z,0.6nm,0.9s,baz=157,slow=4.1,SNR=1.8
comp=Z,1.3nm,0.7s
SONM **Songino Array** 48.68 340 P P 10 51 17.2 -0.7
WMQ **Urumqi** 54.39 325 eP P 10 52 03.3 +2.7
WMQ pP pP 10 52 14.5 +1.2
WMQ sP sP 10 52 22.5 +3.8
WMQ L L
comp=Z,2μm,15.9s
WMQ L L
comp=Z,3μm,20.3s
WMQ L L
comp=Z,4μm,17.3s
PETK **Petropavlovsk-** 55.68 21 P P 10 52 09.4 -0.3
comp=Z,10nm,0.9s,baz=189,slow=6.1,SNR=9.9
PETK pP pP 10 52 23.0 +0.1
comp=Z,18nm,0.8s,baz=170,slow=4.0,SNR=7.0
comp=Z,10nm,0.9s
PETK **Petropavlovsk-** 55.68 21 P P 10 52 09.5 -0.1
ZSN **Zaisan** 58.14 327 eP P 10 52 27.6 +0.4
WUS **Wushi** 58.31 318 P 10 52 28.5 -0.1
SHLS **Shalkode** 59.07 320 eP P 10 52 32.2 -1.6
comp=Z,7.3nm,1.3s
MKAR **Makanchi Array** 59.22 325 P P 10 52 34.2 -0.5
comp=Z,5.3nm,0.5s,baz=115,slow=8.0,SNR=63
MKAR pP pP 10 52 48.0 +0.3
comp=Z,9.8nm,0.5s,baz=112,slow=8.0,SNR=18
MKAR ScP ScP 10 57 19.2 -0.1
comp=Z,1.0nm,0.8s,baz=93,slow=6.1,SNR=4.4
comp=Z,5.3nm,0.5s
MKAR **Makanchi Array** 59.22 325 P P 10 52 33.9 -0.8
UZB **Uzynbulak** 59.35 320 eP P 10 52 36.0 +0.2
comp=Z,2.8nm,1.0s
MAKZ **Makanchi** 59.41 325 P P 10 52 35.6 -0.3
MAKZ **Makanchi** 59.41 325 P P 10 52 35.7 -0.3
MAKZ pP pP 10 52 49.5 +0.6
MAKZ sP sP 10 52 55.0 +0.7
TARG **Taragay, Kyrgy** 59.50 318 P P 10 52 55.5 -1.7
TARG IAmb IAmb 10 52 55.4
comp=Z,9.8nm,0.7s
SATY **Saty** 59.71 319 eP P 10 52 38.5 +0.2
comp=Z,11nm,1.2s
KPKS **Kokpek** 59.72 320 eP P 10 52 38.6 +0.3
KSH2 **Kashi** 59.96 314 P P 10 52 40.8 +0.7
KSH2 pP pP 10 52 53.6 +0.5
KSH2 pmax pmax
comp=Z,21nm,1.2s
KSH2 L L
comp=Z,2μm,17.2s
KSH2 L L
comp=Z,4μm,18.2s
KSH2 L L
comp=Z,4μm,19.6s
NRN **Naryn** 60.59 317 IAmb IAmb 10 52 59.6
comp=Z,8.5nm,0.9s
TDK **Taldyqorghan** 60.62 321 eP P 10 52 44.9 +0.5
comp=Z,4.7nm,0.5s
MDOK **Medeo** 60.64 319 eP P 10 52 44.9 +0.2
TNSS **Tian-Shan** 60.65 319 eP P 10 52 45.0 0.0
AAA **Alma-Ata** 60.75 319 eP P 10 52 45.8 +0.5
ZAA0 **Zalesovo Array** 62.13 333 P P 10 52 54.3 0.0
ZAA0 IAmb IAmb 10 53 08.3
comp=Z,12nm,0.9s
ZALV **Zalesovo Beam** 62.13 333 P P 10 52 53.2 -1.1
comp=Z,1.5nm,0.7s,baz=114,slow=6.6,SNR=6.8
ZALV pP pP 10 53 07.2 0.0
comp=Z,7.3nm,0.7s,baz=123,slow=5.5,SNR=12
comp=Z,1.5nm,0.7s
SEM **Semipalatinsk** 62.33 327 eP P 10 52 56.6 +0.6
SGDS **Sogindy** 62.36 318 eP P 10 52 56.6 +0.5
KBL **Kabul** 63.35 307 P P 10 53 01.5 -1.6
KURK **Kurchatov** 63.37 327 P P 10 53 01.7 -0.9
KURK **Kurchatov** 63.37 327 P P 10 53 01.8 -0.9
KURK pP pP 10 53 16.2 +0.5
KURK sP sP 10 53 21.6 +0.5
KURBB **Kurchatov Arra** 63.37 327 P P 10 53 01.9 -0.8
comp=Z,3.4nm,0.5s,baz=127,slow=6.1,SNR=48
KURBB pP pP 10 53 15.3 -0.4
comp=Z,18nm,0.8s,baz=127,slow=6.1,SNR=18
comp=Z,3.4nm,0.5s
BTLS **Baital** 63.40 320 eP P 10 53 03.6 +0.6
GAR **Garm** 63.72 313 P P 10 53 04.7 -0.6
DZA **Taraz** 64.35 317 eP P 10 53 09.7 +0.4
comp=Z,4.0nm,0.5s
IUG **Iuzhnay** 64.98 316 eP P 10 53 13.8 +0.3
comp=Z,4.2nm,0.7s
KK31 **Karatay Array** 64.99 317 P 10 53 12.8 -0.7
KK31 IAmb IAmb 10 53 28.2
comp=Z,9.3nm,0.8s
KKAR **Karatay Array** 64.99 317 P P 10 53 13.2 -0.2
CHM **Chimkent** 65.34 316 eP P 10 53 16.1 +0.4
BRLS **Borolday** 65.43 317 eP P 10 53 16.6 +0.3
BRZS **Berezniki** 66.36 324 eP P 10 53 22.8 +0.6
TIXI **Tiksi** 68.74 0 P P 10 53 35.5 -1.1
BVAR **Borovoye Array** 68.96 327 P P 10 53 38.2 -0.2
comp=Z,2.4nm,0.5s,baz=131,slow=8.1,SNR=8.9
BVAR pP pP 10 53 51.2 -0.4
comp=Z,15nm,0.9s,baz=116,slow=6.8,SNR=17
comp=Z,2.4nm,0.5s
BORK **Borovoye** 69.00 327 P 10 53 38.5 -0.2
BORK IAmb IAmb 10 53 53.2
comp=Z,18nm,0.8s
SPIA **Saint Paul Isl** 72.47 30 P P 10 54 01.1 +1.5
baz=247
UNV **Unalaska Valle** 73.26 34 P P 10 54 05.1 +0.7
baz=251
AB31 **Akbulak array** 73.87 321 P P 10 54 07.3 -0.8
ABKAR **Akbulak array** 73.87 321 P P 10 54 07.0 -1.1
GAMB **Gambell** 74.58 24 P P 10 54 13.3 +1.4
baz=244
FALS **False Pass** 75.29 34 P P 10 54 17.5 +1.3
baz=254
M11K **Mekoryuk** 75.62 28 P P 10 54 18.3 +0.4
baz=250
K13K **Kusilvak Mount** 76.85 27 IAmb IAmb 10 54 41.1
comp=Z,22nm,1.3s
K13K **Kusilvak Mount** 76.85 27 P P 10 54 26.1 +1.1
baz=251
M13K **Dall Lake** 76.97 28 P P 10 54 27.2 +1.6
baz=252
SDPT **Sand Point** 77.05 34 P P 10 54 27.7 +1.5
baz=256
F14K **Arctic Creek** 77.39 23 P P 10 54 29.4 +1.5
baz=248
ANM **Nome** 77.44 24 P P 10 54 29.5 +1.2
baz=250
L14K **Kuka Creek** 77.56 27 P P 10 54 30.4 +1.5
baz=253
J14K **Nanvaranak Lak** 77.60 26 P P 10 54 30.5 +1.4
baz=252
N14K **Kuskokwak Cree** 77.62 29 P P 10 54 30.4 +1.1
baz=254
M14K **Bethel** 77.72 28 IAmb IAmb 10 54 49.1
comp=Z,20nm,1.1s
M14K **Bethel** 77.72 28 P P 10 54 31.1 +1.3
baz=254
F15K **North Star Dit** 78.12 23 P P 10 54 33.7 +1.7
baz=250
G15K **Niukluk** 78.12 24 P P 10 54 33.5 +1.5
baz=251
L15K **Ungalak Mounta** 78.20 27 P P 10 54 33.9 +1.4
baz=254
O15K **Ungalikthiuk R** 78.34 30 P P 10 54 34.6 +1.3
baz=256
K15K **Wolf Creek Mou** 78.36 27 P P 10 54 35.0 +1.6
baz=254
CHGN **Chignik** 78.41 33 P P 10 54 35.2 +1.5
baz=258
N15K **Kwethluk River** 78.45 29 P P 10 54 35.1 +1.1
baz=255
H16K **Elim** 78.74 24 P P 10 54 36.6 +1.2
baz=252
C16K **Lisburne Hills** 78.78 20 IAmb IAmb 10 54 51.1

comp=Z,26nm,1.6s
C16K **Lisburne Hills** 78.78 20 P P 10 54 36.6 +1.0
baz=249
G16K **Koyuk River** 78.92 24 P P 10 54 37.5 +1.1
baz=252
J16K **Anvik River** 79.04 26 P P 10 54 38.6 +1.5
baz=254
R16K **Pilot Point** 79.12 32 P P 10 54 38.4 +0.7
baz=258
L16K **Owhat River** 79.14 28 P 10 54 38.6 +1.0
L16K **Owhat River** 79.14 28 P P 10 54 39.0 +1.4
baz=256
N16K **Nishlik Lake** 79.17 29 P P 10 54 39.5 +1.6
baz=256
I17K **Unalakleet** 79.17 25 P P 10 54 39.3 +1.5
baz=254
M16K **Timber Creek** 79.21 28 IAmb IAmb 10 54 40.0
comp=Z,14nm,1.2s
M16K **Timber Creek** 79.21 28 P P 10 54 39.3 +1.2
baz=256
P16K **Nushagak River** 79.22 30 P P 10 54 39.8 +1.7
baz=257
O16K **Kokwok River B** 79.30 30 P P 10 54 39.9 +1.3
baz=257
D17K **Noatak River** 79.38 21 P P 10 54 40.3 +1.4
baz=251
RDOG **Red Dog Mine** 79.56 21 P P 10 54 41.2 +1.4
baz=251
C17K **DeLong Mountai** 79.60 20 P P 10 54 41.2 +1.2
baz=251
G17K **Kiwalik Mounta** 79.64 24 P P 10 54 41.6 +1.3
baz=254
F17K **Baldwin Pennin** 79.67 23 P P 10 54 42.1 +1.7
baz=253
L17K **Donlin** 79.78 27 P P 10 54 42.8 +1.7
baz=257
H17K **Granite Mounta** 79.78 24 P P 10 54 42.9 +1.8
baz=255
Q16K **King Salmon** 79.83 31 P P 10 54 43.5 +2.1
baz=259
O17K **Koliganek Bris** 79.83 30 P P 10 54 43.5 +2.1
baz=258
K17K **Iditarod** 79.91 27 IAmb IAmb 10 54 57.6
comp=Z,40nm,1.7s
K17K **Iditarod** 79.91 27 P P 10 54 43.3 +1.4
baz=256
N17K **Nushagak Hills** 79.94 29 IAmb IAmb 10 54 44.3
comp=Z,16nm,1.3s
N17K **Nushagak Hills** 79.94 29 P P 10 54 43.5 +1.4
baz=258
M17K **Holitna River** 80.01 28 P P 10 54 44.1 +1.6
baz=257
Q17K **Contact Creek** 80.14 31 P P 10 54 44.2 +0.9
baz=259
E18K **Tukpahlearik C** 80.20 22 P P 10 54 44.5 +1.2
baz=254
F18K **Selawik** 80.33 23 P P 10 54 45.6 +1.6
baz=255
C18K **Utukok River** 80.34 20 P P 10 54 45.5 +1.3
baz=253
H18K **Honhosa River** 80.47 24 P P 10 54 46.6 +1.8
baz=256
L18K **Granite Mounta** 80.53 27 IAmb IAmb 10 55 07.0
comp=Z,25nm,1.8s
L18K **Granite Mounta** 80.53 27 P P 10 54 46.6 +1.4
baz=258
G18K **Tagagawik** 80.54 23 P P 10 54 46.7 +1.5
baz=256
N18K **Kilae Creek** 80.60 29 P P 10 54 47.1 +1.4
baz=259
P18K **Big Mountain,** 80.69 30 P P 10 54 47.3 +1.2
baz=260
SII **Sitkinak Islan** 80.76 33 P P 10 54 47.9 +1.4
baz=261
O18K **Koktuh Hills** 80.78 30 P P 10 54 48.0 +1.4
baz=260
J18K **Innoko River** 80.79 26 P P 10 54 47.9 +1.4
baz=258
M18K **Stony River** 80.79 28 P P 10 54 47.7 +1.1
baz=259
A19K **Wainwright** 80.85 19 P P 10 54 47.6 +0.9
baz=253
GCSA **Galena City Sc** 80.99 25 P P 10 54 49.1 +1.6
baz=257
C19K **Lookout Ridge** 81.03 20 P P 10 54 49.1 +1.3
baz=254
F19K **Shaleruckik Mo** 81.11 23 P P 10 54 49.0 +0.8
baz=256
G19K **Purcell Mounta** 81.22 23 P P 10 54 50.1 +1.3
baz=257
O19K **Port Alsworth** 81.28 30 P P 10 54 50.5 +1.4
baz=260
N19K **Bonanza Creek** 81.30 29 P P 10 54 50.9 +1.4
baz=260
OHAK **Old Harbor** 81.35 33 P P 10 54 51.0 +1.4
baz=262
J19K **Poorman** 81.37 26 P P 10 54 51.0 +1.4
baz=259
L19K **White Mountain** 81.37 28 P P 10 54 51.2 +1.5
baz=260
D19K **Kuna River** 81.39 21 IAmb IAmb 10 54 51.5
comp=Z,11nm,1.0s
D19K **Kuna River** 81.39 21 P P 10 54 51.2 +1.5
baz=256
Q19K **Cape Douglas,** 81.42 31 P P 10 54 51.3 +1.2
baz=261
E19K **Redstone River** 81.47 22 IAmb IAmb 10 55 07.4
comp=Z,16nm,0.9s
E19K **Redstone River** 81.47 22 P P 10 54 51.5 +1.4
baz=257
KDAK **Kodiak Island** 81.80 32 P P 10 54 53.5 +1.5
baz=262
K20K **Telida** 81.93 26 P P 10 54 54.5 +1.9
baz=260
F20K **Avaraart Lake** 81.95 23 P P 10 54 54.6 +2.0
baz=258
H20K **Anotleneega Mo** 81.97 24 P P 10 54 54.6 +1.8
baz=259
D20K **Etivluk River** 81.98 21 P P 10 54 54.3 +1.5
baz=257
I20K **Naaghedeneel** 82.01 25 P P 10 54 54.6 +1.6
baz=260
Q20K **Shuyak Island** 82.01 31 P P 10 54 54.6 +1.5
baz=262
E20K **Nigu River** 82.03 21 P P 10 54 54.9 +1.8
baz=258
J20K **Nowinta River** 82.04 26 IAmb IAmb 10 54 56.2
comp=Z,32nm,1.8s
J20K **Nowinta River** 82.04 26 P P 10 54 54.6 +1.5
baz=260
B20K **Meade River** 82.09 20 IAmb IAmb 10 54 55.2
comp=Z,11nm,1.0s
B20K **Meade River** 82.09 20 P P 10 54 55.0 +1.7
baz=256
M20K **Styx River** 82.12 28 IAmb IAmb 10 55 10.5
comp=Z,25nm,1.6s
M20K **Styx River** 82.12 28 P P 10 54 55.2 +1.4
baz=261
VNDA **Vanda** 82.33 173 P P 10 54 54.3 -0.1
comp=Z,8.4nm,0.8s,baz=318,slow=6.6,SNR=22
comp=Z,8.4nm,0.8s
VNDA **Vanda** 82.33 173 P P 10 54 54.5 0.0
VNDA IAmb IAmb 10 54 55.9
comp=Z,8.2nm,0.8s
VNDA **Vanda** 82.33 173 P P 10 54 54.4 0.0
VNDA PcP PcP 10 54 59.8 +0.3
VNDA pP pP 10 55 09.4 +0.4
VNDA sP sP 10 55 14.4 -0.2
N20K **Mount Spurr** 82.46 29 P P 10 54 56.8 +1.3
baz=262
SPCR **Spurr Chakacha** 82.46 29 P P 10 54 56.9 +1.4
baz=262
IMAR **Indian Mountai** 82.52 24 P P 10 54 56.3 +0.7
PPLA **Purkeypile** 82.70 27 P P 10 54 58.5 +1.7
baz=262
G21K **Allakaket** 82.71 23 P P 10 54 58.2 +1.6
baz=260
C21K **Knifeblade Rid** 82.72 21 P P 10 54 58.2 +1.6
baz=259
CHUM **Lake Minchumin** 82.79 26 P P 10 54 58.7 +1.7
baz=262
F21K **Alatna River** 82.84 23 P P 10 54 58.6 +1.3
baz=260
H21K **Melozitna Rive** 82.85 24 IAmb IAmb 10 55 12.9
comp=Z,21nm,1.5s
H21K **Melozitna Rive** 82.85 24 P P 10 54 58.9 +1.5
baz=261
B21K **Ikpikpuk River** 82.87 20 IAmb IAmb 10 55 17.8
comp=Z,10nm,0.9s
B21K **Ikpikpuk River** 82.87 20 P P 10 54 58.6 +1.3
baz=259
SKT **Skwentna** 82.88 28 IAmb IAmb 10 55 14.2
comp=Z,17nm,1.2s
SKT **Skwentna** 82.88 28 P P 10 54 58.6 +1.0
baz=263
L22K **Petersville** 83.31 27 IAmb IAmb 10 55 16.1
comp=Z,11nm,0.9s
SLKM **Skilak Lake** 83.34 30 IAmb IAmb 10 55 00.8
comp=Z,25nm,1.4s
KTH **Kantishna Hill** 83.36 26 IAmb IAmb 10 55 18.1
comp=Z,16nm,1.3s
B22K **Teshekpuk Lake** 83.41 19 P P 10 55 01.0 +0.9
baz=260
H22K **Ishtalitna Cre** 83.47 24 IAmb IAmb 10 55 20.1
comp=Z,15nm,1.4s
H22K **Ishtalitna Cre** 83.47 24 P P 10 55 01.7 +1.1
baz=262
M22K **Willow** 83.52 28 P P 10 55 02.0 +1.2
baz=264
CUT **Chulitna** 83.52 28 P P 10 55 01.9 +1.1
baz=264
E22K **Anaktuvuk Pass** 83.62 22 IAmb IAmb 10 55 24.3
comp=Z,16nm,1.1s
E22K **Anaktuvuk Pass** 83.62 22 P P 10 55 02.3 +1.0
baz=262
MLY **Manley** 83.62 25 IAmb IAmb 10 55 19.7
comp=Z,20nm,1.4s
MLY **Manley** 83.62 25 P P 10 55 02.5 +1.1
baz=263
TRF **Thorofare Moun** 83.63 27 P P 10 55 02.6 +0.9
baz=264
RC01 **Rabbit Creek A** 83.64 29 P P 10 55 02.4 +0.9
baz=264
SEW **Seward** 83.68 30 P P 10 55 02.7 +1.0
baz=265
PMR **Palmer** 83.97 28 IAmb IAmb 10 55 22.4
comp=Z,17nm,1.3s
PMR **Palmer** 83.97 28 P P 10 55 03.6 +0.4
baz=265
COLD **Coldfoot** 84.11 23 IAmb IAmb 10 55 26.7
comp=Z,11nm,0.8s
COLD **Coldfoot** 84.11 23 P P 10 55 05.3 +1.5
baz=263,SNR=12
G23K **Bananza Creek** 84.11 23 P P 10 55 05.5 +1.6
baz=264,SNR=12
D23K **Nanushuk River** 84.14 21 IAmb IAmb 10 55 22.5
comp=Z,11nm,0.9s
D23K **Nanushuk River** 84.14 21 P P 10 55 05.5 +1.5
baz=263
I23K **Minto, Yukon-K** 84.22 25 IAmb IAmb 10 55 21.8
comp=Z,7.8nm,0.8s
I23K **Minto, Yukon-K** 84.22 25 P P 10 55 05.4 +1.1
baz=264,SNR=7.5
MCK **McKinley** 84.26 26 P P 10 55 04.8 +0.2
baz=265,SNR=5.7
RND **Reindeer** 84.27 27 IAmb IAmb 10 55 21.6
comp=Z,11nm,1.0s
C23K **Itkillik River** 84.28 20 IAmb IAmb 10 55 06.5
comp=Z,12nm,0.9s
C23K **Itkillik River** 84.28 20 P P 10 55 05.9 +1.3
baz=263,SNR=6.9
KNK **Knik Glacier** 84.28 29 IAmb IAmb 10 55 06.2
comp=Z,16nm,1.0s
KNK **Knik Glacier** 84.28 29 P P 10 55 05.8 +1.0
baz=265,SNR=6.1
NEA2 **Nenana** 84.28 25 IAmb IAmb 10 55 22.5
comp=Z,20nm,1.5s
NEA2 **Nenana** 84.28 25 P P 10 55 05.7 +1.0
baz=265
WAT1 **Susitna Watana** 84.36 27 P P 10 55 06.2 +1.0
baz=265
SML **Sawmill** 84.37 28 IAmb IAmb 10 55 23.8
comp=Z,14nm,0.9s
SML **Sawmill** 84.37 28 P P 10 55 05.4 0.0
baz=266,SNR=6.1
E23K **Chandalar** 84.42 22 IAmb IAmb 10 55 23.9
comp=Z,13nm,0.8s
E23K **Chandalar** 84.42 22 P P 10 55 07.2 +1.7
baz=264,SNR=12
TOLK **Toolik Lake Re** 84.50 21 P P 10 55 06.9 +1.1
baz=264,SNR=6.7
M23K **Glacier View** 84.66 28 P P 10 55 07.2 +0.5
baz=266,SNR=5.2
WRH **Wood River Hil** 84.70 26 P P 10 55 07.2 +0.3
WRH IAmb IAmb 10 55 23.7
comp=Z,11nm,1.3s
WAT6 **Susitna Watana** 84.71 28 P P 10 55 07.7 +0.6
baz=266,SNR=7.6
D24K **Happy Valley** 84.83 21 IAmb IAmb 10 55 30.2
comp=Z,10nm,0.8s
D24K **Happy Valley** 84.83 21 P P 10 55 08.5 +1.2
baz=264
CCB **Clear Creek Bu** 84.83 25 IAmb IAmb 10 55 08.5
comp=Z,11nm,1.4s
E24K **Your Creek** 84.85 22 P P 10 55 07.8 +0.3
E24K **Your Creek** 84.85 22 P P 10 55 09.2 +1.6
baz=265
SCM **Sheep Creek Mo** 84.85 28 P P 10 55 09.0 +1.3
baz=266
H24K **Noodor Dome** 84.89 24 P P 10 55 09.1 +1.3
baz=266
GLI **Glacier Island** 84.90 29 P P 10 55 09.1 +1.1
baz=267
DHY **Denali Highway** 84.91 27 P P 10 55 08.9 +0.7
baz=266
C24K **Franklin Bluff** 84.93 20 P P 10 55 09.5 +1.6
baz=264
POKR **Poker Plat Res** 85.03 25 P P 10 55 10.2 +1.7
baz=266
G24K **Hadweenzic Riv** 85.12 23 P P 10 55 10.4 +1.4
baz=266
HDA **Harding Lake** 85.19 26 P P 10 55 10.3 +1.1
baz=266
Q23K **Middleton Isla** 85.20 31 P P 10 55 10.0 +0.6
baz=267
ILAR **Eielson Array** 85.23 25 P P 10 55 08.2 -1.4
comp=Z,0.6nm,0.5s,baz=257,slow=5.1,SNR=12
ILAR pP pP 10 55 22.0 -1.3
comp=Z,0.8nm,0.5s,baz=245,slow=5.6,SNR=5.0
comp=Z,0.6nm,0.5s
M24K **Tolsona, Glenn** 85.41 28 P P 10 55 12.1 +1.6
baz=267
KLU **Klutina** 85.50 29 IAmb IAmb 10 55 28.2
comp=Z,17nm,1.4s
KLU **Klutina** 85.50 29 P P 10 55 12.6 +1.6
baz=268
EYAK **Cordova Ski Ar** 85.55 30 P P 10 55 12.3 +1.1
baz=268
K24K **Donnelly Dome** 85.67 26 P P 10 55 12.9 +1.2
baz=268
D25K **Kavik River** 85.71 21 P P 10 55 12.9 +1.0
baz=267
PAX **Paxson** 85.77 27 P P 10 55 13.8 +1.5
baz=268
PRP **Porcupine Dome** 85.85 25 P P 10 55 14.2 +1.4
baz=268
J25K **Salcha River,** 85.88 26 P P 10 55 14.0 +1.2
baz=268
F25K **Christian Rive** 85.89 23 P P 10 55 14.4 +1.6
baz=268
E25K **Arctic Village** 85.94 22 P P 10 55 14.3 +1.3
baz=268
RIDG **Independent Ri** 86.08 26 P P 10 55 15.1 +1.3
baz=268
BMRM **Bremner River** 86.12 29 P P 10 55 15.6 +1.6
baz=269
N25K **Chitina, Valde** 86.14 29 P P 10 55 15.2 +1.0
baz=269
KAIM **Kayak Island** 86.19 30 P P 10 55 15.3 +1.0
baz=269
BMAR **Burnt Mountain** 86.29 23 P P 10 55 15.7 +1.0
SCRK **Sand Creek** 86.46 26 P P 10 55 17.2 +1.4
baz=269
F26K **Shenjek River** 86.47 22 P P 10 55 16.9 +1.3
baz=269
G26K **Porcupine Rive** 86.59 23 P P 10 55 17.7 +1.5
baz=269
C27K **Jago River** 86.66 21 P P 10 55 18.1 +1.6
baz=269
BGLC **Bering Glacier** 86.77 30 P P 10 55 18.5 +1.4
baz=270
I26K **Coal Creek Min** 86.83 25 P P 10 55 19.1 +1.7
baz=270
CRQE **Cirque** 86.86 29 P P 10 55 19.0 +1.2
baz=270
MCARA **McCarthy VSAT** 86.89 29 P P 10 55 19.4 +1.6
baz=270
M27K **Edge Creek, AK** 87.42 28 P P 10 55 21.3 +0.8
baz=271
E27K **Coleen River** 87.43 22 P P 10 55 21.5 +1.2
baz=271
MESA **MESA** 87.43 30 P P 10 55 21.6 +1.0
baz=271
G27K **Doyon Strip** 87.43 23 P P 10 55 21.4 +1.0
baz=271
L27K **Beaver Creek,** 87.43 27 P P 10 55 21.6 +1.2
baz=271
I27K **Kandik River** 87.47 25 P P 10 55 21.7 +1.1
baz=271
H27K **Steamboat Moun** 87.50 24 P P 10 55 21.7 +1.0
baz=271
D27M **Malcolm River** 87.64 21 P P 10 55 22.3 +1.0
baz=272
CTG **Chitna Glacier** 87.72 29 P P 10 55 22.7 +0.8
baz=272
F28M **Old Crow** 88.10 23 P P 10 55 24.3 +0.8
baz=273
YUK3 **Moose Creek** 88.11 28 P P 10 55 24.3 +0.5
baz=272
I28M **Miner Creek** 88.18 25 P P 10 55 24.1 +0.1
baz=273
O28M **Mount Upton** 88.28 29 P P 10 55 24.6 -0.2
baz=273
PINM **Pinnacle** 88.28 30 P P 10 55 24.8 +0.3
baz=273
D28M **Stokes Point** 88.42 21 P P 10 55 25.8 +0.9
baz=274
YUK8 **Steele Glacier** 88.47 29 P P 10 55 26.2 +0.6
baz=273
DAWY **Dawson** 88.48 26 P P 10 55 26.3 +0.9
baz=273
E29M **Blow River** 88.79 22 P P 10 55 27.7 +1.0
baz=275
I29M **Ogilvie Camp,** 88.86 25 P P 10 55 28.0 +0.8
baz=274
M29M **Somme Creek** 89.01 28 P P 10 55 28.8 +0.8
baz=274
O29M **Mount Kennedy** 89.11 30 P P 10 55 28.8 +0.3
baz=274
L29M **L29M** 89.11 27 IAmb IAmb 10 58 48.4
comp=Z,12nm,1.5s
L29M **L29M** 89.11 27 P P 10 55 28.9 +0.5
baz=274
YUK6 **Outpost Mounta** 89.17 29 P P 10 55 29.3 +0.4
baz=274
K29M **Barlow Dome** 89.33 26 P P 10 55 29.8 +0.3
baz=275
EPYK **Eagle Plains** 89.43 24 P P 10 55 30.5 +0.7
baz=276
G30M **tAoh Zraii Nji** 89.56 23 P P 10 55 31.2 +0.8
baz=276
HYT **Haines Junctio** 89.59 29 P P 10 55 31.2 +0.4
baz=275
F30M **Barrier River** 89.66 22 P P 10 55 31.4 +0.6
baz=277
I30M **Mount Dempster** 89.69 25 P P 10 55 31.7 +0.6
baz=276
N30M **Aishikik Lake** 89.74 29 P P 10 55 31.9 +0.6
baz=275
M30M **Minto, Yukon** 89.77 27 P P 10 55 32.1 +0.6
baz=276
J30M **Hart River** 89.77 25 P P 10 55 32.1 +0.5
baz=276
P30M **Million Dollar** 89.93 30 P P 10 55 32.6 +0.3
baz=276
MAYO **Mayo, Yukon** 90.07 26 P P 10 55 33.9 +1.1
baz=276
O30N **Mendenhall** 90.29 29 P P 10 55 35.1 +1.1
baz=276
N31M **Braeburn, Yuko** 90.36 29 P P 10 55 35.4 +1.2
baz=277
INK **Inuvik** 90.42 22 P P 10 55 35.4 +1.1
baz=279
H31M **Peel River** 90.46 24 P P 10 55 35.8 +1.2
baz=278
F31M **Tsiigehtchic** 90.46 22 P P 10 55 35.1 +0.7
baz=278
S31K **Pelican** 90.52 32 P P 10 55 35.5 +0.5
baz=276
SKAG **Skagway** 90.82 31 P P 10 55 37.2 +0.9
baz=277
WHY **Whitehorse** 90.89 29 P P 10 55 37.2 +0.4
baz=277
M31M **Drury Creek, Y** 90.92 28 P P 10 55 37.4 +0.6
baz=278
SIT **Sitka** 91.11 33 P P 10 55 38.5 +0.8
baz=277
R32K **Eaglecrest** 91.39 32 P P 10 55 39.1 +0.1
baz=278
S32K **Killisnoo** 91.46 32 P P 10 55 39.8 +0.5
baz=278
P32M **Atlin** 91.62 30 P P 10 55 41.0 +0.9
baz=278
N32M **Quiet Lake** 91.69 29 P P 10 55 41.3 +0.9
baz=279
BRTR **Keskin Array B** 91.84 310 P P 10 55 42.1 +0.4
comp=Z,0.2nm,0.4s,baz=69,slow=7.9,SNR=1.3
BRTR pP pP 10 55 54.5 -1.0
comp=Z,0.8nm,0.7s,baz=72,slow=4.7,SNR=3.7
comp=Z,0.2nm,0.4s
BRTR **Keskin Array B** 91.84 310 P P 10 55 40.8 -0.9
ARCES **ARCESS Array B** 91.85 340 P P 10 55 39.3 -1.6
comp=Z,3.7nm,0.9s,baz=59,slow=5.4,SNR=4.1
comp=Z,3.7nm,0.9s
ARCES **ARCESS Array B** 91.85 340 P P 10 55 39.8 -1.1
P33M **Teslin, Yukon** 91.97 30 P P 10 55 42.4 +0.6
baz=279
U33K **Whale Pass** 92.44 34 P P 10 55 44.6 +0.7
baz=279
Q32M **Nakina River** 92.45 31 P P 10 55 44.8 +0.6
baz=280
CRAG **Craig** 92.54 34 P P 10 55 44.5 +0.2
baz=279
QSPA **South Pole Qui** 92.73 180 P P 10 55 44.8 -0.3
comp=Z,5.9nm,0.8s,baz=201,slow=0.8,SNR=14
comp=Z,5.9nm,0.8s
QSPA **South Pole Qui** 92.73 180 P P 10 55 45.4 +0.2
FINES **FINESS Array B** 93.39 332 P P 10 55 46.9 -1.3
comp=Z,6.2nm,1.1s,baz=104,slow=8.0,SNR=4.1
FINES pP pP 10 56 00.2 -1.7
comp=Z,2.0nm,0.7s,baz=73,slow=6.4,SNR=1.8
comp=Z,6.2nm,1.1s
FINES **FINESS Array B** 93.39 332 P P 10 55 46.8 -1.4
V35K **Ketchikan** 93.41 34 P P 10 55 48.9 +0.5
baz=280
AKASG **Malin Array Be** 93.61 321 P P 10 55 49.6 +0.2
comp=Z,0.4nm,0.6s,baz=74,slow=4.0,SNR=1.8
AKASG pP pP 10 56 01.3 -1.8
comp=Z,0.5nm,0.4s,baz=72,slow=4.1,SNR=2.9
comp=Z,0.4nm,0.6s
AK11 **Malin Array Si** 93.65 321 P P 10 55 48.1 -1.5
T35M **Bob Quinn** 93.86 33 P P 10 55 51.0 +0.5
baz=281
WTLY **Watson Lake, Y** 93.96 29 P P 10 55 51.8 +0.9
baz=283
YKA **Yellowknife Ar** 99.66 25 P Pdif 10 56 16.6 0.0
comp=Z,0.4nm,0.9s,baz=302,slow=5.4,SNR=6.3
comp=Z,0.4nm,0.9s
TXAR **Lajitas Array** 120.87 53 PKP PKiKP 11 01 26.8 +0.6
comp=Z,0.1nm,0.4s,baz=65,slow=1.4,SNR=7.9
TORD **Torodi Ar. Bea** 124.73 288 PKP PKPdf 11 01 33.8 +0.1
comp=Z,1.2nm,0.8s,baz=100,slow=2.7,SNR=4.9
PLCA **Paso Flores** 138.58 158 PKP PKPdf 11 01 59.6 +0.4
comp=Z,2.4nm,0.8s,baz=229,slow=2.6,SNR=5.5
CFA **Coronel Fontan** 147.38 153 PKPbc PKPbc 11 02 17.1 -0.4
comp=Z,6.8nm,0.5s,baz=246,slow=4.4,SNR=24
LPAZ **La Paz** 158.98 131 PKPab PKPab 11 03 09.4 +0.2
comp=Z,1.4nm,0.8s,baz=162,slow=9.0,SNR=4.6

*BJI **14** 10:50:58.1, 11°.32N×127°.02E, h20km, mB5.3/1, mb4.8/60, Ms5.0/1, Ms7 4.8/1*
*MOS **14** 10:50:59.5±0.8, 11°.54N×126°.72E, h16km, mb5.0/63, Error ellipse: s-maj=9.3km s-min=4.4km az=116.9*
*NEIC **14** 10:51:00.8±1.0, 11°.53N±0°.07×126°.76E±0°.02, h10km±1km, mb5.0/166, Error ellipse: s-maj=12.2km s-min=4.1km az=174.0*
*MAN **14** 10:51:01.0, 11°.57N×126°.75E, h27km, MS4.7*
MAN INTENSITY II - HERNANI EASTERN SAMAR.
*IDC **14** 10:51:05.8±1.9, 11°.54N×126°.83E, h56km±17km, mb4.5/33, mbtmp4.8/37, ML4.8/5, MS4.5/1, Error ellipse: s-maj=15.5km s-min=8.3km az=83.0*

DJA ***14*** *10:51:57.7±0.8,8˚N±8˚×12˚7E±˚,h199km±4km,M4.9/42, mb4.7/42,mB5.5/6,MLv5.0/12,Mw(mB)4.9/6*

ISC 14 10:51:03.5±2.3,11˚54N±0˙04×126˚69E±0˙05,h30km±16km, n590,σ1§10/544,mb4.9/198,18C-5D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PLP	**Palo**	**1.71**	**258**	*eP*		**Pn**	**10 51 30.1**	**-1.2**
PLP				*eS*		**Sn**	**10 51 49.5**	**-2.6**
SCPH	**Surigao**	**2.10**	**214**	*i* P		**Pn**	**10 51 35.7**	**-1.0**
SCPH				*i* S		**Sn**	**10 51 58.2**	**-3.6**
TSSP	**Tandag City**	**2.53**	**191**	*eP*		**Pn**	**10 51 41.0**	**-1.4**
TSSP				*eS*		Sn	10 51 56.9	-15
LLP	**Lapu-Lapu**	**2.93**	**246**	*eP*		**Pn**	**10 51 47.4**	**-0.7**
LLP				*eS*		**Sn**	**10 52 25.4**	**+3.0**
MMPH	**Masbate**	**3.10**	**286**	*eP*		**Pn**	**10 51 50.4**	**0.0**
MMPH				*eS*		**Sn**	**10 52 26.2**	**-0.3**
CGP	**Cagayan de Oro**	**3.64**	**213**	*i* P		**Pn**	**10 51 57.8**	**0.0**
CGP				*i* S		**Sn**	**10 52 38.6**	**-1.1**
RCP	**Roxas**	**3.86**	**271**	*eP*		**Pn**	**10 52 01.2**	**+0.4**
RCP				*i* S		**Sn**	**10 52 47.0**	**+1.7**
DCPH	**Dipolog City**	**4.41**	**228**	*i* P		**Pn**	**10 52 08.1**	**-0.3**
DCPH				*i* S		**Sn**	**10 53 03.2**	**+4.6**
DAV	**Davao City (W)**	**4.57**	**194**	P		**Pn**	**10 52 12.3**	**+1.6**
	100nm,0.3s,baz=243,slow=16,SNR=2.1							
DAV				S		**Sn**	**10 53 07.2**	**+4.4**
	234nm,0.3s,baz=158,slow=22,SNR=3.6							
DAV				LR		LR	10 54 04.7	
	comp=Z,5µm,18.4s,baz=159,slow=39							
	199nm,0.3s							
DAV	**Davao City (W)**	**4.57**	**194**			**Pn**	**10 52 06.2**	**-4.4**
DAV	**Davao City (W)**	**4.57**	**194**	P		Pb	10 52 27.9	+4.8
DMPH	**Davao City--Mi**	**4.58**	**195**	*i* P		Pn	10 51 57.1	-14
DMPH				*i* S		Sn	10 52 34.0	-29
GQP	**Guinayangan**	**4.76**	**300**	*eP*		Pn	10 52 04.8	-8.4
GQP				*i* S		**Sn**	**10 53 07.1**	**-0.2**
KCP	**Kidapawan**	**4.77**	**199**	*i* P		**Pn**	**10 52 14.6**	**+1.2**
KCP				*i* S		**Sn**	**10 53 05.7**	**-2.0**
CTBH	**Cotabato--PC H**	**4.92**	**209**	*eP*		**Pn**	**10 52 15.8**	**+0.4**
TGY	**Tagaytay City**	**6.16**	**295**	P		Pn	10 52 37.6	+5.1
	107nm,0.3s,baz=186,slow=15,SNR=3.2							
SGSI	**Sangihe**	**7.89**	**188**	P		**Pn**	**10 52 59.6**	**+3.4**
MNI	**Manado**	**10.20**	**190**	P		**Pn**	**10 53 29.7**	**+1.8**
	1.5nm6µm127nm,0.6s							
MYLDM	**Lahad Datu**	**10.27**	**233**			**Pn**	**10 53 28.6**	**-0.2**
MYLDM	**Lahad Datu**	**10.27**	**233**	P		Pn	10 53 57.3	+28
TNTI	**Ternate**	**10.72**	**176**			**Pn**	**10 53 33.9**	**-1.2**
TNTI	**Ternate**	**10.72**	**176**	P		**Pn**	**10 53 35.2**	**+0.2**
	0.6nm128nm,0.6s							
GTOI	**Gorontalo**	**11.43**	**199**	P		**Pn**	**10 53 44.8**	**0.0**
	0.2nm48nm,0.8s							
KKM	**Kota Kinabalu**	**11.70**	**243**			**Pn**	**10 53 47.7**	**-0.9**
TOLI2	**Tolitoli**	**11.90**	**210**	Pn		**Pn**	**10 53 50.1**	**-1.1**
MPSI	**Mapaga**	**13.01**	**212**	P		**P**	**10 54 14.9**	**-1.6**
	28nm,0.9s							
TPUB	**Ta-pu**	**13.04**	**335**	Pn		**Pn**	**10 54 05.8**	**-1.0**
LUWI	**Luwuk**	**13.09**	**198**	Pn		**Pn**	**10 54 07.1**	**-0.4**
LUWI	**Luwuk**	**13.09**	**198**	P		**Pn**	**10 54 09.4**	**+1.9**
	121nm,0.8s							
SWI	**Sorong**	**13.13**	**159**	P		**Pn**	**10 54 10.9**	**+2.8**
	66nm,1.1s							
SIJI	**Sorong**	**13.14**	**159**	P		**Pn**	**10 54 10.3**	**+2.1**
	2.0nm,0.3s,baz=352,slow=9.7,SNR=9.5							
	20nm,0.6s							
SIJI	**Sorong**	**13.14**	**159**	P		**Pn**	**10 54 11.3**	**+3.1**
	43nm,0.8s							
APSI	**Ampana**	**13.34**	**202**	P		**Pn**	**10 54 12.9**	**+2.0**
	92nm,1.3s							
SANI	**Sanana**	**13.52**	**183**	P		**Pn**	**10 54 08.6**	**-4.7**
	72nm,0.7s							
NLAI	**Namlea**	**14.69**	**178**	P		**Pn**	**10 54 25.8**	**-3.5**
BKB	**Balikpapan**	**16.01**	**218**			**Pn**	**10 54 44.1**	**-2.5**
BKB	**Balikpapan**	**16.01**	**218**	P		**P**	**10 54 53.9**	**+4.1**
TTSI	**Tana Toraja**	**16.02**	**206**	P		**P**	**10 54 49.7**	**-0.2**
	251nm,1.4s							
MMSI	**Mamuju**	**16.11**	**209**	P		**P**	**10 54 51.6**	**+0.6**
	64nm,0.9s							
SPSI	**Sidrap Palu**	**16.87**	**204**	P		**P**	**10 54 58.9**	**-0.4**
	105nm,0.8s							
SBUM	**Sibu**	**16.95**	**239**			**Pn**	**10 54 59.1**	**+0.6**
KAPI	**Kappang**	**17.83**	**203**	P		**Pn**	**10 55 09.3**	**-0.2**
	3.6nm,0.3s,baz=26,slow=8.0,SNR=12							
	39nm,0.7s							
KAPI	**Kappang**	**17.83**	**203**			**Pn**	**10 55 09.5**	**0.0**
KAPI	**Kappang**	**17.83**	**203**	*d* iP		**P**	**10 55 09.7**	**-0.3**
KAPI					pmax	pmax		
	comp=Z,82nm,1.0s							
KAPI	**Kappang**	**17.83**	**203**	P		**Pn**	**10 55 09.3**	**-0.2**
BSSI	**Bau Bau, Buton**	**18.62**	**200**	P		**Pn**	**10 55 19.1**	**0.0**
	comp=Z,56nm,0.8s							
JAY	**Jayapura**	**19.73**	**134**	P		**P**	**10 55 30.4**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=323,slow=4.0,SNR=5.2							
	comp=Z,20nm,0.8s							
MMRI	**Maumere**	**20.52**	**193**	P		**P**	**10 55 38.6**	**-0.8**
MMRI					IAmb	IAmb	10 55 48.9	
	comp=Z,113nm,1.2s							
EDFI	**Ende, Flores**	**20.76**	**194**	P		**P**	**10 55 43.1**	**+1.0**
	comp=Z,44nm,0.9s							
JCJ	**Chichijima**	**21.26**	**41**	P		**P**	**10 55 47.1**	**-0.2**
	comp=Z,122nm,0.7s,baz=312,slow=14,SNR=4.1							
	comp=Z,122nm,0.7s							
SOEI	**Soe**	**21.29**	**187**			**P**	**10 55 46.4**	**-1.5**
SOEI					IAmb	IAmb	10 56 03.5	
	comp=Z,79nm,0.8s							
SOEI	**Soe**	**21.29**	**187**	P		**P**	**10 55 45.2**	**-2.7**
	comp=Z,138nm,1.0s							
DBNI	**Kabupaten Domp**	**21.58**	**203**	P		**P**	**10 55 53.3**	**+2.4**
NJ2	**Nanjing**	**21.65**	**342**	*eP*		**P**	**10 55 49.9**	**-1.6**
NJ2					pmax	pmax		
	comp=Z,29nm,1.1s							
BATI	**Baumata**	**21.81**	**188**	P		**P**	**10 55 52.0**	**-1.4**
	comp=Z,74nm,0.6s,baz=142,slow=1.7,SNR=9.5							
	comp=Z,74nm,0.6s							
JNU	**Nakatsue**	**21.82**	**10**	P		**P**	**10 55 52.9**	**-0.5**
	comp=Z,29nm,0.9s,baz=134,slow=5.8,SNR=8.0							
	comp=Z,29nm,0.9s							
PLAI	**Plampang**	**22.09**	**204**	P		**P**	**10 55 57.5**	**+1.2**
	comp=Z,69nm,0.9s							
WHN	**Wuhan**	**22.10**	**331**	P		**P**	**10 55 58.4**	**+2.0**
WBSI	**Waikabubak, Su**	**22.26**	**199**	P		**P**	**10 55 58.3**	**+0.1**
	comp=Z,55nm,0.9s							
TWSI	**Taliwang, Sumb**	**22.38**	**206**	P		**P**	**10 56 02.3**	**+2.8**
JAGI	**Jajag, Banyuwa**	**23.46**	**213**	P		**P**	**10 56 09.8**	**-0.8**
SMRI	**Semarang**	**24.54**	**222**	P		**P**	**10 56 21.5**	**+0.8**
MTN	**Manton Dam**	**24.62**	**170**	P		**P**	**10 56 20.8**	**-0.6**
MTN					IAmb	IAmb	10 56 29.7	
	comp=Z,43nm,1.1s							
MYKOM	**Kota Tinggi**	**24.64**	**249**	P		**P**	**10 56 21.3**	**-0.3**
MYKOM					IAmb	IAmb	10 56 23.2	
	comp=Z,36nm,0.9s							
TJN	**Taejon**	**24.74**	**1**	P		**P**	**10 56 24.3**	**+2.0**
UGM	**Wanagama**	**25.14**	**220**			**P**	**10 56 26.0**	**-0.2**
INU	**Inuyama**	**25.49**	**20**			**P**	**10 56 28.2**	**-1.0**
INU					IAmb	IAmb	10 56 33.2	
	comp=Z,27nm,0.8s							
KSAR	**Wonju Array Be**	**25.82**	**2**	P		**P**	**10 56 31.7**	**-0.3**
KSAR	**Wonju Array Be**	**25.82**	**2**	P		**P**	**10 56 31.7**	**-0.3**
KSRS	**Korea Array**	**25.83**	**2**	P		**P**	**10 56 32.5**	**+0.4**
	comp=Z,18nm,1.0s,baz=177,slow=11,SNR=29							
	comp=Z,18nm,1.0s							
JGF	**Kuroka**	**25.84**	**20**	P		**P**	**10 56 30.8**	**-1.5**
JGF					IAmb	IAmb	10 56 34.0	
	comp=Z,23nm,0.9s							
KS19	**Wonju Array Si**	**25.87**	**2**	P		**P**	**10 56 32.5**	**-0.1**
KS19					IAmb	IAmb	10 56 42.5	
	comp=Z,78nm,1.8s							
TIA	**Tai'an**	**26.04**	**342**	P		**P**	**10 56 34.1**	**0.0**
TIA					pmax	pmax		
	comp=Z,27nm,0.7s							
LYN	**LuoYang**	**26.32**	**333**	P		**P**	**10 56 37.8**	**+1.2**
LYN					pmax	pmax		
	comp=Z,19nm,0.8s							
KMI2	**Kunming**	**26.39**	**304**	P		**P**	**10 56 39.3**	**+1.7**
KMI2					pmax	pmax		
	comp=Z,28nm,0.9s							
KULM	**Kulim**	**26.48**	**259**	P		**P**	**10 56 38.9**	**+0.6**
KULM					IAmb	IAmb	10 56 42.7	
	comp=Z,52nm,1.1s							
BBJI	**Bungbulang**	**26.74**	**226**			**P**	**10 56 40.9**	**+0.2**
BBJI					IAmb	IAmb	10 56 47.4	
	comp=Z,37nm,0.9s							
MAJO	**Matsushiro**	**26.98**	**21**	P		**P**	**10 56 41.6**	**-1.0**
MAJO	**Matsushiro**	**26.98**	**21**	P		**P**	**10 56 41.6**	**-1.0**
MAJO					pmax	pmax		
	comp=Z,15nm,1.0s							
MJAR	**Matsushiro Arr**	**26.98**	**21**	P		**P**	**10 56 41.1**	**-1.5**
	comp=Z,8.5nm,0.8s,baz=192,slow=9.4,SNR=24							
	comp=Z,8.5nm,0.8s							
MJAR	**Matsushiro Arr**	**26.98**	**21**	P		**P**	**10 56 41.4**	**-1.2**
MJAR	**Matsushiro Arr**	**26.98**	**21**	P		**P**	**10 56 41.4**	**-1.2**
MJAR					pmax	pmax		
	comp=Z,7.0nm,1.2s							
KNRA	**Kununurra**	**27.12**	**176**	P		**P**	**10 56 42.9**	**-1.0**
KNRA					IAmb	IAmb	10 57 06.4	
	comp=Z,24nm,0.7s							
DL2	**Dalian**	**27.62**	**351**	P		**P**	**10 56 48.0**	**-0.3**
DL2					pmax	pmax		
	comp=Z,21nm,0.6s							
CM31	**Chiang Mai Arr**	**27.64**	**288**	P		**P**	**10 56 48.6**	**-0.2**
CM31					IAmb	IAmb	10 56 49.5	
	comp=Z,30nm,1.0s							
CMAR	**Chiang Mai Arr**	**27.64**	**288**	P		**P**	**10 56 48.4**	**-0.4**
	comp=Z,15nm,0.9s,baz=100,slow=7.5,SNR=77							
CMAR					PcP	**PcP**	**11 00 04.9**	**-0.9**
	comp=Z,0.5nm,0.3s,baz=57,slow=1.3,SNR=4.4							
	comp=Z,15nm,0.9s							
CMAR	**Chiang Mai Arr**	**27.64**	**288**	P		**P**	**10 56 48.5**	**-0.2**
CMAR	**Chiang Mai Arr**	**27.64**	**288**	*ce*P		**P**	**10 56 48.7**	**-0.1**
CMAR					pmax	pmax		
	comp=Z,15nm,0.9s							
XAN	**Xi'an**	**27.65**	**327**	⇑P		**P**	**10 56 48.9**	**+0.2**
XAN					pmax	pmax		
	comp=Z,8.0nm,0.8s							
CHTO	**Chiang Mai**	**27.71**	**289**			**P**	**10 56 48.6**	**-0.7**
CHTO	**Chiang Mai**	**27.71**	**289**	P		**P**	**10 56 48.6**	**-0.7**
CHTO					pmax	pmax		
	comp=Z,12nm,1.0s							
PZH	**PanZhiHua**	**27.81**	**306**	P		**P**	**10 56 53.1**	**+2.8**
HNS	**HongShan**	**27.91**	**339**	⇓P		**P**	**10 56 51.4**	**+0.5**
HNS					pmax	pmax		
	comp=Z,38nm,1.2s							
FITZ	**Fitzroy Crossi**	**29.47**	**182**	P		**P**	**10 57 04.2**	**-0.6**
	comp=Z,18nm,0.6s,baz=13,slow=6.8,SNR=24							
	comp=Z,18nm,0.6s							
BJI2	**Beijing**	**29.85**	**344**	P		**P**	**10 57 08.6**	**+0.4**
BJI2					pmax	pmax		
	comp=Z,5.0nm,1.1s							
LZH	**Lanzhou**	**31.99**	**324**	*eP*		P	10 57 33.6	+6.3
LZH					sP	pwP	10 57 40.8	-1.8
LZH					pmax	pmax		
	comp=Z,17nm,1.3s							
WB0	**Warramunga Arr**	**32.02**	**166**	P		**P**	**10 57 26.0**	**-1.5**
WB0					IAmb	IAmb	10 57 28.6	
	comp=Z,9.6nm,0.7s							
HHC	**Hu-ho-hao-te**	**32.09**	**338**	*eP*		**P**	**10 57 29.3**	**+1.3**
HHC					pP	pP	10 57 32.6	-2.3
HHC					pmax	pmax		
	comp=Z,17nm,0.8s							
CN2	**Changchun**	**32.16**	**358**	*eP*		**P**	**10 57 31.1**	**+2.6**
CN2					pmax	pmax		
	comp=Z,10.0nm,0.6s							
WRAB	**Tennant Creek**	**32.17**	**166**	P		**P**	**10 57 27.9**	**-0.9**
WRAB					IAmb	IAmb	10 57 31.0	
	comp=Z,15nm,1.1s							
WRAB	**Tennant Creek**	**32.17**	**166**	P		**P**	**10 57 27.9**	**-0.9**
WRAB					pmax	pmax		
	comp=Z,15nm,1.1s							
WRA	**Warramunga Arr**	**32.18**	**166**	P		**P**	**10 57 27.2**	**-1.6**
	comp=Z,5.1nm,0.7s,baz=343,slow=9.0,SNR=38							
WRA					PcP	**PcP**	**11 00 17.0**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=343,slow=3.1,SNR=3.1							
	comp=Z,5.1nm,0.7s							
WRA	**Warramunga Arr**	**32.18**	**166**	P		**P**	**10 57 26.3**	**-2.6**
WRA	**Warramunga Arr**	**32.18**	**166**	*ce*P		**P**	**10 57 29.0**	**+0.1**
WRA					pmax	pmax		
	comp=Z,6.0nm,0.7s							
WR8	**Warramunga Arr**	**32.23**	**166**	P		**P**	**10 57 28.1**	**-1.2**
WR8					IAmb	IAmb	10 57 30.7	
	comp=Z,25nm,1.3s							
BTO2	**Baotou**	**32.64**	**336**	*eP*		**P**	**10 57 33.3**	**+0.4**
BTO2					pmax	pmax		
	comp=Z,24nm,0.7s							
USRK	**Ussuriysk Ar.**	**32.86**	**7**	P		**P**	**10 57 33.6**	**-0.9**
	comp=Z,14nm,0.8s,baz=193,slow=8.1,SNR=16							
	comp=Z,14nm,0.8s							
MDJ	**Mudanjiang**	**33.05**	**4**	P		**P**	**10 57 37.0**	**+0.7**
MDJ					pmax	pmax		
	comp=Z,10.0nm,1.1s							
MBWA	**Marble Bar**	**33.20**	**192**	P		**P**	**10 57 37.3**	**-0.5**
MBWA					IAmb	IAmb	10 57 39.7	
	comp=Z,21nm,0.8s							
XLT	**XiLinHaoTe**	**33.52**	**346**	*eP*		**P**	**10 57 41.1**	**+0.6**
XLT					pP	pP	10 57 44.4	-3.0
XLT					pmax	pmax		
	comp=Z,23nm,1.0s							
PSAC1	**Pilbara Seismi**	**33.55**	**192**	P		**P**	**10 57 41.0**	**+0.1**
	comp=Z,63nm,0.9s							
PSAC2	**Pilbara Seismi**	**33.56**	**191**	P		**P**	**10 57 40.5**	**-0.5**
	comp=Z,57nm,0.9s							
PSA00	**Pilbara Seismi**	**33.58**	**192**	P		**P**	**10 57 40.3**	**-0.8**
	comp=Z,57nm,0.9s							
PSA00	**Pilbara Seismi**	**33.58**	**192**	P		**P**	**10 57 40.3**	**-0.8**
PSA00	**Pilbara Seismi**	**33.58**	**192**	P		**P**	**10 57 40.5**	**-0.7**
PSA00					IAmb	IAmb	10 57 43.2	
	comp=Z,26nm,0.8s							
PSAB3	**Pilbara Seismi**	**33.60**	**192**	P		**P**	**10 57 41.1**	**-0.1**
	comp=Z,60nm,0.9s							
BNX	**BinXian**	**34.09**	**1**	⇑P		**P**	**10 57 45.4**	**+0.2**
BNX					pmax	pmax		
	comp=Z,16nm,1.2s							
QIS	**Mount Isa**	**34.33**	**158**	P		**P**	**10 57 46.6**	**-1.1**
	comp=Z,37nm,0.7s							
AS31	**Alice Springs**	**35.69**	**169**	P		**P**	**10 57 58.4**	**-1.0**
ASAR	**Alice Springs**	**35.70**	**169**	P		**P**	**10 57 58.3**	**-1.1**
	comp=Z,6.5nm,0.5s,baz=354,slow=7.1,SNR=49							
ASAR					PcP	**PcP**	**11 00 26.6**	**-0.8**
	comp=Z,1.4nm,0.7s,baz=343,slow=3.5,SNR=2.8							
	comp=Z,6.5nm,0.5s							
ASAR	**Alice Springs**	**35.70**	**169**	P		**P**	**10 57 58.1**	**-1.3**
GTA2	**Gaotai**	**36.67**	**324**	P		**P**	**10 58 08.9**	**+1.2**
GTA2					pmax	pmax		
	comp=Z,28nm,1.2s							
GOMU	**GeErMu**	**37.81**	**316**	P		**P**	**10 58 17.1**	**-0.6**
GOMU					pmax	pmax		
	comp=Z,8.0nm,1.3s							
KLR	**Kul'dur**	**37.81**	**5**	*ce*P		**P**	**10 58 17.7**	**+0.6**
KLR					pmax	pmax		
	comp=Z,5.0nm,1.3s							
YSS	**Yuzhno-Sakhali**	**37.82**	**18**	P		**P**	**10 58 17.6**	**+0.4**
YSS	**Yuzhno-Sakhali**	**37.82**	**18**	*ce*P		**P**	**10 58 17.9**	**+0.7**
YSS					pmax	pmax		
	comp=Z,35nm,1.2s							
HIA	**Hailar**	**38.05**	**353**	*i* P		**P**	**10 58 18.5**	**-0.7**
HIA					pmax	pmax		
	comp=Z,9.0nm,1.2s							
HEH	**HeiHe**	**38.60**	**1**	*eP*		**P**	**10 58 24.0**	**+0.3**
HEH					pmax	pmax		
	comp=Z,13nm,1.0s							
MEEK	**Meekatharra**	**38.75**	**192**	P		**P**	**10 58 25.8**	**+0.5**
	comp=Z,49nm,1.1s							
ULN	**Ulaanbaatar**	**39.78**	**339**	P		**P**	**10 58 34.2**	**+0.3**
ULN					IAmb	IAmb	10 58 37.4	
	comp=Z,101nm,2.0s							
ULN	**Ulaanbaatar**	**39.78**	**339**	*ce*P		**P**	**10 58 34.4**	**+0.6**
ULN					pmax	pmax		
	comp=Z,12nm,1.1s							
SONM	**Songino Array**	**39.99**	**339**	P		**P**	**10 58 36.1**	**+0.6**
	comp=Z,5.7nm,0.7s,baz=156,slow=9.7,SNR=36							
SONM					PcP	**PcP**	**11 00 39.5**	**-0.8**
	comp=Z,1.3nm,0.8s,baz=164,slow=3.8,SNR=2.8							
	comp=Z,5.7nm,0.7s							
INKA	**Innaminka**	**41.36**	**161**	P		**P**	**10 58 46.7**	**-0.1**
MORW	**Morawa**	**41.66**	**194**	P		**P**	**10 58 48.8**	**-0.6**
	comp=Z,54nm,0.8s							
MORW	**Morawa**	**41.66**	**194**	P		**P**	**10 58 49.2**	**-0.2**
MORW					IAmb	IAmb	10 58 51.7	
	comp=Z,35nm,0.8s							
ZEA	**Zeya**	**42.09**	**1**	*eP*		**P**	**10 58 53.7**	**+1.1**
ZEA					pmax	pmax		
	comp=Z,10.0nm,1.2s							
FORT	**Forrest**	**42.09**	**178**	P		**P**	**10 58 53.0**	**+0.1**
BLDU	**Ballidu**	**42.99**	**193**	P		**P**	**10 58 59.6**	**-0.6**
	comp=Z,42nm,0.9s							
ZAK	**Zakamensk**	**43.24**	**338**	*eP*		**P**	**10 59 01.7**	**-0.4**
ZAK					pmax	pmax		
	comp=Z,9.0nm,1.6s							
EIDS	**Eidsvold**	**43.72**	**147**	P		**P**	**10 59 05.5**	**-0.6**
KLBR	**Kellerberrin**	**43.73**	**191**	P		**P**	**10 59 06.1**	**0.0**
	comp=Z,53nm,0.8s							
TLY	**Talaya**	**44.19**	**340**	*ce*P		**P**	**10 59 10.6**	**+1.0**
TLY					pmax	pmax		
	comp=Z,16nm,1.0s							
MUN	**Mundaring**	**44.42**	**193**	P		**P**	**10 59 11.7**	**+0.1**
	comp=Z,43nm,0.9s							
IRK	**Irkutsk**	**44.45**	**340**	*eP*		**P**	**10 59 12.3**	**+0.6**
IRK					pmax	pmax		
	comp=Z,27nm,1.9s							
BBOO	**Buckleboo**	**45.00**	**169**	P		**P**	**10 59 14.8**	**-1.5**
	comp=Z,88nm,0.8s							
BBOO	**Buckleboo**	**45.00**	**169**	P		**P**	**10 59 16.4**	**+0.1**
MOY	**Mondy**	**45.13**	**338**	*eP*		**P**	**10 59 18.0**	**+0.8**
MOY					pmax	pmax		
	comp=Z,35nm,1.8s							
NWAO	**Narrogin (SRO)**	**45.13**	**191**	P		**P**	**10 59 19.4**	**+2.2**
	comp=Z,58nm,1.2s							
NWAO	**Narrogin (SRO)**	**45.13**	**191**	P		**P**	**10 59 17.6**	**+0.4**
NWAO	**Narrogin (SRO)**	**45.13**	**191**	P		**P**	**10 59 17.7**	**+0.4**
NWAO					pmax	pmax		
	comp=Z,68nm,1.2s							
STKA	**Stephens Creek**	**45.47**	**162**	P		**P**	**10 59 20.1**	**+0.1**
	comp=Z,153nm,0.9s							
STKA	**Stephens Creek**	**45.47**	**162**	P		**P**	**10 59 19.5**	**-0.5**
	comp=Z,6.7nm,0.7s,baz=341,slow=7.9,SNR=11							
	comp=Z,6.7nm,0.7s							
STKA	**Stephens Creek**	**45.47**	**162**	P		**P**	**10 59 19.6**	**-0.4**
STKA	**Stephens Creek**	**45.47**	**162**	P		**P**	**10 59 19.6**	**-0.4**
KNGR	**Kungurtug, Tuv**	**45.69**	**334**	*i* P		**P**	**10 59 21.1**	**-0.6**
KNGR					pmax	pmax		
	comp=Z,6.0nm,1.0s							
WMQ	**Urumqi**	**46.49**	**321**	*eP*		**P**	**10 59 30.9**	**+2.9**
WMQ					pP	pP	10 59 33.6	-1.6
WMQ					PcP	**PcP**	**11 01 04.1**	**+1.8**
CMSA	**Cobar Meteorol**	**46.55**	**157**	P		**P**	**10 59 28.7**	**+0.2**
PEA0B	**Petropavlovsk-**	**48.32**	**25**	*i* P		**P**	**10 59 41.8**	**-0.2**
PETK	**Petropavlovsk-**	**48.32**	**25**	P		**P**	**10 59 40.8**	**-1.2**
	comp=Z,12nm,0.8s,baz=213,slow=3.4,SNR=13							
	comp=Z,12nm,0.8s							
DGZ	**Jazzator, Alta**	**49.91**	**328**	*i* P		**P**	**10 59 53.9**	**-0.6**
DGZ					pmax	pmax		
	comp=Z,3.0nm,0.9s							
ZSN	**Zaisan**	**50.08**	**324**	*eP*		**P**	**10 59 56.4**	**+0.8**
ZSN	**Zaisan**	**50.08**	**324**	*eP*		**P**	**10 59 56.5**	**+0.8**
YAK	**Yakutsk**	**50.45**	**2**	*eP*		**P**	**10 59 58.3**	**+0.2**
YAK					pmax	pmax		
	comp=Z,45nm,1.1s							
YAK					pmax	pmax		
	comp=N,27nm,1.5s							
YAK					pmax	pmax		
	comp=E,10.0nm,1.5s							
MA2	**Magadan**	**51.21**	**15**	P		**P**	**11 00 03.3**	**-0.6**
MA2					IAmb	IAmb	11 00 05.6	
	comp=Z,22nm,1.3s							
MA2	**Magadan**	**51.21**	**15**	*ce*P		**P**	**11 00 02.8**	**-1.1**
MA2					pmax	pmax		
	comp=Z,25nm,1.7s							
MK31	**Makanchi Array**	**51.28**	**322**	*de*P		**P**	**11 00 05.7**	**+1.0**
MKAR	**Makanchi Array**	**51.28**	**322**	P		**P**	**11 00 05.4**	**+0.7**
	comp=Z,7.7nm,0.8s,baz=114,slow=8.3,SNR=45							
	comp=Z,7.7nm,0.8s							
MKAR	**Makanchi Array**	**51.28**	**322**	*ce*P		**P**	**11 00 05.6**	**+0.9**
MKAR					pmax	pmax		
	comp=Z,8.0nm,0.8s							
MAKZ	**Makanchi**	**51.47**	**322**	P		**P**	**11 00 06.9**	**+0.8**
MAKZ	**Makanchi**	**51.47**	**322**	P		**P**	**11 00 06.9**	**+0.8**
MAKZ					pmax	pmax		
	comp=Z,11nm,1.1s							
SHLS	**Shalkode**	**51.50**	**317**	*eP*		**P**	**11 00 05.1**	**-1.4**
SHLS					pmax	pmax		
	comp=Z,9.0nm,1.0s							
SHLS	**Shalkode**	**51.50**	**317**	*eP*		**P**	**11 00 05.2**	**-1.4**
	comp=Z,9.2nm,1.0s							
UZB	**Uzynbulak**	**51.79**	**316**	*eP*		**P**	**11 00 09.4**	**+0.7**
UZB					pmax	pmax		
	comp=Z,6.0nm,0.8s							
UZB	**Uzynbulak**	**51.79**	**316**	*eP*		**P**	**11 00 09.5**	**+0.7**
	comp=Z,6.3nm,0.8s							
TARG	**Taragay, Kyrgy**	**52.10**	**314**	P		**P**	**11 00 13.3**	**+1.9**
TARG					pmax	pmax		
	comp=Z,7.0nm,0.8s							
KPKS	**Kokpek**	**52.14**	**317**	*eP*		**P**	**11 00 11.9**	**+0.6**
KPKS	**Kokpek**	**52.14**	**317**	*eP*

CHM Chimkent 58.11 313 eP P 11 00 54.9 +0.6
CHM Chimkent 58.11 313 eP P 11 00 54.9 +0.6
BRLS Boroldaу 58.12 314 eP P 11 00 55.1 +0.8
BRLS Boroldaу 58.12 314 eP P 11 00 55.2 +0.8
BRZS Berezniki 58.42 322 eP P 11 00 57.2 +0.9
BRZS Berezniki 58.42 322 eP P 11 00 57.3 +0.9
MSVF Nonsavu 58.47 119 i P P 11 00 58.3 +1.1
MSVF pmax pmax
comp=Z,21nm,1.1s
TIXI Tiksi 60.08 1 P P 11 01 07.0 -0.3
TIXI IAmb IAmb 11 01 08.4
comp=Z,15nm,1.0s
TIXI Tiksi 60.08 1 ceP P 11 01 07.4 0.0
TIXI pmax pmax
comp=Z,14nm,1.0s
BVAR Borovoye Array 60.86 325 P P 11 01 13.9 +0.9
comp=Z,15nm,1.0s,baz=111,slow=8.4,SNR=28
comp=Z,15nm,1.0s
BVAR Borovoye Array 60.86 325 P P 11 01 14.0 +0.9
BORK Borovoye 60.91 325 P P 11 01 13.9 +0.5
BORK Borovoye 60.91 325 P P 11 01 13.9 +0.5
BORK pmax pmax
comp=Z,22nm,0.9s
BILL Bilibino 62.08 16 P P 11 01 21.5 +0.5
BILL Bilibino 62.08 16 ceP P 11 01 19.2 -1.8
BILL pmax pmax
comp=Z,6.0nm,1.2s
HRA Herat 62.52 303 P P 11 01 25.0 +0.1
HRA IAmb IAmb 11 01 28.3
comp=Z,14nm,1.3s
AB31 Akbulak array 66.19 319 P P 11 01 48.7 +0.4
AB31 IAmb IAmb 11 01 52.0
comp=Z,12nm,0.9s
ABKAR Akbulak array 66.19 319 P P 11 01 48.6 +0.3
GAMB Gambell 67.35 25 P P 11 01 56.0 +0.6
baz=249
AKTO Aktyubinsk 67.62 320 P P 11 01 57.7 +0.3
comp=Z,6.1nm,0.6s,baz=95,slow=8.2,SNR=6.5
comp=Z,6.1nm,0.6s
ARTI Arti 68.49 326 P P 11 02 02.4 -0.4
comp=Z,5.3nm,0.8s,baz=114,slow=4.6,SNR=4.3
comp=Z,5.3nm,0.8s
ARTI Arti 68.49 326 P P 11 02 02.7 -0.1
ARTI IAmb IAmb 11 02 03.4
comp=Z,14nm,1.2s
ARTI Arti 68.49 326 d iP P 11 02 00.9 -1.8
ARTI 11 02 22.7
ARTI S S 11 11 01.2 -1.4
ARTI pmax pmax
comp=Z,15nm,1.3s
M11K Mekoryuk 68.79 29 P P 11 02 04.9 +0.4
baz=256
FALS False Pass 69.09 36 P P 11 02 06.7 +0.2
baz=260
TNA Tin City 69.48 24 P P 11 02 09.1 +0.4
baz=252
K13K Kusilvak Mount 69.89 28 P P 11 02 11.9 +0.6
baz=256
F14K Arctic Creek 70.09 24 P P 11 02 13.2 +0.7
baz=254
M13K Dall Lake 70.17 30 P P 11 02 13.6 +0.6
baz=258
ANM Nome 70.23 25 P P 11 02 14.4 +1.0
baz=255
J14K Nanvaranak Lak 70.58 27 P P 11 02 16.2 +0.8
baz=257
L14K Kuka Creek 70.68 29 P P 11 02 17.1 +0.9
baz=258
F15K North Star Dit 70.83 24 P P 11 02 18.1 +1.1
baz=255
SDPT Sand Point 70.83 35 P P 11 02 17.7 +0.5
baz=262
G15K Niukluk 70.89 25 P P 11 02 17.4 0.0
baz=256
N14K Kuskokwak Cree 70.90 30 P P 11 02 17.2 -0.2
baz=260
M14K Bethel 70.91 29 P P 11 02 17.2 -0.3
baz=259
O14K Tigyukauivet M 70.99 31 P P 11 02 17.2 -0.9
baz=260
C16K Lisburne Hills 71.26 21 P P 11 02 19.6 +0.1
baz=254
CHNA Chernabura Isl 71.28 36 P P 11 02 19.2 -0.6
baz=263
L15K Ungalak Mounta 71.31 29 P P 11 02 19.6 -0.3
baz=259
K15K Wolf Creek Mou 71.40 28 P P 11 02 20.4 -0.1
baz=259
M15K Kasigluk River 71.52 30 P P 11 02 21.1 -0.1
baz=260
H16K Elim 71.56 25 P P 11 02 21.3 -0.2
baz=258
G16K Koyuk River 71.68 25 P P 11 02 22.2 +0.1
baz=257
O15K Ungalikthiuk R 71.71 31 P P 11 02 21.5 -1.0
baz=262
N15K Kwethluk River 71.73 30 P P 11 02 22.2 -0.3
baz=261
D17K Noatak River 71.93 22 P P 11 02 23.7 +0.2
baz=256
I17K Unalakleet 72.07 26 P P 11 02 24.5 -0.1
baz=259
RDOG Red Dog Mine 72.08 22 P P 11 02 24.5 0.0
baz=256
C17K DeLong Mountai 72.08 21 P P 11 02 24.2 -0.3
baz=256
CHGN Chignik 72.10 34 P P 11 02 24.9 +0.1
baz=264
L16K Owhat River 72.26 29 IAmb IAmb 11 02 46.4
comp=Z,29nm,1.7s
L16K Owhat River 72.26 29 P P 11 02 25.4 -0.2
baz=261
F17K Baldwin Pennin 72.34 24 P P 11 02 25.9 -0.2
baz=258
G17K Kiwalik Mounta 72.40 25 P P 11 02 26.1 -0.4
baz=259
M16K Timber Creek 72.40 29 IAmb IAmb 11 02 28.2
comp=Z,9.4nm,1.0s
M16K Timber Creek 72.40 29 P P 11 02 25.7 -0.9
baz=262
N16K Nishlik Lake 72.42 30 P P 11 02 26.6 -0.1
baz=262
H17K Granite Mounta 72.60 25 P P 11 02 27.6 -0.1
baz=260
P16K Nushagak River 72.63 32 P P 11 02 28.0 0.0
baz=263
O16K Kokwok River B 72.64 31 IAmb IAmb 11 02 29.9
comp=Z,11nm,0.8s
O16K Kokwok River B 72.64 31 P P 11 02 28.3 +0.3
baz=263
E18K Tukpahlearik C 72.79 23 IAmb IAmb 11 02 31.1
comp=Z,35nm,2.0s
E18K Tukpahlearik C 72.79 23 P P 11 02 29.4 +0.6
baz=258
C18K Utukok River 72.83 21 P P 11 02 29.8 +0.7
baz=257
L17K Donlin 72.87 28 P P 11 02 30.2 +0.9
baz=262
K17K Iditarod 72.95 28 P P 11 02 30.7 +0.9
baz=262
F18K Selawik 73.00 24 P P 11 02 30.8 +0.8
baz=260,SNR=6.2
O17K Koliganek Bris 73.17 31 P P 11 02 31.7 +0.6
baz=264
M17K Holitna River 73.18 29 IAmb IAmb 11 02 33.9
comp=Z,16nm,1.1s
M17K Holitna River 73.18 29 P P 11 02 32.4 +1.2
baz=263
N17K Nushagak Hills 73.20 30 P P 11 02 32.3 +0.9
baz=264
G18K Tagagawik 73.28 24 IAmb IAmb 11 02 34.2
comp=Z,23nm,1.9s
G18K Tagagawik 73.28 24 P P 11 02 32.9 +1.2
baz=261
H18K Honhosa River 73.28 25 P P 11 02 32.6 +0.8
baz=261
Q16K King Salmon 73.28 32 P P 11 02 31.9 +0.1
baz=265
R17L Mt. Peulik Vol 73.35 33 P P 11 02 32.3 0.0
baz=265
P17K Kvichak River 73.44 32 P P 11 02 32.9 +0.1
baz=265
C19K Lookout Ridge 73.50 21 IAmb IAmb 11 02 35.1
comp=Z,10nm,0.9s
C19K Lookout Ridge 73.50 21 P P 11 02 33.2 +0.2
baz=259
KIRV Kirov 73.59 328 P P 11 02 33.1 -0.5
comp=Z,13nm,0.5s,baz=207,slow=2.3,SNR=3.6
comp=Z,13nm,0.5s
KIRV Kirov 73.59 328 ceP P 11 02 33.3 -0.3
L18K Granite Mounta 73.63 28 P P 11 02 34.5 +0.6
baz=264
Q17K Contact Creek 73.65 33 P P 11 02 34.2 0.0
baz=265
J18K Innoko River 73.76 27 P P 11 02 34.8 +0.2
baz=263
F19K Shaleruckik Mo 73.78 24 P P 11 02 35.1 +0.6
baz=261
GCSA Galena City Sc 73.85 26 P P 11 02 35.9 +0.9
baz=263
N18K Kilae Creek 73.86 30 P P 11 02 35.8 +0.6
baz=265
D19K Kuna River 73.92 22 P P 11 02 36.1 +0.6
baz=260
ACHA Angle Creek He 73.94 33 IAmb IAmb 11 02 38.8
comp=Z,14nm,1.3s
G19K Purcell Mounta 73.95 24 P P 11 02 36.1 +0.5
baz=262
M18K Stony River 73.96 29 P P 11 02 36.9 +1.1
baz=264
P18K Big Mountain, 74.08 31 P P 11 02 36.6 0.0
baz=266
E19K Redstone River 74.08 23 IAmb IAmb 11 02 38.7
comp=Z,17nm,1.3s
E19K Redstone River 74.08 23 P P 11 02 37.0 +0.6
baz=262
O18K Koktuh Hills 74.13 31 P P 11 02 37.4 +0.6
baz=266,SNR=14
AKT Akhty 74.20 310 eP P 11 02 38.0 +0.2
BELG Belogornoye 74.27 321 P P 11 02 36.9 -0.9
comp=Z,37nm,1.1s,baz=127,slow=20,SNR=4.7
comp=Z,37nm,1.1s
BELG Belogornoye 74.27 321 i P P 11 02 37.8 +0.1
BELG pmax pmax
comp=Z,6.0nm,1.0s
J19K Poorman 74.31 27 P P 11 02 38.8 +1.0
baz=264
L19K White Mountain 74.48 28 P P 11 02 39.3 +0.5
baz=265
D20K Etivluk River 74.49 22 P P 11 02 39.5 +0.8
baz=262
B20K Meade River 74.50 20 IAmb IAmb 11 02 41.0
comp=Z,13nm,1.1s
B20K Meade River 74.50 20 P P 11 02 39.8 +1.1
baz=261
N19K Bonanza Creek 74.56 30 IAmb IAmb 11 02 41.8
comp=Z,22nm,1.1s
N19K Bonanza Creek 74.56 30 P P 11 02 40.2 +0.8
baz=266
E20K Nigu River 74.58 22 P P 11 02 40.3 +0.9
baz=262
O19K Port Alsworth 74.59 31 IAmb IAmb 11 02 41.3
comp=Z,17nm,1.0s
O19K Port Alsworth 74.59 31 P P 11 02 40.1 +0.6
baz=266,SNR=8.1
F20K Avaraart Lake 74.61 23 P P 11 02 40.4 +1.0
baz=263
H20K Anotleneega Mo 74.78 25 P P 11 02 41.4 +0.9
baz=264
I20K Naaghedeneel 74.88 26 P P 11 02 42.0 +1.0
baz=265
K20K Telida 74.94 27 P P 11 02 42.3 +0.8
baz=266
L20K Farewell, AK 74.96 28 P P 11 02 42.4 +0.8
baz=266
J20K Nowinta River 74.97 26 P P 11 02 42.6 +1.0
baz=265
OHAK Old Harbor 74.98 34 P P 11 02 42.4 +0.6
baz=268
P19K Oil Pt 75.11 31 P P 11 02 42.7 +0.2
baz=267
C21K Knifeblade Rid 75.21 21 P P 11 02 43.5 +0.7
baz=263
M20K Styx River 75.27 29 P P 11 02 44.1 +0.6
baz=267
B21K Ikpikpuk River 75.32 21 IAmb IAmb 11 02 45.8
comp=Z,16nm,1.0s
B21K Ikpikpuk River 75.32 21 P P 11 02 44.4 +1.0
baz=263
RED Redoubt Volcan 75.38 30 IAmb IAmb 11 02 45.0
comp=Z,14nm,1.1s
KDAK Kodiak Island 75.38 33 P P 11 02 44.7 +0.6
baz=268
G21K Allakaket 75.43 24 IAmb IAmb 11 02 46.4
comp=Z,13nm,1.1s
G21K Allakaket 75.43 24 P P 11 02 45.0 +0.8
baz=265
F21K Alatna River 75.50 23 P P 11 02 45.6 +1.0
baz=265
Q20K Shuyak Island 75.50 32 P P 11 02 45.2 +0.4
baz=268
H21K Melozitna Rive 75.65 25 P P 11 02 46.7 +1.2
baz=266
N20K Mount Spurr 75.68 30 P P 11 02 46.3 +0.5
baz=268
SPCR Spurr Chakacha 75.68 30 P P 11 02 46.3 +0.5
baz=268
CHUM Lake Minchumin 75.75 27 P P 11 02 46.5 +0.4
baz=267
PPLA Purkeypile 75.76 28 P P 11 02 46.6 +0.2
baz=267
B22K Teshekpuk Lake 75.81 20 P P 11 02 46.3 +0.1
baz=264
HOM Homer 75.92 31 P P 11 02 46.5 -0.6
baz=269
SKT Skwentna 76.03 29 P P 11 02 47.9 +0.1
baz=268
CAPN Captain Cook N 76.19 30 P P 11 02 48.9 +0.4
baz=269
E22K Anaktuvuk Pass 76.20 22 IAmb IAmb 11 02 50.9
comp=Z,11nm,1.2s
E22K Anaktuvuk Pass 76.20 22 P P 11 02 49.5 +0.9
baz=266
H22K Ishtalitna Cre 76.25 25 P P 11 02 49.9 +1.0
baz=263
BPAW Bear Paw Mtn. 76.35 27 P P 11 02 50.2 +0.7
baz=268
BRSE Bradley Lake S 76.38 31 P P 11 02 50.0 +0.3
baz=269
L22K Petersville 76.40 28 IAmb IAmb 11 03 02.4
comp=Z,7.3nm,0.6s
MLY Manley 76.48 26 IAmb IAmb 11 02 52.2
comp=Z,31nm,1.7s
MLY Manley 76.48 26 P P 11 02 50.7 +0.3
baz=268
TRF Thorofare Moun 76.64 27 P P 11 02 51.9 +0.5
baz=269
D23K Nanushuk River 76.66 22 IAmb IAmb 11 02 53.9
comp=Z,24nm,1.3s
D23K Nanushuk River 76.66 22 P P 11 02 52.1 +1.0
baz=267
M22K Willow 76.70 29 P P 11 02 51.7 +0.3
baz=270
C23K Itkillik River 76.73 21 IAmb IAmb 11 02 53.7
comp=Z,30nm,1.4s
C23K Itkillik River 76.73 21 P P 11 02 52.6 +1.1
baz=267
COLD Coldfoot 76.77 23 P P 11 02 53.1 +1.3
baz=268
G23K Bananza Creek 76.83 24 IAmb IAmb 11 02 54.7
comp=Z,21nm,1.5s
G23K Bananza Creek 76.83 24 P P 11 02 53.3 +1.1
baz=268
RC01 Rabbit Creek A 76.88 30 P P 11 02 52.4 -0.1
baz=270
E23K Chandalar 77.02 23 P P 11 02 53.8 +0.5
baz=268
SEW Seward 77.03 31 P P 11 02 53.9 +0.6
baz=270
TOLK Toolik Lake Re 77.05 22 P P 11 02 54.2 +0.8
baz=268,SNR=7.2
I23K Minto, Yukon-K 77.07 26 P P 11 02 54.1 +0.6
baz=269
PMR Palmer 77.17 29 P P 11 02 53.7 -0.4
baz=270
NEA2 Nenana 77.19 26 P P 11 02 55.0 +0.7
baz=270
MCK McKinley 77.25 27 IAmb IAmb 11 02 55.5
comp=Z,22nm,1.2s
MCK McKinley 77.25 27 P P 11 02 54.6 0.0
baz=270
RND Reindeer 77.29 27 IAmb IAmb 11 02 55.6
comp=Z,21nm,1.4s
D24K Happy Valley 77.33 21 IAmb IAmb 11 02 57.3
comp=Z,21nm,1.4s
D24K Happy Valley 77.33 21 P P 11 02 55.9 +1.0
baz=269
C24K Franklin Bluff 77.39 21 IAmb IAmb 11 02 57.3
comp=Z,18nm,1.2s
C24K Franklin Bluff 77.39 21 P P 11 02 55.8 +0.6
baz=269
WAT1 Susitna Watana 77.43 28 P P 11 02 56.0 +0.3
baz=271
E24K Your Creek 77.44 23 IAmb IAmb 11 02 58.0
comp=Z,12nm,1.1s
E24K Your Creek 77.44 23 P P 11 02 56.9 +1.2
baz=270
RAYN Ar Rayn 77.48 292 P P 11 02 56.6 -0.1
RAYN IAmb IAmb 11 02 59.6
comp=Z,12nm,0.8s
RAYN Ar Rayn 77.48 292 P P 11 02 56.6 -0.1
RAYN pmax pmax
comp=Z,13nm,0.8s
KNK Knik Glacier 77.50 29 P P 11 02 56.5 +0.5
baz=271
SML Sawmill 77.55 29 P P 11 02 56.8 +0.5
baz=271
WRH Wood River Hil 77.61 26 IAmb IAmb 11 02 57.7
comp=Z,17nm,1.4s
KBZ Khabaz 77.66 312 P P 11 02 57.4 +0.1
comp=Z,5.7nm,0.9s,baz=60,slow=3.7,SNR=7.8
comp=Z,5.7nm,0.9s
KBZ Khabaz 77.66 312 ceP P 11 02 57.6 +0.4
KBZ pmax pmax
comp=Z,6.0nm,0.9s
H24K Noodor Dome 77.69 25 P P 11 02 57.9 +0.8
baz=271
COLA College 77.71 26 P P 11 02 57.5 +0.4
COLA College 77.71 26 i P P 11 02 57.5 +0.4
COLA pmax pmax
comp=Z,4.0nm,1.0s
COLA College 77.71 26 P P 11 02 57.5 +0.4
baz=271
CCB Clear Creek Bu 77.73 26 P P 11 02 57.1 -0.1
KIV Kislovodsk 77.79 313 eP P 11 02 57.8 -0.3
KIV pmax pmax
comp=Z,11nm,1.0s
WAT6 Susitna Watana 77.81 28 P P 11 02 58.7 +0.8
baz=271
SHA1 Shidzhatmaz 77.83 312 i P P 11 02 58.9 +0.4
M23K Glacier View 77.84 29 P P 11 02 58.6 +0.6
baz=272
G24K Hadweenzic Riv 77.84 24 P P 11 02 58.8 +1.0
baz=271
POKR Poker Plat Res 77.89 26 P P 11 02 58.6 +0.5
baz=271
VRH Novokhopyorsk 77.96 320 eP P 11 03 06.9 +8.2
VRH pmax pmax
comp=Z,30nm,0.8s
SCM Sheep Creek Mo 78.02 29 P P 11 02 59.2 +0.2
SCM Sheep Creek Mo 78.02 29 P P 11 02 59.2 +0.2
SCM pmax pmax
comp=Z,65nm,1.8s
SCM Sheep Creek Mo 78.02 29 P P 11 02 59.4 +0.3
baz=272
P23K Montague Islan 78.06 31 P P 11 02 59.4 +0.3
baz=272
HDA Harding Lake 78.11 26 P P 11 02 59.0 -0.3
HDA IAmb IAmb 11 03 00.4
comp=Z,25nm,1.7s
HDA Harding Lake 78.11 26 P P 11 02 59.2 -0.2
baz=272
ILAR Eielson Array 78.13 26 P P 11 02 57.9 -1.6
comp=Z,1.5nm,0.8s,baz=243,slow=4.9,SNR=13
comp=Z,1.5nm,0.8s
ILAR Eielson Array 78.13 26 P P 11 02 59.4 -0.1
ILAR Eielson Array 78.13 26 P P 11 02 59.4 -0.1
GLI Glacier Island 78.17 30 P P 11 03 00.5 +0.7
baz=272
D25K Kavik River 78.21 21 IAmb IAmb 11 03 01.9
comp=Z,14nm,1.1s
D25K Kavik River 78.21 21 P P 11 03 00.8 +0.9
baz=271
F25K Christian Rive 78.53 23 IAmb IAmb 11 03 04.4
comp=Z,11nm,1.0s
F25K Christian Rive 78.53 23 P P 11 03 02.4 +0.7
baz=272
E25K Arctic Village 78.54 22 P P 11 03 02.6 +0.9
baz=272,SNR=18
M24K Tolsona, Glenn 78.56 29 P P 11 03 02.4 +0.5
baz=273
KLMR Klimovskoe 78.64 330 eP P 11 03 00.7 -1.6
KLMR e 11 03 10.3
KLMR pmax pmax
comp=Z,16nm,1.1s
K24K Donnelly Dome 78.65 27 P P 11 03 02.6 +0.2
baz=273
PRP Porcupine Dome 78.67 25 P P 11 03 02.7 +0.1
baz=273
C26K Camden Bay 78.70 21 P P 11 03 03.3 +0.8
baz=272
KLU Klutina 78.71 29 P P 11 03 03.5 +0.7
baz=273
GURO Guroymak-BITLI 78.76 307 IAmb IAmb 11 03 08.0
comp=Z,16nm,0.9s
J25K Salcha River, 78.78 26 P P 11 03 03.0 -0.2
baz=273
DIV Divide 78.80 30 IAmb IAmb 11 03 05.2
comp=Z,19nm,1.1s
PAX Paxson 78.83 28 P P 11 03 04.0 +0.4
baz=273
EYAK Cordova Ski Ar 78.85 30 P P 11 03 04.4 +0.9
baz=274
BMAR Burnt Mountain 78.95 23 P P 11 03 05.4 +1.4
RIDG Independent Ri 79.07 27 P P 11 03 04.8 +0.1
RIDG IAmb IAmb 11 03 05.8
comp=Z,23nm,1.1s
RIDG Independent Ri 79.07 27 P P 11 03 05.3 +0.6
baz=274
F26K Sheenjek River 79.10 23 P P 11 03 06.4 +1.6
baz=274
C27K Jago River 79.13 21 IAmb IAmb 11 03 07.4
comp=Z,11nm,1.1s
C27K Jago River 79.13 21 P P 11 03 06.6 +1.7
baz=274
G26K Porcupine Rive 79.29 24 IAmb IAmb 11 03 08.4
comp=Z,12nm,1.1s
G26K Porcupine Rive 79.29 24 P P 11 03 07.5 +1.7
baz=274
N25K Chitina, Valde 79.33 29 P P 11 03 07.5 +1.2
baz=274
BMRM Bremner River 79.38 30 P P 11 03 07.7 +1.2
baz=274
SCRK Sand Creek 79.43 27 P P 11 03 07.5 +0.8
baz=274
VORR Voronezh 79.49 321 eP P 11 03 05.8 -1.4
VORD Divnogorie 79.50 320 eP P 11 03 06.2 -1.0
VORD pmax pmax
comp=Z,7.0nm,0.5s
KAIM Kayak Island 79.56 31 P P 11 03 08.0 +0.6
baz=275
VSR Storozhevoye 79.56 320 eP P 11 03 05.9 -1.7
VSR pmax pmax
comp=Z,10.0nm,0.8s
LPSR Galich'ya Gora 79.58 322 eP P 11 03 06.1 -1.5
LPSR pmax pmax
comp=Z,20nm,0.7s
MENT Mentasta 79.64 28 P P 11 03 07.8 0.0
I26K Coal Creek Min 79.68 25 P P 11 03 08.4 +0.5
baz=275
L26K Log Cabin Wild 79.80 28 P P 11 03 10.0 +1.3
baz=275
E27K Coleen River 80.02 22 P P 11 03 11.2 +1.4
baz=276
M26K Nabesna, AK 80.02 28 IAmb IAmb 11 03 11.8
comp=Z,17nm,1.3s
M26K Nabesna, AK 80.02 28 P P 11 03 11.3 +1.4
baz=276
MCARA McCarthy VSAT 80.11 29 P P 11 03 11.5 +1.2
baz=276
D27M Malcolm River 80.13 21 IAmb IAmb 11 03 12.7
comp=Z,16nm,1.0s
D27M Malcolm River 80.13 21 P P 11 03 11.8 +1.4
baz=276
CRQE Cirque 80.14 30 P P 11 03 11.7 +1.0
baz=276
G27K Doyon Strip 80.14 24 P P 11 03 12.1 +1.6
baz=276
H27K Steamboat Moun 80.25 24 P P 11 03 12.8 +1.7
baz=276
I27K Kandik River 80.29 25 IAmb IAmb 11 03 13.6
comp=Z,24nm,1.0s

I27K	Kandik River	80.29	25	P	P	11 03 12.9	+1.5
	baz=276						
L27K	Beaver Creek,	80.48	27	P	P	11 03 13.6	+1.2
	baz=276						
BCAR	Beaver Creek A	80.50	27	P	P	11 03 13.1	+0.6
M27K	Edge Creek, AK	80.54	28	P	P	11 03 13.9	+1.0
	baz=277						
OBN	Obninsk	80.70	324	*e*P	P	11 03 09.4	-4.2
OBN				*i*		11 03 16.0	
OBN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
F28M	Old Crow	80.73	23	IAmb	IAmb	11 03 15.7	
	comp=Z,14nm,0.9s						
F28M	Old Crow	80.73	23	P	P	11 03 14.8	+1.1
	baz=278,SNR=14						
MESA	MESA	80.77	30	P	P	11 03 14.6	+0.4
	baz=277						
D28M	Stokes Point	80.91	21	P	P	11 03 15.1	+0.6
	baz=278						
CTG	Chitna Glacier	80.97	30	P	P	11 03 16.7	+1.5
	baz=277,SNR=7.5						
CTGM	Chitina Glacie	80.97	30	IAmb	IAmb	11 03 17.6	
	comp=Z,20nm,1.2s						
I28M	Miner Creek	81.00	25	IAmb	IAmb	11 03 17.6	
	comp=Z,17nm,0.9s						
I28M	Miner Creek	81.00	25	P	P	11 03 16.4	+1.2
	baz=278						
BVCY	Beaver Creek	81.00	28	P	P	11 03 16.3	+1.1
	baz=278						
YUK3	Moose Creek	81.28	29	P	P	11 03 18.1	+1.2
	baz=278,SNR=10						
E29M	Blow River	81.35	22	P	P	11 03 17.9	+1.0
	baz=279						
DAWY	Dawson	81.43	26	IAmb	IAmb	11 03 19.5	
	comp=Z,14nm,1.2s						
DAWY	Dawson	81.43	26	P	P	11 03 18.7	+1.3
	baz=278,SNR=11						
O28M	Mount Upton	81.55	30	P	P	11 03 19.8	+1.3
	baz=278						
PINM	Pinnacle	81.62	30	P	P	11 03 20.0	+1.5
	baz=278						
YUK8	Steele Glacier	81.68	29	P	P	11 03 20.3	+1.3
	baz=279,SNR=5.2						
I29M	Ogilvie Camp,	81.69	25	IAmb	IAmb	11 03 20.8	
	comp=Z,11nm,1.1s						
I29M	Ogilvie Camp,	81.69	25	P	P	11 03 20.2	+1.4
	baz=279						
J29N	Klondike Camp	81.88	26	IAmb	IAmb	11 03 22.5	
	comp=Z,17nm,1.2s						
J29N	Klondike Camp	81.88	26	P	P	11 03 21.6	+1.8
	baz=280,SNR=6.1						
M29M	Somme Creek	82.10	28	IAmb	IAmb	11 03 23.8	
	comp=Z,14nm,1.1s						
M29M	Somme Creek	82.10	28	P	P	11 03 22.7	+1.6
	baz=280						
L29M	L29M	82.14	27	P	P	11 03 22.9	+1.7
	baz=280						
EPYK	Eagle Plains	82.15	24	IAmb	IAmb	11 03 22.7	
	comp=Z,13nm,1.0s						
EPYK	Eagle Plains	82.15	24	P	P	11 03 22.1	+0.9
	baz=281,SNR=7.3						
YUK4	Talbot Arm	82.20	29	P	P	11 03 22.8	+1.1
	baz=280						
G30M	tAoh Zraii Nji	82.23	23	IAmb	IAmb	11 03 22.8	
	comp=Z,10.0nm,1.1s						
G30M	tAoh Zraii Nji	82.23	23	P	P	11 03 22.7	+1.1
	baz=281						
F30M	Barrier River	82.28	23	IAmb	IAmb	11 03 23.6	
	comp=Z,12nm,1.0s						
F30M	Barrier River	82.28	23	P	P	11 03 23.2	+1.4
	baz=281						
K29M	Barlow Dome	82.28	26	P	P	11 03 23.5	+1.5
	baz=280						
YUK6	Outpost Mounta	82.41	29	P	P	11 03 24.1	+1.3
	baz=280						
O29M	Mount Kennedy	82.41	30	P	P	11 03 24.3	+1.5
	baz=280						
I30M	Mount Dempster	82.51	25	P	P	11 03 24.6	+1.4
	baz=281						
J30M	Hart River	82.66	26	P	P	11 03 25.3	+1.4
	baz=281						
HYT	Haines Junctio	82.84	29	IAmb	IAmb	11 03 27.5	
	comp=Z,6.7nm,0.9s						
HYT	Haines Junctio	82.84	29	P	P	11 03 26.3	+1.3
	baz=281						
M30M	Minto, Yukon	82.84	28	P	P	11 03 26.5	+1.7
	baz=281,SNR=8.1						
SPB2	Spitsbergen Ar	82.86	349	P	P	11 03 25.1	+0.5
SPITS	Spitsbergen Ar	82.86	349	P	P	11 03 23.0	-1.6
	comp=Z,25nm,0.9s,baz=101,slow=8.6,SNR=11						
	comp=Z,25nm,0.9s						
SPITS	Spitsbergen Ar	82.86	349	P	P	11 03 25.3	+0.7
SPITS				pmax	pmax		
	comp=Z,46nm,1.1s						
N30M	Aishikik Lake	82.92	29	IAmb	IAmb	11 03 27.4	
	comp=Z,7.4nm,1.0s						
N30M	Aishikik Lake	82.92	29	P	P	11 03 26.6	+1.3
	baz=281						
INK	Inuvik	82.96	22	P	P	11 03 25.4	+0.1
INK				IAmb	IAmb	11 03 26.1	
	comp=Z,8.8nm,1.1s						
INK	Inuvik	82.96	22	P	P	11 03 25.4	+0.1
INK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
INK	Inuvik	82.96	22	P	P	11 03 26.0	+0.8
	baz=283						
MAYO	Mayo, Yukon	83.04	27	P	P	11 03 27.2	+1.4
	baz=282						
F31M	Tsiigehtchic	83.08	23	IAmb	IAmb	11 03 29.0	
	comp=Z,11nm,1.2s						
F31M	Tsiigehtchic	83.08	23	P	P	11 03 27.1	+1.2
	baz=283						
ARCES	ARCESS Array B	83.15	340	P	P	11 03 25.6	-0.7
	comp=Z,13nm,0.9s,baz=78,slow=6.5,SNR=15						
	comp=Z,13nm,0.9s						
ARCES	ARCESS Array B	83.15	340	P	P	11 03 26.6	+0.3
ARCES	ARCESS Array B	83.15	340	P	P	11 03 26.6	+0.3
ARCES				pmax	pmax		
	comp=Z,109nm,1.8s						
H31M	Peel River	83.22	24	IAmb	IAmb	11 03 28.2	
	comp=Z,8.0nm,0.8s						
H31M	Peel River	83.22	24	P	P	11 03 27.6	+0.8
	baz=283						
P30M	Million Dollar	83.24	30	P	P	11 03 27.8	+0.8
	baz=281						
PUL	Pulkovo	83.31	330	*i* P	P	11 03 27.5	+0.3
N31M	Braeburn, Yuko	83.53	29	P	P	11 03 29.8	+1.4
	baz=282						
O30N	Mendenhall	83.53	29	P	P	11 03 29.8	+1.4
	baz=282						
M31M	Drury Creek, Y	84.01	28	P	P	11 03 32.3	+1.4
	baz=283						
S31K	Pelican	84.05	32	P	P	11 03 32.6	+1.6
	baz=282						
WHY	Whitehorse	84.14	29	P	P	11 03 33.0	+1.4
	baz=283						
SKAG	Skagway	84.18	31	P	P	11 03 33.2	+1.5
	baz=283						
R31K	City Hall, Gus	84.20	32	P	P	11 03 32.9	+1.1
	baz=282						
A36M	Sachs Harbour	84.59	17	P	P	11 03 34.6	+1.0
	baz=291						
SIT	Sitka	84.72	33	P	P	11 03 36.0	+1.5
	baz=283						
R32K	Eaglecrest	84.86	32	P	P	11 03 36.6	+1.4
	baz=283						
N32M	Quiet Lake	84.87	29	P	P	11 03 36.9	+1.6
	baz=284						
P32M	Atlin	84.95	30	P	P	11 03 36.9	+1.2
	baz=284						
FINES	FINESS Array B	84.97	332	P	P	11 03 35.6	-0.1
	comp=Z,6.2nm,0.9s,baz=96,slow=5.7,SNR=9.5						
	comp=Z,6.2nm,0.9s						
FINES	FINESS Array B	84.97	332	P	P	11 03 35.7	0.0
BR131	Keskin Array S	85.05	309		P	11 03 35.8	-0.9
BR131	Keskin Array S	85.05	309	P	P	11 03 35.8	-0.9
BR131				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BRTR	Keskin Array B	85.05	309	P	P	11 03 35.8	-0.9
	comp=Z,2.0nm,0.7s,baz=104,slow=5.2,SNR=10						
	comp=Z,2.0nm,0.7s						
BRTR	Keskin Array B	85.05	309	P	P	11 03 36.1	-0.7
BR106	Keskin Array S	85.06	309	P	P	11 03 38.0	+1.2
	comp=Z,2.9nm,0.7s						
P33M	Teslin, Yukon	85.24	30	IAmb	IAmb	11 03 38.8	
	comp=Z,8.7nm,1.1s						
P33M	Teslin, Yukon	85.24	30	P	P	11 03 38.1	+1.0
	baz=285						

NOR	Nord	85.36	355	*i* P	P	11 03 37.3	0.0
NOR				IAmb	IAmb	11 03 38.1	
	comp=Z,20nm,1.2s						
VSU	Vasula	85.41	329	*i* P	P	11 03 37.4	-0.5
VSU				pmax	pmax		
	comp=Z,19nm,1.1s						
Q32M	Nakina River	85.83	31	P	P	11 03 40.0	-0.2
	baz=285						
AKASG	Malin Array Be	85.84	321	P	P	11 03 39.5	-0.7
	comp=Z,2.6nm,0.7s,baz=61,slow=4.9,SNR=12						
	comp=Z,2.6nm,0.7s						
AKASG	Malin Array Be	85.84	321	P	P	11 03 39.9	-0.4
AKASG				IAmb	IAmb	11 03 43.2	
	comp=Z,9.2nm,1.1s						
AKASG	Malin Array Be	85.84	321	*ce*P	P	11 03 42.2	+2.0
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AKBB	Malin Array Si	85.84	321	IAmb	IAmb	11 03 42.9	
	comp=Z,14nm,1.0s						
AKBB	Malin Array Si	85.84	321	*ce*P	P	11 03 39.7	-0.5
AKBB				pmax	pmax		
	comp=Z,13nm,0.9s						
AKBB	Malin Array Si	85.84	321	P	P	11 03 39.7	-0.5
KIEV	Kiev	85.86	321	P	P	11 03 39.5	-0.8
KIEV				IAmb	IAmb	11 03 42.9	
	comp=Z,12nm,1.0s						
KIEV	Kiev	85.86	321	P	P	11 03 39.5	-0.8
KIEV				pmax	pmax		
	comp=Z,13nm,1.0s						
KIEV	Kiev	85.86	321	P	P	11 03 40.1	-0.2
	comp=Z,61nm,1.0s						
C36M	Paulatuk	85.92	20	P	P	11 03 41.3	+1.1
	baz=292						
CSS	Mathiatis	86.20	305	P	P	11 03 42.5	+0.1
	comp=Z,20nm,1.4s						
R33M	Jennings River	86.36	30	IAmb	IAmb	11 03 45.3	
	comp=Z,11nm,1.2s						
R33M	Jennings River	86.36	30	P	P	11 03 43.7	+0.9
	baz=286						
LUBAR	Lubar, Ukraine	86.94	320	P	P	11 03 45.5	-0.2
RNPP9	Sopachiv	87.71	322	P	P	11 03 48.5	-0.8
KMPD	K-Podol'skiy	88.11	319	P	P	11 03 50.9	-0.4
BUR08	Bucovina Ar. S	89.17	318	IAmb	IAmb	11 04 06.3	
	comp=Z,19nm,1.6s						
DAG	Danmarks Havn	89.56	352	P	P	11 03 56.9	-0.7
DAG				pmax	pmax		
	comp=Z,15nm,1.4s						
DAG	Danmarks Havn	89.56	352	*i* P	P	11 03 56.8	-0.7
DAG				IAmb	IAmb	11 03 57.6	
	comp=Z,12nm,0.9s						
RES	Resolute Bay	90.18	10	IAmb	IAmb	11 04 01.6	
	comp=Z,6.5nm,0.8s						
RES	Resolute Bay	90.18	10	P	P	11 04 00.9	+0.4
RES				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MAW	Mawson	91.02	200	P	P	11 04 04.3	-0.1
	comp=Z,11nm,0.9s,baz=70,slow=5.6,SNR=8.9						
	comp=Z,11nm,0.9s						
MAW	Mawson	91.02	200	P	P	11 04 05.4	+1.0
MAW	Mawson	91.02	200	P	P	11 04 05.4	+1.0
MAW				pmax	pmax		
	comp=Z,4.0nm,1.2s						
HFS	Hagfors	91.12	333	P	P	11 04 04.2	-0.9
	comp=Z,2.2nm,0.5s,baz=90,slow=4.4,SNR=8.1						
	comp=Z,2.2nm,0.5s						
VNDA	Vanda	91.13	173	P	P	11 04 04.5	-0.3
	comp=Z,3.5nm,0.8s,baz=303,slow=6.0,SNR=8.0						
VNDA				PP	PP	11 07 42.1	+0.3
	comp=Z,2.3nm,0.9s,baz=333,slow=6.2,SNR=4.4						
	comp=Z,3.5nm,0.8s						
VNDA	Vanda	91.13	173	P	P	11 04 05.1	+0.4
VNDA	Vanda	91.13	173	P	P	11 04 05.1	+0.4
VNDA				pmax	pmax		
	comp=Z,34nm,1.8s						
NEEM	North Greenlan	91.16	360	*i* P	P	11 04 05.9	+0.4
NEEM				IAmb	IAmb	11 04 06.5	
	comp=Z,8.4nm,0.6s						
TULEG	Thule	91.61	4	P	P	11 04 07.4	+0.3
TULEG				IAmb	IAmb	11 04 08.0	
	comp=Z,16nm,1.6s						
NOA	NORSAR Array B	91.81	334	P	P	11 04 06.7	-1.7
	comp=Z,1.5nm,0.8s,baz=61,slow=4.6,SNR=3.9						
	comp=Z,1.5nm,0.8s						
DBG	Daneborg	91.85	351	*i* P	P	11 04 07.6	-0.6
DBG				IAmb	IAmb	11 04 09.2	
	comp=Z,12nm,1.2s						
YKA	Yellowknife Ar	92.44	24	P	P	11 04 10.4	-0.8
	comp=Z,1.8nm,0.9s,baz=301,slow=5.5,SNR=25						
	comp=Z,1.8nm,0.9s						
YKA	Yellowknife Ar	92.44	24	*ce*P	P	11 04 11.6	+0.4
YKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HAMD	Hammershus, De	92.66	328	*i* P	P	11 04 05.3	-7.0
KULLO	Kullorsuaq	94.02	1	*i* P	P	11 04 18.3	0.0
KULLO				IAmb	IAmb	11 04 18.8	
	comp=Z,13nm,1.0s						
MEM	Membach	99.52	326	*d*P	Pdif	11 04 44.1	+0.4
NVAR	Mina Array Bea	101.68	47	P	Pdif	11 04 53.8	-0.1
	comp=Z,0.7nm,0.7s,baz=298,slow=5.7,SNR=4.4						
ESDC	Sonseca Array	111.49	321	PP	PP	11 10 16.3	+0.6
	comp=Z,0.5nm,0.7s,baz=69,slow=7.7,SNR=4.4						
TORD	Torodi Ar. Bea	120.17	293	PKP	PKPdf	11 09 52.0	-0.5
	comp=Z,0.7nm,1.0s,baz=3.0,slow=1.2,SNR=4.0						
PLCA	Paso Flores	147.19	155	PKPbc	PKPbc	11 10 44.2	0.0
	comp=Z,5.3nm,0.8s,baz=212,slow=4.2,SNR=7.6						

AFAD ***14*** *11:05:04.0,38.21N×44.72E,h7km±1km,ML2.2*
AZER ***14*** *11:05:07.5,38.31N×44.55E,h10km, ml2.4*
TEH ***14*** *11:05:09.0,38.41N×44.48E,h10km, ML2.5, Presumed earthquake*

ISC 14 11:05:09.2±1.2, 38.31N±0.04×44.45E±0.03, h9km±10km, n15,σ1s71/24, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	Van, Ozalp-Mer	0.50	315	P	Pg	11 05 18.2	-0.9
OZAP				S	Sg	11 05 26.0	+0.2
OZAP				IAML		11 05 31.0	
	comp=E,122nm,1.1s						
TVAN	Van	0.85	285	P	Pb	11 05 25.3	-0.9
TVAN				IAML		11 05 51.0	
	comp=E,77nm,0.6s						
TVAN				IAML		11 05 57.0	
	comp=N,54nm,0.7s						
ISHB	Shabestar	0.92	91	Pg	Pb	11 05 26.0	-1.4
HAKT	HAKKARI	0.95	218	P	Pn	11 05 28.2	-0.7
HAKT				S	Sn	11 05 44.7	+2.0
VMUR	Van-Muradiye	0.97	315	P	Pg	11 05 26.8	-1.0
VMUR				S	Sn	11 05 43.7	+0.7
VMUR				IAML		11 05 45.0	
	comp=E,54nm,0.5s						
VMUR				IAML		11 05 47.0	
	comp=N,43nm,0.4s						
MAKU	Maku	1.06	10	Pg	Pg	11 05 27.5	-2.1
IMRD	Marand	1.06	67	Pg	Pn	11 05 29.0	-1.4
GEVA	Gevas	1.10	271	P	Pg	11 05 29.1	-1.2
GEVA				S	Sn	11 05 47.9	+1.7
GEVA				IAML		11 05 51.0	
	comp=N,58nm,0.5s						
GEVA				IAML		11 05 51.0	
	comp=E,54nm,0.5s						
NAX	Nakhchivan	1.19	43	P	Pg	11 05 31.4	-0.6
NAX				S	Sn	11 05 47.9	-0.5
ORD	Ordubad	1.36	62	P	Pg	11 05 34.2	-1.0
ORD				S	Sg	11 05 53.5	+0.6
IAZR	Azarshahr	1.36	117	Pg	Pg	11 05 36.2	+0.8
SBZ	Shahbuz	1.39	38	P	Pb	11 05 34.6	-0.7
SBZ				S	Sg	11 05 56.5	+2.7
HYR	Heyderabad	1.44	12	S	Sg	11 05 59.6	+4.0
IGDI	IGDIR	1.58	350	P	Pb	11 05 38.9	+0.2
IGDI				S	Sg	11 06 03.1	+2.9
GDB	GEDABAY	2.61	22	P	Pn	11 05 52.8	+1.1
GDB				S	Sb	11 06 27.1	-1.4

MOS ***14*** *11:05:26.3±1.0,42.25N×142.89E,h82km,mb4.1/3, Error ellipse: s-maj=14.7km s-min=7.3km az=71.7*
SKHL ***14*** *11:05:27.1±0.7,42.20N×142.90E,h87km±6km, mb4.9/3*
JMA ***14*** *11:05:27.9±0.2,42.3N±0.5×142.9E±0.5,h61km±1km, MV3.8/40,HIDAKA MOUNTAINS REGION*
JMA Felt I J1 at HIDAKA MOUNTAINS REGION .
NEIC ***14*** *11:05:28.1±1.2,42.34N±0.07×142.8E±0.1,h72km±7km, mb4.1/13,Error ellipse: s-maj=11.9km s-min=9.2km az=132.0*
IDC ***14*** *11:05:28.4±2.1,42.36N×142.84E,h79km±15km,mb3.4/14, mbtmp3.8/15,Error ellipse: s-maj=19.2km s-min=15.3km az=126.0*

ISC 14 11:05:27.3±0.7, 42.27N±0.04×142.93E±0.03, h70km±5km, n85,σ1s01/111, mb4.0/22, 18D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNBK	Urakawa-nobuka	0.13	273	⇓*i* P	Pn	11 05 37.1	-0.6
JTHR	Tokachihiroo	0.28	86	⇓*i* P	Pn	11 05 38.0	-0.3
JTHR				⇓S	Sn	11 05 45.7	-0.7
JEM	Erimo	0.31	147	⇓*i* P	Pn	11 05 38.7	+0.2
JEM				⇓S	Sn	11 05 47.2	+0.4
JSHD	Hidakashinhida	0.37	292	⇓*i* P	Pn	11 05 38.7	-0.3
JCH	Churui	0.47	43	*i* P	Pn	11 05 39.3	-0.6
JCH				S	Sn	11 05 48.2	-0.8
JBT2	Biratori 2	0.66	321	⇓*i* P	Pn	11 05 41.1	-0.6
JBT2				⇓S	Sn	11 05 52.0	-0.4
JIAM	Iburiatsuma	0.82	295	⇓*i* P	Pn	11 05 44.3	+0.7
JOB	Onbets	0.92	46	*i* P	Pn	11 05 45.0	+0.3
JOB				*e*S	Sn	11 05 58.2	+0.4
JFR	Furan	0.92	345	*i* P	Pn	11 05 43.9	-1.0
JAR	Ashorobuto	1.20	31	*i* P	Pn	11 05 47.9	-0.4
JAR				S	Sn	11 06 02.3	-1.7
JEW	Eniwo	1.23	298	Pn	Pn	11 05 48.4	-0.4
JEW				Sn	Sn	11 06 02.4	-2.4
JEW	Eniwo	1.23	298	⇓*i* P	Pn	11 05 48.9	+0.2
JEW				⇓S	Sn	11 06 04.6	-0.2
JAB	Ashibetsu	1.34	337	P	Pn	11 05 50.5	+0.4
JNB	Noboribetsu	1.42	279	⇓*i* P	Pn	11 05 50.4	-0.7
JNB				⇓S	Sn	11 06 08.1	-1.0
JKB	Kayabe	1.46	255	*i* P	Pn	11 05 51.6	-0.1
JKB				S	Sn	11 06 09.9	-0.3
JAK	Akkeshi	1.49	60	*i* P	Pn	11 05 51.7	-0.4
JAK				S	Sn	11 06 10.4	-0.4
JISS	Ishikarishitsu	1.50	312	⇓P	Pn	11 05 52.5	+0.3
JISS				⇓S	Sn	11 06 12.0	+1.0
AKK	Akkeshi	1.59	62	*e*P	Pn	11 05 53.1	-0.4
JKA	Kamikawa-asahi	1.86	353		Pn	11 05 57.4	+0.3
JKA				Sn	Sn	11 06 18.3	-1.3
ASAJ	Asahikawa	1.86	353	P	Pn	11 05 58.5	+1.5
	94nm,0.3s,baz=205,slow=16,SNR=667						
ASAJ				S	Sn	11 06 19.1	-0.5
	262nm,0.5s,baz=80,slow=18,SNR=7.7						
ASAJ	Asahikawa	1.86	353	PN	Pn	11 05 57.4	+0.4
ASAJ						11 06 18.3	
NMR	Nemuro--Hokkai	2.33	61	⇓*i* PN	Pn	11 06 02.5	-0.9
NMR				*e*S	Sn	11 06 28.9	-2.1
NMR	Nemuro--Hokkai	2.33	61	*i* P	Pn	11 06 02.5	-0.9
NMR				*e*S	Sn	11 06 28.8	-2.2
GLVR	Golovnino	2.40	51	*e*PN	Pn	11 06 05.2	+0.9
GLVR				*e*S	Sn	11 06 33.5	+0.9
GLVR				pmax	pmax		
	comp=E,39nm,0.2s						
GLVR				pmax	pmax		
	comp=Z,205nm,0.2s						
GLVR				pmax	pmax		
	comp=N,83nm,0.3s						
GLVR				smax	smax		
	comp=N,784nm,0.3s						
GLVR				smax	smax		
	comp=E,1μm,0.3s						
GLVR	Golovnino	2.40	51	*e*P	Pn	11 06 05.2	+0.9
GLVR				AMB	AMB	11 06 05.7	
	comp=E,210nm,0.4s						
GLVR				*e*S	Sn	11 06 33.5	+0.9
GLVR				A	A	11 06 42.3	
	comp=E,780nm,0.5s						
GLVR				A	A	11 06 42.3	
	comp=E,1μm,0.5s						
RUSJ	Misakicho	2.50	42	⇓*i* PN	Pn	11 06 06.8	+1.2
RUSJ				*e*S	Sn	11 06 37.0	+2.0
YUK	Yuzh-Kuril'sk	2.77	50	*d i* PN	Pn	11 06 10.6	+1.2
YUK				*e*S	Sn	11 06 42.4	+0.6
YUK				pmax	pmax		
	comp=N,71nm,0.2s						
YUK				pmax	pmax		
	comp=E,116nm,0.2s						
YUK				pmax	pmax		
	comp=Z,221nm,0.2s						
YUK				smax	smax		
	comp=N,771nm,0.6s						
YUK				smax	smax		
	comp=E,834nm,0.5s						
YUK	Yuzh-Kuril'sk	2.77	50	*e*P	Pn	11 06 09.9	+0.5
YUK				AMB	AMB	11 06 12.8	
	comp=E,340nm,0.5s						
YUK				*e*S	Sn	11 06 41.3	-0.5
YUK				A	A	11 06 47.5	
	comp=E,950nm,0.6s						
YUK				A	A	11 06 47.5	
	comp=E,1μm,0.6s						
SHO	Shikotan	3.27	60	*e*P	Pn	11 06 26.8	+11
SHO				AMB	AMB	11 06 29.3	
	comp=E,40nm,0.2s						
SHO				*e*S	Sn	11 07 03.0	+9.1
SHO				A	A	11 07 07.8	
	comp=E,340nm,0.4s						
SHO				A	A	11 07 07.8	
	comp=E,420nm,0.4s						
KUR	Kuril'sk	4.64	49	PN	Pn	11 06 36.6	+1.8
KUR				*e*S	Sn	11 07 29.2	+1.8
KUR				pmax	pmax		
	comp=Z,65nm,0.7s						
KUR				smax	smax		
	comp=N,61nm,0.5s						
KUR				smax	smax		
	comp=E,100nm,0.5s						
KUR	Kuril'sk	4.64	49	*e*P	Pn	11 06 36.1	+1.3
KUR				AMB	AMB	11 06 41.7	
	comp=E,70nm,0.5s						
KUR				*e*S	Sn	11 07 27.6	+0.2
KUR				A	A	11 07 42.3	
	comp=E,130nm,0.5s						
KUR				A	A	11 07 42.3	
	comp=E,100nm,0.5s						
YSS	Yuzhno-Sakhali	4.68	359	Pn	Pn	11 06 35.8	+0.4
YSS	Yuzhno-Sakhali	4.68	359	*e*PN	Pn	11 06 36.9	+1.5
YSS				*e*S	Sn	11 07 28.8	+0.4
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
YSS				smax	smax		
	comp=N,20nm,0.8s						
YSS				smax	smax		
	comp=E,10μm,1.0s						
YSS	Yuzhno-Sakhali	4.68	359	*e*P	Pn	11 06 36.3	+0.9
YSS				AMB	AMB	11 06 40.1	
	comp=E,20nm,0.5s						
YSS				*e*S	Sn	11 07 28.7	+0.4
YSS				A	A	11 07 33.3	
	comp=E,30nm,0.5s						
YSS				A	A	11 07 33.3	
	comp=E,20nm,0.5s						
MJB9	Matsu-Tunnel	6.79	214		Pn	11 07 06.1	+1.8
MAJO	Matsushiro	6.79	214		Pn	11 07 04.6	+0.3
MAJO	Matsushiro	6.79	214	PN	Pn	11 07 04.6	+0.3
MJAR	Matsushiro Arr	6.79	214	P	Pn	11 07 04.7	+0.4
	comp=E,6.8nm,0.5s,baz=23,slow=15,SNR=4.7						
JGF	Kuroka	7.95	215		Pn	11 07 20.9	+0.7
INU	Inuyama	8.31	216		Pn	11 07 25.4	+0.4
TYV	Tymovskoe	8.60	359	*e*PN	Pn	11 07 31.7	+2.9
TYV				pmax	pmax		
	comp=Z,18nm,0.6s						
TYV				pmax	pmax		
	comp=Z,1μm,4.3s						
TYV	Tymovskoe	8.60	359	*e*P	Pn	11 07 30.3	+1.5
KSRS	Korea Array	12.49

	comp=Z,1.9nm,0.8s								
ZALV	**Zalesovo Beam**	**39.44**	**308**	P	**P**	**11 12 49.8**	**-0.4**
	comp=Z,1.7nm,0.8s,baz=82,slow=11,SNR=7.4								
ZALV				PcP	**PcP**	**11 14 56.7**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=117,slow=5.5,SNR=2.5								
	comp=Z,1.7nm,0.8s								
ZALV	**Zalesovo Beam**	**39.44**	**308**	P	**P**	**11 12 50.1**	**-0.1**
E19K	**Redstone River**	**40.35**	**31**	P	**P**	**11 12 58.2**	**+0.6**
E19K				IAmb	IAmb	11 13 24.2	
	comp=Z,3.1nm,1.2s								
KDAK	**Kodiak Island**	**42.51**	**46**	P	**P**	**11 13 15.5**	**+0.2**
KDAK	**Kodiak Island**	**42.51**	**46**	P	**P**	**11 13 15.5**	**+0.2**
MKAR	**Makanchi Array**	**42.52**	**298**	P	**P**	**11 13 15.6**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=84,slow=9.6,SNR=12								
MKAR				PcP	**PcP**	**11 15 07.1**	**0.0**
	comp=Z,0.5nm,0.9s,baz=94,slow=4.3,SNR=2.4								
	comp=Z,0.8nm,0.7s								
KURK	**Kurchatov**	**43.79**	**304**	P	**P**	**11 13 25.2**	**-0.6**
KURK				IAmb	IAmb	11 13 26.3	
	comp=Z,2.6nm,0.8s								
KURK	**Kurchatov**	**43.79**	**304**	P	**P**	**11 13 25.2**	**-0.6**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s								
KURK	**Kurchatov**	**43.79**	**304**	*e*P	**P**	**11 13 25.2**	**-0.6**
KURBB	**Kurchatov Arra**	**43.87**	**304**	P	**P**	**11 13 26.4**	**0.0**
	comp=Z,2.2nm,0.8s,baz=76,slow=8.8,SNR=14								
	comp=Z,2.2nm,0.8s								
ILAR	**Eielson Array**	**44.49**	**35**	P	**P**	**11 13 31.5**	**+0.3**
	comp=Z,1.5nm,1.0s,baz=272,slow=7.4,SNR=13								
	comp=Z,1.5nm,1.0s								
ILAR	**Eielson Array**	**44.49**	**35**	P	**P**	**11 13 31.3**	**+0.1**
BMAR	**Burnt Mountain**	**45.22**	**31**	P	**P**	**11 13 37.6**	**+0.7**
BCAR	**Beaver Creek A**	**46.96**	**37**	P	**P**	**11 13 51.6**	**+0.9**
BVAR	**Borovoye Array**	**48.04**	**309**	P	**P**	**11 13 59.1**	**-0.1**
	comp=Z,0.7nm,0.4s,baz=85,slow=7.9,SNR=4.2								
	comp=Z,0.7nm,0.4s								
AB31	**Akbulak array**	**55.55**	**308**	P	**P**	**11 14 54.4**	**-0.7**
AB31				IAmb	IAmb	11 14 55.4	
	comp=Z,1.8nm,1.0s								
ABKAR	**Akbulak array**	**55.55**	**308**	P	**P**	**11 14 54.5**	**-0.6**
RES	**Resolute Bay**	**57.24**	**16**	P	**P**	**11 15 06.3**	**-0.4**
RES	**Resolute Bay**	**57.24**	**16**	P	**P**	**11 15 06.3**	**-0.4**
RES				pmax	pmax		
	comp=Z,2.0nm,0.6s								
YKA	**Yellowknife Ar**	**58.72**	**32**	P	**P**	**11 15 16.8**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=307,slow=6.7,SNR=5.1								
	comp=Z,0.2nm,0.6s								
WRA	**Warramunga Arr**	**62.41**	**189**	P	**P**	**11 15 42.9**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=7.1,slow=6.5,SNR=1.5								
	comp=Z,0.2nm,0.7s								
WRA	**Warramunga Arr**	**62.41**	**189**	P	**P**	**11 15 43.0**	**+0.2**
WRA	**Warramunga Arr**	**62.41**	**189**	P	**P**	**11 15 43.0**	**+0.2**
FIA1	**FINESS Array S**	**64.74**	**332**	P	**P**	**11 15 56.3**	**-1.4**
FINES	**FINESS Array B**	**64.74**	**332**	P	**P**	**11 15 55.9**	**-1.9**
	comp=Z,1.4nm,0.5s,baz=58,slow=6.3,SNR=13								
	comp=Z,1.4nm,0.5s								
FINES	**FINESS Array B**	**64.74**	**332**	P	**P**	**11 15 56.5**	**-1.1**
FINES	**FINESS Array B**	**64.74**	**332**	P	**P**	**11 15 56.6**	**-1.1**
HFS	**Hagfors**	**69.80**	**336**	P	**P**	**11 16 29.3**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=51,slow=9.6,SNR=6.1								
	comp=Z,1.2nm,0.5s								
AKASG	**Malin Array Be**	**70.88**	**322**	P	**P**	**11 16 35.1**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=41,slow=7.3,SNR=1.4								
	comp=Z,0.2nm,0.3s								
MDPB	**Devils Postpil**	**71.00**	**56**	P	**P**	**11 16 37.7**	**0.0**
MDPB				IAmb	IAmb	11 17 10.8	
	comp=Z,4.2nm,0.7s								
PD31	**Pinedale Array**	**73.20**	**47**	P	**P**	**11 16 50.1**	**-0.7**
PDAR	**Pinedale Array**	**73.20**	**47**	P	**P**	**11 16 51.0**	**+0.2**
	comp=Z,0.4nm,0.9s,baz=263,slow=1.2,SNR=3.5								
	comp=Z,0.4nm,0.9s								
PDAR	**Pinedale Array**	**73.20**	**47**	P	**P**	**11 16 50.8**	**0.0**
TX31	**Lajitas Ar. Si**	**86.03**	**53**	P	**P**	**11 18 00.8**	**+0.5**
TX31				IAmb	IAmb	11 18 01.6	
	comp=Z,1.9nm,0.9s								
TXAR	**Lajitas Array**	**86.03**	**53**	P	**P**	**11 18 01.4**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=287,slow=3.6,SNR=12								
	comp=Z,0.5nm,0.6s								
TXAR	**Lajitas Array**	**86.03**	**53**	P	**P**	**11 18 00.9**	**+0.6**

IDC 14 11:40:59.0±2.6, 10°94S×123°22E, h0km, mb3.4/1, mbtmp3.2/3, ML3.1/2, Error ellipse: s-maj=251.6km s-min=33.6km az=51.0, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.96**	**131**	Pn	Pn	11 44 16.9	-1.3
	0.1nm,0.3s,baz=307,slow=13,SNR=7.3						
WRA				Sn	Sn	11 46 46.5	-7.5
	0.3nm,0.3s,baz=291,slow=24,SNR=9.9						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**16.24**	**143**	Pn	Pn	11 44 50.1	+1.4
	0.1nm,0.3s,baz=315,slow=12,SNR=2.5						
ASAR				Sn	Sn	11 47 45.5	-4.2
	0.1nm,0.3s,baz=316,slow=22,SNR=4.2						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**68.11**	**331**	P	P	11 52 00.8	0.0
	0.2nm,0.5s,baz=143,slow=6.6,SNR=6.7						
	0.2nm,0.5s						

MDD ***14*** *11:51:01.1±0.6, 36°.81N×7°.41W, h3km±3km, mb_Lg2.4/10, Error ellipse: s-maj=5.7km s-min=2.7km az=22.0*
INMG ***14*** *11:51:02.8±1.5, 36°.68N×7°.51W, h22km±3km, ML1.6, Error ellipse: s-maj=4.4km s-min=2.7km az=35.0, #DIST_RANGE: LOCAL #IPMA_REGION: Golfo de Cadiz*
SFS ***14*** *11:51:03.3, 36°.72N×7°.45W, h35km, ML2.5/7, ML1.9/10, MLv1.7/10*
IGIL ***14*** *11:51:03.0, 36°.70N×7°.55W, h19km, ML1.3*
ISC 14 11:51:02.0±1.3, 36°.72N±0°.05×7°.46W±0°.03, h33km±9km, n42, σ1s00/77, 2D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PBDV	**Barranco-do-Ve**	**0.64**	**324**	Pg	**Pb**	**11 51 15.3**	**+0.4**
PBDV				Sg	**Sb**	**11 51 23.9**	**+0.2**
PBDV	**Barranco-do-Ve**	**0.64**	**324**	*i*P	**Pb**	**11 51 15.2**	**+0.4**
PBDV				*e*S	**Sb**	**11 51 23.9**	**+0.2**
PBDV				*i* IAML		11 51 24.8	
PBDV				*i* IAML		11 51 25.2	
PBDV				*i* IAML		11 51 25.2	
PVAQ	**Vaqueiros**	**0.71**	**343**	*e*P	**Pb**	**11 51 16.3**	**+0.3**
PVAQ				*e*S	**Sb**	**11 51 25.7**	**+0.1**
PVAQ				*i* IAML		11 51 26.0	
PVAQ				*i* IAML		11 51 26.6	
PVAQ				*i* IAML		11 51 26.7	
EGRO	**El Granado**	**0.81**	**359**	Pg	**Pb**	**11 51 18.0**	**+0.3**
EGRO				Sg	**Sb**	**11 51 28.4**	**+0.1**
EGRO	**El Granado**	**0.81**	**359**	Pg	**Pb**	**11 51 17.9**	**+0.3**
EGRO				Sg	**Sb**	**11 51 28.4**	**+0.1**
EGRO				*i* IVmb_Lg		11 51 29.4	
PCVE	**Castro Verde**	**1.02**	**333**	Pg	**Pn**	**11 51 20.8**	**+0.8**
PCVE				Sg	**Sb**	**11 51 32.8**	**-1.5**
PCVE	**Castro Verde**	**1.02**	**333**	*e*P	**Pn**	**11 51 20.8**	**+0.8**
PCVE				*e*S	**Sb**	**11 51 33.7**	**-0.5**
PCVE				*i* IAML		11 51 34.0	
PCVE				*i* IAML		11 51 34.2	
PCVE				*i* IAML		11 51 34.7	
MORF	**Marmelete**	**1.12**	**302**	*e*P	**Pn**	**11 51 21.4**	**0.0**
MORF	**Marmelete**	**1.12**	**302**	*e*P	**Pn**	**11 51 21.4**	**0.0**
MORF				*e*S	**Sb**	**11 51 35.3**	**-1.8**
MORF				*i* IAML		11 51 44.4	
MORF				*i* IAML		11 51 45.2	
MORF				*i* IAML		11 51 46.4	
PFVI	**Vila Bisbo**	**1.17**	**291**	Pg	**Pn**	**11 51 22.2**	**+0.1**
PFVI	**Vila Bisbo**	**1.17**	**291**	*e*P	**Pn**	**11 51 22.2**	**+0.1**
PFVI				*e*S	**Sb**	**11 51 36.0**	**-2.5**
PFVI				*i* IAML		11 51 44.0	
PFVI				*i* IAML		11 51 47.1	
EMIN	**Mina Concepcio**	**1.22**	**31**	Sn	**Sn**	**11 51 37.3**	**-0.7**
EMIN	**Mina Concepcio**	**1.22**	**31**	Pg	**Pn**	**11 51 21.7**	**-1.0**
EMIN				Sg	**Sn**	**11 51 37.7**	**-0.4**
MESJ	**Messejana**	**1.27**	**332**	*e*P	**Pn**	**11 51 24.1**	**+0.7**
MESJ				*e*S	**Sn**	**11 51 39.2**	**-0.1**
MESJ				IAML		11 51 40.9	
	comp=N,4.1nm,0.1s						
MESJ	**Messejana**	**1.27**	**332**	*e*P	**Pn**	**11 51 24.1**	**+0.7**
MESJ				*e*S	**Sn**	**11 51 40.1**	**+0.7**
MESJ				*i* IAML		11 51 42.0	
MESJ				*i* IAML		11 51 42.2	
MESJ				*i* IAML		11 51 42.6	
ESPR	**Espera**	**1.29**	**83**	Sn	**Sn**	**11 51 40.1**	**+0.2**
ESPR	**Espera**	**1.29**	**83**	Pg	**Pn**	**11 51 23.6**	**-0.1**
ESPR				Sg	**Sn**	**11 51 39.6**	**-0.3**
ESPR				*i* IVmb_Lg		11 51 40.8	
PTEO	**Sao Teotonio**	**1.30**	**309**	*e*P	**Pn**	**11 51 24.1**	**+0.2**
PTEO				*e*S	**Sn**	**11 51 40.8**	**+0.5**
PTEO				*i* IAML		11 51 44.1	
PTEO				*i* IAML		11 51 45.2	
PBAR	**Barrancos**	**1.49**	**13**	Sn	**Sn**	**11 51 45.6**	**+0.8**
PBAR	**Barrancos**	**1.49**	**13**	*e*P	**Pn**	**11 51 27.3**	**+0.9**
PBAR				*e*S	**Sn**	**11 51 45.8**	**+1.1**
PBAR				*i* IAML		11 51 49.6	
PBAR				*i* IAML		11 51 49.7	
PBAR				*i* IAML		11 51 50.5	
EJIF	**Jimena Fronter**	**1.62**	**99**	Sn	**Sn**	**11 51 48.4**	**+0.3**
E1302	**La Puebla de C**	**1.82**	**76**	Pg	**Pn**	**11 51 32.5**	**+1.5**
E1302				Sn	**Sn**	**11 51 53.4**	**+0.4**
E1302				*i* IVmb_Lg		11 51 58.7	
EVO	**Evora**	**1.86**	**346**	Pn	**Pn**	**11 51 32.5**	**+0.9**
EVO				Sn	**Sn**	**11 51 53.0**	**-1.0**
EVO	**Evora**	**1.86**	**346**	*e*Pn	**Pn**	**11 51 32.5**	**+0.9**
EVO				*e*Sn	**Sn**	**11 51 53.4**	**-0.5**
EVO				*i* IAML		11 51 57.4	
EVO				*i* IAML		11 51 57.4	
MOE	**Montemor**	**1.93**	**339**	*e*Pn	**Pn**	**11 51 33.5**	**+0.9**
MOE				*e*Sn	**Sn**	**11 51 55.2**	**-0.5**
MOE				*i* IAML		11 51 57.3	
MOE				*i* IAML		11 51 57.9	
MOE				*i* IAML		11 51 58.8	
ECAB	**El Cabril**	**2.11**	**50**	Pn	**Pn**	**11 51 35.7**	**+0.7**
ECAB				Sn	**Sn**	**11 51 58.2**	**-2.0**
ECAB	**El Cabril**	**2.11**	**50**	Pn	**Pn**	**11 51 35.8**	**+0.7**
ECAB				Sn	**Sn**	**11 51 58.0**	**-2.2**
ECAB				*i* IVmb_Lg		11 52 01.7	
PARRA	**Arraiolos**	**2.14**	**348**	*e*Pn	**Pn**	**11 51 36.3**	**+0.8**
PARRA				*e*Sn	**Sn**	**11 52 01.3**	**+0.4**
PARRA				*i* IAML		11 52 01.7	
PARRA				*i* IAML		11 52 01.7	
PESTR	**Estremoz**	**2.14**	**357**	Pn	**Pn**	**11 51 35.9**	**+0.4**
PESTR				Sn	**Sn**	**11 52 01.1**	**+0.2**
PESTR	**Estremoz**	**2.14**	**357**	*e*Pn	**Pn**	**11 51 36.3**	**+0.8**
PESTR				*e*Sn	**Sn**	**11 52 00.9**	**0.0**
PESTR				*i* IAML		11 52 02.0	
PMTG	**Montargil**	**2.42**	**346**	*e*Pn	**Pn**	**11 51 40.1**	**+0.8**
PMTG				*e*Sn	**Sn**	**11 52 07.9**	**+0.1**
PMTG				*i* IAML		11 52 09.2	
PMTG				*i* IAML		11 52 09.5	
PMAFR	**Mafra**	**2.66**	**328**	*e*Pn	**Pn**	**11 51 44.1**	**+1.6**
PMAFR				*e*Sn	**Sn**	**11 52 14.6**	**+1.0**
PMRV	**Marv??o**	**2.70**	**1**	*e*Pn	**Pn**	**11 51 44.0**	**+0.8**
PMRV				*e*Sn	**Sn**	**11 52 15.4**	**+0.2**
PMRV				*i* IAML		11 52 15.7	
PMRV				*i* IAML		11 52 16.6	
EADA	**Adamuz**	**2.71**	**57**	Pn	**Pn**	**11 51 44.2**	**+0.9**
EADA				Sn	**Sn**	**11 52 12.5**	**-2.4**
EADA				*i* IVmb_Lg		11 52 15.9	
EGOR	**Sierra Gorda,**	**2.71**	**81**	Pn	**Pn**	**11 51 43.6**	**+0.2**
EGOR				Sn	**Sn**	**11 52 16.3**	**+1.1**
EGOR				*i* IVmb_Lg		11 52 19.8	
PSARD	**Sardoal**	**2.93**	**349**	*e*Pn	**Pn**	**11 51 47.3**	**+1.0**
PSARD				*e*Sn	**Sn**	**11 52 20.1**	**-0.2**
PSARD				*i* IAML		11 52 21.0	
PSARD				*i* IAML		11 52 21.4	
PSBE	**So Bento**	**2.98**	**340**	*e*Pn	**Pn**	**11 51 47.5**	**+0.5**
PSBE				*e*Sn	**Sn**	**11 52 20.8**	**-0.9**
ELGU	**Los Guajares,**	**3.08**	**86**	Pn	**Pn**	**11 51 48.9**	**+0.5**
ELGU				Sn	**Sn**	**11 52 25.4**	**+1.3**
ELGU				*i* IVmb_Lg		11 52 32.4	
EPLA	**Plasencia**	**3.51**	**18**	Pn	**Pn**	**11 51 55.3**	**+1.0**
EPLA				Sn	**Sn**	**11 52 33.4**	**-1.2**
EPLA				*i* IVmb_Lg		11 52 37.4	
PSIM	**Granatula de C**	**3.60**	**53**	Pn	**Pn**	**11 51 56.1**	**+0.5**
PSIM				Sn	**Sn**	**11 52 36.3**	**-0.8**
PAB	**San Pablo**	**3.73**	**40**	Pn	**Pn**	**11 51 58.3**	**+0.9**
PAB				Sn	**Sn**	**11 52 37.1**	**-3.2**
PAB				*i* IVmb_Lg		11 52 38.9	
ELOB	**Lobios**	**5.16**	**355**	Sn	**Sn**	**11 53 13.6**	**-1.8**

MEX ***14*** *12:41:33.3±1.2, 14°.37N×92°.10W, h67km±15km, MD3.8*
GCG ***14*** *12:41:34.3±1.0, 14°.39N×92°.03W, h43km±13km, MD3.4, ML3.6, Presumed earthquake*
ISC 14 12:41:30.1±1.9, 14°.1N±0°.1×92°.15W±0°.07, h43km±34km, n21, σ1s88/33, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTAL	**Retalhuleu**	**0.60**	**47**	*e*P	**Pn**	**12 41 44.2**	**+1.9**
RTAL				*e*S	**Sn**	**12 41 52.1**	**+1.1**
SMCA	**Catarina**	**0.74**	**6**	*i* P	**Pn**	**12 41 44.4**	**+0.2**
SMCA				*i* S	**Sn**	**12 41 52.5**	**-1.8**
SMCA				IAML		12 41 53.7	
	comp=N,2μm,0.1s						
THIG		**0.80**	**352**	*e*P	**Pn**	**12 41 45.4**	**+0.4**
THIG				*e*S	**Sn**	**12 41 55.2**	**-0.5**
THIG		**0.80**	**352**	*i* P	**Pn**	**12 41 45.3**	**+0.4**
THIG				IAML		12 41 55.7	
	comp=E,2μm,0.3s						
STG2	**El Palmar, Qui**	**0.81**	**67**	*i* P	**Pn**	**12 41 45.9**	**+0.6**
STG2				IAML		12 41 58.4	
	comp=N,7μm,0.1s						
STG5	**El Palmar, Qui**	**0.83**	**70**	*i* P	**Pn**	**12 41 45.8**	**+0.4**
STG8	**El Palmar, Qui**	**0.84**	**67**	*i* P	**Pn**	**12 41 46.4**	**+0.7**
STG8				*i* S	**Sn**	**12 41 56.4**	**-0.7**
STG8				IAML		12 41 57.7	
	comp=N,3μm,0.1s						
CHUJ	**Union Juarez**	**0.97**	**2**	*e*P	**Pn**	**12 41 47.2**	**-0.3**
CHUJ				*e*S	**Sn**	**12 41 57.6**	**-2.7**
PATR	**El Naranjo**	**1.00**	**355**	*e*P	**Pn**	**12 41 47.1**	**-0.8**
PATR				*e*S	**Sn**	**12 41 58.1**	**-2.8**
PAVE	**Pavencul**	**1.07**	**359**	*e*P	**Pn**	**12 41 48.4**	**-0.5**
PAVE				*e*S	**Sn**	**12 42 00.0**	**-2.7**
HUEH	**Huehuetenango**	**1.35**	**28**	*e*P	**Pn**	**12 41 53.7**	**+1.0**
HUEH				*e*S	**Sn**	**12 42 08.7**	**-0.8**
FG8	**Yepocapa, Chim**	**1.55**	**85**	*i* P	Pn	12 41 53.2	-2.1
FG8				*i* S	Sn	12 42 07.2	-7.0
FG16	**Alotenango, Sa**	**1.60**	**84**	*i* P	**Pn**	**12 41 54.4**	**-1.7**
PCG5	**San Vicente Pa**	**1.72**	**86**	*i* P	**Pn**	**12 41 57.4**	**-0.3**
APG	**El Apazote**	**1.85**	**61**	*i* P	**Pn**	**12 42 01.6**	**+1.9**
PCIG		**1.89**	**327**	*e*P	**Pn**	**12 42 00.2**	**+0.4**
PCIG				*e*S	**Sn**	**12 42 20.2**	**-2.3**
CCIG	**Comitan**	**2.15**	**0**	*e*P	**Pn**	**12 42 05.8**	**+2.1**
CCIG				*e*S	**Sn**	**12 42 31.6**	**+2.3**
CCIG	**Comitan**	**2.15**	**0**	*i* P	**Pn**	**12 42 05.5**	**+1.8**
CARR	**Arriaga**	**2.72**	**321**	*e*P	**Pn**	**12 42 13.7**	**+2.4**
CARR				*e*S	**Sn**	**12 42 38.7**	**-4.2**
TGIG		**2.81**	**341**	*e*P	**Pn**	**12 42 12.5**	**-0.1**
TGIG				*e*S	**Sn**	**12 42 45.4**	**+0.1**
CMIG	**Matias Romero**	**3.96**	**319**	*e*P	**Pn**	**12 42 32.6**	**+4.2**
CMIG				*e*S	**Sn**	**12 43 12.3**	**-1.3**

SJA ***14*** *12:47:40.5±0.8, 32°.19S×70°.06W, h126km±3km, ML3.6, MW3.7*
GUC ***14*** *12:47:42.4±0.7, 32°.18S×70°.36W, h116km±4km, ML3.6*
ISC 14 12:47:41.4±1.3, 32°.18S±0°.02×70°.07W±0°.03, h125km±8km, n68, σ0s95/103, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VA03	**San Esteban**	**0.71**	**215**	*i* P	**Pn**	**12 48 01.3**	**-0.2**
VA03				*e*S	**Sn**	**12 48 15.7**	**-1.0**
VA03	**San Esteban**	**0.71**	**215**	*e*P	**Pn**	**12 48 01.1**	**-0.4**
VA03				*e*S	**Sn**	**12 48 16.1**	**-0.6**
VA03				IAML		12 48 16.6	
	comp=E,3μm,0.1s						
RTLS	**Leoncito**	**0.76**	**60**	*e*P	**Pn**	**12 48 01.8**	**-0.4**
RTLS				*e*S	**Sn**	**12 48 16.2**	**-1.5**
RTLS				IAML		12 48 17.8	
	comp=E,3μm,0.1s						
CO04	**Los Peladeros**	**0.78**	**280**	*i* P	**Pn**	**12 48 01.4**	**-0.9**
CO04				*e*S	**Sn**	**12 48 15.9**	**-2.0**
PEL	**Peldehue**	**1.09**	**208**	*e*P	**Pn**	**12 48 04.7**	**-0.2**
PEL				*e*S	**Sn**	**12 48 22.8**	**+0.1**
PEL				IAML		12 48 23.1	
	comp=E,1μm,0.5s						
VA06	**Catapilco**	**1.11**	**250**	*i* P	**Pn**	**12 48 04.2**	**-0.7**
VA06				IAML		12 48 21.5	
	comp=E,1μm,0.3s						
ASAL	**Salagasta**	**1.12**	**112**	*e*P	**Pn**	**12 48 05.9**	**+0.7**
ASAL				*e*S	**Sn**	**12 48 23.5**	**+0.3**
ROCH	**El Roble**	**1.12**	**225**	*i* P		12 48 05.1	

ROCH				*i* P	**Pn**	**12 48 05.1**	**-0.2**
ROCH				IAML		12 48 26.1	
	comp=N,2μm,0.4s						
ROCH				IAML		12 48 26.1	
	comp=N,818nm,0.3s						
MT10	**Hacienda Santa**	**1.16**	**200**	*i* P	**Pn**	**12 48 06.2**	**+0.5**
MT10				*e*S	**Sn**	**12 48 24.4**	**+0.3**
ARCO	**CERRO ARCO**	**1.17**	**125**	*e*P	**Pn**	**12 48 06.3**	**+0.6**
ARCO				*e*S	**Sn**	**12 48 25.1**	**+1.0**
ARCO				IAML		12 48 26.3	
	comp=Z,2μm,0.3s						
MT04	**Ro Olivares**	**1.23**	**183**	*i* P	**Pn**	**12 48 07.2**	**+0.7**
MT04				IAML		12 48 34.3	
	comp=E,534nm,0.3s						
MT04	**Ro Olivares**	**1.23**	**183**	*e*P	**Pn**	**12 48 06.6**	**+0.1**
MT04				*e*S	**Sn**	**12 48 28.5**	**+3.1**
MT04				IAML		12 48 31.4	
	comp=Z,310nm,0.2s						
CO02	**Combarbal**	**1.25**	**320**	*i* P	**Pn**	**12 48 06.6**	**0.0**
CO02				*e*S	**Sn**	**12 48 25.4**	**-0.4**
CO02	**Combarbal**	**1.25**	**320**	*e*P	**Pn**	**12 48 06.6**	**0.0**
CO02				*e*S	**Sn**	**12 48 26.4**	**+0.6**
CO02				IAML		12 48 27.9	
	comp=Z,810nm,0.5s						
MT08	**Bocatoma Ro**	**1.26**	**178**	*i* P	**Pn**	**12 48 08.0**	**+1.1**
MT08	**Bocatoma Ro**	**1.26**	**178**	*e*P	**Pn**	**12 48 07.5**	**+0.6**
MT08				*e*S	**Sn**	**12 48 25.4**	**-0.7**
MT14	**Cerro Cal¡n**	**1.28**	**198**	*i* P	**Pn**	**12 48 07.3**	**+0.6**
MT14				*e*S	**Sn**	**12 48 26.7**	**+0.6**
MT14				IAML		12 48 28.1	
	comp=E,2μm,0.3s						
MT16	**CCHEN**	**1.30**	**197**	*i* P	**Pn**	**12 48 07.6**	**+0.6**
MT16				*e*S	**Sn**	**12 48 27.1**	**+0.5**
MT16				IAML		12 48 27.6	
	comp=E,764nm,0.4s						
MT05	**Renca**	**1.33**	**205**	*i* P	**Pn**	**12 48 07.8**	**+0.4**
MT05				IAML		12 48 29.1	
	comp=N,3μm,0.2s						
MT05	**Renca**	**1.33**	**205**	*e*P	**Pn**	**12 48 07.3**	**-0.1**
MT05				*e*S	**Sn**	**12 48 27.9**	**+0.7**
MT05				IAML		12 48 29.3	
	comp=Z,948nm,0.7s						
ZON	**Zonda**	**1.34**	**62**	*e*P	**Pn**	**12 48 07.5**	**+0.1**
ZON				*e*S	**Sn**	**12 48 26.5**	**-0.8**
ZON				IAML		12 48 27.6	
	comp=Z,798nm,0.3s						
MT03	**Universidad Ad**	**1.36**	**196**	*i* P	**Pn**	**12 48 08.4**	**+0.6**
MT03	**Universidad Ad**	**1.36**	**196**	*e*P	**Pn**	**12 48 07.8**	**0.0**
MT03				*e*S	**Sn**	**12 48 28.8**	**+0.9**
MT03				IAML		12 48 30.2	
	comp=Z,936nm,0.2s						
AAGR	**Agrelo**	**1.38**	**131**	*e*P	**Pn**	**12 48 09.3**	**+1.3**
AAGR				*e*S	**Sn**	**12 48 29.5**	**+1.3**
AAGR				IAML		12 48 31.2	
	comp=Z,518nm,0.2s						
MT02	**Curacav**	**1.41**	**220**	IAML		12 48 29.7	
	comp=E,699nm,0.3s						
MT02	**Curacav**	**1.41**	**220**	*e*P	**Pn**	**12 48 07.8**	**-0.4**
MT02				*e*S	**Sn**	**12 48 28.4**	**-0.1**
MT02				IAML		12 48 28.8	
	comp=Z,226nm,0.2s						
CO03	**El Pedregal**	**1.44**	**338**	*i* P	**Pn**	**12 48 09.0**	**+0.4**
CO03				*e*S	**Sn**	**12 48 29.4**	**+0.1**
CO03				IAML		12 48 30.4	
	comp=E,2μm,0.2s						
CO03	**El Pedregal**	**1.44**	**338**	*e*P	**Pn**	**12 48 09.0**	**+0.4**
CO03				*e*S	**Sn**	**12 48 29.6**	**+0.4**
CO03				IAML		12 48 30.2	
	comp=Z,640nm,0.5s						
SJA	**San Juan**	**1.44**	**64**	*e*P	Pn	12 48 00.4	-8.1
SJA				*e*S	**Sn**	**12 48 29.3**	**+0.2**
SJA				IAML		12 48 34.6	
	comp=Z,480nm,0.4s						
MT15	**Las Vizcachas**	**1.46**	**194**	*i* P	**Pn**	**12 48 09.8**	**+1.0**
MT15				IAML		12 48 31.7	
	comp=N,2μm,0.3s						
MT13	**San Alfonso**	**1.57**	**187**	*i* P	**Pn**	**12 48 11.2**	**+1.0**
MT13				IAML		12 48 36.1	
	comp=N,537nm,0.2s						
MT13	**San Alfonso**	**1.57**	**187**	*e*P	**Pn**	**12 48 10.5**	**+0.4**
MT13				*e*S	**Sn**	**12 48 33.6**	**+1.6**
MT13				IAML		12 48 38.6	
	comp=Z,328nm,0.3s						
VA01	**Torpederas**	**1.58**	**237**	*i* P	**Pn**	**12 48 09.8**	**-0.2**
VA01				IAML		12 48 36.8	
	comp=E,1μm,0.1s						
VA01	**Torpederas**	**1.58**	**237**	*e*P	**Pn**	**12 48 09.9**	**-0.1**

AC05	**El Transito**	**3.34**	**357**	IAML			12 49 15.3		
AC05	**El Transito**	**3.34**	**357**	*eP*		**Pn**	**12 48 33.0**	**+0.5**	
MRA	**San Martin**	**3.69**	**95**	*eP*		**Pn**	**12 48 35.6**	**-1.4**	
MRA				*eS*		Sn	12 49 33.4	+13	
MRA				IAML			12 49 49.3		
	comp=Z,96nm,0.5s								
VCA	**Vinchina**	**3.79**	**26**	*eP*		**Pn**	**12 48 38.8**	**+0.3**	
VCA				*eS*		**Sn**	**12 49 22.8**	**+0.2**	
VCA				IAML			12 49 28.0		
	comp=Z,104nm,0.6s								
ACLC	**CERRO LA CRUZ**	**3.84**	**45**	*eP*		**Pn**	**12 48 39.4**	**+0.3**	
ACLC				IAML			12 49 50.4		
	comp=Z,50nm,0.3s								
AC04	**Llanos de Chal**	**4.05**	**347**	*eP*		**Pn**	**12 48 42.0**	**+0.2**	
AC04				IAML			12 49 45.1		
	comp=Z,46nm,0.4s								
GO03	**Copiapo**	**4.57**	**358**	*eP*		**Pn**	**12 48 48.9**	**+0.1**	
GO03				*eS*		**Sn**	**12 49 40.3**	**-0.8**	
GO03				IAML			12 50 23.4		
	comp=Z,34nm,0.5s								
BI02	**San Fabin de**	**4.58**	**192**	*eP*		**Pn**	**12 48 48.3**	**-0.6**	
BI02				IAML			12 50 07.2		
	comp=Z,174nm,0.8s								
TCA	**Tanti**	**4.74**	**81**	*eP*		**Pn**	**12 48 50.8**	**-0.2**	
TCA				*eS*		**Sn**	**12 49 42.3**	**-2.8**	
TCA				IAML			12 50 17.1		
	comp=Z,59nm,0.5s								

GCG ***14*** *14:18:20.7±0.7, 14.°69N×92.°03W, h90km±4km, MD3.8, ML3.9, Presumed earthquake*
MEX ***14*** *14:18:20.7±0.9, 14.°65N×92.°09W, h100km±9km, MD3.4*
ISC 14 14:18:17.5±2.0, 14.°5N±0.°1×91.°96W±0.°08, h105km±10km, n17, σ1°89/29, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RTAL	**Retalhuleu**	**0.26**	**88**	*i* P		**Pn**	**14 18 34.8**	**+2.4**
RTAL				*i* S		**Sn**	**14 18 45.4**	**+1.7**
SMCA	**Catarina**	**0.36**	**342**	*i* P		**Pn**	**14 18 33.5**	**+0.6**
SMCA				*i* S		**Sn**	**14 18 43.5**	**-1.0**
THIG		**0.49**	**323**	*i* P		**Pn**	**14 18 34.5**	**+0.8**
THIG				*i* S		**Sn**	**14 18 45.2**	**-0.7**
THIG				IAML			14 18 46.4	
	comp=E,2μm,0.3s							
STG2	**El Palmar, Qui**	**0.57**	**98**	*i* P		**Pn**	**14 18 35.0**	**+0.5**
STG8	**El Palmar, Qui**	**0.59**	**96**	*i* P		**Pn**	**14 18 35.2**	**+0.5**
STG8				IAML			14 18 49.6	
	comp=N,4μm,0.2s							
CHUJ	**Union Juarez**	**0.59**	**346**	*eP*		**Pn**	**14 18 35.0**	**+0.2**
CHUJ				*eS*		**Sn**	**14 18 46.1**	**-1.6**
STG5	**El Palmar, Qui**	**0.60**	**100**	*i* P		**Pn**	**14 18 35.1**	**+0.5**
STG5				*i* S		**Sn**	**14 18 46.8**	**-0.7**
SOKI	**Kika Raxquin**	**0.62**	**60**	*i* P		**Pn**	**14 18 37.7**	**+2.5**
PATR	**El Naranjo**	**0.66**	**336**	*eP*		**Pn**	**14 18 35.0**	**-0.3**
PATR				*eS*		**Sn**	**14 18 46.2**	**-2.3**
PAVE	**Pavencul**	**0.71**	**343**	*eP*		**Pn**	**14 18 36.0**	**+0.4**
PAVE				*eS*		**Sn**	**14 18 48.2**	**-1.1**
FG8	**Yepocapa, Chim**	**1.38**	**100**	*i* P		**Pn**	**14 18 42.0**	**-0.6**
FG8				*i* S		**Sn**	**14 18 58.7**	**-3.0**
FG16	**Alotenango, Sa**	**1.42**	**100**	*i* P		**Pn**	**14 18 43.1**	**-0.2**
FG16				*i* S		**Sn**	**14 19 01.1**	**-1.7**
FG16				IAML			14 19 06.6	
	comp=N,3μm,0.2s							
APG	**El Apazote**	**1.53**	**71**	*i* P		**Pn**	**14 18 48.2**	**+3.7**
PCIG		**1.70**	**314**	*eP*		**Pn**	**14 18 47.7**	**+1.3**
PCIG				*eS*		**Sn**	**14 19 06.8**	**-1.6**
CCIG	**Comitan**	**1.77**	**354**	*eS*		**Sn**	**14 19 10.2**	**-0.1**
TGIG		**2.51**	**334**	*eP*		**Pn**	**14 18 57.9**	**+0.9**
TGIG				*eS*		**Sn**	**14 19 22.9**	**-4.5**
CARR	**Arriaga**	**2.55**	**313**	*eP*		**Pn**	**14 19 00.5**	**+3.1**
CARR				*eS*		**Sn**	**14 19 27.5**	**-0.6**

IDC 14 14:21:11.6±7.8, 7.°92S×129.°53E, h406km±106km, mb2.8/1, mbtmp3.3/4, Error ellipse: s-maj=64.3km s-min=46.8km az=33.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**10.80**	**200**	P		P	14 23 37.2	-0.7
	1.7nm,1.0s,baz=18,slow=8.7,SNR=6.7							
FITZ				S		S	14 25 40.1	+1.3
	2.5nm,1.2s,baz=12,slow=23,SNR=1.0							
WRA	**Warramunga Arr**	**12.83**	**159**	P		P	14 23 59.1	-1.2
	0.4nm,0.9s,baz=338,slow=10,SNR=6.8							
WRA				S		S	14 26 23.6	+3.8
	0.2nm,0.4s,baz=342,slow=20,SNR=6.3							
ASAR	**Alice Springs**	**16.21**	**165**	P		P	14 24 37.0	0.0
	0.3nm,0.8s,baz=348,slow=11,SNR=10							
MKAR	**Makanchi Array**	**68.74**	**327**	P		P	14 31 33.3	+0.2
	0.2nm,0.4s,baz=117,slow=7.6,SNR=7.5							
	0.2nm,0.4s							

RSNC ***14*** *14:33:52.6±0.0, 6.°N±1.°7°3W±.°, h4km±2km, M3.5, mb3.9, ML3.2*
FUNV ***14*** *14:33:52.4, 6.°39N×73.°46W, h9km, MW3.7, Presumed earthquake*
IDC ***14*** *14:33:54.9±7.3, 6.°70N×73.°59W, h63km±45km, mb2.9/1, mbtmp3.2/1, Error ellipse: s-maj=202.3km s-min=35.5km az=101.0*
ISC 14 14:33:51.8±1.0, 6.°48N±0.°02×73.°41W±0.°03, h11km±8km, n39, σ1°40/68, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BARC	**Barichara**	**0.25**	**63**	P		**Pg**	**14 33 57.8**	**+0.6**
BARC				S		**Sg**	**14 34 02.2**	**+1.4**
BRJC	**Barrancabermej**	**0.60**	**326**	P		**Pg**	**14 34 03.8**	**+0.4**
BRJC				S		**Sb**	**14 34 12.9**	**+0.1**
RUSC	**La Rusia**	**0.66**	**151**	P		**Pg**	**14 34 04.0**	**-0.8**
RUSC				S		**Sg**	**14 34 12.9**	**-0.7**
RUSC	**La Rusia**	**0.66**	**151**	*eP*		**Pg**	**14 34 04.2**	**-0.6**
RUSC				*eS*		**Sg**	**14 34 12.2**	**-1.4**
PTBC	**PUERTO BERRIO,**	**1.04**	**274**	P		**Pg**	**14 34 11.3**	**-0.6**
PTBC				S		**Sb**	**14 34 25.6**	**0.0**
SPBC	**San Pablo de B**	**1.05**	**219**	P		**Pg**	**14 34 10.8**	**-1.3**
SPBC				S		**Sb**	**14 34 26.1**	**+0.2**
PAMC	**Pamplona, Colo**	**1.11**	**39**	P		**Pg**	**14 34 11.7**	**-1.6**
PAMC				S		**Sg**	**14 34 26.2**	**-1.6**
NORC	**Norcasia**	**1.71**	**238**	P		**Pn**	**14 34 20.7**	**-1.0**
NORC				S		**Sn**	**14 34 43.1**	**-0.5**
OCAC	**Ocana**	**1.75**	**3**	P		**Pn**	**14 34 22.1**	**-0.3**
OCAC				S		**Sn**	**14 34 44.8**	**0.0**
ROSC	**El Rosal**	**1.86**	**209**	P		**Pb**	**14 34 26.4**	**+0.3**
	145nm,0.3s,baz=116,slow=22,SNR=44							
ROSC				S		**Sg**	**14 34 51.0**	**-0.7**
	164nm,0.3s,baz=145,slow=23,SNR=5.8							
ROSC	**El Rosal**	**1.86**	**209**	P		**Pb**	**14 34 26.2**	**+0.1**
ROSC				S		**Sg**	**14 34 53.1**	**+1.3**
CHIC	**Chingaza**	**1.86**	**190**	P		**Pn**	**14 34 24.2**	**+0.1**
CHIC				S		**Sn**	**14 34 49.2**	**+1.4**
CVER	**Cruz Verde, Cu**	**2.05**	**199**	P		**Pb**	**14 34 29.2**	**-0.2**
CVER				S		**Sg**	**14 34 57.4**	**-0.5**
HELC	**Santa Helena**	**2.12**	**262**	P		**Pn**	**14 34 27.1**	**-0.5**
HELC				S		**Sn**	**14 34 52.9**	**-1.4**
HELC	**Santa Helena**	**2.12**	**262**	*eP*		**Pn**	**14 34 27.2**	**-0.5**
HELC				*eS*		**Sn**	**14 34 52.8**	**-1.5**
GUY2C	**Guyana, Caldas**	**2.31**	**238**	P		**Pn**	**14 34 30.9**	**+0.6**
GUY2C				S		**Sn**	**14 35 00.3**	**+1.3**
VILC	**Villavicencio,**	**2.37**	**187**	P		**Pn**	**14 34 31.9**	**+1.1**
VILC				S		**Sg**	**14 35 08.9**	**+1.0**
UREC	**San Jos de Ur**	**2.46**	**301**	P		**Pn**	**14 34 32.4**	**+0.5**
NIZA	**Niza - Manizal**	**2.49**	**236**	P		**Pn**	**14 34 33.3**	**+0.7**
NIZA				S		**Sn**	**14 35 04.8**	**+1.7**
PTGC	**Puerto Gaitan,**	**2.59**	**151**	P		**Pn**	**14 34 35.6**	**+1.8**
PTGC				S		**Sb**	**14 35 12.1**	**+1.8**
CBOC	**Ciudad Bolivar**	**2.66**	**257**	P		**Pn**	**14 34 36.0**	**+1.2**
CBOC				S		**Sn**	**14 35 08.8**	**+1.6**
DBBC	**Dabeiba**	**2.83**	**281**	P		**Pn**	**14 34 39.3**	**+2.1**
DBBC				S		**Sn**	**14 35 13.0**	**+1.6**
PRAC	**Prado**	**3.11**	**208**	P		**Pn**	**14 34 38.9**	**-2.1**
PRAC				S		**Sb**	**14 35 22.5**	**-2.8**
PLMC	**San Jos del P**	**3.26**	**242**	P		**Pn**	**14 34 44.6**	**+1.6**
PLMC				S		**Sb**	**14 35 28.6**	**-0.9**
URMC	**La Uribe, Meta**	**3.35**	**197**	P		**Pn**	**14 34 45.5**	**+1.2**
URMC				S		**Sn**	**14 35 27.3**	**+3.2**
APAC	**Apartado, Choc**	**3.45**	**294**	P		**Pn**	**14 34 46.4**	**+0.8**
APAC				S		**Sn**	**14 35 28.4**	**+1.9**
ARGC	**Ariguani, Magd**	**3.46**	**346**	P		**Pn**	**14 34 49.4**	**+3.7**
ARGC				S		**Sn**	**14 35 30.0**	**+3.2**
SDV	**Santo Domingo**	**3.65**	**49**	P		**Pn**	**14 34 48.6**	**+0.1**
SDV	**Santo Domingo**	**3.65**	**49**	*eP*		**Pn**	**14 34 49.1**	**+0.6**
SDV				*eS*		**Sn**	**14 35 31.9**	**+0.2**
SJCC	**San Jacinto, C**	**3.82**	**333**	P		**Pn**	**14 34 51.1**	**+0.3**
SJCC				S		**Sn**	**14 35 36.2**	**+0.4**
SJCC	**San Jacinto, C**	**3.82**	**333**	*eP*		**Pn**	**14 34 51.2**	**+0.4**
SJCC				*eS*		**Sn**	**14 35 34.2**	**-1.6**
YOTC	**Yotoco, Valle**	**3.83**	**230**	P		**Pn**	**14 34 51.1**	**+0.2**
POPC	**Popayan, Colom**	**5.09**	**220**	P		**Pn**	**14 35 10.4**	**+2.1**
	7.4nm,0.9s							
FLOC	**Florencia**	**5.35**	**205**	P		**Pn**	**14 35 11.0**	**-0.8**
	17nm,0.7s							
URIC	**Uribia, Colomb**	**5.38**	**15**	P		**Pn**	**14 35 10.5**	**-1.6**
URIC	**Uribia, Colomb**	**5.38**	**15**	*eP*		**Pn**	**14 35 12.3**	**+0.2**
URIC				*eS*		**Sn**	**14 36 11.2**	**-2.9**
YKA	**Yellowknife Ar**	**63.49**	**340**	P		P	14 44 16.4	-5.4
	0.2nm,0.6s,baz=133,slow=6.3,SNR=2.7							
	0.2nm,0.6s							
ASAR	**Alice Springs**	**148.68**	**234**	PKPbc		**PKPdf**	**14 53 35.1**	**-1.3**
	0.3nm,0.9s,baz=124,slow=2.8,SNR=1.2							
WRA	**Warramunga Arr**	**149.92**	**241**	PKPbc		**PKPdf**	**14 53 38.5**	**0.0**
	0.3nm,0.8s,baz=106,slow=2.8,SNR=5.4							

IDC ***14*** *15:42:45.3±0.7, 21.°16N×45.°69W, h0km, mb4.1/15, mbtmp4.1/15, MS3.5/32, Error ellipse: s-maj=19.3km s-min=17.4km az=87.0*
NEIC ***14*** *15:42:47.7±1.9, 21.°23N±0.°08×45.°9W±0.°1, h10km±1km, mb4.7/55, Error ellipse: s-maj=22.9km s-min=11.1km az=67.0*
ISC 14 15:42:46.4±0.5, 21.°13N±0.°10×45.°78W±0.°10, h10km, n112, σ1°37/59, mb4.7/52, MS3.5/31, 1D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MDP	**Montagnes des**	**17.27**	**204**	LR		LR	15 51 58.8	
	comp=Z,115nm,18.3s,baz=98,slow=32							
SJG	**San Juan**	**19.42**	**265**	LR		LR	15 53 30.2	
	comp=Z,113nm,20.6s,baz=83,slow=33							
DR12	**Loma Pena Alta**	**22.30**	**268**	P		**P**	**15 47 44.2**	**-0.1**
SDV	**Santo Domingo**	**26.87**	**247**	LR		LR	15 57 44.4	
	comp=Z,69nm,21.3s,baz=68,slow=33							
TKL	**Tuckaleechee C**	**36.18**	**302**	LR		LR	16 03 26.5	
	comp=Z,44nm,18.7s,baz=124,slow=34							
SADO	**Sadowa**	**36.20**	**318**	LR		LR	16 02 22.3	
	comp=Z,45nm,18.7s,baz=297,slow=32							
BDFB	**Brasilia**	**36.61**	**184**	P		**P**	**15 49 52.5**	**-0.7**
	1.0nm,0.4s,baz=358,slow=16,SNR=1.5							
	1.0nm,0.4s							
SCHQ	**Schefferville**	**37.21**	**340**	P		**P**	**15 49 56.4**	**-1.4**
	6.8nm,1.1s,baz=143,slow=10,SNR=4.4							
	6.8nm,1.1s							
OTAV	**Otavalo**	**38.07**	**241**			**P**	**15 50 05.3**	**-0.8**
JTS	**Las Juntas de**	**39.12**	**260**	LR		LR	16 04 09.4	
	comp=Z,38nm,19.3s,baz=77,slow=33							
ESDC	**Sonseca Array**	**40.10**	**53**	P		**P**	**15 50 21.1**	**-1.3**
	2.2nm,1.2s,baz=247,slow=6.6,SNR=6.7							
ESDC				LR		LR	16 03 24.9	
	comp=Z,78nm,18.8s,baz=242,slow=31							
	2.2nm,1.2s							
DBIC	**Dimbokro**	**42.09**	**104**	P		**P**	**15 50 37.9**	**-1.1**
	4.2nm,0.8s,baz=302,slow=11,SNR=3.2							
DBIC				LR		LR	16 04 25.7	
	comp=Z,72nm,21.0s,baz=302,slow=31							
	4.2nm,0.8s							
H10N3	**ASCENSION HYDR**	**42.10**	**130**	T		T	16 35 08.9	
	baz=314,slow=75,SNR=272							
H10N2	**ASCENSION HYDR**	**42.10**	**130**	T		T	16 35 08.0	
	baz=314,slow=75,SNR=287							
H10N1	**ASCENSION HYDR**	**42.12**	**130**	T		T	16 35 09.4	
	baz=314,slow=75,SNR=338							
ATAH	**Atahualpa**	**42.60**	**232**	LR		LR	16 09 29.7	
	comp=Z,37nm,19.1s,baz=68,slow=38							
H10S3	**ASCENSION HYDR**	**42.76**	**131**	T		T	16 36 01.4	
	baz=268,slow=74,SNR=62							
H10S2	**ASCENSION HYDR**	**42.78**	**131**	T		T	16 35 59.6	
	baz=312,slow=74,SNR=65							
LPAZ	**La Paz**	**43.17**	**212**	P		**P**	**15 50 49.5**	**+1.2**
	0.7nm,0.4s,baz=19,slow=10,SNR=7.5							
LPAZ				LR		LR	16 08 02.1	
	comp=Z,93nm,21.2s,baz=26,slow=35							
	0.7nm,0.4s							
LPAZ	**La Paz**	**43.17**	**212**			**P**	**15 50 50.2**	**+1.8**
NNA	**Nana**	**44.89**	**226**	LR		LR	16 09 27.8	
	comp=Z,80nm,19.6s,baz=96,slow=36							
TORD	**Torodi Ar. Bea**	**45.92**	**92**	P		**P**	**15 51 09.9**	**+0.2**
	1.3nm,0.9s,baz=293,slow=7.7,SNR=6.2							
	1.3nm,0.9s							
CMIG	**Matias Romero**	**46.43**	**274**	LR		LR	16 07 43.6	
	comp=Z,36nm,19.8s,baz=68,slow=32							
EKA	**Eskdalemuir Ar**	**46.63**	**32**	LR		LR	16 07 19.9	
	comp=Z,52nm,19.4s,baz=186,slow=32							
CPUP	**Vila Florida**	**48.49**	**194**	P		**P**	**15 51 30.6**	**+1.1**
	3.2nm,0.9s,baz=7.4,slow=5.5,SNR=6.4							
	3.2nm,0.9s							
CPUP	**Villa Florida**	**48.49**	**194**	P		**P**	**15 51 29.4**	**-0.2**
CPUP				IAmb		IAmb	15 51 37.5	
	comp=Z,12nm,1.2s							
ULM	**Lac du Bonnet**	**48.76**	**319**	P		**P**	**15 51 31.4**	**0.0**
	comp=Z,2.3nm,0.9s,baz=117,slow=6.9,SNR=3.2							
ULM				LR		LR	16 10 15.7	
	comp=Z,42nm,20.4s,baz=14,slow=34							
	comp=Z,2.3nm,0.9s							
MEM	**Membach**	**49.89**	**41**	*d*P		**P**	**15 51 41.2**	**+1.1**
KEST	**Kesra**	**50.01**	**61**	LR		LR	16 10 11.9	
	comp=Z,58nm,21.4s,baz=267,slow=33							
TUE	**Stuetta**	**51.10**	**47**	P		**P**	**15 51 50.7**	**+1.2**
DAVOX	**Davos/Dischmat**	**51.51**	**46**	LR		LR	16 09 48.6	
	comp=Z,43nm,21.9s,baz=251,slow=32							
DAVA	**Damuels**	**51.60**	**46**	*i* P		**P**	**15 51 55.1**	**+1.9**
	comp=Z,8.2nm,1.0s							
FETA	**Feichten**	**52.13**	**46**	*i* P		**P**	**15 51 59.0**	**+1.8**
	comp=Z,15nm,1.2s							
MOTA	**Moosalm**	**52.43**	**46**	*i* P		**P**	**15 52 00.8**	**+1.4**
	comp=Z,16nm,1.4s							
SQTA	**Sankt Quirin**	**52.48**	**46**	*i* P		**P**	**15 52 01.4**	**+1.7**
	comp=Z,19nm,1.1s							
CTI	**Castel Tesino**	**52.61**	**48**			**P**	**15 52 01.1**	**+0.4**
WATA	**Walderalm**	**52.75**	**46**	*i* P		**P**	**15 52 03.0**	**+1.3**
	comp=Z,15nm,1.2s							
WTTA	**Wattenberg**	**52.78**	**46**	*i* P		**P**	**15 52 03.4**	**+1.5**
	comp=Z,9.9nm,1.1s							
ABTA	**Abfaltersbach**	**53.30**	**47**	*i* P		**P**	**15 52 06.7**	**+1.0**
	comp=Z,7.9nm,1.1s							
LESA	**Schwarzleotal**	**53.50**	**46**	*eP*		**P**	**15 52 08.3**	**+1.1**
	comp=Z,8.0nm,1.2s							
KBA	**Koelnbreinsper**	**53.91**	**47**	*eP*		**P**	**15 52 11.3**	**+1.0**
	comp=Z,7.6nm,1.4s							
BIOA	**Bad Ischl, Aus**	**54.19**	**46**	*eP*		**P**	**15 52 13.1**	**+0.9**
	comp=Z,9.1nm,1.5s							
BLKN	**Baker Lake**	**54.35**	**336**	P		**P**	**15 52 13.8**	**+0.8**
BLKN				IAmb		IAmb	15 52 15.7	
	comp=Z,7.5nm,1.1s							
CLL	**Collm**	**54.35**	**41**	*eP*		**P**	**15 52 14.0**	**+0.8**
GEC2	**GERESS Array S**	**54.39**	**44**			**P**	**15 52 14.1**	**+0.4**
GEC2				IAmb		IAmb	15 52 16.2	
	comp=Z,15nm,1.5s							
GERES	**GERESS Array B**	**54.39**	**44**	P		**P**	**15 52 13.8**	**+0.1**
	comp=Z,1.7nm,1.1s,baz=220,slow=5.2,SNR=7.6							
	comp=Z,1.7nm,1.1s							
ANMO	**Albuquerque**	**54.55**	**298**	LR		LR	16 15 14.4	
	comp=Z,21nm,18.8s,baz=59,slow=36							
CUC	**Castrocucco**	**55.20**	**55**			**P**	**15 52 20.3**	**+0.7**
CUC				IAmb		IAmb	15 52 22.2	
	comp=Z,8.7nm,1.1s							
CONA	**Conrad Observa**	**55.70**	**46**	*i* P		**P**	**15 52 24.1**	**+1.0**
	comp=Z,7.5nm,1.5s							
NOA	**NORSAR Array B**	**55.90**	**30**	LR		LR	16 12 04.0	
	comp=Z,63nm,19.8s,baz=255,slow=32							
RONA	**Rosalia, Austr**	**55.97**	**46**	*eP*		**P**	**15 52 26.0**	**+0.9**
	comp=Z,2nm,1.2s							
KRUC	**Moravsky**	**56.18**	**44**	*eP*		**P**	**15 52 27.0**	**+0.6**
VRAC	**Vranov**	**56.33**	**44**	*eP*		**P**	**15 52 28.5**	**+0.9**
MODS	**Modra-Piesok**	**56.69**	**45**	*eP*		**P**	**15 52 32.5**	**+2.4**
HFS	**Hagfors**	**56.79**	**31**	P		**P**	**15 52 30.9**	**+0.2**
	comp=Z,3.5nm,0.9s,baz=253,slow=8.9,SNR=2.6							
HFS				LR		LR	16 12 23.2	
	comp=Z,62nm,19.0s,baz=272,slow=31							
	comp=Z,3.5nm,0.9s							
PD31	**Pinedale Array**	**56.89**	**308**	P		**P**	**15 52 31.0**	**-0.9**
PD31				IAmb		IAmb	15 52 34.0	
	comp=Z,11nm,1.4s							
PDAR	**Pinedale Array**	**56.89**	**308**	P		**P**	**15 52 33.0**	**+1.1**
	comp=Z,1.6nm,1.0s,baz=81,slow=9.2,SNR=10							
PDAR				LR		LR	16 14 04.2	
	comp=Z,24nm,21.8s,baz=100,slow=33							
	comp=Z,1.6nm,1.0s							
PDAR	**Pinedale Array**	**56.89**	**308**	P		**P**	**15 52 30.3**	**-1.6**
SRO	**Srobarova**	**57.34**	**46**	*eP*		**P**	**15 52 37.4**	**+2.7**
LPIG	**La Paz**	**59.17**	**286**	LR		LR	16 20 18.9	
	comp=Z,17nm,19.3s,baz=60,slow=38							
ELK	**Elko**	**61.19**	**306**	LR		LR	16 17 28.8	
	comp=Z,48nm,20.7s,baz=105,slow=34							
YKA	**Yellowknife Ar**	**61.70**	**331**	P		**P**	**15 53 05.0**	**+0.4**
	comp=Z,1.7nm,0.9s,baz=99,slow=6.9,SNR=16							
	comp=Z,1.7nm,0.9s							
YKA	**Yellowknife Ar**	**61.70**	**331**	P		**P**	**15 53 04.4**	**-0.2**
MLR	**Muntele Rosu**	**62.57**	**49**			**P**	**15 53 09.4**	**-1.5**
FINES	**FINESS Array B**	**63.00**	**31**	LR		LR	16 16 02.6	
	comp=Z,60nm,19.4s,baz=220,slow=32							
NVAR	**Mina Array Bea**	**63.77**	**303**	LR		LR	16 20 35.8	
	comp=Z,23nm,19.5s,baz=92,slow=36							
H31M	**Peel River**	**70.35**	**334**	P		**P**	**15 54 01.3**	**+1.1**
F30M	**Barrier River**	**70.67**	**336**			**P**	**15 54 02.8**	**+0.8**
N31M	**Braeburn, Yuko**	**71.67**	**330**			**P**	**15 54 08.4**	**+0.2**
EIL	**Eiat**	**72.10**	**65**	LR		LR	16 27 04.6	
	comp=Z,44nm,18.9s,baz=244,slow=37							
F28M	**Old Crow**	**72.21**	**336**			**P**	**15 54 09.8**	**-1.6**
F28M				IAmb		IAmb	15 54 13.4	
	comp=Z,7.1nm,1.1s							
D27M	**Malcolm River**	**72.25**	**338**	IAmb		IAmb	15 54 14.5	
	comp=Z,9.0nm,1.3s							
E27K	**Coleen River**	**72.72**	**337**	IAmb		IAmb	15 54 29.2	
	comp=Z,10.0nm,1.4s							
C27K	**Jago River**	**73.11**	**339**	IAmb		IAmb	15 54 19.5	
	comp=Z,7.9nm,1.1s							
I27K	**Kandik River**	**73.34**	**334**	IAmb		IAmb	15 54 20.2	
	comp=Z,8.1nm,1.2s							
BMAR	**Burnt Mountain**	**74.01**	**337**			**P**	**15 54 22.6**	**+0.6**
BCAR	**Beaver Creek A**	**74.06**	**332**	P		**P**	**15 54 22.2**	**-0.3**
D25K	**Kavik River**	**74.09**	**339**	IAmb		IAmb	15 54 25.3	
	comp=Z,7.3nm,1.1s							
PRP	**Porcupine Dome**	**74.93**	**335**	IAmb		IAmb	15 54 30.1	
	comp=Z,11nm,1.4s							
E24K	**Your Creek**	**75.22**	**338**	IAmb		IAmb	15 54 33.2	
	comp=Z,10nm,1.4s							
GLB	**Gilahina Butte**	**75.42**	**331**	IAmb		IAmb	15 54 32.8	
	comp=Z,8.8nm,1.3s							
IL31		**75.71**	**334**	IAmb		IAmb	15 54 34.1	
	comp=Z,9.3nm,1.1s							
ILAR	**Eielson Array**	**75.71**	**334**	P		**P**	**15 54 33.0**	**+1.0**
	comp=Z,4.3nm,1.0s,baz=71,slow=4.5,SNR=32							
	comp=Z,4.3nm,1.0s							
ILAR	**Eielson Array**	**75.71**	**334**			**P**	**15 54 32.7**	**+0.8**
CCB	**Clear Creek Bu**	**76.13**	**334**	IAmb		IAmb	15 54 36.4	
	comp=Z,10.0nm,1.2s							
WRH	**Wood River Hil**	**76.30**	**334**	IAmb		IAmb	15 54 37.9	
	comp=Z,9.9nm,1.2s							
E22K	**Anaktuvuk Pass**	**76.36**	**338**	IAmb		IAmb	15 54 45.1	
	comp=Z,7.7nm,1.4s							
I23K	**Minto, Yukon-K**	**76.57**	**335**	IAmb		IAmb	15 54 39.4	
	comp=Z,11nm,1.3s							
H22K	**Ishtalitna Cre**	**77.07**	**336**	IAmb		IAmb	15 54 43.4	
	comp=Z,12nm,1.3s							
TRF	**Thorofare Moun**	**77.58**	**334**	IAmb		IAmb	15 54 45.1	
	comp=Z,9.1nm,1.1s							
MBAR	**Mbarara**	**77.65**	**95**	LR		LR	16 26 27.1	
	comp=Z,89nm,21.0s,baz=311,slow=34							
IMAR	**Indian Mountai**	**77.93**	**337**	P		**P**	**15 54 45.5**	**+1.1**
C19K	**Lookout Ridge**	**78.50**	**340**	IAmb		IAmb	15 54 50.9	
	comp=Z,9.1nm,1.2s							
G19K	**Purcell Mounta**	**79.08**	**337**	IAmb		IAmb	15 54 54.0	
	comp=Z,7.9nm,1.3s							
K20K	**Telida**	**79.17**	**334**	IAmb		IAmb	15 54 53.7	
	comp=Z,10nm,1.4s							
M20K	**Styx River**	**79.41**	**333**	IAmb		IAmb	15 54 55.2	
	comp=Z,13nm,1.4s							

	comp=Z,4.4nm,1.3s,baz=18,slow=8.5,SNR=5.5							
LPAZ					LR	LR	16 21 53.4	
	comp=Z,55nm,21.6s,baz=36,slow=35							
	comp=Z,4.4nm,1.3s							
LPAZ	**La Paz**	**43.18**	**212**		P	**P**	**16 04 39.7**	**+1.0**
TORD	**Torodi Ar. Bea**	**45.95**	**92**		P	**P**	**16 04 59.8**	**-0.6**
	comp=Z,1.0nm,1.0s,baz=267,slow=7.2,SNR=4.4							
	comp=Z,1.0nm,1.0s							
CMIG	**Matias Romero**	**46.39**	**274**		LR	LR	16 23 10.6	
	comp=Z,28nm,19.2s,baz=358,slow=34							
CPUP	**Villa Florida**	**48.51**	**194**		P	**P**	**16 05 19.6**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=31,slow=9.4,SNR=6.0							
	comp=Z,0.5nm,0.3s							
ULM	**Lac du Bonnet**	**48.71**	**319**		P	**P**	**16 05 21.0**	**-0.4**
	comp=Z,2.0nm,1.0s,baz=76,slow=4.2,SNR=2.3							
	comp=Z,2.0nm,1.0s							
DAVA	**Damuels**	**51.61**	**46**	*eP*		**P**	**16 05 45.3**	**+1.6**
	comp=Z,9.2nm,1.1s							
FETA	**Feichten**	**52.14**	**46**	*eP*		**P**	**16 05 49.3**	**+1.7**
	comp=Z,8.9nm,1.1s							
MOTA	**Moosalm**	**52.44**	**46**	*eP*		**P**	**16 05 51.4**	**+1.6**
	comp=Z,11nm,1.3s							
SQTA	**Sankt Quirin**	**52.49**	**46**	*i* P		**P**	**16 05 51.9**	**+1.8**
	comp=Z,12nm,1.2s							
WATA	**Walderalm**	**52.76**	**46**	*i* P		**P**	**16 05 53.9**	**+1.7**
	comp=Z,8.3nm,1.1s							
WTTA	**Wattenberg**	**52.79**	**46**	*eP*		**P**	**16 05 54.0**	**+1.6**
	comp=Z,8.4nm,1.0s							
LESA	**Schwarzleotal**	**53.51**	**46**	*eP*		**P**	**16 05 58.8**	**+1.1**
	comp=Z,7.4nm,1.5s							
BIOA	**Bad Ischl, Aus**	**54.19**	**46**	*eP*		**P**	**16 06 04.5**	**+1.9**
	comp=Z,4.1nm,1.0s							
GERES	**GERESS Array B**	**54.40**	**44**	P		**P**	**16 06 04.3**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=208,slow=7.6,SNR=4.2							
	comp=Z,0.1nm,0.3s							
ANMO	**Albuquerque**	**54.51**	**298**		LR	LR	16 25 38.2	
	comp=Z,20nm,21.1s,baz=22,slow=32							
MOA	**Molln**	**54.63**	**46**	*eP*		**P**	**16 06 07.7**	**+1.9**
	comp=Z,6.1nm,1.3s							
NOA	**NORSAR Array B**	**55.90**	**30**		LR	LR	16 25 34.9	
	comp=Z,40nm,20.0s,baz=15,slow=31							
HFS	**Hagfors**	**56.79**	**31**		LR	LR	16 27 28.3	
	comp=Z,32nm,18.1s,baz=280,slow=33							
PDAR	**Pinedale Array**	**56.84**	**308**		P	**P**	**16 06 23.3**	**+1.3**
	comp=Z,1.1nm,1.0s,baz=89,slow=6.2,SNR=6.3							
	comp=Z,1.1nm,1.0s							
ELK	**Elko**	**61.15**	**306**		LR	LR	16 30 57.1	
	comp=Z,33nm,22.0s,baz=94,slow=34							
YKA	**Yellowknife Ar**	**61.66**	**331**		P	**P**	**16 06 55.4**	**+0.7**
	comp=Z,1.5nm,0.9s,baz=98,slow=7.0,SNR=14							
	comp=Z,1.5nm,0.9s							
MLR	**Muntele Rosu**	**62.58**	**49**		LR	LR	16 32 13.3	
	comp=Z,20nm,18.1s,baz=306,slow=34							
FINES	**FINESS Array B**	**62.99**	**31**		LR	LR	16 31 01.4	
	comp=Z,35nm,19.1s,baz=189,slow=33							
F30M	**Barrier River**	**70.63**	**336**		P	**P**	**16 07 53.1**	**+0.9**
F30M					IAmb	IAmb	16 07 54.0	
	comp=Z,2.8nm,0.8s							
N31M	**Braeburn, Yuko**	**71.63**	**330**			**P**	**16 07 59.0**	**+0.6**
N31M					IAmb	IAmb	16 08 11.8	
	comp=Z,4.5nm,1.0s							
D25K	**Kavik River**	**74.05**	**339**		P	**P**	**16 08 13.1**	**+0.4**
D25K					IAmb	IAmb	16 08 15.7	
	comp=Z,3.6nm,0.9s							
IL31		**75.67**	**334**		P	**P**	**16 08 23.1**	**+1.1**
IL31					IAmb	IAmb	16 08 24.6	
	comp=Z,4.2nm,0.9s							
ILAR	**Eielson Array**	**75.67**	**334**		P	**P**	**16 08 23.4**	**+1.3**
	comp=Z,3.1nm,0.9s,baz=69,slow=4.3,SNR=26							
	comp=Z,3.1nm,0.9s							
ILAR	**Eielson Array**	**75.67**	**334**			**P**	**16 08 22.8**	**+0.7**
WRH	**Wood River Hil**	**76.26**	**334**			**P**	**16 08 24.2**	**-1.2**
WRH					IAmb	IAmb	16 08 27.9	
	comp=Z,3.2nm,0.9s							
H22K	**Ishtalitna Cre**	**77.03**	**336**		P	**P**	**16 08 29.9**	**+0.2**
BOSA	**Boshof**	**84.54**	**123**		LR	LR	16 42 04.0	
	comp=Z,25nm,18.0s,baz=182,slow=32							

*FUNV **14** 16:28:28.8, 12.53N×65.27W, h31km, MW3.8, Presumed earthquake*
*TRN **14** 16:28:28.2, 12.70N×64.85W, h2km, MD4.3, Far North-west of Barbuda.*
ISC 14 16:28:24.8±1.4, 12.54N±0.05×65.23W±0.06, h10km, n20, σ2s05/33, Caribbean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUNV	**FUNVISIS**	**2.58**	**217**	*eP*	**Pn**	**16 29 07.8**	**+1.0**
FUNV				*eS*	**Sn**	**16 29 35.5**	**-2.8**
GRFF	**Grenada Fort F**	**3.45**	**98**	*eP*	**Pn**	**16 29 20.8**	**+2.1**
GRFF				*eS*	**Sn**	**16 29 58.5**	**-1.2**
GRW	**Mount Saint Ca**	**3.51**	**96**	x	Pg	16 29 31.1	-1.1
GRW				*eS*	**Sn**	**16 30 00.9**	**-0.3**
GRGR	**Grenville**	**3.52**	**96**	*eP*	**Pn**	**16 29 20.9**	**+1.3**
GRGR				*eS*	**Sn**	**16 29 59.1**	**-2.3**
GRGR	**Grenville**	**3.52**	**96**	*eP*	**Pn**	**16 29 21.8**	**+2.2**
GRGR				*eS*	**Sn**	**16 29 60.0**	**-1.4**
GRSS	**Sisters**	**3.54**	**94**	*eP*	**Pn**	**16 29 22.1**	**+2.1**
GCMP	**Grenada, Carri**	**3.72**	**90**	*eP*	**Pn**	**16 29 23.9**	**+1.6**
GCMP				*eS*	**Sn**	**16 30 04.0**	**-2.3**
SVB	**Belmont**	**3.95**	**79**	*eP*	**Pn**	**16 29 26.4**	**+0.9**
SVB				*eS*	**Sn**	**16 30 09.7**	**-2.3**
SVB	**Belmont**	**3.95**	**79**	*eP*	**Pn**	**16 29 27.1**	**+1.5**
SVB				*eS*	**Sn**	**16 30 10.7**	**-1.3**
TRN	**Trinidad (W)**	**4.20**	**116**	*eP*	**Pn**	**16 29 29.4**	**+0.5**
TRN				*eS*	**Sn**	**16 30 15.2**	**-2.9**
TRN	**Trinidad (W)**	**4.20**	**116**	*eP*	**Pn**	**16 29 32.5**	**+3.6**
TRN				*eS*	**Sn**	**16 30 18.8**	**+0.7**
MCLT	**Moule a Chique**	**4.34**	**74**	*eP*	**Pn**	**16 29 31.6**	**+0.7**
MCLT				*eS*	**Sn**	**16 30 19.3**	**-2.3**
SLBI	**Saint Lucia, B**	**4.40**	**70**	*eP*	**Pn**	**16 29 33.4**	**+1.7**
SLBI				x	x	16 30 22.0	
BIM	**Bigot**	**4.50**	**64**	*eP*	**Pn**	**16 29 33.9**	**+0.7**
DSLB	**Salisbury**	**4.69**	**52**	*eP*	**Pn**	**16 29 36.4**	**+0.6**
DSLB				*eS*	**Sn**	**16 30 27.4**	**-2.8**
TBG	**Guadaloupe-3**	**4.79**	**46**	x	**Sn**	**16 30 30.7**	**-1.9**
MMLZ	**Guadeloupe Bro**	**4.90**	**44**	*eP*	**Pn**	**16 29 40.2**	**+1.6**
MMLZ				*eS*	**Sn**	**16 30 33.7**	**-1.8**
DHSZ	**Broadband at M**	**5.00**	**42**	*eP*	**Pn**	**16 29 40.8**	**+0.7**
DHSZ				*eS*	**Sn**	**16 30 35.5**	**-2.5**
SKI	**Saint Kitts**	**5.34**	**27**	*eP*	**Pn**	**16 29 49.0**	**+4.3**
DSDZ	**La Diserade, G**	**5.51**	**47**	*eP*	**Pn**	**16 29 48.3**	**+1.3**

*AFAD **14** 17:00:42.0, 40.17N×33.96E, h7km±2km, ML2.4*
*ISK **14** 17:00:42.4, 40.10N×34.00E, h8km, ML2.6/18*
ISC 14 17:00:42.2±0.9, 40.17N±0.02×34.00E±0.02, h14km±7km, n30, σ0s94/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DELI	**KIRIKKALE**	**0.19**	**199**	P	**Pg**	**17 00 46.3**	**-0.3**
DELI				S	**Sg**	**17 00 48.8**	**-0.8**
DELI				IAML		17 00 51.0	
	comp=N,1μm,0.1s						
DELI				IAML		17 00 51.0	
	comp=E,1μm,0.1s						
SUNG	**orum-Sungurl**	**0.19**	**85**	P	**Pg**	**17 00 46.8**	**+0.2**
SUNG				IAML		17 00 50.0	
	comp=N,884nm,0.5s						
SUNG				S	**Sg**	**17 00 50.1**	**+0.5**
KRGN	**Kargin**	**0.36**	**289**	P	**Pg**	**17 00 49.4**	**-0.2**
KRGN				S	**Sg**	**17 00 54.5**	**-0.1**
KRGN				IAML		17 00 55.0	
	comp=N,612nm,0.4s						
GOKD	**Ankara-Kalecik**	**0.41**	**256**	P	**Pg**	**17 00 50.3**	**-0.2**
GOKD				S	**Sg**	**17 00 55.8**	**-0.3**
CORM	**Corum**	**0.48**	**89**	Pg	**Pb**	**17 00 53.0**	**+0.4**
CORM				Sg	**Sb**	**17 01 00.2**	**+0.5**
CANT	**Cankiri**	**0.52**	**326**	Pg	**Pg**	**17 00 53.4**	**+0.9**
YENC	**ankr-Yen**	**0.52**	**347**	P	**Pg**	**17 00 52.2**	**-0.3**
YENC				S	**Sg**	**17 00 59.6**	**+0.1**
BR131	**Keskin Array S**	**0.53**	**212**	Pg	**Pg**	**17 00 52.1**	**-0.5**
BR131				Sg	**Sg**	**17 00 59.2**	**-0.5**
ELDT	**Eldivan**	**0.54**	**306**	P	**Pg**	**17 00 52.3**	**-0.6**
ELDT				S	**Sg**	**17 00 59.6**	**-0.5**
ELDT				IAML		17 01 02.0	
	comp=E,212nm,0.7s						
ELDT				IAML		17 01 03.0	
	comp=N,207nm,0.6s						
KAMT	**Kaman**	**0.83**	**195**	Pg	**Pg**	**17 00 57.3**	**-1.1**
KAMT				Sg	**Sb**	**17 01 08.9**	**-0.8**
ILGA	**Ilgaz**	**0.90**	**346**	P	**Pg**	**17 00 58.8**	**-1.0**
ILGA				S	**Sg**	**17 01 08.6**	**-3.1**
ILGA				IAML		17 01 17.0	
	comp=E,86nm,0.5s						
LOD	**Lodumlu**	**0.99**	**254**	Pg	**Pb**	**17 01 01.6**	**+0.3**
LOD				Sg	**Sn**	**17 01 15.5**	**-0.2**
AFSR	**Afar-Bala (An**	**1.02**	**225**	Pg	**Pb**	**17 01 01.3**	**-0.5**
AFSR				Sg	**Sb**	**17 01 15.3**	**+0.2**
KAGI	**orum-Kargı**	**1.03**	**21**	P	**Pg**	**17 01 01.2**	**-0.9**
KAGI				IAML		17 01 21.0	
	comp=E,77nm,0.3s						
YOZ	**Yozgat**	**1.15**	**117**	Pn	**Pg**	**17 01 03.5**	**-0.8**
YOZ				Sn	**Sg**	**17 01 19.2**	**-0.1**
KOZK	**Kozakli-Nevseh**	**1.17**	**145**	Pn	**Pg**	**17 01 04.3**	**-0.5**
PELI	**Kastamonı-Ara**	**1.24**	**335**	P	**Pg**	**17 01 04.7**	**-0.7**
PELI				S	**Sg**	**17 01 21.5**	**-0.8**
SERE	**Sereflikochisa**	**1.27**	**196**	Pn	**Pn**	**17 01 06.2**	**+0.4**
KULU	**Kulu**	**1.37**	**215**	Pn	**Pg**	**17 01 07.6**	**-0.9**
POLA	**Polatl-ANKAR**	**1.49**	**252**	Pn	**Pb**	**17 01 09.8**	**+0.1**
RUZG	**Kolk¶y-BOLU**	**1.77**	**289**	Pn	**Pb**	**17 01 15.2**	**+0.6**
YUVA	**Yuva-Kibriscik**	**1.78**	**278**	Pn	**Pb**	**17 01 14.6**	**-0.2**
CHBY	**Cihanbeyli**	**1.81**	**209**	Pn	**Pn**	**17 01 13.9**	**+0.8**
KURC	**Kurucasile-Bar**	**1.92**	**331**	Pn	**Pb**	**17 01 17.3**	**+0.2**
SVRH	**Sivrihisar-ESK**	**2.04**	**250**	Pn	**Pn**	**17 01 17.2**	**+0.9**
KIZT	**Kizilcal**	**2.09**	**232**	Pn	**Pn**	**17 01 17.9**	**+0.9**
LADK	**Ladik-KONYA**	**2.34**	**213**	Pn	**Pn**	**17 01 21.6**	**+1.1**
KONT	**Konya--Tatoy**	**2.57**	**210**	Pn	**Pn**	**17 01 24.7**	**+1.2**
SRCK	**Saricakaya, Es**	**2.59**	**268**	Pn	**Pn**	**17 01 25.9**	**+2.1**
GULT	**Gulveren**	**2.68**	**277**	Pn	**Pn**	**17 01 27.3**	**+2.3**

*IDC **14** 17:03:47.2±4.8, 21.90N×121.28E, h0km, mb3.3/3, mbtmp3.3/3, MS2.9/1, Error ellipse: s-maj=367.6km s-min=27.8km az=60.0*
*TAP **14** 17:03:49.8, 21.90N×121.02E, h20km, ML3.6, C*
*JMA **14** 17:03:52.9±0.1, 22.2N±0.3×121.3E±0.5, h0km, MV3.6/13, TAIWAN REGION*
ISC 14 17:03:50.5±0.9, 21.93N±0.03×121.06E±0.02, h19km±2km, n134, σ0s98/170, mb3.4/3, 3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.15**	**261**	∥*iP*	**Pg**	**17 03 55.1**	**+0.2**
TSEB				*i* S	**Sg**	**17 03 58.3**	**+0.5**
SMST	**Manzhou Townsh**	**0.23**	**294**	*i* P	**Pb**	**17 03 55.8**	**+0.1**
SMST				*i* S	**Sg**	**17 03 59.7**	**0.0**
TWKBT	**Hengchun**	**0.23**	**274**	∥*iP*	**Pb**	**17 03 55.6**	**-0.1**
TWKBT				*i* S	**Sb**	**17 03 59.5**	**+0.3**
TWK1	**Hengchun**	**0.24**	**274**	∥*iP*	**Pb**	**17 03 55.6**	**-0.3**
TWK1				*i* S	**Sb**	**17 03 59.5**	**0.0**
HEN	**Hengchun**	**0.31**	**285**	*i* P	**Pg**	**17 03 57.1**	**-0.1**
HEN				S	**Sg**	**17 04 02.1**	**+0.1**
SLIU	**Shizi**	**0.38**	**320**	*i* P	**Pg**	**17 03 58.5**	**+0.1**
SLIU				*eS*	**Sb**	**17 04 04.7**	**+0.4**
TAW	**Tawu**	**0.46**	**340**	*i* P	**Pb**	**17 04 00.2**	**+0.3**
TAW				*i* S	**Sb**	**17 04 07.0**	**+0.6**
LAY	**Lan-yu**	**0.47**	**76**	*i* P	**Pb**	**17 04 00.9**	**+0.8**
LAY				*i* S	**Sn**	**17 04 08.5**	**-1.4**
LYUB	**Lan-yu**	**0.49**	**81**	*i* P	**Pb**	**17 04 00.5**	**+0.1**
LYUB				*i* S	**Sb**	**17 04 08.0**	**+0.7**
EAST	**Anshuo**	**0.50**	**336**	*i* P	**Pb**	**17 04 00.9**	**+0.3**
EAST				S	**Sb**	**17 04 08.4**	**+0.8**
SCZT	**Fangliau**	**0.61**	**317**	*i* P	**Pg**	**17 04 02.7**	**+0.2**
SCZT				*eS*	**Sg**	**17 04 12.0**	**+1.3**
ECL	**Taimali**	**0.68**	**351**	P	**Pb**	**17 04 03.1**	**-0.5**
ECL				*eS*	**Sg**	**17 04 12.6**	**-0.3**
SSPT	**Xinbi**	**0.72**	**321**	*i* P	**Pn**	**17 04 05.7**	**0.0**
SSPT				*eS*	**Sn**	**17 04 16.9**	**+0.7**
WLCH	**Liuqiu**	**0.76**	**304**	*eP*	**Pn**	**17 04 07.9**	**+1.7**
TWP	**Hsiaoliuchiu**	**0.77**	**303**	*eP*	**Pn**	**17 04 08.0**	**+1.6**
MASBT	**Mashibuluo**	**0.79**	**330**	*i* P	**Pg**	**17 04 06.1**	**+0.1**
MASBT				S	**Sg**	**17 04 17.0**	**+0.5**
TTN	**Taitung**	**0.83**	**5**	*eP*	**Pg**	**17 04 06.6**	**-0.1**
TTN				*eS*	**Sn**	**17 04 20.9**	**+2.1**
LDUT	**Ludao**	**0.83**	**27**	*eP*	**Pn**	**17 04 07.0**	**-0.2**
LDUT				*eS*	**Sn**	**17 04 18.5**	**-0.5**
TSMG	**Majia**	**0.87**	**334**	*eP*	**Pb**	**17 04 07.1**	**+0.2**
TSMG				*eS*	**Sg**	**17 04 18.6**	**-0.4**
TWGBT	**Beinan**	**0.89**	**1**	P	**Pb**	**17 04 05.6**	**-1.7**
TWGBT	**Beinan**	**0.89**	**1**	*eP*	**Pb**	**17 04 06.0**	**-1.3**
TWG	**Pinlang**	**0.89**	**0**	*eP*	**Pb**	**17 04 06.0**	**-1.4**
TWG				*eS*	**Sg**	**17 04 19.4**	**-0.3**
SSD	**Sandimen**	**0.91**	**334**	*eP*	**Pb**	**17 04 07.7**	**+0.1**
SSD				*eS*	**Sg**	**17 04 20.5**	**+0.2**
SGLT	**Jiouru**	**0.96**	**326**	*eP*	**Pg**	**17 04 11.0**	**+1.8**
LONT	**Longtian**	**0.98**	**4**	*eP*	**Pb**	**17 04 07.2**	**-1.6**
TWM1	**Shoushan**	**1.07**	**327**	*eP*	**Pg**	**17 04 13.0**	**+1.7**
SCST	**Cishan**	**1.09**	**331**	*eP*	**Pg**	**17 04 13.2**	**+1.5**
SLGT	**Liugui**	**1.13**	**340**	*eP*	**Pg**	**17 04 12.9**	**+0.4**
ECS	**Chishang**	**1.17**	**7**	*eP*	**Pn**	**17 04 10.7**	**-1.2**
EHD	**Haiduan**	**1.23**	**6**	*eP*	**Pn**	**17 04 10.6**	**-2.0**
SGST	**Jiashian**	**1.23**	**339**	*eP*	**Pb**	**17 04 13.2**	**0.0**
SGST				*eS*	**Sg**	**17 04 32.1**	**+1.5**
ELDTW	**Lidau**	**1.26**	**358**	*eP*	**Pn**	**17 04 12.1**	**-1.1**
STYH	**Taoyuan**	**1.27**	**348**	*eP*	**Pb**	**17 04 13.6**	**-0.2**
FULB	**Fuli**	**1.29**	**9**	*eP*	**Pn**	**17 04 12.6**	**-0.9**
FULB				*eS*	**Sn**	**17 04 29.9**	**-0.3**
CHKH	**Chenggong**	**1.30**	**14**	P	**Pn**	**17 04 12.6**	**-1.0**
CHKH				S	**Sn**	**17 04 29.6**	**-0.8**
CHN3	**Shinhua**	**1.31**	**331**	*eP*	**Pb**	**17 04 14.6**	**+0.1**
CHN1	**Nanshi**	**1.35**	**339**	*eP*	**Pb**	**17 04 15.5**	**+0.3**
WTP	**Ta-pu**	**1.38**	**343**	*eP*	**Pb**	**17 04 16.0**	**+0.3**
TPUB	**Ta-pu**	**1.43**	**344**	P	**Pb**	**17 04 16.3**	**-0.2**
TPUB	**Ta-pu**	**1.43**	**344**	*i* P	**Pb**	**17 04 16.6**	**+0.1**
TPUB				S	**Sg**	**17 04 37.3**	**+0.6**
ECBN	**Changbin**	**1.43**	**14**	*eP*	**Pb**	**17 04 16.7**	**+0.2**
EYUL	**Yuli**	**1.44**	**9**	*eP*	**Pn**	**17 04 15.0**	**-0.5**
TWF1	**Yuli**	**1.44**	**9**	*eP*	**Pn**	**17 04 15.7**	**+0.2**
TWK	**Hsinying**	**1.44**	**338**	*eP*	**Pn**	**17 04 15.8**	**+0.2**
YULB	**Yu-li**	**1.48**	**8**	P	**Pn**	**17 04 15.6**	**-0.5**
YULB	**Yu-li**	**1.48**	**8**	*eP*	**Pn**	**17 04 14.7**	**-1.3**
TSCK	**Chigu Township**	**1.52**	**324**	*i* P	**Pn**	**17 04 16.9**	**+0.3**
TSCK				*eS*	**Sb**	**17 04 37.3**	**+0.5**
WCKO	**Fanlu**	**1.56**	**344**	*eP*	**Pb**	**17 04 18.8**	**-0.1**
EHYH	**Wanrong**	**1.58**	**9**	*eP*	**Pn**	**17 04 18.1**	**+0.6**
EHY	**Hungye**	**1.59**	**9**	*eP*	**Pb**	**17 04 19.2**	**-0.1**
HGSD	**Ruisui**	**1.59**	**12**	*eP*	**Pb**	**17 04 18.7**	**-0.6**
ALS	**Alishan**	**1.60**	**351**	*eP*	**Pb**	**17 04 19.2**	**-0.3**
ICHU	**Yijhu**	**1.60**	**333**	*eP*	**Pn**	**17 04 17.4**	**-0.3**
CHY	**Chiayi**	**1.67**	**339**	*eP*	**Pb**	**17 04 19.9**	**-0.7**
CHN5	**Tsauling**	**1.70**	**348**	*eP*	**Pb**	**17 04 21.0**	**-0.3**
WSL	**Shuilin Townsh**	**1.77**	**334**	*eP*	**Pn**	**17 04 20.7**	**+0.7**
WSL				*eS*	**Sb**	**17 04 43.5**	**-0.5**
WHYT	**Xinyi Township**	**1.77**	**354**	*eP*	**Pb**	**17 04 22.3**	**-0.1**
WHYT				*eS*	**Sg**	**17 04 47.4**	**-0.4**
WARBT	**Fenglin Townsh**	**1.81**	**9**	*eP*	**Pn**	**17 04 20.9**	**+0.3**
WARBT				*eS*	**Sb**	**17 04 44.8**	**-0.6**
WGK	**Gukeng**	**1.81**	**345**	*eP*	**Pn**	**17 04 21.2**	**+0.5**
WDLH	**Douliu**	**1.82**	**345**	*i* P	**Pn**	**17 04 21.8**	**+1.0**
WDLH				*eS*	**Sb**	**17 04 45.1**	**-0.5**
SSLB	**Suanglung**	**1.86**	**357**	P	**Pb**	**17 04 23.2**	**-0.6**
SSLB	**Suanglung**	**1.86**	**357**	*eP*	**Pb**	**17 04 23.3**	**-0.6**
WDGT	**Dungji**	**1.86**	**316**	*eP*	**Pn**	**17 04 19.9**	**-1.3**
WDGT				*eS*	**Sn**	**17 04 44.2**	**-0.1**
WSF	**Szhu**	**1.87**	**336**	*eP*	**Pn**	**17 04 22.6**	**+1.1**
WSF				S	**Sb**	**17 04 46.8**	**-0.3**
SHUL	**Shoufeng**	**1.91**	**14**	*eP*	**Pn**	**17 04 21.5**	**-0.5**
SHUL				*eS*	**Sb**	**17 04 46.0**	**-1.3**
ESL	**Shilin**	**1.91**	**10**	*eP*	**Pn**	**17 04 22.1**	**+0.1**
ESL				*eS*	**Sn**	**17 04 45.8**	**+0.2**
SMLT	**Sun Moon Lake**	**1.96**	**356**	*eP*	**Pb**	**17 04 25.1**	**-0.5**
WNT	**Mingjian**	**1.98**	**350**	*eP*	**Pn**	**17 04 24.3**	**+1.4**
VCHM	**Qimei**	**1.98**	**311**	P	**Pn**	**17 04 22.0**	**-0.9**
VCHM				*i* S	**Sn**	**17 04 46.5**	**-0.8**
OWD	**Renai**	**2.02**	**3**	*eP*	**Pb**	**17 04 26.3**	**-0.4**
WUSB	**Renai**	**2.06**	**1**	*eP*	**Pn**	**17 04 25.2**	**+1.1**
WUSB				*eS*	**Sn**	**17 04 50.2**	**+0.8**
WRL	**Guolierlin Hig**	**2.07**	**342**	*eP*	**Pn**	**17 04 24.4**	**+0.3**
ETM	**Tongmen**	**2.07**	**11**	*eP*	**Pn**	**17 04 23.8**	**-0.4**
PHUB	**P'eng-hu**	**2.10**	**319**	*eP*	**Pn**	**17 04 23.8**	**-0.8**
PHUB				*i* S	**Sn**	**17 04 49.0**	**-1.2**
LXIB	**Xiulin Townshi**	**2.11**	**9**	*eP*	**Pn**	**17 04 23.3**	**-1.6**
WCS	**Beigang Elemen**	**2.13**	**356**	*eP*	**Pb**	**17 04 27.3**	**-1.1**
PNG	**Penghu**	**2.15**	**320**	*eP*	**Pn**	**17 04 24.1**	**-1.2**
PNG				*eS*	**Sn**	**17 04 49.6**	**-1.8**
WHF	**Hehuan Shan**	**2.22**	**5**	*eP*	**Pb**	**17 04 29.0**	**-1.2**
NACB	**Ninganchiao**	**2.29**	**12**	P	**Pn**	**17 04 27.3**	**0.0**
NACB	**Ninganchiao**	**2.29**	**12**	S	**Sn**	**17 04 54.8**	**-0.2**
NACB	**Ninganchiao**	**2.29**	**12**	*eP*	**Pn**	**17 04 27.7**	**+0.5**
ETLH	**Xiulin Townshi**	**2.30**	**10**	*eP*	**Pn**	**17 04 27.4**	**-0.1**
FUSS	**Fushou**	**2.32**	**4**	*eP*	**Pn**	**17 04 29.3**	**+1.5**
TDCB	**Techi**	**2.32**	**2**	*eP*	**Pn**	**17 04 29.2**	**+1.4**
TWT	**Tachien**	**2.32**	**3**	*eP*	**Pb**	**17 04 30.1**	**-1.7**
WHP	**Taichung City**	**2.34**	**357**	*eP*	**Pn**	**17 04 29.8**	**+1.7**
TWQ1	**Liyutan**	**2.43**	**354**	*eP*	**Pn**	**17 04 30.6**	**+1.5**
EOS4	**EOS4**	**2.47**	**28**	*eP*	**Pn**	**17 04 30.5**	**+1.1**
NNSB	**Datong**	**2.51**	**7**	*eP*	**Pn**	**17 04 31.1**	**+0.8**
NNS	**Nan Shan**	**2.52**	**6**	*eP*	**Pn**	**17 04 32.6**	**+2.1**
EWUT	**Wuta**	**2.59**	**15**	*eP*	**Pn**	**17 04 31.6**	**+0.2**
EOS3	**EOS3**	**2.62**	**26**	*eP*	**Pn**	**17 04 32.6**	**+1.0**
LATG	**Datong**	**2.63**	**9**	*eP*	**Pn**	**17 04 32.6**	**+0.5**
NSTT	**Nanjuang**	**2.69**	**359**	*eP*	**Pn**	**17 04 34.7**	**+1.9**
NFF	**Wufeng Townshi**	**2.69**	**1**	*eP*	**Pn**	**17 04 35.2**	**+2.3**
EOS2	**EOS2**	**2.71**	**23**	*eP*	**Pn**	**17 04 34.7**	**+1.9**
LIOB	**Emei**	**2.71**	**359**	*eP*	**Pn**	**17 04 33.9**	**+0.9**
ENTT	**Nioudou**	**2.74**	**10**	*eP*	**Pn**	**17 04 34.7**	**+1.2**
YHNB	**Yeheng**	**2.75**	**6**	P	**Pn**	**17 04 34.8**	**+1.1**
YHNB	**Yeheng**	**2.75**	**6**	*eP*	**Pn**	**17 04 34.7**	**+1.1**
NSK	**Sanguang**	**2.75**	**6**	*eP*	**Pn**	**17 04 35.4**	**+1.7**
NSK				*eS*	**Sn**	**17 05 06.5**	**+0.1**
NDS	**Dongshan**	**2.76**	**12**	*eP*	**Pn**	**17 04 34.5**	**+0.8**
TWC	**Suao**	**2.77**	**15**	*eP*	**Pn**	**17 04 35.0**	**+1.2**
TWE	**Neicheng**	**2.84**	**11**	*eP*	**Pn**	**17 04 35.5**	**+0.8**
KSHI	**Guanxi Townshi**	**2.84**	**2**	*eP*	**Pn**	**17 04 36.8**	**+2.0**
FUSB	**Fushanzhiwuyua**	**2.86**	**10**	*eP*	**Pn**	**17 04 35.4**	**+0.2**
NWLT	**Wulai**	**2.87**	**8**	*eP*	**Pn**	**17 04 36.0**	**+0.8**
TIPB	**Shuangxi**	**3.11**	**13**	*eP*	**Pn**	**17 04 39.8**	**+1.2**
SXI1	**Grass Mountain**	**3.24**	**13**	*eP*	**Pn**	**17 04 42.2**	**+1.8**
ZUZH	**Zhuzihu**	**3.25**	**8**	*eP*	**Pn**	**17 04 41.9**	**+1.4**
HATJ	**Hateruma jima**	**3.30**	**49**	*eS*	**Sn**	**17 05 19.0**	**-0.8**
VWUC	**VWUC**	**3.39**	**334**	*eP*	**Pn**	**17 04 42.6**	**+0.2**
VWUC				S	**Sn**	**17 05 22.3**	**+0.2**
IRIF	**Iriomote-Funau**	**3.43**	**45**	*eP*	**Pn**	**17 04 44.2**	**+1.3**
IRIF				*eS*	**Sn**	**17 05 22.3**	**-0.8**
JKRS	**Kuro-shima**	**3.56**	**49**	*eP*	**Pn**	**17 04 47.4**	**+2.8**
JKRS				*eS*	**Sn**	**17 05 26.0**	**-0.2**
PTMZ	**Houxiangcun**	**3.58**	**330**	*eP*	**Pn**	**17 04 44.2**	**-0.8**
ZPLA	**Ao Xicun**	**3.65**	**304**

	6.2nm,0.7s,baz=156,slow=9.0,SNR=7.3							
BKI	**Bering**	**7.32**	**70**	*e*S	**S**	**17 30 16.7**	**+2.1**	
SEY	**Seymchan**	**9.72**	**356**	P	**P**	**17 29 11.5**	**+1.7**	
	1.9nm,0.4s,baz=163,slow=9.9,SNR=9.9							
KLR	**Kul'dur**	**14.45**	**263**	P	**P**	**17 29 58.8**	**-1.3**	
	0.9nm,0.4s,baz=64,slow=6.3,SNR=4.5							
YAK	**Yakutsk**	**15.57**	**314**	P	**P**	**17 30 11.2**	**-0.4**	
	11nm,0.5s,baz=112,slow=1.1,SNR=7.2							
MJAR	**Matsushiro Arr**	**20.02**	**220**	P	**P**	**17 30 54.7**	**+0.1**	
	0.5nm,0.5s,baz=23,slow=9.7,SNR=5.3							
TIXI	**Tiksi**	**21.45**	**338**	P	**P**	**17 31 07.2**	**+0.1**	
	2.7nm,0.3s,baz=159,slow=8.7,SNR=4.1							
	2.7nm,0.3s							
ZALV	**Zalesovo Beam**	**39.51**	**300**	P	**P**	**17 33 40.2**	**-2.2**	
	0.4nm,0.4s,baz=50,slow=9.9,SNR=2.3							
	0.4nm,0.4s							
KURK	**Kurchatov**	**44.44**	**299**	P	**P**	**17 34 21.3**	**0.0**	
KURBB	**Kurchatov Arra**	**44.54**	**298**	P	**P**	**17 34 21.2**	**-0.8**	
	1.2nm,0.5s,baz=74,slow=7.0,SNR=5.0							
	1.2nm,0.5s							
MKAR	**Makanchi Array**	**44.69**	**292**	P	**P**	**17 34 22.2**	**-1.1**	
	0.5nm,0.5s,baz=60,slow=7.2,SNR=9.0							
	0.5nm,0.5s							
YKA	**Yellowknife Ar**	**45.49**	**41**	P	**P**	**17 34 31.4**	**+2.3**	
	0.2nm,0.6s,baz=301,slow=8.1,SNR=2.2							
	0.2nm,0.6s							
CMAR	**Chiang Mai Arr**	**54.64**	**252**	P	**P**	**17 35 37.2**	**+0.2**	
	0.2nm,0.4s,baz=36,slow=7.0,SNR=1.9							
	0.2nm,0.4s							
TXAR	**Lajitas Array**	**73.91**	**63**	P	**P**	**17 37 42.1**	**+2.5**	
	0.1nm,0.5s,baz=296,slow=5.0,SNR=2.2							
	0.1nm,0.5s							
WRA	**Warrannunga Arr**	**74.86**	**199**	P	**P**	**17 37 44.3**	**-0.3**	
	0.4nm,0.8s,baz=14,slow=5.8,SNR=2.4							
	0.4nm,0.8s							
ASAR	**Alice Springs**	**78.57**	**199**	P	**P**	**17 38 05.0**	**+0.1**	
	0.5nm,1.0s,baz=12,slow=5.0,SNR=7.6							
	0.5nm,1.0s							

*IDC **14** 17:54:46.4±1.5,32°.12S×72°.28W,h0km,mb3.9/2, mbtmp3.7/6,ML3.8/4,Error ellipse: s-maj=46.3km s-min=28.4km az=112.0*
*SJA **14** 17:54:46.8±0.7,32°.24S×72°.04W,h14km±2km,ML3.6, MW3.7*
*GUC **14** 17:54:50.9±0.9,32°.21S×71°.83W,h38km±2km,ML3.7*
ISC 14 17:54:47.4±1.3,32°.20S±0°.02×71°.99W±0°.04,h11km±8km, n66,σ1°.44/104,7C-7D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
VA06	**Catapilco**	**0.69**	**122**	*e*P		**Pn**		**17 55 02.1**	**-0.9**
VA06				*e*S		**Sg**		**17 55 10.2**	**+0.5**
VA06				IAML				17 55 12.9	
	comp=N,6μm,0.4s								
VA01	**Torpederas**	**0.87**	**161**	*e*P		**Pn**		**17 55 05.3**	**-0.2**
CO04	**Los Peladeros**	**0.88**	**80**	*e*P		**Pn**		**17 55 05.4**	**-0.5**
CO04				*e*S		**Sg**		**17 55 15.4**	**-0.4**
CO04				IAML				17 55 19.3	
	comp=N,8μm,0.4s								
ROCH	**El Roble**	**1.13**	**133**	*e*P		**Pg**		**17 55 09.4**	**+0.3**
ROCH				*e*S		**Sb**		**17 55 23.6**	**-0.2**
ROCH				IAML				17 55 26.0	
	comp=N,4μm,0.2s								
MT02	**Curacav**	**1.28**	**146**	*e*P		**Pg**		**17 55 11.8**	**-0.1**
MT02				*e*S		**Sb**		**17 55 27.6**	**-0.3**
MT02	**Curacav**	**1.28**	**146**	*e*P		**Pb**		**17 55 11.0**	**-0.4**
MT02				*e*S		Sb		17 55 17.8	-10
MT02				IAML				17 55 31.1	
	comp=Z,638nm,0.4s								
CO02	**Combarbal**	**1.30**	**41**	*e*P		**Pg**		**17 55 12.6**	**+0.2**
CO02				*e*S		**Sn**		**17 55 28.9**	**-0.2**
CO02				IAML				17 55 35.5	
	comp=E,6μm,0.2s								
CO02	**Combarbal**	**1.30**	**41**	*e*P		**Pg**		**17 55 12.7**	**+0.2**
CO02				*e*S		**Sg**		**17 55 29.5**	**+0.1**
CO02				IAML				17 55 30.7	
	comp=Z,2μm,0.4s								
VA03	**San Esteban**	**1.34**	**115**	*e*P		**Pb**		**17 55 12.6**	**0.0**
VA03				*e*S		**Sn**		**17 55 29.0**	**-1.0**
VA03				IAML				17 55 32.1	
	comp=N,5μm,0.4s								
VA03	**San Esteban**	**1.34**	**115**	*e*P		**Pb**		**17 55 12.5**	**0.0**
VA03				*e*S		**Sg**		**17 55 31.5**	**+0.9**
VA03				IAML				17 55 35.4	
	comp=Z,1μm,0.5s								
PEL	**Peldehue**	**1.45**	**131**	*e*P		**Pb**		**17 55 14.5**	**+0.1**
PEL				*e*S		**Sb**		**17 55 32.5**	**-0.3**
PEL				IAML				17 55 34.6	
	comp=N,2μm,0.4s								
PEL	**Peldehue**	**1.45**	**131**	*e*P		**Pn**		**17 55 09.2**	**-4.4**
PEL				*e*S		**Sg**		**17 55 34.4**	**+0.4**
PEL				IAML				17 55 36.2	
	comp=Z,612nm,0.5s								
CO06	**Fray Jorge**	**1.55**	**11**	*e*P		**Pb**		**17 55 15.7**	**-0.4**
CO06				*e*S		**Sb**		**17 55 35.1**	**-0.6**
CO06				IAML				17 55 42.6	
	comp=N,962nm,0.6s								
MT05	**Renca**	**1.59**	**139**	*e*P		**Pb**		**17 55 16.8**	**0.0**
MT05				*e*S		**Sb**		**17 55 36.6**	**-0.3**
MT05				IAML				17 55 40.8	
	comp=N,2μm,0.3s								
MT05	**Renca**	**1.59**	**139**	*e*P		**Pb**		**17 55 16.9**	**+0.1**
MT05				*e*S		**Sg**		**17 55 38.6**	**+0.1**
MT05				IAML				17 55 40.6	
	comp=Z,661nm,1.0s								
MT10	**Hacienda Santa**	**1.63**	**132**	*e*P		**Pb**		**17 55 17.2**	**-0.3**
MT10				*e*S		**Sn**		**17 55 36.8**	**-0.3**
MT10				IAML				17 55 42.0	
	comp=N,3μm,0.5s								
MT14	**Cerro Cal¡n**	**1.71**	**135**	*e*P		**Pb**		**17 55 18.7**	**-0.2**
MT14				*e*S		**Sn**		**17 55 38.6**	**-0.5**
MT14				IAML				17 55 43.7	
	comp=E,2μm,0.7s								
MT16	**CCHEN**	**1.74**	**135**	*i* P		**Pb**		**17 55 19.3**	**0.0**
MT16				*i* S		**Sb**		**17 55 40.5**	**-0.8**
MT16				IAML				17 55 44.1	
	comp=E,422nm,0.3s								
CO03	**El Pedregal**	**1.75**	**40**	*e*P		**Pb**		**17 55 19.7**	**+0.1**
CO03				*e*S		**Sb**		**17 55 40.9**	**-0.8**
CO03				IAML				17 55 46.9	
	comp=E,2μm,0.5s								
CO03	**El Pedregal**	**1.75**	**40**	*e*P		**Pb**		**17 55 19.7**	**+0.1**
CO03				*e*S		**Sb**		**17 55 42.5**	**+0.8**
CO03				IAML				17 55 47.2	
	comp=Z,717nm,0.3s								
MT01	**Popeta**	**1.77**	**160**	*e*P		**Pb**		**17 55 19.1**	**-0.8**
MT01				*e*S		**Sn**		**17 55 40.1**	**-0.4**
MT01				IAML				17 55 49.2	
	comp=N,694nm,0.4s								
MT01	**Popeta**	**1.77**	**160**	*e*P		**Pb**		**17 55 18.4**	**-1.4**
MT01				*e*S		**Sn**		**17 55 35.4**	**-5.1**
MT01				IAML				17 55 50.5	
	comp=Z,380nm,0.8s								
MT09	**Talagante**	**1.78**	**152**	*i* P		**Pb**		**17 55 20.1**	**0.0**
MT09				*i* S		**Sb**		**17 55 41.5**	**-1.1**
MT09				IAML				17 55 48.6	
	comp=E,818nm,0.5s								
MT03	**Universidad Ad**	**1.79**	**136**	*e*P		**Pb**		**17 55 19.7**	**-0.6**
MT03				*e*S		**Sn**		**17 55 40.7**	**-0.5**
MT03				IAML				17 55 47.4	
	comp=E,2μm,0.4s								
MT03	**Universidad Ad**	**1.79**	**136**	*e*P		**Pb**		**17 55 20.0**	**-0.3**
MT03				*e*S		**Sb**		**17 55 43.8**	**+1.0**
MT03				IAML				17 55 51.4	
	comp=Z,906nm,0.5s								
MT15	**Las Vizcachas**	**1.87**	**139**	*e*P		**Pb**		**17 55 21.3**	**-0.3**
MT15				*e*S		**Sb**		**17 55 43.9**	**-1.2**
MT15				IAML				17 55 47.7	
	comp=N,1μm,0.3s								
MT12	**Pirque**	**1.95**	**142**	*e*P		**Pb**		**17 55 22.3**	**-0.6**
MT12				*e*S		**Sn**		**17 55 41.6**	**-3.5**
MT12				IAML				17 56 00.2	
	comp=E,2μm,0.6s								
MT04	**Ro Olivares**	**1.97**	**128**	*e*P		**Pb**		**17 55 22.5**	**-0.8**
MT04				*e*S		**Sn**		**17 55 46.3**	**+0.5**
MT04				IAML				17 55 50.0	
	comp=E,542nm,0.5s								
MT04	**Ro Olivares**	**1.97**	**128**	*e*P		**Pb**		**17 55 22.6**	**-0.8**
MT04				*e*S		**Sb**		**17 55 48.5**	**+0.5**
MT04				IAML				17 55 52.5	
	comp=Z,301nm,0.5s								
MT08	**Bocatoma Ro**	**2.08**	**127**	*i* P		**Pb**		**17 55 24.5**	**-0.7**
MT08				*e*S		**Sn**		**17 55 48.4**	**+0.1**
MT08				IAML				17 55 54.9	
	comp=N,380nm,0.5s								
MT08	**Bocatoma Ro**	**2.08**	**127**	*e*P		**Pb**		**17 55 24.1**	**-1.1**
MT08				*e*S		**Sb**		**17 55 51.8**	**+0.8**
MT08				IAML				17 55 54.7	
	comp=Z,322nm,0.5s								
MT13	**San Alfonso**	**2.10**	**138**	*e*P		**Pb**		**17 55 24.4**	**-1.2**
MT13				*e*S		**Sn**		**17 55 49.3**	**+0.4**
MT13				IAML				17 55 59.7	
	comp=E,743nm,0.4s								
MT13	**San Alfonso**	**2.10**	**138**	*e*P		**Pb**		**17 55 24.0**	**-1.6**
MT13				*e*S		**Sn**		**17 55 48.0**	**-0.9**
MT13				IAML				17 55 58.0	
	comp=Z,336nm,0.5s								
GO04	**Tololo Observa**	**2.27**	**27**	*e*P		**Pb**		**17 55 27.5**	**-0.9**
GO04				*e*S		**Sn**		**17 55 54.3**	**+1.3**
GO04				IAML				17 56 03.8	
	comp=N,2μm,0.6s								
GO04	**Tololo Observa**	**2.27**	**27**	*e*P		**Pb**		**17 55 26.8**	**-1.6**
GO04				*e*S		**Sn**		**17 55 52.9**	**-0.1**
GO04				IAML				17 56 01.7	
	comp=Z,810nm,0.3s								
BO01	**Tunca**	**2.31**	**161**	*e*P		**Pn**		**17 55 26.4**	**+1.0**
BO01				*e*S		**Sb**		**17 55 55.1**	**-2.6**
BO01				IAML				17 56 09.0	
	comp=Z,205nm,0.6s								
RTLS	**Leoncito**	**2.32**	**81**	*e*P		**Pb**		**17 55 29.9**	**+0.4**
RTLS				*e*S		**Sg**		**17 56 01.1**	**-1.0**
RTLS				IAML				17 56 04.4	
	comp=Z,988nm,0.8s								
CO05	**La Serena**	**2.36**	**16**	*i* P		**Pb**		**17 55 27.9**	**-2.1**
CO05				*i* S		**Sb**		**17 55 56.8**	**-2.4**
CO05				IAML				17 56 11.3	
	comp=E,931nm,0.3s								
ARCO	**CERRO ARCO**	**2.66**	**105**	*e*P		**Pn**		**17 55 30.8**	**+0.5**
ARCO				*e*S		**Sb**		**17 56 05.8**	**-2.1**
ARCO				IAML				17 56 17.7	
	comp=Z,220nm,0.4s								
ASAL	**Salagasta**	**2.70**	**99**	*e*P		**Pb**		**17 55 36.4**	**+0.7**
ASAL				*e*S		**Sb**		**17 56 07.3**	**-1.6**
CO01	**Juntas del Tor**	**2.75**	**37**	*e*P		**Pb**		**17 55 34.2**	**-2.5**
CO01				*e*S		**Sb**		**17 56 07.7**	**-2.8**
CO01				IAML				17 56 13.2	
	comp=E,312nm,0.5s								
BO02	**Sierra Bellavi**	**2.78**	**159**	*e*P		**Pn**		**17 55 33.6**	**+1.7**
BO02				*e*S		**Sb**		**17 56 08.4**	**-2.7**
BO02				IAML				17 56 22.4	
	comp=Z,348nm,0.5s								
GO05	**Hualane**	**2.80**	**179**	*e*P		**Pn**		**17 55 32.8**	**+0.6**
GO05				*e*S		**Sg**		**17 56 16.1**	**-1.3**
GO05				IAML				17 56 26.4	
	comp=Z,102nm,1.1s								
AAGR	**Agrelo**	**2.81**	**109**	*e*P		**Pb**		**17 55 37.4**	**-0.2**
AAGR				*e*S		**Sg**		**17 56 17.9**	**+0.2**
AAGR				IAML				17 56 28.9	
	comp=Z,173nm,0.7s								
ZON	**Zonda**	**2.89**	**78**	*e*P		**Pb**		**17 55 37.9**	**-1.1**
ZON				IAML				17 56 29.3	
	comp=Z,154nm,0.5s								
AROD	**Rodeo**	**2.96**	**47**	*e*P		**Pb**		**17 55 38.9**	**-1.4**
CFA	**Coronel Fontan**	**3.25**	**80**	Pn		**Pb**		**17 55 42.2**	**-2.8**
	comp=Z,6.0nm,0.3s,baz=227,slow=11,SNR=65								
CFA				Sn		**Sn**		**17 56 15.6**	**-1.4**
	comp=Z,10nm,0.3s,baz=33,slow=15,SNR=9.7								
	comp=Z,20nm,0.3s								
LCO	**Las Campanas**	**3.37**	**20**	*e*P		**Pn**		**17 55 41.3**	**+1.2**
LCO				*e*S		**Sb**		**17 56 28.8**	**+0.5**
ML02	**Panimavida**	**3.58**	**173**	*e*P		**Pn**		**17 55 43.0**	**+0.1**
ML02				*e*S		**Sb**		**17 56 34.3**	**0.0**
RFA	**San Rafael**	**3.91**	**132**	*e*P		**Pn**		**17 55 50.7**	**+3.3**
RFA				*e*S		**Sg**		**17 56 49.7**	**-3.1**
H03N1	**Juan Fernandez**	**5.96**	**256**	T		T		18 02 54.1	
	baz=84,slow=72,SNR=631								
H03N3	**Juan Fernandez**	**5.97**	**256**	T		T		18 02 55.8	
	baz=84,slow=72,SNR=495								
H03N2	**Juan Fernandez**	**5.97**	**256**	T		T		18 02 54.8	
	baz=84,slow=72,SNR=622								
H03S3	**Juan Fernandez**	**6.03**	**253**	T		T		18 02 56.1	
	baz=80								
H03S1	**Juan Fernandez**	**6.03**	**252**	T		T		18 02 59.2	
	baz=80								
H03S2	**Juan Fernandez**	**6.05**	**252**	T		T		18 03 00.8	
	baz=80								
PLCA	**Paso Flores**	**8.59**	**173**	Pn		**Pn**		**17 56 53.8**	**+2.0**
	comp=Z,0.4nm,0.3s,baz=322,slow=10,SNR=14								
	comp=Z,1.0nm,0.4s								
CPUP	**Villa Florida**	**14.07**	**69**	Pn		**Pn**		**17 58 09.9**	**+3.4**
	comp=Z,0.1nm,0.3s,baz=242,slow=17,SNR=1.4								
CPUP				Sn		**Sn**		**18 00 40.1**	**-2.6**
	comp=Z,0.2nm,0.3s,baz=127,slow=13,SNR=1.9								
	comp=Z,0.6nm,0.4s								
LPAZ	**La Paz**	**16.23**	**13**	Pn		**P**		**17 58 36.8**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=198,slow=9.6,SNR=3.6								
	comp=Z,0.6nm,0.6s								
QSPA	**South Pole Qui**	**58.03**	**180**	P		**P**		**18 04 41.6**	**+1.5**
	comp=Z,1.9nm,1.0s,baz=157,slow=8.4,SNR=2.7								
	comp=Z,1.9nm,1.0s								
TORD	**Torodi Ar. Bea**	**83.56**	**70**	P		**P**		**18 07 17.1**	**+1.2**
	comp=Z,0.7nm,0.6s,baz=252,slow=5.0,SNR=4.0								
	comp=Z,0.7nm,0.6s								
H11S2	**WAKE ISLAND Hy**	**125.82**	**270**	T		T		20 32 53.3	
	baz=117,slow=75,SNR=7.0								
H11S1	**WAKE ISLAND Hy**	**125.83**	**270**	T		T		20 32 51.3	
	baz=117,slow=75,SNR=5.7								
H11S3	**WAKE ISLAND Hy**	**125.83**	**270**	T		T		20 32 47.6	
	baz=117,slow=75,SNR=5.0								
KURBB	**Kurchatov Arra**	**151.51**	**41**	PKPbc		**PKiKP**		**18 14 42.0**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=303,slow=2.7,SNR=7.1								
ZALV	**Zalesovo Beam**	**152.67**	**30**	PKPbc		**PKiKP**		**18 14 44.8**	**+1.0**
	comp=Z,0.8nm,0.5s,baz=330,slow=2.2,SNR=2.7								

*IDC **14** 18:01:16.7±1.1,7°.10S×145°.06E,h0km,mb3.8/7, mbtmp3.9/11,ML3.8/3,MS3.5/10,Error ellipse: s-maj=29.3km s-min=18.8km az=97.0*
*NEIC **14** 18:01:25.4±2.1,7°.54S±0°.08×145°.2E±0°.1,h94km±8km, mb4.4/23,Error ellipse: s-maj=15.2km s-min=11.4km az=66.0*
ISC 14 18:01:19.8±0.6,7°.29S±0°.08×145°.07E±0°.07,h35km,n51, σ2°.05/45,mb4.3/15,MS3.5/8,Near south coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
PMG	**Port Moresby**	**2.96**	**136**			**Pn**		**18 02 08.0**	**+3.7**
	14nm,0.5s,baz=349,slow=2.9,SNR=14								
PMG						Sn		**18 02 41.5**	**+2.9**
	3.9nm,0.3s,baz=295,slow=22,SNR=6.7								
PMG	**Port Moresby**	**2.96**	**136**			**Pn**		**18 02 07.4**	**+3.1**
PMG						Sn		**18 02 36.6**	**-2.0**
MANU	**Manus Island**	**5.69**	**24**	Pn		Pn		18 02 49.6	+7.6
COEN	**Coen**	**6.88**	**195**			**Pn**		**18 03 02.2**	**+3.9**
CTA	**Charters Tower**	**12.78**	**175**	Pn		**Pn**		**18 04 23.3**	**+4.1**
	0.2nm,0.3s,baz=16,slow=14,SNR=2.3								
CTA				LR		LR		18 08 59.6	
	comp=Z,114nm,21.8s,baz=12,slow=36								
	4.0nm,0.9s								
CTAO	**Charters Tower**	**12.78**	**175**			**Pn**		**18 04 19.3**	**+0.1**
SAUI	**Saumlaki**	**13.66**	**266**	Pn		**Pn**		**18 04 30.4**	**-0.9**
MTN	**Manton Dam**	**14.78**	**247**			**Pn**		**18 04 44.8**	**-1.7**
HNR	**Honiara**	**14.88**	**99**	Pn		**Pn**		**18 04 47.5**	**-0.3**
SIJI	**Sorong**	**15.16**	**294**	LR		LR		18 12 17.8	
	comp=Z,221nm,18.6s,baz=140,slow=44								
WB0	**Warramunga Arr**	**16.16**	**219**			**Pn**		**18 05 05.6**	**+1.2**
WB0						IAmb	IAmb	18 05 14.1	
	comp=Z,31nm,1.4s								
WR8	**Warramunga Arr**	**16.24**	**218**			**Pn**		**18 05 06.7**	**+1.3**
WR8						IAmb	IAmb	18 05 14.9	
	comp=Z,20nm,1.1s								
WRA	**Warramunga Arr**	**16.32**	**219**	Pn		**P**		**18 05 08.6**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=41,slow=11,SNR=17								
WRA				Lg		Lg		18 09 59.6	
	comp=Z,0.1nm,0.3s,baz=36,slow=27,SNR=6.0								
	comp=Z,7.7nm,1.2s								
WRA	**Warramunga Arr**	**16.32**	**219**	P		**Pn**		**18 05 05.8**	**-0.7**
KNRA	**Kununurra**	**18.01**	**241**			**Pn**		**18 05 27.0**	**-0.6**
KNRA						IAmb	IAmb	18 05 55.8	
	comp=Z,18nm,1.1s								
AS31	**Alice Springs**	**19.49**	**212**			**P**		**18 05 43.2**	**-0.9**
ASAR	**Alice Springs**	**19.50**	**212**	P		**Pn**		**18 05 47.8**	**+2.2**
	comp=Z,0.3nm,0.3s,baz=44,slow=8.5,SNR=51								
ASAR				Lg		Lg		18 11 43.7	
	comp=Z,0.5nm,0.3s,baz=34,slow=25,SNR=26								
	comp=Z,24nm,1.2s								
ASAR	**Alice Springs**	**19.50**	**212**			**P**		**18 05 42.8**	**-1.3**
SOEI	**Soe**	**20.71**	**262**	P		**P**		**18 05 58.9**	**+1.4**
GUMO	**Guam**	**20.74**	**359**	LR		LR		18 14 19.3	
	comp=Z,14nm,18.7s,baz=162,slow=38								
INKA	**Innaminka**	**20.75**	**191**	P		**P**		**18 05 56.4**	**-1.3**
BATI	**Baumata**	**21.35**	**261**	LR		LR		18 16 17.2	
	comp=Z,108nm,19.6s,baz=101,slow=42								
FITZ	**Fitzroy Crossi**	**21.76**	**239**	P		**P**		**18 06 09.2**	**+0.6**
	comp=Z,3.5nm,0.8s,baz=55,slow=14,SNR=2.2								
FITZ				LR		LR		18 15 27.9	
	comp=Z,239nm,21.8s,baz=56,slow=39								
	comp=Z,3.5nm,0.8s								
STKA	**Stephens Creek**	**24.68**	**187**	LR		LR		18 17 35.2	
	comp=Z,106nm,20.2s,baz=22,slow=39								
KAPI	**Kappang**	**25.27**	**274**	P		**P**		**18 06 41.6**	**-1.5**
KAPI				IAmb		IAmb		18 06 47.1	
	comp=Z,25nm,1.4s								
DZM	**Mont Dzumac**	**25.32**	**128**	P		**P**		**18 06 39.5**	**-4.1**
DZM				IAmb		IAmb		18 06 45.5	
	comp=Z,32nm,1.2s								
ONTNC	**Ouen Toro**	**25.45**	**128**	P		**P**		**18 06 40.7**	**-4.0**
TOLI2	**Tolitoli**	**25.62**	**288**	P		**P**		**18 06 46.4**	**+0.1**
TOLI2				IAmb		IAmb		18 06 51.7	
	comp=Z,11nm,1.0s								
OUENC	**Ouen Island, N**	**25.81**	**128**	P		**P**		**18 06 44.5**	**-3.4**
BBOO	**Buckleboo**	**26.74**	**197**	P		**P**		**18 06 52.9**	**-3.4**
FORT	**Forrest**	**28.28**	**212**	P		**P**		**18 07 08.0**	**-2.1**
FORT				IAmb		IAmb		18 07 47.0	
	comp=Z,14nm,1.1s								
NWAO	**Narrogin (SRO)**	**36.30**	**222**	LR		LR		18 23 55.7	
	comp=Z,195nm,20.7s,baz=90,slow=37								
LEM	**Lembang**	**37.16**	**268**	LR		LR		18 26 23.1	
	comp=Z,62nm,18.9s,baz=156,slow=40								
CM31	**Chiang Mai Arr**	**52.19**	**300**	P		**P**		**18 10 27.7**	**+0.1**
CM31				IAmb		IAmb		18 10 33.7	
	comp=Z,6.1nm,1.2s								
CMAR	**Chiang Mai Arr**	**52.19**	**300**	P		**P**		**18 10 29.6**	**+2.0**
	comp=Z,1.7nm,1.1s,baz=116,slow=5.3,SNR=11								
	comp=Z,1.7nm,1.1s								
CMAR	**Chiang Mai Arr**	**52.19**	**300**			**P**		**18 10 26.7**	**-0.9**
CHTO	**Chiang Mai**	**52.34**	**300**			**P**		**18 10 28.3**	**-0.4**
CHTO				IAmb		IAmb		18 10 36.6	
	comp=Z,5.0nm,1.4s								
SHL	**Shillong**	**61.13**	**304**	P		**P**		**18 11 31.7**	**+0.4**
SONM	**Songino Array**	**64.61**	**332**	P		**P**		**18 11 56.2**	**+2.3**
	comp=Z,2.1nm,1.2s,baz=146,slow=5.1,SNR=8.5								
	comp=Z,2.1nm,1.2s								
SONM	**Songino Array**	**64.61**	**332**	P		**P**		**18 11 54.8**	**+0.8**
SONM				IAmb		IAmb		18 11 58.8	
	comp=Z,4.6nm,1.4s								
VNDA	**Vanda**	**70.76**	**176**	P		**P**		**18 12 29.2**	**-2.9**
VNDA				IAmb		IAmb		18 12 49.7	
	comp=Z,6.9nm,1.4s								
MKAR	**Makanchi Array**	**77.27**	**321**	P		**P**		**18 13 12.2**	**+1.5**
	comp=Z,0.5nm,0.6s,baz=99,slow=7.5,SNR=7.8								
	comp=Z,0.5nm,0.6s								
MKAR	**Makanchi Array**	**77.27**	**321**	P		**P**		**18 13 11.2**	**+0.5**
MAKZ	**Makanchi**	**77.47**	**321**	P		**P**		**18 13 12.5**	**+0.7**
PRZ	**Przheval'sk**	**78.12**	**316**	P		**P**		**18 13 16.3**	**+0.6**
KDJ	**Kajisay**	**78.84**	**315**	P		**P**		**18 13 19.3**	**-0.4**
ZALV	**Zalesovo Beam**	**79.08**	**328**	P		**P**		**18 13 21.4**	**+0.9**
	comp=Z,0.4nm,0.4s,baz=104,slow=6.1,SNR=2.3								
	comp=Z,0.4nm,0.4s								
KURK	**Kurchatov**	**81.10**	**324**	P		**P**		**18 13 32.2**	**+0.8**
KURK				IAmb		IAmb		18 13 35.8	
	comp=Z,6.1nm,1.5s								
KURBB	**Kurchatov Arra**	**81.11**	**324**	P		**P**		**18 13 33.4**	**+1.9**
	comp=Z,0.4nm,0.8s,baz=121,slow=3.4,SNR=4.9								
	comp=Z,0.4nm,0.8s								
QSPA	**South Pole Qui**	**82.69**	**180**	LR		LR		18 49 24.8	
	comp=Z,37nm,20.6s,baz=8.0,slow=35								
ILAR	**Eielson Array**	**87.42**	**23**	P		**P**		**18 14 03.2**	**0.0**
	comp=Z,0.3nm,0.6s,baz=239,slow=5.3,SNR=5.7								
ILAR				LR		LR		18 50 43.1	
	comp=Z,27nm,18.7s,baz=226,slow=34								
	comp=Z,0.3nm,0.6s								

*IDC **14** 18:04:18.2±1.6,11°.11S×163°.30E,h0km,mb3.9/5, mbtmp3.9/6,ML3.1/2,M

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**1.93**	**69**	P	**Pb**	**18 31 10.2**	**-0.4**
BSI	**Banda Aceh**	**2.03**	**20**	P	**Pn**	**18 31 09.8**	**+1.3**
TPTI		**2.60**	**97**	P	**Pn**	**18 31 15.9**	**-0.4**
LHMI	**Lhok Sumawe**	**2.86**	**55**		**Pn**	**18 31 19.8**	**-0.1**
LHMI	**Lhok Sumawe**	**2.86**	**55**	P	**Pn**	**18 31 23.0**	**+3.1**
KCSI	**Kotacane, Aceh**	**3.17**	**91**	P	**Pn**	**18 31 25.8**	**+1.6**
GSI	**Gunungsitoli**	**3.74**	**127**		**Pn**	**18 31 31.4**	**-0.5**
GSI	**Gunungsitoli**	**3.74**	**127**	P	**Pn**	**18 31 33.7**	**+1.8**
TSI	**Tuntungan**	**3.96**	**91**	P	Pb	18 31 54.3	+9.0
PSI	**Prapat**	**4.39**	**100**	P	**Pn**	**18 31 42.4**	**+1.4**
RPSI	**Rantau Prapat**	**4.41**	**101**		**Pn**	**18 31 40.6**	**-0.6**
PBSI	**Pulau Batu** 0.4nm85nm,0.6s	**5.15**	**134**	P	**Pn**	**18 31 52.6**	**+1.2**
MNSI	**Mandailing Nat** 0.6nm3µm59nm,0.5s	**5.70**	**119**	P	**Pn**	**18 31 59.4**	**+0.5**
KULM	**Kulim**	**6.27**	**74**		**Pn**	**18 32 06.6**	**-0.2**
KULM	**Kulim**	**6.27**	**74**	P	**Pn**	**18 32 07.4**	**+0.6**
PPI	**Padang Panjang**	**7.05**	**125**	P	Pb	18 32 30.2	-7.6
PDSI	**Padang** 0.1nm16nm,0.4s	**7.37**	**127**	P	**Pn**	**18 32 24.1**	**+2.2**
MYKOM	**Kota Tinggi**	**9.41**	**101**	Pn	**Pn**	**18 32 49.9**	**-0.1**
MDSI	**Maura Dua**	**12.48**	**130**	P	**P**	**18 33 44.8**	**+1.3**
PALK	**Pallekele**	**14.31**	**285**	Pn	**Pn**	**18 33 58.5**	**+1.5**
PALK	0.4nm,0.3s,baz=112,slow=14,SNR=1.8			Sn	Sn	18 36 22.4	-12
	0.2nm,0.3s,baz=330,slow=22,SNR=1.4 2.2nm,0.4s						
PALK	**Pallekele**	**14.31**	**285**		**Pn**	**18 33 54.3**	**-2.7**
CM31	**Chiang Mai Arr**	**15.39**	**16**	Pn	**Pn**	**18 34 11.1**	**-0.4**
CMAR	**Chiang Mai Arr** 0.5nm,0.3s,baz=198,slow=11,SNR=5.6 1.9nm,0.6s	**15.39**	**16**	Pn	**Pn**	**18 34 12.1**	**+0.6**
CMAR	**Chiang Mai Arr**	**15.39**	**16**	Pn	**Pn**	**18 34 09.9**	**-1.6**
CHTO	**Chiang Mai**	**15.73**	**15**		**Pn**	**18 34 16.0**	**+0.2**
CHTO	**Chiang Mai**	**15.73**	**15**	P	**P**	**18 34 22.0**	**+2.4**
LEM	**Lembang** comp=Z,95nm,18.4s,baz=188,slow=42	**16.61**	**128**	LR	LR	18 42 08.0	
PZH	**PanZhiHua**	**23.81**	**16**	P	**P**	**18 35 48.3**	**+1.4**
MYLDM	**Lahad Datu**	**23.89**	**85**	P	**P**	**18 35 44.8**	**-2.9**
H08S2	**Diego Garcia H** baz=63,slow=75,SNR=2888	**24.71**	**243**	T	T	19 01 34.3	
H08S3	**Diego Garcia H** baz=63,slow=75,SNR=5323	**24.71**	**243**	T	T	19 01 34.3	
H08S1	**Diego Carcia H** baz=63,slow=75,SNR=1082	**24.73**	**243**	T	T	19 01 38.6	
LSA	**Lhasa** comp=Z,4.6nm,0.6s	**26.19**	**353**		**P**	**18 36 08.3**	**-0.6**
LSA				IAmb	IAmb	18 36 31.6	
LSA	**Lhasa**	**26.19**	**353**	P	**P**	**18 36 07.4**	**-1.6**
TOLI2	**Tolitoli** comp=Z,7.9nm,0.8s	**26.28**	**95**		**P**	**18 36 08.7**	**-0.8**
TOLI2				IAmb	IAmb	18 36 17.0	
KAPI	**Kappang** comp=Z,51nm,18.2s,baz=296,slow=39	**26.54**	**109**	LR	LR	18 47 47.5	
HKPS	**Hong Kong Po S**	**26.55**	**44**	P	**P**	**18 36 10.8**	**-1.0**
TWG	**Pinlang**	**31.99**	**51**	P	**P**	**18 36 58.5**	**-1.6**
YHNB	**Yeheng**	**33.24**	**48**	P	**P**	**18 37 09.6**	**-1.6**
KSH2	**Kashi**	**39.41**	**336**	P	P	18 38 08.6	+4.8
WUS	**Wushi** comp=Z,3.3nm,0.8s	**39.93**	**342**		**P**	**18 38 07.5**	**-0.5**
WUS				IAmb	IAmb	18 38 15.7	
HHC	**Hu-ho-hao-te**	**40.13**	**20**	*e*P	**P**	**18 38 10.1**	**+0.4**
HHC	comp=Z,11nm,0.7s			pmax	pmax		
HHC	comp=Z,120nm,5.0s			pmax	pmax		
HHC	comp=N,87nm,12.8s			LR	LR		
HHC	comp=E,130nm,12.2s			LR	LR		
HHC	comp=Z,84nm,12.2s			LR	LR		
WMQ	**Urumqi**	**40.54**	**352**	*e*P	**P**	**18 38 14.8**	**+1.8**
WMQ	comp=E,480nm,24.1s			LR	LR		
TARG	**Taragay, Kyrgy**	**40.86**	**341**	P	**P**	**18 38 15.7**	**-0.4**
NRN	**Naryn**	**41.22**	**339**		**P**	**18 38 18.9**	**0.0**
DRK	**Karamyk**	**41.29**	**333**	P	**P**	**18 38 19.2**	**-0.4**
KDJ	**Kajisay** comp=Z,10.0nm,1.5s	**41.43**	**340**		**P**	**18 38 19.8**	**-0.6**
KDJ				IAmb	IAmb	18 38 27.4	
GAR	**Garm**	**41.60**	**331**		**P**	**18 38 21.1**	**-0.8**
GAR	comp=Z,9.9nm,1.2s			IAmb	IAmb	18 38 36.2	
CHGR	**Chuyangaron** comp=Z,4.4nm,0.6s	**41.91**	**330**	P	**P**	**18 38 23.0**	**-1.3**
CHGR				IAmb	IAmb	18 38 33.5	
BOOM	**Boomskoye usch**	**42.17**	**339**		**P**	**18 38 26.8**	**+0.3**
BOOM	comp=Z,2.7nm,0.7s			IAmb	IAmb	18 38 33.0	
ARSB	**Arslanbob**	**42.30**	**336**	P	**P**	**18 38 27.8**	**+0.3**
UOSS	**Minazif**	**42.60**	**304**	P	**P**	**18 38 30.1**	**0.0**
UOSS	comp=Z,15nm,1.4s			IAmb	IAmb	18 38 59.9	
MKAR	**Makanchi Array** comp=Z,0.8nm,0.4s,baz=153,slow=8.5,SNR=18 comp=Z,0.8nm,0.4s	**44.36**	**348**	P	**P**	**18 38 45.1**	**+1.1**
MKAR	**Makanchi Array**	**44.36**	**348**	P	**P**	**18 38 43.8**	**-0.2**
MAKZ	**Makanchi**	**44.44**	**348**		**P**	**18 38 44.7**	**+0.1**
MAKZ	comp=Z,2.6nm,0.9s			IAmb	IAmb	18 39 06.6	
KK31	**Karatay Array**	**44.80**	**335**	P	**P**	**18 38 47.7**	**+0.2**
KK31	comp=Z,2.6nm,1.1s			IAmb	IAmb	18 38 54.0	
KKAR	**Karatay Array**	**44.80**	**335**	P	**P**	**18 38 47.5**	**0.0**
SONM	**Songino Array** comp=Z,0.7nm,0.7s,baz=190,slow=10.0,SNR=6.0 comp=Z,0.7nm,0.7s	**45.25**	**11**	P	**P**	**18 38 51.6**	**+0.4**
SONM	**Songino Array**	**45.25**	**11**	P	**P**	**18 38 51.0**	**-0.2**
WB0	**Warramunga Arr**	**45.46**	**122**	P	**P**	**18 38 52.5**	**-0.6**
WRA	**Warramunga Arr** comp=Z,0.7nm,0.5s,baz=299,slow=9.2,SNR=19 comp=Z,0.7nm,0.5s	**45.49**	**123**	P	**P**	**18 38 54.0**	**+0.5**
WRA	**Warramunga Arr**	**45.49**	**123**	P	**P**	**18 38 53.6**	**+0.2**
WRAB	**Tennant Creek**	**45.50**	**122**	P	**P**	**18 38 53.6**	**+0.2**
WR8	**Warramunga Arr**	**45.64**	**122**	P	**P**	**18 38 54.4**	**-0.1**
ASAR	**Alice Springs** comp=Z,0.5nm,0.4s,baz=295,slow=7.5,SNR=8.0 comp=Z,0.5nm,0.4s	**46.90**	**127**	P	**P**	**18 39 05.2**	**+0.8**
JMN	**Monobe**	**47.31**	**46**	P	**P**	**18 39 07.7**	**+0.2**
KURBB	**Kurchatov Arra** comp=Z,0.4nm,0.5s,baz=168,slow=7.4,SNR=6.2 comp=Z,0.4nm,0.5s	**48.80**	**346**	P	**P**	**18 39 19.6**	**+1.0**
KURK	**Kurchatov**	**48.87**	**347**	P	**P**	**18 39 19.7**	**+0.5**
KURK	comp=Z,2.2nm,1.0s			IAmb	IAmb	18 39 55.5	
JGF	**Kuroka**	**50.73**	**46**	P	**P**	**18 39 33.8**	**+0.1**
ZAA0	**Zalesovo Array**	**50.85**	**353**	P	**P**	**18 39 34.4**	**+0.2**
ZALV	**Zalesovo Beam** comp=Z,0.6nm,0.3s,baz=186,slow=4.5,SNR=4.5 comp=Z,0.6nm,0.3s	**50.85**	**353**	P	**P**	**18 39 35.5**	**+1.3**
ZALV	**Zalesovo Beam**	**50.85**	**353**	P	**P**	**18 39 33.9**	**-0.3**
BVAR	**Borovoye Array** comp=Z,0.7nm,0.7s,baz=136,slow=11,SNR=4.1 comp=Z,0.7nm,0.7s	**53.19**	**342**	P	**P**	**18 39 54.7**	**+3.1**
AB31	**Akbulak array**	**54.22**	**333**		**P**	**18 39 59.6**	**+0.4**
AB31	comp=Z,2.7nm,1.1s			IAmb	IAmb	18 40 19.3	
ABKAR	**Akbulak array**	**54.22**	**333**	P	**P**	**18 39 59.3**	**+0.1**
CTA	**Charters Tower** comp=Z,56nm,18.5s,baz=268,slow=40	**55.89**	**117**	LR	LR	19 08 15.2	
GEVA	**Gevas**	**58.22**	**314**	P	**P**	**18 40 27.8**	**-0.5**
GEVA	comp=Z,5.0nm,1.3s			IAmb	IAmb	18 40 43.5	
H04N2	**CROZET ISLANDS** baz=49,slow=75,SNR=7510	**62.32**	**212**	T	T	19 48 36.7	
H04N1	**CROZET ISLANDS** baz=49,slow=75,SNR=7338	**62.33**	**212**	T	T	19 48 43.0	
H04N3	**CROZET ISLANDS** baz=49,slow=75,SNR=5628	**62.34**	**212**	T	T	19 48 41.5	
H04S1	**CROZET ISLANDS** baz=50,slow=76,SNR=460	**62.70**	**212**	T	T	19 49 03.2	
H04S3	**CROZET ISLANDS** baz=50,slow=76,SNR=667	**62.71**	**212**	T	T	19 49 02.7	
H04S2	**CROZET ISLANDS** baz=50,slow=76,SNR=650	**62.72**	**212**	T	T	19 49 05.5	
TIXI	**Tiksi** comp=Z,5.0nm,1.4s	**71.34**	**11**	P	**P**	**18 41 52.6**	**-0.3**
TIXI				IAmb	IAmb	18 42 14.2	
KHWEE	**KHWEE**	**72.13**	**246**	P	**P**	**18 41 58.1**	**-0.7**
MLR	**Muntele Rosu** comp=Z,1.2nm,0.8s	**72.56**	**317**	P	**P**	**18 42 00.3**	**-0.7**
MLR				IAmb	IAmb	18 42 21.9	

ARCES	**ARCESS Array B** comp=Z,7.6nm,1.1s,baz=119,slow=6.9,SNR=2.1	**79.44**	**340**	P	**P**	**18 42 40.8**	**+1.3**
	comp=Z,7.6nm,1.1s						
ARCES	**ARCESS Array B** comp=Z,42nm,1.5s	**79.44**	**340**	IAmb	IAmb	18 42 45.4	
VRAC	**Vranov** comp=Z,37nm,18.9s,baz=344,slow=39	**79.48**	**319**	LR	LR	19 21 45.7	
GERES	**GERESS Array B** comp=Z,1.0nm,0.9s,baz=94,slow=5.4,SNR=4.5 comp=Z,1.0nm,0.9s	**81.32**	**319**	P	**P**	**18 42 52.2**	**+2.0**
TEOL	**Teolo**	**82.50**	**315**	P	**P**	**18 42 54.6**	**-1.8**
KEST	**Kesra** comp=Z,27nm,18.3s,baz=317,slow=40	**84.07**	**305**	LR	LR	19 27 14.5	
SPIA	**Saint Paul Isl**	**89.82**	**33**	P	**P**	**18 43 32.3**	**+0.2**

RHSSO ***14*** *18:40:48.9±0.6, 43.°15N×17.°64E, h5km±4km, ML2.5/8*
PDG ***14*** *18:40:48.4±0.2, 43.°14N×17.°69E, h4km, ML2.5/13, Error ellipse: s-maj=0.2km s-min=0.5km az=0.0*
BEO ***14*** *18:40:49.2±0.3, 43.°14N×17.°61E, h0km, ML2.3/7*

ISC 14 18:40:48.3±1.0, 43.°15N±0.°02×17.°65E±0.°02, h6km±9km, n57,σ1°91/107, 9C-8D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	**Ston**	**0.28**	**172**	*i* Pg	**Pg**	**18 40 53.3**	**-0.3**
STON				Sg	**Sg**	**18 40 57.7**	**+0.4**
STON	**Ston**	**0.28**	**172**	*e*Pg	**Pg**	**18 40 53.4**	**-0.3**
STON				*e*Sg	**Sg**	**18 40 57.9**	**+0.6**
MAKA	**Makarska**	**0.48**	**287**	*e*Pg	**Pg**	**18 40 57.3**	**-0.3**
MAKA				Sg	**Sg**	**18 41 04.7**	**+0.8**
RICI	**Ricice**	**0.51**	**313**	*i* Pg	**Pg**	**18 40 57.7**	**-0.5**
RICI				Sg	**Sb**	**18 41 06.5**	**-1.0**
DBRK	**Dubrovnik**	**0.60**	**142**	*i* Pg	**Pg**	**18 40 59.3**	**-0.5**
DBRK				Sg	**Sb**	**18 41 08.8**	**-1.1**
TREB	**Trebinje**	**0.67**	**130**	⇑*i* Pg	**Pg**	**18 41 00.1**	**-1.0**
TREB				*e*Sg	**Sg**	**18 41 10.4**	**+0.6**
LSTV	**Lastovo**	**0.67**	**236**	*i* Pg	**Pg**	**18 41 00.2**	**-1.0**
LSTV				Sg	**Sg**	**18 41 10.8**	**+0.9**
BRY	**Bratogost**	**0.70**	**110**	⇓*i* Pg	**Pg**	**18 41 00.8**	**-0.9**
BRY				*i* Sg	**Sg**	**18 41 11.4**	**+0.7**
BRY	**Bratogost**	**0.70**	**110**	⇑*i* Pg	**Pg**	**18 41 00.7**	**-0.9**
BRY				*e*Sg	**Sb**	**18 41 12.0**	**-0.8**
HVAR	**Hvar**	**0.88**	**273**	*e*Pg	**Pg**	**18 41 04.3**	**-0.9**
HVAR				Sg	**Sg**	**18 41 16.9**	**+0.4**
UPM	**Unac-Piva**	**0.92**	**86**	⇓*i* Pg	**Pg**	**18 41 05.2**	**-0.7**
UPM				*i* Sg	**Sb**	**18 41 19.2**	**-0.1**
UPM	**Unac-Piva**	**0.92**	**86**	*e*Pg	**Pg**	**18 41 05.3**	**-0.7**
UPM				*e*Sg	**Sb**	**18 41 18.7**	**-0.6**
HCY	**Herceg Novi**	**0.93**	**138**	*e*Pg	**Pg**	**18 41 05.0**	**-1.2**
HCY				*i* Sg	**Sb**	**18 41 19.8**	**+0.3**
HCY	**Herceg Novi**	**0.93**	**138**	⇑*i* Pg	**Pg**	**18 41 05.1**	**-0.6**
HCY				*e*Sg	**Sb**	**18 41 19.4**	**-0.1**
NKME	**Niksic**	**1.03**	**111**	⇓*i* Pg	**Pg**	**18 41 08.1**	**-0.9**
NKME				*i* Sg	**Sn**	**18 41 22.9**	**-1.1**
CEME	**Cevo**	**1.11**	**122**	⇓*i* Pg	**Pg**	**18 41 08.2**	**-1.3**
CEME				*i* Sg	**Sn**	**18 41 25.2**	**-0.8**
BUM	**Brajici-Budva**	**1.25**	**132**	⇓*i* Pg	**Pn**	**18 41 11.1**	**-1.2**
BUM				*i* Sg	**Sn**	**18 41 30.2**	**+0.8**
PLE	**Pljevlja**	**1.28**	**81**	⇑*i* Pg	**Pn**	**18 41 11.4**	**-1.5**
PLE				*i* Sg	**Sn**	**18 41 31.7**	**+1.3**
RUDO	**Rudo**	**1.34**	**69**	*e*Pg	**Pn**	**18 41 12.3**	**-1.2**
RUDO				*e*Sg	**Sn**	**18 41 31.2**	**-0.5**
PDG	**Podgorica**	**1.38**	**121**	*e*Pg	**Pg**	**18 41 15.5**	**+0.8**
PDG				*e*Sg	**Sg**	**18 41 35.2**	**+2.6**
PDG	**Podgorica**	**1.38**	**121**	*e*Pg	**Pn**	**18 41 13.2**	**-0.8**
PDG				*i* Sg	**Sg**	**18 41 34.9**	**+2.3**
PDG	**Podgorica**	**1.38**	**121**	*e*Pg	**Pb**	**18 41 14.1**	**-0.4**
PDG				*e*Sg	**Sg**	**18 41 33.5**	**+0.9**
KOME	**Kolasin**	**1.40**	**102**	⇑*i* Pg	**Pn**	**18 41 14.0**	**-0.4**
KOME				*i* Sg	**Sg**	**18 41 35.4**	**+2.2**
BBLS	**Lazi&#263i**	**1.47**	**60**	*e*Pn	**Pb**	**18 41 15.7**	**-0.3**
BBLS				*e*Sn	**Sg**	**18 41 37.2**	**+1.8**
BBLS	**Lazi&#263i**	**1.47**	**60**	⇑*i* Pg	**Pn**	**18 41 15.3**	**0.0**
BBLS				*e*Sg	**Sg**	**18 41 36.4**	**+1.0**
DRME	**Dracevica, Mon**	**1.48**	**130**	⇑*i* Pg	**Pn**	**18 41 15.4**	**-0.1**
DRME				*i* Sg	**Sg**	**18 41 38.3**	**+2.4**
DRME	**Dracevica, Mon**	**1.48**	**130**	*e*Pg	**Pb**	**18 41 15.7**	**-0.5**
DRME				*e*Sg	**Sg**	**18 41 36.4**	**+0.5**
ZIRJ	**Zirje**	**1.55**	**290**	*e*Pn	**Pb**	**18 41 17.1**	**-0.2**
ZIRJ				Sn	**Sg**	**18 41 39.5**	**+1.5**
MORI	**Morici**	**1.59**	**298**	*e*Pn	**Pb**	**18 41 17.3**	**-0.7**
MORI				Sn	**Sg**	**18 41 40.1**	**+0.9**
BLY	**Banja Luka**	**1.64**	**348**	*e*Pg	**Pb**	**18 41 19.1**	**+0.2**
BLY				*e*Sg	**Sg**	**18 41 42.4**	**+1.5**
BLY	**Banja Luka**	**1.64**	**348**	⇑*i* Pn	**Pb**	**18 41 18.5**	**-0.4**
BLY				*e*Sn	**Sg**	**18 41 40.7**	**-0.2**
IVA	**Berane**	**1.67**	**99**	⇓*i* Pn	**Pb**	**18 41 18.8**	**-0.6**
IVA				*i* Sn	**Sg**	**18 41 44.2**	**+2.4**
ULC	**Ulcinj**	**1.67**	**135**	⇓*i* Pn	**Pb**	**18 41 19.0**	**-0.4**
ULC				*i* Sn	**Sg**	**18 41 44.2**	**+2.4**
SJES	**Sjenica**	**1.70**	**85**	*e*Pn	**Pb**	**18 41 20.3**	**+0.3**
SJES				*e*Sn	**Sg**	**18 41 45.0**	**+2.0**
SJES	**Sjenica**	**1.70**	**85**	⇑*i* Pn	**Pb**	**18 41 19.4**	**-0.6**
SJES				*e*Sn	**Sb**	**18 41 41.2**	**-0.5**
PVY	**Plav**	**1.78**	**107**	⇓*i* Pn	**Pb**	**18 41 21.3**	**-0.1**
PVY				*i* Sn	**Sg**	**18 41 47.3**	**+1.7**
IVAS	**Ivanjica**	**1.88**	**76**	*e*Pn	**Pn**	**18 41 21.4**	**+0.5**
IVAS				*e*Sn	**Sg**	**18 41 47.7**	**-0.8**
UDBI	**Udbina**	**1.94**	**316**	*e*Pn	**Pb**	**18 41 24.7**	**+0.6**
UDBI				Sn	**Sg**	**18 41 51.0**	**+0.4**
DIVS	**Divibare**	**1.95**	**60**	*e*Pn	**Pb**	**18 41 23.8**	**-0.4**
DIVS				*e*Sn	**Sg**	**18 41 49.9**	**-1.0**
TEKS	**Tekeris**	**1.95**	**43**	*e*Pn	**Pn**	**18 41 22.3**	**+0.3**
DUGI	**Dugi Otok**	**2.06**	**295**	*e*Pn	**Pb**	**18 41 24.6**	**-1.5**
DUGI				Sn	**Sb**	**18 41 51.8**	**-0.3**
VIRC	**Vir**	**2.20**	**302**	*e*Pn	**Pb**	**18 41 27.3**	**-1.2**
VIRC				Sn	**Sb**	**18 41 56.8**	**+0.7**
PLIT	**Plitvice**	**2.27**	**321**	*e*Pn	**Pb**	**18 41 29.1**	**-0.5**
PLIT				Sn	**Sb**	**18 41 58.3**	**+0.4**
TRUS	**Trudelj**	**2.27**	**61**	*e*Pn	**Pn**	**18 41 27.3**	**+1.0**
GRUS	**Gruza**	**2.35**	**71**	*e*Pn	**Pn**	**18 41 28.9**	**+1.5**
GOCS	**Kraljevo Serbi**	**2.39**	**79**	*e*Pn	**Pb**	**18 41 30.4**	**-1.3**
GOCS				*e*Sn	**Sb**	**18 42 00.9**	**-0.5**
NVLJ	**Novalja**	**2.46**	**306**	*e*Pn	**Pn**	**18 41 30.2**	**+1.4**
NVLJ				Sn	**Sb**	**18 42 02.0**	**-1.3**
SELS	**Selova**	**2.54**	**87**	*e*Pn	**Pb**	**18 41 32.4**	**-1.8**
SELS				*e*Sn	**Sb**	**18 42 03.7**	**-2.0**
FRGS	**Fruska Gora**	**2.54**	**37**	*e*Pn	**Pb**	**18 41 32.8**	**-1.5**
FRGS	**Fruska Gora**	**2.54**	**37**	*e*Pn	**Pn**	**18 41 31.3**	**+1.2**
FRGS				*e*Sn	**Sn**	**18 42 02.2**	**+0.8**
RABC	**Rab**	**2.62**	**309**	*e*Pn	**Pb**	**18 41 33.9**	**-1.7**
RABC				Sn	**Sb**	**18 42 07.4**	**-0.6**
BOJS	**Bojanci**	**2.92**	**325**	*i* Pn	**Pb**	**18 41 37.9**	**-2.8**
BOJS	**Bojanci**	**2.92**	**325**	*e*Pn	**Pn**	**18 41 37.7**	**+2.5**
BOJS				*e*Sn	**Sb**	**18 42 13.7**	**-2.9**
CRES	**Cresnjevec Ost**	**3.11**	**330**	*e*Pn	**Pn**	**18 41 40.0**	**+2.2**
MORH	**Mrgy, Hungar**	**3.15**	**13**	*e*Pn	**Pn**	**18 41 38.9**	**+0.5**
MORH				*e*Sn	**Sn**	**18 42 16.1**	**-0.2**
ZAPS	**Zavoj**	**3.65**	**86**	*e*Pn	**Pn**	**18 41 47.6**	**+2.4**
ZAPS				*e*Sn	**Sn**	**18 42 30.3**	**+1.7**
GROS	**Grobnik**	**3.65**	**336**	*i* Pn	**Pn**	**18 41 47.1**	**+1.8**

NEIC ***14*** *18:59:52.7±1.7, 24.°6S±0.°1×180.°0W±0.°1, h503km±9km, mb4.4/33, Error ellipse: s-maj=18.3km s-min=16.6km az=125.0*
IDC ***14*** *18:59:52.8±1.7, 24.°42S×179.°90E, h502km±17km, mb3.4/8, mbtmp4.2/10, Error ellipse: s-maj=22.3km s-min=16.9km az=149.0*

ISC 14 18:59:53.5±0.5, 24.°50S±0.°06×179.°91E±0.°08, h517km, n86, σ1°43/95, mb4.3/24, 3C, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**5.12**	**158**	P	**P**	**19 01 23.2**	**+0.8**
GLKZ				S	**S**	**19 02 31.0**	**-4.1**
MSVF	**Nonsavu** 2.2nm,0.3s,baz=88,slow=23,SNR=12	**6.95**	**345**	P	**P**	**19 01 38.8**	**-1.3**
MSVF	**Nonsavu**	**6.95**	**345**	P	**P**	**19 01 38.1**	**-1.9**
FUTU	**Fugatoga**	**10.31**	**11**	P	**P**	**19 02 15.7**	**+1.3**
MARNC	**Mare, Loyalty**	**11.35**	**283**	P	**P**	**19 02 23.8**	**-1.5**
WCZ	**Waipu Caves**	**12.37**	**202**	P	**P**	**19 02 38.6**	**+2.8**
DZM	**Mont Dzumac** 10nm,0.7s,baz=120,slow=20,SNR=6.5	**12.61**	**278**	P	**P**	**19 02 39.5**	**+0.9**
DZM	**Mont Dzumac**	**12.61**	**278**	P	**P**	**19 02 38.7**	**+0.1**
MKAZ	**Moumakai**	**13.21**	**197**	P	**P**	**19 02 45.6**	**+1.1**
HAZ	**Te Kaha**	**13.34**	**187**	P	**P**	**19 02 46.5**	**+0.6**
HAZ				S	**S**	**19 05 10.2**	**+2.2**
PKGZ	**Pakihiroa**	**13.41**	**186**	S	**S**	**19 05 10.4**	**+0.8**
RUGZ	**Raukumara Rang**	**13.56**	**188**	S	**S**	**19 05 12.7**	**+0.2**
PUZ	**Puketiti**	**13.60**	**186**	P	**P**	**19 02 50.8**	**+2.1**
PUZ				S	**S**	**19 05 16.2**	**+3.1**
TWGZ	**Tauwhareparae**	**13.73**	**186**	S	**S**	**19 05 17.9**	**+2.3**
URZ	**Urewera**	**13.92**	**189**	S	**S**	**19 05 19.9**	**+0.7**
MWZ	**Matawai**	**13.94**	**188**	S	**S**	**19 05 20.2**	**+0.6**
RIGZ	**Rimuhau**	**14.28**	**187**	S	**S**	**19 05 26.0**	**-0.2**
BKZ	**Black Stump Fm**	**14.90**	**190**	P	**P**	**19 03 01.2**	**-1.2**
BKZ				S	**S**	**19 05 34.0**	**-4.1**
SANVU	**Saraoutou**	**14.95**	**305**	P	**P**	**19 03 03.1**	**+0.1**
NTVZ	**North Tongarir**	**14.99**	**193**	P	**P**	**19 03 03.6**	**+0.3**
TMVZ	**Te Maari**	**15.00**	**193**	P	**P**	**19 03 03.3**	**-0.1**
OTVZ	**Oturere**	**15.05**	**193**	P	**P**	**19 03 02.9**	**-1.2**
WNVZ	**Wahianoa**	**15.22**	**193**	P	**P**	**19 03 05.3**	**-0.6**
PXZ	**Pawanui**	**15.70**	**189**	P	**P**	**19 03 10.5**	**-0.1**
BFZ	**Birch Farm**	**16.43**	**190**	P	**P**	**19 03 15.4**	**-2.5**
BFZ				S	**S**	**19 06 03.4**	**-2.3**
MRZ	**Mangatainoka R**	**16.52**	**192**	P	**P**	**19 03 17.0**	**-2.0**
MRZ				S	**S**	**19 06 02.4**	**-4.9**
CAW	**Cannon Point**	**17.05**	**193**	P	**P**	**19 03 22.9**	**-1.2**
MSWZ	**Moikau Station**	**17.31**	**192**	P	**P**	**19 03 25.4**	**-1.2**
MSWZ				S	**S**	**19 06 18.8**	**-1.7**
TCW	**Tory Channel**	**17.32**	**194**	P	**P**	**19 03 25.6**	**-1.0**
QRZ	**Quartz Range**	**17.41**	**199**	P	**P**	**19 03 28.2**	**+0.7**
NNZ	**Nelson**	**17.54**	**197**	P	**P**	**19 03 29.4**	**+0.7**
THZ	**Tophouse**	**18.17**	**197**	P	**P**	**19 03 33.5**	**-1.0**
THZ	comp=Z,9.5nm,1.1s			IAmb	IAmb	19 04 02.8	
THZ	**Tophouse**	**18.17**	**197**	P	**P**	**19 03 34.0**	**-0.5**
KHZ	**Kahutara**	**18.63**	**195**	P	**P**	**19 03 38.2**	**-0.4**
GVZ	**Greta Valley S**	**19.27**	**195**	P	**P**	**19 03 44.6**	**+0.2**
LTZ	**Lake Taylor**	**19.29**	**197**	P	**P**	**19 03 45.2**	**+0.5**
INZ	**Inchbonnie**	**19.48**	**199**	P	**P**	**19 03 46.1**	**-0.2**
ARMA	**Armidale**	**25.74**	**250**	P	**P**	**19 04 44.3**	**+1.5**
EIDS	**Eidsvold**	**26.13**	**262**	P	**P**	**19 04 46.8**	**+0.6**
CAN	**Canberra**	**28.77**	**241**		**P**	**19 05 10.2**	**+0.9**
CTAO	**Charters Tower**	**31.40**	**271**	P	**P**	**19 05 32.5**	**+0.3**
CTAO	comp=Z,20nm,1.1s			IAmb	IAmb	19 05 33.7	
TOO	**Toolangi**	**32.05**	**238**	P	**P**	**19 05 38.5**	**+0.9**
STKA	**Stephens Creek** comp=Z,3.2nm,0.4s,baz=94,slow=10,SNR=15 comp=Z,3.2nm,0.4s	**34.42**	**249**	P	**P**	**19 05 58.3**	**+0.7**
PMG	**Port Moresby**	**34.61**	**290**	P	**P**	**19 05 59.6**	**+0.2**
INKA	**Innaminka**	**35.21**	**256**	P	**P**	**19 06 03.8**	**-0.4**
COEN	**Coen**	**36.13**	**280**	P	**P**	**19 06 12.2**	**+0.2**
COEN	comp=Z,30nm,1.5s			IAmb	IAmb	19 06 42.7	
BBOO	**Buckleboo**	**39.13**	**248**	P	**P**	**19 06 36.2**	**-0.1**
AS31	**Alice Springs**	**41.86**	**261**	P	**P**	**19 06 58.4**	**+0.1**
ASAR	**Alice Springs** comp=Z,1.9nm,0.5s,baz=90,slow=6.7,SNR=73	**41.86**	**261**	P	**P**	**19 06 58.4**	**+0.1**
ASAR	comp=Z,0.3nm,0.5s,baz=110,slow=4.4,SNR=6.3 comp=Z,1.9nm,0.5s			ScP	**ScP**	**19 11 45.8**	**+2.5**
ASAR	**Alice Springs**	**41.86**	**261**	P	**P**	**19 06 58.0**	**-0.4**
WR8	**Warramunga Arr**	**42.14**	**267**	P	**P**	**19 07 00.1**	**-0.5**
WB0	**Warramunga Arr**	**42.28**	**267**	P	**P**	**19 07 01.1**	**-0.6**
WB0	comp=Z,7.6nm,0.7s			IAmb	IAmb	19 07 01.9	
WRA	**Warramunga Arr** comp=Z,6.1nm,0.6s,baz=98,slow=8.5,SNR=127	**42.28**	**267**	P	**P**	**19 07 01.2**	**-0.5**
WRA	comp=Z,2.3nm,0.9s

SBLS	**San Blas**	**0.67**	**53**	*e*P		**Pn**	**19 01 55.7**	**-0.7**
SBLS				*e*S		**Sn**	**19 02 06.9**	**+1.1**
SLOZ	**Alcaldia de Sa**	**0.70**	**33**	P		**Pb**	**19 01 55.8**	**-1.2**
SLOZ				S		**Sn**	**19 02 07.4**	**+1.1**
JAYA	**Jayaque - finc**	**0.74**	**73**	P		**Pn**	**19 01 56.7**	**-0.7**
JAYA	**Jayaque - finc**	**0.74**	**73**	*i* P		**Pn**	**19 01 56.6**	**-0.7**
JAYA				*i* S		**Sb**	**19 02 07.5**	**-0.1**
JAYA				IAML			19 02 09.6	
	comp=N,6µm,0.3s							
JAYA	**Jayaque - finc**	**0.74**	**73**	*e*P		**Pn**	**19 01 56.6**	**-0.7**
JAYA				*e*S		**Sn**	**19 02 08.5**	**+1.1**
PCG5	**San Vicente Pa**	**0.80**	**346**	*i* P		**Pb**	**19 01 59.2**	**+0.4**
PCG5				*i* S		**Sn**	**19 02 12.5**	**+3.6**
UNIC	**Universidad Ca**	**0.81**	**48**	P		**Pb**	**19 01 57.4**	**-0.8**
UNIC				S		**Sb**	**19 02 09.8**	**+0.2**
RBDL	**Robledal**	**0.82**	**35**	*e*P		**Pb**	**19 01 57.8**	**-1.3**
RBDL				*e*S		**Sb**	**19 02 10.6**	**+0.6**
LALI	**Alcalda de L**	**0.83**	**86**	P		**Pn**	**19 01 57.2**	**-1.2**
LALI				S		**Sb**	**19 02 10.3**	**+0.3**
CEDA	**San Andres**	**0.84**	**64**	P		**Pn**	**19 01 57.6**	**-0.9**
CEDA				S		**Sb**	**19 02 11.0**	**+0.6**
PMON	**Piamonte**	**0.88**	**72**	P		**Pn**	**19 01 58.7**	**-0.4**
PMON	**Piamonte**	**0.88**	**72**	*e*P		**Pn**	**19 01 58.8**	**-0.4**
PMON				*e*S		**Sb**	**19 02 12.4**	**+0.9**
FG16	**Alotenango, Sa**	**0.90**	**338**	*i* P		**Pb**	**19 02 01.5**	**+1.2**
FG8	**Yepocapa, Chim**	**0.90**	**335**	*i* P		**Pb**	**19 02 02.1**	**+1.7**
UEES	**Universidad Ev**	**0.95**	**73**	P		**Pb**	**19 02 00.2**	**-1.0**
UEES				S		**Sb**	**19 02 14.0**	**+0.5**
SEMO	**Seminario San**	**0.96**	**74**	S		**Sb**	**19 02 14.3**	**+0.5**
UTEC	**Universidad Te**	**0.98**	**74**	S		**Sb**	**19 02 14.7**	**+0.4**
PANCS	**Alcalda de**	**0.98**	**80**	P		**Pn**	**19 01 59.8**	**-0.7**
PANCS				S		**Sb**	**19 02 14.7**	**+0.3**
IGN	**Direccin Gen**	**1.01**	**74**	P		**Pn**	**19 01 59.5**	**-1.5**
IGN				S		**Sb**	**19 02 15.5**	**+0.1**
UDBS	**Universidad Do**	**1.03**	**74**	S		**Sb**	**19 02 16.3**	**+0.5**
ESSG	**Sabana Grande**	**1.14**	**326**	*i* P		**Pn**	**19 02 00.1**	**-2.7**
PAVA	**Las Pavas**	**1.23**	**77**	S		**Sb**	**19 02 21.2**	**-0.4**
MTO3	**Montecristo**	**1.24**	**39**	P		**Pn**	**19 02 03.1**	**-1.1**
MTO3				S		**Sn**	**19 02 19.9**	**0.0**
MTO3	**Montecristo**	**1.24**	**39**	*i* P		**Pn**	**19 02 03.1**	**-1.1**
COEG	**Centro de Oper**	**1.27**	**82**	P		**Pn**	**19 02 04.7**	**+0.1**
COEG				S		**Sb**	**19 02 21.9**	**-0.7**
TECO	**Alcaldia de Te**	**1.36**	**86**	P		**Pn**	**19 02 05.5**	**-0.2**
TECO				S		**Sb**	**19 02 24.1**	**-0.9**
ESQI	**Esquipulas**	**1.38**	**36**	P		**Pn**	**19 02 05.1**	**-1.0**
ESQI				S		**Sn**	**19 02 23.2**	**0.0**
LLGN	**La Laguna**	**1.40**	**59**	P		**Pn**	**19 02 05.7**	**-0.6**
LLGN				S		**Sn**	**19 02 24.6**	**+1.0**
P5NO	**Presa 5 de nov**	**1.48**	**68**	P		**Pn**	**19 02 07.8**	**+0.4**
P5NO				S		**Sn**	**19 02 25.8**	**+0.3**
STG5	**El Palmar, Qui**	**1.49**	**310**	*i* P		**Pb**	**19 02 10.5**	**+0.2**
STG8	**El Palmar, Qui**	**1.52**	**312**	*i* P		**Pb**	**19 02 10.9**	**-0.1**
STG8				*e*S		**Sb**	**19 02 32.6**	**+2.5**
APG	**El Apazote**	**1.58**	**350**	*i* P		**Pn**	**19 02 07.8**	**-1.3**
PACA	**Pacayal**	**1.80**	**89**	P		**Pn**	**19 02 10.6**	**-1.3**
PACA				S		**Sn**	**19 02 35.2**	**+1.6**
RTAL	**Retalhuleu**	**1.83**	**306**	S		**Sn**	**19 02 30.6**	**-3.7**
RANC	**El Ranchito**	**1.83**	**90**	P		**Pn**	**19 02 11.3**	**-1.0**
SARH	**Santa Rosa de**	**1.91**	**46**	P		**Pn**	**19 02 12.0**	**-1.3**
SARH				S		**Sn**	**19 02 36.8**	**+0.5**
LCND	**La Caada**	**2.22**	**93**	P		**Pn**	**19 02 17.2**	**-0.4**
LCND				S		**Sn**	**19 02 44.5**	**+0.6**
CNCH	**Conchagua**	**2.28**	**94**	P		**Pn**	**19 02 18.1**	**-0.4**
CNCH				S		**Sn**	**19 02 46.9**	**+1.4**
CSGN	**Cosiguina Volc**	**2.59**	**100**	P		**Pn**	**19 02 21.8**	**-0.9**
CSGN				S		**Sn**	**19 02 54.6**	**+1.6**
PKGN	**Cerro Pekin**	**3.21**	**103**	P		**Pn**	**19 02 31.4**	**+0.3**
PKGN				S		**Sn**	**19 03 09.1**	**+0.9**
YUSH	**Yuscaran**	**3.28**	**81**	P		**Pn**	**19 02 31.6**	**-0.6**

*SJA **14** 19:11:48.1±0.7,32°.38S×71°.95W,h30km,ML3.5,MW3.4*
*GUC **14** 19:11:49.4±0.4,32°.26S×71°.84W,h14km±2km,ML3.4*
ISC 14 19:11:50.6±2.4,32°.39S±0°.05×71°.9W±0°.1,h14km±10km,
n23,σ0°64/38,6C-6D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VA06	**Catapilco**	**0.50**	**110**	*e*P		**Pg**	**19 12 00.5**	**-0.1**
VA06				*e*S		**Sb**	**19 12 08.4**	**+0.1**
VA06				IAML			19 12 15.5	
	comp=E,3µm,0.5s							
ROCH	**El Roble**	**0.92**	**130**	*i* P		**Pb**	**19 12 07.8**	**-0.6**
ROCH				*i* S		**Sn**	**19 12 21.9**	**-0.5**
ROCH				IAML			19 12 24.3	
	comp=N,2µm,0.3s							
MT02	**Curacav**	**1.06**	**145**	*e*P		**Pb**	**19 12 10.1**	**-0.5**
MT02				*e*S		**Sn**	**19 12 25.8**	**+0.3**
VA03	**San Esteban**	**1.16**	**109**	*e*P		**Pn**	**19 12 10.9**	**-1.6**
VA03				*e*S		**Sb**	**19 12 27.6**	**+0.1**
VA03				IAML			19 12 30.5	
	comp=N,3µm,0.4s							
VA03	**San Esteban**	**1.16**	**109**	*e*P		**Pn**	**19 12 10.9**	**-1.6**
VA03				*e*S		**Sg**	**19 12 29.1**	**+0.8**
VA03				IAML			19 12 30.1	
	comp=Z,821nm,0.2s							
PEL	**Peldehue**	**1.24**	**128**	*e*P		**Pn**	**19 12 12.9**	**-0.7**
PEL				*e*S		**Sg**	**19 12 30.9**	**+0.1**
PEL				IAML			19 12 32.9	
	comp=N,2µm,0.4s							
PEL	**Peldehue**	**1.24**	**128**	*e*P		**Pn**	**19 12 12.9**	**-0.7**
PEL				*e*S		**Sn**	**19 12 30.2**	**+0.1**
PEL				IAML			19 12 34.0	
	comp=Z,497nm,0.4s							
MT05	**Renca**	**1.37**	**137**	IAML			19 12 39.1	
	comp=N,2µm,0.4s							
MT10	**Hacienda Santa**	**1.42**	**129**	*e*P		**Pn**	**19 12 15.7**	**-0.4**
MT10				*e*S		**Sb**	**19 12 35.5**	**+0.6**
MT10				IAML			19 12 38.5	
	comp=E,2µm,0.4s							
MT14	**Cerro Cal¡n**	**1.50**	**133**	*e*P		**Pn**	**19 12 17.1**	**0.0**
MT14				*e*S		**Sb**	**19 12 37.0**	**-0.1**
MT14				IAML			19 12 50.9	
	comp=E,1µm,0.6s							
MT16	**CCHEN**	**1.53**	**133**	*i* P		**Pn**	**19 12 17.7**	**+0.2**
MT16				*i* S		**Sb**	**19 12 38.8**	**+0.9**
MT16				IAML			19 12 52.9	
	comp=N,311nm,0.6s							
MT09	**Talagante**	**1.56**	**153**	*e*P		**Pn**	**19 12 18.4**	**+0.4**
MT09				*e*S		**Sg**	**19 12 41.0**	**-0.1**
MT09				IAML			19 12 46.9	
	comp=N,663nm,0.2s							
MT09				IAML			19 12 51.0	
	comp=N,676nm,0.3s							
MT03	**Universidad Ad**	**1.58**	**135**	*e*P		**Pn**	**19 12 18.2**	**0.0**
MT03				*e*S		**Sb**	**19 12 40.0**	**+0.5**
MT03				IAML			19 12 43.8	
	comp=E,1µm,0.3s							
MT15	**Las Vizcachas**	**1.66**	**137**	*e*P		**Pn**	**19 12 19.9**	**+0.6**
MT15				*e*S		**Sn**	**19 12 40.7**	**+0.4**
MT15				IAML			19 12 46.0	
	comp=N,946nm,0.3s							
MT12	**Pirque**	**1.73**	**141**	*e*P		**Pn**	**19 12 20.7**	**+0.4**
MT12				*e*S		**Sb**	**19 12 43.6**	**-0.2**
MT12				IAML			19 12 51.1	
	comp=N,1µm,0.5s							
MT04	**Ro Olivares**	**1.77**	**126**	IAML			19 12 48.2	
	comp=E,392nm,0.5s							
MT08	**Bocatoma Ro**	**1.87**	**125**	*e*P		**Pn**	**19 12 23.1**	**+0.7**
MT08				*e*S		**Sb**	**19 12 48.5**	**+0.5**
MT08				IAML			19 12 58.6	
	comp=E,242nm,0.5s							
MT13	**San Alfonso**	**1.89**	**136**	*e*P		**Pn**	**19 12 22.9**	**+0.4**
MT13				*e*S		**Sb**	**19 12 48.4**	**+0.1**
MT13				IAML			19 12 57.6	
	comp=E,741nm,0.5s							
AUSP	**Uspallata**	**2.10**	**86**	*e*P		**Pn**	**19 12 26.6**	**+1.1**
AUSP				*e*S		**Sb**	**19 12 54.0**	**-0.5**
RTLS	**Leoncito**	**2.25**	**76**	*e*P		**Pn**	**19 12 28.7**	**+1.0**
RTLS				IAML			19 13 04.0	
	comp=Z,454nm,0.4s							
ACCO	**Cerro Coronel**	**2.98**	**54**	*e*P		**Pn**	**19 12 37.9**	**+0.1**
AROD	**Rodeo**	**3.01**	**43**	*e*P		**Pn**	**19 12 37.8**	**-0.3**
ACLC	**CERRO LA CRUZ**	**5.14**	**56**	*e*P		**Pn**	**19 13 07.8**	**+0.4**
ACLC				IAML			19 14 21.7	
	comp=Z,24nm,0.5s							

*ISN **14** 19:20:52.0±1.8,32°.65N×47°.42E,h25km,ML2.4,*
Presumed earthquake
*TEH **14** 19:20:53.6,32°.87N×47°.46E,h10km±80km,ML2.8,*
Presumed earthquake
ISC 14 19:20:52.0±1.3,32°.74N±0°.09×47°.44E±0°.07,h15km,**n7,**
σ0s86/9,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IBDR	**Badra**	**1.32**	**287**	*e*Pg		**Pn**	**19 21 15.0**	**-0.9**
	baz=110							
IBDR				*e*Sg		**Sg**	**19 21 35.0**	**+0.3**
IBDR				AML		AML	19 21 38.0	
	comp=E,72nm,0.4s							
IBDR				AML		AML	19 21 39.2	
	comp=N,67nm,0.5s							
KCHF	**Cheshme Sefid,**	**1.57**	**348**	Pg		**Pb**	**19 21 20.8**	**-0.1**
IGHG	**Ghaleghazi**	**1.75**	**336**	Pg		**Pb**	**19 21 25.0**	**+1.0**
IGHG				Sg		**Sg**	**19 21 49.3**	**+0.9**
IBZA	**Bozab**	**1.77**	**11**	Pg		**Pb**	**19 21 24.4**	**+0.1**
AMIS	**Naft Sefid**	**1.90**	**124**	Pn		**Pg**	**19 21 29.0**	**+0.5**
SNQR	**Sonqor, Kerman**	**2.12**	**4**	Pn		**Pb**	**19 21 29.3**	**-1.1**
IDHR	**Dehrash**	**2.15**	**336**	Pn		**Pb**	**19 21 30.4**	**-0.3**

*IDC **14** 19:28:23.3±1.5,7°.84S×128°.41E,h147km±17km,mb3.2/3,*
mbtmp3.7/8,MS3.4/1,Error ellipse: s-maj=18.3km
s-min=13.0km az=108.0
ISC 14 19:28:23.4±0.8,7°.86S±0°.06×128°.47E±0°.09,h150km,**n9,**
σ1s65/13,mb3.5/3,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BATI	**Baumata**	**5.29**	**243**	P		**Pn**	**19 29 42.0**	**+1.2**
	21nm,0.3s,baz=290,slow=2.4,SNR=27							
BATI				S		**Sn**	**19 30 39.2**	**-1.8**
	80nm,0.4s,baz=63,slow=17,SNR=13							
SIJI	**Sorong**	**7.48**	**22**	P		**Pn**	**19 30 11.0**	**+1.0**
	6.6nm,0.2s,baz=140,slow=23,SNR=12							
SIJI				S		**Sn**	**19 31 31.5**	**-2.2**
	6.1nm,0.4s,baz=109,slow=23,SNR=5.5							
FITZ	**Fitzroy Crossi**	**10.54**	**195**	P		**Pn**	**19 30 52.2**	**+1.6**
	3.0nm,0.4s,baz=18,slow=11,SNR=10							
FITZ				S		**Sn**	**19 32 44.9**	**-2.4**
	7.3nm,0.4s,baz=349,slow=17,SNR=6.4							
WRA	**Warramunga Arr**	**13.29**	**155**	P		**Pn**	**19 31 27.2**	**+0.8**
	0.3nm,0.3s,baz=320,slow=14,SNR=14							
WRA				S		**Sn**	**19 33 52.1**	**-1.4**
	3.8nm,0.4s,baz=332,slow=23,SNR=17							
ASAR	**Alice Springs**	**16.56**	**162**	P		**Pn**	**19 32 09.2**	**+2.1**
	0.4nm,0.9s,baz=342,slow=10,SNR=68							
ASAR				S		**S**	**19 35 10.1**	**-1.0**
	1.2nm,0.5s,baz=346,slow=26,SNR=6.7							
CMAR	**Chiang Mai Arr**	**39.15**	**312**	P		**P**	**19 35 36.9**	**+0.1**
	0.5nm,0.6s,baz=135,slow=7.8,SNR=5.5							
	0.5nm,0.6s							
PALK	**Pallekele**	**49.94**	**286**	LR		LR	19 59 10.0	
	comp=Z,33nm,18.1s,baz=158,slow=37							
MKAR	**Makanchi Array**	**68.12**	**328**	P		**P**	**19 39 06.8**	**-0.4**
	0.4nm,0.5s,baz=127,slow=7.5,SNR=8.9							
	0.4nm,0.5s							
KURBB	**Kurchatov Arra**	**72.46**	**329**	P		**P**	**19 39 33.1**	**-0.3**
	0.2nm,0.4s,baz=125,slow=5.9,SNR=1.5							
	0.2nm,0.4s							

*IDC **14** 19:50:32.3±1.2,27°.98N×105°.68E,h0km,mb3.3/5,*
mbtmp3.3/6,ML3.1/1,Error ellipse: s-maj=44.4km
s-min=20.6km az=61.0
ISC 14 19:50:37.4±1.3,28°.0N±0°.2×105°.7E±0°.2,h35km,**n6,**
σ0s49/6,mb3.3/4,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SONM	**Songino Array**	**19.78**	**1**	P		**P**	**19 55 05.0**	**+0.4**
	0.1nm,0.3s,baz=182,slow=12,SNR=4.5							
	0.7nm,0.9s							
KSRS	**Korea Array**	**20.86**	**58**	P		**P**	**19 55 16.1**	**-0.2**
	0.5nm,0.6s,baz=230,slow=10,SNR=1.8							
	0.5nm,0.6s							
MKAR	**Makanchi Array**	**26.24**	**322**	P		**P**	**19 56 09.5**	**+0.3**
	0.3nm,0.6s,baz=120,slow=8.5,SNR=4.0							
	0.3nm,0.6s							
KURBB	**Kurchatov Arra**	**30.55**	**325**	P		**P**	**19 56 46.9**	**-0.5**
	0.3nm,0.6s,baz=127,slow=10,SNR=5.3							
	0.3nm,0.6s							
WRA	**Warramunga Arr**	**55.14**	**147**	P		**P**	**20 00 06.3**	**-0.2**
	0.2nm,0.6s,baz=335,slow=8.3,SNR=9.4							
	0.2nm,0.6s							
ASAR	**Alice Springs**	**58.14**	**149**	P		**P**	**20 00 28.1**	**+0.3**
	0.2nm,0.5s,baz=328,slow=7.3,SNR=5.9							
	0.2nm,0.5s							

*IDC **14** 20:27:45.3±0.5,22°.45S×173°.41E,h0km,mb4.6/20,*
mbtmp4.6/23,ML4.1/2,MS4.0/47,Error ellipse:
s-maj=16.7km s-min=13.7km az=92.0
*BJI **14** 20:27:46.4,22°.59S×173°.93E,h24km,mB5.3/9,mb4.7/26,*
Ms4.7/2,Ms7 4.3/3
*MOS **14** 20:27:47.2±1.4,22°.53S×173°.27E,h13km,mb5.0/23,Error*
ellipse: s-maj=10.2km s-min=9.0km az=65.1
*NEIC **14** 20:27:48.1±1.6,22°.55S±0°.06×173°.38E±0°.05,h10km±1km,*
mb5.1/73,Error ellipse: s-maj=13.4km s-min=2.7km
az=144.0
*GCMT **14** 20:27:54.1±0.2,22°.64S±0°.01×173°.25E±0°.02,h19km,*
MW5.0/102,Moment Tensor Solution. s77,c111;
s102,c149; Duration: 0 Moment tensor: Scale 10^{16}Nm;
M_{rr}3.46±.12; $M_{\theta\theta}$-3.88±.09; $M_{\phi\phi}$0.41±.08; $M_{r\theta}$1.65±.16;
$M_{\theta\phi}$-0.65±.05; $M_{r\phi}$0.18±.19; Best double couple:
M_{o}4.07200×10^{16} NP1ϕ_s260.00000°,δ33.00000°,
λ88.00000°. NP2ϕ_s83.00000°,δ57.00000°,λ91.00000°.
Principal axes: T 3.8140, Plg78.0000°, Azm356.0000°; N
0.5110, Plg1.0000°, Azm262.0000°; P -4.3300,
Plg12.0000°, Azm172.0000°; nsta1 refers to body waves,
cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
Triangular moment-rate function
*NOU **14** 20:27:58.0,22°.75S×173°.01E,h54km,mb5.0/23,*
Southeast of Loyalty Islands
ISC 14 20:27:52.4±0.3,22°.55S±0°.05×173°.39E±0°.05,h44km,**n378,**
σ1s25/335,mb5.0/83,MS4.1/48,41C-21D,Southeast of
Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**5.09**	**281**	Pn		**Pn**	**20 29 05.0**	**-1.2**
YATNC	**Mamie plateau,**	**6.04**	**273**	P		**Pn**	**20 29 20.2**	**+0.9**
ONTNC	**Ouen Toro**	**6.42**	**271**	P		**Pn**	**20 29 25.3**	**+0.8**
ONTNC	**Ouen Toro**	**6.42**	**271**			**Pn**	**20 29 23.8**	**-0.7**
DZM	**Mont Dzumac**	**6.45**	**273**	*e*Pn		**Pn**	**20 29 25.2**	**+0.2**
	167nm,0.7s							
DZM				*e*Sn		**Sn**	**20 30 35.5**	**-1.9**
	177nm,0.8s							
DZM				*e*LR		LR	20 30 44.5	
	2µm,23.1s							
DZM	**Mont Dzumac**	**6.45**	**273**	Pn		**Pn**	**20 29 23.4**	**-1.6**
	7.7nm,0.3s,baz=124,slow=11,SNR=56							
DZM				Sn		**Sn**	**20 30 33.6**	**-3.8**
	16nm,0.3s,baz=58,slow=23,SNR=5.5							
	49nm,0.5s							
DZM	**Mont Dzumac**	**6.45**	**273**	P		**Pn**	**20 29 23.9**	**-1.1**
DZM	**Mont Dzumac**	**6.45**	**273**			**Pn**	**20 29 23.7**	**-1.3**
MSVF	**Nonsavu**	**6.49**	**43**	Pn		**Pn**	**20 29 23.0**	**-2.5**
	24nm,0.5s,baz=217,slow=17,SNR=76							
MSVF	**Nonsavu**	**6.49**	**43**			**Pn**	**20 29 24.3**	**-1.2**
MSVF	**Nonsavu**	**6.49**	**43**	P		**Pn**	**20 29 24.3**	**-1.2**
RTV	**Rentapao**	**6.65**	**315**	P		**Pn**	**20 29 31.9**	**+4.3**
DVP	**Devils Point**	**6.85**	**314**	P		Pn	20 29 35.3	+4.9
NFK	**Norfolk Island**	**8.12**	**216**	P		**Pn**	**20 29 47.3**	**-0.4**
SANVU	**Saraoutou**	**9.18**	**319**	P		Pn	20 30 07.0	+4.7
SANVU	**Saraoutou**	**9.18**	**319**			**Pn**	**20 30 00.3**	**-1.9**
RAO	**Raoul Island**	**10.28**	**132**	LR		LR	20 33 26.6	
	comp=Z,1µm,21.8s,baz=321,slow=33							
OUZ	**Omahuta**	**12.62**	**179**	P		**Pn**	**20 30 49.4**	**+0.1**
WCZ	**Waipu Caves**	**13.36**	**177**	P		**Pn**	**20 31 01.2**	**+1.7**
TOZ	**Tahuroa Road**	**15.24**	**174**			**Pn**	**20 31 23.9**	**-0.6**
LHI	**Lord Howe Isla**	**15.57**	**232**	P		**Pn**	**20 31 29.9**	**+1.0**
URZ	**Urewera**	**15.98**	**169**	Pn		**Pn**	**20 31 34.2**	**+0.1**
	0.5nm,0.3s,baz=15,slow=7.1,SNR=6.8							
URZ				LR		LR	20 35 25.1	
	comp=Z,290nm,22.0s,baz=14,slow=29							
	20nm,0.9s							
URZ	**Urewera**	**15.98**	**169**	P		**P**	**20 31 37.4**	**+0.4**
MWZ	**Matawai**	**16.12**	**168**	P		**P**	**20 31 38.6**	**-0.1**
RTZ	**Ruatahuna**	**16.30**	**170**			**Pn**	**20 31 38.8**	**+0.5**
AFI	**Afiamalu**	**16.49**	**61**	LR		LR	20 36 54.7	
	comp=Z,550nm,19.3s,baz=223,slow=33							

BKZ	**Black Stump Fm**	**16.77**	**172**	P		**P**	**20 31 47.0**	**+1.1**
BKZ	**Black Stump Fm**	**16.77**	**172**	P		**Pn**	**20 31 44.0**	**-0.2**
BKZ	**Black Stump Fm**	**16.77**	**172**	P		**P**	**20 31 46.4**	**+0.5**
TSZ	**Takapari Road**	**17.59**	**173**	P		**P**	**20 31 57.4**	**+2.5**
MRZ	**Mangatainoka R**	**18.15**	**175**	P		**Pn**	**20 32 02.0**	**+0.9**
QRZ	**Quartz Range**	**18.23**	**182**	P		**Pn**	**20 32 05.0**	**+2.9**
BFZ	**Birch Farm**	**18.23**	**173**	P		**Pn**	**20 32 03.3**	**+1.1**
HNR	**Honiara**	**18.34**	**313**	LR		LR	20 37 57.2	
	comp=Z,21nm,19.0s,baz=218,slow=34							
SAVO	**Savo Central**	**18.64**	**314**	P		**Pn**	**20 32 11.9**	**+4.6**
SNZO	**South Karori**	**18.73**	**177**	P		**P**	**20 32 07.8**	**+0.3**
SNZO				IAmb		IAmb	20 32 15.0	
	comp=Z,116nm,1.4s							
THZ	**Tophouse**	**19.16**	**181**	P		**Pn**	**20 32 14.9**	**+1.5**
TATA	**Tatamba Isabel**	**19.21**	**315**	P		**Pn**	**20 32 14.1**	**0.0**
KHZ	**Kahutara**	**19.81**	**180**	P		**Pn**	**20 32 21.3**	**+0.4**
TW1H	**Toowoomba 1 Ha**	**20.02**	**251**	P		**P**	**20 32 22.6**	**+0.8**
INZ	**Inchbonnie**	**20.18**	**184**	P		Pn	20 32 25.5	+0.1
LTZ	**Lake Taylor**	**20.19**	**182**	P		Pn	20 32 25.6	0.0
EIDS	**Eidsvold**	**20.58**	**258**	P		Pn	20 32 29.4	-0.9
	comp=Z,55nm,1.5s							
EIDS	**Eidsvold**	**20.58**	**258**	P		Pn	20 32 29.6	-0.7
EIDS	**Eidsvold**	**20.58**	**258**			**P**	**20 32 26.6**	**-1.1**
WVZ	**Waitaha Valley**	**20.58**	**186**	P		Pn	20 32 30.3	+0.1
QXZ	**Oxford**	**20.75**	**183**	P		**P**	**20 32 30.9**	**+1.5**
ARMA	**Armidale**	**20.97**	**243**	P		**P**	**20 32 31.8**	**-0.2**
ARMA				IAmb		IAmb	20 32 39.8	
	comp=Z,83nm,1.4s							
MQZ	**McQueen's Vall**	**21.11**	**181**	P		**P**	**20 32 35.3**	**+2.1**
RPZ	**Rata Peaks**	**21.19**	**185**	P		**P**	**20 32 33.0**	**-1.2**
	comp=Z,15nm,0.8s,baz=5.1,slow=3.6,SNR=7.4							
RPZ				LR		LR	20 40 38.1	
	comp=Z,971nm,18.4s,baz=290,slow=36							
	comp=Z,15nm,0.8s							
JCZ	**Jackson Bay**	**21.80**	**189**	P		**P**	**20 32 43.3**	**+2.6**
ODZ	**Otahua Downs**	**22.55**	**185**	P		**P**	**20 32 52.4**	**+3.7**
ODZ	**Otahua Downs**	**22.55**	**185**	P		**P**	**20 32 49.7**	**+1.1**
MLZ	**Mavora Lakes**	**23.16**	**189**	P		**P**	**20 32 58.9**	**+3.9**
SYZ	**Scrubby Hill**	**24.17**	**187**	P		**P**	**20 33 05.6**	**+1.1**
CAN	**Canberra**	**24.77**	**234**	P		**P**	**20 33 09.8**	**-0.4**
CAN				IAmb		IAmb	20 33 40.5	
	comp=Z,118nm,1.9s							
CAN	**Canberra**	**24.77**	**234**	P		**P**	**20 33 09.8**	**-0.4**
CAN				pmax		pmax		
	comp=Z,118nm,1.9s							
RAR	**Rarotonga**	**24.93**	**92**	LR		LR	20 42 57.5	
	comp=Z,141nm,18.1s,baz=267,slow=37							
CTA	**Charters Tower**	**25.39**	**270**	P		**P**	**20 33 14.9**	**-0.9**
	comp=Z,8.7nm,0.9s,baz=94,slow=9.9,SNR=5.9							
CTA				LR		LR	20 43 15.1	
	comp=Z,536nm,18.6s,baz=52,slow=37							
	comp=Z,8.7nm,0.9s							
CTA	**Charters Tower**	**25.39**	**270**	P		**P**	**20 33 15.0**	**-0.9**
CTAO	**Charters Tower**	**25.39**	**270**	P		**P**	**20 33 15.4**	**-0.4**
CTAO	**Charters Tower**	**25.39**	**270**	P		**P**	**20 33 15.4**	**-0.4**
CTAO				pmax		pmax		
	comp=Z,14nm,1.0s							
AUSMG	**Snowy Mountain**	**25.52**	**232**	P		**P**	**20 33 18.8**	**+1.8**
CMSA	**Cobar Meteorol**	**26.19**	**244**	P		**P**	**20 33 22.5**	**-0.5**
	comp=Z,16nm,1.4s							
CMSA	**Cobar Meteorol**	**26.19**	**244**	P		**P**	**20 33 24.4**	**+1.4**
QLP	**Quilpie**	**26.79**	**255**	P		**P**	**20 33 28.4**	**-0.1**
	comp=Z,36nm,0.7s							
QLP	**Quilpie**	**26.79**	**255**	P		**P**	**20 33 28.4**	**-0.1**
MTSU	**Mount Surprise**	**27.59**	**274**	P		**P**	**20 33 35.9**	**+0.2**
	comp=Z,22nm,0.8s							
MTSU	**Mount Surprise**	**27.59**	**274**	P		**P**	**20 33 36.1**	**+0.3**
TOO	**Toolangi**	**28.27**	**232**	P		**P**	**20 33 41.8**	**+0.1**
TOO	**Toolangi**	**28.27**	**232**	P		**P**	**20 33 41.8**	**+0.1**
TOO				pmax		pmax		
	comp=Z,5.0nm,0.9s							
BRAT	**Ballarat**	**29.41**	**233**	P		**P**	**20 33 54.1**	**+2.4**
STKA	**Stephens Creek**	**29.67

SOEI Soe 48.66 277 P **P** **20 36 32.0 -0.7**
SOEI IAmb IAmb 20 36 46.9
comp=Z,30nm,1.2s
BATI Baumata 49.05 276 LR LR 20 57 22.8
comp=Z,605nm,20.4s,baz=129,slow=36
MBWA Marble Bar 49.60 261 P **P** **20 36 39.2 -0.4**
comp=Z,32nm,0.8s
MBWA Marble Bar 49.60 261 **P** **20 36 38.7 -0.9**
MBWA IAmb IAmb 20 36 41.6
comp=Z,18nm,0.8s
MEEK Meekatharra 49.66 254 P **P** **20 36 39.4 -0.8**
comp=Z,28nm,0.9s
NWAO Narrogin (SRO) 50.26 245 LR LR 20 57 16.3
comp=Z,201nm,18.7s,baz=32,slow=35
NWAO Narrogin (SRO) 50.26 245 P **P** **20 36 43.2 -1.3**
NWAO IAmb IAmb 20 36 56.4
comp=Z,60nm,1.4s
NWAO Narrogin (SRO) 50.26 245 P **P** **20 36 43.2 -1.3**
NWAO pmax pmax
comp=Z,60nm,1.4s
MORW Morawa 51.62 250 P **P** **20 36 53.7 -1.1**
MORW IAmb IAmb 20 37 07.0
comp=Z,50nm,1.5s
KAPI Kappang 54.61 280 LR LR 21 00 33.3
comp=Z,69nm,20.8s,baz=123,slow=36
VNDA Vanda 55.30 183 P **P** **20 37 21.1 +0.1**
comp=Z,3.0nm,0.6s,baz=6.4,slow=7.9,SNR=16
VNDA LR LR 20 57 39.3
comp=Z,160nm,20.0s,baz=10.0,slow=32
comp=Z,3.0nm,0.6s
VNDA Vanda 55.30 183 **P** **20 37 21.8 +0.8**
VNDA Vanda 55.30 183 P **P** **20 37 21.8 +0.8**
VNDA pmax pmax
comp=Z,8.0nm,1.1s
SBA Scott Base 55.44 182 P **P** **20 37 23.6 +1.5**
SBA Scott Base 55.44 182 P **P** **20 37 23.6 +1.5**
SBA pmax pmax
comp=Z,46nm,1.1s
TOLI2 Tolitoli 56.37 287 P **P** **20 37 28.8 -0.8**
TOLI2 IAmb IAmb 20 37 54.0
comp=Z,30nm,1.6s
JAGI Jajag, Banyuwa 58.43 274 P **P** **20 37 42.8 -1.4**
CASY Casey 58.71 205 P **P** **20 37 44.9 -0.4**
CASY IAmb IAmb 20 37 51.3
comp=Z,25nm,1.1s
UGM Wanagama 61.98 273 P **P** **20 38 07.8 -0.7**
JHJ Hachijo jima 2 63.98 329 LR LR 21 06 40.1
comp=Z,48nm,18.2s,baz=314,slow=36
BBJI Bungbulang 64.80 272 **P** **20 38 26.1 -1.1**
BBJI IAmb IAmb 20 38 27.0
comp=Z,8.7nm,0.8s
LEM Lembang 65.06 273 LR LR 21 07 05.7
comp=Z,162nm,19.5s,baz=179,slow=36
JGF Kuroka 67.16 329 P **P** **20 38 41.6 -0.3**
MJAR Matsushiro Arr 67.52 330 P **P** **20 38 43.7 -0.3**
comp=Z,7.5nm,0.9s,baz=161,slow=6.7,SNR=18
comp=Z,7.5nm,0.9s
MJAR Matsushiro Arr 67.52 330 **P** **20 38 43.9 -0.2**
MJAR IAmb IAmb 20 38 57.4
comp=Z,30nm,1.8s
MJAR Matsushiro Arr 67.52 330 P **P** **20 38 43.9 -0.2**
MJAR pmax pmax
comp=Z,30nm,1.8s
QSPA South Pole Qui 67.52 180 P **P** **20 38 44.5 +0.6**
comp=Z,23nm,1.0s,baz=9.2,slow=1.1,SNR=57
QSPA LR LR 21 05 50.3
comp=Z,160nm,18.6s,baz=31,slow=34
comp=Z,23nm,1.0s
QSPA South Pole Qui 67.52 180 P **P** **20 38 44.1 +0.2**
MAJO Matsushiro 67.52 330 **P** **20 38 44.1 0.0**
MAJO IAmb IAmb 20 38 49.8
comp=Z,10nm,0.8s
MAJO Matsushiro 67.52 330 *i* P **P** **20 38 44.3 +0.2**
MAJO pmax pmax
comp=Z,9.0nm,0.9s
JNU Nakatsue 68.63 322 LR LR 21 04 31.3
comp=Z,63nm,21.8s,baz=113,slow=32
JKA Kamikawa-asahi 72.10 337 P **P** **20 39 12.4 +0.4**
JKA IAmb IAmb 20 39 37.4
comp=Z,24nm,1.3s
ASAJ Asahikawa 72.10 337 LR LR 21 05 31.2
comp=Z,142nm,20.9s,baz=171,slow=32
ASAJ Asahikawa 72.10 337 P **P** **20 39 12.5 +0.5**
ASAJ pmax pmax
comp=Z,25nm,1.3s
KSRS Korea Array 73.44 324 P **P** **20 39 19.0 -1.1**
comp=Z,3.6nm,0.9s,baz=142,slow=6.3,SNR=6.9
KSRS LR LR 21 08 00.9
comp=Z,44nm,20.7s,baz=135,slow=33
comp=Z,3.6nm,0.9s
KSAR Wonju Array Be 73.45 324 P **P** **20 39 19.4 -0.8**
KSAR Wonju Array Be 73.45 324 P **P** **20 39 19.4 -0.8**
YSS Yuzhno-Sakhali 74.51 339 P **P** **20 39 26.9 +0.7**
YSS IAmb IAmb 20 39 32.8
comp=Z,14nm,1.0s
YSS Yuzhno-Sakhali 74.51 339 *e*P **P** **20 39 29.2 +3.0**
YSS *e* 20 42 11.5
YSS *e*S **S** **20 49 03.3 +5.3**
YSS *e* 20 49 42.8
YSS pmax pmax
comp=Z,10.0nm,1.0s
YSS MLR MLR
comp=Z,200nm,17.0s
SHEM Shemya Is, Ala 74.96 0 LR LR 21 07 54.3
comp=Z,82nm,19.5s,baz=238,slow=32
NJ2 Nanjing 75.28 314 *e*P **P** **20 39 32.6 +1.6**
NJ2 pmax pmax
comp=Z,29nm,0.7s
PET Petropavlovsk 76.34 351 P **P** **20 39 37.4 +0.9**
PET Petropavlovsk 76.34 351 *i* P **P** **20 39 38.6 +2.1**
PET pmax pmax
comp=Z,19nm,1.1s
USRK Ussuriysk Ar. 76.48 331 P **P** **20 39 35.3 -2.2**
comp=Z,4.2nm,0.8s,baz=149,slow=5.6,SNR=6.5
comp=Z,4.2nm,0.8s
PEA0B Petropavlovsk- 76.57 350 P **P** **20 39 39.0 +1.2**
PEA0B Petropavlovsk- 76.57 350 P **P** **20 39 39.0 +1.2**
PETK Petropavlovsk- 76.57 350 P **P** **20 39 37.1 -0.8**
comp=Z,11nm,0.8s,baz=141,slow=7.0,SNR=8.5
PETK LR LR 21 08 23.2
comp=Z,171nm,19.0s,baz=148,slow=32
comp=Z,11nm,0.8s
MAW Mawson 76.82 202 P **P** **20 39 39.8 +0.6**
comp=Z,7.3nm,0.7s,baz=131,slow=5.3,SNR=8.3
MAW LR LR 21 11 53.7
comp=Z,127nm,18.3s,baz=94,slow=34
comp=Z,7.3nm,0.7s
MAW Mawson 76.82 202 P **P** **20 39 39.2 0.0**
MAW Mawson 76.82 202 P **P** **20 39 39.2 0.0**
MAW pmax pmax
comp=Z,2.0nm,0.8s
MDJ Mudanjiang 77.90 330 P **P** **20 39 46.2 +0.6**
MDJ IAmb IAmb 20 39 48.9
comp=Z,10nm,1.0s
MDJ Mudanjiang 77.90 330 P **P** **20 39 48.3 +2.8**
MDJ pmax pmax
comp=Z,13nm,0.8s
BELA Belgrano 2 78.45 174 **P** **20 39 47.7 -0.6**
BELA IAmb IAmb 20 39 48.8
comp=Z,15nm,0.8s
TIA Tai'an 79.00 317 P **P** **20 39 51.8 0.0**
TIA pmax pmax
comp=Z,8.0nm,0.7s
CN2 Changchun 79.32 327 *e*P **P** **20 39 55.8 +2.5**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
BNX BinXian 79.77 329 ⇑P **P** **20 39 56.0 +0.3**
BNX pmax pmax
comp=Z,7.0nm,0.8s
KLR Kul'dur 80.51 334 LR LR 21 13 23.4
comp=Z,58nm,18.8s,baz=170,slow=34
KLR Kul'dur 80.51 334 *i* P **P** **20 39 59.9 +0.2**
KLR pmax pmax
comp=Z,2.0nm,1.0s
HNS HongShan 81.26 316 ⇑P **P** **20 40 05.1 +1.2**
BJI2 Beijing 81.95 319 P **P** **20 40 07.9 +0.4**
BJI2 pmax pmax
comp=Z,2.0nm,0.9s
BJT Baijiatuau 81.95 319 P **P** **20 40 07.7 +0.2**
BJT Baijiatuau 81.95 319 P **P** **20 40 07.7 +0.2**
BJT pmax pmax
comp=Z,10.0nm,1.4s
PMSA Palmer Station 82.45 159 P **P** **20 40 10.2 +0.4**
HEH HeiHe 83.11 332 *e*P **P** **20 40 13.6 +0.3**
HEH pmax pmax
comp=Z,3.0nm,0.7s

CMAR Chiang Mai Arr 83.38 293 P **P** **20 40 15.1 -0.4**
comp=Z,1.0nm,0.6s,baz=134,slow=4.4,SNR=8.9
CMAR LR LR 21 20 22.5
comp=Z,22nm,18.0s,baz=135,slow=38
comp=Z,1.0nm,0.6s
CMAR Chiang Mai Arr 83.38 293 P **P** **20 40 14.9 -0.6**
CMAR Chiang Mai Arr 83.38 293 *i* P **P** **20 40 18.0 +2.5**
CMAR pmax pmax
comp=Z,1.0nm,0.6s
PLK4 Peulik 4 83.80 16 P **P** **20 40 16.1 -0.6**
MA2 Magadan 83.92 349 LR LR 21 11 30.1
comp=Z,86nm,20.4s,baz=160,slow=31
OHAK Old Harbor 84.25 17 P **P** **20 40 18.5 -0.5**
OHAK IAmb IAmb 20 40 24.2
comp=Z,11nm,0.9s
PZH PanZhiHua 84.75 301 P **P** **20 40 24.4 +2.0**
KDAK Kodiak Island 84.93 18 LR LR 21 11 25.2
comp=Z,99nm,21.3s,baz=203,slow=31
KDAK Kodiak Island 84.93 18 *i* P **P** **20 40 23.2 +0.8**
KDAK pmax pmax
comp=Z,11nm,1.1s
N15K Kwethluk River 85.22 13 P **P** **20 40 24.8 +1.0**
N15K IAmb IAmb 20 40 27.8
comp=Z,17nm,0.9s
HHC Hu-ho-hao-te 85.26 318 *e*P **P** **20 40 26.6 +2.0**
HHC pmax pmax
comp=Z,8.0nm,0.5s
HHC pmax pmax
comp=Z,85nm,4.4s
HHC L L
comp=Z,68nm,15.3s
HHC L L
comp=Z,100nm,15.7s
HHC L L
comp=Z,77nm,15.7s
CD2 Chengdu 85.32 306 *e*P **P** **20 40 26.0 +0.9**
M14K Bethel 85.39 12 P **P** **20 40 25.3 +0.7**
M14K IAmb IAmb 20 40 46.4
comp=Z,25nm,1.4s
TROLL Troll, Antarti 85.48 183 P **P** **20 40 24.8 -0.5**
ESPZ Base Esperanza 85.69 160 P **P** **20 40 27.0 +0.7**
ZEA Zeya 85.77 335 *e*P P 20 40 37.4 +11
SNAA Sanae 85.99 181 P **P** **20 40 27.3 -0.5**
comp=Z,185nm,0.6s
SNAA Sanae 85.99 181 P **P** **20 40 27.0 -0.8**
comp=Z,10.0nm,0.8s,baz=247,slow=2.2,SNR=11
SNAA LR LR 21 18 23.1
comp=Z,82nm,18.1s,baz=203,slow=35
comp=Z,10.0nm,0.8s
SNAA Sanae 85.99 181 **P** **20 40 26.8 -1.0**
SNAA IAmb IAmb 20 40 28.1
comp=Z,16nm,1.0s
SNAA Sanae 85.99 181 *ce*P **P** **20 40 27.7 -0.1**
SNAA pmax pmax
comp=Z,29nm,1.7s
K13K Kusilvak Mount 86.01 10 P **P** **20 40 28.4 +0.7**
NVL N'lazarevskaya 86.03 186 *e*P **P** **20 40 24.8 -3.1**
NVL *e* 20 43 44.9
NVL *e*S **SKSac** **20 50 50.1 +0.1**
NVL *e*SS **SS** **20 56 39.4 +3.6**
NVL *e*SSS SSS 21 00 11.2
NVL pmax pmax
comp=Z,8.0nm,0.9s
NVL MLR MLR
comp=Z,625nm,22.0s
MG03 Isla Dawson 86.22 148 P **P** **20 40 29.5 +0.3**
BTO2 Baotou 86.25 317 *e*P **P** **20 40 31.1 +1.5**
BTO2 pmax pmax
comp=Z,10.0nm,0.7s
BTO2 pmax pmax
comp=Z,190nm,6.3s
MG05 Puerto Natales 86.37 145 P **P** **20 40 30.6 +0.7**
VNA3 Neumayer Olymp 86.43 179 ⇑P **P** **20 40 29.0 -0.9**
comp=Z,14nm,0.7s
CMB Columbia Colle 86.54 46 **P** **20 40 30.7 -0.3**
CMB Columbia Colle 86.54 46 P **P** **20 40 30.7 -0.3**
CMB pmax pmax
comp=Z,5.0nm,0.9s
ISA Isabella, Lake 86.62 49 P **P** **20 40 33.1 +1.7**
ISA pmax pmax
comp=Z,5.0nm,0.8s
VNA2 Neumayer--Watz 86.78 180 ⇑P **P** **20 40 31.1 -0.5**
comp=Z,11nm,0.6s,baz=172,slow=4.8
SEY Seymchan 86.81 351 LR LR 21 13 55.1
comp=Z,210nm,21.9s,baz=156,slow=32
SEY Seymchan 86.81 351 *ce*P **P** **20 40 32.1 +0.5**
SEY pmax pmax
comp=Z,9.0nm,1.1s
GAMB Gambell 86.83 7 **P** **20 40 32.9 +1.2**
K15K Wolf Creek Mou 86.89 11 P **P** **20 40 33.0 +0.9**
K15K IAmb IAmb 20 40 41.1
comp=Z,13nm,1.1s
YBH Yreka Blue Hor 87.05 42 LR LR 21 12 39.0
comp=Z,9.7nm,19.3s,baz=253,slow=31
LPIG La Paz 87.41 63 LR LR 21 11 54.1
comp=Z,76nm,19.7s,baz=217,slow=30
MG02 Cerro Sombrero 87.44 147 P **P** **20 40 36.4 +1.2**
NVAR Mina Array Bea 88.15 47 P **P** **20 40 39.2 +0.3**
comp=Z,0.5nm,0.3s,baz=246,slow=9.4,SNR=4.5
NVAR LR LR 21 12 37.3
comp=Z,60nm,19.0s,baz=270,slow=30
comp=Z,0.5nm,0.3s
PINE Pine Mountain 89.27 41 **P** **20 40 45.0 +1.0**
SCM Sheep Creek Mo 89.78 17 P **P** **20 40 45.6 -0.2**
SCM Sheep Creek Mo 89.78 17 P **P** **20 40 45.6 -0.2**
SCM pmax pmax
comp=Z,17nm,0.6s
BBB Bella Bella 90.18 32 LR LR 21 18 26.9
comp=Z,134nm,18.1s,baz=290,slow=34
TGL Tana Glacier 90.26 20 P **P** **20 40 47.5 -0.6**
TGL IAmb IAmb 20 42 13.3
comp=Z,18nm,1.4s
KTH Kantishna Hill 90.27 15 P **P** **20 40 47.0 -1.1**
KTH IAmb IAmb 20 40 52.3
comp=Z,21nm,1.6s
I07A Izee 90.30 42 P **P** **20 40 48.5 -0.3**
I07A IAmb IAmb 20 40 51.6
comp=Z,42nm,1.9s
TRF Thorofare Moun 90.34 15 P **P** **20 40 47.9 -0.6**
TRF IAmb IAmb 20 42 03.3
comp=Z,19nm,1.7s
BILL Bilibino 90.48 357 P **P** **20 40 49.0 +0.2**
BILL IAmb IAmb 20 40 55.8
comp=Z,11nm,1.3s
BILL Bilibino 90.48 357 *ce*P **P** **20 40 49.3 +0.5**
BILL pmax pmax
comp=Z,6.0nm,1.1s
GLB Gilahina Butte 90.49 19 **P** **20 40 49.0 -0.2**
GLB IAmb IAmb 20 40 55.4
comp=Z,7.8nm,1.0s
MCARA McCarthy VSAT 90.68 19 **P** **20 40 50.9 +0.9**
MCARA IAmb IAmb 20 40 53.4
comp=Z,11nm,1.2s
YAK Yakutsk 91.22 341 *e*P **P** **20 40 54.2 +1.8**
YAK pmax pmax
comp=Z,7.0nm,1.3s
YAK pmax pmax
comp=N,2.0nm,1.5s
YAK pmax pmax
comp=E,2.0nm,1.0s
G08A Pilot Rock 91.26 41 **P** **20 40 52.8 -0.4**
G08A IAmb IAmb 20 40 55.0
comp=Z,5.9nm,1.0s
ELK Elko 91.35 46 LR LR 21 14 45.9
comp=Z,92nm,19.9s,baz=270,slow=31
ULN Ulaanbaatar 91.84 322 P **P** **20 40 55.1 -0.8**
ULN Ulaanbaatar 91.84 322 *ce*P **P** **20 40 55.8 -0.1**
ULN pmax pmax
comp=Z,2.0nm,0.9s
RIDG Independent Ri 92.00 17 **P** **20 40 55.9 -0.1**
RIDG IAmb IAmb 20 41 00.5
comp=Z,8.5nm,0.9s
COLA College 92.12 16 *i* P **P** **20 40 56.5 0.0**
COLA pmax pmax
comp=Z,8.0nm,1.1s
SONM Songino Array 92.20 322 P **P** **20 40 56.4 -1.1**
comp=Z,0.8nm,0.7s,baz=113,slow=4.3,SNR=7.1
SONM LR LR 21 20 42.5
comp=Z,27nm,20.2s,baz=140,slow=34
comp=Z,0.8nm,0.7s
SONM Songino Array 92.20 322 P **P** **20 40 56.9 -0.6**
SONM Songino Array 92.20 322 P **P** **20 40 56.9 -0.6**
SONM pmax pmax
comp=Z,6.0nm,1.6s
ILAR Eielson Array 92.28 16 P **P** **20 40 56.5 -0.9**
comp=Z,3.4nm,0.9s,baz=231,slow=4.3,SNR=32

ILAR LR LR 21 17 07.3
comp=Z,91nm,19.1s,baz=243,slow=32
comp=Z,3.4nm,0.9s
GTA2 Gaotai 92.29 312 *e*P **P** **20 40 58.5 +0.4**
GTA2 sP pP 20 41 09.0 -1.3
GTA2 pmax pmax
comp=Z,5.0nm,1.9s
BCAR Beaver Creek A 92.35 19 P **P** **20 40 57.8 +0.1**
SCRK Sand Creek 92.42 17 **P** **20 40 58.1 0.0**
SCRK IAmb IAmb 20 41 06.6
comp=Z,7.4nm,1.2s
DLBC Dease Lake 93.24 26 LR LR 21 18 38.4
comp=Z,70nm,18.3s,baz=293,slow=33
EFI East Falkland 93.46 151 P **P** **20 41 02.9 -0.3**
EFI East Falkland 93.46 151 P **P** **20 41 02.9 -0.3**
PLCA Paso Flores 93.48 137 P **P** **20 41 02.8 -1.0**
comp=Z,2.8nm,0.8s,baz=199,slow=5.4,SNR=6.7
PLCA LR LR 21 18 42.0
comp=Z,56nm,18.8s,baz=212,slow=33
comp=Z,2.8nm,0.8s
PLCA Paso Flores 93.48 137 P **P** **20 41 03.8 +0.1**
PLCA IAmb IAmb 20 44 05.2
comp=Z,36nm,1.8s
NEW Newport 93.86 39 LR LR 21 17 17.9
comp=Z,55nm,18.7s,baz=270,slow=32
TXAR Lajitas Array 94.97 60 P **P** **20 41 10.4 -0.3**
comp=Z,0.2nm,0.5s,baz=226,slow=1.9,SNR=2.4
TXAR PKKP PKKPdf 20 58 20.0 +13
comp=Z,0.2nm,0.7s,baz=145,slow=4.6,SNR=3.4
comp=Z,0.2nm,0.5s
BMAR Burnt Mountain 94.97 15 P **P** **20 41 10.2 +0.4**
ANMO Albuquerque 95.02 54 *i* P **P** **20 41 10.1 -0.8**
ANMO pmax pmax
comp=Z,1.0nm,1.0s
PALK Pallekele 95.22 276 LR LR 21 23 17.0
comp=Z,101nm,21.8s,baz=117,slow=35
TLY Talaya 95.69 324 LR LR 21 22 58.1
comp=Z,56nm,20.1s,baz=104,slow=35
PDAR Pinedale Array 96.05 46 LR LR 21 18 46.6
comp=Z,48nm,18.9s,baz=236,slow=32
CMIG Matias Romero 97.93 75 LR LR 21 15 25.7
comp=Z,68nm,21.5s,baz=180,slow=29
INK Inuvik 98.49 17 LR LR 21 22 10.8
comp=Z,41nm,18.2s,baz=309,slow=33
TIXI Tiksi 98.80 347 LR LR 21 22 49.7
comp=Z,86nm,18.6s,baz=36,slow=34
TIXI Tiksi 98.80 347 *ce*P Pdif 20 41 27.2 +0.4
TIXI pmax pmax
comp=Z,1.0nm,1.1s
WMQ Urumqi 102.29 312 *e*P **Pdif** **20 41 45.1 +1.9**
WMQ L L
comp=Z,150nm,24.1s
MKAR Makanchi Array 106.82 314 Pdiff **Pdif** **20 42 03.3 +0.2**
comp=Z,0.2nm,0.5s,baz=132,slow=4.2,SNR=5.2
MKAR PKKP **PKKPab** **20 57 45.4 0.0**
comp=Z,0.4nm,0.7s,baz=272,slow=3.4,SNR=5.2
KURBB Kurchatov Arra 110.11 317 PKKP 20 57 36.3
comp=Z,2.0nm,0.2s,baz=270,slow=3.8,SNR=4.1
CHGR Chuyangaron 114.53 303 *i* PKIKP PKPdf 20 46 27.8 -0.2
BVAR Borovoye Array 115.44 319 PKP **PKiKP** **20 46 28.3 -0.9**
comp=Z,0.6nm,0.5s,baz=121,slow=3.3,SNR=6.1
BORK Borovoye 115.48 319 *i* PKIKP **PKPdf** **20 46 32.4 +3.2**
ARTI Arti 122.29 323 *i* PKIKP **PKiKP** **20 46 42.7 +0.3**
ARTI 20 48 19.6
ARTI 20 53 54.3
ARTI SS SS 21 05 03.7 +8.5
SPITS Spitsbergen Ar 123.28 354 PKP **PKPdf** **20 46 41.9 -1.7**
comp=Z,1.9nm,0.6s,baz=96,slow=5.9,SNR=5.4
BDFB Brasilia 124.46 129 PKP **PKPdf** **20 46 46.4 -1.4**
comp=Z,1.0nm,0.4s,baz=235,slow=14,SNR=2.1
ARCES ARCESS Array B 129.22 346 PKP **PKPdf** **20 46 53.8 -1.3**
comp=Z,2.4nm,0.6s,baz=46,slow=2.2,SNR=6.6
ARCES ARCESS Array B 129.22 346 **PKPdf** **20 46 54.0 -1.2**
ARCES ARCESS Array B 129.22 346 PKIKP **PKPdf** **20 46 54.0 -1.2**
FINES FINESS Array B 135.10 338 PKP **PKPdf** **20 47 05.5 -0.9**
comp=Z,3.7nm,1.0s,baz=50,slow=3.0,SNR=3.9
KONO Kongsberg 141.20 347 *c* *i* PKIKP **PKiKP** **20 47 21.2 +0.8**
KONO pmax pmax
comp=Z,54nm,2.5s
KMPD K-Podol'skiy 143.10 323 PKP **PKPdf** **20 47 21.4 0.0**
TESR Tescani 144.06 320 ⇓P **PKPab** **20 47 20.1 -0.7**
BUR08 Bucovina Ar. S 144.31 322 PKPbc 20 47 21.9 -0.2
BURAR Bucovina Array 144.31 322 ⇓P **PKPdf** **20 47 23.4 -0.3**
BURAR Bucovina Array 144.31 322 PKPdf PKPbc 20 47 22.4 +0.2
BURAR Bucovina Array 144.31 322 ⇓PKIKP **PKPdf** **20 47 23.4 -0.3**
VRI Vrincioaia 144.34 319 ⇑P **PKPab** **20 47 21.6 -0.2**
VRI Vrincioaia 144.34 319 ⇑PKIKP **PKPab** **20 47 21.6 -0.2**
PLOR Plostina 144.39 319 ⇑P PKPbc 20 47 22.2 -0.1
PLOR Plostina 144.39 319 ⇑PKIKP PKPbc 20 47 22.2 -0.2
BOSR Bodos 144.88 320 ⇑P **PKPdf** **20 47 24.6 0.0**
MLR Muntele Rosu 145.00 319 ⇓P PKPbc 20 47 24.2 -0.2
MLR Muntele Rosu 145.00 319 PKPbc 20 47 23.7 -0.7
MLR Muntele Rosu 145.00 319 ⇓PKIKP PKPbc 20 47 24.2 -0.2
MLR Muntele Rosu 145.00 319 PKPdf PKPbc 20 47 22.5 -1.9
DOPR Dopca 145.09 320 ⇑P **PKPab** **20 47 24.7 +0.1**
BRIU Brid 145.11 325 PKPdf **PKPbc** **20 47 24.1 -0.4**
KORU Korolevo 145.15 324 PKPdf **PKPbc** **20 47 23.4 -1.2**
MUKU Mukachevo 145.21 325 PKPdf **PKPbc** **20 47 23.6 -1.2**
UZHM Uzhgorod 145.31 326 PKPdf **PKPbc** **20 47 24.3 -0.8**
HOLU Holmets 145.33 326 PKPdf **PKPbc** **20 47 24.8 -0.4**
BERU Beregovo 145.37 325 PKPdf **PKPbc** **20 47 24.3 -1.0**
ELL Elmali 145.48 303 **PKPdf** **20 47 25.1 -1.0**
ELL Elmali 145.48 303 PKP2 **PKPdf** **20 47 25.1 -1.0**
OJC Ojcow 145.50 330 *e*PKP **PKPdf** **20 47 23.8 -1.8**
VOIR 145.57 319 ⇑P **PKPdf** **20 47 25.8 -0.2**
VOIR 145.57 319 ⇑PKIKP **PKPdf** **20 47 25.8 -0.2**
MDB Medias 145.60 321 ⇑P **PKPab** **20 47 26.6 +0.1**
MDB Medias 145.60 321 ⇑PKIKP **PKPab** **20 47 26.6 +0.1**
CJR Cluj-Napoca 145.74 322 ⇓P **PKPbc** **20 47 26.6 0.0**
NIE Niedzica 145.81 328 *e*PKP **PKPdf** **20 47 21.5 -4.7**
NIE Niedzica 145.81 328 PKPdf **PKPdf** **20 47 25.2 -1.0**
ARR Arges 145.86 319 ⇑P **PKPdf** **20 47 26.4 0.0**
TNR Turnu Rosu 145.92 320 ⇑P **PKPab** **20 47 28.8 +1.1**
TNR Turnu Rosu 145.92 320 ⇑PKP2 **PKPab** **20 47 28.8 +1.1**
MARR Marisel-Cluj 146.03 322 ⇓P **PKPdf** **20 47 27.0 +0.3**
HUMR Humele 146.07 318 ⇓P **PKPdf** **20 47 26.7 0.0**
DRGR 146.19 323 PKP2 **PKPdf** **20 47 27.0 0.0**
ELND Elena 146.26 315 ⇑P **PKiKP** **20 47 31.3 -0.1**
LANS Liptovska Anna 146.39 329 *e*PKP2 **PKPab** **20 47 29.3 -0.1**
LANS Liptovska Anna 146.39 329 *e*PKP **PKPab** **20 47 29.3 -0.1**
KSP Ksiaz 146.59 333 *e*PKP **PKPbc** **20 47 28.4 -0.5**
KSP Ksiaz 146.59 333 PKPdf **PKPbc** **20 47 28.2 -0.8**
STEB Steborice 146.63 331 ⇑*e*PKP **PKPdf** **20 47 27.9 +0.4**
OSTC Ostas 146.84 333 *e*PKP2 **PKPbc** **20 47 29.6 -0.1**
OSTC Ostas 146.84 333 ⇑*e*PKP **PKPbc** **20 47 29.6 -0.1**
MORC Moravsky Berou 146.85 331 *e*PKP **PKPdf** **20 47 28.8 +0.9**
GZR Gura Zlata 146.95 321 ⇑P **PKPdf** **20 47 28.6 +0.3**
GZR Gura Zlata 146.95 321 ⇑PKIKP **PKPdf** **20 47 28.6 +0.3**
DPC Dobruska-Polom 146.96 333 *e*PKP2 **PKPbc** **20 47 29.9 -0.2**
DPC Dobruska-Polom 146.96 333 ⇑*e*PKP **PKPbc** **20 47 29.9 -0.2**
DPC Dobruska-Polom 146.96 333 PKPdf **PKPdf** **20 47 27.5 -0.6**
KRLC Kraliky 146.96 332 *e*PKP2 **PKPbc** **20 47 29.5 -0.6**
KRLC Kraliky 146.96 332 ⇑*e*PKP **PKPbc** **20 47 29.5 -0.6**
PSZ Pieszkesteto 147.00 327 PKIKP **PKPdf** **20 47 28.2 -0.1**
MAUC Maruska 147.01 330 ⇑*e*PKP **PKPbc** **20 47 29.8 -0.5**
EKA Eskdalemuir Ar 147.16 356 PKPbc **PKPdf** **20 47 28.5 +0.3**
comp=Z,3.6nm,0.6s,baz=1.5,slow=2.6,SNR=10.0
EKA Eskdalemuir Ar 147.16 356 PKIKP **PKPdf** **20 47 29.1 +0.9**
HERR Herculane 147.44 320 ⇑P **PKPbc** **20 47 30.4 -1.2**
JAVC Velka Javorina 147.44 330 *e*PKP **PKPab** **20 47 32.9 -0.7**
BZS Buzias 147.49 322 ⇓P **PKPdf** **20 47 29.4 +0.3**
BZS Buzias 147.49 322 ⇓PKIKP **PKPdf** **20 47 29.4 +0.3**
CLL Collm 147.51 337 **PKPdf** **20 47 28.9 -0.1**
CLL Collm 147.51 337 *i* PKP2 **PKPbc** **20 47 30.4 -1.1**
CLL pmax pmax
comp=Z,8.0nm,0.9s
CLL Collm 147.51 337 *i* PKPbc **PKPbc** **20 47 30.4 -1.1**
comp=Z,8.0nm,0.9s
CLL *i* x x 20 47 32.5
comp=Z,9.0nm,1.1s
CLL *ex* x 20 47 37.0
CLL *e*PP **PP** **20 50 59.0 +1.6**
CLL Collm 147.51 337 PKPdf **PKPdf** **20 47 30.1 +1.2**
PVCC Panska Ves 147.54 335 *e*PKP2 **PKPbc** **20 47 30.9 -0.7**
PVCC Panska Ves 147.54 335 ⇑*e*PKP **PKPbc** **20 47 30.9 -0.7**
VRAC Vranov 147.61 331 ⇓P **PKPbc** **20 47 31.2 -0.7**
VRAC Vranov 147.61 331 ⇓PKP2 **PKPbc** **20 47 31.2 -0.7**
VRAC Vranov 147.61 331 *e*PKP **PKPbc** **20 47 30.7 -1.2**
KRUC Moravsky 147.88 331 *e*PKP **PKPbc** **20 47 31.7 -0.9**
MDVR Moldovita 147.91 321 ⇑P **PKiKP** **20 47 34.5 -0.3**
PRU Pruhonice 147.97 334 *e*PKP2 **PKPbc** **20 47 31.6 -1.2**
PRU Pruhonice 147.97 334 ⇑*e*PKP **PKPbc** **20 47 31.6 -1.2**
MODS Modra-Piesok 147.97 329 *e*PKP2 **PKPab** **20 47 37.9 +2.3**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MODS	Modra-Piesok	147.97	329	ePKP	PKPab	20 47 37.9	+2.3
ZVC	Zvikov	148.54	334⇑	ePKP	PKPbc	20 47 33.8	-0.5
MORH	Mrgy, Hungar	148.76	325	⇑P	PKPbc	20 47 34.0	-1.0
RONA	Rosalia, Austr	148.91	329	epPKP	PKPbc	20 47 35.0	-0.4
	comp=Z,3.0nm,0.7s						
CONA	Conrad Observa	148.95	330	epPKP	PKPbc	20 47 35.2	-0.4
	comp=Z,6.4nm,1.6s						
CKRC	Cesky Krumlov	148.97	333	ePKP2	PKPbc	20 47 35.8	+0.3
CKRC	Cesky Krumlov	148.97	333⇑	ePKP	PKPbc	20 47 35.8	+0.3
KHC	Kasperske Hory	149.03	334		PKPbc	20 47 34.0	-1.7
KHC	Kasperske Hory	149.03	334c	iPKP2	PKiKP	20 47 36.4	-0.5
KHC				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KHC	Kasperske Hory	149.03	334⇑	ePKP	PKPbc	20 47 35.0	-0.7
GERES	GERESS Array B	149.21	333	PKPbc	PKPbc	20 47 35.0	-1.2
	comp=Z,1.9nm,0.8s,baz=31,slow=3.1,SNR=11						
GERES	GERESS Array B	149.21	333	PKP2	PKPbc	20 47 35.0	-1.2
SOKA	Soboth	150.25	329	i PKP	PKPbc	20 47 38.6	-0.2
	comp=Z,8.8nm,1.4s						
BTNL	Ternell	150.30	344	dPKPdf	PKPdf	20 47 34.6	+1.2
MEM	Membach	150.31	344	dPKPdf	PKPdf	20 47 33.9	+0.4
MEM				dPKP	PKPbc	20 47 37.9	-0.7
BSTI	Sart Tilman	150.44	344	dPKP	PKPbc	20 47 38.2	-0.7
OBKA	Obir	150.60	329	i PKP	PKPbc	20 47 39.8	+0.1
	comp=Z,12nm,1.6s						
KBA	Koelnbreinsper	150.72	332	ePKP	PKPbc	20 47 39.9	-0.1
	comp=Z,6.1nm,1.2s						
LESA	Schwarzleotal	150.74	333	i pPKP	PKPbc	20 47 38.7	-1.3
	comp=Z,6.8nm,1.3s						
BGES	Gesves	150.75	345	dPKPdf	PKPdf	20 47 33.0	-1.2
BGES				dPKP	pPKPdf	20 47 45.0	-1.4
BMRD	Maredsous	150.90	345	dPKP	PKPbc	20 47 39.5	-0.6
MYKA	Terra Mystica	150.93	331	epPKP	PKPbc	20 47 39.1	-1.3
	comp=Z,2.8nm,0.5s						
WLF	Walferdange	151.13	343	dPKP	PKPbc	20 47 38.4	-2.3
DOU	Dourbes	151.13	345	dPKP	PKPbc	20 47 40.0	-0.6
WATA	Walderalm	151.27	334	epPKP	PKPbc	20 47 40.0	-1.2
	comp=Z,3.9nm,0.7s						
WTTA	Wattenberg	151.31	334	i PKP	PKPbc	20 47 40.4	-1.0
	comp=Z,5.6nm,0.7s						
ABTA	Abfaltersbach	151.34	332	epPKP	PKPbc	20 47 39.8	-1.6
	comp=Z,7.5nm,1.3s						
MOTA	Moosalm	151.46	334	ePKP	PKPbc	20 47 41.7	0.0
	comp=Z,12nm,1.2s						
RETA	Reutte	151.48	335	ePKP	PKiKP	20 47 42.0	-0.1
	comp=Z,2.8nm,0.7s						
SQTA	Sankt Quirin	151.51	334	ePKP	PKPbc	20 47 41.4	-0.3
	comp=Z,8.0nm,1.1s						
FETA	Feichten	151.87	334	ePKP	PKiKP	20 47 43.2	+0.2
	comp=Z,7.2nm,1.0s						
DAVA	Damuels	151.98	336	ePKP	PKPbc	20 47 42.0	-0.9
	comp=Z,8.7nm,1.3s						
FUORN	Ofenpass-Fuorn	152.38	334		PKPbc	20 47 42.6	-1.3
EDA	Edea	155.26	223	PKPab	PKPab	20 48 06.2	-0.6
ESDC	Sonseca Array	162.78	353	PKPab	PKPab	20 48 36.8	-1.9
	comp=Z,0.7nm,1.1s,baz=13,slow=2.6,SNR=3.2						
TORD	Torodi Ar. Bea	167.76	222	PKPab	PKPab	20 49 00.8	-0.5
	comp=Z,3.4nm,0.9s,baz=148,slow=3.8,SNR=13						
TORD				PP	PP	20 52 51.2	+2.0
	comp=Z,0.6nm,1.0s,baz=151,slow=3.4,SNR=3.5						

TEH 14 20:41:19.6, 34°.59N×50°.78E, h9km±28km, ML3.9, Presumed earthquake, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IQOM	Qom	0.35	43	Pg	Pb	20 41 28.4	+0.2
IVRN	Varamin	0.88	62	Pg	Pn	20 41 38.0	-0.2
IHSB	Hasanabad	0.94	26	Pg	Pn	20 41 39.4	+0.2
QAMS	Qamsar	0.99	149	Pg	Pb	20 41 39.3	+0.2
ISFB	Sefidab	1.23	100	Pg	Pg	20 41 44.2	+0.9
ISFB				Sg	Sn	20 42 01.4	+1.6
TEH	Tehran	1.25	23	Pg	Pg	20 41 44.6	+0.9
KRSH	Karshahi	1.28	118	Pg	Pg	20 41 45.0	+0.8
IKLH	Kolahrood	1.43	152	Pg	Pg	20 41 47.2	+0.2
IDMV	Damavand	1.43	46	Pg	Pg	20 41 47.6	+0.5
IGZV	Ghazvin	1.85	346	Pn	Pb	20 41 54.2	+0.4
IPIR	Pirpir	1.90	177	Pn	Pg	20 41 55.4	-0.6
IFIR	Firoozkooh	1.93	56	Pn	Pg	20 41 56.1	-0.6
IZEF	Zefreh	2.12	142	Pn	Pb	20 41 58.8	+0.3
IALM	Almabolaq	2.17	278	Pn	Pb	20 41 59.1	0.0
JIR1	Jirandeh	2.26	340	Pn	Pb	20 41 59.9	-0.8
IDOB	Doab	2.30	250	Pn	Pb	20 42 01.1	-0.2
JHBN	Jahan bin	2.35	182	Pn	Pb	20 42 02.5	+0.2
IBZA	Bozab	2.41	268	Pn	Pb	20 42 03.0	-0.3
ZNJK	Zanjan	2.69	321	Pn	Pb	20 42 05.7	-2.4
KCHF	Cheshme Sefid,	3.10	265	Pn	Pb	20 42 12.0	-3.1
AMIS	Naft Sefid	3.17	204	Pn	Pn	20 42 12.6	+2.9
IHSH	Hashtrud	3.94	315	Pn	Pn	20 42 22.5	+2.1
IAZR	Azarshahr	4.96	310	Pn	Pn	20 42 37.2	+2.7
TAPT	Tabas- Tapeh t	5.26	85	Pn	Pn	20 42 41.8	+3.3

*AFAD **14** 21:00:05.6, 35°.17N×27°.00E, h4km±3km, ML2.4*
*ATH **14** 21:00:09.3, 35°.22N×27°.30E, h14km±2km, ML2.6/4, Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*ISK **14** 21:00:10.3, 35°.35N×27°.21E, h27km, ML2.4/12*
*THE **14** 21:00:11.6, 35°N±38°×2°7E±7°1, h26km±26km, M2.5/4, MLh2.5/4*
ISC 14 21:00:10.9±1.2**, 35°.37N**±0°.07×**27°.19E**±0°.05**, h30**km±6km**, n31, σ0ˢ78**/47**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.18	353	P	Pb	21 00 16.5	-0.4
KARP				S	Sb	21 00 21.0	0.0
KARP	Karpathos	0.18	353	Pg	Pb	21 00 16.6	-0.4
KARP				Sg	Sb	21 00 21.3	+0.3
KARP	Karpathos	0.18	353	P	Pb	21 00 16.6	-0.4
KARP				S	Sb	21 00 21.4	+0.3
ZKR	Zakros	0.83	252	P	Pn	21 00 26.5	-0.2
ZKR	Zakros	0.83	252	P	Pn	21 00 26.5	-0.2
ZKR				S	Sn	21 00 38.3	+0.4
ARG	Arkhangelos	1.14	42	P	Pb	21 00 31.4	-0.7
ARG				S	Sb	21 00 46.1	-0.4
ARG	Arkhangelos	1.14	42	Pn	Pb	21 00 31.5	-0.5
ARG				Sn	Sb	21 00 46.2	-0.3
ARG	Arkhangelos	1.14	42	P	Pb	21 00 31.6	-0.4
ARG				S	Sb	21 00 46.8	+0.3
NPS	Neapolis	1.29	266	P	Pb	21 00 33.6	-1.0
NPS	Neapolis	1.29	266	P	Pb	21 00 34.3	-0.3
NPS				S	Sb	21 00 52.5	+1.7
YAZI	Mula-Dat§a-	1.33	9	P	Pn	21 00 33.5	+0.1
YAZI				S	Sn	21 00 50.2	0.0
DAT	Datca	1.39	13	Pn	Pn	21 00 34.9	+0.4
DATC	Datca-Mugla	1.44	15	Pn	Pn	21 00 35.4	+0.4
TURN	Turunc	1.64	31	Pn	Pn	21 00 38.3	+0.5
TURN	Turunc	1.64	31	P	Pn	21 00 38.2	+0.3
TURN				S	Sn	21 00 58.5	+0.5
TURN				IAML		21 01 07.0	
	comp=N,39nm,0.4s						
BODT	Bodrum	1.69	3	Pn	Pn	21 00 39.2	+0.7
SNT5	Nea Kammeni, S	1.78	306	P	Pn	21 00 39.4	-0.3
THR3	Thira Island,	1.78	306	P	Pn	21 00 39.4	-0.3
IZZE	Mula-Seydike	1.97	57	P	Pn	21 00 42.4	+0.1
IZZE				IAML		21 01 23.0	
	comp=N,27nm,0.5s						
YER	Yerkesik	1.97	26	Pn	Pn	21 00 43.1	+0.7
MLSB	Milas	1.98	14	Pn	Pn	21 00 43.3	+0.8
MLSB				Sn	Sn	21 01 07.0	+0.7
SABU	Mula-Dalaman	2.05	44	P	Pn	21 00 43.2	-0.2
SABU				S	Sb	21 01 11.3	-1.2
SABU				IAML		21 01 19.0	
	comp=E,19nm,0.6s						
AKAS	Kas	2.15	66	Pn	Pn	21 00 44.9	0.0
CAME	Cameli-Denizli	2.32	47	Pn	Pn	21 00 47.9	+0.6
DNZT	Denizli-Tavas-	2.42	37	P	Pn	21 00 49.7	+1.1
DNZT				S	Sb	21 01 22.0	-1.2
CAEL	Denizli, Camel	2.46	44	P	Pn	21 00 49.8	+0.7
CAEL				IAML		21 01 45.0	
	comp=E,24nm,0.7s						
TAVA	DENIZLI_Tavas	2.51	33	P	Pn	21 00 50.7	+0.8
TAVA				S	Sb	21 01 24.2	-1.8
TAVA				IAML		21 01 39.0	
	comp=E,12nm,0.7s						
ESEN	Aydn-Nazilli	2.60	21	P	Pn	21 00 51.5	+0.6
ESEN				S	Sn	21 01 20.9	-0.5
ELL	Elmali	2.60	57	Pn	Pn	21 00 51.7	+0.6
GOLH	Golhisar	2.67	45	P	Pn	21 00 53.6	+1.5
GOLH				S	Sb	21 01 32.7	+2.1
GOLH				IAML		21 02 16.0	
	comp=E,14nm,2.3s						
APMY	Acipayam-Deniz	2.70	39	Pn	Pn	21 00 52.9	+0.4

*IDC **14** 21:07:08.4±1.5, 15°.70S×173°.14W, h0km, mb4.0/8, mbtmp4.0/9, ML4.2/1, MS3.5/6, Error ellipse: s-maj=71.3km s-min=19.6km az=147.0*
*NEIC **14** 21:07:09.9±2.2, 15°.87S±0°.07×172°.9W±0°.1, h10km±1km, mb4.5/13, Error ellipse: s-maj=23.8km s-min=12.4km az=95.0*
ISC 14 21:07:10.6±0.6**, 15°.6S**±0°.2×**173°.1W**±0°.2**, h10**km**, n81, σ1ˢ79**/69**, mb4.3**/15**, MS4.0**/4**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.08	38	Pn	Pn	21 07 44.6	-1.0
	63nm,0.3s,baz=157,slow=5.0,SNR=65						
AFI				Sn	Sn	21 08 08.2	-3.3
	80nm,0.3s,baz=20,slow=18,SNR=5.7						
AFI				LR	LR	21 08 41.1	
	comp=Z,327nm,19.4s,baz=271,slow=42						
	206nm,0.4s						
NIUE	Niue	4.61	140	Pn	Pn	21 08 12.2	-8.1
MSVF	Nonsavu	8.77	255	LR	LR	21 11 41.1	
	comp=Z,77nm,20.6s,baz=114,slow=31						
DZM	Mont Dzumac	20.42	248	eLR	LR	21 16 24.7	
	62nm,21.1s						
PPT2	Papeete2	22.61	98	eLR	LR	21 17 11.0	
	46nm,23.5s						
WCZ	Waipu Caves	23.19	207	P	P	21 12 14.8	-2.8
WMGZ	Waiomatatini S	23.41	197	P	P	21 12 20.6	+0.8
HAZ	Te Kaha	23.53	198	P	P	21 12 18.9	-2.1
TBI	Tubuai	23.55	113	eLR	LR	21 17 21.6	
	303nm,29.8s						
PUZ	Puketiti	23.69	197	P	P	21 12 21.8	-0.7
RUGZ	Raukumara Rang	23.76	198	P	P	21 12 21.4	-1.9
MKAZ	Moumakai	23.86	204	P	P	21 12 21.7	-2.4
TWGZ	Tauwhareparae	23.86	198	P	P	21 12 23.5	-0.8
MWZ	Matawai	24.14	198	P	P	21 12 25.5	-1.4
TKGZ	Te Karaka	24.15	198	P	P	21 12 23.4	-3.4
URZ	Urewera	24.20	199	P	P	21 12 24.6	-2.8
RTZ	Ruatahuna	24.57	199	P	P	21 12 28.1	-2.7
RTZ				IAmb	IAmb	21 12 33.1	
	comp=Z,11nm,0.8s						
RTZ	Ruatahuna	24.57	199	P	P	21 12 29.7	-1.2
RAHZ	Arahi	24.81	199	P	P	21 12 31.8	-1.2
MTHZ	Maungataniwha	24.83	199	P	P	21 12 33.2	0.0
NMHZ	Naumai	25.07	199	P	P	21 12 33.5	-1.8
HIZ	Hauiti	25.21	203	P	P	21 12 36.4	-0.1
BKZ	Black Stump Fm	25.23	199	P	P	21 12 34.5	-2.2
ETVZ	East Tongariro	25.46	201	P	P	21 12 39.2	+0.2
OTVZ	Oturere	25.50	201	P	P	21 12 36.6	-2.7
KAHZ	Kahuranaki	25.68	198	P	P	21 12 42.8	+2.0
BFZ	Birch Farm	26.69	198	P	P	21 12 49.5	-0.4
MRZ	Mangatainoka R	26.88	199	P	P	21 12 50.1	-1.5
QRZ	Quartz Range	28.10	204	P	P	21 13 03.2	+0.6
THZ	Tophouse	28.77	202	P	P	21 13 08.4	-0.2
KHZ	Kahutara	29.12	201	P	P	21 13 12.1	+0.5
DSZ	Denniston Nort	29.17	204	P	P	21 13 11.5	-0.7
LTZ	Lake Taylor	29.89	202	P	P	21 13 19.6	+1.0
INZ	Inchbonnie	30.15	203	P	P	21 13 19.3	-1.4
TAOE	Nuku Hiva Isla	32.84	82	eLR	LR	21 23 40.0	
	comp=Z,189nm,30.9s						
H11S2	WAKE ISLAND Hy	39.27	329	T	T	21 56 21.5	
	baz=146,slow=76,SNR=6.8						
H11S3	WAKE ISLAND Hy	39.28	329	T	T	21 56 21.5	
	baz=146,slow=76,SNR=6.2						
H11S1	WAKE ISLAND Hy	39.28	329	T	T	21 56 22.6	
	baz=146,slow=76,SNR=5.4						
H11N3	WAKE ISLAND Hy	40.21	330	T	T	21 57 39.2	
	baz=150,slow=76,SNR=2.4						
H11N1	WAKE ISLAND Hy	40.21	330	T	T	21 57 35.6	
	baz=150,slow=76,SNR=2.6						
H11N2	WAKE ISLAND Hy	40.23	330	T	T	21 57 37.8	
	baz=150,slow=76,SNR=3.0						
WB0	Warramunga Arr	50.07	257	P	P	21 16 04.5	-1.6
WB0				IAmb	IAmb	21 16 10.8	
	comp=Z,9.2nm,1.3s						
WRA	Warramunga Arr	50.11	257	P	P	21 16 04.5	-1.9
	comp=Z,0.7nm,0.6s,baz=91,slow=6.7,SNR=14						
	comp=Z,0.7nm,0.6s						
WRA	Warramunga Arr	50.11	257	P	P	21 16 04.1	-2.2
AS31	Alice Springs	50.35	252	P	P	21 16 06.3	-1.9
ASAR	Alice Springs	50.35	252	P	P	21 16 06.4	-1.8
	comp=Z,1.2nm,0.5s,baz=89,slow=7.8,SNR=17						
	comp=Z,1.2nm,0.5s						
ASAR	Alice Springs	50.35	252	P	P	21 16 05.5	-2.8
PSA00	Pilbara Seismi	63.45	253	P	P	21 17 39.9	-1.3
PSA00				IAmb	IAmb	21 17 40.9	
	comp=Z,4.6nm,0.9s						
SHEM	Shemya Is, Ala	68.91	352	LR	LR	21 42 06.0	
	comp=Z,39nm,21.8s,baz=247,slow=30						
PETK	Petropavlovsk-	72.88	342	P	P	21 18 39.9	+0.3
	comp=Z,6.2nm,1.0s,baz=157,slow=6.5,SNR=2.1						
	comp=Z,6.2nm,1.0s						
NVAR	Mina Array Bea	74.25	42	P	P	21 18 49.5	+1.2
	comp=Z,0.6nm,0.4s,baz=249,slow=7.8,SNR=2.0						
	comp=Z,0.6nm,0.4s						
K05A	Summer Lake	75.22	37	P	P	21 18 53.9	+0.1
M14K	Bethel	76.58	6	P	P	21 19 02.1	+1.3
K15K	Wolf Creek Mou	78.14	5	P	P	21 19 11.5	+1.9
K15K				IAmb	IAmb	21 19 14.3	
	comp=Z,8.7nm,1.2s						
SCM	Sheep Creek Mo	79.80	12	P	P	21 19 19.1	+0.3
VHRN	Van Horn	80.00	54	P	P	21 19 19.4	-1.3
TXAR	Lajitas Array	80.45	56	P	P	21 19 23.1	0.0
	comp=Z,0.6nm,0.9s,baz=221,slow=8.5,SNR=5.2						
TXAR				LR	LR	21 47 18.9	
	comp=Z,89nm,19.2s,baz=34,slow=30						
	comp=Z,0.6nm,0.9s						
TRF	Thorofare Moun	80.73	10	P	P	21 19 24.5	+0.5
TRF				IAmb	IAmb	21 19 40.0	
	comp=Z,3.6nm,1.2s						
PDAR	Pinedale Array	82.18	42	P	P	21 19 32.5	+0.2
	comp=Z,1.0nm,0.7s,baz=224,slow=4.1,SNR=4.8						
	comp=Z,1.0nm,0.7s						
CCB	Clear Creek Bu	82.27	11	P	P	21 19 32.4	+0.6
CCB				IAmb	IAmb	21 19 33.4	
	comp=Z,3.6nm,0.8s						
ILAR	Eielson Array	82.55	11	P	P	21 19 34.0	+0.7
	comp=Z,0.7nm,0.7s,baz=229,slow=6.2,SNR=21						
	comp=Z,0.7nm,0.7s						
ILAR	Eielson Array	82.55	11	P	P	21 19 33.5	+0.2
IMAR	Indian Mountai	82.60	8	P	P	21 19 34.2	+0.7
MMPY	Sheldon Lake,	84.51	18	P	P	21 19 44.4	+0.9
MMPY				IAmb	IAmb	21 19 45.1	
	comp=Z,1.6nm,0.8s						
BMAR	Burnt Mountain	85.36	11	P	P	21 19 48.9	+1.2
MAW	Mawson	87.73	199	LR	LR	21 55 12.3	
	comp=Z,53nm,21.8s,baz=128,slow=33						
CMAR	Chiang Mai Arr	92.96	288	P	P	21 20 24.8	0.0
	comp=Z,0.2nm,0.3s,baz=62,slow=3.0,SNR=1.2						
	comp=Z,0.2nm,0.3s						
LZDM	Lanzhou Array	93.65	306	LR	LR	21 58 42.5	
	comp=Z,64nm,21.9s,baz=175,slow=33						
GERES	GERESS Array B	146.35	352	PKPbc	PKPdf	21 26 49.4	-1.2
	comp=Z,0.2nm,0.5s,baz=20,slow=4.3,SNR=3.5						
BRTR	Keskin Array B	146.48	321	PKPbc	PKPdf	21 26 52.5	+1.3
	comp=Z,3.0nm,0.9s,baz=94,slow=1.9,SNR=14						
BRTR	Keskin Array B	146.48	321		PKPdf	21 26 51.7	+0.5
CONA	Conrad Observa	146.90	349	ePKP	PKPdf	21 26 51.7	+0.1
	comp=Z,5.5nm,1.4s						
CONA				i PKP	PKPbc	21 26 54.8	+1.4
	comp=Z,1.3nm,0.6s						
MOA	Molln	147.24	351	ePKP	PKPdf	21 26 55.2	+3.1
	comp=Z,7.4nm,1.4s						
RETA	Reutte	148.01	355	i PKiKP	PKPbc	21 26 57.4	+0.9
	comp=Z,6.9nm,1.3s						
MOTA	Moosalm	148.13	355	ePKiKP	PKPbc	21 26 57.6	+0.7
	comp=Z,6.2nm,1.2s						
WTTA	Wattenberg	148.15	354	i PKiKP	PKPdf	21 26 57.6	+3.8
	comp=Z,8.1nm,1.2s						
SQTA	Sankt Quirin	148.24	354	ePKiKP	PKPbc	21 26 58.0	+0.8
	comp=Z,7.0nm,1.6s						
DAVA	Damuels	148.28	356	i PKP	PKPdf	21 26 55.1	+1.1
	comp=Z,0.4nm,0.4s						
DAVA				ePKiKP	pPKPdf	21 26 58.4	+1.5
	comp=Z,6.6nm,1.2s						
ABTA	Abfaltersbach	148.56	353	ePKP	PKPdf	21 26 58.1	+3.7
	comp=Z,2.3nm,0.7s						
MMAI	Mount Meron Ar	148.91	309	PKPbc	PKPdf	21 26 59.0	+3.7
	comp=Z,0.3nm,0.3s,baz=66,slow=2.8,SNR=2.2						
FUORN	Ofenpass-Fuorn	148.91	356	PKPbc	PKPdf	21 26 59.2	+4.0

*IDC **14** 21:15:10.9±2.2, 23°.55S×179°.97E, h527km±25km, mb3.2/4, mbtmp4.2/6, Error ellipse: s-maj=33.3km s-min=23.0km az=46.0*
ISC 14 21:15:10.4±1.5**, 23°.5S**±0°.1×**179°.9W**±0°.3**, h532**km**, n8, σ0ˢ74**/8**, mb3.7**/4**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.07	341	P	P	21 16 49.2	+0.2
	2.2nm,0.3s,baz=260,slow=20,SNR=7.0						
URZ	Urewera	14.90	189	P	P	21 18 18.4	-0.5
	15nm,0.6s,baz=62,slow=1.8,SNR=20						
CTA	Charters Tower	31.55	270	P	P	21 20 49.9	+0.6
	2.5nm,0.4s,baz=95,slow=10,SNR=6.7						
	2.5nm,0.4s						
ASAR	Alice Springs	42.16	260	P	P	21 22 16.5	-0.1
	1.1nm,0.7s,baz=102,slow=7.0,SNR=10						
	1.1nm,0.7s						
WRA	Warramunga Arr	42.50	266	P	P	21 22 18.8	-0.5
	1.2nm,0.7s,baz=103,slow=8.2,SNR=12						
	1.2nm,0.7s						
QSPA	South Pole Qui	66.55	180	P	P	21 25 08.3	+1.0
	2.7nm,0.9s,baz=344,slow=0.9,SNR=11						
	2.7nm,0.9s						
BRTR	Keskin Array B	147.41	308	PKPbc	PKPbc	21 33 54.0	-0.8
	0.3nm,0.7s,baz=49,slow=4.4,SNR=1.8						
MMAI	Mount Meron Ar	147.61	295	PKPbc	PKiKP	21 33 56.3	-0.6
	0.9nm,0.5s,baz=90,slow=3.4,SNR=2.4						

IDC 14 21:25:17.0±15.0**, 21°.49S×68°.18E, h0**km**, mb3.5**/4**, mbtmp3.5**/4**, Error ellipse: s-maj=477.6km s-min=39.3km az=56.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	14.38	17	T	T	21 43 11.7	
	baz=195,slow=76,SNR=16						
H08S2	Diego Garcia H	14.38	17	T	T	21 43 12.3	
	baz=195,slow=76,SNR=22						
H08S3	Diego Garcia H	14.40	17	T	T	21 43 11.7	
	baz=195,slow=76,SNR=34						
H04N2	CROZET ISLANDS	28.01	205	T	T	22 00 53.7	
	baz=36,slow=74,SNR=284						
H04N1	CROZET ISLANDS	28.01	205	T	T	22 00 54.6	
	baz=36,slow=74,SNR=264						
H04N3	CROZET ISLANDS	28.02	205	T	T	22 00 53.1	
	baz=36,slow=74,SNR=333						
ASAR	Alice Springs	60.24	106	P	P	21 35 27.6	+0.1
	1.0nm,0.8s,baz=260,slow=7.1,SNR=8.6						
	1.0nm,0.8s						
WRA	Warramunga Arr	61.47	102	P	P	21 35 35.7	-0.2
	0.5nm,0.8s,baz=261,slow=7.1,SNR=2.8						
	0.5nm,0.8s						
MKAR	Makanchi Array	69.15	10	P	P	21 36 24.7	-0.3
	0.1nm,0.5s,baz=194,slow=6.5,SNR=1.6						
	0.1nm,0.5s						
SONM	Songino Array	77.07	25	P	P	21 37 12.4	+0.4
	0.3nm,0.6s,baz=216,slow=5.3,SNR=3.5						
	0.3nm,0.6s						

*IDC **14** 21:39:06.9±1.2, 36°.21S×52°.24E, h0km, mb3.9/5, mbtmp3.9/5, MS3.4/3, Error ellipse: s-maj=68.1km s-min=23.9km az=17.0*
*NEIC **14** 21:39:09.6±1.3, 36°.3S±0°.1×52°.4E±0°.2, h10km±1km, mb4.4/8, Error ellipse: s-maj=24.8km s-min=16.4km az=109.0*
ISC 14 21:39:08.8±0.9**, 36°.3S**±0°.1×**52°.4E**±0°.2**, h10**km**, n25, σ0ˢ83**/19**, mb4.3**/5**, MS3.3**/3**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H04N1	CROZET ISLANDS	9.89	182	T	T	21 51 31.8	
	baz=4.1,slow=75,SNR=133						
H04N2	CROZET ISLANDS	9.89	182	T	T	21 51 31.8	
	baz=4.1,slow=75,SNR=110						
H04N3	CROZET ISLANDS	9.91	182	T	T	21 51 31.8	
	baz=4.1,slow=75,SNR=136						
FOMA	Nahampoana Res	12.17	336	Pn	Pn	21 42 02.2	0.0
VOI	Vohitsoka	15.11	340	Pn	Pn	21 42 42.6	+0.1
VOI				IAmb	IAmb	21 43 06.8	
	comp=Z,34nm,1.5s						
ABPO	Ambohimpanom	17.77	344		P	21 43 18.3	+1.0
ABPO				IAmb	IAmb	21 43 49.3	
	comp=Z,29nm,1.4s						
BOSA	Boshof	24.06	281	P	P	21 44 22.1	-2.3
	comp=Z,1.1nm,0.6s,baz=102,slow=8.5,SNR=4.0						
	comp=Z,1.1nm,0.6s						
BOSA	Boshof	24.06	281	P	P	21 44 24.5	+0.1
BOSA				IAmb	IAmb	21 44 38.9	
	comp=Z,9.8nm,1.5s						
LSZ	Lusaka	30.03	308	LR	LR	21 54 39.6	
	comp=Z,51nm,19.2s,baz=174,slow=31						
FURI	Furi	46.73	341	LR	LR	22 04 27.5	
	comp=Z,32nm,19.0s,baz=170,slow=33						
RAYN	Ar Rayn	59.82	353	P	P	21 49 14.9	+0.6
HOPE	Hope Point	60.88	222	P	P	21 49 22.3	+1.0
TORD	Torodi Ar. Bea	68.54	306	P	P	21 50 11.2	-0.5
	comp=Z,0.7nm,0.9s,baz=136,slow=6.4,SNR=3.5						
	comp=Z,0.7nm,0.9s						
ASF	Jabal al Asfar	69.61	346	LR	LR	22 18 50.9	
	comp=Z,33nm,19.0s,baz=197,slow=34						
ASAR	Alice Springs	69.87	105	P	P	21 50 20.6	+0.5
	comp=Z,1.9nm,0.6s,baz=231,slow=5.9,SNR=30						
	comp=Z,1.9nm,0.6s						
ASAR	Alice Springs	69.87	105	P	P	21 50 20.1	0.0
CMAR	Chiang Mai Arr	70.01	47	P	P	21 50 19.9	-0.9
	comp=Z,0.3nm,0.4s,baz=236,slow=7.2,SNR=4.1						
	comp=Z,0.3nm,0.4s						
KNRA	Kununurra	70.05	95	P	P	21 50 20.6	-0.6
WRA	Warramunga Arr	72.19	102	P	P	21 50 34.5	+0.3
	comp=Z,2.2nm,0.8s,baz=232,slow=5.5,SNR=19						
	comp=Z,2.2nm,0.8s						
WRA	Warramunga Arr	72.19	102	P	P	21 50 34.0	-0.2
WB0	Warramunga Arr	72.33	102	P	P	21 50 34.8	-0.3
WB0				IAmb	IAmb	21 51 06.3	
	comp=Z,11nm,1.4s						
WRH	Wood River Hil	149.20	17	PKPbc	PKPbc	21 58 56.6	+0.1
ILAR	Eielson Array	149.22	16	PKPbc	PKPbc	21 58 56.8	+0.1
	comp=Z,1.4nm,0.9s,baz=314,slow=3.4,SNR=13						
ILAR	Eielson Array	149.22	16		PKPbc	21 58 56.1	-0.5
PPLA	Purkeypile	149.35	22	PKPbc	PKPbc	21 58 58.2	+1.0

*IDC **14** 21:41:21.4±0.9, 36°.38N×141°.93E, h0km, mb3.5/10, mbtmp3.5/13, ML3.1/3, MS3.0/4, Error ellipse: s-maj=21.1km s-min=18.5km az=134.0*
*NIED **14** 21:41:25.4, 36°.35N×141°.76E, h32km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.25; $M_{\theta\theta}$4.29; $M_{\phi\phi}$-3.04; $M_{r\theta}$-0.82; $M_{\theta\phi}$-1.57; $M_{\phi r}$1.51; Fault plane solution: $M_0$4.42000×10^{14} NP1: ϕ_s239.00000°, δ63.00000°, λ-168.00000°. NP2: ϕ_s143.00000°, δ79.00000°, λ-27.00000°.*
*JMA **14** 21:41:25.4±0.2, 36°.4N±0°.4×14°2E±°, h32km, MV3.8/38, FAR E OFF IBARAKI PREF*
ISC 14 21:41:23.7±3.5**, 36°.36N**±0°.06×**141°.82E**±0°.06**, h15**km±22km**, n34, σ0ˢ87**/32**, mb3.5**/10**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	Hitachinakayam	1.00	269	P	Pb	21 41 42.6	-0.1
JHYU				S	Sb	21 41 55.2	-0.5
JHO	Hitachi	1.04	284	P	Pb	21 41 43.2	-0.3
JHO				eS	Sb	21 41 57.2	+0.2
ONAJ	Iwakimizuishiy	1.11	312	eP	Pn	21 41 44.4	-0.4
JIHU	Itakohorinouch	1.12	250	eP	Pn	21 41 45.0	+0.1
JFK	Kawauchi	1.26	323	eP	Pn	21 41 47.0	+0.1
JOTO	OTAMA OYAMA	1.69	316	P	Pn	21 41 54.1	+1.3
JOTO				eS	Sn	21 42 15.0	+0.8
JMM	Marumori	1.72	332	eP	Pn	21 41 54.0	+1.0
BSO1	Boso 1	1.83	202	eP	Pn	21 41 55.3	+1.1
BSO3	Boso 3	1.89	215	eP	Pn	21 41 56.0	+0.8
JAG	Ashikaga	1.91	273	P	Pn	21 41 55.7	-0.1
JAG				eS	Sn	21 42 17.6	-2.0
JFY	Yanaizu	2.00	302	eP	Pb	21 41 58.7	-1.0
JKT	Katashina	2.11	282	P	Pn	21 41 59.3	+0.7
JKT				eS	Sn	21 42 23.8	-0.9
MJAR	Matsushiro Arr	2.92	275	Pn	Pn	21 42 10.9	+1.2
	1.0nm,0.3s,baz=112,slow=9.2,SNR=98						
MJAR				Sn	Sn	21 42 45.5	+1.0
	1.4nm,0.3s,baz=181,slow=33,SNR=5.8						
MJAR				LR	LR	21 43 28.7	
	comp=Z,127nm,18.6s,baz=24,slow=42						

	9.6nm,0.5s								
ASAJ	**Asahikawa**	**7.77**	**4**	Pn		**Pn**	**21 43 17.1**	**+0.9**	
	0.5nm,0.3s,baz=204,slow=15,SNR=11								
ASAJ				Sn		**Sn**	**21 44 43.0**	**-1.0**	
	0.2nm,0.3s,baz=260,slow=28,SNR=1.1								
	1.3nm,0.2s								
JNU	**Nakatsue**	**9.57**	**253**	Pn		**Pn**	**21 43 40.9**	**-0.1**	
	0.1nm,0.3s,baz=27,slow=11,SNR=2.0								
	7.5nm,1.0s								
KSRS	**Korea Array**	**11.19**	**280**	LR		LR	21 47 58.2		
	comp=Z,18nm,18.4s,baz=45,slow=35								
MA2	**Magadan**	**23.95**	**11**	LR		LR	21 56 28.8		
	comp=Z,38nm,20.0s,baz=266,slow=38								
H11N2	**WAKE ISLAND Hy**	**27.52**	**120**	T		T	22 15 57.2		
	baz=313,slow=75,SNR=20								
H11N1	**WAKE ISLAND Hy**	**27.53**	**120**	T		T	22 15 58.6		
	baz=313,slow=75,SNR=16								
H11N3	**WAKE ISLAND Hy**	**27.54**	**120**	T		T	22 15 59.4		
	baz=313,slow=75,SNR=15								
H11S1	**WAKE ISLAND Hy**	**28.22**	**122**	T		T	22 16 52.1		
	baz=314,slow=75,SNR=19								
H11S3	**WAKE ISLAND Hy**	**28.22**	**122**	T		T	22 16 50.1		
	baz=314,slow=75,SNR=18								
H11S2	**WAKE ISLAND Hy**	**28.23**	**122**	T		T	22 16 53.3		
	baz=314,slow=75,SNR=16								
SONM	**Songino Array**	**28.44**	**305**	P		**P**	**21 47 17.4**	**-0.6**	
	0.4nm,0.6s,baz=106,slow=8.4,SNR=4.8								
	0.4nm,0.6s								
CMAR	**Chiang Mai Arr**	**41.65**	**256**	P		**P**	**21 49 12.3**	**+0.6**	
	0.3nm,0.4s,baz=48,slow=6.6,SNR=4.6								
	0.3nm,0.4s								
ZALV	**Zalesovo Beam**	**42.62**	**313**	P		**P**	**21 49 20.1**	**+0.9**	
	0.5nm,0.5s,baz=91,slow=10,SNR=2.1								
	0.5nm,0.5s								
MKAR	**Makanchi Array**	**44.76**	**303**	P		**P**	**21 49 37.1**	**+0.6**	
	0.6nm,0.8s,baz=91,slow=8.9,SNR=6.5								
	0.6nm,0.8s								
KURBB	**Kurchatov Arra**	**46.68**	**309**	P		**P**	**21 49 52.6**	**+1.0**	
	0.9nm,0.7s,baz=85,slow=8.1,SNR=8.2								
	0.9nm,0.7s								
ILAR	**Eielson Array**	**49.89**	**32**	P		**P**	**21 50 15.2**	**-1.0**	
	0.4nm,0.8s,baz=265,slow=6.8,SNR=4.8								
	0.4nm,0.8s								
WRA	**Warramunga Arr**	**56.44**	**188**	P		**P**	**21 51 05.0**	**+0.1**	
	0.2nm,0.4s,baz=5.3,slow=7.3,SNR=5.7								
	0.2nm,0.4s								
ASAR	**Alice Springs**	**60.17**	**188**	P		**P**	**21 51 31.4**	**+0.5**	
	0.2nm,0.7s,baz=18,slow=8.3,SNR=1.7								
	0.2nm,0.7s								
YKA	**Yellowknife Ar**	**64.23**	**30**	P		**P**	**21 51 56.9**	**-0.8**	
	0.3nm,0.7s,baz=302,slow=7.8,SNR=3.7								
	0.3nm,0.7s								
BELG	**Belogornoye**	**64.52**	**317**	LR		LR	22 21 50.6		
	comp=Z,88nm,18.4s,baz=85,slow=38								
TXAR	**Lajitas Array**	**90.27**	**53**	P		**P**	**21 54 24.6**	**+0.3**	
	0.1nm,0.5s,baz=294,slow=4.7,SNR=3.8								
	0.1nm,0.5s								

*CATAC **14** 21:50:09.4±0.4,14°N±2°×9°2W±°, h26km±3km, M4.4/30, mb5.2/2, mB5.8/2, MLv4.0/30, Mw(mB)5.4/2, Error ellipse: s-maj=5.6km s-min=2.4km az=34.5, confirmed*
*SNET **14** 21:50:09.3±2.2, 13°.86N×91°.41W, h15km, ML3.9, Presumed earthquake*
*GCG **14** 21:50:10.0±1.9, 13°.88N×91°.47W, h37km±191km, MD4.0, ML4.1, Presumed earthquake*

ISC 14 21:50:07.9±1.8, 13°.81N±0°.06×91°.39W±0°.06, h8km±12km, n60, σ1°33/91, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG5	**El Palmar, Qui**	**0.59**	**4**	*i* P	**Pn**	**21 50 24.6**	**+1.9**
STG2	**El Palmar, Qui**	**0.62**	**1**	*i* P	**Pn**	**21 50 25.4**	**+2.2**
STG2				IAML		21 50 40.4	
	comp=E,6μm,0.2s						
STG8	**El Palmar, Qui**	**0.64**	**4**	*i* P	**Pn**	**21 50 25.7**	**+2.2**
STG8				*i* S	**Sn**	**21 50 37.6**	**+3.7**
STG8				IAML		21 50 39.2	
	comp=E,5μm,0.2s						
RTAL	**Retalhuleu**	**0.77**	**338**	P	**Pg**	**21 50 23.8**	**+1.1**
RTAL				S	**Sn**	**21 50 34.4**	**-2.4**
ESSG	**Sabana Grande**	**0.79**	**44**	*i* P	**Pn**	**21 50 24.6**	**-0.8**
ESSJ	**San Jos, E**	**0.90**	**106**	*i* P	**Pb**	**21 50 23.6**	**-2.2**
FG8	**Yepocapa, Chim**	**0.92**	**61**	*i* P	**Pb**	**21 50 24.6**	**-1.6**
FG8				*e*S	**Sb**	**21 50 35.1**	**-3.6**
FG16	**Alotenango, Sa**	**0.97**	**62**	*i* P	**Pb**	**21 50 25.8**	**-1.3**
FG16				IAML		21 50 45.5	
	comp=N,19μm,0.2s						
SOKI	**Kika Raxquin**	**1.01**	**359**	*i* P	**Pb**	**21 50 27.6**	**-0.2**
SOKI				IAML		21 50 43.0	
	comp=E,1μm,0.3s						
PCG5	**San Vicente Pa**	**1.06**	**68**	*i* P	**Pb**	**21 50 27.2**	**-1.5**
PCG5				*i* S	**Sb**	**21 50 40.4**	**-2.4**
PCG5				IAML		21 50 41.7	
	comp=E,7μm,0.4s						
SMCA	**Catarina**	**1.23**	**328**	*i* P	**Pn**	**21 50 29.7**	**-1.8**
FAME	**Alcaldia de Sa**	**1.34**	**88**	P	**Pn**	**21 50 33.0**	**+0.1**
FAME				S	**Sn**	**21 50 49.6**	**-1.3**
APG	**El Apazote**	**1.49**	**37**	*i* P	**Pb**	**21 50 35.7**	**-0.3**
APG				*e*S	**Sb**	**21 50 54.4**	**-0.7**
QUIS	**Sacapulas**	**1.50**	**11**	*i* S	**Sg**	**21 50 55.4**	**-0.9**
QUIS				IAML		21 50 59.9	
	comp=N,796nm,0.4s						
HUEH	**Huehuetenango**	**1.50**	**356**	P	**Pb**	**21 50 35.4**	**-0.8**
HUEH				S	**Sg**	**21 50 56.3**	**0.0**
NUBE	**Las Nubes**	**1.57**	**86**	P	**Pb**	**21 50 36.8**	**-0.4**
NUBE	**Las Nubes**	**1.57**	**86**	*i* S	**Sn**	**21 50 55.9**	**-0.9**
NUBE				IAML		21 50 57.9	
	comp=E,1μm,0.6s						
NUBE	**Las Nubes**	**1.57**	**86**	*e*P	**Pb**	**21 50 37.4**	**+0.1**
NUBE				*e*S	**Sb**	**21 50 56.2**	**-1.1**
SLOZ	**Alcaldia de Sa**	**1.58**	**82**	P	**Pb**	**21 50 37.6**	**+0.3**
SLOZ				S	**Sb**	**21 50 58.0**	**+0.6**
RBDL	**Robledal**	**1.68**	**79**	*i* P	**Pb**	**21 50 38.6**	**-0.6**
RBDL				*e*S	**Sb**	**21 51 00.3**	**-0.3**
CEVE	**Cerro Verde**	**1.72**	**89**	P	**Pb**	**21 50 39.2**	**-0.6**
CEVE				S	**Sb**	**21 51 02.6**	**+0.9**
CEVE	**Cerro Verde**	**1.72**	**89**	*e*P	**Pb**	**21 50 39.7**	**-0.1**
CEVE				*e*S	**Sb**	**21 51 00.5**	**-1.2**
SBLS	**San Blas**	**1.72**	**89**	*e*P	**Pb**	**21 50 39.7**	**-0.2**
SNJE	**San Jose**	**1.74**	**88**	*e*P	**Pb**	**21 50 39.8**	**-0.3**
UNIC	**Universidad Ca**	**1.80**	**84**	P	**Pb**	**21 50 40.6**	**-0.5**
UNIC				S	**Sb**	**21 51 03.7**	**-0.2**
JAYA	**Jayaque - finc**	**1.89**	**94**	P	**Pn**	**21 50 41.5**	**+0.8**
JAYA	**Jayaque - finc**	**1.89**	**94**	*i* P	**Pn**	**21 50 41.2**	**+0.4**
JAYA				*i* S	**Sn**	**21 51 04.8**	**-0.1**
JAYA				IAML		21 51 10.7	
	comp=N,4μm,0.4s						
JAYA	**Jayaque - finc**	**1.89**	**94**	*e*P	**Pn**	**21 50 41.1**	**+0.4**
JAYA				*e*S	**Sn**	**21 51 04.7**	**-0.1**
CEDA	**San Andres**	**1.94**	**90**	P	**Pn**	**21 50 42.3**	**+1.1**
CEDA				S	**Sb**	**21 51 08.3**	**+0.4**
PMON	**Piamonte**	**2.02**	**92**	P	**Pb**	**21 50 44.2**	**-0.8**
PMON				S	**Sb**	**21 51 08.9**	**-1.4**
LALI	**Alcalda de L**	**2.04**	**99**	P	**Pn**	**21 50 43.2**	**+0.7**
LALI				S	**Sn**	**21 51 08.8**	**+0.7**
BOQS	**Boqueron**	**2.05**	**92**	*e*P	**Pb**	**21 50 44.8**	**-0.8**
MTO3	**Montecristo**	**2.06**	**73**	P	**Pn**	**21 50 43.6**	**+0.6**
MTO3				S	**Sb**	**21 51 09.5**	**-1.9**
MTO3	**Montecristo**	**2.06**	**73**	*i* P	**Pn**	**21 50 43.3**	**+0.4**
UEES	**Universidad Ev**	**2.09**	**92**	P	**Pn**	**21 50 44.6**	**+1.2**
UEES				S	**Sn**	**21 51 10.2**	**+0.6**
ESQI	**Esquipulas**	**2.12**	**69**	P	**Pn**	**21 50 44.9**	**+1.1**
ESQI				S	**Sb**	**21 51 13.1**	**-0.2**
ESQI	**Esquipulas**	**2.12**	**69**	*e*P	**Pn**	**21 50 44.3**	**+0.5**
PANCS	**Alcalda de**	**2.16**	**95**	P	**Pn**	**21 50 45.7**	**+1.5**
PANCS				S	**Sn**	**21 51 11.6**	**+0.4**
LOMA	**Loma Larga**	**2.16**	**94**	*e*P	**Pn**	**21 50 45.5**	**+1.2**
LOMA				*e*S	**Sn**	**21 51 11.8**	**+0.3**
UDBS	**Universidad Do**	**2.17**	**92**	P	**Pn**	**21 50 45.7**	**+1.3**
UDBS				S	**Sb**	**21 51 13.2**	**-1.6**
LFRS	**El Faro**	**2.27**	**94**	*e*P	**Pn**	**21 50 47.2**	**+1.4**
SJTE	**Alcalda de S**	**2.33**	**94**	*e*P	**Pb**	**21 50 48.6**	**-1.5**
PAVA	**Las Pavas**	**2.39**	**92**	P	**Pn**	**21 50 48.5**	**+1.1**
PAVA				S	**Sb**	**21 51 19.7**	**-1.1**
PAVA	**Las Pavas**	**2.39**	**92**	*e*P	**Pn**	**21 50 48.6**	**+1.1**
LLGN	**La Laguna**	**2.40**	**81**	P	**Pn**	**21 50 48.1**	**+0.5**
LLGN				S	**Sb**	**21 51 20.0**	**-1.3**
COEG	**Centro de Oper**	**2.45**	**94**	P	**Pn**	**21 50 49.9**	**+1.6**
COEG				S	**Sb**	**21 51 21.4**	**-1.2**
COEG	**Centro de Oper**	**2.45**	**94**	*e*P	**Pn**	**21 50 50.2**	**+2.0**
TECO	**Alcaldia de Te**	**2.55**	**96**	P	**Pn**	**21 50 50.7**	**+1.1**
TECO				S	**Sn**	**21 51 21.8**	**+0.9**
P5NO	**Presa 5 de nov**	**2.56**	**86**	P	**Pn**	**21 50 50.7**	**+1.0**
SCLA	**Alcaldia de Sa**	**2.59**	**92**	P	**Pn**	**21 50 51.8**	**+1.6**
SCLA				S	**Sb**	**21 51 24.3**	**-2.4**
SARH	**Santa Rosa de**	**2.73**	**69**	P	**Pn**	**21 50 52.8**	**+0.8**
TECA	**Tecapa**	**2.83**	**96**	*e*P	**Pn**	**21 50 55.5**	**+1.9**
PACA	**Pacayal**	**3.00**	**96**	P	**Pn**	**21 50 56.7**	**+0.8**
RANC	**El Ranchito**	**3.04**	**97**	P	**Pn**	**21 50 57.3**	**+0.9**
MARCA	**Marcala la Paz**	**3.28**	**84**	P	**Pn**	**21 51 01.1**	**+1.4**
PETF	**Flores**	**3.42**	**25**	P	**Pn**	**21 51 01.9**	**+0.4**
CNCH	**Conchagua**	**3.50**	**98**	P	**Pn**	**21 51 03.8**	**+1.0**
CNCH				S	**Sn**	**21 51 47.2**	**+2.7**
YUSH	**Yuscaran**	**4.42**	**88**	P	**Pn**	**21 51 15.9**	**+0.5**
RCVN	**Varillal2**	**5.06**	**92**	P	**Pn**	**21 51 25.6**	**+1.5**
RCON	**San Juan de Ri**	**5.10**	**93**	P	**Pn**	**21 51 26.3**	**+1.5**
RCON				S	**Sn**	**21 52 26.1**	**+2.1**

*IDC **14** 22:18:26.1±0.8, 10°.74N×126°.23E, h0km, mb3.9/12, mbtmp3.9/12, MS3.0/5, Error ellipse: s-maj=46.0km s-min=15.4km az=68.0*
*MAN **14** 22:18:28.0, 10°.73N×126°.30E, h1km, MS4.0*

ISC 14 22:18:27.8±3.7, 10°.76N±0°.05×126°.36E±0°.07, h12km±23km, n33, σ1°25/31, mb4.0/12, MS2.8/3, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**1.29**	**222**	*i* P	**Pn**	**22 18 51.8**	**+0.1**
SCPH				*i* S	**Sn**	**22 19 08.7**	**-0.4**
PLP	**Palo**	**1.41**	**287**	*e*P	**Pn**	**22 18 53.4**	**0.0**
PLP				*e*S	**Sb**	**22 19 12.4**	**+0.2**
TSSP	**Tandag City**	**1.71**	**185**	*e*P	**Pn**	**22 18 57.0**	**-0.4**
TSSP				*e*S	**Sn**	**22 19 19.9**	**+0.6**
LLP	**Lapu-Lapu**	**2.39**	**260**	*e*P	**Pb**	**22 19 09.5**	**-1.4**
LLP				*e*S	**Sb**	**22 19 41.9**	**+1.5**
CGP	**Cagayan de Oro**	**2.82**	**216**	*e*P	**Pn**	**22 19 15.1**	**+2.4**
CGP				*e*S	**Sn**	**22 19 48.1**	**+1.5**
MMPH	**Masbate**	**3.12**	**301**	*e*P	**Pb**	**22 19 23.7**	**+0.5**
MMPH				*i* S	**Sb**	**22 20 01.2**	**0.0**
RCP	**Roxas**	**3.63**	**283**	*e*P	**Pn**	**22 19 25.8**	**+1.8**
RCP				*i* S	**Sb**	**22 20 12.1**	**-4.1**
DCPH	**Dipolog City**	**3.67**	**234**	*e*P	**Pn**	**22 19 26.2**	**+1.8**
DCPH				*i* S	**Sn**	**22 20 07.9**	**+0.2**
DAV	**Davao City (W)**	**3.75**	**192**	LR	LR	22 21 27.1	
	comp=Z,276nm,18.4s,baz=326,slow=49						
GQP	**Guinayangan**	**4.94**	**310**	*e*P	**Pn**	**22 19 43.3**	**+1.4**
GUMO	**Guam**	**18.31**	**79**	LR	LR	22 28 40.1	
	comp=Z,43nm,19.0s,baz=138,slow=33						
JCJ	**Chichijima**	**22.05**	**40**	LR	LR	22 32 23.0	
	comp=Z,34nm,19.1s,baz=26,slow=38						
KSRS	**Korea Array**	**26.62**	**3**	LR	LR	22 35 04.0	
	comp=Z,27nm,19.3s,baz=265,slow=38						
CMAR	**Chiang Mai Arr**	**27.58**	**289**	P	**P**	**22 24 14.6**	**-0.6**
	0.6nm,0.3s,baz=97,slow=7.0,SNR=5.2						
	0.6nm,0.3s						
MJAR	**Matsushiro Arr**	**27.82**	**21**	LR	LR	22 36 52.5	
	comp=Z,24nm,18.3s,baz=184,slow=40						
WRA	**Warramunga Arr**	**31.50**	**166**	P	**P**	**22 24 49.4**	**-0.5**
	0.4nm,0.5s,baz=346,slow=8.7,SNR=3.0						
	0.4nm,0.5s						
USRK	**Ussuriysk Ar.**	**33.67**	**7**	P	**P**	**22 25 09.4**	**+0.8**
	2.0nm,0.9s,baz=158,slow=6.2,SNR=5.2						
	2.0nm,0.9s						
ASAR	**Alice Springs**	**35.00**	**168**	P	**P**	**22 25 20.9**	**+0.6**
	0.4nm,0.3s,baz=339,slow=7.1,SNR=10						
ASAR				PcP	**PcP**	**22 27 51.9**	**-0.7**
	0.2nm,0.4s,baz=353,slow=3.9,SNR=1.9						
	0.4nm,0.3s						
H11S3	**WAKE ISLAND Hy**	**39.70**	**74**	T	T	23 08 48.7	
	baz=261						
H11S1	**WAKE ISLAND Hy**	**39.71**	**74**	T	T	23 08 49.8	
	baz=261						
H11S2	**WAKE ISLAND Hy**	**39.72**	**74**	T	T	23 08 48.7	
	baz=261						
H11N1	**WAKE ISLAND Hy**	**40.02**	**72**	T	T	23 09 25.5	
	baz=265,slow=74,SNR=6.0						
H11N2	**WAKE ISLAND Hy**	**40.03**	**72**	T	T	23 09 20.3	
	baz=265						
H11N3	**WAKE ISLAND Hy**	**40.04**	**72**	T	T	23 09 22.5	
	baz=265,slow=74,SNR=5.9						
SONM	**Songino Array**	**40.59**	**339**	P	**P**	**22 26 07.8**	**+0.2**
	0.7nm,0.9s,baz=165,slow=12,SNR=4.3						
	0.7nm,0.9s						
STKA	**Stephens Creek**	**44.83**	**162**	P	**P**	**22 26 42.1**	**+0.1**
	1.3nm,0.7s,baz=337,slow=13,SNR=1.8						
	1.3nm,0.7s						
MKAR	**Makanchi Array**	**51.70**	**322**	P	**P**	**22 27 34.8**	**-0.1**
	1.8nm,0.7s,baz=120,slow=8.3,SNR=30						
	1.8nm,0.7s						
ZALV	**Zalesovo Beam**	**54.24**	**331**	P	**P**	**22 27 53.1**	**-0.3**
	1.2nm,0.7s,baz=111,slow=6.3,SNR=6.2						
	1.2nm,0.7s						
KURBB	**Kurchatov Arra**	**55.72**	**325**	P	**P**	**22 28 03.9**	**-0.4**
	1.2nm,0.7s,baz=124,slow=7.1,SNR=12						
	1.2nm,0.7s						
BVAR	**Borovoye Array**	**61.32**	**325**	P	**P**	**22 28 42.9**	**-0.4**
	0.8nm,0.7s,baz=78,slow=7.7,SNR=4.8						
	0.8nm,0.7s						
ARCES	**ARCESS Array B**	**83.77**	**340**	P	**P**	**22 30 56.4**	**-0.3**
	2.5nm,0.9s,baz=62,slow=5.6,SNR=4.1						
	2.5nm,0.9s						
FINES	**FINESS Array B**	**85.50**	**332**	P	**P**	**22 31 04.6**	**-0.9**
	2.3nm,1.0s,baz=78,slow=5.9,SNR=5.5						
	2.3nm,1.0s						
PLCA	**Paso Flores**	**146.62**	**156**	PKPbc	**PKPbc**	**22 38 10.2**	**+0.3**
	2.1nm,1.1s,baz=239,slow=4.3,SNR=4.2						

*IDC **14** 22:22:05.2±1.0, 5°.43N×126°.37E, h0km, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=77.3km s-min=21.5km az=66.0*
*MAN **14** 22:22:11.0, 5°.46N×126°.62E, h14km, MS3.6*

ISC 14 22:22:13.9±0.9, 5°.3N±0°.1×126°.3E±0°.2, h66km, n10, σ1°60/13, mb3.6/6, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.93**	**325**	*e*P	**Pn**	**22 22 30.8**	**-0.5**
DDMP				*e*S	**Sn**	**22 22 46.4**	**+2.2**
DMPH	**Davao City--Mi**	**1.88**	**337**	*e*P	**Pn**	**22 22 43.7**	**-0.2**
DMPH				*e*S	**Sn**	**22 23 03.0**	**-3.6**
KCP	**Kidapawan**	**2.02**	**325**	*e*P	**Pn**	**22 22 47.1**	**+1.4**
KCP				*i* S	Sn	22 23 20.8	+11
SCPH	**Surigao**	**4.47**	**350**	*e*P	**Pn**	**22 23 21.3**	**+2.1**
WRA	**Warramunga Arr**	**26.36**	**163**	P	**P**	**22 27 43.3**	**-0.7**
	0.8nm,0.7s,baz=342,slow=10,SNR=6.0						
	0.8nm,0.7s						
STKA	**Stephens Creek**	**39.80**	**159**	P	**P**	**22 29 40.8**	**+0.1**
	1.9nm,0.9s,baz=315,slow=13,SNR=2.2						
	1.9nm,0.9s						
MKAR	**Makanchi Array**	**55.97**	**325**	P	**P**	**22 31 45.6**	**+0.1**
	0.3nm,0.5s,baz=121,slow=7.2,SNR=7.6						
MKAR				PcP	**PcP**	**22 32 43.9**	**+0.6**
	0.2nm,0.7s,baz=113,slow=4.8,SNR=3.7						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**60.13**	**327**	P	**P**	**22 32 14.6**	**+0.1**
	0.8nm,0.8s,baz=123,slow=7.0,SNR=6.6						
	0.8nm,0.8s						
BVAR	**Borovoye Array**	**65.72**	**327**	P	**P**	**22 32 51.1**	**-0.5**
	0.5nm,0.7s,baz=99,slow=8.9,SNR=2.7						
	0.5nm,0.7s						
ILAR	**Eielson Array**	**83.86**	**25**	P	**P**	**22 34 35.9**	**-0.2**
	0.2nm,0.8s,baz=288,slow=3.7,SNR=1.4						
	0.2nm,0.8s						

*DJA **14** 22:24:54.2±0.5, 2°N±3°×12°9E±°, h17km±5km, M4.1/14, mB5.8/1, mb4.6/4, MLv3.9/14, Mw(mB)5.4/1*
*NEIC **14** 22:24:56.3±1.3, 1°.7N±0°.1×128°.50E±0°.08, h72km±11km, mb4.0/7, Error ellipse: s-maj=16.7km s-min=11.3km az=190.0*
*IDC **14** 22:24:58.2±4.6, 1°.89N×128°.95E, h99km±52km, mb3.4/7, mbtmp3.8/8, MS2.8/1, Error ellipse: s-maj=65.4km s-min=20.5km az=80.0*

ISC 14 22:24:53.9±0.7, 1°.86N±0°.07×128°.59E±0°.07, h50km, n28, σ1°08/29, mb4.0/11, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAMI	**Galela, Maluku**	**0.80**	**269**	P	**Pn**	**22 25 08.4**	**-0.6**
TNTI	**Ternate**	**1.63**	**228**		**Pn**	**22 25 20.1**	**-0.1**
TNTI				Sn	**Sn**	**22 25 39.3**	**-0.8**
TNTI	**Ternate**	**1.63**	**228**	P	**Pn**	**22 25 20.4**	**+0.2**
SWI	**Sorong**	**3.80**	**135**	P	**Pn**	**22 25 50.7**	**+0.7**
SIJI	**Sorong**	**3.81**	**135**	P	**Pn**	**22 25 51.8**	**+1.6**
	21nm,0.2s,baz=213,slow=22,SNR=25						
SIJI				S	**Sn**	**22 26 33.9**	**+0.1**
	14nm,0.3s,baz=199,slow=23,SNR=10.0						
SIJI	**Sorong**	**3.81**	**135**	P	**Pn**	**22 25 51.4**	**+1.2**
GTOI	**Gorontalo**	**5.70**	**258**	P	**Pn**	**22 26 18.8**	**+2.6**
	0.1nm32nm,0.7s						
TOLI2	**Tolitoli**	**7.84**	**265**		**Pn**	**22 26 45.9**	**+0.5**
SPSI	**Sidrap Palu**	**10.54**	**237**	P	**Pn**	**22 27 23.8**	**+1.4**
MYLDM	**Lahad Datu**	**10.59**	**288**	Pn	**Pn**	**22 27 25.7**	**+2.6**
MTN	**Manton Dam**	**14.82**	**170**	Pn	**Pn**	**22 28 19.5**	**-1.1**
WB0	**Warramunga Arr**	**22.23**	**165**	P	**P**	**22 29 46.7**	**+0.1**
WB0				IAmb	IAmb	22 30 12.8	
	comp=Z,4.3nm,1.1s						
WRA	**Warramunga Arr**	**22.39**	**166**	P	**P**	**22 29 47.3**	**-1.0**
	comp=Z,0.7nm,0.8s,baz=350,slow=12,SNR=5.7						
	comp=Z,0.7nm,0.8s						
WRA	**Warramunga Arr**	**22.39**	**166**	P	**P**	**22 29 47.5**	**-0.8**
QIZ	**Qiongzhong**	**25.07**	**314**	P	**P**	**22 30 15.1**	**+1.2**
ASAR	**Alice Springs**	**25.89**	**169**	P	**P**	**22 30 21.4**	**0.0**
	comp=Z,0.3nm,0.5s,baz=350,slow=14,SNR=4.2						
	comp=Z,0.3nm,0.5s						
JNU	**Nakatsue**	**31.18**	**4**	LR	LR	22 44 05.9	
	comp=Z,18nm,18.9s,baz=50,slow=37						
MJAR	**Matsushiro Arr**	**35.64**	**13**	P	**P**	**22 31 45.5**	**-1.7**
	comp=Z,1.0nm,0.5s,baz=193,slow=10,SNR=4.7						
	comp=Z,1.0nm,0.5s						
SHL	**Shillong**	**42.47**	**307**	P	**P**	**22 32 44.4**	**-0.3**
SHL				IAmb	IAmb	22 32 46.2	
	comp=Z,5.0nm,0.7s						
SONM	**Songino Array**	**49.66**	**340**	P	**P**	**22 33 41.5**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=148,slow=8.6,SNR=4.4						
	comp=Z,0.3nm,0.4s						
SONM	**Songino Array**	**49.66**	**340**	P	**P**	**22 33 40.8**	**0.0**
SONM				IAmb	IAmb	22 34 05.3	
	comp=Z,0.4nm,0.9s						
MKAR	**Makanchi Array**	**60.14**	**325**	P	**P**	**22 34 56.8**	**+0.3**
	comp=Z,1.3nm,0.4s,baz=117,slow=8.4,SNR=43						
	comp=Z,1.3nm,0.4s						
MKAR	**Makanchi Array**	**60.14**	**325**	P	**P**	**22 34 56.6**	**+0.1**
MAKZ	**Makanchi**	**60.33**	**325**	P	**P**	**22 34 57.8**	**0.0**
MAKZ				IAmb	IAmb	22 35 01.8	
	comp=Z,0.7nm,0.4s						
ZALV	**Zalesovo Beam**	**63.09**	**333**	P	**P**	**22 35 15.2**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=129,slow=2.0,SNR=2.0						
	comp=Z,0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**64.31**	**327**	P	**P**	**22 35 24.1**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=127,slow=6.1,SNR=19						
	comp=Z,1.1nm,0.5s						
KURK	**Kurchatov**	**64.31**	**327**	P	**P**	**22 35 23.9**	**-0.3**
KURK				IAmb	IAmb	22 35 24.7	
	comp=Z,1.7nm,0.6s						
KKAR	**Karatay Array**	**65.86**	**317**	P	**P**	**22 35 33.8**	**-0.7**

TAP 14 22:26:29.1, 22°.42N×121°.08E, h11km, ML3.4, B, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAW	**Tawu**	**0.18**	**251**	*i* P	**Pg**	**22 26 33.6**	**+0.6**
TAW				*i* S	**Sg**	**22 26 36.7**	**+1.0**
TAWH	**Dawu Township**	**0.19**	**246**	*i* P	**Pg**	**22 26 33.9**	**+0.7**
TAWH				*i* S	**Sg**	**22 26 37.2**	**+1.2**
ECL	**Taimali**	**0.21**	**327**	*i* P	**Pg**	**22 26 34.1**	**+0.5**
ECL				*i* S	**Sg**	**22 26 37.6**	**+0.9**
EAST	**Anshuo**	**0.22**	**261**	*i* P	**Pg**	**22 26 34.2**	**+0.6**
EAST				*i* S	**Sg**	**22 26 37.6**	**+0.8**
SLIU	**Shizi**	**0.33**	**232**	P	**Pb**	**22 26 36.5**	**-0.5**
SLIU				*e*S	**Sb**	**22 26 42.1**	**-0.2**
TTN	**Taitung**	**0.34**	**11**	P	**Pb**	**22 26 38.0**	**+0.8**
TWGBT	**Beinan**	**0.40**	**0**	P	**Pb**	**22 26 37.7**	**-0.6**
TWGBT	**Beinan**	**0.40**	**0**	S	**Sb**	**22 26 45.1**	**+0.7**
TWGBT	**Beinan**	**0.40**	**0**	P	**Pg**	**22 26 37.5**	**+0.5**
TWGBT				S	**Sb

WJS	**Zhushan**	**1.44**	**347**	*eP*	Pg	22 26 57.2	+0.4
WJS				*eS*	Sg	22 27 18.0	+2.7
WSF	**Szhu**	**1.45**	**327**	*eP*	Pn	22 26 55.5	+0.2
WSF				*eS*	Sg	22 27 16.5	+0.7
SMLT	**Sun Moon Lake**	**1.47**	**354**	*eS*	Sg	22 27 18.1	+1.6
TYC	**Yuchr**	**1.49**	**352**	*eS*	Sg	22 27 20.0	+2.8
WNT	**Mingjian**	**1.50**	**346**	*eP*	Pg	22 26 58.1	+0.2
WNT				*eS*	Sg	22 27 19.4	+1.9
OWD	**Renai**	**1.53**	**3**	*eP*	Pg	22 26 58.7	+0.1
WDGT	**Dungji**	**1.55**	**303**	*eS*	Sg	22 27 19.3	+0.1
WUSB	**Renai**	**1.57**	**1**	*eP*	Pn	22 26 57.6	+0.4
WCS	**Beigang Elemen**	**1.64**	**355**	*eP*	Pb	22 26 59.5	0.0
WCS				*eS*	Sg	22 27 22.3	+0.3
VCHM	**Qimei**	**1.71**	**298**	*eP*	Pn	22 26 58.8	-0.2
VCHM				*eS*	Sn	22 27 21.0	+0.1
WCHH	**Zhanghua**	**1.72**	**344**	*eS*	Sg	22 27 24.6	0.0
TWD	**Chiawan**	**1.72**	**16**	*eP*	Pn	22 26 59.5	+0.4
TWD				*eS*	Sn	22 27 18.8	-2.3
PHUB	**P'eng-hu**	**1.77**	**308**	*eP*	Pn	22 26 59.6	-0.1
PHUB				*eS*	Sn	22 27 21.3	-0.9
PNG	**Penghu**	**1.81**	**309**	*eP*	Pn	22 26 59.7	-0.6
PNG				*eS*	Sn	22 27 22.3	-1.0
NACB	**Ninganchiao**	**1.81**	**15**	P	Pb	22 27 02.1	-0.3
NACB	**Ninganchiao**	**1.81**	**15**	*eP*	Pn	22 26 59.7	-0.6
NACB				*eS*	Sn	22 27 22.5	-0.9
ETLH	**Xiulin Townshi**	**1.82**	**12**	*eP*	Pn	22 27 00.9	+0.4
ETLH				*eS*	Sn	22 27 23.3	-0.4
FUSS	**Fushou**	**1.83**	**5**	*eP*	Pb	22 27 02.9	+0.1
TDCB	**Techi**	**1.83**	**2**	*eP*	Pb	22 27 02.6	-0.1
TDCB				*eS*	Sg	22 27 27.4	-0.6
TWT	**Tachien**	**1.83**	**3**	*eP*	Pn	22 27 01.3	+0.5
TWT				*eS*	Sb	22 27 26.4	+0.6
WHP	**Taichung City**	**1.86**	**356**	P	Pb	22 27 03.4	+0.2
WHP				S	Sg	22 27 28.8	-0.1
TWQ1	**Liyutan**	**1.94**	**352**	*eP*	Pb	22 27 04.2	-0.4
TWQ1				*eS*	Sb	22 27 29.8	+0.9
NNSB	**Datong**	**2.02**	**8**	*eP*	Pb	22 27 04.8	-1.2
NNSB				*eS*	Sn	22 27 29.4	+0.7
NNS	**Nan Shan**	**2.03**	**8**	*eP*	Pn	22 27 04.5	+1.0
NNS				*eS*	Sn	22 27 29.2	+0.2
EOS4	**EOS4**	**2.04**	**34**	*eP*	Pn	22 27 02.4	-0.8
EOS4				*eS*	Sn	22 27 27.1	-1.4
LATG	**Datong**	**2.15**	**11**	*eP*	Pn	22 27 05.7	+0.6
LATG				*eS*	Sn	22 27 31.9	+0.1
EOS3	**EOS3**	**2.18**	**31**	*eP*	Pn	22 27 04.0	-1.3
EOS3				*eS*	Sn	22 27 31.2	-1.0
NFF	**Wufeng Townshi**	**2.21**	**1**	*eP*	Pb	22 27 08.0	-1.2
NFF				*eS*	Sb	22 27 35.4	-1.1
NSTT	**Nanjuang**	**2.21**	**358**	*eP*	Pb	22 27 08.0	-1.1
NSTT				*eS*	Sb	22 27 35.3	-1.1
LIOB	**Emei**	**2.22**	**359**	*eP*	Pn	22 27 07.1	+1.1
LIOB				*eS*	Sb	22 27 36.1	-0.8
ENTT	**Nioudou**	**2.26**	**11**	*eP*	Pn	22 27 06.9	+0.4
ENTT				*eS*	Sn	22 27 33.8	-0.6
YHNB	**Yeheng**	**2.26**	**7**	P	Pn	22 27 08.0	+1.4
YHNB	**Yeheng**	**2.26**	**7**	S	Sb	22 27 37.9	-0.2
YHNB	**Yeheng**	**2.26**	**7**	*eP*	Pn	22 27 07.7	+1.2
YHNB				*eS*	Sn	22 27 35.6	+1.1
NSK	**Sanguang**	**2.26**	**6**	*eP*	Pn	22 27 07.5	+0.9
NSK				*eS*	Sn	22 27 36.2	+1.6
KSHI	**Guanxi Townshi**	**2.35**	**2**	*eP*	Pb	22 27 09.9	-1.7
FUSB	**Fushanzhiwuyua**	**2.38**	**11**	*eP*	Pn	22 27 09.0	+0.8
FUSB				*eS*	Sn	22 27 38.4	+0.9
NWLT	**Wulai**	**2.38**	**9**	*eP*	Pn	22 27 09.4	+1.2
NWLT				*eS*	Sn	22 27 36.8	-0.6
TIPB	**Shuangxi**	**2.63**	**15**	*eP*	Pn	22 27 13.1	+1.4
TIPB				*eS*	Sn	22 27 43.3	-0.4
PTMZ	**Houxiangcun**	**3.17**	**326**	*eP*	Pn	22 27 19.7	+0.7
PTMZ				*eS*	Sn	22 27 57.2	+0.4
AXDP	**Jialang**	**3.77**	**312**	*eP*	Pn	22 27 28.2	+0.9
MATB	**Ma-tsu**	**3.86**	**345**	*eP*	Pn	22 27 28.7	+0.2
MATB				*eS*	Sn	22 28 13.9	+0.1
MHZQ	**Yeshan**	**4.12**	**333**	*eP*	Pn	22 27 32.9	+0.9
MHZQ				*eS*	Sn	22 28 20.3	+0.1
LYJJ	**Jianjiangzhen**	**4.29**	**344**	*eP*	Pn	22 27 35.9	+1.5
LYJJ				*eS*	Sn	22 28 25.6	+1.2

*AFAD **14** 22:38:56.7, 35°.79N×35°.87E, h3km±2km, ML2.7*
*GRAL **14** 22:38:56.0±0.3, 35°.84N×35°.81E, h6km±8km, MD3.3*
*ISK **14** 22:38:57.1, 35°.70N×35°.86E, h22km, ML2.8/18*
*NIC **14** 22:39:01.0, 35°.56N×35°.73E, h24km±7km, Ml2.2/11*

ISC 14 22:38:56.5±1.1, 35°.74N±0°.03×35°.92E±0°.03, h16km±9km, n43, σ0s80/68, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YAYL	**Yayladag**	**0.33**	**28**	P	**Pg**	**22 39 03.0**	**-0.6**
YAYL				S	**Sg**	**22 39 08.3**	**0.0**
RHAN	**Hatay/Reyhanl**	**0.76**	**47**	P	**Pg**	**22 39 11.7**	**+0.4**
RHAN				S	**Sn**	**22 39 22.4**	**-1.3**
RHAN				IAML		22 39 25.0	
	comp=E,220nm,0.3s						
RHAN				IAML		22 39 26.0	
	comp=N,336nm,0.2s						
YURE	**YUREGIR**	**1.10**	**348**	P	**Pg**	**22 39 18.3**	**+0.4**
HASA	**Hatay-Hassa-Ha**	**1.11**	**25**	P	**Pg**	**22 39 17.8**	**-0.2**
HASA				S	**Sg**	**22 39 32.7**	**+0.3**
HASA				IAML		22 39 36.0	
	comp=N,138nm,0.4s						
HASA				IAML		22 39 39.0	
	comp=E,135nm,0.5s						
BEIL	**Beino**	**1.22**	**169**	*eP*	**Pn**	**22 39 19.3**	**+0.4**
BEIL				*eS*	**Sg**	**22 39 36.3**	**+0.4**
KUZU	**Kuzuini**	**1.39**	**42**	P	**Pg**	**22 39 23.2**	**-0.2**
KUZU				S	**Sg**	**22 39 41.5**	**0.0**
KUZU				IAML		22 39 49.0	
	comp=N,188nm,0.5s						
EREN	**Erenkoy**	**1.44**	**262**	Pn	**Pn**	**22 39 21.8**	**-0.1**
EREN				Sn	**Sn**	**22 39 39.8**	**-0.6**
HWQ	**Hawqa**	**1.46**	**179**	*eP*	**Pn**	**22 39 22.9**	**+0.6**
HWQ				*eS*	**Sb**	**22 39 43.1**	**+1.4**
CAYT	**Sariam**	**1.51**	**342**	P	**Pn**	**22 39 23.4**	**+0.6**
CAYT				S	**Sg**	**22 39 45.8**	**+0.6**
CAYT				IAML		22 39 46.0	
	comp=N,131nm,0.3s						
CAYT				IAML		22 39 47.0	
	comp=E,149nm,0.3s						
PARAL	**Paralimni**	**1.71**	**245**	P	**Pn**	**22 39 24.6**	**-0.9**
PARAL				S	**Sn**	**22 39 46.4**	**-0.6**
PARAL				AML	AML	22 39 47.6	
	0.1nm,0.3s						
PARAL				AML	AML	22 39 48.2	
	0.1nm,0.5s						
SILI	**Silifke-Mersin**	**1.73**	**292**	Pn	**Pn**	**22 39 26.5**	**+0.6**
SILI				Sn	**Sn**	**22 39 47.7**	**0.0**
KOZT	**Kozan**	**1.74**	**358**	Pn	**Pn**	**22 39 27.0**	**+0.9**
GAZ	**Gaziantep**	**1.77**	**36**	Pn	**Pb**	**22 39 28.4**	**-0.2**
GAZ	**Gaziantep**	**1.77**	**36**	P	**Pg**	**22 39 31.2**	**+0.7**
GAZ				S	**Sg**	**22 39 52.8**	**-0.7**
GAZ				AML	AML	22 39 57.8	
	0.1nm,0.7s						
GAZ				AML	AML	22 40 00.5	
	0.1nm,0.5s						
KHMR	**Kahramanmara**	**1.79**	**26**	P	**Pb**	**22 39 28.1**	**-0.8**
KHMR				S	**Sn**	**22 39 49.0**	**-0.2**
BHL	**Bhannes**	**1.85**	**187**	*eP*	**Pn**	**22 39 28.2**	**+0.5**
ANDN	**Andirin**	**1.87**	**11**	P	**Pb**	**22 39 29.5**	**-0.8**
ANDN				S	**Sb**	**22 39 53.5**	**0.0**
IKL	**Isikli**	**1.88**	**286**	Pn	**Pn**	**22 39 27.7**	**-0.2**
IKL				Sn	**Sn**	**22 39 50.5**	**-0.8**
ZAHL	**Zahle**	**1.88**	**181**	*eP*	**Pn**	**22 39 28.9**	**+0.8**
KEBE	**Keben-Mersin**	**1.92**	**292**	Pn	**Pn**	**22 39 29.2**	**+0.6**
KEBE				Sn	**Sn**	**22 39 52.4**	**0.0**
KMRS	**Kahramanmaras**	**1.93**	**24**	Pn	**Pb**	**22 39 30.6**	**-0.8**
KMRS				Sn	**Sb**	**22 39 54.6**	**-0.6**
BECE	**Buyukeceli-Mer**	**1.96**	**283**	Pn	**Pn**	**22 39 29.2**	**+0.2**
LFK	**Lefkose**	**2.00**	**257**	Pn	**Pn**	**22 39 30.0**	**+0.3**
MVOU	**Mavrovouni**	**2.00**	**249**	P	**Pn**	**22 39 29.4**	**-0.3**
MVOU				S	**Sn**	**22 39 53.0**	**-1.4**
MVOU				AML	AML	22 40 01.9	
MVOU				AML	AML	22 40 06.2	
DQRL	**Deir Qamar**	**2.05**	**188**	*eP*	**Pn**	**22 39 30.9**	**+0.5**
CMRD	**Camardi-Nigde**	**2.06**	**339**	Pn	**Pn**	**22 39 31.5**	**+0.9**
TEVE	**Tevekalti-Mers**	**2.12**	**290**	Pn	**Pn**	**22 39 31.9**	**+0.5**
QRWL	**Qaraoun**	**2.20**	**185**	*eP*	**Pn**	**22 39 33.1**	**+0.7**
CSS	**Mathiatis**	**2.25**	**251**	P	**Pn**	**22 39 33.9**	**+0.8**
CSS				AML	AML	22 39 58.2	
CSS				S	**Sn**	**22 39 59.7**	**-0.9**
CSS				AML	AML	22 40 05.5	
TEKE	**Tekeli-Mersin**	**2.31**	**281**	Pn	**Pn**	**22 39 34.3**	**+0.4**
XYLS	**Xyliatos**	**2.45**	**254**	P	**Pn**	**22 39 36.9**	**+1.0**
XYLS				S	**Sn**	**22 40 04.8**	**-0.8**
XYLS				AML	AML	22 40 09.0	
XYLS				AML	AML	22 40 17.1	
KRMN	**Karaman**	**2.57**	**305**	Pn	**Pn**	**22 39 38.8**	**+1.2**
TROD	**Troodos**	**2.62**	**253**	P	**Pn**	**22 39 39.7**	**+1.3**
TROD				S	**Sn**	**22 40 09.1**	**-0.8**
TROD				AML	AML	22 40 25.3	
TROD				AML	AML	22 40 25.6	
YESY	**Yesilyurt**	**2.68**	**320**	Pn	**Pn**	**22 39 40.5**	**+1.4**
SARI	**SarD1z-Kayseri**	**2.69**	**8**	Pn	**Pn**	**22 39 40.8**	**+1.5**
ALFC	**Alefka**	**2.77**	**259**	P	**Pn**	**22 39 40.9**	**+0.7**
ALFC				S	**Sn**	**22 40 13.3**	**-0.1**
ALFC				AML	AML	22 40 24.7	
ALFC				AML	AML	22 40 25.5	
NATA	**Nata**	**2.90**	**252**	P	**Pn**	**22 39 43.9**	**+1.8**
NATA				S	**Sn**	**22 40 15.9**	**-0.7**
NATA				AML	AML	22 40 35.6	
	0.1nm,0.3s						
NATA				AML	AML	22 40 38.6	
	0.1nm,0.5s						
GAZI	**Gazipasa**	**2.96**	**281**	Pn	**Pn**	**22 39 44.0**	**+1.1**
AKMS	**Akamas**	**3.01**	**257**	P	**Pn**	**22 39 45.0**	**+1.4**
AKMS				S	**Sn**	**22 40 18.9**	**-0.5**
AKMS				AML	AML	22 40 35.3	
	0.1nm,0.9s						
AKMS				AML	AML	22 40 41.2	
	0.1nm,0.9s						
HDMB	**Hadim**	**3.02**	**295**	Pn	**Pn**	**22 39 44.8**	**+0.8**
MMLI	**Mount Malkishu**	**3.32**	**187**	Pn	**Pn**	**22 39 48.3**	**+0.4**
MMLI	**Mount Malkishu**	**3.32**	**187**	P	**Pn**	**22 39 48.9**	**+1.0**
MMLI				S	**Sn**	**22 40 26.6**	**-0.5**
MMLI				AML	AML	22 40 27.9	
MMLI				AML	AML	22 40 35.1	
OSC2	**CSNet OBS 4**	**4.02**	**230**	P	**Pn**	**22 39 58.0**	**+0.6**
OSC2				S	**Sn**	**22 40 43.0**	**-1.2**
OSC2				AML	AML	22 40 46.5	
	0.1nm,1.8s						

IDC 14 23:05:43.6±2.3, 7°.62N×124°.82E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=242.1km s-min=22.0km az=65.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**28.95**	**161**	P	P	23 11 45.4	+0.5
	0.6nm,0.4s,baz=341,slow=9.1,SNR=12						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**32.34**	**164**	P	P	23 12 14.2	-0.6
	0.3nm,0.3s,baz=339,slow=6.5,SNR=8.6						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**53.30**	**325**	P	P	23 15 04.9	+0.4
	0.3nm,0.5s,baz=125,slow=7.0,SNR=8.0						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**57.46**	**327**	P	P	23 15 33.6	-0.8
	0.2nm,0.5s,baz=131,slow=6.3,SNR=2.1						
	0.2nm,0.5s						

*UPP **14** 23:08:22.3±0.1, 67°.18N×20°.62E, h0km, ML2.5, Suspected explosion*
*HEL **14** 23:08:22.5±0.3, 67°.14N×20°.57E, h0km, ML1.1, Suspected explosion*

ISC 14 23:08:21.8±0.9, 67°.19N±0°.02×20°.76E±0°.03, h0km, n21, σ0s89/33, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.10**	**230**	P	**Pg**	**23 08 23.7**	**0.0**
DUNU				S	**Sg**	**23 08 24.7**	**-0.2**
DUNU	**Dundret**	**0.10**	**230**	P	**Pg**	**23 08 24.3**	**+0.5**
	baz=33						
DUNU				S	**Sg**	**23 08 25.3**	**+0.3**
MASU	**Masugnsbyn**	**0.55**	**60**	P	**Pb**	**23 08 33.7**	**-0.7**
MASU				S	**Sb**	**23 08 42.0**	**-0.9**
MASU	**Masugnsbyn**	**0.55**	**60**	P	**Pb**	**23 08 34.3**	**-0.1**
MASU				S	**Sb**	**23 08 42.5**	**-0.3**
RATU	**Laukkuluspa**	**0.78**	**325**	P	**Pg**	**23 08 36.5**	**-0.3**
RATU	**Laukkuluspa**	**0.78**	**325**	P	**Pg**	**23 08 37.3**	**+0.5**
RATU				S	**Sg**	**23 08 48.0**	**+1.0**
KUA	**Kurravaara**	**0.79**	**348**	P	**Pg**	**23 08 37.1**	**+0.1**
KUA	**Kurravaara**	**0.79**	**348**	P	**Pb**	**23 08 37.7**	**-0.7**
KUA				S	**Sb**	**23 08 48.8**	**-0.9**
ERTU	**Ertsjaerv**	**0.85**	**138**	PG	**Pg**	**23 08 38.2**	**+0.1**
LANU	**Lannavaara**	**0.99**	**28**	P	**Pb**	**23 08 41.2**	**-0.6**
LANU				S	**Sb**	**23 08 55.0**	**-0.3**
LANU	**Lannavaara**	**0.99**	**28**	PG	**Pb**	**23 08 41.3**	**-0.4**
	baz=216						
KOVU	**Salmi**	**1.07**	**348**	P	**Pg**	**23 08 41.8**	**-0.4**
KLF	**Kolari**	**1.25**	**86**	PG	**Pb**	**23 08 46.1**	**-0.1**
	baz=268						
KLF				smax	smax	23 09 02.4	
	comp=Z,1.3nm,0.2s						
KLF				SG	**Sn**	**23 09 03.4**	**-0.6**
HEF	**Hetta**	**1.65**	**41**	smax	smax	23 09 14.1	
	comp=Z,1.2nm,0.2s						
HEF				SN	**Sg**	**23 09 17.3**	**+2.5**
TOF	**Tornio**	**1.80**	**126**	PG	**Pb**	**23 08 55.6**	**-0.1**
TOF				smax	smax	23 09 17.4	
	comp=Z,0.9nm,0.2s						
TOF				SG	**Sg**	**23 09 20.2**	**+0.6**
KIF	**Kilpisjarvi**	**1.83**	**0**	PG	**Pg**	**23 08 56.7**	**-0.1**
KIF				smax	smax	23 09 19.5	
	comp=Z,1.1nm,0.2s						
KIF				SG	**Sg**	**23 09 22.3**	**+1.8**
KTK1	**Kautokeino**	**2.06**	**26**	PG	**Pg**	**23 09 00.9**	**-0.3**
KTK1				SG	**Sg**	**23 09 27.9**	**+0.1**
RNF	**Rovaniemi**	**2.15**	**103**	PG	**Pb**	**23 09 01.6**	**0.0**
RNF				SG	**Sg**	**23 09 31.2**	**+0.4**
RANF	**Ranua**	**2.68**	**113**	SG	**Sb**	**23 09 45.4**	**+1.5**
ARA0	**ARCESS Array S**	**2.94**	**35**	SB	**Sb**	**23 09 52.8**	**+1.2**
MSF	**Maaselka**	**3.55**	**107**	SG	**Sg**	**23 10 13.6**	**-2.1**

*BGR **14** 23:14:04.9, 20°.93S×178°.38W, h33km*
*BJI **14** 23:15:15.4, 17°.62S×177°.49W, h621km, mB4.8/9, mb4.7/29*
*NEIC **14** 23:15:15.0±1.6, 18°.08S±0°.08×178°.19W±0°.08, h604km±5km, mb4.6/63, Error ellipse: s-maj=14.9km s-min=6.9km az=221.0*
*NOU **14** 23:15:15.2, 18°.17S×178°.09W, h617km, mb4.7/48, Fiji Islands Region*
*IDC **14** 23:15:15.4±0.9, 18°.13S×178°.24W, h605km±9km, mb3.7/17, mbtmp4.6/20, Error ellipse: s-maj=14.5km s-min=11.1km az=135.0*

ISC 14 23:15:14.3±0.3, 18°.17S±0°.06×178°.19W±0°.06, h600km, n334, σ1s34/332, mb4.7/81, 34C-32D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.60**	**276**	P	**P**	**23 16 40.1**	**+2.8**
	138nm,0.7s,baz=127,slow=8.8,SNR=71						
MSVF				S	**S**	**23 17 46.8**	**+2.0**
	14nm,0.9s,baz=244,slow=23,SNR=0.7						
MSVF	**Nonsavu**	**3.60**	**276**	P	**P**	**23 16 39.7**	**+2.4**
MSVF	**Nonsavu**	**3.60**	**276**		**P**	**23 16 39.9**	**+2.6**
FUTU	**Fugatoga**	**3.84**	**1**	P	**P**	**23 16 40.9**	**+2.1**
FUTU	**Fugatoga**	**3.84**	**1**	S	**S**	**23 17 51.3**	**+3.8**
FUTU	**Fugatoga**	**3.84**	**1**	P	**P**	**23 16 40.2**	**+1.4**
AFI	**Afiamalu**	**7.48**	**56**	P	**P**	**23 17 08.8**	**-0.1**
	123nm,0.9s,baz=264,slow=3.3,SNR=14						
AFI				S	**S**	**23 18 37.8**	**-4.8**
	19nm,0.7s,baz=276,slow=21,SNR=1.7						
NIUE	**Niue**	**7.89**	**98**	P	**P**	**23 17 13.8**	**+1.2**
FUNA	**Funafuti**	**9.92**	**345**	P	**P**	**23 17 31.2**	**-1.2**
SANVU	**Saraoutou**	**14.24**	**279**	P	**P**	**23 18 16.7**	**+1.1**
SANVU	**Saraoutou**	**14.24**	**279**	P	**P**	**23 18 15.7**	**+0.1**
OUENC	**Ouen Island, N**	**14.66**	**251**	P	**P**	**23 18 19.4**	**0.0**
DZM	**Mont Dzumac**	**14.94**	**252**	P	**P**	**23 18 22.6**	**+0.5**
	12nm,0.6s,baz=8.1,slow=7.1						
DZM	**Mont Dzumac**	**14.94**	**252**	P	**P**	**23 18 23.1**	**+1.0**
DZM	**Mont Dzumac**	**14.94**	**252**	P	**P**	**23 18 22.3**	**+0.1**
ONTNC	**Ouen Toro**	**14.99**	**251**	P	**P**	**23 18 23.0**	**+0.6**
OUZ	**Omahuta**	**18.49**	**202**	P	**P**	**23 18 55.8**	**+1.6**
TOZ	**Tahuroa Road**	**20.26**	**195**	P	**P**	**23 19 11.1**	**+0.9**
TOZ				IAmb	IAmb	23 19 18.0	
	comp=Z,13nm,0.9s						
URZ	**Urewera**	**20.43**	**191**	P	**P**	**23 19 11.2**	**-0.6**
	comp=Z,11nm,0.5s,baz=321,slow=1.3,SNR=18						
URZ				S	**S**	**23 22 17.6**	**-5.9**
	comp=Z,2.8nm,0.6s,baz=44,slow=20,SNR=1.6						
	comp=Z,11nm,0.5s						
URZ	**Urewera**	**20.43**	**191**	P	**P**	**23 19 11.6**	**-0.2**
URZ	**Urewera**	**20.43**	**191**	S	**S**	**23 22 23.3**	**-0.1**
BKZ	**Black Stump Fm**	**21.43**	**191**	P	**P**	**23 19 21.0**	**+0.2**
BFZ	**Birch Farm**	**22.94**	**191**	P	**P**	**23 19 34.6**	**+0.4**
TATA	**Tatamba Isabel**	**23.49**	**292**	P	**P**	**23 19 40.0**	**+0.6**
SNZO	**South Karori**	**23.86**	**193**	P	**P**	**23 19 42.7**	**+0.5**
SNZO	**South Karori**	**23.86**	**193**	P	**P**	**23 19 42.0**	**-0.2**
SNZO				IAmb	IAmb	23 19 45.8	
	comp=Z,24nm,0.7s						
QRZ	**Quartz Range**	**23.95**	**198**	P	**P**	**23 19 44.2**	**+1.1**
QRZ	**Quartz Range**	**23.95**	**198**	S	**S**	**23 23 19.7**	**+0.9**
KHZ	**Kahutara**	**25.18**	**195**	P	**P**	**23 19 54.2**	**+0.4**
LTZ	**Lake Taylor**	**25.84**	**196**		**P**	**23 19 59.6**	**-0.2**
LTZ				IAmb	IAmb	23 20 02.2	
	comp=Z,9.5nm,0.8s						
RPZ	**Rata Peaks**	**27.04**	**197**	P	**P**	**23 20 10.2**	**0.0**
RPZ	**Rata Peaks**	**27.04**	**197**	S	**S**	**23 24 08.3**	**+1.2**
JCZ	**Jackson Bay**	**28.06**	**200**	P	**P**	**23 20 19.7**	**+0.5**
ODZ	**Otahua Downs**	**28.38**	**197**	P	**P**	**23 20 22.2**	**+0.4**
EIDS	**Eidsvold**	**29.38**	**250**	P	**P**	**23 20 31.5**	**+0.7**
EIDS	**Eidsvold**	**29.38**	**250**	P	**P**	**23 20 30.9**	**+0.1**
EIDS				IAmb	IAmb	23 20 32.4	
	comp=Z,28nm,0.9s						
ARMA	**Armidale**	**29.99**	**240**	P	**P**	**23 20 36.7**	**+0.6**
ARMA	**Armidale**	**29.99**	**240**	P	**P**	**23 20 37.1**	**+0.9**
ARMA				IAmb	IAmb	23 20 38.7	
	comp=Z,16nm,0.9s						
CNB	**Canberra Magne**	**33.43**	**233**	P	**P**	**23 21 06.1**	**+0.9**
CTA	**Charters Tower**	**33.61**	**261**	P	**P**	**23 21 07.2**	**+0.3**
	comp=Z,31nm,0.6s,baz=87,slow=11,SNR=26						
	comp=Z,31nm,0.6s						
CTAO	**Charters Tower**	**33.61**	**261**	P	**P**	**23 21 07.5**	**+0.7**
CTAO	**Charters Tower**	**33.61**	**261**		**P**	**23 21 06.9**	**0.0**
CAN	**Canberra**	**33.71**	**233**	P	**P**	**23 21 08.3**	**+0.8**
CAN	**Canberra**	**33.71**	**233**	P	**P**	**23 21 08.3**	**+0.8**
CAN				IAmb	IAmb	23 21 10.1	
	comp=Z,27nm,0.9s						
PMG	**Port Moresby**	**34.71**	**280**	P	**P**	**23 21 17.6**	**+1.6**
PMG	**Port Moresby**	**34.71**	**280**		**P**	**23 21 16.7**	**+0.7**
PMG	**Port Moresby**	**34.71**	**280**	P	**P**	**23 21 17.3**	**+1.3**
	comp=Z,129nm,0.9s						
CMSA	**Cobar Meteorol**	**35.20**	**241**	P	**P**	**23 21 20.8**	**+0.9**
MTSU	**Mount Surprise**	**35.59**	**264**	P	**P**	**23 21 23.9**	**+0.6**
GLAD	**Gladstone**	**36.81**	**225**	P	**P**	**23 21 33.4**	**+0.5**
TOO	**Toolangi**	**37.17**	**231**		**P**	**23 21 37.3**	**+1.3**
TOO				IAmb	IAmb	23 21 38.6	
	comp=Z,9.4nm,0.8s						
COEN	**Coen**	**37.31**	**271**	P	**P**	**23 21 38.1**	**+0.6**
COEN	**Coen**	**37.31**	**271**		**P**	**23 21 38.2**	**+0.8**
MANU	**Manus Island**	**37.39**	**291**	P	**P**	**23 21 38.4**	**+0.4**
STKA	**Stephens Creek**	**38.69**	**241**	P	**P**	**23 21 50.0**	**+1.6**
	comp=Z,36nm,0.8s,baz=92,slow=10,SNR=47						
	comp=Z,36nm,0.8s						
STKA	**Stephens Creek**	**38.69**	**241**	P	**P**	**23 21 49.5**	**+1.1**
STKA	**Stephens Creek**	**38.69**	**241**	P	**P**	**23 21 49.5**	**+1.1**
QIS	**Mount Isa**	**39.81**	**259**	P	**P**	**23 21 58.2**	**+0.7**
HTT	**Hallett**	**41.19**	**240**	P	**P**	**23 22 09.4**	**+1.1**
BBOO	**Buckleboo**	**43.46**	**241**	P	**P**	**23 22 26.7**	**+0.7**
BBOO	**Buckleboo**	**43.46**	**241**	P	**P**	**23 22 26.8**	**+0.6**
KEKH	**Kekaha**	**43.81**	**25**	P	**P**	**23 22 28.6**	**-0.1**
WB0	**Warramunga Arr**	**44.76**	**260**	P	**P**	**23 22 35.7**	**-0.5**
WRAB	**Tennant Creek**	**44.78**	**260**	P	**P**	**23 22 36.3**	**0.0**
WRA	**Warramunga Arr**	**44.79**	**260**	P	**P**	**23 22 36.3**	**-0.1**
	comp=Z,32nm,0.7s,baz=95,slow=7.3,SNR=446						
WRA				PcP	**PcP**	**23 24 05.4**	**+0.2**
	comp=Z,4.1nm,0.7s,baz=89,slow=3.4,SNR=6.4						
WRA				S	**S**	**23 28 24.4**	**-6.9**
	comp=Z,1.6nm,0.7s,baz=99,slow=13,SNR=5.6						
	comp=Z,32nm,0.7s						
WRA	**Warramunga Arr**	**44.79**	**260**	P	**P**	**23 22 35.5**	**-0.9**
AS31	**Alice Springs**	**44.92**	**254**	P	**P**	**23 22 37.7**	**+0.3**
ASAR	**Alice Springs**	**44.92**	**254**	P	**P**	**23 22 37.9**	**+0.5**
	comp=Z,113nm,0.6s,baz=87,slow=8.8,SNR=790						
ASAR				PcP	**PcP**	**23 24 05.3**	**-0.3**
	comp=Z,5.7nm,0.6s,baz=94,slow=4.0,SNR=7.5						
ASAR				S	**S**	**23 28 26.8**	**-6.3**
	comp=Z,5.3nm,0.9s,baz=86,slow=15,SNR=17	

SBUM	Sibu	71.45	279	P		P		23 25 35.3	-0.6
SBUM	Sibu	71.45	279	P		P		23 25 37.0	+1.1
KPJI	Karang Pucung	71.52	268	P		P		23 25 36.4	+0.1
	comp=Z,39nm,1.0s								
JKA	Kamikawa-asahi	71.60	331	P		P		23 25 36.0	-0.1
JKA				IAmb		IAmb		23 25 53.8	
	comp=Z,24nm,1.5s								
QSPA	South Pole Qui	71.89	180	P		P		23 25 39.4	+1.8
	comp=Z,4.1nm,0.8s,baz=6.0,slow=0.8,SNR=16								
	comp=Z,4.1nm,0.8s								
QSPA	South Pole Qui	71.89	180	P		P		23 25 39.1	+1.4
YULB	Yu-li	72.08	303	P		P		23 25 38.0	-1.4
YULB				IAmb		IAmb		23 25 42.0	
	comp=Z,35nm,1.2s								
SSLB	Suanglung	72.55	303	P		P		23 25 40.7	-1.4
SSLB				IAmb		IAmb		23 26 14.9	
	comp=Z,18nm,1.0s								
BBJI	Bungbulang	72.70	268			P		23 25 42.3	-0.9
BBJI				IAmb		IAmb		23 25 43.7	
	comp=Z,17nm,0.7s								
BBJI	Bungbulang	72.70	268	P		P		23 25 42.6	-0.6
	comp=Z,26nm,0.8s								
LEM	Lembang	72.92	268	P		P		23 25 45.0	+0.5
	comp=Z,59nm,0.7s,baz=114,slow=6.0,SNR=14								
DBJI	Dramaga	73.82	268	P		P		23 25 50.0	+0.5
PEA0B	Petropavlovsk-	73.98	345	P		P		23 25 49.4	-0.1
PETK	Petropavlovsk-	73.98	345	P		P		23 25 49.2	-0.3
	comp=Z,2.9nm,0.6s,baz=108,slow=8.4,SNR=5.3								
	comp=Z,2.9nm,0.6s								
PETK	Petropavlovsk-	73.98	345	P		P		23 25 49.6	+0.1
CGJI	Cibinong	74.81	268	P		P		23 25 54.1	-0.9
KSRS	Korea Array	75.03	318	P		P		23 25 56.3	+0.6
	comp=Z,1.7nm,0.7s,baz=124,slow=6.6,SNR=6.1								
	comp=Z,1.7nm,0.7s								
KASI	Kota Agung	76.26	269	P		P		23 26 02.3	-0.8
	comp=Z,53nm,1.1s								
MDSI	Maura Dua	76.87	270	P		P		23 26 05.3	-1.1
	comp=Z,19nm,0.8s								
MNAI	Manna	78.07	269	P		P		23 26 12.8	-0.1
NJ2	Nanjing	78.26	309	⇓P		P		23 26 14.5	+1.0
NJ2				pmax		pmax			
	comp=Z,28nm,0.7s								
MDJ	Mudanjiang	78.52	325	P		P		23 26 15.3	+0.7
MDJ				pmax		pmax			
	comp=Z,18nm,0.9s								
O16K	Kokwok River B	79.20	10	P		P		23 26 16.9	-0.9
NVAR	Mina Array Bea	79.47	44	P		P		23 26 21.9	+1.9
	comp=Z,0.6nm,0.3s,baz=238,slow=8.6,SNR=2.6								
	comp=Z,0.6nm,0.3s								
M16K	Timber Creek	80.42	9	P		P		23 26 25.1	+0.9
BNX	BinXian	80.43	325	⇑P		P		23 26 25.0	+0.5
BNX				pmax		pmax			
	comp=Z,13nm,0.9s								
BRLK	Bradley Lake	80.78	14	P		P		23 26 25.8	-0.3
BRLK				IAmb		IAmb		23 26 43.0	
	comp=Z,16nm,1.3s								
BELA	Belgrano 2	81.88	173			P		23 26 32.3	+0.8
BELA				IAmb		IAmb		23 26 33.7	
	comp=Z,8.2nm,0.7s								
STLK	Strandline Lak	82.14	12	P		P		23 26 32.0	-1.1
U15A	North Rim	82.54	48	P		P		23 26 37.3	+1.4
GHO	Glory Hole Cre	83.01	14	P		P		23 26 37.4	0.0
GHO				IAmb		IAmb		23 26 38.2	
	comp=Z,6.8nm,0.6s								
J18K	Innoko River	83.08	10	P		P		23 26 38.0	+0.4
HEH	HeiHe	83.24	328	eP		P		23 26 38.8	+0.1
HEH				pmax		pmax			
	comp=Z,6.0nm,1.1s								
SCM	Sheep Creek Mo	83.43	14	P		P		23 26 39.5	0.0
SCM				IAmb		IAmb		23 26 40.3	
	comp=Z,7.0nm,0.6s								
HNS	HongShan	83.85	312	⇑P		P		23 26 43.3	+1.3
HNS				pmax		pmax			
	comp=Z,8.0nm,0.8s								
RPSI	Rantau Prapat	84.08	275	P		P		23 26 43.0	-0.7
RPSI				IAmb		IAmb		23 26 44.6	
	comp=Z,18nm,0.8s								
BJI2	Beijing	84.11	315	P		P		23 26 43.8	+0.6
BJT	Baijiatuau	84.11	315	P		P		23 26 43.4	+0.2
BJT				IAmb		IAmb		23 26 44.9	
	comp=Z,15nm,1.4s								
TRF	Thorofare Moun	84.22	12	P		P		23 26 42.8	-0.6
TRF				IAmb		IAmb		23 26 44.4	
	comp=Z,6.3nm,0.7s								
RND	Reindeer	84.48	13	P		P		23 26 44.9	+0.3
ENH	Enshi	84.59	304			P		23 26 46.1	+0.3
ENH				IAmb		IAmb		23 26 47.7	
	comp=Z,19nm,0.8s								
GSI	Gunungsitoli	84.92	273	P		P		23 26 48.3	+0.5
GSI				IAmb		IAmb		23 26 50.0	
	comp=Z,25nm,0.9s								
WRH	Wood River Hil	85.58	13	P		P		23 26 49.2	-0.5
WRH				IAmb		IAmb		23 26 50.3	
	comp=Z,11nm,1.4s								
CCB	Clear Creek Bu	85.79	13	P		P		23 26 50.2	-0.5
IMAR	Indian Mountai	85.90	10	P		P		23 26 51.1	-0.1
TXAR	Lajitas Array	85.96	58	P		P		23 26 55.2	+2.7
	comp=Z,1.8nm,0.7s,baz=217,slow=6.0,SNR=23								
	comp=Z,1.8nm,0.7s								
TXAR	Lajitas Array	85.96	58			P		23 26 54.7	+2.2
ILAR	Eielson Array	86.09	13	P		P		23 26 51.5	-0.7
	comp=Z,1.1nm,0.5s,baz=224,slow=4.6,SNR=27								
	comp=Z,1.1nm,0.5s								
ILAR	Eielson Array	86.09	13	P		P		23 26 52.0	-0.2
XAN	Xi'an	86.58	307	⇓P		P		23 26 56.4	+1.1
XAN				pmax		pmax			
	comp=Z,20nm,1.0s								
PD31	Pinedale Array	87.40	43	P		P		23 26 59.6	+0.5
PDAR	Pinedale Array	87.40	43	P		P		23 27 00.4	+1.2
	comp=Z,0.9nm,0.6s,baz=217,slow=3.9,SNR=13								
	comp=Z,0.9nm,0.6s								
PDAR	Pinedale Array	87.40	43	P		P		23 26 59.8	+0.6
HHC	Hu-ho-hao-te	87.60	314	eP		P		23 27 01.5	+1.5
HHC				pmax		pmax			
	comp=Z,14nm,0.6s								
HHC				pmax		pmax			
	comp=Z,43nm,4.6s								
ELIB	Princess Elisa	88.93	187	dP		P		23 27 06.7	+1.0
	comp=Z,9.3nm,0.8s								
CMAR	Chiang Mai Arr	89.17	290	P		P		23 27 09.3	+1.6
	comp=Z,4.8nm,0.8s,baz=108,slow=2.9,SNR=34								
	comp=Z,4.8nm,0.8s								
CMAR	Chiang Mai Arr	89.17	290			P		23 27 08.4	+0.8
CHTO	Chiang Mai	89.28	290			P		23 27 08.4	+0.2
CHTO				IAmb		IAmb		23 27 10.1	
	comp=Z,7.3nm,0.8s								
CHTO	Chiang Mai	89.28	290	P		P		23 27 09.3	+1.1
PZH	PanZhiHua	89.46	298	P		P		23 27 02.3	-6.7
TROLL	Troll, Antarti	90.05	180	P		P		23 27 12.0	+1.1
SNAA	Sanae	90.33	179	⇑pPKiKP		pPKiKP		23 34 24.7	+3.3
SNAA	Sanae	90.33	179	P		P		23 27 12.6	+0.5
SNAA				IAmb		IAmb		23 27 24.6	
	comp=Z,8.7nm,1.3s								
VNA3	Neumayer Olymp	90.47	176	⇑P		P		23 27 14.1	+1.4
	comp=Z,10nm,0.8s								
VNA2	Neumayer--Watz	90.91	177	⇑P		P		23 27 15.2	+0.5
	comp=Z,4.3nm,0.6s,baz=174,slow=4.4								
VNA1	Neumayer--Stat	91.14	177	⇑P		P		23 27 14.6	-1.1
	comp=Z,12nm,1.0s								
LZH	Lanzhou	91.21	308	eP		P		23 27 18.4	+1.5
LZH				pmax		pmax			
	comp=Z,13nm,1.2s								
LZDM	Lanzhou Array	91.28	307	P		P		23 27 18.2	+0.8
	comp=Z,0.9nm,0.3s,baz=22,slow=9.6,SNR=4.6								
	comp=Z,0.9nm,0.3s								
F31M	Tsiigehtchic	91.38	16	P		P		23 27 16.6	-0.1
F31M				IAmb		IAmb		23 27 17.7	
	comp=Z,4.8nm,0.7s								
SONM	Songino Array	93.88	319	P		P		23 27 29.7	+0.9
	comp=Z,0.4nm,0.6s,baz=83,slow=2.0,SNR=6.0								
	comp=Z,0.4nm,0.6s								
SONM	Songino Array	93.88	319	P		P		23 27 29.4	+0.6
YKA	Yellowknife Ar	94.48	25	P		P		23 27 31.1	+0.1
	comp=Z,0.3nm,0.7s,baz=254,slow=4.7,SNR=5.1								
	comp=Z,0.3nm,0.7s								
GTA2	Gaotai	95.42	310	eP		P		23 27 36.5	+0.5
GTA2				pmax		pmax			
	comp=Z,2.0nm,1.0s								
WMQ	Urumqi	105.26	312	Pdif		Pdif		23 28 27.5	+7.9
WMQ				LR		LR			
	comp=Z,150nm,24.0s								
MKAR	Makanchi Array	109.46	314	Pdiff		Pdif		23 28 39.2	+1.0
	comp=Z,0.1nm,0.5s,baz=87,slow=5.9,SNR=1.9								
BVAR	Borovoye Array	117.18	321	PKP		PKiKP		23 32 51.6	-0.5
	comp=Z,2.0nm,0.5s,baz=200,slow=0.4,SNR=12								
KK31	Karatay Array	117.64	310	PKPdf		PKPdf		23 32 52.8	-0.5
KKAR	Karatay Array	117.64	310	PKPdf		PKPdf		23 32 52.7	-0.6
ARTI	Arti	123.29	326			PKPdf		23 33 03.2	-0.4
ARCES	ARCESS Array B	126.61	350	PKP		PKPdf		23 33 09.1	-0.6
	comp=Z,2.8nm,0.7s,baz=285,slow=6.0,SNR=4.3								
FINES	FINESS Array B	133.49	344	PKP		PKPdf		23 33 22.5	-0.5
	comp=Z,3.1nm,0.9s,baz=48,slow=2.8,SNR=4.4								
NOA	NORSAR Array B	136.66	353	PKP		PKPdf		23 33 28.7	-0.2
	comp=Z,0.7nm,0.9s,baz=59,slow=2.6,SNR=3.4								
HFS	Hagfors	137.22	351	PKiKP		PKPpre		23 33 22.6	
	comp=Z,3.2nm,0.9s,baz=57,slow=5.5,SNR=4.9								
AKASG	Malin Array Be	140.89	332	PKhKP		PKPpre		23 33 30.5	
	comp=Z,0.7nm,0.4s,baz=45,slow=4.1,SNR=8.9								
AKBB	Malin Array Si	140.89	332	PKPdf		PKPdf		23 33 30.3	-6.5
AK11	Malin Array Si	140.93	332	PKPdf		PKPdf		23 33 30.8	-6.1
RNPP9	Sopachiv	141.74	336	PKPdf		PKPdf		23 33 34.2	-4.1
RNPP5	Staryi Chortor	141.89	335	PKPdf		PKPdf		23 33 34.7	-3.9
LUBAR	Lubar, Ukraine	142.10	333	PKPdf		PKPdf		23 33 34.9	-4.1
SORM	Soroca	143.12	330	⇓P		PKPab		23 33 38.5	-0.3
NDNU	Novodnistrovsk	143.25	331	PKPdf		PKPab		23 33 37.7	-1.7
PURM	Purcari	143.46	327	⇓P		PKPbc		23 33 40.3	0.0
PURM	Purcari	143.46	327	PKPdf		PKPab		23 33 39.4	-0.8
KMPD	K-Podol'skiy	143.68	332	PKPdf		PKPbc		23 33 37.0	-4.0
KMPD				PKPdf		PKPab		23 33 39.5	-1.5
KWP	Kalwaria Pacla	144.39	337	ePKP		PKPab		23 33 43.1	-0.6
KWP	Kalwaria Pacla	144.39	337	PKPdf		PKPdf		23 33 41.5	-1.6
STNU	Starunia	144.41	334	PKPdf		PKPdf		23 33 41.7	-1.4
SHIU	Shidnytsya	144.47	336	PKPdf		PKPdf		23 33 41.3	-2.0
KSV	Kosov	144.47	333	PKPdf		PKPdf		23 33 42.6	-0.7
VLDR	Vladesti	144.84	327	⇓P		PKPab		23 33 45.5	-0.1
TLCR		144.90	326	⇓P		PKPab		23 33 45.7	-0.2
OJC	Ojcow	144.93	340	ePKP		PKPab		23 33 44.9	-0.8
OJC	Ojcow	144.93	340			PKPbc		23 33 44.5	-0.3
BURAR	Bucovina Array	144.94	332	⇑P		PKPab		23 33 45.7	-0.3
GHRR		145.03	328	⇓P		PKPab		23 33 45.9	-0.4
BR131	Keskin Array S	145.11	315			PKPbc		23 33 45.3	-0.6
BRTR	Keskin Array B	145.11	315	PKPbc		PKPbc		23 33 45.8	-0.1
	comp=Z,6.3nm,0.8s,baz=142,slow=5.0,SNR=38								
BRTR	Keskin Array B	145.11	315			PKPbc		23 33 45.2	-0.6
BR104	Keskin Array S	145.12	315	PKPdf		PKPdf		23 33 44.6	-0.2
BR105	Keskin Array S	145.13	315	PKPdf		PKPbc		23 33 45.0	-0.9
KIRS	Kirsehir-Merke	145.20	314	⇓P		PKPbc		23 33 46.0	-0.1
CFR	Carcaliu	145.27	327	⇑P		PKPab		23 33 46.4	-0.9
BRIU	Brid	145.31	335	PKPdf		PKPbc		23 33 45.3	-0.6
TPGR	Topolog	145.33	326	⇑P		PKPab		23 33 47.0	-0.6
ONER	Baraj Valea Uz	145.34	330	⇓P		PKPab		23 33 47.4	-0.1
MUKU	Mukachevo	145.35	335	PKPdf		PKPbc		23 33 45.6	-0.4
UZHM	Uzhgorod	145.37	336	PKPdf		PKPbc		23 33 45.8	-0.3
KSP	Ksiaz	145.42	344	ePKP		PKPab		23 33 47.1	-0.6
NIE	Niedzica	145.44	339	ePKP		PKPab		23 33 47.3	-0.5
VRI	Vrincioaia	145.51	329	⇓P		PKPab		23 33 47.4	-0.8
BERU	Beregovo	145.54	335	PKPdf		PKPab		23 33 46.2	-0.4
BMR	Baia Mare	145.64	334	⇑P		PKPab		23 33 47.7	-1.0
OSTC	Ostas	145.70	344	ePKP		PKPab		23 33 48.3	-0.5
CLL	Collm	145.76	347			PKPbc		23 33 47.1	0.0
CLL	Collm	145.76	347	iPKPbc		PKPbc		23 33 47.4	+0.3
	comp=Z,29nm,0.8s								
CLL	Collm	145.76	347	ePKPbc		PKPab		23 33 47.7	-1.2
	baz=18,slow=2.5								
CLL	Collm	145.76	347	PKPdf		PKPbc		23 33 46.7	-0.4
COVR	Voineasa-Covas	145.78	329	⇓P		PKPbc		23 33 47.4	0.0
UPC	Upice	145.80	344	⇑ePKP		PKPbc		23 33 47.7	+0.4
STEB	Steborice	145.81	342	⇑ePKP		PKPab		23 33 48.1	-1.2
DPC	Dobruska-Polom	145.86	343	⇑ePKP		PKPab		23 33 48.3	-1.2
DPC	Dobruska-Polom	145.86	343	PKPdf		PKPbc		23 33 46.7	-0.8
BOSR	Bodos	145.88	330	⇑P		PKPab		23 33 49.0	-0.7
LANS	Liptovska Anna	145.96	339	ePKP		PKPab		23 33 49.3	-0.6
BRG	Berggiesshubel	145.97	346	ePKPbc		PKPab		23 33 48.5	-1.4
	baz=18,slow=2.5								
KRLC	Kraliky	145.98	343	⇑ePKP		PKPbc		23 33 48.4	+0.5
MORC	Moravsky Berou	146.02	342	⇑P		PKPdf		23 33 46.4	+0.5
MORC	Moravsky Berou	146.02	342	ePKP		PKPab		23 33 48.6	-1.6
DOPR	Dopca	146.09	330	⇓P		PKPab		23 33 49.4	-1.2
NEUB	Neuenburg	146.10	349	ePKPbc		PKPab		23 33 48.8	-1.5
	baz=18,slow=2.5								
PVCC	Panska Ves	146.14	345	⇑ePKP		PKiKP		23 33 49.1	-1.5
MLR	Muntele Rosu	146.16	329	⇑P		PKPbc		23 33 48.8	+0.2
MLR	Muntele Rosu	146.16	329			PKPbc		23 33 47.9	-0.8
MAUC	Maruska	146.30	341	⇑ePKP		PKiKP		23 33 49.7	-1.3
CJR	Cluj-Napoca	146.34	333	⇓P		PKiKP		23 33 49.7	-1.4
MMAI	Mount Meron Ar	146.46	303	PKPbc		PKiKP		23 33 50.3	-1.6
	comp=Z,8.0nm,0.6s,baz=46,slow=7.2,SNR=28								
LTVH	Ltavrtes, Hu	146.53	335	⇓P		PKPbc		23 33 49.1	-0.3
MARR	Marisel-Cluj	146.58	333	⇑P		PKPbc		23 33 49.0	-0.7
PRA	Prague	146.60	345	⇑ePKP		PKiKP		23 33 50.5	-1.0
VOIR		146.63	330	⇓P		PKPbc		23 33 48.9	-1.0
PRU	Pruhonice	146.65	345	⇑ePKP		PKiKP		23 33 50.2	-1.4
DRGR		146.66	334	⇑P		PKiKP		23 33 50.4	-1.4
PLN	Plauen	146.71	348	ePKPbc		PKiKP		23 33 50.5	-1.2
	baz=18,slow=2.5								
TANN	Tannenbergstha	146.72	348	ePKPbc		PKiKP		23 33 50.6	-1.2
	baz=18,slow=2.5								
VRAC	Vranov	146.72	342	⇓P		PKPbc		23 33 49.7	-0.2
VRAC	Vranov	146.72	342	ePKP		PKPbc		23 33 50.3	+0.4
JAVC	Velka Javorina	146.79	341	ePKP		PKiKP		23 33 51.8	-0.2
PSZ	Piszkesteto	146.85	338	⇑P		PKiKP		23 33 50.8	-1.4
PSZ	Piszkesteto	146.85	338			PKiKP		23 33 49.8	-0.6
ARR	Arges	146.88	330	⇓P		PKiKP		23 33 51.4	-1.0
NKC	Novy Kostel	146.89	347	⇑ePKP		PKiKP		23 33 51.1	-1.1
KRUC	Moravsky	147.00	342	ePKP		PKiKP		23 33 51.0	-1.4
BORA	Eskisehir	147.14	317			PKPbc		23 33 51.0	-0.4
MANZ	Manzenberg	147.20	348	ePKPbc		PKiKP		23 33 51.9	-0.9
	baz=18,slow=2.5								
LOT	Lotru	147.23	331	⇑P		PKPbc		23 33 51.3	-0.2
ZVC	Zvikov	147.24	345	⇑ePKP		PKPbc		23 33 51.5	+0.3
ZVC				ePKPAB		PKPab		23 33 55.1	+0.1
MODS	Modra-Piesok	147.35	341	ePKP		PKiKP		23 33 52.8	-0.3
UCC	Uccle	147.38	357	dPKPdf		PKPdf		23 33 47.4	-0.7
ROTZ	Rotzenmuhle	147.38	347	ePKPbc		PKiKP		23 33 52.4	-0.8
	baz=18,slow=2.5								
CSS	Mathiatis	147.40	307			PKPbc		23 33 51.2	-0.9
MEM	Membach	147.46	355	dPKP		PKPbc		23 33 49.8	-1.9
BTNL	Ternell	147.47	355	dPKiKP		PKiKP		23 33 52.4	-1.0
BSTI	Sart Tilman	147.52	356	dPKP		PKiKP		23 33 52.6	-0.8
KHC	Kasperske Hory	147.68	345	⇑ePKP		PKiKP		23 33 52.7	-1.1
BHOU	Houvegnez	147.72	355	dPKiKP		PKiKP		23 33 53.1	-0.7
GZR	Gura Zlata	147.72	332	⇓P		PKPbc		23 33 52.6	0.0
BGES	Gesves	147.75	356	dPKiKP		PKiKP		23 33 52.9	-0.9
CKRC	Cesky Krumlov	147.79	344	⇑ePKP		PKiKP		23 33 54.2	+0.2
BMRD	Maredsous	147.85	356	dPKiKP		PKiKP		23 33 53.3	-0.7
GEC2	GERESS Array S	147.91	345			PKPbc		23 33 53.1	0.0
GEC2	GERESS Array S	147.91	345	ePKPbc		PKiKP		23 33 53.7	-0.7
	baz=18,slow=2.5								
GERES	GERESS Array B	147.91	345	PKPbc		PKiKP		23 33 53.4	-1.1
	comp=Z,4.6nm,0.7s,baz=0.0,slow=2.7,SNR=37								
RCHB	Rochefort	147.97	356	dPKP		PKPbc		23 33 52.3	-0.7
BZS	Buzias	148.06	333	⇑P		PKiKP		23 33 53.8	-0.9
DOU	Dourbes	148.07	357	dPKiKP		PKiKP		23 33 53.8	-0.7
CONA	Conrad Observa	148.17	342	iPKiKP		PKiKP		23 33 54.4	-0.6
	comp=Z,17nm,1.3s,SNR=5.5								
RONA	Rosalia, Austr	148.25	341	iPKiKP		PKiKP		23 33 54.4	-0.7
	comp=Z,9.9nm,0.9s								
HERR	Herculane	148.28	332	⇓P		PKPbc		23 33 54.0	0.0
PLVB	Pleven	148.33	327	⇑P		PKiKP		23 33 54.6	-0.6
WLF	Walferdange	148.39	355	dPKiKP		PKiKP		23 33 55.3	+0.1
WLF	Walferdange	148.39	355	ePKPbc		PKiKP		23 33 55.4	+0.2
	baz=18,slow=2.5								
MDVR	Moldovita	148.67	332	⇑P		PKPbc		23 33 54.4	-0.6
MOA	Molln	148.69	344	iPKiKP		PKiKP		23 33 55.2	-0.8
	comp=Z,10nm,1.3s								
MORH	Mrgy, Hungar	148.75	337	⇑P		PKPbc		23 33 54.3	-0.8
ARSA	Arzberg	148.88	342	iPKiKP		PKiKP		23 33 55.5	-0.8
	comp=Z,6.0nm,1.2s								
STU	Stuttgart	148.89	351	ePKPbc		PKiKP		23 33 56.2	-0.1
	baz=18,slow=2.5								
BIOA	Bad Ischl, Aus	149.00	344	iPKiKP		PKiKP		23 33 55.8	-0.8
	comp=Z,8.8nm,1.1s								
RJOB	Jochberg	149.17	345	ePKPbc		PKiKP		23 33 56.6	-0.4
	baz=18,slow=2.5								
BFO	Black Forest	149.45	351			PKPbc		23 33 55.8	-0.9
BFO	Black Forest	149.45	351	ePKPbc		PKiKP		23 33 57.3	-0.1
	baz=18,slow=2.5								
LESA	Schwarzleotal	149.49	345	iPKiKP		PKiKP		23 33 57.1	-0.6
	comp=Z,6.4nm,0.7s								
SOKA	Soboth	149.55	342	iPKP		PKPbc		23 33 56.7	-0.4
	comp=Z,14nm,1.2s								
KBA	Koelnbreinsper	149.65	344	iPKiKP		PKPbc		23 33 57.0	-0.5
	comp=Z,7.9nm,0.8s								
UBR	Ueberruh	149.79	349	ePKPbc		PKiKP		23 33 58.2	-0.1
	baz=18,slow=2.5								
WATA	Walderalm	149.82	347	iPKiKP		PKiKP		23 33 57.9	-0.6
	comp=Z,7.7nm,0.7s								
RETA	Reutte	149.85	348	iPKiKP		PKiKP		23 33 58.0	-0.5
	comp=Z,8.0nm,1.2s								
WTTA	Wattenberg	149.88	347	iPKiKP		PKiKP		23 33 58.2	-0.4
	comp=Z,16nm,0.7s,SNR=5.6								
MOTA	Moosalm	149.92	347	iPKiKP		PKiKP		23 33 58.1	-0.6
	comp=Z,14nm,1.0s								
MYKA	Terra Mystica	149.98	344	iPKP		PKPbc		23 33 57.6	-0.6
	comp=Z,9.0nm,0.7s								
SQTA	Sankt Quirin	150.01	347	iPKiKP		PKiKP		23 33 58.4	-0.4
	comp=Z,10nm,0.7s								
ABTA	Abfaltersbach	150.16	345	iPKiKP		PKPbc		23 33 58.2	-0.4
	comp=Z,15nm,0.7s,SNR=5.8								
DAVA	Damuels	150.21	349	iPKiKP		PKiKP		23 33 58.9	-0.4
	comp=Z,15nm,1.1s								
FETA	Feichten	150.30	348	iPKiKP		PKiKP		23 33 59.4	-0.1
	comp=Z,15nm,1.0s								
BLY	Banja Luka	150.54	337	⇓P		PKiKP		23 34 00.3	+0.5
ESDC	Sonseca Array	157.99	12	PKP		PKPdf		23 34 04.3	+0.5
	comp=Z,0.5nm,1.0s,baz=341,slow=1.7,SNR=2.9								
DBIC	Dimbokro	166.85	150	PKP		PKPdf		23 34 11.4	-1.6
	comp=Z,15nm,1.2s,baz=202,slow=7.0,SNR=3.2								
TORD	Torodi Ar. Bea	175.01	179	PKP		PKPdf		23 34 15.6	-1.5
	comp=Z,1.5nm,0.9s,baz=236,slow=2.3,SNR=7.1								

MAN 14 23:20:05.0, 6.60N×125.24E, h10km, MS3.9, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KCP	Kidapawan	0.43	340	iP		Pg	23 20 13.8	+0.2
KCP				iS		Sg	23 20 20.2	+0.9
DMPH	Davao City--Mi	0.55	29	iP		Pg	23 20 16.1	+0.4
DMPH				iS		Sb	23 20 24.5	-0.2
GSPH	General Santos	0.59	210	iP		Pb	23 20 17.4	-0.1
GSPH				iS		Sn	23 20 28.0	-1.2
DDMP	Don Marcelino,	0.68	136	eP		Pb	23 20 18.8	-0.2
DDMP				eS		Sb	23 20 29.2	+0.7
CTBH	Cotabato--PC H	1.16	302	iP		Pb	23 20 25.7	-1.5
CTBH				iS		Sg	23 20 42.6	+0.1
TSSP	Tandag City	2.61	21	eP		Pn	23 20 47.6	+0.4
DCPH	Dipolog City	2.72	317	iP		Pb	23 20 51.5	-2.2
DCPH				iS		Sg	23 21 32.5	+0.1

CNCH	**Conchagua**	**3.69**	**95**	P		**Pn**	**23 25 46.8**	**+1.6**
CNCH				S		**Sn**	**23 26 31.6**	**+2.4**
CNCH	**Conchagua**	**3.69**	**95**	*e*P		**Pn**	**23 25 47.7**	**+2.5**
CSGN	**Cosiguina Volc**	**4.00**	**99**	P		**Pn**	**23 25 51.2**	**+1.8**
CSGN				S		**Sn**	**23 26 38.6**	**+2.0**
PKGN	**Cerro Pekin**	**4.61**	**102**	P		**Pn**	**23 25 59.2**	**+1.4**
PKGN				S		**Sn**	**23 26 52.6**	**+0.9**
YUSH	**Yuscaran**	**4.64**	**86**	P		**Pn**	**23 25 59.7**	**+1.4**
CMIG	**Matias Romero**	**4.66**	**318**	Pn		**Pn**	**23 25 58.8**	**+0.3**
	comp=N,2.8nm,0.3s,baz=136,slow=11,SNR=33							
CMIG				Sn		**Sn**	**23 26 51.9**	**-1.1**
	comp=N,7.6nm,0.3s,baz=90,slow=19,SNR=7.2							
	comp=N,26nm,0.6s							
TEL3	**Telica 3**	**4.76**	**102**	P		**Pn**	**23 26 00.1**	**+0.2**
HERN	**Volcan Telica**	**4.77**	**102**	P		**Pn**	**23 26 01.4**	**+1.4**
OCON	**Estacion meteo**	**4.99**	**90**	P		**Pn**	**23 26 03.3**	**+0.3**
COPN	**Copaltepe**	**5.10**	**106**	P		**Pn**	**23 26 06.8**	**+2.3**
LIMN	**Finca el Limon**	**5.13**	**96**	P		**Pn**	**23 26 06.2**	**+1.1**
RCVN	**Varillal2**	**5.26**	**90**	P		**Pn**	**23 26 08.3**	**+1.4**
RCON	**San Juan de Ri**	**5.30**	**91**	P		**Pn**	**23 26 09.0**	**+1.6**
JTS	**Las Juntas de**	**7.31**	**116**	Pn		**Pn**	**23 26 34.7**	**-0.3**
	comp=N,1.5nm,0.3s,baz=317,slow=19,SNR=4.4							
JTS				Lg		Lg	23 28 24.4	
	comp=N,0.6nm,0.3s,baz=63,slow=21,SNR=4.0							
	comp=N,3.9nm,0.4s							
ROSC	**El Rosal**	**19.16**	**116**	P		**P**	**23 29 11.5**	**-0.7**
	comp=N,1.1nm,0.3s,baz=276,slow=24,SNR=4.1							
	comp=N,4.0nm,0.3s							
TXAR	**Lajitas Array**	**19.20**	**326**	P		**Pn**	**23 29 14.2**	**+1.0**
	comp=N,0.1nm,0.3s,baz=155,slow=12,SNR=16							
	comp=N,1.5nm,0.8s							
SDV	**Santo Domingo**	**21.10**	**101**	P		**P**	**23 29 32.1**	**-1.1**
	comp=N,1.4nm,0.4s,baz=329,slow=9.5,SNR=3.3							
SDV				LR		LR	23 39 40.8	
	comp=N,48nm,18.0s,baz=258,slow=42							
	comp=N,1.4nm,0.4s							
TKL	**Tuckaleechee C**	**23.03**	**16**	P		**P**	**23 29 52.8**	**-0.6**
	comp=N,1.3nm,0.5s,baz=235,slow=12,SNR=2.0							
	comp=N,1.3nm,0.5s							
PDAR	**Pinedale Array**	**32.90**	**335**	P		**P**	**23 31 22.4**	**-0.3**
	comp=N,0.2nm,0.6s,baz=140,slow=7.1,SNR=2.4							
	comp=N,0.2nm,0.6s							
NVAR	**Mina Array Bea**	**34.19**	**321**	P		**P**	**23 31 34.2**	**+0.2**
	comp=N,0.6nm,0.3s,baz=114,slow=8.7,SNR=5.2							
	comp=N,0.6nm,0.3s							
ULM	**Lac du Bonnet**	**36.67**	**355**	LR		LR	23 50 51.8	
	comp=N,27nm,18.2s,baz=304,slow=43							
ILAR	**Eielson Array**	**63.32**	**337**	P		**P**	**23 35 16.6**	**-0.5**
	comp=N,0.4nm,0.7s,baz=170,slow=4.8,SNR=12							
	comp=N,0.4nm,0.7s							
CMAR	**Chiang Mai Arr**	**146.45**	**342**	PKPbc		**PKPdf**	**23 44 29.5**	**+0.3**
	comp=N,1.2nm,0.7s,baz=337,slow=4.0,SNR=11							

DJA ***14*** *23:26:32.8±0.5, 7°S±3°×10°6E±°, h25km±3km, M4.1/30, mB5.5/1, mb4.3/4, MLv4.0/30, Mw(mB)4.9/1*
IDC ***14*** *23:26:34.7±5.3, 6°76S×105°63E, h79km±42km, mb3.5/12, mbtmp3.9/13, ML4.8/1, Error ellipse: s-maj=55.1km s-min=14.8km az=53.0*
NEIC ***14*** *23:26:34.6±1.8, 6°8S±0°1×105°65E±0°08, h75km±10km, mb4.4/12, Error ellipse: s-maj=21.1km s-min=7.7km az=208.0*

ISC 14 23:26:32.2±0.6, 6°93S±0°08×105°58E±0°06, h56km, n62, σ1s70/63, mb3.9/16, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGJI	**Cibinong**	**0.33**	**21**	P	**Pn**	**23 26 43.0**	**+0.8**
CGJI				S	**Sn**	**23 26 49.9**	**+0.6**
SBJI	**Serang**	**0.97**	**35**	P	**Pn**	**23 26 50.8**	**+1.1**
DBJI	**Dramaga**	**1.22**	**72**	P	**Pn**	**23 26 54.1**	**+1.0**
TNG	**Tangerang**	**1.30**	**55**	P	**Pn**	**23 26 55.1**	**+1.0**
TNG				P	**Pn**	**23 26 55.1**	**+1.0**
BLSI	**Bandar Lampung**	**1.58**	**348**	P	**Pn**	**23 27 00.2**	**+2.2**
KASI	**Kota Agung**	**1.76**	**322**	P	**Pn**	**23 27 02.9**	**+2.6**
LEM	**Lembang**	**2.03**	**87**	P	**Pn**	**23 27 07.3**	**+3.1**
	131nm,0.4s,baz=223,slow=11,SNR=13						
LEM				S	**Sn**	**23 27 31.1**	**+2.6**
	193nm,0.5s,baz=207,slow=14,SNR=9.1						
LEM	**Lembang**	**2.03**	**87**	P	**Pn**	**23 27 06.8**	**+2.6**
BBJI	**Bungbulang**	**2.13**	**105**		**Pn**	**23 27 06.3**	**+0.9**
BBJI				Sn	**Sn**	**23 27 30.7**	**0.0**
BBJI	**Bungbulang**	**2.13**	**105**	P	**Pn**	**23 27 05.8**	**+0.4**
KLI	**Kotabumi**	**2.17**	**341**	P	**Pn**	**23 27 09.7**	**+3.8**
KLSI		**2.38**	**339**	P	**Pn**	**23 27 11.9**	**+3.1**
LWLI	**Liwa**	**2.42**	**321**	P	**Pn**	**23 27 14.1**	**+4.6**
MDSI	**Maura Dua**	**2.79**	**330**	P	**Pn**	**23 27 17.8**	**+3.3**
KPJI	**Karang Pucung**	**3.35**	**97**	P	**Pn**	**23 27 26.4**	**+4.3**
MNAI	**Manna**	**3.65**	**314**	Pn	**Pn**	**23 27 28.6**	**+2.4**
MNAI				Sn	**Sn**	**23 28 09.6**	**+1.6**
MNAI	**Manna**	**3.65**	**314**	P	**Pn**	**23 27 29.2**	**+3.0**
KSI	**Kapahiang**	**4.40**	**317**	P	Pn	23 27 45.1	+8.5
TPI	**Tanjungpandan**	**4.63**	**27**	P	**Pn**	**23 27 41.3**	**+1.6**
UGM	**Wanagama**	**5.00**	**102**		**Pn**	**23 27 46.1**	**+1.4**
UGM	**Wanagama**	**5.00**	**102**	P	**Pn**	**23 27 46.5**	**+1.7**
PCJI	**Pacitan**	**5.70**	**103**	P	**Pn**	**23 27 56.0**	**+1.8**
JAGI	**Jajag, Banyuwa**	**8.64**	**101**	Pn	**Pn**	**23 28 35.5**	**+0.9**
MYKOM	**Kota Tinggi**	**8.83**	**349**	Pn	**Pn**	**23 28 38.2**	**+1.0**
KKM	**Kota Kinabalu**	**16.69**	**40**	Pn	**Pn**	**23 30 21.4**	**-1.2**
KKM				IAmb	IAmb	23 30 42.9	
	comp=Z,24nm,1.2s						
GIRL	**Giralia**	**17.71**	**153**	P	**Pn**	**23 30 35.6**	**+0.6**
GIRL				IAmb	IAmb	23 31 13.2	
	comp=Z,44nm,1.4s						
BATI	**Baumata**	**18.18**	**102**	P	**Pn**	**23 30 41.8**	**+0.9**
	comp=Z,2.8nm,0.3s,baz=348,slow=3.6,SNR=2.2						
	comp=Z,9.0nm,0.4s						
FITZ	**Fitzroy Crossi**	**22.49**	**121**	P	**P**	**23 31 28.1**	**+1.0**
	comp=Z,4.2nm,1.1s,baz=304,slow=11,SNR=2.2						
	comp=Z,4.2nm,1.1s						
KNRA	**Kununurra**	**24.32**	**113**	P	**P**	**23 31 45.0**	**+0.2**
KNRA				IAmb	IAmb	23 32 25.6	
	comp=Z,25nm,1.5s						
CMAR	**Chiang Mai Arr**	**26.06**	**346**	P	**P**	**23 31 59.0**	**-1.6**
	comp=Z,0.5nm,0.3s,baz=186,slow=7.8,SNR=4.1						
	comp=Z,0.5nm,0.3s						
WB0	**Warramunga Arr**	**30.74**	**117**	P	**P**	**23 32 42.6**	**+0.3**
WB0				IAmb	IAmb	23 32 57.6	
	comp=Z,6.8nm,1.2s						
WRA	**Warramunga Arr**	**30.75**	**118**	P	**P**	**23 32 43.1**	**+0.6**
	comp=Z,0.2nm,0.4s,baz=291,slow=10,SNR=7.4						
WRA				PcP	**PcP**	**23 35 39.3**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=305,slow=2.2,SNR=4.8						
	comp=Z,0.2nm,0.4s						
WRA	**Warramunga Arr**	**30.75**	**118**	P	**P**	**23 32 41.7**	**-0.8**
ASAR	**Alice Springs**	**31.89**	**125**	P	**P**	**23 32 52.0**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=298,slow=8.6,SNR=1.8						
	comp=Z,0.1nm,0.3s						
ASAR	**Alice Springs**	**31.89**	**125**	P	**P**	**23 32 53.1**	**+0.6**
H08S2	**Diego Garcia H**	**32.82**	**267**	T	T	00 07 17.9	
	baz=91,slow=76,SNR=16						
H08S3	**Diego Garcia H**	**32.83**	**267**	T	T	00 07 21.7	
	baz=91,slow=76,SNR=32						
H08S1	**Diego Carcia H**	**32.84**	**267**	T	T	00 07 22.7	
	baz=91,slow=76,SNR=4.0						
COEN	**Coen**	**37.59**	**104**	P	**P**	**23 33 42.2**	**+0.4**
STKA	**Stephens Creek**	**41.74**	**131**	P	**P**	**23 34 16.6**	**+0.6**
	comp=Z,1.4nm,0.5s,baz=300,slow=8.9,SNR=3.8						
	comp=Z,1.4nm,0.5s						
SONM	**Songino Array**	**54.53**	**1**	P	**P**	**23 35 53.8**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=176,slow=10,SNR=5.5						
SONM				PcP	**PcP**	**23 36 56.2**	**-1.1**
	comp=Z,0.8nm,0.7s,baz=208,slow=3.4,SNR=4.5						
	comp=Z,0.5nm,0.5s						
KDJ	**Kajisay**	**55.28**	**335**	P	**P**	**23 35 59.7**	**-0.5**
BOOM	**Boomskoye usch**	**56.11**	**334**	P	**P**	**23 36 05.9**	**-0.2**
SHAA	**Shahritus**	**56.39**	**325**		**P**	**23 36 06.4**	**-1.6**
SHAA				IAmb	IAmb	23 36 07.7	
	comp=Z,7.7nm,0.9s						
ARSB	**Arslanbob**	**56.55**	**331**	P	**P**	**23 36 08.3**	**-0.9**
ARSB				IAmb	IAmb	23 36 10.2	
	comp=Z,2.4nm,0.6s						
BTK	**Batken**	**56.69**	**328**	P	**P**	**23 36 09.4**	**-0.7**
MKAR	**Makanchi Array**	**57.35**	**341**	P	**P**	**23 36 13.5**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=154,slow=8.6,SNR=8.9						
	comp=Z,0.3nm,0.3s						
MKAR	**Makanchi Array**	**57.35**	**341**	P	**P**	**23 36 13.2**	**-1.4**
H04N2	**CROZET ISLANDS**	**60.40**	**220**	T	T	00 42 21.7	
	baz=68,slow=74,SNR=27						
H04N1	**CROZET ISLANDS**	**60.42**	**220**	T	T	00 42 20.6	
	baz=68,slow=74,SNR=21						
H04N3	**CROZET ISLANDS**	**60.42**	**220**	T	T	00 42 21.7	
	baz=68,slow=74,SNR=15						
KURBB	**Kurchatov Arra**	**61.91**	**341**	P	**P**	**23 36 45.0**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=155,slow=5.8,SNR=4.7						
KURBB				PcP	**PcP**	**23 37 25.8**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=149,slow=3.5,SNR=5.9						
	comp=Z,0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**63.12**	**346**	P	**P**	**23 36 51.8**	**-2.0**
	comp=Z,1.0nm,0.5s,baz=157,slow=5.2,SNR=5.3						
	comp=Z,1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**63.12**	**346**	P	**P**	**23 36 52.0**	**-1.8**
BVAR	**Borovoye Array**	**66.76**	**338**	P	**P**	**23 37 16.1**	**-1.5**
	comp=Z,1.4nm,0.5s,baz=143,slow=8.2,SNR=7.7						
	comp=Z,1.4nm,0.5s						
AB31	**Akbulak array**	**68.63**	**330**		**P**	**23 37 29.5**	**+0.1**
ABKAR	**Akbulak array**	**68.63**	**330**		**P**	**23 37 29.2**	**-0.2**
ARTI	**Arti**	**74.00**	**335**		**P**	**23 38 01.9**	**+0.3**
BRTR	**Keskin Array B**	**80.73**	**312**	P	**P**	**23 38 39.2**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=142,slow=7.3,SNR=3.4						
	comp=Z,0.9nm,0.7s						
FINES	**FINESS Array B**	**91.04**	**332**	P	**P**	**23 39 30.7**	**+0.5**
	comp=Z,3.4nm,0.9s,baz=116,slow=4.4,SNR=8.5						
	comp=Z,3.4nm,0.9s						
FINES	**FINESS Array B**	**91.04**	**332**	P	**P**	**23 39 29.9**	**-0.3**
TXAR	**Lajitas Array**	**144.57**	**47**	PKP	**PKPab**	**23 46 02.1**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=214,slow=1.2,SNR=9.4						

IDC 15 00:07:08.5±2.7, 30°16S×177°74W, h0km, mb3.8/2, mbtmp3.8/3, ML3.6/1, MS3.5/1, Error ellipse: s-maj=60.5km s-min=19.6km az=102.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.92**	**350**	Pn	Pn	00 07 29.7	+1.0
	244nm,0.3s,baz=100,slow=8.4,SNR=7.1						
RAO				Sn	Sn	00 07 41.6	-1.1
	767nm,0.3s,baz=21,slow=23,SNR=17						
URZ	**Urewera**	**9.13**	**206**	Pn	Pn	00 09 21.0	-0.5
	0.6nm,0.3s,baz=270,slow=4.3,SNR=8.3						
URZ				Sn	Sn	00 11 01.5	-3.5
	0.6nm,0.3s,baz=193,slow=22,SNR=5.9						
	4.4nm,0.9s						
ASAR	**Alice Springs**	**43.35**	**267**	P	P	00 15 12.7	0.0
	1.0nm,0.9s,baz=103,slow=7.5,SNR=10						
	1.0nm,0.9s						
WRA	**Warramunga Arr**	**44.31**	**272**	P	P	00 15 20.5	0.0
	0.6nm,0.3s,baz=111,slow=7.6,SNR=13						
	0.6nm,0.3s						
GUMO	**Guam**	**56.47**	**315**	LR	LR	00 38 25.3	
	comp=Z,51nm,21.6s,baz=92,slow=33						
FINES	**FINESS Array B**	**145.00**	**340**	PKPbc	PKPbc	00 26 45.1	-1.3
	2.3nm,0.5s,baz=63,slow=3.6,SNR=19						

NEIC ***15*** *00:20:53.0±2.0, 11°3S±0°1×162°70E±0°09, h10km±2km, mb4.3/11, Error ellipse: s-maj=26.7km s-min=5.0km az=34.0*
NOU ***15*** *00:20:53.2, 11°33S×162°73E, h0km, MLv4.9/12, Solomon Islands*
IDC ***15*** *00:20:58.1±3.3, 11°32S×162°55E, h51km±26km, mb3.9/6, mbtmp4.2/9, ML3.9/2, MS3.2/10, Error ellipse: s-maj=28.9km s-min=17.3km az=71.0*

ISC 15 00:20:57.0±0.8, 11°31S±0°08×162°72E±0°08, h50km, n42, σ1s13/40, mb4.1/9, MS3.2/8, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HURO	**Huro Makira**	**1.17**	**316**	P	**Pn**	**00 21 15.6**	**-1.4**
HURO	**Huro Makira**	**1.17**	**316**	S	**Sn**	**00 21 30.7**	**-1.1**
NGOA	**Tingoa Renbel**	**2.62**	**264**	P	**Pn**	**00 21 35.6**	**-1.2**
HNR	**Honiara**	**3.31**	**304**	P	**Pn**	**00 21 46.3**	**0.0**
	3.0nm,0.3s,baz=76,slow=5.4,SNR=9.9						
HNR				S	**Sn**	**00 22 22.5**	**-1.9**
	23nm,0.4s,baz=260,slow=5.5,SNR=5.4						
HNR				LR	LR	00 23 07.8	
	comp=Z,32nm,20.5s,baz=218,slow=41						
	14nm,0.5s						
HNR	**Honiara**	**3.31**	**304**	P	**Pn**	**00 21 46.6**	**+0.3**
HNR	**Honiara**	**3.31**	**304**		**Pn**	**00 21 45.0**	**-1.3**
HNR				Sn	**Sn**	**00 22 22.7**	**-1.8**
SAVO	**Savo Central**	**3.58**	**307**	P	**Pn**	**00 21 50.6**	**+0.5**
TATA	**Tatamba Isabel**	**4.09**	**315**	P	**Pn**	**00 21 57.3**	**+0.3**
SANVU	**Saraoutou**	**5.99**	**134**	P	**Pn**	**00 22 23.2**	**+0.1**
SANVU	**Saraoutou**	**5.99**	**134**		**Pn**	**00 22 22.8**	**-0.4**
SANVU				Sn	**Sn**	**00 23 27.9**	**-2.5**
DZM	**Mont Dzumac**	**11.28**	**162**	P	**Pn**	**00 23 36.9**	**+1.3**
	6.1nm,0.8s,baz=120,slow=20						
DZM				LR	LR	00 26 56.7	
	comp=Z,195nm,19.3s,baz=342,slow=32						
DZM	**Mont Dzumac**	**11.28**	**162**		**Pn**	**00 23 35.3**	**-0.3**
EIDS	**Eidsvold**	**17.80**	**217**		**Pn**	**00 25 00.9**	**-0.4**
EIDS				IAmb	IAmb	00 25 21.7	
	comp=Z,29nm,1.2s						
CTA	**Charters Tower**	**18.08**	**239**	P	**P**	**00 25 05.5**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=55,slow=13,SNR=13						
CTA				LR	LR	00 30 56.8	
	comp=Z,122nm,19.0s,baz=42,slow=33						
	comp=Z,19nm,0.8s						
CTA	**Charters Tower**	**18.08**	**239**	P	**P**	**00 25 06.8**	**+2.1**
CTAO	**Charters Tower**	**18.08**	**239**	P	**P**	**00 25 06.8**	**+2.1**
CTAO	**Charters Tower**	**18.08**	**239**		**P**	**00 25 05.4**	**+0.8**
CTAO				IAmb	IAmb	00 25 10.1	
	comp=Z,22nm,0.9s						
COEN	**Coen**	**19.25**	**260**	P	**Pn**	**00 25 19.3**	**+0.4**
COEN	**Coen**	**19.25**	**260**	P	**P**	**00 25 17.4**	**-0.1**
COEN				IAmb	IAmb	00 25 21.5	
	comp=Z,17nm,0.9s						
ARMA	**Armidale**	**21.62**	**207**	P	**P**	**00 25 43.0**	**-0.1**
ARMA				IAmb	IAmb	00 25 45.8	
	comp=Z,49nm,1.4s						
AFI	**Afiamalu**	**25.01**	**99**	LR	LR	00 34 41.4	
	comp=Z,63nm,19.5s,baz=39,slow=33						
CMSA	**Cobar Meteorol**	**25.55**	**215**	P	**P**	**00 26 22.7**	**+1.5**
STKA	**Stephens Creek**	**28.26**	**220**	P	**P**	**00 26 46.0**	**+0.4**
	comp=Z,2.4nm,0.6s,baz=40,slow=11,SNR=3.6						
	comp=Z,2.4nm,0.6s						
WB0	**Warramunga Arr**	**28.52**	**249**	P	**P**	**00 26 47.3**	**-0.9**
WB0				IAmb	IAmb	00 26 48.3	
	comp=Z,6.7nm,1.0s						
WRA	**Warramunga Arr**	**28.61**	**249**	P	**P**	**00 26 48.4**	**-0.5**
	comp=Z,3.0nm,0.5s,baz=79,slow=9.5,SNR=28						
	comp=Z,3.0nm,0.5s						
WRA	**Warramunga Arr**	**28.61**	**249**	P	**P**	**00 26 48.0**	**-0.9**
AS31	**Alice Springs**	**30.04**	**242**	P	**P**	**00 27 00.7**	**-0.9**
ASAR	**Alice Springs**	**30.04**	**242**	P	**P**	**00 27 00.7**	**-0.8**
	comp=Z,3.2nm,0.6s,baz=65,slow=10,SNR=56						
ASAR				LR	LR	00 38 41.2	
	comp=Z,88nm,18.8s,baz=92,slow=36						
	comp=Z,3.2nm,0.6s						
ASAR	**Alice Springs**	**30.04**	**242**	P	**P**	**00 27 00.1**	**-1.5**
TOO	**Toolangi**	**30.38**	**208**	P	**P**	**00 27 04.9**	**+0.5**
TOO				IAmb	IAmb	00 27 32.8	
	comp=Z,4.1nm,1.2s						
BBOO	**Buckleboo**	**32.52**	**225**	P	**P**	**00 27 23.5**	**+0.3**
KNRA	**Kununurra**	**33.28**	**259**	P	**P**	**00 27 29.1**	**-1.0**
RAR	**Rarotonga**	**37.24**	**110**	LR	LR	00 41 32.9	
	comp=Z,20nm,20.1s,baz=94,slow=33						
BATI	**Baumata**	**38.37**	**268**	LR	LR	00 45 24.5	
	comp=Z,111nm,18.1s,baz=280,slow=38						
KAPI	**Kappang**	**42.96**	**275**	LR	LR	00 47 17.4	
	comp=Z,28nm,20.0s,baz=152,slow=37						
KSRS	**Konsea Array**	**58.47**	**328**	LR	LR	00 54 22.2	
	comp=Z,18nm,19.7s,baz=85,slow=34						
CMAR	**Chiang Mai Arr**	**69.51**	**295**	LR	LR	01 02 38.6	
	comp=Z,4.3nm,19.1s,baz=190,slow=36						
SONM	**Songino Array**	**77.15**	**325**	P	**P**	**00 32 46.7**	**+1.2**
	comp=Z,0.9nm,0.7s,baz=134,slow=4.2,SNR=7.5						
SONM				LR	LR	01 06 54.0	
	comp=Z,9.9nm,18.2s,baz=47,slow=36						
	comp=Z,0.9nm,0.7s						
SONM	**Songino Array**	**77.15**	**325**	P	**P**	**00 32 47.0**	**+1.4**
SONM				IAmb	IAmb	00 33 04.3	
	comp=Z,1.3nm,0.8s						
ILAR	**Eielson Array**	**84.73**	**19**	P	**P**	**00 33 26.2**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=232,slow=4.4,SNR=1.5						
	comp=Z,0.5nm,0.6s						
MKAR	**Makanchi Array**	**91.70**	**317**	P	**P**	**00 33 59.4**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=96,slow=6.5,SNR=6.1						
MKAR				pP	**sP**	**00 34 15.6**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=93,slow=6.6,SNR=5.8						
	comp=Z,0.4nm,0.6s						
MKAR	**Makanchi Array**	**91.70**	**317**	P	**P**	**00 33 59.5**	**+0.4**

IDC ***15*** *00:29:37.1±1.4, 1°41S×121°03E, h0km, mb3.1/4, mbtmp3.2/5, ML3.7/1, MS2.5/1, Error ellipse: s-maj=49.9km s-min=21.6km az=77.0*
DJA ***15*** *00:29:37.2±0.2, 1°S±2°×12°1E±°, h10km, M4.0/25, mB6.3/1, mb4.1/2, MLv4.0/25, Mw(mB)6.1/1*

ISC 15 00:29:41.3±1.0, 1°22S±0°06×120°88E±0°06, h35km, n18, σ2s29/19, mb3.2/4, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	**Ampana**	**0.82**	**68**	P	**Pn**	**00 29 53.3**	**-3.1**
PCI	**Palu**	**1.09**	**287**	P	**Pn**	**00 29 56.9**	**-3.2**
MPSI	**Mapaga**	**1.83**	**328**	P	**Pn**	**00 30 06.6**	**-3.7**
LUWI	**Luwuk**	**1.90**	**85**	P	**Pn**	**00 30 10.7**	**-0.5**
MRSI	**Marisa**	**1.99**	**32**	P	**Pn**	**00 30 10.3**	**-2.2**
TTSI	**Tana Toraja**	**2.10**	**210**	P	**Pn**	**00 30 12.9**	**-1.1**
MMSI	**Mamuju**	**2.45**	**233**	P	**Pn**	**00 30 18.5**	**-0.4**
GTOI	**Gorontalo**	**2.81**	**49**	P	**Pn**	**00 30 23.0**	**-0.8**
SPSI	**Sidrap Palu**	**2.94**	**202**	P	**Pn**	**00 30 24.2**	**-1.4**
PMSI	**Majene**	**3.00**	**221**	P	**Pn**	**00 30 27.0**	**+0.6**
KAPI	**Kappang**	**3.94**	**197**	Pn	**Pn**	**00 30 37.1**	**-2.2**
	5.6nm,0.3s,baz=354,slow=11,SNR=12						
KAPI				Sn	**Sn**	**00 31 23.4**	**-0.8**
	1.5nm,0.3s,baz=34,slow=23,SNR=3.9						
KAPI				LR	LR	00 32 17.3	
	comp=Z,61nm,20.6s,baz=14,slow=42						
	16nm,0.3s						
KAPI	**Kappang**	**3.94**	**197**	P	**Pn**	**00 30 37.8**	**-1.5**
BSSI	**Bau Bau, Buton**	**4.91**	**185**	P	**Pn**	**00 30 50.3**	**-2.3**
EDFI	**Ende, Flores**	**7.52**	**174**	P	**Pn**	**00 31 26.6**	**-2.1**
WRA	**Warramunga Arr**	**22.79**	**146**	P	**P**	**00 34 39.1**	**-2.0**
	0.8nm,1.0s,baz=331,slow=8.7,SNR=4.8						
	0.8nm,1.0s						
ASAR	**Alice Springs**	**25.64**	**151**	P	**P**	**00 35 06.6**	**-1.3**
	0.3nm,0.8s,baz=329,slow=8.8,SNR=1.9						
	0.3nm,0.8s						
SONM	**Songino Array**	**50.46**	**347**	P	**P**	**00 38 39.7**	**+3.9**
	0.1nm,0.3s,baz=174,slow=8.2,SNR=1.9						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**58.56**	**330**	P	**P**	**00 39 36.1**	**+1.6**
	0.2nm,0.6s,baz=126,slow=7.3,SNR=2.0						
	0.2nm,0.6s						

IDC ***15*** *00:44:35.2±14.0, 19°58N×144°69E, h531km±187km, mb2.8/7, mbtmp3.7/7, Error ellipse: s-maj=41.7km s-min=29.3km az=33.0*

ISC 15 00:44:32.6±1.2, 19°6N±0°2×144°7E±0°3, h500km, n7, σ0s88/7, mb3.1/7, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.60**	**195**	P	**P**	**00 51 28.5**	**0.0**
	0.6nm,0.9s,baz=20,slow=8.3,SNR=2.0						
	0.6nm,0.9s						
MKAR	**Makanchi Array**	**57.16**	**314**	P	**P**	**00 53 31.9**	**+0.7**
	0.3nm,0.5s,baz=90,slow=7.8,SNR=4.6						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**60.02**	**318**	P	**P**	**00 53 50.1**	**-0.3**
	0.8nm,0.5s,baz=96,slow=7.4,SNR=10						
	0.8nm,0.5s						
ILAR	**Eielson Array**	**63.25**	**27**	P	**P**	**00 54 10.9**	**-0.4**
	0.2nm,0.6s,baz=259,slow=5.3,SNR=4.6						
	0.2nm,0.6s						
BVAR	**Borovoye Array**	**65.18**	**320**	P	**P**	**00 54 24.2**	**+0.4**
	1.0nm,0.5s,baz=101,slow=6.8,SNR=10						
	1.0nm,0.5s						
YKA	**Yellowknife Ar**	**77.62**	**28**	P	**P**	**00 55 37.4**	**+0.8**
	0.1nm,0.5s,baz=313,slow=6.4,SNR=5.3						
	0.1nm,0.5s						
FINES	**FINESS Array B**	**85.67**	**335**	P	**P**	**00 56 16.5**	**-1.3**
	1.0nm,0.6s,baz=53,slow=5.4,SNR=1.2						
	1.0nm,0.6s						

IDC 15 00:46:29.0±386.0, 2°05S×79°77W, h0km, Error ellipse: s-maj=210.5km s-min=149.6km az=22.0, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I20EC	**Galapagos**	**10.69**	**278**	I	I	01 50 20.0	
	baz=98,sl

T 4.9150, Plg24.0000°, Azm43.0000°; N -0.1143, Plg2.0000°, Azm134.0000°; P -4.8007, Plg66.0000°, Azm227.0000°;
*NEIC **15** 01:22:16.8, 15°.06N×92°.77W, h80km*
*MEX **15** 01:22:16.7±0.8, 14°.86N×92°.90W, h74km±9km, MD5.1*
*PTWC **15** 01:22:17, 15°.10N×92°.80W, h53km, Mwp5.0/3,*
MEXICO-GUATEMALA BORDER REGION

ISC 15 01:22:15.3±0.4,**14°.97N**±0°.03×**92°.82W**±0°.03,**h82**km±3km, **h82**km:**pP-P, n994,** σ**2**&**26**/935,**mb5.0**/214,**20C-29D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
THIG		**0.54**	**97**			**Pn**	**01 22 29.4**	**-0.2**
THIG						**Sn**	**01 22 40.0**	**-0.2**
THIG		**0.54**	**97**	⇓*eP*		**Pn**	**01 22 29.4**	**-0.2**
THIG				*eS*		**Sn**	**01 22 40.0**	**-0.2**
THIG		**0.54**	**97**	*i* P		**Pn**	**01 22 29.4**	**-0.2**
THIG				*i* S		**Sn**	**01 22 40.0**	**-0.2**
THIG				IAML			01 22 46.6	
	comp=E,94μm,0.5s							
PATR	**El Naranjo**	**0.58**	**76**			**Pn**	**01 22 30.2**	**-0.1**
PATR						**Sn**	**01 22 41.2**	**-0.2**
PATR	**El Naranjo**	**0.58**	**76**	⇓*eP*		**Pn**	**01 22 30.2**	**-0.1**
PATR				*eS*		**Sn**	**01 22 41.2**	**-0.2**
PATR	**El Naranjo**	**0.58**	**76**	P		**Pn**	**01 22 30.2**	**-0.1**
PAVE	**Pavencul**	**0.66**	**71**			**Pn**	**01 22 31.4**	**+0.4**
PAVE						**Sn**	**01 22 43.0**	**+0.3**
PAVE	**Pavencul**	**0.66**	**71**	⇓*eP*		**Pn**	**01 22 31.4**	**+0.4**
PAVE				*eS*		**Sn**	**01 22 43.0**	**+0.3**
CHUJ	**Union Juarez**	**0.70**	**80**	⇓*eP*		**Pn**	**01 22 31.4**	**0.0**
CHUJ				*eS*		**Sn**	**01 22 43.7**	**+0.4**
SMCA	**Catarina**	**0.73**	**99**	*i* P		**Pn**	**01 22 31.2**	**-0.2**
SMCA				*i* S		**Sn**	**01 22 42.9**	**-0.6**
PCIG		**0.82**	**332**			**Pn**	**01 22 33.0**	**+0.5**
PCIG						**Sn**	**01 22 45.4**	**+0.2**
PCIG		**0.82**	**332**	⇓*eP*		**Pn**	**01 22 33.0**	**+0.5**
PCIG				*eS*		**Sn**	**01 22 45.4**	**+0.2**
PCIG		**0.82**	**332**	P		**Pn**	**01 22 32.9**	**+0.5**
RTAL	**Retalhuleu**	**1.18**	**112**			**Pn**	**01 22 37.0**	**+0.4**
RTAL					Sn	**Sn**	**01 22 54.0**	**+1.3**
RTAL	**Retalhuleu**	**1.18**	**112**	⇓*eP*		**Pn**	**01 22 37.0**	**+0.4**
RTAL				*eS*		**Sn**	**01 22 53.0**	**+0.3**
RTAL	**Retalhuleu**	**1.18**	**112**	⇓P		**Pn**	**01 22 37.0**	**+0.4**
HUEH	**Huehuetenango**	**1.32**	**75**			**Pn**	**01 22 40.0**	**+1.4**
HUEH					Sn	**Sn**	**01 22 58.9**	**+2.8**
HUEH	**Huehuetenango**	**1.32**	**75**	⇑*eP*		**Pn**	**01 22 40.3**	**+1.7**
HUEH				*eS*		**Sn**	**01 22 59.4**	**+3.2**
HUEH	**Huehuetenango**	**1.32**	**75**	⇑P		**Pn**	**01 22 40.3**	**+1.7**
HUEH	**Huehuetenango**	**1.32**	**75**	*i* P		**Pn**	**01 22 40.3**	**+1.7**
HUEH	**Huehuetenango**	**1.32**	**75**	*i* P		**Sn**	**01 22 59.4**	**+3.2**
HUEH				IAML			01 23 06.2	
	comp=E,275μm,1.1s							
SOKI	**Kika Raxquin**	**1.38**	**96**	*i* P		**Pn**	**01 22 41.2**	**+1.7**
SOKI				*i* S		**Sn**	**01 22 59.9**	**+2.1**
SOKI				IAML			01 23 09.2	
	comp=N,35μm,0.6s							
CCIG	**Comitan**	**1.46**	**27**			**Pn**	**01 22 41.4**	**+1.0**
CCIG					Sn	**Sn**	**01 22 58.9**	**-0.3**
CCIG	**Comitan**	**1.46**	**27**	⇑*eP*		**Pn**	**01 22 42.8**	**+2.4**
CCIG				*eS*		**Sn**	**01 23 01.3**	**+2.1**
CCIG	**Comitan**	**1.46**	**27**	⇑P		**Pn**	**01 22 42.6**	**+2.2**
CCIG				S		**Sn**	**01 23 03.6**	**+4.4**
CCIG	**Comitan**	**1.46**	**27**	*i* P		**Pn**	**01 22 42.8**	**+2.4**
CCIG				*i* S		**Sn**	**01 22 58.8**	**-0.5**
CCIG				IAML			01 23 10.8	
	comp=E,29μm,0.9s							
STG2	**El Palmar, Qui**	**1.50**	**111**	*e*P		**Pn**	**01 22 37.0**	**-3.8**
STG2				*i* S		**Sn**	**01 22 53.0**	**-7.1**
STG2				IAML			01 22 54.7	
	comp=N,477μm,0.3s							
STG8	**El Palmar, Qui**	**1.51**	**110**	*i* P		**Pn**	**01 22 37.5**	**-3.6**
STG8				*i* S		**Sn**	**01 22 54.2**	**-6.4**
STG8				IAML			01 22 55.7	
	comp=N,195μm,0.2s							
STG5	**El Palmar, Qui**	**1.53**	**112**	*i* P		**Pn**	**01 22 37.8**	**-3.4**
STG5				*i* S		**Sn**	**01 22 54.3**	**-6.5**
CARR	**Arriaga**	**1.65**	**320**	*e*P		**Pn**	**01 22 44.4**	**+1.8**
CARR				*e*S		**Sn**	**01 23 05.7**	**+2.4**
TGBT	**Tuxtla Gutierr**	**1.81**	**352**			**Pn**	**01 22 45.6**	**+0.8**
TGBT						**Sn**	**01 23 07.7**	**+0.6**
TGBT	**Tuxtla Gutierr**	**1.81**	**352**	*e*P		**Pn**	**01 22 45.6**	**+0.8**
TGBT				*e*S		**Sn**	**01 23 07.7**	**+0.6**
TGIG		**1.82**	**351**			**Pn**	**01 22 45.7**	**+0.7**
TGIG						**Sn**	**01 23 07.3**	**-0.1**
TGIG		**1.82**	**351**	⇑*eP*		**Pn**	**01 22 45.7**	**+0.7**
TGIG				*i* S		**Sn**	**01 23 08.2**	**+0.8**
TGIG		**1.82**	**351**	P		**Pn**	**01 22 45.7**	**+0.7**
TGIG		**1.82**	**351**	*i* P		**Pn**	**01 22 45.6**	**+0.7**
TGIG				*i* S		**Sn**	**01 23 08.0**	**+0.6**
TGIG				IAML			01 23 21.8	
	comp=E,25μm,1.4s							
ESSG	**Sabana Grande**	**2.01**	**107**	*i* P		**Pn**	**01 22 48.8**	**+1.3**
ESSG				*i* S		**Sn**	**01 23 12.5**	**+0.4**
ESSG				IAML			01 23 15.0	
	comp=E,17μm,0.6s							
APG	**El Apazote**	**2.28**	**89**	P		**Pn**	**01 22 51.9**	**+0.7**
	comp=E,30nm,0.4s,baz=190,slow=12,SNR=265							
APG				S		**Sn**	**01 23 21.1**	**+2.5**
	comp=E,69nm,0.4s,baz=61,slow=23,SNR=9.1							
APG	**El Apazote**	**2.28**	**89**	*i* P		**Pn**	**01 22 52.7**	**+1.5**
APG				*i* S		**Sn**	**01 23 20.1**	**+1.5**
FG18	**Yepocapa, Chim**	**2.30**	**108**	*i* P		**Pn**	**01 22 47.0**	**-4.4**
FG18				*i* S		**Sn**	**01 23 10.5**	**-8.5**
FG16	**Alotenango, Sa**	**2.34**	**107**	*i* P		**Pn**	**01 22 48.3**	**-3.7**
PCG5	**San Vicente Pa**	**2.48**	**107**	*i* P		**Pn**	**01 22 51.7**	**-2.2**
PCG5				*i* S		**Sn**	**01 23 18.1**	**-5.4**
PCG5				IAML			01 23 23.8	
	comp=N,41μm,0.5s							
ESSJ	**San Jos, E**	**2.65**	**122**	*i* P		Pn	01 22 51.0	-5.0
CMIG	**Matias Romero**	**2.89**	**317**	P		**Pn**	**01 23 00.2**	**+0.9**
	comp=N,192nm,0.3s,baz=160,slow=12,SNR=202							
CMIG				S		**Sn**	**01 23 31.0**	**-2.1**
	comp=N,1μm,0.4s,baz=124,slow=16,SNR=14							
CMIG				LR		LR	01 23 54.6	
	comp=N,1μm,20.3s,baz=179,slow=35							
CMIG	**Matias Romero**	**2.89**	**317**			**Pn**	**01 23 00.4**	**+1.1**
CMIG						**Sn**	**01 23 33.2**	**+0.1**
CMIG	**Matias Romero**	**2.89**	**317**	⇓*eP*		**Pn**	**01 23 00.4**	**+1.1**
CMIG				*eS*		**Sn**	**01 23 33.2**	**+0.1**
FAME	**Alcaldia de Sa**	**2.94**	**112**	P		**Pn**	**01 23 00.7**	**+0.7**
FAME				S		**Sn**	**01 23 34.9**	**+0.6**
VHSA	**Villahermosa**	**2.99**	**358**			**Pn**	**01 23 02.9**	**+2.3**
VHSA						**Sn**	**01 23 37.6**	**+2.1**
VHSA	**Villahermosa**	**2.99**	**358**	*e*P		**Pn**	**01 23 02.9**	**+2.3**
VHSA				*e*S		**Sn**	**01 23 37.6**	**+2.1**
SLOZ	**Alcaldia de Sa**	**3.09**	**107**	P		**Pn**	**01 23 03.9**	**+1.9**
NUBE	**Las Nubes**	**3.13**	**110**	P		**Pn**	**01 23 03.8**	**+1.2**
NUBE	**Las Nubes**	**3.13**	**110**	*i* P		**Pn**	**01 23 03.9**	**+1.2**
HUIG	**Huatulco**	**3.27**	**284**			**Pn**	**01 23 03.6**	**-0.7**
HUIG	**Huatulco**	**3.27**	**284**	⇓*eP*		**Pn**	**01 23 03.6**	**-0.7**
HUIG				*e*S		**Sn**	**01 23 36.2**	**-6.0**
HUIG	**Huatulco**	**3.27**	**284**	*i* P		**Pn**	**01 23 03.4**	**-1.0**
CEVE	**Cerro Verde**	**3.30**	**110**	⇓P		**Pn**	**01 23 07.5**	**+2.4**
CEVE				S		**Sn**	**01 23 47.6**	**+4.2**
UNIC	**Universidad Ca**	**3.32**	**107**	S		**Sn**	**01 23 49.1**	**+5.5**
ZAFR2	**Estanzuela, Za**	**3.38**	**96**	*i* P		**Pn**	**01 23 05.2**	**-0.6**
ZAFR2				IAML			01 24 17.6	
	comp=E,12μm,0.9s							
ESQI	**Esquipulas**	**3.39**	**97**			**Pn**	**01 23 07.1**	**+1.0**
ESQI	**Esquipulas**	**3.39**	**97**	P		**Pn**	**01 23 07.0**	**+0.9**
MTO3	**Montecristo**	**3.40**	**99**			**Pn**	**01 23 07.0**	**+0.8**
MTO3	**Montecristo**	**3.40**	**99**	P		**Pn**	**01 23 07.2**	**+0.9**
TUIG	**Tuzandepetl**	**3.41**	**333**			**Pn**	**01 23 06.4**	**+0.1**
TUIG						**Sn**	**01 23 40.9**	**-4.7**
TUIG	**Tuzandepetl**	**3.41**	**333**	*e*P		**Pn**	**01 23 06.4**	**+0.1**
TUIG				*e*S		**Sn**	**01 23 40.9**	**-4.7**
TUIG	**Tuzandepetl**	**3.41**	**333**	P		**Pn**	**01 23 07.3**	**+1.0**
MIHL	**Minatitlan**	**3.42**	**331**			**Pn**	**01 23 05.8**	**-0.7**
MIHL						**Sn**	**01 23 47.6**	**+1.7**
MIHL	**Minatitlan**	**3.42**	**331**	*e*P		**Pn**	**01 23 05.8**	**-0.7**
MIHL				*e*S		**Sn**	**01 23 47.6**	**+1.7**
PETF	**Flores**	**3.44**	**55**			**Pn**	**01 23 07.2**	**+0.6**
PETF					Sn	**Sn**	**01 23 46.2**	**0.0**
PETF	**Flores**	**3.44**	**55**	*e*P		**Pn**	**01 23 07.9**	**+1.3**
PETF				*e*S		**Sn**	**01 23 46.3**	**0.0**
PETF	**Flores**	**3.44**	**55**	⇓P		**Pn**	**01 23 08.0**	**+1.3**
PETF	**Flores**	**3.44**	**55**	P		**Pn**	**01 23 07.7**	**+1.1**
PETF	**Flores**	**3.44**	**55**	*i* P		**Pn**	**01 23 08.0**	**+1.4**
PETF				IAML			01 24 14.8	
	comp=N,13μm,0.6s							
CEDA	**San Andres**	**3.52**	**109**	S		**Sn**	**01 23 52.6**	**+4.2**
JAYA	**Jayaque - finc**	**3.52**	**111**	P		**Pn**	**01 23 09.4**	**+1.5**
JAYA				S		**Sn**	**01 23 50.6**	**+2.0**
JAYA	**Jayaque - finc**	**3.52**	**111**	*i* P		**Pn**	**01 23 09.1**	**+1.2**
JAYA				*i* S		**Sn**	**01 23 48.0**	**-0.6**
JAYA				IAML			01 23 54.7	
	comp=N,18μm,0.3s							
PMON	**Piamonte**	**3.62**	**110**	P		**Pn**	**01 23 10.8**	**+1.6**
PMON				S		**Sn**	**01 23 55.4**	**+4.4**
UEES	**Universidad Ev**	**3.69**	**109**	S		**Sn**	**01 23 57.4**	**+4.9**
LALI	**Alcalda de L**	**3.70**	**113**	P		**Pn**	**01 23 12.6**	**+2.3**
LALI				S		**Sn**	**01 23 55.3**	**+2.6**
LALI	**Alcalda de L**	**3.70**	**113**	*i* P		**Pn**	**01 23 12.4**	**+2.2**
SEMO	**Seminario San**	**3.71**	**109**	S		**Sn**	**01 23 57.4**	**+4.4**
IGN	**Direccin Gen**	**3.75**	**109**	S		**Sn**	**01 24 00.1**	**+5.9**
UDBS	**Universidad Do**	**3.77**	**109**	S		**Sn**	**01 23 60.0**	**+5.5**
PANCS	**Alcalda de**	**3.78**	**111**	P		**Pn**	**01 23 14.5**	**+3.1**
PANCS				S		**Sn**	**01 23 58.0**	**+3.2**
SARH	**Santa Rosa de**	**3.93**	**92**	⇑P		**Pn**	**01 23 15.1**	**+1.6**
SARH	**Santa Rosa de**	**3.93**	**92**	*i* P		**Pn**	**01 23 15.0**	**+1.6**
NEUV	**Arroyo Zacate**	**3.95**	**314**			**Pn**	**01 23 14.8**	**+1.2**
NEUV						**Sn**	**01 23 59.8**	**+1.0**
NEUV	**Arroyo Zacate**	**3.95**	**314**	*e*P		**Pn**	**01 23 14.8**	**+1.2**
NEUV				*e*S		**Sn**	**01 23 59.8**	**+1.0**
PAVA	**Las Pavas**	**3.97**	**108**	⇓P		**Pn**	**01 23 17.7**	**+3.8**
COEG	**Centro de Oper**	**4.05**	**109**	⇓P		**Pn**	**01 23 18.2**	**+3.2**
COEG				S		**Sn**	**01 24 07.2**	**+5.9**
IZABA	**Izabal, Puerto**	**4.16**	**79**	⇓*eP*		**Pn**	**01 23 16.9**	**+0.6**
IZABA				*e*S		**Sn**	**01 24 03.8**	**0.0**
IZABA	**Izabal, Puerto**	**4.16**	**79**	⇑P		**Pn**	**01 23 17.2**	**+0.9**
IZABA				S		**Sn**	**01 24 04.3**	**+0.5**
SCLA	**Alcaldia de Sa**	**4.16**	**107**	⇓P		**Pn**	**01 23 17.8**	**+1.3**
SCLA				S		**Sn**	**01 24 06.8**	**+2.7**
TECO	**Alcaldia de Te**	**4.17**	**110**	⇓P		**Pn**	**01 23 19.6**	**+3.0**
TECO				S		**Sn**	**01 24 08.6**	**+4.4**
PMUV	**Sontecomapan**	**4.18**	**328**			**Pn**	**01 23 16.1**	**-0.7**
PMUV						**Sn**	**01 23 58.3**	**-6.2**
PMUV	**Sontecomapan**	**4.18**	**328**	*e*P		**Pn**	**01 23 16.1**	**-0.7**
PMUV				*e*S		**Sn**	**01 23 58.3**	**-6.2**
SCIG	**Sabancuy**	**4.27**	**21**			**Pn**	**01 23 18.6**	**+0.7**
SCIG						**Sn**	**01 24 05.2**	**-1.3**
SCIG	**Sabancuy**	**4.27**	**21**	⇑*eP*		**Pn**	**01 23 18.6**	**+0.7**
SCIG				*e*S		**Sn**	**01 24 05.2**	**-1.3**
SCIG	**Sabancuy**	**4.27**	**21**	⇑P		**Pn**	**01 23 18.5**	**+0.7**
SCIG				S		**Sn**	**01 24 06.6**	**+0.1**
SCIG	**Sabancuy**	**4.27**	**21**	P		**Pn**	**01 23 18.7**	**+0.8**
SCIG	**Sabancuy**	**4.27**	**21**	*i* P		**Pn**	**01 23 18.6**	**+0.7**
OXLC	**Oaxaca**	**4.27**	**300**			Pn	01 23 24.0	+5.8
OXLC						**Sn**	**01 24 05.1**	**-1.9**
OXLC	**Oaxaca**	**4.27**	**300**	*e*P		Pn	01 23 24.0	+5.8
OXLC				*e*S		**Sn**	**01 24 05.1**	**-1.9**
OXBJ	**Oaxaca**	**4.29**	**300**			Pn	01 23 23.4	+4.9
OXBJ						**Sn**	**01 24 07.6**	**+0.1**
OXBJ	**Oaxaca**	**4.29**	**300**	*e*P		Pn	01 23 23.4	+4.9
OXBJ				*e*S		**Sn**	**01 24 07.6**	**+0.1**
PEIG	**Puerto Escondi**	**4.29**	**284**			**Pn**	**01 23 17.8**	**-0.5**
PEIG						**Sn**	**01 23 59.6**	**-7.6**
PEIG	**Puerto Escondi**	**4.29**	**284**	*e*P		**Pn**	**01 23 17.8**	**-0.5**
PEIG				*e*S		**Sn**	**01 23 59.6**	**-7.6**
OXIG	**Oaxaca**	**4.30**	**300**			**Pn**	**01 23 20.8**	**+2.2**
OXIG						**Sn**	**01 24 07.1**	**-0.6**
VHO	**Vista Hermosa**	**4.30**	**300**	*e*P		**Pn**	**01 23 20.8**	**+2.2**
VHO				*e*S		**Sn**	**01 24 07.1**	**-0.5**
PACA	**Pacayal**	**4.61**	**108**	⇓P		**Pn**	**01 23 26.8**	**+4.1**
PACA				S		**Sn**	**01 24 18.4**	**+3.3**
RANC	**El Ranchito**	**4.65**	**109**	⇓P		**Pn**	**01 23 26.2**	**+2.9**
RANC				S		**Sn**	**01 24 21.0**	**+4.8**
MARCA	**Marcala la Paz**	**4.70**	**99**	*i* P		**Pn**	**01 23 25.2**	**+1.2**
YOIG	**Yosondua**	**4.92**	**293**			**Pn**	**01 23 29.3**	**+2.3**
YOIG						**Sn**	**01 24 18.3**	**-4.5**
YOIG	**Yosondua**	**4.92**	**293**	*e*P		**Pn**	**01 23 29.3**	**+2.3**
YOIG				*e*S		**Sn**	**01 24 18.3**	**-4.5**
LCND	**La Caada**	**5.06**	**108**	⇓P		**Pn**	**01 23 31.9**	**+3.2**
LCND				S		**Sn**	**01 24 32.1**	**+6.2**
TOIG	**Toxpalan**	**5.12**	**308**			**Pn**	**01 23 31.6**	**+2.0**
TOIG						**Sn**	**01 24 25.9**	**-1.6**
TOIG	**Toxpalan**	**5.12**	**308**	*e*P		**Pn**	**01 23 31.6**	**+2.0**
TOIG				*e*S		**Sn**	**01 24 25.9**	**-1.6**
CNCH	**Conchagua**	**5.12**	**109**	⇑P		**Pn**	**01 23 32.3**	**+2.6**
CNCH				S		**Sn**	**01 23 58.8**	**+6.1**
TXIG	**Tlaxiaco**	**5.27**	**296**			**Pn**	**01 23 33.6**	**+1.8**
TXIG						**Sn**	**01 24 33.6**	**+2.2**
TXIG	**Tlaxiaco**	**5.27**	**296**	⇓*eP*		**Pn**	**01 23 33.6**	**+1.8**
TXIG				*e*S		**Sn**	**01 24 33.6**	**+2.2**
PNIG	**Pinotepa**	**5.30**	**286**			**Pn**	**01 23 32.1**	**+0.1**
PNIG	**Pinotepa**	**5.30**	**286**	*e*P		**Pn**	**01 23 32.1**	**+0.1**
PNIG				*e*S		**Sn**	**01 24 26.0**	**-5.9**
PNIG	**Pinotepa**	**5.30**	**286**	P		**Pn**	**01 23 32.6**	**+0.5**
TGUH	**Tegucigalpa,Un**	**5.45**	**99**			**Pn**	**01 23 34.5**	**+0.3**
TGUH	**Tegucigalpa,Un**	**5.45**	**99**	P		**Pn**	**01 23 35.5**	**+1.3**
TGUH	**Tegucigalpa,Un**	**5.45**	**99**	P		**Pn**	**01 23 35.5**	**+1.3**
TPIG	**Tehuac#an**	**5.54**	**309**			**Pn**	**01 23 37.8**	**+2.4**
TPIG						**Sn**	**01 24 35.0**	**-2.9**
TPIG	**Tehuac#an**	**5.54**	**309**	*e*P		**Pn**	**01 23 37.8**	**+2.4**
TPIG				*e*S		**Sn**	**01 24 35.0**	**-2.9**
TPIG	**Tehuac#an**	**5.54**	**309**	P		**Pn**	**01 23 38.3**	**+2.9**
HLIG	**Huajuapan de L**	**5.56**	**301**			**Pn**	**01 23 38.1**	**+2.4**
HLIG	**Huajuapan de L**	**5.56**	**301**	*e*P		**Pn**	**01 23 38.1**	**+2.4**
HLIG				*e*S		**Sn**	**01 24 31.1**	**-7.3**
JAUV	**Jalcomulco**	**5.79**	**319**			**Pn**	**01 23 37.6**	**-1.1**
JAUV	**Jalcomulco**	**5.79**	**319**	*e*P		**Pn**	**01 23 37.6**	**-1.1**
JAUV				*e*S		**Sn**	**01 24 36.4**	**-7.5**
LVIG	**Laguna Verde**	**5.84**	**324**			**Pn**	**01 23 35.8**	**-3.6**
LVIG	**Laguna Verde**	**5.84**	**324**	*e*P		**Pn**	**01 23 35.8**	**-3.6**
LVIG				*e*S		**Sn**	**01 24 38.9**	**-6.1**
LVIG	**Laguna Verde**	**5.84**	**324**	P		**Pn**	**01 23 37.9**	**-1.5**
FTIG	**Fresnillo de T**	**5.87**	**301**			**Pn**	**01 23 43.0**	**+3.1**
FTIG	**Fresnillo de T**	**5.87**	**301**	*e*P		**Pn**	**01 23 43.0**	**+3.1**
YUSH	**Yuscaran**	**5.88**	**99**	⇑P		**Pn**	**01 23 41.2**	**+1.2**
MGIG	**Malinaltepec**	**6.02**	**293**			**Pn**	**01 23 44.3**	**+2.2**
MGIG						**Sn**	**01 24 46.1**	**-3.6**
MGIG	**Malinaltepec**	**6.02**	**293**	*e*P		**Pn**	**01 23 44.3**	**+2.2**
MGIG				*e*S		**Sn**	**01 24 46.1**	**-3.6**
CRIN	**San Cristobal**	**6.04**	**111**			**Pn**	**01 23 42.7**	**+0.5**
CRIN	**San Cristobal**	**6.04**	**111**	P		**Pn**	**01 23 43.6**	**+3.4**
TLIG	**Tlapa**	**6.09**	**296**			**Pn**	**01 23 44.8**	**+1.9**
TLIG	**Tlapa**	**6.09**	**296**			**Sn**	**01 24 49.5**	**-1.8**
TLIG	**Tlapa**	**6.09**	**296**	*e*P		**Pn**	**01 23 45.1**	**+2.2**
TLIG				*e*S		**Sn**	**01 24 49.5**	**-1.8**
TLIG	**Tlapa**	**6.09**	**296**	P		**Pn**	**01 23 45.4**	**+2.5**
PKGN	**Cerro Pekin**	**6.12**	**111**	P		**Pn**	**01 23 45.7**	**+2.5**
PKGN				S		**Sn**	**01 24 53.4**	**+1.5**
HERN	**Volcan Telica**	**6.28**	**111**			**Pn**	**01 23 45.2**	**-0.2**
TEL3	**Telica 3**	**6.28**	**112**	P		**Pn**	**01 23 48.8**	**+3.5**
CRIG	**Cruz Grande**	**6.32**	**287**			**Pn**	**01 23 46.9**	**+1.0**
CRIG	**Cruz Grande**	**6.32**	**287**	*e*P		**Pn**	**01 23 46.9**	**+1.0**
CRIG				*e*S		Sn	01 24 47.5	-9.2
CNGN	**Cerro Negro**	**6.44**	**112**			**Pn**	**01 23 47.7**	**+0.1**
CNGN	**Cerro Negro**	**6.44**	**112**	P		**Pn**	**01 23 50.6**	**+3.0**
LIMN	**Finca el Limon**	**6.55**	**106**	⇓P		**Pn**	**01 23 49.0**	**-0.1**
MYIG	**Merida**	**6.63**	**26**			**Pn**	**01 23 50.0**	**-0.2**
MYIG						**Sn**	**01 25 04.2**	**-0.1**
MYIG	**Merida**	**6.63**	**26**	*e*P		**Pn**	**01 23 50.0**	**-0.2**
MYIG				*e*S		**Sn**	**01 25 04.2**	**-0.1**
PPAX	**Atlixo**	**6.64**	**307**	*e*P		**Pn**	**01 23 53.6**	**+3.1**
PPAX				*e*S		**Sn**	**01 25 06.7**	**+1.8**
COPN	**Copaltepe**	**6.66**	**114**	P		**Pn**	**01 23 52.6**	**+2.0**
PBCV	**Popocatepetl**	**6.79**	**307**	*e*P		**Pn**	**01 23 55.6**	**+3.0**
PBCV				*e*S		**Sn**	**01 25 11.4**	**+2.8**
TEIG	**Tepich**	**6.79**	**39**			**Pn**	**01 23 51.0**	**-1.3**
TEIG	**Tepich**	**6.79**	**39**			**Sn**	**01 25 04.1**	**-4.0**
TEIG	**Tepich**	**6.79**	**39**	⇑*eP*		**Pn**	**01 23 51.6**	**-0.6**
TEIG				*e*S		**Sn**	**01 25 04.1**	**-4.0**
TEIG	**Tepich**	**6.79**	**39**	P		**Pn**	**01 23 51.9**	**-0.4**
TEIG	**Tepich**	**6.79**	**39**	P		**Pn**	**01 23 51.5**	**-0.8**
	comp=N,6μmcomp=N,405μmcomp=N,5μm,0.5s							
PPCL	**Tochimilco**	**6.79**	**306**	*e*P		**Pn**	**01 23 56.3**	**+3.7**
PPCL				*e*P			01 23 58.9	
PPSX	**Xalitzintla**	**6.81**	**308**	*e*P		Pn	01 23 58.3	+5.4
PPSX				*e*S		Sn	01 25 19.3	+10
PPPT	**Popocatepetl**	**6.83**	**306**	*e*P		**Pn**	**01 23 56.9**	**+3.6**
PPPT				*e*S		**Sn**	**01 25 16.0**	**+6.1**
PPCU	**Popocatapetl**	**6.84**	**307**	*e*S		**Sn**	**01 25 07.4**	**-2.9**
PBXN	**Popocatepetl**	**6.88**	**307**	*e*P		**Pn**	**01 23 58.3**	**+4.3**
PBXN				*e*P		**Pn**	**01 23 58.3**	**+4.3**
PBXN				*e*S		**Sn**	**01 25 11.4**	**+0.4**
PBXN				*e*S			01 25 15.3	
DAIG	**Los Arroyos**	**6.88**	**288**			**Pn**	**01 23 55.0**	**+1.4**
DAIG								
DAIG	**Los Arroyos**	**6.88**	**288**	⇓*eP*		**Pn**	**01 23 55.0**	**+1.4**
DAIG				*e*S		**Sn**	**01 25 07.6**	**-2.8**
PPM	**Popocatepetl**	**6.88**	**307**	*e*P		**Pn**	**01 23 58.1**	**+4.0**
PPM				*e*S		**Sn**	**01 25 10.8**	**-0.5**
CXUV	**Coxquihui**	**6.89**	**319**			**Pn**	**01 23 52.9**	**-0.7**
CXUV	**Coxquihui**	**6.89**	**319**	*e*P		**Pn**	**01 23 52.9**	**-0.7**
CXUV				*e*S		**Sn**	**01 25 03.6**	**-7.0**
PPIG	**Popocatepetl**	**6.89**	**307**			**Pn**	**01 23 58.1**	**+4.0**
PPIG						**Sn**	**01 25 10.8**	**-0.5**
AMVM	**AMECAMECA**	**7.05**	**307**			**Pn**	**01 23 58.3**	**+2.2**
AMVM	**AMECAMECA**	**7.05**	**307**	*e*P		**Pn**	**01 23 58.3**	**+2.2**
AMVM				*e*S		**Sn**	**01 25 23.3**	**+8.4**
YAIG	**Yautepec**	**7.12**	**304**			**Pn**	**01 24 00.0**	**+3.3**
YAIG	**Yautepec**	**7.12**	**304**	*e*P		**Pn**	**01 24 00.3**	**+3.3**
YAIG				*e*S		**Sn**	**01 25 10.5**	**-6.0**
MEIG	**Mezcala**	**7.15**	**295**			**Pn**	**01 23 59.1**	**+1.7**
MEIG						**Sn**	**01 25 14.7**	**-2.6**
MEIG	**Mezcala**	**7.15**	**295**	*e*P		**Pn**	**01 23 59.1**	**+1.7**
MEIG				*e*S		**Sn**	**01 25 14.7**	**-2.6**
PLIG	**Platanillo**	**7.25**	**299**			**Pn**	**01 24 01.6**	**+2.9**
PLIG						**Sn**	**01 25 15.0**	**-4.6**
PLIG	**Platanillo**	**7.25**	**299**	*e*P		**Pn**	**01 24 01.6**	**+2.9**
PLIG				*e*S		**Sn**	**01 25 15.0**	**-4.6**
MPVM	**San Francisco**	**7.26**	**306**			Pn	01 24 04.2	+5.3
MPVM						**Sn**	**01 25 20.0**	**0.0**
MPVM	**San Francisco**	**7.26**	**306**	*e*P		Pn	01 24 04.2	+5.3
MPVM				*e*S		**Sn**	**01 25 20.0**	**0.0**
THVM	**De Xico**	**7.29**	**307**			**Sn**	**01 25 20.0**	**-0.9**

HKT pmax pmax
comp=Z,71nm,1.3s
MLDN Muldoon 15.25 346 P **P** **01 25 47.8 -1.3**
PDIG Papasquiaro 15.48 312 P **P** **01 25 55.5 +3.6**
PDIG Papasquiaro 15.48 312 *eP* **P** **01 25 55.5 +3.6**
CCCC Cccc 15.59 64 *eP* **P** **01 25 53.9 +1.0**
HNDO Hondo 15.66 339 P **Pn** **01 25 51.8 +0.5**
441A DeRidder 15.71 359 **Pn** **01 25 51.8 0.0**
HNVL Huntsville, TX 15.90 352 **Pn** **01 25 54.1 -0.1**
DRIO Del Rio 16.08 335 **Pn** **01 25 56.4 -0.2**
435B Jarrell 16.33 345 **Pn** **01 25 58.9 -0.7**
CHIV Chivirico 16.42 70 **Pn** **01 26 00.0 -0.8**
YAR Yar 16.57 69 *eP* **P** **01 26 03.8 -0.1**
346A Big Creek Wild 16.62 10 **Pn** **01 26 02.8 -0.5**
060A Indiantown 16.70 42 Pn **Pn** **01 26 01.9 -2.3**
JCT Junction City 16.71 339 P **P** **01 26 05.0 -0.4**
JCT Junction City 16.71 339 P **P** **01 26 05.0 -0.4**
NATX Nacogdoches 16.79 355 **Pn** **01 26 05.4 0.0**
DWPF Disney Wildern 16.81 37 **Pn** **01 26 04.6 -1.0**
451A Vernon 16.87 21 **Pn** **01 26 05.4 -0.9**
HPIG 16.88 317 P **P** **01 26 08.4 +0.9**
HPIG 16.88 317 *eP* **P** **01 26 08.8 +1.4**
BRAL Brewton 16.96 17 P **P** **01 26 08.3 +0.2**
553A Crawfordville 17.00 26 P **Pn** **01 26 07.0 -0.8**
237A Washetta, Mont 17.17 351 **Pn** **01 26 10.1 +0.2**
656A Williston 17.19 32 **Pn** **01 26 09.2 -1.0**
BRDY Brady 17.20 342 **P** **01 26 11.4 +0.7**
SAND Sanderson 17.20 332 P **P** **01 26 11.9 +1.2**
VBMS Vicksburg 17.30 7 P **Pn** **01 26 10.7 -0.8**
APAC Apartado, Choc 17.39 112 P **Pn** **01 26 11.4 -1.4**
comp=Z,1µmcomp=Z,147nm,0.7s
TXAR Lajitas Array 17.45 327 P **P** **01 26 14.5 +0.9**
comp=Z,10nm,0.9s,baz=150,slow=10,SNR=70
TXAR Lajitas Array 17.45 327 P **P** **01 26 15.2 +1.7**
TXAR Lajitas Array 17.45 327 P **P** **01 26 15.3 +1.7**
TX31 Lajitas Ar. Si 17.45 327 P **P** **01 26 15.0 +1.4**
WHTX Lake Whitney, 17.46 347 P **P** **01 26 14.3 +0.8**
GTBY Guantanamo Bay 17.59 71 P **P** **01 26 12.4 -2.8**
comp=Z,2µmcomp=Z,2µmcomp=Z,78nm,0.7s
OZNA Ozona 17.61 336 P **Pn** **01 26 16.4 +1.0**
146A Union 17.91 10 P **Pn** **01 26 18.4 -0.2**
TREL Terrell 17.93 351 P **Pn** **01 26 19.6 +0.5**
QMBU Quimbuelo 17.93 71 *eP* **Pn** **01 26 20.4 +1.0**
352A Blakely 17.95 22 P **Pn** **01 26 19.8 +0.4**
SJCC San Jacinto, C 17.95 104 P **P** **01 26 12.2 -6.9**
250A Grady 17.95 18 P **P** **01 26 19.0 0.0**
DBBC Dabeiba 18.11 114 P **Pn** **01 26 21.6 0.0**
Z41A Richland Creek 18.20 0 P **Pn** **01 26 23.3 +0.8**
ALPN Alpine 18.27 329 P **Pn** **01 26 24.7 +1.2**
Z38A Mt. Pleasant 18.31 354 P **Pn** **01 26 24.8 +1.0**
SLBS Sierra La Lagu 18.32 301 P **Pn** **01 26 23.7 -0.4**
UREC San Jos de Ur 18.40 111 P **P** **01 26 22.8 -1.2**
comp=Z,8.4nm,0.6s
FW06 Azle 18.43 347 P **Pn** **01 26 25.9 +0.7**
TIGA Tifton 18.44 26 P **P** **01 26 24.6 +0.2**
PLPT Palo Pinto 18.45 345 P **Pn** **01 26 25.5 0.0**
SGCY Sterling City 18.49 337 P **P** **01 26 25.2 +0.2**
456A Hilliard 18.55 340 P **P** **01 26 25.3 -0.2**
TP805 Hovey Rd 18.57 331 P **Pn** **01 26 27.0 0.0**
WLAR White Oak Lake 18.63 359 P **Pn** **01 26 27.4 -0.2**
ABTX Abilene, Hawle 18.64 342 P **P** **01 26 27.0 +0.5**
TMB01 Midkiff 18.65 335 P **P** **01 26 27.3 +0.5**
MNHN Monahans 18.66 333 P **Pn** **01 26 27.9 -0.2**
Z35A Perchaven, San 18.71 348 P **Pn** **01 26 29.9 +1.3**
LRAL Lakeview Retre 18.74 15 P **P** **01 26 27.7 +0.1**
LPIG La Paz 18.80 302 P **Pn** **01 26 29.5 -0.2**
comp=Z,20nm,0.3s,baz=202,slow=0.6,SNR=7.4
LPIG LR LR 01 33 52.9
comp=Z,101nm,21.2s,baz=123,slow=37
229A Bryant Ranch, 18.80 336 P **Pn** **01 26 29.4 -0.4**
TPB01 Permian Basin 18.81 330 P **Pn** **01 26 29.5 -0.3**
CBOC Ciudad Bolivar 18.83 117 P **P** **01 26 29.7 +0.7**
comp=Z,730nmcomp=Z,16nm,1.0s
CCAR Cane Creek 18.89 3 P **P** **01 26 29.2 +0.1**
Y45A Yeager Farm, C 19.04 8 P **P** **01 26 31.3 +0.4**
152A Waverly Hall 19.10 21 P **P** **01 26 31.4 -0.2**
PLMC San Jos del P 19.10 120 P **P** **01 26 31.2 -0.6**
comp=Z,1µmcomp=Z,11nm,0.8s
TPB06 Permian Basin 19.13 332 P **P** **01 26 32.4 +0.5**
PECS Pecos 19.20 330 P **P** **01 26 32.9 +0.2**
ODSA Odessa 19.24 334 P **Pn** **01 26 34.3 -0.7**
VHRN Van Horn 19.30 327 P **Pn** **01 26 34.8 -0.9**
LOOK Love County 19.34 349 P **P** **01 26 34.6 +0.4**
WTFS Witchita Falls 19.40 346 P **P** **01 26 34.9 +0.1**
129A Stewart Farms, 19.41 336 P **P** **01 26 35.0 0.0**
X40A Basin Creek Fa 19.43 102 P **P** **01 26 35.2 +0.1**
APMT Aspermont 19.43 341 P **P** **01 26 36.0 +0.8**
YOTC Yotoco, Valle 19.56 122 P **P** **01 26 37.3 +0.5**
comp=Z,668nmcomp=Z,17nm,0.7s
GUY2C Guyana, Caldas 19.71 118 P **P** **01 26 38.7 -0.2**
comp=Z,768nmcomp=Z,26nm,0.6s
JAMC Jamundi, Valle 19.74 125 P **Pn** **01 26 40.1 -1.1**
comp=Z,557nmcomp=Z,47nm,0.8s
PTBC PUERTO BERRIO, 19.88 113 P **P** **01 26 37.7 -2.5**
NORC Norcasia 19.97 116 P **P** **01 26 40.8 -0.4**
comp=Z,14nm,1.0s
BBAC Balboa, Cauca 20.05 128 P Pn 01 26 45.2 +0.5
comp=Z,669nmcomp=Z,66nm,1.2s
POPC Popayan, Colom 20.16 126 P Pn 01 26 45.5 -0.5
comp=Z,1µmcomp=Z,65nm,1.0s
WHAR Wooly Hollow 20.24 1 P **P** **01 26 44.0 +0.2**
CMBC Cumbal 20.34 132 P Pn 01 26 49.0 +0.6
CUSE Cuicocha Este 20.39 134 P Pn 01 26 48.7 -0.2
OTAV Otavalo 20.40 135 P Pn 01 26 49.2 +0.1
OTAV Otavalo 20.40 135 P Pn 01 26 49.2 +0.1
OTAV Otavalo 20.40 135 P Pn 01 26 48.9 -0.2
comp=Z,18nm,1.6s
OTAV Otavalo 20.40 135 *eP* Pn 01 26 49.6 +0.5
WMOK Wichita Mounta 20.40 346 P Pn 01 26 47.9 -0.6
WMOK pmax pmax
comp=Z,27nm,1.3s
GCUF Volcan Galeras 20.50 130 P Pn 01 26 49.5 -0.8
comp=Z,1µmcomp=Z,32nm,1.1s
ORTC Ortega, Tolima 20.51 121 P Pn 01 26 48.6 -1.3
comp=Z,1µmcomp=Z,35nm,1.1s
URIC Uribia, Colomb 20.52 97 P **P** **01 26 44.8 -2.4**
comp=Z,568nmcomp=Z,29nm,0.8s
TULM Tulcn-Chalpat 20.53 132 P Pn 01 26 50.6 0.0
comp=Z,1µmcomp=Z,67nm,1.4s
SPBC San Pablo de B 20.62 115 P **P** **01 26 49.3 +1.0**
comp=Z,9.8nm,0.4s
INCA Colegio Marist 20.67 135 P Pn 01 26 58.3 +6.1
ROSC El Rosal 20.80 117 P **P** **01 26 50.6 +0.1**
comp=Z,3.4nm,0.3s,baz=107,slow=4.4,SNR=7.1
comp=Z,3.4nm,0.3s
ROSC El Rosal 20.80 117 P Pn 01 26 54.2 +0.5
ROSC El Rosal 20.80 117 P Pn 01 26 53.2 -0.5
BONI La Bonita 20.83 132 P **P** **01 26 51.6 +0.2**
comp=Z,797nmcomp=Z,76nm,1.0s
PRAC Prado 20.91 121 P **P** **01 26 51.8 +0.4**
comp=Z,2µmcomp=Z,53nm,1.3s
SDDR Presa de Saban 20.97 76 P **P** **01 26 52.9 +0.9**
SDDR Presa de Saban 20.97 76 P **P** **01 26 51.6 -0.4**
PAMC Pamplona, Colo 21.13 109 P **P** **01 26 53.4 -0.9**
comp=Z,156nmcomp=Z,17nm,0.6s
CASC Dorado de Casc 21.25 133 P **P** **01 26 56.1 +1.0**
comp=Z,2µmcomp=Z,114nm,1.4s
GARC Garzon, Huila 21.30 125 P **P** **01 26 56.3 +0.5**
comp=Z,32nm,0.6s
RUSC La Rusia 21.39 113 P **P** **01 26 54.8 -2.1**
comp=Z,15nm,1.2s
CHIC Chingaza 21.41 117 P **P** **01 26 56.5 -0.6**
comp=Z,919nmcomp=Z,25nm,1.3s
WVT Waverly 21.54 11 P **P** **01 26 57.6 -0.2**
WVT Waverly 21.54 11 P **P** **01 26 57.6 -0.2**
FLOC Florencia 21.55 127 P **P** **01 27 00.3 +2.1**
comp=Z,2µmcomp=Z,140nm,1.4s
SC01 Santiago de Io 21.56 75 P **P** **01 27 00.1 +1.9**
URMC La Uribe, Meta 21.57 121 P **P** **01 26 58.3 -0.4**
comp=Z,678nmcomp=Z,18nm,1.5s
T35A Sooner Cattle 22.10 352 P **P** **01 27 03.8 -0.1**
TKL Tuckaleechee C 22.14 20 P **P** **01 27 03.4 -0.9**
comp=Z,11nm,0.5s,baz=192,slow=13,SNR=24
TKL LR LR 01 36 15.1
comp=Z,352nm,21.8s,baz=215,slow=38
comp=Z,11nm,0.5s
Y58A Scranton 22.29 30 P **P** **01 27 06.7 +0.8**
SDV Santo Domingo 22.52 103 P **P** **01 27 05.9 -3.0**
comp=Z,8.5nm,0.4s,baz=301,slow=8.1,SNR=16
SDV LR LR 01 38 23.0
comp=Z,150nm,18.0s,baz=292,slow=43
SDV Santo Domingo 22.52 103 P **P** **01 27 05.6 -3.2**
SDV Santo Domingo 22.52 103 P **P** **01 27 04.8 -4.0**
SDV Santo Domingo 22.52 103 *eP* **P** **01 27 05.8 -3.0**
MACC Macarena, Meta 22.65 122 P **P** **01 27 10.1 +0.2**
CCM Cathedral Cave 23.03 3 P **P** **01 27 12.6 -0.9**
CCM Cathedral Cave 23.03 3 P **P** **01 27 12.6 -0.9**
CCM pmax pmax
comp=Z,26nm,0.9s
MCRA Macar, Loja 23.06 145 P **P** **01 27 14.2 +0.1**
PTLC Puerto Leguiza 23.10 128 P **P** **01 27 18.7 +4.2**
RTBA Rita Blanca 23.14 339 IAmb IAmb 01 27 17.0
comp=Z,125nm,1.6s
R40A Maddies Statio 23.23 1 IAmb IAmb 01 27 34.2
comp=Z,69nm,1.5s
V55A Taylorsville 23.25 24 IAmb IAmb 01 27 37.6
comp=Z,57nm,1.1s
USIN University of 23.35 10 IAmb IAmb 01 27 37.6
comp=Z,92nm,1.1s
ANMO Albuquerque 23.37 331 P **P** **01 27 19.1 +2.1**
ANMO Albuquerque 23.37 331 *i P* **P** **01 27 16.9 -0.1**
ANMO pmax pmax
comp=Z,9.0nm,0.8s
TUC Tucson 23.78 320 P **P** **01 27 22.9 +2.3**
TUC Tucson 23.78 320 P **P** **01 27 22.9 +2.3**
TUC pmax pmax
comp=Z,43nm,1.3s
TUC Tucson 23.78 320 *eP* **P** **01 27 22.9 +2.3**
WCI Wyandotte Cave 23.87 13 P **P** **01 27 20.3 -0.9**
WCI Wyandotte Cave 23.87 13 P **P** **01 27 20.3 -0.9**
WCI pmax pmax
comp=Z,203nm,1.5s
R32A Long Quarter, 23.93 349 IAmb IAmb 01 27 42.8
comp=Z,47nm,1.0s
S51A Beattyville 24.01 18 IAmb IAmb 01 27 48.7
comp=Z,66nm,1.0s
Q44A Meyer Farm, Va 24.07 7 IAmb IAmb 01 27 55.1
comp=Z,70nm,1.0s
V58A Windy Hill, Pi 24.10 28 IAmb IAmb 01 27 46.0
comp=Z,71nm,1.1s
R49A Shelbyville 24.19 15 IAmb IAmb 01 27 44.4
comp=Z,71nm,1.2s
KSU1 Kansas State U 24.27 353 IAmb IAmb 01 27 45.6
comp=Z,49nm,0.8s
T25A Trinidad 24.36 337 IAmb IAmb 01 27 48.9
comp=Z,74nm,1.2s
R50A Paris 24.40 16 IAmb IAmb 01 27 42.1
comp=Z,113nm,1.3s
P40A Paris 24.47 1 IAmb IAmb 01 27 46.8
comp=Z,75nm,1.2s
CBKS Cedar Bluff 24.52 347 IAmb IAmb 01 27 50.1
comp=Z,57nm,1.2s
P38A Dawn 24.57 359 IAmb IAmb 01 27 47.8
comp=Z,61nm,1.2s
BLA Blacksburg 24.74 24 IAmb IAmb 01 27 51.5
comp=Z,44nm,0.8s
S54A Dingess, Beckl 24.92 22 IAmb IAmb 01 28 01.7
comp=Z,135nm,1.8s
UUPR Utuado, UPR, P 25.21 79 P **P** **01 27 33.3 -0.3**
P48A Milroy 25.24 14 IAmb IAmb 01 28 05.5
comp=Z,84nm,1.2s
Q52A Bidwell 25.64 19 IAmb IAmb 01 28 01.2
comp=Z,67nm,1.0s
SJG San Juan 25.75 79 LR LR 01 38 27.0
comp=Z,211nm,20.8s,baz=250,slow=38
R55A Marlinton 25.79 23 IAmb IAmb 01 28 01.4
comp=Z,55nm,1.1s
Q54A Coxs Mills 26.14 22 IAmb IAmb 01 28 02.7
comp=Z,111nm,1.5s
MVCO Mesa Verde 26.17 331 IAmb IAmb 01 27 47.0
comp=Z,44nm,0.8s
P53A Whipple 26.40 20 IAmb IAmb 01 28 06.8
comp=Z,121nm,1.6s
R58B Mineral 26.45 27 IAmb IAmb 01 28 06.5
comp=Z,78nm,1.6s
O52A Adamsville 26.83 19 IAmb IAmb 01 28 25.8
comp=Z,65nm,1.2s
CBN Corbin Frederi 26.87 28 IAmb IAmb 01 28 30.5
comp=Z,98nm,1.4s
GLA Glamis 26.88 316 IAmb IAmb 01 28 33.1
comp=Z,46nm,1.4s
ESJX Sierra Juarez 27.06 313 P **P** **01 27 51.8 +1.5**
L34A Svendsen Farm, 27.07 354 IAmb IAmb 01 28 10.6
comp=Z,43nm,0.9s
PV13 Radium Mtn., P 27.08 331 IAmb IAmb 01 27 55.4
comp=Z,89nm,1.5s
BLYC Blythe 27.11 317 P **P** **01 27 53.6 +3.0**
PV05 Paradox Valley 27.15 331 IAmb IAmb 01 27 55.7
comp=Z,35nm,1.0s
PV03 Paradox Valley 27.17 332 IAmb IAmb 01 27 56.1
comp=Z,49nm,1.2s
PV18 Skein Mesa, Pa 27.20 331 IAmb IAmb 01 28 14.2
comp=Z,82nm,1.1s
PV11 David Mesa, Pa 27.22 332 IAmb IAmb 01 27 56.6
comp=Z,103nm,1.5s
PV07 Paradox Valley 27.23 332 IAmb IAmb 01 28 14.8
comp=Z,32nm,1.0s
PV17 East Wray Mesa 27.25 331 IAmb IAmb 01 28 14.6
comp=Z,32nm,1.0s
PV16 Nyswonger Mesa 27.25 332 IAmb IAmb 01 28 14.8
comp=Z,54nm,1.2s
PV20 West Nyswonger 27.30 332 IAmb IAmb 01 28 15.1
comp=Z,45nm,0.9s
PV04 Paradox Valley 27.31 332 IAmb IAmb 01 27 57.4
comp=Z,99nm,1.5s
PV10 Paradox Valley 27.36 331 IAmb IAmb 01 27 57.1
comp=Z,74nm,1.3s
O54A Avella 27.37 21 IAmb IAmb 01 28 27.2
comp=Z,91nm,1.7s
PV22 Blue Mesa, Par 27.37 332 IAmb IAmb 01 28 15.3
comp=Z,31nm,1.0s
YUH Yuha Desert 27.40 314 IAmb IAmb 01 28 29.6
comp=Z,68nm,2.0s
PV23 Carpenter Ridg 27.41 332 IAmb IAmb 01 28 16.1
comp=Z,62nm,1.0s
BC3 Big Chuckawall 27.66 316 IAmb IAmb 01 28 40.2
comp=Z,38nm,1.2s
PFO Pinyon Flats O 28.32 315 LR LR 01 39 53.0
comp=Z,221nm,20.1s,baz=140,slow=37
PFO Pinyon Flats O 28.32 315 *i P* **P** **01 28 00.6 -0.9**
PFO pmax pmax
comp=Z,54nm,4.4s
Q16A Castle Valley 28.81 329 IAmb IAmb 01 28 11.1
comp=Z,37nm,1.5s
CZSB Cruzeiro do Su 30.11 137 *eP* **P** **01 28 18.9 +1.5**
SPMN Marine on St. 30.15 0 IAmb IAmb 01 28 38.7
comp=Z,38nm,1.2s
S11A Rachel 30.38 322 IAmb IAmb 01 29 05.3
comp=Z,34nm,1.3s
BBSR BB Station 30.90 51 P **P** **01 28 22.8 -1.4**
BBSR IAmb IAmb 01 28 24.2
comp=Z,24nm,0.7s
HWUT Hardware Ranch 31.11 332 IAmb IAmb 01 28 29.7
comp=Z,39nm,1.7s
NNA Nana 31.11 149 LR LR 01 39 43.6
comp=Z,152nm,18.8s,baz=328,slow=34
NNA Nana 31.11 149 *i P* **P** **01 28 27.1 +0.8**
NNA pmax pmax
comp=Z,28nm,1.1s
L59A Walton 31.16 26 IAmb IAmb 01 28 48.3
comp=Z,27nm,1.0s
PDAR Pinedale Array 31.21 336 P **P** **01 28 26.6 -0.6**
comp=Z,1.0nm,0.6s,baz=141,slow=9.6,SNR=12
PDAR PcP **PcP** **01 31 20.3 +0.2**
comp=Z,0.8nm,0.5s,baz=120,slow=5.3,SNR=10
PDAR LR LR 01 44 37.8
comp=Z,62nm,18.6s,baz=130,slow=43
comp=Z,1.0nm,0.6s
SADO Sadowa 31.89 19 LR LR 01 42 43.7
comp=Z,243nm,20.5s,baz=237,slow=39
ELK Elko 32.25 327 LR LR 01 43 09.3
comp=Z,163nm,20.1s,baz=138,slow=39
LOHW Long Hollow 32.34 335 IAmb IAmb 01 28 59.2
comp=Z,26nm,1.4s
NVAR Mina Array Bea 32.42 321 P **P** **01 28 38.4 +0.6**
comp=Z,16nm,1.0s,baz=139,slow=8.7,SNR=31
NVAR pP **pP** **01 28 57.2 +0.3**
comp=Z,8.1nm,0.8s,baz=130,slow=8.6,SNR=5.7
NVAR LR LR 01 42 13.6
comp=Z,168nm,19.8s,baz=130,slow=37
comp=Z,16nm,1.0s
NCB Newcomb 32.96 25 IAmb IAmb 01 29 04.4
comp=Z,43nm,1.1s
RLMT Red Lodge 33.12 338 IAmb IAmb 01 29 30.4
comp=Z,33nm,1.7s
YNE Yellowstone No 33.28 338 IAmb IAmb 01 29 48.2
comp=Z,19nm,1.3s
YMR Madison River 33.36 336 IAmb IAmb 01 29 08.6
comp=Z,26nm,1.0s
TEFE Tefe 33.42 121 *eP* **P** **01 28 47.6 +1.2**
YHL Hebgen Lake 33.60 336 IAmb IAmb 01 29 33.3
comp=Z,31nm,1.6s
PNTR Pine Nut 33.62 321 IAmb IAmb 01 29 38.2
comp=Z,37nm,1.4s
PAHR Pah Rah Range 33.88 322 IAmb IAmb 01 29 34.6
comp=Z,44nm,1.7s
HLID Hailey 33.95 331 IAmb IAmb 01 28 55.5
comp=Z,40nm,1.7s
MFID Camas Ranch 34.50 330 IAmb IAmb 01 29 19.9
comp=Z,34nm,1.6s
BEKR Beckworth 34.56 321 IAmb IAmb 01 29 01.2
comp=Z,14nm,1.1s
DLMT Dillon 34.59 335 IAmb IAmb 01 29 19.3
comp=Z,32nm,1.1s
EPLO Experimental L 34.61 359 IAmb IAmb 01 29 17.4
comp=Z,40nm,1.4s
WVOR Wild Horse Val 35.24 326 IAmb IAmb 01 29 24.5
comp=Z,31nm,1.4s
ULM Lac du Bonnet 35.27 357 P **P** **01 29 00.6 -1.4**
comp=Z,2.5nm,0.5s,baz=172,slow=10.0,SNR=9.7
ULM pP **pP** **01 29 19.8 -1.6**
comp=Z,6.6nm,0.9s,baz=179,slow=7.1,SNR=6.0
ULM PcP **PcP** **01 31 31.5 +0.5**
comp=Z,2.1nm,0.6s,baz=164,slow=5.4,SNR=2.0
ULM LR LR 01 46 50.0
comp=Z,82nm,18.1s,baz=168,slow=42
comp=Z,2.5nm,0.5s
EGMT Eagleton 35.81 340 IAmb IAmb 01 29 28.6
comp=Z,24nm,1.1s
PLID Pearl Lake 35.84 332 IAmb IAmb 01 29 29.7
comp=Z,40nm,1.4s
BMO Blue Mountains 36.28 330 IAmb IAmb 01 29 33.0
comp=Z,31nm,1.6s
MSO Missoula 36.32 335 IAmb IAmb 01 29 41.3
comp=Z,8nm,1.2s
MACA Manacapuru-AM 36.57 117 *eP* **P** **01 29 13.6 0.0**
YBH Yreka Blue Hor 37.11 322 LR LR 01 45 07.9
comp=Z,11nm,21.7s,baz=128,slow=37
H04A Detroit Lake 38.67 326 P **P** **01 29 31.4 +0.4**
D08A Wollman Farm, 38.67 331 IAmb IAmb 01 29 35.3
comp=Z,38nm,1.9s
E07A Sunnyside 38.75 330 P **P** **01 29 31.8 +0.2**
WAH2 Wahluke Slope 38.75 330 P **P** **01 29 30.5 -1.1**
NEW Newport 38.78 334 LR LR 01 48 46.0
comp=Z,76nm,21.1s,baz=140,slow=41
HOOD Mount Hood Mea 38.80 327 P **P** **01 29 33.1 +0.9**
C09A Chrisman Ranch 38.92 333 P **P** **01 29 33.6 +0.5**
C09A IAmb IAmb 01 29 36.6
comp=Z,13nm,0.7s
MXC Moxie City 38.98 330 IAmb IAmb 01 29 55.9
comp=Z,36nm,1.8s
EPH Ephrata 39.20 331 IAmb IAmb 01 29 38.6
comp=Z,8.9nm,0.8s
LPAZ La Paz 39.49 141 P **P** **01 29 38.0 -0.8**
comp=Z,1.7nm,0.7s,baz=314,slow=5.6,SNR=4.3
LPAZ LR LR 01 43 53.2
comp=Z,105nm,19.4s,baz=316,slow=33
comp=Z,1.7nm,0.7s
LPAZ La Paz 39.49 141 IAmb IAmb 01 30 03.6
comp=Z,25nm,1.8s
LPAZ La Paz 39.49 141 P **P** **01 29 38.0 -0.8**
LPAZ La Paz 39.49 141 *eP* **P** **01 29 39.7 +0.9**
FFC Flin Flon 40.30 352 P **P** **01 29 43.7 -0.7**
FFC Flin Flon 40.30 352 P **P** **01 29 43.7 -0.7**
FFC pmax pmax
comp=Z,7.0nm,1.0s
FFC Flin Flon 40.30 352 P **P** **01 29 43.7 -0.7**
MDP Montagnes des 40.69 100 LR LR 01 49 12.0
comp=Z,62nm,18.5s,baz=290,slow=40
ITTB Itaituba 41.47 115 *eP* **P** **01 29 53.2 -1.3**
VILB Vilhena 42.58 129 P **P** **01 30 03.5 0.0**
VILB IAmb IAmb 01 30 24.8
comp=Z,40nm,1.2s
VILB Vilhena 42.58 129 *eP* **P** **01 30 03.6 +0.1**
NPGB Novo Progresso 43.10 118 *eP* **P** **01 30 06.0 -1.8**
FCC Fort Churchill 43.72 359 P **P** **01 30 10.9 -1.2**
FCC Fort Churchill 43.72 359 P **P** **01 30 10.9 -1.2**
FCC pmax pmax
comp=Z,9.0nm,1.2s
PDRB Porto dos Gac 44.45 124 *eP* **P** **01 30 17.6 -0.9**
SCHQ Schefferville 44.60 21 P **P** **01 30 17.8 -1.4**
comp=Z,3.4nm,0.7s,baz=224,slow=8.3,SNR=7.6
SCHQ PcP **PcP** **01 32 00.2 -0.6**
comp=Z,4.4nm,1.0s,baz=235,slow=4.7,SNR=1.7
SCHQ LR LR 01 49 46.3
comp=Z,405nm,21.4s,baz=210,slow=37
comp=Z,3.4nm,0.7s
SCHQ Schefferville 44.60 21 IAmb IAmb 01 30 40.6
comp=Z,33nm,1.1s
CLDB Colider 44.78 123 *eP* **P** **01 30 21.2 0.0**
RPN Rapa Nui 44.82 201 LR LR 01 45 38.0
comp=Z,44nm,19.2s,baz=32,slow=31
PTLB Pontes e Lacer 44.96 131 P **P** **01 30 22.1 -0.5**
PTLB Pontes e Lacer 44.96 131 *eP* **P** **01 30 23.3 +0.7**
BBB Bella Bella 46.53 331 LR LR 01 54 23.3
comp=Z,53nm,18.1s,baz=119,slow=42
AC02 Maricunga 47.51 151 P **P** **01 30 43.3 +0.3**
SALV Santo Antonio 47.81 128 *eP* **P** **01 30 44.4 -0.5**
SNDB Serra Nova Dou 49.07 121 *eP* **P** **01 30 54.3 -0.3**
PP1B Ponte de Pedra 49.47 130 *eP* **P** **01 30 57.9 +0.2**
YKAW1 Yellowknife Wh 49.87 347 IAmb IAmb 01 31 44.4
comp=Z,13nm,1.1s
YKA Yellowknife Ar 49.90 347 P **P** **01 30 60.0 -0.3**
comp=Z,1.9nm,0.6s,baz=151,slow=7.1,SNR=68
comp=Z,1.9nm,0.6s
YKA Yellowknife Ar 49.90 347 P **P** **01 31 00.0 -0.3**
YKA Yellowknife Ar 49.90 347 *ceP* **P** **01 31 00.4 +0.1**
YKA pmax pmax
comp=Z,2.0nm,0.6s
BDQN Bodoquena, MS 49.95 134 *eP* **P** **01 31 00.7 -0.5**
YKAW3 Yellowknife Wh 49.96 347 IAmb IAmb 01 31 43.6
comp=Z,27nm,1.6s
V35K Ketchikan 50.12 332 P **P** **01 31 05.2 +3.2**
baz=128
MURT Porto Murtinho 50.18 136 *eP* **P** **01 31 02.2 -0.8**
T35M Bob Quinn 50.58 334 P **P** **01 31 08.8 +3.3**
baz=130
ARAG Araguaiana, MT 50.70 125 *eP* **P** **01 31 06.8 -0.2**
SMTB Santa Maria do 50.70 115 *eP* **P** **01 31 06.5 -0.6**
AQDB Aquidauana 50.71 133 P **P** **01 31 07.2 +0.3**
AQDB IAmb IAmb 01 31 27.8
comp=Z,19nm,1.2s
AQDB Aquidauana 50.71 133 *eP* **P** **01 31 07.5 +0.6**
CRAG Craig 50.89 332 P **P** **01 31 11.1 +3.3**
baz=126
WRAK Wrangell Islan 51.12 333 P **P** **01 31 12.7 +3.2**
baz=128
U33K Whale Pass 51.28 332 P **P** **01 31 13.8 +3.1**
baz=127
DLBC Dease Lake 51.45 336 LR LR 01 55 10.3
comp=Z,84nm,21.4s,baz=94,slow=38
DLBC Dease Lake 51.45 336 P **P** **01 31 15.2 +3.2**
baz=132,SNR=20
S34M Telegraph Cree 51.54 335 IAmb IAmb 01 31 17.3
comp=Z,8.1nm,0.8s
S34M Telegraph Cree 51.54 335 P **P** **01 31 15.7 +3.1**
baz=130,SNR=6.5
FRB Frobisher Bay 51.55 14 LR LR 01 54 15.2
comp=Z,152nm,20.1s,baz=223,slow=37
T33K Petersburg 51.62 333 P **P** **01 31 16.3 +3.0**
baz=127
C2SB Chapadao do Su 51.72 129 *eP* **P** **01 31 14.7 +0.2**
WTLY Watson Lake, Y 52.12 338 P **P** **01 31 18.2 +1.2**
WTLY Watson Lake, Y 52.12 338 P **P** **01 31 19.1 +2.1**
baz=134,SNR=13
R33M Jennings River 52.45 337 P **P** **01 31 22.3 +2.7**
baz=131
Q32M Nakina River 52.68 336 P **P** **01 31 24.2 +2.9**
baz=129
S32K Killisnoo 52.73 333 P **P** **01 31 24.5 +3.1**
baz=126
WRGLY Wrigley 52.73 343 P **P** **01 31 22.0 +0.6**
WRGLY IAmb IAmb 01 32 06.8
comp=Z,12nm,0.8s
WRGLY Wrigley 52.73 343 P **P** **01 31 23.3 +1.9**
baz=142
MT09 Talagante 52.76 157 P **P** **01 31 22.9 +0.8**
AMBA Amambai (Brazi 52.82 135 *eP* **P** **01 31 22.5 -0.2**
MT08 Bocatoma Ro 52.84 156 P **P** **01 31 23.7 +0.8**
TGTN Hyland Airport 52.94 340 P **P** **01 31 25.3 +2.2**
baz=135,SNR=9.0
R32K Eaglecrest 53.18 334 P **P** **01 31 27.6 +2.8**
baz=126
CPUP Villa Florida 53.63 140 P **P** **01 31 28.0 -0.5**
comp=Z,2.1nm,0.7s,baz=329,slow=8.8,SNR=6.4
CPUP LR LR 01 54 13.5

comp=Z,70nm,21.5s,baz=341,slow=36
comp=Z,2.1nm,0.7s
CPUP Villa Florida 53.63 140 IAmb IAmb 01 31 49.5
comp=Z,31nm,1.7s
CPUP Villa Florida 53.63 140 *e*P **P 01 31 28.5 0.0**
P32M Atlin 53.65 336 IAmb IAmb 01 31 32.1
comp=Z,27nm,1.6s
P32M Atlin 53.65 336 P **P 01 31 30.7 +2.4**
baz=128
P33M Teslin, Yukon 53.69 337 IAmb IAmb 01 31 33.0
comp=Z,32nm,1.6s
P33M Teslin, Yukon 53.69 337 P **P 01 31 31.0 +2.4**
baz=130,SNR=8.3
BDFB Brasilia 53.71 123 P **P 01 31 29.3 -0.2**
comp=Z,4.1nm,0.5s,baz=296,slow=7.8,SNR=11
BDFB LR LR 01 54 33.9
comp=Z,105nm,19.7s,baz=286,slow=36
comp=Z,4.1nm,0.5s
BDFB Brasilia 53.71 123 P **P 01 31 29.1 -0.2**
BDFB IAmb IAmb 01 31 31.6
comp=Z,34nm,1.7s
BDFB Brasilia 53.71 123 P **P 01 31 29.2 -0.2**
BDFB pmax pmax
comp=Z,34nm,1.7s
S31K Pelican 53.74 333 P **P 01 31 31.6 +2.8**
baz=124
BO02 Sierra Bellavi 53.74 157 P **P 01 31 30.3 +1.0**
N32M Quiet Lake 54.39 337 IAmb IAmb 01 32 20.5
comp=Z,27nm,1.2s
N32M Quiet Lake 54.39 337 P **P 01 31 35.8 +2.1**
baz=130
SDBA SAO DESIDERIO 54.69 117 *e*P **P 01 31 35.0 -1.5**
MMPY Sheldon Lake, 54.71 339 P **P 01 31 38.5 +2.5**
baz=132,SNR=22
WHY Whitehorse 54.77 336 P **P 01 31 38.7 +2.2**
baz=128,SNR=5.9
IPMB Ipameri, GO 54.83 125 *e*P **P 01 31 37.1 -0.3**
P30M Million Dollar 55.28 335 P **P 01 31 42.8 +2.6**
baz=125
O30N Mendenhall 55.31 336 IAmb IAmb 01 31 44.7
comp=Z,34nm,1.6s
O30N Mendenhall 55.31 336 P **P 01 31 42.8 +2.5**
baz=126,SNR=8.7
M31M Drury Creek, Y 55.54 338 IAmb IAmb 01 31 45.3
comp=Z,21nm,1.6s
M31M Drury Creek, Y 55.54 338 P **P 01 31 44.1 +2.2**
baz=129,SNR=8.3
N31M Braeburn, Yuko 55.62 337 P **P 01 31 42.9 +0.4**
N31M Braeburn, Yuko 55.62 337 P **P 01 31 45.0 +2.5**
baz=127
LDASE Londrina, Braz 55.83 132 *e*P **P 01 31 43.7 -0.9**
HYT Haines Junctio 55.91 335 P **P 01 31 45.5 +0.9**
HYT IAmb IAmb 01 32 30.0
comp=Z,23nm,1.5s
HYT Haines Junctio 55.91 335 P **P 01 31 47.4 +2.8**
baz=125,SNR=7.2
PTGB Pitanga 56.01 134 *e*P **P 01 31 45.1 -0.7**
O29M Mount Kennedy 56.05 335 IAmb IAmb 01 31 50.2
comp=Z,12nm,1.2s
O29M Mount Kennedy 56.05 335 P **P 01 31 48.4 +2.7**
baz=123
N30M Aishikik Lake 56.11 336 IAmb IAmb 01 31 50.0
comp=Z,13nm,1.1s
N30M Aishikik Lake 56.11 336 P **P 01 31 48.7 +2.7**
baz=126
YUK6 Outpost Mounta 56.32 335 P **P 01 31 50.3 +2.6**
baz=124,SNR=6.5
BB19B Bebedouro 56.33 128 *e*P **P 01 31 46.6 -1.6**
JANB Januaria 56.48 120 *e*P **P 01 31 46.8 -2.5**
PMNB Patos De Minas 56.54 125 *e*P **P 01 31 47.9 -1.9**
PINM Pinnacle 56.65 334 P **P 01 31 52.5 +2.6**
baz=122
PCA Pinnacle 56.65 334 P **P 01 31 50.5 +0.6**
PCA IAmb IAmb 01 32 36.5
comp=Z,25nm,1.3s
M30M Minto, Yukon 56.66 337 IAmb IAmb 01 31 53.7
comp=Z,18nm,1.2s
M30M Minto, Yukon 56.66 337 P **P 01 31 51.6 +1.7**
baz=126,SNR=16
YUK4 Talbot Arm 56.66 336 P **P 01 31 52.7 +2.6**
baz=124,SNR=8.5
MAYO Mayo, Yukon 56.95 339 P **P 01 31 53.7 +1.8**
baz=128,SNR=5.9
O28M Mount Upton 56.98 334 P **P 01 31 54.9 +2.5**
baz=122
YUK8 Steele Glacier 57.08 335 P **P 01 31 55.5 +2.3**
baz=123,SNR=5.9
M29M Somme Creek 57.21 337 P **P 01 31 56.0 +2.1**
baz=125
LOGN Logan Glacier 57.34 334 IAmb IAmb 01 31 59.6
comp=Z,24nm,1.3s
MESA MESA 57.42 333 P **P 01 31 58.2 +2.8**
baz=120
L29M L29M 57.47 337 P **P 01 31 57.5 +1.9**
baz=125
CTG Chitna Glacier 57.56 334 P **P 01 31 58.4 +2.0**
baz=121
GRNC Granite Creek 57.61 334 IAmb IAmb 01 32 01.4
comp=Z,17nm,1.0s
ITAB Concordia 57.61 137 *e*P **P 01 31 58.0 +1.0**
YUK3 Moose Creek 57.62 335 P **P 01 31 58.9 +2.0**
baz=122,SNR=6.3
K29M Barlow Dome 57.68 338 IAmb IAmb 01 32 00.7
comp=Z,33nm,1.8s
K29M Barlow Dome 57.68 338 P **P 01 31 58.4 +1.2**
baz=126
J30M Hart River 57.71 339 IAmb IAmb 01 32 01.7
comp=Z,7.3nm,0.7s
J30M Hart River 57.71 339 P **P 01 31 58.9 +1.5**
baz=128
C36M Paulatuk 57.78 347 P **P 01 31 59.5 +2.0**
baz=144
H31M Peel River 57.85 341 P **P 01 31 59.5 +1.3**
baz=131
RCLB Rio Claro- Sao 57.87 129 *e*P **P 01 32 00.2 +1.2**
TGL Tana Glacier 58.09 334 IAmb IAmb 01 32 03.9
comp=Z,22nm,1.1s
BVCY Beaver Creek 58.12 336 P **P 01 32 01.9 +1.7**
baz=122,SNR=7.2
I30M Mount Dempster 58.13 340 P **P 01 32 01.6 +1.3**
baz=128
CRQE Cirque 58.20 334 P **P 01 32 03.1 +2.3**
baz=119
CRQM Cirque 58.22 334 IAmb IAmb 01 32 04.7
comp=Z,14nm,1.0s
J29N Klondike Camp 58.29 339 IAmb IAmb 01 32 47.5
comp=Z,20nm,1.5s
J29N Klondike Camp 58.29 339 P **P 01 32 02.6 +1.2**
baz=126
KAIM Kayak Island 58.39 332 P **P 01 32 03.4 +1.4**
baz=117
MCARA McCarthy VSAT 58.48 334 P **P 01 32 04.1 +1.5**
MCARA IAmb IAmb 01 32 07.3
comp=Z,15nm,0.9s
MCARA McCarthy VSAT 58.48 334 P **P 01 32 04.5 +1.9**
baz=119,SNR=8.1
DAWY Dawson 58.48 338 P **P 01 32 02.5 -0.2**
DAWY Dawson 58.48 338 P **P 01 32 03.4 +0.7**
baz=124,SNR=9.2
M27K Edge Creek, AK 58.50 336 IAmb IAmb 01 32 06.4
comp=Z,15nm,1.3s
M27K Edge Creek, AK 58.50 336 P **P 01 32 04.7 +1.8**
baz=121
VRDI Verde Repeater 58.58 334 IAmb IAmb 01 32 07.3
comp=Z,8.6nm,1.0s
DIAM Diamantina, MG 58.63 123 *e*P **P 01 32 05.0 +0.5**
VAO Valinhos 58.64 129 *e*P **P 01 32 05.8 +1.4**
F31M Tsiigehtchic 58.76 343 IAmb IAmb 01 32 50.0
comp=Z,24nm,1.2s
F31M Tsiigehtchic 58.76 343 P **P 01 32 05.2 +0.8**
baz=132
BCAR Beaver Creek A 58.83 336 P **P 01 32 06.6 +1.4**
GLB Gilahina Butte 58.84 334 P **P 01 32 06.7 +1.6**
GLB IAmb IAmb 01 32 09.0
comp=Z,15nm,1.0s
SFJD Kangerlussuaq 58.84 18 LR LR 01 59 01.9
comp=Z,188nm,18.6s,baz=226,slow=38
L27K Beaver Creek, 58.85 336 P **P 01 32 06.8 +1.6**
baz=122
I29M Ogilvie Camp, 58.86 340 P **P 01 32 05.6 +0.4**
I29M IAmb IAmb 01 32 50.7
comp=Z,9.0nm,0.8s
I29M Ogilvie Camp, 58.86 340 P **P 01 32 06.9 +1.7**
baz=126
BMRM Bremner River 58.95 333 IAmb IAmb 01 32 09.9
comp=Z,11nm,0.8s
BMRM Bremner River 58.95 333 P **P 01 32 07.8 +1.8**
baz=118
EPYK Eagle Plains 58.96 341 P **P 01 32 07.3 +1.4**
baz=128
M26K Nabesna, AK 58.97 335 IAmb IAmb 01 32 10.2
comp=Z,27nm,1.6s
M26K Nabesna, AK 58.97 335 P **P 01 32 08.2 +2.1**
baz=120
Q23K Middleton Isla 59.05 331 P **P 01 32 07.7 +1.2**
baz=115
PLCA Paso Flores 59.15 160 P **P 01 32 07.7 +0.2**
comp=Z,14nm,1.3s,baz=314,slow=8.6,SNR=7.4
PLCA pP **pP 01 32 29.7 +1.3**
comp=Z,9.9nm,1.0s,baz=332,slow=8.8,SNR=8.3
PLCA LR LR 01 52 53.6
comp=Z,50nm,19.8s,baz=355,slow=31
comp=Z,14nm,1.3s
PLCA Paso Flores 59.15 160 P **P 01 32 07.8 +0.2**
PLCA Paso Flores 59.15 160 *e*P **P 01 32 09.1 +1.6**
BSCB Bom Sucesso 59.19 126 *e*P **P 01 32 08.9 +0.7**
G30M tAoh Zraii Nji 59.19 342 P **P 01 32 09.1 +1.6**
baz=129
N25K Chitina, Valde 59.25 334 IAmb IAmb 01 32 12.1
comp=Z,16nm,0.8s
N25K Chitina, Valde 59.25 334 P **P 01 32 10.8 +2.7**
baz=118,SNR=10
EYAK Cordova Ski Ar 59.26 333 IAmb IAmb 01 32 12.2
comp=Z,12nm,0.7s
EYAK Cordova Ski Ar 59.26 333 P **P 01 32 10.7 +2.6**
baz=116
INK Inuvik 59.29 344 LR LR 02 03 43.7
comp=Z,41nm,18.1s,baz=251,slow=42
INK Inuvik 59.29 344 P **P 01 32 08.4 +0.3**
INK Inuvik 59.29 344 P **P 01 32 08.4 +0.3**
INK pmax pmax
comp=Z,23nm,1.2s
INK Inuvik 59.29 344 P **P 01 32 09.0 +1.0**
baz=133,SNR=25
H29M Whitestone 59.39 340 P **P 01 32 10.2 +1.3**
baz=127
L26K Log Cabin Wild 59.42 336 P **P 01 32 10.6 +1.4**
L26K IAmb IAmb 01 32 13.2
comp=Z,20nm,1.6s
L26K Log Cabin Wild 59.42 336 P **P 01 32 11.4 +2.2**
baz=120
F30M Barrier River 59.46 342 P **P 01 32 10.6 +1.3**
baz=130,SNR=14
I28M Miner Creek 59.46 339 IAmb IAmb 01 32 17.2
comp=Z,23nm,1.8s
I28M Miner Creek 59.46 339 P **P 01 32 11.2 +1.7**
baz=125
MENT Mentasta 59.53 336 P **P 01 32 10.7 +0.8**
MENT IAmb IAmb 01 32 14.0
comp=Z,32nm,1.7s
DIV Divide 59.53 333 P **P 01 32 11.1 +1.1**
DIV IAmb IAmb 01 32 13.6
comp=Z,21nm,1.2s
RSD Rainshed 59.55 284 P **P 01 32 11.2 +0.3**
RES Resolute Bay 59.72 359 LR LR 01 59 23.4
comp=Z,130nm,21.7s,baz=122,slow=37
KLU Klutina 59.76 334 P **P 01 32 12.6 +1.1**
KLU Klutina 59.76 334 P **P 01 32 13.9 +2.4**
baz=116,SNR=9.6
P23K Montague Islan 59.77 332 P **P 01 32 13.0 +1.5**
baz=114
DAH Dandelion 59.93 284 P **P 01 32 13.9 +0.1**
GLI Glacier Island 60.00 333 P **P 01 32 15.1 +2.0**
baz=115
DOT Dot Lake 60.01 336 P **P 01 32 14.7 +1.5**
DOT IAmb IAmb 01 32 16.5
comp=Z,13nm,0.8s
RCBR Riachuelo 60.07 106 LR LR 02 00 23.6
comp=Z,31nm,18.2s,baz=258,slow=38
LL01 San Ignacio de 60.08 163 P **P 01 32 15.8 +2.0**
I27K Kandik River 60.13 339 IAmb IAmb 01 32 59.5
comp=Z,11nm,1.0s
I27K Kandik River 60.13 339 P **P 01 32 15.9 +1.9**
baz=123,SNR=8.4
M24K Tolsona, Glenn 60.14 334 P **P 01 32 15.2 +1.1**
M24K Tolsona, Glenn 60.14 334 P **P 01 32 16.8 +2.7**
baz=116
A36M Sachs Harbour 60.14 349 IAmb IAmb 01 32 59.1
comp=Z,14nm,1.1s
A36M Sachs Harbour 60.14 349 P **P 01 32 14.1 +0.2**
baz=143,SNR=5.7
SCRK Sand Creek 60.15 337 P **P 01 32 15.4 +1.2**
SCRK Sand Creek 60.15 337 P **P 01 32 16.5 +2.3**
baz=120,SNR=7.7
PAX Paxson 60.24 335 P **P 01 32 15.2 +0.3**
PAX IAmb IAmb 01 32 17.8
comp=Z,13nm,0.8s
PAX Paxson 60.24 335 P **P 01 32 15.2 +0.3**
PAX pmax pmax
comp=Z,13nm,0.8s
PAX Paxson 60.24 335 P **P 01 32 16.4 +1.5**
baz=118
RIDG Independent Ri 60.36 336 P **P 01 32 16.2 +0.6**
RIDG Independent Ri 60.36 336 P **P 01 32 17.7 +2.0**
baz=119,SNR=8.4
H27K Steamboat Moun 60.45 340 P **P 01 32 17.8 +1.7**
baz=123
SCM Sheep Creek Mo 60.51 334 P **P 01 32 18.4 +1.7**
baz=115
I26K Coal Creek Min 60.52 338 IAmb IAmb 01 32 19.9
comp=Z,12nm,0.8s
I26K Coal Creek Min 60.52 338 P **P 01 32 18.1 +1.6**
baz=121
E29M Blow River 60.57 342 P **P 01 32 18.6 +1.7**
baz=128
M23K Glacier View 60.66 334 P **P 01 32 19.4 +1.8**
baz=115
CMC01 Camacan, BA 60.69 117 *e*P **P 01 32 18.6 +0.1**
F28M Old Crow 60.70 341 P **P 01 32 19.5 +1.7**
baz=126,SNR=37
SEW Seward 60.76 331 P **P 01 32 19.9 +1.7**
baz=112
K24K Donnelly Dome 60.76 336 P **P 01 32 19.9 +1.6**
baz=118,SNR=6.4
G27K Doyon Strip 60.81 340 IAmb IAmb 01 32 21.2
comp=Z,24nm,1.6s
G27K Doyon Strip 60.81 340 P **P 01 32 19.8 +1.3**
baz=124
KNK Knik Glacier 60.83 333 IAmb IAmb 01 32 22.1
comp=Z,15nm,1.0s
KNK Knik Glacier 60.83 333 P **P 01 32 20.2 +1.4**
baz=114,SNR=7.8
NBPV Pedro Velho 60.85 106 *e*P **P 01 32 18.8 -0.9**
SJMB Sao Joao De Ma 60.87 122 *e*P **P 01 32 19.9 +0.2**
SML Sawmill 60.93 333 P **P 01 32 21.2 +1.7**
baz=114,SNR=6.8
J25K Salcha River, 60.99 337 IAmb IAmb 01 32 23.1
comp=Z,26nm,1.5s
J25K Salcha River, 60.99 337 P **P 01 32 21.2 +1.3**
baz=119,SNR=10
WAT6 Susitna Watana 61.01 334 P **P 01 32 21.8 +1.7**
baz=115,SNR=11
GUA01 Guaratinga, BA 61.01 119 *e*P **P 01 32 21.5 +0.8**
O22K Copper Landing 61.03 332 P **P 01 32 21.7 +1.7**
baz=112
DHY Denali Highway 61.07 335 P **P 01 32 22.0 +1.5**
baz=116
E28M Babbage River 61.18 342 P **P 01 32 22.3 +1.2**
baz=126
PMR Palmer 61.19 333 IAmb IAmb 01 32 24.2
comp=Z,9.9nm,0.8s
PMR Palmer 61.19 333 P **P 01 32 23.0 +1.8**
baz=113,SNR=6.9
BSFB Barra de Sao F 61.22 122 *e*P **P 01 32 21.6 -0.5**
BRSE Bradley Lake S 61.23 331 P **P 01 32 23.4 +1.9**
baz=111
RC01 Rabbit Creek A 61.26 332 IAmb IAmb 01 32 29.1
comp=Z,13nm,0.9s
RC01 Rabbit Creek A 61.26 332 P **P 01 32 23.4 +1.7**
baz=112,SNR=8.5
D28M Stokes Point 61.39 343 P **P 01 32 24.1 +1.7**
baz=128
WAT1 Susitna Watana 61.45 334 P **P 01 32 24.7 +1.8**
baz=114
KDAK Kodiak Island 61.48 328 LR LR 01 57 38.6
comp=Z,39nm,21.7s,baz=111,slow=35
KDAK Kodiak Island 61.48 328 P **P 01 32 24.7 +1.6**
baz=108
PRP Porcupine Dome 61.48 338 P **P 01 32 24.7 +1.5**
baz=119,SNR=16
HDA Harding Lake 61.49 336 IAmb IAmb 01 32 25.7
comp=Z,12nm,0.7s
HDA Harding Lake 61.49 336 P **P 01 32 24.5 +1.3**
baz=117,SNR=14
E27K Coleen River 61.56 341 IAmb IAmb 01 33 09.3
comp=Z,24nm,1.2s
E27K Coleen River 61.56 341 P **P 01 32 25.2 +1.6**
baz=124
G26K Porcupine Rive 61.59 340 IAmb IAmb 01 32 27.1
comp=Z,12nm,1.1s
G26K Porcupine Rive 61.59 340 P **P 01 32 25.2 +1.4**
baz=121
HOM Homer 61.63 330 P **P 01 32 25.6 +1.5**
baz=110
ILAR Eielson Array 61.64 337 P **P 01 32 24.8 +0.6**
comp=Z,5.7nm,0.6s,baz=127,slow=4.9,SNR=58
ILAR pP **pP 01 32 45.2 +0.2**
comp=Z,7.1nm,1.1s,baz=128,slow=4.4,SNR=7.1
ILAR LR LR 02 01 53.2
comp=Z,57nm,19.5s,baz=112,slow=39
comp=Z,5.7nm,0.6s
ILAR Eielson Array 61.64 337 P **P 01 32 25.3 +1.2**
Q20K Shuyak Island 61.64 329 P **P 01 32 26.3 +2.0**
baz=109
OHAK Old Harbor 61.67 327 P **P 01 32 26.7 +2.2**
baz=107
CAPN Captain Cook N 61.79 332 P **P 01 32 27.1 +2.0**
baz=111
RIB01 Linhares ES 61.83 122 *e*P **P 01 32 26.0 -0.1**
AY01 Puyuhuapi 61.90 164 IAmb IAmb 01 32 49.7
comp=Z,14nm,0.9s
CCB Clear Creek Bu 61.93 336 IAmb IAmb 01 32 29.0
comp=Z,9.4nm,1.1s
SII Sitkinak Islan 61.95 327 P **P 01 32 28.3 +1.8**
baz=106
D27M Malcolm River 61.98 342 P **P 01 32 28.0 +1.6**
baz=125
MCK McKinley 61.98 335 IAmb IAmb 01 32 29.4
comp=Z,13nm,0.9s
MCK McKinley 61.98 335 P **P 01 32 28.1 +1.6**
baz=115,SNR=9.7
POKR Poker Plat Res 62.00 337 P **P 01 32 28.1 +1.4**
baz=117
CUT Chulitna 62.01 334 P **P 01 32 28.5 +1.8**
baz=113
COLA College 62.05 337 P **P 01 32 28.3 +1.4**
COLA College 62.05 337 *i* P **P 01 32 27.5 +0.6**
COLA pmax pmax
comp=Z,10.0nm,0.9s
CAM01 Campos-RJ 62.08 125 *e*P **P 01 32 28.6 +0.9**
F26K Sheenjek River 62.10 340 IAmb IAmb 01 32 30.4
comp=Z,10nm,1.1s
F26K Sheenjek River 62.10 340 P **P 01 32 29.2 +1.9**
baz=121
BMAR Burnt Mountain 62.11 340 P **P 01 32 29.3 +2.0**
ALF01 Guarapari-ES 62.20 123 *e*P **P 01 32 29.1 +0.4**
L22K Petersville 62.27 334 IAmb IAmb 01 32 31.4
comp=Z,14nm,1.0s
SPU Mount Spurr 62.34 332 IAmb IAmb 01 32 32.6
comp=Z,15nm,1.0s
STLK Strandline Lak 62.36 332 IAmb IAmb 01 32 51.6
comp=Z,26nm,1.7s
Q19K Cape Douglas, 62.36 329 P **P 01 32 31.2 +2.1**
baz=108
P19K Oil Pt 62.39 330 P **P 01 32 31.4 +2.1**
baz=108
SKT Skwentna 62.40 333 P **P 01 32 30.7 +1.4**
baz=111,SNR=14
NEA2 Nenana 62.40 336 IAmb IAmb 01 32 31.8
comp=Z,32nm,1.6s
NEA2 Nenana 62.40 336 P **P 01 32 30.6 +1.4**
baz=115,SNR=6.4
N20K Mount Spurr 62.42 332 P **P 01 32 30.9 +1.4**
baz=110,SNR=10.0
SPCR Spurr Chakacha 62.42 332 P **P 01 32 31.1 +1.5**
baz=110
TRF Thorofare Moun 62.42 335 P **P 01 32 30.9 +1.3**
baz=113,SNR=18
H24K Noodor Dome 62.49 338 IAmb IAmb 01 32 32.7
comp=Z,13nm,0.8s
H24K Noodor Dome 62.49 338 P **P 01 32 31.4 +1.4**
baz=117,SNR=16
F25K Christian Rive 62.55 340 IAmb IAmb 01 32 33.6
comp=Z,14nm,1.0s
F25K Christian Rive 62.55 340 P **P 01 32 32.0 +1.8**
baz=120,SNR=17
KTH Kantishna Hill 62.73 335 IAmb IAmb 01 32 34.1
comp=Z,8.5nm,0.8s
G24K Hadweenzic Riv 62.74 339 IAmb IAmb 01 32 34.6
comp=Z,13nm,0.9s
G24K Hadweenzic Riv 62.74 339 P **P 01 32 32.9 +1.4**
baz=118
I23K Minto, Yukon-K 62.75 337 P **P 01 32 32.8 +1.3**
baz=115,SNR=25
E25K Arctic Village 62.79 340 P **P 01 32 33.4 +1.6**
baz=120,SNR=14
BPAW Bear Paw Mtn. 62.96 335 IAmb IAmb 01 32 35.6
comp=Z,10nm,0.7s
BPAW Bear Paw Mtn. 62.96 335 P **P 01 32 34.3 +1.3**
baz=113,SNR=14
C27K Jago River 63.00 342 IAmb IAmb 01 33 19.7
comp=Z,18nm,1.1s
C27K Jago River 63.00 342 P **P 01 32 34.9 +1.7**
baz=123,SNR=6.6
PPLA Purkeypile 63.01 334 P **P 01 32 35.0 +1.4**
baz=111,SNR=7.0
M20K Styx River 63.07 333 IAmb IAmb 01 32 36.8
comp=Z,12nm,1.0s
M20K Styx River 63.07 333 P **P 01 32 35.2 +1.4**
baz=110
O19K Port Alsworth 63.08 331 IAmb IAmb 01 32 36.1
comp=Z,31nm,1.5s
O19K Port Alsworth 63.08 331 P **P 01 32 35.5 +1.7**
baz=108
MLY Manley 63.23 336 P **P 01 32 36.3 +1.4**
baz=113,SNR=26
F24K Squaw Lake 63.27 339 IAmb IAmb 01 32 38.4
comp=Z,23nm,1.6s
F24K Squaw Lake 63.27 339 P **P 01 32 36.9 +1.8**
baz=117
P18K Big Mountain, 63.28 329 P **P 01 32 36.6 +1.3**
baz=106
Q17K Contact Creek 63.30 328 P **P 01 32 37.1 +1.6**
baz=105
N19K Bonanza Creek 63.34 331 IAmb IAmb 01 32 38.3
comp=Z,34nm,1.4s
N19K Bonanza Creek 63.34 331 P **P 01 32 37.0 +1.3**
baz=108,SNR=12
R17L Mt. Peulik Vol 63.38 327 P **P 01 32 37.6 +1.7**
baz=104
O18K Koktuh Hills 63.40 330 IAmb IAmb 01 32 38.5
comp=Z,11nm,0.9s
O18K Koktuh Hills 63.40 330 P **P 01 32 37.4 +1.4**
baz=107
CHUM Lake Minchumin 63.42 335 P **P 01 32 37.3 +1.2**
baz=111
C26K Camden Bay 63.51 342 P **P 01 32 38.4 +1.9**
baz=122
D25K Kavik River 63.64 341 IAmb IAmb 01 32 41.2
comp=Z,23nm,0.9s
D25K Kavik River 63.64 341 P **P 01 32 39.1 +1.6**
baz=120
G23K Bananza Creek 63.66 338 P **P 01 32 39.4 +1.8**
baz=115,SNR=6.8
E24K Your Creek 63.73 340 IAmb IAmb 01 32 42.3
comp=Z,19nm,1.4s
E24K Your Creek 63.73 340 P **P 01 32 39.6 +1.5**
baz=117,SNR=12
I21K Tanana 63.78 336 IAmb IAmb 01 32 40.9
comp=Z,25nm,1.4s
I21K Tanana 63.78 336 P **P 01 32 39.8 +1.4**
baz=112,SNR=7.0
Q16K King Salmon 63.80 328 P **P 01 32 40.4 +1.8**
baz=105
H22K Ishtalitna Cre 63.82 337 P **P 01 32 40.7 +2.0**
baz=113,SNR=11
P17K Kvichak River 63.82 329 IAmb IAmb 01 32 41.7
comp=Z,40nm,1.4s
P17K Kvichak River 63.82 329 P **P 01 32 40.3 +1.6**
baz=105
L19K White Mountain 63.94 333 IAmb IAmb 01 32 42.1
comp=Z,16nm,1.3s
L19K White Mountain 63.94 333 P **P 01 32 41.0 +1.5**
baz=108
COLD Coldfoot 63.94 339 IAmb IAmb 01 32 43.0
comp=Z,19nm,1.2s
COLD Coldfoot 63.94 339 P **P 01 32 41.3 +1.9**
baz=115,SNR=8.4
N18K Kilae Creek 63.96 331 IAmb IAmb 01 32 42.4
comp=Z,16nm,1.2s
N18K Kilae Creek 63.96 331 P **P 01 32 41.2 +1.5**
baz=106,SNR=6.0

K20K	**Telida**	**63.98**	**334**	IAmb	IAmb	01 32 42.2
	comp=Z,17nm,0.8s					
K20K	**Telida**	**63.98**	**334**	P	**P**	**01 32 40.9 +1.2**
	baz=109					
E23K	**Chandalar**	**64.10**	**340**	P	**P**	**01 32 42.3 +1.8**
	baz=116,SNR=27					
M18K	**Stony River**	**64.17**	**332**	P	**P**	**01 32 42.3 +1.4**
	baz=107,SNR=10					
H21K	**Melozitna Rive**	**64.28**	**337**	P	**P**	**01 32 43.0 +1.4**
	baz=112,SNR=9.5					
G22K	**Bettles**	**64.28**	**338**	P	**P**	**01 32 43.3 +1.7**
	baz=114					
J20K	**Nowinta River**	**64.28**	**335**	P	**P**	**01 32 43.0 +1.3**
	baz=110					
O17K	**Koliganek Bris**	**64.30**	**330**	P	**P**	**01 32 43.5 +1.7**
	baz=105					
D24K	**Happy Valley**	**64.33**	**341**	IAmb	IAmb	01 32 45.7
	comp=Z,50nm,1.6s					
D24K	**Happy Valley**	**64.33**	**341**	P	**P**	**01 32 43.8 +1.8**
	baz=117					
TOLK	**Toolik Lake Re**	**64.34**	**340**	P	**P**	**01 32 43.7 +1.6**
	baz=116,SNR=17					
CHNA	**Chernabura Isl**	**64.53**	**324**	P	**P**	**01 32 44.8 +1.4**
	baz=100					
N17K	**Nushagak Hills**	**64.54**	**330**	IAmb	IAmb	01 32 46.4
	comp=Z,24nm,1.4s					
N17K	**Nushagak Hills**	**64.54**	**330**	P	**P**	**01 32 44.9 +1.4**
	baz=105					
C24K	**Franklin Bluff**	**64.55**	**341**	P	**P**	**01 32 45.0 +1.6**
	baz=118					
P16K	**Nushagak River**	**64.56**	**329**	P	**P**	**01 32 45.1 +1.5**
	baz=104					
I20K	**Naaghedeneel**	**64.63**	**335**	IAmb	IAmb	01 32 46.9
	comp=Z,26nm,1.0s					
I20K	**Naaghedeneel**	**64.63**	**335**	P	**P**	**01 32 45.3 +1.5**
	baz=110					
PPT	**Papeete**	**64.63**	**242**	LR	LR	01 52 14.0
	comp=Z,90nm,20.2s,baz=42,slow=28					
O16K	**Kokwok River B**	**64.74**	**329**	IAmb	IAmb	01 32 48.2
	comp=Z,27nm,1.4s					
O16K	**Kokwok River B**	**64.74**	**329**	P	**P**	**01 32 46.4 +1.6**
	baz=104					
L18K	**Granite Mounta**	**64.77**	**332**	IAmb	IAmb	01 32 47.5
	comp=Z,19nm,1.2s					
L18K	**Granite Mounta**	**64.77**	**332**	P	**P**	**01 32 46.3 +1.4**
	baz=106					
J19K	**Poorman**	**64.84**	**334**	IAmb	IAmb	01 32 48.0
	comp=Z,11nm,0.8s					
J19K	**Poorman**	**64.84**	**334**	P	**P**	**01 32 47.2 +1.9**
	baz=108,SNR=12					
D23K	**Nanushuk River**	**64.84**	**340**	IAmb	IAmb	01 32 49.0
	comp=Z,26nm,1.2s					
D23K	**Nanushuk River**	**64.84**	**340**	P	**P**	**01 32 47.2 +1.9**
	baz=115					
G21K	**Allakaket**	**64.86**	**337**	IAmb	IAmb	01 32 48.2
	comp=Z,12nm,0.8s					
G21K	**Allakaket**	**64.86**	**337**	P	**P**	**01 32 47.0 +1.5**
	baz=111					
E22K	**Anaktuvuk Pass**	**64.88**	**339**	IAmb	IAmb	01 32 50.5
	comp=Z,20nm,1.1s					
E22K	**Anaktuvuk Pass**	**64.88**	**339**	P	**P**	**01 32 47.2 +1.7**
	baz=114					
M17K	**Holitna River**	**64.89**	**331**	IAmb	IAmb	01 32 49.0
	comp=Z,25nm,1.4s					
M17K	**Holitna River**	**64.89**	**331**	P	**P**	**01 32 47.1 +1.4**
	baz=105					
H20K	**Anotleneega Mo**	**65.02**	**336**	P	**P**	**01 32 48.0 +1.5**
	baz=110,SNR=7.5					
F21K	**Alatna River**	**65.11**	**338**	P	**P**	**01 32 48.7 +1.6**
	baz=112					
J18K	**Innoko River**	**65.14**	**334**	IAmb	IAmb	01 32 50.2
	comp=Z,24nm,1.6s					
J18K	**Innoko River**	**65.14**	**334**	P	**P**	**01 32 48.6 +1.3**
	baz=107,SNR=7.8					
C23K	**Itkillik River**	**65.20**	**341**	P	**P**	**01 32 49.1 +1.5**
	baz=116,SNR=11					
N16K	**Nishlik Lake**	**65.28**	**330**	P	**P**	**01 32 50.0 +1.7**
	baz=104					
L17K	**Donlin**	**65.47**	**332**	P	**P**	**01 32 50.9 +1.4**
	baz=105					
M16K	**Timber Creek**	**65.50**	**331**	P	**P**	**01 32 51.1 +1.4**
	baz=104					
O15K	**Ungalikthiuk R**	**65.51**	**329**	P	**P**	**01 32 50.7 +1.0**
	baz=102					
K17K	**Iditarod**	**65.62**	**333**	IAmb	IAmb	01 32 52.6
	comp=Z,18nm,1.3s					
K17K	**Iditarod**	**65.62**	**333**	P	**P**	**01 32 51.7 +1.2**
	baz=105					
N15K	**Kwethluk River**	**65.85**	**330**	P	**P**	**01 32 53.3 +1.3**
	baz=102					
F20K	**Avaraart Lake**	**65.87**	**338**	IAmb	IAmb	01 32 55.1
	comp=Z,17nm,0.8s					
F20K	**Avaraart Lake**	**65.87**	**338**	P	**P**	**01 32 53.6 +1.8**
	baz=109,SNR=35					
L16K	**Owhat River**	**65.91**	**331**	IAmb	IAmb	01 32 55.9
	comp=Z,23nm,1.4s					
L16K	**Owhat River**	**65.91**	**331**	P	**P**	**01 32 53.9 +1.6**
	baz=104					
G19K	**Purcell Mounta**	**66.09**	**336**	P	**P**	**01 32 54.7 +1.3**
	baz=108,SNR=20					
O14K	**Tigyukauivet M**	**66.25**	**329**	P	**P**	**01 32 56.2 +1.7**
	baz=101					
M15K	**Kasigluk River**	**66.25**	**330**	P	**P**	**01 32 56.1 +1.6**
	baz=102					
C21K	**Knifeblade Rid**	**66.28**	**340**	P	**P**	**01 32 56.4 +1.9**
	baz=111					
B22K	**Teshekpuk Lake**	**66.28**	**341**	P	**P**	**01 32 55.9 +1.4**
	baz=113					
H18K	**Honhosa River**	**66.31**	**335**	P	**P**	**01 32 56.1 +1.3**
	baz=106					
B21K	**Ikpikpuk River**	**66.39**	**340**	P	**P**	**01 32 56.6 +1.5**
	baz=112					
E20K	**Nigu River**	**66.44**	**339**	P	**P**	**01 32 57.1 +1.5**
	baz=110					
E19K	**Redstone River**	**66.56**	**338**	P	**P**	**01 32 57.7 +1.4**
	baz=108					
F19K	**Shaleruckik Mo**	**66.57**	**337**	P	**P**	**01 32 57.8 +1.5**
	baz=107					
N14K	**Kuskokwak Cree**	**66.59**	**329**	P	**P**	**01 32 58.1 +1.5**
	baz=101					
G18K	**Tagagawik**	**66.63**	**336**	P	**P**	**01 32 58.6 +1.8**
	baz=106,SNR=17					
FALS	**False Pass**	**66.73**	**324**	P	**P**	**01 32 59.0 +1.5**
	baz=97					
D20K	**Etivluk River**	**66.74**	**339**	IAmb	IAmb	01 33 00.6
	comp=Z,22nm,0.8s					
D20K	**Etivluk River**	**66.74**	**339**	P	**P**	**01 32 59.0 +1.5**
	baz=109					
J16K	**Anvik River**	**66.78**	**333**	IAmb	IAmb	01 33 01.9
	comp=Z,20nm,1.0s					
J16K	**Anvik River**	**66.78**	**333**	P	**P**	**01 32 60.0 +2.1**
	baz=103					
L15K	**Ungalak Mounta**	**66.84**	**331**	P	**P**	**01 33 00.0 +1.9**
	baz=102					
M14K	**Bethel**	**66.88**	**330**	P	**P**	**01 33 00.4 +2.0**
	baz=101					
H17K	**Granite Mounta**	**66.89**	**335**	IAmb	IAmb	01 33 01.9
	comp=Z,28nm,1.4s					
H17K	**Granite Mounta**	**66.89**	**335**	P	**P**	**01 33 00.5 +2.0**
	baz=104,SNR=15					
I17K	**Unalakleet**	**66.96**	**334**	P	**P**	**01 33 01.0 +2.1**
	baz=103					
K15K	**Wolf Creek Mou**	**66.98**	**332**	P	**P**	**01 33 01.1 +2.0**
	baz=102,SNR=9.5					
A22K	**Sinclair Lake**	**67.02**	**342**	P	**P**	**01 33 00.5 +1.4**
	baz=112					
D19K	**Kuna River**	**67.19**	**339**	IAmb	IAmb	01 33 03.9
	comp=Z,44nm,1.6s					
D19K	**Kuna River**	**67.19**	**339**	P	**P**	**01 33 02.0 +1.6**
	baz=108					
F18K	**Selawik**	**67.22**	**337**	P	**P**	**01 33 02.0 +1.6**
	baz=105					
G17K	**Kiwalik Mounta**	**67.33**	**335**	P	**P**	**01 33 03.0 +1.7**
	baz=104					
L14K	**Kuka Creek**	**67.33**	**331**	P	**P**	**01 33 03.0 +1.7**
	baz=100					
B20K	**Meade River**	**67.35**	**340**	P	**P**	**01 33 02.9 +1.6**
	baz=109					
M13K	**Dall Lake**	**67.49**	**330**	P	**P**	**01 33 04.0 +1.6**
	baz=99,SNR=5.8					
A21K	**Barrow**	**67.63**	**342**	P	**P**	**01 33 04.3 +1.3**
	baz=110					
H16K	**Elim**	**67.79**	**334**	P	**P**	**01 33 05.9 +1.8**
	baz=102,SNR=15					
E18K	**Tukpahlearik C**	**67.79**	**337**	P	**P**	**01 33 05.5 +1.4**
	baz=105					
F17K	**Baldwin Pennin**	**67.80**	**336**	IAmb	IAmb	01 33 09.6
	comp=Z,24nm,1.8s					
F17K	**Baldwin Pennin**	**67.80**	**336**	P	**P**	**01 33 05.9 +1.8**
	baz=104					
C19K	**Lookout Ridge**	**67.89**	**339**	P	**P**	**01 33 06.8 +2.0**
	baz=106,SNR=20					
J14K	**Nanvaranak Lak**	**67.99**	**332**	P	**P**	**01 33 07.4 +1.9**
	baz=100					
G16K	**Koyuk River**	**68.00**	**335**	P	**P**	**01 33 07.6 +2.2**
	baz=102,SNR=12					
E17K	**Hotham Inlet**	**68.17**	**337**	P	**P**	**01 33 08.1 +1.6**
	baz=104					
C18K	**Utukok River**	**68.32**	**339**	IAmb	IAmb	01 33 10.7
	comp=Z,18nm,1.4s					
C18K	**Utukok River**	**68.32**	**339**	P	**P**	**01 33 09.1 +1.6**
	baz=105					
K13K	**Kusilvak Mount**	**68.36**	**331**	IAmb	IAmb	01 33 11.4
	comp=Z,24nm,1.5s					
K13K	**Kusilvak Mount**	**68.36**	**331**	P	**P**	**01 33 09.3 +1.5**
	baz=99					
G15K	**Niukluk**	**68.61**	**334**	P	**P**	**01 33 11.3 +2.0**
	baz=101					
A19K	**Wainwright**	**68.69**	**340**	P	**P**	**01 33 11.5 +1.8**
	baz=105					
D17K	**Noatak River**	**68.78**	**337**	P	**P**	**01 33 11.8 +1.5**
	baz=102					
RDOG	**Red Dog Mine**	**68.80**	**338**	IAmb	IAmb	01 33 13.7
	comp=Z,15nm,1.2s					
RDOG	**Red Dog Mine**	**68.80**	**338**	P	**P**	**01 33 11.8 +1.4**
	baz=103					
C17K	**DeLong Mountai**	**68.99**	**338**	P	**P**	**01 33 12.9 +1.3**
	baz=103					
F15K	**North Star Dit**	**69.00**	**335**	IAmb	IAmb	01 33 15.8
	comp=Z,49nm,1.6s					
F15K	**North Star Dit**	**69.00**	**335**	P	**P**	**01 33 13.7 +2.0**
	baz=100,SNR=28					
ANM	**Nome**	**69.10**	**334**	P	**P**	**01 33 14.3 +2.0**
	baz=85,SNR=6.8					
F14K	**Arctic Creek**	**69.64**	**335**	P	**P**	**01 33 17.8 +2.2**
	baz=99					
C16K	**Lisburne Hills**	**69.73**	**338**	IAmb	IAmb	01 33 19.1
	comp=Z,18nm,1.2s					
C16K	**Lisburne Hills**	**69.73**	**338**	P	**P**	**01 33 18.0 +1.9**
	baz=101					
TNA	**Tin City**	**70.31**	**335**	IAmb	IAmb	01 33 23.6
	comp=Z,22nm,1.4s					
TNA	**Tin City**	**70.31**	**335**	P	**P**	**01 33 22.0 +2.3**
	baz=97,SNR=17					
SPIA	**Saint Paul Isl**	**70.74**	**326**	P	**P**	**01 33 24.7 +2.3**
	baz=92					
GAMB	**Gambell**	**71.77**	**333**	P	**P**	**01 33 30.6 +2.0**
	baz=93					
RAR	**Rarotonga**	**74.89**	**243**	LR	LR	01 58 02.0
	comp=Z,38nm,21.0s,baz=59,slow=29					
EKA	**Eskdalemuir Ar**	**77.64**	**36**	P	**P**	**01 34 00.1 -2.6**
	comp=Z,1.5nm,0.6s,baz=272,slow=5.9,SNR=7.5					
EKA				LR	LR	02 08 34.4
	comp=Z,125nm,19.0s,baz=192,slow=36					
	comp=Z,1.5nm,0.6s					
SPITS	**Spitsbergen Ar**	**79.30**	**11**	P	**P**	**01 34 10.3 -1.2**
	comp=Z,2.0nm,0.8s,baz=256,slow=3.0,SNR=5.8					
SPITS				LR	LR	02 10 40.6
	comp=Z,230nm,21.8s,baz=226,slow=37					
	comp=Z,2.0nm,0.8s					
ESDC	**Sorseca Array**	**79.74**	**52**	P	**P**	**01 34 12.0 -2.6**
	comp=Z,1.1nm,0.6s,baz=282,slow=6.1,SNR=22					
ESDC				LR	LR	02 02 09.4
	comp=Z,128nm,21.2s,baz=286,slow=30					
	comp=Z,1.1nm,0.6s					
SHEM	**Shemya Is, Ala**	**80.08**	**322**	LR	LR	02 07 49.0
	comp=Z,14nm,20.8s,baz=287,slow=34					
BILL	**Bilibino**	**80.26**	**338**	P	**P**	**01 34 18.4 +1.6**
BILL	**Bilibino**	**80.26**	**338**	*ceP*	**P**	**01 34 15.7 -1.1**
BILL				pmax	pmax	
	comp=Z,19nm,1.1s					
BILL	**Bilibino**	**80.26**	**338**	P	**P**	**01 34 18.6 +1.8**
BILL				PcP	**PcP**	**01 34 24.6 +0.9**
BILL				x	x	01 34 39.1
BILL				x	x	01 34 42.9
BILL				x	x	01 34 46.6
MDT	**Midelt**	**80.57**	**59**	LR	LR	02 05 23.4
	comp=Z,74nm,19.9s,baz=258,slow=32					
AFI	**Afiamalu**	**83.20**	**254**	LR	LR	02 01 40.4
	comp=Z,52nm,20.2s,baz=24,slow=28					
NB2	**NORSAR Subarra**	**83.67**	**28**	P	**P**	**01 34 33.9 -0.9**
	comp=Z,1.9nm,0.7s,baz=291,slow=5.1					
NOA	**NORSAR Array B**	**83.67**	**28**	P	**P**	**01 34 33.4 -1.5**
	comp=Z,1.8nm,0.7s,baz=291,slow=5.1,SNR=5.8					
NOA				LR	LR	02 10 39.8
	comp=Z,83nm,21.4s,baz=280,slow=35					
	comp=Z,1.8nm,0.7s					
HFS	**Hagfors**	**85.14**	**29**	P	**P**	**01 34 40.2 -2.0**
	comp=Z,2.7nm,0.6s,baz=222,slow=2.0,SNR=7.9					
HFS				LR	LR	02 12 49.7
	comp=Z,102nm,18.0s,baz=296,slow=36					
	comp=Z,2.7nm,0.6s					
ARCES	**ARCESS Array B**	**85.47**	**18**	P	**P**	**01 34 42.6 -1.1**
	comp=Z,2.9nm,0.7s,baz=289,slow=4.9,SNR=5.9					
ARCES				LR	LR	02 12 37.2
	comp=Z,111nm,22.0s,baz=297,slow=35					
	comp=Z,2.9nm,0.7s					
ARCES	**ARCESS Array B**	**85.47**	**18**	P	**P**	**01 34 42.6 -1.1**
ARCES				pmax	pmax	
	comp=Z,181nm,2.0s					
DBIC	**Dimbokro**	**86.35**	**84**	LR	LR	02 12 46.0
	comp=Z,27nm,19.1s,baz=330,slow=35					
SEY	**Seymchan**	**87.54**	**335**	*ceP*	**P**	**01 34 53.4 -0.5**
SEY				pmax	pmax	
	comp=Z,3.0nm,1.0s					
DAVOX	**Davos/Dischmat**	**87.68**	**42**	LR	LR	02 08 49.3
	comp=Z,136nm,20.5s,baz=288,slow=32					
APA	**Apatity**	**88.97**	**18**	⇓*eP*	P	01 35 14.1 +14
APA				*e*		01 38 35.7
APA				pmax	pmax	
	comp=Z,8.0nm,1.3s					
TIXI	**Tiksi**	**89.14**	**348**	LR	LR	02 19 42.5
	comp=Z,40nm,21.3s,baz=12,slow=39					
TIXI	**Tiksi**	**89.14**	**348**	P	**P**	**01 35 01.4 +0.1**
TIXI	**Tiksi**	**89.14**	**348**	*ceP*	**P**	**01 35 01.6 +0.3**
TIXI				pmax	pmax	
	comp=Z,8.0nm,0.9s					
TIXI	**Tiksi**	**89.14**	**348**	P	**P**	**01 35 01.6 +0.3**
TIXI				x	**pP**	**01 35 23.7 +0.2**
GERES	**GERESS Array B**	**89.36**	**39**	LR	LR	02 11 17.3
	comp=Z,97nm,21.1s,baz=288,slow=33					
MA2	**Magadan**	**89.87**	**333**	*ceP*	**P**	**01 35 05.7 +0.7**
MA2				pmax	pmax	
	comp=Z,8.0nm,1.1s					
FINES	**FINESS Array B**	**89.96**	**25**	P	**P**	**01 35 03.1 -2.2**
	comp=Z,2.8nm,1.0s,baz=325,slow=2.3,SNR=6.9					
FINES				LR	LR	02 16 24.7
	comp=Z,75nm,18.6s,baz=284,slow=36					
	comp=Z,2.8nm,1.0s					
TORD	**Torodi Ar, Bea**	**90.92**	**76**	P	**P**	**01 35 08.5 -2.2**
	comp=Z,0.3nm,0.5s,baz=271,slow=9.1,SNR=2.1					
	comp=Z,0.3nm,0.5s					
VRAC	**Vranov**	**90.92**	**38**	LR	LR	02 17 19.6
	comp=Z,55nm,18.6s,baz=318,slow=36					
KEST	**Kesra**	**90.94**	**53**	P	**P**	**01 35 08.0 -2.6**
	comp=Z,1.5nm,0.8s,baz=245,slow=3.4,SNR=4.9					
KEST				LR	LR	02 08 16.0
	comp=Z,62nm,20.3s,baz=266,slow=30					
	comp=Z,1.5nm,0.8s					
VSU	**Vasula**	**91.84**	**27**	*i* P	**P**	**01 35 14.1 0.0**
VSU				pmax	pmax	
	comp=Z,15nm,1.2s					
VAE	**Valguarnera**	**94.14**	**50**	LR	LR	02 11 57.3
	comp=Z,136nm,20.3s,baz=298,slow=32					
UZHM	**Uzhgorod**	**94.59**	**37**	P	**P**	**01 35 28.4 +1.4**
YAK	**Yakutsk**	**96.29**	**341**	LR	LR	02 25 46.8
	comp=Z,25nm,18.8s,baz=26,slow=40					
YAK	**Yakutsk**	**96.29**	**341**	*i* P	**P**	**01 35 34.7 +0.3**
YAK				pmax	pmax	
	comp=Z,5.0nm,0.8s					
AKASG	**Malin Array Be**	**97.35**	**33**	LR	LR	02 20 27.2
	comp=Z,58nm,19.9s,baz=258,slow=36					
OBN	**Obninsk**	**98.18**	**27**	LR	LR	02 20 30.6
	comp=Z,78nm,19.8s,baz=7.5,slow=36					
OBN	**Obninsk**	**98.18**	**27**	*eP*	**P**	**01 35 42.9 -0.2**
OBN				pmax	pmax	
	comp=Z,5.0nm,1.2s					
MLR	**Muntele Rosu**	**98.32**	**39**	LR	LR	02 16 43.5
	comp=Z,146nm,20.8s,baz=305,slow=33					
URZ	**Urewera**	**99.16**	**233**	LR	LR	02 14 04.2
	comp=Z,37nm,19.0s,baz=349,slow=31					
YSS	**Yuzhno-Sakhali**	**100.79**	**325**	*i* P	**Pdif**	**01 35 54.9 0.0**
YSS				pmax	pmax	
	comp=Z,3.0nm,0.9s					
KURK	**Kurchatov**	**114.17**	**6**		PKPdf	01 40 45.4 +0.2
KURK	**Kurchatov**	**114.17**	**6**	PKIKP	PKPdf	01 40 45.4 +0.2
KURK				APKP	pPKiKP	01 41 07.9 -0.4
KURBB	**Kurchatov Arra**	**114.25**	**6**	PKP	**PKiKP**	**01 40 45.4 0.0**
	comp=Z,0.2nm,0.3s,baz=356,slow=1.5,SNR=6.3					
KURBB				pPKP	**pPKiKP**	**01 41 07.9 -0.6**
	comp=Z,0.6nm,0.7s,baz=351,slow=2.0,SNR=4.4					
SONM	**Songino Array**	**115.16**	**346**	PKP	**PKPdf**	**01 40 48.2 +0.7**
	comp=Z,0.4nm,0.6s,baz=306,slow=1.2,SNR=2.8					
SONM				pPKP	**pPKiKP**	**01 41 09.1 -1.4**
	comp=Z,0.7nm,0.8s,baz=211,slow=1.7,SNR=4.0					
KSRS	**Korea Array**	**115.29**	**325**	PKP	**PKPdf**	**01 40 48.7 +0.9**
	comp=Z,0.9nm,0.7s,baz=4.8,slow=1.9,SNR=4.6					
DGZ	**Jazzator, Alta**	**115.61**	**360**	*i* PKIKP	**PKiKP**	**01 40 48.2 -0.1**
MKAR	**Makanchi Array**	**118.36**	**4**	PKP	**PKPdf**	**01 40 52.5 -1.0**
	comp=Z,0.2nm,0.5s,baz=355,slow=3.0,SNR=5.5					
MKAR				pPKP	**pPKPdf**	**01 41 15.7 -0.9**
	comp=Z,0.7nm,0.8s,baz=24,slow=1.8,SNR=4.8					
HHC	**Hu-ho-hao-te**	**120.03**	**339**	*eP*	**PKPdf**	**01 40 55.3 -1.7**
BOSA	**Boshof**	**121.48**	**115**	PKP	**PKPdf**	**01 41 00.0 -0.1**
	comp=Z,1.3nm,0.4s,baz=272,slow=2.1,SNR=14					
WMQ	**Urumqi**	**121.49**	**360**	*eP*	**PKiKP**	**01 41 00.3 +0.5**
WMQ				LR	LR	
	comp=Z,120nm,24.7s					
AAK	**Ala-Archa**	**121.50**	**11**	*i* PKIKP	**PKPdf**	**01 40 59.9 +0.1**
TIY	**Taiyuan**	**122.47**	**336**	PKIKP	**PKPdf**	**01 41 01.3 -0.4**
CHGR	**Chuyangaron**	**124.05**	**17**	*i* PKIKP	**PKiKP**	**01 41 05.0 0.0**
NJ2	**Nanjing**	**124.25**	**327**	*eP*	**PKiKP**	**01 41 06.5 +1.0**
NJ2				pmax	pmax	
	comp=Z,33nm,0.5s					
GTA2	**Gaotai**	**124.56**	**348**	PKP	**PKiKP**	**01 41 07.0 +0.9**
GTA2				pPKP	pPKPdf	01 41 28.8 -0.1
STKA	**Stephens Creek**	**127.84**	**241**	PKP	**PKPdf**	**01 41 11.2 -0.8**
	comp=Z,1.5nm,0.5s,baz=217,slow=2.3,SNR=4.2					
GOMU	**GeErMu**	**128.60**	**352**	PKP	**PKPdf**	**01 41 13.5 -0.4**
GOMU				pPKP	pPKPdf	01 41 36.8 -0.2
CD2	**Chengdu**	**131.68**	**341**	PKP	**PKPdf**	**01 41 19.0 -0.4**
WRA	**Warramunga Arr**	**134.85**	**257**	PKP	**PKPdf**	**01 41 25.6 0.0**
	comp=Z,1.2nm,0.8s,baz=87,slow=1.9,SNR=12					
WRA				pPKP	**pPKPdf**	**01 41 50.4 +1.7**
	comp=Z,1.0nm,0.6s,baz=82,slow=2.0,SNR=4.3					
WRA	**Warramunga Arr**	**134.85**	**257**	*c i* PKIKP	**PKiKP**	**01 41 27.6 +0.6**
WRA				pmax	pmax	
	comp=Z,1.0nm,0.8s					
ASAR	**Alice Springs**	**135.23**	**251**	PKhKP	PKPpre	01 41 17.4
	comp=Z,0.3nm,0.6s,baz=107,slow=3.4,SNR=4.9					
ASAR				PKP	**PKiKP**	**01 41 27.2 -0.5**
	comp=Z,0.8nm,0.6s,baz=86,slow=1.6,SNR=10.0					
PZH	**PanZhiHua**	**136.41**	**341**	PKP	**PKPdf**	**01 41 28.4 -0.1**
CHTO	**Chiang Mai**	**144.48**	**341**		**PKPab**	**01 41 41.2 -0.3**
CHTO	**Chiang Mai**	**144.48**	**341**	PKIKP	**PKPab**	**01 41 41.2 -0.3**
CMAR	**Chiang Mai Arr**	**144.82**	**340**	PKP	**PKPdf**	**01 41 44.0 +0.3**
	comp=Z,4.5nm,0.6s,baz=342,slow=3.7,SNR=30					
CMAR				pPKP	**pPKPdf**	**01 42 06.0 -0.8**
	comp=Z,3.6nm,0.7s,baz=341,slow=3.9,SNR=3.4					
CMAR	**Chiang Mai Arr**	**144.82**	**340**	PKP	**PKPdf**	**01 41 43.4 -0.3**
CMAR	**Chiang Mai Arr**	**144.82**	**340**	*c i* PKIKP	**PKPdf**	**01 41 43.7 0.0**
CMAR				pmax	pmax	
	comp=Z,5.0nm,0.6s					
PSA00	**Pilbara Seismi**	**148.34**	**253**		**PKPbc**	**01 41 53.6 +0.6**

ISU **15** *01:40:44,40˚.57N×72˚.15E,h8km*
KRNET **15** *01:40:45.4±0.1,40˚.64N×72˚.34E,h20km,mb2.6*
ISC 15 01:40:47.8±1.2,40˚.51N±0˚.06×72˚.45E±0˚.07,h14km±7km, n5,σ1961/10,4C-4D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TSTA	**Tashata**	**0.07**	**18**	P	**Pg**	**01 40 50.3**	**-0.5**
TSTA				S	**Sg**	**01 40 53.7**	**+1.0**
SFK	**Sufi-Kurgan**	**0.95**	**121**	⇑*i* P	**Pg**	**01 41 05.6**	**-0.6**
SFK				⇑*i* S	**Sb**	**01 41 20.8**	**+2.1**
SALK	**Salom-Alik**	**1.11**	**70**	⇓*i* P	**Pg**	**01 41 07.1**	**-2.1**
SALK				⇓*i* S	**Sg**	**01 41 22.8**	**-0.9**
DRK	**Karamyk**	**1.14**	**206**	⇓*i* P	**Pg**	**01 41 08.4**	**-1.5**
DRK				⇓*i* S	**Sg**	**01 41 25.1**	**+0.2**
ARLS	**Aral**	**1.96**	**46**	⇑*i* P	**Pn**	**01 41 20.7**	**-0.1**
ARLS				⇑*i* S	**Sn**	**01 41 46.5**	**+1.3**

IDC **15** *01:45:31.9±1.8,0˚.80S×146˚.06E,h0km,mb3.7/8, mbtmp3.8/9,ML3.2/1,MS3.4/4, Error ellipse: s-maj=54.3km s-min=21.2km az=103.0*
ISC 15 01:45:37.7±1.5,0˚.8S±0˚.2×145˚.9E±0˚.2,h35km,n19, σ1913/10,mb3.7/8,MS3.5/3,Admiralty Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**5.47**	**252**	Pn	**Pn**	**01 46 57.0**	**+0.3**
	0.7nm,0.3s,baz=207,slow=8.3,SNR=1.0						
JAY				Sn	**Sn**	**01 47 57.9**	**-0.6**
	0.9nm,0.3s,baz=181,slow=19,SNR=4.3						
	10.0nm,0.8s						
GUMO	**Guam**	**14.36**	**356**	LR	LR	01 54 21.8	
	comp=Z,24nm,18.1s,baz=90,slow=37						
WRA	**Warramunga Arr**	**22.12**	**210**	P	**P**	**01 50 29.5**	**-0.8**
	2.0nm,0.6s,baz=31,slow=11,SNR=22						
	2.0nm,0.6s						
ASAR	**Alice Springs**	**25.52**	**206**	P	**P**	**01 51 03.6**	**+0.4**
	0.9nm,0.7s,baz=27,slow=10,SNR=12						
	0.9nm,0.7s						
JCJ	**Chichijima**	**27.99**	**353**	LR	LR	02 00 49.0	
	comp=Z,390nm,21.8s,baz=232,slow=33						
H11S3	**WAKE ISLAND Hy**	**28.04**	**46**	T	T	02 20 19.3	
	baz=229,slow=76,SNR=19						
H11S2	**WAKE ISLAND Hy**	**28.05**	**46**	T	T	02 20 17.8	
	baz=229,slow=76,SNR=9.3						
H11S1	**WAKE ISLAND Hy**	**28.05**	**46**	T	T	02 20 12.1	
	baz=229,slow=76,SNR=7.2						
TGY	**Tagaytay City**	**28.84**	**302**	LR	LR	02 00 26.9	
	comp=Z,67nm,21.9s,baz=50,slow=31						
H11N1	**WAKE ISLAND Hy**	**28.99**	**44**	T	T	02 21 14.7	
	baz=227,slow=76,SNR=8.7						
H11N2	**WAKE ISLAND Hy**	**29.00**	**44**	T	T	02 21 21.1	
	baz=227,slow=76,SNR=14						
H11N3	**WAKE ISLAND Hy**	**29.00**	**44**	T	T	02 21 22.2	
	baz=227,slow=76,SNR=8.0						
CMAR	**Chiang Mai Arr**	**49.97**	**295**	P	**P**	**01 54 30.6**	**+1.8**
	0.6nm,0.6s,baz=109,slow=8.6,SNR=4.7						
	0.6nm,0.3s

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
SLGT				S	Sb	01 53 08.5	+0.4
STYH	Taoyuan	0.20	86	⇓iP	Pb	01 53 05.0	0.0
STYH				S	Sb	01 53 08.5	-0.1
CHN3	Shinhua	0.20	246	⇓P	Pb	01 53 05.9	+0.7
CHN3				S	Sb	01 53 10.7	+2.0
SSHA	Shanhua	0.25	265	⇓P	Pb	01 53 06.9	+0.8
SSHA				eS	Sn	01 53 12.9	-1.8
SCST	Cishan	0.28	193	eP	Pb	01 53 06.8	+0.3
SCST				eS	Sb	01 53 12.5	+1.6
WCKO	Fanlu	0.28	8	eP	Pb	01 53 06.5	-0.1
WCKO				eS	Sb	01 53 11.9	+0.7
TAI1	Yung-k'ang	0.33	249	eP	Pb	01 53 08.1	+0.8
TAI1				eS	Sb	01 53 14.4	+2.0
ICHU	Yijhu	0.33	308	⇓P	Pb	01 53 07.7	+0.4
ICHU				eS	Sb	01 53 14.4	+1.9
TWM1	Shoushan	0.36	201	eP	Pn	01 53 09.6	-0.9
CHY	Chiayi	0.36	339	⇓iP	Pb	01 53 08.4	+0.5
CHY				S	Sb	01 53 14.9	+1.5
CHN8	Yiju	0.38	300	eP	Pb	01 53 08.3	+0.2
CHN8				eS	Sb	01 53 15.5	+1.7
CHN2	Minshiung	0.38	348	⇓P	Pb	01 53 08.9	+0.6
CHN2				S	Sb	01 53 15.6	+1.6
SSD	Sandimen	0.41	171	⇓iP	Pb	01 53 08.8	0.0
SSD				eS	Sb	01 53 15.6	+0.7
ALS	Alishan	0.42	32	⇑iP	Pb	01 53 08.9	-0.1
ALS				eS	Sb	01 53 15.6	+0.3
ELDTW	Lidau	0.42	86	⇓iP	Pb	01 53 08.8	-0.1
ELDTW				eS	Sb	01 53 15.2	+0.1
SGLT	Jiouru	0.43	189	eP	Pn	01 53 10.6	-0.9
SGLT				eS	Sn	01 53 19.2	+0.1
TSCK	Chigu Township	0.44	269	P	Pb	01 53 09.8	+0.6
TSCK				S	Sn	01 53 18.0	-1.2
CHN5	Tsauling	0.45	14	⇓iP	Pb	01 53 09.5	0.0
CHN5				S	Sb	01 53 17.2	+1.1
TSMG	Majia	0.46	170	eP	Pb	01 53 09.6	+0.1
TSMG				eS	Sb	01 53 16.5	+0.4
WSL	Shuilin Townsh	0.48	320	P	Pb	01 53 10.3	+0.4
WSL				S	Sb	01 53 18.6	+1.9
WGK	Gukeng	0.53	360	P	Pb	01 53 11.5	+0.8
WGK				S	Sn	01 53 20.4	-1.0
WDLH	Douliu	0.53	358	P	Pb	01 53 11.7	+0.9
WDLH				S	Sn	01 53 20.9	-0.6
MASBT	Mashibuluo	0.55	173	⇓iP	Pb	01 53 11.0	-0.1
MASBT				S	Sb	01 53 19.5	+0.8
WTK	Tuku	0.55	343	P	Pb	01 53 11.8	+0.6
WTK				S	Sn	01 53 21.0	-1.1
WDL	Douliou City	0.56	358	⇓P	Pb	01 53 12.1	+0.8
WDL				S	Sn	01 53 21.2	-0.9
WSF	Szhu	0.57	327	P	Pb	01 53 11.8	+0.3
WSF				S	Sb	01 53 20.9	+1.4
TWG	Pinlang	0.58	125	⇓P	Pb	01 53 11.9	+0.3
TWG				eS	Sb	01 53 20.4	+0.9
LONT	Longtian	0.58	115	eP	Pb	01 53 11.8	+0.2
LONT				eS	Sb	01 53 20.7	+1.0
WSSB	Gushan	0.58	209	eP	Pn	01 53 13.4	-0.2
WSSB				S	Sn	01 53 24.3	+1.4
TWGBT	Beinan	0.58	125	P	Pb	01 53 11.9	+0.2
TWGBT	Beinan	0.58	125	S	Pb	01 53 21.1	+1.3
TWGBT	Beinan	0.58	125	⇓P	Pb	01 53 11.8	+0.2
TWGBT				S	Sb	01 53 20.5	+0.7
EHD	Haiduan	0.59	91	⇓P	Pb	01 53 11.8	-0.1
EHD				eS	Sb	01 53 20.2	+0.2
WHYT	Xinyi Township	0.60	26	eP	Pb	01 53 12.3	+0.3
WHYT				eS	Sb	01 53 21.2	+0.9
ECS	Chishang	0.61	96	P	Pb	01 53 12.3	+0.2
ECS				S	Sb	01 53 21.6	+1.2
ECL	Taimali	0.66	147	eP	Pb	01 53 13.1	0.0
ECL				eS	Sb	01 53 23.0	+0.9
SSPT	Xinbi	0.67	180	eP	Pn	01 53 14.2	-0.5
SSPT				eS	Sn	01 53 25.0	+0.1
TTN	Taitung	0.67	127	eP	Pn	01 53 14.3	-0.4
FULB	Fuli	0.67	86	eP	Pb	01 53 13.9	+0.7
FULB				eS	Sn	01 53 24.1	-1.0
WJS	Zhushan	0.68	13	⇑P	Pb	01 53 13.8	+0.5
WJS				S	Sb	01 53 24.0	+1.4
TWF1	Yuli	0.70	74	⇓iP	Pb	01 53 13.9	+0.1
TWF1				S	Sb	01 53 23.4	+0.2
YULB	Yu-li	0.71	71	P	Pb	01 53 14.1	+0.2
YULB	Yu-li	0.71	71	S	Sb	01 53 23.6	0.0
YULB	Yu-li	0.71	71	⇓P	Pb	01 53 13.9	0.0
YULB				eS	Sg	01 53 23.4	+0.1
EYUL	Yuli	0.72	75	eP	Pb	01 53 14.3	+0.3
EYUL				eS	Sb	01 53 23.7	0.0
SSLB	Suanglung	0.72	30	P	Pb	01 53 14.3	+0.2
SSLB	Suanglung	0.72	30	S	Sb	01 53 25.4	+1.5
SSLB	Suanglung	0.72	30	⇑P	Pb	01 53 14.1	0.0
SSLB				eS	Sb	01 53 24.6	+0.7
WNT	Mingjian	0.73	9	eP	Pb	01 53 14.8	+0.6
WNT				eS	Sn	01 53 25.9	-0.4
CHKT	Chengkung	0.74	94	eP	Pn	01 53 15.2	-0.5
CHKT				eS	Sn	01 53 26.6	0.0
WTCT	Ta-ch'eng	0.75	340	eP	Pb	01 53 14.9	+0.4
WTCT				eS	Sb	01 53 25.6	+1.1
RLNB	Erlin	0.75	346	eP	Pb	01 53 15.0	+0.4
RLNB				eS	Sb	01 53 26.1	+1.4
WRL	Guolierlin Hig	0.76	347	⇓P	Pb	01 53 14.8	+0.1
WRL				eS	Sb	01 53 25.8	+0.9
CHKH	Chenggong	0.77	87	eP	Pb	01 53 15.2	+0.4
CHKH				eS	Sn	01 53 27.6	+0.3
EHY	Hungye	0.78	63	eS	Sb	01 53 25.8	+0.4
SCZT	Fangliau	0.78	176	eP	Pb	01 53 15.2	+0.2
SMLT	Sun Moon Lake	0.79	23	⇑P	Pb	01 53 15.6	+0.3
SMLT				eS	Sn	01 53 27.3	-0.7
TYC	Yuchr	0.79	20	⇑P	Pb	01 53 15.6	+0.4
TYC				eS	Sn	01 53 27.6	-0.3
EHYH	Wanrong	0.79	65	eP	Pb	01 53 15.5	+0.2
EHYH				eS	Sb	01 53 26.0	+0.2
VWDT	VWDT	0.80	42	⇑P	Pb	01 53 15.7	+0.4
VWDT				eS	Sb	01 53 26.5	+0.6
EAST	Anshuo	0.81	161	⇓P	Pb	01 53 16.0	+0.3
WLCH	Liuqiu	0.82	192	eP	Pn	01 53 18.5	+1.8
WLCH				eS	Sn	01 53 32.8	+4.2
TWP	Hsiaoliuchiu	0.83	193	eP	Pn	01 53 18.3	+1.4
TWP				eS	Sn	01 53 31.6	+2.7
ECBN	Changbin	0.83	79	eP	Pb	01 53 17.8	+0.8
ECBN				eS	Sn	01 53 29.5	+0.5
WDGT	Dungji	0.84	277	⇓P	Pg	01 53 15.6	-0.5
WDGT				eS	Sb	01 53 27.3	+0.2
TAW	Tawu	0.85	159	eP	Pb	01 53 16.6	+0.3
TAW				eS	Sn	01 53 28.7	-0.7
HGSD	Ruisui	0.86	67	eP	Pn	01 53 17.8	+0.4
HGSD				eS	Sn	01 53 29.6	0.0
WCH1	Changhua City	0.91	359	eP	Pn	01 53 18.0	0.0
WCH1				eS	Sn	01 53 31.0	+0.1
WCHH	Zhanghua	0.92	360	eP	Pg	01 53 17.6	0.0
WCHH				eS	Sn	01 53 30.9	-0.1
WARBT	Fenglin Townsh	0.94	53	⇑P	Pg	01 53 18.1	+0.1
WARBT				eS	Sb	01 53 30.9	+0.8
WCS	Beigang Elemen	0.95	20	eS	Sb	01 53 31.8	-0.1
SLIU	Shizi	0.96	167	eP	Pn	01 53 18.8	+0.1
SLIU				eS	Sn	01 53 33.2	+1.0
LDUT	Ludao	0.96	120	eP	Pg	01 53 18.3	-0.1
LDUT				eS	Sn	01 53 32.6	+0.4
OWD	Renai	0.97	35	⇑iP	Pb	01 53 18.5	+0.1
OWD				eS	Sb	01 53 31.9	+0.7
WUSB	Renai	0.97	31	⇑P	Pb	01 53 18.4	0.0
WUSB				eS	Sb	01 53 31.9	+0.7
PHUB	P'eng-hu	0.98	291	⇓P	Pb	01 53 17.6	-0.9
PHUB				eS	Sb	01 53 30.6	-0.5
TCU	Taichung	0.99	6	eP	Pg	01 53 19.1	+0.1
TCU				eS	Sn	01 53 32.7	-0.2
PNG	Penghu	1.01	294	⇓P	Pb	01 53 18.2	-0.8
PNG				eS	Sb	01 53 31.8	-0.3
ESL	Shilin	1.03	51	eP	Pg	01 53 19.7	0.0
ESL				eS	Sn	01 53 34.3	+0.4
VCHM	Qimei	1.04	273	eP	Pb	01 53 18.7	-0.8
VCHM				eS	Sb	01 53 32.8	-0.3
SHUL	Shoufeng	1.11	55	eP	Pb	01 53 21.9	+0.6
SHUL				eS	Sg	01 53 35.9	+0.1
SMST	Manzhou Townsh	1.16	167	eP	Pg	01 53 22.4	+0.3
SMST				eS	Sn	01 53 38.5	+1.5
LXIB	Xiulin Townshi	1.16	42	⇑P	Pb	01 53 21.8	+0.1
LXIB				eS	Sn	01 53 38.2	+0.9
WHP	Taichung City	1.17	17	⇑eP	Pb	01 53 22.1	+0.4
WHP				eS	Sn	01 53 38.8	+1.4
ETM	Tongmen	1.17	46	eP	Pg	01 53 22.4	-0.1
ETM				eS	Sn	01 53 38.8	+1.4
WHF	Hehuan Shan	1.18	33	eP	Pg	01 53 22.6	0.0
WHF				eS	Sn	01 53 39.5	+1.5
TEYL	Yanliau Villag	1.19	53	eP	Pg	01 53 23.2	+0.6
TEYL				eS	Sg	01 53 40.0	+1.9
WDJ	Dajia District	1.19	3	eP	Pg	01 53 22.5	-0.2
WDJ				eS	Sg	01 53 39.6	+1.4
TWQ1	Liyutan	1.20	9	⇑P	Pb	01 53 22.6	+0.3
TWQ1				eS	Sg	01 53 39.4	+0.7
TDCB	Techi	1.22	26	⇑eP	Pb	01 53 22.8	+0.2
TDCB				eS	Sg	01 53 39.6	+0.3
TWT	Tachien	1.23	27	eP	Pb	01 53 23.0	+0.2
TWT				eS	Sg	01 53 40.0	+0.5
TWK1	Hengchun	1.23	169	eP	Pg	01 53 23.9	+0.4
TWKBT	Hengchun	1.23	169	eP	Pg	01 53 23.5	0.0
FUSS	Fushou	1.25	30	eP	Pb	01 53 23.5	+0.2
FUSS				eS	Sg	01 53 40.5	+0.2
HWA	Hwalien	1.26	49	eP	Pg	01 53 24.5	+0.5
HWA				eS	Sg	01 53 41.1	+0.7
TWD	Chiawan	1.32	46	eP	Pg	01 53 24.9	-0.4
TWD				eS	Sg	01 53 42.0	-0.5
ETLH	Xiulin Townshi	1.34	39	eP	Pb	01 53 25.2	+0.5
ETLH				eS	Sg	01 53 43.5	+0.3
NACB	Ninganchiao	1.39	43	⇑P	Pb	01 53 25.2	-0.2
NACB				eS	Sg	01 53 44.4	-0.1
NMLH	Miaoli	1.39	9	eP	Pb	01 53 25.9	+0.5
NMLH				eS	Sg	01 53 44.9	+0.2
ETL	Fush Village	1.39	44	eP	Pb	01 53 25.9	+0.4
LAY	Lan-yu	1.44	140	eP	Pn	01 53 25.6	+0.3
LAY				eS	Sg	01 53 45.2	-1.0
NNSB	Datong	1.47	31	eP	Pb	01 53 26.9	-0.1
NNSB				eS	Sg	01 53 46.7	-0.7
NNS	Nan Shan	1.48	30	eP	Pb	01 53 27.2	+0.2
NNS				eS	Sg	01 53 47.8	+0.3
LYUB	Lan-yu	1.49	140	eP	Pn	01 53 24.8	-1.1
LYUB				eS	Sn	01 53 44.4	-0.7
NSTT	Nanjuang	1.52	15	eP	Pb	01 53 27.4	-0.3
NSTT				eS	Sb	01 53 47.3	+0.5
LIOB	Emei	1.54	16	eP	Pn	01 53 27.5	+0.8
LIOB				eS	Sb	01 53 48.4	+1.1
NFF	Wufeng Townshi	1.55	19	eP	Pb	01 53 27.9	-0.3
NFF				eS	Sb	01 53 48.7	+0.9
EAHA	Aohua	1.59	42	eP	Pb	01 53 28.8	-0.1
EAHA				eS	Sg	01 53 50.5	-0.6
LATG	Datong	1.63	33	⇑eP	Pb	01 53 29.4	-0.2
LATG				eS	Sg	01 53 51.8	-0.6
SBCB	Hsinchu	1.67	13	eS	Sb	01 53 51.6	+0.4
NSK	Sanguang	1.68	26	eP	Pn	01 53 29.6	+1.0
NSK				eS	Sb	01 53 52.5	+1.1
HSN	Hsinchu	1.68	13	eS	Sg	01 53 52.9	-1.0
YHNB	Yeheng	1.68	26	P	Pn	01 53 29.6	+0.9
YHNB	Yeheng	1.68	26	eP	Pn	01 53 29.5	+0.8
NDT	Datong Townshi	1.68	31	eP	Pb	01 53 31.0	+0.5
EWUT	Wuta	1.70	41	eP	Pb	01 53 30.6	-0.1
EWUT				eS	Sg	01 53 53.8	-0.7
KSHI	Guanxi Townshi	1.71	19	eP	Pn	01 53 30.0	+1.0
KSHI				eS	Sb	01 53 53.0	+0.9
ENTT	Nioudou	1.74	32	eP	Pb	01 53 31.2	-0.2
NDS	Dongshan	1.81	35	eP	Pb	01 53 32.9	+0.3
NDS				eS	Sg	01 53 57.4	-0.7
NWLT	Wulai	1.83	28	eP	Pn	01 53 31.6	+0.9
FUSB	Fushanzhiwuyua	1.85	30	eP	Pn	01 53 32.2	+1.1
FUSB				eS	Sb	01 53 56.4	0.0
TWE	Neicheng	1.86	33	eP	Pb	01 53 33.9	+0.5
TWC	Suao	1.86	39	eP	Pb	01 53 33.6	0.0
TWC				eS	Sb	01 53 57.8	+1.1
EOS4	EOS4	1.87	59	eS	Sb	01 53 56.6	0.0
NCUH	Zhongli	1.89	17	eS	Sb	01 53 56.9	-0.6
EOS3	EOS3	1.96	55	eP	Pb	01 53 34.0	-1.1
EOS2	EOS2	1.98	50	eP	Pb	01 53 35.5	+0.1
TWA	Mucha	2.04	27	eP	Pn	01 53 34.8	+1.2
VWUC	VWUC	2.09	331	eP	Pn	01 53 33.8	-0.5
VWUC				eS	Sn	01 54 01.9	+1.9
TIPB	Shuangxi	2.14	32	eP	Pn	01 53 36.4	+1.3
YM01	YM01	2.18	25	eP	Pn	01 53 36.4	+0.8
ANP	Anpu	2.20	23	eP	Pn	01 53 36.0	+0.1
SXI1	Grass Mountain	2.27	32	eP	Pn	01 53 37.7	+0.9
JYNG	Yonagunijimaku	2.53	59	eP	Pn	01 53 42.7	+2.4
JYNG				eS	Sb	01 54 14.4	-1.6
YOJ	Yonaguni jima	2.59	59	P	Pb	01 53 43.7	-2.2
YOJ	Yonaguni jima	2.59	59	eS	Sb	01 54 16.1	-1.5
ZPLA	Ao Xicun	2.69	287	eP	Pn	01 53 41.8	-0.8
MATB	Ma-tsu	3.03	349	eP	Pn	01 53 46.5	-0.8
HATJ	Hateruma jima	3.11	73	eP	Pn	01 53 50.0	+1.8
HATJ				eS	Sn	01 54 27.2	+2.2
IRIF	Iriomote-Funau	3.13	67	eP	Pn	01 53 50.6	+2.0
IRIF				eS	Sn	01 54 27.4	+1.8
MHZQ	Yeshan	3.25	335	eP	Pn	01 53 50.1	-0.1
MHZQ				eS	Sn	01 54 27.4	-1.1
JKRS	Kuro-shima	3.34	71	eP	Pn	01 53 53.6	+2.2
LYJJ	Jianjiangzhen	3.46	348	eP	Pn	01 53 52.5	-0.5
JIJ	Ishigaki jima	3.49	69	eP	Pn	01 53 54.9	+1.4
MJAR	Matsushiro Arr	20.26	45	P	Pn	01 57 40.5	+3.9
	2.5nm,0.7s,baz=224,slow=9.2,SNR=11						
	2.5nm,0.7s						
CMAR	Chiang Mai Arr	20.74	261	LR	LR	02 06 14.6	
	comp=Z,19nm,19.5s,baz=240,slow=39						
SONM	Songino Array	27.10	339	P	P	01 58 42.9	+0.8
	0.7nm,0.9s,baz=145,slow=5.4,SNR=3.5						
	0.7nm,0.9s						
MKAR	Makanchi Array	38.69	317	P	P	02 00 22.5	-0.5
	0.7nm,0.9s,baz=101,slow=11,SNR=3.6						
	0.7nm,0.9s						
ZALV	Zalesovo Beam	40.80	328	P	P	02 00 40.3	-0.1
	0.6nm,0.5s,baz=134,slow=12,SNR=2.3						
	0.6nm,0.5s						
WRA	Warramunga Arr	44.90	161	P	P	02 01 11.2	-2.8
	0.3nm,0.5s,baz=343,slow=8.7,SNR=5.7						
	0.3nm,0.5s						
ASAR	Alice Springs	48.31	164	P	P	02 01 39.9	-0.8
	0.3nm,0.7s,baz=340,slow=8.6,SNR=2.1						
	0.3nm,0.7s						
YKA	Yellowknife Ar	84.13	23	P	P	02 05 29.9	0.0
	0.3nm,0.5s,baz=315,slow=5.4,SNR=11						
	0.3nm,0.5s						

*BJI **15** 01:54:02.1, 26°.01N×125°.39E, h157km, mB4.6/12, mb4.5/37*

*JMA **15** 01:54:04.0±0.2, 26°N±1'×125°E±', h144km, MV4.3/24, NW OFF MIYAKOJIMA ISLAND*

*IDC **15** 01:54:04.5±0.6, 26°.21N×125°.35E, h155km±4km, mb3.8/20, mbtmp4.3/25, Error ellipse: s-maj=10.6km s-min=8.5km az=15.0*

*NEIC **15** 01:54:05.1±2.0, 26°.15N±0°.08×125°.21E±0°.07, h154km±5km, mb4.4/95, Error ellipse: s-maj=11.5km s-min=8.3km az=157.0*

ISC 15 01:54:04.7±0.4, 26°.11N±0°.04×125°.26E±0°.04, h156km±3km, h156km:pP-P, n345, σ0.99/343, mb4.4/71, 4C, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKM	Ikemajima	1.18	180	P	Pn	01 54 31.4	-0.3
JIKM				eS	Sn	01 54 51.2	-1.1
JOGS	Gusukube	1.35	174	eP	Pn	01 54 33.3	0.0
JMJ2	Miyako jima3	1.36	177	iP	Pn	01 54 33.3	-0.1
JMJ2				eS	Sn	01 54 54.1	-1.3
JKE	Kume jima 2	1.39	81	eP	Pn	01 54 32.9	-0.7
JKE				eS	Sn	01 54 54.5	-1.2
JTJ	Tarama	1.55	199	iP	Pn	01 54 34.6	-0.6
JTJ				S	Sn	01 54 56.4	-2.3
JISG	Ishigakijimahi	1.74	210	eP	Pn	01 54 36.6	-0.8
JISG				S	Sn	01 55 00.0	-2.4
JAGN	Aguni-jima	1.84	75	eP	Pn	01 54 38.0	-0.4
JAGN				eS	Sn	01 55 02.3	-2.1
JIJ	Ishigaki jima	2.01	210	iP	Pn	01 54 39.3	-1.0
JIJ				S	Sn	01 55 04.4	-3.4
JKRS	Kuro-shima	2.18	212	P	Pn	01 54 41.5	-0.9
JKRS				eS	Sn	01 55 08.2	-3.1
IRIF	Iriomote-Funau	2.25	218	iP	Pn	01 54 42.1	-1.0
JJT3	Tamagusuku3	2.27	89	iP	Pn	01 54 43.5	+0.1
JJT3				eS	Sn	01 55 12.3	-0.9
HATJ	Hateruma jima	2.43	213	eP	Pn	01 54 44.3	-1.0
HATJ				S	Sn	01 55 14.7	-1.9
JNTH	Nagotoyohara	2.51	80	eP	Pn	01 54 45.6	-0.6
JIH	Iheya	2.59	69	eP	Pn	01 54 46.6	-0.7
JIH				eS	Sn	01 55 17.6	-2.5
YOJ	Yonaguni jima	2.61	232		Pn	01 54 47.3	-0.2
YOJ				Sn	Sn	01 55 18.9	-1.7
YOJ	Yonaguni jima	2.61	232	P	Pn	01 54 47.4	-0.2
JYNG	Yonagunijimaku	2.67	232	P	Pn	01 54 48.2	0.0
JYNG				eS	Sn	01 55 21.7	-0.1
JOW	Kunigami	2.80	74	P	Pn	01 54 48.9	-0.9
	126nm,0.3s,baz=112,slow=27,SNR=211						
JOW				S	Sn	01 55 20.6	-4.1
	570nm,0.3s,baz=269,slow=22,SNR=8.0						
JOW	Kunigami	2.80	74		Pn	01 54 49.0	-0.8
JOW	Kunigami	2.80	74	eP	Pn	01 54 48.9	-0.9
JOW				eS	Sn	01 55 20.9	-3.8
JYRO	Yoronjima	3.00	72	eP	Pn	01 54 51.3	-1.0
JOKE	Okinoerabujima	3.21	66	eP	Pn	01 54 53.8	-1.2
TATO	Taipei	3.59	252	Pn	Pn	01 54 57.7	-2.2
JTK	Tokunoshima	3.69	62	eP	Pn	01 54 59.6	-1.5
YHNB	Yeheng	3.79	249	Pn	Pn	01 55 03.8	+1.2
NACB	Ninganchiao	3.84	241	Pn	Pn	01 55 02.1	-0.9
YULB	Yu-li	4.50	234	Pn	Pn	01 55 09.4	-2.4
SSLB	Suanglung	4.54	240	Pn	Pn	01 55 12.1	-1.1
TWG	Pinlang	5.03	230	Pn	Pn	01 55 15.8	-2.9
NJ2	Nanjing	8.15	318	eP	Pn	01 55 59.8	-0.3
NJ2				pmax	pmax		
	comp=Z,34nm,0.5s						
JNU	Nakatsue	8.53	34	P	Pn	01 56 04.7	-0.5
	15nm,1.0s,baz=269,slow=6.3,SNR=6.0						
KSAR	Wonju Array Be	11.52	11		Pn	01 56 44.5	+0.1
KSRS	Korea Array	11.54	11	P	Pn	01 56 44.5	-0.2
	16nm,1.0s,baz=190,slow=12,SNR=25						
KS19	Wonju Array Si	11.57	10		Pn	01 56 46.2	+1.0
LYN	LuoYang	13.88	310	P	P	01 57 16.8	-1.2
LYN				pmax	pmax		
	comp=Z,26nm,1.2s						
HNS	HongShan	14.38	324	⇑P	P	01 57 22.9	-0.7
HNS				pmax	pmax		
	comp=Z,34nm,1.2s						
MJAR	Matsushiro Arr	15.17	44	P	Pn	01 57 29.8	-1.2
	2.2nm,0.8s,baz=238,slow=10,SNR=7.6						
MJAR	Matsushiro Arr	15.17	44	P	P	01 57 34.0	+1.7
BJI2	Beijing	15.81	334	P	P	01 57 40.4	+1.0
BJI2				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BJT	Baijiatuau	15.81	334	P	P	01 57 40.2	+0.8
XAN	Xi'an	16.19	303	⇑P	P	01 57 45.0	+1.3
XAN				pmax	pmax		
	comp=Z,13nm,0.8s						
HHC	Hu-ho-hao-te	18.58	326	⇑iP	Pn	01 58 15.6	+3.6
HHC				pmax	pmax		
	comp=Z,25nm,0.8s						
HHC				pmax	pmax		
	comp=Z,180nm,4.3s						
USRK	Ussuriysk Ar.	18.86	15	P	P	01 58 11.7	-1.0
	7.5nm,0.5s,baz=190,slow=9.5,SNR=18						
XLT	XiLinHaoTe	19.25	340	eP	P	01 58 17.3	+0.2
XLT				pmax	pmax		
	comp=Z,10.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,130nm,5.6s						
BTO2	Baotou	19.39	323	eP	P	01 58 19.9	+1.1
BTO2				sP	sP	01 59 07.8	+2.2
BTO2				S	S	02 01 46.9	-2.8
BTO2				pmax	pmax		
	comp=Z,18nm,0.7s						
BTO2				pmax	pmax		
	comp=Z,310nm,4.6s						
BTO2				L	L		
	comp=N,330nm,5.5s						
BTO2				L	L		
	comp=E,210nm,7.6s						
BTO2				L	L		
	comp=Z,190nm,5.2s						
BNX	BinXian	19.66	4	⇑P	P	01 58 21.9	+0.4
BNX				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LZH	Lanzhou	20.82	304	eP	P	01 58 35.0	+0.8
LZH				pmax	pmax		
	comp=Z,15nm,1.6s						
LZDM	Lanzhou Array	20.88	303	P	P	01 58 35.1	+0.1
	2.3nm,0.3s,baz=150,slow=10,SNR=5.9						
	2.3nm,0.3s						
PZH	PanZhiHua	21.08	276	P	P	01 58 37.4	+0.4
KKM	Kota Kinabalu	21.74	205	P	P	01 58 42.8	-1.2
KKM				IAmb	IAmb	01 58 45.9	
	comp=Z,18nm,0.8s						
MYLDM	Lahad Datu	21.79	198	P	P	01 58 43.9	-0.6
MYLDM				IAmb	IAmb	01 58 49.7	
	comp=Z,17nm,0.9s						
ASAJ	Asahikawa	22.81	34	P	P	01 58 53.0	-1.0
	comp=Z,3.2nm,0.3s,baz=249,slow=11,SNR=5.1						
	comp=Z,3.2nm,0.3s						
JKA	Kamikawa-asahi	22.81	34	P	P	01 58 53.0	-1.0
HIA	Hailar	23.51	351	P	P	01 58 59.0	-1.5
HIA				IAmb	IAmb	01 59 02.6	
	comp=Z,9.0nm,0.8s						
KLR	Kul'dur	23.63	11	P	P	01 59 00.3	-1.2
	comp=Z,0.7nm,0.3s,baz=238,slow=8.6,SNR=5.2						
	comp=Z,0.7nm,0.3s						
GTA2	Gaotai	25.14	308	P	P	01 59 15.6	+0.1
GTA2				pP	pP	01 59 49.5	+1.6
GTA2				pmax	pmax		
	comp=Z,12nm,1.0s						
TOLI2	Tolitoli	25.23	191		P	01 59 16.0	-0.3
TOLI2				IAmb	IAmb	01 59 20.0	
	comp=Z,15nm,0.8s						
CMAR	Chiang Mai Arr	25.48	258	P	P	01 59 18.1	-0.5
	comp=Z,0.8nm,0.4s,baz=61,slow=8.5,SNR=5.1						
	comp=Z,0.8nm,0.4s						
ULN	Ulaanbaatar	26.01	331		P	01 59 22.6	-0.6
ULN				IAmb	IAmb	01 59 26.9	
	comp=Z,14nm,1.2s						
SONM	Songino Array	26.27	331	P	P	01 59 24.9	-0.7
	comp=Z,4.1nm,0.6s,baz=147,slow=9.4,SNR=11						
SONM				pP	pP	01 59 58.9	+0.9
	comp=Z,4.5nm,0.8s,baz=139,slow=11,SNR=7.4						
SONM				ScP	ScP	02 06 12.9	-0.1
	comp=Z,0.9nm,0.7s,baz=163,slow=4.8,SNR=7.0						
	comp=Z,4.1nm,0.6s						
SONM	Songino Array	26.27	331	IAmb	IAmb	01 59 29.4	
	comp=Z,4.4nm,0.8s						
SBUM	Sibu	26.65	210		P	01 59 29.9	+0.8
SBUM				IAmb	IAmb	01 59 33.7	
	comp=Z,8.3nm,0.7s						
WMQ	Urumqi	35.13	310	eP	P	02 00 47.3	+4.0
WMQ				pmax	pmax		
	comp=Z,13nm,0.8s						
PETK	Petropavlovsk-	36.23	33	P	P	02 00 52.7	+0.3
	comp=Z,4.7nm,1.0s,baz=217,slow=7.3,SNR=2.1						
	comp=Z,4.7nm,1.0s						
H11N2	WAKE ISLAND Hy	38.75	91	T	T	02 43 08.3	
	SNR=35						
H11S2	WAKE ISLAND Hy	38.96	93	T	T	02 42 54.9	
	SNR=17						
MTN	Manton Dam	39.14	171	P	P	02 01 17.7	+0.5
MKAR	Makanchi Array	39.64	313	P	P	02 01 20.9	-0.3
	comp=Z,3.7nm,0.5s,baz=98,slow=10,SNR=70						
MKAR				pP	pP	02 01 55.4	+0.2
	comp=Z,1.4nm,0.6s,baz=96,slow=11,SNR=3.0						
MKAR				PcP	PcP	02 03 25.5	+0.6
	comp=Z,0.9nm,0.7s,baz=82,slow=4.7,SNR=3.9						
MKAR				ScP	ScP	02 06 58.5	-0.6
	comp=Z,1.5nm,0.7s,baz=100,slow=5.7,SNR=12						
	comp=Z,3.7nm,0.5s						
MAKZ	Makanchi	39.85	313		P	02 01 22.8	-0.2
ZAA0	Zalesovo Array	40.75	324		P	02 01 28.9	-1.2
ZAA0				IAmb	IAmb	02 01 29.8	
	comp=Z,5.6nm,0.7s						
ZALV	Zalesovo Beam	40.75	324	P	P	02 01 29.1	-1.0
	comp=Z,5.8nm,0.5s,baz=112,slow=8.5,SNR=23						
ZALV				pP	pP	02 02 04.0	-0.3
	comp=Z,2.2nm,0.6s,baz=117,slow=7.9,SNR=3.3						
ZALV				ScP	ScP	02 07 02.0	-1.3
	comp=Z,2.4nm,0.6s,baz=119,slow=4.3,SNR=10						
	comp=Z,5.8nm,0.5s						
KNRA	Kununurra	41.67	175		P	02 01 39.2	+1.2
KDJ	Kajisay	42.32	305	P	P	02 01 44.0	+0.6
KURK	Kurchatov	43.09	317		P	02 01 48.6	-0.5
KURBB	Kurchatov Arra	43.12	317	P	P	02 01 48.2	-0.1
	comp=Z,3.6nm,0.5s,baz=112,slow=7.9,SNR=4.7						
KURBB				pP	pP	02 02 24.1	+0.2
	comp=Z,1.0nm,0.6s,baz=104,slow=8.3,SNR=2.7						
KURBB				ScP	ScP	02 07 11.7	-1.1
	comp=Z,0.4nm,0.7s,baz=110,slow=3.8,SNR=4.2						
	comp=Z,3.6nm,0.5s						
COEN	Coen	43.48	154	P	P	02 01 53.8	+1.2
COEN				IAmb	IAmb	02 01 55.2	
	comp=Z,17nm,1.0s						
AAK	Ala-Archa	44.35	305	ScP	ScP	02 07 17.8	-0.5
	comp=Z,1.4nm,0.6s,baz=124,slow=5.5,SNR=6.9						
WB0	Warramunga Arr	46.46	168	IAmb	IAmb	02 02 17.7	
	comp=Z,20nm,1.2s						
WRA	Warramunga Arr	46.62	168	P	P	02 02 17.7	+0.4

comp=Z,11nm,0.7s,baz=348,slow=8.6,SNR=60
comp=Z,11nm,0.7s
WRA Warramunga Arr 46.62 168 P **P** **02 02 17.4 +0.1**
BVAR Borovoye Array 48.60 319 P **P** **02 02 31.9 -0.4**
comp=Z,1.6nm,0.5s,baz=99,slow=7.5,SNR=14
BVAR pP **pP** **02 03 07.0 -0.5**
comp=Z,1.0nm,0.6s,baz=106,slow=11,SNR=2.9
BVAR PcP **PcP** **02 03 55.2 -0.2**
comp=Z,0.5nm,0.5s,baz=86,slow=2.5,SNR=3.6
BVAR ScP **ScP** **02 07 34.4 -1.2**
comp=Z,0.8nm,0.7s,baz=80,slow=1.7,SNR=5.2
comp=Z,1.6nm,0.5s
ASAR Alice Springs 50.19 170 P **P** **02 02 45.9 +1.3**
comp=Z,8.4nm,0.5s,baz=355,slow=6.3,SNR=20
comp=Z,8.4nm,0.5s
ASAR Alice Springs 50.19 170 **P** **02 02 46.2 +1.5**
SPIA Saint Paul Isl 54.69 37 P **P** **02 03 18.3 +1.0**
baz=264
AB31 Akbulak array 54.78 313 **P** **02 03 17.8 -0.4**
ABKAR Akbulak array 54.78 313 P **P** **02 03 17.6 -0.6**
GAMB Gambell 55.02 29 P **P** **02 03 20.8 +1.2**
baz=258
UNV Unalaska Valle 56.62 41 P **P** **02 03 31.8 +0.6**
baz=269
TNA Tin City 56.96 27 P **P** **02 03 33.9 +0.6**
baz=260
M11K Mekoryuk 57.09 33 P **P** **02 03 35.0 +0.6**
baz=265
F14K Arctic Creek 57.60 27 P **P** **02 03 38.2 +0.3**
baz=262
ANM Nome 57.89 28 P **P** **02 03 39.7 -0.2**
ANM Nome 57.89 28 P **P** **02 03 40.1 +0.2**
baz=264,SNR=5.3
K13K Kusilvak Mount 57.96 32 P **P** **02 03 40.4 -0.1**
baz=266
F15K North Star Dit 58.32 27 P **P** **02 03 43.8 +0.9**
F15K IAmb IAmb 02 03 45.1
comp=Z,8.9nm,1.3s
F15K North Star Dit 58.32 27 P **P** **02 03 43.4 +0.5**
baz=263
C16K Lisburne Hills 58.40 24 P **P** **02 03 43.8 +0.5**
baz=261
G15K Niukluk 58.50 28 P **P** **02 03 44.7 +0.5**
baz=264
J14K Nanvaranak Lak 58.53 31 P **P** **02 03 44.8 +0.4**
baz=266
L14K Kuka Creek 58.87 32 P **P** **02 03 47.2 +0.5**
baz=268
D17K Noatak River 59.17 25 P **P** **02 03 48.9 +0.2**
baz=264
M14K Bethel 59.20 33 P **P** **02 03 49.1 +0.1**
baz=269
C17K DeLong Mountai 59.22 24 P **P** **02 03 49.0 -0.1**
baz=263
H16K Elim 59.24 29 P **P** **02 03 49.2 0.0**
baz=266
G16K Koyuk River 59.24 28 P **P** **02 03 49.4 +0.2**
baz=266
RDOG Red Dog Mine 59.27 25 P **P** **02 03 49.5 +0.1**
baz=264
K15K Wolf Creek Mou 59.45 31 P **P** **02 03 51.1 +0.4**
baz=268
L15K Ungalak Mounta 59.45 32 P **P** **02 03 51.2 +0.5**
baz=269
E17K Hotham Inlet 59.59 26 P **P** **02 03 52.1 +0.5**
baz=265
STKA Stephens Creek 59.73 164 P **P** **02 03 53.5 +0.5**
comp=Z,3.0nm,0.7s,baz=340,slow=8.2,SNR=5.0
comp=Z,3.0nm,0.7s
F17K Baldwin Pennin 59.77 26 P **P** **02 03 53.6 +0.8**
baz=266
I17K Unalakleet 59.88 29 P **P** **02 03 54.5 +0.9**
baz=268
J16K Anvik River 59.90 30 P **P** **02 03 54.6 +0.8**
baz=269
G17K Kiwalik Mounta 59.96 28 P **P** **02 03 54.8 +0.6**
baz=267
C18K Utukok River 59.96 24 P **P** **02 03 54.8 +0.6**
baz=265
E18K Tukpahlearik C 60.09 25 P **P** **02 03 55.7 +0.6**
baz=266
SDPT Sand Point 60.10 39 P **P** **02 03 55.5 +0.3**
baz=273
N15K Kwethluk River 60.13 34 P **P** **02 03 55.8 +0.4**
baz=271
H17K Granite Mounta 60.25 28 IAmb IAmb 02 03 58.3
comp=Z,6.3nm,1.2s
H17K Granite Mounta 60.25 28 P **P** **02 03 57.1 +0.9**
baz=268
O15K Ungalikthiuk R 60.28 35 P **P** **02 03 56.5 0.0**
baz=272
L16K Owhat River 60.41 32 P **P** **02 03 57.1 -0.2**
baz=270
F18K Selawik 60.42 26 P **P** **02 03 57.8 +0.6**
baz=268
C19K Lookout Ridge 60.58 23 P **P** **02 03 58.6 +0.2**
baz=266
M16K Timber Creek 60.67 33 P **P** **02 03 59.5 +0.4**
baz=271
N16K Nishlik Lake 60.78 33 P **P** **02 04 00.6 +0.7**
baz=272
G18K Tagagawik 60.80 27 IAmb IAmb 02 04 00.7
comp=Z,3.9nm,0.5s
G18K Tagagawik 60.80 27 P **P** **02 04 00.7 +0.8**
baz=269
H18K Honhosa River 60.91 28 P **P** **02 04 01.2 +0.6**
baz=270
K17K Iditarod 60.95 31 P **P** **02 04 00.9 0.0**
baz=271
L17K Donlin 60.96 31 P **P** **02 04 01.1 +0.1**
baz=271
D19K Kuna River 61.08 24 P **P** **02 04 02.1 +0.3**
baz=268
F19K Shaleruckik Mo 61.17 26 P **P** **02 04 03.2 +0.9**
baz=269
E19K Redstone River 61.39 25 IAmb IAmb 02 04 05.7
comp=Z,4.7nm,1.1s
E19K Redstone River 61.39 25 P **P** **02 04 04.4 +0.6**
baz=269
M17K Holitna River 61.39 32 P **P** **02 04 04.8 +0.9**
baz=272
G19K Purcell Mounta 61.44 27 IAmb IAmb 02 04 06.1
comp=Z,5.3nm,1.4s
G19K Purcell Mounta 61.44 27 P **P** **02 04 04.8 +0.6**
baz=270
B20K Meade River 61.48 22 P **P** **02 04 04.9 +0.6**
baz=268
N17K Nushagak Hills 61.56 33 P **P** **02 04 05.8 +0.8**
baz=273
D20K Etivluk River 61.64 24 P **P** **02 04 06.4 +0.9**
baz=269
O17K Koliganek Bris 61.65 34 P **P** **02 04 06.8 +1.1**
baz=274
J18K Innoko River 61.65 30 P **P** **02 04 06.2 +0.5**
baz=272
L18K Granite Mounta 61.71 31 P **P** **02 04 07.3 +1.2**
baz=273
E20K Nigu River 61.79 24 P **P** **02 04 07.3 +0.8**
baz=270
Q16K King Salmon 61.95 35 P **P** **02 04 08.6 +0.9**
baz=275
F20K Avaraart Lake 61.98 26 P **P** **02 04 08.7 +1.0**
baz=271
P17K Kvichak River 62.02 35 P **P** **02 04 09.1 +0.9**
baz=274
J19K Poorman 62.12 29 IAmb IAmb 02 04 10.6
comp=Z,7.5nm,1.2s
J19K Poorman 62.12 29 P **P** **02 04 10.2 +1.5**
baz=273,SNR=5.4
M18K Stony River 62.16 32 P **P** **02 04 10.5 +1.5**
baz=274
N18K Kilae Creek 62.19 33 P **P** **02 04 10.0 +0.7**
baz=274
C21K Knifeblade Rid 62.30 23 P **P** **02 04 10.7 +0.8**
baz=271
B21K Ikpikpuk River 62.36 23 P **P** **02 04 10.6 +0.4**
baz=271
H20K Anotleneega Mo 62.37 28 P **P** **02 04 11.1 +0.7**
baz=273
I20K Naaghedeneel 62.57 28 P **P** **02 04 12.6 +1.0**
baz=273
L19K White Mountain 62.57 31 P **P** **02 04 13.1 +1.3**
baz=274
O18K Koktuh Hills 62.59 34 P **P** **02 04 12.9 +0.9**
baz=275
P18K Big Mountain, 62.62 35 P **P** **02 04 12.9 +0.7**
baz=275
J20K Nowinta River 62.75 29 P **P** **02 04 12.9 0.0**
baz=274
K20K Telida 62.84 30 IAmb IAmb 02 04 17.5
comp=Z,4.3nm,1.0s
K20K Telida 62.84 30 P **P** **02 04 13.7 +0.1**
baz=274
F21K Alatna River 62.85 26 P **P** **02 04 14.0 +0.4**
baz=273
G21K Allakaket 62.88 26 IAmb IAmb 02 04 16.1
comp=Z,11nm,1.4s
G21K Allakaket 62.88 26 P **P** **02 04 14.2 +0.5**
baz=273
O19K Port Alsworth 63.01 34 P **P** **02 04 15.7 +1.0**
baz=276
H21K Melozitna Rive 63.22 27 IAmb IAmb 02 04 18.1
comp=Z,12nm,1.3s
H21K Melozitna Rive 63.22 27 P **P** **02 04 16.0 0.0**
baz=274,SNR=5.2
M20K Styx River 63.41 32 P **P** **02 04 17.4 0.0**
baz=276
E22K Anaktuvuk Pass 63.43 25 IAmb IAmb 02 04 19.1
comp=Z,4.2nm,1.1s
E22K Anaktuvuk Pass 63.43 25 P **P** **02 04 17.6 +0.2**
baz=274
Q19K Cape Douglas, 63.49 35 P **P** **02 04 18.0 +0.1**
baz=277
SII Sitkinak Islan 63.50 38 P **P** **02 04 19.2 +1.1**
baz=278
CHUM Lake Minchumin 63.58 29 P **P** **02 04 19.2 +0.8**
baz=276
I21K Tanana 63.60 28 P **P** **02 04 20.0 +1.5**
I21K Tanana 63.60 28 P **P** **02 04 19.0 +0.5**
baz=275
P19K Oil Pt 63.61 34 P **P** **02 04 19.3 +0.6**
P19K Oil Pt 63.61 34 P **P** **02 04 18.0 -0.7**
baz=277
G22K Bettles 63.64 26 P **P** **02 04 19.0 +0.3**
baz=275
PPLA Purkeypile 63.74 30 P **P** **02 04 20.6 +0.9**
PPLA IAmb IAmb 02 04 46.8
comp=Z,12nm,1.5s
PPLA Purkeypile 63.74 30 P **P** **02 04 19.4 -0.2**
baz=276
C23K Itkillik River 63.74 23 P **P** **02 04 19.9 +0.5**
baz=274
D23K Nanushuk River 63.78 24 P **P** **02 04 19.7 0.0**
baz=275
H22K Ishtalitna Cre 63.78 27 P **P** **02 04 20.3 +0.5**
baz=276,SNR=9.0
OHAK Old Harbor 63.90 37 P **P** **02 04 21.6 +1.0**
OHAK Old Harbor 63.90 37 P **P** **02 04 20.7 +0.2**
baz=278
N20K Mount Spurr 63.92 32 P **P** **02 04 20.4 -0.4**
baz=277
SPU Mount Spurr 64.00 32 P **P** **02 04 22.2 +0.9**
COLD Coldfoot 64.12 26 P **P** **02 04 22.3 +0.4**
baz=276
BPAW Bear Paw Mtn. 64.14 29 P **P** **02 04 22.6 +0.5**
baz=277,SNR=7.1
MLY Manley 64.14 28 **P** **02 04 23.6 +1.5**
MLY IAmb IAmb 02 04 23.8
comp=Z,4.4nm,0.5s
MLY Manley 64.14 28 P **P** **02 04 22.3 +0.2**
baz=276,SNR=9.5
SKT Skwentna 64.15 31 P **P** **02 04 22.6 +0.4**
baz=277
KDAK Kodak Island 64.19 36 P **P** **02 04 23.2 +0.7**
KDAK Kodiak Island 64.19 36 P **P** **02 04 22.8 +0.3**
baz=278
TOLK Toolik Lake Re 64.21 24 P **P** **02 04 22.7 +0.2**
baz=276
G23K Bananza Creek 64.25 26 P **P** **02 04 23.4 +0.6**
baz=276
E23K Chandalar 64.26 25 IAmb IAmb 02 04 24.9
comp=Z,4.7nm,0.9s
E23K Chandalar 64.26 25 P **P** **02 04 22.7 -0.2**
baz=276
C24K Franklin Bluff 64.41 23 P **P** **02 04 24.1 +0.4**
baz=276
D24K Happy Valley 64.43 23 IAmb IAmb 02 04 25.6
comp=Z,4.3nm,0.6s
D24K Happy Valley 64.43 23 P **P** **02 04 24.2 +0.4**
baz=276
L22K Petersville 64.43 31 IAmb IAmb 02 04 26.2
comp=Z,4.7nm,1.0s
TRF Thorofare Moun 64.53 30 P **P** **02 04 26.3 +1.5**
TRF IAmb IAmb 02 04 42.1
comp=Z,6.7nm,1.2s
TRF Thorofare Moun 64.53 30 P **P** **02 04 25.0 +0.2**
baz=278
E24K Your Creek 64.68 24 P **P** **02 04 25.9 +0.4**
baz=277
I23K Minto, Yukon-K 64.70 28 P **P** **02 04 26.1 +0.5**
baz=278,SNR=7.3
BRSE Bradley Lake S 64.85 34 P **P** **02 04 27.2 +0.5**
baz=279
NEA2 Nenana 64.90 28 P **P** **02 04 27.5 +0.5**
baz=278,SNR=16
F24K Squaw Lake 64.97 25 IAmb IAmb 02 04 29.5
comp=Z,3.8nm,0.7s
F24K Squaw Lake 64.97 25 P **P** **02 04 28.0 +0.5**
baz=278
MCK McKinley 65.09 29 **P** **02 04 28.9 +0.6**
MCK IAmb IAmb 02 04 30.2
comp=Z,4.2nm,0.5s
MCK McKinley 65.09 29 P **P** **02 04 28.7 +0.5**
baz=279,SNR=5.2
H24K Noodor Dome 65.22 27 IAmb IAmb 02 04 31.5
comp=Z,11nm,1.4s
H24K Noodor Dome 65.22 27 P **P** **02 04 29.6 +0.5**
baz=279
G24K Hadweenzic Riv 65.25 26 P **P** **02 04 29.7 +0.4**
baz=279
D25K Kavik River 65.28 23 P **P** **02 04 29.1 -0.3**
baz=278
PMR Palmer 65.33 32 P **P** **02 04 30.0 +0.2**
baz=280
WRH Wood River Hil 65.34 28 P **P** **02 04 30.2 +0.4**
WRH IAmb IAmb 02 04 33.8
comp=Z,2.4nm,0.6s
WAT1 Susitna Watana 65.40 30 P **P** **02 04 30.8 +0.5**
baz=279
CCB Clear Creek Bu 65.43 28 IAmb IAmb 02 04 31.6
comp=Z,2.4nm,0.6s
POKR Poker Plat Res 65.52 28 P **P** **02 04 31.2 +0.3**
baz=279
SML Sawmill 65.67 31 P **P** **02 04 32.4 +0.3**
SML IAmb IAmb 02 04 40.9
comp=Z,7.4nm,1.1s
SML Sawmill 65.67 31 P **P** **02 04 32.4 +0.3**
baz=280
E25K Arctic Village 65.75 24 P **P** **02 04 32.6 +0.2**
baz=280
LHI Lord Howe Isla 65.77 149 P **P** **02 04 32.5 -0.4**
IL31 65.80 28 P **P** **02 04 32.6 -0.2**
IL31 IAmb IAmb 02 04 34.5
comp=Z,5.7nm,1.3s
ILAR Eielson Array 65.80 28 P **P** **02 04 32.5 -0.3**
comp=Z,1.2nm,0.5s,baz=259,slow=5.0,SNR=33
comp=Z,1.2nm,0.5s
ILAR Eielson Array 65.80 28 P **P** **02 04 32.2 -0.5**
WAT6 Susitna Watana 65.81 30 P **P** **02 04 32.8 -0.3**
baz=280
F25K Christian Rive 65.81 25 IAmb IAmb 02 04 35.5
comp=Z,3.1nm,0.7s
F25K Christian Rive 65.81 25 P **P** **02 04 33.7 +0.8**
baz=280
HDA Harding Lake 65.84 28 P **P** **02 04 33.1 +0.1**
baz=280
DHY Denali Highway 65.89 30 P **P** **02 04 34.4 +0.8**
DHY Denali Highway 65.89 30 P **P** **02 04 33.9 +0.3**
baz=280
M23K Glacier View 65.96 31 P **P** **02 04 33.4 -0.5**
baz=281
TOO Toolangi 66.14 163 P **P** **02 04 37.0 +1.8**
TOO IAmb IAmb 02 04 38.3
comp=Z,12nm,1.5s
SCM Sheep Creek Mo 66.14 31 P **P** **02 04 36.2 +1.1**
SCM Sheep Creek Mo 66.14 31 P **P** **02 04 35.7 +0.6**
baz=281
C27K Jago River 66.15 23 P **P** **02 04 35.5 +0.6**
baz=281
PRP Porcupine Dome 66.23 27 P **P** **02 04 36.2 +0.5**
baz=281
BMAR Burnt Mountain 66.25 25 P **P** **02 04 36.1 +0.4**
F26K Sheenjek River 66.36 25 IAmb IAmb 02 04 39.0
comp=Z,5.5nm,1.2s
F26K Sheenjek River 66.36 25 P **P** **02 04 37.4 +1.1**
baz=281
GLI Glacier Island 66.43 32 P **P** **02 04 36.9 0.0**
baz=282
K24K Donnelly Dome 66.46 29 P **P** **02 04 37.5 +0.4**
baz=281,SNR=6.3
J25K Salcha River, 66.47 28 P **P** **02 04 37.8 +0.6**
baz=281
M24K Tolsona, Glenn 66.62 31 P **P** **02 04 39.7 +1.6**
M24K Tolsona, Glenn 66.62 31 P **P** **02 04 39.1 +1.0**
baz=282
G26K Porcupine Rive 66.64 25 P **P** **02 04 39.1 +1.0**
baz=282
PAX Paxson 66.76 30 P **P** **02 04 40.3 +1.3**
baz=282
KLU Klutina 66.86 31 P **P** **02 04 40.7 +1.1**
baz=282
RIDG Independent Ri 66.88 29 P **P** **02 04 40.2 +0.5**
RIDG IAmb IAmb 02 04 41.0
comp=Z,3.9nm,0.7s
RIDG Independent Ri 66.88 29 P **P** **02 04 40.6 +0.9**
baz=282
EYAK Cordova Ski Ar 67.15 32 P **P** **02 04 42.3 +1.0**
baz=283
SCRK Sand Creek 67.20 29 P **P** **02 04 41.6 -0.2**
baz=283
E27K Coleen River 67.20 24 P **P** **02 04 42.2 +0.6**
baz=283
DOT Dot Lake 67.24 29 IAmb IAmb 02 04 43.8
comp=Z,3.1nm,0.6s
I26K Coal Creek Min 67.25 27 IAmb IAmb 02 04 46.7
comp=Z,9.1nm,1.4s
I26K Coal Creek Min 67.25 27 P **P** **02 04 41.9 -0.1**
baz=283
N25K Chitina, Valde 67.46 31 P **P** **02 04 45.0 +1.6**
N25K Chitina, Valde 67.46 31 P **P** **02 04 43.6 +0.1**
baz=283
G27K Doyon Strip 67.50 25 P **P** **02 04 44.1 +0.6**
baz=284
H27K Steamboat Moun 67.69 26 IAmb IAmb 02 04 48.0
comp=Z,3.2nm,0.7s
H27K Steamboat Moun 67.69 26 P **P** **02 04 45.8 +1.0**
baz=284
L26K Log Cabin Wild 67.69 30 P **P** **02 04 46.2 +1.3**
baz=284
RAGM Ragged Mountai 67.70 32 P **P** **02 04 46.3 +1.4**
I27K Kandik River 67.80 27 IAmb IAmb 02 04 48.6
comp=Z,5.7nm,0.8s
I27K Kandik River 67.80 27 P **P** **02 04 46.7 +1.2**
baz=284,SNR=7.0
E28M Babbage River 67.84 23 IAmb IAmb 02 04 48.4
comp=Z,6.6nm,1.4s
E28M Babbage River 67.84 23 P **P** **02 04 46.5 +0.8**
baz=285
GLB Gilahina Butte 67.86 31 P **P** **02 04 46.8 +0.9**
F28M Old Crow 67.97 24 P **P** **02 04 47.8 +1.3**
baz=285
M26K Nabesna, AK 68.00 30 IAmb IAmb 02 04 48.7
comp=Z,5.0nm,0.5s
M26K Nabesna, AK 68.00 30 P **P** **02 04 47.9 +1.1**
baz=284
MCARA McCarthy VSAT 68.24 31 P **P** **02 04 49.3 +1.0**
baz=285
L27K Beaver Creek, 68.36 29 P **P** **02 04 50.0 +1.0**
baz=285
CRQE Cirque 68.37 32 P **P** **02 04 50.0 +0.7**
baz=285
E29M Blow River 68.48 23 P **P** **02 04 50.3 +0.7**
baz=286
M27K Edge Creek, AK 68.52 30 P **P** **02 04 50.7 +0.6**
baz=285
I28M Miner Creek 68.52 27 IAmb IAmb 02 04 53.9
comp=Z,3.8nm,0.7s
I28M Miner Creek 68.52 27 P **P** **02 04 50.3 +0.2**
baz=286
H29M Whitestone 68.92 26 P **P** **02 04 53.2 +0.8**
baz=287
BVCY Beaver Creek 68.96 30 P **P** **02 04 53.6 +0.9**
baz=286
MESA MESA 69.07 32 P **P** **02 04 54.2 +0.5**
baz=286
DAWY Dawson 69.13 28 P **P** **02 04 54.8 +1.1**
DAWY IAmb IAmb 02 04 55.5
comp=Z,2.8nm,0.5s
DAWY Dawson 69.13 28 P **P** **02 04 54.2 +0.4**
baz=287
CTG Chitna Glacier 69.14 31 P **P** **02 04 54.1 +0.1**
baz=286
YUK3 Moose Creek 69.32 30 P **P** **02 04 54.9 -0.3**
baz=287
F30M Barrier River 69.47 24 P **P** **02 04 56.1 +0.4**
baz=288
J29N Klondike Camp 69.51 27 P **P** **02 04 57.4 +1.3**
baz=288,SNR=15
G30M tAoh Zraii Nji 69.51 25 IAmb IAmb 02 04 57.9
comp=Z,10nm,1.2s
G30M tAoh Zraii Nji 69.51 25 P **P** **02 04 57.0 +1.0**
baz=288
EPYK Eagle Plains 69.51 25 IAmb IAmb 02 04 58.7
comp=Z,4.5nm,0.8s
EPYK Eagle Plains 69.51 25 P **P** **02 04 57.0 +0.9**
baz=288,SNR=5.2
O28M Mount Upton 69.74 31 P **P** **02 04 59.0 +1.2**
baz=287
PINM Pinnacle 69.91 32 P **P** **02 04 59.6 +1.0**
baz=287
L29M L29M 69.95 29 IAmb IAmb 02 05 03.0
comp=Z,6.3nm,1.1s
L29M L29M 69.95 29 P **P** **02 05 00.1 +1.3**
baz=288
K29M Barlow Dome 69.98 28 P **P** **02 05 00.1 +1.0**
baz=288
I30M Mount Dempster 70.01 26 P **P** **02 05 00.0 +0.8**
baz=289
M29M Somme Creek 70.02 29 P **P** **02 05 00.4 +1.1**
baz=288
INK Inuvik 70.04 23 P **P** **02 05 00.1 +0.9**
baz=290
J30M Hart River 70.24 27 P **P** **02 05 00.8 +0.2**
baz=289
F31M Tsiigehtchic 70.27 24 P **P** **02 05 01.0 +0.4**
baz=290
YUK4 Talbot Arm 70.28 31 P **P** **02 05 01.7 +0.7**
baz=288
YUK6 Outpost Mounta 70.53 31 P **P** **02 05 03.2 +0.6**
baz=289
H31M Peel River 70.61 25 P **P** **02 05 04.0 +1.2**
baz=290
M30M Minto, Yukon 70.71 29 IAmb IAmb 02 05 06.4
comp=Z,4.0nm,0.6s
M30M Minto, Yukon 70.71 29 P **P** **02 05 04.2 +0.8**
baz=289,SNR=7.7
MAYO Mayo, Yukon 70.75 28 P **P** **02 05 04.1 +0.5**
baz=290
N30M Aishikik Lake 70.95 30 P **P** **02 05 05.1 +0.2**
baz=290
HYT Haines Junctio 70.97 31 P **P** **02 05 06.8 +1.6**
HYT Haines Junctio 70.97 31 P **P** **02 05 05.6 +0.5**
baz=289
A36M Sachs Harbour 71.18 18 P **P** **02 05 06.9 +0.9**
baz=296
P30M Million Dollar 71.46 32 P **P** **02 05 08.6 +0.6**
baz=290
N31M Braeburn, Yuko 71.53 30 P **P** **02 05 09.0 +0.6**
baz=291
O30N Mendenhall 71.64 31 P **P** **02 05 09.6 +0.6**
baz=291
FINES FINESS Array B 71.64 330 P **P** **02 05 07.9 -1.1**
comp=Z,0.6nm,0.3s,baz=46,slow=5.5,SNR=11
FINES pP **pP** **02 05 46.0 -0.7**
comp=Z,4.4nm,0.8s,baz=80,slow=5.7,SNR=4.0
comp=Z,0.6nm,0.3s
FINES FINESS Array B 71.64 330 P **P** **02 05 08.5 -0.4**
M31M Drury Creek, Y 71.89 29 P **P** **02 05 11.3 +0.8**
baz=292,SNR=6.0
WHY Whitehorse 72.24 31 P **P** **02 05 13.3 +0.6**
baz=292
SKAG Skagway 72.47 32 P **P** **02 05 14.8 +0.9**
baz=292
S31K Pelican 72.58 34 P **P** **02 05 14.9 +0.3**
baz=291
C36M Paulatuk 72.75 20 P **P** **02 05 15.7 +0.4**
baz=298
N32M Quiet Lake 72.86 30 P **P** **02 05 16.9 +0.6**
baz=293
MMPY Sheldon Lake, 73.07 28 P **P** **02 05 18.3 +0.8**
baz=294
P32M Atlin 73.18 31 P **P** **02 05 18.7 +0.5**
baz=293
P33M Teslin, Yukon 73.35 31 P **P** **02 05 20.3 +1.1**

baz=293
AKASG **Malin Array Be** 73.88 319 P **P** 02 05 21.2 -1.1
comp=Z,0.6nm,0.5s,baz=67,slow=6.1,SNR=4.0
AKASG pP **pP** 02 05 59.4 -0.9
comp=Z,1.0nm,0.6s,baz=60,slow=6.6,SNR=3.5
comp=Z,0.6nm,0.5s
AKASG **Malin Array Be** 73.88 319 IAmb IAmb 02 05 22.3
comp=Z,2.4nm,1.2s
TGTN **Hyland Airport** 74.81 28 P **P** 02 05 28.4 +0.8
baz=297
BRTR **Keskin Array B** 74.99 307 P **P** 02 05 28.5 -0.7
comp=Z,0.5nm,0.5s,baz=141,slow=3.7,SNR=5.3
BRTR pP **pP** 02 06 07.2 0.0
comp=Z,1.1nm,0.8s,baz=79,slow=6.4,SNR=5.2
comp=Z,0.5nm,0.5s
BRTR **Keskin Array B** 74.99 307 P **P** 02 05 28.9 -0.3
DLBC **Dease Lake** 75.40 32 P **P** 02 05 31.6 +0.6
baz=296
WRGLY **Wrigley** 75.97 26 P **P** 02 05 34.7 +0.6
baz=300
HFS **Hagfors** 77.67 332 P **P** 02 05 43.0 -0.7
comp=Z,3.1nm,0.9s,baz=90,slow=4.3,SNR=4.5
comp=Z,3.1nm,0.9s
NB2 **NORSAR Subarra** 78.22 333 P **P** 02 05 46.0 -0.8
comp=Z,0.4nm,0.4s,baz=54,slow=6.2
NOA **NORSAR Array B** 78.22 333 P **P** 02 05 45.8 -1.0
comp=Z,0.7nm,0.6s,baz=53,slow=6.0,SNR=2.5
comp=Z,0.7nm,0.6s
YKA **Yellowknife Ar** 79.74 24 P **P** 02 05 55.1 +0.2
comp=Z,0.6nm,0.5s,baz=306,slow=6.0,SNR=16
comp=Z,0.6nm,0.5s
QRZ **Quartz Range** 79.75 145 P **P** 02 05 56.5 +1.3
QRZ IAmb IAmb 02 05 58.5
comp=Z,12nm,1.1s
GERES **GERESS Array B** 83.66 322 pP pP 02 06 54.6 -0.1
comp=Z,0.6nm,0.7s,baz=54,slow=6.8,SNR=2.8
QSPA **South Pole Qui** 115.89 180 PKP **PKPdf** 02 12 28.0 -0.1
comp=Z,0.5nm,0.5s,baz=295,slow=2.3,SNR=6.9
DBIC **Dimbokro** 121.67 297 PKP **PKPdf** 02 12 40.1 -0.7
comp=Z,6.4nm,1.0s,baz=112,slow=3.6,SNR=4.6
PLCA **Paso Flores** 160.38 142 PKPab **PKPab** 02 14 27.4 0.0
comp=Z,1.0nm,0.7s,baz=248,slow=1.7,SNR=4.3

GCG ***15*** *01:55:54.8±2.3, 14.°87N×92.°83W, h72km±22km, MD4.1, ML3.7, Presumed earthquake*
MEX ***15*** *01:55:55.0±0.8, 14.°88N×92.°87W, h79km±13km, MD4.0*
ISC 15 01:55:50.2±1.4**, 14.°67N**±0.°06×**92.89W**±0.°04**, h97**km±11km,
n25,σ2**69**/45**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**0.65**	**68**	*e*P	**Pn**	**01 56 07.9**	**+1.0**
THIG				*e*S	**Sn**	**01 56 19.4**	**0.0**
THIG		**0.65**	**68**	*i* P	**Pn**	**01 56 07.9**	**+1.0**
THIG				*i* S	**Sn**	**01 56 19.9**	**+0.5**
THIG				IAML		01 56 27.5	
	comp=E,542nm,0.6s						
PATR	**El Naranjo**	**0.78**	**55**	*e*P	**Pn**	**01 56 08.4**	**0.0**
PATR				*e*S	**Sn**	**01 56 19.8**	**-2.2**
SMCA	**Catarina**	**0.81**	**76**	*i* P	**Pn**	**01 56 09.8**	**+1.3**
SMCA				*i* S	**Sn**	**01 56 21.9**	**-0.2**
CHUJ	**Union Juarez**	**0.87**	**61**	*e*P	**Pn**	**01 56 09.8**	**+0.5**
CHUJ				*e*S	**Sn**	**01 56 21.9**	**-1.6**
PAVE	**Pavencul**	**0.87**	**53**	*e*P	**Pn**	**01 56 09.7**	**+0.5**
PAVE				*e*S	**Sn**	**01 56 21.9**	**-1.6**
PCIG		**1.08**	**343**	*e*P	**Pn**	**01 56 11.4**	**+0.1**
PCIG				*e*S	**Sn**	**01 56 23.9**	**-3.3**
RTAL	**Retalhuleu**	**1.17**	**97**	*e*P	**Pn**	**01 56 16.3**	**+4.0**
RTAL				*e*S	**Sn**	**01 56 32.4**	**+3.5**
STG2	**El Palmar, Qui**	**1.48**	**99**	*i* P	**Pn**	**01 56 15.8**	**-0.4**
STG2				*i* S	**Sn**	**01 56 31.9**	**-4.1**
STG2				IAML		01 56 32.7	
	comp=N,4μm,0.2s						
HUEH	**Huehuetenango**	**1.49**	**64**	*e*P	**Pn**	**01 56 19.1**	**+2.7**
HUEH				*e*S	**Sn**	**01 56 37.6**	**+1.4**
STG8	**El Palmar, Qui**	**1.51**	**98**	*i* P	**Pn**	**01 56 16.3**	**-0.3**
STG8				*i* S	**Sn**	**01 56 33.2**	**-3.4**
STG8				IAML		01 56 33.7	
	comp=N,1μm,0.2s						
STG5	**El Palmar, Qui**	**1.52**	**100**	*i* P	**Pn**	**01 56 16.4**	**-0.2**
STG5				*i* S	**Sn**	**01 56 33.5**	**-3.1**
CCIG	**Comitan**	**1.76**	**24**	*e*P	**Pn**	**01 56 20.9**	**+1.1**
CCIG				*e*S	**Sn**	**01 56 40.1**	**-2.2**
CCIG	**Comitan**	**1.76**	**24**	*i* P	**Pn**	**01 56 20.6**	**+0.8**
CCIG				*i* S	**Sn**	**01 56 42.2**	**-0.1**
CARR	**Arriaga**	**1.85**	**328**	*e*P	**Pn**	**01 56 22.8**	**+2.0**
CARR				*e*S	**Sn**	**01 56 43.8**	**-0.3**
TGIG		**2.11**	**354**	*e*P	**Pn**	**01 56 25.7**	**+1.5**
TGIG				*e*S	**Sn**	**01 56 45.6**	**-4.5**
APG	**El Apazote**	**2.37**	**82**	*i* P	Pn	01 56 33.8	+6.1
CMIG	**Matias Romero**	**3.08**	**322**	*e*P	**Pn**	**01 56 41.5**	**+4.5**
CMIG				*e*S	**Sn**	**01 57 12.7**	**-0.4**
HUIG	**Huatulco**	**3.29**	**290**	*e*P	**Pn**	**01 56 41.5**	**+1.7**
HUIG				*e*S	**Sn**	**01 57 14.1**	**-4.1**
PETF	**Flores**	**3.67**	**52**	*e*P	**Pn**	**01 56 46.8**	**+1.9**
PETF				*e*S	**Sn**	**01 57 23.1**	**-4.1**
NEUV	**Arroyo Zacate**	**4.12**	**318**	*e*P	**Pn**	**01 56 55.0**	**+4.0**
NEUV				*e*S	**Sn**	**01 57 36.9**	**-1.3**
PEIG	**Puerto Escondi**	**4.32**	**288**	*e*P	**Pn**	**01 56 54.3**	**+0.7**
PEIG				*e*S	Sn	01 57 36.1	-6.8
YOIG	**Yosondua**	**4.98**	**297**	*e*S	**Sn**	**01 58 01.5**	**+2.0**
PNIG	**Pinotepa**	**5.33**	**289**	*e*P	**Pn**	**01 57 11.1**	**+3.7**
PNIG				*e*S	**Sn**	**01 58 02.4**	**-5.2**
TXIG	**Tlaxiaco**	**5.35**	**299**	*e*P	Pn	01 57 13.6	+5.7
TXIG				*e*S	**Sn**	**01 58 02.1**	**-6.3**

IDC ***15*** *02:01:01.4±43.0, 8.°37N×127.°18E, h0km, mb3.6/3, mbtmp3.6/3, MS2.6/2, Error ellipse: s-maj=742.6km s-min=271.1km az=155.0*
MAN ***15*** *02:01:05.0, 8.°67N×126.°35E, h21km, MS3.2*
ISC 15 02:00:58.4±2.1**, 8.73N**±0.°04×**126.77E**±0.°10**, h6**km±12km,
n20,σ1**45**/19**, mb3.2**/3**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TSSP	**Tandag City**	**0.64**	**299**	*i* P	**Pn**	**02 01 14.6**	**+0.7**
TSSP				*e*S	**Sg**	**02 01 29.4**	**+1.3**
BIPH	**Bislig**	**0.68**	**216**	*i* P	**Pn**	**02 01 15.7**	**+1.2**
BIPH				*i* S	**Sb**	**02 01 23.2**	**+1.0**
SCPH	**Surigao**	**1.64**	**310**	*i* P	**Pb**	**02 01 29.8**	**+0.8**
SCPH				*i* S	**Sn**	**02 01 48.4**	**-0.7**
DAV	**Davao City (W)**	**2.03**	**216**	Sn	**Sn**	**02 01 60.0**	**+1.2**
	77nm,0.3s,baz=272,slow=18,SNR=4.2						
DMPH	**Davao City--Mi**	**2.06**	**217**	*e*P	**Pb**	**02 01 36.2**	**0.0**
DMPH				*i* S	**Sn**	**02 01 59.8**	**+0.3**
CGP	**Cagayan de Oro**	**2.07**	**263**	*e*P	**Pn**	**02 01 32.5**	**-1.1**
CGP				*e*S	Sn	02 01 51.9	-7.8
KCP	**Kidapawan**	**2.38**	**224**	*i* P	**Pn**	**02 01 38.9**	**+0.9**
KCP				*i* S	**Sn**	**02 02 03.8**	**-3.9**
DDMP	**Don Marcelino,**	**2.81**	**202**	*e*P	**Pg**	**02 01 51.4**	**-0.9**
DDMP				*e*S	**Sn**	**02 02 17.0**	**-1.1**
PLP	**Palo**	**2.99**	**324**	*e*P	**Pb**	**02 01 50.2**	**-1.9**
PLP				*e*S	**Sn**	**02 02 23.5**	**+0.9**
KAPI	**Kappang**	**15.34**	**207**	LR	LR	02 10 22.5	
	comp=Z,29nm,21.1s,baz=94,slow=37						
WRA	**Warramunga Arr**	**29.45**	**165**	P	**P**	**02 07 02.8**	**-0.4**
	0.3nm,0.7s,baz=348,slow=8.6,SNR=1.7						
	0.3nm,0.7s						
MJAR	**Matsushiro Arr**	**29.58**	**19**	LR	LR	02 20 23.6	
	comp=Z,11nm,19.2s,baz=64,slow=39						
ASAR	**Alice Springs**	**32.95**	**168**	P	**P**	**02 07 33.6**	**-0.4**
	0.1nm,0.3s,baz=349,slow=8.2,SNR=4.1						
	0.1nm,0.3s						
H11S3	**WAKE ISLAND Hy**	**39.91**	**72**	T	T	02 51 41.8	
	baz=261,slow=75,SNR=26						
H11S1	**WAKE ISLAND Hy**	**39.93**	**72**	T	T	02 51 42.9	
	baz=261,slow=75,SNR=22						
H11S2	**WAKE ISLAND Hy**	**39.93**	**72**	T	T	02 51 38.6	
	baz=261,slow=75,SNR=15						
H11N1	**WAKE ISLAND Hy**	**40.30**	**70**	T	T	02 52 12.4	
	baz=264,slow=75,SNR=6.3						
H11N2	**WAKE ISLAND Hy**	**40.31**	**70**	T	T	02 52 19.8	
	baz=264,slow=75,SNR=5.9						
H11N3	**WAKE ISLAND Hy**	**40.32**	**70**	T	T	02 52 18.2	
	baz=264,slow=75,SNR=6.6						
STKA	**Stephens Creek**	**42.80**	**161**	P	**P**	**02 08 57.9**	**+0.8**
	1.6nm,0.7s,baz=323,slow=10,SNR=3.7						
	1.6nm,0.7s						

IDC ***15*** *02:05:06.1±2.5, 29.°26N×66.°24E, h0km, mb3.5/8, mbtmp3.5/9, ML3.4/1, MS3.3/3, Error ellipse: s-maj=72.9km s-min=22.3km az=145.0*
ISC 15 02:05:07.2±0.8**, 29.°17N**±0.°09×**66.°3E**±0.°1**, h10**km**, n32,**
σ2**45**/43**, mb3.5**/7**, MS3.3**/3**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**5.86**	**23**	P	**Pb**	**02 06 51.5**	**+2.1**
	SNR=6.8						
NGCH	**Negor - Chabah**	**5.93**	**231**	P	**Pn**	**02 06 39.2**	**+4.1**
NGCH				S	**Sn**	**02 07 41.2**	**-2.0**
JASK	**Jask - Hormozg**	**8.15**	**248**	P	Pn	02 07 10.3	+4.8
WSAR	**Wadi Sarin**	**9.04**	**231**	P	**Pn**	**02 07 20.7**	**+2.9**
WSAR				S	**Sn**	**02 08 56.1**	**-3.7**
WBK	**Wadi Bani Khal**	**9.26**	**227**	P	**Pn**	**02 07 23.1**	**+2.3**
	SNR=7.7						
WBK				S	**Sn**	**02 09 03.5**	**-1.6**
JLN	**Jalan Bani Buh**	**9.33**	**223**	P	**Pn**	**02 07 23.9**	**+2.2**
	SNR=12						
JLN				P	**Pn**	**02 07 23.9**	**+2.2**
	SNR=12						
JLN				S	**Sn**	**02 09 04.4**	**-2.3**
JLN				S	**Sn**	**02 09 04.4**	**-2.3**
BANOM	**Banah**	**9.41**	**252**	P	**Pn**	**02 07 26.7**	**+3.8**
BANOM				P	**Pn**	**02 07 26.7**	**+3.8**
SHME	**Shamm**	**9.50**	**253**	P	Pn	02 07 28.2	+4.1
	SNR=6.5						
SMDO	**Samad**	**9.56**	**232**	P	**Pn**	**02 07 28.1**	**+3.0**
SMDO				S	**Sn**	**02 09 11.0**	**-1.7**
MDH	**Madha**	**9.67**	**249**	P	**Pn**	**02 07 28.7**	**+2.4**
MDH				P	**Pn**	**02 07 28.7**	**+2.4**
MDH				S	**Sn**	**02 09 13.1**	**-2.0**
MDH				S	**Sn**	**02 09 13.1**	**-2.0**
MASF	**Masafi**	**9.75**	**250**	P	Pn	02 07 32.0	+4.4
	SNR=9.0						
MASF				P	Pn	02 07 32.0	+4.4
	SNR=9.0						
MASF				S	**Sn**	**02 09 16.6**	**-0.6**
MASF				S	**Sn**	**02 09 16.6**	**-0.6**
HOQ	**Hoqain**	**9.76**	**237**	P	**Pn**	**02 07 30.1**	**+2.3**
UOSS	**Minazif**	**9.90**	**247**	P	**Pn**	**02 07 31.4**	**+1.8**
UOSS				S	**Sn**	**02 09 17.6**	**-3.3**
JMDO	**Jabal Madar**	**9.99**	**229**	P	**Pn**	**02 07 34.7**	**+3.9**
	SNR=22						
JMDO				S	**Sn**	**02 09 21.4**	**-1.7**
HATD	**Hatta, Dubai**	**10.02**	**247**	P	**Pn**	**02 07 35.0**	**+3.9**
SOHO	**SOHO**	**10.04**	**242**	P	**Pn**	**02 07 33.6**	**+2.1**
SOHO				P	**Pn**	**02 07 33.6**	**+2.1**
ASHO	**Ashiyiah**	**10.14**	**246**	P	Pn	02 07 37.5	+4.6
	SNR=5.9						
BSY	**Bisya**	**10.36**	**234**	P	Pn	02 07 40.4	+4.5
	SNR=7.7						
BSY				P	Pn	02 07 40.4	+4.5
	SNR=7.7						
MHTO	**MHTO**	**11.08**	**225**	P	**Pn**	**02 07 48.8**	**+3.1**
MHTO				P	**Pn**	**02 07 48.8**	**+3.1**
MHTO				S	**Sn**	**02 09 49.4**	**-0.3**
MHTO				S	**Sn**	**02 09 49.4**	**-0.3**
AAK	**Ala-Archa**	**14.99**	**24**	Pn	**P**	**02 08 40.3**	**-4.4**
	0.2nm,0.3s,baz=270,slow=20,SNR=4.1						
	0.7nm,0.4s						
DOK	**Doka**	**15.27**	**229**	P	**P**	**02 08 46.2**	**-1.6**
MKAR	**Makanchi Array**	**21.59**	**31**	P	**P**	**02 09 57.3**	**+0.3**
	1.4nm,0.9s,baz=246,slow=9.1,SNR=12						
	1.4nm,0.9s						
KURBB	**Kurchatov Arra**	**23.34**	**20**	P	**P**	**02 10 14.9**	**-0.6**
	0.6nm,0.8s,baz=214,slow=10,SNR=4.0						
	0.6nm,0.8s						
BVAR	**Borovoye Array**	**24.03**	**6**	P	**P**	**02 10 21.9**	**-0.2**
	1.0nm,0.6s,baz=173,slow=9.8,SNR=9.1						
	1.0nm,0.6s						
SONM	**Songino Array**	**36.02**	**48**	P	**P**	**02 12 08.8**	**+0.2**
	0.3nm,0.5s,baz=258,slow=7.2,SNR=2.6						
	0.3nm,0.5s						
NOA	**NORSAR Array B**	**48.13**	**328**	LR	LR	02 37 43.6	
	comp=Z,29nm,18.3s,baz=0.0,slow=41						
ESDC	**Sonseca Array**	**57.54**	**301**	P	**P**	**02 14 56.6**	**-0.4**
	0.5nm,0.9s,baz=52,slow=7.7,SNR=5.2						
	0.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**61.61**	**270**	P	**P**	**02 15 26.2**	**+0.9**
	1.8nm,0.7s,baz=61,slow=4.7,SNR=13						
	1.8nm,0.7s						
BORG	**Borgarnes**	**63.01**	**331**	LR	LR	02 44 39.9	
	comp=Z,32nm,18.1s,baz=56,slow=38						
SFJD	**Kangerlussuaq**	**73.11**	**339**	LR	LR	02 48 20.4	
	comp=Z,16nm,19.0s,baz=0.5,slow=36						
ILAR	**Eielson Array**	**82.86**	**14**	P	**P**	**02 17 30.9**	**-0.6**
	0.2nm,0.5s,baz=334,slow=5.4,SNR=2.6						
	0.2nm,0.5s						
YKA	**Yellowknife Ar**	**88.66**	**0**	P	**P**	**02 18 00.1**	**-0.2**
	0.2nm,0.6s,baz=351,slow=5.6,SNR=4.8						
	0.2nm,0.6s						

ISK ***15*** *02:05:07.9, 34.°93N×27.°74E, h24km, ML3.0/15*
AFAD ***15*** *02:05:10.1, 35.°10N×28.°19E, h15km±3km, ML2.7*
THE ***15*** *02:05:11.4, 35.°1N×4.°2E±.°1, h1km, 9km, M2.6/7, MLh2.6/7*
ATH ***15*** *02:05:11.8, 35.°28N×27.°80E, h11km±3km, ML2.7/6, Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
ISC 15 02:05:11.1±1.4**, 35.°21N**±0.°05×**27.°85E**±0.°03**, h13**km±10km,
n55,σ1**33**/72**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.65**	**301**	P	**Pg**	**02 05 23.5**	**-0.4**
KARP				S	**Sb**	**02 05 33.3**	**-0.2**
KARP	**Karpathos**	**0.65**	**301**	Pg	**Pg**	**02 05 23.8**	**-0.1**
KARP				Sg	**Sn**	**02 05 35.4**	**-0.9**
KARP	**Karpathos**	**0.65**	**301**	P	**Pg**	**02 05 23.4**	**-0.4**
KARP				S	**Sg**	**02 05 31.2**	**-1.3**
ARG	**Arkhangelos**	**1.03**	**13**	P	**Pb**	**02 05 30.5**	**-0.3**
ARG				S	**Sn**	**02 05 46.2**	**+0.6**
ARG	**Arkhangelos**	**1.03**	**13**	Pn	**Pg**	**02 05 31.6**	**+0.5**
ARG				Sn	**Sn**	**02 05 48.8**	**+3.2**
ARG	**Arkhangelos**	**1.03**	**13**	P	**Pb**	**02 05 30.7**	**-0.1**
ARG				S	**Sb**	**02 05 43.3**	**-1.1**
ZKR	**Zakros**	**1.34**	**267**	P	**Pg**	**02 05 36.5**	**-0.4**
ZKR	**Zakros**	**1.34**	**267**	P	**Pb**	**02 05 35.9**	**-0.2**
ZKR				S	**Sb**	**02 05 53.4**	**+0.3**
SIT2	**Siteia**	**1.42**	**270**	P	**Pb**	**02 05 37.3**	**-0.2**
STIA	**Sitia Lasithi**	**1.44**	**270**	P	**Pb**	**02 05 37.2**	**-0.5**
STIA				S	**Sb**	**02 05 55.9**	**0.0**
DAT	**Datca**	**1.53**	**352**	Pn	**Pn**	**02 05 38.4**	**+0.1**
TURN	**Turunc**	**1.60**	**12**	Pn	**Pn**	**02 05 39.6**	**+0.5**
TURN	**Turunc**	**1.60**	**12**	P	**Pb**	**02 05 40.1**	**-0.4**
TURN				S	**Sg**	**02 06 05.0**	**+2.4**
TURN				IAML		02 06 09.0	
	comp=N,86nm,0.4s						
TURN				IAML		02 06 20.0	
	comp=E,74nm,0.5s						
IZZE	**Mula-Seydike**	**1.66**	**42**	P	**Pn**	**02 05 39.8**	**-0.1**
IZZE				S	**Sn**	**02 06 01.2**	**0.0**
IZZE				IAML		02 06 12.0	
	comp=E,70nm,0.4s						
KSL	**Kastellorizon**	**1.70**	**56**	P	**Pn**	**02 05 41.0**	**+0.5**
KSL				S	**Sg**	**02 06 05.4**	**-0.4**
KSL	**Kastellorizon**	**1.70**	**56**	P	**Pn**	**02 05 41.3**	**+0.8**
FETY	**Fethiye**	**1.74**	**35**	P	Pn	02 05 33.0	-8.2
FETY				S	**Sn**	**02 05 55.5**	**-7.7**
AKAS	**Kas**	**1.76**	**54**	Pn	**Pn**	**02 05 41.3**	**-0.1**
AKAS	**Kas**	**1.76**	**54**	P	**Pn**	**02 05 41.7**	**+0.3**
AKAS				S	**Sb**	**02 06 06.7**	**+1.2**
AKAS				IAML		02 06 08.0	
	comp=N,91nm,0.7s						
NPS	**Neapolis**	**1.83**	**272**	P	**Pb**	**02 05 44.2**	**-0.2**
NPS				S	**Sb**	**02 06 06.7**	**-0.6**
NPS	**Neapolis**	**1.83**	**272**	P	**Pn**	**02 05 43.1**	**+0.8**
SABU	**Mula-Dalaman**	**1.85**	**29**	P	**Pn**	**02 05 43.6**	**+1.0**
KLNA	**Kalymnos**	**1.88**	**338**	P	**Pn**	**02 05 42.9**	**-0.1**
BODT	**Bodrum**	**1.90**	**347**	P	**Pb**	**02 05 44.9**	**-0.8**
BODT				S	**Sb**	**02 06 08.9**	**-0.5**
BODT	**Bodrum**	**1.90**	**347**	Pn	**Pn**	**02 05 43.7**	**+0.4**
YER	**Yerkesik**	**1.96**	**10**	P	**Pn**	**02 05 45.2**	**+1.1**
YER	**Yerkesik**	**1.96**	**10**	Pn	**Pn**	**02 05 44.7**	**+0.6**
MULA	**Mugla, Merkez-**	**2.08**	**11**	P	**Pn**	**02 05 47.0**	**+1.2**
MULA				S	**Sg**	**02 06 18.9**	**+0.8**
MULA				IAML		02 06 28.0	
	comp=E,39nm,0.3s						
MLSB	**Milas**	**2.08**	**358**	Pn	**Pn**	**02 05 46.3**	**+0.5**
CAME	**Cameli-Denizli**	**2.10**	**34**	Pn	**Pn**	**02 05 46.5**	**+0.4**
KNIK	**Mula-Seydike**	**2.15**	**40**	P	**Pn**	**02 05 47.3**	**+0.5**
KNIK				S	**Sn**	**02 06 14.3**	**+0.8**
THERA	**Ancient Thera,**	**2.25**	**302**	P	**Pn**	**02 05 48.8**	**+0.7**
THERA	**Ancient Thera,**	**2.25**	**302**	P	**Pn**	**02 05 48.2**	**+0.2**
CAEL	**Denizli, Camel**	**2.25**	**32**	P	**Pb**	**02 05 50.4**	**-1.4**
CAEL				IAML		02 06 49.0	
	comp=E,58nm,1.2s						
CAEL				IAML		02 06 50.0	
	comp=N,68nm,0.9s						
ELL	**Elmali**	**2.27**	**47**	Pn	**Pn**	**02 05 48.8**	**+0.3**
DNZT	**Denizli-Tavas-**	**2.28**	**24**	P	**Pn**	**02 05 50.3**	**+1.8**
THR3	**Thira Island,**	**2.32**	**302**	P	**Pn**	**02 05 50.1**	**+1.1**
SNT5	**Nea Kammeni, S**	**2.32**	**302**	P	**Pn**	**02 05 50.0**	**+0.9**
SNT5	**Nea Kammeni, S**	**2.32**	**302**	P	**Pn**	**02 05 49.3**	**+0.3**
THR9	**Santorini-Faro**	**2.33**	**300**	P	**Pn**	**02 05 50.4**	**+1.3**
SAP3	**Santorini-Thir**	**2.37**	**302**	P	**Pn**	**02 05 50.1**	**+0.4**
TAVA	**DENIZLI_Tavas**	**2.41**	**21**	P	**Pn**	**02 05 51.1**	**+0.7**
GOLH	**Golhisar**	**2.46**	**34**	P	**Pn**	**02 05 52.1**	**+1.1**
GOLH				S	**Sn**	**02 06 22.0**	**+1.1**
GOLH				IAML		02 06 58.0	
	comp=E,40nm,1.0s						
APMY	**Acipayam-Deniz**	**2.55**	**27**	Pn	**Pn**	**02 05 52.9**	**+0.7**
SMG	**Samos**	**2.63**	**342**	P	**Pn**	**02 05 53.9**	**+0.7**
SMG	**Samos**	**2.63**	**342**	P	**Pn**	**02 05 53.3**	**0.0**
KORT	**Korkueli**	**2.71**	**48**	Pn	**Pn**	**02 05 54.8**	**+0.4**
NAZL	**Nazilli-Aydin**	**2.77**	**7**	Pn	**Pn**	**02 05 56.2**	**+0.9**
VAM	**Vamos**	**2.99**	**275**	P	**Pn**	**02 06 00.5**	**+2.3**
VAM	**Vamos**	**2.99**	**275**	P	**Pn**	**02 05 59.2**	**+1.0**
ODEM	**Odemis-Izmir**	**3.07**	**3**	Pn	**Pn**	**02 06 00.1**	**+0.7**
CHAN	**Chania**	**3.12**	**277**	P	**Pn**	**02 06 00.4**	**+0.4**
IMMV	**Iera Moni Meta**	**3.17**	**276**	P	**Pn**	**02 06 03.1**	**+2.4**
KULA	**Kula-Manisa**	**3.37**	**11**	Pn	**Pn**	**02 06 03.2**	**-0.3**
KNDR	**Palaiochora Ch**	**3.46**	**272**	P	**Pn**	**02 06 05.1**	**+0.5**

OSPL ***15*** *02:41:25.6±0.3, 17.°82N×66.°96W, h2km±999km, ML1.7, Presumed earthquake*
SDD ***15*** *02:41:25.9±1.4, 17.°92N×66.°89W, h30km±14km, MD3.0, ML2.1, MW2.6, Presumed earthquake*
ISC 15 02:41:25.8±1.4**, 17.91N**±0.°08×**66.92W**±0.°03**, h11**km±9km,
n9,σ0**96**/18**, 6C-5D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRPR	**Cabo Rojo, PR**	**0.21**	**298**	*i* P	**Pg**	**02 41 29.9**	**-0.3**
CRPR				*e*S	**Sg**	**02 41 33.1**	**-0.2**
CRPR				IAML		02 41 33.4	
	comp=Z,528nm,0.2s						
OBIP	**Obispado Ponce**	**0.33**	**66**	*i* P	**Pg**	**02 41 32.8**	**+0.4**
OBIP				*e*S	**Sg**	**02 41 38.1**	**+1.3**
OBIP				IAML		02 41 40.2	
	comp=Z,48nm,0.5s						
CELP	**Cerrillos**	**0.36**	**63**	⇓*e*Pg	**Pg**	**02 41 33.4**	**+0.3**
CELP				⇑*e*Sg	**Sg**	**02 41 39.1**	**+1.1**
CELP				IAML		02 41 40.8	
	comp=N,54nm,0.2s						
PRSN	**Puerto Rico Se**	**0.38**	**325**	⇑*e*Pg	**Pg**	**02 41 33.0**	**-0.4**
PRSN				⇓*e*Sg	**Sg**	**02 41 39.4**	**+1.1**
PRSN				IAML		02 41 43.1	
	comp=N,172nm,0.3s						
AOPR	**Arecibo Observ**	**0.46**	**20**	⇑*e*Pg	**Pg**	**02 41 34.4**	**-0.6**
AOPR				⇓*e*Sg	**Sg**	**02 41 41.1**	**0.0**
AOPR				IAML		02 41 41.6	
	comp=N,183nm,0.3s						
AGPR	**Aguadilla, PR**	**0.59**	**342**	*e*Pg	**Pg**	**02 41 36.5**	**-0.8**
AGPR				⇓*e*Sg	**Sg**	**02 41 44.9**	**-0.2**
AGPR				IAML		02 41 45.1	
	comp=N,111nm,1.4s						
SJG	**San Juan**	**0.76**	**74**	⇑*e*Pg	**Pg**	**02 41 39.4**	**-1.2**
SJG				⇓*e*Sg	**Sg**	**02 41 48.6**	**-1.9**
SJG	**San Juan**	**0.76**	**74**	*i* P	**Pg**	**02 41 31.0**	**-0.2**
SJG				*e*S	**Sb**	**02 41 51.4**	**0.0**
SJG				IAML		02 41 52.3	
	comp=Z,29nm,0.3s						
HATOM	**Hato Mayor del**	**2.50**	**291**	⇑*e*Pg	**Pn**	**02 42 06.0**	**-0.4**
HATOM				⇑*e*Sg	**Sn**	**02 42 38.5**	**+1.5**
HATOM				IAML		02 43 13.8	
	comp=N,15nm,2.0s						

IDC ***15*** *02:49:03.4±1.1, 37.°17N×141.°77E, h0km, mb3.7/9, mbtmp3.7/12, ML3.2/3, MS2.5/2, Error ellipse: s-maj=24.7km s-min=22.4km az=115.0*
JMA ***15*** *02:49:08.2±0.2, 37.°2N±0.°4×141.°7E±1.°0, h44km±1km, MV3.6/39, E OFF FUKUSHIMA PREF*
NIED ***15*** *02:49:08.2, 37.°23N×141.°67E, h44km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr-1.37; Mθθ-0.16; Mϕϕ1.52; Mrθ-1.18; Mϕr1.60; Mϕr-1.66; Fault plane solution: M₀2.81000×10¹⁴ NP1: ϕs200.00000°, δ22.00000°, λ-106.00000°. NP2: ϕs37.00000°, δ68.00000°, λ-84.00000°.*
NEIC ***15*** *02:49:09.1±1.6, 37.°23N±0.°09×141.°8E±0.°1, h35km±2km, mb4.2/11 Error ellipse: s-maj=21.3km s-min=12.6km az=121.0*
ISC 15 02:49:05.5±2.1**, 37.°23N**±0.°05×**141.°79E**±0.°07**, h12**km±12

comp=Z,1.0nm,0.6s
MKAR Makanchi Array 44.27 302 P P 02 57 14.5 -0.4
KURBB Kurchatov Arra 46.12 308 P P 02 57 28.9 -0.6
comp=Z,1.3nm,0.4s,baz=83,slow=8.1,SNR=12
comp=Z,1.3nm,0.4s
ILAR Eielson Array 49.17 32 P P 02 57 53.8 +0.8
comp=Z,0.6nm,0.7s,baz=273,slow=6.6,SNR=9.7
comp=Z,0.6nm,0.7s
BOOM Boomskoye usch 49.69 298 P P 02 57 57.6 +0.2
I30M Mount Dempster 53.55 31 P 02 58 28.1 +2.1
I30M IAmb IAmb 02 58 28.6
comp=Z,2.3nm,0.7s
WB0 Warramunga Arr 57.12 188 P P 02 58 51.6 -0.4
WR8 Warramunga Arr 57.29 188 P P 02 58 52.2 -1.0
WR8 IAmb IAmb 02 59 07.9
comp=Z,4.8nm,1.3s
WRA Warramunga Arr 57.30 188 P P 02 58 52.3 -0.9
comp=Z,1.1nm,0.8s,baz=5.1,slow=7.3,SNR=13
comp=Z,1.1nm,0.8s
AB31 Akbulak array 58.04 310 P P 02 58 57.7 -0.6
AB31 IAmb IAmb 02 59 10.0
comp=Z,1.2nm,0.8s
ABKAR Akbulak array 58.04 310 P P 02 58 57.5 -0.7
RES Resolute Bay 62.34 15 P P 02 59 26.1 -1.1
RES IAmb IAmb 02 59 44.7
comp=Z,2.8nm,1.4s
YKA Yellowknife Ar 63.49 30 P P 02 59 35.8 +0.7
comp=Z,0.2nm,0.7s,baz=305,slow=8.2,SNR=2.7
comp=Z,0.2nm,0.7s
FORT Forrest 68.86 193 P P 03 00 09.2 -0.7
BLKN Baker Lake 69.09 23 P P 03 00 11.0 0.0
BLKN IAmb IAmb 03 00 23.6
comp=Z,6.4nm,1.5s
AKASG Malin Array Be 74.33 322 P P 03 00 41.6 -1.1
comp=Z,0.6nm,0.5s,baz=50,slow=6.2,SNR=6.2
comp=Z,0.6nm,0.5s
BURAR Bucovina Array 78.34 322 P P 03 01 06.1 +0.4
BURAR IAmb IAmb 03 01 45.5
comp=Z,2.4nm,1.3s
GERES GERESS Array B 82.70 328 P P 03 01 28.8 -0.3
comp=Z,0.4nm,0.6s,baz=46,slow=7.6,SNR=4.3
comp=Z,0.4nm,0.6s
H03N2 Juan Fernandez 146.75 96 T T 05 52 51.1
baz=291,slow=76,SNR=7.3
H03N3 Juan Fernandez 146.76 96 T T 05 52 52.8
baz=291,slow=76,SNR=6.7
H03N1 Juan Fernandez 146.76 96 T T 05 52 52.2
baz=291,slow=76,SNR=7.5

NNC 15 02:59:48.6±4.1, 57.51N×60.47E, h0km, mb3.7, mpv3.4, 4C-3D, Error ellipse: s-maj=35.1km s-min=16.8km az=151.0, Ural Mountains region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BVA0	**Borovoye Array**	**7.23**	**124**	⇓Pn	Pn	03 01 36.1	+0.6
	3.2nm,1.0s,baz=334,slow=11,SNR=9.9						
BVA0				⇑Sn	Sn	03 02 59.1	+0.8
	3.4nm,1.3s						
AKTO	**Aktyubinsk**	**7.24**	**193**	⇓Pn	Pn	03 01 34.6	-1.0
	2.5nm,1.3s						
AKTO				⇑Sn	Sn	03 02 59.3	+0.9
	2.5nm,1.1s						
AKTO				⇑Lg	Lg	03 03 41.2	
	2.7nm,1.1s						
AB31	**Akbulak array**	**8.28**	**182**	Pn	Pn	03 01 50.5	+0.7
	0.6nm,0.3s,baz=7.5,slow=12,SNR=45						
AB31				⇑Sn	Sn	03 03 25.4	+1.4
	0.5nm,0.5s						
AB31				⇓Lg	Lg	03 04 12.7	
	8.0nm,1.2s,baz=21,slow=27,SNR=5.7						

IDC ***15*** *02:59:52.9±1.1, 36.17N×138.53E, h0km, mb3.6/5, mbtmp3.6/8, ML3.4/2, MS3.1/5, Error ellipse: s-maj=29.6km s-min=7.9km az=63.0*
NIED ***15*** *02:59:53.1, 36.11N×138.36E, h3km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^14 Nm; Mrr-0.85; Mθθ4.28; Mφφ-3.43; Mrθ 0.82; Mθφ-5.33; Mφr-0.70; Fault plane solution: Mo6.66000×10^14 NP1:φs72.00000°, δ83.00000°, λ177.00000°. NP2:φs162.00000°, δ87.00000°, λ7.00000°.*
JMA ***15*** *02:59:53.1±0.2, 36.1N±0.2×138.4E±0.2, h3km±3km, MV3.7/20, EASTERN NAGANO PREF*
JMA Felt III J1 at EASTERN NAGANO PREF .
ISC 15 02:59:53.0±1.2, 36.13N±0.03×138.41E±0.03, h1km±9km, **n21**,σ**θ84/26, mb3.5**/5, **MS3.0**/4, **4D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNT	**Takato**	**0.34**	**221**	P	**Pg**	**02 59 59.0**	**-0.6**
JNT				S	**Sg**	**03 00 03.3**	**-0.7**
JNG	**Nsakai**	**0.37**	**317**	⇓*i* P	**Pg**	**03 00 00.3**	**+0.2**
JNG				⇓*i* S	**Sg**	**03 00 05.3**	**+0.3**
JRY	**Ryogami san**	**0.41**	**106**	⇓*i* P	**Pg**	**03 00 01.5**	**+0.5**
JRY				⇓S	**Sb**	**03 00 07.7**	**-2.2**
MJAR	**Matsushiro Arr**	**0.44**	**338**	Pg	**Pg**	**03 00 01.3**	**-0.2**
	91nm,0.3s,baz=173,slow=17,SNR=4088						
MJAR				Lg	Lg	03 00 06.7	
	237nm,0.3s,baz=167,slow=18,SNR=39						
MAT	**Matsushiro**	**0.44**	**338**	*i* P	**Pg**	**03 00 01.8**	**+0.3**
MAT				S	**Sg**	**03 00 07.8**	**+0.6**
JGK	**Kuni**	**0.47**	**23**	*i* P	**Pb**	**03 00 03.2**	**-0.9**
JGK				S	**Sb**	**03 00 10.4**	**-1.1**
JYN	**Shimob**	**0.64**	**170**	*i* P	**Pg**	**03 00 05.5**	**+0.1**
JYN				S	**Sg**	**03 00 14.4**	**+0.7**
JAG	**Ashikaga**	**0.89**	**71**	*i* P	**Pg**	**03 00 10.2**	**+0.1**
JAG				S	**Sb**	**03 00 23.1**	**-0.5**
JKT	**Katashina**	**0.92**	**47**	*i* P	**Pb**	**03 00 11.1**	**-0.8**
JKT				S	**Sb**	**03 00 24.2**	**-0.6**
JTT	**Ttatey**	**0.99**	**299**	*i* P	**Pg**	**03 00 11.8**	**-0.2**
JHJ	**Hachijo jima 2**	**3.21**	**159**	Pn	**Pn**	**03 00 45.7**	**+1.1**
	16nm,0.3s,baz=160,slow=2.7,SNR=1.5						
	244nm,0.8s						
JNU	**Nakatsue**	**6.90**	**246**	Pn	**Pn**	**03 01 36.0**	**+0.7**
	0.6nm,0.3s,baz=3.8,slow=4.5,SNR=3.6						
	6.5nm,0.7s						
KSRS	**Korea Array**	**8.52**	**282**	Pn	**Pn**	**03 01 58.3**	**+0.9**
	0.7nm,0.5s,baz=100,slow=15,SNR=1.5						
KSRS				LR	LR	03 05 07.8	
	comp=Z,66nm,19.7s,baz=105,slow=36						
PETK	**Petropavlovsk-**	**21.71**	**33**	LR	LR	03 12 42.0	
	comp=Z,48nm,19.6s,baz=261,slow=36						
MA2	**Magadan**	**24.79**	**15**	LR	LR	03 15 21.0	
	comp=Z,49nm,18.2s,baz=268,slow=38						
SONM	**Songino Array**	**26.32**	**306**	LR	LR	03 16 02.0	
	comp=Z,40nm,20.4s,baz=195,slow=37						
MKAR	**Makanchi Array**	**42.56**	**302**	P	**P**	**03 07 51.3**	**+1.1**
	0.2nm,0.6s,baz=97,slow=10,SNR=1.9						
MKAR				LR	LR	03 25 41.7	
	comp=Z,28nm,20.5s,baz=128,slow=36						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**44.66**	**308**	P	**P**	**03 08 06.9**	**-0.1**
	0.3nm,0.4s,baz=84,slow=8.6,SNR=4.4						
	0.3nm,0.4s						
ILAR	**Eielson Array**	**51.54**	**32**	P	**P**	**03 08 59.1**	**-1.0**
	0.5nm,0.9s,baz=280,slow=6.1,SNR=6.5						
	0.5nm,0.9s						
WRA	**Warramunga Arr**	**55.90**	**185**	P	**P**	**03 09 33.1**	**+0.6**
	0.6nm,0.8s,baz=0.7,slow=7.5,SNR=5.4						
	0.6nm,0.8s						
STKA	**Stephens Creek**	**67.72**	**177**	P	**P**	**03 10 51.9**	**-0.1**
	1.4nm,0.4s,baz=326,slow=3.6,SNR=3.5						
	1.4nm,0.4s						

IDC ***15*** *03:28:48.0±1.2, 7.87S×122.78E, h244km±14km, mb3.5/5, mbtmp4.1/11, Error ellipse: s-maj=34.1km s-min=12.6km az=58.0*
NEIC ***15*** *03:28:48.4±2.6, 7.99S±0.05×122.73E±0.07, h252km±7km, mb4.5/9, Error ellipse: s-maj=11.0km s-min=5.9km az=118.0*
DJA ***15*** *03:28:48.5±0.6, 8°S±3'×12°3E±', h251km±9km, M4.2/20, mB4.9/4, mb4.2/7, MLv4.2/20, Mw(mB)4.2/4*
ISC 15 03:28:48.0±0.6, 8.05S±0.06×122.66E±0.06, h250km, **n48,** σ**θ08/54, mb4.1/8, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**0.72**	**215**		**Pn**	**03 29 22.7**	**+0.9**
MMRI	**Maumere**	**0.72**	**215**	P	**Pn**	**03 29 23.0**	**+1.3**
SOEI	**Soe**	**2.33**	**137**		**Pn**	**03 29 34.6**	**+0.9**
SOEI	**Soe**	**2.33**	**137**	P	**Pn**	**03 29 34.7**	**+0.9**
SOEI				S	**S**	**03 30 09.4**	**-0.4**
BATI	**Baumata**	**2.37**	**155**	P	**Pn**	**03 29 35.0**	**+1.0**
	133nm,0.3s,baz=292,slow=1.5,SNR=47						
BATI				S	**S**	**03 30 07.5**	**-2.9**
	851nm,0.3s,baz=187,slow=5.2,SNR=11						
BATI	**Baumata**	**2.37**	**155**	P	**Pn**	**03 29 35.1**	**+1.1**
BATI				S	**S**	**03 30 09.6**	**-0.8**
BBSI	**Bau Bau**	**2.54**	**358**	P	**Pn**	**03 29 37.2**	**+1.4**
LBFI	**Labuhan Bajo,**	**2.77**	**261**	P	**Pn**	**03 29 37.8**	**-0.3**
WSI	**Waingapu**	**2.83**	**235**	P	**Pn**	**03 29 38.1**	**-0.6**
WBSI	**Waikabubak, Su**	**3.59**	**244**	P	**Pn**	**03 29 46.8**	**-0.4**
KAPI	**Kappang**	**4.17**	**316**	P	**Pn**	**03 29 53.3**	**-0.6**
	9.6nm,0.5s,baz=110,slow=8.3,SNR=10						
KAPI	**Kappang**	**4.17**	**316**		**Pn**	**03 29 54.1**	**+0.2**
KAPI	**Kappang**	**4.17**	**316**	P	**Pn**	**03 29 54.9**	**+1.0**
DBNI	**Kabupaten Domp**	**4.32**	**264**	P	**Pn**	**03 29 55.5**	**-0.2**
PLAI	**Plampang**	**4.89**	**261**	P	**Pn**	**03 30 02.5**	**0.0**
TWSI	**Taliwang, Sumb**	**5.75**	**263**	P	**Pn**	**03 30 13.7**	**+0.6**
	2µm48nm,0.9s						
KLNI	**Mataram**	**6.50**	**266**	P	**Pn**	**03 30 23.0**	**+0.5**
	0.3nm28nm,0.6s						
IGBI	**Denpasar**	**7.47**	**264**	P	**Pn**	**03 30 35.0**	**+0.3**
JAGI	**Jajag, Banyuwa**	**8.43**	**267**		**Pn**	**03 30 45.0**	**-1.9**
JAGI	**Jajag, Banyuwa**	**8.43**	**267**	P	**Pn**	**03 30 45.3**	**-1.5**
	936nm23nm,0.5s						
MTN	**Manton Dam**	**9.60**	**120**		**Pn**	**03 31 01.6**	**-0.1**
KNRA	**Kununurra**	**9.65**	**142**		**Pn**	**03 31 01.9**	**-0.3**
FITZ	**Fitzroy Crossi**	**10.40**	**164**	P	**Pn**	**03 31 11.5**	**-0.3**
	1.8nm,0.6s,baz=342,slow=8.0,SNR=31						
FITZ				S	**S**	**03 33 06.8**	**-1.7**
	18nm,0.6s,baz=168,slow=6.2,SNR=12						
SIJI	**Sorong**	**11.15**	**51**	P	**Pn**	**03 31 18.5**	**-2.7**
	5.4nm,0.4s,baz=188,slow=23,SNR=9.3						
UGM	**Wanagama**	**12.02**	**270**	Pn	**Pn**	**03 31 31.2**	**-0.8**
SMRI	**Semarang**	**12.15**	**274**	Pn	**Pn**	**03 31 34.2**	**+0.5**
MBWA	**Marble Bar**	**13.34**	**192**		**Pn**	**03 31 49.2**	**+1.1**
PSA00	**Pilbara Seismi**	**13.72**	**191**		**Pn**	**03 31 53.4**	**+0.6**
PSA00	**Pilbara Seismi**	**13.72**	**191**		**Pn**	**03 31 53.4**	**+0.6**
BBJI	**Bungbulang**	**14.88**	**271**	P	**P**	**03 32 06.3**	**-0.4**
WRA	**Warramunga Arr**	**16.37**	**137**	P	**P**	**03 32 23.9**	**+0.9**
	1.4nm,0.3s,baz=312,slow=13,SNR=31						
WRA				S	**S**	**03 35 22.3**	**+0.7**
	4.7nm,0.8s,baz=312,slow=19,SNR=6.5						
GIRL	**Giralia**	**16.62**	**208**	Pn	**Pn**	**03 32 28.1**	**+0.6**
ASAR	**Alice Springs**	**18.91**	**146**	P	**P**	**03 32 52.3**	**+1.7**
	4.3nm,0.3s,baz=329,slow=13,SNR=130						
ASAR				S	**S**	**03 36 12.0**	**0.0**
	2.4nm,0.9s,baz=330,slow=23,SNR=8.5						
COEN	**Coen**	**20.97**	**108**	P	**P**	**03 33 11.3**	**-1.3**
COEN				IAmb	IAmb	03 33 30.0	
	comp=Z,8.6nm,1.1s						
MYKOM	**Kota Tinggi**	**21.15**	**297**	P	**P**	**03 33 15.7**	**+1.5**
MYKOM				IAmb	IAmb	03 33 17.7	
	comp=Z,14nm,0.8s						
MORW	**Morawa**	**21.82**	**196**	P	**P**	**03 33 21.6**	**+1.2**
MORW				IAmb	IAmb	03 33 55.7	
	comp=Z,26nm,1.4s						
BBOO	**Buckleboo**	**27.60**	**155**	P	**P**	**03 34 13.5**	**+1.0**
STKA	**Stephens Creek**	**29.55**	**146**	P	**P**	**03 34 30.9**	**+1.2**
	comp=Z,1.6nm,0.3s,baz=309,slow=7.9,SNR=6.5						
	comp=Z,1.6nm,0.3s						
STKA	**Stephens Creek**	**29.55**	**146**	P	**P**	**03 34 31.2**	**+1.5**
STKA				IAmb	IAmb	03 34 31.7	
	comp=Z,14nm,0.8s						
CMAR	**Chiang Mai Arr**	**35.23**	**319**	P	**P**	**03 35 19.6**	**+0.4**
	comp=Z,1.1nm,0.3s,baz=130,slow=8.2,SNR=2.3						
	comp=Z,1.1nm,0.3s						
MKAR	**Makanchi Array**	**65.33**	**331**	P	**P**	**03 39 03.5**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=137,slow=7.5,SNR=17						
	comp=Z,1.1nm,0.5s						
MKAR	**Makanchi Array**	**65.33**	**331**	P	**P**	**03 39 03.8**	**+0.2**
BOOM	**Boomskoye usch**	**65.88**	**324**	P	**P**	**03 39 08.2**	**+0.8**
DRK	**Karamyk**	**66.69**	**319**	P	**P**	**03 39 13.6**	**+0.9**
DRK				IAmb	IAmb	03 39 14.4	
	comp=Z,5.2nm,0.6s						
AAK	**Ala-Archa**	**66.82**	**323**	P	**P**	**03 39 14.3**	**+1.0**
ZALV	**Zalesovo Beam**	**69.50**	**337**	P	**P**	**03 39 28.0**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=116,slow=6.6,SNR=2.3						
	comp=Z,0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**69.50**	**337**	P	**P**	**03 39 28.6**	**-0.9**
KURBB	**Kurchatov Arra**	**69.78**	**332**	P	**P**	**03 39 31.8**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=148,slow=5.4,SNR=5.5						
	comp=Z,0.2nm,0.4s						

SDD ***15*** *03:35:00.6±2.2, 17.80N×66.71W, h7km±60km, MD3.2, ML2.8, MW2.9, Presumed earthquake*
NEIC ***15*** *03:35:03.5±1.2, 17.94N±0.03×66.739W±0.007, h10km±1km, ML2.9/35, Md3.2/5(RSPR), Error ellipse: s-maj=4.8km s-min=2.6km az=2.0*
OSPL ***15*** *03:35:03.7±0.4, 17.88N×66.73W, h2km±999km, ML2.6, Presumed earthquake*
ISC 15 03:35:01.9±1.1, 17.89N±0.05×66.73W±0.02, h16km±7km, **n25**,σ**θ76/47, 9C-2D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.17**	**300**		**Pg**	**03 35 06.9**	**+0.7**
OBIP	**Obispado Ponce**	**0.19**	**37**		**Pb**	**03 35 07.1**	**+0.1**
OBIP				Sg	**Sb**	**03 35 09.9**	**-0.6**
OBIP	**Obispado Ponce**	**0.19**	**37**	*i* P	**Pb**	**03 35 07.2**	**+0.1**
OBIP				*eS*	**Sb**	**03 35 10.0**	**-0.4**
OBIP				IAML		03 35 10.1	
	comp=Z,2µm,0.2s						
CELP	**Cerrillos**	**0.23**	**37**		**Pb**	**03 35 07.8**	**+0.1**
CELP				Sg	**Sb**	**03 35 11.2**	**-0.4**
CELP				IAML		03 35 12.2	
	comp=Z,1µm,0.3s						
MLPR	**Magueyes Islan**	**0.31**	**285**	Pg	**Pg**	**03 35 06.7**	**-1.7**
MLPR				Sg	**Sg**	**03 35 12.2**	**-0.8**
MLPR				IAML		03 35 13.7	
	comp=Z,2µm,0.5s						
MLPR	**Magueyes Islan**	**0.31**	**285**	⇑*e*Pg	**Pg**	**03 35 06.8**	**-1.7**
MLPR				⇓*e*Sg	**Sg**	**03 35 12.0**	**-1.0**
MLPR				IAML		03 35 13.6	
	comp=N,560nm,0.6s						
UUPR	**Utuado, UPR, P**	**0.36**	**1**		**Pg**	**03 35 09.6**	**+0.2**
UUPR				Sg	**Sg**	**03 35 13.9**	**-0.5**
CRPR	**Cabo Rojo, PR**	**0.38**	**288**		**Pg**	**03 35 10.5**	**+0.8**
CRPR				Sg	**Sg**	**03 35 16.0**	**+1.0**
CRPR				IAML		03 35 20.1	
	comp=N,1µm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.38**	**288**	*i* P	**Pg**	**03 35 10.5**	**+0.8**
CRPR				*eS*	**Sg**	**03 35 15.9**	**+0.9**
CRPR				IAML		03 35 17.0	
	comp=Z,511nm,0.2s						
LSP	**Las Mesas**	**0.44**	**310**		**Pb**	**03 35 11.7**	**+0.4**
LSP					**Sb**	**03 35 18.9**	**+1.1**
AOPR	**Arecibo Observ**	**0.46**	**357**		**Pg**	**03 35 11.0**	**-0.1**
AOPR				Sg	**Sg**	**03 35 16.3**	**-0.9**
AOPR				IAML		03 35 21.0	
	comp=Z,1µm,0.2s						
AOPR	**Arecibo Observ**	**0.46**	**357**	⇑*e*Pg	**Pg**	**03 35 11.2**	**+0.1**
AOPR				⇑*e*Sg	**Sg**	**03 35 16.6**	**-0.7**
AOPR				IAML		03 35 22.7	
	comp=N,955nm,0.3s						
PRSN	**Puerto Rico Se**	**0.51**	**309**		**Pg**	**03 35 12.4**	**+0.2**
PRSN				Sg	**Sg**	**03 35 19.3**	**+0.2**
PRSN				IAML		03 35 24.2	
	comp=N,2µm,0.2s						
PRSN	**Puerto Rico Se**	**0.51**	**309**	⇓*e*Pg	**Pg**	**03 35 12.6**	**+0.5**
PRSN				⇑*e*Sg	**Sg**	**03 35 19.3**	**+0.2**
PRSN				IAML		03 35 22.1	
	comp=N,1µm,0.3s						
ECPR	**Experimental S**	**0.55**	**39**		**Pg**	**03 35 12.9**	**+0.1**
ECPR				Sg	**Sg**	**03 35 20.0**	**-0.2**
ECPR				IAML		03 35 22.7	
	comp=N,1µm,0.2s						
ECPR				IAML		03 35 23.0	
	comp=N,1µm,0.2s						
SJG	**San Juan**	**0.59**	**68**		**Pb**	**03 35 14.3**	**+0.4**
SJG				Sg	**Sg**	**03 35 21.6**	**+0.2**
SJG				IAML		03 35 24.6	
	comp=N,486nm,0.4s						
SJG	**San Juan**	**0.59**	**68**	*i* P	**Pb**	**03 35 14.4**	**+0.6**
SJG				*eS*	**Sb**	**03 35 22.5**	**+0.5**
SJG				IAML		03 35 22.7	
	comp=Z,370nm,0.2s						
EMPR	**Esperanza - Ma**	**0.61**	**18**		**Pb**	**03 35 15.1**	**+0.9**
EMPR					**Sn**	**03 35 23.9**	**-1.5**
AGPR	**Aguadilla, PR**	**0.68**	**328**		**Pg**	**03 35 15.4**	**+0.1**
AGPR				Sg	**Sg**	**03 35 24.1**	**-0.3**
AGPR				IAML		03 35 25.9	
	comp=Z,567nm,0.3s						
AGPR				IAML		03 35 27.6	
	comp=Z,524nm,0.5s						
AGPR	**Aguadilla, PR**	**0.68**	**328**	⇑*e*Pg	**Pg**	**03 35 15.4**	**+0.1**
AGPR				⇑*e*Sg	**Sb**	**03 35 24.6**	**+0.1**
AGPR				IAML		03 35 29.7	
	comp=N,383nm,0.4s						
PDPR	**Patillas Dam,**	**0.68**	**79**		**Pn**	**03 35 16.9**	**+0.1**
IDE	**Isla Desecheo**	**0.86**	**305**		**Pg**	**03 35 19.2**	**+0.5**
IDE					**Sg**	**03 35 31.1**	**+1.0**
HUMP	**Col San Antoni**	**0.87**	**73**		**Pg**	**03 35 19.1**	**+0.3**
HUMP				Sg	**Sb**	**03 35 29.9**	**-0.1**
HUMP				IAML		03 35 34.1	
	comp=N,225nm,0.2s						
HIDR	**Higuey Centro**	**2.02**	**291**	⇑*e*Pg	**Pn**	**03 35 36.0**	**+0.9**
HIDR				IAML		03 36 09.5	
	comp=N,90nm,0.3s						
HATOM	**Hato Mayor del**	**2.67**	**290**	⇑*e*Pg	**Pb**	**03 35 48.9**	**-0.5**
HATOM				⇑*e*Sg	**Sg**	**03 36 26.0**	**-1.9**
HATOM				IAML		03 36 30.4	
	comp=N,29nm,0.8s						

IDC ***15*** *03:37:04.8±1.7, 53.61N×165.62W, h0km, mb4.0/11, mbtmp3.9/13, ML3.1/2, MS3.1/1, Error ellipse: s-maj=40.1km s-min=22.0km az=177.0*
AEIC ***15*** *03:37:10.1±1.9, 53.47N±0.05×165.29W±0.07, h32km±5km, Error ellipse: s-maj=7.9km s-min=5.3km az=157.0*
NEIC ***15*** *03:37:11.2±1.7, 53.49N±0.05×165.36W±0.08, h46km±8km, mb4.1/30, ML3.8/14, ML3.5(AEIC), Error ellipse: s-maj=8.3km s-min=5.9km az=146.0*
ISC 15 03:37:08.8±1.4, 53.40N±0.06×165.28W±0.04, h30km±10km, **n100**,σ**1§52/98, mb4.2/21, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKSA	**Akutan Strait**	**0.78**	**341**		**Pn**	**03 37 23.3**	**-0.3**
AKSA					**Sn**	**03 37 33.8**	**-0.5**
AHB	**Akutan Harbor**	**0.78**	**336**		**Pb**	**03 37 23.9**	**0.0**
AHB					**Sn**	**03 37 34.5**	**-0.1**
AKUT	**Akutan**	**0.79**	**338**		**Pb**	**03 37 23.8**	**-0.2**
AKUT				IAML		03 37 40.2	
	comp=E,2µm,0.6s						
AKUT	**Akutan**	**0.79**	**338**		**Sn**	**03 37 34.5**	**-0.1**
AKBBA	**Akutan Broad B**	**0.80**	**331**		**Pb**	**03 37 24.1**	**0.0**
AKBBA					**Sn**	**03 37 35.1**	**+0.2**
AKMO	**Akutan Morgan**	**0.82**	**328**		**Pb**	**03 37 24.4**	**0.0**
AKMO					**Sn**	**03 37 35.4**	**+0.1**
UNV	**Unalaska Valle**	**0.86**	**302**		**Pb**	**03 37 25.2**	**+0.1**
UNV				IAML		03 37 37.2	
	comp=N,4µm,0.3s						
UNV	**Unalaska Valle**	**0.86**	**302**		**Sb**	**03 37 36.5**	**+0.3**
LVA	**Lava Point**	**0.88**	**330**		**Pb**	**03 37 25.4**	**-0.2**
LVA				Sn	**Sb**	**03 37 36.5**	**-0.6**
LVA				IAML		03 37 46.7	
	comp=E,2µm,0.5s						
LVA				IAML		03 37 49.6	
	comp=N,3µm,0.7s						
AKGG	**Akutan Green G**	**0.90**	**332**		**Pb**	**03 37 25.5**	**-0.5**
AKGG					**Sb**	**03 37 37.3**	**-0.3**
MNAT	**Makushin Natee**	**0.97**	**301**		**Pb**	**03 37 27.1**	**+0.1**
MNAT					**Sb**	**03 37 39.4**	**0.0**
MGOD	**Makushin Gods**	**1.03**	**293**		**Pb**	**03 37 28.0**	**0.0**
MAPS	**Pakushin South**	**1.07**	**293**		**Pb**	**03 37 28.6**	**-0.1**
SSBA	**Shishaldin**	**1.53**	**26**		**Sn**	**03 37 53.8**	**+0.8**
OKFG	**Magazine Ridge**	**1.58**	**271**		**Pn**	**03 37 36.4**	**+1.7**
SSLN	**Shishaldin Nor**	**1.60**	**28**		**Pn**	**03 37 35.1**	**0.0**
SSLN					**Sb**	**03 37 56.2**	**-1.3**
OKTU	**Okmok Mt. Tuli**	**1.66**	**270**		**Pn**	**03 37 37.5**	**+1.6**
ISNN	**Isanotski Nort**	**1.68**	**31**		**Pn**	**03 37 36.6**	**+0.4**
ISNN					**Sn**	**03 37 57.4**	**+0.7**
OKWE	**Okmok W'ng Wal**	**1.77**	**273**		**Pn**	**03 37 39.2**	**+1.8**
OKSP	**Okmok Steeple**	**1.81**	**266**		**Pn**	**03 37 39.5**	**+1.5**
FALS	**False Pass**	**1.82**	**36**		**Pn**	**03 37 39.5**	**+1.4**
FALS	**False Pass**	**1.82**	**36**		**Sn**	**03 38 00.1**	**0.0**
NIKH	**Nikolski High**	**2.20**	**260**		**Sb**	**03 38 12.9**	**-1.6**
NIKH	**Nikolski High**	**2.20**	**260**		**Pn**	**03 37 45.6**	**+2.4**
NIKH				IAML		03 38 23.5	
	comp=N,743nm,0.6s						
NIKH				IAML		03 38 23.5	
	comp=E,833nm,0.7s						
DT1	**Dutton Round H**	**2.45**	**45**		**Pn**	**03 37 47.4**	**+0.7**
DT1					**Sn**	**03 38 15.4**	**-0.2**
DT1					LR	03 38 15.8	
DTNA	**Dutton South F**	**2.49**	**44**		**Pn**	**03 37 48.3**	**+1.1**
DTNA					**Sn**	**03 38 16.8**	**+0.1**
DTNA					LR	03 38 17.4	
HAG	**Hague Volcano**	**2.75**	**44**		**Pn**	**03 37 52.6**	**+1.7**
SDPT	**Sand Point**	**3.42**	**53**		**Sn**	**03 38 00.3**	**-0.8**
SDPT	**Sand Point**	**3.42**	**53**	Pn	**Pn**	**03 38 01.7**	**+1.8**
SDPT				IAML		03 38 52.5	
	comp=N,233nm,0.8s						
SDPT				IAML		03 39 01.8	
	comp=E,164nm,0.5s						
CNBA	**Chernabura Isl**	**3.64**	**65**	Pn	**Pn**	**03 38 03.1**	**+0.2**
SPIA	**Saint Paul Isl**	**4.73**	**325**	Pn	**Pn**	**03 38 20.9**	**+2.9**
CHGN	**Chignik**	**4.92**	**51**	Pn	**Pn**	**03 38 22.0**	**+1.5**
O15K	**Ungalikthiuk R**	**6.53**	**25**	Pn	**Pn**	**03 38 44.6**	**+1.9**
PLK4	**Peulik 4**	**6.60**	**46**	Pn	**Pn**	**03 38 46.5**	**+2.7**
M13K	**Dall Lake**	**7.11**	**8**		**Pn**	**03 38 53.6**	**+3.1**
N15K	**Kwethluk River**	**7.36**	**21**		**Pn**	**03 38 56.4**	**+2.4**
ACHA	**Angle Creek He**	**7.39**	**45**		**Pn**	**03 38 57.0**	**+2.5**
N17K	**Nushagak Hills**	**8.39**	**28**		**Pn**	**03 39 10.8**	**+2.6**
KDAK	**Kodiak Island**	**8.42**	**54**	Pn	**Pn**	**03 39 07.7**	**-0.8**
	comp=E,

comp=Z,24nm,18.1s,baz=356,slow=37
H11N2 WAKE ISLAND Hy 39.86 223 T T 04 27 17.8
baz=25,slow=76,SNR=46
H11N3 WAKE ISLAND Hy 39.87 223 T T 04 27 27.4
baz=25,slow=76,SNR=49
H11N1 WAKE ISLAND Hy 39.88 223 T T 04 27 19.1
baz=25,slow=76,SNR=37
H11S1 WAKE ISLAND Hy 41.04 223 T T 04 28 44.4
baz=25,slow=76,SNR=64
H11S2 WAKE ISLAND Hy 41.05 223 T T 04 28 53.3
baz=25,slow=76,SNR=63
H11S3 WAKE ISLAND Hy 41.05 223 T T 04 28 53.6
baz=25,slow=76,SNR=52
FRB Frobisher Bay 46.67 37 P **P 03 45 34.0 -0.1**
comp=Z,3.4nm,0.8s,baz=292,slow=8.0,SNR=4.0
comp=Z,3.4nm,0.8s
SUMG Summit 49.04 19 P **P 03 45 53.5 +0.8**
SUMG IAmb IAmb 03 46 24.4
comp=Z,5.2nm,1.3s
P40A Paris 50.11 75 P **P 03 46 00.7 -0.1**
TXAR Lajitas Array 50.28 93 P **P 03 46 04.5 +2.1**
comp=Z,0.5nm,0.7s,baz=302,slow=5.1,SNR=6.9
comp=Z,0.5nm,0.7s
TXAR Lajitas Array 50.28 93 P **P 03 46 04.0 +1.6**
R40A Maddies Statio 50.81 76 P **P 03 46 05.5 -0.6**
R40A IAmb IAmb 03 46 06.1
comp=Z,2.8nm,0.6s
EF02 Christine 53.77 89 P **P 03 46 27.1 -1.1**
EF02 IAmb IAmb 03 46 28.6
comp=Z,35nm,0.5s
ARCES ARCESS Array B 57.12 356 P **P 03 46 50.0 -1.8**
comp=Z,3.4nm,0.8s,baz=354,slow=3.8,SNR=4.1
comp=Z,3.4nm,0.8s
ARCES ARCESS Array B 57.12 356 P **P 03 46 50.5 -1.3**
FIA1 FINESS Array S 65.14 354 P **P 03 47 44.9 -1.3**
FINES FINESS Array B 65.15 354 P **P 03 47 45.3 -0.9**
comp=Z,2.6nm,0.6s,baz=18,slow=5.7,SNR=18
comp=Z,2.6nm,0.6s
FINES FINESS Array B 65.15 354 P **P 03 47 45.5 -0.8**
NC303 NORSAR Array S 65.69 2 P **P 03 47 49.8 0.0**
NOA NORSAR Array B 65.87 2 P **P 03 47 50.6 -0.4**
comp=Z,0.5nm,0.5s,baz=9.1,slow=2.8,SNR=3.9
comp=Z,0.5nm,0.5s
HFS Hagfors 66.81 1 P **P 03 47 56.5 -0.5**
comp=Z,3.6nm,0.3s,baz=28,slow=3.5,SNR=37
comp=Z,3.6nm,0.3s
PABE Paberze 71.19 354 P **P 03 48 24.4 +0.2**
AKASG Malin Array Be 75.55 351 P **P 03 48 49.4 -0.6**
comp=Z,1.3nm,0.5s,baz=13,slow=5.9,SNR=7.3
comp=Z,1.3nm,0.5s
GERES GERESS Array B 78.12 1 P **P 03 49 05.5 +0.9**
comp=Z,0.5nm,0.7s,baz=345,slow=7.1,SNR=2.6
comp=Z,0.5nm,0.7s
BUR08 Bucovina Ar. S 78.94 353 P **P 03 49 08.0 -1.2**
BURAR Bucovina Array 78.96 353 P **P 03 49 09.5 +0.2**
BURAR IAmb IAmb 03 49 10.2
comp=Z,1.0nm,0.8s
BRTR Keskin Array B 85.81 345 P **P 03 49 44.4 -0.9**
comp=Z,0.8nm,0.9s,baz=21,slow=1.7,SNR=3.9
comp=Z,0.8nm,0.9s
BRTR Keskin Array B 85.81 345 P **P 03 49 45.7 +0.5**
H03N2 Juan Fernandez 114.04 114 T T 06 00 12.6
baz=322,slow=77,SNR=14
H03N1 Juan Fernandez 114.05 114 T T 06 00 16.9
baz=322,slow=77,SNR=13
H03N3 Juan Fernandez 114.06 114 T T 06 00 14.8
baz=322,slow=77,SNR=14

*TEH **15** 03:39:43.7,27.°24N×52.°52E,h15km±20km,ML3.6, Presumed earthquake*
*DSN **15** 03:39:47.1±1.2,27.°26N×52.°62E,h15km,ML3.0/7,Error ellipse: s-maj=27.0km s-min=11.0km az=31.0*
ISC 15 03:39:45.3±1.3,**27.°23N**±0.°06×**52.°53E**±0.°07,**h10**km,**n21,**
σ0**s84**/23,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHL1	**Khalili_Fars**	**0.79**	**59**	Pg	**Pg**	**03 39 59.6**	**-1.0**
QIR1	**Qir**	**1.32**	**20**	Pg	**Pb**	**03 40 09.4**	**-0.8**
QIR1				Sg	**Sg**	**03 40 29.3**	**+1.4**
JHRM	**Jahrom**	**1.57**	**36**	Pg	**Pg**	**03 40 14.4**	**-1.0**
DSBU	**Dashti - Bushe**	**1.59**	**315**	Pg	**Pb**	**03 40 14.7**	**-0.2**
SHI	**Shiraz**	**2.40**	**360**	Pn	**Pn**	**03 40 25.1**	**+0.3**
GENO	**Geno**	**3.24**	**86**	Pn	**Pn**	**03 40 37.6**	**+1.2**
SHME	**Shamm**	**3.44**	**109**	P	**Pn**	**03 40 39.1**	**+0.2**
BANOM	**Banah**	**3.62**	**110**	P	**Pn**	**03 40 41.6**	**+0.2**
MSFE	**Esma-Masafi**	**3.75**	**119**	P	**Pn**	**03 40 44.4**	**+1.1**
MSFE				S	**Sn**	**03 41 27.7**	**+0.2**
KLNJ	**Kolanjah**	**3.85**	**348**	Pn	**Pn**	**03 40 45.5**	**+0.5**
MDH	**Madha**	**3.89**	**119**	P	**Pn**	**03 40 45.9**	**+0.7**
HATD	**Hatta, Dubai**	**4.03**	**126**	P	**Pn**	**03 40 46.7**	**-0.4**
ASHO	**Ashiyiah**	**4.06**	**128**	P	**Pn**	**03 40 48.5**	**+0.9**
NGKK	**Negar Kerman**	**4.41**	**56**	Pn	**Pn**	**03 40 53.1**	**+0.4**
IMEH	**Mehriz**	**4.53**	**23**	Pn	**Pn**	**03 40 55.1**	**+1.0**
KHGB	**Koh Gabri**	**4.67**	**47**	Pn	**Pn**	**03 40 56.3**	**+0.2**
JASK	**Jask - Hormozg**	**4.97**	**105**	Pn	**Pn**	**03 41 00.3**	**+0.3**
ZNGN	**Zangian**	**5.08**	**344**	Pn	**Pn**	**03 41 02.3**	**+0.5**
IBAF	**Bafgh**	**5.09**	**31**	Pn	**Pn**	**03 41 02.5**	**+0.7**
CHMN	**Cheshme madani**	**5.12**	**58**	Pn	**Pn**	**03 41 03.8**	**+1.3**
HOQ	**Hoqain**	**5.64**	**129**	Pn	**Pn**	**03 41 10.4**	**+1.1**

*JSN **15** 04:03:01.3±0.9,19.°01N×80.°62W,h14km±78km,MD4.1, Presumed earthquake*
*SSNC **15** 04:03:03.7±1.5,18.°99N×80.°58W,h20km±10km,MD3.7, ML3.2,MW3.3,Presumed earthquake*
ISC 15 04:03:04.3±2.3,**19.°06N**±0.°09×**80.°5W**±0.°1,**h35**km,**n17,**
σ1**s31**/20,**2D,Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCCY	**Blossom Villag**	**0.72**	**32**	*eP*	**Pn**	**04 03 17.0**	**-1.0**
LCCY				*eS*	**Sn**	**04 03 27.4**	**-0.4**
LCCY				IAML		04 03 28.8	
	comp=E,411nm,0.3s						
LCCY				IAML		04 03 29.6	
	comp=N,372nm,0.2s						
CBCY	**The Bluff, Cay**	**0.97**	**45**	*eP*	**Pn**	**04 03 20.5**	**-0.9**
CBCY				*eS*	**Sn**	**04 03 34.1**	**+0.2**
CBCY				IAML		04 03 36.1	
	comp=E,245nm,0.4s						
CBCY				IAML		04 03 36.4	
	comp=N,414nm,0.4s						
MTDJ	**Mount Denham**	**2.92**	**106**	*eP*	**Pn**	**04 03 47.9**	**-0.4**
MTDJ				*eS*	**Sn**	**04 04 20.6**	**-1.6**
MTDJ				IAML		04 04 24.0	
	comp=N,215nm,0.4s						
MTDJ				IAML		04 04 24.5	
	comp=N,134nm,0.4s						
MGV	**Manicaragua**	**3.08**	**9**	*eP*	**Pn**	**04 03 49.3**	**-1.1**
MGV				*eS*	**Sn**	**04 04 25.2**	**-0.8**
CCCC	**Cccc**	**3.33**	**50**	*eP*	Pn	04 03 58.9	+5.0
LMGC	**Las Mercedes**	**3.43**	**72**	*eP*	**Pn**	**04 03 55.9**	**+0.6**
STH	**Stony Hill**	**3.62**	**105**	*iP*	**Pn**	**04 03 57.8**	**-0.2**
HOJ	**Hope**	**3.70**	**106**	*iP*	**Pn**	**04 03 59.2**	**+0.2**
CHIV	**Chivirico**	**3.95**	**76**	*eP*	**Pn**	**04 04 03.2**	**+0.8**
CAMR	**Camarioca**	**4.07**	**348**	*eP*	**Pn**	**04 04 06.1**	**+2.0**
YAR	**Yar**	**4.10**	**71**	*eP*	**Pn**	**04 04 05.6**	**+1.1**
MARVS	**Santiago de Cu**	**4.43**	**77**	*eP*	**Pn**	**04 04 07.8**	**-1.2**
HLGC	**Holguin**	**4.55**	**66**	*eP*	**Pn**	**04 04 12.3**	**+1.6**
PINC	**Pinares de May**	**4.64**	**71**	*eP*	**Pn**	**04 04 14.1**	**+2.1**
GTBY	**Guantanamo Bay**	**5.14**	**79**	*eP*	**Pn**	**04 04 20.9**	**+2.0**
MASC	**Masc**	**6.00**	**78**	*eP*	**Pn**	**04 04 32.5**	**+1.9**
061Z	**Ochoppi**	**6.79**	**357**	*eP*	**Pn**	**04 04 41.4**	**-0.1**

CATAC 15 04:04:47.5±0.3,**14.°N**±2.°×**8.°4W**±.°,**h1**km,**M3.9**/19,
MLv3.9/19,**Error ellipse: s-maj=4.3km s-min=3.0km az=12.4,confirmed,Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIUN	**Universidad Ur**	**0.48**	**218**	P	Pg	04 04 56.8	0.0
SIUN				S	Sg	04 05 03.4	+0.3
BILN	**Bilwi Airport**	**1.06**	**93**	P	Pg	04 05 06.9	-0.9
BILN				S	Sg	04 05 21.7	0.0
RCPN	**Sur Rio San Ju**	**1.68**	**250**	P	Pn	04 05 18.0	-0.2
RCPN				S	Sn	04 05 39.9	-0.5
RCON	**San Juan de Ri**	**1.75**	**250**	P	Pn	04 05 19.3	+0.2
RCON				S	Sn	04 05 41.7	-0.5
RCVN	**Varillal2**	**1.75**	**253**	P	Pn	04 05 19.3	+0.1
RCVN				S	Sn	04 05 42.3	0.0
MATN	**Matagalpa**	**1.83**	**231**	P	Pn	04 05 19.2	-1.0
MATN				S	Sn	04 05 43.3	-0.8
OCON	**Estacion meteo**	**2.01**	**257**	P	Pn	04 05 23.3	+0.7
OCON				S	Sn	04 05 49.0	+0.6
BOAB	**BOACO BROADBAN**	**2.01**	**216**	P	Pn	04 05 22.6	0.0
BOAB				S	Sn	04 05 49.2	+0.7
LIMN	**Finca el Limon**	**2.12**	**241**	P	Pn	04 05 23.3	-0.8
LIMN				S	Sn	04 05 51.9	+0.8
BLUN	**Bluefields**	**2.19**	**162**	P	Pn	04 05 25.7	+0.6
BLUN				S	Sn	04 05 53.5	+0.7
ACON	**Acoyapa**	**2.23**	**198**	P	Pn	04 05 25.6	0.0
ACON				S	Sn	04 05 54.6	+0.8
YUSH	**Yuscaran**	**2.31**	**267**	P	Pn	04 05 26.7	-0.1
YUSH				S	Sn	04 05 55.5	-0.4
UNAN	**Cigeo UNAN**	**2.65**	**222**	P	Pn	04 05 31.6	+0.2
UNAN				S	Sn	04 06 04.1	0.0
NANN	**Nandasmo**	**2.69**	**217**	P	Pn	04 05 32.4	+0.5
NANN				S	Sn	04 06 06.3	+1.1
CNGN	**Cerro Negro**	**2.69**	**234**	P	Pn	04 05 32.0	0.0
CNGN				S	Sn	04 06 06.3	+1.0
TGUH	**Tegucigalpa,Un**	**2.72**	**269**	S	Sn	04 06 06.6	+0.4
COPN	**Copaltepe**	**2.82**	**228**	P	Pn	04 05 33.6	0.0
CSGN	**Cosiguina Volc**	**3.21**	**250**	P	Pn	04 05 39.2	0.0
CSGN				S	Sn	04 06 18.6	+0.6
CNCH	**Conchagua**	**3.37**	**256**	P	Pn	04 05 41.8	+0.3
CNCH				S	Sn	04 06 22.1	-0.1
MARCA	**Marcala la Paz**	**3.46**	**271**	P	Pn	04 05 42.8	+0.1
MARCA				S	Sn	04 06 24.7	+0.3
TRT2	**Tortugero**	**3.59**	**168**	S	Sn	04 06 27.3	-0.2

*IDC **15** 04:05:39.0±1.9,31.°17S×178.°26W,h0km,mb4.3/3, mbtmp4.2/4,ML3.8/1,Error ellipse: s-maj=47.4km s-min=33.0km az=59.0*
ISC 15 04:05:43.7±1.1,**31.°39S**±0.°09×**178.°4W**±0.°2,**h35**km,**n25,**
σ1**s62**/34,**mb4.2/3,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.16**	**11**	P	**Pn**	**04 06 16.7**	**-0.5**
GLKZ				S	**Sn**	**04 06 41.4**	**-1.3**
PKGZ	**Pakihiroa**	**7.09**	**203**	P	**Pn**	**04 07 24.0**	**-0.9**
PKGZ				S	**Sn**	**04 08 43.6**	**-0.6**
HAZ	**Te Kaha**	**7.09**	**205**	P	**Pn**	**04 07 23.3**	**-1.6**
HAZ				S	**Sn**	**04 08 46.4**	**+2.1**
PUZ	**Puketiti**	**7.21**	**202**	P	**Pn**	**04 07 24.6**	**-2.0**
PUZ				S	**Sn**	**04 08 46.3**	**-1.1**
RUGZ	**Raukumara Rang**	**7.32**	**205**	P	**Pn**	**04 07 26.4**	**-1.8**
RUGZ				S	**Sn**	**04 08 49.5**	**-0.5**
TWGZ	**Tauwhareparae**	**7.40**	**203**	P	**Pn**	**04 07 33.1**	**+3.8**
TWGZ				S	**Sn**	**04 08 52.4**	**+0.5**
WCZ	**Waipu Caves**	**7.57**	**231**	P	Pn	04 07 39.2	+7.7
CNGZ	**Carnagh Statio**	**7.61**	**201**	P	**Pn**	**04 07 30.5**	**-1.5**
CNGZ				S	**Sn**	**04 08 57.7**	**+0.7**
MWZ	**Matawai**	**7.70**	**205**	P	**Pn**	**04 07 30.4**	**-2.9**
MWZ				S	**Sn**	**04 08 59.4**	**+0.1**
OUZ	**Omahuta**	**7.72**	**238**	P	Pn	04 07 40.3	+6.7
URZ	**Urewera**	**7.79**	**207**	Pn	**Pn**	**04 07 35.6**	**+1.1**
	1.1nm,0.3s,baz=242,slow=2.4,SNR=8.8						
URZ				Sn	**Sn**	**04 09 01.0**	**-0.4**
	4.5nm,0.3s,baz=107,slow=18,SNR=21						
	2.4nm,0.3s						
URZ	**Urewera**	**7.79**	**207**	P	**Pn**	**04 07 32.6**	**-1.9**
URZ				S	**Sn**	**04 09 01.0**	**-0.4**
RAGZ	**Rawiri**	**7.88**	**205**	S	**Sn**	**04 09 01.8**	**-2.1**
RIGZ	**Rimuhau**	**7.95**	**202**	S	**Sn**	**04 09 04.3**	**-1.2**
MUGZ	**Murupara**	**8.11**	**208**	P	**Pn**	**04 07 38.4**	**-0.5**
MUGZ				S	**Sn**	**04 09 08.0**	**-1.4**
PRGZ	**Paritu Road**	**8.11**	**201**	S	**Sn**	**04 09 07.3**	**-2.2**
MHGZ	**Mahia Peninsul**	**8.32**	**200**	S	**Sn**	**04 09 12.9**	**-1.5**
RAHZ	**Arahi**	**8.37**	**205**	S	**Sn**	**04 09 14.4**	**-1.5**
MTHZ	**Maungataniwha**	**8.41**	**206**	S	**Sn**	**04 09 15.2**	**-1.6**
WHHZ	**Waihua**	**8.46**	**204**	S	**Sn**	**04 09 17.6**	**-0.4**
NMHZ	**Naumai**	**8.63**	**206**	S	**Sn**	**04 09 21.3**	**-1.1**
ASAR	**Alice Springs**	**42.74**	**268**	P	**P**	**04 13 39.0**	**+1.2**
	1.3nm,0.4s,baz=106,slow=7.3,SNR=39						
	1.3nm,0.4s						
WRA	**Warramunga Arr**	**43.81**	**273**	P	**P**	**04 13 47.8**	**+1.3**
	3.4nm,0.3s,baz=111,slow=8.0,SNR=96						
	3.4nm,0.3s						
QSPA	**South Pole Qui**	**58.72**	**180**	P	**P**	**04 15 40.2**	**+2.5**
	1.9nm,0.9s,baz=329,slow=0.9,SNR=7.9						
	1.9nm,0.9s						
FINES	**FINESS Array B**	**145.96**	**339**	PKPbc	**PKPbc**	**04 25 18.1**	**-0.7**
	1.3nm,0.5s,baz=44,slow=4.2,SNR=7.5						

*IDC **15** 04:08:35.2±1.2,39.°82N×29.°74W,h0km,mb3.8/10, mbtmp3.7/11,ML4.0/1,MS3.5/14,Error ellipse: s-maj=38.0km s-min=19.7km az=8.0*
*NEIC **15** 04:08:36.3±1.3,39.°7N±0.°1×29.°58W±0.°05,h10km±1km, mb4.5/10,Error ellipse: s-maj=24.4km s-min=6.2km az=172.0*
*SVSA **15** 04:08:36.5±0.8,39.°98N×29.°62W,h5km,ML3.0(INMG), Error ellipse: s-maj=15.0km s-min=5.5km az=82.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Crista Mdia AtIntico N*
ISC 15 04:08:35.9±0.5,**39.°71N**±0.°06×**29.°48W**±0.°06,**h10**km,**n47,**
σ1**s39**/38,**mb4.0**/14,**MS3.5**/13,**Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H07N1	**FLORES T-PHASE**	**1.26**	**270**	Pn	Pn	04 08 55.7	-4.0
CALA	**Caldeira**	**1.28**	**151**	*eP*	**Pg**	**04 09 00.5**	**0.0**
CALA				*eS*	**Sg**	**04 09 18.0**	**+0.9**
CALA				IAML		04 09 20.6	
CALA				IAML		04 09 23.2	
CALA				IAML		04 09 26.1	
PFCBR	**Castelo Branco**	**1.33**	**153**	P	**Pb**	**04 09 01.0**	**+0.1**
PGRA	**Graciosa**	**1.35**	**120**	*eP*	**Pg**	**04 09 00.1**	**-1.6**
HOR	**Horta**	**1.35**	**150**	P	**Pb**	**04 09 01.2**	**-0.1**
H07S1	**FLORES T-PHASE**	**1.37**	**257**	Pn	**Pn**	**04 09 01.0**	**-0.1**
ROSA	**Rosais**	**1.38**	**135**	*eP*	**Pg**	**04 09 01.6**	**-0.8**
PICO	**Pico**	**1.46**	**145**	*eP*	**Pb**	**04 09 02.5**	**-0.7**
PICO				*eS*	**Sg**	**04 09 22.4**	**-0.4**
PICO				IAML		04 09 26.6	
PICO				IAML		04 09 27.5	
PICO				IAML		04 09 30.2	
PCAN	**Candelaria**	**1.47**	**148**	*eP*	**Pb**	**04 09 02.7**	**-0.6**
PCAN				*eS*	**Sg**	**04 09 22.4**	**-0.6**
PCAN				IAML		04 09 26.6	
PCAN				IAML		04 09 27.2	
PCAN				IAML		04 09 29.5	
PMAN	**Manadas**	**1.52**	**134**	P	**Pn**	**04 09 02.6**	**-0.6**
PAGU	**Agualva, Azore**	**2.02**	**117**	*eP*	**Pb**	**04 09 09.9**	**-2.8**
ADH	**Angra Heroismo**	**2.04**	**120**	*eP*	**Pb**	**04 09 10.3**	**-2.7**
CMLA	**Cha da Macela**	**3.65**	**121**		**Pn**	**04 09 33.9**	**+1.4**
MACI	**Morro de la Ar**	**15.68**	**133**	Pn	**P**	**04 12 17.9**	**-3.2**
ESDC	**Sonseca Array**	**19.62**	**82**	P	**Pn**	**04 13 08.8**	**+2.9**
	0.1nm,0.3s,baz=287,slow=9.4,SNR=9.7						
ESDC				LR	LR	04 19 45.1	
	comp=Z,145nm,18.2s,baz=298,slow=34						
	2.4nm,1.0s						
MDT	**Midelt**	**21.17**	**101**	LR	LR	04 19 42.2	
	comp=Z,68nm,19.3s,baz=351,slow=31						
GERES	**GERESS Array B**	**31.86**	**59**	LR	LR	04 28 33.1	
	comp=Z,42nm,18.0s,baz=262,slow=38						
NOA	**NORSAR Array B**	**32.80**	**36**	LR	LR	04 27 33.8	
	comp=Z,40nm,19.7s,baz=255,slow=35						
NC602	**NORSAR Array S**	**32.84**	**36**	P	**P**	**04 15 08.8**	**-0.6**
VAE	**Valguarnera**	**34.13**	**79**	LR	LR	04 28 30.3	
	comp=Z,188nm,19.9s,baz=352,slow=35						
TORD	**Torodi Ar. Bea**	**38.12**	**125**	P	**P**	**04 15 57.7**	**+2.5**
	2.3nm,1.1s,baz=288,slow=6.1,SNR=5.8						
	2.3nm,1.1s						
BURAR	**Bucovina Array**	**39.63**	**60**	P	**P**	**04 16 09.1**	**+1.3**
ARCES	**ARCESS Array B**	**41.29**	**26**	P	**P**	**04 16 21.5**	**+0.4**
ARCES				IAmb	IAmb	04 16 34.6	
	comp=Z,25nm,1.5s						
AKASG	**Malin Array Be**	**41.76**	**55**	P	**P**	**04 16 26.4**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=279,slow=8.7,SNR=6.7						
	comp=Z,0.3nm,0.3s						
EYMN	**Ely**	**44.40**	**302**	P	**P**	**04 16 44.5**	**-2.1**
EYMN				IAmb	IAmb	04 17 20.4	
	comp=Z,9.0nm,1.2s						
YKA	**Yellowknife Ar**	**53.56**	**325**	P	**P**	**04 17 56.2**	**-0.2**
	comp=Z,0.4nm,0.9s,baz=67,slow=6.8,SNR=4.7						
	comp=Z,0.4nm,0.9s						
ARTI	**Arti**	**56.99**	**42**	LR	LR	04 44 15.7	
	comp=Z,32nm,18.9s,baz=20,slow=38						
YNE	**Yellowstone No**	**57.41**	**304**	P	**P**	**04 18 23.9**	**-1.0**
YNE				IAmb	IAmb	04 18 29.1	
	comp=Z,3.5nm,0.9s						
PD31	**Pinedale Array**	**58.10**	**301**	P	**P**	**04 18 28.7**	**-1.1**
PD31				IAmb	IAmb	04 18 33.3	
	comp=Z,3.6nm,1.1s						
PDAR	**Pinedale Array**	**58.10**	**301**	P	**P**	**04 18 28.9**	**-0.9**
	comp=Z,1.6nm,0.9s,baz=67,slow=11,SNR=9.9						
PDAR				LR	LR	04 43 25.3	
	comp=Z,34nm,18.9s,baz=72,slow=36						
	comp=Z,1.6nm,0.9s						
FXWY	**Fox Creek**	**58.67**	**303**	P	**P**	**04 18 33.0**	**-0.7**
AKTO	**Aktyubinsk**	**59.28**	**48**	LR	LR	04 43 15.9	
	comp=Z,34nm,20.2s,baz=148,slow=35						
MCMT	**McKenzie Canyo**	**59.30**	**305**	P	**P**	**04 18 37.1**	**-1.0**
F30M	**Barrier River**	**59.68**	**335**	P	**P**	**04 18 39.7**	**-0.3**
F30M				IAmb	IAmb	04 18 59.8	
	comp=Z,7.7nm,1.4s						
NEW	**Newport**	**60.35**	**310**	LR	LR	04 43 14.8	
	comp=Z,58nm,19.4s,baz=91,slow=35						
TXAR	**Lajitas Array**	**60.41**	**285**	P	**P**	**04 18 45.2**	**-0.5**
	comp=Z,0.8nm,0.8s,baz=76,slow=5.3,SNR=5.8						
TXAR				LR	LR	04 44 45.1	
	comp=Z,41nm,19.3s,baz=99,slow=36						
	comp=Z,0.8nm,0.8s						
TXAR	**Lajitas Array**	**60.41**	**285**	P	**P**	**04 18 45.6**	**-0.2**
CMIG	**Matias Romero**	**60.47**	**268**	LR	LR	04 42 19.3	
	comp=Z,48nm,21.8s,baz=56,slow=34						
PLID	**Pearl Lake**	**61.16**	**306**	P	**P**	**04 18 51.0**	**+0.2**
PLID				IAmb	IAmb	04 18 52.8	
	comp=Z,3.3nm,0.9s						
BVAR	**Borovoye Array**	**64.70**	**41**	P	**P**	**04 19 15.2**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=304,slow=11,SNR=3.6						
	comp=Z,0.4nm,0.6s						
LPIG	**La Paz**	**68.24**	**284**	LR	LR	04 47 46.1	
	comp=Z,30nm,21.2s,baz=94,slow=35						
KURBB	**Kurchatov Arra**	**70.21**	**40**	P	**P**	**04 19 49.9**	**+1.1**
	comp=Z,0.6nm,0.5s,baz=314,slow=7.2,SNR=4.3						
	comp=Z,0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**71.00**	**35**	P	**P**	**04 19 54.6**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=300,slow=6.5,SNR=4.9						
	comp=Z,0.4nm,0.3s						
MKAR	**Makanchi Array**	**74.59**	**41**	P	**P**	**04 20 15.7**	**+0.7**
	comp=Z,1.6nm,0.9s,baz=309,slow=5.9,SNR=12						
	comp=Z,1.6nm,0.9s						
SONM	**Songino Array**	**84.42**	**28**	P	**P**	**04 21 09.9**	**+1.3**
	comp=Z,0.6nm,0.9s,baz=326,slow=7.2,SNR=5.3						
	comp=Z,0.6nm,0.9s						
BOSA	**Boshof**	**84.93**	**134**	LR	LR	04 58 15.2	
	comp=Z,38nm,20.0s,baz=304,slow=35						
SUR	**Sutherland**	**85.53**	**139**	LR	LR	04 58 41.2	
	comp=Z,11nm,18.7s,baz=290,slow=35						

*IDC **15** 04:11:11.7±1.8,39.°51N×29.°92W,h0km,mb3.7/2, mbtmp3.5/3,ML3.3/1,MS3.4/4,Error ellipse: s-maj=87.3km s-min=30.0km az=22.0*
ISC 15 04:11:13.0±1.0,**39.°3N**±0.°2×**30.°0W**±0.°1,**h10**km,**n13,**
σ1**s20**/10,**MS3.4**/4,**Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H07S1	**FLORES T-PHASE**	**0.97**	**274**	Pn	**Pb**	**04 11 32.1**	**+0.2**
H07N1	**FLORES T-PHASE**	**0.97**	**293**	Pn	**Pn**	**04 11 32.3**	**-0.4**
PFCBR	**Castelo Branco**	**1.25**	**129**	*eS*	**Sb**	**04 11 52.5**	**-0.4**
PFCBR				IAML		04 11 53.1	
PFCBR				IAML		04 11 53.4	
PFCBR				IAML		04 11 54.0	
HOR	**Horta**	**1.30**	**127**	*eS*	**Sn**	**04 11 53.2**	**-1.6**
HOR				IAML		04 11 54.5	
HOR				IAML		04 11 54.7	
HOR				IAML		04 11 56.6	
PCAN	**Candelaria**	**1.43**	**126**	*eS*	**Sn**	**04 11 56.4**	**-1.6**
PCAN				IAML		04 11 59.2	
PCAN				IAML		04 12 00.2	
PCAN				IAML		04 12 02.5	
PICO	**Pico**	**1.45**	**124**	*eP*	**Pg**	**04 11 42.5**	**+1.6**
PICO				*eS*	**Sn**	**04 11 57.3**	**-1.1**
PICO				IAML		04 11 58.3	
PICO				IAML		04 11 59.0	
PICO				IAML		04 12 05.7	
ESDC	**Sonseca Array**	**20.05**	**81**	P	**P**	**04 15 46.0**	**-0.3**
	baz=291,slow=9.9,SNR=4.4						
	0.8nm,1.0s						
SCHQ	**Schefferville**	**29.10**	**314**	LR	LR	04 26 39.8	
	comp=Z,44nm,19.4s,baz=28,slow=32						
TORD	**Torodi Ar. Bea**	**38.20**	**124**	P	**P**	**04 18 33.7**	**+0.7**
	1.3nm,1.1s,baz=310,slow=9.0,SNR=3.5						
	1.3nm,1.1s						
EIL	**Elat**	**53.34**	**79**	LR	LR	04 45 07.5	
	comp=Z,25nm,18.1s,baz=277,slow=38						
JTS	**Las Juntas de**	**56.64**	**255**	LR	LR	04 41 35.9	
	comp=Z,36nm,20.5s,baz=94,slow=32						
PDAR	**Pinedale Array**	**57.99**	**301**	P	**P**	**04 21 05.8**	**-0.3**
	0.8nm,1.0s,baz=65,slow=7.0,SNR=4.5						
	0.8nm,1.0s						
PFO	**Pinyon Flats O**	**67.22**	**295**	LR	LR	04 51 57.7	
	comp=Z,32nm,18.4s,baz=194,slow=36						

IDC 15 04:15:48.6±3.1,**31.°53S**×**178.°15W**,**h0**km,**mb3.9**/2,
mbtmp3.9/3,**ML3.3**/1,**Error ellipse: s-maj=71.1km s-min=37.1km az=113.0,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.76**	**209**	Pn	Pn	04 17 43.6	+0.8
	0.4nm,0.3s,baz=357,slow=22,SNR=1.2						
URZ				Sn	Sn	04 19 10.4	-0.9
	0.9nm,0.3s,baz=328,slow=23,SNR=8.2						

KOTS					Lg	Lg	04 27 40.0		
	63nm,0.8s								
KOTS	**Kotyrbulak**	**2.67**	**352**	*eP*	**Pg**		**04 27 05.2**	**+0.2**
	24nm,0.4s								
KOTS					*eS*	**Sg**	**04 27 40.0**	**+0.4**
	63nm,0.8s								
KNDC	**Almaty**	**2.67**	**349**	⇓Pg	**Pb**		**04 27 02.2**	**+0.8**
	63nm,0.6s								
KNDC				⇓Lg	Lg		04 27 40.0		
	125nm,0.8s								
MTBS	**Maitube**	**2.69**	**341**	Pg	**Pg**		**04 27 06.0**	**+0.6**
	15nm,0.4s								
MTBS				Lg	Lg		04 27 41.0		
	49nm,0.4s								
MTBS	**Maitube**	**2.69**	**341**	*eP*	**Pg**		**04 27 06.0**	**+0.6**
	15nm,0.4s								
MTBS				*eS*	**Sg**		**04 27 41.0**	**+0.7**
	49nm,0.4s								
UZB	**Uzynbulak**	**2.75**	**22**	*eP*	**Pg**		**04 27 06.0**	**-0.7**
	4.8nm,0.2s								
UZB				*eS*	**Sg**		**04 27 41.3**	**-1.2**
	20nm,0.4s								
TKM2	**Tokmak 2**	**2.78**	**327**	P	**Pg**		**04 27 08.5**	**+1.2**
	SNR=27								
TKM2	**Tokmak 2**	**2.78**	**327**	⇑*iP*	**Pb**		**04 27 02.9**	**-0.5**
TKM2				⇑*iS*	**Sb**		**04 27 37.3**	**0.0**
ARLS	**Aral**	**2.80**	**298**	⇑*iP*	**Pb**		**04 27 03.2**	**-0.5**
ARLS				⇑*iS*	**Sb**		**04 27 37.6**	**-0.2**
UCH	**Uchtor**	**2.86**	**306**	P	**Pg**		**04 27 09.4**	**+0.6**
	SNR=34								
UCH	**Uchtor**	**2.86**	**306**	⇓*iP*	**Pb**		**04 27 04.4**	**-0.5**
UCH				⇓*iS*	**Sb**		**04 27 39.6**	**-0.2**
KBK	**Karagaybulak**	**2.88**	**317**	P	**Pg**		**04 27 09.7**	**+0.6**
	SNR=16								
SHLS	**Shalkode**	**2.90**	**28**	Pg	**Pg**		**04 27 11.1**	**+1.5**
	12nm,0.5s								
SHLS				Lg	Lg		04 27 49.5		
	57nm,0.8s								
SHLS	**Shalkode**	**2.90**	**28**	*eP*	**Pg**		**04 27 11.1**	**+1.5**
	12nm,0.5s								
SHLS				*eS*	**Sg**		**04 27 49.5**	**+2.3**
	57nm,0.8s								
KURS	**Kuram**	**2.92**	**8**	Pg	**Pg**		**04 27 10.1**	**+0.2**
	8.0nm,0.3s								
KURS				Lg	Lg		04 27 48.0		
	22nm,1.2s								
DGS	**Degeres**	**2.99**	**333**	Pg	**Pg**		**04 27 11.4**	**+0.2**
	29nm,0.6s								
DGS				Lg	Lg		04 27 50.6		
	42nm,0.5s								
DGS	**Degeres**	**2.99**	**333**	*eP*	**Pg**		**04 27 11.4**	**+0.2**
	29nm,0.6s								
DGS				*eS*	**Sg**		**04 27 50.6**	**+0.7**
	42nm,0.5s								
AAK	**Ala-Archa**	**3.11**	**312**	P	**Pg**		**04 27 13.6**	**0.0**
	SNR=89								
AAK	**Ala-Archa**	**3.11**	**312**	⇑*iP*	**Pb**		**04 27 07.6**	**-1.5**
AAK				⇑*iS*	**Sb**		**04 27 45.5**	**-1.4**
KTBS	**Karatobe**	**3.19**	**348**	Pg	**Pg**		**04 27 14.4**	**-0.8**
	18nm,0.4s								
KTBS				Lg	Lg		04 27 55.2		
	23nm,0.7s								
KTBS	**Karatobe**	**3.19**	**348**	*eP*	**Pg**		**04 27 14.4**	**-0.8**
	18nm,0.4s								
KTBS				*eS*	**Sg**		**04 27 55.2**	**-1.3**
	23nm,0.7s								
CHMS	**Chumysh**	**3.23**	**319**	P	**Pg**		**04 27 15.8**	**0.0**
	SNR=12								
KRBS	**Karabastau**	**3.42**	**336**	Pg	**Pg**		**04 27 18.5**	**-1.1**
	18nm,0.6s								
KRBS				Lg	Lg		04 28 02.7		
	25nm,0.8s								
KRBS	**Karabastau**	**3.42**	**336**	*eP*	**Pg**		**04 27 18.5**	**-1.1**
	18nm,0.6s								
KRBS				*eS*	**Sg**		**04 28 02.7**	**-1.2**
	25nm,0.8s								
KTMS	**Ketmen**	**3.50**	**35**	Pg	**Pg**		**04 27 19.6**	**-1.3**
	1.1nm,0.3s								
KTMS				Lg	Lg		04 28 04.4		
	8.8nm,0.3s								
KTMS	**Ketmen**	**3.50**	**35**	*eP*	**Pg**		**04 27 19.6**	**-1.3**
	1.1nm,0.3s								
KTMS				*eS*	**Sg**		**04 28 04.4**	**-1.8**
	8.8nm,0.3s								
USP	**Ospenovka**	**3.55**	**320**	P	**Pg**		**04 27 21.3**	**-0.6**
	SNR=16								
EKS2	**Erkin-Say**	**3.55**	**307**	P	**Pg**		**04 27 22.5**	**+0.5**
	SNR=6.4								
BLB	**Baldybastay**	**3.56**	**10**	Pg	**Pg**		**04 27 20.9**	**-1.2**
	12nm,0.4s								
BLB				Lg	Lg		04 28 06.5		
	53nm,0.7s								
ARXS	**Arharly**	**3.62**	**2**	Pg	**Pg**		**04 27 22.4**	**-0.9**
	3.7nm,0.3s								
ARXS				Lg	Lg		04 28 09.2		
	41nm,0.3s								
ARXS	**Arharly**	**3.62**	**2**	*eP*	**Pg**		**04 27 22.4**	**-0.9**
	3.7nm,0.3s								
ARXS				*eS*	**Sg**		**04 28 09.2**	**-1.0**
	41nm,0.3s								
KNOS	**Konyrlen**	**3.93**	**16**	Pg	**Pg**		**04 27 28.7**	**-0.6**
	1.6nm,0.4s								
KNOS				Lg	Lg		04 28 19.8		
	9.5nm,0.7s								
MRKS	**Merke**	**3.94**	**305**	Pg	**Pg**		**04 27 28.5**	**-0.9**
	12nm,0.5s								
MRKS				Lg	Lg		04 28 20.0		
	12nm,0.4s								
MRKS	**Merke**	**3.94**	**305**	*eP*	**Pg**		**04 27 28.5**	**-0.9**
	12nm,0.5s								
MRKS				*eS*	**Sg**		**04 28 20.0**	**-0.4**
	12nm,0.4s								
BTLS	**Baital**	**5.17**	**331**	Pg	**Pg**		**04 27 51.3**	**-1.5**
	7.3nm,0.6s								
BTLS				Lg	Lg		04 28 58.8		
	8.8nm,0.8s								
BTLS	**Baital**	**5.17**	**331**	*eP*	**Pg**		**04 27 51.3**	**-1.5**
	7.3nm,0.6s								
BTLS				*eS*	**Sg**		**04 28 58.8**	**-1.0**
	8.8nm,0.8s								

IDC 15 04:44:58.3±2.1, 1°31N×125°82E, h0km, mb3.3/3, mbtmp3.4/3, Error ellipse: s-maj=182.7km s-min=26.7km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.71**	**159**	P	P	04 50 00.8	-1.2
	0.8nm,0.5s,baz=337,slow=11,SNR=10						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**26.04**	**163**	P	P	04 50 34.5	+1.0
	0.5nm,0.7s,baz=331,slow=9.2,SNR=6.9						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**59.03**	**327**	P	P	04 55 00.1	-0.1
	0.1nm,0.4s,baz=125,slow=7.0,SNR=4.1						
	0.1nm,0.4s						

BJI ***15*** *05:16:21.8,26°.09N×126°.99E,h86km, mB4.7/12, mb4.5/44, Ms4.2/2, Ms7 3.9/3*

NEIC ***15*** *05:16:28.7±2.0,26°.54N±0°.03×126°.58E±0°.06,h85km±6km, mb4.5/93, Error ellipse: s-maj=8.5km s-min=2.8km az=67.0*

MOS ***15*** *05:16:28.5±0.9,26°.50N×126°.51E,h104km, mb4.3/24, Error ellipse: s-maj=10.2km s-min=6.1km az=118.6*

NIED ***15*** *05:16:29.3,26°.49N×126°.58E,h91km, MW4.6, Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁵Nm; M_{rr}1.20; $M_{\theta\theta}$0.10; $M_{\phi\phi}$-1.30; $M_{r\theta}$-5.55; $M_{\theta\phi}$2.32; $M_{\phi r}$-6.01; Fault plane solution: $M_0$8.24000×10¹⁵ NP1: ϕ_s306.00000°,δ8.00000°,λ-3.00000°. NP2:ϕ_s39.00000°, δ90.00000°,λ-98.00000°.*

IDC ***15*** *05:16:29.4±0.6,26°.56N×126°.59E,h100km±5km,mb4.1/25, mbtmp4.4/28,MS3.1/16 Error ellipse: s-maj=10.7km s-min=7.5km az=30.0*

JMA ***15*** *05:16:29.3±0.2,26°N±1°×12°7E±°,h91km±1km,MD4.2/13, MV4.4/13,NW OFF OKINAWAJIMA IS*

JMA Felt I J1 at NW OFF OKINAWAJIMA IS .

ISC 15 05:16:29.3±0.4, 26.48N±0°.04×126.57E±0°.04, h97km±3km, h101km:pP-P,n237,σ1s14/264, mb4.5/87, 14C-1D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKE	**Kume jima 2**	**0.25**	**128**	*i* P	**Pn**	**05 16 42.8**	**-0.5**
JKE				A	A	05 16 42.8	
	comp=N,42nm,0.7s,comp=E,58nm,2.2s						
JKE				S	**Sn**	**05 16 52.6**	**-1.1**
JAGN	**Aguni-jima**	**0.61**	**80**	*i* P	**Pn**	**05 16 45.2**	**-0.4**
JAGN				A	A	05 16 45.2	
	comp=N,28nm,3.4s,comp=E,15nm,1.4s						
JAGN				S	**Sn**	**05 16 57.1**	**-0.8**
JJT3	**Tamagusuku3**	**1.14**	**107**	*i* P	**Pn**	**05 16 51.5**	**+0.4**
JJT3				A	A	05 16 51.5	
	comp=N,20nm,1.4s,comp=E,23nm,3.8s						
JJT3				S	**Sn**	**05 17 08.1**	**+0.6**
JNTH	**Nagotoyohara**	**1.30**	**88**	*i* P	**Pn**	**05 16 52.9**	**-0.1**
JNTH				A	A	05 16 52.9	
	comp=N,9.0nm,1.9s,comp=E,10.0nm,0.7s						
JNTH				S	**Sn**	**05 17 09.5**	**-1.4**
JIH	**Iheya**	**1.37**	**66**	*i* P	**Pn**	**05 16 53.9**	**+0.2**
JIH				A	A	05 16 53.9	
	comp=N,7.0nm,1.0s,comp=E,7.0nm,1.9s						
JIH				S	**Sn**	**05 17 11.2**	**-1.1**
JOW	**Kunigami**	**1.57**	**77**	P	**Pn**	**05 16 56.0**	**-0.2**
	comp=E,1μm,0.2s,baz=162,slow=14,SNR=2006						
JOW				S	**Sn**	**05 17 15.2**	**-1.5**
	comp=E,962nm,0.3s,baz=281,slow=25,SNR=6.2						
JOW	**Kunigami**	**1.57**	**77**	P	**Pn**	**05 16 56.0**	**-0.2**
JOW	**Kunigami**	**1.57**	**77**	P	**Sn**	**05 17 15.3**	**-1.4**
JOW	**Kunigami**	**1.57**	**77**		**Pn**	**05 16 56.2**	**-0.1**
JOW				Sn	**Sn**	**05 17 14.9**	**-1.8**
JOW	**Kunigami**	**1.57**	**77**	*i* P	**Pn**	**05 16 56.0**	**-0.2**
JOW				A	A	05 16 56.0	
	comp=N,16nm,0.3s,comp=E,14nm,0.7s						
JOW				S	**Sn**	**05 17 14.9**	**-1.8**
JYRO	**Yoronjima**	**1.77**	**72**	*i* P	**Pn**	**05 16 58.5**	**-0.3**
JYRO				S	**Sn**	**05 17 19.2**	**-2.0**
JIKM	**Ikemajima**	**1.95**	**218**	P	**Pn**	**05 17 01.1**	**-0.1**
JIKM				S	**Sn**	**05 17 24.6**	**-0.8**
JOKE	**Okinoerabujima**	**1.99**	**63**	*i* P	**Pn**	**05 17 01.3**	**-0.4**
JOKE				S	**Sn**	**05 17 24.1**	**-2.3**
JOGS	**Gusukube**	**2.01**	**212**	P	**Pn**	**05 17 01.9**	**+0.1**
JMJ	**Miyako jima 2**	**2.02**	**215**	P	**Pn**	**05 17 01.4**	**-0.6**
JMJ2	**Miyako jima3**	**2.06**	**213**	P	**Pn**	**05 17 02.5**	**0.0**
JMJ2				*e*S	**Sn**	**05 17 26.8**	**-1.1**
YOJ	**Yonaguni jima**	**3.79**	**239**	P	**Pn**	**05 17 25.6**	**0.0**
YOJ	**Yonaguni jima**	**3.79**	**239**	Pn	**Pn**	**05 17 25.9**	**+0.3**
YOJ	**Yonaguni jima**	**3.79**	**239**	P	**Pn**	**05 17 25.9**	**+0.3**
JMZ	**Minamidaito 2**	**4.24**	**98**	P	Pn	05 17 19.1	-13
TATO	**Taipei**	**4.82**	**253**	P	**Pn**	**05 17 43.1**	**+3.6**
TATO	**Taipei**	**4.82**	**253**	Pn	**Pn**	**05 17 43.2**	**+3.7**
YHNB	**Yeheng**	**5.02**	**250**	P	**Pn**	**05 17 44.5**	**+2.1**
YHNB	**Yeheng**	**5.02**	**250**		**Pn**	**05 17 44.4**	**+2.0**
NACB	**Ninganchiao**	**5.05**	**244**	P	**Pn**	**05 17 41.9**	**-0.8**
NACB	**Ninganchiao**	**5.05**	**244**		**Pn**	**05 17 42.0**	**-0.8**
YULB	**Yu-li**	**5.69**	**238**	P	**Pn**	**05 17 48.5**	**-2.8**
YULB	**Yu-li**	**5.69**	**238**		**Pn**	**05 17 48.7**	**-2.6**
SSLB	**Suanglung**	**5.75**	**243**	P	**Pn**	**05 17 51.1**	**-1.1**
SSLB	**Suanglung**	**5.75**	**243**		**Pn**	**05 17 51.2**	**-1.1**
JSU	**Suzuyama**	**6.06**	**33**	P	**Pn**	**05 17 56.8**	**+0.5**
TWGBT	**Beinan**	**6.18**	**235**	P	**Pn**	**05 17 55.3**	**-2.8**
TWG	**Pinlang**	**6.18**	**235**		**Pn**	**05 17 54.8**	**-3.3**
TPUB	**Ta-pu**	**6.25**	**241**	P	**Pn**	**05 17 58.8**	**-0.2**
TPUB	**Ta-pu**	**6.25**	**241**		**Pn**	**05 17 58.3**	**-0.7**
JNU	**Nakatsue**	**7.61**	**28**	P	**Pn**	**05 18 18.1**	**+0.7**
	comp=E,13nm,0.4s,baz=300,slow=3.0,SNR=31						
JNU				LR	LR	05 21 53.7	
	comp=E,28nm,19.1s,baz=218,slow=43						
NJ2	**Nanjing**	**8.73**	**311**	⇓P	**Pn**	**05 18 35.0**	**+2.4**
NJ2				S	**Sn**	**05 20 10.9**	**+1.6**
NJ2				pmax	pmax		
	comp=E,100nm,0.9s						
NJ2				pmax	pmax		
	comp=E,760nm,4.3s						
JMN	**Monobe**	**9.60**	**39**	P	**Pn**	**05 18 41.4**	**-3.2**
JMN	**Monobe**	**9.60**	**39**	Pn	**Pn**	**05 18 41.4**	**-3.2**
KSRS	**Korea Array**	**11.00**	**6**	P	**Pn**	**05 19 04.2**	**+0.6**
	comp=E,3.0nm,0.7s,baz=179,slow=13,SNR=8.2						
KSRS				LR	LR	05 23 24.9	
	comp=E,40nm,20.1s,baz=190,slow=38						
WHN	**Wuhan**	**11.48**	**293**	P	**Pn**	**05 19 10.6**	**+0.5**
WHN				pmax	pmax		
	comp=E,120nm,1.4s						
MJAR	**Matsushiro Arr**	**14.10**	**42**	P	**Pn**	**05 19 45.0**	**+0.4**
	comp=E,0.5nm,0.4s,baz=230,slow=10.0,SNR=6.7						
MJAR				LR	LR	05 25 01.0	
	comp=E,63nm,20.0s,baz=180,slow=36						
MJAR	**Matsushiro Arr**	**14.10**	**42**	P	**Pn**	**05 19 45.0**	**+0.4**
LYN	**LuoYang**	**14.56**	**307**	P	**Pn**	**05 19 51.8**	**+1.3**
LYN				pmax	pmax		
	comp=E,22nm,0.6s						
LYN				pmax	pmax		
	comp=E,250nm,4.8s						
HNS	**HongShan**	**14.81**	**320**	⇑P	**P**	**05 19 55.8**	**-1.3**
HNS				pmax	pmax		
	comp=E,50nm,1.1s						
ENH	**Enshi**	**15.50**	**288**		**Pn**	**05 20 02.1**	**-0.4**
BJI2	**Beijing**	**16.04**	**330**	P	**P**	**05 20 11.1**	**+0.4**
BJI2				pmax	pmax		
	comp=E,5.0nm,1.2s						
BJT	**Baijiatuan**	**16.04**	**330**		**Pn**	**05 20 08.2**	**-1.0**
BJT	**Baijiatuan**	**16.04**	**330**	P	**Pn**	**05 20 08.2**	**-1.0**
BJT				pmax	pmax		
	comp=E,27nm,1.3s						
XAN	**Xi'an**	**16.99**	**301**	⇑P	**P**	**05 20 22.4**	**+1.1**
XAN				pmax	pmax		
	comp=Z,15nm,1.3s						
QIZ	**Qiongzhong**	**17.10**	**248**		**Pn**	**05 20 21.3**	**-1.1**
QIZ				IAmb	IAmb	05 20 48.5	
	comp=Z,44nm,1.3s						
HHC	**Hu-ho-hao-te**	**18.97**	**323**	⇑*iP*	**Pn**	**05 20 45.3**	**+0.5**
HHC				pmax	pmax		
	comp=E,16nm,0.9s						
HHC				pmax	pmax		
	comp=E,130nm,6.3s						
XLT	**XiLinHaoTe**	**19.35**	**337**	*eP*	**Pn**	**05 20 51.0**	**+1.8**
XLT				pmax	pmax		
	comp=E,36nm,0.8s						
XLT				pmax	pmax		
	comp=Z,130nm,5.2s						
GUMO	**Guam**	**21.41**	**123**	LR	LR	05 29 30.5	
	comp=Z,14nm,19.3s,baz=34,slow=36						
LZH	**Lanzhou**	**21.61**	**302**	*eP*	**P**	**05 21 12.0**	**+0.4**
LZH				pP	pP	05 21 34.8	+4.4
LZH				pmax	pmax		
	comp=Z,22nm,1.6s						
LZDM	**Lanzhou Array**	**21.68**	**301**	P	**P**	**05 21 12.8**	**+0.3**
	comp=Z,7.3nm,0.5s,baz=134,slow=11,SNR=17						
	comp=Z,7.3nm,0.5s						
PZH	**PanZhiHua**	**22.21**	**276**	P	**P**	**05 21 17.8**	**-0.3**
KLR	**Kul'dur**	**23.07**	**9**	LR	LR	05 30 17.7	
	comp=Z,30nm,19.6s,baz=224,slow=36						
GTA2	**Gaotai**	**25.85**	**307**	*eP*	**P**	**05 21 50.3**	**-1.6**
ULN	**Ulaanbaatar**	**26.27**	**329**	*ceP*	**P**	**05 21 56.3**	**+0.7**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.7s						
SONM	**Songino Array**	**26.55**	**329**	P	**P**	**05 21 57.2**	**-0.9**
	comp=Z,2.3nm,0.4s,baz=148,slow=9.1,SNR=17						
SONM				pP	**pwP**	**05 22 20.7**	**-0.6**
	comp=Z,5.2nm,0.8s,baz=146,slow=9.9,SNR=6.9						
SONM				ScP	**ScP**	**05 28 50.2**	**-1.2**
	comp=Z,1.4nm,1.1s,baz=35,slow=4.8,SNR=4.4						
SONM				LR	LR	05 33 16.9	
	comp=Z,47nm,18.0s,baz=100,slow=38						
	comp=Z,2.3nm,0.4s						
SONM	**Songino Array**	**26.55**	**329**	P	**P**	**05 21 57.9**	**-0.2**
SONM	**Songino Array**	**26.55**	**329**	P	**P**	**05 21 57.9**	**-0.2**
SONM				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CHTO	**Chiang Mai**	**26.57**	**259**	P	**P**	**05 21 56.5**	**-1.9**
CHTO				IAmb	IAmb	05 22 00.2	
	comp=Z,8.5nm,0.7s						
CHTO	**Chiang Mai**	**26.57**	**259**	P	**P**	**05 21 56.5**	**-1.9**
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CM31	**Chiang Mai Arr**	**26.71**	**258**	P	**P**	**05 21 56.6**	**-3.0**
CMAR	**Chiang Mai Arr**	**26.71**	**258**	P	**P**	**05 21 58.4**	**-1.3**
	comp=Z,2.1nm,0.5s,baz=57,slow=7.5,SNR=23						
CMAR				LR	LR	05 32 19.1	
	comp=Z,28nm,21.1s,baz=80,slow=36						
	comp=Z,2.1nm,0.5s						
CMAR	**Chiang Mai Arr**	**26.71**	**258**	P	**P**	**05 21 58.1**	**-1.5**
CMAR	**Chiang Mai Arr**	**26.71**	**258**	*ceP*	**P**	**05 22 00.3**	**+0.6**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
TLY	**Talaya**	**30.57**	**332**	LR	LR	05 34 57.4	
	comp=Z,43nm,18.6s,baz=118,slow=36						
TLY	**Talaya**	**30.57**	**332**	P	**P**	**05 22 33.2**	**-0.4**
TLY				IAmb	IAmb	05 22 34.8	
	comp=Z,3.8nm,0.5s						
TLY	**Talaya**	**30.57**	**332**	P	**P**	**05 22 33.2**	**-0.4**
TLY				pmax	pmax		
	comp=Z,4.0nm,0.5s						
JAY	**Jayapura**	**31.90**	**152**	LR	LR	05 32 40.5	
	comp=Z,39nm,21.3s,baz=309,slow=30						
PETK	**Petropavlovsk-**	**35.28**	**33**	LR	LR	05 37 00.4	
	comp=Z,21nm,21.1s,baz=276,slow=35						
YAK	**Yakutsk**	**35.61**	**3**	*i* P	**P**	**05 23 16.1**	**-1.1**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WMQ	**Urumqi**	**35.80**	**309**	*eP*	**P**	**05 23 19.5**	**+0.2**
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
DGZ	**Jazzator, Alta**	**37.94**	**318**	*i* P	**P**	**05 23 37.5**	**+0.1**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MK31	**Makanchi Array**	**40.26**	**312**	*ceP*	**P**	**05 23 55.6**	**-1.1**
MKAR	**Makanchi Array**	**40.26**	**312**	P	**P**	**05 23 55.4**	**-1.3**
	comp=Z,6.0nm,0.5s,baz=96,slow=9.7,SNR=84						
MKAR				PcP	**PcP**	**05 25 59.0**	**+0.4**
	comp=Z,4.0nm,0.8s,baz=93,slow=2.3,SNR=9.8						
MKAR				ScP	**ScP**	**05 29 38.1**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=90,slow=7.3,SNR=3.9						
MKAR				LR	LR	05 42 00.5	
	comp=Z,38nm,18.1s,baz=107,slow=38						
	comp=Z,6.0nm,0.5s						
MKAR	**Makanchi Array**	**40.26**	**312**		**P**	**05 23 55.6**	**-1.0**
MAKZ	**Makanchi**	**40.47**	**312**	P	**P**	**05 23 57.1**	**-1.3**
MAKZ				IAmb	IAmb	05 24 24.1	
	comp=Z,13nm,1.1s						
MAKZ	**Makanchi**	**40.47**	**312**	P	**P**	**05 23 57.1**	**-1.3**
MAKZ				pmax	pmax		
	comp=Z,13nm,1.1s						
ZAA0	**Zalesovo Array**	**41.15**	**323**		**P**	**05 24 02.8**	**-1.1**
ZAA0				IAmb	IAmb	05 24 04.2	
	comp=Z,6.4nm,0.5s						
ZALV	**Zalesovo Beam**	**41.15**	**323**	P	**P**	**05 24 02.5**	**-1.3**
	comp=Z,5.7nm,0.4s,baz=107,slow=8.5,SNR=28						
ZALV				pP	**pwP**	**05 24 27.1**	**-0.9**
	comp=Z,3.2nm,0.5s,baz=114,slow=8.8,SNR=3.9						
ZALV				PcP	**PcP**	**05 26 00.8**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=114,slow=3.7,SNR=4.5						
ZALV				ScP	**ScP**	**05 29 41.5**	**-0.8**
	comp=Z,0.8nm,0.4s,baz=104,slow=6.3,SNR=6.1						
ZALV				LR	LR	05 42 36.0	
	comp=Z,21nm,19.7s,baz=121,slow=38						
	comp=Z,5.7nm,0.4s						
ZALV	**Zalesovo Beam**	**41.15**	**323**	P	**P**	**05 24 02.6**	**-1.2**
WUS	**Wushi**	**41.48**	**303**	P	**P**	**05 24 06.3**	**-0.5**
WUS				IAmb	IAmb	05 24 34.9	
	comp=Z,9.3nm,1.2s						
KNRA	**Kununurra**	**41.96**	**177**	P	**P**	**05 24 10.7**	**-0.1**
KDJ	**Kajisay**	**43.08**	**304**	P	**P**	**05 24 20.6**	**+0.7**
KDJ				IAmb	IAmb	05 24 47.1	
	comp=Z,7.9nm,0.9s						
KDJ	**Kajisay**	**43.08**	**304**	P	**P**	**05 24 20.6**	**+0.7**
KDJ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
COEN	**Coen**	**43.32**	**156**	P	**P**	**05 24 22.7**	**+0.9**
KURK	**Kurchatov**	**43.62**	**317**		**P**	**05 24 23.0**	**-0.9**
KURK				IAmb	IAmb	05 24 49.5	
	comp=Z,14nm,1.1s						
KURK	**Kurchatov**	**43.62**	**317**	*ceP*	**P**	**05 24 23.5**	**-0.3**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KURBB	**Kurchatov Arra**	**43.65**	**317**	P	**P**	**05 24 22.6**	**-1.4**
	comp=Z,2.3nm,0.4s,baz=106,slow=8.9,SNR=5.5						
KURBB				pP	**pP**	**05 24 46.8**	**+0.4**
	comp=Z,5.3nm,0.8s,baz=106,slow=7.9,SNR=6.3						
KURBB				PcP	**PcP**	**05 26 09.6**	**-0.1**
	comp=Z,2.1nm,0.6s,baz=111,slow=3.6,SNR=6.4						
	comp=Z,2.3nm,0.4s						
NRN	**Naryn**	**43.91**	**303**	P	**P**	**05 24 26.5**	**-0.3**
NRN				IAmb	IAmb	05 24 53.5	
	comp=Z,8.3nm,1.0s						
NRN	**Naryn**	**43.91**	**303**	P	**P**	**05 24 26.5**	**-0.3**
NRN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BOOM	**Boomskoye usch**	**44.03**	**305**	P	**P**	**05 24 28.9**	**+1.4**
BOOM	**Boomskoye usch**	**44.03**	**305**	P	**P**	**05 24 28.9**	**+1.4**
BOOM				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KSH2	**Kashi**	**44.16**	**300**	P	**P**	**05 24 27.9**	**-0.7**
KSH2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
FITZ	**Fitzroy Crossi**	**44.32**	**181**	P	**P**	**05 24 29.6**	**-0.2**
	comp=Z,10nm,0.5s,baz=11,slow=7.8,SNR=47						
	comp=Z,10nm,0.5s						
AAK	**Ala-Archa**	**45.10**	**305**	*i* P	**P**	**05 24 36.0**	**-0.1**
AAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
TIXI	**Tiksi**	**45.23**	**1**	LR	LR	05 43 27.1	
	comp=Z,36nm,21.0s,baz=204,slow=36						
WB0	**Warramunga Arr**	**46.59**	**170**		**P**	**05 24 47.7**	**0.0**
WRAB	**Tennant Creek**	**46.75**	**170**	*ceP*	**P**	**05 24 48.8**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WRA	**Warramunga Arr**	**46.76**	**170**	P	**P**	**05 24 48.8**	**-0.2**
	comp=Z,8.6nm,0.7s,baz=352,slow=8.6,SNR=66						
	comp=Z,8.6nm,0.7s						
WRA	**Warramunga Arr**	**46.76**	**170**		**P**	**05 24 47.5**	**-1.5**
WR8	**Warramunga Arr**	**46.80**	**170**		**P**	**05 24 49.2**	**-0.1**

ANM IAmb IAmb 05 26 06.1
comp=Z,3.2nm,0.8s
ANM Nome 57.00 29 P **P** **05 26 05.6 +1.1**
ANM pmax pmax
comp=Z,3.0nm,0.8s
BBOO Buckleboo 59.65 171 P **P** **05 26 22.9 -0.3**
NWAO Narrogin (SRO) 59.74 189 P **P** **05 26 24.5 +0.6**
NWAO Narrogin (SRO) 59.74 189 P **P** **05 26 24.5 +0.6**
NWAO pmax pmax
comp=Z,38nm,1.4s
STKA Stephens Creek 59.77 165 P **P** **05 26 24.5 +0.3**
comp=Z,12nn,0.6s,baz=347,slow=6.6,SNR=24
comp=Z,12nn,0.6s
L18K Granite Mounta 60.78 32 P **P** **05 26 31.9 +1.1**
L18K IAmb IAmb 05 26 33.1
comp=Z,2.6nm,0.8s
KIRV Kirov 61.17 324 *i* P **P** **05 26 33.9 +0.5**
J19K Poorman 61.22 29 **P** **05 26 34.8 +1.2**
J19K IAmb IAmb 05 26 35.5
comp=Z,5.8nm,1.0s
ARMA Armidale 61.45 155 P **P** **05 26 36.7 +1.0**
L19K White Mountain 61.65 32 **P** **05 26 38.0 +1.4**
L19K IAmb IAmb 05 26 39.1
comp=Z,11nm,1.5s
DZM Mont Dzumac 61.81 138 P **P** **05 26 39.0 +0.7**
comp=Z,11nn,0.6s,baz=176,slow=20,SNR=8.7
comp=Z,11nn,0.6s
J20K Nowinta River 61.86 29 P **P** **05 26 39.4 +1.5**
K20K Telida 61.94 30 **P** **05 26 40.2 +1.7**
K20K IAmb IAmb 05 26 40.6
comp=Z,3.4nm,0.7s
IMAR Indian Mountai 61.94 27 P **P** **05 26 38.9 +0.4**
H21K Melozitna Rive 62.35 27 P **P** **05 26 42.4 +1.2**
H21K IAmb IAmb 05 26 43.4
comp=Z,3.0nm,0.8s
I21K Tanana 62.72 28 P **P** **05 26 45.0 +1.4**
I21K IAmb IAmb 05 26 46.6
comp=Z,5.0nm,0.9s
H22K Ishtalitna Cre 62.92 27 P **P** **05 26 46.5 +1.5**
H22K IAmb IAmb 05 26 47.1
comp=Z,4.3nm,0.8s
MLY Manley 63.26 28 **P** **05 26 48.5 +1.1**
MLY IAmb IAmb 05 26 49.0
comp=Z,3.0nm,0.7s
NEA2 Nenana 64.02 29 IAmb IAmb 05 26 53.6
comp=Z,5.8nm,0.6s
MCK McKinley 64.19 29 IAmb IAmb 05 26 55.3
comp=Z,3.7nm,0.8s
RND Reindeer 64.27 30 IAmb IAmb 05 26 56.6
comp=Z,8.8nm,1.0s
ILAR Eielson Array 64.92 28 P **P** **05 26 57.5 -0.6**
comp=Z,0.6nm,0.7s,baz=253,slow=4.4,SNR=21
comp=Z,0.6nm,0.7s
ILAR Eielson Array 64.92 28 P **P** **05 26 57.8 -0.4**
ILAR Eielson Array 64.92 28 P **P** **05 26 57.8 -0.4**
HDA Harding Lake 64.95 29 P **P** **05 26 58.2 -0.2**
HDA IAmb IAmb 05 26 58.9
comp=Z,4.0nm,0.7s
F25K Christian Rive 64.99 25 P **P** **05 27 00.1 +1.6**
F25K IAmb IAmb 05 27 00.8
comp=Z,3.3nm,0.8s
CAN Canberra 65.02 160 P **P** **05 27 00.7 +1.6**
CAN Canberra 65.02 160 P **P** **05 27 00.7 +1.6**
CAN pmax pmax
comp=Z,52nm,1.5s
C27K Jago River 65.36 23 P **P** **05 27 02.1 +1.2**
C27K IAmb IAmb 05 27 02.4
comp=Z,4.2nm,0.7s
PRP Porcupine Dome 65.37 27 P **P** **05 27 01.5 +0.3**
BMAR Burnt Mountain 65.42 25 P **P** **05 27 03.2 +1.9**
K24K Donnelly Dome 65.56 29 P **P** **05 27 02.8 +0.4**
K24K IAmb IAmb 05 27 03.8
comp=Z,7.3nm,0.9s
SCRK Sand Creek 66.31 29 **P** **05 27 07.3 +0.1**
DOT Dot Lake 66.34 29 P **P** **05 27 07.5 +0.2**
DOT IAmb IAmb 05 27 08.2
comp=Z,4.3nm,0.8s
E27K Coleen River 66.38 24 P **P** **05 27 08.7 +1.2**
H27K Steamboat Moun 66.84 26 P **P** **05 27 12.0 +1.5**
M26K Nabesna, AK 67.09 30 IAmb IAmb 05 27 15.7
comp=Z,7.3nm,1.1s
F28M Old Crow 67.15 25 **P** **05 27 13.6 +1.2**
F28M IAmb IAmb 05 27 15.9
comp=Z,7.1nm,1.3s
L27K Beaver Creek, 67.46 30 P **P** **05 27 16.1 +1.6**
BCAR Beaver Creek A 67.47 30 P **P** **05 27 15.9 +1.4**
KBZ Khabaz 67.84 309 P **P** **05 27 16.8 -0.4**
comp=Z,5.4nm,1.0s,baz=207,slow=11,SNR=6.0
comp=Z,5.4nm,1.0s
KBZ Khabaz 67.84 309 *ce* P **P** **05 27 17.0 -0.1**
KBZ pmax pmax
comp=Z,5.0nm,1.0s
KIV Kislovodsk 67.93 309 *e* P **P** **05 27 18.0 +0.2**
KIV pmax pmax
comp=Z,9.0nm,1.1s
SHA1 Shidzhatmaz 68.01 309 *ce* P **P** **05 27 18.8 +0.3**
EPYK Eagle Plains 68.68 25 **P** **05 27 22.7 +0.7**
OBN Obninsk 68.72 322 *e* P **P** **05 27 21.5 -0.8**
OBN pmax pmax
comp=Z,4.0nm,0.9s
I30M Mount Dempster 69.16 27 P **P** **05 27 26.1 +1.0**
ARCES ARCESS Array B 69.23 338 P **P** **05 27 25.7 +0.4**
comp=Z,4.2nm,1.0s,baz=65,slow=6.1,SNR=4.0
comp=Z,4.2nm,1.0s
INK Inuvik 69.25 23 P **P** **05 27 25.7 +0.3**
INK IAmb IAmb 05 27 28.6
comp=Z,5.0nm,1.0s
INK Inuvik 69.25 23 P **P** **05 27 25.7 +0.3**
INK pmax pmax
comp=Z,5.0nm,1.0s
A36M Sachs Harbour 70.46 18 **P** **05 27 33.4 +0.7**
A36M IAmb IAmb 05 27 34.5
comp=Z,10nm,0.9s
M31M Drury Creek, Y 70.99 29 P **P** **05 27 37.2 +1.0**
WHY Whitehorse 71.32 31 P **P** **05 27 39.9 +1.5**
WHY IAmb IAmb 05 28 06.9
comp=Z,8.7nm,1.3s
FIA1 FINESS Array S 71.91 330 P **P** **05 27 41.0 -0.7**
FINES FINESS Array B 71.91 330 P **P** **05 27 40.8 -0.9**
comp=Z,0.9nm,0.4s,baz=61,slow=5.3,SNR=23
comp=Z,0.9nm,0.4s
C36M Paulatuk 71.99 21 P **P** **05 27 42.4 +0.4**
C36M IAmb IAmb 05 27 42.8
comp=Z,6.2nm,0.8s
RAYN Ar Rayn 72.31 288 P **P** **05 27 44.6 -0.3**
RAYN IAmb IAmb 05 27 45.8
comp=Z,3.8nm,0.5s
RAYN Ar Rayn 72.31 288 P **P** **05 27 44.6 -0.3**
RAYN pmax pmax
comp=Z,4.0nm,0.5s
MNK Minsk 73.66 323 *i* P **P** **05 27 52.6 +0.4**
comp=E,19nm,0.9s
MNK *i* P **P** **05 27 52.6 +0.4**
comp=N,11nm,0.9s
MNK *i* P **P** **05 27 52.6 +0.4**
comp=Z,9.0nm,0.9s,baz=67
MNK *i* pP **pP** **05 28 15.9 -0.5**
MNK *i* sP **sP** **05 28 28.7 +1.9**
MNK *i* PP PP 05 30 46.7 +9.5
MNK *i* PPP PPP 05 32 18.4
MNK *i* S **S** **05 37 16.8 +1.9**
MNK *i* sS **sS** **05 37 57.2 -0.2**
MNK *i* SS **SS** **05 42 02.8 +3.5**
MNK *i* SSS SSS 05 45 24.5
MNK Minsk 73.66 323 *i* P **P** **05 27 52.6 +0.4**
MNK *i* *PP **pP** **05 28 15.9 -0.5**
MNK *i* *SP **sP** **05 28 28.6 +1.9**
MNK *i* 05 30 46.6
MNK *i* PPP PPP 05 32 18.3
MNK *i* S **S** **05 37 16.7 +1.9**
MNK *i* *SS **sS** **05 37 57.1 -0.2**
MNK *i* SS **SS** **05 42 02.8 +3.5**
MNK pmax pmax
comp=E,19nm,0.9s
MNK pmax pmax
comp=Z,9.0nm,0.9s
MNK pmax pmax
comp=N,11nm,0.9s
AKASG Malin Array Be 74.37 319 P **P** **05 27 55.1 -1.2**
comp=N,1.4nm,0.4s,baz=62,slow=6.4,SNR=14
comp=N,1.4nm,0.4s
AKASG Malin Array Be 74.37 319 P **P** **05 27 55.5 -0.9**
AKASG IAmb IAmb 05 27 56.4
comp=Z,5.8nm,1.2s
AKASG Malin Array Be 74.37 319 P **P** **05 27 55.5 -0.9**
AKASG pmax pmax
comp=Z,6.0nm,1.2s
AKBB Malin Array Si 74.37 319 P **P** **05 27 55.4 -1.0**
AKBB IAmb IAmb 05 28 21.2
comp=Z,7.9nm,1.2s
AKBB Malin Array Si 74.37 319 P **P** **05 27 55.4 -1.0**
AKBB pmax pmax
comp=Z,8.0nm,1.3s
KIEV Kiev 74.38 319 P **P** **05 27 55.5 -0.9**
KIEV IAmb IAmb 05 28 21.2
comp=Z,7.0nm,1.2s
KIEV Kiev 74.38 319 P **P** **05 27 55.5 -0.9**
KIEV pmax pmax
comp=Z,7.0nm,1.3s
RES Resolute Bay 75.58 10 **P** **05 28 02.8 -0.1**
RES Resolute Bay 75.58 10 P **P** **05 28 02.8 -0.1**
RES pmax pmax
comp=Z,3.0nm,0.8s
BR131 Keskin Array S 75.70 307 P **P** **05 28 04.0 -0.5**
BR131 Keskin Array S 75.70 307 P **P** **05 28 04.0 -0.5**
BR131 pmax pmax
comp=Z,2.0nm,0.9s
BRTR Keskin Array B 75.70 307 P **P** **05 28 03.2 -1.2**
comp=Z,2.1nm,0.8s,baz=117,slow=2.9,SNR=8.9
comp=Z,2.1nm,0.8s
BRTR Keskin Array B 75.70 307 P **P** **05 28 04.1 -0.3**
BRTR Keskin Array B 75.70 307 *ce* P **P** **05 28 04.0 -0.5**
BRTR pmax pmax
comp=Z,1.0nm,0.5s
CSS Mathiatis 77.80 303 P **P** **05 28 15.4 -0.8**
CSS IAmb IAmb 05 28 18.7
comp=Z,4.7nm,0.7s
HFS Hagfors 77.90 332 P **P** **05 28 14.6 -1.7**
comp=Z,2.4nm,0.8s,baz=82,slow=3.1,SNR=7.0
comp=Z,2.4nm,0.8s
BUR08 Bucovina Ar. S 78.04 317 P **P** **05 28 17.2 -0.2**
BURAR Bucovina Array 78.04 317 P **P** **05 28 17.2 -0.2**
NOA NORSAR Array B 78.43 333 P **P** **05 28 17.6 -1.6**
comp=Z,1.8nm,0.9s,baz=56,slow=6.0,SNR=2.3
comp=Z,1.8nm,0.9s
YKAW3 Yellowknife Wh 78.88 24 **P** **05 28 22.5 +0.9**
YKAW3 IAmb IAmb 05 28 24.4
comp=Z,8.4nm,1.4s
YKA Yellowknife Ar 78.92 24 P **P** **05 28 21.9 +0.1**
comp=Z,1.6nm,0.9s,baz=306,slow=6.4,SNR=18
comp=Z,1.6nm,0.9s
YKA Yellowknife Ar 78.92 24 P **P** **05 28 22.4 +0.6**
YKA Yellowknife Ar 78.92 24 *ce* P **P** **05 28 22.7 +0.9**
YKA pmax pmax
comp=Z,1.0nm,0.8s
YKAW1 Yellowknife Wh 78.97 24 **P** **05 28 23.4 +1.3**
YKAW1 IAmb IAmb 05 28 24.9
comp=Z,8.4nm,1.4s
STHS Stebnicka Huta 79.56 320 *e* P **P** **05 28 27.1 +1.5**
STHS Stebnicka Huta 79.56 320 *e* P **P** **05 28 27.1 +1.5**
ELL Elmali 79.59 306 P **P** **05 28 25.3 -0.8**
ELL Elmali 79.59 306 P **P** **05 28 25.3 -0.8**
ELL pmax pmax
comp=Z,20nm,1.4s
POIN Pond Inlet 79.68 7 P **P** **05 28 25.7 0.0**
URZ Urewera 79.93 142 LR LR 06 04 01.8
comp=Z,23nm,18.0s,baz=34,slow=36
KECS Kecovo 80.45 320 *e* P **P** **05 28 30.9 +0.5**
KECS Kecovo 80.45 320 *e* P **P** **05 28 30.9 +0.5**
LANS Liptovska Anna 80.71 321 *e* P **P** **05 28 32.9 +1.1**
LANS Liptovska Anna 80.71 321 *e* P **P** **05 28 32.9 +1.1**
ILON Igloolik, Nuna 82.23 10 **P** **05 28 39.7 +0.4**
ILON IAmb IAmb 05 28 40.3
comp=Z,8.2nm,1.2s
BLKN Baker Lake 83.60 17 P **P** **05 28 46.3 -0.1**
GERES GERESS Array B 84.10 322 P **P** **05 28 48.2 -1.3**
comp=Z,0.7nm,0.6s,baz=48,slow=8.0,SNR=7.7
comp=Z,0.7nm,0.6s
ITM Ithomi 85.07 309 P **P** **05 28 53.4 -1.2**
FUORN Ofenpass-Fuorn 87.28 322 P **P** **05 29 05.4 -0.1**
FUORN IAmb IAmb 05 29 11.3
comp=Z,4.2nm,0.9s
FCC Fort Churchill 88.62 20 P **P** **05 29 11.8 +0.6**
FCC IAmb IAmb 05 29 38.0
comp=Z,5.0nm,1.1s
FCC Fort Churchill 88.62 20 P **P** **05 29 11.8 +0.6**
FCC pmax pmax
comp=Z,5.0nm,1.1s
NVAR Mina Array Bea 91.40 45 P **P** **05 29 26.3 +1.4**
comp=Z,0.4nm,0.4s,baz=290,slow=7.3,SNR=4.5
comp=Z,0.4nm,0.4s
PDAR Pinedale Array 93.89 38 P **P** **05 29 35.8 -0.6**
comp=Z,0.4nm,0.7s,baz=335,slow=2.1,SNR=4.1
comp=Z,0.4nm,0.7s
PDAR Pinedale Array 93.89 38 P **P** **05 29 35.6 -0.8**

KRNET ***15*** *05:17:23.9±0.1, 41°.74N×79°.45E, h18km, mb2.7*
NNC ***15*** *05:17:24.9±2.2, 41°.87N×79°.42E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=15.2km s-min=10.3km az=155.0*
SOME ***15*** *05:17:24.4, 41°.88N×79°.45E, h5km*
ISC 15 05:17:21.2±2.4, 41°.66N±0°.08×79°.56E±0°.06, h9km±13km, n30, σ1$27/47, 9C-3D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
PRZ	**Przheval'sk**	**1.19**	**314**	⇑ *i*	P	**05 17 44.6**	**+0.5**
PRZ				⇑ *i*	S	**05 17 59.5**	**-0.1**
TARG	**Taragay, Kyrgy**	**1.31**	**274**	⇑ *i*	P	**05 17 47.2**	**+0.9**
TARG				⇑ *i*	S	**05 18 04.2**	**+0.7**
SHLS	**Shalkode**	**1.50**	**357**	*eP*		**05 17 50.6**	**+0.7**
	17nm,0.2s						
SHLS				*eS*		**05 18 09.8**	**+0.4**
	77nm,0.4s						
KDJ	**Kajisay**	**1.83**	**286**	⇑ *i*	P	**05 17 55.8**	**+0.8**
KDJ				⇑ *i*	S	**05 18 19.2**	**-1.0**
KTMS	**Ketmen**	**1.88**	**18**	*eP*		**05 17 54.2**	**+0.6**
	1.6nm,0.2s						
KTMS				*eS*		**05 18 15.8**	**-1.8**
	5.1nm,0.2s						
KPKS	**Kokpek**	**1.92**	**341**	*eP*		**05 17 57.3**	**+0.9**
	0.3nm,0.1s						
KPKS				*eS*		**05 18 21.1**	**-1.8**
	46nm,0.4s						
KURS	**Kuram**	**2.10**	**331**	Pg		**05 18 00.3**	**+0.9**
	5.3nm,0.5s						
KURS				Lg		05 18 26.2	
	20nm,0.6s						
TNSS	**Tian-Shan**	**2.38**	**306**	Pg		**05 18 05.7**	**+1.3**
	0.8nm,0.2s						
TNSS				Lg		05 18 35.3	
	4.7nm,0.3s						
TNSS	**Tian-Shan**	**2.38**	**306**	*eP*		**05 18 05.7**	**+1.3**
	0.8nm,0.2s						
TNSS				*eS*		**05 18 35.3**	**-2.2**
	4.7nm,0.3s						
MDOK	**Medeo**	**2.39**	**310**	Pg		**05 18 05.7**	**+1.3**
	5.1nm,0.2s						
MDOK				Lg		05 18 35.4	
	49nm,0.6s						
KOTS	**Kotyrbulak**	**2.40**	**312**	Pg		**05 18 06.4**	**-0.8**
	7.0nm,0.2s						
KOTS				Lg		05 18 36.7	
	62nm,0.6s						
KOTS	**Kotyrbulak**	**2.40**	**312**	*eP*		**05 18 06.4**	**-0.8**
	7.0nm,0.2s						
KOTS				*eS*		**05 18 36.7**	**-1.5**
	62nm,0.6s						
KNDC	**Almaty**	**2.47**	**310**	⇓ Pg		**05 18 04.1**	**-1.7**
	18nm,0.5s						
KNDC				⇑ Lg		05 18 32.4	
	28nm,0.7s						
ULHL	**Ulahol**	**2.54**	**284**	⇓ *i*	P	**05 18 06.7**	**-0.4**
ULHL				⇓ *i*	S	**05 18 37.9**	**-0.6**
BLB	**Baldybastay**	**2.56**	**342**	Pg		**05 18 08.2**	**+0.8**
	9.8nm,0.2s						
BLB				Lg		05 18 39.8	
	43nm,0.5s						
DJR	**Jarkent**	**2.68**	**4**	Pg		**05 18 09.2**	**-0.2**
	1.1nm,0.2s						
DJR				Lg		05 18 41.7	
	8.4nm,0.2s						
DJR	**Jarkent**	**2.68**	**4**	*eP*		**05 18 09.2**	**-0.2**
	1.1nm,0.2s						
DJR				*eS*		**05 18 41.7**	**-0.7**
	8.4nm,0.2s						
KNOS	**Konyrlen**	**2.71**	**354**	Pg		**05 18 10.5**	**+0.5**
	1.7nm,0.2s						
KNOS				Lg		05 18 43.9	
	8.0nm,0.3s						
MTBS	**Maitube**	**2.74**	**303**	Pg		**05 18 12.1**	**+1.6**
	1.5nm,0.2s						
MTBS				Lg		05 18 46.3	
	9.5nm,0.3s						
MTBS	**Maitube**	**2.74**	**303**	*eP*		**05 18 12.1**	**+1.6**
	1.5nm,0.2s						
MTBS				*eS*		**05 18 46.3**	**-3.0**
	9.5nm,0.3s						
BOOM	**Boomskoye usch**	**2.82**	**288**	⇑ *i*	P	**05 18 10.3**	**-1.5**
BOOM				⇑ *i*	S	**05 18 44.4**	**-2.0**
ARXS	**Arharly**	**2.85**	**334**	Pg		**05 18 13.0**	**+0.7**
	1.5nm,0.3s						
ARXS				Lg		05 18 48.0	
	22nm,0.5s						
ARXS	**Arharly**	**2.85**	**334**	*eP*		**05 18 13.0**	**+0.7**
	1.5nm,0.3s						
ARXS				*eS*		**05 18 48.0**	**+0.6**
	22nm,0.5s						
KST	**Kastek**	**3.00**	**299**	Pg		**05 18 15.8**	**+1.0**
	2.4nm,0.4s						
KST				Lg		05 18 53.3	
	14nm,0.7s						
KST	**Kastek**	**3.00**	**299**	*eP*		**05 18 15.8**	**+1.0**
	2.4nm,0.4s						
KST				*eS*		**05 18 53.3**	**+1.6**
	14nm,0.7s						
DGS	**Degeres**	**3.22**	**301**	Pg		**05 18 19.5**	**+0.9**
	2.4nm,0.4s						
DGS				Lg		05 18 59.3	
	7.2nm,0.7s						
DGS	**Degeres**	**3.22**	**301**	*eP*		**05 18 19.5**	**+0.9**
	2.4nm,0.4s						
DGS				*eS*		**05 18 59.3**	**+1.4**
	7.2nm,0.7s						
KUU	**Kurty**	**3.25**	**314**	*eP*		**05 18 23.9**	**+0.3**
	0.6nm,0.3s						
KUU				*eS*		**05 19 06.8**	**+1.0**
	12nm,0.5s						
KRBS	**Karabastau**	**3.51**	**307**	Pg		**05 18 24.7**	**+1.2**
	0.8nm,0.5s						
KRBS				Lg		05 19 08.4	
	7.1nm,0.4s						
KRBS	**Karabastau**	**3.51**	**307**	*eP*		**05 18 24.7**	**+1.2**
	0.8nm,0.5s						
KRBS				*eS*		**05 19 08.4**	**+2.0**
	7.1nm,0.4s						

CFUSG ***15*** *05:36:00.8, 44°.55N×36°.92E, h10km, MD3.6/9, MSH3.9/9*
MCSM ***15*** *05:36:00.9±0.3, 45°.N±2°×3°.7E±°, h41km±5km, mb4.5, mB5.3, MLv4.7, Mw(mB)4.7*
MOS ***15*** *05:36:00.6±1.6, 44°.80N×37°.09E, h41km±16km, mb3.7/15, mbtmp3.9/24, ML4.3/7, MS2.9/15, Error ellipse: s-maj=14.6km s-min=11.9km az=164.0*
NEIC ***15*** *05:36:00.6±1.6, 44°.88N±0°.04×37°.11E±0°.09, h38km±7km, mb4.3/16, Error ellipse: s-maj=9.4km s-min=5.7km az=79.0*
PRU ***15*** *05:36:04.6, 48°.87N×38°.69E, h1km*
AFAD ***15*** *05:36:06.0, 44°.39N×37°.15E, h69km±81km, MW4.0*
ISC 15 05:36:00.5±0.6, 44°.71N±0°.03×37°.12E±0°.02, h45km±6km, n318, σ1$96/408, mb4.0/24, MS3.5/5, 28C-28D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
SUKR	**Sukko**	**0.24**	**69**	⇓ *iP*		**Pn**	**05 36 09.6**	**+1.1**
SUKR				*eS*		**Sn**	**05 36 15.4**	**+1.2**
ANN	**Anapa**	**0.24**	**69**	*i* Pg		**Pn**	**05 36 09.6**	**+1.1**
ANN				*e*Sg		**Sn**	**05 36 15.3**	**+1.1**
ANN	**Anapa**	**0.24**	**69**	⇓ *iP*		**Pn**	**05 36 09.6**	**+1.1**
ANN				*i* S		**Sn**	**05 36 15.3**	**+1.1**
TMNR	**Tamanskiy**	**0.50**	**332**	*e*Pg		**Pn**	**05 36 14.6**	**+3.2**
TMNR				*e*Sg		**Sn**	**05 36 24.7**	**+5.5**
TMNR	**Tamanskiy**	**0.50**	**332**	*i* P		**Pn**	**05 36 14.7**	**+3.3**
TMNR				*e*S		**Sn**	**05 36 24.2**	**+5.0**
GLDR	**Gladkovskiy**	**0.51**	**58**	*i* Pg		**Pn**	**05 36 12.9**	**+1.4**
GLDR				*e*Sg		**Sn**	**05 36 20.9**	**+1.5**
GLDR	**Gladkovskiy**	**0.51**	**58**	⇓ *iP*		**Pn**	**05 36 13.0**	**+1.4**
GLDR				*e*S		**Sn**	**05 36 20.1**	**+0.7**
SPGR	**Shapsug**	**0.68**	**87**	⇓ *iP*		**Pn**	**05 36 15.5**	**+1.7**
SPGR				*e*S		**Sn**	**05 36 25.8**	**+2.5**
KERU	**Kerch**	**0.76**	**322**	*e*Pg		**Pn**	**05 36 18.1**	**+3.3**
KERU				*e*Sg		**Sn**	**05 36 31.5**	**+6.4**
KERU	**Kerch**	**0.76**	**322**	⇑ *eP*		**Pn**	**05 36 18.1**	**+3.3**
KERU	**Kerch**	**0.76**	**322**	*e*Pg		**Pn**	**05 36 18.1**	**+3.3**
KERU				pmax	pmax		05 36 18.7
	comp=Z,370nm,0.3s						
KERU				*ex*		x	05 36 31.9
KERU				smax	smax		05 36 33.0
	comp=N,1μm,0.4s						
KERU				smax	smax		05 36 33.2
	comp=E,723nm,0.5s						
FEO	**Feodosiya**	**1.27**	**285**	*eP*		**Pn**	**05 36 22.8**	**+1.1**
FEO				*e*			05 36 39.2
FEO	**Feodosiya**	**1.27**	**285**	*e*Pg		**Pn**	**05 36 22.8**	**+1.1**
FEO				pmax	pmax		05 36 23.2
	comp=Z,178nm,0.2s						
FEO				*e*Sg		**Sn**	**05 36 39.2**	**+1.7**
FEO				smax	smax		05 36 41.1
	comp=N,2μm,0.3s						
FEO				smax	smax		05 36 42.5
	comp=E,957nm,0.3s						
KGUR	**Krasnodar**	**1.40**	**77**	*i* P		**Pn**	**05 36 26.5**	**+3.1**
KGUR				*e*			05 36 46.5
SUDU	**Sudak**	**1.52**	**277**	⇓ *iP*		**Pn**	**05 36 25.6**	**+0.5**
SUDU				*e*S		**Sn**	**05 36 44.0**	**+0.4**
SUDU	**Sudak**	**1.52**	**277**	⇓ *iP*		**Pn**	**05 36 25.6**	**+0.5**
SUDU				P			05 36 26.0
	comp=Z,592nm,0.2s						
SUDU				*e*S		**Sn**	**05 36 44.1**	**+0.4**
SUDU				S			05 36 45.6
	comp=E,798nm,0.3s						
SUDU				S			05 36 46.4
	comp=N,2μm,0.4s						
GOYR	**Goytkh**	**1.68**	**105**	*e*Pg		**Pn**	**05 36 28.9**	**+1.5**
GOYR				*e*Sg		**Sn**	**05 36 48.3**	**+0.5**
GOYR	**Goytkh**	**1.68**	**105**	⇑ *eP*		**Pn**	**05 36 28.9**	**+1.5**
GOYR				*e*S		**Sn**	**05 36 48.3**	**+0.5**
MRNR	**Maryino**	**1.86**	**114**	⇑ *iP*		**Pn**	**05 36 31.1**	**+1.2**
MRNR				*e*S		**Sn**	**05 36 53.2**	**+1.0**
ALU	**Alushta**	**1.94**	**270**	*eP*		**Pn**	**05 36 31.0**	**+0.2**
ALU				*e*			05 36 53.8
ALU	**Alushta**	**1.94**	**270**	*eP*		**Pn**	**05 36 31.0**	**+0.2**
ALU				P			05 36 33.5
	comp=Z,108nm,0.2s						
ALU				*e*S		**Sn**	**05 36 53.8**	**-0.1**
ALU				S			05 36 57.5
	comp=N,2μm,0.3s						
ALU				S			05 36 57.6
	comp=E,1μm,0.3s						
YAL	**Yalta**	**2.13**	**265**	*e*Pg		**Pn**	**05 36 34.8**	**+1.3**
YAL				*e*Sg		**Sn**	**05 36 59.8**	**+1.1**
YAL	**Yalta**	**2.13**	**265**	*eP*		**Pn**	**05 36 34.9**	**+1.4**
YAL				*e*			05 36 59.8
YAL	**Yalta**	**2.13**	**265**	*eP*		**Pn**	**05 36 34.9**	**+1.4**
YAL				P			05 36 35.5
	comp=Z,371nm,0.2s						
YAL				*e*S		**Sn**	**05 36 59.8**	**+1.1**
YAL				S			05 37 01.4
	comp=E,1μm,0.3s						
YAL				S			05 37 01.6
	comp=N,815nm,0.2s						
SIM	**Simferopol'**	**2.15**	**277**	*i* Pg		**Pn**	**05 36 35.5**	**+1.7**
SIM				*e*Sg		**Sn**	**05 37 00.5**	**+1.3**
SIM	**Simferopol'**	**2.15**	**277**	⇓ *iP*		**Pn**	**05 36 35.5**	**+1.7**
SIM				*e*S		**Sn**	**05 37 00.5**	**+1.3**
SIM	**Simferopol'**	**2.15**	**277**	⇓ *iP*		**Pn**	**05 36 35.4**	**+1.7**
SIM				P			05 36 35.9
	comp=Z,352nm,0.3s						
SIM				*e*S		**Sn**	**05 37 00.6**	**+1.3**
SIM				S			05 37 00.9
	comp=N,553nm,0.3s						
SIM				S			05 37 01.8
	comp=E,752nm,0.2s						
SOC	**Sochi**	**2.19**	**120**	*eP*		**Pn**	**05 36 35.8**	**+1.5**
SOC				*e*S		**Sn**	**05 37 01.5**	**+1.4**
VSLR	**Vesyoloye**	**2.44**	**120**	*i* Pn		**Pn**	**05 36 39.3**	**+1.4**
VSLR				*e*Sn		**Sn**	**05 37 07.0**	**+0.6**
VSLR	**Vesyoloye**	**2.44**	**120**	⇓ *iP*		**Pn**	**05 36 39.3**	**+1.4**
VSLR				*e*S		**Sn**	**05 37 07.1**	**+0.6**
SEV	**Sevastopol'**	**2.47**	**267**	⇑ *iP*		**Pn**	**05 36 39.4**	**+1.3**
SEV				*e*			05 37 07.8
SEV	**Sevastopol'**	**2.47**	**267**	⇑ *iP*		**Pn**	**05 36 39.4**	**+1.3**

SEV P 05 36 39.6
comp=Z,117nm,0.3s
SEV eS Sn 05 37 07.8 +0.8
SEV S S 05 37 10.5 +3.5
comp=N,621nm,0.4s
SEV S S 05 37 10.5 +3.5
comp=E,375nm,0.3s
RPOR Krasnaya Polya 2.48 113 *e*Pn Pn **05 36 39.4 +0.9**
RPOR eSn Sn **05 37 08.2 +0.7**
RPOR Krasnaya Polya 2.48 113⇑ *i*P Pn **05 36 39.3 +0.9**
RPOR eS Sn **05 37 07.8 +0.4**
LABN Labinsk 2.57 90 *e*Pn Pn **05 36 42.2 +2.6**
LABN eSn Sn **05 37 12.8 +3.1**
LABN Labinsk 2.57 90 *e*P Pn **05 36 42.2 +2.6**
LABN eS Sn **05 37 11.1 +1.4**
ERBR Yeremizino-Bor 2.58 66 *e*Pn Pn **05 36 41.4 +1.7**
ERBR eSn Sn **05 37 11.0 +1.1**
ERBR Yeremizino-Bor 2.58 66 *e*P Pn **05 36 41.5 +1.8**
ERBR eS Sn **05 37 10.7 +0.8**
DNZ2 Donuzlav2 2.84 285 *e*Pn Pn **05 36 45.5 +2.2**
DNZ2 eSn Sn **05 37 17.2 +1.0**
DNZ2 Donuzlav2 2.84 285 *e*P Pn **05 36 45.5 +2.2**
DNZ2 P 05 36 47.1
comp=Z,165nm,0.3s
DNZ2 eS Sn **05 37 17.7 +1.4**
DNZ2 S 05 37 19.0
comp=N,751nm,0.2s
DNZ2 S 05 37 20.6
comp=E,824nm,0.3s
GRYR Gornoye 2.91 100 *e*Pn Pn **05 36 45.5 +1.2**
GRYR eSn Sn **05 37 18.1 +0.1**
GRYR Gornoye 2.91 100⇑ *e*P Pn **05 36 45.5 +1.2**
GRYR eS Sn **05 37 18.1 +0.1**
SNOP Sinop 3.03 208 Pn **05 36 47.4 +1.5**
SNOP Sn Sn **05 37 21.2 +0.3**
SINO SINOP_Merkez 3.03 208 P Pn **05 36 47.6 +1.6**
TARU Tarkhankut 3.32 283 *i* Pn Pn **05 36 51.4 +1.6**
TARU eSn Sn **05 37 29.4 +1.5**
TARU Tarkhankut 3.32 283 *e*P Pn **05 36 51.3 +1.6**
TARU P 05 37 00.4
comp=Z,111nm,0.3s
TARU eS Sn **05 37 29.1 +1.2**
TARU S 05 37 30.2
comp=N,508nm,0.2s
TARU S 05 37 32.1
comp=E,397nm,0.3s
SAMS Samsun-Alacam 3.42 192 P Pn **05 36 53.5 +2.3**
SAMS S Sn **05 37 31.2 +0.7**
SAMS IAML 05 37 34.0
comp=E,423nm,0.3s
SAMS IAML 05 37 34.0
comp=E,564nm,0.2s
NVNR Nevinnomyssk 3.46 90 *e*Pn Pn **05 36 53.6 +1.8**
NVNR *i* Sn Sn **05 37 31.7 +0.2**
NVNR Nevinnomyssk 3.46 90 *e*P Pn **05 36 53.6 +1.8**
NVNR *i* S Sn **05 37 31.7 +0.2**
DOMR Dombai 3.55 112 *e*Pn Pn **05 36 55.4 +2.2**
DOMR eSn Sn **05 37 35.2 +1.3**
DOMR Dombai 3.55 112 *e*P Pn **05 36 55.0 +1.8**
DOMR eS Sn **05 37 31.6 -2.3**
BZK Bozkurt 3.57 221⇑P Pn **05 36 55.3 +2.1**
BZK ⇑S Sn **05 37 35.9 +1.8**
BZK Bozkurt 3.57 221 Pn **05 36 55.5 +2.2**
BZK Bozkurt 3.57 221 Pn Pn **05 36 55.3 +2.1**
BOYA Sinop/Boyabat- 3.64 210 P Pn **05 36 56.8 +2.5**
BOYA S Sn **05 37 37.2 +1.1**
BOYA IAML 05 37 38.0
comp=E,862nm,0.4s
BOYA IAML 05 37 38.0
comp=E,1µm,0.5s
ORDU Ordu-Boztepe 3.76 171 P Pn **05 36 57.1 +1.1**
ORDU IAML 05 37 40.0
comp=E,412nm,0.3s
ORDU IAML 05 38 53.0
comp=E,4.4nm,3.8s
ERBA Erbaa 4.04 184 P Pn **05 37 01.7 +2.0**
ERBA S Sn **05 37 45.1 -0.7**
ERBA IAML 05 37 47.0
comp=E,445nm,0.4s
ERBA IAML 05 37 49.0
comp=E,283nm,0.3s
KAGI orum-Kargı 4.06 209 P Pn **05 37 02.9 +2.8**
KAGI S Sn **05 37 48.1 +1.7**
KAGI IAML 05 37 50.0
comp=E,228nm,0.4s
KAGI IAML 05 37 51.0
comp=E,183nm,0.4s
KIV Kislovodsk 4.07 99⇓P Pn **05 37 00.4 +0.2**
KIV ⇓S Sn **05 37 47.6 +1.0**
KIV Kislovodsk 4.07 99 Pn **05 37 00.5 +0.2**
KIV Kislovodsk 4.07 99 *e*Pn Pn **05 37 01.1 +0.9**
KIV eSn Sn **05 37 47.1 +0.5**
KIV Kislovodsk 4.07 99 *e*P Pn **05 37 01.2 +1.0**
KIV eS Sn **05 37 47.2 +0.6**
KIV Kislovodsk 4.07 99 Pn Pn **05 37 00.6 +0.4**
KIV Sn Sn **05 37 48.3 +1.7**
KIV0 Kislovodsk Arr 4.07 99 *e*Pn Pn **05 37 01.2 +0.9**
KIV0 eSn Sn **05 37 47.2 +0.4**
KVAR Kislovodsk Arr 4.07 99 P Pn **05 37 01.4 +1.1**
comp=E,4.2nm,0.5s,baz=75,slow=22,SNR=2.5
KVAR S Sn **05 37 44.7 -2.1**
comp=E,66nm,0.2s,baz=102,slow=20,SNR=10
SHA1 Shidzhatmaz 4.10 102 *e*Pn Pn **05 37 01.6 +0.8**
SHA1 eSn Sn **05 37 49.5 +1.9**
SHA1 Shidzhatmaz 4.10 102 *e*P Pn **05 37 01.6 +0.8**
SHA1 eS Sn **05 37 47.5 -0.1**
ALER Alexandrovskoy 4.13 87 *e*Pn Pn **05 37 02.7 +1.7**
ALER eSn Sn **05 37 48.0 -0.1**
ALER Alexandrovskoy 4.13 87⇓ *e*P Pn **05 37 02.7 +1.7**
ALER eS Sn **05 37 48.0 -0.1**
BEYR Belyy Ugol+ 4.15 98 *e*Pn Pn **05 37 02.2 +1.0**
BEYR eSn Sn **05 37 49.3 +0.8**
BEYR Belyy Ugol+ 4.15 98 *e*P Pn **05 37 02.2 +1.0**
BEYR eS Sn **05 37 49.3 +0.8**
CIDE Kastamonu/Cide 4.16 229⇑P Pn **05 37 03.5 +2.2**
AMSY Amasya-Merkez 4.18 194 P Pn **05 37 04.3 +2.5**
AMSY S Sn **05 37 49.4 0.0**
AMSY IAML 05 37 52.0
comp=E,649nm,0.7s
AMSY IAML 05 37 52.0
comp=E,577nm,0.6s
GOF Gofitskoye 4.23 83 *e*P Pn **05 37 02.3 0.0**
GOF eS Sn **05 37 51.3 +1.0**
KBZ Khabaz 4.27 101 P Pn **05 37 03.4 +0.5**
comp=E,4.4nm,0.3s,baz=287,slow=8.7,SNR=26
KBZ S Sn **05 37 49.1 -2.3**
comp=E,26nm,0.3s,baz=304,slow=7.3,SNR=9.0
KBZ LR LR 05 39 10.2
comp=E,97nm,20.2s,baz=222,slow=44
KBZ Khabaz 4.27 101⇑ *e*P Pn **05 37 04.1 +1.2**
KBZ eS Sn **05 37 52.8 +1.4**
NEUR Neytrino 4.28 108 *e*Pn Pn **05 37 06.0 +2.8**
NEUR eSn Sn **05 37 52.6 +0.5**
NEUR Neytrino 4.28 108 *e*P Pn **05 37 05.5 +2.3**
NEUR eS Sn **05 37 51.5 -0.5**
RSDY Resadiye-TOKAT 4.32 178 P Pn **05 37 05.2 +1.6**
RSDY S Sn **05 37 52.4 -0.2**
RSDY IAML 05 37 54.0
comp=E,343nm,0.7s
RSDY IAML 05 37 56.0
comp=E,396nm,0.3s
PYA1 Pyatigorsk 4.33 97 *e*Pn Pn **05 37 04.7 +0.9**
PYA1 eSn Sn **05 37 53.5 +0.4**
PYA1 Pyatigorsk 4.33 97 *e*P Pn **05 37 04.7 +0.9**
PYA1 eS Sn **05 37 53.5 +0.4**
AYAZ Ayas K¶y, M 4.36 203 P Pn **05 37 07.2 +2.9**
AYAZ S Sn **05 37 54.1 +0.3**
AYAZ IAML 05 37 56.0
comp=E,132nm,0.4s
AYAZ IAML 05 37 56.0
comp=E,149nm,0.4s
TOKA Tokat 4.41 186 Pn **05 37 07.5 +2.6**
TOKA Tokat 4.41 186 P Pn **05 37 07.9 +3.0**
TOKA S Sn **05 37 49.2 -5.8**
TOKA IAML 05 37 58.0
comp=E,113nm,0.4s
TOKA IAML 05 38 00.0
comp=E,205nm,0.5s
ILGA Ilgaz 4.43 216 Pn Pn **05 37 07.8 +2.5**
ALUC Giresun/Alucra 4.53 164 P Pn **05 37 08.7 +2.0**
ALUC S Sn **05 37 56.3 -1.9**
ALUC IAML 05 37 59.0
comp=E,574nm,0.4s
ALUC IAML 05 38 03.0
comp=E,514nm,0.4s
SUSE Susehri 4.57 170 P Pn **05 37 09.4 +2.2**
SUSE S Sn **05 37 59.4 +0.2**
SUSE IAML 05 38 02.0
comp=E,364nm,0.3s
SUSE IAML 05 38 03.0
comp=E,270nm,0.2s
KBTC Kuba-Taba 4.61 99 *e*Pn Pn **05 37 10.4 +2.8**
KBTC eSn Sn **05 38 02.2 +2.4**
KBTC Kuba-Taba 4.61 99 *e*P Pn **05 37 10.4 +2.8**
KBTC eS Sn **05 38 02.2 +2.4**
YENC ankr-Yen 4.70 212 P Pn **05 37 11.7 +2.9**
YENC IAML 05 38 12.0
comp=E,52nm,0.6s
YENC IAML 05 38 14.0
comp=E,60nm,0.6s
COAL Corum-Alaca 4.72 200 P Pn **05 37 12.6 +3.3**
COAL S Sn **05 38 03.5 +0.7**
COAL IAML 05 38 04.0
comp=E,111nm,0.6s
COAL IAML 05 38 05.0
comp=E,96nm,0.9s
NE56 Odesa 4.78 296 Pn Pn **05 37 09.3 -0.5**
CKRK Yozgat, Cekere 4.79 195 P Pn **05 37 12.8 +2.7**
CKRK S Sn **05 38 04.6 +0.2**
CKRK IAML 05 38 07.0
comp=E,63nm,0.9s
CKRK IAML 05 38 09.0
comp=E,63nm,0.4s
KELT Kelkit 4.83 160 P Pn **05 37 13.2 +2.5**
KELT S Sn **05 38 04.6 -0.8**
KELT IAML 05 38 07.0
comp=E,412nm,0.3s
KELT IAML 05 38 09.0
comp=E,342nm,0.2s
SUNG orum-Sungurl 4.99 206 P Pn **05 37 16.0 +3.1**
SUNG S Sn **05 38 09.1 -0.3**
SUNG IAML 05 38 12.0
comp=E,58nm,0.6s
SUNG IAML 05 38 13.0
comp=E,104nm,0.8s
DIGR Digorskoe uzhe 5.02 109 *e*Pn Pn **05 37 15.7 +2.4**
DIGR eSn Sn **05 38 08.5 -1.6**
DIGR Digorskoe uzhe 5.02 109 *e*P Pn **05 37 15.7 +2.4**
DIGR eS Sn **05 38 08.5 -1.6**
HACI Hacifakili, Ak 5.11 192 P Pn **05 37 17.6 +3.1**
HACI S Sn **05 38 12.9 +0.6**
HACI IAML 05 38 14.0
comp=E,54nm,0.6s
HACI IAML 05 38 15.0
comp=E,58nm,0.3s
YOZG Bozok Univ. Me 5.22 200 P Pn **05 37 18.6 +2.5**
YOZG S Sn **05 38 14.6 -0.5**
YOZG IAML 05 38 18.0
comp=E,34nm,0.5s
YOZG IAML 05 38 19.0
comp=E,40nm,0.5s
DELI KIRIKKALE 5.27 208 P Pn **05 37 19.1 +2.3**
DELI S Sn **05 38 15.7 -0.6**
DELI IAML 05 38 18.0
comp=E,34nm,0.7s
DELI IAML 05 38 19.0
comp=E,31nm,0.4s
KORR Kora 5.28 106 *e*Pn Pn **05 37 18.5 +1.7**
KORR eSn Sn **05 38 13.8 -2.5**
KORR Kora 5.28 106 *e*P Pn **05 37 18.5 +1.7**
KORR eS Sn **05 38 13.8 -2.5**
KOPT Kop Dagi 5.32 151 Pn **05 37 21.2 +3.7**
ARNR Ardon 5.40 104 *e*Pn Pn **05 37 19.7 +1.3**
ARNR eSn Sn **05 38 20.5 +1.3**
ARNR Ardon 5.40 104 *e*P Pn **05 37 19.7 +1.3**
ARNR eS Sn **05 38 20.5 +1.3**
PURM Purcari 5.40 292⇓P Pn **05 37 18.4 +0.1**
PURM Purcari 5.40 292 Pn Pn **05 37 18.8 +0.5**
comp=E,0.9nmcomp=E,4µmcomp=E,52nm,0.8s
ALIG Mtskhetisjvari 5.42 116 P Pn **05 37 19.8 +1.0**
ALIG Mtskhetisjvari 5.42 116 P Pn **05 37 19.8 +1.0**
MDIV 5.43 172 P Pn **05 37 22.3 +3.4**
MDIV IAML 05 38 33.0
comp=E,28nm,1.0s
MDIV IAML 05 38 36.0
comp=E,22nm,0.5s
MIMR Divri 5.43 172 P Pn 05 37 14.6 -4.4
MIMR IAML 05 38 12.0
comp=E,34nm,0.5s
MIMR IAML 05 38 14.0
comp=E,44nm,0.8s
CUAYA Sivas-Altinyay 5.45 183 P Pn **05 37 22.1 +2.8**
CUAYA IAML 05 38 39.0
comp=E,28nm,0.6s
CUAYA IAML 05 38 44.0
comp=E,25nm,0.6s
CDAG Cicekdag 5.48 203 P Pn **05 37 21.9 +2.3**
CDAG IAML 05 38 23.0
comp=E,28nm,0.6s
CDAG IAML 05 38 42.0
comp=E,43nm,0.8s
SIRC Yozgat 5.57 196 P Pn **05 37 23.7 +2.8**
SIRC S Sn **05 38 23.6 0.0**
SIRC IAML 05 38 24.0
comp=E,42nm,0.5s
SIRC IAML 05 38 26.0
comp=E,37nm,0.7s
BR106 Keskin Array S 5.61 209 Pn Pn **05 37 23.1 +1.6**
comp=E,0.2nmcomp=E,2µmcomp=E,33nm,0.8s
BR131 Keskin Array S 5.61 209 Pn **05 37 23.8 +2.3**
BR131 Keskin Array S 5.61 209 P Pn **05 37 23.8 +2.3**
BRTR Keskin Array B 5.61 209 P Pn **05 37 22.6 +1.1**
comp=E,10.0nm,0.3s,baz=30,slow=12,SNR=468
BRTR S Sn **05 38 26.1 +1.3**
comp=E,18nm,0.6s,baz=40,slow=23,SNR=9.1
BRTR LR LR 05 40 25.4
comp=E,39nm,21.2s,baz=26,slow=47
comp=E,22nm,0.4s
BRTR Keskin Array B 5.61 209 Pn **05 37 23.8 +2.3**
BRTR Sn **05 38 27.6 +2.8**
BR105 Keskin Array S 5.63 209 Pn Pn **05 37 23.5 +1.8**
comp=E,0.2nmcomp=E,919nmcomp=E,41nm,0.7s
BR104 Keskin Array S 5.63 208 Pn Pn **05 37 23.4 +1.7**
comp=E,0.2nmcomp=E,1µmcomp=E,53nm,0.6s
ARPR Arapgir-MALATY 5.69 170 Pn **05 37 26.0 +3.5**
AKH Akhalkalaki 5.72 123 P Pn **05 37 26.0 +3.0**
AKH Akhalkalaki 5.72 123 P Pn **05 37 26.0 +3.0**
GUDG Gudauri 5.80 110 *e*Pn Pn **05 37 24.1 0.0**
GUDG eSn Sn **05 38 29.6 +0.2**
GUDG Gudauri 5.80 110 *e*P Pn **05 37 24.1 0.0**
GUDG eS Sn **05 38 29.6 +0.2**
KMGR Komgaron 5.84 104 *e*P Pn **05 37 28.4 +3.9**
KMGR eS Sn **05 38 30.0 -0.2**
HEKM Malatya_Hekimh 5.86 174 P Pn **05 37 27.4 +2.4**
HEKM IAML 05 38 35.0
comp=E,34nm,0.3s
HEKM IAML 05 38 36.0
comp=E,27nm,0.4s
TLCR 5.91 278⇓P Pn **05 37 25.4 0.0**
TLCR 5.91 278 P Pn **05 37 25.4 0.0**
BNN Bunyan 5.93 190 Pn **05 37 29.1 +3.2**
KARS Kars 6.00 131 Pn Pn **05 37 28.6 +1.9**
KARS Kars 6.00 131 P Pn **05 37 28.6 +1.9**
SAHE Sakarya_HENDEK 6.01 232⇓P Pn **05 37 28.3 +1.6**
KIRS Kirsehir-Merke 6.06 204⇑P Pn **05 37 30.5 +2.9**
MDUB Mudurnu 6.09 228 Pn **05 37 29.4 +1.5**
EFOR EFORIE 6.11 267⇑P Pn **05 37 28.0 -0.1**
BAL3X Bal3x, Balta 6.12 304 Pn Pn **05 37 28.1 -0.2**
SHTL Shatili 6.18 107 P Pn 05 37 34.9 +5.7
SHTL Shatili 6.18 107 P Pn 05 37 34.9 +5.7
TPGR Topolog 6.19 274⇑P Pn **05 37 30.1 +0.9**
TIRR Tirgusor 6.22 271⇑P Pn **05 37 29.5 -0.1**
TIRR Tirgusor 6.22 271 Pn **05 37 29.7 0.0**
TIRR Tirgusor 6.22 271 P Pn **05 37 29.7 0.0**
TIRR Tirgusor 6.22 271 Pn Pn **05 37 29.6 0.0**
comp=E,0.7nmcomp=E,2µmcomp=E,80nm,0.5s
MFTR Murfatlar 6.25 268⇓P Pn **05 37 30.1 +0.1**
CFR Carcaliu 6.39 277⇓P Pn **05 37 33.1 +1.1**
CFR Carcaliu 6.39 277 P Pn **05 37 33.1 +1.1**
VORD Divnogorie 6.43 12 *e*P Pn **05 37 31.7 -0.7**
VORD pmax pmax
comp=Z,30nm,0.5s
CVDA Cernavoda 6.50 270⇓P Pn **05 37 34.0 +0.5**
SILT Sile 6.54 240⇓P Pn **05 37 34.8 +0.9**
PSN Preselentsi 6.55 264 *i* P Pn **05 37 33.9 -0.2**
VSR Storozhevoye 6.65 11 *e*P Pn **05 37 34.8 -0.7**
VSR pmax pmax
comp=Z,40nm,0.7s
ICOR Ion Corvin 6.70 268⇑P Pn **05 37 36.8 +0.6**
VASR Vaslui 6.81 290⇑P Pn **05 37 38.0 +0.3**
KLYT Kilyos 6.86 243 Pn Pn **05 37 38.5 +0.1**
BORA Eskisehir 6.91 228 Pn **05 37 39.9 +0.7**
SORM Soroca 6.96 303 Pn Pn **05 37 39.2 -0.5**
comp=Z,0.4nmcomp=Z,2µmcomp=Z,19nm,0.7s
VORR Voronezh 7.10 11 *e*P Pn **05 37 40.0 -1.7**
VORR pmax pmax
comp=Z,90nm,0.4s
PRD Provadia 7.18 261 *i* P Pn **05 37 42.6 -0.2**
VRH Novokhopyorsk 7.19 24 *e*P Pn **05 37 42.5 -0.4**
VRH pmax pmax
comp=Z,70nm,0.5s
CTYL Yalikoy Yolu 7.22 246 Pn Pn **05 37 44.1 +0.7**
comp=Z,0.6nmcomp=Z,2µmcomp=Z,57nm,0.6s
GNI Garni 7.25 126 LR LR 05 41 18.9
comp=Z,32nm,18.8s,baz=352,slow=44
VRI Vrincioaia 7.42 283⇑P Pn **05 37 46.5 +0.4**
VRI Vrincioaia 7.42 283 P Pn **05 37 46.5 +0.4**
VRI Vrincioaia 7.42 283 Pn Pn **05 37 46.2 +0.1**
comp=Z,0.2nmcomp=Z,12nm,0.8s
TESR Tescani 7.56 287 Pn Pn **05 37 47.7 -0.3**
comp=Z,0.4nmcomp=Z,33nm,0.7s
NDNU Novodnistrovsk 7.75 304 Pn Pn **05 37 50.3 -0.3**
COVR Voineasa-Covas 7.78 282⇓P Pn **05 37 50.8 -0.3**
AK07 Malin Array Si 7.91 320 Pn Pn **05 37 52.1 -0.7**
AK09 Malin Array Si 7.92 321 Pn Pn **05 37 52.2 -0.7**
AK10 Malin Array Si 7.93 321 Pn Pn **05 37 52.4 -0.6**
AK06 Malin Array Si 7.94 321 Pn Pn **05 37 52.2 -1.0**
MLR Muntele Rosu 7.94 280 P Pn **05 37 53.3 -0.1**
comp=Z,1.3nm,0.3s,baz=147,slow=19,SNR=16
MLR S Sn **05 39 17.4 -4.6**
comp=Z,25nm,0.4s,baz=219,slow=19,SNR=14
MLR LR LR 05 42 11.5
comp=Z,73nm,18.7s,baz=106,slow=47
comp=Z,2.8nm,0.3s
MLR Muntele Rosu 7.94 280⇑P Pn **05 37 54.5 +1.0**
MLR Muntele Rosu 7.94 280 Pn **05 37 54.0 +0.6**
MLR Muntele Rosu 7.94 280 P Pn **05 37 54.4 +1.0**
MLR Muntele Rosu 7.94 280 Pn Pn **05 37 54.0 +0.6**
comp=Z,0.2nmcomp=Z,18nm,2.2s
AK08 Malin Array Si 7.95 321 Pn Pn **05 37 52.4 -0.9**
BAND Balkesir-Ban 7.95 240⇓P Pn **05 37 53.8 +0.4**
AK05 Malin Array Si 7.96 321 Pn Pn **05 37 52.6 -0.9**
LPSR Galich'ya Gora 7.99 8 *e*P Pn **05 37 53.1 -0.7**
LPSR pmax pmax
comp=Z,100nm,0.7s
AK02 Malin Array Si 7.99 321 Pn Pn **05 37 52.6 -1.2**
JMB Yambol 8.00 258 *i* P Pn **05 37 53.9 -0.1**
AK12 Malin Array Si 8.00 321 Pn Pn **05 37 52.8 -1.2**
AKASG Malin Array Be 8.01 321 P Pn **05 37 52.6 -1.5**
comp=Z,4.0nm,0.3s,baz=130,slow=14,SNR=24
AKASG S Sn **05 39 16.5 -6.8**
comp=Z,9.6nm,0.4s,baz=131,slow=25,SNR=14
AKASG LR LR 05 41 39.3
comp=Z,160nm,18.4s,baz=64,slow=43
comp=Z,1.4nm,0.2s
AKBB Malin Array Si 8.01 321 Pn **05 37 53.4 -0.7**
AKBB Malin Array Si 8.01 321 *i* P Pn **05 37 53.4 -0.7**
AKBB Malin Array Si 8.01 321 Pn Pn **05 37 53.2 -0.9**
KIEV Kiev 8.01 321 Pn **05 37 52.8 -1.4**
KIEV Kiev 8.01 321 P Pn **05 37 52.8 -1.4**
AK19 Malin Array Si 8.12 321 Pn Pn **05 37 54.4 -1.3**
SZH Strazhitsa 8.16 264 *i* P Pn **05 37 55.8 -0.5**
LUBAR Lubar, Ukraine 8.22 313 Pn Pn **05 37 55.2 -1.8**
KMPD K-Podol'skiy 8.28 301 Pn Pn **05 37 56.9 -1.0**
ELND Elena 8.32 262⇓P Pn **05 37 57.8 -0.7**
DOPR Dopca 8.36 283⇓P Pn **05 37 59.2 +0.2**
DOPR ⇑S Sn **05 39 30.4 -1.6**
ISP Isparta 8.48 218 Pn Pn **05 38 03.4 +2.6**
ISP Isparta 8.48 218 P Pn **05 38 03.4 +2.6**
BALB Balikesir 8.53 237 Pn Pn **05 38 01.7 +0.5**
VOIR 8.57 279⇓P Pn **05 38 02.5 +0.6**
VOIR 8.57 279 P Pn **05 38 02.5 +0.6**
VOIR 8.57 279 Pn Pn **05 38 02.0 0.0**
comp=Z,14nm,0.9s
BURAR Bucovina Array 8.76 294⇓P Pn **05 38 03.8 -0.7**
BURAR Bucovina Array 8.76 294 Pn Pn **05 38 03.7 -0.8**
BURAR Bucovina Array 8.76 294 P Pn **05 38 03.8 -0.7**
BUR08 Bucovina Ar. S 8.77 294 Pn Pn **05 38 04.1 -0.6**
DIM Dimitrovgrad 8.82 256 *i* P Pn **05 38 05.5 +0.3**
MI28 Mi28,Pidlybu 8.89 318 Pn Pn **05 38 05.2 -1.0**
MANT Manisa 8.93 229 Pn Pn **05 38 07.4 +0.5**
ALN Alexandroupoli 8.99 249 Pn Pn **05 38 07.4 -0.2**
ALN Alexandroupoli 8.99 249 P Pn **05 38 07.4 -0.2**
RDO Rodhopi 9.21 251 Pn Pn **05 38 09.9 -0.7**
PLD Plovdiv 9.36 258 *i* P Pn **05 38 12.6 0.0**
EZN Ezine 9.37 242 Pn Pn **05 38 13.5 +0.7**
comp=Z,1µmcomp=Z,29nm,1.7s
STNU Starunia 9.54 299 Pn Pn **05 38 14.6 -0.5**
CJR Cluj-Napoca 9.67 287⇑P Pn **05 38 17.7 +0.7**
CJR Cluj-Napoca 9.67 287 P Pn **05 38 17.6 +0.7**
RNPP5 Staryi Chortor 9.96 315 Pn Pn **05 38 20.2 -0.5**
MARR Marisel-Cluj 9.99 286⇓P Pn **05 38 21.0 -0.4**
GZR Gura Zlata 10.17 279⇑P Pn **05 38 24.4 +0.6**
GZR Gura Zlata 10.17 279 P Pn **05 38 24.4 +0.6**
AKAS Kas 10.22 217 Pn Pn 05 38 29.5 +5.0
DRGR 10.28 287⇑P Pn **05 38 25.4 +0.1**
DRGR 10.28 287 P Pn **05 38 25.4 +0.1**
BELG Belogornoye 10.36 38 P Pn **05 38 24.6 -1.7**
comp=Z,10nm,0.3s,baz=235,slow=0.4,SNR=58
BELG S Sn **05 40 14.9 -6.0**
comp=Z,23nm,0.5s,baz=4.4,slow=10,SNR=4.5
BELG Belogornoye 10.36 38 *e*Pn Pn **05 38 24.1 -2.2**
BELG eSn Sn 05 40 11.3 -10
BELG Belogornoye 10.36 38 *i* P Pn **05 38 29.7 +3.4**
BRIU Brid 10.37 295 P Pn **05 38 25.3 -1.1**
OBN Obninsk 10.42 358 P Pn **05 38 25.3 -1.7**
comp=Z,4.0nm,0.3s,baz=346,slow=23,SNR=5.3
OBN S Sn 05 40 12.3 -10
comp=Z,29nm,0.5s,baz=28,slow=23,SNR=4.6
comp=Z,26nm,0.6s
OBN Obninsk 10.42 358⇓ *e*P Pn **05 38 28.8 +1.8**
OBN eS Sn **05 40 30.3 +8.0**
OBN pmax pmax
comp=Z,26nm,0.6s
HERR Herculane 10.45 276⇓P Pn **05 38 27.8 +0.1**
KWP Kalwaria Pacla 10.97 302 P Pn **05 38 34.0 -0.7**
MOS Moscow 11.04 2 *e*P Pn **05 38 33.5 -2.1**
MOS pmax pmax
comp=Z,38nm,0.6s
MMAI Mount Meron Ar 11.76 187 P Pn **05 38 48.4 +2.9**
comp=Z,0.8nm,0.3s,baz=356,slow=15,SNR=2.2
MMAI LR LR 05 43 26.9
comp=Z,36nm,20.8s,baz=352,slow=38
comp=Z,0.7nm,0.4s
STHS Stebnicka Huta 11.80 299 *e*SN Sn **05 40 47.4 -8.8**
KARP Karpathos 11.90 223 Pn Pn **05 38 49.3 +1.9**
KECS Kecovo 12.04 294 *e*P Pn **05 38 47.0 -2.3**
KECS *e* 05 40 55.2
KECS Kecovo 12.04 294 *e*PN Pn **05 38 47.0 -2.3**
KECS Kecovo 12.04 294 *e*SN Sn **05 40 55.2 -6.9**
PSZ Piszkesteto 12.33 291 Pn Pn **05 38 51.8 -1.5**
PSZ Piszkesteto 12.33 291 P Pn **05 38 51.8 -1.5**
LANS Liptovska Anna 12.85 296 *e*P Pn **05 38 58.2 -2.1**
LANS *e* 05 41 14.0
LANS Liptovska Anna 12.85 296 *e*PN Pn **05 38 58.2 -2.1**
LANS *e* 05 41 14.0
OJC Ojcow 12.94 301 Pn Pn **05 38 58.9 -2.6**
OJC Ojcow 12.94 301 P Pn **05 38 58.9 -2.6**
OJC Ojcow 12.94 301 P Pn **05 38 59.6 -1.9**
ITM Ithomi 13.71 242 Pn Pn **05 39 13.8 +1.5**
STEB Steborice 14.11 299 *e*SN Sn 05 41 41.7 -11
VRAC Vranov 14.72 295 LR LR 05 45 22.6
comp=Z,27nm,18.9s,baz=57,slow=38
EIL Elat 15.11 187 LR LR 05 47 14.9
comp=Z,31nm,18.7s,baz=200,slow=44
DPC Dobruska-Polom 15.12 299 *e*P Pn **05 39 29.7 -1.2**
DPC *e* 05 42 05.0
DPC Dobruska-Polom 15.12 299 *e*PN Pn **05 39 29.7 -1.2**
DPC *e*SN Sn 05 42 05.0 -12
AKTO Aktyubinsk 15.20 60 P Pn **05 39 28.9 -3.0**
comp=Z,4.0nm,0.6s,baz=253,slow=8.5,SNR=10
AKTO S Sn 05 42 04.5 -15
comp=Z,7.9nm,0.8s,baz=74,slow=18,SNR=10
AKTO Aktyubinsk 15.20 60⇑P Pn **05 39 28.2 -3.7**
comp=Z,5.0nm,0.9s
AKTO ⇑S Sn 05 42 03.1 -16
comp=Z,8.9nm,1.0s
KIRV Kirov 15.81 24 P Pn **05 39 34.2 -5.4**
comp=Z,9.2nm,0.5s,baz=289,slow=3.4,SNR=3.9
AB31 Akbulak array 16.20 66 Pn Pn **05 39 43.4 -1.4**

AB31	**Akbulak array**	**16.20**	**66**	⇑P		**Pn**	**05 39 43.1**	**-1.7**
	comp=Z,1.4nm,0.4s,baz=263,slow=12,SNR=40							
AB31				⇑S		Sn	05 42 30.9	-12
	comp=Z,3.8nm,0.7s,baz=262,slow=30,SNR=5.3							
ABKAR	**Akbulak array**	**16.20**	**66**	Pn		**Pn**	**05 39 43.4**	**-1.4**
KLMR	**Klimovskoe**	**16.23**	**4**	*e*P		**Pn**	**05 39 46.3**	**+1.3**
KLMR				pmax	pmax			
	comp=Z,26nm,1.2s							
GERES	**GERESS Array B**	**16.54**	**293**	P		**Pn**	**05 39 48.8**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=105,slow=14,SNR=1.9							
GERES				LR	LR		05 46 58.3	
	comp=Z,40nm,20.2s,baz=226,slow=40							
ARTI	**Arti**	**17.78**	**41**	P		**Pn**	**05 39 59.7**	**-4.6**
	comp=Z,4.7nm,0.5s,baz=235,slow=11,SNR=12							
ARTI	**Arti**	**17.78**	**41**			**Pn**	**05 40 00.4**	**-3.9**
ARTI				IAmb	IAmb		05 40 05.5	
	comp=Z,19nm,1.1s							
ARTI	**Arti**	**17.78**	**41**	*c i*P		**P**	**05 40 05.3**	**+0.6**
ARTI				S		**S**	**05 43 26.2**	**-0.3**
ARTI				pmax	pmax			
	comp=Z,3.0nm,0.5s							
FINES	**FINESS Array B**	**17.98**	**343**	P		**Pn**	**05 40 01.6**	**-5.1**
	comp=Z,1.6nm,0.4s,baz=147,slow=13,SNR=18							
FINES				S		Sn	05 43 08.4	-18
	comp=Z,5.3nm,0.7s,baz=154,slow=20,SNR=5.3							
FINES				LR	LR		05 46 06.4	
	comp=Z,20nm,20.4s,baz=208,slow=34							
FINES	**FINESS Array B**	**17.98**	**343**	P		**Pn**	**05 40 02.1**	**-4.6**
FINES	**FINESS Array B**	**17.98**	**343**	P		**Pn**	**05 40 02.1**	**-4.6**
FIA1	**FINESS Array S**	**17.98**	**343**	Pn		**Pn**	**05 40 02.1**	**-4.6**
FIA1				IAmb	IAmb		05 40 20.5	
	comp=Z,62nm,1.4s							
FUORN	**Ofenpass-Fuorn**	**18.84**	**285**	P		**P**	**05 40 16.3**	**-0.4**
SVE	**Sverdlovsk**	**19.07**	**42**	*e*P		**P**	**05 40 16.8**	**-2.1**
DAVOX	**Davos/Dischmat**	**19.09**	**286**	P		**P**	**05 40 19.1**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=99,slow=14,SNR=7.4							
DAVOX				LR	LR		05 48 08.2	
	comp=Z,48nm,18.6s,baz=52,slow=38							
	comp=Z,1.6nm,0.5s							
TUE	**Stuetta**	**19.48**	**285**	P		**P**	**05 40 23.3**	**-0.3**
HFS	**Hagfors**	**20.86**	**326**	P		**P**	**05 40 37.6**	**-0.6**
	comp=Z,1.5nm,0.4s,baz=129,slow=12,SNR=8.7							
	comp=Z,1.5nm,0.4s							
SENIN	**Lac Senin/Sane**	**20.90**	**285**	P		**P**	**05 40 37.9**	**-1.1**
SENIN				IAmb	IAmb		05 41 22.0	
	comp=Z,16nm,1.4s							
BNI	**Bardonecchia**	**21.51**	**282**	P		**P**	**05 40 44.5**	**-1.1**
BNI	**Bardonecchia**	**21.51**	**282**	P		**P**	**05 40 44.5**	**-1.1**
BNI				pmax	pmax			
	comp=Z,8.0nm,1.2s							
RAYN	**Ar Rayn**	**22.22**	**159**	P		**P**	**05 40 54.6**	**+1.4**
RAYN				pmax	pmax			
	comp=Z,7.0nm,1.4s							
NC405	**NORSAR Array S**	**22.23**	**327**	P		**P**	**05 40 52.2**	**-0.7**
NC405				IAmb	IAmb		05 41 31.8	
	comp=Z,29nm,1.2s							
NOA	**NORSAR Array B**	**22.38**	**326**	P		**P**	**05 40 54.2**	**-0.5**
	comp=Z,1.7nm,1.0s,baz=130,slow=10,SNR=2.5							
NOA				LR	LR		05 50 29.2	
	comp=Z,59nm,18.3s,baz=355,slow=39							
	comp=Z,1.7nm,1.0s							
NC303	**NORSAR Array S**	**22.43**	**327**	P		**P**	**05 40 54.7**	**-0.4**
NC204	**NORSAR Array S**	**22.70**	**326**	P		**P**	**05 40 57.4**	**-0.6**
NC204				IAmb	IAmb		05 41 33.9	
	comp=Z,7.3nm,0.8s							
BORK	**Borovoye**	**23.20**	**57**	*i* P		**P**	**05 41 06.9**	**+3.8**
BORK				pmax	pmax			
	comp=Z,5.0nm,0.9s							
BVAR	**Borovoye Array**	**23.24**	**57**	P		**P**	**05 41 03.9**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=269,slow=10,SNR=9.3							
BVAR				S		**S**	**05 45 15.7**	**+3.6**
	comp=Z,1.2nm,0.6s,baz=264,slow=25,SNR=6.1							
	comp=Z,0.5nm,0.4s							
UOSS	**Minazif**	**25.07**	**136**	P		**P**	**05 41 21.8**	**+1.1**
GAR	**Garm**	**25.26**	**91**	P		**P**	**05 41 22.6**	**+0.2**
GAR				IAmb	IAmb		05 41 26.7	
	comp=Z,11nm,0.6s							
ARCES	**ARCESS Array B**	**25.58**	**351**	P		**P**	**05 41 25.4**	**+0.6**
	comp=Z,4.8nm,1.1s,baz=164,slow=9.2,SNR=4.6							
	comp=Z,4.8nm,1.1s							
ARCES	**ARCESS Array B**	**25.58**	**351**	P		**P**	**05 41 23.9**	**-0.9**
ARCES	**ARCESS Array B**	**25.58**	**351**	P		**P**	**05 41 23.9**	**-0.9**
ARCES				pmax	pmax			
	comp=Z,32nm,1.5s							
AAK	**Ala-Archa**	**26.96**	**81**			**P**	**05 41 37.4**	**-0.4**
AAK				IAmb	IAmb		05 41 39.3	
	comp=Z,3.7nm,0.8s							
AAK	**Ala-Archa**	**26.96**	**81**	*i* P		**P**	**05 41 39.2**	**+1.4**
AAK				pmax	pmax			
	comp=Z,4.0nm,0.9s							
ARLS	**Aral**	**27.08**	**83**	P		**P**	**05 41 39.2**	**+0.3**
ARLS				pmax	pmax			
	comp=Z,4.0nm,1.4s							
BOOM	**Boomskoye usch**	**28.02**	**81**			**P**	**05 41 48.0**	**+0.6**
BOOM				IAmb	IAmb		05 41 49.0	
	comp=Z,4.6nm,0.6s							
BOOM	**Boomskoye usch**	**28.02**	**81**	P		**P**	**05 41 48.0**	**+0.6**
BOOM				pmax	pmax			
	comp=Z,5.0nm,0.6s							
KURBB	**Kurchatov Arra**	**28.22**	**63**	P		**P**	**05 41 48.9**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=270,slow=9.7,SNR=16							
	comp=Z,0.6nm,0.3s							
KURK	**Kurchatov**	**28.27**	**63**	*i* P		**P**	**05 41 53.9**	**+4.7**
KURK				pmax	pmax			
	comp=Z,1.0nm,0.9s							
KDJ	**Kajisay**	**29.01**	**81**	P		**P**	**05 41 56.6**	**+0.5**
MK31	**Makanchi Array**	**31.26**	**70**	*i* P		**P**	**05 42 16.1**	**+0.3**
MKAR	**Makanchi Array**	**31.26**	**70**	P		**P**	**05 42 16.2**	**+0.5**
	comp=Z,0.9nm,0.3s,baz=283,slow=8.1,SNR=37							
	comp=Z,0.9nm,0.3s							
ZALV	**Zalesovo Beam**	**31.88**	**56**	P		**P**	**05 42 21.3**	**+0.3**
	comp=Z,1.0nm,0.3s,baz=260,slow=8.5,SNR=5.1							
	comp=Z,1.0nm,0.3s							
ZALV	**Zalesovo Beam**	**31.88**	**56**	P		**P**	**05 42 19.6**	**-1.5**
WMQ	**Urumqi**	**35.76**	**73**	*e*P		**P**	**05 42 57.9**	**+3.0**
TLY	**Talaya**	**43.49**	**56**	LR	LR		06 03 54.1	
	comp=Z,25nm,18.4s,baz=320,slow=38							
TORD	**Torodi Ar. Bea**	**43.58**	**235**	P		**P**	**05 44 00.5**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=37,slow=7.6,SNR=4.4							
	comp=Z,0.4nm,0.6s							
SONM	**Songino Array**	**46.52**	**60**	P		**P**	**05 44 24.0**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=280,slow=7.9,SNR=5.5							
	comp=Z,1.3nm,0.6s							
SONM	**Songino Array**	**46.52**	**60**	P		**P**	**05 44 24.0**	**+0.6**
DBIC	**Dimbokro**	**52.59**	**237**	P		**P**	**05 45 10.3**	**+0.5**
	comp=Z,9.6nm,1.2s,baz=57,slow=6.1,SNR=5.6							
	comp=Z,9.6nm,1.2s							
YAK	**Yakutsk**	**52.89**	**36**	LR	LR		06 10 15.1	
	comp=Z,38nm,18.4s,baz=268,slow=39							
HHC	**Hu-ho-hao-te**	**53.00**	**66**	*e*P		**P**	**05 45 14.3**	**+1.7**
HHC				pmax	pmax			
	comp=Z,5.0nm,0.7s							
HHC				pmax	pmax			
	comp=Z,85nm,6.0s							
PZH	**PanZhiHua**	**54.20**	**87**	P		**P**	**05 45 23.3**	**+1.7**
SCHQ	**Schefferville**	**61.81**	**320**	P		**P**	**05 46 14.5**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=60,slow=5.6,SNR=5.7							
	comp=Z,1.4nm,0.7s							
KSRS	**Korea Array**	**65.38**	**61**	P		**P**	**05 46 37.6**	**-0.5**
	comp=Z,1.8nm,0.9s,baz=335,slow=4.7,SNR=3.5							
	comp=Z,1.8nm,0.9s							
YKA	**Yellowknife Ar**	**70.76**	**347**	P		**P**	**05 47 11.7**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=20,slow=6.6,SNR=35							
	comp=Z,0.8nm,0.4s							
ILAR	**Eielson Array**	**70.81**	**2**	P		**P**	**05 47 12.4**	**+0.7**
	comp=Z,0.1nm,0.6s,baz=342,slow=6.0,SNR=1.7							
	comp=Z,0.1nm,0.6s							
BOSA	**Boshof**	**73.77**	**191**	P		**P**	**05 47 30.6**	**+0.7**
	comp=Z,1.2nm,0.4s,baz=26,slow=5.4,SNR=7.5							
	comp=Z,1.2nm,0.4s							
BOSA	**Boshof**	**73.77**	**191**	P		**P**	**05 47 31.3**	**+1.4**
BOSA	**Boshof**	**73.77**	**191**	P		**P**	**05 47 31.3**	**+1.4**
BOSA				pmax	pmax			
	comp=Z,12nm,1.3s							
RCBR	**Riachuelo**	**82.16**	**254**	LR	LR		06 25 08.8	
	comp=Z,51nm,21.9s,baz=76,slow=36							
BDFB	**Brasilia**	**97.44**	**255**	LR	LR		06 33 05.0	
	comp=Z,192nm,21.7s,baz=351,slow=35							

*IDC **15** 05:56:16.2±6.5,6.°12S×154.°99E,h75km±53km,mb3.6/8, mbtmp4.0/9,ML2.8/1,MS3.2/1,Error ellipse: s-maj=43.7km s-min=24.3km az=91.0*

ISC 15 05:56:18.0±1.3,6.°1S±0.°2×154.°9E±0.°2,h89km,n10, σ1$18/9,mb3.6/8,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**8.32**	**246**	P	**Pn**	**05 58 15.6**	**-0.3**
	6.5nm,0.3s,baz=52,slow=8.9,SNR=12						
	34nm,0.5s						
SIJI	**Sorong**	**24.13**	**282**	LR	LR	06 11 01.5	
	comp=Z,59nm,21.7s,baz=173,slow=36						
WRA	**Warramunga Arr**	**24.23**	**234**	P	**P**	**06 01 27.1**	**+0.3**
	2.1nm,0.7s,baz=57,slow=9.9,SNR=17						
	2.1nm,0.7s						
ASAR	**Alice Springs**	**26.68**	**227**	P	**P**	**06 01 48.4**	**-0.5**
	1.2nm,0.6s,baz=57,slow=9.2,SNR=21						
	1.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**60.30**	**295**	P	**P**	**06 06 20.0**	**+2.1**
	2.1nm,0.5s,baz=123,slow=5.5,SNR=12						
	2.1nm,0.5s						
SONM	**Songino Array**	**68.54**	**327**	P	**P**	**06 07 09.9**	**-1.4**
	0.4nm,0.6s,baz=94,slow=4.3,SNR=2.4						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**82.60**	**22**	P	**P**	**06 08 31.6**	**+0.6**
	0.4nm,0.9s,baz=250,slow=5.3,SNR=5.0						
	0.4nm,0.9s						
MKAR	**Makanchi Array**	**82.67**	**319**	P	**P**	**06 08 30.8**	**-1.1**
	0.5nm,0.6s,baz=94,slow=6.2,SNR=8.0						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**83.39**	**326**	P	**P**	**06 08 35.0**	**-0.4**
	0.6nm,0.6s,baz=101,slow=7.9,SNR=3.9						
	0.6nm,0.6s						
QSPA	**South Pole Qui**	**83.86**	**180**	P	**P**	**06 08 37.8**	**+0.1**
	1.7nm,0.7s,baz=350,slow=1.0,SNR=13						
	1.7nm,0.7s						

*IDC **15** 06:02:00.7±1.1,39.°86N×29.°78W,h0km,mb3.9/16, mbtmp3.9/17,ML4.4/1,Error ellipse: s-maj=30.7km s-min=17.3km az=10.0*

*SVSA **15** 06:02:02.6±0.9,39.°89N×29.°70W,h10km,ML3.6(INMG), Error ellipse: s-maj=10.1km s-min=4.1km az=81.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Crista Mdia Atlntico N*

*NEIC **15** 06:02:03.1±1.3,39.°76N±0.°05×29.°6W±0.°1,h10km±1km, mb4.5/23,Error ellipse: s-maj=16.4km s-min=9.4km az=259.0*

ISC 15 06:02:01.4±3.4,39.°65N±0.°06×29.°59W±0.°05,h5km±22km, n73,σ1$11/75,mb4.4/29,Azores Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H07N1	**FLORES T-PHASE**	**1.18**	**273**	Pn	**Pb**	**06 02 24.8**	**+0.5**
PCED	**Cedros**	**1.23**	**146**	*e*P	**Pn**	**06 02 24.7**	**-0.5**
PCED				*e*S	**Sb**	**06 02 40.4**	**-0.8**
PCED				IAML		06 02 43.4	
PCED				IAML		06 02 44.3	
PCED				IAML		06 02 47.5	
CALA	**Caldeira**	**1.27**	**147**	*e*P	**Pn**	**06 02 25.4**	**-0.4**
CALA				*e*S	**Sn**	**06 02 42.8**	**-0.4**
CALA				IAML		06 02 47.0	
CALA				IAML		06 02 49.5	
CALA				IAML		06 02 50.6	
H07S1	**FLORES T-PHASE**	**1.28**	**259**	Pn	**Pn**	**06 02 24.5**	**-1.5**
PFCBR	**Castelo Branco**	**1.31**	**149**	*e*S	**Sb**	**06 02 43.2**	**-0.3**
PFCBR				IAML		06 02 44.1	
PFCBR				IAML		06 02 44.4	
PFCBR				IAML		06 02 44.9	
HOR	**Horta**	**1.34**	**146**	*e*P	**Pn**	**06 02 25.9**	**-0.9**
HOR				*e*S	**Sb**	**06 02 44.0**	**-0.5**
HOR				IAML		06 02 45.2	
HOR				IAML		06 02 45.4	
HOR				IAML		06 02 50.7	
SRBC	**Serra Branca**	**1.34**	**116**	*e*P	**Pn**	**06 02 25.5**	**-1.3**
SRBC				*e*S	**Sb**	**06 02 42.6**	**-1.9**
SRBC				IAML		06 02 44.2	
SRBC				IAML		06 02 44.8	
SRBC				IAML		06 02 46.3	
PGRA	**Graciosa**	**1.39**	**116**	*e*P	**Pn**	**06 02 26.1**	**-1.4**
ROSA	**Rosais**	**1.40**	**131**	*e*P	**Pn**	**06 02 26.7**	**-0.8**
PICO	**Pico**	**1.46**	**141**	*e*P	**Pn**	**06 02 28.0**	**-0.4**
PICO				*e*S	**Sn**	**06 02 47.1**	**-0.9**
PICO				IAML		06 02 51.1	
PICO				IAML		06 02 52.6	
PICO				IAML		06 02 52.8	
PCAN	**Candelaria**	**1.46**	**144**	*e*P	**Pn**	**06 02 28.1**	**-0.3**
PCAN				*e*S	**Sn**	**06 02 47.1**	**-0.9**
PCAN				IAML		06 02 51.2	
PCAN				IAML		06 02 53.0	
PCAN				IAML		06 02 54.3	
PMAN	**Manadas**	**1.54**	**130**	*e*P	**Pn**	**06 02 28.8**	**-0.8**
PAGU	**Agualva, Azore**	**2.06**	**114**	*e*P	**Pn**	**06 02 35.6**	**-1.1**
ADH	**Angra Heroismo**	**2.08**	**118**	*e*P	**Pn**	**06 02 35.9**	**-1.1**
PSCM	**Serra do Cume**	**2.14**	**115**	P	**Pn**	**06 02 36.5**	**-1.3**
CMLA	**Cha da Macela**	**3.69**	**119**		**Pn**	**06 03 00.0**	**+0.9**
MTE	**Manteigas**	**16.90**	**80**	Pn	**Pn**	**06 05 57.7**	**-1.0**
SFS	**San Fernando**	**18.68**	**92**	P	**P**	**06 06 19.8**	**-0.5**
PAB	**San Pablo**	**19.44**	**82**	P	**P**	**06 06 28.2**	**-0.5**
ESDC	**Sonseca Array**	**19.71**	**82**	P	**Pn**	**06 06 33.3**	**+0.2**
	0.2nm,0.3s,baz=284,slow=13,SNR=13						
	1.8nm,0.9s						
MD01	**Midelt array s**	**21.10**	**101**		**P**	**06 06 47.6**	**+0.8**
MD31	**MD31**	**21.10**	**101**		**P**	**06 06 48.0**	**+1.1**
MDT	**Midelt**	**21.23**	**101**	P	**P**	**06 06 51.4**	**+3.1**
	4.1nm,1.2s,baz=292,slow=13,SNR=4.0						
	4.1nm,1.2s						
EKA	**Eskdalemuir Ar**	**23.57**	**40**	P	**P**	**06 07 13.4**	**+0.9**
	5.5nm,1.1s,baz=220,slow=13,SNR=2.9						
	5.5nm,1.1s						
MODS	**Modra-Piesok**	**34.35**	**60**	*e*P	**P**	**06 08 48.9**	**-0.1**
CUC	**Castrocucco**	**34.59**	**75**		**P**	**06 08 51.5**	**+0.4**
CUC				IAmb	IAmb	06 08 56.8	
	comp=Z,12nm,1.2s						
LANS	**Liptovska Anna**	**35.75**	**58**	*e*P	**P**	**06 09 03.5**	**+2.4**
PSZ	**Piszkesteto**	**36.13**	**60**	P	**P**	**06 09 04.3**	**-0.1**
TORD	**Torodi Ar. Bea**	**38.15**	**125**	P	**P**	**06 09 23.1**	**+1.4**
	comp=Z,2.6nm,0.9s,baz=305,slow=7.8,SNR=11						
	comp=Z,2.6nm,0.9s						
TORD	**Torodi Ar. Bea**	**38.15**	**125**		**P**	**06 09 22.8**	**+1.1**
BUR08	**Bucovina Ar. S**	**39.72**	**60**	P	**P**	**06 09 34.4**	**-0.3**
BUR08				IAmb	IAmb	06 09 43.2	
	comp=Z,13nm,1.4s						
BURAR	**Bucovina Array**	**39.73**	**60**	P	**P**	**06 09 34.8**	**0.0**
AKASG	**Malin Array Be**	**41.87**	**55**	P	**P**	**06 09 51.0**	**-1.2**
	comp=Z,2.6nm,0.9s,baz=279,slow=8.5,SNR=11						
	comp=Z,2.6nm,0.9s						
FCC	**Fort Churchill**	**44.31**	**318**		**P**	**06 10 12.7**	**+0.9**
FCC				IAmb	IAmb	06 10 14.4	
	comp=Z,9.7nm,1.4s						
MANT	**Manisa**	**44.47**	**72**	P	**P**	**06 10 14.2**	**+0.5**
MANT				IAmb	IAmb	06 10 20.0	
	comp=Z,9.8nm,1.2s						
T47A	**Sharon Grove**	**44.54**	**286**	P	**P**	**06 10 16.1**	**+2.0**
T47A				IAmb	IAmb	06 10 30.3	
	comp=Z,6.1nm,1.1s						
BRTR	**Keskin Array B**	**47.72**	**69**	P	**P**	**06 10 40.0**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=249,slow=6.5,SNR=4.6						
	comp=Z,0.8nm,0.8s						
BRTR	**Keskin Array B**	**47.72**	**69**	P	**P**	**06 10 39.6**	**+0.3**
YKA	**Yellowknife Ar**	**53.56**	**325**	P	**P**	**06 11 20.3**	**-2.5**
	comp=Z,0.4nm,1.0s,baz=70,slow=5.3,SNR=5.3						
	comp=Z,0.4nm,1.0s						
YKA	**Yellowknife Ar**	**53.56**	**325**	P	**P**	**06 11 21.5**	**-1.3**
JCT	**Junction City**	**56.88**	**284**	P	**P**	**06 11 48.4**	**+1.0**
JCT				IAmb	IAmb	06 11 54.3	
	comp=Z,11nm,1.4s						
ARTI	**Arti**	**57.09**	**41**	P	**P**	**06 11 47.6**	**-0.8**
	comp=Z,4.9nm,0.9s,baz=288,slow=5.4,SNR=4.5						
	comp=Z,4.9nm,0.9s						
ARTI	**Arti**	**57.09**	**41**		**P**	**06 11 47.9**	**-0.4**
PDAR	**Pinedale Array**	**58.06**	**301**	P	**P**	**06 11 53.9**	**-1.9**
	comp=Z,1.6nm,1.1s,baz=64,slow=6.8,SNR=8.7						
	comp=Z,1.6nm,1.1s						
PDAR	**Pinedale Array**	**58.06**	**301**		**P**	**06 11 54.7**	**-1.0**
AKTO	**Aktyubinsk**	**59.39**	**48**	P	**P**	**06 12 04.2**	**-0.4**
	comp=Z,1.1nm,0.4s,baz=301,slow=6.3,SNR=6.8						
	comp=Z,1.1nm,0.4s						
F30M	**Barrier River**	**59.70**	**335**	P	**P**	**06 12 06.1**	**-0.4**
F30M				IAmb	IAmb	06 12 13.0	
	comp=Z,6.0nm,1.1s						
TX31	**Lajitas Ar. Si**	**60.35**	**285**	P	**P**	**06 12 10.5**	**-1.1**
TX31				IAmb	IAmb	06 12 24.2	
	comp=Z,6.3nm,1.4s						
TXAR	**Lajitas Array**	**60.35**	**285**	P	**P**	**06 12 11.2**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=96,slow=6.3,SNR=5.9						
	comp=Z,0.7nm,0.8s						
TXAR	**Lajitas Array**	**60.35**	**285**	P	**P**	**06 12 10.3**	**-1.3**
BVAR	**Borovoye Array**	**64.81**	**41**	P	**P**	**06 12 41.2**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=294,slow=8.0,SNR=3.9						
	comp=Z,1.0nm,0.8s						
TIXI	**Tiksi**	**67.96**	**7**		**P**	**06 13 00.7**	**0.0**
TIXI				IAmb	IAmb	06 13 02.6	
	comp=Z,5.5nm,1.1s						
TNA	**Tin City**	**70.25**	**343**	P	**P**	**06 13 15.6**	**+0.5**
TNA				IAmb	IAmb	06 13 17.2	
	comp=Z,5.7nm,1.2s						
KURK	**Kurchatov**	**70.30**	**40**		**P**	**06 13 15.6**	**0.0**
KURBB	**Kurchatov Arra**	**70.31**	**40**	P	**P**	**06 13 15.2**	**-0.5**
	comp=Z,1.8nm,0.9s,baz=309,slow=7.3,SNR=14						
	comp=Z,1.8nm,0.9s						
ZAA0	**Zalesovo Array**	**71.10**	**35**		**P**	**06 13 20.9**	**+0.5**
ZAA0				IAmb	IAmb	06 13 21.8	
	comp=Z,5.5nm,1.1s						
ZALV	**Zalesovo Beam**	**71.10**	**35**	P	**P**	**06 13 19.7**	**-0.7**
	comp=Z,1.5nm,0.8s,baz=311,slow=9.0,SNR=9.8						
	comp=Z,1.5nm,0.8s						
ZALV	**Zalesovo Beam**	**71.10**	**35**		**P**	**06 13 20.5**	**+0.1**
AAK	**Ala-Archa**	**73.13**	**48**	P	**P**	**06 13 34.1**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=272,slow=8.2,SNR=4.1						
	comp=Z,0.4nm,0.3s						
MAKZ	**Makanchi**	**74.52**	**42**		**P**	**06 13 41.1**	**+0.2**
MAKZ				IAmb	IAmb	06 13 42.6	
	comp=Z,6.3nm,1.2s						
MKAR	**Makanchi Array**	**74.69**	**41**	P	**P**	**06 13 41.6**	**-0.3**
	comp=Z,2.5nm,0.9s,baz=312,slow=5.9,SNR=13						
	comp=Z,2.5nm,0.9s						
MKAR	**Makanchi Array**	**74.69**	**41**		**P**	**06 13 41.8**	**-0.1**
KSH2	**Kashi**	**75.96**	**51**	P	**P**	**06 13 52.0**	**+2.5**
KSH2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WMQ	**Urumqi**	**79.50**	**41**	*e*P	**P**	**06 14 11.3**	**+2.2**
WMQ				LR	LR		
	comp=Z,160nm,23.9s						
SONM	**Songino Array**	**84.52**	**28**	P	**P**	**06 14 35.1**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=312,slow=7.4,SNR=7.6						
	comp=Z,0.5nm,0.5s						
SONM	**Songino Array**	**84.52**	**28**		**P**	**06 14 35.6**	**+0.1**
SONM				IAmb	IAmb	06 14 38.9	
	comp=Z,2.8nm,1.3s						
ULN	**Ulaanbaatar**	**84.73**	**28**		**P**	**06 14 37.0**	**+0.4**
HHC	**Hu-ho-hao-te**	**92.41**	**28**	*e*P	**P**	**06 15 10.9**	**-2.4**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,150nm,4.9s						
PZH	**PanZhiHua**	**100.07**	**43**	P	**Pdif**	**06 15 48.3**	**0.0**
TAOE	**Nuku Hiva Isla**	**111.42**	**276**	*e*LR	LR	06 53 40.2	
	comp=Z,78nm,25.4s						
PPT2	**Papeete2**	**123.98**	**275**	*e*LR	LR	06 59 26.0	
	comp=Z,68nm,23.5s						
TBI	**Tubuai**	**127.15**	**269**	*e*LR	LR	07 00 54.0	
	comp=Z,276nm,26.8s						
DZM	**Mont Dzumac**	**157.78**	**317**	*e*LR	LR	07 15 10.3	
	comp=Z,174nm,25.2s						

*IDC **15** 06:02:46.9±5.1,39.°91N×29.°76W,h0km,mb3.9/3, mbtmp3.8/4,ML3.7/1,MS3.5/1,Error ellipse: s-maj=182.0km s-min=31.7km az=2.0*

ISC 15 06:02:47.0±1.5,39.°5N±0.°2×29.°8W±0.°2,h10km,n8,σ0$59/7, mb3.9/3,Azores Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CALA	**Caldeira**	**1.26**	**139**	*e*S	**Sb**	**06 03 27.3**	**0.0**
PFCBR	**Castelo Branco**	**1.30**	**141**	*e*S	**Sb**	**06 03 28.6**	**+0.3**
PICO	**Pico**	**1.47**	**135**	*e*S	**Sn**	**06 03 32.6**	**-0.3**
ESDC	**Sonseca Array**	**19.86**	**81**	P	**P**	**06 07 18.6**	**+0.4**
	0.1nm,0.3s,baz=289,slow=9.7,SNR=4.5						
	1.1nm,0.9s						
AKASG	**Malin Array Be**	**42.03**	**54**	P	**P**	**06 10 37.7**	**-0.8**
	1.8nm,0.8s,baz=276,slow=8.5,SNR=4.5						
	1.8nm,0.8s						
EIL	**Elat**	**53.15**	**80**	LR	LR	06 35 06.1	
	comp=Z,49nm,21.1s,baz=265,slow=36						
PDAR	**Pinedale Array**	**58.01**	**301**	P	**P**	**06 12 40.0**	**-0.1**
	1.3nm,0.9s,baz=79,slow=7.7,SNR=4.5						
	1.3nm,0.9s						
MKAR	**Makanchi Array**	**74.86**	**41**	P	**P**	**06 14 28.4**	**+0.7**
	1.1nm,0.9s,baz=331,slow=4.5,SNR=3.8						
	1.1nm,0.9s						

*TAP **15** 06:18:10.5,24.°00N×122.°67E,h29km,ML2.6,D*

*JMA **15** 06:18:11.4±0.2,24.°N±1.°×122.°6E±0.°7,h32km,MV2.

EHY	**Hungye**	**1.33**	**247**	S	**Sn**	**06 18 49.7**	**-0.9**
NSK	**Sanguang**	**1.34**	**298**	*i* P	**Pn**	**06 18 34.5**	**+0.4**
NSK				*i* S	**Sn**	**06 18 51.3**	**+0.4**
OWD	**Renai**	**1.36**	**267**	*e*P	**Pn**	**06 18 34.0**	**-0.4**
OWD				*e*S	**Sn**	**06 18 50.5**	**-0.8**
TWT	**Tachien**	**1.37**	**279**	P	**Pn**	**06 18 33.9**	**-0.6**
JIJ	**Ishigaki jima**	**1.39**	**76**	*e*P	**Pn**	**06 18 35.4**	**+0.7**
JIJ				*e*S	**Sn**	**06 18 53.0**	**+1.1**
YULB	**Yu-li**	**1.41**	**243**	*e*P	**Pn**	**06 18 34.9**	**0.0**
YULB				*e*S	**Sn**	**06 18 52.1**	**-0.2**
WUSB	**Renai**	**1.41**	**268**	*e*P	**Pn**	**06 18 35.1**	**+0.1**
VWDT	**VWDT**	**1.42**	**259**	*e*P	**Pn**	**06 18 35.5**	**+0.5**
VWDT				*e*S	**Sn**	**06 18 53.5**	**+0.9**
TWF1	**Yuli**	**1.42**	**242**	*i* P	**Pn**	**06 18 35.0**	**-0.2**
TWF1				S	**Sn**	**06 18 52.4**	**-0.4**
NFF	**Wufeng Townshi**	**1.52**	**293**	*e*P	**Pn**	**06 18 38.0**	**+1.5**
NFF				S	**Sn**	**06 18 56.4**	**+1.1**
SSLB	**Suanglung**	**1.58**	**261**	*e*P	**Pn**	**06 18 38.2**	**+0.9**
SSLB				*e*S	**Sn**	**06 18 57.0**	**+0.4**
WHP	**Taichung City**	**1.58**	**279**	*e*P	**Pn**	**06 18 39.0**	**+1.6**
EHD	**Haiduan**	**1.60**	**237**	*e*P	**Pn**	**06 18 37.9**	**+0.3**
JISG	**Ishigakijimahi**	**1.60**	**70**	*e*P	**Pn**	**06 18 37.8**	**+0.2**
JISG				*e*S	**Sn**	**06 18 56.6**	**-0.5**
NSTT	**Nanjuang**	**1.62**	**292**	*e*P	**Pn**	**06 18 37.1**	**-0.8**
WHYT	**Xinyi Township**	**1.69**	**259**	*e*P	**Pn**	**06 18 39.7**	**+0.9**
ELDTW	**Lidau**	**1.73**	**241**	P	**Pn**	**06 18 37.4**	**-2.1**
ELDTW				S	**Sn**	**06 18 58.9**	**-1.5**
ALS	**Alishan**	**1.78**	**253**	*e*P	**Pn**	**06 18 41.8**	**+1.5**
WJS	**Zhushan**	**1.78**	**263**	*e*P	**Pn**	**06 18 41.8**	**+1.8**
CHN5	**Tsauling**	**1.87**	**257**	P	**Pn**	**06 18 41.3**	**0.0**
TPUB	**Ta-pu**	**2.00**	**249**	*e*P	**Pn**	**06 18 45.0**	**+1.8**

IGIL ***15*** *06:20:10.1,34˚.29N×5˚.72W,h2km,ML2.5*
CNRM ***15*** *06:20:10.8,34˚.28N×5˚.82W,h5km,ML3.1*
MDD ***15*** *06:20:11.2±0.6,34˚.33N×5˚.82W,h4km±5km,mb_Lg3.0/23, Error ellipse: s-maj=3.9km s-min=2.9km az=139.0*
SFS ***15*** *06:20:11.2,34˚.33N×5˚.80W,h5km,ML3.5/18,ML3.6/18, MLv3.5/18*
INMG ***15*** *06:20:12.7±1.5,34˚.30N×5˚.76W,h27km±5km,ML2.7, Error ellipse: s-maj=4.3km s-min=2.4km az=84.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NW Fez (Marr)*

ISC 15 06:20:12.0±0.8,**34˚32N**±0˚.02×**5˚81W**±0˚.02,**h22**km±10km, **n168,**σ1§**73**/257,**3D, Morocco**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SICH	**Sidi Chahed**	**0.46**	**118**	P	**Pb**	**06 20 19.5**	**-1.9**
SICH				S	**Sb**	**06 20 25.8**	**-2.0**
RSA	**Sarsar**	**0.56**	**359**	P	**Pb**	**06 20 22.8**	**-0.5**
RSA				S	**Sb**	**06 20 31.3**	**+0.3**
CHEFC	**Chefchaouen**	**0.87**	**26**	P	**Pn**	**06 20 29.1**	**0.0**
CHEFC				S	**Sn**	**06 20 41.1**	**0.0**
RTC	**Rabat Centre**	**0.93**	**249**	Pg	**Pn**	**06 20 28.8**	**-1.0**
RTC				Sg	**Sb**	**06 20 42.0**	**+0.6**
RTC	**Rabat Centre**	**0.93**	**249**	P	**Pn**	**06 20 28.0**	**-1.8**
RTC				S	**Sn**	**06 20 40.8**	**-1.6**
IFR	**Ifrane**	**0.98**	**145**	Pg	**Pn**	**06 20 28.6**	**-2.0**
IFR				Sg	**Sn**	**06 20 41.6**	**-2.3**
LCRM	**LCR**	**1.01**	**129**	P	**Pn**	**06 20 29.2**	**-1.8**
LCRM				S	**Sn**	**06 20 44.6**	**0.0**
LCRM	**LCR**	**1.01**	**129**	P	**Pb**	**06 20 33.0**	**+2.1**
LCRM	**LCR**	**1.01**	**129**	P	**Pb**	**06 20 33.0**	**+2.1**
LCRM	**LCR**	**1.01**	**129**	P	**Pn**	**06 20 29.2**	**-1.8**
LCRM	**LCR**	**1.01**	**129**	P	**Pn**	**06 20 29.2**	**-1.8**
LCRM	**LCR**	**1.01**	**129**	P	**Pn**	**06 20 30.0**	**-1.0**
LCRM	**LCR**	**1.01**	**129**	P	**Pn**	**06 20 30.0**	**-1.0**
LCRM	**LCR**	**1.01**	**129**	P	**Pn**	**06 20 30.0**	**-1.0**
LCRM	**LCR**	**1.01**	**129**	P	**Pn**	**06 20 30.0**	**-1.0**
LCRM	**LCR**	**1.01**	**129**	P	**Pb**	**06 20 33.0**	**+2.1**
LCRM	**LCR**	**1.01**	**129**	P	**Pb**	**06 20 33.0**	**+2.1**
ZHG	**ZHG**	**1.12**	**219**	P	**Pb**	**06 20 35.0**	**+2.3

PB02 eS Sn 06 33 36.3 +0.6
PB02 IAML 06 33 37.0
comp=Z,14µm,0.5s
PB09 IPOC Station P 1.23 185 Pn 06 33 22.3 +1.5
PB09 IPOC Station P 1.23 185⇑ *iP* **Pn 06 33 22.1 +1.3**
PB09 *i* S Sn **06 33 40.4 +1.0**
PB09 IAML 06 33 42.8
comp=N,3µm,0.6s
PB09 IPOC Station P 1.23 185 *eP* **Pn 06 33 21.5 +0.6**
PB09 IAML 06 33 42.0
comp=Z,4µm,0.8s
PB09 eS Sn **06 33 42.0 +2.7**
PB07 IPOC Station P 1.35 211 Pn 06 33 23.0 +0.8
PB07 IPOC Station P 1.35 211⇑ *iP* **Pn 06 33 22.9 +0.6**
PB07 *i* S Sn **06 33 41.7 -0.1**
PB07 IAML 06 33 45.2
comp=E,3µm,0.3s
PB07 IPOC Station P 1.35 211 *eP* **Pn 06 33 22.6 +0.4**
PB07 eS Sn **06 33 42.2 +0.4**
PB07 IAML 06 33 46.1
comp=Z,3µm,0.5s
PB03 IPOC Station P 1.59 202 Pn 06 33 25.6 +0.7
PB03 IPOC Station P 1.59 202⇑ *iP* **Pn 06 33 25.6 +0.7**
PB03 *i* S Sn **06 33 46.2 -0.4**
PB03 IAML 06 33 48.5
comp=E,3µm,0.6s
PB03 IPOC Station P 1.59 202 *eP* **Pn 06 33 25.1 +0.2**
PB03 eS Sn **06 33 46.8 +0.2**
PB03 IAML 06 33 48.1
comp=Z,3µm,0.5s
PX02 IPOC Station P 1.89 327 *iP* **Pn 06 33 27.2 -1.3**
PB06 IPOC Station P 2.17 191 Pn 06 33 32.8 +0.8
PB06 IPOC Station P 2.17 191⇑ *iP* **Pn 06 33 32.8 +0.8**
PB06 IAML 06 34 01.1
comp=N,1µm,0.2s
PB06 IPOC Station P 2.17 191 *eP* **Pn 06 33 32.5 +0.4**
PB06 eS Sn **06 34 00.4 +1.0**
PB06 IAML 06 34 09.6
comp=Z,849nm,0.4s
PB12 IPOC Station P 2.25 330 Pn 06 33 32.5 -0.6
PB12 IPOC Station P 2.25 330⇑ *iP* **Pn 06 33 32.4 -0.6**
PB12 *i* S Sn **06 33 58.4 -2.6**
PB12 IAML 06 34 01.8
comp=N,1µm,0.2s
PB12 IPOC Station P 2.25 330 *eP* **Pn 06 33 32.3 -0.7**
PB12 eS Sn **06 33 59.8 -1.3**
PB16 IPOC Station P 2.25 351 Pn 06 33 35.4 +1.9
PB16 IPOC Station P 2.25 351 *iP* **Pn 06 33 34.9 +1.4**
PB16 IPOC Station P 2.25 351 *eP* **Pn 06 33 34.3 +0.8**
PB16 eS Sn **06 34 04.2 +2.4**
PB05 IPOC Station P 2.49 204 Pn 06 33 36.8 +0.8
PB05 IPOC Station P 2.49 204⇑ *iP* **Pn 06 33 36.5 +0.4**
PB05 *i* S Sn **06 34 02.1 -4.5**
PB05 IPOC Station P 2.49 204 *eP* **Pn 06 33 36.5 +0.4**
PB05 eS Sn **06 34 04.8 -1.7**
PB05 IAML 06 34 05.7
comp=Z,717nm,0.4s
AF01 San Pedro de A 2.53 160 Pn 06 33 39.6 +2.7
AF01 San Pedro de A 2.53 160 *eP* **Pn 06 33 39.0 +2.2**
AF01 San Pedro de A 2.53 160 *eP* **Pn 06 33 39.1 +2.2**
AF01 eS Sn **06 34 01.6 -6.2**
PB18 Visviri 2.98 353 *eP* **Pn 06 33 46.2 +3.2**
PB10 IPOC Station P 3.22 204 Pn 06 33 45.2 -0.3
PB10 IPOC Station P 3.22 204⇑ *iP* **Pn 06 33 44.2 -0.6**
PB10 IPOC Station P 3.22 204 *eP* **Pn 06 33 45.2 -0.3**
PB10 eS Sn **06 34 18.9 -4.5**
PB14 IPOC Station P 4.21 196 Pn 06 33 58.3 -0.7
PB14 IPOC Station P 4.21 196 eS Sn **06 34 45.6 -1.9**
HJA Humahuaca 4.34 128 *eP* **Pn 06 34 04.0 +3.1**
HJA *eP* 06 34 04.8
LPAZ La Paz 4.36 13 P **Pn 06 34 03.4 +2.0**
comp=Z,4.5nm,0.3s,baz=212,slow=5.1,SNR=25
LPAZ S Sn **06 34 48.6 -3.0**
comp=Z,8.7nm,0.6s,baz=202,slow=12,SNR=5.0
LPAZ La Paz 4.36 13 Pn 06 34 04.3 +3.0
LPAZ La Paz 4.36 13 *eP* **Pn 06 34 04.2 +2.9**
LPAZ eS Sn **06 34 44.6 -7.0**
LPAZ La Paz 4.36 13 *eP* Pn 06 33 54.1 -7.2
AC01 Pan de Azucar 5.72 193 Pn **Pn 06 34 17.4 -1.7**
AC02 Maricunga 6.24 180 Pn 06 34 27.3 +0.8
AC06 Mina Casimiro 6.85 189 Pn **Pn 06 34 33.3 -1.1**
SIV San Ignacio 8.90 61 P **Pn 06 35 00.4 -1.8**
comp=Z,19nm,0.6s,baz=245,slow=12,SNR=100
PTLB Pontes e Lacer 10.78 63 Pn **Pn 06 35 27.1 -0.4**
PTLB Pontes e Lacer 10.78 63 *eP* **Pn 06 35 26.5 -1.0**
MURT Porto Murtinho 10.80 98 *eP* **Pn 06 35 24.3 -3.5**
CFA Coronel Fontan 11.02 176 P **Pn 06 35 29.0 -1.7**
comp=Z,0.3nm,0.3s,baz=359,slow=14,SNR=1.8
VILB Vilhena 11.41 50 Pn **Pn 06 35 36.0 0.0**
BDQN Bodoquena, MS 11.60 92 *eP* **Pn 06 35 35.8 -2.6**
CPUP Villa Florida 12.25 120 P **Pn 06 35 45.0 -1.9**
comp=Z,1.1nm,0.8s,baz=293,slow=11,SNR=4.6
CPUP Villa Florida 12.25 120 Pn **Pn 06 35 45.2 -1.7**
VA01 Torpederas 12.61 190 Pn **Pn 06 35 49.2 -2.3**
AMBA Amambai (Brazi 13.34 103 *eP* **Pn 06 35 58.1 -3.2**
SALV Santo Antonio 13.58 72 *eP* **Pn 06 36 02.5 -1.8**
PP1B Ponte de Pedra 13.79 80 *eP* **Pn 06 36 06.4 -0.6**
PDRB Porto dos Gac 14.86 55 *eP* **Pn 06 36 21.4 +0.6**
C2SB Chapadao do Su 15.45 86 *eP* **Pn 06 36 27.9 -0.1**
TRCB Terra Rica 15.49 101 Pn 06 36 28.5 0.0
CLDB Colider 16.04 55 *eP* **P 06 36 36.4 -0.1**
ITAB Concordia 16.89 116 P 06 36 46.7 +0.9
ITAB IAmb IAmb 06 36 48.6
comp=Z,6.8nm,0.6s
ITAB Concordia 16.89 116 *eP* **Pn 06 36 42.1 -3.6**
LDASE Londrina, Braz 16.94 103 *eP* **P 06 36 44.4 -2.1**
ARAG Araguaiana, MT 17.15 76 *eP* **Pn 06 36 50.0 +1.0**
FRTB Fartura 18.36 102 *eP* **P 06 37 02.0 0.0**
TRQA Tornquist 18.50 162 P **Pn 06 37 04.6 -0.4**
NPGB Novo Progresso 18.94 47 *eP* **Pn 06 37 09.8 -0.5**
SNDB Serra Nova Dou 19.12 66 *eP* **P 06 37 10.4 +0.1**
MACA Manacapuru-AM 19.16 27 P **Pn 06 37 11.3 -1.6**
MACA IAmb IAmb 06 37 13.4
comp=Z,22nm,1.1s
MACA Manacapuru-AM 19.16 27 *eP* **P 06 37 11.1 +0.4**
BB19B Bebedouro 19.26 95 *eP* **P 06 37 11.3 -0.7**
MAJ01 Sao Joao Batis 19.58 114 *eP* **P 06 37 14.0 -1.4**
IPMB Ipameri, GO 19.91 86 *eP* **P 06 37 19.3 +0.3**
PLCA Paso Flores 20.14 183 P Pn 06 37 23.4 -0.8
RCLB Rio Claro- Sao 20.18 99 *eP* **P 06 37 22.2 +0.4**
SPB Sao Paulo 20.33 103 P Pn 06 37 27.9 +1.4
SPB IAmb IAmb 06 37 33.8
comp=Z,13nm,1.1s
BDFB Brasilia 20.65 80 P **P 06 37 26.5 -0.5**
comp=Z,3.3nm,0.7s,baz=242,slow=13,SNR=8.0
comp=Z,3.3nm,0.7s
BDFB Brasilia 20.65 80 P **P 06 37 26.6 -0.5**
BDFB IAmb IAmb 06 37 33.7
comp=Z,5.1nm,0.8s
ITTB Itaituba 20.71 41 *eP* **P 06 37 27.5 -0.1**
VAO Valinhos 20.72 101 P **P 06 37 27.1 -0.6**
VAO IAmb IAmb 06 37 29.4
comp=Z,12nm,1.1s
PMNB Patos De Minas 21.47 88 *eP* **P 06 37 35.9 +0.1**
BSCB Bom Sucesso 22.77 95 *eP* **P 06 37 49.8 +0.6**
PRPB Parauapebas 23.57 55 *eP* **P 06 37 58.1 +1.5**
SMTB Santa Maria do 23.82 64 *eP* **P 06 38 00.1 +1.3**
DIAM Diamantina, MG 24.10 89 *eP* **P 06 38 02.3 +0.8**
JANB Januaria 24.24 81 *eP* **P 06 38 03.1 +0.5**
BOAV Boa Vista 24.33 21 P **P 06 38 04.7 +1.4**
SDBA SAO DESIDERIO 24.58 75 *eP* **P 06 38 07.0 +1.3**
GUA01 Guaratinga, BA 28.05 87 *eP* **P 06 38 37.7 +0.8**
SDV Santo Domingo 29.30 357 P **P 06 38 48.8 +0.6**
SDV IAmb IAmb 06 39 07.0
comp=Z,3.8nm,1.0s
NBPS Pedro II - PI 31.35 63 *eP* **P 06 39 07.8 +1.6**
NBMA Muriti-CE 32.18 70 *eP* **P 06 39 15.0 +1.6**
RCBR Riachuelo 35.40 70 P **P 06 39 42.3 +1.0**
BOAB BOACO BROADBA 36.62 332 P **P 06 39 51.7 +0.2**
CNGN Cerro Negro 37.13 331 P **P 06 39 57.5 +1.6**
PMSA Palmer Station 44.31 177 LR LR 07 00 41.2
comp=Z,71nm,18.7s,baz=131,slow=38
TXAR Lajitas Array 59.75 325 P **P 06 42 49.6 +0.4**
comp=Z,0.1nm,0.5s,baz=155,slow=11,SNR=4.0
comp=Z,0.1nm,0.5s
NVAR Mina Array Bea 74.64 322 P **P 06 44 25.5 +2.3**
comp=Z,0.6nm,0.7s,baz=157,slow=8.0,SNR=3.9
comp=Z,0.6nm,0.7s
TORD Torodi Ar. Bea 77.24 71 P **P 06 44 40.5 +2.3**
comp=Z,1.9nm,0.5s,baz=240,slow=7.4,SNR=8.7
TORD pP **pP 06 45 07.7 -1.6**
comp=Z,1.5nm,0.8s,baz=244,slow=6.9,SNR=5.0
comp=Z,1.9nm,0.5s

YKA Yellowknife Ar 90.24 341 P **P 06 45 44.7 +1.4**
comp=Z,0.5nm,0.8s,baz=137,slow=3.8,SNR=6.8
YKA pP **pP 06 46 13.6 -0.8**
comp=Z,0.2nm,0.8s,baz=136,slow=3.9,SNR=6.9
comp=Z,0.5nm,0.8s
H11S2 WAKE ISLAND Hyd 27.56 278 T T 09 11 41.7
baz=102,slow=74,SNR=35
H11S1 WAKE ISLAND Hyd 27.56 278 T T 09 11 44.4
baz=102,slow=74,SNR=45
H11S3 WAKE ISLAND Hyd 27.57 278 T T 09 11 46.6
baz=102,slow=74,SNR=26
H11N3 WAKE ISLAND Hyd 27.61 279 T T 09 11 50.1
baz=101,slow=75,SNR=18
H11N2 WAKE ISLAND Hyd 27.63 279 T T 09 11 48.9
baz=101,slow=75,SNR=17
H11N1 WAKE ISLAND Hyd 27.63 279 T T 09 11 50.7
baz=101,slow=75,SNR=11
WRA Warramunga Arr 133.65 211 PKP **PKiKP 06 52 00.9 -0.4**
comp=Z,0.2nm,0.8s,baz=149,slow=1.5,SNR=5.1
MKAR Makanchi Array 144.99 35 PKPbc **PKiKP 06 52 21.2 -2.4**
comp=Z,0.7nm,0.7s,baz=343,slow=3.8,SNR=7.5
MKAR Makanchi Array 144.99 35 PKiKP 06 52 21.4 -2.3

TRN 15 06:41:40.8, 17.63N×61.20W, h31km, MD3.6, Far East of Barbuda., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ANWB	**Willy Bob**	**0.56**	**274**	*eP*			Pn	06 41 54.4	+1.8
ANWB				*eS*			Sn	06 42 03.6	+2.7
DHSZ	**Broadband at M**	**1.46**	**202**	*eP*			Pb	06 42 06.8	-0.5
DHSZ				*eS*			Sb	06 42 24.9	-0.5
MMLZ	**Guadeloupe Bro**	**1.64**	**196**	*eP*			Pb	06 42 09.6	-0.9
MMLZ				*eS*			Sb	06 42 30.2	-0.5
TBG	**Guadaloupe-3**	**1.82**	**194**	*eP*			Pn	06 42 11.1	+1.1
TBG				*eS*			Sn	06 42 33.6	+1.6
DSLB	**Salisbury**	**2.19**	**186**	*eP*			Pn	06 42 16.1	+1.0
DSLB				*eS*			Sb	06 42 44.0	-2.6

IDC ***15*** *07:15:52.2±1.4, 7.05N×126.32E, h0km, mb3.4/4, mbtmp3.4/4, MS2.9/1, Error ellipse: s-maj=27.2km s-min=11.2km az=11.0*
MAN ***15*** *07:15:56.0, 6.62N×125.22E, h11km, MS3.7*
ISC 15 07:15:55.9±1.5, 6.72N±0.04×125.27E±0.06, h18km±7km, n13, σ1s27/19, mb3.4/4, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**0.34**	**329**	*i* P			Pn	**07 16 05.2**	**-0.9**
KCP				*i* S			Sn	**07 16 11.4**	**-1.1**
DMPH	**Davao City--Mi**	**0.44**	**33**	*i* P			Pn	**07 16 07.5**	**+0.2**
DMPH				*i* S			Sn	**07 16 15.6**	**+0.8**
DAV	**Davao City (W)**	**0.47**	**41**	Pg			Pn	**07 16 08.2**	**+0.5**
DAV	415nm,0.3s,baz=88,slow=16,SNR=18			Lg			Lg	07 16 15.4	
	444nm,0.3s,baz=146,slow=23,SNR=11								
GSPH	**General Santos**	**0.70**	**207**	*i* P			Pb	**07 16 10.0**	**+0.3**
GSPH				*i* S			Sg	**07 16 20.2**	**+1.1**
DDMP	**Don Marcelino,**	**0.75**	**144**	*i* P			Pn	**07 16 11.0**	**-0.6**
DDMP				*i* S			Sn	**07 16 22.3**	**-0.2**
CTBH	**Cotabato--PC H**	**1.13**	**296**	*i* P			Pg	**07 16 17.6**	**-0.2**
CTBH				*i* S			Sg	**07 16 33.3**	**+0.6**
CGP	**Cagayan de Oro**	**1.82**	**342**	*eP*			Pg	**07 16 29.7**	**-1.3**
CGP				*eS*			Sg	**07 16 54.0**	**-0.6**
SNPH	**Sibulan**	**3.30**	**323**	*eP*			Pg	**07 16 58.2**	**-0.9**
SNPH				*eS*			Sg	**07 17 44.6**	**+2.7**
KAPI	**Kappang**	**12.89**	**205**	LR			LR	07 25 29.6	
	comp=Z,46nm,19.0s,baz=313,slow=42								
WRA	**Warramunga Arr**	**27.95**	**162**	P			**P**	**07 21 44.2**	**-1.4**
	0.5nm,0.7s,baz=340,slow=8.9,SNR=1.8								
	0.5nm,0.7s								
ASAR	**Alice Springs**	**31.35**	**165**	P			**P**	**07 22 15.2**	**-0.6**
	0.4nm,0.5s,baz=341,slow=6.9,SNR=13								
	0.4nm,0.5s								
MKAR	**Makanchi Array**	**54.29**	**325**	P			**P**	**07 25 23.6**	**+2.5**
	0.3nm,0.9s,baz=120,slow=5.8,SNR=2.3								
	0.3nm,0.9s								
KURBB	**Kurchatov Arra**	**58.46**	**327**	P			**P**	**07 25 50.2**	**-0.5**
	0.2nm,0.6s,baz=126,slow=6.2,SNR=2.4								
	0.2nm,0.6s								

IDC ***15*** *07:28:28.4±1.7, 29.98S×177.32W, h0km, mb4.0/3, mbtmp4.0/4, ML3.4/1, MS3.3/1, Error ellipse: s-maj=38.0km s-min=27.0km az=88.0*
ISC 15 07:28:34.2±1.6, 29.96S±0.08×177.5W±0.2, h35km, n22, σ0s82/11, mb4.0/4, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.78**	**334**	Pn			**Pn**	**07 28 48.6**	**-0.1**
	834nm,0.3s,baz=102,slow=20,SNR=61								
RAO				LR			LR	07 28 54.0	
	comp=Z,141nm,22.0s,baz=100,slow=29								
RAO				Sn			**Sn**	**07 28 58.7**	**-0.5**
	762nm,0.3s,baz=210,slow=20,SNR=12								
URZ	**Urewera**	**9.40**	**207**	Pn			**Pn**	**07 30 47.3**	**+0.2**
	0.3nm,0.3s,baz=25,slow=14,SNR=2.5								
URZ				Sn			**Sn**	**07 32 30.5**	**-1.0**
	1.4nm,0.3s,baz=354,slow=19,SNR=6.5								
	8.2nm,0.9s								
STKA	**Stephens Creek**	**34.98**	**256**	P			**P**	**07 35 23.8**	**+0.6**
	1.4nm,0.7s,baz=102,slow=12,SNR=2.5								
	1.4nm,0.7s								
ASAR	**Alice Springs**	**43.55**	**266**	P			**P**	**07 36 35.4**	**+0.5**
	1.4nm,0.7s,baz=104,slow=7.8,SNR=14								
	1.4nm,0.7s								
WRA	**Warramunga Arr**	**44.50**	**271**	P			**P**	**07 36 42.7**	**+0.2**
	1.5nm,0.6s,baz=110,slow=8.1,SNR=19								
	1.5nm,0.6s								
QSPA	**South Pole Qui**	**60.15**	**180**	P			P	07 38 43.9	+5.8
	1.5nm,0.8s,baz=301,slow=2.3,SNR=7.9								
H03S2	**Juan Fernandez**	**80.36**	**123**	T			T	09 10 14.7	
	baz=236								
H03S1	**Juan Fernandez**	**80.37**	**123**	T			T	09 10 14.0	
	baz=236								
H03S3	**Juan Fernandez**	**80.38**	**123**	T			T	09 10 08.5	
	baz=236								
H03N3	**Juan Fernandez**	**80.55**	**123**	T			T	09 10 18.2	
	baz=238								
H03N2	**Juan Fernandez**	**80.55**	**123**	T			T	09 10 26.9	
	baz=238								
H03N1	**Juan Fernandez**	**80.57**	**123**	T			T	09 10 20.3	
	baz=238								
DLBC	**Dease Lake**	**96.55**	**23**	LR			LR	08 26 06.0	
	comp=Z,12nm,18.4s,baz=115,slow=36								
H10S3	**ASCENSION HYDR**	**37.95**	**154**	T			T	10 23 06.1	
	baz=18								
H10S2	**ASCENSION HYDR**	**37.95**	**154**	T			T	10 23 19.7	
	baz=202								
H10N3	**ASCENSION HYDR**	**39.03**	**154**	T			T	10 24 32.3	
	baz=207								
H10N1	**ASCENSION HYDR**	**39.03**	**154**	T			T	10 23 59.7	
	baz=207,slow=74								
H10N2	**ASCENSION HYDR**	**39.04**	**154**	T			T	10 24 02.0	
	baz=207,slow=74								
FINES	**FINESS Array B**	**144.87**	**340**	PKP			**PKPab**	**07 48 05.8**	**-0.1**
	4.0nm,0.7s,baz=31,slow=1.9,SNR=11								
HFS	**Hagfors**	**148.89**	**349**	PKPbc			**PKPbc**	**07 48 17.9**	**+0.4**
	7.3nm,1.1s,baz=52,slow=9.5,SNR=2.8								
AKASG	**Malin Array Be**	**151.19**	**324**	PKPbc			**PKPbc**	**07 48 21.8**	**-1.6**
	0.3nm,0.3s,baz=62,slow=1.4,SNR=1.7								
MMAI	**Mount Meron Ar**	**151.82**	**285**	PKPbc			**PKiKP**	**07 48 26.7**	**+0.8**
	0.6nm,0.3s,baz=44,slow=4.4,SNR=2.3								

CATAC ***15*** *07:47:52.2±0.7, 14.7N±3.9×91.1W±., h10km±4km, M3.4/14, MLv3.4/14, Error ellipse: s-maj=8.3km s-min=3.5km az=32.7, confirmed*
GCG ***15*** *07:47:53.6±2.2, 13.58N×91.40W, h13km±21km, MD4.3, ML3.6, Presumed earthquake*
SNET ***15*** *07:47:55.2±1.1, 13.69N×91.22W, h10km, ML3.4, Presumed earthquake*
ISC 15 07:47:51.9±1.9, 13.44N±0.09×91.30W±0.06, h10km, n35, σ1s52/48, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
STG5	**El Palmar, Qui**	**0.95**	**357**	*i* P			**Pn**	**07 48 13.0**	**+1.4**
STG5				*i* S			**Sn**	**07 48 28.0**	**+2.8**
STG2	**El Palmar, Qui**	**0.99**	**356**	*i* P			**Pn**	**07 48 13.7**	**+1.7**
STG2				*i* S			**Sn**	**07 48 30.4**	**+4.2**
STG2				IAML				07 48 32.3	
	comp=E,6µm,0.3s								

STG8 El Palmar, Qui 1.00 357 *i* P **Pn 07 48 14.1 +1.8**
STG8 *i* S **Sn 07 48 30.5 +3.9**
STG8 IAML 07 48 38.7
comp=N,2µm,0.2s
FG8 Yepocapa, Chim 1.08 42 *i* P **Pb 07 48 12.4 -0.5**
FG16 Alotenango, Sa 1.13 43 *i* P **Pg 07 48 12.7 -1.0**
FG16 *i* S **Sb 07 48 28.2 -0.3**
FG16 IAML 07 48 33.1
comp=E,4µm,0.2s
RTAL Retalhuleu 1.14 341 P **Pb 07 48 12.2 -1.6**
RTAL S **Sg 07 48 26.4 -2.3**
FAME Alcaldia de Sa 1.31 72 P **Pn 07 48 16.0 -0.4**
FAME S **Sn 07 48 33.8 -0.2**
SOKI Kika Raxquin 1.37 356 *i* P **Pn 07 48 16.0 -1.5**
SOKI *i* S **Sb 07 48 34.2 -1.6**
SOKI IAML 07 48 50.2
comp=N,1µm,0.6s
SLOZ Alcaldia de Sa 1.59 68 P **Pb 07 48 20.6 -0.8**
SLOZ S **Sg 07 48 42.5 -0.5**
SLOZ Alcaldia de Sa 1.59 68 *eP* **Pb 07 48 20.9 -0.6**
CEVE Cerro Verde 1.68 77 P **Pb 07 48 22.2 -0.9**
CEVE Cerro Verde 1.68 77 *eP* **Pb 07 48 23.3 +0.2**
SBLS San Blas 1.68 76 *eP* **Pb 07 48 23.4 +0.2**
APG El Apazote 1.75 28 *iP* **Pn 07 48 23.4 -1.0**
UNIC Universidad Ca 1.79 72 P **Pn 07 48 23.5 +0.6**
JAYA Jayaque - finc 1.82 83 P **Pn 07 48 24.1 +0.7**
JAYA Jayaque - finc 1.82 83 *iP* **Pb 07 48 24.5 -0.9**
JAYA *i* S **Sb 07 48 48.6 +0.3**
JAYA IAML 07 48 58.3
comp=N,508nm,0.5s
HUEH Huehuetenango 1.87 354 *iP* **Pb 07 48 25.1 -1.2**
HUEH Huehuetenango 1.87 354 *eP* **Pb 07 48 25.2 -1.2**
CEDA San Andres 1.89 79 P **Pb 07 48 25.4 -1.2**
LALI Alcalda de L 1.93 88 P **Pb 07 48 26.1 -1.1**
PMON Piamonte 1.95 82 P **Pb 07 48 26.7 -1.0**
PMON S **Sg 07 48 53.5 -1.3**
PMON Piamonte 1.95 82 *eP* **Pb 07 48 26.9 -0.8**
MTO3 Montecristo 2.11 63 P **Pn 07 48 28.7 +1.1**
MTO3 S **Sb 07 48 57.3 +0.5**
MTO3 Montecristo 2.11 63 *iP* **Pb 07 48 28.8 -1.7**
MTO3 Montecristo 2.11 63 *iP* **Pn 07 48 27.7 +0.1**
PAVA Las Pavas 2.32 83 P **Pn 07 48 31.7 +1.3**
PAVA Las Pavas 2.32 83 *eP* **Pn 07 48 31.6 +1.3**
COEG Centro de Oper 2.36 85 P **Pb 07 48 33.1 -1.6**
COEG S **Sb 07 49 03.9 0.0**
SCLA Alcaldia de Sa 2.52 84 P **Pb 07 48 35.3 -2.0**
SARH Santa Rosa de 2.80 61 P **Pn 07 48 38.4 +1.5**
SARH Santa Rosa de 2.80 61 *iP* **Pn 07 48 38.4 +1.5**
CCIG Comitan 2.93 344 P **Pn 07 48 39.9 +1.1**
CCIG S **Sn 07 49 16.0 +1.7**
CCIG Comitan 2.93 344 *iP* **Pn 07 48 39.8 +0.9**
CCIG IAML 07 49 23.9
comp=N,68nm,0.5s
LCND La Caada 3.33 92 P **Pn 07 48 46.0 +2.0**

IDC 15 08:02:46.0±1.7, 4.73S×153.71E, h0km, mb3.6/4, mbtmp3.7/5, ML2.0/1, Error ellipse: s-maj=53.3km s-min=34.3km az=115.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.99**	**234**	Pn			Pn	08 04 45.3	+1.9
	1.1nm,0.3s,baz=50,slow=16,SNR=1.6								
PMG				Sn			Sn	08 06 11.5	-3.1
	2.6nm,0.3s,baz=53,slow=15,SNR=6.9								
	12nm,0.7s								
WRA	**Warramunga Arr**	**24.18**	**230**	P			P	08 08 04.4	+0.1
	0.5nm,0.5s,baz=54,slow=10.0,SNR=8.1								
	0.5nm,0.5s								
ASAR	**Alice Springs**	**26.82**	**224**	P			P	08 08 27.8	-0.5
	0.2nm,0.4s,baz=56,slow=9.2,SNR=6.7								
	0.2nm,0.4s								
MKAR	**Makanchi Array**	**80.88**	**319**	P			P	08 15 02.7	+0.6
	0.1nm,0.4s,baz=95,slow=5.9,SNR=2.2								
	0.1nm,0.4s								
QSPA	**South Pole Qui**	**85.22**	**180**	P			P	08 15 24.6	+0.2
	1.0nm,0.4s,baz=8.1,slow=7.1,SNR=13								
	1.0nm,0.4s								
TORD	**Torodi Ar. Bea**	**151.15**	**289**	PKPbc			PKPbc	08 22 41.3	-1.1
	1.0nm,0.7s,baz=85,slow=1.4,SNR=6.0								

PGC ***15*** *08:11:41.2±1.4, 49.87N×130.25W, h10km, MLSn2.8/8, Mw3.4/8, 208km west of Port Alice, Bc Vancouver Island, Canada Region*
IDC ***15*** *08:11:42.9±3.5, 50.03N×130.22W, h0km, mb3.5/2, mbtmp3.2/7, ML3.1/5, MS3.0/13, Error ellipse: s-maj=58.9km s-min=17.6km az=72.0*
ISC 15 08:11:44.3±2.2, 50.27N±0.07×129.90W±0.06, h9km±14km, n36, σ1s82/28, MS3.2/5, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.19**	**71**	Pn			**Pg**	**08 12 07.2**	**+0.1**
BPEB	**Brooks Peninsu**	**1.37**	**94**	Pn			**Pn**	**08 12 07.6**	**-2.0**
BPEB				Sn			**Sn**	**08 12 26.2**	**-1.7**
PACB	**Port Alice, BC**	**1.55**	**83**	Pn			**Pn**	**08 12 11.1**	**-0.9**
PACB				Sn			**Sn**	**08 12 32.3**	**+0.1**
PHC	**Port Hardy**	**1.64**	**74**	Pn			**Pn**	**08 12 13.4**	**+0.2**
PHC				Sn			**Sb**	**08 12 35.5**	**+0.2**
FHBB	**Fair Harbour**	**1.80**	**96**	Pn			**Pn**	**08 12 13.9**	**-1.6**
EDB	**Eliza Dome**	**1.83**	**101**	Pn			**Pn**	**08 12 13.4**	**-2.5**
TAHB	**Tahsis**	**2.11**	**99**	Pn			**Pn**	**08 12 17.8**	**-1.9**
WOSB	**Woss**	**2.14**	**92**	Pn			**Pn**	**08 12 19.7**	**-0.5**
WOSB				Sn			**Sn**	**08 12 46.4**	**-0.6**
JEDB	**Jedway, Haida**	**2.19**	**339**	Pn			**Pn**	**08 12 20.7**	**-0.1**
JEDB				Sn			**Sb**	**08 12 48.2**	**-2.9**
BBB	**Bella Bella**	**2.22**	**30**	Pn			**Pb**	**08 12 23.5**	**-1.1**
	8.0nm,0.3s,baz=217,slow=15,SNR=142								
BBB				Sn			**Sb**	**08 12 51.2**	**-1.0**
	3.6nm,0.3s,baz=291,slow=17,SNR=5.2								
	15nm,0.3s								
BBB	**Bella Bella**	**2.22**	**30**	Pn			**Pb**	**08 12 23.6**	**-1.1**
NCSB	**Newcastle Ridg**	**2.47**	**85**	Pn			**Pn**	**08 12 25.0**	**+0.2**
CBB	**Campbell River**	**2.93**	**93**	Pn			**Pn**	**08 12 28.4**	**-2.6**
H02S2	**DAWSON INLET T**	**3.35**	**332**	Pn			**Pn**	**08 12 36.0**	**-0.7**
H02S2				Sn			**Sn**	**08 13 14.7**	**-1.9**
DLBC	**Dease Lake**	**8.19**	**360**	Pn			**Pn**	**08 13 46.5**	**+3.3**
	baz=188,slow=17,SNR=1.0								
DLBC				Sn			**Sn**	**08 15 13.3**	**-2.4**
	0.1nm,0.3s,baz=142,slow=19,SNR=5.4								
	0.3nm,0.6s								
NEW	**Newport**	**8.60**	**99**	LR			LR	08 16 58.6	
	comp=Z,120nm,19.9s,baz=284,slow=36								
YBH	**Yreka Blue Hor**	**9.89**	**147**	LR			LR	08 17 23.8	
	comp=Z,9.9nm,20.4s,baz=326,slow=35								
ELK	**Elko**	**13.99**	**127**	LR			LR	08 20 19.2	
	comp=Z,53nm,21.1s,baz=286,slow=37								
NVAR	**Mina Array Bea**	**14.43**	**141**	Pn			**Pn**	**08 15 09.1**	**+0.3**
	0.1nm,0.3s,baz=254,slow=11,SNR=1.7								
NVAR				LR			LR	08 20 07.4	
	comp=Z,64nm,19.9s,baz=265,slow=35								
	0.3nm,0.6s								
YKA	**Yellowknife Ar**	**14.84**	**29

baz=42,slow=75,SNR=15
H11N1 WAKE ISLAND Hy 58.02 263 T T 09 24 16.5
baz=42,slow=75,SNR=11
H11S1 WAKE ISLAND Hy 59.03 262 T T 09 25 31.2
baz=46
H11S2 WAKE ISLAND Hy 59.04 262 T T 09 25 30.8
baz=46
H11S3 WAKE ISLAND Hy 59.05 262 T T 09 25 31.0
baz=46
ARTI Arti 73.49 355 LR LR 08 56 00.5
comp=Z,13nm,21.0s,baz=0.5,slow=36

*IDC **15** 08:12:36.9±3.5, 14°.20N×60°.29W, h73^{km}±39^{km}, mb3.2/5, mbtmp3.7/8, ML3.3/3, Error ellipse: s-maj=57.7km s-min=29.4km az=35.0*
*TRN **15** 08:12:39.3, 14°.30N×60°.56W, h70^{km}, MD4.1, North-east of Saint Lucia.*
ISC 15 08:12:39.5±0.9, 14°.31N±0°.03×60°.56W±0°.07, h78^{km}±6^{km}, n38, σ0^{s}.88/56, mb3.4/5, 3C-2D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
H05S1	**Guadeloupe/Mar**	**0.30**	**294**	P		**Pn**	**08 12 52.2**	**+0.6**
H05S1				S		**Sn**	**08 13 00.9**	**+0.5**
SLBI	**Saint Lucia, B**	**0.49**	**235**	*e*P		**Pn**	**08 12 52.9**	**-0.2**
SLBI				*e*S		**Sn**	**08 13 03.0**	**0.0**
SLCP	**Castries, St.**	**0.51**	**235**	*e*P		**Pn**	**08 12 53.2**	**-0.1**
SLCP				*e*S		**Sn**	**08 13 03.6**	**+0.3**
SLAC	**Saint Lucia, A**	**0.52**	**219**	⇑*i*P		**Pn**	**08 12 53.5**	**+0.1**
SLAC				*e*S		**Sn**	**08 13 03.5**	**0.0**
BIM	**Bigot**	**0.54**	**293**	*e*P		**Pn**	**08 12 53.8**	**+0.3**
BIM				*e*S		**Sn**	**08 13 04.2**	**+0.3**
MCLT	**Moule a Chique**	**0.70**	**212**	⇑*i*P		**Pn**	**08 12 54.9**	**-0.2**
MCLT				*e*S		**Sn**	**08 13 06.0**	**-0.6**
SVN	**Savane Anatole**	**0.80**	**312**	*e*P		**Pn**	**08 12 56.8**	**+0.6**
SVN				*e*S		**Sn**	**08 13 09.5**	**+1.0**
DLPL	**La Plaine**	**1.22**	**327**	⇓*i*P		**Pn**	**08 13 01.7**	**+0.5**
DLPL				*e*S		**Sn**	**08 13 18.1**	**+0.6**
SVB	**Belmont**	**1.23**	**213**	*e*P		**Pn**	**08 13 01.7**	**+0.4**
SVB				*e*S		**Sn**	**08 13 17.8**	**+0.1**
DSLB	**Salisbury**	**1.40**	**323**	⇓*i*P		**Pn**	**08 13 04.2**	**+0.7**
DSLB				*e*S		**Sn**	**08 13 23.0**	**+1.3**
DWS	**Wesley**	**1.45**	**330**	⇑*i*P		**Pn**	**08 13 04.7**	**+0.5**
DWS				*e*S		**Sn**	**08 13 23.1**	**+0.3**
BBGH	**Gun Hill**	**1.51**	**140**	*e*P		**Pn**	**08 13 06.0**	**+1.1**
BBGH				*e*S		**Sn**	**08 13 26.1**	**+2.0**
TBG	**Guadaloupe-3**	**1.86**	**326**	*e*P		**Pn**	**08 13 10.4**	**+0.9**
TBG				*e*S		**Sn**	**08 13 34.2**	**+1.8**
GCMP	**Grenada, Carri**	**2.00**	**205**	*e*P		**Pn**	**08 13 12.0**	**+0.6**
GCMP				*e*S		**Sn**	**08 13 35.9**	**+0.3**
DSDZ	**La Diserade, G**	**2.06**	**346**	*e*P		**Pn**	**08 13 11.6**	**-0.5**
DSDZ				*e*S		**Sn**	**08 13 37.2**	**+0.3**
H05N1	**Guadeloupe/Mar**	**2.06**	**346**	P		**Pn**	**08 13 11.9**	**-0.3**
H05N1	SNR=286			S		**Sn**	**08 13 35.9**	**-1.1**
GRSS	**Sisters**	**2.25**	**207**	*e*P		**Pn**	**08 13 15.7**	**+1.0**
GRSS				*e*S		**Sn**	**08 13 41.9**	**+0.3**
DHSZ	**Broadband at M**	**2.28**	**329**	*e*P		**Pn**	**08 13 16.3**	**+1.2**
DHSZ				*e*S		**Sn**	**08 13 43.3**	**+1.0**
GRW	**Mount Saint Ca**	**2.39**	**207**	*e*P		**Pn**	**08 13 18.6**	**+1.9**
GRW				*e*S		**Sn**	**08 13 45.9**	**+0.7**
GRGR	**Grenville**	**2.41**	**206**	*e*P		**Pn**	**08 13 17.8**	**+0.8**
GRGR				*e*S		**Sn**	**08 13 46.3**	**+0.7**
GRFF	**Grenada Fort F**	**2.52**	**207**	*e*P		**Pn**	**08 13 19.0**	**+0.6**
GRFF				*e*S		**Sn**	**08 13 49.5**	**+1.3**
ANWB	**Willy Bob**	**3.55**	**341**	*e*P		**Pn**	**08 13 33.5**	**+1.2**
ANWB				*e*S		**Sn**	**08 14 12.3**	**-0.8**
SKI	**Saint Kitts**	**3.67**	**325**	*e*P		**Pn**	**08 13 36.0**	**+1.9**
SKI				*e*S		**Sn**	**08 14 17.5**	**+1.3**
TRN	**Trinidad (W)**	**3.73**	**193**	*e*P		**Pn**	**08 13 35.8**	**+1.0**
TRN				*e*S		**Sn**	**08 14 16.3**	**-1.2**
SMRT	**St. Maarten**	**4.44**	**327**	*e*P		**Pn**	**08 13 44.7**	**+0.2**
SJG	**San Juan**	**6.57**	**306**	P		**Pn**	**08 14 14.7**	**+1.1**
	1.7nm,0.3s,baz=121,slow=15,SNR=2.5 13nm,0.8s							
SDV	**Santo Domingo**	**11.24**	**242**	P		**Pn**	**08 15 18.0**	**+0.4**
	0.3nm,0.3s,baz=357,slow=19,SNR=1.5 0.9nm,0.3s							
MDP	**Montagnes des**	**12.02**	**139**	P		Pn	08 15 21.7	-6.2
	0.4nm,0.3s,baz=344,slow=15,SNR=17							
MDP				S		Sn	08 17 25.8	-14
	46nm,0.5s,baz=325,slow=15,SNR=25 21nm,1.0s							
TXAR	**Lajitas Array**	**42.47**	**298**	P		**P**	**08 20 26.8**	**-0.5**
	0.1nm,0.5s,baz=97,slow=12,SNR=2.0 0.1nm,0.5s							
ULM	**Lac du Bonnet**	**45.89**	**329**	P		**P**	**08 20 53.4**	**-0.8**
	0.9nm,0.4s,baz=124,slow=7.3,SNR=2.2 0.9nm,0.4s							
PDAR	**Pinedale Array**	**50.62**	**314**	P		**P**	**08 21 30.6**	**-0.3**
	0.5nm,0.5s,baz=124,slow=9.5,SNR=6.4 0.5nm,0.5s							
H10N3	**ASCENSION HYDR**	**50.71**	**113**	T		T	09 16 44.9	
	baz=296,slow=75,SNR=32							
H10N2	**ASCENSION HYDR**	**50.72**	**113**	T		T	09 16 45.8	
	baz=296,slow=75,SNR=34							
H10N1	**ASCENSION HYDR**	**50.73**	**113**	T		T	09 16 47.3	
	baz=296,slow=75,SNR=46							
H10S3	**ASCENSION HYDR**	**51.05**	**114**	T		T	09 17 20.2	
	baz=287,slow=74,SNR=30							
H10S2	**ASCENSION HYDR**	**51.07**	**114**	T		T	09 17 12.6	
	baz=293,slow=74,SNR=25							
YKA	**Yellowknife Ar**	**61.20**	**335**	P		**P**	**08 22 45.4**	**-0.5**
	0.2nm,0.6s,baz=110,slow=6.4,SNR=10 0.2nm,0.6s							
ILAR	**Eielson Array**	**75.61**	**334**	P		**P**	**08 24 15.2**	**-0.5**
	0.2nm,0.5s,baz=90,slow=4.7,SNR=6.1 0.2nm,0.5s							

*AFAD **15** 08:41:00.3, 38°.41N×39°.06E, h16^{km}, MW3.7*
*ISK **15** 08:41:00.1, 38°.37N×39°.10E, h5^{km}, ML3.5/16*
*IDC **15** 08:41:02.2±1.4, 38°.35N×38°.92E, h0^{km}, mb3.4/3, mbtmp3.4/5, ML3.3/2, MS2.9/5, Error ellipse: s-maj=23.8km s-min=16.2km az=172.0*
ISC 15 08:41:00.7±0.9, 38°.38N±0°.02×39°.09E±0°.02, h4^{km}±6^{km}, n60, σ0^{s}.92/69, mb3.2/3, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ESGZ	**Sivrice-Elazig**	**0.06**	**339**	Pg		**Pg**	**08 41 02.3**	**+0.1**
ESGZ				Sg		**Sg**	**08 41 03.6**	**+0.3**
MDYL	**Doganyol-Malat**	**0.07**	**212**	Pg		**Pg**	**08 41 02.3**	**-0.1**
MDYL				Sg		**Sg**	**08 41 03.8**	**+0.2**
ELZG	**Elazig**	**0.14**	**326**	P		**Pg**	**08 41 04.0**	**+0.3**
ELZG				S		**Sg**	**08 41 06.3**	**+0.6**
ELZG				IAML			08 41 07.0	
	comp=N,4μm,0.3s							
SVRC	**Sivrice-ELAZID**	**0.17**	**90**	Pg		**Pg**	**08 41 03.5**	**-0.7**
ESIJ	**Sivrice-Elazig**	**0.19**	**68**	Pg		**Pg**	**08 41 04.2**	**-0.3**
ELZ	**Elazig**	**0.32**	**17**	P		**Pg**	**08 41 06.5**	**-0.6**
ELZ				S		**Sg**	**08 41 11.5**	**+0.2**
ELZ				IAML			08 41 12.0	
	comp=N,2μm,0.3s							
ELZ				IAML			08 41 14.0	
	comp=E,9μm,0.6s							
MDNT	**Maden**	**0.47**	**88**	P		**Pb**	**08 41 11.2**	**-0.4**
MDNT				S		**Sb**	**08 41 17.6**	**-1.2**
MAYA	**Malatya/Merkez**	**0.52**	**264**	P		**Pg**	**08 41 10.7**	**-0.1**
MAYA				S		**Sg**	**08 41 17.2**	**-0.5**
MAYA				IAML			08 41 20.0	
	comp=N,4μm,0.3s							
NARI	**Adyaman-Kaht**	**0.56**	**208**	P		**Pb**	**08 41 11.6**	**-1.4**
KOVA	**Elazig, Kovanc**	**0.66**	**60**	P		**Pg**	**08 41 12.9**	**-0.4**
KAHTU	**Kahta**	**0.69**	**214**	P		**Pb**	**08 41 14.2**	**-1.1**
MCKZ	**Bingol**	**0.74**	**353**	P		**Pg**	**08 41 14.3**	**-1.0**
MCKZ				S		**Sg**	**08 41 24.4**	**-0.4**
MCKZ				IAML			08 41 27.0	
	comp=E,2μm,0.4s							
HANM	**anlurfa/Hi**	**0.81**	**192**	P		**Pb**	**08 41 16.3**	**-1.1**
HANM				S		**Sn**	**08 41 31.3**	**-0.2**
HANM				IAML			08 41 32.0	
	comp=E,1μm,0.4s							
TNCL	**Tunceli-Merkez**	**0.82**	**26**	P		**Pg**	**08 41 15.6**	**-0.9**
AZEY	**Adyaman-Merk**	**0.87**	**230**	P		**Pb**	**08 41 17.9**	**-0.6**
ARPR	**Arapgir-MALATY**	**0.93**	**321**	Pg		**Pg**	**08 41 18.1**	**-0.4**
ARPR				Sg		**Sb**	**08 41 32.3**	**+0.2**
DYBB	**Diyarbakir**	**0.93**	**117**	Pg		**Pg**	**08 41 18.8**	**+0.2**
DIYA	**Diyarbakir**	**0.93**	**119**	P		**Pn**	**08 41 21.9**	**+1.2**
HEKM	**Malatya_Hekimh**	**1.02**	**300**	P		**Pg**	**08 41 19.3**	**-0.9**
HEKM				S		**Sb**	**08 41 33.8**	**-1.0**
HEKM				IAML			08 41 39.0	
	comp=N,2μm,0.3s							
MAYK		**1.06**	**70**	P		**Pg**	**08 41 20.2**	**-0.8**
ATAB	**Bozova**	**1.10**	**215**	P		**Pn**	**08 41 22.0**	**-0.9**
ILIC	**ilic-Erzincan**	**1.15**	**339**	Pn		**Pg**	**08 41 21.8**	**-0.9**
SANL	**SANLIURFA_Merk**	**1.21**	**184**	P		**Pn**	**08 41 23.8**	**-0.6**
SANL				S		**Sn**	**08 41 40.2**	**-1.0**
SANL				IAML			08 41 42.0	
	comp=N,3μm,0.5s							
MDIV		**1.25**	**319**	P		**Pg**	**08 41 23.3**	**-1.3**
MDIV				S		**Sg**	**08 41 39.6**	**-1.2**
MDIV				IAML			08 41 47.0	
	comp=N,860nm,0.7s							
MIMR	**Divri**	**1.25**	**319**	P		Pn	08 41 31.8	+6.8
AKCA	**Adyaman/G¶l**	**1.25**	**243**	P		**Pn**	**08 41 24.7**	**-0.3**
AKCA				S		**Sn**	**08 41 43.8**	**+1.4**
AKCA				IAML			08 41 51.0	
	comp=E,1μm,0.9s							
ERZN	**Erzincan**	**1.30**	**22**	Pn		**Pn**	**08 41 25.4**	**-0.4**
BNGB	**Bingl**	**1.39**	**63**	Pn		**Pn**	**08 41 26.8**	**-0.2**
EUZM	**Uzumlu**	**1.41**	**19**	P		**Pn**	**08 41 26.5**	**-0.8**
ELBS	**KAHRAMANMARAS**	**1.54**	**269**	P		**Pb**	**08 41 28.6**	**-1.2**
SURC	**SANLIURFA_SURC**	**1.54**	**194**	P		**Pn**	**08 41 28.5**	**-0.5**
YEDI	**Yedisu-Bingol**	**1.55**	**47**	Pn		**Pn**	**08 41 29.4**	**+0.1**
GZT	**Gaziantep**	**1.58**	**230**	P		**Pb**	**08 41 29.7**	**-0.9**
SLHN	**Bingol, Solhan**	**1.62**	**99**	P		**Pn**	**08 41 30.5**	**+0.3**
SVAN	**Silvan-Diyarba**	**1.68**	**97**	Pn		**Pn**	**08 41 30.7**	**-0.2**
SVAN	**Silvan-Diyarba**	**1.68**	**97**	P		**Pn**	**08 41 29.9**	**-0.9**
NZIP	**Nizip/Gaziante**	**1.74**	**221**	P		**Pn**	**08 41 31.6**	**-0.2**
KELT	**Kelkit**	**1.77**	**4**	P		**Pb**	**08 41 33.3**	**-0.7**
BTMN	**Batman**	**1.79**	**105**	P		**Pn**	**08 41 31.9**	**-0.5**
KARO	**Karliova-Bingo**	**1.79**	**58**	Pn		**Pn**	**08 41 32.9**	**+0.3**
KAHM	**Kahramanmaras,**	**1.87**	**243**	P		**Pn**	**08 41 33.5**	**0.0**
GAZ	**Gaziantep**	**1.91**	**232**	Pn		**Pb**	**08 41 34.6**	**-1.6**
KMRS	**Kahramanmaras**	**1.94**	**244**	Pn		**Pb**	**08 41 34.7**	**-1.9**
SUSE	**Susehri**	**1.95**	**340**	P		**Pg**	**08 41 37.1**	**-1.0**
VRTB	**Varto-Mus**	**2.01**	**66**	Pn		**Pn**	**08 41 35.7**	**+0.2**
BAYT	**Aydıntepe-Bayb**	**2.17**	**22**	Pn		**Pn**	**08 41 38.5**	**+0.7**
GURO	**Guroymak-BITLI**	**2.32**	**85**	Pn		**Pn**	**08 41 40.2**	**+0.4**
BRTR	**Keskin Array B**	**4.45**	**289**	Pn		**Pn**	**08 42 11.3**	**+2.3**
	1.0nm,0.3s,baz=114,slow=12,SNR=19							
BRTR				Lg		Lg	08 43 19.9	
	baz=114,slow=32							
BRTR				LR		LR	08 44 10.8	
	comp=Z,154nm,18.1s,baz=116,slow=44 4.0nm,0.5s							
BEIL	**Beino**	**4.49**	**212**	*e*P		**Pn**	**08 42 10.2**	**+0.7**
FKH	**Fakeheh**	**4.66**	**208**	*e*P		**Pn**	**08 42 12.3**	**+0.4**
HWQ	**Hawqa**	**4.81**	**213**	*e*P		**Pn**	**08 42 14.8**	**+0.7**
ZAHL	**Zahle**	**5.20**	**211**	*e*P		**Pn**	**08 42 20.4**	**+0.9**
BHL	**Bhannes**	**5.26**	**213**	*e*P		**Pn**	**08 42 21.5**	**+1.4**
DQRL	**Deir Qamar**	**5.46**	**212**	*e*P		**Pn**	**08 42 24.5**	**+1.5**
MMAI	**Mount Meron Ar**	**6.13**	**210**	Pn		**Pn**	**08 42 33.7**	**+1.5**
	1.3nm,0.3s,baz=27,slow=13,SNR=4.0							
MMAI				Lg		Lg	08 44 14.4	
	1.2nm,0.3s,baz=11,slow=33,SNR=1.8							
MMAI				LR		LR	08 44 59.6	
	comp=Z,75nm,20.9s,baz=11,slow=39 1.1nm,0.3s							
EIL	**Elat**	**9.34**	**203**	LR		LR	08 47 12.8	
	comp=Z,69nm,21.7s,baz=66,slow=40							
MLR	**Muntele Rosu**	**12.09**	**310**	LR		LR	08 48 46.3	
	comp=Z,37nm,22.0s,baz=123,slow=39							
FINES	**FINESS Array B**	**24.47**	**345**	P		**P**	**08 46 21.7**	**+1.2**
	3.5nm,1.0s,baz=153,slow=9.4,SNR=1.5 3.5nm,1.0s							
KURBB	**Kurchatov Arra**	**30.32**	**53**	P		**P**	**08 47 14.8**	**+1.8**
	0.3nm,0.8s,baz=264,slow=9.1,SNR=2.6 0.3nm,0.8s							
MKAR	**Makanchi Array**	**32.55**	**61**	P		P	08 47 37.4	+4.5
	0.1nm,0.5s,baz=282,slow=7.2,SNR=4.9							
MKAR				LR		LR	09 01 20.0	
	comp=Z,85nm,20.9s,baz=129,slow=37 0.1nm,0.5s							

*SOME **15** 08:59:23.7, 45°.37N×84°.77E, h15^{km}*
*NNC **15** 08:59:25.6±1.3, 45°.45N×84°.65E, h0^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=11.1km s-min=6.0km az=113.0*
ISC 15 08:59:22.3±2.0, 45°.33N±0°.06×84°.9E±0°.1, h10^{km}, n32, σ2^{s}.77/45, 7C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ZSN	**Zaisan**	**2.12**	**0**	*e*P		**Pb**	**09 00 00.4**	**-0.4**
ZSN	93nm,0.4s			*e*S		**Sb**	**09 00 26.7**	**-0.5**
	195nm,0.5s							
MK31	**Makanchi Array**	**2.31**	**310**	⇑Pn		**Pb**	**09 00 03.3**	**-0.7**
	10nm,0.3s,baz=123,slow=16,SNR=490							
MK31				Lg		Lg	09 00 32.9	
	434nm,0.6s,baz=124,slow=29,SNR=51							
MAKZ	**Makanchi**	**2.49**	**308**	⇓Pn		**Pn**	**09 00 05.2**	**+2.4**
MAKZ	9.6nm,0.4s			⇑Lg		Lg	09 00 38.3	
	196nm,0.8s							
KTMS	**Ketmen**	**3.73**	**241**	Pg		**Pb**	**09 00 31.1**	**+2.8**
KTMS	1.8nm,0.2s			Lg		Lg	09 01 19.3	
	48nm,0.7s							
KTMS	**Ketmen**	**3.73**	**241**	*e*P		**Pb**	**09 00 31.1**	**+2.8**
KTMS	1.8nm,0.2s			*e*S		**Sg**	**09 01 19.3**	**-2.7**
	48nm,0.7s							
DJR	**Jarkent**	**3.73**	**256**	Pg		**Pg**	**09 00 31.9**	**-1.9**
DJR	14nm,0.5s			Lg		Lg	09 01 21.2	
	22nm,0.7s							
DJR	**Jarkent**	**3.73**	**256**	*e*P		**Pg**	**09 00 31.9**	**-1.9**
DJR	14nm,0.5s			*e*S		**Sg**	**09 01 21.2**	**-0.9**
	22nm,0.7s							
KNOS	**Konyrlen**	**4.15**	**258**	Pg		**Pg**	**09 00 39.7**	**-1.9**
KNOS	12nm,0.6s			Lg		Lg	09 01 34.2	
	52nm,1.0s							
SHLS	**Shalkode**	**4.44**	**243**	Pg		**Pb**	**09 00 40.1**	**-0.3**
SHLS	18nm,0.2s			Lg		Lg	09 01 34.6	
	97nm,0.8s							
SHLS	**Shalkode**	**4.44**	**243**	*e*P		**Pb**	**09 00 40.1**	**-0.3**
SHLS	18nm,0.2s			*e*S		**Sb**	**09 01 34.6**	**+0.7**
	97nm,0.8s							
TDK	**Taldyqorghan**	**4.57**	**268**	Pg		**Pg**	**09 00 48.2**	**-1.6**
TDK	72nm,0.3s			Lg		Lg	09 01 49.2	
	221nm,1.3s							
TDK	**Taldyqorghan**	**4.57**	**268**	*e*P		**Pg**	**09 00 48.2**	**-1.6**
TDK	72nm,0.3s			*e*S		**Sg**	**09 01 49.2**	**+0.4**
	221nm,1.3s							
BLB	**Baldybastay**	**4.70**	**257**	Pg		**Pg**	**09 00 49.8**	**-2.5**
BLB	38nm,0.5s			Lg		Lg	09 01 51.1	
	65nm,0.5s							
KPKS	**Kokpek**	**4.79**	**249**	Pg		**Pb**	**09 00 50.2**	**+3.8**
KPKS	0.3nm,0.2s			Lg		Lg	09 01 51.9	
	80nm,0.7s							
KPKS	**Kokpek**	**4.79**	**249**	*e*P		**Pb**	**09 00 50.2**	**+3.8**
KPKS	0.3nm,0.2s			*e*S		**Sg**	**09 01 51.9**	**-4.3**
	80nm,0.7s							
ARXS	**Arharly**	**5.12**	**260**	*e*P		**Pg**	**09 00 56.8**	**-3.5**
ARXS	7.1nm,0.3s			*e*S		**Sg**	**09 02 03.4**	**-3.2**
	56nm,0.9s							
KURS	**Kuram**	**5.13**	**251**	Pg		**Pb**	**09 00 56.7**	**+4.7**
KURS	3.6nm,0.5s			Lg		Lg	09 02 03.9	
	41nm,0.7s							
KOTS	**Kotyrbulak**	**5.94**	**252**	*e*P		**Pg**	**09 01 16.2**	**+0.3**
KOTS	14nm,0.5s			*e*S		**Sg**	**09 02 36.8**	**+4.1**
	60nm,0.7s							
SEM	**Semipalatinsk**	**5.95**	**330**	*e*P		**Pg**	**09 01 15.6**	**-0.5**
SEM	3.7nm,0.2s			*e*S		**Sg**	**09 02 35.6**	**+2.5**
	28nm,0.6s							
MDOK	**Medeo**	**6.01**	**252**	Pg		**Pg**	**09 01 14.6**	**-2.6**
MDOK	8.8nm,0.7s			Lg		Lg	09 02 34.1	
	33nm,1.1s							
KTBS	**Karatobe**	**6.06**	**257**	*e*P		**Pg**	**09 01 14.3**	**-3.9**
KTBS	4.6nm,0.8s			*e*S		**Sg**	**09 02 33.5**	**-3.2**
	9.8nm,1.0s							
MTBS	**Maitube**	**6.43**	**253**	Pg		**Pg**	**09 01 21.9**	**-3.5**
MTBS	3.6nm,0.2s			Lg		Lg	09 02 46.8	
	16nm,0.5s							
MTBS	**Maitube**	**6.43**	**253**	*e*P		**Pg**	**09 01 21.9**	**-3.5**
MTBS	3.6nm,0.2s			*e*S		**Sg**	**09 02 46.8**	**-2.0**
	16nm,0.5s							
KRBS	**Karabastau**	**6.76**	**259**	Pg		**Pg**	**09 01 27.9**	**-3.7**
KRBS	2.0nm,0.5s			Lg		Lg	09 02 57.2	
	8.1nm,0.5s							
KRBS	**Karabastau**	**6.76**	**259**	*e*P		**Pg**	**09 01 27.9**	**-3.7**
KRBS	2.0nm,0.5s			*e*S		**Sg**	**09 02 57.2**	**-1.9**
	8.1nm,0.5s							
KURBB	**Kurchatov Arra**	**6.78**	**324**	⇑Pn		**Pn**	**09 01 01.2**	**-0.5**
KURBB	7.5nm,0.8s			⇑Lg		Lg	09 02 53.2	
	70nm,0.6s							
KST	**Kastek**	**6.78**	**253**	Pg		**Pg**	**09 01 28.4**	**-3.7**
KST	2.4nm,0.4s			Lg		Lg	09 02 58.2	
	16nm,0.7s							
KST	**Kastek**	**6.78**	**253**	*e*P		**Pg**	**09 01 33.0**	**+0.9**
KST	4.9nm,0.7s			*e*S		**Sg**	**09 03 05.5**	**+5.6**
	16nm,0.7s							
KURK	**Kurchatov**	**6.82**	**324**	⇓Pn		**Pn**	**09 01 03.1**	**+0.9**
KURK	2.1nm,1.4s			⇑Lg		Lg	09 02 52.7	
	24nm,0.6s							
DGS	**Degeres**	**6.84**	**255**	Pg		Pg	09 01 28.6	-4.5
DGS	2.4nm,0.5s			Lg		Lg	09 02 58.7	
	24nm,0.8s							
DGS	**Degeres**	**6.84**	**255**	*e*P		**Pg**	**09 01 31.7**	**-1.5**
DGS	2.9nm,0.4s			*e*S		**Sg**	**09 03 03.4**	**+1.7**
	24nm,0.8s							
AAK	**Ala-Archa**	**7.94**	**254**	⇑Pg		**Pg**	**09 01 51.2**	**-3.0**
AAK	3.0nm,0.9s			⇑Lg		Lg	09 03 40.7	
	12nm,1.0s							

*IDC **15** 09:14:27.0±10.0, 1°.24N×96°.33E, h0^{km}, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=464.6km s-min=32.6km az=54.0, Off west coast of northern Sumatera*

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
H08S2	**Diego Garcia H**	**25.36**	**249**	T		T	09 46 38.7	
	baz=68,slow=76,SNR=27							
H08S3	**Diego Garcia H**	**25.36**	**249**	T		T	09 46 38.8	
	baz=68,slow=76,SNR=36							
H08S1	**Diego Carcia H**	**25.38**	**249**	T		T	09 46 35.8	
	baz=68,slow=76,SNR=18							
WRA	**Warramunga Arr**	**42.79**	**121**	P		P	09 22 26.7	-0.2
	0.2nm,0.8s,baz=298,slow=8.2,SNR=1.8 0.2nm,0.8s							
MKAR	**Makanchi Array**	**47.00**	**347**	P		P	09 22 59.9	-0.1
	0.5nm,0.7s,baz=159,slow=7.5,SNR=7.3 0.5nm,0.7s							
ZALV	**Zalesovo Beam**	**53.39**	**352**	P		P	09 23 48.2	0.0
	0.9nm,0.5s,baz=168,slow=7.4,SNR=5.2 0.9nm,0.5s							
H04N2	**CROZET ISLANDS**	**61.32**	**214**	T		T	10 32 08.5	
	baz=53,slow=74,SNR=232							
H04N1	**CROZET ISLANDS**	**61.33**	**214**	T		T	10 32 10.5	
	baz=53,slow=74,SNR=195							
H04N3	**CROZET ISLANDS**	**61.34**	**214**	T		T	10 32 08.4	
	baz=53,slow=74,SNR=182							
H04S1	**CROZET ISLANDS**	**61.67**	**213**	T		T	10 32 39.8	
	baz=51							
H04S3	**CROZET ISLANDS**	**61.68**	**213**	T		T	10 32 34.6	
	baz=51							
H04S2	**CROZET ISLANDS**	**61.68**	**213**	T		T	10 32 40.9	
	baz=51							

*IDC **15** 09:20:51.2±0.9, 35°.90N×71°.33E, h0^{km}, mb3.9/17, mbtmp3.9/22, ML3.6/5, Error ellipse: s-maj=19.6km s-min=16.1km az=35.0*
*MOS **15** 09:21:03.0±1.0, 36°.41N×71°.25E, h93^{km}, mb4.1/6, Error ellipse: s-maj=9.9km s-min=5.3km az=91.1*
*NNC **15** 09:21:04.6±3.9, 36°.88N×70°.82E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=31.0km s-min=23.6km az=165.0*
*NEIC **15** 09:21:04.4±2.1, 36°.42N±0°.06×71°.17E±0°.09, h81^{km}±10^{km}, mb4.2/15, Error ellipse: s-maj=10.7km s-min=9.0km az=68.0*
ISC 15 09:21:05.2±0.5, 36°.32N±0°.05×71°.30E±0°.05, h114^{km}, n119, σ2^{s}.91/133, mb4.0/27, 5C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KBL	**Kabul**	**2.56**	**227**			**Pn**	**09 21 44.9**	**-0.8**
KBL	**Kabul**	**2.56**	**227**	PN		**Pn**	**09 21 44.9**	**-0.8**
GAR	**Garm**	**2.78**	**344**			**Pn**	**09 21 45.9**	**-2.6**
SHAA	**Shahritus**	**2.83**	**297**			Pn	09 21 44.7	-4.3
CHGR	**Chuyangaron**	**2.88**	**325**			Pn	09 21 45.4	-4.4
CHGR	**Chuyangaron**	**2.88**	**325**	PN		Pn	09 21 45.4	-4.4
NIL	**Nilore**	**3.11**	**148**			**Pn**	**09 21 53.4**	**+0.6**
NIL	**Nilore**	**3.11**	**148**	PN		**Pn**	**09 21 53.4**	**+0.6**
DRK	**Karamyk**	**3.18**	**7**	Pn		**Pn**	**09 21 53.3**	**-0.6**
DRK	**Karamyk**	**3.18**	**7**	PN		**Pn**	**09 21 53.3**	**-0.6**
BTK	**Batken**	**3.

AAK	**Ala-Archa**	**6.77**	**20**	⇑P		**Pn**	**09 22 40.2**	**-1.9**
	comp=E,2.5nm,0.4s							
AAK				⇑S		**Sn**	**09 23 54.4**	**-3.4**
	comp=E,13nm,1.0s							
AAK	**Ala-Archa**	**6.77**	**20**	PN		**Pn**	**09 22 40.2**	**-1.9**
KK31	**Karatay Array**	**6.80**	**355**			**Pn**	**09 22 39.0**	**-3.3**
KK31	**Karatay Array**	**6.80**	**355**	P		**Pn**	**09 22 39.5**	**-2.8**
	comp=E,5.6nm,0.3s,baz=180,slow=13,SNR=101							
KK31				⇓S		**Sn**	**09 23 51.4**	**-6.8**
	comp=E,4.0nm,0.3s,baz=177,slow=31,SNR=3.7							
KK31	**Karatay Array**	**6.80**	**355**	PN		**Pn**	**09 22 39.5**	**-2.8**
KKAR	**Karatay Array**	**6.80**	**355**			**Pn**	**09 22 38.9**	**-3.4**
KKAR	**Karatay Array**	**6.80**	**355**	PN		**Pn**	**09 22 38.9**	**-3.4**
KBK	**Karagaybulak** SNR=5.1	**6.93**	**23**	P		**Pn**	**09 22 44.3**	**+0.1**
SMLA	**Simla**	**7.12**	**135**	*e*P		**Pn**	**09 22 44.7**	**-2.0**
SMLA				*e*S		**Sn**	**09 24 00.9**	**-5.2**
SMLA				IAML			09 24 07.7	
	comp=N,184nm,0.2s							
SMLA				IAML			09 24 08.5	
	comp=E,134nm,0.3s							
BOOM	**Boomskoye usch**	**7.13**	**29**	Pn		**Pn**	**09 22 46.4**	**-0.6**
BOOM	**Boomskoye usch**	**7.13**	**29**	PN		**Pn**	**09 22 46.4**	**-0.6**
CHMS	**Chumysh** SNR=6.0	**7.18**	**21**	P		**Pn**	**09 22 46.3**	**-1.1**
HNLY	**HANLEY**	**7.25**	**117**	*e*P		**Pn**	**09 22 47.1**	**-1.9**
HNLY				*e*S		**Sn**	**09 24 04.3**	**-5.8**
TKM2	**Tokmak 2** SNR=6.9	**7.38**	**25**	P		**Pn**	**09 22 49.5**	**-0.8**
TARG	**Taragay, Kyrgy**	**7.40**	**41**			**Pn**	**09 22 49.2**	**-1.6**
TARG	**Taragay, Kyrgy**	**7.40**	**41**	PN		**Pn**	**09 22 49.2**	**-1.6**
WUS	**Wushi**	**7.87**	**49**	Pn		**Pn**	**09 22 56.2**	**-0.8**
JOSI	**Joshimath**	**8.98**	**127**	*e*P		**Pn**	**09 23 12.9**	**+0.8**
JOSI				*e*S		**Sn**	**09 24 45.9**	**-5.8**
KUDL	**Kundal**	**9.26**	**150**	*e*P		**Pn**	**09 23 12.0**	**-3.8**
KUDL				*e*S		**Sn**	**09 24 49.3**	**-8.8**
KUDL				IAML			09 24 55.7	
	comp=N,162nm,0.3s							
KUDL				IAML			09 24 56.4	
	comp=E,124nm,0.4s							
PTH	**Pithoragarh**	**10.05**	**129**	*e*P		**Pn**	**09 23 22.9**	**-3.7**
LGTI	**Lohaghat**	**10.11**	**131**	*e*P		**Pn**	**09 23 24.1**	**-3.3**
MK31	**Makanchi Array**	**13.30**	**35**	*i* P		**Pn**	**09 24 08.3**	**-1.0**
MKAR	**Makanchi Array** baz=228,slow=12,SNR=5.8	**13.30**	**35**	Pn		**Pn**	**09 24 08.4**	**-0.9**
	comp=E,0.4nm,0.7s							
BHPL	**Bhopal**	**14.08**	**156**	*e*S		Sn	09 26 42.0	-13
WMQ	**Urumqi**	**14.61**	**54**	*e*P		**P**	**09 24 28.3**	**-1.1**
KURBB	**Kurchatov Arra**	**15.21**	**18**	Pn		**Pn**	**09 24 30.4**	**-3.3**
	comp=E,0.1nm,0.3s,baz=206,slow=10.0,SNR=3.4							
	comp=E,0.8nm,0.3s							
KURK	**Kurchatov**	**15.32**	**18**	P		**Pn**	**09 24 30.4**	**-4.7**
AB31	**Akbulak array**	**15.35**	**331**	P		**Pn**	**09 24 31.2**	**-4.3**
	comp=E,0.9nm,0.3s,baz=144,slow=11,SNR=55							
AB31				⇑S		**Sn**	**09 27 16.8**	**-8.4**
	comp=E,0.7nm,0.3s,baz=156,slow=22,SNR=9.0							
AB31	**Akbulak array**	**15.35**	**331**	P		**Pn**	**09 24 31.2**	**-4.3**
AB31				S		**Sn**	**09 27 16.8**	**-8.4**
ABKAR	**Akbulak array**	**15.35**	**331**	Pn		**Pn**	**09 24 32.6**	**-2.8**
BVAR	**Borovoye Array**	**16.71**	**358**	P		**Pn**	**09 24 51.7**	**-0.6**
	comp=E,0.1nm,0.3s,baz=164,slow=8.6,SNR=9.1							
	comp=E,0.9nm,0.4s							
BORK	**Borovoye**	**16.73**	**358**	*i* P		**Pn**	**09 24 50.1**	**-2.4**
AKTO	**Aktyubinsk**	**17.05**	**330**	P		**P**	**09 24 54.1**	**-2.3**
	comp=E,1.3nm,0.3s,baz=133,slow=6.5,SNR=15							
	comp=E,2.2nm,0.4s							
AKTO	**Aktyubinsk**	**17.05**	**330**	⇓P		**P**	**09 24 54.5**	**-1.9**
	comp=E,3.8nm,0.8s							
AKTO				⇑S		**Sn**	**09 27 58.2**	**-7.9**
	comp=E,5.9nm,1.2s							
AKTO	**Aktyubinsk**	**17.05**	**330**	P		**P**	**09 24 54.5**	**-1.9**
AKTO				S		**Sn**	**09 27 58.2**	**-7.9**
UOSS	**Minazif**	**17.22**	**233**			**P**	**09 24 58.0**	**-0.4**
UOSS				IAmb		IAmb	09 25 26.8	
	comp=E,29nm,1.5s							
DGZ	**Jazzator, Alta**	**17.78**	**36**	*i* P		**Pn**	**09 25 06.5**	**+1.1**
DGZ				pmax		pmax		
	comp=E,2.0nm,0.5s							
ZAA0	**Zalesovo Array**	**19.98**	**24**			**P**	**09 25 27.3**	**-1.0**
ZAA0				IAmb		IAmb	09 25 29.5	
	comp=E,3.7nm,0.6s							
ZALV	**Zalesovo Beam**	**19.98**	**24**	P		**P**	**09 25 27.9**	**-0.4**
	comp=E,3.6nm,0.5s,baz=209,slow=9.9,SNR=18							
	comp=E,3.6nm,0.5s							
ZALV	**Zalesovo Beam**	**19.98**	**24**			**P**	**09 25 28.0**	**-0.3**
ZALV	**Zalesovo Beam**	**19.98**	**24**	*i* P		**P**	**09 25 28.2**	**-0.1**
ZALV				pmax		pmax		
	comp=E,3.0nm,0.3s							
SHL	**Shillong**	**20.62**	**116**			**P**	**09 25 36.2**	**+0.6**
SHL	**Shillong**	**20.62**	**116**	P		**P**	**09 25 36.2**	**+0.6**
GNI	**Garni**	**21.18**	**288**	P		**P**	**09 25 45.6**	**+4.1**
	comp=E,7.4nm,0.6s,baz=101,slow=16,SNR=4.7							
GNI	**Garni**	**21.18**	**288**	*i* P		**P**	**09 25 41.6**	**+0.1**
GNI				pmax		pmax		
	comp=E,11nm,1.0s							
ARTI	**Arti**	**21.89**	**341**	P		**P**	**09 25 51.7**	**+3.1**
	comp=E,3.3nm,0.5s,baz=161,slow=4.1,SNR=5.0							
	comp=E,3.3nm,0.5s							
ARTI	**Arti**	**21.89**	**341**	*d* P		**P**	**09 25 52.6**	**+3.9**
ARTI							09 26 20.1	
ARTI				S		**S**	**09 29 50.1**	**+6.9**
ARTI				SS		**SnSn**	**09 30 26.9**	**+6.9**
GEVA	**Gevas**	**22.51**	**284**	P		**P**	**09 25 56.4**	**+0.9**
GTA2	**Gaotai**	**22.64**	**73**	*e*P		**P**	**09 25 59.0**	**+2.3**
GTA2				pmax		pmax		
	comp=E,4.0nm,1.0s							
KBZ	**Khabaz**	**22.89**	**298**	P		**P**	**09 26 00.2**	**+1.2**
	comp=E,0.8nm,0.6s,baz=157,slow=7.7,SNR=1.7							
	comp=E,0.8nm,0.6s							
KBZ	**Khabaz**	**22.89**	**298**	*i* P		**P**	**09 25 57.6**	**-1.4**
KBZ				pmax		pmax		
	comp=E,10.0nm,3.2s							
KIV	**Kislovodsk**	**23.08**	**298**	*e*P		**P**	**09 26 00.8**	**-0.1**
KIV				pmax		pmax		
	comp=E,4.0nm,1.1s							
ARPR	**Arapgir-MALATY**	**26.14**	**286**	P		**P**	**09 26 30.0**	**+1.2**
ARPR				IAmb		IAmb	09 26 52.6	
	comp=E,4.4nm,0.9s							
PZH	**PanZhiHua**	**27.67**	**102**	P		**P**	**09 26 46.4**	**+3.9**
BRTR	**Keskin Array B**	**29.71**	**288**	P		**P**	**09 27 01.6**	**+1.0**
	comp=E,0.2nm,0.3s,baz=91,slow=7.2,SNR=1.8							
	comp=E,0.2nm,0.3s							
CMAR	**Chiang Mai Arr**	**30.16**	**119**	P		P	09 26 59.4	-5.2
	comp=E,0.8nm,0.3s,baz=340,slow=6.3,SNR=4.6							
	comp=E,0.8nm,0.3s							
XAN	**Xi'an**	**30.71**	**83**	⇑P		**P**	**09 27 09.8**	**+0.5**
XAN				pmax		pmax		
	comp=E,7.0nm,1.0s							
HHC	**Hu-ho-hao-te**	**31.60**	**69**	*e*P		P	09 27 21.4	+4.3
HHC				pmax		pmax		
	comp=E,10.0nm,0.5s							
HHC				pmax		pmax		
	comp=E,77nm,6.2s							
AKASG	**Malin Array Be**	**33.24**	**309**	P		**P**	**09 27 33.0**	**+1.8**
	comp=E,0.7nm,0.4s,baz=84,slow=7.1,SNR=16							
	comp=E,0.7nm,0.4s							
AKASG	**Malin Array Be**	**33.24**	**309**	P		**P**	**09 27 33.0**	**+1.8**
AKBB	**Malin Array Si**	**33.24**	**309**	P		**P**	**09 27 31.7**	**+0.5**
AKBB				IAmb		IAmb	09 27 34.5	
	comp=E,6.9nm,0.8s							
AKBB	**Malin Array Si**	**33.24**	**309**	P		**P**	**09 27 31.7**	**+0.5**
AKBB				pmax		pmax		
	comp=E,7.0nm,0.8s							
BURAR	**Bucovina Array**	**35.58**	**303**	P		**P**	**09 27 53.2**	**+1.7**
BURAR	**Bucovina Array**	**35.58**	**303**	P		**P**	**09 27 53.2**	**+1.7**
BURAR				pmax		pmax		
	comp=E,1.0nm,1.0s							
RDO	**Rodhopi**	**35.70**	**292**	P		**P**	**09 27 53.9**	**+1.5**
FINES	**FINESS Array B**	**37.76**	**326**	P		**P**	**09 28 11.3**	**+1.6**
	comp=E,1.4nm,0.5s,baz=126,slow=8.7,SNR=10							
	comp=E,1.4nm,0.5s							
FINES	**FINESS Array B**	**37.76**	**326**	P		**P**	**09 28 11.5**	**+1.8**
FINES	**FINESS Array B**	**37.76**	**326**	P		**P**	**09 28 11.5**	**+1.8**
ARCES	**ARCESS Array B**	**41.40**	**338**	P		**P**	**09 28 41.8**	**+2.1**
	comp=E,3.5nm,0.8s,baz=111,slow=7.8,SNR=9.1							
	comp=E,3.5nm,0.8s							
ARCES	**ARCESS Array B**	**41.40**	**338**	P		**P**	**09 28 41.4**	**+1.7**
ARCES				IAmb		IAmb	09 29 16.2	
	comp=E,24nm,1.4s							
ARCES	**ARCESS Array B**	**41.40**	**338**	P		**P**	**09 28 41.4**	**+1.7**
ARCES				pmax		pmax		
	comp=E,24nm,1.4s							
GERES	**GERESS Array B**	**43.23**	**305**	P		**P**	**09 28 55.4**	**+0.4**
	comp=E,0.1nm,0.4s,baz=57,slow=5.5,SNR=1.7							
	comp=E,0.1nm,0.4s							
HFS	**Hagfors**	**43.35**	**322**	P		**P**	**09 28 57.1**	**+1.5**
	comp=Z,3.0nm,0.5s,baz=98,slow=11,SNR=12							
	comp=Z,3.0nm,0.5s							
NORES	**NORESS Array B**	**44.48**	**323**	P		**P**	**09 29 07.1**	**+2.5**
NB201	**NORSAR Array S**	**44.63**	**323**	P		**P**	**09 29 07.1**	**+1.2**
NB2	**NORSAR Subarra**	**44.66**	**323**	P		**P**	**09 29 07.7**	**+1.5**
	comp=Z,2.6nm,0.5s,baz=98,slow=7.9							
NOA	**NORSAR Array B**	**44.66**	**323**	P		**P**	**09 29 07.6**	**+1.4**
	comp=Z,2.1nm,0.6s,baz=105,slow=7.2,SNR=7.0							
	comp=Z,2.1nm,0.6s							
NC204	**NORSAR Array S**	**44.90**	**323**	P		**P**	**09 29 09.6**	**+1.5**
SPITS	**Spitsbergen Ar**	**47.72**	**347**	P		**P**	**09 29 32.9**	**+3.1**
	comp=Z,3.6nm,0.8s,baz=108,slow=9.4,SNR=4.9							
	comp=Z,3.6nm,0.8s							
EKA	**Eskdalemuir Ar**	**52.58**	**316**	P		**P**	**09 30 08.0**	**+1.2**
	comp=Z,2.9nm,0.9s,baz=88,slow=8.6,SNR=2.4							
	comp=Z,2.9nm,0.8s							
EKA	**Eskdalemuir Ar**	**52.58**	**316**	P		**P**	**09 30 08.0**	**+1.2**
TORD	**Torodi Ar. Bea**	**65.95**	**269**	P		**P**	**09 31 39.2**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=53,slow=7.3,SNR=8.0							
	comp=Z,1.1nm,0.5s							
C19K	**Lookout Ridge**	**68.42**	**17**	P		**P**	**09 31 56.1**	**+1.9**
POIN	**Pond Inlet**	**69.20**	**351**	P		**P**	**09 32 01.9**	**+3.0**
POIN				IAmb		IAmb	09 32 16.7	
	comp=Z,2.1nm,1.3s							
D19K	**Kuna River**	**69.24**	**17**	P		**P**	**09 32 00.9**	**+1.6**
D19K				IAmb		IAmb	09 32 19.4	
	comp=Z,4.2nm,1.4s							
C27K	**Jago River**	**71.29**	**12**	P		**P**	**09 32 14.4**	**+2.7**
C27K				IAmb		IAmb	09 32 50.7	
	comp=Z,3.2nm,1.2s							
ILON	**Igloolik, Nuna**	**72.77**	**350**	P		**P**	**09 32 22.8**	**+2.3**
ILON				IAmb		IAmb	09 32 31.5	
	comp=Z,8.0nm,1.5s							
BMAR	**Burnt Mountain**	**73.06**	**14**	P		**P**	**09 32 25.5**	**+3.2**
YKA	**Yellowknife Ar**	**81.41**	**3**	P		**P**	**09 33 11.4**	**+2.4**
	comp=Z,0.3nm,0.6s,baz=351,slow=5.9,SNR=10							
	comp=Z,0.3nm,0.6s							
WRA	**Warramunga Arr**	**81.69**	**122**	P		**P**	**09 33 11.1**	**0.0**
	comp=Z,0.1nm,0.4s,baz=324,slow=4.9,SNR=4.9							
	comp=Z,0.1nm,0.4s							
ASAR	**Alice Springs**	**83.96**	**125**	P		**P**	**09 33 23.8**	**+1.1**
	comp=Z,0.3nm,0.7s,baz=304,slow=4.5,SNR=2.7							
	comp=Z,0.3nm,0.7s							

JMA ***15*** *09:34:19.5±0.2,34.°7N±0.°7×140.°2E±0.°8,h64km±2km, MV3.0/38,SE OFF BOSO PENINSULA*
IDC ***15*** *09:34:21.0±4.1,34.°35N×139.°30E,h42km±45km,mb3.2/3, mbtmp3.3/4,ML2.3/1,Error ellipse: s-maj=59.8km s-min=26.9km az=64.0*
ISC 15 09:34:20.0±1.0,34.°74N±0.°05×140.°15E±0.°05,h64km±8km, n25,σ0ŝ59/27,mb3.4/3,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BSO4	**Boso 4**	**0.29**	**31**	*i* P		**Pn**	**09 34 30.5**	**+0.1**
BSO4				X			09 34 37.8	
BSO3	**Boso 3**	**0.30**	**78**	*i* P		**Pn**	**09 34 30.2**	**-0.1**
BSO3				X			09 34 38.8	
TATJ	**Tateyama 2**	**0.36**	**324**	*i* P		**Pn**	**09 34 31.6**	**+0.5**
TATJ				S		**Sn**	**09 34 40.5**	**+1.4**
JKUC	**kamogawauchiur**	**0.42**	**5**	*i* P		**Pn**	**09 34 31.2**	**-0.4**
JKUC				S		**Sn**	**09 34 39.5**	**-0.5**
KTR	**Katsuura**	**0.43**	**18**	S		**Sn**	**09 34 39.7**	**-0.5**
BSO2	**Boso 2**	**0.49**	**88**	X			09 34 40.6	
JIM2	**Oshima 3**	**0.59**	**268**	*i* P		**Pn**	**09 34 33.0**	**-0.3**
BSO1	**Boso 1**	**0.69**	**97**	*i* P		**Pn**	**09 34 33.5**	**-0.3**
JTHY	**Toshimahigashi**	**0.74**	**254**	P		**Pn**	**09 34 35.2**	**+0.1**
JTHY				S		**Sn**	**09 34 46.4**	**+0.3**
JMYK	**Miyake Tsubota**	**0.84**	**217**	P		**Pn**	**09 34 36.3**	**0.0**
JMYK				S		**Sn**	**09 34 48.3**	**+0.2**
KTJ3	**Kamata3**	**0.91**	**283**	*i* P		**Pn**	**09 34 36.6**	**-0.5**
KTJ3				S		**Sn**	**09 34 48.4**	**-1.4**
JMKN	**Mikurajimanish**	**0.96**	**209**	P		**Pn**	**09 34 37.8**	**0.0**
JMKN				S		**Sn**	**09 34 50.5**	**-0.4**
JOD2	**Odawara 2**	**1.02**	**301**	*i* P		**Pn**	**09 34 38.1**	**-0.4**
JOD2				S		**Sn**	**09 34 51.3**	**-1.0**
JIZS	**Izushimoda**	**1.05**	**269**	P		**Pn**	**09 34 38.8**	**-0.1**
JIZS				S		**Sn**	**09 34 52.7**	**-0.2**
JYN	**Shimob**	**1.52**	**300**	*i* P		**Pn**	**09 34 45.4**	**+0.3**
MJAR	**Matsushiro Arr** 0.8nm,0.3s,baz=154,slow=12,SNR=51	**2.40**	**319**	P		**Pn**	**09 34 57.3**	**+0.4**
MJAR				S		**Sn**	**09 35 24.8**	**-0.5**
	9.4nm,0.5s,baz=157,slow=22,SNR=7.8 8.9nm,0.6s							
H11N2	**WAKE ISLAND Hy** baz=308,slow=75,SNR=15	**27.97**	**115**	T		T	10 09 51.9	
H11N1	**WAKE ISLAND Hy** baz=308,slow=75,SNR=14	**27.98**	**115**	T		T	10 09 49.2	
H11N3	**WAKE ISLAND Hy** baz=308,slow=75,SNR=16	**27.99**	**115**	T		T	10 09 50.0	
H11S3	**WAKE ISLAND Hy** baz=311	**28.59**	**118**	T		T	10 10 27.5	
H11S1	**WAKE ISLAND Hy** baz=311	**28.59**	**118**	T		T	10 10 11.3	
H11S2	**WAKE ISLAND Hy** baz=311	**28.60**	**118**	T		T	10 10 21.6	
MKAR	**Makanchi Array** 0.3nm,0.8s,baz=99,slow=8.9,SNR=2.9 0.3nm,0.8s	**44.51**	**304**	P		**P**	**09 42 25.6**	**+0.5**
KURBB	**Kurchatov Arra** 0.2nm,0.4s,baz=87,slow=7.1,SNR=2.6 0.2nm,0.4s	**46.64**	**310**	P		**P**	**09 42 42.5**	**+0.7**
WRA	**Warramunga Arr** 0.5nm,0.5s,baz=0.1,slow=7.5,SNR=15 0.5nm,0.5s	**54.66**	**187**	P		**P**	**09 43 42.0**	**-0.4**

IDC ***15*** *09:34:50.7±1.1,14.°99N×91.°11W,h174km±4km,mb3.5/9, mbtmp4.0/11,Error ellipse: s-maj=31.8km s-min=17.3km az=29.0*
CATAC ***15*** *09:34:50.8±0.6,15.°N±5.°×9.°1W±.°,h166km±5km,M3.8/16, MLv3.8/16,Error ellipse: s-maj=12.1km s-min=4.5km az=37.1,confirmed*
GCG ***15*** *09:34:50.1±1.4,14.°85N×91.°27W,h170km±6km,MD4.2, ML4.4,Presumed earthquake*
SNET ***15*** *09:34:51.5±0.8,14.°84N×91.°17W,h159km±6km,ML4.0, Presumed earthquake*
NEIC ***15*** *09:34:52.5±1.9,14.°89N±0.°05×91.°20W±0.°08,h162km±9km, mb4.4/16,Error ellipse: s-maj=12.8km s-min=6.0km az=64.0*
ISC 15 09:34:50.5±0.6,14.°80N±0.°05×91.°28W±0.°04,h173km±5km, n100,σ1ŝ67/120,mb3.8/10,2C-3D,Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
STG8	**El Palmar, Qui**	**0.35**	**191**	*i* P		**Pn**	**09 35 13.8**	**-0.6**
STG2	**El Palmar, Qui**	**0.37**	**194**	*i* P		**Pn**	**09 35 13.8**	**-0.5**
STG2				IAML			09 35 17.2	
	comp=E,16μm,0.2s							
STG5	**El Palmar, Qui**	**0.40**	**190**	*i* P		**Pn**	**09 35 13.7**	**-0.6**
RTAL	**Retalhuleu**	**0.49**	**236**			**Pn**	**09 35 14.1**	**-0.5**
RTAL	**Retalhuleu**	**0.49**	**236**	P		**Pn**	**09 35 14.4**	**0.0**
RTAL				S		**Sn**	**09 35 33.5**	**+0.6**
RTAL	**Retalhuleu**	**0.49**	**236**	⇑*i* P		**Pn**	**09 35 14.5**	**0.0**
RTAL				*e*S		**Sn**	**09 35 32.6**	**-0.3**
HUEH	**Huehuetenango**	**0.56**	**337**			**Pn**	**09 35 15.3**	**+0.3**
HUEH	**Huehuetenango**	**0.56**	**337**	P		**Pn**	**09 35 15.4**	**+0.3**
HUEH	**Huehuetenango**	**0.56**	**337**	*i* P		**Pn**	**09 35 15.4**	**+0.3**
HUEH				*i* S		**Sn**	**09 35 34.0**	**-0.1**
HUEH				IAML			09 35 36.4	
	comp=N,10μm,0.6s							
HUEH	**Huehuetenango**	**0.56**	**337**	⇑*e*P		**Pn**	**09 35 15.4**	**+0.3**
HUEH				*e*S		**Sn**	**09 35 33.6**	**-0.5**
GCG4	**OSOP**	**0.75**	**106**	*i* P		**Pn**	**09 35 16.2**	**+0.1**
GCG4				*i* S		**Sn**	**09 35 35.9**	**+0.2**
GCG4				IAML			09 35 36.5	
	comp=E,3μm,0.6s							
SMCA	**Catarina**	**0.77**	**274**	*i* P		**Pn**	**09 35 15.8**	**-0.2**
APG	**El Apazote**	**0.81**	**75**	P		**Pn**	**09 35 16.6**	**+0.1**
	comp=E,59nm,0.4s,baz=184,slow=11,SNR=933							
APG				S		**Sn**	**09 35 35.5**	**-0.9**
	comp=E,73nm,0.6s,baz=227,slow=19,SNR=23							
APG	**El Apazote**	**0.81**	**75**	*i* P		**Pn**	**09 35 16.6**	**+0.1**
APG				*i* S		**Sn**	**09 35 35.8**	**-0.7**
FG8	**Yepocapa, Chim**	**0.88**	**128**	*i* P		**Pn**	**09 35 14.3**	**-2.6**
FG8				*i* S		**Sn**	**09 35 32.5**	**-4.5**
FG16	**Alotenango, Sa**	**0.91**	**125**	*i* P		**Pn**	**09 35 14.7**	**-2.5**
FG16				IAML			09 35 44.0	
	comp=N,11μm,0.2s							
THIG		**0.96**	**277**	*i* P		**Pn**	**09 35 17.5**	**+0.3**
THIG				*i* S		**Sn**	**09 35 38.8**	**+1.0**
THIG				IAML			09 35 39.9	
	comp=N,3μm,0.5s							
PCG5	**San Vicente Pa**	**1.05**	**123**	*i* P		**Pn**	**09 35 16.2**	**-2.0**
FAME	**Alcaldia de Sa**	**1.55**	**128**	P		**Pn**	**09 35 22.3**	**-0.1**
FAME				S		**Sn**	**09 35 46.9**	**-0.3**
SLOZ	**Alcaldia de Sa**	**1.64**	**118**	P		**Pn**	**09 35 23.2**	**-0.2**
SLOZ				S		**Sn**	**09 35 55.2**	**+6.4**
SLOZ	**Alcaldia de Sa**	**1.64**	**118**	*e*P		**Pn**	**09 35 23.1**	**-0.2**
CCIG	**Comitan**	**1.69**	**331**			**Pn**	**09 35 24.5**	**+0.5**
CCIG	**Comitan**	**1.69**	**331**	P		**Pn**	**09 35 24.8**	**+0.7**
CCIG	**Comitan**	**1.69**	**331**	*i* P		**Pn**	**09 35 24.7**	**+0.7**
CCIG				*i* S		**Sn**	**09 35 50.5**	**+0.5**
CCIG				IAML			09 35 53.6	
	comp=E,1μm,0.5s							
RTR	**El Retiro**	**1.82**	**119**	*e*P		**Pn**	**09 35 25.4**	**+0.1**
UNIC	**Universidad Ca**	**1.86**	**116**	P		**Pn**	**09 35 25.6**	**-0.2**
SBLS	**San Blas**	**1.87**	**121**	*e*P		**Pn**	**09 35 25.6**	**-0.4**
SNJE	**San Jose**	**1.87**	**119**	*e*P		**Pn**	**09 35 25.9**	**0.0**
CEVE	**Cerro Verde**	**1.87**	**121**	P		**Pn**	**09 35 26.2**	**+0.2**
CEVE				S		**Sn**	**09 35 59.3**	**+5.8**
CEVE	**Cerro Verde**	**1.87**	**121**	*e*P		**Pn**	**09 35 26.3**	**+0.2**
CEVE				IAML			09 36 06.9	
	comp=Z,894nm,0.2s							
ZAFR2	**Estanzuela, Za**	**1.88**	**96**	*i* P		**Pn**	**09 35 23.5**	**-2.3**
ZAFR2				*i* S		**Sn**	**09 35 49.7**	**-3.5**
ZAFR2				IAML			09 35 50.6	
	comp=N,1μm,0.8s							
ESQI	**Esquipulas**	**1.89**	**97**			**Pn**	**09 35 26.4**	**+0.3**
ESQI	**Esquipulas**	**1.89**	**97**	P		**Pn**	**09 35 26.3**	**+0.3**
ESQI	**Esquipulas**	**1.89**	**97**	⇓*i* P		**Pn**	**09 35 26.3**	**+0.3**
MTO3	**Montecristo**	**1.90**	**102**			**Pn**	**09 35 25.9**	**-0.4**
MTO3	**Montecristo**	**1.90**	**102**	P		**Pn**	**09 35 26.1**	**-0.2**
MTO3	**Montecristo**	**1.90**	**102**	*i* P		**Pn**	**09 35 26.2**	**-0.1**
MTO3	**Montecristo**	**1.90**	**102**	⇓*i* P		**Pn**	**09 35 26.2**	**-0.1**
JAYA	**Jayaque - finc**	**2.11**	**122**	P		**Pn**	**09 35 28.4**	**-0.1**
JAYA				S		**Sn**	**09 35 59.1**	**+1.2**
JAYA	**Jayaque - finc**	**2.11**	**122**	*i* P		**Pn**	**09 35 28.4**	**-0.1**
JAYA				IAML			09 36 06.1	
	comp=N,1μm,0.2s							
JAYA	**Jayaque - finc**	**2.11**	**122**	*e*P		**Pn**	**09 35 28.3**	**-0.2**
JAYA				IAML			09 36 04.1	
	comp=Z,654nm,0.2s							
PMON	**Piamonte**	**2.19**	**119**	P		**Pn**	**09 35 29.5**	**+0.1**
PMON				S		**Sn**	**09 36 02.6**	**+3.2**
PMON	**Piamonte**	**2.19**	**119**	*e*P		**Pn**	**09 35 29.3**	**-0.1**
LOMA	**Loma Larga**	**2.34**	**119**	*e*P		**Pn**	**09 35 32.2**	**+1.0**
LLGN	**La Laguna**	**2.35**	**105**	P		**Pn**	**09 35 31.1**	**-0.1**
SARH	**Santa Rosa de**	**2.44**	**90**	P		**Pn**	**09 35 32.5**	**+0.4**
SARH	**Santa Rosa de**	**2.44**	**90**	*i* P		**Pn**	**09 35 32.6**	**+0.4**
PETF	**Flores**	**2.51**	**33**			**Pn**	**09 35 32.4**	**-0.4**
PETF	**Flores**	**2.51**	**33**	P		**Pn**	**09 35 32.5**	**-0.4**
PETF	**Flores**	**2.51**	**33**	*i* P		**Pn**	**09 35 32.5**	**-0.4**
PETF				IAML			09 36 10.0	
	comp=N,1μm,0.7s							
PETF	**Flores**	**2.51**	**33**	⇓*i* P		**Pn**	**09 35 32.5**	**-0.4**
PAVA	**Las Pavas**	**2.52**	**115**	*e*P		**Pn**	**09 35 33.1**	**0.0**
P5NO	**Presa 5 de nov**	**2.57**	**108**	P		**Pn**	**09 35 33.5**	**-0.3**
P5NO	**Presa 5 de nov**	**2.57**	**108**	*e*P		**Pn**	**09 35 33.3**	**-0.5**
COEG	**Centro de Oper**	**2.60**	**116**	*e*P		**Pn**	**09 35 34.1**	**-0.1**
TGIG		**2.65**	**318**	*i* P		**Pn**	**09 35 34.5**	**-0.2**
TGIG				*i* S		**Sn**	**09 36 07.7**	**-1.3**
SCLA	**Alcaldia de Sa**	**2.70**	**113**	P		**Pn**	**09 35 35.5**	**+0.2**
MARCA	**Marcala la Paz**	**3.21**	**101

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.25**	**192**	P	**Pn**	**09 37 16.9**	**+0.4**
BARC				S	**Sn**	**09 37 32.0**	**-0.7**
BRJC	**Barrancabermej**	**0.62**	**282**	P	**Pn**	**09 37 18.7**	**+0.9**
BRJC				S	**Sn**	**09 37 35.7**	**+0.8**
PAMC	**Pamplona, Colo**	**0.65**	**41**	P	**Pn**	**09 37 19.7**	**+1.2**
PAMC				S	**Sn**	**09 37 36.7**	**+0.4**
RUSC	**La Rusia**	**0.94**	**177**	P	**Pn**	**09 37 20.8**	**+0.2**
RUSC				S	**Sn**	**09 37 39.2**	**-0.7**
RUSC	**La Rusia**	**0.94**	**177**	*eP*	**Pn**	**09 37 21.0**	**+0.4**
RUSC				*eS*	**Sn**	**09 37 39.1**	**-0.7**
PTBC	**PUERTO BERRIO,**	**1.35**	**257**	P	**Pn**	**09 37 23.5**	**-0.2**
PTBC				S	**Sn**	**09 37 44.6**	**-0.8**
OCAC	**Ocana**	**1.40**	**352**	P	**Pn**	**09 37 25.0**	**+0.6**
OCAC				S	**Sn**	**09 37 47.0**	**+0.3**
SPBC	**San Pablo de B**	**1.51**	**218**	P	**Pn**	**09 37 25.8**	**+0.4**
SPBC				S	**Sn**	**09 37 47.8**	**-0.6**
CHIC	**Chingaza**	**2.28**	**195**	P	**Pn**	**09 37 35.3**	**+0.9**
CHIC				S	**Sn**	**09 38 03.0**	**-1.5**
ROSC	**El Rosal**	**2.31**	**211**	P	**Pn**	**09 37 37.1**	**+2.3**
ROSC				S	**Sn**	**09 38 05.5**	**+0.3**
UREC	**San Jos de Ur**	**2.55**	**291**	P	**Pn**	**09 37 36.9**	**-0.4**
UREC				S	**Sn**	**09 38 08.5**	**-1.1**
GUY2C	**Guyana, Caldas**	**2.74**	**234**	P	**Pn**	**09 37 41.3**	**+1.2**
GUY2C				S	**Sn**	**09 38 15.5**	**+0.9**
VILC	**Villavicencio,**	**2.77**	**192**	P	**Pn**	**09 37 40.7**	**+0.6**
VILC				S	**Sn**	**09 38 14.9**	**+0.1**
CBOC	**Ciudad Bolivar**	**3.02**	**251**	P	**Pn**	**09 37 44.9**	**+1.6**
CBOC				S	**Sn**	**09 38 19.9**	**-0.6**
DBBC	**Dabeiba**	**3.06**	**273**	P	**Pn**	**09 37 44.7**	**+1.0**
DBBC				S	**Sn**	**09 38 20.6**	**+0.5**
ARGC	**Ariguani, Magd**	**3.19**	**340**	P	**Pn**	**09 37 47.3**	**+2.0**
ARGC				S	**Sn**	**09 38 26.0**	**+1.9**
SDV	**Santo Domingo**	**3.20**	**50**	P	**Pn**	**09 37 46.4**	**+0.8**
SDV				S	**Sn**	**09 38 24.1**	**-0.4**
SDV	**Santo Domingo**	**3.20**	**50**	*eP*	**Pn**	**09 37 47.0**	**+1.4**
SDV				*eS*	**Sn**	**09 38 24.4**	**-0.1**
PRAC	**Prado**	**3.56**	**209**	P	**Pn**	**09 37 50.4**	**+0.3**
PRAC				S	**Sn**	**09 38 32.3**	**-0.4**
APAC	**Apartado, Choc**	**3.58**	**287**	P	**Pn**	**09 37 51.1**	**+0.8**
APAC				S	**Sn**	**09 38 32.9**	**0.0**
SJCC	**San Jacinto, C**	**3.65**	**326**	P	**Pn**	**09 37 50.8**	**-0.4**
SJCC				S	**Sn**	**09 38 32.9**	**-1.8**
SJCC	**San Jacinto, C**	**3.65**	**326**	*eP*	**Pn**	**09 37 51.1**	**-0.1**
SJCC				*eS*	**Sn**	**09 38 31.1**	**-3.5**
PLMC	**San Jos del P**	**3.68**	**239**	P	**Pn**	**09 37 52.8**	**+1.2**
PLMC				S	**Sn**	**09 38 34.8**	**-0.5**
URMC	**La Uribe, Meta**	**3.78**	**199**	P	**Pn**	**09 37 53.8**	**+0.8**
URMC				S	**Sn**	**09 38 37.6**	**-0.2**
LCBC	**Los crdobas,**	**3.78**	**302**	P	**Pn**	**09 37 53.4**	**+0.5**
LCBC				S	**Sn**	**09 38 38.0**	**+0.4**
YOTC	**Yotoco, Valle**	**4.28**	**229**	P	**Pn**	**09 37 59.9**	**+0.4**
PTAC	**Punta Ardita,**	**4.65**	**274**	P	**Pn**	**09 38 04.7**	**+0.4**
MACC	**Macarena, Meta**	**4.72**	**189**	P	**Pn**	**09 38 04.1**	**-1.1**
MACC				S	**Sn**	**09 38 55.4**	**-4.3**
URIC	**Uribia, Colomb**	**4.96**	**13**	P	**Pn**	**09 38 07.4**	**-0.9**
URIC	**Uribia, Colomb**	**4.96**	**13**	*eS*	**Sn**	**09 39 00.7**	**-4.5**
GARC	**Garzon, Huila**	**5.19**	**207**	P	**Pn**	**09 38 11.4**	**-0.2**
GARC				S	**Sn**	**09 39 08.8**	**-2.3**
POPC	**Popayan, Colom** 2.1nm,0.5s	**5.54**	**220**	P	**Pn**	**09 38 17.0**	**+0.7**
POPC	2.1nm,0.5s			S	**Sn**	**09 39 21.1**	**+1.6**
FLOC	**Florencia**	**5.80**	**206**	P	**Pn**	**09 38 19.3**	**-0.2**

SOME ***15*** *09:43:33.6, 45˚.55N×84˚.63E, h10km*
NNC ***15*** *09:43:35.2±1.5, 45˚.48N×84˚.64E, h0km, mb3.6, mpv3.4, Error ellipse: s-maj=13.1km s-min=6.8km az=115.0*
ISC 15 09:43:34.8±1.8, 45˚.52N±0˚.07×84˚.65E±0˚.10, h10km, n19, σ2ˢ90/28, 8C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZSN	**Zaisan** 33nm,0.2s	**1.93**	**4**	Pg	**Pb**	**09 44 10.1**	**0.0**
ZSN	71nm,0.3s			Lg	Lg	09 44 36.6	
ZSN	**Zaisan** 33nm,0.2s	**1.93**	**4**	*eP*	**Pb**	**09 44 10.1**	**0.0**
ZSN	71nm,0.3s			*eS*	**Sb**	**09 44 36.6**	**+2.3**
MK31	**Makanchi Array** 5.4nm,0.3s,baz=133,slow=14,SNR=243	**2.07**	**309**	⇑Pn	**Pb**	**09 44 12.8**	**+0.3**
MK31	54nm,0.3s,baz=121,slow=30,SNR=54			⇓Lg	Lg	09 44 42.9	
MAKZ	**Makanchi** 6.3nm,0.5s	**2.25**	**306**	⇑Pn	**Pb**	**09 44 15.2**	**-0.4**
MAKZ	50nm,0.5s			⇑Lg	Lg	09 44 47.8	
KTMS	**Ketmen** 1.8nm,0.3s	**3.71**	**237**	Pg	**Pb**	**09 44 41.2**	**+0.7**
KTMS	21nm,0.4s			Lg	Lg	09 45 29.1	
KTMS	**Ketmen** 1.8nm,0.3s	**3.71**	**237**	*eP*	**Pb**	**09 44 41.2**	**+0.7**
KTMS	21nm,0.4s			*eS*	**Sb**	**09 45 29.1**	**+3.6**
KNOS	**Konyrlen** 4.1nm,0.4s	**4.05**	**255**	Pg	**Pg**	**09 44 49.7**	**-2.7**
KNOS	21nm,0.5s			Lg	Lg	09 45 44.0	
TDK	**Taldyqorghan** 33nm,0.5s	**4.43**	**265**	Pg	**Pb**	**09 44 56.4**	**+3.6**
TDK	45nm,0.5s			Lg	Lg	09 45 56.3	
TDK	**Taldyqorghan** 33nm,0.5s	**4.43**	**265**	*eP*	**Pb**	**09 44 56.4**	**+3.6**
TDK	45nm,0.5s			*eS*	**Sg**	**09 45 56.3**	**-0.9**
BLB	**Baldybastay** 14nm,0.4s	**4.61**	**254**	Pg	**Pb**	**09 44 58.8**	**+2.9**
BLB	26nm,0.5s			Lg	Lg	09 46 00.1	
UZB	**Uzynbulak** 3.5nm,0.2s	**4.68**	**241**	*eP*	**Pb**	**09 44 59.8**	**+2.7**
UZB	11nm,0.3s			*eS*	**Sg**	**09 46 01.6**	**-3.5**
KPKS	**Kokpek** 0.5nm,0.2s	**4.73**	**246**	Pg	**Pb**	**09 45 00.1**	**+2.2**
KPKS	28nm,0.5s			Lg	Lg	09 46 02.0	
KPKS	**Kokpek** 0.5nm,0.2s	**4.73**	**246**	*eP*	**Pb**	**09 45 00.1**	**+2.2**
KPKS	28nm,0.5s			*eS*	**Sg**	**09 46 02.0**	**-4.8**
ARXS	**Arharly** 5.8nm,0.3s	**5.02**	**257**	*eP*	**Pb**	**09 45 05.1**	**+2.3**
ARXS	17nm,0.3s			*eS*	**Sg**	**09 46 11.0**	**-5.0**
KOTS	**Kotyrbulak** 6.6nm,0.5s	**5.86**	**250**	*eP*	**Pg**	**09 45 23.8**	**-3.3**
KOTS	21nm,0.5s			*eS*	**Sg**	**09 46 43.0**	**0.0**
KTBS	**Karatobe** 1.0nm,0.3s	**5.96**	**255**	Pg	**Pb**	**09 45 22.8**	**+4.0**
KTBS	4.3nm,0.5s			Lg	Lg	09 46 40.7	
KTBS	**Karatobe** 1.4nm,0.5s	**5.96**	**255**	*eP*	**Pg**	**09 45 24.6**	**-4.5**
KTBS	4.3nm,0.5s			*eS*	**Sg**	**09 46 43.7**	**-2.5**
KURBB	**Kurchatov Arra** 6.2nm,1.3s	**6.54**	**323**	⇑Pn	**Pn**	**09 45 13.0**	**+2.0**
KURBB	32nm,0.6s			⇑Lg	Lg	09 47 02.1	
KURK	**Kurchatov** 0.7nm,0.9s	**6.58**	**324**	⇑Pn	**Pn**	**09 45 12.4**	**+0.9**
KURK	0.6nm,0.5s			⇑Sn	**Sn**	**09 46 29.3**	**+2.9**
KURK	7.1nm,0.8s			⇑Lg	Lg	09 47 03.3	

AZER ***15*** *09:59:47.9, 38˚.44N×44˚.46E, h10km, ml2.3*
AFAD ***15*** *09:59:50.0, 38˚.47N×44˚.38E, h7km.3km, ML2.2*
ISK ***15*** *09:59:53.4, 38˚.51N×44˚.41E, h24km, ML2.6/6*
ISC 15 09:59:50.8±1.1, 38˚.46N±0˚.03×44˚.42E±0˚.03, h10km±10km, n22, σ1ˢ20/35, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.39**	**302**	P	**Pg**	**09 59 58.0**	**-0.7**
TVAN	**Van**	**0.80**	**276**	P	**Pg**	**10 00 04.6**	**-1.7**
VANB	**Van**	**0.82**	**280**	Pg	**Pn**	**10 00 10.4**	**+1.8**
VANB				Sg	**Sn**	**10 00 21.1**	**+0.2**
VMUR	**Van-Muradiye**	**0.85**	**309**	P	**Pg**	**10 00 06.1**	**-1.2**
VMUR				S	**Sb**	**10 00 19.6**	**+0.1**
YOVA	**Hakkari_Yksek**	**0.87**	**187**	P	**Pg**	**10 00 07.2**	**-0.5**
HAKT	**HAKKARI**	**1.06**	**212**	P	**Pg**	**10 00 10.6**	**-0.6**
HAKT	**HAKKARI**	**1.06**	**212**	P	**Pg**	**10 00 10.3**	**-0.8**
HAKT				S	**Sn**	**10 00 26.5**	**-0.4**
GEVA	**Gevas**	**1.08**	**263**	P	**Pg**	**10 00 09.0**	**-2.6**
GEVA				S	**Sg**	**10 00 25.7**	**0.0**
GEVA	comp=N,57nm,0.4s			IAML		10 00 32.0	
NAX	**Nakhchivan**	**1.10**	**49**	P	**Pb**	**10 00 11.1**	**-1.0**
NAX				S	**Sn**	**10 00 27.5**	**-0.4**
AKDM	**Akdamar-Van**	**1.14**	**264**	Pn	**Pb**	**10 00 10.9**	**-1.8**
AKDM				Sn	**Sn**	**10 00 29.7**	**+0.9**
SBZ	**Shahbuz**	**1.29**	**43**	P	**Pn**	**10 00 14.3**	**-0.8**
SBZ				S	**Sg**	**10 00 34.2**	**+1.8**
HYR	**Heyderabad**	**1.31**	**15**	P	**Pn**	**10 00 15.1**	**-0.1**
HYR				S	**Sg**	**10 00 34.8**	**+1.9**
ORD	**Ordubad**	**1.32**	**69**	P	**Pn**	**10 00 14.6**	**-0.8**
ORD				S	**Sg**	**10 00 33.9**	**+0.7**
CUKT	**Cukurca**	**1.37**	**208**	Pn	**Pg**	**10 00 18.2**	**+1.1**
CUKT				Sn	**Sg**	**10 00 36.4**	**+1.6**
IGDI	**IGDIR**	**1.44**	**349**	P	**Pb**	**10 00 17.8**	**0.0**
IGDI				S	**Sg**	**10 00 39.5**	**+2.5**
PERV	**Siirt/Pervari-**	**1.56**	**252**	P	**Pg**	**10 00 21.4**	**+0.5**
AGRB	**Hanur-Agry**	**1.58**	**316**	Pn	**Pb**	**10 00 19.9**	**-0.3**
AGRB				Sn	**Sb**	**10 00 39.6**	**-0.7**
DORK	**Agr/Tutak/Do**	**1.58**	**307**	P	**Pn**	**10 00 19.2**	**+0.1**
KOTA	**Agri, Merkez-K**	**1.64**	**325**	P	**Pn**	**10 00 20.3**	**+0.3**
GNI	**Garni**	**1.71**	**8**	Pn	**Pb**	**10 00 21.8**	**-0.7**
GURO	**Guroymak-BITLI**	**1.88**	**274**	Pn	**Pb**	**10 00 24.8**	**-0.5**
GDB	**GEDABAY**	**2.49**	**24**	P	**Pn**	**10 00 33.3**	**+1.7**
GDB				S	**Sb**	**10 01 06.4**	**-0.1**

NEIC ***15*** *10:08:16.7±1.0, 32˚.24N×0˚.05×16˚.82W±0˚.10, h10km±2km, ML3.8/4, Error ellipse: s-maj=15.8km s-min=6.1km az=242.0*
CNRM ***15*** *10:08:19.9, 32˚.43N×16˚.51W, h10km, ML3.9*
IGIL ***15*** *10:08:20.3, 32˚.30N×16˚.88W, h15km, ML3.2*
INMG ***15*** *10:08:21.9±1.5, 32˚.30N×16˚.84W, h5km, ML3.4, Error ellipse: s-maj=4.3km s-min=1.4km az=98.0, #DIST_RANGE: LOCAL #IPMA_REGION: SW Desertas (Madeira) #FELT: III (MM56) at Ilha da Madeira: Se (Funchal)*
ISC 15 10:08:17.0±0.8, 32˚.31N±0˚.05×16˚.70W±0˚.04, h10km, n78, σ2ˢ21/107, 5C, Madeira Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUL	**Funchal**	**0.37**	**334**	⇑*iP*	**Pb**	**10 08 27.2**	**+1.5**
FUL				*eS*	**Sb**	**10 08 31.6**	**0.0**
PMAR	**Madeira**	**0.45**	**336**	⇑*iP*	**Pb**	**10 08 28.4**	**+1.2**
PMAR				*eS*	**Sg**	**10 08 33.6**	**+1.8**
PMAR				*i* IAML		10 08 34.0	
PMAR				*i* IAML		10 08 35.5	
PMAR				*i* IAML		10 08 38.0	
PMAR	**Madeira**	**0.45**	**336**	P	**Pb**	**10 08 28.3**	**+1.1**
PMAR				S	**Sb**	**10 08 35.7**	**+1.7**
PMOZ	**Porto Moniz, M**	**0.66**	**320**	P	**Pb**	**10 08 31.0**	**+0.3**
PMOZ				S	**Sg**	**10 08 38.3**	**-0.3**
PMOZ	**Porto Moniz, M**	**0.66**	**320**		**Pg**	**10 08 30.1**	**+0.2**
PMOZ					**Sg**	**10 08 38.2**	**-0.4**
PMOZ	comp=N,6μm,0.7s			IAML		10 08 50.0	
PMOZ	**Porto Moniz, M**	**0.66**	**320**	⇑*eP*	**Pb**	**10 08 31.1**	**+0.4**
PMOZ				*eS*	**Sg**	**10 08 38.6**	**0.0**
PMOZ				*i* IAML		10 08 41.6	
PMOZ				*i* IAML		10 08 42.6	
PMOZ				*i* IAML		10 08 43.9	
PMOZ	**Porto Moniz, M**	**0.66**	**320**	P	**Pb**	**10 08 30.6**	**-0.1**
PMPS	**Porto Santo**	**0.80**	**22**	⇑*iP*	**Pg**	**10 08 34.4**	**+1.9**
PMPS				*i* IAML		10 08 47.0	
PMPST	**Porto Santo, M**	**0.82**	**22**	⇑*iP*	**Pg**	**10 08 34.6**	**+1.7**
PMPST				*eS*	**Sg**	**10 08 44.5**	**+0.9**
PMPST				*i* IAML		10 08 48.1	
PMPST				*i* IAML		10 08 51.8	
PMPST				*i* IAML		10 08 52.2	
MACI	**Morro de la Ar**	**4.05**	**178**	Pn	**Pn**	**10 09 17.9**	**-1.4**
MACI				Sn	**Sn**	**10 10 01.1**	**-5.8**
MACI	comp=E,92nm,1.6s			IAML		10 10 05.5	
EAH	**EAH**	**6.08**	**94**	P	**Pn**	**10 09 48.5**	**+1.6**
EAH				S	**Sn**	**10 10 55.8**	**-0.8**
TANT	**Tantan**	**6.12**	**128**	P	**Pn**	**10 09 49.3**	**+1.8**
TANT				S	**Sn**	**10 10 58.8**	**+1.2**
SRHM	**Skhour des Reh**	**7.44**	**86**	P	**Pn**	**10 10 05.2**	**-0.6**
SRHM				S	**Sn**	**10 11 27.9**	**-2.4**
AVE	**Averroes**	**7.88**	**80**	P	**Pn**	**10 10 14.4**	**+2.8**
AVE				S	**Sn**	**10 11 38.4**	**-2.4**
AVE	**Averroes**	**7.88**	**80**	Pn	**Pn**	**10 10 12.7**	**+1.0**
PFVI	**Vila Bisbo**	**8.06**	**51**	P	**Pn**	**10 10 14.8**	**+0.6**
PFVI				S	Sn	10 11 37.7	-7.8
PFVI	**Vila Bisbo**	**8.06**	**51**	Pn	**Pn**	**10 10 13.9**	**-0.3**
PFVI	**Vila Bisbo**	**8.06**	**51**	*eP*	**Pn**	**10 10 15.0**	**+0.8**
PFVI				*eS*	Sn	10 11 38.1	-7.4
PFVI	**Vila Bisbo**	**8.06**	**51**	P	**Pn**	**10 10 15.0**	**+0.8**
PFVI				S	**Sn**	**10 11 43.2**	**-2.3**
TIO	**Tiouine**	**8.16**	**97**	P	**Pn**	**10 10 20.0**	**+4.2**
TIO				S	**Sn**	**10 11 45.3**	**-2.8**
TIO	**Tiouine**	**8.16**	**97**	P	**Pn**	**10 10 17.2**	**+1.5**
TIO				S	**Sn**	**10 11 47.7**	**-0.4**
MORF	**Marmelete**	**8.28**	**51**	*eP*	**Pn**	**10 10 17.0**	**+0.9**
MORF				*eS*	Sn	10 11 43.9	-6.8
MORF	comp=N,15nm,0.1s			IAML		10 11 48.8	
MORF	**Marmelete**	**8.28**	**51**	Pn	**Pn**	**10 10 18.2**	**+1.0**
MORF	**Marmelete**	**8.28**	**51**	*eP*	**Pn**	**10 10 18.1**	**+0.9**
MORF				*eS*	Sn	10 11 41.8	-9.0
PTEO	**Sao Teotonio**	**8.37**	**49**	*eP*	**Pn**	**10 10 20.4**	**+2.0**
PTEO				*eS*	Sn	10 11 46.5	-6.4
ZHG	**ZHG**	**8.53**	**80**	P	**Pn**	**10 10 23.1**	**+2.4**
ZHG				P	**Pn**	**10 10 23.1**	**+2.4**
ZHG				S	**Sn**	**10 11 51.0**	**-6.1**
OUZM	**OUZ**	**8.59**	**97**	P	**Pn**	**10 10 21.6**	**+0.1**
OUZM				S	**Sn**	**10 11 56.6**	**-1.9**
PBDV	**Barranco-do-Ve**	**8.72**	**53**	P	**Pn**	**10 10 24.1**	**+0.8**
PBDV				S	Sn	10 11 55.3	-6.4
PBDV	**Barranco-do-Ve**	**8.72**	**53**	*eP*	**Pn**	**10 10 24.3**	**+1.0**
PBDV				*eS*	**Sn**	**10 11 55.8**	**-5.9**
TISM	**Timmit**	**8.73**	**91**	P	**Pn**	**10 10 24.7**	**+1.4**
TISM				S	**Sn**	**10 12 00.6**	**-1.2**
PCVE	**Castro Verde**	**8.86**	**51**	P	**Pn**	**10 10 26.4**	**+1.2**
PCVE				S	Sn	10 11 57.8	-7.3
PCVE	**Castro Verde**	**8.86**	**51**	*eP*	**Pn**	**10 10 27.6**	**+2.4**
PCVE				*eS*	Sn	10 11 58.0	-7.1
MESJ	**Messejana**	**8.87**	**49**	Pn	**Pn**	**10 10 26.0**	**+0.8**
MESJ	**Messejana**	**8.87**	**49**	*eP*	**Pn**	**10 10 26.6**	**+1.4**
MESJ				*eS*	**Sn**	**10 12 00.4**	**-4.8**
PVAQ	**Vaqueiros**	**8.95**	**53**		**Pn**	**10 10 27.0**	**+0.6**
PVAQ	**Vaqueiros**	**8.95**	**53**	*eP*	**Pn**	**10 10 27.4**	**+1.0**
PVAQ				*eS*	Sn	10 11 59.9	-7.5
PVAQ	**Vaqueiros**	**8.95**	**53**	P	**Pn**	**10 10 27.0**	**+0.6**
PVAQ				S	**Sn**	**10 12 05.7**	**-1.7**
PMAFR	**Mafra**	**8.96**	**40**	P	**Pn**	**10 10 26.4**	**0.0**
PMAFR				S	Sn	10 11 58.3	-9.2
PMAFR	**Mafra**	**8.96**	**40**	*eP*	**Pn**	**10 10 27.1**	**+0.6**
PMAFR				*eS*	Sn	10 11 58.2	-9.3
CMLA	**Cha da Macela**	**9.05**	**309**	Pn	**Pn**	**10 10 26.7**	**-1.0**
EGRO	**El Granado**	**9.18**	**53**	P	**Pn**	**10 10 30.1**	**+0.6**
EGRO				S	**Sn**	**10 12 07.3**	**-5.6**
PBEJ	**Beja**	**9.20**	**49**	*eP*	**Pn**	**10 10 32.2**	**+2.4**
PBEJ				*eS*	Sn	10 12 06.5	-7.0
MOE	**Montemor**	**9.20**	**45**	*eP*	**Pn**	**10 10 31.9**	**+2.1**
MOE				*eS*	**Sn**	**10 12 07.6**	**-5.8**
EVO	**Evora**	**9.41**	**46**	P	**Pn**	**10 10 34.1**	**+1.4**
EVO				S	Sn	10 12 10.3	-8.3
EVO	**Evora**	**9.41**	**46**	*eP*	**Pn**	**10 10 35.0**	**+2.3**
EVO				*eS*	Sn	10 12 10.5	-8.1
PARRA	**Arraiolos**	**9.58**	**45**	*eP*	**Pn**	**10 10 36.9**	**+2.0**
PARRA				*eS*	Sn	10 12 14.7	-7.9
PSBE	**So Bento**	**9.62**	**39**	*eP*	**Pn**	**10 10 37.5**	**+1.9**
PMTG	**Montargil**	**9.63**	**43**	*eP*	**Pn**	**10 10 37.2**	**+1.5**
PMTG				*eS*	Sn	10 12 15.4	-8.6
IFR	**Ifrane**	**9.80**	**80**	P	**Pn**	**10 10 40.1**	**+2.0**
IFR				S	Sn	10 12 20.5	-7.9
PBAR	**Barrancos**	**9.82**	**51**	P	**Pn**	**10 10 39.1**	**+0.8**
PBAR				S	Sn	10 12 20.0	-8.6
PBAR	**Barrancos**	**9.82**	**51**	*eP*	**Pn**	**10 10 40.5**	**+2.1**
PBAR				*eS*	**Sn**	**10 12 22.7**	**-6.0**
EMIN	**Mina Concepcio**	**9.85**	**54**	P	**Pn**	**10 10 39.7**	**+1.0**
EMIN				S	Sn	10 12 22.0	-7.4
PESTR	**Estremoz**	**9.88**	**46**	Pn	**Pn**	**10 10 40.5**	**+1.4**
PESTR	**Estremoz**	**9.88**	**46**	*eP*	**Pn**	**10 10 41.1**	**+2.0**
PESTR				*eS*	Sn	10 12 23.0	-7.1
PESTR	**Estremoz**	**9.88**	**46**	P	**Pn**	**10 10 39.2**	**0.0**
PESTR				S	**Sn**	**10 12 29.2**	**-0.9**
ESPR	**Espera**	**10.02**	**60**	P	**Pn**	**10 10 41.1**	**+0.1**
ESPR				S	Sn	10 12 26.7	-6.9
PSARD	**Sardoal**	**10.03**	**41**	*eP*	**Pn**	**10 10 41.8**	**+0.6**
PSARD				*eS*	Sn	10 12 25.1	-8.7
MD01	**Midelt array s**	**10.09**	**84**		**Pn**	**10 10 44.1**	**+2.0**
MD31	**MD31**	**10.09**	**84**		**Pn**	**10 10 43.6**	**+1.6**
MD31	**MD31**	**10.09**	**84**	P	**Pn**	**10 10 43.0**	**+1.0**
MD31				S	**Sn**	**10 12 33.9**	**-1.4**
PCAS	**Casmilo, Conde**	**10.17**	**38**	*eP*	**Pn**	**10 10 44.2**	**+1.1**
MDT	**Midelt**	**10.21**	**84**	P	**Pn**	**10 10 47.5**	**+3.7**
MDT				S	**Sn**	**10 12 37.7**	**-0.7**
PMRV	**Marv??o**	**10.36**	**44**	*eP*	**Pn**	**10 10 47.1**	**+1.4**
PMRV				*eS*	**Sn**	**10 12 35.6**	**-6.2**
PCBR	**Castelo Branco**	**10.58**	**42**	*eP*	**Pn**	**10 10 50.1**	**+1.4**
ECAB	**El Cabril**	**10.87**	**55**	P	**Pn**	**10 10 52.9**	**+0.2**
ECAB				S	Sn	10 12 45.4	-8.9
MTE	**Manteigas**	**10.93**	**40**	Pn	**Pn**	**10 10 53.5**	**0.0**
MTE	**Manteigas**	**10.93**	**40**	*eP*	**Pn**	**10 10 54.4**	**+0.9**
PVIS	**Viseu**	**10.97**	**38**	*eP*	**Pn**	**10 10 55.1**	**+1.1**
PVIS				*eS*	Sn	10 12 45.4	-11
EMAL	**Malaga-Limoner**	**11.04**	**63**	S	**Sn**	**10 12 53.3**	**-5.3**
EADA	**Adamuz**	**11.50**	**56**	P	**Pn**	**10 11 01.1**	**-0.2**
EADA				S	Sn	10 13 02.4	-7.3
POLO	**Lamas de Olo**	**11.51**	**36**	*eP*	**Pn**	**10 11 02.8**	**+1.3**
PCAB	**Cabril**	**11.65**	**34**	*eP*	**Pn**	**10 11 05.0**	**+1.6**
MVO	**Moncorvo**	**11.75**	**39**	*eP*	**Pn**	**10 11 05.4**	**+0.7**
JBK	**JBK**	**11.99**	**76**	P	**Pn**	**10 11 07.5**	**-0.7**
PAB	**San Pablo**	**12.33**	**51**	Pn	**Pn**	**10 11 13.8**	**+1.0**
PBRG	**Braganca**	**12.36**	**37**	*eP*	**Pn**	**10 11 13.2**	**+0.1**
ECAL	**Calabor**	**12.46**	**37**	P	**Pn**	**10 11 14.4**	**0.0**
ECAL				S	Sn	10 13 21.8	-12
UCM	**Universidad Co**	**13.45**	**50**	P	**Pn**	**10 11 29.6**	**+1.6**

IDC ***15*** *10:09:11.4±1.6, 36˚.12N×140˚.31E, h80km±13km, mb3.4/12, mbtmp3.7/15, MS1.9/1, Error ellipse: s-maj=17.5km s-min=9.4km az=72.0*
NIED ***15*** *10:09:12.5, 36˚.12N×140˚.08E, h64km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr3.13; Mθθ-0.35; Mϕϕ-2.78; Mrθ-0.31; Mθϕ-1.30; Mϕr2.72; Fault plane solution: M₀4.24000×10¹⁴ NP1: ϕs221.00000°, δ29.00000°, λ122.00000°. NP2: ϕs5.00000°, δ66.00000°, λ74.00000°.*
JMA ***15*** *10:09:12.5±0.1, 36˚.1N±0˚.3×140˚.1E±0˚.4, h64km, MV3.8/39, SW IBARAKI PREF*
JMA Felt II J1 at SW IBARAKI PREF .
ISC 15 10:09:11.2±0.8, 36˚.10N±0˚.05×140˚.17E±0˚.06, h72km±7km, n32, σ1ˢ15/37, mb3.7/12, 11D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.13**	**8**	P	**Pn**	**10 09 22.3**	**+0.5**
JYT				S	**Sn**	**10 09 29.4**	**-0.1**
JAG	**Ashikaga**	**0.67**	**300**	⇓*iP*	**Pn**	**10 09 26.0**	**+0.1**
JAG				⇓S	**Sn**	**10 09 35.5**	**-1.2**
JKT	**Katashina**	**1.00**	**312**	⇓*iP*	**Pn**	**10 09 29.9**	**0.0**
JKT				⇓S	**Sn**	**10 09 43.7**	**-0.1**
JRY	**Ryogami san**	**1.03**	**266**	⇓*iP*	**Pn**	**10 09 30.4**	**+0.3**
JRY				⇓S	**Sn**	**10 09 43.9**	**-0.4**
JOD2	**Odawara 2**	**1.21**	**227**	⇓*iP*	**Pn**	**10 09 32.9**	**+0.4**
JOD2				⇓S	**Sn**	**10 09 47.8**	**-0.6**
JFY	**Yanaizu**	**1.36**	**344**	⇓*iP*	**Pn**	**10 09 35.0**	**+0.6**
JFY				⇓*eS*	**Sn**	**10 09 51.9**	**0.0**
JFK	**Kawauchi**	**1.39**	**24**	*iP*	**Pn**	**10 09 35.7**	**+0.9**
JUON	**Uonuma**	**1.43**	**321**	⇓P	**Pn**	**10 09 35.5**	**+0.3**
JYN	**Shimob**	**1.45**	**246**	*iP*	**Pn**	**10 09 36.4**	**+0.8**
JYN				S	**Sn**	**10 09 54.2**	**+0.1**
JOTO	**OTAMA OYAMA**	**1.47**	**5**	*iP*	**Pn**	**10 09 36.8**	**+1.0**
JOTO				S	**Sn**	**10 09 56.1**	**+1.8**
MJAR	**Matsushiro Arr** 27nm,0.3s,baz=35,slow=20,SNR=253	**1.65**	**286**	P	**Pn**	**10 09 38.0**	**-0.1**
MJAR	24nm,0.4s,baz=90,slow=29,SNR=3.7			S	**Sn**	**10 10 02.2**	**+3.7**
MJAR	comp=Z,59nm,20.6s,baz=59,slow=45			LR	LR	10 10 30.5	
JHJ	**Hachijo jima 2** 134nm,0.5s,baz=46,slow=17,SNR=2.6	**2.99**	**186**	P	**Pn**	**10

MKAR	**Makanchi Array**	**54.79**	**327**	P		P	10 19 14.2	-0.1
	0.2nm,0.8s,baz=122,slow=5.4,SNR=1.9							
	0.2nm,0.8s							

IDC 15 10:14:42.8±1.6, 1°56.N×126°68.E, h0km, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=159.8km s-min=21.4km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.65**	**161**	P	P		10 19 46.1	+0.3
	0.7nm,0.4s,baz=340,slow=11,SNR=16							
	0.7nm,0.4s							
ASAR	**Alice Springs**	**26.04**	**165**	P	P		10 20 17.6	-0.3
	0.3nm,0.6s,baz=345,slow=7.7,SNR=4.4							
	0.3nm,0.6s							
MKAR	**Makanchi Array**	**59.31**	**326**	P	P		10 24 46.6	+0.1
	0.2nm,0.5s,baz=119,slow=7.7,SNR=3.0							
	0.2nm,0.5s							
ZALV	**Zalesovo Beam**	**62.49**	**334**	P	P		10 25 07.2	-0.8
	0.2nm,0.3s,baz=148,slow=8.4,SNR=1.2							
	0.2nm,0.3s							
KURBB	**Kurchatov Arra**	**63.53**	**328**	P	P		10 25 15.6	+0.6
	0.4nm,0.4s,baz=123,slow=6.8,SNR=1.8							
	0.4nm,0.4s							

MOS ***15*** *10:30:45.9±0.9, 44°.35N×147°.41E, h89km, mb4.2/5, Error ellipse: s-maj=11.3km s-min=7.8km az=55.9*
NIED ***15*** *10:30:46.5, 44°.26N×147°.56E, h64km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr1.64; Mθθ2.81; Mϕϕ-4.45; Mrθ2.09; Mϕr-4.13; Mθr-0.34; Fault plane solution: M₀6.04000×10¹⁴ NP1: ϕs162.00000°, δ68.00000°, λ17.00000°. NP2:ϕs66.00000°, δ74.00000°, λ157.00000°.*
JMA ***15*** *10:30:46.5±0.4, 44°.N±1°×14°.8E±°, h64km, MV4.4/38, NEAR ETOROFU ISLAND*
IDC ***15*** *10:30:47.7±2.2, 44°.38N×147°.34E, h87km±20km, mb3.4/9, mbtmp3.8/17, MS3.3/2, Error ellipse: s-maj=25.1km s-min=14.0km az=146.0*
SKHL ***15*** *10:30:47.5±0.1, 44°.30N×147°.40E, h87km±7km, mb5.6/3, msh6.5/3*
NEIC ***15*** *10:30:48.3±1.8, 44°.40N±0°.09×147°.3E±0°.1, h90km±10km, mb4.3/19, Error ellipse: s-maj=17.9km s-min=2.9km az=135.0*

ISC 15 10:30:47.7±0.7, 44°.36N±0°.05×147°.41E±0°.05, h88km±7km, n99, σ1s27/110, mb4.1/22, 3C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
SHO	**Shikotan**	**0.64**	**220**	*e*P		Pn	10 31 12.9	+10
SHO					AMB	AMB	10 31 13.2	
	5μm,0.4s							
SHO				*e*S		**Sn**	**10 31 23.4**	**+8.3**
SHO				A		A	10 31 24.0	
	4μm,0.3s							
SHO				A		A	10 31 24.0	
	10μm,0.3s							
KUR	**Kuril'sk**	**0.93**	**20**	*c* iPN		**Pn**	**10 31 04.2**	**-2.2**
KUR				*e*S		**Sn**	**10 31 18.1**	**-2.3**
KUR	**Kuril'sk**	**0.93**	**20**	*e*P		**Pn**	**10 31 06.0**	**-0.4**
KUR				AMB		AMB	10 31 07.4	
	380nm,0.3s							
KUR				*e*S		**Sn**	**10 31 19.9**	**-0.5**
KUR				A		A	10 31 21.3	
	2μm,0.3s							
KUR				A		A	10 31 21.3	
	1μm,0.3s							
YUK	**Yuzh-Kuril'sk**	**1.16**	**254**	*c* iPN		**Pn**	**10 31 08.3**	**-0.7**
YUK				*e*S		**Sn**	**10 31 23.1**	**-2.0**
YUK				pmax		pmax		
	comp=N,238nm,0.2s							
YUK				pmax		pmax		
	comp=Z,1μm,0.2s							
YUK				pmax		pmax		
	comp=E,266nm,0.1s							
YUK				smax		smax		
	comp=N,6μm,0.2s							
YUK				smax		smax		
	comp=E,9μm,0.2s							
YUK	**Yuzh-Kuril'sk**	**1.16**	**254**	*e*P		**Pn**	**10 31 08.3**	**-0.7**
YUK				AMB		AMB	10 31 09.7	
	comp=E,1μm,0.3s							
YUK				*e*S		**Sn**	**10 31 23.4**	**-1.7**
YUK				A		A	10 31 26.7	
	comp=E,6μm,0.4s							
YUK				A		A	10 31 26.7	
	comp=E,8μm,0.4s							
GLVR	**Golovnino**	**1.50**	**246**	⇓ iPN		**Pn**	**10 31 12.8**	**-0.4**
GLVR				*e*S		**Sn**	**10 31 31.6**	**-0.9**
GLVR				pmax		pmax		
	comp=Z,735nm,0.2s							
GLVR				pmax		pmax		
	comp=N,159nm,0.1s							
GLVR				pmax		pmax		
	comp=E,206nm,0.3s							
GLVR				smax		smax		
	comp=N,2μm,0.2s							
GLVR				smax		smax		
	comp=E,4μm,0.3s							
GLVR	**Golovnino**	**1.50**	**246**	*e*P		**Pn**	**10 31 12.6**	**-0.6**
GLVR				AMB		AMB	10 31 15.3	
	comp=E,740nm,0.2s							
GLVR				*e*S		**Sn**	**10 31 31.6**	**-0.9**
GLVR				A		A	10 31 35.1	
	comp=E,2μm,0.2s							
GLVR				A		A	10 31 35.1	
	comp=E,4μm,0.2s							
NEM2	**Nemuro 2**	**1.56**	**231**	*i* P		**Pn**	**10 31 12.8**	**-1.2**
NEM2				S		**Sn**	**10 31 31.7**	**-2.3**
NMR	**Nemuro--Hokkai**	**1.57**	**231**	⇑ iPN		**Pn**	**10 31 12.8**	**-1.3**
NMR				*e*S		**Sn**	**10 31 31.7**	**-2.4**
NMR	**Nemuro--Hokkai**	**1.57**	**231**	*e*P		**Pn**	**10 31 12.9**	**-1.2**
NMR				*e*S		**Sn**	**10 31 31.6**	**-2.5**
RUSJ	**Misakicho**	**1.57**	**261**	⇓ iPN		**Pn**	**10 31 13.8**	**-0.4**
RUSJ				*e*S		**Sn**	**10 31 34.2**	**-0.1**
JRA	**Rausu**	**1.70**	**256**	P		**Pn**	**10 31 15.6**	**-0.2**
JRA				*e*S		**Sn**	**10 31 37.8**	**+0.7**
JNSB	**Nemuroshibetsu**	**1.83**	**252**	P		**Pn**	**10 31 17.6**	**+0.2**
JNSB				S		**Sn**	**10 31 40.6**	**+0.5**
JKHN	**Kushirohamanak**	**2.07**	**233**	*i* P		**Pn**	**10 31 19.8**	**-0.8**
JKHN				S		**Sn**	**10 31 43.4**	**-2.4**
JNK	**Nakash**	**2.09**	**249**	*i* P		**Pn**	**10 31 21.1**	**+0.1**
JNK				S		**Sn**	**10 31 46.4**	**0.0**
AKK	**Akkeshi**	**2.29**	**235**	*e*P		**Pn**	**10 31 22.6**	**-1.0**
JAK	**Akkeshi**	**2.39**	**236**	*i* P		**Pn**	**10 31 24.1**	**-0.8**
JAK				S		**Sn**	**10 31 51.6**	**-1.9**
JTKR	**Abashiri--Toko**	**2.55**	**262**	P		**Pn**	**10 31 27.1**	**+0.1**
JAR	**Ashorobuto**	**2.84**	**249**	P		**Pn**	**10 31 31.7**	**+0.8**
JMP	**Maruseppu**	**2.93**	**264**	*i* P		**Pn**	**10 31 32.7**	**+0.5**
JOB	**Onbets**	**2.97**	**242**	P		**Pn**	**10 31 33.1**	**+0.4**
JOB				S		**Sn**	**10 32 06.8**	**-0.6**
JKK2	**Kamakawa 2**	**3.39**	**263**	P		**Pn**	**10 31 39.2**	**+0.9**
JCH	**Churui**	**3.42**	**241**	P		**Pn**	**10 31 39.0**	**+0.3**
JKA	**Kamikawa-asahi**	**3.46**	**268**			**Pn**	**10 31 40.2**	**+0.9**
JKA	**Kamikawa-asahi**	**3.46**	**268**	*e*P		**Pn**	**10 31 40.7**	**+1.4**
ASAJ	**Asahikawa**	**3.46**	**268**	P		**Pn**	**10 31 40.7**	**+1.4**
	comp=E,30nm,0.4s,baz=57,slow=17,SNR=64							
ASAJ				S		**Sn**	**10 32 18.5**	**-0.9**
	comp=E,19nm,0.6s,baz=75,slow=9.7,SNR=4.7							
ASAJ	**Asahikawa**	**3.46**	**268**	P		**Pn**	**10 31 40.4**	**+1.0**
JSE	**Soyaes**	**3.49**	**282**	*i* P		**Pn**	**10 31 40.2**	**+0.5**
JNBK	**Urakawa-nobuka**	**3.98**	**240**	P		**Pn**	**10 31 45.7**	**-0.6**
JSS	**Shosan**	**3.98**	**272**	*e*P		**Pn**	**10 31 48.2**	**+1.8**
JWK2	**Keihoku**	**4.03**	**286**	P		**Pn**	**10 31 48.9**	**+1.9**
YSS	**Yuzhno-Sakhali**	**4.17**	**310**			**Pn**	**10 31 48.8**	**0.0**
YSS	**Yuzhno-Sakhali**	**4.17**	**310**	*e*PN		**Pn**	**10 31 49.4**	**+0.6**
YSS				*e*S		**Sn**	**10 32 34.2**	**-2.1**
YSS				pmax		pmax		
	comp=Z,30nm,0.6s							
YSS				smax		smax		
	comp=E,30nm,1.1s							
YSS	**Yuzhno-Sakhali**	**4.17**	**310**	*e*P		**Pn**	**10 31 49.4**	**+0.6**
YSS				*e*S		**Sn**	**10 32 36.7**	**+0.4**
JRBN	**Rebuntou**	**4.63**	**285**	P		**Pn**	**10 31 56.1**	**+1.0**
TYV	**Tymovskoe**	**7.25**	**335**	*e*P		**Pn**	**10 32 32.2**	**+1.4**
MAJO	**Matsushiro**	**10.49**	**225**	Pn		**Pn**	**10 33 14.5**	**-0.5**
MAJO	**Matsushiro**	**10.49**	**225**	PN		**Pn**	**10 33 14.5**	**-0.5**
MJAR	**Matsushiro Arr**	**10.49**	**225**	P		**Pn**	**10 33 13.6**	**-1.4**
	comp=E,2.1nm,0.7s,baz=0.0,slow=23,SNR=5.9							
MJAR	**Matsushiro Arr**	**10.49**	**225**			**Pn**	**10 33 14.1**	**-0.9**
MJAR	**Matsushiro Arr**	**10.49**	**225**	PN		**Pn**	**10 33 14.1**	**-0.9**
USRK	**Ussuriysk Ar.**	**11.06**	**275**	P		**Pn**	**10 33 21.9**	**-0.9**
	comp=E,4.6nm,0.9s,baz=88,slow=13,SNR=5.5							
PEA0B	**Petropavlovsk-**	**11.07**	**34**	Pn		**Pn**	**10 33 22.5**	**-0.3**
PEA0B	**Petropavlovsk-**	**11.07**	**34**	PN		**Pn**	**10 33 22.5**	**-0.3**
PETK	**Petropavlovsk-**	**11.07**	**34**	P		**Pn**	**10 33 23.2**	**+0.3**
	comp=E,5.7nm,0.6s,baz=181,slow=8.0,SNR=15							
PETK	**Petropavlovsk-**	**11.07**	**34**			**Pn**	**10 33 22.4**	**-0.4**
PETK	**Petropavlovsk-**	**11.07**	**34**	PN		**Pn**	**10 33 22.4**	**-0.4**
PET	**Petropavlovsk**	**11.41**	**37**	Pn		**Pn**	**10 33 27.9**	**+0.5**
KLR	**Kul'dur**	**11.78**	**300**	P		**Pn**	**10 33 32.3**	**-0.1**
	comp=E,2.9nm,0.8s,baz=116,slow=15,SNR=8.4							
KLR	**Kul'dur**	**11.78**	**300**	*i* PN		**Pn**	**10 33 32.1**	**-0.3**
KLR				pmax		pmax		
	comp=Z,5.0nm,1.0s							
KLR	**Kul'dur**	**11.78**	**300**	*e*P		**Pn**	**10 33 32.1**	**-0.3**
MA2	**Magadan**	**15.38**	**6**	P		**Pn**	**10 34 19.8**	**+0.4**
	comp=Z,1.4nm,0.5s,baz=168,slow=10,SNR=4.3							
KSRS	**Korea Array**	**16.25**	**252**	P		**Pn**	**10 34 29.2**	**-1.3**
	comp=Z,0.6nm,0.5s,baz=60,slow=13,SNR=1.5							
SEY	**Seymchan**	**18.83**	**7**	P		**P**	**10 34 59.7**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=207,slow=10,SNR=4.7							
SEY	**Seymchan**	**18.83**	**7**	*i* P		**P**	**10 34 59.0**	**-1.1**
SMY	**Shemya**	**19.46**	**55**	P		**Pn**	**10 35 09.1**	**-0.1**
SMY	**Shemya**	**19.46**	**55**	P		**Pn**	**10 35 09.1**	**-0.1**
SMY				pmax		pmax		
	comp=Z,84nm,1.3s							
SHEM	**Shemya Is, Ala**	**19.47**	**55**	P		**Pn**	**10 35 08.8**	**-0.4**
H11N2	**WAKE ISLAND Hy**	**29.45**	**140**	T		T	11 07 38.5	
	baz=331,slow=75							
H11N1	**WAKE ISLAND Hy**	**29.46**	**140**	T		T	11 07 37.3	
	baz=331,slow=75							
H11N3	**WAKE ISLAND Hy**	**29.46**	**140**	T		T	11 07 37.8	
	baz=331,slow=75							
TPUB	**Ta-pu**	**30.36**	**235**	P		**P**	**10 36 51.5**	**+0.3**
H11S1	**WAKE ISLAND Hy**	**30.43**	**142**	T		T	11 08 45.4	
	baz=332,slow=76							
H11S3	**WAKE ISLAND Hy**	**30.43**	**142**	T		T	11 08 48.7	
	baz=332,slow=76							
H11S2	**WAKE ISLAND Hy**	**30.45**	**142**	T		T	11 08 53.8	
	baz=332,slow=76							
K13K	**Kusilvak Mount**	**32.73**	**40**	P		**P**	**10 37 11.2**	**-0.3**
K13K						IAmb	IAmb	10 37 16.2
	comp=Z,3.2nm,1.2s							
M14K	**Bethel**	**33.86**	**43**	P		**P**	**10 37 22.3**	**+1.0**
M14K						IAmb	IAmb	10 37 52.8
	comp=Z,13nm,1.4s							
C16K	**Lisburne Hills**	**34.11**	**29**	P		**P**	**10 37 23.6**	**+0.2**
N15K	**Kwethluk River**	**34.74**	**44**	P		**P**	**10 37 29.6**	**+0.6**
M16K	**Timber Creek**	**35.34**	**43**	P		**P**	**10 37 34.5**	**+0.3**
M16K						IAmb	IAmb	10 38 04.2
	comp=Z,5.8nm,1.2s							
O16K	**Kokwok River B**	**35.73**	**45**	P		**P**	**10 37 38.0**	**+0.5**
O16K						IAmb	IAmb	10 38 11.3
	comp=Z,2.7nm,1.0s							
G18K	**Tagagawik**	**36.03**	**34**	P		**P**	**10 37 39.6**	**-0.4**
G19K	**Purcell Mounta**	**36.70**	**34**	P		**P**	**10 37 45.3**	**-0.4**
G19K						IAmb	IAmb	10 37 56.6
	comp=Z,5.7nm,1.5s							
P18K	**Big Mountain,**	**37.20**	**45**	P		**P**	**10 37 50.9**	**+0.9**
P18K						IAmb	IAmb	10 38 09.8
	comp=Z,11nm,1.4s							
B20K	**Meade River**	**37.42**	**28**	P		**P**	**10 37 50.5**	**-1.1**
B20K						IAmb	IAmb	10 37 51.4
	comp=Z,1.3nm,0.6s							
E22K	**Anaktuvuk Pass**	**38.99**	**31**	P		**P**	**10 38 04.6**	**-0.4**
E22K						IAmb	IAmb	10 38 05.6
	comp=Z,2.3nm,0.9s							
ILAR	**Eielson Array**	**40.89**	**37**	P		**P**	**10 38 20.2**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=273,slow=8.4,SNR=7.8							
	comp=Z,0.6nm,0.8s							
ILAR	**Eielson Array**	**40.89**	**37**	*e*P		**P**	**10 38 21.0**	**+0.4**
ILAR				pmax		pmax		
	comp=Z,1.0nm,0.8s							
DAV	**Davao City (W)**	**41.75**	**214**	LR		LR	10 55 09.0	
	comp=Z,40nm,20.8s,baz=138,slow=35							
MK31	**Makanchi Array**	**44.47**	**297**	*i* P		**P**	**10 38 48.5**	**-1.4**
MKAR	**Makanchi Array**	**44.47**	**297**	P		**P**	**10 38 49.6**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=75,slow=8.5,SNR=6.4							
	comp=Z,0.5nm,0.6s							
MKAR	**Makanchi Array**	**44.47**	**297**	P		**P**	**10 38 49.5**	**-0.4**
L29M	**L29M**	**44.93**	**38**	P		**P**	**10 38 54.1**	**+0.7**
L29M						IAmb	IAmb	10 38 57.0
	comp=Z,12nm,1.5s							
KURK	**Kurchatov**	**45.34**	**304**	*i* P		**P**	**10 38 57.6**	**+0.9**
KURK				pmax		pmax		
	comp=Z,1.0nm,0.6s							
KURK	**Kurchatov**	**45.34**	**304**	*e*P		**P**	**10 38 57.7**	**+1.0**
CMAR	**Chiang Mai Arr**	**47.88**	**253**	P		**P**	**10 39 17.6**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=52,slow=7.1,SNR=1.4							
	comp=Z,0.3nm,0.3s							
DLBC	**Dease Lake**	**50.10**	**43**	LR		LR	11 02 20.2	
	comp=Z,24nm,18.1s,baz=273,slow=38							
YKA	**Yellowknife Ar**	**55.19**	**34**	P		**P**	**10 40 11.0**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=305,slow=7.7,SNR=14							
	comp=Z,0.7nm,0.7s							
KLMR	**Klimovskoe**	**60.02**	**327**	*e*P		**P**	**10 40 44.0**	**-0.6**
KLMR				pmax		pmax		
	comp=Z,30nm,1.5s							
PLID	**Pearl Lake**	**64.31**	**51**	P		**P**	**10 41 14.4**	**+0.4**
FINES	**FINESS Array B**	**64.42**	**333**	P		**P**	**10 41 13.8**	**-0.2**
	comp=Z,2.8nm,0.8s,baz=5.7,slow=7.7,SNR=5.3							
	comp=Z,2.8nm,0.8s							
FINES	**FINESS Array B**	**64.42**	**333**	*i* P		**P**	**10 41 15.3**	**+1.3**
FINES				pmax		pmax		
	comp=Z,3.0nm,0.8s							
WR8	**Warramunga Arr**	**65.08**	**193**	P		**P**	**10 41 19.1**	**+0.4**
WR8						IAmb	IAmb	10 41 20.0
	comp=Z,4.5nm,1.1s							
WRA	**Warramunga Arr**	**65.10**	**194**	P		**P**	**10 41 18.8**	**0.0**
	comp=Z,0.4nm,0.8s,baz=10,slow=6.1,SNR=2.4							
	comp=Z,0.4nm,0.8s							
FFC	**Flin Flon**	**65.10**	**37**	P		**P**	**10 41 18.5**	**0.0**
FFC						IAmb	IAmb	10 41 19.3
	comp=Z,3.9nm,1.2s							
FFC	**Flin Flon**	**65.10**	**37**	P		**P**	**10 41 18.5**	**0.0**
FFC				pmax		pmax		
	comp=Z,4.0nm,1.2s							
HFS	**Hagfors**	**69.20**	**337**	P		**P**	**10 41 43.9**	**-0.5**
	comp=Z,4.2nm,0.9s,baz=66,slow=4.9,SNR=2.0							
	comp=Z,4.2nm,0.9s							
PDAR	**Pinedale Array**	**69.38**	**50**	P		**P**	**10 41 46.5**	**+0.4**
	comp=Z,3.0nm,0.6s,baz=270,slow=1.8,SNR=4.1							
	comp=Z,0.3nm,0.6s							
TXAR	**Lajitas Array**	**82.16**	**56**	P		**P**	**10 42 59.8**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=291,slow=4.7,SNR=12							
	comp=Z,0.5nm,0.5s							

ISK ***15*** *10:35:31.1, 37°.53N×36°.02E, h5km, ML4.0/18*
IDC ***15*** *10:35:31.8±0.7, 37°.47N×36°.02E, h0km, mb3.8/13, mbtmp3.7/20, ML3.3/7, MS3.1/17, Error ellipse: s-maj=12.1km s-min=9.7km az=66.0*
AFAD ***15*** *10:35:32.3, 37°.49N×36°.03E, h20km±1km, MW4.1*
NEIC ***15*** *10:35:33.9±1.9, 37°.45N±0°.06×36°.12E±0°.06, h10km±1km, mb4.2/10, Error ellipse: s-maj=9.7km s-min=7.6km az=191.0*
GII ***15*** *10:35:35.1±0.0, 37°.622N±0°.004×36°.194E±0°.001, h0km, Mws4.0, confirmed*

ISC 15 10:35:32.5±1.1, 37°.50N±0°.02×36°.04E±0°.02, h1km±7km, n144, σ1s38/166, mb4.0/16, MS3.1/8, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
KOZT	**Kozan**	**0.17**	**265**		Pg	**Pg**	**10 35 35.1**	**-0.7**
KOZT					Sg	**Sg**	**10 35 37.8**	**-0.3**
ANDN	**Andirin**	**0.26**	**71**	P	P	**Pg**	**10 35 38.5**	**+1.1**
ANDN					S	**Sg**	**10 35 43.3**	**+2.6**
ANDN					IAML		10 35 44.0	
	comp=N,2μm,0.5s							
ANDN					IAML		10 35 45.0	
	comp=E,2μm,0.3s							
SAIM	**ADANA**	**0.48**	**4**	P		**Pg**	**10 35 41.9**	**+0.1**
KAMA	**Osmaniye**	**0.59**	**122**	P		**Pg**	**10 35 43.5**	**-0.3**
CAYT	**Sariam**	**0.66**	**241**	P		**Pg**	**10 35 45.7**	**+0.5**
CAYT					S	**Sg**	**10 35 54.8**	**+1.0**
CAYT					IAML		10 35 57.0	
	comp=N,1μm,0.9s							
CAYT					IAML		10 35 58.0	
	comp=E,1μm,0.4s							
KMRS	**Kahramanmaras**	**0.68**	**89**	Pg		**Pg**	**10 35 45.9**	**+0.3**
KMRS				Sg		**Sb**	**10 35 56.8**	**-0.3**
KHMR	**Kahramanmara**	**0.70**	**102**	P		**Pg**	**10 35 46.2**	**+0.2**
KHMR				P		**Pb**	**10 35 46.8**	**-0.8**
YURE	**YUREGIR**	**0.74**	**206**	P		**Pg**	**10 35 47.0**	**+0.3**
KAHM	**Kahramanmaras,**	**0.75**	**88**	P		**Pg**	**10 35 46.5**	**-0.4**
YAHY	**KAYSERI_Yahyal**	**0.81**	**318**	P		**Pg**	**10 35 48.1**	**+0.2**
HASA	**Hatay-Hassa-Ha**	**0.82**	**154**	P		**Pg**	**10 35 47.9**	**-0.4**
CMRD	**Camardi-Nigde**	**0.85**	**282**	Pg		**Pg**	**10 35 47.4**	**-1.4**
CMRD				Sg		**Sg**	**10 36 00.7**	**+0.8**
KHMN	**Narli-Kahraman**	**0.89**	**96**	Pg		**Pb**	**10 35 49.9**	**-0.9**
KHMN				Sg		**Sb**	**10 36 03.7**	**+0.5**
KHMN	**Narli-Kahraman**	**0.89**	**96**	P		**Pb**	**10 35 50.1**	**-0.7**
KHMN				P		**Pb**	**10 35 50.1**	**-0.7**
KHMN				S		**Sb**	**10 36 03.3**	**+0.1**
KHMN				S		**Sn**	**10 36 05.0**	**-0.8**
KHMN				IAML			10 36 07.0	
	comp=E,4μm,0.7s							
KHMN				IAML			10 36 09.0	
	comp=N,4μm,0.5s							
SARI	**SarD1z-Kayseri**	**0.96**	**18**	Pg		**Pg**	**10 35 50.3**	**-0.6**
GAZ	**Gaziantep**	**0.99**	**109**			**Pg**	**10 35 50.8**	**-0.6**
GAZ	**Gaziantep**	**0.99**	**109**	Pg		**Pb**	**10 35 51.5**	**-0.9**
GULE	**Gulek**	**1.03**	**259**	P		**Pg**	**10 35 51.5**	**-0.8**
KUZU	**Kuzuini**	**1.10**	**131**	P		**Pn**	**10 35 54.2**	**-0.8**
KUZU				S		**Sb**	**10 36 08.3**	**-0.7**
KUZU				IAML			10 36 13.0	
	comp=N,5μm,0.3s							
NIDE	**Nigde/Merkez-G**	**1.12**	**297**	P		**Pg**	**10 35 53.4**	**-0.6**
NIDE				S		**Sg**	**10 36 06.9**	**-1.6**
NIDE				IAML			10 36 13.0	
	comp=N,3μm,0.5s							
ELBS	**KAHRAMANMARAS**	**1.20**	**46**	P		**Pn**	**10 35 57.0**	**+0.5**
GZT	**Gaziantep**	**1.22**	**96**	P		**Pb**	**10 35 56.2**	**-0.3**
GZT				S		**Sn**	**10 36 13.3**	**-0.7**
GZT				IAML			10 36 16.0	
	comp=N,6μm,0.6s							
GZT				IAML			10 36 20.0	
	comp=E,4μm,0.6s							
RHAN	**Hatay/Reyhanl**	**1.31**	**160**	P		**Pn**	**10 35 57.5**	**-0.4**
AKCA	**Adyaman/Gʈl**	**1.34**	**77**	P		**Pg**	**10 35 57.5**	**-0.6**
AKCA				S		**Sn**	**10 36 16.9**	**0.0**
AKCA				IAML			10 36 23.0	
	comp=N,4μm,0.8s							
BNN	**Bunyan**	**1.36**	**354**	Pn		**Pn**	**10 35 57.3**	**-1.5**
BNN	**Bunyan**	**1.36**	**354**	Pn		**Pn**	**10 35 57.3**	**-1.5**
NZIP	**Nizip/Gaziante**	**1.38**	**109**	P		**Pb**	**10 35 59.8**	**+0.7**
NZIP				S		**Sb**	**10 36 16.3**	**-0.9**
NZIP				IAML			10 36 27.0	
	comp=N,3μm,0.5s							
GUNE	**Kayseri**	**1.44**	**347**	P		**Pn**	**10 35 59.5**	**-0.4**
YAYL	**Yayladag**	**1.46**	**178**	P		**Pn**	**10 35 58.1**	**-2.0**
KERG	**Konya-Eregli**	**1.53**	**268**	P		**Pn**	**10 36 00.1**	**-1.0**
KERG				S		**Sn**	**10 36 18.9**	**-2.7**
KERG				IAML			10 36 22.0	
	comp=N,1μm,0.6s							
BSIR	**Belisirma, Guz**	**1.59**	**300**	P		**Pn**	**10 36 02.2**	**+0.4**
BSIR				S		**Sn**	**10 36 23.6**	**+0.6**
BSIR				IAML			10 36 30.0	
	comp=E,3μm,0.7s							
AVNS	**Nevsehir-Avano**	**1.61**	**325**	P		**Pn**	**10 36 02.0**	**-0.2**
AVNS				S		**Sn**	**10 36 23.5**	**-0.2**
AVNS				IAML			10 36 31.0	
	comp=N,3μm,0.7s							
GULA	**Gulagac**	**1.66**	**301**	Pn		**Pn**	**10 36 02.3**	**-0.5**
AKCD	**Akcadag**	**1.69**	**61**	P		**Pb**	**10 36 04.4**	**0.0**
AKCD				S		**Sg**	**10 36 26.3**	**-0.5**
AKCD				IAML			10 36 33.0	
	comp=N,3μm,1.0s							
AZEY	**Adyaman-Merk**	**1.78**	**79**	P		**Pg**	**10 36 06.7**	**+0.1**
ATAB	**Bozova**	**1.79**	**90**	P		**Pg**	**10 36 06.1**	**-0.7**
ATAB				S		**Sg**	**10 36 29.9**	**-0.2**
ATAB				IAML			10 36 36.0	
	comp=N,2μm,0.7s							
YESY	**Yesilyurt**	**1.85**	**280**	Pn		**Pn**	**10 36 05.1**	**-0.3**
CUAYA	**Sivas-Altinyay**	**1.85**	**17**	P		**Pn**	**10 36 05.3**	**-0.2**
CUAYA				S		**Sg**	**10 36 33.2**	**+1.2**
CUAYA				IAML			10 36 37.0	
	comp=N,668nm,0.8s							
CUAYA				IAML			10 36 50.0	
	comp=E,650nm,1.3s							
KOZK	**Kozakli-Nevseh**	**1.94**	**332**	Pn		**Pn**	**10 36 06.1**	**-0.7**
SIRC	**Yozgat**	**1.97**	**339**	P		**Pn**	**10 36 08.3**	**+1.2**
SLFK	**Silifke-Mersin**	**2.01**	**237**	Pn		**Pn**	**10 36 07.6**	**+0.1**
SILI	**Silifke-Mersin**	**2.04**	**237**	Pn		**Pn**	**10 36 08.3**	**+0.4**
HEKM	**Malatya_Hekimh**	**2.05**	**47**	P		**Pb**	**10 36 10.8**	**+0.3**
MCUR	**KIREHR**	**2.05**	**325**	P		**Pn**	**10 36 09.9**	**+1.8**
MCUR				S		**Sn**	**10 36 36.8**	**+2.4**
MCUR				IAML			10 36 43.0	
	comp=E,602nm,1.2s							

ELL	**Elmali**	**4.96**	**263**	Pn	**Pn**	**10 36 50.3**	**+2.1**
HMDT	**Nahal Hemdat**	**5.25**	**185**	P	**Pn**	**10 36 55.0**	**+2.9**
HMDT				S	**Sn**	**10 37 57.1**	**+3.9**
AKAS	**Kas**	**5.31**	**258**	Pn	**Pn**	**10 36 53.6**	**+0.6**
ASF	**Jabal al Asfar**	**5.36**	**172**	Pn	**Pn**	**10 36 53.9**	**+0.3**
	0.6nm,0.3s,baz=313,slow=5.3,SNR=3.4						
ASF				Lg	Lg	10 38 20.6	
	2.5nm,0.3s,baz=343,slow=19,SNR=4.3						
ASF				LR	LR	10 39 06.3	
	comp=Z,279nm,18.3s,baz=306,slow=40						
	0.8nm,0.3s						
GEVA	**Gevas**	**5.61**	**80**		**Pn**	**10 36 56.7**	**-0.5**
YTIR	**Yattir**	**6.17**	**187**	P	**Pn**	**10 37 07.7**	**+3.0**
YTIR				S	**Sn**	**10 38 18.5**	**+2.6**
GNI	**Garni**	**7.29**	**66**	Pg	Pb	10 37 45.3	+5.5
	0.8nm,0.3s,baz=180,slow=6.1,SNR=1.6						
GNI				Lg	Lg	10 39 25.2	
	0.3nm,0.3s,baz=347,slow=18,SNR=1.6						
EIL	**Elat**	**7.86**	**187**	Pn	**Pn**	**10 37 27.9**	**-0.1**
	0.3nm,0.3s,baz=330,slow=20,SNR=1.5						
EIL				Pg	Pb	10 37 54.2	+4.7
	0.5nm,0.3s,baz=67,slow=4.1,SNR=5.6						
EIL				Sn	**Sn**	**10 38 58.6**	**+1.1**
	0.2nm,0.3s,baz=88,slow=23,SNR=1.3						
EIL				LR	LR	10 40 52.3	
	comp=Z,130nm,18.1s,baz=246,slow=41						
	1.8nm,0.5s						
KBZ	**Khabaz**	**8.12**	**38**	LR	LR	10 41 01.8	
	comp=Z,140nm,18.0s,baz=221,slow=40						
KVAR	**Kislovodsk Arr**	**8.19**	**36**	Pn	**Pn**	**10 37 34.6**	**+2.0**
	baz=256,slow=17						
	1.9nm,0.6s						
TIRR	**Tirgusor**	**9.03**	**323**	Pn	**Pn**	**10 37 45.7**	**+1.8**
IDI	**Anoyia**	**9.26**	**260**	Pn	Pn	10 37 42.2	-4.9
	3.8nm,0.3s,baz=62,slow=14,SNR=14						
IDI				Sn	**Sn**	**10 39 26.9**	**-5.0**
	0.2nm,0.3s,baz=15,slow=14,SNR=1.7						
MLR	**Muntele Rosu**	**11.00**	**320**	LR	LR	10 43 17.2	
	comp=Z,81nm,19.0s,baz=92,slow=42						
BURAR	**Bucovina Array**	**12.87**	**325**	Pn	**Pn**	**10 38 37.6**	**+1.1**
AKASG	**Malin Array Be**	**14.07**	**342**	Pn	**Pn**	**10 38 51.1**	**-1.7**
	0.4nm,0.3s,baz=167,slow=13,SNR=4.3						
	0.3nm,0.4s						
MODS	**Modra-Piesok**	**17.47**	**314**	*e*P	**P**	**10 39 44.2**	**+5.6**
OBN	**Obninsk**	**17.63**	**1**	LR	LR	10 48 26.5	
	comp=Z,43nm,18.2s,baz=338,slow=44						
VRAC	**Vranov**	**18.35**	**316**	LR	LR	10 47 34.5	
	comp=Z,39nm,19.9s,baz=117,slow=39						
GERES	**GERESS Array B**	**19.78**	**312**	P	**P**	**10 40 04.3**	**+0.3**
	baz=123,slow=11,SNR=4.2						
GERES				LR	LR	10 50 13.2	
	comp=Z,42nm,18.3s,baz=306,slow=45						
	0.4nm,0.5s						
TEOL	**Teolo**	**19.84**	**301**	P	**P**	**10 40 06.1**	**+1.5**
TEOL				IAmb	IAmb	10 40 10.7	
	comp=Z,19nm,1.1s						
KHC	**Kasperske Hory**	**19.98**	**313**	*e*P	Pn	10 40 08.0	+0.2
CTI	**Castel Tesino**	**20.04**	**303**	P	Pn	10 40 08.7	+0.1
CTI				IAmb	IAmb	10 40 13.1	
	comp=Z,14nm,1.3s						
AKTO	**Aktyubinsk**	**20.34**	**44**	P	**P**	**10 40 09.9**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=252,slow=4.1,SNR=4.3						
	comp=Z,0.9nm,0.3s						
AB31	**Akbulak array**	**20.88**	**48**		**P**	**10 40 16.9**	**+1.0**
ABKAR	**Akbulak array**	**20.88**	**48**	P	**P**	**10 40 15.6**	**-0.3**
FUORN	**Ofenpass-Fuorn**	**21.12**	**304**	P	**P**	**10 40 19.9**	**+1.1**
DAVOX	**Davos/Dischmat**	**21.42**	**304**	P	**P**	**10 40 22.5**	**+0.5**
	comp=Z,1.6nm,0.8s,baz=58,slow=15,SNR=3.5						
	comp=Z,1.6nm,0.8s						
BNI	**Bardonecchia**	**23.23**	**298**	P	**P**	**10 40 40.5**	**-0.7**
BNI				IAmb	IAmb	10 40 45.5	
	comp=Z,9.8nm,1.0s						
ECH	**Echery**	**23.60**	**306**	P	**P**	**10 40 44.5**	**-0.2**
FINES	**FINESS Array B**	**24.77**	**349**	P	**P**	**10 40 55.2**	**-0.3**
	comp=Z,3.3nm,0.9s,baz=162,slow=13,SNR=5.7						
	comp=Z,3.3nm,0.9s						
FINES	**FINESS Array B**	**24.77**	**349**	P	**P**	**10 40 55.5**	**0.0**
KK31	**Karatay Array**	**26.75**	**67**	P	**P**	**10 41 13.4**	**-0.2**
KK31				IAmb	IAmb	10 41 14.9	
	comp=Z,5.1nm,1.1s						
KKAR	**Karatay Array**	**26.75**	**67**	P	**P**	**10 41 13.4**	**-0.2**
HFS	**Hagfors**	**26.76**	**335**	P	**P**	**10 41 13.3**	**-0.1**
	comp=Z,2.5nm,0.7s,baz=138,slow=16,SNR=4.1						
HFS				LR	LR	10 54 00.8	
	comp=Z,43nm,19.2s,baz=114,slow=41						
	comp=Z,2.5nm,0.7s						
NOA	**NORSAR Array B**	**28.26**	**334**	LR	LR	10 53 09.6	
	comp=Z,33nm,16.6s,baz=345,slow=37						
BVAR	**Borovoye Array**	**28.39**	**46**	P	**P**	**10 41 27.8**	**-0.4**
	comp=Z,0.6nm,0.9s,baz=270,slow=1.5,SNR=3.6						
	comp=Z,0.6nm,0.9s						
NRN	**Naryn**	**30.91**	**70**	P	**P**	**10 41 52.0**	**+1.0**
NRN				IAmb	IAmb	10 41 53.5	
	comp=Z,3.6nm,1.1s						
ESDC	**Sonseca Array**	**31.17**	**287**	LR	LR	10 54 50.0	
	comp=Z,15nm,19.4s,baz=70,slow=37						
KURBB	**Kurchatov Arra**	**32.77**	**53**	P	**P**	**10 42 06.4**	**-0.4**
	comp=Z,0.8nm,0.2s,baz=272,slow=9.4,SNR=6.6						
	comp=Z,0.8nm,0.2s						
MKAR	**Makanchi Array**	**35.08**	**60**	P	**P**	**10 42 27.4**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=278,slow=6.2,SNR=5.8						
	comp=Z,0.6nm,0.7s						
MKAR	**Makanchi Array**	**35.08**	**60**	P	**P**	**10 42 27.2**	**+0.2**
ZALV	**Zalesovo Beam**	**36.99**	**48**	P	**P**	**10 42 42.5**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=270,slow=8.5,SNR=1.9						
	comp=Z,0.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**39.04**	**241**	P	**P**	**10 42 58.6**	**-2.3**
	comp=Z,0.9nm,0.9s,baz=46,slow=4.3,SNR=4.4						
	comp=Z,0.9nm,0.9s						
SPITS	**Spitsbergen Ar**	**41.62**	**354**	P	**P**	**10 43 21.9**	**+0.2**
	comp=Z,2.2nm,0.7s,baz=157,slow=9.1,SNR=4.6						
	comp=Z,2.2nm,0.7s						
SONM	**Songino Array**	**51.09**	**55**	P	**P**	**10 44 36.4**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=278,slow=10.0,SNR=1.6						
	comp=Z,0.4nm,0.4s						
LSZ	**Lusaka**	**53.01**	**190**	LR	LR	11 09 53.0	
	comp=Z,18nm,20.2s,baz=135,slow=39						
TIXI	**Tiksi**	**55.77**	**22**	LR	LR	11 12 57.5	
	comp=Z,35nm,18.5s,baz=198,slow=40						
HHC	**Hu-ho-hao-te**	**56.92**	**61**	*e*P	**P**	**10 45 18.9**	**-0.4**
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,5.1s						
CMAR	**Chiang Mai Arr**	**57.68**	**91**	LR	LR	11 15 22.3	
	comp=Z,11nm,18.1s,baz=130,slow=41						
LBTB	**Lobatse**	**62.95**	**191**	LR	LR	11 14 30.1	
	comp=Z,35nm,18.9s,baz=3.0,slow=37						
SEY	**Seymchan**	**67.82**	**26**	P	**P**	**10 46 31.9**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=314,slow=7.3,SNR=4.1						
	comp=Z,0.5nm,0.4s						
BLKN	**Baker Lake**	**71.73**	**340**	P	**P**	**10 46 56.0**	**+0.2**
E25K	**Arctic Village**	**74.70**	**1**	P	**P**	**10 47 13.8**	**+0.5**
E25K				IAmb	IAmb	10 47 14.1	
	comp=Z,3.5nm,1.2s						
BMAR	**Burnt Mountain**	**75.40**	**0**	P	**P**	**10 47 17.8**	**+0.3**
YKA	**Yellowknife Ar**	**77.59**	**347**	P	**P**	**10 47 28.9**	**-0.9**
	comp=Z,0.6nm,0.9s,baz=17,slow=6.2,SNR=7.1						
	comp=Z,0.6nm,0.9s						
PDAR	**Pinedale Array**	**94.20**	**335**	LR	LR	11 32 47.5	
	comp=Z,22nm,18.2s,baz=169,slow=36						

*IDC **15** 10:43:33.8±10.0, 21°.79N×143°.80E, h193km±87km, mb3.3/10, mbtmp3.8/11, MS3.0/12, Error ellipse: s-maj=59.5km s-min=22.6km az=166.0*

ISC 15 10:43:23.0±1.9, 21°.5N±0°.3×143°.9E±0°.2, h105km, n28, σ0s77/11, mb3.6/10, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.79**	**344**	LR	LR	10 46 11.0	
	comp=Z,42nm,18.3s,baz=182,slow=29						
MJAR	**Matsushiro Arr**	**15.80**	**343**	P	**P**	**10 47 02.3**	**+1.1**
	1.3nm,0.8s,baz=150,slow=11,SNR=2.5						
MJAR				LR	LR	10 52 36.4	
	comp=Z,80nm,20.8s,baz=158,slow=35						
JNU	**Nakatsue**	**16.37**	**318**	LR	LR	10 52 00.2	
	comp=Z,51nm,21.1s,baz=306,slow=32						
KSRS	**Korea Array**	**21.09**	**322**	LR	LR	10 56 34.6	
	comp=Z,37nm,18.4s,baz=140,slow=38						
H11N1	**WAKE ISLAND Hy**	**21.56**	**91**	T	T	11 10 20.8	
	baz=278,slow=75,SNR=19						
H11N2	**WAKE ISLAND Hy**	**21.56**	**91**	T	T	11 10 18.2	
	baz=278,slow=75,SNR=15						
H11N3	**WAKE ISLAND Hy**	**21.57**	**91**	T	T	11 10 16.4	
	baz=278,slow=75,SNR=15						
H11S3	**WAKE ISLAND Hy**	**21.58**	**94**	T	T	11 10 18.8	
	baz=281,slow=75,SNR=9.3						
H11S1	**WAKE ISLAND Hy**	**21.59**	**94**	T	T	11 10 21.1	
	baz=281,slow=75,SNR=8.3						
H11S2	**WAKE ISLAND Hy**	**21.60**	**94**	T	T	11 10 21.4	
	baz=281,slow=75,SNR=10						
ASAJ	**Asahikawa**	**22.58**	**357**	LR	LR	10 56 39.8	
	comp=Z,42nm,21.8s,baz=190,slow=35						
JAY	**Jayapura**	**24.08**	**188**	LR	LR	10 57 59.0	
	comp=Z,43nm,19.1s,baz=163,slow=36						
KLR	**Kul'dur**	**29.32**	**344**	LR	LR	11 00 34.3	
	comp=Z,38nm,20.3s,baz=224,slow=35						
PETK	**Petropavlovsk-**	**33.28**	**15**	LR	LR	11 02 16.0	
	comp=Z,22nm,20.2s,baz=232,slow=34						
BATI	**Baumata**	**37.27**	**214**	LR	LR	11 06 23.3	
	comp=Z,76nm,18.3s,baz=292,slow=37						
MA2	**Magadan**	**38.35**	**6**	LR	LR	11 03 54.2	
	comp=Z,20nm,21.7s,baz=251,slow=32						
SHEM	**Shemya Is, Ala**	**38.84**	**29**	LR	LR	11 05 04.3	
	comp=Z,21nm,20.1s,baz=207,slow=33						
YAK	**Yakutsk**	**41.68**	**350**	LR	LR	11 10 47.5	
	comp=Z,11nm,18.1s,baz=59,slow=40						
CMAR	**Chiang Mai Arr**	**42.29**	**274**	P	**P**	**10 51 07.3**	**+0.8**
	0.4nm,0.4s,baz=56,slow=7.4,SNR=4.8						
	0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**54.80**	**322**	P	**P**	**10 52 41.6**	**-0.3**
	0.3nm,0.4s,baz=113,slow=4.8,SNR=2.1						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**55.35**	**313**	P	**P**	**10 52 45.6**	**-0.4**
	0.5nm,0.8s,baz=97,slow=8.7,SNR=4.6						
	0.5nm,0.8s						
KURBB	**Kurchatov Arra**	**58.15**	**317**	P	**P**	**10 53 04.7**	**-1.1**
	1.7nm,0.7s,baz=93,slow=7.8,SNR=18						
	1.7nm,0.7s						
ILAR	**Eielson Array**	**61.89**	**27**	P	**P**	**10 53 30.7**	**-0.4**
	0.4nm,0.9s,baz=212,slow=7.8,SNR=4.2						
	0.4nm,0.9s						
BVAR	**Borovoye Array**	**63.27**	**320**	P	**P**	**10 53 40.1**	**-0.3**
	2.2nm,0.8s,baz=72,slow=6.4,SNR=10						
	2.2nm,0.8s						
INK	**Inuvik**	**67.47**	**24**	P	**P**	**10 54 06.9**	**-0.3**
	0.9nm,0.8s,baz=216,slow=13,SNR=3.4						
	0.9nm,0.8s						
YKA	**Yellowknife Ar**	**76.30**	**28**	P	**P**	**10 55 00.3**	**+0.2**
	0.3nm,0.8s,baz=297,slow=6.3,SNR=4.9						
	0.3nm,0.8s						
NVAR	**Mina Array Bea**	**82.72**	**52**	P	**P**	**10 55 36.3**	**+0.6**
	0.6nm,0.7s,baz=263,slow=5.7,SNR=4.5						
	0.6nm,0.7s						
FINES	**FINESS Array B**	**83.66**	**335**	P	**P**	**10 55 38.8**	**-0.9**
	2.3nm,0.9s,baz=37,slow=4.8,SNR=4.6						
	2.3nm,0.9s						

*IDC **15** 10:45:53.8±1.9, 0°.97N×126°.83E, h82km±16km, mb3.8/14, mbtmp4.1/17, MS2.7/3, Error ellipse: s-maj=25.3km s-min=11.3km az=76.0*

*NEIC **15** 10:45:53.6±0.8, 0°.9N±0°.1×126°.76E±0°.05, h72km±7km, mb4.5/28, Error ellipse: s-maj=14.9km s-min=7.3km az=188.0*

*DJA **15** 10:45:53.9±0.3, 1°.N±3°.×12°.7E±°, h51km±16km, M4.5/16, mB5.0/1, mb4.6/2, MLv4.5/16, Mw(mB)4.3/1*

ISC 15 10:45:52.8±0.4, 0°.94N±0°.05×126°.77E±0°.07, h72km, n66, σ1s60/73, mb4.5/29, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.62**	**105**		**Pn**	**10 46 07.9**	**+0.9**
TNTI	**Ternate**	**0.62**	**105**	P	**Pn**	**10 46 08.4**	**+1.4**
MNI	**Manado**	**1.99**	**285**	P	**Pn**	**10 46 25.0**	**+0.6**
SGSI	**Sangihe**	**3.00**	**336**	P	**Pn**	**10 46 37.6**	**-0.5**
SANI	**Sanana**	**3.06**	**195**	P	**Pn**	**10 46 39.6**	**+0.7**
GTOI	**Gorontalo**	**3.77**	**266**	P	**Pn**	**10 46 51.1**	**+2.6**
NLAI	**Namlea**	**4.16**	**175**	P	**Pn**	**10 46 56.0**	**+2.1**
SIJI	**Sorong**	**4.84**	**112**	P	**Pn**	**10 47 05.5**	**+2.3**
	9.2nm,0.6s,baz=331,slow=23,SNR=6.0						
DDMP	**Don Marcelino,**	**5.24**	**348**	*e*P	**Pn**	**10 47 07.9**	**-0.8**
DDMP				*e*S	**Sn**	**10 48 00.1**	**-7.7**
APSI	**Ampana**	**5.44**	**250**	P	**Pn**	**10 47 13.0**	**+1.7**
TOLI2	**Tolitoli**	**5.99**	**272**	Pn	**Pn**	**10 47 20.1**	**+1.3**
DAV	**Davao City (W)**	**6.21**	**349**	S	**Sn**	**10 48 33.0**	**+1.5**
	64nm,0.3s,baz=244,slow=17,SNR=1.4						
KAPI	**Kappang**	**9.17**	**230**	P	**Pn**	**10 48 03.3**	**+1.0**
	7.6nm,0.4s,baz=349,slow=4.0,SNR=4.5						
KAPI				S	**Sn**	**10 49 41.3**	**-2.6**
	8.0nm,0.4s,baz=359,slow=23,SNR=4.0						
MYLDM	**Lahad Datu**	**9.27**	**297**	Pn	**Pn**	**10 48 04.2**	**+0.5**
MTN	**Manton Dam**	**14.36**	**163**	Pn	**Pn**	**10 49 11.3**	**-1.3**
KNRA	**Kununurra**	**16.62**	**173**	P	**Pn**	**10 49 41.6**	**+0.2**
FITZ	**Fitzroy Crossi**	**18.95**	**183**	P	**P**	**10 50 09.2**	**+1.0**
	2.9nm,0.9s,baz=358,slow=12,SNR=5.7						
GUMO	**Guam**	**21.89**	**54**	LR	LR	10 57 44.5	
	comp=Z,15nm,21.1s,baz=166,slow=33						
WB0	**Warramunga Arr**	**21.89**	**160**		**P**	**10 50 39.8**	**-0.2**
WRA	**Warramunga Arr**	**22.04**	**161**	P	**P**	**10 50 41.5**	**-0.1**
	4.3nm,0.3s,baz=336,slow=11,SNR=119						
WRA				S	**S**	**10 54 37.5**	**-3.2**
	1.4nm,0.7s,baz=329,slow=18,SNR=5.2						
WRA				ScP	**ScP**	**10 58 06.6**	**-2.0**
	0.5nm,0.7s,baz=340,slow=2.9,SNR=4.8						
	4.3nm,0.3s						
WRA	**Warramunga Arr**	**22.04**	**161**		**P**	**10 50 40.5**	**-1.1**
TPUB	**Ta-pu**	**23.02**	**345**	P	**P**	**10 50 50.0**	**-1.9**
TPUB				IAmb	IAmb	10 50 53.6	
	comp=Z,31nm,0.9s						
AS31	**Alice Springs**	**25.42**	**165**		**P**	**10 51 13.5**	**-0.3**
ASAR	**Alice Springs**	**25.42**	**165**	P	**P**	**10 51 14.0**	**+0.1**
	comp=Z,2.8nm,0.5s,baz=342,slow=8.5,SNR=118						
ASAR				PcP	**PcP**	**10 54 44.0**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=351,slow=2.3,SNR=5.1						
ASAR				S	**S**	**10 55 32.8**	**-2.9**
	comp=Z,0.4nm,0.6s,baz=354,slow=22,SNR=3.7						
ASAR				ScP	**ScP**	**10 58 16.4**	**-1.4**
	comp=Z,0.3nm,0.8s,baz=351,slow=2.8,SNR=2.6						
	comp=Z,2.8nm,0.5s						
ASAR	**Alice Springs**	**25.42**	**165**	P	**P**	**10 51 13.8**	**-0.1**
FORT	**Forrest**	**31.56**	**178**	P	**P**	**10 52 08.4**	**-0.1**
NJ2	**Nanjing**	**31.84**	**347**	*e*P	**P**	**10 52 13.1**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,26nm,0.5s						
PZH	**PanZhiHua**	**35.01**	**319**	P	**P**	**10 52 41.4**	**+2.7**
STKA	**Stephens Creek**	**35.53**	**158**	P	**P**	**10 52 42.5**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=330,slow=8.4,SNR=6.0						
STKA				PcP	**PcP**	**10 55 11.0**	**+0.1**
	comp=Z,1.4nm,0.5s,baz=0.5,slow=6.6,SNR=4.2						
	comp=Z,1.1nm,0.5s						
INU	**Inuyama**	**35.55**	**14**	P	**P**	**10 52 42.2**	**-0.8**
KSRS	**Korea Array**	**36.36**	**2**	P	**P**	**10 52 49.7**	**-0.3**
	comp=Z,1.3nm,0.8s,baz=182,slow=8.5,SNR=1.6						
KSRS				LR	LR	11 06 26.3	
	comp=Z,7.4nm,21.9s,baz=225,slow=34						
	comp=Z,1.3nm,0.8s						
MJAR	**Matsushiro Arr**	**36.98**	**15**	P	**P**	**10 52 53.6**	**-1.7**
	comp=Z,0.7nm,0.4s,baz=181,slow=8.9,SNR=5.9						
MJAR				LR	LR	11 05 07.2	
	comp=Z,25nm,21.8s,baz=168,slow=31						
	comp=Z,0.7nm,0.4s						
MJAR	**Matsushiro Arr**	**36.98**	**15**	P	**P**	**10 52 53.8**	**-1.5**
MJAR				IAmb	IAmb	10 53 26.1	
	comp=Z,7.5nm,1.5s						
HHC	**Hu-ho-hao-te**	**42.05**	**343**	*e*P	**P**	**10 53 40.9**	**+3.3**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,75nm,4.6s						
JKA	**Kamikawa-asahi**	**45.24**	**16**	P	**P**	**10 54 04.2**	**+1.3**
JKA				IAmb	IAmb	10 54 08.3	
	comp=Z,12nm,1.3s						
SONM	**Songino Array**	**49.95**	**342**	P	**P**	**10 54 38.7**	**-0.8**
	comp=Z,0.8nm,0.5s,baz=153,slow=8.3,SNR=4.2						
	comp=Z,0.8nm,0.5s						
FUTU	**Fugotoga**	**56.60**	**108**	P	**P**	**10 55 29.0**	**+0.3**
PETK	**Petropavlovsk-**	**57.99**	**21**	P	**P**	**10 55 38.1**	**+0.2**
	comp=Z,2.2nm,0.6s,baz=214,slow=6.7,SNR=1.2						
	comp=Z,2.2nm,0.6s						
THZ	**Tophouse**	**59.50**	**141**	P	**P**	**10 55 48.9**	**+0.3**
MKAR	**Makanchi Array**	**59.87**	**326**	P	**P**	**10 55 51.7**	**+0.6**
	comp=Z,1.7nm,0.4s,baz=118,slow=7.8,SNR=41						
	comp=Z,1.7nm,0.4s						
MKAR	**Makanchi Array**	**59.87**	**326**	P	**P**	**10 55 51.1**	**0.0**
MAKZ	**Makanchi**	**60.05**	**326**	P	**P**	**10 55 52.5**	**+0.2**
MAKZ				IAmb	IAmb	10 55 53.3	
	comp=Z,2.4nm,0.6s						
BKZ	**Black Stump Fm**	**60.51**	**137**	P	**P**	**10 55 54.9**	**-0.7**
ZALV	**Zalesovo Beam**	**63.09**	**334**	P	**P**	**10 56 11.8**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=151,slow=3.4,SNR=4.2						
	comp=Z,0.8nm,0.8s						
KURBB	**Kurchatov Arra**	**64.11**	**328**	P	**P**	**10 56 19.6**	**+0.2**
	comp=Z,2.7nm,0.5s,baz=128,slow=6.2,SNR=28						
	comp=Z,2.7nm,0.5s						
KURK	**Kurchatov**	**64.11**	**328**		**P**	**10 56 19.4**	**+0.1**
KURK				IAmb	IAmb	10 56 20.7	
	comp=Z,5.3nm,0.6s						
BVAR	**Borovoye Array**	**69.68**	**328**	P	**P**	**10 56 54.7**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=134,slow=6.2,SNR=4.0						
	comp=Z,0.6nm,0.5s						
VNDA	**Vanda**	**80.67**	**173**	P	**P**	**10 57 57.7**	**+0.3**
	comp=Z,1.7nm,0.8s,baz=313,slow=8.3,SNR=6.0						
	comp=Z,1.7nm,0.8s						
C16K	**Lisburne Hills**	**81.07**	**20**	P	**P**	**10 58 00.4**	**+0.7**
C16K				IAmb	IAmb	10 58 01.5	
	comp=Z,4.4nm,1.1s						
H17K	**Granite Mounta**	**82.13**	**24**		**P**	**10 58 06.4**	**+1.0**
H17K				IAmb	IAmb	10 58 07.9	
	comp=Z,6.5nm,1.4s						
K17K	**Iditarod**	**82.29**	**27**		**P**	**10 58 07.4**	**+1.1**
K17K				IAmb	IAmb	10 58 08.6	
	comp=Z,4.9nm,0.8s						
E18K	**Tukpahlearik C**	**82.52**	**22**		**P**	**10 58 08.5**	**+1.2**
E18K				IAmb	IAmb	10 58 09.8	
	comp=Z,6.2nm,0.9s						
C18K	**Utukok River**	**82.65**	**21**	P	**P**	**10 58 09.1**	**+1.0**
H18K	**Honhosa River**	**82.82**	**24**	P	**P**	**10 58 09.8**	**+0.9**
H18K				IAmb	IAmb	10 58 10.8	
	comp=Z,6.6nm,1.0s						
G18K	**Tagagawik**	**82.88**	**24**		**P**	**10 58 09.7**	**+0.5**
L18K	**Granite Mounta**	**82.92**	**27**		**P**	**10 58 10.5**	**+1.0**
L18K				IAmb	IAmb	10 58 11.8	
	comp=Z,5.3nm,0.8s						
J18K	**Innoko River**	**83.16**	**26**		**P**	**10 58 11.6**	**+0.8**
J18K				IAmb	IAmb	10 58 12.0	
	comp=Z,3.6nm,0.7s						
C19K	**Lookout Ridge**	**83.33**	**20**		**P**	**10 58 12.9**	**+1.3**
C19K				IAmb	IAmb	10 58 14.2	
	comp=Z,8.6nm,0.8s						
D19K	**Kuna River**	**83.70**	**21**		**P**	**10 58 14.3**	**+0.9**
N19K	**Bonanza Creek**	**83.70**	**29**		**P**	**10 58 15.2**	**+1.5**
E19K	**Redstone River**	**83.79**	**22**		**P**	**10 58 15.4**	**+1.4**
E19K				IAmb	IAmb	10 58 16.1	
	comp=Z,6.2nm,0.8s						
COLD	**Coldfoot**	**86.44**	**23**		**P**	**10 58 27.6**	**+0.5**
ILAR	**Eielson Array**	**87.60**	**25**	P	**P**	**10 58 31.1**	**-1.7**
	comp=Z,0.9nm,1.0s,baz=251,slow=5.3,SNR=6.6						
	comp=Z,0.9nm,1.0s						
QSPA	**South Pole Qui**	**90.86**	**180**	P	**P**	**10 58 48.1**	**-0.1**
	comp=Z,0.8nm,0.8s,baz=328,slow=5.6,SNR=1.6						
	comp=Z,0.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**123.78**	**286**	PKP	**PKPdf**	**11 04 43.1**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=92,slow=2.0,SNR=2.6						
PLCA	**Paso Flores**	**137.38**	**160**	PKP	**PKPdf**	**11 05 09.7**	**+1.0**
	comp=Z,1.1nm,0.7s,baz=264,slow=6.3,SNR=4.1						

*SDD **15** 10:56:32.5±1.2, 17°.85N×66°.90W, h15km±15km, MD2.4, ML2.1, MW2.3, Presumed earthquake*

*OSPL **15** 10:56:33.5±0.3, 18°.00N×66°.83W, h20km±4km, ML3.0, Presumed earthquake*

ISC 15 10:56:32.0±1.6, 17°.9N±0°.1×66°.86W±0°.03, h14km±9km, n7, σ0s69/13, 2C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLPR	**Magueyes Islan**	**0.20**	**292**	↓*e*Pg	**Pg**	**10 56 35.8**	**-0.6**
MLPR				↓*e*Sg	**Sg**	**10 56 39.5**	**+0.1**
MLPR				IAML		10 56 39.6	
	comp=N,88nm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.27**	**295**	*i* P	**Pb**	**10 56 39.2**	**+0.6**
CRPR				*e*S	**Sb**	**10 56 43.4**	**+0.2**
CRPR				IAML		10 56 43.5	
	comp=Z,172nm,0.2s						
OBIP	**Obispado Ponce**	**0.28**	**58**	*i* P	**Pg**	**10 56 38.4**	**+0.5**
OBIP				*e*S	**Sg**	**10 56 42.1**

mbtmp4.4/36, Error ellipse: s-maj=8.2km s-min=7.1km az=95.0
*NEIC **15** 11:29:06.3±1.3, 39.8°N±0.1°×13.3°E±0.1°, h480km±15km, mb4.4/22, Error ellipse: s-maj=21.2km s-min=18.8km az=205.0*
*MCSM **15** 11:29:06.0±0.3, 40°N±3°×1°3E±°, h478km±3km, mb4.3, mB4.6, MLv4.3, Mw(mB)3.8*
*MOS **15** 11:29:06.0±0.9, 39.86N×13.28E, h492km, mb4.2/17, Error ellipse: s-maj=7.3km s-min=3.9km az=74.1*
*BGS **15** 11:29:08.4±1.6, 40.15N×13.36E, h480km, mb4.6*
*PRU **15** 11:29:29.3, 41.89N×13.55E, h462km, M4.3*
ISC 15 11:29:05.8±0.4, **39.78N**±0.05×**13.38E**±0.04, **h473**km±5km, **n578**, σ1§**24**/651, **mb4.2**/55, **45C-61D**, **Tyrrhenian Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IFOR	**Ischia Forio P**	**1.00**	**21**	⇑P	**P**	**11 30 05.9**	**+1.6**
IMTC	**Ischia Forio M**	**1.01**	**22**	P	**P**	**11 30 06.1**	**+1.8**
IMTC				AML	AML		
	comp=N,664μm,0.6s						
IMTC				AML	AML		
	comp=E,708μm,0.7s						
VENT	**Ventotene**	**1.01**	**2**	⇑P	**P**	**11 30 05.8**	**+1.5**
IOCA	**Ischia Osserva**	**1.04**	**22**	P	**P**	**11 30 06.1**	**+1.7**
USI	**Ustica**	**1.08**	**189**	⇑P	**P**	**11 30 05.8**	**+1.0**
USI				S	**S**	**11 30 53.8**	**+1.3**
USI				AML	AML		
	comp=N,1675μm,0.4s						
USI				AML	AML		
	comp=E,587μm,0.4s						
USI				AML	AML		
	comp=E,587μm,0.4s						
USI				AML	AML		
	comp=N,1675μm,0.4s						
CMIS	**Campi Flegrei**	**1.13**	**28**	P	**P**	**11 30 08.7**	**+4.0**
CPOZ	**Campi Flegrei,**	**1.18**	**28**	P	**P**	**11 30 06.8**	**+2.0**
CFMN	**Campi Flegrei**	**1.18**	**27**	P	**P**	**11 30 06.7**	**+1.9**
CAAM	**Accademia Aero**	**1.19**	**29**	P	**P**	**11 30 07.5**	**+2.6**
VTIR	**Vesuvio Tirone**	**1.30**	**37**	P	**P**	**11 30 07.2**	**+1.9**
CRTO	**Cratere Ovest,**	**1.31**	**37**	P	**P**	**11 30 07.3**	**+1.9**
VBKN	**Vesuvio Bunker**	**1.32**	**37**	P	**P**	**11 30 07.2**	**+1.8**
VVDG	**Vesuvio Valle**	**1.32**	**37**	P	**P**	**11 30 07.5**	**+2.0**
IACL	**Alicudi**	**1.46**	**148**	⇑P	**P**	**11 30 06.8**	**+0.8**
IACL				S	**S**	**11 30 55.5**	**+0.7**
IFIL	**Filicudi I Eol**	**1.52**	**143**	⇑P	**P**	**11 30 07.1**	**+0.8**
IFIL				S	**S**	**11 30 55.9**	**+0.6**
IFIL				AML	AML		
	comp=N,412μm,0.4s						
IFIL				AML	AML		
	comp=E,1079μm,0.3s						
IFIL				AML	AML		
	comp=N,411μm,0.4s						
IFIL				AML	AML		
	comp=E,1078μm,0.3s						
PAOL	**Paolisi**	**1.54**	**35**		**P**	**11 30 07.5**	**+1.3**
BULG	**Bulgheria - Ca**	**1.56**	**78**	⇑P	**P**	**11 30 08.2**	**+1.8**
BULG				AML	AML		
	comp=E,426μm,0.4s						
BULG				AML	AML		
	comp=N,562μm,0.7s						
BULG				AML	AML		
	comp=E,432μm,0.4s						
BULG				AML	AML		
	comp=N,590μm,0.7s						
BULG				AML	AML		
	comp=E,426μm,0.4s						
BULG				AML	AML		
	comp=N,562μm,0.7s						
BULG				AML	AML		
	comp=N,590μm,1.3s						
BULG				AML	AML		
	comp=N,562μm,1.3s						
BULG				AML	AML		
	comp=E,426μm,0.4s						
BULG				AML	AML		
	comp=E,432μm,0.4s						
BULG				AML	AML		
	comp=N,534μm,0.3s						
BULG				AML	AML		
	comp=N,542μm,0.3s						
CMPR	**Campora**	**1.57**	**69**	⇑P	**P**	**11 30 08.1**	**+1.7**
CMPR				S	**S**	**11 30 57.9**	**+2.2**
MPG	**Monte Pellegri**	**1.62**	**181**	⇑P	**P**	**11 30 07.6**	**+0.8**
MPG				S	**S**	**11 30 56.4**	**+0.3**
MNT3	**Montella**	**1.63**	**49**	⇑P	**P**	**11 30 08.7**	**+2.0**
SGO	**Sicignano**	**1.67**	**62**	⇑P	**P**	**11 30 08.9**	**+2.1**
MTMR	**Montemarano**	**1.68**	**47**	⇑P	**P**	**11 30 08.9**	**+2.0**
SNR3	**Senerchia**	**1.68**	**55**	P	**P**	**11 30 09.1**	**+2.1**
SOLUN	**Solunto**	**1.69**	**176**	⇑P	**P**	**11 30 07.8**	**+0.7**
SOLUN				S	**S**	**11 30 56.6**	**0.0**
SOLUN				AML	AML		
	comp=E,306μm,0.9s						
SOLUN				AML	AML		
	comp=N,268μm,0.3s						
SOLUN				AML	AML		
	comp=E,375μm,0.3s						
SOLUN				AML	AML		
	comp=E,1285μm,0.8s						
SOLUN				AML	AML		
	comp=N,1137μm,1.1s						
MCRV	**Calabrutti - M**	**1.69**	**53**	⇑P	**P**	**11 30 08.8**	**+1.8**
NSC3	**Nusco**	**1.70**	**51**	P	**P**	**11 30 08.6**	**+1.5**
MGR	**Morigerati**	**1.71**	**77**	⇑P	**P**	**11 30 08.6**	**+1.6**
MGR				S	**S**	**11 30 58.0**	**+1.3**
MGR				AML	AML		
	comp=E,102μm,0.4s						
MGR				AML	AML		
	comp=N,105μm,0.3s						
MGR				AML	AML		
	comp=E,102μm,1.6s						
MGR				AML	AML		
	comp=E,248μm,0.9s						
MGR				AML	AML		
	comp=E,102μm,0.4s						
MGR				AML	AML		
	comp=N,177μm,0.5s						
MGR				AML	AML		
	comp=N,118μm,0.6s						
SRN3	**Sant'Arsenio**	**1.74**	**65**	P	**P**	**11 30 09.2**	**+2.0**
SLCN	**Sala Consilina**	**1.83**	**70**	P	**P**	**11 30 09.4**	**+1.7**
GIB	**Gibilmanna**	**1.86**	**164**	P	**P**	**11 30 07.9**	**-0.1**
GIB				S	**S**	**11 30 57.3**	**-1.0**
GIB				AML	AML		
	comp=E,158μm,0.9s						
GIB				AML	AML		
	comp=N,177μm,0.6s						
GIB				AML	AML		
	comp=E,158μm,1.1s						
GIB				AML	AML		
	comp=E,646μm,0.5s						
GIB				AML	AML		
	comp=N,588μm,0.4s						
MBFT	**Monte Bonifato**	**1.86**	**191**	P	**P**	**11 30 08.8**	**+0.9**
VPL	**Vulcano Piano**	**1.87**	**138**	P	**P**	**11 30 08.7**	**+0.8**
VPL				S	**S**	**11 30 58.5**	**+0.3**
PLLN	**Pollina**	**1.88**	**161**	P	**P**	**11 30 08.3**	**+0.2**
PLLN				S	**S**	**11 30 57.6**	**-0.8**
PLLN				AML	AML		
	comp=E,164μm,1.3s						
PLLN				AML	AML		
	comp=N,272μm,0.4s						
PLLN				AML	AML		
	comp=E,790μm,0.5s						
PLLN				AML	AML		
	comp=N,867μm,0.5s						
CUC	**Castrocucco**	**1.88**	**83**		**P**	**11 30 09.1**	**+1.2**
CUC	**Castrocucco**	**1.88**	**83**	⇑P	**P**	**11 30 09.3**	**+1.5**
CUC				S	**S**	**11 30 59.4**	**+1.0**
CUC				AML	AML		
	comp=E,105μm,1.3s						
CUC				AML	AML		
	comp=E,105μm,1.3s						
CUC				AML	AML		
	comp=N,113μm,0.7s						
CUC				AML	AML		
	comp=E,105μm,0.7s						
CUC				AML	AML		
	comp=N,192μm,0.7s						
CUC				AML	AML		
	comp=N,182μm,0.7s						
CUC				AML	AML		
	comp=E,130μm,1.0s						
CUC				AML	AML		
	comp=E,253μm,1.3s						
MRLC	**Muro Lucano**	**1.88**	**58**	⇑P	**P**	**11 30 09.7**	**+1.8**
CORL	**Corleone**	**1.88**	**182**	P	**P**	**11 30 09.2**	**+1.1**
STN3	**Satriano di Lu**	**1.89**	**66**	P	**P**	**11 30 09.8**	**+1.9**
GRIS	**Grisolia**	**1.90**	**90**	⇑P	**P**	**11 30 09.4**	**+1.4**
GRIS				S	**S**	**11 30 59.2**	**+0.7**
CSLB	**Castelbuono**	**1.91**	**164**	⇓P	**P**	**11 30 08.0**	**-0.2**
CSLB				S	**S**	**11 30 57.1**	**-1.6**
CSLB				AML	AML		
	comp=E,47μm,0.4s						
CSLB				AML	AML		
	comp=E,47μm,1.6s						
CSLB				AML	AML		
	comp=N,42μm,0.8s						
CSLB				AML	AML		
	comp=N,194μm,0.4s						
CSLB				AML	AML		
	comp=E,180μm,0.7s						
MCEL	**Monticello**	**1.93**	**73**	⇑P	**P**	**11 30 10.1**	**+1.9**
MCEL				AML	AML		
	comp=N,150μm,0.4s						
MCEL				AML	AML		
	comp=E,148μm,0.5s						
MCEL				AML	AML		
	comp=N,150μm,0.4s						
MCEL				AML	AML		
	comp=E,140μm,0.4s						
SIRI	**Monte Sirino -**	**1.95**	**77**	⇑P	**P**	**11 30 09.6**	**+1.3**
SIRI				AML	AML		
	comp=E,102μm,1.2s						
SIRI				AML	AML		
	comp=E,105μm,1.1s						
SIRI				AML	AML		
	comp=N,92μm,1.6s						
SIRI				AML	AML		
	comp=N,88μm,1.0s						
SIRI				AML	AML		
	comp=E,105μm,0.9s						
SIRI				AML	AML		
	comp=E,98μm,0.4s						
SIRI				AML	AML		
	comp=E,98μm,0.3s						
SIRI				AML	AML		
	comp=N,81μm,0.4s						
SIRI				AML	AML		
	comp=N,81μm,0.4s						
MSFR	**San Fratello**	**1.98**	**151**	P	**P**	**11 30 08.9**	**+0.3**
MSFR				S	**S**	**11 30 58.9**	**-0.4**
MSFR				AML	AML		
	comp=E,51μm,0.8s						
MSFR				AML	AML		
	comp=N,66μm,1.5s						
MSFR				AML	AML		
	comp=N,66μm,0.5s						
MSFR				AML	AML		
	comp=E,51μm,1.2s						
MSFR				AML	AML		
	comp=N,128μm,0.7s						
MSFR				AML	AML		
	comp=E,161μm,1.1s						
CRJA	**Costa Raja**	**2.00**	**189**	P	**P**	**11 30 09.9**	**+1.2**
CET2	**Cetraro**	**2.00**	**96**	⇑P	**P**	**11 30 09.8**	**+1.3**
CET2				S	**S**	**11 30 59.1**	**-0.4**
CET2				AML	AML		
	comp=N,394μm,0.2s						
CET2				AML	AML		
	comp=E,180μm,0.5s						
CET2				AML	AML		
	comp=E,477μm,0.7s						
CET2				AML	AML		
	comp=N,1499μm,0.6s						
MMN	**Mormanno**	**2.01**	**86**	P	**P**	**11 30 10.0**	**+1.6**
MMN				AML	AML		
	comp=E,112μm,0.4s						
MMN				AML	AML		
	comp=N,169μm,0.4s						
MMN				AML	AML		
	comp=N,163μm,0.4s						
MMN				AML	AML		
	comp=E,144μm,0.4s						
PGN3	**Pignola, Italy**	**2.01**	**66**	⇑P	**P**	**11 30 10.4**	**+1.8**
VIVA	**Pratoni del Vi**	**2.02**	**347**	AML	AML		
	comp=E,878μm,1.3s						
VIVA				AML	AML		
	comp=N,725μm,0.5s						
PETRA	**Petralia Sopra**	**2.03**	**163**	P	**P**	**11 30 09.4**	**+0.4**
PETRA				S	**S**	**11 30 59.9**	**-0.1**
PETRA				AML	AML		
	comp=N,176μm,1.6s						
PETRA				AML	AML		
	comp=N,176μm,0.4s						
PETRA				AML	AML		
	comp=E,190μm,0.4s						
PETRA				AML	AML		
	comp=N,842μm,0.5s						
PETRA				AML	AML		
	comp=E,1071μm,0.6s						
ALJA	**Alia**	**2.05**	**172**	P	**P**	**11 30 10.1**	**+1.1**
ALJA				S	**S**	**11 31 01.1**	**+1.1**
ALJA				AML	AML		
	comp=N,428μm,0.4s						
MILZ	**Milazzo**	**2.08**	**136**	P	**P**	**11 30 08.8**	**-0.1**
MILZ				S	**S**	**11 30 59.5**	**-0.6**
MILZ				AML	AML		
	comp=E,388μm,0.6s						
MILZ				AML	AML		
	comp=N,250μm,0.8s						
MILZ				AML	AML		
	comp=N,175μm,0.5s						
MILZ				AML	AML		
	comp=E,357μm,0.2s						
MUCR	**Ucria**	**2.09**	**146**	P	**P**	**11 30 09.4**	**+0.2**
MUCR				S	**S**	**11 31 00.6**	**+0.1**
MUCR				AML	AML		
	comp=N,135μm,1.2s						
MUCR				AML	AML		
	comp=E,144μm,1.5s						
MUCR				AML	AML		
	comp=E,144μm,0.5s						
MUCR				AML	AML		
	comp=E,121μm,0.4s						
MUCR				AML	AML		
	comp=N,128μm,0.4s						
SCHR	**S. Chirico Rap**	**2.11**	**78**	P	**P**	**11 30 11.0**	**+1.8**
MCT	**Mte Cammarata**	**2.15**	**175**	P	**P**	**11 30 11.2**	**+1.6**
ACER	**Acerenza**	**2.20**	**62**		**P**	**11 30 10.0**	**+0.4**
MPNC	**Port Mandanici**	**2.24**	**136**	P	**P**	**11 30 10.1**	**+0.2**
MSRU	**Castanea**	**2.24**	**132**	P	**P**	**11 30 09.6**	**-0.2**
MSRU				S	**S**	**11 31 00.8**	**-1.0**
MSRU				AML	AML		
	comp=E,268μm,1.3s						
MSRU				AML	AML		
	comp=N,244μm,0.7s						
MSRU				AML	AML		
	comp=E,268μm,0.7s						
MSRU				AML	AML		
	comp=N,244μm,1.3s						
MSRU				AML	AML		
	comp=E,1204μm,0.5s						
MSRU				AML	AML		
	comp=N,1425μm,0.3s						
CAR1	**CAROLEI**	**2.25**	**103**	P	**P**	**11 30 10.4**	**+0.5**
CAR1				S	**S**	**11 31 00.2**	**-1.8**
CAR1				AML	AML		
	comp=E,152μm,0.4s						
CAR1				AML	AML		
	comp=N,152μm,0.7s						
CAR1				AML	AML		
	comp=N,112μm,0.9s						
CAR1				AML	AML		
	comp=E,887μm,0.5s						
CAR1				AML	AML		
	comp=N,871μm,0.7s						
CAR1				AML	AML		
	comp=N,882μm,0.5s						
CAR1				AML	AML		
	comp=E,971μm,0.5s						
GALF	**Gagliano Caste**	**2.26**	**156**	P	**P**	**11 30 10.5**	**+0.4**
GALF				S	**S**	**11 31 02.4**	**+0.2**
GALF				AML	AML		
	comp=N,338μm,0.7s						
GALF				AML	AML		
	comp=E,282μm,0.7s						
GALF				AML	AML		
	comp=N,147μm,0.6s						
GALF				AML	AML		
	comp=N,755μm,0.6s						
GALF				AML	AML		
	comp=E,937μm,0.6s						
EPZF	**Pizzo Felice**	**2.27**	**149**	P	**P**	**11 30 11.1**	**+0.9**
EPZF				AML	AML		
	comp=E,504μm,1.1s						
EPZF				AML	AML		
	comp=N,484μm,0.6s						
JOPP	**Joppolo**	**2.27**	**120**	⇓P	**P**	**11 30 10.2**	**+0.2**
JOPP				S	**S**	**11 31 00.2**	**-1.9**
JOPP				AML	AML		
	comp=E,125μm,0.4s						
JOPP				AML	AML		
	comp=N,256μm,0.5s						
JOPP				AML	AML		
	comp=N,1052μm,0.2s						
JOPP				AML	AML		
	comp=E,1175μm,0.3s						
SALB	**San Lorenzo Be**	**2.28**	**87**	P	**P**	**11 30 11.7**	**+1.6**
SALB				AML	AML		
	comp=E,138μm,1.5s						
SALB				AML	AML		
	comp=N,121μm,1.0s						
SALB				AML	AML		
	comp=E,267μm,0.4s						
SALB				AML	AML		
	comp=N,202μm,0.4s						
EMSG	**Monte Spagnolo**	**2.31**	**147**	P	**P**	**11 30 11.5**	**+1.1**
AIO	**Antillo**	**2.31**	**141**	P	**P**	**11 30 10.4**	**0.0**
AIO				S	**S**	**11 31 02.3**	**-0.4**
AIO				AML	AML		
	comp=N,286μm,0.9s						
AIO				AML	AML		
	comp=E,124μm,0.2s						
AIO				AML	AML		
	comp=N,286μm,1.1s						
AIO				AML	AML		
	comp=E,401μm,0.3s						
AIO				AML	AML		
	comp=N,367μm,0.5s						
CAGR	**Agira**	**2.33**	**158**	⇓P	**P**	**11 30 11.1**	**+0.7**
CAGR				AML	AML		
	comp=N,284μm,0.7s						
CAGR				AML	AML		
	comp=E,310μm,0.3s						
CAGR				AML	AML		
	comp=N,296μm,0.5s						
CAGR				AML	AML		
	comp=E,852μm,0.7s						
CAGR				AML	AML		
	comp=N,685μm,0.5s						
ECTS	**Castiglione**	**2.33**	**144**	P	**P**	**11 30 10.7**	**+0.2**
SPS2	**Spezzano della**	**2.33**	**101**	P	**P**	**11 30 11.4**	**+1.0**
SPS2				S	**S**	**11 31 01.5**	**-1.4**
SPS2				AML	AML		
	comp=E,116μm,0.5s						
SPS2				AML	AML		
	comp=N,162μm,1.1s						
SPS2				AML	AML		
	comp=N,57μm,0.2s						
SPS2				AML	AML		
	comp=N,57μm,1.8s						
SPS2				AML	AML		
	comp=E,46μm,0.2s						
SPS2				AML	AML		
	comp=N,306μm,0.5s						
SPS2				AML	AML		
	comp=E,214μm,0.4s						
EPIT	**Pozzo Pitarron**	**2.36**	**146**	P	**P**	**11 30 11.3**	**+0.5**
SICLA	**Scilla**	**2.37**	**129**	P	**P**	**11 30 10.1**	**-0.5**
SICLA				S	**S**	**11 31 01.6**	**-1.5**
SICLA				AML	AML		
	comp=E,200μm,0.9s						
SICLA				AML	AML		
	comp=N,248μm,0.8s						
SICLA				AML	AML		
	comp=N,248μm,1.2s						
SICLA				AML	AML		
	comp=E,200μm,1.1s						
SICLA				AML	AML		
	comp=E,1192μm,0.5s						
SICLA				AML	AML		
	comp=N,1241μm,0.3s						
RCU	**Reggio Calabri**	**2.43**	**132**	P	**P**	**11 30 11.3**	**+0.3**
VAE	**Valguarnera**	**2.44**	**160**	P	**P**	**11 30 11.9**	**+0.8**
	comp=N,6.7nm,0.3s,baz=326,slow=3.6,SNR=17						
VAE				S	**S**	**11 31 02.3**	**-1.7**
	comp=N,106nm,0.7s,baz=30,slow=16,SNR=7.3						
VAE	**Valguarnera**	**2.44**	**160**	P	**P**	**11 30 12.4**	**+1.3**
CELI	**Celico**	**2.44**	**98**	⇓P	**P**	**11 30 12.9**	**+1.8**
CELI				S	**S**	**11 31 04.3**	**+0.1**
CELI				AML	AML		
	comp=N,169μm,0.4s						
CELI				AML	AML		
	comp=E,160μm,0.4s						
CELI				AML	AML		
	comp=N,467μm,0.6s						
CELI				AML	AML		
	comp=N,453μm,0.6s						
CELI				AML	AML		
	comp=E,482μm,0.6s						
CELI				AML	AML		
	comp=E,481μm,0.6s						
CPTP	**Pietraperzia**	**2.45**	**165**	P	**P**	**11 30 12.2**	**+1.0**
CPTP				AML	AML		
	comp=E,644μm,1.2s						
CPTP				AML	AML		
	comp=N,572μm,0.7s						
CPTP				AML	AML		
	comp=N,276μm,0.6s						
CPTP				AML	AML		
	comp=E,224μm,1.6s						
CPTP				AML	AML		
	comp=N,276μm,1.4s						
CPTP				AML	AML		
	comp=N,579μm,0.8s						
CPTP				AML	AML		
	comp=E,510μm,0.5s						
CEL	**Celeste**	**2.48**	**127**		**P**	**11 30 10.0**	**-1.3**
CEL	**Celeste**	**2.48**	**127**	P	**P**	**11 30 10.6**	**-0.7**
CEL				S	**S**	**11 31 01.7**	**-2.7**
CEL				AML	AML		
	comp=E,412μm,0.3s						
CEL				AML	AML		
	comp=N,586μm,0.6s						
CEL				AML	AML		
	comp=E,424μm,0.3s						
CEL				AML	AML		
	comp=N,578μm,0.6s						
CEL				AML	AML		
	comp=E,320μm,0.2s						
CEL				AML	AML		
	comp=E,302μm,0.2s						
CEL				AML	AML		
	comp=N,221μm,0.2s						
CEL				AML	AML		
	comp=N,210μm,0.4s						
CEL				AML	AML		
	comp=E,2018μm,0.4s						
CEL				AML	AML		
	comp=E,2024μm,0.4s						
CEL				AML	AML		
	comp=N,960μm,0.5s						
CEL				AML	AML		
	comp=N,971μm,0.5s						
CEL	**Celeste**	**2.48**	**127**	P	**P**	**11 30 10.6**	**-0.7**
GMB	**Gambarie**	**2.49**	**129**	P	**P**	**11 30 11.2**	**-0.3**
GMB				S	**S**	**11 31 03.1**	**-1.7**
GMB				AML	AML		
	comp=E,1595μm,0.2s						
GMB				AML	AML		
	comp=N,1375μm,0.2s						
GMB				AML	AML		
	comp=E,4862μm,0.6s						
GMB				AML	AML		
	comp=N,3887μm,0.5s						
FERC	**Galatro**	**2.51**	**121**	P	**P**	**11 30 11.6**	**+0.1**
MTTG	**Motta San Giov**	**2.53**	**134**	P	**P**	**11 30 11.5**	**-0.1**
MTTG				S	**S**	**11 31 03.7**	**-1.3**
MTTG				AML	AML		
	comp=E,499μm,0.5s						
MTTG				AML	AML		
	comp=N,276μm,0.4s						
MTTG				AML	AML		
	comp=N,235μm,0.6s						
MTTG				AML	AML		
	comp=E,194μm,0.6s						
MTTG				AML	AML		

comp=N,820µm,0.5s
MTTG AML AML
comp=E,567µm,0.6s
GRI Girifalco 2.54 111 P **P** **11 30 12.2 +0.6**
GRI S **S** **11 31 03.0 -2.1**
GRI AML AML
comp=E,199µm,0.3s
GRI AML AML
comp=N,204µm,0.6s
GRI AML AML
comp=E,1076µm,0.4s
GRI AML AML
comp=N,1349µm,0.4s
AQU L'Aquila 2.57 0 P **P** **11 30 14.5 +2.8**
AQU L'Aquila 2.57 0 P **P** **11 30 12.5 +0.8**
AQU L'Aquila 2.57 0 *e*Pn **P** **11 30 13.7 +2.0**
SGRT San Giovanni R 2.67 41 **P** **11 30 12.4 0.0**
PIPA Pietrapaola 2.67 95 P **P** **11 30 13.4 +1.0**
PIPA AML AML
comp=E,628µm,0.8s
PIPA AML AML
comp=N,598µm,0.5s
PIPA AML AML
comp=N,535µm,0.5s
PIPA AML AML
comp=E,621µm,0.7s
PIPA AML AML
comp=E,628µm,1.2s
PIPA AML AML
comp=N,535µm,0.5s
PIPA AML AML
comp=E,584µm,0.2s
PIPA AML AML
comp=N,598µm,0.5s
PIPA AML AML
comp=E,577µm,0.2s
RAFF Raffo Rosso 2.67 163 P **P** **11 30 12.3 -0.3**
SERS Sersale 2.67 105 ⇓P **P** **11 30 13.0 +0.4**
SERS S **S** **11 31 04.1 -2.7**
SERS AML AML
comp=E,602µm,1.2s
SERS AML AML
comp=N,608µm,0.4s
SERS AML AML
comp=E,602µm,0.8s
SERS AML AML
comp=E,571µm,0.6s
SERS AML AML
comp=N,470µm,0.6s
SERS AML AML
comp=E,597µm,0.8s
SERS AML AML
comp=E,571µm,0.6s
SERS AML AML
comp=N,570µm,0.4s
SERS AML AML
comp=N,667µm,0.4s
TIP Timpagrande 2.68 102 ⇓P **P** **11 30 13.4 +0.9**
TIP Timpagrande 2.68 102 P **P** **11 30 13.3 +0.7**
TIP Timpagrande 2.68 102 ⇓P **P** **11 30 13.2 +0.7**
TIP S **S** **11 31 04.2 -2.6**
TIP AML AML
comp=E,380µm,1.5s
TIP AML AML
comp=N,354µm,0.6s
TIP AML AML
comp=E,372µm,1.5s
TIP AML AML
comp=N,358µm,0.6s
TIP AML AML
comp=E,329µm,0.6s
TIP AML AML
comp=N,370µm,0.7s
TIP AML AML
comp=E,301µm,0.6s
TIP AML AML
comp=N,361µm,0.7s
TIP Timpagrande 2.68 102 P **P** **11 30 12.9 +0.3**
MATE Matera 2.69 70 ⇑P **P** **11 30 13.3 +0.8**
MATE Matera 2.69 70 *e*P **P** **11 30 13.4 +1.0**
SOI Samo 2.69 128 ⇓P **P** **11 30 11.9 -0.7**
SOI S **S** **11 31 04.0 -2.9**
SOI AML AML
comp=E,324µm,0.5s
SOI AML AML
comp=N,446µm,0.4s
SOI AML AML
comp=E,324µm,1.5s
SOI AML AML
comp=N,756µm,0.5s
SOI AML AML
comp=E,798µm,0.5s
HLNI Lentini 2.69 154 ⇓P **P** **11 30 12.1 -0.6**
HLNI S **S** **11 31 05.3 -1.6**
HLNI AML AML
comp=E,470µm,0.9s
HLNI AML AML
comp=N,393µm,1.3s
HLNI AML AML
comp=E,470µm,1.1s
HLNI AML AML
comp=N,393µm,0.7s
HLNI AML AML
comp=N,361µm,0.6s
HLNI AML AML
comp=E,470µm,0.9s
PLAC Placanica 2.72 118 ⇓P **P** **11 30 12.7 -0.2**
PLAC S **S** **11 31 03.9 -3.4**
PLAC AML AML
comp=E,1725µm,1.1s
PLAC AML AML
comp=N,1835µm,0.3s
PLAC AML AML
comp=E,1760µm,0.3s
PLAC AML AML
comp=N,1635µm,1.1s
PLAC AML AML
comp=N,1834µm,0.3s
PLAC AML AML
comp=E,1760µm,0.3s
PLAC AML AML
comp=E,2419µm,0.5s
PLAC AML AML
comp=N,2313µm,0.5s
HAGA Augusta 2.85 150 P **P** **11 30 13.1 -0.6**
HAGA AML AML
comp=E,200µm,1.5s
HAGA AML AML
comp=N,194µm,1.4s
HAGA AML AML
comp=E,200µm,0.5s
HAGA AML AML
comp=E,192µm,1.0s
HAGA AML AML
comp=N,189µm,0.8s
CESX Cesi 2.89 348 P **P** **11 30 14.9 +1.1**
NRCA Norcia 3.06 356 **P** **11 30 16.2 +1.2**
VSL Villasalto 3.11 266 P **P** **11 30 16.6 +1.2**
FDMO Fiordimonte 3.26 356 **P** **11 30 17.4 +1.0**
GUMA Gualdo di Mace 3.28 359 P **P** **11 30 17.7 +1.1**
MURB Monte Urbino 3.54 350 P **P** **11 30 19.4 +0.8**
CASP Castiglione de 3.56 329 P **P** **11 30 19.6 +0.8**
SCTE Santa Cesarea 3.92 84 P **P** **11 30 22.9 +1.1**
PGF Pioggiola 4.31 311 *e*P **P** **11 30 25.7 +0.6**
PGF *e*Sn **S** **11 31 36.9 +7.0**
comp=N,18nm,0.6s
TREB Trebinje 4.76 50 *e*Pn **P** **11 30 30.0 +1.0**
ZCCA Zocca 4.91 339 **P** **11 30 31.2 +0.8**
KEK Kerkira 4.95 89 P **P** **11 30 31.6 +0.8**
BRY Bratogost 4.98 50 *e*Pn **P** **11 30 32.0 +0.8**
DRME Dracevica, Mon 5.00 59 *e*Pn **P** **11 30 32.7 +1.4**
KEST Kesra 5.15 220 P **P** **11 30 33.5 +0.5**
comp=N,13nm,0.5s,baz=7.9,slow=4.1,SNR=26
KEST S **S** **11 31 43.2 -0.8**
comp=N,13nm,0.9s,baz=331,slow=22,SNR=14
KEST Kesra 5.15 220 P **P** **11 30 33.2 +0.2**
KEST Kesra 5.15 220 P **P** **11 30 33.9 +0.9**
KEST S **S** **11 31 44.2 +0.2**
PDG Podgorica 5.17 57 ⇑P **P** **11 30 34.1 +1.3**
PDG Podgorica 5.17 57 P **P** **11 30 33.6 +0.8**
PDG Podgorica 5.17 57 *e*Pn **P** **11 30 34.5 +1.7**
PRMA PARMA 5.48 336 P **P** **11 30 35.4 -0.3**
BLY Banja Luka 5.71 28 ⇓P **P** **11 30 38.6 +0.7**
BLY Banja Luka 5.71 28 *e*Pn **P** **11 30 38.3 +0.3**
TEOL Teolo 5.72 348 P **P** **11 30 36.9 -1.2**
BOJS Bojanci 5.88 13 *i*P **P** **11 30 40.4 +0.7**

RUDO Rudo 5.90 47 *e*Pn **P** **11 30 40.6 +0.7**
TRI Trieste 5.93 3 P **P** **11 30 39.0 -1.1**
TRI Trieste 5.93 3 P **P** **11 30 39.0 -1.1**
SBF Sospel 6.03 314 *e*P **P** **11 30 41.9 +0.6**
SJES Sjenica 6.04 53 *e*Pn **P** **11 30 42.9 +1.4**
BBLS Lazi&#263i 6.07 46 *e*Pn **P** **11 30 42.4 +0.7**
SABO M.te Sabotino 6.20 1 P **P** **11 30 42.5 -0.3**
LMR La Mourre 6.26 307 *e*P **P** **11 30 44.2 +0.7**
LJU Ljubljana 6.32 7 *i*P **P** **11 30 44.2 +0.2**
LJU *e*S **S** **11 32 03.7 -0.7**
CTI Castel Tesino 6.39 349 **P** **11 30 43.5 -1.4**
CTI Castel Tesino 6.39 349 P **P** **11 30 43.5 -1.4**
ISO Isola 6.45 315 P **P** **11 30 48.2 +2.7**
STAL STALIGIAL 6.50 356 **P** **11 30 45.0 -0.8**
PRED Cave del Predi 6.66 1 P **P** **11 30 47.5 0.0**
OBKA Obir 6.78 7 *i*P **P** **11 30 49.0 +0.3**
comp=N,51nm,0.6s,SNR=11
OBKA *e*S **S** **11 32 11.1 -2.2**
comp=N,8.1nm,0.8s
MYKA Terra Mystica 6.85 1 *i*P **P** **11 30 49.9 +0.5**
comp=N,40nm,0.5s,SNR=16
MYKA *e*S **S** **11 32 13.4 -1.2**
comp=N,4.4nm,0.7s
MBDF Montbardon 6.96 317 *e*P **P** **11 30 52.4 +1.7**
MBDF *e*Sn S 11 32 25.4 +8.6
comp=N,13nm,0.6s
KOGS Kog 6.99 17 *i*P **P** **11 30 52.0 +1.2**
ABTA Abfaltersbach 6.99 355 *i*P **P** **11 30 51.2 +0.3**
comp=N,33nm,1.2s,SNR=12
ABTA *e*S **S** **11 32 14.0 -3.3**
comp=N,13nm,0.8s
SOKA Soboth 7.00 9 *i*P **P** **11 30 51.6 +0.6**
comp=N,15nm,0.6s,SNR=9.2
SOKA *e*S **S** **11 32 14.9 -2.4**
comp=N,8.4nm,0.7s
MAHO Mahon 7.02 274 P **P** **11 30 51.2 -0.1**
BEHE Becsehely 7.13 19 P **P** **11 30 53.5 +1.2**
BEHE Becsehely 7.13 19 *e*Pn **P** **11 30 53.7 +1.4**
FRGS Fruska Gora 7.17 39 *e*Pn **P** **11 30 53.9 +1.2**
SMRF Simiane la Rot 7.18 308 *e*P **P** **11 30 53.9 +1.0**
ITM Ithomi 7.19 108 P **P** **11 30 54.4 +1.3**
FUORN Ofenpass-Fuorn 7.21 343 P **P** **11 30 52.5 -0.8**
BNI Bardonecchia 7.24 319 **P** **11 30 53.9 +0.3**
BNI Bardonecchia 7.24 319 P **P** **11 30 53.9 +0.3**
KBA Koelnbreinsper 7.30 360 *i*P **P** **11 30 54.7 +0.5**
comp=N,12nm,0.5s,SNR=20
KBA *e*S **S** **11 32 23.2 0.0**
comp=N,26nm,1.6s
TUE Stuetta 7.31 338 **P** **11 30 53.3 -1.1**
TUE Stuetta 7.31 338 P **P** **11 30 53.5 -0.9**
comp=N,0.9nmcomp=N,163nm,0.6s
TUE S **S** **11 32 21.0 -2.5**
comp=N,0.9nmcomp=N,163nm,0.6s
DAVOX Davos/Dischmat 7.45 341 P **P** **11 30 55.7 -0.1**
comp=N,33nm,0.5s,baz=177,slow=4.9,SNR=78
DAVOX S **S** **11 32 25.8 -0.3**
comp=N,3.4nm,0.3s,baz=155,slow=22,SNR=6.0
FETA Feichten 7.49 346 *i*P **P** **11 30 56.3 +0.1**
comp=N,39nm,0.4s,SNR=25
FETA *e*S **S** **11 32 26.3 -0.6**
comp=N,16nm,1.1s
MORH Mrgy, Hungar 7.50 29 ⇓P **P** **11 30 57.6 +1.5**
MORH Mrgy, Hungar 7.50 29 P **P** **11 30 57.1 +1.0**
comp=N,0.2nmcomp=N,61nm,0.9s
MORH Mrgy, Hungar 7.50 29 *e*Pn **P** **11 30 57.4 +1.3**
LPG La Plagne 7.52 322 *e*P **P** **11 30 56.8 +0.1**
LPG *e*Sn S 11 32 35.8 +8.1
comp=N,6.1nm,0.1s
LPL La Plagne 7.54 322 *e*P **P** **11 30 56.9 +0.1**
ORIF Oris-en-Rattie 7.56 315 *e*P **P** **11 30 57.3 +0.4**
WTTA Wattenberg 7.59 351 *i*P **P** **11 30 57.9 +0.6**
comp=N,182nm,1.3s,SNR=41
WTTA *e*S **S** **11 32 28.2 -0.5**
comp=N,25nm,1.1s
SQTA Sankt Quirin 7.60 349 *i*P **P** **11 30 57.8 +0.4**
comp=N,24nm,0.4s,SNR=19
SQTA *e*S **S** **11 32 28.0 -0.9**
comp=N,6.7nm,0.5s
ARSA Arzberg 7.63 11 **P** **11 30 58.1 +0.6**
ARSA Arzberg 7.63 11 *i*P **P** **11 30 58.7 +1.3**
comp=N,35nm,0.5s,SNR=26
ARSA *e*S **S** **11 32 29.2 -0.1**
comp=N,9.4nm,1.1s
LESA Schwarzleotal 7.66 356 *i*P **P** **11 30 58.9 +1.0**
comp=N,22nm,0.4s,SNR=39
LESA *e*S **S** **11 32 29.4 -0.5**
comp=N,6.7nm,0.8s
WATA Walderalm 7.67 351 *i*P **P** **11 30 58.4 +0.4**
comp=N,35nm,0.5s,SNR=25
WATA *e*S **S** **11 32 29.7 -0.5**
comp=N,7.9nm,0.6s
MOTA Moosalm 7.74 348 *i*P **P** **11 30 58.7 -0.1**
comp=N,18nm,0.4s,SNR=19
BIOA Bad Ischl, Aus 7.91 1 *i*P **P** **11 31 01.4 +1.0**
comp=N,57nm,0.5s,SNR=42
DAVA Damuels 7.92 342 *i*P **P** **11 30 59.9 -0.8**
comp=N,12nm,0.5s,SNR=18
DAVA *e*S **S** **11 32 34.5 -0.7**
comp=N,9.9nm,0.6s
RETA Reutte 7.94 347 *i*P **P** **11 31 00.2 -0.6**
comp=N,12nm,0.4s,SNR=15
RETA *e*S **S** **11 32 35.0 -0.2**
comp=N,14nm,0.9s
MDVR Moldovita 7.94 48 ⇓P **P** **11 31 02.6 +1.8**
SENIN Lac Senin/Sane 7.94 328 **P** **11 30 59.6 -1.4**
MPLH Magyarpolny 7.98 21 P **P** **11 31 02.6 +1.4**
comp=N,0.4nmcomp=N,68nm,0.9s
MOA Molln 8.09 4 *i*P **P** **11 31 03.3 +0.9**
comp=N,46nm,0.6s,SNR=31
MOA *e*S **S** **11 32 37.8 -0.4**
comp=N,3.8nm,0.8s
RONA Rosalia, Austr 8.19 14 *i*P **P** **11 31 05.3 +1.9**
comp=N,15nm,0.5s,SNR=14
VIVF Saint-Julien-l 8.21 311 *e*P **P** **11 31 03.2 -0.5**
LASF Ste Croix 8.30 304 *e*P **P** **11 31 04.3 -0.3**
CONA Conrad Observa 8.34 12 *e*P **P** **11 31 06.5 +1.4**
comp=N,16nm,1.0s,SNR=11
HERR Herculane 8.41 50 ⇑P **P** **11 31 07.6 +1.8**
BZS Buzias 8.41 43 ⇓P **P** **11 31 07.8 +2.0**
BZS Buzias 8.41 43 P **P** **11 31 07.7 +2.0**
WINA Alland / Wiene 8.55 12 *i*P **P** **11 31 09.0 +1.9**
comp=N,32nm,0.7s,SNR=9.9
CABF La Chapelle 8.66 324 *e*P **P** **11 31 06.7 -1.8**
GZR Gura Zlata 8.91 48 ⇓P **P** **11 31 13.1 +1.9**
GZR Gura Zlata 8.91 48 P **P** **11 31 13.0 +1.9**
MODS Modra-Piesok 9.04 17 *e*P **P** **11 31 14.2 +1.8**
MODS Modra-Piesok 9.04 17 *e*P **P** **11 31 14.2 +1.8**
CKRC Cesky Krumlov 9.06 4 *e*P **P** **11 31 13.8 +1.1**
CKRC Cesky Krumlov 9.06 4 ⇓*e*P **P** **11 31 13.8 +1.1**
GEC2 GERESS Array S 9.07 1 P **P** **11 31 13.4 +0.6**
GERES GERESS Array B 9.07 1 P **P** **11 31 13.4 +0.6**
comp=N,26nm,0.4s,baz=172,slow=10.0,SNR=154
GERES S **S** **11 32 57.2 -0.1**
comp=N,0.9nm,0.7s,baz=187,slow=13,SNR=1.9
MTLF Montolieu 9.10 297 *e*P **P** **11 31 13.5 +0.4**
SMOL Smolenice 9.20 17 *e*P **P** **11 31 15.9 +1.7**
BFO Black Forest 9.29 339 P **P** **11 31 14.8 -0.3**
BFO Black Forest 9.29 339 P **P** **11 31 14.8 -0.3**
HINF Hinteralfeld 9.31 332 *e*P **P** **11 31 14.3 -1.1**
KHC Kasperske Hory 9.35 1 **P** **11 31 16.7 +0.9**
KHC Kasperske Hory 9.35 1 ⇓*i*P **P** **11 31 16.7 +0.9**
KHC Kasperske Hory 9.35 1 ⇓*i*P **P** **11 31 16.7 +0.9**
KHC Kasperske Hory 9.35 1 P **P** **11 31 15.7 -0.1**
comp=N,84nm,0.6s
PSZ Piszkesteto 9.39 28 ⇑P **P** **11 31 17.9 +1.5**
PSZ Piszkesteto 9.39 28 **P** **11 31 16.8 +0.5**
PSZ Piszkesteto 9.39 28 P **P** **11 31 17.8 +1.5**
PSZ Piszkesteto 9.39 28 *e*P **P** **11 31 17.4 +1.0**
STU Stuttgart 9.48 343 *e*P **P** **11 31 17.7 +0.6**
BORR Bors 9.52 37 ⇑P **P** **11 31 20.2 +2.6**
KRUC Moravsky 9.53 12 *e*P **P** **11 31 19.2 +1.6**
ECH Echery 9.55 334 **P** **11 31 16.7 -1.2**
ECH Echery 9.55 334 P **P** **11 31 16.7 -1.2**
CEST Esterri de Car 9.57 291 P **P** **11 31 19.8 +1.5**
JAVC Velka Javorina 9.58 17 *e*P **P** **11 31 20.6 +2.3**
TREC Trest 9.63 8 ⇓*i*P **P** **11 31 20.6 +1.8**
TREC Trest 9.63 8 ⇓*i*P **P** **11 31 20.6 +1.8**
WLS Welschbruch 9.66 335 P **P** **11 31 19.0 -0.1**
HAU Haudompre 9.66 331 *e*P **P** **11 31 18.3 -0.8**
ZVC Zvikov 9.68 3 ⇓*i*P **P** **11 31 20.8 +1.6**
CDF Champ du Feu 9.68 335 *e*P **P** **11 31 18.6 -0.8**
DRGR 9.76 41 ⇓P **P** **11 31 22.2 +1.9**
DRGR 9.76 41 P **P** **11 31 22.1 +1.9**
SMF Signal de Mont 9.77 318 *e*P **P** **11 31 19.4 -0.9**

SMF Signal de Mont 9.77 318 P **P** **11 31 19.5 -0.9**
LTVH Ltavrtes, Hu 9.79 36 ⇓P **P** **11 31 23.0 +2.6**
VRAC Vranov 9.80 12 P **P** **11 31 22.1 +1.6**
comp=N,30nm,0.6s,baz=195,slow=10,SNR=54
VRAC Vranov 9.80 12 ⇓P **P** **11 31 22.2 +1.6**
VRAC Vranov 9.80 12 *e*P **P** **11 31 22.1 +1.6**
MARR Marisel-Cluj 9.89 43 ⇑P **P** **11 31 23.6 +1.9**
ELND Elena 9.90 67 ⇑P **P** **11 31 23.7 +1.8**
ARR Arges 10.00 52 ⇑P **P** **11 31 25.6 +2.7**
GRA1 Grafenberg Arr 10.03 352 **P** **11 31 23.7 +0.7**
GRF Grafenberg Arr 10.03 352 P **P** **11 31 23.7 +0.7**
KECS Kecovo 10.08 28 *e*P **P** **11 31 26.1 +2.5**
KECS Kecovo 10.08 28 *e*P **P** **11 31 26.1 +2.5**
MAUC Maruska 10.09 17 ⇓*i*P **P** **11 31 25.6 +1.8**
AVF Avril sur Loir 10.12 317 *e*P **P** **11 31 23.5 -0.6**
IDI Anoyia 10.18 113 P **P** **11 31 26.7 +1.8**
comp=N,6.1nm,0.3s,baz=291,slow=9.2,SNR=18
IDI S **S** **11 33 18.8 -0.7**
comp=N,16nm,0.7s,baz=279,slow=23,SNR=10
LOR Lormes 10.19 320 *e*P **P** **11 31 23.6 -1.2**
SSF Saint Saulge 10.22 319 *e*P **P** **11 31 24.3 -0.8**
SSF Saint Saulge 10.22 319 P **P** **11 31 23.0 -2.1**
PRU Pruhonice 10.24 4 *e*P **P** **11 31 26.1 +0.8**
PRU Pruhonice 10.24 4 ⇓*e*P **P** **11 31 26.1 +0.8**
BGF Bois d'Agland 10.25 315 *e*P **P** **11 31 25.1 -0.3**
VOIR 10.29 53 ⇓P **P** **11 31 29.1 +3.1**
VOIR 10.29 53 P **P** **11 31 29.1 +3.1**
VOIR 10.29 53 P **P** **11 31 26.8 +0.8**
comp=N,5.7nm,1.0s
EPF Esparros 10.32 293 *e*P **P** **11 31 26.0 -0.4**
LANS Liptovska Anna 10.32 23 *e*P **P** **11 31 29.1 +2.8**
LANS Liptovska Anna 10.32 23 *e*P **P** **11 31 29.1 +2.8**
SFTF Sexfontaines 10.34 327 *e*P **P** **11 31 25.9 -0.5**
RJF Les Rejaudoux 10.35 306 *e*P **P** **11 31 26.9 +0.4**
PAGF Fort de Pagny 10.35 330 *e*P **P** **11 31 27.0 +0.5**
MORC Moravsky Berou 10.42 15 ⇑P **P** **11 31 28.9 +1.6**
MORC Moravsky Berou 10.42 15 P **P** **11 31 28.9 +1.6**
MORC Moravsky Berou 10.42 15 *e*P **P** **11 31 28.8 +1.5**
TCF Toulx Ste Croi 10.44 312 *e*P **P** **11 31 27.6 0.0**
NKC Novy Kostel 10.47 357 *e*P **P** **11 31 29.2 +1.4**
NKC Novy Kostel 10.47 357 ⇓*e*P **P** **11 31 29.2 +1.4**
MEZF Maizieres J'vi 10.57 328 *e*P **P** **11 31 29.1 +0.2**
KRLC Kraliky 10.57 12 *e*P **P** **11 31 30.8 +1.9**
KRLC Kraliky 10.57 12 ⇓*e*P **P** **11 31 30.8 +1.9**
STEB Steborice 10.62 16 ⇓*e*P **P** **11 31 30.9 +1.5**
SAVF Savonnieres en 10.63 329 *e*P **P** **11 31 30.2 +0.7**
SAVF Savonnieres en 10.63 329 *e*P **P** **11 31 30.3 +0.7**
LFF La Frestale 10.68 303 *e*P **P** **11 31 30.9 +0.8**
LFF La Frestale 10.68 303 P **P** **11 31 30.8 +0.7**
DPC Dobruska-Polom 10.77 10 *e*P **P** **11 31 32.3 +1.2**
DPC Dobruska-Polom 10.77 10 ⇓*e*P **P** **11 31 32.3 +1.2**
DPC Dobruska-Polom 10.77 10 P **P** **11 31 31.2 +0.1**
comp=N,53nm,0.8s
NIE Niedzica 10.82 25 P **P** **11 31 32.4 +0.8**
comp=N,15nm,1.2s
HSKC Hora Svate Kat 10.83 0 ⇓*i*P **P** **11 31 33.0 +1.4**
HOLU Holmets 10.87 33 P **P** **11 31 33.2 +1.2**
MLR Muntele Rosu 10.87 54 P **P** **11 31 34.7 +2.5**
comp=N,4.0nm,0.3s,baz=214,slow=1.7,SNR=12
MLR S **S** **11 33 33.8 +0.9**
comp=N,10nm,0.9s,baz=300,slow=20,SNR=8.3
MLR Muntele Rosu 10.87 54 ⇓P **P** **11 31 35.1 +2.8**
MLR Muntele Rosu 10.87 54 P **P** **11 31 33.8 +1.5**
comp=N,9.2nm,1.3s
UPC Upice 10.89 9 ⇓*i*P **P** **11 31 33.7 +1.5**
UPC Upice 10.89 9 ⇓*i*P **P** **11 31 33.7 +1.5**
MOX Moxa 10.94 354 P **P** **11 31 34.2 +1.4**
ETSF Etsaut 10.94 291 *e*P **P** **11 31 33.2 +0.2**
OSTC Ostas 10.96 10 ⇓*i*P **P** **11 31 34.6 +1.6**
OSTC Ostas 10.96 10 ⇓*i*P **P** **11 31 34.6 +1.6**
CHVC Chvalec 10.97 9 ⇓*i*P **P** **11 31 34.6 +1.4**
CHVC Chvalec 10.97 9 ⇓*i*P **P** **11 31 34.6 +1.4**
BRIU Brid 11.00 36 P **P** **11 31 34.5 +1.0**
BRG Berggiesshubel 11.10 2 P **P** **11 31 36.1 +1.6**
WLF Walferdange 11.13 335 *d*P **P** **11 31 35.2 +0.2**
comp=Z,27nm,0.9s
STHS Stebnicka Huta 11.14 28 *e*P **P** **11 31 37.0 +2.0**
STHS Stebnicka Huta 11.14 28 *e*P **P** **11 31 37.0 +2.0**
KSP Ksiaz 11.25 9 P **P** **11 31 36.9 +0.8**
comp=Z,50nm,0.8s
MEZ Mezhgor'ye 11.36 36 P **P** **11 31 38.6 +1.3**
OJC Ojcow 11.38 21 **P** **11 31 38.7 +1.1**
OJC Ojcow 11.38 21 P **P** **11 31 38.7 +1.1**
OJC Ojcow 11.38 21 P **P** **11 31 38.6 +1.1**
comp=Z,46nm,0.8s
SJPF Ste Jean 11.46 292 *e*P **P** **11 31 39.4 +0.8**
VRI Vrincioaia 11.53 54 ⇑P **P** **11 31 40.9 +1.7**
VRI Vrincioaia 11.53 54 P **P** **11 31 40.9 +1.7**
VRI Vrincioaia 11.53 54 P **P** **11 31 41.3 +2.1**
comp=Z,13nm,0.5s
CLL Collm 11.53 359 **P** **11 31 40.5 +1.4**
CLL Collm 11.53 359 ⇓*i*P **P** **11 31 40.8 +1.6**
CLL pmax pmax
comp=Z,115nm,0.6s
CLL Collm 11.53 359 ⇓*i*P **P** **11 31 40.8 +1.6**
comp=Z,115nm,0.6s
CLL Collm 11.53 359 P **P** **11 31 40.0 +0.8**
comp=Z,176nm,1.2s
ICOR Ion Corvin 11.57 63 ⇑P **P** **11 31 42.0 +2.2**
BURAR Bucovina Array 11.60 44 ⇓P **P** **11 31 42.9 +2.9**
BURAR Bucovina Array 11.60 44 P **P** **11 31 42.9 +2.9**
BUR08 Bucovina Ar. S 11.61 44 **P** **11 31 42.2 +2.0**
ODBI Odobesti 11.69 55 ⇓P **P** **11 31 43.4 +2.5**
KARP Karpathos 11.71 107 *e*P **P** **11 31 42.1 +0.7**
BHOU Houvegnez 11.78 336 *d*P **P** **11 31 42.1 +0.2**
comp=Z,24nm,0.9s
PANC Panciu 11.79 54 ⇓P **P** **11 31 44.4 +2.4**
MANT Manisa 11.86 91 P **P** **11 31 45.0 +1.9**
RCHB Rochefort 11.87 334 *d*P **P** **11 31 42.6 -0.2**
BTNL Ternell 11.95 337 *d*P **P** **11 31 45.2 +1.5**
comp=Z,64nm,0.7s
GIVF Givet 11.96 332 *e*P **P** **11 31 43.2 -0.6**
MFF Saint Martin d 11.99 309 *e*P **P** **11 31 44.1 -0.1**
MFF Saint Martin d 11.99 309 P **P** **11 31 44.3 +0.1**
MEM Membach 12.01 337 *d*P **P** **11 31 45.6 +1.4**
comp=Z,52nm,0.8s
DOU Dourbes 12.04 332 *d*P **P** **11 31 44.3 -0.3**
GHRR 12.04 54 ⇑P **P** **11 31 46.4 +1.7**
GHRR 12.04 54 P **P** **11 31 45.5 +0.8**
BCLA Clavier 12.06 335 *d*P **P** **11 31 45.0 +0.2**
comp=Z,11nm,0.5s
TIRR Tirgusor 12.10 62 ⇑P **P** **11 31 46.8 +1.5**
TIRR Tirgusor 12.10 62 P **P** **11 31 46.8 +1.5**
BGES Gesves 12.11 334 *d*P **P** **11 31 45.4 +0.1**
comp=Z,20nm,0.6s
BSTI Sart Tilman 12.12 336 *d*P **P** **11 31 46.0 +0.5**
comp=Z,5.4nm,0.7s
BMRD Maredsous 12.15 333 *d*P **P** **11 31 45.4 -0.3**
CFR Carcaliu 12.15 59 ⇑P **P** **11 31 46.9 +1.0**
CFR Carcaliu 12.15 59 P **P** **11 31 46.8 +1.0**
BAIF Baives 12.15 331 *e*P **P** **11 31 45.1 -0.7**
TPGR Topolog 12.23 61 ⇑P **P** **11 31 48.0 +1.2**
BIR Birlad 12.27 53 ⇓P **P** **11 31 48.9 +1.7**
BIR Birlad 12.27 53 P **P** **11 31 48.8 +1.7**
BEBN Eben Emael 12.27 336 *d*P **P** **11 31 48.4 +1.3**
VLDR Vladesti 12.37 56 ⇓P **P** **11 31 48.8 +0.6**
RUE Ruedersdorf 12.71 1 *e*P **P** **11 31 52.8 +1.1**
UCC Uccle 12.71 333 **P** **11 31 51.3 -0.5**
UCC Uccle 12.71 333 P **P** **11 31 51.3 -0.5**
UCC Uccle 12.71 333 *d*P **P** **11 31 51.4 -0.4**
comp=Z,38nm,0.5s
KMPD K-Podol'skiy 12.84 43 P **P** **11 31 54.6 +1.4**
KMPD P P 11 31 54.8 +1.6
LDF La Druitiere 13.08 317 *e*P **P** **11 31 54.4 -1.4**
GRR Gorron 13.36 315 *e*P **P** **11 31 57.3 -1.5**
ESDC Sonseca Array 13.36 275 P **P** **11 31 58.7 -0.3**
comp=Z,3.8nm,0.5s,baz=74,slow=11,SNR=40
FLN La Foliniere 13.37 317 *e*P **P** **11 31 57.5 -1.4**
ISP Isparta 13.51 93 *ce*P **P** **11 32 02.0 +1.3**
ISP pmax pmax
comp=Z,9.0nm,1.3s
SORM Soroca 13.62 47 P **P** **11 32 01.6 0.0**
comp=Z,33nm,0.4s
MDUB Mudurnu 13.65 81 **P** **11 32 02.7 +0.5**
GKP Gorka Klasztor 13.75 10 *e*P **P** **11 32 04.5 +1.7**
SGMF Saint Gilles 14.24 312 *e*P **P** **11 32 06.5 -1.7**
RNPP5 Staryi Chortor 14.39 33 P **P** **11 32 09.8 0.0**
QUIF Quistinic 14.43 310 *e*P **P** **11 32 08.9 -1.3**
RNPP9 Sopachiv 14.53 33 P **P** **11 32 11.2 0.0**
ROSF Rostrenen 14.69 311 *e*P **P** **11 32 11.5 -1.5**
MI28 MI28_Pidlybu 14.97 37 P **P** **11 32 14.6 -1.3**
BSD Bornholm Skovb 15.38 3 *e*P **P** **11 32 19.6 -0.4**

BSD Bornholm Skovb 15.38 3 *i* P **P** 11 32 19.4 -0.7
BSD IAmb IAmb 11 32 20.0
comp=Z,13nm,0.8s
PBRG Braganca 15.38 284 *e*P **P** 11 32 19.6 -0.8
AK13 Malin Array Si 15.44 40 P **P** 11 32 20.7 -0.1
AK07 Malin Array Si 15.47 41 P **P** 11 32 21.2 0.0
AK14 Malin Array Si 15.47 40 P **P** 11 32 20.8 -0.4
AK17 Malin Array Si 15.48 40 P **P** 11 32 21.1 -0.2
AK19 Malin Array Si 15.48 40 P **P** 11 32 20.6 -0.7
AK06 Malin Array Si 15.49 41 P **P** 11 32 20.9 -0.5
HAMD Hammershus, De 15.53 3 *i* P **P** 11 32 20.3 -1.3
HAMD IAmb IAmb 11 32 20.9
comp=Z,7.1nm,0.6s
KIEV Kiev 15.56 40 P **P** 11 32 21.6 -0.5
KIEV Kiev 15.56 40 P **P** 11 32 21.6 -0.5
KIEV pmax pmax
comp=Z,11nm,0.4s
AKASG Malin Array Be 15.57 40 P **P** 11 32 21.9 -0.4
comp=Z,3.0nm,0.3s,baz=233,slow=8.2,SNR=36
AKASG Malin Array Be 15.57 40 *i* P **P** 11 32 22.0 -0.2
AKASG pmax pmax
comp=Z,7.0nm,0.3s
AKBB Malin Array Si 15.57 40 **P** 11 32 21.6 -0.6
AKBB Malin Array Si 15.57 40 P **P** 11 32 21.6 -0.6
AKBB pmax pmax
comp=Z,14nm,0.4s
AKBB Malin Array Si 15.57 40 P **P** 11 32 21.7 -0.6
BR131 Keskin Array S 15.58 84 **P** 11 32 23.4 +0.7
BR131 IAmb IAmb 11 32 27.3
comp=Z,8.7nm,0.8s
BR131 Keskin Array S 15.58 84 P **P** 11 32 23.4 +0.7
BR131 pmax pmax
comp=Z,9.0nm,0.8s
BR131 Keskin Array S 15.58 84 P **P** 11 32 23.3 +0.6
BR131 S **S** 11 35 06.1 +0.9
BRTR Keskin Array B 15.58 84 P **P** 11 32 23.8 +1.1
comp=Z,5.3nm,0.7s,baz=258,slow=6.9,SNR=14
BR104 Keskin Array S 15.59 84 P **P** 11 32 23.0 +0.3
comp=Z,73nmcomp=Z,9.9nm,0.8s
MVO Moncorvo 15.60 282 *e*P **P** 11 32 21.7 -1.0
SUW Suwalki 15.71 22 P **P** 11 32 22.9 -0.7
SUW Suwalki 15.71 22 P **P** 11 32 22.9 -0.7
SUW Suwalki 15.71 22 *e*P **P** 11 32 23.9 +0.2
LUNU Lund 15.86 0 *i* P **P** 11 32 24.6 -0.6
KIRS Kirsehir-Merke 15.88 86 ⇓P **P** 11 32 27.4 +1.7
COP Copenhagen 15.93 358 *i* P **P** 11 32 25.9 0.0
COP IAmb IAmb 11 32 26.1
comp=Z,181nm,0.7s
PBAR Barrancos 15.96 271 *e*P **P** 11 32 25.2 -1.4
PMRV Marv??o 16.02 275 *e*P **P** 11 32 23.2 -4.0
MTE Manteigas 16.03 279 *e*P **P** 11 32 26.1 -1.2
PCBR Castelo Branco 16.03 277 *e*P **P** 11 32 26.9 -0.3
MDT Midelt 16.07 250 P **P** 11 32 26.7 -1.2
comp=Z,1.1nm,0.8s,baz=110,slow=2.4,SNR=2.5
STRD Stroud 16.13 323 *e*P **P** 11 32 27.0 -1.1
STRD IAmb IAmb 11 32 28.5
comp=Z,61nm,0.6s
DYA Yadsworthy 16.17 317 *e*P **P** 11 32 28.2 -0.4
DYA IAmb IAmb 11 32 29.8
comp=Z,20nm,0.9s
PESTR Estremoz 16.26 273 *e*P **P** 11 32 28.0 -1.7
PVIS Viseu 16.27 280 *e*P **P** 11 32 28.3 -1.6
BJUU Bjuv 16.31 359 *i* P **P** 11 32 29.2 -0.6
MONM Monmouth 16.47 322 *e*P **P** 11 32 30.4 -1.3
MONM IAmb IAmb 11 32 31.6
comp=Z,23nm,0.6s
CSS Mathiatis 16.56 101 **P** 11 32 32.9 0.0
CSS Mathiatis 16.56 101 P **P** 11 32 33.4 +0.4
comp=Z,29nm,0.6s
PSARD Sardoal 16.59 276 *e*P **P** 11 32 32.3 -0.9
BLEU Blekinge 16.61 5 *i* P **P** 11 32 31.6 -1.5
PARRA Arraiolos 16.61 274 *e*P **P** 11 32 31.3 -2.1
MCH1 Michaelchurch 16.66 323 *e*P **P** 11 32 33.0 -0.8
MCH1 IAmb IAmb 11 32 34.2
comp=Z,25nm,0.6s
PVAQ Vaqueiros 16.67 269 *e*P **P** 11 32 32.3 -1.7
DEL Delary 16.70 1 *i* P **P** 11 32 33.0 -1.0
PMTG Montargil 16.71 274 *e*P **P** 11 32 32.0 -2.4
PCAS Casmilo, Conde 16.79 278 *e*P **P** 11 32 34.8 -0.5
PCVE Castro Verde 16.86 270 *e*P **P** 11 32 34.0 -2.0
MUD Monsted U'grnd 16.92 352 *i* P **P** 11 32 35.2 -1.1
MUD IAmb IAmb 11 32 35.6
comp=Z,44nm,0.4s
HLM1 Long Mynd 16.96 324 *e*P **P** 11 32 35.3 -1.5
HLM1 IAmb IAmb 11 32 36.8
comp=Z,24nm,0.5s
FABU Falkenberg 17.24 359 *e*P **P** 11 32 39.2 -0.4
PABE Paberze 17.24 21 **P** 11 32 38.5 -1.2
PABE Paberze 17.24 21 *e*P **P** 11 32 39.1 -0.5
BNN Bunyan 17.40 86 **P** 11 32 42.6 +0.9
BNN IAmb IAmb 11 32 45.4
comp=Z,18nm,0.9s
RSBS Rosebush, Pemb 17.48 320 *e*P **P** 11 32 41.3 -0.8
RSBS IAmb IAmb 11 32 42.2
comp=Z,98nm,0.6s
VSVD Vaisvydziai 17.65 20 *e*P **P** 11 32 43.5 -0.2
ONAU Onsala 17.66 357 *i* P **P** 11 32 43.1 -0.6
BORU Boraas 17.87 359 *i* P **P** 11 32 45.1 -0.8
WME Mynydd Eilian 18.18 324 *e*P **P** 11 32 48.7 -0.2
TAM Tamanrasset 18.20 204 P **P** 11 32 50.2 +0.5
TJOU Tjoern 18.30 357 *i* P **P** 11 32 48.8 -1.1
HOMB Homborsund 18.77 352 *i* P **P** 11 32 54.2 0.0
SLIT Slitere, Latvi 18.77 15 *e*P **P** 11 32 54.3 0.0
MMAI Mount Meron Ar 18.94 104 P **P** 11 32 57.8 +1.5
comp=Z,3.1nm,0.4s,baz=295,slow=11,SNR=8.1
EKA Eskdalemuir Ar 19.07 330 P **P** 11 32 56.0 -1.1
comp=Z,3.4nm,0.3s,baz=145,slow=11,SNR=40
EKA Eskdalemuir Ar 19.07 330 P **P** 11 32 56.0 -1.1
ESK Eskdalemuir 19.08 330 *e*P **P** 11 32 55.5 -1.6
ESK IAmb IAmb 11 32 57.1
comp=Z,14nm,0.6s
ESK Eskdalemuir 19.08 330 *i* P **P** 11 32 58.8 +1.7
ARPR Arapgir-MALATY 19.27 84 P **P** 11 32 59.9 +0.5
ARPR IAmb IAmb 11 33 07.7
comp=Z,11nm,0.8s
STRU Stroemstad 19.32 357 *i* P **P** 11 32 58.9 -0.4
EDI Edinburgh 19.52 331 *e*P **P** 11 33 00.4 -0.7
KONO Kongsberg 20.03 354 *e*P **P** 11 33 06.1 +0.3
DRUM Mains of Drumt 20.04 334 *e*P **P** 11 33 05.0 -0.8
DRUM IAmb IAmb 11 33 06.1
comp=Z,45nm,0.7s
MTSE Matsula 20.09 16 *e*P **P** 11 33 06.6 +0.3
CLGH Cloghs, Cushen 20.10 326 *e*P **P** 11 33 05.7 -0.7
CLGH IAmb IAmb 11 33 07.7
comp=Z,18nm,0.5s
KMY Karmoy 20.13 348 *e*P **P** 11 33 06.4 -0.2
BLS5 Blasjo 20.15 350 *e*P **P** 11 33 07.5 +0.7
BLS5 IAmb IAmb 11 33 08.1
comp=Z,32nm,0.6s
EAB Aberfoyle 20.15 330 *e*P **P** 11 33 06.0 -0.9
EAB IAmb IAmb 11 33 07.7
comp=Z,11nm,0.9s
INVG Invergeldie, C 20.22 331 *e*P **P** 11 33 06.7 -0.8
INVG IAmb IAmb 11 33 09.3
comp=Z,20nm,0.6s
OSL Oslo 20.25 356 *e*P **P** 11 33 08.1 +0.4
EIL Elat 20.35 113 P **P** 11 33 10.8 +1.7
comp=Z,6.1nm,0.7s,baz=315,slow=4.5,SNR=4.6
comp=Z,6.1nm,0.7s
HFS Hagfors 20.38 0 P **P** 11 33 08.2 -0.7
comp=Z,22nm,0.3s,baz=190,slow=12,SNR=177
comp=Z,22nm,0.3s
ASF Jabal al Asfar 20.45 104 P **P** 11 33 12.7 +2.6
comp=Z,10nm,0.5s,baz=285,slow=5.2,SNR=14
comp=Z,10nm,0.5s
VSU Vasula 20.57 20 *e*P **P** 11 33 11.1 +0.5
ODD1 Odda 20.60 350 *e*P **P** 11 33 10.9 0.0
LAWE Loch Awe, Argy 20.62 329 *e*P **P** 11 33 10.6 -0.5
KOPT Kop Dagi 20.78 81 P **P** 11 33 13.6 +0.4
KOPT IAmb IAmb 11 33 18.4
comp=Z,16nm,0.8s
MCD Coleburn Disti 20.83 334 *e*P **P** 11 33 11.9 -1.1
MCD IAmb IAmb 11 33 14.2
comp=Z,19nm,0.7s
AAL Aland 20.84 9 *e*P **P** 11 33 12.0 -1.0
NC602 NORSAR Array S 21.01 357 *e*P **P** 11 33 15.0 +0.4
NC602 IAmb IAmb 11 33 16.7
comp=Z,20nm,0.5s
SKAR Skarslia 21.16 353 *e*P **P** 11 33 17.1 +1.0
SKAR IAmb IAmb 11 33 27.1
comp=Z,660nm,2.6s
NB2 NORSAR Subarra 21.33 357 P **P** 11 33 17.4 -0.2
comp=Z,8.4nm,0.4s,baz=175,slow=11
NB2 NORSAR Subarra 21.33 357 P **P** 11 33 17.4 -0.2
comp=Z,11nm,0.7s
BTK Batken 43.37 70 P **P** 11 36 24.9 -0.4
BTK Batken 43.37 70 P **P** 11 36 24.9 -0.4
BTK pmax pmax
comp=Z,5.0nm,0.6s
AAK Ala-Archa 45.18 66 *i* P **P** 11 36 37.6 -1.8
KURBB Kurchatov Arra 45.77 54 P **P** 11 36 43.5 0.0
comp=Z,6.7nm,0.9s,baz=279,slow=9.2,SNR=30
KURBB PcP **PcP** 11 38 11.9 +0.4
comp=Z,1.4nm,0.8s,baz=281,slow=3.9,SNR=8.2
comp=Z,6.7nm,0.9s
KURK Kurchatov 45.80 54 **P** 11 36 43.5 -0.3
KURK IAmb IAmb 11 36 44.5
comp=Z,9.6nm,0.7s
KURK Kurchatov 45.80 54*ce*P **P** 11 36 43.9 +0.1
KURK pmax pmax
comp=Z,11nm,0.8s
BOOM Boomskoye usch 46.24 65 P **P** 11 36 47.9 +0.4
BOOM Boomskoye usch 46.24 65 P **P** 11 36 47.9 +0.4
BOOM pmax pmax
comp=Z,4.0nm,0.9s
KSH2 Kashi 47.13 70 P **P** 11 36 55.3 +1.0
KSH2 pmax pmax
comp=Z,15nm,0.7s
NIL Nilore 47.61 78 **P** 11 36 58.2 +0.5
NIL IAmb IAmb 11 36 59.3
comp=Z,11nm,0.7s
NIL Nilore 47.61 78 P **P** 11 36 58.3 +0.5
NIL pmax pmax
comp=Z,11nm,0.7s
TARG Taragay, Kyrgy 47.80 66 P **P** 11 37 00.6 +1.0
TARG IAmb IAmb 11 37 02.1
comp=Z,13nm,0.6s
TARG Taragay, Kyrgy 47.80 66 P **P** 11 37 00.6 +1.0
TARG pmax pmax
comp=Z,13nm,0.6s
ZAA0 Zalesovo Array 48.77 48 **P** 11 37 05.7 -0.4
ZAA0 IAmb IAmb 11 37 06.8
comp=Z,5.6nm,0.6s
ZALV Zalesovo Beam 48.77 48 P **P** 11 37 06.1 0.0
comp=Z,6.6nm,0.4s,baz=286,slow=6.7,SNR=45
comp=Z,6.6nm,0.4s
ZALV Zalesovo Beam 48.77 48 P **P** 11 37 05.9 -0.3
MK31 Makanchi Array 49.19 58 *i* P **P** 11 37 09.4 0.0
MKAR Makanchi Array 49.19 58 P **P** 11 37 09.5 +0.1
comp=Z,11nm,0.4s,baz=285,slow=6.5,SNR=225
MKAR PcP **PcP** 11 38 24.0 -0.1
comp=Z,1.5nm,0.6s,baz=285,slow=3.6,SNR=5.6
comp=Z,11nm,0.4s
MKAR Makanchi Array 49.19 58 P **P** 11 37 09.2 -0.2
DGZ Jazzator, Alta 51.52 53 *i* P **P** 11 37 24.8 -1.9
DGZ pmax pmax
comp=Z,9.0nm,2.6s
SCHQ Schefferville 53.45 315 P **P** 11 37 39.2 -1.1
comp=Z,0.9nm,0.3s,baz=83,slow=5.1,SNR=11
comp=Z,0.9nm,0.3s
WMQ Urumqi 53.80 60 *e*P **P** 11 37 44.1 +1.1
WMQ PcP **PcP** 11 38 46.0 +4.4
WMQ pP pP 11 39 18.6 +2.2
WMQ ScP **ScP** 11 41 53.1 -0.5
WMQ pmax pmax
comp=Z,7.0nm,0.8s
TLY Talaya 60.23 46*ce*P **P** 11 38 27.8 +0.8
TLY pmax pmax
comp=Z,5.0nm,1.7s
EVN Everest 60.55 77 **P** 11 38 29.4 -0.9
SONM Songino Array 63.66 49 P **P** 11 38 50.5 +0.9
comp=Z,4.3nm,0.7s,baz=291,slow=7.3,SNR=21
SONM PcP **PcP** 11 39 21.9 +0.8
comp=Z,0.7nm,0.6s,baz=257,slow=3.1,SNR=3.5
comp=Z,4.3nm,0.7s
GTA2 Gaotai 63.81 59 *e*P **P** 11 38 51.6 +0.8
GTA2 pmax pmax
comp=Z,12nm,1.0s
ULN Ulaanbaatar 64.03 48*ce*P **P** 11 38 51.1 -0.9
ULN pmax pmax
comp=Z,1.0nm,0.6s
LZDM Lanzhou Array 68.34 61 P **P** 11 39 19.8 +0.4
comp=Z,3.3nm,0.6s,baz=288,slow=5.9,SNR=3.7
comp=Z,3.3nm,0.6s
BOSA Boshof 68.94 169 P **P** 11 39 22.6 0.0
comp=Z,1.1nm,0.5s,baz=353,slow=5.6,SNR=6.7
comp=Z,1.1nm,0.5s
YKA Yellowknife Ar 69.87 337 P **P** 11 39 27.9 +0.3
comp=Z,0.1nm,0.3s,baz=25,slow=5.7,SNR=6.7
YKA Yellowknife Ar 69.87 337 P **P** 11 39 28.0 +0.3
HHC Hu-ho-hao-te 70.61 53 *e*P **P** 11 39 32.4 -0.2
HHC pmax pmax
comp=Z,9.0nm,0.6s
HHC pmax pmax
comp=Z,120nm,4.6s
ULM Lac du Bonnet 71.01 320 P **P** 11 39 34.2 -0.5
comp=Z,0.9nm,0.5s,baz=45,slow=2.9,SNR=2.0
comp=Z,0.9nm,0.5s
PZH PanZhiHua 72.38 70 P **P** 11 39 43.8 +0.5
XAN Xi'an 72.94 60 ⇑P **P** 11 39 46.8 +0.5
XAN pmax pmax
comp=Z,11nm,0.8s
MA2 Magadan 74.93 21 P **P** 11 39 57.7 +0.6
CMAR Chiang Mai Arr 75.10 78 P **P** 11 39 59.0 +0.2
comp=Z,3.2nm,0.7s,baz=304,slow=7.0,SNR=20
comp=Z,3.2nm,0.7s
CMAR Chiang Mai Arr 75.10 78 P **P** 11 39 59.0 +0.2
KLR Kul'dur 76.04 36 P **P** 11 40 03.3 -0.1
comp=Z,0.9nm,0.5s,baz=308,slow=10,SNR=4.3
comp=Z,0.9nm,0.5s
KLR Kul'dur 76.04 36 *i* P **P** 11 40 02.9 -0.6
BNX BinXian 76.39 41 ⇓P **P** 11 40 06.1 +0.6
BNX pmax pmax
comp=Z,9.0nm,0.7s
USRK Ussuriysk Ar. 79.78 40 P **P** 11 40 23.7 -0.2
comp=Z,1.8nm,0.6s,baz=274,slow=5.2,SNR=4.1
comp=Z,1.8nm,0.6s
KSRS Korea Array 82.46 47 P **P** 11 40 38.0 +0.2
comp=Z,1.8nm,0.8s,baz=320,slow=5.6,SNR=3.3
comp=Z,1.8nm,0.8s
PDAR Pinedale Array 82.96 321 P **P** 11 40 40.7 +0.1
comp=Z,0.2nm,0.7s,baz=54,slow=8.0,SNR=1.7
ASAJ Asahikawa 84.77 34 P **P** 11 40 49.3 +0.1
comp=Z,1.9nm,0.6s,baz=0.0,slow=11,SNR=1.8
comp=Z,1.9nm,0.6s
WRA Warramunga Arr 126.08 87 PKP **PKPdf** 11 47 12.9 -1.0
comp=Z,0.4nm,0.4s,baz=309,slow=1.6,SNR=22
ASAR Alice Springs 127.82 91 PKP **PKPdf** 11 47 16.1 -1.0
comp=Z,0.9nm,0.4s,baz=310,slow=1.6,SNR=35
QSPA South Pole Qui 129.64 180 PKP **PKPdf** 11 47 18.6 -0.7
comp=Z,0.3nm,0.4s,baz=161,slow=2.5,SNR=6.1

NOA NORSAR Array B 21.33 357 P **P** 11 33 17.3 -0.3
comp=Z,3.5nm,0.3s,baz=174,slow=10,SNR=35
comp=Z,3.5nm,0.3s
KPL Plockton 21.49 331 *e*P **P** 11 33 18.1 -0.9
KPL IAmb IAmb 11 33 20.8
comp=Z,19nm,0.6s
MEF Metsahovi 21.59 15 *e*P **P** 11 33 21.2 +1.3
BIGH Upper Bighouse 21.76 335 *e*P **P** 11 33 20.6 -0.8
BIGH IAmb IAmb 11 33 21.9
comp=Z,8.8nm,0.8s
RAF Rauma 21.89 11 *e*P **P** 11 33 21.8 -0.8
SHA1 Shidzhatmaz 22.14 70*ce*P **P** 11 33 27.2 +1.8
KIV Kislovodsk 22.16 70 *e*P **P** 11 33 25.2 -0.2
KIV pmax pmax
comp=Z,4.0nm,0.9s
NEUR Neytrino 22.17 71 *i* P **P** 11 33 24.9 -0.7
NEUR pmax pmax
comp=Z,3.0nm,1.1s
KBZ Khabaz 22.31 70 P **P** 11 33 28.4 +1.8
comp=Z,3.0nm,0.5s,baz=251,slow=14,SNR=11
comp=Z,3.0nm,0.5s
KBZ Khabaz 22.31 70*ce*P **P** 11 33 27.1 +0.5
KBZ pmax pmax
comp=Z,6.0nm,1.1s
LRW Lerwick 22.33 341 *e*P **P** 11 33 27.2 +0.7
LRW IAmb IAmb 11 33 28.5
comp=Z,6.5nm,0.5s
DOMB Dombas 22.45 355 *e*P **P** 11 33 28.0 +0.3
DOMB IAmb IAmb 11 33 32.0
comp=Z,54nm,1.3s
NCK Nalchik 22.82 71 *i* P **P** 11 33 29.7 -1.6
NCK pmax pmax
comp=Z,5.0nm,0.6s
GEVA Gevas 23.05 84 P **P** 11 33 35.4 +1.8
GEVA IAmb IAmb 11 33 36.2
comp=Z,5.6nm,0.7s
FINES FINESS Array B 23.05 16 P **P** 11 33 33.2 +0.2
comp=Z,10nm,0.5s,baz=192,slow=8.4,SNR=63
FINES PcP **PcP** 11 37 04.4 -0.9
comp=Z,4.5nm,1.1s,baz=204,slow=3.0,SNR=1.5
FINES ScP **ScP** 11 39 56.1 -1.8
comp=Z,4.4nm,1.0s,baz=222,slow=2.6,SNR=3.7
comp=Z,10nm,0.5s
KEF Keuruu 23.48 14 *e*P **P** 11 33 39.6 +2.7
GNI Garni 23.98 79*ce*P **P** 11 33 42.5 +0.7
GNI pmax pmax
comp=Z,17nm,1.7s
NSS Namsos 24.80 359 *e*P **P** 11 33 48.4 -0.2
AKT Akhty 26.02 75 *e*P **P** 11 33 59.0 -0.9
AKT pmax pmax
comp=Z,19nm,1.5s
LEIR Leirfjorden 26.38 360 *e*P **P** 11 34 02.3 -0.2
MOR8 Moi Rana 26.45 1 *e*P **P** 11 34 04.3 +1.1
KONS Konsvik 26.77 360 *e*P **P** 11 34 06.2 +0.2
FAUS Fauske 27.68 2 *e*P **P** 11 34 13.1 -0.8
STEI Steigen 28.22 1 *e*P **P** 11 34 19.2 +0.5
TORD Torodi Ar. Bea 28.46 204 P **P** 11 34 21.1 -0.4
comp=Z,4.3nm,0.5s,baz=1.4,slow=7.7,SNR=37
TORD PcP **PcP** 11 37 16.4 -2.3
comp=Z,0.3nm,0.7s,baz=309,slow=1.5,SNR=1.8
comp=Z,4.3nm,0.5s
KIRV Kirov 29.62 39 *i* P **P** 11 34 29.4 -1.6
KTK1 Kautokeino 29.77 7 *e*P **P** 11 34 32.0 -0.2
KBD Kabd 30.03 100 P **P** 11 34 35.7 +0.6
TRO Tromso 30.06 4 *e*P **P** 11 34 34.8 +0.1
TRO IAmb IAmb 11 34 36.1
comp=Z,324nm,2.1s
JETT Jettan, Norway 30.07 5 *e*P **P** 11 34 35.0 +0.1
JETT IAmb IAmb 11 34 35.4
comp=Z,17nm,0.5s
ARA0 ARCESS Array S 30.51 8 *e*P **P** 11 34 38.6 -0.1
ARCES ARCESS Array B 30.51 8 P **P** 11 34 37.6 -1.0
comp=Z,3.2nm,0.5s,baz=185,slow=7.8,SNR=28
ARCES PcP **PcP** 11 37 22.2 -1.0
comp=Z,2.1nm,0.8s,baz=192,slow=2.4,SNR=4.4
comp=Z,3.2nm,0.5s
RAYN Ar Rayn 31.57 111 P **P** 11 34 49.2 +0.7
ARTI Arti 33.62 45*d* *i* P **P** 11 35 05.9 +0.5
ARTI *PP **pP** 11 36 28.5 -0.5
ARTI 11 36 46.0
ARTI S **S** 11 39 53.3 -0.1
ARTI pmax pmax
comp=Z,24nm,1.9s
SAKB Bahrain 33.85 103 P **P** 11 35 08.4 +0.6
AB31 Akbulak array 34.04 58 P **P** 11 35 08.9 -0.1
ABKAR Akbulak array 34.04 58 P **P** 11 35 08.7 -0.4
SHMA Al-Shehemyia 34.24 102 P **P** 11 35 11.6 +0.6
SMRA Abu-Samra 34.75 104 P **P** 11 35 15.8 +0.4
TRNA Turayna 35.05 104 P **P** 11 35 19.0 +1.2
SNR=9.4
GHWR Ruwais 36.73 103 P **P** 11 35 32.5 +0.6
DBIC Dimbokro 36.82 211 P **P** 11 35 32.0 -0.6
comp=Z,4.4nm,0.4s,baz=67,slow=8.5,SNR=13
comp=Z,4.4nm,0.4s
MZWR Madinat Zayed 37.60 103 P **P** 11 35 39.6 +0.6
MZR Muzera 37.74 104 P **P** 11 35 40.7 +0.5
MZR P P 11 35 40.8 +0.6
MZR P P 11 35 40.9 +0.7
SHME Shamm 38.06 98 P **P** 11 35 43.1 +0.3
ASUD Al Ashush, Dub 38.21 100 P **P** 11 35 45.1 +1.1
BANOM Banah 38.25 98 P **P** 11 35 45.1 +0.7
NAZ Nazwa, Dubai 38.27 100 P **P** 11 35 45.0 +0.5
FAQ Al Faqa, Dubai 38.34 100 P **P** 11 35 45.6 +0.4
MASF Masafi 38.44 99 P **P** 11 35 46.3 +0.4
MASF S **S** 11 41 07.1 +0.6
SPA0 Spitsbergen Ar 38.53 1 IAmb IAmb 11 35 46.1
comp=Z,815nm,3.4s
SPA0 *eP **P** 11 35 46.4 +0.5
SPITS Spitsbergen Ar 38.53 1 P **P** 11 35 46.5 +0.5
comp=Z,2.3nm,0.4s,baz=161,slow=10,SNR=31
comp=Z,2.3nm,0.4s
MDH Madha 38.58 99 P **P** 11 35 47.6 +0.5
MDH P P 11 35 47.6 +0.5
MDH P P 11 35 47.6 +0.5
UOSS Minazif 38.70 99 P **P** 11 35 47.5 -0.6
UOSS Minazif 38.70 99 P **P** 11 35 48.3 +0.3
UOSS P P 11 35 48.4 +0.3
UOSS P P 11 35 48.5 +0.4
HATD Hatta, Dubai 38.71 100 P **P** 11 35 48.8 +0.6
ALNE Al Ain 38.85 101 P **P** 11 35 50.1 +0.9
UMZA Um Al Zommool 39.17 103 P **P** 11 35 52.5 +0.7
SOHO SOHO 39.40 100 P **P** 11 35 54.1 +0.4
JASK Jask - Hormozg 39.48 97 P **P** 11 35 56.2 +1.9
ARQ Araqi 39.84 101 P **P** 11 35 57.9 +0.6
SNR=20
HOQ Hoqain 40.29 100 P **P** 11 36 01.1 +0.1
BORK Borovoye 40.37 51 P **P** 11 36 01.4 +0.2
BORK Borovoye 40.37 51*ce*P **P** 11 36 02.1 +1.0
BORK pmax pmax
comp=Z,5.0nm,0.7s
BVAR Borovoye Array 40.41 51 P **P** 11 36 02.0 +0.5
comp=Z,3.2nm,0.4s,baz=277,slow=8.0,SNR=24
comp=Z,3.2nm,0.4s
BSY Bisya 40.68 101 P **P** 11 36 04.7 +0.5
DOK Doka 40.90 109 P **P** 11 36 06.2 +0.3
SNR=9.3
ABTO Aybut 41.11 111 P **P** 11 36 08.0 +0.4
SMDO Samad 41.15 100 P **P** 11 36 08.2 +0.3
SNR=8.6
SMDO P P 11 36 08.3 +0.4
SNR=8.6
WSAR Wadi Sarin 41.49 100 P **P** 11 36 11.1 +0.6
WSAR P P 11 36 11.1 +0.6
JMDO Jabal Madar 41.58 101 P **P** 11 36 11.6 +0.4
WBK Wadi Bani Khal 42.10 100 P **P** 11 36 14.4 +1.0
SNR=6.9
KK31 Karatay Array 42.25 66 **P** 11 36 16.8 +0.5
KK31 IAmb IAmb 11 36 19.2
comp=Z,5.0nm,0.6s
KK31 Karatay Array 42.25 66 P **P** 11 36 16.8 +0.5
KK31 pmax pmax
comp=Z,5.0nm,0.6s
KKAR Karatay Array 42.25 66 **P** 11 36 15.8 -0.4
KKAR Karatay Array 42.25 66 P **P** 11 36 15.9 -0.4
MHTO MHTO 42.29 103 P **P** 11 36 17.5 +0.7
CHGR Chuyangaron 42.62 73 **P** 11 36 19.4 +0.1
CHGR IAmb IAmb 11 36 20.4
comp=Z,11nm,0.6s
CHGR Chuyangaron 42.62 73 P **P** 11 36 19.5 +0.1
CHGR pmax pmax
comp=Z,11nm,0.6s
JLN Jalan Bani Buh 42.70 100 P **P** 11 36 20.6 +0.5
GAR Garm 43.36 72 P **P** 11 36 25.3 +0.1
GAR IAmb IAmb 11 36 27.9

NEIC ***15*** *11:53:26.9±1.5, 19°.09S±0°.08×169°.4E±0°.1, h262km±7km, mb4.4/18, Error ellipse: s-maj=16.1km s-min=10.1km az=113.0*
IDC ***15*** *11:53:27.4±1.4, 19°.18S×169°.45E, h268km±14km, mb3.8/11, mbtmp4.4/14, Error ellipse: s-maj=19.0km s-min=11.3km az=166.0*

ISC 15 11:53:25.6±0.6, **19°.09S**±0°.08×**169°.39E**±0°.08, **h246**km, **n40,** σ**1928/43, mb4.3**/18, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**2.70**	**208**			**Pn**	**11 54 15.8**	**+1.1**
DZM	**Mont Dzumac**	**4.05**	**222**	**P**		**Pn**	**11 54 32.6**	**+2.7**
	22nm,0.4s,baz=84,slow=18,SNR=11							
DZM				S		**S**	**11 55 19.6**	**-1.3**
	34nm,0.7s,baz=122,slow=9.5,SNR=4.0							
DZM	**Mont Dzumac**	**4.05**	**222**			**Pn**	**11 54 32.1**	**+2.1**
SANVU	**Saraoutou**	**4.18**	**330**	Pn		**Pn**	**11 54 32.7**	**+1.3**
ONTNC	**Ouen Toro**	**4.22**	**220**	Pn		**Pn**	**11 54 34.4**	**+2.6**
MSVF	**Nonsavu**	**8.34**	**82**	P		**Pn**	**11 55 24.9**	**+1.6**
	29nm,0.7s,baz=263,slow=11,SNR=15							
MSVF	**Nonsavu**	**8.34**	**82**			**Pn**	**11 55 24.7**	**+1.4**
EIDS	**Eidsvold**	**18.05**	**246**	P		**P**	**11 57 20.4**	**+1.2**
EIDS				IAmb	IAmb		11 57 51.5	
	comp=Z,23nm,1.2s							
AFI	**Afiamalu**	**18.78**	**77**	P		**P**	**11 57 28.1**	**+1.1**
	comp=Z,14nm,0.5s,baz=253,slow=17,SNR=7.8							
ARMA	**Armidale**	**19.65**	**232**	P		**P**	**11 57 37.5**	**+1.2**
URZ	**Urewera**	**20.25**	**162**	P		**P**	**11 57 41.9**	**-0.6**
	comp=Z,14nm,1.1s,baz=241,slow=4.1,SNR=6.3							
	comp=Z,14nm,1.1s							
CTA	**Charters Tower**	**21.82**	**264**	P		**P**	**11 57 59.9**	**+1.4**
	comp=Z,4.6nm,0.6s,baz=85,slow=11,SNR=10							
	comp=Z,4.6nm,0.6s							
CTAO	**Charters Tower**	**21.82**	**264**	P		**P**	**11 57 58.9**	**+0.5**
CTAO				IAmb	IAmb		11 58 01.1	
	comp=Z,7.4nm,0.8s							

THZ	**Tophouse**	**22.80**	**173**	P	**P**	11 58 06.6	**-0.6**
PMG	**Port Moresby**	**23.57**	**291**	P	**P**	11 58 16.1	**+1.7**
	comp=Z,8.9nm,0.7s,baz=180,slow=10,SNR=3.2						
	comp=Z,8.9nm,0.7s						
CAN	**Canberra**	**24.22**	**224**	P	**P**	11 58 19.6	**-0.6**
CAN				IAmb	IAmb	11 58 57.9	
	comp=Z,30nm,1.5s						
TOO	**Toolangi**	**27.82**	**224**	P	**P**	11 58 51.7	**-0.7**
STKA	**Stephens Creek**	**28.04**	**238**	P	**P**	11 58 55.0	**+0.7**
	comp=Z,13nm,0.7s,baz=65,slow=9.2,SNR=22						
	comp=Z,13nm,0.7s						
WR8	**Warramunga Arr**	**32.86**	**263**		**P**	11 59 35.8	**-0.9**
WR8				IAmb	IAmb	11 59 36.7	
	comp=Z,4.3nm,0.6s						
WRA	**Warramunga Arr**	**33.01**	**263**	P	**P**	11 59 37.2	**-0.9**
	comp=Z,3.8nm,0.5s,baz=82,slow=5.9,SNR=190						
WRA				ScP	**ScP**	**12 05 34.8**	**-1.7**
	comp=Z,0.5nm,0.8s,baz=86,slow=3.3,SNR=3.5						
	comp=Z,3.8nm,0.5s						
WRA	**Warramunga Arr**	**33.01**	**263**		**P**	11 59 36.5	**-1.6**
AS31	**Alice Springs**	**33.30**	**256**		**P**	11 59 40.2	**-0.4**
ASAR	**Alice Springs**	**33.30**	**256**	P	**P**	11 59 40.5	**0.0**
	comp=Z,28nm,0.5s,baz=82,slow=9.2,SNR=1020						
ASAR				ScP	**ScP**	**12 05 35.8**	**-1.7**
	comp=Z,0.6nm,1.0s,baz=83,slow=3.7,SNR=2.8						
	comp=Z,28nm,0.5s						
ASAR	**Alice Springs**	**33.30**	**256**		**P**	11 59 40.0	**-0.6**
MTN	**Manton Dam**	**37.24**	**274**	P	**P**	12 00 13.9	**-0.2**
MTN				IAmb	IAmb	12 00 15.1	
	comp=Z,7.9nm,0.6s						
QSPA	**South Pole Qui**	**70.97**	**180**	P	**P**	**12 04 14.4**	**-2.0**
	comp=Z,1.7nm,0.8s,baz=77,slow=1.4,SNR=7.0						
	comp=Z,1.7nm,0.8s						
QSPA	**South Pole Qui**	**70.97**	**180**	P	**P**	**12 04 14.9**	**-1.4**
P18K	**Big Mountain,**	**83.38**	**17**	P	**P**	**12 05 23.5**	**-1.4**
P18K				IAmb	IAmb	12 05 25.6	
	comp=Z,7.7nm,0.9s						
Q19K	**Cape Douglas,**	**83.46**	**18**	P	**P**	**12 05 24.7**	**-0.6**
O18K	**Koktuh Hills**	**83.78**	**17**	P	**P**	**12 05 25.7**	**-1.2**
O18K				IAmb	IAmb	12 05 27.3	
	comp=Z,8.8nm,1.2s						
M16K	**Timber Creek**	**83.79**	**15**	P	**P**	**12 05 27.7**	**+0.8**
M16K				IAmb	IAmb	12 05 28.8	
	comp=Z,4.4nm,0.8s						
N17K	**Nushagak Hills**	**83.81**	**16**	P	**P**	**12 05 26.9**	**-0.1**
N17K				IAmb	IAmb	12 05 42.1	
	comp=Z,7.8nm,1.5s						
L16K	**Owhat River**	**84.27**	**14**	P	**P**	**12 05 29.1**	**-0.2**
N18K	**Kilae Creek**	**84.28**	**16**	P	**P**	**12 05 29.4**	**0.0**
N18K				IAmb	IAmb	12 05 34.8	
	comp=Z,10nm,1.4s						
NVAR	**Mina Array Bea**	**88.60**	**48**	P	**P**	**12 05 50.6**	**-0.5**
	comp=Z,1.2nm,0.9s,baz=242,slow=7.2,SNR=5.4						
	comp=Z,1.2nm,0.9s						
ILAR	**Eielson Array**	**90.05**	**17**	P	**P**	**12 05 54.9**	**-2.1**
	comp=Z,0.5nm,0.8s,baz=253,slow=5.1,SNR=13						
	comp=Z,0.5nm,0.8s						
PDAR	**Pinedale Array**	**96.41**	**47**	P	**P**	**12 06 27.2**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=284,slow=7.1,SNR=2.1						
	comp=Z,0.2nm,0.7s						
TXAR	**Lajitas Array**	**96.57**	**61**	P	**P**	**12 06 27.8**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=232,slow=6.2,SNR=4.3						
	comp=Z,0.4nm,0.8s						
YKA	**Yellowknife Ar**	**100.47**	**27**	P	**Pdif**	**12 06 44.1**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=262,slow=4.9,SNR=5.0						
GERES	**GERESS Array B**	**144.42**	**332**	PKP	**PKPab**	**12 12 30.5**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=36,slow=8.5,SNR=1.8						

*CATAC **15** 11:56:47.1±0.3, 13°N±2°×8°1W±°, h10km±2km, M4.0/12, MLv4.0/12, Error ellipse: s-maj=6.1km s-min=3.5km az=131.6, confirmed*
*RSNC **15** 11:56:48.1±0.0, 13°N±3°×8°1W±°, h14km±2km, M3.0, mB4.8, mb4.2, ML3.0, Mw(mB)4.0*
ISC 15 11:56:47.0±1.0, 13°09N±0°05×81°38W±0°04, h20km±4km, n18, σ1§34/31, Caribbean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRVC	**Isla de Provid**	**0.28**	**3**	P	**Pb**	**11 56 53.5**	**-0.1**
PRVC				S	**Sb**	**11 56 57.9**	**0.0**
PRVC	**Isla de Provid**	**0.28**	**3**	P	**Pb**	11 56 53.4	-0.1
PRVC				S	**Sb**	**11 56 57.8**	**-0.2**
SAIC	**Isla e San And**	**0.64**	**211**	P	**Pb**	11 56 59.3	-0.2
SAIC				S	**Sb**	**11 57 08.6**	**+0.5**
RNCC	**Cayo Roncador,**	**1.34**	**69**	P	**Pn**	**11 57 11.7**	**+1.1**
RNCC				S	**Sb**	**11 57 30.6**	**+2.3**
SERC	**Banco Serrana,**	**1.54**	**40**	P	**Pb**	11 57 15.2	+0.3
SERC				S	**Sb**	11 57 35.6	+1.5
BILN	**Bilwi Airport**	**2.16**	**296**	P	**Pn**	11 57 21.7	-0.2
SIUN	**Universidad Ur**	**3.36**	**281**	P	**Pn**	11 57 38.3	-0.1
TRT2	**Tortugero**	**3.41**	**223**	P	**Pn**	11 57 40.7	+1.5
TRT2				S	**Sn**	11 58 17.8	-1.2
BCIP	**Isla Barro Col**	**4.18**	**159**	P	**Pn**	11 57 49.2	-0.5
BCIP				S	**Sn**	11 58 35.9	-2.1
MATN	**Matagalpa**	**4.43**	**268**	P	**Pn**	11 57 53.0	-0.3
JTS	**Las Juntas de**	**4.47**	**232**	P	**Pn**	11 57 54.5	+0.8
JTS	**Las Juntas de**	**4.47**	**232**	P	**Pn**	11 57 54.1	+0.4
JTS				S	**Sn**	11 58 44.0	-1.2
OCHAL	**Ojochal**	**4.55**	**210**	P	**Pn**	11 57 57.0	+2.2
OCHAL				S	**Sn**	11 58 49.8	+2.7
RCPN	**Sur Rio San Ju**	**4.61**	**276**	P	**Pn**	11 57 56.1	+0.4
RCPN				S	**Sn**	11 58 46.8	-1.9
RCON	**San Juan de Ri**	**4.67**	**275**	P	**Pn**	11 57 56.9	+0.4
RCON				S	**Sn**	11 58 49.8	-0.4
RCVN	**Varillal2**	**4.71**	**277**	P	**Pn**	11 57 57.5	+0.3
SJCC	**San Jacinto, C**	**6.85**	**117**	P	**Pn**	11 58 26.7	+0.2
	14nm,1.4s						
SJCC				S	**Sn**	11 59 40.9	-3.1
	14nm,1.4s						
APAC	**Apartado, Choc**	**6.99**	**137**	P	**Pn**	11 58 29.4	+1.1
APAC				S	**Sn**	11 59 46.5	-0.7

*NOU **15** 12:07:39.9±1.1, 41°56S±0°03×174°53E±0°02, h13km±10km, n193, σ1§11/208, Cook Strait, New Zealand*
*WEL **15** 12:07:41.0±0.2, 41°S±3°×17°4E±°, h12km, M3.7/68, ML3.7/21, MLv3.7/68, Error ellipse: s-maj=3.7km s-min=1.6km az=156.3, confirmed*
ISC 15 12:07:39.9±1.1, 41°56S±0°03×174°53E±0°02, h13km±10km, n193, σ1§11/208, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNZO	**South Karori**	**0.28**	**28**	P	**Pb**	**12 07 47.1**	**+0.3**
SNZO	**South Karori**	**0.28**	**28**	S	**Sb**	**12 07 51.8**	**+0.4**
BHW	**Baring Head**	**0.30**	**60**	P	**Pb**	12 07 48.3	+1.3
BHW				S	**Sb**	12 07 53.2	+1.3
CMWZ	**Cape Campbell**	**0.30**	**231**	P	**Pb**	12 07 49.0	+1.8
SDNS	**Seddon**	**0.31**	**250**	P	**Pb**	12 07 48.3	+1.0
WNAS	**Wellington Int**	**0.31**	**43**	P	**Pb**	12 07 48.1	+0.8
WNKS	**Wellington Kar**	**0.32**	**31**	P	**Pb**	12 07 47.9	+0.5
WNKS				S	**Sb**	12 07 52.7	+0.3
WNHS	**Wellington Hig**	**0.32**	**36**	P	**Pb**	12 07 48.1	+0.7
TRTW	**Torrens Terrac**	**0.32**	**36**	P	**Pb**	12 07 48.1	+0.7
MKVS	**Makara Village**	**0.32**	**25**	P	**Pb**	12 07 47.9	+0.5
WTYS	**Wellington Ten**	**0.33**	**36**	P	**Pb**	12 07 48.2	+0.7
MISS	**Wellington Mir**	**0.33**	**42**	P	**Pb**	12 07 48.3	+0.7
TEPS	**Wellington Te**	**0.33**	**36**	P	**Pb**	12 07 48.2	+0.7
TEPS				S	**Sb**	12 07 53.6	+0.8
WEL	**Wellington**	**0.33**	**34**	P	**Pb**	12 07 48.3	+0.7
WEL				S	**Sb**	12 07 53.3	+0.6
SEAW	**Seatoun School**	**0.33**	**45**	P	**Pb**	12 07 48.4	+0.8
FKPS	**Wellington Fra**	**0.33**	**35**	P	**Pb**	12 07 49.1	+1.5
BOWS	**Bowen St Turnb**	**0.34**	**34**	P	**Pb**	12 07 48.4	+0.7
BOWS				S	**Sb**	12 07 53.7	+0.8
VUWS	**Victoria Unive**	**0.34**	**34**	P	**Pb**	12 07 48.4	+0.7
POTA	**Wellington Pot**	**0.34**	**33**	P	**Pb**	12 07 48.3	+0.5
WEMS	**Wellington Eme**	**0.34**	**34**	P	**Pb**	12 07 48.5	+0.6
TFSS	**Wellington Tho**	**0.34**	**34**	P	**Pb**	12 07 48.5	+0.7
MKBS	**Makara Bunker**	**0.36**	**21**	P	**Pb**	12 07 48.4	+0.3
MKBS				S	**Sb**	12 07 53.6	0.0
SEDS	**Seddon Fire St**	**0.36**	**251**	P	**Pb**	12 07 49.0	+0.9
SOMS	**Somes Island**	**0.39**	**40**	P	**Pb**	12 07 49.3	+0.6
NEWS	**Newlands**	**0.39**	**34**	P	**Pb**	12 07 49.2	+0.5
TCW	**Tory Channel**	**0.40**	**331**	P	**Pg**	12 07 48.3	+0.5
TCW				S	**Sg**	12 07 53.0	-0.2
WDFS	**Ward Fire Stat**	**0.40**	**227**	P	**Pb**	12 07 50.5	+1.8
PTOS	**Petone Overbri**	**0.42**	**37**	P	**Pb**	12 07 49.6	+0.5
SEAV	**Seaview**	**0.42**	**42**	P	**Pb**	12 07 49.8	+0.7
PVCS	**Petone Victori**	**0.42**	**38**	P	**Pb**	12 07 49.7	+0.6
PGMS	**Petone Municip**	**0.43**	**39**	P	**Pb**	12 07 49.8	+0.6
LRSS	**Randwick Schoo**	**0.43**	**41**	P	**Pb**	12 07 50.0	+0.7
WDAS	**Wainuiomata Bu**	**0.44**	**47**	P	**Pb**	12 07 50.2	+0.7
INSS	**Lower Hutt GNS**	**0.44**	**43**	P	**Pb**	12 07 50.1	+0.6
LIRS	**Lower Hutt IRL**	**0.44**	**42**	P	**Pb**	12 07 50.1	+0.6
MGCS	**Blenheim Marlb**	**0.44**	**276**	P	**Pb**	12 07 49.6	+0.1
ARKS	**Wainuiomata Ar**	**0.45**	**45**	P	**Pb**	12 07 50.3	+0.7
WANS	**Wainuiomata Hi**	**0.45**	**43**	P	**Pb**	12 07 50.2	+0.6
LHES	**Hutt Central**	**0.45**	**39**	P	**Pb**	12 07 50.2	+0.6
LHRS	**Lower Hutt Nor**	**0.45**	**38**	P	**Pb**	12 07 50.1	+0.5
LHBS	**Lower Hutt Nor**	**0.45**	**37**	P	**Pb**	12 07 50.2	+0.5
SOCS	**Lower Hutt St**	**0.46**	**40**	P	**Pb**	12 07 50.4	+0.6
FAIS	**Fairfield**	**0.47**	**42**	P	**Pb**	12 07 50.5	+0.5
QCCS	**Picton Queen C**	**0.47**	**306**	P	**Pg**	12 07 49.3	+0.2
BMTS	**Belmont**	**0.47**	**39**	P	**Pb**	12 07 50.5	+0.5
DAVS	**Collett Street**	**0.48**	**43**	P	**Pb**	12 07 50.7	+0.6
NBSS	**St Bernadette"**	**0.48**	**42**	P	**Pb**	12 07 50.8	+0.6
BWRS	**Waikakaho Road**	**0.48**	**284**	P	**Pg**	12 07 49.7	+0.3
PFAS	**Porirua Free A**	**0.48**	**30**	P	**Pb**	12 07 50.5	+0.3
PWES	**Porirua West**	**0.48**	**28**	P	**Pb**	12 07 50.5	+0.2
POLS	**Porirua Librar**	**0.49**	**29**	P	**Pb**	12 07 50.6	+0.3
POKS	**Katoa Kinderga**	**0.49**	**28**	P	**Pb**	12 07 50.6	+0.2
TAIT	**Taita Central**	**0.50**	**41**	P	**Pb**	12 07 51.0	+0.6
HSSS	**Lower Hutt Hay**	**0.53**	**40**	P	**Pb**	12 07 51.4	+0.4
PLWZ	**Palliser**	**0.55**	**91**	P	**Pn**	12 07 53.4	0.0
MSWZ	**Moikau Station**	**0.56**	**76**	P	**Pn**	12 07 53.4	-0.1
MSWZ					S	**Sb**	**12 08 01.7**	**+2.2**
HIBS	**Hutt Internati**	**0.57**	**43**	P	**Pb**	12 07 52.2	+0.6
KEKS	**Kekerengu Vall**	**0.57**	**226**	P	**Pn**	12 07 53.7	0.0
UHCS	**Upper Hutt Col**	**0.58**	**42**	P	**Pb**	12 07 52.5	+0.6
UHSS	**Upper Hutt Pri**	**0.59**	**43**	P	**Pb**	12 07 52.7	+0.6
CAW	**Cannon Point**	**0.61**	**42**	P	**Pb**	12 07 53.0	+0.7
CAW				S	**Sb**	**12 08 01.5**	**+0.7**
HAVS	**Havelock**	**0.63**	**297**	P	**Pg**	12 07 52.4	+0.2
TMDS	**Te Marua Water**	**0.67**	**45**	P	**Pb**	12 07 54.2	+0.7
PAWZ	**Paruwai Farm**	**0.70**	**76**	P	**Pn**	12 07 55.8	+0.3
PAPS	**Paraparaumu Pr**	**0.74**	**29**	P	**Pb**	12 07 54.9	+0.4
FTPS	**Featherston Pr**	**0.74**	**54**	P	**Pn**	12 07 56.0	-0.1
KIW	**Kapiti Island**	**0.75**	**23**	P	**Pb**	12 07 55.1	+0.2
KIW				S	**Sg**	**12 08 04.8**	**+0.4**
MAVS	**Martinborough**	**0.78**	**64**	P	**Pn**	12 07 57.1	+0.5
MTW	**Mount Morrison**	**0.83**	**62**	P	**Pn**	12 07 57.8	+0.5
MTW				S	**Sn**	**12 08 09.4**	**-0.1**
DUWZ	**D'Urville Isla**	**0.88**	**329**	P	**Pg**	12 07 56.8	-0.2
WVFS	**Wairau Valley**	**0.89**	**266**	P	**Pb**	12 07 58.0	+0.9
OGWZ	**Otaki Gorge**	**0.89**	**33**	P	**Pb**	12 07 57.5	+0.4
OGWZ				S	**Sb**	12 08 09.0	+0.2
TRWZ	**Traveller**	**0.89**	**80**	P	**Pn**	12 07 58.5	+0.4
LOKS	**Mount Lookout**	**0.90**	**240**	P	**Pn**	12 07 59.1	+0.7
OTKS	**Otaki School**	**0.93**	**30**	P	**Pb**	12 07 58.3	+0.5
NNZ	**Nelson**	**0.93**	**291**	P	**Pg**	12 07 57.4	-0.4
NNZ				S	**Sg**	**12 08 08.3**	**-1.6**
NLMS	**Nelson Nelmac**	**0.98**	**287**	P	**Pg**	12 07 58.9	0.0
HOWZ	**Holdsworth Sta**	**0.99**	**49**	P	**Pn**	12 07 59.9	+0.4
HOWZ				S	**Sn**	12 08 13.3	-0.2
WRCS	**Masterton Wair**	**1.04**	**55**	P	**Pn**	12 08 00.8	+0.6
KIKS	**Kaikoura**	**1.07**	**216**	P	**Pb**	12 08 01.1	+0.9
MOLW	**Molesworth Sta**	**1.09**	**240**	P	**Pn**	12 08 01.6	+0.7
TMWZ	**Te Maipa**	**1.12**	**67**	P	**Pb**	12 08 01.5	+0.4
KHZ	**Kahutara**	**1.13**	**220**	P	**Pb**	12 08 01.6	+0.3
KHZ	**Kahutara**	**1.13**	**220**	S	**Sg**	**12 08 17.5**	**+1.1**
KHZ	**Kahutara**	**1.13**	**220**	P	**Pb**	12 08 01.9	+0.6
MRZ	**Mangatainoka R**	**1.20**	**42**	P	**Pb**	12 08 02.8	+0.4
MOTS	**Motueka DOC wo**	**1.22**	**290**	P	**Pn**	12 08 02.3	-0.3
THZ	**Tophouse**	**1.23**	**260**	P	**Pn**	12 08 02.5	-0.4
THZ				S	**Sb**	12 08 19.1	+0.3
TIWZ	**Tintock**	**1.29**	**53**	P	**Pn**	12 08 03.7	0.0
TKNZ	**Takaka Hill**	**1.29**	**293**	P	**Pn**	12 08 03.4	-0.3
MRNZ	**Matariki Terra**	**1.34**	**276**	P	**Pn**	12 08 04.2	-0.1
CPWZ	**Westpoint**	**1.42**	**63**	P	**Pn**	12 08 05.6	+0.3
OHWZ	**Ohakea**	**1.48**	**24**	P	**Pb**	12 08 07.9	+0.7
PRWZ	**Pori Road**	**1.48**	**48**	P	**Pn**	12 08 06.4	+0.2
POWZ	**Post Office Ro**	**1.50**	**39**	P	**Pn**	12 08 06.7	+0.3
BFZ	**Birch Farm**	**1.57**	**57**	P	**Pn**	12 08 06.8	-0.6
BFZ	**Birch Farm**	**1.57**	**57**	P	**Pn**	12 08 06.9	-0.4
QRZ	**Quartz Range**	**1.68**	**295**	P	**Pn**	12 08 09.3	+0.4
QRZ	**Quartz Range**	**1.68**	**295**	S	**Sb**	12 08 31.7	+0.1
QRZ	**Quartz Range**	**1.68**	**295**	P	**Pn**	12 08 09.5	+0.6
DVHZ	**Dannevirke**	**1.77**	**45**	P	**Pn**	12 08 09.8	-0.4
GVZ	**Greta Valley S**	**1.79**	**218**	P	**Pn**	12 08 10.6	+0.1
WAZ	**Wanganui**	**1.83**	**11**	P	**Pb**	12 08 13.7	+0.4
ANWZ	**Angora Road**	**1.84**	**54**	P	**Pn**	12 08 10.5	-0.6
TSZ	**Takapari Road**	**1.85**	**36**	P	**Pn**	12 08 11.4	+0.1
DSZ	**Denniston Nort**	**2.05**	**264**	P	**Pn**	12 08 14.8	+0.7
PRHZ	**Porangahau**	**2.05**	**52**	P	**Pn**	12 08 13.3	-0.8
LTZ	**Lake Taylor**	**2.08**	**233**	P	**Pn**	12 08 14.5	+0.1
PNWZ	**Pukenui**	**2.08**	**38**	P	**Pn**	12 08 14.5	-0.2
WPHZ	**Waipuurau**	**2.08**	**45**	P	**Pn**	12 08 14.2	-0.3
LREZ	**Lake Rotokare**	**2.10**	**357**	P	**Pn**	12 08 17.9	+0.2
AMCZ	**Amberley**	**2.13**	**220**	P	**Pn**	12 08 14.8	-0.4
NMEZ	**Namu Road**	**2.20**	**347**	P	**Pn**	12 08 19.8	+0.3
PREZ	**Palmer Road**	**2.23**	**353**	P	**Pn**	12 08 19.8	-0.3
MTVZ	**Mangateitei**	**2.29**	**19**	P	**Pb**	12 08 19.7	-1.3
KHEZ	**Kahui Hut**	**2.29**	**350**	P	**Pb**	12 08 20.2	-1.0
KHEZ	**Kahui Hut**	**2.29**	**350**	P	**Pb**	12 08 20.6	-0.5
PXZ	**Pawanui**	**2.34**	**50**	P	**Pn**	12 08 16.9	-1.1
NBEZ	**Newall Road No**	**2.34**	**347**	P	**Pb**	12 08 21.6	-0.4
MOVZ	**Moawhango**	**2.34**	**24**	P	**Pn**	12 08 18.9	+0.7
PKVZ	**Pokaka**	**2.35**	**16**	P	**Pn**	12 08 20.4	+2.1
KRHZ	**Kereru**	**2.37**	**37**	P	**Pn**	12 08 18.0	-0.5
WNVZ	**Wahianoa**	**2.37**	**20**	P	**Pn**	12 08 20.0	+1.4
DREZ	**Durham Road**	**2.38**	**354**	P	**Pb**	12 08 21.9	-0.7
TRVZ	**Turoa**	**2.39**	**19**	P	**Pb**	12 08 23.1	+0.2
WHVZ	**Whangaehu Hut**	**2.41**	**20**	P	**Pb**	12 08 23.6	+0.3
MAVZ	**Matarangi**	**2.42**	**19**	P	**Pg**	12 08 25.6	-0.7
OKCZ	**Okains Bay**	**2.42**	**206**	P	**Pn**	12 08 18.4	-0.8
FWVZ	**Far West T-bar**	**2.43**	**19**	P	**Pb**	12 08 23.3	-0.3
VRZ	**Vera Road**	**2.44**	**4**	P	**Pn**	12 08 21.6	+2.3
TUVZ	**Tukino**	**2.44**	**21**	P	**Pn**	12 08 20.9	+1.3
COVZ	**Chateau Observ**	**2.48**	**19**	P	**Pn**	12 08 22.5	+2.4
KAHZ	**Kahuranaki**	**2.51**	**46**	P	**Pn**	12 08 19.5	-0.9
NGZ	**Ngauruhoe**	**2.52**	**19**	P	**Pn**	12 08 22.1	+1.5
SNVZ	**South Ngauruho**	**2.52**	**20**	P	**Pn**	12 08 22.0	+1.3
OTVZ	**Oturere**	**2.54**	**20**	P	**Pn**	12 08 22.3	+1.3
OXZ	**Oxford**	**2.55**	**225**	P	**Pn**	12 08 19.8	-1.1
MQZ	**McQueen's Vall**	**2.55**	**212**	P	**Pn**	12 08 19.5	-1.4
INZ	**Inchbonnie**	**2.57**	**242**	P	**Pn**	12 08 21.3	+0.1
WTVZ	**West Tongariro**	**2.57**	**19**	P	**Pn**	12 08 23.0	+1.7
KWHZ	**Kaweka Forest**	**2.58**	**35**	P	**Pn**	12 08 20.8	-0.5
TWVZ	**Taurewa**	**2.58**	**16**	P	**Pn**	12 08 25.4	-0.7
ETVZ	**East Tongariro**	**2.58**	**21**	P	**Pn**	12 08 22.8	+1.3
TMVZ	**Te Maari**	**2.60**	**21**	P	**Pn**	12 08 22.7	+0.9
AKCZ	**Ohakune Harbour**	**2.60**	**207**	P	**Pn**	12 08 20.7	-0.9
KRVZ	**Karewarewa**	**2.60**	**19**	P	**Pn**	12 08 24.0	+2.2
NTVZ	**North Tongarir**	**2.61**	**20**	P	**Pn**	12 08 22.9	+1.0
MCHZ	**McNeill Hill**	**2.68**	**39**	P	**Pn**	12 08 22.1	-0.6
KATZ	**Kakaramea**	**2.73**	**19**	P	**Pb**	12 08 26.7	-2.0
RITZ	**Rihia Road**	**2.77**	**22**	P	**Pb**	12 08 29.2	-0.1
RACZ	**Rakaia**	**2.79**	**218**	P	**Pn**	12 08 23.0	-1.3
BKZ	**Black Stump Fm**	**2.82**	**33**	P	**Pn**	12 08 24.1	-0.6
BKZ	**Black Stump Fm**	**2.82**	**33**	P	**Pn**	12 08 23.9	-0.8
RATZ	**Rangitukua**	**2.85**	**20**	P	**Pb**	12 08 31.9	+1.2
MHCZ	**Mount Hutt**	**2.94**	**227**	P	**Pn**	12 08 25.3	-1.0
ARHZ	**Aropaoanui**	**2.97**	**40**	P	**Pn**	12 08 25.7	-1.0
WATZ	**Wairara**	**2.99**	**18**	P	**Pb**	12 08 33.5	+0.5
NMHZ	**Naumai**	**3.01**	**36**	P	**Pn**	12 08 26.6	-0.8
HIZ	**Hauiti**	**3.05**	**5**	P	**Pn**	12 08 30.4	+2.6
HIZ	**Hauiti**	**3.05**	**5**	P	**Pn**	12 08 30.6	+2.8
WACZ	**Wakanui South**	**3.10**	**219**	P	**Pn**	12 08 27.3	-1.1
WVZ	**Waitaha Valley**	**3.19**	**240**	P	**Pn**	12 08 29.5	-0.9
RAHZ	**Arahi**	**3.29**	**37**	P	**Pn**	12 08 30.2	-0.9
TLZ	**Tolley Road**	**3.32**	**14**	P	**Pn**	12 08 34.6	+3.1
RPZ	**Rata Peaks**	**3.35**	**229**	P	**Pn**	12 08 31.1	-0.8
RPZ	**Rata Peaks**	**3.35**	**229**	P	**Pn**	12 08 31.1	-0.8
PRRZ	**Plateau Road**	**3.38**	**26**	P	**Pb**	12 08 40.1	+0.5
ARCZ	**Arundel**	**3.43**	**225**	P	**Pn**	12 08 32.0	-1.1
MUGZ	**Murupara**	**3.53**	**30**	P	**Pn**	12 08 36.2	+1.9
GCSZ	**Gaunt Creek Bo**	**3.57**	**239**	P	**Pn**	12 08 35.3	+0.4
TMZ	**Timaru**	**3.83**	**221**	P	**Pn**	12 08 37.6	-0.9
URZ	**Urewera**	**3.85**	**32**	P	**Pn**	12 08 38.4	-0.3
URZ	**Urewera**	**3.85**	**32**	P	**Pn**	12 08 37.7	-1.0
TOZ	**Tahuroa Road**	**3.90**	**11**	P	**Pb**	12 08 44.4	-4.0
FOZ	**Fox Glacier**	**4.00**	**239**	P	**Pn**	12 08 40.3	-0.5
LBZ	**Lake Benmore**	**4.26**	**227**	P	**Pn**	12 08 43.9	-0.5
MKAZ	**Moumakai**	**4.47**	**7**	P	**Pn**	12 08 50.5	+3.2
AWAZ	**Awhitu Peninsu**	**4.49**	**1**	P	**Pn**	12 08 50.4	+2.8
ODZ	**Otahua Downs**	**4.49**	**218**	P	**Pn**	12 08 46.4	-1.2
ODZ	**Otahua Downs**	**4.49**	**218**	P	**Pn**	12 08 46.1	-1.5
ETAZ	**East Tamaki Re**	**4.61**	**4**	P	**Pn**	12 08 52.5	+3.2
WIAZ	**Waiheke Island**	**4.78**	**6**	P	**Pn**	12 08 56.3	+4.7
MBAZ	**Motutapu North**	**4.79**	**4**	P	**Pb**	12 08 59.4	-4.3
JCZ	**Jackson Bay**	**4.92**	**237**	P	**Pn**	**12 08 53.1**	**-0.4**
JCZ	**Jackson Bay**	**4.92**	**237**	P	**Pn**	**12 08 52.8**	**-0.7**
WKZ	**Wanaka**	**5.19**	**229**	P	**Pn**	**12 08 55.5**	**-1.7**
EAZ	**Earnscleugh**	**5.29**	**224**	P	**Pn**	**12 08 57.1**	**-1.4**
TUZ	**Tuapeka**	**5.65**	**217**	P	**Pn**	**12 09 00.6**	**-2.8**
MLZ	**Mavora Lakes**	**6.02**	**229**	P	**Pn**	**12 09 07.6**	**-1.0**
SYZ	**Scrubby Hill**	**6.31**	**216**	P	**Pn**	**12 09 12.5**	**-0.1**
OUZ	**Omahuta**	**6.37**	**353**	P	**Pn**	**12 09 15.1**	**+1.7**
CTZ	**Chatham Island**	**6.88**	**111**	P	**Pn**	**12 09 19.8**	**-0.6**
CTZ	**Chatham Island**	**6.88**	**111**	P	**Pn**	**12 09 20.1**	**-0.3**

*SJA **15** 12:11:32.8±0.6, 21°25S×68°98W, h127km±3km, ML4.1, MW3.9*
*NEIC **15** 12:11:33.9±1.6, 21°27S±0°03×68°81W±0°07, h111km±6km, mb4.3/12, ML4.1(GUC), Error ellipse: s-maj=10.0km s-min=3.8km az=75.0*
*VAO **15** 12:11:33.9±0.7, 21°16S×68°64W, h99km±6km, mb4.5, Presumed earthquake*
*GUC **15** 12:11:34.6±0.6, 21°26S×68°87W, h114km±2km, ML4.1*
*IDC **15** 12:11:34.6±2.4, 21°22S×68°55W, h114km±22km, mb3.9/6, mbtmp4.2/9, Error ellipse: s-maj=27.6km s-min=16.5km az=91.0*
ISC 15 12:11:33.4±0.6, 21°27S±0°03×68°81W±0°04, h116km±5km, n123, σ1§49/141, mb4.2/5, 1C-1D, Chile-Bolivia border region

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

AP01 Chacalluta 3.22 333 *e*P Pn 12 12 25.3 +2.8
AP01 IAML 12 13 07.2
comp=Z,602nm,0.2s
PB14 IPOC Station P 3.65 203 Pn 12 12 28.0 -0.6
PB14 IPOC Station P 3.65 203 *e*P Pn 12 12 27.4 -1.2
PB14 IPOC Station P 3.65 203 *e*P Pn 12 12 27.3 -1.2
PB14 *e*S **Sn 12 13 08.8 -2.3**
PB14 IAML 12 13 18.9
comp=Z,131nm,0.3s
HJA Humahuaca 3.70 122 *e*P Pn 12 12 32.7 +3.5
HJA *e*S Sn 12 13 25.5 +13
PB18 Visviri 3.71 350⇑ *e*P Pn 12 12 34.7 +5.1
SALTA 3.73 143 *e*P Pn 12 12 32.3 +2.6
LPAZ La Paz 4.99 8 P Pn 12 12 48.9 +2.1
comp=Z,5.3nm,0.4s,baz=164,slow=2.1,SNR=36
LPAZ S **Sn 12 13 43.1 -0.7**
comp=Z,5.3nm,0.5s,baz=195,slow=17,SNR=1.9
LPAZ La Paz 4.99 8 Pn 12 12 48.8 +2.0
LPAZ La Paz 4.99 8 *e*P Pn 12 12 34.4 -12
LPAZ La Paz 4.99 8 *e*P Pn 12 12 45.8 -1.0
AC01 Pan de Azucar 5.13 198 Pn 12 12 46.5 -1.6
AC01 Pan de Azucar 5.13 198 *e*P Pn 12 12 34.0 -14
AC01 *e*S **Sn 12 13 42.5 -3.6**
AC01 IAML 12 14 03.3
comp=Z,51nm,0.3s
AC02 Maricunga 5.55 183 Pn 12 12 53.6 -0.7
SIV San Ignacio 9.02 56 P Pn 12 13 38.2 -2.5
comp=Z,12nm,0.4s,baz=249,slow=9.8,SNR=104
SIV S **Sn 12 15 13.9 -6.8**
comp=Z,1.0nm,0.7s,baz=262,slow=19,SNR=1.6
CFA Coronel Fontan 10.31 177 S Sn 12 15 42.3 -9.5
comp=Z,1.4nm,0.4s,baz=352,slow=9.3,SNR=1.5
MURT Porto Murtinho 10.44 94 *e*P Pn 12 13 57.2 -2.7
PTLB Pontes e Lacer 10.85 59 *e*P Pn 12 14 04.3 -1.2
BDQN Bodoquena, MS 11.31 88 *e*P Pn 12 14 10.0 -1.6
SALV Santo Antonio 13.53 69 *e*P Pn 12 14 38.7 -2.1
CZSB Cruzeiro do Su 13.97 344 *e*P Pn 12 14 47.6 +1.1
PDRB Porto dos Gac 15.04 52 *e*P Pn 12 14 59.3 -0.7
H03N1 Juan Fernandez 15.07 214 T T 12 30 32.4
baz=35
TRCB Terra Rica 15.08 99 Pn **Pn 12 15 01.2 +0.7**
TRCB Terra Rica 15.08 99 *e*P Pn 12 15 00.9 +0.3
H03N2 Juan Fernandez 15.08 214 T T 12 30 40.7
baz=35
H03N3 Juan Fernandez 15.09 214 T T 12 30 25.9
baz=35
BI02 San Fabin de 15.49 187 Pn **Pn 12 15 05.9 +0.3**
BI02 IAmb IAmb 12 15 28.7
comp=Z,16nm,1.5s
LDASE Londrina, Braz 16.51 101 *e*P Pn 12 15 17.5 -0.8
ARAG Araguaiana, MT 17.04 74 *e*P Pn 12 15 24.8 0.0
TRQA Tornquist 17.75 162 P **P 12 15 31.9 -0.4**
FRTB Fartura 17.93 100 *e*P Pn 12 15 35.5 0.0
GO06 Curarrehue 18.40 187 P **P 12 15 38.2 -1.4**
LR05 Currie 19.10 187 P **P 12 15 47.0 0.0**
LR05 IAmb IAmb 12 15 50.6
comp=Z,18nm,1.2s
SNDB Serra Nova Dou 19.14 64 *e*P P 12 15 47.5 -0.3
NPGB Novo Progresso 19.21 45 *e*P P 12 15 47.0 -1.5
PLCA Paso Flores 19.46 184 P **P 12 15 51.9 +0.8**
comp=Z,1.8nm,0.7s,baz=4.5,slow=9.2,SNR=12
PLCA Paso Flores 19.46 184 *e*P Pn 12 15 53.6 +0.2
MACA Manacapuru-AM 19.66 25 *e*P P 12 15 52.1 -1.2
IPMB Ipameri, GO 19.68 84 *e*P P 12 15 53.8 +0.2
RCLB Rio Claro- Sao 19.79 97 *e*P P 12 15 55.3 +0.6
VAO Valinhos 20.31 99 P **P 12 15 58.9 -1.5**
VAO IAmb IAmb 12 16 35.3
comp=Z,33nm,1.5s
BDFB Brasilia 20.50 78 P **P 12 16 00.8 -1.7**
comp=Z,7.2nm,0.4s,baz=248,slow=10,SNR=19
comp=Z,7.2nm,0.4s
BDFB Brasilia 20.50 78 P 12 16 02.2 -0.3
BDFB IAmb IAmb 12 16 06.1
comp=Z,7.5nm,0.4s
ITTB Itaituba 21.06 39 *e*P P 12 16 07.4 -1.0
BSCB Bom Sucesso 22.42 94 *e*P P 12 16 23.9 +1.1
SMTB Santa Maria do 23.88 62 *e*P P 12 16 37.2 +0.7
JANB Januaria 24.07 79 *e*P P 12 16 38.6 +0.4
SDBA SAO DESIDERIO 24.49 73 *e*P P 12 16 42.7 +0.7
BOAV Boa Vista 24.88 20 P **P 12 16 45.6 +0.1**
BOAV IAmb IAmb 12 16 47.9
comp=Z,6.7nm,0.8s
BOAV Boa Vista 24.88 20 *e*P P 12 16 46.1 +0.6
ROSC El Rosal 26.50 348 P **P 12 17 02.1 +1.5**
comp=Z,7.6nm,0.4s,baz=92,slow=22,SNR=2.2
comp=Z,7.6nm,0.4s
ROSC El Rosal 26.50 348 IAmb IAmb 12 17 07.2
comp=Z,7.9nm,0.5s
GUA01 Guaratinga, BA 27.81 85 *e*P P 12 17 12.8 +0.9
NBPS Pedro II - PI 31.42 62 *e*P P 12 17 43.9 0.0
NBMA Muriti-CE 32.14 69 *e*P P 12 17 50.5 +0.2
SNAA Sanae 62.47 161 P **P 12 21 45.2 +1.2**
comp=Z,2.1nm,0.6s,baz=250,slow=5.3,SNR=3.7
comp=Z,2.1nm,0.6s
QSPA South Pole Qui 68.92 180 P **P 12 22 28.3 +2.6**
comp=Z,1.5nm,0.5s,baz=156,slow=2.3,SNR=21
comp=Z,1.5nm,0.5s
TORD Torodi Ar. Bea 77.19 70 P **P 12 23 15.3 +0.3**
comp=Z,1.4nm,0.8s,baz=245,slow=6.5,SNR=9.6
comp=Z,1.4nm,0.8s
YKA Yellowknife Ar 91.00 341 P **P 12 24 24.6 +0.7**
comp=Z,0.2nm,0.8s,baz=136,slow=3.6,SNR=3.0
comp=Z,0.2nm,0.8s
H11S2 WAKE ISLAND Hyl 27.94 277 T T 14 50 36.5
baz=102,slow=74,SNR=20
H11S1 WAKE ISLAND Hyl 27.95 277 T T 14 50 36.1
baz=102,slow=74,SNR=12
H11S3 WAKE ISLAND Hyl 27.96 277 T T 14 50 36.5
baz=102,slow=74,SNR=10
H11N3 WAKE ISLAND Hyl 28.01 279 T T 14 50 35.8
baz=103,slow=74
H11N2 WAKE ISLAND Hyl 28.03 279 T T 14 50 36.1
baz=103,slow=74
H11N1 WAKE ISLAND Hyl 28.03 279 T T 14 50 37.1
baz=103
ASAR Alice Springs 130.16 208 PKP **PKPdf 12 30 30.8 +0.3**
comp=Z,0.2nm,0.8s,baz=132,slow=1.4,SNR=1.3
WRA Warramunga Arr 133.20 210 PKP **PKiKP 12 30 37.1 -0.5**
comp=Z,0.2nm,0.8s,baz=102,slow=1.3,SNR=1.4
MKAR Makanchi Array 145.39 36 PKPbc **PKPab 12 30 58.4 +0.3**
comp=Z,0.9nm,0.8s,baz=311,slow=3.1,SNR=7.5
MKAR pPKPbc pPKPab 12 31 29.6 -0.5
comp=Z,1.3nm,0.9s,baz=306,slow=4.2,SNR=6.9
HHC Hu-ho-hao-te 160.47 359 *e*P PKPdf 12 31 20.6 +0.9
PZH PanZhiHua 169.91 57 PKP **PKPdf 12 31 25.3 -2.8**

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*IDC **15** 12:42:45.6±1.0,6.66S×127.54E,h412km±11km,mb4.0/19, mbtmp4.8/26,Error ellipse: s-maj=12.7km s-min=7.7km az=67.0*
*NEIC **15** 12:42:45.9±1.6,6.66S±0.07×127.76E±0.1,h411km±8km, mb4.5/66,Error ellipse: s-maj=14.7km s-min=10.4km az=80.0*
*DJA **15** 12:42:45.6±0.1,7.7°S±2.2×12.8E±.1°,h403km±3km,M4.4/60, mb4.7/60,mB5.0/37,MLv5.3/48,Mw(mB)4.3/37, MwMwp4.8/1,Mwp5.1/1*

ISC 15 12:42:45.5±0.5,6.69S±0.04×127.56E±0.04,h412km±6km, n227,σ1°17/242,mb4.4/54,2C,Banda Sea

Code	Station Name	Δ°	Az°	Phase	Op	ID	ISC	Time h m s	Res ISC
AAI	**Ambon**	**3.05**	**12**	**P**	**P**		**P**	**12 43 49.7**	**-0.3**
BNDI	**Bandanaira**	**3.17**	**47**	**P**	**P**		**P**	**12 43 51.1**	**+0.1**
BNDI	**Bandanaira**	**3.17**	**47**	**S**	**S**		**S**	**12 44 45.8**	**+1.6**
BNDI	**Bandanaira**	**3.17**	**47**	**P**	**P**		**P**	**12 43 50.3**	**-0.7**
KRAI	**Karang Ratu**	**3.45**	**14**	**P**	**P**		**P**	**12 43 51.9**	**-1.4**
NLAI	**Namlea**	**3.46**	**352**	**P**	**P**		**P**	**12 43 53.7**	**+0.3**
MSAI	**Masohi**	**3.59**	**22**	**P**	**P**		**P**	**12 43 52.4**	**-2.1**
SAUI	**Saumlaki**	**3.92**	**109**	**P**	**P**		**P**	**12 43 56.8**	**-0.7**
SAUI	**Saumlaki**	**3.92**	**109**	**S**	**S**		**S**	**12 44 56.1**	**-0.1**
SAUI	**Saumlaki**	**3.92**	**109**				**P**	**12 43 57.3**	**-0.3**
SAUI	**Saumlaki**	**3.92**	**109**	**P**	**P**		**P**	**12 43 57.9**	**+0.4**
SOEI	**Soe**	**4.46**	**227**	**P**	**P**		**P**	**12 44 03.3**	**+0.6**
SOEI	**Soe**	**4.46**	**227**	**S**	**S**		**S**	**12 45 04.6**	**-1.1**
SOEI	**Soe**	**4.46**	**227**				**P**	**12 44 03.1**	**+0.4**
SOEI	**Soe**	**4.46**	**227**	**P**	**P**		**P**	**12 44 02.9**	**+0.2**
SANI	**Sanana**	**4.87**	**341**	**P**	**P**		**P**	**12 44 05.6**	**-1.0**
SANI	**Sanana**	**4.87**	**341**	**P**	**P**		**P**	**12 44 05.0**	**-1.6**
BATI	**Baumata**	**5.21**	**228**	**P**	**P**		**P**	**12 44 10.8**	**+0.8**
	452nm,0.5s,baz=115,slow=1.1,SNR=138								
BATI					S		**S**	**12 45 18.1**	**-1.0**
	646nm,0.7s,baz=349,slow=17,SNR=17								
BATI	**Baumata**	**5.21**	**228**		P		**P**	**12 44 10.6**	**+0.5**
MMRI	**Maumere**	**5.62**	**250**		P		**P**	**12 44 16.2**	**+1.9**
MMRI	**Maumere**	**5.62**	**250**		S		**S**	**12 45 28.0**	**+0.9**
MMRI	**Maumere**	**5.62**	**250**				**P**	**12 44 15.0**	**+0.6**
MMRI	**Maumere**	**5.62**	**250**		P		**P**	**12 44 16.0**	**+1.7**
	0.4nm35nm,0.6s								
EDFI	**Ende, Flores**	**6.17**	**250**		P		**P**	**12 44 21.2**	**+0.9**
KKSI	**Kolaka, Sulawe**	**6.39**	**293**		P		**P**	**12 44 23.6**	**+1.0**
	0.5nm2µm96nm,0.5s								
DRS	**Darwin Rock St**	**6.59**	**150**		P		**P**	**12 44 25.5**	**+0.2**
KMPI	**Kaimana, Papua**	**6.82**	**64**		P		**P**	**12 44 26.6**	**-1.3**
	5µm309nm,0.7s								
SIJI	**Sorong**	**6.86**	**33**		P		**P**	**12 44 26.8**	**-1.6**
	40nm,0.5s,baz=303,slow=6.4,SNR=36								
SIJI					S		**S**	**12 45 43.7**	**-8.0**
	52nm,0.4s,baz=116,slow=23,SNR=19								
SIJI	**Sorong**	**6.86**	**33**		P		**P**	**12 44 26.8**	**-1.6**
	0.5nm2µm47nm,0.6s								
SWI	**Sorong**	**6.86**	**33**		P		**P**	**12 44 27.0**	**-1.4**
	1.0nm43nm,0.7s								
BSSI	**Bau Bau, Buton**	**7.05**	**274**		P		**P**	**12 44 30.6**	**+0.2**
	0.2nm76nm,0.7s								
MTN	**Manton Dam**	**7.06**	**150**				**P**	**12 44 30.0**	**-0.5**
LUWI	**Luwuk**	**7.37**	**319**		P		**P**	**12 44 34.0**	**+0.1**
LUWI	**Luwuk**	**7.37**	**319**		P		**P**	**12 44 34.2**	**+0.3**
	1.0nm243nm,0.8s								
WSI	**Waingapu**	**7.78**	**247**		P		**P**	**12 44 37.8**	**-0.6**
	66nm,0.6s								
LBFI	**Labuhan Bajo,**	**7.81**	**256**		P		**P**	**12 44 39.8**	**+1.0**
KAPI	**Kappang**	**7.95**	**282**		P		**P**	**12 44 40.8**	**+0.6**
	64nm,0.6s,baz=116,slow=5.2,SNR=58								
KAPI	**Kappang**	**7.95**	**282**		P		**P**	**12 44 41.8**	**+1.5**
KAPI	**Kappang**	**7.95**	**282**		P		**P**	**12 44 40.3**	**0.0**
	0.2nm60nm,0.8s								
MKS	**Makassar**	**8.18**	**280**		P		**P**	**12 44 43.9**	**+1.1**
	73nm,1.0s								
SPSI	**Sidrap Palu**	**8.22**	**289**		P		**P**	**12 44 44.2**	**+1.0**
	67nm,0.9s								
APSI	**Ampana**	**8.23**	**314**		P		**P**	**12 44 44.2**	**+0.9**
	0.4nm1µm134nm,1.0s								
RKPI	**Ransiki, Papua**	**8.36**	**52**		P		**P**	**12 44 44.4**	**-0.4**
	275nm,0.8s								
TTSI	**Tana Toraja**	**8.52**	**295**		P		**P**	**12 44 47.6**	**+1.1**
	2µm162nm,0.8s								
MNI	**Manado**	**8.52**	**341**		P		**P**	**12 44 46.5**	**-0.1**
	0.6nm3µm5µm148nm,0.6s								
WBSI	**Waikabubak, Su**	**8.60**	**250**		P		**P**	**12 44 46.3**	**-1.2**
	47nm,0.9s								
MWPI	**Manokwari, Pap**	**8.63**	**49**		P		**P**	**12 44 47.5**	**-0.3**
	108nm,1.1s								
KNRA	**Kununurra**	**9.01**	**173**				**P**	**12 44 52.4**	**+0.4**
MRSI	**Marisa**	**9.06**	**322**		P		**P**	**12 44 52.3**	**-0.2**
	74nm,0.6s								
PMSI	**Majene**	**9.18**	**290**		P		**P**	**12 44 55.2**	**+1.4**
	2µm134nm,0.9s								
DBNI	**Kabupaten Domp**	**9.35**	**258**		P		**P**	**12 44 54.9**	**-0.8**
MMSI	**Mamuju**	**9.49**	**294**		P		**P**	**12 44 58.7**	**+1.4**
	1µm113nm,0.8s								
PLAI	**Plampang**	**9.93**	**257**		P		**P**	**12 45 01.7**	**-0.4**
PLAI	**Plampang**	**9.93**	**257**		P		**P**	**12 45 00.2**	**-1.9**
	55nm,0.7s								
BAKI	**Biak**	**10.12**	**58**		P		**P**	**12 45 06.0**	**+1.7**
	156nm,0.8s								
TOLI2	**Tolitoli**	**10.29**	**319**		P		**P**	**12 45 06.1**	**0.0**
TOLI2	**Tolitoli**	**10.29**	**319**		S		**S**	**12 47 05.3**	**+3.1**
MPSI	**Mapaga**	**10.35**	**312**		P		**P**	**12 45 08.0**	**+1.2**
FITZ	**Fitzroy Crossi**	**11.50**	**189**		P		**P**	**12 45 19.8**	**+0.4**
	26nm,0.4s,baz=18,slow=9.8,SNR=208								
FITZ					S		**S**	**12 47 23.9**	**-2.6**
	17nm,0.7s,baz=85,slow=15,SNR=3.7								
BBKI	**Banjar Baru**	**13.07**	**284**		P		**P**	**12 45 38.7**	**+2.0**
	2µm111nm,1.0s								
JAGI	**Jajag, Banyuwa**	**13.41**	**262**		P		**P**	**12 45 39.9**	**-0.6**
JAGI	**Jajag, Banyuwa**	**13.41**	**262**		P		**P**	**12 45 38.9**	**-1.5**
KMMI	**Kalianget**	**13.50**	**268**		P		**P**	**12 45 44.8**	**+3.4**
	83nm,1.1s								
JAY	**Jayapura**	**13.74**	**73**		P		**P**	**12 45 45.0**	**+0.9**
	4.1nm,0.3s,baz=227,slow=7.6,SNR=5.7								
WB0	**Warramunga Arr**	**14.60**	**154**		P		**P**	**12 45 53.3**	**0.0**
WRAB	**Tennant Creek**	**14.72**	**154**		P		**P**	**12 45 54.3**	**-0.4**
WRAB	**Tennant Creek**	**14.72**	**154**		P		**P**	**12 45 54.6**	**-0.1**
WRA	**Warramunga Arr**	**14.73**	**154**		P		**P**	**12 45 54.3**	**-0.4**
	189nm,0.6s,baz=330,slow=11,SNR=401								
WRA					S		**S**	**12 48 25.2**	**-6.0**
	6.4nm,0.6s,baz=327,slow=17,SNR=1.3								
WRA	**Warramunga Arr**	**14.73**	**154**		P		**P**	**12 45 54.4**	**-0.3**
WR8	**Warramunga Arr**	**14.81**	**154**		P		**P**	**12 45 55.7**	**+0.1**
MYLDM	**Lahad Datu**	**14.86**	**322**		P		**P**	**12 45 57.5**	**+1.3**
MYLDM	**Lahad Datu**	**14.86**	**322**		P		**P**	**12 45 57.6**	**+1.4**
SNJI	**Sawahan-Nganju**	**15.71**	**265**		P		**P**	**12 46 05.2**	**-0.4**
	25nm,0.6s								
MBWA	**Marble Bar**	**16.26**	**207**		P		**P**	**12 46 11.7**	**+0.6**
MBWA	**Marble Bar**	**16.26**	**207**		P		**P**	**12 46 11.1**	**-0.1**
MBWA					IAmb	IAmb		12 46 12.2	
	comp=Z,16nm,0.7s								
PSA00	**Pilbara Seismi**	**16.57**	**206**		P		**P**	**12 46 15.1**	**+0.6**
PSA00	**Pilbara Seismi**	**16.57**	**206**		P		**P**	**12 46 14.3**	**-0.2**
PSA00					IAmb	IAmb		12 46 15.5	
	comp=Z,20nm,1.4s								
PSA00	**Pilbara Seismi**	**16.57**	**206**		P		**P**	**12 46 14.8**	**+0.3**
PSA00					IAmb	IAmb		12 46 16.2	
	comp=Z,13nm,0.9s								
COEN	**Coen**	**16.97**	**116**		P		**P**	**12 46 18.2**	**-0.5**
COEN	**Coen**	**16.97**	**116**				**P**	**12 46 18.4**	**-0.3**
KKM	**Kota Kinabalu**	**16.98**	**318**		P		**P**	**12 46 20.7**	**+1.8**
KKM	**Kota Kinabalu**	**16.98**	**318**		P		**P**	**12 46 20.7**	**+1.8**
SBUM	**Sibu**	**17.80**	**300**		P		**P**	**12 46 28.8**	**+1.2**
SBUM	**Sibu**	**17.80**	**300**		P		**P**	**12 46 27.2**	**-0.4**
SBUM	**Sibu**	**17.80**	**300**		P		**P**	**12 46 28.6**	**+1.0**
AS31	**Alice Springs**	**17.95**	**161**		P		**P**	**12 46 29.3**	**+0.2**
ASAR	**Alice Springs**	**17.95**	**161**		P		**P**	**12 46 28.9**	**-0.2**
	comp=Z,95nm,0.5s,baz=348,slow=13,SNR=1354								
ASAR					S		**S**	**12 49 32.5**	**-1.4**
	comp=Z,13nm,0.8s,baz=335,slow=18,SNR=10								
ASAR					PcP		**PcP**	**12 50 42.0**	**-0.7**
	comp=Z,1.9nm,0.4s,baz=14,slow=2.1,SNR=4.5								
ASAR	**Alice Springs**	**17.95**	**161**		P		**P**	**12 46 29.4**	**+0.2**
QIS	**Mount Isa**	**18.07**	**141**		P		**P**	**12 46 30.2**	**-0.2**
QIS	**Mount Isa**	**18.07**	**141**		S		**S**	**12 49 35.9**	**-0.1**
PMG	**Port Moresby**	**19.59**	**99**		P		**P**	**12 46 45.6**	**+0.1**
	comp=Z,16nm,0.4s,baz=259,slow=19,SNR=20								
PMG	**Port Moresby**	**19.59**	**99**		P		**P**	**12 46 46.1**	**+0.5**
PMG	**Port Moresby**	**19.59**	**99**		P		**P**	**12 46 46.0**	**+0.5**
PMG	**Port Moresby**	**19.59**	**99**		P		**P**	**12 46 45.8**	**+0.1**
PMG	**Port Moresby**	**19.59**	**99**		P		**P**	**12 46 45.7**	**+0.1**
	comp=Z,23nm,0.6s								
BBJI	**Bungbulang**	**19.77**	**267**		P		**P**	**12 46 47.6**	**+0.3**
BBJI	**Bungbulang**	**19.77**	**267**		P		**P**	**12 46 46.5**	**-0.9**
BBJI					IAmb	IAmb		12 46 48.6	
	comp=Z,13nm,0.8s								
LEM	**Lembang**	**19.81**	**268**		P		P	12 46 40.5	-7.2
	comp=Z,50nm,0.3s,baz=143,slow=20,SNR=4.8								
MTSU	**Mount Surprise**	**19.91**	**126**		P		**P**	**12 46 48.8**	**+0.4**
GIRL	**Giralia**	**20.41**	**218**		P		**P**	**12 46 54.0**	**+1.1**
MEEK	**Meekatharra**	**21.59**	**202**		P		**P**	**12 47 03.8**	**+0.1**
CTA	**Charters Tower**	**22.50**	**128**		P		**P**	**12 47 12.9**	**+0.8**
	comp=Z,10nm,0.6s,baz=297,slow=10,SNR=16								
	comp=Z,10nm,0.6s								
CTA	**Charters Tower**	**22.50**	**128**		P		**P**	**12 47 13.6**	**+1.5**
CTAO	**Charters Tower**	**22.50**	**128**		P		**P**	**12 47 13.6**	**+1.5**
CTAO	**Charters Tower**	**22.50**	**128**		P		**P**	**12 47 13.1**	**+1.0**
CTAO					IAmb	IAmb		12 47 14.1	
	comp=Z,14nm,0.8s								
FORT	**Forrest**	**23.97**	**179**		P		**P**	**12 47 25.1**	**0.0**
FORT					IAmb	IAmb		12 48 02.4	
	comp=Z,16nm,1.1s								
INKA	**Innaminka**	**24.39**	**151**		P		**P**	**12 47 29.6**	**+0.7**
INKA					IAmb	IAmb		12 47 41.9	
	comp=Z,7.8nm,0.6s								
MORW	**Morawa**	**24.78**	**205**		P		**P**	**12 47 32.6**	**+0.3**
MORW					IAmb	IAmb		12 47 52.7	
	comp=Z,21nm,1.4s								
MYKOM	**Kota Tinggi**	**25.12**	**289**		P		**P**	**12 47 36.7**	**+1.1**
MYKOM					IAmb	IAmb		12 47 54.0	
	comp=Z,20nm,1.2s								
QLP	**Quilpie**	**25.37**	**143**		P		**P**	**12 47 37.9**	**+0.3**
BLDU	**Ballidu**	**25.89**	**202**		P		**P**	**12 47 43.3**	**+1.1**
KLBR	**Kellerberrin**	**26.42**	**199**		P		**P**	**12 47 47.4**	**+0.5**
BBOO	**Buckleboo**	**27.17**	**164**		P		**P**	**12 47 54.0**	**+0.5**
BBOO	**Buckleboo**	**27.17**	**164**		P		**P**	**12 47 53.9**	**+0.4**
BBOO					IAmb	IAmb		12 47 54.5	
	comp=Z,23nm,1.1s								
NWAO	**Narrogin (SRO)**	**27.82**	**199**		P		**P**	**12 47 59.4**	**+0.1**
NWAO					IAmb	IAmb		12 48 07.4	
	comp=Z,50nm,1.4s								
STKA	**Stephens Creek**	**28.28**	**154**		P		**P**	**12 48 03.7**	**+0.4**
	comp=Z,23nm,0.4s,baz=332,slow=8.8,SNR=92								
	comp=Z,23nm,0.4s								
STKA	**Stephens Creek**	**28.28**	**154**		P		**P**	**12 48 03.7**	**+0.4**
STKA	**Stephens Creek**	**28.28**	**154**		P		**P**	**12 48 03.8**	**+0.5**
HTT	**Hallett**	**28.62**	**160**		P		**P**	**12 48 06.8**	**+0.4**
EIDS	**Eidsvold**	**29.16**	**132**		P		**P**	**12 48 10.3**	**-0.9**
CMSA	**Cobar Meteorol**	**29.98**	**148**		P		**P**	**12 48 18.9**	**+0.7**
RPSI	**Rantau Prapat**	**30.07**	**287**		P		**P**	**12 48 18.1**	**-1.1**
RPSI					IAmb	IAmb		12 48 20.9	
	comp=Z,14nm,0.8s								
TATA	**Tatamba Isabel**	**32.00**	**95**		P		**P**	**12 48 36.8**	**+0.8**
ARMA	**Armidale**	**32.68**	**139**		P		**P**	**12 48 43.1**	**+1.4**
ARMA	**Armidale**	**32.68**	**139**		P		**P**	**12 48 43.0**	**+1.2**
ARMA					IAmb	IAmb		12 49 03.4	
	comp=Z,51nm,1.4s								
MGBR	**Mount Gambier**	**33.08**	**161**		P		**P**	**12 48 46.3**	**+1.4**
CAN	**Canberra**	**34.65**	**148**		P		**P**	**12 48 59.8**	**+1.4**
CAN	**Canberra**	**34.65**	**148**		P		**P**	**12 49 00.2**	**+1.8**
CAN					IAmb	IAmb		12 49 00.3	
	comp=Z,17nm,0.6s								
TOO	**Toolangi**	**34.80**	**155**		P		**P**	**12 49 01.4**	**+1.8**
CNB	**Canberra Magne**	**34.84**	**148**		P		**P**	**12 49 01.0**	**+1.0**
WOLH	**Wollongong Har**	**34.99**	**145**		P		**P**	**12 49 00.3**	**-0.8**
CMAR	**Chiang Mai Arr**	**37.70**	**312**		P		**P**	**12 49 23.6**	**-0.4**
	comp=Z,3.7nm,0.7s,baz=138,slow=6.7,SNR=14								
CMAR					PcP		**PcP**	**12 51 31.6**	**+0.4**
	comp=Z,1.6nm,0.5s,baz=149,slow=2.1,SNR=7.7								
	comp=Z,3.7nm,0.7s								
CHTO	**Chiang Mai**	**37.92**	**312**		P		**P**	**12 49 25.3**	**-0.5**
NJ2	**Nanjing**	**39.41**	**348**		*e*P		**P**	**12 49 39.4**	**+1.7**
NJ2					pmax	pmax			
	comp=Z,24nm,0.5s								
PZH	**PanZhiHua**	**41.42**	**324**		P		**P**	**12 49 56.3**	**+2.0**
KSRS	**Korea Array**	**43.91**	**0**		P		**P**	**12 50 14.1**	**+0.4**
	comp=Z,1.2nm,0.6s,baz=179,slow=9.8,SNR=6.9								
KSRS					PcP		**PcP**	**12 51 51.6**	**+0.4**
	comp=Z,2.7nm,0.7s,baz=195,slow=3.6,SNR=6.0								
	comp=Z,1.2nm,0.6s								
MJAR	**Matsushiro Arr**	**44.15**	**12**		P		**P**	**12 50 14.4**	**-1.2**
	comp=Z,2.9nm,0.6s,baz=190,slow=9.3,SNR=13								
	comp=Z,2.9nm,0.6s								
MJAR	**Matsushiro Arr**	**44.15**	**12**		P		**P**	**12 50 14.5**	**-1.1**
XAN	**Xi'an**	**44.19**	**338**	⇑	P		**P**	**12 50 15.1**	**-0.8**
XAN					pmax	pmax			
	comp=Z,9.0nm,0.8s								
HNS	**HongShan**	**45.47**	**346**	⇑	P		**P**	**12 50 24.8**	**-1.0**
HNS					pmax	pmax			
	comp=Z,8.0nm,1.0s								
SHL	**Shillong**	**47.23**	**314**		P		**P**	**12 50 38.6**	**-1.1**
SHL					IAmb	IAmb		12 50 40.4	
	comp=Z,10nm,0.7s								
LZDM	**Lanzhou Array**	**47.98**	**334**		P		**P**	**12 50 44.4**	**-1.0**
	comp=Z,2.6nm,0.4s,baz=187,slow=10,SNR=6.1								
LZDM					PcP		**pP**	**12 52 07.1**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=157,slow=4.7,SNR=1.4								
	comp=Z,2.6nm,0.4s								
PALK	**Pallekele**	**48.76**	**286**		P		**P**	**12 50 50.3**	**-1.0**
HHC	**Hu-ho-hao-te**	**49.54**	**344**		*e*P		**P**	**12 50 58.8**	**+2.1**
HHC					pmax	pmax			
	comp=Z,6.0nm,0.7s								
HHC					pmax	pmax			
	comp=Z,160nm,4.9s								
LSA	**Lhasa**	**50.32**	**318**		P		**P**	**12 51 00.6**	**-2.6**
LSA					pmax	pmax			
	comp=Z,14nm,0.6s								
USRK	**Ussuriysk Ar.**	**50.81**	**4**		P		**P**	**12 51 06.0**	**+0.1**
	comp=Z,5.5nm,0.6s,baz=182,slow=5.5,SNR=7.1								
	comp=Z,5.5nm,0.6s								
JCZ	**Jackson Bay**	**51.78**	**143**		P		**P**	**12 51 14.0**	**+0.8**
EVN	**Everest**	**52.28**	**313**		P		**P**	**12 51 17.4**	**-0.4**
EVN					IAmb	IAmb		12 51 18.1	
	comp=Z,14nm,0.6s								
WHZ	**Wether Hill Ro**	**52.32**	**145**		P		**P**	**12 51 17.1**	**+0.1**
JKA	**Kamikawa-asahi**	**52.36**	**14**		P		**P**	**12 51 17.2**	**0.0**
QRZ	**Quartz Range**	**52.51**	**137**		P		**P**	**12 51 18.7**	**+0.2**
QRZ	**Quartz Range**	**52.51**	**137**		P		**P**	**12 51 20.2**	**+1.7**
QRZ		

QSPA	**South Pole Qui**	**83.29**	**180**	P		**P**		**12 54 26.8**	**-0.4**
	comp=Z,2.5nm,0.6s,baz=307,slow=1.4,SNR=26								
	comp=Z,2.5nm,0.6s								
QSPA	**South Pole Qui**	**83.29**	**180**			**P**		**12 54 27.3**	**0.0**
GAMB	**Gambell**	**83.56**	**23**			**P**		**12 54 29.0**	**+0.6**
GAMB					IAmb	IAmb		12 54 29.7	
	comp=Z,5.5nm,0.7s								
ARTI	**Arti**	**84.25**	**329**			**P**		**12 54 31.5**	**-0.6**
RAYN	**Ar Rayn**	**85.41**	**294**			**P**		**12 54 38.8**	**+0.2**
RAYN					IAmb	IAmb		12 54 39.1	
	comp=Z,8.4nm,0.8s								
M14K	**Bethel**	**86.43**	**28**	P		**P**		**12 54 43.0**	**+0.5**
N15K	**Kwethluk River**	**87.11**	**28**			**P**		**12 54 46.0**	**+0.2**
N15K					IAmb	IAmb		12 54 46.9	
	comp=Z,8.2nm,0.8s								
J16K	**Anvik River**	**87.89**	**25**			**P**		**12 54 49.3**	**-0.1**
C16K	**Lisburne Hills**	**87.90**	**20**	P		**P**		**12 54 48.4**	**-0.9**
K17K	**Iditarod**	**88.71**	**26**			**P**		**12 54 53.4**	**+0.2**
K17K					IAmb	IAmb		12 54 54.2	
	comp=Z,5.1nm,0.8s								
M20K	**Styx River**	**90.83**	**28**	P		**P**		**12 55 02.6**	**-0.6**
M20K					IAmb	IAmb		12 55 03.7	
	comp=Z,6.7nm,0.9s								
RC01	**Rabbit Creek A**	**92.28**	**29**	P		**P**		**12 55 08.2**	**-1.6**
RC01					IAmb	IAmb		12 55 09.4	
	comp=Z,5.2nm,0.7s								
KNK	**Knik Glacier**	**92.94**	**29**	P		**P**		**12 55 12.1**	**-0.8**
G23K	**Bananza Creek**	**93.10**	**23**			**P**		**12 55 13.1**	**-0.4**
G23K					IAmb	IAmb		12 55 14.4	
	comp=Z,5.5nm,1.1s								
DHY	**Denali Highway**	**93.67**	**27**	P		**P**		**12 55 15.3**	**-1.1**
DHY					IAmb	IAmb		12 55 16.6	
	comp=Z,6.1nm,1.2s								
ILAR	**Eielson Array**	**94.10**	**25**	P		**P**		**12 55 16.2**	**-1.9**
	comp=Z,0.5nm,0.6s,baz=260,slow=5.0,SNR=13								
	comp=Z,0.5nm,0.6s								
M24K	**Tolsona, Glenn**	**94.11**	**28**	P		**P**		**12 55 18.0**	**-0.3**
BOSA	**Boshof**	**97.53**	**240**	P		**P**		**12 55 33.9**	**-0.8**
	comp=Z,2.9nm,1.0s,baz=167,slow=20,SNR=2.0								
	comp=Z,2.9nm,1.0s								
SPITS	**Spitsbergen Ar**	**100.79**	**349**	P		**Pdif**		**12 55 46.7**	**-1.2**
	comp=Z,4.0nm,0.8s,baz=129,slow=8.7,SNR=4.1								
FINES	**FINESS Array B**	**101.33**	**331**	PKiKP		**PKiKP**		**13 00 11.1**	**-1.3**
	comp=Z,3.4nm,1.0s,baz=90,slow=1.9,SNR=5.0								
YKA	**Yellowknife Ar**	**108.53**	**26**	PKiKP		**PKiKP**		**13 00 25.1**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=306,slow=2.3,SNR=13								
GERES	**GERESS Array B**	**110.63**	**320**	PKiKP		**PKiKP**		**13 00 29.6**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=79,slow=2.1,SNR=2.9								
EKA	**Eskdalemuir Ar**	**117.72**	**331**	PKP		**PKPdf**		**13 00 43.1**	**-0.4**
	comp=Z,3.8nm,1.0s,baz=44,slow=3.2,SNR=3.8								
PDAR	**Pinedale Array**	**118.38**	**45**	PKP		**PKPdf**		**13 00 45.5**	**0.0**
	comp=Z,0.7nm,0.6s,baz=147,slow=1.0,SNR=10								
ULM	**Lac du Bonnet**	**123.49**	**32**	PKP		**PKPdf**		**13 00 53.8**	**-0.9**
	comp=Z,3.1nm,0.6s,baz=243,slow=2.5,SNR=8.0								
ESDC	**Sonseca Array**	**125.58**	**315**	PKP		**PKPdf**		**13 00 59.1**	**0.0**
	comp=Z,1.0nm,1.1s,baz=27,slow=4.2,SNR=4.7								
TORD	**Torodi Ar. Bea**	**126.37**	**281**	PKP		**PKPdf**		**13 01 00.7**	**-0.6**
	comp=Z,2.8nm,0.7s,baz=165,slow=1.2,SNR=14								
TXAR	**Lajitas Array**	**126.83**	**58**	PKP		**PKPdf**		**13 01 02.1**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=186,slow=2.2,SNR=12								
PLCA	**Paso Flores**	**129.96**	**162**	PKP		**PKiKP**		**13 01 08.5**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=249,slow=5.5,SNR=4.1								
SCHQ	**Schefferville**	**130.62**	**11**	PKP		**PKPdf**		**13 01 08.8**	**+0.6**
	comp=Z,1.8nm,0.4s,baz=273,slow=1.7,SNR=7.4								
DBIC	**Dimbokro**	**132.76**	**273**	PKP		**PKPdf**		**13 01 14.2**	**+0.8**
	comp=Z,5.5nm,1.1s,baz=12,slow=2.9,SNR=4.3								
CPUP	**Villa Florida**	**146.84**	**172**	PKPbc		**PKPbc**		**13 01 40.6**	**-0.3**
	comp=Z,5.9nm,0.8s,baz=204,slow=2.3,SNR=12								
LPAZ	**La Paz**	**152.39**	**146**	PKP		**PKPdf**		**13 01 48.5**	**+0.3**
	comp=Z,1.2nm,0.9s,baz=290,slow=2.9,SNR=3.5								
LPAZ					PKPbc	**PKPbc**		**13 01 55.4**	**0.0**
	comp=Z,3.1nm,0.4s,baz=160,slow=12,SNR=22								
LPAZ					PKPab	**PKPab**		**13 02 08.5**	**+1.3**
	comp=Z,2.4nm,0.6s,baz=235,slow=7.9,SNR=7.2								
SIV	**San Ignacio**	**155.90**	**159**	PKP		**PKPdf**		**13 01 52.6**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=189,slow=3.9,SNR=3.9								
SIV					PKPab	**PKPab**		**13 02 21.9**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=175,slow=4.9,SNR=4.0								
BDFB	**Brasilia**	**157.39**	**191**	PKP		**PKPdf**		**13 01 52.5**	**-1.8**
	comp=Z,2.4nm,0.8s,baz=158,slow=5.4,SNR=3.3								

*IDC **15** 13:09:09.2±3.7,3.°00S×100.°91E, h0km, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=168.4km s-min=22.3km az=55.0*
*DJA **15** 13:09:16.7±0.5,3.°S±3.°×10.°1E±.°, h17km±4km, M3.6/22, MLv3.6/22*
ISC 15 13:09:16.7±0.9,**2.°89S**±0.°06×**101.°01E**±0.°07,**h46**km,**n21,**
σ1§25/16,mb3.5/5,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRJI	**Kerinci**	**0.91**	**30**	P	**Pn**	**13 09 33.9**	**+0.7**
KRJI				S	**Sn**	**13 09 46.8**	**+1.5**
PPSI	**Pulau Pagai**	**1.00**	**277**	P	**Pn**	**13 09 35.9**	**+1.5**
MASI	**Maura Aman, Be**	**1.26**	**102**	P	**Pn**	**13 09 37.6**	**-0.2**
UBSI	**University, Be**	**1.53**	**125**	P	**Pn**	**13 09 42.8**	**+1.2**
KSI	**Kapahiang**	**1.76**	**116**	P	**Pn**	**13 09 46.5**	**+1.8**
PDSI	**Padang**	**2.04**	**344**	P	**Pn**	**13 09 49.0**	**+0.5**
MNAI	**Manna**	**2.43**	**127**	P	**Pn**	**13 09 56.0**	**+2.0**
EGSI	**Enggano, Bengk**	**2.76**	**153**	P	**Pn**	**13 09 58.2**	**-0.2**
KLSI		**4.12**	**116**	P	**Pn**	**13 10 18.7**	**+1.5**
H08S2	**Diego Garcia H**	**28.77**	**259**	T	T	13 44 34.1	
	baz=82,slow=76,SNR=7.8						
H08S3	**Diego Garcia H**	**28.78**	**259**	T	T	13 44 34.5	
	baz=82,slow=76,SNR=11						
H08S1	**Diego Carcia H**	**28.79**	**259**	T	T	13 44 35.4	
	baz=82,slow=76,SNR=6.8						
WRA	**Warramunga Arr**	**36.68**	**120**	P	**P**	**13 16 17.9**	**-1.6**
	0.2nm,0.4s,baz=302,slow=8.7,SNR=6.3						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**37.92**	**126**	P	**P**	**13 16 29.1**	**-0.8**
	0.1nm,0.5s,baz=301,slow=8.1,SNR=7.6						
	0.1nm,0.5s						
SONM	**Songino Array**	**50.73**	**5**	P	**P**	**13 18 11.8**	**-0.2**
	0.3nm,0.6s,baz=188,slow=8.7,SNR=2.8						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**52.15**	**344**	P	**P**	**13 18 22.4**	**-0.1**
	0.4nm,0.6s,baz=167,slow=9.0,SNR=4.3						
	0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**58.22**	**349**	P	**P**	**13 19 05.5**	**-0.6**
	1.2nm,0.6s,baz=150,slow=6.2,SNR=6.5						
	1.2nm,0.6s						
H04N2	**CROZET ISLANDS**	**60.69**	**217**	T	T	14 24 39.2	
	baz=60,slow=75,SNR=21						
H04N1	**CROZET ISLANDS**	**60.70**	**217**	T	T	14 24 31.2	
	baz=60,slow=75,SNR=23						
H04N3	**CROZET ISLANDS**	**60.71**	**217**	T	T	14 24 30.1	
	baz=60,slow=75,SNR=25						
TXAR	**Lajitas Array**	**144.77**	**39**	PKP	**PKPab**	**13 28 48.1**	**-0.2**
	0.1nm,0.5s,baz=261,slow=0.8,SNR=5.2						

*IDC **15** 13:10:45.3±1.4,28.°83N×95.°50E, h0km, mb3.4/6, mbtmp3.4/6, MS3.2/1, Error ellipse: s-maj=73.4km s-min=20.1km az=63.0*
ISC 15 13:10:46.7±1.1,**28.°85N**±0.°08×**95.°8E**±0.°1,**h10**km,**n18,**
σ2§10/16,mb3.5/4,Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PASG	**PASIGHAT**	**0.89**	**208**	*eP*	**Pg**	**13 11 03.3**	**-0.6**
PASG				*ex*	**Sg**	**13 11 15.6**	**0.0**
PASG				IAML		13 11 16.0	
	comp=E,420nm,0.4s						
PASG				IAML		13 11 16.6	
	comp=N,316nm,0.3s						
ZIRO	**ZIRO**	**2.17**	**233**	*eP*	**Pn**	**13 11 20.2**	**-2.9**
ZIRO				IAML		13 11 47.4	
	comp=N,385nm,0.3s						
ZIRO				IAML		13 11 49.1	
	comp=E,404nm,0.5s						
ITAN	**ITANAGAR**	**2.51**	**228**	*eP*	**Pn**	**13 11 25.6**	**-2.0**
ITAN				IAML		13 11 59.1	
	comp=N,515nm,0.3s						
ITAN				IAML		13 11 59.3	
	comp=E,140nm,0.5s						
ITAN				*eS*	**Sn**	**13 11 59.9**	**+1.7**
JORH	**JORHAT**	**2.51**	**214**	*eS*	**Sn**	**13 12 00.9**	**+2.6**
JORH				IAML		13 12 01.7	
	comp=E,672nm,0.5s						
JORH				IAML		13 12 02.4	
	comp=N,349nm,0.4s						
MOKO	**MOKOCHONG**	**2.77**	**205**	*eP*	Pn	13 11 25.9	-5.4
MOKO				*eS*	**Sn**	**13 12 03.4**	**-1.5**
MOKO				IAML		13 12 11.9	
	comp=N,461nm,0.3s						
MOKO				IAML		13 12 12.2	
	comp=E,578nm,0.4s						
KOHI	**KOHIMA**	**3.46**	**206**	IAML		13 12 43.8	
	comp=E,491nm,0.7s						
KOHI				IAML		13 12 44.2	
	comp=N,434nm,0.5s						
TEZP	**TEZPUR**	**3.47**	**231**	*eP*	Pn	13 11 36.5	-4.3
TEZP				*eS*	**Sn**	**13 12 24.0**	**+2.0**
TEZP				IAML		13 12 25.5	
	comp=E,470nm,0.2s						
TEZP				IAML		13 12 26.8	
	comp=N,574nm,0.2s						
TAWA	**Tawang**	**3.69**	**251**	*eS*	**Sn**	**13 12 29.1**	**+1.0**
TAWA				IAML		13 12 32.6	
	comp=E,526nm,0.4s						
TAWA				IAML		13 12 33.0	
	comp=N,417nm,0.5s						
LSA	**Lhasa**	**4.16**	**283**	Pn	Pn	13 11 44.0	-6.7
LSA				Sn	Sn	13 12 24.9	-15
LSA				smax	smax		
	comp=N,20nm,0.7s						
LSA				smax	smax		
	comp=E,15nm,0.7s						
IMP	**Imphal**	**4.33**	**203**	IAML		13 13 05.3	
	comp=N,514nm,0.3s						
IMP				IAML		13 13 06.1	
	comp=E,619nm,0.5s						
GUWA	**GUWAHATI**	**4.51**	**235**	*eS*	**Sn**	**13 12 52.0**	**+4.3**
GUWA				IAML		13 12 58.7	
	comp=N,180nm,0.4s						
GUWA				IAML		13 13 01.3	
	comp=E,186nm,0.7s						
SONM	**Songino Array**	**20.66**	**21**	P	**P**	**13 15 27.8**	**+1.1**
	comp=E,0.3nm,0.5s,baz=218,slow=13,SNR=3.3						
	comp=E,0.3nm,0.5s						
MKAR	**Makanchi Array**	**20.80**	**333**	P	**P**	**13 15 26.3**	**-1.8**
	comp=E,1.0nm,0.6s,baz=141,slow=12,SNR=14						
	comp=E,1.0nm,0.6s						
KURBB	**Kurchatov Arra**	**25.36**	**334**	P	**P**	**13 16 13.3**	**-0.5**
	comp=E,0.7nm,0.2s,baz=145,slow=9.9,SNR=6.1						
	comp=E,0.7nm,0.2s						
ZALV	**Zalesovo Beam**	**26.33**	**345**	P	**P**	**13 16 22.6**	**0.0**
	comp=E,0.3nm,0.4s,baz=157,slow=12,SNR=1.6						
	comp=E,0.3nm,0.4s						
SEY	**Seymchan**	**49.62**	**30**	LR	LR	13 43 52.6	
	comp=E,25nm,20.3s,baz=326,slow=40						
WRA	**Warramunga Arr**	**61.13**	**138**	P	**P**	**13 21 03.1**	**+1.6**
	comp=E,0.2nm,0.7s,baz=322,slow=8.5,SNR=4.8						
	comp=E,0.2nm,0.7s						
ASAR	**Alice Springs**	**63.81**	**141**	P	**P**	**13 21 20.3**	**+1.0**
	comp=E,0.3nm,0.8s,baz=325,slow=6.1,SNR=5.9						
	comp=E,0.3nm,0.8s						

*IDC **15** 13:48:09.8±9.3,4.°21N×63.°05E, h0km, mb3.4/6, mbtmp3.4/6, MS3.2/16, Error ellipse: s-maj=300.4km s-min=29.3km az=73.0*
ISC 15 13:48:12.3±8.0,**4.°3N**±0.°5×**6.°3E**±.°,**h10**km,**n20,**σ0§**77/6,**
mb3.5/6,MS3.1/15,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALK	**Pallekele**	**17.62**	**79**	LR	LR	13 57 55.3	
	comp=Z,46nm,19.4s,baz=258,slow=33						
FURI	**Furi**	**24.82**	**282**	LR	LR	14 02 33.2	
	comp=Z,25nm,18.3s,baz=150,slow=35						
MBAR	**Mbarara**	**32.84**	**262**	LR	LR	14 08 16.7	
	comp=Z,28nm,18.1s,baz=111,slow=37						
BRDH	**Bariadhala**	**33.01**	**54**	LR	LR	14 07 07.9	
	comp=Z,68nm,21.3s,baz=264,slow=34						
ASF	**Jabal al Asfar**	**37.14**	**321**	LR	LR	14 09 46.9	
	comp=Z,23nm,20.1s,baz=201,slow=35						
CMAR	**Chiang Mai Arr**	**37.63**	**65**	LR	LR	14 10 49.1	
	comp=Z,13nm,18.1s,baz=185,slow=36						
MMAI	**Mount Meron Ar**	**38.64**	**321**	LR	LR	14 09 46.9	
	comp=Z,27nm,19.9s,baz=164,slow=34						
LSZ	**Lusaka**	**39.78**	**240**	LR	LR	14 09 40.6	
	comp=Z,24nm,18.2s,baz=154,slow=33						
MKAR	**Makanchi Array**	**45.45**	**18**	P	**P**	**13 56 31.5**	**0.0**
	0.1nm,0.5s,baz=208,slow=8.2,SNR=4.7						
MKAR				LR	LR	14 15 47.4	
	comp=Z,23nm,19.1s,baz=190,slow=36						
	0.1nm,0.5s						
AKTO	**Aktyubinsk**	**46.21**	**355**	LR	LR	14 15 17.2	
	comp=Z,27nm,19.9s,baz=306,slow=35						
LBTB	**Lobatse**	**46.74**	**230**	LR	LR	14 14 08.6	
	comp=Z,24nm,18.2s,baz=82,slow=34						
KURBB	**Kurchatov Arra**	**47.94**	**13**	P	**P**	**13 56 51.2**	**+0.3**
	0.1nm,0.5s,baz=220,slow=8.1,SNR=2.6						
	0.1nm,0.5s						
TSUM	**Tsumeb**	**50.62**	**241**	LR	LR	14 16 30.4	
	comp=Z,45nm,20.1s,baz=143,slow=34						
ZALV	**Zalesovo Beam**	**52.56**	**16**	P	**P**	**13 57 25.2**	**-0.7**
	0.3nm,0.4s,baz=218,slow=9.0,SNR=2.4						
	0.3nm,0.4s						
SUR	**Sutherland**	**54.31**	**225**	LR	LR	14 17 19.4	
	comp=Z,27nm,20.9s,baz=202,slow=32						
SONM	**Songino Array**	**56.98**	**33**	P	**P**	**13 57 58.6**	**+0.3**
	0.2nm,0.5s,baz=235,slow=5.1,SNR=1.4						
SONM				LR	LR	14 22 33.3	
	comp=Z,42nm,19.6s,baz=338,slow=36						
	0.2nm,0.5s						
TLY	**Talaya**	**57.94**	**28**	LR	LR	14 23 40.5	
	comp=Z,33nm,18.3s,baz=238,slow=37						
DBIC	**Dimbokro**	**67.79**	**275**	LR	LR	14 27 04.4	
	comp=Z,12nm,20.3s,baz=208,slow=34						
WRA	**Warramunga Arr**	**73.81**	**112**	P	**P**	**13 59 46.9**	**-0.8**
	1.1nm,1.0s,baz=290,slow=4.9,SNR=4.9						
	1.1nm,1.0s						
ASAR	**Alice Springs**	**74.14**	**116**	P	**P**	**13 59 50.3**	**+0.7**
	0.9nm,0.9s,baz=288,slow=5.1,SNR=8.5						
	0.9nm,0.9s						

*SOF **15** 14:12:27.3,41.°30N±0.°03×23.°58E±0.°01, h5km±3km, MD2.7/6*
*BEO **15** 14:12:30.2±0.3,41.°40N×23.°55E, h3km±3km, ML2.2/8*
ISC 15 14:12:29.7±1.2,**41.°42N**±0.°03×**23.°60E**±0.°04,**h4**km±10km,
n15,σ0§72/26,Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMB	**Musomishta**	**0.17**	**40**	*i* P	**Pg**	**14 12 33.3**	**+0.3**
MMB				*i* S	**Sg**	**14 12 35.9**	**+0.6**
SRS	**Serrai**	**0.30**	**182**	*e*Pg	**Pg**	**14 12 35.3**	**-0.2**
SRS				*e*Sg	**Sg**	**14 12 39.6**	**+0.2**
KKB	**Krupnik**	**0.55**	**320**	*i* P	**Pg**	**14 12 40.2**	**-0.1**
KKB				*i* S	**Sg**	**14 12 48.2**	**+0.7**
RZN	**Rozhen**	**0.90**	**72**	*i* P	**Pg**	**14 12 46.2**	**-0.6**
PLNA	**Plana**	**1.07**	**353**	*i* P	**Pn**	**14 12 51.3**	**-0.2**
PLD	**Plovdiv**	**1.12**	**49**	*e*P	**Pg**	**14 12 50.9**	**-0.3**
PLD				*i* S	**Sb**	**14 13 07.8**	**+1.2**
PLD	**Plovdiv**	**1.12**	**49**	*e*Pg	**Pg**	**14 12 49.9**	**-1.3**
PLD				*e*Sg	**Sg**	**14 13 05.8**	**0.0**
VTS	**Vitosha**	**1.23**	**347**	*i* P	**Pg**	**14 12 53.3**	**0.0**
VTS	**Vitosha**	**1.23**	**347**	*e*Pg	**Pg**	**14 12 52.7**	**-0.6**
VTS				*e*Sg	**Sg**	**14 13 08.9**	**-0.3**
BOSS	**Bosilegrad**	**1.36**	**322**	*e*Pg	**Pn**	**14 12 55.1**	**-0.4**
BOSS				*e*Sg	**Sb**	**14 13 12.8**	**-0.8**
BARS	**Barje**	**1.93**	**317**	*e*Pn	**Pb**	**14 13 04.7**	**-0.7**
BARS				*e*Sn	**Sn**	**14 13 28.7**	**+0.8**
ZAPS	**Zavoj**	**1.99**	**339**	*e*Pn	**Pn**	**14 13 05.1**	**+1.0**
ZAPS				*e*Sn	**Sn**	**14 13 29.7**	**+0.2**
SELS	**Selova**	**2.58**	**315**	*e*Pn	**Pn**	**14 13 13.4**	**+1.2**
SELS				*e*Sn	**Sn**	**14 13 44.4**	**+0.5**
ZAGS	**Zajecar**	**2.60**	**338**	*e*Pn	**Pn**	**14 13 13.0**	**+0.6**
ZAGS				*e*Sn	**Sn**	**14 13 44.1**	**-0.3**
GOCS	**Kraljevo Serbi**	**2.94**	**318**	*e*Sn	**Sn**	**14 13 52.1**	**-1.0**

*TAP **15** 14:12:49.6,24.°59N×122.°85E, h94km, ML2.7, D*
*JMA **15** 14:12:49.6±0.2,25.°N±4.°×122.°9E±0.°8, h93km±2km, MV1.2/9, NW OFF ISHIGAKIJIMA IS*
ISC 15 14:12:49.6±1.5,**24.°53N**±0.°06×**122.°86E**±0.°03,**h97**km±9km,
n59,σ0§89/106,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.11**	**136**	P	**Pn**	**14 13 03.3**	**+0.1**
JYNG				*e*S	**Sn**	**14 13 13.8**	**+0.4**
YOJ	**Yonaguni jima**	**0.15**	**117**	P	**Pn**	**14 13 03.4**	**+0.1**
YOJ				S	**Sn**	**14 13 13.1**	**-0.4**
YOJ	**Yonaguni jima**	**0.15**	**117**	P	**Pn**	**14 13 03.5**	**+0.2**
EOS3	**EOS3**	**0.55**	**244**	*e*P	**Pn**	**14 13 05.8**	**+0.5**
EOS3				*e*S	**Sn**	**14 13 18.4**	**+1.4**
EOS2	**EOS2**	**0.58**	**259**	*e*P	**Pn**	**14 13 05.8**	**+0.2**
EOS2				*e*S	**Sn**	**14 13 18.6**	**+1.1**
EOS4	**EOS4**	**0.64**	**231**	*e*P	**Pn**	**14 13 06.1**	**+0.4**
EOS4				*e*S	**Sn**	**14 13 19.1**	**+1.2**
IRIF	**Iriomote-Funau**	**0.82**	**104**	*e*P	**Pn**	**14 13 07.8**	**0.0**
IRIF				*e*S	**Sn**	**14 13 21.5**	**-0.1**
TWC	**Suao**	**0.92**	**275**	P	**Pn**	**14 13 08.4**	**-0.6**
EWUT	**Wuta**	**0.99**	**265**	*e*S	**Sn**	**14 13 24.4**	**-0.3**
TIPB	**Shuangxi**	**1.04**	**295**	*i* P	**Pn**	**14 13 09.9**	**-0.3**
NDS	**Dongshan**	**1.05**	**276**	P	**Pn**	**14 13 10.2**	**-0.1**
SXI1	**Grass Mountain**	**1.06**	**302**	*i* P	**Pn**	**14 13 10.2**	**-0.3**
JKRS	**Kuro-shima**	**1.09**	**105**	*e*P	**Pn**	**14 13 11.3**	**+0.5**
JKRS				*e*S	**Sn**	**14 13 27.2**	**+0.5**
TWE	**Neicheng**	**1.10**	**280**	*e*P	**Pn**	**14 13 10.6**	**-0.3**
FUSB	**Fushanzhiwuyua**	**1.18**	**281**	*i* P	**Pn**	**14 13 11.9**	**0.0**
FUSB				S	**Sn**	**14 13 27.5**	**-1.3**
JIJ	**Ishigaki jima**	**1.18**	**98**	P	**Pn**	**14 13 11.8**	**0.0**
JIJ				*e*S	**Sn**	**14 13 28.0**	**-0.6**
ENTT	**Nioudou**	**1.18**	**276**	P	**Pn**	**14 13 12.2**	**+0.4**
ENTT				*e*S	**Sn**	**14 13 28.5**	**-0.2**
NACB	**Ninganchiao**	**1.21**	**253**	*i* P	**Pn**	**14 13 11.6**	**-0.6**
NACB				*e*S	**Sn**	**14 13 28.6**	**-0.5**
LATG	**Datong**	**1.22**	**270**	P	**Pn**	**14 13 12.2**	**-0.1**
LATG				S	**Sn**	**14 13 29.2**	**-0.3**
NWLT	**Wulai**	**1.26**	**282**	P	**Pn**	**14 13 12.7**	**-0.1**
NWLT				*i* S	**Sn**	**14 13 29.5**	**-0.9**
ETLH	**Xiulin Townshi**	**1.30**	**256**	P	**Pn**	**14 13 12.8**	**-0.5**
ETLH				*e*S	**Sn**	**14 13 30.5**	**-0.7**
JISG	**Ishigakijimahi**	**1.32**	**87**	*e*S	**Sn**	**14 13 30.8**	**-0.8**
NNSB	**Datong**	**1.35**	**266**	P	**Pn**	**14 13 13.7**	**-0.3**
NNSB				*e*S	**Sn**	**14 13 31.5**	**-0.9**
NNS	**Nan Shan**	**1.36**	**266**	*e*P	**Pn**	**14 13 14.5**	**0.0**
YHNB	**Yeheng**	**1.36**	**276**	*i* P	**Pn**	**14 13 14.2**	**+0.1**
YHNB				S	**Sn**	**14 13 31.9**	**-0.6**
ETM	**Tongmen**	**1.37**	**246**	P	**Pn**	**14 13 13.5**	**-0.6**
ETM				*e*S	**Sn**	**14 13 30.8**	**-1.8**
SHUL	**Shoufeng**	**1.40**	**238**	*e*P	**Pn**	**14 13 14.2**	**-0.2**
SHUL				S	**Sn**	**14 13 33.0**	**-0.2**
LXIB	**Xiulin Townshi**	**1.42**	**249**	*i* P	**Pn**	**14 13 14.2**	**-0.6**
LXIB				*e*S	**Sn**	**14 13 32.5**	**-1.4**
ESL	**Shilin**	**1.49**	**242**	*i* P	**Pn**	**14 13 15.0**	**-0.5**
ESL				*e*S	**Sn**	**14 13 34.1**	**-1.1**
FUSS	**Fushou**	**1.50**	**260**	P	**Pn**	**14 13 16.2**	**+0.3**
FUSS				S	**Sn**	**14 13 35.3**	**-0.6**
TWT	**Tachien**	**1.56**	**260**	*e*P	**Pn**	**14 13 17.1**	**+0.5**
WARBT	**Fenglin Townsh**	**1.57**	**239**	*i* P	**Pn**	**14 13 15.9**	**-0.7**
WARBT				S	**Sn**	**14 13 35.9**	**-1.2**
NFF	**Wufeng Townshi**	**1.59**	**274**	P	**Pn**	**14 13 16.9**	**+0.1**
NFF				S	**Sn**	**14 13 37.1**	**-0.5**
OWD	**Renai**	**1.64**	**250**	*e*P	**Pn**	**14 13 17.4**	**-0.2**
OWD				S	**Sn**	**14 13 37.6**	**-1.2**
HGSD	**Ruisui**	**1.67**	**232**	*i* P	**Pn**	**14 13 17.4**	**-0.4**
HGSD				*i* S	**Sn**	**14 13 38.5**	**-0.9**
WUSB	**Renai**	**1.68**	**252**	*i* P	**Pn**	**14 13 18.2**	**+0.2**
WUSB				*i* S	**Sn**	**14 13 39.0**	**-0.7**
JTJ	**Tarama**	**1.68**	**86**	*e*S	**Sn**	**14 13 39.1**	**-0.3**
LIOB	**Emei**	**1.68**	**274**	P	**Pn**	**14 13 18.0**	**0.0**
LIOB				*e*S	**Sn**	**14 13 39.1**	**-0.5**
NSTT	**Nanjuang**	**1.70**	**274**	P	**Pn**	**14 13 17.5**	**-0.6**
NSTT				S	**Sn**	**14 13 39.5**	**-0.3**
EHYH	**Wanrong**	**1.73**	**234**	P	**Pn**	**14 13 18.1**	**-0.4**
EHYH				*e*S	**Sn**	**14 13 39.3**	**-1.3**
EHY	**Hungye**	**1.74**	**234**	P	**Pn**	**14 13 18.2**	**-0.5**
EHY				S	**Sn**	**14 13 37.3**	**-3.5**
VWDT	**VWDT**	**1.75**	**244**	*e*P	**Pn**	**14 13 19.1**	**+0.3**
VWDT				*e*S	**Sn**	**14 13 40.3**	**-0.8**
WHP	**Taichung City**	**1.76**	**262**	P	**Pn**	**14 13

CHTO	Chiang Mai	39.66	68	P	P	14 28 32.8	+1.0	
KBZ	Khabaz	40.32	340	P	P	14 28 37.4	+0.4	
KBZ	comp=Z,1.2nm,0.8s,baz=153,slow=9.0,SNR=4.0			LR	LR	14 44 35.1		
BRTR	comp=Z,27nm,20.0s,baz=152,slow=35 comp=Z,1.2nm,0.8s Keskin Array B	41.03	328	P	P	14 28 43.5	+0.4	
BRTR	comp=Z,0.8nm,0.8s,baz=134,slow=12,SNR=4.4 comp=Z,0.8nm,0.8s Keskin Array B	41.03	328	P	P	14 28 42.3	-0.8	
GOMU	GeErMu	43.45	42	P	P	14 29 05.3	+2.2	
GOMU	comp=Z,4.0nm,1.0s			pmax	pmax			
AKTO	Aktyubinsk	44.06	358	LR	LR	14 48 59.4		
MKAR	comp=Z,45nm,20.0s,baz=128,slow=38 Makanchi Array	44.61	22	LR	LR	14 48 54.8		
LBTB	comp=Z,55nm,19.5s,baz=200,slow=38 Lobatse	45.88	226	LR	LR	14 45 48.2		
KURBB	comp=Z,122nm,21.1s,baz=52,slow=32 Kurchatov Arra	46.77	16	LR	LR	14 51 15.1		
BVAR	comp=Z,40nm,18.2s,baz=174,slow=39 Borovoye Array	47.35	8	LR	LR	14 50 13.2		
BOSA	comp=Z,102nm,20.8s,baz=205,slow=37 Boshof	48.38	222	LR	LR	14 48 28.1		
LEM	comp=Z,99nm,19.3s,baz=32,slow=34 Lembang	49.00	105	LR	LR	14 47 09.3		
TSUM	comp=Z,106nm,19.6s,baz=217,slow=32 Tsumeb	49.07	238	LR	LR	14 48 26.4		
MLR	comp=Z,75nm,21.0s,baz=92,slow=33 Muntele Rosu	49.12	328	LR	LR	14 51 16.3		
ARTI	comp=Z,33nm,18.6s,baz=132,slow=37 Arti	50.01	359	LR	LR	14 52 35.2		
AKASG	comp=Z,36nm,18.2s,baz=163,slow=38 Malin Array Be	51.30	335	P	P	14 30 02.8	-0.8	
AKASG	comp=Z,0.1nm,0.3s,baz=142,slow=6.6,SNR=4.4			LR	LR	14 53 44.8		
ZALV	comp=Z,28nm,21.1s,baz=246,slow=38 comp=Z,0.1nm,0.3s Zalesovo Beam	51.54	18	LR	LR	14 52 40.2		
H04N1	comp=Z,38nm,18.2s,baz=225,slow=37 CROZET ISLANDS	52.74	187	T	T	15 27 17.9		
H04N2	baz=11,slow=76,SNR=474 CROZET ISLANDS	52.74	187	T	T	15 27 16.7		
H04N3	baz=11,slow=76,SNR=403 CROZET ISLANDS	52.75	187	T	T	15 27 16.9		
SUR	baz=11,slow=76,SNR=502 Sutherland	53.72	222	LR	LR	14 52 08.0		
VRAC	comp=Z,81nm,18.9s,baz=12,slow=35 Vranov	56.46	327	LR	LR	14 54 48.3		
SONM	comp=Z,14nm,21.7s,baz=99,slow=36 Songino Array	57.02	35	P	P	14 30 44.3	-1.3	
SONM	comp=Z,1.4nm,1.1s,baz=247,slow=7.7,SNR=7.7			LR	LR	14 55 20.5		
SONM	comp=Z,58nm,21.9s,baz=193,slow=36 comp=Z,1.4nm,1.1s Songino Array	57.02	35	P	P	14 30 45.2	-0.5	
TLY	Talaya	57.68	30	LR	LR	14 57 08.6		
TORD	comp=Z,35nm,19.4s,baz=234,slow=38 Torodi Ar. Bea	58.04	282	P	P	14 30 55.3	+2.2	
TORD	comp=Z,1.4nm,1.0s,baz=106,slow=2.9,SNR=7.7 comp=Z,1.4nm,1.0s Torodi Ar. Bea	58.04	282	IAmb	IAmb	14 30 58.1		
DAVOX	comp=Z,4.9nm,1.4s Davos/Dischmat	59.05	322	LR	LR	14 57 07.8		
GIRL	comp=Z,20nm,19.5s,baz=268,slow=37 Giralia	60.08	120	P	P	14 31 07.2	+0.1	
DBIC	Dimbokro	64.67	274	LR	LR	15 00 52.3		
NC602	comp=Z,73nm,18.2s,baz=132,slow=37 NORSAR Array S	65.38	336	P	P	14 31 42.4	+0.5	
ESDC	Sonseca Array	66.27	311	P	P	14 31 47.4	-0.7	
ARCES	comp=Z,1.3nm,0.9s,baz=90,slow=5.8,SNR=7.6 comp=Z,1.3nm,0.9s ARCESS Array B	67.13	347	LR	LR	15 06 24.7		
JOW	comp=Z,17nm,19.6s,baz=155,slow=41 Kunigami	67.58	64	LR	LR	15 03 10.7		
JNU	comp=Z,47nm,18.3s,baz=354,slow=38 Nakatsue	70.37	57	LR	LR	15 01 55.9		
MTN	comp=Z,35nm,21.9s,baz=118,slow=35 Manton Dam	72.91	105	P	P	14 32 28.4	-1.0	
KLR	Kul'dur	73.21	40	LR	LR	15 05 37.9		
YAK	comp=Z,117nm,20.1s,baz=250,slow=37 Yakutsk	74.91	27	LR	LR	15 06 43.0		
SPITS	comp=Z,34nm,18.9s,baz=244,slow=37 Spitsbergen Ar	75.30	352	LR	LR	15 07 32.8		
WRA	comp=Z,9.2nm,21.8s,baz=206,slow=37 Warramunga Arr	77.29	112	P	P	14 32 54.2	-0.5	
TIXI	comp=Z,2.0nm,0.9s,baz=277,slow=6.0,SNR=4.7 comp=Z,2.0nm,0.9s Tiksi	77.43	18	LR	LR	15 09 25.8		
ASAR	comp=Z,38nm,18.7s,baz=196,slow=38 Alice Springs	77.67	116	P	P	14 32 58.5	+1.7	
ASAR	comp=Z,2.3nm,1.0s,baz=283,slow=5.3,SNR=7.7			LR	LR	15 01 50.4		
ASAR	comp=Z,28nm,21.3s,baz=286,slow=32 comp=Z,2.3nm,1.0s Alice Springs	77.67	116	P	P	14 32 57.5	+0.8	
CTA	Charters Tower	88.37	110	LR	LR	15 12 15.2		
PETK	comp=Z,33nm,19.0s,baz=66,slow=35 Petropavlovsk-	89.49	37	LR	LR	15 15 47.0		
RCBR	comp=Z,33nm,20.4s,baz=261,slow=37 Riachuelo	96.73	265	LR	LR	15 13 48.8		
SHEM	comp=Z,15nm,18.1s,baz=82,slow=33 Shemya Is, Ala	99.11	34	LR	LR	15 22 14.1		
	comp=Z,34nm,18.9s,baz=112,slow=37							

*IDC **15** 14:22:34.4±1.0,37.°50S×177.°53E,h95km±7km,mb4.4/10, mbtmp4.7/11,MS3.3/18,Error ellipse: s-maj=22.5km s-min=15.6km az=76.0*

*NOU **15** 14:22:35.5,37.°89S×177.°67E,h101km,mb4.8/43,Off E. Coast of N. Island, N.Z.*

*NEIC **15** 14:22:36.6±1.5,37.°68S±0.°09×177.°6E±0.°1,h104km±7km, mb5.0/36,Mww4.8/10,Error ellipse: s-maj=13.8km s-min=10.7km az=152.0*

*NEIC **15** 14:22:36.4,37.°65S×177.°57E,h110km,Moment Tensor Solution. Duration: 1s4 Moment tensor: Scale 10^{16}Nm; M_{rr}2.00; $M_{\theta\theta}$-1.70; $M_{\phi\phi}$-0.29; $M_{r\theta}$0.98; $M_{\theta\phi}$-0.54; $M_{r\phi}$0.31; Fault plane solution: M_o2.20000×10^{16} NP1: ϕ_s250.61000°,δ31.04000°,λ88.95000°. NP2:ϕ_s71.84000°, δ58.97000°,λ90.63000°. Principal axes: T 2.2523, Plg76.0000°, Azm344.0000°; N -0.1082, Plg1.0000°, Azm252.0000°; P -2.1441, Plg14.0000°, Azm161.0000°;*

*NEIC **15** 14:22:36.4,37.°65S×177.°57E,h110km*

*WEL **15** 14:22:37.8±0.6,38.°S±4.°×17.°8E±.°,h73km±5km,M5.0/117, ML4.8/44,MLv5.0/117,Error ellipse: s-maj=5.9km s-min=3.8km az=13.8,confirmed*

*WEL **15** 14:22:37.8,37.°58S×177.°53E,h100km,ML5.0,Mw4.8, Moment Tensor Solution. s12 Moment tensor: Scale 10^{16}Nm; M_{rr}1.31; $M_{\theta\theta}$-1.66; $M_{\phi\phi}$0.35; $M_{r\theta}$1.09; $M_{\theta\phi}$0.87; $M_{r\phi}$0.62; Fault plane solution: M_o2.15000×10^{16} NP1: ϕ_s81.00000°,δ66.00000°,λ56.00000°. NP2:ϕ_s321.00000°, δ41.00000°,λ142.00000°. Principal axes: T -2.1865, Plg55.0000°, Azm307.0000°; N 2.1100, Plg31.0000°, Azm96.0000°; P 0.0765, Plg14.0000°, Azm196.0000°; Stations used: MXZ PUZ MWZ OPRZ RTZ TLZ RATZ MKAZ HIZ WHVZ VRZ WCZ REVERSE FAULTING*

*GCMT **15** 14:22:38.4±0.4,37.°60S±0.°02×177.°28E±0.°03,h104km±3km, MW4.9/73,Moment Tensor Solution. s31,c32; s73,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.78±.10; $M_{\theta\theta}$-2.29±.14; $M_{\phi\phi}$1.52±.15; $M_{r\theta}$1.01±.07; $M_{\theta\phi}$1.66±.11; $M_{r\phi}$0.88±.07; Best double couple: M_o2.93200×10^{16} NP1:ϕ_s332.00000°,δ61.00000°,λ165.00000°. NP2: ϕ_s70.00000°,δ76.00000°,λ30.00000°. Principal axes: T 2.8360, Plg31.0000°, Azm294.0000°; N 0.1970, Plg57.0000°, Azm92.0000°; P -3.0270, Plg10.0000°, Azm198.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 14:22:36.4±0.5,37.°70S±0.°04×177.°53E±0.°03,h110km±3km, h110km:pP-P,n374,σ1°77/362,mb4.8/29,2C-3D,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HAZ	Te Kaha	0.21	107	P	Pn	14 22 50.1	-1.6
HAZ				S	Sn	14 23 00.2	-3.1
RUGZ	Raukumara Rang	0.29	156	P	Pn	14 22 50.6	-1.7
RUGZ				S	Sn	14 23 01.1	-3.0
WIZ	White Island	0.32	302	P	Pn	14 22 49.9	-2.3
WSRZ	White Island S	0.33	302	P	Pn	14 22 50.5	-1.8
OPCS	Opotiki Colleg	0.37	211	P	Pn	14 22 51.6	-0.9
OPCS				S	Sn	14 23 03.0	-1.5
WHRZ	Whale Island	0.47	250	P	Pn	14 22 52.1	-1.0
PKGZ	Pakihiroa	0.47	112	P	Pn	14 22 52.4	-0.6
PKGZ				S	Sn	14 23 04.4	-1.1
WKHS	Whakatane High	0.51	238	P	Pn	14 22 52.3	-0.9
WKHS				S	Sn	14 23 04.0	-1.8
TWGZ	Tauwhareparae	0.60	144	P	Pn	14 22 54.1	+0.1
TWGZ				S	Sn	14 23 07.9	+0.7
MXZ	Matakaoa Point	0.63	78	P	Pn	14 22 53.2	-1.0
MXZ	Matakaoa Point	0.63	78	S	Sn	14 23 06.4	-1.1
MXZ	Matakaoa Point	0.63	78		Pn	14 22 53.0	-1.1
MXZ	Matakaoa Point	0.63	78	P	Pn	14 22 53.1	-1.0
MXZ				S	Sn	14 23 05.3	-2.2
MWZ	Matawai	0.64	180	P	Pn	14 22 54.2	-0.1
MWZ				S	Sn	14 23 07.4	-0.4
URZ	Urewera	0.65	210	P	Pn	14 22 53.8	-0.5
URZ	4μm,0.4s,baz=260,slow=4.7			S	Sn	14 23 06.9	-0.9
URZ	30μm,0.6s,baz=12,slow=20,SNR=22			LR	LR	14 23 22.7	
URZ	comp=Z,4μm,18.1s,baz=332,slow=58			P	Pn	14 22 54.0	-0.3
URZ	Urewera	0.65	210	S	Pn	14 23 07.7	-0.1
URZ	Urewera	0.65	210	P	Pn	14 22 54.1	-0.3
URZ				S	Sn	14 23 07.1	-0.7
TDHS	Te Araroa Dist	0.67	85	P	Pn	14 22 54.0	-0.4
PUZ	Puketiti	0.69	123	P	Pn	14 22 54.1	-0.6
PUZ				S	Sn	14 23 07.0	-1.4
MWFS	Matata Watchor	0.70	256	P	Pn	14 22 53.9	-0.8
WMGZ	Waiomatatini S	0.71	100	P	Pn	14 22 54.3	-0.5
WMGZ				S	Sn	14 23 07.7	-1.0
MARZ	Manawahe	0.73	247	P	Pn	14 22 54.5	-0.6
EDRZ	Edgecumbe	0.75	236	P	Pn	14 22 55.0	-0.3
KAFS	Kawerau Fire S	0.76	239	P	Pn	14 22 55.1	-0.1
TKGZ	Te Karaka	0.79	161	P	Pn	14 22 55.6	+0.2
TKGZ				S	Sn	14 23 10.2	+0.4
OPRZ	Ohinepanea	0.79	259	P	Pn	14 22 54.7	-0.8
OPRZ				S	Sn	14 23 07.9	-1.9
RAGZ	Rawiri	0.81	186	P	Pn	14 22 56.4	+0.6
RAGZ				S	Sn	14 23 11.5	+1.2
ECLS	East Cape Ligh	0.81	90	P	Pn	14 22 55.9	+0.2
TBAS	Tolaga Bay Are	0.91	138	P	Pn	14 22 57.3	+0.7
MKRZ	Makatiti	0.95	242	P	Pn	14 22 57.6	+0.5
CNGZ	Carnagh Statio	0.95	146	P	Pn	14 22 57.5	+0.5
LIRZ	Kichensteins R	0.96	251	P	Pn	14 22 56.9	-0.2
TARZ	Mount Tarawera	0.97	236	P	Pn	14 22 57.6	+0.2
MUGZ	Murupara	0.98	217	P	Pn	14 22 57.6	+0.1
OMRZ	Omania	1.00	245	P	Pn	14 22 57.6	0.0
TGRZ	Tauranga	1.01	268	P	Pn	14 22 56.9	-0.7
GHHS	Gisborne Hospi	1.02	158	P	Pn	14 22 58.2	+0.4
RIGZ	Rimuhau	1.03	170	P	Pn	14 22 58.2	+0.3
RRRZ	Republican Roa	1.03	231	P	Pn	14 22 58.1	+0.2
GISS	Gisborne 2ZG	1.04	158	P	Pn	14 22 58.4	+0.4
GKBS	Kaiti Beach	1.06	158	P	Pn	14 22 58.7	+0.4
KARZ	Kaharoa	1.07	252	P	Pn	14 22 58.1	-0.2
HLRZ	Highlands Stat	1.08	239	P	Pn	14 22 58.8	+0.3
ROTS	Rotorua Distri	1.10	246	P	Pn	14 22 58.5	-0.1
MYRZ	Mayor Island	1.10	292	P	Pn	14 22 57.7	-1.0
NGRZ	Ngongotaha	1.14	249	P	Pn	14 22 59.3	+0.2
UTU	Utuhina	1.16	245	P	Pn	14 23 00.2	+0.9
HSRZ	Hossack Road	1.19	238	P	Pn	14 23 00.3	+0.7
RPCS	Reporoa Colleg	1.19	231	P	Pn	14 23 00.2	+0.5
HRRZ	Hanchock Road	1.20	234	P	Pn	14 23 00.2	+0.4
PRRZ	Plateau Road	1.20	228	P	Pn	14 23 00.2	+0.4
PRGZ	Paritu Road	1.26	167	P	Pn	14 23 00.7	+0.3
KMRZ	Kaimai	1.27	263	P	Pn	14 23 00.1	-0.4
RAHZ	Arahi	1.27	196	P	Pn	14 23 01.3	+0.8
ALRZ	Allen Road	1.27	227	P	Pn	14 23 01.1	+0.6
MTHZ	Maungataniwha	1.28	205	P	Pn	14 23 00.9	+0.3
KNZ	Kokohu	1.33	175	P	Pn	14 23 01.3	+0.1
WFSS	Wairoa Fire St	1.34	183	P	Pn	14 23 02.1	+0.8
WPRZ	Whakapapatarin	1.36	232	P	Pn	14 23 02.3	+0.8
WHHZ	Waihua	1.40	189	P	Pn	14 23 02.7	+0.7
MRHZ	Matea Rd	1.44	217	P	Pn	14 23 03.0	+0.5
MHGZ	Mahia Peninsul	1.49	169	P	Pn	14 23 03.5	+0.5
TIRS	Atiamuri Tiroh	1.49	238	P	Pn	14 23 03.8	+0.7
NMHZ	Naumai	1.51	202	P	Pn	14 23 04.6	+1.2
TPPS	Taupo Police S	1.52	229	P	Pn	14 23 04.6	+1.2
KUTZ	Kaahu Road	1.56	239	P	Pn	14 23 04.4	+0.9
WHTZ	Whakaora	1.57	231	P	Pn	14 23 04.4	+0.9
TOZ	Tahuroa Road	1.61	268		Pn	14 23 04.2	-0.2
TOZ	Tahuroa Road	1.61	268	P	Pn	14 23 04.4	-0.1
ARHZ	Aropaoanui	1.62	195	P	Pn	14 23 05.3	+0.7
BKZ	Black Stump Fm	1.68	209	P	Pn	14 23 04.4	-1.0
BKZ	Black Stump Fm	1.68	209		Pn	14 23 05.7	+0.3
BKZ	Black Stump Fm	1.68	209	P	Pn	14 23 05.8	+0.3
TLZ	Tolley Road	1.69	247	P	Pn	14 23 06.1	+0.5
WATZ	Wairara	1.74	234	P	Pn	14 23 07.1	+1.0
RATZ	Rangitukua	1.81	229	P	Pn	14 23 08.2	+1.2
RITZ	Rihia Road	1.83	225	P	Pn	14 23 08.6	+1.3
MCHZ	McNeill Hill	1.86	200	P	Pn	14 23 08.2	+0.5
KATZ	Kakaramea	1.93	228	P	Pn	14 23 09.5	+0.9
KWHZ	Kaweka Forest	1.93	206	P	Pn	14 23 08.9	+0.3
MKAZ	Moumakai	1.98	287	P	Pn	14 23 08.5	-0.5
CKHZ	Cape Kidnapper	1.99	190	P	Pn	14 23 09.2	-0.1
TMVZ	Te Maari	2.02	225	P	Pn	14 23 10.6	+0.9
NTGZ	North Tongarir	2.02	227	P	Pn	14 23 10.7	+0.9
ETVZ	East Tongariro	2.03	224	P	Pn	14 23 10.6	+0.8
KRVZ	Karewarewa	2.04	226	P	Pn	14 23 11.0	+1.1
OTVZ	Oturere	2.07	224	P	Pn	14 23 11.3	+0.8
WTVZ	West Tongariro	2.08	226	P	Pn	14 23 11.5	+0.9
SNVZ	South Ngauruho	2.10	224	P	Pn	14 23 11.6	+0.8
WIAZ	Waiheke Island	2.11	294	P	Pn	14 23 10.2	-0.6
NGZ	Ngauruhoe	2.12	225	P	Pn	14 23 11.9	+0.9
TWVZ	Taurewa	2.14	229	P	Pn	14 23 12.2	+0.9
KRHZ	Kereru	2.15	205	P	Pn	14 23 11.1	-0.2
TUVZ	Tukino	2.15	223	P	Pn	14 23 12.0	+0.6
KAHZ	Kahuranaki	2.16	193	P	Pn	14 23 11.4	-0.1
COVZ	Chateau Observ	2.17	225	P	Pn	14 23 12.3	+0.7
KBAZ	Karaka Road Bo	2.19	285	P	Pn	14 23 12.2	+0.5
GRZ	Great Barrier	2.20	310	P	Pn	14 23 10.5	-1.4
FWVZ	Far West T-bar	2.20	224	P	Pn	14 23 12.8	+0.6
WHVZ	Whangaehu Hut	2.20	223	P	Pn	14 23 12.7	+0.5
ETAZ	East Tamaki Re	2.20	289	P	Pn	14 23 11.8	-0.1
MAVZ	Matarajiri	2.20	224	P	Pn	14 23 12.8	+0.6
MOVZ	Moawhango	2.21	219	P	Pn	14 23 12.1	0.0
WNVZ	Wahianoa	2.23	222	P	Pn	14 23 12.8	+0.4
TRVZ	Turoa	2.23	224	P	Pn	14 23 13.1	+0.5
HIZ	Hauiti	2.26	248	P	Pn	14 23 12.8	+0.1
HIZ	Hauiti	2.26	248		Pn	14 23 13.9	+1.2
HIZ	Hauiti	2.26	248	P	Pn	14 23 14.1	+1.4
MBAZ	Motutapu North	2.29	293	P	Pn	14 23 12.9	-0.3
MTVZ	Mangateitei	2.33	223	P	Pn	14 23 14.2	+0.4
PKVZ	Pokaka	2.34	226	P	Pn	14 23 14.5	+0.7
EPAZ	Eden Park BICE	2.37	289	P	Pn	14 23 14.6	+0.6
AWAZ	Awhitu Peninsu	2.38	284	P	Pn	14 23 14.5	+0.2
HBAZ	Herne Bay Bore	2.39	290	P	Pn	14 23 14.8	+0.5
PXZ	Pawanui	2.39	192	P	Pn	14 23 13.6	-0.8
ABAZ	Army Bay	2.42	296	P	Pn	14 23 14.5	-0.2
PNHZ	Pukenui	2.45	205	P	Pn	14 23 14.4	-0.7
WTAZ	Waiatarua	2.48	287	P	Pn	14 23 15.9	+0.4
WPHZ	Waipukurau	2.51	199	P	Pn	14 23 15.2	-0.8
RVAZ	Riverhead Bore	2.53	291	P	Pn	14 23 16.3	+0.1
VRZ	Vera Road	2.60	236	P	Pn	14 23 18.5	+1.4
TSZ	Takapari Road	2.66	207	P	Pn	14 23 16.9	-1.0
PRHZ	Porangahau	2.66	195	P	Pn	14 23 17.0	-0.9
DVHZ	Dannevirke	2.81	202	P	Pn	14 23 18.3	-1.6
WAZ	Wanganui	2.86	223	P	Pn	14 23 21.0	+0.5
MHEZ	Mangahewa	2.87	240	P	Pn	14 23 23.5	+2.9
ANWZ	Angora Road	2.88	196	P	Pn	14 23 19.7	-1.1
DREZ	Durham Road	3.01	239	P	Pn	14 23 24.5	+2.0
LREZ	Lake Rotokare	3.02	233	P	Pn	14 23 23.9	+1.3
POWZ	Post Office Ro	3.02	206	P	Pn	14 23 21.3	-1.4
OHWZ	Ohakea	3.04	214	P	Pn	14 23 22.9	0.0
WCZ	Waipu Caves	3.10	303	P	Pn	14 23 23.0	-0.7
PRWZ	Pori Road	3.10	202	P	Pn	14 23 22.3	-1.4
PREZ	Palmer Road	3.11	237	P	Pn	14 23 26.1	+2.1
BFZ	Birch Farm	3.15	198	P	Pn	14 23 22.7	-1.6
BFZ	Birch Farm	3.15	198		Pn	14 23 22.3	-2.0
BFZ	Birch Farm	3.15	198	P	Pn	14 23 22.6	-1.8
KHEZ	Kahui Hut	3.19	239	P	Pn	14 23 24.9	0.0
KHEZ	Kahui Hut	3.19	239	P	Pn	14 23 26.4	+1.5
NBEZ	Newall Road No	3.27	240	P	Pn	14 23 27.7	+1.7
MRZ	Mangatainoka R	3.33	206		Pn	14 23 24.6	-2.1
MRZ	Mangatainoka R	3.33	206	P	Pn	14 23 24.8	-2.0
TIWZ	Tintock	3.33	202	P	Pn	14 23 25.1	-1.7
NMEZ	Namu Road	3.34	238	P	Pn	14 23 28.2	+1.4
CPWZ	Castlepoint	3.37	197	P	Pn	14 23 26.1	-1.2
HOWZ	Holdsworth Sta	3.56	205	P	Pn	14 23 27.4	-2.5
OGWZ	Otaki Gorge	3.62	210	P	Pn	14 23 28.4	-2.2
TMWZ	Te Maipa	3.64	200	P	Pn	14 23 28.5	-2.3
KIW	Kapiti Island	3.76	212	P	Pn	14 23 30.5	-2.0
MTW	Mount Morrison	3.80	204	P	Pn	14 23 30.2	-2.8
CAW	Cannon Point	3.91	208	P	Pn	14 23 31.8	-2.7
TRWZ	Traveller	3.96	200	P	Pn	14 23 32.5	-2.7
OUZ	Omahuta	4.02	307	P	Pn	14 23 35.7	-0.3
OUZ	Omahuta	4.02	307	P	Pn	14 23 35.7	-0.3
PAWZ	Paruwai Farm	4.02	203	P	Pn	14 23 33.0	-3.1
MSWZ	Moikau Station	4.11	205		Pn	14 23 33.9	-3.4
MSWZ	Moikau Station	4.11	205	P	Pn	14 23 33.9	-3.4
WEL	Wellington	4.17	210	P	Pn	14 23 35.2	-2.8
DUWZ	D'Urville Isla	4.18	221	P	Pn	14 23 35.6	-2.6
SNZO	South Karori	4.22	210	P	Pn	14 23 35.5	-3.1
SNZO	South Karori	4.22	210	S	Sn	14 24 24.9	-2.0
SNZO	South Karori	4.22	210		Pn	14 23 35.5	-3.1
BHW	Baring Head	4.24	208		Pn	14 23 35.6	-3.3
BHW	Baring Head	4.24	208	P	Pn	14 23 35.8	-3.1
PLWZ	Palliser	4.25	204		Pn	14 23 35.5	-3.6
PLWZ	Palliser	4.25	204	P	Pn	14 23 35.8	-3.3
TCW	Tory Channel	4.32	215		Pn	14 23 36.9	-3.1
TCW	Tory Channel	4.32	215	P	Pn	14 23 37.0	-3.1
TUWZ	Tuamarina	4.65	215		Pn	14 23 41.2	-3.2
TUWZ	Tuamarina	4.65	215	P	Pn	14 23 42.1	-2.3
NNZ	Nelson	4.76	221		Pn	14 23 42.6	-3.3
NNZ	Nelson	4.76	221	P	Pn	14 23 42.7	-3.2
CMWZ	Cape Campbell	4.79	211		Pn	14 23 42.8	-3.6
CMWZ	Cape Campbell	4.79	211	P	Pn	14 23 45.0	-1.3
TKNZ	Takaka Hill	4.86	225		Pn	14 23 44.1	-3.2
TKNZ	Takaka Hill	4.86	225	P	Pn	14 23 44.5	-2.8
QRZ	Quartz Range	4.98	230	P	Pn	14 23 46.4	-2.6
QRZ	Quartz Range	4.98	230	S	Sn	14 24 43.5	-1.9
QRZ	Quartz Range	4.98	230		Pn	14 23 46.2	-2.8
QRZ	Quartz Range	4.98	230	P	Pn	14 23 46.4	-2.6
MRNZ	Matariki Terra	5.22	223		Pn	14 23 48.9	-3.3
MRNZ	Matariki Terra	5.22	223	P	Pn	14 23 49.1	-3.1
THZ	Tophouse	5.40	220		Pn	14 23 51.1	-3.6
THZ	Tophouse	5.40	220	P	Pn	14 23 51.3	-3.5
KHZ	Kahutara	5.62	212	P	Pn	14 23 53.5	-4.1
KHZ	Kahutara	5.62	212	S	Sn	14 24 57.6	-3.2
KHZ	Kahutara	5.62	212	P	Pn	14 23 53.4	-4.2
DSZ	Denniston Nort	5.99	226	P	Pn	14 23 58.6	-3.9
GVZ	Greta Valley S	6.29	212	P	Pn	14 24 02.4	-4.2
LTZ	Lake Taylor	6.48	217		Pn	14 24 04.5	-4.8
LTZ	Lake Taylor	6.48	217	P	Pn	14 24 04.4	-4.8
AMCZ	Amberley	6.62	213	P	Pn	14 24 06.5	-4.5
INZ	Inchbonnie	6.85	221		Pn	14 24 09.4	-4.8
INZ	Inchbonnie	6.85	221	P	Pn	14 24 09.6	-4.6
OKCZ	Okains Bay	6.91	208	P	Pn	14 24 10.1	-5.0
OXZ	Oxford	7.01	215	P	Pn	14 24 10.8	-5.6
MOZ	McQueen's Vall	7.05	210	P	Pn	14 24 11.2	-5.8
AKCZ	Akaroa Harbour	7.09	208	P	Pn	14 24 13.0	-4.6
RACZ	Rakaia	7.28	212	P	Pn	14 24 14.6	-5.5
MHCZ	Mount Hutt	7.38	216	P	Pn	14 24 15.7	-5.9
WVZ	Waitaha Valley	7.46	222	P	Pn	14 24 18.3	-4.2
CTZ	Chatham Island	7.49	145	S	Sn	14 25 40.6	-5.6
CTZ	Chatham Island	7.49	145	P	Pn	14 24 23.1	+0.2
WACZ	Wakanui South	7.58	213	P	Pn	14 24 19.4	-4.8
RPZ	Rata Peaks	7.77	217	P	Pn	14 24 22.4	-4.2
RPZ	54nm,0.4s,baz=172,slow=0.1,SNR=38			S	Sn	14 25 45.2	-7.7
RPZ	97nm,0.4s,baz=189,slow=2.3,SNR=7.9			LR	LR	14 27 36.8	
RPZ	comp=Z,409nm,21.8s,baz=53,slow=38	7.77	217	P	Pn	14 24 22.7	-4.0
RPZ	Rata Peaks	7.77	217	P	Pn	14 24 22.5	-4.2
GCSZ	Rata Peaks Gaunt Creek Bo	7.85	222	P	Pn	14 24 23.3	-4.4
ARCZ	Arundel	7.88	216	P	Pn	14 24 23.6	-4.7
FOZ	Fox Glacier	8.27	223	P	Pn	14 24 28.1	-5.3
TMZ	Timaru	8.30	214	P	Pn	14 24 28.3	-5.6
L

comp=Z,66nm,1.9s
WR8 Warramunga Arr 41.23 283 P **P** **14 30 10.8 +0.1**
WB1 Warramunga Ar. 41.35 283 P **P** **14 30 12.1 +0.4**
WRAB Tennant Creek 41.36 283 P **P** **14 30 12.2 +0.4**
WRAB Tennant Creek 41.36 283 P **P** **14 30 11.7 -0.1**
WRAB x x 14 30 28.8
WRAB pP **pP** **14 30 34.8 -1.9**
WRA Warramunga Arr 41.36 283 P **P** **14 30 11.0 -0.8**
comp=Z,6.7nm,0.8s,baz=121,slow=8.3,SNR=75
WRA PcP **PcP** **14 32 06.7 -1.4**
comp=Z,1.2nm,0.4s,baz=126,slow=3.2,SNR=6.1
WRA ScP **ScP** **14 35 45.5 -2.4**
comp=Z,1.0nm,0.9s,baz=122,slow=3.4,SNR=4.6
comp=Z,6.7nm,0.8s
WRA Warramunga Arr 41.36 283 P **P** **14 30 11.9 +0.1**
WB0 Warramunga Ar 41.42 283 P **P** **14 30 12.3 0.0**
WB0 IAmb IAmb 14 30 14.1
comp=Z,8.5nm,0.6s
CCD Concordia, Ant 44.92 197 P **P** **14 30 43.1 +2.9**
CCD pP **pP** **14 31 05.9 +0.2**
CASY Casey 46.98 211 P **P** **14 30 57.7 +1.7**
CASY IAmb IAmb 14 31 03.5
comp=Z,31nm,1.5s
MTN Manton Dam 48.08 288 P **P** **14 31 05.6 +0.5**
KNRA Kununurra 48.15 283 P **P** **14 31 06.2 +0.6**
KLBR Kellerberrin 48.84 258 P **P** **14 31 10.7 -0.1**
MUN Mundaring 49.88 257 P **P** **14 31 19.4 +0.7**
BLDU Ballidu 50.06 259 P **P** **14 31 19.7 -0.4**
MEEK Meekatharra 50.35 265 P **P** **14 31 22.5 +0.1**
MORW Morawa 51.26 260 P **P** **14 31 29.4 +0.3**
MORW Morawa 51.26 260 P **P** **14 31 29.1 0.0**
PSA00 Pilbara Seismi 51.88 271 P **P** **14 31 32.9 -1.0**
PSA00 IAmb IAmb 14 32 23.0
comp=Z,20nm,1.7s
MBWA Marble Bar 52.19 271 P **P** **14 31 37.9 +1.8**
MBWA Marble Bar 52.19 271 P **P** **14 31 35.2 -0.9**
MBWA IAmb IAmb 14 31 39.5
comp=Z,44nm,1.6s
QSPA South Pole Qui 52.43 180 P **P** **14 31 39.5 +2.0**
comp=Z,8.5nm,0.9s,baz=2.3,slow=0.9,SNR=32
QSPA LR LR 14 50 22.2
comp=Z,55nm,21.6s,baz=32,slow=32
comp=Z,8.5nm,0.9s
QSPA South Pole Qui 52.43 180 P **P** **14 31 40.7 +3.2**
QSPA IAmb IAmb 14 31 49.2
comp=Z,9.7nm,0.8s
QSPA South Pole Qui 52.43 180 P **P** **14 31 41.5 +4.0**
GIRL Giralia 55.78 266 P **P** **14 32 03.1 +0.9**
SIJI Sorong 56.11 300 LR LR 14 57 02.3
comp=Z,16nm,19.8s,baz=158,slow=37
GUMO Guam 59.52 322 LR LR 14 55 08.4
comp=Z,12nm,21.4s,baz=169,slow=33
JAGI Jajag, Banyuwa 63.85 280 P **P** **14 32 58.2 +0.7**
JAGI IAmb IAmb 14 34 12.7
comp=Z,34nm,1.1s
TOLI2 Tolitoli 64.97 293 P **P** **14 33 05.7 +0.9**
UGM Wanagama 67.03 278 P **P** **14 33 18.9 +0.8**
BBJI Bungbulang 69.56 276 IAmb IAmb 14 33 35.6
comp=Z,10nm,0.8s
LEM Lembang 69.97 277 LR LR 15 05 31.1
comp=Z,48nm,18.5s,baz=140,slow=37
TROLL Troll, Antarti 70.54 182 ⇑P **P** **14 33 43.8 +4.7**
SNAA Sanae 70.94 180 P **P** **14 33 42.2 +0.8**
comp=Z,1.7nm,0.4s,baz=216,slow=9.9,SNR=5.2
SNAA LR LR 15 02 14.2
comp=Z,37nm,20.8s,baz=42,slow=34
comp=Z,1.7nm,0.4s
SNAA Sanae 70.94 180 IAmb IAmb 14 34 47.4
comp=Z,57nm,2.0s
VNA3 Neumayer Olymp 71.24 178 ⇑P P 14 33 49.0 +5.8
comp=Z,2.4nm,0.2s
VNA2 Neumayer--Watz 71.63 178 ⇓P P 14 33 51.4 +5.9
comp=Z,4.0nm,0.4s,baz=186,slow=6.7
KKM Kota Kinabalu 71.64 293 P **P** **14 33 47.0 +0.5**
KKM IAmb IAmb 14 34 16.6
comp=Z,29nm,1.1s
VNA1 Neumayer--Stat 71.88 178 ⇓P P 14 33 53.0 +6.0
comp=Z,2.7nm,0.4s
JCJ Chichijima 72.48 327 LR LR 14 59 19.1
comp=Z,28nm,21.1s,baz=150,slow=30
SSLB Suanglung 81.02 309 IAmb IAmb 14 34 39.2
comp=Z,39nm,1.1s
YHNB Yeheng 81.42 310 P **P** **14 34 41.4 +0.1**
MJAR Matsushiro Arr 82.34 329 P **P** **14 34 44.8 -1.1**
comp=Z,5.8nm,1.1s,baz=159,slow=5.7,SNR=6.6
comp=Z,5.8nm,1.1s
MJAR Matsushiro Arr 82.34 329 P **P** **14 34 46.0 +0.2**
MAJO Matsushiro 82.34 329 P **P** **14 34 46.6 +0.8**
MJB9 Matsu-Tunnel 82.35 329 P **P** **14 34 47.5 +1.6**
GSI Gunungsitoli 82.84 277 P **P** **14 34 50.1 +1.1**
KSRS Korea Array 87.69 323 P **P** **14 35 11.9 -0.5**
comp=Z,14nm,0.9s,baz=141,slow=5.6,SNR=17
comp=Z,14nm,0.9s
KS19 Wonju Array Si 87.75 323 P **P** **14 35 13.7 +0.9**
NJ2 Nanjing 88.36 313 ⇓P **P** **14 35 17.0 +1.2**
NJ2 pmax pmax
comp=Z,46nm,0.8s
YSS Yuzhno-Sakhali 89.84 337 P **P** **14 35 23.5 +1.1**
USRK Ussuriysk Ar. 91.34 329 P **P** **14 35 28.4 -1.0**
comp=Z,7.5nm,0.8s,baz=116,slow=3.4,SNR=6.8
comp=Z,7.5nm,0.8s
LPIG La Paz 91.44 60 LR LR 15 07 04.1
comp=Z,24nm,22.0s,baz=213,slow=29
PETK Petropavlovsk- 92.06 348 P **P** **14 35 30.9 -1.6**
comp=Z,4.5nm,0.8s,baz=134,slow=8.5,SNR=5.3
comp=Z,4.5nm,0.8s
CMAR Chiang Mai Arr 92.44 291 P **P** **14 35 34.4 -0.7**
comp=Z,8.7nm,0.8s,baz=151,slow=3.5,SNR=60
CMAR LR LR 15 19 30.1
comp=Z,14nm,20.2s,baz=150,slow=37
comp=Z,8.7nm,0.8s
CMAR Chiang Mai Arr 92.44 291 P **P** **14 35 35.6 +0.5**
CHTO Chiang Mai 92.66 292 **P** **14 35 36.5 +0.3**
CHTO IAmb IAmb 14 35 37.7
comp=Z,13nm,1.1s
PZH PanZhiHua 95.49 299 P **P** **14 35 51.6 +2.5**
HHC Hu-ho-hao-te 98.72 315 *e*P Pdif 14 36 07.3 +4.0
HHC pmax pmax
comp=Z,13nm,0.5s
HHC pmax pmax
comp=Z,68nm,4.8s
MA2 Magadan 99.42 347 LR LR 15 14 16.4
comp=Z,13nm,20.8s,baz=188,slow=31
ILAR Eielson Array 105.88 15 PKiKP **PKiKP** **14 40 46.4 +0.1**
comp=Z,0.2nm,0.4s,baz=290,slow=1.9,SNR=4.5
YKA Yellowknife Ar 113.61 28 PKiKP **PKiKP** **14 41 00.5 -0.3**
comp=Z,0.2nm,0.4s,baz=250,slow=2.1,SNR=7.9
MKAR Makanchi Array 119.48 308 PKP **PKPdf** **14 41 10.6 -2.1**
comp=Z,0.5nm,0.7s,baz=101,slow=1.9,SNR=8.6
BVAR Borovoye Array 128.79 312 PKP **PKPdf** **14 41 27.6 -2.7**
comp=Z,1.1nm,0.8s,baz=150,slow=1.2,SNR=3.2
ARTI Arti 136.13 316 PKP **PKPdf** **14 41 44.0 0.0**
comp=Z,2.0nm,0.8s,baz=42,slow=7.8,SNR=3.4
SPA0 Spitsbergen Ar 138.64 354 *e*PKPdf **PKiKP** **14 41 50.3 0.0**
SPITS Spitsbergen Ar 138.64 354 PKP **PKPdf** **14 41 46.8 -1.3**
comp=Z,1.2nm,0.4s,baz=70,slow=7.2,SNR=13
VADS Vadso 143.39 342 *e*PKPdf PKPab 14 41 53.6 +0.5
HAMF Hammerfest 144.24 345 *e*PKPdf **PKPab** **14 41 56.5 +0.1**
ARA0 ARCESS Array S 144.72 343 *e*PKPbc **PKPab** **14 41 58.1 -0.1**
ARCES ARCESS Array B 144.72 343 PKP **PKPab** **14 41 56.9 -1.4**
comp=Z,16nm,0.7s,baz=42,slow=2.7,SNR=49
KBZ Khabaz 145.43 295 PKPbc **PKPdf** **14 41 59.6 -1.4**
comp=Z,20nm,0.9s,baz=133,slow=1.0,SNR=30
KTK1 Kautokeino 145.64 344 *e*PKPdf **PKPdf** **14 42 00.5 -0.2**
JETT Jettan, Norway 145.78 346 *e*PKPdf **PKPbc** **14 42 01.7 0.0**
TRO Tromso 145.99 347 *e*PKPdf **PKPbc** **14 42 01.8 -0.5**
STEI Steigen 148.13 347 *e*PKPdf **PKPbc** **14 42 07.5 -0.7**
LOF Lofoten 148.23 349 *e*PKPdf **PKPbc** **14 42 07.3 -1.2**
FAUS Fauske 148.62 347 *e*PKPdf **PKPbc** **14 42 08.3 -1.3**
MMAI Mount Meron Ar 148.90 273 PKPbc **PKPbc** **14 42 11.7 +0.2**
comp=Z,2.4nm,0.3s,baz=84,slow=7.4,SNR=14
DBIC Dimbokro 149.04 175 PKPbc **PKPbc** **14 42 12.4 +0.2**
comp=Z,1.5nm,0.3s,baz=197,slow=2.4,SNR=7.4
VAGH Vaagaholmen 149.55 348 *e*PKPdf **PKPbc** **14 42 10.9 -1.0**
KONS Konsvik 149.79 348 *e*PKPdf **PKPbc** **14 42 11.3 -1.1**
MOR8 Moi Rana 149.85 346 *e*PKPdf **PKPbc** **14 42 10.8 -1.9**
STOK Stokkvaagen 149.96 348 *e*PKPdf **PKPbc** **14 42 12.0 -0.9**
LEIR Leirfjorden 150.14 347 *e*PKPdf **PKPbc** **14 42 12.0 -1.3**
FINES FINESS Array B 150.32 332 PKPbc **PKPbc** **14 42 12.1 -1.7**
comp=Z,2.5nm,0.4s,baz=47,slow=3.2,SNR=31
FINES PKPab **PKPab** **14 42 18.9 -1.7**
comp=Z,24nm,0.8s,baz=65,slow=3.6,SNR=26
NSS Namsos 151.79 347 *e*PKPbc **PKPbc** **14 42 15.8 -1.4**
BRTR Keskin Array B 151.87 285 PKPbc **PKPbc** **14 42 17.1 -1.3**
comp=Z,11nm,0.8s,baz=131,slow=3.8,SNR=34
BRTR PKPab **PKPab** **14 42 27.0 -1.0**
comp=Z,5.3nm,0.7s,baz=118,slow=3.1,SNR=9.0
AKASG Malin Array Be 154.04 310 PKPbc **PKPbc** **14 42 22.3 -0.3**
comp=Z,0.3nm,0.3s,baz=61,slow=3.1,SNR=4.4
AKASG PKPab **PKPab** **14 42 34.2 -2.4**
comp=Z,1.2nm,0.4s,baz=60,slow=4.5,SNR=11
NB2 NORSAR Subarra155.10 344 PKP **PKPab** **14 42 39.3 -1.5**
comp=Z,21nm,1.4s,baz=24,slow=3.3
NB2 NORSAR Subarra155.10 344 PKPab **PKPab** **14 42 39.3 -1.5**
NOA NORSAR Array B 155.10 344 PKPbc PKPdf 14 42 24.2 +8.5
comp=Z,0.7nm,0.8s,baz=45,slow=2.2,SNR=1.5
NOA PKPab **PKPab** **14 42 38.4 -2.4**
comp=Z,2.4nm,0.7s,baz=28,slow=3.4,SNR=5.7
TORD Torodi Ar. Bea 155.27 190 PKP **PKPdf** **14 42 17.2 0.0**
comp=Z,3.0nm,1.0s,baz=207,slow=1.7,SNR=8.2
TORD PKPbc PKPbc 14 42 26.7
comp=Z,0.7nm,0.3s,baz=168,slow=3.6,SNR=11
TORD PKPab **PKPab** **14 42 42.8 +0.1**
comp=Z,3.3nm,0.6s,baz=192,slow=5.1,SNR=11
HFS Hagfors 155.29 341 PKP **PKPdf** **14 42 16.2 +0.3**
comp=Z,2.7nm,0.8s,baz=42,slow=2.3,SNR=1.3
HFS PKPab **PKPab** **14 42 39.0 -2.6**
comp=Z,4.5nm,0.8s,baz=35,slow=5.3,SNR=4.1
STEB Steborice 161.02 317 *e*PKPAB **PKPab** **14 43 06.9 +0.1**
OSTC Ostas 161.49 320 *e*PKPAB **PKPab** **14 43 13.2 +4.4**
CHVC Chvalec 161.55 320 *e*PKPAB **PKPab** **14 43 09.4 +0.3**
DPC Dobruska-Polom 161.55 319 *e*PKPAB **PKPab** **14 43 10.0 +0.8**
MODS Modra-Piesok 162.10 313 *e*PKP **PKPab** **14 43 11.9 +0.3**
CLL Collm 162.53 326 *i* PKPab **PKPab** **14 43 12.7 -0.6**
comp=Z,15nm,0.9s
CLL *ep*PKPab **pPKPab** **14 43 42.0 +0.2**
WINA Alland / Wiene 162.93 313 *e*PKP **PKPab** **14 43 16.5 +1.2**
CONA Conrad Observa 163.14 313 *e*PKP **PKPab** **14 43 17.1 +0.8**
comp=Z,10nm,1.0s
CKRC Cesky Krumlov 163.52 318 *e*PKPAB **PKPab** **14 43 17.7 -0.1**
NKC Novy Kostel 163.53 324 *e*PKPAB **PKPab** **14 43 17.7 -0.1**
GERES GERESS Array B 163.82 319 PKPab **PKPab** **14 43 18.8 -0.4**
comp=Z,0.6nm,0.6s,baz=17,slow=8.2,SNR=3.7
MOA Molln 164.09 315 *e*PKP **PKPab** **14 43 20.3 0.0**
comp=Z,10nm,1.4s
ABTA Adalztersbach 165.70 314 PKP **PKPab** **14 43 26.5 -1.1**
comp=Z,7.4nm,1.1s
MOTA Moosalm 166.12 318 *e*PKP **PKPab** **14 43 28.5 -1.0**
comp=Z,3.1nm,1.0s

IDC ***15*** *14:25:14.4±4.4, 36.97N×71.32E, h65km±36km, mb3.7/13, mbtmp4.1/19, ML4.1/5, MS3.0/2, Error ellipse: s-maj=28.8km s-min=17.5km az=20.0*
NNC ***15*** *14:25:17.2±6.2, 37.52N×71.01E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=49.5km s-min=39.0km az=9.0*
NEIC ***15*** *14:25:18.3±0.9, 37.15N±0.06×71.18E±0.06, h94km±7km, mb4.3/30, Error ellipse: s-maj=9.6km s-min=8.3km az=83.0*
ISC 15 14:25:16.4±0.5,**37.05N**±0.05×**71.13E**±0.06,**h88**km,**n100,**
s202/111,**mb4.2**/29,**4C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GAR	**Garm**	**2.05**	**342**			**Pn**	**14 25 50.4**	**+1.1**
CHGR	**Chuyangaron**	**2.24**	**316**			**Pn**	**14 25 52.7**	**+0.8**
SHAA	**Shahritus**	**2.46**	**283**			**Pn**	**14 25 56.0**	**+1.4**
DRK	**Karamyk**	**2.48**	**12**			**Pn**	**14 25 56.7**	**+1.4**
KBL	**Kabul**	**3.02**	**215**			**Pn**	**14 26 05.7**	**+3.2**
NIL	**Nilore**	**3.81**	**152**			**Pn**	**14 26 15.9**	**+3.1**
KSH2	**Kashi**	**4.08**	**58**	Pn		**Pn**	**14 26 19.6**	**+3.0**
KSH2				Sn		**Sn**	**14 27 05.4**	**+2.2**
KSH2				smax	smax			
	comp=N,330nm,0.5s							
KSH2				smax	smax			
	comp=E,200nm,0.5s							
ARSB	**Arslanbob**	**4.51**	**18**			**Pn**	**14 26 22.4**	**0.0**
JMU	**Jammu**	**5.23**	**143**	*e*P		**Pn**	**14 26 32.9**	**+0.7**
JMU				*e*S		**Sn**	**14 27 31.6**	**+0.5**
JMU				IAML			14 27 40.2	
	comp=E,354nm,0.3s							
JMU				IAML			14 27 40.4	
	comp=N,530nm,0.6s							
ALCI	**Alchi Leh**	**5.68**	**118**	*e*P		**Pn**	**14 26 37.7**	**-1.0**
ALCI				*e*S		**Sn**	**14 27 40.8**	**-1.9**
ALCI				IAML			14 27 44.8	
	comp=N,195nm,0.7s							
ALCI				IAML			14 27 44.9	
	comp=E,282nm,0.7s							
NRN	**Naryn**	**5.78**	**39**			**Pn**	**14 26 39.0**	**-0.9**
UCH	**Uchtor** SNR=30	**5.79**	**26**	P		**Pn**	**14 26 41.0**	**+0.8**
TSSA	**Tissa**	**5.88**	**134**	*e*P		**Pn**	**14 26 40.7**	**-0.5**
TSSA				*e*S		**Sn**	**14 27 42.3**	**-5.1**
TSSA				IAML			14 27 50.2	
	comp=N,457nm,0.4s							
TSSA				IAML			14 27 50.5	
	comp=E,328nm,0.3s							
EKS2	**Erkin-Say** SNR=22	**5.96**	**19**	P		**Pn**	**14 26 43.7**	**+1.5**
THN	**Thein Dam**	**5.97**	**139**	*e*P		**Pn**	**14 26 43.0**	**+0.7**
THN				*e*S		**Sn**	**14 27 47.7**	**-1.5**
THN				IAML			14 27 53.2	
	comp=E,239nm,0.3s							
THN				IAML			14 27 54.5	
	comp=N,205nm,0.4s							
KK31	**Karatay Array**	**6.07**	**356**			**Pn**	**14 26 42.4**	**-1.2**
KK31	**Karatay Array**	**6.07**	**356**	⇑P		**Pn**	**14 26 44.1**	**+0.5**
	comp=N,3.9nm,0.2s,baz=184,slow=13,SNR=330							
KK31				⇑S		**Sn**	**14 27 48.8**	**-2.7**
	comp=N,17nm,0.3s,baz=161,slow=28,SNR=5.1							
KKAR	**Karatay Array**	**6.07**	**356**			**Pn**	**14 26 42.6**	**-0.9**
AAK	**Ala-Archa**	**6.15**	**24**	P		**Pn**	**14 26 44.8**	**0.0**
	comp=N,7.6nm,0.3s,baz=173,slow=6.7,SNR=92							
AAK				S		**Sn**	**14 27 52.7**	**-1.0**
	comp=N,22nm,0.5s,baz=165,slow=23,SNR=7.6							
	comp=N,12nm,0.3s							
AAK	**Ala-Archa** SNR=26	**6.15**	**24**	P		**Pn**	**14 26 46.4**	**+1.6**
AAK	**Ala-Archa**	**6.15**	**24**	⇓P		**Pn**	**14 26 45.9**	**+1.1**
	comp=N,7.0nm,0.6s							
AAK				⇓S		**Sn**	**14 27 51.0**	**-2.8**
	comp=N,6.6nm,0.5s							
KBK	**Karagaybulak** SNR=9.1	**6.32**	**26**	P		**Pn**	**14 26 49.3**	**+2.2**
DHRM	**DHARAMSHALA**	**6.40**	**137**	*e*P		**Pn**	**14 26 49.0**	**+0.6**
DHRM				*e*S		**Sn**	**14 27 57.7**	**-2.5**
DHRM				IAML			14 28 00.6	
	comp=E,445nm,0.2s							
DHRM				IAML			14 28 02.1	
	comp=N,545nm,0.4s							
ULHL	**Ulahol** SNR=17	**6.52**	**36**	P		**Pn**	**14 26 51.1**	**+1.3**
CHMS	**Chumysh** SNR=19	**6.56**	**24**	P		**Pn**	**14 26 51.2**	**+1.0**
BOOM	**Boomskoye usch**	**6.58**	**33**			**Pn**	**14 26 50.4**	**-0.2**
USP	**Ospenovka** SNR=18	**6.72**	**21**	P		**Pn**	**14 26 53.0**	**+0.5**
TKM2	**Tokmak 2** SNR=12	**6.79**	**29**	P		**Pn**	**14 26 55.0**	**+1.4**
KDJ	**Kajisay**	**6.89**	**41**			**Pn**	**14 26 55.2**	**+0.3**
TARG	**Taragay, Kyrgy**	**6.97**	**46**			**Pn**	**14 26 56.1**	**0.0**
BHK	**Bhakra**	**7.12**	**141**	*e*P		**Pn**	**14 27 01.1**	**+3.2**
BHK				IAML			14 28 17.5	
	comp=E,141nm,0.3s							
BHK				IAML			14 28 18.5	
	comp=N,226nm,0.3s							
BHK				*e*S		**Sn**	**14 28 22.8**	**+5.5**
WUS	**Wushi**	**7.53**	**54**			**Pn**	**14 27 03.7**	**+0.2**
SMLA	**Simla**	**7.74**	**138**	*e*P		**Pn**	**14 27 05.6**	**-0.7**
SMLA				*e*S		**Sn**	**14 28 27.8**	**-4.6**
SMLA				IAML			14 28 33.2	
	comp=N,237nm,0.4s							
SMLA				IAML			14 28 35.4	
	comp=E,229nm,0.3s							
PDGK	**Podgornoye** comp=E,4.4nm,0.5s	**8.96**	**43**	⇓P		**Pn**	**14 27 21.3**	**-1.6**
JOSI	**Joshimath**	**9.54**	**130**	*e*P		**Pn**	**14 27 31.4**	**+0.3**
JOSI				*e*S		**Sn**	**14 29 11.3**	**-5.3**
JOSI				IAML			14 29 18.3	
	comp=N,138nm,0.8s							
JOSI				IAML			14 29 22.9	
	comp=E,104nm,0.4s							
KUDL	**Kundal**	**9.96**	**152**	*e*P		**Pn**	**14 27 34.9**	**-1.7**
KUDL				*e*S		**Sn**	**14 29 18.5**	**-8.0**
KUDL				IAML			14 29 23.0	
	comp=E,35nm,0.3s							
KUDL				IAML			14 29 23.6	
	comp=N,24nm,0.4s							
LGTI	**Lohaghat**	**10.69**	**133**	*e*P		**Pn**	**14 27 44.2**	**-2.5**
MAKZ	**Makanchi**	**12.65**	**36**			**Pn**	**14 28 10.9**	**-2.0**
MKAR	**Makanchi Array**	**12.79**	**37**	P		**Pn**	**14 28 12.8**	**-2.0**
	comp=N,1.3nm,0.3s,baz=225,slow=15,SNR=106							
	comp=N,7.2nm,0.6s							
WMQ	**Urumqi**	**14.30**	**57**	*e*P		**Pn**	**14 28 34.9**	**+0.2**
WMQ				pmax	pmax			
	comp=Z,8.0nm,0.7s							
KURBB	**Kurchatov Arra**	**14.57**	**19**	P		**Pn**	**14 28 35.3**	**-2.7**
	comp=Z,0.9nm,0.7s,baz=210,slow=11,SNR=9.8							
AB31	**Akbulak array**	**14.66**	**330**			**Pn**	**14 28 36.9**	**-2.2**
AB31	**Akbulak array**	**14.66**	**330**	⇓P		**Pn**	**14 28 37.1**	**-2.1**
	comp=Z,1.3nm,0.3s,baz=136,slow=14,SNR=89							
AB31				⇓S		**Sn**	**14 31 15.3**	**-5.2**
	comp=Z,6.3nm,0.5s,baz=66,slow=44,SNR=4.7							
ABKAR	**Akbulak array**	**14.66**	**330**			**Pn**	**14 28 36.7**	**-2.4**
KURK	**Kurchatov**	**14.68**	**19**	P		**P**	**14 28 42.7**	**-0.5**
KURK	**Kurchatov**	**14.68**	**19**			**Pn**	**14 28 35.3**	**-4.1**
BHPL	**Bhopal**	**14.79**	**157**	*e*P		**Pn**	**14 28 40.0**	**-1.0**
BHPL				*e*S		Sn	14 31 15.3	-8.8
BVAR	**Borovoye Array**	**15.99**	**358**	P		**Pn**	**14 28 55.7**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=155,slow=8.3,SNR=9.8							
BVAR				LR		LR	14 34 32.1	
	comp=Z,23nm,18.8s,baz=186,slow=35							
	comp=Z,1.5nm,0.4s							
AKTO	**Aktyubinsk**	**16.36**	**329**	P		**Pn**	**14 29 00.1**	**-0.5**
	comp=Z,1.5nm,0.3s,baz=137,slow=5.4,SNR=16							
AKTO				S		Sn	14 31 51.2	-10
	comp=Z,8.6nm,0.8s,baz=3.5,slow=23,SNR=4.7							
	comp=Z,4.4nm,0.3s							
AKTO	**Aktyubinsk**	**16.36**	**329**	⇑P		**Pn**	**14 29 01.8**	**+1.2**
	comp=Z,2.6nm,0.5s							
AKTO				⇑S		**Sn**	**14 31 56.0**	**-5.7**
	comp=Z,6.3nm,1.0s							
ZAA0	**Zalesovo Array**	**19.37**	**25**	P		**P**	**14 29 34.6**	**-0.3**
ZAA0				IAmb		IAmb	14 29 35.3	
	comp=Z,11nm,0.6s							
ZALV	**Zalesovo Beam**	**19.37**	**25**	P		**P**	**14 29 34.4**	**-0.5**
	comp=Z,3.2nm,0.3s,baz=221,slow=10,SNR=88							
	comp=Z,1.3nm,0.4s							
SHL	**Shillong**	**21.05**	**117**	P		**P**	**14 29 54.4**	**+0.8**
ARTI	**Arti**	**21.16**	**340**	P		**P**	**14 29 54.1**	**-0.1**
	comp=Z,1.5nm,0.3s,baz=137,slow=7.5,SNR=4.1							
	comp=Z,1.5nm,0.3s							
GTA2	**Gaotai**	**22.57**	**75**	*e*P		**P**	**14 30 11.5**	**+2.0**
GTA2				pmax	pmax			
	comp=Z,10.0nm,1.2s							
ULN	**Ulaanbaatar**	**28.38**	**56**	P		**P**	**14 31 02.9**	**+0.5**
HHC	**Hu-ho-hao-te**	**31.48**	**70**	*e*P		**P**	**14 31 30.5**	**+0.7**
HHC				pmax	pmax			
	comp=Z,10.0nm,0.6s							
HHC				pmax	pmax			
	comp=Z,120nm,4.5s							
FIA1	**FINESS Array S**	**37.09**	**326**	P		**P**	**14 32 18.2**	**+0.4**
FINES	**FINESS Array B**	**37.09**	**326**	P		**P**	**14 32 18.5**	**+0.7**
	comp=Z,2.3nm,0.6s,baz=98,slow=7.9,SNR=11							
	comp=Z,2.3nm,0.6s							
FINES	**FINESS Array B**	**37.09**	**326**	P		**P**	**14 32 18.4**	**+0.6**
ARCES	**ARCESS Array B**	**40.68**	**337**	P		**P**	**14 32 49.3**	**+1.6**
	comp=Z,4.3nm,1.0s,baz=112,slow=9.5,SNR=7.8							
	comp=Z,4.3nm,1.0s							
ARCES	**ARCESS Array B**	**40.68**	**337**	P		**P**	**14 32 48.5**	**+0.8**
HEH	**HeiHe**	**41.83**	**53**	*e*P		**P**	**14 32 58.4**	**+1.0**
HEH				pmax	pmax			
	comp=Z,10.0nm,0.8s							
HFS	**Hagfors**	**42.70**	**322**	P		**P**	**14 33 06.2**	**+1.9**
	comp=Z,2.5nm,0.5s,baz=98,slow=9.1,SNR=13							
	comp=Z,2.5nm,0.5s							
YAK	**Yakutsk**	**43.46**	**36**	P		**P**	**14 33 10.3**	**-0.1**
NC303	**NORSAR Array S**	**43.95**	**323**	P		**P**	**14 33 15.3**	**+0.9**
NB2	**NORSAR Subarra**	**44.01**	**323**	P		**P**	**14 33 16.6**	**+1.8**
	comp=Z,3.8nm,0.7s,baz=95,slow=7.9							
NOA	**NORSAR Array B**	**44.01**	**323**	P		**P**	**14 33 16.7**	**+1.8**
	comp=Z,1.6nm,0.6s,baz=95,slow=7.7,SNR=6.1							
	comp=Z,1.6nm,0.6s							
KSRS	**Korea Array**	**44.60**	**71**	P		**P**	**14 33 19.2**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=292,slow=12,SNR=1.7							
	comp=Z,1.0nm,0.7s							
TIXI	**Tiksi**	**45.23**	**22**	P		**P**	**14 33 25.2**	**+0.9**
SPITS	**Spitsbergen Ar**	**46.98**	**347**	P		**P**	**14 33 39.7**	**+1.7**
	comp=Z,4.4nm,0.8s,baz=129,slow=11,SNR=1.8							
	comp=Z,4.4nm,0.8s							
ESDC	**Sonseca Array**	**57.30**	**298**	P		**P**	**14 34 57.0**	**+1.9**
	comp=Z,0.5nm,0.4s,baz=65,slow=7.4,SNR=12							
	comp=Z,0.5nm,0.4s							
TORD	**Torodi Ar. Bea**	**65.84**	**268**	P		**P**	**14 35 53.8**	**+1.0**
	comp=Z,4.4nm,0.6s,baz=69,slow=4.0,SNR=2.6							
	comp=Z,0.4nm,0.6s							
TORD	**Torodi Ar. Bea**	**65.84**	**268**	IAmb		IAmb	14 36 01.8	
	comp=Z,1.3nm,0.8s							
C16K	**Lisburne Hills**	**66.91**	**20**	IAmb		IAmb	14 36 00.7	
	comp=Z,2.4nm,0.8s							
B22K	**Teshekpuk Lake**	**68.19**	**15**	P		**P**	**14 36 08.0**	**+1.2**
B22K				IAmb		IAmb	14 36 08.9	
	comp=Z,3.4nm,0.7s							
D19K	**Kuna River**	**68.59**	**17**	P		**P**	**14 36 10.0**	**+0.6**
E18K	**Tukpahlearik C**	**68.78**	**19**			**P**	**14 36 11.4**	**+0.9**
E18K				IAmb		IAmb	14 36 12.6	
	comp=Z,3.3nm,0.8s							
F21K	**Alatna River**	**70.68**	**17**	P		**P**	**14 36 23.2**	**+0.9**
G21K	**Allakaket**	**71.25**	**17**	P		**P**	**14 36 26.4**	**+0.8**
COLD	**Coldfoot**	**71.42**	**16**			**P**	**14 36 27.9**	**+1.2**
COLD				IAmb		IAmb	14 36 28.9	
	comp=Z,3.7nm,1.0s							
IMAR	**Indian Mountai**	**71.62**	**18**	P		**P**	**14 36 28.6**	**+0.7**
ILON	**Igloolik, Nuna**	**72.04**	**350**	P		**P**	**14 36 31.5**	**+1.2**
ILON				IAmb		IAmb	14 36 41.7	
	comp=Z,5.1nm,1.3s							
H21K	**Melozitna Rive**	**72.11**	**18**	P		**P**	**14 36 31.8**	**+0.9**
H21K				IAmb		IAmb	14 36 32.8	
	comp=Z,4.9nm,1.2s							
J19K	**Poorman**	**72.73**	**20**	P		**P**	**14 36 36.0**	**+1.4**
J19K				IAmb		IAmb	14 36 36.5	
	comp=Z,7.1nm,1.4s							
NEA2	**Nenana**	**73.88**	**17**	P		**P**	**14 36 42.3**	**+

PUZ	**Puketiti**	**5.49 191**	P	P	14 35 13.2 -0.1
PUZ			S	S	14 36 24.8 +0.1
RUGZ	**Raukumara Rang**	**5.50 196**	P	P	14 35 13.8 +0.2
RUGZ			S	S	14 36 23.9 -1.1
TWGZ	**Tauwhareparae**	**5.64 193**	P	P	14 35 15.6 +0.7
TWGZ			S	S	14 36 27.5 -0.1
MWZ	**Matawai**	**5.89 196**	P	P	14 35 17.0 -0.6
MWZ			S	S	14 36 32.3 -0.1
LIRZ	**Lichensteins R**	**5.92 205**	P	P	14 35 19.9 +2.0
URZ	**Urewera**	**5.92 199**	P	P	14 35 17.5 -0.4
URZ			S	S	14 36 33.8 +0.7
RIGZ	**Rimuhau**	**6.20 193**	P	P	14 35 20.9 0.0
RIGZ			S	S	14 36 38.6 +0.1
MUGZ	**Murupara**	**6.23 201**	P	P	14 35 20.8 -0.3
MUGZ			S	S	14 36 39.3 +0.3
KNZ	**Kokohu**	**6.52 193**	S	S	14 36 45.8 +1.0
RAHZ	**Arahi**	**6.55 197**	P	P	14 35 24.1 -1.5
RAHZ			S	S	14 36 46.4 +0.8
MTHZ	**Maungataniwha**	**6.55 199**	P	P	14 35 25.8 +0.2
BKZ	**Black Stump Fm**	**6.94 200**	P	P	14 35 27.5 -2.4
BKZ			S	S	14 36 54.2 +0.5
KWHZ	**Kaweka Forest**	**7.20 200**	P	P	14 35 32.7 -0.2
OTVZ	**Oturere**	**7.21 205**	P	P	14 35 32.6 -0.5
KRHZ	**Kereru**	**7.42 200**	P	P	14 35 35.1 -0.2
KAHZ	**Kahuranaki**	**7.43 196**	P	P	14 35 34.4 -1.0
PXZ	**Pawanui**	**7.66 196**	P	P	14 35 37.3 -0.5
PNHZ	**Pukenui**	**7.72 200**	P	P	14 35 37.3 -1.3
PRHZ	**Porangahau**	**7.94 197**	P	P	14 35 41.3 +0.4

IDC ***15*** *14:36:33.9±2.2,22.°09S×68.°36W,h101km±20km,mb3.7/3, mbtmp3.9/7,MS3.3/3,Error ellipse: s-maj=41.1km s-min=17.9km az=99.0*

SJA ***15*** *14:36:34.1±0.9,21.°90S×68.°66W,h130km,ML3.8,MW3.7*

NEIC ***15*** *14:36:35.8±1.2,21.°91S±0.°03×68.°67W±0.°08,h118km±7km, mb4.3/10,ML3.9(GUC),Error ellipse: s-maj=10.6km s-min=3.7km az=100.0*

GUC ***15*** *14:36:36.3±0.8,21.°88S×68.°68W,h123km±4km,ML3.9*

ISC 15 14:36:35.5±0.7,**21.°94S**±0.°03×**68.°66W**±0.°04,**h127**km±6km, **n89**,σ1°**43**/115,**mb4.3**/4,**1C-6D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.56 285**			**Pn**	**14 36 54.1**	**-0.7**
PB09	**IPOC Station P**	**0.56 285**		↓*i* P	**Pn**	**14 36 54.5**	**-0.3**
PB09				*e*S	**Sn**	**14 37 09.4**	**+0.1**
PB09	**IPOC Station P**	**0.56 285**		*e*P	**Pn**	**14 36 54.5**	**-0.3**
PB09				*e*S	**Sn**	**14 37 10.3**	**+1.0**
PB09				IAML		14 37 11.1	
	comp=Z,2μm,0.1s						
PB03	**IPOC Station P**	**1.02 264**			**Pn**	**14 36 58.2**	**-0.2**
PB03	**IPOC Station P**	**1.02 264**		↓↓*i* P	**Pn**	**14 36 58.3**	**-0.2**
PB03				*e*S	**Sn**	**14 37 15.5**	**-0.4**
PB03				IAML		14 37 16.1	
	comp=N,3μm,0.1s						
PB03	**IPOC Station P**	**1.02 264**		*e*P	**Pn**	**14 36 57.8**	**-0.7**
PB03				*e*S	**Sn**	**14 37 15.7**	**-0.2**
PB03				IAML		14 37 16.4	
	comp=Z,3μm,0.3s						
AF01	**San Pedro de A**	**1.10 156**			**Pn**	**14 36 59.9**	**+0.4**
AF01	**San Pedro de A**	**1.10 156**		*e*P	**Pn**	**14 37 00.2**	**+0.7**
AF01				IAML		14 37 37.4	
	comp=E,2μm,0.4s						
AF01	**San Pedro de A**	**1.10 156**		*e*P	**Pn**	**14 36 59.9**	**+0.4**
AF01				IAML		14 37 34.1	
	comp=Z,954nm,0.7s						
PB06	**IPOC Station P**	**1.14 228**			**Pn**	**14 36 59.8**	**+0.1**
PB06	**IPOC Station P**	**1.14 228**		↓*i* P	**Pn**	**14 37 00.1**	**+0.5**
PB06				*e*S	**Sn**	**14 37 18.3**	**+0.3**
PB06				IAML		14 37 19.2	
	comp=N,3μm,0.2s						
PB06	**IPOC Station P**	**1.14 228**		*e*P	**Pn**	**14 36 59.6**	**0.0**
PB06				*e*S	**Sn**	**14 37 18.9**	**+0.9**
PB06				IAML		14 37 20.6	
	comp=Z,2μm,0.3s						
PB07	**IPOC Station P**	**1.16 280**			**Pn**	**14 36 59.4**	**-0.5**
PB07	**IPOC Station P**	**1.16 280**		*e*P	**Pn**	**14 36 59.7**	**-0.2**
PB07				*e*S	**Sn**	**14 37 17.8**	**-0.6**
PB07				IAML		14 37 19.3	
	comp=N,5μm,0.1s						
PB07	**IPOC Station P**	**1.16 280**		*e*P	**Pn**	**14 36 59.2**	**-0.6**
PB07				*e*S	**Sn**	**14 37 18.6**	**+0.3**
PB07				IAML		14 37 20.3	
	comp=Z,2μm,0.1s						
PB01	**IPOC Station P**	**1.18 319**			**Pn**	**14 36 59.0**	**-1.0**
PB01	**IPOC Station P**	**1.18 319**		*i* P	**Pn**	**14 36 59.2**	**-0.8**
PB01				*e*S	**Sn**	**14 37 16.9**	**-1.6**
PB01				IAML		14 37 19.6	
	comp=E,2μm,0.2s						
PB01	**IPOC Station P**	**1.18 319**		*e*P	**Pn**	**14 36 59.3**	**-0.8**
PB01				*e*S	**Sn**	**14 37 17.2**	**-1.4**
PB01				IAML		14 37 19.3	
	comp=Z,2μm,0.2s						
PB02	**IPOC Station P**	**1.30 298**			**Pn**	**14 37 00.7**	**-0.7**
PB02	**IPOC Station P**	**1.30 298**		↓*i* P	**Pn**	**14 37 00.9**	**-0.5**
PB02				*e*S	**Sn**	**14 37 19.5**	**-1.4**
PB02				IAML		14 37 20.4	
	comp=E,2μm,0.2s						
PB02	**IPOC Station P**	**1.30 298**		*e*P	**Pn**	**14 37 00.5**	**-0.8**
PB02				*e*S	**Sn**	**14 37 20.2**	**-0.7**
PB02				IAML		14 37 20.7	
	comp=Z,2μm,0.5s						
PB05	**IPOC Station P**	**1.69 237**			**Pn**	**14 37 05.8**	**+0.1**
PB05	**IPOC Station P**	**1.69 237**		↓*i* P	**Pn**	**14 37 05.8**	**+0.1**
PB05				*e*S	**Sn**	**14 37 28.3**	**-0.5**
PB05				IAML		14 37 29.2	
	comp=N,888nm,0.3s						
PB05	**IPOC Station P**	**1.69 237**		*e*P	**Pn**	**14 37 05.6**	**-0.1**
PB05				*e*S	**Sn**	**14 37 29.1**	**+0.3**
PB05				IAML		14 37 32.5	
	comp=Z,586nm,0.3s						
PX03	**IPOC Station P**	**1.78 329**		*e*P	**Pn**	**14 37 05.0**	**-1.7**
PX03				IAML		14 37 30.1	
	comp=N,1μm,0.2s						
PATCX	**Punta Patache**	**1.78 308**			**Pn**	**14 37 06.0**	**-0.7**
PATCX	**Punta Patache**	**1.78 308**		*e*P	**Pn**	**14 37 06.3**	**-0.5**
PATCX				*e*S	**Sn**	**14 37 29.1**	**-1.5**
PATCX				IAML		14 37 31.9	
	comp=N,889nm,0.2s						
PATCX	**Punta Patache**	**1.78 308**		*e*P	**Pn**	**14 37 05.8**	**-1.0**
PATCX				*e*S	**Sn**	**14 37 30.0**	**-0.6**
PATCX				IAML		14 37 33.4	
	comp=Z,527nm,0.3s						
PB08	**IPOC Station P**	**1.85 345**		↑*i* P	**Pn**	**14 37 07.9**	**+0.1**
PB08				*e*S	**Sn**	**14 37 32.1**	**-0.4**
PB08				IAML		14 37 33.8	
	comp=E,771nm,0.2s						
PB08	**IPOC Station P**	**1.85 345**		*e*P	**Pn**	**14 37 07.5**	**-0.4**
PB08				*e*S	**Sn**	**14 37 32.9**	**+0.4**
PB08				IAML		14 37 37.2	
	comp=Z,242nm,0.2s						
TA01	**Diego Aracena**	**1.97 314**			**Pn**	**14 37 08.1**	**-0.7**
TA01	**Diego Aracena**	**1.97 314**		*e*P	**Pn**	**14 37 08.0**	**-1.0**
TA01	**Diego Aracena**	**1.97 314**		*e*P	**Pn**	**14 37 08.2**	**-0.7**
TA01				*e*S	**Sn**	**14 37 33.2**	**-1.3**
TA01				IAML		14 37 35.9	
	comp=Z,222nm,0.5s						
HMBC	**Humberstone**	**2.01 325**			**Pn**	**14 37 07.9**	**-1.7**
HMBC	**Humberstone**	**2.01 325**		↓↓*i* P	**Pn**	**14 37 08.3**	**-1.2**
HMBC				IAML		14 37 36.2	
	comp=N,1μm,0.2s						
HMBC	**Humberstone**	**2.01 325**		*e*P	**Pn**	**14 37 08.2**	**-1.4**
HMBC				*e*S	**Sn**	**14 37 33.6**	**-2.1**
HMBC				IAML		14 37 37.2	
	comp=Z,948nm,0.2s						
TA02	**Huaiquique**	**2.15 320**		*e*P	**Pn**	**14 37 10.0**	**-1.2**
TA02				IAML		14 37 41.4	
	comp=N,2μm,0.1s						
TA02	**Huaiquique**	**2.15 320**		*e*P	**Pn**	**14 37 10.1**	**-1.1**
TA02				*e*S	**Sn**	**14 37 38.7**	**+0.1**
TA02				IAML		14 37 42.0	
	comp=Z,524nm,0.2s						
GO01	**Chusmiza**	**2.31 347**			**Pn**	**14 37 12.9**	**-0.8**
GO01	**Chusmiza**	**2.31 347**		*e*P	**Pn**	**14 37 13.3**	**-0.4**
GO01				IAML		14 37 44.5	
	comp=N,1μm,0.2s						
GO01	**Chusmiza**	**2.31 347**		*e*P	**Pn**	**14 37 13.0**	**-0.7**
GO01				*e*S	**Sn**	**14 37 43.6**	**+0.7**
GO01				IAML		14 37 44.0	
	comp=Z,285nm,0.6s						
PB10	**IPOC Station P**	**2.35 228**			**Pn**	**14 37 14.5**	**+0.8**
PB11	**IPOC Station P**	**2.36 337**			**Pn**	**14 37 12.9**	**-1.0**
PB11	**IPOC Station P**	**2.36 337**		*i* P	**Pn**	**14 37 13.0**	**-1.0**
PB11				*e*S	**Sn**	**14 37 41.3**	**-2.1**
PB11				IAML		14 37 43.3	
	comp=E,1μm,0.2s						
PB11	**IPOC Station P**	**2.36 337**		*e*P	**Pn**	**14 37 13.0**	**-0.9**
PB11				*e*S	**Sn**	**14 37 42.2**	**-1.2**
PB11				IAML		14 37 42.9	
	comp=Z,350nm,0.2s						
YJA	**Yavi**	**2.93 95**		*e*P		14 37 26.8	+5.3
YJA				*e*S	**Sn**	**14 37 54.1**	**-2.8**
PB14	**IPOC Station P**	**3.12 211**			**Pn**	**14 37 24.1**	**+0.2**
PB14	**IPOC Station P**	**3.12 211**		*e*P	**Pn**	**14 37 23.9**	**+0.1**
PB14				IAML		14 38 03.1	
	comp=E,120nm,0.4s						
PB14	**IPOC Station P**	**3.12 211**		*e*P	**Pn**	**14 37 23.6**	**-0.2**
PB14				*e*S	**Sn**	**14 38 01.0**	**-0.2**
PB14				IAML		14 38 04.0	
	comp=Z,142nm,0.3s						
SALTA		**3.12 137**		*e*P	**Pn**	**14 37 27.3**	**+3.2**
HJA	**Humahuaca**	**3.26 113**		*e*P	**Pn**	**14 37 23.1**	**-2.6**
PB12	**IPOC Station P**	**3.66 334**			**Pn**	**14 37 28.6**	**-2.2**
PB12	**IPOC Station P**	**3.66 334**		*i* P	**Pn**	**14 37 28.4**	**-2.4**
PB12	**IPOC Station P**	**3.66 334**		*e*P	**Pn**	**14 37 28.9**	**-1.9**
PB12				*e*S	**Sn**	**14 38 09.8**	**-3.8**
PB12				IAML		14 38 14.1	
	comp=Z,81nm,0.3s						
PB16	**IPOC Station P**	**3.67 347**			**Pn**	**14 37 30.2**	**-1.2**
PB16	**IPOC Station P**	**3.67 347**		*e*P	**Pn**	**14 37 30.8**	**-0.6**
PB16	**IPOC Station P**	**3.67 347**		*e*P	**Pn**	**14 37 30.9**	**-0.6**
PB16				*e*S	**Sn**	**14 38 16.9**	**+2.3**
PB16				IAML		14 38 18.0	
	comp=Z,54nm,0.5s						
AC01	**Pan de Azucar**	**4.55 203**			**Pn**	**14 37 41.1**	**-1.4**
AC01	**Pan de Azucar**	**4.55 203**		*e*P	**Pn**	**14 37 41.2**	**-1.4**
AC01				*e*S	**Sn**	**14 38 31.7**	**-2.9**
AC01				IAML		14 39 05.9	
	comp=Z,62nm,0.7s						
AC02	**Maricunga**	**4.89 185**			**Pn**	**14 37 47.6**	**+0.1**
AC02	**Maricunga**	**4.89 185**		*e*P	**Pn**	**14 37 47.3**	**-0.2**
AC02				*e*S	**Sn**	**14 38 46.6**	**+3.1**
AC02				IAML		14 38 52.1	
	comp=Z,247nm,0.8s						
AC06	**Mina Casimiro**	**5.61 196**		Pn	**Pn**	**14 37 55.2**	**-1.6**
LPAZ	**La Paz**	**5.64 5**		P	**Pn**	**14 37 58.4**	**+0.6**
	comp=Z,5.1nm,0.4s,baz=203,slow=5.6,SNR=24						
LPAZ	**La Paz**	**5.64 5**		Pn	**Pn**	**14 37 57.7**	**-0.1**
AC05	**El Transito**	**7.02 192**			**Pn**	**14 38 13.6**	**-2.3**
SIV	**San Ignacio**	**9.30 52**		P	**Pn**	**14 38 42.7**	**-3.9**
	comp=Z,2.2nm,0.4s,baz=215,slow=14,SNR=18						
SIV				S	Sn	14 40 18.6	-11
	comp=Z,0.7nm,0.4s,baz=137,slow=20,SNR=4.1						
CFA	**Coronel Fontan**	**9.63 178**		P	**Pn**	**14 38 48.1**	**-2.8**
	comp=Z,1.1nm,0.3s,baz=334,slow=13,SNR=11						
CFA				S	**Sn**	**14 40 30.6**	**-6.8**
	comp=Z,1.0nm,0.3s,baz=179,slow=19,SNR=2.4						
MT02	**Curacav**	**11.49 190**		Pn	**Pn**	**14 39 15.1**	**-0.6**
BI02	**San Fabin de**	**14.85 188**		Pn	**Pn**	**14 39 59.9**	**+0.8**
TRCB	**Terra Rica**	**14.85 96**		P	**P**	**14 40 02.8**	**+1.0**
ITAB	**Concordia**	**15.93 113**			**P**	**14 40 13.5**	**-0.1**
ITAB				IAmb	IAmb	14 40 36.3	
	comp=Z,21nm,1.5s						
PLCA	**Paso Flores**	**18.80 184**		P	**P**	**14 40 44.8**	**-0.4**
	comp=Z,1.5nm,0.9s,baz=350,slow=8.2,SNR=3.3						
PLCA	**Paso Flores**	**18.80 184**		P	**Pn**	**14 40 47.1**	**0.0**
PLCA				IAmb	IAmb	14 41 27.0	
	comp=Z,9.7nm,1.5s						
OTAV	**Otavalo**	**24.02 335**		P	**P**	**14 41 39.8**	**+0.5**
BOAV	**Boa Vista**	**25.46 19**		P	**P**	**14 41 52.3**	**+0.5**
BOAV				IAmb	IAmb	14 42 04.0	
	comp=Z,10.0nm,1.5s						
BRU2	**Volcan**	**33.50 334**		P	**P**	**14 43 03.9**	**+0.7**
BRU2				IAmb	IAmb	14 43 11.1	
	comp=Z,9.7nm,0.6s						
JTS	**Las Juntas de**	**35.80 332**		LR	LR	14 56 55.1	
	comp=Z,45nm,21.6s,baz=273,slow=34						
Y45A	**Yeager Farm, C**	**58.95 340**		P	**P**	**14 46 22.3**	**+0.8**
SHEL	**Horse Pasture**	**59.46 96**		P	**P**	**14 46 25.8**	**+0.3**
DBIC	**Dimbokro**	**68.64 73**		P	**P**	**14 47 25.5**	**0.0**
	comp=Z,2.8nm,0.8s,baz=240,slow=8.1,SNR=1.8						
	comp=Z,2.8nm,0.8s						
DBIC	**Dimbokro**	**68.64 73**		IAmb	IAmb	14 47 42.8	
	comp=Z,20nm,1.5s						
D62A	**Allapoint, All**	**68.70 360**		P	**P**	**14 47 26.7**	**+1.6**
TORD	**Torodi Ar. Bea**	**77.28 70**		P	**P**	**14 48 16.4**	**0.0**
	comp=Z,0.6nm,0.4s,baz=261,slow=4.3,SNR=6.6						
	comp=Z,0.6nm,0.4s						
LBTB	**Lobatse**	**84.62 115**		LR	LR	15 22 58.0	
	comp=Z,17nm,20.7s,baz=158,slow=33						
LSZ	**Lusaka**	**90.55 107**		LR	LR	15 26 05.9	
	comp=Z,14nm,19.0s,baz=102,slow=33						
YKA	**Yellowknife Ar**	**91.68 340**		P	**P**	**14 49 29.3**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=131,slow=4.3,SNR=6.9						
	comp=Z,0.3nm,0.6s						
YKA	**Yellowknife Ar**	**91.68 340**		P	**P**	**14 49 29.0**	**+1.1**
ILULI	**Ilulissat**	**91.78 6**		P	**P**	**14 49 28.4**	**+0.2**
MKAR	**Makanchi Array**	**145.85 36**		PKPbc	**PKiKP**	**14 56 01.3**	**-2.0**
	comp=Z,0.4nm,0.5s,baz=308,slow=3.9,SNR=5.9						

IDC ***15*** *14:41:07.2±2.0,15.°84S×175.°69W,h294km±83km,mb3.1/4, mbtmp3.8/5,Error ellipse: s-maj=302.1km s-min=29.3km az=143.0*

NEIC ***15*** *14:41:08.4±0.5,15.°8S±0.°2×175.°7W±0.°1,h301km±10km, mb4.3/11,Error ellipse: s-maj=24.3km s-min=13.7km az=164.0*

ISC 15 14:41:07.9±0.8,**15.°8S**±0.°2×**175.°67W**±0.°09,**h300**km,**n20,** σ0°**57**/21,**mb3.9**/11,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FUTU	**Fugatoga**	**2.80 302**		Pn	**Pn**	**14 42 02.0**	**+0.3**
AFI	**Afiamalu**	**4.21 64**		P	**Pn**	**14 42 17.1**	**+0.4**
	14nm,0.4s,baz=179,slow=1.7,SNR=10						
AFI				S	**S**	**14 43 10.6**	**-1.1**
	24nm,0.8s,baz=19,slow=15,SNR=3.8						
OXZ	**Oxford**	**29.36 198**		P	**P**	**14 46 44.4**	**+0.7**
CAN	**Canberra**	**37.05 232**		P	**P**	**14 47 50.0**	**0.0**
CAN				IAmb	IAmb	14 48 31.8	
	comp=Z,32nm,1.4s						
STKA	**Stephens Creek**	**41.94 240**		P	**P**	**14 48 29.6**	**-0.4**
STKA				IAmb	IAmb	14 48 57.0	
	comp=Z,40nm,1.4s						
BBOO	**Buckleboo**	**46.72 240**		P	**P**	**14 49 07.6**	**-0.1**
BBOO				IAmb	IAmb	14 49 46.6	
	comp=Z,40nm,1.4s						
WR8	**Warramunga Arr**	**47.47 257**		P	**P**	**14 49 13.2**	**-0.4**
WR8				IAmb	IAmb	14 49 51.5	
	comp=Z,10.0nm,1.5s						
WB0	**Warramunga Arr**	**47.58 258**		P	**P**	**14 49 14.2**	**-0.3**
WB0				IAmb	IAmb	14 49 40.2	
	comp=Z,4.8nm,1.1s						
WRA	**Warramunga Arr**	**47.62 257**		P	**P**	**14 49 14.2**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=93,slow=7.6,SNR=11						
	comp=Z,0.3nm,0.5s						
WRA	**Warramunga Arr**	**47.62 257**		P	**P**	**14 49 14.2**	**-0.6**
AS31	**Alice Springs**	**47.90 252**		P	**P**	**14 49 16.5**	**-0.4**
ASAR	**Alice Springs**	**47.90 252**		P	**P**	**14 49 16.5**	**-0.4**
	comp=Z,1.3nm,0.4s,baz=90,slow=7.6,SNR=71						
	comp=Z,1.3nm,0.4s						
ASAR	**Alice Springs**	**47.90 252**		P	**P**	**14 49 16.0**	**-0.9**
FITZ	**Fitzroy Crossi**	**55.98 259**		P	**P**	**14 50 15.3**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=76,slow=4.2,SNR=1.4						
	comp=Z,1.1nm,0.7s						
PSA00	**Pilbara Seismi**	**60.99 254**		P	**P**	**14 50 50.2**	**-0.3**
MBWA	**Marble Bar**	**61.14 254**		P	**P**	**14 50 51.3**	**-0.3**
MBWA				IAmb	IAmb	14 51 29.4	
	comp=Z,24nm,1.4s						
JOW	**Kunigami**	**68.98 307**		P	**P**	**14 51 42.2**	**+0.7**
J20K	**Nowinta River**	**81.44 9**		P	**P**	**14 52 51.5**	**+0.1**
J20K				IAmb	IAmb	14 53 17.1	
	comp=Z,3.9nm,1.4s						
IMAR	**Indian Mountai**	**83.20 9**		P	**P**	**14 53 00.9**	**+0.5**
ILAR	**Eielson Array**	**83.28 12**		P	**P**	**14 53 01.0**	**+0.2**
	comp=Z,0.2nm,0.8s,baz=212,slow=5.7,SNR=2.0						
	comp=Z,0.2nm,0.8s						

JMA ***15*** *14:41:53.9±0.2,25°N±4°×12°2E±°,h74km±3km,MV2.0/10, TAIWAN REGION*

TAP ***15*** *14:41:53.7,24.°67N×122.°06E,h76km,ML3.0,B*

ISC 15 14:41:53.4±1.3,**24.°67N**±0.°03×**122.°08E**±0.°03,**h81**km±5km, **n116**,σ1°**06**/199,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.22 253**		*i* P	**Pn**	**14 42 05.3**	**0.0**
TWC				*i* S	**Sn**	**14 42 13.5**	**-0.7**
ESAO	**Su ao**	**0.23 246**		P	**Pn**	**14 42 05.5**	**+0.1**
EOS2	**EOS2**	**0.29 151**		*e*P	**Pn**	**14 42 06.3**	**+0.7**
EOS2				*e*S	**Sn**	**14 42 15.4**	**+0.9**
ILA	**Ilan**	**0.31 287**		*e*P	**Pn**	**14 42 06.0**	**+0.2**
ILA				S	**Sn**	**14 42 15.3**	**+0.2**
NDS	**Dongshan**	**0.33 263**		P	**Pn**	**14 42 06.2**	**+0.3**
NDS				S	**Sn**	**14 42 14.8**	**-0.5**
TWB1	**Santiao Chiao**	**0.34 346**		*i* P	**Pn**	**14 42 05.8**	**-0.2**
TWB1				S	**Sn**	**14 42 14.5**	**-0.9**
EWUT	**Wuta**	**0.36 230**		S	**Sn**	**14 42 15.5**	**0.0**
TIPB	**Shuangxi**	**0.38 322**		*i* P	**Pn**	**14 42 06.2**	**-0.2**
TIPB				*i* S	**Sn**	**14 42 14.8**	**-1.1**
TWE	**Neicheng**	**0.38 277**		*i* P	**Pn**	**14 42 06.5**	**+0.3**
TWE				S	**Sn**	**14 42 15.8**	**0.0**
EOS3	**EOS3**	**0.44 151**		*e*P	**Pn**	**14 42 07.5**	**+1.0**
EOS3				*e*S	**Sn**	**14 42 17.9**	**+1.6**
FUSB	**Fushanzhiwuyua**	**0.46 281**		*i* P	**Pn**	**14 42 07.1**	**+0.2**
FUSB				S	**Sn**	**14 42 17.3**	**+0.3**
SXI1	**Grass Mountain**	**0.46 336**		*i* P	**Pn**	**14 42 06.8**	**-0.2**
SXI1				S	**Sn**	**14 42 16.7**	**-0.3**
EAHA	**Aohua**	**0.46 222**		P	**Pn**	**14 42 06.9**	**0.0**
EAHA				*i* S	**Sn**	**14 42 17.2**	**+0.3**
ENTT	**Nioudou**	**0.47 266**		*i* P	**Pn**	**14 42 07.7**	**+0.7**
ENTT				*e*S	**Sn**	**14 42 17.7**	**+0.6**
NWF	**Wu-fen Shan**	**0.48 326**		*e*S	**Sn**	**14 42 16.1**	**-1.2**
WFSB	**Wu-fen Shan**	**0.48 326**		*e*S	**Sn**	**14 42 15.8**	**-1.3**
NDT	**Datong Townshi**	**0.52 262**		P	**Pn**	**14 42 08.1**	**+0.7**
NDT				S	**Sn**	**14 42 18.6**	**+0.8**
LATG	**Datong**	**0.52 255**		*i* P	**Pn**	**14 42 08.0**	**+0.4**
LATG				*i* S	**Sn**	**14 42 18.4**	**+0.4**
NWLT	**Wulai**	**0.53 281**		*i* P	**Pn**	**14 42 07.9**	**+0.3**
NWLT				S	**Sn**	**14 42 17.6**	**-0.4**
TWA	**Mucha**	**0.54 304**		*e*P	**Pn**	**14 42 07.5**	**-0.1**
TWA				S	**Sn**	**14 42 17.3**	**-0.9**
TNOU	**National Taiwa**	**0.55 330**		S	**Sn**	**14 42 17.3**	**-0.9**
NHDH	**Xindian Distri**	**0.58 300**		*e*P	**Pn**	**14 42 08.0**	**+0.1**
NHDH				*e*S	**Sn**	**14 42 19.3**	**+0.6**
EOS4	**EOS4**	**0.59 158**		*e*P	**Pn**	**14 42 08.4**	**+0.7**
EOS4				*e*S	**Sn**	**14 42 19.0**	**+0.7**
TATO	**Taipei**	**0.61 299**		P	Pn	14 42 16.6	+8.3
TAP	**Taipei**	**0.64 305**		*e*S	**Sn**	**14 42 18.8**	**-0.8**
YHNB	**Yeheng**	**0.64 270**		P	**Pn**	**14 42 08.8**	**+0.2**
YHNB	**Yeheng**	**0.64 270**		*i* P	**Pn**	**14 42 08.9**	**+0.3**
YHNB				S	**Sn**	**14 42 19.9**	**0.0**
NSK	**Sanguang**	**0.66 270**		*i* P	**Pn**	**14 42 09.1**	**+0.3**
NSK				S	**Sn**	**14 42 20.1**	**0.0**
ETL	**Fush Village**	**0.66 219**		P	**Pn**	**14 42 08.4**	**-0.3**
ETL				S	**Sn**	**14 42 20.1**	**-0.1**
YM01	**YM01**	**0.66 316**		P	**Pn**	**14 42 08.7**	**-0.1**
YM01				S	**Sn**	**14 42 19.1**	**-1.1**
NACB	**Ninganchiao**	**0.67 222**		P	**Pn**	**14 42 07.9**	**-0.9**
NACB	**Ninganchiao**	**0.67 222**		*i* P	**Pn**	**14 42 08.4**	**-0.4**
NACB				S	**Sn**	**14 42 19.9**	**-0.3**
YM08	**YM08**	**0.68 319**		S	**Sn**	**14 42 18.9**	**-1.5**
NNSB	**Datong**	**0.68 249**		P	**Pn**	**14 42 09.4**	**+0.4**
NNSB				S	**Sn**	**14 42 21.0**	**+0.3**
NNS	**Nan Shan**	**0.68 250**		*i* P	**Pn**	**14 42 09.5**	**+0.4**
NNS				*e*S	**Sn**	**14 42 20.8**	**+0.1**
ZUZH	**Zhuzihu**	**0.69 315**		*e*P	**Pn**	**14 42 09.0**	**0.0**
ZUZH				*e*S	**Sn**	**14 42 19.4**	**-1.3**
ETLH	**Xiulin Townshi**	**0.72 230**		*i* P	**Pn**	**14 42 09.2**	**-0.2**
ETLH				*i* S	**Sn**	**14 42 21.2**	**-0.1**
TWS1	**Kuangyinshan**	**0.74 305**		P	**Pn**	**14 42 09.7**	**+0.2**
TWS1				*e*S	**Sn**	**14 42 21.5**	**0.0**
TWD	**Chiawan**	**0.74 217**		*i* P	**Pn**	**14 42 09.3**	**-0.2**
TWD				*e*S	**Sn**	**14 42 20.3**	**-1.1**
NTST	**Danshui**	**0.75 311**		P	**Pn**	**14 42 10.5**	**+0.9**
NTST				*e*S	**Sn**	**14 42 21.6**	**-0.2**
HWA	**Hwalien**	**0.82 212**		*e*P	**Pn**	**14 42 11.2**	**+0.8**
HWA				*e*S	**Sn**	**14 42 23.5**	**+0.4**
JYNG	**Yonagunijimaku**	**0.82 105**		P	**Pn**	**14 42 10.6**	**+0.2**
JYNG				*e*S	**Sn**	**14 42 23.0**	**-0.1**
KSHI	**Guanxi Townshi**	**0.83 277**		P	**Pn**	**14 42 11.1**	**+0.6**
KSHI

EHD				*e*S		**Sn**	14 42 40.7	**-2.3**
WRL	**Guolierlin Hig**	**1.73**	**244**	*e*P		**Pn**	14 42 20.3	**-1.5**
WRL				*e*S		**Sn**	14 42 42.9	**-0.5**
ELDTW	**Lidau**	**1.77**	**214**	*e*P		**Pn**	14 42 22.0	**-0.4**
ELDTW				*e*S		**Sn**	14 42 42.6	**-1.7**
JKRS	**Kuro-shima**	**1.81**	**103**	*e*P		**Pn**	14 42 23.7	**+0.9**
JKRS				*e*S		**Sn**	14 42 46.2	**+1.1**
WCKO	**Fanlu**	**1.82**	**228**	*e*P		**Pn**	14 42 24.3	**+1.2**
WCKO				*e*S		**Sn**	14 42 47.8	**+2.3**
TPUB	**Ta-pu**	**1.90**	**224**	P		**Pn**	14 42 26.3	**+2.2**
TPUB	**Ta-pu**	**1.90**	**224**	*e*P		**Pn**	14 42 25.1	**+1.0**
TPUB				*e*S		**Sn**	14 42 49.0	**+1.6**
JIJ	**Ishigaki jima**	**1.91**	**99**	*e*P		**Pn**	14 42 24.4	**+0.4**
STYH	**Taoyuan**	**1.91**	**219**	*e*P		**Pn**	14 42 25.4	**+1.3**
STYH				*e*S		**Sn**	14 42 49.0	**+1.4**
WTP	**Ta-pu**	**1.95**	**224**	*e*P		**Pn**	14 42 25.9	**+1.2**
WTP				*e*S		**Sn**	14 42 51.0	**+2.4**
WSF	**Szhu**	**1.98**	**239**	*e*S		**Sn**	14 42 49.4	**+0.1**
TWK	**Hsinying**	**2.02**	**226**	*e*P		**Pn**	14 42 26.7	**+1.1**
TWK				*e*S		**Sn**	14 42 53.3	**+3.1**
JISG	**Ishigakijimahi**	**2.03**	**92**	*e*P		**Pn**	14 42 26.2	**+0.4**
CHN1	**Nanshi**	**2.05**	**224**	*e*P		**Pn**	14 42 26.9	**+0.8**
CHN1				*e*S		**Sn**	14 42 54.0	**+3.1**
TWG	**Pinlang**	**2.06**	**207**	*e*S		**Sn**	14 42 49.6	**-1.5**
TWGBT	**Beinan**	**2.06**	**207**	*e*S		**Sn**	14 42 50.3	**-0.8**
SGST	**Jiashian**	**2.09**	**221**	*e*P		**Pn**	14 42 27.4	**+0.8**
SGST				*e*S		**Sn**	14 42 53.1	**+1.2**
ECL	**Taimali**	**2.31**	**207**	*e*S		**Sn**	14 42 55.5	**-1.6**
JTJ	**Tarama**	**2.39**	**90**	*e*P		**Pn**	14 42 31.8	**+1.3**
VWUC	**VWUC**	**2.41**	**278**	*e*P		**Pn**	14 42 30.5	**-0.3**
VWUC				*e*S		**Sn**	14 42 58.6	**-0.8**
MATB	**Ma-tsu**	**2.43**	**308**	P		**Pn**	14 42 30.8	**-0.2**
MATB				*e*S		**Sn**	14 42 59.4	**-0.5**
MASBT	**Mashibuluo**	**2.44**	**213**	*e*P		**Pn**	14 42 33.1	**+1.9**
MASBT				*e*S		**Sn**	14 43 02.2	**+1.9**
PHUB	**P'eng-hu**	**2.57**	**244**	*e*P		**Pn**	14 42 32.0	**-0.8**
PHUB				*e*S		**Sn**	14 43 00.7	**-2.5**
LYUB	**Lan-yu**	**2.70**	**190**	*e*P		**Pn**	14 42 33.3	**-1.4**
LYUB				*e*S		**Sn**	14 43 02.6	**-3.8**
PTMZ	**Houxiangcun**	**2.71**	**278**	*e*P		**Pn**	14 42 34.8	**-0.1**
SLIU	**Shizi**	**2.71**	**206**	*e*P		**Pn**	14 42 33.8	**-1.1**
SLIU				*e*S		**Sn**	14 43 06.0	**-0.9**
SMST	**Manzhou Townsh**	**2.88**	**204**	*e*S		**Sn**	14 43 10.6	**-0.2**

WEL 15 14:53:21.0±1.3, 35°S±15″×18°0E±2″4, h12km, M3.4/4, ML3.5/14, MLv3.4/4, Error ellipse: s-maj=35.5km s-min=11.0km az=118.4, confirmed, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**2.96**	**200**	P	Pn	14 54 10.0	+2.2
PKGZ	**Pakihiroa**	**3.11**	**205**	P	Pn	14 54 11.3	+1.4
PKGZ				S	Sn	14 54 47.0	0.0
HAZ	**Te Kaha**	**3.12**	**209**	P	Pn	14 54 11.4	+1.4
PUZ	**Puketiti**	**3.24**	**201**	P	Pn	14 54 12.6	+0.9
PUZ				S	Sn	14 54 49.5	-0.7
RUGZ	**Raukumara Rang**	**3.35**	**209**	P	Pn	14 54 14.1	+0.8
RUGZ				S	Sn	14 54 51.1	-1.9
TWGZ	**Tauwhareparae**	**3.42**	**204**	P	Pn	14 54 15.1	+0.9
CNGZ	**Carnagh Statio**	**3.64**	**199**	P	Pn	14 54 17.8	+0.6
MWZ	**Matawai**	**3.73**	**208**	P	Pn	14 54 18.4	+0.1
URZ	**Urewera**	**3.83**	**212**	P	Pn	14 54 19.6	-0.2
URZ				S	Sn	14 55 07.9	+3.1
RIGZ	**Rimuhau**	**3.98**	**203**	P	Pn	14 54 22.2	+0.4
MUGZ	**Murupara**	**4.16**	**214**	P	Pn	14 54 23.9	-0.5
RTZ	**Ruatahuna**	**4.19**	**211**	P	Pn	14 54 23.6	-1.2
KNZ	**Kokohu**	**4.29**	**202**	P	Pn	14 54 24.8	-1.3
MHGZ	**Mahia Peninsul**	**4.35**	**199**	P	Pn	14 54 26.1	-0.8
MTHZ	**Maungataniwha**	**4.44**	**210**	P	Pn	14 54 27.0	-1.2
MTHZ				S	Sn	14 55 23.5	+3.5
NMHZ	**Naumai**	**4.67**	**209**	P	Pn	14 54 30.2	-1.2
BKZ	**Black Stump Fm**	**4.85**	**211**	P	Pn	14 54 31.7	-2.2
TMVZ	**Te Maari**	**5.18**	**217**	P	Pn	14 54 37.2	-1.2
BFZ	**Birch Farm**	**6.26**	**205**	P	Pn	14 54 48.9	-4.3
MRZ	**Mangatainoka R**	**6.49**	**209**	P	Pn	14 54 51.2	-5.2
MRZ				S	Sn	14 55 59.1	-11

*CATAC **15** 14:53:24.6±0.5, 13°N±2°×97°0W±°, h19km±3km, M4.1/24, MLv4.1/24, Error ellipse: s-maj=5.1km s-min=3.5km az=51.9, confirmed*
*SNET **15** 14:53:25.7±1.1, 13°.00N×89°.61W, h30km, ML3.9, Presumed earthquake*
*GCG **15** 14:53:26.4±1.4, 13°.06N×89°.70W, h23km±14km, MD4.2, ML3.8, Presumed earthquake*
ISC 15 14:53:24.9±1.6, 12°.94N±0°.05×89°.61W±0°.04, h23km±14km, n67, σ0°59/96, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.62**	**27**	*i* P	**Pb**	**14 53 37.4**	**+0.4**
LALI				*i* S	**Sb**	**14 53 45.2**	**0.0**
LALI				IAML		14 53 47.6	
	comp=E,3µm,0.4s						
LALI	**Alcalda de L**	**0.62**	**27**	*e*P	**Pb**	**14 53 37.5**	**+0.5**
JAYA	**Jayaque - finc**	**0.73**	**12**	P	**Pb**	**14 53 38.9**	**-0.1**
JAYA				S	**Sn**	**14 53 49.6**	**-0.9**
JAYA	**Jayaque - finc**	**0.73**	**12**	*i* P	**Pb**	**14 53 38.9**	**-0.1**
JAYA				IAML		14 53 52.3	
	comp=N,7µm,0.3s						
JAYA	**Jayaque - finc**	**0.73**	**12**	*e*P	**Pb**	**14 53 38.9**	**-0.1**
PANCS	**Alcalda de**	**0.79**	**32**	P	**Pb**	**14 53 40.2**	**+0.2**
PANCS				S	**Sn**	**14 53 50.8**	**-1.0**
LOMA	**Loma Larga**	**0.82**	**31**	*e*P	**Pb**	**14 53 40.8**	**+0.1**
PMON	**Piamonte**	**0.82**	**20**	P	**Pb**	**14 53 40.2**	**-0.3**
PMON	**Piamonte**	**0.82**	**20**	*e*P	**Pb**	**14 53 40.5**	**-0.1**
SEMO	**Seminario San**	**0.85**	**26**	S	**Sn**	**14 53 52.6**	**-0.7**
UEES	**Universidad Ev**	**0.85**	**25**	P	**Pb**	**14 53 40.9**	**-0.2**
UEES				S	**Sn**	**14 53 53.2**	**-0.3**
UEES	**Universidad Ev**	**0.85**	**25**	*e*P	**Pb**	**14 53 40.9**	**-0.2**
UEES				*e*S	**Sn**	**14 53 52.9**	**-0.6**
BOQS	**Boqueron**	**0.86**	**22**	*e*P	**Pb**	**14 53 41.1**	**-0.2**
UTEC	**Universidad Te**	**0.86**	**28**	S	**Sn**	**14 53 53.1**	**-0.5**
LFRS	**El Faro**	**0.87**	**38**	*e*P	**Pb**	**14 53 41.4**	**0.0**
PIC2	**El Picacho**	**0.87**	**23**	*e*P	**Pb**	**14 53 41.5**	**0.0**
IGN	**Direccin Gen**	**0.88**	**29**	P	**Pb**	**14 53 41.9**	**-0.1**
IGN				S	**Sn**	**14 53 53.9**	**-0.3**
CEDA	**San Andres**	**0.89**	**14**	P	**Pb**	**14 53 41.2**	**-0.5**
CEDA				S	**Sn**	**14 53 53.8**	**-0.4**
CEDA	**San Andres**	**0.89**	**14**	*e*P	**Pb**	**14 53 39.7**	**-1.9**
CEVE	**Cerro Verde**	**0.89**	**359**	P	**Pb**	**14 53 41.5**	**-0.2**
CEVE	**Cerro Verde**	**0.89**	**359**	*e*P	**Pb**	**14 53 41.6**	**-0.2**
CEVE				*e*S	**Sn**	**14 53 54.8**	**+0.4**
SJTE	**Alcalda de S**	**0.89**	**41**	*e*P	**Pb**	**14 53 42.0**	**+0.2**
SBLS	**San Blas**	**0.90**	**359**	*e*P	**Pb**	**14 53 41.6**	**-0.4**
SNJE	**San Jose**	**0.93**	**0**	*e*P	**Pb**	**14 53 42.0**	**-0.4**
LFU	**La Fuente**	**0.94**	**31**	*e*P	**Pb**	**14 53 42.6**	**+0.1**
LBRS	**Las Brisas**	**0.97**	**35**	*e*P	**Pn**	**14 53 43.2**	**0.0**
COEG	**Centro de Oper**	**0.98**	**46**	*e*P	**Pb**	**14 53 43.0**	**-0.3**
COEG				*e*S	**Sn**	**14 53 56.8**	**-0.3**
FAME	**Alcaldia de Sa**	**0.98**	**336**	P	**Pb**	**14 53 42.3**	**-1.0**
FAME				S	**Sb**	**14 53 54.9**	**-0.9**
TECO	**Alcaldia de Te**	**1.00**	**53**	P	**Pb**	**14 53 42.9**	**-0.7**
TECO	**Alcaldia de Te**	**1.00**	**53**	*e*P	**Pb**	**14 53 42.9**	**-0.7**
TECO				*e*S	**Sb**	**14 53 56.6**	**+0.2**
PAVA	**Las Pavas**	**1.01**	**40**	P	**Pb**	**14 53 43.8**	**0.0**
PAVA				S	**Sn**	**14 53 57.5**	**+0.1**
PAVA	**Las Pavas**	**1.01**	**40**	*e*P	**Pb**	**14 53 43.8**	**0.0**
PAVA				*e*S	**Sn**	**14 53 58.2**	**+0.8**
UNIC	**Universidad Ca**	**1.04**	**3**	P	**Pb**	**14 53 43.8**	**-0.5**
UNIC				S	**Sn**	**14 53 57.9**	**-0.1**
SLOZ	**Alcaldia de Sa**	**1.10**	**351**	P	**Pn**	**14 53 44.5**	**-0.4**
SLOZ				S	**Sn**	**14 53 59.7**	**+0.3**
SCLA	**Alcaldia de Sa**	**1.15**	**48**	P	**Pn**	**14 53 45.8**	**+0.2**
SCLA	**Alcaldia de Sa**	**1.15**	**48**	*e*P	**Pn**	**14 53 45.7**	**+0.1**
SCLA				*e*S	**Sn**	**14 54 01.5**	**+0.9**
TECA	**Tecapa**	**1.21**	**63**	*e*P	**Pn**	**14 53 46.3**	**-0.3**
PQSS	**Presa 15 de Se**	**1.23**	**56**	P	**Pn**	**14 53 46.4**	**-0.2**
PQSS				S	**Sb**	**14 54 03.1**	**+0.3**
P5NO	**Presa 5 de nov**	**1.33**	**38**	P	**Pn**	**14 53 48.5**	**+0.4**
P5NO				S	**Sb**	**14 54 05.9**	**+0.1**
P5NO	**Presa 5 de nov**	**1.33**	**38**	*e*P	**Pn**	**14 53 48.5**	**+0.4**
PACA	**Pacayal**	**1.36**	**67**	P	**Pn**	**14 53 48.5**	**-0.1**
PACA				S	**Sn**	**14 54 05.9**	**-0.1**
PACA	**Pacayal**	**1.36**	**67**	*e*P	**Pn**	**14 53 48.5**	**-0.1**
PACA				*e*S	**Sn**	**14 54 06.2**	**+0.2**
LCY	**Lacayo**	**1.37**	**69**	*e*P	**Pn**	**14 53 49.0**	**+0.3**
RANC	**El Ranchito**	**1.38**	**69**	P	**Pn**	**14 53 49.4**	**+0.6**
RANC				S	**Sb**	**14 54 07.3**	**0.0**
LLGN	**La Laguna**	**1.38**	**28**	P	**Pn**	**14 53 49.4**	**+0.5**
LLGN				S	**Sb**	**14 54 08.2**	**+0.9**
MTO3	**Montecristo**	**1.47**	**9**	P	**Pn**	**14 53 50.5**	**+0.2**
MTO3				S	**Sb**	**14 54 10.4**	**+0.3**
MTO3	**Montecristo**	**1.47**	**9**	*e*P	**Pn**	**14 53 50.5**	**+0.2**
ESQI	**Esquipulas**	**1.64**	**9**	P	**Pb**	**14 53 54.0**	**-0.4**
ESQI				S	**Sb**	**14 54 14.0**	**-0.6**
LCND	**La Caada**	**1.71**	**77**	P	**Pn**	**14 53 53.3**	**0.0**
LCND	**La Caada**	**1.71**	**77**	*e*P	**Pn**	**14 53 53.5**	**+0.2**
CNCH	**Conchagua**	**1.76**	**79**	P	**Pn**	**14 53 54.4**	**+0.3**
CNCH				S	**Sn**	**14 54 16.6**	**+0.7**
CNCH	**Conchagua**	**1.76**	**79**	*e*P	**Pn**	**14 53 54.1**	**0.0**
MARCA	**Marcala la Paz**	**1.96**	**51**	*e*P	**Pn**	**14 53 58.1**	**+1.3**
CSGN	**Cosiguina Volc**	**2.00**	**89**	P	**Pn**	**14 53 58.0**	**+0.6**
CSGN				S	**Sn**	**14 54 22.6**	**+0.9**
SARH	**Santa Rosa de**	**2.01**	**24**	P	**Pn**	**14 53 58.7**	**+1.2**
SARH	**Santa Rosa de**	**2.01**	**24**	*i* P	**Pn**	**14 53 58.5**	**+1.1**
APG	**El Apazote**	**2.22**	**338**	*i* P	**Pn**	**14 54 00.8**	**+0.3**
STG5	**El Palmar, Qui**	**2.23**	**311**	*i* P	**Pb**	**14 54 06.0**	**+1.4**
STG8	**El Palmar, Qui**	**2.27**	**312**	*i* P	**Pb**	**14 54 05.4**	**+0.1**
PKGN	**Cerro Pekin**	**2.58**	**96**	P	**Pn**	**14 54 05.7**	**+0.4**
PKGN				S	**Sn**	**14 54 34.3**	**-1.7**
HERN	**Volcan Telica**	**2.73**	**97**	P	**Pn**	**14 54 07.1**	**-0.3**
HOYN	**Al Sur del Vol**	**2.73**	**97**	P	**Pn**	**14 54 07.6**	**+0.1**
POLN	**Al Sur del Vol**	**2.74**	**96**	P	**Pn**	**14 54 07.6**	**+0.1**
POLN				S	**Sn**	**14 54 38.0**	**-2.0**
CNGN	**Cerro Negro**	**2.87**	**98**	S	**Sn**	**14 54 43.9**	**+0.7**
YUSH	**Yuscaran**	**2.88**	**69**	P	**Pn**	**14 54 09.6**	**+0.2**
COPN	**Copaltepe**	**3.04**	**104**	P	**Pn**	**14 54 11.7**	**+0.1**
LIMN	**Finca el Limon**	**3.16**	**87**	P	**Pn**	**14 54 13.5**	**+0.1**
LIMN				S	**Sn**	**14 54 50.3**	**-0.1**

*NEIC **15** 14:54:54.0±1.0, 20°.27S±0°.05×177°.6W±0°.1, h515km±7km, mb4.5/52, Error ellipse: s-maj=16.0km s-min=7.0km az=94.0*
*IDC **15** 14:54:54.8±1.5, 20°.22S×177°.74W, h518km±13km, mb3.6/14, mbtmp4.5/16, Error ellipse: s-maj=18.3km s-min=12.9km az=95.0*
ISC 15 14:54:53.2±0.4, 20°.23S±0°.07×177°.69W±0°.06, h500km, n148, σ1°75/146, mb4.4/44, 6C-12D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.74**	**301**	P	**Pn**	**14 56 19.9**	**+1.9**
	6.6nm,0.4s,baz=93,slow=23,SNR=13						
MSVF				S	**Sn**	**14 57 31.1**	**+4.1**
	18nm,0.9s,baz=110,slow=13,SNR=4.2						
MSVF	**Nonsavu**	**4.74**	**301**		**Pn**	**14 56 21.0**	**+3.0**
FUTU	**Fugatoga**	**5.90**	**356**	P	**Pn**	**14 56 30.9**	**+2.2**
NIUE	**Niue**	**7.40**	**82**	P	**Pn**	**14 56 43.8**	**+0.4**
NIUE	**Niue**	**7.40**	**82**	P	**Pn**	**14 56 43.9**	**+0.4**
NIUE				S	**Sn**	**14 58 19.3**	**+5.5**
AFI	**Afiamalu**	**8.45**	**43**	P	**Pn**	**14 56 52.6**	**-1.8**
	60nm,0.4s,baz=329,slow=0.8,SNR=11						
AFI				S	**Sn**	**14 58 27.3**	**-6.5**
	143nm,0.4s,baz=245,slow=13,SNR=12						
FUNA	**Funafuti**	**12.02**	**345**	P	**Pn**	**14 57 34.0**	**+1.9**
DZM	**Mont Dzumac**	**14.92**	**260**	P	**Pn**	**14 58 02.9**	**+0.2**
	9.3nm,0.7s,baz=83,slow=18,SNR=6.8						
OUZ	**Omahuta**	**16.80**	**205**	P	**Pn**	**14 58 23.4**	**+1.4**
WCZ	**Waipu Caves**	**17.15**	**202**	P	**Pn**	**14 58 26.7**	**+1.2**
MXZ	**Matakaoa Point**	**17.62**	**191**	P	**Pn**	**14 58 35.0**	**+5.1**
WIAZ	**Waiheke Island**	**17.66**	**199**	P	**Pn**	**14 58 31.9**	**+1.6**
WMGZ	**Waiomatatini S**	**17.86**	**190**	P	**Pn**	**14 58 36.9**	**+4.8**
WMGZ				S	**Sn**	15 01 43.5	+13
HAZ	**Te Kaha**	**17.91**	**192**	P	**Pn**	**14 58 31.8**	**-0.7**
HAZ				S	**Sn**	15 01 48.2	+17
MKAZ	**Moumakai**	**17.94**	**199**	P	**Pn**	**14 58 34.8**	**+2.0**
PKGZ	**Pakihiroa**	**17.96**	**191**	P	**Pn**	**14 58 34.5**	**+1.4**
PKGZ				S	**Sn**	15 01 46.6	+14
AWAZ	**Awhitu Peninsu**	**18.07**	**200**	P	**Pn**	**14 58 35.0**	**+1.0**
PUZ	**Puketiti**	**18.13**	**190**	P	**Pn**	**14 58 38.4**	**+3.8**
PUZ				S	**Sn**	15 01 50.3	+15
RUGZ	**Raukumara Rang**	**18.13**	**192**	P	**Pn**	**14 58 35.7**	**+1.0**
TWGZ	**Tauwhareparae**	**18.28**	**191**	P	**Pn**	**14 58 36.1**	**+0.1**
TWGZ				S	**Sn**	15 01 55.2	+18
KMRZ	**Kaimai**	**18.41**	**196**	P	**Pn**	**14 58 43.7**	**+6.5**
TOZ	**Tahuroa Road**	**18.42**	**197**		**Pn**	**14 58 37.3**	**+0.1**
TOZ				IAmb	IAmb	14 58 45.2	
	comp=Z,9.9nm,0.7s						
MWZ	**Matawai**	**18.52**	**192**	P	**Pn**	**14 58 37.3**	**-0.8**
MWZ				S	**Sn**	15 01 58.8	+17
URZ	**Urewera**	**18.53**	**193**	P	**Pn**	**14 58 35.5**	**-2.7**
URZ				S	**Sn**	15 02 00.6	+19
CNGZ	**Carnagh Statio**	**18.54**	**190**	P	**Pn**	**14 58 44.7**	**+6.4**
CNGZ				S	**Sn**	15 02 00.6	+19
RAGZ	**Rawiri**	**18.70**	**192**	P	**Pn**	**14 58 44.0**	**+4.1**
MUGZ	**Murupara**	**18.81**	**194**	P	**Pn**	14 58 49.0	+8.2
RIGZ	**Rimuhau**	**18.83**	**191**	P	**Pn**	**14 58 47.9**	**+6.9**
KNZ	**Kokohu**	**19.16**	**191**	P	**Pn**	14 58 51.8	+7.9
MTHZ	**Maungataniwha**	**19.16**	**193**	P	**Pn**	14 58 53.3	+9.3
RAHZ	**Arahi**	**19.17**	**193**	P	**Pn**	14 58 54.0	+10
MHGZ	**Mahia Peninsul**	**19.24**	**190**	P	**Pn**	14 58 53.9	+9.1
TCW	**Tory Channel**	**22.01**	**196**	P	**Pn**	**14 59 09.7**	**-0.1**
TUWZ	**Tuamarina**	**22.30**	**197**	P	**Pn**	**14 59 12.1**	**-0.3**
KHZ	**Kahutara**	**23.33**	**197**	P	**Pn**	**14 59 20.5**	**-1.1**
INZ	**Inchbonnie**	**24.23**	**200**	P	**Pn**	**14 59 28.2**	**-1.5**
WHZ	**Wether Hill Ro**	**28.20**	**202**	P	**Pn**	**15 00 05.0**	**+0.3**
EIDS	**Eidsvold**	**29.20**	**254**	P	**Pn**	**15 00 13.7**	**0.0**
EIDS				IAmb	IAmb	15 00 39.6	
	comp=Z,38nm,1.5s						
ARMA	**Armidale**	**29.45**	**244**	P	**Pn**	**15 00 16.6**	**+0.6**
CAN	**Canberra**	**32.91**	**236**	P	**Pn**	**15 00 45.9**	**+0.4**
CTAO	**Charters Tower**	**33.81**	**264**		**Pn**	**15 00 53.3**	**0.0**
PMG	**Port Moresby**	**35.57**	**282**	P	**Pn**	**15 01 08.0**	**-0.1**
PMG				IAmb	IAmb	15 01 09.5	
	comp=Z,29nm,1.1s						
TOO	**Toolangi**	**36.30**	**234**		**Pn**	**15 01 13.4**	**-0.4**
TOO				IAmb	IAmb	15 01 15.2	
	comp=Z,16nm,1.4s						
TAU	**Tasmania Unive**	**37.03**	**224**	P	**Pn**	**15 01 19.4**	**-0.3**
TAU				IAmb	IAmb	15 01 24.5	
	comp=Z,26nm,1.1s						
COEN	**Coen**	**37.86**	**273**	P	**Pn**	**15 01 27.0**	**0.0**
COEN				IAmb	IAmb	15 01 28.0	
	comp=Z,7.3nm,0.8s						
STKA	**Stephens Creek**	**38.17**	**244**	P	**Pn**	**15 01 29.2**	**-0.1**
	comp=Z,9.0nm,0.7s,baz=91,slow=10,SNR=15						
	comp=Z,9.0nm,0.7s						
STKA	**Stephens Creek**	**38.17**	**244**		**Pn**	**15 01 29.4**	**0.0**
INKA	**Innaminka**	**38.57**	**251**		**Pn**	**15 01 32.7**	**+0.1**
MGBR	**Mount Gambier**	**40.09**	**235**	P	**Pn**	**15 01 44.7**	**-0.1**
BBOO	**Buckleboo**	**42.93**	**243**		**Pn**	**15 02 07.0**	**-0.4**
WR8	**Warramunga Arr**	**44.78**	**262**		**Pn**	**15 02 20.9**	**-1.0**
WR8				IAmb	IAmb	15 02 22.2	
	comp=Z,9.7nm,0.6s						
AS31	**Alice Springs**	**44.87**	**256**		**Pn**	**15 02 22.3**	**-0.3**
AS31				IAmb	IAmb	15 02 23.6	
	comp=Z,11nm,1.1s						
ASAR	**Alice Springs**	**44.87**	**256**	P	**Pn**	**15 02 22.3**	**-0.3**
	comp=Z,23nm,0.7s,baz=90,slow=7.8,SNR=634						
ASAR				PcP	**PcP**	**15 03 53.5**	**-0.3**
	comp=Z,3.7nm,0.6s,baz=106,slow=4.0,SNR=9.4						
ASAR				ScP	**ScP**	**15 06 57.4**	**-1.0**
	comp=Z,0.2nm,0.6s,baz=87,slow=4.5,SNR=1.6						
ASAR				S	**S**	**15 08 21.3**	**-2.3**
	comp=Z,1.5nm,1.1s,baz=96,slow=15,SNR=4.8						
	comp=Z,23nm,0.7s						
WB0	**Warramunga Arr**	**44.91**	**262**		**Pn**	**15 02 22.0**	**-1.0**
WB0				IAmb	IAmb	15 02 22.9	
	comp=Z,16nm,0.6s						
WRAB	**Tennant Creek**	**44.92**	**262**	P	**Pn**	**15 02 22.2**	**-0.9**
WRAB				IAmb	IAmb	15 02 22.5	
	comp=Z,10nm,0.9s						
WRA	**Warramunga Arr**	**44.93**	**262**	P	**Pn**	**15 02 22.2**	**-1.0**
	comp=Z,6.1nm,0.4s,baz=97,slow=7.1,SNR=262						
WRA				PcP	**PcP**	**15 03 53.8**	**-0.3**
	comp=Z,3.1nm,0.9s,baz=96,slow=3.9,SNR=5.3						
WRA				S	**S**	**15 08 21.6**	**-2.9**
	comp=Z,0.5nm,0.9s,baz=97,slow=12,SNR=4.7						
	comp=Z,6.1nm,0.4s						
MTN	**Manton Dam**	**49.45**	**270**		**Pn**	**15 02 56.4**	**-1.0**
MTN				IAmb	IAmb	15 02 58.0	
	comp=Z,15nm,0.7s						
FORT	**Forrest**	**49.67**	**246**	P	**Pn**	**15 02 58.0**	**-0.7**
FORT				IAmb	IAmb	15 02 58.6	
	comp=Z,21nm,0.6s						
KNRA	**Kununurra**	**50.97**	**266**		**Pn**	**15 03 07.8**	**-0.6**
KNRA				IAmb	IAmb	15 03 08.5	
	comp=Z,11nm,0.7s						
SOEI	**Soe**	**56.79**	**271**		**P**	**15 03 50.2**	**+0.4**
PSA00	**Pilbara Seismi**	**58.02**	**257**		**P**	**15 03 56.9**	**-1.1**
PSA00				IAmb	IAmb	15 03 58.1	
	comp=Z,25nm,0.8s						
PSA00	**Pilbara Seismi**	**58.02**	**257**		**P**	**15 03 56.9**	**-1.1**
PSA00				IAmb	IAmb	15 03 58.1	
	comp=Z,14nm,0.8s						
SBA	**Scott Base**	**58.16**	**184**	P	**P**	**15 03 59.3**	**+1.3**
SBA				IAmb	IAmb	15 04 05.6	
	comp=Z,19nm,1.4s						
MBWA	**Marble Bar**	**58.20**	**257**	P	**P**	**15 03 58.4**	**-0.9**
MBWA				IAmb	IAmb	15 03 59.3	
	comp=Z,17nm,0.8s						
VNDA	**Vanda**	**58.21**	**185**	P	**P**	**15 03 59.6**	**+1.2**
	comp=Z,2.3nm,0.7s,baz=3.3,slow=6.3,SNR=13						
	comp=Z,2.3nm,0.7s						
VNDA	**Vanda**	**58.21**	**185**	P	**P**	**15 03 57.7**	**-0.6**
NWAO	**Narrogin (SRO)**	**58.75**	**243**	P	**P**	**15 04 02.1**	**-0.7**
NWAO				IAmb	IAmb	15 04 03.1	
	comp=Z,58nm,1.5s						
MORW	**Morawa**	**60.20**	**247**	P	**P**	**15 04 11.9**	**-0.7**
MORW				IAmb	IAmb	15 04 12.3	
	comp=Z,11nm,0.7s						
GIRL	**Giralia**	**62.91**	**254**	P	**P**	**15 04 30.8**	**+0.4**
CASY	**Casey**	**64.34**	**205**	P	**P**	**15 04 38.5**	**-0.2**
CASY				IAmb	IAmb	15 04 38.9	
	comp=Z,12nm,0.7s						
QSPA	**South Pole Qui**	**69.84**	**180**	P	**P**	**15 05 13.3**	**+0.4**
	comp=Z,15nm,0.7s,baz=42,slow=1.9,SNR=113						
	comp=Z,15nm,0.7s						
QSPA	**South Pole Qui**	**69.84**	**180**	P	**P**	**15 05 13.2**	**+0.4**
QSPA				IAmb	IAmb	15 05 14.3	
	comp=Z,19nm,0.9s						
MJAR	**Matsushiro Arr**	**70.16**	**323**	P	**P**	**15 05 15.0**	**0.0**
	comp=Z,2.1nm,0.8s,baz=153,slow=5.8,SNR=4.9						
	comp=Z,2.1nm,0.8s						
UGM	**Wanagama**	**70.26**	**269**	P	**P**	**15 05 15.9**	**-0.3**
BBJI	**Bungbulang**	**73.10**	**268**		**P**	**15 05 31.9**	**-0.9**
BBJI				IAmb	IAmb	15 05 32.7	
	comp=Z,10.0nm,0.8s						
PETK	**Petropavlovsk-**	**76.08**	**345**	P	**P**	**15 05 49.0**	**+0.4**
	comp=Z,3.3nm,0.8s,baz=165,slow=6.4,SNR=1.8						
	comp=Z,3.3nm,0.8s						
USRK	**Ussuriysk Ar.**	**78.90**	**326**	P	**P**	**15 06 05.4**	**+1.3**
	comp=Z,6.5nm,0.8s,baz=126,slow=3.3,SNR=4.3						
	comp=Z,6.5nm,0.8s						
BELA	**Belgrano 2**	**79.79**	**173**		**P**	**15 06 07.9**	**-0.5**
BELA				IAmb	IAmb	15 06 08.9	
	comp=Z,12nm,0.8s						
MAW	**Mawson**	**81.92**	**200**	P	**P**	**15 06 18.5**	**-1.1**
	comp=Z,12nm,0.8s,baz=111,slow=8.6,SNR=2.7						
	comp=Z,12nm

WLF	**Walferdange**	**150.47**	**355**	*d*PKP	**PKPbc**	**15 13 48.5**	**+0.7**
MORH	**Mrgy, Hungar**	**150.82**	**336**	⇓P	**PKPbc**	**15 13 48.4**	**-0.3**
KBA	**Koelnbreinsper**	**151.74**	**344**	*e*PKP	**PKPab**	**15 14 00.4**	**-1.7**
	comp=Z,7.2nm,1.6s						
WTTA	**Wattenberg**	**151.98**	**346**	*e*PKiKP	**PKPbc**	**15 13 51.0**	**-0.5**
	comp=Z,1.7nm,0.5s						
ABTA	**Abfaltersbach**	**152.26**	**345**	*e*PKiKP	**PKPbc**	**15 13 51.3**	**-0.7**
	comp=Z,3.9nm,0.6s						
TORD	**Torodi Ar. Bea**	**172.94**	**175**	PKP	**PKPdf**	**15 14 03.3**	**-2.0**
	comp=Z,1.5nm,0.9s,baz=176,slow=2.3,SNR=5.1						
TORD				PKPab	**PKPab**	**15 15 34.2**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=198,slow=4.9,SNR=3.0						

MOS ***15*** *15:00:15.5±1.1,28°.23N×83°.63E,h10km,mb4.4/14, Error ellipse: s-maj=10.5km s-min=5.1km az=114.1*
IDC ***15*** *15:00:16.3±0.6,28°.21N×83°.68E,h0km,mb4.2/21, mbtmp4.2/25,ML4.2/4,MS2.9/2, Error ellipse: s-maj=19.2km s-min=12.9km az=44.0*
NEIC ***15*** *15:00:17.4±1.9,28°.2N±0°.1×83°.59E±0°.09,h10km±1km, mb4.3/44, Error ellipse: s-maj=20.0km s-min=11.3km az=202.0*
DMN ***15*** *15:00:19.7±0.2,28°.27N×83°.80E,h2km,Ml5.1/9, Error ellipse: s-maj=4.5km s-min=2.6km az=14.0*
NDI ***15*** *15:00:20.8±2.4,28°.17N×83°.77E,h10km,ML4.0,MW3.4, mb4.3(NEIC), Presumed earthquake*
ISC 15 15:00:17.6±0.9, 28°.23N±0°.03×83°.67E±0°.03, h11km±6km, n169, σ1s57/189, mb4.3/51, 8C-1D, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**0.14**	**34**			Pg	**Pg**	**15 00 21.9**	**+0.6**
	baz=340,slow=0.0								
DANN						Sg	**Sg**	**15 00 23.8**	**0.0**
	93μm,0.2s,baz=340,slow=0.0								
KOLN	**Koldanda**	**0.46**	**188**			Pg	**Pn**	**15 00 30.1**	**-0.3**
	baz=199,slow=0.0								
KOLN						Sg	**Sb**	**15 00 36.7**	**+1.9**
	14μm,0.6s,baz=199,slow=0.0								
PYUN	**Piuthan**	**0.61**	**258**			Pg	**Pn**	**15 00 33.4**	**+0.9**
	baz=257,slow=0.0								
PYUN						Sg	**Sn**	**15 00 44.2**	**+1.8**
	baz=257,slow=0.0								
GKN	**Gorkha**	**0.89**	**105**			Pg	**Pb**	**15 00 34.5**	**-0.6**
	baz=109,slow=0.0								
GKN						Sg	**Sg**	**15 00 45.7**	**-0.6**
	4μm,0.2s,baz=109,slow=0.0								
DMN	**Daman**	**1.41**	**116**			Pg	**Pg**	**15 00 44.8**	**0.0**
	baz=119,slow=0.0								
DMN						Sg	**Sn**	**15 01 02.1**	**-0.2**
	9μm,0.5s,baz=119,slow=0.0								
KKN	**Kakani**	**1.49**	**107**			Pg	**Pg**	**15 00 45.9**	**-0.4**
	baz=109,slow=0.0								
KKN						Sg	**Sn**	**15 01 03.8**	**-0.3**
	4μm,0.2s,baz=109,slow=0.0								
PKIN	**Phulchoki**	**1.66**	**113**			Pg	**Pg**	**15 00 48.6**	**-0.9**
	baz=116,slow=0.0								
PKIN						Sg	**Sg**	**15 01 10.8**	**-0.3**
	6μm,0.4s,baz=116,slow=0.0								
PKI	**Pulchoki**	**1.67**	**113**			Pg	**Pb**	**15 00 48.7**	**0.0**
	baz=116,slow=0.0								
PKI						Sg	**Sg**	**15 01 10.7**	**-0.9**
	2μm,0.3s,baz=116,slow=0.0								
GUN	**Gumba**	**1.98**	**99**			Pg	**Pb**	**15 00 52.7**	**-1.2**
	baz=100,slow=0.0								
GUN						Sg	**Sb**	**15 01 19.5**	**+0.8**
	3μm,0.4s,baz=100,slow=0.0								
JIRN	**Jiri**	**2.30**	**104**			Pg	**Pb**	**15 00 57.4**	**-2.0**
	baz=106,slow=0.0								
JIRN						Sg	**Sb**	**15 01 28.6**	**+0.6**
	1μm,0.2s,baz=106,slow=0.0								
EVN	**Everest**	**2.79**	**95**				**Pn**	**15 01 03.7**	**+0.9**
RAMN	**Ramite**	**2.90**	**115**		Pn		**Pn**	**15 01 05.1**	**+1.2**
	baz=117,slow=0.0								
RAMN					Sn		**Sn**	**15 01 37.7**	**-1.2**
	1μm,0.3s,baz=117,slow=0.0								
PTH	**Pithoragarh**	**3.32**	**295**	*e*P			**Pb**	**15 01 13.3**	**-3.4**
PTH				IAML				15 02 07.0	
	comp=N,528nm,0.2s								
PTH				IAML				15 02 07.7	
	comp=E,682nm,0.3s								
ALBI	**Allahabad**	**3.35**	**210**	*e*P			**Pb**	**15 01 13.9**	**-3.1**
ALBI				*e*S			**Sn**	**15 01 52.9**	**+3.2**
LGTI	**Lohaghat**	**3.35**	**291**	*e*P			**Pb**	**15 01 13.8**	**-3.3**
ODAN	**Odare**	**3.58**	**112**	Pn			**Pn**	**15 01 15.2**	**+2.0**
	baz=113,slow=0.0								
JOSI	**Joshimath**	**4.27**	**304**	*e*P			**Pb**	**15 01 28.4**	**-4.4**
JOSI				*e*S			**Sn**	**15 02 15.4**	**+2.7**
JOSI				IAML				15 02 32.8	
	comp=N,533nm,0.4s								
JOSI				IAML				15 02 41.0	
	comp=E,574nm,0.5s								
GTK	**Tadong**	**4.46**	**101**	*e*P			**Pn**	**15 01 27.6**	**+2.2**
GTK				*e*S			**Sn**	**15 02 16.6**	**-0.8**
GTK				IAML				15 02 21.1	
	comp=N,131nm,0.1s								
JHNI	**Jhansi**	**5.29**	**240**	*e*P			**Pn**	**15 01 38.0**	**+1.4**
JHNI				*e*S			**Sn**	**15 02 38.3**	**+0.6**
JHNI				IAML				15 02 41.1	
	comp=E,175nm,0.2s								
JHNI				IAML				15 02 41.4	
	comp=N,139nm,0.2s								
DDI	**Dehra Dun**	**5.33**	**294**	*e*P			Pn	15 01 42.1	+5.0
DDI				*e*S			**Sn**	**15 02 41.9**	**+3.3**
DDI				IAML				15 02 45.0	
	comp=E,420nm,0.3s								
DDI				IAML				15 02 47.5	
	comp=N,717nm,0.3s								
DHUB	**DHUBRI**	**6.05**	**110**	*e*P			**Pn**	**15 01 47.4**	**+0.4**
KUDL	**Kundal**	**6.34**	**271**	*e*P			**Pn**	**15 01 54.8**	**+3.8**
KUDL				*e*S			**Sn**	**15 03 03.4**	**0.0**
SMLA	**Simla**	**6.35**	**299**	*e*P			**Pn**	**15 01 54.3**	**+3.2**
SMLA				*e*S			**Sn**	**15 03 04.6**	**+0.9**
SMLA				IAML				15 03 11.0	
	comp=N,168nm,0.5s								
SMLA				IAML				15 03 11.0	
	comp=E,218nm,0.3s								
LSA	**Lhasa**	**6.72**	**76**				**Pn**	**15 01 56.1**	**-0.5**
LSA	**Lhasa**	**6.72**	**76**	P			**Pn**	**15 01 56.1**	**-0.5**
BHK	**Bhakra**	**7.07**	**298**	*e*P			**Pn**	**15 02 00.7**	**-0.4**
BHK				*e*S			Sn	15 03 12.7	-8.8
BHK				IAML				15 03 27.9	
	comp=E,108nm,0.3s								
BHK				IAML				15 03 29.9	
	comp=N,158nm,0.4s								
GUWA	**GUWAHATI**	**7.42**	**104**	*e*P			**Pn**	**15 02 06.6**	**+0.7**
GUWA				*e*S			**Sn**	**15 03 25.9**	**-4.2**
GUWA				IAML				15 03 37.4	
	comp=N,23nm,0.5s								
GUWA				IAML				15 03 41.5	
	comp=E,21nm,0.3s								
BHPL	**Bhopal**	**7.51**	**230**	*e*P			**Pn**	**15 02 09.7**	**+2.6**
BHPL				*e*S			**Sn**	**15 03 31.7**	**-0.5**
BHPL				IAML				15 03 35.2	
	comp=N,711nm,0.2s								
BHPL				IAML				15 03 37.0	
	comp=E,114nm,0.3s								
DHRM	**DHARAMSHALA**	**7.53**	**304**	*e*P			**Pn**	**15 02 10.2**	**+2.6**
DHRM				*e*S			**Sn**	**15 03 31.9**	**-1.1**
DHRM				IAML				15 03 42.1	
	comp=N,120nm,0.9s								
SHL	**Shillong**	**7.80**	**108**				**Pn**	**15 02 09.6**	**-1.7**
SHL	**Shillong**	**7.80**	**108**	P			**Pn**	**15 02 09.6**	**-1.7**
SHL	**Shillong**	**7.80**	**108**	*e*P			**Pn**	**15 02 12.6**	**+1.3**
SHL				*e*S			**Sn**	**15 03 34.8**	**-4.8**
TSSA	**Tissa**	**7.94**	**307**	*e*P			Pn	15 02 18.3	+5.1
TSSA				*e*S			**Sn**	**15 03 42.2**	**-1.0**
TSSA				IAML				15 03 46.2	
	comp=N,133nm,0.3s								
TSSA				IAML				15 03 46.6	
	comp=E,86nm,0.5s								
THN	**Thein Dam**	**8.02**	**303**	*e*P			**Pn**	**15 02 17.3**	**+3.2**
THN				*e*S			**Sn**	**15 03 43.9**	**-1.0**
THN				IAML				15 03 52.3	
	comp=N,72nm,0.3s								
THN				IAML				15 03 52.6	
	comp=E,98nm,0.5s								
TEZP	**TEZPUR**	**8.27**	**99**	IAML				15 03 51.3	
	comp=N,402nm,0.2s								
TEZP				IAML				15 03 51.9	
	comp=E,428nm,0.1s								
ZIRO	**ZIRO**	**9.04**	**92**	*e*S			**Sn**	**15 04 04.0**	**-6.1**
ZIRO				IAML				15 04 09.2	
	comp=N,245nm,0.6s								
ZIRO				IAML				15 04 16.9	
	comp=E,222nm,0.8s								
KOHI	**KOHIMA**	**9.64**	**103**	*e*P			**Pn**	**15 02 37.6**	**+1.1**
KOHI				*e*S			**Sn**	**15 04 18.6**	**-6.3**
KOHI				IAML				15 04 26.4	
	comp=E,31nm,0.5s								
KOHI				IAML				15 04 38.5	
	comp=N,28nm,0.7s								
NIL	**Nilore**	**10.45**	**304**				**Pn**	**15 02 46.1**	**-1.3**
NIL	**Nilore**	**10.45**	**304**	P			**Pn**	**15 02 46.1**	**-1.3**
KSH2	**Kashi**	**12.80**	**330**	P			**Pn**	**15 03 19.9**	**+0.2**
KSH2				pP				15 03 23.8	
KSH2				pmax			pmax		
	comp=E,5.0nm,0.6s								
KBL	**Kabul**	**13.98**	**300**	Pn			**Pn**	**15 03 34.8**	**-1.1**
KBL	**Kabul**	**13.98**	**300**	P			**Pn**	**15 03 34.8**	**-1.1**
TARG	**Taragay, Kyrgy**	**14.29**	**342**				**Pn**	**15 03 39.2**	**-1.0**
TARG	**Taragay, Kyrgy**	**14.29**	**342**	P			**Pn**	**15 03 39.3**	**-1.0**
NRN	**Naryn**	**14.59**	**337**				**Pn**	**15 03 44.1**	**-0.2**
NRN	**Naryn**	**14.59**	**337**	P			**Pn**	**15 03 44.1**	**-0.2**
KDJ	**Kajisay**	**14.84**	**341**	Pn			**Pn**	**15 03 46.1**	**-1.4**
KDJ	**Kajisay**	**14.84**	**341**	P			**Pn**	**15 03 46.2**	**-1.4**
DRK	**Karamyk**	**14.92**	**322**	Pn			**Pn**	**15 03 46.7**	**-2.1**
DRK	**Karamyk**	**14.92**	**322**	P			**Pn**	**15 03 46.7**	**-2.1**
GAR	**Garm**	**15.44**	**317**				**Pn**	**15 03 53.1**	**-2.5**
BOOM	**Boomskoye usch**	**15.55**	**338**				**Pn**	**15 03 56.5**	**-0.5**
BOOM	**Boomskoye usch**	**15.55**	**338**	P			**Pn**	**15 03 56.5**	**-0.5**
BOOM				pmax			pmax		
	comp=Z,4.0nm,1.0s								
ARSB	**Arslanbob**	**15.72**	**329**				**Pn**	**15 03 56.3**	**-2.9**
ARSB	**Arslanbob**	**15.72**	**329**	P			**Pn**	**15 03 56.3**	**-2.9**
ARSB				pmax			pmax		
	comp=Z,6.0nm,0.7s								
BTK	**Batken**	**15.87**	**321**	Pn			**Pn**	**15 03 58.9**	**-2.0**
BTK				IAmb			IAmb	15 04 07.8	
	comp=Z,14nm,1.0s								
BTK	**Batken**	**15.87**	**321**	P			**Pn**	**15 03 58.9**	**-2.0**
BTK				pmax			pmax		
	comp=Z,14nm,1.0s								
WMQ	**Urumqi**	**15.89**	**11**	*e*P			**P**	**15 04 03.5**	**-1.5**
WMQ				pmax			pmax		
	comp=Z,8.0nm,0.9s								
SHAA	**Shahritus**	**16.02**	**309**				**Pn**	**15 04 00.9**	**-2.0**
SHAA				IAmb			IAmb	15 04 11.0	
	comp=Z,33nm,0.8s								
AAK	**Ala-Archa**	**16.19**	**335**	Pn			**Pn**	**15 04 04.7**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=154,slow=12,SNR=9.8								
AAK				LR			LR	15 10 36.6	
	comp=Z,35nm,19.2s,baz=92,slow=38								
	comp=Z,0.6nm,0.4s								
AAK	**Ala-Archa**	**16.19**	**335**	Pn			**Pn**	**15 04 05.4**	**+0.3**
AAK	**Ala-Archa**	**16.19**	**335**	P			**Pn**	**15 04 05.4**	**+0.3**
AAK				pmax			pmax		
	comp=Z,5.0nm,0.9s								
CMAR	**Chiang Mai Arr**	**17.05**	**121**	Pn			**Pn**	**15 04 15.3**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=304,slow=11,SNR=9.2								
	comp=Z,0.8nm,0.6s								
CMAR	**Chiang Mai Arr**	**17.05**	**121**	*ce*P			**Pn**	**15 04 16.1**	**0.0**
CMAR				pmax			pmax		
	comp=Z,1.0nm,0.5s								
GTA2	**Gaotai**	**17.43**	**46**	*e*P			**P**	**15 04 21.8**	**-0.3**
GTA2				pmax			pmax		
	comp=Z,3.0nm,0.8s								
KK31	**Karatay Array**	**18.25**	**328**	P			**Pn**	**15 04 29.4**	**-1.5**
KK31	**Karatay Array**	**18.25**	**328**	P			**Pn**	**15 04 29.4**	**-1.5**
KK31				pmax			pmax		
	comp=Z,3.0nm,0.7s								
MK31	**Makanchi Array**	**18.56**	**357**	*ce*P			**Pn**	**15 04 36.3**	**+1.7**
MKAR	**Makanchi Array**	**18.56**	**357**	P			**P**	**15 04 34.5**	**0.0**
	comp=Z,0.9nm,0.3s,baz=183,slow=10,SNR=25								
	comp=Z,2.2nm,0.4s								
MAKZ	**Makanchi**	**18.59**	**356**	P			**Pn**	**15 04 35.0**	**0.0**
MAKZ	**Makanchi**	**18.59**	**356**	P			**Pn**	**15 04 35.0**	**0.0**
MAKZ				pmax			pmax		
	comp=Z,3.0nm,0.7s								
LZDM	**Lanzhou Array**	**18.61**	**61**	P			**P**	**15 04 35.2**	**-0.2**
	baz=241,slow=8.3								
	comp=Z,1.5nm,0.3s								
DGZ	**Jazzator, Alta**	**21.63**	**7**	*i* P			**P**	**15 05 08.6**	**+0.7**
DGZ				pmax			pmax		
	comp=Z,3.0nm,0.6s								
XAN	**Xi'an**	**22.35**	**69**	⇓P			**P**	**15 05 17.0**	**+1.3**
XAN				pmax			pmax		
	comp=Z,10.0nm,0.7s								
KURBB	**Kurchatov Arra**	**22.70**	**352**	P			**P**	**15 05 19.6**	**+0.4**
	comp=Z,2.5nm,0.6s,baz=174,slow=10,SNR=30								
	comp=Z,2.5nm,0.6s								
KURK	**Kurchatov**	**22.78**	**352**	P			**P**	**15 05 20.2**	**+0.2**
KURK				IAmb			IAmb	15 05 32.9	
	comp=Z,10nm,1.1s								
KURK	**Kurchatov**	**22.78**	**352**	*ce*P			**P**	**15 05 20.9**	**+0.9**
KURK				pmax			pmax		
	comp=Z,23nm,2.5s								
ZAA0	**Zalesovo Array**	**25.71**	**2**	P			**P**	**15 05 48.2**	**+0.5**
ZAA0				IAmb			IAmb	15 05 49.5	
	comp=Z,6.9nm,1.2s								
ZALV	**Zalesovo Beam**	**25.71**	**2**	P			**P**	**15 05 48.4**	**+0.7**
	comp=Z,2.5nm,0.6s,baz=182,slow=9.3,SNR=13								
	comp=Z,2.5nm,0.6s								
ZALV	**Zalesovo Beam**	**25.71**	**2**	P			**P**	**15 05 48.2**	**+0.5**
ZALV	**Zalesovo Beam**	**25.71**	**2**	*i* P			**P**	**15 05 48.9**	**+1.2**
ZALV				pmax			pmax		
	comp=Z,3.0nm,0.6s								
HHC	**Hu-ho-hao-te**	**26.08**	**54**	*e*P			**P**	**15 05 49.8**	**-1.6**
HHC				pmax			pmax		
	comp=Z,13nm,0.7s								
HHC				pmax			pmax		
	comp=Z,73nm,3.8s								
SONM	**Songino Array**	**26.36**	**36**	P			**P**	**15 05 54.7**	**+0.8**
	comp=Z,3.0nm,0.8s,baz=224,slow=9.6,SNR=14								
	comp=Z,3.0nm,0.8s								
SONM	**Songino Array**	**26.36**	**36**	P			**P**	**15 05 54.6**	**+0.8**
BVAR	**Borovoye Array**	**26.65**	**342**	P			**P**	**15 05 57.0**	**+0.8**
	comp=Z,0.5nm,0.4s,baz=151,slow=12,SNR=7.6								
	comp=Z,0.5nm,0.4s								
BORK	**Borovoye**	**26.69**	**342**	*i* P			**P**	**15 06 00.1**	**+3.5**
BORK				pmax			pmax		
	comp=Z,2.0nm,0.6s								
ULN	**Ulaanbaatar**	**26.72**	**36**	P			**P**	**15 05 58.2**	**+1.1**
ULN				IAmb			IAmb	15 06 01.9	
	comp=Z,4.9nm,0.7s								
ULN	**Ulaanbaatar**	**26.72**	**36**	*ce*P			**P**	**15 05 57.2**	**+0.1**
ULN				pmax			pmax		
	comp=Z,7.0nm,1.0s								
AB31	**Akbulak array**	**27.78**	**326**	P			**P**	**15 06 04.6**	**-1.9**
AKT	**Akhty**	**32.08**	**304**	*e*P			**P**	**15 06 45.8**	**+1.0**
AKT				*e*				15 09 35.8	
AKT				pmax			pmax		
	comp=Z,3.0nm,0.6s								
KBZ	**Khabaz**	**36.05**	**306**	P			**P**	**15 07 18.9**	**0.0**
	comp=Z,1.6nm,0.7s,baz=106,slow=11,SNR=4.6								
	comp=Z,1.6nm,0.7s								
KBZ	**Khabaz**	**36.05**	**306**	P			**P**	**15 07 19.0**	**0.0**
KIV	**Kislovodsk**	**36.24**	**307**	*e*P			**P**	**15 07 22.9**	**+2.1**
KIV				pmax			pmax		
	comp=Z,5.0nm,1.1s								
HEH	**HeiHe**	**39.65**	**44**	*e*P			**P**	**15 07 50.4**	**+1.1**
HEH				pmax			pmax		
	comp=Z,4.0nm,0.8s								
USRK	**Ussuriysk Ar.**	**41.50**	**54**	P			**P**	**15 08 04.8**	**+0.1**
	comp=Z,2.0nm,0.6s,baz=246,slow=11,SNR=2.9								
	comp=Z,2.0nm,0.6s								
BRTR	**Keskin Array B**	**42.55**	**299**	P			**P**	**15 08 12.5**	**-1.1**
	comp=Z,1.1nm,0.9s,baz=91,slow=8.2,SNR=4.9								
	comp=Z,1.1nm,0.9s								
BRTR	**Keskin Array B**	**42.55**	**299**	*ce*P			**P**	**15 08 16.2**	**+2.6**
BRTR				pmax			pmax		
	comp=Z,1.0nm,0.8s								
ISP	**Isparta**	**45.05**	**296**	*ce*P			**P**	**15 08 35.2**	**+1.5**
ISP				pmax			pmax		
	comp=Z,4.0nm,1.0s								
KARP	**Karpathos**	**47.98**	**294**	*e*P			**P**	**15 08 58.6**	**+2.0**
JOF	**Joensuu**	**48.32**	**331**	*e*P			**P**	**15 09 00.1**	**+1.4**
TIXI	**Tiksi**	**49.97**	**17**	*ce*P			**P**	**15 09 10.3**	**-0.9**
TIXI				pmax			pmax		
	comp=Z,4.0nm,1.7s								
FIA1	**FINESS Array S**	**50.22**	**328**	P			**P**	**15 09 13.5**	**+0.2**
FINES	**FINESS Array B**	**50.22**	**328**	P			**P**	**15 09 14.0**	**+0.7**
	comp=Z,7.3nm,0.7s,baz=108,slow=8.0,SNR=39								
	comp=Z,7.3nm,0.7s								
FINES	**FINESS Array B**	**50.22**	**328**	P			**P**	**15 09 12.9**	**-0.4**
FINES	**FINESS Array B**	**50.22**	**328**	*i* P			**P**	**15 09 14.5**	**+1.2**
FINES				pmax			pmax		
	comp=Z,5.0nm,0.5s								
SUF	**Sumiainen**	**50.51**	**330**	*e*P			**P**	**15 09 16.9**	**+1.4**
MEF	**Metsahovi**	**50.74**	**326**	*e*P			**P**	**15 09 18.6**	**+1.4**
MTSE	**Matsula**	**50.76**	**324**	*e*P			**P**	**15 09 18.5**	**+1.2**
KEF	**Keuruu**	**50.95**	**329**	*e*P			**P**	**15 09 20.0**	**+1.3**
VAF	**Ylistaro**	**52.13**	**330**	*e*P			**P**	**15 09 29.0**	**+1.4**
RAF	**Rauma**	**52.17**	**327**	*e*P			**P**	**15 09 27.2**	**-0.7**
OJC	**Ojcow**	**52.39**	**313**	P			**P**	**15 09 28.0**	**-1.8**
OJC	**Ojcow**	**52.39**	**313**	P			**P**	**15 09 28.0**	**-1.8**
ARCES	**ARCESS Array B**	**52.83**	**338**	P			**P**	**15 09 33.2**	**+0.4**
	comp=Z,4.0nm,0.7s,baz=90,slow=6.1,SNR=7.3								
	comp=Z,4.0nm,0.7s								
ARCES	**ARCESS Array S**	**52.83**	**338**	P			**P**	**15 09 32.7**	**0.0**
ARCES	**ARCESS Array B**	**52.83**	**338**	P			**P**	**15 09 32.7**	**0.0**
ARCES				pmax			pmax		
	comp=Z,12nm,1.3s								
AAL	**Aland**	**52.91**	**326**	*e*P			**P**	**15 09 34.0**	**+0.6**
SEY	**Seymchan**	**55.60**	**31**	*ce*P			**P**	**15 09 53.6**	**+0.6**
SEY				pmax			pmax		
	comp=Z,17nm,3.0s								
HFS	**Hagfors**	**56.04**	**325**	P			**P**	**15 09 56.8**	**+0.6**
	comp=Z,5.0nm,0.5s,baz=104,slow=6.2,SNR=25								
	comp=Z,5.0nm,0.5s								
NORES	**NORESS Array B**	**57.12**	**326**	P			**P**	**15 10 07.2**	**+3.3**
NC303	**NORSAR Array S**	**57.21**	**327**	P			**P**	**15 10 03.0**	**-1.5**
NB201	**NORSAR Array S**	**57.24**	**327**	P			**P**	**15 10 03.5**	**-1.3**
NB2	**NORSAR Subarra**	**57.28**	**327**	P			**P**	**15 10 05.3**	**+0.2**
	comp=Z,1.8nm,0.5s,baz=88,slow=7.4								
NOA	**NORSAR Array B**	**57.28**	**327**	P			**P**	**15 10 05.6**	**+0.5**
	comp=Z,2.9nm,0.7s,baz=90,slow=7.4,SNR=8.4								
NOA				LR			LR	15 33 51.3	
	comp=Z,13nm,20.6s,baz=110,slow=35								
	comp=Z,2.9nm,0.7s								
SPITS	**Spitsbergen Ar**	**57.95**	**347**	P			**P**	**15 10 10.4**	**+0.9**
	comp=Z,1.8nm,1.1s,baz=93,slow=10,SNR=11								
	comp=Z,1.8nm,1.1s								
KONO	**Kongsberg**	**58.11**	**325**	P			**P**	**15 10 10.2**	**-0.6**
KONO	**Kongsberg**	**58.11**	**325**	P			**P**	**15 10 10.3**	**-0.6**
KBS	**Kingsbay**	**58.99**	**348**	P			**P**	**15 10 16.6**	**-0.1**
KBS	**Kingsbay**	**58.99**	**348**	P			**P**	**15 10 16.6**	**-0.1**
KBS				pmax			pmax		
	comp=Z,16nm,1.2s								
KEST	**Kesra**	**62.12**	**298**	P			**P**	**15 10 40.5**	**+1.6**
	comp=Z,4.8nm,0.8s,baz=33,slow=22,SNR=5.0								
	comp=Z,4.8nm,0.8s								
KEST	**Kesra**	**62.12**	**298**	IAmb			IAmb	15 10 41.2	
	comp=Z,5.6nm,0.8s								
EKA	**Eskdalemuir Ar**	**65.54**	**321**	P			**P**	**15 11 01.5**	**+0.5**
	comp=Z,1.5nm,0.6s,baz=70,slow=7.3,SNR=4.6								
	comp=Z,1.5nm,0.6s								
WB0	**Warramunga Arr**	**68.42**	**128**	P			**P**	**15 11 19.9**	**+0.2**
WRA	**Warramunga Arr**	**68.50**	**129**	P			**P**	**15 11 20.8**	**+0.6**
	comp=Z,2.6nm,0.7s,baz=320,slow=6.5,SNR=54								
	comp=Z,2.6nm,0.7s								
WRA	**Warramunga Arr**	**68.50**	**129**	P			**P**	**15 11 20.4**	**+0.2**
WRA	**Warramunga Arr**	**68.50**	**129**	*i* P			**P**	**15 11 21.2**	**+1.0**
WRA				pmax			pmax		
	comp=Z,3.0nm,0.5s								
WR8	**Warramunga Arr**	**68.62**	**128**	P			**P**	**15 11 20.9**	**0.0**
NWAO	**Narrogin (SRO)**	**68.67**	**150**	P			**P**	**15 11 20.4**	**-0.6**
NWAO	**Narrogin (SRO)**	**68.67**	**150**	P			**P**	**15 11 20.4**	**-0.6**
AS31	**Alice Springs**	**70.75**	**132**	P			**P**	**15 11 34.7**	**+0.6**
ASAR	**Alice Springs**	**70.75**	**132**	P			**P**	**15 11 34.6**	**+0.5**
	comp=Z,1.6nm,0.3s,baz=314,slow=6.2,SNR=90								
	comp=Z,1.6nm,0.3s								
ASAR	**Alice Springs**	**70.75**	**132**	P			**P**	**15 11 34.8**	**+0.7**
ASAR	**Alice Springs**	**70.75**	**132**	P			**P**	**15 11 34.8**	**+0.7**
ESDC	**Sonseca Array**	**70.89**	**305**	P			**P**	**15 11 35.9**	**+1.0**
	comp=Z,1.1nm,0.7s,baz=58,slow=6.3,SNR=10.0								
	comp=Z,1.1nm,0.7s								
C16K	**Lisburne Hills**	**71.39**	**22**	P			**P**	**15 11 37.0**	**-0.3**
C16K				IAmb			IAmb	15 11 40.0	
	comp=Z,3.5nm,0.8s								
E18K	**Tukpahlearik C**	**73.37**	**21**	P			**P**	**15 11 48.6**	**-0.6**
E18K				IAmb			IAmb	15 11 56.3	
	comp=Z,3.5nm,0.9s								
D20K	**Etivluk River**	**73.84**	**19**	P			**P**	**15 11 51.4**	**

MJAR Matsushiro Arr 2.64 287 Pn **Pn** 15 15 57.7 +0.9
0.6nm,0.3s,baz=90,slow=20,SNR=43
MJAR Sn **Sb** 15 16 31.8 -2.1
0.6nm,0.3s,baz=130,slow=20,SNR=5.4
MJAR LR LR 15 17 01.0
comp=Z,31nm,21.5s,baz=172,slow=40
2.5nm,0.3s
JHJ Hachijo jima 2 2.98 206 Pn **Pn** 15 16 02.0 +0.6
6.5nm,0.3s,baz=73,slow=19,SNR=1.4
JHJ Sn **Sn** 15 16 34.5 -2.0
53nm,0.3s,baz=57,slow=21,SNR=7.3
32nm,0.3s
ASAJ Asahikawa 8.35 6 Pn **Pn** 15 17 15.2 0.0
1.3nm,0.3s,baz=217,slow=9.9,SNR=25
ASAJ Sn **Sn** 15 18 47.1 -1.8
0.2nm,0.3s,baz=251,slow=28,SNR=1.2
2.3nm,0.3s
H11N2 WAKE ISLAND Hy 27.59 119 T T 15 50 03.9
baz=311,slow=75,SNR=29
H11N1 WAKE ISLAND Hy 27.60 119 T T 15 50 05.2
baz=311,slow=75,SNR=11
H11N3 WAKE ISLAND Hy 27.61 119 T T 15 50 05.8
baz=311,slow=75,SNR=19
H11S3 WAKE ISLAND Hy 28.26 121 T T 15 51 00.3
baz=312,slow=75,SNR=24
H11S1 WAKE ISLAND Hy 28.26 121 T T 15 51 00.3
baz=312,slow=75,SNR=34
H11S2 WAKE ISLAND Hy 28.28 121 T T 15 51 01.5
baz=312,slow=75,SNR=23
ZALV Zalesovo Beam 42.70 313 P **P** 15 23 11.4 +0.7
0.3nm,0.3s,baz=80,slow=7.6,SNR=2.0
0.3nm,0.3s
MKAR Makanchi Array 44.73 303 P **P** 15 23 27.1 0.0
0.6nm,0.7s,baz=88,slow=7.3,SNR=6.1
0.6nm,0.7s
KURBB Kurchatov Arra 46.72 309 P **P** 15 23 42.5 -0.2
0.3nm,0.4s,baz=81,slow=7.3,SNR=6.5
0.3nm,0.4s
ILAR Eielson Array 50.56 32 P **P** 15 24 13.2 +1.1
0.2nm,0.8s,baz=261,slow=5.5,SNR=7.1
0.2nm,0.8s
WRA Warramunga Arr 55.84 188 P **P** 15 24 50.7 -0.7
0.4nm,0.4s,baz=3.1,slow=7.2,SNR=21
0.4nm,0.4s
ASAR Alice Springs 59.57 188 P **P** 15 25 17.3 -0.2
0.3nm,0.7s,baz=2.0,slow=7.6,SNR=10
0.3nm,0.7s
AFI Afiamalu 66.40 129 LR LR 15 49 40.9
comp=Z,28nm,22.0s,baz=188,slow=31

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*IDC **15** 15:28:55.8±0.6,42˚.48S×172˚.86E,h0km,mb4.4/10, mbtmp4.3/11,ML3.9/1,MS3.7/17,Error ellipse: s-maj=22.2km s-min=17.5km az=70.0*

*WEL **15** 15:28:58.8,42˚.69S×172˚.77E,h10km,ML5.1,Mw4.5, Moment Tensor Solution. s7 Moment tensor: Scale 10^{15} Nm; Mrr3.97; Mθθ4.66; Mφφ-8.64; Mrθ-1.99; Mθφ-2.40; Mφr0.45; Fault plane solution: Mo7.85000×10^{15} NP1: φs332.00000°,δ65.00000°,λ29.00000°. NP2: φs228.00000°,δ64.00000°,λ152.00000°. Principal axes: T -9.0564, Plg38.0000°, Azm191.0000°; N 6.6457, Plg52.0000°, Azm8.0000°; P 2.4107, Plg1.0000°, Azm100.0000°; Stations used: KHZ OXZ INZ WVZ QRZ LBZ ODZ OBLIQUE-REVERSE FAULTING*

*WEL **15** 15:28:58.9±0.3,43˚.5S×172˚.3E±˚,h8km±2km,M5.1/115, ML4.9/14,MLv5.1/115 Error ellipse: s-maj=2.5km s-min=1.9km az=114.7,confirmed*

*NEIC **15** 15:28:58.5±1.1,42˚.74S±0.02˚-172˚.84E±0.02˚,h16km±4km, mb4.7/17,Error ellipse: s-maj=3.6km s-min=3.0km az=80.0*

*NOU **15** 15:28:59.2,42˚.85S×173˚.01E,h29km,MLv5.1/16,South Island, New Zealand*

ISC 15 15:28:58.8±0.7,42˚.72S±0˚.02×172˚.81E±0˚.02,h16km±4km, n321,σ1↕30/320,mb4.5/19,MS3.8/19,1C-1D,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIGC	**Waiau Gorge**	**0.02**	**345**	P	**Pg**	**15 29 00.8**	**-0.9**
WIGC				S	**Sg**	**15 29 02.3**	**-1.2**
CULC	**Culverden Airl**	**0.04**	**184**	P	**Pg**	**15 29 01.5**	**-0.2**
CULC				S	**Sg**	**15 29 03.6**	**-0.1**
HSES	**Hanmer Springs**	**0.20**	**5**	P	**Pg**	**15 29 02.8**	**-0.6**
WTMC	**Te Mara Farm W**	**0.21**	**62**	P	**Pg**	**15 29 03.9**	**+0.2**
WTMC				S	**Sg**	**15 29 07.6**	**+0.7**
SCAC	**Scargill**	**0.24**	**159**	P	**Pg**	**15 29 05.1**	**+1.0**
SCAC				S	**Sg**	**15 29 09.8**	**+2.1**
LSRC	**Lake Sumner Ro**	**0.25**	**232**	P	**Pg**	**15 29 04.9**	**+0.6**
LSRC				S	**Sg**	**15 29 09.4**	**+1.4**
WAKC	**Waikari**	**0.26**	**197**	P	**Pg**	**15 29 05.2**	**+0.7**
WAKC				S	**Sg**	**15 29 09.9**	**+1.6**
GVZ	**Greta Valley S**	**0.30**	**146**		**Pb**	**15 29 06.1**	**+0.3**
GVZ	**Greta Valley S**	**0.30**	**146**	P	**Pn**	**15 29 06.3**	**-2.2**
GVZ				S	**Sb**	**15 29 11.8**	**+1.3**
CECS	**Cheviot Emerge**	**0.36**	**106**	P	**Pb**	**15 29 07.4**	**+0.6**
CECS				S	**Sb**	**15 29 13.8**	**+1.7**
LTZ	**Lake Taylor**	**0.40**	**261**		**Pb**	**15 29 06.8**	**-0.7**
LTZ				Sg	**Sb**	**15 29 12.6**	**-0.9**
LTZ	**Lake Taylor**	**0.40**	**261**	P	**Pb**	**15 29 06.9**	**-0.5**
LTZ				S	**Sb**	**15 29 12.6**	**-0.8**
AMBC	**Amberley HDC**	**0.44**	**187**	P	**Pn**	**15 29 09.0**	**-1.4**
AMCZ	**Amberley**	**0.47**	**194**		**Pn**	**15 29 09.5**	**-1.4**
AMCZ	**Amberley**	**0.47**	**194**	P	**Pn**	**15 29 09.6**	**-1.3**
ASHY	**Ashley**	**0.58**	**195**	P	**Pn**	**15 29 11.5**	**-0.8**
ASHY				S	**Sn**	**15 29 20.5**	**-0.9**
SJFS	**Springs Juncti**	**0.60**	**309**	P	**Pg**	**15 29 10.2**	**-0.5**
KHZ	**Kahutara**	**0.62**	**61**	P	**Pb**	**15 29 11.3**	**+0.1**
KHZ	**Kahutara**	**0.62**	**61**		**Pb**	**15 29 11.3**	**+0.1**
KHZ	**Kahutara**	**0.62**	**61**	P	**Pb**	**15 29 11.4**	**+0.1**
KHZ				S	**Sb**	**15 29 20.3**	**+0.7**
SMHS	**Summerhill**	**0.64**	**212**	P	**Pn**	**15 29 12.6**	**-0.6**
SMHS				S	**Sn**	**15 29 22.5**	**-0.6**
CSTC	**Cust School**	**0.67**	**208**	P	**Pn**	**15 29 13.2**	**-0.4**
CSTC				S	**Sn**	**15 29 23.6**	**-0.1**
SWNC	**Swannanoa Scho**	**0.69**	**199**	P	**Pn**	**15 29 13.7**	**-0.2**
KIKS	**Kaikoura**	**0.71**	**66**	P	**Pn**	**15 29 13.7**	**-0.3**
KIKS				S	**Sn**	**15 29 25.0**	**+0.4**
MOLW	**Molesworth Sta**	**0.71**	**28**	P	**Pg**	**15 29 12.1**	**-0.7**
SMTX	**Styx Mill Tran**	**0.76**	**191**	P	**Pn**	**15 29 14.6**	**-0.2**
BWHS	**Burwood Hospit**	**0.77**	**187**	P	**Pn**	**15 29 14.9**	**0.0**
NNBS	**New Brighton**	**0.78**	**185**	P	**Pn**	**15 29 15.1**	**0.0**
MPSS	**Mairehau Prima**	**0.79**	**189**	P	**Pn**	**15 29 15.3**	**+0.1**
NBLC	**New Brighton L**	**0.79**	**184**	P	**Pn**	**15 29 15.0**	**-0.2**
PPHS	**Papanui**	**0.79**	**191**	P	**Pn**	**15 29 15.1**	**-0.1**
CACS	**Harewood**	**0.79**	**195**	P	**Pn**	**15 29 15.1**	**-0.1**
SHLC	**Shirley Librar**	**0.79**	**188**	P	**Pn**	**15 29 15.3**	**0.0**
DALS	**Dallington**	**0.80**	**187**	P	**Pn**	**15 29 15.1**	**-0.2**
SAGC	**St Andrews Col**	**0.80**	**190**	P	**Pn**	**15 29 15.1**	**-0.3**
STAS	**St Albans Chri**	**0.80**	**189**	P	**Pn**	**15 29 15.1**	**-0.3**
PRPC	**Pages Road Pum**	**0.81**	**186**	P	**Pn**	**15 29 15.6**	**+0.1**
REHS	**Christchurch**	**0.81**	**189**	P	**Pn**	**15 29 15.3**	**-0.3**
CBGS	**Christchurch**	**0.82**	**189**	P	**Pn**	**15 29 15.4**	**-0.3**
CHCC	**Christchurch C**	**0.83**	**188**	P	**Pn**	**15 29 15.4**	**-0.3**
OXZ	**Oxford**	**0.83**	**223**		**Pn**	**15 29 15.2**	**-0.6**
OXZ	**Oxford**	**0.83**	**223**	P	**Pn**	**15 29 15.2**	**-0.6**
MOOR	**Moorhouse Ave**	**0.83**	**189**	P	**Pn**	**15 29 15.8**	**0.0**
RCBS	**Redcliffs Bore**	**0.84**	**184**	P	**Pn**	**15 29 15.5**	**-0.4**
MENS	**Menlo Terrace**	**0.84**	**185**	P	**Pn**	**15 29 15.8**	**-0.1**
OPWS	**Opawa School**	**0.84**	**187**	P	**Pn**	**15 29 15.8**	**-0.1**
PARS	**Panorama Road**	**0.85**	**183**	P	**Pn**	**15 29 15.7**	**-0.3**
SUMS	**Sumner**	**0.85**	**182**	P	**Pn**	**15 29 15.7**	**-0.4**
GODS	**Godley Drive**	**0.86**	**182**	P	**Pn**	**15 29 15.7**	**-0.5**
HVSC	**Heathcote Vall**	**0.86**	**185**	P	**Pn**	**15 29 16.1**	**-0.1**
LOKS	**Mount Lookout**	**0.87**	**36**	P	**Pg**	**15 29 15.2**	**-0.4**
TPLC	**Templeton Scho**	**0.87**	**196**	P	**Pn**	**15 29 16.0**	**-0.2**
HUNS	**Huntsbury**	**0.87**	**187**	P	**Pn**	**15 29 16.1**	**-0.2**
MTPS	**Mount Pleasant**	**0.87**	**184**	P	**Pn**	**15 29 16.2**	**-0.1**
SHFC	**Sheffield Scho**	**0.88**	**220**	P	**Pn**	**15 29 15.9**	**-0.6**
HALL	**Halswell Schoo**	**0.89**	**191**	P	**Pn**	**15 29 16.3**	**-0.3**
LPDS	**Lyttelton Port**	**0.89**	**185**	P	**Pn**	**15 29 16.2**	**-0.4**
SPRS	**Springfield Vo**	**0.89**	**226**	P	**Pn**	**15 29 16.1**	**-0.6**
STKS	**Sign of the Ki**	**0.90**	**188**	P	**Pn**	**15 29 16.1**	**-0.6**
DHSS	**Diamond Harbou**	**0.91**	**184**	P	**Pn**	**15 29 16.8**	**-0.1**
DHSS				S	**Sn**	**15 29 29.9**	**+0.1**
MNZS	**Menzies Bay Ba**	**0.93**	**172**	P	**Pn**	**15 29 16.6**	**-0.5**
ROLC	**Rolleston Scho**	**0.93**	**199**	P	**Pn**	**15 29 16.6**	**-0.5**
DFHS	**Darfield**	**0.93**	**213**	P	**Pn**	**15 29 16.6**	**-0.6**
LINC	**Lincoln Crop a**	**0.94**	**195**	P	**Pn**	**15 29 17.0**	**-0.2**
APPS	**Arthurs Pass P**	**0.94**	**255**	P	**Pn**	**15 29 17.1**	**-0.2**
CSHS	**Castle Hill**	**0.94**	**237**	P	**Pn**	**15 29 17.1**	**-0.3**
THZ	**Tophouse**	**0.96**	**4**		**Pg**	**15 29 16.3**	**-1.0**
THZ	**Tophouse**	**0.96**	**4**	P	**Pg**	**15 29 16.4**	**-1.0**
IFPS	**Inchbonnie Fit**	**0.98**	**269**	P	**Pb**	**15 29 17.2**	**-0.2**
MCASZ	**Murchison**	**0.98**	**339**	P	**Pb**	**15 29 18.0**	**+0.6**
MQZ	**McQueen's Vall**	**0.99**	**186**		**Pb**	**15 29 16.7**	**-0.9**
MQZ	**McQueen's Vall**	**0.99**	**186**	P	**Pn**	**15 29 16.8**	**-1.2**
INZ	**Inchbonnie**	**1.00**	**269**		**Pb**	**15 29 17.5**	**-0.2**
INZ	**Inchbonnie**	**1.00**	**269**	P	**Pb**	**15 29 17.7**	**-0.1**
WCSS	**Whitecliffs**	**1.01**	**223**	P	**Pn**	**15 29 17.5**	**-0.8**
GDAL	**Greendale**	**1.01**	**211**	P	**Pn**	**15 29 17.7**	**-0.6**
OKCZ	**Okains Bay**	**1.02**	**170**	P	**Pn**	**15 29 18.0**	**-0.5**
HORC	**Hororata Schoo**	**1.03**	**217**	P	**Pn**	**15 29 17.9**	**-0.6**
RACZ	**Rakaia**	**1.12**	**206**	P	**Pn**	**15 29 19.1**	**-0.7**
MHCZ	**Mount Hutt**	**1.22**	**228**	P	**Pb**	**15 29 20.5**	**-1.0**
DSZ	**Denniston Nort**	**1.23**	**322**		**Pn**	**15 29 21.4**	**+0.1**
DSZ	**Denniston Nort**	**1.23**	**322**	P	**Pn**	**15 29 21.6**	**+0.3**
MRNZ	**Matariki Terra**	**1.32**	**358**		**Pn**	**15 29 22.7**	**+0.2**
MRNZ	**Matariki Terra**	**1.32**	**358**	P	**Pn**	**15 29 22.8**	**+0.3**
WACZ	**Wakanui South**	**1.41**	**210**	P	**Pn**	**15 29 23.1**	**-0.7**
CMWZ	**Cape Campbell**	**1.43**	**48**	P	**Pb**	**15 29 25.0**	**+0.1**
TUWZ	**Tuamarina**	**1.54**	**34**	P	**Pb**	**15 29 26.9**	**0.0**
NNZ	**Nelson**	**1.56**	**16**		**Pn**	**15 29 25.8**	**0.0**
NNZ	**Nelson**	**1.56**	**16**	P	**Pn**	**15 29 26.2**	**+0.4**
WVZ	**Waitaha Valley**	**1.56**	**256**	P	**Pn**	**15 29 26.1**	**+0.2**
RPZ	**Rata Peaks**	**1.62**	**232**	Pn	**Pn**	**15 29 26.2**	**-0.5**
	390nm,0.3s,baz=185,slow=0.5,SNR=1239						
RPZ				Sn	**Sn**	**15 29 46.6**	**-0.7**
	1μm,0.3s,baz=187,slow=0.1,SNR=30						
RPZ				LR	LR	15 29 54.0	
	comp=Z,939nm,18.5s,baz=264,slow=32						
RPZ	**Rata Peaks**	**1.62**	**232**	P	**Pn**	**15 29 26.1**	**-0.6**
RPZ	**Rata Peaks**	**1.62**	**232**	P	**Pn**	**15 29 26.2**	**-0.5**
TKNZ	**Takaka Hill**	**1.69**	**4**		**Pn**	**15 29 28.0**	**+0.4**
TKNZ	**Takaka Hill**	**1.69**	**4**	P	**Pn**	**15 29 28.3**	**+0.7**
ARCZ	**Arundel**	**1.71**	**224**	P	**Pn**	**15 29 27.2**	**-0.7**
TCW	**Tory Channel**	**1.86**	**37**		**Pn**	**15 29 29.9**	**-0.1**
TCW	**Tory Channel**	**1.86**	**37**	P	**Pn**	**15 29 30.1**	**+0.2**
QRZ	**Quartz Range**	**1.90**	**354**		**Pn**	**15 29 31.7**	**+1.2**
QRZ	**Quartz Range**	**1.90**	**354**		**Pn**	**15 29 31.0**	**+0.5**
QRZ	**Quartz Range**	**1.90**	**354**	P	**Pn**	**15 29 31.0**	**+0.5**
GCSZ	**Gaunt Creek Bo**	**1.91**	**251**	P	**Pn**	**15 29 31.2**	**+0.6**
SNZO	**South Karori**	**2.00**	**46**		**Pn**	**15 29 31.3**	**-0.5**
BHW	**Baring Head**	**2.02**	**50**	P	**Pn**	**15 29 31.7**	**-0.4**
WEL	**Wellington**	**2.05**	**48**	P	**Pn**	**15 29 32.4**	**-0.1**
DUWZ	**D'Urville Isla**	**2.09**	**24**	P	**Pn**	**15 29 33.8**	**+0.7**
TMZ	**Timaru**	**2.12**	**218**	P	**Pn**	**15 29 32.8**	**-0.8**
PLWZ	**Palliser**	**2.15**	**59**		**Pn**	**15 29 33.0**	**-1.0**
PLWZ	**Palliser**	**2.15**	**59**	P	**Pn**	**15 29 33.0**	**-1.0**
MSWZ	**Moikau Station**	**2.24**	**55**		**Pn**	**15 29 34.2**	**-0.9**
MSWZ	**Moikau Station**	**2.24**	**55**	P	**Pn**	**15 29 34.3**	**-0.9**
CAW	**Cannon Point**	**2.33**	**47**	P	**Pn**	**15 29 36.0**	**-0.5**
FOZ	**Fox Glacier**	**2.34**	**249**	P	**Pn**	**15 29 36.8**	**+0.4**
PAWZ	**Paruwai Farm**	**2.37**	**56**	P	**Pn**	**15 29 35.8**	**-1.1**
KIW	**Kapiti Island**	**2.43**	**41**	P	**Pn**	**15 29 37.8**	**0.0**
TRWZ	**Traveller**	**2.52**	**59**	P	**Pn**	**15 29 37.7**	**-1.3**
LBZ	**Lake Benmore**	**2.53**	**228**		**Pn**	**15 29 38.6**	**-0.6**
LBZ	**Lake Benmore**	**2.53**	**228**	P	**Pn**	**15 29 38.7**	**-0.5**
MTW	**Mount Morrison**	**2.54**	**53**	P	**Pn**	**15 29 38.2**	**-1.2**
OGWZ	**Otaki Gorge**	**2.59**	**44**	P	**Pn**	**15 29 39.6**	**-0.4**
HOWZ	**Holdsworth Sta**	**2.72**	**49**	P	**Pn**	**15 29 40.7**	**-1.1**
ODZ	**Otahua Downs**	**2.80**	**213**		**Pn**	**15 29 41.7**	**-1.2**
ODZ	**Otahua Downs**	**2.80**	**213**	P	**Pn**	**15 29 42.0**	**-0.9**
ODZ	**Otahua Downs**	**2.80**	**213**	P	**Pn**	**15 29 42.0**	**-0.9**
TMWZ	**Te Maipa**	**2.81**	**56**	P	**Pn**	**15 29 41.6**	**-1.4**
MRZ	**Mangatainoka R**	**2.92**	**46**		**Pn**	**15 29 43.4**	**-1.1**
MRZ	**Mangatainoka R**	**2.92**	**46**	P	**Pn**	**15 29 43.6**	**-0.9**
TIWZ	**Tintock**	**3.01**	**51**	P	**Pn**	**15 29 45.0**	**-0.8**
CPWZ	**Castlepoint**	**3.12**	**56**	P	**Pn**	**15 29 47.6**	**+0.4**
OHWZ	**Ohakea**	**3.14**	**38**	P	**Pn**	**15 29 48.2**	**+0.7**
PRWZ	**Pori Road**	**3.21**	**49**	P	**Pn**	**15 29 47.2**	**-1.3**
POWZ	**Post Office Ro**	**3.22**	**45**	P	**Pn**	**15 29 47.5**	**-1.0**
JCZ	**Jackson Bay**	**3.23**	**244**		**Pn**	**15 29 48.2**	**-0.6**
JCZ	**Jackson Bay**	**3.23**	**244**	P	**Pn**	**15 29 48.3**	**-0.5**
BFZ	**Birch Farm**	**3.28**	**53**	P	**Pn**	**15 29 47.6**	**-1.9**
BFZ	**Birch Farm**	**3.28**	**53**	P	**Pn**	**15 29 47.5**	**-2.0**
WAZ	**Wanganui**	**3.39**	**30**	P	**Pn**	**15 29 52.6**	**+1.7**
NMEZ	**Namu Road**	**3.40**	**14**	P	**Pn**	**15 29 53.3**	**+2.2**
WKZ	**Wanaka**	**3.46**	**231**		**Pn**	**15 29 50.6**	**-1.4**
WKZ	**Wanaka**	**3.46**	**231**	P	**Pn**	**15 29 50.7**	**-1.3**
LREZ	**Lake Rotokare**	**3.47**	**21**	P	**Pn**	**15 29 54.7**	**+2.7**
DVHZ	**Dannevirke**	**3.49**	**47**	P	**Pn**	**15 29 50.5**	**-1.9**
PREZ	**Palmer Road**	**3.52**	**17**	P	**Pn**	**15 29 54.9**	**+2.1**
NBEZ	**Newall Road No**	**3.54**	**13**	P	**Pn**	**15 29 55.3**	**+2.2**
HHSZ	**Highcliff Hill**	**3.54**	**206**	P	**Pn**	**15 29 51.9**	**-1.1**
KHEZ	**Kahui Hut**	**3.54**	**15**	P	**Pn**	**15 29 54.6**	**+1.5**
KHEZ	**Kahui Hut**	**3.54**	**15**	P	**Pn**	**15 29 55.0**	**+1.9**
ANWZ	**Angora Road**	**3.56**	**52**	P	**Pn**	**15 29 51.7**	**-1.5**
EAZ	**Earnscleugh**	**3.56**	**224**	P	**Pn**	**15 29 51.9**	**-1.4**
TSZ	**Takapari Road**	**3.56**	**43**	P	**Pn**	**15 29 52.1**	**-1.3**
DREZ	**Durham Road**	**3.68**	**17**	P	**Pn**	**15 29 57.8**	**+2.8**
PRHZ	**Porangahau**	**3.78**	**51**	P	**Pn**	**15 29 54.1**	**-2.2**
PNHZ	**Pukenui**	**3.79**	**43**	P	**Pn**	**15 29 54.9**	**-1.7**
WPHZ	**Waipukurau**	**3.81**	**47**	P	**Pn**	**15 29 55.0**	**-1.7**
MHEZ	**Mangahewa**	**3.82**	**18**	P	**Pn**	**15 30 02.7**	**-3.0**
VRZ	**Vera Road**	**3.88**	**23**	P	**Pn**	**15 29 59.5**	**+1.8**
MTVZ	**Mangateitei**	**3.89**	**32**	P	**Pn**	**15 29 58.7**	**+0.7**
PKVZ	**Pokaka**	**3.90**	**32**	P	**Pn**	**15 29 58.9**	**+0.5**
TUZ	**Tuapeka**	**3.96**	**214**	P	**Pn**	**15 29 57.9**	**-1.8**
MOVZ	**Moawhango**	**3.99**	**35**	P	**Pn**	**15 29 58.7**	**-0.6**
WNVZ	**Wahianoa**	**3.99**	**33**	P	**Pn**	**15 29 59.8**	**+0.3**
TRVZ	**Turoa**	**4.00**	**32**	P	**Pn**	**15 30 00.0**	**+0.5**
WHVZ	**Whangaehu Hut**	**4.03**	**32**	P	**Pn**	**15 30 00.4**	**+0.5**
MAVZ	**Matarangi**	**4.03**	**32**	P	**Pn**	**15 30 00.7**	**+0.7**
FWVZ	**Far West T-bar**	**4.04**	**32**	P	**Pn**	**15 30 00.5**	**+0.5**
MSZ	**Milford Sound**	**4.04**	**239**	P	**Pn**	**15 29 58.3**	**-1.6**
PXZ	**Pawanui**	**4.06**	**50**	P	**Pn**	**15 29 57.8**	**-2.4**
TUVZ	**Tukino**	**4.07**	**33**	P	**Pn**	**15 30 00.7**	**+0.3**
COVZ	**Chateau Observ**	**4.08**	**31**	P	**Pn**	**15 30 01.0**	**+0.5**
KRHZ	**Kereru**	**4.08**	**42**	P	**Pn**	**15 29 58.8**	**-1.8**
NGZ	**Ngauruhoe**	**4.12**	**32**	P	**Pn**	**15 30 01.6**	**+0.4**
SNVZ	**South Ngauruho**	**4.13**	**32**	P	**Pn**	**15 30 01.8**	**+0.5**
TWVZ	**Taurewa**	**4.15**	**30**	P	**Pn**	**15 30 02.0**	**+0.4**
OTVZ	**Oturere**	**4.16**	**32**	P	**Pn**	**15 30 02.0**	**+0.3**
WTVZ	**West Tongariro**	**4.17**	**31**	P	**Pn**	**15 30 02.2**	**+0.3**
ETVZ	**East Tongariro**	**4.20**	**33**	P	**Pn**	**15 30 02.3**	**+0.1**
KRVZ	**Karewarewa**	**4.21**	**32**	P	**Pn**	**15 30 02.8**	**+0.5**
TMVZ	**Te Maari**	**4.21**	**32**	P	**Pn**	**15 30 02.6**	**+0.1**
NTVZ	**North Tongarir**	**4.22**	**32**	P	**Pn**	**15 30 02.8**	**+0.3**
KAHZ	**Kahuranaki**	**4.24**	**48**	P	**Pn**	**15 30 00.3**	**-2.3**
KWHZ	**Kaweka Forest**	**4.28**	**41**	P	**Pn**	**15 30 02.1**	**-1.1**
MLZ	**Mavora Lakes**	**4.29**	**230**	P	**Pn**	**15 30 01.7**	**-1.7**
KATZ	**Kakaramea**	**4.33**	**31**	P	**Pn**	**15 30 04.7**	**+0.6**
RITZ	**Rihia Road**	**4.40**	**33**	P	**Pn**	**15 30 04.7**	**-0.1**
MCHZ	**McNeill Hill**	**4.40**	**43**	P	**Pn**	**15 30 03.0**	**-1.9**
CKHZ	**Cape Kidnapper**	**4.44**	**48**	P	**Pn**	**15 30 03.9**	**-1.5**
RATZ	**Rangitukua**	**4.46**	**31**	P	**Pn**	**15 30 06.2**	**+0.5**
HIZ	**Hauiti**	**4.48**	**21**	P	**Pn**	**15 30 06.7**	**+0.7**
HIZ	**Hauiti**	**4.48**	**21**	P	**Pn**	**15 30 07.0**	**+1.1**
BKZ	**Black Stump Fm**	**4.51**	**39**	P	**Pn**	**15 30 04.9**	**-1.6**
BKZ	**Black Stump Fm**	**4.51**	**39**		**Pn**	**15 30 04.4**	**-2.1**
BKZ	**Black Stump Fm**	**4.51**	**39**	P	**Pn**	**15 30 04.6**	**-1.9**
WATZ	**Wairara**	**4.58**	**30**	P	**Pn**	**15 30 07.7**	**+0.4**
SYZ	**Scrubby Hill**	**4.63**	**213**	P	**Pn**	**15 30 06.8**	**-1.2**
SYZ	**Scrubby Hill**	**4.63**	**213**	P	**Pn**	**15 30 07.2**	**-0.7**
ARHZ	**Aropaoanui**	**4.69**	**44**	P	**Pn**	**15 30 07.8**	**-0.9**
WHTZ	**Whakaora**	**4.70**	**32**	P	**Pn**	**15 30 10.1**	**+1.0**
WHZ	**Wether Hill Ro**	**4.71**	**226**	P	**Pn**	**15 30 06.6**	**-2.6**
NMHZ	**Naumai**	**4.72**	**41**	P	**Pn**	**15 30 07.7**	**-1.6**
MRHZ	**Matea Rd**	**4.75**	**36**	P	**Pn**	**15 30 07.9**	**-1.8**
KUTZ	**Kaahu Road**	**4.81**	**30**	P	**Pn**	**15 30 13.5**	**+3.0**
TLZ	**Tolley Road**	**4.85**	**26**	P	**Pn**	**15 30 11.2**	**+0.1**
WPRZ	**Whakapapatarin**	**4.91**	**32**	P	**Pn**	**15 30 10.9**	**-1.0**
DCZ	**Deep Cove**	**4.91**	**234**	P	**Pn**	**15 30 10.1**	**-1.8**
MTHZ	**Maungataniwha**	**4.93**	**40**	P	**Pn**	**15 30 10.5**	**-1.7**
ALRZ	**Allen Road**	**4.95**	**34**	P	**Pn**	**15 30 10.8**	**-1.6**
WHHZ	**Waihua**	**4.95**	**44**	P	**Pn**	**15 30 11.0**	**-1.3**
RAHZ	**Arahi**	**5.00**	**42**	P	**Pn**	**15 30 10.7**	**-2.4**
PRRZ	**Plateau Road**	**5.02**	**34**	P	**Pn**	**15 30 12.0**	**-1.4**
HRRZ	**Handcock Road**	**5.07**	**33**	P	**Pn**	**15 30 15.1**	**+1.0**
HSRZ	**Hossack Road**	**5.12**	**32**	P	**Pn**	**15 30 17.5**	**+2.7**
RRRZ	**Republican Roa**	**5.21**	**34**	P	**Pn**	**15 30 21.2**	**+5.2**
KNZ	**Kokohu**	**5.22**	**47**	P	**Pn**	**15 30 13.1**	**-2.9**
MHGZ	**Mahia Peninsul**	**5.25**	**49**	P	**Pn**	**15 30 14.8**	**-1.8**
NGRZ	**Ngongotaha**	**5.28**	**30**	P	**Pn**	**15 30 19.8**	**+2.8**
TARZ	**Mount Tarawera**	**5.29**	**33**	P	**Pn**	**15 30 20.0**	**+2.8**
APZ	**The Paps**	**5.36**	**218**	P	**Pn**	**15 30 16.1**	**-1.9**
KARZ	**Kaharoa**	**5.38**	**30**	P	**Pn**	**15 30 21.5**	**+3.2**
TOZ	**Tahuroa Road**	**5.39**	**23**	P	**Pn**	**15 30 18.7**	**+0.3**
KMRZ	**Kaimai**	**5.42**	**27**	P	**Pn**	**15 30 21.8**	**+2.9**
LIRZ	**Lichensteins R**	**5.44**	**31**	P	**Pn**	**15 30 20.2**	**+1.0**
RAGZ	**Rawiri**	**5.49**	**41**	P	**Pn**	**15 30 20.6**	**+0.8**
URZ	**Urewera**	**5.53**	**38**	Pn	**Pn**	**15 30 16.7**	**-3.7**
	4.2nm,0.3s,baz=234,slow=6.5,SNR=16						
URZ				Sn	**Sn**	**15 31 18.3**	**-5.3**
	71nm,0.3s,baz=70,slow=19,SNR=11						
	8.9nm,0.3s						
URZ	**Urewera**	**5.53**	**38**	P	**Pn**	**15 30 19.5**	**-0.9**
MARZ	**Manawahe**	**5.58**	**33**	P	**Pn**	**15 30 19.5**	**-1.5**
PYZ	**Puysegur Point**	**5.58**	**230**	P	**Pn**	**15 30 20.4**	**-0.6**
PYZ	**Puysegur Point**	**5.58**	**230**	P	**Pn**	**15 30 20.1**	**-0.9**
TGRZ	**Tauranga**	**5.64**	**29**	P	**Pn**	**15 30 21.3**	**-0.6**
OPRZ	**Ohinepanea**	**5.65**	**32**	P	**Pn**	**15 30 20.5**	**-1.5**
AWAZ	**Awhitu Peninsu**	**5.82**	**15**	P	**Pn**	**15 30 25.8**	**+1.4**
KBAZ	**Karaka Road Bo**	**5.84**	**17**	P	**Pn**	**15 30 27.2**	**+2.5**
MKAZ	**Moumakai**	**5.89**	**19**	P	**Pn**	**15 30 26.0**	**+0.7**
CNGZ	**Carnagh Statio**	**5.90**	**46**	P	**Pn**	**15 30 25.0**	**-0.5**
WTAZ	**Waiatarua**	**5.94**	**14**	P	**Pn**	**15 30 28.1**	**+2.1**
ETAZ	**East Tamaki Re**	**5.98**	**17**	P	**Pn**	**15 30 27.9**	**+1.2**
TWGZ	**Tauwhareparae**	**6.01**	**43**	P	**Pn**	**15 30 25.3**	**-1.7**
EPAZ	**Eden Park BICE**	**6.02**	**15**	P	**Pn**	**15 30 29.5**	**+2.3**
RUGZ	**Raukumara Rang**	**6.03**	**40**	P	**Pn**	**15 30 26.0**	**-1.3**
MYRZ	**Mayor Island**	**6.04**	**27**	P	**Pn**	**15 30 30.7**	**+3.3**
RVAZ	**Riverhead Bore**	**6.10**	**14**	P	**Pn**	**15 30 30.0**	**+1.9**
MBAZ	**Motutapu North**	**6.16**	**16**	P	**Pn**	**15 30 30.5**	**+1.5**
WIAZ	**Waiheke Island**	**6.18**	**18

comp=Z,0.3nm,0.4s,baz=149,slow=3.4,SNR=1.9
KURBB Kurchatov Arra 123.78 310 PKP **PKPdf 15 47 53.5 -1.5**
comp=Z,1.3nm,0.5s,baz=111,slow=1.9,SNR=18
BVAR Borovoye Array 129.38 310 PKP **PKPdf 15 48 04.3 -1.3**
comp=Z,0.6nm,0.5s,baz=82,slow=1.1,SNR=4.2
SPITS Spitsbergen Ar 143.20 352 PKhKP PKPpre 15 48 25.5
comp=Z,2.5nm,0.8s,baz=76,slow=7.0,SNR=5.4
SPITS PKP **PKPdf 15 48 30.8 +0.2**
comp=Z,2.3nm,0.8s,baz=74,slow=3.0,SNR=4.3
KBZ Khabaz 143.94 289 PKP PKPab 15 48 29.7 -0.4
comp=Z,1.6nm,0.8s,baz=113,slow=3.7,SNR=2.5
DBIC Dimbokro 144.04 184 PKP PKPbc 15 48 33.0 +1.3
comp=Z,3.8nm,0.6s,baz=212,slow=2.6,SNR=5.6
MMAI Mount Meron Ar 145.32 268 PKPbc **PKPdf 15 48 36.3 +0.6**
comp=Z,9.0nm,0.8s,baz=124,slow=0.5,SNR=9.8
ARCES ARCESS Array B 148.31 339 PKPbc **PKPdf 15 48 41.0 +1.6**
comp=Z,8.9nm,0.8s,baz=61,slow=2.9,SNR=14
BRTR Keskin Array B 149.35 278 PKPbc **PKPbc 15 48 46.0 -0.7**
comp=Z,5.3nm,0.9s,baz=127,slow=3.8,SNR=14
TORD Torodi Ar. Bea 149.55 197 PKPbc **PKPbc 15 48 47.5 -0.2**
comp=Z,6.3nm,0.7s,baz=194,slow=3.5,SNR=31
FINES FINESS Array B 152.73 325 PKPbc **PKPbc 15 48 52.4 -1.2**
comp=Z,2.5nm,0.6s,baz=46,slow=5.5,SNR=12
AKASG Malin Array Be 154.00 301 PKPbc **PKPbc 15 48 55.5 -1.2**
comp=Z,0.5nm,0.4s,baz=73,slow=3.1,SNR=4.6
HFS Hagfors 158.40 331 PKPab PKPab **PKPab 15 49 27.0 -1.8**
comp=Z,2.0nm,0.7s,baz=64,slow=6.6,SNR=4.4
MODS Modra-Piesok 161.99 297 *e*PKP **PKPdf 15 49 01.4 +2.8**

IDC ***15*** *15:35:06.2±2.5,8.°84S×74.°44W,h130km±27km,mb3.6/4, mbtmp4.0/7,Error ellipse: s-maj=28.1km s-min=14.1km az=68.0*
NEIC ***15*** *15:35:08.5±1.1,8.°91S±0.°06×74.°55W±0.°04,h143km±8km, mb4.3/11,Error ellipse: s-maj=10.6km s-min=3.5km az=147.0*
ISC 15 15:35:07.8±0.6,**8.°90S**±0.°07×**74.°52W**±0.°06,**h145**km,**n25,** σ0ŝ**75**/26,**mb4.2/6,Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CZSB	**Cruzeiro do Su**	**2.14**	**57**	**Pn**	**Pn**	**15 35 45.1**	**+0.8**
NNA	**Nana**	**3.83**	**216**	**P**	**Pn**	**15 36 05.7**	**-0.1**
	30nm,0.3s,baz=43,slow=7.2,SNR=28						
NNA				S	**Sn**	**15 36 50.7**	**0.0**
	105nm,0.3s,baz=214,slow=9.0,SNR=12						
NNA	**Nana**	**3.83**	**216**		**Pn**	**15 36 05.8**	**+0.1**
ATAH	**Atahualpa**	**4.22**	**294**	P	**Pn**	**15 36 11.3**	**+0.1**
	17nm,0.4s,baz=134,slow=3.9,SNR=36						
ATAH				S	**Sn**	**15 36 58.8**	**-1.5**
	35nm,0.3s,baz=331,slow=14,SNR=9.3						
COHC	**Cochancay**	**7.94**	**323**	Pn	**Pn**	**15 37 00.1**	**-0.4**
PB12	**IPOC Station P**	**10.48**	**159**	Pn	**Pn**	**15 37 33.6**	**-0.8**
MACA	**Manacapuru-AM**	**14.89**	**68**	P	**P**	**15 38 33.4**	**+0.2**
SIV	**San Ignacio**	**14.90**	**120**	P	**Pn**	**15 38 31.3**	**0.0**
	1.0nm,0.5s,baz=294,slow=13,SNR=6.1						
BOAV	**Boa Vista**	**17.90**	**52**		**Pn**	**15 39 07.4**	**-0.5**
SDV	**Santo Domingo**	**18.09**	**12**		**Pn**	**15 39 09.6**	**-0.6**
UALR	**University of**	**46.60**	**340**	P	**P**	**15 43 21.4**	**+0.1**
TXAR	**Lajitas Array**	**47.26**	**325**	P	**P**	**15 43 27.6**	**+0.9**
	0.4nm,0.4s,baz=147,slow=8.8,SNR=5.9						
	0.4nm,0.4s						
TXAR	**Lajitas Array**	**47.26**	**325**	P	**P**	**15 43 27.5**	**+0.8**
HAYD	**Hayden**	**57.71**	**331**	P	**P**	**15 44 44.3**	**+0.7**
HAYD				IAmb	IAmb	15 45 01.5	
	comp=Z,2.0nm,0.8s						
DBIC	**Dimbokro**	**71.13**	**80**	P	**P**	**15 46 10.3**	**-0.8**
	comp=Z,1.2nm,0.4s,baz=239,slow=4.6,SNR=1.9						
	comp=Z,1.2nm,0.4s						
DBIC	**Dimbokro**	**71.13**	**80**	P	**P**	**15 46 10.5**	**-0.7**
DBIC				IAmb	IAmb	15 46 23.0	
	comp=Z,5.0nm,1.0s						
TORD	**Torodi Ar. Bea**	**78.78**	**75**	P	**P**	**15 46 54.0**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=251,slow=5.3,SNR=5.1						
	comp=Z,0.5nm,0.3s						
QSPA	**South Pole Qui**	**81.22**	**180**	P	**P**	**15 47 08.2**	**+0.8**
	comp=Z,1.2nm,0.9s,baz=124,slow=3.6,SNR=2.1						
	comp=Z,1.2nm,0.9s						
QSPA	**South Pole Qui**	**81.22**	**180**	IAmb	IAmb	15 47 36.7	
	comp=Z,9.1nm,1.5s						
M27K	**Edge Creek, AK**	**87.62**	**334**	P	**P**	**15 47 40.5**	**+0.9**
M27K				IAmb	IAmb	15 48 17.7	
	comp=Z,5.5nm,1.4s						
BERG	**Berg Lake**	**87.65**	**332**	P	**P**	**15 47 40.7**	**+1.1**
VRDI	**Verde Repeater**	**87.86**	**333**	P	**P**	**15 47 41.5**	**+0.7**
VRDI				IAmb	IAmb	15 47 51.5	
	comp=Z,5.2nm,1.3s						
BCAR	**Beaver Creek A**	**87.87**	**335**	P	**P**	**15 47 41.5**	**+0.9**
ASAR	**Alice Springs**	**137.34**	**220**	PKP	**PKPdf**	**15 54 14.6**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=117,slow=1.7,SNR=1.3						
WRA	**Warramunga Arr**	**139.64**	**225**	PKP	**PKPdf**	**15 54 19.6**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=124,slow=2.0,SNR=6.6						

WEL 15 15:44:20.6±1.1,**33°S**±15°×**17°6W**±1°4,**h33**km,**M4.8**/9, **mB4.6**/3,**ML4.9**/11,**MLv4.9**/9,**Mw(mB)3.8**/3,**Error ellipse: s-maj=25.7km s-min=7.8km az=137.1,confirmed,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**6.09**	**224**	P	Pn	15 45 49.4	+1.0
MXZ				S	Sn	15 46 57.1	+0.2
PKGZ	**Pakihiroa**	**6.43**	**223**	P	Pn	15 45 53.5	+0.5
PKGZ				S	Sn	15 47 07.2	+1.9
PUZ	**Puketiti**	**6.48**	**221**	P	Pn	15 45 53.3	-0.4
PUZ				S	Sn	15 47 07.1	+0.7
HAZ	**Te Kaha**	**6.53**	**225**	P	Pn	15 45 55.4	+1.1
HAZ				S	Sn	15 47 10.2	+2.5
TWGZ	**Tauwhareparae**	**6.71**	**222**	P	Pn	15 45 57.1	+0.3
TWGZ				S	Sn	15 47 14.1	+2.0
RUGZ	**Raukumara Rang**	**6.73**	**224**	P	Pn	15 45 58.2	+0.9
RUGZ				S	Sn	15 47 14.3	+1.4
CNGZ	**Carnagh Statio**	**6.81**	**219**	P	Pn	15 45 58.4	+0.2
CNGZ				S	Sn	15 47 13.8	-0.6
TKGZ	**Te Karaka**	**6.97**	**221**	P	Pn	15 45 59.2	-1.1
TKGZ				S	Sn	15 47 19.1	+0.7
MWZ	**Matawai**	**7.07**	**223**	P	Pn	15 46 01.6	-0.2
MWZ				S	Sn	15 47 21.5	+0.5
RIGZ	**Rimuhau**	**7.21**	**220**	P	Pn	15 46 03.6	-0.1
RIGZ				S	Sn	15 47 25.6	+1.3
URZ	**Urewera**	**7.26**	**225**	P	Pn	15 46 04.5	+0.2
URZ				S	Sn	15 47 25.3	-0.3
KNZ	**Kokohu**	**7.49**	**218**	P	Pn	15 46 06.5	-1.0
RTZ	**Ruatahuna**	**7.58**	**223**	P	Pn	15 46 08.1	-0.6
WHNZ	**Waihua**	**7.76**	**220**	P	Sn	15 47 38.5	+0.7
NMHZ	**Naumai**	**8.01**	**222**	P	Pn	15 46 14.7	0.0
NMHZ				P	Sn	15 47 44.3	+0.2
ARHZ	**Aropaoanui**	**8.02**	**220**	P	Pn	15 46 14.9	+0.1
ARHZ				P	Sn	15 47 43.8	-0.6
BKZ	**Black Stump Fm**	**8.23**	**222**	P	Pn	15 46 16.2	-1.5
MCHZ	**McNeill Hill**	**8.31**	**220**	P	Pn	15 46 18.5	-0.3
MCHZ				P	Sn	15 47 50.6	-0.9
KWHZ	**Kaweka Forest**	**8.45**	**221**	P	Sn	15 47 54.5	-0.4
KAHZ	**Kahuranaki**	**8.47**	**218**	P	Sn	15 47 50.4	-5.1
KRHZ	**Kereru**	**8.63**	**220**	P	Sn	15 47 58.2	-1.2
TMVZ	**Te Maari**	**8.65**	**225**	P	Sn	15 47 59.0	-1.1
PXZ	**Pawanui**	**8.66**	**217**	P	Pn	15 46 23.4	-0.1
PXZ				S	Sn	15 47 58.1	-1.9
ETVZ	**East Tongariro**	**8.66**	**225**	P	Sn	15 47 58.8	-1.5
NGZ	**Ngauruhoe**	**8.76**	**225**	P	Sn	15 48 01.7	-0.9
HIZ	**Hauiti**	**8.83**	**231**	P	Pn	15 46 26.1	+0.3
WPHZ	**Waipukurau**	**8.90**	**218**	P	Sn	15 48 05.1	-0.8
PRHZ	**Porangahau**	**8.95**	**217**	P	Sn	15 48 01.5	-5.7
TSZ	**Takapari Road**	**9.15**	**220**	P	Pn	15 46 27.4	-2.9
TSZ				S	Sn	15 48 08.6	-3.5
ANWZ	**Angora Road**	**9.18**	**217**	P	Sn	15 48 09.7	-3.0
BFZ	**Birch Farm**	**9.46**	**216**	P	Pn	15 46 29.6	-4.9
BFZ				S	Sn	15 48 16.1	-3.5
MRZ	**Mangatainoka R**	**9.78**	**219**	P	Pn	15 46 37.9	-1.0
CTZ	**Chatham Island**	**10.45**	**181**	P	Pn	15 46 48.8	+0.7
CTZ				S	Sn	15 48 37.0	-6.9

IDC ***15*** *15:57:24.7±1.2,3.°36S×140.°24E,h0km,mb3.5/4, mbtmp3.6/5,ML3.6/1,Error ellipse: s-maj=43.4km s-min=10.6km az=119.0*
DJA ***15*** *15:57:29.5±0.4,3.°5S±4.°×14.°0E±.°,h24km±4km,M4.0/8, mb4.4/2,MLv3.8/8*
ISC 15 15:57:28.1±0.9,**3.°45S**±0.°07×**140.°4E**±0.°1,**h39**km,**n10,** σ2ŝ**51**/13,**mb3.5/3,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**0.89**	**343**	P	**Pn**	**15 57 42.9**	**-1.3**
GENI				S	**Sn**	**15 57 54.5**	**-1.4**
JAY	**Jayapura**	**0.97**	**17**	Pg	**Pn**	**15 57 44.3**	**-1.1**
	8.6nm,0.3s,baz=209,slow=13,SNR=46						
JAY				Lg	Lg	15 57 55.8	
	67nm,0.3s,baz=89,slow=22,SNR=19						
JAY	**Jayapura**	**0.97**	**17**	P	**Pn**	**15 57 44.1**	**-1.3**
JAY				S	**Sn**	**15 57 56.1**	**-1.9**
WAMI	**Wamena**	**1.76**	**256**	P	**Pn**	**15 57 55.0**	**-1.1**
BAKI	**Biak**	**4.86**	**297**	P	**Pn**	**15 58 38.5**	**-0.3**
WRA	**Warramunga Arr**	**17.43**	**199**	P	**Pn**	**16 01 28.8**	**+0.4**
	0.2nm,0.3s,baz=17,slow=13,SNR=11						
WRA				S	**Sn**	**16 04 35.2**	**-6.4**
	0.3nm,0.8s,baz=13,slow=22,SNR=2.1						
	0.7nm,0.5s						
FITZ	**Fitzroy Crossi**	**20.53**	**224**	P	**P**	**16 02 04.3**	**+1.0**
	1.7nm,0.7s,baz=60,slow=9.6,SNR=5.7						
	1.7nm,0.7s						
ASAR	**Alice Springs**	**21.06**	**197**	P	**P**	**16 02 11.4**	**+2.4**
	1.3nm,0.6s,baz=28,slow=10.0,SNR=41						
	1.3nm,0.6s						
MKAR	**Makanchi Array**	**71.42**	**322**	P	**P**	**16 08 46.2**	**+1.7**
	0.3nm,0.7s,baz=101,slow=7.6,SNR=3.0						
	0.3nm,0.7s						
ILAR	**Eielson Array**	**85.80**	**24**	P	**P**	**16 10 04.4**	**+1.2**
	0.4nm,0.9s,baz=256,slow=5.6,SNR=2.8						
	0.4nm,0.9s						

IDC ***15*** *16:13:12.4±1.6,34.°95N×5.°86E,h0km,mb3.5/2, mbtmp3.3/5,ML3.0/3,Error ellipse: s-maj=33.9km s-min=17.5km az=157.0*
MDD ***15*** *16:13:13.5±0.9,34.°54N×5.°87E,h37km±44km,Mb4.3/22, M_mb3.7/18,Error ellipse: s-maj=16.9km s-min=5.3km az=149.0*
CRAAG ***15*** *16:13:14.6,35.°10N×5.°67E,Ml3.5,Algrie 10km NE El-Outaya*
ISC 15 16:13:13.8±0.9,**34.°97N**±0.°04×**5.°69E**±0.°03,**h10**km,**n44,** σ1ŝ**46**/57,**8C,Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CKTS	**El Kantara**	**0.26**	**0**	P	**Pg**	**16 13 18.6**	**-0.6**
CTGD	**Timgad**	**0.89**	**51**	P	**Pg**	**16 13 30.7**	**-0.3**
CJSR	**Ain Djasser**	**0.92**	**13**	P	**Pg**	**16 13 31.5**	**0.0**
AFRS	**Ain Fares**	**1.05**	**257**	P	**Pn**	**16 13 35.0**	**+0.4**
CTEI	**Djebel Teioual**	**1.24**	**28**	P	**Pg**	**16 13 38.6**	**+0.9**
CBBAR	**Babar**	**1.25**	**81**	P	**Pg**	**16 13 38.0**	**+0.2**
SET	**Setif**	**1.25**	**349**	P	**Pg**	**16 13 53.0**	**-1.2**
CAZD	**Ain Tagrout**	**1.28**	**340**	P	**Pg**	**16 13 39.5**	**+1.0**
ABSD	**Ouled Sidi Bra**	**1.31**	**291**	P	**Pg**	**16 13 39.5**	**+0.6**
COAT	**Oued Athmania**	**1.35**	**21**	P	**Pg**	**16 13 40.5**	**+0.6**
CSGS	**Sigus**	**1.43**	**35**	P	**Pg**	**16 13 41.4**	**+0.1**
CASM	**Ain Smara**	**1.45**	**27**	P	**Pb**	**16 13 41.0**	**+0.1**
CNGR	**Negrine**	**1.58**	**108**	P	**Pg**	**16 13 45.4**	**+1.3**
CBHR	**Beni Haroun da**	**1.67**	**16**	P	**Pn**	**16 13 44.0**	**+0.9**
CTCHA	**Tamokra**	**1.69**	**330**	P	**Pb**	**16 13 45.4**	**+0.4**
CRHA	**Rehia**	**1.79**	**63**	P	**Pb**	**16 13 47.3**	**+0.6**
AKET	**Djebel Ketaf**	**1.83**	**307**	P	**Pg**	**16 13 49.6**	**+0.7**
CBST	**Bordj Sabath**	**1.84**	**38**	P	**Pb**	**16 13 46.9**	**-0.7**
CBOS	**Bilal Ibnou Ra**	**1.89**	**15**	P	**Pn**	**16 13 47.3**	**+1.1**
ATKB	**Taksebt**	**2.13**	**324**	P	**Pb**	**16 13 52.9**	**+0.4**
CMAH	**Djebel Manchou**	**2.17**	**40**	P	**Pn**	**16 13 51.3**	**+1.2**
ABRIN	**Birine**	**2.20**	**288**	P	**Pb**	**16 13 52.6**	**-1.1**
KEST	**Kesra**	**3.09**	**75**	Pn	**Pn**	**16 14 02.7**	**0.0**
	1.0nm,0.3s,baz=252,slow=16,SNR=19						
KEST				Lg	Lg	16 14 46.5	
	1.1nm,0.3s,baz=175,slow=17,SNR=3.6						
	2.1nm,0.4s						
MAHO	**Mahon**	**5.05**	**347**	P	**Pn**	**16 14 30.8**	**+1.3**
ETOS	**Mallorca**	**5.31**	**335**	P	**Pn**	**16 14 35.2**	**+2.0**
ETOS				⇑*i*IVmb_VC		16 14 37.7	
	331nm,SNR=2.4						
ETOS				S	**Sn**	**16 15 35.5**	**+1.0**
EIBI	**Ibiza**	**5.34**	**321**	P	**Pn**	**16 14 35.7**	**+2.1**
EIBI				S	**Sn**	**16 15 35.0**	**-0.2**
EIBI	**Ibiza**	**5.34**	**321**	P	**Pn**	**16 14 35.7**	**+2.1**
EIBI				⇑*i*IVmb_VC		16 14 39.8	
	204nm,SNR=1.2						
EIBI				S	**Sn**	**16 15 36.2**	**+1.1**
VSL	**Villasalto**	**5.39**	**32**	P	**Pn**	**16 14 35.7**	**+1.3**
VSL				S	**Sn**	**16 15 34.1**	**-2.4**
CART	**Cartagena**	**6.00**	**298**	P	**Pn**	**16 14 44.4**	**+1.7**
CART				S	**Sn**	**16 15 50.7**	**-0.7**
EMUR	**La Murta**	**6.28**	**299**	P	**Pn**	**16 14 47.0**	**+0.5**
EMUR				S	**Sn**	**16 15 59.4**	**+1.0**
EMUR	**La Murta**	**6.28**	**299**	P	**Pn**	**16 14 46.6**	**0.0**
EMUR				⇑*i*IVmb_VC		16 14 51.4	
	65nm,SNR=1.0						
EMUR				S	**Sn**	**16 15 57.0**	**-1.4**
ETOB	**Tobarra**	**6.87**	**304**	P	**Pn**	**16 14 56.7**	**+2.0**
ETOB				S	**Sn**	**16 16 13.6**	**+0.8**
ETOB	**Tobarra**	**6.87**	**304**	P	**Pn**	**16 14 56.1**	**+1.5**
ETOB				⇑*i*IVmb_VC		16 14 59.3	
	110nm,SNR=1.2						
ETOB				S	**Sn**	**16 16 11.7**	**-1.2**
ECHE	**Chera**	**7.03**	**313**	P	**Pn**	**16 14 59.9**	**+3.1**
ECHE				⇑*i*IVmb_VC		16 15 02.3	
	119nm,SNR=1.4						
EBER	**Berja**	**7.22**	**288**	P	**Pn**	**16 15 00.4**	**+0.8**
EBER	**Berja**	**7.22**	**288**	P	**Pn**	**16 14 59.1**	**-0.5**
EBER				⇑*i*IVmb_VC		16 15 01.8	
	78nm,SNR=0.8						
EBER				S	**Sn**	**16 16 17.7**	**-4.0**
EPOB	**Poblet**	**7.34**	**332**	P	**Pn**	**16 15 03.3**	**+2.3**
EPOB				⇑*i*IVmb_VC		16 15 04.4	
	68nm,SNR=0.8						
EPOB				S	**Sn**	**16 16 24.4**	**0.0**
EQES	**Quesada**	**7.61**	**294**	P	**Pn**	**16 15 05.7**	**+0.8**
EQES				⇑*i*IVmb_VC		16 15 06.2	
	85nm,SNR=1.4						
EQES				S	**Sn**	**16 16 28.1**	**-3.2**
EJON	**La Jonquera**	**7.79**	**345**	P	**Pn**	**16 15 08.0**	**+0.8**
ELGU	**Los Guajares,**	**7.79**	**287**	P	**Pn**	**16 15 08.8**	**+1.4**
ELGU				S	**Sn**	**16 16 36.2**	**+0.6**
MDT	**Midelt**	**8.82**	**259**	Pn	**Pn**	**16 15 23.5**	**+2.0**
	0.3nm,0.3s,baz=78,slow=13,SNR=6.4						
	0.9nm,0.3s						
ESDC	**Sonseca Array**	**9.01**	**304**	Pn	**Pn**	**16 15 26.7**	**+2.7**
	0.1nm,0.3s,baz=121,slow=15,SNR=4.3						
	0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**22.02**	**190**	P	**P**	**16 18 08.3**	**-0.2**
	2.8nm,0.7s,baz=354,slow=9.5,SNR=9.8						
	2.8nm,0.7s						
AKASG	**Malin Array Be**	**23.20**	**40**	P	**P**	**16 18 18.4**	**-2.3**
	0.5nm,0.5s,baz=242,slow=10.0,SNR=3.2						
	0.5nm,0.5s						

SOME ***15*** *16:15:28.2,41.°33N×83.°97E,h10km*
NNC ***15*** *16:15:31.3±2.2,41.°33N×83.°69E,h0km,mb3.7,mpv3.4, Error ellipse: s-maj=19.4km s-min=14.7km az=10.0*
ISC 15 16:15:29.4±3.0,**41.°2N**±0.°2×**83.°7E**±0.°1,**h10**km,**n12,** σ2ŝ**51**/17,**5C-2D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**3.34**	**314**	Pg	**Pb**	**16 16 29.1**	**+0.2**
	5.8nm,0.4s						
KTMS				Lg	Lg	16 17 13.0	
	40nm,0.5s						
KTMS	**Ketmen**	**3.34**	**314**	*e*P	**Pb**	**16 16 29.1**	**+0.2**
	5.8nm,0.4s						
KTMS				*e*S	**Sb**	**16 17 13.0**	**+3.3**
	40nm,0.5s						
SHLS	**Shalkode**	**3.70**	**303**	Pg	**Pb**	**16 16 32.3**	**-2.7**
	17nm,0.4s						
SHLS				Lg	Lg	16 17 18.6	
	87nm,0.6s						
SHLS	**Shalkode**	**3.70**	**303**	*e*P	**Pb**	**16 16 32.3**	**-2.7**
	17nm,0.4s						
SHLS				*e*S	**Sb**	**16 17 18.6**	**-1.4**
	87nm,0.6s						
PDGK	**Podgornoye**	**3.78**	**306**	⇑Pn	**Pn**	**16 16 29.6**	**+1.8**
	4.8nm,0.7s						
PDGK				⇑Pg	**Pg**	**16 16 40.8**	**-0.9**
	16nm,0.8s						
PDGK				⇑Lg	Lg	16 17 32.3	
	68nm,1.1s						
DJR	**Jarkent**	**4.25**	**319**	Pg	**Pb**	**16 16 47.1**	**+2.7**
	6.8nm,0.5s						
DJR				Lg	Lg	16 17 44.2	
	16nm,0.9s						
DJR	**Jarkent**	**4.25**	**319**	*e*P	**Pb**	**16 16 47.0**	**+2.7**
	6.8nm,0.5s						
DJR				*e*S	**Sg**	**16 17 44.2**	**-1.8**
	16nm,0.9s						
KPKS	**Kokpek**	**4.35**	**303**	*e*P	**Pg**	**16 16 50.8**	**-1.9**
	0.3nm,0.1s						
KPKS				*e*S	**Sg**	**16 17 50.3**	**+1.3**
	33nm,0.6s						
KNOS	**Konyrlen**	**4.58**	**315**	Pg	**Pg**	**16 16 54.1**	**-3.2**
	5.5nm,0.6s						
KNOS				Lg	Lg	16 17 56.1	
	30nm,0.7s						
BLB	**Baldybastay**	**4.81**	**309**	Pg	**Pb**	**16 16 56.9**	**+3.0**
	7.3nm,0.3s						
BLB				Lg	Lg	16 18 00.8	
	32nm,0.5s						
MK31	**Makanchi Array**	**5.69**	**350**	Pn	**Pn**	**16 16 55.6**	**+1.6**
	0.1nm,0.3s,baz=160,slow=13,SNR=7.2						
MK31				⇑Pg	Pg	16 17 12.1	-6.3
	1.1nm,0.5s,baz=167,slow=16,SNR=8.8						
MK31				⇓Lg	Lg	16 18 26.3	
	29nm,0.7s,baz=169,slow=26,SNR=4.8						
MAKZ	**Makanchi**	**5.75**	**348**	⇓Pg	**Pg**	**16 17 16.0**	**-3.5**
	4.9nm,1.3s						
MAKZ				⇑Lg	Lg	16 18 29.1	
	24nm,0.8s						

MOS ***15*** *16:17:02.3±1.1,32.°61N×85.°39E,h12km,mb4.2/10,Error ellipse: s-maj=10.3km s-min=5.5km az=117.8*
IDC ***15*** *16:17:02.6±0.7,32.°64N×85.°55E,h0km,mb3.9/16, mbtmp3.9/20,ML4.5/2,MS3.9/14,Error ellipse: s-maj=23.7km s-min=14.3km az=45.0*
NEIC ***15*** *16:17:04.7±1.6,32.°68N±0.°04×85.°46E±0.°10,h10km±1km, mb4.2/22,Error ellipse: s-maj=15.3km s-min=3.1km az=66.0*
BJI ***15*** *16:17:05.5,32.°87N×85.°63E,h10km,mB4.4/1,mb4.3/21, Ms4.3/23,Ms7 4.2/23*
NDI ***15*** *16:17:06.1±2.7,32.°90N×85.°70E,h10km,ML4.0,MW4.0, mb4.2(NEIC),Presumed earthquake*
GCMT ***15*** *16:17:06.7±0.3,32.°79N±0.°02×85.°63E±0.°02,h26km±1km, MW5.0/98,Moment Tensor Solution. s20,c24; s98,c144; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr0.02±.14; Mθθ-3.12±.10; Mϕϕ3.10±.10; Mrθ1.13±.23; Mrϕ0.44±.08; Mθϕ0.20±.19; Best double couple: Mw3.33000×10¹⁶ NP1:ϕs320.00000°,δ74.00000°,λ-171.00000°. NP2: ϕs228.00000°,δ82.00000°,λ-16.00000°. Principal axes: T 3.1570, Plg5.0000°, Azm275.0000°; N 0.3450, Plg72.0000°, Azm21.0000°; P -3.5040, Plg18.0000°, Azm183.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 15 16:17:04.8±0.4,**32.°76N**±0.°05×**85.°44E**±0.°04,**h10**km,**n129,** σ1ŝ**92**/137,**mb4.2**/29,**MS3.9**/20,**2C,Xizang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EVN	**Everest**	**4.93**	**166**		**Pn**	**16 18 18.0**	**-1.6**
JOSI	**Joshimath**	**5.47**	**248**	*e*P	**Pn**	**16 18 30.2**	**+3.6**
JOSI				*e*S	**Sn**	**16 19 33.2**	**+3.5**
PTH	**Pithoragarh**	**5.49**	**236**	*e*P	Pn	16 18 32.2	+5.4
PTH				*e*S	**Sn**	**16 19 34.4**	**+4.3**
LGTI	**Lohaghat**	**5.68**	**235**	*e*P	Pn	16 18 34.0	+4.6
LGTI				*e*S	**Sn**	**16 19 39.4**	**+4.6**
LSA	**Lhasa**	**5.77**	**120**		**Pn**	**16 18 29.7**	**-1.2**
LSA	**Lhasa**	**5.77**	**120**	P	**Pn**	**16 18 29.7**	**-1.2**
LSA	**Lhasa**	**5.77**	**120**	Pn	**Pn**	**16 18 31.3**	**+0.4**
LSA				Sn	**Sn**	**16 19 41.9**	**+4.6**
LSA				L	L		
	comp=E,5μm,9.3s						
LSA				L	L		
	comp=Z,3μm,8.2s						
GTK	**Tadong**	**6.08**	**152**	*e*P	**Pn**	**16 18 37.6**	**+2.8**
ALCI	**Alchi Leh**	**7.04**	**284**	*e*P	**Pn**	**16 18 52.0**	**+3.6**
ALCI				*e*S	**Sn**	**16 20 08.3**	**-0.3**
SMLA	**Simla**	**7.21**	**259**	*e*P	**Pn**	**16 18 53.1**	**+2.8**
TAWA	**Tawang**	**7.58**	**131**	*e*P	**Pn**	**16 18 55.3**	**-0.4**
DHRM	**DHARAMSHALA**	**7.73**	**269**	*e*P	**Pn**	**16 19 01.5**	**+3.9**
DHRM				*e*S	**Sn**	**16 20 27.6**	**+2.2**
DHRM				IAML		16 20 37.1	
	comp=N,91nm,1.0s						
DHRM				IAML		16 20 53.4	
	comp=E,93nm,0.9s						
SHBG	**Sahibganj**	**7.74**	**165**	*e*P	**Pn**	**16 19 00.4**	**+2.9**
SHBG				*e*S	**Sn**	**16 20 21.1**	**-4.3**
TSSA	**Tissa**	**7.82**	**273**	*e*P	**Pn**	**16 19 03.1**	**+4.3**
TSSA				IAML		16 20 15.3	
	comp=N,87nm,0.6s						
TSSA				IAML		16 20 15.7	
	comp=E,62nm,0.6s						
TSSA				*e*S	**Sn**	**16 20 24.6**	**-2.9**
ZIRO	**ZIRO**	**8.96**	**123**	*e*P	**Pn**	**16 19 14.7**	**+0.2**
KUDL	**Kundal**	**8.98**	**242**	*e*P	**Pn**	**16 19 17.8**	**+3.2

KKAR	**Karatay Array**	**15.64**	**316**		P		**Pn**		**16 20 45.6**	**+0.3**
KMI2	**Kunming**	**16.93**	**112**		P		**P**		**16 21 02.8**	**-1.3**
KMI2					S		**Sn**		**16 24 11.3**	**+0.9**
KMI2					pmax		pmax			
	comp=Z,17nm,0.7s									
KMI2					L		L			
	comp=Z,370nm,8.7s									
KMI2					L		L			
	comp=Z,600nm,8.9s									
DGZ	**Jazzator, Alta**	**16.99**	**4**	*i*	P		**Pn**		**16 21 04.2**	**+1.5**
CHTO	**Chiang Mai**	**18.43**	**136**				**Pn**		**16 21 18.2**	**-2.3**
CHTO	**Chiang Mai**	**18.43**	**136**		P		**Pn**		**16 21 18.2**	**-2.3**
CHTO					pmax		pmax			
	comp=Z,8.0nm,0.8s									
KURBB	**Kurchatov Arra**	**18.56**	**346**		P		**P**		**16 21 21.7**	**0.0**
	comp=Z,4.0nm,1.0s,baz=163,slow=11,SNR=5.0									
KURK	**Kurchatov**	**18.63**	**346**		P		**P**		**16 21 21.7**	**-0.8**
KURK	**Kurchatov**	**18.63**	**346**		IAmb		IAmb		16 21 31.8	
	comp=Z,9.9nm,0.9s									
KURK	**Kurchatov**	**18.63**	**346**		P		**P**		**16 21 21.7**	**-0.8**
CM31	**Chiang Mai Arr**	**18.71**	**136**		P		**P**		**16 21 21.6**	**-2.0**
CM31					IAmb		IAmb		16 21 25.7	
	comp=Z,19nm,0.9s									
CMAR	**Chiang Mai Arr**	**18.71**	**136**		P		**P**		**16 21 21.2**	**-2.4**
	comp=Z,0.8nm,0.3s,baz=316,slow=12,SNR=59									
CMAR					LR		LR		16 29 25.4	
	comp=Z,431nm,18.2s,baz=315,slow=40									
	comp=Z,12nm,0.8s									
CMAR	**Chiang Mai Arr**	**18.71**	**136**				**P**		**16 21 22.1**	**-1.5**
CMAR	**Chiang Mai Arr**	**18.71**	**136**	*i*	P		**Pn**		**16 21 22.8**	**-1.1**
CMAR					pmax		pmax			
	comp=Z,12nm,0.8s									
KNGR	**Kungurtug, Tuv**	**19.94**	**23**	*i*	P		**P**		**16 21 37.7**	**+0.8**
KNGR					pmax		pmax			
	comp=Z,16nm,1.5s									
ENH	**Enshi**	**20.65**	**90**				**P**		**16 21 44.4**	**-0.3**
ENH					IAmb		IAmb		16 21 51.7	
	comp=Z,24nm,1.1s									
ZAA0	**Zalesovo Array**	**21.19**	**359**				**P**		**16 21 51.7**	**+1.4**
ZAA0					IAmb		IAmb		16 22 01.4	
	comp=Z,6.7nm,0.9s									
ZALV	**Zalesovo Beam**	**21.19**	**359**		P		**P**		**16 21 50.9**	**+0.7**
	comp=Z,3.8nm,0.7s,baz=186,slow=11,SNR=13									
	comp=Z,3.8nm,0.7s									
ZALV	**Zalesovo Beam**	**21.19**	**359**				**P**		**16 21 51.7**	**+1.5**
ZALV	**Zalesovo Beam**	**21.19**	**359**	*i*	P		**P**		**16 21 53.9**	**+3.7**
ZALV					pmax		pmax			
	comp=Z,4.0nm,0.7s									
SONM	**Songino Array**	**21.86**	**40**		P		**P**		**16 21 57.9**	**+0.2**
	comp=Z,2.4nm,1.0s,baz=229,slow=10,SNR=12									
	comp=Z,2.4nm,1.0s									
SONM	**Songino Array**	**21.86**	**40**				**P**		**16 21 58.8**	**+1.1**
SONM	**Songino Array**	**21.86**	**40**		P		**P**		**16 21 58.8**	**+1.1**
SONM					pmax		pmax			
	comp=Z,6.0nm,1.2s									
ZAK	**Zakamensk**	**22.00**	**32**	*e*	P		**P**		**16 21 58.4**	**-0.7**
ZAK					pmax		pmax			
	comp=Z,10.0nm,1.8s									
MOY	**Mondy**	**22.05**	**26**	*e*	P		**P**		**16 22 02.4**	**+2.8**
MOY					pmax		pmax			
	comp=Z,24nm,2.6s									
ULN	**Ulaanbaatar**	**22.24**	**41**		P		**P**		**16 22 03.0**	**+1.2**
ULN					IAmb		IAmb		16 22 26.2	
	comp=Z,5.1nm,0.9s									
ULN	**Ulaanbaatar**	**22.24**	**41**		P		**P**		**16 22 03.0**	**+1.2**
ULN					pmax		pmax			
	comp=Z,5.0nm,0.9s									
HHC	**Hu-ho-hao-te**	**22.37**	**61**	*e*	P		**P**		**16 22 03.5**	**+0.3**
HHC					pmax		pmax			
	comp=Z,4.0nm,0.6s									
HHC					L		L			
	comp=Z,590nm,14.1s									
HHC					L		L			
	comp=Z,670nm,17.8s									
BVAR	**Borovoye Array**	**22.97**	**336**		P		**P**		**16 22 10.0**	**+0.7**
	comp=Z,1.5nm,0.9s,baz=154,slow=7.7,SNR=6.5									
	comp=Z,1.5nm,0.9s									
BVAR	**Borovoye Array**	**22.97**	**336**		P		**P**		**16 22 10.0**	**+0.7**
BORK	**Borovoye**	**23.01**	**336**	*i*	P		**P**		**16 22 07.7**	**-2.0**
CNSH	**ChangSha**	**24.10**	**94**		P		**P**		**16 22 21.4**	**+0.7**
CNSH					S		**S**		**16 26 43.1**	**+4.8**
CNSH					L		L			
	comp=Z,370nm,8.6s									
CNSH					L		L			
	comp=Z,490nm,11.3s									
HNS	**HongShan**	**24.35**	**71**	⇑	P		**P**		**16 22 21.0**	**-1.9**
HNS					S		**S**		**16 26 41.3**	**-0.8**
HNS					L		L			
	comp=Z,160nm,15.5s									
HNS					L		L			
	comp=Z,580nm,14.3s									
AB31	**Akbulak array**	**25.16**	**318**		P		**P**		**16 22 30.8**	**+0.7**
AB31					IAmb		IAmb		16 22 37.5	
	comp=Z,3.1nm,0.8s									
ABKAR	**Akbulak array**	**25.16**	**318**		P		**P**		**16 22 30.6**	**+0.5**
QIZ	**Qiongzhong**	**25.79**	**116**		P		**P**		**16 22 35.0**	**-1.1**
QIZ					S		**S**		**16 27 05.6**	**+0.2**
QIZ					L		L			
	comp=Z,320nm,13.1s									
QIZ					L		L			
	comp=Z,350nm,12.0s									
AKTO	**Aktyubinsk**	**26.83**	**319**		LR		LR		16 35 04.0	
	comp=Z,262nm,19.2s,baz=106,slow=40									
MAK	**Makhachkala**	**31.40**	**300**	*c*	*i* P		P		16 23 21.0	-4.9
MAK					*e*				16 24 27.4	
MAK					*e*S		**S**		**16 28 27.1**	**-6.2**
MAK					*e*SS		**SnSn**		**16 30 16.1**	**-0.8**
MAK					MLR		MLR			
	comp=Z,323nm,16.0s									
GNI	**Garni**	**33.33**	**295**		P		**P**		**16 23 43.9**	**+0.8**
GNI					IAmb		IAmb		16 24 11.7	
	comp=Z,7.0nm,1.1s									
GNI	**Garni**	**33.33**	**295**		P		**P**		**16 23 43.9**	**+0.8**
GNI					pmax		pmax			
	comp=Z,7.0nm,1.1s									
KSRS	**Korea Array**	**34.86**	**70**		P		**P**		**16 23 54.3**	**-1.8**
	comp=Z,1.3nm,0.9s,baz=277,slow=8.0,SNR=1.6									
	comp=Z,1.3nm,0.9s									
KIV	**Kislovodsk**	**34.98**	**301**	*e*	P		**P**		**16 23 56.9**	**-0.4**
KIV					pmax		pmax			
	comp=Z,4.0nm,1.1s									
KIV					MLR		MLR			
	comp=Z,128nm,16.0s									
SOC	**Sochi**	**37.11**	**300**	*e*	P		**P**		**16 24 14.3**	**-1.1**
SOC				*e*					16 25 41.2	
SOC				*e*S		**S**			**16 30 01.6**	**0.0**
SOC				*e*SS		**SnSn**			**16 32 33.6**	**-1.9**
SOC				pmax		pmax				
	comp=Z,14nm,0.8s									
SOC				MLR		MLR				
	comp=Z,168nm,17.0s									
JNU	**Nakatsue**	**37.91**	**77**		LR		LR		16 40 44.2	
	comp=Z,147nm,19.9s,baz=298,slow=38									
YAK	**Yakutsk**	**40.58**	**30**		LR		LR		16 40 56.9	
	comp=Z,158nm,18.4s,baz=240,slow=35									
TIXI	**Tiksi**	**45.20**	**18**	*i*	P		**P**		**16 25 21.0**	**-0.5**
TIXI					pmax		pmax			
	comp=Z,7.0nm,1.4s									
MNK	**Minsk**	**45.48**	**316**	*i*	P		**P**		**16 25 23.1**	**-0.9**
	comp=E,5.0nm,0.6s,baz=94									
MNK				*i*	P		**P**		**16 25 23.1**	**-0.9**
	comp=N,3.0nm,0.6s									
MNK				*i*	P		**P**		**16 25 23.1**	**-0.9**
	comp=Z,6.0nm,0.6s									
MNK				*i*	PcP		**PcP**		**16 27 01.3**	**-1.5**
MNK				*i*	PP		**PP**		**16 27 10.0**	**-0.2**
MNK				*i*	PPP		PPP		16 27 49.5	
MNK				*i*	S		**S**		**16 32 06.4**	**+0.8**
MNK				*i*	SS		SS		16 35 42.9	+14
MNK				*i*	SSS		SSS		16 36 40.2	
MNK				*i*	LQ		LQ		16 42 25.4	
MNK				*i*	LR		LR		16 44 28.0	
MNK				*i*	LRM		MLR		16 46 21.0	
	comp=Z,119nm,13.8s									
MNK				*i*	LRM		MLR		16 46 35.7	
	comp=E,380nm,15.5s									
MNK				*i*	LRM		MLR		16 47 21.5	
	comp=N,97nm,14.3s									
MNK	**Minsk**	**45.48**	**316**	*i*	P		**P**		**16 25 23.1**	**-0.9**
MNK				*i*					16 27 01.3	
MNK				*i*					16 27 10.0	
MNK				*i*	PPP		PPP		16 27 49.5	
MNK				*i*	S		**S**		**16 32 06.3**	**+0.8**
MNK				pmax		pmax				
	comp=E,5.0nm,0.6s									
MNK				pmax		pmax				
	comp=Z,6.0nm,0.6s									
MNK				pmax		pmax				
	comp=N,3.0nm,0.6s									
MNK				MLR		MLR				
	comp=Z,119nm,14.0s									
MNK				MLR		MLR				
	comp=E,380nm,15.0s									
MNK				MLR		MLR				
	comp=N,97nm,14.0s									
MLR	**Muntele Rosu**	**46.87**	**304**		P		**P**		**16 25 35.9**	**+0.7**
	comp=N,2.3nm,0.8s,baz=145,slow=6.6,SNR=3.5									
	comp=N,2.3nm,0.8s									
FIA1	**FINESS Array S**	**47.26**	**326**		P		**P**		**16 25 38.1**	**+0.2**
FINES	**FINESS Array B**	**47.26**	**326**		P		**P**		**16 25 38.7**	**+0.8**
	comp=N,1.4nm,0.6s,baz=101,slow=6.0,SNR=7.6									
	comp=N,1.4nm,0.6s									
FINES	**FINESS Array B**	**47.26**	**326**		P		**P**		**16 25 38.2**	**+0.4**
FINES	**FINESS Array B**	**47.26**	**326**	*i*	P		**P**		**16 25 41.2**	**+3.3**
FINES					pmax		pmax			
	comp=Z,2.0nm,0.6s									
FURI	**Furi**	**49.22**	**252**		LR		LR		16 48 29.8	
	comp=Z,84nm,18.3s,baz=103,slow=38									
ARCES	**ARCESS Array B**	**49.26**	**336**		P		**P**		**16 25 54.6**	**+1.4**
	comp=Z,5.7nm,1.0s,baz=92,slow=8.1,SNR=2.1									
	comp=Z,5.7nm,1.0s									
ARCES	**ARCESS Array B**	**49.26**	**336**		IAmb		IAmb		16 25 58.3	
	comp=Z,25nm,1.4s									
KAPI	**Kappang**	**49.72**	**133**		LR		LR		16 50 14.7	
	comp=Z,78nm,18.4s,baz=280,slow=40									
HFS	**Hagfors**	**53.25**	**324**		P		**P**		**16 26 23.4**	**+0.2**
	comp=Z,2.7nm,0.7s,baz=88,slow=10,SNR=4.1									
HFS					LR		LR		16 51 28.7	
	comp=Z,86nm,18.3s,baz=90,slow=39									
	comp=Z,2.7nm,0.7s									
PETK	**Petropavlovsk-**	**54.24**	**45**		LR		LR		16 50 43.3	
	comp=Z,163nm,18.4s,baz=284,slow=37									
NB201	**NORSAR Array S**	**54.37**	**325**		P		**P**		**16 26 31.4**	**-0.1**
NB2	**NORSAR Subarra**	**54.41**	**325**		P		**P**		**16 26 31.9**	**+0.1**
	comp=Z,6.3nm,0.9s,baz=84,slow=7.9									
NOA	**NORSAR Array B**	**54.41**	**325**		P		**P**		**16 26 31.7**	**-0.2**
	comp=Z,2.2nm,0.8s,baz=85,slow=7.3,SNR=6.0									
	comp=Z,2.2nm,0.8s									
NAO01	**NORSAR Array S**	**54.59**	**325**		P		**P**		**16 26 33.3**	**+0.2**
GERES	**GERESS Array B**	**54.64**	**310**		P		**P**		**16 26 34.2**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=85,slow=2.8,SNR=5.5									
GERES					LR		LR		16 51 07.6	
	comp=Z,184nm,21.6s,baz=79,slow=37									
	comp=Z,0.5nm,0.6s									
FUORN	**Ofenpass-Fuorn**	**57.40**	**308**		P		**P**		**16 26 53.2**	**-0.6**
FUORN					IAmb		IAmb		16 26 55.2	
	comp=Z,5.3nm,1.2s									
ESDC	**Sonseca Array**	**69.56**	**305**		P		**P**		**16 28 14.2**	**+0.1**
	comp=Z,0.7nm,1.0s,baz=52,slow=8.3,SNR=2.6									
	comp=Z,0.7nm,1.0s									
WRA	**Warramunga Arr**	**70.22**	**131**		P		**P**		**16 28 16.8**	**-1.4**
	comp=Z,1.4nm,0.7s,baz=325,slow=6.4,SNR=16									
	comp=Z,1.4nm,0.7s									
WRA	**Warramunga Arr**	**70.22**	**131**		P		**P**		**16 28 16.9**	**-1.2**
NWAO	**Narrogin (SRO)**	**71.88**	**152**		LR		LR		17 02 46.5	
	comp=Z,44nm,20.6s,baz=338,slow=38									
ASAR	**Alice Springs**	**72.71**	**134**		P		**P**		**16 28 31.7**	**-1.5**
	comp=Z,1.9nm,0.9s,baz=319,slow=5.9,SNR=10									
	comp=Z,1.9nm,0.9s									
RES	**Resolute Bay**	**72.83**	**0**		P		**P**		**16 28 32.6**	**-0.5**
RES					IAmb		IAmb		16 29 12.1	
	comp=Z,2.9nm,1.2s									
RES	**Resolute Bay**	**72.83**	**0**		P		**P**		**16 28 32.6**	**-0.5**
RES					pmax		pmax			
	comp=Z,3.0nm,1.3s									
MDT	**Midelt**	**73.15**	**298**		LR		LR		17 06 14.3	
	comp=Z,63nm,18.1s,baz=54,slow=40									
NEA2	**Nenana**	**74.05**	**21**		P		**P**		**16 28 40.1**	**-0.5**
NEA2					IAmb		IAmb		16 28 54.9	
	comp=Z,1.9nm,0.8s									
ILAR	**Eielson Array**	**74.58**	**21**		P		**P**		**16 28 43.2**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=314,slow=4.5,SNR=6.1									
	comp=Z,0.3nm,0.5s									
SFJD	**Kangerlussuaq**	**75.12**	**344**		LR		LR		17 06 55.6	
	comp=Z,42nm,18.2s,baz=39,slow=40									
RIDG	**Independent Ri**	**75.95**	**21**		P		**P**		**16 28 51.3**	**-0.3**
TORD	**Torodi Ar. Bea**	**77.81**	**278**		P		**P**		**16 29 02.9**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=51,slow=2.9,SNR=4.7									
	comp=Z,0.9nm,0.7s									
LBTB	**Lobatse**	**80.93**	**233**		LR		LR		17 02 56.4	
	comp=Z,43nm,21.0s,baz=48,slow=34									
YKA	**Yellowknife Ar**	**83.72**	**9**		P		**P**		**16 29 32.9**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=338,slow=5.5,SNR=7.2									
	comp=Z,0.5nm,0.8s									
YKA	**Yellowknife Ar**	**83.72**	**9**	*i*	P		**P**		**16 29 33.5**	**-0.1**
YKA					pmax		pmax			
	comp=Z,1.0nm,0.8s									
LMN	**Caledonia Moun**	**97.24**	**340**		P		**P**		**16 30 37.1**	**-0.8**

*NDI **15** 16:18:04.9±2.5,32.°80N×86.°34E,h10km,ML4.3,MW4.5, mb4.4(NEIC),Presumed earthquake*
*IDC **15** 16:18:06.7±0.8,32.°74N×85.°64E,h0km,mb3.9/13, mbtmp4.0/17,ML4.4/2,MS3.7/2,Error ellipse: s-maj=29.1km s-min=15.6km az=53.0*
*NEIC **15** 16:18:09.2±0.9,32.°79N±0.°09×85.°66E±0.°07,h10km±1km, mb4.4/21,Error ellipse: s-maj=15.8km s-min=10.0km az=200.0*

ISC 15 16:18:08.7±0.5,**32.°76N**±0.°06×**85.°70E**±0.°05,**h10**km,**n66,**
σ1§**80**/72,**mb4.2**/20,**Xizang**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EVN	**Everest**	**4.88**	**168**	Pn	Pn	**Pn**	**16 19 23.6**	**+0.8**
JOSI	**Joshimath**	**5.67**	**249**	*e*S		**Sn**	**16 20 43.8**	**+5.2**
ALCI	**Alchi Leh**	**7.26**	**284**	*e*P		**Pn**	**16 19 56.8**	**+1.6**
ALCI				*e*S		**Sn**	**16 21 18.7**	**+0.9**
SMLA	**Simla**	**7.43**	**260**	*e*P		**Pn**	**16 19 59.8**	**+2.6**
SMLA				*e*S		**Sn**	**16 21 24.7**	**+3.2**
SMLA				IAML			16 21 29.2	
	comp=E,180nm,1.2s							
SMLA				IAML			16 21 31.4	
	comp=N,156nm,0.9s							
DHRM	**DHARAMSHALA**	**7.95**	**269**	*e*P		**Pn**	**16 20 07.9**	**+3.3**
DHRM				*e*S		**Sn**	**16 21 35.1**	**+0.3**
DHRM				*e*S		**Sn**	**16 21 36.3**	**+1.6**
DHRM				IAML			16 21 41.1	
	comp=N,163nm,1.1s							
DHRM				IAML			16 21 48.1	
	comp=E,153nm,1.4s							
BHK	**Bhakra**	**8.02**	**263**	*e*S		**Sn**	**16 21 28.6**	**-7.5**
TSSA	**Tissa**	**8.04**	**273**	*e*P		**Pn**	**16 20 08.3**	**+2.5**
TSSA				*e*S		**Sn**	**16 21 38.1**	**+1.3**
TSSA				IAML			16 21 42.6	
	comp=N,157nm,1.0s							
THN	**Thein Dam**	**8.39**	**271**	*e*S		**Sn**	**16 21 48.3**	**+3.0**
KUDL	**Kundal**	**9.18**	**242**	*e*P		**Pn**	**16 20 23.2**	**+2.0**
KUDL				*e*S		**Sn**	**16 22 03.7**	**-0.8**
KUDL				IAML			16 22 08.6	
	comp=N,115nm,0.8s							
KUDL				IAML			16 22 10.9	
	comp=E,117nm,0.9s							
NIL	**Nilore**	**10.46**	**278**	Pn		**Pn**	**16 20 38.3**	**-0.6**
BHPL	**Bhopal**	**11.96**	**220**	*e*P		**Pn**	**16 21 01.1**	**+1.7**
BHPL				*e*S		**Sn**	**16 23 05.9**	**-7.1**
BHPL				*e*S			16 23 06.2	
ARSB	**Arslanbob**	**13.26**	**314**	Pn		**Pn**	**16 21 16.6**	**-0.6**
MK31	**Makanchi Array**	**14.26**	**350**	Pn		**Pn**	**16 21 29.9**	**-0.8**
MKAR	**Makanchi Array**	**14.26**	**350**	Pn		**Pn**	**16 21 29.8**	**-0.9**
	comp=E,3.0nm,0.9s,baz=175,slow=14,SNR=2.2							
MKAR	**Makanchi Array**	**14.26**	**350**			**Pn**	**16 21 29.8**	**-0.9**
CHGR	**Chuyangaron**	**14.66**	**298**	Pn		**Pn**	**16 21 34.2**	**-2.1**
LZDM	**Lanzhou Array**	**15.21**	**73**	Pn		**Pn**	**16 21 45.3**	**+1.4**
	baz=262,slow=10							
	comp=E,2.2nm,0.6s							
LZDM	**Lanzhou Array**	**15.21**	**73**			**Pn**	**16 21 45.3**	**+1.4**
CHTO	**Chiang Mai**	**18.28**	**136**	P		**P**	**16 22 23.2**	**+0.5**
CM31	**Chiang Mai Arr**	**18.56**	**137**	P		**P**	**16 22 25.9**	**0.0**
CM31				IAmb		IAmb	16 22 29.4	
	comp=Z,11nm,0.8s							
CMAR	**Chiang Mai Arr**	**18.56**	**137**	P		**P**	**16 22 25.1**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=316,slow=11,SNR=9.7							
	comp=Z,7.4nm,0.7s							
CMAR	**Chiang Mai Arr**	**18.56**	**137**	P		**Pn**	**16 22 26.3**	**+0.3**
KURBB	**Kurchatov Arra**	**18.62**	**346**	P		**P**	**16 22 24.9**	**-1.3**
	comp=Z,4.0nm,0.8s,baz=158,slow=10,SNR=3.0							
KURK	**Kurchatov**	**18.69**	**346**	P		**P**	**16 22 25.9**	**-1.1**
ENH	**Enshi**	**20.43**	**91**	P		**P**	**16 22 47.3**	**+1.1**
ENH				IAmb		IAmb	16 22 56.7	
	comp=Z,17nm,1.1s							
ZALV	**Zalesovo Beam**	**21.19**	**359**	P		**P**	**16 22 54.1**	**-0.1**
	comp=Z,2.3nm,0.7s,baz=194,slow=11,SNR=3.9							
ZALV				LR		LR	16 32 32.3	
	comp=Z,194nm,18.2s,baz=180,slow=41							
	comp=Z,2.3nm,0.7s							
ZALV	**Zalesovo Beam**	**21.19**	**359**	P		**P**	**16 22 53.5**	**-0.7**
SONM	**Songino Array**	**21.72**	**40**	P		**P**	**16 23 00.8**	**+0.7**
	comp=Z,2.3nm,0.9s,baz=233,slow=12,SNR=7.2							
	comp=Z,2.3nm,0.9s							
SONM	**Songino Array**	**21.72**	**40**	P		**P**	**16 23 00.2**	**+0.1**
BVAR	**Borovoye Array**	**23.06**	**336**	P		**P**	**16 23 14.3**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=128,slow=11,SNR=1.8							
	comp=Z,0.9nm,0.6s							
BVAR	**Borovoye Array**	**23.06**	**336**	P		**P**	**16 23 14.3**	**+0.2**
FIA1	**FINESS Array S**	**47.38**	**326**	P		**P**	**16 26 42.7**	**-0.1**
FINES	**FINESS Array B**	**47.39**	**326**	P		**P**	**16 26 42.5**	**-0.3**
	comp=Z,4.1nm,0.7s,baz=102,slow=8.5,SNR=6.7							
	comp=Z,4.1nm,0.7s							
FINES	**FINESS Array B**	**47.39**	**326**	P		**P**	**16 26 42.6**	**-0.1**
ARCES	**ARCESS Array B**	**49.35**	**336**	P		**P**	**16 26 57.6**	**-0.3**
	comp=Z,5.5nm,0.9s,baz=134,slow=13,SNR=1.9							
	comp=Z,5.5nm,0.9s							
ARCES	**ARCESS Array B**	**49.35**	**336**	P		**P**	**16 26 57.7**	**-0.1**
HFS	**Hagfors**	**53.38**	**324**	P		**P**	**16 27 27.5**	**-0.6**
	comp=Z,2.0nm,0.5s,baz=90,slow=12,SNR=5.1							
	comp=Z,2.0nm,0.5s							
HFS	**Hagfors**	**53.38**	**324**	P		**P**	**16 27 27.5**	**-0.6**
NB2	**NORSAR Subarra**	**54.54**	**325**	P		**P**	**16 27 35.4**	**-1.3**
	comp=Z,2.3nm,0.7s,baz=86,slow=7.4							
NOA	**NORSAR Array B**	**54.54**	**325**	P		**P**	**16 27 35.2**	**-1.5**
	comp=Z,1.1nm,0.6s,baz=86,slow=7.1,SNR=4.8							
	comp=Z,1.1nm,0.6s							
NOA	**NORSAR Array B**	**54.54**	**325**	P		**P**	**16 27 35.2**	**-1.5**
GERES	**GERESS Array B**	**54.80**	**310**	P		**P**	**16 27 38.6**	**-0.3**
	comp=Z,0.7nm,0.9s,baz=64,slow=4.8,SNR=2.1							
	comp=Z,0.7nm,0.9s							
GERES	**GERESS Array B**	**54.80**	**310**	P		**P**	**16 27 38.6**	**-0.3**
WLF	**Walferdange**	**59.42**	**312**	P		**P**	**16 28 11.2**	**-0.2**
WB0	**Warramunga Arr**	**69.96**	**131**	P		**P**	**16 29 20.6**	**+0.1**
WB0				IAmb		IAmb	16 29 58.4	
	comp=Z,3.7nm,1.0s							
WRA	**Warramunga Arr**	**70.05**	**131**	P		**P**	**16 29 20.8**	**-0.3**
	comp=Z,1.3nm,0.5s,baz=326,slow=6.5,SNR=14							
	comp=Z,1.3nm,0.5s							
WRA	**Warramunga Arr**	**70.05**	**131**	P		**P**	**16 29 20.6**	**-0.4**
WB2	**Warramunga Arr**	**70.06**	**131**	P		**P**	**16 29 20.8**	**-0.4**
H17K	**Granite Mounta**	**70.18**	**24**	P		**P**	**16 29 21.3**	**0.0**
H17K				IAmb		IAmb	16 29 27.7	
	comp=Z,4.2nm,0.9s							
WR0	**Warramunga Arr**	**70.19**	**131**	P		**P**	**16 29 22.1**	**+0.1**
WR0				IAmb		IAmb	16 29 52.1	
	comp=Z,5.0nm,1.1s							
L16K	**Owhat River**	**72.25**	**27**	P		**P**	**16 29 34.4**	**+0.6**
L16K				IAmb		IAmb	16 29 37.0	
	comp=Z,4.6nm,1.4s							
AS31	**Alice Springs**	**72.55**	**134**	P		**P**	**16 29 36.8**	**+0.7**
ASAR	**Alice Springs**	**72.55**	**134**	P		**P**	**16 29 36.1**	**0.0**
	comp=Z,0.9nm,0.6s,baz=316,slow=5.5,SNR=6.5							
	comp=Z,0.9nm,0.6s							
ASAR	**Alice Springs**	**72.55**	**134**	P		**P**	**16 29 36.6**	**+0.5**
NEA2	**Nenana**	**73.97**	**22**	P		**P**	**16 29 44.2**	**+0.2**
NEA2				IAmb		IAmb	16 30 01.0	
	comp=Z,2.6nm,1.2s							
E29M	**Blow River**	**74.09**	**15**	P		**P**	**16 29 45.2**	**+0.5**
E29M				IAmb		IAmb	16 29 52.6	
	comp=Z,1.7nm,0.8s							
ILAR	**Eielson Array**	**74.51**	**21**	P		**P**	**16 29 46.0**	**-1.1**
	comp=Z,0.4nm,0.8s,baz=321,slow=5.2,SNR=4.1							
	comp=Z,0.4nm,0.8s							
ILAR	**Eielson Array**	**74.51**	**21**	P		**P**	**16 29 47.0**	**-0.1**
L22K	**Petersville**	**74.86**	**24**	P		**P**	**16 29 49.5**	**+0.2**
L22K				IAmb		IAmb	16 30 26.4	
	comp=Z,5.8nm,1.4s							
P19K	**Oil Pt**	**75.93**	**27**	P		**P**	**16 29 55.8**	**+0.4**
TORD	**Torodi Ar. Bea**	**78.02**	**278**	P		**P**	**16 30 07.9**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=52,slow=2.6,SNR=2.0							
	com

RAR	**Rarotonga**	**19.79**	**59**	LR	LR	16 40 13.5		
	comp=Z,61nm,19.4s,baz=240,slow=35							
MGBR	**Mount Gambier**	**34.05**	**250**	P	**P**	**16 35 20.1**	**-0.1**	
CTAO	**Charters Tower**	**34.22**	**282**	P	**P**	**16 35 21.2**	**-0.7**	
INKA	**Innaminka**	**35.84**	**267**	P	**P**	**16 35 35.3**	**-0.5**	
AS31	**Alice Springs**	**43.05**	**269**	P	**P**	**16 36 35.1**	**-1.0**	
ASAR	**Alice Springs**	**43.05**	**269**	P	**P**	**16 36 35.2**	**-0.8**	
	3.8nm,0.7s,baz=108,slow=7.3,SNR=78							
	3.8nm,0.7s							
ASAR	**Alice Springs**	**43.05**	**269**	P	**P**	**16 36 34.7**	**-1.4**	
WR8	**Warramunga Arr**	**44.09**	**274**		**P**	**16 36 43.4**	**-1.1**	
WRAB	**Tennant Creek**	**44.23**	**274**	P	**P**	**16 36 44.5**	**-1.0**	
WRAB				IAmb	IAmb	16 36 45.9		
	comp=Z,8.1nm,0.6s							
WRA	**Warramunga Arr**	**44.23**	**274**	P	**P**	**16 36 44.5**	**-1.1**	
	comp=Z,5.8nm,0.4s,baz=114,slow=8.1,SNR=197							
	comp=Z,5.8nm,0.4s							
WB0	**Warramunga Arr**	**44.27**	**275**		**P**	**16 36 44.9**	**-1.0**	
FORT	**Forrest**	**45.53**	**257**	P	**P**	**16 36 55.0**	**-0.8**	
FORT				IAmb	IAmb	16 36 56.7		
	comp=Z,23nm,1.2s							
MTN	**Manton Dam**	**50.37**	**281**	P	**P**	**16 37 32.2**	**-1.2**	
MTN				IAmb	IAmb	16 39 19.8		
	comp=Z,24nm,1.4s							
KNRA	**Kununurra**	**50.92**	**276**	P	**P**	**16 37 36.7**	**-0.8**	
KNRA				IAmb	IAmb	16 38 19.4		
	comp=Z,15nm,1.2s							
CASY	**Casey**	**53.20**	**209**	P	**P**	**16 37 55.3**	**+1.4**	
NWAO	**Narrogin (SRO)**	**53.65**	**251**	P	**P**	**16 37 57.4**	**-0.3**	
QSPA	**South Pole Qui**	**57.50**	**180**	P	**P**	**16 38 25.8**	**+0.8**	
	comp=Z,1.9nm,0.9s,baz=6.3,slow=1.4,SNR=3.5							
	comp=Z,1.9nm,0.9s							
QSPA	**South Pole Qui**	**57.50**	**180**	P	**P**	**16 38 27.1**	**+2.0**	
QSPA				IAmb	IAmb	16 38 40.3		
	comp=Z,19nm,1.5s							
CM31	**Chiang Mai Arr**	**94.14**	**289**	P	**P**	**16 41 54.9**	**-0.1**	
CM31				IAmb	IAmb	16 43 36.6		
	comp=Z,2.2nm,0.7s							
KURK	**Kurchatov**	**122.57**	**313**			**PKPdf**	**16 47 30.0**	**-1.0**
KURBB	**Kurchatov Arra**	**122.61**	**313**	PKP		**PKPdf**	**16 47 30.0**	**-1.1**
	comp=Z,0.6nm,0.8s,baz=105,slow=1.6,SNR=4.7							
BVAR	**Borovoye Array**	**127.98**	**315**	PKP		**PKPdf**	**16 47 41.2**	**-0.1**
	comp=Z,0.8nm,0.8s,baz=70,slow=4.7,SNR=2.4							
FINES	**FINESS Array B**	**147.22**	**339**	PKPbc		**PKPdf**	**16 48 17.1**	**+0.9**
	comp=Z,14nm,0.9s,baz=46,slow=3.7,SNR=18							
HFS	**Hagfors**	**151.41**	**348**	PKP		**PKPdf**	**16 48 24.5**	**+1.6**
	comp=Z,5.6nm,1.0s,baz=20,slow=4.6,SNR=1.7							
HFS				PKPbc		**PKiKP**	**16 48 30.7**	**+1.1**
	comp=Z,4.7nm,0.9s,baz=11,slow=3.1,SNR=4.5							
MMAI	**Mount Meron Ar**	**152.00**	**280**	PKPbc		**PKPbc**	**16 48 31.6**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=47,slow=17,SNR=4.4							
MMAI				PKPab		**PKPab**	**16 48 41.9**	**+1.1**
	comp=Z,0.6nm,0.3s,baz=76,slow=6.4,SNR=4.3							
AKASG	**Malin Array Be**	**153.03**	**320**	PKPbc		**PKPbc**	**16 48 32.7**	**-0.2**
	comp=Z,0.3nm,0.2s,baz=52,slow=2.0,SNR=5.2							
AKASG				PKPab		**PKPab**	**16 48 45.6**	**+1.2**
	comp=Z,0.4nm,0.2s,baz=48,slow=4.4,SNR=4.6							
BRTR	**Keskin Array B**	**153.59**	**295**	PKPbc		**PKPbc**	**16 48 34.5**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=127,slow=4.1,SNR=5.3							
BRTR				PKPab		**PKPab**	**16 48 46.7**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=147,slow=3.4,SNR=5.0							
TORD	**Torodi Ar. Bea**	**160.62**	**179**	PKPab		**PKPab**	**16 49 17.7**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=180,slow=6.4,SNR=2.9							

*IDC **15** 16:37:42.6±1.6, 6.°52N×60.°13E, h0km, mb3.7/8, mbtmp3.7/8, MS3.2/1, Error ellipse: s-maj=41.6km s-min=27.3km az=57.0*

ISC 15 16:37:46.5±1.7, 6.°6N±0.°3×60.°2E±0.°2, h23km, n12, σ0s83/8, mb3.7/8, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**20.41**	**87**	LR	LR	16 48 43.6	
	comp=Z,66nm,19.3s,baz=312,slow=32						
CMAR	**Chiang Mai Arr**	**39.57**	**69**	P	**P**	**16 45 16.9**	**+0.7**
	1.3nm,0.9s,baz=256,slow=9.1,SNR=9.6						
	1.3nm,0.9s						
MKAR	**Makanchi Array**	**44.36**	**22**	P	**P**	**16 45 55.0**	**0.0**
	0.3nm,0.8s,baz=219,slow=7.5,SNR=3.8						
	0.3nm,0.8s						
KURBB	**Kurchatov Arra**	**46.51**	**16**	P	**P**	**16 46 13.1**	**+1.2**
	0.7nm,0.8s,baz=212,slow=8.0,SNR=5.6						
	0.7nm,0.8s						
ZALV	**Zalesovo Beam**	**51.28**	**18**	P	**P**	**16 46 47.6**	**-0.9**
	0.4nm,0.4s,baz=220,slow=9.1,SNR=3.7						
	0.4nm,0.4s						
H04N1	**CROZET ISLANDS**	**53.03**	**187**	T	T	17 44 11.8	
	baz=11,slow=76,SNR=526						
H04N2	**CROZET ISLANDS**	**53.03**	**187**	T	T	17 44 07.5	
	baz=11,slow=76,SNR=544						
H04N3	**CROZET ISLANDS**	**53.05**	**187**	T	T	17 44 10.8	
	baz=11,slow=76,SNR=667						
SONM	**Songino Array**	**56.83**	**36**	P	**P**	**16 47 28.5**	**-0.8**
	0.7nm,0.8s,baz=208,slow=8.1,SNR=4.6						
	0.7nm,0.8s						
ESDC	**Sonseca Array**	**65.98**	**311**	P	**P**	**16 48 31.5**	**+0.2**
	0.8nm,0.9s,baz=94,slow=7.5,SNR=3.3						
	0.8nm,0.9s						
WRA	**Warramunga Arr**	**77.52**	**112**	P	**P**	**16 49 41.1**	**+0.1**
	1.2nm,1.1s,baz=277,slow=5.2,SNR=6.0						
	1.2nm,1.1s						
ASAR	**Alice Springs**	**77.91**	**116**	P	**P**	**16 49 42.8**	**-0.3**
	1.2nm,0.9s,baz=289,slow=5.2,SNR=8.8						
	1.2nm,0.9s						

IDC 15 17:04:22.4±1.9, 2.°11N×127.°94E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=150.0km s-min=22.8km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.80**	**164**	P	P	17 09 27.3	+0.3
	0.5nm,0.5s,baz=344,slow=10,SNR=11						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**26.27**	**168**	P	P	17 09 58.8	-0.9
	0.1nm,0.6s,baz=346,slow=9.1,SNR=1.2						
	0.1nm,0.6s						
MKAR	**Makanchi Array**	**59.56**	**325**	P	P	17 14 28.6	+0.7
	0.2nm,0.4s,baz=120,slow=7.4,SNR=5.2						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.74**	**327**	P	P	17 14 55.7	-0.3
	0.3nm,0.4s,baz=124,slow=4.7,SNR=4.7						
	0.3nm,0.4s						

IDC 15 17:12:45.6±5.8, 2.°67S×138.°67E, h0km, mb3.5/2, mbtmp3.3/4, ML2.7/2, Error ellipse: s-maj=96.9km s-min=17.9km az=155.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.04**	**86**	Pn	Pn	17 13 21.0	-0.2
	0.8nm,0.3s,baz=212,slow=9.8,SNR=6.5						
JAY				Lg	Lg	17 13 50.1	
	1.0nm,0.3s,baz=161,slow=3.8,SNR=2.4						
	12nm,0.9s						
WRA	**Warramunga Arr**	**17.68**	**194**	P	Pn	17 16 51.5	-1.9
	baz=16,slow=12,SNR=5.8						
	0.2nm,0.7s						
ASAR	**Alice Springs**	**21.37**	**192**	P	P	17 17 34.4	-0.5
	0.5nm,0.8s,baz=13,slow=10,SNR=7.8						
	0.5nm,0.8s						
STKA	**Stephens Creek**	**29.18**	**175**	P	P	17 18 50.1	+1.3
	2.8nm,1.0s,baz=355,slow=11,SNR=2.2						
	2.8nm,1.0s						

*IDC **15** 17:14:40.5±0.9, 32.°68N×85.°63E, h0km, mb3.8/9, mbtmp3.8/13, ML3.4/3, MS3.3/16, Error ellipse: s-maj=31.7km s-min=17.1km az=57.0*

ISC 15 17:14:45.6±1.0, 32.°8N±0.°1×85.°7E±0.°1, h35km, n27, σ1s25/14, mb3.7/8, MS3.3/12, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRDH	**Bariadhala**	**11.35**	**151**	LR	LR	17 22 10.8	
	comp=Z,110nm,18.6s,baz=19,slow=40						
AAK	**Ala-Archa**	**13.23**	**321**	LR	LR	17 23 07.5	
	comp=Z,87nm,20.0s,baz=152,slow=38						
MKAR	**Makanchi Array**	**14.25**	**351**	Pn	**Pn**	**17 18 03.0**	**-1.7**
	0.1nm,0.3s,baz=169,slow=13,SNR=10.0						
MKAR				LR	LR	17 24 25.8	
	comp=Z,112nm,20.4s,baz=159,slow=41						
	0.8nm,0.8s						
LZDM	**Lanzhou Array**	**15.22**	**73**	Pn	**Pn**	**17 18 18.8**	**+0.5**
	0.7nm,0.3s,baz=264,slow=12,SNR=1.4						

CMAR	**Chiang Mai Arr**	**18.58**	**137**	Pn	**P**	**17 18 58.0**	**-1.8**	
	0.2nm,0.3s,baz=330,slow=14,SNR=16							
CMAR				LR	LR	17 26 54.0		
	comp=Z,42nm,19.1s,baz=295,slow=40							
	2.0nm,0.6s							
KURBB	**Kurchatov Arra**	**18.61**	**346**	P	**P**	**17 18 58.8**	**-1.0**	
	0.1nm,0.3s,baz=162,slow=10,SNR=7.9							
	1.4nm,0.2s							
ZALV	**Zalesovo Beam**	**21.18**	**359**	P	**P**	**17 19 28.6**	**+0.8**	
	1.4nm,0.6s,baz=178,slow=10,SNR=8.3							
	1.4nm,0.6s							
SONM	**Songino Array**	**21.73**	**40**	P	**P**	**17 19 35.6**	**+1.8**	
	1.8nm,1.0s,baz=236,slow=13,SNR=5.9							
SONM				LR	LR	17 28 53.9		
	comp=Z,63nm,21.8s,baz=68,slow=39							
	1.8nm,1.0s							
TLY	**Talaya**	**23.01**	**29**	LR	LR	17 28 46.2		
	comp=Z,94nm,18.1s,baz=221,slow=37							
BVAR	**Borovoye Array**	**23.04**	**336**	LR	LR	17 28 21.2		
	comp=Z,14nm,18.6s,baz=147,slow=36							
PALK	**Pallekele**	**25.78**	**191**	LR	LR	17 31 08.2		
	comp=Z,80nm,18.5s,baz=24,slow=38							
AKTO	**Aktyubinsk**	**26.95**	**319**	LR	LR	17 31 57.1		
	comp=Z,109nm,19.6s,baz=116,slow=38							
ARTI	**Arti**	**30.22**	**330**	LR	LR	17 35 13.2		
	comp=Z,23nm,18.1s,baz=144,slow=41							
GNI	**Garni**	**33.50**	**295**	LR	LR	17 36 44.6		
	comp=Z,43nm,20.6s,baz=110,slow=40							
JNU	**Nakatsue**	**37.72**	**77**	LR	LR	17 40 24.9		
	comp=Z,26nm,20.9s,baz=34,slow=41							
EIL	**Elat**	**43.15**	**280**	LR	LR	17 43 16.6		
	comp=Z,80nm,20.7s,baz=58,slow=40							
LEM	**Lembang**	**44.57**	**148**	LR	LR	17 46 01.5		
	comp=Z,97nm,18.4s,baz=278,slow=42							
TIXI	**Tiksi**	**45.13**	**18**	LR	LR	17 42 39.7		
	comp=Z,53nm,18.6s,baz=197,slow=37							
ASAJ	**Asahikawa**	**45.19**	**58**	LR	LR	17 43 31.9		
	comp=Z,34nm,19.8s,baz=188,slow=38							
FINES	**FINESS Array B**	**47.37**	**326**	P	**P**	**17 23 15.5**	**-0.4**	
	5.3nm,1.1s,baz=101,slow=7.4,SNR=6.1							
	5.3nm,1.1s							
HFS	**Hagfors**	**53.36**	**324**	P	**P**	**17 24 02.8**	**+1.6**	
	4.4nm,0.8s,baz=141,slow=9.3,SNR=1.6							
	4.4nm,0.9s							
NB2	**NORSAR Subarra**	**54.52**	**325**	P	**P**	**17 24 11.0**	**+1.3**	
	comp=Z,5.4nm,0.9s,baz=99,slow=7.9							
NOA	**NORSAR Array B**	**54.52**	**325**	P	**P**	**17 24 10.4**	**+0.7**	
	comp=Z,0.8nm,0.8s,baz=85,slow=7.2,SNR=1.8							
	comp=Z,0.8nm,0.8s							
WRA	**Warramunga Arr**	**70.07**	**131**	P	**P**	**17 25 54.2**	**-0.1**	
	comp=Z,0.6nm,0.5s,baz=325,slow=6.5,SNR=11							
	comp=Z,0.6nm,0.5s							
ASAR	**Alice Springs**	**72.57**	**134**	P	**P**	**17 26 09.7**	**+0.3**	
	comp=Z,0.4nm,0.6s,baz=322,slow=6.1,SNR=9.9							
	comp=Z,0.4nm,0.6s							
TORD	**Torodi Ar. Bea**	**78.00**	**278**	P	**P**	**17 26 41.8**	**+0.9**	
	comp=Z,0.2nm,0.4s,baz=39,slow=4.1,SNR=2.1							
	comp=Z,0.2nm,0.4s							
YKA	**Yellowknife Ar**	**83.68**	**9**	P	**P**	**17 27 09.7**	**-0.6**	
	comp=Z,0.3nm,0.8s,baz=339,slow=5.7,SNR=4.3							
	comp=Z,0.3nm,0.8s							

*ISK **15** 17:27:07.4, 36.°13N×31.°19E, h20km, ML4.0/19*
*MOS **15** 17:27:08.7±1.2, 36.°14N×31.°14E, h68km, mb4.4/8, Error ellipse: s-maj=7.9km s-min=4.9km az=90.0*
*NIC **15** 17:27:08.4, 36.°13N×31.°20E, h70km±6km, Ml4.2/11*
*IDC **15** 17:27:09.8±1.3, 36.°22N×31.°14E, h63km±12km, mb3.7/22, mbtmp4.0/33, MS2.7/6, Error ellipse: s-maj=11.5km s-min=10.1km az=44.0*
*NEIC **15** 17:27:09.6±1.5, 36.°11N±0.°04×31.°13E±0.°06, h70km±8km, mb4.4/17, Error ellipse: s-maj=8.8km s-min=4.5km az=52.0*
*AFAD **15** 17:27:09.3, 36.°17N×31.°17E, h24km, MW4.0*
*MED_RC **15** 17:27:10.0±0.8, 36.°14N×31.°10E, h60km, MW4.1/6, Moment Tensor Solution.Mantle waves: s6,c8; Duration: 1s0 Moment tensor: Scale 10^{15}Nm; M_{rr}0.08±.49; $M_{\theta\theta}$-1.43±.45; $M_{\phi\phi}$ 1.36±.26; $M_{r\theta}$0.45±.25; $M_{\theta\phi}$-0.84±.81; $M_{\phi r}$-0.08±.37; Best double couple: $M_0$1.69000×10^{15} NP1:ϕ_s209.00000°, δ76.00000°, λ-4.00000°. NP2: ϕ_s300.00000°, δ87.00000°, λ-166.00000°. Principal axes: T 1.6200, Plg8.0000°, Azm74.0000°; N 0.1400, Plg75.0000°, Azm313.0000°; P -1.7600, Plg13.0000°, Azm165.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*
*CFUSG **15** 17:27:10.4, 36.°50N×30.°91E, h54km, MD3.4/1, MSH2.9/4*
*GII **15** 17:27:11.2±0.0, 35.°92N±0.°06×31.°13E±0.°02, h0km, Mws3.8/6, confirmed*
*THE **15** 17:27:20.9, 36°N±15°×3°0E±3°2, h92km±36km, M3.4/7, MLh3.4/7*

ISC 15 17:27:09.3±0.7, 36.°17N±0.°03×31.°17E±0.°02, h58km±7km, n255, σ1s66/319, mb4.2/40, MS2.8/3, 21C-8D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEMT	**Kemer-ANTALYA**	**0.66**	**311**	Pg	**Pn**	**17 27 21.9**	**-1.0**
KEMT				Sg	**Sn**	**17 27 32.0**	**-0.8**
AKUM	**Antalya-Kumluc**	**0.69**	**283**	P	**Pn**	**17 27 23.0**	**-0.2**
AKUM				S	**Sn**	**17 27 33.6**	**+0.3**
ALAN	**Alanya-ANTALYA**	**0.80**	**61**	Pg	**Pn**	**17 27 23.8**	**-0.8**
ALAN				Sg	**Sn**	**17 27 35.0**	**-0.9**
KEPZ	**Antalya-Kepez**	**0.81**	**25**	P	**Pn**	**17 27 24.1**	**-0.8**
KEPZ				S	**Sn**	**17 27 35.1**	**-1.1**
ANTB	**Antalya**	**0.84**	**331**	Pg	**Pn**	**17 27 25.3**	**+0.2**
ANTB				Sg	**Sn**	**17 27 37.5**	**+0.7**
GAZI	**Gazipasa**	**0.93**	**86**	Pg	**Pn**	**17 27 25.7**	**-0.6**
GAZI				Sg	**Sn**	**17 27 38.4**	**-0.5**
GAZI	**Gazipasa**	**0.93**	**86**	P	**Pn**	**17 27 25.5**	**-0.8**
GAZI				S	**Sn**	**17 27 35.5**	**-3.4**
GAZI	**Gazipasa**	**0.93**	**86**	P	**Pn**	**17 27 25.6**	**-0.8**
GAZI				S	**Sn**	**17 27 35.1**	**-3.8**
DEMR	**Demre-Antalya**	**1.02**	**274**	Pg	**Pn**	**17 27 27.2**	**-0.3**
KORT	**Korkueli**	**1.06**	**322**	Pn	**Pn**	**17 27 28.0**	**-0.2**
KORT	**Korkueli**	**1.06**	**322**	P	**Pn**	**17 27 27.7**	**-0.5**
KORT				S	**Sn**	**17 27 44.5**	**+2.3**
KORT	**Korkueli**	**1.06**	**322**	P	**Pn**	**17 27 27.4**	**-0.7**
ELL	**Elmali**	**1.17**	**300**		**Pn**	**17 27 30.6**	**+1.0**
ELL				Sn	**Sn**	**17 27 49.1**	**+4.4**
ELL	**Elmali**	**1.17**	**300**	Pn	**Pn**	**17 27 30.1**	**+0.5**
ELL	**Elmali**	**1.17**	**300**	P	**Pn**	**17 27 30.2**	**+0.6**
ELL	**Elmali**	**1.17**	**300**	P	**Pn**	**17 27 30.5**	**+1.0**
ELL				S	**Sn**	**17 27 47.0**	**+2.3**
BUCA	**Burdur, Bucak-**	**1.25**	**337**	P	**Pn**	**17 27 29.7**	**-1.0**
AKAS	**Kas**	**1.27**	**273**		**Pn**	**17 27 30.7**	**-0.2**
AKAS	**Kas**	**1.27**	**273**	Pn	**Pn**	**17 27 30.7**	**-0.2**
AKAS	**Kas**	**1.27**	**273**	P	**Pn**	**17 27 30.9**	**0.0**
AKAS				S	**Sn**	**17 27 47.9**	**+0.9**
KSL	**Kastellorizon**	**1.28**	**270**	P	**Pn**	**17 27 30.8**	**-0.1**
KSL				S	**Sn**	**17 27 48.1**	**+0.9**
HDMB	**Hadim**	**1.32**	**53**	Pn	**Pn**	**17 27 31.8**	**+0.1**
SEYD	**Seydisehir-KON**	**1.35**	**23**	Pn	**Pn**	**17 27 32.4**	**+0.4**
SEDI	**Konya, Seydise**	**1.36**	**20**	P	**Pn**	**17 27 32.9**	**+0.7**
SEDI				S	**Sn**	**17 27 49.5**	**+0.1**
BCK	**Bucak**	**1.37**	**340**	Pn	**Pn**	**17 27 32.2**	**0.0**
BCK	**Bucak**	**1.37**	**340**	P	**Pn**	**17 27 31.7**	**-0.5**
KNIK	**Mula-Seydike**	**1.45**	**298**	P	**Pn**	**17 27 35.0**	**+1.6**
KNIK				S	**Sn**	**17 27 53.9**	**+2.5**
BOZY	**Bozyazi-Mersin**	**1.46**	**92**	Pn	**Pn**	**17 27 33.2**	**-0.2**
ERMK	**Ermenek**	**1.48**	**71**	P	**Pn**	**17 27 34.6**	**+0.8**
ERMK				S	**Sn**	**17 27 56.4**	**+4.0**
AKMS	**Akamas**	**1.49**	**140**	↓*i* P	**Pn**	**17 27 32.8**	**-1.0**
AKMS				S	**Sn**	**17 27 52.8**	**+0.5**
AKMS				AML	AML	17 28 02.0	
	11nm,0.6s						
AKMS				AML	AML	17 28 02.1	
	12nm,0.5s						
ALFC	**Alefka**	**1.54**	**131**	↓*i* P	**Pn**	**17 27 33.1**	**-1.4**
ALFC				S	**Sn**	**17 27 51.2**	**-2.3**
ALFC				AML	AML	17 28 01.3	
	9.6nm,0.4s						
ALFC				AML	AML	17 28 05.2	
	7.1nm,0.3s						
TEKE	**Tekeli-Mersin**	**1.57**	**90**	Pn	**Pn**	**17 27 35.1**	**+0.2**
IZZE	**Mula-Seydike**	**1.59**	**280**	P	**Pn**	**17 27 35.9**	**+0.8**
GOLH	**Golhisar**	**1.68**	**310**	P	**Pn**	**17 27 38.8**	**+2.4**
GOLH				S	**Sn**	**17 28 01.1**	**+4.3**
CAME	**Cameli-Denizli**	**1.69**	**298**	Pn	**Pn**	**17 27 37.3**	**+0.7**
ISP	**Isparta**	**1.73**	**343**		**Pn**	**17 27 37.5**	**+0.4**
ISP	**Isparta**	**1.73**	**343**	Pn	**Pn**	**17 27 37.8**	**+0.7**
ISP	**Isparta**	**1.73**	**343**	*i* P	**Pn**	**17 27 37.8**	**+0.7**
ISP	**Isparta**	**1.73**	**343**	*e*P	**Pn**	**17 27 37.8**	**+0.7**

BRDR	**BURDUR-Merkez**	**1.76**	**330**	P	**Pn**	**17 27 39.8**	**+2.3**	
BRDR				S	**Sn**	**17 28 01.8**	**+2.8**	
CAEL	**Denizli, Camel**	**1.77**	**303**	P	**Pn**	**17 27 39.0**	**+1.4**	
KKBE	**Karaman, Kazim**	**1.77**	**53**	P	**Pn**	**17 27 39.8**	**+2.2**	
KKBE				S	**Sn**	**17 28 00.2**	**+1.1**	
NATA	**Nata**	**1.80**	**140**	P	**Pn**	**17 27 39.8**	**+1.8**	
NATA				S	**Sn**	**17 28 02.5**	**+2.8**	
NATA				AML	AML	17 28 17.5		
	26nm,0.5s							
NATA				AML	AML	17 28 17.5		
	28nm,0.8s							
BAGO	**Egridir - ISPA**	**1.84**	**351**	P	**Pn**	**17 27 38.8**	**+0.1**	
TROD	**Troodos**	**1.84**	**131**	P	**Pn**	**17 27 38.2**	**-0.6**	
TROD				S	**Sn**	**17 28 00.1**	**-1.0**	
TROD				AML	AML	17 28 21.4		
	5.0nm,0.8s							
TROD				AML	AML	17 28 21.5		
	4.2nm,1.1s							
KMER	**Konya-Meram**	**1.86**	**31**	P	**Pn**	**17 27 40.8**	**+1.9**	
KMER				S	**Sn**	**17 28 02.1**	**+0.6**	
SABU	**Mula-Dalaman**	**1.89**	**291**	P	**Pn**	**17 27 39.8**	**+0.6**	
SABU				S	**Sn**	**17 28 01.5**	**-0.5**	
XYLS	**Xyliatos**	**1.92**	**126**	P	**Pn**	**17 27 38.3**	**-1.3**	
XYLS				S	**Sn**	**17 27 59.9**	**-2.8**	
XYLS				AML	AML	17 28 10.9		
	5.7nm,0.3s							
XYLS				AML	AML	17 28 11.1		
	4.5nm,0.3s							
GULN	**MERSIN_Gulnar**	**1.92**	**89**	P	**Pn**	**17 27 40.4**	**+0.8**	
GULN				S	**Sn**	**17 28 04.8**	**+2.2**	
BASM	**Basmaki-Afyon**	**1.96**	**333**	Pn	**Pn**	**17 27 41.4**	**+1.1**	
DOGA	**KONYA_Doganhis**	**1.97**	**12**	P	**Pn**	**17 27 42.1**	**+1.6**	
DOGA				S	**Sn**	**17 28 05.6**	**+1.4**	
APMY	**Acipayam-Deniz**	**1.98**	**311**	Pn	**Pn**	**17 27 41.2**	**+0.7**	
INCE	**Denizli-Bozkur**	**2.00**	**321**	P	**Pn**	**17 27 43.0**	**+2.2**	
INCE				S	**Sn**	**17 28 06.7**	**+2.0**	
KONT	**Konya--Tatoy**	**2.01**	**28**	Pn	**Pn**	**17 27 41.9**	**+1.0**	
KONT	**Konya--Tatoy**	**2.01**	**28**	P	**Pn**	**17 27 42.4**	**+1.5**	
KONT				S	**Sn**	**17 28 05.9**	**+0.9**	
APOL	**The Sanctuary**	**2.04**	**137**	P	**Pn**	**17 27 42.0**	**+0.8**	
APOL				S	**Sn**	**17 28 11.5**	**+6.0**	
APOL				AML	AML	17 28 27.4		
	3.5nm,0.5s							
APOL				AML	AML	17 28 28.1		
	3.4nm,0.8s							
DNZT	**Denizli-Tavas-**	**2.05**	**303**	P	**Pn**	**17 27 42.5**	**+1.1**	
ATHAL	**Athalassa**	**2.08**	**119**	P	**Pn**	**17 27 41.1**	**-0.7**	
ATHAL				S	**Sn**	**17 28 06.0**	**-0.7**	
ATHAL				AML	AML	17 28 20.5		
	9.5nm,0.6s							
ATHAL				AML	AML	17 28 21.2		
	10nm,0.6s							
YVAC	**Isparta, Yalva**	**2.10**	**2**	P	**Pn**	**17 27 43.2**	**+1.0**	
YVAC				S	**Sn**	**17 28 07.1**	**-0.1**	
CSS	**Mathiatis**	**2.13**	**124**		**Pn**	**17 27 41.3**	**-1.3**	
CSS	**Mathiatis**	**2.13**	**124**	↑↑*i* P	**Pn**	**17 27 41.2**	**-1.3**	
CSS				S	**Sn**	**17 28 07.5**	**-0.4**	
CSS				AML	AML	17 28 23.8		
	2.4nm,0.5s							
CSS				AML	AML	17 28 24.4		
	3.4nm,0.6s							
CSS	**Mathiatis**	**2.13**	**124**	P	**Pn**	**17 27 41.2**	**-1.3**	
AFYN	**Afyon-Dinar-K**	**2.16**	**346**	P	**Pn**	**17 27 43.7**	**+0.6**	
AFYN				S	**Sn**	**17 28 10.0**	**+1.2**	
ASGA	**Asgata**	**2.19**	**129**	P	**Pn**	**17 27 43.4**	**+0.1**	
ASGA				S	**Sn**	**17 28 11.1**	**+1.9**	
ASGA				AML	AML	17 28 20.2		
	4.2nm,1.2s							
ASGA				AML	AML	17 28 27.6		
	4.2nm,0.6s							
TAVA	**DENIZLI_Tavas**	**2.23**	**306**	P	**Pn**	**17 27 45.4**	**+1.5**	
KZIL	**AFYON_Kizioren**	**2.24**	**339**	P	**Pn**	**17 27 44.7**	**+0.6**	
LADK	**Ladik-KONYA**	**2.24**	**25**	Pn	**Pn**	**17 27 45.5**	**+1.4**	
DNIZ	**Denizli-Tavas-**	**2.24**	**311**	P	**Pn**	**17 27 45.6**	**+1.5**	
SDAG	**Sultandagi-AFY**	**2.27**	**355**	Pn	**Pn**	**17 27 45.4**	**+0.8**	
MVOU	**Mavrovouni**	**2.31**	**119**	↑↑*i* P	**Pn**	**17 27 43.5**	**-1.4**	
MVOU				S	**S

MMAI	**Mount Meron Ar**	4.70	131	P		Pn	17 28 17.8	+0.1		
	10nm,0.3s,baz=322,slow=14,SNR=61									
MMAI				S		Sn	17 29 10.3	-0.7		
	26nm,0.3s,baz=318,slow=29,SNR=9.2									
THR9	**Santorini-Faro**	4.70	274	P		Pn	17 28 17.1	-0.5		
FKH	**Fakeheh**	4.70	113	*eP*		Pn	17 28 19.8	+2.1		
GEM	**Giv'at Ha'Em**	4.74	127	P		Pn	17 28 19.5	+1.4		
GEM				S		Sn	17 29 11.4	-0.3		
OFRI	**`Ofer**	4.74	137	P		Pn	17 28 18.3	0.0		
OFRI				S		Sn	17 29 10.7	-1.3		
NATI	**Neve Ativ**	4.75	126	P		Pn	17 28 19.3	+1.0		
NATI				S		Sn	17 29 12.9	+0.9		
GAZ	**Gaziantep**	4.96	77			Pn	17 28 22.6	+1.4		
KSHT	**Keshet**	4.98	128	P		Pn	17 28 22.9	+1.4		
KSHT				S		Sn	17 29 17.9	+0.1		
SLTI	**Sal'it**	5.06	140	P		Pn	17 28 23.3	+0.7		
SLTI				S		Sn	17 29 18.2	-1.7		
MMLI	**Mount Malkishu**	5.12	135	P		Pn	17 28 24.0	+0.5		
IDI	**Anoyia**	5.18	262	P		Pn	17 28 23.4	-0.9		
	22nm,0.3s,baz=65,slow=10,SNR=54									
IDI				S		Sn	17 29 19.8	-3.0		
	36nm,0.3s,baz=309,slow=17,SNR=7.4									
HMDT	**Nahal Hemdat**	5.32	136	P		Pn	17 28 26.9	+0.8		
HMDT				S		Sn	17 29 26.2	+0.1		
AMAZ	**Amatzia**	5.58	145	P		Pn	17 28 30.1	+0.4		
AMAZ				S		Sn	17 29 31.4	-1.0		
YTIR	**Yattir**	5.81	144	P		Pn	17 28 33.8	+0.8		
KZIT	**Kziot**	5.90	152	P		Pn	17 28 34.8	+0.7		
MSBI	**Mazada**	5.97	143	P		Pn	17 28 35.6	+0.6		
GHAJ	**Ghor Haditha**	6.08	142	P		Pn	17 28 37.2	+0.7		
ASF	**Jabal al Asfar**	6.20	128	P		Pn	17 28 40.3	+2.1		
	6.7nm,0.3s,baz=305,slow=11,SNR=17									
ASF				S		Sn	17 29 50.9	+3.1		
	18nm,0.5s,baz=148,slow=22,SNR=6.9									
IDAN	**Idan**	6.33	146	P		Pn	17 28 41.2	+1.3		
PRNI	**Paran**	6.63	150	P		Pn	17 28 43.9	-0.3		
EIL	**Elat**	7.22	153	P		Pn	17 28 51.6	-0.6		
	36nm,0.5s,baz=321,slow=7.5,SNR=25									
EIL				S		Sn	17 30 09.4	-3.3		
	29nm,0.4s,baz=56,slow=16,SNR=6.4									
EIL				LR		LR	17 32 02.0			
	comp=Z,37nm,20.1s,baz=26,slow=40									
EIL	**Elat**	7.22	153	P		Pn	17 28 51.7	-0.5		
EIL				S		Sn	17 30 10.7	-2.0		
ELND	**Elena**	7.89	330	⇑P		Pn	17 29 03.9	+2.6		
ELND				⇑S		Sn	17 30 33.8	+4.7		
SEV	**Sevastopol'**	8.58	12	*eS*		Sn	17 30 45.9	0.0		
SEV				smax		smax	17 30 48.4			
	comp=N,4.0nm,0.5s									
SEV				smax		smax	17 30 48.4			
	comp=E,4.0nm,0.3s									
YAL	**Yalta**	8.62	14	⇓*i*P		Pn	17 29 12.7	+1.5		
YAL				*eS*		Sn	17 30 47.3	+0.5		
YAL	**Yalta**	8.62	14	⇑*i*P		Pn	17 29 12.7	+1.5		
YAL				pmax		pmax	17 29 15.5			
	comp=Z,10.0nm,0.6s									
YAL				*eS*		Sn	17 30 47.3	+0.5		
YAL				smax		smax	17 30 50.2			
	comp=N,3.0nm,0.2s									
YAL				smax		smax	17 30 50.2			
	comp=E,9.0nm,0.4s									
PLVB	**Pleven**	8.79	327	⇑P		Pn	17 29 16.2	+2.5		
SUDU	**Sudak**	9.19	17	*eS*		Sn	17 31 01.7	+0.9		
SUDU				smax		smax	17 31 05.1			
	comp=N,13nm,0.5s									
SUDU				smax		smax	17 31 05.1			
	comp=E,1.0nm,0.3s									
CFR	**Carcaliu**	9.29	347	⇑P		Pn	17 29 22.9	+2.5		
CFR	**Carcaliu**	9.29	347	⇑P		Pn	17 29 22.9	+2.5		
DNZ2	**Donuzlav2**	9.32	9	*eS*		Sn	17 31 01.7	-2.5		
DNZ2				smax		smax	17 31 13.1			
	comp=N,10.0nm,0.5s									
DNZ2				smax		smax	17 31 13.1			
	comp=E,5.0nm,0.5s									
MLR	**Muntele Rosu**	10.12	339	P		Pn	17 29 32.0	+0.2		
	comp=E,1.6nm,0.7s,baz=119,slow=7.8,SNR=6.5									
MLR				LR		LR	17 34 19.3			
	comp=E,68nm,18.1s,baz=164,slow=43									
MLR	**Muntele Rosu**	10.12	339	⇑P		Pn	17 29 34.9	+3.1		
MLR	**Muntele Rosu**	10.12	339	P		Pn	17 29 32.0	+0.2		
VRI	**Vrincioaia**	10.25	342	⇓P		Pn	17 29 36.4	+2.9		
VRI	**Vrincioaia**	10.25	342	⇓P		Pn	17 29 36.4	+2.9		
PLOR	**Plostina**	10.26	342	⇓P		Pn	17 29 36.5	+2.9		
PLOR	**Plostina**	10.26	342	⇓P		Pn	17 29 36.5	+2.9		
VOIR		10.35	335	⇑P		Pn	17 29 38.1	+3.1		
VOIR		10.35	335	⇑P		Pn	17 29 38.1	+3.1		
COVR	**Voineasa-Covas**	10.37	340	⇓P		Pn	17 29 38.6	+3.5		
NEUR	**Neytrino**	11.35	48	*i* P		Pn	17 29 50.1	+1.3		
KBZ	**Khabaz**	11.74	46	P		Pn	17 29 56.1	+2.3		
	comp=E,4.1nm,1.0s,baz=215,slow=12,SNR=4.5									
KIV	**Kislovodsk**	11.75	45	⇑P		Pn	17 29 57.8	+3.6		
KIV	**Kislovodsk**	11.75	45	*eP*		Pn	17 29 55.5	+1.3		
KIV				pmax		pmax				
	comp=Z,7.0nm,1.0s									
KIV				MLR		MLR				
	comp=Z,27nm,14.0s									
NCK	**Nalchik**	12.02	49	*i* P		Pn	17 30 00.1	+2.3		
BURAR	**Bucovina Array**	12.26	341	⇑P		Pn	17 30 04.9	+3.8		
BURAR	**Bucovina Array**	12.26	341	⇑P		Pn	17 30 04.9	+3.8		
AKASG	**Malin Array Be**	14.59	355	P		Pn	17 30 32.9	+0.6		
	comp=Z,0.2nm,0.3s,baz=180,slow=9.3,SNR=14									
AKASG				S		Sn	17 33 18.3	+5.7		
	comp=Z,1.1nm,0.7s,baz=186,slow=26,SNR=4.1									
AKASG	**Malin Array Be**	14.59	355	*eP*		P	17 30 37.4	+0.1		
AKASG				pmax		pmax				
	comp=Z,1.0nm,0.4s									
AKBB	**Malin Array Si**	14.59	355	*i* P		P	17 30 35.5	-1.8		
LANS	**Liptovska Anna**	15.54	330	*eP*		P	17 30 50.3	+2.4		
LANS	**Liptovska Anna**	15.54	330	*eP*		P	17 30 50.3	+2.4		
MODS	**Modra-Piesok**	15.92	324	*eP*		P	17 30 52.5	+0.4		
MODS	**Modra-Piesok**	15.92	324	*eP*		Pn	17 30 52.5	+0.4		
GERES	**GERESS Array B**	18.01	320	P		Pn	17 31 16.6	+1.1		
	comp=Z,0.3nm,0.5s,baz=104,slow=9.6,SNR=8.5									
GERES				LR		LR	17 38 41.0			
	comp=Z,34nm,19.8s,baz=50,slow=38									
DAVOX	**Davos/Dischmat**	19.09	310	P		Pn	17 31 28.6	0.0		
	comp=Z,2.0nm,0.8s,baz=79,slow=5.2,SNR=4.5									
OBN	**Obninsk**	19.31	9	*eP*		Pn	17 31 32.3	+1.5		
OBN				pmax		pmax				
	comp=Z,69nm,2.3s									
CLL	**Collm**	19.95	325	*eP*		Pn	17 31 48.0	+10		
CLL	**Collm**	19.95	325	*eP*x		Px	17 31 48.0			
BELG	**Belogornoye**	19.97	31	P		P	17 31 36.8	+0.3		
	comp=Z,7.6nm,0.6s,baz=252,slow=9.6,SNR=6.3									
BELG	**Belogornoye**	19.97	31	*i* P		P	17 31 37.8	+1.3		
BELG				pmax		pmax				
	comp=Z,5.0nm,1.6s									
SENIN	**Lac Senin/Sane**	20.56	307	P		P	17 31 40.3	-2.9		
AB31	**Akbulak array**	24.69	49	P		P	17 32 24.5	-0.2		
ABKAR	**Akbulak array**	24.69	49	P		P	17 32 24.1	-0.5		
FINES	**FINESS Array B**	25.50	354	P		P	17 32 30.7	-1.1		
	comp=Z,3.3nm,0.5s,baz=161,slow=9.5,SNR=13									
FINES				PcP		PcP	17 36 01.8	-0.1		
	comp=Z,3.0nm,1.0s,baz=204,slow=6.1,SNR=1.2									
	comp=Z,3.3nm,0.5s									
HFS	**Hagfors**	26.49	340	P		P	17 32 40.7	-0.2		
	comp=Z,4.8nm,0.9s,baz=120,slow=8.7,SNR=4.6									
	comp=Z,4.8nm,0.9s									
ARTI	**Arti**	27.31	34			P	17 32 47.4	-0.9		
ARTI				IAmb		IAmb	17 32 48.6			
	comp=Z,7.3nm,0.6s									
ARTI	**Arti**	27.31	34	*i* P		P	17 32 47.5	-0.8		
ARTI				pmax		pmax				
	comp=Z,21nm,2.5s									
ESDC	**Sonseca Array**	27.83	288	P		P	17 32 54.0	+0.9		
	comp=Z,1.7nm,0.7s,baz=76,slow=9.2,SNR=17									
	comp=Z,1.7nm,0.7s									
NOA	**NORSAR Array B**	27.94	339	P		P	17 32 54.0	+0.2		
	comp=Z,0.3nm,0.6s,baz=155,slow=10,SNR=1.1									
NOA				LR		LR	17 44 31.7			
	comp=Z,10nm,20.3s,baz=340,slow=37									
	comp=Z,0.3nm,0.6s									
CHGR	**Chuyangaron**	30.14	74	P		P	17 33 15.0	+1.3		
CHGR				pmax		pmax				
	comp=Z,14nm,0.7s									
EKA	**Eskdalemuir Ar**	30.23	320	P		P	17 33 12.4	-1.8		
	comp=Z,0.3nm,0.3s,baz=123,slow=10.0,SNR=1.7									
	comp=Z,0.3nm,0.3s									
KK31	**Karatay Array**	30.86	65	IAmb		IAmb	17 33 21.7			
	comp=Z,3.6nm,0.7s									
GAR	**Garm**	30.99	73	IAmb		IAmb	17 33 24.6			
	comp=Z,4.5nm,0.8s									
BVAR	**Borovoye Array**	32.12	46	P		P	17 33 31.9	+1.1		
	comp=Z,1.1nm,0.5s,baz=254,slow=5.9,SNR=6.7									
	comp=Z,1.1nm,0.5s									

ARSB	**Arslanbob**	32.78	68	IAmb		IAmb	17 33 39.1			
	comp=Z,2.6nm,0.7s									
ARCES	**ARCESS Array B**	33.57	356	P		P	17 33 42.5	-0.8		
	comp=Z,1.0nm,0.4s,baz=174,slow=8.8,SNR=6.7									
	comp=Z,1.0nm,0.4s									
ARCES	**ARCESS Array B**	33.57	356	P		P	17 33 41.9	-1.4		
ARCES	**ARCESS Array B**	33.57	356	*eP*		P	17 33 43.6	+0.3		
ARCES				pmax		pmax				
	comp=Z,1.0nm,0.4s									
AAK	**Ala-Archa**	33.81	66	LR		LR	17 47 39.8			
	comp=Z,18nm,21.4s,baz=221,slow=36									
AAK	**Ala-Archa**	33.81	66			P	17 33 46.6	+0.7		
AAK				IAmb		IAmb	17 33 48.2			
	comp=Z,4.4nm,0.5s									
AAK	**Ala-Archa**	33.81	66	*ce*		P	17 33 47.1	+1.2		
AAK				pmax		pmax				
	comp=Z,2.0nm,0.6s									
BOOM	**Boomskoye usch**	34.88	66	IAmb		IAmb	17 33 59.6			
	comp=Z,1.9nm,0.6s									
KSH2	**Kashi**	35.01	71	P		P	17 33 58.3	+1.9		
TORD	**Torodi Ar. Bea**	35.01	237	P		P	17 33 57.3	+0.9		
	comp=Z,0.6nm,0.8s,baz=19,slow=5.4,SNR=3.2									
	comp=Z,0.6nm,0.8s									
NRN	**Naryn**	35.03	67	P		P	17 33 58.6	+1.9		
NRN				pmax		pmax				
	comp=Z,6.0nm,1.1s									
KDJ	**Kajisay**	35.83	66	P		P	17 34 05.8	+2.4		
KDJ				pmax		pmax				
	comp=Z,6.0nm,0.8s									
KURBB	**Kurchatov Arra**	36.67	52	P		P	17 34 10.6	+0.4		
	comp=Z,3.4nm,0.2s,baz=273,slow=8.9,SNR=7.2									
KURBB				PcP		PcP	17 36 32.0	+0.2		
	comp=Z,0.6nm,0.5s,baz=262,slow=3.6,SNR=4.9									
	comp=Z,3.4nm,0.2s									
KURK	**Kurchatov**	36.73	52	P		P	17 34 11.0	+0.3		
KURK	**Kurchatov**	36.73	52	*ce*		P	17 34 11.1	+0.3		
KURK				pmax		pmax				
	comp=Z,7.0nm,2.5s									
MK31	**Makanchi Array**	39.11	58	*ce*		P	17 34 29.4	-1.5		
MKAR	**Makanchi Array**	39.11	58	P		P	17 34 31.3	+0.4		
	comp=Z,1.4nm,0.7s,baz=269,slow=8.9,SNR=13									
MKAR				PcP		PcP	17 36 38.9	-0.6		
	comp=Z,0.4nm,0.6s,baz=246,slow=3.5,SNR=3.4									
	comp=Z,1.4nm,0.7s									
MKAR	**Makanchi Array**	39.11	58	P		P	17 34 30.9	-0.1		
ZAA0	**Zalesovo Array**	40.76	47			P	17 34 42.9	-1.5		
ZAA0				IAmb		IAmb	17 34 45.2			
	comp=Z,3.1nm,0.5s									
ZALV	**Zalesovo Beam**	40.76	47	P		P	17 34 43.8	-0.6		
	comp=Z,2.8nm,0.4s,baz=260,slow=9.8,SNR=23									
	comp=Z,2.8nm,0.4s									
ZALV	**Zalesovo Beam**	40.76	47			P	17 34 43.4	-0.9		
ZALV	**Zalesovo Beam**	40.76	47	*eP*		P	17 34 44.0	-0.4		
ZALV				pmax		pmax				
	comp=Z,3.0nm,0.4s									
SPITS	**Spitsbergen Ar**	42.59	356	P		P	17 34 58.9	-0.2		
	comp=Z,5.1nm,0.9s,baz=146,slow=12,SNR=8.5									
SPITS				PcP		PcP	17 36 50.5	+0.2		
	comp=Z,7.6nm,1.0s,baz=142,slow=4.9,SNR=5.3									
	comp=Z,5.1nm,0.9s									
SPITS	**Spitsbergen Ar**	42.59	356	P		P	17 34 59.8	+0.8		
GOMU	**GeErMu**	50.50	70	P		P	17 35 54.3	-7.7		
GOMU				pmax		pmax				
	comp=Z,3.0nm,0.6s									
SONM	**Songino Array**	55.02	53	P		P	17 36 34.5	-0.4		
	comp=Z,0.5nm,0.5s,baz=298,slow=7.2,SNR=4.5									
	comp=Z,0.5nm,0.5s									
LZDM	**Lanzhou Array**	57.27	67	P		P	17 36 50.7	-0.7		
	comp=Z,0.8nm,0.3s,baz=295,slow=12,SNR=1.8									
	comp=Z,0.8nm,0.3s									
TULEG	**Thule**	57.43	344	P		P	17 36 49.8	-1.6		
TULEG				IAmb		IAmb	17 37 14.5			
	comp=Z,7.1nm,1.3s									
TIXI	**Tiksi**	58.47	22	*ce*		P	17 36 57.4	-1.3		
TIXI				pmax		pmax				
	comp=Z,1.0nm,0.6s									
PZH	**PanZhiHua**	59.87	78	P		P	17 37 09.5	+0.2		
HHC	**Hu-ho-hao-te**	60.97	59	*eP*		P	17 37 15.4	-1.2		
HHC				pmax		pmax				
	comp=Z,4.0nm,0.6s									
HHC				pmax		pmax				
	comp=Z,57nm,4.3s									
POIN	**Pond Inlet**	61.23	341	P		P	17 37 17.1	-0.5		
POIN				IAmb		IAmb	17 37 20.9			
	comp=Z,5.6nm,1.5s									
CMAR	**Chiang Mai Arr**	61.61	87	P		P	17 37 20.9	-0.2		
	comp=Z,1.2nm,0.8s,baz=297,slow=8.1,SNR=10									
	comp=Z,1.2nm,0.8s									
CMAR	**Chiang Mai Arr**	61.61	87	*eP*		P	17 37 21.2	+0.1		
CMAR				pmax		pmax				
	comp=Z,1.0nm,0.7s									
XAN	**Xi'an**	61.97	67	⇓P		P	17 37 23.8	+0.4		
XAN				pmax		pmax				
	comp=Z,9.0nm,0.8s									
SCHQ	**Schefferville**	65.54	321	P		P	17 37 44.9	-1.6		
	comp=Z,2.8nm,1.0s,baz=56,slow=7.1,SNR=3.6									
	comp=Z,2.8nm,1.0s									
SCHQ	**Schefferville**	65.54	321	P		P	17 37 44.0	-2.5		
SEY	**Seymchan**	70.69	24	*ce*		P	17 38 18.9	+0.4		
SEY				pmax		pmax				
	comp=Z,6.0nm,1.7s									
MA2	**Magadan**	72.40	28	P		P	17 38 29.0	+0.1		
	comp=Z,2.3nm,0.5s,baz=338,slow=8.4,SNR=4.8									
	comp=Z,2.3nm,0.5s									
MA2	**Magadan**	72.40	28	P		P	17 38 29.0	+0.1		
KSRS	**Korea Array**	73.73	55	P		P	17 38 36.7	-0.5		
	comp=Z,1.3nm,0.6s,baz=299,slow=5.1,SNR=2.5									
	comp=Z,1.3nm,0.6s									
INK	**Inuvik**	75.21	354	P		P	17 38 43.8	-1.3		
	comp=Z,1.0nm,1.0s,baz=31,slow=4.1,SNR=2.8									
	comp=Z,1.0nm,1.0s									
INK	**Inuvik**	75.21	354	P		P	17 38 43.1	-2.0		
INK	**Inuvik**	75.21	354	P		P	17 38 43.2	-2.0		
INK				pmax		pmax				
	comp=Z,2.0nm,1.2s									
YKA	**Yellowknife Ar**	77.89	345	P		P	17 38 59.7	-0.7		
	comp=Z,7.7nm,0.7s,baz=22,slow=5.4,SNR=11									
	comp=Z,0.7nm,0.7s									
YKA	**Yellowknife Ar**	77.89	345	P		P	17 38 59.6	-0.8		
ILAR	**Eielson Array**	79.38	359	P		P	17 39 08.4	-0.2		
	comp=Z,3.0nm,0.7s,baz=348,slow=4.0,SNR=5.5									
	comp=Z,0.3nm,0.7s									
ILAR	**Eielson Array**	79.38	359	P		P	17 39 08.6	0.0		
ILAR	**Eielson Array**	79.38	359	P		P	17 39 08.6	0.0		
TGY	**Tagaytay City**	81.64	79	P		P	17 39 23.2	+1.7		
	comp=Z,99nm,0.3s,baz=42,slow=11,SNR=3.7									
BBB	**Bella Bella**	90.17	347	LR		LR	18 20 39.0			
	comp=Z,75nm,19.5s,baz=120,slow=36									
PDAR	**Pinedale Array**	93.65	332	P		P	17 40 18.2	-1.5		
	comp=Z,0.1nm,0.4s,baz=19,slow=4.0,SNR=1.8									
	comp=Z,0.1nm,0.4s									
ASAR	**Alice Springs**	113.46	103	PKiKP		**PKiKP**	17 45 40.5	-0.6		
	comp=Z,0.2nm,0.5s,baz=318,slow=1.5,SNR=6.8									
QSPA	**South Pole Qui**	126.02	180	PKP		**PKPdf**	17 46 03.4	-0.4		
	comp=Z,1.5nm,0.8s,baz=223,slow=1.8,SNR=6.8									
QSPA	**South Pole Qui**	126.02	180	PKPdf		**PKPdf**	17 46 02.9	-0.9		

*IDC **15** 17:30:53.5±0.5, 5.°64N×32.°85W, h0km, mb4.3/29, mbtmp4.3/31, ML3.7/2, MS4.2/67, Error ellipse: s-maj=15.9km s-min=11.5km az=144.0*
*NEIC **15** 17:30:56.0±2.7, 5.°78N±0.°09×32.°93W±0.°10, h10km±1km, mb4.7/97, Error ellipse: s-maj=17.4km s-min=14.0km az=117.0*
*GCMT **15** 17:30:59.0±0.2, 5.°66N±0.°02×32.°86W±0.°01, h12km, MW4.9/119, Moment Tensor Solution. s39,c46; s119,c162; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-2.88±.06; Mθθ0.15±.07; Mϕϕ2.73±.06; Mrθ0.43±.29; Mθϕ-0.84±.06; Mϕr-0.59±.21; Best double couple: M=3.01800×10^16^ NP1=φs168.00000°, δ39.00000°, λ-82.00000°. NP2=φs339.00000°, δ52.00000°, λ-96.00000°. Principal axes: T 3.0560, Plg7.0000°, Azm73.0000°; N -0.0770, Plg5.0000°, Azm342.0000°; P -2.9800, Plg82.0000°, Azm217.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 15 17:30:55.1±0.3, 5.°66N±0.°07×32.°85W±0.°06, h12km, n244, σ1s09/152, mb4.6/90, MS4.2/68, 4D, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NBMO	**Morrinhos-CE**	11.44	219	*eP*		**Pn**	17 33 35.8	-2.7
RCBR	**Riachuelo**	11.81	195	Pn		**Pn**	17 33 41.6	-1.9
	0.6nm,0.3s,baz=21,slow=19,SNR=13							
RCBR					Sn	Sn	17 35 44.1	-11
	0.1nm,0.3s,baz=48,slow=22,SNR=1.7							
RCBR					LR	LR	17 37 01.0	
	comp=Z,618nm,21.0s,baz=16,slow=31							
	3.5nm,0.6s							
RCBR	**Riachuelo**	11.81	195			**Pn**	17 33 41.9	-1.6
RCBR	**Riachuelo**	11.81	195	*eP*		**Pn**	17 33 41.9	-1.6
NBPA	**Parau_RN**	12.10	201	*eP*		**Pn**	17 33 45.9	-1.7
NBPV	**Pedro Velho**	12.24	192	*eP*		**Pn**	17 33 48.1	-1.3
SACV	**Santiago Islan**	12.97	44			**Pn**	17 33 57.1	-2.3
NBPS	**Pedro II - PI**	13.16	221	*eP*		**Pn**	17 34 00.6	-1.5
NBMA	**Muriti-CE**	14.22	205	*eP*		**Pn**	17 34 16.1	-0.4
MDP	**Montagnes des**	19.71	269	P		**P**	17 35 24.8	+0.2
	0.2nm,0.3s,baz=84,slow=7.1,SNR=2.8							
MDP				LR		LR	17 41 21.5	
	comp=Z,664nm,21.2s,baz=104,slow=32							
	10.0nm,0.8s							
SMTB	**Santa Maria do**	20.59	226	*eP*		**P**	17 35 34.8	+0.6
PRPB	**Parauapebas**	20.61	235	*eP*		**P**	17 35 34.4	0.0
SDBA	**SAO DESIDERIO**	21.58	214	*eP*		**P**	17 35 45.5	+0.5
CMC01	**Camacan, BA**	21.90	197	*eP*		**P**	17 35 48.2	0.0
H10N3	**ASCENSION HYDR**	22.69	126	T		T	17 59 19.9	
	baz=305,slow=75,SNR=461							
H10N2	**ASCENSION HYDR**	22.69	126	T		T	17 59 19.4	
	baz=305,slow=75,SNR=203							
H10N1	**ASCENSION HYDR**	22.71	126	T		T	17 59 21.6	
	baz=305,slow=75,SNR=442							
GUA01	**Guaratinga, BA**	23.14	197	*eP*		**P**	17 36 01.2	-0.3
H10S3	**ASCENSION HYDR**	23.23	129	T		T	18 00 05.7	
	baz=276,slow=74,SNR=226							
H10S2	**ASCENSION HYDR**	23.24	129	T		T	18 00 03.3	
	baz=304,slow=74,SNR=251							
JANB	**Januaria**	23.51	209	*eP*		**P**	17 36 05.0	-0.2
ITTB	**Itaituba**	24.93	247	*eP*		**P**	17 36 18.5	+0.1
SNDB	**Serra Nova Dou**	25.36	226	*eP*		**P**	17 36 21.8	-0.5
SJMB	**Sao Joao De Ma**	25.56	199	*eP*		**P**	17 36 24.0	-0.1
BSFB	**Barra de Sao F**	25.58	198	*eP*		**P**	17 36 22.6	-1.6
NPGB	**Novo Progresso**	25.76	241	*eP*		**P**	17 36 24.8	-1.2
BDFB	**Brasilia**	25.95	215	P		**P**	17 36 28.4	+0.6
	5.3nm,0.9s,baz=32,slow=12,SNR=7.0							
BDFB				LR		LR	17 45 46.2	
	comp=Z,1μm,18.7s,baz=34,slow=34							
	5.3nm,0.9s							
BDFB	**Brasilia**	25.95	215			**P**	17 36 30.4	+2.6
BDFB					IAmb	IAmb	17 36 32.6	
	comp=Z,17nm,1.2s							
DIAM	**Diamantina, MG**	26.08	204	*eP*		**P**	17 36 28.2	-0.8
ALF01	**Guarapari-ES**	27.23	196	*eP*		**P**	17 36 40.1	+0.9
PMNB	**Patos De Minas**	27.52	209	*eP*		**P**	17 36 42.6	+0.7
BOAV	**Boa Vista**	27.79	264	*eP*		**P**	17 36 43.3	-1.0
DBIC	**Dimbokro**	27.85	86	P		**P**	17 36 44.0	-0.9
	comp=Z,13nm,1.0s,baz=299,slow=10,SNR=8.8							
DBIC				LR		LR	17 45 25.3	
	comp=Z,729nm,21.4s,baz=284,slow=31							
	comp=Z,13nm,1.0s							
DBIC	**Dimbokro**	27.85	86			**P**	17 36 44.9	0.0
ARAG	**Araguaiana, MT**	28.34	221	*eP*		**P**	17 36 48.0	-1.2
CAM01	**Campos-RJ**	28.64	197	*eP*		**P**

DAVOX **Davos/Dischmat** 55.01 35 P P 17 40 27.2 +0.6
comp=Z,4.1nm,0.8s,baz=246,slow=8.7,SNR=11
DAVOX LR LR 18 03 53.1
comp=Z,203nm,18.0s,baz=252,slow=36
comp=Z,4.1nm,0.8s
DAVA **Damuels** 55.29 34 eP P 17 40 29.3 +0.5
comp=Z,4.9nm,0.9s
MEM **Membach** 55.31 29 dP P 17 40 29.9 +1.3
comp=Z,11nm,0.9s
BTNL **Ternell** 55.35 29 dP P 17 40 30.1 +1.2
comp=Z,8.5nm,1.0s
TKL **Tuckaleechee C** 55.41 310 LR LR 17 59 32.6
comp=Z,162nm,21.1s,baz=106,slow=31
TSUM **Tsumeb** 55.46 118 LR LR 17 58 47.8
comp=Z,397nm,21.5s,baz=322,slow=30
TSUM **Tsumeb** 55.46 118 P 17 40 31.2 +0.9
TSUM IAmb IAmb 17 40 35.0
comp=Z,12nm,1.1s
FETA **Feichten** 55.62 35 eP P 17 40 31.6 +0.5
comp=Z,5.8nm,1.0s
CTI **Castel Tesino** 55.63 36 P 17 40 30.9 -0.2
CTI IAmb IAmb 17 40 33.8
comp=Z,8.2nm,0.8s
RETA **Reutte** 55.90 34 eP P 17 40 33.3 +0.3
comp=Z,1.9nm,0.7s
SQTA **Sankt Quirin** 56.01 35 eP P 17 40 33.9 +0.1
comp=Z,6.2nm,0.9s
MOTA **Moosalm** 56.02 35 eP P 17 40 33.9 0.0
comp=Z,1.7nm,0.7s
SADO **Sadowa** 56.04 322 LR LR 17 59 42.2
comp=Z,124nm,20.1s,baz=132,slow=31
SCHQ **Schefferville** 56.13 337 P P 17 40 35.6 +1.2
comp=Z,5.8nm,0.7s,baz=124,slow=6.6,SNR=12
SCHQ LR LR 18 02 29.5
comp=Z,67nm,18.7s,baz=184,slow=34
comp=Z,5.8nm,0.7s
WTTA **Wattenberg** 56.27 35 eP P 17 40 36.2 +0.4
comp=Z,2.3nm,0.8s
WATA **Walderalm** 56.28 35 eP P 17 40 36.2 +0.4
comp=Z,3.1nm,0.7s
ABTA **Abfaltersbach** 56.50 36 eP P 17 40 38.3 +0.9
comp=Z,4.7nm,1.0s
LESA **Schwarzleotal** 56.96 35 eP P 17 40 40.6 0.0
comp=Z,4.9nm,0.9s
GO06 **Curarrehue** 57.40 215 P 17 40 43.1 -0.7
OBKA **Obir** 57.59 37 eP P 17 40 45.6 +0.6
comp=Z,4.0nm,1.1s
PLCA **Paso Flores** 57.67 213 LR LR 18 05 29.7
comp=Z,726nm,19.7s,baz=48,slow=36
SOKA **Soboth** 57.96 37 eP P 17 40 48.0 +0.4
comp=Z,5.5nm,0.9s
MOA **Molln** 58.10 36 eP P 17 40 48.0 -0.5
comp=Z,4.5nm,1.3s
GERES **GERESS Array B** 58.29 34 P P 17 40 49.9 -0.1
comp=Z,2.4nm,0.9s,baz=243,slow=5.8,SNR=11
GERES LR LR 18 03 23.4
comp=Z,205nm,20.1s,baz=264,slow=33
comp=Z,2.4nm,0.9s
KHC **Kasperske Hory** 58.38 34 eP P 17 40 50.8 +0.4
CKRC **Cesky Krumlov** 58.62 35 eP P 17 40 52.9 +0.8
ZVC **Zvikov** 58.88 34 eP P 17 40 54.2 +0.3
CLL **Collm** 59.25 32 eP P 17 40 58.0 +1.6
TREC **Trest** 59.53 35 eP P 17 40 59.4 +1.0
BORG **Borgarnes** 59.55 6 LR LR 18 01 00.7
comp=Z,66nm,20.2s,baz=182,slow=30
MODS **Modra-Piesok** 60.11 36 eP P 17 41 03.4 +1.0
VRAC **Vranov** 60.16 35 P P 17 41 02.9 +0.2
comp=Z,4.7nm,0.8s,baz=267,slow=5.5,SNR=8.2
VRAC LR LR 18 04 52.8
comp=Z,153nm,20.2s,baz=254,slow=34
comp=Z,4.7nm,0.8s
SRO **Srobarova** 60.47 37 eP P 17 41 07.5 +2.7
DPC **Dobruska-Polom** 60.53 34 eP P 17 41 06.7 +1.4
OSTC **Ostas** 60.58 34 eP P 17 41 07.2 +1.6
IDI **Anoyia** 60.60 53 LR LR 18 07 37.6
comp=Z,378nm,21.8s,baz=292,slow=36
STEB **Steborice** 61.14 35 eP P 17 41 11.2 +1.8
PSZ **Piszkesteto** 61.47 38 P 17 41 12.3 +0.5
PSZ IAmb IAmb 17 41 15.6
comp=Z,8.3nm,0.9s
CMIG **Matias Romero** 61.64 286 LR LR 18 09 14.7
comp=Z,137nm,19.2s,baz=92,slow=37
LANS **Liptovska Anna** 61.76 36 eP P 17 41 15.9 +2.3
MGMO **Mountain Grove** 62.39 309 P 17 41 16.5 -1.6
OJC **Ojcow** 62.43 35 P P 17 41 18.3 +0.2
FRB **Frobisher Bay** 63.44 343 LR LR 18 04 30.8
comp=Z,56nm,21.9s,baz=138,slow=32
MBAR **Mbarara** 63.79 93 LR LR 18 06 42.1
comp=Z,342nm,19.1s,baz=289,slow=34
LSZ **Lusaka** 63.93 110 LR LR 18 04 01.3
comp=Z,145nm,20.4s,baz=302,slow=31
NOA **NORSAR Array B** 64.31 22 P P 17 41 30.9 +0.6
comp=Z,2.4nm,0.8s,baz=232,slow=6.5,SNR=4.7
NOA LR LR 18 07 16.9
comp=Z,182nm,18.8s,baz=240,slow=34
comp=Z,2.4nm,0.8s
MLR **Muntele Rosu** 64.39 42 LR LR 18 07 20.2
comp=Z,151nm,21.9s,baz=246,slow=34
STNU **Starunia** 64.60 38 P P 17 41 30.9 -1.6
HFS **Hagfors** 64.70 24 P P 17 41 33.4 +0.5
comp=Z,4.9nm,1.0s,baz=235,slow=4.6,SNR=1.4
HFS LR LR 18 09 08.6
comp=Z,88nm,18.0s,baz=232,slow=36
comp=Z,4.9nm,1.0s
BOSA **Boshof** 65.44 125 P P 17 41 38.9 +0.5
comp=Z,9.1nm,0.9s,baz=286,slow=6.5,SNR=12
BOSA LR LR 18 04 32.7
comp=Z,158nm,20.8s,baz=298,slow=31
comp=Z,9.1nm,0.9s
BOSA **Boshof** 65.44 125 P P 17 41 38.6 +0.1
KMPD **K-Podol'skiy** 65.76 39 P P 17 41 38.0 -2.0
SUW **Suwalki** 65.97 32 P 17 41 40.7 -0.6
RNPP8 **Varash** 66.39 36 P P 17 41 42.4 -1.6
BRDY **Brady** 66.72 302 IAmb IAmb 17 42 00.3
comp=Z,5.5nm,1.1s
SORM **Soroca** 66.81 40 P P 17 41 46.0 -0.7
comp=Z,18nm,0.8s
LUBAR **Lubar, Ukraine** 67.02 38 P P 17 41 47.4 -0.6
EPLO **Experimental L** 67.10 322 P 17 41 48.2 -0.4
MI28 **Mi28,Pidlybu** 67.31 37 P P 17 41 48.8 -1.1
EIL **Elat** 67.95 60 LR LR 18 12 06.0
comp=Z,339nm,20.3s,baz=248,slow=36
LODK **Lodwar** 68.01 89 P 17 41 56.2 +1.2
LODK IAmb IAmb 17 41 59.5
comp=Z,4.1nm,1.0s
AK19 **Malin Array Si** 68.05 37 P P 17 41 54.1 -0.4
AK20 **Malin Array Si** 68.05 37 P P 17 41 54.3 -0.2
AK17 **Malin Array Si** 68.06 37 P P 17 41 54.0 -0.6
AK14 **Malin Array Si** 68.07 37 P P 17 41 54.3 -0.4
AKASG **Malin Array Be** 68.17 37 P P 17 41 55.4 +0.1
comp=Z,4.6nm,0.8s,baz=252,slow=6.2,SNR=13
AKASG LR LR 18 11 19.3
comp=Z,106nm,19.7s,baz=208,slow=36
comp=Z,4.6nm,0.8s
AKASG **Malin Array Be** 68.17 37 P P 17 41 54.1 -1.1
AKBB **Malin Array Si** 68.17 37 P P 17 41 53.8 -1.4
AK03 **Malin Array Si** 68.17 37 P P 17 41 54.9 -0.4
BR105 **Keskin Array S** 68.36 50 P P 17 41 55.7 -1.2
comp=Z,3.7nm,1.1s
BR131 **Keskin Array S** 68.38 50 P 17 41 57.5 +0.5
BR131 IAmb IAmb 17 42 00.4
comp=Z,3.7nm,0.9s
BRTR **Keskin Array B** 68.38 50 P P 17 41 57.5 +0.5
comp=Z,1.9nm,0.8s,baz=236,slow=5.8,SNR=8.3
BRTR LR LR 18 14 00.9
comp=Z,81nm,18.6s,baz=273,slow=38
comp=Z,1.9nm,0.8s
BRTR **Keskin Array B** 68.38 50 P P 17 41 54.5 -2.6
OZNA **Ozona** 68.49 301 P 17 41 56.1 -1.7
OZNA IAmb IAmb 17 42 01.3
comp=Z,6.0nm,1.1s
ULM **Lac du Bonnet** 68.60 322 P P 17 41 57.3 -0.7
comp=Z,1.7nm,0.8s,baz=104,slow=8.3,SNR=3.7
ULM LR LR 18 07 06.9
comp=Z,129nm,20.3s,baz=174,slow=32
comp=Z,1.7nm,0.8s
MMAI **Mount Meron Ar** 68.72 57 LR LR 18 16 14.3
comp=Z,93nm,18.2s,baz=258,slow=40
SAND **Sanderson** 69.25 300 IAmb IAmb 17 42 16.8
comp=Z,3.9nm,0.9s
ASF **Jabal al Asfar** 69.88 58 LR LR 18 14 00.2
comp=Z,150nm,19.5s,baz=217,slow=37
KMBO **Kilima Mbogo** 70.33 93 LR LR 18 10 42.5
comp=Z,234nm,18.4s,baz=274,slow=34
TXAR **Lajitas Array** 70.53 299 P P 17 42 11.1 +0.6
comp=Z,0.5nm,0.8s,baz=78,slow=6.0,SNR=4.9
TXAR LR LR 18 09 43.6
comp=Z,76nm,21.6s,baz=72,slow=33
comp=Z,0.5nm,0.8s
FCC **Fort Churchill** 70.54 331 P 17 42 10.2 +0.5
FINES **FINESS Array B** 70.57 26 P P 17 42 10.8 +0.9
comp=Z,3.5nm,0.8s,baz=217,slow=4.4,SNR=4.5
FINES LR LR 18 13 00.1
comp=Z,54nm,18.1s,baz=218,slow=36
comp=Z,3.5nm,0.8s
FURI **Furi** 70.94 83 LR LR 18 11 34.9
comp=Z,299nm,20.3s,baz=270,slow=34
ARPR **Arapgir-MALATY** 71.87 51 IAmb IAmb 17 42 21.9
comp=Z,7.1nm,0.9s
ISCO **Idaho Springs** 73.16 310 IAmb IAmb 17 42 56.1
comp=Z,7.2nm,1.4s
ANMO **Albuquerque** 73.35 305 LR LR 18 10 44.3
comp=Z,187nm,21.6s,baz=96,slow=33
ANMO **Albuquerque** 73.35 305 P 17 42 28.1 +0.7
FFC **Flin Flon** 73.41 326 P 17 42 27.5 +0.4
FFC IAmb IAmb 17 42 28.4
comp=Z,6.4nm,0.9s
BLKN **Baker Lake** 73.50 336 IAmb IAmb 17 42 28.7
comp=Z,4.9nm,0.8s
OBN **Obninsk** 73.67 34 LR LR 18 12 08.8
comp=Z,112nm,21.0s,baz=70,slow=34
ARCES **ARCESS Array B** 74.02 18 LR LR 18 08 53.2
comp=Z,124nm,21.6s,baz=238,slow=31
121A **Cookes Peak, D** 74.28 302 IAmb IAmb 17 42 35.6
comp=Z,9.4nm,1.2s
ATD **Arta Tunnel** 74.91 80 LR LR 18 14 21.4
comp=Z,9.1nm,18.8s,baz=299,slow=35
PV13 **Radium Mtn., P** 75.50 308 IAmb IAmb 17 42 42.4
comp=Z,8.3nm,1.0s
PV16 **Nyswonger Mesa** 75.58 308 IAmb IAmb 17 42 44.2
comp=Z,8.9nm,1.2s
PV20 **West Nyswonger** 75.62 308 IAmb IAmb 17 42 45.7
comp=Z,8.7nm,0.8s
KBZ **Khabaz** 75.82 46 P P 17 42 42.1 +0.8
comp=Z,3.8nm,0.9s,baz=265,slow=8.6,SNR=6.7
KBZ LR LR 18 19 10.9
comp=Z,54nm,19.0s,baz=277,slow=38
comp=Z,3.8nm,0.9s
X18A **Snowflake** 76.19 304 IAmb IAmb 17 42 47.1
comp=Z,11nm,1.4s
RDMU **Red Mountain** 76.25 310 IAmb IAmb 17 42 47.5
comp=Z,6.8nm,1.0s
LPIG **La Paz** 76.27 293 LR LR 18 17 20.3
comp=Z,29nm,18.4s,baz=60,slow=36
PDAR **Pinedale Array** 76.42 313 P P 17 42 45.6 +0.5
comp=Z,1.4nm,0.7s,baz=99,slow=7.0,SNR=16
comp=Z,1.4nm,0.7s
PDAR **Pinedale Array** 76.42 313 P P 17 42 44.5 -0.6
RLMT **Red Lodge** 76.43 315 IAmb IAmb 17 42 48.4
comp=Z,6.0nm,0.8s
P18A **Preston Nutter** 76.71 309 IAmb IAmb 17 42 49.2
comp=Z,10nm,1.2s
SPITS **Spitsbergen Ar** 76.71 9 LR LR 18 09 29.4
comp=Z,70nm,19.9s,baz=207,slow=30
TUC **Tucson** 76.81 302 P 17 42 47.2 -0.1
TUC IAmb IAmb 17 42 50.1
comp=Z,8.3nm,1.3s
SRU **San Rafael Swe** 76.89 309 IAmb IAmb 17 42 50.6
comp=Z,13nm,1.4s
GNI **Garni** 76.89 50 LR LR 18 17 54.2
comp=Z,81nm,21.7s,baz=256,slow=37
YNE **Yellowstone No** 76.94 315 IAmb IAmb 17 42 50.3
comp=Z,6.2nm,0.9s
HMU **Henry Mountain** 77.00 307 IAmb IAmb 17 42 52.2
comp=Z,11nm,1.3s
P17A **Butcher Ranch,** 77.08 309 IAmb IAmb 17 42 50.8
comp=Z,4.5nm,0.9s
RAYN **Ar Rayn** 77.10 67 P 17 42 50.3 +1.3
LOHW **Long Hollow** 77.25 313 IAmb IAmb 17 42 52.1
comp=Z,11nm,1.2s
RES **Resolute Bay** 77.39 346 LR LR 18 12 54.7
comp=Z,32nm,18.1s,baz=96,slow=33
RES **Resolute Bay** 77.39 346 IAmb IAmb 17 42 51.4
comp=Z,5.0nm,1.0s
WUAZ **Wupatki** 77.40 305 IAmb IAmb 17 42 53.9
comp=Z,8.3nm,0.9s
X16A **Lo Mia Camp, P** 77.42 304 IAmb IAmb 17 42 54.3
comp=Z,12nm,1.4s
FXWY **Fox Creek** 77.56 313 IAmb IAmb 17 42 53.7
comp=Z,13nm,1.5s
YHL **Hebgen Lake** 77.76 315 IAmb IAmb 17 42 56.0
comp=Z,9.9nm,1.2s
MTPU **Mount Pierson** 78.14 308 IAmb IAmb 17 42 59.1
comp=Z,7.2nm,1.0s
U15A **North Rim** 78.17 306 IAmb IAmb 17 42 57.9
comp=Z,6.0nm,1.2s
PKCU **Pink Cliffs** 78.22 307 IAmb IAmb 17 42 59.0
comp=Z,7.3nm,1.1s
DLMT **Dillon** 78.79 315 IAmb IAmb 17 43 01.3
comp=Z,12nm,1.3s
BGU **Big Grassy Mou** 78.90 310 IAmb IAmb 17 43 01.4
comp=Z,15nm,1.4s
CCUT **Cedar City** 79.06 307 IAmb IAmb 17 43 02.7
comp=Z,9.7nm,1.1s
PSUT **Pine Spring** 79.47 308 IAmb IAmb 17 43 05.3
comp=Z,6.9nm,1.0s
PRN **Pahroc Range** 80.40 307 IAmb IAmb 17 43 10.7
comp=Z,18nm,1.3s
RPN **Rapa Nui** 80.62 241 LR LR 18 14 20.2
comp=Z,156nm,21.7s,baz=80,slow=32
KIRV **Kirov** 81.17 32 LR LR 18 19 02.8
comp=Z,80nm,18.4s,baz=273,slow=36
YKA **Yellowknife Ar** 81.20 332 P P 17 43 10.2 -0.4
comp=Z,0.9nm,0.7s,baz=93,slow=4.6,SNR=14
comp=Z,0.9nm,0.7s
YKA **Yellowknife Ar** 81.20 332 P P 17 43 09.7 -0.9
PFO **Pinyon Flats O** 81.58 303 LR LR 18 16 54.3
comp=Z,98nm,20.1s,baz=137,slow=34
WCT **Wildcat Mounta** 81.66 306 IAmb IAmb 17 43 17.2
comp=Z,15nm,1.5s
NEW **Newport** 82.00 318 LR LR 18 17 50.5
comp=Z,102nm,18.2s,baz=110,slow=34
MPMC **Manual Prospec** 82.37 306 IAmb IAmb 17 43 21.5
comp=Z,6.3nm,1.2s
E09A **Wood Farm, Sta** 82.69 316 IAmb IAmb 17 43 24.9
comp=Z,5.1nm,1.0s
C09A **Chrisman Ranch** 82.77 317 IAmb IAmb 17 43 22.3
comp=Z,3.8nm,0.8s
NVAR **Mina Array Bea** 82.96 308 P P 17 43 22.0 +1.3
comp=Z,1.6nm,0.9s,baz=96,slow=5.0,SNR=4.2
NVAR LR LR 18 16 43.5
comp=Z,44nm,21.2s,baz=91,slow=33
comp=Z,1.6nm,0.9s
ARTI **Arti** 86.02 34 LR LR 18 19 30.6
comp=Z,162nm,21.9s,baz=267,slow=34
YBH **Yreka Blue Hor** 86.17 311 LR LR 18 19 26.7
comp=Z,6.6nm,19.7s,baz=99,slow=34
INK **Inuvik** 88.72 339 P P 17 43 49.4 +1.1
comp=Z,0.8nm,0.9s,baz=124,slow=4.2,SNR=3.6
comp=Z,0.8nm,0.9s
BVAR **Borovoye Array** 93.42 36 P P 17 44 11.9 +1.4
comp=Z,0.7nm,0.8s,baz=281,slow=2.3,SNR=2.7
BVAR LR LR 18 24 43.8
comp=Z,99nm,20.6s,baz=284,slow=35
comp=Z,0.7nm,0.8s
ILAR **Eielson Array** 94.89 337 P P 17 44 17.1 +0.2
comp=Z,0.8nm,0.9s,baz=61,slow=3.9,SNR=5.6
ILAR LR LR 18 25 51.1
comp=Z,79nm,18.4s,baz=72,slow=35
comp=Z,0.8nm,0.9s
QSPA **South Pole Qui** 95.69 180 P P 17 44 21.6 +1.0
comp=Z,3.1nm,1.2s,baz=224,slow=4.8,SNR=2.8
QSPA LR LR 18 20 23.5
comp=Z,57nm,20.6s,baz=195,slow=31
comp=Z,3.1nm,1.2s
AAK **Ala-Archa** 98.79 45 LR LR 18 32 41.5
comp=Z,45nm,20.4s,baz=288,slow=38
KURBB **Kurchatov Arra** 98.95 37 LR LR 18 28 00.3
comp=Z,78nm,20.6s,baz=168,slow=35
WMQ **Urumqi** 107.37 41 Pdif Pdif 17 45 15.1 +1.7
WMQ LR LR
comp=Z,120nm,24.1s
TAOE **Nuku Hiva Isla** 107.90 263 eLR LR 18 21 01.1
comp=Z,92nm,23.0s
TBI **Tubuai** 116.63 247 eLR LR 18 24 59.4
comp=Z,396nm,37.5s
PPT2 **Papeete2** 117.15 253 eLR LR 18 25 09.2
comp=Z,195nm,33.0s
PPT2 eLR LR 18 25 09.5
comp=Z,144nm,22.2s
HHC **Hu-ho-hao-te** 123.38 32 eP PKPdf 17 49 49.3 -3.5
PZH **PanZhiHua** 125.64 52 PKP PKPdf 17 49 57.6 +0.1
CMAR **Chiang Mai Arr** 126.78 62 PKP PKiKP 17 50 00.5 +0.3
comp=Z,0.7nm,0.3s,baz=295,slow=1.9,SNR=8.8
CMAR **Chiang Mai Arr** 126.78 62 PKiKP 17 50 01.3 +1.1
NJ2 **Nanjing** 133.82 34 eP PKPdf 17 50 12.9 +0.2
NJ2 pmax pmax
comp=Z,22nm,0.6s
ASAR **Alice Springs** 158.02 146 PKP PKPdf 17 50 53.4 +0.4
comp=Z,1.5nm,1.0s,baz=309,slow=0.1,SNR=11
ASAR PKPab pPKPab 17 51 27.1 -1.8
comp=Z,1.1nm,1.0s,baz=205,slow=4.4,SNR=4.7

IDC 15 17:33:22.4±2.2, 18°69S×179°09E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=41.6km s-min=31.6km az=63.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**1.38**	**314**	Pn	Pb			17 33 49.4	+0.4
	5.3nm,0.3s,baz=293,slow=17,SNR=22								
MSVF				Sn		Sg		17 34 06.9	+0.3
	9.2nm,0.3s,baz=106,slow=22,SNR=6.3								
WRA	**Warramunga Arr**	**42.16**	**261**	P		P		17 41 17.9	+0.9
	0.1nm,0.3s,baz=97,slow=6.7,SNR=1.2								
	0.1nm,0.3s								
ASAR	**Alice Springs**	**42.29**	**255**	P		P		17 41 17.3	-0.8
	0.2nm,0.3s,baz=90,slow=8.0,SNR=10								
	0.2nm,0.3s								
ILAR	**Eielson Array**	**87.20**	**14**	P		P		17 46 10.0	-0.1
	0.2nm,0.9s,baz=206,slow=3.8,SNR=1.5								
	0.2nm,0.9s								

IDC ***15*** *17:51:11.8±2.1,6°22S×148°90E,h59km±17km,mb4.1/16, mbtmp4.4/20,MS3.6/26,Error ellipse: s-maj=24.3km s-min=10.4km az=93.0*

NEIC ***15*** *17:51:13.3±0.9,6°27S±0°07×148°92E±0°08,h62km±7km, mb4.9/136,Error ellipse: s-maj=12.6km s-min=8.9km az=114.0*

DJA ***15*** *17:51:18.7±1.1,6°S±6°×14°8E±°,h96km±6km,M5.2/53, mb5.1/53,mB5.6/18,MLv5.5/1,Mw(mB)5.1/18*

ISC 15 17:51:12.2±0.5,6°31S±0°05×148°84E±0°06,h56km±4km, h56km:pP-P,n468,σ1§20/400,mb4.9/115,MS3.6/24,1C-1D, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.50**	**208**	P		P	**Pn**	17 52 05.9	+1.8
	322nm,0.3s,baz=34,slow=5.3,SNR=214								
PMG				S			**Sn**	17 52 47.1	+2.8
	2μm,0.4s,baz=239,slow=21,SNR=26								
PMG				LR		LR		17 53 45.8	
	comp=Z,2μm,18.6s,baz=48,slow=43								
PMG	**Port Moresby**	**3.50**	**208**	P		P	**Pn**	17 52 06.4	+2.3
PMG	**Port Moresby**	**3.50**	**208**	P		P	**Pn**	17 52 07.2	+3.1
I40PG	**Keravat**	**3.73**	**58**	I		I		18 04 50.0	
	0.1nm,0.5s,baz=240,slow=311,SNR=1.2								
RABL	**Rabaul**	**3.92**	**58**				**Pn**	17 52 09.9	0.0
MANU	**Manus Island**	**4.49**	**341**	Pn		Pn	**Pn**	17 52 18.6	+0.9
MMPI	**Merauke**	**8.66**	**255**	P		Pn	**Pn**	17 53 15.3	+0.4
	377nm,1.1s								
JAY	**Jayapura**	**8.95**	**295**	P		Pn	**Pn**	17 53 18.1	-0.8
	11nm,0.9s,baz=162,slow=12,SNR=4.8								
JAY	**Jayapura**	**8.95**	**295**	P		Pn	**Pn**	17 53 21.3	+2.4
COEN	**Coen**	**9.43**	**216**	P		Pn	**Pn**	17 53 26.4	+1.0
	comp=Z,26nm,0.6s								
COEN	**Coen**	**9.43**	**216**	P		Pn	**Pn**	17 53 26.1	+0.7
COEN	**Coen**	**9.43**	**216**	S		Sn	**Sn**	17 55 06.9	-3.1
COEN	**Coen**	**9.43**	**216**				**Pn**	17 53 25.5	+0.1
HNR	**Honiara**	**11.43**	**106**	LR		LR		17 57 45.0	
	comp=Z,8.1nm,20.4s,baz=355,slow=34								
MTSU	**Mount Surprise**	**12.55**	**200**	P		Pn	**Pn**	17 54 11.0	+2.8
	comp=Z,13nm,0.8s								
MTSU	**Mount Surprise**	**12.55**	**200**	P		Pn	**Pn**	17 54 11.1	+2.9
CTA	**Charters Tower**	**13.92**	**190**	P		Pn	**Pn**	17 54 30.0	+3.2
	comp=Z,5.5nm,1.7s								
CTA	**Charters Tower**	**13.92**	**190**	P		Pn	**Pn**	17 54 28.6	+1.8
	comp=Z,3.7nm,0.5s,baz=7.6,slow=13,SNR=8.0								
CTA				LR		LR		17 59 46.0	
	comp=Z,226nm,19.5s,baz=8.0,slow=37								
CTA	**Charters Tower**	**13.92**	**190**	P		Pn	**Pn**	17 54 29.5	+2.7
CTAO	**Charters Tower**	**13.92**	**190**	P		Pn	**Pn**	17 54 29.0	+2.2
CTAO	**Charters Tower**	**13.92**	**190**	Pn		Pn	**Pn**	17 54 26.9	+0.1
QIS	**Mount Isa**	**16.76**	**211**	P		Pn	**Pn**	17 55 04.3	+1.0
	comp=Z,26nm,0.8s								
QIS	**Mount Isa**	**16.76**	**211**	P		Pn	**Pn**	17 55 03.7	+0.4
KDU	**Kakadu**	**17.34**	**247**	P		Pn	**Pn**	17 55 09.8	-0.6
	comp=Z,30nm,0.5s								
SAUI	**Saumlaki**	**17.49**	**264**	P		Pn	**Pn**	17 55 12.7	+0.4
SAUI	**Saumlaki**	**17.49**	**264**				**Pn**	17 55 13.7	+1.3
SAUI	**Saumlaki**	**17.49**	**264**	P		Pn	**Pn**	17 55 12.7	+0.4
	comp=Z,217nm,0.8s								
SIJI	**Sorong**	**18.35**	**286**	P		P	**P**	17 55 22.6	+0.2
	comp=Z,6.4nm,0.5s,baz=286,slow=23,SNR=2.7								
SWI	**Sorong**	**18.36**	**286**	P		P	**Pn**	17 55 24.4	+1.4
	comp=Z,27nm,0.8s								
MTN	**Manton Dam**	**18.62**	**248**	P		P	**P**	17 55 26.1	+0.7
	comp=Z,49nm,0.7s								
DRS	**Darwin Rock St**	**18.71**	**250**	P		P	**P**	17 55 26.3	0.0
BNDI	**Bandanaira**	**18.94**	**274**	P		Pn	**Pn**	17 55 31.0	+1.0
BNDI	**Bandanaira**	**18.94**	**274**	P		P	**P**	17 55 29.5	+0.7
	comp=Z,196nm,1.3s								
EIDS	**Eidsvold**	**19.07**	**174**	P		Pn	**Pn**	17 55 33.7	+2.2
EIDS	**Eidsvold**	**19.07**	**174**	P		P	**P**	17 55 30.4	+0.2
WB0	**Warramunga Arr**	**19.39**	**225**	P		P	**P**	17 55 34.8	+1.0
WR8	**Warramunga Arr**	**19.44**	**224**	P		P	**P**	17 55 35.4	+1.0
WRAB	**Tennant Creek**	**19.53**	**225**	P		P	**P**	17 55 35.6	+0.3
WRAB	**Tennant Creek**	**19.53**	**225**	S		S	**S**	17 59 06.6	-6.6
WRA	**Warramunga Arr**	**19.55**	**225**	P		P	**P**	17 55 35.7	+0.2
	comp=Z,172nm,0.5s,baz=52,slow=11,SNR=975								
WRA				S		S	**S**	17 59 04.4	-9.0
	comp=Z,7.3nm,0.8s,baz=55,slow=22,SNR=4.9								
WRA				ScP		ScP	**ScP**	18 03 24.7	-1.0
	comp=Z,4.2nm,0.8s,baz=44,slow=2.4,SNR=8.9								
WRA	**Warramunga Arr**	**19.55**	**225**				**P**	17 55 36.6	+1.1
WRA				IAmb		IAmb		17 55 37.7	
	comp=Z,23nm,0.5s								
GUMO	**Guam**	**20.16**	**349**	LR		LR		18 03 43.8	
	comp=Z,56nm,18.6s,baz=158,slow=38								
SANVU	**Saraoutou**	**20.17**	**118**				**P**	17 55 40.0	-2.2
KRAI	**Karang Ratu**	**20.59**	**277**	P		P	**P**	17 55 48.4	+1.6
QLP	**Quilpie**	**20.63**	**192**	P		Pn		17 55 50.3	+0.3
	comp=Z,122nm,1.2s								
QLP	**Quilpie**	**20.63**	**192**	P		P	**P**	17 55 49.0	+1.8
AAI	**Ambon**	**20.73**	**276**	P		P	**P**	17 55 48.5	+0.1
	comp=Z,74nm,0.7s								
KNRA	**Kununurra**	**21.78**	**243**	P		P	**P**	17 55 59.6	+0.1
	comp=Z,108nm,0.8s								
KNRA	**Kununurra**	**21.78**	**243**				**P**	17 55 58.5	-1.1
AS31	**Alice Springs**	**22.45**	**218**	P		P	**P**	17 56 07.5	+0.7
AS31				IAmb		IAmb		17 56 09.2	
	comp=Z,25nm,0.6s								
ASAR	**Alice Springs**	**22.45**	**218**	P		P	**P**	17 56 07.5	+0.7
	comp=Z,56nm,0.6s,baz=56,slow=9.7,SNR=1705								
ASAR				S		S	**S**	18 00 08.9	-1.0
	comp=Z,16nm,0.8s,baz=47,slow=19,SNR=19								
ASAR				ScP		ScP	**ScP**	18 03 32.8	0.0
	comp=Z,2.1nm,0.9s,baz=40,slow=2.5,SNR=5.3								
ASAR				LR		LR		18 05 05.3	
	comp=Z,188nm,20.7s,baz=42,slow=37								
	comp=Z,56nm,0.6s								
INKA	**Innaminka**	**22.66**	**199**				**P**	17 56 07.6	-1.2
SANI	**Sanana**	**23.18**	**280**	P		P	**P**	17 56 16.3	+2.0
SANI	**Sanana**	**23.18**	**280**	P		P	**P**	17 56 14.1	-0.2
	comp=Z,27nm,0.6s								
ARMA	**Armidale**	**24.12**	**174**	P		P	**P**	17 56 29.0	+5.9
	comp=Z,30nm,1.8s								
ARMA	**Armidale**	**24.12**	**174**	P		P	**P**	17 56 27.0	+3.9
SOEI	**Soe**	**24.57**	**260**	P		P	**P**	17 56 28.1	+0.8
SOEI	**Soe**	**24.57**	**260**	P		P	**P**	17 56 27.3	0.0
	comp=Z,1μmcomp=Z,110nm,0.9s								
BATI	**Baumata**	**25.21**	**259**	LR		LR		18 09 15.3	
	comp=Z,135nm,18.2s,baz=129,slow=43								
BATI	**Baumata**	**25.21**	**259**	P		P	**P**	17 56 32.9	-0.2
CMSA	**Cobar Meteorol**	**25.27**	**186**	P		P	**P**	17 56 35.5	+2.2
	comp=Z,19nm,0.9s								
CMSA	**Cobar Meteorol**	**25.27**	**186**	P		P	**P**	17 56 35.8	+2.5
FITZ	**Fitzroy Crossi**	**25.49**	**241**	LR		LR		18 07 29.7	
	comp=Z,234nm,19.9s,baz=84,slow=38								
STKA	**Stephens Creek**	**26.32**	**194**	P		P	**P**	17 56 44.7	+1.8
	comp=Z,89nm,1.8s								
STKA	**Stephens Creek**	**26.32**	**194**	P		P	**P**	17 56 44.1	+1.2
	comp=Z,9.4nm,0.8s,baz=0.6,slow=9.8,SNR=14								
STKA				LR		LR		18 07 18.5	
	comp=Z,185nm,20.5s,baz=21,slow=37								
	comp=Z,9.4nm,0.8s								
STKA	**Stephens Creek**	**26.32**	**194**	P		P	**P**	17 56 45.5	+2.6
STKA	**Stephens Creek**	**26.32**	**194**	P		P	**P**	17 56 44.4	+1.5

MMRI Maumere 26.48 263 P **P** 17 56 43.9 -0.6
MMRI Maumere 26.48 263 P **P** 17 56 42.1 -2.4
MMRI Maumere 26.48 263 P **P** 17 56 43.2 -1.3
EDFI Ende, Flores 27.02 263 P **P** 17 56 48.1 -1.4
WRKA Warakurna 27.09 224 P **P** 17 56 50.7 +0.7
comp=Z,24nm,0.6s
BSSI Bau Bau, Buton 28.18 269 P **P** 17 56 59.1 -0.7
comp=Z,57nm,0.9s
WSI Waingapu 28.46 261 P **P** 17 57 01.5 -0.7
HTT Hallett 28.51 198 P P 17 57 07.4 +4.8
comp=Z,17nm,1.3s
HTT Hallett 28.51 198 P **P** 17 57 05.7 +3.1
LBFI Labuhan Bajo, 28.79 264 P **P** 17 57 02.5 -2.7
BBOO Buckleboo 28.93 203 P **P** 17 57 07.5 +1.3
BBOO Buckleboo 28.93 203 P **P** 17 57 05.8 -0.4
BBOO IAmb IAmb 17 58 02.2
comp=Z,60nm,1.6s
TOLI2 Tolitoli 28.97 284 P **P** 17 57 09.5 +2.7
KAPI Kappang 28.98 271 LR LR 18 10 09.3
comp=Z,85nm,21.9s,baz=84,slow=39
KAPI Kappang 28.98 271 P **P** 17 57 06.6 -0.2
WBSI Waikabubak, Su 29.35 262 P **P** 17 57 09.3 -0.9
comp=Z,1umcomp=Z,59nm,0.8s
DBNI Kabupaten Domp 30.35 264 P **P** 17 57 15.7 -3.3
comp=Z,15nm,0.7s
PLAI Plampang 30.89 263 P **P** 17 57 22.1 -1.7
PLAI Plampang 30.89 263 P **P** 17 57 21.4 -2.4
comp=Z,60nm,0.7s
FORT Forrest 31.19 216 P **P** 17 57 27.2 +1.0
comp=Z,32nm,0.8s
FORT Forrest 31.19 216 P **P** 17 57 26.4 +0.2
FORT IAmb IAmb 17 57 27.7
comp=Z,23nm,0.7s
BRAT Ballarat 31.41 188 P **P** 17 57 30.1 +2.0
MBWA Marble Bar 31.81 239 P **P** 17 57 32.5 +0.7
comp=Z,57nm,0.7s
MBWA Marble Bar 31.81 239 P **P** 17 57 32.2 +0.4
MBWA Marble Bar 31.81 239 P **P** 17 57 31.9 +0.1
MBWA Marble Bar 31.81 239 P **P** 17 57 32.2 +0.4
PSAC2 Pilbara Seismi 31.83 239 P **P** 17 57 32.8 +0.8
comp=Z,47nm,0.9s
PSA00 Pilbara Seismi 31.88 239 P **P** 17 57 33.2 +0.8
comp=Z,41nm,0.8s
PSA00 Pilbara Seismi 31.88 239 P **P** 17 57 32.9 +0.5
PSA00 Pilbara Seismi 31.88 239 P **P** 17 57 32.7 +0.3
PSA00 IAmb IAmb 17 57 33.9
comp=Z,18nm,0.8s
PSA00 Pilbara Seismi 31.88 239 P **P** 17 57 32.9 +0.5
PSA00 IAmb IAmb 17 57 33.8
comp=Z,31nm,0.8s
PSAB3 Pilbara Seismi 31.88 239 P **P** 17 57 33.2 +0.8
comp=Z,44nm,1.0s
PSAC1 Pilbara Seismi 31.89 239 P **P** 17 57 33.4 +0.8
comp=Z,60nm,0.9s
IGBI Denpasar 33.49 264 P **P** 17 57 44.6 -2.0
JCJ Chichijima 33.83 349 LR LR 18 10 40.4
comp=Z,41nm,18.7s,baz=138,slow=35
MEEK Meekatharra 35.17 231 P **P** 17 58 02.1 +1.1
comp=Z,90nm,1.0s
MEEK Meekatharra 35.17 231 P **P** 17 58 02.2 +1.1
KMBL Kambalda 35.47 222 P **P** 17 58 04.3 +0.8
comp=Z,25nm,0.9s
SJI Sawahan 36.82 266 P **P** 17 58 14.7 -0.6
comp=Z,58nm,0.9s
SNJI Sawahan-Nganju 36.83 265 P **P** 17 58 15.4 -0.1
comp=Z,29nm,0.8s
GIRL Giralia 37.10 240 P **P** 17 58 19.6 +2.1
comp=Z,53nm,1.9s
GIRL Giralia 37.10 240 P **P** 17 58 18.2 +0.8
PCJI Pacitan 37.40 265 P **P** 17 58 19.3 -0.9
UGM Wanagama 38.05 265 P **P** 17 58 24.5 -1.2
comp=Z,40nm,0.9s
MORW Morawa 38.35 230 P **P** 17 58 27.5 -0.5
comp=Z,40nm,1.5s
MORW Morawa 38.35 230 P **P** 17 58 28.6 +0.6
MORW Morawa 38.35 230 P **P** 17 58 28.4 +0.4
KLBR Kellerberrin 38.43 225 P **P** 17 58 29.0 +0.3
comp=Z,132nm,0.8s
BLDU Ballidu 38.65 227 P **P** 17 58 31.3 +0.8
comp=Z,31nm,2.4s
NWAO Narrogin (SRO) 39.55 224 LR LR 18 16 01.2
comp=Z,141nm,18.5s,baz=40,slow=38
MUN Mundaring 39.74 226 P **P** 17 58 40.5 +0.9
comp=Z,40nm,0.9s
BBJI Bungbulang 40.90 266 P **P** 17 58 47.9 -1.6
BBJI Bungbulang 40.90 266 P **P** 17 58 48.0 -1.6
TPI Tanjungpandan 41.20 273 P **P** 17 58 52.3 +0.4
comp=Z,35nm,1.0s
RPZ Rata Peaks 42.06 156 LR LR 18 14 19.4
comp=Z,60nm,20.5s,baz=91,slow=33
MJAR Matsushiro Arr 43.78 348 P **P** 17 59 11.2 -1.2
comp=Z,2.8nm,0.8s,baz=175,slow=6.9,SNR=12
MJAR LR LR 18 14 33.1
comp=Z,76nm,18.9s,baz=173,slow=32
comp=Z,2.8nm,0.8s
MJAR Matsushiro Arr 43.78 348 P **P** 17 59 10.8 -1.7
NJ2 Nanjing 47.67 325 *e*P **P** 17 59 44.3 +1.1
KSRS Korea Array 47.72 337 P **P** 17 59 42.3 -1.2
comp=Z,2.4nm,0.5s,baz=159,slow=8.8,SNR=17
comp=Z,2.4nm,0.5s
ASAJ Asahikawa 50.51 354 LR LR 18 19 46.8
comp=Z,32nm,21.8s,baz=310,slow=34
USRK Ussuriysk Ar. 52.53 345 P **P** 18 00 19.7 -0.1
comp=Z,4.5nm,0.8s,baz=186,slow=11,SNR=2.2
comp=Z,4.5nm,0.8s
CN2 Changchun 54.18 339 *e*P **P** 18 00 34.1 +2.2
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CMAR Chiang Mai Arr 55.01 298 P **P** 18 00 37.9 -0.6
comp=Z,0.9nm,0.4s,baz=109,slow=7.2,SNR=4.8
comp=Z,0.9nm,0.4s
BNX BinXian 55.25 342 ⇑P **P** 18 00 39.9 +0.3
BNX pmax pmax
comp=Z,5.0nm,1.0s
PZH PanZhiHua 56.09 308 P **P** 18 00 48.3 +2.1
CD2 Chengdu 56.81 313 *e*P **P** 18 00 49.0 -2.2
CD2 pmax pmax
comp=Z,10.0nm,0.4s
HHC Hu-ho-hao-te 58.07 327 *e*P **P** 18 01 01.3 +1.4
HHC pmax pmax
comp=Z,8.0nm,0.8s
HHC pmax pmax
comp=Z,72nm,5.1s
BTO2 Baotou 58.92 326 *e*P **P** 18 01 07.1 +1.2
BTO2 pP **sP** 18 01 26.5 -0.7
BTO2 sP pP 18 01 34.8 +14
BTO2 PP **PP** 18 03 18.8 +2.0
BTO2 S **S** 18 09 09.4 +1.3
BTO2 pmax pmax
comp=Z,3.0nm,0.5s
BTO2 pmax pmax
comp=Z,190nm,4.6s
BTO2 L L
comp=Z,310nm,4.7s
BTO2 L L
comp=Z,180nm,5.0s
HEH HeiHe 59.32 344 *e*P **P** 18 01 08.3 0.0
HEH pmax pmax
comp=Z,6.0nm,0.7s
PETK Petropavlovsk- 59.67 6 P **P** 18 01 09.8 -0.8
comp=Z,16nm,0.5s,baz=187,slow=7.3,SNR=67
PETK LR LR 18 22 45.3
comp=Z,39nm,21.4s,baz=242,slow=32
comp=Z,16nm,0.5s
PETK Petropavlovsk- 59.67 6 P **P** 18 01 11.2 +0.6
DRV Dumont d'Urvil 60.56 184 P **P** 18 01 17.7 +1.2
DRV x x 18 01 26.9
DRV pP **pP** 18 01 30.4 +0.3
DRV sP **pwP** 18 01 36.1 -0.9
DRV x x 18 01 38.9
DRV x x 18 01 42.4
SONM Songino Array 65.58 330 P **P** 18 01 49.9 -0.4
comp=Z,0.8nm,0.4s,baz=176,slow=6.8,SNR=4.9
SONM PcP **PcP** 18 02 20.7 -0.8
comp=Z,1.4nm,0.6s,baz=137,slow=3.7,SNR=4.1
comp=Z,0.8nm,0.4s
MA2 Magadan 65.69 1 LR LR 18 27 28.5
comp=Z,21nm,21.9s,baz=260,slow=33
MA2 Magadan 65.69 1 **P** 18 01 50.7 0.0
MA2 IAmb IAmb 18 01 52.0
comp=Z,13nm,0.8s
MA2 Magadan 65.69 1 P **P** 18 01 51.2 +0.6
MA2 pP **pP** 18 02 03.7 -2.2
MA2 x x 18 02 06.7
LSA Lhasa 65.90 306 P **P** 18 01 51.9 -1.2
PALK Pallekele 69.30 280 LR LR 18 36 08.1
comp=Z,84nm,18.1s,baz=290,slow=39
YAK Yakutsk 69.73 351 LR LR 18 34 53.1
comp=Z,16nm,18.9s,baz=283,slow=38
UNV Unalaska Valle 70.67 26 P **P** 18 02 22.4 +0.5
baz=228
SPIA Saint Paul Isl 71.48 22 P **P** 18 02 27.3 +0.6
baz=223
VNDA Vanda 71.50 177 P **P** 18 02 26.6 0.0
comp=Z,3.9nm,0.3s,baz=18,slow=4.7,SNR=37
VNDA LR LR 18 30 29.9
comp=Z,58nm,19.9s,baz=138,slow=33
comp=Z,3.9nm,0.3s
VNDA Vanda 71.50 177 P **P** 18 02 27.1 +0.5
VNDA Vanda 71.50 177 P **P** 18 02 26.9 +0.2
WMQ Urumqi 74.23 319 *e*P **P** 18 02 45.3 +1.9
SDPT Sand Point 74.33 27 P **P** 18 02 44.0 +0.4
baz=233
CHNA Chernabura Isl 74.43 28 P **P** 18 02 44.5 +0.3
baz=234
BILL Bilibino 75.19 7 P **P** 18 02 49.6 +1.2
BILL x x 18 02 57.8
BILL x x 18 02 59.3
BILL pP **PcP** 18 03 03.0 +1.3
M11K Mekoryuk 75.25 21 P **P** 18 02 49.4 +0.6
baz=226
CHGN Chignik 75.83 27 P **P** 18 02 51.7 -0.5
baz=235
GAMB Gambell 75.93 17 P **P** 18 02 53.3 +0.7
baz=221
M13K Dall Lake 76.32 22 P **P** 18 02 55.8 +0.9
baz=229
O14K Tigyukauivet M 76.39 24 IAmb IAmb 18 02 57.4
comp=Z,22nm,1.1s
O14K Tigyukauivet M 76.39 24 P **P** 18 02 56.1 +0.8
baz=231
N14K Kuskokwak Cree 76.64 23 P **P** 18 02 57.3 +0.5
baz=231
K13K Kusilvak Mount 76.86 21 IAmb IAmb 18 04 37.6
comp=Z,27nm,2.0s
K13K Kusilvak Mount 76.86 21 P **P** 18 02 58.8 +0.9
baz=228
CHIR Chirikof Islan 76.86 29 P **P** 18 02 58.4 +0.2
baz=237
O15K Ungalikthiuk R 76.93 24 IAmb IAmb 18 03 00.0
comp=Z,15nm,0.8s
O15K Ungalikthiuk R 76.93 24 P **P** 18 02 58.7 +0.3
baz=233
R16K Pilot Point 76.94 26 P **P** 18 02 58.5 0.0
baz=235
M14K Bethel 77.06 22 IAmb IAmb 18 03 00.9
comp=Z,16nm,0.8s
M14K Bethel 77.06 22 P **P** 18 02 59.6 +0.5
baz=230
L14K Kuka Creek 77.17 22 P **P** 18 03 00.2 +0.5
baz=230
N15K Kwethluk River 77.42 23 IAmb IAmb 18 03 03.4
comp=Z,14nm,0.9s
N15K Kwethluk River 77.42 23 P **P** 18 03 01.1 -0.1
baz=232
M15K Kasigluk River 77.51 23 P **P** 18 03 01.9 +0.2
baz=232
R17L Mt. Peulik Vol 77.51 27 P **P** 18 03 01.9 +0.1
baz=236
P16K Nushagak River 77.60 25 P **P** 18 03 01.8 -0.4
baz=234
J14K Nanvaranak Lak 77.78 20 IAmb IAmb 18 03 05.5
comp=Z,7.0nm,0.7s
J14K Nanvaranak Lak 77.78 20 P **P** 18 03 03.6 +0.5
baz=229
L15K Ungalak Mounta 77.83 22 P **P** 18 03 03.3 -0.1
baz=231
O16K Kokwok River B 77.89 25 P **P** 18 03 03.7 0.0
baz=234
SII Sitkinak Islan 77.94 28 P **P** 18 03 04.1 -0.1
baz=238
Q16K King Salmon 77.97 26 P **P** 18 03 04.0 -0.2
baz=236
Q17K Contact Creek 78.08 26 P **P** 18 03 04.7 -0.3
baz=237
N16K Nishlik Lake 78.13 24 P **P** 18 03 05.1 -0.1
baz=234
K15K Wolf Creek Mou 78.20 21 IAmb IAmb 18 03 07.4
comp=Z,13nm,0.8s
K15K Wolf Creek Mou 78.20 21 P **P** 18 03 06.0 +0.5
baz=231
TNA Tin City 78.35 17 P **P** 18 03 06.5 +0.3
baz=224
P17K Kvichak River 78.35 25 P **P** 18 03 05.7 -0.7
baz=236
M16K Timber Creek 78.39 23 P **P** 18 03 06.8 +0.2
baz=233
O17K Koliganek Bris 78.41 25 P **P** 18 03 07.1 +0.5
baz=235
ANM Nome 78.41 18 P **P** 18 03 07.4 +0.8
baz=227,SNR=7.9
L16K Owhat River 78.60 22 IAmb IAmb 18 03 08.8
comp=Z,7.2nm,0.7s
L16K Owhat River 78.60 22 P **P** 18 03 07.5 -0.2
baz=233
OHAK Old Harbor 78.70 28 P **P** 18 03 07.7 -0.6
baz=239
F14K Arctic Creek 78.75 17 P **P** 18 03 08.5 0.0
baz=2
N17K Nushagak Hills 78.80 24 IAmb IAmb 18 04 04.5
comp=Z,42nm,1.9s
N17K Nushagak Hills 78.80 24 P **P** 18 03 09.6 +0.8
baz=235
MKAR Makanchi Array 78.91 320 P **P** 18 03 08.7 -1.0
comp=Z,0.6nm,0.6s,baz=100,slow=7.7,SNR=8.2
comp=Z,0.6nm,0.6s
P18K Big Mountain, 78.98 26 P **P** 18 03 10.1 +0.2
baz=237
G15K Niukluk 79.12 18 P **P** 18 03 11.0 +0.5
baz=228
J16K Anvik River 79.16 21 IAmb IAmb 18 03 12.5
comp=Z,7.9nm,0.6s
J16K Anvik River 79.16 21 P **P** 18 03 11.1 +0.4
baz=231,SNR=8.7
M17K Holitna River 79.20 23 P **P** 18 03 11.9 +0.8
baz=235
O18K Koktuh Hills 79.24 25 P **P** 18 03 12.0 +0.7
baz=237
L17K Donlin 79.30 22 P **P** 18 03 12.5 +1.0
baz=234
KDAK Kodiak Island 79.31 28 LR LR 18 32 02.1
comp=Z,56nm,21.9s,baz=60,slow=31
KDAK Kodiak Island 79.31 28 P **P** 18 03 12.3 +0.7
baz=240
N18K Kilae Creek 79.42 24 P **P** 18 03 12.8 +0.5
baz=236
F15K North Star Dit 79.42 18 P **P** 18 03 12.8 +0.6
baz=227
Q19K Cape Douglas, 79.42 26 P **P** 18 03 12.7 +0.4
baz=238
H16K Elim 79.47 19 P **P** 18 03 12.9 +0.5
baz=230,SNR=14
I17K Unalakleet 79.51 20 IAmb IAmb 18 03 14.4
comp=Z,7.9nm,0.7s
I17K Unalakleet 79.51 20 P **P** 18 03 13.1 +0.6
baz=231,SNR=11
K17K Iditarod 79.65 22 IAmb IAmb 18 03 15.4
comp=Z,14nm,0.8s
K17K Iditarod 79.65 22 P **P** 18 03 14.3 +0.9
baz=234
Q20K Shuyak Island 79.82 27 P **P** 18 03 15.2 +0.8
baz=240
M18K Stony River 79.89 24 P **P** 18 03 15.6 +0.8
baz=236
G16K Koyuk River 79.92 19 P **P** 18 03 15.7 +0.8
baz=229
L18K Granite Mounta 79.97 23 IAmb IAmb 18 03 16.8
comp=Z,9.3nm,0.7s
L18K Granite Mounta 79.97 23 P **P** 18 03 15.9 +0.7
baz=235
P19K Oil Pt 79.98 26 **P** 18 03 15.0 -0.3
P19K Oil Pt 79.98 26 P **P** 18 03 15.3 0.0
baz=239
N19K Bonanza Creek 80.07 25 IAmb IAmb 18 03 17.0
comp=Z,20nm,1.6s
N19K Bonanza Creek 80.07 25 P **P** 18 03 16.2 +0.4
baz=237
ZALV Zalesovo Beam 80.25 327 P **P** 18 03 14.6 -2.2
comp=Z,1.0nm,0.5s,baz=105,slow=6.2,SNR=5.6
comp=Z,1.0nm,0.5s
H17K Granite Mounta 80.43 20 P **P** 18 03 18.5 +0.9
baz=232
G17K Kiwalik Mounta 80.54 19 P **P** 18 03 18.7 +0.5
baz=231
L19K White Mountain 80.66 23 IAmb IAmb 18 03 20.6
comp=Z,11nm,0.9s
L19K White Mountain 80.66 23 P **P** 18 03 19.2 +0.2
baz=237
J18K Innoko River 80.67 22 P **P** 18 03 19.3 +0.4
baz=235
HOM Homer 80.68 26 P **P** 18 03 18.9 -0.1
baz=240
M19K Big River Lodg 80.69 24 P **P** 18 03 19.7 +0.6
baz=237
F17K Baldwin Pennin 80.95 18 P **P** 18 03 21.0 +0.8
baz=230
C16K Lisburne Hills 80.99 16 P **P** 18 03 21.4 +0.9
baz=226
H18K Honhosa River 81.08 20 P **P** 18 03 21.6 +0.5
baz=233
BRSE Bradley Lake S 81.12 26 P **P** 18 03 21.8 +0.4
baz=241
E17K Hotham Inlet 81.19 17 P **P** 18 03 22.4 +0.8
baz=230
M20K Styx River 81.19 24 IAmb IAmb 18 03 23.0
comp=Z,6.6nm,0.6s
M20K Styx River 81.19 24 P **P** 18 03 22.2 +0.4
baz=238
N20K Mount Spurr 81.21 25 P **P** 18 03 22.4 +0.4
baz=240
D17K Noatak River 81.22 17 P **P** 18 03 22.7 +0.9
baz=228
GCSA Galena City Sc 81.35 21 P **P** 18 03 23.0 +0.5
baz=235
J19K Poorman 81.38 22 P **P** 18 03 23.1 +0.5
baz=236
G18K Tagagawik 81.43 19 P **P** 18 03 23.3 +0.4
baz=233
RDOG Red Dog Mine 81.51 16 P **P** 18 03 24.0 +0.7
baz=228
F18K Selawik 81.55 18 P **P** 18 03 24.0 +0.5
baz=232
K20K Telida 81.60 22 IAmb IAmb 18 03 25.5
comp=Z,12nm,0.9s
K20K Telida 81.60 22 P **P** 18 03 24.5 +0.6
baz=238
C17K DeLong Mountai 81.72 16 P **P** 18 03 24.9 +0.5
baz=228
E18K Tukpahlearik C 81.77 18 P **P** 18 03 25.3 +0.7
baz=231
SEW Seward 81.86 26 P **P** 18 03 25.1 -0.1
baz=242
SKT Skwentna 81.89 24 P **P** 18 03 25.0 -0.4
baz=240
O22K Cooper Landing 81.92 26 P **P** 18 03 25.4 -0.2
baz=242
J20K Nowinta River 82.02 22 IAmb IAmb 18 03 27.3
comp=Z,5.7nm,0.6s
J20K Nowinta River 82.02 22 P **P** 18 03 26.0 -0.1
baz=237,SNR=7.6
PPLA Purkeypile 82.09 23 P **P** 18 03 26.6 0.0
baz=239
G19K Purcell Mounta 82.10 19 P **P** 18 03 26.6 +0.2
baz=234
RC01 Rabbit Creek A 82.20 26 IAmb IAmb 18 03 27.1
comp=Z,8.8nm,0.7s
RC01 Rabbit Creek A 82.20 26 P **P** 18 03 26.8 -0.3
baz=242
I20K Naaghedeneel 82.23 21 P **P** 18 03 27.6 +0.5
baz=237
F19K Shaleruckik Mo 82.28 19 P **P** 18 03 27.7 +0.4
baz=234
C18K Utukok River 82.38 16 P **P** 18 03 28.1 +0.2
baz=230
H20K Anotleneega Mo 82.47 20 P **P** 18 03 28.7 +0.3
baz=236
CHUM Lake Minchumin 82.55 22 P **P** 18 03 29.1 +0.3
baz=239,SNR=23
KURBB Kurchatov Arra 82.58 323 P **P** 18 03 27.6 -1.6
comp=Z,0.2nm,0.4s,baz=116,slow=4.1,SNR=5.6
comp=Z,0.2nm,0.4s
CUT Chulitna 82.61 24 P **P** 18 03 28.8 -0.3
baz=241
PMR Palmer 82.70 25 P **P** 18 03 29.5 -0.1
baz=242
P23K Montague Islan 82.73 27 P **P** 18 03 30.0 +0.2
baz=244
E19K Redstone River 82.82 18 IAmb IAmb 18 03 31.4
comp=Z,8.2nm,0.6s
E19K Redstone River 82.82 18 P **P** 18 03 30.3 +0.1
baz=234
KNK Knik Glacier 82.90 26 P **P** 18 03 30.7 -0.1
baz=243
KTH Kantishna Hill 82.92 23 IAmb IAmb 18 03 30.7
comp=Z,18nm,1.1s
F20K Avaraart Lake 83.07 19 P **P** 18 03 31.5 +0.1
baz=236
TRF Thorofare Moun 83.11 23 IAmb IAmb 18 03 33.2
comp=Z,7.5nm,0.5s
TRF Thorofare Moun 83.11 23 P **P** 18 03 31.5 -0.5
baz=241,SNR=6.7
C19K Lookout Ridge 83.12 16 P **P** 18 03 32.5 +0.7
baz=232
SML Sawmill 83.14 25 P **P** 18 03 31.9 0.0
baz=243,SNR=6.4
BPAW Bear Paw Mtn. 83.16 23 P **P** 18 03 31.4 -0.6
baz=240,SNR=8.0
D19K Kuna River 83.17 17 IAmb IAmb 18 03 32.8
comp=Z,6.5nm,0.5s
D19K Kuna River 83.17 17 P **P** 18 03 32.0 0.0
baz=233
GLI Glacier Island 83.26 26 P **P** 18 03 32.3 -0.3
baz=244
H21K Melozitna Rive 83.29 21 P **P** 18 03 32.8 +0.2
baz=238
I21K Tanana 83.34 21 IAmb IAmb 18 03 35.0
comp=Z,9.3nm,1.1s
I21K Tanana 83.34 21 P **P** 18 03 33.5 +0.7
baz=239,SNR=7.4
M23K Glacier View 83.39 25 P **P** 18 03 32.9 -0.3
baz=244
A19K Wainwright 83.42 15 P **P** 18 03 33.8 +0.7
baz=230
G21K Allakaket 83.51 20 P **P** 18 03 33.8 +0.1
baz=238
WAT1 Susitna Watana 83.52 24 P **P** 18 03 33.0 -0.9
baz=243
SCM Sheep Creek Mo 83.58 25 P **P** 18 03 34.1 -0.1
baz=244
E20K Nigu River 83.61 18 P **P** 18 03 34.7 +0.4
baz=235
QSPA South Pole Qui 83.66 180 P **P** 18 03 34.2 -0.5
comp=Z,2.2nm,0.7s,baz=9.5,slow=6.1,SNR=3.5
comp=Z,2.2nm,0.7s
QSPA South Pole Qui 83.66 180 P **P** 18 03 34.9 +0.2
QSPA PcP **PcP** 18 03 39.3 +0.5
QSPA pP **pP** 18 03 48.2 -1.1
QSPA x x 18 03 49.0
QSPA sP **pwP** 18 03 53.3 -1.1
EYAK Cordova Ski Ar 83.71 27 P **P** 18 03 34.6 -0.2
baz=245
MLY Manley 83.72 22 IAmb IAmb 18 03 35.7
comp=Z,8.4nm,0.7s
MLY Manley 83.72 22 P **P** 18 03 34.9 0.0
baz=240,SNR=16
WAT6 Susitna Watana 83.73 25 P **P** 18 03 34.8 -0.3
baz=243,SNR=7.4
D20K Etivluk River 83.75 17 IAmb IAmb 18 03 36.5
comp=Z,12nm,1.4s
D20K Etivluk River 83.75 17 P **P** 18 03 35.3 +0.3
baz=234
MCK McKinley 83.78 23 P **P** 18 03 34.4 -0.8
baz=242,SNR=21
F21K Alatna River 83.89 19 IAmb IAmb 18 05 14.3
comp=Z,17nm,2.0s
F21K Alatna River 83.89 19 P **P** 18 03 35.9 +0.2
baz=238
H22K Ishtalitna Cre 83.92 21 P **P** 18 03 35.6 -0.3
baz=240
KLU Klutina 84.03 26 IAmb IAmb 18 03 37.9
comp=Z,16nm,1.0s
KLU Klutina 84.03 26 P **P** 18 03 36.8 +0.2
baz=245,SNR=6.9
KAIM Kayak Island 84.07 28 P **P** 18 03 36.9 +0.2
baz=247
DHY Denali Highway 84.11 24 IAmb IAmb 18 03 37.8
comp=Z,9.2nm,0.7s
DHY Denali Highway 84.11 24 P **P** 18 03 36.7 -0.4
baz=244,SNR=7.6
NEA2 Nenana 84.13 23 IAmb IAmb 18 03 36.9
comp=Z,7.3nm,0.6s
NEA2 Nenana 84.13 23 P **P** 18 03 36.1 -0.9

	baz=242,SNR=5.9						
M24K	**Tolsona, Glenn**	84.18	25	P	P	18 03 37.7	+0.4
	baz=245,SNR=7.0						
I23K	**Minto, Yukon-K**	84.29	22	IAmb	IAmb	18 06 19.7	
	comp=Z,19nm,1.9s						
I23K	**Minto, Yukon-K**	84.29	22	P	P	18 03 37.2	-0.4
	baz=242						
B20K	**Meade River**	84.35	16	P	P	18 03 38.2	+0.3
	baz=234						
G22K	**Bettles**	84.40	20	P	P	18 03 38.4	+0.2
	baz=240						
E21K	**Killik River**	84.40	18	P	P	18 03 38.7	+0.4
	baz=237						
BMRM	**Bremner River**	84.40	27	P	P	18 03 38.4	-0.1
	baz=246						
WRH	**Wood River Hil**	84.45	23	IAmb	IAmb	18 03 38.5	
	comp=Z,13nm,1.0s						
C21K	**Knifeblade Rid**	84.55	17	P	P	18 03 39.6	+0.6
	baz=236						
N25K	**Chitina, Valde**	84.66	26	P	P	18 03 39.9	+0.1
	baz=246						
COLA	**College**	84.73	23	P	P	18 03 39.0	-0.9
G23K	**Bananza Creek**	84.80	20	IAmb	IAmb	18 03 41.7	
	comp=Z,6.4nm,0.9s						
G23K	**Bananza Creek**	84.80	20	P	P	18 03 40.8	+0.4
	baz=241						
PAX	**Paxson**	84.84	25	P	P	18 03 40.6	-0.1
	baz=245						
B21K	**Ikpikpuk River**	84.86	17	P	P	18 03 40.9	+0.5
	baz=236						
HDA	**Harding Lake**	84.87	23	P	P	18 03 39.8	-0.8
	baz=244,SNR=6.1						
E22K	**Anaktuvuk Pass**	84.92	19	IAmb	IAmb	18 03 42.0	
	comp=Z,4.1nm,0.6s						
E22K	**Anaktuvuk Pass**	84.92	19	P	P	18 03 41.4	+0.5
	baz=239						
COLD	**Coldfoot**	84.99	20	P	P	18 03 41.5	+0.3
	baz=241						
POKR	**Poker Plat Res**	85.00	22	P	P	18 03 40.2	-1.1
	baz=243						
CRQE	**Cirque**	85.00	27	P	P	18 03 41.4	-0.2
	baz=248						
ILAR	**Eielson Array**	85.05	23	P	P	18 03 39.5	-2.1
	comp=Z,8.1nm,0.6s,baz=256,slow=5.3,SNR=110						
	comp=Z,8.1nm,0.6s						
K24K	**Donnelly Dome**	85.07	24	IAmb	IAmb	18 03 43.3	
	comp=Z,12nm,1.0s						
K24K	**Donnelly Dome**	85.07	24	P	P	18 03 41.9	+0.2
	baz=245						
H24K	**Noodor Dome**	85.16	22	P	P	18 03 42.4	+0.2
	baz=243						
MCARA	**McCarthy VSAT**	85.27	27	P	P	18 03 43.0	+0.3
	baz=248						
MESA	**MESA**	85.31	28	P	P	18 03 42.8	-0.4
	baz=249						
RIDG	**Independent Ri**	85.42	24	IAmb	IAmb	18 03 43.8	
	comp=Z,6.2nm,0.7s						
RIDG	**Independent Ri**	85.42	24	P	P	18 03 43.2	-0.3
	baz=246,SNR=5.6						
A22K	**Sinclair Lake**	85.53	16	P	P	18 03 44.2	+0.4
	baz=236						
J25K	**Saicha River,**	85.57	23	P	P	18 03 43.9	-0.4
	baz=245						
B22K	**Teshekpuk Lake**	85.59	17	IAmb	IAmb	18 03 46.4	
	comp=Z,5.1nm,0.5s						
B22K	**Teshekpuk Lake**	85.59	17	P	P	18 03 44.6	+0.5
	baz=237						
E23K	**Chandalar**	85.59	19	IAmb	IAmb	18 03 45.8	
	comp=Z,9.9nm,1.3s						
E23K	**Chandalar**	85.59	19	P	P	18 03 45.0	+0.6
	baz=241						
M26K	**Nabesna, AK**	85.67	26	P	P	18 03 44.9	+0.1
	baz=248						
G24K	**Hadweenzic Riv**	85.69	21	IAmb	IAmb	18 03 46.7	
	comp=Z,12nm,1.4s						
G24K	**Hadweenzic Riv**	85.69	21	P	P	18 03 45.3	+0.6
	baz=243						
D23K	**Nanushuk River**	85.70	18	P	P	18 03 45.6	+0.9
	baz=240						
DOT	**Dot Lake**	85.70	24	IAmb	IAmb	18 03 45.8	
	comp=Z,11nm,0.9s						
L26K	**Log Cabin Wild**	85.75	25	P	P	18 03 45.3	+0.1
	baz=247,SNR=10						
BARN	**Barnard Glacie**	85.76	27	IAmb	IAmb	18 03 46.4	
	comp=Z,5.7nm,0.7s						
SCRK	**Sand Creek**	85.86	24	P	P	18 03 45.9	+0.1
	baz=247						
CTG	**Chitna Glacier**	85.87	27	P	P	18 03 46.2	+0.3
	baz=249						
CTGM	**Chitina Glacie**	85.88	27	IAmb	IAmb	18 03 47.3	
	comp=Z,11nm,1.0s						
TOLK	**Toolik Lake Re**	85.89	19	P	P	18 03 46.5	+0.7
	baz=241						
PRP	**Porcupine Dome**	85.89	22	P	P	18 03 46.2	+0.3
	baz=245						
F24K	**Squaw Lake**	85.92	20	IAmb	IAmb	18 03 47.3	
	comp=Z,6.8nm,0.6s						
F24K	**Squaw Lake**	85.92	20	P	P	18 03 46.5	+0.6
	baz=243						
E24K	**Your Creek**	85.97	20	P	P	18 03 46.3	+0.1
	baz=242						
PINM	**Pinnacle**	86.08	28	P	P	18 03 47.0	+0.1
	baz=250						
M27K	**Edge Creek, AK**	86.13	26	IAmb	IAmb	18 03 48.8	
	comp=Z,14nm,1.0s						
M27K	**Edge Creek, AK**	86.13	26	P	P	18 03 47.4	+0.2
	baz=249,SNR=8.4						
C23K	**Itkillik River**	86.15	18	P	P	18 03 48.0	+1.1
	baz=240						
O28M	**Mount Upton**	86.33	28	P	P	18 03 48.8	+0.5
	baz=250						
D24K	**Happy Valley**	86.37	19	P	P	18 03 48.9	+0.8
	baz=242						
L27K	**Beaver Creek,**	86.41	25	IAmb	IAmb	18 03 50.0	
	comp=Z,8.6nm,1.1s						
L27K	**Beaver Creek,**	86.41	25	P	P	18 03 48.9	+0.5
	baz=249						
BCAR	**Beaver Creek A**	86.43	25	P	P	18 03 47.7	-0.9
FYU	**Fort Yukon**	86.44	21	IAmb	IAmb	18 03 49.3	
	comp=Z,6.6nm,0.7s						
YUK3	**Moose Creek**	86.55	27	P	P	18 03 49.9	+0.5
	baz=250,SNR=7.2						
BVCY	**Beaver Creek**	86.60	26	P	P	18 03 49.9	+0.6
	baz=250,SNR=5.5						
C24K	**Franklin Bluff**	86.68	18	IAmb	IAmb	18 03 50.8	
	comp=Z,11nm,0.8s						
C24K	**Franklin Bluff**	86.68	18	P	P	18 03 50.4	+0.9
	baz=242						
YUK8	**Steele Glacier**	86.70	27	P	P	18 03 50.7	+0.5
	baz=251						
I26K	**Coal Creek Min**	86.72	23	P	P	18 03 49.7	-0.1
	baz=247						
F25K	**Christian River**	86.73	20	P	P	18 03 50.5	+0.6
	baz=245						
O29M	**Mount Kennedy**	86.94	28	P	P	18 03 51.5	+0.4
	baz=252						
E25K	**Arctic Village**	86.98	20	IAmb	IAmb	18 06 00.1	
	comp=Z,15nm,2.0s						
E25K	**Arctic Village**	86.98	20	P	P	18 03 51.8	+0.8
	baz=245						
G26K	**Porcupine Rive**	87.12	21	IAmb	IAmb	18 03 53.2	
	comp=Z,8.1nm,0.7s						
G26K	**Porcupine Rive**	87.12	21	P	P	18 03 52.6	+0.9
	baz=247						
D25K	**Kavik River**	87.23	19	IAmb	IAmb	18 03 53.1	
	comp=Z,4.6nm,0.6s						
D25K	**Kavik River**	87.23	19	P	P	18 03 52.7	+0.4
	baz=244						
YUK4	**Talbot Arm**	87.23	27	P	P	18 03 53.5	+0.8
	baz=252,SNR=9.4						
YUK6	**Outpost Mounta**	87.23	28	P	P	18 03 53.1	+0.4
	baz=252						
F26K	**Sheenjek River**	87.29	21	P	P	18 03 53.3	+0.7
	baz=246						
I27K	**Kandik River**	87.42	23	P	P	18 03 53.8	+0.5
	baz=249						
HYT	**Haines Junctio**	87.60	28	P	P	18 03 54.9	+0.5
	baz=253,SNR=14						
P30M	**Million Dollar**	87.65	29	P	P	18 03 55.0	+0.5
	baz=253						
M29M	**Somme Creek**	87.66	26	IAmb	IAmb	18 03 56.1	
	comp=Z,6.9nm,0.7s						
M29M	**Somme Creek**	87.66	26	P	P	18 03 55.1	+0.6
	baz=252						
H27K	**Steamboat Moun**	87.68	22	IAmb	IAmb	18 03 55.8	
	comp=Z,8.0nm,0.7s						
H27K	**Steamboat Moun**	87.68	22	P	P	18 03 55.3	+0.7
	baz=249						
DAWY	**Dawson**	87.78	25	P	P	18 03 55.5	+0.5
	baz=251,SNR=10						
G27K	**Doyon Strip**	87.85	22	P	P	18 03 55.8	+0.5
	baz=249						
C26K	**Camden Bay**	87.95	18	P	P	18 03 56.4	+0.8
	baz=246						
N30M	**Aishikik Lake**	87.98	28	P	P	18 03 56.6	+0.5
	baz=253						
L29M	**L29M**	88.01	26	P	P	18 03 56.9	+0.8
	baz=252						
I28M	**Miner Creek**	88.02	23	IAmb	IAmb	18 03 57.4	
	comp=Z,5.0nm,0.6s						
I28M	**Miner Creek**	88.02	23	P	P	18 03 56.6	+0.4
	baz=250						
BVAR	**Borovoye Array**	88.10	324	P	P	18 03 54.4	-2.3
	comp=Z,0.9nm,0.7s,baz=96,slow=5.9,SNR=4.9						
	comp=Z,0.9nm,0.7s						
S32K	**Killisnoo**	88.12	32	P	P	18 03 57.1	+0.5
	baz=255						
C27K	**Jago River**	88.21	19	P	P	18 03 57.9	+1.0
	baz=247						
O30N	**Mendenhall**	88.25	28	IAmb	IAmb	18 03 58.9	
	comp=Z,7.4nm,0.9s						
O30N	**Mendenhall**	88.25	28	P	P	18 03 58.0	+0.7
	baz=254,SNR=6.4						
SKAG	**Skagway**	88.26	30	P	P	18 03 58.0	+0.7
	baz=255						
R32K	**Eaglecrest**	88.36	31	P	P	18 03 58.4	+0.6
	baz=255						
E27K	**Coleen River**	88.37	21	IAmb	IAmb	18 03 59.7	
	comp=Z,11nm,1.3s						
E27K	**Coleen River**	88.37	21	P	P	18 03 58.2	+0.5
	baz=249						
CRAG	**Craig**	88.42	34	P	P	18 03 58.8	+0.7
	baz=257						
M30M	**Minto, Yukon**	88.44	26	IAmb	IAmb	18 03 60.0	
	comp=Z,11nm,1.4s						
M30M	**Minto, Yukon**	88.44	26	P	P	18 03 58.7	+0.6
	baz=253,SNR=6.4						
K29M	**Barlow Dome**	88.50	25	P	P	18 03 59.1	+0.6
	baz=253						
U33K	**Whale Pass**	88.57	33	P	P	18 03 59.3	+0.5
	baz=257						
N31M	**Braeburn, Yuko**	88.59	28	P	P	18 03 59.5	+0.6
	baz=254						
I29M	**Ogilvie Camp,**	88.64	24	P	P	18 03 59.5	+0.4
	baz=252						
F28M	**Old Crow**	88.78	21	IAmb	IAmb	18 04 02.1	
	comp=Z,3.5nm,0.8s						
F28M	**Old Crow**	88.78	21	P	P	18 04 00.3	+0.6
	baz=250						
WHY	**Whitehorse**	88.79	29	P	P	18 04 00.3	+0.3
	baz=255						
H29M	**Whitestone**	88.89	23	P	P	18 04 00.6	+0.4
	baz=252						
WRAK	**Wrangell Islan**	89.06	33	P	P	18 04 01.2	+0.1
	baz=257						
P32M	**Atlin**	89.09	30	P	P	18 04 01.7	+0.4
	baz=256						
J30M	**Hart River**	89.21	25	IAmb	IAmb	18 04 03.4	
	comp=Z,5.0nm,0.6s						
J30M	**Hart River**	89.21	25	P	P	18 04 02.4	+0.5
	baz=254						
V35K	**Ketchikan**	89.23	34	P	P	18 04 01.8	-0.1
	baz=258						
E28M	**Babbage River**	89.23	20	IAmb	IAmb	18 04 03.5	
	comp=Z,2.6nm,0.6s						
E28M	**Babbage River**	89.23	20	P	P	18 04 02.4	+0.7
	baz=251						
I30M	**Mount Dempster**	89.37	24	IAmb	IAmb	18 04 03.2	
	comp=Z,3.1nm,0.7s						
I30M	**Mount Dempster**	89.37	24	P	P	18 04 02.8	+0.2
	baz=254						
M31M	**Drury Creek, Y**	89.41	27	P	P	18 04 03.2	+0.4
	baz=255						
EPYK	**Eagle Plains**	89.57	23	P	P	18 04 03.9	+0.5
	baz=253						
Q32M	**Nakina River**	89.66	31	P	P	18 04 04.5	+0.3
	baz=257						
P33M	**Teslin, Yukon**	89.67	29	P	P	18 04 04.5	+0.4
	baz=254						
E29M	**Blow River**	89.73	21	P	P	18 04 04.7	+0.6
	baz=252						
D28M	**Stokes Point**	89.74	20	P	P	18 04 04.7	+0.6
	baz=251						
G30M	**tAoh Zraii Nji**	89.93	22	P	P	18 04 05.7	+0.6
	baz=254						
F30M	**Barrier River**	90.27	22	P	P	18 04 07.1	+0.5
	baz=254						
T35M	**Bob Quinn**	90.31	33	P	P	18 04 07.7	+0.7
	baz=259						
H31M	**Peel River**	90.35	24	IAmb	IAmb	18 04 07.4	
	comp=Z,4.1nm,0.7s						
H31M	**Peel River**	90.35	24	P	P	18 04 07.6	+0.6
	baz=255						
R33M	**Jennings River**	90.41	30	P	P	18 04 07.6	0.0
	baz=258						
BBB	**Bella Bella**	90.68	38	LR	LR	18 36 40.4	
	comp=Z,32nm,22.0s,baz=286,slow=30						
DLBC	**Dease Lake**	90.70	31	LR	LR	18 41 52.9	
	comp=Z,18nm,19.7s,baz=270,slow=34						
MMPY	**Sheldon Lake,**	90.93	27	P	P	18 04 10.0	+0.2
	baz=258						
F31M	**Tsiigehtchic**	90.98	22	P	P	18 04 09.5	-0.4
	baz=256						
INK	**Inuvik**	91.27	21	IAmb	IAmb	18 04 12.1	
	comp=Z,4.3nm,1.0s						
INK	**Inuvik**	91.27	21	P	P	18 04 11.1	-0.1
	baz=256						
WTLY	**Watson Lake, Y**	91.62	30	P	P	18 04 13.5	+0.4
	baz=260						
TGTN	**Hyland Airport**	92.11	28	P	P	18 04 15.5	+0.1
	baz=261						
KOTAN	**Kotaneelee Air**	93.98	30	P	P	18 04 24.0	+0.1
	baz=264						
ELIB	**Princess Elisa**	94.37	195	*d*P	P	18 04 24.4	-1.3
WRGLY	**Wrigley**	94.55	27	P	P	18 04 26.6	+0.2
	baz=265						
A36M	**Sachs Harbour**	94.69	18	P	P	18 04 26.9	0.0
	baz=264						
C36M	**Paulatuk**	94.83	21	P	P	18 04 27.9	+0.3
	baz=265						
ARTI	**Arti**	95.46	326	LR	LR	18 48 46.0	
	comp=Z,20nm,20.5s,baz=28,slow=36						
NEW	**Newport**	97.35	42	LR	LR	18 42 53.4	
	comp=Z,34nm,19.3s,baz=167,slow=32						
PFO	**Pinyon Flats O**	97.36	57	LR	LR	18 40 04.8	
	comp=Z,46nm,21.7s,baz=224,slow=30						
ELK	**Elko**	98.56	50	LR	LR	18 42 25.1	
	comp=Z,23nm,20.2s,baz=252,slow=31						
YKA	**Yellowknife Ar**	98.59	28	P	P	18 04 43.8	-0.9
	comp=Z,0.4nm,0.9s,baz=276,slow=5.0,SNR=5.3						
YKA				LR	LR	18 46 34.2	
	comp=Z,32nm,18.7s,baz=336,slow=34						
	comp=Z,0.4nm,0.9s						
PLCA	**Paso Flores**	120.85	146	PKP	PKPdf	18 09 58.9	+0.1
	comp=Z,1.1nm,0.4s,baz=262,slow=2.2,SNR=17						
GERES	**GERESS Array B**	123.19	326	PKP	PKPdf	18 10 01.4	-1.6
	comp=Z,0.4nm,0.4s,baz=66,slow=2.7,SNR=6.3						
SCHQ	**Schefferville**	123.80	24	PKP	PKPdf	18 10 02.9	-0.9
	comp=Z,6.2nm,1.0s,baz=351,slow=5.2,SNR=3.9						
EKA	**Eskdalemuir Ar**	126.24	341	PKP	PKPdf	18 10 07.2	-1.2
	comp=Z,1.2nm,0.5s,baz=32,slow=1.8,SNR=5.5						
LPAZ	**La Paz**	137.07	122	PKP	PKPdf	18 10 27.7	-3.1
	comp=Z,2.8nm,0.8s,baz=335,slow=0.7,SNR=7.3						
VILB	**Vilhena**	145.37	124		PKPbc	18 10 43.9	-1.1
TORD	**Torodi Ar. Bea**	146.94	284	PKPbc	PKPdf	18 10 48.1	+0.4
	comp=Z,1.8nm,0.5s,baz=68,slow=4.7,SNR=18						
BDFB	**Brasilia**	152.53	143	PKPbc	PKPbc	18 11 01.1	-2.5
	comp=Z,3.4nm,0.4s,baz=218,slow=0.5,SNR=7.9						
DBIC	**Dimbokro**	153.87	272	PKPbc	PKPbc	18 11 05.5	-0.9
	comp=Z,1.1nm,0.4s,baz=133,slow=2.6,SNR=1.6						

DNK ***15*** *17:59:18.9±1.9,51°.30N×16°.40E,h15km±65km,ML2.4, Presumed earthquake*
IPEC ***15*** *17:59:20.8±0.2,51°.44N×16°.42E,h1km,ML2.5/6, Error ellipse: s-maj=2.5km s-min=1.4km az=77.0*
VIE ***15*** *17:59:21.3±0.6,51°.40N×16°.25E,h0km,mb2.6/3,ml2.9/6, Error ellipse: s-maj=5.3km s-min=3.7km az=37.0 63 km NW of Wroclaw Suspected Mining induced.*
PRU ***15*** *17:59:22.1,51°.42N×16°.27E,h0km*
IDC ***15*** *17:59:22.3±0.8,51°.42N×16°.02E,h0km,mbtmp3.4/8, ML3.1/7, Error ellipse: s-maj=13.6km s-min=7.2km az=112.0*
ISC 15 17:59:19.8±0.7,**51°.48N**±0°.03×**16°.26E**±0°.02,**h0km**,**n48,**
σ1§**12**/89,**Poland**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	0.64	178	*e*Pg		**Pg**		17 59 32.9	+0.9
KSP				*e*Sg		**Sg**		17 59 41.0	+0.7
CHVC	**Chvalec**	0.90	188	*e*PG		**Pg**		17 59 37.8	+0.7
CHVC				*e*SG		**Sg**		17 59 49.5	+0.8
	comp=Z,76nm,0.5s								
OSTC	**Ostas**	0.93	182	*e*PG		**Pg**		17 59 38.3	+0.8
OSTC				*e*SG		**Sg**		17 59 50.2	+0.7
UPC	**Upice**	0.99	189	*e*PG		**Pg**		17 59 39.3	+0.6
UPC				*e*SG		**Sg**		17 59 52.3	+0.9
	comp=Z,178nm,0.4s								
DPC	**Dobruska-Polom**	1.13	178	*e*PG		**Pg**		17 59 41.9	+0.4
DPC				*e*SG		**Sg**		17 59 56.8	+0.7
	comp=Z,70nm,0.6s								
PIVO	**Bartosovice**	1.31	172	*e*Pg		**Pg**		17 59 44.9	+0.1
	baz=356								
PIVO				*e*Sg		**Sg**		18 00 00.4	-1.4
	69nm,0.5s,baz=356								
PVCC	**Panska Ves**	1.43	229	*e*PG		**Pb**		17 59 47.9	+0.6
PVCC				*e*SG		**Sg**		18 00 06.4	+0.7
	comp=Z,218nm,0.4s								
KRLC	**Kraliky**	1.45	166	*e*PG		**Pn**		17 59 47.5	+0.2
KRLC				*e*SG		**Sg**		18 00 05.1	-1.1
	comp=Z,36nm,0.5s								
RYBC	**Ceska Rybna**	1.68	184	*e*Pn		**Pn**		17 59 50.5	+0.1
	baz=7.8								
RYBC				*e*Sg		**Sn**		18 00 12.1	-0.5
	33nm,0.3s,baz=7.8								
STEB	**Steborice**	1.82	147	*e*PN		**Pn**		17 59 52.7	+0.3
STEB				*e*PG		**Pb**		17 59 53.9	-0.1
STEB				*e*SG		**Sn**		18 00 16.5	+0.3
	comp=Z,72nm,0.5s								
PRU	**Pruhonice**	1.85	217	*e*PG		**Pb**		17 59 54.8	+0.4
PRU				*e*SG		**Sb**		18 00 18.9	+0.8
	comp=Z,30nm,0.5s								
MORC	**Moravsky Berou**	1.89	154	*e*Pn		**Pn**		17 59 53.3	-0.1
	baz=337								
MORC				*e*Sg		**Sn**		18 00 17.4	-0.5
	30nm,0.6s,baz=337								
HSKC	**Hora Svate Kat**	1.98	245	*e*SG		**Sb**		18 00 23.3	+1.2
	comp=Z,46nm,0.3s								
OKC	**Ostrava-Krasne**	2.04	143	*e*PG		**Pb**		17 59 58.3	+0.6
OKC				*e*SG		**Sb**		18 00 24.4	+0.9
CLL	**Collm**	2.04	266	*e*Pn		**Pn**		17 59 56.0	+0.6
CLL				*i* Pg		**Pg**		17 59 59.1	+0.1
CLL				*e*Sg		**Sg**		18 00 26.0	+0.5
	comp=Z,27nm,0.7s								
VRAC	**Vranov**	2.19	174	Pn		**Pn**		17 59 58.7	+1.4
	comp=Z,3.3nm,0.3s,baz=350,slow=13,SNR=15								
VRAC				Lg		Lg		18 00 27.8	
	comp=Z,4.1nm,0.3s,baz=264,slow=19,SNR=8.3								
	comp=Z,9.1nm,0.4s								
VRAC	**Vranov**	2.19	174	*e*Pn		**Pn**		17 59 57.5	+0.1
	baz=357								
VRAC				*e*Sg		**Sb**		18 00 27.8	0.0
	comp=Z,28nm,0.6s,baz=357								
KRUC	**Moravsky**	2.42	178	*e*Pn		**Pn**		18 00 00.9	+0.3
	baz=0.4								
KRUC				*e*Sg		**Sb**		18 00 35.4	+0.8
	comp=Z,33nm,0.8s,baz=0.4								
OJC	**Ojcow**	2.58	118	*e*Pg		**Pg**		18 00 10.2	+1.0
OJC				*e*Sg		**Sg**		18 00 44.2	+1.7
NKC	**Novy Kostel**	2.72	244	*e*PN		**Pn**		18 00 05.7	+1.0
NKC				*e*PG		**Pg**		18 00 11.8	0.0
NKC				*e*SG		**Sg**		18 00 48.9	+1.9
JAVC	**Velka Javorina**	2.78	160	*e*Pn		**Pn**		18 00 05.3	-0.3
	baz=343								
JAVC	**Velka Javorina**	2.78	160	*e*PN		**Pn**		18 00 05.4	-0.2
KHC	**Kasperske Hory**	2.91	217	*e*PN		**Pn**		18 00 07.8	+0.4
KHC				*e*PG		**Pb**		18 00 14.1	+1.5
KHC				*e*SN		**Sn**		18 00 42.0	-1.1
KHC				*e*SG		**Sg**		18 00 52.7	-0.6
	comp=Z,21nm,0.5s								
CKRC	**Cesky Krumlov**	2.94	206	*e*PN		**Pn**		18 00 09.0	+1.2
CKRC				*e*PG		**Pb**		18 00 14.4	+1.3
CKRC				*e*SG		**Sg**		18 00 53.1	-1.2
	comp=Z,28nm,0.6s								
GERES	**GERESS Array B**	3.11	213	Pn		**Pn**		18 00 11.2	+1.1
	comp=Z,0.8nm,0.4s,baz=27,slow=14,SNR=13								
GERES				Pg		**Pb**		18 00 17.1	+1.2
	comp=Z,0.7nm,0.3s,baz=27,slow=18,SNR=59								
GERES				Sn		**Sn**		18 00 47.5	-0.5
	comp=Z,0.3nm,0.3s,baz=27,slow=29,SNR=6.8								
GERES				Lg		Lg		18 00 57.4	
	comp=Z,0.6nm,0.3s,baz=29,slow=28,SNR=10								
LANS	**Liptovska Anna**	3.11	137	*e*PG		**Pg**		18 00 19.1	-0.3
LANS				*e*SG		**Sg**		18 00 58.8	-0.9
MODS	**Modra-Piesok**	3.18	168	*e*PG		**Pg**		18 00 21.4	+0.7
MODS				*e*SG		**Sg**		18 01 01.3	-0.6
NIE	**Niedzica**	3.31	127	*e*Pg		**Pg**		18 00 25.2	+2.1
NIE				*e*Sg		**Sg**		18 01 06.0	0.0
WINA	**Alland / Wiene**	3.38	182	*e*Pn		**Pn**		18 00 14.8	+1.1
CONA	**Conrad Observa**	3.56	184	*e*Pn		**Pn**		18 00 17.0	+0.6
	comp=Z,0.4nm,0.3s								
CONA				*e*Sn		**Sn**		18 00 58.2	-1.0
	comp=Z,5.2nm,0.4s								
BSD	**Bornholm Skovb**	3.73	348	*i* P		**Pn**		18 00 19.2	+0.6
BSD				*i* S		**Sn**		18 01 00.7	-2.4
BSD				IAML				18 01 06.1	
	comp=Z,3.0nm,0.4s								
STHS	**Stebnicka Huta**	3.80	121	*e*PN		**Pn**		18 00 20.8	+1.2
STHS				*e*PG		**Pg**		18 00 32.6	0.0
STHS				*e*SG		**Sg**		18 01 25.2	+3.4
MOA	**Molln**	3.86	200	*e*Pn		**Pn**		18 00 20.8	+0.4
	comp=Z,1.2nm,0.4s								
HAMD	**Hammershus, De**	3.90	347	*i* P		**Pn**		18 00 21.6	+0.7
HAMD				*i* S		**Sn**		18 01 07.2	-0.2
HAMD				IAML				18 01 11.8	
	comp=Z,4.2nm,0.3s								
KECS	**Kecovo**	4.05	136	*e*SN		**Sn**		18 01 06.2	-5.0
KECS				*e*SG		**Sg**		18 01 29.4	-0.6
BIOA	**Bad Ischl, Aus**	4.16	205	*e*Pn		**Pn**		18 00 24.2	-0.3
	comp=Z,1.9nm,0.4s								
ARSA	**Arzberg**	4.26	187	*e*Pn		**Pn**		18 00 26.3	+0.

GO05	**Hualane**	**1.65**	**99**	*i* P		**Pn**	**18 21 23.1**	**-0.6**
GO05				*e*S		**Sn**	**18 21 42.1**	**-2.8**
GO05				IAML			18 21 43.4	
	comp=N,3μm,0.2s							
BI05	**Punta Hualpn**	**2.06**	**164**	⇑*i* P		**Pn**	**18 21 27.6**	**-1.7**
BI05				IAML			18 21 51.5	
	comp=N,599nm,0.3s							
BI05	**Punta Hualpn**	**2.06**	**164**	*e*P		**Pn**	**18 21 27.7**	**-1.7**
BI05				*e*S		**Sn**	**18 21 50.1**	**-5.0**
BI05				IAML			18 21 54.0	
	comp=Z,367nm,0.1s							
ML02	**Panimavida**	**2.27**	**117**	*e*P		**Pn**	**18 21 32.8**	**+0.5**
ML02				IAML			18 22 04.4	
	comp=E,807nm,0.7s							
BO01	**Tunca**	**2.36**	**82**	*e*P		**Pn**	**18 21 32.9**	**-0.6**
BO01				IAML			18 22 02.2	
	comp=N,476nm,0.6s							
MT01	**Popeta**	**2.38**	**68**	*i* P		**Pn**	**18 21 32.6**	**-1.1**
MT01				IAML			18 22 00.8	
	comp=E,431nm,0.2s							
BO02	**Sierra Bellavi**	**2.57**	**91**	⇑*i* P		**Pn**	**18 21 36.7**	**+0.2**
BO02				IAML			18 22 07.7	
	comp=N,2μm,0.4s							
MT09	**Talagante**	**2.61**	**69**	*e*P		**Pn**	**18 21 36.0**	**-1.1**
MT09				IAML			18 22 10.0	
	comp=N,673nm,0.2s							
MT02	**Curacav**	**2.75**	**58**	*e*P		**Pn**	**18 21 37.6**	**-1.3**
MT02				IAML			18 22 11.2	
	comp=E,187nm,0.5s							
BO04	**La Punta**	**2.84**	**75**	⇑*i* P		**Pn**	**18 21 40.1**	**0.0**
BO04				IAML			18 22 14.7	
	comp=N,820nm,0.4s							
BI02	**San Fabin de**	**2.86**	**132**	*e*P		**Pn**	**18 21 40.5**	**+0.1**
BI02				IAML			18 22 15.4	
	comp=N,132nm,0.3s							
BI02	**San Fabin de**	**2.86**	**132**	*e*P		**Pn**	**18 21 40.6**	**+0.1**
BI02				*e*S		**Sn**	**18 22 14.0**	**-1.0**
BI02				IAML			18 22 17.9	
	comp=Z,90nm,0.4s							
MT05	**Renca**	**2.97**	**63**	*e*P		**Pn**	**18 21 42.0**	**+0.1**
MT05				IAML			18 22 19.5	
	comp=E,803nm,0.3s							
MT12	**Pirque**	**2.97**	**71**	*e*P		**Pn**	**18 21 41.8**	**-0.1**
MT12				IAML			18 22 26.6	
	comp=E,658nm,0.6s							
ROCH	**El Roble**	**3.00**	**54**	*e*P		**Pn**	**18 21 41.8**	**-0.8**
ROCH				*e*P		Pb	18 21 41.9	-6.6
ROCH				IAML			18 22 21.9	
	comp=N,236nm,0.6s							
MT15	**Las Vizcachas**	**3.05**	**69**	*e*P		**Pn**	**18 21 42.8**	**-0.3**
MT15				IAML			18 22 23.0	
	comp=N,674nm,0.3s							
MT03	**Universidad Ad**	**3.09**	**67**	*e*P		**Pn**	**18 21 43.1**	**-0.5**
MT03				IAML			18 22 23.3	
	comp=N,700nm,0.1s							
VA06	**Catapilco**	**3.10**	**45**	*e*P		**Pn**	**18 21 42.0**	**-1.6**
VA06				IAML			18 22 20.8	
	comp=E,314nm,0.5s							
MT16	**CCHEN**	**3.11**	**66**	*e*P		**Pn**	**18 21 43.6**	**-0.2**
MT16				IAML			18 22 24.1	
	comp=E,131nm,0.4s							
MT14	**Cerro Cal¡n**	**3.12**	**65**	*e*P		**Pn**	**18 21 43.8**	**-0.1**
MT14				IAML			18 22 25.7	
	comp=N,349nm,0.2s							
PEL	**Peldehue**	**3.13**	**60**	*e*P		**Pn**	**18 21 44.2**	**0.0**
PEL				IAML			18 22 22.1	
	comp=N,302nm,0.5s							
PEL	**Peldehue**	**3.13**	**60**	*e*P		**Pn**	**18 21 44.4**	**+0.3**
PEL				*e*S		**Sn**	**18 22 21.5**	**-0.2**
MT13	**San Alfonso**	**3.17**	**72**	*e*P		**Pn**	**18 21 44.9**	**+0.1**
MT13				IAML			18 22 26.9	
	comp=E,315nm,0.2s							
MT10	**Hacienda Santa**	**3.17**	**63**	⇑*i* P		**Pn**	**18 21 44.8**	**0.0**
MT10				IAML			18 22 23.4	
	comp=E,503nm,0.2s							
LMEL	**Las Melosas**	**3.20**	**74**	*e*P		**Pn**	**18 21 45.5**	**+0.3**
LMEL				IAML			18 22 27.6	
	comp=E,502nm,0.1s							
MT04	**Ro Olivares**	**3.41**	**68**	*e*P		**Pn**	**18 21 48.0**	**-0.2**
MT04				IAML			18 22 29.6	
	comp=N,205nm,0.3s							
VA03	**San Esteban**	**3.44**	**55**	*e*P		**Pn**	**18 21 48.1**	**-0.3**
VA03				IAML			18 22 30.3	
	comp=E,541nm,0.2s							
VA03	**San Esteban**	**3.44**	**55**	*e*P		**Pn**	**18 21 48.2**	**-0.2**
VA03				IAML			18 22 30.3	
	comp=Z,293nm,0.2s							
MT08	**Bocatoma Ro**	**3.49**	**69**	*e*P		**Pn**	**18 21 49.5**	**+0.3**
MT08				IAML			18 22 38.3	
	comp=N,138nm,0.4s							
CO04	**Los Peladeros**	**3.66**	**43**	*e*P		**Pn**	**18 21 50.2**	**-1.4**
CANA	**Caviahue**	**3.87**	**144**	*e*P		**Pn**	**18 21 56.1**	**+1.7**
CANA				IAML			18 22 59.5	
	comp=Z,20nm,0.9s							
LC02	**Puerto Saavedr**	**4.04**	**174**	*e*P		**Pn**	**18 21 54.9**	**-1.7**
H03S1	**Juan Fernandez**	**4.24**	**281**	Pn		**Pn**	18 21 55.0	-4.1
H03S1				Sn		Sn	18 22 36.4	-12
	baz=113,slow=72							
H03S3	**Juan Fernandez**	**4.25**	**281**	Pn		**Pn**	18 21 55.6	-3.6
H03S3				Sn		Sn	18 22 35.7	-13
	baz=113,slow=72							
H03S2	**Juan Fernandez**	**4.25**	**281**	Pn		**Pn**	18 21 55.3	-4.0
H03S2				Sn		Sn	18 22 36.2	-13
	baz=113,slow=72							
CO02	**Combarbal**	**4.31**	**35**	*e*P		**Pn**	**18 21 59.3**	**-1.2**
H03N1	**Juan Fernandez**	**4.36**	**286**	Pn		**Pn**	18 21 58.5	-2.2
H03N3	**Juan Fernandez**	**4.36**	**286**	Pn		**Pn**	18 21 57.9	-2.9
H03N2	**Juan Fernandez**	**4.37**	**286**	Pn		**Pn**	18 21 58.3	-2.6
AUSP	**Uspallata**	**4.55**	**57**	*e*P		**Pn**	**18 22 05.9**	**+2.0**
CO03	**El Pedregal**	**4.76**	**36**	⇑*e*P		**Pn**	**18 22 06.1**	**-0.6**
RTLS	**Leoncito**	**4.87**	**54**	*e*P		**Pn**	**18 22 09.8**	**+1.6**
RTLS				IAML			18 23 11.4	
	comp=Z,74nm,0.8s							
GO06	**Curarrehue**	**5.19**	**159**	*e*P		**Pn**	**18 22 12.4**	**-0.1**
GO06				IAML			18 23 14.5	
	comp=Z,15nm,1.4s							
ZON	**Zonda**	**5.44**	**55**	*e*P		**Pn**	**18 22 16.6**	**+0.8**
ZON				IAML			18 23 28.2	
	comp=Z,15nm,3.1s							
ACCO	**Cerro Coronel**	**5.83**	**46**	*e*P		**Pn**	**18 22 23.3**	**+1.7**
AROD	**Rodeo**	**5.92**	**40**	*e*P		**Pn**	**18 22 24.1**	**+1.3**
ACAN	**Cantantal**	**6.14**	**68**	*e*P		**Pn**	**18 22 26.5**	**+1.0**
ACAN				IAML			18 23 40.1	
	comp=Z,41nm,0.5s							
PLCA	**Paso Flores**	**6.52**	**157**	Pn		**Pn**	**18 22 31.2**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=328,slow=14,SNR=49							
PLCA				Sn		**Sn**	**18 23 50.7**	**+5.5**
	comp=Z,0.3nm,0.3s,baz=264,slow=19,SNR=2.9							
PLCA				LR		LR	18 25 16.2	
	comp=Z,142nm,19.1s,baz=22,slow=40							
	comp=Z,2.7nm,0.4s							
TCA	**Tanti**	**8.53**	**69**	*e*P		**Pn**	**18 22 57.4**	**-1.0**
LPAZ	**La Paz**	**19.12**	**17**	P		**P**	**18 25 20.4**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=173,slow=10.0,SNR=4.4							
	comp=Z,1.1nm,0.7s							
TXAR	**Lajitas Array**	**69.67**	**332**	P		**P**	**18 32 03.9**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=148,slow=6.8,SNR=4.6							
	comp=Z,0.2nm,0.5s							
TORD	**Torodi Ar. Bea**	**85.92**	**71**	P		**P**	**18 33 34.6**	**-0.7**
	comp=Z,0.4nm,0.8s,baz=246,slow=6.1,SNR=2.3							
	comp=Z,0.4nm,0.8s							
BVAR	**Borovoye Array**	**148.90**	**43**	PKPbc		**PKPdf**	**18 40 41.6**	**+3.4**
	comp=Z,0.4nm,0.5s,baz=318,slow=1.9,SNR=3.0							
MKAR	**Makanchi Array**	**158.43**	**49**	PKPab		**PKPab**	**18 41 25.1**	**-1.6**
	comp=Z,0.6nm,0.8s,baz=308,slow=3.2,SNR=5.3							

*IDC **15** 18:24:53.9±2.5, 14°.11S×170°.69E, h610km±25km, mb3.1/9, mbtmp4.0/9, Error ellipse: s-maj=44.9km s-min=18.2km az=135.0*

ISC 15 18:24:55.0±1.2, **14°.1S**±0°.3×**170°.7E**±0°.2, **h628km**, **n16, s18/48/16, mb3.5/8, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**31.96**	**231**	P	**P**	**18 30 31.9**	**0.0**
	7.0nm,0.7s,baz=56,slow=8.5,SNR=12						
	7.0nm,0.7s						
WRA	**Warramunga Arr**	**35.22**	**255**	P	**P**	**18 30 58.6**	**-0.6**
	2.4nm,0.7s,baz=86,slow=9.0,SNR=28						
WRA				ScP	**ScP**	**18 36 00.6**	**+1.4**
	0.5nm,0.7s,baz=87,slow=3.5,SNR=5.6						
	2.4nm,0.7s						
ASAR	**Alice Springs**	**36.02**	**249**	P	**P**	**18 31 05.2**	**-0.6**
	4.0nm,0.7s,baz=77,slow=9.1,SNR=81						
ASAR				PcP	**PcP**	**18 33 14.0**	**-0.3**
	0.4nm,0.8s,baz=62,slow=2.3,SNR=2.6						
ASAR				ScP	**S**	**18 36 03.3**	**+1.1**
	0.5nm,0.8s,baz=96,slow=3.6,SNR=4.6						
	4.0nm,0.7s						
MJAR	**Matsushiro Arr**	**59.00**	**330**	P	**P**	**18 33 56.0**	**-0.3**
	1.5nm,0.9s,baz=158,slow=8.2,SNR=2.4						
	1.5nm,0.9s						
CMAR	**Chiang Mai Arr**	**77.79**	**293**	P	**P**	**18 35 50.6**	**+1.0**
	1.0nm,0.9s,baz=117,slow=5.8,SNR=5.2						
	1.0nm,0.9s						
NVAR	**Mina Array Bea**	**84.36**	**48**	P	**P**	**18 36 24.4**	**+1.3**
	0.3nm,0.3s,baz=249,slow=4.0,SNR=2.0						
	0.3nm,0.3s						
ILAR	**Eielson Array**	**84.95**	**17**	P	**P**	**18 36 24.5**	**-0.5**
	0.8nm,0.6s,baz=245,slow=5.2,SNR=18						
	0.8nm,0.6s						
YKA	**Yellowknife Ar**	**95.49**	**27**	P	**P**	**18 37 14.4**	**+0.7**
	0.2nm,0.6s,baz=264,slow=5.3,SNR=5.2						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**99.09**	**316**	P	Pdiff	18 37 31.8	
	0.1nm,0.6s,baz=98,slow=6.0,SNR=1.3						
	0.1nm,0.6s						
SOKA	**Soboth**	**141.69**	**333**	*i* PKP	**PKPdf**	**18 43 15.5**	**-1.0**
	0.2nm,0.2s						
OBKA	**Obir**	**142.03**	**333**	*i* PKP	**PKPdf**	**18 43 16.9**	**-0.2**
	1.3nm,0.7s						
LESA	**Schwarzleotal**	**142.10**	**336**	*e*PKP	**PKPdf**	**18 43 14.7**	**-2.5**
	0.2nm,0.2s						
WTTA	**Wattenberg**	**142.64**	**336**	*e*PKP	**PKPdf**	**18 43 15.2**	**-3.1**
	0.4nm,0.4s						
SQTA	**Sankt Quirin**	**142.84**	**337**	*i* PKP	**PKPdf**	**18 43 16.6**	**-1.9**
	0.9nm,0.3s						
FETA	**Feichten**	**143.19**	**337**	*i* PKP	PKPab	18 43 16.9	-0.6
	1.1nm,0.4s						
DAVA	**Damuels**	**143.28**	**338**	*e*PKP	PKPbc	18 43 18.5	+0.4
	3.3nm,0.6s,SNR=4.5						

*AZER **15** 18:24:54.8, 38°.37N×44°.45E, h2km, ml3.0*
*AFAD **15** 18:24:55.7, 38°.39N×44°.47E, h15km±2km, ML3.0*
*TEH **15** 18:24:56.8, 38°.40N×44°.39E, h5km, ML2.9, Presumed earthquake*
*NSSP **15** 18:24:57.0, 38°.37N×44°.50E, h10km, Ms3.1*
*ISK **15** 18:25:00.8, 38°.45N×44°.43E, h22km, ML3.1/7*

ISC 15 18:24:57.3±1.1, **38°.41N**±0°.02×**44°.43E**±0°.01, **h8km**±10km, **n53, σ1s59/95, 4D, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.43**	**307**	P	**Pg**	**18 25 04.8**	**-1.0**
OZAP				S	**Sg**	**18 25 12.6**	**+1.3**
OZAP				IAML		18 25 16.0	
	comp=E,904nm,0.7s						
OZAP				IAML		18 25 20.0	
	comp=N,2μm,0.9s						
TVAN	**Van**	**0.81**	**279**	P	**Pg**	**18 25 11.8**	**-1.2**
TVAN				S	**Sb**	**18 25 24.7**	**-0.4**
VANB	**Van**	**0.84**	**283**	Pg	**Pn**	**18 25 17.6**	**+2.0**
VANB				Sg	**Sn**	**18 25 28.5**	**+0.4**
VMUR	**Van-Muradiye**	**0.89**	**311**	P	**Pg**	**18 25 14.6**	**+0.1**
VMUR				S	**Sb**	**18 25 27.0**	**-0.2**
ISHB	**Shabestar**	**0.94**	**97**	Pg	**Pg**	**18 25 13.9**	**-1.6**
MAKU	**Maku**	**0.97**	**12**	Pg	**Pg**	**18 25 15.3**	**-0.6**
HAKT	**HAKKARI**	**1.02**	**214**	P	**Pg**	**18 25 15.6**	**-1.4**
HAKT				S	**Sb**	**18 25 30.4**	**-0.7**
HAKT				IAML		18 25 33.0	
	comp=E,365nm,0.4s						
HAKT				IAML		18 25 36.0	
	comp=N,379nm,0.4s						
HAKT	**HAKKARI**	**1.02**	**214**	P	**Pg**	**18 25 15.9**	**-1.1**
HAKT				S	**Sn**	**18 25 32.7**	**-0.1**
IMRD	**Marand**	**1.04**	**73**	Pg	**Pb**	**18 25 17.1**	**-0.7**
GEVA	**Gevas**	**1.08**	**265**	P	**Pg**	**18 25 15.5**	**-2.6**
GEVA				S	**Sb**	**18 25 32.5**	**-0.2**
GEVA				IAML		18 25 40.0	
	comp=N,304nm,0.5s						
NAX	**Nakhchivan**	**1.13**	**47**	P	**Pn**	**18 25 18.9**	**-0.6**
NAX				S	**Sn**	**18 25 35.9**	**+0.5**
DYDN	**Diyadin**	**1.27**	**333**	P	**Pb**	**18 25 21.6**	**-0.1**
DYDN				S	**Sb**	**18 25 35.0**	**-3.4**
SBZ	**Shahbuz**	**1.32**	**41**	P	**Pg**	**18 25 22.4**	**-0.3**
SBZ				S	**Sg**	**18 25 42.1**	**+2.2**
CUKT	**Cukurca**	**1.33**	**210**	Pn	**Pg**	**18 25 25.2**	**+2.4**
CUKT				Sn	**Sg**	**18 25 43.2**	**+3.2**
CUKT	**Cukurca**	**1.33**	**210**	P	**Pg**	**18 25 23.8**	**+1.0**
CUKT				S	**Sg**	**18 25 41.9**	**+1.9**
CUKT				IAML		18 25 47.0	
	comp=E,466nm,0.6s						
CUKT				IAML		18 25 49.0	
	comp=N,362nm,0.6s						
ORD	**Ordubad**	**1.33**	**66**	P	**Pb**	**18 25 22.0**	**-0.6**
ORD				S	**Sg**	**18 25 41.7**	**+1.5**
HYR	**Heyderabad**	**1.35**	**14**	P	**Pg**	**18 25 24.5**	**+1.2**
HYR				S	**Sg**	**18 25 45.0**	**+4.2**
ADCV	**BITLIS_Adilcev**	**1.40**	**287**	P	**Pb**	**18 25 23.1**	**-0.7**
ADCV				S	**Sg**	**18 25 43.4**	**+1.2**
IAZR	**Azarshahr**	**1.42**	**120**	Pg	**Pg**	**18 25 24.0**	**-0.7**
IGDI	**IGDIR**	**1.48**	**349**	P	**Pb**	**18 25 25.2**	**0.0**
IGDI				S	**Sg**	**18 25 45.8**	**+0.7**
IGDI				IAML		18 25 52.0	
	comp=E,136nm,0.7s						
IGDI	**IGDIR**	**1.48**	**349**	P	**Pg**	**18 25 26.0**	**+0.2**
IGDI				S	**Sg**	**18 25 50.3**	**+5.2**
VAYK	**Vayk**	**1.50**	**31**	⇓*e*P	**Pg**	**18 25 25.5**	**-0.7**
VAYK				⇓*e*S	**Sg**	**18 25 45.4**	**-0.2**
PERV	**Siirt/Pervari-**	**1.56**	**253**	P	**Pn**	**18 25 25.3**	**-0.2**
PERV				S	**Sg**	**18 25 48.1**	**+0.7**
PERV				IAML		18 25 55.0	
	comp=E,235nm,0.5s						
PERV				IAML		18 25 56.0	
	comp=N,353nm,0.5s						
ALVK	**Alvank**	**1.59**	**70**	*e*P	**Pb**	**18 25 26.3**	**-0.8**
ALVK				*e*S	**Sg**	**18 25 48.7**	**+0.1**
DORK	**Agr/Tutak/Do**	**1.62**	**308**	P	**Pb**	**18 25 26.6**	**-1.0**
DORK				S	**Sb**	**18 25 47.8**	**-0.4**
AGRB	**Hanur-Agry**	**1.62**	**317**	Pn	**Pg**	**18 25 28.1**	**-0.2**
MLAZ	**Malazgirt-MUS**	**1.64**	**297**	Pn	**Pg**	**18 25 29.1**	**+0.3**
MLAZ				Sn	**Sg**	**18 25 49.6**	**-0.5**
KOTA	**Agri, Merkez-K**	**1.69**	**326**	P	**Pn**	**18 25 27.3**	**0.0**
KOTA				S	**Sn**	**18 25 48.6**	**-0.6**
GNI	**Garni**	**1.76**	**8**	Pn	**Pb**	**18 25 29.9**	**0.0**
GNI	**Garni**	**1.76**	**8**	*e*P	**Pg**	**18 25 31.3**	**+0.3**
GNI				*e*S	**Sg**	**18 25 55.6**	**+1.7**
BLIS	**Bitlis-Merkez**	**1.82**	**271**	P	**Pb**	**18 25 30.2**	**-0.8**
BLIS				S	**Sb**	**18 25 54.5**	**+0.5**
SIRN	**Sırnak**	**1.83**	**241**	P	**Pb**	**18 25 31.0**	**-0.2**
SIRN				S	**Sg**	**18 25 55.9**	**-0.4**
SIRN				IAML		18 26 03.0	
	comp=N,136nm,0.7s						
SIRN				IAML		18 26 03.0	
	comp=E,202nm,0.7s						
EGVZ	**Egvard**	**1.84**	**63**	*e*P	**Pb**	**18 25 30.5**	**-0.9**
EGVZ				*e*S	**Sg**	**18 25 56.0**	**-0.6**
GRS	**Goris**	**1.84**	**53**	⇓*i*P	**Pg**	**18 25 33.0**	**+0.3**
GRS				⇓*i*S	**Sg**	**18 25 59.0**	**+2.4**
GURO	**Guroymak-BITLI**	**1.89**	**275**	Pn	**Pg**	**18 25 32.6**	**-0.9**
AYRK	**Ayrk**	**2.01**	**31**	*e*P	**Pb**	**18 25 34.5**	**+0.3**
AYRK				*e*S	**Sg**	**18 26 02.6**	**+0.7**
SRTM	**Siirt_Merkez**	**2.02**	**259**	P	**Pb**	**18 25 33.4**	**-0.9**
SRTM				S	**Sg**	**18 26 01.7**	**-0.5**
SRTM				IAML		18 26 13.0	
	comp=E,111nm,0.5s						
SRTM				IAML		18 26 14.0	
	comp=N,152nm,0.7s						
IHRS	**Heris**	**2.06**	**92**	Pn	**Pb**	**18 25 34.6**	**-0.4**
QRD	**Qoradiz**	**2.49**	**64**	P	**Pb**	**18 25 40.5**	**-1.8**
QRD				S	**Sg**	**18 26 14.7**	**-2.5**
GDB	**GEDABAY**	**2.53**	**23**	P	**Pb**	**18 25 41.5**	**-1.6**
GDB				S	**Sb**	**18 26 15.5**	**+1.2**
SVAN	**Silvan-Diyarba**	**2.56**	**265**	Pn	**Pb**	**18 25 42.2**	**-1.3**
GANJ	**Ganja**	**2.67**	**33**	P	**Pb**	**18 25 43.8**	**-1.7**
GANJ				S	**Sb**	**18 26 18.9**	**+0.5**
AGDM	**Agdam**	**2.69**	**50**	P	**Pb**	**18 25 43.0**	**-2.6**
AGDM				S	**Sg**	**18 26 21.4**	**-2.2**
QZX	**Qazax, Azerbai**	**2.75**	**15**	P	**Pb**	**18 25 45.2**	**-1.5**
QZX				S	**Sg**	**18 26 23.4**	**-2.1**
BLQ	**Beylaqan**	**2.77**	**61**	P	**Pn**	**18 25 43.7**	**+1.8**
BLQ				S	**Sb**	**18 26 22.2**	**+1.1**
YRD	**Yardimli**	**3.03**	**79**	P	**Pb**	**18 25 48.4**	**-3.2**
YRD				S	**Sb**	**18 26 29.4**	**+0.6**
LRK	**Lerik**	**3.08**	**84**	P	**Pn**	**18 25 48.5**	**+2.1**
LRK				S	**Sb**	**18 26 30.2**	**0.0**
DGRG	**David-gareji**	**3.13**	**13**	P	**Pg**	**18 25 56.3**	**-0.9**
VSHL	**Vashlovani**	**3.20**	**28**	P	**Pb**	**18 25 52.4**	**-2.0**
VSHL				S	**Sg**	**18 26 43.3**	**+3.1**
GLBA	**Clilabad**	**3.21**	**74**	P	**Pn**	**18 25 50.0**	**+2.0**
GLBA				S	**Sb**	**18 26 34.4**	**+0.7**
LKRN	**Lenkeran, Azer**	**3.42**	**84**	P	**Pn**	**18 25 53.5**	**+2.6**
LKRN				S	**Sb**	**18 26 38.1**	**-1.9**
ASTR	**Astara**	**3.43**	**86**	P	**Pn**	**18 25 53.3**	**+2.3**
ASTR				S	**Sb**	**18 26 38.7**	**-1.3**
SHTL	**Shatili**	**4.28**	**7**	P	**Pg**	**18 26 16.7**	**-2.7**

*OSUNB **15** 18:33:37.5±0.3, 0°.56N×68°.90W, h0km, mb4.6/10, Error ellipse: s-maj=2.5km s-min=1.9km az=0.0*
*VAO **15** 18:33:37.1±0.3, 0°.55N×68°.88W, h0km, mbR4.2, Presumed earthquake*
*NEIC **15** 18:33:38.0±2.5, 0°.36N±0°.07×69°.06W±0°.08, h13km±5km, mb4.4/30, Error ellipse: s-maj=11.0km s-min=9.9km az=76.0*
*IDC **15** 18:33:39.8±0.6, 0°.49N×69°.13W, h18km±3km, mb3.8/12, mbtmp4.1/18, ML4.0/6, MS3.3/8, Error ellipse: s-maj=19.8km s-min=13.8km az=61.0*
*RSNC **15** 18:33:44.3±0.3, 1°.N±4°.×6°.9W±°, h45km, M4.7, mB5.2, mb5.2, ML4.6, Mw(mB)4.6*

ISC 15 18:33:41.2±0.3, **0°.50N**±0°.04×**69°.00W**±0°.04, **h35km**, **n117, σ2s28/156, mb4.3/18, MS3.3/3, Western Brazil**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGC2	**Sao Gabriel da**	**2.12**	**108**	P	**Pn**	**18 34 17.2**	**+3.0**
SGC2				S	**Sn**	**18 34 39.9**	**+0.6**
SGC2	**Sao Gabriel da**	**2.12**	**108**	P	**Pn**	**18 34 17.2**	**+3.0**
SGC2				S	**Sn**	**18 34 44.8**	**+5.5**
PTGC	**Puerto Gaitan,**	**4.83**	**320**	P	**Pn**	**18 34 53.5**	**+2.1**
PTGC				S	**Sn**	**18 35 46.2**	**0.0**
MACC	**Macarena, Meta**	**5.12**	**289**	P	**Pn**	**18 34 57.0**	**+1.6**
	3μm167nm,0.7s						
MACC				S	**Sn**	**18 35 53.0**	**-0.3**
	3μm167nm,0.7s						
PTLC	**Puerto Leguiza**	**5.81**	**267**	P	**Pn**	**18 35 06.6**	**+1.7**
	6μm511nm,0.6s						
PTLC				S	**Sn**	**18 36 08.3**	**-2.1**
	6μm511nm,0.6s						
TEFE	**Tefe**	**5.91**	**132**	P	**Pn**	**18 35 08.8**	**+2.6**
TEFE				S	**Sn**	**18 36 13.9**	**+1.1**
TEFE	**Tefe**	**5.91**	**132**	*e*P	**Pn**	**18 35 05.6**	**-0.7**
TEFE				*e*S	**Sn**	**18 36 13.7**	**+0.9**
VILC	**Villavicencio,**	**5.91**	**307**	P	**Pn**	**18 35 08.6**	**+2.3**
	8μm321nm,0.6s						
VILC				S	**Sn**	**18 36 13.8**	**+0.9**
	8μm321nm,0.6s						
URMC	**La Uribe, Meta**	**6.03**	**297**	P	**Pn**	**18 35 09.5**	**+1.5**
	2μm118nm,0.7s						
URMC				S	**Sn**	**18 36 16.4**	**+0.5**
	2μm118nm,0.7s						
CHIC	**Chingaza**	**6.26**	**311**	P	**Pn**	**18 35 13.3**	**+1.8**
CHIC				S	**Sn**	**18 36 20.2**	**-1.8**
PRAC	**Prado**	**6.70**	**299**	P	**Pn**	**18 35 19.7**	**+2.6**
	2μm73nm,0.8s						
PRAC				S	**Sn**	**18 36 34.1**	**+1.9**
	2μm73nm,0.8s						
GARC	**Garzon, Huila**	**6.71**	**285**	P	**Pn**	**18 35 19.1**	**+1.6**
	5μm187nm,0.6s						
GARC				S	**Sn**	**18 36 31.6**	**-1.2**
	5μm187nm,0.6s						
RUSC	**La Rusia**	**6.73**	**323**	P	**Pn**	**18 35 20.2**	**+2.2**
	1μm130nm,0.6s						
RUSC				S	**Sn**	**18 36 31.9**	**-1.9**
	1μm130nm,0.6s						
FLOC	**Florencia**	**6.74**	**279**	P	**Pn**	**18 35 19.1**	**+1.4**
	4μm150nm,0.6s						
FLOC				S	**Sn**	**18 36 31.3**	**-2.1**
	4μm150nm,0.6s						
ROSC	**El Rosal**	**6.84**	**309**	Pn	**Pn**	**18 35 20.4**	**+0.9**
	28nm,0.3s,baz=123,slow=21,SNR=33						
ROSC				Sn	**Sn**	**18 36 36.0**	**-0.4**
	22nm,0.3s,baz=244,slow=23,SNR=6.9						
	76nm,0.4s						
ROSC	**El Rosal**	**6.84**	**309**		**Pn**	**18 35 21.0**	**+1.5**
ROSC	**El Rosal**	**6.84**	**309**	P	**Pn**	**18 35 22.1**	**+2.6**
	1μm116nm,0.5s						
ROSC				S	**Sn**	**18 36 38.2**	**+1.8**
	1μm116nm,0.5s						
ORTC	**Ortega, Tolima**	**7.10**	**299**	P	**Pn**	**18 35 24.5**	**+1.8**
	1μm111nm,0.8s						
ORTC				S	**Sn**	**18 36 45.0**	**+2.7**
	1μm111nm,0.8s						
SPBC	**San Pablo de B**	**7.20**	**315**	P	**Pn**	**18 35 25.4**	**+1.3**
SPBC				S	**Sn**	**18 36 41.7**	**-3.1**
PAMC	**Pamplona, Colo**	**7.73**	**332**	P	**Pn**	**18 35 33.7**	**+2.0**
	1μm122nm,0.9s						
PAMC				S	**Sn**	**18 36 55.2**	**-3.2**

LPAZ La Paz 16.70 177 *e*P **Pn** **18 37 33.2 -0.1**
MDP Montagnes des 16.96 74 Lg Lg 18 42 27.6
comp=Z,4.6nm,0.3s,baz=160,slow=22,SNR=11
MDP LR LR 18 44 06.3
comp=Z,212nm,18.6s,baz=230,slow=37
PDRB Porto dos Gac 17.13 135 P **Pn** **18 37 36.4 -1.6**
MLPR Magueyes Islan 17.46 6 P **Pn** **18 37 41.7 -0.4**
MLPR IAmb IAmb 18 37 56.9
comp=Z,26nm,1.0s
CRPR Cabo Rojo, PR 17.49 6 P **P** **18 37 43.9 +0.6**
CRPR IAmb IAmb 18 38 00.3
comp=Z,61nm,1.4s
OBIP Obispado Ponce 17.59 8 Pn **Pn** **18 37 42.3 -1.4**
CELP Cerrillos 17.62 8 Pn **Pn** **18 37 42.1 -2.0**
CELP IAmb IAmb 18 38 06.8
comp=Z,15nm,0.9s
SJG San Juan 17.72 9 P **P** **18 37 46.8 +0.9**
comp=Z,1.0nm,0.3s,baz=186,slow=19,SNR=1.5
SJG LR LR 18 44 58.6
comp=Z,30nm,21.8s,baz=106,slow=38
comp=Z,4.2nm,0.4s
AOPR Arecibo Observ 17.87 7 P **Pn** **18 37 46.8 -0.3**
AOPR IAmb IAmb 18 38 06.5
comp=Z,53nm,1.2s
SIV San Ignacio 18.16 155 P **Pn** **18 37 50.2 -0.5**
comp=Z,0.1nm,0.3s,baz=343,slow=13,SNR=20
SIV Lg Lg 18 43 12.0
comp=Z,0.3nm,0.3s,baz=204,slow=21,SNR=8.4
comp=Z,4.2nm,0.4s
DR12 Loma Pena Alta 18.18 359 P **Pn** **18 37 49.5 -1.5**
PB16 IPOC Station P 18.73 182 P **P** **18 37 52.4 -5.1**
PB12 IPOC Station P 19.04 184 P **P** **18 37 55.9 -4.6**
GO01 Chusmiza 20.05 181 P **P** **18 38 11.3 -0.6**
GO01 IAmb IAmb 18 38 20.6
comp=Z,12nm,0.6s
MAS01 UHE Manso 20.09 140 P **P** **18 38 13.6 +1.6**
PB11 IPOC Station P 20.15 182 P **P** **18 38 08.6 -4.1**
PB11 IAmb IAmb 18 38 21.3
comp=Z,21nm,0.7s
PRPB Parauapebas 20.26 109 P Pn 18 38 17.0 +1.0
PB08 IPOC Station P 20.52 180 P **P** **18 38 12.5 -4.4**
PB08 IAmb IAmb 18 38 27.8
comp=Z,14nm,0.9s
SALV Santo Antonio 20.93 142 P Pn 18 38 24.0 +0.2
SALV Santo Antonio 20.93 142 *e*P **P** **18 38 21.1 +0.1**
SALV *e*S **S** **18 42 16.2 +3.6**
PP1B Ponte de Pedra 22.73 143 *e*P **P** **18 38 40.8 +0.4**
SMTB Santa Maria do 23.27 114 *e*P **P** **18 38 45.8 0.0**
SMTB *e*S **S** **18 42 58.0 +2.0**
CAIB Caibarien 24.12 336 P **P** **18 38 54.0 +0.1**
CAIB IAmb IAmb 18 38 57.3
comp=Z,29nm,0.7s
AQDB Aquidauana 24.58 149 P **P** **18 39 01.6 +3.5**
MURT Porto Murtinho 24.67 154 *e*P **P** **18 38 60.0 +1.1**
MURT *e*S **S** **18 43 24.5 +6.1**
CAMR Camarioca 25.45 333 P **P** **18 39 05.3 -0.6**
BDFB Brasilia 26.21 129 LR LR 18 50 03.8
comp=Z,90nm,19.3s,baz=200,slow=37
CO03 El Pedregal 31.21 183 P **P** **18 39 54.5 -3.0**
CO04 Los Peladeros 32.42 183 P **P** **18 40 05.6 -2.7**
RCBR Riachuelo 33.63 101 LR LR 18 54 54.5
comp=Z,57nm,18.3s,baz=185,slow=38
GOGA Godfrey 35.45 339 P **P** **18 40 34.4 +0.2**
GOGA IAmb IAmb 18 40 42.9
comp=Z,4.5nm,0.9s
LRAL Lakeview Retre 36.53 334 **P** **18 40 43.0 -0.5**
LRAL IAmb IAmb 18 40 52.0
comp=Z,9.4nm,0.9s
Y49A Blount Mountai 36.98 336 **P** **18 40 47.8 +0.4**
TKL Tuckaleechee C 37.59 340 LR LR 18 58 32.3
comp=Z,70nm,18.1s,baz=212,slow=40
W50A Signal Mountai 37.73 338 P **P** **18 40 54.6 +0.9**
W50A IAmb IAmb 18 40 56.4
comp=Z,8.4nm,0.6s
X48A Hartselle 37.76 335 P **P** **18 40 54.3 +0.4**
TRQA Tornquist 38.91 171 P **P** **18 41 01.8 -1.8**
S51A Beattyville 39.33 342 P **P** **18 41 08.5 +1.4**
WHAR Wooly Hollow 40.85 330 P **P** **18 41 20.2 +0.5**
WHAR IAmb IAmb 18 41 37.7
comp=Z,4.7nm,1.2s
PLCA Paso Flores 41.07 182 P **P** **18 41 21.7 +0.2**
comp=Z,1.5nm,1.0s,baz=348,slow=8.6,SNR=6.1
PLCA PcP **PcP** **18 43 22.3 +1.4**
comp=Z,1.0nm,0.7s,baz=27,slow=5.9,SNR=3.4
comp=Z,1.5nm,1.0s
PLCA Paso Flores 41.07 182 P **P** **18 41 21.3 -0.2**
TXAR Lajitas Array 43.75 314 P **P** **18 41 43.3 -0.3**
comp=Z,0.4nm,0.8s,baz=117,slow=6.6,SNR=4.5
TXAR PcP **PcP** **18 43 32.0 +1.9**
comp=Z,0.2nm,0.6s,baz=114,slow=1.5,SNR=2.4
comp=Z,0.4nm,0.8s
SCHQ Schefferville 54.18 2 P **P** **18 43 04.0 +1.1**
comp=Z,2.3nm,0.7s,baz=178,slow=9.8,SNR=5.5
comp=Z,2.3nm,0.7s
ULM Lac du Bonnet 54.60 339 P **P** **18 43 05.7 -0.4**
comp=Z,2.5nm,0.5s,baz=138,slow=5.7,SNR=6.3
ULM pP **pP** **18 43 11.6 -5.1**
comp=Z,5.3nm,0.6s,baz=129,slow=9.1,SNR=9.1
comp=Z,2.5nm,0.5s
PDAR Pinedale Array 55.58 325 P **P** **18 43 13.8 +0.2**
comp=Z,0.5nm,0.6s,baz=130,slow=10,SNR=5.7
comp=Z,0.5nm,0.6s
NVAR Mina Array Bea 58.84 316 P **P** **18 43 37.3 +0.6**
comp=Z,1.1nm,0.6s,baz=112,slow=7.2,SNR=4.5
comp=Z,1.1nm,0.6s
DBIC Dimbokro 64.26 83 P **P** **18 44 15.7 +2.2**
comp=Z,3.1nm,0.8s,baz=296,slow=3.2,SNR=3.8
comp=Z,3.1nm,0.8s
DBIC Dimbokro 64.26 83 P **P** **18 44 14.5 +1.0**
YKA Yellowknife Ar 70.58 339 P **P** **18 44 53.1 +0.6**
comp=Z,1.3nm,0.8s,baz=134,slow=5.9,SNR=19
YKA pP **pP** **18 44 59.5 -3.9**
comp=Z,2.1nm,0.8s,baz=136,slow=5.5,SNR=16
comp=Z,1.3nm,0.8s
TORD Torodi Ar. Bea 71.09 76 P **P** **18 44 58.1 +1.5**
comp=Z,1.0nm,0.5s,baz=272,slow=7.2,SNR=5.3
TORD pP **pP** **18 45 04.4 -3.1**
comp=Z,1.1nm,0.5s,baz=282,slow=5.4,SNR=7.2
comp=Z,1.0nm,0.5s
SUMG Summit 74.47 9 *i*P **P** **18 45 17.7 +1.7**
SUMG IAmb IAmb 18 45 18.7
comp=Z,7.5nm,0.8s
TULEG Thule 75.95 0 *i*P **P** **18 45 25.5 +1.5**
TULEG IAmb IAmb 18 45 26.4
comp=Z,5.7nm,0.6s
NEEM North Greenlan 77.49 4 *i*P **P** **18 45 34.9 +1.8**
NEEM IAmb IAmb 18 45 35.8
comp=Z,14nm,1.1s
BELA Belgrano 2 80.45 173 P **P** **18 45 49.8 +1.0**
ILAR Eielson Array 84.39 335 P **P** **18 46 09.2 -0.5**
comp=Z,0.3nm,0.8s,baz=67,slow=6.3,SNR=2.5
ILAR pP **PcP** **18 46 16.3 +3.0**
comp=Z,0.5nm,0.8s,baz=116,slow=4.3,SNR=5.7
ILAR PP **PP** **18 49 30.6 +5.8**
comp=Z,0.4nm,0.7s,baz=101,slow=6.8,SNR=6.2
comp=Z,0.3nm,0.8s
GERES GERESS Array B 84.81 41 P **P** **18 46 13.9 +1.7**
comp=Z,0.7nm,0.6s,baz=270,slow=3.9,SNR=4.8
GERES pP **pP** **18 46 20.8 -2.6**
comp=Z,1.0nm,0.8s,baz=234,slow=6.4,SNR=5.3
comp=Z,0.7nm,0.6s
SPITS Spitsbergen Ar 88.56 12 P **P** **18 46 31.8 +1.9**
comp=Z,1.1nm,0.5s,baz=224,slow=4.0,SNR=7.3
SPITS pP **pP** **18 46 37.9 -3.2**
comp=Z,1.3nm,0.4s,baz=270,slow=1.4,SNR=1.4
comp=Z,1.1nm,0.5s
ZALV Zalesovo Beam 121.56 18 PKP **PKiKP** **18 52 32.7 +1.5**
comp=Z,0.4nm,0.5s,baz=355,slow=3.5,SNR=4.0
KURBB Kurchatov Arra 122.05 24 PKP **PKiKP** **18 52 34.2 +1.9**
comp=Z,0.3nm,0.6s,baz=301,slow=3.1,SNR=5.0
MKAR Makanchi Array 126.60 24 PKP **PKiKP** **18 52 42.3 +0.8**
comp=Z,0.4nm,0.8s,baz=13,slow=0.5,SNR=4.4
HHC Hu-ho-hao-te 138.84 359 *e*P **PKPdf** **18 53 00.4 -4.0**
NJ2 Nanjing 146.78 348 *e*P **PKPdf** **18 53 17.4 -1.1**
NJ2 pmax pmax
comp=Z,21nm,0.5s
ASAR Alice Springs 148.00 222 PKPbc **PKPbc** **18 53 24.5 +0.6**
comp=Z,2.1nm,0.6s,baz=120,slow=3.6,SNR=8.8
CD2 Chengdu 148.01 12 PKPbc **PKPdf** **18 53 20.0 -0.6**
WRA Warramunga Arr 150.08 228 PKP **PKPdf** **18 53 24.7 +0.5**
comp=Z,2.8nm,0.6s,baz=129,slow=2.0,SNR=4.9
WRA PKPbc **PKPbc** **18 53 30.1 +0.9**
comp=Z,3.7nm,0.8s,baz=131,slow=2.4,SNR=9.0
PZH PanZhiHua 151.71 18 PKPbc **PKPdf** **18 53 26.3 -0.4**
CMAR Chiang Mai Arr 157.74 32 PKP **PKPdf** **18 53 36.0 +0.9**
comp=Z,0.6nm,0.8s,baz=314,slow=1.0,SNR=4.7
CMAR PKPab **PKPab** **18 54 09.2 +1.9**
comp=Z,0.6nm,0.9s,baz=333,slow=5.7,SNR=4.3

*IDC **15** 18:44:06.6±1.5,5.°01S×128.°21E,h413km±22km, mb2.8/3, mbtmp3.4/7, Error ellipse: s-maj=35.1km s-min=17.9km az=86.0*
ISC 15 18:44:05.6±0.9,5.°03S±0.°10×128.°3E±0.°2,h400km,n8, σ2°23/10,mb3.3/3,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.09**	**36**	P	**Pn**	**18 45 31.1**	**+2.5**
	4.7nm,0.6s,baz=204,slow=20,SNR=34						
SIJI				S	**S**	**18 46 33.0**	**-3.0**
	3.7nm,0.2s,baz=223,slow=22,SNR=9.7						
BATI	**Baumata**	**6.89**	**221**	P	**Pn**	**18 45 48.4**	**+0.2**
	20nm,0.4s,baz=285,slow=2.8,SNR=8.2						
FITZ	**Fitzroy Crossi**	**13.25**	**191**	P	**P**	**18 47 00.4**	**+1.4**
	1.4nm,0.9s,baz=25,slow=13,SNR=1.1						
FITZ				S	**S**	**18 49 19.4**	**-3.1**
	2.1nm,1.0s,baz=194,slow=4.6,SNR=2.3						
WRA	**Warramunga Arr**	**15.95**	**159**	P	**P**	**18 47 27.8**	**-0.6**
	0.3nm,0.7s,baz=340,slow=11,SNR=7.3						
ASAR	**Alice Springs**	**19.30**	**164**	P	**P**	**18 48 04.9**	**+1.2**
	0.1nm,0.4s,baz=342,slow=10,SNR=5.1						
MKAR	**Makanchi Array**	**65.66**	**327**	P	**P**	**18 54 08.5**	**-0.1**
	0.5nm,0.7s,baz=109,slow=9.2,SNR=5.1						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**69.95**	**329**	P	**P**	**18 54 32.6**	**-2.3**
	0.2nm,0.5s,baz=115,slow=5.4,SNR=3.9						
	0.2nm,0.5s						
BVAR	**Borovoye Array**	**75.50**	**328**	P	**P**	**18 55 07.9**	**+0.8**
	0.3nm,0.4s,baz=107,slow=5.0,SNR=2.6						
	0.3nm,0.4s						

*NEIC **15** 18:44:47.5±2.1,22.°59S±0.°09×171.°46E±0.°08,h44km±8km, mb4.7/40, Error ellipse: s-maj=12.9km s-min=10.5km az=173.0*
*NOU **15** 18:44:51.3,22.°80S×170.°91E,h0km,mb5.6/9,Southeast of Loyalty Islands*
*IDC **15** 18:44:51.1±2.3,22.°51S×171.°31E,h61km±19km,mb4.3/14, mbtmp4.6/17,MS3.7/31,Error ellipse: s-maj=17.5km s-min=14.5km az=12.0*
ISC 15 18:44:47.3±0.4,22.°60S±0.°06×171.°38E±0.°06,h35km,n166, σ1°45/129,mb4.7/37,MS3.7/27,7C-8D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**3.30**	**289**	P	**Pn**	**18 45 39.8**	**+3.3**
MARNC	**Mare, Loyalty**	**3.30**	**289**	S	**Sn**	**18 46 16.8**	**+2.4**
MARNC	**Mare, Loyalty**	**3.30**	**289**	Pn	**Pn**	**18 45 36.1**	**-0.4**
MARNC				Sn	**Sn**	**18 46 16.4**	**+1.9**
YATNC	**Mamie plateau,**	**4.19**	**277**	P	**Pn**	**18 45 50.1**	**+1.4**
YATNC	**Mamie plateau,**	**4.19**	**277**	S	**Sn**	**18 46 37.1**	**+0.7**
OUENC	**Ouen Island, N**	**4.20**	**272**	Pn	**Pn**	**18 45 51.2**	**+2.3**
OUENC				Sn	**Sn**	**18 46 39.6**	**+2.9**
ONTNC	**Ouen Toro**	**4.56**	**273**	P	**Pn**	**18 45 56.6**	**+2.8**
ONTNC	**Ouen Toro**	**4.56**	**273**	S	**Sn**	**18 46 44.9**	**-0.8**
ONTNC	**Ouen Toro**	**4.56**	**273**	Pn	**Pn**	**18 45 56.7**	**+2.8**
ONTNC				Sn	**Sn**	**18 46 45.2**	**-0.4**
DZM	**Mont Dzumac**	**4.59**	**276**	P	**Pn**	**18 45 57.0**	**+2.5**
	117nm,0.3s,baz=137,slow=16,SNR=162						
DZM				S	**Sn**	**18 46 48.4**	**+1.8**
	207nm,0.5s,baz=336,slow=21,SNR=11						
RTV	**Rentapao**	**5.53**	**329**	P	Pn	18 46 14.5	+7.4
NFK	**Norfolk Island**	**7.13**	**205**	P	**Pn**	**18 46 29.4**	**+0.3**
	comp=Z,1μm,0.7s						
MSVF	**Nonsavu**	**7.92**	**54**	P	**Pn**	**18 46 44.7**	**+4.6**
	comp=Z,70nm,1.0s,baz=207,slow=10.0,SNR=19						
MSVF				LR	LR	18 49 04.3	
	comp=Z,729nm,18.4s,baz=211,slow=32						
MSVF	**Nonsavu**	**7.92**	**54**		**Pn**	**18 46 39.5**	**-0.5**
SANVU	**Saraoutou**	**8.13**	**330**	P	Pn	18 46 51.5	+8.5
SANVU	**Saraoutou**	**8.13**	**330**	Pn	**Pn**	**18 46 42.6**	**-0.4**
RAO	**Raoul Island**	**11.69**	**127**	LR	LR	18 50 58.1	
	comp=Z,616nm,20.5s,baz=320,slow=31						
HIZ	**Hauiti**	**16.14**	**170**		**Pn**	**18 48 32.9**	**+1.4**
HIZ				IAmb	IAmb	18 48 38.8	
	comp=Z,113nm,1.5s						
URZ	**Urewera**	**16.37**	**164**	P	**P**	**18 48 37.9**	**+0.9**
	comp=Z,11nm,0.8s,baz=356,slow=7.3,SNR=5.4						
URZ				LR	LR	18 53 30.9	
	comp=Z,421nm,21.0s,baz=340,slow=32						
RTZ	**Ruatahuna**	**16.67**	**165**		**Pn**	**18 48 38.8**	**+0.5**
HNR	**Honiara**	**17.07**	**318**	LR	LR	18 54 44.2	
	comp=Z,7.8nm,20.7s,baz=263,slow=35						
HNR	**Honiara**	**17.07**	**318**	Pn	**Pn**	**18 48 41.1**	**-2.3**
AFI	**Afiamalu**	**18.17**	**64**	LR	LR	18 54 24.7	
	comp=Z,206nm,18.9s,baz=232,slow=32						
MRZ	**Mangatainoka R**	**18.36**	**170**	P	**P**	**18 48 58.0**	**-0.8**
BFZ	**Birch Farm**	**18.49**	**168**	P	**P**	**18 48 59.3**	**-1.1**
BFZ				IAmb	IAmb	18 49 15.8	
	comp=Z,58nm,1.4s						
TCW	**Tory Channel**	**18.72**	**173**	P	**P**	**18 49 01.3**	**-1.5**
MSWZ	**Moikau Station**	**19.05**	**171**	P	**P**	**18 49 05.4**	**-1.0**
THZ	**Tophouse**	**19.15**	**177**	P	**P**	**18 49 07.2**	**-0.5**
PLWZ	**Palliser**	**19.20**	**171**	P	**P**	**18 49 08.1**	**-0.1**
ARMA	**Armidale**	**19.29**	**242**	P	**P**	**18 49 07.6**	**-1.8**
ARMA				IAmb	IAmb	18 49 23.9	
	comp=Z,38nm,1.2s						
LTZ	**Lake Taylor**	**20.14**	**178**	P	**P**	**18 49 17.2**	**-1.3**
RPZ	**Rata Peaks**	**21.06**	**181**	P	**P**	**18 49 32.4**	**+4.0**
	comp=Z,28nm,0.8s,baz=356,slow=13,SNR=16						
RPZ				LR	LR	18 56 40.3	
	comp=Z,272nm,18.7s,baz=292,slow=34						
	comp=Z,28nm,0.8s						
RPZ	**Rata Peaks**	**21.06**	**181**	P	**P**	**18 49 28.0**	**-0.4**
CTA	**Charters Tower**	**23.52**	**271**	LR	LR	18 58 13.6	
	comp=Z,196nm,21.4s,baz=86,slow=34						
CTAO	**Charters Tower**	**23.52**	**271**	P	**P**	**18 49 52.3**	**-2.2**
CTAO				IAmb	IAmb	18 49 58.2	
	comp=Z,22nm,1.1s						
CMSA	**Cobar Meteorol**	**24.50**	**243**	P	**P**	**18 50 08.3**	**+4.9**
	comp=Z,29nm,0.9s						
QLP	**Quilpie**	**24.98**	**255**	P	**P**	**18 50 10.3**	**+2.5**
	comp=Z,36nm,1.4s						
MTSU	**Mount Surprise**	**25.74**	**275**	P	**P**	**18 50 17.5**	**+2.7**
	comp=Z,59nm,0.8s						
PMG	**Port Moresby**	**26.66**	**296**	P	**P**	**18 50 20.6**	**-2.6**
PMG				IAmb	IAmb	18 50 25.0	
	comp=Z,24nm,0.8s						
RAR	**Rarotonga**	**26.79**	**93**	LR	LR	19 00 50.5	
	comp=Z,81nm,18.2s,baz=276,slow=36						
STKA	**Stephens Creek**	**27.97**	**244**	P	**P**	**18 50 36.6**	**+1.9**
	comp=Z,2.4nm,0.7s,baz=89,slow=14,SNR=4.3						
STKA				LR	LR	19 00 40.9	
	comp=Z,96nm,20.7s,baz=50,slow=34						
	comp=Z,2.4nm,0.7s						
STKA	**Stephens Creek**	**27.97**	**244**	P	**P**	**18 50 33.3**	**-1.5**
STKA				IAmb	IAmb	18 51 01.8	
	comp=Z,20nm,0.8s						
COEN	**Coen**	**28.08**	**283**	P	**P**	**18 50 38.8**	**+2.9**
	comp=Z,20nm,1.2s						
COEN	**Coen**	**28.08**	**283**	P	**P**	**18 50 33.8**	**-2.1**
COEN				IAmb	IAmb	18 50 39.4	
	comp=Z,28nm,1.1s						
INKA	**Innaminka**	**28.15**	**253**	P	**P**	**18 50 35.1**	**-1.3**
BBOO	**Buckleboo**	**32.75**	**244**	P	**P**	**18 51 17.8**	**+0.8**
BBOO				IAmb	IAmb	18 51 45.7	
	comp=Z,27nm,1.3s						
WR8	**Warramunga Arr**	**34.41**	**267**		**P**	**18 51 31.6**	**0.0**
AS31	**Alice Springs**	**34.41**	**261**		**P**	**18 51 31.5**	**-0.2**
ASAR	**Alice Springs**	**34.41**	**261**	P	**P**	**18 51 32.1**	**+0.5**
	comp=Z,8.8nm,0.8s,baz=85,slow=8.8,SNR=71						
ASAR				LR	LR	19 05 38.2	
	comp=Z,120nm,19.0s,baz=98,slow=36						
	comp=Z,8.8nm,0.8s						
ASAR	**Alice Springs**	**34.41**	**261**		**P**	**18 51 31.9**	**+0.2**
WB0	**Warramunga Arr**	**34.54**	**268**		**P**	**18 51 32.0**	**-0.8**
WB0				IAmb	IAmb	18 51 38.6	
	comp=Z,6.0nm,0.9s						
WRA	**Warramunga Arr**	**34.56**	**267**	P	**P**	**18 51 32.8**	**-0.1**
	comp=Z,2.2nm,0.5s,baz=97,slow=8.4,SNR=60						
	comp=Z,2.2nm,0.5s						
WRA	**Warramunga Arr**	**34.56**	**267**	P	**P**	**18 51 32.5**	**-0.4**
TBI	**Tubuai**	**35.99**	**99**	*e*LR	LR	19 01 24.4	
	comp=Z,760nm,27.2s						
PPT2	**Papeete2**	**36.94**	**89**	*e*LR	LR	19 01 49.9	
PPT2				*e*LR	LR	19 01 56.4	
	comp=Z,170nm,26.8s						
KDU	**Kakadu**	**38.26**	**278**	P	**P**	**18 52 07.0**	**+2.6**
	comp=Z,6.3nm,1.0s						

FORT Forrest 39.35 249 P **P** **18 52 12.5 -1.0**
FORT IAmb IAmb 18 52 38.9
comp=Z,12nm,1.0s
MTN Manton Dam 39.43 277 P **P** **18 52 13.5 -0.9**
MTN IAmb IAmb 18 52 31.9
comp=Z,28nm,1.4s
KNRA Kununurra 40.73 272 P **P** **18 52 26.3 +1.2**
KNRA Kununurra 40.73 272 P **P** **18 52 23.6 -1.5**
KNRA IAmb IAmb 18 52 26.9
comp=Z,11nm,0.9s
H11S2 WAKE ISLAND Hy 41.09 353 T T 19 36 13.1
baz=171,slow=76,SNR=12
H11S3 WAKE ISLAND Hy 41.10 353 T T 19 36 10.4
baz=171,slow=76,SNR=7.4
H11S1 WAKE ISLAND Hy 41.11 353 T T 19 36 10.4
baz=171,slow=76,SNR=6.6
H11N1 WAKE ISLAND Hy 42.28 354 T T 19 37 38.3
baz=172,slow=76,SNR=11
H11N3 WAKE ISLAND Hy 42.28 354 T T 19 37 38.7
baz=172,slow=76,SNR=6.6
H11N2 WAKE ISLAND Hy 42.30 354 T T 19 37 39.8
baz=172,slow=76,SNR=9.0
FITZ Fitzroy Crossi 42.99 267 P **P** **18 52 44.5 +0.9**
comp=Z,17nm,0.8s,baz=120,slow=8.6,SNR=35
comp=Z,17nm,0.8s
SIJI Sorong 44.56 293 LR LR 19 11 46.5
comp=Z,121nm,18.8s,baz=78,slow=36
BATI Baumata 47.21 277 LR LR 19 13 54.8
comp=Z,352nm,19.4s,baz=142,slow=37
PSAC2 Pilbara Seismi 47.51 261 P **P** **18 53 20.0 +0.6**
comp=Z,27nm,1.0s
PSA00 Pilbara Seismi 47.56 261 P **P** **18 53 18.3 -1.5**
PSA00 IAmb IAmb 18 53 23.8
comp=Z,6.4nm,1.1s
MBWA Marble Bar 47.75 261 P **P** **18 53 20.9 -0.4**
MEEK Meekatharra 47.86 254 P **P** **18 53 23.1 +1.0**
comp=Z,22nm,0.9s
KLBR Kellerberrin 48.17 247 P **P** **18 53 24.6 +0.2**
comp=Z,29nm,1.0s
TAOE Nuku Hiva Isla 48.41 82 *e*LR LR 19 07 04.2
comp=Z,144nm,23.3s
NWAO Narrogin (SRO) 48.55 245 P **P** **18 53 27.1 -0.2**
MORW Morawa 49.85 250 P **P** **18 53 37.9 +0.6**
MORW Morawa 49.85 250 P **P** **18 53 37.0 -0.3**
MORW IAmb IAmb 18 53 43.8
comp=Z,13nm,1.0s
KAPI Kappang 52.79 281 LR LR 19 17 07.2
comp=Z,51nm,19.0s,baz=103,slow=37
KAPI Kappang 52.79 281 P **P** **18 53 57.5 -2.0**
TOLI2 Tolitoli 54.61 289 P **P** **18 54 10.9 -1.9**
VNDA Vanda 55.17 183 LR LR 19 13 49.4
comp=Z,78nm,21.3s,baz=340,slow=32
SBA Scott Base 55.35 181 P **P** **18 54 16.3 -1.0**
SBA IAmb IAmb 18 54 24.6
comp=Z,11nm,1.1s
KKM Kota Kinabalu 60.98 291 P **P** **18 54 57.9 +0.2**
LEM Lembang 63.20 274 P **P** **18 55 14.2 +1.4**
comp=Z,12nm,0.4s,baz=101,slow=6.5,SNR=6.2
LEM LR LR 19 22 52.6
comp=Z,68nm,18.4s,baz=190,slow=36
comp=Z,12nm,0.4s
JGF Kuroka 66.25 330 P **P** **18 55 30.8 -1.1**
MJAR Matsushiro Arr 66.64 331 P **P** **18 55 33.4 -1.0**
comp=Z,3.3nm,0.9s,baz=160,slow=6.0,SNR=7.2
MJAR LR LR 19 24 06.0
comp=Z,25nm,19.4s,baz=160,slow=35
comp=Z,3.3nm,0.9s
MJAR Matsushiro Arr 66.64 331 P **P** **18 55 33.0 -1.3**
QSPA South Pole Qui 67.47 180 P **P** **18 55 39.5 0.0**
comp=Z,2.3nm,0.8s,baz=183,slow=0.5,SNR=11
QSPA LR LR 19 23 21.3
comp=Z,63nm,18.3s,baz=45,slow=34
comp=Z,2.3nm,0.8s
QSPA South Pole Qui 67.47 180 P **P** **18 55 38.7 -0.9**
QSPA IAmb IAmb 18 55 58.2
comp=Z,6.8nm,0.9s
JNU Nakatsue 67.55 324 LR LR 19 23 00.7
comp=Z,22nm,19.8s,baz=128,slow=34
MNAI Manna 68.42 274 P **P** **18 55 44.8 -1.4**
RPN Rapa Nui 70.95 112 LR LR 19 20 13.3
comp=Z,49nm,20.7s,baz=40,slow=30
ASAJ Asahikawa 71.44 339 LR LR 19 21 49.3
comp=Z,38nm,21.6s,baz=164,slow=31
KSRS Korea Array 72.39 325 LR LR 19 25 33.4
comp=Z,35nm,20.9s,baz=135,slow=34
GSI Gunungsitoli 75.57 278 P **P** **18 56 26.4 -2.6**
PETK Petropavlovsk- 76.32 352 P **P** **18 56 32.9 +0.6**
comp=Z,11nm,1.1s,baz=178,slow=6.3,SNR=2.2
comp=Z,11nm,1.1s
BELA Belgrano 2 78.59 175 P **P** **18 56 43.3 -1.6**
KLR Kul'dur 79.74 335 LR LR 19 31 03.1
comp=Z,14nm,18.4s,baz=225,slow=35
CM31 Chiang Mai Arr 81.69 294 P **P** **18 57 02.5 -0.1**
CM31 IAmb IAmb 18 57 05.7
comp=Z,7.3nm,0.9s
CMAR Chiang Mai Arr 81.69 294 P **P** **18 57 04.7 +2.1**
comp=Z,4.9nm,0.9s,baz=134,slow=4.0,SNR=35
comp=Z,4.9nm,0.9s
CMAR Chiang Mai Arr 81.69 294 P **P** **18 57 02.3 -0.3**
MA2 Magadan 83.61 350 LR LR 19 29 27.3
comp=Z,102nm,19.1s,baz=175,slow=32
OHAK Old Harbor 84.87 18 P **P** **18 57 17.8 -0.2**
OHAK IAmb IAmb 18 57 22.0
comp=Z,9.1nm,1.2s
N14K Kuskokwak Cree 85.13 13 P **P** **18 57 18.6 -0.7**
N15K Kwethluk River 85.70 14 P **P** **18 57 22.4 +0.2**
N15K IAmb IAmb 18 57 40.7
comp=Z,10.0nm,1.2s
M14K Bethel 85.83 13 P **P** **18 57 22.2 -0.5**
M14K IAmb IAmb 18 57 23.8
comp=Z,6.9nm,1.1s
SNAA Sanae 85.90 182 LR LR 19 34 11.0
comp=Z,76nm,18.6s,baz=226,slow=34
LZDM Lanzhou Array 86.48 311 P **P** **18 57 27.9 +0.8**
comp=Z,0.4nm,0.3s,baz=126,slow=6.1,SNR=3.7
comp=Z,0.4nm,0.3s
LPIG La Paz 89.09 64 LR LR 19 31 08.8
comp=Z,38nm,18.4s,baz=190,slow=31
NVAR Mina Array Bea 89.55 48 P **P** **18 57 41.7 +0.2**
comp=Z,1.9nm,0.7s,baz=248,slow=5.8,SNR=6.4
NVAR LR LR 19 31 00.2
comp=Z,47nm,18.4s,baz=267,slow=31
comp=Z,1.9nm,0.7s
YAK Yakutsk 90.67 342 LR LR 19 37 24.8
comp=Z,16nm,18.8s,baz=104,slow=35
SONM Songino Array 91.09 322 P **P** **18 57 48.4 +0.1**
comp=Z,2.6nm,1.0s,baz=142,slow=5.0,SNR=10
comp=Z,2.6nm,1.0s
ILAR Eielson Array 92.85 17 P **P** **18 57 53.7 -2.2**
comp=Z,0.4nm,0.8s,baz=228,slow=5.6,SNR=5.5
ILAR LR LR 19 33 06.7
comp=Z,65nm,19.6s,baz=224,slow=31
H03N3 Juan Fernandez 92.91 128 T T 20 41 46.0
baz=240,slow=74,SNR=18
H03N2 Juan Fernandez 92.91 128 T T 20 41 43.9
baz=240,slow=74,SNR=26
H03N1 Juan Fernandez 92.93 128 T T 20 41 43.7
baz=240,slow=74,SNR=20
DLBC Dease Lake 94.11 27 LR LR 19 31 35.5
comp=Z,40nm,21.5s,baz=276,slow=30
PLCA Paso Flores 94.71 138 P **P** **18 58 07.1 +1.7**
comp=Z,0.8nm,0.6s,baz=216,slow=8.7,SNR=3.1
comp=Z,0.8nm,0.6s
ANMO Albuquerque 96.57 55 LR LR 19 32 57.3
comp=Z,40nm,21.7s,baz=237,slow=30
PDAR Pinedale Array 97.44 47 LR LR 19 36 36.9
comp=Z,21nm,19.2s,baz=209,slow=32
TIXI Tiksi 98.43 348 LR LR 19 37 31.1
comp=Z,30nm,21.8s,baz=189,slow=32
MKAR Makanchi Array 105.51 315 Pdiff **Pdif** **18 58 53.2 -0.1**
comp=Z,0.2nm,0.5s,baz=109,slow=7.0,SNR=3.8
KURBB Kurchatov Arra 108.89 318 PKiKP **PKiKP** **19 03 11.4 -1.3**
comp=Z,0.2nm,0.5s,baz=100,slow=2.6,SNR=4.0
BOSA Boshof 119.51 214 PKP **PKPdf** **19 03 34.5 +0.5**
comp=Z,4.5nm,1.2s,baz=112,slow=1.0,SNR=6.8
BRTR Keskin Array B 140.41 306 PKP **PKPdf** **19 04 13.5 +0.4**
comp=Z,0.7nm,0.7s,baz=127,slow=5.2,SNR=2.8
NEHR Nehoiu 143.60 317 ⇓P PKPbc 19 04 16.7 +0.8
MLR Muntele Rosu 143.79 318 ⇑P PKPbc 19 04 17.1 +0.5
DOPR Dopca 143.91 319

DRGR		145.08 321	⇑P	PKPbc	19 04 21.1	+0.5
LOT	Lotru	145.15 319	⇑P	PKPbc	19 04 21.2	+0.3
LANS	Liptovska Anna	145.43 327	*e*PKP	PKPab	19 04 22.9	+1.1
STEB	Steborice	145.74 329	*e*PKP	PKPdf	19 04 22.3	+0.3
GZR	Gura Zlata	145.78 319	⇑P	PKPdf	19 04 22.4	+0.1
CHVC	Chvalec	146.06 332	*e*PKP	PKPab	19 04 24.8	+0.7
MAUC	Maruska	146.10 329	*e*PKP	PKPbc	19 04 24.1	+0.5
DPC	Dobruska-Polom	146.12 331	*e*PKP	PKPbc	19 04 23.9	+0.3
HERR	Herculane	146.26 319	⇑P	PKPdf	19 04 24.1	+1.1
VRAC	Vranov	146.73 329	⇓P	PKPbc	19 04 25.8	+0.3
PVCC	Panska Ves	146.75 333	*e*PKP	PKPab	19 04 27.7	+1.0
MODS	Modra-Piesok	147.04 328	*e*PKP	PKPbc	19 04 26.3	-0.1
EKA	Eskdalemuir Ar	147.06 354	PKPbc	PKPdf	19 04 24.2	+0.2
	comp=Z,1.7nm,0.7s,baz=5.8,slow=2.9,SNR=4.5					
ZVC	Zvikov	147.72 332	*e*PKP	PKPbc	19 04 28.0	-0.2
RONA	Rosalia, Austr	147.98 328	*e*PKP	PKPbc	19 04 28.7	-0.3
	comp=Z,3.3nm,0.6s					
CONA	Conrad Observa	148.03 328	*e*PKP	PKPbc	19 04 28.7	-0.5
	comp=Z,0.5nm,0.3s					
CKRC	Cesky Krumlov	148.13 331	*e*PKP	PKPbc	19 04 29.1	-0.2
KHC	Kasperske Hory	148.22 332	*e*PKP	PKPbc	19 04 30.0	+0.4
GERES	GERESS Array B	148.38 331	PKPbc	PKPbc	19 04 29.8	-0.3
	comp=Z,1.8nm,0.7s,baz=25,slow=5.1,SNR=9.2					
MOA	Molln	148.85 330	*i* PKP	PKPbc	19 04 30.8	-0.4
	comp=Z,0.6nm,0.3s					
SOKA	Soboth	149.31 327	*e*PKP	PKPbc	19 04 31.3	-1.2
	comp=Z,1.2nm,0.5s					
LESA	Schwarzleotal	149.90 331	*e*PKP	PKPbc	19 04 32.8	-1.1
	comp=Z,3.6nm,0.5s					
MYKA	Terra Mystica	150.02 328	*e*PKP	PKPbc	19 04 33.2	-1.0
	comp=Z,1.2nm,0.4s					
WATA	Walderalm	150.46 332	*e*PKP	PKPbc	19 04 34.8	-0.5
	comp=Z,1.3nm,0.4s					
ABTA	Abfaltersbach	150.47 330	*i* PKP	PKPbc	19 04 34.5	-0.8
	comp=Z,3.0nm,0.6s					
WTTA	Wattenberg	150.48 331	*e*PKP	PKPbc	19 04 35.1	-0.3
	comp=Z,3.6nm,0.7s					
MOTA	Moosalm	150.65 332	*e*PKP	PKPbc	19 04 35.2	-0.7
	comp=Z,2.3nm,0.6s,SNR=4.1					
SQTA	Sankt Quirin	150.70 332	*i* PKP	PKPbc	19 04 35.3	-0.6
	comp=Z,3.4nm,0.5s,SNR=5.0					
FETA	Feichten	151.07 332	*e*PKP	PKPbc	19 04 36.9	+0.1
	comp=Z,1.9nm,0.7s					
TORD	Torodi Ar. Bea	166.41 228	PKP	PKPdf	19 04 49.4	-0.4
	comp=Z,2.1nm,1.0s,baz=250,slow=2.9,SNR=6.2					
TORD			PKPab	PKPab	19 05 51.9	+0.5
	comp=Z,2.1nm,1.0s,baz=161,slow=4.2,SNR=4.9					

YARS 15 18:49:04.3, 72.04N×129.80E, h10km, ML1.4/4, Northern and central Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
Y860		**0.27**	**213**	*i* Pg	Pg	18 49 09.6	-0.3
	110nm,0.1s						
Y860				*e*Sg	Sg	18 49 13.0	-0.5
	138nm,0.0s						
Y860				*e*Sg	Sg	18 49 13.0	-0.5
	112nm,0.0s						
Y765		**0.46**	**275**	*e*Pg	Pg	18 49 12.6	-0.7
Y765				*e*Sg	Sg	18 49 19.1	-0.2
	0.7nm,0.5s						
Y455		**0.47**	**172**	*e*Pg	Pg	18 49 13.2	-0.3
	25nm,0.0s						
Y455				*e*Sg	Sg	18 49 19.3	-0.4
	45nm,0.1s						
TIXI	**Tiksi**	**0.49**	**217**	*i* Pg	Pg	18 49 13.4	-0.5
	9.9nm,0.2s						
Y452		**0.71**	**209**	*i* Pg	Pg	18 49 17.3	-0.8
	8.8nm,0.2s						
Y452				*i* Sg	Sg	18 49 26.9	-0.5
	20nm,0.1s						
Y452				*i* Sg	Sg	18 49 26.9	-0.5
	26nm,0.3s						

YARS 15 18:49:11.1, 72.08N×129.91E, h6km, ML1.6/5, Northern and central Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
Y860		**0.32**	**214**	*e*Pg	Pg	18 49 17.6	+0.2
	200nm,0.1s						
Y860				*e*Sg	Sg	18 49 21.2	-0.4
	129nm,0.0s						
Y860				*e*Sg	Sg	18 49 21.2	-0.4
	195nm,0.0s						
Y765		**0.49**	**270**	*e*Pg	Pg	18 49 19.4	-1.1
Y765				*e*Sg	Sg	18 49 27.3	+0.4
Y455		**0.50**	**177**	*e*Pg	Pg	18 49 19.5	-1.3
	26nm,0.1s						
Y455				*e*Sg	Sg	18 49 27.5	+0.2
	77nm,0.1s						
Y455				*e*Sg	Sg	18 49 27.5	+0.2
	78nm,0.1s						
TIXI	**Tiksi**	**0.54**	**218**	*e*Pg	Pg	18 49 20.4	-1.1
	21nm,0.1s						
TIXI				*e*Sg	Sg	18 49 28.1	-0.4
	40nm,0.1s						
TIXI				*e*Sg	Sg	18 49 28.1	-0.4
	32nm,0.2s						
Y452		**0.76**	**210**	*e*Pg	Pg	18 49 25.3	-0.4
	11nm,0.1s						
Y452				*e*Sg	Sg	18 49 35.0	-0.6
	34nm,0.4s						
Y452				*e*Sg	Sg	18 49 35.0	-0.6
	39nm,0.2s						
Y453		**1.27**	**165**	*e*Pg	Pn	18 49 34.6	-0.8
	3.6nm,0.1s						
Y453				*e*Sg	Sg	18 49 50.9	-1.0
	12nm,0.3s						
Y453				*e*Sg	Sg	18 49 50.9	-1.0
	17nm,0.3s						

*TEH **15** 18:53:58.0, 34.68N×45.50E, h10km±46km, ML2.9, Presumed earthquake*
*ISN **15** 18:53:59.9±2.5, 34.68N×45.40E, h19km±63km, ML3.0, Presumed earthquake*
ISC 15 18:53:58.5±1.1, 34.65N±0.06×45.42E±0.05, h18km, n9, σ1§56/12, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLG1	**Gilan-e-Gharb**	**0.67**	**143**	Pg	**Pb**	**18 54 10.8**	**-0.9**
IDHR	**Dehrash**	**0.80**	**86**	Pg	**Pb**	**18 54 12.3**	**-1.6**
IDHR				Sg	**Sb**	**18 54 23.5**	**-1.0**
IGHG	**Ghaleghazi**	**1.00**	**108**	Pg	**Pb**	**18 54 16.9**	**-0.6**
IKRK	**Kirkuk**	**1.16**	**310**	*e*Pg	**Pn**	**18 54 20.0**	**+0.2**
	baz=130						
IKRK				*e*Sg	**Sg**	**18 54 37.0**	**+0.9**
IKRK				AML	AML	18 54 42.5	
	comp=E,254nm,0.5s						
IKRK				AML	AML	18 54 42.5	
	comp=N,600nm,0.4s						
KCHF	**Cheshme Sefid,**	**1.39**	**105**	Pg	**Pn**	**18 54 23.7**	**+0.5**
SNQR	**Sonqor, Kerman**	**1.83**	**83**	Pg	**Pb**	**18 54 31.2**	**-0.4**
IBZA	**Bozab**	**2.02**	**94**	Pn	**Pn**	**18 54 33.9**	**+2.0**
IALM	**Almabolaq**	**2.27**	**84**	Pn	**Pn**	**18 54 37.1**	**+1.7**
RAFI	**Al-Rafai**	**2.98**	**169**	*e*Pn	**Pn**	**18 54 47.0**	**+2.2**
RAFI				*e*Sn	**Sb**	**18 55 25.0**	**-2.1**

*DJA **15** 18:59:01.9±0.2, 9°S±2°×11°1E±°, h10km, M4.2/41, mB5.2/1, mb4.3/6, MLv4.2/41, Mw(mB)4.6/1*
*IDC **15** 18:59:03.1±3.1, 9.15S×110.76E, h48km±35km, mb3.6/10, mbtmp3.8/12, ML3.5/2, MS3.1/3, Error ellipse: s-maj=53.8km s-min=15.8km az=45.0*
ISC 15 18:59:02.4±0.8, 9.45S±0.08×110.62E±0.06, h50km, n49, σ1§66/50, mb4.0/11, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCJI	**Pacitan**	**1.36**	**24**	P	**Pn**	**18 59 24.1**	**-1.0**
UGM	**Wanagama**	**1.53**	**356**	P	**Pn**	**18 59 26.1**	**-1.4**
UGM	**Wanagama**	**1.53**	**356**	S	**Sn**	**18 59 48.1**	**+1.9**
UGM	**Wanagama**	**1.53**	**356**	P	**Pn**	**18 59 26.0**	**-1.4**
UGM				S	**Sn**	**18 59 45.3**	**-0.9**
YOGI	**Yogyakarta**	**1.65**	**349**	P	**Pn**	**18 59 28.5**	**-0.6**
YOGI				S	**Sn**	**18 59 48.4**	**-0.8**
SNJI	**Sawahan-Nganju**	**2.00**	**34**	P	**Pn**	**18 59 35.0**	**+1.0**
SNJI				S	**Sn**	**18 59 59.4**	**+1.4**
SJI	**Sawahan**	**2.04**	**34**	P	**Pn**	**18 59 34.7**	**+0.2**
NGJI	**Ngawi**	**2.23**	**22**	P	**Pn**	**18 59 40.1**	**+3.2**
SMRI	**Semarang**	**2.39**	**356**	P	**Pn**	**18 59 40.3**	**+1.1**
SMRI	**Semarang**	**2.39**	**356**	P	**Pn**	**18 59 40.7**	**+1.5**
SMRI				S	**Sn**	**19 00 10.3**	**+3.0**
KPJI	**Karang Pucung**	**2.69**	**321**	P	**Pn**	**18 59 44.6**	**+1.4**
CTJI	**Waduk Cacaban**	**2.81**	**329**	P	**Pn**	**18 59 46.8**	**+1.8**
BLJI	**Banyuglugur**	**3.39**	**60**	P	**Pn**	**18 59 56.6**	**+3.7**
BBJI	**Bungbulang**	**3.54**	**304**	P	**Pn**	**18 59 54.7**	**-0.3**
BBJI	**Bungbulang**	**3.54**	**304**	S	**Sn**	**19 00 36.7**	**+1.0**
BBJI	**Bungbulang**	**3.54**	**304**	P	**Pn**	**18 59 55.3**	**+0.3**
JAGI	**Jajag, Banyuwa**	**3.62**	**75**	P	**Pn**	**18 59 57.3**	**+1.2**
JAGI	**Jajag, Banyuwa**	**3.62**	**75**	P	**Pn**	**18 59 57.0**	**+0.9**
ABJI	**Asem Bagus**	**3.93**	**66**	P	**Pn**	**19 00 02.7**	**+2.4**
LEM	**Lembang**	**3.95**	**311**	P	**Pn**	**19 00 00.1**	**-0.6**
	5.1nm,0.3s,baz=84,slow=7.2,SNR=7.3						
LEM				S	**Sn**	**19 00 50.0**	**+4.0**
	46nm,0.5s,baz=316,slow=15,SNR=3.9						
LEM				LR	LR	19 01 16.9	
	comp=Z,62nm,18.4s,baz=145,slow=34						
	25nm,0.6s						
LEM	**Lembang**	**3.95**	**311**	P	**Pn**	**19 00 02.3**	**+1.5**
KMMI	**Kalianget**	**4.08**	**55**	P	**Pn**	**19 00 02.3**	**0.0**
RTBI	**Rangdo, Negare**	**4.38**	**77**	P	**Pn**	**19 00 08.9**	**+2.4**
XMI	**Christmas Isla**	**4.96**	**258**	P	**Pn**	**19 00 14.6**	**+0.2**
KHKI	**Kahang-Kahang**	**5.04**	**78**	P	**Pn**	**19 00 17.6**	**+2.0**
	0.1nm,24nm,0.7s						
CGJI	**Cibinong**	**5.63**	**300**	P	**Pn**	**19 00 23.5**	**-0.2**
	2μm42nm,0.5s						
PLAI	**Plampang**	**7.09**	**86**	P	**Pn**	**19 00 45.3**	**+1.6**
PLAI	**Plampang**	**7.09**	**86**	P	**Pn**	**19 00 44.7**	**+1.0**
KASI	**Kota Agung**	**7.22**	**302**	P	**Pn**	**19 00 45.8**	**+0.4**
	0.1nm16nm,1.3s						
DBNI	**Kabupaten Domp**	**7.66**	**84**	P	**Pn**	**19 00 52.6**	**+1.1**
	12nm,0.5s						
WBSI	**Waikabubak, Su**	**8.65**	**92**	P	**Pn**	**19 01 01.8**	**-3.3**
LBFI	**Labuhan Bajo,**	**9.21**	**85**	P	**Pn**	**19 01 12.4**	**-0.3**
SOEI	**Soe**	**13.46**	**92**	P	**Pn**	**19 02 12.9**	**+1.9**
FITZ	**Fitzroy Crossi**	**16.92**	**122**	P	**Pn**	**19 02 55.5**	**-0.3**
	0.1nm,0.3s,baz=313,slow=14,SNR=1.4						
FITZ				S	Sn	19 05 49.1	-14
	3.1nm,0.9s,baz=345,slow=23,SNR=5.7						
FITZ				LR	LR	19 10 38.5	
	comp=Z,98nm,18.0s,baz=108,slow=41						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**25.17**	**117**	P	**P**	**19 04 25.0**	**+1.6**
	0.5nm,0.7s,baz=299,slow=8.8,SNR=9.3						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**26.36**	**125**	P	**P**	**19 04 35.7**	**+1.6**
	0.7nm,0.8s,baz=299,slow=10.0,SNR=8.0						
	0.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**30.03**	**337**	P	**P**	**19 05 07.1**	**+0.2**
	0.2nm,0.3s,baz=147,slow=9.9,SNR=2.0						
	0.2nm,0.3s						
KSRS	**Korea Array**	**49.39**	**18**	P	**P**	**19 07 46.4**	**-0.8**
	1.5nm,0.7s,baz=186,slow=9.8,SNR=4.1						
	1.5nm,0.7s						
MJAR	**Matsushiro Arr**	**52.59**	**28**	P	**P**	**19 08 08.8**	**-2.5**
	2.0nm,0.7s,baz=200,slow=8.2,SNR=8.1						
	2.0nm,0.7s						
SONM	**Songino Array**	**57.15**	**357**	P	**P**	**19 08 43.3**	**-0.9**
	0.8nm,0.6s,baz=183,slow=7.3,SNR=7.2						
	0.8nm,0.6s						
HEH	**HeiHe**	**61.23**	**12**	*e*P	**P**	**19 09 11.3**	**-0.9**
HEH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MKAR	**Makanchi Array**	**61.43**	**338**	P	**P**	**19 09 13.1**	**-0.6**
	comp=Z,1.1nm,0.4s,baz=150,slow=7.4,SNR=26						
	comp=Z,1.1nm,0.4s						
H04N2	**CROZET ISLANDS**	**61.82**	**222**	T	T	20 17 13.6	
	baz=71						
H04N1	**CROZET ISLANDS**	**61.83**	**222**	T	T	20 17 09.3	
	baz=71						
H04N3	**CROZET ISLANDS**	**61.83**	**222**	T	T	20 17 13.1	
	baz=71						
KURBB	**Kurchatov Arra**	**66.00**	**338**	P	**P**	**19 09 42.8**	**-0.8**
	comp=Z,0.5nm,0.4s,baz=158,slow=5.0,SNR=6.6						
	comp=Z,0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**66.83**	**344**	P	**P**	**19 09 47.5**	**-1.3**
	comp=Z,1.7nm,0.4s,baz=166,slow=5.0,SNR=11						
	comp=Z,1.7nm,0.4s						
BVAR	**Borovoye Array**	**71.03**	**336**	P	**P**	**19 10 14.7**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=154,slow=8.1,SNR=5.6						
	comp=Z,0.7nm,0.6s						
KIRV	**Kirov**	**83.69**	**332**	LR	LR	19 56 11.5	
	comp=Z,24nm,18.8s,baz=135,slow=41						

*IDC **15** 19:17:04.9±1.9, 32.41N×85.06E, h0km, mb3.3/4, mbtmp3.5/8, ML3.4/4, MS3.0/5, Error ellipse: s-maj=56.0km s-min=20.4km az=73.0*
ISC 15 19:17:07.1±1.7, 32.5N±0.1×85.1E±0.2, h16km, n12, σ1§18/8, mb3.4/4, MS3.5/3, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**13.15**	**323**	LR	LR	19 25 23.8	
	comp=Z,50nm,20.0s,baz=176,slow=38						
MKAR	**Makanchi Array**	**14.46**	**352**	Pn	**Pn**	**19 20 29.4**	**-1.6**
	baz=168,slow=14,SNR=7.3						
MKAR				LR	LR	19 25 57.3	
	comp=Z,11nm,20.8s,baz=148,slow=37						
	0.6nm,0.8s						
LZDM	**Lanzhou Array**	**15.78**	**72**	Pn	**Pn**	**19 20 48.6**	**-0.4**
	baz=270,slow=19						
	0.6nm,0.3s						
CMAR	**Chiang Mai Arr**	**18.72**	**135**	P	**Pn**	**19 21 24.9**	**-0.6**
	0.1nm,0.3s,baz=320,slow=10.0,SNR=11						
	1.2nm,0.8s						
KURBB	**Kurchatov Arra**	**18.77**	**347**	P	**Pn**	**19 21 25.9**	**+0.1**
	baz=152,slow=11,SNR=15						
	2.4nm,1.1s						
ZALV	**Zalesovo Beam**	**21.46**	**360**	P	**P**	**19 21 56.0**	**+1.4**
	0.7nm,0.4s,baz=183,slow=10,SNR=6.3						
	0.7nm,0.4s						
SONM	**Songino Array**	**22.26**	**40**	P	**P**	**19 22 04.5**	**+1.0**
	1.1nm,0.8s,baz=226,slow=12,SNR=6.9						
	1.1nm,0.8s						
AKTO	**Aktyubinsk**	**26.85**	**320**	LR	LR	19 33 54.9	
	comp=Z,32nm,20.3s,baz=24,slow=38						
ASAJ	**Asahikawa**	**45.76**	**58**	LR	LR	19 47 08.7	
	comp=Z,49nm,18.5s,baz=226,slow=39						
KEST	**Kesra**	**61.31**	**296**	LR	LR	19 57 39.8	
	comp=Z,31nm,19.0s,baz=314,slow=40						
WRA	**Warramunga Arr**	**70.26**	**131**	P	**P**	**19 28 19.4**	**-0.3**
	0.2nm,0.4s,baz=320,slow=6.2,SNR=8.9						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**72.73**	**134**	P	**P**	**19 28 35.4**	**+0.8**
	0.2nm,0.7s,baz=315,slow=6.5,SNR=5.5						
	0.2nm,0.7s						

*IDC **15** 19:22:18.1±1.0, 26.89N×142.81E, h0km, mb3.8/6, mbtmp3.7/7, ML2.4/1, Error ellipse: s-maj=23.2km s-min=15.6km az=33.0*
ISC 15 19:22:22.8±1.0, 26.9N±0.1×142.8E±0.1, h32km, n8, σ1§16/9, mb3.6/6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**0.58**	**287**	Pn	**Pb**	**19 22 34.2**	**-0.5**
	113nm,0.3s,baz=278,slow=23,SNR=41						
JCJ				Sn	**Sn**	**19 22 44.1**	**+0.8**
	504nm,0.3s,baz=284,slow=23,SNR=16						
MJAR	**Matsushiro Arr**	**10.35**	**339**	Pn	**Pn**	**19 24 47.9**	**-1.2**
	baz=160,slow=14,SNR=2.2						
	1.4nm,0.9s						
WRA	**Warramunga Arr**	**47.31**	**191**	P	**P**	**19 30 53.5**	**0.0**
	1.5nm,0.4s,baz=12,slow=8.6,SNR=45						
	1.5nm,0.4s						
ASAR	**Alice Springs**	**51.03**	**191**	P	**P**	**19 31 21.3**	**-0.6**
	0.3nm,0.8s,baz=21,slow=11,SNR=6.4						
	0.3nm,0.8s						
KURBB	**Kurchatov Arra**	**53.56**	**314**	P	**P**	**19 31 40.1**	**-0.3**
	0.4nm,0.7s,baz=89,slow=7.5,SNR=1.1						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**57.59**	**29**	P	**P**	**19 32 10.2**	**+1.0**
	0.3nm,0.9s,baz=252,slow=4.9,SNR=2.4						
	0.3nm,0.9s						
FINES	**FINESS Array B**	**78.34**	**334**	P	**P**	**19 34 21.5**	**+1.9**
	4.7nm,1.0s,baz=29,slow=5.9,SNR=3.9						
	4.7nm,1.0s						
NVAR	**Mina Array Bea**	**80.18**	**52**	P	**P**	**19 34 29.5**	**-0.9**
	0.6nm,0.6s,baz=277,slow=9.8,SNR=2.5						
	0.6nm,0.6s						

*IDC **15** 19:27:06.5±0.6, 12.37N×144.12E, h0km, mb4.2/19, mbtmp4.2/19, MS3.4/19, Error ellipse: s-maj=19.6km s-min=13.2km az=99.0*
*NEIC **15** 19:27:07.5±1.4, 12.31N±0.06×144.03E±0.09, h10km±1km, mb4.5/40, Error ellipse: s-maj=15.8km s-min=10.8km az=101.0*
ISC 15 19:27:07.1±2.2, 12.30N±0.07×144.1E±0.1, h9km±14km, n93, σ1§18/80, mb4.5/45, MS3.6/15, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.48**	**30**	Pn	**Pg**	**19 27 34.9**	**-0.6**
	149nm,0.3s,baz=196,slow=10,SNR=88						
GUMO				Sn	**Sg**	**19 27 54.1**	**-0.6**
	232nm,0.3s,baz=17,slow=20,SNR=11						
JCJ	**Chichijima**	**14.83**	**353**	LR	LR	19 35 31.0	
	comp=Z,120nm,20.4s,baz=136,slow=34						
KRVT	**Keravat (AS076**	**18.27**	**154**	LR	LR	19 37 21.5	
	comp=Z,15nm,20.0s,baz=351,slow=34						
SIJI	**Sorong**	**18.27**	**225**	LR	LR	19 38 10.4	
	comp=Z,156nm,19.0s,baz=122,slow=36						
DAV	**Davao City (W)**	**18.99**	**256**	LR	LR	19 38 58.8	
	comp=Z,39nm,20.0s,baz=315,slow=38						
JHJ	**Hachijo jima 2**	**21.10**	**350**	LR	LR	19 38 41.1	
	comp=Z,131nm,18.8s,baz=192,slow=33						
H11S3	**WAKE ISLAND Hy**	**22.60**	**71**	T	T	19 55 38.7	
	baz=257,slow=75,SNR=17						
H11S1	**WAKE ISLAND Hy**	**22.62**	**71**	T	T	19 55 47.1	
	baz=257,slow=75,SNR=15						
H11S2	**WAKE ISLAND Hy**	**22.62**	**71**	T	T	19 55 48.1	
	baz=257,slow=75,SNR=22						
H11N1	**WAKE ISLAND Hy**	**23.08**	**68**	T	T	19 56 14.6	
	baz=255,slow=75,SNR=42						
H11N2	**WAKE ISLAND Hy**	**23.09**	**68**	T	T	19 56 15.1	
	baz=255,slow=75,SNR=44						
H11N3	**WAKE ISLAND Hy**	**23.10**	**68**	T	T	19 56 20.8	
	baz=255,slow=75,SNR=39						
MJAR	**Matsushiro Arr**	**24.72**	**349**	P	**P**	**19 32 28.6**	**-0.2**
	2.5nm,0.9s,baz=166,slow=9.5,SNR=4.4						
MJAR				PcP	**PcP**	**19 36 06.7**	**+0.8**
	1.5nm,0.7s,baz=157,slow=4.6,SNR=3.2						
MJAR				LR	LR	19 41 34.7	
	comp=Z,106nm,18.3s,baz=170,slow=35						
	2.5nm,0.9s						
MJAR	**Matsushiro Arr**	**24.72**	**349**	P	**P**	**19 32 27.4**	**-1.4**
COEN	**Coen**	**26.10**	**182**	P	**P**	**19 32 40.9**	**-0.6**
COEN				IAmb	IAmb	19 33 04.9	
	comp=Z,26nm,1.5s						
MTN	**Manton Dam**	**28.10**	**208**	P	**P**	**19 32 58.1**	**-1.4**
KSRS	**Korea Array**	**28.95**	**333**	P	**P**	**19 33 07.6**	**+0.8**
	comp=Z,1.6nm,0.7s,baz=143,slow=10,SNR=3.4						
	comp=Z,1.6nm,0.7s						
KNRA	**Kununurra**	**31.68**	**209**	P	**P**	**19 33 30.4**	**-0.7**
KNRA				IAmb	IAmb	19 33 37.0	
	comp=Z,18nm,1.4s						
WB0	**Warramunga Arr**	**33.27**	**197**	P	**P**	**19 33 44.9**	**-0.3**
WB0				IAmb	IAmb	19 33 51.1	
	comp=Z,10nm,1.4s						
WR8	**Warramunga Arr**	**33.42**	**197**	P	**P**	**19 33 45.6**	**-0.9**
WR8				IAmb	IAmb	19 34 24.5	
	comp=Z,13nm,1.5s						
WRA	**Warramunga Arr**	**33.45**	**197**	P	**P**	**19 33 47.5**	**+0.8**
	comp=Z,2.7nm,0.8s,baz=21,slow=9.6,SNR=26						
WRA				PcP	**PcP**	**19 36 29.6**	**+1.5**
	comp=Z,0.3nm,0.7s,baz=7.2,slow=2.7,SNR=2.5						
	comp=Z,2.7nm,0.8s						
WRA	**Warramunga Arr**	**33.45**	**197**	P	**P**	**19 33 43.9**	**-2.8**
AS31	**Alice Springs**	**37.11**	**196**	P	**P**	**19 34 17.9**	**-0.4**
ASAR	**Alice Springs**	**37.11**	**196**	P	**P**	**19 34 19.4**	**+1.1**
	comp=Z,2.2nm,0.8s,baz=20,slow=11,SNR=30						
ASAR				PcP	**PcP**	**19 36 39.6**	**+0.8**
	comp=Z,0.8nm,0.8s,baz=351,slow=2.4,SNR=5.2						
ASAR				LR	LR	19 49 57.6	
	comp=Z,90nm,19.3s,baz=14,slow=37						
	comp=Z,2.2nm,0.8s						
ASAR	**Alice Springs**	**37.11**	**196**	P	**P**	**19 34 17.2**	**-1.1**
EIDS	**Eidsvold**	**38.05**	**170**	P	**P**	**19 34 25.7**	**-0.4**
KLR	**Kul'dur**	**38.22**	**347**	LR	LR	19 49 14.8	
	comp=Z,41nm,18.9s,baz=40,slow=35						
HEH	**HeiHe**	**40.25**	**343**	*e*P	**P**	**19 34 44.8**	**+0.5**
HEH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**40.29**	**321**	*e*P	**P**	**19 34 47.3**	**+2.4**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,97nm,4.8s						
PZH	**PanZhiHua**	**42.19**	**296**	P	**P**	**19 35 02.3**	**+1.6**
LZH	**Lanzhou**	**43.27**	**310**	*e*P	**P**	**19 35 11.3**	**+1.9**
LZH				pP	pwP	19 35 24.8	+5.9
LZH				pmax	pmax		
	comp=Z,8.0nm,1.4s						
LZDM	**Lanzhou Array**	**43.33**	**310**	P	**P**	**19 35 11.5**	**+1.4**
	comp=Z,1.3nm,0.5s,baz=169,slow=8.1,SNR=4.6						
	comp=Z,1.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**43.90**	**284**	P	**P**	**19 35 16.2**	**+1.7**
	comp=Z,1.4nm,0.8s,baz=84,slow=6.3,SNR=11						
CMAR				PcP	**PcP**	**19 37 02.4**	**+1.6**
	comp=Z,1.4nm,0.5s,baz=89,slow=1.8,SNR=10						
CMAR				LR	LR	19 53 28.9	
	comp=Z,26nm,19.4s,baz=140,slow=36						
	comp=Z,1.4nm,0.8s						
STKA	**Stephens Creek**	**43.99**	**183**	P	**P**	**19 35 16.6**	**+1.6**
	comp=Z,4.1nm,0.9s,baz=330,slow=8.8,SNR=4.3						
	comp=Z,4.1nm,0.9s						
STKA	**Stephens Creek**	**43.99**	**183**	P	**P**	**19 35 14.6**	**-0.3**
**BBO

B21K	**Ikpikpuk River**	**68.73**	**19**	P	**P**	**19 38 10.2**	**-0.8**
B21K				IAmb	IAmb	19 38 14.7	
	comp=Z,2.2nm,0.8s						
E22K	**Anaktuvuk Pass**	**69.13**	**21**		**P**	**19 38 12.2**	**-1.3**
E22K				IAmb	IAmb	19 38 17.9	
	comp=Z,3.0nm,0.9s						
G23K	**Bananza Creek**	**69.32**	**23**	IAmb	IAmb	19 38 19.7	
	comp=Z,2.7nm,0.8s						
B22K	**Teshekpuk Lake**	**69.39**	**19**	P	**P**	**19 38 14.1**	**-0.9**
B22K				IAmb	IAmb	19 38 50.0	
	comp=Z,4.2nm,1.1s						
KKAR	**Karatay Array**	**69.75**	**312**		**P**	**19 38 18.2**	**+0.4**
D23K	**Nanushuk River**	**69.80**	**20**	IAmb	IAmb	19 38 22.4	
	comp=Z,3.5nm,1.0s						
GAR	**Garm**	**69.81**	**307**		**P**	**19 38 17.0**	**-1.4**
IL31		**70.04**	**25**	P	**P**	**19 38 17.4**	**-1.7**
ILAR	**Eielson Array**	**70.04**	**25**	P	**P**	**19 38 18.2**	**-1.0**
	comp=Z,1.4nm,0.7s,baz=251,slow=5.7,SNR=37						
ILAR				LR	LR	20 10 34.9	
	comp=Z,19nm,18.0s,baz=166,slow=37						
	comp=Z,1.4nm,0.7s						
E24K	**Your Creek**	**70.29**	**22**	IAmb	IAmb	19 38 25.0	
	comp=Z,2.9nm,0.9s						
BVAR	**Borovoye Array**	**70.48**	**322**	P	**P**	**19 38 22.4**	**+0.3**
	comp=Z,5.1nm,0.5s,baz=105,slow=7.5,SNR=55						
BVAR				LR	LR	20 11 35.9	
	comp=Z,39nm,19.3s,baz=89,slow=38						
	comp=Z,5.1nm,0.5s						
BORK	**Borovoye**	**70.53**	**322**		**P**	**19 38 21.0**	**-1.4**
C24K	**Franklin Bluff**	**70.70**	**20**		**P**	**19 38 22.7**	**-0.4**
C24K				IAmb	IAmb	19 38 28.9	
	comp=Z,2.7nm,0.8s						
D25K	**Kavik River**	**71.38**	**21**	P	**P**	**19 38 26.4**	**-1.0**
D25K				IAmb	IAmb	19 38 34.9	
	comp=Z,3.6nm,1.1s						
BMAR	**Burnt Mountain**	**71.57**	**23**		**P**	**19 38 29.5**	**+1.0**
H27K	**Steamboat Moun**	**72.53**	**24**	IAmb	IAmb	19 38 35.9	
	comp=Z,3.3nm,0.8s						
I28M	**Miner Creek**	**73.06**	**25**	P	**P**	**19 38 36.8**	**-0.7**
F28M	**Old Crow**	**73.38**	**23**	P	**P**	**19 38 39.8**	**+0.5**
E29M	**Blow River**	**74.22**	**22**	P	**P**	**19 38 43.9**	**-0.3**
F30M	**Barrier River**	**74.94**	**23**	P	**P**	**19 38 48.3**	**0.0**
F30M				IAmb	IAmb	19 38 52.2	
	comp=Z,7.7nm,1.2s						
ABKAR	**Akbulak array**	**77.00**	**318**		**P**	**19 39 00.5**	**+0.1**
BBB	**Bella Bella**	**79.04**	**39**	LR	LR	20 09 30.0	
	comp=Z,30nm,19.4s,baz=290,slow=32						
YKA	**Yellowknife Ar**	**84.34**	**27**	P	**P**	**19 39 39.7**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=291,slow=6.2,SNR=7.4						
YKA				LR	LR	20 15 57.6	
	comp=Z,28nm,20.7s,baz=320,slow=35						
	comp=Z,0.7nm,0.8s						
NEW	**Newport**	**86.67**	**41**	LR	LR	20 15 23.2	
	comp=Z,29nm,18.8s,baz=198,slow=33						
NVAR	**Mina Array Bea**	**88.30**	**51**	P	**P**	**19 40 01.8**	**+2.0**
	comp=Z,1.1nm,0.6s,baz=293,slow=4.8,SNR=4.0						
	comp=Z,1.1nm,0.6s						
KBZ	**Khabaz**	**89.55**	**315**	P	**P**	**19 40 04.2**	**-1.0**
	comp=Z,1.7nm,0.8s,baz=0.0,slow=0.0,SNR=3.8						
	comp=Z,1.7nm,0.8s						
ELK	**Elko**	**89.97**	**48**	LR	LR	20 14 37.8	
	comp=Z,38nm,19.7s,baz=226,slow=32						
PFO	**Pinyon Flats O**	**90.97**	**55**	LR	LR	20 21 22.4	
	comp=Z,27nm,18.1s,baz=196,slow=36						
FINES	**FINESS Array B**	**92.02**	**335**	P	**P**	**19 40 15.1**	**-1.2**
	comp=Z,1.6nm,0.5s,baz=62,slow=5.1,SNR=21						
	comp=Z,1.6nm,0.5s						
PDAR	**Pinedale Array**	**93.39**	**45**	P	**P**	**19 40 24.2**	**+0.8**
	comp=Z,0.2nm,0.7s,baz=292,slow=1.5,SNR=3.7						
	comp=Z,0.2nm,0.7s						
BRTR	**Keskin Array B**	**97.41**	**313**	P	**P**	**19 40 40.8**	**-0.9**
	comp=Z,1.1nm,0.8s,baz=16,slow=5.4,SNR=4.2						
	comp=Z,1.1nm,0.8s						
ULM	**Lac du Bonnet**	**98.72**	**34**	LR	LR	20 24 40.0	
	comp=Z,18nm,19.6s,baz=18,slow=35						
TORD	**Torodi Ar. Bea**	**134.97**	**303**	PKP	**PKPdf**	**19 46 26.9**	**-0.9**
	comp=Z,1.1nm,0.8s,baz=330,slow=0.3,SNR=5.5						
DBIC	**Dimbokro**	**143.85**	**300**	PKP	PKPbc	19 46 42.3	+0.7
	comp=Z,5.5nm,0.7s,baz=65,slow=2.2,SNR=9.9						
LPAZ	**La Paz**	**148.52**	**101**	PKPbc	**PKiKP**	**19 46 57.8**	**0.0**
	comp=Z,1.8nm,0.8s,baz=342,slow=3.2,SNR=6.3						

*IDC **15** 19:31:17.5±5.1,26°.49N×126°.57E,h90km±61km, mb3.4/8, mbtmp3.8/9,ML3.2/1,MS3.4/1,Error ellipse: s-maj=65.3km s-min=14.4km az=62.0*

*JMA **15** 19:31:18.7±0.2,26°.N±1°.×126°.6E±0°.9, h89km±1km, MV3.5/13,NW OFF OKINAWAJIMA IS*

ISC 15 19:31:18.0±0.9,26°.51N±0°.08×126°.58E±0°.07,h94km±7km, n22,σ0°63/33,mb3.7/8,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKE	**Kume jima 2**	**0.26**	**134**	P	**Pn**	**19 31 31.7**	**0.0**
JKE				*e*S	**Sn**	**19 31 41.3**	**-0.5**
JAGN	**Aguni-jima**	**0.60**	**82**	P	**Pn**	**19 31 34.2**	**+0.3**
JAGN				*e*S	**Sn**	**19 31 45.9**	**0.0**
JJT3	**Tamagusuku3**	**1.14**	**108**	P	**Pn**	**19 31 40.5**	**+0.9**
JJT3				*e*S	**Sn**	**19 31 55.9**	**0.0**
JNTH	**Nagotoyohara**	**1.29**	**89**	*i* P	**Pn**	**19 31 41.9**	**+0.5**
JNTH				*e*S	**Sn**	**19 31 58.6**	**-0.5**
JIH	**Iheya**	**1.35**	**67**	P	**Pn**	**19 31 42.9**	**+0.9**
JIH				*e*S	**Sn**	**19 32 00.3**	**0.0**
JOW	**Kunigami**	**1.55**	**78**	P	**Pn**	**19 31 44.9**	**+0.4**
	320nm,0.2s,baz=137,slow=21,SNR=746						
JOW				S	**Sn**	**19 32 04.2**	**-0.6**
	483nm,0.2s,baz=326,slow=30,SNR=35						
JOW	**Kunigami**	**1.55**	**78**	P	**Pn**	**19 31 45.0**	**+0.4**
JOW				*e*S	**Sn**	**19 32 04.2**	**-0.6**
JYRO	**Yoronjima**	**1.75**	**72**	*i* P	**Pn**	**19 31 47.5**	**+0.4**
JYRO				*e*S	**Sn**	**19 32 09.1**	**-0.2**
JOKE	**Okinoerabujima**	**1.97**	**64**	P	**Pn**	**19 31 50.1**	**+0.1**
JOKE				*e*S	**Sn**	**19 32 13.8**	**-0.5**
JIKM	**Ikemajima**	**1.98**	**218**	*e*P	**Pn**	**19 31 50.6**	**+0.5**
JIKM				*e*S	**Sn**	**19 32 14.3**	**-0.2**
JOGS	**Gusukube**	**2.04**	**212**	*e*P	**Pn**	**19 31 51.1**	**+0.3**
JOGS				*e*S	**Sn**	**19 32 16.1**	**+0.3**
JMJ2	**Miyako jima3**	**2.09**	**213**	*e*P	**Pn**	**19 31 51.9**	**+0.4**
JMJ2				*e*S	**Sn**	**19 32 16.8**	**-0.3**
JNU	**Nakatsue**	**7.58**	**29**	P	**Pn**	**19 33 06.0**	**+0.3**
	0.3nm,0.3s,baz=243,slow=4.5,SNR=1.7						
	8.8nm,0.9s						
SONM	**Songino Array**	**26.53**	**329**	P	**P**	**19 36 48.9**	**+2.0**
	0.2nm,0.4s,baz=148,slow=10,SNR=1.2						
	0.2nm,0.4s						
MA2	**Magadan**	**37.05**	**20**	LR	LR	19 54 38.5	
	comp=Z,49nm,18.1s,baz=208,slow=38						
MKAR	**Makanchi Array**	**40.25**	**312**	P	**P**	**19 38 44.5**	**-1.0**
	0.5nm,0.5s,baz=94,slow=9.2,SNR=5.7						
	0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**41.13**	**323**	P	**P**	**19 38 51.8**	**-0.9**
	0.7nm,0.5s,baz=113,slow=8.9,SNR=2.2						
	0.7nm,0.5s						
KURBB	**Kurchatov Arra**	**43.63**	**317**	P	**P**	**19 39 12.6**	**-0.4**
	0.3nm,0.4s,baz=104,slow=6.5,SNR=0.7						
	0.3nm,0.4s						
FITZ	**Fitzroy Crossi**	**44.35**	**181**	P	**P**	**19 39 18.4**	**-0.6**
	1.4nm,0.4s,baz=12,slow=9.2,SNR=9.7						
	1.4nm,0.4s						
WRA	**Warramunga Arr**	**46.78**	**170**	P	**P**	**19 39 37.7**	**-0.5**
	1.2nm,0.8s,baz=352,slow=8.6,SNR=8.9						
	1.2nm,0.8s						
ASAR	**Alice Springs**	**50.38**	**171**	P	**P**	**19 40 05.9**	**+0.1**
	0.5nm,0.7s,baz=349,slow=9.4,SNR=9.5						
	0.5nm,0.7s						
STKA	**Stephens Creek**	**59.80**	**165**	P	**P**	**19 41 13.3**	**0.0**
	1.7nm,0.6s,baz=359,slow=7.8,SNR=4.3						
	1.7nm,0.6s						

*SDD **15** 19:44:59.1±2.5, 17°.95N×66°.75W, h15km±24km, MD3.5, ML2.8,MW3.3,Presumed earthquake*

*OSPL **15** 19:44:59.9±0.3, 17°.89N×66°.74W, h13km±8km, ML2.8, Presumed earthquake*

*NEIC **15** 19:45:00.8±1.6, 18°.05N±0°.01×66°.76W±0°.01, h10km±1km, ML3.0/35, Md3.1/4(RSPR), Error ellipse: s-maj=2.7km s-min=1.7km az=153.0*

ISC 15 19:44:59.3±0.9,17°.97N±0°.04×66°.75W±0°.02,h14km±7km, n29,σ0°89/43,14C-1D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.12**	**272**		**Pb**	**19 45 04.1**	**+0.6**
GBPR					**Sb**	**19 45 07.1**	**+0.9**
OBIP	**Obispado Ponce**	**0.15**	**63**		**Pg**	**19 45 03.9**	**+0.7**
OBIP	**Obispado Ponce**	**0.15**	**63**	*i* P	**Pg**	**19 45 04.0**	**+0.8**
OBIP				*e*S	**Sb**	**19 45 07.0**	**-0.1**
OBIP				IAML		19 45 07.7	
	comp=Z,1μm,0.1s						
CELP	**Cerrillos**	**0.19**	**58**		**Pg**	**19 45 04.6**	**+0.8**
CELP				IAML		19 45 08.1	
	comp=Z,3μm,0.3s						
CELP				IAML		19 45 08.2	
	comp=Z,4μm,0.2s						
CELP	**Cerrillos**	**0.19**	**58**	↑*e*Pg	**Pg**	**19 45 04.5**	**+0.8**
CELP				↑*e*Sg	**Sg**	**19 45 04.7**	**-2.0**
CELP				IAML		19 45 08.2	
	comp=N,2μm,0.2s						
MLPR	**Magueyes Islan**	**0.28**	**270**		**Pg**	**19 45 03.3**	**-1.9**
MLPR				IAML		19 45 08.4	
	comp=N,3μm,0.5s						
MLPR				IAML		19 45 08.5	
	comp=N,3μm,0.4s						
MLPR	**Magueyes Islan**	**0.28**	**270**	↑*e*Pg	**Pg**	**19 45 03.3**	**-1.9**
MLPR				↑*e*Sg	**Sg**	**19 45 07.9**	**-1.3**
MLPR				IAML		19 45 08.5	
	comp=N,929nm,0.2s						
UUPR	**Utuado, UPR, P**	**0.28**	**6**		**Pg**	**19 45 05.4**	**+0.2**
CRPR	**Cabo Rojo, PR**	**0.34**	**276**		**Pg**	**19 45 06.8**	**+0.5**
CRPR				IAML		19 45 12.2	
	comp=N,1μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.34**	**276**		**Sg**	**19 45 12.1**	**+1.1**
CRPR	**Cabo Rojo, PR**	**0.34**	**276**	*i* P	**Pg**	**19 45 06.8**	**+0.5**
CRPR				*e*S	**Sg**	**19 45 11.9**	**+0.9**
CRPR				IAML		19 45 12.4	
	comp=Z,1μm,0.3s						
AOPR	**Arecibo Observ**	**0.37**	**359**		**Pg**	**19 45 06.8**	**-0.1**
AOPR				IAML		19 45 12.8	
	comp=Z,3μm,0.2s						
AOPR	**Arecibo Observ**	**0.37**	**359**	↑*e*Pg	**Pg**	**19 45 06.9**	**-0.1**
AOPR				↑*e*Sg	**Sg**	**19 45 11.7**	**-0.3**
AOPR				IAML		19 45 12.8	
	comp=N,3μm,0.2s						
LSP	**Las Mesas**	**0.38**	**303**		**Pg**	**19 45 07.2**	**+0.3**
LSP					**Sb**	**19 45 13.2**	**-0.5**
PRSN	**Puerto Rico Se**	**0.45**	**303**		**Pg**	**19 45 08.0**	**-0.3**
PRSN				IAML		19 45 17.1	
	comp=N,2μm,0.2s						
PRSN				IAML		19 45 19.0	
	comp=N,2μm,0.2s						
PRSN	**Puerto Rico Se**	**0.45**	**303**	↑*e*Pg	**Pg**	**19 45 08.0**	**-0.3**
PRSN				↑*e*Sg	**Sg**	**19 45 14.5**	**+0.2**
PRSN				IAML		19 45 17.1	
	comp=N,1μm,0.2s						
ECPR	**Experimental S**	**0.51**	**47**		**Pg**	**19 45 09.1**	**-0.2**
ECPR				IAML		19 45 17.6	
	comp=N,2μm,0.2s						
ECPR				IAML		19 45 17.8	
	comp=N,2μm,0.3s						
EMPR	**Esperanza - Ma**	**0.55**	**23**		**Pg**	**19 45 10.2**	**+0.2**
EMPR					**Sg**	**19 45 16.9**	**-0.5**
SJG	**San Juan**	**0.59**	**76**		**Pg**	**19 45 10.7**	**-0.1**
SJG				IAML		19 45 20.1	
	comp=N,806nm,0.4s						
SJG				IAML		19 45 20.6	
	comp=N,711nm,0.2s						
SJG	**San Juan**	**0.59**	**76**	↑*e*Pg	**Pg**	**19 45 10.6**	**-0.1**
SJG				↑*e*Sg	**Sg**	**19 45 18.5**	**-0.2**
SJG	**San Juan**	**0.59**	**76**	*i* P	**Pg**	**19 45 10.8**	**-0.1**
SJG				*e*S	**Sg**	**19 45 18.8**	**+0.1**
SJG				IAML		19 45 20.7	
	comp=Z,511nm,0.3s						
AGPR	**Aguadilla, PR**	**0.60**	**325**		**Pg**	**19 45 10.5**	**-0.6**
AGPR	**Aguadilla, PR**	**0.60**	**325**	↑*e*Pg	**Pg**	**19 45 10.5**	**-0.6**
AGPR				↑*e*Sg	**Sg**	**19 45 18.9**	**-0.2**
AGPR				IAML		19 45 26.4	
	comp=N,328nm,0.4s						
PDPR	**Patillas Dam,**	**0.69**	**86**		**Pg**	**19 45 12.6**	**-0.2**
PDPR				IAML		19 45 24.1	
	comp=N,576nm,0.1s						
PDPR				IAML		19 45 24.3	
	comp=N,484nm,0.1s						
IDE	**Isla Desecheo**	**0.80**	**301**		**Pg**	**19 45 14.0**	**-0.9**
IDE					**Sg**	**19 45 23.8**	**-1.7**
HUMP	**Col San Antoni**	**0.87**	**79**		**Pb**	**19 45 15.1**	**-1.1**
HUMP				IAML		19 45 28.3	
	comp=N,637nm,0.2s						
HUMP	**Col San Antoni**	**0.87**	**79**		**Sb**	**19 45 26.6**	**-1.2**
HIDR	**Higuey Centro**	**1.97**	**289**	↑*e*Pg	**Pb**	**19 45 34.5**	**-0.4**
HIDR				↑*e*Sg	**Sb**	**19 45 58.8**	**-0.6**
HIDR				IAML		19 46 00.6	
	comp=N,68nm,0.7s						
HATOM	**Hato Mayor del**	**2.63**	**288**	↑*e*Pg	**Pn**	**19 45 43.2**	**+1.8**
HATOM				IAML		19 46 24.1	
	comp=N,35nm,0.8s						

IDC 15 20:02:38.9±1.2,15°.64N×118°.80E,h0km,mb3.3/5, mbtmp3.3/5,Error ellipse: s-maj=162.3km s-min=20.3km az=65.0,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**33.70**	**345**	P	P	20 09 21.8	0.0
	0.3nm,0.7s,baz=155,slow=9.1,SNR=2.7						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**38.52**	**156**	P	P	20 10 02.4	-0.8
	0.4nm,0.7s,baz=335,slow=8.8,SNR=7.4						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**41.76**	**159**	P	P	20 10 30.7	+0.5
	0.5nm,0.6s,baz=342,slow=8.3,SNR=12						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**43.39**	**323**	P	P	20 10 43.1	0.0
	0.2nm,0.7s,baz=134,slow=8.3,SNR=2.9						
	0.2nm,0.7s						
KURBB	**Kurchatov Arra**	**47.56**	**326**	P	P	20 11 15.9	-0.2
	0.2nm,0.6s,baz=122,slow=8.3,SNR=2.4						
	0.2nm,0.6s						

*IDC **15** 20:11:26.0±0.8,4°.10N×124°.77E,h0km,mb3.6/10, mbtmp3.7/11,ML4.2/1,MS2.8/2,Error ellipse: s-maj=42.9km s-min=11.6km az=79.0*

*DJA **15** 20:11:28.8±0.3,4°.N±3°.×12°.4E±°, h10km,M4.5/21, mb4.3/18,mB5.0/7,MLv4.7/21,Mw(mB)4.4/7*

*MAN **15** 20:11:30.0,4°.51N×124°.13E,h19km,MS3.7*

ISC 15 20:11:25.7±1.8,4°.18N±0°.03×124°.28E±0°.07,h1km±12km, n33,σ2°04/43,mb3.6/10,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.34**	**111**	P	**Pg**	**20 11 51.9**	**+0.4**
SGSI				S	**Sg**	**20 12 08.5**	**-0.4**
GSPH	**General Santos**	**2.01**	**19**	*i* P	**Pn**	**20 12 00.3**	**-0.6**
GSPH				*i* S	**Sn**	**20 12 24.2**	**-2.6**
DDMP	**Don Marcelino,**	**2.39**	**37**	*e*P	**Pn**	**20 12 06.0**	**-0.1**
DDMP				*e*S	Sn	20 12 23.2	-13
MNI	**Manado**	**2.77**	**168**	P	**Pn**	**20 12 12.4**	**+1.1**
MNI				S	**Sn**	**20 12 44.5**	**-1.0**
KCP	**Kidapawan**	**2.93**	**16**	*i* P	**Pn**	**20 12 13.7**	**+0.2**
KCP				*i* S	**Sn**	**20 12 47.6**	**-1.8**
CTBH	**Cotabato--PC H**	**3.02**	**359**	*i* P	**Pn**	**20 12 13.7**	**-1.1**
CTBH				*i* S	**Sn**	**20 12 46.5**	**-5.2**
DMPH	**Davao City--Mi**	**3.14**	**23**	*i* P	**Pn**	**20 12 17.8**	**+1.5**
DMPH				*i* S	**Sn**	**20 12 54.0**	**-0.4**
DAV	**Davao City (W)**	**3.15**	**24**	Pn	**Pn**	**20 12 16.0**	**-0.6**
	27nm,0.3s,baz=180,slow=6.1,SNR=1.4						
DAV				Sn	**Sn**	**20 12 55.2**	**+0.4**
	57nm,0.3s,baz=221,slow=19,SNR=12						
DAV				LR	LR	20 13 43.4	
	comp=Z,244nm,20.1s,baz=340,slow=45						
	79nm,0.4s						
GTOI	**Gorontalo**	**3.74**	**200**	P	**Pn**	**20 12 24.0**	**-0.6**
GTOI				S	**Sn**	**20 13 04.8**	**-4.5**
CGP	**Cagayan de Oro**	**4.27**	**6**	*e*P	**Pn**	**20 12 34.7**	**+2.8**
CGP				*e*S	**Sn**	**20 13 24.4**	**+2.0**
MRSI	**Marisa**	**4.35**	**212**	P	**Pn**	**20 12 34.2**	**+1.2**
BIPH	**Bislig**	**4.49**	**27**	*i* P	**Pg**	**20 12 50.0**	**-1.8**
BIPH				*i* S	**Sn**	**20 13 26.8**	**-1.1**
LUWI	**Luwuk**	**5.40**	**196**	P	**Pn**	**20 12 50.1**	**+2.7**
APSI	**Ampana**	**5.69**	**208**	P	**Pn**	**20 12 54.5**	**+3.0**
MPSI	**Mapaga**	**5.80**	**229**	P	**Pn**	**20 12 51.5**	**-1.5**
	0.5nm1μm15nm,0.4s						
MYLDM	**Lahad Datu**	**5.84**	**280**	P	**Pn**	**20 12 55.0**	**+1.5**
	0.2nm30nm,0.8s						
SANI	**Sanana**	**6.42**	**164**	P	**Pn**	**20 13 02.1**	**+0.6**
	14nm,0.8s						
PCI	**Palu**	**6.72**	**221**	P	**Pn**	**20 13 07.2**	**+1.6**
	0.3nm26nm,0.7s						

KKM	**Kota Kinabalu**	**8.24**	**283**	P	**Pn**	**20 13 27.5**	**+0.9**
	11nm,0.8s						
SIJI	**Sorong**	**8.60**	**126**	P	**Pn**	**20 13 33.2**	**+1.8**
	7.6nm,0.9s						
MMSI	**Mamuju**	**8.68**	**218**	P	**Pn**	**20 13 33.4**	**+0.9**
	15nm,1.4s						
SPSI	**Sidrap Palu**	**9.26**	**209**	P	**Pn**	**20 13 42.3**	**+1.9**
	8.3nm,0.9s						
KAPI	**Kappang**	**10.19**	**206**	LR	LR	20 17 52.5	
	comp=Z,39nm,21.5s,baz=57,slow=37						
FITZ	**Fitzroy Crossi**	**22.17**	**177**	P	**P**	**20 16 22.9**	**-0.5**
	4.4nm,0.5s,baz=6.2,slow=12,SNR=34						
FITZ				S	**S**	**20 20 27.7**	**-0.9**
	0.8nm,0.8s,baz=37,slow=20,SNR=1.3						
	4.4nm,0.5s						
WRA	**Warramunga Arr**	**25.93**	**158**	P	**P**	**20 16 58.5**	**-1.3**
	2.6nm,0.6s,baz=337,slow=9.2,SNR=38						
	2.6nm,0.6s						
ASAR	**Alice Springs**	**29.22**	**162**	P	**P**	**20 17 27.6**	**-1.7**
	0.3nm,0.5s,baz=343,slow=9.0,SNR=9.4						
	0.3nm,0.5s						
STKA	**Stephens Creek**	**39.46**	**157**	P	**P**	**20 18 56.6**	**-1.2**
	2.5nm,0.8s,baz=337,slow=9.1,SNR=4.2						
	2.5nm,0.8s						
SONM	**Songino Array**	**46.13**	**343**	P	**P**	**20 19 53.4**	**+1.5**
	0.1nm,0.3s,baz=154,slow=7.9,SNR=6.5						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**55.81**	**326**	P	**P**	**20 21 09.3**	**+4.6**
	0.3nm,0.5s,baz=124,slow=7.4,SNR=5.0						
	0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**59.10**	**334**	P	**P**	**20 21 30.8**	**+3.2**
	0.2nm,0.3s,baz=123,slow=10,SNR=1.6						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**60.06**	**328**	P	**P**	**20 21 36.8**	**+2.4**
	0.3nm,0.7s,baz=132,slow=5.1,SNR=5.9						
	0.3nm,0.7s						
BVAR	**Borovoye Array**	**65.62**	**328**	P	**P**	**20 22 12.5**	**+1.1**
	0.1nm,0.3s,baz=123,slow=5.3,SNR=1.4						
	0.1nm,0.3s						
ILAR	**Eielson Array**	**85.75**	**25**	P	**P**	**20 24 04.9**	**-1.6**
	0.1nm,0.5s,baz=261,slow=6.1,SNR=1.6						
	0.1nm,0.5s						

*MOS **15** 20:28:23.9±1.3,45°.44N×150°.02E,h114km, mb4.2/5,Error ellipse: s-maj=10.6km s-min=9.6km az=46.5*

*SKHL **15** 20:28:24.3±0.8,45°.20N×150°.20E,h113km±4km, mb5.0/5, msh5.8/4*

*JMA **15** 20:28:26.9±0.6,45°.N±3°.×15°.0E±°, h130km, MV3.5/12,SE OFF ETOROFU*

*NEIC **15** 20:28:27.6±2.0,45°.5N±0°.1×149°.9E±0°.2,h122km±10km, mb4.3/15,Error ellipse: s-maj=18.5km s-min=16.1km az=157.0*

*IDC **15** 20:28:27.0±2.3,45°.48N×149°.98E,h123km±20km, mb3.5/21,mbtmp3.9/24,Error ellipse: s-maj=16.8km s-min=13.7km az=149.0*

ISC 15 20:28:24.0±0.6,45°.27N±0°.06×150°.13E±0°.06,h100km,n96, σ1°86/103,mb3.9/35,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.60**	**269**	*e*PN	**Pn**	**20 28 50.5**	**-0.8**
KUR				*e*S	**Sn**	**20 29 11.7**	**-0.5**
KUR	**Kuril'sk**	**1.60**	**269**	*e*P	**Pn**	**20 28 52.7**	**+1.4**
KUR				AMB	AMB	20 28 53.4	
	1μm,0.5s						
KUR				*e*S	**Sn**	**20 29 13.7**	**+1.5**
KUR				A	A	20 29 14.9	
	1μm,0.2s						
KUR				A	A	20 29 14.9	
	2μm,0.2s						
SHO	**Shikotan**	**2.74**	**240**	*e*P	Pn	20 29 16.8	+11
SHO				AMB	AMB	20 29 18.3	
	50nm,0.3s						
SHO				*e*S	**Sn**	**20 29 47.0**	**+8.3**
SHO				A	A	20 29 52.0	
	280nm,0.3s						
SHO				A	A	20 29 52.0	
	160nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**3.29**	**249**	*e*PN	**Pn**	**20 29 13.5**	**+0.1**
YUK				*e*S	**Sn**	**20 29 51.1**	**-0.6**
YUK				smax	smax		
	comp=N,345nm,0.6s						
YUK				smax	smax		
	comp=E,391nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**3.29**	**249**	*e*P	**Pn**	**20 29 13.6**	**+0.1**
YUK				AMB	AMB	20 29 14.5	
	comp=E,170nm,0.5s						
YUK				*e*S	**Sn**	**20 29 51.3**	**-0.4**
YUK				A	A	20 29 57.5	
	comp=E,440nm,0.4s						
YUK				A	A	20 29 57.5	
	comp=E,460nm,0.4s						
GLVR	**Golovnino**	**3.63**	**247**	*e*PN	**Pn**	**20 29 19.3**	**+1.1**
GLVR				*e*S	**Sn**	**20 29 59.6**	**-0.5**
GLVR				pmax	pmax		
	comp=E,36nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,61nm,0.1s						
GLVR				smax	smax		
	comp=N,257nm,0.3s						
GLVR				smax	smax		
	comp=E,54nm,0.2s						
GLVR	**Golovnino**	**3.63**	**247**	*e*P	**Pn**	**20 29 19.3**	**+1.1**
GLVR				AMB	AMB	20 29 23.2	
	comp=E,60nm,0.4s						
GLVR				*e*S	**Sn**	**20 29 59.6**	**-0.5**
GLVR				A	A	20 30 09.2	
	comp=E,260nm,0.3s

TIXI					IAmb	IAmb	20 34 06.0		
	comp=Z,4.2nm,1.1s								
TIXI	**Tiksi**	**28.35**	**346**		P	**P**	**20 34 05.1**	**-2.9**	
TIXI					pmax	pmax			
	comp=Z,4.0nm,1.2s								
H11N2	**WAKE ISLAND Hy**	**29.01**	**146**		T	T	21 05 19.0		
	baz=336,slow=76,SNR=175								
H11N1	**WAKE ISLAND Hy**	**29.03**	**146**		T	T	21 05 15.8		
	baz=336,slow=76,SNR=106								
H11N3	**WAKE ISLAND Hy**	**29.03**	**146**		T	T	21 05 16.5		
	baz=336,slow=76,SNR=139								
SONM	**Songino Array**	**29.89**	**291**		P	**P**	**20 34 20.6**	**-1.5**	
	comp=Z,0.2nm,0.3s,baz=84,slow=9.1,SNR=7.0								
	comp=Z,0.2nm,0.3s								
SONM	**Songino Array**	**29.89**	**291**		P	**P**	**20 34 19.3**	**-2.7**	
SONM	**Songino Array**	**29.89**	**291**		P	**P**	**20 34 19.3**	**-2.7**	
H11S1	**WAKE ISLAND Hy**	**30.05**	**147**		T	T	21 06 34.9		
	baz=337,slow=76,SNR=206								
H11S3	**WAKE ISLAND Hy**	**30.05**	**147**		T	T	21 06 34.9		
	baz=337,slow=76,SNR=145								
H11S2	**WAKE ISLAND Hy**	**30.06**	**147**		T	T	21 06 34.9		
	baz=337,slow=76,SNR=144								
C18K	**Utukok River**	**33.94**	**30**		P	**P**	**20 34 58.3**	**+1.1**	
B20K	**Meade River**	**35.71**	**28**		P	**P**	**20 35 13.5**	**+1.2**	
B20K					IAmb	IAmb	20 35 15.3		
	comp=Z,3.9nm,0.6s								
B21K	**Ikpikpuk River**	**36.47**	**29**		P	**P**	**20 35 18.2**	**-0.5**	
B21K					IAmb	IAmb	20 35 22.8		
	comp=Z,4.4nm,0.8s								
KDAK	**Kodiak Island**	**36.65**	**49**		P	**P**	**20 35 19.3**	**-1.1**	
KDAK					IAmb	IAmb	20 35 27.4		
	comp=Z,9.2nm,1.1s								
KDAK	**Kodiak Island**	**36.65**	**49**		P	**P**	**20 35 19.3**	**-1.1**	
KDAK					pmax	pmax			
	comp=Z,9.0nm,1.2s								
C23K	**Itkillik River**	**37.88**	**29**		P	**P**	**20 35 31.9**	**+1.2**	
C23K					IAmb	IAmb	20 35 34.4		
	comp=Z,2.1nm,0.8s								
ILAR	**Eielson Array**	**38.99**	**37**		P	**P**	**20 35 40.8**	**+0.7**	
	comp=Z,0.2nm,0.6s,baz=271,slow=9.2,SNR=2.2								
	comp=Z,0.2nm,0.6s								
ZALV	**Zalesovo Beam**	**41.80**	**306**		P	**P**	**20 36 02.6**	**-0.7**	
	comp=Z,0.4nm,0.3s,baz=73,slow=9.7,SNR=2.4								
	comp=Z,0.4nm,0.3s								
MKAR	**Makanchi Array**	**45.77**	**297**		P	**P**	**20 36 34.2**	**-1.0**	
	comp=Z,1.4nm,0.6s,baz=72,slow=6.8,SNR=21								
	comp=Z,1.4nm,0.6s								
MKAR	**Makanchi Array**	**45.77**	**297**		P	**P**	**20 36 34.3**	**-0.9**	
KURK	**Kurchatov**	**46.45**	**304**		P	**P**	**20 36 38.9**	**-1.5**	
KURK	**Kurchatov**	**46.45**	**304**		P	**P**	**20 36 38.9**	**-1.5**	
KURK					pmax	pmax			
	comp=Z,1.0nm,0.6s								
KURK	**Kurchatov**	**46.45**	**304**	*e*	P	**P**	**20 36 38.9**	**-1.5**	
KURBB	**Kurchatov Arra**	**46.54**	**304**		P	**P**	**20 36 40.0**	**-1.2**	
	comp=Z,0.9nm,0.5s,baz=72,slow=8.7,SNR=16								
	comp=Z,0.9nm,0.5s								
CMAR	**Chiang Mai Arr**	**49.99**	**255**		P	**P**	**20 37 09.4**	**+1.3**	
	comp=Z,0.5nm,0.3s,baz=41,slow=4.2,SNR=2.1								
	comp=Z,0.5nm,0.3s								
BVAR	**Borovoye Array**	**50.19**	**309**		P	**P**	**20 37 08.0**	**-1.1**	
	comp=Z,0.3nm,0.5s,baz=53,slow=11,SNR=2.6								
	comp=Z,0.3nm,0.5s								
KDJ	**Kajisay**	**51.15**	**294**		P	**P**	**20 37 14.4**	**-2.4**	
KDJ					IAmb	IAmb	20 37 18.4		
	comp=Z,2.8nm,0.9s								
KDJ	**Kajisay**	**51.15**	**294**		P	**P**	**20 37 14.4**	**-2.4**	
KDJ					pmax	pmax			
	comp=Z,3.0nm,0.9s								
BOOM	**Boomskoye usch**	**51.77**	**295**			**P**	**20 37 22.5**	**+1.2**	
BOOM					IAmb	IAmb	20 37 23.8		
	comp=Z,1.8nm,0.7s								
BOOM	**Boomskoye usch**	**51.77**	**295**		P	**P**	**20 37 22.5**	**+1.2**	
BOOM					pmax	pmax			
	comp=Z,2.0nm,0.7s								
YKA	**Yellowknife Ar**	**53.34**	**35**		P	**P**	**20 37 32.5**	**+0.1**	
	comp=Z,0.2nm,0.6s,baz=302,slow=8.2,SNR=2.8								
	comp=Z,0.2nm,0.6s								
GAR	**Garm**	**57.24**	**294**			**P**	**20 38 01.6**	**+0.7**	
AB31	**Akbulak array**	**57.76**	**309**			**P**	**20 38 03.7**	**-0.6**	
AB31					IAmb	IAmb	20 38 04.9		
	comp=Z,1.8nm,0.5s								
CHGR	**Chuyangaron**	**58.18**	**294**		P	**P**	**20 38 08.3**	**+0.8**	
CHGR	**Chuyangaron**	**58.18**	**294**		P	**P**	**20 38 08.3**	**+0.8**	
CHGR					pmax	pmax			
	comp=Z,15nm,0.7s								
FINES	**FINESS Array B**	**64.47**	**334**		P	**P**	**20 38 48.0**	**-1.3**	
	comp=Z,2.5nm,0.7s,baz=36,slow=6.3,SNR=15								
	comp=Z,2.5nm,0.7s								
FINES	**FINESS Array B**	**64.47**	**334**		P	**P**	**20 38 48.0**	**-1.3**	
NVAR	**Mina Array Bea**	**64.97**	**60**		P	**P**	**20 38 53.1**	**-0.1**	
	comp=Z,0.4nm,0.4s,baz=312,slow=7.5,SNR=2.4								
	comp=Z,0.4nm,0.4s								
WRA	**Warramunga Arr**	**66.47**	**196**		P	**P**	**20 39 03.3**	**+0.6**	
	comp=Z,1.1nm,0.9s,baz=8.6,slow=6.6,SNR=5.3								
	comp=Z,1.1nm,0.9s								
NB2	**NORSAR Subarra**	**68.93**	**340**		P	**P**	**20 39 16.6**	**-1.1**	
	comp=Z,5.0nm,0.7s,baz=29,slow=6.5								
NOA	**NORSAR Array B**	**68.93**	**340**		P	**P**	**20 39 16.0**	**-1.7**	
	comp=Z,0.9nm,0.4s,baz=23,slow=7.4,SNR=6.4								
	comp=Z,0.9nm,0.4s								
NOA	**NORSAR Array B**	**68.93**	**340**		P	**P**	**20 39 16.0**	**-1.7**	
HFS	**Hagfors**	**69.09**	**338**		P	**P**	**20 39 17.2**	**-1.4**	
	comp=Z,1.6nm,0.6s,baz=49,slow=5.4,SNR=8.8								
	comp=Z,1.6nm,0.6s								
ASAR	**Alice Springs**	**70.18**	**196**		P	**P**	**20 39 26.9**	**+1.2**	
	comp=Z,0.3nm,0.5s,baz=13,slow=6.3,SNR=5.1								
	comp=Z,0.3nm,0.5s								
ASAR	**Alice Springs**	**70.18**	**196**		P	**P**	**20 39 27.5**	**+1.7**	
ASAR	**Alice Springs**	**70.18**	**196**		P	**P**	**20 39 27.5**	**+1.7**	
KBZ	**Khabaz**	**70.36**	**313**		P	**P**	**20 39 26.7**	**0.0**	
	comp=Z,2.4nm,0.9s,baz=39,slow=6.5,SNR=4.5								
	comp=Z,2.4nm,0.9s								
AKASG	**Malin Array Be**	**71.59**	**325**		P	**P**	**20 39 33.0**	**-1.0**	
	comp=Z,1.3nm,0.4s,baz=38,slow=6.2,SNR=23								
	comp=Z,1.3nm,0.4s								
EKA	**Eskdalemuir Ar**	**77.25**	**345**		P	**P**	**20 40 06.4**	**-0.3**	
	comp=Z,0.8nm,0.8s,baz=16,slow=6.2,SNR=1.1								
	comp=Z,0.8nm,0.8s								
GERES	**GERESS Array B**	**78.83**	**332**		P	**P**	**20 40 15.3**	**-0.5**	
	comp=Z,0.8nm,0.6s,baz=36,slow=8.5,SNR=3.3								
	comp=Z,0.8nm,0.6s								
TXAR	**Lajitas Array**	**80.04**	**58**		P	**P**	**20 40 23.5**	**+0.9**	
	comp=Z,0.6nm,0.5s,baz=318,slow=4.7,SNR=7.3								
	comp=Z,0.6nm,0.5s								
SOKA	**Soboth**	**80.26**	**330**	*e*	P	**P**	**20 40 24.1**	**+0.5**	
	comp=Z,0.7nm,0.6s								
OBKA	**Obir**	**80.57**	**331**	*i*	P	**P**	**20 40 26.6**	**+1.4**	
	comp=Z,0.2nm,0.2s								
WATA	**Walderalm**	**80.84**	**333**	*i*	P	**P**	**20 40 27.3**	**+0.6**	
	comp=Z,0.6nm,0.3s								
WTTA	**Wattenberg**	**80.89**	**333**	*i*	P	**P**	**20 40 27.7**	**+0.8**	
	comp=Z,1.9nm,0.4s								
MOTA	**Moosalm**	**80.99**	**333**	*i*	P	**P**	**20 40 28.0**	**+0.5**	
	comp=Z,0.2nm,0.1s								
MMAI	**Mount Meron Ar**	**82.19**	**310**		P	**P**	**20 40 34.0**	**+0.1**	
	comp=Z,0.7nm,0.5s,baz=40,slow=9.6,SNR=4.2								
	comp=Z,0.7nm,0.5s								
H03N2	**Juan Fernandez**	**140.83**	**90**		T	T	23 25 07.3		
	baz=306,slow=77,SNR=12								
H03N3	**Juan Fernandez**	**140.84**	**90**		T	T	23 25 11.2		
	baz=306,slow=77,SNR=8.8								
H03N1	**Juan Fernandez**	**140.85**	**90**		T	T	23 25 11.9		
	baz=306,slow=77,SNR=10.0								
PLCA	**Paso Flores**	**150.14**	**96**		PKPbc	**PKPdf**	**20 48 03.6**	**+6.1**	
	comp=Z,1.1nm,0.7s,baz=301,slow=1.5,SNR=4.7								

*MEX **15** 20:58:08.9±0.6, 15°.50N×93°.58W, h82km±5km, MD4.1*
*GCG **15** 20:58:10.6±1.6, 15°.57N×93°.38W, h50km±91km, MD4.2, ML3.8, Presumed earthquake*

ISC 15 20:58:04.7±1.8, 15°.42N±0°.07×93°.52W±0°.06, h111km±14km, n17, σ2966/28, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PCIG		**0.41**	**45**	*e*P		**Pn**	**20 58 20.6**	**-0.4**
PCIG				*e*S		**Sn**	**20 58 30.1**	**-3.2**
CARR	**Arriaga**	**0.91**	**335**	*e*P		**Pn**	**20 58 25.9**	**+0.8**
CARR				*e*S		**Sn**	**20 58 38.8**	**-1.6**
PATR	**El Naranjo**	**1.27**	**103**	*e*P		**Pn**	**20 58 31.2**	**+2.1**
PATR				*e*S		**Sn**	**20 58 49.0**	**+1.3**
THIG		**1.31**	**113**	*e*P		**Pn**	**20 58 31.8**	**+2.5**
THIG				*e*S		**Sn**	**20 58 49.2**	**+1.2**
THIG		**1.31**	**113**	*i* S		**Sn**	**20 58 48.7**	**+0.8**
THIG				IAML			20 58 51.5	
	comp=E,785nm,0.4s							
PAVE	**Pavencul**	**1.31**	**100**	*e*P		**Pn**	**20 58 32.2**	**+2.6**
PAVE				*e*S		**Sn**	**20 58 50.0**	**+1.6**
CHUJ	**Union Juarez**	**1.40**	**103**	*e*P		**Pn**	**20 58 33.0**	**+2.4**
CHUJ				*e*S		**Sn**	**20 58 51.8**	**+1.6**
TGIG		**1.41**	**16**	*i* P		**Pn**	**20 58 31.3**	**+0.8**
TGIG				*e*S		**Sn**	**20 58 48.0**	**-2.1**
TGIG		**1.41**	**16**	*i* P		**Pn**	**20 58 31.1**	**+0.6**
TGIG				*i* S		**Sn**	**20 58 47.3**	**-2.8**
SMCA	**Catarina**	**1.50**	**112**	*e*S		**Sn**	**20 58 52.9**	**+0.9**
SMCA				IAML			20 58 54.8	
	comp=N,634nm,0.2s							
CCIG	**Comitan**	**1.58**	**57**	*e*P		**Pn**	**20 58 35.6**	**+2.9**
CCIG	**Comitan**	**1.58**	**57**	*i* P		**Pn**	**20 58 35.9**	**+3.2**
CMIG	**Matias Romero**	**2.12**	**322**	*e*P		**Pn**	**20 58 41.1**	**+1.8**
STG2	**El Palmar, Qui**	**2.29**	**115**	*i* P		**Pn**	**20 58 41.2**	**-0.4**
STG2				*e*S		**Sn**	**20 59 04.4**	**-5.4**
STG2				IAML			20 59 07.5	
	comp=E,3μm,0.3s							
STG8	**El Palmar, Qui**	**2.31**	**114**	*i* P		**Pn**	**20 58 41.5**	**-0.3**
STG8				*e*S		**Sn**	**20 59 05.4**	**-4.9**
STG5	**El Palmar, Qui**	**2.33**	**115**	*i* P		**Pn**	**20 58 41.4**	**-0.6**
STG5				*e*S		**Sn**	**20 59 05.3**	**-5.3**
HUIG	**Huatulco**	**2.52**	**278**	*e*P		**Pn**	**20 58 46.6**	**+2.2**

*IDC **15** 21:01:15.4±5.9, 36°.12N×140°.26E, h161km±25km, mb2.7/2, mbtmp3.3/3, Error ellipse: s-maj=69.8km s-min=56.5km az=98.0*
*JMA **15** 21:01:20.2±0.1, 35°.9N±0°.2×140°.1E±0°.3, h59km, MV2.0/33, SOUTHERN IBARAKI PREF*

ISC 15 21:01:18.2±3.7, 35°.84N±0°.08×140°.3E±0°.2, h68km±23km, n10, σ1839/15, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JYT	**Yasato**	**0.40**	**352**	*i* P		**Pn**	**21 01 30.5**	**+0.6**
JYT				S		**Sn**	**21 01 38.3**	**-0.2**
JAG	**Ashikaga**	**0.88**	**312**	*i* P		**Pn**	**21 01 35.4**	**+0.2**
JAG				S		**Sn**	**21 01 46.5**	**-1.2**
JOD2	**Odawara 2**	**1.12**	**240**	P		**Pn**	**21 01 38.8**	**+0.7**
JOD2				S		**Sn**	**21 01 52.0**	**-0.9**
JRY	**Ryogami san**	**1.12**	**280**	*i* P		**Pn**	**21 01 38.8**	**+0.6**
JRY				*e*S		**Sn**	**21 01 53.1**	**+0.1**
JKT	**Katashina**	**1.24**	**319**	P		**Pn**	**21 01 40.0**	**+0.3**
JKT				*e*S		**Sn**	**21 01 55.3**	**-0.6**
JYN	**Shimodate**	**1.44**	**257**	P		**Pn**	**21 01 43.4**	**+1.0**
JYN				S		**Sn**	**21 02 00.0**	**-0.6**
MJAR	**Matsushiro Arr**	**1.81**	**294**	P		**Pn**	**21 01 47.8**	**+0.6**
	2.8nm,0.5s,baz=98,slow=14,SNR=14							
MJAR				S		**Sn**	**21 02 12.2**	**+3.0**
	0.6nm,0.4s,baz=114,slow=13,SNR=4.1							
KSRS	**Korea Array**	**10.05**	**283**	P		**Pn**	**21 03 37.1**	**-2.5**
	1.4nm,0.8s,baz=96,slow=17,SNR=1.8							
SONM	**Songino Array**	**27.71**	**306**	P		P	21 06 48.4	-12
	0.1nm,0.5s,baz=99,slow=8.7,SNR=1.9							
	0.1nm,0.5s							
MKAR	**Makanchi Array**	**43.98**	**303**	P		P	21 09 03.5	-15
	0.3nm,0.8s,baz=76,slow=6.1,SNR=2.1							
	0.3nm,0.8s							

*BJI **15** 21:05:30.0, 10°.50S×118°.40E, h10km, mB5.2/32, mb5.2/77, Ms4.8/62, Ms7 4.6/61*
*IDC **15** 21:05:31.7±0.4, 10°.22S×118°.34E, h0km, mb5.1/25, mbtmp5.1/28, ML5.4/4, MS4.4/32, Error ellipse: s-maj=15.6km s-min=11.7km az=61.0*
*NEIC **15** 21:05:32.4±1.8, 10°.47S±0°.06×118°.29E±0°.06, h10km±1km, mb5.5/119, Mww5.2/32, Error ellipse: s-maj=10.6km s-min=9.3km az=221.0*
*NEIC **15** 21:05:32.4, 10°.46S×118°.31E, h22km*
*NEIC **15** 21:05:32.4, 10°.76S×118°.31E, h22km, Moment Tensor Solution. Duration: 2s1 Moment tensor: Scale 10^16 Nm; Mrr-1.84; Mθθ1.39; Mφφ0.45; Mrθ0.85; Mθφ7.22; Mφr3.44; Fault plane solution: Mo8.21000×10^16 NP1:φs91.86000°, δ62.69000°, λ-4.98000°. NP2:φs184.15000°, δ85.58000°, λ-152.60000°. Principal axes: T 8.9842, Plg16.0000°, Azm315.0000°; N -1.8775, Plg62.0000°, Azm193.0000°; P -7.1067, Plg22.0000°, Azm51.0000°;*
*GFZ **15** 21:05:33.1, 10°.49S×118°.27E, h11km, MW5.1, Moment Tensor Solution. s35 Moment tensor: Mrr-1.00; Mθθ1.47; Mφφ-0.47; Mrθ0.71; Mθφ4.84; Mφr0.45; Fault plane solution: NP1:φs95.00000°, δ86.00000°, λ6.00000°. NP2:φs5.00000°, δ83.00000°, λ176.00000°. Principal axes: T 5.5400, Plg7.0000°, Azm320.0000°; N -1.1000, Plg82.0000°, Azm127.0000°; P -4.4400, Plg1.0000°, Azm230.0000°;*
*DJA **15** 21:05:33.3±0.3, 11°.5S±1°.1×11°.8E±1°.1, h23km±2km, M5.3/192, mB5.8/160, mb5.6/192, MLv5.8/44, Mw5.2/115, Mw(mB)5.4/160, MwMwp4.9/46, Mwp5.2/46*
*MOS **15** 21:05:34.4±1.1, 10°.27S×118°.43E, h33km, mb5.5/63, MS4.5/4, Error ellipse: s-maj=9.4km s-min=4.8km az=116.1*
*GCMT **15** 21:05:37.4±0.1, 10°.54S±0°.01×118°.28E±0°.01, h20km, MW5.2/137, Moment Tensor Solution. s95,c141; s137,c233; Duration: 1s0 Moment tensor: Scale 10^16 Nm; Mrr-2.29±.17; Mθθ2.17±.13; Mφφ0.11±.15; Mrθ0.68±.25; Mθφ7.53±.11; Mφr4.97±.36; Best double couple: Mo9.22900×10^16 NP1:φs92.00000°, δ54.00000°, λ-11.00000°. NP2:φs188.00000°, δ81.00000°, λ-144.00000°. Principal axes: T 9.9740, Plg18.0000°, Azm315.0000°; N -1.4960, Plg53.0000°, Azm200.0000°; P -8.4830, Plg31.0000°, Azm57.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 21:05:34.9±0.5, 10°.42S±0°.03×118°.31E±0°.03, h31km±3km, n922, σ1874/902, mb5.4/184, MS4.5/56, 37C-8D, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WBSI	**Waikabubak, Su**	**1.31**	**54**	P		**Pb**	**21 05 58.7**	**-0.3**
WBSI				S		**Sb**	**21 06 15.4**	**-0.1**
PLAI	**Plampang**	**1.66**	**342**	P		**Pb**	**21 06 03.9**	**-1.0**
PLAI	**Plampang**	**1.66**	**342**	S		**Sb**	**21 06 24.3**	**-1.1**
PLAI	**Plampang**	**1.66**	**342**	P		**Pb**	**21 06 03.5**	**-1.4**
PLAI				S		**Sn**	**21 06 22.8**	**+0.6**
DBNI	**Kabupaten Domp**	**1.90**	**0**	P		**Pb**	**21 06 07.7**	**-1.2**
DBNI				S		**Sn**	**21 06 29.9**	**+1.8**
WSI	**Waingapu**	**2.10**	**69**	P		**Pn**	**21 06 09.3**	**+1.4**
LBFI	**Labuhan Bajo,**	**2.48**	**39**	P		**Pb**	**21 06 16.1**	**-2.6**
KHKI	**Kahang-Kahang**	**3.35**	**307**	P		**Pn**	**21 06 28.2**	**+3.0**
KHKI				S		**Sn**	**21 07 07.2**	**+3.2**
IGBI	**Denpasar**	**3.50**	**297**	P		**Pn**	**21 06 27.9**	**+0.7**
IGBI				S		**Sn**	**21 07 08.5**	**+0.9**
DNP	**Denpasar**	**3.51**	**299**	P		**Pn**	**21 06 29.6**	**+2.3**
DNP				S		**Sn**	**21 07 11.1**	**+3.3**
EDFI	**Ende, Flores**	**3.72**	**64**	P		**Pn**	**21 06 31.0**	**+0.6**
EDFI				S		**Sn**	**21 07 12.1**	**-1.2**
RTBI	**Rangdo, Negare**	**3.85**	**300**	P		**Pn**	**21 06 34.0**	**+2.0**
MMRI	**Maumere**	**4.26**	**66**	P		**Pn**	**21 06 38.9**	**+1.2**
MMRI	**Maumere**	**4.26**	**66**			**Pn**	**21 06 38.3**	**+0.7**
MMRI				Sn		**Sn**	**21 07 24.5**	**-1.9**
MMRI	**Maumere**	**4.26**	**66**	P		**Pn**	**21 06 38.9**	**+1.2**
JAGI	**Jajag, Banyuwa**	**4.53**	**295**	P		**Pn**	**21 06 41.2**	**-0.2**
JAGI	**Jajag, Banyuwa**	**4.53**	**295**	S		**Sn**	**21 07 34.3**	**+1.2**
JAGI	**Jajag, Banyuwa**	**4.53**	**295**			**Pn**	**21 06 41.2**	**-0.2**
JAGI	**Jajag, Banyuwa**	**4.53**	**295**	P		**Pn**	**21 06 41.3**	**-0.2**
JAGI				S		**Sn**	**21 07 31.7**	**-1.4**
BSSI	**Bau Bau, Buton**	**4.76**	**27**	P		**Pn**	**21 06 48.1**	**+3.5**
ABJI	**Asem Bagus**	**4.79**	**303**	P		**Pn**	**21 06 47.2**	**+2.2**
BATI	**Baumata**	**5.27**	**88**	Pn		**Pn**	**21 06 53.2**	**+1.6**
	897nm,0.3s,baz=269,slow=5.0,SNR=1335							
BATI				Sn		**Sn**	**21 07 48.8**	**-2.6**
	422nm,0.3s,baz=288,slow=9.6,SNR=10							
BATI	**Baumata**	**5.27**	**88**	P		**Pn**	**21 06 53.2**	**+1.6**
BATI				S		**Sn**	**21 07 50.1**	**-1.4**
MKS	**Makassar**	**5.29**	**13**	P		**Pn**	**21 06 55.2**	**+3.4**
	5.5nm8μm825nm,0.7s							
BLJI	**Banyuglugur**	**5.36**	**299**	P		**Pn**	**21 06 54.1**	**+1.3**
	4.2nm14μm550nm,0.6s							
KMMI	**Kalianget**	**5.44**	**308**	P		**Pn**	**21 06 57.6**	**+3.7**
	2.6nm10μm707nm,1.1s							
KAPI	**Kappang**	**5.55**	**15**	Pn		**Pn**	**21 06 59.2**	**+3.7**
	32nm,0.3s,baz=194,slow=8.0,SNR=129							
KAPI				Sn		**Sn**	**21 07 58.2**	**-0.1**
	23nm,0.3s,baz=197,slow=19,SNR=11							
KAPI	**Kappang**	**5.55**	**15**	P		**Pn**	**21 06 58.1**	**+2.6**
KAPI	**Kappang**	**5.55**	**15**	S		**Sn**	**21 07 59.9**	**+1.6**
KAPI	**Kappang**	**5.55**	**15**			**Pn**	**21 06 58.7**	**+3.2**
KAPI	**Kappang**	**5.55**	**15**	*i* P		**Pn**	**21 06 58.7**	**+3.2**
KAPI	**Kappang**	**5.55**	**15**	P		Pn	21 07 00.3	+4.9
KAPI				S		**Sn**	**21 08 02.4**	**+4.1**
KAPI	**Kappang**	**5.55**	**15**	P		**Pn**	**21 06 59.4**	**+3.9**
	392nm,1.3s							
SOEI	**Soe**	**5.91**	**84**	P		**Pn**	**21 07 01.8**	**+1.4**
SOEI	**Soe**	**5.91**	**84**	S		**Sn**	**21 08 07.7**	**+0.6**
SOEI	**Soe**	**5.91**	**84**			**Pn**	**21 07 01.9**	**+1.5**
SOEI	**Soe**	**5.91**	**84**	P		**Pn**	**21 07 02.2**	**+1.8**
SPSI	**Sidrap Palu**	**6.57**	**13**	P		**Pn**	**21 07 13.6**	**+4.2**
	1.5nm4μm337nm,0.7s							
PMSI	**Majene**	**6.90**	**5**	P		**Pn**	**21 07 17.0**	**+3.1**
	1.6nm4μm440nm,0.6s							
SNJI	**Sawahan-Nganju**	**6.98**	**291**	P		**Pn**	**21 07 15.0**	**-0.2**
	2.8nm6μm5μm355nm,0.9s							
SJI	**Sawahan**	**6.99**	**292**	P		**Pn**	**21 07 14.6**	**-0.6**
	590nm,0.8s							
KKSI	**Kolaka, Sulawe**	**7.03**	**28**	P		Pn	21 07 21.1	+5.3
	2.1nm7μm511nm,0.8s							
PCJI	**Pacitan**	**7.38**	**287**	P		**Pn**	**21 07 21.6**	**+1.1**
	10μm1μm,1.0s							
NGJI	**Ngawi**	**7.41**	**294**	P		**Pn**	**21 07 23.4**	**+2.4**
	3.6nm11μm456nm,0.9s							
TTSI	**Tana Toraja**	**7.47**	**12**	P		Pn	21 07 27.0	+5.1
	2.7nm8μm645nm,0.7s							
MMSI	**Mamuju**	**7.70**	**4**	P		**Pn**	**21 07 29.5**	**+4.5**
	0.6nm188nm,0.7s							
BBKI	**Banjar Baru**	**7.72**	**333**	P		**Pn**	**21 07 29.7**	**+4.5**
	1.4nm433nm,1.1s							
UGM	**Wanagama**	**8.08**	**287**	P		**Pn**	**21 07 30.5**	**+0.3**
UGM	**Wanagama**	**8.08**	**287**	S		**Sn**	**21 09 00.6**	**0.0**
UGM	**Wanagama**	**8.08**	**287**				**21 07 29.1**	**-1.0**
UGM	**Wanagama**	**8.08**	**287**	P		**Pn**	**21 07 31.3**	**+1.1**
	5μm5μm447nm,0.9s							
YOGI	**Yogyakarta**	**8.32**	**287**	P		**Pn**	**21 07 36.8**	**+3.3**
	4μm6μm269nm,0.9s							
SMRI	**Semarang**	**8.46**	**293**			**Pn**	**21 07 35.5**	**0.0**
SMRI	**Semarang**	**8.46**	**293**	P		**Pn**	**21 07 36.1**	**+0.6**
	265nm,1.1s							
PCI	**Palu**	**9.57**	**9**	P		Pn	21 07 56.4	+5.8
	8μm494nm,1.3s							
CTJI	**Waduk Cacaban**	**9.63**	**290**	P		**Pn**	**21 07 51.8**	**+0.3**
	6μm181nm,1.3s							
KPJI	**Karang Pucung**	**9.76**	**288**	P		**Pn**	**21 07 54.0**	**+0.8**
	3μm3μm179nm,0.9s							
APSI	**Ampana**	**10.01**	**20**	P		**Pn**	**21 08 01.3**	**+4.7**
	2μm176nm,1.0s							
LUWI	**Luwuk**	**10.31**	**26**			**Pn**	**21 08 02.5**	**+1.6**
LUWI	**Luwuk**	**10.31**	**26**	P		**Pn**	**21 08 05.3**	**+4.5**
	2μm236nm,1.3s							
FITZ	**Fitzroy Crossi**	**10.43**	**138**	Pn		**Pn**	**21 08 01.4**	**-1.0**
	56nm,0.3s,baz=324,slow=8.4,SNR=1005							
FITZ				Sn		**Sn**	**21 09 50.4**	**-7.9**
	20nm,0.3s,baz=345,slow=20,SNR=11							
FITZ				LR		LR	21 12 14.5	
	comp=Z,2μm,18.3s,baz=323,slow=38							
MBWA	**Marble Bar**	**10.77**	**173**	P		**Pn**	**21 08 05.4**	**-1.7**
	comp=Z,489nm,1.0s							
MBWA	**Marble Bar**	**10.77**	**173**	P		**Pn**	**21 08 05.6**	**-1.5**
MBWA	**Marble Bar**	**10.77**	**173**				**21 08 05.7**	**-1.3**
MBWA	**Marble Bar**	**10.77**	**173**	P		**Pn**	**21 08 06.3**	**-0.7**
MBWA				S		Sn	21 09 56.3	-10
MPSI	**Mapaga**	**10.80**	**9**	P		Pn	21 08 12.8	+5.3
BBJI	**Bungbulang**	**10.93**	**285**	P		**Pn**	**21 08 08.0**	**-1.4**
BBJI	**Bungbulang**	**10.93**	**285**			**Pn**	**21 08 07.4**	**-1.9**
BBJI	**Bungbulang**	**10.93**	**285**	P		**Pn**	**21 08 07.9**	**-1.4**
PSAC1	**Pilbara Seismi**	**11.15**	**173**	P		**Pn**	**21 08 10.3**	**-2.0**

TPRI Tanjung Pinang 17.74 309 P **P** **21 09 41.2 +0.8**
comp=Z,2µmcomp=Z,2µmcomp=Z,190nm,0.8s
RKPI Ransiki, Papua 18.08 62 P **Pn** **21 09 43.4 -0.5**
comp=Z,5µmcomp=Z,488nm,0.8s
WB0 Warramunga Arr 18.09 123 Pn **Pn** **21 09 40.3 -3.6**
WRA Warramunga Arr 18.13 123 P **Pn** **21 09 42.1 -2.4**
comp=Z,70nm,0.9s,baz=301,slow=14,SNR=174
WRA S Sn 21 12 50.7 -15
comp=Z,11nm,0.4s,baz=293,slow=24,SNR=7.2
WRA Warramunga Arr 18.13 123 Pn **Pn** **21 09 41.5 -3.0**
WRA Warramunga Arr 18.13 123 P **Pn** **21 09 41.5 -3.0**
WRA pmax pmax
comp=Z,12nm,1.0s
WRAB Tennant Creek 18.13 123 P **Pn** **21 09 42.2 -2.3**
WRAB Tennant Creek 18.13 123 Pn **Pn** **21 09 40.5 -4.0**
WRAB Tennant Creek 18.13 123 *i* P **Pn** **21 09 41.1 -3.4**
WRAB pmax pmax
comp=Z,82nm,0.9s
MWPI Manokwari, Pap 18.26 60 P **Pn** **21 09 47.0 +0.9**
comp=Z,4µmcomp=Z,527nm,1.2s
WR8 Warramunga Arr 18.27 123 P **P** **21 09 44.1 -2.1**
WR8 Warramunga Arr 18.27 123 Pn **P** **21 09 43.7 -2.5**
KRJI Kerinci 18.66 295 P **P** **21 09 50.0 -0.6**
MORW Morawa 18.68 186 P **P** **21 09 50.2 -0.4**
comp=Z,183nm,0.9s
MORW Morawa 18.68 186 P **P** **21 09 50.4 -0.2**
MORW Morawa 18.68 186 **P** **21 09 49.7 -0.8**
MYKOM Kota Tinggi 18.82 309 P **Pn** **21 09 53.1 +0.2**
MYKOM Kota Tinggi 18.82 309 **P** **21 09 52.1 -0.1**
MYKOM Kota Tinggi 18.82 309 P **P** **21 09 52.4 +0.2**
comp=Z,2µmcomp=Z,198nm,0.9s
DAV Davao City (W) 18.82 23 P **Pn** **21 09 54.1 +1.2**
comp=Z,76nm,0.4s,baz=260,slow=17,SNR=5.0
DAV LR LR 21 17 30.4
comp=Z,725nm,20.9s,baz=198,slow=39
DAV Davao City (W) 18.82 23 P **Pn** **21 09 52.9 0.0**
DAV Davao City (W) 18.82 23 P **Pn** **21 09 53.4 +0.5**
DAV S **S** **21 13 24.8 +0.1**
PPSI Pulau Pagai 19.69 291 P **P** **21 10 01.7 -0.1**
comp=Z,9µmcomp=Z,447nm,1.0s
SRPI Serui, Papua 19.73 66 P **P** **21 10 02.6 +0.4**
comp=Z,5µmcomp=Z,372nm,1.1s
AS31 Alice Springs 19.87 134 P **P** **21 10 02.8 -1.0**
AS31 IAmb IAmb 21 10 08.9
comp=Z,128nm,0.8s
ASAR Alice Springs 19.87 134 P **Pn** **21 10 04.9 -0.6**
comp=Z,9.1nm,0.3s,baz=308,slow=11,SNR=246
ASAR S S 21 13 33.8 -12
comp=Z,37nm,0.7s,baz=313,slow=24,SNR=5.6
ASAR LR LR 21 18 14.6
comp=Z,996nm,18.4s,baz=308,slow=38
comp=Z,389nm,0.9s
ASAR Alice Springs 19.87 134 P **P** **21 10 03.7 -0.1**
ASAR Alice Springs 19.87 134 P **P** **21 10 03.7 -0.1**
BAKI Biak 19.92 64 P **Pn** **21 10 06.1 0.0**
PDSI Padang 20.09 297 P **P** **21 10 03.1 -3.1**
BLDU Ballidu 20.16 184 P Pn 21 10 08.8 +0.1
BLDU Ballidu 20.16 184 P Pn 21 10 08.6 -0.1
BKNI Bangkinang 20.22 301 P **P** **21 10 07.4 -0.2**
BKNI Bangkinang 20.22 301 P **P** **21 10 08.5 +0.9**
PPI Padang Panjang 20.37 298 P **P** **21 10 09.5 +0.3**
comp=Z,5µmcomp=Z,494nm,1.2s
KLBR Kellerberrin 21.08 181 P **P** **21 10 18.1 +1.4**
KLBR Kellerberrin 21.08 181 P **P** **21 10 18.9 +2.2**
KMBL Kambalda 21.11 171 P **P** **21 10 18.0 +0.9**
comp=Z,118nm,1.0s
COCO West Island 21.13 263 P **P** **21 10 21.4 +4.0**
COCO S Sn 21 14 17.0 -1.5
COCO West Island 21.13 263 P **P** **21 10 15.5 -1.9**
WAMI Wamena 21.25 74 P **P** **21 10 20.7 +2.0**
MUN Mundaring 21.55 185 P **P** **21 10 23.9 +2.1**
MUN Mundaring 21.55 185 P **P** **21 10 23.4 +1.7**
MNSI Mandailing Nat 21.71 300 P **P** **21 10 23.1 -0.5**
comp=Z,2µmcomp=Z,325nm,1.0s
FORT Forrest 22.20 157 P **P** **21 10 28.7 -0.1**
comp=Z,206nm,1.0s
FORT Forrest 22.20 157 P **P** **21 10 27.7 -1.1**
FORT IAmb IAmb 21 10 50.8
comp=Z,169nm,0.9s
PBSI Pulau Batu 22.42 296 P **P** **21 10 30.7 -0.6**
comp=Z,182nm,1.0s
NWAO Narrogin (SRO) 22.43 182 P **P** **21 10 31.8 +0.6**
comp=Z,167nm,0.7s
NWAO Narrogin (SRO) 22.43 182 S S 21 14 24.7 -11
comp=Z,166nm,0.6s,baz=315,slow=20,SNR=11
NWAO Narrogin (SRO) 22.43 182 P **P** **21 10 31.5 +0.3**
NWAO Narrogin (SRO) 22.43 182 P **P** **21 10 31.7 +0.5**
NWAO IAmb IAmb 21 10 42.6
comp=Z,108nm,0.7s
NWAO Narrogin (SRO) 22.43 182 P **P** **21 10 31.7 +0.5**
NWAO pmax pmax
comp=Z,108nm,0.7s
NWAO Narrogin (SRO) 22.43 182 P **P** **21 10 28.8 -2.3**
NWAO S **S** **21 14 29.0 -6.7**
QIS Mount Isa 22.84 119 P **P** **21 10 36.0 +0.3**
comp=Z,231nm,1.1s,comp=Z,0.0nm
QIS Mount Isa 22.84 119 P **P** **21 10 36.2 +0.5**
GENI Genyem 23.05 72 P **P** **21 10 37.0 -0.9**
RPSI Rantau Prapat 23.28 303 P **P** **21 10 40.0 -0.2**
PSI Prapat 23.34 303 P **P** **21 10 40.8 -0.1**
PSI Prapat 23.34 303 P **P** **21 10 40.0 -0.9**
PSI pmax pmax
comp=Z,440nm,1.0s
PSI Prapat 23.34 303 P **P** **21 10 40.4 -0.5**
comp=Z,5µmcomp=Z,443nm,1.1s
JAY Jayapura 23.58 72 P **P** **21 10 43.0 -0.2**
comp=Z,227nm,0.8s,baz=243,slow=9.7,SNR=28
comp=Z,227nm,0.8s
JAY Jayapura 23.58 72 P **P** **21 10 42.5 -0.7**
comp=Z,2µmcomp=Z,243nm,0.8s
GSI Gunungsitoli 23.69 298 P **P** **21 10 43.5 -0.7**
GSI Gunungsitoli 23.69 298 P **P** **21 10 42.9 -1.3**
GSI IAmb IAmb 21 10 59.2
comp=Z,165nm,1.3s
GSI Gunungsitoli 23.69 298 P **P** **21 10 43.0 -1.2**
TSI Tuntungan 24.03 304 P **P** **21 10 49.8 +2.4**
COEN Coen 24.55 101 P **P** **21 10 52.7 +0.5**
comp=Z,182nm,1.0s,comp=Z,0.0nm
COEN Coen 24.55 101 P **P** **21 10 52.9 +0.7**
COEN Coen 24.55 101 P **P** **21 10 52.4 +0.2**
KCSI Kotacane, Aceh 24.70 303 P **P** **21 10 53.0 -0.5**
comp=Z,5µmcomp=Z,424nm,1.5s
TPTI 25.04 302 P **P** **21 10 56.6 0.0**
MLSI Meulaboh, Aceh 26.24 303 P **P** **21 11 06.3 -1.2**
MTSU Mount Surprise 26.32 110 P **P** **21 11 09.7 +1.5**
comp=Z,173nm,0.9s
MTSU Mount Surprise 26.32 110 P **P** **21 11 09.8 +1.5**
LHMI Lhok Sumawe 26.34 305 P **P** **21 11 08.8 +0.4**
LHMI Lhok Sumawe 26.34 305 P **P** **21 11 08.5 +0.1**
comp=Z,3µmcomp=Z,290nm,1.0s
BBOO Buckleboo 27.64 146 P **P** **21 11 21.2 +1.2**
comp=Z,81nm,0.9s
BBOO Buckleboo 27.64 146 P **P** **21 11 20.4 +0.5**
BBOO Buckleboo 27.64 146 P **P** **21 11 19.2 -0.7**
BBOO IAmb IAmb 21 11 45.7
comp=Z,119nm,1.2s
BSI Banda Aceh 27.84 304 P **P** **21 11 21.8 -0.1**
PMG Port Moresby 28.43 91 *ce* P **P** **21 11 26.9 -0.3**
PMG pmax pmax
comp=Z,34nm,1.0s
PMG Port Moresby 28.43 91 P **P** **21 11 26.1 -1.1**
UBPT Khong Chiam 28.52 333 P **P** **21 11 29.1 +1.2**
CTA Charters Tower 28.58 113 P **P** **21 11 30.2 +1.7**
comp=Z,9.5nm,0.7s,baz=279,slow=10.0,SNR=9.3
CTA LR LR 21 24 49.4
comp=Z,1µm,19.8s,baz=284,slow=40
comp=Z,9.5nm,0.7s
CTAO Charters Tower 28.58 113 P **P** **21 11 29.1 +0.6**
CTAO IAmb IAmb 21 11 44.8
comp=Z,62nm,1.1s
CTAO Charters Tower 28.58 113 P **P** **21 11 29.1 +0.6**
CTAO pmax pmax
comp=Z,62nm,1.1s
QLP Quilpie 29.28 127 P **P** **21 11 37.7 +3.0**
HTT Hallett 29.72 144 P **P** **21 11 40.8 +2.4**
HTT Hallett 29.72 144 P **P** **21 11 39.9 +1.4**
MANU Manus Island 30.03 76 P **P** **21 11 41.2 -0.2**
MANU IAmb IAmb 21 11 44.5
comp=Z,85nm,0.8s
STKA Stephens Creek 30.33 138 P **P** **21 11 45.0 +1.1**
comp=Z,101nm,1.0s
STKA Stephens Creek 30.33 138 P **P** **21 11 45.3 +1.5**
comp=Z,7.4nm,0.8s,baz=310,slow=10,SNR=12
STKA LR LR 21 25 20.5
comp=Z,873nm,18.0s,baz=300,slow=39
comp=Z,7.4nm,0.8s
STKA Stephens Creek 30.33 138 P **P** **21 11 44.8 +1.0**
STKA Stephens Creek 30.33 138 P **P** **21 11 43.5 -0.3**
STKA Stephens Creek 30.33 138 P **P** **21 11 43.5 -0.3**
STKA pmax pmax
comp=Z,208nm,0.9s
QIZ Qiongzhong 30.43 344 P **P** **21 11 46.0 +1.3**
QIZ S **S** **21 16 49.6 +5.8**
QIZ L L
comp=Z,460nm,15.1s
QIZ L L
comp=Z,470nm,12.5s
QIZ L L
comp=Z,700nm,18.5s
CMSA Cobar Meteorol 32.93 134 P **P** **21 12 09.6 +2.9**
CMSA Cobar Meteorol 32.93 134 P **P** **21 12 08.6 +1.9**
YULB Yu-li 33.73 5 P **P** **21 12 15.4 +1.7**
ARPS Mount Arapiles 33.77 145 P **P** **21 12 16.0 +2.0**
SSLB Suanglung 34.09 4 P **P** **21 12 18.4 +1.6**
GZH2 Guangzhou 34.16 352 P **P** **21 12 18.3 +0.9**
CM31 Chiang Mai Arr 34.47 326 P **P** **21 12 21.6 +1.4**
CM31 Chiang Mai Arr 34.47 326 P **P** **21 12 21.8 +1.6**
CMAR Chiang Mai Arr 34.47 326 P **P** **21 12 20.2 0.0**
comp=Z,21nm,0.8s,baz=140,slow=8.2,SNR=71
CMAR PcP **PcP** **21 14 57.6 +2.4**
comp=Z,1.3nm,0.7s,baz=151,slow=2.5,SNR=2.3
CMAR S **S** **21 17 42.1 -4.8**
comp=Z,0.3nm,0.4s,baz=152,slow=15,SNR=2.0
CMAR ScP **ScP** **21 18 40.8 +2.4**
comp=Z,1.5nm,0.9s,baz=148,slow=2.5,SNR=5.1
CMAR LR LR 21 27 56.9
comp=Z,891nm,19.4s,baz=105,slow=39
comp=Z,21nm,0.8s
CMAR Chiang Mai Arr 34.47 326 P **P** **21 12 21.0 +0.8**
CMAR **PcP** **21 14 55.0 -0.2**
CMAR **ScP** **21 18 40.0 +1.7**
CMAR Chiang Mai Arr 34.47 326 *i* P **P** **21 12 21.2 +1.0**
CMAR pmax pmax
comp=Z,23nm,0.8s
CHTO Chiang Mai 34.76 327 P **P** **21 12 23.6 +0.9**
CHTO Chiang Mai 34.76 327 P **P** **21 12 22.3 -0.4**
CHTO Chiang Mai 34.76 327 P **P** **21 12 22.3 -0.4**
CHTO pmax pmax
comp=Z,26nm,0.9s
CHTO Chiang Mai 34.76 327 P **P** **21 12 24.1 +1.4**
CHTO S **S** **21 17 52.7 +1.3**
CHTO Chiang Mai 34.76 327 P **P** **21 12 22.9 +0.2**
comp=Z,33nm,0.9s
YHNB Yeheng 35.00 5 P **P** **21 12 25.3 +0.5**
GUMO Guam 35.54 48 P **P** **21 12 28.2 -1.3**
GUMO Guam 35.54 48 P **P** **21 12 28.2 -1.3**
GUMO pmax pmax
comp=Z,395nm,1.0s
YNG Young 36.35 136 P **P** **21 12 37.6 +1.3**
comp=Z,66nm,1.2s
TOO Toolangi 36.45 142 P **P** **21 12 40.3 +3.2**
TOO Toolangi 36.45 142 P **P** **21 12 36.4 -0.7**
TOO Toolangi 36.45 142 P **P** **21 12 36.4 -0.7**
TOO pmax pmax
comp=Z,13nm,1.0s
JOW Kunigami 38.27 14 LR LR 21 29 42.5
comp=Z,219nm,20.3s,baz=250,slow=38
GYA Guiyang 38.36 343 ⇑P **P** **21 12 54.4 +1.0**
GYA sP pwP 21 13 07.8 +1.2
GYA PP **PnPn** **21 14 26.8 +3.3**
GYA S **S** **21 18 46.3 0.0**
GYA ScS **ScS** **21 23 04.4 +1.5**
GYA pmax pmax
comp=Z,25nm,1.3s
GYA L L
comp=Z,730nm,20.5s
GYA L L
comp=Z,390nm,19.6s
GYA L L
comp=Z,930nm,20.8s
KMI2 Kunming 38.47 337 ⇑P **P** **21 12 56.5 +2.0**
KMI2 S **S** **21 18 45.3 -2.9**
KMI2 pmax pmax
comp=Z,48nm,1.0s
KMI2 pmax pmax
comp=Z,260nm,5.5s
KMI2 L L
comp=Z,300nm,18.7s
KMI2 L L
comp=Z,620nm,18.1s
KMI2 L L
comp=Z,660nm,16.7s
CNSH ChangSha 38.72 352 P **P** **21 12 57.4 +1.1**
CNSH S **S** **21 18 49.4 -2.1**
CNSH pmax pmax
comp=Z,14nm,1.2s
CNSH L L
comp=Z,460nm,22.4s
CNSH L L
comp=Z,350nm,17.6s
CNSH L L
comp=Z,580nm,21.2s
PZH PanZhiHua 40.07 337 P **P** **21 13 11.6 +3.8**
TNCH TengChong 40.17 332 P **P** **21 13 09.4 +0.8**
TNCH PP **PnPn** **21 14 47.4 +2.2**
TNCH S **S** **21 19 11.4 -2.3**
TNCH pmax pmax
comp=Z,94nm,1.1s
TNCH pmax pmax
comp=Z,200nm,3.3s
TNCH L L
comp=Z,600nm,17.0s
TNCH L L
comp=Z,520nm,18.5s
TNCH L L
comp=Z,1µm,17.6s
WHN Wuhan 40.90 355 P **P** **21 13 15.8 +1.4**
WHN S **S** **21 19 26.6 +2.6**
WHN pmax pmax
comp=Z,30nm,0.7s
WHN L L
comp=Z,2µm,20.0s
TATA Tatamba Isabel 40.97 91 P **P** **21 13 15.4 +0.1**
HNR Honiara 41.01 92 LR LR 21 31 21.6
comp=Z,23nm,20.3s,baz=349,slow=38
SAIH SAIHA 41.05 323 *e* P **P** **21 13 15.8 -0.2**
SAIH IAmb IAmb 21 13 19.8
comp=Z,35nm,0.6s
ENH Enshi 41.33 348 P **P** **21 13 18.4 +0.4**
PALK Pallekele 41.36 294 LR LR 21 31 28.5
comp=Z,790nm,21.4s,baz=116,slow=38
PALK Pallekele 41.36 294 P **P** **21 13 18.4 -0.1**
PALK IAmb IAmb 21 13 21.1
comp=Z,198nm,1.2s
PALK Pallekele 41.36 294 *i* P **P** **21 13 19.7 +1.2**
SNR=24
PALK Pallekele 41.36 294 *c i* P **P** **21 13 19.5 +1.0**
PALK pmax pmax
comp=Z,161nm,1.0s
PALK Pallekele 41.36 294 P **P** **21 13 19.5 +1.0**
PALK Pallekele 41.36 294 P **P** **21 13 19.8 +1.2**
comp=Z,867nmcomp=Z,81nm,1.2s
NJ2 Nanjing 42.23 1 ⇑P **P** **21 13 26.8 +1.6**
NJ2 pP **pP** **21 13 29.8 -3.3**
NJ2 S **S** **21 19 41.8 -1.9**
NJ2 pmax pmax
comp=Z,79nm,0.6s
NJ2 pmax pmax
comp=Z,720nm,3.8s
IMP Imphal 42.33 326 *e* P **P** **21 13 25.7 -0.6**
IMP IAmb IAmb 21 13 28.4
comp=Z,50nm,1.5s
KOHI KOHIMA 42.95 327 *e* P **P** **21 13 30.4 -1.0**
KOHI IAmb IAmb 21 13 50.1
comp=Z,42nm,0.7s
MOKO MOKOCHONG 43.23 328 *e* P **P** **21 13 33.6 0.0**
MOKO IAmb IAmb 21 13 50.9
comp=Z,81nm,1.1s
CD2 Chengdu 43.40 342 P **P** **21 13 35.0 +0.2**
CD2 S **S** **21 19 54.4 -6.7**
CD2 pmax pmax
comp=Z,80nm,0.8s
CD2 pmax pmax
comp=Z,210nm,6.0s
CD2 L L
comp=Z,1µm,21.1s
CD2 L L
comp=Z,1µm,19.6s
JCJ Chichijima 43.90 31 P **P** **21 13 37.9 -1.0**
SHL Shillong 44.06 325 P **P** **21 13 39.4 -1.0**
SHL IAmb IAmb 21 13 42.4
comp=Z,46nm,0.8s
SHL Shillong 44.06 325 P **P** **21 13 39.4 -1.0**
SHL pmax pmax
comp=Z,46nm,0.8s
SHL Shillong 44.06 325 P **P** **21 13 41.0 +0.6**
SNR=17
SHL Shillong 44.06 325 *e* P **P** **21 13 39.8 -0.7**
SHL IAmb IAmb 21 13 45.8
comp=Z,51nm,1.3s
PASG PASIGHAT 44.25 330 *e* P **P** **21 13 40.6 -1.0**
PASG IAmb IAmb 21 13 42.2
comp=Z,15nm,0.5s
ITAN ITANAGAR 44.31 328 *e* P **P** **21 13 42.4 +0.3**
ITAN IAmb IAmb 21 13 46.6
comp=Z,32nm,0.7s
TEZP TEZPUR 44.38 327 *e* P **P** **21 13 42.1 -0.6**
VIS Vishakhapatnam 44.45 309 *e* P **P** **21 13 43.3 0.0**
ZIRO ZIRO 44.55 328 *e* P **P** **21 13 44.8 +0.5**
GUWA GUWAHATI 44.66 325 *e* P **P** **21 13 45.1 +0.1**
LYN LuoYang 45.06 353 P **P** **21 13 48.5 +0.5**
LYN S **S** **21 20 21.8 -3.3**
LYN SS **ScS** **21 23 44.1 +1.0**
LYN pmax pmax
comp=Z,26nm,0.6s
LYN L L
comp=Z,530nm,17.9s
LYN L L
comp=Z,430nm,22.0s
LYN L L
comp=Z,710nm,17.5s
XAN Xi'an 45.10 349 ⇑P **P** **21 13 48.4 0.0**
XAN pP pP 21 13 52.5 -3.8
XAN sP sP 21 13 55.3 -4.2
XAN S **S** **21 20 26.0 +0.2**
XAN SS **ScS** **21 23 45.9 +2.4**
XAN pmax pmax
comp=Z,37nm,0.8s
XAN L L
comp=Z,640nm,22.0s
XAN L L
comp=Z,510nm,19.9s
XAN L L
comp=Z,880nm,22.7s
TRD Trivandrum 45.25 293 *e* P **P** **21 13 50.9 +1.0**
RAGD RAYAGADA 45.26 311 *e* P **P** **21 13 50.4 +0.5**
H08S2 Diego Garcia H 45.30 270 T T 22 03 30.0
baz=95,slow=76,SNR=7.4
H08S3 Diego Garcia H 45.31 270 T T 22 03 30.2
baz=95,slow=76,SNR=10.0
H08S1 Diego Carcia H 45.32 270 T T 22 03 28.5
baz=95,slow=76,SNR=1.7
DHUB DHUBRI 45.50 323 *e* P **P** **21 13 51.8 +0.1**
DHUB IAmb IAmb 21 13 54.6
comp=Z,54nm,1.1s
KOD Kodaikanal 45.51 296 *e* P **P** **21 13 53.1 +0.9**
TAWA Tawang 45.65 326 *e* P **P** **21 13 53.6 +0.4**
JTU Tsushima 45.91 13 P **P** **21 13 54.3 -0.5**
KAAM Kaadhehdhoo 46.35 281 P **P** **21 13 59.1 +0.4**
KAAM Kaadhehdhoo 46.35 281 P **P** **21 14 00.3 +1.7**
comp=Z,200nm,1.2s
TIA Tai'an 46.39 359 P **P** **21 13 55.3 -3.2**
TIA pmax pmax
comp=Z,16nm,0.8s
TIA L L
comp=Z,200nm,16.7s
TIA L L
comp=Z,460nm,20.4s
TIA L L
comp=Z,420nm,23.5s
GTK Tadong 47.30 323 *e* P **P** **21 14 06.1 +0.2**
GTK IAmb IAmb 21 14 09.5
comp=Z,26nm,0.8s
TJN Taejon 47.32 10 P **P** **21 14 06.3 +0.6**
TJN Taejon 47.32 10 P **P** **21 14 06.3 +0.6**
DZM Mont Dzumac 47.46 110 LR LR 21 34 54.5
comp=Z,590nm,19.5s,baz=240,slow=37
GAYA Gaya 47.60 318 *e* P **P** **21 14 07.9 -0.3**
HNS HongShan 47.68 356 ⇑P **P** **21 14 08.4 -0.1**
HNS S **S** **21 21 01.1 -1.4**
HNS ScS **ScS** **21 24 00.1 +0.1**
HNS pmax pmax
comp=Z,9.0nm,1.0s
HNS L L
comp=Z,440nm,16.0s
HNS L L
comp=Z,380nm,14.7s
HNS L L
comp=Z,420nm,17.1s
LSA Lhasa 47.70 328 *i* P **P** **21 14 10.1 +0.7**
SNR=45
LSA Lhasa 47.70 328 P **P** **21 14 07.3 -2.1**
LSA S **S** **21 20 56.1 -7.9**
LSA pmax pmax
comp=Z,32nm,0.8s
LSA L L
comp=Z,370nm,21.3s
LSA L L
comp=Z,220nm,19.9s
LSA L L
comp=Z,490nm,22.0s
HYB Hyderabad 48.04 305 *e* P **P** **21 14 12.0 +0.3**
HMDM Hanimaadhoo 48.07 289 P **P** **21 14 11.3 -0.7**
HMDM Hanimaadhoo 48.07 289 P **P** **21 14 14.3 +2.3**
HMDM Hanimaadhoo 48.07 289 P **P** **21 14 13.4 +1.4**
comp=Z,277nm,1.9s
LZDM Lanzhou Array 48.14 344 P **P** **21 14 12.9 +0.3**
comp=Z,9.4nm,0.7s,baz=160,slow=8.8,SNR=23
LZDM LR LR 21 36 34.9
comp=Z,373nm,19.9s,baz=80,slow=39
comp=Z,9.4nm,0.7s
LZH Lanzhou 48.22 344 P **P** **21 14 13.9 +0.9**
LZH pP pP 21 14 18.6 -2.4
LZH S **S** **21 21 05.8 -4.8**
LZH ScS **ScS** **21 24 04.8 +0.7**
LZH pmax pmax
comp=Z,20nm,1.4s
LZH L L
comp=Z,470nm,14.4s
LZH L L
comp=Z,520nm,15.5s
LZH L L
comp=Z,620nm,14.1s
KSAR Wonju Array Be 48.44 10 P **P** **21 14 14.7 +0.3**
KSAR Wonju Array Be 48.44 10 P **P** **21 14 14.7 +0.3**
KSRS Korea Array 48.46 10 P **P** **21 14 15.3 +0.8**
comp=Z,51nm,0.7s,baz=190,slow=9.3,SNR=107
KSRS PcP **PcP** **21 15 42.9 +2.5**
comp=Z,5.3nm,0.9s,baz=193,slow=4.3,SNR=1.4
KSRS LR LR 21 35 28.3
comp=Z,193nm,21.9s,baz=195,slow=37
comp=Z,51nm,0.7s
KS19 Wonju Array Si 48.50 10 P **P** **21 14 14.3 -0.5**
KS19 IAmb IAmb 21 14 22.4
comp=Z,62nm,0.9s
MNGI Mangalore 48.95 297 ⇑ *e* P **P** **21 14 20.1 +1.3**
DL2 Dalian 49.16 3 P **P** **21 14 18.5 -1.4**
DL2 S **S** **21 21 20.8 -2.6**
DL2 pmax pmax
comp=Z,67nm,0.9s
DL2 pmax pmax
comp=Z,500nm,5.7s
DL2 L L
comp=Z,620nm,17.9s
DL2 L L
comp=Z,460nm,17.1s
DL2 L L
comp=Z,810nm,21.8s
JGF Kuroka 49.18 21 P **P** **21 14 19.7 -0.5**
NGP Nagpur 49.73 309 *e* P **P** **21 14 24.7 +0.1**
BJI2 Beijing 50.22 358 P **P** **21 14 28.1 +0.2**
BJI2 S **S** **21 21 33.3 -4.8**
BJI2 ScS **ScS** **21 24 19.5 +2.5**
BJI2 pmax pmax
comp=Z,11nm,0.7s
BJI2 L L
comp=Z,220nm,15.1s
BJI2 L L
comp=Z,97nm,16.0s
BJI2 L L
comp=Z,160nm,16.7s
BJT Baijiatuau 50.22 358 P **P** **21 14 28.6 +0.7**
MAJO Matsushiro 50.32 21 P **P** **21 14 28.4 -0.5**
MAJO Matsushiro 50.32 21 P **P** **21 14 28.2 -0.7**
MAJO IAmb IAmb 21 14 28.9

comp=Z,65nm,1.1s
MAJO Matsushiro 50.32 21 P **P** **21 14 28.2 -0.7**
MAJO pmax pmax
comp=Z,65nm,1.1s
MJAR Matsushiro Arr 50.32 21 P **P** **21 14 28.0 -0.9**
comp=Z,39nm,0.9s,baz=192,slow=7.5,SNR=67
MJAR PcP **PcP** **21 15 49.1 +1.8**
comp=Z,4.5nm,0.8s,baz=193,slow=5.0,SNR=1.3
MJAR LR LR 21 36 58.5
comp=Z,203nm,19.0s,baz=210,slow=38
comp=Z,39nm,0.9s
MJAR Matsushiro Arr 50.32 21 P **P** **21 14 27.8 -1.1**
MJAR IAmb IAmb 21 14 28.9
comp=Z,54nm,1.0s
MJAR **PcP** **21 15 48.9 +1.5**
MJAR Matsushiro Arr 50.32 21 P **P** **21 14 27.8 -1.1**
MJAR 21 15 48.9
MJAR pmax pmax
comp=Z,54nm,1.0s
MJB9 Matsu-Tunnel 50.33 21 P **P** **21 14 29.0 +0.1**
MJB9 IAmb IAmb 21 14 30.3
comp=Z,70nm,1.1s
AKL Akola 51.03 307 *e*P **P** **21 14 34.2 -0.3**
GOMU GeErMu 51.38 336 P **P** **21 14 37.5 +0.2**
GOMU pmax pmax
comp=Z,17nm,0.9s
GOMU L L
comp=Z,390nm,18.9s
GOMU L L
comp=Z,440nm,18.7s
GOMU L L
comp=Z,540nm,17.7s
HHC Hu-ho-hao-te 51.38 353 *e*P **P** **21 14 37.6 +0.7**
HHC S **S** **21 21 50.6 -4.0**
HHC pmax pmax
comp=Z,3.0nm,0.6s
HHC pmax pmax
comp=Z,170nm,5.0s
HHC L L
comp=Z,200nm,19.9s
HHC L L
comp=Z,230nm,22.7s
HHC L L
comp=Z,250nm,22.7s
BTO2 Baotou 51.49 352 *e*P **P** **21 14 37.8 +0.1**
BTO2 sP **pP** **21 14 45.5 -0.3**
BTO2 S **S** **21 21 58.3 +2.2**
BTO2 pmax pmax
comp=Z,39nm,0.9s
BTO2 pmax pmax
comp=Z,370nm,4.7s
BTO2 L L
comp=Z,570nm,18.4s
BTO2 L L
comp=Z,730nm,15.5s
BTO2 L L
comp=Z,940nm,19.8s
KAD Karad 51.58 302 *e*P **P** **21 14 39.0 +0.3**
NRDN NARMADA NAGAR 52.04 310 *e*P **P** **21 14 43.4 +1.3**
NRDN IAmb IAmb 21 14 48.7
comp=Z,25nm,0.8s
BHPL Bhopal 52.15 310 *e*P **P** **21 14 42.1 -0.7**
POO Poona 52.45 303 *e*P **P** **21 14 45.8 +0.7**
GTA2 Gaotai 52.56 342 P **P** **21 14 46.8 +1.1**
GTA2 pP pP 21 14 51.0 -2.8
GTA2 S **S** **21 22 06.8 -3.9**
GTA2 ScS **ScS** **21 24 32.8 -0.7**
GTA2 pmax pmax
comp=Z,21nm,1.0s
GTA2 L L
comp=Z,430nm,20.9s
GTA2 L L
comp=Z,430nm,20.3s
GTA2 L L
comp=Z,580nm,20.0s
JHNI Jhansi 52.59 313 *e*P **P** **21 14 44.3 -1.7**
GUNA GUNA 53.03 312 *e*P **P** **21 14 48.4 -1.0**
LGTI Lohaghat 54.08 318⇑ *e*P **P** **21 14 56.1 -1.0**
XLT XiLinHaoTe 54.09 358 *e*P **P** **21 14 56.5 -0.3**
XLT S **S** **21 22 28.3 -3.1**
XLT pmax pmax
comp=Z,16nm,1.0s
PTH Pithoragarh 54.12 318 *e*P **P** **21 14 55.4 -2.1**
PTH IAmb IAmb 21 15 04.9
comp=Z,16nm,0.8s
CN2 Changchun 54.35 6 *e*P **P** **21 14 58.6 0.0**
CN2 *es*P pP 21 15 05.0 -1.6
CN2 *e*S **S** **21 22 36.1 +1.5**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,400nm,4.0s
CN2 L L
comp=Z,300nm,13.0s
CN2 L L
comp=Z,400nm,13.0s
CN2 L L
comp=Z,300nm,14.0s
VLA Vladivostok 54.70 12 *i* P **P** **21 15 01.1 0.0**
VLA pmax pmax
comp=Z,40nm,0.7s
JOSI Joshimath 55.18 319 *e*P **P** **21 15 04.1 -1.1**
JOSI IAmb IAmb 21 15 24.6
comp=Z,33nm,0.7s
AYAN Aya Nagar 55.49 315 *e*P **P** **21 15 05.8 -1.4**
AYAN IAmb IAmb 21 15 07.8
comp=Z,69nm,0.9s
NPLP NPLP New Delhi 55.56 315 *e*P **P** **21 15 06.3 -1.4**
MDJ Mudanjiang 55.72 10 P **P** **21 15 08.9 +0.4**
MDJ Mudanjiang 55.72 10 P **P** **21 15 08.6 +0.1**
MDJ pmax pmax
comp=Z,140nm,0.8s
KUDL Kundal 55.73 315 *e*P **P** **21 15 06.9 -1.9**
KUDL IAmb IAmb 21 15 09.1
comp=Z,54nm,0.8s
USRK Ussuriysk Ar. 55.76 12 P **P** **21 15 08.7 0.0**
comp=Z,47nm,0.7s,baz=189,slow=6.5,SNR=43
comp=Z,47nm,0.7s
AJM Ajmer 56.05 312 *e*P **P** **21 15 10.5 -0.8**
AJM IAmb IAmb 21 15 16.3
comp=Z,25nm,0.8s
RPZ Rata Peaks 56.26 136 LR LR 21 40 15.4
comp=Z,696nm,19.1s,baz=308,slow=37
BNX BinXian 56.49 8⇑ P **P** **21 15 13.6 -0.4**
BNX pmax pmax
comp=Z,23nm,0.8s
SMLA Simla 57.12 318 *e*P **P** **21 15 17.6 -1.1**
BHUJ Bhuj 58.19 306 *e*P **P** **21 15 26.9 +0.5**
MSVF Nonsavu 58.21 104 LR LR 21 41 49.6
comp=Z,344nm,18.3s,baz=318,slow=37
DHRM DHARAMSHALA 58.40 318 *e*P **P** **21 15 27.0 -1.0**
DHRM IAmb IAmb 21 15 32.2
comp=Z,69nm,0.6s
ASAJ Asahikawa 58.59 20 P **P** **21 15 28.6 -0.1**
ASAJ pmax pmax
comp=Z,39nm,1.2s
JKA Kamikawa-asahi 58.59 20 P **P** **21 15 28.6 -0.2**
JKA IAmb IAmb 21 15 46.3
comp=Z,39nm,1.2s
TSSA Tissa 58.87 319 *e*P **P** **21 15 29.9 -1.3**
THN Thein Dam 58.88 318 *e*P **P** **21 15 30.4 -0.7**
THN IAmb IAmb 21 15 32.4
comp=Z,123nm,0.7s
ULN Ulaanbaatar 58.88 351 P **P** **21 15 30.8 -0.1**
ULN Ulaanbaatar 58.88 351 *ce*P **P** **21 15 31.4 +0.5**
ULN pmax pmax
comp=Z,22nm,1.3s
ULN Ulaanbaatar 58.88 351 P **P** **21 15 31.3 +0.5**
ULN Ulaanbaatar 58.88 351 P **P** **21 15 31.1 +0.2**
comp=Z,75nm,0.9s
BKZ Black Stump Fm 58.93 130 P **P** **21 15 31.4 0.0**
BKZ IAmb IAmb 21 15 48.1
comp=Z,64nm,1.2s
SONM Songino Array 58.95 351 P **P** **21 15 31.8 +0.4**
comp=Z,19nm,0.7s,baz=169,slow=7.9,SNR=140
SONM S **S** **21 23 31.1 -4.6**
comp=Z,0.6nm,0.9s,baz=155,slow=7.2,SNR=2.7
SONM LR LR 21 43 14.3
comp=Z,379nm,20.9s,baz=180,slow=38
comp=Z,19nm,0.7s
SONM Songino Array 58.95 351 P **P** **21 15 31.2 -0.2**
SONM IAmb IAmb 21 15 47.4
comp=Z,22nm,0.7s
SONM Songino Array 58.95 351 P **P** **21 15 31.2 -0.2**
SONM pmax pmax
comp=Z,22nm,0.7s

ALCI Alchi Leh 59.10 321 *e*P **P** **21 15 32.6 -0.4**
ALCI IAmb IAmb 21 15 38.6
comp=Z,13nm,0.9s
RTZ Ruatahuna 59.18 129 P **P** **21 15 33.3 +0.1**
URZ Urewera 59.21 128 LR LR 21 41 02.0
comp=Z,1μm,19.7s,baz=283,slow=36
KLR Kul'dur 60.55 10 S **S** **21 23 51.8 -4.2**
comp=Z,0.5nm,0.4s,baz=221,slow=17,SNR=1.8
KLR Kul'dur 60.55 10 *ce*P **P** **21 15 42.2 0.0**
KLR pmax pmax
comp=Z,3.0nm,1.0s
WMQ Urumqi 60.73 335 *e*P **P** **21 15 44.5 +0.8**
WMQ pmax pmax
comp=Z,38nm,0.7s
WMQ pmax pmax
comp=Z,140nm,4.7s
WMQ L L
comp=Z,430nm,24.1s
HEH HeiHe 60.93 7 *e*P **P** **21 15 44.8 0.0**
HEH pmax pmax
comp=Z,61nm,0.9s
YSS Yuzhno-Sakhali 61.14 19 *e*P **P** **21 15 46.2 0.0**
YSS *e*S **S** **21 23 59.6 -3.9**
YSS pmax pmax
comp=Z,20nm,0.9s
YSS MLR MLR
comp=N,300nm,17.0s
YSS MLR MLR
comp=Z,400nm,17.0s
YSS MLR MLR
comp=E,300nm,16.0s
NIL Nilore 61.27 318 P **P** **21 15 47.3 -0.2**
NIL IAmb IAmb 21 15 48.0
comp=Z,37nm,0.9s
NIL Nilore 61.27 318 P **P** **21 15 47.3 -0.2**
NIL pmax pmax
comp=Z,37nm,0.9s
ZAK Zakamensk 61.95 349 *e*P **P** **21 15 51.1 -0.7**
ZAK pmax pmax
comp=Z,13nm,1.2s
RAO Raoul Island 62.15 118 LR LR 21 42 48.0
comp=Z,555nm,20.5s,baz=39,slow=36
TLY Talaya 63.13 350 LR LR 21 47 49.2
comp=Z,358nm,18.1s,baz=164,slow=40
TLY Talaya 63.13 350 P **P** **21 15 59.5 0.0**
TLY Talaya 63.13 350 *ce*P **P** **21 16 00.7 +1.2**
TLY pmax pmax
comp=Z,8.0nm,0.7s
TLY Talaya 63.13 350 P **P** **21 15 59.8 +0.2**
TLY S **S** **21 24 27.9 -0.7**
KSH2 Kashi 63.33 324 P **P** **21 16 01.4 +0.1**
KSH2 sP pwP 21 16 16.8 +1.6
KSH2 S **S** **21 24 27.3 -4.5**
KSH2 pmax pmax
comp=Z,91nm,0.9s
KSH2 L L
comp=Z,300nm,20.3s
KSH2 L L
comp=Z,340nm,22.3s
KSH2 L L
comp=Z,440nm,17.9s
KNGR Kungurtug, Tuv 63.41 345 *i* P **P** **21 16 01.4 -0.1**
KNGR pmax pmax
comp=Z,15nm,0.9s
IRK Irkutsk 63.56 350 *e*P **P** **21 16 00.9 -1.5**
IRK pmax pmax
comp=Z,36nm,2.9s
MOY Mondy 63.62 348 *e*P **P** **21 16 03.1 +0.2**
MOY pmax pmax
comp=Z,27nm,1.9s
TARG Taragay, Kyrgy 63.84 327 P **P** **21 16 04.8 -0.2**
TARG IAmb IAmb 21 16 24.8
comp=Z,47nm,1.1s
TARG Taragay, Kyrgy 63.84 327 P **P** **21 16 04.8 -0.2**
TARG pmax pmax
comp=Z,47nm,1.1s
SHLS Shalkode 64.01 329 *c i*P **P** **21 16 05.1 -0.5**
SHLS pmax pmax
comp=Z,17nm,0.6s
SHLS Shalkode 64.01 329⇑ *i*P **P** **21 16 05.2 -0.5**
comp=Z,17nm,0.6s
PRZ Przheval'sk 64.06 328 P **P** **21 16 06.7 +0.6**
PRZ Przheval'sk 64.06 328 P **P** **21 16 06.7 +0.6**
PRZ pmax pmax
comp=Z,65nm,1.0s
UZB Uzunbulak 64.22 329 *c i*P **P** **21 16 07.7 +0.6**
UZB pmax pmax
comp=Z,32nm,1.2s
UZB Uzunbulak 64.22 329⇑ *i*P **P** **21 16 07.8 +0.6**
comp=Z,32nm,1.2s
ZEA Zeya 64.35 6 *e*P **P** **21 16 07.9 +0.4**
ZEA pmax pmax
comp=E,10.0nm,0.8s
ZEA pmax pmax
comp=N,20nm,1.0s
ZEA pmax pmax
comp=Z,40nm,0.8s
ZEA MLR MLR
comp=Z,200nm,17.0s
KDJ Kajisay 64.46 327 P **P** **21 16 09.2 +0.5**
KDJ IAmb IAmb 21 16 10.8
comp=Z,44nm,0.9s
KDJ Kajisay 64.46 327 P **P** **21 16 09.2 +0.5**
KDJ pmax pmax
comp=Z,44nm,0.9s
SATY Saty 64.47 329 *c i*P **P** **21 16 09.5 +0.8**
SATY pmax pmax
comp=Z,27nm,1.0s
SATY Saty 64.47 329⇑ *i*P **P** **21 16 09.5 +0.8**
comp=Z,28nm,1.0s
TYV Tymovskoe 64.59 17 *e*P **P** **21 16 10.4 +1.3**
TYV *e*S **S** **21 24 46.4 -0.3**
TYV pmax pmax
comp=Z,10.0nm,0.9s
TYV pmax pmax
comp=Z,300nm,5.0s
TYV smax smax
comp=N,500nm,5.8s
TYV smax smax
comp=E,500nm,5.8s
NRN Naryn 64.62 326 P **P** **21 16 09.9 0.0**
NRN IAmb IAmb 21 16 11.4
comp=Z,47nm,0.9s
NRN Naryn 64.62 326 P **P** **21 16 09.9 0.0**
NRN pmax pmax
comp=Z,47nm,0.9s
KPKS Kokpek 64.62 329 *e*P **P** **21 16 10.4 +0.8**
KPKS Kokpek 64.62 329 *e*P **P** **21 16 10.4 +0.8**
KBL Kabul 64.62 316 P **P** **21 16 09.8 -0.2**
KBL Kabul 64.62 316 P **P** **21 16 09.8 -0.2**
KBL pmax pmax
comp=Z,102nm,0.8s
KBL Kabul 64.62 316 P **P** **21 16 10.1 +0.1**
SNR=50
ZSN Zaisan 64.83 336 *c i*P **P** **21 16 11.6 +0.8**
ZSN pmax pmax
comp=Z,14nm,1.1s
ZSN Zaisan 64.83 336⇑ *i*P **P** **21 16 11.7 +0.8**
comp=Z,14nm,1.1s
ULHL Ulahol 65.04 327 P **P** **21 16 13.3 +0.7**
SNR=22
TNSS Tian-Shan 65.21 328 *e*P **P** **21 16 14.2 +0.3**
TNSS Tian-Shan 65.21 328 *e*P **P** **21 16 14.3 +0.3**
MDOK Medeo 65.25 328 *e*P **P** **21 16 14.5 +0.7**
MDOK Medeo 65.25 328 *e*P **P** **21 16 14.6 +0.7**
AAA Alma-Ata 65.35 328 *e*P **P** **21 16 15.1 +0.7**
AAA pmax pmax
comp=Z,23nm,0.9s
AAA Alma-Ata 65.35 328 *e*P **P** **21 16 15.1 +0.7**
comp=Z,23nm,0.9s
BOOM Boomskoye usch 65.37 327 P **P** **21 16 15.0 +0.4**
BOOM Boomskoye usch 65.37 327 P **P** **21 16 15.0 +0.4**
BOOM pmax pmax
comp=Z,81nm,0.8s
MK31 Makanchi Array 65.41 334 *ce*P **P** **21 16 15.0 +0.4**
MKAR Makanchi Array 65.41 334 P **P** **21 16 15.2 +0.6**
comp=Z,90nm,0.7s,baz=141,slow=6.0,SNR=881
MKAR S **S** **21 24 53.1 -3.9**
comp=Z,0.7nm,1.0s,baz=145,slow=11,SNR=2.9
MKAR LR LR 21 47 54.6
comp=Z,418nm,20.2s,baz=142,slow=39
comp=Z,90nm,0.7s
MKAR Makanchi Array 65.41 334 P **P** **21 16 14.7 +0.1**
MAKZ Makanchi 65.55 333 P **P** **21 16 16.1 +0.6**
MAKZ IAmb IAmb 21 16 16.9
comp=Z,39nm,0.8s

MAKZ Makanchi 65.55 333 P **P** **21 16 16.1 +0.6**
MAKZ pmax pmax
comp=Z,39nm,0.8s
DGZ Jazzator, Alta 65.69 339 *i* P **P** **21 16 17.1 +0.6**
DGZ pmax pmax
comp=Z,94nm,1.1s
DRK Karamyk 65.78 322 P **P** **21 16 17.6 +0.2**
DRK Karamyk 65.78 322 P **P** **21 16 17.7 +0.2**
DRK pmax pmax
comp=Z,75nm,0.9s
TKM2 Tokmak 2 65.85 327 P **P** **21 16 18.6 +0.8**
SNR=9.8
UCH Uchtor 65.97 326 P **P** **21 16 19.3 +0.4**
SNR=30
KBK Karagaybulak 66.02 326 P **P** **21 16 19.9 +1.0**
SNR=128
NGCH Negor - Chabah 66.05 304 P **P** **21 16 20.3 +1.3**
JLN Jalan Bani Buh 66.19 300 P **P** **21 16 21.2 +1.1**
JLN P **pP** **21 16 21.5 -6.8**
ARSB Arslanbob 66.25 324 P **P** **21 16 20.5 +0.2**
ARSB Arslanbob 66.25 324 P **P** **21 16 20.5 +0.2**
ARSB pmax pmax
comp=Z,191nm,0.9s
AAK Ala-Archa 66.26 326 LR LR 21 50 17.0
comp=Z,370nm,20.1s,baz=150,slow=41
AAK Ala-Archa 66.26 326 P **P** **21 16 21.3 +1.0**
SNR=118
AAK Ala-Archa 66.26 326 P **P** **21 16 21.1 +0.8**
AAK Ala-Archa 66.26 326 *i* P **P** **21 16 21.3 +1.0**
SNR=147
AAK Ala-Archa 66.26 326 *ce*P **P** **21 16 21.4 +1.1**
AAK pmax pmax
comp=Z,97nm,0.8s
AAK Ala-Archa 66.26 326 P **P** **21 16 21.9 +1.5**
FRU1 Bishkek 66.30 326 P **P** **21 16 21.0 +0.5**
FRU1 IAmb IAmb 21 16 22.5
comp=Z,67nm,1.3s
FRU1 Bishkek 66.30 326 P **P** **21 16 21.0 +0.5**
FRU1 pmax pmax
comp=Z,67nm,1.3s
CHMS Chumysh 66.36 327 P **P** **21 16 21.2 +0.3**
SNR=22
GAR Garm 66.39 321 P **P** **21 16 21.2 0.0**
EKS2 Erkin-Say 66.67 326 P **P** **21 16 24.2 +1.3**
SNR=144
USP Ospenovka 66.68 327 P **P** **21 16 23.4 +0.6**
SNR=89
BTK Batken 66.73 322 P **P** **21 16 23.6 +0.3**
BTK Batken 66.73 322 P **P** **21 16 23.6 +0.3**
BTK pmax pmax
comp=Z,71nm,1.1s
SGDS Sogindy 66.73 327 *e*P **P** **21 16 23.8 +0.6**
comp=Z,9.7nm,0.9s
WBK Wadi Bani Khal 66.74 300 P **P** **21 16 23.4 -0.3**
CHGR Chuyangaron 66.92 320 P **P** **21 16 24.0 -0.6**
CHGR Chuyangaron 66.92 320 P **P** **21 16 24.0 -0.6**
CHGR pmax pmax
comp=Z,133nm,0.9s
SHAA Shahritus 66.95 318 P **P** **21 16 23.4 -1.4**
SHAA IAmb IAmb 21 16 24.6
comp=Z,113nm,1.0s
MHTO MHTO 66.99 298 P **P** **21 16 25.9 +0.7**
WSAR Wadi Sarin 67.27 301 P **P** **21 16 30.0 +3.0**
SNR=7.2
JMDO Jabal Madar 67.39 300 P **P** **21 16 29.7 +1.9**
MAW Mawson 67.68 200 LR LR 21 39 59.5
comp=Z,240nm,20.1s,baz=58,slow=30
SMDO Samad 67.69 300 P **P** **21 16 31.0 +1.2**
BIDO Bidbid 67.81 301 P **P** **21 16 31.9 +1.5**
SNR=9.7
BOD Bodaibo 68.08 358 *e*P **P** **21 16 31.5 +0.1**
BOD pmax pmax
comp=Z,57nm,1.9s
BTLS Baital 68.11 328 *e*P **P** **21 16 32.7 +0.9**
BTLS Baital 68.11 328 *e*P **P** **21 16 32.8 +0.9**
DZA Taraz 68.19 325 *e*P **P** **21 16 33.2 +0.8**
DZA pmax pmax
comp=Z,16nm,1.1s
DZA Taraz 68.19 325 *e*P **P** **21 16 33.2 +0.8**
comp=Z,16nm,1.1s
BSY Bisya 68.30 300 P **P** **21 16 34.8 +1.2**
SNR=6.0
IUG Iuzhnay 68.48 323 *c i*P **P** **21 16 35.2 +0.8**
IUG Iuzhnay 68.48 323⇑ *i*P **P** **21 16 35.2 +0.8**
HOQ Hoqain 68.52 300 P **P** **21 16 36.5 +1.6**
SNR=6.2
DMTO DMTO 68.52 294 P **P** **21 16 36.9 +1.9**
KK31 Karatay Array 68.79 324 IAmb IAmb 21 16 38.6
comp=Z,28nm,0.9s
KKAR Karatay Array 68.79 324 P **P** **21 16 36.7 +0.5**
KKAR Karatay Array 68.79 324 P **P** **21 16 36.7 +0.5**
CHM Chimkent 68.84 323 *e*P **P** **21 16 37.4 +1.0**
CHM pmax pmax
comp=Z,24nm,0.9s
CHM Chimkent 68.84 323 *e*P **P** **21 16 37.5 +1.0**
comp=Z,24nm,0.9s
SOHO SOHO 69.39 301 *i* P **P** **21 16 41.0 +0.8**
SNR=8.3
DOK Doka 69.55 294 P **P** **21 16 42.5 +1.2**
DOK S **S** **21 25 44.7 -3.0**
WHFO Wadi Hawf 69.65 294 P **P** **21 16 43.0 +1.0**
ABTO Aybut 69.90 293 P **P** **21 16 45.0 +1.4**
KURBB Kurchatov Arra 69.93 334 P **P** **21 16 43.4 +0.4**
comp=Z,31nm,0.9s,baz=142,slow=5.6,SNR=187
KURBB S **S** **21 25 47.1 -3.8**
comp=Z,0.2nm,0.4s,baz=129,slow=13,SNR=5.1
comp=Z,31nm,0.9s
KURK Kurchatov 69.96 334 P **P** **21 16 43.6 +0.4**
KURK Kurchatov 69.96 334 *ce*P **P** **21 16 43.6 +0.4**
KURK pmax pmax
comp=Z,88nm,1.0s
KURK Kurchatov 69.96 334 P **P** **21 16 43.7 +0.4**
UOSS Minazif 69.97 301 P **P** **21 16 44.1 +0.3**
UOSS IAmb IAmb 21 17 05.3
comp=Z,99nm,1.6s
UOSS Minazif 69.97 301 P **P** **21 16 44.6 +0.8**
UOSS Minazif 69.97 301 P **P** **21 16 46.0 +2.1**
UOSS S **S** **21 25 48.6 -3.8**
HATD Hatta, Dubai 69.99 301 P **P** **21 16 45.2 +1.2**
HATD Hatta, Dubai 69.99 301 P **P** **21 16 45.7 +1.8**
HATD S **S** **21 25 50.0 -2.7**
ALNE Al Ain 70.02 300 *i* P **P** **21 16 45.2 +1.0**
SNR=7.2
ALNE Al Ain 70.02 300 P **P** **21 16 47.1 +3.0**
SNR=7.0
ALNE S **S** **21 25 50.7 -2.4**
UMZA Um Al Zommool 70.04 299 P **P** **21 16 45.3 +1.0**
ZAA0 Zalesovo Array 70.12 340 IAmb IAmb 21 17 01.8
comp=Z,36nm,0.8s
ZALV Zalesovo Beam 70.12 340 P **P** **21 16 43.5 -0.5**
comp=Z,33nm,0.7s,baz=144,slow=5.2,SNR=163
ZALV S **S** **21 25 45.3 -7.7**
comp=Z,2.2nm,1.0s,baz=146,slow=10,SNR=6.2
ZALV LR LR 21 50 17.0
comp=Z,267nm,21.1s,baz=144,slow=38
comp=Z,33nm,0.7s
ZALV Zalesovo Beam 70.12 340 P **P** **21 16 43.2 -0.9**
MASF Masafi 70.17 302 P **P** **21 16 46.3 +1.2**
MASF S **S** **21 25 52.7 -2.1**
BANOM Banah 70.26 302 P **P** **21 16 48.0 +2.3**
BANOM Banah 70.26 302 P **P** **21 16 46.9 +1.2**
FAQ Al Faqa, Dubai 70.41 301 *i* P **P** **21 16 47.9 +1.4**
SNR=9.6
FAQ Al Faqa, Dubai 70.41 301 P **P** **21 16 47.7 +1.2**
SNR=11
FAQ S **S** **21 25 54.9 -2.7**
NAZ Nazwa, Dubai 70.44 301 P **P** **21 16 48.0 +1.3**
SHME Shamm 70.44 302 P **P** **21 16 48.4 +1.7**
ASUD Al Ashush, Dub 70.59 301 P **P** **21 16 48.9 +1.3**
ASUD Al Ashush, Dub 70.59 301 P **P** **21 16 48.7 +1.1**
SNR=7.0
VNDA Vanda 70.71 171 P **P** **21 16 50.2 +2.9**
comp=Z,2.8nm,0.9s,baz=325,slow=7.5,SNR=4.3
VNDA LR LR 21 45 48.8
comp=Z,121nm,19.1s,baz=326,slow=34
comp=Z,2.8nm,0.9s
VNDA Vanda 70.71 171 P **P** **21 16 48.3 +0.9**
VNDA Vanda 70.71 171 P **P** **21 16 48.3 +0.9**
VNDA pmax pmax
comp=Z,15nm,1.1s
AJN Ajban 70.86 301 P **P** **21 16 49.5 +0.3**
AJN S **S** **21 26 00.3 -2.4**
MZWR Madinat Zayed 71.51 299 P **P** **21 16 53.5 +0.3**
MZWR S **S** **21 26 07.3 -3.1**
MZR Muzera 71.59 298 *i* P **P** **21 16 55.5 +1.8**

SNR=7.0
MZR Muzera 71.59 298 P **P** **21 16 55.0 +1.2**
PETK Petropavlovsk- 71.64 24 P **P** **21 16 54.5 +1.2**
comp=Z,30nm,0.8s,baz=223,slow=6.6,SNR=14
PETK LR LR 21 46 55.9
comp=Z,74nm,21.9s,baz=220,slow=35
comp=Z,30nm,0.8s
PETK Petropavlovsk- 71.64 24 P **P** **21 16 53.8 +0.4**
GHWR Ruwais 72.44 299 P **P** **21 16 59.9 +1.1**
YAK Yakutsk 72.77 6 P **P** **21 16 59.5 -0.4**
YAK Yakutsk 72.77 6 *e*P **P** **21 16 59.3 -0.5**
YAK *e* 21 17 14.1
YAK *e**PP **PcP** **21 17 20.0 +3.0**
YAK *e* 21 19 43.9
YAK *e*PPP PPP 21 21 26.1
YAK *e*S **S** **21 26 19.8 -3.4**
YAK *e**SS **SKSac** **21 26 54.6 -8.0**
YAK *e* 21 27 14.9
YAK *e*SS **SS** **21 31 02.5 -1.3**
YAK pmax pmax
comp=Z,55nm,1.5s
YAK pmax pmax
comp=N,20nm,1.6s
YAK pmax pmax
comp=E,4.0nm,1.5s
YAK pmax pmax
comp=Z,204nm,5.2s
YAK pmax pmax
comp=N,241nm,7.8s
YAK pmax pmax
comp=E,126nm,3.9s
YAK smax smax
comp=E,341nm,6.8s
YAK smax smax
comp=N,281nm,6.1s
JRN Qarnain Island 72.81 300 P **P** **21 17 01.6 +0.7**
MA2 Magadan 74.46 16 P **P** **21 17 10.4 +0.5**
comp=N,5.3nm,0.7s,baz=192,slow=9.3,SNR=7.0
MA2 LR LR 21 50 48.2
comp=N,76nm,21.1s,baz=218,slow=37
comp=N,5.3nm,0.7s
MA2 Magadan 74.46 16 P **P** **21 17 09.6 -0.3**
MA2 IAmb IAmb 21 17 28.4
comp=Z,45nm,1.2s
MA2 Magadan 74.46 16*ce*P **P** **21 17 11.9 +2.0**
MA2 pmax pmax
comp=Z,22nm,1.7s
MA2 Magadan 74.46 16 P **P** **21 17 10.7 +0.8**
comp=Z,33nm,0.9s
SMRA Abu-Samra 74.47 299 P **P** **21 17 12.0 +1.3**
BVAR Borovoye Array 75.22 332 P **P** **21 17 14.9 +0.4**
comp=Z,20nm,0.7s,baz=130,slow=7.4,SNR=64
BVAR S **S** **21 26 46.2 -5.1**
comp=Z,0.6nm,0.6s,baz=149,slow=14,SNR=3.7
comp=Z,20nm,0.7s
BORK Borovoye 75.27 332 P **P** **21 17 14.7 0.0**
BORK IAmb IAmb 21 17 17.2
comp=Z,56nm,1.1s
BORK Borovoye 75.27 332*ce*P **P** **21 17 15.3 +0.6**
BORK pmax pmax
comp=Z,56nm,1.0s
SEY Seymchan 77.70 15 P **P** **21 17 29.0 +0.7**
comp=Z,5.4nm,0.7s,baz=211,slow=9.3,SNR=23
comp=Z,5.4nm,0.7s
SEY Seymchan 77.70 15*ce*P **P** **21 17 29.6 +1.4**
SEY pmax pmax
comp=Z,12nm,1.0s
AB31 Akbulak array 78.32 325 IAmb IAmb 21 17 37.3
comp=Z,36nm,0.7s
AB31 Akbulak array 78.32 325 *i* P **P** **21 17 32.4 +0.4**
AB31 pmax pmax
comp=Z,23nm,0.6s
ABKAR Akbulak array 78.32 325 P **P** **21 17 32.3 +0.3**
KBD Kabd 78.55 303 P **P** **21 17 34.2 +0.4**
RAYN Ar Rayn 78.72 297 P **P** **21 17 35.5 +0.7**
RAYN Ar Rayn 78.72 297 *i* P **P** **21 17 36.4 +1.5**
SNR=23
RAYN Ar Rayn 78.72 297 P **P** **21 17 35.5 +0.7**
RAYN pmax pmax
comp=Z,18nm,0.9s
RAYN Ar Rayn 78.72 297 P **P** **21 17 35.2 +0.3**
SHEM Shemya Is, Ala 78.83 31 LR LR 21 49 50.8
comp=Z,51nm,22.0s,baz=36,slow=34
RAR Rarotonga 78.83 110 LR LR 21 51 49.8
comp=Z,64nm,21.9s,baz=273,slow=35
QSPA South Pole Qui 79.59 180 P **P** **21 17 41.3 +2.4**
comp=Z,4.5nm,1.1s,baz=337,slow=4.0,SNR=4.9
comp=Z,4.5nm,1.1s
QSPA South Pole Qui 79.59 180 P **P** **21 17 38.9 -0.1**
AKTO Aktyubinsk 80.00 326 *i* P **P** **21 17 41.9 +0.7**
AKTO pmax pmax
comp=Z,26nm,0.9s
KIBK Kibwezi 80.01 269 P **P** **21 17 40.4 -1.8**
KMBO Kilima Mbogo 81.00 271 P **P** **21 17 49.1 +1.4**
baz=83,slow=8.1
SVE Sverdlovsk 82.00 332 *e*P **P** **21 17 52.2 +0.5**
SVE pmax pmax
comp=Z,31nm,1.5s
TIXI Tiksi 82.19 3 P **P** **21 17 52.0 -0.3**
TIXI IAmb IAmb 21 18 07.8
comp=Z,44nm,0.9s
TIXI Tiksi 82.19 3*ce*P **P** **21 17 52.2 -0.1**
TIXI pmax pmax
comp=Z,31nm,1.0s
AKT Akhty 82.69 314 *e*P **P** **21 17 56.1 +0.3**
AKT *e*S **S** **21 28 12.9 +1.3**
AKT pmax pmax
comp=Z,14nm,0.6s
ARTI Arti 82.82 331 P **P** **21 17 55.6 -0.4**
ARTI IAmb IAmb 21 18 12.8
comp=Z,40nm,1.2s
ARTI Arti 82.82 331*c i* P **P** **21 17 57.0 +1.0**
ARTI 21 21 06.0
ARTI S **SKSac** **21 28 19.1 +3.9**
ARTI SS **SS** **21 33 37.1 +1.5**
ARTI pmax pmax
comp=Z,25nm,2.0s
SEKA Sheki 82.97 314 P **P** **21 18 00.6 +3.4**
MAK Makhachkala 83.37 316 *e*P **P** **21 17 55.9 -3.2**
MAK *e* 21 21 08.2
MAK *e*PPP PPP 21 23 05.2
MAK *e*S **S** **21 28 14.2 -4.0**
MAK *e*SS **SS** **21 33 41.6 -2.6**
MAK *e*SSS SSS 21 37 12.1
MAK pmax pmax
comp=Z,66nm,1.4s
GANJ Ganja 83.40 313 P **P** **21 18 03.0 +3.6**
NAX Nakhchivan 83.51 312 P **P** **21 18 03.1 +3.0**
LODK Lodwar 83.69 275 P **P** **21 18 01.9 +0.4**
GNI Garni 84.38 312 P **P** **21 18 04.7 +0.1**
GNI IAmb IAmb 21 18 32.5
comp=Z,43nm,0.9s
GNI Garni 84.38 312 P **P** **21 18 07.1 +2.5**
GNI Garni 84.38 312*ce*P **P** **21 18 05.2 +0.6**
GNI pmax pmax
comp=Z,32nm,1.7s
GNI Garni 84.38 312 P **P** **21 18 06.2 +1.6**
GNI Garni 84.38 312 P **P** **21 18 05.7 +1.1**
comp=Z,47nm,1.0s
NVL N'lazarevskaya 85.58 199 *e*P P 21 18 04.5 -5.4
NVL *e*S **SKSac** **21 28 28.9 -3.8**
NVL *e*SS **SS** **21 34 13.4 -1.6**
NVL *e*SSS SSS 21 37 44.6
NVL pmax pmax
comp=Z,12nm,0.9s
NVL MLR MLR
comp=Z,576nm,21.0s
KARS Kars 85.73 312 IAmb IAmb 21 18 30.6
comp=Z,56nm,1.0s
BELG Belogornoye 86.70 325 *i* P **P** **21 18 16.7 +1.1**
BELG pmax pmax
comp=Z,12nm,1.0s
KBZ Khabaz 86.79 315 P **P** **21 18 18.2 +2.0**
comp=Z,15nm,0.9s,baz=100,slow=3.3,SNR=22
comp=Z,15nm,0.9s
KBZ Khabaz 86.79 315*ce*P **P** **21 18 19.2 +2.9**
SHA1 Shidzhatmaz 86.96 315*ce*P **P** **21 18 18.1 +0.7**
KIV Kislovodsk 87.01 316 P **P** **21 18 18.9 +1.5**
KIV Kislovodsk 87.01 316 *e*P **P** **21 18 19.1 +1.6**
KIV pmax pmax
comp=Z,10.0nm,1.1s
KIV MLR MLR
comp=Z,136nm,19.0s
KIV Kislovodsk 87.01 316 P **P** **21 18 17.9 +0.5**
KIV Kislovodsk 87.01 316 P **P** **21 18 18.5 +1.0**
comp=Z,18nm,1.1s
GOF Gofitskoye 87.10 317*ce*P **P** **21 18 21.0 +3.2**
LSZ Lusaka 87.42 255 P **P** **21 18 19.2 -0.9**
LSZ IAmb IAmb 21 18 38.3
comp=Z,19nm,0.9s
LSZ Lusaka 87.42 255 P **P** **21 18 19.2 -0.9**
LSZ pmax pmax
comp=Z,19nm,1.0s
MBAR Mbarara 87.50 270 *i* P **P** **21 18 22.2 +1.6**
MBAR pmax pmax
comp=Z,18nm,1.1s
BOSA Boshof 87.73 241 P **P** **21 18 23.8 +2.4**
comp=Z,5.2nm,1.0s,baz=106,slow=5.1,SNR=3.1
BOSA LR LR 21 54 59.6
comp=Z,147nm,18.2s,baz=108,slow=34
comp=Z,5.2nm,1.0s
BOSA Boshof 87.73 241 IAmb IAmb 21 18 39.4
comp=Z,22nm,1.1s
TBI Tubuai 87.96 113 *e*P P 21 18 15.8 -6.6
comp=Z,149nm,24.5s
TBI *e*S **S** **21 29 04.0 -0.2**
comp=Z,361nm,30.2s
TBI *e*SS **SS** **21 34 55.3 +3.1**
comp=Z,662nm,34.8s
TBI *e*LQ LQ 21 42 18.0
comp=Z,2μm,31.8s
TBI *e*LR LR 21 46 20.7
comp=Z,1μm,30.0s
LBTB Lobatse 88.09 245 LR LR 21 53 30.6
comp=Z,182nm,18.2s,baz=134,slow=33
KIRV Kirov 88.13 331 *i* P **P** **21 18 23.7 +1.4**
NIKH Nikolski High 88.14 35 P **P** **21 18 23.9 +1.4**
baz=250
SPIA Saint Paul Isl 88.86 31 P **P** **21 18 27.7 +1.9**
baz=249
PPT2 Papeete2 88.89 108 *e*P **P** **21 18 29.2 +2.2**
comp=Z,36nm,24.0s
PPT2 *e*S **S** **21 29 15.1 +1.7**
comp=Z,71nm,27.0s
PPT2 *e*SS **SS** **21 35 07.3 +1.1**
comp=Z,122nm,34.2s
PPT2 *e*LQ LQ 21 42 52.5
comp=Z,537nm,34.5s
PPT2 *e*LR LR 21 46 38.0
comp=Z,636nm,32.0s
PPT2 *e*LR LR 21 46 40.5
comp=Z,348nm,31.8s
PPT Papeete 88.90 108 LR LR 21 55 11.9
comp=Z,88nm,21.7s,baz=216,slow=34
SNAA Sanae 89.46 196 P **P** **21 18 31.0 +2.4**
comp=Z,6.2nm,0.9s,baz=124,slow=4.2,SNR=5.5
SNAA LR LR 21 55 57.4
comp=Z,353nm,19.8s,baz=102,slow=34
comp=Z,6.2nm,0.9s
SNAA Sanae 89.46 196 P **P** **21 18 29.1 +0.5**
SNAA Sanae 89.46 196 P **P** **21 18 29.1 +0.5**
SNAA pmax pmax
comp=Z,20nm,1.1s
MMAI Mount Meron Ar 89.73 304 P **P** **21 18 32.8 +2.2**
comp=Z,1.4nm,0.5s,baz=106,slow=14,SNR=10
comp=Z,1.4nm,0.5s
UNV Unalaska Valle 89.75 35 P **P** **21 18 31.4 +1.3**
baz=252
VRH Novokhopyorsk 89.77 322 *e*P **P** **21 18 31.9 +1.6**
VRH pmax pmax
comp=Z,40nm,0.8s
BELA Belgrano 2 90.55 186 P **P** **21 18 34.3 +0.7**
GAMB Gambell 90.65 25 P **P** **21 18 35.7 +1.7**
baz=248,SNR=5.7
BNN Bunyan 90.66 309 IAmb IAmb 21 18 53.5
comp=Z,20nm,1.2s
VORD Divnogorie 91.18 322 *e*P **P** **21 18 38.0 +1.2**
VORD pmax pmax
comp=Z,10.0nm,0.7s
VSR Storozhevoye 91.32 322 *e*P **P** **21 18 38.9 +1.4**
VSR pmax pmax
comp=Z,9.0nm,0.7s
VORR Voronezh 91.42 322 *e*P **P** **21 18 39.7 +1.8**
VORR pmax pmax
comp=Z,21nm,1.6s
LPSR Galich'ya Gora 91.82 323 *e*P P 21 18 44.8 +5.1
LPSR pmax pmax
comp=Z,10.0nm,0.7s
M11K Mekoryuk 91.92 29 P **P** **21 18 41.7 +1.7**
baz=252
KIRS Kirsehir-Merke 92.18 309 ⇓P **P** **21 18 45.2 +3.3**
BR131 Keskin Array S 92.51 310 P **P** **21 18 43.1 -0.3**
BRTR Keskin Array B 92.51 310 P **P** **21 18 44.2 +0.7**
comp=Z,2.9nm,0.9s,baz=116,slow=3.4,SNR=12
comp=Z,2.9nm,0.9s
BRTR Keskin Array B 92.51 310 P **P** **21 18 43.8 +0.3**
BR105 Keskin Array S 92.53 310 P **P** **21 18 44.4 +0.8**
comp=Z,8.1nm,1.4s
TNA Tin City 92.80 24 P **P** **21 18 46.0 +2.0**
baz=251
K13K Kusilvak Mount 93.09 27 P **P** **21 18 47.3 +1.9**
baz=254
M13K Dall Lake 93.28 29 P **P** **21 18 48.5 +2.2**
baz=255
MOS Moscow 93.33 326 *e*P P 21 19 01.1 +14
F14K Arctic Creek 93.41 24 P **P** **21 18 48.8 +2.0**
baz=252
ANM Nome 93.53 25 P **P** **21 18 48.9 +1.5**
baz=253,SNR=6.8
KLMR Klimovskoe 93.61 331 *e*P **P** **21 18 47.7 -0.1**
KLMR pmax pmax
comp=Z,27nm,1.2s
OBN Obninsk 93.77 325⇓ *e*P **P** **21 18 51.1 +2.4**
OBN *i* 21 19 05.2
OBN *e* 21 22 36.2
OBN *e*SS SS 21 36 23.2 +8.2
OBN pmax pmax
comp=Z,11nm,1.3s
J14K Nanvaranak Lak 93.81 27 P **P** **21 18 50.1 +1.4**
baz=255
L14K Kuka Creek 93.84 28 P **P** **21 18 50.5 +1.6**
baz=255
N14K Kuskokwak Cree 93.97 30 P **P** **21 18 51.0 +1.5**
baz=256
O14K Tigyukauivet M 94.02 31 IAmb IAmb 21 18 52.2
comp=Z,17nm,0.8s
O14K Tigyukauivet M 94.02 31 P **P** **21 18 51.2 +1.5**
baz=256
M14K Bethel 94.03 29 IAmb IAmb 21 18 52.3
comp=Z,64nm,1.8s
M14K Bethel 94.03 29 P **P** **21 18 51.1 +1.4**
baz=256
F15K North Star Dit 94.14 24 P **P** **21 18 52.0 +1.8**
baz=254
G15K Niukluk 94.20 25 P **P** **21 18 51.6 +1.2**
baz=254,SNR=6.8
L15K Ungalak Mounta 94.48 28 P **P** **21 18 53.0 +1.2**
baz=256
K15K Wolf Creek Mou 94.60 28 P **P** **21 18 53.7 +1.3**
baz=256
C16K Lisburne Hills 94.60 21 IAmb IAmb 21 18 55.0
comp=Z,22nm,0.9s
C16K Lisburne Hills 94.60 21 P **P** **21 18 53.9 +1.6**
baz=254
M15K Kasigluk River 94.63 29 P **P** **21 18 53.8 +1.3**
baz=257
O15K Ungalikthiuk R 94.72 31 P **P** **21 18 54.3 +1.3**
baz=258
N15K Kwethluk River 94.80 30 P **P** **21 18 54.7 +1.3**
baz=258
H16K Elim 94.85 25 P **P** **21 18 54.8 +1.4**
baz=256,SNR=21
CHGN Chignik 94.87 34 P **P** **21 18 55.2 +1.5**
baz=259
G16K Koyuk River 94.98 24 IAmb IAmb 21 18 56.6
comp=Z,22nm,0.8s
G16K Koyuk River 94.98 24 P **P** **21 18 55.5 +1.5**
baz=256,SNR=35
J16K Anvik River 95.24 27 P **P** **21 18 57.1 +1.8**
baz=257
D17K Noatak River 95.27 22 P **P** **21 18 57.4 +2.1**
baz=256,SNR=42
I17K Unalakleet 95.33 26 IAmb IAmb 21 18 58.6
comp=Z,12nm,1.1s
I17K Unalakleet 95.33 26 P **P** **21 18 57.5 +1.9**
baz=257,SNR=6.6
L16K Owhat River 95.42 28 IAmb IAmb 21 18 58.3
comp=Z,12nm,0.8s
L16K Owhat River 95.42 28 P **P** **21 18 57.3 +1.2**
baz=258
RDOG Red Dog Mine 95.42 22 IAmb IAmb 21 18 58.9
comp=Z,21nm,1.3s
RDOG Red Dog Mine 95.42 22 P **P** **21 18 57.8 +1.8**
baz=256,SNR=5.5
C17K DeLong Mountai 95.43 21 P **P** **21 18 57.9 +1.8**
baz=256
N16K Nishlik Lake 95.51 30 P **P** **21 18 58.3 +1.7**
baz=259
M16K Timber Creek 95.53 29 P **P** **21 18 58.3 +1.6**
baz=259
R16K Pilot Point 95.56 33 P **P** **21 18 58.3 +1.4**
baz=259
P16K Nushagak River 95.62 31 P **P** **21 18 58.5 +1.5**
baz=259
F17K Baldwin Pennin 95.67 23 P **P** **21 18 58.8 +1.6**
baz=257
O16K Kokwok River B 95.67 31 P **P** **21 18 58.7 +1.4**
baz=259
G17K Kiwalik Mounta 95.70 24 P **P** **21 18 59.0 +1.7**
baz=258
H17K Granite Mounta 95.89 25 IAmb IAmb 21 19 01.0
comp=Z,20nm,0.9s
H17K Granite Mounta 95.89 25 P **P** **21 19 00.0 +1.8**
baz=258,SNR=22
L17K Donlin 96.05 28 P **P** **21 19 00.6 +1.6**
baz=259
E18K Tukpahlearik C 96.13 23 P **P** **21 19 00.9 +1.6**
baz=258
K17K Iditarod 96.16 27 P **P** **21 19 01.3 +1.8**
baz=259
C18K Utukok River 96.18 21 P **P** **21 19 01.0 +1.5**
baz=257
O17K Koliganek Bris 96.20 30 P **P** **21 19 00.9 +1.2**
baz=260
R17L Mt. Peulik Vol 96.22 33 P **P** **21 19 01.1 +1.2**
baz=260
Q16K King Salmon 96.24 32 P **P** **21 19 01.1 +1.2**
baz=260
N17K Nushagak Hills 96.29 30 P **P** **21 19 01.3 +1.2**
baz=260
M17K Holitna River 96.32 29 P **P** **21 19 01.3 +1.0**
baz=260
CHIR Chirikof Islan 96.33 35 P **P** **21 19 01.5 +1.1**
baz=261
F18K Selawik 96.33 23 P **P** **21 19 01.5 +1.4**
baz=259
PURM Purcari 96.39 316 ⇑P **P** **21 19 04.1 +3.2**
P17K Kvichak River 96.44 31 P **P** **21 19 02.1 +1.3**
baz=261
A19K Wainwright 96.56 20 P **P** **21 19 03.0 +1.9**
baz=258
Q17K Contact Creek 96.57 32 P **P** **21 19 02.5 +0.9**
baz=261
H18K Honhosa River 96.58 25 P **P** **21 19 02.7 +1.3**
baz=260
G18K Tagagawik 96.59 24 P **P** **21 19 02.7 +1.3**
baz=259
L18K Granite Mounta 96.81 28 P **P** **21 19 03.9 +1.5**
baz=261
JURR Jurilovca 96.84 314 ⇓P **P** **21 19 06.2 +3.2**
C19K Lookout Ridge 96.84 21 IAmb IAmb 21 19 25.6
comp=Z,26nm,1.2s
C19K Lookout Ridge 96.84 21 P **P** **21 19 04.5 +2.0**
baz=259
KARP Karpathos 96.89 305 P **P** **21 19 04.2 +0.7**
comp=Z,44nm,0.9s
N18K Kilae Creek 96.94 30 P **P** **21 19 04.6 +1.5**
baz=261
J18K Innoko River 97.00 27 P 21 19 04.5
baz=261,SNR=9.1
P18K Big Mountain, 97.08 31 P Pdif 21 19 05.0 +1.1
baz=262
M18K Stony River 97.10 29 P Pdif 21 19 05.1 +1.3
baz=261
F19K Shaleruckik Mo 97.11 23 P Pdif 21 19 05.0 +1.2
baz=260
GCSA Galena City Sc 97.13 26 P Pdif 21 19 05.2 +1.4
baz=261
O18K Koktuh Hills 97.16 31 IAmb IAmb 21 19 06.0
comp=Z,15nm,1.2s
O18K Koktuh Hills 97.16 31 P Pdif 21 19 05.2 +1.0
baz=262
SII Sitkinak Islan 97.23 34 P Pdif 21 19 05.8 +1.3
baz=262
D19K Kuna River 97.26 22 P Pdif 21 19 05.9 +1.4
baz=260
G19K Purcell Mounta 97.27 24 P Pdif 21 19 06.1 +1.6
baz=261
AKASG Malin Array Be 97.39 320 P **P** **21 19 05.3 0.0**
comp=Z,1.4nm,0.7s,baz=86,slow=4.3,SNR=6.2
comp=Z,1.4nm,0.7s
AKASG Malin Array Be 97.39 320 P **P** **21 19 02.7 -2.6**
AKASG Malin Array Be 97.39 320 *i* P Pdif 21 19 07.3 +1.9
AKASG pmax pmax
comp=Z,1.0nm,0.6s
E19K Redstone River 97.42 23 P Pdif 21 19 06.6 +1.4
baz=261
J19K Poorman 97.56 26 P Pdif 21 19 07.3 +1.5
baz=262
APA Apatity 97.60 337⇓ *e*P Pdif 21 19 06.4 +0.5
APA *e* 21 23 03.1
APA *e*SS SS 21 37 14.2 +5.5
APA pmax pmax
comp=Z,36nm,0.6s
APA MLR MLR
comp=Z,1μm,4.7s
SORM Soroca 97.64 317 ⇓P Pdif 21 19 06.7 +0.2
SORM Soroca 97.64 317 P Pdif 21 19 06.7 +0.2
O19K Port Alsworth 97.65 30 P Pdif 21 19 07.6 +1.3
baz=262
N19K Bonanza Creek 97.65 30 IAmb IAmb 21 19 08.8
comp=Z,20nm,0.9s
N19K Bonanza Creek 97.65 30 P Pdif 21 19 07.7 +1.3
baz=262
L19K White Mountain 97.65 28 IAmb IAmb 21 19 08.8
comp=Z,11nm,1.1s
L19K White Mountain 97.65 28 P Pdif 21 19 07.6 +1.2
baz=262
OHAK Old Harbor 97.81 33 IAmb IAmb 21 19 23.2
comp=Z,21nm,1.2s
OHAK Old Harbor 97.81 33 P Pdif 21 19 08.1 +1.0
baz=263
Q19K Cape Douglas, 97.83 32 P Pdif 21 19 08.1 +0.9
baz=263
M19K Big River Lodg 97.83 29 P Pdif 21 19 08.4 +1.3
baz=263
D20K Etivluk River 97.84 22 P Pdif 21 19 08.5 +1.4
baz=262
B20K Meade River 97.84 20 P Pdif 21 19 08.7 +1.7
baz=261
E20K Nigu River 97.93 22 P Pdif 21 19 09.2 +1.7
baz=262
F20K Avaraart Lake 97.94 23 P Pdif 21 19 09.3 +1.9
baz=262
H20K Anotleneega Mo 98.07 25 P Pdif 21 19 09.7 +1.5
baz=263
P19K Oil Pt 98.12 31 P Pdif 21 19 10.0 +1.5
baz=263
I20K Naaghedeneel 98.15 26 P Pdif 21 19 10.2 +1.8
baz=263
K20K Telida 98.16 27 IAmb IAmb 21 19 11.2
comp=Z,7.3nm,1.0s
K20K Telida 98.16 27 P Pdif 21 19 10.0 +1.4
baz=263,SNR=6.8
A21K Barrow 98.21 19 P Pdif 21 19 10.3 +1.7
baz=262
J20K Nowinta River 98.22 26 P Pdif 21 19 10.3 +1.5
baz=263
KDAK Kodiak Island 98.25 33 P Pdif 21 19 10.1 +1.1
baz=264
M20K Styx River 98.42 29 IAmb IAmb 21 19 12.2
comp=Z,12nm,1.0s
M20K Styx River 98.42 29 P Pdif 21 19 11.0 +1.1
baz=264,SNR=8.4
RED Redoubt Volcan 98.44 30 IAmb IAmb 21 19 10.7
comp=Z,10.0nm,0.9s
PLOR Plostina 98.53 315 ⇓P Pdif 21 19 11.8 +1.1
PLOR Plostina 98.53 315 P Pdif 21 19 11.8 +1.1
C21K Knifeblade Rid 98.55 21 P Pdif 21 19 11.7 +1.5
baz=263
IMAR Indian Mountai 98.59 24 P Pdif 21 19 10.8 +0.3
MNK Minsk 98.64 324 *i* P Pdif 21 19 25.5 +15
comp=E,3.0nm,0.7s
MNK *i* P Pdif 21 19 25.5 +15
comp=N,8.0nm,0.8s
MNK *i* P Pdif 21 19 25.5 +15
comp=Z,6.0nm,0.7s,baz=96
MNK *i* PP PP 21 23 27.1 +15
MNK *i* PPP PPP 21 25 25.2
MNK *i* SKS 21 29 17.5

MNK				*i* S		SKKSac	21 30 05.0	-12	
MNK				*i* SP		SP	21 32 21.1	+19	
MNK				*i* PS		PS	21 32 23.4	+16	
MNK				*i* SS		SS	21 37 44.2	+20	
MNK				*i* SSS		SSS	21 41 32.3		
MNK				*i* LRM		MLR	22 04 38.3		
	comp=N,111nm,15.7s								
MNK				*i* LRM		MLR	22 05 38.1		
	comp=E,195nm,18.4s								
MNK	**Minsk**	**98.64**	**324**	*i* P		Pdif	21 19 25.4	+15	
MNK				*i* PPP		PPP	21 25 25.1		
MNK				pmax		pmax			
	comp=N,8.0nm,0.8s								
MNK				pmax		pmax			
	comp=E,3.0nm,0.7s								
MNK				pmax		pmax			
	comp=Z,6.0nm,0.7s								
MNK				MLR		MLR			
	comp=Z,60nm,14.0s								
MNK				MLR		MLR			
	comp=N,111nm,16.0s								
MNK				MLR		MLR			
	comp=E,195nm,18.0s								
B21K	**Ikpikpuk River**	**98.67**	**21**	P		Pdif	21 19 12.5	+1.9	
	baz=264								
A22K	**Sinclair Lake**	**98.70**	**19**	P		Pdif	21 19 12.8	+2.0	
	baz=264								
NEHR	**Nehoiu**	**98.73**	**315**	⇑P		Pdif	21 19 14.7	+3.1	
G21K	**Allakaket**	**98.75**	**24**	P		Pdif	21 19 12.8	+1.7	
	baz=264								
N20K	**Mount Spurr**	**98.79**	**29**	P		Pdif	21 19 12.1	+0.6	
	baz=264,SNR=7.7								
SPCR	**Spurr Chakacha**	**98.79**	**29**	P		Pdif	21 19 12.4	+0.9	
	baz=264								
F21K	**Alatna River**	**98.83**	**23**	P		Pdif	21 19 12.7	+1.2	
	baz=264								
SPU	**Mount Spurr**	**98.86**	**29**	IAmb		IAmb	21 19 13.4		
	comp=Z,9.5nm,1.1s								
HOM	**Homer**	**98.93**	**31**	P		Pdif	21 19 13.2	+1.2	
	baz=265								
H21K	**Melozitna Rive**	**98.95**	**25**	P		Pdif	21 19 13.4	+1.4	
	baz=265								
PPLA	**Purkeypile**	**98.96**	**28**	P		Pdif	21 19 13.2	+0.9	
	baz=265								
MLR	**Muntele Rosu**	**98.99**	**315**	⇓P		Pdif	21 19 15.3	+2.5	
MLR	**Muntele Rosu**	**98.99**	**315**	P		Pdif	21 19 15.3	+2.5	
CHUM	**Lake Minchumin**	**98.99**	**27**	P		**Pdif**	**21 19 13.6**	**+1.4**	
	baz=265,SNR=10.0								
B22K	**Teshekpuk Lake**	**99.15**	**20**	P		**Pdif**	**21 19 14.3**	**+1.5**	
	baz=265								
SKT	**Skwentna**	**99.19**	**29**	IAmb		IAmb	21 19 14.1		
	comp=Z,8.9nm,1.0s								
SKT	**Skwentna**	**99.19**	**29**	P		**Pdif**	**21 19 14.0**	**+0.9**	
	baz=265,SNR=5.4								
I21K	**Tanana**	**99.25**	**25**	IAmb		IAmb	21 19 16.3		
	comp=Z,15nm,1.5s								
I21K	**Tanana**	**99.25**	**25**	P		**Pdif**	**21 19 14.5**	**+1.2**	
	baz=265								
CAPN	**Captain Cook N**	**99.27**	**30**	P		**Pdif**	**21 19 14.6**	**+1.2**	
	baz=265								
BRSE	**Bradley Lake S**	**99.39**	**31**	P		**Pdif**	**21 19 14.9**	**+0.8**	
	baz=266								
E22K	**Anaktuvuk Pass**	**99.54**	**22**	IAmb		IAmb	21 19 33.3		
	comp=Z,14nm,1.2s								
E22K	**Anaktuvuk Pass**	**99.54**	**22**	P		**Pdif**	**21 19 16.1**	**+1.4**	
	baz=266								
H22K	**Ishtalitna Cre**	**99.55**	**25**	P		**Pdif**	**21 19 16.0**	**+1.2**	
	baz=266								
G22K	**Bettles**	**99.57**	**24**	P		**Pdif**	**21 19 16.0**	**+1.2**	
	baz=266								
L22K	**Petersville**	**99.58**	**28**	IAmb		IAmb	21 19 16.8		
	comp=Z,12nm,1.0s								
BPAW	**Bear Paw Mtn.**	**99.59**	**26**	IAmb		IAmb	21 19 39.8		
	comp=Z,23nm,2.0s								
BPAW	**Bear Paw Mtn.**	**99.59**	**26**	P		**Pdif**	**21 19 16.2**	**+1.3**	
	baz=266								
TAOE	**Nuku Hiva Isla**	**99.62**	**101**	*e*LR		LR	21 51 39.6		
	comp=Z,180nm,24.6s								
BURAR	**Bucovina Array**	**99.68**	**317**	⇓P		**Pdif**	**21 19 16.8**	**+1.0**	
BURAR	**Bucovina Array**	**99.68**	**317**	P		**Pdif**	**21 19 16.8**	**+1.0**	
MLY	**Manley**	**99.76**	**26**	P		**Pdif**	**21 19 17.0**	**+1.3**	
	baz=266								
M22K	**Willow**	**99.83**	**29**	P		**Pdif**	**21 19 17.1**	**+1.2**	
	baz=266								
TRF	**Thorofare Moun**	**99.86**	**27**	P		**Pdif**	**21 19 16.9**	**+0.6**	
	baz=266								
RC01	**Rabbit Creek A**	**99.98**	**30**	P		**Pdif**	**21 19 17.8**	**+1.1**	
	baz=267								
D23K	**Nanushuk River**	**100.01**	**22**	P		**Pdif**	**21 19 18.1**	**+1.4**	
	baz=267								
SEW	**Seward**	**100.06**	**31**	P		**Pdif**	**21 19 18.1**	**+1.0**	
	baz=267								
C23K	**Itkillik River**	**100.07**	**21**	P		**Pdif**	**21 19 18.6**	**+1.7**	
	baz=267								
COLD	**Coldfoot**	**100.10**	**23**	P		**Pdif**	**21 19 18.8**	**+1.7**	
	baz=267								
FINES	**FINESS Array B**	**100.13**	**331**	P		**Pdif**	**21 19 16.6**	**-0.7**	
	comp=Z,2.4nm,0.8s,baz=107,slow=7.7,SNR=4.8								
	comp=Z,2.4nm,0.8s								
FINES	**FINESS Array B**	**100.13**	**331**			**Pdif**	**21 19 16.9**	**-0.4**	
FINES	**FINESS Array B**	**100.13**	**331**	*i* P		**Pdif**	**21 19 17.7**	**+0.4**	
FINES				pmax		pmax			
	comp=Z,4.0nm,1.0s								
G23K	**Bananza Creek**	**100.15**	**24**	P		**Pdif**	**21 19 18.6**	**+1.2**	
	baz=267								
PMR	**Palmer**	**100.30**	**29**	P		**Pdif**	**21 19 19.4**	**+1.4**	
	baz=267								
I23K	**Minto, Yukon-K**	**100.35**	**25**	P		**Pdif**	**21 19 19.6**	**+1.4**	
	baz=268								
E23K	**Chandalar**	**100.36**	**22**	P		**Pdif**	**21 19 19.7**	**+1.3**	
	baz=268								
TOLK	**Toolik Lake Re**	**100.40**	**22**	P		**Pdif**	**21 19 19.8**	**+1.4**	
	baz=268								
NEA2	**Nenana**	**100.45**	**26**	P		**Pdif**	**21 19 19.9**	**+1.1**	
	baz=268								
MCK	**McKinley**	**100.48**	**27**	P		**Pdif**	**21 19 20.0**	**+1.0**	
	baz=268								
KNK	**Knik Glacier**	**100.61**	**29**	P		**Pdif**	**21 19 20.8**	**+1.3**	
	baz=268,SNR=11								
WAT1	**Susitna Watana**	**100.62**	**28**	P		**Pdif**	**21 19 20.5**	**+1.0**	
	baz=268								
ARCES	**ARCESS Array B**	**100.66**	**339**	P		**Pdif**	**21 19 20.8**	**+1.3**	
	comp=Z,6.0nm,1.0s,baz=76,slow=5.3,SNR=2.0								
ARCES	**ARCESS Array B**	**100.66**	**339**			**Pdif**	**21 19 20.5**	**+0.9**	
D24K	**Happy Valley**	**100.68**	**21**	P		**Pdif**	**21 19 21.1**	**+1.5**	
	baz=269								
SML	**Sawmill**	**100.69**	**29**	P		**Pdif**	**21 19 21.1**	**+1.1**	
	baz=268,SNR=7.1								
C24K	**Franklin Bluff**	**100.73**	**21**	P		**Pdif**	**21 19 21.2**	**+1.4**	
	baz=269								
E24K	**Your Creek**	**100.78**	**22**	P		**Pdif**	**21 19 21.6**	**+1.4**	
	baz=269								
M23K	**Glacier View**	**100.97**	**29**	P		**Pdif**	**21 19 22.4**	**+1.2**	
	baz=268,SNR=5.1								
WAT6	**Susitna Watana**	**100.99**	**28**	P		**Pdif**	**21 19 22.3**	**+1.0**	
	baz=269,SNR=9.9								
H24K	**Noodor Dome**	**100.99**	**25**	P		**Pdif**	**21 19 22.4**	**+1.2**	
	baz=269								
F24K	**Squaw Lake**	**101.00**	**23**	P		**Pdif**	**21 19 22.6**	**+1.4**	
	baz=270								
P23K	**Montague Islan**	**101.08**	**31**	P		**Pdif**	**21 19 22.9**	**+1.3**	
	baz=268								
G24K	**Hadweenzic Riv**	**101.16**	**24**	P		**Pdif**	**21 19 23.1**	**+1.3**	
	baz=270								
DHY	**Denali Highway**	**101.16**	**28**	P		**Pdif**	**21 19 23.1**	**+1.0**	
	baz=269								
SCM	**Sheep Creek Mo**	**101.16**	**29**	P		**Pdif**	**21 19 23.2**	**+1.2**	
	baz=269								
POKR	**Poker Plat Res**	**101.17**	**25**	P		**Pdif**	**21 19 23.1**	**+1.2**	
	baz=269								
GLI	**Glacier Island**	**101.26**	**30**	P		**Pdif**	**21 19 23.6**	**+1.2**	
	baz=269								
HDA	**Harding Lake**	**101.37**	**26**	P		**Pdif**	**21 19 24.1**	**+1.3**	
	baz=270								
ILAR	**Eielson Array**	**101.40**	**26**	P		**Pdif**	**21 19 22.3**	**-0.6**	
	comp=Z,0.5nm,0.6s,baz=259,slow=1.8,SNR=7.8								
ILAR				PP		**PP**	**21 23 30.1**	**-2.5**	
	comp=Z,1.9nm,1.1s,baz=273,slow=8.3,SNR=7.5								
ILAR	**Eielson Array**	**101.40**	**26**			**Pdif**	**21 19 22.0**	**-1.0**	
D25K	**Kavik River**	**101.55**	**21**	P		**Pdif**	**21 19 25.0**	**+1.4**	
	baz=271								
M24K	**Tolsona, Glenn**	**101.71**	**29**	P		**Pdif**	**21 19 25.8**	**+1.3**	
	baz=270								
KLU	**Klutina**	**101.83**	**29**	P		**Pdif**	**21 19 26.3**	**+1.3**	
	baz=270								
F25K	**Christian River**	**101.87**	**23**	P		**Pdif**	**21 19 26.6**	**+1.6**	
	baz=272								
E25K	**Arctic Village**	**101.88**	**22**	P		**Pdif**	**21 19 26.8**	**+1.8**	
	baz=272								
K24K	**Donnelly Dome**	**101.88**	**27**	P		**Pdif**	**21 19 26.7**	**+1.5**	
	baz=271								
EYAK	**Cordova Ski Ar**	**101.92**	**30**	P		**Pdif**	**21 19 26.8**	**+1.5**	
	baz=270								
PRP	**Porcupine Dome**	**101.97**	**25**	P		**Pdif**	**21 19 27.1**	**+1.5**	
	baz=271								
PAX	**Paxson**	**102.03**	**28**	P		**Pdif**	**21 19 27.3**	**+1.4**	
	baz=271,SNR=5.7								
C26K	**Camden Bay**	**102.04**	**21**	P		**Pdif**	**21 19 27.5**	**+1.9**	
	baz=273								
J25K	**Salcha River,**	**102.05**	**26**	P		**Pdif**	**21 19 27.0**	**+1.1**	
	baz=271								
RIDG	**Independent Ri**	**102.30**	**27**	P		**Pdif**	**21 19 28.1**	**+1.1**	
	baz=272								
F26K	**Sheenjek River**	**102.43**	**23**	P		**Pdif**	**21 19 29.2**	**+1.7**	
	baz=273								
N25K	**Chitina, Valde**	**102.46**	**29**	P		**Pdif**	**21 19 29.5**	**+1.6**	
	baz=271								
BMRM	**Bremner River**	**102.47**	**30**	P		**Pdif**	**21 19 29.4**	**+1.5**	
	baz=271								
C27K	**Jago River**	**102.48**	**21**	P		**Pdif**	**21 19 29.5**	**+1.9**	
	baz=274								
SPITS	**Spitsbergen Ar**	**102.57**	**348**	P		**Pdif**	**21 19 28.0**	**+0.1**	
	comp=Z,3.2nm,0.8s,baz=76,slow=6.1,SNR=6.4								
G26K	**Porcupine Rive**	**102.61**	**24**	P		**Pdif**	**21 19 30.1**	**+1.9**	
	baz=273								
SCRK	**Sand Creek**	**102.67**	**27**	P		**Pdif**	**21 19 30.3**	**+1.5**	
	baz=272								
I26K	**Coal Creek Min**	**102.96**	**25**	P		**Pdif**	**21 19 31.7**	**+1.8**	
	baz=273								
L26K	**Log Cabin Wild**	**103.00**	**28**	P		**Pdif**	**21 19 31.8**	**+1.6**	
	baz=273								
M26K	**Nabesna, AK**	**103.19**	**28**	P		**Pdif**	**21 19 32.5**	**+1.4**	
	baz=273								
CRQE	**Cirque**	**103.22**	**30**	P		**Pdif**	**21 19 32.8**	**+1.5**	
	baz=272								
MCARA	**McCarthy VSAT**	**103.23**	**29**	P		**Pdif**	**21 19 32.8**	**+1.7**	
	baz=273								
E27K	**Coleen River**	**103.36**	**22**	P		**Pdif**	**21 19 33.5**	**+1.8**	
	baz=276								
G27K	**Doyon Strip**	**103.46**	**24**	P		**Pdif**	**21 19 34.0**	**+1.8**	
	baz=275								
D27M	**Malcolm River**	**103.48**	**21**	P		**Pdif**	**21 19 34.1**	**+1.9**	
	baz=276								
H27K	**Steamboat Moun**	**103.57**	**24**	P		**Pdif**	**21 19 34.2**	**+1.6**	
	baz=275								
I27K	**Kandik River**	**103.58**	**25**	P		**Pdif**	**21 19 34.6**	**+1.9**	
	baz=275,SNR=13								
L27K	**Beaver Creek,**	**103.69**	**28**	P		**Pdif**	**21 19 34.9**	**+1.7**	
	baz=274								
M27K	**Edge Creek, AK**	**103.71**	**28**	P		**Pdif**	**21 19 35.1**	**+1.6**	
	baz=274								
MESA	**MESA**	**103.81**	**30**	P		**Pdif**	**21 19 35.0**	**+0.9**	
	baz=273								
CTG	**Chitna Glacier**	**104.06**	**30**	P		**Pdif**	**21 19 36.5**	**+1.4**	
	baz=274								
E28M	**Babbage River**	**104.07**	**22**	P		**Pdif**	**21 19 36.6**	**+1.8**	
	baz=278								
F28M	**Old Crow**	**104.07**	**23**	P		**Pdif**	**21 19 36.7**	**+1.9**	
	baz=277								
BVCY	**Beaver Creek**	**104.18**	**28**	P		**Pdif**	**21 19 37.1**	**+1.7**	
	baz=275								
D28M	**Stokes Point**	**104.25**	**21**	P		**Pdif**	**21 19 37.6**	**+2.1**	
	baz=278								
I28M	**Miner Creek**	**104.30**	**25**	P		**Pdif**	**21 19 37.8**	**+1.9**	
	baz=276								
YUK3	**Moose Creek**	**104.42**	**29**	P		**Pdif**	**21 19 38.2**	**+1.5**	
	baz=275								
O28M	**Mount Upton**	**104.64**	**30**	P		**Pdif**	**21 19 39.3**	**+1.4**	
	baz=275								
DAWY	**Dawson**	**104.68**	**26**	P		**Pdif**	**21 19 39.4**	**+1.7**	
	baz=276								
E29M	**Blow River**	**104.70**	**22**	P		**Pdif**	**21 19 39.1**	**+1.6**	
	baz=279								
YUK8	**Steele Glacier**	**104.80**	**29**	P		**Pdif**	**21 19 39.8**	**+1.3**	
	baz=275								
H29M	**Whitestone**	**104.84**	**24**	P		**Pdif**	**21 19 39.8**	**+1.5**	
	baz=278								
G29M	**Pine Creek**	**104.88**	**23**	P		**Pdif**	**21 19 40.2**	**+1.9**	
	baz=280								
I29M	**Ogilvie Camp,**	**104.98**	**25**	P		**PKiKP**	**21 23 55.6**	**+2.0**	
	baz=278								
MODS	**Modra-Piesok**	**105.03**	**317**	*i* P		**Pdif**	**21 19 42.5**	**+3.0**	
MODS	**Modra-Piesok**	**105.03**	**317**	*e*PDIFF		**Pdif**	**21 19 42.5**	**+3.0**	
J29N	**Klondike Camp**	**105.14**	**26**	P		**PKiKP**	**21 23 55.4**	**+1.4**	
	baz=278								
M29M	**Somme Creek**	**105.29**	**28**	P		**PKiKP**	**21 23 56.0**	**+1.7**	
	baz=277								
YUK4	**Talbot Arm**	**105.33**	**29**	P		**PKiKP**	**21 23 55.8**	**+1.3**	
	baz=276								
L29M	**L29M**	**105.36**	**27**	P		**PKiKP**	**21 23 56.3**	**+2.0**	
	baz=277								
O29M	**Mount Kennedy**	**105.48**	**30**	P		**PKiKP**	**21 23 56.0**	**+1.3**	
	baz=276								
YUK6	**Outpost Mounta**	**105.51**	**30**	P		**PKiKP**	**21 23 55.7**	**+0.8**	
	baz=277								
K29M	**Barlow Dome**	**105.53**	**26**	P		**PKiKP**	**21 23 56.1**	**+1.4**	
	baz=278								
G30M	**tAoh Zraii Nji**	**105.56**	**23**	P		**PKiKP**	**21 23 55.8**	**+1.2**	
	baz=280								
F30M	**Barrier River**	**105.62**	**22**	P		**PKiKP**	**21 23 56.2**	**+1.5**	
	baz=281								
J30M	**Hart River**	**105.93**	**26**	P		**PKiKP**	**21 23 56.7**	**+1.2**	
	baz=279								
HYT	**Haines Junctio**	**105.94**	**30**	P		**PKiKP**	**21 23 56.5**	**+0.9**	
	baz=277								
N30M	**Aishikik Lake**	**106.06**	**29**	P		**PKiKP**	**21 23 57.0**	**+1.3**	
	baz=278								
P30M	**Million Dollar**	**106.30**	**30**	P		**PKiKP**	**21 23 57.3**	**+1.2**	
	baz=278								
INK	**Inuvik**	**106.31**	**22**	P		**PKiKP**	**21 23 57.2**	**+1.4**	
	baz=283								
F31M	**Tsiigehtchic**	**106.42**	**22**	P		**PKiKP**	**21 23 57.4**	**+1.3**	
	baz=283								
H31M	**Peel River**	**106.53**	**24**	P		**PKiKP**	**21 23 57.6**	**+1.2**	
	baz=282								
O30N	**Mendenhall**	**106.64**	**30**	P		**PKiKP**	**21 23 58.1**	**+1.3**	
	baz=278								
S31K	**Pelican**	**106.96**	**32**	P		**PKiKP**	**21 23 58.8**	**+1.4**	
	baz=278								
M31M	**Drury Creek, Y**	**107.21**	**28**	P		**PKiKP**	**21 23 58.7**	**+0.9**	
	baz=280								
SKAG	**Skagway**	**107.21**	**31**	P		**PKiKP**	**21 23 58.7**	**+0.9**	
	baz=279								
WHY	**Whitehorse**	**107.24**	**30**	P		**PKiKP**	**21 23 58.7**	**+0.7**	
	baz=280								
SIT	**Sitka**	**107.57**	**33**	P		**PKiKP**	**21 23 59.3**	**+0.8**	
	baz=278								
CLL	**Collm**	**107.63**	**321**	*e*PPS		PPS	21 34 42.0		
CLL	**Collm**	**107.63**	**321**	*e*PS		PS	21 33 36.0	-5.9	
R32K	**Eaglecrest**	**107.82**	**32**	P		**PKiKP**	**21 24 00.1**	**+1.2**	
	baz=279								
A36M	**Sachs Harbour**	**107.88**	**17**	P		**PKiKP**	**21 24 00.3**	**+1.6**	
	baz=292								
S32K	**Killisnoo**	**107.91**	**33**	P		**PKiKP**	**21 23 60.0**	**+0.9**	
	baz=279								
P32M	**Atlin**	**108.00**	**31**	P		**PKiKP**	**21 24 00.1**	**+0.8**	
	baz=280								
MMPY	**Sheldon Lake,**	**108.54**	**27**	P		**PKiKP**	**21 24 01.2**	**+0.9**	
	baz=284								
Q32M	**Nakina River**	**108.85**	**31**	P		**PKiKP**	**21 24 01.8**	**+0.6**	
	baz=281								
U33K	**Whale Pass**	**108.92**	**34**	P		**PKiKP**	**21 24 01.8**	**+0.8**	
	baz=280								
CRAG	**Craig**	**109.03**	**35**	P		**PKiKP**	**21 24 02.2**	**+0.9**	
	baz=279								
S34M	**Telegraph Cree**	**109.65**	**32**	P		**PKiKP**	**21 24 03.5**	**+1.1**	
	baz=282								
V35K	**Ketchikan**	**109.90**	**35**	P		**PKiKP**	**21 24 03.9**	**+1.0**	
	baz=281								
DLBC	**Dease Lake**	**110.11**	**31**	P		**PKiKP**	**21 24 04.2**	**+0.8**	
	baz=283								
T35M	**Bob Quinn**	**110.31**	**33**	P		**PKiKP**	**21 24 04.5**	**+0.8**	
	baz=282								
KEST	**Kesra**	**111.38**	**304**	PP		**PP**	**21 24 47.1**	**0.0**	
	comp=Z,9.9nm,1.1s,baz=86,slow=14,SNR=4.2								
KOTAN	**Kotaneelee Air**	**112.58**	**29**	P		**PKiKP**	**21 24 08.9**	**+1.0**	
	baz=289								
YKA	**Yellowknife Ar**	**115.75**	**24**	PKP		**PKPdf**	**21 24 15.0**	**+1.1**	
	comp=Z,1.5nm,0.6s,baz=309,slow=2.7,SNR=17								
YKA	**Yellowknife Ar**	**115.75**	**24**			**PKiKP**	**21 24 13.8**	**-0.1**	
YKA	**Yellowknife Ar**	**115.75**	**24**	PKIKP		**PKPdf**	**21 24 15.0**	**+1.1**	
YKAW1	**Yellowknife Wh**	**115.81**	**24**			**PKPdf**	**21 24 14.7**	**+0.6**	
TORD	**Torodi Ar. Bea**	**118.03**	**279**	PKP		**PKiKP**	**21 24 21.3**	**+1.6**	
	comp=Z,1.4nm,0.7s,baz=117,slow=2.0,SNR=8.5								
TORD	**Torodi Ar. Bea**	**118.03**	**279**			**PKiKP**	**21 24 20.4**	**+0.7**	
ESDC	**Sonseca Array**	**121.30**	**310**	PKP		**PKiKP**	**21 24 26.9**	**+1.4**	
	comp=Z,0.2nm,0.5s,baz=40,slow=2.3,SNR=1.3								
PLID	**Pearl Lake**	**122.23**	**43**			**PKiKP**	**21 24 28.7**	**+1.3**	
NVAR	**Mina Array Bea**	**122.44**	**51**	PKP		**PKiKP**	**21 24 30.6**	**+2.6**	
	comp=Z,3.2nm,0.7s,baz=284,slow=2.7,SNR=14								
NVAR	**Mina Array Bea**	**122.44**	**51**			**PKiKP**	**21 24 31.0**	**+3.0**	
DBIC	**Dimbokro**	**123.73**	**271**	PKP		**PKiKP**	**21 24 32.9**	**+2.0**	
	comp=Z,3.9nm,0.7s,baz=97,slow=5.4,SNR=4.9								
LRM	**Limekiln Ridge**	**124.30**	**41**			**PKiKP**	**21 24 33.1**	**+1.6**	
FFC	**Flin Flon**	**125.56**	**27**			**PKiKP**	**21 24 33.4**	**0.0**	
FFC	**Flin Flon**	**125.56**	**27**	PKIKP		**PKiKP**	**21 24 33.4**	**0.0**	
PDAR	**Pinedale Array**	**127.41**	**43**	PKP		**PKiKP**	**21 24 37.7**	**-0.1**	
	comp=Z,2.0nm,0.9s,baz=297,slow=3.3,SNR=12								
PDAR	**Pinedale Array**	**127.41**	**43**			**PKiKP**	**21 24 39.1**	**+1.3**	
PLCA	**Paso Flores**	**128.46**	**171**	PKP		**PKiKP**	**21 24 42.1**	**+2.3**	
	comp=Z,5.7nm,1.2s,baz=162,slow=1.5,SNR=5.0								
RSSD	**Black Hills**	**130.41**	**40**			**PKiKP**	**21 24 43.4**	**-0.3**	
RSSD	**Black Hills**	**130.41**	**40**	PKIKP		**PKiKP**	**21 24 43.4**	**-0.3**	
ULM	**Lac du Bonnet**	**131.31**	**29**	PKP		**PKiKP**	**21 24 45.5**	**+0.5**	
	comp=Z,2.9nm,0.9s,baz=312,slow=2.8,SNR=5.4								
ULM				SKPbc		**SKPab**	**21 28 07.5**	**+0.2**	
	comp=Z,3.3nm,0.8s,baz=302,slow=5.3,SNR=6.2								
ANMO	**Albuquerque**	**132.55**	**52**			**PKPdf**	**21 24 46.3**	**-0.9**	
ANMO	**Albuquerque**	**132.55**	**52**	PKIKP		**PKPdf**	**21 24 46.3**	**-0.9**	
EPLO	**Experimental L**	**132.71**	**28**			**PKPdf**	**21 24 45.5**	**-1.3**	
SCHQ	**Schefferville**	**135.51**	**4**	PKP		**PKiKP**	**21 24 53.2**	**-0.3**	
	comp=Z,2.3nm,0.8s,baz=356,slow=5.4,SNR=2.3								
SCHQ	**Schefferville**	**135.51**	**4**			**PKPdf**	**21 24 52.7**	**+0.8**	
TXAR	**Lajitas Array**	**136.56**	**58**	PKP		**PKPdf**	**21 24 53.9**	**-0.9**	
	comp=Z,1.3nm,0.9s,baz=287,slow=4.2,SNR=3.9								
TXAR				SKPbc		**SKPbc**	**21 28 26.9**	**+1.8**	
	comp=Z,0.7nm,0.8s,baz=292,slow=4.3,SNR=4.1								
TXAR	**Lajitas Array**	**136.56**	**58**			**PKPdf**	**21 24 54.1**	**-0.6**	
TXAR	**Lajitas Array**	**136.56**	**58**	PKIKP		**PKPdf**	**21 24 54.1**	**-0.6**	
CCM	**Cathedral Cave**	**141.79**	**39**			PKPpre	21 25 00.1		
CCM	**Cathedral Cave**	**141.79**	**39**	PKIKP		**PKPdf**	**21 25 00.1**	**-3.8**	
MIAR	**Mount Ida**	**142.27**	**45**			**PKPdf**	**21 25 02.3**	**-2.5**	
MIAR	**Mount Ida**	**142.27**	**45**	PKIKP		**PKPdf**	**21 25 02.3**	**-2.5**	
HKT	**Hockley**	**142.74**	**54**			**PKPdf**	**21 25 04.6**	**-1.1**	
HKT	**Hockley**	**142.74**	**54**	PKIKP		**PKPdf**	**21 25 04.6**	**-1.1**	
CPUP	**Villa Florida**	**143.23**	**187**	PKP		**PKPdf**	**21 25 07.1**	**+0.3**	
	comp=Z,1.1nm,0.4s,baz=152,slow=4.8,SNR=4.4								
J57A	**Williamstown**	**144.85**	**18**			PKPbc	21 25 08.5	+0.3	
GUA01	**Guaratinga, BA**	**145.53**	**219**	*e*P		**PKPdf**	**21 25 10.7**	**-0.3**	
TRCB	**Terra Rica**	**145.82**	**195**	*e*P		**PKPdf**	**21 25 11.3**	**-0.1**	
HRV	**Adam Dziewonsk**	**146.89**	**13**	PKPdf		**PKPdf**	**21 25 13.5**	**+0.9**	
HRV	**Adam Dziewonsk**	**146.89**	**13**	PKP2		**PKPdf**	**21 25 13.5**	**+0.9**	
LRAL	**Lakeview Retre**	**147.62**	**42**	PKPdf		**PKPdf**	**21 25 12.8**	**-1.3**	
PAL	**Palisades**	**147.68**	**17**	PKPdf		**PKPdf**	**21 25 13.4**	**-0.5**	
PAL	**Palisades**	**147.68**	**17**	PKIKP		**PKPdf**	**21 25 13.4**	**-0.5**	
R55A	**Marlinton**	**147.70**	**28**	PKPbc		**PKPbc**	**21 25 17.1**	**+0.1**	
GO01	**Chusmiza**	**149.21**	**166**			**PKiKP**	**21 25 24.6**	**+1.4**	
BDFB	**Brasilia**	**150.78**	**208**	PKPbc		**PKiKP**	**21 25 28.2**	**+2.2**	
	comp=Z,9.7nm,0.8s,baz=135,slow=3.0,SNR=3.5								
BDFB	**Brasilia**	**150.78**	**208**	PKPdf		**PKPdf**	**21 25 18.4**	**-1.4**	
BDFB	**Brasilia**	**150.78**	**208**	PKIKP		**PKPdf**	**21 25 18.4**	**-1.4**	
LPAZ	**La Paz**	**152.71**	**166**	PKP		**PKPdf**	**21 25 26.3**	**+3.0**	
	comp=Z,2.0nm,1.0s,baz=164,slow=3.7,SNR=6.5				

AGG	Agios Georgios	1.92	280	P		Pn	21 30 31.5	+0.9
PLG	Polygyros	1.95	329	P		Pn	21 30 31.8	+0.9
BUHA	Balikesir, Bur	1.97	66	P		Pg	21 30 37.3	+0.8
BUHA				S		Sg	21 31 00.8	-1.3
BUHA				IAML			21 31 11.0	
	comp=N,43nm,1.5s							
CAMT	Merkez	2.00	88	P		Pg	21 30 37.7	+0.7
CAMT				S		Sb	21 30 59.9	+0.9
CAMT				IAML			21 31 11.0	
	comp=E,46nm,0.7s							
CAMT				IAML			21 31 15.0	
	comp=N,54nm,0.7s							
GUR	Goura	2.05	249	P		Pn	21 30 33.1	+0.7
MAKR	Makrakomi, Fth	2.08	279	P		Pn	21 30 34.2	+1.6
SERG	Sergoula	2.14	263	P		Pn	21 30 34.3	+0.8
KLV	Kalavryta, Ach	2.16	253	P		Pn	21 30 34.3	+0.5
ANX	Ano Chora	2.23	268	P		Pn	21 30 35.9	+1.1
EFP	Efpalio	2.25	264	P		Pn	21 30 36.2	+1.1
THL	Klokotos Trika	2.30	293	P		Pn	21 30 37.0	+1.3
VLX	Vlachokerasia	2.31	235	P		Pn	21 30 36.8	+0.9
STEP	BALIKESIR_Sava	2.40	73	P		Pg	21 30 44.8	+0.1
STEP				S		Sb	21 31 10.8	+0.2
IZMR	zmir-demi	2.57	102	P		Pg	21 30 49.0	+1.0
IZMR				S		Sg	21 31 19.1	-2.2
KTTT	Salihli	2.61	89	P		Pb	21 30 45.7	+0.8

AFAD ***15*** *21:36:25.5,37.89N×26.84E,h7km±3km,ML2.8*
ISK ***15*** *21:36:25.7,37.89N×26.85E,h10km,ML2.8/24*
THE ***15*** *21:36:26.1,38.1°×2.7E±.1°,h5km±3km,M2.7/6,MLh2.7/6*
ISC 15 21:36:25.9±0.8,**37.89N**±0.02×**26.84E**±0.03,**h14**km±6km,
n63,σ0°66/96,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGB	zmir	0.17	13	P	Pg	21 36 29.6	-0.2
DGB				S	Sg	21 36 31.8	-0.8
DGB				IAML		21 36 33.0	
	comp=E,2μm,0.2s						
SMG	Samos	0.18	180	P	Pg	21 36 29.7	-0.4
SMG				S	Sg	21 36 32.8	-0.2
GMLD	Gumuldur	0.20	19	Pg	Pg	21 36 30.3	-0.1
GMLD				Sg	Sg	21 36 33.7	+0.3
KUSD	Kusadasi-Aydin	0.36	94	Pg	Pg	21 36 33.2	+0.1
KUSD				Sg	Sg	21 36 38.3	+0.2
GCAM	G?zelcaml?	0.37	121	Pg	Pg	21 36 33.4	+0.1
GCAM				Sg	Sg	21 36 38.9	+0.6
GCAM	G?zelcaml?	0.37	121	P	Pg	21 36 33.1	-0.2
GCAM				S	Sg	21 36 38.5	+0.2
GCAM				IAML		21 36 39.0	
	comp=N,941nm,0.7s						
GCAM				IAML		21 36 39.0	
	comp=E,1μm,0.4s						
ZEYE	Izmir, Urla-Ze	0.44	323	P	Pg	21 36 34.1	-0.5
ZEYE				S	Sg	21 36 40.1	-0.4
ZEYE				IAML		21 36 41.0	
	comp=N,2μm,0.3s						
ZEYE				IAML		21 36 41.0	
	comp=E,700nm,0.4s						
BLCB	Balcova	0.52	18	P	Pg	21 36 36.2	+0.1
BLCB				S	Sg	21 36 43.6	+0.4
BLCB	Balcova	0.52	18	Pg	Pg	21 36 36.3	+0.1
BLCB				Sg	Sb	21 36 44.1	-0.2
DDIM	Aydin, Didim	0.54	143	P	Pg	21 36 36.5	0.0
DDIM				S	Sg	21 36 44.1	+0.4
DDIM				IAML		21 36 45.0	
	comp=N,874nm,0.5s						
DDIM				IAML		21 36 45.0	
	comp=E,818nm,0.4s						
DUVT	Torbali	0.59	56	P	Pg	21 36 37.0	-0.3
DUVT				S	Sg	21 36 44.3	-0.9
DUVT				IAML		21 36 48.0	
	comp=E,752nm,0.2s						
DIDI	Didim-Aydin	0.60	148	Pg	Pg	21 36 37.6	-0.1
CESE	eme	0.61	316	Pg	Pb	21 36 38.2	-0.2
KRBN	Karaburun	0.74	343	Pg	Pb	21 36 40.6	+0.1
BAGT	Foa	0.77	1	P	Pg	21 36 40.3	-0.4
BAGT				S	Sb	21 36 52.2	+0.9
BAGT				IAML		21 36 56.0	
	comp=E,382nm,0.4s						
BAGT				IAML		21 36 58.0	
	comp=N,300nm,0.6s						
FOCM	Foa	0.83	354	Pg	Pb	21 36 42.1	0.0
YKAV	Yalikavak-Bodr	0.84	155	Pg	Pg	21 36 42.2	0.0
KARB	zmir-Karabur	0.84	337	P	Pg	21 36 41.3	-0.9
KARB				S	Sb	21 36 53.8	+0.3
KARB				IAML		21 36 56.0	
	comp=N,496nm,0.4s						
KARB				IAML		21 36 57.0	
	comp=E,384nm,0.4s						
AYDN	Tasoluk	0.86	105	P	Pg	21 36 42.3	-0.2
AYDN				S	Sg	21 36 52.9	-0.9
BODT	Bodrum	0.91	155	P	Pb	21 36 43.7	+0.2
BODT				S	Sb	21 36 57.0	+1.6
BODT	Bodrum	0.91	155	Pg	Pg	21 36 43.3	-0.1
IZMR	zmir-demi	0.92	74	P	Pg	21 36 43.3	-0.3
IZMR				S	Sg	21 36 53.8	-1.8
CAMT	Merkez	0.94	23	P	Pb	21 36 44.5	+0.5
CAMT				S	Sb	21 36 56.7	+0.5
CAMT				IAML		21 37 01.0	
	comp=N,544nm,0.5s						
MLSB	Milas	0.95	128	Pg	Pg	21 36 44.2	-0.1
ODEM	Odemis-Izmir	1.05	68	Pg	Pg	21 36 45.9	-0.3
ZEDA	zmir-Bergama	1.09	10	P	Pg	21 36 46.6	-0.4
ZEDA				S	Sb	21 37 01.8	+1.1
IZMD	zmir-Dikili-	1.10	4	P	Pg	21 36 46.1	-0.9
IZMD				S	Sg	21 37 01.0	-0.3
NAZL	Nazilli-Aydin	1.15	86	Pn	Pg	21 36 47.5	-0.6
GOMA	Golmarmara-Man	1.18	46	Pn	Pg	21 36 48.3	-0.3
DKL	Dikili	1.18	3	Pn	Pn	21 36 48.9	+0.9
ESEN	Aydn-Nazilli	1.20	94	P	Pg	21 36 48.3	-0.7
ESEN				S	Sg	21 37 03.8	-0.9
AKHS	Akhisar	1.25	38	P	Pg	21 36 50.0	0.0
AKHS				S	Sb	21 37 05.5	+0.2
AKHS				IAML		21 37 09.0	
	comp=E,227nm,0.5s						
KTTT	Salihli	1.27	51	P	Pn	21 36 49.7	+0.4
KTTT				S	Sb	21 37 05.8	-0.1
KTTT				IAML		21 37 09.0	
	comp=N,183nm,0.6s						
KIRA	zmir-Kiraz	1.27	76	P	Pn	21 36 49.6	+0.2
KIRA				S	Sg	21 37 05.2	-1.8
DAT	Datca	1.30	153	Pn	Pb	21 36 50.5	+0.3
YAZI	Mula-Dat§a-	1.30	158	P	Pn	21 36 48.7	-1.0
YAZI				S	Sb	21 37 05.9	-0.9
DATC	Datca-Mugla	1.31	150	Pn	Pb	21 36 50.4	+0.2
MULA	Mugla, Merkez-	1.34	118	P	Pn	21 36 51.0	+0.7
MULA				S	Sb	21 37 06.3	-1.6
YER	Yerkesik	1.38	123	P	Pn	21 36 50.9	+0.1
YER				S	Sg	21 37 10.5	+0.3
YER	Yerkesik	1.38	123	Pn	Pn	21 36 51.1	+0.3
SOMA	Soma-Manisa	1.38	23	Pn	Pb	21 36 51.9	+0.4
AYVA	Ayvalik	1.42	355	P	Pg	21 36 53.0	-0.3
AYVA				IAML		21 37 16.0	
	comp=N,127nm,0.6s						
AYVA				IAML		21 37 17.0	
	comp=E,90nm,0.5s						
PRK	Paraskevi	1.43	342	P	Pn	21 36 51.9	+0.5
PRK				S	Sg	21 37 12.1	+0.3
GORD	Gordes-Manisa	1.47	46	Pn	Pn	21 36 52.7	+0.7
MANT	Manisa	1.48	66	P	Pg	21 36 54.1	-0.3
MANT				S	Sn	21 37 10.7	-1.1
MANT				IAML		21 37 15.0	
	comp=N,91nm,0.6s						
MANT				IAML		21 37 16.0	
	comp=E,120nm,0.4s						
SIGR	SIGRI	1.53	330	P	Pn	21 36 53.4	+0.6
SIGR	SIGRI	1.53	330	Pn	Pb	21 36 54.1	+0.1
SULTU	Buldan	1.54	83	P	Pn	21 36 52.3	-0.7
KULA	Kula-Manisa	1.57	66	Pn	Pn	21 36 53.6	+0.2
TURN	Turunc	1.58	134	Pn	Pn	21 36 53.4	-0.1
TURN	Turunc	1.58	134	P	Pn	21 36 53.5	-0.1
TURN				S	Sn	21 37 13.5	-0.2
BUHA	Balikesir, Bur	1.62	7	P	Pn	21 36 53.9	-0.2
BUHA				S	Sn	21 37 15.8	+1.0
BUHA				IAML		21 37 22.0	
	comp=E,131nm,0.4s						
BUHA				IAML		21 37 23.0	
	comp=N,89nm,0.3s						
STEP	BALIKESIR_Sava	1.64	25	P	Pg	21 36 56.8	-0.6
STEP				S	Sn	21 37 16.5	+1.2
STEP				IAML		21 37 21.0	
	comp=N,144nm,0.5s						
KOCA	Canakkale, Ayv	1.70	341	P	Pn	21 36 55.8	+0.6
KOCA				S	Sn	21 37 15.5	-1.3
KOCA				IAML		21 37 25.0	
	comp=E,90nm,0.5s						
KOCA				IAML		21 37 40.0	
	comp=N,115nm,2.3s						
TAVA	DENIZLI_Tavas	1.70	104	P	Pn	21 36 56.0	+0.7
DNIZ	Denizli-Tavas-	1.77	98	P	Pn	21 36 56.9	+0.8
DNIZ				IAML		21 37 31.0	
	comp=E,81nm,0.3s						
DNZT	Denizli-Tavas-	1.84	109	P	Pn	21 36 58.6	+1.4
DNZT				S	Sb	21 37 23.5	+1.1
BAYC	CANAKKALE_Bayr	1.86	353	P	Pn	21 36 56.8	-0.6
BAYC				IAML		21 37 29.0	
	comp=E,71nm,0.4s						
DEMI	Demirci	1.87	51	P	Pg	21 37 01.4	-0.5
USAK	Uak-Merkez	1.90	64	P	Pg	21 37 01.6	-0.8
BALB	Balikesir	1.93	25	Pn	Pn	21 36 59.2	+0.9
BALY	Balya	1.95	18	P	Pb	21 37 01.5	+0.3
BALY				IAML		21 37 30.0	
	comp=E,109nm,0.4s						
BALY				IAML		21 37 34.0	
	comp=N,131nm,0.4s						
BKES	Balkesir-Mer	2.03	25	P	Pb	21 37 03.1	+0.5
BKES				IAML		21 37 41.0	
	comp=E,55nm,0.8s						

TAP ***15*** *21:51:58.1,24.70N×122.33E,h14km,ML2.6,C*
JMA ***15*** *21:51:58.5±0.1,24.6N±0.9×122.4E±0.3,h16km,MV2.4/7,*
TAIWAN REGION
ISC 15 21:51:57.9±1.1,**24.68N**±0.03×**122.38E**±0.02,**h7**km±10km,
n53,σ9s3/81,2C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS2	EOS2	0.29	208	*i* P	Pb	21 52 05.0	-0.4
EOS2				*i* S	Sb	21 52 10.6	+0.2
EOS3	EOS3	0.39	188	*i* P	Pb	21 52 06.8	-0.3
EOS3				*i* S	Sb	21 52 14.0	+0.7
EGS		0.44	292	*i* P	Pg	21 52 06.4	0.0
EGS				S	Sg	21 52 13.5	+1.2
TWB1	Santiao Chiao	0.49	313	↑*i* P	Pg	21 52 07.0	-0.3
TWB1				*i* S	Sg	21 52 12.6	-1.1
TWC	Suao	0.49	262	*i* P	Pg	21 52 06.8	-0.6
TWC				*i* S	Sg	21 52 13.8	0.0
EOS4	EOS4	0.56	186	*eP*	Pb	21 52 10.0	+0.2
EOS4				*eS*	Sb	21 52 18.6	+0.8
JYNG	Yonagunijimaku	0.56	114	P	Pg	21 52 09.0	+0.2
TIPB	Shuangxi	0.58	300	*i* P	Pg	21 52 09.2	0.0
EWUT	Wuta	0.59	247	*eP*	Pg	21 52 09.9	+0.5
NDS	Dongshan	0.61	266	*eP*	Pg	21 52 09.5	-0.1
NDS				S	Sb	21 52 18.7	-0.9
YOJ	Yonaguni jima	0.61	110	⇑P	Pg	21 52 10.0	+0.2
YOJ	Yonaguni jima	0.61	110	P	Pg	21 52 09.9	+0.2
YOJ				*eS*	Sg	21 52 17.9	+0.1
SXI1	Grass Mountain	0.62	312	*eP*	Pg	21 52 09.9	0.0
SXI1				S	Sg	21 52 19.1	+1.2
TWE	Neicheng	0.65	274	*i* P	Pg	21 52 09.8	-0.7
TWE				S	Sg	21 52 18.8	-0.1
NWF	Wu-fen Shan	0.67	306	*i* P	Pg	21 52 11.6	+0.7
NWF				*eS*	Sb	21 52 21.5	-0.1
WFSB	Wu-fen Shan	0.67	306	*i* P	Pb	21 52 11.7	-0.3
WFSB				*eS*	Sb	21 52 21.2	-0.3
EAHA	Aohua	0.68	239	*eS*	Sg	21 52 19.7	-0.1
FUSB	Fushanzhiwuyua	0.73	277	P	Pg	21 52 11.7	-0.2
FUSB				*eS*	Sg	21 52 21.4	+0.1
ENTT	Nioudou	0.74	267	*i* P	Pg	21 52 12.1	-0.1
ENTT				*eS*	Sg	21 52 22.3	+0.4
TWA	Mucha	0.79	293	*eP*	Pb	21 52 13.6	-0.3
TWA				S	Sb	21 52 25.0	+0.2
LATG	Datong	0.79	260	*eP*	Pg	21 52 13.3	+0.1
LATG				*i* S	Sb	21 52 24.3	-0.7
NDT	Datong Townshi	0.79	265	*eP*	Pg	21 52 13.2	0.0
NDT				*eS*	Sg	21 52 23.7	+0.2
NWLT	Wulai	0.81	277	P	Pg	21 52 13.5	+0.1
NWLT				S	Sg	21 52 23.5	-0.3
NHY	Taipei	0.82	296	*eP*	Pb	21 52 15.3	+0.8
ETL	Fush Village	0.86	233	*eP*	Pg	21 52 14.3	-0.2
YM01	YM01	0.87	303	*eP*	Pg	21 52 14.8	+0.1
YM01				*eS*	Sg	21 52 26.5	+0.5
NACB	Ninganchiao	0.87	235	*eP*	Pg	21 52 14.1	-0.6
YM08	YM08	0.88	305	*eP*	Pg	21 52 14.6	-0.2
YM08				*i* S	Sg	21 52 26.1	-0.2
ZUZH	Zhuzihu	0.90	303	*eP*	Pg	21 52 14.1	-1.1
YHNB	Yeheng	0.91	270	*eP*	Pg	21 52 15.6	+0.1
TWY	Chenhua	0.93	310	P	Pg	21 52 15.7	0.0
TWY				S	Sg	21 52 27.4	-0.4
NSK	Sanguang	0.93	270	*i* P	Pg	21 52 15.7	-0.1
NSK				*i* S	Sg	21 52 27.5	-0.4
TWD	Chiawan	0.93	230	P	Pb	21 52 16.1	-0.3
NNSB	Datong	0.94	255	*eP*	Pg	21 52 15.8	-0.3
NNSB				*eS*	Sb	21 52 28.6	-0.8
ETLH	Xiulin Townshi	0.94	240	*eP*	Pg	21 52 16.0	-0.1
ETLH				S	Sb	21 52 30.1	+0.7
NNS	Nan Shan	0.95	256	*i* P	Pg	21 52 16.1	0.0
NNS				*i* S	Sg	21 52 28.0	-0.5
ETM	Tongmen	1.08	229	*eP*	Pn	21 52 19.7	+0.2
LXIB	Xiulin Townshi	1.10	234	*eP*	Pg	21 52 18.4	-0.6
KSHI	Guanxi Townshi	1.10	275	*eP*	Pb	21 52 19.5	+0.2
FUSS	Fushou	1.12	248	*i* P	Pb	21 52 19.6	-0.2
FUSS				S	Sn	21 52 35.1	-1.0
WHF	Hehuan Shan	1.15	243	P	Pg	21 52 19.7	-0.3
NFF	Wufeng Townshi	1.15	268	*eP*	Pg	21 52 20.0	0.0
SHUL	Shoufeng	1.16	220	*eP*	Pb	21 52 20.2	0.0
ESL	Shilin	1.22	225	P	Pg	21 52 20.5	-0.8
LIOB	Emei	1.24	269	*eP*	Pn	21 52 23.0	+1.2
NSTT	Nanjuang	1.26	268	P	Pg	21 52 23.3	+1.2
IRIF	Iriomote-Funau	1.27	105	*eP*	Pn	21 52 21.3	-0.8
IRIF				*eS*	Sb	21 52 38.5	-0.4
OWD	Renai	1.31	237	*eP*	Pg	21 52 23.3	+0.2
WARBT	Fenglin Townsh	1.32	224	*eP*	Pg	21 52 23.4	+0.2
WUSB	Renai	1.34	240	*eP*	Pg	21 52 23.6	-0.1
WUSB				*i* S	Sn	21 52 42.6	+1.3
WHP	Taichung City	1.37	253	*eP*	Pn	21 52 23.6	+0.1
VWDT	VWDT	1.46	231	*eP*	Pn	21 52 24.6	-0.1
HGSD	Ruisui	1.47	217	*eP*	Pn	21 52 24.8	-0.1

ISK ***15*** *21:52:59.1,38.75N×24.41E,h28km,ML3.4/19*
ATH ***15*** *21:53:00.5,38.68N×24.79E,h14km±1km,ML3.5/33,*
Latitude uncertainty: 0 km; Longitude uncertainty: 0 km
AFAD ***15*** *21:53:00.1,38.70N×24.61E,h8km±3km,ML3.3*
IDC ***15*** *21:53:00.7±1.2,38.87N×24.76E,h0km,mb3.5/7,*
mbtmp3.5/9,ML3.1/2,Error ellipse: s-maj=27.7km
s-min=20.4km az=176.0
THE ***15*** *21:53:01.6,38.7N±0.7×24.8E±0.9,h11km±1km,M3.4/51,*
MLh3.4/51
ISC 15 21:53:01.1±0.9,**38.71N**±0.02×**24.75E**±0.02,**h11**km±7km,
n203,σ1s08/240,mb3.4/6,10C-9D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKY	Skiros Island	0.23	317	P	Pb	21 53 06.8	-0.5
SKY				S	Sg	21 53 10.4	+1.2
SKY	Skiros Island	0.23	317	P	Pb	21 53 06.8	-0.5
SKY				S	Sg	21 53 10.5	+1.3
KYMI	Kymi, Euboea I	0.52	262	P	Pb	21 53 11.5	-0.6
KYMI				S	Sb	21 53 19.0	-0.7
KYMI	Kymi, Euboea I	0.52	262	P	Pb	21 53 11.4	-0.8
KYMI				S	Sb	21 53 18.6	-1.0
KARY	Karystos	0.72	200	P	Pg	21 53 14.5	-0.6
KARY				S	Sb	21 53 25.2	-0.3
KARY	Karystos	0.72	200	P	Pg	21 53 14.4	-0.6
KARY				S	Sg	21 53 23.7	-0.8
AOS	Alonnisos	0.82	304	P	Pn	21 53 17.6	-1.0
AOS				S	Sn	21 53 30.0	-0.7
AOS2	Alonissos-2	0.83	302	P	Pb	21 53 17.4	-0.1
AOS2				S	Sb	21 53 28.8	+0.1
DION	Dionisos Attik	0.90	226	P	Pb	21 53 18.0	-0.8
DION				S	Sn	21 53 31.3	-1.4
DION	Dionisos Attik	0.90	226	P	Pg	21 53 17.7	-0.8
DION				S	Sb	21 53 30.7	0.0
PTL	Penteli	0.96	227	P	Pn	21 53 19.6	-0.9
PTL				S	Sn	21 53 33.3	-0.9
PTL	Penteli	0.96	227	P	Pb	21 53 19.2	-0.6
PTL				S	Sb	21 53 31.9	-0.5
SIGR	SIGRI	1.00	59	P	Pn	21 53 20.6	-0.3
SIGR				S	Sn	21 53 34.8	-0.2
SIGR	SIGRI	1.00	59	Pn	Pn	21 53 20.7	-0.3
SIGR				Sn	Sn	21 53 35.9	+0.9
SIGR	SIGRI	1.00	59	P	Pn	21 53 20.6	-0.3
SIGR				S	Sg	21 53 32.3	-1.0
ATHU	Athens Univers	1.06	226	P	Pb	21 53 20.9	-0.6
ATHU	Athens Univers	1.06	226	P	Pg	21 53 20.6	-0.9
STFN	Stefani	1.09	241	P	Pn	21 53 21.8	-0.6
STFN				S	Sn	21 53 36.8	-0.6
STFN	Stefani	1.09	241	P	Pn	21 53 21.7	-0.6
STFN				S	Sb	21 53 35.8	-0.3
ATH	Athens Observa	1.10	228	P	Pn	21 53 21.8	-0.6
ATH				S	Sn	21 53 37.4	-0.1
ATH	Athens Observa	1.10	228	P	Pn	21 53 21.7	-0.6
VLY	Voula,Athens	1.14	222	P	Pb	21 53 22.0	-0.8
VLY	Voula,Athens	1.14	222	P	Pb	21 53 21.7	-1.1
MAGU	Magoula	1.16	237	P	Pn	21 53 22.6	-0.6
MAGU				S	Sn	21 53 38.5	-0.6
MAGU	Magoula	1.16	237	P	Pn	21 53 22.6	-0.6
LIA	Limnos Island	1.23	16	P	Pb	21 53 23.9	-0.5
LIA	Limnos Island	1.23	16	P	Pn	21 53 23.6	-0.6
VILL	Villia	1.25	245	P	Pn	21 53 23.9	-0.7
VIL2	Platees	1.27	247	P	Pn	21 53 23.9	-0.9
KARB	zmir-Karabur	1.30	92	P	Pg	21 53 26.8	+0.7
KARB				S	Sg	21 53 42.5	-0.5
KARB				IAML		21 53 49.0	
	comp=N,396nm,0.5s						
KARB				IAML		21 53 51.0	
	comp=E,411nm,1.2s						
PRK	Paraskevi	1.30	65	P	Pg	21 53 25.5	-0.6
PRK	Paraskevi	1.30	65	P	Pb	21 53 25.2	-0.4
NEO	Neokhori	1.33	297	P	Pn	21 53 25.1	-0.5
NEO	Neokhori	1.33	297	P	Pn	21 53 24.8	-0.8
KOCA	Canakkale, Ayv	1.34	53	P	Pn	21 53 25.3	-0.4
KOCA				S	Sg	21 53 44.4	+0.2
KOCA				IAML		21 53 49.0	
	comp=E,676nm,0.5s						
KOCA				IAML		21 53 55.0	
	comp=N,457nm,0.7s						
ATAL	Atalanti	1.35	270	P	Pn	21 53 25.4	-0.6
ATAL	Atalanti	1.35	270	P	Pn	21 53 25.2	-0.7
LKR	Lokris	1.37	268	P	Pn	21 53 25.5	-0.7
LKR	Lokris	1.37	268	P	Pn	21 53 25.2	-0.9
KRBN	Karaburun	1.42	94	Pn	Pb	21 53 27.1	-0.4
KRBN				Sn	Sg	21 53 47.4	+0.7
ZEYE	Izmir, Urla-Ze	1.45	108	P	Pg	21 53 28.2	-0.8
ZEYE				S	Sn	21 53 44.2	-2.1
PAIG	Paliouri	1.47	326	P	Pb	21 53 27.7	-0.7
BOZC	Bozcaada	1.52	41	P	Pn	21 53 20.2	-8.0
BOZC				S	Sn	21 53 39.0	-8.9
MET4	Agioi Theodoro	1.52	225	P	Pn	21 53 27.6	-0.6
MET5	Makryloggos,Me	1.54	226	P	Pn	21 53 27.6	-0.9
LTK	Loutraki	1.56	244	P	Pn	21 53 28.4	-0.4
LTK	Loutraki	1.56	244	P	Pn	21 53 28.1	-0.7
MET2	Kameni Chora,	1.57	226	P	Pn	21 53 27.7	-1.2
MET6	Megalochori,Me	1.57	225	P	Pn	21 53 27.8	-1.0
AYVA	Ayvalik	1.62	68	P	Pb	21 53 30.4	-0.6
AYVA				S	Sn	21 53 50.4	-0.1
AYVA				IAML		21 53 57.0	
	comp=E,415nm,1.3s						
AYVA				IAML		21 54 02.0	
	comp=N,383nm,0.6s						
AXAR	Agios Charalam	1.64	273	P	Pn	21 53 29.7	-0.1
AXAR	Agios Charalam	1.64	273	P	Pn	21 53 29.4	-0.5
BAGT	Foa	1.65	91	P	Pg	21 53 33.4	+0.7
BAGT				S	Sg	21 53 53.5	-0.6
EZN	Ezine	1.65	47	P	Pn	21 53 30.1	+0.1
EZN	Ezine	1.65	47	Pn	Pn	21 53 29.5	-0.5
GOAD	anakkale-G¶	1.71	31	P	Pn	21 53 30.2	-0.5
GOAD				IAML		21 54 02.0	
	comp=E,558nm,0.5s						
GOAD				IAML		21 54 05.0	
	comp=N,556nm,0.6s						
DKL	Dikili	1.72	77	Pn	Pb	21 53 31.5	-1.2
IZMD	zmir-Dikili-	1.72	80	P	Pg	21 53 33.3	-0.9
GADA	Gvkgeada	1.73	31	P	Pn	21 53 30.7	-0.3
GADA	Gvkgeada	1.73	31	Pn	Pn	21 53 29.4	-1.6
GADA				Sn	Sn	21 53 51.8	-1.2
ECEA	Canakkale, Ece	1.73	39	P	Pg	21 53 33.4	-0.9
ECEA				S	Sg	21 53 55.6	-1.2
BAYC	CANAKKALE_Bayr	1.73	53	P	Pn	21 53 30.2	-0.9
BAYC				S	Sn	21 53 51.8	-1.4
DGB	zmir	1.80	111	P	Pn	21 53 32.1	+0.1
ZEDA	zmir-Bergama	1.83	81	P	Pn	21 53 31.9	-0.6
ZEDA				S	Sn	21 53 54.1	-1.7
CNKL	anakkale-Mer	1.85	43	P	Pb	21 53 34.9	-0.1
CNKL				S	Sb	21 53 57.7	-0.5
CNKL				IAML		21 54 04.0	
	comp=N,331nm,1.1s						
CNKL				IAML		21 54 08.0	
	comp=E,443nm,1.3s						
SMTH	Samothraki Isl	1.86	19	P	Pn	21 53 31.9	-1.0
THAS	Thassos island	1.89	359	P	Pn	21 53 32.4	-0.9
AGG	Agios Georgios	1.92	280	P	Pn	21 53 33.5	-0.1
AGG	Agios Georgios	1.92	280	P	Pn	21 53 33.2	-0.4
SMG	Samos	1.92	121	P	Pn	21 53 33.7	-0.1
SMG	Samos	1.92	121	P	Pn	21 53 33.4	-0.4
COMU	Canakkale	1.93	43	Pn	Pn	21 53 32.9	-0.9
PLG	Polygyros	1.94	329	P	Pn	21 53 34.0	-0.1
BUHA	Balikesir, Bur	1.98	66	P	Pn	21 53 35.1	+0.6
BUHA				S	Sb	21 54 01.9	+0.3
BUHA				IAML		21 54 18.0	
	comp=E,295nm,0.7s						
BUHA				IAML		21 54 25.0

THR6	**Thira Island,**	**2.41**	**167**	P		**Pn**	**21 53 40.0**	**-0.3**
THERA	**Ancient Thera,**	**2.41**	**166**	P		**Pn**	**21 53 39.6**	**-0.8**
THERA	**Ancient Thera,**	**2.41**	**166**	P		**Pn**	**21 53 39.4**	**-1.0**
GOKT	**Kean, EDRN**	**2.43**	**36**	P		**Pn**	**21 53 41.0**	**+0.3**
GOKT				IAML			21 54 25.0	
	comp=E,146nm,0.7s							
GOKT				IAML			21 54 28.0	
	comp=N,263nm,0.7s							
BALY	**Balya**	**2.45**	**64**	P		**Pb**	**21 53 45.5**	**+0.3**
BALY				S		**Sb**	**21 54 15.9**	**+0.4**
VLI	**Veliai**	**2.45**	**216**	P		**Pn**	**21 53 40.2**	**-0.8**
VLI	**Veliai**	**2.45**	**216**	P		**Pn**	**21 53 39.7**	**-1.3**
RDO	**Rodhopi**	**2.51**	**14**	Pn		**Pn**	**21 53 39.5**	**-2.3**
RDO	**Rodhopi**	**2.51**	**14**	P		**Pn**	**21 53 40.8**	**-0.9**
DRO	**Drossia**	**2.51**	**253**	P		**Pn**	**21 53 42.1**	**+0.3**
DRO	**Drossia**	**2.51**	**253**	P		**Pn**	**21 53 41.9**	**+0.1**
PVO	**Paravola**	**2.53**	**269**	P		**Pn**	**21 53 42.9**	**+0.8**
SRS	**Serrai**	**2.56**	**340**	P		**Pn**	**21 53 42.5**	**-0.1**
SRS	**Serrai**	**2.56**	**340**	P		**Pn**	**21 53 41.9**	**-0.7**
IZMR	**zmir-demi**	**2.58**	**102**	P		**Pg**	**21 53 48.5**	**-2.0**
IZMR				S		**Sb**	**21 54 19.5**	**+0.5**
BODT	**Bodrum**	**2.61**	**128**	Pn		**Pn**	**21 53 44.5**	**+1.3**
KTTT	**Salihli**	**2.62**	**89**	P		**Pn**	**21 53 43.9**	**+0.6**
RLS	**Riolos of Patr**	**2.66**	**257**	P		**Pn**	**21 53 44.3**	**+0.4**
BKES	**Balkesir-Mer**	**2.67**	**67**	P		**Pn**	**21 53 45.1**	**+1.1**
BKES				S		**Sb**	**21 54 22.9**	**+1.2**
BKES				IAML			21 54 35.0	
	comp=N,98nm,0.8s							
BKES				IAML			21 54 38.0	
	comp=E,113nm,0.7s							
AYDN	**Tasoluk**	**2.68**	**112**	P		**Pn**	**21 53 44.7**	**+0.5**
ITM	**Ithomi**	**2.71**	**236**	P		**Pn**	**21 53 45.2**	**+0.7**
ITM	**Ithomi**	**2.71**	**236**	Pn		Pn	21 53 39.2	-5.3
NVR	**Nevrokopi**	**2.72**	**346**	P		**Pn**	**21 53 44.7**	**-0.1**
NVR	**Nevrokopi**	**2.72**	**346**	P		**Pn**	**21 53 44.3**	**-0.5**
BLKS	**Balkesir-Sus**	**2.75**	**64**	P		**Pb**	**21 53 50.6**	**+0.3**
TETR	**Tetrakomo, Epi**	**2.78**	**284**	P		**Pn**	**21 53 46.2**	**+0.5**
KTHA	**Kythira Island**	**2.79**	**209**	P		**Pn**	**21 53 45.3**	**-0.4**
KZN	**Kozani**	**2.80**	**306**	P		**Pn**	**21 53 46.3**	**+0.4**
KNT	**Kendrikon**	**2.83**	**330**	P		**Pn**	**21 53 46.9**	**+0.6**
KNT	**Kendrikon**	**2.83**	**330**	P		**Pn**	**21 53 46.2**	**-0.1**
GRG	**Griva**	**2.88**	**322**	P		**Pn**	**21 53 47.2**	**+0.3**
KPRO	**Kipourio**	**2.91**	**296**	P		**Pn**	**21 53 48.0**	**+0.7**
KPRO	**Kipourio**	**2.91**	**296**	P		**Pn**	**21 53 47.7**	**+0.4**
KIRA	**zmir-Kiraz**	**2.91**	**99**	P		**Pn**	**21 53 48.9**	**+1.5**
KIRA				S		**Sb**	**21 54 30.6**	**+1.9**
MMB	**Musomishta**	**2.94**	**345**	P		**Pn**	**21 53 48.0**	**+0.3**
MMB	**Musomishta**	**2.94**	**345**	*i* P		**Pn**	**21 53 48.0**	**+0.3**
KDZ	**Kurdzhali**	**2.95**	**9**	Pn		**Pn**	**21 53 45.7**	**-2.2**
ESEN	**Aydn-Nazilli**	**2.98**	**107**	P		**Pn**	**21 53 49.1**	**+0.9**
RZN	**Rozhen**	**2.98**	**360**	*i* P		**Pn**	**21 53 48.7**	**+0.2**
DAT	**Datca**	**2.99**	**131**	Pn		**Pn**	**21 53 49.2**	**+0.7**
MANT	**Manisa**	**2.99**	**93**	P		**Pn**	**21 53 50.8**	**+2.2**
DURS	**Dursunbey**	**3.03**	**72**	P		**Pb**	**21 53 52.2**	**-2.8**
DURS				IAML			21 54 47.0	
	comp=E,71nm,0.6s							
VAY	**Valandovo**	**3.10**	**328**	*i* Pn		**Pn**	**21 53 51.9**	**+2.0**
DEMI	**Demirci**	**3.11**	**83**	P		**Pn**	**21 53 50.7**	**+0.6**
DEMI				IAML			21 54 53.0	
	comp=E,73nm,0.6s							
SULTU	**Buldan**	**3.22**	**100**	P		**Pn**	**21 53 53.2**	**+1.5**
SULTU				IAML			21 54 53.0	
	comp=N,72nm,0.6s							
USAK	**Uak-Merkez**	**3.34**	**89**	P		**Pn**	**21 53 54.2**	**+0.9**
KKB	**Krupnik**	**3.37**	**339**	*i* P		**Pn**	**21 53 54.6**	**+1.0**
PLD	**Plovdiv**	**3.43**	**360**	Pn		**Pn**	**21 53 51.0**	**-3.5**
PLD	**Plovdiv**	**3.43**	**360**	*i* P		**Pn**	**21 53 55.0**	**+0.5**
KNDR	**Palaiochora Ch**	**3.58**	**195**	Pn		**Pn**	**21 53 53.9**	**-2.7**
KARP	**Karpathos**	**3.70**	**148**	Pn		**Pn**	**21 53 58.2**	**0.0**
PLNA	**Plana**	**3.90**	**345**	*i* P		**Pn**	**21 54 02.6**	**+1.6**
KEK	**Kerkira**	**3.98**	**286**	Pn		Pn	21 53 55.6	-6.4
VTS	**Vitosha**	**4.07**	**344**	*i* P		**Pn**	**21 54 04.7**	**+1.3**
ELND	**Elena**	**4.30**	**11**	⇑P		**Pn**	**21 54 07.4**	**+1.0**
TRAN	**Tran**	**4.42**	**340**	*i* P		**Pn**	**21 54 09.5**	**+1.4**
MPEP	**Malo Peshtene**	**4.70**	**351**	*i* P		**Pn**	**21 54 13.0**	**+1.0**
RAZG	**Razgrad**	**5.03**	**15**	⇓P		**Pn**	**21 54 17.9**	**+1.4**
PDG	**Podgorica**	**5.60**	**313**	⇑P		**Pn**	**21 54 23.4**	**-0.8**
TIP	**Timpagrande**	**6.25**	**277**	⇓P		**Pn**	**21 54 33.5**	**+0.2**
HERR	**Herculane**	**6.41**	**345**	⇑P		**Pn**	**21 54 34.8**	**-0.5**
ARR	**Arges**	**6.65**	**359**	⇑P		**Pn**	**21 54 39.2**	**+0.4**
VOIR		**6.73**	**2**	⇑P		**Pn**	**21 54 40.5**	**+0.7**
LOT	**Lotru**	**6.77**	**354**	⇓P		**Pn**	**21 54 40.4**	**-0.1**
MLR	**Muntele Rosu**	**6.83**	**7**	⇑P		**Pn**	**21 54 42.6**	**+1.3**
GZR	**Gura Zlata**	**6.84**	**348**	⇓P		**Pn**	**21 54 41.2**	**-0.1**
BRTR	**Keskin Array B**	**6.98**	**79**	Pn		**Pn**	**21 54 45.6**	**+2.3**
	0.1nm,0.3s,baz=266,slow=13,SNR=2.2							
	0.6nm,0.6s							
DOPR	**Dopca**	**7.27**	**4**	⇑P		**Pn**	**21 54 48.2**	**+1.0**
PLOR	**Plostina**	**7.27**	**11**	⇑P		**Pn**	**21 54 49.1**	**+1.8**
BZS	**Buzias**	**7.28**	**342**	⇑P		**Pn**	**21 54 46.7**	**-0.7**
VRI	**Vrincioaia**	**7.30**	**11**	⇑P		**Pn**	**21 54 48.3**	**+0.7**
MARR	**Marisel-Cluj**	**8.05**	**352**	⇓P		**Pn**	**21 54 58.5**	**+0.5**
DRGR		**8.21**	**350**	⇓P		**Pn**	**21 55 00.6**	**+0.4**
BURAR	**Bucovina Array**	**8.91**	**2**	⇓P		**Pn**	**21 55 10.3**	**+0.6**
MMAI	**Mount Meron Ar**	**10.34**	**120**	Pn		**Pn**	**21 55 30.3**	**+0.9**
	0.6nm,0.3s,baz=306,slow=12,SNR=4.3							
	0.6nm,0.4s							
ESDC	**Sonseca Array**	**22.24**	**282**	P		**P**	**21 57 57.0**	**-0.8**
	1.2nm,0.8s,baz=87,slow=11,SNR=10							
	1.2nm,0.8s							
FINES	**FINESS Array B**	**22.77**	**2**	P		**P**	**21 58 04.3**	**+1.0**
	7.2nm,1.1s,baz=181,slow=11,SNR=1.6							
	7.2nm,1.1s							
NOA	**NORSAR Array B**	**23.90**	**344**	P		**P**	**21 58 14.6**	**0.0**
	0.3nm,0.5s,baz=155,slow=9.3,SNR=1.6							
	0.3nm,0.5s							
EKA	**Eskdalemuir Ar**	**25.02**	**321**	P		**P**	**21 58 25.1**	**+0.3**
	1.8nm,0.7s,baz=117,slow=10,SNR=3.1							
	1.8nm,0.7s							
TORD	**Torodi Ar. Bea**	**32.65**	**225**	P		**P**	**21 59 36.8**	**+3.7**
	0.6nm,0.9s,baz=26,slow=6.7,SNR=3.9							
	0.6nm,0.9s							
MKAR	**Makanchi Array**	**42.18**	**60**	P		**P**	**22 00 54.6**	**+1.0**
	0.2nm,0.6s,baz=277,slow=7.3,SNR=2.2							
	0.2nm,0.6s							
ZALV	**Zalesovo Beam**	**42.85**	**49**	P		**P**	**22 00 58.1**	**-0.8**
	0.3nm,0.3s,baz=277,slow=12,SNR=1.5							
	0.3nm,0.3s							

DJA 15 21:53:52.8±0.8, 0˚N±3˚ × 9˚7E±˚, h28km±8km, M3.9/18, mB5.3/1, mb4.2/2, MLv3.8/18, Mw(mB)4.7/1, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBSI	**Pulau Batu**	**1.18**	**100**	P	Pn	21 54 12.7	-0.7
PBSI				S	Sn	21 54 26.5	-2.1
GSI	**Gunungsitoli**	**1.22**	**22**	P	Pn	21 54 14.6	+0.5
MNSI	**Mandailing Nat**	**2.54**	**76**	P	Pn	21 54 31.9	-0.3
TPTI		**3.08**	**1**	P	Pn	21 54 39.9	+0.3
TPTI				S	Sn	21 55 14.6	-0.9
KCSI	**Kotacane, Aceh**	**3.40**	**11**	P	Pn	21 54 44.4	+0.3
KCSI				S	Sn	21 55 23.6	+0.1
PDSI	**Padang**	**3.51**	**108**	P	Pn	21 54 44.9	-0.6
KRJI	**Kerinci**	**4.88**	**117**	P	Pn	21 55 05.4	+0.9
MNAI	**Manna**	**7.36**	**128**	P	Pn	21 55 36.8	-1.7

BJI ***15*** *22:04:18.9, 27˚.42N×54˚.75E, h10km, mB5.4/71, mb5.2/86, Ms5.4/91, Ms7 5.1/88*

IDC ***15*** *22:04:22.9±0.4, 27˚.32N×55˚.40E, h0km, mb5.0/50, mbtmp5.0/56, ML4.6/6, MS4.9/75, Error ellipse: s-maj=8.9km s-min=6.5km az=21.0*

MOS ***15*** *22:04:23.7±0.8, 27˚.34N×55˚.41E, h14km, mb5.6/64, MS5.0/34, Error ellipse: s-maj=4.4km s-min=3.0km az=104.1*

TEH ***15*** *22:04:24.3, 27˚.24N×55˚.35E, h12km±19km, ML5.4, Presumed earthquake*

NEIC ***15*** *22:04:25.4, 27˚.41N×55˚.35E, h20km*

NEIC ***15*** *22:04:25.4±1.3, 27˚.41N±0˚.06×55˚.35E±0˚.06, h10km±1km, mb5.4/299, Mwb5.2/44, Mww5.4/18, Error ellipse: s-maj=10.0km s-min=9.0km az=229.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr7.85; Mθθ-8.06; Mϕϕ0.21; Mrθ-2.19; Mϕθ-2.18; Mϕr-2.72; Fault plane solution: M₀8.96000×10¹⁶ NP1:ϕ₁90.50000°, δ37.45000°, λ113.31000°. NP2:ϕ₂242.01000°, δ56.05000°, λ73.14000°. Principal axes: T 8.8417, Plg73.0000°, Azm108.0000°; N 0.2273, Plg14.0000°, Azm252.0000°; P -9.0690, Plg10.0000°, Azm344.0000°;*

GFZ ***15*** *22:04:25.6, 27˚.42N×55˚.39E, h19km, MW5.4, Moment Tensor Solution. s87 Moment tensor: Mrr1.36; Mθθ-1.34; Mϕϕ-0.01; Mrθ-0.10; Mϕθ0.04; Mϕr-0.15; Fault plane solution: NP1:ϕ₁98.00000°, δ43.00000°, λ99.00000°. NP2:ϕ₂265.00000°, δ47.00000°, λ81.00000°. Principal axes: T 1.3800, Plg83.0000°, Azm109.0000°; N -0.0300, Plg6.0000°, Azm271.0000°; P -1.3500, Plg1.0000°, Azm1.0000°;*

NEIC ***15*** *22:04:25.4, 27˚.31N×55˚.68E, h20km, Moment Tensor Solution. Duration: 2²5 Moment tensor: Scale 10¹⁷Nm; Mrr1.45; Mθθ-1.27; Mϕϕ-0.18; Mrθ-0.70; Mϕθ0.19; Mϕr0.53; Fault plane solution: M₀1.64000×10¹⁷ NP1:ϕ₁89.73000°, δ31.02000°, λ69.90000°. NP2:ϕ₂292.85000°, δ61.05000°, λ101.68000°. Principal axes: T 1.7414, Plg71.0000°, Azm230.0000°; N -0.2237, Plg10.0000°, Azm107.0000°; P -1.5178, Plg15.0000°, Azm14.0000°;*

NEIC ***15*** *22:04:25.4, 27˚.40N×55˚.35E, h10km*

THR ***15*** *22:04:26.5±0.4, 27˚.23N×55˚.28E, h15km, ML5.5, Presumed earthquake*

DSN ***15*** *22:04:26.3±1.9, 27˚.38N×55˚.32E, h13km±14km, mb5.9/2, ML5.0/18, Error ellipse: s-maj=10.2km s-min=6.5km az=65.0*

GCMT ***15*** *22˚04˚26.4±0.1, 27˚.24N±0˚.01×55˚.29E±0˚.01, h12km, MW5.4/137, Moment Tensor Solution. s119, c196; s137, c278; Duration: 1s3 Moment tensor: Scale 10¹⁷ Nm; Mrr1.08±.02; Mθθ-1.56±.01; Mϕϕ0.48±.02; Mrθ-0.43±.04; Mϕθ0.07±.01; Mϕr-1.00±.04; Best double couple: M₀1.75000×10¹⁷ NP1:ϕ₁121.00000°, δ46.00000°, λ142.00000°. NP2:ϕ₂240.00000°, δ64.00000°, λ50.00000°. Principal axes: T 1.8680, Plg53.0000°, Azm101.0000°; N -0.2330, Plg35.0000°, Azm260.0000°; P -1.6320, Plg10.0000°, Azm357.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

OMAN ***15*** *22:04:28.5±0.1, 27˚.12N×55˚.36E, h16km, mb5.3/14, ml5.3/24, Mwp5.8/27 Error ellipse: s-maj=0.7km s-min=0.7km az=290.0*

BGR ***15*** *22:04:38.1, 27˚.49N×53˚.59E, h33km, mb5.6, Ms5.0*

ISC 15 22:04:25.4±0.3, 27˚.32N±0˚.02×55˚.36E±0˚.02, h14km±1km, h14km:pP-P,n1369,σ1937/1412, mb5.4/414, MS5.0/134, 83C-52D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENO	**Geno**	**0.73**	**84**	Pg	**Pg**	**22 04 38.7**	**-0.9**
IBND	**Bandar-abas**	**1.06**	**83**	Pg	**Pb**	**22 04 45.4**	**-0.1**
SHME	**Shamm**	**1.45**	**151**	*eP*	**Pb**	**22 04 52.5**	**+0.4**
	SNR=945						
SHME				S	**Sg**	**22 05 12.8**	**+0.8**
SHME	**Shamm**	**1.45**	**151**	P	**Pb**	**22 04 52.5**	**+0.4**
	SNR=945						
SHME				P	**Pb**	**22 04 52.5**	**+0.4**
	SNR=945						
SHME				S	**Sn**	**22 05 10.6**	**+0.7**
SHME				S	**Sn**	**22 05 10.6**	**+0.7**
BANOM	**Banah**	**1.63**	**149**	*eP*	**Pb**	**22 04 55.3**	**+0.1**
	SNR=5169						
BANOM				S	**Sg**	**22 05 18.9**	**+1.2**
BANOM	**Banah**	**1.63**	**149**	P	**Pb**	**22 04 55.5**	**+0.3**
BANOM				P	**Pb**	**22 04 55.5**	**+0.3**
BANOM				S	**Sn**	**22 05 13.6**	**-0.8**
BANOM				S	**Sn**	**22 05 13.6**	**-0.8**
UMQ	**Umm Al-Quwin**	**1.81**	**171**	*eP*	**Pb**	**22 04 59.3**	**+1.0**
	SNR=181						
UMQ	**Umm Al-Quwin**	**1.81**	**171**	P	**Pb**	**22 04 58.2**	**-0.1**
	SNR=180						
UMQ				P	**Pb**	**22 04 58.2**	**-0.1**
	SNR=180						
KHL1	**Khalili_Fars**	**1.86**	**280**	Pn	**Pb**	**22 04 58.6**	**-0.5**
LMD1	**Lamerd**	**1.95**	**271**	IAML		22 06 08.7	
	comp=Z,25μm,1.0s						
LMD1	**Lamerd**	**1.95**	**271**	Pn	**Pn**	**22 04 59.3**	**+1.2**
JHRM	**Jahrom**	**1.97**	**307**	Pn	**Pb**	**22 05 00.4**	**-0.7**
MASF	**Masafi**	**2.07**	**160**	P	**Pn**	**22 05 01.8**	**+2.1**
	SNR=335						
MASF				P	**Pn**	**22 05 01.8**	**+2.1**
	SNR=335						
MSFE	**Esma-Masafi**	**2.08**	**160**	*eP*	**Pb**	**22 05 02.4**	**-0.6**
	SNR=335						
MDH	**Madha**	**2.18**	**157**	*eP*	**Pn**	**22 05 03.3**	**+2.0**
	SNR=216						
MDH	**Madha**	**2.18**	**157**	P	**Pn**	**22 05 03.3**	**+2.0**
	SNR=217						
MDH				P	**Pn**	**22 05 03.3**	**+2.0**
	SNR=217						
NAZ	**Nazwa, Dubai**	**2.34**	**173**	*eP*	**Pb**	**22 05 06.4**	**-0.9**
	SNR=124						
NAZ	**Nazwa, Dubai**	**2.34**	**173**	P	**Pb**	**22 05 06.0**	**-1.3**
	SNR=125						
NAZ				P	**Pb**	**22 05 06.0**	**-1.3**
	SNR=125						
QIR1	**Qir**	**2.35**	**300**	Pn	**Pn**	**22 05 05.0**	**+1.3**
UOSS	**Minazif**	**2.48**	**162**		**Pn**	**22 05 07.2**	**+1.8**
UOSS				Sn	**Sn**	**22 05 37.6**	**+2.1**
UOSS	**Minazif**	**2.48**	**162**	*eP*	**Pn**	**22 05 07.5**	**+2.1**
	SNR=581						
UOSS	**Minazif**	**2.48**	**162**	P	**Pn**	**22 05 07.7**	**+2.3**
FAQ	**Al Faqa, Dubai**	**2.57**	**175**	*eP*	**Pn**	**22 05 09.5**	**+2.9**
	SNR=138						
FAQ	**Al Faqa, Dubai**	**2.57**	**175**	P	**Pn**	**22 05 09.3**	**+2.7**
	SNR=138						
FAQ				P	**Pn**	**22 05 09.3**	**+2.7**
	SNR=138						
HATD	**Hatta, Dubai**	**2.58**	**164**	*eP*	**Pn**	**22 05 09.1**	**+2.4**
	SNR=152						
HATD	**Hatta, Dubai**	**2.58**	**164**	P	**Pn**	**22 05 09.2**	**+2.4**
	SNR=152						
HATD				P	**Pn**	**22 05 09.2**	**+2.4**
	SNR=152						
HATD				S	**Sn**	**22 05 37.7**	**-0.3**
HATD				S	**Sn**	**22 05 37.7**	**-0.3**
JASK	**Jask - Hormozg**	**2.67**	**122**	P	**Pn**	**22 05 09.0**	**+1.0**
	SNR=266						
JASK				S	**Sn**	**22 05 41.7**	**+1.6**
JASK	**Jask - Hormozg**	**2.67**	**122**	Pn	**Pn**	**22 05 08.9**	**+0.9**
ASUD	**Al Ashush, Dub**	**2.68**	**181**	*eP*	**Pb**	**22 05 11.4**	**-1.8**
	SNR=460						
ASUD	**Al Ashush, Dub**	**2.68**	**181**	P	**Pn**	**22 05 10.4**	**+2.2**
	SNR=460						
ASUD				P	**Pn**	**22 05 10.4**	**+2.2**
	SNR=460						
AJN	**Ajban**	**2.77**	**187**	*eP*	**Pn**	**22 05 12.1**	**+2.9**
	SNR=61						
AJN	**Ajban**	**2.77**	**187**	P	**Pn**	**22 05 11.8**	**+2.5**
	SNR=61						
AJN				P	**Pn**	**22 05 11.8**	**+2.5**
	SNR=61						
CHMN	**Cheshme madani**	**3.18**	**37**	Pn	**Pn**	**22 05 17.4**	**+2.1**
KHGB	**Koh Gabri**	**3.20**	**18**	Pn	**Pn**	**22 05 18.1**	**+2.7**
ALNE	**Al Ain**	**3.27**	**174**	*i* P	**Pn**	**22 05 18.8**	**+2.5**
	SNR=133						
ALNE	**Al Ain**	**3.27**	**174**	P	**Pn**	**22 05 18.5**	**+2.3**
	SNR=173						
ALNE				P	**Pn**	**22 05 18.5**	**+2.3**
	SNR=173						
JRN	**Qarnain Island**	**3.27**	**224**	P	**Pn**	**22 05 18.5**	**+2.3**
	SNR=9.7						
KBAM	**BAM**	**3.27**	**56**	Pn	**Pn**	**22 05 18.3**	**+1.9**
SOHO	**SOHO**	**3.34**	**161**	*i* P	**Pn**	**22 05 18.2**	**+0.9**
	SNR=190						
SOHO	**SOHO**	**3.34**	**161**	P	**Pn**	**22 05 18.1**	**+0.9**
SOHO				P	**Pn**	**22 05 18.1**	**+0.9**
SHI	**Shiraz**	**3.41**	**313**	Pn	**Pn**	**22 05 20.1**	**+1.8**
KRM1	**Kerman Provinc**	**3.59**	**27**	Pn	**Pn**	**22 05 23.1**	**+2.3**
ZRDN	**Zarand Kerman**	**3.78**	**16**	Pn	**Pn**	**22 05 25.6**	**+2.2**
MZWR	**Madinat Zayed**	**3.79**	**201**	P	**Pn**	**22 05 24.8**	**+1.4**
MZWR				P	**Pn**	**22 05 24.8**	**+1.4**
MZWR				S	**Sn**	**22 06 07.9**	**+0.2**
MZWR				S	**Sn**	**22 06 07.9**	**+0.2**
GHWR	**Ruwais**	**4.02**	**214**	P	**Pn**	**22 05 27.8**	**+1.2**
GHWR				P	**Pn**	**22 05 27.8**	**+1.2**
GHWR				S	**Sn**	**22 06 15.2**	**+1.7**
GHWR				S	**Sn**	**22 06 15.2**	**+1.7**
ARQ	**Araqi**	**4.10**	**165**	P	**Pn**	**22 05 29.8**	**+2.1**
	SNR=71						
ARQ				P	**Pn**	**22 05 29.8**	**+2.1**
	SNR=71						
IMEH	**Mehriz**	**4.11**	**351**	Pn	**Pn**	**22 05 30.0**	**+2.0**
HOQ	**Hoqain**	**4.12**	**154**	P	**Pn**	**22 05 28.0**	**+0.1**
	SNR=60						
HOQ				P	**Pn**	**22 05 28.0**	**+0.1**
	SNR=60						
HOQ				S	**Sn**	**22 06 15.6**	**-0.4**
HOQ				S	**Sn**	**22 06 15.6**	**-0.4**
HOQ	**Hoqain**	**4.12**	**154**	Pn	**Pn**	**22 05 27.7**	**-0.2**
SHMA	**Al-Shehemyia**	**4.20**	**251**	P	**Pn**	**22 05 31.1**	**+2.1**
	SNR=59						
IBAF	**Bafgh**	**4.26**	**2**	Pn	**Pn**	**22 05 32.0**	**+2.1**
TAFT	**Taft - Yazd**	**4.51**	**347**	Pn	**Pn**	**22 05 35.8**	**+2.4**
TRNA	**Turayna**	**4.53**	**236**	P	**Pn**	**22 05 35.4**	**+1.9**
	SNR=17						
TRNA				S	**Sn**	**22 06 27.5**	**+1.4**
	SNR=6.5						
BIDO	**Bidbid**	**4.54**	**146**	P	**Pn**	**22 05 35.0**	**+1.3**
	SNR=54						
BIDO				S	**Sn**	**22 06 26.7**	**+0.5**
UMZA	**Um Al Zommool**	**4.59**	**182**	P	**Pn**	**22 05 35.9**	**+1.6**
UMZA				P	**Pn**	**22 05 35.9**	**+1.6**
UMZA				S	**Sn**	**22 06 27.3**	**-0.2**
UMZA				S	**Sn**	**22 06 27.3**	**-0.2**
MZR	**Muzera**	**4.62**	**202**	*i* P	**Pn**	**22 05 36.1**	**+1.3**
	SNR=18						
MZR	**Muzera**	**4.62**	**202**	P	**Pn**	**22 05 35.6**	**+0.7**
	SNR=66						
MZR				P	**Pn**	**22 05 35.6**	**+0.7**
	SNR=66						
SMRA	**Abu-Samra**	**4.82**	**239**	P	**Pn**	**22 05 39.4**	**+1.9**
	SNR=46						
SMRA				S	**Sn**	**22 06 34.5**	**+1.4**
	SNR=6.7						
BSY	**Bisya**	**4.85**	**159**	P	**Pn**	**22 05 40.0**	**+2.0**
	SNR=124						
BSY				P	**Pn**	**22 05 40.0**	**+2.0**
	SNR=124						
BSY				S	**Sn**	**22 06 33.6**	**-0.4**
BSY				S	**Sn**	**22 06 33.6**	**-0.4**
SMDO	**Samad**	**4.89**	**150**	P	**Pn**	**22 05 40.6**	**+2.0**
	SNR=135						
SMDO				P	**Pn**	**22 05 40.6**	**+2.0**
	SNR=135						
SMDO				S	**Sn**	**22 06 34.6**	**-0.5**
SMDO				S	**Sn**	**22 06 34.6**	**-0.5**
CHBR	**Chabahar**	**4.90**	**109**	*ePn*	**Pn**	**22 05 39.8**	**+1.1**
CHBR				IAML		22 07 53.1	
	comp=Z,4μm,1.0s						
CHBR	**Chabahar**	**4.90**	**109**	Pn	**Pn**	**22 05 39.3**	**+0.7**
KLNJ	**Kolanjah**	**4.94**	**319**	*ePn*	**Pn**	**22 05 40.3**	**+0.9**
KLNJ				IAML		22 07 40.7	
	comp=Z,2μm,1.0s						
WSAR	**Wadi Sarin**	**5.03**	**143**	LR	LR	22 07 35.5	
	comp=Z,59nm,22.0s,baz=356,slow=38						
WSAR	**Wadi Sarin**	**5.03**	**143**	P	**Pn**	**22 05 41.9**	**+1.5**
	SNR=104						
WSAR				S	**Sn**	**22 06 38.1**	**-0.2**
YZKH	**Yazd**	**5.10**	**353**	*ePn*	**Pn**	**22 05 43.6**	**+2.2**
YZKH				IAML		22 07 39.9	
	comp=Z,2μm,1.0s						
IRAM	**Ramesheh**	**5.17**	**331**	Pn	**Pn**	**22 05 44.5**	**+2.0**
JMDO	**Jabal Madar**	**5.52**	**153**	P	**Pn**	**22 05 49.0**	**+1.7**
	SNR=229						
JMDO				P	**Pn**	**22 05 49.0**	**+1.7**
	SNR=229						
NGCH	**Negor - Chabah**	**5.54**	**109**	P	**Pn**	**22 05 49.0**	**+1.6**
	SNR=570						
NGCH	**Negor - Chabah**	**5.54**	**109**	Pn	**Pn**	**22 05 48.4**	**+1.0**
BSRN	**Basiran**	**5.67**	**34**	*ePn*	**Pn**	**22 05 50.5**	**+1.1**
BSRN				IAML		22 07 39.4	
	comp=Z,3μm,1.0s						
WBK	**Wadi Bani Khal**	**5.72**	**144**	P	**Pn**	**22 05 51.0**	**+1.0**
	SNR=433						
WBK	**Wadi Bani Khal**	**5.72**	**144**	Pn	**Pn**	**22 05 50.5**	**+0.6**
NASN	**Na'in**	**5.89**	**339**	*ePn*	**Pn**	**22 05 53.9**	**+1.4**
NASN				IAML		22 07 55.1	
	comp=Z,1μm,1.0s						
SRVN	**Saravan**	**6.26**	**88**	*ePn*	**Pn**	**22 05 59.1**	**+1.6**
SRVN				IAML_BB		22 06 22.4	
	comp=Z,8μm,1.0s						
SRVN	**Saravan**	**6.26**	**88**	Pn	**Pn**	**22 05 59.2**	**+1.7**
JLN	**Jalan Bani Buh**	**6.33**	**144**	P	**Pn**	**22 05 59.0**	**+0.7**
	SNR=156						
JLN				S	**Sn**	**22 07 09.6**	**-0.8**
TABS	**Tabas**	**6.49**	**13**	*ePn*	**Pn**	**22 06 02.7**	**+2.2**
TABS				IAML		22 07 00.1	
	comp=Z,2.2nm,1.0s						
MHTO	**MHTO**	**6.74**	**159**	P	**Pn**	**22 06 05.1**	**+1.2**
	SNR=102						
MHTO				P	**Pn**	**22 06 05.1**	**+1.2**
	SNR=102						
MHTO				S	**Sn**	**22 07 20.3**	**-0.2**
MHTO				S	**Sn**	**22 07 20.3**	**-0.2**
KBD	**Kabd**	**7.01**	**287**	P	**Pn**	**22 06 09.2**	**+1.6**
GTMR	**Gotvand**	**7.

ZNJK IAML_BB 22 07 56.4
comp=Z,1μm,1.0s
SRSL SARDASHT 12.23 319 *e*Pn **Pn 22 07 18.9 -0.5**
SRSL IAML_BB 22 07 25.2
comp=Z,4μm,1.0s
GRMI Germi 13.05 333 *e*Pn **Pn 22 07 32.3 +1.9**
GRMI IAML_BB 22 08 13.3
comp=Z,2μm,1.0s
KBL Kabul 13.77 55 Pn 22 07 41.0 +0.7
KBL Kabul 13.77 55 P **Pn 22 07 41.0 +0.7**
KBL Kabul 13.77 55 P **Pn 22 07 44.5 +4.2**
SNR=72
KBL P **Pn 22 07 44.5 +4.2**
SNR=72
KBL S **Sn 22 10 20.7 +7.6**
KBL S **Sn 22 10 20.7 +7.6**
SHAA Shahritus 14.83 43 Pn 22 07 54.4 -0.3
GEVA Gevas 15.05 320 Pn 22 07 55.6 -2.2
AKT Akhty 15.45 338 P **Pn 22 08 03.0 0.0**
AKT *e*S **Sn 22 10 55.9 +1.9**
AKT pmax pmax
comp=Z,64nm,0.6s
AKT MLR MLR
comp=Z,3μm,10.0s
GNI Garni 15.53 328 Pn **Pn 22 08 06.2 +2.1**
comp=Z,8.9nm,0.3s,baz=142,slow=5.5,SNR=22
GNI Sn **Sn 22 10 57.3 +1.3**
baz=196,slow=16
GNI Lg Lg 22 12 36.7
comp=Z,0.1nm,0.3s,baz=143,slow=20,SNR=1.3
GNI LR LR 22 14 49.5
comp=Z,6μm,20.6s,baz=138,slow=40
comp=Z,74nm,0.8s
GNI Garni 15.53 328 Pn 22 08 04.2 +0.1
GNI Garni 15.53 328 P **Pn 22 08 04.2 +0.1**
GNI Garni 15.53 328 P **Pn 22 08 04.6 +0.5**
comp=Z,4μmcomp=Z,388nm,0.9s
GURO Guroymak-BITLI 15.81 318 Pn 22 08 05.0 -2.7
CHGR Chuyangaron 16.16 42 Pn 22 08 10.1 -2.0
CHGR Chuyangaron 16.16 42 P **Pn 22 08 10.1 -2.0**
CHGR pmax pmax
comp=Z,121nm,1.0s
NIL Nilore 16.66 63 P **Pn 22 08 17.6 -0.9**
NIL Nilore 16.66 63 P **Pn 22 08 17.6 -0.9**
NIL pmax pmax
comp=Z,154nm,1.3s
KARS Kars 16.71 326 Pn **Pn 22 08 18.2 -0.9**
KARS Kars 16.71 326 P **Pn 22 08 18.2 -0.9**
KARS pmax pmax
comp=Z,195nm,1.1s
ASF Jabal al Asfar 16.74 291 Pn **Pn 22 08 19.6 -0.1**
comp=Z,1.7nm,0.3s,baz=90,slow=12,SNR=19
ASF Sn **Sn 22 11 28.0 +2.6**
comp=Z,1.3nm,0.3s,baz=107,slow=19,SNR=1.2
ASF LR LR 22 16 36.4
comp=Z,7μm,18.3s,baz=99,slow=44
comp=Z,8.7nm,0.3s
MAK Makhachkala 16.86 340*d* iP **Pn 22 08 21.6 +0.7**
MAK *e*S **Sn 22 11 30.6 +2.6**
MAK pmax pmax
comp=Z,554nm,1.1s
MAK MLR MLR
comp=Z,6μm,16.0s
GAR Garm 17.08 43 Pn 22 08 22.1 -1.7
GAR IAmb IAmb 22 08 29.1
comp=Z,207nm,0.8s
KOPT Kop Dagi 17.67 320 Pn 22 08 31.4 0.0
GHAJ Ghor Haditha 17.71 288 P **Pn 22 08 31.4 -0.2**
RCY Rachaya 17.92 295 *e*P **P 22 08 39.7 +4.8**
BEIL Beino 17.94 298 *e*P **Pn 22 08 34.5 0.0**
ZAHL Zahle 17.98 296 *e*P **P 22 08 35.8 +0.3**
BTK Batken 18.05 41 Pn 22 08 34.2 -1.6
BTK Batken 18.05 41 P **Pn 22 08 34.2 -1.6**
BTK pmax pmax
comp=Z,89nm,1.0s
HWQ Hawqa 18.05 297 *e*P **Pn 22 08 36.0 +0.1**
EIL Elat 18.09 282 P **Pn 22 08 36.6 +0.3**
comp=Z,0.8nm,0.3s,baz=117,slow=5.3,SNR=14
EIL S **Sn 22 12 00.8 +2.8**
comp=Z,22nm,0.9s,baz=98,slow=15,SNR=1.1
EIL LR LR 22 17 39.6
comp=Z,10μm,18.4s,baz=106,slow=44
comp=Z,11nm,0.6s
MMAI Mount Meron Ar 18.16 293 P **Pn 22 08 36.4 -0.8**
comp=Z,1.8nm,0.3s,baz=84,slow=16,SNR=21
MMAI S **S 22 12 02.5 -2.6**
comp=Z,3.5nm,0.7s,baz=108,slow=26,SNR=1.6
MMAI LR LR 22 17 59.8
comp=Z,4μm,19.4s,baz=98,slow=45
comp=Z,10nm,0.8s
BHL Bhannes 18.17 296 *e*P **Pn 22 08 37.5 +0.1**
DQRL Deir Qamar 18.19 295 *e*P **P 22 08 39.1 +1.3**
GAZ Gaziantep 18.20 307 Pn 22 08 36.7 -0.9
DRK Karamyk 18.28 44 P **Pn 22 08 38.2 -0.7**
DRK Karamyk 18.28 44 P **Pn 22 08 38.2 -0.7**
DRK pmax pmax
comp=Z,80nm,0.7s
ARPR Arapgir-MALATY 18.42 314 P 22 08 40.4 -0.1
NCK Nalchik 18.74 332 *i* P **Pn 22 08 46.0 +1.8**
CHM Chimkent 18.95 34 *e*P **P 22 08 46.4 +0.4**
CHM *e*S **Sn 22 12 19.8 +1.2**
CHM MLR MLR
comp=Z,5μm,14.0s
CHM Chimkent 18.95 34 *e*P **P 22 08 46.4 +0.4**
CHM *e*S **Sn 22 12 19.8 +1.2**
CHM LR LR 22 17 19.2
comp=Z,5μm,13.7s
IUG luzhnay 19.04 35*c i*P **P 22 08 47.3 +0.2**
IUG *e*S **Sn 22 12 21.8 +0.8**
IUG luzhnay 19.04 35⇑ *i*P **P 22 08 47.3 +0.2**
IUG *e*S **Sn 22 12 21.8 +0.8**
TRKS Terek-Say 19.20 38 P **P 22 08 47.9 -1.1**
KBZ Khabaz 19.22 332 P **Pn 22 08 50.8 +0.9**
comp=Z,0.9nm,0.3s,baz=140,slow=12,SNR=26
KBZ S **Sn 22 12 24.9 -0.2**
comp=Z,9.4nm,1.0s,baz=135,slow=20,SNR=1.2
KBZ LR LR 22 17 39.8
comp=Z,3μm,19.1s,baz=142,slow=41
comp=Z,58nm,1.2s
SHA1 Shidzhatmaz 19.33 331*c e*P **Pn 22 08 51.1 -0.4**
KVAR Kislovodsk Arr 19.49 332 P **Pn 22 08 53.3 0.0**
baz=165,slow=12
KVAR S **S 22 12 32.9 +0.9**
comp=Z,18nm,1.0s,baz=159,slow=11,SNR=1.3
comp=Z,14nm,0.5s
KIV Kislovodsk 19.50 332⇑ P **Pn 22 08 54.4 +1.0**
KIV Kislovodsk 19.50 332 Pn **Pn 22 08 52.9 -0.4**
KIV IAmb IAmb 22 09 00.5
comp=Z,257nm,0.8s
KIV Kislovodsk 19.50 332 *i* P **Pn 22 08 54.0 +0.7**
SNR=31
KIV Kislovodsk 19.50 332 *e*P **Pn 22 08 53.8 +0.5**
KIV *e*S **S 22 12 33.5 +1.5**
KIV pmax pmax
comp=Z,277nm,1.0s
KIV MLR MLR
comp=Z,1μm,14.0s
KIV Kislovodsk 19.50 332 P **Pn 22 08 55.1 +1.7**
KIV Kislovodsk 19.50 332 P **Pn 22 08 52.8 -0.5**
comp=Z,3μmcomp=Z,244nm,1.0s
BRLS Boroldav 19.59 33*c i*P **P 22 08 50.5 -2.6**
BRLS *e*S **S 22 12 28.4 -5.5**
BRLS Boroldav 19.59 33⇑ *i*P **P 22 08 50.5 -2.6**
BRLS *e*S **S 22 12 28.5 -5.5**
ATD Arta Tunnel 19.62 219 P **P 22 08 54.2 +0.6**
comp=Z,1.1nm,0.8s,baz=34,slow=5.6,SNR=8.6
ATD LR LR 22 16 46.8
comp=Z,270nm,18.6s,baz=38,slow=38
ATD Arta Tunnel 19.62 219 P **P 22 08 54.0 +0.5**
ATD IAmb IAmb 22 09 06.5
comp=Z,317nm,1.9s
ATD Arta Tunnel 19.62 219 P **P 22 08 54.3 +0.7**
ATD S **Sn 22 12 36.6 +1.5**
ARK Arkit 19.84 39 P **P 22 08 55.8 -0.1**
BNN Bunyan 19.94 310 P **P 22 08 57.2 +0.1**
BNN IAmb IAmb 22 09 09.7
comp=Z,263nm,1.2s
KK31 Karatay Array 19.98 34 P 22 08 56.7 -0.6
KK31 IAmb IAmb 22 09 09.6
comp=Z,163nm,1.0s
KK31 Karatay Array 19.98 34 P **P 22 08 56.7 -0.6**
KK31 pmax pmax
comp=Z,163nm,1.0s
KKAR Karatay Array 19.98 34 P 22 08 56.5 -0.8
KKAR Karatay Array 19.98 34 P **P 22 08 56.5 -0.8**

ARSB Arslanbob 20.12 42 P **P 22 08 58.6 -0.4**
ARSB Arslanbob 20.12 42 P **P 22 08 58.6 -0.4**
ARSB pmax pmax
comp=Z,117nm,0.8s
DZA Taraz 20.25 36 *e*P **P 22 09 00.4 +0.2**
DZA *e*S **S 22 12 48.4 +1.4**
DZA pmax pmax
comp=Z,97nm,0.9s
DZA Taraz 20.25 36 *e*P **P 22 09 00.5 +0.2**
comp=Z,97nm,0.9s
DZA *e*S **S 22 12 48.4 +1.4**
GOF Gofitskoye 20.26 334*c e*P Pn 22 09 03.0 +0.7
TOKA Tokat 20.30 315 P **P 22 09 00.8 -0.1**
CSS Mathiatis 20.31 297 P 22 09 00.8 -0.1
CSS IAmb IAmb 22 09 10.5
comp=Z,215nm,1.4s
CSS Mathiatis 20.31 297 P **P 22 09 01.9 +0.9**
comp=Z,1μmcomp=Z,109nm,1.0s
VSLR Vesyoloye 20.33 326 *i* P **P 22 09 00.5 -0.6**
VSLR pmax pmax
comp=Z,447nm,1.0s
KSH2 Kashi 20.56 50 P **P 22 09 02.1 -1.7**
KSH2 pP Pn 22 09 05.4 -0.6
KSH2 S **S 22 12 48.0 -5.5**
KSH2 pmax pmax
comp=Z,220nm,0.8s
KSH2 L L
comp=Z,8μm,13.7s
KSH2 L L
comp=Z,6μm,12.0s
KSH2 L L
comp=Z,7μm,9.6s
SOC Sochi 20.57 326 *e*P **P 22 09 03.6 -0.1**
SOC *e*PPP PPP 22 09 25.1
SOC *e*S **S 22 12 53.5 +0.1**
SOC *e*SS **SnSn 22 13 17.1 +4.6**
SOC *e*SSS SSS 22 13 27.6
SOC pmax pmax
comp=Z,301nm,1.1s
SOC MLR MLR
comp=Z,4μm,13.0s
LABN Labinsk 20.90 330 *e*P Pn 22 09 08.8 -0.9
LABN *e*S Sn 22 13 02.7 -2.8
LABN pmax pmax
comp=Z,796nm,1.3s
LABN MLR MLR
comp=Z,5μm,14.0s
KIRS Kirsehir-Merke 21.40 309⇓ P **P 22 09 14.6 +1.8**
EKS2 Erkin-Say 21.42 40 P **P 22 09 13.6 +0.5**
SNR=174
UCH Uchtor 21.58 42 P P 22 09 14.7 -0.4
SNR=30
AAK Ala-Archa 21.82 41 P **P 22 09 17.5 +0.2**
comp=Z,48nm,0.7s,baz=223,slow=8.8,SNR=72
AAK LR LR 22 19 20.0
comp=Z,6μm,18.1s,baz=244,slow=41
comp=Z,48nm,0.7s
AAK Ala-Archa 21.82 41 P **P 22 09 16.0 -1.3**
SNR=15
AAK Ala-Archa 21.82 41 P 22 09 17.1 -0.3
AAK Ala-Archa 21.82 41 *i* P **P 22 09 17.6 +0.3**
SNR=126
AAK Ala-Archa 21.82 41*c e*P **P 22 09 17.7 +0.3**
AAK pmax pmax
comp=Z,247nm,2.5s
ERBR Yeremizino-Bor 21.84 331 *e*P **P 22 09 18.8 +1.4**
ERBR *e*S **S 22 13 19.2 +0.8**
ERBR pmax pmax
comp=Z,217nm,1.2s
ERBR MLR MLR
comp=Z,3μm,14.0s
BR104 Keskin Array S 21.86 310 P **P 22 09 18.1 +0.4**
comp=Z,1μmcomp=Z,146nm,1.3s
BRTR Keskin Array B 21.86 310 P **P 22 09 18.4 +0.6**
comp=Z,61nm,0.9s,baz=136,slow=11,SNR=54
BRTR LR LR 22 20 28.2
comp=Z,5μm,18.8s,baz=116,slow=44
comp=Z,61nm,0.9s
BRTR Keskin Array B 21.86 310 P 22 09 17.6 -0.3
BR131 Keskin Array S 21.87 310 IAmb IAmb 22 09 26.8
comp=Z,194nm,1.1s
BR131 Keskin Array S 21.87 310 *i* P **P 22 09 18.2 +0.4**
BR131 Keskin Array S 21.87 310 S Sn 22 13 24.4 -4.6
BR105 Keskin Array S 21.88 310 P **P 22 09 18.8 +0.8**
comp=Z,1μmcomp=Z,182nm,1.1s
BR106 Keskin Array S 21.88 310 P **P 22 09 18.9 +0.9**
comp=Z,1μmcomp=Z,133nm,1.1s
FRU1 Bishkek 22.00 40 IAmb IAmb 22 09 39.2
comp=Z,105nm,0.9s
NRN Naryn 22.03 45 IAmb IAmb 22 09 40.9
comp=Z,127nm,0.9s
KBK Karagaybulak 22.09 41 P **P 22 09 20.9 +0.6**
SNR=85
AB31 Akbulak array 22.19 8 IAmb IAmb 22 09 27.1
comp=Z,165nm,0.8s
AB31 Akbulak array 22.19 8 *i* P **P 22 09 20.6 -0.4**
AB31 pmax pmax
comp=Z,217nm,1.0s
ABKAR Akbulak array 22.19 8 P 22 09 21.0 0.0
CHMS Chumysh 22.19 40 P **P 22 09 24.0 +2.8**
SNR=28
USP Ospenovka 22.22 39 P **P 22 09 20.9 -0.6**
SNR=55
SGDS Sogindy 22.41 39 *e*P **P 22 09 23.7 +0.1**
SGDS *e*S **S 22 13 30.5 +1.2**
ANN Anapa 22.59 325 *e*P **P 22 09 27.2 +1.8**
ANN *e*S **S 22 13 32.6 +0.1**
ANN pmax pmax
comp=Z,135nm,1.0s
ANN MLR MLR
comp=Z,4μm,15.0s
ULHL Ulahol 22.63 43 P **P 22 09 26.2 +0.2**
SNR=34
TKM2 Tokmak 2 22.64 41 P **P 22 09 25.9 -0.3**
SNR=15
BZK Bozkurt 22.76 315 P **P 22 09 29.1 +1.9**
comp=Z,186nm,1.1s
KDJ Kajisay 23.14 45 IAmb IAmb 22 09 52.5
comp=Z,120nm,1.0s
BTLS Baital 23.15 35 *e*P **P 22 09 31.3 +0.1**
BTLS Baital 23.15 35 *e*P **P 22 09 31.3 +0.1**
AKTO Aktyubinsk 23.17 4 P **P 22 09 31.7 +0.3**
comp=Z,88nm,0.8s,baz=208,slow=7.5,SNR=106
AKTO LR LR 22 20 48.5
comp=Z,5μm,20.3s,baz=184,slow=42
comp=Z,88nm,0.8s
TARG Taragay, Kyrgy 23.33 46 P 22 09 33.3 -0.3
TARG IAmb IAmb 22 09 56.8
comp=Z,96nm,1.0s
TARG Taragay, Kyrgy 23.33 46 P **P 22 09 33.3 -0.3**
TARG pmax pmax
comp=Z,96nm,1.0s
ISP Isparta 23.34 303 IAmb IAmb 22 09 42.0
comp=Z,165nm,1.3s
ISP Isparta 23.34 303*c e*P **P 22 09 34.8 +1.5**
ISP pmax pmax
comp=Z,72nm,2.5s
ISP Isparta 23.34 303 *e*P **P 22 09 34.1 +0.8**
ELL Elmali 23.48 300 IAmb IAmb 22 10 00.5
comp=Z,101nm,0.9s
TNSS Tian-Shan 23.51 43 *e*P **P 22 09 35.2 0.0**
TNSS Tian-Shan 23.51 43 *e*P **P 22 09 35.3 0.0**
HYB Hyderabad 23.57 110 *e*P **P 22 09 36.4 +0.7**
HYB *e*S **S 22 13 52.0 +2.4**
AKAS Kas 23.57 299 IAmb IAmb 22 09 47.9
comp=Z,268nm,1.5s
AAA Alma-Ata 23.59 42 *e*P **P 22 09 35.9 +0.2**
AAA pmax pmax
comp=Z,55nm,0.8s
AAA MLR MLR
comp=Z,5μm,12.0s
AAA Alma-Ata 23.59 42 *e*P **P 22 09 36.0 +0.2**
comp=Z,55nm,0.8s
AAA LR LR 22 19 09.1
comp=Z,5μm,11.6s
MDOK Medeo 23.64 42 *e*P **P 22 09 36.3 0.0**
MDOK *e*S **S 22 13 51.7 +1.1**
MDOK Medeo 23.64 42 *e*P **P 22 09 36.4 0.0**
MDOK *e*S **S 22 13 51.8 +1.1**
MDOK LR LR 22 19 40.2
MDUB Mudurnu 23.87 310 IAmb IAmb 22 10 01.7
comp=Z,174nm,1.0s
WUS Wushi 24.00 49 IAmb IAmb 22 10 01.0
comp=Z,121nm,1.1s
PRZ Przheval'sk 24.10 45 IAmb IAmb 22 10 07.6
comp=Z,125nm,1.0s

FURI Furi 24.18 224 LR LR 22 19 39.8
comp=Z,4μm,20.1s,baz=38,slow=38
SAHE Sakarya_HENDEK 24.27 310⇑ P **P 22 09 42.9 +0.7**
SATY Saty 24.41 44*c i*P **P 22 09 43.6 +0.1**
SATY Saty 24.41 44⇑ *i*P **P 22 09 43.6 +0.1**
SIM Simferopol' 24.45 322 *e*P **P 22 09 44.2 +0.5**
SIM *e*S **S 22 14 02.5 -0.8**
SIM pmax pmax
comp=Z,280nm,1.3s
SIM smax smax
comp=N,1μm,5.3s
SIM MLR MLR
comp=Z,2μm,18.0s
ARXS Arharly 24.71 41 *e*P **P 22 09 40.1 -6.0**
ARG Arkhangelos 24.73 298 IAmb IAmb 22 10 07.5
comp=Z,77nm,0.9s
ARG Arkhangelos 24.73 298 P **P 22 09 46.9 +0.6**
ARG pmax pmax
comp=Z,96nm,0.9s
KPKS Kokpek 24.80 43 *e*P **P 22 09 47.2 +0.2**
KPKS Kokpek 24.80 43 *e*P **P 22 09 47.2 +0.2**
UZB Uzynbulak 24.84 44*c i*P **P 22 09 47.5 +0.1**
UZB pmax pmax
comp=Z,108nm,1.5s
UZB Uzynbulak 24.84 44⇑ *i*P **P 22 09 47.5 +0.1**
comp=Z,108nm,1.5s
SHLS Shalkode 25.12 45*c i*P **P 22 09 52.5 +2.6**
SHLS *e*S **S 22 14 19.8 +5.6**
SHLS pmax pmax
comp=Z,46nm,0.9s
SHLS Shalkode 25.12 45⇑ *i*P **P 22 09 52.5 +2.6**
comp=Z,46nm,0.9s
SHLS *e*S **S 22 14 19.9 +5.6**
KARP Karpathos 25.36 296 *e*P **P 22 09 53.7 +1.7**
KARP Karpathos 25.36 296 P **P 22 09 53.1 +1.1**
comp=Z,5μmcomp=Z,695nm,0.9s
KARP pP **pP 22 09 56.6 0.0**
comp=Z,5μmcomp=Z,695nm,0.9s
BELG Belogornoye 25.71 349 P **P 22 09 55.4 +0.4**
comp=Z,44nm,0.6s,baz=219,slow=6.5,SNR=18
BELG LR LR 22 23 35.3
comp=Z,2μm,18.5s,baz=138,slow=45
comp=Z,44nm,0.6s
BELG Belogornoye 25.71 349 *i* P **P 22 09 54.5 -0.4**
BELG pmax pmax
comp=Z,31nm,0.9s
BALB Balikesir 25.90 305 IAmb IAmb 22 10 05.1
comp=Z,127nm,1.1s
BAND Balkesir-Ban 25.99 307⇑ P **P 22 09 58.7 +0.9**
VRH Novokhopyorsk 26.00 340 *e*P **P 22 09 57.3 -0.3**
VRH *e*S **S 22 14 32.4 +4.7**
VRH pmax pmax
comp=Z,207nm,0.9s
VRH smax smax
comp=N,2μm,8.1s
BRZS Berezniki 26.24 26 *e*P **P 22 10 00.3 +0.5**
BRZS Berezniki 26.24 26 *e*P **P 22 10 00.3 +0.5**
CTYL Yalikoy Yolu 26.29 309 P **P 22 10 01.3 +0.9**
comp=N,140nm,1.0s
VORD Divnogorie 26.58 337 *e*P **P 22 10 02.3 -0.6**
VORD pmax pmax
comp=Z,110nm,1.0s
VSR Storozhevoye 26.84 337 *e*P **P 22 10 05.3 +0.1**
VSR *e*S **S 22 14 43.9 +2.9**
VSR pmax pmax
comp=Z,130nm,1.1s
VSR MLR MLR
comp=Z,3μm,15.0s
KHAM Kharkiv 26.97 332 P **P 22 10 07.4 +0.9**
EZN Ezine 27.09 305 P **P 22 10 09.0 +1.4**
comp=Z,103nm,0.9s
IDI Anoyia 27.14 295 P **P 22 10 08.9 +0.6**
comp=Z,21nm,0.6s,baz=91,slow=12,SNR=21
IDI LR LR 22 23 12.5
comp=Z,1μm,20.1s,baz=74,slow=42
comp=Z,21nm,0.6s
VORR Voronezh 27.20 338 *e*P **P 22 10 07.1 -1.4**
VORR *e*S **S 22 14 48.5 +1.7**
VORR pmax pmax
comp=Z,122nm,0.8s
VORR smax smax
comp=E,100nm,3.2s
NE56 Odesa 27.29 322 P **P 22 10 08.7 -0.6**
JURR Jurilovca 27.42 316⇑ P **P 22 10 11.2 +0.7**
TIRR Tirgusor 27.55 315⇓ P **P 22 10 12.9 +1.1**
TIRR Tirgusor 27.55 315 IAmb IAmb 22 10 19.4
comp=Z,81nm,1.0s
TIRR Tirgusor 27.55 315 P **P 22 10 12.8 +1.1**
TIRR Tirgusor 27.55 315 P **P 22 10 12.8 +1.1**
comp=Z,82nm,1.1s
ALN Alexandroupoli 27.65 307 IAmb IAmb 22 10 21.0
comp=Z,70nm,1.1s
TLCR 27.67 317⇓ P **P 22 10 13.4 +0.6**
TLCR 27.67 317 P **P 22 10 13.3 +0.6**
NEF NEVSHA 27.73 312 P **P 22 10 18.7 +5.4**
TPOL Topolog 27.74 316⇓ P **P 22 10 14.4 +0.9**
ICOR Ion Corvin 27.77 314⇑ P **P 22 10 14.2 +0.5**
PURM Purcari 27.78 320⇑ P **P 22 10 14.2 +0.5**
PURM Purcari 27.78 320 P **P 22 10 13.5 -0.2**
comp=Z,2μmcomp=Z,249nm,1.0s
BORK Borovoye 28.01 19 P 22 10 15.5 -0.2
BORK Borovoye 28.01 19*c e*P **P 22 10 15.9 +0.2**
BORK pmax pmax
comp=Z,49nm,1.0s
BORK MLR MLR
comp=Z,5μm,15.0s
BVAR Borovoye Array 28.01 19 P **P 22 10 15.7 -0.1**
comp=Z,41nm,0.8s,baz=201,slow=7.8,SNR=48
BVAR PcP **PcP 22 13 30.4 0.0**
comp=Z,5.3nm,0.5s,baz=223,slow=2.4,SNR=9.8
BVAR LR LR 22 22 10.6
comp=Z,4μm,18.7s,baz=208,slow=38
comp=Z,41nm,0.8s
CFR Carcaliu 28.08 317⇑ P **P 22 10 17.4 +1.0**
CFR Carcaliu 28.08 317 P **P 22 10 17.4 +1.0**
LPSR Galich'ya Gora 28.08 338 *e*P **P 22 10 16.1 -0.2**
LPSR *e*S **S 22 15 04.3 +3.7**
LPSR pmax pmax
comp=Z,40nm,0.7s
LPSR MLR MLR
comp=Z,2μm,15.0s
RDO Rodhopi 28.09 307 IAmb IAmb 22 10 25.0
comp=Z,50nm,0.9s
LOZB Loznitsa 28.22 312⇑ P **P 22 10 18.0 +0.3**
AMRR Amara 28.30 315⇑ P **P 22 10 19.7 +1.3**
AMRR Amara 28.30 315 P **P 22 10 19.7 +1.3**
TATR Tatarca 28.34 317⇓ P **P 22 10 19.1 +0.4**
RAZG Razgrad 28.36 312⇓ P **P 22 10 19.6 +0.6**
SCHLR Schela 28.41 317⇑ P **P 22 10 19.7 +0.3**
SCTR Scanteiesti 28.41 317⇓ P **P 22 10 20.5 +1.1**
VLDR Vladesti 28.45 318⇓ P **P 22 10 19.9 +0.1**
IZVR Izvoarele 28.49 317⇓ P **P 22 10 21.1 +1.0**
ELND Elena 28.52 311⇑ P **P 22 10 21.0 +0.6**
LEHL Lehliu 28.56 314⇓ P **P 22 10 21.3 +0.6**
MAKZ Makanchi 28.58 40 P 22 10 20.6 -0.3
MAKZ Makanchi 28.58 40 P **P 22 10 20.6 -0.3**
MAKZ pmax pmax
comp=Z,187nm,1.5s
VARL Varlezi 28.62 318⇑ P **P 22 10 21.6 +0.4**
KIS Kishinev 28.64 320⇑ P **P 22 10 21.5 0.0**
KIS Kishinev 28.64 320 P **P 22 10 21.4 0.0**
MK31 Makanchi Array 28.75 40*c e*P **P 22 10 22.5 0.0**
MKAR Makanchi Array 28.75 40 P **P 22 10 22.4 0.0**
comp=Z,9.8nm,0.6s,baz=227,slow=8.4,SNR=68
MKAR PcP **PcP 22 13 32.0 -0.4**
comp=Z,2.2nm,0.6s,baz=222,slow=1.3,SNR=1.4
MKAR ScP **ScP 22 17 14.0 +0.6**
comp=Z,1.0nm,0.8s,baz=259,slow=4.1,SNR=1.8
MKAR LR LR 22 22 16.3
comp=Z,3μm,21.5s,baz=236,slow=37
comp=Z,9.8nm,0.6s
BIR Birlad 28.94 318⇓ P **P 22 10 25.5 +1.4**
BIR Birlad 28.94 318 P **P 22 10 25.5 +1.4**
GHRR 28.96 318⇑ P **P 22 10 25.4 +1.1**
GHRR 28.96 318 P **P 22 10 25.0 +0.7**
GHRR pP **pP 22 10 27.6 -1.3**
SGRR Singureni 28.99 313⇑ P **P 22 10 25.7 +1.2**
SULR 29.01 314⇓ P **P 22 10 26.2 +1.5**
PANC Panciu 29.03 317⇑ P **P 22 10 26.6 +1.7**
ODBI Odobesti 29.03 317⇑ P **P 22 10 26.2 +1.4**
ISR Istrita 29.04 315⇑ P **P 22 10 26.0 +1.0**
ISR Istrita 29.04 315 P **P 22 10 26.0 +1.0**
ISR Istrita 29.04 315 P **P 22 10 26.0 +1.0**
comp=Z,103nm,1.1s
VASR Vaslui 29.04 319⇑ P **P 22 10 25.4 +0.4**

ARTI Arti 29.13 3 P **P** **22 10 25.8 +0.2**
comp=Z,8.4nm,0.7s,baz=168,slow=5.2,SNR=8.8
ARTI LR LR 22 24 33.2
comp=Z,2µm,18.2s,baz=179,slow=42
comp=Z,8.4nm,0.7s
ARTI Arti 29.13 3 **P** **22 10 24.8 -0.9**
ARTI Arti 29.13 3*d iP* **P** **22 10 25.9 +0.3**
ARTI 22 11 17.9
ARTI 22 13 31.6
ARTI S **S** **22 15 22.5 +5.5**
ARTI SS **SnSn** **22 16 52.7 +11**
ARTI MLR MLR
comp=Z,4µm,16.0s
KURBB Kurchatov Arra 29.20 31 P **P** **22 10 26.7 +0.4**
comp=Z,41nm,0.9s,baz=230,slow=8.4,SNR=134
KURBB LR LR 22 23 03.2
comp=Z,2µm,18.9s,baz=216,slow=38
comp=Z,41nm,0.9s
VRI Vrincioaia 29.28 317 ⇑P **P** **22 10 28.4 +1.3**
VRI Vrincioaia 29.28 317 P **P** **22 10 28.4 +1.3**
VRI Vrincioaia 29.28 317 P **P** **22 10 27.5 +0.4**
comp=Z,50nm,1.0s
KURK Kurchatov 29.30 31 **P** **22 10 27.3 0.0**
KURK Kurchatov 29.30 31*ce*P **P** **22 10 27.6 +0.4**
KURK pmax pmax
comp=Z,42nm,1.0s
PLOR Plostina 29.32 317 ⇓P **P** **22 10 28.6 +1.0**
PLOR Plostina 29.32 317 P **P** **22 10 28.5 +1.0**
NEHR Nehoiu 29.33 316 ⇑P **P** **22 10 29.3 +1.6**
COPA Copaceanca 29.45 313 ⇑P **P** **22 10 29.4 +0.8**
IASR Iasi 29.45 320 ⇓P **P** **22 10 28.6 0.0**
MMB Musomishta 29.50 307 P P 22 10 35.9 +6.8
PLVB Pleven 29.54 311 ⇑P **P** **22 10 30.2 +0.7**
SORM Soroca 29.55 322 P **P** **22 10 28.0 -1.4**
comp=Z,69nm,1.2s
SOH Sokhos 29.56 305 P **P** **22 10 31.3 +1.6**
MLR Muntele Rosu 29.58 316 P **P** **22 10 30.6 +0.6**
comp=Z,18nm,0.8s,baz=30,slow=4.2,SNR=30
MLR LR LR 22 24 32.7
comp=Z,3µm,18.8s,baz=126,slow=41
comp=Z,18nm,0.8s
MLR Muntele Rosu 29.58 316 ⇓P **P** **22 10 31.6 +1.6**
MLR Muntele Rosu 29.58 316 **P** **22 10 29.4 -0.6**
MLR Muntele Rosu 29.58 316 P **P** **22 10 29.4 -0.6**
MLR pmax pmax
comp=Z,158nm,1.2s
MLR Muntele Rosu 29.58 316 P **P** **22 10 30.9 +0.9**
comp=Z,124nm,1.1s
COVR Voineasa-Covas 29.59 316 ⇑P **P** **22 10 31.0 +1.1**
TESR Tescani 29.65 318 ⇓P **P** **22 10 31.1 +0.8**
TESR Tescani 29.65 318 P **P** **22 10 30.2 -0.2**
comp=Z,148nm,1.0s
ONER Baraj Valea Uz 29.71 317 ⇓P **P** **22 10 32.3 +1.3**
SVE Sverdlovsk 29.73 6*de*P **P** **22 10 31.2 +0.3**
SVE *e*S **S** **22 15 22.7 -3.7**
SVE pmax pmax
comp=Z,50nm,1.2s
SVE MLR MLR
comp=Z,7µm,13.0s
HUMR Humele 29.77 313 ⇓P **P** **22 10 32.6 +1.2**
THE Thessaloniki 29.79 305 P **P** **22 10 32.8 +1.2**
ITM Ithomi 29.80 298 IAmb IAmb 22 10 53.2
comp=Z,52nm,1.0s
TURR Turia 29.80 317 ⇑P **P** **22 10 33.0 +1.2**
VLAD Vladila 29.93 312 ⇓P **P** **22 10 33.4 +0.6**
GIRR Girov 29.96 319 ⇓P **P** **22 10 33.5 +0.4**
MTUR Matau 30.02 315 ⇑P **P** **22 10 34.5 +0.7**
MTUR Matau 30.02 315 P **P** **22 10 34.4 +0.7**
BOSR Bodos 30.03 316 ⇑P **P** **22 10 34.2 +0.4**
VOIR 30.12 315 ⇓P **P** **22 10 36.0 +1.4**
VOIR 30.12 315 P **P** **22 10 36.0 +1.4**
VOIR 30.12 315 P **P** **22 10 35.2 +0.6**
comp=Z,100nm,1.1s
MPEP Malo Peshtene 30.13 310 P **P** **22 10 36.1 +1.5**
DOPR Dopca 30.15 316 ⇑P **P** **22 10 36.0 +1.2**
PRAR RASCA 30.33 319 ⇓P **P** **22 10 36.5 0.0**
NDNU Novodnistrovsk 30.35 322 P **P** **22 10 34.9 -1.6**
ARR Arges 30.35 315 ⇑P **P** **22 10 37.4 +0.7**
MALK Mahakanadarawa 30.36 124 P **P** **22 10 38.4 +1.4**
LODK Lodwar 30.50 222 **P** **22 10 38.0 -0.3**
LODK Lodwar 30.50 222 P **P** **22 10 40.7 +2.5**
DRBR Darabani 30.56 321 ⇑P **P** **22 10 39.1 +0.7**
AK07 Malin Array Si 30.57 326 P **P** **22 10 37.5 -0.9**
AK09 Malin Array Si 30.57 327 P **P** **22 10 37.7 -0.7**
AK10 Malin Array Si 30.57 327 P **P** **22 10 37.7 -0.8**
ZSN Zaisan 30.59 41 *eP* **P** **22 10 39.2 +0.5**
ZSN Zaisan 30.59 41 *eP* **P** **22 10 39.2 +0.5**
AKASG Malin Array Be 30.65 327 P **P** **22 10 38.6 -0.6**
comp=Z,17nm,0.6s,baz=136,slow=8.4,SNR=140
comp=Z,17nm,0.6s
AKASG Malin Array Be 30.65 327 **P** **22 10 38.3 -0.9**
AKBB Malin Array Si 30.65 327 **P** **22 10 38.4 -0.8**
AKBB Malin Array Si 30.65 327*ce*P **P** **22 10 38.8 -0.4**
AKBB pmax pmax
comp=Z,195nm,0.9s
AKBB Malin Array Si 30.65 327 P **P** **22 10 38.3 -0.9**
WMQ Urumqi 30.78 49 *eP* **P** **22 10 41.4 +0.9**
WMQ pP sP 22 10 46.9 0.0
WMQ S **S** **22 15 43.0 -0.4**
WMQ PcS **PcS** **22 17 19.3 -2.3**
WMQ ScS **ScS** **22 21 13.8 -2.8**
WMQ pmax pmax
comp=Z,14nm,0.7s
WMQ pmax pmax
comp=Z,670nm,5.7s
WMQ L L
comp=Z,5µm,13.5s
WMQ L L
comp=Z,4µm,20.9s
MDB Medias 30.85 316 ⇓P **P** **22 10 42.7 +1.6**
MDB Medias 30.85 316 P **P** **22 10 42.6 +1.6**
LUBAR Lubar, Ukraine 30.91 324 P **P** **22 10 40.8 -0.7**
LOT Lotru 30.93 314 ⇓P **P** **22 10 42.1 +0.2**
TGMR Targu Mures 30.94 317 ⇑P **P** **22 10 43.0 +1.1**
OBN Obninsk 30.95 339 P **P** **22 10 41.7 0.0**
comp=Z,55nm,0.5s,baz=100,slow=5.9,SNR=12
OBN LR LR 22 25 52.8
comp=Z,1µm,19.0s,baz=164,slow=42
comp=Z,55nm,0.5s
OBN Obninsk 30.95 339 ⇑P **P** **22 10 42.3 +0.5**
OBN Obninsk 30.95 339 **P** **22 10 41.9 +0.1**
OBN Obninsk 30.95 339⇑*iP* **P** **22 10 42.5 +0.8**
OBN *e* 22 11 42.2
OBN *e*S **S** **22 15 45.9 +0.3**
OBN *e*SS **SnSn** **22 17 26.7 +0.9**
OBN pmax pmax
comp=Z,173nm,1.3s
OBN MLR MLR
comp=Z,2µm,17.0s
OBN Obninsk 30.95 339 P **P** **22 10 42.5 +0.8**
comp=Z,185nm,0.9s
SRE Strehaia 30.98 312 ⇑P **P** **22 10 43.7 +1.5**
SRE Strehaia 30.98 312 P **P** **22 10 43.6 +1.5**
BURAR Bucovina Array 31.05 319 ⇓P **P** **22 10 43.1 +0.3**
BURAR Bucovina Array 31.05 319 **P** **22 10 42.6 -0.2**
BURAR IAmb IAmb 22 10 51.1
comp=Z,46nm,0.8s
BURAR Bucovina Array 31.05 319 P **P** **22 10 43.1 +0.3**
BUR08 Bucovina Ar. S 31.07 319 IAmb IAmb 22 10 51.0
comp=Z,52nm,1.0s
MOS Moscow 31.15 341 *eP* **P** **22 10 43.7 +0.2**
MOS *e* 22 11 45.8
MOS *e*S **S** **22 15 47.2 -1.6**
MOS *e*SS **SnSn** **22 17 33.9 +3.2**
MOS pmax pmax
comp=Z,181nm,1.4s
MOS pmax pmax
comp=N,127nm,1.2s
MOS pmax pmax
comp=E,76nm,1.3s
MOS MLR MLR
comp=Z,1µm,15.0s
MI29 MI29, Kamyanyy 31.16 325 P **P** **22 10 43.2 -0.5**
comp=Z,475nm,1.1s
MI30 MI30,Zelenitsa 31.19 326 P **P** **22 10 43.1 -0.9**
comp=Z,216nm,0.9s
HORU Horodok 31.21 322 P **P** **22 10 42.9 -1.2**
PALK Pallekele 31.23 125 LR LR 22 24 23.6
comp=Z,864nm,18.6s,baz=309,slow=38
KBN Korca 31.38 304 P **P** **22 10 46.6 +0.7**
DJES Djerdap 31.43 312 ⇓P **P** **22 10 46.5 +0.3**
LSA Lhasa 31.46 77 P **P** **22 10 45.6 -1.6**
LSA S **S** **22 15 55.8 +0.6**
LSA L L
comp=Z,2µm,16.5s
LSA L L
comp=Z,1µm,20.6s
LSA L L
comp=Z,2µm,19.2s
KIRV Kirov 31.53 354 P **P** **22 10 46.4 -0.3**
comp=Z,27nm,0.8s,baz=186,slow=5.2,SNR=9.4
KIRV LR LR 22 25 11.3
comp=Z,1µm,18.7s,baz=164,slow=40
comp=Z,27nm,0.8s
KIRV Kirov 31.53 354*ce*P **P** **22 10 47.7 +1.0**
GZR Gura Zlata 31.55 314 ⇑P **P** **22 10 47.7 +0.4**
GZR Gura Zlata 31.55 314 P **P** **22 10 47.6 +0.4**
HERR Herculane 31.58 312 ⇑P **P** **22 10 48.0 +0.6**
CJR Cluj-Napoca 31.59 316 ⇑P **P** **22 10 49.2 +1.6**
CJR Cluj-Napoca 31.59 316 P **P** **22 10 49.2 +1.6**
DEV Deva 31.67 314 ⇑P **P** **22 10 49.2 +1.0**
DEV Deva 31.67 314 P **P** **22 10 49.2 +1.0**
MARR Marisel-Cluj 31.87 316 ⇓P **P** **22 10 51.2 +1.1**
MDVR Moldovita 32.01 312 ⇑P **P** **22 10 52.4 +1.1**
STNU Starunia 32.01 320 P **P** **22 10 52.3 +1.1**
BMR Baia Mare 32.09 318 ⇓P **P** **22 10 52.9 +1.0**
BMR Baia Mare 32.09 318 P **P** **22 10 52.9 +1.0**
DRGR 32.17 316 ⇓P **P** **22 10 53.8 +1.0**
DRGR 32.17 316 P **P** **22 10 53.7 +1.0**
MESR Meseseni 32.19 317 ⇓P **P** **22 10 53.4 +0.7**
BZS Buzias 32.39 313 ⇑P **P** **22 10 55.1 +0.6**
BZS Buzias 32.39 313 P **P** **22 10 55.1 +0.6**
MEZ Mezhgor'ye 32.48 319 P **P** **22 10 56.0 +0.6**
KORU Korolevo 32.54 318 P **P** **22 10 56.3 +0.5**
BANR Banloc 32.61 313 ⇑P **P** **22 10 57.6 +1.1**
RNPP5 Staryi Chortor 32.65 325 P **P** **22 10 56.3 -0.4**
SHL Shillong 32.68 85 **P** **22 10 56.8 -0.7**
SHL Shillong 32.68 85 P **P** **22 10 56.8 -0.7**
SHL pmax pmax
comp=Z,23nm,0.8s
SHL Shillong 32.68 85 P **P** **22 10 57.6 +0.1**
SNR=10
SJES Sjenica 32.69 308 *eP* **P** **22 10 57.0 -0.3**
BRIU Brid 32.69 319 P **P** **22 10 58.2 +1.1**
TIM Timisoara 32.69 313 ⇑P **P** **22 10 57.7 +0.5**
TIM Timisoara 32.69 313 P **P** **22 10 57.6 +0.5**
RNPP8 Varash 32.73 325 P **P** **22 10 57.0 -0.4**
RNPP9 Sopachiv 32.75 325 P **P** **22 10 57.3 -0.3**
BERU Beregovo 32.86 318 P **P** **22 10 59.5 +0.9**
BORR Bors 32.88 316 ⇓P **P** **22 10 58.7 -0.1**
SHIU Shidnytsya 32.92 320 P **P** **22 10 59.7 +0.5**
LTVH Ltavrtes, Hu 32.93 316 ⇓P **P** **22 11 00.7 +1.5**
DRME Dracevica, Mon 32.94 306 *eP* **P** **22 10 57.8 -1.7**
PDG Podgorica 32.96 307 ⇑P **P** **22 11 00.2 +0.7**
PDG Podgorica 32.96 307 IAmb IAmb 22 11 06.4
comp=Z,48nm,1.0s
PDG Podgorica 32.96 307 *eP* **P** **22 10 55.7 -3.8**
HOLU Holmets 33.15 319 P **P** **22 11 01.5 +0.3**
DGZ Jazzator, Alta 33.20 39 *i* P **P** **22 11 01.4 -0.4**
DGZ pmax pmax
comp=Z,36nm,1.0s
RUDO Rudo 33.21 309 *eP* **P** **22 10 57.7 -4.1**
KMBO Kilima Mbogo 33.22 215 P **P** **22 11 02.6 +0.2**
baz=35,slow=12
KMBO LR LR 22 24 48.6
comp=Z,2µm,18.8s,baz=27,slow=37
UZHM Uzhgorod 33.25 319 P **P** **22 11 03.0 +0.9**
BBLS Lazi&#263i 33.26 309 *eP* **P** **22 10 59.6 -2.7**
FRGS Fruska Gora 33.41 312 *eP* **P** **22 11 03.4 -0.1**
KWP Kalwaria Pacla 33.49 321 *eP* **P** **22 11 04.8 +0.6**
KWP Kalwaria Pacla 33.49 321 P **P** **22 11 04.1 -0.1**
comp=Z,141nm,1.0s
HCY Herceg Novi 33.51 306 *eP* **P** **22 11 05.0 +0.6**
TREB Trebinje 33.68 307 *eP* **P** **22 11 03.1 -2.8**
MNK Minsk 33.77 331 *i* P **P** **22 11 06.0 -0.5**
comp=E,12nm,0.8s
MNK *i* P **P** **22 11 06.0 -0.5**
comp=N,20nm,0.8s
MNK *i* P **P** **22 11 06.0 -0.5**
comp=Z,31nm,0.7s,baz=132
MNK *i* PP **PnPn** **22 12 18.7 -0.1**
MNK *i* PPP PPP 22 12 29.9
MNK *i* S **S** **22 16 31.2 +1.6**
MNK *i* SS **SnSn** **22 18 37.9 +3.5**
MNK *i* SSS SSS 22 19 12.4
MNK *i* LQ LQ 22 23 01.8
MNK *i* LR LR 22 24 39.5
MNK *i* LRM MLR 22 26 54.5
comp=Z,2µm,15.2s
MNK *i* LRM MLR 22 27 21.5
comp=E,998nm,16.3s
MNK *i* LRM MLR 22 27 28.6
comp=N,1µm,15.7s
MNK Minsk 33.77 331 *i* P **P** **22 11 06.0 -0.5**
MNK *i* 22 12 18.6
MNK *i* 22 13 44.4
MNK *i* S **S** **22 16 31.2 +1.6**
MNK *i* SS **SnSn** **22 18 37.8 +3.5**
MNK pmax pmax
comp=Z,31nm,0.7s
MNK pmax pmax
comp=N,20nm,0.8s
MNK pmax pmax
comp=E,12nm,0.8s
MNK MLR MLR
comp=Z,2µm,15.0s
MNK MLR MLR
comp=E,998nm,16.0s
MNK MLR MLR
comp=N,1µm,16.0s
KIBK Kibwezi 33.88 212 P **P** **22 11 09.1 +1.2**
KIBK Kibwezi 33.88 212 **P** **22 11 07.7 -0.2**
KIBK IAmb IAmb 22 11 22.6
comp=Z,103nm,1.7s
KIBK Kibwezi 33.88 212 P **P** **22 11 09.9 +1.9**
SNR=12
BSZH Besenyszg 33.91 315 ⇓P **P** **22 11 08.3 +0.6**
TIP Timpagrande 34.14 300 ⇓P **P** **22 11 10.5 +0.5**
TIP Timpagrande 34.14 300 P **P** **22 11 11.0 +1.0**
comp=Z,1µmcomp=Z,154nm,1.4s
STHS Stebnicka Huta 34.23 319 *eP* **P** **22 11 11.1 +0.5**
STHS *e* 22 11 17.7
STHS Stebnicka Huta 34.23 319 *eP* **P** **22 11 11.1 +0.5**
STHS *e* 22 11 17.7
KECS Kecovo 34.26 317 *eP* **P** **22 11 11.8 +0.9**
KECS *e* 22 11 18.2
KECS pmax pmax
comp=Z,26nm,0.8s
KECS Kecovo 34.26 317 *eP* **P** **22 11 11.8 +0.9**
KECS *e* 22 11 18.2
ZALV Zalesovo Beam 34.30 31 P **P** **22 11 10.8 -0.3**
comp=Z,86nm,0.6s,baz=238,slow=9.1,SNR=232
ZALV PcP **PcP** **22 13 46.1 -0.9**
comp=Z,4.2nm,0.5s,baz=229,slow=3.5,SNR=1.8
ZALV S **S** **22 16 38.8 +1.1**
comp=Z,9.3nm,0.9s,baz=245,slow=18,SNR=4.2
ZALV LR LR 22 27 28.0
comp=Z,4µm,22.0s,baz=228,slow=40
comp=Z,86nm,0.6s
ZALV Zalesovo Beam 34.30 31 **P** **22 11 10.8 -0.3**
ZALV **PcP** **22 13 45.1 -2.0**
PSZ Piszkesteto 34.39 316 ⇑P **P** **22 11 13.2 +1.2**
PSZ Piszkesteto 34.39 316 IAmb IAmb 22 11 20.1
comp=Z,89nm,1.1s
PSZ Piszkesteto 34.39 316 P **P** **22 11 13.2 +1.2**
PSZ Piszkesteto 34.39 316 *eP* **P** **22 11 12.4 +0.4**
GOMU GeErMu 34.50 65 P **P** **22 11 13.9 +0.4**
GOMU S **S** **22 16 42.0 -0.1**
GOMU pmax pmax
comp=Z,24nm,1.1s
GOMU L L
comp=Z,2µm,17.3s
GOMU L L
comp=Z,2µm,17.1s
GOMU L L
comp=Z,2µm,15.4s
NACGM Naroch 34.52 331 *eP* **P** **22 11 12.7 -0.3**
comp=Z,78nm,1.0s,baz=131
MORH Mrgy, Hungar 34.54 313 ⇑P **P** **22 11 13.7 +0.5**
MORH Mrgy, Hungar 34.54 313 P **P** **22 11 13.4 +0.2**
comp=Z,60nm,1.1s
MORH Mrgy, Hungar 34.54 313 *eP* **P** **22 11 13.0 -0.2**
CEL Celeste 34.69 298 IAmb IAmb 22 11 27.3
comp=Z,60nm,1.0s
CEL Celeste 34.69 298 P **P** **22 11 15.6 +0.8**
comp=Z,650nmcomp=Z,64nm,1.1s
NIE Niedzica 34.78 319 *eP* **P** **22 11 16.6 +1.2**
NIE Niedzica 34.78 319 P **P** **22 11 16.0 +0.6**
comp=Z,15nm,1.3s
BLY Banja Luka 35.05 310 ⇑P **P** **22 11 18.3 +0.6**
BLY Banja Luka 35.05 310 *eP* **P** **22 11 15.2 -2.5**
LANS Liptovska Anna 35.16 318 *eP* **P** **22 11 19.6 +1.0**
LANS *e* 22 11 26.6
LANS pmax pmax
comp=Z,24nm,0.8s
LANS Liptovska Anna 35.16 318 *eP* **P** **22 11 19.6 +1.0**
LANS *e* 22 11 26.6
KLMR Klimovskoe 35.20 347 *eP* **P** **22 11 18.5 -0.3**
KLMR pmax pmax
comp=Z,195nm,1.2s
ISAL Salakas 35.24 331 *eP* **P** **22 11 20.2 +1.0**
SRO Srobarova 35.33 315 *eP* **P** **22 11 20.9 +0.9**
SRO *e* 22 11 27.3
SRO pmax pmax
comp=Z,26nm,1.0s
SRO Srobarova 35.33 315 *eP* **P** **22 11 20.9 +0.9**
SRO *e* 22 11 27.3
OJC Ojcow 35.43 320 *eP* **P** **22 11 21.2 +0.3**
OJC Ojcow 35.43 320 P **P** **22 11 21.2 +0.3**
OJC Ojcow 35.43 320 P **P** **22 11 20.7 -0.2**
comp=Z,2µmcomp=Z,237nm,1.2s
MPLH Magyarpolny 35.58 314 P **P** **22 11 22.4 +0.1**
comp=Z,3µmcomp=Z,235nm,1.2s
SUW Suwalki 35.61 327 *eP* **P** **22 11 22.5 +0.1**
SUW Suwalki 35.61 327 *eP* **P** **22 11 23.3 +0.9**
BEL Belsk 35.65 323 *eP* **P** **22 11 23.3 +0.5**
R9F13 Warsaw-Wawer 35.66 324 *eP* **P** **22 11 23.6 +0.8**
R9F13 *e*S **S** **22 16 54.1 -4.6**
BEHE Becsehely 35.84 313 IAmb IAmb 22 11 32.4
comp=Z,52nm,1.1s
BEHE Becsehely 35.84 313 *eP* **P** **22 11 24.8 +0.3**
JAVC Velka Javorina 36.12 317 *eP* **P** **22 11 27.6 +0.7**
SMOL Smolenice 36.14 316 *eP* **P** **22 11 27.7 +0.7**
SMOL *e* 22 11 34.3
PABE Paberze 36.14 330 *eP* **P** **22 11 27.8 +0.8**
MODS Modra-Piesok 36.18 316 *eP* **P** **22 11 28.1 +0.7**
MODS *e* 22 11 33.5
MODS Modra-Piesok 36.18 316 *eP* **P** **22 11 28.1 +0.7**
MODS *e* 22 11 33.5
KOGS Kog 36.18 312 *eP* **P** **22 11 27.4 +0.1**
KOGS *e* 22 12 35.4
MAUC Maruska 36.22 318 *eP* **P** **22 11 28.3 +0.5**
MAUC *ep*P **sP** **22 11 34.6 +0.3**
OKC Ostrava-Krasne 36.23 319 *eP* **P** **22 11 27.6 -0.1**
OKC MLR MLR
comp=Z,2µm,15.4s
OKC Ostrava-Krasne 36.23 319 *eP* **P** **22 11 27.6 -0.1**
OKC AMS AMS 22 29 00.0
comp=Z,2µm,15.4s
MBAR Mbarara 36.48 224 LR LR 22 27 00.8
comp=Z,5µm,18.5s,baz=43,slow=37
MBAR Mbarara 36.48 224 P **P** **22 11 31.0 +0.5**
MBAR Mbarara 36.48 224 P **P** **22 11 31.0 +0.5**
MBAR pmax pmax
comp=Z,18nm,1.0s
STEB Steborice 36.49 318 *eP* **P** **22 11 29.8 -0.2**
STEB *ep*P **sP** **22 11 35.3 -1.2**
RONA Rosalia, Austr 36.56 314 *eP* **P** **22 11 30.5 -0.2**
comp=Z,5.7nm,0.4s,SNR=5.6
MORC Moravsky Berou 36.56 318 ⇑P **P** **22 11 30.6 0.0**
MORC Moravsky Berou 36.56 318 P **P** **22 11 30.6 0.0**
MORC Moravsky Berou 36.56 318 *eP* **P** **22 11 30.1 -0.6**
BOJS Bojanci 36.57 311 *eP* **P** **22 11 31.0 +0.2**
PUL Pulkovo 36.71 339 *i* P **P** **22 11 31.4 -0.3**
PUL pmax pmax
comp=Z,237nm,1.0s
WINA Alland / Wiene 36.84 315 *eP* **P** **22 11 32.8 -0.1**
comp=Z,11nm,0.5s
ARSA Arzberg 36.91 313 *i* P **P** **22 11 33.7 +0.1**
comp=Z,11nm,1.0s,SNR=6.9
CONA Conrad Observa 36.91 315 *i* P **P** **22 11 33.4 -0.3**
comp=Z,14nm,1.0s,SNR=6.2
VRAC Vranov 36.95 317 P **P** **22 11 33.4 -0.5**
comp=Z,15nm,0.6s,baz=111,slow=7.8,SNR=23
VRAC LR LR 22 30 23.2
comp=Z,2µm,18.4s,baz=124,slow=42
comp=Z,15nm,0.6s
VRAC Vranov 36.95 317 ⇓P **P** **22 11 34.8 +0.9**
VRAC Vranov 36.95 317 P **P** **22 11 34.8 +0.9**
VRAC Vranov 36.95 317 *eP* **P** **22 11 34.0 +0.1**
KRUC Moravsky 36.98 317 *eP* **P** **22 11 34.0 -0.1**
VSU Vasula 36.98 335 *i* P **P** **22 11 34.0 0.0**
VSU pmax pmax
comp=Z,116nm,0.8s
VSU Vasula 36.98 335 *eP* **P** **22 11 34.2 +0.2**
SOKA Soboth 37.05 312 *i* P **P** **22 11 34.9 -0.1**
comp=Z,13nm,1.3s,SNR=5.7
KRLC Kraliky 37.13 318 *eP* **P** **22 11 35.1 -0.4**
KRLC MLR MLR
comp=Z,2µm,14.5s
KRLC Kraliky 37.13 318 *eP* **P** **22 11 35.1 -0.4**
KRLC AMS AMS 22 30 00.0
comp=Z,2µm,14.5s
AQU L'Aquila 37.17 305 P **P** **22 11 36.9 +1.0**
AQU L'Aquila 37.17 305 P **P** **22 11 37.0 +1.0**
comp=Z,1µmcomp=Z,118nm,0.9s
AQU L'Aquila 37.17 305 *eP* **P** **22 11 36.5 +0.6**
LJU Ljubljana 37.21 311 *eP* **P** **22 11 36.7 +0.5**
LJU *e* 22 11 42.0
OBKA Obir 37.32 312 *eP* **P** **22 11 37.1 -0.1**
comp=Z,17nm,1.5s
DPC Dobruska-Polom 37.51 318 *eP* **P** **22 11 38.8 +0.1**
DPC MLR MLR
comp=Z,2µm,17.6s
DPC Dobruska-Polom 37.51 318 *eP* **P** **22 11 38.8 +0.1**
DPC AMS AMS 22 30 20.0
comp=Z,2µm,17.6s
DPC Dobruska-Polom 37.51 318 P **P** **22 11 38.3 -0.4**
comp=Z,109nm,1.1s
TREC Trest 37.62 317 AMS AMS 22 30 50.0
comp=Z,3µm,15.2s
TRI Trieste 37.63 310 IAmb IAmb 22 11 47.2
comp=Z,86nm,1.0s
OSTC Ostas 37.65 319 *eP* **P** **22 11 40.2 +0.3**
OSTC MLR MLR
comp=Z,2µm,17.2s
OSTC Ostas 37.65 319 *eP* **P** **22 11 40.2 +0.3**
OSTC AMS AMS 22 31 20.0
comp=Z,2µm,17.2s
KSP Ksiaz 37.72 319 *eP* **P** **22 11 40.7 +0.3**
KSP Ksiaz 37.72 319 P **P** **22 11 40.2 -0.2**
comp=Z,122nm,1.1s
UPC Upice 37.75 319 *eP* **P** **22 11 40.6 -0.1**
UPC MLR MLR
comp=Z,2µm,15.2s
UPC Upice 37.75 319 *eP* **P** **22 11 40.6 -0.1**
UPC AMS AMS 22 30 00.0
comp=Z,2µm,15.2s
CHVC Chvalec 37.76 319 *eP* **P** **22 11 40.9 +0.1**
CHVC Chvalec 37.76 319 *eP* **P** **22 11 40.9 +0.1**
SABO M.te Sabotino 37.81 311 IAmb IAmb 22 11 48.8
comp=Z,52nm,0.9s
MOA Molln 37.90 314 *eP* **P** **22 11 41.8 -0.3**
comp=Z,8.7nm,0.7s,SNR=7.5
MYKA Terra Mystica 37.96 312 *eP* **P** **22 11 42.5 -0.1**
comp=Z,5.1nm,0.8s
PRED Cave del Predi 37.96 311 IAmb IAmb 22 11 57.1
comp=Z,82nm,1.2s
SLIT Slitere, Latvi 38.19 332 *eP* **P** **22 11 44.7 +0.5**
GKP Gorka Klasztor 38.24 323 *eP* **P** **22 11 45.1 +0.3**
GKP Gorka Klasztor 38.24 323 *eP* **P** **22 11 44.9 +0.2**
ADZR Andozero 38.25 348 *eP* **P** **22 11 43.9 -0.8**
ADZR pmax pmax
comp=Z,88nm,1.0s
BIOA Bad Ischl, Aus 38.26 313 *i* P **P** **22 11 44.9 -0.2**
comp=Z,7.8nm,0.5s,SNR=13
BIOA *e*S **S** **22 17 38.3 -0.2**
comp=Z,1.2nm,0.4s
MTSE Matsula 38.27 334 *eP* **P** **22 11 45.5 +0.6**
KBA Koelnbreinsper 38.27 312 *i* P **P** **22 11 45.2 -0.2**
comp=Z,12nm,0.8s,SNR=14
PBA Port Blair 38.35 107 P **P** **22 11 48.3 +2.2**
PRU Pruhonice 38.44 317 *eP* **P** **22 11 46.2 -0.3**
PRU MLR MLR
comp=Z,2µm,15.2s
PRU Pruhonice 38.44 317 *eP* **P** **22 11 46.2 -0.3**
PRU AMS AMS 22 31 40.0
comp=Z,2µm,15.2s
ZVC Zvikov 38.46 316 *eP* **P** **22 11 47.0 +0.3**
ZVC *e*S **S** **22 17 37.7 -3.8**
ZVC AMS AMS 22 31 10.0
comp=Z,2µm,15.7s

STAL STALIGIAL 38.48 311 IAmb IAmb 22 11 54.4
comp=Z,82nm,1.0s
PRA Prague 38.53 317 *e*P **P** **22 11 51.7 +4.4**
PRA Prague 38.53 317 *e*P **P** **22 11 51.7 +4.4**
GERES GERESS Array B 38.57 315 P **P** **22 11 47.1 -0.6**
comp=Z,3.4nm,0.5s,baz=97,slow=7.8,SNR=27
GERES LR LR 22 29 22.8
comp=Z,1μm,20.9s,baz=114,slow=39
comp=Z,3.4nm,0.5s
PVCC Panska Ves 38.61 318 AMS AMS 22 32 00.0
comp=Z,2μm,15.6s
GTA2 Gaotai 38.64 60 P **P** **22 11 49.3 +0.8**
GTA2 pP pP 22 11 52.8 -0.3
GTA2 S **S** **22 17 41.6 -3.2**
GTA2 SS **SnSn** **22 20 28.1 -4.6**
GTA2 pmax pmax
comp=Z,74nm,1.4s
GTA2 pmax pmax
comp=Z,580nm,5.6s
GTA2 L L
comp=Z,1μm,15.2s
GTA2 L L
comp=Z,3μm,14.9s
GTA2 L L
comp=Z,4μm,14.9s
TNCH TengChong 38.66 83 P **P** **22 11 50.8 +1.9**
TNCH PP **PnPn** **22 13 21.9 +2.4**
TNCH S **S** **22 17 46.5 +1.0**
TNCH pmax pmax
comp=Z,160nm,1.4s
TNCH pmax pmax
comp=Z,1μm,3.2s
TNCH L L
comp=Z,880nm,11.3s
TNCH L L
comp=Z,710nm,12.6s
TNCH L L
comp=Z,1μm,11.7s
ABTA Abfaltersbach 38.74 312 *i* P **P** **22 11 49.0 -0.2**
comp=Z,8.3nm,0.7s,SNR=16
KHC Kasperske Hory 38.74 316 *e*P **P** **22 11 48.9 -0.2**
KHC *e*S **S** **22 17 38.8 -7.0**
KHC MLR MLR
comp=Z,2μm,19.0s
KHC Kasperske Hory 38.74 316 *e*P **P** **22 11 48.9 -0.2**
KHC *e*S **S** **22 17 38.8 -7.0**
KHC AMS AMS 22 31 10.0
comp=Z,2μm,19.0s
KHC Kasperske Hory 38.74 316 P **P** **22 11 48.6 -0.5**
comp=Z,131nm,1.2s
LESA Schwarzleotal 38.81 313 *i* P **P** **22 11 49.1 -0.6**
comp=Z,8.3nm,0.5s,SNR=14
RJOB Jochberg 38.82 313 *e*P **P** **22 11 49.3 -0.5**
comp=Z,52nm,0.8s,baz=109,slow=8.3
RICC Richard 38.90 318 *e*P **P** **22 11 50.3 -0.1**
RICC AMS AMS 22 31 50.0
comp=Z,2μm,16.3s
JOF Joensuu 38.94 343 *e*P **P** **22 11 50.4 -0.2**
TEOL Teolo 38.98 309 IAmb IAmb 22 11 58.2
comp=Z,124nm,1.3s
MEF Metsahovi 39.06 336 *e*P **P** **22 11 51.7 +0.2**
BRG Berggiesshubel 39.11 318 *e*P **P** **22 11 52.0 -0.1**
comp=Z,106nm,1.0s,baz=109,slow=8.3
CTI Castel Tesino 39.15 310 IAmb IAmb 22 12 00.3
comp=Z,84nm,0.9s
HSKC Hora Svate Kat 39.32 318 *e*P **P** **22 11 53.3 -0.6**
HSKC AMS AMS 22 32 00.0
comp=Z,3μm,15.9s
FINES FINESS Array B 39.35 338 P **P** **22 11 53.8 -0.2**
comp=Z,9.0nm,0.5s,baz=134,slow=9.2,SNR=47
FINES LR LR 22 31 06.7
comp=Z,1μm,19.5s,baz=144,slow=41
comp=Z,9.0nm,0.5s
FINES FINESS Array B 39.35 338 **P** **22 11 54.0 0.0**
FINES FINESS Array B 39.35 338 P **P** **22 11 54.0 0.0**
WTTA Wattenberg 39.45 312 *i* P **P** **22 11 54.5 -0.7**
comp=Z,18nm,0.5s,SNR=19
WTTA *e*S **S** **22 17 56.3 -0.5**
comp=Z,23nm,1.6s
KNGR Kungurtug, Tuv 39.46 42 *i* P **P** **22 11 55.4 +0.2**
KNGR pmax pmax
comp=Z,79nm,1.1s
WATA Walderalm 39.51 312 *i* P **P** **22 11 54.7 -1.0**
comp=Z,11nm,0.6s,SNR=27
WATA *e*S **S** **22 17 57.3 -0.3**
comp=Z,4.7nm,0.8s
VLC Villacollemand 39.65 307 P **P** **22 11 57.6 +0.9**
SQTA Sankt Quirin 39.72 312 *i* P **P** **22 11 56.6 -0.8**
comp=Z,23nm,0.5s,SNR=23
SQTA *e*S **S** **22 17 59.1 -1.7**
comp=Z,6.9nm,0.8s
NKC Novy Kostel 39.79 317 *e*P **P** **22 12 00.2 +2.4**
NKC *e**PP **sP** **22 12 04.2 -0.2**
NKC MLR MLR
comp=Z,2μm,15.9s
NKC Novy Kostel 39.79 317 *e*P **P** **22 12 00.2 +2.4**
NKC *e*pP **sP** **22 12 04.2 -0.2**
NKC AMS AMS 22 32 20.0
comp=Z,2μm,15.9s
ROTZ Rotzenmuhle 39.79 316 *e*P **P** **22 11 57.8 0.0**
comp=Z,24nm,1.1s,baz=109,slow=8.3
RUE Ruedersdorf 39.80 321 *e*P **P** **22 11 57.9 0.0**
RUE Ruedersdorf 39.80 321 *e*P **P** **22 11 57.9 0.0**
comp=Z,184nm,1.0s,baz=109,slow=8.3
KEST Kesra 39.81 294 P **P** **22 11 59.4 +1.1**
comp=Z,15nm,0.9s,baz=117,slow=0.8,SNR=22
KEST LR LR 22 32 43.3
comp=Z,1μm,18.8s,baz=49,slow=43
comp=Z,15nm,0.9s
KEST Kesra 39.81 294 IAmb IAmb 22 12 08.5
comp=Z,68nm,0.9s
KEST Kesra 39.81 294 P **P** **22 12 00.1 +1.8**
SNR=15
CLL Collm 39.82 319 IAmb IAmb 22 12 06.0
comp=Z,143nm,1.0s
CLL Collm 39.82 319 *i* P **P** **22 11 58.1 +0.1**
CLL *e*S **S** **22 18 03.0 +1.2**
CLL pmax pmax
comp=Z,183nm,1.1s
CLL MLR MLR
comp=Z,3μm,18.0s
CLL Collm 39.82 319 *i* P **P** **22 11 58.1 +0.1**
comp=Z,183nm,1.1s
CLL *i* x x 22 12 03.7
comp=Z,183nm,1.1s
CLL *e*Pmax 22 12 03.0
CLL *e*S **S** **22 18 03.0 +1.2**
CLL *e*x x 22 18 34.0
CLL *e*SS **SS** **22 20 54.0 -3.8**
CLL AMS AMS 22 32 00.0
CLL AMS AMS 22 32 00.0
comp=Z,3μm,18.0s
CLL Collm 39.82 319 *e*P **P** **22 11 58.1 +0.1**
comp=Z,172nm,1.1s,baz=109,slow=8.3
CLL Collm 39.82 319 P **P** **22 11 58.2 +0.2**
comp=Z,152nm,1.1s
MOTA Moosalm 39.82 312 *i* P **P** **22 11 57.1 -1.2**
comp=Z,18nm,0.5s,SNR=17
MOTA *e*S **S** **22 18 00.4 -1.9**
comp=Z,5.6nm,1.2s
FUR Furstenfeldbru 39.91 313 *e*P **P** **22 11 58.3 -0.7**
comp=Z,252nm,1.4s,baz=109,slow=8.3
FETA Feichten 39.99 312 *i* P **P** **22 11 59.1 -0.6**
comp=Z,16nm,0.5s,SNR=25
FETA *e*S **S** **22 18 01.6 -3.3**
comp=Z,11nm,1.0s
RETA Reutte 40.08 312 *e*P **P** **22 11 59.5 -0.9**
comp=Z,8.3nm,0.5s
FUORN Ofenpass-Fuorn 40.21 311 IAmb IAmb 22 12 21.2
comp=Z,86nm,0.9s
SUF Sumiainen 40.27 340 *e*P **P** **22 12 02.6 +1.0**
KEF Keuruu 40.27 338 *e*P **P** **22 12 01.9 +0.3**
BSD Bornholm Skovb 40.30 325 *e*P **P** **22 12 01.0 -0.9**
BSD Bornholm Skovb 40.30 325 *i* P **P** **22 12 00.8 -1.1**
BSD IAmb IAmb 22 12 01.4
comp=Z,21nm,0.7s
GRF Grafenberg Arr 40.37 316 *e*P **P** **22 12 02.6 -0.1**
comp=Z,169nm,1.1s,baz=109,slow=8.3
GRF *e*L L 22 32 36.1
comp=Z,2μm,18.4s
GRFO Grafenberg 40.38 316 P **P** **22 12 02.6 0.0**
GRFO IAmb IAmb 22 12 10.4
comp=Z,111nm,0.9s
GRFO Grafenberg 40.38 316 P **P** **22 12 02.7 0.0**
GRFO pmax pmax
comp=Z,111nm,0.9s

BLEU Blekinge 40.41 327 *i* P **P** **22 12 02.6 -0.3**
MOX Moxa 40.42 317 P **P** **22 12 03.5 +0.4**
MOX Moxa 40.42 317 *e*L L 22 30 45.3
comp=Z,2μm,19.6s
HAMD Hammershus, De 40.44 325 *i* P **P** **22 12 03.4 +0.3**
HAMD IAmb IAmb 22 12 09.3
comp=Z,93nm,1.0s
DAVOX Davos/Dischmat 40.50 311 LR LR 22 32 46.7
comp=Z,3μm,18.9s,baz=98,slow=42
NEUB Neuenburg 40.51 318 *e*P **P** **22 12 03.8 +0.1**
comp=Z,115nm,0.9s,baz=109,slow=8.3
UBR Ueberruh 40.55 312 *e*P **P** **22 12 03.6 -0.7**
comp=Z,180nm,1.0s,baz=109,slow=8.3
RAF Rauma 40.57 336 *e*P **P** **22 12 02.2 -1.9**
DAVA Damuels 40.62 312 *e*P **P** **22 12 04.1 -0.8**
comp=Z,46nm,0.5s,SNR=47
DAVA S **S** **22 18 13.1 -1.1**
comp=Z,13nm,1.3s
AAL Aland 40.71 334 *e*P **P** **22 12 05.5 +0.3**
TUE Stuetta 40.80 310 **P** **22 12 05.6 -0.9**
TUE Stuetta 40.80 310 P **P** **22 12 06.2 -0.3**
comp=Z,200nm,1.1s
CHTO Chiang Mai 40.82 92 P **P** **22 12 07.4 +0.7**
CHTO Chiang Mai 40.82 92 **P** **22 12 07.5 +0.7**
CHTO Chiang Mai 40.82 92 P **P** **22 12 07.5 +0.7**
CHTO pmax pmax
comp=Z,33nm,1.1s
CHTO Chiang Mai 40.82 92 P **P** **22 12 05.9 -0.8**
comp=Z,960nmcomp=Z,27nm,1.1s
CM31 Chiang Mai Arr 40.94 93 P **P** **22 12 08.0 +0.3**
CM31 Chiang Mai Arr 40.94 93 P **P** **22 12 08.9 +1.2**
SNR=12
CMAR Chiang Mai Arr 40.94 93 P **P** **22 12 08.8 +1.0**
comp=Z,5.5nm,0.8s,baz=292,slow=7.8,SNR=31
CMAR PcP **PcP** **22 14 08.4 +0.3**
comp=Z,4.7nm,0.6s,baz=281,slow=4.8,SNR=11
CMAR LR LR 22 33 52.8
comp=Z,930nm,18.1s,baz=280,slow=43
comp=Z,5.5nm,0.8s
CMAR Chiang Mai Arr 40.94 93 **P** **22 12 08.2 +0.5**
CMAR **PcP** **22 14 07.8 -0.3**
PZH PanZhiHua 41.18 80 P **P** **22 12 10.5 +0.7**
PZH PP **PP** **22 13 46.6 +1.8**
PZH S **S** **22 18 21.8 -1.3**
PZH SS **SS** **22 21 23.6 -2.4**
PZH ScS **ScS** **22 22 11.6 -2.8**
PZH pmax pmax
comp=Z,60nm,1.0s
PZH pmax pmax
comp=Z,560nm,4.5s
PZH L L
comp=Z,650nm,15.7s
PZH L L
comp=Z,540nm,13.9s
PZH L L
comp=Z,670nm,13.2s
FLTG Flechtingen 41.20 320 *e*P **P** **22 12 09.7 +0.3**
comp=Z,364nm,1.1s,baz=109,slow=8.3
LUNU Lund 41.28 325 *i* P **P** **22 12 10.3 +0.3**
GORT1 Trebel 41.39 321 *e*P **P** **22 12 11.3 +0.4**
comp=Z,280nm,1.2s,baz=109,slow=8.3
STU Stuttgart 41.41 314 *e*P **P** **22 12 10.8 -0.4**
DEL Delary 41.44 326 *i* P **P** **22 12 11.2 -0.1**
DEL IAmb IAmb 22 12 15.9
comp=Z,12nm,1.2s
ASSE Asse, Remlinge 41.46 319 *e*P **P** **22 12 11.9 +0.4**
comp=Z,131nm,1.0s,baz=109,slow=8.3
CLZ Clausthal 41.54 319 *e*P **P** **22 12 13.0 +0.6**
comp=Z,291nm,1.0s,baz=109,slow=8.3
VAF Ylistaro 41.61 338 *e*P **P** **22 12 13.2 +0.6**
BJUU Bjuv 41.69 325 *e*P **P** **22 12 13.4 0.0**
LZDM Lanzhou Array 41.69 66 P **P** **22 12 14.4 +0.3**
comp=Z,24nm,0.9s,baz=255,slow=9.8,SNR=18
LZDM LR LR 22 32 57.1
comp=Z,2μm,22.0s,baz=15,slow=41
comp=Z,24nm,0.9s
GTTG Gottingen 41.69 318 *e*P **P** **22 12 13.9 +0.5**
comp=Z,158nm,1.1s,baz=109,slow=8.3
LZH Lanzhou 41.81 65 P **P** **22 12 15.5 +0.6**
LZH sP sP 22 12 25.3 +4.0
LZH pmax pmax
comp=Z,40nm,1.5s
LZH pmax pmax
comp=Z,280nm,5.5s
LZH L L
comp=Z,4μm,17.2s
LZH L L
comp=Z,1μm,17.9s
LZH L L
comp=Z,2μm,13.1s
COP Copenhagen 41.82 325 *i* P **P** **22 12 13.6 -0.9**
COP IAmb IAmb 22 12 22.5
comp=Z,343nm,1.1s
BFO Black Forest 41.87 313 **P** **22 12 14.7 -0.3**
BFO Black Forest 41.87 313 P **P** **22 12 14.7 -0.3**
BFO pmax pmax
comp=Z,62nm,1.4s
MOY Mondy 41.87 42 *e*P **P** **22 12 15.5 +0.4**
MOY pmax pmax
comp=Z,45nm,1.7s
SENIN Lac Senin/Sane 42.17 310 IAmb IAmb 22 12 25.2
comp=Z,68nm,1.1s
CD2 Chengdu 42.18 73 P **P** **22 12 17.5 -0.3**
CD2 PP **PP** **22 13 55.8 +0.3**
CD2 S **S** **22 18 37.3 -0.3**
CD2 SS **SS** **22 21 46.0 +0.5**
CD2 pmax pmax
comp=Z,40nm,0.9s
CD2 pmax pmax
comp=Z,510nm,7.0s
CD2 L L
comp=Z,2μm,13.5s
CD2 L L
comp=Z,2μm,14.3s
TNS Taunus Mts 42.24 316 *e*P **P** **22 12 18.0 -0.1**
comp=Z,108nm,1.1s,baz=109,slow=8.3
KMI2 Kunming 42.37 82 ⇑P **P** **22 12 20.8 +1.2**
KMI2 S **S** **22 18 41.0 +0.2**
KMI2 SS **SS** **22 21 50.4 +0.8**
KMI2 pmax pmax
comp=Z,69nm,1.0s
KMI2 pmax pmax
comp=Z,880nm,6.1s
KMI2 L L
comp=Z,750nm,19.2s
KMI2 L L
comp=Z,1μm,14.1s
KMI2 L L
comp=Z,2μm,14.6s
BNI Bardonecchia 42.40 308 IAmb IAmb 22 12 26.6
comp=Z,131nm,1.1s
APA Apatity 42.42 348 ⇓*i*P **P** **22 12 19.0 -0.2**
APA *i* 22 13 57.4
APA *i* 22 14 11.4
APA *i* S **S** **22 18 39.6 -0.4**
APA *i* SS **SS** **22 21 44.0 -5.0**
APA pmax pmax
comp=Z,40nm,1.1s
APA MLR MLR
comp=Z,3μm,11.9s
BORU Boraas 42.51 327 *e*P **P** **22 12 20.4 +0.4**
KASTN Kahler Asten 42.52 317 *e*P **P** **22 12 20.8 +0.5**
comp=Z,185nm,1.2s,baz=109,slow=8.3
ECH Echery 42.61 313 IAmb IAmb 22 12 28.1
comp=Z,108nm,1.1s
ONAU Onsala 42.81 327 *e*P **P** **22 12 22.3 -0.2**
ZAK Zakamensk 42.91 44 *e*P **P** **22 12 23.4 -0.2**
ZAK pmax pmax
comp=Z,47nm,2.0s
BUG Bochum--Univer 43.28 317 *e*P **P** **22 12 27.0 +0.6**
comp=Z,242nm,1.1s,baz=109,slow=8.3
HFS Hagfors 43.29 331 P **P** **22 12 25.9 -0.5**
comp=Z,11nm,0.6s,baz=124,slow=9.5,SNR=41
HFS LR LR 22 32 50.2
comp=Z,2μm,21.7s,baz=132,slow=39
comp=Z,11nm,0.6s
TLY Talaya 43.46 43 P **P** **22 12 27.6 -0.3**
comp=Z,6.2nm,0.9s,baz=207,slow=2.3
TLY LR LR 22 31 38.2
comp=Z,2μm,19.4s,baz=252,slow=38
comp=Z,6.2nm,0.9s
TLY Talaya 43.46 43 P **P** **22 12 27.4 -0.5**
TLY Talaya 43.46 43 *ce*P **P** **22 12 28.8 +0.9**
TLY pmax pmax
comp=Z,10.0nm,1.3s
WLF Walferdange 43.55 314 P **P** **22 12 28.5 -0.1**

WLF Walferdange 43.55 314 IAmb IAmb 22 12 36.2
comp=Z,95nm,1.0s
WLF Walferdange 43.55 314 *d*P **P** **22 12 28.1 -0.5**
comp=Z,60nm,0.9s
BTNL Ternell 43.77 316 *d*P **P** **22 12 31.4 +1.0**
comp=Z,35nm,1.0s
BHOU Houvegnez 43.80 315 *d*P **P** **22 12 31.0 +0.4**
comp=Z,30nm,1.1s
MUD Monsted U'grnd 43.81 325 *i* P **P** **22 12 29.8 -0.8**
MUD IAmb IAmb 22 12 38.0
comp=Z,155nm,1.3s
MAHO Mahon 43.82 300 P **P** **22 12 32.0 +1.1**
MEM Membach 43.85 316 *d*P **P** **22 12 31.8 +0.8**
comp=Z,58nm,1.0s
STRU Stroemstad 43.89 329 *i* P **P** **22 12 30.5 -0.6**
SSB Saint Sauveur 43.93 308 IAmb IAmb 22 12 38.7
comp=Z,45nm,0.9s
IRK Irkutsk 43.98 42 *e*P **P** **22 12 29.7 -2.4**
IRK pmax pmax
comp=Z,54nm,2.8s
BEBN Eben Emael 44.10 316 *d*P **P** **22 12 33.8 +0.8**
comp=Z,79nm,1.0s
RCHB Rochefort 44.24 315 *d*P **P** **22 12 34.2 +0.1**
comp=Z,48nm,1.3s
BCLA Clavier 44.25 315 *d*P **P** **22 12 34.2 0.0**
comp=Z,60nm,1.2s
BGES Gesves 44.38 315 *d*P **P** **22 12 35.6 +0.4**
comp=Z,50nm,1.1s
SONM Songino Array 44.41 48 P **P** **22 12 35.9 +0.1**
comp=Z,20nm,0.9s,baz=260,slow=8.9,SNR=31
SONM PcP **PP** **22 14 18.9 -0.4**
comp=Z,2.7nm,0.8s,baz=243,slow=5.1,SNR=1.0
SONM LR LR 22 33 17.2
comp=Z,3μm,20.0s,baz=262,slow=39
comp=Z,20nm,0.9s
SONM Songino Array 44.41 48 **P** **22 12 35.9 +0.1**
SONM **PP** **22 14 18.5 -0.8**
OSL Oslo 44.50 330 *e*P **P** **22 12 36.3 +0.2**
OSL IAmb IAmb 22 12 42.6
comp=Z,200nm,1.2s
NC602 NORSAR Array S 44.52 331 IAmb IAmb 22 12 43.2
comp=Z,72nm,1.2s
NC602 NORSAR Array S 44.52 331 *e*P **P** **22 12 35.9 -0.3**
NC602 IAmb IAmb 22 12 42.1
comp=Z,77nm,1.2s
BMRD Maredsous 44.56 315 *d*P **P** **22 12 37.1 +0.4**
comp=Z,53nm,1.4s
BMRD *d*pP **pP** **22 12 40.3 -1.1**
NC405 NORSAR Array S 44.62 332 IAmb IAmb 22 12 43.6
comp=Z,96nm,1.1s
DOU Dourbes 44.63 315 *d*P **P** **22 12 37.5 +0.3**
comp=Z,83nm,1.2s
NB201 NORSAR Array S 44.77 331 IAmb IAmb 22 12 45.2
comp=Z,66nm,1.0s
NB2 NORSAR Subarra 44.80 331 P **P** **22 12 37.8 -0.7**
comp=Z,5.7nm,0.7s,baz=118,slow=8.6
NB2 NORSAR Subarra 44.80 331 PKP 22 26 34.4
comp=Z,1.4nm,0.7s,baz=17,slow=4.3
NB2 NORSAR Subarra 44.80 331 P **P** **22 12 37.8 -0.7**
NOA NORSAR Array B 44.80 331 P **P** **22 12 37.6 -1.0**
comp=Z,8.7nm,0.7s,baz=117,slow=7.9,SNR=23
NOA PP **PcP** **22 14 20.8 +0.5**
comp=Z,10nm,1.1s,baz=127,slow=11,SNR=3.6
NOA LR LR 22 33 46.9
comp=Z,2μm,21.1s,baz=125,slow=39
comp=Z,8.7nm,0.7s
HOMB Homborsund 44.84 327 *e*P **P** **22 12 38.7 0.0**
HOMB IAmb IAmb 22 12 45.3
comp=Z,235nm,1.6s
NAO01 NORSAR Array S 44.85 331 IAmb IAmb 22 12 46.0
comp=Z,75nm,1.1s
ULN Ulaanbaatar 44.86 49 **P** **22 12 39.1 -0.2**
ULN Ulaanbaatar 44.86 49 *ce*P **P** **22 12 39.5 +0.2**
ULN pmax pmax
comp=Z,26nm,1.3s
ULN Ulaanbaatar 44.86 49 P **P** **22 12 37.8 -1.5**
KONO Kongsberg 44.89 329 **P** **22 12 38.7 -0.5**
KONO Kongsberg 44.89 329 *e*P **P** **22 12 38.7 -0.5**
KONO IAmb IAmb 22 12 48.4
comp=Z,76nm,1.2s
KONO Kongsberg 44.89 329 P **P** **22 12 38.7 -0.5**
KONO pmax pmax
comp=Z,122nm,1.4s
UCC Uccle 44.91 316 *d*P **P** **22 12 39.9 +0.4**
comp=Z,59nm,1.2s
EJON La Jonquera 44.92 304 P **P** **22 12 39.8 +0.1**
ETOS Mallorca 44.94 300 P **P** **22 12 40.8 +0.9**
NBO00 NORSAR Array S 44.99 331 IAmb IAmb 22 12 48.6
comp=Z,93nm,1.4s
NC204 NORSAR Array S 45.11 331 IAmb IAmb 22 12 47.3
comp=Z,64nm,1.4s
TAM Tamanrasset 45.14 276 **P** **22 12 41.3 -0.6**
TAM IAmb IAmb 22 13 31.9
comp=Z,42nm,1.0s
TAM Tamanrasset 45.14 276 P **P** **22 12 41.3 -0.6**
TAM pmax pmax
comp=Z,42nm,1.0s
VADS Vadso 45.37 348 *e*P **P** **22 12 43.1 +0.3**
VADS IAmb IAmb 22 12 43.8
comp=Z,691nm,2.4s
GYA Guiyang 45.50 79 ⇑P **P** **22 12 44.8 +0.1**
GYA PP **PP** **22 14 34.8 +3.7**
GYA S **S** **22 19 21.1 -5.2**
GYA pmax pmax
comp=Z,21nm,0.8s
GYA pmax pmax
comp=Z,640nm,6.9s
GYA L L
comp=Z,2μm,22.2s
GYA L L
comp=Z,780nm,23.6s
GYA L L
comp=Z,2μm,19.3s
CORI Orista 45.52 303 IAmb IAmb 22 12 54.0
comp=Z,52nm,0.9s
ARA0 ARCESS Array S 45.67 346 IAmb IAmb 22 12 44.9
comp=Z,113nm,1.6s
ARA0 *e*P **P** **22 12 45.2 -0.1**
ARCES ARCESS Array B 45.67 346 P **P** **22 12 45.0 -0.3**
comp=Z,13nm,1.0s,baz=128,slow=7.9,SNR=12
ARCES PcP **PcP** **22 14 24.4 +1.2**
comp=Z,6.2nm,0.8s,baz=145,slow=4.4,SNR=1.4
ARCES PP **PP** **22 14 35.2 +3.1**
comp=Z,12nm,0.8s,baz=158,slow=13,SNR=3.7
comp=Z,13nm,1.0s
ARCES ARCESS Array B 45.67 346 P **P** **22 12 45.1 -0.2**
ARCES IAmb IAmb 22 12 52.5
comp=Z,69nm,1.4s
ARCES ARCESS Array B 45.67 346 P **P** **22 12 45.1 -0.2**
ARCES pmax pmax
comp=Z,69nm,1.5s
KTK1 Kautokeino 45.78 344 *e*P **P** **22 12 46.2 +0.1**
KTK1 IAmb IAmb 22 12 46.6
comp=Z,57nm,1.4s
CLF Chambon-Foret 45.81 312 IAmb IAmb 22 12 55.5
comp=Z,68nm,1.1s
SKAR Skarslia 45.91 330 *e*P **P** **22 12 47.4 +0.1**
EIBI Ibiza 46.09 299 P **P** **22 12 49.2 +0.2**
XAN Xi'an 46.12 68 ⇑P **P** **22 12 49.0 -0.4**
XAN pP pP 22 12 52.9 -1.1
XAN sP sP 22 12 56.5 +0.7
XAN PP **PP** **22 14 38.8 +1.3**
XAN S **S** **22 19 34.4 -0.5**
XAN pmax pmax
comp=Z,30nm,1.4s
XAN pmax pmax
comp=Z,390nm,11.1s
XAN L L
comp=Z,1μm,15.8s
XAN L L
comp=Z,3μm,13.1s
DOMB Dombas 46.18 332 *e*P **P** **22 12 49.3 -0.1**
DOMB IAmb IAmb 22 12 49.9
comp=Z,717nm,2.8s
BLS5 Blasjo 46.26 328 *e*P **P** **22 12 50.4 +0.3**
BLS5 IAmb IAmb 22 12 55.3
comp=Z,153nm,1.8s
NSS Namsos 46.27 336 *e*P **P** **22 12 50.1 +0.1**
NSS IAmb IAmb 22 12 54.4
comp=Z,4μm,4.2s
OPO Ambohidratompo 46.30 191 LR LR 22 30 49.4
comp=Z,2μm,19.8s,baz=174,slow=34
MOR8 Moi Rana 46.35 338 *e*P **P** **22 12 50.1 -0.5**
MOR8 IAmb IAmb 22 13 04.9
comp=Z,794nm,2.8s
ODD1 Odda 46.37 328 *e*P **P** **22 12 51.4 +0.5**

ODD1 IAmb IAmb 22 12 59.7
comp=Z,101nm,1.1s
BTO2 Baotou 46.43 59 *e*P **P** **22 12 52.5 +0.6**
BTO2 sP **sP** **22 13 00.4 +2.1**
BTO2 S **S** **22 19 40.4 +0.9**
BTO2 pmax pmax
comp=Z,87nm,0.9s
BTO2 pmax pmax
comp=Z,2µm,6.4s
BTO2 L L
comp=Z,2µm,15.5s
BTO2 L L
comp=Z,5µm,19.2s
LEIR Leirfjorden 46.75 338 *e*P **P** **22 12 53.6 -0.2**
LEIR IAmb IAmb 22 13 00.1
comp=Z,124nm,1.2s
FAUS Fauske 46.82 340 *e*P **P** **22 12 54.2 -0.1**
FAUS IAmb IAmb 22 13 04.8
comp=Z,104nm,1.2s
JETT Jettan, Norway 46.87 344 *e*P **P** **22 12 54.9 +0.2**
JETT IAmb IAmb 22 12 58.5
comp=Z,234nm,1.6s
STOK Stokkvaagen 46.91 338 *e*P **P** **22 12 54.9 -0.1**
STOK IAmb IAmb 22 12 59.6
comp=Z,86nm,1.1s
HAMF Hammerfest 46.93 346 *e*P **P** **22 12 55.3 +0.2**
HAMF IAmb IAmb 22 13 03.2
comp=Z,574nm,2.1s
KONS Konsvik 46.97 338 *e*P **P** **22 12 54.6 -0.8**
KONS IAmb IAmb 22 12 59.3
comp=Z,197nm,1.6s
HYA Hoyanger 47.06 330 *e*P **P** **22 12 56.6 +0.4**
HYA IAmb IAmb 22 13 04.9
comp=Z,240nm,1.5s
VAGH Vaagaholmen 47.06 339 *e*P **P** **22 12 56.4 +0.3**
VAGH IAmb IAmb 22 13 13.0
comp=Z,2µm,2.9s
BER Bergen 47.15 329 *e*P **P** **22 12 57.0 0.0**
BER IAmb IAmb 22 13 03.5
comp=Z,115nm,1.3s
STEI Steigen 47.17 341 *e*P **P** **22 12 56.9 -0.1**
STEI IAmb IAmb 22 13 11.9
comp=Z,6µm,4.8s
ELMS Elmsett, Ipswi 47.23 317 *e*P **P** **22 12 57.3 -0.4**
ASK Askoy 47.25 329 *e*P **P** **22 12 57.8 0.0**
ASK IAmb IAmb 22 13 09.4
comp=Z,6µm,3.8s
TRO Tromso 47.29 344 *e*P **P** **22 12 58.0 +0.1**
TRO IAmb IAmb 22 13 11.4
comp=Z,115nm,1.1s
HHC Hu-ho-hao-te 47.71 58 ⇑*i*P **P** **22 13 02.5 +0.7**
HHC pP pP 22 13 06.3 -0.2
HHC sP sP 22 13 10.8 +2.5
HHC PP **PP** **22 14 55.3 +1.9**
HHC S **S** **22 19 53.8 -3.9**
HHC pmax pmax
comp=Z,41nm,1.1s
HHC pmax pmax
comp=Z,230nm,4.5s
HHC L L
comp=Z,2µm,23.7s
HHC L L
comp=Z,1µm,20.8s
HHC L L
comp=Z,850nm,20.8s
LOF Lofoten 47.80 340 *e*P **P** **22 13 01.2 -0.7**
LOF IAmb IAmb 22 13 15.2
comp=Z,726nm,2.3s
ECHE Chera 47.86 300 P **P** **22 13 03.5 +0.6**
UBPT Khong Chiam 47.92 94 P **P** **22 13 04.0 +0.5**
CART Cartagena 48.02 297 P **P** **22 13 04.4 +0.3**
CART Cartagena 48.02 297 IAmb IAmb 22 13 12.2
comp=Z,32nm,0.9s
EMUR La Murta 48.19 298 P **P** **22 13 06.5 +1.0**
PSI Prapat 48.23 113 P P 22 13 12.0 +5.8
ETOB Tobarra 48.37 299 P **P** **22 13 07.6 +0.8**
WOL Wolverton 48.47 316 *e*P **P** **22 13 07.3 0.0**
TIY Taiyuan 48.58 63 P **P** **22 13 08.8 +0.3**
TIY PcP **PcP** **22 14 36.8 +2.7**
TIY S **S** **22 20 10.0 +0.1**
TIY pmax pmax
comp=Z,40nm,0.7s
TIY pmax pmax
comp=Z,400nm,4.0s
TIY L L
comp=Z,1µm,15.0s
TIY L L
comp=Z,2µm,15.1s
TIY L L
comp=Z,2µm,16.0s
CWF Charnwood Fore 48.72 317 *e*P **P** **22 13 08.1 -1.1**
CWF IAmb IAmb 22 13 09.5
comp=Z,7.7nm,0.6s
JSA Saint Aubin 48.86 313 *e*P **P** **22 13 09.5 -0.8**
JSA IAmb IAmb 22 13 10.6
comp=Z,14nm,0.9s
LYN LuoYang 48.97 67 P **P** **22 13 11.9 +0.5**
LYN PP **PP** **22 15 09.6 +4.8**
LYN S **S** **22 20 13.8 -1.5**
LYN SS **SS** **22 23 48.4 +2.4**
LYN pmax pmax
comp=Z,64nm,0.7s
LYN pmax pmax
comp=Z,550nm,6.4s
LYN L L
comp=Z,3µm,14.1s
LYN L L
comp=Z,4µm,19.6s
GULI GuiLin 49.02 79 P **P** **22 13 13.3 +1.3**
GULI S **S** **22 20 17.6 +1.4**
GULI pmax pmax
comp=Z,23nm,1.0s
GULI L L
comp=Z,580nm,16.3s
GULI L L
comp=Z,840nm,16.8s
GULI L L
comp=Z,1µm,13.6s
ENIJ Nijar 49.04 296 P **P** **22 13 13.2 +1.2**
EDA Edea 49.05 250 **P** **22 13 12.0 -0.3**
EDMD Edmundbyers 49.44 320 *e*P **P** **22 13 14.1 -0.7**
EDMD IAmb IAmb 22 13 15.2
comp=Z,23nm,0.5s
MONM Monmouth 49.52 316 *e*P **P** **22 13 14.6 -0.8**
MONM IAmb IAmb 22 13 18.3
comp=Z,18nm,0.9s
UCM Universidad Co 49.56 301 P **P** **22 13 17.3 +1.3**
EBER Berja 49.59 296 P **P** **22 13 16.9 +0.4**
VOI Vohitsoka 49.63 190 P **P** **22 13 17.4 +0.7**
HLM1 Long Mynd 49.64 317 *e*P **P** **22 13 15.4 -1.0**
HLM1 IAmb IAmb 22 13 21.6
comp=Z,15nm,0.8s
MCH1 Michaelchurch 49.65 316 *e*P **P** **22 13 15.2 -1.2**
MCH1 IAmb IAmb 22 13 19.5
comp=Z,23nm,0.8s
LSZ Lusaka 49.88 215 LR LR 22 33 57.8
comp=Z,1µm,19.5s,baz=33,slow=36
LSZ Lusaka 49.88 215 **P** **22 13 19.5 +0.8**
LSZ Lusaka 49.88 215 P **P** **22 13 19.5 +0.8**
LSZ pmax pmax
comp=Z,41nm,1.4s
KESW Keswick, Cumbr 50.05 320 *e*P **P** **22 13 19.2 -0.2**
KESW IAmb IAmb 22 13 20.0
comp=Z,14nm,0.7s
DYA Yadsworthy 50.09 314 *e*P **P** **22 13 19.2 -0.6**
DYA IAmb IAmb 22 13 20.2
comp=Z,14nm,0.9s
LLW Llanuwychllyn 50.16 317 *e*P **P** **22 13 19.6 -0.6**
ESDC Sonseca Array 50.16 300 P **P** **22 13 20.1 -0.5**
comp=Z,7.5nm,1.0s,baz=63,slow=7.1,SNR=23
ESDC LR LR 22 35 55.9
comp=Z,705nm,21.1s,baz=78,slow=38
comp=Z,7.5nm,1.0s
EKA Eskdalemuir Ar 50.20 321 P **P** **22 13 19.5 -1.0**
comp=Z,1.4nm,0.3s,baz=96,slow=7.2,SNR=28
EKA LR LR 22 38 33.0
comp=Z,1µm,18.3s,baz=104,slow=41
comp=Z,1.4nm,0.3s
EDI Edinburgh 50.31 321 *e*P **P** **22 13 20.6 -0.7**
EDI IAmb IAmb 22 13 24.7
comp=Z,13nm,0.6s
HNS HongShan 50.41 63 ⇑P **P** **22 13 22.5 +0.1**
HNS PcP **PcP** **22 14 40.8 +0.1**
HNS PP **PP** **22 15 23.4 +5.5**
HNS S **S** **22 20 38.8 +3.5**
HNS ScS **ScS** **22 23 11.1 -2.2**
HNS pmax pmax
comp=Z,17nm,1.4s
HNS pmax pmax
comp=Z,430nm,6.7s
HNS L L
comp=Z,2µm,22.7s
HNS L L
comp=Z,750nm,17.8s
HNS L L
comp=Z,3µm,18.6s
QIZ Qiongzhong 50.44 87 P **P** **22 13 22.8 -0.1**
QIZ PP **PP** **22 15 19.5 +1.0**
QIZ S **S** **22 20 36.8 +0.6**
QIZ SS **SS** **22 24 13.5 +3.3**
QIZ pmax pmax
comp=Z,35nm,1.5s
QIZ pmax pmax
comp=Z,710nm,7.4s
QIZ L L
comp=Z,940nm,23.7s
QIZ L L
comp=Z,450nm,24.1s
QIZ L L
comp=Z,1µm,17.0s
PAB San Pablo 50.47 300 **P** **22 13 22.8 -0.1**
PAB IAmb IAmb 22 13 31.1
comp=Z,67nm,1.1s
PAB San Pablo 50.47 300 P **P** **22 13 22.8 -0.1**
PAB pmax pmax
comp=Z,67nm,1.1s
CNSH ChangSha 50.53 75 P **P** **22 13 23.3 -0.1**
CNSH S **S** **22 20 34.1 -3.2**
CNSH pmax pmax
comp=Z,50nm,0.9s
CNSH L L
comp=Z,940nm,17.0s
CNSH L L
comp=Z,800nm,14.2s
CNSH L L
comp=Z,1µm,18.6s
BOD Bodaibo 50.70 36 *e*P **P** **22 13 23.3 -1.0**
BOD pmax pmax
comp=Z,91nm,2.0s
BJO1 Bjornoya 50.77 348 *e*P **P** **22 13 24.6 0.0**
BJO1 IAmb IAmb 22 13 28.0
comp=Z,67nm,1.0s
EMAL Malaga-Limoner 50.83 296 P **P** **22 13 24.9 -0.7**
INVG Invergeldie, C 50.86 322 *e*P **P** **22 13 24.6 -0.9**
INVG IAmb IAmb 22 13 27.3
comp=Z,8.4nm,0.6s
XLT XiLinHaoTe 50.95 54 *e*P **P** **22 13 27.3 +0.8**
XLT pP pP 22 13 31.3 +0.1
XLT PP **PP** **22 15 26.8 +4.0**
XLT S **S** **22 20 45.5 +2.5**
XLT pmax pmax
comp=Z,22nm,1.4s
XLT pmax pmax
comp=Z,590nm,6.4s
XLT L L
comp=Z,360nm,21.6s
XLT L L
comp=Z,1µm,20.6s
XLT L L
comp=Z,2µm,19.3s
EAB Aberfoyle 50.99 322 *e*P **P** **22 13 25.0 -1.5**
WHN Wuhan 51.22 72 P **P** **22 13 28.8 +0.2**
WHN sP **sP** **22 13 36.6 +1.6**
WHN S **S** **22 20 47.4 +0.5**
WHN pmax pmax
comp=Z,49nm,0.8s
WHN pmax pmax
comp=Z,1µm,4.5s
WHN L L
comp=Z,2µm,10.8s
WHN L L
comp=Z,6µm,14.2s
BJI2 Beijing 51.27 59 P **P** **22 13 29.4 +0.5**
BJI2 S **S** **22 20 47.8 +0.5**
BJI2 ScS **ScS** **22 23 16.8 -2.4**
BJI2 pmax pmax
comp=Z,9.0nm,1.0s
BJI2 pmax pmax
comp=Z,160nm,5.1s
BJI2 L L
comp=Z,2µm,23.1s
BJI2 L L
comp=Z,740nm,23.5s
BJI2 L L
comp=Z,2µm,16.8s
PPI Padang Panjang 51.31 115 P **P** **22 13 30.0 +0.6**
comp=Z,771nmcomp=Z,50nm,1.2s
LAWE Loch Awe, Argy 51.58 322 *e*P **P** **22 13 30.4 -0.5**
LAWE IAmb IAmb 22 13 31.3
comp=Z,10nm,0.5s
MDT Midelt 51.59 292 LR LR 22 40 30.5
comp=Z,2µm,18.1s,baz=90,slow=42
PDSI Padang 51.63 115 P **P** **22 13 31.2 -0.7**
comp=Z,33nm,1.2s
MD01 Midelt array s 51.71 292 **P** **22 13 32.6 +0.2**
DSB Dublin 51.82 318 P **P** **22 13 32.4 -0.4**
ILTH Belurgan, Co L 51.87 319 P **P** **22 13 32.1 -0.9**
IFR Ifrane 51.90 292 P **P** **22 13 35.3 +1.4**
TORD Torodi Ar. Bea 51.92 265 P **P** **22 13 33.7 -0.3**
comp=Z,38nm,0.5s,baz=75,slow=5.3,SNR=625
TORD LR LR 22 38 22.5
comp=Z,4µm,18.1s,baz=66,slow=39
comp=Z,38nm,0.5s
TORD Torodi Ar. Bea 51.92 265 P **P** **22 13 33.7 -0.3**
TORD IAmb IAmb 22 13 42.2
comp=Z,37nm,0.8s
IWEX Carrickbyrne, 52.00 317 P **P** **22 13 36.5 +2.4**
PBRG Braganca 52.09 303 *e*pP pP 22 13 39.8 -0.1
CNIL Conil 52.18 296 P **P** **22 13 37.4 +1.7**
GZH2 Guangzhou 52.35 80 P **P** **22 13 37.8 +0.7**
GZH2 S **S** **22 21 03.6 +1.1**
GZH2 L L
comp=Z,2µm,15.5s
GZH2 L L
comp=Z,960nm,16.4s
GZH2 L L
comp=Z,2µm,14.9s
MVO Moncorvo 52.36 302 *e*P **P** **22 13 37.5 +0.4**
MVO *e*pP **pP** **22 13 42.4 +0.5**
MVO *i* IAmb IAmb 22 13 45.1
comp=Z,98nm,1.0s
MVO *e*S **S** **22 21 04.2 +1.8**
MVO *e*LR LR 22 33 09.6
MVO *i* IAMs_20 IAMs_20 22 41 51.6
comp=Z,629nm,18.0s
TIA Tai'an 52.49 64 P **P** **22 13 38.1 +0.1**
TIA S **S** **22 21 03.8 -0.4**
TIA ScS **ScS** **22 23 25.4 -2.4**
TIA pmax pmax
comp=Z,70nm,0.8s
TIA pmax pmax
comp=Z,670nm,4.6s
TIA L L
comp=Z,3µm,19.0s
TIA L L
comp=Z,960nm,22.2s
TIA L L
comp=Z,2µm,21.2s
IDGL Inch Island, C 52.64 320 P **P** **22 13 38.0 -0.8**
PBAR Barrancos 52.71 299 *e*P **P** **22 13 38.7 -0.9**
PBAR *e*pP **pP** **22 13 44.3 -0.1**
PBAR *i* IAmb IAmb 22 13 47.2
comp=Z,117nm,1.3s
PMRV Marv??o 52.82 300 *e*P **P** **22 13 40.2 -0.2**
PMRV *e*pP **pP** **22 13 45.3 0.0**
PMRV *i* IAmb IAmb 22 13 48.0
comp=Z,60nm,1.1s
PMRV *e*S **S** **22 21 08.3 -0.3**
PMRV *e*LR LR 22 34 27.2
PMRV *i* IAMs_20 IAMs_20 22 43 26.0
comp=Z,808nm,16.0s
MTE Manteigas 52.83 301 IAmb IAmb 22 13 48.6
comp=Z,66nm,1.1s
MTE Manteigas 52.83 301 *e*pP **pP** **22 13 45.5 +0.2**
MTE *e*S **S** **22 21 11.0 +2.2**
MTE *e*LR LR 22 33 59.4
MTE *i* IAMs_20 IAMs_20 22 37 36.5
comp=Z,723nm,18.0s
PCBR Castelo Branco 52.84 301 *e*pP pP 22 13 45.9 +0.5
PVRL Vila Real 52.87 303 *e*P **P** **22 13 41.2 +0.4**
PVRL *i* IAmb IAmb 22 13 49.5
comp=Z,113nm,1.8s
POLO Lamas de Olo 52.91 303 *e*pP pP 22 13 45.5 -0.5
PESTR Estremoz 53.05 300 IAmb IAmb 22 13 49.4
comp=Z,47nm,1.2s
PESTR Estremoz 53.05 300 *e*pP pP 22 13 46.4 -0.5
PCAB Cabril 53.05 303 *e*pP pP 22 13 47.4 +0.4
PVIS Viseu 53.06 302 *e*P **P** **22 13 42.9 +0.7**
PVIS *e*pP **pP** **22 13 47.5 +0.5**
KRJI Kerinci 53.13 116 P **P** **22 13 43.6 +0.5**
PGAV Gavieira, Arco 53.21 303 *e*pP **pP** **22 13 49.0 +0.8**
PGAV *e*LR LR 22 33 47.4
PGAV *i* IAMs_20 IAMs_20 22 40 26.4
comp=Z,774nm,16.0s
PVAQ Vaqueiros 53.35 298 *e*LR LR 22 31 39.3
PVAQ *i* IAMs_20 IAMs_20 22 41 29.3
comp=Z,617nm,20.0s
PBEJ Beja 53.37 299 *e*P **P** **22 13 46.0 +1.5**
PBEJ *e*pP **pP** **22 13 48.7 -0.6**
PBEJ *i* IAmb IAmb 22 13 52.8
comp=Z,71nm,1.8s
PSARD Sardoal 53.39 301 *e*P **P** **22 13 46.6 +2.0**
PSARD *e*pP **pP** **22 13 49.7 +0.2**
PSARD *i* IAmb IAmb 22 13 53.5
comp=Z,62nm,0.9s
PARRA Arraiolos 53.40 300 *e*pP pP 22 13 48.9 -0.6
EVO Evora 53.42 299 P **P** **22 13 45.5 +0.7**
EVO Evora 53.42 299 *e*P **P** **22 13 42.1 -2.7**
EVO *e*pP **pP** **22 13 49.5 -0.2**
EVO *i* IAmb IAmb 22 13 52.6
comp=Z,76nm,1.2s
PMTG Montargil 53.51 300 *e*pP pP 22 13 50.2 -0.1
PBDV Barranco-do-Ve 53.54 298 *e*pP pP 22 13 50.9 +0.3
KSANE Kasane 53.56 217 *i* P **P** **22 13 45.9 -0.2**
PCVE Castro Verde 53.57 298 *e*pP pP 22 13 50.3 -0.5
PCAS Casmilo, Conde 53.59 301 *e*P **P** **22 13 46.5 +0.4**
PCAS *e*pP **pP** **22 13 51.5 +0.5**
IGLA Glengowla, Co 53.63 318 P **P** **22 13 45.3 -0.8**
AVE Averroes 53.82 293 P **P** **22 13 50.6 +2.8**
SPB2 Spitsbergen Ar 53.89 351 IAmb IAmb 22 14 16.6
comp=Z,37nm,0.8s
PSBE So Bento 53.89 300 *e*pP pP 22 13 54.2 +1.1
SPA0 Spitsbergen Ar 53.89 351 *e*P **P** **22 13 48.4 +0.7**
SPA0 IAmb IAmb 22 13 53.3
comp=Z,60nm,1.2s
SPITS Spitsbergen Ar 53.89 351 P **P** **22 13 47.8 +0.1**
comp=Z,12nm,0.6s,baz=143,slow=9.9,SNR=43
SPITS LR LR 22 40 07.5
comp=Z,1µm,18.1s,baz=126,slow=40
comp=Z,12nm,0.6s
SPITS Spitsbergen Ar 53.89 351 P **P** **22 13 48.1 +0.4**
SPITS pmax pmax
comp=Z,87nm,1.3s
VAL Valentia 54.12 316 P **P** **22 13 51.3 +1.6**
TIO Tiouine 54.19 290 P **P** **22 13 51.3 +0.5**
PFVI Vila Bisbo 54.27 298 *e*pP pP 22 13 58.5 +2.6
MASI Maura Aman, Be 54.38 116 P **P** **22 13 49.6 -2.6**
comp=Z,1µmcomp=Z,86nm,1.3s
NJ2 Nanjing 54.67 69 ⇑P **P** **22 13 54.0 -0.1**
NJ2 pP **pP** **22 13 57.1 -1.7**
NJ2 pmax pmax
comp=Z,49nm,0.8s
NJ2 pmax pmax
comp=Z,810nm,6.2s
NJ2 L L
comp=Z,2µm,16.1s
NJ2 L L
comp=Z,8µm,20.6s
KSI Kapahiang 54.97 117 P **P** **22 13 53.9 -2.6**
comp=Z,65nm,0.9s
KBS Kingsbay 55.05 351 P **P** **22 13 56.0 -0.1**
KBS IAmb IAmb 22 14 01.9
comp=Z,44nm,1.1s
KBS Kingsbay 55.05 351 *e*P **P** **22 13 55.9 -0.2**
KBS IAmb IAmb 22 14 02.1
comp=Z,168nm,1.8s
KBS Kingsbay 55.05 351 *ce*P **P** **22 13 57.1 +1.0**
KBS pmax pmax
comp=Z,48nm,1.3s
KBS Kingsbay 55.05 351 *i* P **P** **22 13 56.2 +0.1**
BROLN Tlhalogang 55.25 212 *i* P **P** **22 13 57.2 -1.2**
SOOWA Sowa 55.34 214 *i* P **P** **22 13 56.8 -2.2**
DL2 Dalian 55.60 60 P **P** **22 14 00.8 +0.1**
DL2 S **S** **22 21 44.5 -1.6**
DL2 pmax pmax
comp=Z,140nm,1.0s
DL2 pmax pmax
comp=Z,770nm,6.1s
DL2 L L
comp=Z,4µm,20.4s
DL2 L L
comp=Z,2µm,16.7s
QZH2 Quanzhou 56.28 77 P **P** **22 14 06.4 +0.7**
QZH2 S **S** **22 21 56.8 +1.3**
QZH2 pmax pmax
comp=Z,420nm,7.1s
QZH2 L L
comp=Z,2µm,17.9s
QZH2 L L
comp=Z,930nm,17.2s
QZH2 L L
comp=Z,1µm,15.8s
MDSI Maura Dua 56.73 116 P **P** **22 14 05.0 -4.0**
comp=Z,19nm,1.0s
SSE Sheshan 56.83 69 P **P** **22 14 10.1 +0.5**
SSE S **S** **22 22 03.1 +0.5**
SSE pmax pmax
comp=Z,12nm,1.2s
SSE pmax pmax
comp=Z,110nm,4.3s
SSE L L
comp=Z,370nm,15.6s
SSE L L
comp=Z,560nm,15.8s
KHWEE KHWEE 56.88 214 *i* P **P** **22 14 08.5 -1.5**
KLSI 57.29 116 P **P** **22 14 10.2 -2.8**
CN2 Changchun 57.70 54 ⇑P **P** **22 14 15.1 -0.5**
CN2 *es*P sP 22 14 22.0 -0.1
CN2 *e*S **S** **22 22 10.3 -3.6**
CN2 pmax pmax
comp=Z,30nm,1.2s
CN2 pmax pmax
comp=Z,400nm,5.0s
CN2 L L
comp=Z,700nm,12.0s
CN2 L L
comp=Z,700nm,12.0s
CN2 L L
comp=Z,900nm,13.0s
ZEA Zeya 57.89 42 *e*P **P** **22 14 16.9 +0.2**
ZEA pmax pmax
comp=Z,20nm,1.1s
ZEA MLR MLR
comp=E,1µm,14.0s
ZEA MLR MLR
comp=N,800nm,13.0s
ZEA MLR MLR
comp=Z,2µm,13.0s
HEH HeiHe 58.26 46 *e*P **P** **22 14 18.8 -0.6**
HEH pP **pP** **22 14 21.6 -2.5**
HEH S **S** **22 22 20.5 -0.4**
HEH pmax pmax
comp=Z,26nm,1.1s
HEH L L
comp=Z,2µm,17.5s
HEH L L
comp=Z,8µm,13.0s
KDWAN Kaudwane 58.48 213 *i* P **P** **22 14 20.7 -0.5**
TPI Tanjungpandan 58.55 112 P **P** **22 14 19.5 -2.4**
comp=Z,627nmcomp=Z,18nm,0.8s
GRTLG Ghanzi 58.60 218 *i* P **P** **22 14 20.7 -1.4**
SSLB Suanglung 58.68 78 P **P** **22 14 24.6 +1.9**
SSLB Suanglung 58.68 78 IAmb IAmb 22 14 31.7
comp=Z,30nm,1.0s
YHNB Yeheng 58.77 76 P **P** **22 14 25.1 +1.7**
BNX BinXian 58.80 51 ⇑P **P** **22 14 22.5 -0.7**
BNX S **S** **22 22 24.9 -3.2**
BNX pmax pmax
comp=Z,33nm,1.3s
BNX pmax pmax
comp=Z,370nm,7.2s
BNX L L
comp=Z,2µm,14.3s
BNX L L
comp=Z,2µm,17.3s

YAK **Yakutsk** 58.94 32 LR LR 22 42 43.3
comp=Z,2µm,19.6s,baz=264,slow=39
YAK **Yakutsk** 58.94 32 *e*P **P** **22 14 22.2 -1.6**
YAK *e**PP **pP** **22 14 26.4 -2.2**
YAK *e* 22 15 11.3
YAK *e* 22 16 31.3
YAK *e*S **S** **22 22 28.5 -0.8**
YAK *e* 22 24 09.7
YAK *e*SS **SS** **22 26 20.5 -2.0**
YAK pmax pmax
comp=Z,25nm,1.9s
YAK pmax pmax
comp=N,3.0nm,2.4s
YAK pmax pmax
comp=E,16nm,2.2s
YAK pmax pmax
comp=Z,204nm,4.0s
YAK pmax pmax
comp=N,196nm,9.6s
YAK pmax pmax
comp=E,89nm,2.2s
YAK smax smax
comp=E,285nm,5.9s
YAK smax smax
comp=N,210nm,5.2s
YAK MLR MLR
comp=Z,6µm,21.0s
YAK MLR MLR
comp=N,641nm,14.0s
YAK MLR MLR
comp=E,2µm,11.0s
TSUM Tsumeb 58.98 222 LR LR 22 42 36.0
comp=E,3µm,18.0s,baz=36,slow=39
TSUM Tsumeb 58.98 222 **P** **22 14 25.0 +0.1**
TWGBT Beinan 59.10 79 P **P** **22 14 28.1 +2.5**
NACB Ninganchiao 59.11 77 P **P** **22 14 26.4 +0.7**
NACB Ninganchiao 59.11 77 IAmb IAmb 22 14 34.9
comp=Z,34nm,1.1s
TIXI Tiksi 59.13 21 LR LR 22 43 30.6
comp=Z,2µm,19.2s,baz=279,slow=40
TIXI Tiksi 59.13 21 **P** **22 14 24.3 -0.8**
TIXI IAmb IAmb 22 14 31.2
comp=Z,27nm,0.8s
TIXI Tiksi 59.13 21 *ce*P **P** **22 14 24.4 -0.7**
TIXI pmax pmax
comp=Z,30nm,1.3s
CGJI Cibinong 59.21 117 P **P** **22 14 22.9 -3.5**
comp=Z,66nm,1.6s
KGCAE Kacgae 59.28 216 *i*P **P** **22 14 25.5 -1.4**
LBTB Lobatse 59.42 212 LR LR 22 39 53.7
comp=Z,2µm,20.4s,baz=32,slow=36
LBTB Lobatse 59.42 212 **P** **22 14 28.1 +0.4**
LBTB IAmb IAmb 22 14 41.6
comp=Z,70nm,1.6s
LBTB Lobatse 59.42 212 P **P** **22 14 28.1 +0.4**
LBTB pmax pmax
comp=Z,70nm,1.6s
INCN Inchon 59.74 61 P **P** **22 14 29.9 0.0**
INCN Inchon 59.74 61 P **P** **22 14 29.7 -0.2**
INCN Inchon 59.74 61 P **P** **22 14 29.7 -0.2**
INCN pmax pmax
comp=Z,123nm,1.0s
DAG Danmarks Havn 59.95 345 P **P** **22 14 30.3 -0.4**
DAG Danmarks Havn 59.95 345 *i*P **P** **22 14 30.5 -0.2**
DAG IAmb IAmb 22 14 31.5
comp=Z,6.5nm,0.8s
BORG Borgarnes 59.98 331 LR LR 22 42 18.4
comp=Z,721nm,20.7s,baz=102,slow=38
DBG Daneborg 60.03 342 *i*P **P** **22 14 31.4 +0.2**
DBG IAmb IAmb 22 14 39.0
comp=Z,24nm,1.0s
SCO Scoresbysund 60.29 338 *i*P **P** **22 14 34.2 +1.2**
KOOLE Kule 60.47 218 *i*P **P** **22 14 35.0 0.0**
MAKGR Makgori 60.47 212 *i*P **P** **22 14 32.4 -2.5**
MDJ Mudanjiang 60.51 52 P **P** **22 14 34.6 -0.4**
MDJ pmax pmax
comp=Z,22nm,2.5s
NOR Nord 60.53 351 *i*P **P** **22 14 36.4 +1.8**
NOR IAmb IAmb 22 14 39.1
comp=Z,36nm,1.2s
DBIC Dimbokro 60.55 262 P **P** **22 14 35.2 -0.5**
comp=Z,10nm,0.4s,baz=78,slow=6.3,SNR=24
DBIC LR LR 22 42 08.2
comp=Z,980nm,19.1s,baz=76,slow=37
comp=Z,10nm,0.4s
DBIC Dimbokro 60.55 262 **P** **22 14 35.4 -0.3**
DBIC IAmb IAmb 22 14 46.5
comp=Z,25nm,0.8s
DBIC Dimbokro 60.55 262 P **P** **22 14 35.4 -0.3**
DBIC pmax pmax
comp=Z,25nm,0.8s
TJN Taejon 60.57 62 P **P** **22 14 34.9 -0.6**
KSAR Wonju Array Be 60.72 61 **P** **22 14 36.5 -0.1**
KSAR Wonju Array Be 60.72 61 P **P** **22 14 36.5 -0.1**
KSRS Korea Array 60.75 60 P **P** **22 14 36.1 -0.6**
comp=Z,60nm,1.0s,baz=278,slow=6.9,SNR=36
KSRS LR LR 22 44 19.8
comp=Z,1µm,18.6s,baz=270,slow=40
comp=Z,60nm,1.0s
LEM Lembang 60.87 116 LR LR 22 42 33.7
comp=Z,645nm,19.3s,baz=310,slow=38
KLR Kul'dur 61.19 47 LR LR 22 43 27.0
comp=Z,3µm,19.0s,baz=282,slow=38
KLR Kul'dur 61.19 47 *ce*P **P** **22 14 39.0 -0.5**
KLR pmax pmax
comp=Z,9.0nm,1.3s
BBJI Bungbulang 61.27 117 P P 22 14 46.2 +5.6
BBJI Bungbulang 61.27 117 P **P** **22 14 39.1 -1.4**
PMAR Madeira 61.71 294 *ep*P pP 22 14 50.0 +1.5
PMOZ Porto Moniz, M 61.91 294 *e*LR LR 22 46 07.7
PMOZ *i* IAMs_20 IAMs_20 22 46 49.6
comp=Z,457nm,18.0s
TGY Tagaytay City 62.13 88 LR LR 22 45 40.6
comp=Z,512nm,19.7s,baz=284,slow=40
USRK Ussuriysk Ar. 62.28 52 P **P** **22 14 45.9 -1.1**
comp=Z,24nm,1.0s,baz=278,slow=4.1,SNR=12
comp=Z,24nm,1.0s
BOSA Boshof 62.66 210 P **P** **22 14 48.7 -1.1**
comp=Z,8.5nm,0.7s,baz=15,slow=4.3,SNR=23
BOSA LR LR 22 41 42.5
comp=Z,852nm,20.1s,baz=28,slow=36
comp=Z,8.5nm,0.7s
BOSA Boshof 62.66 210 **P** **22 14 49.8 0.0**
BOSA IAmb IAmb 22 15 17.1
comp=Z,23nm,1.1s
BOSA Boshof 62.66 210 P **P** **22 14 49.8 0.0**
BOSA pmax pmax
comp=Z,23nm,1.1s
MYLDM Lahad Datu 63.81 98 P **P** **22 14 59.4 +1.8**
MYLDM Lahad Datu 63.81 98 **P** **22 14 57.4 -0.2**
MYLDM Lahad Datu 63.81 98 P **P** **22 14 56.5 -1.1**
comp=Z,33nm,1.2s
GRNR Gornyy 63.87 44 *i*P **P** **22 14 56.6 -0.8**
GRNR pmax pmax
comp=Z,10.0nm,1.2s
GRNR MLR MLR
comp=E,990nm,16.0s
GRNR MLR MLR
comp=N,790nm,15.0s
GRNR MLR MLR
comp=Z,1µm,14.0s
JNU Nakatsue 64.22 64 LR LR 22 46 24.4
comp=Z,1µm,20.2s,baz=288,slow=39
SJI Sawahan 64.74 114 P **P** **22 15 01.2 -2.5**
comp=Z,42nm,1.0s
BBKI Banjar Baru 64.94 108 P **P** **22 15 03.1 -1.9**
comp=Z,34nm,0.9s
SUMG Summit 65.32 341 **P** **22 15 07.0 -0.1**
SUMG Summit 65.32 341 P **P** **22 15 07.0 -0.1**
SUMG pmax pmax
comp=Z,71nm,1.0s
SUMG Summit 65.32 341 *i*P **P** **22 15 07.3 +0.2**
SUMG IAmb IAmb 22 15 08.8
comp=Z,18nm,0.8s
ABJI Asem Bagus 66.78 113 P **P** **22 15 13.7 -3.1**
comp=Z,40nm,0.9s
NEEM North Greenlan 67.02 347 *i*P **P** **22 15 18.2 +0.5**
NEEM IAmb IAmb 22 15 25.3
comp=Z,144nm,1.1s
JAGI Jajag, Banyuwa 67.09 113 P P 22 15 23.8 +5.0
JAGI Jajag, Banyuwa 67.09 113 IAmb IAmb 22 15 43.4
comp=Z,48nm,1.1s
JAGI Jajag, Banyuwa 67.09 113 P P 22 15 13.5 -5.3
comp=Z,39nm,1.1s
MPSI Mapaga 67.35 102 P **P** **22 15 19.5 -0.9**
comp=Z,1µmcomp=Z,20nm,1.3s

TYV Tymovskoe 67.68 43 *e*P **P** **22 15 22.0 0.0**
TYV *e*S **S** **22 24 15.3 -3.6**
TYV pmax pmax
comp=Z,500nm,5.1s
TYV pmax pmax
comp=Z,36nm,1.1s
TYV smax smax
comp=N,700nm,5.5s
TYV smax smax
comp=E,400nm,5.5s
TYV MLR MLR
comp=Z,4µm,15.0s
SUR Sutherland 67.87 211 LR LR 22 47 57.6
comp=Z,1µm,19.6s,baz=28,slow=38
MMSI Mamuju 68.00 105 P **P** **22 15 23.1 -1.5**
comp=Z,837nmcomp=Z,38nm,1.0s
KHKI Kahang-Kahang 68.23 112 P P 22 15 21.2 -4.7
comp=Z,66nm,1.0s
INU Inuyama 68.38 60 P **P** **22 15 28.6 +1.9**
YSS Yuzhno-Sakhali 68.88 47 P **P** **22 15 29.1 -0.5**
YSS Yuzhno-Sakhali 68.88 47 **P** **22 15 28.7 -0.9**
YSS Yuzhno-Sakhali 68.88 47 *ce*P **P** **22 15 28.9 -0.7**
YSS *e*S **S** **22 24 27.5 -5.8**
YSS *e* 22 24 54.4
YSS pmax pmax
comp=Z,500nm,3.3s
YSS pmax pmax
comp=Z,120nm,0.9s
YSS MLR MLR
comp=N,2µm,18.0s
YSS MLR MLR
comp=Z,3µm,18.0s
YSS MLR MLR
comp=E,2µm,17.0s
MAJO Matsushiro 68.91 59 P **P** **22 15 29.5 -0.5**
MAJO Matsushiro 68.91 59 **P** **22 15 30.2 +0.3**
MAJO IAmb IAmb 22 15 33.1
comp=Z,33nm,1.1s
MAJO Matsushiro 68.91 59 P **P** **22 15 30.3 +0.3**
MAJO pmax pmax
comp=Z,33nm,1.2s
MJAR Matsushiro Arr 68.91 59 P **P** **22 15 28.9 -1.1**
comp=Z,12nm,1.1s,baz=287,slow=9.6,SNR=10
MJAR LR LR 22 48 27.8
comp=Z,900nm,18.8s,baz=298,slow=38
comp=Z,12nm,1.1s
MJAR Matsushiro Arr 68.91 59 **P** **22 15 29.5 -0.5**
MJAR Matsushiro Arr 68.91 59 P **P** **22 15 29.5 -0.5**
MJAR pmax pmax
comp=Z,11nm,1.1s
SEY Seymchan 69.13 29 LR LR 22 49 39.3
comp=Z,4µm,18.0s,baz=288,slow=39
SEY Seymchan 69.13 29 *ce*P **P** **22 15 31.1 +0.2**
SEY pmax pmax
comp=Z,34nm,1.0s
SPSI Sidrap Palu 69.39 106 P P 22 15 24.2 -9.0
MA2 Magadan 69.49 33 LR LR 22 48 03.1
comp=Z,694nm,18.3s,baz=284,slow=38
MA2 Magadan 69.49 33 P **P** **22 15 32.6 -0.6**
MA2 Magadan 69.49 33 **P** **22 15 32.6 -0.6**
MA2 IAmb IAmb 22 15 38.4
comp=Z,26nm,0.9s
MA2 Magadan 69.49 33 *ce*P **P** **22 15 33.2 0.0**
MA2 pmax pmax
comp=Z,33nm,1.0s
JKA Kamikawa-asahi 69.66 50 IAmb IAmb 22 15 42.2
comp=Z,34nm,0.8s
SAATT Saattut 69.83 340 *i*P **P** **22 15 34.8 -0.2**
SAATT IAmb IAmb 22 15 41.2
comp=Z,49nm,1.0s
KAPI Kappang 69.91 107 P **P** **22 15 36.0 -0.4**
comp=Z,11nm,0.5s,baz=286,slow=3.2,SNR=12
comp=Z,11nm,0.5s
KAPI Kappang 69.91 107 **P** **22 15 35.4 -1.1**
KAPI IAmb IAmb 22 16 22.9
comp=Z,55nm,1.4s
KAPI Kappang 69.91 107 P **P** **22 15 35.4 -1.1**
KAPI pmax pmax
comp=Z,55nm,1.4s
KAPI Kappang 69.91 107 P **P** **22 15 34.4 -2.0**
comp=Z,504nmcomp=Z,16nm,1.1s
NUUG Nuugaatsiaq 69.97 341 *i*P **P** **22 15 36.2 +0.4**
NUUG IAmb IAmb 22 15 43.6
comp=Z,36nm,1.2s
UPNV Upernavik 70.20 343 *i*P **P** **22 15 37.6 +0.4**
UPNV IAmb IAmb 22 15 47.0
comp=Z,23nm,0.9s
SAQQ Saqqaq 70.27 340 *i*P **P** **22 15 37.9 +0.2**
SAQQ IAmb IAmb 22 15 43.5
comp=Z,51nm,1.0s
ILULI Ilulissat 70.34 339 *i*P **P** **22 15 37.9 -0.3**
ILULI IAmb IAmb 22 15 43.1
comp=Z,35nm,1.1s
NIAQ Niaqornat 70.44 341 *i*P **P** **22 15 38.9 +0.2**
JEM Erimo 70.74 52 P **P** **22 15 41.5 +0.4**
TULEG Thule 70.93 348 *i*P **P** **22 15 40.2 -1.5**
TULEG IAmb IAmb 22 15 48.5
comp=Z,104nm,1.1s
GDH Godhavn 71.10 339 *i*P **P** **22 15 42.9 +0.1**
GDH IAmb IAmb 22 15 50.4
comp=Z,32nm,1.1s
KKSI Kolaka, Sulawe 71.11 105 P **P** **22 15 41.8 -2.0**
comp=Z,28nm,0.8s
SFJD Kangerlussuaq 71.12 336 LR LR 22 50 28.5
comp=Z,1µm,18.3s,baz=72,slow=39
SFJD Kangerlussuaq 71.12 336 **P** **22 15 43.0 0.0**
SFJD Kangerlussuaq 71.12 336 P **P** **22 15 43.0 0.0**
SFJD pmax pmax
comp=Z,66nm,1.3s
SFJD Kangerlussuaq 71.12 336 *i*P **P** **22 15 43.2 +0.2**
SFJD IAmb IAmb 22 15 49.8
comp=Z,64nm,1.3s
BSSI Bau Bau, Buton 71.12 108 P **P** **22 15 41.2 -2.7**
comp=Z,56nm,0.8s
JHJ Hachijo jima 2 71.29 62 LR LR 22 51 54.5
comp=Z,708nm,18.7s,baz=67,slow=40
NRS Narsarsuaq 71.42 330 *i*P **P** **22 15 45.3 +0.5**
LBFI Labuhan Bajo, 71.84 110 P P 22 15 42.8 -5.4
WBSI Waikabubak, Su 72.05 111 P P 22 15 43.8 -5.7
comp=Z,40nm,0.9s
BILL Bilibino 72.33 22 **P** **22 15 50.4 +0.2**
SANI Sanana 73.82 101 P **P** **22 16 00.6 +0.7**
SANI Sanana 73.82 101 P **P** **22 15 56.0 -3.9**
comp=Z,1µmcomp=Z,45nm,1.1s
JCJ Chichijima 75.48 67 LR LR 22 52 55.2
comp=Z,594nm,20.5s,baz=96,slow=39
GIRL Giralia 75.52 125 P **P** **22 16 09.2 -0.3**
comp=Z,33nm,1.6s
PETK Petropavlovsk- 75.55 37 P **P** **22 16 08.0 -1.4**
comp=Z,22nm,1.0s,baz=281,slow=8.7,SNR=6.1
PETK LR LR 22 49 47.9
comp=Z,876nm,20.8s,baz=287,slow=36
comp=Z,22nm,1.0s
PETK Petropavlovsk- 75.55 37 P **P** **22 16 08.5 -0.8**
PETK Petropavlovsk- 75.55 37 P **P** **22 16 08.5 -0.8**
BATI Baunata 75.91 109 P **P** **22 16 11.0 -1.1**
comp=Z,16nm,0.5s,baz=309,slow=6.5,SNR=5.4
BATI LR LR 22 53 36.9
comp=Z,351nm,19.0s,baz=300,slow=39
comp=Z,16nm,0.5s
SOEI Soe 76.19 109 P **P** **22 16 18.5 +4.8**
SOEI Soe 76.19 109 P **P** **22 16 10.8 -2.9**
RES Resolute Bay 76.42 352 P **P** **22 16 13.3 -0.6**
comp=Z,7.3nm,1.1s,baz=28,slow=9.6,SNR=10
RES LR LR 22 54 37.9
comp=Z,725nm,18.2s,baz=24,slow=40
comp=Z,7.3nm,1.1s
RES Resolute Bay 76.42 352 P **P** **22 16 13.9 0.0**
RES Resolute Bay 76.42 352 P **P** **22 16 13.9 0.0**
RES pmax pmax
comp=Z,8.0nm,1.0s
KRAI Karang Ratu 76.53 101 P **P** **22 16 12.7 -2.9**
comp=Z,45nm,0.9s
SWI Sorong 77.89 97 P **P** **22 16 19.0 -4.2**
comp=Z,29nm,1.1s
SIJI Sorong 77.89 97 P **P** **22 16 22.7 -0.5**
comp=Z,20nm,0.8s,baz=266,slow=4.8,SNR=6.2
comp=Z,20nm,0.8s
SIJI Sorong 77.89 97 P **P** **22 16 20.7 -2.6**
comp=Z,27nm,0.9s
ILON Igloolik, Nuna 78.72 346 **P** **22 16 26.6 -0.3**
PSA00 Pilbara Seismi 79.06 121 P **P** **22 16 29.3 -0.2**
comp=Z,17nm,2.0s
PSA00 Pilbara Seismi 79.06 121 **P** **22 16 28.9 -0.6**
A21K Barrow 79.10 10 P **P** **22 16 29.4 +0.5**
baz=331

FRB Frobisher Bay 79.15 338 LR LR 22 53 32.4
comp=Z,388nm,18.6s,baz=59,slow=37
A19K Wainwright 79.32 12 P **P** **22 16 30.7 +0.6**
baz=328
A22K Sinclair Lake 79.64 10 P **P** **22 16 32.5 +0.7**
baz=333
C16K Lisburne Hills 80.06 14 P **P** **22 16 33.7 -0.5**
baz=324
B20K Meade River 80.17 11 P **P** **22 16 35.3 +0.5**
baz=331
C17K DeLong Mountai 80.36 13 P **P** **22 16 35.9 +0.1**
baz=326
B22K Teshekpuk Lake 80.46 10 P **P** **22 16 36.7 +0.4**
baz=334
C19K Lookout Ridge 80.53 12 P **P** **22 16 37.1 +0.3**
baz=329
C18K Utukok River 80.61 13 P **P** **22 16 37.2 -0.1**
baz=328
MORW Morawa 80.75 129 P P 22 16 45.3 +6.8
RDOG Red Dog Mine 80.77 14 P **P** **22 16 37.7 -0.4**
baz=326
B21K Ikpikpuk River 80.93 10 P **P** **22 16 39.3 +0.5**
baz=333
A36M Sachs Harbour 80.96 0 P **P** **22 16 38.9 -0.1**
baz=360,SNR=32
D17K Noatak River 81.03 14 P **P** **22 16 39.3 -0.1**
baz=326
MEEK Meekatharra 81.10 126 P **P** **22 16 39.9 -0.5**
comp=Z,19nm,2.2s
MEEK Meekatharra 81.10 126 P P 22 16 47.6 +7.2
C21K Knifeblade Rid 81.32 10 P **P** **22 16 41.5 +0.5**
baz=333,SNR=21
C23K Itkillik River 81.32 9 P **P** **22 16 41.5 +0.6**
baz=337
D19K Kuna River 81.33 12 P **P** **22 16 41.0 -0.1**
baz=330
D20K Etivluk River 81.41 11 P **P** **22 16 41.4 -0.1**
baz=332
TNA Tin City 81.62 17 P **P** **22 16 42.6 0.0**
baz=322
C24K Franklin Bluff 81.68 8 P **P** **22 16 43.6 +0.8**
baz=338
E18K Tukpahlearik C 81.78 13 P **P** **22 16 43.3 -0.1**
baz=328
E20K Nigu River 81.89 11 P **P** **22 16 44.0 -0.1**
baz=332
C26K Camden Bay 81.94 7 P **P** **22 16 44.9 +0.7**
baz=342
GAMB Gambell 81.97 19 IAmb IAmb 22 16 51.8
comp=Z,69nm,1.8s
GAMB Gambell 81.97 19 P **P** **22 16 44.1 -0.3**
baz=319
E21K Killik River 82.09 11 P **P** **22 16 44.9 -0.2**
baz=334
F14K Arctic Creek 82.10 16 P **P** **22 16 45.3 +0.2**
baz=323,SNR=18
D23K Nanushuk River 82.12 9 IAmb IAmb 22 16 51.2
comp=Z,32nm,1.1s
D23K Nanushuk River 82.12 9 P **P** **22 16 45.6 +0.4**
baz=337,SNR=31
D24K Happy Valley 82.20 9 P **P** **22 16 46.1 +0.5**
baz=338,SNR=14
F15K North Star Dit 82.32 16 IAmb IAmb 22 17 20.1
comp=Z,39nm,1.1s
F15K North Star Dit 82.32 16 P **P** **22 16 46.5 +0.3**
baz=325,SNR=45
D25K Kavik River 82.34 8 P **P** **22 16 46.8 +0.4**
baz=341
C27K Jago River 82.35 7 IAmb IAmb 22 16 53.2
comp=Z,43nm,1.1s
C27K Jago River 82.35 7 P **P** **22 16 46.9 +0.5**
baz=343,SNR=43
E19K Redstone River 82.40 12 P **P** **22 16 46.3 -0.4**
baz=331
F17K Baldwin Pennin 82.47 14 P **P** **22 16 47.1 +0.1**
baz=328,SNR=5.4
TOLK Toolik Lake Re 82.58 9 P **P** **22 16 47.8 +0.2**
baz=338,SNR=28
MUN Mundaring 82.66 132 P P 22 16 55.8 +7.3
F18K Selawik 82.67 13 P **P** **22 16 47.7 -0.3**
baz=329,SNR=42
E22K Anaktuvuk Pass 82.72 10 IAmb IAmb 22 16 55.3
comp=Z,85nm,1.9s
E22K Anaktuvuk Pass 82.72 10 P **P** **22 16 48.4 0.0**
baz=336,SNR=22
F19K Shaleruckib Mo 82.85 13 P **P** **22 16 48.4 -0.5**
baz=331
KNRA Kununurra 82.98 112 P **P** **22 16 51.0 +0.5**
comp=Z,34nm,1.0s
KNRA Kununurra 82.98 112 IAmb IAmb 22 17 00.0
comp=Z,28nm,0.9s
D27M Malcolm River 82.98 6 IAmb IAmb 22 16 57.0
comp=Z,42nm,1.6s
D27M Malcolm River 82.98 6 P **P** **22 16 50.0 +0.2**
baz=345,SNR=8.3
F20K Avaraart Lake 83.04 12 P **P** **22 16 49.6 -0.4**
baz=332
G15K Niukluk 83.05 16 P **P** **22 16 49.9 -0.1**
baz=325
ANM Nome 83.07 16 IAmb IAmb 22 16 55.5
comp=Z,36nm,1.1s
ANM Nome 83.07 16 P **P** **22 16 50.5 +0.3**
baz=324,SNR=35
D28M Stokes Point 83.09 5 P **P** **22 16 51.0 +0.8**
baz=347,SNR=13
E23K Chandalar 83.11 9 P **P** **22 16 50.9 +0.4**
baz=338
G16K Koyuk River 83.11 15 P **P** **22 16 50.6 +0.2**
baz=327
DRLN Deer Lake 83.20 323 P **P** **22 16 51.2 0.0**
E24K Your Creek 83.25 9 IAmb IAmb 22 16 57.7
comp=Z,31nm,1.1s
E24K Your Creek 83.25 9 P **P** **22 16 51.6 +0.4**
baz=339
F21K Alatna River 83.28 11 P **P** **22 16 51.1 -0.1**
baz=334,SNR=33
G17K Kiwalik Mounta 83.41 14 P **P** **22 16 51.8 -0.2**
baz=328,SNR=18
GUMO Guam 83.45 78 LR LR 22 57 19.8
comp=Z,314nm,21.1s,baz=320,slow=38
KLBR Kellerberrin 83.47 130 P P 22 16 59.2 +6.5
G18K Tagagawik 83.49 13 P **P** **22 16 51.9 -0.5**
baz=330
E25K Arctic Village 83.58 8 IAmb IAmb 22 16 59.1
comp=Z,32nm,1.1s
E25K Arctic Village 83.58 8 P **P** **22 16 53.2 +0.4**
baz=341,SNR=35
G19K Purcell Mounta 83.59 13 IAmb IAmb 22 16 58.6
comp=Z,26nm,0.9s
G19K Purcell Mounta 83.59 13 P **P** **22 16 52.8 -0.1**
baz=331,SNR=40
C36M Paulatuk 83.61 360 IAmb IAmb 22 16 57.5
comp=Z,24nm,1.1s
C36M Paulatuk 83.61 360 P **P** **22 16 51.9 -0.9**
baz=0.5,SNR=12
E28M Babbage River 83.73 5 P **P** **22 16 53.8 +0.2**
baz=347
H16K Elim 83.78 15 P **P** **22 16 54.0 +0.2**
baz=327,SNR=21
COLD Coldfoot 83.80 10 IAmb IAmb 22 17 00.1
comp=Z,25nm,1.0s
COLD Coldfoot 83.80 10 P **P** **22 16 54.3 +0.4**
baz=337,SNR=29
F24K Squaw Lake 83.86 9 P **P** **22 16 54.6 +0.3**
baz=339
G22K Bettles 83.88 10 P **P** **22 16 54.3 0.0**
baz=336
G21K Allakaket 83.92 11 P **P** **22 16 54.3 -0.2**
baz=334
NWAO Narrogin (SRO) 83.93 132 LR LR 22 50 30.9
comp=Z,155nm,19.3s,baz=274,slow=33
E27K Coleen River 83.95 6 IAmb IAmb 22 17 01.9
comp=Z,42nm,1.5s
E27K Coleen River 83.95 6 P **P** **22 16 55.1 +0.4**
baz=345,SNR=17
H17K Granite Mounta 84.05 14 P **P** **22 16 55.1 -0.1**
baz=329
E29M Blow River 84.07 5 IAmb IAmb 22 17 36.6
comp=Z,25nm,1.2s
E29M Blow River 84.07 5 P **P** **22 16 55.5 +0.2**
baz=348,SNR=26
F25K Christian River 84.08 8 P **P** **22 16 56.1 +0.7**
baz=341,SNR=21
SHEM Shemya Is, Ala 84.13 32 LR LR 22 57 22.1
comp=Z,541nm,18.3s,baz=312,slow=38
F26K Sheenjek River 84.16 7 P **P** **22 16 56.2 +0.5**
baz=343,SNR=6.7
H18K Honhosa River 84.20 14 P **P** **22 16 55.8 -0.2**

baz=330
G23K **Bananza Creek** 84.30 10 IAmb IAmb 22 17 02.9
comp=Z,31nm,1.1s
G23K **Bananza Creek** 84.30 10 P P 22 16 56.8 +0.3
baz=338,SNR=38
IMAR **Indian Mountai** 84.35 12 P P 22 16 56.5 -0.3
BMAR **Burnt Mountain** 84.36 8 P P 22 16 57.3 +0.5
SCHQ **Schefferville** 84.37 331 P P 22 16 56.6 -0.5
comp=Z,6.1nm,0.5s,baz=43,slow=3.2,SNR=25
SCHQ LR LR 22 56 53.4
comp=Z,374nm,18.9s,baz=54,slow=37
comp=Z,6.1nm,0.5s
INK **Inuvik** 84.43 3 P P 22 16 56.7 -0.4
comp=Z,6.8nm,0.8s,baz=16,slow=8.8,SNR=15
comp=Z,6.8nm,0.8s
INK **Inuvik** 84.43 3 P P 22 16 56.9 -0.1
baz=352,SNR=15
H20K **Anotleneega Mo** 84.59 12 P P 22 16 58.0 0.0
baz=333,SNR=21
KDU **Kakadu** 84.61 107 P P 22 16 59.1 +0.3
comp=Z,18nm,0.9s
F28M **Old Crow** 84.67 6 IAmb IAmb 22 17 03.4
comp=Z,21nm,1.1s
F28M **Old Crow** 84.67 6 P P 22 16 58.6 +0.2
baz=346,SNR=27
G24K **Hadweenzic Riv** 84.68 9 P P 22 16 59.2 +0.8
baz=340,SNR=43
I17K **Unalakleet** 84.77 15 P P 22 16 59.4 +0.5
baz=328,SNR=20
H21K **Melozitna Rive** 84.82 11 P P 22 16 59.5 +0.4
baz=335,SNR=30
H22K **Ishtalitna Cre** 84.84 11 P P 22 16 59.8 +0.6
baz=336,SNR=58
GCSA **Galena City Sc** 84.86 13 P P 22 16 59.5 +0.2
baz=332
G26K **Porcupine Rive** 84.91 7 P P 22 17 00.2 +0.7
baz=343
F30M **Barrier River** 84.99 4 P P 22 17 00.1 +0.2
baz=350,SNR=17
J14K **Nanvaranak Lak** 85.03 17 P P 22 17 00.4 +0.3
baz=326
FYU **Fort Yukon** 85.11 8 IAmb IAmb 22 17 07.2
comp=Z,48nm,1.3s
G27K **Doyon Strip** 85.28 7 P P 22 17 02.1 +0.6
baz=345
F31M **Tsiigehtchic** 85.28 4 P P 22 17 01.4 0.0
baz=352,SNR=39
I20K **Naaghedeneel** 85.29 12 P P 22 17 02.1 +0.6
baz=334
J16K **Anvik River** 85.31 15 P P 22 17 02.1 +0.5
baz=328
I21K **Tanana** 85.39 11 IAmb IAmb 22 17 07.2
comp=Z,31nm,1.2s
I21K **Tanana** 85.39 11 P P 22 17 02.3 +0.3
baz=336,SNR=28
K13K **Kusilvak Mount** 85.41 18 P P 22 17 02.3 +0.2
baz=325,SNR=11
H24K **Noodor Dome** 85.44 9 IAmb IAmb 22 17 09.6
comp=Z,57nm,1.7s
H24K **Noodor Dome** 85.44 9 P P 22 17 02.9 +0.6
baz=339,SNR=23
G29M **Pine Creek** 85.52 5 P P 22 17 02.5 -0.1
baz=348
G30M **tAoh Zraii Nji** 85.58 5 P P 22 17 02.7 -0.3
baz=350
MLY **Manley** 85.74 11 IAmb IAmb 22 17 11.4
comp=Z,21nm,1.0s
MLY **Manley** 85.74 11 P P 22 17 04.0 +0.2
baz=337,SNR=22
J19K **Poorman** 85.78 13 P P 22 17 04.3 +0.3
baz=333
H27K **Steamboat Moun** 85.86 7 IAmb IAmb 22 17 10.9
comp=Z,37nm,1.2s
H27K **Steamboat Moun** 85.86 7 P P 22 17 04.5 +0.2
baz=345,SNR=31
I23K **Minto, Yukon-K** 85.86 10 IAmb IAmb 22 17 09.5
comp=Z,35nm,1.2s
I23K **Minto, Yukon-K** 85.86 10 P P 22 17 04.6 +0.4
baz=338,SNR=33
J20K **Nowinta River** 85.91 12 P P 22 17 05.1 +0.5
baz=334
K15K **Wolf Creek Mou** 85.93 16 P P 22 17 05.4 +0.7
baz=328
BLKN **Baker Lake** 85.95 348 IAmb IAmb 22 17 14.5
comp=Z,31nm,1.2s
J18K **Innoko River** 86.03 14 P P 22 17 05.3 +0.1
baz=332
PRP **Porcupine Dome** 86.07 9 IAmb IAmb 22 17 10.8
comp=Z,25nm,1.1s
PRP **Porcupine Dome** 86.07 9 P P 22 17 05.7 +0.1
baz=342,SNR=26
EPYK **Eagle Plains** 86.15 5 IAmb IAmb 22 17 11.3
comp=Z,30nm,1.1s
EPYK **Eagle Plains** 86.15 5 P P 22 17 05.5 -0.3
baz=349
H29M **Whitestone** 86.17 6 P P 22 17 05.6 -0.2
baz=348,SNR=37
POKR **Poker Plat Res** 86.18 9 P P 22 17 06.1 +0.1
baz=340
M11K **Mekoryuk** 86.24 19 P P 22 17 06.0 -0.2
baz=324
K17K **Iditarod** 86.34 15 IAmb IAmb 22 17 11.7
comp=Z,44nm,1.1s
K17K **Iditarod** 86.34 15 P P 22 17 07.0 +0.3
baz=330
NEA2 **Nenana** 86.42 10 P P 22 17 06.5 -0.6
baz=338,SNR=20
L14K **Kuka Creek** 86.43 17 P P 22 17 07.5 +0.3
baz=327
I27K **Kandik River** 86.45 7 IAmb IAmb 22 17 13.4
comp=Z,42nm,1.2s
I27K **Kandik River** 86.45 7 P P 22 17 07.4 +0.1
baz=345,SNR=32
L15K **Ungalak Mounta** 86.46 17 P P 22 17 07.7 +0.4
baz=328
CHUM **Lake Minchumin** 86.52 12 P P 22 17 07.6 0.0
baz=336,SNR=18
BPAW **Bear Paw Mtn.** 86.56 11 P P 22 17 07.6 -0.2
baz=337,SNR=60
GENI **Genyem** 86.57 95 P P 22 17 09.2 +0.5
GENI **Genyem** 86.57 95 P P 22 17 06.7 -2.0
I26K **Coal Creek Min** 86.57 8 P P 22 17 07.9 +0.1
baz=344
ILAR **Eielson Array** 86.59 9 P P 22 17 06.8 -1.2
comp=Z,6.4nm,1.1s,baz=323,slow=4.6,SNR=31
ILAR PP PP 22 20 28.8 -0.1
comp=Z,0.2nm,0.3s,baz=349,slow=8.3,SNR=6.5
ILAR PKKPbc PKKPbc 22 35 03.6 -1.0
comp=Z,0.4nm,0.7s,baz=186,slow=2.5,SNR=6.6
ILAR LR LR 23 00 20.5
comp=Z,630nm,20.5s,baz=310,slow=39
comp=Z,6.4nm,1.1s
ILAR **Eielson Array** 86.59 9 P 22 17 06.9 -1.0
ILAR **Eielson Array** 86.59 9 P P 22 17 06.9 -1.0
K20K **Telida** 86.67 13 P P 22 17 08.5 +0.2
baz=334
I28M **Miner Creek** 86.78 6 IAmb IAmb 22 17 51.7
comp=Z,79nm,1.9s
I28M **Miner Creek** 86.78 6 P P 22 17 08.6 -0.3
baz=346,SNR=17
L17K **Donlin** 86.84 15 P P 22 17 09.1 -0.2
baz=330
H31M **Peel River** 86.88 4 IAmb IAmb 22 17 43.9
comp=Z,41nm,1.1s
H31M **Peel River** 86.88 4 P P 22 17 08.8 -0.5
baz=351,SNR=20
HDA **Harding Lake** 86.92 10 P P 22 17 08.3 -1.2
baz=340
L16K **Owhat River** 86.93 16 IAmb IAmb 22 17 14.9
comp=Z,35nm,1.1s
L16K **Owhat River** 86.93 16 P P 22 17 10.1 +0.5
baz=330,SNR=27
J25K **Salcha River,** 86.95 9 IAmb IAmb 22 17 17.0
comp=Z,45nm,1.3s
J25K **Salcha River,** 86.95 9 P P 22 17 09.4 -0.3
baz=342,SNR=26
JAY **Jayapura** 87.01 94 P P 22 17 10.5 -0.4
comp=Z,8.4nm,0.7s,baz=212,slow=7.5,SNR=1.6
comp=Z,8.4nm,0.7s
I29M **Ogilvie Camp,** 87.02 6 P P 22 17 09.6 -0.4
baz=348
M13K **Dall Lake** 87.03 18 P P 22 17 10.7 +0.6
baz=326
KTH **Kantishna Hill** 87.08 11 IAmb IAmb 22 17 58.5
comp=Z,23nm,1.0s
M14K **Bethel** 87.12 17 P P 22 17 11.1 +0.5
baz=327,SNR=20
L18K **Granite Mounta** 87.14 14 P P 22 17 10.6 0.0
baz=332
MCK **McKinley** 87.25 11 P P 22 17 10.6 -0.5
baz=339,SNR=35
TRF **Thorofare Moun** 87.28 11 IAmb IAmb 22 17 48.4
comp=Z,20nm,0.9s
TRF **Thorofare Moun** 87.28 11 P P 22 17 11.0 -0.6
baz=337,SNR=13
I30M **Mount Dempster** 87.31 5 IAmb IAmb 22 17 22.4
comp=Z,28nm,0.9s
I30M **Mount Dempster** 87.31 5 P P 22 17 11.4 -0.2
baz=350
WRKA **Warakurna** 87.44 120 P P 22 17 13.3 +0.5
comp=Z,11nm,1.0s
PPLA **Purkeypile** 87.45 12 IAmb IAmb 22 17 21.9
comp=Z,42nm,1.2s
PPLA **Purkeypile** 87.45 12 P P 22 17 12.4 +0.1
baz=336,SNR=7.9
SPIA **Saint Paul Isl** 87.48 23 P P 22 17 12.6 +0.2
baz=321
M15K **Kasigluk River** 87.50 17 P P 22 17 12.9 +0.5
baz=328,SNR=14
L19K **White Mountain** 87.56 14 IAmb IAmb 22 17 18.9
comp=Z,30nm,1.1s
L19K **White Mountain** 87.56 14 P P 22 17 12.9 +0.2
baz=333,SNR=21
RND **Reindeer** 87.57 11 IAmb IAmb 22 17 39.8
comp=Z,22nm,1.0s
M16K **Timber Creek** 87.66 16 IAmb IAmb 22 17 33.1
comp=Z,30nm,1.1s
M16K **Timber Creek** 87.66 16 P P 22 17 13.7 +0.6
baz=330
K24K **Donnelly Dome** 87.66 9 P P 22 17 13.8 +0.6
baz=341,SNR=14
M17K **Holitna River** 87.69 15 P P 22 17 13.9 +0.6
baz=331,SNR=18
SCRK **Sand Creek** 87.74 8 P P 22 17 13.7 0.0
baz=343,SNR=48
RIDG **Independent Ri** 87.85 9 IAmb IAmb 22 17 45.4
comp=Z,20nm,1.1s
RIDG **Independent Ri** 87.85 9 P P 22 17 13.8 -0.3
baz=342,SNR=6.5
N14K **Kuskokwak Cree** 87.90 18 P P 22 17 14.7 +0.4
baz=328
M19K **Big River Lodg** 87.91 14 P P 22 17 14.6 +0.2
baz=334
J29N **Klondike Camp** 87.92 6 IAmb IAmb 22 17 19.5
comp=Z,35nm,1.2s
J29N **Klondike Camp** 87.92 6 P P 22 17 14.8 +0.4
baz=348,SNR=15
J30M **Hart River** 87.95 5 P P 22 17 14.8 +0.1
baz=350
M18K **Stony River** 87.97 14 P P 22 17 15.1 +0.5
baz=333,SNR=12
DOT **Dot Lake** 88.05 9 IAmb IAmb 22 17 39.5
comp=Z,22nm,1.2s
L22K **Petersville** 88.05 12 IAmb IAmb 22 17 39.8
comp=Z,13nm,0.8s
N15K **Kwethluk River** 88.11 17 P P 22 17 14.8 -0.5
baz=329
DHY **Denali Highway** 88.11 10 P P 22 17 14.7 -0.8
baz=340
WAT1 **Susitna Watana** 88.16 11 P P 22 17 15.9 +0.3
baz=339
N16K **Nishlik Lake** 88.18 16 P P 22 17 15.8 +0.1
baz=330
DAWY **Dawson** 88.18 6 P P 22 17 15.5 -0.2
baz=347,SNR=28
M20K **Styx River** 88.19 13 IAmb IAmb 22 17 38.6
comp=Z,25nm,1.4s
M20K **Styx River** 88.19 13 P P 22 17 15.5 -0.3
baz=335
CUT **Chulitna** 88.25 12 P P 22 17 15.3 -0.6
baz=337
SKT **Skwentna** 88.41 12 IAmb IAmb 22 17 26.3
comp=Z,29nm,1.0s
SKT **Skwentna** 88.41 12 P P 22 17 16.2 -0.6
baz=336,SNR=20
PAX **Paxson** 88.50 9 P P 22 17 16.9 -0.4
baz=342
N17K **Nushagak Hills** 88.52 15 IAmb IAmb 22 17 22.7
comp=Z,20nm,1.2s
N17K **Nushagak Hills** 88.52 15 P P 22 17 17.7 +0.4
baz=332,SNR=6.7
WAT6 **Susitna Watana** 88.52 10 P P 22 17 16.8 -0.6
baz=340
K29M **Barlow Dome** 88.58 6 IAmb IAmb 22 18 09.2
comp=Z,18nm,1.1s
K29M **Barlow Dome** 88.58 6 P P 22 17 17.7 0.0
baz=349
O14K **Tigyukauivet M** 88.58 18 P P 22 17 18.0 +0.4
baz=328
N18K **Kilae Creek** 88.68 15 P P 22 17 18.6 +0.5
baz=333
L26K **Log Cabin Wild** 88.74 8 P P 22 17 18.8 +0.5
baz=344
MENT **Mentasta** 88.77 9 P P 22 17 19.9 +1.4
N19K **Bonanza Creek** 88.87 14 IAmb IAmb 22 17 29.6
comp=Z,19nm,1.0s
N19K **Bonanza Creek** 88.87 14 P P 22 17 19.1 0.0
baz=334
M22K **Willow** 88.89 12 P P 22 17 19.0 +0.1
baz=338
L27K **Beaver Creek,** 88.89 8 P P 22 17 19.7 +0.7
baz=345,SNR=6.8
BCAR **Beaver Creek A** 88.89 8 P 22 17 19.2 +0.1
MAYO **Mayo, Yukon** 88.96 5 P P 22 17 19.2 -0.1
baz=350
N20K **Mount Spurr** 89.00 13 P P 22 17 19.2 -0.4
baz=336
SPCR **Spurr Chakacha** 89.00 13 P P 22 17 19.2 -0.4
baz=336
O15K **Ungalikthiuk R** 89.03 17 IAmb IAmb 22 17 56.3
comp=Z,23nm,1.3s
O15K **Ungalikthiuk R** 89.03 17 P P 22 17 20.0 +0.3
baz=329
GHO **Glory Hole Cre** 89.08 11 IAmb IAmb 22 17 55.1
comp=Z,33nm,1.0s
O16K **Kokwok River B** 89.11 16 IAmb IAmb 22 18 09.6
comp=Z,23nm,2.0s
O16K **Kokwok River B** 89.11 16 P P 22 17 20.2 +0.2
baz=331
SML **Sawmill** 89.15 11 IAmb IAmb 22 18 05.7
comp=Z,24nm,0.9s
SML **Sawmill** 89.15 11 P P 22 17 20.0 -0.3
baz=339
O17K **Koliganek Bris** 89.20 16 P P 22 17 20.7 +0.2
baz=332
PMR **Palmer** 89.21 11 P P 22 17 21.0 +0.5
PMR **Palmer** 89.21 11 P P 22 17 20.5 0.0
baz=338,SNR=5.5
M24K **Tolsona, Glenn** 89.22 10 P P 22 17 20.8 +0.2
baz=341
L29M **L29M** 89.24 6 P P 22 17 20.7 0.0
baz=348
M23K **Glacier View** 89.27 11 P P 22 17 20.4 -0.4
baz=340
SCM **Sheep Creek Mo** 89.29 11 IAmb IAmb 22 18 15.8
comp=Z,51nm,1.7s
SCM **Sheep Creek Mo** 89.29 11 P P 22 17 21.0 0.0
baz=340
M26K **Nabesna, AK** 89.39 8 P P 22 17 21.3 -0.1
baz=344
O19K **Port Alsworth** 89.47 14 P P 22 17 21.5 -0.1
baz=334
KNK **Knik Glacier** 89.50 11 IAmb IAmb 22 17 42.7
comp=Z,27nm,1.1s
KNK **Knik Glacier** 89.50 11 P P 22 17 22.1 +0.2
baz=339
M27K **Edge Creek, AK** 89.57 8 P P 22 17 22.8 +0.4
baz=345
RC01 **Rabbit Creek A** 89.57 12 P P 22 17 22.4 +0.2
baz=338
O18K **Koktuh Hills** 89.57 15 P P 22 17 22.4 +0.1
baz=333,SNR=8.3
RED **Redoubt Volcan** 89.59 14 IAmb IAmb 22 18 05.8
comp=Z,33nm,1.6s
CAPN **Captain Cook N** 89.60 13 P P 22 17 22.6 +0.3
baz=337
P16K **Nushagak River** 89.63 17 IAmb IAmb 22 17 30.4
comp=Z,39nm,1.1s
P16K **Nushagak River** 89.63 17 P P 22 17 23.0 +0.5
baz=331
BVCY **Beaver Creek** 89.64 7 P P 22 17 22.9 +0.4
baz=346
WB0 **Warramunga Arr** 89.66 112 IAmb IAmb 22 18 03.2
comp=Z,50nm,1.6s
WRA **Warramunga Arr** 89.70 113 P P 22 17 23.2 -0.3
comp=Z,4.6nm,0.6s,baz=314,slow=4.0,SNR=40
WRA PKKPbc PKKPbc 22 34 56.1 -0.4
comp=Z,0.4nm,0.5s,baz=111,slow=3.0,SNR=8.4
comp=Z,4.6nm,0.6s
WRA **Warramunga Arr** 89.70 113 P 22 17 22.6 -0.9
WRA **Warramunga Arr** 89.70 113 P P 22 17 22.6 -0.9
WRA pmax pmax
comp=Z,3.0nm,1.4s
WRAB **Tennant Creek** 89.71 113 P P 22 17 23.2 -0.3
WRAB IAmb IAmb 22 17 31.7
comp=Z,17nm,0.9s
WRAB **Tennant Creek** 89.71 113 P P 22 17 23.2 -0.3
WRAB pmax pmax
comp=Z,17nm,0.9s
WRGLY **Wrigley** 89.76 359 IAmb IAmb 22 17 58.1
comp=Z,24nm,1.1s
WRGLY **Wrigley** 89.76 359 P P 22 17 23.4 +0.4
baz=1.1
KLU **Klutina** 89.84 10 P P 22 17 23.9 +0.4
baz=341
WR8 **Warramunga Arr** 89.84 113 P P 22 17 24.4 +0.3
M29M **Somme Creek** 89.86 6 P P 22 17 24.3 +0.6
baz=348
P17K **Kvichak River** 89.87 16 P P 22 17 23.7 +0.1
baz=332
M30M **Minto, Yukon** 89.89 6 P P 22 17 23.7 -0.1
baz=349
N25K **Chitina, Valde** 89.93 9 P P 22 17 23.9 -0.1
baz=342
P18K **Big Mountain,** 89.98 15 P P 22 17 24.2 0.0
baz=333
SLKM **Skilak Lake** 90.02 12 IAmb IAmb 22 18 09.7
comp=Z,42nm,1.4s
YKAW3 **Yellowknife Wh** 90.07 355 IAmb IAmb 22 18 02.9
comp=Z,44nm,1.6s
O22K **Cooper Landing** 90.14 12 P P 22 17 24.9 +0.1
baz=338
YKA **Yellowknife Ar** 90.14 355 P P 22 17 24.8 0.0
comp=Z,11nm,1.1s,baz=2.0,slow=5.6,SNR=30
YKA LR LR 23 03 18.7
comp=Z,573nm,20.4s,baz=349,slow=39
comp=Z,11nm,1.1s
YKA **Yellowknife Ar** 90.14 355 P P 22 17 24.6 -0.2
YKAW1 **Yellowknife Wh** 90.14 355 IAmb IAmb 22 17 58.1
comp=Z,72nm,1.9s
P19K **Oil Pt** 90.19 14 P P 22 17 25.2 0.0
baz=335
MMPY **Sheldon Lake,** 90.22 3 P P 22 17 25.3 0.0
baz=354
GLI **Glacier Island** 90.23 11 P P 22 17 25.4 +0.1
baz=340
FORT **Forrest** 90.27 125 P P 22 17 26.1 +0.2
comp=Z,32nm,0.9s
FORT **Forrest** 90.27 125 P 22 17 25.9 0.0
FORT IAmb IAmb 22 17 34.9
comp=Z,27nm,1.0s
Q16K **King Salmon** 90.28 16 P P 22 17 25.6 +0.1
baz=332
YUK3 **Moose Creek** 90.30 7 P P 22 17 25.9 0.0
baz=346
MCARA **McCarthy VSAT** 90.36 9 P P 22 17 26.0 +0.1
baz=344
M31M **Drury Creek, Y** 90.45 5 P P 22 17 26.0 -0.3
baz=351
HOM **Homer** 90.52 13 P P 22 17 26.3 -0.3
baz=336
BMRM **Bremner River** 90.54 10 P P 22 17 26.5 -0.3
baz=342
SEW **Seward** 90.54 12 IAmb IAmb 22 17 30.7
comp=Z,16nm,1.0s
SEW **Seward** 90.54 12 P P 22 17 26.5 -0.2
baz=338
FCC **Fort Churchill** 90.55 345 IAmb IAmb 22 17 33.4
comp=Z,54nm,1.8s
BRSE **Bradley Lake S** 90.63 13 P P 22 17 26.9 -0.2
baz=337
Q19K **Cape Douglas,** 90.76 15 P P 22 17 28.3 +0.4
baz=334
EYAK **Cordova Ski Ar** 90.76 10 P P 22 17 27.8 0.0
baz=341
Q17K **Contact Creek** 90.83 16 P P 22 17 28.5 +0.3
baz=333
BARN **Barnard Glacie** 90.85 8 IAmb IAmb 22 17 44.3
comp=Z,47nm,1.8s
YUK8 **Steele Glacier** 90.86 7 P P 22 17 28.4 -0.1
baz=347
YUK4 **Talbot Arm** 90.92 7 P P 22 17 28.7 -0.1
baz=348
CRQE **Cirque** 90.96 9 P P 22 17 28.6 -0.3
baz=344
N30M **Aishikik Lake** 90.96 6 P P 22 17 28.8 0.0
baz=349
CTG **Chitna Glacier** 90.99 8 P P 22 17 28.9 -0.1
baz=345
CTGM **Chitina Glacie** 90.99 8 IAmb IAmb 22 18 13.2
comp=Z,19nm,1.1s
P23K **Montague Islan** 91.01 11 P P 22 17 28.7 -0.2
baz=340
N31M **Braeburn, Yuko** 91.05 5 IAmb IAmb 22 17 34.6
comp=Z,20nm,1.3s
N31M **Braeburn, Yuko** 91.05 5 P P 22 17 29.3 +0.2
baz=350
ASAR **Alice Springs** 91.16 116 P P 22 17 29.8 -0.5
comp=Z,5.4nm,0.7s,baz=305,slow=4.7,SNR=46
comp=Z,5.4nm,0.7s
LOGN **Logan Glacier** 91.16 8 IAmb IAmb 22 17 39.6
comp=Z,16nm,1.0s
NIKH **Nikolski High** 91.27 25 P P 22 17 30.4 +0.1
baz=322
R17L **Mt. Peulik Vol** 91.28 16 P P 22 17 30.4 +0.2
baz=332
O28M **Mount Upton** 91.31 8 P P 22 17 30.5 -0.2
baz=346
Q20K **Shuyak Island** 91.33 14 P P 22 17 30.4 0.0
baz=336
YUK6 **Outpost Mounta** 91.35 7 P P 22 17 30.8 0.0
baz=348
HYT **Haines Junctio** 91.55 6 IAmb IAmb 22 17 38.0
comp=Z,20nm,1.0s
HYT **Haines Junctio** 91.55 6 P P 22 17 31.7 +0.1
baz=349
KAIM **Kayak Island** 91.56 10 P P 22 17 31.8 +0.3
baz=342
MESA **MESA** 91.67 9 P P 22 17 32.3 0.0
baz=345
Q23K **Middleton Isla** 91.73 11 P P 22 17 32.5 +0.3
baz=341
O30N **Mendenhall** 91.73 6 P P 22 17 32.2 -0.1
baz=350
CHGN **Chignik** 91.90 18 P P 22 17 32.7 -0.4
baz=330
WHY **Whitehorse** 91.94 5 P P 22 17 33.2 -0.2
baz=351
O29M **Mount Kennedy** 91.95 7 P P 22 17 33.4 -0.1
baz=348
PINM **Pinnacle** 91.96 8 P P 22 17 33.8 +0.3
baz=346
KDAK **Kodiak Island** 92.04 15 P P 22 17 33.6 -0.1
comp=Z,15nm,1.0s,baz=326,slow=4.3,SNR=4.0
KDAK LR LR 23 04 30.7
comp=Z,578nm,20.8s,baz=330,slow=39
comp=Z,15nm,1.0s
KDAK **Kodiak Island** 92.04 15 P P 22 17 33.4 -0.3
KDAK IAmb IAmb 22 18 10.9
comp=Z,24nm,1.1s
KDAK **Kodiak Island** 92.04 15 P P 22 17 33.4 -0.3
KDAK pmax pmax
comp=Z,24nm,1.1s
KDAK **Kodiak Island** 92.04 15 P P 22 17 33.5 -0.3
baz=335
SDPT **Sand Point** 92.13 20 P P 22 17 34.2 0.0
baz=329
P30M **Million Dollar** 92.29 6 P P 22 17 34.8 -0.2
baz=349
OHAK **Old Harbor** 92.39 15 IAmb IAmb 22 17 43.4
comp=Z,18nm,1.0s
OHAK **Old Harbor** 92.39 15 P P 22 17 35.2 -0.1
baz=335
P33M **Teslin, Yukon** 92.53 4 P P 22 17 36.0 0.0
baz=353
SII **Sitkinak Islan** 92.77 16 P P 22 17 37.0 -0.2
baz=334
WTLY **Watson Lake, Y** 92.82 2 P P 22 17 37.3 0.0
baz=356
P32M **Atlin** 93.09 5 P P 22 17 38.8 +0.1
baz=352
SKAG **Skagway** 93.09 5 P P 22 17 38.8 +0.3
baz=350
R33M **Jennings River** 93.45 3 P P 22 17 40.4 0.0

	baz=354								
RCBR	**Riachuelo**	**93.76**	**265**	P		**P**		**22 17 43.3**	**+0.9**
	comp=Z,2.2nm,1.0s,baz=30,slow=20,SNR=1.8								
RCBR				LR		LR		23 00 54.5	
	comp=Z,331nm,18.6s,baz=70,slow=36								
	comp=Z,2.2nm,1.0s								
RCBR	**Riachuelo**	**93.76**	**265**	P		**P**		**22 17 41.8**	**-0.7**
RCBR				IAmb		IAmb		22 19 22.4	
	comp=Z,20nm,1.2s								
RCBR	**Riachuelo**	**93.76**	**265**	P		**P**		**22 17 41.8**	**-0.7**
RCBR				pmax		pmax			
	comp=Z,20nm,1.2s								
Q32M	**Nakina River**	**93.81**	**4**	P		**P**		**22 17 42.1**	**-0.1**
	baz=353								
R32K	**Eaglecrest**	**94.33**	**5**	P		**P**		**22 17 44.5**	**+0.2**
	baz=351								
DLBC	**Dease Lake**	**94.45**	**3**	P		**P**		**22 17 45.0**	**+0.1**
	comp=Z,3.7nm,1.0s,baz=348,slow=9.7,SNR=3.3								
DLBC				LR		LR		23 06 24.5	
	comp=Z,315nm,18.6s,baz=309,slow=39								
	comp=Z,3.7nm,1.0s								
DLBC	**Dease Lake**	**94.45**	**3**	P		**P**		**22 17 44.6**	**-0.3**
	baz=355								
S31K	**Pelican**	**94.49**	**6**	P		**P**		**22 17 44.1**	**-0.8**
	baz=350								
MAW	**Mawson**	**94.80**	**177**	LR		LR		22 54 20.2	
	comp=Z,546nm,18.8s,baz=11,slow=32								
S34M	**Telegraph Cree**	**94.92**	**3**	P		**P**		**22 17 46.8**	**-0.2**
	baz=354								
LONY	**Lake Ozonia**	**95.07**	**327**	IAmb		IAmb		22 17 53.5	
	comp=Z,25nm,1.1s								
S32K	**Killisnoo**	**95.13**	**5**	P		**P**		**22 17 47.4**	**-0.5**
	baz=351								
M65A	**Busby, Falmout**	**95.21**	**322**	P		**P**		**22 17 48.1**	**-0.5**
	baz=46								
SIT	**Sitka**	**95.47**	**6**	P		**P**		**22 17 48.7**	**-0.8**
	baz=350								
T35M	**Bob Quinn**	**95.90**	**3**	P		**P**		**22 17 50.8**	**-0.7**
	baz=355								
FFC	**Flin Flon**	**95.99**	**347**	P		**P**		**22 17 51.9**	**-0.1**
FFC				IAmb		IAmb		22 17 56.4	
	comp=Z,21nm,1.4s								
FFC	**Flin Flon**	**95.99**	**347**	P		**P**		**22 17 51.9**	**-0.1**
FFC				pmax		pmax			
	comp=Z,21nm,1.4s								
WRAK	**Wrangell Islan**	**96.34**	**4**	P		**P**		**22 17 52.0**	**-1.5**
	baz=353								
SADO	**Sadowa**	**97.11**	**329**	LR		LR		23 04 43.9	
	comp=Z,410nm,19.2s,baz=64,slow=37								
CRAG	**Craig**	**97.23**	**5**	P		**P**		**22 17 56.3**	**-1.2**
	baz=352								
V35K	**Ketchikan**	**97.47**	**4**	P		**P**		**22 17 57.1**	**-1.5**
	baz=354								
ULM	**Lac du Bonnet**	**98.67**	**342**	P		**P**		**22 18 02.3**	**-1.8**
	comp=Z,1.1nm,0.7s,baz=73,slow=8.7,SNR=2.0								
ULM				LR		LR		23 06 34.7	
	comp=Z,621nm,18.5s,baz=26,slow=38								
	comp=Z,1.1nm,0.7s								
ULM	**Lac du Bonnet**	**98.67**	**342**	P		**P**		**22 18 01.7**	**-2.4**
ULM	**Lac du Bonnet**	**98.67**	**342**	P		**P**		**22 18 01.7**	**-2.4**
ULM				pmax		pmax			
	comp=Z,9.0nm,1.4s								
NVL	**N'lazarevskaya**	**102.53**	**194**	*e*P		**Pdif**		**22 18 24.3**	**+3.8**
NVL				*e*				22 22 37.6	
NVL				*e*PPP		PPP		22 24 47.5	
NVL				*e*SS		**SKSac**		**22 29 04.0**	**+4.8**
NVL				*e*SS		**SS**		**22 37 18.3**	**+6.4**
NVL				*e*SSS		SSS		22 41 12.2	
NVL				pmax		pmax			
	comp=Z,31nm,2.1s								
NVL				MLR		MLR			
	comp=Z,329nm,18.0s								
NEW	**Newport**	**104.46**	**355**	PP		**PKiKP**		**22 22 46.5**	**+0.4**
	comp=Z,2.7nm,0.9s,baz=18,slow=6.4,SNR=3.3								
BDFB	**Brasilia**	**108.70**	**262**	PP		**PP**		**22 23 21.2**	**+0.2**
	comp=Z,1.4nm,0.4s,baz=87,slow=11,SNR=3.8								
PDAR	**Pinedale Array**	**108.89**	**348**	PKiKP		**PKiKP**		**22 22 53.8**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=52,slow=3.0,SNR=6.6								
PDAR				PP		PP		**22 23 20.6**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=22,slow=5.7,SNR=2.8								
PDAR				PKKP		**PKKPdf**		**22 34 13.4**	**-3.4**
	comp=Z,0.6nm,0.7s,baz=160,slow=6.5,SNR=6.1								
NVAR	**Mina Array Bea**	**114.33**	**355**	PKP		**PKiKP**		**22 23 04.8**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=59,slow=0.9,SNR=3.6								
NVAR	**Mina Array Bea**	**114.33**	**355**			**PKiKP**		**22 23 04.2**	**-1.0**
QSPA	**South Pole Qui**	**117.16**	**180**	eS		**PKPdf**		**22 23 08.6**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=0.0,slow=2.0,SNR=8.2								
QSPA	**South Pole Qui**	**117.16**	**180**	PKP		**PKPdf**		**22 23 08.2**	**-1.2**
TXAR	**Lajitas Array**	**120.19**	**339**	PKP		**PKPdf**		**22 23 15.6**	**-1.0**
	comp=Z,0.7nm,0.6s,baz=10.0,slow=2.1,SNR=5.2								
TXAR				PP		**PP**		**22 24 40.2**	**-0.2**
	comp=Z,1.8nm,1.1s,baz=87,slow=4.3,SNR=3.5								
TXAR	**Lajitas Array**	**120.19**	**339**			**PKPdf**		**22 23 14.8**	**-1.8**
CPUP	**Villa Florida**	**120.62**	**254**	PKP		**PKPdf**		**22 23 16.2**	**-0.9**
	comp=Z,1.1nm,0.5s,baz=27,slow=2.3,SNR=3.6								
LPAZ	**La Paz**	**126.78**	**270**	PKP		**PKPdf**		**22 23 29.9**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=39,slow=2.2,SNR=5.9								
LPAZ	**La Paz**	**126.78**	**270**			**PKPdf**		**22 23 29.0**	**-1.0**
LPAZ	**La Paz**	**126.78**	**270**	*e*P		**PKPdf**		**22 23 29.9**	**-0.1**
TRQA	**Tornquist**	**127.07**	**242**			**PKPdf**		**22 23 29.3**	**+0.1**
TRQA	**Tornquist**	**127.07**	**242**	PKiKP		**PKPdf**		**22 23 29.3**	**+0.1**
OTAV	**Otavalo**	**127.88**	**294**			**PKPdf**		**22 23 31.8**	**-0.3**
OTAV	**Otavalo**	**127.88**	**294**	PKiKP		**PKPdf**		**22 23 31.8**	**-0.3**
OTAV	**Otavalo**	**127.88**	**294**	*e*P		**PKPdf**		**22 23 31.6**	**-0.4**
PB11	**IPOC Station P**	**129.36**	**266**			**PKPdf**		**22 23 34.3**	**0.0**
PLCA	**Paso Flores**	**133.89**	**239**	PKP		**PKPdf**		**22 23 43.0**	**+0.9**
	comp=Z,3.0nm,1.2s,baz=49,slow=3.5,SNR=5.9								
PPT2	**Papeete2**	**155.05**	**72**	*e*LR		LR		23 16 10.9	
	comp=Z,566nm,26.5s								
PPT2				*e*LR		LR		23 16 20.2	
	comp=Z,374nm,26.8s								
TAOE	**Nuku Hiva Isla**	**156.50**	**41**	*e*LR		LR		23 16 50.8	
	comp=Z,554nm,23.8s								
TBI	**Tubuai**	**157.23**	**86**	*e*LR		LR		23 17 13.2	
	comp=Z,1μm,28.5s								

WEL ***15*** *22:06:40.8±1.1,32°S±5°×17°7W±1°,6,h33km,M4.4/10, mB4.8/7,ML4.6/12,MLv4.8/10,Mw(mB)4.0/7,Error ellipse: s-maj=21.8km s-min=4.3km az=105.3,confirmed*
IDC ***15*** *22:06:41.5±0.7,31°.89S×178°.14W,h0km,mb4.3/6, mbtmp4.3/7,ML4.4/1,MS3.5/3,Error ellipse: s-maj=29.6km s-min=19.8km az=92.0*
NEIC ***15*** *22:06:44.3±1.5,32°.08S±0°.02×178°.3W±0°.2,h10km±1km, mb4.8/14,Error ellipse: s-maj=25.2km s-min=3.8km az=96.0*

ISC 15 22:06:42.5±0.6,**32°21S**±0°.05×**178°.0W**±0°.1,**h10**km,**n69,**
σ2§**14**/**77**,**mb4.7**/**11**,**MS3.5/3**,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.94**	**1**	P	**Pn**	**22 07 27.4**	**-1.9**
GLKZ				S	**Sn**	**22 08 02.0**	**-2.6**
RAO	**Raoul Island**	**2.95**	**1**	Pn	**Pn**	**22 07 26.4**	**-3.0**
	76nm,0.3s,baz=234,slow=19,SNR=2.3						
RAO				Sn	**Sn**	**22 08 00.1**	**-4.9**
	109nm,0.3s,baz=133,slow=19,SNR=2.1						
	166nm,0.3s						
RAO	**Raoul Island**	**2.95**	**1**		**Pn**	**22 07 30.0**	**+0.6**
RAO					**Sn**	**22 08 03.9**	**-1.0**
WMGZ	**Waiomatatini S**	**6.32**	**207**	P	**Pn**	**22 08 14.8**	**-1.0**
WMGZ				S	**Sn**	**22 09 25.6**	**-2.5**
PKGZ	**Pakihiroa**	**6.50**	**209**	P	**Pn**	**22 08 15.5**	**-2.7**
PKGZ				S	**Sn**	**22 09 30.4**	**-2.1**
HAZ	**Te Kaha**	**6.53**	**211**	P	**Pn**	**22 08 16.6**	**-2.0**
HAZ				S	**Sn**	**22 09 33.0**	**-0.1**
PUZ	**Puketiti**	**6.61**	**207**	P	Pn	22 08 16.6	-3.1
PUZ				S	**Sn**	**22 09 32.5**	**-2.6**
RUGZ	**Raukumara Rang**	**6.75**	**211**	P	**Pn**	**22 08 19.5**	**-2.3**
RUGZ				S	**Sn**	**22 09 37.4**	**-1.4**
TWGZ	**Tauwhareparae**	**6.80**	**208**	P	**Pn**	**22 08 19.9**	**-2.5**
TWGZ				S	**Sn**	**22 09 38.2**	**-1.8**
CNGZ	**Carnagh Statio**	**6.99**	**205**	P	Pn	22 08 21.7	-3.2
MWZ	**Matawai**	**7.12**	**210**	P	**Pn**	**22 08 24.3**	**-2.6**
MWZ				S	**Sn**	**22 09 45.5**	**-2.3**
URZ	**Urewera**	**7.24**	**212**	Pn	Pn	22 08 25.3	-3.1
	2.3nm,0.3s,baz=55,slow=2.7,SNR=14						
URZ				Sn	**Sn**	**22 09 46.0**	**-4.7**
	4.5nm,0.3s,baz=29,slow=18,SNR=7.5						
URZ	**Urewera**	**7.24**	**212**	P	**Pn**	**22 08 25.6**	**-2.8**
URZ				S	**Sn**	**22 09 47.8**	**-2.9**
WCZ	**Waipu Caves**	**7.37**	**238**	S	**Pn**	**22 08 34.6**	**+4.5**
RTZ	**Ruatahuna**	**7.59**	**211**		**Pn**	**22 08 31.4**	**-2.0**
RTZ	**Ruatahuna**	**7.59**	**211**	P	**Pn**	**22 08 31.6**	**-1.7**
RTZ				S	**Sn**	**22 09 55.7**	**-3.8**
OUZ	**Omahuta**	**7.62**	**245**	P	**Pn**	**22 08 37.7**	**+4.1**
RAHZ	**Arahi**	**7.80**	**210**	P	**Pn**	**22 08 36.1**	**0.0**
MTHZ	**Maungatapiwha**	**7.85**	**211**	P	**Pn**	**22 08 36.0**	**-0.8**
MTHZ				S	**Sn**	**22 10 01.8**	**-3.9**
OTVZ	**Oturere**	**8.64**	**215**	P	**Pn**	**22 08 47.3**	**-0.5**
THZ	**Tophouse**	**11.99**	**215**	Pn	**Pn**	**22 09 34.4**	**+0.9**
TBI	**Tubuai**	**26.68**	**78**	*e*LR	LR	22 18 45.0	
	580nm,29.2s						
PPT2	**Papeete2**	**29.48**	**67**	*e*LR	LR	22 20 14.3	
	136nm,23.5s						
PPT2				*e*LR	LR	22 20 17.0	
	114nm,27.0s						
PPT	**Papeete**	**29.50**	**67**	LR	LR	22 21 11.5	
	comp=Z,48nm,20.1s,baz=194,slow=30						
STKA	**Stephens Creek**	**34.12**	**260**	P	**P**	**22 13 28.6**	**+1.0**
	3.4nm,0.8s,baz=73,slow=12,SNR=5.1						
STKA				LR	LR	22 26 24.5	
	comp=Z,126nm,18.1s,baz=41,slow=35						
	3.4nm,0.8s						
STKA	**Stephens Creek**	**34.12**	**260**	P	**P**	**22 13 27.6**	**+0.1**
CTA	**Charters Tower**	**34.14**	**282**	LR	LR	22 25 42.4	
	comp=Z,94nm,19.2s,baz=70,slow=34						
CTAO	**Charters Tower**	**34.14**	**282**	P	**P**	**22 13 29.1**	**+1.3**
CTAO				IAmb	IAmb	22 13 29.8	
	comp=Z,16nm,1.1s						
BBOO	**Buckleboo**	**38.52**	**256**	P	**P**	**22 14 03.0**	**-2.2**
COEN	**Coen**	**39.80**	**288**	P	**P**	**22 14 15.2**	**-0.9**
COEN				IAmb	IAmb	22 14 29.0	
	comp=Z,20nm,1.2s						
ASAR	**Alice Springs**	**43.05**	**269**	P	**P**	**22 14 41.7**	**-1.0**
	comp=Z,3.2nm,0.9s,baz=113,slow=8.6,SNR=4.2						
	comp=Z,3.2nm,0.9s						
ASAR	**Alice Springs**	**43.05**	**269**	P	**P**	**22 14 41.1**	**-1.6**
WR8	**Warramunga Arr**	**44.06**	**274**		**P**	**22 14 49.0**	**-1.9**
WRAB	**Tennant Creek**	**44.20**	**274**	P	**P**	**22 14 51.0**	**-1.0**
WRAB				IAmb	IAmb	22 14 52.8	
	comp=Z,16nm,1.4s						
WRA	**Warramunga Arr**	**44.20**	**274**	P	**P**	**22 14 50.8**	**-1.2**
	comp=Z,2.8nm,0.4s,baz=114,slow=8.0,SNR=37						
	comp=Z,2.8nm,0.4s						
WRA	**Warramunga Arr**	**44.20**	**274**		**P**	**22 14 50.8**	**-1.2**
WB0	**Warramunga Arr**	**44.23**	**274**		**P**	**22 14 51.2**	**-1.1**
FORT	**Forrest**	**45.62**	**257**	P	**P**	**22 15 01.7**	**-1.4**
KNRA	**Kununurra**	**50.87**	**276**	P	**P**	**22 15 42.9**	**-1.0**
KNRA				IAmb	IAmb	22 16 00.6	
	comp=Z,19nm,1.4s						
PSA00	**Pilbara Seismi**	**55.78**	**264**	P	**P**	**22 16 19.0**	**-1.0**
QSPA	**South Pole Qui**	**57.90**	**180**	P	**P**	**22 16 37.3**	**+2.7**
	comp=Z,1.3nm,0.9s,baz=59,slow=1.2,SNR=25						
	comp=Z,1.3nm,0.9s						
QSPA	**South Pole Qui**	**57.90**	**180**	P	**P**	**22 16 37.2**	**+2.7**
QSPA				IAmb	IAmb	22 16 46.5	
	comp=Z,7.4nm,0.8s						
BELA	**Belgrano 2**	**68.00**	**172**	P	**P**	**22 17 44.4**	**+3.0**
BELA				IAmb	IAmb	22 18 06.7	
	comp=Z,9.3nm,1.4s						
SNAA	**Sanae**	**76.35**	**178**	P	**P**	**22 18 35.8**	**+4.3**
	comp=Z,1.3nm,0.4s,baz=241,slow=10.0,SNR=3.4						
	comp=Z,1.3nm,0.4s						
SNAA	**Sanae**	**76.35**	**178**	P	**P**	**22 18 32.9**	**+1.5**
SNAA				IAmb	IAmb	22 18 47.2	
	comp=Z,7.2nm,1.0s						
PETK	**Petropavlovsk-**	**87.56**	**346**	P	**P**	**22 19 29.4**	**-0.8**
	comp=Z,4.2nm,0.8s,baz=167,slow=5.9,SNR=1.4						
	comp=Z,4.2nm,0.8s						
PETK	**Petropavlovsk-**	**87.56**	**346**	P	**P**	**22 19 30.1**	**-0.2**
MKAR	**Makanchi Array**	**118.93**	**309**	PKP	**PKPdf**	**22 25 30.1**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=82,slow=3.1,SNR=2.9						
MKAR	**Makanchi Array**	**118.93**	**309**		**PKPdf**	**22 25 30.3**	**-0.8**
BOOM	**Boomskoye usch**	**122.04**	**303**		**PKPdf**	**22 25 38.0**	**+0.7**
KURK	**Kurchatov**	**122.30**	**313**		**PKPdf**	**22 25 35.4**	**-2.0**
KURBB	**Kurchatov Arra**	**122.33**	**313**	PKP	**PKPdf**	**22 25 36.6**	**-0.8**
	comp=Z,18nm,0.8s,baz=103,slow=1.9,SNR=5.9						
BVAR	**Borovoye Array**	**127.69**	**315**	PKP	**PKPdf**	**22 25 47.8**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=104,slow=1.8,SNR=3.6						
KBZ	**Khabaz**	**146.10**	**302**	PKPbc	**PKPdf**	**22 26 22.1**	**+0.5**
	comp=Z,3.5nm,1.0s,baz=0.0,slow=3.0,SNR=4.9						
GEVA	**Gevas**	**146.14**	**292**		**PKPdf**	**22 26 21.5**	**-0.7**
FINES	**FINESS Array B**	**146.84**	**339**	PKPbc	**PKPdf**	**22 26 23.3**	**+0.9**
	comp=Z,3.7nm,0.7s,baz=62,slow=1.9,SNR=16						
FINES	**FINESS Array B**	**146.84**	**339**		**PKPdf**	**22 26 23.6**	**+1.2**
NOA	**NORSAR Array B**	**150.54**	**351**	PKPbc	**PKPdf**	**22 26 32.7**	**+4.2**
	comp=Z,1.2nm,0.7s,baz=17,slow=4.3,SNR=4.0						
HFS	**Hagfors**	**151.01**	**348**	PKPbc	**PKPdf**	**22 26 33.9**	**+4.7**
	comp=Z,2.7nm,0.8s,baz=343,slow=4.5,SNR=5.1						
EIL	**Elat**	**151.69**	**274**	PKPbc	**PKPbc**	**22 26 37.8**	**+0.2**
	comp=Z,9.0nm,0.9s,baz=102,slow=4.1,SNR=7.2						
BNN	**Bunyan**	**151.79**	**293**		**PKPbc**	**22 26 37.7**	**+0.1**
MMAI	**Mount Meron Ar**	**151.92**	**281**	PKPbc	**PKPbc**	**22 26 38.5**	**+0.4**
	comp=Z,6.0nm,0.8s,baz=28,slow=5.7,SNR=13						
AKASG	**Malin Array Be**	**152.72**	**321**	PKPbc	**PKPbc**	**22 26 38.6**	**-0.5**
	comp=Z,2.1nm,0.8s,baz=61,slow=2.0,SNR=8.2						
AKASG				PKPab	**PKPab**	**22 26 50.4**	**+0.4**
	comp=Z,1.2nm,0.7s,baz=62,slow=2.2,SNR=5.5						
AKASG	**Malin Array Be**	**152.72**	**321**	PKPdf	**PKPdf**	**22 26 32.0**	**0.0**
BRTR	**Keskin Array B**	**153.42**	**295**	PKPbc	**PKPbc**	**22 26 40.4**	**-0.9**
	comp=Z,1.6nm,0.8s,baz=126,slow=3.5,SNR=7.0						
BRTR	**Keskin Array B**	**153.42**	**295**		**PKPdf**	**22 26 33.1**	**-0.5**
TORD	**Torodi Ar. Bea**	**161.02**	**179**	PKPab	**PKPab**	**22 27 27.3**	**+0.9**
	comp=Z,1.7nm,0.9s,baz=199,slow=5.1,SNR=6.2						
TORD	**Torodi Ar. Bea**	**161.02**	**179**		**PKPab**	**22 27 26.8**	**+0.4**
GERES	**GERESS Array B**	**161.19**	**335**	PKPab	**PKPab**	**22 27 25.9**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=70,slow=5.9,SNR=2.8						

IDC ***15*** *22:07:09.5±1.7,12°.74N×123°.20E,h0km,mb3.7/4, mbtmp3.8/5,ML4.4/1,MS3.2/5,Error ellipse: s-maj=82.5km s-min=19.2km az=54.0*
MAN ***15*** *22:07:10.0,12°.81N×123°.01E,h4km,MS3.9*

ISC 15 22:07:10.4±0.7,**12°77N**±0°.04×**123°08E**±0°.05,**h10**km,**n20,**
σ1§**83**/**25**,**mb3.7**/**4**,**Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.67**	**127**	*e*P	**Pn**	**22 07 25.3**	**-0.6**
MMPH				*i* S	**Sn**	**22 07 35.8**	**-0.7**
RCP	**Roxas**	**1.24**	**195**	*e*P	**Pg**	**22 07 33.8**	**-0.5**
RCP				*i* S	**Sn**	**22 07 54.0**	**+3.3**
GQP	**Guinayangan**	**1.29**	**332**	*e*P	**Pg**	**22 07 34.6**	**-0.5**
GQP				*e*S	**Sn**	**22 07 52.0**	**+0.2**
IBAJ	**Ibajay, Aklan**	**1.29**	**223**	*i* P	**Pg**	**22 07 35.0**	**-0.3**
BOAC	**Boac**	**1.39**	**300**	*e*P	**Pb**	**22 07 34.9**	**-1.4**
BOAC				*e*S	**Sg**	**22 07 54.2**	**-0.8**
PLP	**Palo**	**2.45**	**130**	*e*P	**Pn**	**22 07 51.9**	**+1.5**
PLP				*e*S	**Sn**	**22 08 22.6**	**+2.1**
TGY	**Tagaytay City**	**2.47**	**303**	Pn	**Pb**	**22 07 52.5**	**-2.4**
	73nm,0.3s,baz=146,slow=7.3,SNR=9.3						
TGY				Sn	**Sb**	**22 08 25.2**	**-0.3**
	165nm,0.3s,baz=78,slow=19,SNR=3.2						
TGY				LR	LR	22 09 02.2	
	comp=Z,257nm,20.1s,baz=106,slow=44						
	325nm,0.4s						
TGY	**Tagaytay City**	**2.47**	**303**	*e*P	**Pb**	**22 07 53.5**	**-1.4**
LLP	**Lapu-Lapu**	**2.59**	**160**	*i* P	**Pb**	**22 07 54.8**	**-2.1**
LLP				*e*S	**Sb**	**22 08 27.2**	**-1.6**
SNPH	**Sibulan**	**3.41**	**177**	*e*P	**Pb**	**22 08 10.2**	**-0.7**
SNPH				*e*S	**Sg**	**22 09 00.3**	**+0.4**
SCPH	**Surigao**	**3.79**	**141**	*e*P	**Pb**	**22 08 15.2**	**-2.3**
DCPH	**Dipolog City**	**4.17**	**176**	*i* P	**Pn**	**22 08 10.6**	**-3.5**
JOW	**Kunigami**	**14.82**	**18**	LR	LR	22 17 03.5	
	comp=Z,78nm,18.2s,baz=62,slow=40						
SIJI	**Sorong**	**15.80**	**148**	LR	LR	22 16 44.7	
	comp=Z,99nm,19.5s,baz=204,slow=37						
GUMO	**Guam**	**21.23**	**85**	LR	LR	22 18 23.2	
	comp=Z,59nm,21.2s,baz=79,slow=32						
KCSI	**Kotacane, Aceh**	**26.66**	**252**	P	**P**	**22 12 53.5**	**+3.8**
WRA	**Warramunga Arr**	**34.34**	**161**	P	**P**	**22 13 57.4**	**-0.2**
	0.5nm,0.8s,baz=342,slow=9.1,SNR=5.5						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**37.73**	**164**	P	**P**	**22 14 26.6**	**+0.1**
	0.8nm,0.8s,baz=338,slow=6.8,SNR=7.4						
ASAR				LR	LR	22 33 15.3	
	comp=Z,94nm,18.1s,baz=102,slow=42						
	0.8nm,0.8s						
MKAR	**Makanchi Array**	**48.16**	**323**	P	**P**	**22 15 52.8**	**+1.9**
	0.7nm,0.6s,baz=128,slow=8.4,SNR=1.8						
	0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**52.26**	**326**	P	**P**	**22 16 22.6**	**+0.9**
	0.9nm,0.3s,baz=123,slow=7.5,SNR=1.8						
	0.9nm,0.3s						

NEIC ***15*** *22:49:09.7±1.6,7°.58S±0°.06×128°.41E±0°.07,h127km±6km, mb4.1/10,Error ellipse: s-maj=10.2km s-min=8.8km az=72.0*

DJA ***15*** *22:49:10.5±0.2,8°S±3°×12°8E±°,h168km±8km,M4.5/19, mb4.4/19,mB5.1/6,MLv4.5/19,Mw(mB)4.5/6*
IDC ***15*** *22:49:11.1±1.6,7°.52S×128°.28E,h138km±15km,mb3.7/8, mbtmp4.3/13,Error ellipse: s-maj=16.2km s-min=12.5km az=110.0*

ISC 15 22:49:10.9±0.5,**7°65S**±0°.05×**128°39E**±0°.06,**h151**km,**n57,**
σ1§**51**/**61**,**mb3.9**/**9**,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.90**	**97**		**Pn**	**22 49 54.8**	**-2.3**
SAUI	**Saumlaki**	**2.90**	**97**	P	**Pn**	**22 49 58.0**	**+0.9**
AAI	**Ambon**	**3.95**	**357**	P	**Pn**	**22 50 10.4**	**-0.2**
KRAI	**Karang Ratu**	**4.31**	**0**	P	**Pn**	**22 50 15.4**	**+0.1**
SOEI	**Soe**	**4.58**	**243**		**Pn**	**22 50 17.5**	**-1.4**
SOEI	**Soe**	**4.58**	**243**	P	**Pn**	**22 50 19.0**	**+0.1**
SOEI				S	**Sn**	**22 51 10.3**	**-1.6**
BATI	**Baumata**	**5.31**	**241**	P	**Pn**	**22 50 29.5**	**+1.0**
	296nm,0.5s,baz=105,slow=5.4,SNR=67						
BATI				S	**Sn**	**22 51 27.7**	**-1.5**
	210nm,0.8s,baz=104,slow=20,SNR=9.7						
BATI	**Baumata**	**5.31**	**241**	P	**Pn**	**22 50 29.1**	**+0.5**
MTN	**Manton Dam**	**5.82**	**153**		**Pn**	**22 50 35.7**	**+0.4**
MMRI	**Maumere**	**6.17**	**260**	Pn	**Pn**	**22 50 40.7**	**+0.8**
MMRI	**Maumere**	**6.17**	**260**	P	**Pn**	**22 50 39.9**	**0.0**
	0.3nm60nm,1.2s						
EDFI	**Ende, Flores**	**6.72**	**260**	P	**Pn**	**22 50 48.1**	**+0.7**
	0.1nm19nm,1.0s						
SIJI	**Sorong**	**7.33**	**23**	P	**Pn**	**22 50 55.4**	**0.0**
	16nm,0.5s,baz=242,slow=17,SNR=6.9						
SIJI				S	**Sn**	**22 52 14.2**	**-3.2**
	11nm,0.6s,baz=156,slow=20,SNR=6.3						
SIJI	**Sorong**	**7.33**	**23**	P	**Pn**	**22 50 54.3**	**-1.1**
	0.2nm1μm17nm,0.7s						
SWI	**Sorong**	**7.33**	**23**	P	**Pn**	**22 50 53.8**	**-1.6**
	0.2nm26nm,0.8s						
KNRA	**Kununurra**	**7.98**	**177**		**Pn**	**22 51 03.8**	**-0.3**
WSI	**Waingapu**	**8.25**	**255**	P	**Pn**	**22 51 06.0**	**-1.7**
	4μm156nm,0.9s						
RKPI	**Ransiki, Papua**	**8.40**	**44**	P	**Pn**	**22 51 08.9**	**-0.8**
	6μm140nm,0.8s						
LBFI	**Labuhan Bajo,**	**8.46**	**264**	P	**Pn**	**22 51 10.0**	**-0.5**
KAPI	**Kappang**	**8.98**	**286**	P	**Pn**	**22 51 16.8**	**-0.6**
	5.1nm,0.4s,baz=143,slow=13,SNR=1.6						
KAPI	**Kappang**	**8.98**	**286**		**Pn**	**22 51 17.4**	**0.0**
WBSI	**Waikabubak, Su**	**9.11**	**257**	P	**Pn**	**22 51 18.9**	**-0.4**
	54nm,0.6s						
DBNI	**Kabupaten Domp**	**10.01**	**264**	P	**Pn**	**22 51 31.6**	**+0.4**
	15nm,0.6s						
BAKI	**Biak**	**10.02**	**51**	P	**Pn**	**22 51 32.0**	**+0.7**
PLAI	**Plampang**	**10.57**	**263**	P	**Pn**	**22 51 36.8**	**-1.7**
FITZ	**Fitzroy Crossi**	**10.72**	**194**	P	**Pn**	**22 51 39.0**	**-1.5**
	3.1nm,0.3s,baz=26,slow=9.1,SNR=33						
FITZ				S	Sn	22 53 31.7	-7.4
	30nm,0.8s,baz=79,slow=16,SNR=9.7						
JAY	**Jayapura**	**13.28**	**68**	P	**Pn**	**22 52

NMEZ S Sn 22 57 44.2 -1.2
KHEZ Kahui Hut 0.54 337 P Pn 22 57 27.2 -0.3
KHEZ Kahui Hut 0.54 337 S Sn 22 57 44.6 -1.4
KHEZ Kahui Hut 0.54 337 P Pn 22 57 27.3 -0.1
KHEZ S Sn 22 57 44.4 -1.7
WAZ Wanganui 0.54 86 P Pn 22 57 28.1 +0.8
WAZ S Sn 22 57 45.3 -0.5
DREZ Durham Road 0.61 354 P Pn 22 57 27.5 -0.2
DREZ S Sn 22 57 44.8 -1.7
NBEZ Newall Road No 0.62 328 P Pn 22 57 27.7 0.0
NBEZ S Sn 22 57 45.2 -1.3
PKE Pukeiti 0.64 339 P Pn 22 57 27.8 -0.1
MHEZ Mangahewa 0.72 2 P Pn 22 57 28.6 +0.3
MHEZ S Sn 22 57 46.1 -1.4
VRZ Vera Road 0.76 29 P Pn 22 57 28.0 -0.5
VRZ S Sn 22 57 46.0 -1.9
OHWZ Ohakea 0.89 118 P Pn 22 57 30.2 +0.9
OHWZ S Sn 22 57 48.7 -0.8
PKVZ Pokaka 0.96 59 P Pn 22 57 29.8 -0.1
PKVZ S Sn 22 57 48.6 -1.9
MTVZ Mangateitei 1.00 66 P Pn 22 57 30.2 -0.1
MTVZ S Sn 22 57 48.9 -2.2
DUWZ D'Urville Isla 1.04 195 P Pn 22 57 30.8 +0.3
DUWZ S Sn 22 57 50.0 -1.7
TRVZ Turoa 1.10 64 P Pn 22 57 31.1 -0.1
TRVZ S Sn 22 57 49.9 -2.8
WNVZ Wahianoa 1.12 66 P Pn 22 57 31.3 0.0
FWVZ Far West T-bar 1.12 62 P Pn 22 57 31.2 -0.2
FWVZ S Sn 22 57 50.4 -2.7
MAVZ Matarangi 1.12 62 P Pn 22 57 31.3 -0.2
WHVZ Whangaehu Hut 1.13 64 P Pn 22 57 31.3 -0.2
COVZ Chateau Observ 1.14 59 P Pn 22 57 31.2 -0.2
TWVZ Taurewa 1.15 51 P Pn 22 57 31.1 -0.4
KIW Kapiti Island 1.17 156 P Pn 22 57 31.8 +0.3
TUVZ Tukino 1.18 64 P Pn 22 57 31.9 +0.1
NGZ Ngauruhoe 1.19 59 P Pn 22 57 31.7 -0.2
MOVZ Moawhango 1.20 72 P Pn 22 57 31.5 -0.3
SNVZ South Ngauruho 1.21 60 P Pn 22 57 32.1 -0.1
WTVZ West Tongariro 1.22 57 P Pn 22 57 31.9 -0.2
OGWZ Otaki Gorge 1.23 147 P Pn 22 57 32.5 +0.5
OGWZ S Sn 22 57 51.9 -2.4
OTVZ Oturere 1.24 60 P Pn 22 57 32.3 0.0
KRVZ Karewarewa 1.26 57 P Pn 22 57 32.3 -0.2
NTVZ North Tongarir 1.28 58 P Pn 22 57 32.5 -0.1
ETVZ East Tongariro 1.29 60 P Pn 22 57 32.7 0.0
POWZ Post Office Ro 1.29 118 P Pn 22 57 32.7 +0.2
TMVZ Te Maari 1.29 59 P Pn 22 57 32.8 +0.1
MRZ Mangatainoka R 1.32 132 P Pn 22 57 33.0 +0.2
MRZ S Sn 22 57 53.4 -2.4
MRZ Mangatainoka R 1.32 132 P Pn 22 57 33.0 +0.2
TSZ Takapari Road 1.32 102 P Pn 22 57 32.9 +0.1
HIZ Hauiti 1.35 19 P Pn 22 57 32.4 -0.8
HIZ Hauiti 1.35 19 S Sn 22 57 54.4 -1.9
HIZ Hauiti 1.35 19 P Pn 22 57 32.3 -0.9
HIZ S Sn 22 57 53.6 -2.7
HIZ Hauiti 1.35 19 P Pn 22 57 32.6 -0.6
KATZ Kakaramea 1.37 54 P Pn 22 57 33.4 0.0
TCW Tory Channel 1.42 180 P Pn 22 57 34.4 +0.8
TCW S Sn 22 57 54.5 -2.9
TCW Tory Channel 1.42 180 P Pn 22 57 34.4 +0.8
TCW S Sn 22 57 55.1 -2.3
CAW Cannon Point 1.44 156 P Pn 22 57 34.4 +0.5
HOWZ Holdsworth Sta 1.45 140 P Pn 22 57 34.3 +0.2
RITZ Rihia Road 1.47 57 P Pn 22 57 34.4 +0.1
PNHZ Pukenui 1.48 95 P Pn 22 57 34.5 +0.1
RATZ Rangitukua 1.48 52 P Pn 22 57 34.3 -0.1
PRWZ Pori Road 1.50 121 P Pn 22 57 34.5 +0.5
DVHZ Dannevirke 1.53 110 P Pn 22 57 35.0 +0.1
WEL Wellington 1.53 166 P Pn 22 57 35.3 +0.5
SNZO South Karori 1.55 168 P Pn 22 57 35.2 +0.3
SNZO South Karori 1.55 168 S Sn 22 57 35.0 +0.1
WATZ Wairara 1.56 47 P Pn 22 57 35.2 0.0
TIWZ Tintock 1.57 129 P Pn 22 57 35.6 +0.3
NNZ Nelson 1.58 206 P Pn 22 57 35.3 +0.1
NNZ Nelson 1.58 206 P Pn 22 57 35.7 +0.4
NNZ S Sn 22 57 58.9 -1.3
TKNZ Takaka Hill 1.60 219 P Pn 22 57 35.3 -0.1
TKNZ Takaka Hill 1.60 219 P Pn 22 57 35.4 -0.1
TKNZ S Sn 22 57 58.7 -1.9
KRHZ Kereru 1.62 85 P Pn 22 57 35.6 -0.1
MTW Mount Morrison 1.65 146 P Pn 22 57 36.2 +0.2
TUWZ Tuamarina 1.65 189 Pn Pn 22 57 36.8 +0.8
BHW Baring Head 1.67 165 P Pn 22 57 36.4 +0.2
BHW Baring Head 1.67 165 P Pn 22 57 36.5 +0.3
WPUZ Waipukurau 1.68 105 P Pn 22 57 36.2 +0.2
QRZ Quartz Range 1.69 232 P Pn 22 57 36.0 -0.4
QRZ Quartz Range 1.69 232 P Sn 22 58 00.1 -2.1
QRZ Quartz Range 1.69 232 P Pn 22 57 36.0 -0.4
QRZ Quartz Range 1.69 232 P Pn 22 57 36.1 -0.3
QRZ S Sn 22 58 00.0 -2.1
KWHZ Kaweka Forest 1.69 78 P Pn 22 57 36.7 +0.1
WHTZ Whakaora 1.72 50 P Pn 22 57 37.0 +0.2
BFZ Birch Farm 1.75 121 P Pn 22 57 37.0 0.0
BFZ Birch Farm 1.75 121 P Pn 22 57 37.1 +0.1
BFZ Birch Farm 1.75 121 P Pn 22 57 37.1 +0.1
KUTZ Kaahu Road 1.77 43 P Pn 22 57 37.4 +0.1
MSWZ Moikau Station 1.78 156 P Pn 22 57 37.2 -0.1
MSWZ Moikau Station 1.78 156 P Pn 22 57 37.5 +0.2
TMWZ Te Maipa 1.79 137 P Pn 22 57 37.9 +0.4
ANWZ Angora Road 1.81 112 P Pn 22 57 38.2 +0.6
PAWZ Paruwai Farm 1.81 152 P Pn 22 57 37.9 +0.2
BKZ Black Stump Fm 1.82 71 P Pn 22 57 37.4 -0.5
BKZ Black Stump Fm 1.82 71 P Pn 22 57 37.4 -0.5
BKZ Black Stump Fm 1.82 71 P Pn 22 57 37.5 -0.4
CPWZ Castlepoint 1.84 128 P Pn 22 57 38.8 +0.9
PRHZ Porangahau 1.87 105 P Pn 22 57 38.7 +0.4
MCHZ McNeill Hill 1.90 80 P Pn 22 57 39.2 +0.6
MRHZ Matea Rd 1.91 61 P Pn 22 57 38.2 -0.7
PLWZ Palliser 1.92 158 P Pn 22 57 38.6 -0.2
PLWZ Palliser 1.92 158 P Pn 22 57 38.9 0.0
TRWZ Traveller 1.93 147 P Pn 22 57 39.2 +0.3
WPRZ Whakapapatarin 1.94 50 P Pn 22 57 38.8 -0.3
CMWZ Cape Campbell 1.95 182 P Pn 22 57 40.0 +0.9
CMWZ Cape Campbell 1.95 182 P Pn 22 57 40.4 +1.2
MRNZ Matariki Terra 1.98 215 P Pn 22 57 39.3 -0.2
MRNZ Matariki Terra 1.98 215 P Pn 22 57 39.4 -0.1
KAHZ Kahuranaki 2.00 91 P Pn 22 57 40.1 +0.4
PXZ Pawanui 2.00 98 P Pn 22 57 39.9 +0.2
ALRZ Allen Road 2.02 53 P Pn 22 57 39.4 -0.6
NMHZ Naumai 2.07 71 P Pn 22 57 41.2 +0.6
HRRZ Handcock Road 2.10 49 P Pn 22 57 40.2 -0.1
HSRZ Hossack Road 2.13 47 P Pn 22 57 41.1 -0.1
CKHZ Cape Kidnapper 2.16 87 P Pn 22 57 42.1 +0.6
ARHZ Aropaoanui 2.16 77 P Pn 22 57 41.8 +0.2
MTHZ Maungataniwha 2.20 65 P Pn 22 57 41.5 -0.5
UTU Utuhina 2.20 43 P Pn 22 57 42.6 +0.6
THZ Tophouse 2.23 208 P Pn 22 57 42.2 -0.1
THZ Tophouse 2.23 208 S Pn 22 57 42.4 +0.1
HLRZ Highlands Stat 2.23 47 P Pn 22 57 43.6 +1.2
NGRZ Ngongotaha 2.25 42 P Pn 22 57 42.9 +0.3
RRRZ Republican Roa 2.27 51 P Pn 22 57 42.3 -0.5
TOZ Tahuroa Road 2.27 25 P Pn 22 57 41.7 -1.1
TOZ Tahuroa Road 2.27 25 P Pn 22 57 42.0 -0.8
TARZ Mount Tarawera 2.33 49 P Pn 22 57 43.3 -0.2
KMRZ Kaimai 2.34 34 P Pn 22 57 43.6 0.0
MUGZ Murupara 2.34 57 P Pn 22 57 42.6 -1.0
RAHZ Arahi 2.34 69 P Pn 22 57 43.6 0.0
OMRZ Omania 2.34 45 P Pn 22 57 43.4 -0.3
MKRZ Makatiti 2.37 47 P Pn 22 57 44.6 +0.5
WHHZ Waihua 2.40 74 P Pn 22 57 44.3 +0.1
RTZ Ruatahuna 2.40 62 S Pn 22 57 43.1 -1.3
RTZ Ruatahuna 2.40 62 P Pn 22 57 43.6 -0.9
KHZ Kahutara 2.68 192 P Pn 22 57 47.8 +0.3
KHZ Kahutara 2.68 192 S Pn 22 57 47.8 +0.3
KHZ Kahutara 2.68 192 P Pn 22 57 48.0 +0.5
URZ Urewera 2.68 56 P Pn 22 57 46.5 -1.1
230nm,0.4s,baz=235,slow=7.3,SNR=462
URZ S Sn 22 58 17.1 -5.0
216nm,0.4s,baz=258,slow=4.4,SNR=22
URZ Urewera 2.68 56 P Pn 22 57 46.3 -1.3
URZ Urewera 2.68 56 P Pn 22 57 46.3 -1.3
DSZ Denniston Nort 2.71 229 P Pn 22 57 47.6 -0.3
DSZ Denniston Nort 2.71 223 P Pn 22 57 47.7 -0.3
KNZ Kokohu 2.74 75 P Pn 22 57 47.8 -0.5
AWAZ Awhitu Peninsu 2.74 6 P Pn 22 57 49.1 +0.7
RAGZ Rawiri 2.76 63 P Pn 22 57 46.3 -2.3
MKAZ Moumakai 2.77 15 P Pn 22 57 48.8 0.0
MHGZ Mahia Peninsul 2.88 78 P Pn 22 57 49.9 -0.1
RIGZ Rimuhau 2.91 69 P Pn 22 57 50.0 -0.5

MWZ Matawai 2.92 61 P Pn 22 57 49.4 -1.1
PRGZ Paritu Road 2.92 74 P Pn 22 57 50.2 -0.3
MYRZ Mayor Island 2.94 32 P Pn 22 57 51.2 +0.3
MBAZ Motutapu North 3.06 9 P Pn 22 57 51.4 -0.9
WIAZ Waiheke Island 3.07 13 P Pn 22 57 52.9 +0.5
TKGZ Te Karaka 3.09 65 P Pn 22 57 52.0 -0.5
RUGZ Raukumara Rang 3.22 56 P Pn 22 57 52.6 -1.7
TWGZ Tauwhareparae 3.30 62 P Pn 22 57 54.6 -0.6
GVZ Greta Valley S 3.31 196 P Pn 22 57 55.0 -0.3
GVZ Greta Valley S 3.31 196 P Pn 22 57 55.1 -0.2
CNGZ Carnagh Statio 3.32 68 P Pn 22 57 54.9 -0.5
LTZ Lake Taylor 3.35 206 P Pn 22 57 55.2 -0.5
LTZ Lake Taylor 3.35 206 P Pn 22 57 55.2 -0.5
HAZ Te Kaha 3.41 54 P Pn 22 57 54.8 -1.8
PKGZ Pakihiroa 3.54 58 P Pn 22 57 56.9 -1.3
PUZ Puketiti 3.54 62 P Pn 22 57 57.0 -1.3
AMCZ Amberley 3.59 199 P Pn 22 57 58.5 -0.4
AMCZ Amberley 3.59 199 P Pn 22 57 58.4 -0.4
INZ Inchbonnie 3.63 215 P Pn 22 57 58.3 -0.9
WMGZ Waiomatatini S 3.78 60 P Pn 22 57 59.9 -1.4
WCZ Waipu Caves 3.85 1 P Pn 22 58 02.3 +0.1
MXZ Matakaoa Point 3.86 56 P Pn 22 58 01.2 -1.1
MXZ Matakaoa Point 3.86 56 P Pn 22 58 01.0 -1.3
MXZ Matakaoa Point 3.86 56 P Pn 22 58 01.1 -1.1
OXZ Oxford 3.91 205 P Pn 22 58 01.5 -1.4
OXZ Oxford 3.91 205 P Pn 22 58 01.6 -1.2
OKCZ Okains Bay 4.03 193 P Pn 22 58 03.4 -1.0
MQZ McQueen's Vall 4.09 197 P Pn 22 58 03.7 -1.4
MQZ McQueen's Vall 4.09 197 P Pn 22 58 03.6 -1.6
AKCZ Akaroa Harbour 4.20 194 P Pn 22 58 05.3 -1.3
WVZ Waitaha Valley 4.22 218 P Pn 22 58 06.1 -0.7
RACZ Rakaia 4.24 201 P Pn 22 58 05.9 -1.2
MHCZ Mount Hutt 4.25 208 P Pn 22 58 06.1 -1.2
WACZ Wakanui South 4.53 203 P Pn 22 58 09.9 -0.9
RPZ Rata Peaks 4.60 211 P Pn 22 58 11.1 -0.6
43nm,0.4s,baz=5.0,slow=12,SNR=57
RPZ S Sn 22 58 59.9 -5.7
78nm,0.3s,baz=4.4,slow=0.8,SNR=29
RPZ Rata Peaks 4.60 211 P Pn 22 58 11.2 -0.6
RPZ Rata Peaks 4.60 211 Pn Pn 22 58 11.3 -0.5
RPZ Rata Peaks 4.60 211 P Pn 22 58 10.7 -1.0
GCSZ Gaunt Creek Bo 4.60 219 P Pn 22 58 10.7 -1.1
ARCZ Arundel 4.75 208 P Pn 22 58 12.5 -1.2
FOZ Fox Glacier 5.01 220 Pn Pn 22 58 16.6 -0.5
FOZ Fox Glacier 5.01 220 P Pn 22 58 16.6 -0.5
TMZ Timaru 5.19 207 P Pn 22 58 15.5 -1.0
LBZ Lake Benmore 5.51 212 Pn Pn 22 58 22.8 -0.8
LBZ Lake Benmore 5.51 212 P Pn 22 58 22.6 -1.0
ODZ Otahua Downs 5.90 206 P Pn 22 58 27.9 -0.7
ODZ Otahua Downs 5.90 206 S Pn 22 58 28.0 -0.7
ODZ Otahua Downs 5.90 206 P Pn 22 58 27.7 -0.9
JCZ Jackson Bay 5.92 222 P Pn 22 58 27.1 -2.0
JCZ Jackson Bay 5.92 222 P Pn 22 58 27.1 -2.0
WKZ Wanaka 6.37 216 Pn Pn 22 58 33.3 -1.5
WKZ Wanaka 6.37 216 P Pn 22 58 33.5 -1.3
EAZ Earnscleugh 6.56 212 P Pn 22 58 35.5 -1.8
HHSZ Highcliff Hill 6.66 203 P Pn 22 58 38.2 -0.5
TUZ Tuapeka 7.04 207 P Pn 22 58 43.2 -0.5
MLZ Mavora Lakes 7.19 217 P Pn 22 58 45.2 -0.5
SYZ Scrubby Hill 7.71 207 P Pn 22 58 52.2 -0.4
SYZ Scrubby Hill 7.71 207 P Pn 22 58 53.2 +0.6
CTZ Chatham Island 7.86 123 P Pn 22 58 55.3 +0.8
CTZ Chatham Island 7.86 123 P Pn 22 58 55.4 +0.8
MSVF Nonsavu 22.23 10 P P 23 01 47.0 +1.1
5.90,0.6s,baz=164,slow=18,SNR=2.2
5.9nm,0.6s
MSVF Nonsavu 22.23 10 P P 23 01 46.7 +0.8
MSVF IAmb IAmb 23 01 58.2
comp=Z,32nm,1.2s
TOO Toolangi 22.55 266 P P 23 01 52.1 +3.4
TOO IAmb IAmb 23 01 58.7
comp=Z,10nm,1.4s
COEN Coen 37.51 305 P P 23 03 58.7 -1.8
COEN IAmb IAmb 23 04 00.8
comp=Z,18nm,1.4s
ASAR Alice Springs 37.57 283 P P 23 04 03.4 +2.4
comp=Z,1.9nm,0.5s,baz=128,slow=7.4,SNR=27
comp=Z,1.9nm,0.5s
ASAR Alice Springs 37.57 283 P P 23 04 01.4 +0.5
WR8 Warramunga Arr 39.35 288 P P 23 04 18.4 +2.5
WRA Warramunga Arr 39.48 288 P P 23 04 19.1 +2.2
comp=Z,1.1nm,0.5s,baz=130,slow=7.6,SNR=12
comp=Z,1.1nm,0.5s
WRA Warramunga Arr 39.48 288 P P 23 04 17.5 +0.6
WB0 Warramunga Arr 39.55 288 P P 23 04 19.6 +2.1
WB0 IAmb IAmb 23 04 46.2
comp=Z,7.6nm,1.4s
FITZ Fitzroy Crossi 47.08 283 P P 23 05 20.2 +2.5
comp=Z,3.6nm,0.5s,baz=152,slow=6.3,SNR=16
comp=Z,3.6nm,0.5s
QSPA South Pole Qui 50.33 180 P P 23 05 45.7 +3.6
comp=Z,1.4nm,0.3s,baz=0.0,slow=8.1,SNR=37
comp=Z,1.4nm,0.3s
QSPA South Pole Qui 50.33 180 P P 23 05 43.2 +1.1
QSPA IAmb IAmb 23 06 18.0
comp=Z,8.1nm,1.4s
TROLL Troll, Antarti 68.35 183 ⇑P P 23 07 48.2 +2.8
SNAA Sanae 68.82 181 P P 23 07 47.9 -0.3
SNAA IAmb IAmb 23 07 53.4
comp=Z,5.6nm,1.1s
VNA3 Neumayer Olymp 69.23 179 ⇑P P 23 07 53.4 +2.6
comp=Z,1.6nm,0.6s
VNA2 Neumayer--Watz 69.58 179 ⇓P P 23 07 54.8 +2.0
comp=Z,2.4nm,0.7s,baz=164,slow=4.8
JCJ Chichijima 72.96 330 P P 23 08 11.4 -2.2
HOPE Hope Point 82.63 162 P P 23 09 05.7 -1.1
HOPE IAmb IAmb 23 09 20.5
comp=Z,49nm,1.3s
NJ2 Nanjing 88.02 316 eP P 23 09 33.4 -0.2
NJ2 pmax pmax
comp=Z,18nm,0.5s
PZH PanZhiHua 94.35 301 P P 23 10 02.3 -1.0
PB09 IPOC Station P 94.81 123 P P 23 10 02.9 -2.8
HHC Hu-ho-hao-te 98.48 317 eP Pdif 23 10 22.1 +0.5
HHC pmax pmax
comp=Z,8.0nm,0.6s
HHC pmax pmax
comp=Z,170nm,4.6s
TORD Torodi Ar. Bea 152.66 196 PKPbc PKiKP 23 16 41.0 +1.1
comp=Z,0.2nm,0.4s,baz=168,slow=2.7,SNR=1.2
TORD PKPab PKPab 23 16 52.4 +1.5
comp=Z,0.4nm,0.6s,baz=195,slow=2.6,SNR=5.8

IDC 15 22:58:47.9±7.1,30°.69S×178°.87W,h0km,mb3.7/2, mbtmp3.7/2,MS3.4/2,Error ellipse: s-maj=284.2km s-min=62.2km az=156.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	28.94	313	LR	LR	23 13 18.6	
	comp=Z,30nm,20.7s,baz=0.0,slow=30						
ASAR	Alice Springs	42.35	268	P	P	23 06 43.5	-0.4
	0.3nm,0.4s,baz=106,slow=7.1,SNR=5.0						
	0.3nm,0.4s						
WRA	Warramunga Arr	43.36	273	P	P	23 06 52.3	+0.1
	0.7nm,0.4s,baz=113,slow=7.9,SNR=9.2						
	0.7nm,0.4s						
FITZ	Fitzroy Crossi	51.61	271	LR	LR	23 27 54.9	
	comp=Z,101nm,18.6s,baz=61,slow=34						
FINES	FINESS Array B	145.16	339	PKPbc	PKPbc	23 18 25.3	-0.9
	6.8nm,1.1s,baz=32,slow=5.6,SNR=3.6						

*GCMT **15** 23:09:36.4±0.5,4°.81S×0°.05×154°.23E±0°.04,h381km±3km, MW5.2/50,Moment Tensor Solution. s50,c60; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr-6.07±.35; Mθθ 1.54±.65; Mφφ4.53±.58; Mrθ-0.42±.62; Mθφ-0.97±.58; Mφr3.94±.65; Best double couple: M06.72600×10^{16} NP1:φs341.00000°,δ27.00000°,λ-98.00000°. NP2: φs169.00000°,δ63.00000°,λ-86.00000°. Principal axes: T 6.0780, Plg18.0000°, Azm256.0000°; N 1.2970, Plg3.0000°, Azm347.0000°; P -7.3750, Plg72.0000°, Azm88.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

*BJI **15** 23:09:36.3,4°.15S×154°.25E,h372km,mB4.8/14,mb4.6/56*
*NEIC **15** 23:09:36.4±1.5,4°.36S±0°.09×154°.11E±0°.08,h362km±4km, mb4.9/306,Error ellipse: s-maj=13.7km s-min=10.0km az=218.0*
*IDC **15** 23:09:38.2±0.4,4°.51S×154°.07E,h384km±3km,mb4.2/22, mbtmp5.0/25,Error ellipse: s-maj=10.2km s-min=7.0km az=92.0*
*MOS **15** 23:09:38.3±1.0,4°.47S×154°.07E,h395km,mb5.0/47,Error ellipse: s-maj=7.8km s-min=5.8km az=103.5*
*DJA **15** 23:09:42.2±0.9,5°.5S±5°.1×15°.4E±°.1,h429km±8km,M5.0/62, mb4.8/62,mB5.6/19,Mw(mB)5.1/19*

ISC 15 23:09:37.5±0.3,4°.48S±0°.04×154°.10E±0°.04,h381km±2km, h382km:pP-P,n939,σ0:98/976,mb4.9/241,16C-18D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.95	279		Pn	23 10 30.1	-1.3
TATA	Tatamba Isabel	6.87	125	P	Pn	23 11 20.1	+0.9
MANU	Manus Island	7.14	290		Pn	23 11 22.6	+0.3
SAVO	Savo Central	7.33	130	P	Pn	23 11 24.7	+0.2
HNR	Honiara	7.61	131	P	Pn	23 11 28.1	+0.4
	9.2nm,0.5s,baz=279,slow=2.8,SNR=6.4						
HNR				S	S	23 12 59.5	+1.7
	5.4nm,0.6s,baz=331,slow=13,SNR=1.3						
HNR	Honiara	7.61	131	Pn	Pn	23 11 27.6	0.0
PMG	Port Moresby	8.44	234	P	P	23 11 39.0	+0.6
	374nm,0.7s,baz=48,slow=6.5,SNR=141						
PMG				S	S	23 13 16.9	+1.4
	96nm,0.7s,baz=58,slow=15,SNR=1.6						
PMG	Port Moresby	8.44	234	P	P	23 11 39.6	+1.2
PMG	Port Moresby	8.44	234		P	23 11 39.4	+1.0
PMG	Port Moresby	8.44	234	P	P	23 11 39.1	+0.7
	4μm562nm,1.0s						
NGOA	Tingoa Renbel	9.18	140	P	Pn	23 11 46.6	+0.7
HURO	Huro Makira	9.76	128	P	Pn	23 11 52.3	-0.4
PATS	Pohnpei	12.01	21		P	23 12 15.8	-2.1
JAY	Jayapura	13.51	278	P	P	23 12 35.0	+0.5
	169nm,0.7s,baz=112,slow=4.3,SNR=36						
JAY				S	S	23 15 02.3	+1.1
	31nm,1.0s,baz=115,slow=19,SNR=2.5						
JAY	Jayapura	13.51	278	P	P	23 12 34.6	0.0
	2μm191nm,0.9s						
GENI	Genyem	14.03	277	P	P	23 12 40.7	+0.5
MMPI	Merauke	14.19	253	P	P	23 12 43.6	+1.7
COEN	Coen	14.30	228	P	P	23 12 45.2	+2.0
COEN	Coen	14.30	228		Pn	23 12 45.7	+0.1
MTSU	Mount Surprise	16.60	214	P	P	23 13 09.8	+1.7
SANVU	Saraoutou	16.88	131	P	P	23 13 11.9	+0.9
CTA	Charters Tower	17.29	206	P	P	23 13 16.3	+0.9
	61nm,0.6s,baz=23,slow=11,SNR=40						
CTA				S	S	23 16 16.0	+0.1
	32nm,1.0s,baz=52,slow=19,SNR=6.4						
CTAO	Charters Tower	17.29	206	P	P	23 13 16.5	+1.1
CTAO	Charters Tower	17.29	206		P	23 13 16.9	+1.5
CTAO	Charters Tower	17.29	206	P	P	23 13 16.9	+1.5
RKPI	Ransiki, Papua	20.11	278	P	P	23 13 44.7	+0.3
	135nm,1.5s						
EIDS	Eidsvold	20.97	188	P	P	23 13 52.5	+0.4
EIDS	Eidsvold	20.97	188		P	23 13 52.6	+0.6
DZM	Mont Dzumac	21.19	147	P	P	23 13 55.0	+0.8
	149nm,0.7s,baz=318,slow=14						
	149nm,0.7s						
QIS	Mount Isa	21.31	220	P	P	23 13 55.7	+0.5
ONTNC	Ouen Toro	21.38	147	P	P	23 13 54.6	-1.2
SIJI	Sorong	23.08	278	P	P	23 14 10.4	-1.1
	25nm,1.0s						
SWI	Sorong	23.09	278	P	P	23 14 09.7	-1.8
	45nm,0.9s						
QLP	Quilpie	23.91	202	P	P	23 14 19.0	+0.2
WB0	Warramunga Arr	24.48	230		P	23 14 23.8	-0.2
WR8	Warramunga Arr	24.51	230		P	23 14 24.1	-0.1
WRAB	Tennant Creek	24.61	230	P	P	23 14 24.7	-0.5
WRA	Warramunga Arr	24.63	230	P	P	23 14 25.0	-0.3
	9.3nm,0.6s,baz=54,slow=9.4,SNR=92						
WRA				pP	pP	23 15 29.1	+0.9
	3.1nm,0.3s,baz=52,slow=8.9,SNR=1.2						
WRA				PcP	PcP	23 17 51.9	+0.7
	9.5nm,0.8s,baz=39,slow=2.0,SNR=6.0						
WRA				S	S	23 18 15.4	-2.8
	8.2nm,0.6s,baz=55,slow=14,SNR=6.1						
WRA				ScP	ScP	23 20 53.5	+0.1
	6.1nm,0.8s,baz=52,slow=2.9,SNR=5.6						
WRA				PKiKP	PKiKP	23 25 31.6	-1.2
	1.2nm,1.0s,baz=330,slow=1.2,SNR=5.1						
	9.3nm,0.6s						
WRA	Warramunga Arr	24.63	230	P	P	23 14 24.4	-0.9
KRAI	Karang Ratu	25.67	272	P	P	23 14 33.4	-1.2
ARMA	Armidale	25.90	185	P	P	23 14 37.5	+0.9
ARMA	Armidale	25.90	185		P	23 14 37.3	+0.7
ARMA				IAmb	IAmb	23 14 38.3	
	comp=Z,52nm,0.8s						
MSVF	Nonsavu	26.89	121	P	P	23 14 45.7	+0.2
MSVF	Nonsavu	26.89	121	P	P	23 14 45.7	+0.2
MSVF				pmax	pmax		
	comp=Z,33nm,1.3s						
AS31	Alice Springs	27.26	224		P	23 14 48.4	-0.3
ASAR	Alice Springs	27.26	224	P	P	23 14 48.3	-0.4
	comp=Z,6.9nm,0.6s,baz=56,slow=8.9,SNR=92						
ASAR				pP	pP	23 15 56.9	-0.3
	comp=Z,9.0nm,0.9s,baz=46,slow=9.6,SNR=2.0						
ASAR				PcP	PcP	23 17 57.9	+0.5
	comp=Z,5.7nm,0.7s,baz=54,slow=3.7,SNR=6.0						
ASAR				S	S	23 18 57.2	-2.4
	comp=Z,5.4nm,0.5s,baz=30,slow=19,SNR=9.2						
ASAR				ScP	ScP	23 21 02.0	+0.9
	comp=Z,4.0nm,0.8s,baz=34,slow=4.5,SNR=5.3						
	comp=Z,6.9nm,0.6s						
CMSA	Cobar Meteorol	28.05	195	P	P	23 14 55.4	-0.1
SANI	Sanana	28.16	274	P	P	23 14 57.1	+0.4
STKA	Stephens Creek	29.67	202	P	P	23 15 09.2	-0.5
	comp=Z,5.8nm,0.4s,baz=0.1,slow=9.4,SNR=19						
STKA				pP	pP	23 16 19.4	+0.6
	comp=Z,3.9nm,0.6s,baz=36,slow=14,SNR=1.5						
STKA				PcP	PcP	23 18 03.5	+0.3
	comp=Z,8.3nm,0.9s,baz=11,slow=3.4,SNR=3.4						
STKA				S	S	23 19 36.8	-0.3
	comp=Z,3.6nm,0.7s,baz=306,slow=6.2,SNR=3.2						
STKA				ScP	ScP	23 21 09.5	+1.1
	comp=Z,1.1nm,0.9s,baz=22,slow=4.5,SNR=8.0						
	comp=Z,5.8nm,0.4s						
STKA	Stephens Creek	29.67	202	P	P	23 15 09.4	-0.3
STKA	Stephens Creek	29.67	202		P	23 15 09.4	-0.3
STKA				IAmb	IAmb	23 16 20.8	
	comp=Z,129nm,1.6s						
SOEI	Soe	30.05	258		P	23 15 13.1	-0.3
SOEI				IAmb	IAmb	23 16 29.6	
	comp=Z,41nm,0.9s						
SOEI	Soe	30.05	258	P	P	23 15 13.5	+0.1
	comp=Z,40nm,0.8s						
BATI	Baumata	30.70	258	P	P	23 15 18.9	-0.1
	comp=Z,41nm,0.9s						
CNB	Canberra Magne	30.99	188	P	P	23 15 22.2	+0.9
CAN	Canberra	31.05	188	P	P	23 15 22.7	+1.0
CAN	Canberra	31.05	188	P	P	23 15 22.7	+1.0
CAN	Canberra	31.05	188	P	P	23 15 22.7	+1.0
CAN				pmax	pmax		
	comp=Z,42nm,1.0s						
GTOI	Gorontalo	31.47	279	P	P	23 15 26.4	+0.7
	comp=Z,57nm,0.8s						
HTT	Hallett	32.09	204	P	P	23 15 30.8	0.0
EDFI	Ende, Flores	32.46	261	P	P	23 15 31.7	-2.6
	comp=Z,51nm,0.8s						
BBOO	Buckleboo	32.84	209	P	P	23 15 36.6	-0.6
BBOO	Buckleboo	32.84	209	P	P	23 15 36.6	-0.6
TOLI2	Tolitoli	33.75	279	P	P	23 15 42.7	-2.6
TOO	Toolangi	33.86	192	P	P	23 15 46.2	+0.3
TOO	Toolangi	33.86	192	P	P	23 15 46.2	+0.3
TOO				pmax	pmax		
	comp=Z,12nm,1.5s						
WSI	Waingapu	33.92	259	P	P	23 15 45.5	-1.2
BRAT	Ballarat	34.20	194	P	P	23 15 49.5	+0.8
SPSI	Sidrap Palu	34.23	270	P	P	23 15 48.4	-1.0
PCI	Palu	34.40	275	P	P	23 15 51.8	+1.0
	comp=Z,3μmcomp=Z,106nm,1.0s						
MPSI	Mapaga	34.50	277	P	P

GRZ	Great Barrier	37.23	151	P		P		23 16 15.9	+1.7		
PSA00	Pilbara Seismi	37.30	240	P		P		23 16 14.0	-1.1		
WTAZ	Waiatarua	37.36	152	P		P		23 16 17.7	+2.3		
MBAZ	Motutapu North	37.38	152	P		P		23 16 17.1	+1.7		
AWAZ	Awhitu Peninsu	37.50	153	P		P		23 16 18.5	+2.0		
WIAZ	Waiheke Island	37.51	152	P		P		23 16 18.4	+1.8		
KHKI	Kahang-Kahang	38.43	262	P		P		23 16 22.9	-1.5		
	comp=Z,19nm,1.0s										
TOZ	Tahuroa Road	38.44	152	P		P		23 16 25.6	+1.4		
TOZ				IAmb		IAmb		23 16 26.6			
	comp=Z,63nm,1.0s										
TOZ	Tahuroa Road	38.44	152	P		P		23 16 25.8	+1.6		
TAU	Tasmania Unive	38.73	188	P		P		23 16 27.3	+0.8		
TAU	Tasmania Unive	38.73	188	P		P		23 16 27.6	+1.1		
TAU	Tasmania Unive	38.73	188	P		P		23 16 27.6	+1.1		
TAU				pmax		pmax					
	comp=Z,23nm,0.7s										
HIZ	Hauiti	38.78	154	P		P		23 16 28.8	+1.8		
HIZ	Hauiti	38.78	154	P		P		23 16 28.9	+1.9		
HIZ	Hauiti	38.78	154	P		P		23 16 29.1	+2.1		
KHEZ	Kahui Hut	39.07	155	P		P		23 16 29.7	+0.2		
KHEZ	Kahui Hut	39.07	155	P		P		23 16 31.9	+2.4		
OMRZ	Omania	39.15	152	P		P		23 16 33.6	+3.5		
BBKI	Banjar Baru	39.17	270	P		P		23 16 31.1	+0.5		
KKM	Kota Kinabalu	39.24	285	P		P		23 16 31.1	-0.2		
KKM	Kota Kinabalu	39.24	285	P		P		23 16 30.8	-0.5		
	comp=Z,47nm,0.9s										
VRZ	Vera Road	39.25	154	P		P		23 16 33.2	+2.4		
WATZ	Wairara	39.34	153	P		P		23 16 33.3	+1.7		
RATZ	Rangitukua	39.48	153	P		P		23 16 34.5	+1.7		
TWVZ	Taurewa	39.50	154	P		P		23 16 34.7	+1.7		
KATZ	Kakaramea	39.54	153	P		P		23 16 35.5	+2.1		
HAZ	Te Kaha	39.56	150	P		P		23 16 33.9	+0.6		
WTVZ	West Tongariro	39.60	153	P		P		23 16 36.7	+2.8		
URZ	Urewera	39.62	151	P		P		23 16 33.9	0.0		
URZ	Urewera	39.62	151	P		P		23 16 34.4	+0.6		
MUGZ	Murupara	39.63	152	P		P		23 16 35.3	+1.3		
PKVZ	Pokaka	39.64	154	P		P		23 16 36.1	+2.0		
COVZ	Chateau Observ	39.65	154	P		P		23 16 35.8	+1.5		
NGZ	Ngauruhoe	39.66	153	P		P		23 16 36.3	+1.9		
MXZ	Matakaoa Point	39.67	149	P		P		23 16 34.8	+0.5		
ETVZ	East Tongariro	39.68	153	P		P		23 16 36.9	+2.5		
SNVZ	South Ngauruho	39.69	153	P		P		23 16 36.8	+2.2		
WNVZ	Wahianoa	39.78	154	P		P		23 16 37.7	+2.3		
QRZ	Quartz Range	39.80	158	P		P		23 16 36.4	+1.1		
QRZ	Quartz Range	39.80	158	P		P		23 16 36.8	+1.6		
RTZ	Ruatahuna	39.84	152	P		P		23 16 36.7	+0.9		
WAZ	Wanganui	39.87	155	P		P		23 16 38.2	+2.3		
JAGI	Jajag, Banyuwa	39.87	262	P		P		23 16 32.7	-3.6		
JAGI	Jajag, Banyuwa	39.87	262	P		P		23 16 31.7	-4.6		
	comp=Z,28nm,1.1s										
MWZ	Matawai	39.88	151	P		P		23 16 37.4	+1.4		
PUZ	Puketiti	40.04	150	P		P		23 16 37.8	+0.5		
BKZ	Black Stump Fm	40.05	153	P		P		23 16 37.6	+0.1		
BKZ	Black Stump Fm	40.05	153	P		P		23 16 38.1	+0.6		
BKZ				IAmb		IAmb		23 16 40.2			
	comp=Z,45nm,0.6s										
BKZ	Black Stump Fm	40.05	153	P		P		23 16 38.0	+0.6		
MEEK	Meekatharra	40.42	233	P		P		23 16 39.7	-0.9		
NNZ	Nelson	40.46	157	P		P		23 16 41.5	+0.9		
KNZ	Kokohu	40.49	151	P		P		23 16 41.1	+0.2		
TSZ	Takapari Road	40.54	154	P		P		23 16 41.4	+0.1		
THZ	Tophouse	40.75	158	P		P		23 16 43.5	+0.4		
THZ	Tophouse	40.75	158	P		P		23 16 43.1	+0.1		
MRZ	Mangatainoka R	40.87	155	P		P		23 16 44.1	+0.1		
SNZO	South Karori	41.06	156	P		P		23 16 45.6	+0.2		
WVZ	Waitaha Valley	41.17	161	P		P		23 16 47.0	+0.8		
BFZ	Birch Farm	41.18	154	P		P		23 16 46.5	+0.1		
BFZ	Birch Farm	41.18	154	P		P		23 16 46.7	+0.3		
FOZ	Fox Glacier	41.30	163	P		P		23 16 48.0	+0.7		
FOZ				IAmb		IAmb		23 16 49.1			
	comp=Z,96nm,0.9s										
FOZ	Fox Glacier	41.30	163	P		P		23 16 47.9	+0.6		
LTZ	Lake Taylor	41.42	160	P		P		23 16 49.2	+0.8		
LTZ	Lake Taylor	41.42	160	P		P		23 16 48.9	+0.6		
JCZ	Jackson Bay	41.50	164	P		P		23 16 49.3	+0.2		
JCZ	Jackson Bay	41.50	164	P		P		23 16 49.9	+0.8		
KHZ	Kahutara	41.55	158	P		P		23 16 48.8	-0.6		
KHZ	Kahutara	41.55	158	P		P		23 16 49.1	-0.2		
KHZ				IAmb		IAmb		23 16 49.3			
	comp=Z,58nm,0.7s										
RPZ	Rata Peaks	41.84	162	P		P		23 16 52.0	+0.2		
LBZ	Lake Benmore	42.19	163	P		P		23 16 54.4	-0.1		
LBZ				IAmb		IAmb		23 16 56.1			
	comp=Z,78nm,0.9s										
LBZ	Lake Benmore	42.19	163	P		P		23 16 54.1	-0.3		
SJI	Sawahan	42.20	263	P		P		23 16 54.6	-0.5		
SNJI	Sawahan-Nganju	42.21	263	P		P		23 16 55.1	-0.2		
	comp=Z,29nm,1.1s										
MQZ	McQueen's Vall	42.36	160	P		P		23 16 56.0	+0.2		
PCJI	Pacitan	42.80	263	P		P		23 16 57.9	-1.9		
	comp=Z,174nm,1.4s										
MJAR	Matsushiro Arr	43.43	341	P		P		23 17 03.0	-1.4		
	comp=Z,1.1nm,0.4s,baz=154,slow=6.9,SNR=4.8										
MJAR				PcP		PcP		23 18 45.2	+0.3		
	comp=Z,7.9nm,0.8s,baz=169,slow=3.6,SNR=9.0										
	comp=Z,1.1nm,0.4s										
UGM	Wanagama	43.44	263	P		P		23 17 04.6	-0.3		
UGM	Wanagama	43.44	263	P		P		23 17 04.5	-0.4		
MORW	Morawa	43.55	232	P		P		23 17 04.5	-1.0		
MORW	Morawa	43.55	232	P		P		23 17 04.5	-1.0		
BLDU	Ballidu	43.76	229	P		P		23 17 07.0	-0.1		
APZ	The Paps	43.87	166	P		P		23 17 07.4	-0.3		
NWAO	Narrogin (SRO)	44.53	226	P		P		23 17 11.9	-1.3		
NWAO	Narrogin (SRO)	44.53	226	P		P		23 17 11.9	-1.3		
NWAO				pmax		pmax					
	comp=Z,86nm,1.8s										
KPJI	Karang Pucung	45.00	264	P		P		23 17 17.5	+0.4		
	comp=Z,37nm,1.1s										
BBJI	Bungbulang	46.27	264	P		P		23 17 25.1	-1.9		
BBJI	Bungbulang	46.27	264	P		P		23 17 25.5	-1.6		
BBJI	Bungbulang	46.27	264	P		P		23 17 25.1	-1.9		
	comp=Z,37nm,0.8s										
TPI	Tanjungpandan	46.38	270	P		P		23 17 27.8	0.0		
	comp=Z,25nm,1.0s										
CTZ	Chatham Island	46.86	151	P		P		23 17 30.9	0.0		
CTZ	Chatham Island	46.86	151	P		P		23 17 32.0	+1.0		
CGJI	Cibinong	48.21	265	P		P		23 17 39.2	-2.5		
	comp=Z,7μmcomp=Z,81nm,1.0s										
KSRS	Korea Array	48.32	332	P		P		23 17 42.2	+0.2		
	comp=Z,9.5nm,1.0s,baz=146,slow=8.8,SNR=10										
KSRS				PcP		PcP		23 19 01.3	-0.8		
	comp=Z,1.7nm,0.5s,baz=154,slow=8.6,SNR=5.1										
	comp=Z,9.5nm,1.0s										
NJ2	Nanjing	49.43	320	*e*P		P		23 17 52.0	+1.5		
NJ2				pmax		pmax					
	comp=Z,38nm,0.5s										
YSS	Yuzhno-Sakhali	52.19	350	*ce*P		P		23 18 09.9	-0.7		
YSS				pmax		pmax					
	comp=Z,5.0nm,0.6s										
USRK	Ussuriysk Ar.	52.38	340	P		P		23 18 12.8	+0.7		
	comp=Z,3.9nm,0.6s,baz=164,slow=7.5,SNR=5.2										
	comp=Z,3.9nm,0.6s										
PPI	Padang Panjang	53.78	273	P		P		23 18 22.5	-0.2		
	comp=Z,17nm,0.8s										
LYN	LuoYang	55.16	318	P		P		23 18 32.9	+0.7		
LYN				pmax		pmax					
	comp=Z,21nm,0.9s										
BNX	BinXian	55.36	338	⇓P		P		23 18 33.3	-0.1		
BNX				pmax		pmax					
	comp=Z,23nm,0.9s										
HNS	HongShan	55.48	322	⇓P		P		23 18 34.9	+0.6		
HNS				pmax		pmax					
	comp=Z,24nm,1.3s										
TYV	Tymovskoe	56.00	351	*e*P		P		23 18 38.5	+0.8		
TYV				pmax		pmax					
	comp=Z,16nm,1.0s										
TYV				pmax		pmax					
	comp=Z,200nm,4.6s										
BJI2	Beijing	56.34	325	P		P		23 18 40.3	-0.1		
BJI2				pmax		pmax					
	comp=Z,4.0nm,0.7s										
KLR	Kul'dur	56.92	343	*ce*P		P		23 18 45.2	+1.0		
KLR				pmax		pmax					
	comp=Z,11nm,1.7s										
XAN	Xi'an	57.29	316	⇓P		P		23 18 47.5	+0.4		
XAN				PcP		PcP		23 19 37.3	+0.8		
XAN				pP		pwP		23 20 09.9	+0.6		
XAN				pmax		pmax					
	comp=Z,15nm,0.8s										
PETK	Petropavlovsk-	57.46	3	P		P		23 18 48.5	+0.7		
	comp=Z,18nm,0.8s,baz=153,slow=7.2,SNR=9.3										
PETK				PcP		PcP		23 19 37.1	+0.5		
	comp=Z,10.0nm,0.8s,baz=160,slow=4.7,SNR=4.0										
PETK				pP		pwP		23 20 10.4	-0.6		
	comp=Z,22nm,1.0s,baz=117,slow=8.5,SNR=4.7										
	comp=Z,18nm,0.8s										
KMI2	Kunming	57.89	303	P		P		23 18 53.8	+2.1		
KMI2				pmax		pmax					
	comp=Z,10.0nm,1.2s										
CMAR	Chiang Mai Arr	58.92	295	P		P		23 19 00.1	+1.6		
	comp=Z,3.4nm,0.6s,baz=109,slow=4.9,SNR=16										
CMAR				PKPPKP		P'P'df		23 48 25.6	-3.7		
	comp=Z,1.1nm,0.3s,baz=297,slow=4.6,SNR=4.8										
CMAR				PKP2bc		P'P'bc		23 48 38.8	-1.7		
	comp=Z,1.1nm,0.3s,baz=291,slow=4.8,SNR=7.1										
	comp=Z,3.4nm,0.6s										
CMAR	Chiang Mai Arr	58.92	295	P		P		23 18 59.8	+1.3		
XLT	XiLinHaoTe	59.06	329	*e*P		P		23 18 59.8	+0.7		
XLT				pmax		pmax					
	comp=Z,52nm,0.8s										
XLT				pmax		pmax					
	comp=Z,230nm,6.2s										
HEH	HeiHe	59.18	340	*e*P		P		23 18 59.5	-0.2		
HEH				pmax		pmax					
	comp=Z,14nm,0.8s										
PZH	PanZhiHua	59.26	304	P		P		23 19 02.6	+1.8		
CD2	Chengdu	59.52	310	P		P		23 19 03.3	+0.9		
CD2				pmax		pmax					
	comp=Z,20nm,0.4s										
HHC	Hu-ho-hao-te	59.55	323	*e*P		P		23 19 03.3	+0.8		
HHC				pmax		pmax					
	comp=Z,15nm,0.8s										
HHC				pmax		pmax					
	comp=Z,39nm,4.1s										
ADK	Adak	61.42	20	P		P		23 19 14.8	+0.2		
ADK				IAmb		IAmb		23 20 02.2			
	comp=Z,70nm,1.2s										
ADK	Adak	61.42	20	P		P		23 19 14.8	+0.2		
ADK				pmax		pmax					
	comp=Z,71nm,1.2s										
LZH	Lanzhou	61.91	315	P		P		23 19 20.3	+1.9		
LZH				pP		pwP		23 20 43.8	+4.1		
LZH				pmax		pmax					
	comp=Z,39nm,1.5s										
LZDM	Lanzhou Array	61.95	315	P		P		23 19 20.5	+1.6		
	comp=Z,22nm,0.8s,baz=144,slow=5.5,SNR=29										
LZDM				pP		pwP		23 20 42.5	+2.2		
	comp=Z,0.8nm,0.3s,baz=171,slow=3.8,SNR=2.0										
	comp=Z,22nm,0.8s										
ZEA	Zeya	62.23	342	*e*P		P		23 19 21.1	+1.2		
ZEA				pmax		pmax					
	comp=Z,20nm,0.9s										
DRV	Dumont d'Urvil	62.84	186	P		P		23 19 24.4	+0.7		
DRV				PcP		PcP		23 19 57.9	-0.1		
DRV				pP		pP		23 20 43.4	+0.1		
MA2	Magadan	63.92	358	P		P		23 19 31.0	+0.2		
MA2				IAmb		IAmb		23 19 31.9			
	comp=Z,31nm,0.8s										
MA2	Magadan	63.92	358	*ce*P		P		23 19 31.1	+0.3		
MA2				pmax		pmax					
	comp=Z,30nm,0.7s										
MA2	Magadan	63.92	358	P		P		23 19 30.8	0.0		
MA2				PcP		PcP		23 20 01.9	-0.7		
GTA2	Gaotai	66.38	317	P		P		23 19 48.4	+1.3		
GTA2				pP		pP		23 21 09.3	-0.4		
GTA2				S		S		23 28 09.4	+3.4		
GTA2				pmax		pmax					
	comp=Z,38nm,1.3s										
ULN	Ulaanbaatar	66.42	327	P		P		23 19 47.5	+0.4		
ULN				IAmb		IAmb		23 19 49.6			
	comp=Z,21nm,0.9s										
ULN	Ulaanbaatar	66.42	327	*ce*P		P		23 19 48.7	+1.5		
ULN				pmax		pmax					
	comp=Z,26nm,1.0s										
ULN	Ulaanbaatar	66.42	327	P		P		23 19 47.8	+0.7		
ULN	Ulaanbaatar	66.42	327	P		P		23 19 48.6	+1.5		
ULN				PcP		PcP		23 20 14.2	+0.7		
SONM	Songino Array	66.75	327	P		P		23 19 50.4	+1.2		
	comp=Z,11nm,0.7s,baz=140,slow=5.1,SNR=67										
SONM				PcP		PcP		23 20 15.1	+0.2		
	comp=Z,5.3nm,0.9s,baz=128,slow=4.2,SNR=6.9										
SONM				pP		pP		23 21 13.5	+1.8		
	comp=Z,1.9nm,0.7s,baz=143,slow=5.8,SNR=3.1										
SONM				PKP2bc		P'P'bc		23 48 18.1	-2.9		
	comp=Z,1.6nm,0.9s,baz=290,slow=2.8,SNR=5.3										
	comp=Z,11nm,0.7s										
SONM	Songino Array	66.75	327	P		P		23 19 49.8	+0.6		
SONM				IAmb		IAmb		23 19 51.5			
	comp=Z,31nm,1.2s										
SEY	Seymchan	67.24	359	*ce*P		P		23 19 52.4	+0.7		
SEY				pmax		pmax					
	comp=Z,37nm,2.0s										
SHL	Shillong	67.27	300	P		P		23 19 53.0	+0.1		
SHL				IAmb		IAmb		23 19 54.5			
	comp=Z,30nm,0.9s										
SHL	Shillong	67.27	300	P		P		23 19 53.0	+0.1		
SHL				pmax		pmax					
	comp=Z,29nm,0.9s										
SPIA	Saint Paul Isl	67.91	20	P		P		23 19 56.8	+0.8		
	baz=219										
GOMU	GeErMu	68.51	312	P		P		23 20 01.1	+0.5		
GOMU				pmax		pmax					
	comp=Z,6.0nm,1.0s										
CASY	Casey	68.70	197	P		P		23 20 00.4	-0.3		
CASY	Casey	68.70	197	P		P		23 20 00.8	+0.1		
FALS	False Pass	68.79	25	P		P		23 20 02.2	+0.8		
	baz=226										
YAK	Yakutsk	68.93	348	P		P		23 20 02.2	+0.1		
YAK				IAmb		IAmb		23 20 03.8			
	comp=Z,39nm,0.9s										
YAK	Yakutsk	68.93	348	*e*P		P		23 20 02.6	+0.5		
YAK				*e*				23 20 23.5			
YAK				*e*				23 22 37.0			
YAK				*e*PPP		PPP		23 24 22.0			
YAK				*e*S		SKiKP		23 29 06.2	-5.8		
YAK				pmax		pmax					
	comp=Z,65nm,1.5s										
YAK				pmax		pmax					
	comp=N,18nm,1.4s										
YAK				pmax		pmax					
	comp=E,9.0nm,1.8s										
YAK				pmax		pmax					
	comp=Z,205nm,5.3s										
YAK				pmax		pmax					
	comp=N,237nm,5.3s										
YAK				pmax		pmax					
	comp=E,179nm,5.8s										
YAK				smax		smax					
	comp=N,300nm,6.5s										
YAK				smax		smax					
	comp=E,112nm,7.8s										
ZAK	Zakamensk	69.90	328	*e*P		P		23 20 08.3	-0.1		
ZAK				pmax		pmax					
	comp=Z,34nm,1.1s										
SDPT	Sand Point	70.37	26	P		P		23 20 11.4	+0.5		
	baz=229										
CHNA	Chernabura Isl	70.42	26	P		P		23 20 12.1	+0.8		
	baz=230										
TLY	Talaya	70.46	329	*ce*P		P		23 20 13.3	+1.6		
TLY				pmax		pmax					
	comp=Z,11nm,1.3s										
M11K	Mekoryuk	71.73	20	P		P		23 20 20.2	+1.3		
	baz=222										
MOY	Mondy	71.82	328	*e*P		P		23 20 20.6	+0.8		
MOY				pmax		pmax					
	comp=Z,25nm,1.5s										
CHGN	Chignik	71.88	26	P		P		23 20 21.1	+1.2		
	baz=231										
O14K	Tigyukauivet M	72.67	22	IAmb		IAmb		23 20 26.4			
	comp=Z,32nm,0.9s										
O14K	Tigyukauivet M	72.67	22	P		P		23 20 25.4	+1.0		
	baz=227										
M13K	Dall Lake	72.72	21	P		P		23 20 26.0	+1.2		
	baz=225										
GAMB	Gambell	72.74	15	P		P		23 20 25.4	+0.6		
GAMB				IAmb		IAmb		23 20 26.6			
	comp=Z,28nm,1.0s										
GAMB	Gambell	72.74	15	P		P		23 20 25.6	+0.8		
	baz=216,SNR=8.4										
CCD	Concordia, Ant	72.75	188	P		P		23 20 25.9	+0.6		
CHIR	Chirikof Islan	72.82	27	P		P		23 20 26.0	+0.6		
	baz=233										
BILL	Bilibino	72.87	5	P		P		23 20 25.5	0.0		
BILL	Bilibino	72.87	5	*ce*P		P		23 20 26.3	+0.8		
BILL				pmax		pmax					
	comp=Z,59nm,1.0s										
BILL	Bilibino	72.87	5	P		P		23 20 26.2	+0.8		
BILL				pP		pP		23 21 48.5	-0.7		
N14K	Kuskokwak Cree	72.97	22	P		P		23 20 26.8	+0.6		
	baz=227										
VNDA	Vanda	73.10	178	P		P		23 20 27.3	+0.5		
	comp=Z,18nm,0.8s,baz=326,slow=6.4,SNR=41										
	comp=Z,18nm,0.8s										
VNDA	Vanda	73.10	178	P		P		23 20 27.4	+0.7		
VNDA				IAmb		IAmb		23 20 28.6			
	comp=Z,26nm,0.9s										
VNDA	Vanda	73.10	178	P		P		23 20 27.4	+0.7		
VNDA				pmax		pmax					
	comp=Z,27nm,0.9s										
VNDA	Vanda	73.10	178	P		P		23 20 27.6	+0.9		
KNGR	Kungurtug, Tuv	73.14	326	*i* P		P		23 20 28.3	+0.7		
KNGR				pmax		pmax					
	comp=Z,31nm,0.9s										
O15K	Ungalikthiuk R	73.17	23	P		P		23 20 28.0	+0.6		
	baz=229										
K13K	Kusilvak Mount	73.38	19	P		P		23 20 29.5	+1.0		
	baz=223										
M14K	Bethel	73.45	21	P		P		23 20 29.7	+0.8		
M14K	Bethel	73.45	21	P		P		23 20 29.7	+0.8		
	baz=226,SNR=16										
R17L	Mt. Peulik Vol	73.59	25	P		P		23 20 30.3	+0.5		
	baz=232										
L14K	Kuka Creek	73.61	20	P		P		23 20 30.9	+1.1		
	baz=225										
SBA	Scott Base	73.62	177	P		P		23 20 31.4	+1.7		
SBA				IAmb		IAmb		23 20 32.7			
	comp=Z,21nm,0.9s										
SBA	Scott Base	73.62	177	P		P		23 20 31.4	+1.7		
SBA				pmax		pmax					
	comp=Z,21nm,1.0s										
N15K	Kwethluk River	73.73	22	P		P		23 20 31.5	+0.9		
	baz=228										
P16K	Nushagak River	73.80	24	P		P		23 20 29.9	-1.0		
P16K				IAmb		IAmb		23 20 32.3			
	comp=Z,36nm,0.9s										
P16K	Nushagak River	73.80	24	P		P		23 20 31.8	+0.8		
	baz=230										
M15K	Kasigluk River	73.86	21	P		P		23 20 32.1	+0.7		
	baz=227										
SII	Sitkinak Islan	73.90	27	P		P		23 20 30.8	-0.9		
SII	Sitkinak Islan	73.90	27	P		P		23 20 31.0	-0.7		
SII	Sitkinak Islan	73.90	27	P		P		23 20 32.1	+0.4		
	baz=234										
Q16K	King Salmon	74.11	24	P		P		23 20 33.3	+0.5		
	baz=232										
O16K	Kokwok River B	74.11	23	P		P		23 20 33.7	+0.9		
	baz=230										
Q17K	Contact Creek	74.18	25	P		P		23 20 33.3	0.0		
	baz=233										
L15K	Ungalak Mounta	74.26	20	P		P		23 20 34.1	+0.5		
	baz=226										
J14K	Nanvaranak Lak	74.32	19	P		P		23 20 35.3	+1.4		
	baz=224										
N16K	Nishlik Lake	74.43	22	P		P		23 20 35.9	+1.2		
	baz=229										
P17K	Kvichak River	74.52	24	P		P		23 20 33.8	-1.3		
P17K				IAmb		IAmb		23 20 35.3			
	comp=Z,15nm,0.8s										
P17K	Kvichak River	74.52	24	P		P		23 20 35.0	-0.1		
	baz=232										
O17K	Koliganek Bris	74.62	23	P		P		23 20 36.0	+0.4		
	baz=231										
K15K	Wolf Creek Mou	74.67	20	P		P		23 20 37.0	+1.1		
	baz=226										
OHAK	Old Harbor	74.69	27	P		P		23 20 36.5	+0.4		
OHAK				IAmb		IAmb		23 20 37.9			
	comp=Z,17nm,0.8s										
OHAK	Old Harbor	74.69	27	P		P		23 20 36.6	+0.4		
	baz=235										
M16K	Timber Creek	74.72	22	P		P		23 20 37.4	+1.2		
	baz=229										
Q18K	Katmai Hardscr	74.78	25	P		P		23 20 36.7	-0.1		
	baz=233										
L16K	Owhat River	74.98	21	P		P		23 20 37.9	+0.2		
L16K				IAmb		IAmb		23 20 39.5			
	comp=Z,15nm,0.8s										
L16K	Owhat River	74.98	21	P		P		23 20 38.5	+0.8		
	baz=228,SNR=11										
N17K	Nushagak Hills	75.06	23	P		P		23 20 39.4	+1.2		
	baz=231										
ANM	Nome	75.10	17	P		P		23 20 38.6	+0.4		
ANM				IAmb		IAmb		23 20 40.5			
	comp=Z,28nm,0.9s										
ANM	Nome	75.10	17	P		P		23 20 38.7	+0.4		
ANM				pmax		pmax					
	com

L19K White Mountain 76.97 22 P P 23 20 49.7 +0.8
baz=233,SNR=36
H17K Granite Mounta 77.01 18 P P 23 20 49.9 +0.9
baz=227
J18K Innoko River 77.10 20 P P 23 20 50.2 +0.7
baz=231
BRLK Bradley Lake 77.16 25 P P 23 20 49.7 -0.3
BRLK IAmb IAmb 23 20 51.1
comp=Z,24nm,0.9s
G17K Kiwalik Mounta 77.17 18 P P 23 20 50.8 +1.0
baz=227
BRSE Bradley Lake S 77.21 25 P P 23 20 50.6 +0.4
baz=237
N20K Mount Spurr 77.42 24 P P 23 20 50.7 -0.7
baz=235,SNR=5.1
SPCR Spurr Chakacha 77.42 24 P P 23 20 51.0 -0.4
baz=235
M20K Styx River 77.45 23 P P 23 20 52.1 +0.6
baz=234
SPU Mount Spurr 77.47 24 P P 23 20 50.3 -1.4
CAPN Captain Cook N 77.60 24 P P 23 20 53.0 +0.8
baz=236
H18K Honhosa River 77.64 19 P P 23 20 52.7 +0.2
baz=229
F17K Baldwin Pennin 77.65 17 P P 23 20 53.4 +1.0
baz=226
STLK Strandline Lak 77.73 23 P P 23 20 51.7 -1.4
TIXI Tiksi 77.76 352 P P 23 20 52.5 -0.5
TIXI IAmb IAmb 23 20 55.0
comp=Z,24nm,1.4s
TIXI Tiksi 77.76 352 *ce* P P 23 20 53.0 +0.1
TIXI pmax pmax
comp=Z,26nm,1.7s
J19K Poorman 77.81 20 P P 23 20 54.1 +0.7
baz=232
SLKM Skilak Lake 77.84 25 P P 23 20 53.6 0.0
GCSA Galena City Sc 77.86 19 P P 23 20 54.6 +1.0
baz=230,SNR=8.8
C16K Lisburne Hills 77.88 14 P P 23 20 54.4 +0.7
baz=222
SEW Seward 77.95 25 P P 23 20 53.8 -0.4
SEW IAmb IAmb 23 20 55.6
comp=Z,34nm,1.0s
SEW Seward 77.95 25 P P 23 20 54.4 +0.2
baz=238
K20K Telida 77.97 21 P P 23 20 55.3 +1.0
baz=233,SNR=28
D17K Noatak River 78.03 15 P P 23 20 55.7 +1.2
baz=224,SNR=42
O22K Cooper Landing 78.03 25 P P 23 20 54.8 +0.2
G18K Tagagawik 78.05 18 IAmb IAmb 23 20 56.4
comp=Z,34nm,1.0s
G18K Tagagawik 78.05 18 P P 23 20 55.0 +0.4
baz=228
SKT Skwentna 78.12 23 P P 23 20 53.9 -1.3
SKT Skwentna 78.12 23 P P 23 20 54.1 -1.1
baz=236,SNR=5.7
F18K Selawik 78.22 17 P P 23 20 55.9 +0.4
baz=227,SNR=14
RDOG Red Dog Mine 78.34 15 P P 23 20 57.2 +1.0
RDOG Red Dog Mine 78.34 15 P P 23 20 57.3 +1.0
baz=224,SNR=10
RC01 Rabbit Creek A 78.36 24 P P 23 20 55.7 -0.7
RC01 Rabbit Creek A 78.36 24 P P 23 20 56.6 +0.1
baz=238,SNR=19
PPLA Purkeypile 78.39 22 P P 23 20 56.9 +0.2
PPLA IAmb IAmb 23 20 57.8
comp=Z,26nm,1.2s
PPLA Purkeypile 78.39 22 P P 23 20 56.4 -0.3
baz=235
J20K Nowinta River 78.44 21 P P 23 20 57.8 +1.0
baz=233
E18K Tukpahlearik C 78.51 16 P P 23 20 58.1 +1.0
baz=226
M22K Willow 78.56 24 P P 23 20 58.2 +0.8
baz=237
C17K DeLong Mountai 78.58 15 P P 23 20 58.5 +1.0
baz=224
DGZ Jazzator, Alta 78.62 323 *i* P P 23 20 58.4 +0.1
DGZ pmax pmax
comp=Z,32nm,0.9s
G19K Purcell Mounta 78.69 18 P P 23 20 59.0 +0.9
baz=230,SNR=59
I20K Naaghedeneel 78.70 20 P P 23 20 59.2 +1.1
baz=233
L22K Petersville 78.72 23 IAmb IAmb 23 20 58.6
comp=Z,19nm,1.0s
P23K Montague Islan 78.78 26 P P 23 20 58.6 -0.1
P23K Montague Islan 78.78 26 P P 23 20 58.6 -0.1
baz=240
CUT Chulitna 78.85 23 P P 23 20 59.0 -0.1
CUT Chulitna 78.85 23 P P 23 20 58.4 -0.7
baz=237
PMR Palmer 78.87 24 P P 23 20 59.1 0.0
PMR IAmb IAmb 23 21 00.2
comp=Z,27nm,1.0s
PMR Palmer 78.87 24 P P 23 20 59.1 0.0
PMR pmax pmax
comp=Z,27nm,1.0s
PMR Palmer 78.87 24 P P 23 20 59.1 0.0
baz=238,SNR=13
CHUM Lake Minchumin 78.91 21 P P 23 20 59.9 +0.6
baz=235,SNR=50
F19K Shaleruckik Mo 78.93 17 P P 23 20 59.8 +0.4
baz=229
Q23K Middleton Isla 78.96 27 P P 23 21 00.6 +1.0
baz=241
MID Middleton Isla 78.97 27 P P 23 20 59.9 +0.2
H20K Anolleneega Mo 78.99 19 P P 23 21 00.6 +0.9
baz=232
GHO Glory Hole Cre 79.05 24 P P 23 21 00.5 +0.2
GHO IAmb IAmb 23 21 01.4
comp=Z,30nm,1.0s
KNK Knik Glacier 79.05 24 P P 23 21 00.2 0.0
KNK Knik Glacier 79.05 24 P P 23 21 00.6 +0.4
baz=239,SNR=16
C18K Utukok River 79.21 15 P P 23 21 01.5 +0.6
baz=226
KTH Kantishna Hill 79.24 22 IAmb IAmb 23 21 01.6
comp=Z,31nm,1.0s
SML Sawmill 79.31 24 P P 23 21 01.7 +0.1
SML Sawmill 79.31 24 P P 23 21 01.7 +0.1
SML pmax pmax
comp=Z,59nm,0.9s
SML Sawmill 79.31 24 P P 23 21 01.9 +0.3
baz=239,SNR=25
GLI Glacier Island 79.35 25 P P 23 21 02.1 +0.4
baz=240
HIN Hinchinbrook I 79.37 26 P P 23 21 01.0 -0.9
TRF Thorofare Moun 79.42 22 P P 23 21 00.7 -1.6
TRF IAmb IAmb 23 21 04.1
comp=Z,20nm,0.9s
TRF Thorofare Moun 79.42 22 P P 23 21 01.5 -0.8
baz=237,SNR=18
ZSN Zaisan 79.46 320 *d i* P P 23 21 03.2 +0.5
ZSN Zaisan 79.46 320 *ǁ i* P P 23 21 03.3 +0.5
E19K Redstone River 79.50 17 P P 23 21 03.5 +1.0
baz=230
BPAW Bear Paw Mtn. 79.52 21 P P 23 21 02.1 -0.6
BPAW IAmb IAmb 23 21 03.2
comp=Z,18nm,1.0s
BPAW Bear Paw Mtn. 79.52 21 P P 23 21 02.2 -0.5
baz=236,SNR=12
M23K Glacier View 79.55 24 P P 23 21 03.1 +0.3
baz=240,SNR=7.4
IMAR Indian Mountai 79.66 19 P P 23 21 03.6 +0.3
F20K Avaraart Lake 79.69 18 IAmb IAmb 23 21 05.7
comp=Z,20nm,0.9s
F20K Avaraart Lake 79.69 18 P P 23 21 04.4 +0.9
baz=231,SNR=28
SCM Sheep Creek Mo 79.73 24 P P 23 21 04.2 +0.3
SCM Sheep Creek Mo 79.73 24 P P 23 21 04.2 +0.3
SCM pmax pmax
comp=Z,50nm,1.1s
SCM Sheep Creek Mo 79.73 24 P P 23 21 04.0 +0.1
baz=240,SNR=16
WAT1 Susitna Watana 79.75 23 P P 23 21 03.5 -0.5
baz=238
EYAK Cordova Ski Ar 79.77 26 P P 23 21 03.3 -0.7
EYAK IAmb IAmb 23 21 05.5
comp=Z,17nm,0.9s
EYAK Cordova Ski Ar 79.77 26 P P 23 21 04.4 +0.4
baz=242
H21K Melozitna Rive 79.78 20 IAmb IAmb 23 21 05.8
comp=Z,22nm,0.9s
H21K Melozitna Rive 79.78 20 P P 23 21 04.7 +0.7
baz=234,SNR=24
I21K Tanana 79.78 20 P P 23 21 04.7 +0.7
I21K Tanana 79.78 20 P P 23 21 04.7 +0.7
baz=235,SNR=43
D19K Kuna River 79.93 16 P P 23 21 05.4 +0.6
baz=229
WAT6 Susitna Watana 79.94 24 P P 23 21 05.2 +0.1
baz=239,SNR=19
C19K Lookout Ridge 79.95 15 P P 23 21 05.9 +1.0
baz=227
DIV Divide 80.03 25 P P 23 21 05.6 +0.1
DIV IAmb IAmb 23 21 07.1
comp=Z,28nm,0.8s
G21K Allakaket 80.06 19 P P 23 21 05.9 +0.5
baz=233
KAIM Kayak Island 80.06 27 P P 23 21 06.5 +0.9
baz=243
MCK McKinley 80.08 22 P P 23 21 05.2 -0.4
baz=238,SNR=69
MLY Manley 80.13 21 IAmb IAmb 23 21 07.2
comp=Z,28nm,0.8s
MLY Manley 80.13 21 P P 23 21 06.1 +0.2
baz=236,SNR=49
KLU Klutina 80.15 25 P P 23 21 06.9 +0.8
KLU Klutina 80.15 25 P P 23 21 06.8 +0.8
baz=241,SNR=33
RAGM Ragged Mountai 80.16 26 P P 23 21 05.7 -0.5
E20K Nigu River 80.32 17 P P 23 21 07.8 +1.0
baz=230
A19K Wainwright 80.34 14 P P 23 21 07.8 +1.0
baz=226
DHY Denali Highway 80.34 23 P P 23 21 07.5 +0.3
DHY IAmb IAmb 23 21 08.5
comp=Z,28nm,1.0s
DHY Denali Highway 80.34 23 P P 23 21 07.3 +0.2
baz=240,SNR=17
M24K Tolsona, Glenn 80.34 24 P P 23 21 07.7 +0.6
M24K Tolsona, Glenn 80.34 24 P P 23 21 08.0 +0.9
baz=241,SNR=14
H22K Ishtalitna Cre 80.40 20 P P 23 21 07.5 +0.2
H22K IAmb IAmb 23 21 09.1
comp=Z,21nm,0.9s
H22K Ishtalitna Cre 80.40 20 P P 23 21 08.0 +0.7
baz=235,SNR=26
BMRM Bremner River 80.46 26 P P 23 21 08.0 +0.2
BMRM IAmb IAmb 23 21 09.3
comp=Z,31nm,1.0s
BMRM Bremner River 80.46 26 P P 23 21 08.0 +0.2
baz=242,SNR=9.8
NEA2 Nenana 80.49 21 IAmb IAmb 23 21 08.2
comp=Z,30nm,0.9s
NEA2 Nenana 80.49 21 P P 23 21 07.3 -0.4
baz=238,SNR=24
F21K Alatna River 80.49 18 P P 23 21 08.2 +0.5
baz=233
D20K Etivluk River 80.50 16 P P 23 21 07.9 +0.2
baz=230
I23K Minto, Yukon-K 80.68 21 P P 23 21 08.7 0.0
baz=237,SNR=14
N25K Chitina, Valde 80.76 25 P P 23 21 09.5 +0.2
N25K IAmb IAmb 23 21 11.2
comp=Z,26nm,1.0s
N25K Chitina, Valde 80.76 25 P P 23 21 09.9 +0.6
baz=242,SNR=12
WRH Wood River Hil 80.79 22 IAmb IAmb 23 21 09.7
comp=Z,29nm,1.0s
MK31 Makanchi Array 80.94 319 *ce* P P 23 21 11.3 +0.8
MKAR Makanchi Array 80.94 319 P P 23 21 11.2 +0.6
comp=Z,7.2nm,0.6s,baz=103,slow=6.1,SNR=81
MKAR pP pP 23 22 38.0 +1.6
comp=Z,3.3nm,0.8s,baz=114,slow=5.4,SNR=2.3
comp=Z,7.2nm,0.6s
MKAR Makanchi Array 80.94 319 P P 23 21 11.0 +0.4
G22K Bettles 80.94 19 P P 23 21 10.7 +0.7
baz=235
CCB Clear Creek Bu 80.98 22 IAmb IAmb 23 21 10.5
comp=Z,24nm,0.9s
CRQM Cirque 81.00 26 P P 23 21 10.8 0.0
GLB Gilahina Butte 81.02 25 P P 23 21 10.4 -0.2
CRQE Cirque 81.02 26 P P 23 21 11.4 +0.6
baz=244,SNR=10
PAX Paxson 81.05 24 P P 23 21 10.6 -0.2
baz=241,SNR=9.5
VRDI Verde Repeater 81.08 26 IAmb IAmb 23 21 12.7
comp=Z,29nm,0.9s
E21K Killik River 81.08 17 P P 23 21 10.3 -0.6
baz=233
COLA College 81.08 22 P P 23 21 10.1 -0.7
COLA College 81.08 22 P P 23 21 10.4 -0.4
COLA College 81.08 22 P P 23 21 10.4 -0.4
COLA pmax pmax
comp=Z,34nm,0.8s
COLA College 81.08 22 P P 23 21 10.0 -0.8
baz=239
COLA College 81.08 22 P P 23 21 10.2 -0.6
COLA pP pP 23 22 34.3 -2.5
TGL Tana Glacier 81.14 26 P P 23 21 11.5 +0.2
TGL IAmb IAmb 23 21 13.1
comp=Z,30nm,1.0s
MAKZ Makanchi 81.15 319 P P 23 21 12.0 +0.4
MAKZ Makanchi 81.15 319 P P 23 21 12.0 +0.4
MAKZ pmax pmax
comp=Z,45nm,1.2s
MAKZ Makanchi 81.15 319 P P 23 21 12.3 +0.6
MAKZ pP pP 23 22 37.0 -0.6
HDA Harding Lake 81.18 22 IAmb IAmb 23 21 12.6
comp=Z,12nm,0.8s
HDA Harding Lake 81.18 22 P P 23 21 10.9 -0.5
baz=240,SNR=8.7
B20K Meade River 81.19 15 IAmb IAmb 23 21 13.0
comp=Z,25nm,0.8s
B20K Meade River 81.19 15 P P 23 21 11.9 +0.7
baz=229
MESA MESA 81.28 27 P P 23 21 11.7 -0.5
MESA IAmb IAmb 23 21 14.2
comp=Z,24nm,1.0s
MESA MESA 81.28 27 P P 23 21 12.9 +0.7
baz=245
C21K Knifeblade Rid 81.29 16 P P 23 21 12.8 +1.0
baz=232
G23K Bananza Creek 81.31 19 P P 23 21 12.6 +0.6
baz=237,SNR=32
K24K Donnelly Dome 81.33 23 IAmb IAmb 23 21 13.9
comp=Z,26nm,0.9s
K24K Donnelly Dome 81.33 23 P P 23 21 12.5 +0.3
baz=241,SNR=11
MCARA McCarthy VSAT 81.33 26 P P 23 21 12.5 +0.3
MCARA McCarthy VSAT 81.33 26 P P 23 21 12.6 +0.3
baz=244,SNR=12
POKR Poker Plat Res 81.36 21 P P 23 21 11.5 -0.8
baz=239
IL31 81.39 22 IAmb IAmb 23 21 12.5
comp=Z,24nm,0.9s
ILAR Eielson Array 81.39 22 P P 23 21 11.6 -0.8
comp=Z,16nm,0.8s,baz=251,slow=5.3,SNR=139
ILAR pP pP 23 22 36.1 -2.4
comp=Z,2.6nm,0.8s,baz=245,slow=5.6,SNR=6.3
ILAR PKKPbc PKKPbc 23 39 43.6 -3.9
comp=Z,0.6nm,0.7s,baz=351,slow=1.9,SNR=8.6
comp=Z,16nm,0.8s
ILAR Eielson Array 81.39 22 P P 23 21 11.0 -1.4
ILAR Eielson Array 81.39 22 P P 23 21 11.0 -1.4
HMDM Hanimaadhoo 81.53 277 P P 23 21 14.0 -0.3
COLD Coldfoot 81.54 19 IAmb IAmb 23 21 15.2
comp=Z,28nm,1.2s
COLD Coldfoot 81.54 19 P P 23 21 14.0 +0.8
baz=236,SNR=23
E22K Anaktuvuk Pass 81.55 18 IAmb IAmb 23 21 15.1
comp=Z,23nm,0.8s
E22K Anaktuvuk Pass 81.55 18 P P 23 21 13.9 +0.7
baz=235,SNR=23
H24K Noodor Dome 81.57 21 P P 23 21 14.0 +0.6
baz=239
GRNC Granite Creek 81.61 27 P P 23 21 12.5 -1.4
GRNC IAmb IAmb 23 21 15.5
comp=Z,13nm,0.9s
ZAA0 Zalesovo Array 81.61 326 IAmb IAmb 23 21 14.6
comp=Z,30nm,1.2s
ZALV Zalesovo Beam 81.61 326 P P 23 21 13.4 -0.4
comp=Z,5.7nm,0.5s,baz=104,slow=6.3,SNR=40
ZALV pP pP 23 22 42.1 +2.2
comp=Z,2.2nm,0.7s,baz=107,slow=5.1,SNR=3.8
comp=Z,5.7nm,0.5s
ZALV Zalesovo Beam 81.61 326 P P 23 21 13.2 -0.5
ZALV Zalesovo Beam 81.61 326 *i* P P 23 21 13.3 -0.5
ZALV pmax pmax
comp=Z,11nm,0.7s
B21K Ikpikpuk River 81.62 16 P P 23 21 14.2 +0.6
baz=232
WUS Wushi 81.64 313 P P 23 21 15.6 +1.2
RIDG Independent Ri 81.66 23 P P 23 21 14.2 +0.3
baz=242,SNR=21
MENT Mentasta 81.74 24 P P 23 21 14.6 +0.3
MENT IAmb IAmb 23 21 15.9
comp=Z,15nm,0.8s
BARN Barnard Glacie 81.79 26 P P 23 21 15.0 +0.2
BARN IAmb IAmb 23 21 16.7
comp=Z,31nm,1.0s
M26K Nabesna, AK 81.79 25 P P 23 21 15.2 +0.6
baz=244
J25K Salcha River, 81.88 22 P P 23 21 15.0 0.0
baz=241,SNR=41
CTG Chitna Glacier 81.89 26 P P 23 21 16.2 +0.9
baz=245,SNR=17
CTGM Chitina Glacie 81.89 26 P P 23 21 15.6 +0.3
L26K Log Cabin Wild 81.93 24 P P 23 21 15.8 +0.4
L26K IAmb IAmb 23 21 16.9
comp=Z,19nm,0.8s
L26K Log Cabin Wild 81.93 24 P P 23 21 16.1 +0.8
baz=243,SNR=8.5
SHLS Shalkode 81.93 315 *eP* P 23 21 14.7 -1.1
SHLS Shalkode 81.93 315 *eP* P 23 21 14.8 -1.1
LOGN Logan Glacier 81.98 27 P P 23 21 16.2 +0.4
LOGN IAmb IAmb 23 21 17.6
comp=Z,21nm,1.0s
PCA Pinnacle 82.02 27 P P 23 21 16.4 +0.5
PCA IAmb IAmb 23 21 17.7
comp=Z,28nm,0.9s
PINM Pinnacle 82.03 27 P P 23 21 16.5 +0.6
baz=246
SCRK Sand Creek 82.11 23 IAmb IAmb 23 21 17.7
comp=Z,20nm,0.9s
SCRK Sand Creek 82.11 23 P P 23 21 16.4 +0.1
baz=243,SNR=17
G24K Hadweenzic Riv 82.16 20 P P 23 21 16.9 +0.5
baz=239,SNR=25
A21K Barrow 82.18 14 P P 23 21 16.9 +0.5
baz=230,SNR=5.8
E23K Chandalar 82.18 18 IAmb IAmb 23 21 18.6
comp=Z,30nm,0.9s
E23K Chandalar 82.18 18 P P 23 21 17.3 +0.7
baz=237
UZB Uzynbulak 82.24 314 *eP* P 23 21 17.8 +0.3
UZB pmax pmax
comp=Z,15nm,1.1s
UZB Uzynbulak 82.24 314 *eP* P 23 21 17.8 +0.3
comp=Z,15nm,1.1s
M27K Edge Creek, AK 82.25 25 P P 23 21 18.0 +0.9
baz=245
PRP Porcupine Dome 82.26 21 P P 23 21 17.8 +0.7
baz=241
O28M Mount Upton 82.32 27 P P 23 21 18.5 +0.8
baz=246
D23K Nanushuk River 82.36 17 P P 23 21 18.8 +1.4
baz=236
A22K Sinclair Lake 82.39 15 P P 23 21 18.0 +0.6
baz=231
B22K Teshekpuk Lake 82.39 16 IAmb IAmb 23 21 19.0
comp=Z,28nm,0.8s
B22K Teshekpuk Lake 82.39 16 P P 23 21 18.0 +0.5
baz=233
F24K Squaw Lake 82.45 19 P P 23 21 18.9 +1.0
baz=238
TOLK Toolik Lake Re 82.52 18 P P 23 21 19.1 +0.8
baz=237,SNR=51
PRZ Przheval'sk 82.53 314 P P 23 21 19.6 +0.5
PRZ Przheval'sk 82.53 314 P P 23 21 19.6 +0.5
PRZ pmax pmax
comp=Z,78nm,1.4s
E24K Your Creek 82.55 19 P P 23 21 18.9 +0.5
baz=238,SNR=18
KPKS Kokpek 82.55 315 *eP* P 23 21 19.4 +0.4
KPKS Kokpek 82.55 315 *eP* P 23 21 19.4 +0.4
L27K Beaver Creek, 82.57 24 P P 23 21 19.3 +0.7
baz=245
BCAR Beaver Creek A 82.59 24 P P 23 21 19.3 +0.6
YUK3 Moose Creek 82.61 26 P P 23 21 19.8 +0.7
baz=246,SNR=17
SATY Saty 82.66 314 *d i* P P 23 21 19.9 +0.3
SATY Saty 82.66 314 *ǁ i* P P 23 21 19.9 +0.3
BVCY Beaver Creek 82.70 25 P P 23 21 19.9 +0.7
baz=246
YUK8 Steele Glacier 82.72 26 P P 23 21 20.7 +1.0
baz=247,SNR=14
TARG Taragay, Kyrgy 82.80 313 P P 23 21 20.5 -0.2
TARG Taragay, Kyrgy 82.80 313 P P 23 21 20.5 -0.2
TARG pmax pmax
comp=Z,12nm,1.1s
FYU Fort Yukon 82.87 21 IAmb IAmb 23 21 21.7
comp=Z,20nm,0.9s
C23K Itkillik River 82.88 17 P P 23 21 20.9 +0.9
baz=236
O29M Mount Kennedy 82.88 28 IAmb IAmb 23 21 22.6
comp=Z,25nm,0.9s
O29M Mount Kennedy 82.88 28 P P 23 21 21.4 +1.0
baz=248,SNR=14
D24K Happy Valley 83.03 18 P P 23 21 21.5 +0.8
baz=238
I26K Coal Creek Min 83.03 22 P P 23 21 19.9 -0.9
I26K Coal Creek Min 83.03 22 P P 23 21 20.9 +0.1
baz=243,SNR=12
S31K Pelican 83.17 30 P P 23 21 22.6 +0.9
baz=250
YUK6 Outpost Mounta 83.22 27 P P 23 21 23.2 +1.0
baz=248,SNR=5.3
F25K Christian Rive 83.23 20 P P 23 21 23.1 +1.2
baz=241,SNR=35
YUK4 Talbot Arm 83.24 27 P P 23 21 23.7 +1.5
baz=248,SNR=14
SIT Sitka 83.33 31 P P 23 21 22.9 +0.5
SIT IAmb IAmb 23 23 42.5
comp=Z,47nm,1.5s
SIT Sitka 83.33 31 P P 23 21 23.0 +0.5
SIT pmax pmax
comp=Z,47nm,1.5s
SIT Sitka 83.33 31 P P 23 21 23.4 +0.9
baz=251
KDJ Kajisay 83.34 313 P P 23 21 23.2 0.0
KDJ Kajisay 83.34 313 P P 23 21 23.2 0.0
KDJ pmax pmax
comp=Z,36nm,0.9s
C24K Franklin Bluff 83.37 17 P P 23 21 23.4 +0.9
baz=238
BMAR Burnt Mountain 83.51 20 P P 23 21 24.1 +0.8
E25K Arctic Village 83.52 19 P P 23 21 23.5 +0.3
E25K IAmb IAmb 23 21 25.3
comp=Z,16nm,0.9s
E25K Arctic Village 83.52 19 P P 23 21 24.1 +0.8
baz=241,SNR=24
G26K Porcupine Rive 83.56 21 P P 23 21 24.7 +1.3
baz=242,SNR=83
HYT Haines Junctio 83.56 27 P P 23 21 24.2 +0.4
HYT Haines Junctio 83.56 27 P P 23 21 24.8 +1.0
baz=249,SNR=35
P30M Million Dollar 83.56 28 P P 23 21 24.8 +1.1
baz=249
MDOK Medeo 83.65 314 *eP* P 23 21 25.0 +0.3
MDOK Medeo 83.65 314 *eP* P 23 21 25.1 +0.3
TNSS Tian-Shan 83.70 314 *eP* P 23 21 25.2 0.0
TNSS Tian-Shan 83.70 314 *eP* P 23 21 25.3 0.0
M29M Somme Creek 83.74 26 P P 23 21 24.9 +0.3
M29M Somme Creek 83.74 26 P P 23 21 25.5 +0.9
baz=248,SNR=19
DIB Dawson Inlet, 83.74 35 P P 23 21 24.6 -0.1
I27K Kandik River 83.74 22 P P 23 21 25.1 +0.6
baz=245
AAA Alma-Ata 83.76 314 *eP* P 23 21 25.7 +0.6
AAA pmax pmax
comp=Z,13nm,0.9s
AAA Alma-Ata 83.76 314 *eP* P 23 21 25.7 +0.6
comp=Z,13nm,0.9s
F26K Sheenjek River 83.78 20 IAmb IAmb 23 21 27.0
comp=Z,21nm,1.0s
F26K Sheenjek River 83.78 20 P P 23 21 25.8 +1.2
baz=242,SNR=27
S32K Killisnoo 83.85 31 P P 23 21 25.3 +0.2
S32K IAmb IAmb 23 21 27.2
comp=Z,20nm,1.2s
S32K Killisnoo 83.85 31 P P 23 21 25.8 +0.7
baz=252
D25K Kavik River 83.86 18 P P 23 21 25.2 +0.2
baz=240
KSH2 Kashi 83.95 310 P P 23 21 26.5 +0.2
KSH2 pmax pmax

comp=Z,16nm,1.3s
DAWY Dawson 83.97 24 P **P** **23 21 26.3 +0.6**
DAWY IAmb IAmb 23 21 27.8
comp=Z,30nm,1.0s
DAWY Dawson 83.97 24 P **P** **23 21 26.6 +1.0**
baz=247,SNR=32
N30M Aishikik Lake 83.98 27 IAmb IAmb 23 21 28.8
comp=Z,21nm,1.1s
N30M Aishikik Lake 83.98 27 P **P** **23 21 26.6 +0.8**
baz=249,SNR=10.0
CRAG Craig 84.02 33 P **P** **23 21 26.1 +0.1**
CRAG Craig 84.02 33 P **P** **23 21 26.8 +0.8**
baz=253
H27K Steamboat Moun 84.05 22 P **P** **23 21 26.3 +0.3**
H27K Steamboat Moun 84.05 22 P **P** **23 21 26.9 +1.0**
baz=245,SNR=38
ULHL Ulahol 84.05 313 P **P** **23 21 27.8 +1.1**
SNR=24
BESE Bessie Mountai 84.06 30 P **P** **23 21 26.9 +0.6**
BESE IAmb IAmb 23 21 28.4
comp=Z,30nm,1.0s
NRN Naryn 84.06 312 P **P** **23 21 27.0 0.0**
NRN IAmb IAmb 23 21 29.1
comp=Z,24nm,1.5s
NRN Naryn 84.06 312 P **P** **23 21 27.0 0.0**
NRN pmax pmax
comp=Z,24nm,1.5s
SKAG Skagway 84.11 29 P **P** **23 21 27.0 +0.6**
SKAG IAmb IAmb 23 21 28.5
comp=Z,13nm,0.8s
SKAG Skagway 84.11 29 P **P** **23 21 27.3 +0.9**
baz=251
L29M L29M 84.13 25 P **P** **23 21 27.7 +1.2**
baz=248,SNR=32
R32K Eaglecrest 84.13 30 P **P** **23 21 25.8 -0.7**
O30N Mendenhall 84.19 28 P **P** **23 21 27.4 +0.5**
O30N IAmb IAmb 23 21 28.8
comp=Z,17nm,1.0s
O30N Mendenhall 84.19 28 P **P** **23 21 27.8 +1.0**
baz=250,SNR=8.1
U33K Whale Pass 84.21 33 P **P** **23 21 27.5 +0.6**
baz=253
G27K Doyon Strip 84.25 21 P **P** **23 21 28.0 +1.0**
baz=244
BOOM Boomskoye usch 84.31 313 IAmb IAmb 23 21 30.1
comp=Z,22nm,0.9s
I28M Miner Creek 84.31 23 P **P** **23 21 28.1 +0.7**
baz=246
KURK Kurchatov 84.32 322 P **P** **23 21 27.1 -0.5**
KURK IAmb IAmb 23 21 28.6
comp=Z,35nm,1.1s
KURK Kurchatov 84.32 322 *ce*P **P** **23 21 27.5 -0.1**
KURK pmax pmax
comp=Z,40nm,1.3s
KURK Kurchatov 84.32 322 P **P** **23 21 27.4 -0.1**
KURK pP **pP** **23 22 52.7 -1.5**
KURBB Kurchatov Arra 84.35 322 P **P** **23 21 27.6 -0.1**
comp=Z,8.9nm,0.9s,baz=110,slow=3.5,SNR=66
KURBB pP **pP** **23 22 56.5 +2.0**
comp=Z,1.5nm,0.8s,baz=106,slow=3.6,SNR=3.2
KURBB PKKPbc **PKKPbc** **23 39 38.1 -1.8**
comp=Z,1.0nm,0.6s,baz=288,slow=2.9,SNR=11
KURBB PKPPKP **P'P'df** **23 47 42.6 -2.9**
comp=Z,0.5nm,0.7s,baz=301,slow=3.0,SNR=5.3
comp=Z,8.9nm,0.9s
M30M Minto, Yukon 84.50 26 P **P** **23 21 28.4 0.0**
M30M IAmb IAmb 23 21 30.5
comp=Z,41nm,1.4s
M30M Minto, Yukon 84.50 26 P **P** **23 21 29.3 +0.9**
baz=249,SNR=22
N31M Braeburn, Yuko 84.58 27 P **P** **23 21 29.3 +0.6**
N31M Braeburn, Yuko 84.58 27 P **P** **23 21 29.9 +1.2**
baz=250,SNR=27
J29N Klondike Camp 84.60 24 P **P** **23 21 29.7 +0.9**
J29N Klondike Camp 84.60 24 P **P** **23 21 30.2 +1.4**
baz=248,SNR=6.9
C26K Camden Bay 84.60 18 P **P** **23 21 30.2 +1.6**
baz=241
TKM2 Tokmak 2 84.64 314 P **P** **23 21 30.2 +0.5**
SNR=5.9
K29M Barlow Dome 84.66 24 P **P** **23 21 30.1 +1.0**
baz=249,SNR=45
WRAK Wrangell Islan 84.71 32 P **P** **23 21 29.1 -0.3**
WRAK IAmb IAmb 23 21 31.5
comp=Z,23nm,1.2s
WRAK Wrangell Islan 84.71 32 P **P** **23 21 30.3 +0.9**
baz=254
WHY Whitehorse 84.72 28 P **P** **23 21 30.3 +0.7**
WHY Whitehorse 84.72 28 P **P** **23 21 30.2 +0.7**
baz=251,SNR=9.0
V35K Ketchikan 84.81 34 P **P** **23 21 30.3 +0.4**
V35K Ketchikan 84.81 34 P **P** **23 21 30.6 +0.7**
baz=254,SNR=5.3
C27K Jago River 84.83 18 P **P** **23 21 30.8 +1.0**
baz=242
E27K Coleen River 84.86 20 P **P** **23 21 31.1 +1.1**
baz=244
NIL Nilore 84.86 304 P **P** **23 21 31.3 +0.5**
NIL Nilore 84.86 304 P **P** **23 21 31.3 +0.5**
NIL pmax pmax
comp=Z,74nm,1.9s
I29M Ogilvie Camp, 84.91 23 P **P** **23 21 30.8 +0.6**
baz=248,SNR=35
P32M Atlin 84.94 29 P **P** **23 21 31.2 +0.7**
P32M IAmb IAmb 23 21 32.5
comp=Z,14nm,0.9s
P32M Atlin 84.94 29 P **P** **23 21 31.5 +1.0**
baz=252,SNR=10.0
KBK Karagaybulak 85.06 313 P **P** **23 21 32.4 +0.7**
SNR=10.0
H29M Whitestone 85.21 22 P **P** **23 21 32.4 +0.7**
baz=248
F28M Old Crow 85.22 21 P **P** **23 21 32.7 +1.0**
baz=246,SNR=74
MAYO Mayo, Yukon 85.25 25 P **P** **23 21 33.3 +1.3**
MAYO Mayo, Yukon 85.25 25 P **P** **23 21 33.2 +1.3**
baz=250,SNR=10
CHMS Chumysh 85.27 314 P **P** **23 21 33.1 +0.5**
SNR=11
UCH Uchtor 85.30 313 P **P** **23 21 34.4 +1.2**
SNR=10
RUBB Prince Rupert 85.31 35 P **P** **23 21 32.5 +0.1**
RUBB IAmb IAmb 23 21 34.6
comp=Z,25nm,1.0s
FRU1 Bishkek 85.32 313 IAmb IAmb 23 21 34.6
comp=Z,19nm,1.1s
AAK Ala-Archa 85.39 313 P **P** **23 21 34.0 +0.6**
SNR=9.3
AAK Ala-Archa 85.39 313 P **P** **23 21 33.0 -0.3**
AAK Ala-Archa 85.39 313 *ce*P **P** **23 21 34.2 +0.9**
AAK pmax pmax
comp=Z,17nm,1.7s
AAK Ala-Archa 85.39 313 P **P** **23 21 33.8 +0.5**
AAK pP **pP** **23 22 57.8 -2.6**
AAK sP **sP** **23 23 36.7 -3.2**
J30M Hart River 85.40 24 P **P** **23 21 34.0 +1.1**
baz=250,SNR=76
M31M Drury Creek, Y 85.44 26 P **P** **23 21 33.4 +0.5**
baz=252,SNR=34
SGDS Sogindy 85.44 314 *eP* **P** **23 21 33.9 +0.5**
Q32M Nakina River 85.46 30 P **P** **23 21 34.3 +1.0**
baz=254
QSPA South Pole Qui 85.47 180 P **P** **23 21 33.5 +0.4**
comp=Z,72nm,0.8s,baz=343,slow=1.2,SNR=215
QSPA pP **pP** **23 22 58.1 -2.1**
comp=Z,5.4nm,0.7s,baz=14,slow=4.2,SNR=2.6
QSPA PKiKP **PKiKP** **23 26 41.0 +0.5**
comp=Z,0.5nm,0.6s,baz=34,slow=7.2,SNR=3.5
QSPA PKKPbc **PKKPdf** **23 39 34.0 +4.7**
comp=Z,1.0nm,1.0s,baz=214,slow=0.6,SNR=5.7
comp=Z,72nm,0.8s
QSPA South Pole Qui 85.47 180 P **P** **23 21 33.5 +0.4**
QSPA South Pole Qui 85.47 180 P **P** **23 21 33.6 +0.4**
QSPA pP **pP** **23 22 57.7 -2.5**
USP Ospenovka 85.50 314 P **P** **23 21 34.2 +0.5**
SNR=15
D27M Malcolm River 85.53 19 P **P** **23 21 34.4 +1.1**
baz=245
P33M Teslin, Yukon 85.55 29 P **P** **23 21 33.8 +0.2**
P33M IAmb IAmb 23 21 35.3
comp=Z,19nm,1.2s
P33M Teslin, Yukon 85.55 29 P **P** **23 21 34.1 +0.5**
baz=253,SNR=11
G29M Pine Creek 85.60 21 P **P** **23 21 34.4 +0.8**
baz=248
I30M Mount Dempster 85.61 23 P **P** **23 21 34.4 +0.5**
baz=250
E28M Babbage River 85.73 20 P **P** **23 21 35.3 +1.1**
baz=246
S34M Telegraph Cree 85.75 31 IAmb IAmb 23 21 37.0
comp=Z,27nm,0.9s
S34M Telegraph Cree 85.75 31 P **P** **23 21 35.4 +0.9**
baz=255,SNR=15
EPYK Eagle Plains 85.89 22 P **P** **23 21 35.8 +0.7**
baz=249,SNR=64
EKS2 Erkin-Say 85.92 313 P **P** **23 21 37.0 +1.1**
SNR=6.9
T35M Bob Quinn 85.97 32 P **P** **23 21 36.4 +0.8**
T35M IAmb IAmb 23 21 38.0
comp=Z,20nm,1.1s
T35M Bob Quinn 85.97 32 P **P** **23 21 36.9 +1.3**
baz=256,SNR=6.6
BTLS Baital 86.14 316 *eP* **P** **23 21 37.2 +0.6**
BTLS Baital 86.14 316 *eP* **P** **23 21 37.3 +0.6**
E29M Blow River 86.21 20 P **P** **23 21 36.9 +0.5**
baz=248
R33M Jennings River 86.22 30 P **P** **23 21 38.1 +1.1**
baz=255
D28M Stokes Point 86.29 19 P **P** **23 21 37.8 +1.0**
baz=247
G30M tAoh Zraii Nji 86.29 22 P **P** **23 21 37.3 +0.3**
baz=250
MAW Mawson 86.36 203 P **P** **23 21 37.4 +0.2**
comp=Z,8.4nm,0.6s,baz=49,slow=9.3,SNR=1.9
comp=Z,8.4nm,0.6s
DLBC Dease Lake 86.45 31 P **P** **23 21 39.1 +1.1**
baz=256,SNR=14
H31M Peel River 86.61 23 P **P** **23 21 39.0 +0.5**
baz=251
F30M Barrier River 86.67 21 P **P** **23 21 39.4 +0.7**
baz=250
DRK Karamyk 86.89 310 P **P** **23 21 41.0 +0.2**
DRK IAmb IAmb 23 21 42.7
comp=Z,14nm,1.0s
DRK Karamyk 86.89 310 P **P** **23 21 41.0 +0.2**
DRK pmax pmax
comp=Z,15nm,1.0s
MMPY Sheldon Lake, 86.95 27 P **P** **23 21 40.4 +0.2**
MMPY IAmb IAmb 23 21 42.3
comp=Z,26nm,1.1s
MMPY Sheldon Lake, 86.95 27 P **P** **23 21 41.1 +0.9**
baz=254,SNR=21
CBB Campbell River 87.34 40 P **P** **23 21 42.4 +0.2**
CBB IAmb IAmb 23 21 44.2
comp=Z,16nm,0.9s
F31M Tsiigehtchic 87.35 22 P **P** **23 21 41.6 -0.3**
F31M IAmb IAmb 23 21 43.1
comp=Z,24nm,0.9s
F31M Tsiigehtchic 87.35 22 P **P** **23 21 42.1 +0.2**
baz=252,SNR=22
KHBM Hayfork Bally 87.36 49 P **P** **23 21 42.5 -0.3**
KHBM IAmb IAmb 23 21 45.6
comp=Z,13nm,1.1s
WTLY Watson Lake, Y 87.47 29 P **P** **23 21 43.6 +0.9**
baz=257,SNR=7.4
INK Inuvik 87.70 21 IAmb IAmb 23 21 44.6
comp=Z,24nm,1.0s
INK Inuvik 87.70 21 P **P** **23 21 43.7 +0.2**
baz=252
BTK Batken 87.72 310 P **P** **23 21 44.7 +0.3**
BTK Batken 87.72 310 P **P** **23 21 44.7 +0.3**
BTK pmax pmax
comp=Z,9.0nm,1.0s
DZA Taraz 87.73 313 *eP* **P** **23 21 44.4 +0.1**
DZA Taraz 87.73 313 *eP* **P** **23 21 44.5 +0.1**
BRZS Berezniki 87.89 320 *eP* **P** **23 21 45.4 +0.5**
BRZS Berezniki 87.89 320 *eP* **P** **23 21 45.4 +0.5**
GAR Garm 87.97 309 P **P** **23 21 45.8 +0.1**
GAR IAmb IAmb 23 21 47.0
comp=Z,27nm,1.1s
TGTN Hyland Airport 88.04 28 P **P** **23 21 46.4 +1.0**
baz=257,SNR=10
KK31 Karatay Array 88.35 313 P **P** **23 21 46.6 -0.6**
KK31 Karatay Array 88.35 313 P **P** **23 21 46.6 -0.6**
KK31 pmax pmax
comp=Z,5.0nm,1.0s
KKAR Karatay Array 88.35 313 P **P** **23 21 46.7 -0.5**
KKAR Karatay Array 88.35 313 P **P** **23 21 46.7 -0.5**
O03E Paynes Creek 88.38 50 P **P** **23 21 48.4 +0.9**
O03E IAmb IAmb 23 21 53.4
comp=Z,15nm,1.2s
ORV Oroville 88.52 50 P **P** **23 21 47.5 -0.5**
ORV Oroville 88.52 50 P **P** **23 21 47.5 -0.5**
ORV pmax pmax
comp=Z,8.0nm,1.6s
IUG luzhnay 88.58 312 *eP* **P** **23 21 48.4 0.0**
IUG luzhnay 88.58 312 *eP* **P** **23 21 48.5 0.0**
CHGR Chuyangaron 88.82 309 P **P** **23 21 49.0 -0.6**
CHGR Chuyangaron 88.82 309 P **P** **23 21 49.0 -0.6**
CHGR pmax pmax
comp=Z,34nm,0.9s
BRLS Borolday 88.84 313 *eP* **P** **23 21 50.3 +0.8**
BRLS Borolday 88.84 313 *eP* **P** **23 21 50.4 +0.8**
AFDM Forest Hills D 88.85 51 P **P** **23 21 48.8 -0.8**
PKD Bear Valley Ra 88.85 54 P **P** **23 21 50.0 +0.2**
PKD IAmb IAmb 23 21 57.4
comp=Z,32nm,1.2s
CHM Chimkent 88.92 312 *eP* **P** **23 21 50.2 +0.3**
CHM Chimkent 88.92 312 *eP* **P** **23 21 50.3 +0.3**
CMB Columbia Colle 89.20 52 P **P** **23 21 50.2 -1.2**
CMB Columbia Colle 89.20 52 P **P** **23 21 50.2 -1.2**
CMB pmax pmax
comp=Z,18nm,1.8s
I05D Terrebonne, OR 89.22 46 P **P** **23 21 50.1 -1.2**
I05D IAmb IAmb 23 21 52.6
comp=Z,14nm,1.0s
K05A Summer Lake 89.35 47 P **P** **23 21 51.5 -0.6**
K05A IAmb IAmb 23 24 19.7
comp=Z,45nm,1.7s
BEKR Beckworth 89.43 50 P **P** **23 21 52.5 0.0**
PINE Pine Mountain 89.44 46 P **P** **23 21 52.7 +0.2**
PINE IAmb IAmb 23 21 54.2
comp=Z,17nm,1.1s
SHAA Shahritus 89.51 308 P **P** **23 21 53.1 +0.3**
SHAA IAmb IAmb 23 21 54.8
comp=Z,20nm,0.9s
BVAR Borovoye Array 89.76 323 P **P** **23 21 52.8 -0.7**
comp=Z,20nm,0.8s,baz=106,slow=5.4,SNR=55
BVAR pP **pP** **23 23 23.2 +1.2**
comp=Z,2.7nm,0.8s,baz=94,slow=4.8,SNR=5.3
BVAR PKKPbc **PKKPdf** **23 39 24.7 +3.0**
comp=Z,0.6nm,0.6s,baz=290,slow=4.4,SNR=3.8
comp=Z,20nm,0.8s
KOTAN Kotaneelee Air 89.80 30 P **P** **23 21 54.1 +0.6**
baz=261
BORK Borovoye 89.81 323 P **P** **23 21 53.0 -0.7**
BORK IAmb IAmb 23 21 53.9
comp=Z,18nm,0.9s
BORK Borovoye 89.81 323 P **P** **23 21 53.0 -0.7**
BORK pmax pmax
comp=Z,18nm,0.9s
BORK Borovoye 89.81 323 P **P** **23 21 53.1 -0.7**
MXC Moxie City 90.21 43 P **P** **23 21 55.2 -0.6**
F07A Phinny Hill Vi 90.39 44 P **P** **23 21 56.2 -0.4**
F07A IAmb IAmb 23 21 58.0
comp=Z,16nm,1.4s
ISA Isabella, Lake 90.50 54 P **P** **23 21 57.2 -0.3**
ISA Isabella, Lake 90.50 54 P **P** **23 21 57.2 -0.3**
ISA pmax pmax
comp=Z,6.0nm,0.9s
I07A Izee 90.50 46 P **P** **23 21 56.9 -0.4**
E07A Sunnyside 90.50 44 P **P** **23 21 57.7 +0.5**
E07A IAmb IAmb 23 21 59.2
comp=Z,43nm,1.7s
WRGLY Wrigley 90.57 27 P **P** **23 21 57.0 0.0**
WRGLY IAmb IAmb 23 21 58.6
comp=Z,17nm,0.9s
WRGLY Wrigley 90.57 27 P **P** **23 21 57.7 +0.7**
baz=261,SNR=6.8
PASC Pasadena Art C 90.60 56 P **P** **23 21 57.7 -0.2**
PASC IAmb IAmb 23 21 59.7
comp=Z,13nm,0.9s
MWC Mount Wilson 90.71 56 P **P** **23 21 58.5 -0.1**
MWC Mount Wilson 90.71 56 P **P** **23 21 58.5 -0.1**
MWC pmax pmax
comp=Z,29nm,1.1s
WAH2 Wahluke Slope 90.72 43 P **P** **23 21 58.3 +0.2**
WAH2 IAmb IAmb 23 21 59.4
comp=Z,17nm,1.2s
EPH Ephrata 90.76 43 P **P** **23 21 58.2 -0.2**
EPH IAmb IAmb 23 22 00.0
comp=Z,18nm,1.2s
NVAR Mina Array Bea 90.88 52 P **P** **23 22 00.7 +1.3**
comp=Z,6.6nm,0.8s,baz=256,slow=5.8,SNR=22
NVAR pP **pP** **23 23 29.2 +2.0**
comp=Z,0.2nm,0.3s,baz=198,slow=23,SNR=1.8
comp=Z,6.6nm,0.8s
NVAR Mina Array Bea 90.88 52 P **P** **23 21 59.7 +0.4**
CWC Cottonwood Cre 90.88 54 P **P** **23 21 59.0 -0.3**
WVOR Wild Horse Val 90.98 48 P **P** **23 21 59.0 -0.6**
WVOR Wild Horse Val 90.98 48 P **P** **23 21 59.0 -0.6**
WVOR pmax pmax
comp=Z,9.0nm,1.3s
NV11 Mina Array Sit 90.99 52 P **P** **23 21 59.5 -0.3**
NV11 IAmb IAmb 23 22 01.5
comp=Z,10nm,0.9s
G08A Pilot Rock 91.00 45 P **P** **23 21 59.1 -0.6**
E08A Dider Farm, El 91.05 44 P **P** **23 21 60.0 +0.4**
E08A IAmb IAmb 23 22 01.1
comp=Z,13nm,1.1s
DSP Deep Springs 91.05 53 P **P** **23 22 00.6 +0.8**
DSP IAmb IAmb 23 22 02.6
comp=Z,17nm,1.1s
YPT Yellepit 91.07 44 P **P** **23 21 59.8 +0.1**
YPT IAmb IAmb 23 22 01.2
comp=Z,15nm,1.2s
KVN Kaiserville 91.09 51 P **P** **23 22 00.2 -0.1**
KVN Kaiserville 91.09 51 P **P** **23 22 00.2 -0.1**
J08A Circle Bar Ran 91.18 47 P **P** **23 22 01.0 +0.5**
ELS Elsinore Mount 91.19 57 P **P** **23 22 01.1 +0.4**
ELS IAmb IAmb 23 22 02.6
comp=Z,20nm,1.6s
D08A Wollman Farm, 91.19 43 P **P** **23 22 00.5 +0.2**
CLC China Lake 91.22 54 P **P** **23 22 01.1 +0.3**
CLC IAmb IAmb 23 22 02.6
comp=Z,12nm,1.1s
CLC China Lake 91.22 54 P **P** **23 22 01.1 +0.3**
CLC pmax pmax
comp=Z,12nm,1.1s
C36M Paulatuk 91.28 21 IAmb IAmb 23 22 01.0
comp=Z,17nm,0.9s
C36M Paulatuk 91.28 21 P **P** **23 21 60.0 -0.2**
baz=261
MPMC Manual Prospec 91.33 54 P **P** **23 22 01.2 -0.3**
MPMC IAmb IAmb 23 22 03.3
comp=Z,12nm,1.1s
A36M Sachs Harbour 91.34 18 P **P** **23 22 00.4 -0.1**
baz=260
CPE Camp Elliot 91.40 57 P **P** **23 22 00.9 -0.6**
CPE IAmb IAmb 23 22 04.0
comp=Z,20nm,1.3s
DPP Dos Picos Cty 91.54 57 P **P** **23 22 02.6 +0.3**
DPP IAmb IAmb 23 22 04.5
comp=Z,12nm,1.0s
E09A Wood Farm, Sta 91.68 44 IAmb IAmb 23 22 03.8
comp=Z,18nm,1.1s
C09A Chrisman Ranch 91.69 42 P **P** **23 22 01.9 -0.7**
BAR Barrett 91.75 58 P **P** **23 22 02.4 -0.9**
GSC Goldstone, Bar 91.83 55 P **P** **23 22 02.9 -0.7**
GSC Goldstone, Bar 91.83 55 P **P** **23 22 02.9 -0.7**
GSC pmax pmax
comp=Z,8.0nm,1.0s
DNR Dunn Ranch,Anz 91.84 57 P **P** **23 22 02.5 -1.2**
DNR IAmb IAmb 23 22 05.8
comp=Z,14nm,1.2s
FURC Furnace Creek, 91.86 54 P **P** **23 22 03.0 -0.5**
PFO Pinyon Flats O 91.99 57 P **P** **23 22 04.7 +0.2**
PFO Pinyon Flats O 91.99 57 P **P** **23 22 04.7 +0.2**
PFO pmax pmax
comp=Z,7.0nm,1.0s
BORC Borrego Spring 92.00 57 P **P** **23 22 04.0 -0.4**
PMD Palm Desert 92.06 57 P **P** **23 22 04.4 -0.2**
WCT Wildcat Mounta 92.08 53 P **P** **23 22 05.0 +0.3**
WCT IAmb IAmb 23 22 07.1
comp=Z,17nm,1.1s
BMO Blue Mountains 92.14 45 P **P** **23 22 04.4 -0.4**
BMO Blue Mountains 92.14 45 P **P** **23 22 04.4 -0.4**
BMO pmax pmax
comp=Z,9.0nm,1.0s
F10A Beach Ranch, E 92.27 44 P **P** **23 22 05.0 -0.4**
F10A IAmb IAmb 23 22 06.3
comp=Z,11nm,1.0s
SHOC Shoshone, Teco 92.30 54 P **P** **23 22 05.8 +0.1**
ESJX Sierra Juarez 92.31 58 P **P** **23 22 06.7 +0.7**
ESJX IAmb IAmb 23 22 09.0
comp=Z,11nm,1.1s
YUH Yuha Desert 92.37 58 P **P** **23 22 06.3 +0.2**
TPNV Topopah Spring 92.39 53 P **P** **23 22 06.5 +0.2**
TPNV IAmb IAmb 23 22 08.0
comp=Z,12nm,0.9s
TPNV Topopah Spring 92.39 53 P **P** **23 22 06.5 +0.2**
TPNV pmax pmax
comp=Z,12nm,1.0s
NEW Newport 92.50 42 P **P** **23 22 06.1 -0.3**
NEW IAmb IAmb 23 22 07.3
comp=Z,11nm,1.0s
NEW Newport 92.50 42 P **P** **23 22 06.1 -0.3**
NEW pmax pmax
comp=Z,11nm,1.0s
BC3 Big Chuckawall 92.83 57 P **P** **23 22 08.5 +0.2**
BC3 IAmb IAmb 23 22 10.7
comp=Z,17nm,1.3s
S11A Rachel 92.83 53 P **P** **23 22 08.2 0.0**
S11A IAmb IAmb 23 22 10.3
comp=Z,8.5nm,0.9s
MTPC Mountain Pass 92.86 55 P **P** **23 22 07.8 -0.7**
PLID Pearl Lake 93.08 45 P **P** **23 22 08.4 -0.9**
MFID Camas Ranch 93.11 47 P **P** **23 22 08.6 -0.8**
IRM Iron Mountain 93.12 56 IAmb IAmb 23 22 11.8
comp=Z,15nm,1.3s
SHPR Sheep Range 93.23 54 P **P** **23 22 10.5 +0.4**
GLA Glamis 93.32 57 P **P** **23 22 10.1 -0.4**
GLA IAmb IAmb 23 25 05.0
comp=Z,9.6nm,0.8s
GLA Glamis 93.32 57 P **P** **23 22 10.1 -0.4**
GLA pmax pmax
comp=Z,10.0nm,0.8s
PRN Pahroc Range 93.37 53 P **P** **23 22 10.3 -0.5**
PRN IAmb IAmb 23 22 12.8
comp=Z,13nm,1.1s
ELK Elko 93.40 50 P **P** **23 22 10.1 -0.8**
ELK Elko 93.40 50 P **P** **23 22 10.1 -0.8**
ELK pmax pmax
comp=Z,4.0nm,1.2s
V12A Nelson 93.44 55 P **P** **23 22 10.9 -0.2**
V12A IAmb IAmb 23 25 27.8
comp=Z,7.5nm,0.6s
BLYC Blythe 93.61 57 P **P** **23 22 11.1 -0.6**
HRA Herat 94.03 304 P **P** **23 22 12.3 -1.7**
W13A Hualapai Mount 94.20 55 P **P** **23 22 14.9 +0.2**
W13A IAmb IAmb 23 22 16.8
comp=Z,12nm,1.4s
PSUT Pine Spring 94.37 52 P **P** **23 22 14.8 -0.6**
YKAW3 Yellowknife Wh 94.55 28 P **P** **23 22 14.8 -0.5**
YKAW3 IAmb IAmb 23 22 16.7
comp=Z,11nm,0.9s
YKA Yellowknife Ar 94.55 28 P **P** **23 22 15.5 +0.2**
comp=Z,8.3nm,1.0s,baz=276,slow=5.3,SNR=49
YKA pP **pP** **23 23 44.5 +0.4**
comp=Z,0.9nm,0.8s,baz=280,slow=5.5,SNR=6.2
comp=Z,8.3nm,1.0s
YKA Yellowknife Ar 94.55 28 P **P** **23 22 15.1 -0.2**
YKAW1 Yellowknife Wh 94.60 28 P **P** **23 22 15.1 -0.5**
YKAW1 IAmb IAmb 23 22 16.9
comp=Z,11nm,0.9s
CCUT Cedar City 94.72 53 P **P** **23 22 17.3 +0.3**
CCUT IAmb IAmb 23 22 19.2
comp=Z,7.5nm,1.0s
LCMT Little Creek M 94.80 53 P **P** **23 22 17.1 -0.2**
LCMT IAmb IAmb 23 23 49.9
comp=Z,18nm,1.8s
KNB Kanab 95.13 53 IAmb IAmb 23 22 21.2
comp=Z,10nm,1.1s
DLMT Dillon 95.49 45 P **P** **23 22 19.7 -0.5**
DLMT IAmb IAmb 23 25 37.6
comp=Z,22nm,1.9s
U15A North Rim 95.54 54 P **P** **23 22 20.7 -0.2**
PKCU Pink Cliffs 95.55 53 P **P** **23 22 21.5 +0.6**
PKCU IAmb IAmb 23 22 24.4
comp=Z,13nm,1.1s
LRM Limekiln Ridge 95.60 45 P **P** **23 22 18.8 -2.1**
MTPU Mount Pierson 95.67 52 P **P** **23 22 20.9 -0.6**
MTPU IAmb IAmb 23 22 24.0
comp=Z,8.9nm,1.1s
LYMT Lyon Mountain 95.72 43 P **P** **23 22 20.6 -0.7**
CTU Camp Tracy 96.05 50 P **P** **23 22 21.9 -1.1**
CTU IAmb IAmb 23 24 17.3

	comp=Z,17nm,1.8s									
ABKAR	**Akbulak array**		**96.08**	**319**	P		**P**	**23 22 20.2**	**-2.4**
TMUT	**Trail Mountain**		**96.45**	**51**	P		**P**	**23 22 24.7**	**-0.2**
FXWY	**Fox Creek**		**96.60**	**47**	P		**P**	**23 22 24.6**	**-0.8**
YHH	**Holmes Hill**		**96.72**	**46**	P		**P**	**23 22 25.6**	**-0.4**
ARTI	**Arti**		**96.88**	**326**	P		**P**	**23 22 24.9**	**-1.1**
ARTI					IAmb		IAmb	23 22 25.1	
	comp=Z,14nm,1.3s									
ARTI	**Arti**		**96.88**	**326**	*d*	*i*P	**P**	**23 22 23.6**	**-2.4**
ARTI								23 26 25.4	
ARTI					S		**SKSac**	**23 32 27.2**	**+1.9**
ARTI					pmax		pmax		
	comp=Z,9.0nm,1.2s									
ELIB	**Princess Elisa**		**97.42**	**194**	*d*P		**P**	**23 22 28.1**	**-0.3**
	comp=Z,5.0nm,0.9s									
BELA	**Belgrano 2**		**97.61**	**178**	IAmb		IAmb	23 22 30.4	
	comp=Z,6.6nm,1.0s									
PDAR	**Pinedale Array**		**97.68**	**48**	P		**P**	**23 22 29.6**	**-0.7**
	comp=Z,1.0nm,0.8s,baz=247,slow=3.1,SNR=11									
PDAR					*p*P		**pP**	**23 24 00.7**	**+2.2**
	comp=Z,0.3nm,0.8s,baz=289,slow=7.2,SNR=2.6									
	comp=Z,1.0nm,0.8s									
PV05	**Paradox Valley**		**98.10**	**52**	P		**P**	**23 22 32.1**	**-0.1**
PV05					IAmb		IAmb	23 23 45.1	
	comp=Z,11nm,1.4s									
PV23	**Carpenter Ridg**		**98.17**	**52**	P		**P**	**23 22 31.7**	**-0.9**
TXAR	**Lajitas Array**		**102.85**	**61**	PP		**PKiKP**	**23 22 12.4**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=315,slow=6.4,SNR=4.1									
TXAR					PKKPbc		**PKKPbc**	**23 38 50.1**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=126,slow=6.4,SNR=3.7									
ULM	**Lac du Bonnet**		**106.19**	**39**	PKiKP		**PKiKP**	**23 27 17.0**	**-0.1**
	comp=Z,0.9nm,0.4s,baz=18,slow=1.1,SNR=3.9									
FINES	**FINESS Array B**		**111.30**	**336**	Pdiff		**Pdif**	**23 23 29.1**	**-0.9**
	comp=Z,3.9nm,1.0s,baz=132,slow=2.8,SNR=1.3									
FINES					PKiKP		**PKiKP**	**23 27 26.3**	**0.0**
	comp=Z,7.5nm,1.1s,baz=104,slow=5.9,SNR=2.2									
FINES					PKKPbc		**PKKPbc**	**23 38 23.0**	**-2.7**
	comp=Z,6.3nm,1.0s,baz=216,slow=2.8,SNR=10									
AKASG	**Malin Array Be**		**114.99**	**325**	PKP		**PKiKP**	**23 27 33.3**	**-0.5**
	comp=Z,4.0nm,0.6s,baz=62,slow=2.2,SNR=20									
AKASG					PKKPbc		**PKKPbc**	**23 38 10.0**	**-3.0**
	comp=Z,1.1nm,0.5s,baz=263,slow=4.0,SNR=8.3									
AKASG	**Malin Array Be**		**114.99**	**325**			**PKiKP**	**23 27 33.5**	**-0.3**
AKASG	**Malin Array Be**		**114.99**	**325**	*c*	*i*PKiKP	**PKiKP**	**23 27 33.4**	**-0.3**
AKASG					pmax		pmax		
	comp=Z,4.0nm,0.6s									
AKBB	**Malin Array Si**		**114.99**	**325**	*c*	*i*PKiKP	**PKiKP**	**23 27 33.8**	**+0.1**
BRTR	**Keskin Array B**		**116.05**	**312**	PKP		**PKPdf**	**23 27 35.5**	**-0.8**
	comp=Z,2.8nm,1.0s,baz=186,slow=1.2,SNR=5.7									
BRTR					PKKPbc		**PKKPbc**	**23 38 08.0**	**-1.2**
	comp=Z,0.9nm,0.9s,baz=141,slow=0.8,SNR=4.5									
BRTR	**Keskin Array B**		**116.05**	**312**	*c*	*i*PKiKP	**PKPdf**	**23 27 35.7**	**-0.7**
BRTR					pmax		pmax		
	comp=Z,3.0nm,1.0s									
CLTN	**Cedars of Leba**		**116.36**	**52**			**PKPdf**	**23 27 36.6**	**-0.3**
MMAI	**Mount Meron Ar**		**116.38**	**305**	PKP		**PKPdf**	**23 27 37.4**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=120,slow=12,SNR=5.4									
MMAI					PKKPbc		**PKKPbc**	**23 38 06.7**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=227,slow=15,SNR=4.6									
HFS	**Hagfors**		**116.85**	**339**	PKP		**PKPdf**	**23 27 36.4**	**-0.6**
	comp=Z,2.9nm,0.8s,baz=45,slow=2.9,SNR=2.1									
NB2	**NORSAR Subarra**		**117.05**	**341**	PKPdf		**PKPdf**	**23 27 36.4**	**-1.1**
	comp=Z,1.0nm,0.7s,baz=39,slow=1.9									
NOA	**NORSAR Array B**		**117.05**	**341**	PKP		**PKPdf**	**23 27 37.1**	**-0.4**
	comp=Z,2.0nm,0.8s,baz=43,slow=2.0,SNR=6.8									
CSS	**Mathiatis**		**117.59**	**307**			**PKPdf**	**23 27 39.2**	**0.0**
ISP	**Isparta**		**118.95**	**311**	*c*	*i*PKiKP	**PKPdf**	**23 27 42.0**	**+0.1**
ISP					pmax		pmax		
	comp=Z,12nm,2.5s									
PLCA	**Paso Flores**		**119.25**	**142**	PKP		**PKPdf**	**23 27 42.7**	**+0.3**
	comp=Z,5.2nm,0.7s,baz=212,slow=3.4,SNR=14									
PAOC	**Oil Creek Stat**		**119.59**	**44**	PKPdf		**PKPdf**	**23 27 42.4**	**-0.5**
SCHQ	**Schefferville**		**119.94**	**26**	PKP		**PKPdf**	**23 27 43.1**	**0.0**
	comp=Z,5.1nm,1.0s,baz=40,slow=9.6,SNR=3.2									
HODGE	**Hodges**		**120.08**	**53**			**PKPdf**	**23 27 44.1**	**+0.1**
AKAS	**Kas**		**120.14**	**310**	PKPdf		**PKPdf**	**23 27 42.8**	**-1.5**
J55A	**Hilton**		**120.15**	**42**	PKPdf		**PKPdf**	**23 27 43.1**	**-0.8**
BLA	**Blacksburg**		**120.58**	**49**	PKPdf		**PKPdf**	**23 27 45.1**	**+0.1**
BLA	**Blacksburg**		**120.58**	**49**	PKiKP		**PKPdf**	**23 27 45.1**	**+0.1**
BOSA	**Boshof**		**120.84**	**233**	PKP		**PKPdf**	**23 27 45.8**	**-0.1**
	comp=Z,3.5nm,0.6s,baz=113,slow=3.3,SNR=10									
BI02	**San Fabin de**		**121.13**	**138**			**PKiKP**	**23 27 46.7**	**+0.4**
SSPA	**Standing Stone**		**121.18**	**44**			**PKPdf**	**23 27 46.0**	**0.0**
JTS	**Las Juntas de**		**121.23**	**81**	PKPdf		**PKPdf**	**23 27 46.3**	**-0.5**
JTS	**Las Juntas de**		**121.23**	**81**	PKiKP		**PKPdf**	**23 27 46.3**	**-0.5**
LANS	**Liptovska Anna**		**121.23**	**327**	*e*PKiKP		**PKiKP**	**23 27 47.2**	**+1.2**
LANS	**Liptovska Anna**		**121.23**	**327**	*e*PKP		**PKiKP**	**23 27 47.2**	**+1.2**
J57A	**Williamstown**		**121.29**	**41**	PKPdf		**PKPdf**	**23 27 45.6**	**-0.5**
STEB	**Steborice**		**121.68**	**328**	*e*PKPDF		**PKPdf**	**23 27 46.9**	**+0.2**
MORC	**Moravsky Berou**		**121.90**	**328**	*e*PKiKP		**PKiKP**	**23 27 47.8**	**+0.5**
LBTB	**Lobatse**		**122.03**	**237**	PKP		**PKPdf**	**23 27 48.2**	**-0.1**
	comp=Z,4.4nm,0.8s,baz=116,slow=10,SNR=3.6									
OSTC	**Ostas**		**122.11**	**330**	*e*PKiKP		**PKiKP**	**23 27 48.1**	**+0.4**
OSTC	**Ostas**		**122.11**	**330**	*e*PKPDF		**PKiKP**	**23 27 48.1**	**+0.4**
FRNY	**Flat Rock**		**122.15**	**38**			**PKPdf**	**23 27 47.4**	**-0.3**
DPC	**Dobruska-Polom**		**122.18**	**329**	*e*PKiKP		**PKPdf**	**23 27 48.0**	**+0.3**
DPC	**Dobruska-Polom**		**122.18**	**329**	*e*PKPDF		**PKPdf**	**23 27 48.0**	**+0.3**
JAVC	**Velka Javorina**		**122.37**	**327**	*e*PKiKP		**PKiKP**	**23 27 49.8**	**+1.5**
VRAC	**Vranov**		**122.67**	**328**	*e*PKiKP		**PKPdf**	**23 27 49.0**	**+0.4**
MODS	**Modra-Piesok**		**122.86**	**327**	*e*PKiKP		**PKiKP**	**23 27 49.9**	**+0.7**
MODS	**Modra-Piesok**		**122.86**	**327**	*e*PKP		**PKiKP**	**23 27 49.9**	**+0.7**
KRUC	**Moravsky**		**122.92**	**328**	*e*PKiKP		**PKPdf**	**23 27 49.5**	**+0.4**
PVCC	**Panska Ves**		**122.94**	**330**	*e*PKiKP		**PKiKP**	**23 27 49.9**	**+0.6**
PVCC	**Panska Ves**		**122.94**	**330**	*e*PKPDF		**PKiKP**	**23 27 49.9**	**+0.6**
LSZ	**Lusaka**		**122.95**	**249**			**PKPdf**	**23 27 50.4**	**+0.2**
LSZ	**Lusaka**		**122.95**	**249**	PKiKP		**PKPdf**	**23 27 50.4**	**+0.2**
CLL	**Collm**		**123.19**	**332**	*i*	PKiKP	**PKPdf**	**23 27 49.7**	**+0.2**
CLL					pmax		pmax		
	comp=Z,12nm,0.9s									
CLL	**Collm**		**123.19**	**332**	*i*	PKPdf	**PKPdf**	**23 27 49.7**	**+0.2**
	comp=Z,12nm,0.9s									
TREC	**Trest**		**123.25**	**329**	*e*PKiKP		**PKiKP**	**23 27 50.4**	**+0.4**
TREC	**Trest**		**123.25**	**329**	*e*PKPDF		**PKiKP**	**23 27 50.4**	**+0.4**
PRU	**Pruhonice**		**123.30**	**330**	*e*PKiKP		**PKPdf**	**23 27 50.0**	**+0.2**
PRU	**Pruhonice**		**123.30**	**330**	*e*PKPDF		**PKPdf**	**23 27 50.0**	**+0.2**
WINA	**Alland / Wiene**		**123.67**	**327**	*e*PKiKP		**PKiKP**	**23 27 51.3**	**+0.5**
VA03	**San Esteban**		**123.77**	**135**	*e*P		**PKPdf**	**23 27 51.7**	**+0.3**
RONA	**Rosalia, Austr**		**123.79**	**327**	*e*PKiKP		**PKiKP**	**23 27 51.5**	**+0.4**
	comp=Z,11nm,0.9s									
CONA	**Conrad Observa**		**123.89**	**327**	*i*	PKP	**PKPdf**	**23 27 51.4**	**+0.3**
	comp=Z,5.8nm,0.8s									
NKC	**Novy Kostel**		**124.17**	**331**	*e*PKiKP		**PKiKP**	**23 27 52.7**	**+0.9**
NKC	**Novy Kostel**		**124.17**	**331**	*e*PKPDF		**PKiKP**	**23 27 52.7**	**+0.9**
KHC	**Kasperske Hory**		**124.33**	**330**	*ce*	PKiKP	**PKiKP**	**23 27 52.6**	**+0.4**
KHC					pmax		pmax		
	comp=Z,10.0nm,1.0s									
KHC	**Kasperske Hory**		**124.33**	**330**	*e*PKPDF		**PKPdf**	**23 27 52.4**	**+0.6**
GERES	**GERESS Array B**		**124.45**	**329**	PKP		**PKPdf**	**23 27 52.5**	**+0.3**
	comp=Z,4.9nm,0.7s,baz=85,slow=1.5,SNR=30									
GERES					PKKPbc		**PKKPab**	**23 37 37.0**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=174,slow=1.3,SNR=8.1									
ARSA	**Arzberg**		**124.48**	**327**	*i*	PKP	**PKPdf**	**23 27 52.0**	**-0.1**
	comp=Z,2.6nm,0.8s									
MOA	**Molln**		**124.79**	**328**	*i*	PKP	**PKPdf**	**23 27 52.6**	**-0.1**
	comp=Z,5.1nm,0.9s									
AAGR	**Agrelo**		**124.80**	**136**	*e*P		**PKiKP**	**23 27 54.1**	**+0.4**
AUSP	**Uspallata**		**124.88**	**135**	*e*P		**PKiKP**	**23 27 54.6**	**+0.5**
ASAL	**Salagasta**		**125.07**	**135**	*e*P		**PKPdf**	**23 27 54.5**	**+0.6**
SOKA	**Soboth**		**125.09**	**327**	*i*	PKP	**PKPdf**	**23 27 53.3**	**-0.1**
	comp=Z,6.3nm,1.0s									
RTLS	**Leoncito**		**125.18**	**134**	*e*P		**PKPdf**	**23 27 54.5**	**+0.1**
BIOA	**Bad Ischl, Aus**		**125.22**	**328**	*i*	PKP	**PKPdf**	**23 27 53.0**	**-0.5**
	comp=Z,9.4nm,1.1s									
KBA	**Koelnbreinsper**		**125.76**	**328**	*i*	PKP	**PKPdf**	**23 27 54.3**	**-0.6**
	comp=Z,8.2nm,1.1s									
MYKA	**Terra Mystica**		**125.88**	**327**	*i*	PKP	**PKPdf**	**23 27 54.4**	**-0.5**
	comp=Z,3.6nm,0.7s									
LESA	**Schwarzleotal**		**125.89**	**328**	*i*	PKP	**PKPdf**	**23 27 54.5**	**-0.5**
	comp=Z,9.3nm,0.8s									
CFA	**Coronel Fontan**		**126.04**	**135**	PKP		**PKPdf**	**23 27 55.6**	**0.0**
	comp=Z,12nm,0.8s,baz=244,slow=2.5,SNR=36									
EKA	**Eskdalemuir Ar**		**126.09**	**344**	PKP		**PKPdf**	**23 27 55.5**	**+0.6**
	comp=Z,3.2nm,0.7s,baz=27,slow=3.0,SNR=7.6									
EKA					PKKPbc		**PKKPab**	**23 37 30.3**	**+0.4**
	comp=Z,1.4nm,0.6s,baz=234,slow=2.7,SNR=5.3									
ATAH	**Atahualpa**		**126.36**	**102**	PKP		**PKiKP**	**23 27 58.9**	**+1.3**
	comp=Z,21nm,0.8s,baz=272,slow=5.2,SNR=8.8									
ACAN	**Cantantal**		**126.40**	**136**	*e*P		**PKPdf**	**23 27 56.9**	**+0.5**
ABTA	**Abfaltersbach**		**126.41**	**328**	*i*	PKP	**PKPdf**	**23 27 55.5**	**-0.5**
	comp=Z,9.7nm,0.9s,SNR=6.7									
WATA	**Walderalm**		**126.52**	**329**	*e*PKP		**PKPdf**	**23 27 56.2**	**0.0**
	comp=Z,13nm,1.0s,SNR=5.5									
WTTA	**Wattenberg**		**126.53**	**329**	*i*	PKP	**PKPdf**	**23 27 56.2**	**0.0**
	comp=Z,19nm,0.9s,SNR=8.7									
MOTA	**Moosalm**		**126.75**	**329**	*e*PKP		**PKPdf**	**23 27 56.6**	**0.0**
	comp=Z,13nm,0.9s,SNR=5.9									
BTNL	**Ternell**		**126.77**	**335**	*d*PKP		**PKiKP**	**23 27 57.3**	**+0.3**
NNA	**Nana**		**126.78**	**108**	PKP		**PKiKP**	**23 27 59.0**	**+1.0**
	comp=Z,3.9nm,0.4s,baz=287,slow=3.6,SNR=4.7									
NNA	**Nana**		**126.78**	**108**	PKiKP		**PKiKP**	**23 27 59.0**	**+1.0**
SQTA	**Sankt Quirin**		**126.78**	**329**	*e*PKP		**PKPdf**	**23 27 56.7**	**+0.1**
	comp=Z,11nm,0.9s									
MEM	**Membach**		**126.80**	**335**	*d*PKPdf		**PKPdf**	**23 27 56.9**	**+0.5**
RETA	**Reutte**		**126.83**	**330**	*e*PKP		**PKPdf**	**23 27 56.9**	**+0.2**
	comp=Z,11nm,1.2s									
BHOU	**Houvegnez**		**127.00**	**335**	*d*PKPdf		**PKiKP**	**23 27 57.6**	**+0.2**
BSTI	**Sart Tilman**		**127.01**	**335**	*d*PKPdf		**PKiKP**	**23 27 58.0**	**+0.6**
FETA	**Feichten**		**127.16**	**329**	*i*	PKiKP	**PKPdf**	**23 27 57.9**	**+0.4**
	comp=Z,15nm,0.9s,SNR=6.6									
UCC	**Uccle**		**127.33**	**336**	*d*PKP		**PKiKP**	**23 27 58.5**	**+0.4**
OTAV	**Otavalo**		**127.34**	**93**			**PKPdf**	**23 27 59.6**	**+0.5**
OTAV	**Otavalo**		**127.34**	**93**	PKIKP		**PKPdf**	**23 27 59.6**	**+0.5**
DAVA	**Damuels**		**127.41**	**330**	*e*PKP		**PKPdf**	**23 27 58.1**	**+0.2**
	comp=Z,9.6nm,0.8s									
WLF	**Walferdange**		**127.45**	**334**	*d*PKP		**PKPdf**	**23 27 58.2**	**+0.5**
RCHB	**Rochefort**		**127.47**	**335**	*d*PKP		**PKPdf**	**23 27 57.2**	**-0.6**
BMRD	**Maredsous**		**127.55**	**336**	*d*PKPdf		**PKPdf**	**23 27 58.4**	**+0.5**
DOU	**Dourbes**		**127.78**	**336**	*d*PKP		**PKiKP**	**23 27 59.5**	**+0.5**
TSUM	**Tsumeb**		**131.16**	**240**	SKPbc		**SKPbc**	**23 30 53.8**	**-0.5**
	comp=Z,4.4nm,0.8s,baz=108,slow=4.6,SNR=2.8									
ROSC	**El Rosal**		**131.75**	**88**	PKP		**PKPdf**	**23 28 08.2**	**+0.7**
	comp=Z,16nm,0.3s,baz=315,slow=13,SNR=9.3									
ROSC					SKPbc		**SKPab**	**23 30 57.8**	**-0.3**
	comp=Z,9.2nm,0.6s,baz=239,slow=18,SNR=5.5									
LPAZ	**La Paz**		**133.42**	**117**	PKP		**PKPdf**	**23 28 11.7**	**+0.9**
	comp=Z,11nm,0.6s,baz=251,slow=3.1,SNR=29									
LPAZ					SKP		**SKPbc**	**23 31 06.6**	**+3.8**
	comp=Z,4.4nm,0.8s,baz=191,slow=7.0,SNR=8.0									
KEST	**Kesra**		**135.04**	**318**	PKP		**PKPdf**	**23 28 13.6**	**+1.0**
	comp=Z,4.9nm,1.0s,baz=350,slow=18,SNR=3.6									
KEST					SKPbc		**SKPbc**	**23 31 06.9**	**+0.1**
	comp=Z,5.0nm,0.9s,baz=12,slow=19,SNR=4.6									
SDV	**Santo Domingo**		**135.38**	**82**			**PKPdf**	**23 28 13.5**	**-0.4**
CPUP	**Villa Florida**		**136.82**	**137**	PKhKP		PKPpre	23 28 06.0	
	comp=Z,1.2nm,0.3s,baz=204,slow=5.5,SNR=6.1									
CPUP					PKP		**PKPdf**	**23 28 16.9**	**+0.9**
	comp=Z,9.9nm,0.9s,baz=253,slow=1.9,SNR=13									
CPUP					SKPbc		**SKPbc**	**23 31 12.4**	**+0.1**
	comp=Z,1.0nm,0.4s,baz=235,slow=3.6,SNR=6.6									
SIV	**San Ignacio**		**139.69**	**121**	PKhKP		PKPpre	23 28 11.9	
	comp=Z,4.1nm,0.6s,baz=255,slow=4.1,SNR=12									
SIV					PKP		**PKPdf**	**23 28 22.3**	**+0.7**
	comp=Z,8.3nm,0.8s,baz=247,slow=2.4,SNR=13									
ESDC	**Sonseca Array**		**139.74**	**333**	PKhKP		PKPpre	23 28 13.0	
	comp=Z,0.2nm,0.4s,baz=28,slow=39,SNR=2.4									
ESDC					SKPbc		**SKPbc**	**23 31 18.5**	**-1.8**
	comp=Z,1.4nm,1.1s,baz=108,slow=3.3,SNR=4.3									
SMRT	**St. Maarten**		**141.24**	**67**			**PKPdf**	**23 28 24.6**	**+0.3**
VILB	**Vilhena**		**141.78**	**117**			**PKPdf**	**23 28 21.2**	**-4.3**
TRCB	**Terra Rica**		**142.35**	**137**			**PKPdf**	**23 28 22.7**	**-3.5**
SVN	**Savane Anatole**		**143.80**	**71**	PKPdf		PKPab	23 28 26.9	-0.3
EDA	**Edea**		**144.03**	**270**			**PKPab**	**23 28 27.7**	**-0.5**
MACA	**Manacapuru-AM**		**144.43**	**102**	PKPbc		PKPbc	23 28 29.1	-0.4
TAM	**Tamanrasset**		**144.59**	**304**			**PKPdf**	**23 28 30.7**	**+0.4**
TAM	**Tamanrasset**		**144.59**	**304**	PKiKP		**PKPdf**	**23 28 30.7**	**+0.4**
SPB	**Sao Paulo**		**145.08**	**144**	PKPdf		**PKPdf**	**23 28 30.9**	**0.0**
BOAV	**Boa Vista**		**145.38**	**92**	PKPdf		**PKPdf**	**23 28 32.0**	**+0.3**
MD01	**Midelt array s**		**145.54**	**328**			**PKPdf**	**23 28 32.5**	**+0.8**
MD31	**MD31**		**145.54**	**328**			**PKPbc**	**23 28 33.1**	**+0.5**
VAO	**Valinhos**		**145.80**	**144**			**PKPdf**	**23 28 33.2**	**+0.9**
AVE	**Averroes**		**146.54**	**331**			**PKPbc**	**23 28 35.1**	**-0.2**
CMLA	**Cha da Macela**		**146.88**	**359**	PKPab		**PKPab**	**23 28 38.9**	**+0.6**
CMLA	**Cha da Macela**		**146.88**	**359**	PKP2		**PKPab**	**23 28 38.9**	**+0.6**
BDFB	**Brasilia**		**150.35**	**133**	PKP		**PKPdf**	**23 28 40.4**	**+0.5**
	comp=Z,33nm,0.4s,baz=189,slow=2.9,SNR=57									
BDFB					PKPbc		**PKPbc**	**23 28 46.0**	**+0.4**
	comp=Z,33nm,0.4s,baz=214,slow=2.0,SNR=63									
BDFB	**Brasilia**		**150.35**	**133**			**PKPdf**	**23 28 40.5**	**+0.6**
BDFB					PKPbc		**PKPbc**	**23 28 45.6**	**0.0**
BDFB					PKPab		**PKPab**	**23 28 54.1**	**+0.8**
BDFB	**Brasilia**		**150.35**	**133**	PKIKP		**PKPdf**	**23 28 40.5**	**+0.6**
BDFB								23 28 54.1	
TORD	**Torodi Ar. Bea**		**151.43**	**289**	PKP		**PKPdf**	**23 28 42.5**	**+1.1**
	comp=Z,2.9nm,1.0s,baz=161,slow=0.7,SNR=8.6									
TORD					PKPbc		**PKPbc**	**23 28 47.4**	**-0.6**
	comp=Z,26nm,0.8s,baz=158,slow=0.4,SNR=88									
TORD					pPKP		**pPKPdf**	**23 30 15.2**	**+1.1**
	comp=Z,2.6nm,0.8s,baz=150,slow=2.1,SNR=3.4									
SHEL	**Horse Pasture**		**151.53**	**224**	PKPdf		**PKPdf**	**23 28 41.7**	**+0.1**
SHEL					PKPbc		**PKPbc**	**23 28 48.5**	**+0.4**
SHEL	**Horse Pasture**		**151.53**	**224**	PKIKP		**PKPdf**	**23 28 41.7**	**+0.1**
DBIC	**Dimbokro**		**158.94**	**277**	PKP		**PKPdf**	**23 28 51.5**	**0.0**
	comp=Z,2.7nm,0.7s,baz=162,slow=1.7,SNR=3.9									
DBIC					PKPab		**PKPab**	**23 29 30.1**	**0.0**
	comp=Z,4.2nm,0.6s,baz=166,slow=7.9,SNR=3.8									

*IDC **15** 23:32:15.5±1.0,26˚.41S×27˚.43E,h0km,mb3.8/6, mbtmp3.9/11,ML3.9/4,Error ellipse: s-maj=17.3km s-min=13.3km az=96.0*
*PRE **15** 23:32:15.9±0.5,26˚.44S×27˚.39E,h2km,ML3.3, Presumed earthquake*
*BGSI **15** 23:32:17.2±1.4,26˚.67S×27˚.67E,h164km±24km,ML3.7*

ISC 15 23:32:15.8±1.2,26˚.45S±0˚.03×27˚.34E±0˚.04,h9km±8km, n39,σ2ᵠ11/61,mb3.8/5,South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PRYS	**Parys**	**0.48**	**178**	*e*P		**Pg**	**23 32 25.0**	**-0.2**
PRYS				*e*S		**Sb**	**23 32 32.3**	**-1.3**
PRYS				IAML			23 32 39.8	
	comp=Z,665nm,0.4s							
HRAO	**HartRAO**	**0.64**	**29**	*e*P		**Pg**	**23 32 27.5**	**-0.6**
HRAO				*e*S		**Sg**	**23 32 36.2**	**-0.3**
HRAO				IAML			23 32 36.4	
	comp=Z,3μm,0.1s							
LBTB	**Lobatse**	**2.12**	**312**	Pn		**Pb**	**23 32 54.5**	**+0.1**
	comp=Z,34nm,0.3s,baz=133,slow=14,SNR=388							
LBTB				Sn		**Sb**	**23 33 22.0**	**+1.0**
	comp=Z,166nm,0.3s,baz=210,slow=21,SNR=22							
LBTB				Lg		Lg	23 33 24.2	
	comp=Z,57nm,0.3s,baz=36,slow=19,SNR=6.9							
	comp=Z,129nm,0.4s							
LBTB	**Lobatse**	**2.12**	**312**	P		**Pb**	**23 32 54.7**	**+0.2**
LBTB	**Lobatse**	**2.12**	**312**	*e*P		**Pb**	**23 32 53.7**	**-0.7**
LBTB				*e*S		**Sb**	**23 33 21.1**	**+0.2**
LBTB				IAML			23 33 25.8	
	comp=Z,448nm,0.3s							
MAKGR	**Makgori**	**2.37**	**285**	*i*	P	**Pg**	**23 33 00.5**	**-0.7**
MAKGR				*i*	S	**Sg**	**23 33 31.8**	**-0.1**
MAKGR				IAML			23 33 41.5	
	comp=N,1μm,0.3s							
LEPH	**Lephalale, Lim**	**2.61**	**9**	*e*P		**Pn**	**23 32 59.0**	**+0.8**
LEPH				*e*S		**Sn**	**23 33 31.8**	**+1.8**
LEPH				IAML			23 33 37.5	
	comp=Z,206nm,0.3s							
BOSA	**Boshof**	**2.84**	**220**	Pn		**Pb**	**23 33 04.1**	**-2.7**
	comp=Z,8.5nm,0.3s,baz=43,slow=13,SNR=374							
BOSA				Pg		**Pg**	**23 33 09.0**	**-1.3**
	comp=Z,14nm,0.3s,baz=41,slow=15,SNR=16							
BOSA				Lg		Lg	23 33 46.8	
	comp=Z,59nm,0.3s,baz=139,slow=20,SNR=18							
	comp=Z,22nm,0.3s							
BOSA	**Boshof**	**2.84**	**220**	P		**Pb**	**23 33 04.1**	**-2.7**
BOSA	**Boshof**	**2.84**	**220**	*e*P		**Pn**	**23 33 03.7**	**+2.3**
BOSA				*e*S		**Sn**	**23 33 38.5**	**+2.7**
BOSA				IAML			23 33 48.9	
	comp=Z,149nm,0.3s							
LPHEP	**Lephephe**	**3.35**	**336**	*i*	P	**Pn**	**23 33 11.1**	**+2.7**
LPHEP				*i*	S	**Sn**	**23 33 52.3**	**+3.9**
MREMI	**Moremi**	**3.86**	**1**	P		**Pn**	**23 33 16.6**	**+1.1**
KDWAN	**Kaudwane**	**3.90**	**321**	*i*	P	**Pn**	**23 33 18.2**	**+2.2**
KDWAN				IAML			23 34 21.1	
	comp=N,306nm,0.3s							
KDWAN	**Kaudwane**	**3.90**	**321**	P		**Pn**	**23 33 18.2**	**+2.2**
POGA	**Pongola**	**4.00**	**104**	P		**Pn**	**23 33 17.2**	**0.0**
KHWEE	**KHWEE**	**4.80**	**339**	*i*	P	**Pn**	**23 33 30.7**	**+2.3**
BROLN	**Tlhalogang**	**5.32**	**360**	*i*	P	**Pn**	**23 33 35.1**	**-0.5**
BROLN				*i*	S	**Sn**	**23 34 33.8**	**-3.3**
BROLN				IAML			23 35 00.8	
	comp=E,65nm,0.4s							
BROLN	**Tlhalogang**	**5.32**	**360**	P		**Pn**	**23 33 36.1**	**+0.5**
KGCAE	**Kacgae**	**5.88**	**306**	*i*	P	**Pn**	**23 33 44.3**	**+1.0**
KGCAE				*i*	S	**Sn**	**23 34 48.8**	**-2.1**
SOOWA	**Sowa**	**5.95**	**350**	*i*	P	**Pn**	**23 33 43.8**	**-0.3**
SOOWA				*i*	S	**Sn**	**23 34 49.0**	**-3.4**
SOOWA				IAML			23 35 22.1	
	comp=E,262nm,0.4s							
BFON	**Badsfontein, M**	**6.22**	**210**	*e*P		**Pn**	**23 33 50.1**	**+2.2**
BFON				*e*S		**Sn**	**23 34 59.2**	**+0.1**
BFON				IAML			23 35 40.5	
	comp=Z,36nm,0.7s							
GRAF	**Camdeboo Natio**	**6.32**	**202**	*e*P		**Pn**	**23 33 51.1**	**+1.9**
GRAF				*e*S		**Sn**	**23 35 01.6**	**0.0**
GRAF				IAML			23 35 40.0	
	comp=Z,29nm,0.5s							
BRAK	**Brakfontein**	**6.59**	**215**	*e*P		**Pn**	**23 33 55.1**	**+2.2**
BRAK				*e*S		**Sn**	**23 35 08.3**	**+0.2**
BRAK				IAML			23 35 47.9	
	comp=Z,43nm,0.5s							
GRHM	**Grahamstown, E**	**6.86**	**187**	*e*P		**Pn**	**23 33 58

PMG	**Port Moresby**	**19.30**	**276**	P		**P**	**23 37 33.6**	**+0.5**	
PMG	**Port Moresby**	**19.30**	**276**	P		**P**	**23 37 31.9**	**-1.2**	
	114nm,1.1s								
EIDS	**Eidsvold**	**19.64**	**226**	P		**Pn**	**23 37 38.8**	**0.0**	
	comp=Z,187nm,1.0s								
EIDS	**Eidsvold**	**19.64**	**226**	P		**P**	**23 37 38.3**	**+1.7**	
EIDS	**Eidsvold**	**19.64**	**226**			**P**	**23 37 35.7**	**-0.9**	
AUAYR	**Ayr State High**	**19.84**	**246**	P		**P**	**23 37 40.4**	**+1.5**	
TW1H	**Toowoomba 1 Ha**	**20.50**	**220**	P		Pn	23 37 48.3	-0.6	
CTA	**Charters Tower**	**21.03**	**246**	P		**P**	**23 37 52.3**	**+0.5**	
	comp=Z,65nm,0.9s,baz=72,slow=11,SNR=21								
CTA				LR		LR	23 44 41.3		
	comp=Z,702nm,21.8s,baz=60,slow=33								
	comp=Z,65nm,0.9s								
CTA	**Charters Tower**	**21.03**	**246**	P		**P**	**23 37 52.8**	**+1.0**	
CTAO	**Charters Tower**	**21.03**	**246**	P		**P**	**23 37 52.8**	**+1.0**	
CTAO	**Charters Tower**	**21.03**	**246**			**P**	**23 37 51.5**	**-0.3**	
CTAO	**Charters Tower**	**21.03**	**246**	P		**P**	**23 37 51.5**	**-0.3**	
AFI	**Afiamalu**	**21.13**	**97**	P		**P**	**23 37 54.3**	**+1.5**	
	comp=Z,78nm,0.9s,baz=276,slow=18,SNR=10								
AFI				LR		LR	23 44 53.5		
	comp=Z,420nm,20.6s,baz=268,slow=33								
	comp=Z,78nm,0.9s								
RMQ	**Roma**	**21.97**	**227**	P		**P**	**23 38 02.8**	**+1.1**	
	comp=Z,105nm,1.2s								
RMQ	**Roma**	**21.97**	**227**	P		**P**	**23 38 03.1**	**+1.4**	
RAO	**Raoul Island**	**22.24**	**142**	LR		LR	23 45 41.8		
	comp=Z,344nm,20.5s,baz=2.5,slow=34								
MTSU	**Mount Surprise**	**22.29**	**252**	P		**P**	**23 38 06.0**	**+0.8**	
	comp=Z,88nm,1.3s								
MTSU	**Mount Surprise**	**22.29**	**252**	P		**P**	**23 38 06.1**	**+0.9**	
ARMA	**Armidale**	**22.80**	**215**	P		**P**	**23 38 11.7**	**+1.1**	
	comp=Z,41nm,1.0s								
ARMA	**Armidale**	**22.80**	**215**	P		**P**	**23 38 12.2**	**+1.6**	
ARMA	**Armidale**	**22.80**	**215**			**P**	**23 38 10.6**	**0.0**	
COEN	**Coen**	**22.88**	**263**	P		**P**	**23 38 12.2**	**+0.7**	
	comp=Z,62nm,1.2s								
COEN	**Coen**	**22.88**	**263**	P		**P**	**23 38 11.3**	**-0.1**	
COEN	**Coen**	**22.88**	**263**			**P**	**23 38 10.4**	**-1.0**	
AUPHS	**Peel High Scho**	**23.73**	**215**	P		**P**	**23 38 21.3**	**+2.1**	
OUZ	**Omahuta**	**23.75**	**166**	P		**P**	**23 38 21.1**	**+1.9**	
AULRC	**Lightning Ridg**	**24.35**	**223**	P		**P**	**23 38 26.9**	**+2.2**	
QLP	**Quilpie**	**25.41**	**233**	P		**P**	**23 38 34.7**	**+0.2**	
	comp=Z,200nm,1.2s,comp=Z,2µm								
QLP	**Quilpie**	**25.41**	**233**	P		**P**	**23 38 35.7**	**+1.2**	
AUDCS	**Dubbo College**	**25.87**	**217**	P		**P**	**23 38 40.7**	**+2.2**	
QIS	**Mount Isa**	**27.16**	**249**	P		**P**	**23 38 49.7**	**-0.6**	
	comp=Z,29nm,0.8s								
QIS	**Mount Isa**	**27.16**	**249**	P		**P**	**23 38 50.5**	**+0.2**	
CMSA	**Cobar Meteorol**	**27.21**	**222**	P		**P**	**23 38 50.6**	**0.0**	
	comp=Z,39nm,0.8s								
CMSA	**Cobar Meteorol**	**27.21**	**222**	P		**P**	**23 38 50.8**	**+0.2**	
RUGZ	**Raukumara Rang**	**27.47**	**161**	P		**P**	**23 38 53.6**	**+0.7**	
PKGZ	**Pakihiroa**	**27.52**	**160**	P		**P**	**23 38 53.0**	**-0.2**	
URZ	**Urewera**	**27.57**	**162**	P		**P**	**23 38 53.1**	**-0.6**	
	comp=Z,5.9nm,0.6s,baz=330,slow=2.1,SNR=5.2								
	comp=Z,5.9nm,0.6s								
URZ	**Urewera**	**27.57**	**162**	P		**P**	**23 38 54.1**	**+0.4**	
MWZ	**Matawai**	**27.76**	**161**	P		**P**	**23 38 55.6**	**+0.2**	
RTZ	**Ruatahuna**	**27.86**	**162**	P		**P**	**23 38 56.0**	**-0.3**	
TMVZ	**Te Maari**	**27.97**	**165**	P		**P**	**23 39 00.4**	**+3.0**	
ETVZ	**East Tongariro**	**27.99**	**165**	P		**P**	**23 39 00.8**	**+3.2**	
NGZ	**Ngauruhoe**	**28.00**	**165**	P		**P**	**23 39 01.2**	**+3.5**	
OTVZ	**Oturere**	**28.00**	**165**	P		**P**	**23 39 00.4**	**+2.7**	
MTHZ	**Maungataniwha**	**28.03**	**163**	P		**P**	**23 38 59.0**	**+1.1**	
CNGZ	**Carnagh Statio**	**28.12**	**160**	P		**P**	**23 38 58.9**	**+0.3**	
BKZ	**Black Stump Fm**	**28.23**	**164**	P		**P**	**23 38 58.4**	**-1.2**	
NMHZ	**Naumai**	**28.25**	**163**	P		**P**	**23 39 00.4**	**+0.5**	
KRHZ	**Kereru**	**28.64**	**164**	P		**P**	**23 39 01.9**	**-1.3**	
PNHZ	**Pukenui**	**28.85**	**165**	P		**P**	**23 39 05.0**	**-0.1**	
KAHZ	**Kahuranaki**	**28.92**	**163**	P		**P**	**23 39 05.0**	**-0.8**	
MRZ	**Mangatainoka R**	**29.40**	**166**	P		**P**	**23 39 09.1**	**-0.8**	
BFZ	**Birch Farm**	**29.58**	**165**	P		**P**	**23 39 11.2**	**-0.4**	
THZ	**Tophouse**	**29.93**	**171**	P		**P**	**23 39 16.0**	**+1.3**	
THZ				IAmb		IAmb	23 39 19.1		
	comp=Z,63nm,1.6s								
THZ	**Tophouse**	**29.93**	**171**	P		**P**	**23 39 16.0**	**+1.3**	
STKA	**Stephens Creek**	**30.19**	**226**	P		**P**	**23 39 17.1**	**+0.1**	
	comp=Z,18nm,0.8s,baz=46,slow=9.1,SNR=33								
STKA				pP		**pP**	**23 39 36.4**	**+1.2**	
	comp=Z,7.6nm,0.6s,baz=75,slow=9.3,SNR=2.4								
	comp=Z,18nm,0.8s								
STKA	**Stephens Creek**	**30.19**	**226**	P		**P**	**23 39 17.9**	**+0.8**	
	comp=Z,133nm,0.9s								
STKA	**Stephens Creek**	**30.19**	**226**	P		**P**	**23 39 17.9**	**+0.8**	
STKA	**Stephens Creek**	**30.19**	**226**	P		**P**	**23 39 17.9**	**+0.8**	
H11S2	**WAKE ISLAND Hy**	**30.52**	**0**	T		T	00 10 21.7		
	baz=184,slow=76,SNR=26								
H11S3	**WAKE ISLAND Hy**	**30.53**	**0**	T		T	00 10 51.8		
	baz=184,slow=76,SNR=20								
H11S1	**WAKE ISLAND Hy**	**30.54**	**0**	T		T	00 10 25.9		
	baz=184,slow=76,SNR=15								
LTZ	**Lake Taylor**	**30.84**	**172**	P		**P**	**23 39 23.8**	**+1.1**	
LTZ				IAmb		IAmb	23 39 26.4		
	comp=Z,26nm,0.8s								
TOO	**Toolangi**	**31.52**	**213**	P		**P**	**23 39 28.5**	**-0.3**	
TOO				IAmb		IAmb	23 40 03.6		
	comp=Z,24nm,1.5s								
TOO	**Toolangi**	**31.52**	**213**	P		**P**	**23 39 28.5**	**-0.3**	
TOO				pmax		pmax			
	comp=Z,24nm,1.5s								
RPZ	**Rata Peaks**	**31.61**	**174**	P		**P**	**23 39 28.8**	**-0.6**	
	comp=Z,18nm,0.7s,baz=0.0,slow=6.1,SNR=8.2								
	comp=Z,18nm,0.7s								
H11N1	**WAKE ISLAND Hy**	**31.74**	**1**	T		T	00 11 51.8		
	baz=183,slow=76,SNR=9.6								
WR8	**Warramunga Arr**	**31.74**	**252**	P		**P**	**23 39 28.4**	**-2.6**	
WR8	**Warramunga Arr**	**31.74**	**252**	P		**P**	**23 39 29.5**	**-1.4**	
WR8				IAmb		IAmb	23 39 31.9		
	comp=Z,28nm,1.1s								
H11N3	**WAKE ISLAND Hy**	**31.75**	**1**	T		T	00 11 51.4		
	baz=183,slow=76,SNR=7.5								
H11N2	**WAKE ISLAND Hy**	**31.76**	**1**	T		T	00 11 59.7		
	baz=183,slow=76,SNR=8.3								
WB0	**Warramunga Arr**	**31.82**	**252**	P		**P**	**23 39 30.1**	**-1.5**	
WRAB	**Tennant Creek**	**31.88**	**252**	P		**P**	**23 39 31.5**	**-0.6**	
WRAB	**Tennant Creek**	**31.88**	**252**	*i* P		**P**	**23 39 30.5**	**-1.6**	
WRAB				pmax		pmax			
	comp=Z,32nm,0.9s								
WRAB	**Tennant Creek**	**31.88**	**252**	P		**P**	**23 39 30.9**	**-1.2**	
WRAB				pP		**pP**	**23 39 50.5**	**+0.8**	
WRAB				x		x	23 39 59.4		
WRA	**Warramunga Arr**	**31.89**	**252**	P		**P**	**23 39 31.1**	**-1.1**	
	comp=Z,20nm,0.9s,baz=84,slow=8.6,SNR=96								
WRA				pP		**pP**	**23 39 50.5**	**+0.7**	
	comp=Z,8.7nm,1.0s,baz=83,slow=9.4,SNR=2.8								
WRA				ScP		**ScP**	**23 45 56.2**	**-0.9**	
	comp=Z,5.9nm,1.1s,baz=83,slow=3.8,SNR=7.5								
	comp=Z,20nm,0.9s								
WRA	**Warramunga Arr**	**31.89**	**252**			**P**	**23 39 30.4**	**-1.8**	
LBZ	**Lake Benmore**	**32.19**	**175**	P		**P**	**23 39 34.3**	**-0.2**	
HTT	**Hallett**	**32.93**	**226**	P		**P**	**23 39 42.1**	**+0.9**	
	comp=Z,14nm,1.8s								
HTT	**Hallett**	**32.93**	**226**	P		**P**	**23 39 41.5**	**+0.3**	
AS31	**Alice Springs**	**33.04**	**245**			**P**	**23 39 41.1**	**-1.1**	
AS31				IAmb		IAmb	23 39 43.4		
	comp=Z,11nm,0.6s								
ASAR	**Alice Springs**	**33.04**	**245**	P		**P**	**23 39 41.4**	**-0.8**	
	comp=Z,33nm,0.7s,baz=69,slow=9.7,SNR=190								
ASAR				pP		**pP**	**23 40 01.8**	**+1.3**	
	comp=Z,4.4nm,0.6s,baz=64,slow=10,SNR=2.2								
ASAR				ScP		**ScP**	**23 46 00.3**	**-0.7**	
	comp=Z,0.5nm,0.8s,baz=90,slow=3.3,SNR=5.8								
	comp=Z,33nm,0.7s								
ASAR	**Alice Springs**	**33.04**	**245**			**P**	**23 39 41.3**	**-1.0**	
KDU	**Kakadu**	**33.32**	**265**	P		**P**	**23 39 44.7**	**0.0**	
	comp=Z,14nm,1.2s								
MGBR	**Mount Gambier**	**34.43**	**218**	P		**P**	**23 39 55.4**	**+1.3**	
MTN	**Manton Dam**	**34.61**	**265**	P		**P**	**23 39 56.5**	**+0.5**	
MTN				IAmb		IAmb	23 39 58.4		
	comp=Z,16nm,0.8s								
BBOO	**Buckleboo**	**34.66**	**229**	P		**P**	**23 39 54.9**	**-1.3**	
	comp=Z,30nm,1.3s								
BBOO	**Buckleboo**	**34.66**	**229**	P		**P**	**23 39 56.2**	**0.0**	
BBOO	**Buckleboo**	**34.66**	**229**			**P**	**23 39 56.1**	**0.0**	
BBOO				IAmb		IAmb	23 39 56.8		
	comp=Z,24nm,0.9s								
TAU	**Tasmania Unive**	**34.84**	**205**	P		**P**	**23 39 57.6**	**+0.1**	
TAU	**Tasmania Unive**	**34.84**	**205**	P		**P**	**23 39 57.6**	**+0.1**	
TAU				pmax		pmax			
	comp=Z,31nm,1.1s								
SIJI	**Sorong**	**36.82**	**285**	P		**P**	**23 40 13.6**	**-1.2**	
	comp=Z,2µmcomp=Z,42nm,1.0s								
SWI	**Sorong**	**36.82**	**285**	P		**P**	**23 40 14.3**	**-0.5**	
	comp=Z,56nm,1.1s								

KNRA	**Kununurra**	**36.85**	**260**	P		**P**	**23 40 15.0**	**-0.1**	
	comp=Z,72nm,1.3s								
KNRA	**Kununurra**	**36.85**	**260**	P		**P**	**23 40 14.9**	**-0.2**	
WRKA	**Warakurna**	**38.33**	**245**	P		**P**	**23 40 27.3**	**-0.3**	
	comp=Z,23nm,1.1s								
KRAI	**Karang Ratu**	**38.83**	**280**	P		**P**	**23 40 31.4**	**-0.4**	
	comp=Z,46nm,1.1s								
FORT	**Forrest**	**40.07**	**236**	P		**P**	**23 40 42.2**	**+0.3**	
	comp=Z,70nm,0.8s								
FORT	**Forrest**	**40.07**	**236**	P		**P**	**23 40 42.0**	**+0.1**	
NLAI	**Namlea**	**40.10**	**280**	P		**P**	**23 40 43.5**	**+1.2**	
SANI	**Sanana**	**41.49**	**281**	P		**P**	**23 40 54.9**	**+1.1**	
SANI	**Sanana**	**41.49**	**281**	P		**P**	**23 40 53.1**	**-0.7**	
	comp=Z,779nmcomp=Z,95nm,1.1s								
SOEI	**Soe**	**41.60**	**269**	P		**P**	**23 40 56.1**	**+1.3**	
SOEI	**Soe**	**41.60**	**269**	P		**P**	**23 40 55.1**	**+0.3**	
	comp=Z,44nm,1.3s								
BATI	**Baumata**	**42.14**	**268**	P		**P**	**23 40 59.8**	**+0.7**	
	comp=Z,70nm,1.1s								
MMRI	**Maumere**	**43.74**	**270**	P		**P**	**23 41 12.3**	**+0.3**	
MMRI	**Maumere**	**43.74**	**270**	P		**P**	**23 41 11.0**	**-1.0**	
	comp=Z,84nm,1.2s								
EDFI	**Ende, Flores**	**44.26**	**270**	P		**P**	**23 41 15.3**	**-1.0**	
	comp=Z,39nm,1.2s								
GTOI	**Gorontalo**	**45.12**	**283**	P		**P**	**23 41 23.8**	**+0.8**	
	comp=Z,23nm,0.8s								
PSA00	**Pilbara Seismi**	**45.55**	**252**	P		**P**	**23 41 26.4**	**+0.1**	
PSA00	**Pilbara Seismi**	**45.55**	**252**			**P**	**23 41 27.0**	**+0.7**	
PSA00	**Pilbara Seismi**	**45.55**	**252**			**P**	**23 41 26.6**	**+0.3**	
PSA00				IAmb		IAmb	23 41 29.0		
	comp=Z,51nm,1.3s								
MBWA	**Marble Bar**	**45.63**	**252**	P		**P**	**23 41 27.9**	**+1.0**	
MBWA	**Marble Bar**	**45.63**	**252**	P		**P**	**23 41 27.1**	**+0.2**	
MBWA	**Marble Bar**	**45.63**	**252**	P		**P**	**23 41 27.3**	**+0.3**	
MBWA				pP		**pP**	**23 41 48.4**	**+2.6**	
LBFI	**Labuhan Bajo,**	**46.06**	**270**	P		**P**	**23 41 29.0**	**-1.4**	
WBSI	**Waikabubak, Su**	**46.38**	**268**	P		**P**	**23 41 32.1**	**-0.9**	
	comp=Z,71nm,1.0s								
KAPI	**Kappang**	**46.82**	**275**	P		**P**	**23 41 37.3**	**+0.9**	
KAPI	**Kappang**	**46.82**	**275**	*i* P		**P**	**23 41 34.2**	**-2.2**	
KAPI				pmax		pmax			
	comp=Z,46nm,1.3s								
KAPI	**Kappang**	**46.82**	**275**	P		**P**	**23 41 35.7**	**-0.7**	
	comp=Z,19nm,1.0s								
SPSI	**Sidrap Palu**	**47.03**	**276**	P		**P**	**23 41 36.2**	**-1.8**	
	comp=Z,822nmcomp=Z,20nm,0.9s								
MEEK	**Meekatharra**	**47.20**	**245**	P		**P**	**23 41 39.6**	**+0.4**	
TOLI2	**Tolitoli**	**47.38**	**283**	P		**P**	**23 41 40.7**	**-0.1**	
TOLI2	**Tolitoli**	**47.38**	**283**	P		**P**	**23 41 40.3**	**-0.4**	
TOLI2				IAmb		IAmb	23 41 42.8		
	comp=Z,15nm,0.7s								
DBNI	**Kabupaten Domp**	**47.60**	**270**	P		**P**	**23 41 40.6**	**-1.9**	
	comp=Z,43nm,0.8s								
PCI	**Palu**	**47.71**	**280**	P		**P**	**23 41 44.2**	**+0.9**	
MPSI	**Mapaga**	**48.00**	**282**	P		**P**	**23 41 44.4**	**-1.1**	
	comp=Z,1µmcomp=Z,37nm,1.0s								
PLAI	**Plampang**	**48.08**	**269**	P		**P**	**23 41 45.5**	**-0.6**	
PLAI	**Plampang**	**48.08**	**269**	P		**P**	**23 41 44.1**	**-2.0**	
	comp=Z,67nm,1.0s								
AUKUL	**Kulin High Sch**	**48.70**	**237**	P		**P**	**23 41 51.0**	**+0.3**	
KLBR	**Kellerberrin**	**48.80**	**239**	P		**P**	**23 41 51.2**	**-0.3**	
MORW	**Morawa**	**49.81**	**242**	P		**P**	**23 41 59.8**	**+0.6**	
MORW	**Morawa**	**49.81**	**242**			**P**	**23 41 59.4**	**+0.2**	
KHKI	**Kahang-Kahang**	**50.27**	**269**	P		**P**	**23 42 02.1**	**-0.7**	
	comp=Z,35nm,1.2s								
IGBI	**Denpasar**	**50.65**	**269**	P		**P**	**23 42 05.8**	**+0.1**	
GIRL	**Girilia**	**50.80**	**251**	P		**P**	**23 42 07.3**	**+0.5**	
MYLDM	**Lahad Datu**	**50.85**	**287**	P		**P**	**23 42 08.9**	**+1.7**	
MYLDM	**Lahad Datu**	**50.85**	**287**	P		**P**	**23 42 09.8**	**+2.6**	
MYLDM	**Lahad Datu**	**50.85**	**287**	P		**P**	**23 42 08.5**	**+1.3**	
	comp=Z,57nm,1.2s								
JAGI	**Jajag, Banyuwa**	**51.67**	**269**	P		**P**	**23 42 13.1**	**-0.3**	
JAGI	**Jajag, Banyuwa**	**51.67**	**269**	P		**P**	**23 42 12.5**	**-0.9**	
	comp=Z,55nm,1.1s								
ABJI	**Asem Bagus**	**51.70**	**270**	P		**P**	**23 42 12.8**	**-0.8**	
	comp=Z,70nm,1.0s								
BBKI	**Banjar Baru**	**51.93**	**275**	P		**P**	**23 42 15.1**	**-0.2**	
	comp=Z,1µmcomp=Z,42nm,0.7s								
KKM	**Kota Kinabalu**	**53.28**	**287**	P		**P**	**23 42 26.8**	**+1.4**	
KKM	**Kota Kinabalu**	**53.28**	**287**			**P**	**23 42 25.8**	**+0.4**	
KKM	**Kota Kinabalu**	**53.28**	**287**	P		**P**	**23 42 24.7**	**-0.7**	
	comp=Z,659nmcomp=Z,70nm,1.0s								
SJI	**Sawahan**	**54.12**	**269**	P		**P**	**23 42 30.2**	**-1.3**	
SNJI	**Sawahan-Nganju**	**54.12**	**269**	P		**P**	**23 42 30.3**	**-1.3**	
	comp=Z,87nm,1.2s								
PCJI	**Pacitan**	**54.62**	**269**	P		**P**	**23 42 34.8**	**-0.3**	
MJAR	**Matsushiro Arr**	**55.40**	**332**	P		**P**	**23 42 40.0**	**-0.3**	
	comp=Z,1.3nm,0.7s,baz=168,slow=10.0,SNR=2.0								
MJAR				pP		**pP**	**23 42 58.6**	**-2.4**	
	comp=Z,2.8nm,0.9s,baz=157,slow=8.4,SNR=4.9								
	comp=Z,1.3nm,0.7s								
MJAR	**Matsushiro Arr**	**55.40**	**332**	IAmb		IAmb	23 44 00.2		
	comp=Z,19nm,1.7s								
KPJI	**Karang Pucung**	**56.96**	**269**	P		**P**	**23 42 51.5**	**-0.3**	
	comp=Z,23nm,0.8s								
TPUB	**Ta-pu**	**57.19**	**308**			P	23 43 02.0	+8.8	
DBJI	**Dramaga**	**59.23**	**270**	P		**P**	**23 43 06.7**	**-1.0**	
CGJI	**Cibinong**	**60.25**	**269**	P		**P**	**23 43 14.1**	**-0.5**	
KSRS	**Korea Array**	**61.32**	**325**	P		**P**	**23 43 21.4**	**0.0**	
	comp=Z,1.9nm,0.7s,baz=141,slow=6.4,SNR=3.0								
	comp=Z,1.9nm,0.7s								
YSS	**Yuzhno-Sakhali**	**62.67**	**342**	*i* P		**P**	**23 43 29.3**	**-0.9**	
YSS				pmax		pmax			
	comp=Z,15nm,1.0s								
NJ2	**Nanjing**	**63.45**	**315**	*e*P		**P**	**23 43 35.8**	**+0.1**	
NJ2				pP		**pP**	**23 43 56.3**	**-0.2**	
NJ2				pmax		pmax			
	comp=Z,40nm,0.7s								
QIZ	**Qiongzhong**	**63.98**	**298**	P		**P**	**23 43 41.4**	**+1.9**	
QIZ				S		**S**	**23 52 11.4**	**+2.0**	
QIZ				L		L			
	comp=Z,250nm,24.8s								
USRK	**Ussuriysk Ar.**	**64.38**	**333**	P		**P**	**23 43 41.8**	**+0.2**	
	comp=Z,2.8nm,0.8s,baz=116,slow=6.7,SNR=2.6								
USRK				pP		**pP**	**23 44 03.0**	**+0.1**	
	comp=Z,7.2nm,0.8s,baz=134,slow=5.5,SNR=5.5								
	comp=Z,2.8nm,0.8s								
VNDA	**Vanda**	**65.33**	**181**	P		**P**	**23 43 46.6**	**-0.7**	
	comp=Z,8.0nm,0.9s,baz=339,slow=4.7,SNR=14								
	comp=Z,8.0nm,0.9s								
VNDA	**Vanda**	**65.33**	**181**			**P**	**23 43 47.1**	**-0.2**	
VNDA				IAmb		IAmb	23 43 51.5		
	comp=Z,14nm,1.1s								
VNDA	**Vanda**	**65.33**	**181**	P		**P**	**23 43 47.1**	**-0.2**	
VNDA				pmax		pmax			
	comp=Z,14nm,1.1s								
PETK	**Petropavlovsk-**	**65.52**	**354**	P		**P**	**23 43 48.5**	**-0.3**	
	comp=Z,3.6nm,0.8s,baz=190,slow=7.4,SNR=1.8								
PETK				pP		**pP**	**23 44 10.3**	**+0.2**	
	comp=Z,4.6nm,1.0s,baz=162,slow=11,SNR=1.2								
	comp=Z,3.6nm,0.8s								
SBA	**Scott Base**	**65.62**	**180**	P		**P**	**23 43 49.7**	**+0.5**	
SBA	**Scott Base**	**65.62**	**180**	P		**P**	**23 43 49.7**	**+0.5**	
SBA				pmax		pmax			
	comp=Z,25nm,0.8s								
SBA	**Scott Base**	**65.62**	**180**	P		**P**	**23 43 49.7**	**+0.5**	
WHN	**Wuhan**	**65.80**	**312**	P		**P**	**23 43 50.8**	**-0.3**	
CN2	**Changchun**	**67.18**	**329**	*e*P		**P**	**23 44 03.3**	**+3.7**	
CN2				pmax		pmax			
	comp=Z,10.0nm,0.6s								
CCD	**Concordia, Ant**	**67.21**	**191**	P		**P**	**23 43 58.2**	**-1.7**	
CCD				x		x	23 44 18.7		
BNX	**BinXian**	**67.65**	**331**	⇓P		**P**	**23 44 03.3**	**+0.8**	
BNX				pmax		pmax			
	comp=Z,7.0nm,1.2s								
MNSI	**Mandailing Nat**	**67.75**	**276**	P		**P**	**23 44 02.6**	**-1.2**	
	comp=Z,17nm,0.7s								
KLR	**Kul'dur**	**68.47**	**336**	*i* P		**P**	**23 44 05.0**	**-2.6**	
KLR				pmax		pmax			
	comp=Z,14nm,1.5s								
PSI	**Prapat**	**68.86**	**278**	P		**P**	**23 44 08.6**	**-2.3**	
LYN	**LuoYang**	**69.27**	**314**	P		**P**	**23 44 13.3**	**+0.4**	
LYN				S		**S**	**23 53 13.4**	**+0.6**	
LYN				pmax		pmax			
	comp=Z,22nm,1.0s								
HNS	**HongShan**	**69.32**	**318**	⇑P		**P**	**23 44 14.6**	**+1.5**	
HNS				S		**S**	**23 53 15.6**	**+2.4**	
HNS				pmax		pmax			
	comp=Z,7.0nm,1.0s								
HNS				L		L			
	comp=Z,280nm,14.3s								
HNS				L		L			
	comp=Z,270nm,20.8s								
HNS				L		L			
	comp=Z,360nm,24.5s								

BJI2	**Beijing**	**69.92**	**321**	P		**P**	**23 44 16.6**	**-0.1**	
BJI2				pmax		pmax			
	comp=Z,4.0nm,2.2s								
HEH	**HeiHe**	**71.03**	**335**	*e*P		**P**	**23 44 22.8**	**-0.5**	
HEH				pmax		pmax			
	comp=Z,7.0nm,1.0s								
XAN	**Xi'an**	**71.53**	**312**	⇑P		**P**	**23 44 26.9**	**+0.1**	
XAN				pP		PcP	23 44 47.3	+1.6	
XAN				pmax		pmax			
	comp=Z,10.0nm,1.0s								
XAN				L		L			
	comp=Z,160nm,19.9s								
XAN				L		L			
	comp=Z,190nm,18.6s								
XAN				L		L			
	comp=Z,310nm,24.1s								
XLT	**XiLinHaoTe**	**72.31**	**324**	*e*P		**P**	**23 44 30.8**	**-0.5**	
XLT				pP		pP	23 44 52.6	-0.2	
XLT				pmax		pmax			
	comp=Z,16nm,0.8s								
XLT				pmax		pmax			
	comp=Z,170nm,4.9s								
KMI2	**Kunming**	**72.46**	**301**	P		**P**	**23 44 33.9**	**+1.2**	
KMI2				pP		pP	23 44 54.8	+0.9	
KMI2				S		**S**	**23 53 54.4**	**+3.9**	
KMI2				pmax		pmax			
	comp=Z,11nm,1.1s								
HHC	**Hu-ho-hao-te**	**73.27**	**320**	*e*P		**P**	**23 44 38.6**	**+1.6**	
HHC				S		**SKiKP**	**23 54 00.3**	**-0.4**	
HHC				pmax		pmax			
	comp=Z,10.0nm,0.6s								
HHC				pmax		pmax			
	comp=Z,220nm,4.7s								
HHC				L		L			
	comp=Z,210nm,21.8s								
HHC				L		L			
	comp=Z,210nm,21.8s								
HHC				L		L			
	comp=Z,370nm,21.8s								
CMAR	**Chiang Mai Arr**	**73.35**	**294**	P		**P**	**23 44 38.5**	**+0.7**	
	comp=Z,3.4nm,0.7s,baz=129,slow=4.5,SNR=19								
CMAR				pP		**pP**	**23 44 59.6**	**+0.6**	
	comp=Z,15nm,0.9s,baz=122,slow=4.5,SNR=9.7								
	comp=Z,3.4nm,0.7s								
CHTO	**Chiang Mai**	**73.47**	**294**	P		**P**	**23 44 39.9**	**+1.4**	
CHTO	**Chiang Mai**	**73.47**	**294**			**P**	**23 44 39.3**	**+0.8**	
CHTO				IAmb		IAmb	23 45 03.9		
	comp=Z,29nm,1.1s								
CHTO	**Chiang Mai**	**73.47**	**294**	P		**P**	**23 44 39.3**	**+0.8**	
CHTO				pmax		pmax			
	comp=Z,29nm,1.1s								
CHTO	**Chiang Mai**	**73.47**	**294**	P		**P**	**23 44 38.0**	**-0.5**	
	comp=Z,25nm,1.2s								
HIA	**Hailar**	**73.81**	**330**	*i* P		**P**	**23 44 38.6**	**-1.3**	
HIA				pmax		pmax			
	comp=Z,7.0nm,0.9s								
CD2	**Chengdu**	**73.98**	**307**	P		**P**	**23 44 38.5**	**-2.9**

GLB IAmb IAmb 23 45 58.9
comp=Z,20nm,1.2s
I21K Tanana 83.19 16 P **P** **23 45 31.2 +0.1**
TLY Talaya 83.57 326 *i* P **P** **23 45 31.6 -1.8**
TLY pmax pmax
comp=Z,6.0nm,0.9s
BARN Barnard Glacie 83.65 23 pP pP 23 45 58.3 +2.4
WRH Wood River Hil 83.79 18 **P** **23 45 34.3 +0.2**
WRH pP **pwP** **23 45 58.7 +0.2**
C18K Utukok River 83.85 11 **P** **23 45 33.9 -0.6**
M02C Callahan 83.89 46 P **P** **23 45 39.2 +3.9**
CCB Clear Creek Bu 84.00 18 **P** **23 45 35.6 +0.4**
CCB pP **pP** **23 45 59.7 +2.4**
K24K Donnelly Dome 84.04 19 IAmb IAmb 23 46 02.4
comp=Z,13nm,0.9s
HDA Harding Lake 84.09 18 IAmb IAmb 23 46 02.3
comp=Z,26nm,1.2s
COLA College 84.15 18 P **P** **23 45 40.4 +4.5**
COLA College 84.15 18 P **P** **23 45 37.0 +1.1**
COLA College 84.15 18 *i* P **P** **23 45 33.5 -2.4**
COLA pmax pmax
comp=Z,4.0nm,0.8s
ORV Oroville 84.18 48 P **P** **23 45 39.4 +2.6**
ORV IAmb IAmb 23 46 04.1
comp=Z,16nm,1.2s
ORV Oroville 84.18 48 P **P** **23 45 39.4 +2.6**
ORV pmax pmax
comp=Z,16nm,1.3s
O03E Paynes Creek 84.23 47 P **P** **23 45 38.6 +1.5**
O03E **pP** **23 46 01.4 +2.2**
AFDM Forest Hills D 84.35 48 P **P** **23 45 40.8 +3.1**
AFDM **pwP** **23 46 02.3 +0.2**
AFDM IAmb IAmb 23 46 05.0
comp=Z,23nm,1.3s
M03C McCloud 84.36 46 P **P** **23 45 40.2 +2.4**
M03C pP **pP** **23 46 01.9 +2.1**
IL31 84.36 18 IAmb IAmb 23 46 03.3
comp=Z,17nm,1.3s
ILAR Eielson Array 84.36 18 P **P** **23 45 35.2 -1.9**
comp=Z,3.9nm,0.6s,baz=242,slow=4.8,SNR=28
ILAR pP **pP** **23 46 00.5 +1.3**
comp=Z,7.5nm,1.0s,baz=219,slow=5.5,SNR=6.6
comp=Z,3.9nm,0.6s
CMB Columbia Colle 84.47 49 P **P** **23 45 41.1 +2.8**
CMB pP **pwP** **23 46 03.3 +0.5**
CMB IAmb IAmb 23 46 05.5
comp=Z,10.0nm,1.1s
CMB Columbia Colle 84.47 49 P **P** **23 45 41.1 +2.8**
CMB *PP **pwP** **23 46 03.3 +0.5**
CMB pmax pmax
comp=Z,10.0nm,1.2s
DOT Dot Lake 84.49 20 P **P** **23 45 37.7 -0.1**
DOT IAmb IAmb 23 46 05.4
comp=Z,28nm,1.3s
SCRK Sand Creek 84.74 20 **P** **23 45 39.4 +0.3**
SCRK pP **pP** **23 46 03.2 +1.9**
SCRK IAmb IAmb 23 46 07.0
comp=Z,17nm,1.3s
D20K Etivluk River 84.84 13 P **P** **23 45 41.2 +1.8**
D20K IAmb IAmb 23 46 24.3
comp=Z,33nm,1.9s
G23K Bananza Creek 84.87 16 **P** **23 45 40.9 +1.3**
L27K Beaver Creek, 84.87 21 P **P** **23 45 43.7 +3.9**
BCAR Beaver Creek A 84.89 21 P **P** **23 45 42.8 +3.0**
J04A Umpqua Nationa 85.09 44 **P** **23 45 44.8 +3.3**
HYT Haines Junctio 85.12 24 P **23 45 45.9 +4.8**
G24K Hadweenzic Riv 85.56 17 IAmb IAmb 23 46 11.1
comp=Z,21nm,1.3s
K05A Summer Lake 85.74 45 P **P** **23 45 46.3 +1.5**
B20K Meade River 85.78 12 P **P** **23 45 44.1 +0.1**
B20K IAmb IAmb 23 46 18.5
comp=Z,13nm,1.6s
B21K Ikpikpuk River 86.00 13 IAmb IAmb 23 45 48.9
comp=Z,6.2nm,0.8s
NVAR Mina Array Basa 86.14 50 P **P** **23 45 46.2 -0.6**
comp=Z,0.8nm,0.6s,baz=254,slow=7.5,SNR=2.3
NVAR pP **pP** **23 46 10.1 +1.0**
comp=Z,3.5nm,0.8s,baz=227,slow=6.3,SNR=5.5
comp=Z,0.8nm,0.6s
KVN Kaiserville 86.50 49 P **P** **23 45 50.1 +1.6**
KVN pP **pP** **23 46 13.1 +2.4**
KNGR Kungurtug, Tuv 86.55 323 *i* P **P** **23 45 45.0 -3.4**
KNGR pmax pmax
comp=Z,11nm,1.1s
I27K Kandik River 86.58 19 pP 23 46 12.6 +2.2
F25K Christian Rive 86.70 17 **P** **23 45 50.5 +1.8**
G26K Porcupine Rive 86.79 17 P **P** **23 45 49.3 +0.3**
G26K IAmb IAmb 23 46 26.1
comp=Z,11nm,1.0s
B22K Teshekpuk Lake 86.82 13 P **P** **23 45 49.0 -0.1**
B22K IAmb IAmb 23 46 26.6
comp=Z,14nm,1.4s
BMAR Burnt Mountain 86.89 17 P **P** **23 45 50.1 +0.5**
D24K Happy Valley 86.98 15 P **P** **23 45 52.1 +2.1**
D24K IAmb IAmb 23 46 18.7
comp=Z,16nm,1.4s
H27K Steamboat Moun 87.00 19 P **P** **23 45 52.4 +2.2**
I28M Miner Creek 87.02 20 P **P** **23 45 52.3 +2.0**
C23K Itkillik River 87.06 14 P **P** **23 45 51.4 +1.1**
C23K IAmb IAmb 23 46 18.5
comp=Z,17nm,1.4s
E25K Arctic Village 87.08 16 P **P** **23 45 50.9 +0.3**
F26K Sheenjek River 87.19 17 P **P** **23 45 52.5 +1.4**
F26K IAmb IAmb 23 46 18.5
comp=Z,15nm,1.9s
TIXI Tiksi 87.41 349 *i* P **P** **23 45 50.1 -1.8**
TIXI pmax pmax
comp=Z,7.0nm,1.4s
I29M Ogilvie Camp, 87.51 20 P **P** **23 45 53.5 +0.9**
I29M **pP** **23 46 15.9 +1.0**
I29M IAmb IAmb 23 46 19.7
comp=Z,14nm,1.2s
J08A Circle Bar Ran 87.62 45 P **P** **23 45 56.1 +2.3**
J08A pP **pP** **23 46 17.7 +1.7**
J08A IAmb IAmb 23 46 20.2
comp=Z,12nm,0.9s
E27K Coleen River 88.24 17 **P** **23 45 57.1 +1.0**
C27K Jago River 88.60 15 **P** **23 45 58.8 +1.1**
C27K IAmb IAmb 23 46 26.9
comp=Z,10.0nm,1.5s
D27M Malcolm River 89.09 16 P **P** **23 46 00.7 +0.6**
E28M Babbage River 89.10 17 P **P** **23 46 02.5 +2.5**
E28M IAmb IAmb 23 46 23.6
comp=Z,12nm,1.8s
G30M tAoh Zrail Nji 89.15 19 P **P** **23 46 00.2 -0.1**
BELA Belgrano 2 89.25 176 **P** **23 45 59.9 -0.9**
MFID Camas Ranch 89.47 45 **P** **23 46 04.3 +1.7**
MFID **pP** **23 46 26.3 +1.5**
MFID IAmb IAmb 23 46 30.4
comp=Z,13nm,1.2s
PSUT Pine Spring 89.51 50 P **P** **23 46 03.1 +0.2**
PSUT pP **pP** **23 46 26.1 +0.8**
PSUT IAmb IAmb 23 46 30.9
comp=Z,10nm,1.2s
LCMT Little Creek M 89.56 52 P **P** **23 46 04.1 +1.0**
LCMT pP **pP** **23 46 27.0 +1.6**
LCMT IAmb IAmb 23 46 31.2
comp=Z,14nm,1.2s
CCUT Cedar City 89.61 52 P **P** **23 46 04.3 +0.9**
CCUT pP **pP** **23 46 27.7 +2.0**
CCUT IAmb IAmb 23 46 32.5
comp=Z,12nm,1.2s
KNB Kanab 89.89 52 P **P** **23 46 06.0 +1.4**
KNB pP **pP** **23 46 27.8 +0.8**
U15A North Rim 90.14 53 **P** **23 46 05.9 -0.2**
U15A IAmb IAmb 23 46 34.9
comp=Z,14nm,1.1s
WMQ Urumqi 90.52 315 *eP* **P** **23 46 07.3 0.0**
WMQ pmax pmax
comp=Z,10.0nm,0.9s
WMQ L L
comp=Z,170nm,24.0s
DGZ Jazzator, Alta 92.34 320 *i* P **P** **23 46 13.5 -2.2**
DGZ pmax pmax
comp=Z,3.0nm,0.7s
ELIB Princess Elisa 92.54 191 *dP* **P** **23 46 14.7 -1.6**
comp=Z,6.1nm,1.0s
ELIB *dp*P **pP** **23 46 37.0 -1.6**
PDAR Pinedale Array 93.73 47 P **P** **23 46 25.7 +3.2**
comp=Z,0.1nm,0.5s,baz=267,slow=6.5,SNR=2.1
PDAR pP **pP** **23 46 44.9 +0.1**
comp=Z,2.4nm,1.1s,baz=248,slow=1.6,SNR=8.7
MK31 Makanchi Array 94.95 317 P **P** **23 46 27.0 -0.7**
MK31 IAmb IAmb 23 46 27.7
comp=Z,5.1nm,0.7s
MK31 Makanchi Array 94.95 317 P **P** **23 46 27.0 -0.7**
MK31 pmax pmax
comp=Z,5.0nm,0.7s
MKAR Makanchi Array 94.95 317 P **P** **23 46 26.9 -0.8**
comp=Z,6.6nm,0.6s,baz=95,slow=6.3,SNR=66
MKAR pP **pP** **23 46 47.9 -2.1**
comp=Z,3.4nm,0.8s,baz=100,slow=6.8,SNR=5.1
MKAR PKKPbc **PKKPdf** **00 03 23.0 -1.7**
comp=Z,0.9nm,0.7s,baz=268,slow=3.2,SNR=6.1
comp=Z,6.6nm,0.6s
ZALV Zalesovo Beam 95.00 324 P **P** **23 46 26.5 -1.2**
comp=Z,0.7nm,0.3s,baz=64,slow=3.4,SNR=5.6
ZALV pP **pP** **23 46 47.9 -2.1**
comp=Z,1.3nm,0.8s,baz=90,slow=3.1,SNR=2.1
comp=Z,0.7nm,0.3s
MAKZ Makanchi 95.17 317 P **P** **23 46 26.9 -1.7**
MAKZ IAmb IAmb 23 46 30.0
comp=Z,4.6nm,0.8s
MAKZ Makanchi 95.17 317 P **P** **23 46 26.9 -1.7**
MAKZ pmax pmax
comp=Z,5.0nm,0.9s
YKA Yellowknife Ar 95.63 27 P **P** **23 46 29.7 -0.7**
comp=Z,0.4nm,0.8s,baz=265,slow=4.5,SNR=2.3
YKA pP **pP** **23 46 51.6 -1.1**
comp=Z,1.6nm,1.1s,baz=266,slow=5.3,SNR=3.8
comp=Z,0.4nm,0.8s
TXAR Lajitas Array 95.66 61 P **P** **23 46 31.5 +0.1**
comp=Z,0.8nm,0.7s,baz=216,slow=6.0,SNR=8.9
TXAR pP **pP** **23 46 53.8 0.0**
comp=Z,0.5nm,0.9s,baz=249,slow=4.8,SNR=2.1
comp=Z,0.8nm,0.7s
KURK Kurchatov 98.08 320 P **P** **23 46 39.6 -2.1**
KURK **pP** **23 47 03.0 -1.0**
KURK Kurchatov 98.08 320 IAmb IAmb 23 47 37.7
comp=Z,11nm,1.8s
KURK Kurchatov 98.08 320 P **P** **23 46 39.6 -2.1**
KURK *PP **pP** **23 47 03.1 -1.0**
KURBB Kurchatov Arra 98.12 320 P **P** **23 46 39.6 -2.2**
comp=Z,0.4nm,0.7s,baz=99,slow=3.2,SNR=4.6
KURBB pP **pP** **23 47 03.0 -1.2**
comp=Z,0.4nm,0.8s,baz=93,slow=5.4,SNR=2.3
comp=Z,0.4nm,0.7s
ARCES ARCESS Array B 117.68 346 PKP **PKPdf** **23 51 48.8 -1.6**
comp=Z,4.7nm,1.0s,baz=60,slow=2.4,SNR=5.7
CPUP Villa Florida 122.61 132 PKP **PKPdf** **23 52 00.3 -0.8**
comp=Z,2.1nm,0.8s,baz=203,slow=2.8,SNR=6.5
KIV Kislovodsk 122.65 315 *i* PKIKP **PKPdf** **23 52 00.3 -0.5**
KIV pmax pmax
comp=Z,5.0nm,1.1s
RAYN Ar Rayn 123.16 290 **PKPdf** **23 52 01.4 -1.0**
RAYN pPKPdf **pPKPdf** **23 52 24.3 -1.3**
FINES FINESS Array B 123.17 339 PKP **PKPdf** **23 52 00.9 -0.3**
comp=Z,5.0nm,1.0s,baz=48,slow=2.1,SNR=4.3
FINES PKKPbc **PKKPab** **00 01 53.2 +1.7**
comp=Z,6.3nm,1.0s,baz=212,slow=6.8,SNR=4.5
PTLB Pontes e Lacer 127.03 120 PKPdf **PKPdf** **23 52 08.3 -1.6**
TRCB Terra Rica 128.15 132 **PKPdf** **23 52 10.9 -1.1**
BRTR Keskin Array B 130.38 312 PKP **PKPdf** **23 52 14.8 -1.0**
comp=Z,0.3nm,0.6s,baz=129,slow=3.7,SNR=1.9
BRTR pPKP **pPKPdf** **23 52 39.0 0.0**
comp=Z,1.4nm,1.0s,baz=134,slow=4.2,SNR=1.8
BRTR SKPbc **SKPbc** **23 55 31.7 0.0**
comp=Z,2.8nm,0.9s,baz=70,slow=3.0,SNR=8.2
MMAI Mount Meron Ar 130.93 303 SKPbc **SKPab** **23 55 34.6 +0.5**
comp=Z,1.4nm,1.1s,baz=112,slow=1.6,SNR=1.4
LANS Liptovska Anna 134.26 330 *eP*KIKP **PKiKP** **23 52 27.5 +3.4**
LANS Liptovska Anna 134.26 330 *eP*KP **PKiKP** **23 52 27.5 +3.4**
BDFB Brasilia 135.95 128 PKP **PKPdf** **23 52 27.7 +0.8**
comp=Z,3.3nm,0.8s,baz=182,slow=6.4,SNR=6.8
GERES GERESS Array B 137.13 334 PKP **PKPdf** **23 52 29.0 +0.9**
comp=Z,0.4nm,0.6s,baz=38,slow=4.7,SNR=1.7
GERES pPKP **pPKPdf** **23 52 51.6 +0.3**
comp=Z,0.4nm,0.6s,baz=32,slow=5.2,SNR=2.3
GERES SKPbc **SKPbc** **23 55 53.6 -0.2**
comp=Z,0.4nm,0.8s,baz=29,slow=2.4,SNR=3.9
KEST Kesra 148.86 323 PKPbc **PKPbc** **23 52 52.5 -0.6**
comp=Z,7.0nm,0.8s,baz=52,slow=3.4,SNR=8.4
KEST pPKPbc **pPKPbc** **23 53 17.2 +1.0**
comp=Z,6.8nm,0.7s,baz=110,slow=2.4,SNR=4.6
ESDC Sonseca Array 151.42 345 PKPbc **PKPbc** **23 52 58.2 -0.9**
comp=Z,1.6nm,0.9s,baz=353,slow=2.0,SNR=6.7
ESDC PKPab **PKPab** **23 53 07.0 -0.5**
comp=Z,0.8nm,0.6s,baz=18,slow=3.8,SNR=7.8
ESDC pPKPbc **pPKPbc** **23 53 21.4 -0.8**
comp=Z,0.7nm,0.8s,baz=5.6,slow=3.8,SNR=1.5
ESDC pPKPab **pPKPab** **23 53 30.7 +0.7**
comp=Z,0.9nm,0.8s,baz=18,slow=2.3,SNR=3.6
TORD Torodi Ar. Bea 165.25 275 PKP **PKPdf** **23 53 10.6 +0.5**
comp=Z,1.1nm,1.0s,baz=76,slow=0.7,SNR=5.0
TORD pPKP **pPKPdf** **23 53 32.5 -1.1**
comp=Z,0.9nm,1.0s,baz=288,slow=2.6,SNR=2.5
TORD PKPab **PKPab** **23 54 08.6 +0.5**
comp=Z,1.0nm,0.9s,baz=143,slow=3.4,SNR=2.3
TORD pPKPab **pPKPab** **23 54 29.1 -1.1**
comp=Z,8.2nm,1.0s,baz=120,slow=3.2,SNR=13
DBIC Dimbokro 169.93 238 pPKPab pPKPab 23 54 49.8 -0.8
comp=Z,6.8nm,0.9s,baz=160,slow=6.9,SNR=4.1

*IDC **15** 23:51:29.5±7.0, 6.2°20S×153.1°05E, h59km±56km, mb3.4/7, mbtmp3.7/8, ML2.5/1, Error ellipse: s-maj=50.8km s-min=28.2km az=100.0*
ISC 15 23:51:26.3±1.1, 6.2°2S±0.2°×153.2°2E±0.2°, h33km, n9, σ0.8s 86/10, mb3.6/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.82**	**241**	P		**Pn**	**23 53 05.4**	**+1.3**
	5.3nm,0.3s,baz=30,slow=3.6,SNR=6.0							
PMG				S		**Sn**	**23 54 20.2**	**-0.4**
	36nm,0.7s,baz=338,slow=19,SNR=8.2							
	18nm,0.5s							
WRA	**Warramunga Arr**	**22.90**	**231**	P		**P**	**23 56 26.1**	**-1.4**
	0.9nm,0.7s,baz=54,slow=10,SNR=7.1							
	0.9nm,0.7s							
ASAR	**Alice Springs**	**25.46**	**225**	P		**P**	**23 56 51.0**	**-0.6**
	0.6nm,0.6s,baz=59,slow=8.6,SNR=9.9							
	0.6nm,0.6s							
SONM	**Songino Array**	**67.68**	**328**	P		**P**	**00 02 20.6**	**+0.2**
	0.7nm,0.6s,baz=145,slow=5.5,SNR=6.9							
	0.7nm,0.6s							
MKAR	**Makanchi Array**	**81.61**	**319**	P		**P**	**00 03 40.8**	**-0.3**
	0.5nm,0.8s,baz=114,slow=3.5,SNR=2.3							
	0.5nm,0.8s							
ILAR	**Eielson Array**	**83.25**	**22**	P		**P**	**00 03 49.6**	**+0.4**
	0.4nm,0.9s,baz=232,slow=4.4,SNR=5.2							
	0.4nm,0.9s							
QSPA	**South Pole Qui**	**83.82**	**180**	P		**P**	**00 03 52.6**	**+0.2**
	0.8nm,0.8s,baz=39,slow=6.5,SNR=1.1							
	0.8nm,0.8s							
KURBB	**Kurchatov Arra**	**85.11**	**322**	P		**P**	**00 03 58.3**	**-0.7**
	0.6nm,0.9s,baz=115,slow=6.2,SNR=3.2							
	0.6nm,0.9s							
TORD	**Torodi Ar. Bea**	**151.10**	**286**	PKPbc		**PKPbc**	**00 11 16.8**	**-0.4**
	2.1nm,0.7s,baz=47,slow=1.8,SNR=14							

*SOME **15** 23:54:53.1, 42.3°32N×79.8°53E, h0km*
*KRNET **15** 23:54:53.5±0.1, 42.3°22N×79.9°55E, h16km, mb4.0*
*IDC **15** 23:54:53.4±2.1, 42.3°16N×79.9°59E, h0km, mbtmp3.6/1, ML2.9/6, Error ellipse: s-maj=24.6km s-min=11.3km az=152.0*
*NNC **15** 23:54:54.2±1.0, 42.3°29N×79.9°56E, h0km, mb4.5, mpv4.2, Error ellipse: s-maj=7.2km s-min=3.4km az=136.0*
ISC 15 23:54:54.0±1.4, 42.3°28N±0.0°×03.3°79.7°46E±0.0°04, h4km±9km, n72, σ2s12/117, 37C-21D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.81**	**285**	⇑*iP*		**Pg**	**23 55 11.1**	**+1.6**
PRZ				⇑*iS*		**Sn**	**23 55 23.6**	**-1.3**
SHLS	**Shalkode**	**0.88**	**0**	*eP*		**Pn**	**23 55 12.0**	**-1.2**
	454nm,0.3s							
SHLS				*eS*		**Sn**	**23 55 25.5**	**-1.0**
	444nm,0.3s							
UZB	**Uzynbulak**	**0.93**	**340**	*eP*		**Pb**	**23 55 12.3**	**-0.4**
UZB				*eS*		**Sg**	**23 55 26.1**	**+2.3**
UZB	**Uzynbulak**	**0.93**	**340**	*eP*		**Pb**	**23 55 12.3**	**-0.4**
	36nm,0.2s							
UZB				*eS*		**Sg**	**23 55 26.1**	**+2.3**
	267nm,0.2s							
PDGK	**Podgornoye**	**1.05**	**1**	⇑P		**Pb**	**23 55 13.9**	**-0.9**
	64nm,0.4s							
PDGK				⇑S		**Sb**	**23 55 28.7**	**-0.3**
	300nm,0.5s							
KPKS	**Kokpek**	**1.32**	**335**	*eP*		**Pb**	**23 55 19.4**	**+0.1**
	22nm,0.1s							
KPKS				*eS*		**Sg**	**23 55 38.0**	**+1.8**
	297nm,0.3s							
TARG	**Taragay, Kyrgy**	**1.35**	**247**	⇑*eP*		**Pb**	**23 55 19.4**	**-0.6**
TARG				⇑*eS*		**Sg**	**23 55 38.9**	**+1.6**
KDJ	**Kajisay**	**1.70**	**266**	⇑*eP*		**Pb**	**23 55 26.2**	**+0.3**
KDJ				⇑*eS*		**Sg**	**23 55 49.5**	**+1.0**
BLB	**Baldybastay**	**1.95**	**339**	Pg		**Pb**	**23 55 31.2**	**+1.0**
	17nm,0.2s							
BLB				Lg		Lg	23 55 58.1	
	2μm,0.2s							
KOTS	**Kotyrbulak**	**1.97**	**300**	Pg		**Pg**	**23 55 31.9**	**+0.1**
	175nm,0.2s							
KOTS				Lg		Lg	23 55 59.8	
	635nm,0.5s							
KOTS	**Kotyrbulak**	**1.97**	**300**	*eP*		**Pg**	**23 55 31.9**	**+0.1**
	175nm,0.2s							
KOTS				*eS*		**Sg**	**23 55 59.8**	**+2.5**
	635nm,0.5s							
MDOK	**Medeo**	**1.98**	**297**	Pg		**Pb**	**23 55 31.9**	**+1.2**
	217nm,0.4s							
MDOK				Lg		Lg	23 55 59.4	
	334nm,0.6s							
TNSS	**Tian-Shan**	**2.00**	**293**	Pg		**Pb**	**23 55 32.1**	**+1.0**
	77nm,0.3s							
TNSS				Lg		Lg	23 56 00.4	
	62nm,0.3s							
TNSS	**Tian-Shan**	**2.00**	**293**	*eP*		**Pb**	**23 55 32.2**	**+1.1**
	77nm,0.3s							
TNSS				*eS*		**Sg**	**23 56 00.8**	**+2.5**
	62nm,0.3s							
KNDC	**Almaty**	**2.06**	**298**	⇓Pg		**Pb**	**23 55 33.3**	**+1.3**
	220nm,0.6s							
KNDC				⇑Lg		Lg	23 56 03.7	
	367nm,0.8s							
DJR	**Jarkent**	**2.07**	**7**	Pg		**Pb**	**23 55 31.3**	**-0.8**
	145nm,0.3s							
DJR				Lg		Lg	23 55 59.2	
	563nm,0.4s							
DJR	**Jarkent**	**2.07**	**7**	*eP*		**Pb**	**23 55 31.9**	**-0.2**
	145nm,0.3s							
DJR				*eS*		**Sg**	**23 55 59.9**	**-0.5**
	563nm,0.4s							
AAA	**Alma-Ata**	**2.09**	**297**	Pg		**Pg**	**23 55 34.1**	**+0.1**
	353nm,0.4s							
AAA				Lg		Lg	23 56 03.3	
	18nm,0.2s							
AAA	**Alma-Ata**	**2.09**	**297**	*eP*		**Pg**	**23 55 34.1**	**+0.1**
	353nm,0.4s							
AAA				*eS*		**Sg**	**23 56 03.6**	**+2.4**
	18nm,0.2s							
KNOS	**Konyrlen**	**2.09**	**355**	Pg		**Pb**	**23 55 32.8**	**+0.2**
	83nm,0.2s							
KNOS				Lg		Lg	23 56 00.8	
	354nm,0.2s							
IZV	**Izvestkoviy**	**2.23**	**291**	Pg		**Pb**	**23 55 35.4**	**+0.5**
	107nm,0.2s							
IZV				Lg		Lg	23 56 05.4	
	357nm,0.3s							
IZV	**Izvestkoviy**	**2.23**	**291**	*eP*		**Pb**	**23 55 36.0**	**+1.1**
	107nm,0.2s							
IZV				*eS*		**Sg**	**23 56 07.2**	**+1.6**
	357nm,0.3s							
ARXS	**Arharly**	**2.27**	**329**	*eP*		**Pb**	**23 55 36.2**	**+0.7**
	93nm,0.3s							
ARXS				*eS*		**Sg**	**23 56 07.0**	**0.0**
	611nm,0.3s							
ULHL	**Ulahol**	**2.39**	**270**	P		**Pb**	**23 55 37.8**	**+0.1**
	SNR=308							
ULHL	**Ulahol**	**2.39**	**270**	⇓*iP*		**Pb**	**23 55 37.1**	**-0.5**
ULHL				⇓*iS*		**Sb**	**23 56 08.5**	**+1.0**
MTBS	**Maitube**	**2.39**	**292**	Pg		**Pb**	**23 55 38.0**	**+0.4**
	77nm,0.2s							
MTBS				Lg		Lg	23 56 10.0	
	202nm,0.4s							
MTBS	**Maitube**	**2.39**	**292**	*eP*		**Pb**	**23 55 38.2**	**+0.6**
	77nm,0.2s							
MTBS				*eS*		**Sg**	**23 56 10.9**	**+0.2**
	202nm,0.4s							
KTBS	**Karatobe**	**2.49**	**306**	*eP*		**Pb**	**23 55 39.6**	**+0.3**
	140nm,0.3s							
KTBS				*eS*		**Sb**	**23 56 12.8**	**+2.5**
	122nm,0.4s							
BOOM	**Boomskoye usch**	**2.61**	**276**	⇑*iP*		**Pb**	**23 55 40.4**	**-1.1**
BOOM				⇑*iS*		**Sb**	**23 56 14.1**	**+0.1**
KST	**Kastek**	**2.69**	**288**	Pg		**Pb**	**23 55 42.6**	**-0.1**
	125nm,0.3s							
KST				Lg		Lg	23 56 18.2	
	183nm,0.9s							
KST	**Kastek**	**2.69**	**288**	*eP*		**Pb**	**23 55 44.4**	**+1.7**
	125nm,0.3s							
KST				*eS*		**Sg**	**23 56 21.6**	**+1.3**
	183nm,0.9s							
NRN	**Naryn**	**2.72**	**253**	⇑*iP*		**Pb**	**23 55 41.3**	**-2.0**
NRN				⇑*iS*		**Sb**	**23 56 16.4**	**-0.7**
TDK	**Taldyqorghan**	**2.83**	**345**	*eP*		**Pb**	**23 55 43.6**	**-1.5**
	111nm,0.5s							
TDK				*eS*		**Sb**	**23 56 19.6**	**-0.4**
	269nm,0.3s							
DGS	**Degeres**	**2.88**	**291**	*eP*		**Pb**	**23 55 47.2**	**+1.2**
	32nm,0.2s							
DGS				*eS*		**Sg**	**23 56 26.5**	**0.0**
	70nm,0.2s							
TKM2	**Tokmak 2**	**2.92**	**284**	P		**Pb**	**23 55 45.8**	**-1.0**
	SNR=35							
TKM2	**Tokmak 2**	**2.92**	**284**	⇑*iP*		**Pb**	**23 55 45.0**	**-1.7**
TKM2				⇑*iS*		**Sb**	**23 56 22.2**	**-0.7**
KRBS	**Karabastau**	**3.12**	**298**	Pg		**Pb**	**23 55 51.2**	**+1.3**
	46nm,0.3s							
KRBS				Lg		Lg	23 56 33.3	
	35nm,0.3s							
KRBS	**Karabastau**	**3.12**	**298**	*eP*		**Pb**	**23 55 51.3**	**+1.3**
	46nm,0.3s							
KRBS				*eS*		**Sg**	**23 56 33.3**	**-0.8**
	35nm,0.3s							
JNKS	**Jany-Kuch**	**3.12**	**248**	⇑*iP*		**Pb**	**23 55 46.2**	**-3.9**
JNKS				⇑*iS*		**Sb**	**23 56 24.9**	**-3.7**
KBK	**Karagaybulak**	**3.36**	**278**	P		**Pb**	**23 55 51.9**	**-2.2**
	SNR=30							
KBK	**Karagaybulak**	**3.36**	**278**	⇓*iP*		**Pb**	**23 55 50.9**	**-3.2**
KBK				⇓*iS*		**Sb**	**23 56 32.2**	**-3.2**
CHMS	**Chumysh**	**3.54**	**283**	P		**Pb**	**23 55 56.9**	**-0.3**
	SNR=13							
CHMS	**Chumysh**	**3.54**	**283**	⇑*iP*		**Pb**	**23 55 53.4**	**-3.9**
CHMS				⇑*iS*		**Sb**	**23 56 36.8**	**-3.8**
FRU1	**Bishkek**	**3.61**	**280**	⇑*iP*		**Pb**	**23 55 54.3**	**-4.0**
FRU1				⇑*iS*		**Sb**	**23 56 38.5**	**-3.9**
UCH	**Uchtor**	**3.67**	**271**	P		**Pb**	**23 55 56.9**	**-2.8**
	SNR=12							
UCH	**Uchtor**	**3.67**	**271**	⇓*iP*		**Pn**	**23 55 55.0**	**+3.1**
UCH				⇓*iS*		**Sn**	**23 56 39.6**	**+3.8**
AAK	**Ala-Archa**	**3.69**	**277**	Pn		**Pb**	**23 55 56.2**	**-3.6**
	1.5nm,0.3s,baz=101,slow=7.6,SNR=30							
AAK				Pg		**Pg**	**23 56 03.9**	**-0.7**
	3.9nm,0.3s,baz=116,slow=9.7,SNR=24							
AAK				Lg		Lg	23 56 51.5	
	4.7nm,0.3s,baz=26,slow=21,SNR=7.2							
	5.9nm,0.3s							
AAK	**Ala-Archa**	**3.69**	**277**	P		**Pb**	**23 55 56.2**	**-3.6**
	SNR=14							
AAK	**Ala-Archa**	**3.69**	**277**	⇓Pn		**Pb**	**23 55 55.9**	**-3.9**
	1.3nm,0.4s							
AAK				⇓Pg		**Pg**	**23 56 05.0**	**+0.3**
	12nm,0.5s							
AAK				⇑Lg		Lg	23 56 54.4	
	17nm,0.7s							
AAK	**Ala-Archa**	**3.69**	**277**	⇓*iP*		**Pb**	23 55 55.4	-4.4
AAK				⇓*iS*		**Sn**	**23 56 39.9**	**+4.0**
USP	**Ospenovka**	**3.78**	**287**	P		**Pb**	23 55 56.9	-4.4
	SNR=7.2							
USP	**Ospenovka**	**3.78**	**287**	⇑*iP*		Pb	23 55 56.8	-4.4
USP				⇑*iS*		**Sb**	**23 56 42.6**	**-4.8**
ARLS	**Aral**	**3.84**	**265**	⇑*eP*		**Pn**	**23 55 56.8**	**+2.8**
ARLS				⇑*iS*		**Sn**	**23 56 42.8**	**+3.1**
EKS2	**Erkin-Say**	**4.22**	**277**	P		**Pg**	**23 56 14.5**	**-0.3**
	SNR=24							
EKS2	**Erkin-Say**	**4.22**	**277**	⇓*iP*		**Pn**	**23 56 02.7**	**+3.6**
EKS2				⇓*iS*		**Sn**	**23 56 52.8**	**+3.9**
KSH2	**Kashi**	**4.30**	**225**	Pn		**Pb**	**23 56 09.5**	**-0.8**
KSH2				Sn		**Sg**	**23 57 08.1**	**-4.1**
KSH2				smax	smax			
	comp=N,31nm,0.7s							
KSH2				smax	smax			
	comp=E,48nm,0.8s	

comp=E,23nm,0.4s
MRKS Lg Lg 23 57 17.9
comp=E,12nm,0.4s
MRKS Merke 4.63 278 *e*P **Pb 23 56 19.4 +3.6**
comp=E,9.7nm,0.3s
MRKS *e*S **Sg 23 57 21.4 -1.3**
comp=E,24nm,0.5s
MAKZ Makanchi 4.87 21 ⇑Pn **Pn 23 56 09.1 +1.0**
comp=E,1.7nm,0.2s
MAKZ ⇓Sn **Sn 23 57 04.7 -0.2**
comp=E,4.6nm,0.6s
MAKZ ⇓Lg Lg 23 57 25.7
comp=E,8.7nm,0.6s
ARSB Arslanbob 4.93 261 ⇑*i*P **Pn 23 56 11.9 +2.9**
ARSB ⇑*i*S **Sn 23 57 09.3 +2.8**
MK31 Makanchi Array 4.95 23 Pn **Pn 23 56 10.2 +1.1**
comp=E,1.2nm,0.2s,baz=203,slow=12,SNR=136
MK31 ⇑Sn **Sn 23 57 06.7 0.0**
comp=E,1.6nm,0.3s,baz=195,slow=23,SNR=3.5
MK31 ⇑Lg Lg 23 57 26.4
comp=E,6.7nm,0.5s,baz=205,slow=26,SNR=3.9
MKAR Makanchi Array 4.95 23 Pn **Pn 23 56 10.6 +1.6**
comp=E,3.6nm,0.3s,baz=207,slow=13,SNR=192
MKAR Sn **Sn 23 57 08.6 +1.9**
comp=E,2.2nm,0.3s,baz=206,slow=26,SNR=3.7
MKAR Lg Lg 23 57 26.7
comp=E,4.2nm,0.3s,baz=203,slow=21,SNR=5.6
SFK Sufi-Kurgan 5.03 245 ⇓*i*P **Pn 23 56 12.7 +2.3**
SFK ⇓*i*S **Sn 23 57 11.0 +1.9**
MNAS Manas 5.15 275 ⇑*i*P **Pn 23 56 15.4 +3.4**
MNAS ⇑*e*S **Sn 23 57 14.9 +2.9**
OHH Osh 5.31 253 ⇓*i*P **Pn 23 56 16.7 +2.5**
OHH ⇓*i*S **Sn 23 57 17.7 +1.9**
ARK Arkit 5.60 268 ⇑*i*P **Pn 23 56 21.3 +3.2**
ARK ⇑*i*S **Sn 23 57 25.0 +2.0**
KK31 Karatay Array 6.64 280 ⇓Pg Pb 23 56 55.8 +5.8
comp=E,6.8nm,0.8s,baz=90,slow=17,SNR=26
KK31 ⇓Lg Lg 23 58 28.7
comp=E,3.4nm,0.4s,baz=100,slow=27,SNR=5.3
KURBB Kurchatov Arra 8.37 356 Pn **Pn 23 56 58.7 +2.7**
baz=180,slow=12,SNR=1.6
KURBB Pg **Pb 23 57 20.7 +1.4**
comp=E,0.1nm,0.3s,baz=178,slow=13,SNR=5.4
KURBB Lg Lg 23 59 17.2
comp=E,0.2nm,0.3s,baz=183,slow=29,SNR=4.7
ZALV Zalesovo Beam 12.21 15 Pn **Pn 23 57 49.0 +0.5**
comp=E,0.2nm,0.3s,baz=203,slow=13,SNR=2.5
ZALV Sn **Sn 00 00 03.0 -2.0**
comp=E,0.4nm,0.3s,baz=197,slow=24,SNR=4.1
ZALV Lg Lg 00 01 22.5
comp=E,0.3nm,0.3s,baz=201,slow=23,SNR=1.5
BVAR Borovoye Array 12.36 334 Pn **Pn 23 57 52.3 +1.7**
baz=146,slow=14,SNR=3.0
BVAR Sn **Sn 00 00 07.7 -0.8**
baz=150,slow=23,SNR=5.6
BVAR Lg Lg 00 01 29.5
baz=146,slow=24,SNR=3.9
SONM Songino Array 19.77 64 P **Pn 23 59 26.2 -0.3**
comp=E,0.1nm,0.3s,baz=272,slow=10,SNR=2.6

DJA 16 00:03:05.7±0.4,**1°N**±3°×**12°2E**±°, **h89**km±4km, **M3.8**/15, **mb3.8**/2, **MLv3.8**/15, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.32**	**229**	P	Pn	00 03 19.7	+0.6
MRSI				S	Sn	00 03 30.6	+1.5
GTOI	**Gorontalo**	**0.83**	**94**	P	Pn	00 03 22.6	-0.9
GTOI				S	Sn	00 03 36.2	-0.5
APSI	**Ampana**	**1.68**	**198**	P	Pn	00 03 33.5	-0.2
LUWI	**Luwuk**	**1.82**	**161**	P	Pn	00 03 36.6	+1.1
LUWI				S	Sn	00 03 58.4	+0.2
MPSI	**Mapaga**	**2.31**	**261**	P	Pn	00 03 42.5	+0.5
MNI	**Manado**	**2.76**	**74**	P	Pn	00 03 48.9	+0.9
SPSI	**Sidrap Palu**	**5.21**	**208**	P	Pn	00 04 20.8	-0.5
	0.1nm10nm,0.5s						

TRN ***16*** *00:09:10.3, 10°.40N×62°.56W, h1km, MD5.1, Gulf of Paria. Felt widely in Trinidad, MMI IV, V.*
FUNV ***16*** *00:09:12.2, 10°.34N×62°.53W, h5km, MW4.7, Presumed earthquake*
VAO ***16*** *00:09:12.5±0.3, 10°.25N×62°.67W, h10km, mb4.8, Presumed earthquake*
CATAC ***16*** *00:09:12.2±1.5, 10°N±10°×6°3W±1°0, h33km±36km, M5.2/6, mb5.4/6, mB5.4/6, MLv5.5/3, Mw(mB)4.8/6, Error ellipse: s-maj=29.2km s-min=5.4km az=133.4, confirmed*
NEIC ***16*** *00:09:13.6±2.0, 10°.37N±0°.06×62°.61W±0°.07, h28km±4km, mb4.9/516, Error ellipse: s-maj=9.4km s-min=8.3km az=99.0*
RSNC ***16*** *00:09:13.9±0.3, 10°N±2°×6°3W±°, h53km±22km, M4.8, mB5.4, mb5.4, ML4.3, MLv5.1, Mw(mB)4.8*
IDC ***16*** *00:09:14.4±1.8, 10°.45N×62°.77W, h35km±13km, mb4.3/27, mbtmp4.5/30, ML4.0/3, MS3.8/22, Error ellipse: s-maj=11.9km s-min=10.9km az=105.0*

ISC 16 00:09:13.6±1.1, **10°37N**±0°.03×**62°.65W**±0°.03, **h31**km±7km, **n882**, σ0**99**/868, **mb4.9**/268, **MS3.8**/18, **17C-9D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMDM	**Guralp CMG5TDE**	**1.13**	**73**	*e*P	**Pn**	**00 09 30.7**	**-2.6**
DMDM				*e*S	**Sn**	**00 09 45.2**	**-2.5**
PSMG	**Mucurapo Girls**	**1.14**	**75**	*e*P	**Pn**	**00 09 30.8**	**-2.6**
PSMG				*e*S	**Sn**	**00 09 46.5**	**-1.4**
TPP	**Pointe-a-Pierr**	**1.18**	**93**⇑	*e*P	**Pb**	**00 09 35.1**	**-0.3**
TRN	**Trinidad (W)**	**1.25**	**77**	*e*P	**Pn**	**00 09 33.2**	**-1.8**
TRN				*e*S	**Sn**	**00 09 49.4**	**-1.5**
TRN	**Trinidad (W)**	**1.25**	**77**⇑	*e*P	**Pn**	**00 09 32.7**	**-2.3**
TRN				*e*S	**Sn**	**00 09 49.0**	**-1.8**
GRFF	**Grenada Fort F**	**1.89**	**28**	*e*P	**Pn**	**00 09 43.0**	**-0.9**
GRFF				*e*S	**Sn**	**00 10 08.3**	**+1.6**
GRGR	**Grenville**	**2.00**	**29**		**Pn**	**00 09 44.6**	**-0.7**
GRGR	**Grenville**	**2.00**	**29**	P	**Pn**	**00 09 44.3**	**-1.1**
GRGR	**Grenville**	**2.00**	**29**	P	**Pn**	**00 09 44.3**	**-1.1**
GRGR				S	**Sb**	**00 10 11.8**	**-2.2**
GRGR	**Grenville**	**2.00**	**29**	*e*P	**Pn**	**00 09 45.0**	**-0.4**
GRGR				*e*S	**Sn**	**00 10 10.6**	**+1.2**
GRGR	**Grenville**	**2.00**	**29**⇑	*e*P	**Pn**	**00 09 44.2**	**-1.1**
GRW	**Mount Saint Ca**	**2.02**	**28**⇑	*e*P	**Pn**	**00 09 45.3**	**-0.4**
GRW				*e*S	**Sn**	**00 10 11.1**	**+1.1**
GRSS	**Sisters**	**2.17**	**28**	*e*P	**Pn**	**00 09 47.4**	**-0.2**
GRSS				*e*S	**Sn**	**00 10 12.4**	**-1.0**
SVB	**Belmont**	**3.19**	**25**	*e*P	**Pn**	**00 10 01.4**	**-0.4**
SVB				*e*S	**Sn**	**00 10 38.3**	**-0.4**
SVB	**Belmont**	**3.19**	**25**⇑	*i*P	**Pn**	**00 10 01.1**	**-0.6**
SVB				*e*S	**Sn**	**00 10 40.8**	**+2.0**
MCLT	**Moule a Chique**	**3.71**	**27**⇑	*i*P	**Pn**	**00 10 08.6**	**-0.3**
MCLT				*e*S	**Sn**	**00 10 51.1**	**-0.5**
SLAC	**Saint Lucia, A**	**3.90**	**26**⇑	*i*P	**Pn**	**00 10 11.4**	**-0.1**
SLAC				*e*S	**Sn**	**00 10 56.1**	**-0.2**
SLCP	**Castries, St.**	**3.96**	**24**	*e*S	**Sn**	**00 10 58.4**	**+0.6**
SLBI	**Saint Lucia, B**	**3.98**	**24**⇑	*e*P	**Pn**	**00 10 12.0**	**-0.6**
SLBI				*e*S	**Sn**	**00 10 56.9**	**-1.3**
BBGH	**Gun Hill**	**4.09**	**47**		**Pn**	**00 10 14.3**	**+0.3**
BBGH	**Gun Hill**	**4.09**	**47**	P	**Pn**	**00 10 17.2**	**+3.1**
BBGH				S	**Sn**	**00 11 03.6**	**+2.6**
BBGH	**Gun Hill**	**4.09**	**47**	*e*P	**Pn**	**00 10 13.1**	**-1.0**
BBGH				*e*S	**Sn**	**00 10 58.5**	**-2.5**
BBGH	**Gun Hill**	**4.09**	**47**	*e*P	**Pn**	**00 10 15.9**	**+1.9**
FUNV	**FUNVISIS**	**4.09**	**272**	*e*P	**Pn**	**00 10 15.7**	**+1.5**
FUNV				*e*S	**Sn**	**00 11 03.1**	**+1.9**
BIM	**Bigot**	**4.40**	**20**		**Pn**	**00 10 18.4**	**0.0**
BIM	**Bigot**	**4.40**	**20**	*e*P	**Pn**	**00 10 18.2**	**-0.2**
BIM				*e*S	**Sn**	**00 11 07.0**	**-1.6**
MPOM	**Morne Pois Mar**	**4.41**	**23**		**Pn**	**00 10 17.9**	**-0.6**
FDFM	**Morne la Roset**	**4.57**	**18**		**Pn**	**00 10 21.1**	**+0.3**
CXM	**Morne La Croix**	**4.64**	**18**		**Pn**	**00 10 22.1**	**+0.3**
SVN	**Savane Anatole**	**4.67**	**18**		**Pn**	**00 10 22.2**	**+0.1**
SVN	**Savane Anatole**	**4.67**	**18**⇑	*e*P	**Pn**	**00 10 22.1**	**+0.1**
DLPL	**La Plaine**	**5.12**	**15**	*e*P	**Pn**	**00 10 29.6**	**+1.3**
DWS	**Wesley**	**5.33**	**14**	*e*P	**Pn**	**00 10 32.4**	**+1.4**
TDBA	**Terre de Bas,**	**5.53**	**10**		**Pn**	**00 10 34.7**	**+0.8**
TBG	**Guadaloupe-3**	**5.54**	**10**	*e*P	**Pn**	**00 10 34.4**	**+0.5**
TBG				*e*S	**Sn**	**00 11 35.2**	**-1.3**
MAGL	**Barre de l'ile**	**5.70**	**13**		**Pn**	**00 10 37.0**	**+0.8**
MMLZ	**Guadeloupe Bro**	**5.72**	**9**	*e*P	**Pn**	**00 10 37.2**	**+0.8**
MMLZ				*e*S	**Sn**	**00 11 40.8**	**-0.2**
CBE	**Ff, Capester**	**5.75**	**10**		**Pn**	**00 10 37.6**	**+0.6**
CBE	**Ff, Capester**	**5.75**	**10**	P	**Pn**	**00 10 38.1**	**+1.1**
CBE				S	**Sn**	**00 11 42.9**	**+0.8**
DHSZ	**Broadband at M**	**5.93**	**8**⇑	*e*P	**Pn**	**00 10 39.8**	**+0.5**
GDHS	**Morne Mazeau,**	**5.93**	**8**		**Pn**	**00 10 40.1**	**+0.7**
GDSD	**La Dsirade Is**	**6.10**	**14**		**Pn**	**00 10 42.1**	**+0.3**
ABD	**La Joyeuse, An**	**6.17**	**10**		**Pn**	**00 10 43.5**	**+0.8**
SKI	**Saint Kitts**	**6.92**	**359**	*e*P	**Pn**	**00 10 54.5**	**+1.5**
SKI				*e*S	**Sn**	**00 12 09.6**	**-1.2**
SEUS	**St. Eustatius**	**7.09**	**357**		**Pn**	**00 10 56.1**	**+0.9**
SABA	**Saba**	**7.23**	**355**		**Pn**	**00 10 57.6**	**+0.4**
SABA	**Saba**	**7.23**	**355**	*e*P	**Pn**	**00 10 58.3**	**+1.0**
ANWB	**Willy Bob**	**7.30**	**6**		**Pn**	**00 10 58.5**	**+0.2**
ANWB	**Willy Bob**	**7.30**	**6**	P	**Pn**	**00 10 58.4**	**+0.2**
ANWB	**Willy Bob**	**7.30**	**6**	P	**Pn**	**00 10 58.3**	**+0.1**
	264nm,0.7s						
ANWB				S	**Sn**	**00 12 20.4**	**+0.3**
	264nm,0.7s						
ANWB	**Willy Bob**	**7.30**	**6**	*e*P	**Pn**	**00 10 58.2**	**0.0**
SMRT	**St. Maarten**	**7.64**	**357**		**Pn**	**00 11 03.2**	**+0.3**
SMRT	**St. Maarten**	**7.64**	**357**	*e*P	**Pn**	**00 11 03.3**	**+0.3**
SDV	**Santo Domingo**	**8.01**	**260**	Pn	**Pn**	**00 11 08.0**	**-0.1**
	30nm,0.3s,baz=64,slow=8.6,SNR=76						
SDV				Sn	**Sn**	**00 12 36.9**	**-1.0**
	20nm,0.3s,baz=6.6,slow=14,SNR=3.9						
SDV				Lg	Lg	00 13 19.1	
	baz=33,slow=21						
SDV				LR	LR	00 14 57.6	
	comp=Z,1μm,18.1s,baz=73,slow=43 114nm,0.5s						
SDV	**Santo Domingo**	**8.01**	**260**		**Pn**	**00 11 08.4**	**+0.3**
SDV	**Santo Domingo**	**8.01**	**260**	P	**Pn**	**00 11 08.6**	**+0.5**
	4μm524nm,0.7s						
SDV				S	**Sn**	**00 12 35.8**	**-2.1**
	4μm524nm,0.7s						
SDV	**Santo Domingo**	**8.01**	**260**	*e*P	**Pn**	**00 11 07.3**	**-0.8**
SDV				*e*S	**Sn**	**00 12 39.8**	**+1.9**
SDV	**Santo Domingo**	**8.01**	**260**	*e*P	**Pn**	**00 11 08.5**	**+0.3**
SDV				*e*S	**Sn**	**00 12 35.1**	**-2.8**
BOAV	**Boa Vista**	**8.20**	**165**		**Pn**	**00 11 08.4**	**-2.1**
BOAV	**Boa Vista**	**8.20**	**165**	P	**Pn**	**00 11 08.3**	**-2.3**
	1μm80nm,0.4s						
BOAV				S	**Sn**	**00 12 37.7**	**-4.6**
	1μm80nm,0.4s						
BOAV	**Boa Vista**	**8.20**	**165**	*e*P	**Pn**	**00 11 08.6**	**-1.9**
PDPR	**Patillas Dam,**	**8.28**	**337**		**Pn**	**00 11 10.0**	**-1.6**
CUPR	**Culebra, Puert**	**8.29**	**342**		**Pn**	**00 11 10.8**	**-1.0**
HUMP	**Col San Antoni**	**8.32**	**338**		**Pn**	**00 11 10.9**	**-1.3**
SJG	**San Juan**	**8.41**	**337**	Pn	**Pn**	**00 11 11.9**	**-1.5**
	4.4nm,0.3s,baz=136,slow=8.5,SNR=16						
SJG				Sn	**Sn**	**00 12 40.1**	**-7.3**
	6.3nm,0.3s,baz=329,slow=16,SNR=2.0						
SJG				LR	LR	00 14 46.5	
	comp=Z,391nm,18.4s,baz=168,slow=40 16nm,0.5s						
SJG	**San Juan**	**8.41**	**337**		**Pn**	**00 11 12.7**	**-0.7**
SJG	**San Juan**	**8.41**	**337**	P	**Pn**	**00 11 14.9**	**+1.5**
	15nm,0.5s						
SJG				S	**Sn**	**00 12 42.8**	**-4.5**
	15nm,0.5s						
SJG	**San Juan**	**8.41**	**337**	*e*P	**Pn**	**00 11 14.1**	**+0.7**
OBIP	**Obispado Ponce**	**8.54**	**334**		**Pn**	**00 11 15.9**	**+0.8**
CELP	**Cerrillos**	**8.55**	**334**		**Pn**	**00 11 15.4**	**0.0**
MLPR	**Magueyes Islan**	**8.67**	**331**	Pn	**Pn**	**00 11 15.9**	**-1.1**
ECPR	**Experimental S**	**8.68**	**336**		**Pn**	**00 11 17.2**	**+0.1**
CRPR	**Cabo Rojo, PR**	**8.73**	**331**		**Pn**	**00 11 18.8**	**+0.9**
UUPR	**Utuado, UPR, P**	**8.77**	**334**		**Pn**	**00 11 19.2**	**+0.8**
AOPR	**Arecibo Observ**	**8.87**	**334**		**Pn**	**00 11 19.8**	**+0.1**
PRSN	**Puerto Rico Se**	**8.93**	**331**		**Pn**	**00 11 21.3**	**+0.8**
AGPR	**Aguadilla, PR**	**9.13**	**332**	Pn	**Pn**	**00 11 24.4**	**+1.0**
URI	**Uribia**	**9.27**	**279**	P	**Pn**	**00 11 24.8**	**-0.4**
URI				S	**Sn**	**00 13 10.4**	**+2.0**
URIC	**Uribia, Colomb**	**9.27**	**279**	P	**Pn**	**00 11 24.9**	**-0.3**
	951nm83nm,0.6s						
PAMC	**Pamplona, Colo**	**10.38**	**254**	P	**Pn**	**00 11 40.7**	**-0.2**
	1μm105nm,0.6s						
PAMC				S	**Sn**	**00 13 35.7**	**-0.8**
	1μm105nm,0.6s						
DR12	**Loma Pena Alta**	**10.60**	**323**		**Pn**	**00 11 44.3**	**+0.8**
SDD	**Santo Domingo**	**10.68**	**320**		**Pn**	**00 11 45.4**	**+0.9**
OCAC	**Ocana**	**10.74**	**260**	P	**Pn**	**00 11 45.4**	**-0.2**
	808nm,0.6s						
OCAC				P		00 11 46.6	
	808nm,0.6s						
OCAC				S	**Sn**	**00 13 45.8**	**+0.9**
	808nm,0.6s						
BANI	**BANI**	**10.92**	**318**		**Pn**	**00 11 49.5**	**+1.5**
BARC	**Barichara**	**11.07**	**251**	P	**Pn**	**00 11 50.4**	**+0.2**
	2μm228nm,0.9s						
BARC				S	**Sn**	**00 13 52.7**	**-0.5**
	2μm228nm,0.9s						
MDP	**Montagnes des**	**11.21**	**117**	Pn	**Pn**	**00 11 47.4**	**-4.4**
	3.7nm,0.3s,baz=316,slow=14,SNR=31						
MDP				Sn	Sn	00 13 44.2	-12
	21nm,0.3s,baz=211,slow=20,SNR=13						
MDP				Lg	Lg	00 15 15.1	
	2.8nm,0.3s,baz=191,slow=23,SNR=1.3						
MDP				LR	LR	00 16 38.2	
	comp=Z,722nm,19.9s,baz=304,slow=39						
RUSC	**La Rusia**	**11.25**	**247**	P	**Pn**	**00 11 52.0**	**-0.7**
RUSC	**La Rusia**	**11.25**	**247**	P	**Pn**	**00 11 52.3**	**-0.5**
	2μm166nm,0.9s						
ARGC	**Artiguani, Magd**	**11.43**	**268**	P	**Pn**	**00 11 56.3**	**+1.4**
	3μm231nm,0.6s						
SC01	**Santiago de lo**	**11.91**	**320**			**00 12 03.3**	**+1.9**
SDDR	**Presa de Saban**	**11.96**	**317**		**Pn**	**00 12 03.0**	**+0.9**
SDDR	**Presa de Saban**	**11.96**	**317**	*e*P	**Pn**	**00 12 03.0**	**+0.9**
SJCC	**San Jacinto, C**	**12.35**	**269**	P	**Pn**	**00 12 07.6**	**+0.1**
SJCC				S	**Sn**	**00 14 27.5**	**+3.4**
SJCC	**San Jacinto, C**	**12.35**	**269**	P	**Pn**	**00 12 07.9**	**+0.5**
	2μm211nm,0.8s						
SJCC	**San Jacinto, C**	**12.35**	**269**	*e*P	**Pn**	**00 12 06.6**	**-0.9**
VILC	**Villavicencio,**	**12.60**	**241**	P	**Pn**	**00 12 10.6**	**-0.3**
	4μm319nm,0.6s						
ROSC	**El Rosal**	**12.80**	**245**	Pn	**Pn**	**00 12 13.7**	**-0.3**
	6.0nm,0.3s,baz=75,slow=14,SNR=18						
ROSC				Lg	Lg	00 15 57.7	
	3.6nm,0.3s,baz=33,slow=22,SNR=1.8						
ROSC				LR	LR	00 18 19.4	
	comp=Z,4μm,18.6s,baz=44,slow=43 31nm,0.5s						
ROSC	**El Rosal**	**12.80**	**245**		**Pn**	**00 12 14.7**	**+0.7**
UREC	**San Jos de Ur**	**12.99**	**260**	P	**Pn**	**00 12 15.2**	**-1.0**
	542nm53nm,0.7s						
HELC	**Santa Helena**	**13.40**	**253**	P	**Pn**	**00 12 20.9**	**-1.3**
MACA	**Manacapuru-AM**	**13.59**	**172**		**Pn**	**00 12 22.6**	**-1.7**
MACA	**Manacapuru-AM**	**13.59**	**172**	*e*P	**Pn**	**00 12 21.4**	**-2.9**
GUY2C	**Guyana, Caldas**	**13.60**	**249**	P	**Pn**	**00 12 24.0**	**-0.9**
	2μm223nm,0.8s						
GUY2C				S	**Sn**	**00 14 56.7**	**+1.5**
	2μm223nm,0.8s						
PRAC	**Prado**	**13.82**	**242**	P	**Pn**	**00 12 25.8**	**-1.8**
TEFE	**Tefe**	**13.93**	**188**	*e*P	**Pn**	**00 12 28.1**	**-0.9**
CBOC	**Ciudad Bolivar**	**13.96**	**252**	P	**Pn**	**00 12 30.1**	**+0.4**
	936nm75nm,0.8s						
ORTC	**Ortega, Tolima**	**14.05**	**244**	P	**Pn**	**00 12 29.5**	**-1.2**
	1μm96nm,0.8s						
PLMC	**San Jos del P**	**14.56**	**249**	P	**Pn**	**00 12 38.0**	**+0.3**
NMDO	**Nuevo Mundo**	**15.61**	**312**	Pn	**Pn**	**00 12 52.4**	**+0.9**
ITTB	**Itaituba**	**16.18**	**154**	*e*P	**Pn**	**00 12 53.9**	**-4.9**
CHIV	**Chivirico**	**16.35**	**307**	Pn	**Pn**	**00 13 00.7**	**-0.3**
MTDJ	**Mount Denham**	**16.39**	**300**		**Pn**	**00 13 02.3**	**+0.6**
MTDJ				IAmb	IAmb	00 13 09.2	
	comp=Z,92nm,1.1s						
OTAV	**Otavalo**	**18.66**	**238**	P	**Pn**	**00 13 31.5**	**+1.3**
OTAV	**Otavalo**	**18.66**	**238**	*e*P	**P**	**00 13 29.9**	**+0.1**
NPGB	**Novo Progresso**	**18.76**	**157**	*e*P	**Pn**	**00 13 30.9**	**0.0**
SLOR	**San Lorenzo -**	**19.24**	**236**	P	**Pn**	**00 13 38.0**	**+0.8**
SLOR				IAmb	IAmb	00 13 49.0	
	comp=Z,34nm,0.7s						
BRU2	**Volcan**	**19.82**	**267**	P	**P**	**00 13 41.6**	**-0.5**
BRU2				IAmb	IAmb	00 13 52.3	
	comp=Z,53nm,0.9s						
PIRO	**Carate, Puerto**	**20.50**	**266**	P	**P**	**00 13 46.9**	**-2.5**
PIRO				IAmb	IAmb	00 14 00.8	
	comp=Z,75nm,1.0s						
BILN	**Bilwi Airport**	**20.58**	**282**	P	**P**	**00 13 49.7**	**-0.5**
CZSB	**Cruzeiro do Su**	**20.58**	**209**	P	**P**	**00 13 51.0**	**+0.8**
CZSB	**Cruzeiro do Su**	**20.58**	**209**	*e*P	**P**	**00 13 50.4**	**+0.2**
HDC	**Heredia**	**21.13**	**271**	*e*P	**P**	**00 13 59.5**	**+3.2**
JTS	**Las Juntas de**	**21.94**	**272**	P	**P**	**00 14 02.0**	**-2.9**
	comp=Z,6.2nm,0.9s,baz=339,slow=24,SNR=1.5						
	comp=Z,6.2nm,0.9s						
JTS	**Las Juntas de**	**21.94**	**272**	P	**P**	**00 14 06.2**	**+1.3**
BBSR	**BB Station**	**21.98**	**355**	P	**P**	**00 14 05.8**	**+0.8**
CLDB	**Colider**	**22.18**	**162**	*e*P	**P**	**00 14 06.6**	**-0.8**
PDRB	**Porto dos Gac**	**22.62**	**165**	*e*P	**P**	**00 14 13.1**	**+1.1**
BOAB	**BOACO BROADBA**	**22.66**	**277**	P	**P**	**00 14 13.1**	**+0.6**
BOAB				IAmb	IAmb	00 14 25.7	
	comp=Z,47nm,0.9s						
SOR	**Soroa**	**23.05**	**305**	P	**P**	**00 14 16.3**	**-0.3**
VILB	**Vilhena**	**23.30**	**174**	P	**P**	**00 14 19.3**	**+0.2**
VILB	**Vilhena**	**23.30**	**174**	*e*P	**P**	**00 14 21.0**	**+2.0**
ATAH	**Atahualpa**	**23.41**	**223**	LR	LR	00 24 44.1	
	comp=Z,821nm,19.5s,baz=35,slow=40						
SMTB	**Santa Maria do**	**24.28**	**141**	*e*P	**P**	**00 14 29.5**	**+1.1**
SNDB	**Serra Nova Dou**	**24.90**	**153**	*e*P	**P**	**00 14 35.9**	**+1.9**
DWPF	**Disney Wildern**	**24.95**	**318**	P	**P**	**00 14 34.4**	**0.0**
NBPS	**Pedro II - PI**	**25.71**	**124**	*e*P	**P**	**00 14 44.2**	**+2.8**
PTLB	**Pontes e Lacer**	**25.89**	**172**	P	**P**	**00 14 43.4**	**+0.5**
PTLB				IAmb	IAmb	00 14 51.7	
	comp=Z,19nm,0.9s						
PTLB	**Pontes e Lacer**	**25.89**	**172**	*e*P	**P**	**00 14 43.8**	**+0.9**
NBMO	**Morrinhos-CE**	**26.30**	**120**	*e*P	**P**	**00 14 47.5**	**+0.8**
NNA	**Nana**	**26.31**	**213**	P	**P**	**00 14 47.1**	**+0.2**
NNA				IAmb	IAmb	00 14 49.8	
	comp=Z,26nm,0.7s						
MTO3	**Montecristo**	**26.39**	**281**	P	**P**	**00 14 48.5**	**+0.7**
656A	**Willston**	**26.51**	**318**	P	**P**	**00 14 49.9**	**+1.4**
656A				IAmb	IAmb	00 14 54.2	
	comp=Z,34nm,1.3s						
SALV	**Santo Antonio**	**27.00**	**165**	*e*P	**P**	**00 14 54.2**	**+1.3**
LPAZ	**La Paz**	**27.04**	**192**	P	**P**	**00 14 55.3**	**+1.3**
	comp=Z,4.7nm,0.7s,baz=348,slow=12,SNR=18						
LPAZ				LR	LR	00 26 05.6	
	comp=Z,515nm,19.2s,baz=355,slow=37 comp=Z,4.7nm,0.7s						
LPAZ	**La Paz**	**27.04**	**192**	P	**P**	**00 14 52.9**	**-1.1**
LPAZ	**La Paz**	**27.04**	**192**	*e*P	**P**	**00 14 56.0**	**+1.9**
456A	**Hilliard**	**27.10**	**321**	P	**P**	**00 14 54.8**	**+1.0**
456A				IAmb	IAmb	00 15 07.9	
	comp=Z,41nm,1.0s						
PETF	**Flores**	**27.22**	**287**	P	**P**	**00 14 55.8**	**+0.8**
ARAG	**Araguaiana, MT**	**28.04**	**157**	*e*P	**P**	**00 15 03.9**	**+1.5**
SDBA	**SAO DESIDERIO**	**28.68**	**142**	*e*P	**P**	**00 15 10.0**	**+1.9**
JSC	**Jenkinsville**	**29.27**	**327**	P	**P**	**00 15 14.0**	**+1.0**
CCIG	**Comitan**	**29.27**	**285**	P	**P**	**00 15 13.9**	**+0.4**
CCIG				IAmb	IAmb	00 15 17.4	
	comp=Z,12nm,0.7s						
W57A	**Gilead**	**29.30**	**330**	P	**P**	**00 15 13.0**	**-0.3**
PB16	**IPOC Station P**	**29.32**	**193**	P	**P**	**00 15 13.9**	**-0.3**
PB16				IAmb	IAmb	00 15 20.3	
	comp=Z,15nm,0.8s						
BDFB	**Brasilia**	**29.63**	**151**	P	**P**	**00 15 17.5**	**+0.9**
	comp=Z,2.7nm,0.6s,baz=326,slow=15,SNR=7.1						
BDFB				LR	LR	00 28 41.2	
	comp=Z,131nm,18.9s,baz=327,slow=39 comp=Z,2.7nm,0.6s						
BDFB	**Brasilia**	**29.63**	**151**	P	**P**	**00 15 16.8**	**+0.2**
NBPA	**Parau_RN**	**30.05**	**121**	*e*P	**P**	**00 15 21.6**	**+1.3**
GO01	**Chusmiza**	**30.54**	**192**	P	**P**	**00 15 24.6**	**-0.4**
GO01				IAmb	IAmb	00 15 29.6	
	comp=Z,9.6nm,0.6s						
250A	**Grady**	**30.64**	**318**	P	**P**	**00 15 26.1**	**+0.8**
250A				IAmb	IAmb	00 15 32.0	
	comp=Z,24nm,0.9s						
BRAL	**Brewton**	**30.67**	**316**	P	**P**	**00 15 25.6**	**+0.1**
PB11	**IPOC Station P**	**30.73**	**193**	P	**P**	**00 15 26.7**	**+0.4**
RCBR	**Riachuelo**	**31.12**	**120**	LR	LR	00 28 02.9	
	comp=Z,73nm,21.7s,baz=266,slow=36						
RCBR	**Riachuelo**	**31.12**	**120**	P	**P**	**00 15 30.3**	**+0.6**
RCBR				IAmb	IAmb	00 15 38.0	
	comp=Z,18nm,0.8s						
RCBR	**Riachuelo**	**31.12**	**120**	*e*P	**P**	**00 15 31.3**	**+1.6**
JANB	**Januaria**	**31.12**	**144**	*e*P	**P**	**00 15 31.9**	**+2.1**
BDQN	**Bodoquena, MS**	**31.17**	**169**	*e*P	**P**	**00 15 32.7**	**+2.7**
AQDB	**Aquidauana**	**31.41**	**167**	*e*P	**P**	**00 15 34.5**	**+2.4**
IPMB	**Ipameri, GO**	**31.57**	**153**	*e*P	**P**	**00 15 35.0**	**+1.3**
LRAL	**Lakeview Retre**	**31.79**	**319**	P	**P**	**00

P46A IAmb IAmb 00 16 28.4
comp=Z,13nm,0.7s
NATX Nacogdoches 36.45 311 P **P** **00 16 16.9 +1.1**
NATX IAmb IAmb 00 16 17.9
comp=Z,22nm,0.9s
HKT Hockley 36.54 307 P **P** **00 16 17.4 +0.9**
HKT IAmb IAmb 00 16 18.5
comp=Z,29nm,1.4s
X40A Basin Creek Fa 36.55 316 P **P** **00 16 17.6 +1.0**
HNVL Huntsville, TX 36.60 309 P **P** **00 16 16.8 -0.4**
HNVL IAmb IAmb 00 16 19.3
comp=Z,18nm,0.7s
WHAR Wooly Hollow 36.64 317 P **P** **00 16 18.2 +0.8**
WHAR IAmb IAmb 00 16 23.8
comp=Z,8.8nm,0.6s
K50A Casco 36.69 335 P **P** **00 16 18.2 +0.5**
AAM Ann Arbor 36.74 334 P **P** **00 16 18.8 +0.6**
CPUP Villa Florida 36.85 172 P **P** **00 16 19.2 0.0**
comp=Z,3.1nm,0.7s,baz=357,slow=9.8,SNR=6.6
CPUP PcP **PcP** **00 18 41.9 +1.1**
comp=Z,3.1nm,0.7s,baz=0.9,slow=3.9,SNR=6.1
comp=Z,3.1nm,0.7s
FCAR Ozark Folk Cen 36.88 318 P **P** **00 16 19.0 -0.5**
FCAR IAmb IAmb 00 16 24.7
comp=Z,15nm,0.6s
Q44A Meyer Farm, Va 36.90 325 P **P** **00 16 20.0 +0.4**
Q44A IAmb IAmb 00 16 33.0
comp=Z,16nm,0.7s
T42A Van Buren 36.91 321 P **P** **00 16 20.0 +0.3**
T42A IAmb IAmb 00 16 25.0
comp=Z,40nm,1.9s
MIAR Mount Ida 37.10 315 P **P** **00 16 20.8 -0.5**
MIAR IAmb IAmb 00 17 09.9
comp=Z,31nm,1.9s
FVM French Village 37.11 322 P **P** **00 16 21.2 -0.2**
FVM IAmb IAmb 00 16 27.8
comp=Z,15nm,0.6s
Z38A Mt. Pleasant 37.42 312 P **P** **00 16 23.0 -1.1**
MLDN Muldoon 37.44 306 P **P** **00 16 24.8 +0.5**
AC02 Maricunga 37.52 190 P **P** **00 16 25.7 +0.2**
AC02 IAmb IAmb 00 16 31.5
comp=Z,12nm,0.8s
CCM Cathedral Cave 37.65 322 P **P** **00 16 25.5 -0.5**
CCM IAmb IAmb 00 16 32.3
comp=Z,11nm,0.6s
735A Kenedy 37.68 304 P **P** **00 16 25.9 -0.4**
P43A Skaggs, Pawnee 37.69 325 P **P** **00 16 27.4 +1.2**
MGMO Mountain Grove 37.73 320 P **P** **00 16 26.9 +0.2**
L46A Eue Claire 37.73 331 P **P** **00 16 27.6 +1.1**
HBVL Hebbronville 37.76 301 P **P** **00 16 28.5 +1.4**
BUKO Buck Lake 37.79 341 P **P** **00 16 28.4 +1.4**
BUKO IAmb IAmb 00 16 35.1
comp=Z,51nm,1.9s
435B Jarrell 38.26 307 P **P** **00 16 31.7 +0.5**
HHAR Hobbs 38.31 317 P **P** **00 16 31.2 -0.4**
HHAR IAmb IAmb 00 16 32.4
comp=Z,15nm,0.6s
R40A Maddies Statio 38.43 321 P **P** **00 16 31.8 -0.7**
R40A IAmb IAmb 00 16 37.8
comp=Z,7.5nm,0.5s
WHTX Lake Whitney, 38.67 309 P **P** **00 16 35.0 +0.3**
WHTX IAmb IAmb 00 16 42.7
comp=Z,19nm,0.7s
U38A Gravette 38.69 317 **P** **00 16 33.7 -1.1**
U38A IAmb IAmb 00 16 35.0
comp=Z,7.8nm,0.5s
S39A Bolivar 38.72 320 **P** **00 16 34.7 -0.3**
833A Chaparral WMA, 38.79 303 **P** **00 16 35.6 -0.1**
FW13 Cleburne 38.81 310 P **P** **00 16 35.4 -0.4**
FW13 IAmb IAmb 00 16 43.1
comp=Z,19nm,0.9s
RLO Rose Lookout 38.97 316 P **P** **00 16 36.9 -0.2**
P40A Paris 39.08 323 **P** **00 16 37.4 -0.6**
P40A IAmb IAmb 00 16 38.7
comp=Z,19nm,0.8s
HNDO Hondo 39.12 304 P **P** **00 16 38.9 +0.4**
HNDO IAmb IAmb 00 16 39.7
comp=Z,21nm,0.9s
Z35A Perchaven, San 39.12 311 P **P** **00 16 38.5 0.0**
Z35A IAmb IAmb 00 16 39.9
comp=Z,17nm,1.0s
GLMI Grayling 39.20 335 P **P** **00 16 40.5 +1.6**
TUL3 Leonard 39.36 316 **P** **00 16 39.9 -0.5**
TUL3 IAmb IAmb 00 16 40.8
comp=Z,20nm,0.6s
LOOK Love County 39.38 312 P **P** **00 16 41.4 +0.8**
LOOK IAmb IAmb 00 16 42.3
comp=Z,23nm,1.0s
L42A Oliver, Polo 39.42 328 P **P** **00 16 41.4 +0.6**
L42A IAmb IAmb 00 17 11.9
comp=Z,58nm,1.8s
BRDY Brady 39.57 307 **P** **00 16 42.0 -0.2**
AC05 El Transito 39.67 191 **P** **00 16 42.9 -0.2**
AC05 IAmb IAmb 00 16 48.4
comp=Z,26nm,0.8s
PLPT Palo Pinto 39.69 310 P **P** **00 16 42.8 -0.3**
PLPT IAmb IAmb 00 16 44.3
comp=Z,20nm,0.9s
W35A Tecumseh 39.73 314 **P** **00 16 42.0 -1.4**
W35A IAmb IAmb 00 16 43.6
comp=Z,18nm,0.5s
DEOK Depew 39.81 315 P **P** **00 16 43.1 -1.0**
DEOK IAmb IAmb 00 16 44.9
comp=Z,25nm,1.4s
JCT Junction City 39.89 306 P **P** **00 16 44.6 -0.4**
JCT IAmb IAmb 00 16 46.0
comp=Z,19nm,0.5s
LCO Las Campanas 39.92 191 P **P** **00 16 44.9 -0.4**
LCO IAmb IAmb 00 16 50.3
comp=Z,25nm,0.8s
P38A Dawn 40.03 322 P **P** **00 16 44.8 -1.0**
ZAIG Zacatecas 40.07 293 P **P** **00 16 47.5 +0.7**
OK052 Battle Ridge R 40.10 315 P **P** **00 16 45.3 -1.2**
OK052 IAmb IAmb 00 16 46.8
comp=Z,17nm,0.5s
QUOK Quay 40.13 315 P **P** **00 16 46.2 -0.5**
X34A Smith Ranch, M 40.14 313 **P** **00 16 47.0 +0.1**
FNO Franklin 40.15 314 P **P** **00 16 46.2 -0.8**
FNO IAmb IAmb 00 16 47.3
comp=Z,27nm,1.4s
DRIO Del Rio 40.17 304 P **P** **00 16 47.4 +0.1**
WTFS Witchita Falls 40.22 311 P **P** **00 16 47.0 -0.5**
OKCSW OKLAHOMA CITY 40.25 314 P **P** **00 16 47.3 -0.5**
OKCSW IAmb IAmb 00 16 48.0
comp=Z,25nm,0.6s
L40A Anamosa 40.29 327 P **P** **00 16 47.9 -0.1**
H43A Windswept, Lux 40.30 332 P **P** **00 16 49.0 +0.9**
H43A IAmb IAmb 00 16 49.7
comp=Z,21nm,0.7s
E46A Sault Ste Mari 40.34 337 P **P** **00 16 49.1 +0.8**
JFWS Jewell Farm 40.37 328 P **P** **00 16 49.0 +0.3**
JFWS IAmb IAmb 00 17 08.2
comp=Z,38nm,1.5s
T35A Sooner Cattle 40.38 316 **P** **00 16 48.0 -0.8**
OK051 E0350 and S346 40.39 316 P **P** **00 16 48.2 -0.7**
I42A Draeger Farm, 40.41 330 **P** **00 16 48.8 -0.2**
I42A IAmb IAmb 00 16 56.6
comp=Z,13nm,0.5s
OK048 Pawnee Station 40.42 315 P **P** **00 16 48.7 -0.5**
OK048 IAmb IAmb 00 16 49.6
comp=Z,14nm,0.5s
N38A Joes South For 40.58 324 P **P** **00 16 51.2 +0.7**
ABTX Abilene, Hawle 40.62 309 P **P** **00 16 51.2 +0.3**
ABTX IAmb IAmb 00 16 51.9
comp=Z,13nm,0.6s
CO01 Juntas del Tor 40.75 190 P **P** **00 16 52.0 -0.2**
OZNA Ozona 41.12 306 **P** **00 16 54.5 -0.6**
CROK Carrier 41.18 315 P **P** **00 16 54.5 -0.9**
CROK IAmb IAmb 00 16 55.9
comp=Z,13nm,0.6s
I40A Norwalk 41.25 329 P **P** **00 16 55.8 -0.1**
I40A IAmb IAmb 00 17 01.4
comp=Z,13nm,0.6s
APMT Aspermont 41.27 309 **P** **00 16 55.9 -0.4**
APMT IAmb IAmb 00 16 57.4
comp=Z,22nm,1.0s
SCIA State Center 41.29 325 P **P** **00 16 56.6 +0.3**
SCIA IAmb IAmb 00 17 11.5
comp=Z,61nm,1.8s
KAN01 Argonia South 41.36 316 P **P** **00 16 56.4 -0.5**
KAN01 IAmb IAmb 00 16 57.5
comp=Z,17nm,0.6s
F42A Maple Grove Fa 41.45 333 P **P** **00 16 58.2 +0.7**
SGCY Sterling City 41.49 307 P **P** **00 16 58.2 +0.1**
SGCY IAmb IAmb 00 16 58.8
comp=Z,12nm,0.5s
KAN08 Anthony NE Sta 41.54 316 P **P** **00 16 58.0 -0.4**
KAN08 IAmb IAmb 00 17 18.9
comp=Z,49nm,1.3s
SAND Sanderson 41.59 304 **P** **00 16 58.9 0.0**
KSU1 Kansas State U 41.64 319 **P** **00 16 57.9 -1.3**
KSU1 IAmb IAmb 00 16 58.9
comp=Z,20nm,0.7s
OK038 West end E0370 41.70 314 P **P** **00 16 59.1 -0.6**
SN07 Snyder 07 41.77 309 P **P** **00 17 00.6 +0.3**
NOKA Waynoka 41.91 315 P **P** **00 17 01.4 -0.1**
ELIS Ellis County 41.98 314 P **P** **00 17 02.2 +0.2**
ELIS IAmb IAmb 00 17 02.8
comp=Z,21nm,0.6s
DKNS Dickens 42.02 309 **P** **00 17 02.5 0.0**
G40A Rib Lake 42.05 331 P **P** **00 17 02.9 +0.5**
G40A IAmb IAmb 00 17 05.4
comp=Z,55nm,2.0s
N35A Tabor 42.06 322 P **P** **00 17 01.2 -1.3**
N35A IAmb IAmb 00 17 02.4
comp=Z,16nm,0.9s
ZON Zonda 42.08 188 P **P** **00 17 03.5 +0.6**
SMWD Samnorwood 42.13 312 P **P** **00 17 02.1 -1.3**
POST Post 42.23 308 **P** **00 17 04.0 -0.1**
MNHN Monahans 42.58 305 P **P** **00 17 06.7 -0.3**
MNHN IAmb IAmb 00 17 07.9
comp=Z,14nm,0.7s
R32A Long Quarter, 42.66 317 **P** **00 17 07.0 -0.5**
R32A IAmb IAmb 00 17 08.7
comp=Z,56nm,1.6s
TXAR Lajitas Array 42.66 302 P **P** **00 17 08.6 +0.8**
comp=Z,3.3nm,0.6s,baz=116,slow=8.7,SNR=69
TXAR PcP **PcP** **00 18 59.1 -0.4**
comp=Z,1.7nm,0.7s,baz=100,slow=3.5,SNR=5.0
TXAR ScP **ScP** **00 22 47.6 -0.8**
comp=Z,0.4nm,0.6s,baz=87,slow=4.5,SNR=4.1
comp=Z,3.3nm,0.6s
TXAR Lajitas Array 42.66 302 **P** **00 17 07.6 -0.2**
TX31 Lajitas Ar. Si 42.66 302 **P** **00 17 07.7 -0.1**
I37A Lemond, Waseca 42.79 327 P **P** **00 17 07.9 -0.6**
I37A IAmb IAmb 00 17 18.3
comp=Z,18nm,0.7s
ALPN Alpine 42.96 304 **P** **00 17 10.1 -0.2**
AMTX Amarillo 43.10 311 **P** **00 17 10.9 -0.4**
L34A Svendsen Farm, 43.16 323 **P** **00 17 10.9 -0.6**
SPMN Marine on St. 43.30 329 P **P** **00 17 12.4 -0.2**
PECS Pecos 43.47 305 P **P** **00 17 14.8 +0.5**
PH02 Texas Public H 43.52 311 P **P** **00 17 13.9 -0.7**
PH02 IAmb IAmb 00 17 15.9
comp=Z,13nm,0.8s
CBKS Cedar Bluff 43.55 317 P **P** **00 17 13.9 -0.8**
CBKS IAmb IAmb 00 17 14.8
comp=Z,22nm,0.7s
VA03 San Esteban 43.55 190 P **P** **00 17 16.0 +1.2**
VA03 IAmb IAmb 00 17 20.1
comp=Z,18nm,0.8s
MSTX Muleshoe 43.56 309 P **P** **00 17 15.0 0.0**
MSTX IAmb IAmb 00 17 18.1
comp=Z,22nm,1.0s
E38A The Farm, Brul 43.67 331 P **P** **00 17 15.5 0.0**
HTMS Hat Mesa 43.67 307 P **P** **00 17 15.6 -0.3**
HPIG 43.72 298 **P** **00 17 15.4 -1.0**
HPIG IAmb IAmb 00 17 17.9
comp=Z,17nm,1.0s
CLNB Carlsbad 43.79 306 P **P** **00 17 16.5 -0.4**
BGNE Belgrade 43.92 321 P **P** **00 17 17.4 -0.2**
BGNE IAmb IAmb 00 17 17.9
comp=Z,41nm,1.3s
GDL2 Guadalupe Moun 44.15 306 **P** **00 17 20.0 +0.1**
VHRN Van Horn 44.20 304 **P** **00 17 20.3 +0.1**
TBO Thunder Bay 44.24 335 P **P** **00 17 20.8 +0.7**
TBO IAmb IAmb 00 17 21.2
comp=Z,17nm,0.6s
MT13 San Alfonso 44.47 189 P **P** **00 17 23.2 +1.1**
SCHQ Schefferville 44.47 357 P **P** **00 17 20.7 -1.1**
comp=Z,3.9nm,0.5s,baz=183,slow=6.3,SNR=22
comp=Z,3.9nm,0.5s
SCHQ Schefferville 44.47 357 **P** **00 17 22.8 +0.9**
SCHQ IAmb IAmb 00 17 29.1
comp=Z,13nm,1.0s
RTBA Rita Blanca 44.54 312 **P** **00 17 22.1 -0.8**
EYMN Ely 44.62 332 **P** **00 17 23.0 -0.2**
BO04 La Punta 44.76 189 P **P** **00 17 25.1 +0.7**
BO04 IAmb IAmb 00 17 29.5
comp=Z,18nm,0.7s
MNTX Cornudas Mount 44.80 305 **P** **00 17 24.3 -0.6**
BO01 Tunca 45.23 190 P **P** **00 17 27.9 -0.2**
BO01 IAmb IAmb 00 17 32.9
comp=Z,15nm,0.8s
K30B Basset 45.53 322 P **P** **00 17 29.6 -0.9**
F33A 5 Mile Ranch, 45.53 327 P **P** **00 17 29.9 -0.5**
F33A IAmb IAmb 00 18 13.0
comp=Z,16nm,1.3s
BO02 Sierra Bellavi 45.57 189 P **P** **00 17 31.9 +1.0**
EPT El Paso 45.74 305 P **P** **00 17 31.9 -0.6**
EPT IAmb IAmb 00 17 33.0
comp=Z,12nm,0.7s
T25A Trinidad 46.05 312 P **P** **00 17 34.4 -0.6**
T25A IAmb IAmb 00 17 36.3
comp=Z,21nm,1.4s
ANMO Albuquerque 46.74 309 LR LR 00 39 50.8
comp=Z,102nm,19.0s,baz=123,slow=39
ANMO Albuquerque 46.74 309 **P** **00 17 41.0 +0.6**
ANMO IAmb IAmb 00 17 46.8
comp=Z,6.5nm,0.7s
Y22A Socorro 46.79 307 **P** **00 17 40.4 -0.4**
Y22A IAmb IAmb 00 17 50.0
comp=Z,7.8nm,0.9s
LENM Lemitar 46.88 307 P **P** **00 17 41.8 +0.4**
EPLO Experimental L 46.89 333 **P** **00 17 40.1 -0.9**
AGMN Agassiz Nation 46.94 330 **P** **00 17 40.8 -0.7**
SBM South Baldy 46.98 307 P **P** **00 17 43.0 +0.6**
121A Cookes Peak, D 47.00 305 P **P** **00 17 42.3 -0.1**
121A IAmb IAmb 00 17 45.0
comp=Z,7.5nm,0.8s
SDCO Great Sand Dun 47.09 313 P **P** **00 17 41.9 -1.3**
ISCO Idaho Springs 48.03 315 **P** **00 17 49.6 -0.8**
DUN6 Lazy B Ranch 48.06 305 P **P** **00 17 51.4 +0.8**
ULM Lac du Bonnet 48.28 332 P **P** **00 17 50.9 -1.0**
comp=Z,20nm,0.5s,baz=127,slow=8.1,SNR=73
ULM ScP **ScP** **00 23 07.8 -3.2**
comp=Z,1.0nm,0.5s,baz=133,slow=6.9,SNR=5.2
ULM LR LR 00 38 00.9
comp=Z,48nm,19.6s,baz=196,slow=36
comp=Z,20nm,0.5s
ULM Lac du Bonnet 48.28 332 **P** **00 17 50.4 -1.4**
MDND Maddock 48.56 327 P **P** **00 17 53.6 -0.5**
RSSD Black Hills 49.03 321 P **P** **00 17 57.1 -0.8**
X18A Snowflake 49.33 307 P **P** **00 18 01.0 +0.7**
TUC Tucson 49.37 304 P **P** **00 18 00.7 0.0**
PV01 Paradox Valley 49.48 312 P **P** **00 18 02.4 +0.8**
PV01 IAmb IAmb 00 18 03.3
comp=Z,9.8nm,1.1s
PV15 Paradox Valley 49.49 312 P **P** **00 18 02.1 +0.5**
PV15 IAmb IAmb 00 18 19.9
comp=Z,10nm,0.8s
PV02 Paradox Valley 49.63 312 P **P** **00 18 02.6 -0.1**
PV02 IAmb IAmb 00 18 04.3
comp=Z,18nm,1.0s
PV13 Radium Mtn., P 49.67 312 P **P** **00 18 03.0 -0.1**
PV13 IAmb IAmb 00 18 30.1
comp=Z,10nm,1.0s
PV03 Paradox Valley 49.73 312 P **P** **00 18 03.4 0.0**
PV11 David Mesa, Pa 49.76 312 P **P** **00 18 04.1 +0.5**
PV11 IAmb IAmb 00 18 11.0
comp=Z,7.3nm,0.6s
PV18 Skein Mesa, Pa 49.77 312 P **P** **00 18 03.9 +0.2**
PV18 IAmb IAmb 00 18 30.1
comp=Z,6.7nm,0.8s
PV16 Nyswonger Mesa 49.80 312 P **P** **00 18 03.4 -0.6**
PV16 IAmb IAmb 00 18 20.2
comp=Z,30nm,1.8s
PV19 Morning Glory 49.85 312 P **P** **00 18 03.3 -1.0**
PV19 IAmb IAmb 00 19 48.3
comp=Z,7.9nm,0.8s
PV20 West Nyswonger 49.85 312 P **P** **00 18 04.2 -0.1**
PV20 IAmb IAmb 00 18 13.8
comp=Z,9.5nm,0.7s
PV05 Paradox Valley 49.85 312 P **P** **00 18 04.4 0.0**
K22A Casper 49.91 318 P **P** **00 18 04.5 -0.2**
K22A IAmb IAmb 00 18 04.9
comp=Z,6.7nm,0.7s
X16A Lo Mia Camp, P 50.47 306 P **P** **00 18 09.2 +0.1**
WUAZ Wupatki 50.73 308 P **P** **00 18 11.3 +0.3**
WUAZ IAmb IAmb 00 18 17.1
comp=Z,6.3nm,0.7s
LR05 Currie 51.09 189 P **P** **00 18 14.2 +1.0**
LR05 IAmb IAmb 00 18 18.4
comp=Z,14nm,0.8s
RDMU Red Mountain 51.12 314 P **P** **00 18 13.3 -0.6**
P18A Preston Nutter 51.24 313 P **P** **00 18 14.9 -0.1**
SRU San Rafael Swe 51.26 312 P **P** **00 18 14.8 -0.2**
PLCA Paso Flores 51.37 188 P **P** **00 18 16.4 +0.9**
comp=Z,11nm,0.7s,baz=349,slow=7.5,SNR=19
PLCA LR LR 00 40 27.5
comp=Z,98nm,18.8s,baz=357,slow=36
comp=Z,11nm,0.7s
PLCA Paso Flores 51.37 188 **P** **00 18 14.9 -0.5**
PLCA IAmb IAmb 00 18 21.2
comp=Z,11nm,0.8s
PLCA Paso Flores 51.37 188 *e*P **P** **00 18 16.8 +1.3**
ASCN Ascension 51.40 109 P **P** **00 18 14.0 -2.1**
PIX Pinacate 51.40 302 P **P** **00 18 15.0 -0.9**
PIX IAmb IAmb 00 18 17.9
comp=Z,18nm,1.7s
P17A Butcher Ranch, 51.55 313 P **P** **00 18 17.4 +0.4**
Y14A Wickenburg 51.59 305 P **P** **00 18 17.8 +0.4**
U15A North Rim 51.72 308 P **P** **00 18 19.3 +0.8**
BSUT Blindstream Ca 51.94 314 P **P** **00 18 19.1 -1.2**
PD31 Pinedale Array 51.98 317 **P** **00 18 19.2 -1.1**
PD31 IAmb IAmb 00 18 25.0
comp=Z,6.7nm,0.6s
PDAR Pinedale Array 51.98 317 P **P** **00 18 19.3 -1.1**
comp=Z,4.6nm,0.5s,baz=114,slow=9.8,SNR=79
PDAR PcP **PcP** **00 19 31.7 -0.9**
comp=Z,1.0nm,0.5s,baz=118,slow=4.2,SNR=1.1
PDAR ScP **ScP** **00 23 25.3 -2.1**
comp=Z,0.4nm,0.7s,baz=97,slow=4.3,SNR=3.3
PDAR LR LR 00 41 25.1
comp=Z,55nm,20.5s,baz=106,slow=37
comp=Z,4.6nm,0.5s
PDAR Pinedale Array 51.98 317 **P** **00 18 19.2 -1.1**
BW06 Boulder Array 51.98 317 P **P** **00 18 19.0 -1.3**
BW06 IAmb IAmb 00 18 25.0
comp=Z,6.7nm,0.6s
MTPU Mount Pierson 52.13 310 P **P** **00 18 21.8 +0.1**
KNB Kanab 52.30 309 P **P** **00 18 23.2 +0.5**
W13A Hualapai Mount 52.59 306 P **P** **00 18 25.0 0.0**
TCUT Toone Canyon 52.61 314 P **P** **00 18 23.8 -1.3**
LCMT Little Creek M 52.62 309 P **P** **00 18 25.0 -0.1**
SZCU Shurtz Canyon 52.67 310 P **P** **00 18 25.4 -0.2**
CTU Camp Tracy 52.70 314 P **P** **00 18 25.1 -0.5**
RLMT Red Lodge 52.79 320 P **P** **00 18 25.3 -0.9**
HWUT Hardware Ranch 52.90 315 **P** **00 18 26.1 -1.0**
AHID Auburn Hatcher 53.02 316 P **P** **00 18 26.6 -1.4**
LOHW Long Hollow 53.02 318 P **P** **00 18 27.3 -0.7**
SNOW Snow King Moun 53.06 317 P **P** **00 18 28.1 -0.3**
MOOW Moose Ponds 53.17 318 **P** **00 18 28.8 -0.3**
YNE Yellowstone No 53.21 319 P **P** **00 18 28.6 -0.8**
LL01 San Ignacio de 53.25 189 P **P** **00 18 30.5 +1.3**
FLWY Flagg Ranch 53.27 318 P **P** **00 18 29.7 -0.2**
FXWY Fox Creek 53.31 317 P **P** **00 18 29.8 -1.2**
IRM Iron Mountain 53.37 305 P **P** **00 18 31.1 +0.6**
IRM IAmb IAmb 00 18 32.1
comp=Z,19nm,1.5s
PSUT Pine Spring 53.53 311 P **P** **00 18 31.9 0.0**
YHH Holmes Hill 53.66 319 P **P** **00 18 32.6 -0.2**
YMR Madison River 53.69 319 P **P** **00 18 33.6 +0.7**
FCC Fort Churchill 53.83 340 IAmb IAmb 00 19 00.0
comp=Z,34nm,1.7s
YHB Horse Butte 53.87 319 P **P** **00 18 34.0 -0.2**
YHB IAmb IAmb 00 18 58.2
comp=Z,7.8nm,0.8s
YHL Hebgen Lake 53.91 319 P **P** **00 18 35.0 +0.4**
YHL IAmb IAmb 00 18 35.9
comp=Z,14nm,0.8s
FFC Flin Flon 54.05 333 **P** **00 18 34.0 -1.0**
FFC IAmb IAmb 00 18 34.4
comp=Z,7.2nm,0.6s
HRY Holter Researc 55.09 321 P **P** **00 18 41.5 -1.4**
ELK Elko 55.22 313 P **P** **00 18 42.4 -1.8**
AY01 Puyuhuapi 55.28 189 P **P** **00 18 44.7 +0.7**
AY01 IAmb IAmb 00 18 52.0
comp=Z,8.1nm,0.8s
LYMT Lyon Mountain 55.48 321 P **P** **00 18 44.6 -1.3**
DSP Deep Springs 56.35 308 **P** **00 18 52.1 +0.1**
DSP IAmb IAmb 00 18 53.7
comp=Z,16nm,1.5s
NVAR Mina Array Bea 56.86 309 P **P** **00 18 56.2 +0.3**
comp=Z,1.9nm,0.8s,baz=107,slow=9.5,SNR=3.9
NVAR LR LR 00 46 37.4
comp=Z,132nm,18.1s,baz=100,slow=40
comp=Z,1.9nm,0.8s
PLID Pearl Lake 57.16 317 **P** **00 18 56.1 -1.9**
DBIC Dimbokro 57.21 89 P **P** **00 18 59.1 +0.7**
comp=Z,6.4nm,0.7s,baz=302,slow=5.8,SNR=16
comp=Z,6.4nm,0.7s
DBIC Dimbokro 57.21 89 IAmb IAmb 00 19 05.8
comp=Z,12nm,1.1s
MD01 Midelt array s 57.54 58 **P** **00 19 00.8 +0.2**
MD31 MD31 57.54 58 P **P** **00 19 01.1 +0.6**
RPN Rapa Nui 58.64 229 LR LR 00 42 00.9
comp=Z,70nm,19.2s,baz=18,slow=34
BLKN Baker Lake 58.73 344 IAmb IAmb 00 19 11.8
comp=Z,7.4nm,0.7s
LNOR Linclon Mounta 58.94 318 IAmb IAmb 00 20 13.8
comp=Z,25nm,2.0s
NEW Newport 59.00 321 LR LR 00 46 04.7
comp=Z,64nm,20.4s,baz=105,slow=38
ESDC Sonseca Array 59.44 50 P **P** **00 19 15.5 +1.8**
comp=Z,2.1nm,0.9s,baz=256,slow=6.8,SNR=9.1
comp=Z,2.1nm,0.9s
YBH Yreka Blue Hor 60.91 312 LR LR 00 48 43.0
comp=Z,7.5nm,18.4s,baz=106,slow=39
LLLB Lillooet 62.71 322 P **P** **00 19 35.1 -0.6**
LLLB IAmb IAmb 00 19 58.1
comp=Z,18nm,1.3s
TORD Torodi Ar. Bea 62.91 80 P **P** **00 19 38.0 +0.5**
comp=Z,4.4nm,0.5s,baz=278,slow=8.8,SNR=88
comp=Z,4.4nm,0.5s
TORD Torodi Ar. Bea 62.91 80 **P** **00 19 40.0 +2.5**
SUMG Summit 63.84 8 **P** **00 19 42.9 -0.2**
SUMG IAmb IAmb 00 19 52.0
comp=Z,19nm,1.2s
SUMG Summit 63.84 8 *i* P **P** **00 19 42.7 -0.4**
SUMG IAmb IAmb 00 19 49.4
comp=Z,13nm,1.0s
YKA Yellowknife Ar 63.90 336 P **P** **00 19 41.8 -1.4**
comp=Z,4.8nm,0.6s,baz=109,slow=6.8,SNR=77
comp=Z,4.8nm,0.6s
YKA Yellowknife Ar 63.90 336 P **P** **00 19 41.4 -1.9**
YKAW3 Yellowknife Wh 63.94 336 IAmb IAmb 00 19 47.2
comp=Z,6.5nm,0.8s
EKA Eskdalemuir Ar 64.39 33 P **P** **00 19 47.3 +0.7**
comp=Z,1.2nm,0.5s,baz=294,slow=8.0,SNR=11
comp=Z,1.2nm,0.5s
SCO Scoresbysund 65.22 14 *i* P **P** **00 19 52.8 +1.1**
TAM Tamanrasset 66.02 70 P **P** **00 19 58.8 +0.8**
TULEG Thule 66.23 358 *i* P **P** **00 19 56.9 -1.3**
TULEG IAmb IAmb 00 19 58.5
comp=Z,2.7nm,0.6s
BBB Bella Bella 66.89 322 LR LR 00 49 15.3
comp=Z,4.1nm,19.1s,baz=97,slow=36
KOTAN Kotaneelee Air 67.01 331 P **P** **00 20 03.3 -0.1**
baz=110
NEEM North Greenlan 67.33 3 *i* P **P** **00 20 04.6 -0.9**
NEEM IAmb IAmb 00 20 05.1
comp=Z,6.9nm,0.5s
WRGLY Wrigley 67.87 335 **P** **00 20 08.1 -0.7**
WRGLY **P** **00 20 08.4 -0.3**
WRGLY IAmb IAmb 00 20 13.2
comp=Z,12nm,0.8s
WRGLY Wrigley 67.87 335 P **P** **00 20 08.8 +0.1**
baz=112
DBG Daneborg 68.30 11 *i* P **P** **00 20 11.3 0.0**
DBG IAmb IAmb 00 20 11.8
comp=Z,3.4nm,0.7s
T35M Bob Quinn 69.21 327 P **P** **00 20 17.5 +0.1**
baz=103
WTLY Watson Lake, Y 69.26 331 P **P** **00 20 17.1 -0.6**
WTLY IAmb IAmb 00 20 23.7
comp=Z,19nm,1.3s
WTLY Watson Lake, Y 69.26 331 P **P** **00 20 18.1 +0.4**
baz=106
TGTN Hyland Airport 69.42 332 P **P** **00 20 18.9 +0.4**
baz=107
KEST Kesra 69.42 56 P **P** **00 20 20.6 +1.4**
comp=Z,1.4nm,0.6s,baz=170,slow=4.1,SNR=6.9

DLBC **Dease Lake** 69.44 329 P P 00 20 19.0 +0.2
baz=104,SNR=7.8
V35K **Ketchikan** 69.60 325 P P 00 20 19.7 0.0
baz=102
S34M **Telegraph Cree** 69.89 328 P 00 20 21.4 -0.1
S34M IAmb IAmb 00 20 27.6
comp=Z,13nm,1.2s
S34M **Telegraph Cree** 69.89 328 P P 00 20 21.8 +0.4
baz=103,SNR=6.1
R33M **Jennings River** 70.14 330 P 00 20 23.0 -0.2
R33M IAmb IAmb 00 20 32.5
comp=Z,12nm,1.0s
R33M **Jennings River** 70.14 330 P P 00 20 23.4 +0.3
baz=104
DAG **Danmarks Havn** 70.30 10 *i* P P 00 20 22.3 -1.4
DAG IAmb IAmb 00 20 23.7
comp=Z,1.9nm,0.6s
CRAG **Craig** 70.47 325 P P 00 20 25.2 +0.1
baz=100
U33K **Whale Pass** 70.59 326 P P 00 20 26.1 +0.4
baz=100
DAVA **Damuels** 70.60 44 *e*P P 00 20 27.6 +1.4
comp=Z,0.7nm,0.2s
Q32M **Nakina River** 70.70 329 IAmb IAmb 00 20 28.1
comp=Z,9.1nm,0.7s
Q32M **Nakina River** 70.70 329 P P 00 20 27.0 +0.4
baz=102
MMPY **Sheldon Lake,** 71.07 333 P P 00 20 29.0 +0.4
baz=104
FETA **Feichten** 71.16 44 *e*P P 00 20 30.8 +1.2
comp=Z,2.6nm,0.6s
P33M **Teslin, Yukon** 71.24 330 P 00 20 29.2 -0.5
P33M IAmb IAmb 00 20 30.4
comp=Z,16nm,1.4s
P33M **Teslin, Yukon** 71.24 330 P P 00 20 29.6 -0.2
baz=102,SNR=8.5
MOTA **Moosalm** 71.44 44 *e*P P 00 20 31.3 0.0
comp=Z,0.4nm,0.3s
SQTA **Sankt Quirin** 71.50 44 *e*P P 00 20 31.6 -0.1
comp=Z,1.5nm,0.5s
P32M **Atlin** 71.56 330 P P 00 20 31.4 -0.2
P32M **Atlin** 71.56 330 P P 00 20 32.1 +0.4
baz=101
S32K **Killisnoo** 71.61 327 P P 00 20 31.7 -0.2
S32K **Killisnoo** 71.61 327 P P 00 20 32.7 +0.8
baz=100
R32K **Eaglecrest** 71.72 328 P P 00 20 33.0 +0.4
baz=100
WTTA **Wattenberg** 71.79 44 *e*P P 00 20 33.1 -0.4
comp=Z,0.2nm,0.2s
A36M **Sachs Harbour** 71.89 343 P P 00 20 32.4 -0.9
BESE **Bessie Mountai** 71.95 328 P P 00 20 34.0 -0.1
BESE IAmb IAmb 00 20 52.2
comp=Z,18nm,1.2s
WHY **Whitehorse** 72.33 331 P P 00 20 36.4 0.0
baz=100
SKAG **Skagway** 72.34 329 P P 00 20 36.7 +0.4
baz=100
ABTA **Abfaltersbach** 72.35 44 *e*P P 00 20 37.1 +0.4
comp=Z,1.5nm,0.6s
R31K **City Hall, Gus** 72.38 328 P P 00 20 36.7 +0.2
baz=99
M31M **Drury Creek, Y** 72.39 332 P P 00 20 36.3 -0.3
M31M IAmb IAmb 00 20 37.5
comp=Z,16nm,0.8s
M31M **Drury Creek, Y** 72.39 332 P P 00 20 36.8 +0.2
baz=101,SNR=25
LESA **Schwarzleotal** 72.51 44 *e*P P 00 20 38.4 +0.8
comp=Z,1.0nm,0.4s
S31K **Pelican** 72.57 328 P P 00 20 38.1 +0.5
baz=98
N31M **Braeburn, Yuko** 72.91 331 P P 00 20 39.7 0.0
baz=100,SNR=8.2
O30N **Mendenhall** 72.94 331 P P 00 20 39.5 -0.3
O30N IAmb IAmb 00 20 41.3
comp=Z,5.6nm,0.7s
O30N **Mendenhall** 72.94 331 P P 00 20 39.9 0.0
baz=99,SNR=7.5
KBA **Koelnbreinsper** 72.94 44 *e*P P 00 20 40.6 +0.3
comp=Z,1.6nm,0.6s
H31M **Peel River** 73.12 336 P P 00 20 39.9 -0.9
H31M IAmb IAmb 00 20 45.9
comp=Z,22nm,1.2s
H31M **Peel River** 73.12 336 P P 00 20 41.0 +0.1
baz=102
NB2 **NORSAR Subarra** 73.18 29 P P 00 20 42.3 +1.0
comp=Z,19nm,1.1s,baz=263,slow=6.2
NB2 **NORSAR Subarra** 73.18 29 P P 00 20 42.3 +1.0
NOA **NORSAR Array B** 73.18 29 P P 00 20 42.1 +0.8
comp=Z,3.1nm,0.7s,baz=262,slow=6.0,SNR=9.2
NOA LR LR 00 49 24.0
comp=Z,30nm,20.5s,baz=15,slow=33
comp=Z,3.1nm,0.7s
HSKC **Hora Svate Kat** 73.22 40 *e*P P 00 20 51.0 +9.3
P30M **Million Dollar** 73.26 330 P P 00 20 41.9 +0.1
baz=98
F31M **Tsiigehtchic** 73.26 338 P P 00 20 41.6 +0.1
baz=104
GERES **GERESS Array B** 73.28 42 P P 00 20 43.0 +0.8
comp=Z,1.2nm,0.6s,baz=267,slow=3.9,SNR=7.9
comp=Z,1.2nm,0.6s
MAYO **Mayo, Yukon** 73.33 333 P P 00 20 41.6 -0.5
MAYO **Mayo, Yukon** 73.33 333 P P 00 20 42.3 +0.2
baz=100
INK **Inuvik** 73.39 338 LR LR 00 52 20.0
comp=Z,48nm,21.5s,baz=296,slow=35
INK **Inuvik** 73.39 338 IAmb IAmb 00 20 46.9
comp=Z,8.9nm,1.0s
INK **Inuvik** 73.39 338 P P 00 20 42.6 +0.3
baz=104
N30M **Aishikik Lake** 73.52 331 P P 00 20 42.9 -0.5
N30M **Aishikik Lake** 73.52 331 P P 00 20 43.1 -0.3
baz=99
M30M **Minto, Yukon** 73.56 332 IAmb IAmb 00 20 49.3
comp=Z,7.4nm,0.8s
M30M **Minto, Yukon** 73.56 332 P P 00 20 43.1 -0.4
baz=99,SNR=16
MOA **Molln** 73.61 43 *e*P P 00 20 44.7 +0.6
comp=Z,0.4nm,0.2s
HYT **Haines Junctio** 73.63 330 P 00 20 43.5 -0.5
HYT **Haines Junctio** 73.63 330 P P 00 20 44.0 -0.1
baz=98,SNR=5.9
ZVC **Zvikov** 73.64 41 *e*P P 00 20 53.4 +9.2
J30M **Hart River** 73.70 334 P P 00 20 44.5 +0.1
J30M **Hart River** 73.70 334 P P 00 20 44.2 -0.2
baz=100
OBKA **Obir** 73.74 45 *e*P P 00 20 45.9 +0.9
comp=Z,1.6nm,0.5s
I30M **Mount Dempster** 73.84 335 P P 00 20 44.2 -1.0
I30M IAmb IAmb 00 20 45.6
comp=Z,11nm,0.7s
I30M **Mount Dempster** 73.84 335 P P 00 20 44.8 -0.4
baz=100
PRU **Pruhonice** 73.89 41 *e*P P 00 20 49.0 +3.3
YUK6 **Outpost Mounta** 74.06 331 P P 00 20 46.6 -0.2
baz=97
F30M **Barrier River** 74.06 338 IAmb IAmb 00 20 50.6
comp=Z,10nm,0.8s
F30M **Barrier River** 74.06 338 P P 00 20 46.3 0.0
baz=102
SOKA **Soboth** 74.08 44 *e*P P 00 20 48.1 +1.1
comp=Z,0.7nm,0.4s
O29M **Mount Kennedy** 74.08 330 P P 00 20 46.7 0.0
baz=97
K29M **Barlow Dome** 74.09 334 IAmb IAmb 00 20 48.2
comp=Z,8.7nm,0.8s
K29M **Barlow Dome** 74.09 334 P P 00 20 46.6 -0.1
baz=99
G30M **tAoh Zraii Nji** 74.11 337 P P 00 20 46.2 -0.5
baz=101
EPYK **Eagle Plains** 74.19 336 IAmb IAmb 00 20 52.4
comp=Z,23nm,1.4s
EPYK **Eagle Plains** 74.19 336 P P 00 20 46.6 -0.5
baz=100
L29M **L29M** 74.25 333 IAmb IAmb 00 20 53.0
comp=Z,8.5nm,0.7s
L29M **L29M** 74.25 333 P P 00 20 47.4 -0.1
baz=98
YUK4 **Talbot Arm** 74.25 331 P P 00 20 47.5 -0.3
baz=97,SNR=8.4
HFS **Hagfors** 74.27 30 P P 00 20 48.3 +0.7
comp=Z,7.3nm,0.6s,baz=222,slow=2.0,SNR=28
comp=Z,7.3nm,0.6s
M29M **Somme Creek** 74.31 332 IAmb IAmb 00 20 48.3
comp=Z,5.9nm,0.7s
M29M **Somme Creek** 74.31 332 P P 00 20 48.1 +0.1
baz=98

ARSA **Arzberg** 74.44 44 *e*P P 00 20 50.0 +1.1
comp=Z,1.0nm,0.4s
J29N **Klondike Camp** 74.48 334 P P 00 20 49.3 +0.4
baz=98
I29M **Ogilvie Camp,** 74.66 335 IAmb IAmb 00 22 32.2
comp=Z,8.3nm,0.5s
I29M **Ogilvie Camp,** 74.66 335 P P 00 20 49.4 -0.4
baz=99
CONA **Conrad Observa** 74.68 43 *e*P P 00 20 51.9 +1.4
comp=Z,0.6nm,0.4s
YUK8 **Steele Glacier** 74.78 331 P P 00 20 50.9 -0.1
baz=96
G29M **Pine Creek** 74.79 337 P P 00 20 49.8 -0.8
G29M **Pine Creek** 74.79 337 P P 00 20 50.2 -0.4
baz=99
H29M **Whitestone** 74.82 336 P P 00 20 49.4 -1.4
H29M IAmb IAmb 00 20 50.8
comp=Z,12nm,0.8s
H29M **Whitestone** 74.82 336 P P 00 20 50.2 -0.6
baz=99
CHVC **Chvalec** 74.89 40 *e*P P 00 20 51.5 0.0
O28M **Mount Upton** 74.93 330 P P 00 20 51.7 -0.2
baz=96
DAWY **Dawson** 74.94 334 P 00 20 51.0 -0.6
DAWY IAmb IAmb 00 20 57.4
comp=Z,26nm,1.4s
DAWY **Dawson** 74.94 334 P P 00 20 50.9 -0.6
baz=97
OSTC **Ostas** 74.99 40 *e*P P 00 20 53.2 +1.1
E29M **Blow River** 74.99 338 IAmb IAmb 00 20 55.9
comp=Z,10nm,1.0s
E29M **Blow River** 74.99 338 P P 00 20 50.7 -1.0
baz=100
DPC **Dobruska-Polom** 75.05 41 *e*P P 00 20 53.5 +1.0
YUK3 **Moose Creek** 75.16 331 P P 00 20 52.9 -0.2
baz=96,SNR=6.5
LOGN **Logan Glacier** 75.33 330 P P 00 20 53.4 -0.6
LOGN IAmb IAmb 00 20 59.1
comp=Z,7.6nm,0.8s
I28M **Miner Creek** 75.35 335 P P 00 20 53.5 -0.4
baz=97
BVCY **Beaver Creek** 75.41 332 P P 00 20 54.0 -0.2
baz=96,SNR=6.7
D28M **Stokes Point** 75.45 339 P P 00 20 53.6 -0.7
baz=99
CTGM **Chitina Glacie** 75.50 330 P P 00 20 55.0 0.0
CTGM IAmb IAmb 00 20 56.2
comp=Z,9.6nm,0.6s
CTG **Chitina Glacier** 75.51 330 P P 00 20 55.0 +0.1
baz=95,SNR=6.2
F28M **Old Crow** 75.61 337 IAmb IAmb 00 21 02.4
comp=Z,6.1nm,0.7s
F28M **Old Crow** 75.61 337 P P 00 20 54.3 -0.9
baz=98
E28M **Babbage River** 75.62 338 IAmb IAmb 00 20 54.1
comp=Z,5.5nm,0.7s
E28M **Babbage River** 75.62 338 P P 00 20 53.7 -1.6
baz=98
MODS **Modra-Piesok** 75.64 43 *e*P P 00 20 58.1 +2.3
MODS *e* 00 21 05.1
M27K **Edge Creek, AK** 75.88 332 P P 00 20 56.1 -1.0
M27K IAmb IAmb 00 20 57.8
comp=Z,11nm,0.6s
M27K **Edge Creek, AK** 75.88 332 P P 00 20 56.7 -0.4
baz=95
BCAR **Beaver Creek A** 75.90 333 P 00 20 56.8 -0.2
L27K **Beaver Creek,** 75.92 333 IAmb IAmb 00 20 57.9
comp=Z,9.8nm,0.9s
L27K **Beaver Creek,** 75.92 333 P P 00 20 56.7 -0.5
baz=95
I27K **Kandik River** 76.06 335 IAmb IAmb 00 21 02.7
comp=Z,14nm,1.0s
I27K **Kandik River** 76.06 335 P P 00 20 57.2 -0.8
baz=96
H27K **Steamboat Moun** 76.09 336 P P 00 20 57.4 -0.7
baz=96
G27K **Doyon Strip** 76.20 336 P P 00 20 58.2 -0.5
baz=96
TGL **Tana Glacier** 76.22 330 P P 00 20 58.0 -1.0
TGL IAmb IAmb 00 20 59.9
comp=Z,10nm,1.0s
D27M **Malcolm River** 76.22 339 P P 00 20 57.9 -0.9
baz=97
E27K **Coleen River** 76.33 338 IAmb IAmb 00 20 59.5
comp=Z,14nm,1.6s
E27K **Coleen River** 76.33 338 P P 00 20 58.7 -0.7
baz=96
CRQE **Cirque** 76.35 330 P P 00 20 59.4 -0.3
baz=93
MCARA **McCarthy VSAT** 76.35 331 P 00 20 59.5 -0.1
MCARA IAmb IAmb 00 21 15.1
comp=Z,16nm,1.0s
MCARA **McCarthy VSAT** 76.35 331 P P 00 20 60.0 +0.3
baz=93,SNR=5.3
CRQM **Cirque** 76.37 330 P P 00 20 58.7 -1.2
CRQM IAmb IAmb 00 21 45.3
comp=Z,10nm,1.0s
M26K **Nabesna, AK** 76.40 332 P P 00 20 59.5 -0.5
M26K **Nabesna, AK** 76.40 332 P P 00 20 59.7 -0.2
baz=94
VRDI **Verde Repeater** 76.55 331 P 00 21 00.6 -0.4
VRDI IAmb IAmb 00 21 06.2
comp=Z,9.1nm,1.0s
MORH **Mrgy, Hungar** 76.58 45 ⇓P P 00 21 02.1 +1.0
L26K **Log Cabin Wild** 76.60 332 P P 00 21 00.6 -0.4
L26K **Log Cabin Wild** 76.60 332 P P 00 21 00.7 -0.3
baz=94,SNR=5.5
BERG **Berg Lake** 76.63 330 P P 00 21 00.6 -0.6
BERG IAmb IAmb 00 21 07.0
comp=Z,12nm,0.8s
I26K **Coal Creek Min** 76.67 335 P P 00 20 59.4 -2.0
I26K IAmb IAmb 00 21 05.6
comp=Z,9.0nm,0.6s
I26K **Coal Creek Min** 76.67 335 P P 00 21 00.5 -0.9
baz=94
GLB **Gilahina Butte** 76.73 331 P 00 21 01.6 -0.2
MENT **Mentasta** 76.77 332 P P 00 21 01.7 -0.3
MENT IAmb IAmb 00 21 02.5
comp=Z,12nm,0.6s
SCRK **Sand Creek** 76.94 333 P P 00 21 02.4 -0.6
baz=93,SNR=28
G26K **Porcupine Rive** 77.05 336 P P 00 21 02.6 -0.9
baz=94
BMRM **Bremner River** 77.10 330 P 00 21 04.0 +0.1
BMRM IAmb IAmb 00 21 11.2
comp=Z,10nm,0.6s
BMRM **Bremner River** 77.10 330 P P 00 21 03.6 -0.3
baz=92,SNR=5.7
N25K **Chitina, Valde** 77.12 331 P 00 21 03.8 -0.2
N25K **Chitina, Valde** 77.12 331 P P 00 21 03.8 -0.2
baz=92,SNR=9.2
C27K **Jago River** 77.23 339 P P 00 21 03.9 -0.5
baz=95
F26K **Sheenjek River** 77.24 337 P P 00 21 04.1 -0.5
baz=94
RIDG **Independent Ri** 77.31 333 IAmb IAmb 00 21 05.0
comp=Z,15nm,1.2s
RIDG **Independent Ri** 77.31 333 P P 00 21 04.5 -0.6
baz=92,SNR=7.5
BMAR **Burnt Mountain** 77.39 337 P P 00 21 03.9 -1.5
PAX **Paxson** 77.57 332 IAmb IAmb 00 21 12.6
comp=Z,16nm,1.6s
PAX **Paxson** 77.57 332 P P 00 21 05.7 -0.9
baz=92
J25K **Salcha River,** 77.58 334 IAmb IAmb 00 21 06.1
comp=Z,5.4nm,0.5s
J25K **Salcha River,** 77.58 334 P P 00 21 05.7 -0.8
baz=92
FYU **Fort Yukon** 77.60 336 IAmb IAmb 00 21 11.0
comp=Z,8.7nm,0.8s
SPITS **Spitsbergen Ar** 77.66 12 P P 00 21 06.3 -0.4
comp=Z,2.4nm,0.5s,baz=186,slow=3.1,SNR=18
comp=Z,2.4nm,0.5s
C26K **Camden Bay** 77.67 339 P P 00 21 06.4 -0.4
baz=94
DIV **Divide** 77.67 330 P P 00 21 07.3 +0.2
DIV IAmb IAmb 00 21 12.9
comp=Z,13nm,1.2s
PRP **Porcupine Dome** 77.68 335 IAmb IAmb 00 21 11.8
comp=Z,11nm,0.9s
PRP **Porcupine Dome** 77.68 335 P P 00 21 06.3 -0.8
baz=92,SNR=15
K24K **Donnelly Dome** 77.73 333 P P 00 21 06.7 -0.6
baz=92,SNR=8.2
KLU **Klutina** 77.75 331 P P 00 21 07.1 -0.4
baz=91
E25K **Arctic Village** 77.80 338 P P 00 21 07.2 -0.5
baz=93
F25K **Christian Rive** 77.81 337 IAmb IAmb 00 21 08.2
comp=Z,7.3nm,0.7s
F25K **Christian Rive** 77.81 337 P P 00 21 07.4 -0.4
baz=92
M24K **Tolsona, Glenn** 77.88 331 P P 00 21 07.3 -0.9
M24K **Tolsona, Glenn** 77.88 331 P P 00 21 08.0 -0.3
baz=91
D25K **Kavik River** 78.15 339 IAmb IAmb 00 21 14.9
comp=Z,8.3nm,0.8s
D25K **Kavik River** 78.15 339 P P 00 21 09.2 -0.4
baz=92
ILAR **Eielson Array** 78.23 334 P P 00 21 08.7 -1.4
comp=Z,7.4nm,0.5s,baz=94,slow=4.6,SNR=166
ILAR LR LR 00 58 20.9
comp=Z,61nm,18.3s,baz=84,slow=38
comp=Z,7.4nm,0.5s
ILAR **Eielson Array** 78.23 334 P 00 21 08.5 -1.6
HDA **Harding Lake** 78.26 334 IAmb IAmb 00 21 10.1
comp=Z,5.8nm,0.5s
HDA **Harding Lake** 78.26 334 P P 00 21 09.5 -0.7
baz=91,SNR=5.1
GLI **Glacier Island** 78.31 330 P P 00 21 10.2 -0.5
baz=90
SCM **Sheep Creek Mo** 78.42 331 P P 00 21 10.8 -0.5
SCM IAmb IAmb 00 21 11.7
comp=Z,16nm,1.0s
SCM **Sheep Creek Mo** 78.42 331 P P 00 21 11.0 -0.3
baz=90
DHY **Denali Highway** 78.44 332 P P 00 21 10.8 -0.6
DHY IAmb IAmb 00 21 16.2
comp=Z,30nm,1.9s
DHY **Denali Highway** 78.44 332 P P 00 21 11.3 -0.1
baz=90
POKR **Poker Plat Res** 78.47 335 P P 00 21 10.8 -0.6
baz=90
P23K **Montague Islan** 78.47 329 P P 00 21 11.1 -0.4
baz=89
G24K **Hadweenzic Riv** 78.50 336 P P 00 21 10.9 -0.7
G24K **Hadweenzic Riv** 78.50 336 P P 00 21 11.2 -0.4
baz=91
WAT6 **Susitna Watana** 78.61 332 P P 00 21 11.5 -1.0
baz=90
M23K **Glacier View** 78.61 331 P P 00 21 11.9 -0.4
baz=89,SNR=6.8
COLA **College** 78.65 334 P P 00 21 11.6 -0.7
COLA IAmb IAmb 00 21 11.9
comp=Z,5.8nm,0.5s
COLA **College** 78.65 334 P P 00 21 11.6 -0.7
baz=90
H24K **Noodor Dome** 78.66 335 P 00 21 11.3 -1.1
H24K **Noodor Dome** 78.66 335 P P 00 21 11.9 -0.6
baz=90,SNR=7.6
F24K **Squaw Lake** 78.67 337 P P 00 21 11.7 -0.8
F24K **Squaw Lake** 78.67 337 P P 00 21 12.2 -0.3
baz=90
BZS **Buzias** 78.67 45 ⇓P P 00 21 14.3 +1.4
WRH **Wood River Hil** 78.75 334 IAmb IAmb 00 21 13.1
comp=Z,9.6nm,0.6s
E24K **Your Creek** 78.90 338 IAmb IAmb 00 21 19.5
comp=Z,12nm,1.4s
E24K **Your Creek** 78.90 338 P P 00 21 13.4 -0.3
baz=90
SML **Sawmill** 78.90 331 IAmb IAmb 00 21 20.5
comp=Z,7.1nm,0.7s
SML **Sawmill** 78.90 331 P P 00 21 13.2 -0.6
baz=89
KNK **Knik Glacier** 78.97 331 P P 00 21 13.5 -0.8
KNK **Knik Glacier** 78.97 331 P P 00 21 13.9 -0.3
baz=89
C24K **Franklin Bluff** 78.97 339 P P 00 21 13.2 -0.9
C24K IAmb IAmb 00 21 19.1
comp=Z,14nm,0.9s
C24K **Franklin Bluff** 78.97 339 P P 00 21 13.7 -0.3
baz=90
WAT1 **Susitna Watana** 78.98 332 P P 00 21 13.7 -0.5
baz=89
D24K **Happy Valley** 79.02 339 P P 00 21 13.9 -0.4
baz=90
MCK **McKinley** 79.13 333 P P 00 21 15.0 -0.1
MCK **McKinley** 79.13 333 P P 00 21 14.4 -0.7
baz=89
NEA2 **Nenana** 79.17 334 P P 00 21 14.3 -1.0
baz=89,SNR=28
SUW **Suwalki** 79.24 37 P P 00 21 15.3 -0.5
I23K **Minto, Yukon-K** 79.28 335 IAmb IAmb 00 21 15.7
comp=Z,7.2nm,0.6s
I23K **Minto, Yukon-K** 79.28 335 P P 00 21 15.0 -0.8
baz=88,SNR=11
PMR **Palmer** 79.28 331 IAmb IAmb 00 21 16.3
comp=Z,11nm,1.3s
PMR **Palmer** 79.28 331 P P 00 21 15.5 -0.4
baz=88
TOLK **Toolik Lake Re** 79.29 338 P P 00 21 15.3 -0.7
baz=89
E23K **Chandalar** 79.32 338 P P 00 21 15.6 -0.6
baz=89
DRGR 79.36 44 ⇓P P 00 21 18.1 +1.4
SEW **Seward** 79.50 329 P P 00 21 16.9 -0.1
SEW **Seward** 79.50 329 P P 00 21 16.5 -0.6
baz=88
GZR **Gura Zlata** 79.50 46 ⇓P P 00 21 18.5 +1.0
G23K **Bananza Creek** 79.51 336 P P 00 21 16.6 -0.5
baz=88
COLD **Coldfoot** 79.57 337 P P 00 21 17.5 +0.1
COLD **Coldfoot** 79.57 337 P P 00 21 17.0 -0.4
baz=88
RC01 **Rabbit Creek A** 79.59 330 IAmb IAmb 00 21 25.2
comp=Z,18nm,1.5s
RC01 **Rabbit Creek A** 79.59 330 P P 00 21 17.0 -0.6
baz=87
O22K **Cooper Landing** 79.62 330 P P 00 21 17.2 -0.5
baz=87
C23K **Itkillik River** 79.64 339 IAmb IAmb 00 21 23.4
comp=Z,9.6nm,0.9s
C23K **Itkillik River** 79.64 339 P P 00 21 17.4 -0.3
baz=88
D23K **Nanushuk River** 79.69 338 P P 00 21 18.1 +0.1
D23K IAmb IAmb 00 21 18.5
comp=Z,14nm,1.6s
D23K **Nanushuk River** 79.69 338 P P 00 21 17.5 -0.5
baz=88
ARCES **ARCESS Array B** 79.71 21 P P 00 21 18.0 -0.1
comp=Z,2.1nm,0.6s,baz=269,slow=5.7,SNR=5.2
comp=Z,2.1nm,0.6s
TRF **Thorofare Moun** 79.75 333 P P 00 21 18.1 -0.5
baz=87,SNR=18
M22K **Willow** 79.75 331 P P 00 21 17.9 -0.5
M22K **Willow** 79.75 331 P P 00 21 18.0 -0.3
baz=87
CUT **Chulitna** 79.79 332 P P 00 21 17.9 -0.7
CUT **Chulitna** 79.79 332 P P 00 21 18.4 -0.2
baz=87
MLY **Manley** 79.87 334 IAmb IAmb 00 21 24.2
comp=Z,19nm,1.6s
MLY **Manley** 79.87 334 P P 00 21 18.4 -0.7
baz=87,SNR=8.0
L22K **Petersville** 80.01 332 IAmb IAmb 00 21 48.2
comp=Z,30nm,2.0s
BPAW **Bear Paw Mtn.** 80.03 334 P P 00 21 18.2 -1.7
BPAW IAmb IAmb 00 21 20.4
comp=Z,12nm,1.0s
BPAW **Bear Paw Mtn.** 80.03 334 P P 00 21 19.0 -0.9
baz=87,SNR=8.0
KTH **Kantishna Hill** 80.03 333 IAmb IAmb 00 21 20.3
comp=Z,22nm,1.2s
G22K **Bettles** 80.09 336 P P 00 21 20.0 -0.2
baz=87
H22K **Ishtalitna Cre** 80.09 335 P P 00 21 19.8 -0.5
baz=87
E22K **Anaktuvuk Pass** 80.14 338 IAmb IAmb 00 21 25.3
comp=Z,17nm,1.4s
E22K **Anaktuvuk Pass** 80.14 338 P P 00 21 19.8 -0.7
baz=87,SNR=7.7
BRSE **Bradley Lake S** 80.17 329 P P 00 21 20.5 -0.3
baz=86
CAPN **Captain Cook N** 80.30 330 P P 00 21 21.4 0.0
baz=86
FINES **FINESS Array B** 80.36 29 P P 00 21 21.9 +0.2
comp=Z,2.6nm,0.5s,baz=266,slow=3.8,SNR=17
comp=Z,2.6nm,0.5s
I21K **Tanana** 80.39 335 P P 00 21 21.3 -0.5
baz=86
SKT **Skwentna** 80.40 331 IAmb IAmb 00 21 26.6
comp=Z,8.5nm,0.8s
SKT **Skwentna** 80.40 331 P P 00 21 21.6 -0.4
baz=86

MDB **Medias** 80.56 45 ⇑P P 00 21 24.8 +1.7
B22K **Teshekpuk Lake** 80.57 340 P P 00 21 22.5 -0.2
baz=86
STLK **Strandline Lak** 80.58 331 IAmb IAmb 00 21 23.4
comp=Z,11nm,0.6s
CHUM **Lake Minchumin** 80.62 333 P P 00 21 22.6 -0.5
baz=86,SNR=10
HOM **Homer** 80.63 329 P P 00 21 23.2 0.0
baz=86
PPLA **Purkeypile** 80.64 332 IAmb IAmb 00 21 29.7
comp=Z,31nm,1.5s
PPLA **Purkeypile** 80.64 332 P P 00 21 22.9 -0.5
baz=86
H21K **Melozitna Rive** 80.70 335 P P 00 21 22.7 -0.8
H21K **Melozitna Rive** 80.70 335 P P 00 21 23.4 -0.1
baz=86
N20K **Mount Spurr** 80.78 331 P P 00 21 23.7 -0.4
baz=85
SPCR **Spurr Chakacha** 80.78 331 P P 00 21 23.6 -0.5
baz=85
ARR **Arges** 80.81 46 ⇑P P 00 21 25.9 +1.3
F21K **Alatna River** 80.84 337 P P 00 21 23.9 -0.4
baz=85
G21K **Allakaket** 80.91 336 P P 00 21 24.0 -0.7
G21K **Allakaket** 80.91 336 P P 00 21 24.4 -0.3
baz=85
BUR08 **Bucovina Ar. S** 80.98 43 P 00 21 25.9 +0.4
BUR08 IAmb IAmb 00 21 40.0
comp=Z,13nm,1.1s
BURAR **Bucovina Array** 81.00 43 ⇑P P 00 21 26.8 +1.3
BURAR **Bucovina Array** 81.00 43 P P 00 21 26.2 +0.6
BURAR IAmb IAmb 00 21 40.3
comp=Z,9.3nm,0.9s
B21K **Ikpikpuk River** 81.04 339 P P 00 21 24.8 -0.4
baz=84
IMAR **Indian Mountai** 81.06 336 P P 00 21 24.4 -1.0
RNPP8 **Varash** 81.06 39 P P 00 21 25.3 -0.4
RNPP9 **Sopachiv** 81.07 39 P P 00 21 26.6 +0.8
SYI **Shuyak Island** 81.10 328 P P 00 21 25.7 0.0
Q20K **Shuyak Island** 81.10 328 P P 00 21 25.7 -0.1
baz=85
C21K **Knifeblade Rid** 81.15 339 P P 00 21 25.7 -0.1
baz=84
M20K **Styx River** 81.17 331 P P 00 21 25.6 -0.6
baz=85
NACGM **Naroch** 81.28 36 *e*P P 00 21 28.3 +1.5
comp=Z,26nm,0.8s,baz=276
KDAK **Kodiak Island** 81.28 327 P P 00 21 25.9 -0.8
baz=84
J20K **Nowinta River** 81.40 334 IAmb IAmb 00 21 27.1
comp=Z,6.6nm,0.6s
J20K **Nowinta River** 81.40 334 P P 00 21 26.8 -0.5
baz=84
P19K **Oil Pt** 81.43 329 P P 00 21 27.3 -0.3
baz=84
K20K **Telida** 81.45 333 P P 00 21 26.8 -0.7
K20K IAmb IAmb 00 21 33.0
comp=Z,20nm,1.3s
K20K **Telida** 81.45 333 P P 00 21 27.2 -0.4
baz=84
I20K **Naaghedeneel** 81.48 334 P P 00 21 27.6 0.0
baz=84
H20K **Anotleneega Mo** 81.57 335 P P 00 21 27.7 -0.5
baz=84
HORU **Horodok** 81.64 42 P P 00 21 29.5 +0.7
PRAR **RASCA** 81.70 43 ⇓P P 00 21 30.7 +1.5
MLR **Muntele Rosu** 81.71 45 ⇓P P 00 21 31.0 +1.6
MLR **Muntele Rosu** 81.71 45 P 00 21 31.1 +1.6
OHAK **Old Harbor** 81.71 327 P P 00 21 28.5 -0.6
baz=84
Q19K **Cape Douglas,** 81.72 328 P P 00 21 28.7 -0.4
Q19K **Cape Douglas,** 81.72 328 P P 00 21 28.6 -0.4
baz=84
F20K **Avaraart Lake** 81.73 337 P P 00 21 28.4 -0.5
F20K **Avaraart Lake** 81.73 337 P P 00 21 28.7 -0.2
baz=83
E20K **Nigu River** 81.76 338 P P 00 21 29.0 -0.2
baz=83
COVR **Voineasa-Covas** 81.86 45 ⇑P P 00 21 31.9 +1.8
D20K **Etivluk River** 81.86 338 P P 00 21 28.9 -0.7
baz=82
B20K **Meade River** 81.88 340 IAmb IAmb 00 21 35.1
comp=Z,17nm,1.1s
B20K **Meade River** 81.88 340 P P 00 21 29.4 -0.3
baz=82,SNR=12
O19K **Port Alsworth** 81.92 330 P P 00 21 29.6 -0.5
baz=83
N19K **Bonanza Creek** 81.93 330 P P 00 21 29.5 -0.7
baz=83
ONER **Baraj Valea Uz** 81.93 44 ⇓P P 00 21 32.6 +2.2
L19K **White Mountain** 81.94 332 P P 00 21 28.6 -1.6
L19K **White Mountain** 81.94 332 P P 00 21 29.9 -0.3
baz=83
NEHR **Nehoiu** 81.97 45 ⇑P P 00 21 32.1 +1.4
J19K **Poorman** 82.07 334 P P 00 21 30.2 -0.5
baz=83
MI28 **Mi28,Pidlybu** 82.24 40 P P 00 21 31.4 -0.5
E19K **Redstone River** 82.26 337 P P 00 21 31.8 +0.1
E19K IAmb IAmb 00 21 37.0
comp=Z,9.2nm,0.8s
E19K **Redstone River** 82.26 337 P P 00 21 31.4 -0.4
baz=82
NDNU **Novodnistrovsk** 82.32 42 P P 00 21 31.7 -0.7
G19K **Purcell Mounta** 82.39 336 IAmb IAmb 00 21 38.4
comp=Z,9.3nm,0.9s
G19K **Purcell Mounta** 82.39 336 P P 00 21 32.1 -0.4
baz=82
O18K **Koktuh Hills** 82.40 329 IAmb IAmb 00 21 37.3
comp=Z,12nm,0.8s
O18K **Koktuh Hills** 82.40 329 P P 00 21 32.2 -0.5
baz=82
MI29 **MI29, Kamyanyy** 82.42 40 P P 00 21 33.0 +0.1
LUBAR **Lubar, Ukraine** 82.42 41 P P 00 21 32.4 -0.5
D19K **Kuna River** 82.43 338 P P 00 21 31.8 -0.8
D19K IAmb IAmb 00 21 48.9
comp=Z,7.9nm,0.9s
D19K **Kuna River** 82.43 338 P P 00 21 32.5 -0.2
baz=81
Q18K **Katmai Hardscr** 82.46 328 P P 00 21 32.8 -0.3
baz=82
P18K **Big Mountain,** 82.47 329 IAmb IAmb 00 21 37.6
comp=Z,18nm,1.5s
P18K **Big Mountain,** 82.47 329 P P 00 21 32.7 -0.3
baz=82
M18K **Stony River** 82.49 331 P P 00 21 32.8 -0.2
baz=82
GCSA **Galena City Sc** 82.51 334 P P 00 21 32.7 -0.3
baz=82
F19K **Shaleruckik Mo** 82.56 337 P P 00 21 32.5 -0.8
F19K IAmb IAmb 00 21 39.0
comp=Z,17nm,1.4s
F19K **Shaleruckik Mo** 82.56 337 P P 00 21 32.7 -0.5
baz=81
J18K **Innoko River** 82.62 333 P P 00 21 33.3 -0.4
baz=82
N18K **Kilae Creek** 82.63 330 P P 00 21 33.4 -0.4
baz=82
L18K **Granite Mounta** 82.79 332 P P 00 21 33.8 -0.7
L18K IAmb IAmb 00 21 35.7
comp=Z,23nm,1.6s
L18K **Granite Mounta** 82.79 332 P P 00 21 34.5 -0.1
baz=82
C19K **Lookout Ridge** 82.86 339 P P 00 21 34.2 -0.7
C19K IAmb IAmb 00 21 41.2
comp=Z,11nm,0.9s
C19K **Lookout Ridge** 82.86 339 P P 00 21 34.6 -0.3
baz=80
Q17K **Contact Creek** 82.97 328 P P 00 21 34.9 -0.8
baz=82
SORM **Soroca** 83.03 42 ⇓P P 00 21 36.6 +0.5
SORM **Soroca** 83.03 42 P P 00 21 35.9 -0.2
comp=Z,16nm,1.3s
G18K **Tagagawik** 83.06 336 P P 00 21 35.2 -0.7
G18K **Tagagawik** 83.06 336 P P 00 21 35.6 -0.3
baz=80
H18K **Honhosa River** 83.07 335 P P 00 21 35.4 -0.6
H18K IAmb IAmb 00 21 37.7
comp=Z,20nm,1.5s
H18K **Honhosa River** 83.07 335 P P 00 21 35.4 -0.6
baz=80
P17K **Kvichak River** 83.11 329 P 00 21 35.4 -0.9
P17K **Kvichak River** 83.11 329 P P 00 21 35.5 -0.8
baz=81
AK22 **Malin Array Si** 83.14 40 P P 00 21 36.2 -0.4
A19K **Wainwright** 83.16 340 P P 00 21 36.1 -0.2
baz=78
AKASG **Malin Array Be** 83.25 40 P P 00 21 37.6 +0.4
comp=Z,1.1nm,0.5s,baz=290,slow=4.4,SNR=5.5
comp=Z,1.1nm,0.5s
M17K **Holitna River** 83.27 331 P P 00 21 36.3 -0.8
M17K IAmb IAmb 00 21 45.8
comp=Z,15nm,1.2s
M17K **Holitna River** 83.27 331 P P 00 21 36.6 -0.5
baz=81
N17K **Nushagak Hills** 83.28 330 P P 00 21 36.6 -0.6
baz=81
Q16K **King Salmon** 83.31 328 P P 00 21 36.7 -0.6
baz=81
R17L **Mt. Peulik Vol** 83.31 327 P P 00 21 36.8 -0.6
baz=81
F18K **Selawik** 83.33 336 P P 00 21 36.9 -0.3
baz=79,SNR=18
O17K **Koliganek Bris** 83.36 329 P P 00 21 37.2 -0.3
baz=81
K17K **Iditarod** 83.45 333 P P 00 21 38.2 +0.2
baz=80
C18K **Utukok River** 83.52 339 P P 00 21 38.0 -0.3
baz=78,SNR=6.5
E18K **Tukpahlearik C** 83.55 337 P P 00 21 37.9 -0.5
E18K IAmb IAmb 00 21 43.8
comp=Z,14nm,1.2s
E18K **Tukpahlearik C** 83.55 337 P P 00 21 38.1 -0.3
baz=79
L17K **Donlin** 83.55 332 P P 00 21 38.3 -0.2
baz=80
H17K **Granite Mounta** 83.75 335 P P 00 21 38.8 -0.7
H17K IAmb IAmb 00 21 45.8
comp=Z,12nm,1.1s
H17K **Granite Mounta** 83.75 335 P P 00 21 39.1 -0.4
baz=79
O16K **Kokwok River B** 83.89 329 IAmb IAmb 00 21 44.2
comp=Z,5.7nm,0.9s
O16K **Kokwok River B** 83.89 329 P P 00 21 39.2 -1.1
baz=80
G17K **Kiwalik Mounta** 83.95 335 P P 00 21 40.4 -0.1
baz=78
F17K **Baldwin Pennin** 84.00 336 P P 00 21 40.0 -0.6
F17K IAmb IAmb 00 21 45.6
comp=Z,7.5nm,0.7s
F17K **Baldwin Pennin** 84.00 336 P P 00 21 40.4 -0.3
baz=78
M16K **Timber Creek** 84.06 331 P 00 21 40.6 -0.5
M16K **Timber Creek** 84.06 331 P P 00 21 40.6 -0.5
baz=79
N16K **Nishlik Lake** 84.06 330 P P 00 21 41.2 0.0
baz=80
L16K **Owhat River** 84.17 332 P 00 21 42.0 +0.3
L16K IAmb IAmb 00 21 48.1
comp=Z,7.5nm,0.7s
L16K **Owhat River** 84.17 332 P P 00 21 42.3 +0.6
baz=79
C17K **DeLong Mountai** 84.27 339 P P 00 21 42.3 +0.2
baz=76
RDOG **Red Dog Mine** 84.27 338 P P 00 21 40.9 -1.2
RDOG IAmb IAmb 00 21 47.3
comp=Z,15nm,1.3s
RDOG **Red Dog Mine** 84.27 338 P P 00 21 42.3 +0.2
baz=77
PURM **Purcari** 84.29 44 ⇓P P 00 21 44.5 +1.9
I17K **Unalakleet** 84.29 334 P 00 21 42.0 -0.2
I17K IAmb IAmb 00 21 47.9
comp=Z,4.5nm,0.8s
I17K **Unalakleet** 84.29 334 P P 00 21 42.7 +0.5
baz=78
J16K **Anvik River** 84.38 333 P P 00 21 42.7 0.0
J16K IAmb IAmb 00 21 51.8
comp=Z,7.1nm,0.9s
J16K **Anvik River** 84.38 333 P P 00 21 43.1 +0.4
baz=78
D17K **Noatak River** 84.42 338 P P 00 21 43.2 +0.4
baz=76
G16K **Koyuk River** 84.67 336 P 00 21 43.7 -0.4
G16K IAmb IAmb 00 21 45.1
comp=Z,10nm,1.2s
G16K **Koyuk River** 84.67 336 P P 00 21 44.5 +0.4
baz=77,SNR=6.9
N15K **Kwethluk River** 84.77 330 P 00 21 44.5 -0.2
N15K **Kwethluk River** 84.77 330 P P 00 21 44.9 +0.1
baz=78
H16K **Elim** 84.79 335 P P 00 21 44.8 +0.1
baz=77
O15K **Ungalikthiuk R** 84.83 329 P P 00 21 44.8 -0.3
baz=78
M15K **Kasigluk River** 84.95 331 P P 00 21 45.5 -0.1
baz=78
NE56 **Odesa** 84.96 44 P P 00 21 45.5 -0.5
K15K **Wolf Creek Mou** 85.00 332 P P 00 21 46.0 +0.1
K15K **Wolf Creek Mou** 85.00 332 P P 00 21 45.8 -0.1
baz=77
C16K **Lisburne Hills** 85.10 339 P 00 21 45.9 -0.3
C16K IAmb IAmb 00 21 51.5
comp=Z,11nm,1.1s
C16K **Lisburne Hills** 85.10 339 P P 00 21 46.1 -0.1
baz=74,SNR=7.1
L15K **Ungalak Mounta** 85.12 332 P P 00 21 46.6 +0.2
baz=77
G15K **Niukluk** 85.45 335 P P 00 21 48.2 +0.2
baz=75
F15K **North Star Dit** 85.51 336 P 00 21 48.4 0.0
F15K IAmb IAmb 00 21 54.5
comp=Z,8.8nm,1.1s
F15K **North Star Dit** 85.51 336 P P 00 21 48.3 0.0
baz=75
O14K **Tigyukauivet M** 85.54 329 P P 00 21 48.3 -0.2
O14K **Tigyukauivet M** 85.54 329 P P 00 21 48.4 -0.2
baz=77
M14K **Bethel** 85.55 331 P 00 21 48.2 -0.4
M14K **Bethel** 85.55 331 P P 00 21 48.7 +0.2
baz=77
N14K **Kuskokwak Cree** 85.60 330 P P 00 21 49.4 +0.5
baz=77
L14K **Kuka Creek** 85.75 332 P P 00 21 49.9 +0.3
L14K IAmb IAmb 00 21 55.4
comp=Z,18nm,1.4s
L14K **Kuka Creek** 85.75 332 P P 00 21 50.1 +0.5
baz=76
J14K **Nanvaranak Lak** 85.81 333 P P 00 21 49.3 -0.5
J14K **Nanvaranak Lak** 85.81 333 P P 00 21 50.1 +0.2
baz=76
SDPT **Sand Point** 85.97 325 P P 00 21 50.8 0.0
baz=78
ANM **Nome** 86.12 335 P P 00 21 51.7 +0.4
baz=74
F14K **Arctic Creek** 86.25 336 P P 00 21 52.3 +0.3
baz=73
M13K **Dall Lake** 86.30 331 P 00 21 52.3 0.0
M13K **Dall Lake** 86.30 331 P P 00 21 52.8 +0.5
baz=76
K13K **Kusilvak Mount** 86.52 332 P P 00 21 52.9 -0.4
K13K IAmb IAmb 00 22 00.0
comp=Z,7.4nm,1.1s
K13K **Kusilvak Mount** 86.52 332 P P 00 21 53.7 +0.3
baz=74
TNA **Tin City** 86.86 336 P 00 21 54.7 -0.2
TNA IAmb IAmb 00 22 00.8
comp=Z,11nm,1.0s
TNA **Tin City** 86.86 336 P P 00 21 55.2 +0.2
baz=72
M11K **Mekoryuk** 87.67 331 P P 00 21 59.2 +0.3
baz=73
FALS **False Pass** 87.73 325 P P 00 21 59.6 +0.3
baz=75
BRTR **Keskin Array B** 88.24 50 P P 00 22 03.1 +0.7
comp=Z,1.5nm,0.7s,baz=268,slow=5.3,SNR=5.5
comp=Z,1.5nm,0.7s
VNA3 **Neumayer Olymp** 88.72 165 ⇑P P 00 22 10.7 +7.0
comp=Z,3.5nm,0.7s
GAMB **Gambell** 89.00 335 P P 00 22 05.4 +0.2
baz=68
VNA2 **Neumayer--Watz** 89.12 164 ⇑P P 00 22 12.4 +6.9
comp=Z,2.1nm,0.5s,baz=306,slow=6.8
BELA **Belgrano 2** 89.50 174 P P 00 22 08.9 +1.7
UNV **Unalaska Valle** 89.75 325 P P 00 22 08.8 -0.1
baz=73
SNAA **Sanae** 90.75 164 P P 00 22 14.5 +1.3
comp=Z,2.5nm,0.6s,baz=298,slow=4.5,SNR=3.6
SNAA LR LR 01 03 01.8
comp=Z,36nm,21.7s,baz=18,slow=36
comp=Z,2.5nm,0.6s
BOSA **Boshof** 93.07 118 P P 00 22 24.0 -1.0
comp=Z,3.6nm,0.9s,baz=269,slow=5.7,SNR=4.4
comp=Z,3.6nm,0.9s
ARTI **Arti** 97.67 29 LR LR 01 04 04.9
comp=Z,47nm,20.6s,baz=332,slow=34
SONM **Songino Array** 121.24 9 PKP PKPdf 00 28 02.3 -1.6
comp=Z,0.3nm,0.4s,baz=278,slow=2.1,SNR=4.6
HHC **Hu-ho-hao-te** 128.76 6 *e*P PKPdf 00 28 17.4 -1.1
NJ2 **Nanjing** 137.79 358 *e*P PKPdf 00 28 34.4 -1.2
NJ2 pmax pmax
comp=Z,22nm,0.6s
PZH **PanZhiHua** 140.33 22 PKP PKPdf 00 28 39.3 -1.2
CMAR **Chiang Mai Arr** 146.08 32 PKPbc PKPdf 00 28 50.8 +0.1
comp=Z,2.1nm,0.5s,baz=313,slow=5.2,SNR=7.8
CMAR SKPbc SKPbc 00 32 27.4 -1.4
comp=Z,1.4nm,0.6s,baz=314,slow=1.4,SNR=5.0
CMAR **Chiang Mai Arr** 146.08 32 PKiKP 00 28 54.1 -0.8
STKA **Stephens Creek** 149.01 223 PKP PKPdf 00 28 55.3 +0.1
comp=Z,5.1nm,0.4s,baz=126,slow=1.6,SNR=9.0
STKA PKPbc PKPbc 00 28 59.3 +0.1
comp=Z,5.7nm,0.4s,baz=90,slow=3.9,SNR=13
ASAR **Alice Springs** 159.41 228 PKP PKPdf 00 29 09.8 -0.2
comp=Z,1.3nm,0.6s,baz=110,slow=1.4,SNR=8.2
ASAR PKPab PKPab 00 29 47.5 -0.1
comp=Z,1.4nm,0.5s,baz=139,slow=4.3,SNR=6.4
WRA **Warramunga Arr** 161.06 238 PKP PKPdf 00 29 11.8 -0.1
comp=Z,2.8nm,0.8s,baz=129,slow=0.3,SNR=13
WRA PKPab PKPab 00 29 54.0 -0.9
comp=Z,3.1nm,0.8s,baz=114,slow=4.3,SNR=17
WRA **Warramunga Arr** 161.06 238 PKPdf 00 29 11.5 -0.3

IDC 16 00:50:12.6±9.0, 20°.20S×177°.28W, h553km±82km, mb2.9/3, mbtmp3.8/4, Error ellipse: s-maj=265.1km s-min=28.8km az=156.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	5.05	298	P	P	00 51 43.1	-0.1
	9.4nm,0.5s,baz=131,slow=19,SNR=7.6						
ASAR	**Alice Springs**	45.24	256	P	P	00 57 41.8	+0.5
	0.9nm,0.4s,baz=99,slow=6.9,SNR=12						
	0.9nm,0.4s						
WRA	**Warramunga Arr**	45.31	262	P	P	00 57 41.1	-0.7
	0.7nm,0.4s,baz=98,slow=6.7,SNR=15						
	0.7nm,0.4s						
TXAR	**Lajitas Array**	86.33	57	P	P	01 01 56.7	0.0
	0.3nm,0.7s,baz=224,slow=5.2,SNR=4.2						
	0.3nm,0.7s						

*IDC **16** 01:24:47.0±1.1, 55°.67S×124°.91W, h0km, mb3.8/4, mbtmp3.8/4, MS3.7/11, Error ellipse: s-maj=39.6km s-min=27.5km az=137.0*

ISC 16 01:24:48.4±1.0, 55°.7S±0°.2×124°.9W±0°.2, h10km, n20, σ0s 89/6, mb3.9/5, MS3.7/11, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	30.39	132	LR	LR	01 40 27.6	
	comp=Z,108nm,18.2s,baz=340,slow=31						
RPN	**Rapa Nui**	30.67	28	P	P	01 31 02.7	-0.2
	59nm,0.8s,baz=113,slow=7.7,SNR=2.2						
QSPA	**South Pole Qui**	34.52	180	P	P	01 31 36.1	-0.4
	0.3nm,0.3s,baz=70,slow=2.6,SNR=7.9						
QSPA				LR	LR	01 43 17.5	
	comp=Z,100nm,20.2s,baz=101,slow=32						
	0.3nm,0.3s						
PLCA	**Paso Flores**	38.16	90	LR	LR	01 43 49.5	
	comp=Z,89nm,20.1s,baz=222,slow=30						
H03S2	**Juan Fernandez**	38.35	75	T	T	02 13 07.5	
	baz=220,slow=74,SNR=194						
H03S1	**Juan Fernandez**	38.36	75	T	T	02 13 09.0	
	baz=220,slow=74,SNR=218						
H03S3	**Juan Fernandez**	38.37	75	T	T	02 13 08.1	
	baz=220,slow=74,SNR=197						
H03N3	**Juan Fernandez**	38.64	74	T	T	02 13 23.6	
	baz=222,slow=72,SNR=625						
H03N2	**Juan Fernandez**	38.65	74	T	T	02 13 23.8	
	baz=222,slow=72,SNR=973						
H03N1	**Juan Fernandez**	38.66	74	T	T	02 13 22.8	
	baz=222,slow=72,SNR=827						
URZ	**Urewera**	41.85	270	LR	LR	01 46 11.7	
	comp=Z,119nm,19.6s,baz=76,slow=31						
PPT	**Papeete**	42.39	324	LR	LR	01 46 05.2	
	comp=Z,93nm,19.1s,baz=184,slow=30						
RAR	**Rarotonga**	43.08	309	LR	LR	01 47 12.4	
	comp=Z,50nm,20.0s,baz=157,slow=31						
SNAA	**Sanae**	46.66	158	LR	LR	01 53 59.7	
	comp=Z,104nm,18.1s,baz=166,slow=38						
CPUP	**Villa Florida**	56.14	88	P	P	01 34 28.4	+0.5
	0.4nm,0.3s,baz=228,slow=15,SNR=3.2						
CPUP				LR	LR	01 55 27.3	
	comp=Z,113nm,18.4s,baz=250,slow=33						
	0.4nm,0.3s						
STKA	**Stephens Creek**	66.18	248	LR	LR	01 59 36.5	
	comp=Z,47nm,18.9s,baz=203,slow=32						
CTA	**Charters Tower**	73.00	259	LR	LR	02 04 31.2	
	comp=Z,31nm,18.6s,baz=92,slow=33						
ASAR	**Alice Springs**	76.80	248	P	P	01 36 40.7	+0.5
	0.7nm,0.8s,baz=145,slow=5.6,SNR=5.3						
ASAR				LR	LR	02 05 20.0	
	comp=Z,69nm,20.6s,baz=143,slow=32						
	0.7nm,0.8s						
WRA	**Warramunga Arr**	79.62	250	P	P	01 36 56.6	+0.7
	1.6nm,1.0s,baz=147,slow=5.0,SNR=8.0						
	1.6nm,1.0s						
SONM	**Songino Array**	147.93	278	PKPbc	PKPbc	01 44 31.9	-1.1
	0.2nm,0.3s,baz=97,slow=3.5,SNR=2.0						

WEL 16 01:39:41.9±1.3, 34°S±26°×177°9E±2°9, h197km±43km, M3.9/9, ML3.6/8, MLv3.9/9, Error ellipse: s-maj=46.3km s-min=20.0km az=131.0, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	3.18	195	P	Pn	01 40 33.6	+0.2
MXZ				S	Sn	01 41 13.9	+0.1
WMGZ	**Waiomatatini S**	3.41	193	P	Pn	01 40 36.3	+0.2
WMGZ				S	Sn	01 41 20.1	+1.3
HAZ	**Te Kaha**	3.50	201	P	Pn	01 40 37.9	+0.7
HAZ				S	Sn	01 41 21.2	+0.4
PKGZ	**Pakihiroa**	3.52	197	P	Pn	01 40 37.7	+0.1
PUZ	**Puketiti**	3.68	194	P	Pn	01 40 38.9	-0.6
PUZ				S	Sn	01 41 24.5	-0.3
RUGZ	**Raukumara Rang**	3.72	201	P	Pn	01 40 39.8	-0.4
TWGZ	**Tauwhareparae**	3.84	196	P	Pn	01 40 40.3	-1.3
TWGZ				S	Sn	01 41 29.4	+0.9
CNGZ	**Carnagh Statio**	4.09	193	P	Pn	01 40 44.1	-0.4
MWZ	**Matawai**	4.11	201	P	Pn	01 40 44.6	-0.3
TKGZ	**Te Karaka**	4.12	197	P	Pn	01 40 45.5	+0.5
TKGZ				S	Sn	01 41 35.3	+0.6
URZ	**Urewera**	4.17	205	P	Pn	01 40 45.2	-0.4
URZ				S	Sn	01 41 35.4	-0.5
RAGZ	**Rawiri**	4.29	201	S	Sn	01 41 38.9	+0.3
RIGZ	**Rimuhau**	4.40	197	P	Pn	01 40 48.9	+0.4
RIGZ				S	Sn	01 41 40.9	-0.1
MUGZ	**Murupara**	4.49	207	P	Pn	01 40 49.9	+0.2
MTHZ	**Maungataniwha**	4.80	204	P	Pn	01 40 54.1	+0.5
TMVZ	**Te Maari**	5.47	211	P	Pn	01 41 02.5	+0.3
ETVZ	**East Tongariro**	5.48	211	P	Pn	01 41 02.6	+0.2
OTVZ	**Oturere**	5.52	211	P	Pn	01 41 02.9	-0.1
KAHZ	**Kahuranaki**	5.65	200	P	Pn	01 41 02.9	-1.6

*ISK **16** 01:53:20.2, 35°.04N×27°.05E, h3km, ML4.5/15*
*IDC **16** 01:53:21.7±0.5, 35°.18N×26°.94E, h0km, mb4.4/29, mbtmp4.3/42, ML3.7/11, MS3.7/51, Error ellipse: s-maj=12.5km s-min=9.4km az=176.0*
*MCSM **16** 01:53:22.9±0.6, 35°.N±4°×2°.7E±°, h10km±4km, mb4.5, mB5.1, MLv4.5, Mw(mB)4.5*
*GII **16** 01:53:22.9±0.0, 35°.154N±0°.002×27°.049E±0°.001, h0km, Mws4.5, confirmed*
*MOS **16** 01:53:22.0±1.1, 35°.14N×27°.01E, h15km, mb4.8/41, Error ellipse: s-maj=5.2km s-min=3.2km az=82.3*
*NEIC **16** 01:53:23.5±2.2, 35°.20N±0°.04×27°.01E±0°.06, h10km±1km, mb4.6/112, Error ellipse: s-maj=8.5km s-min=6.8km az=123.0*
*AFAD **16** 01:53:23.7, 35°.19N×26°.86E, h8km±2km, MW4.4*
*ATH **16** 01:53:25.0, 35°.31N×27°.03E, h9km±3km, ML4.2/21, Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*THE **16** 01:53:25.5, 35°.N±5°×2°.7E±°, h2km±18km, M4.0/29, ML4.0/29*
*NAO **16** 01:53:28.2, 35°.08N×24°.47E, h33km, MB4.1*
ISC 16 01:53:23.1±0.8, 35°.14N±0°.03×27°.02E±0°.02, h12km±5km,

n593,σ1§37/626,mb4.6/107,MS3.8/45,22C-33D,
Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.43	16	Pg	Pg	01 53 30.1	-1.4
KARP				Sg	Sg	01 53 36.1	-1.1
KARP	Karpathos	0.43	16	P	Pg	01 53 30.5	-1.0
KARP				S	Sg	01 53 34.6	-2.6
KARP	Karpathos	0.43	16	Pg	Pg	01 53 30.5	-1.0
KARP				Sg	Sb	01 53 39.2	+0.1
KARP	Karpathos	0.43	16	P	Pg	01 53 30.3	-1.2
KARP				S	Sg	01 53 34.0	-3.3
ZKR	Zakros	0.66	268	Pg	Pg	01 53 34.4	-1.4
ZKR				Sg	Sg	01 53 44.1	-0.4
NPS	Neapolis	1.16	277	P	Pg	01 53 44.2	-1.2
NPS				S	Sg	01 53 59.3	-1.1
ARG	Arkhangelos	1.41	40	Pn	Pn	01 53 48.3	-0.2
ARG	Arkhangelos	1.41	40	P	Pg	01 53 48.8	-0.3
ARG				S	Sg	01 54 08.2	-0.1
ARG	Arkhangelos	1.41	40	Pn	Pn	01 53 48.3	-0.2
ARG	Arkhangelos	1.41	40	P	Pb	01 53 48.9	-0.4
ARG				S	Sg	01 54 08.2	-0.1
ARG	Arkhangelos	1.41	40	P	Pb	01 53 48.9	-0.4
ARG				S	Sb	01 54 05.5	-1.7
YAZI	Mula-Dat§a-	1.58	13	P	Pn	01 53 50.3	-0.6
YAZI				S	Sn	01 54 11.3	-0.1
IACM	Heraklion	1.60	277	P	Pg	01 53 53.0	-0.9
IACM	Heraklion	1.60	277	P	Pg	01 53 53.8	-0.1
DAT	Datca	1.65	16	Pn	Pn	01 53 52.3	+0.2
DAT	Datca	1.65	16	P	Pn	01 53 52.4	+0.4
DAT				S	Sb	01 54 13.8	-0.7
DATC	Datca-Mugla	1.70	18	Pn	Pn	01 53 52.7	+0.1
IDI	Anoyia	1.75	276	Pn	Pn	01 53 53.8	+0.5
	57nm,0.3s,baz=79,slow=14,SNR=244						
IDI				Sn	Sn	01 54 16.0	+0.4
	183nm,0.3s,baz=336,slow=16,SNR=12						
THERA	Ancient Thera,	1.76	315	P	Pn	01 53 53.0	-0.4
THERA	Ancient Thera,	1.76	315	P	Pn	01 53 53.2	-0.2
THERA				S	Sn	01 54 15.7	0.0
THR8	Santorini-Mono	1.78	316	P	Pn	01 53 53.8	+0.1
THR6	Thira Island,	1.79	313	P	Pn	01 53 53.8	-0.1
THR9	Santorini-Faro	1.82	313	P	Pn	01 53 54.0	-0.2
SNT5	Nea Kammeni, S	1.83	314	P	Pn	01 53 54.1	-0.2
THR3	Thira Island,	1.83	314	P	Pn	01 53 54.3	0.0
SAP3	Santorini-Thir	1.88	314	P	Pn	01 53 54.8	-0.2
TURN	Turunc	1.91	31	Pn	Pn	01 53 55.7	+0.2
TURN	Turunc	1.91	31	P	Pn	01 53 56.2	+0.7
TURN				S	Sb	01 54 22.1	+0.3
BODT	Bodrum	1.94	7	Pn	Pn	01 53 56.4	+0.5
YKAV	Yalikavak-Bodr	2.00	6	Pn	Pn	01 53 57.5	+0.8
IZZE	Mula-Seydike	2.21	53	P	Pn	01 54 01.0	+1.3
IZZE				S	Sb	01 54 29.6	-0.9
MLSB	Milas	2.24	16	Pn	Pn	01 54 00.6	+0.5
YER	Yerkesik	2.24	27	P	Pn	01 54 01.2	+1.1
YER	Yerkesik	2.24	27	Pn	Pn	01 54 00.7	+0.6
YER	Yerkesik	2.24	27	P	Pn	01 54 00.7	+0.6
SABU	Mula-Dalaman	2.31	43	P	Pn	01 54 02.5	+1.5
SABU				S	Sb	01 54 34.3	+1.1
KSL	Kastellorizon	2.32	63	P	Pn	01 54 02.5	+1.4
KSL	Kastellorizon	2.32	63	P	Pn	01 54 02.1	+0.9
DDIM	Aydin, Didim	2.32	4	P	Pn	01 54 02.5	+1.4
DDIM				S	Sg	01 54 36.2	-1.5
VAM	Vamos	2.32	277	P	Pn	01 54 02.2	+1.0
VAM	Vamos	2.32	277	P	Pn	01 54 02.2	+1.0
MULA	Mugla, Merkez-	2.36	26	P	Pn	01 54 02.9	+1.1
MULA				S	Sn	01 54 31.9	+1.0
AKAS	Kas	2.37	62	Pn	Pn	01 54 03.3	+1.0
AKAS	Kas	2.37	62	P	Pn	01 54 02.5	+0.6
AKAS				S	Sb	01 54 34.9	-0.2
GVD	Gavdhos	2.42	264	P	Pb	01 54 05.4	-1.3
GVD	Gavdhos	2.42	264	Pn	Pn	01 54 02.2	-0.4
GVD	Gavdhos	2.42	264	P	Pb	01 54 05.0	-1.6
IMMV	Iera Moni Meta	2.51	278	P	Pn	01 54 05.0	+1.3
IMMV	Iera Moni Meta	2.51	278	Pn	Pn	01 54 03.6	-0.1
IMMV	Iera Moni Meta	2.51	278	P	Pn	01 54 05.2	+1.5
GCAM	G?zelcaml?	2.56	4	Pn	Pn	01 54 05.6	+1.1
GCAM	G?zelcaml?	2.56	4	P	Pn	01 54 04.5	0.0
SMG	Samos	2.57	357	P	Pn	01 54 04.5	-0.1
SMG	Samos	2.57	357	P	Pn	01 54 04.2	-0.5
AYDN	Tasoluk	2.61	15	P	Pn	01 54 06.5	+1.3
AYDN				S	Sn	01 54 37.2	+0.2
KNIK	Mula-Seydike	2.68	50	P	Pn	01 54 07.7	+1.4
KNIK				S	Sn	01 54 38.9	+0.2
DNZT	Denizli-Tavas-	2.68	37	P	Pn	01 54 08.2	+2.0
DNZT				S	Sb	01 54 44.3	+0.3
CAEL	Denizli, Camel	2.72	43	P	Pn	01 54 08.6	+1.9
CAEL				S	Sg	01 54 49.0	-1.5
KNDR	Palaiochora Ch	2.78	273	Pn	Pn	01 54 07.7	+0.2
KNDR	Palaiochora Ch	2.78	273	P	Pn	01 54 09.8	+2.4
TAVA	DENIZLI_Tavas	2.78	33	P	Pn	01 54 09.4	+1.8
TAVA				S	Sb	01 54 45.6	-1.4
ELL	Elmali	2.84	55	Pn	Pn	01 54 09.4	+1.0
ELL	Elmali	2.84	55	P	Pn	01 54 09.5	+1.0
ESEN	Aydn-Nazilli	2.87	22	P	Pn	01 54 08.8	+0.2
DGB	zmir	2.91	358	P	Pn	01 54 08.9	-0.4
DGB				S	Sn	01 54 46.4	+2.2
GOLH	Golhisar	2.94	44	P	Pn	01 54 12.1	+2.4
GOLH				S	Sb	01 54 49.2	-2.2
AKUM	Antalya-Kumluc	2.95	65	P	Pn	01 54 10.3	+0.5
DNIZ	Denizli-Tavas-	2.97	33	P	Pn	01 54 11.7	+1.5
NAZL	Nazilli-Aydin	3.00	20	Pn	Pn	01 54 11.1	+0.5
IZMR	zmir-demi	3.09	14	P	Pn	01 54 13.6	+2.0
IZMR				S	Sb	01 54 56.9	+1.3
DUVT	Torbali	3.10	6	P	Pn	01 54 12.1	+0.3
SULTU	Buldan	3.23	25	P	Pn	01 54 15.3	+1.5
BLCB	Balcova	3.24	0	P	Pn	01 54 14.3	+0.5
ODEM	Odemis-Izmir	3.25	15	Pn	Pn	01 54 14.7	+0.8
KIRA	zmir-Kiraz	3.25	20	P	Pn	01 54 15.3	+1.3
KORT	Korkueli	3.28	54	P	Pn	01 54 16.6	+2.2
INCE	Denizli-Bozkur	3.29	38	P	Pn	01 54 15.9	+1.3
INCE				S	Sb	01 55 02.5	+0.9
KTHA	Kythira Island	3.41	290	P	Pn	01 54 16.6	+0.4
BRDR	BURDUR-Merkez	3.54	43	P	Pn	01 54 19.9	+1.9
MANT	Manisa	3.57	20	Pn	Pn	01 54 19.3	+0.8
BUCA	Burdur, Bucak-	3.60	52	P	Pn	01 54 20.6	+1.8
BUCA				S	Sb	01 55 05.9	-4.5
KULA	Kula-Manisa	3.62	21	Pn	Pn	01 54 20.3	+1.2
KTTT	Salihli	3.65	13	P	Pn	01 54 21.1	+1.6
VLI	Veliai	3.67	297	P	Pn	01 54 20.4	+0.7
VLY	Voula,Athens	3.75	317	P	Pn	01 54 20.3	-0.6
VLY	Voula,Athens	3.75	317	P	Pn	01 54 20.4	-0.5
PASA	Karahalli, USA	3.77	31	P	Pn	01 54 21.4	+0.2
PASA				S	Sb	01 55 10.8	-4.5
MET6	Megalochori,Me	3.84	311	P	Pn	01 54 22.8	+0.7
ATHU	Athens Univers	3.84	318	P	Pn	01 54 22.9	+0.8
ATHU	Athens Univers	3.84	318	P	Pn	01 54 22.2	+0.2
DION	Dionisos Attik	3.84	321	P	Pn	01 54 22.0	-0.1
DION	Dionisos Attik	3.84	321	P	Pn	01 54 22.3	+0.2
MET5	Makryloggos,Me	3.86	311	P	Pn	01 54 22.9	+0.7
PTL	Penteli	3.86	320	P	Pn	01 54 23.1	+0.8
PTL	Penteli	3.86	320	P	Pn	01 54 22.7	+0.4
ISP	Isparta	3.89	45	Pn	Pn	01 54 23.6	+0.8
ISP	Isparta	3.89	45	*i* P	Pn	01 54 22.9	0.0
ISP	Isparta	3.89	45	P	Pn	01 54 23.9	+1.0
ISP	Isparta	3.89	45	P	Pn	01 54 21.4	-1.5
USAK	Uak-Merkez	3.91	24	P	Pn	01 54 23.9	+0.8
KZIL	AFYON_Kizioren	4.00	38	P	Pn	01 54 24.2	-0.1
KEPZ	Antalya-Kepez	4.11	63	P	Pn	01 54 27.1	+1.3
STFN	Stefani	4.12	318	P	Pn	01 54 25.9	-0.1
PRK	Paraskevi	4.15	352	P	Pn	01 54 26.3	+0.1
PRK	Paraskevi	4.15	352	P	Pn	01 54 25.6	-0.6
BAGO	Egridir - ISPA	4.16	46	P	Pn	01 54 29.0	+2.5
SIGR	SIGRI	4.17	347	P	Pn	01 54 26.3	-0.3
AFYN	Afyon-Dinar-K	4.20	41	P	Pn	01 54 28.1	+1.0
BNAZ	Uak-Banaz	4.21	32	P	Pn	01 54 27.9	+0.6
VIL2	Platees	4.30	317	P	Pn	01 54 27.5	-0.9
LTK	Loutraki	4.35	313	P	Pn	01 54 29.4	+0.3
VLX	Vlachokerasia	4.36	302	P	Pn	01 54 30.8	+1.5
SEDI	Konya, Seydise	4.47	57	P	Pn	01 54 31.9	+1.1
SEDI				S	Sn	01 55 16.7	-6.1
BALB	Balikesir	4.55	8	Pn	Pn	01 54 32.7	+1.0
ITM	Ithomi	4.60	298	Pn	Pn	01 54 34.3	+1.8
ITM	Ithomi	4.60	298	P	Pn	01 54 33.7	+1.2
ITM	Ithomi	4.60	298	Pn	Pn	01 54 34.4	+2.0
ITM	Ithomi	4.60	298	P	Pn	01 54 34.5	+2.0
PYL	PYLOS	4.62	294	P	Pn	01 54 33.2	+0.4
PYL	PYLOS	4.62	294	P	Pn	01 54 33.2	+0.4
GUR	Goura	4.69	308	P	Pn	01 54 35.6	+1.8
GUR	Goura	4.69	308	P	Pn	01 54 35.3	+1.5
EZN	Ezine	4.71	353	P	Pn	01 54 34.0	0.0
EZN	Ezine	4.71	353	Pn	Pn	01 54 32.5	-1.5
LKR	Lokris	4.76	319	P	Pn	01 54 35.5	+0.8
LKR	Lokris	4.76	319	P	Pn	01 54 35.5	+0.8
KLV	Kalavryta, Ach	4.88	308	P	Pn	01 54 38.3	+1.9
KLV	Kalavryta, Ach	4.88	308	P	Pn	01 54 37.9	+1.6
AXAR	Agios Charalam	5.03	317	P	Pn	01 54 39.6	+1.2
CSS	Mathiatis	5.18	90	Pn	Pn	01 54 39.8	-0.7
CSS	Mathiatis	5.18	90	Pn	Pn	01 54 40.1	-0.4
	0.6nm827nm80nm,0.8s						
CSS	Mathiatis	5.18	90	P	Pn	01 54 39.3	-1.2
CSS				S	Sn	01 55 38.1	-2.1
EFP	Efpalio	5.26	310	P	Pn	01 54 42.9	+1.4
ANX	Ano Chora	5.35	312	P	Pn	01 54 44.3	+1.5
MAKR	Makrakomi, Fth	5.50	316	P	Pn	01 54 46.8	+2.0
CAVK	Edirne/Enez-Ca	5.59	353	⇑P	Pn	01 54 47.1	+1.1
PVO	Paravola	5.61	310	P	Pn	01 54 47.3	+1.0
ALN	Alexandroupoli	5.80	353	Pn	Pn	01 54 48.7	-0.3
ALN	Alexandroupoli	5.80	353	P	Pn	01 54 48.7	-0.3
THL	Klokotos Trika	5.95	319	P	Pn	01 54 52.2	+1.2
RDO	Rodhopi	6.11	349	Pn	Pn	01 54 53.7	+0.5
MDUB	Mudurnu	6.27	31	Pn	Pn	01 54 57.4	+1.9
CTYL	Yalikoy Yolu	6.41	9	Pn	Pn	01 54 55.9	-1.4
	0.5nm91nm,1.3s						
KIRS	Kirsehir-Merke	6.80	52	⇑P	Pn	01 55 04.7	+1.9
BR104	Keskin Array S	6.97	47	Pn	Pn	01 55 05.7	+0.6
	0.0nm135nm15nm,0.9s						
BR131	Keskin Array S	6.98	47	Pn	Pn	01 55 05.7	+0.4
BR131	Keskin Array S	6.98	47	P	Pn	01 55 05.7	+0.4
BRTR	Keskin Array B	6.98	47	Pn	Pn	01 55 06.6	+1.3
	0.4nm,0.3s,baz=219,slow=14,SNR=15						
BRTR				Sn	Sn	01 56 26.2	+1.5
	0.2nm,0.3s,baz=22,slow=27,SNR=1.4						
	7.3nm,0.9s						
BRTR	Keskin Array B	6.98	47	Pn	Pn	01 55 07.8	+2.5
HNTI	Hanita	7.07	105	P	Pn	01 55 05.0	-1.3
VAY	Valandovo	7.10	332	*i* P	Pn	01 55 14.9	+8.2
DQRL	Deir Qamar	7.21	99	*e*P	Pn	01 55 10.2	+1.8
BHL	Bhannes	7.23	97	*e*P	Pn	01 55 10.4	+1.7
MMC7	Mount Meron ar	7.26	105	P	Pn	01 55 08.3	-0.8
MMA0B	Mount Meron ar	7.27	105	P	Pn	01 55 08.6	-0.7
MMA0B				S	Sn	01 56 30.6	-1.2
MMAI	Mount Meron Ar	7.27	105	Pn	Pn	01 55 09.8	+0.6
	2.4nm,0.3s,baz=308,slow=14,SNR=15						
MMAI				Sn	Sn	01 56 34.7	+2.9
	5.0nm,0.3s,baz=306,slow=23,SNR=6.7						
	1.3nm,0.4s						
SLTI	Sal'it	7.28	111	P	Pn	01 55 08.3	-1.0
SLTI				S	Sn	01 56 30.4	-1.6
QRWL	Qaraoun	7.34	100	*e*P	Pn	01 55 12.1	+1.9
KEK	Kerkira	7.34	311	Pn	Pn	01 55 08.8	-1.3
JMB	Yambol	7.35	357	P	Pn	01 55 17.2	+6.9
KKB	Krupnik	7.36	337	P	Pn	01 55 15.6	+5.3
HWQ	Hawqa	7.40	94	*e*P	Pn	01 55 12.1	+1.0
GEM	Giv'at Ha'Em	7.42	103	P	Pn	01 55 10.1	-1.1
GEM				S	Sn	01 56 33.9	-1.4
ZAHL	Zahle	7.43	97	*e*P	Pn	01 55 11.0	-0.5
NATI	Neve Ativ	7.46	102	P	Pn	01 55 11.3	-0.4
NATI				S	Sn	01 56 35.4	-0.9
SALP	Salfit	7.47	112	P	Pn	01 55 11.3	-0.7
SALP				S	Sn	01 56 35.6	-1.1
RCY	Rachaya	7.48	100	*e*P	Pn	01 55 11.9	-0.2
KZIT	Kziot	7.49	122	P	Pn	01 55 10.1	-2.2
KZIT				S	Sn	01 56 35.9	-1.3
MMLI	Mount Malkishu	7.49	109	P	Pn	01 55 11.6	-0.7
MMLI				S	Sn	01 56 35.6	-1.6
AMAZ	Amatzia	7.52	116	P	Pn	01 55 11.8	-0.8
AMAZ				S	Sn	01 56 36.6	-1.3
BEIL	Beino	7.56	92	*e*P	Pn	01 55 12.3	-0.8
KSHT	Keshet	7.61	104	P	Pn	01 55 12.8	-1.0
KSHT				S	Sn	01 56 38.4	-1.6
HMDT	Nahal Hemdat	7.65	110	P	Pn	01 55 13.6	-0.8
HMDT				S	Sn	01 56 39.4	-1.6
UJAP	Al Uja	7.73	112	P	Pn	01 55 14.8	-0.6
UJAP				S	Sn	01 56 41.6	-1.3
YTIR	Yattir	7.75	117	P	Pn	01 55 15.3	-0.6
YTIR				S	Sn	01 56 42.4	-1.3
ELND	Elena	7.83	354	⇑P	Pn	01 55 18.8	+2.0
PLNA	Plana	7.85	340	P	Pn	01 55 22.8	+5.6
RMNI	Mount Ramon	7.93	123	P	Pn	01 55 17.8	-0.5
RMNI				S	Sn	01 56 46.6	-1.4
MSBI	Mazada	7.96	116	P	Pn	01 55 17.8	-0.7
MSBI				S	Sn	01 56 47.1	-1.4
BNN	Bunyan	7.98	60	Pn	Pn	01 55 19.7	+0.7
VTS	Vitosha	8.03	340	P	Pn	01 55 22.8	+3.1
GHAJ	Ghor Haditha	8.12	116	Pn	Pn	01 55 20.9	+0.2
GHAJ	Ghor Haditha	8.12	116	P	Pn	01 55 19.8	-0.9
GHAJ				S	Sn	01 56 51.4	-1.1
PRMI	Paran Flat	8.20	125	P	Pn	01 55 21.6	-0.4
KRMI				S	Sn	01 56 52.9	-1.7
LOZB	Loznitsa	8.23	358	⇓P	Pn	01 55 23.7	+1.4
PRNI	Paran	8.24	123	P	Pn	01 55 21.8	-0.8
PRNI				S	Sn	01 56 54.4	-1.3
ZFRI	Zfri	8.24	121	P	Pn	01 55 21.6	-0.9
ZFRI				S	Sn	01 56 54.4	-1.2
TRAN	Tran	8.40	337	P	Pn	01 55 26.7	+2.0
HRFI	Mount Harif	8.46	125	P	Pn	01 55 24.8	-0.7
HRFI				S	Sn	01 56 59.6	-1.4
PSN	Preselentsi	8.53	5	P	Pn	01 55 27.9	+1.4
MPEP	Malo Peshtene	8.59	344	P	Pn	01 55 29.7	+2.4
EIL	Elat	8.64	127	Pn	Pn	01 55 27.8	-0.2
	1.1nm,0.3s,baz=320,slow=11,SNR=13						
EIL				Sn	Sn	01 57 01.6	-3.8
	2.7nm,0.3s,baz=306,slow=20,SNR=4.8						
	4.9nm,0.4s						
EIL	Elat	8.64	127	P	Pn	01 55 27.3	-0.7
EIL				S	Sn	01 57 03.6	-1.7
ASF	Jabal al Asfar	8.75	107	Pn	Pn	01 55 30.1	+0.5
	0.4nm,0.3s,baz=287,slow=8.8,SNR=6.3						
ASF				Sn	Sn	01 57 11.1	+2.9
	0.2nm,0.3s,baz=340,slow=22,SNR=1.9						
	2.6nm,0.8s						
TIP	Timpagrande	9.13	299	⇑P	Pn	01 55 32.9	-1.8
TIP	Timpagrande	9.13	299	Pn	Pn	01 55 33.6	-1.1
TIP	Timpagrande	9.13	299	Pn	Pn	01 55 33.9	-0.8
	31nm,1.2s						
TIRR	Tirgusor	9.37	6	⇓P	Pn	01 55 40.3	+2.4
TIRR	Tirgusor	9.37	6	Pn	Pn	01 55 40.1	+2.2
TIRR	Tirgusor	9.37	6	P	Pn	01 55 40.3	+2.4
CEL	Celeste	9.46	292	Pn	Pn	01 55 38.0	-1.3
CEL	Celeste	9.46	292	Pn	Pn	01 55 39.0	-0.3
	27nm,1.1s						
PDG	Podgorica	9.47	323	⇑P	Pn	01 55 39.9	+0.6
PDG	Podgorica	9.47	323	Pn	Pn	01 55 39.4	+0.1
HUMR	Humele	9.51	351	⇓P	Pn	01 55 42.4	+2.5
TPGR	Topolog	9.77	6	⇑P	Pn	01 55 46.3	+2.9
ISR	Istrita	9.98	358	⇓P	Pn	01 55 47.6	+1.2
ISR	Istrita	9.98	358	P	Pn	01 55 47.5	+1.2
ISR	Istrita	9.98	358	Pn	Pn	01 55 44.8	-1.5
	62nm,1.3s						
CFR	Carcaliu	10.07	5	⇑P	Pn	01 55 49.9	+2.4
CFR	Carcaliu	10.07	5	P	Pn	01 55 49.8	+2.4
CUC	Castrocucco	10.13	302	Pn	Pn	01 55 47.5	-0.9
NEHR	Nehoiu	10.29	357	⇓P	Pn	01 55 53.8	+3.1
HERR	Herculane	10.35	341	⇑P	Pn	01 55 51.6	+0.2
MLR	Muntele Rosu	10.38	356	Pn	Pn	01 55 51.7	-0.1
	0.2nm,0.3s,baz=201,slow=7.1,SNR=14						
MLR				LR	LR	02 00 15.3	
	comp=Z,466nm,18.2s,baz=184,slow=40						
	6.6nm,0.9s						
MLR	Muntele Rosu	10.38	356	⇓P	Pn	01 55 55.5	+3.7
MLR	Muntele Rosu	10.38	356	Pn	Pn	01 55 50.2	-1.6
	1µm73nm,1.4s						
VOIR		10.40	352	⇓P	Pn	01 55 54.2	+2.1
VOIR		10.40	352	P	Pn	01 55 54.2	+2.1
ACER	Acerenza	10.40	306	Pn	Pn	01 55 49.7	-2.4
VAE	Valguarnera	10.44	287	Pn	Pn	01 55 53.1	+0.4
	10.0nm,0.7s,baz=21,slow=21,SNR=7.6						
VAE				Sn	Sn	01 57 48.0	-1.6
	1.4nm,0.3s,baz=53,slow=23,SNR=3.5						
VAE				LR	LR	02 00 47.4	
	comp=Z,177nm,22.0s,baz=117,slow=43						
RAFF	Raffo Rosso	10.44	285	Pn	Pn	01 55 51.1	-1.5
MDVR	Moldovita	10.46	339	⇓P	Pn	01 55 54.2	+1.4
ODBI	Odobesti	10.62	0	⇓P	Pn	01 55 57.9	+3.0
PLOR	Plostina	10.71	359	⇓P	Pn	01 55 59.9	+3.6
PLOR	Plostina	10.71	359	P	Pn	01 55 59.9	+3.6
COVR	Voineasa-Covas	10.72	357	⇑P	Pn	01 55 59.9	+3.5
VRI	Vrincioaia	10.72	359	⇑P	Pn	01 55 60.0	+3.5
VRI	Vrincioaia	10.72	359	P	Pn	01 55 59.9	+3.5
VRI	Vrincioaia	10.72	359	P	Pn	01 55 54.8	-1.6
	35nm,1.5s						
GZR	Gura Zlata	10.74	344	⇓P	Pn	01 55 58.0	+1.1
GZR	Gura Zlata	10.74	344	P	Pn	01 55 57.9	+1.1
DOPR	Dopca	10.89	354	⇓P	Pn	01 56 00.6	+1.8
GHRR		10.92	1	⇑P	Pn	01 56 01.4	+2.3
GHRR		10.92	1	P	Pn	01 55 57.7	-1.4
TURR	Turia	10.93	356	⇑P	Pn	01 56 02.5	+3.1
MDB	Medias	11.18	350	⇓P	Pn	01 56 05.2	+2.5
MDB	Medias	11.18	350	P	Pn	01 56 05.1	+2.5
ONER	Baraj Valea Uz	11.20	358	⇓P	Pn	01 56 05.5	+2.5
SIM	Simferopol'	11.20	27	*e*P	Pn	01 56 13.1	+10
TESR	Tescani	11.37	359	⇓P	Pn	01 56 07.3	+2.0
TESR	Tescani	11.37	359	P	Pn	01 56 03.8	-1.5
	29nm,1.0s						
PAOL	Paolisi	11.44	305	Pn	Pn	01 56 06.4	+0.1
PURM	Purcari	11.58	10	P	Pn	01 56 06.4	-1.8
	28nm,0.9s						
MARR	Marisel-Cluj	11.90	347	⇑P	Pn	01 56 13.5	+0.9
BURAR	Bucovina Array	12.54	354	⇓P	Pn	01 56 24.4	+3.0
BURAR	Bucovina Array	12.54	354	Pn	Pn	01 56 23.6	+2.2
BURAR	Bucovina Array	12.54	354	P	Pn	01 56 24.3	+3.0
BUR08	Bucovina Ar. S	12.57	354	Pn	Pn	01 56 23.2	+1.4
MORH	Mrgy, Hungar	12.75	333	P	Pn	01 56 23.0	-1.2
	4.5nm,1.9s						
AQU	L'Aquila	12.83	308	P	Pn	01 56 24.5	-0.9
	22nm,1.1s						
SOC	Sochi	12.94	46	*e*P	Pn	01 56 26.8	+0.1
SOC				*e*S	Sn	01 58 52.4	+1.8
SOC				pmax	pmax		
	comp=Z,16nm,0.8s						
SOC				MLR	MLR		
	comp=Z,406nm,14.0s						
NRCA	Norcia	13.26	310	Pn	Pn	01 56 29.7	-1.5
FDMO	Fiordimonte	13.38	310	Pn	Pn	01 56 31.4	-1.4
PSZ	Piszkesteto	13.83	340	⇑P	Pn	01 56 39.8	+0.8
PSZ	Piszkesteto	13.83	340	P	Pn	01 56 39.8	+0.8
MPLH	Magyarpolny	13.97	332	P	Pn	01 56 39.5	-1.3
	comp=Z,58nm,1.1s						
LABN	Labinsk	14.15	44	*e*P	P	01 56 50.2	-0.7
LABN				pmax	pmax		
	comp=Z,58nm,1.2s						
KEST	Kesra	14.43	277	Pn	Pn	01 56 48.0	+0.8
	comp=Z,0.2nm,0.3s,baz=128,slow=2.8,SNR=8.5						
KEST				Sn	Sn	01 59 23.9	-3.2
	comp=Z,0.1nm,0.3s,baz=249,slow=23,SNR=1.4						
	comp=Z,6.3nm,0.9s						
KEST	Kesra	14.43	277	Pn	Pn	01 56 48.1	+1.0
NEUR	Neytrino	14.60	52	*i* P	Pn	01 56 49.8	+0.1
SOKA	Soboth	14.64	326	*e*P	P	01 56 55.7	-0.8
	comp=Z,8.0nm,0.8s,SNR=8.9						
CASP	Castiglione de	14.69	306	Pn	Pn	01 56 51.1	+0.3
ERBR	Yeremizino-Bor	14.70	40	*e*P	P	01 56 56.7	-0.3
ERBR				pmax	pmax		
	comp=Z,58nm,1.0s						
ERBR				MLR	MLR		
	comp=Z,213nm,16.0s						
LUBAR	Lubar, Ukraine	14.79	2	P	Pn	01 56 50.4	-1.5
SHA1	Shidzhatmaz	14.81	50	*i* P	Pn	01 56 52.8	+0.3
SABO	M.te Sabotino	14.86	321	Pn	Pn	01 56 51.3	-1.6
ARSA	Arzberg	14.86	328	Pn	Pn	01 56 54.2	+1.3
ARSA	Arzberg	14.86	328	*e*P	P	01 56 58.3	-0.5
	comp=Z,

KHC pmax pmax
comp=Z,36nm,1.4s
KHC Kasperske Hory 17.14 329 *e*P **P 01 57 23.2 -0.8**
KHC AMS AMS 02 04 40.0
KHC Kasperske Hory 17.14 329 P **Pn 01 57 21.3 -1.1**
comp=Z,19nm,1.1s
OSTC Ostas 17.30 336 *e*P **P 01 57 27.8 +2.0**
OSTC Ostas 17.30 336 *e*P **P 01 57 27.8 +2.0**
RETA Reutte 17.32 320 *e*Pn **Pn 01 57 24.2 -0.5**
comp=Z,9.3nm,1.2s
UPC Upice 17.32 336 *e*P **P 01 57 25.3 -0.8**
UPC Upice 17.32 336 *e*P **P 01 57 25.3 -0.8**
DAVOX Davos/Dischmat 17.36 317 P **P 01 57 26.0 -0.7**
comp=Z,0.5nm,0.3s,baz=95,slow=8.0,SNR=14
DAVOX LR LR 02 06 29.8
comp=Z,218nm,18.3s,baz=114,slow=46
comp=Z,2.5nm,0.6s
DAVOX Davos/Dischmat 17.36 317 P **P 01 57 26.0 -0.7**
PRU Pruhonice 17.42 332 *e*P **P 01 57 27.4 +0.3**
PRU Pruhonice 17.42 332 *e*P **P 01 57 27.4 +0.3**
AKT Akhty 17.43 63 *e*P **P 01 57 27.6 +0.2**
AKT pmax pmax
comp=Z,23nm,1.5s
AKT MLR MLR
comp=Z,580nm,17.0s
DAVA Damuels 17.66 319 *e*Pn **Pn 01 57 28.5 -0.6**
comp=Z,4.9nm,0.7s
MAK Makhachkala 17.70 58 *d i*P **Pn 01 57 26.3 -3.1**
MAK *e*S **Sn 02 00 41.2 -5.2**
MAK pmax pmax
comp=Z,212nm,1.4s
MAK MLR MLR
comp=Z,223nm,18.0s
VORD Divnogorie 18.15 26 *e*P **P 01 57 36.2 +1.1**
VORD pmax pmax
comp=Z,20nm,0.8s
VSR Storozhevoye 18.31 25 *e*P **P 01 57 37.2 +0.3**
VSR pmax pmax
comp=Z,10.0nm,0.6s
BNI Bardonecchia 18.40 309 P **P 01 57 38.9 +0.8**
BNI Bardonecchia 18.40 309 P **P 01 57 38.9 +0.8**
BNI pmax pmax
comp=Z,18nm,1.2s
NKC Novy Kostel 18.45 329 *e*P **Pn 01 57 39.2 +0.6**
NKC Novy Kostel 18.45 329 *e*P **Pn 01 57 39.2 +0.6**
GRA1 Grafenberg Arr 18.59 326 P **P 01 57 38.7 -1.3**
GRA1 IAmb IAmb 01 57 45.5
comp=Z,47nm,1.3s
GRF Grafenberg Arr 18.59 326 P **P 01 57 38.7 -1.3**
GRF pmax pmax
comp=Z,47nm,1.3s
SENIN Lac Senin/Sane 18.63 313 P **P 01 57 39.5 -1.3**
VORR Voronezh 18.71 24 *e*P **P 01 57 40.3 -1.0**
VORR pmax pmax
comp=Z,10.0nm,0.4s
CLL Collm 19.07 332 *e*P **P 01 57 43.0 -2.2**
CLL Collm 19.07 332 *e*P **P 01 57 43.0 -2.2**
CLL *i* x x 01 57 46.2
CLL *i* x x 01 57 48.6
comp=Z,64nm,1.9s
CLL *i* x x 01 57 53.1
CLL *e*S **Sn 02 01 18.0 -1.3**
CLL AMS AMS 02 04 00.0
comp=N,200nm,19.9s
CLL AMS AMS 02 04 00.0
comp=E,300nm,18.7s
CLL Collm 19.07 332 P **P 01 57 44.3 -0.9**
comp=E,11nm,1.2s
SUW Suwalki 19.07 353 P **P 01 57 44.4 -0.8**
SUW Suwalki 19.07 353 P **P 01 57 44.4 -0.8**
MOX Moxa 19.11 329 P **Pn 01 57 49.5 +2.9**
BFO Black Forest 19.13 319 P **P 01 57 45.8 -0.1**
BFO Black Forest 19.13 319 P **P 01 57 45.8 -0.1**
BFO pmax pmax
comp=Z,12nm,1.0s
VRH Novokhopyorsk 19.25 29 *e*P **Pn 01 57 48.2 0.0**
VRH pmax pmax
comp=Z,30nm,0.6s
MNK Minsk 19.37 2 *i*P **Pn 01 57 49.6 0.0**
comp=E,26nm,1.0s
MNK *i* P **Pn 01 57 49.6 0.0**
comp=N,12nm,1.0s
MNK *i* P **Pn 01 57 49.6 0.0**
comp=Z,30nm,0.9s,baz=182
MNK *i* PP **PnPn 01 58 03.7 +1.0**
MNK *i* PPP PPP 01 58 11.6
MNK *i* S **Sn 02 01 26.9 +0.1**
MNK *i* SS **SnSn 02 01 42.6 +1.7**
MNK *i* SSS SSS 02 01 54.4
MNK *i* LR LR 02 04 01.2
MNK *i* LRM MLR 02 05 12.9
comp=N,426nm,17.2s
MNK *i* LRM MLR 02 05 23.5
comp=Z,193nm,15.4s
MNK *i* LRM MLR 02 05 31.2
comp=E,211nm,17.5s
MNK Minsk 19.37 2 *i*P **Pn 01 57 49.6 0.0**
MNK *i* S **Sn 02 01 26.8 +0.1**
MNK pmax pmax
comp=N,12nm,1.0s
MNK pmax pmax
comp=Z,30nm,0.9s
MNK pmax pmax
comp=E,26nm,1.0s
MNK MLR MLR
comp=N,426nm,17.0s
MNK MLR MLR
comp=Z,193nm,15.0s
MNK MLR MLR
comp=E,211nm,17.0s
LPSR Galich'ya Gora 19.41 22 *e*P **Pn 01 57 50.6 +0.5**
LPSR pmax pmax
comp=Z,10.0nm,0.7s
ECH Echery 19.70 318 P **P 01 57 50.9 -1.3**
NACGM Naroch 19.77 360 *e*P **Pn 01 57 58.9 +4.5**
comp=Z,21nm,0.9s,baz=180
RAYN Ar Rayn 19.80 121 P **Pn 01 57 54.8 -0.3**
RAYN Ar Rayn 19.80 121 P **Pn 01 57 54.8 -0.3**
RAYN pmax pmax
comp=Z,6.0nm,0.8s
SSB Saint Sauveur 19.87 307 P **P 01 57 52.9 -1.3**
SSB Saint Sauveur 19.87 307 P **P 01 57 52.9 -1.3**
SSB pmax pmax
comp=Z,16nm,1.1s
PABE Paberze 20.48 355 P **P 01 57 59.3 -1.3**
PABE IAmb IAmb 01 58 13.6
comp=Z,37nm,0.8s
OBN Obninsk 21.05 15 P **P 01 58 07.7 +1.0**
comp=Z,6.5nm,0.4s,baz=194,slow=14,SNR=7.0
OBN LR LR 02 06 22.8
comp=Z,114nm,21.1s,baz=190,slow=37
comp=Z,6.5nm,0.4s
OBN Obninsk 21.05 15 P **P 01 58 06.8 +0.1**
OBN IAmb IAmb 01 58 16.5
comp=Z,46nm,1.0s
OBN Obninsk 21.05 15 ǁ *e*P **P 01 58 12.3 +5.6**
OBN *i* *SP **pwP 01 58 15.7 +3.8**
OBN *i* 01 58 34.3
OBN *i* PPP PPP 01 58 39.2
OBN 02 02 04.0
OBN *i* S Sn 02 02 13.0 +6.1
OBN SS SnSn 02 02 43.0 +21
OBN pmax pmax
comp=Z,77nm,2.6s
OBN MLR MLR
comp=Z,91nm,14.0s
OBN Obninsk 21.05 15 P **P 01 58 05.8 -0.9**
WLF Walferdange 21.07 320 *d*P **P 01 58 09.9 +2.8**
comp=Z,11nm,1.0s
CEST Esterri de Car 21.35 298 P **P 01 58 10.1 -0.2**
CEST IAmb IAmb 01 58 30.4
comp=Z,31nm,1.3s
BHOU Houvegnez 21.56 321 *d*P **P 01 58 13.2 +0.9**
comp=Z,8.2nm,1.0s
BHOU *d*S **S 02 02 12.9 +2.0**
BTNL Ternell 21.63 322 *d*P **P 01 58 11.9 -1.2**
comp=Z,9.9nm,0.8s
MEM Membach 21.71 322 *d*P **P 01 58 13.7 -0.1**
comp=Z,14nm,1.0s
RCHB Rochefort 21.84 320 *d*P **P 01 58 14.3 -1.0**
comp=Z,8.1nm,0.9s
MOS Moscow 21.86 16 *e*P **P 01 58 17.2 +1.8**
MOS *e* 01 58 39.8
MOS *e* 02 02 18.2
MOS pmax pmax
comp=Z,52nm,1.0s
BSTI Sart Tilman 21.92 321 *d*P **P 01 58 18.4 +2.2**
comp=Z,3.4nm,1.2s
BGES Gesves 22.05 320 *d*P **P 01 58 21.4 +3.8**
DOU Dourbes 22.14 319 *d*P **P 01 58 18.1 -0.5**
comp=Z,12nm,0.8s
BMRD Maredsous 22.17 320 *d*P **P 01 58 18.4 -0.5**
comp=Z,7.1nm,0.9s
TAM Tamanrasset 22.42 242 P **P 01 58 22.7 +0.8**
TAM IAmb IAmb 01 58 29.2
comp=Z,17nm,0.9s
TAM Tamanrasset 22.42 242 P **P 01 58 22.7 +0.8**
TAM pmax pmax
comp=Z,17nm,0.9s
CLF Chambon-Foret 22.44 313 P **P 01 58 22.4 +0.6**
BELG Belogornoye 22.65 34 LR LR 02 09 28.8
comp=Z,105nm,20.0s,baz=259,slow=43
BELG Belogornoye 22.65 34 *i*P **P 01 58 24.3 +0.4**
BELG pmax pmax
comp=Z,17nm,1.0s
UCC Uccle 22.67 321 P **P 01 58 24.1 -0.1**
UCC Uccle 22.67 321 P **P 01 58 24.1 -0.1**
UCC pmax pmax
comp=Z,11nm,0.9s
UCC Uccle 22.67 321 *d*P **P 01 58 23.8 -0.3**
comp=Z,8.6nm,1.0s
UCC *d*PcP **PcP 02 02 17.4 +1.0**
ESDC Sonseca Array 24.96 290 P **P 01 58 45.2 -1.3**
comp=Z,8.1nm,0.8s,baz=82,slow=9.2,SNR=32
ESDC LR LR 02 09 10.2
comp=Z,64nm,18.9s,baz=80,slow=38
comp=Z,8.1nm,0.8s
PAB San Pablo 25.25 289 P **P 01 58 48.9 -0.2**
PAB IAmb IAmb 01 58 51.8
comp=Z,17nm,1.1s
PAB San Pablo 25.25 289 P **P 01 58 48.9 -0.2**
PAB pmax pmax
comp=Z,17nm,1.2s
FINES FINESS Array B 26.33 359 P **P 01 58 59.1 +0.5**
comp=Z,2.5nm,0.5s,baz=163,slow=9.8,SNR=11
comp=Z,2.5nm,0.5s
FINES FINESS Array B 26.33 359 P **P 01 58 58.7 +0.1**
MD01 Midelt array s 26.39 274 P **P 01 59 00.2 +0.6**
MD31 MD31 26.39 274 P **P 01 58 59.9 +0.4**
MD31 IAmb IAmb 01 59 03.8
comp=Z,16nm,1.2s
HFS Hagfors 26.47 345 P **P 01 58 58.8 -1.1**
comp=Z,4.1nm,0.7s,baz=170,slow=9.0,SNR=7.9
HFS LR LR 02 10 29.6
comp=Z,391nm,18.0s,baz=156,slow=39
comp=Z,4.1nm,0.7s
KLMR Klimovskoe 26.96 14 *e*P **P 01 59 04.6 +0.3**
KLMR pmax pmax
comp=Z,27nm,1.3s
PBRG Braganca 27.14 294 *e*P **P 01 59 08.6 +2.4**
AKTO Aktyubinsk 27.16 46 LR LR 02 13 18.9
comp=Z,111nm,19.3s,baz=228,slow=44
MVO Moncorvo 27.33 293 *e*P **P 01 59 08.3 +0.4**
PBAR Barrancos 27.40 286 *e*P **P 01 59 08.8 +0.3**
PMRV Marv??o 27.61 289 *e*P **P 01 59 10.4 0.0**
PCBR Castelo Branco 27.66 290 *e*P **P 01 59 13.0 +2.2**
MTE Manteigas 27.71 291 *e*P **P 01 59 11.7 +0.4**
KIRV Kirov 27.75 25 *i*P **P 01 59 09.8 -1.6**
NB2 NORSAR Subarra 27.83 344 P **P 01 59 09.4 -2.8**
comp=Z,2.1nm,0.8s,baz=156,slow=9.3
NOA NORSAR Array B 27.83 344 P **P 01 59 12.5 +0.3**
comp=Z,0.4nm,0.5s,baz=164,slow=9.1,SNR=5.3
comp=Z,0.4nm,0.5s
POLO Lamas de Olo 27.91 293 *e*P **P 01 59 13.7 +0.6**
ABKAR Akbulak array 27.92 50 P **P 01 59 13.5 +0.5**
PVAQ Vaqueiros 28.01 285 *e*P **P 01 59 13.8 -0.1**
PBEJ Beja 28.07 286 *e*P **P 01 59 17.3 +2.8**
PARRA Arraiolos 28.14 288 *e*P **P 01 59 16.7 +1.6**
FURI Furi 28.21 155 LR LR 02 11 37.5
comp=Z,204nm,19.4s,baz=338,slow=39
HRA Herat 28.86 81 P **P 01 59 22.5 +0.7**
EKA Eskdalemuir Ar 28.95 324 P **P 01 59 20.5 -1.6**
comp=Z,0.8nm,0.4s,baz=118,slow=11,SNR=9.6
EKA PcP **PcP 02 02 31.4 +0.8**
comp=Z,0.8nm,0.6s,baz=114,slow=4.7,SNR=1.6
EKA LR LR 02 11 28.4
comp=Z,167nm,19.5s,baz=118,slow=38
comp=Z,0.8nm,0.4s
ARTI Arti 30.08 35 LR LR 02 13 19.1
comp=Z,124nm,18.3s,baz=242,slow=40
ARTI Arti 30.08 35 P **P 01 59 32.1 0.0**
ARTI IAmb IAmb 01 59 56.2
comp=Z,7.0nm,0.8s
ARTI Arti 30.08 35 *d i*P **P 01 59 32.4 +0.3**
ARTI 02 00 28.7
ARTI S **S 02 04 30.4 +0.2**
ARTI SS **SnSn 02 06 01.9 -0.5**
SVE Sverdlovsk 31.37 36 *e*P **P 01 59 44.8 +1.3**
SVE pmax pmax
comp=Z,8.0nm,0.8s
TORD Torodi Ar. Bea 31.66 233 P **P 01 59 46.4 0.0**
comp=Z,8.6nm,0.8s,baz=33,slow=7.0,SNR=47
TORD LR LR 02 15 21.1
comp=Z,126nm,18.8s,baz=27,slow=42
comp=Z,8.6nm,0.8s
TORD Torodi Ar. Bea 31.66 233 P **P 01 59 46.3 -0.2**
LODK Lodwar 32.49 164 P **P 01 59 55.6 +1.8**
CHGR Chuyangaron 33.67 71 P **P 02 00 05.2 +1.2**
CHGR Chuyangaron 33.67 71 P **P 02 00 05.2 +1.2**
CHGR pmax pmax
comp=Z,32nm,1.4s
KBL Kabul 34.31 79 P **P 02 00 11.6 +1.8**
KBL Kabul 34.31 79 P **P 02 00 11.6 +1.8**
KBL pmax pmax
comp=Z,4.0nm,0.9s
KK31 Karatay Array 34.35 63 P **P 02 00 10.6 +0.8**
KK31 IAmb IAmb 02 00 19.5
comp=Z,8.0nm,1.1s
KK31 Karatay Array 34.35 63 P **P 02 00 10.6 +0.8**
KK31 pmax pmax
comp=Z,8.0nm,1.2s
KKAR Karatay Array 34.35 63 P **P 02 00 10.6 +0.8**
KKAR Karatay Array 34.35 63 P **P 02 00 10.6 +0.8**
ARCES ARCESS Array B 34.46 359 P **P 02 00 11.0 +0.6**
comp=Z,6.2nm,1.0s,baz=180,slow=9.7,SNR=6.0
ARCES PcP **PcP 02 02 44.9 -0.4**
comp=Z,8.2nm,1.1s,baz=134,slow=3.9,SNR=2.0
comp=Z,6.2nm,1.0s
ARCES ARCESS Array B 34.46 359 P **P 02 00 09.7 -0.7**
ARCES ARCESS Array B 34.46 359 P **P 02 00 09.7 -0.7**
ARCES pmax pmax
comp=Z,37nm,1.5s
GAR Garm 34.52 71 P **P 02 00 12.5 +1.1**
BORK Borovoye 35.23 46 *i*P **P 02 00 17.8 +0.6**
BORK pmax pmax
comp=Z,4.0nm,0.8s
BVAR Borovoye Array 35.27 46 P **P 02 00 19.1 +1.6**
comp=Z,2.2nm,0.8s,baz=262,slow=7.3,SNR=8.1
BVAR LR LR 02 18 31.2
comp=Z,116nm,18.8s,baz=254,slow=43
comp=Z,2.2nm,0.8s
DRK Karamyk 35.60 69 P **P 02 00 22.0 +1.0**
DRK IAmb IAmb 02 00 35.5
comp=Z,8.0nm,0.9s
DRK Karamyk 35.60 69 P **P 02 00 22.0 +1.0**
DRK pmax pmax
comp=Z,8.0nm,0.9s
MBAR Mbarara 35.72 174 LR LR 02 16 18.0
comp=Z,95nm,18.4s,baz=1.5,slow=38
ARSB Arslanbob 36.29 66 P **P 02 00 27.4 +0.7**
ARSB Arslanbob 36.29 66 P **P 02 00 27.4 +0.7**
ARSB pmax pmax
comp=Z,22nm,1.0s
AAK Ala-Archa 37.30 64 LR LR 02 19 10.7
comp=Z,111nm,19.3s,baz=290,slow=42
AAK Ala-Archa 37.30 64 P **P 02 00 35.8 +0.6**
AAK IAmb IAmb 02 00 41.6
comp=Z,9.0nm,0.8s
AAK Ala-Archa 37.30 64 P **P 02 00 35.8 +0.6**
AAK pmax pmax
comp=Z,9.0nm,0.8s
NIL Nilore 37.92 79 P **P 02 00 41.1 +0.7**
NIL IAmb IAmb 02 00 52.5
comp=Z,13nm,0.9s
NIL Nilore 37.92 79 P **P 02 00 41.1 +0.7**
NIL pmax pmax
comp=Z,13nm,1.0s
BOOM Boomskoye usch 38.38 64 P **P 02 00 45.7 +1.3**
BOOM Boomskoye usch 38.38 64 P **P 02 00 45.7 +1.3**
BOOM pmax pmax
comp=Z,6.0nm,0.8s
NRN Naryn 38.54 66 P **P 02 00 47.4 +1.5**
NRN IAmb IAmb 02 00 53.0
comp=Z,17nm,0.9s
NRN Naryn 38.54 66 P **P 02 00 47.4 +1.5**
NRN pmax pmax
comp=Z,17nm,0.9s
KDJ Kajisay 39.33 64 P **P 02 00 53.3 +0.9**
KDJ IAmb IAmb 02 00 59.5
comp=Z,13nm,0.8s
KDJ Kajisay 39.33 64 P **P 02 00 53.3 +0.9**
KDJ pmax pmax
comp=Z,13nm,0.8s
KURBB Kurchatov Arra 39.95 51 P **P 02 00 57.9 +0.8**
comp=Z,5.7nm,0.7s,baz=276,slow=8.7,SNR=45
KURBB PP **PnPn 02 02 31.8 -0.4**
comp=Z,2.5nm,1.0s,baz=275,slow=11,SNR=6.0
KURBB PcP **PcP 02 03 03.1 +0.7**
comp=Z,1.4nm,0.8s,baz=267,slow=4.0,SNR=4.3
KURBB LR LR 02 20 18.6
comp=Z,93nm,20.8s,baz=174,slow=40
comp=Z,5.7nm,0.7s
KURK Kurchatov 40.01 51 P **P 02 00 57.8 +0.1**
KURK Kurchatov 40.01 51 *ce*P **P 02 00 57.1 -0.6**
KURK pmax pmax
comp=Z,11nm,1.3s
DBIC Dimbokro 40.76 233 P **P 02 01 03.5 -0.7**
comp=Z,4.0nm,0.8s,baz=75,slow=9.8,SNR=5.1
DBIC LR LR 02 20 09.6
comp=Z,61nm,18.8s,baz=72,slow=40
comp=Z,4.0nm,0.8s
DBIC Dimbokro 40.76 233 P **P 02 01 03.7 -0.5**
DBIC Dimbokro 40.76 233 P **P 02 01 03.7 -0.5**
DBIC pmax pmax
comp=Z,9.0nm,1.2s
BORG Borgarnes 41.30 331 LR LR 02 21 42.5
comp=Z,69nm,19.3s,baz=120,slow=41
MAKZ Makanchi 42.30 57 P **P 02 01 16.6 0.0**
MAKZ IAmb IAmb 02 01 21.8
comp=Z,7.6nm,0.6s
MAKZ Makanchi 42.30 57 P **P 02 01 16.6 0.0**
MAKZ pmax pmax
comp=Z,8.0nm,0.6s
MK31 Makanchi Array 42.52 57 *ce*P **P 02 01 19.2 +0.8**
MKAR Makanchi Array 42.52 57 P **P 02 01 19.0 +0.7**
comp=Z,12nm,0.5s,baz=280,slow=6.4,SNR=84
MKAR LR LR 02 23 27.3
comp=Z,58nm,19.1s,baz=264,slow=42
comp=Z,12nm,0.5s
MKAR Makanchi Array 42.52 57 P **P 02 01 18.7 +0.3**
SPITS Spitsbergen Ar 43.39 357 P **P 02 01 24.5 -0.5**
comp=Z,17nm,1.1s,baz=147,slow=12,SNR=11
comp=Z,17nm,1.1s
ZAA0 Zalesovo Array 43.92 46 P **P 02 01 29.9 +0.3**
ZAA0 IAmb IAmb 02 01 36.3
comp=Z,6.4nm,0.6s
ZALV Zalesovo Beam 43.92 46 P **P 02 01 29.8 +0.2**
comp=Z,3.3nm,0.4s,baz=266,slow=9.4,SNR=17
ZALV PP **PP 02 03 11.9 +0.3**
comp=Z,0.6nm,0.5s,baz=260,slow=6.7,SNR=1.1
ZALV LR LR 02 22 27.2
comp=Z,89nm,21.4s,baz=346,slow=40
comp=Z,3.3nm,0.4s
ZALV Zalesovo Beam 43.92 46 P **P 02 01 29.4 -0.1**
DBG Daneborg 45.35 344 *i*P **P 02 01 42.5 +1.8**
DBG IAmb IAmb 02 01 43.8
comp=Z,4.0nm,1.0s
DGZ Jazzator, Alta 45.69 52 *i*P **P 02 01 44.3 +0.3**
DGZ pmax pmax
comp=Z,7.0nm,0.6s
DAG Danmarks Havn 46.42 347 *i*P **P 02 01 46.8 -2.3**
DAG IAmb IAmb 02 01 51.5
comp=Z,3.2nm,0.7s
WMQ Urumqi 46.70 60 *e*P **P 02 01 53.8 +2.0**
WMQ pP pwP 02 01 58.6 +0.8
WMQ pmax pmax
comp=Z,11nm,0.7s
WMQ LR LR
comp=Z,160nm,24.0s
NOR Nord 49.17 352 *i*P **P 02 02 12.0 +1.6**
NOR IAmb IAmb 02 02 12.5
comp=Z,4.4nm,0.7s
SUMG Summit 49.55 339 P **P 02 02 13.8 0.0**
SUMG Summit 49.55 339 P **P 02 02 13.9 0.0**
SUMG pmax pmax
comp=Z,4.0nm,1.0s
SUMG Summit 49.55 339 *i*P **P 02 02 13.2 -0.7**
SUMG IAmb IAmb 02 02 17.1
comp=Z,9.2nm,0.8s
LSZ Lusaka 50.15 179 LR LR 02 24 03.7
comp=Z,104nm,19.1s,baz=352,slow=37
KNGR Kungurtug, Tuv 51.98 50 *i*P **P 02 02 33.0 +0.8**
KNGR pmax pmax
comp=Z,10.0nm,0.9s
SFJD Kangerlussuaq 53.43 331 LR LR 02 27 36.2
comp=Z,62nm,18.3s,baz=83,slow=38
SFJD Kangerlussuaq 53.43 331 P **P 02 02 41.9 -0.6**
SFJD Kangerlussuaq 53.43 331 P **P 02 02 41.9 -0.6**
SFJD pmax pmax
comp=Z,17nm,1.3s
MOY Mondy 53.90 48 *e*P **P 02 02 48.5 +2.2**
GOMU GeErMu 54.03 68 P **P 02 02 46.4 -1.4**
TSUM Tsumeb 54.78 191 LR LR 02 28 53.0
comp=Z,186nm,19.2s,baz=2.5,slow=39
TLY Talaya 55.50 47 LR LR 02 28 58.6
comp=Z,88nm,21.4s,baz=322,slow=38
TLY Talaya 55.50 47 *ce*P **P 02 02 57.3 -0.5**
TLY pmax pmax
comp=Z,5.0nm,0.8s
ZAK Zakamensk 55.62 49 *e*P **P 02 02 59.7 +0.9**
ZAK pmax pmax
comp=Z,7.0nm,1.5s
SHL Shillong 55.92 81 P **P 02 03 01.0 -0.4**
SHL IAmb IAmb 02 03 07.4
comp=Z,6.9nm,1.0s
SHL Shillong 55.92 81 P **P 02 03 01.0 -0.4**
SHL pmax pmax
comp=Z,7.0nm,1.0s
PALK Pallekele 56.38 106 LR LR 02 30 07.3
comp=Z,108nm,20.3s,baz=301,slow=39
SONM Songino Array 58.32 51 P **P 02 03 19.5 +1.5**
comp=Z,5.2nm,0.6s,baz=287,slow=8.5,SNR=14
comp=Z,5.2nm,0.6s
SONM Songino Array 58.32 51 P **P 02 03 18.3 +0.3**
SONM IAmb IAmb 02 03 23.8
comp=Z,3.8nm,0.6s
SONM Songino Array 58.32 51 P **P 02 03 18.3 +0.3**
SONM pmax pmax
comp=Z,4.0nm,0.6s
ULN Ulaanbaatar 58.73 51 P **P 02 03 21.8 +0.9**
ULN IAmb IAmb 02 03 26.6
comp=Z,5.1nm,0.7s
ULN Ulaanbaatar 58.73 51 P **P 02 03 21.8 +0.9**
ULN pmax pmax
comp=Z,5.0nm,0.7s
LBTB Lobatse 59.84 181 LR LR 02 30 14.7
comp=Z,76nm,19.0s,baz=357,slow=37
TIXI Tiksi 60.65 21 LR LR 02 33 59.7
comp=Z,80nm,19.4s,baz=250,slow=40
TIXI Tiksi 60.65 21 P **P 02 03 33.2 -0.3**
TIXI IAmb IAmb 02 03 37.0
comp=Z,4.9nm,0.7s
TIXI Tiksi 60.65 21 *ce*P **P 02 03 31.9 -1.6**
TIXI pmax pmax
comp=Z,6.0nm,0.8s
LZDM Lanzhou Array 60.78 65 P **P 02 03 36.6 +1.2**
comp=Z,1.1nm,0.3s,baz=270,slow=7.4,SNR=3.8
comp=Z,1.1nm,0.3s
FRB Frobisher Bay 61.46 330 LR LR 02 32 16.1
comp=Z,37nm,19.3s,baz=53,slow=38
PZH PanZhiHua 63.40 75 P **P 02 03 54.1 +1.2**
BOSA Boshof 63.43 182 P **P 02 03 54.3 +1.5**
comp=Z,5.4nm,0.9s,baz=5.7,slow=7.8,SNR=6.6
BOSA LR LR 02 31 16.0
comp=Z,78nm,20.1s,baz=12,slow=36
comp=Z,5.4nm,0.9s
BOSA Boshof 63.43 182 P **P 02 03 54.3 +1.5**
KUQ Kuujjuuaa 63.62 324 P **P 02 03 53.5 -0.1**
ILON Igloolik, Nuna 63.77 338 P **P 02 03 52.9 -1.5**
ILON IAmb IAmb 02 03 57.2
comp=Z,2.6nm,0.7s
RES Resolute Bay 64.08 345 LR LR 02 34 38.4
comp=Z,58nm,18.3s,baz=1.0,slow=39
SCHQ Schefferville 64.19 320 P **P 02 03 57.6 +0.1**
comp=Z,9.3nm,0.7s,baz=69,slow=4.4,SNR=14
SCHQ LR LR 02 30 49.0
comp=Z,30nm,19.4s,baz=352,slow=35
comp=Z,9.3nm,0.7s

SCHQ	**Schefferville**	**64.19**	**320**	P		**P**		**02 03 57.1**	**-0.3**
HHC	**Hu-ho-hao-te**	**64.38**	**57**	*e*P		**P**		**02 03 58.3**	**-0.8**
HHC					pmax	pmax			
	comp=Z,12nm,0.6s								
HHC					pmax	pmax			
	comp=Z,200nm,5.1s								
HHC					LR	LR			
	comp=N,290nm,16.2s								
HHC					LR	LR			
	comp=E,200nm,17.0s								
CMAR	**Chiang Mai Arr**	**65.06**	**84**	P		**P**		**02 04 04.1**	**+0.4**
	comp=E,3.0nm,0.7s,baz=296,slow=8.0,SNR=11								
CMAR					LR	LR		02 36 42.7	
	comp=E,40nm,18.6s,baz=285,slow=40								
	comp=E,3.0nm,0.7s								
CMAR	**Chiang Mai Arr**	**65.06**	**84**	P		**P**		**02 04 03.5**	**-0.3**
ICQ	**Pointe Anglais**	**66.76**	**315**	P		**P**		**02 04 14.8**	**+0.7**
BJI2	**Beijing**	**67.90**	**56**	P		**P**		**02 04 23.5**	**+1.9**
BJI2					pmax	pmax			
	comp=Z,3.0nm,0.8s								
D62A	**Allapoint, All**	**68.96**	**313**	P		**P**		**02 04 28.9**	**+0.8**
LMQ	**La Malbaie**	**69.48**	**314**	P		**P**		**02 04 32.4**	**+1.0**
BLKN	**Baker Lake**	**71.27**	**337**	P		**P**		**02 04 40.0**	**-1.9**
BLKN					IAmb	IAmb		02 04 45.5	
	comp=Z,4.2nm,0.6s								
A36M	**Sachs Harbour**	**71.41**	**351**	P		**P**		**02 04 42.1**	**-0.5**
A36M					IAmb	IAmb		02 04 46.9	
	comp=Z,5.5nm,0.7s								
BILL	**Bilibino**	**72.70**	**15**	*i* P		**P**		**02 04 51.2**	**+0.7**
KLR	**Kul'dur**	**72.78**	**42**	P		**P**		**02 04 52.5**	**+1.2**
	comp=Z,0.9nm,0.4s,baz=321,slow=5.5,SNR=4.3								
	comp=Z,0.9nm,0.4s								
KLR	**Kul'dur**	**72.78**	**42**	*i* P		**P**		**02 04 51.4**	**+0.1**
KLR					pmax	pmax			
	comp=Z,25nm,3.5s								
SEY	**Seymchan**	**72.99**	**23**	P		**P**		**02 04 53.9**	**+1.6**
	comp=Z,0.9nm,0.5s,baz=273,slow=9.3,SNR=4.1								
	comp=Z,0.9nm,0.5s								
SEY	**Seymchan**	**72.99**	**23**	*i* P		**P**		**02 04 50.5**	**-1.8**
SEY					pmax	pmax			
	comp=Z,8.0nm,1.4s								
VLDQ	**Val d'Or**	**73.26**	**317**	P		**P**		**02 04 54.7**	**+0.6**
C36M	**Paulatuk**	**73.67**	**350**	IAmb		IAmb		02 04 58.9	
	comp=Z,4.1nm,0.6s								
NJ2	**Nanjing**	**73.72**	**62**	*e*P		**P**		**02 04 57.0**	**-0.1**
NJ2					pmax	pmax			
	comp=Z,30nm,0.6s								
L59A	**Walton**	**75.16**	**311**	P		**P**		**02 05 04.4**	**-1.1**
B21K	**Ikpikpuk River**	**75.54**	**1**	P		**P**		**02 05 06.8**	**-0.2**
B21K					IAmb	IAmb		02 05 11.2	
	comp=Z,6.6nm,0.8s								
USRK	**Ussuriysk Ar.**	**75.77**	**46**	P		**P**		**02 05 09.3**	**+0.5**
	comp=Z,6.1nm,0.6s,baz=308,slow=7.1,SNR=6.6								
	comp=Z,6.1nm,0.6s								
INK	**Inuvik**	**75.84**	**353**	P		**P**		**02 05 08.5**	**-0.2**
INK	**Inuvik**	**75.84**	**353**	P		**P**		**02 05 08.5**	**-0.2**
INK					pmax	pmax			
	comp=Z,2.0nm,0.9s								
D24K	**Happy Valley**	**75.97**	**358**	P		**P**		**02 05 09.5**	**0.0**
SADO	**Sadowa**	**76.14**	**315**	LR		LR		02 38 59.8	
	comp=Z,41nm,18.2s,baz=66,slow=36								
E29M	**Blow River**	**76.17**	**354**	IAmb		IAmb		02 05 14.2	
	comp=Z,6.4nm,0.8s								
F31M	**Tsiigehtchic**	**76.70**	**352**	P		**P**		**02 05 12.0**	**-1.6**
F31M					IAmb	IAmb		02 05 16.6	
	comp=Z,5.8nm,0.8s								
F30M	**Barrier River**	**76.75**	**353**	P		**P**		**02 05 12.4**	**-1.5**
F30M					IAmb	IAmb		02 05 28.2	
	comp=Z,9.4nm,1.2s								
E25K	**Arctic Village**	**76.91**	**357**	P		**P**		**02 05 14.2**	**-0.6**
E25K					IAmb	IAmb		02 05 31.0	
	comp=Z,4.1nm,0.9s								
KSRS	**Korea Array**	**77.08**	**53**	P		**P**		**02 05 16.2**	**-0.1**
	comp=Z,2.4nm,0.6s,baz=290,slow=5.2,SNR=4.1								
KSRS					LR	LR		02 42 53.3	
	comp=Z,43nm,18.8s,baz=305,slow=38								
	comp=Z,2.4nm,0.6s								
F28M	**Old Crow**	**77.09**	**355**	P		**P**		**02 05 14.6**	**-1.3**
F25K	**Christian Rive**	**77.44**	**357**	IAmb		IAmb		02 05 22.4	
	comp=Z,2.9nm,0.8s								
BMAR	**Burnt Mountain**	**77.55**	**357**	P		**P**		**02 05 18.6**	**0.0**
YKAW3	**Yellowknife Wh**	**77.87**	**343**	P		**P**		**02 05 18.8**	**-1.5**
YKAW3					IAmb	IAmb		02 05 22.9	
	comp=Z,7.8nm,1.4s								
YKAW1	**Yellowknife Wh**	**77.91**	**343**	IAmb		IAmb		02 05 32.9	
	comp=Z,6.1nm,1.4s								
YKA	**Yellowknife Ar**	**77.93**	**343**	P		**P**		**02 05 19.5**	**-1.1**
	comp=Z,1.9nm,0.8s,baz=29,slow=5.9,SNR=16								
	comp=Z,1.9nm,0.8s								
YKA	**Yellowknife Ar**	**77.93**	**343**	P		**P**		**02 05 18.9**	**-1.7**
YKA	**Yellowknife Ar**	**77.93**	**343**	*ce*P		**P**		**02 05 21.6**	**+1.0**
YKA					pmax	pmax			
	comp=Z,2.0nm,0.7s								
COLD	**Coldfoot**	**77.93**	**359**	IAmb		IAmb		02 05 37.0	
	comp=Z,4.0nm,0.8s								
H27K	**Steamboat Moun**	**78.57**	**355**	IAmb		IAmb		02 05 28.6	
	comp=Z,5.1nm,0.7s								
MDP	**Montagnes des**	**78.63**	**268**	LR		LR		02 39 23.6	
	comp=Z,38nm,21.2s,baz=20,slow=35								
I27K	**Kandik River**	**79.20**	**355**	IAmb		IAmb		02 05 31.8	
	comp=Z,4.7nm,0.8s								
IMAR	**Indian Mountai**	**79.20**	**0**	P		**P**		**02 05 27.0**	**-0.6**
I28M	**Miner Creek**	**79.23**	**354**	IAmb		IAmb		02 05 34.1	
	comp=Z,6.5nm,1.4s								
I21K	**Tanana**	**80.01**	**360**	P		**P**		**02 05 31.5**	**-0.5**
I21K					IAmb	IAmb		02 05 36.3	
	comp=Z,4.8nm,0.9s								
ANM	**Nome**	**80.15**	**5**	P		**P**		**02 05 31.6**	**-1.2**
ANM	**Nome**	**80.15**	**5**	P		**P**		**02 05 31.6**	**-1.2**
ANM					pmax	pmax			
	comp=Z,3.0nm,0.7s								
ILAR	**Eielson Array**	**80.31**	**357**	P		**P**		**02 05 32.8**	**-0.9**
	comp=Z,1.3nm,0.7s,baz=347,slow=4.1,SNR=14								
	comp=Z,1.3nm,0.7s								
ILAR	**Eielson Array**	**80.31**	**357**	P		**P**		**02 05 33.7**	**+0.1**
ILAR	**Eielson Array**	**80.31**	**357**	P		**P**		**02 05 33.7**	**+0.1**
CCB	**Clear Creek Bu**	**80.46**	**358**	P		**P**		**02 05 34.1**	**-0.4**
DAWY	**Dawson**	**80.55**	**354**	P		**P**		**02 05 34.5**	**-0.5**
DAWY					IAmb	IAmb		02 05 38.9	
	comp=Z,4.8nm,0.7s								
WRH	**Wood River Hil**	**80.65**	**358**	P		**P**		**02 05 34.1**	**-1.3**
WRH					IAmb	IAmb		02 05 39.0	
	comp=Z,7.1nm,0.7s								
HDA	**Harding Lake**	**80.67**	**357**	P		**P**		**02 05 34.1**	**-1.4**
HDA					IAmb	IAmb		02 05 39.0	
	comp=Z,5.9nm,0.7s								
MMPY	**Sheldon Lake,**	**81.03**	**350**	P		**P**		**02 05 37.6**	**0.0**
BPAW	**Bear Paw Mtn.**	**81.08**	**359**	IAmb		IAmb		02 05 40.8	
	comp=Z,4.0nm,0.9s								
ULM	**Lac du Bonnet**	**81.17**	**327**	P		**P**		**02 05 39.3**	**+0.8**
	comp=Z,1.6nm,0.7s,baz=56,slow=6.6,SNR=5.1								
ULM					LR	LR		02 40 56.1	
	comp=Z,70nm,21.6s,baz=16,slow=35								
	comp=Z,1.6nm,0.7s								
ULM	**Lac du Bonnet**	**81.17**	**327**	IAmb		IAmb		02 06 08.2	
	comp=Z,7.9nm,1.4s								
J19K	**Poorman**	**81.18**	**1**	IAmb		IAmb		02 05 42.4	
	comp=Z,4.3nm,0.8s								
RIDG	**Independent Ri**	**81.25**	**356**	IAmb		IAmb		02 05 44.8	
	comp=Z,6.6nm,1.0s								
DOT	**Dot Lake**	**81.29**	**356**	P		**P**		**02 05 37.9**	**-1.0**
DOT					IAmb	IAmb		02 05 42.9	
	comp=Z,3.7nm,0.7s								
BCAR	**Beaver Creek A**	**81.72**	**355**	P		**P**		**02 05 41.0**	**-0.2**
DHY	**Denali Highway**	**82.02**	**357**	P		**P**		**02 05 42.9**	**-0.1**
DHY					IAmb	IAmb		02 05 47.8	
	comp=Z,4.8nm,0.8s								
PETK	**Petropavlovsk-**	**82.24**	**27**	LR		LR		02 49 23.7	
	comp=Z,69nm,20.8s,baz=310,slow=41								
PPLA	**Purkeypile**	**82.30**	**360**	P		**P**		**02 05 43.5**	**-1.0**
PPLA					IAmb	IAmb		02 05 44.9	
	comp=Z,11nm,1.4s								
L22K	**Petersville**	**82.66**	**359**	P		**P**		**02 05 45.0**	**-1.2**
L22K					IAmb	IAmb		02 05 50.2	
	comp=Z,4.3nm,0.7s								
SKT	**Skwentna**	**83.22**	**359**	P		**P**		**02 05 47.5**	**-1.5**
SKT					IAmb	IAmb		02 05 52.8	
	comp=Z,3.9nm,0.8s								
GHO	**Glory Hole Cre**	**83.38**	**358**	P		**P**		**02 05 50.2**	**+0.3**
STLK	**Strandline Lak**	**83.70**	**359**	P		**P**		**02 05 50.9**	**-0.8**
STLK					IAmb	IAmb		02 05 54.3	
	comp=Z,3.7nm,0.9s								
MJAR	**Matsushiro Arr**	**84.20**	**49**	P		**P**		**02 05 56.1**	**+1.6**
	comp=Z,4.6nm,1.0s,baz=316,slow=2.9,SNR=4.4								
	comp=Z,4.6nm,1.0s								
T50A	**Nancy**	**84.30**	**312**	P		**P**		**02 05 54.4**	**-0.6**
TKL	**Tuckaleechee C**	**84.52**	**310**	LR		LR		02 44 01.5	
	comp=Z,54nm,20.0s,baz=58,slow=36								
DLBC	**Dease Lake**	**84.82**	**348**	LR		LR		02 44 35.7	
	comp=Z,55nm,19.0s,baz=360,slow=36								
S34M	**Telegraph Cree**	**85.50**	**349**	P		**P**		**02 06 02.2**	**+1.6**
ECSD	**EROS Data Cent**	**86.24**	**323**	IAmb		IAmb		02 06 09.9	
	comp=Z,5.2nm,1.1s								
P40A	**Paris**	**86.83**	**317**	P		**P**		**02 06 06.8**	**-0.8**
BDFB	**Brasilia**	**87.11**	**249**	P		**P**		**02 06 09.8**	**+0.5**
	comp=Z,1.6nm,0.8s,baz=77,slow=9.6,SNR=3.9								
BDFB					LR	LR		02 45 35.8	
	comp=Z,88nm,20.3s,baz=90,slow=36								
	comp=Z,1.6nm,0.8s								
R40A	**Maddies Statio**	**87.82**	**317**	P		**P**		**02 06 11.8**	**-0.6**
BBB	**Bella Bella**	**90.36**	**345**	LR		LR		02 47 47.9	
	comp=Z,33nm,20.6s,baz=136,slow=36								
NEW	**Newport**	**91.01**	**337**	LR		LR		02 50 15.4	
	comp=Z,67nm,18.2s,baz=26,slow=38								
PDAR	**Pinedale Array**	**92.91**	**330**	P		**P**		**02 06 36.6**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=4.4,slow=1.9,SNR=3.6								
PDAR					LR	LR		02 50 35.9	
	comp=Z,48nm,18.5s,baz=38,slow=37								
	comp=Z,0.2nm,0.5s								
KAPI	**Kappang**	**95.09**	**93**	LR		LR		02 56 42.9	
	comp=Z,28nm,18.3s,baz=244,slow=40								
ANMO	**Albuquerque**	**97.85**	**323**	LR		LR		02 52 38.6	
	comp=Z,40nm,18.2s,baz=42,slow=36								
NVAR	**Mina Array Bea**	**100.06**	**333**	LR		LR		02 54 12.9	
	comp=Z,54nm,19.6s,baz=92,slow=36								

KRNET ***16*** *02:11:18.5±0.1,40.˝10N×77.˝35E,mb2.5*
SOME ***16*** *02:11:39.9,40.˝78N×77.˝47E,h15km*
NNC ***16*** *02:11:41.0±1.6,40.˝84N×77.˝36E,h14km±9km,mb3.1, mpv2.7,Error ellipse: s-maj=10.5km s-min=6.8km az=175.0*

ISC 16 02:11:37.9±3.0, 40.˝7N±0.˝1×77.˝26E±0.˝06, h9km±12km, n23, σ1s77/28, 12C-6D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.09**	**22**	⇑	*e*P	P*g*		02 11 49.5	-9.5
TARG				⇑	*e*S	**Sg**		**02 12 12.2**	**-1.0**
NRN	**Naryn**	**1.19**	**307**	⇓	*e*P	P*g*		02 11 49.9	-11
NRN				⇓	*e*S	**Sg**		**02 12 12.8**	**-3.5**
KDJ	**Kajisay**	**1.41**	**358**	⇓	*e*P	P*g*		02 11 55.7	-9.4
KDJ				⇓	*e*S	**Sg**		**02 12 22.8**	**-0.6**
ULHL	**Ulahol**	**1.71**	**334**	⇑	*e*P	P*n*		02 11 59.5	-8.6
ULHL				⇑	*e*S	**Sn**		**02 12 29.5**	**-0.7**
BOOM	**Boomskoye usch**	**2.03**	**331**	⇑	*e*P	P*n*		02 12 03.9	-8.6
BOOM				⇑	*e*S	**Sn**		**02 12 37.0**	**-1.1**
TNSS	**Tian-Shan** 1.4nm,0.3s	**2.33**	**354**	P*g*		**Pg**		**02 12 22.2**	**-0.4**
TNSS				L*g*		L*g*		02 12 52.7	
	1.7nm,0.4s								
TNSS	**Tian-Shan** 1.4nm,0.3s	**2.33**	**354**	*e*P		**Pg**		**02 12 22.2**	**-0.4**
TNSS				*e*S		**Sg**		**02 12 52.7**	**-0.1**
	1.7nm,0.4s								
IZV	**Izvestkoviy** 1.4nm,0.1s	**2.37**	**349**	P*g*		**Pg**		**02 12 23.1**	**-0.2**
IZV				L*g*		L*g*		02 12 54.3	
	9.3nm,0.4s								
IZV	**Izvestkoviy** 1.4nm,0.1s	**2.37**	**349**	*e*P		**Pg**		**02 12 23.1**	**-0.2**
IZV				*e*S		**Sg**		**02 12 54.3**	**+0.3**
	9.3nm,0.4s								
MDOK	**Medeo** 3.6nm,0.4s	**2.45**	**356**	P*g*		**Pb**		**02 12 23.8**	**+1.5**
MDOK				L*g*		L*g*		02 12 55.4	
	8.1nm,0.6s								
ARLS	**Aral**	**2.49**	**298**	⇑	*e*P	P*n*		02 12 07.5	-11
ARLS				⇑	*e*S	S*n*		02 12 43.3	-6.1
MTBS	**Maitube** 1.6nm,0.3s	**2.49**	**346**	P*g*		**Pb**		**02 12 24.7**	**+1.8**
MTBS				L*g*		L*g*		02 12 56.9	
	5.7nm,0.3s								
MTBS	**Maitube** 1.6nm,0.3s	**2.49**	**346**	*e*P		**Pb**		**02 12 24.7**	**+1.8**
MTBS				*e*S		**Sg**		**02 12 56.9**	**-1.0**
	5.7nm,0.3s								
SATY	**Saty** 1.7nm,0.2s	**2.49**	**20**	P*g*		**Pb**		**02 12 23.9**	**+0.9**
SATY				L*g*		L*g*		02 12 55.6	
	4.5nm,0.3s								
KST	**Kastek** 2.0nm,0.2s	**2.52**	**338**	P*g*		**Pb**		**02 12 25.7**	**+2.3**
KST				L*g*		L*g*		02 12 58.8	
	5.3nm,0.4s								
KST	**Kastek** 2.0nm,0.2s	**2.52**	**338**	*e*P		**Pb**		**02 12 25.8**	**+2.3**
KST				*e*S		**Sg**		**02 12 58.8**	**0.0**
	5.3nm,0.4s								
UCH	**Uchtor**	**2.55**	**307**	⇑	*e*P	P*n*		02 12 09.6	-10
UCH				⇑	*e*S	**Sn**		**02 12 46.9**	**-4.6**
AAK	**Ala-Archa** 2.2nm,1.0s	**2.82**	**314**	⇑	P*n*	**Pn**		**02 12 25.2**	**+1.8**
AAK				⇓	L*g*	L*g*		02 13 08.0	
	3.6nm,1.0s								
KPKS	**Kokpek** 0.6nm,0.4s	**2.94**	**21**	P*g*		**Pb**		**02 12 30.4**	**-0.3**
KPKS				L*g*		L*g*		02 13 06.8	
	2.5nm,0.3s								
KPKS	**Kokpek** 0.6nm,0.4s	**2.94**	**21**	*e*P		**Pb**		**02 12 30.4**	**-0.3**
KPKS				*e*S		**Sb**		**02 13 06.8**	**-0.1**
	2.5nm,0.3s								
KTBS	**Karatobe** 0.7nm,0.1s	**3.02**	**352**	P*g*		**Pb**		**02 12 34.5**	**+2.5**
KTBS				L*g*		L*g*		02 13 13.8	
	1.1nm,0.5s								
KTBS	**Karatobe** 0.7nm,0.1s	**3.02**	**352**	*e*P		**Pb**		**02 12 34.5**	**+2.5**
KTBS				*e*S		**Sg**		**02 13 13.8**	**-1.2**
	1.1nm,0.5s								
PDGK	**Podgornoye** 2.8nm,1.1s	**3.10**	**32**	⇓	P*n*	**Pn**		**02 12 27.7**	**+0.5**
PDGK				⇑	L*g*	L*g*		02 13 16.0	
	2.4nm,0.7s								

IDC ***16*** *02:15:54.7±1.6,21.˝78N×121.˝05E,h0km,mb3.6/6, mbtmp3.6/6,MS3.4/1,Error ellipse: s-maj=149.0km s-min=19.8km az=64.0*
TAP ***16*** *02:15:57.0,21.˝91N×120.˝97E,h23km,ML3.8,D*
JMA ***16*** *02:15:58.8±0.3,22.˝8N±1.˝×121.˝3E±0.˝7,h3km,MV3.7/13, TAIWAN REGION*

ISC 16 02:15:57.4±0.9, 21.˝95N±0.˝03×121.˝06E±0.˝02, h18km±3km, n110, σ1s25/148, mb3.5/6, 3C-12D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.15**	**252**	⇓	*i*P	**Pg**		**02 16 01.8**	**+0.1**
TSEB					*i* S	**Sg**		**02 16 05.2**	**+0.7**
SMST	**Manzhou Townsh**	**0.22**	**289**	⇓	*i*P	**Pb**		**02 16 02.5**	**-0.1**
SMST					*i* S	**Sg**		**02 16 06.2**	**+0.1**
TWKBT	**Hengchun**	**0.23**	**268**	⇓	*i*P	**Pg**		**02 16 02.3**	**-0.4**
TWKBT					*i* S	**Sb**		**02 16 05.7**	**-0.8**
TWK1	**Hengchun**	**0.24**	**269**	⇓	*i*P	**Pg**		**02 16 02.3**	**-0.5**
TWK1					*i* S	**Sg**		**02 16 05.8**	**-0.8**
SNW	**Nanwan**	**0.29**	**272**	*e*P		**Pg**		**02 16 03.5**	**-0.2**
SNW				*e*S		**Sb**		**02 16 08.5**	**+0.1**
HEN	**Hengchun**	**0.30**	**281**	⇓	*i*P	**Pg**		**02 16 03.8**	**-0.1**
HEN					S	**Sb**		**02 16 08.8**	**-0.1**
SLIU	**Shizi**	**0.36**	**318**	⇓	*i*P	**Pb**		**02 16 05.2**	**0.0**
SLIU				*e*S		**Sb**		**02 16 11.0**	**+0.4**
TAWH	**Dawu Township**	**0.42**	**338**	⇓	P	**Pb**		**02 16 06.7**	**+0.4**
TAWH					S	**Sb**		**02 16 13.4**	**+1.0**
TAW	**Tawu**	**0.43**	**340**	⇑	*i*P	**Pb**		**02 16 07.2**	**+0.7**
TAW					*i* S	**Sb**		**02 16 13.9**	**+1.2**
LAY	**Lan-yu**	**0.47**	**79**	⇓	P	**Pb**		**02 16 07.9**	**+0.8**
LAY					S	**Sn**		**02 16 15.9**	**-1.1**
EAST	**Anshuo**	**0.47**	**336**	⇓	*i*P	**Pb**		**02 16 07.7**	**+0.4**
EAST					*i* S	**Sb**		**02 16 15.2**	**+1.2**
LYUB	**Lan-yu**	**0.49**	**84**	⇓	*e*P	**Pg**		**02 16 07.4**	**+0.2**
LYUB				*e*S		**Sb**		**02 16 14.7**	**+0.4**
SCZT	**Fangliau**	**0.58**	**316**	⇓	*i*P	**Pb**		**02 16 09.4**	**+0.4**
ECL	**Taimali**	**0.65**	**351**	⇑	*i*P	**Pb**		**02 16 09.8**	**-0.4**
ECL				*e*S		**Sn**		**02 16 20.5**	**-1.1**
SSPT	**Xinbi**	**0.70**	**320**	⇓	*e*P	**Pn**		**02 16 12.4**	**0.0**
WLCH	**Liuqiu**	**0.75**	**303**	*e*P		**Pn**		**02 16 13.9**	**+0.9**
TWP	**Hsiaoliuchiu**	**0.76**	**302**	*e*P		**Pn**		**02 16 13.9**	**+0.7**
MASBT	**Mashibuluo**	**0.77**	**329**	⇑	*i*P	**Pg**		**02 16 12.8**	**+0.3**
MASBT					*i* S	**Sn**		**02 16 23.7**	**-0.8**
LDUT	**Ludao**	**0.81**	**28**	*e*P		**Pb**		**02 16 12.8**	**-0.2**
TSMG	**Majia**	**0.84**	**333**	*e*P		**Pb**		**02 16 13.7**	**+0.1**
TWGBT	**Beinan**	**0.86**	**1**	P		**Pb**		**02 16 13.4**	**-0.5**
TWGBT	**Beinan**	**0.86**	**1**	S		**Sb**		**02 16 16.2**	**-8.9**
TWGBT	**Beinan**	**0.86**	**1**	*e*P		**Pb**		**02 16 12.7**	**-1.2**
TWG	**Pinlang**	**0.87**	**1**	*e*P		**Pb**		**02 16 12.7**	**-1.2**
SSD	**Sandimen**	**0.89**	**334**	*e*P		**Pb**		**02 16 14.3**	**+0.1**
SSD				*e*S		**Sg**		**02 16 26.6**	**+0.2**
LONT	**Longtian**	**0.95**	**4**	*e*P		**Pb**		**02 16 14.3**	**-1.1**
WSSB	**Gushan**	**1.01**	**313**	*e*P		**Pg**		**02 16 17.2**	**+0.2**
TWM1	**Shoushan**	**1.05**	**326**	*e*P		**Pg**		**02 16 19.6**	**+1.8**
SLGT	**Liugui**	**1.11**	**340**	*e*P		**Pg**		**02 16 19.1**	**+0.3**
CHKT	**Chengkung**	**1.18**	**14**	*e*P		**Pg**		**02 16 19.8**	**-0.4**
CHKT				*e*S		**Sb**		**02 16 33.6**	**-0.6**
EHD	**Haiduan**	**1.20**	**6**	*e*P		**Pn**		**02 16 17.2**	**-2.1**
SGST	**Jiashian**	**1.21**	**339**	*e*P		**Pn**		**02 16 19.5**	**+0.1**
ELDTW	**Lidau**	**1.23**	**358**	*e*P		**Pn**		**02 16 18.6**	**-1.3**
STYT	**Tauyuan**	**1.24**	**347**	*e*P		**Pn**		**02 16 20.1**	**+0.2**
STYH	**Taoyuan**	**1.24**	**348**	*e*P		**Pb**		**02 16 20.5**	**+0.2**
FULB	**Fuli**	**1.26**	**10**	*e*P		**Pn**		**02 16 19.4**	**-0.7**
FULB				*e*S		**Sn**		**02 16 36.8**	**+0.1**
CHKH	**Chenggong**	**1.27**	**14**	*e*P		**Pn**		**02 16 19.0**	**-1.3**
CHKH				*e*S		**Sb**		**02 16 36.1**	**-0.8**
CHN1	**Nanshi**	**1.32**	**338**	*e*P		**Pb**		**02 16 21.8**	**0.0**
WTP	**Ta-pu**	**1.35**	**342**	*e*P		**Pb**		**02 16 22.2**	**-0.1**
TPUB	**Ta-pu**	**1.40**	**344**	P		**Pb**		**02 16 23.7**	**+0.6**
TPUB	**Ta-pu**	**1.40**	**344**	*e*P		**Pb**		**02 16 23.3**	**+0.3**
ECBN	**Changbin**	**1.41**	**15**	*e*S		**Sn**		**02 16 40.2**	**0.0**
TWF1	**Yuli**	**1.41**	**9**	*e*P		**Pn**		**02 16 22.1**	**-0.1**
TWK	**Hsinying**	**1.41**	**338**	*e*P		**Pb**		**02 16 23.2**	**0.0**
YULB	**Yu-li**	**1.45**	**9**	P		**Pn**		**02 16 23.3**	**+0.5**
YULB	**Yu-li**	**1.45**	**9**	*e*P		**Pn**		**02 16 22.7**	**-0.2**
TSCK	**Chigu Township**	**1.49**	**323**	*e*P		**Pn**		**02 16 23.5**	**+0.2**
TSCK				*e*S		**Sb**		**02 16 44.1**	**+0.9**
WCKO	**Fanlu**	**1.54**	**344**	*e*P		**Pb**		**02 16 25.3**	**-0.1**
EHYH	**Wanrong**	**1.56**	**10**	*e*P		**Pn**		**02 16 25.0**	**+0.7**
EHY	**Hungye**	**1.57**	**9**	*e*P		**Pn**		**02 16 24.3**	**0.0**
ALS	**Alishan**	**1.57**	**351**	*e*P		**Pb**		**02 16 26.2**	**+0.1**
ALS				*e*S		**Sg**		**02 16 49.2**	**+0.9**
HGSD	**Ruisui**	**1.57**	**12**	*e*P		**Pn**		**02 16 24.0**	**-0.4**
CHN5	**Tsauling**	**1.68**	**348**	*e*P		**Pb**		**02 16 27.1**	**-0.7**
WSL	**Shuilin Townsh**	**1.74**	**334**	*e*P		**Pn**		**02 16 26.9**	**+0.2**
WHYT	**Xinyi Township**	**1.75**	**354**	*e*P		**Pn**		**02 16 28.8**	**-0.2**
WARBT	**Fenglin Townsh**	**1.79**	**10**	*e*P		**Pn**		**02 16 27.8**	**+0.4**
WDLH	**Douliu**	**1.80**	**345**	*e*P		**Pn**		**02 16 28.5**	**+1.0**
VWDT	**VWDT**	**1.80**	**2**	*e*P		**Pb**		**02 16 29.4**	**-0.4**
VWDT				*e*S		**Sg**		**02 16 54.4**	**-1.0**
SSLB	**Suanglung**	**1.83**	**357**	P		**Pb**		**02 16 30.2**	**-0.2**
SSLB	**Suanglung**	**1.83**	**357**	*e*P		**Pb**		**02 16 29.8**	**-0.6**
WDGT	**Dungji**	**1.84**	**316**	*e*P		**Pn**		**02 16 27.1**	**-0.9**
WDGT				*e*S		**Sn**		**02 16 49.7**	**-1.2**
SHUL	**Shoufeng**	**1.89**	**14**	*e*P		**Pn**		**02 16 29.2**	**+0.4**
SHUL				*e*S		**Sn**		**02 16 53.3**	**+1.2**
SMLT	**Sun Moon Lake**	**1.93**	**356**	*e*P		**Pb**		**02 16 31.2**	**-1.0**
TYC	**Yuchr**	**1.96**	**355**	*e*P		**Pb**		**02 16 31.6**	**-0.8**
VCHM	**Qimei**	**1.96**	**310**

KUR eS Sn 02 19 25.2 +8.7
KUR pmax pmax
comp=E,43nm,0.7s
KUR pmax pmax
comp=Z,82nm,0.7s
KUR pmax pmax
comp=N,33nm,0.3s
KUR smax smax
comp=N,71nm,0.4s
KUR smax smax
comp=E,46nm,0.7s
TYV Tymovskoe 7.33 285 ePN Pn 02 18 36.3 +5.2
TYV eS **Sn 02 19 55.2 +2.3**
TYV pmax pmax
comp=Z,500nm,3.9s
TYV pmax pmax
comp=Z,18nm,0.6s
TYV smax smax
comp=N,23nm,0.8s
TYV smax smax
comp=E,31nm,0.8s
TYV smax smax
comp=N,900nm,4.6s
TYV smax smax
comp=E,600nm,4.6s
TYV MLR MLR
comp=Z,2µm,17.0s
YUK Yuzh-Kuril'sk 7.69 228 i PN **Pn 02 18 35.4 -0.8**
YUK Yuzh-Kuril'sk 7.69 228 eP **Pn 02 18 38.4 +2.3**
UGL Uglegorsk 7.71 272 ePN Pn 02 18 43.3 +6.9
YSS Yuzhno-Sakhali 7.81 256 Pn **Pn 02 18 35.8 -2.0**
YSS Yuzhno-Sakhali 7.81 256 ePN **Pn 02 18 40.0 +2.2**
YSS pmax pmax
comp=Z,20nm,0.5s
YSS MLR MLR
comp=N,500nm,13.0s
YSS MLR MLR
comp=Z,700nm,13.0s
YSS MLR MLR
comp=E,1µm,14.0s
YSS Yuzhno-Sakhali 7.81 256 eP Pn 02 18 45.0 +7.2
JKA Kamikawa-asahi 9.37 240 Pn **Pn 02 18 56.3 -2.8**
ASAJ Asahikawa 9.37 240 P **Pn 02 18 59.9 +0.7**
comp=E,1.0nm,0.3s,baz=83,slow=14,SNR=17
comp=E,8.6nm,0.7s
MA2 Magadan 10.31 351 P **Pn 02 19 12.6 +0.6**
comp=E,8.2nm,0.3s,baz=170,slow=8.7,SNR=13
MA2 LR LR 02 23 42.4
comp=E,154nm,19.5s,baz=172,slow=40
MA2 Magadan 10.31 351 Pn **Pn 02 19 10.7 -1.2**
MA2 Magadan 10.31 351 cePN **Pn 02 19 13.1 +1.1**
MA2 pmax pmax
comp=Z,23nm,0.6s
TEY Ternei 12.51 256 ePN **P 02 19 51.1 -1.7**
SEY Seymchan 13.55 357 P **Pn 02 19 57.7 +1.6**
comp=Z,0.5nm,0.3s,baz=163,slow=13,SNR=6.8
comp=Z,2.0nm,0.6s
SEY Seymchan 13.55 357 ceP **Pn 02 19 57.8 +1.6**
SEY pmax pmax
comp=Z,10.0nm,1.7s
KLR Kul'dur 14.40 278 P **Pn 02 20 09.2 +1.5**
comp=Z,4.5nm,0.6s,baz=88,slow=12,SNR=9.4
KLR Kul'dur 14.40 278 i P **Pn 02 20 06.9 -0.8**
USRK Ussuriysk Ar. 15.83 259 P **Pn 02 20 26.3 -0.2**
comp=Z,0.5nm,0.3s,baz=68,slow=13,SNR=9.8
comp=Z,3.9nm,0.7s
ZEA Zeya 17.03 295 eP **P 02 20 47.9 +5.0**
ZEA pmax pmax
comp=E,20nm,1.5s
ZEA pmax pmax
comp=N,10.0nm,1.1s
ZEA pmax pmax
comp=Z,20nm,1.4s
ZEA MLR MLR
comp=E,200nm,9.0s
ZEA MLR MLR
comp=Z,200nm,16.0s
HEH HeiHe 17.04 283 eP **P 02 20 46.5 +3.4**
HEH pmax pmax
comp=Z,31nm,0.9s
HEH LR LR
comp=N,400nm,13.0s
HEH LR LR
comp=E,510nm,13.6s
HEH LR LR
comp=Z,640nm,13.9s
MAJO Matsushiro 17.18 227 P **Pn 02 20 42.2 -1.4**
MJAR Matsushiro Arr 17.18 227 P **Pn 02 20 41.2 -2.4**
comp=Z,0.1nm,0.3s,baz=24,slow=12,SNR=14
MJAR LR LR 02 27 31.0
comp=Z,169nm,18.3s,baz=24,slow=38
comp=Z,12nm,1.0s
MJAR Matsushiro Arr 17.18 227 Pn **Pn 02 20 42.0 -1.6**
MJAR Matsushiro Arr 17.18 227 P **Pn 02 20 42.0 -1.6**
MJAR pmax pmax
comp=Z,9.0nm,1.4s
MDJ Mudanjiang 17.19 263 P **Pn 02 20 43.9 +0.2**
MDJ Mudanjiang 17.19 263 P **P 02 20 46.5 +1.7**
MDJ pmax pmax
comp=Z,24nm,1.5s
BNX BinXian 18.18 268 ⇓P **Pn 02 20 56.5 +0.8**
BNX pmax pmax
comp=Z,7.0nm,0.9s
YAK Yakutsk 18.40 322 LR LR 02 28 48.8
comp=Z,89nm,18.2s,baz=121,slow=40
YAK Yakutsk 18.40 322 eP **Pn 02 20 58.9 +0.6**
YAK eS **S 02 24 24.5 -1.2**
YAK pmax pmax
comp=Z,62nm,0.9s
YAK pmax pmax
comp=E,13nm,1.1s
YAK pmax pmax
comp=N,11nm,1.2s
YAK smax smax
comp=N,297nm,5.8s
YAK smax smax
comp=E,216nm,4.8s
YAK Yakutsk 18.40 322 eP **Pn 02 21 02.2 +3.9**
BILL Bilibino 19.66 14 P **P 02 21 12.1 +0.4**
BILL IAmb IAmb 02 21 26.0
comp=Z,16nm,0.7s
BILL Bilibino 19.66 14 ceP **Pn 02 21 13.5 +0.1**
BILL pmax pmax
comp=Z,17nm,1.7s
BILL Bilibino 19.66 14 eP **Pn 02 21 13.7 +0.3**
CN2 Changchun 20.23 265 P Pn 02 21 22.0 +1.7
CN2 pmax pmax
comp=Z,10.0nm,0.7s
KSRS Korea Array 22.18 247 P **P 02 21 37.4 -1.8**
comp=Z,1.7nm,0.5s,baz=48,slow=10,SNR=4.1
comp=Z,1.7nm,0.5s
SPIA Saint Paul Isl 22.59 56 P **P 02 21 43.4 +0.1**
baz=266
GAMB Gambell 23.39 39 P **P 02 21 51.3 0.0**
baz=249
JNU Nakatsue 23.60 235 P **P 02 21 51.4 -2.3**
comp=Z,4.9nm,0.5s,baz=349,slow=22,SNR=1.2
comp=Z,4.9nm,0.5s
BOD Bodaibo 24.75 305 eP **P 02 22 04.5 +0.5**
BOD pmax pmax
comp=Z,16nm,1.8s
UNV Unalaska Valle 24.77 65 P **P 02 22 04.0 -0.1**
baz=276
M11K Mekoryuk 25.04 49 P **P 02 22 06.0 -0.6**
baz=262
TIXI Tiksi 25.05 342 ceP **P 02 22 07.9 +1.4**
TIXI pmax pmax
comp=Z,22nm,1.3s
DL2 Dalian 25.21 258 P **P 02 22 07.3 -1.0**
DL2 pmax pmax
comp=Z,39nm,1.1s
TNA Tin City 25.55 37 P **P 02 22 12.3 +1.1**
TNA Tin City 25.55 37 P **P 02 22 11.1 -0.1**
baz=250
K13K Kusilvak Mount 26.02 46 P **P 02 22 16.0 +0.6**
baz=261
F14K Arctic Creek 26.15 37 P **P 02 22 15.8 -0.8**
baz=252
ANM Nome 26.27 40 P **P 02 22 17.8 +0.1**
ANM Nome 26.27 40 P **P 02 22 17.8 +0.1**
ANM pmax pmax
comp=Z,8.0nm,1.4s
ANM Nome 26.27 40 P **P 02 22 17.6 -0.1**
baz=255
M13K Dall Lake 26.45 49 P **P 02 22 20.3 +1.0**
baz=265
FALS False Pass 26.46 62 P **P 02 22 20.4 +0.9**
baz=276
J14K Nanvaranak Lak 26.66 44 P **P 02 22 21.8 +0.5**
baz=260
L14K Kuka Creek 26.87 47 P **P 02 22 23.3 +0.2**
baz=264
F15K North Star Dit 26.89 37 P **P 02 22 23.7 +0.4**
baz=253
G15K Niukluk 26.94 39 P **P 02 22 24.6 +0.9**
baz=255
M14K Bethel 27.16 49 P **P 02 22 26.9 +1.1**
baz=266
N14K Kuskokwak Cree 27.25 50 P **P 02 22 26.5 0.0**
baz=268
O14K Tigyukauivet M 27.44 52 P **P 02 22 28.1 -0.2**
baz=269
L15K Ungalak Mounta 27.47 47 P **P 02 22 29.3 +0.7**
baz=264
C16K Lisburne Hills 27.50 32 P **P 02 22 29.0 +0.3**
baz=248
K15K Wolf Creek Mou 27.52 45 P **P 02 22 29.7 +0.7**
K15K Wolf Creek Mou 27.52 45 P **P 02 22 28.5 -0.4**
baz=263
H16K Elim 27.60 40 P **P 02 22 29.6 0.0**
baz=258
G16K Koyuk River 27.73 39 P **P 02 22 30.9 +0.2**
G16K Koyuk River 27.73 39 P **P 02 22 30.3 -0.4**
baz=256
M15K Kasigluk River 27.78 49 P **P 02 22 31.0 -0.3**
baz=267
N15K Kwethluk River 28.05 50 P **P 02 22 34.4 +0.6**
N15K IAmb IAmb 02 22 46.3
comp=Z,12nm,1.1s
N15K Kwethluk River 28.05 50 P **P 02 22 34.0 +0.3**
baz=269
J16K Anvik River 28.07 43 P **P 02 22 33.7 -0.3**
baz=262
SDPT Sand Point 28.08 60 P **P 02 22 33.7 -0.3**
baz=277
D17K Noatak River 28.09 34 P **P 02 22 33.6 -0.4**
baz=252
I17K Unalakleet 28.12 42 P **P 02 22 34.0 -0.4**
baz=261
O15K Ungalikthiuk R 28.18 52 P **P 02 22 34.5 -0.4**
baz=271
RDOG Red Dog Mine 28.27 33 P **P 02 22 34.9 -0.8**
baz=251
C17K DeLong Mountai 28.32 32 P **P 02 22 36.3 +0.2**
baz=250
F17K Baldwin Pennin 28.42 37 P **P 02 22 36.6 -0.3**
baz=256
L16K Owhat River 28.43 47 P **P 02 22 36.8 -0.3**
baz=266
G17K Kiwalik Mounta 28.44 39 P **P 02 22 36.6 -0.6**
baz=258
H17K Granite Mounta 28.64 40 P **P 02 22 39.3 +0.3**
baz=260
M16K Timber Creek 28.64 48 P **P 02 22 39.0 0.0**
baz=268
CHNA Chernabura Isl 28.66 61 P **P 02 22 39.7 +0.6**
baz=279
N16K Nishlik Lake 28.72 49 P **P 02 22 40.2 +0.4**
baz=269
E18K Tukpahlearik C 28.92 35 P **P 02 22 41.4 0.0**
baz=255
L17K Donlin 29.02 46 P **P 02 22 42.1 -0.1**
baz=267
K17K Iditarod 29.06 45 P **P 02 22 43.4 +0.7**
baz=266
O16K Kokwok River B 29.06 51 P **P 02 22 43.0 +0.3**
baz=271
C18K Utukok River 29.07 32 P **P 02 22 42.4 -0.3**
baz=252
F18K Selawik 29.08 37 P **P 02 22 42.9 +0.1**
baz=257
P16K Nushagak River 29.13 52 P **P 02 22 43.8 +0.5**
baz=272
H18K Honhosa River 29.32 40 P **P 02 22 44.7 -0.3**
baz=261
G18K Tagagawik 29.33 38 P **P 02 22 45.0 -0.1**
G18K Tagagawik 29.33 38 P **P 02 22 45.0 -0.1**
baz=260
M17K Holitna River 29.39 47 P **P 02 22 45.8 +0.2**
baz=269
R16K Pilot Point 29.44 55 P **P 02 22 46.0 -0.1**
baz=275
N17K Nushagak Hills 29.50 49 P **P 02 22 46.0 -0.6**
baz=270
O17K Koliganek Bris 29.56 51 P **P 02 22 46.7 -0.4**
baz=272
A19K Wainwright 29.63 29 P **P 02 22 47.1 -0.5**
baz=250
C19K Lookout Ridge 29.76 32 P **P 02 22 48.9 0.0**
baz=253
L18K Granite Mounta 29.77 46 P **P 02 22 49.2 +0.2**
baz=268
J18K Innoko River 29.84 43 P **P 02 22 49.0 -0.6**
baz=266
Q16K King Salmon 29.84 53 P **P 02 22 48.4 -1.2**
baz=274
F19K Shaleruckik Mo 29.86 36 P **P 02 22 49.4 -0.3**
baz=259
P17K Kvichak River 29.92 52 P **P 02 22 50.1 -0.2**
baz=273
G19K Purcell Mounta 30.01 38 P **P 02 22 50.6 -0.4**
baz=261
R17L Mt. Peulik Vol 30.09 55 P **P 02 22 52.1 +0.2**
baz=276
D19K Kuna River 30.11 33 P **P 02 22 51.7 -0.2**
baz=256
N18K Kilae Creek 30.14 49 P **P 02 22 53.3 +1.0**
N18K IAmb IAmb 02 22 54.5
comp=Z,7.7nm,1.0s
N18K Kilae Creek 30.14 49 P **P 02 22 52.6 +0.3**
baz=271
M18K Stony River 30.17 47 P **P 02 22 52.6 +0.2**
baz=270
E19K Redstone River 30.19 35 P **P 02 22 52.1 -0.6**
baz=258
Q17K Contact Creek 30.28 54 P **P 02 22 54.0 +0.4**
baz=275
J19K Porman 30.36 42 P **P 02 22 54.0 -0.1**
baz=266
O18K Koktuh Hills 30.51 51 P **P 02 22 55.6 +0.1**
baz=273
HNS HongShan 30.52 262 ⇑P **P 02 22 55.9 +0.1**
HNS pmax pmax
comp=Z,8.0nm,0.8s
P18K Big Mountain, 30.53 51 P **P 02 22 55.9 +0.2**
baz=274
ULN Ulaanbaatar 30.57 285 ceP **P 02 22 57.6 +1.2**
ULN pmax pmax
comp=Z,3.0nm,0.8s
L19K White Mountain 30.63 46 P **P 02 22 56.2 -0.4**
baz=270
HHC Hu-ho-hao-te 30.68 270 eP **P 02 22 56.1 -1.3**
HHC pmax pmax
comp=Z,8.0nm,0.6s
HHC pmax pmax
comp=Z,82nm,6.0s
HHC LR LR
comp=N,210nm,14.5s
HHC LR LR
comp=E,330nm,15.3s
HHC LR LR
comp=Z,300nm,15.3s
F20K Avaraart Lake 30.69 36 P **P 02 22 55.8 -1.2**
baz=261
D20K Etivluk River 30.70 33 P **P 02 22 56.2 -0.9**
baz=257
Q18K Katmai Hardscr 30.70 53 P **P 02 22 56.5 -0.8**
baz=276
CHIR Chirikof Islan 30.74 58 P **P 02 22 57.2 -0.4**
baz=280
E20K Nigu River 30.75 34 P **P 02 22 57.0 -0.6**
baz=258
H20K Anotleneega Mo 30.82 39 P **P 02 22 57.4 -0.8**
baz=264
N19K Bonanza Creek 30.83 49 P **P 02 22 58.0 -0.4**
baz=272
B20K Meade River 30.84 30 P **P 02 22 57.5 -0.7**
B20K Meade River 30.84 30 P **P 02 22 57.4 -0.9**
baz=254
I20K Naaghedeneel 30.92 41 P **P 02 22 59.7 +0.6**
baz=266
SONM Songino Array 30.99 285 P **P 02 22 57.6 -2.5**
comp=Z,0.5nm,0.5s,baz=60,slow=8.8,SNR=4.2
SONM PcP **PcP 02 25 55.1 -0.1**
comp=Z,1.1nm,0.5s,baz=69,slow=3.5,SNR=6.5
comp=Z,0.5nm,0.5s
SONM Songino Array 30.99 285 P **P 02 22 58.6 -1.5**
SONM Songino Array 30.99 285 P **P 02 22 58.6 -1.5**
SONM pmax pmax
comp=Z,1.0nm,0.9s
K20K Telida 31.02 44 P **P 02 22 59.8 -0.2**
baz=268
J20K Nowinta River 31.02 42 P **P 02 23 00.4 +0.4**
baz=267
NJ2 Nanjing 31.32 249 eP **P 02 23 02.5 -0.4**
NJ2 pmax pmax
comp=Z,25nm,0.5s
Q19K Cape Douglas, 31.38 52 P **P 02 23 03.1 -0.1**
Q19K IAmb IAmb 02 23 11.8
comp=Z,22nm,1.0s
Q19K Cape Douglas, 31.38 52 P **P 02 23 02.9 -0.3**
baz=276
SII Sitkinak Islan 31.41 57 P **P 02 23 02.6 -0.9**
baz=280
H11N2 WAKE ISLAND Hy 31.43 156 T T 02 55 23.3
baz=344,slow=76,SNR=74
C21K Knifeblade Rid 31.44 32 P **P 02 23 03.3 -0.3**
baz=258
H11N1 WAKE ISLAND Hy 31.45 156 T T 02 55 32.8
baz=344,slow=76,SNR=121
H11N3 WAKE ISLAND Hy 31.45 156 T T 02 55 24.5
baz=344,slow=76,SNR=76
M20K Styx River 31.45 47 P **P 02 23 03.5 -0.4**
baz=272
TLY Talaya 31.46 294 ceP **P 02 23 03.9 -0.1**
TLY pmax pmax
comp=Z,13nm,1.7s
G21K Allakaket 31.49 38 P **P 02 23 03.1 -1.0**
baz=264
P19K Oil Pt 31.52 51 P **P 02 23 03.7 -0.8**
baz=275
F21K Alatna River 31.59 36 P **P 02 23 04.4 -0.6**
baz=263
B21K Ikpikpuk River 31.60 32 P **P 02 23 04.4 -0.6**
baz=258
H21K Melozitna River 31.69 39 P **P 02 23 04.9 -1.0**
baz=266
OHAK Old Harbor 31.79 55 P **P 02 23 06.1 -0.7**
baz=279
A22K Sinclair Lake 31.82 29 P **P 02 23 05.7 -1.2**
baz=255
CHUM Lake Minchumin 31.82 43 P **P 02 23 05.8 -1.1**
baz=269
PPLA Purkeypile 31.87 45 P **P 02 23 06.5 -1.2**
baz=271
N20K Mount Spurr 31.92 48 P **P 02 23 06.8 -1.2**
baz=274
SPCR Spurr Chakacha 31.92 48 P **P 02 23 07.6 -0.4**
baz=274
I21K Tanana 32.00 40 P **P 02 23 08.1 -0.5**
baz=267
Q20K Shuyak Island 32.07 53 P **P 02 23 09.2 +0.1**
baz=278
ZAK Zakamensk 32.07 291 eP **P 02 23 09.2 -0.3**
ZAK pmax pmax
comp=Z,5.0nm,1.9s
KDAK Kodiak Island 32.08 54 P **P 02 23 08.6 -0.7**
baz=279
STLK Strandline Lak 32.08 47 P **P 02 23 10.3 +0.9**
STLK IAmb IAmb 02 23 11.6
comp=Z,6.1nm,0.8s
B22K Teshekpuk Lake 32.16 30 P **P 02 23 09.5 -0.4**
baz=258
SKT Skwentna 32.20 46 P **P 02 23 09.7 -0.7**
baz=273
H22K Ishtalitna Cre 32.30 39 P **P 02 23 12.1 +0.9**
H22K Ishtalitna Cre 32.30 39 P **P 02 23 11.1 -0.1**
baz=267
G22K Bettles 32.32 37 P **P 02 23 11.4 0.0**
baz=265
HOM Homer 32.33 51 P **P 02 23 11.9 +0.4**
baz=276
E22K Anaktuvuk Pass 32.34 35 P **P 02 23 11.5 -0.1**
baz=263
BPAW Bear Paw Mtn. 32.40 42 P **P 02 23 12.3 +0.2**
baz=270
MLY Manley 32.52 41 P **P 02 23 13.3 +0.1**
baz=269
H11S1 WAKE ISLAND Hy 32.55 157 T T 02 56 26.9
baz=345,slow=76,SNR=1026
H11S3 WAKE ISLAND Hy 32.56 157 T T 02 56 41.9
baz=345,slow=76,SNR=835
H11S2 WAKE ISLAND Hy 32.57 157 T T 02 56 28.3
baz=345,slow=76,SNR=720
TRF Thorofare Moun 32.72 43 P **P 02 23 15.4 +0.3**
TRF IAmb IAmb 02 23 16.5
comp=Z,11nm,1.4s
TRF Thorofare Moun 32.72 43 P **P 02 23 14.8 -0.4**
baz=272
CUT Chulitna 32.77 45 P **P 02 23 15.1 -0.2**
baz=273
BRSE Bradley Lake S 32.77 50 P **P 02 23 15.2 -0.2**
baz=277
COLD Coldfoot 32.86 36 P **P 02 23 14.8 -1.2**
COLD Coldfoot 32.86 36 P **P 02 23 15.6 -0.5**
baz=266,SNR=7.2
D23K Nanushuk River 32.86 33 P **P 02 23 15.9 -0.2**
baz=263
G23K Bananza Creek 32.89 37 P **P 02 23 16.2 -0.2**
baz=267
C23K Itkillik River 33.01 32 P **P 02 23 16.6 -0.8**
baz=261
I23K Minto, Yukon-K 33.11 40 P **P 02 23 18.3 0.0**
baz=270
RC01 Rabbit Creek A 33.12 48 P **P 02 23 18.3 -0.1**
baz=276
E23K Chandalar 33.15 35 P **P 02 23 18.5 -0.2**
baz=265
O22K Cooper Landing 33.19 49 P **P 02 23 19.2 +0.2**
baz=277
TOLK Toolik Lake Re 33.22 34 P **P 02 23 19.3 0.0**
baz=264
NEA2 Nenana 33.24 41 P **P 02 23 19.2 -0.2**
NEA2 Nenana 33.24 41 P **P 02 23 19.5 +0.1**
baz=271
MCK McKinley 33.32 43 P **P 02 23 19.7 -0.5**
baz=272
PMR Palmer 33.37 47 P **P 02 23 20.6 +0.1**
baz=275
RND Reindeer 33.37 44 P **P 02 23 20.1 -0.5**
RND Reindeer 33.37 44 P **P 02 23 20.1 -0.5**
RND pmax pmax
comp=Z,4.0nm,0.8s
SEW Seward 33.37 50 P **P 02 23 20.5 -0.1**
baz=277
WAT1 Susitna Watana 33.54 45 P **P 02 23 21.5 -0.6**
baz=274
D24K Happy Valley 33.55 33 P **P 02 23 21.9 -0.1**
baz=264
E24K Your Creek 33.57 35 P **P 02 23 21.7 -0.6**
baz=266,SNR=9.4
C24K Franklin Bluff 33.65 32 P **P 02 23 22.2 -0.7**
baz=264
WRH Wood River Hil 33.66 42 P **P 02 23 23.6 +0.5**
WRH IAmb IAmb 02 23 24.6
comp=Z,5.6nm,0.9s
KNK Knik Glacier 33.70 47 P **P 02 23 23.2 -0.3**
baz=276,SNR=7.1
SML Sawmill 33.72 46 P **P 02 23 24.0 +0.2**
SML Sawmill 33.72 46 P **P 02 23 23.0 -0.7**
SML pmax pmax
comp=Z,22nm,0.9s
SML Sawmill 33.72 46 P **P 02 23 23.6 -0.1**
baz=276,SNR=10.0
H24K Noodor Dome 33.73 39 P **P 02 23 23.2 -0.6**
baz=270
COLA College 33.75 41 i P **P 02 23 23.9 +0.1**
COLA pmax pmax
comp=Z,8.0nm,0.9s
COLA College 33.75 41 P **P 02 23 24.3 +0.4**
baz=272
F24K Squaw Lake 33.77 36 P **P 02 23 24.1 +0.1**
baz=268
G24K Hadweenzic Riv 33.90 38 P **P 02 23 25.1 -0.1**
baz=269,SNR=9.2
POKR Poker Plat Res 33.92 40 P **P 02 23 25.2 -0.2**
baz=272
WAT6 Susitna Watana 33.93 45 P **P 02 23 25.0 -0.6**
baz=275
M23K Glacier View 34.01 46 P **P 02 23 26.1 -0.1**
baz=276
DHY Denali Highway 34.05 44 P **P 02 23 26.3 -0.4**
baz=275

HDA Harding Lake 34.16 42 P P 02 23 27.8 +0.4
HDA IAmb IAmb 02 23 28.4
comp=Z,3.3nm,0.6s
HDA Harding Lake 34.16 42 P P 02 23 27.0 -0.4
baz=273
ILAR Eielson Array 34.17 41 P P 02 23 27.6 +0.1
comp=Z,2.1nm,0.8s,baz=263,slow=8.6,SNR=25
comp=Z,2.1nm,0.8s
ILAR Eielson Array 34.17 41 P P 02 23 27.7 +0.2
ILAR Eielson Array 34.17 41 P P 02 23 27.7 +0.2
SCM Sheep Creek Mo 34.20 46 P P 02 23 27.7 -0.2
baz=276
P23K Montague Islan 34.40 50 P P 02 23 29.6 +0.1
baz=279
GLI Glacier Island 34.42 48 P P 02 23 29.8 0.0
baz=278
D25K Kavik River 34.43 33 P P 02 23 29.2 -0.6
baz=266
F25K Christian Rive 34.63 36 P P 02 23 30.6 -0.9
baz=270
E25K Arctic Village 34.67 35 P P 02 23 31.9 0.0
baz=269
M24K Tolsona, Glenn 34.70 46 P P 02 23 31.9 -0.3
baz=277
K24K Donnelly Dome 34.71 43 P P 02 23 32.0 -0.2
baz=275
PRP Porcupine Dome 34.71 40 P P 02 23 32.9 +0.5
PRP IAmb IAmb 02 23 34.0
comp=Z,8.4nm,0.8s
PRP Porcupine Dome 34.71 40 P P 02 23 32.0 -0.4
baz=273,SNR=7.1
J25K Salcha River, 34.83 41 P P 02 23 32.8 -0.6
J25K Salcha River, 34.83 41 P P 02 23 32.7 -0.6
baz=274
KLU Klutina 34.90 47 P P 02 23 33.1 -0.9
baz=278
PAX Paxson 34.93 44 P P 02 23 33.4 -0.8
baz=276
C26K Camden Bay 34.98 32 P P 02 23 34.6 +0.2
baz=267
BMAR Burnt Mountain 35.04 36 P P 02 23 35.6 +0.6
EYAK Cordova Ski Ar 35.13 48 P P 02 23 34.8 -1.0
baz=280
RIDG Independent Ri 35.13 43 P P 02 23 35.8 0.0
baz=276
F26K Sheenjek River 35.20 36 P P 02 23 35.7 -0.8
baz=271
G26K Porcupine Rive 35.36 37 P P 02 23 36.9 -0.8
baz=272
C27K Jago River 35.38 32 P P 02 23 37.3 -0.6
baz=268
KNGR Kungurtug, Tuv 35.47 294 *i* P P 02 23 39.4 +0.4
KNGR pmax pmax
comp=Z,5.0nm,0.9s
SCRK Sand Creek 35.49 42 P P 02 23 38.6 -0.4
baz=276
N25K Chitina, Valde 35.51 46 P P 02 23 39.5 +0.3
baz=279
BMRM Bremner River 35.61 47 P P 02 23 39.8 -0.2
baz=280
I26K Coal Creek Min 35.72 40 P P 02 23 41.2 +0.4
baz=275
VRDI Verde Repeater 36.12 47 P P 02 23 45.4 +0.8
VRDI IAmb IAmb 02 24 25.7
comp=Z,5.9nm,1.0s
M26K Nabesna, AK 36.14 45 P P 02 23 44.8 +0.3
baz=279
E27K Coleen River 36.16 35 P P 02 23 45.0 +0.4
baz=272
G27K Doyon Strip 36.21 37 P P 02 23 45.0 0.0
baz=274
MCARA McCarthy VSAT 36.30 47 P P 02 23 46.1 +0.3
baz=280
H27K Steamboat Moun 36.31 38 P P 02 23 45.5 -0.4
baz=275,SNR=5.7
I27K Kandik River 36.33 39 P P 02 23 46.2 +0.1
baz=276
D27M Malcolm River 36.35 33 P P 02 23 46.2 -0.1
baz=272
CRQE Cirque 36.38 48 P P 02 23 46.7 0.0
baz=281
L27K Beaver Creek, 36.56 44 P P 02 23 48.6 +0.5
baz=279
BCAR Beaver Creek A 36.58 44 P P 02 23 49.6 +1.3
M27K Edge Creek, AK 36.66 45 P P 02 23 49.0 -0.1
baz=280,SNR=7.2
F28M Old Crow 36.84 36 P P 02 23 50.5 +0.1
baz=275,SNR=5.8
E28M Babbage River 36.90 34 P P 02 23 49.2 -1.7
baz=274
I28M Miner Creek 37.04 39 P P 02 23 51.2 -1.0
baz=278
MESA MESA 37.05 48 P P 02 23 50.8 -1.7
baz=283
BVCY Beaver Creek 37.11 44 P P 02 23 52.4 -0.4
baz=281
D28M Stokes Point 37.14 33 P P 02 23 51.1 -1.8
baz=274
CTG Chitna Glacier 37.18 47 P P 02 23 53.2 -0.3
baz=282,SNR=6.2
YUK3 Moose Creek 37.42 45 P P 02 23 55.4 -0.2
baz=282
DAWY Dawson 37.48 42 P P 02 23 55.8 0.0
baz=280
E29M Blow River 37.52 34 P P 02 23 56.5 +0.4
baz=276
H29M Whitestone 37.58 38 P P 02 23 57.2 +0.5
baz=278
G29M Pine Creek 37.63 37 P P 02 23 57.5 +0.4
baz=277
I29M Ogilvie Camp, 37.73 39 P P 02 23 58.0 +0.1
baz=279
O28M Mount Upton 37.77 47 P P 02 23 58.8 +0.1
baz=283
YUK8 Steele Glacier 37.85 46 P P 02 23 59.1 -0.2
baz=283
PINM Pinnacle 37.90 48 P P 02 23 59.0 -0.6
baz=284
M29M Somme Creek 38.20 44 P P 02 24 02.5 +0.5
baz=283
L29M L29M 38.21 43 P P 02 24 02.6 +0.5
baz=282,SNR=9.8
EPYK Eagle Plains 38.22 38 P P 02 24 02.7 +0.6
baz=279
G30M tAoh Zraii Nji 38.32 37 P P 02 24 03.3 +0.3
baz=279
K29M Barlow Dome 38.33 42 P P 02 24 03.1 -0.1
baz=282
YUK4 Talbot Arm 38.37 46 P P 02 24 03.1 -0.5
baz=284
F30M Barrier River 38.40 36 IAmb IAmb 02 24 05.9
comp=Z,6.3nm,0.9s
F30M Barrier River 38.40 36 P P 02 24 04.0 +0.5
baz=278
I30M Mount Dempster 38.55 39 P P 02 24 04.5 -0.6
baz=281,SNR=14
YUK6 Outpost Mounta 38.60 46 P P 02 24 05.0 -0.6
baz=284
O29M Mount Kennedy 38.66 47 P P 02 24 05.7 -0.3
baz=285
J30M Hart River 38.70 40 P P 02 24 05.5 -0.7
baz=282
M30M Minto, Yukon 38.93 44 P P 02 24 07.1 -1.0
baz=284
HYT Haines Junctio 39.03 46 P P 02 24 10.4 +1.3
HYT Haines Junctio 39.03 46 P P 02 24 07.9 -1.2
baz=285
N30M Aishikik Lake 39.06 45 P P 02 24 08.1 -1.1
baz=285
GTA2 Gaotai 39.09 276 P P 02 24 10.5 +0.7
GTA2 pP pP 02 24 18.9 -1.8
GTA2 pmax pmax
comp=Z,14nm,0.8s
GTA2 LR LR
comp=N,230nm,14.0s
GTA2 LR LR
comp=E,360nm,11.7s
GTA2 LR LR
comp=Z,460nm,12.4s
MAYO Mayo, Yukon 39.09 42 P P 02 24 08.9 -0.5
baz=283
INK Inuvik 39.13 34 P P 02 24 09.8 +0.2
INK Inuvik 39.13 34 P P 02 24 09.8 +0.2
INK pmax pmax
comp=Z,4.0nm,1.2s
INK Inuvik 39.13 34 P P 02 24 09.5 -0.2
baz=279
F31M Tsiigehtchic 39.20 36 P P 02 24 09.9 -0.3
baz=280
H31M Peel River 39.27 38 P P 02 24 10.6 -0.3
baz=282
P30M Million Dollar 39.48 47 P P 02 24 13.1 +0.3
baz=286
N31M Braeburn, Yuko 39.66 45 P P 02 24 13.7 -0.5
baz=286
O30N Mendenhall 39.72 46 P P 02 24 14.7 0.0
baz=286,SNR=5.2
M31M Drury Creek, Y 40.10 44 P P 02 24 18.1 +0.3
baz=286
WHY Whitehorse 40.32 46 P P 02 24 19.4 -0.4
baz=287
SKAG Skagway 40.47 48 P P 02 24 20.5 -0.3
baz=288
S31K Pelican 40.50 50 P P 02 24 21.3 +0.2
baz=289
P32M Atlin 41.21 47 P P 02 24 26.1 -0.9
baz=289
A36M Sachs Harbour 41.23 28 P P 02 24 27.1 +0.1
baz=282,SNR=8.7
R32K Eaglecrest 41.26 50 P P 02 24 27.4 +0.1
baz=290
SIT Sitka 41.27 51 P P 02 24 27.1 -0.4
baz=291
MMPY Sheldon Lake, 41.38 42 P P 02 24 28.8 +0.4
MMPY Sheldon Lake, 41.38 42 P P 02 24 28.6 +0.2
baz=288
P33M Teslin, Yukon 41.43 46 P P 02 24 28.9 +0.1
baz=289
ZALV Zalesovo Beam 41.48 304 P P 02 24 27.6 -1.6
comp=Z,3.1nm,0.6s,baz=67,slow=7.0,SNR=12
ZALV PcP PcP 02 26 24.9 -1.3
comp=Z,3.3nm,0.7s,baz=90,slow=4.4,SNR=8.6
comp=Z,3.1nm,0.6s
ZALV Zalesovo Beam 41.48 304 P P 02 24 29.1 -0.1
ZALV Zalesovo Beam 41.48 304 *i* P P 02 24 29.1 -0.1
ZALV pmax pmax
comp=Z,3.0nm,0.6s
S32K Killisnoo 41.51 51 P P 02 24 29.2 -0.1
baz=291
DGZ Jazzator, Alta 41.78 297 *i* P P 02 24 32.7 +0.8
DGZ pmax pmax
comp=Z,3.0nm,0.7s
Q32M Nakina River 42.12 48 P P 02 24 34.0 -0.7
baz=291
C36M Paulatuk 42.26 32 P P 02 24 35.0 -0.3
baz=286
R33M Jennings River 42.59 47 P P 02 24 37.9 -0.5
baz=291
U33K Whale Pass 42.76 52 P P 02 24 39.7 +0.1
baz=293
CRAG Craig 43.02 53 P P 02 24 41.5 -0.2
baz=294
WRAK Wrangell Islan 43.04 51 P P 02 24 41.8 0.0
baz=294
S34M Telegraph Cree 43.06 49 P P 02 24 39.9 -2.1
baz=293
TGTN Hyland Airport 43.07 43 P P 02 24 40.7 -1.4
baz=291
WTLY Watson Lake, Y 43.35 45 P P 02 24 42.6 -1.8
baz=292
DLBC Dease Lake 43.40 48 P P 02 24 42.1 -2.8
baz=293
T35M Bob Quinn 43.87 50 P P 02 24 51.8 +3.2
T35M IAmb IAmb 02 25 03.5
comp=Z,9.7nm,0.9s
T35M Bob Quinn 43.87 50 P P 02 24 50.7 +2.0
baz=294,SNR=5.5
GOMU GeErMu 44.18 276 P P 02 24 50.3 -1.5
GOMU PcP PcP 02 26 36.1 +0.1
GOMU S S 02 31 19.0 -3.2
GOMU pmax pmax
comp=Z,7.0nm,0.8s
GOMU LR LR
comp=N,140nm,14.7s
GOMU LR LR
comp=E,210nm,13.6s
GOMU LR LR
comp=Z,350nm,13.0s
PZH PanZhiHua 45.93 260 P P 02 25 05.3 -0.1
MK31 Makanchi Array 46.18 295 *ce* P P 02 25 07.4 +0.3
MKAR Makanchi Array 46.18 295 P P 02 25 06.7 -0.5
comp=Z,4.2nm,0.7s,baz=66,slow=8.3,SNR=42
MKAR LR LR 02 44 15.5
comp=Z,43nm,19.1s,baz=52,slow=36
comp=Z,4.2nm,0.7s
MKAR Makanchi Array 46.18 295 P P 02 25 06.9 -0.2
MKAR Makanchi Array 46.18 295 *ce* P P 02 25 07.5 +0.4
MKAR pmax pmax
comp=Z,4.0nm,0.7s
KURK Kurchatov 46.32 302 P P 02 25 07.6 -0.5
KURK IAmb IAmb 02 25 17.7
comp=Z,14nm,0.8s
KURK Kurchatov 46.32 302 *ce* P P 02 25 08.1 0.0
KURK pmax pmax
comp=Z,22nm,1.3s
MAKZ Makanchi 46.36 296 P P 02 25 08.5 0.0
MAKZ IAmb IAmb 02 25 18.0
comp=Z,3.3nm,0.7s
MAKZ Makanchi 46.36 296 P P 02 25 08.5 0.0
MAKZ pmax pmax
comp=Z,3.0nm,0.7s
KURBB Kurchatov Arra 46.42 302 P P 02 25 08.3 -0.5
comp=Z,7.3nm,0.6s,baz=65,slow=8.3,SNR=41
KURBB PcP PcP 02 26 41.9 -1.2
comp=Z,0.5nm,0.6s,baz=57,slow=3.2,SNR=4.2
comp=Z,7.3nm,0.6s
RES Resolute Bay 48.13 19 LR LR 02 48 26.7
comp=Z,36nm,19.2s,baz=15,slow=39
YKA Yellowknife Ar 48.49 38 P P 02 25 25.7 +0.9
comp=Z,1.3nm,0.7s,baz=303,slow=8.0,SNR=29
YKA PcP PcP 02 26 50.7 +0.5
comp=Z,0.8nm,0.9s,baz=304,slow=3.7,SNR=6.2
comp=Z,1.3nm,0.7s
YKA Yellowknife Ar 48.49 38 P P 02 25 24.4 -0.4
BVAR Borovoye Array 49.56 308 P P 02 25 33.0 -0.1
comp=Z,4.3nm,0.6s,baz=53,slow=7.2,SNR=15
BVAR PcP PcP 02 26 53.6 -0.7
comp=Z,2.8nm,0.7s,baz=60,slow=7.0,SNR=3.9
comp=Z,4.3nm,0.6s
BORK Borovoye 49.58 308 *ce* P P 02 25 33.6 +0.3
BORK pmax pmax
comp=Z,11nm,1.3s
KDJ Kajisay 51.81 293 P P 02 25 49.8 -0.6
KDJ IAmb IAmb 02 25 51.4
comp=Z,7.4nm,0.8s
KDJ Kajisay 51.81 293 P P 02 25 49.8 -0.6
KDJ pmax pmax
comp=Z,7.0nm,0.8s
TKM2 Tokmak 2 52.29 295 P P 02 25 54.4 +0.4
SNR=5.3
ULHL Ulahol 52.30 294 P P 02 25 54.7 +0.5
SNR=8.2
USP Ospenovka 52.73 296 P P 02 25 57.7 +0.6
SNR=7.1
POIN Pond Inlet 52.98 17 P P 02 25 58.0 -0.5
POIN IAmb IAmb 02 25 58.6
comp=Z,6.5nm,1.2s
AAK Ala-Archa 53.11 295 LR LR 02 50 01.3
comp=Z,75nm,18.5s,baz=42,slow=38
AAK Ala-Archa 53.11 295 P P 02 26 00.4 +0.3
SNR=5.0
AAK Ala-Archa 53.11 295 *ce* P P 02 26 00.6 +0.6
AAK pmax pmax
comp=Z,6.0nm,1.7s
ARTI Arti 53.48 316 P P 02 26 02.8 +0.4
ARTI IAmb IAmb 02 26 13.0
comp=Z,9.9nm,0.6s
ARTI Arti 53.48 316 *d i* P P 02 26 02.5 +0.1
ARTI S S 02 33 33.3 +1.6
ARTI SS SS 02 37 10.6 -0.9
ARTI pmax pmax
comp=Z,9.0nm,1.1s
CMAR Chiang Mai Arr 53.51 255 P P 02 26 03.5 +0.5
comp=Z,0.9nm,0.3s,baz=40,slow=7.5,SNR=1.1
CMAR PcP PcP 02 27 09.2 -0.3
comp=Z,1.7nm,0.5s,baz=4.7,slow=2.7,SNR=7.2
CMAR LR LR 02 51 17.2
comp=Z,26nm,18.2s,baz=170,slow=39
comp=Z,0.9nm,0.3s
EKS2 Erkin-Say 53.52 295 P P 02 26 03.5 +0.5
SNR=5.3
EDM Edmonton 54.12 48 P P 02 26 08.1 +0.9
EDM Edmonton 54.12 48 P P 02 26 08.1 +0.9
EDM pmax pmax
comp=Z,18nm,0.8s
KSH2 Kashi 54.59 291 P P 02 26 08.9 -2.0
KSH2 pmax pmax
comp=Z,5.0nm,0.6s
KK31 Karatay Array 55.16 298 P P 02 26 13.7 -1.1
KK31 Karatay Array 55.16 298 P P 02 26 13.7 -1.1
KK31 pmax pmax
comp=Z,3.0nm,0.8s
KKAR Karatay Array 55.16 298 P P 02 26 14.5 -0.3
KKAR Karatay Array 55.16 298 P P 02 26 14.5 -0.3
NEW Newport 55.19 54 P P 02 26 16.1 +1.2
NEW pmax pmax
comp=Z,6.0nm,1.0s
ARCES ARCESS Array B 55.48 340 LR LR 02 53 29.4
comp=Z,48nm,19.0s,baz=10,slow=40
KIRV Kirov 55.94 322 *ce* P P 02 26 20.5 +0.5
AB31 Akbulak array 57.10 309 P P 02 26 27.2 -1.2
AB31 IAmb IAmb 02 26 39.4
comp=Z,9.7nm,0.9s
ABKAR Akbulak array 57.10 309 P P 02 26 27.8 -0.7
BMO Blue Mountains 57.20 58 P P 02 26 30.1 +0.7
BMO IAmb IAmb 02 26 31.6
comp=Z,3.3nm,0.9s
BMO Blue Mountains 57.20 58 P P 02 26 30.1 +0.7
BMO pmax pmax
comp=Z,3.0nm,0.9s
GAR Garm 57.85 294 P P 02 26 33.6 -0.5
KLMR Klimovskoe 58.07 328 *eP* P P 02 26 36.7 +1.6
KLMR pmax pmax
comp=Z,57nm,1.6s
FFC Flin Flon 58.38 41 P P 02 26 38.0 +0.6
FFC IAmb IAmb 02 26 50.4
comp=Z,11nm,1.4s
FFC Flin Flon 58.38 41 P P 02 26 38.0 +0.6
FFC pmax pmax
comp=Z,11nm,1.5s
FCC Fort Churchill 58.76 34 P P 02 26 40.1 +0.2
FCC IAmb IAmb 02 26 41.0
comp=Z,4.0nm,1.0s
FCC Fort Churchill 58.76 34 P P 02 26 40.1 +0.2
FCC pmax pmax
comp=Z,4.0nm,1.0s
CHGR Chuyangaron 58.76 294 P P 02 26 39.1 -1.3
CHGR Chuyangaron 58.76 294 P P 02 26 39.1 -1.3
CHGR pmax pmax
comp=Z,22nm,0.7s
NIL Nilore 59.55 287 P P 02 26 45.7 -0.2
NIL Nilore 59.55 287 P P 02 26 45.7 -0.2
NIL pmax pmax
comp=Z,25nm,1.0s
BOZ Bozeman (W) 59.79 54 P P 02 26 49.4 +1.9
BOZ Bozeman (W) 59.79 54 P P 02 26 49.4 +1.9
BOZ pmax pmax
comp=Z,13nm,0.8s
YHL Hebgen Lake 60.52 54 P P 02 26 54.7 +2.0
YHL IAmb IAmb 02 26 55.6
comp=Z,9.9nm,0.8s
NVAR Mina Array Bea 60.78 64 P P 02 26 56.3 +1.8
comp=Z,2.3nm,0.7s,baz=289,slow=7.5,SNR=13
comp=Z,2.3nm,0.7s
NVAR Mina Array Bea 60.78 64 P P 02 26 56.2 +1.7
RLMT Red Lodge 61.34 53 P P 02 26 59.3 +1.1
FINES FINESS Array B 61.82 334 P P 02 26 59.7 -1.1
comp=Z,6.3nm,1.0s,baz=29,slow=4.4,SNR=11
FINES LR LR 02 57 02.9
comp=Z,37nm,18.3s,baz=42,slow=39
comp=Z,6.3nm,1.0s
FINES FINESS Array B 61.82 334 P P 02 26 60.0 -0.8
FINES FINESS Array B 61.82 334 P P 02 27 00.0 -0.8
SFJD Kangerlussuaq 62.42 11 LR LR 02 55 44.9
comp=Z,37nm,19.1s,baz=270,slow=37
HWUT Hardware Ranch 62.49 57 P P 02 27 06.3 +0.4
HWUT IAmb IAmb 02 27 09.0
comp=Z,10nm,1.2s
BW06 Boulder Array 62.79 55 P P 02 27 08.9 +0.9
PDAR Pinedale Array 62.79 55 P P 02 27 09.6 +1.6
comp=Z,7.8nm,0.8s,baz=319,slow=2.2,SNR=55
comp=Z,7.8nm,0.8s
PDAR Pinedale Array 62.79 55 P P 02 27 09.3 +1.4
BSUT Blindstream Ca 63.66 58 P P 02 27 16.2 +2.3
BSUT IAmb IAmb 02 27 34.6
comp=Z,3.8nm,1.0s
COEN Coen 63.81 192 P P 02 27 14.5 -0.1
RSSD Black Hills 64.73 51 P P 02 27 21.4 +0.7
RSSD Black Hills 64.73 51 P P 02 27 21.4 +0.7
RSSD pmax pmax
comp=Z,15nm,0.7s
MTN Manton Dam 65.17 205 P P 02 27 22.2 -1.1
HMU Henry Mountain 65.48 60 P P 02 27 26.8 +1.1
HMU IAmb IAmb 02 27 28.4
comp=Z,8.7nm,0.9s
NB2 NORSAR Subarra 65.84 341 P P 02 27 26.7 -0.6
comp=Z,1.4nm,0.7s,baz=29,slow=6.5
NOA NORSAR Array B 65.84 341 P P 02 27 26.8 -0.6
comp=Z,1.3nm,0.9s,baz=25,slow=6.3,SNR=2.9
NOA LR LR 03 00 08.1
comp=Z,24nm,19.1s,baz=35,slow=40
comp=Z,1.3nm,0.9s
HFS Hagfors 66.11 339 P P 02 27 27.8 -1.2
comp=Z,2.8nm,0.8s,baz=37,slow=3.7,SNR=5.4
HFS LR LR 02 59 40.0
comp=Z,38nm,18.1s,baz=12,slow=39
comp=Z,2.8nm,0.8s
PV10 Paradox Valley 66.12 59 P P 02 27 31.9 +2.0
PV01 Paradox Valley 66.56 58 P P 02 27 33.5 +0.9
PV01 IAmb IAmb 02 27 35.2
comp=Z,7.7nm,1.4s
ISCO Idaho Springs 66.99 55 P P 02 27 37.3 +1.9
ISCO IAmb IAmb 02 27 38.4
comp=Z,7.7nm,1.0s
ISCO Idaho Springs 66.99 55 P P 02 27 37.3 +1.9
ISCO pmax pmax
comp=Z,8.0nm,1.0s
KUQ Kuujjuaa 67.33 23 P P 02 27 34.9 -1.9
KUQ IAmb IAmb 02 28 13.6
comp=Z,11nm,1.4s
OGNE Ogallala 68.05 52 P P 02 27 42.6 +0.8
ECSD EROS Data Cent 68.68 47 P P 02 27 45.8 +0.2
KIV Kislovodsk 69.28 314 *eP* P P 02 27 50.1 +0.7
KIV pmax pmax
comp=Z,3.0nm,1.0s
KIV MLR MLR
comp=Z,25nm,17.0s
SHA1 Shidzhatmaz 69.46 314 *i* P P 02 27 51.9 +1.2
CTA Charters Tower 69.54 188 P P 02 27 50.5 -0.4
comp=Z,3.4nm,0.6s,baz=16,slow=7.3,SNR=2.7
comp=Z,3.4nm,0.6s
AKASG Malin Array Be 69.59 326 P P 02 27 49.2 -1.9
comp=Z,1.9nm,0.7s,baz=36,slow=6.6,SNR=7.6
comp=Z,1.9nm,0.7s
AKBB Malin Array Si 69.59 326 *i* P P 02 27 52.2 +1.2
I37A Lemond, Waseca 69.98 45 P P 02 27 54.6 +1.0
ANMO Albuquerque 70.03 59 *i* P P 02 27 55.1 +0.8
SCHQ Schefferville 70.64 24 P P 02 27 57.3 -0.2
comp=Z,3.9nm,0.7s,baz=314,slow=4.6,SNR=18
comp=Z,3.9nm,0.7s
SCHQ Schefferville 70.64 24 P P 02 27 57.4 -0.1
SCHQ IAmb IAmb 02 28 00.5
comp=Z,15nm,1.4s
WB0 Warramunga Arr 71.03 199 P P 02 27 59.2 -0.9
WB0 IAmb IAmb 02 28 00.4
comp=Z,9.5nm,0.8s
WR8 Warramunga Arr 71.19 199 P P 02 28 00.3 -0.8
WR8 IAmb IAmb 02 28 00.9
comp=Z,9.8nm,1.1s
WRA Warramunga Arr 71.21 199 P P 02 28 00.5 -0.7
comp=Z,5.5nm,0.9s,baz=16,slow=6.6,SNR=30
comp=Z,5.5nm,0.9s
WRA Warramunga Arr 71.21 199 P P 02 28 00.2 -1.0
WRA Warramunga Arr 71.21 199 P P 02 28 00.2 -1.0
WRA pmax pmax
comp=Z,1.0nm,1.1s
SCIA State Center 71.69 46 P P 02 28 04.9 +0.9
SMWD Samnorwood 73.33 55 P P 02 28 15.2 +1.2
STHS Stebnicka Huta 73.43 330 *eP* P P 02 28 19.2 +4.9
STHS Stebnicka Huta 73.43 330 *eP* P P 02 28 19.2 +4.9
BUR08 Bucovina Ar. S 73.59 327 P P 02 28 14.4 -0.9
BURAR Bucovina Array 73.61 327 P P 02 28 14.3 -1.2
BURAR Bucovina Array 73.61 327 P P 02 28 14.3 -1.2
BURAR pmax pmax
comp=Z,1.0nm,0.7s
EKA Eskdalemuir Ar 73.84 347 P P 02 28 15.6 -0.9
comp=Z,1.4nm,0.7s,baz=20,slow=5.4,SNR=6.6
comp=Z,1.4nm,0.7s
STEB Steborice 74.08 332 *eP* P P 02 28 18.4 +0.4
STEB *ep*P pP 02 28 26.5 -3.2

P40A	**Paris**	**74.10**	**47**	P		**P**	**02 28 18.3**	**0.0**
DPC	**Dobruska-Polom**	**74.14**	**333**	*e*P		**P**	**02 28 19.1**	**+0.6**
DPC	**Dobruska-Polom**	**74.14**	**333**	*e*P		**P**	**02 28 19.1**	**+0.6**
CLL	**Collm**	**74.22**	**336**	*i* P		**P**	**02 28 18.5**	**-0.3**
CLL				pmax	pmax			
	comp=Z,6.0nm,1.0s							
CLL	**Collm**	**74.22**	**336**	*i* P		**P**	**02 28 18.5**	**-0.3**
	comp=Z,6.0nm,1.0s							
CLL				*i* x		x	02 28 24.6	
LANS	**Liptovska Anna**	**74.24**	**331**	*e*P		**P**	**02 28 20.5**	**+1.5**
LANS				*e*			02 28 29.3	
LANS	**Liptovska Anna**	**74.24**	**331**	*e*P		**P**	**02 28 20.5**	**+1.5**
LANS				*e*			02 28 29.3	
MORC	**Moravsky Berou**	**74.29**	**332**	*e*P		**P**	**02 28 17.7**	**-1.6**
WMOK	**Wichita Mounta**	**74.39**	**55**	P		**P**	**02 28 21.1**	**+1.0**
WMOK				IAmb	IAmb		02 28 22.0	
	comp=Z,8.3nm,0.8s							
WMOK	**Wichita Mounta**	**74.39**	**55**	P		**P**	**02 28 21.1**	**+1.0**
WMOK				pmax	pmax			
	comp=Z,8.0nm,0.8s							
AS31	**Alice Springs**	**74.91**	**199**	P		**P**	**02 28 23.1**	**+0.1**
ASAR	**Alice Springs**	**74.91**	**199**	P		**P**	**02 28 23.3**	**+0.2**
	comp=Z,2.3nm,0.5s,baz=12,slow=5.4,SNR=45							
	comp=Z,2.3nm,0.5s							
ASAR	**Alice Springs**	**74.91**	**199**	P		**P**	**02 28 23.0**	**-0.1**
R40A	**Maddies Statio**	**74.96**	**48**	P		**P**	**02 28 23.7**	**+0.3**
R40A				IAmb	IAmb		02 28 24.5	
	comp=Z,13nm,0.9s							
VRAC	**Vranov**	**74.99**	**333**	LR		LR	03 04 32.9	
	comp=Z,46nm,20.3s,baz=8.5,slow=38							
VRAC	**Vranov**	**74.99**	**333**	*e*P		**P**	**02 28 23.6**	**+0.3**
KRUC	**Moravsky**	**75.27**	**333**	*e*P		**P**	**02 28 24.0**	**-0.9**
ZVC	**Zvikov**	**75.58**	**334**	*e*P		**P**	**02 28 26.9**	**+0.2**
ZVC				*e*pP		**pP**	**02 28 33.3**	**-5.1**
MODS	**Modra-Piesok**	**75.61**	**332**	*e*P		**P**	**02 28 29.7**	**+2.8**
MODS	**Modra-Piesok**	**75.61**	**332**	*e*P		**P**	**02 28 29.7**	**+2.8**
HHAR	**Hobbs**	**75.71**	**51**	P		**P**	**02 28 28.0**	**+0.3**
HHAR				IAmb	IAmb		02 28 28.4	
	comp=Z,6.7nm,0.8s							
TXAR	**Lajitas Array**	**75.76**	**62**	P		**P**	**02 28 29.7**	**+1.5**
	comp=Z,6.3nm,0.7s,baz=298,slow=4.4,SNR=57							
	comp=Z,6.3nm,0.7s							
TXAR	**Lajitas Array**	**75.76**	**62**	P		**P**	**02 28 29.3**	**+1.1**
KHC	**Kasperske Hory**	**76.03**	**334**	P		**P**	**02 28 29.7**	**+0.3**
KHC				IAmb	IAmb		02 28 39.6	
	comp=Z,6.2nm,1.0s							
KHC	**Kasperske Hory**	**76.03**	**334**	P		**P**	**02 28 29.7**	**+0.3**
KHC				pmax	pmax			
	comp=Z,6.0nm,1.0s							
KHC	**Kasperske Hory**	**76.03**	**334**	*e*P		**P**	**02 28 29.6**	**+0.3**
KHC				*e*pP		**pP**	**02 28 37.9**	**-3.1**
FVM	**French Village**	**76.10**	**47**	P		**P**	**02 28 29.9**	**0.0**
FVM				IAmb	IAmb		02 28 31.2	
	comp=Z,11nm,0.7s							
FVM	**French Village**	**76.10**	**47**	P		**P**	**02 28 29.9**	**0.0**
FVM				pmax	pmax			
	comp=Z,11nm,0.7s							
GERES	**GERESS Array B**	**76.25**	**334**	P		**P**	**02 28 30.6**	**0.0**
	comp=Z,0.7nm,0.7s,baz=44,slow=5.9,SNR=6.2							
GERES				LR		LR	03 06 11.1	
	comp=Z,43nm,18.3s,baz=30,slow=39							
	comp=Z,0.7nm,0.7s							
SIUC	**Southern Illin**	**76.89**	**47**	P		**P**	**02 28 34.6**	**+0.3**
PSA00	**Pilbara Seismi**	**76.89**	**212**	P		**P**	**02 28 33.8**	**-0.5**
PSA00				IAmb	IAmb		02 28 44.6	
	comp=Z,5.1nm,1.1s							
FCAR	**Ozark Folk Cen**	**76.92**	**50**	P		**P**	**02 28 34.5**	**-0.1**
MIAR	**Mount Ida**	**77.25**	**51**	P		**P**	**02 28 36.8**	**+0.4**
MIAR				IAmb	IAmb		02 28 38.2	
	comp=Z,9.0nm,0.8s							
MIAR	**Mount Ida**	**77.25**	**51**	P		**P**	**02 28 36.8**	**+0.4**
MIAR				pmax	pmax			
	comp=Z,9.0nm,0.8s							
WCI	**Wyandotte Cave**	**77.83**	**44**	P		**P**	**02 28 39.1**	**-0.5**
WCI	**Wyandotte Cave**	**77.83**	**44**	P		**P**	**02 28 39.1**	**-0.5**
WCI				pmax	pmax			
	comp=Z,16nm,0.8s							
PAOC	**Oil Creek Stat**	**77.95**	**38**	P		**P**	**02 28 40.4**	**+0.2**
PAOC				IAmb	IAmb		02 29 17.2	
	comp=Z,20nm,1.4s							
KBA	**Koelnbreinsper**	**77.95**	**334**	*e*P		**P**	**02 28 40.3**	**-0.1**
	comp=Z,2.3nm,0.5s							
WATA	**Walderalm**	**78.22**	**335**	*i* P		**P**	**02 28 41.6**	**-0.2**
	comp=Z,0.3nm,0.2s							
F64A	**Sherman**	**78.23**	**29**	P		**P**	**02 28 42.2**	**+0.6**
WTTA	**Wattenberg**	**78.27**	**335**	*e*P		**P**	**02 28 41.2**	**-0.9**
	comp=Z,2.2nm,0.7s							
MOTA	**Moosalm**	**78.34**	**335**	*i* P		**P**	**02 28 41.6**	**-0.9**
	comp=Z,0.2nm,0.2s							
T47A	**Sharon Grove**	**78.47**	**46**	P		**P**	**02 28 43.8**	**+0.7**
T47A				IAmb	IAmb		02 28 44.9	
	comp=Z,11nm,0.8s							
FETA	**Feichten**	**78.74**	**335**	*e*P		**P**	**02 28 43.9**	**-0.8**
	comp=Z,0.1nm,0.1s							
WVT	**Waverly**	**78.82**	**47**	P		**P**	**02 28 45.5**	**+0.4**
WVT				IAmb	IAmb		02 28 46.7	
	comp=Z,8.4nm,0.7s							
WVT	**Waverly**	**78.82**	**47**	P		**P**	**02 28 45.5**	**+0.4**
WVT				pmax	pmax			
	comp=Z,8.0nm,0.7s							
L59A	**Walton**	**79.17**	**35**	P		**P**	**02 28 47.0**	**0.0**
L59A				IAmb	IAmb		02 28 49.5	
	comp=Z,9.2nm,1.2s							
FUORN	**Ofenpass-Fuorn**	**79.23**	**335**	P		**P**	**02 28 45.3**	**-2.2**
FUORN				IAmb	IAmb		02 29 05.2	
	comp=Z,9.3nm,1.4s							
U49A	**Red Boiling Sp**	**79.47**	**45**	P		**P**	**02 28 49.3**	**+0.6**
U49A				IAmb	IAmb		02 28 50.1	
	comp=Z,11nm,0.9s							
T50A	**Nancy**	**79.48**	**44**	P		**P**	**02 28 49.3**	**+0.6**
S51A	**Beattyville**	**79.53**	**43**	P		**P**	**02 28 49.4**	**+0.4**
S51A				IAmb	IAmb		02 28 50.3	
	comp=Z,11nm,0.9s							
CLTN	**Cedars of Leba**	**79.56**	**46**	P		**P**	**02 28 49.3**	**+0.2**
CLTN				IAmb	IAmb		02 28 50.8	
	comp=Z,6.5nm,0.8s							
TUE	**Stuetta**	**79.62**	**336**	P		**P**	**02 28 48.2**	**-1.3**
TUE				IAmb	IAmb		02 28 59.9	
	comp=Z,6.3nm,0.9s							
SWET	**Sewanee**	**80.46**	**46**	P		**P**	**02 28 54.5**	**+0.4**
W50A	**Signal Mountai**	**80.76**	**45**	P		**P**	**02 28 55.9**	**+0.2**
W50A				IAmb	IAmb		02 28 56.5	
	comp=Z,22nm,1.4s							
ASF	**Jabal al Asfar**	**81.34**	**310**	LR		LR	03 08 37.9	
	comp=Z,25nm,18.9s,baz=235,slow=38							
Y49A	**Blount Mountai**	**81.34**	**47**	P		**P**	**02 28 59.2**	**+0.5**
Y49A				IAmb	IAmb		02 28 59.9	
	comp=Z,9.0nm,0.8s							
MMAI	**Mount Meron Ar**	**81.40**	**312**	P		**P**	**02 28 59.4**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=23,slow=14,SNR=4.8							
	comp=Z,0.6nm,0.5s							
STKA	**Stephens Creek**	**81.68**	**191**	P		**P**	**02 29 00.3**	**0.0**
	comp=Z,1.0nm,0.4s,baz=332,slow=15,SNR=2.9							
	comp=Z,1.0nm,0.4s							
STKA	**Stephens Creek**	**81.68**	**191**	P		**P**	**02 28 59.4**	**-0.8**
STKA	**Stephens Creek**	**81.68**	**191**	P		**P**	**02 28 59.4**	**-0.8**
STKA				pmax	pmax			
	comp=Z,39nm,1.3s							
FORT	**Forrest**	**83.10**	**202**	P		**P**	**02 29 07.8**	**+0.2**
EIL	**Elat**	**84.34**	**310**	LR		LR	03 10 30.8	
	comp=Z,20nm,19.8s,baz=30,slow=38							
ESDC	**Sonseca Array**	**89.13**	**343**	P		**P**	**02 29 36.1**	**-1.5**
	comp=Z,0.9nm,0.8s,baz=341,slow=3.1,SNR=4.7							
ESDC				LR		LR	03 14 57.1	
	comp=Z,14nm,19.8s,baz=3.5,slow=39							
	comp=Z,0.9nm,0.8s							
QSPA	**South Pole Qui**	**139.18**	**180**	PKPpre		PKPpre	02 35 57.3	
BI02	**San Fabin de**	**145.16**	**86**			**PKPbc**	**02 36 18.9**	**-0.1**
CPUP	**Villa Florida**	**146.66**	**58**	PKPbc		**PKPbc**	**02 36 24.2**	**+0.5**
	comp=Z,4.1nm,1.0s,baz=326,slow=5.0,SNR=8.8							
PLCA	**Paso Flores**	**147.88**	**91**	PKPbc		**PKPbc**	**02 36 27.3**	**+0.6**
	comp=Z,5.1nm,0.8s,baz=324,slow=2.6,SNR=13							
PLCA	**Paso Flores**	**147.88**	**91**	PKPbc		**PKPbc**	**02 36 26.9**	**+0.1**
ELIB	**Princess Elisa**	**148.42**	**207**	*d*PKPdf		**PKPbc**	**02 36 26.9**	**-0.4**
TRQA	**Tornquist**	**151.99**	**80**	PKPbc		**PKPbc**	**02 36 36.7**	**-0.1**
TRQA	**Tornquist**	**151.99**	**80**	PKIKP		**PKPbc**	**02 36 36.7**	**-0.1**

CATAC ***16*** *02:20:17.5±0.7,15°N±5°×9°2W±°, h95km±4km, M3.0/9, MLv3.0/9, Error ellipse: s-maj=13.0km s-min=4.8km az=44.2, confirmed*
GCG ***16*** *02:20:22.2±0.6, 14°.31N×91°.71W, h65km±6km, MD3.7, Presumed earthquake*
ISC 16 02:20:20.8±2.4, 14°2N±0°2×91°7W±0°1, h79km±14km, n19, σ1s99/27, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
RTAL	**Retalhuleu**	**0.30**	**358**	P		**Pn**	**02 20 32.1**	**-0.9**
RTAL				S		**Sn**	**02 20 41.1**	**-1.0**
STG2	**El Palmar, Qui**	**0.37**	**54**	*e*P		**Pn**	**02 20 34.3**	**+0.7**
STG2				*e*S		**Sn**	**02 20 44.0**	**+0.9**
STG5	**El Palmar, Qui**	**0.37**	**61**	*e*P		**Pn**	**02 20 33.8**	**+0.2**
STG8	**El Palmar, Qui**	**0.39**	**55**	*e*P		**Pn**	**02 20 34.7**	**+0.8**
STG8				*e*S		**Sn**	**02 20 44.8**	**+1.2**
SOKI	**Kika Raxquin**	**0.65**	**24**	*e*P		**Pn**	**02 20 36.7**	**+0.3**
SMCA	**Catarina**	**0.74**	**329**	*e*P		**Pn**	**02 20 36.3**	**-0.5**
ESSG	**Sabana Grande**	**0.84**	**79**	*e*P		**Pn**	**02 20 38.7**	**+0.7**
ESSG				*e*S		**Sn**	**02 20 51.8**	**+1.0**
FG8	**Yepocapa, Chim**	**1.09**	**88**	*e*P		**Pn**	**02 20 38.0**	**-3.0**
HUEH	**Huehuetenango**	**1.10**	**9**	P		Pn	02 20 35.9	-5.4
FG16	**Alotenango, Sa**	**1.14**	**87**	*e*P		**Pn**	**02 20 39.0**	**-2.7**
FG16				*i* S		**Sn**	**02 20 52.9**	**-4.4**
PCG5	**San Vicente Pa**	**1.27**	**90**	*i* P		**Pn**	**02 20 41.9**	**-1.4**
PCG5				*i* S		**Sn**	**02 20 57.2**	**-2.9**
APG	**El Apazote**	**1.41**	**56**	*e*P		**Pn**	**02 20 46.8**	**+1.6**
FAME	**Alcaldia de Sa**	**1.66**	**103**	P		**Pn**	**02 20 48.5**	**+0.3**
FAME				S		**Sn**	**02 21 11.2**	**+2.2**
SLOZ	**Alcaldia de Sa**	**1.85**	**96**	P		**Pn**	**02 20 49.1**	**-1.7**
SLOZ				S		**Sn**	**02 21 15.4**	**+1.9**
CEVE	**Cerro Verde**	**2.04**	**101**	S		**Sn**	**02 21 19.8**	**+1.6**
CCIG	**Comitan**	**2.10**	**348**	P		Pn	02 20 45.4	-8.7
CCIG				S		Sn	02 21 07.0	-12
JAYA	**Jayaque - finc**	**2.24**	**104**	P		**Pn**	**02 20 57.4**	**+1.3**
JAYA				S		**Sn**	**02 21 26.1**	**+3.1**
PMON	**Piamonte**	**2.35**	**102**	P		**Pn**	**02 20 57.1**	**-0.4**
PMON				S		**Sn**	**02 21 27.7**	**+2.0**
LLGN	**La Laguna**	**2.66**	**91**	P		**Pn**	**02 20 59.1**	**-2.5**

IDC ***16*** *02:30:28.5±8.9, 31°.56S×179°.51W, h217km±84km, mb3.3/2, mbtmp3.8/3, Error ellipse: s-maj=79.9km s-min=35.7km az=11.0*
ISC 16 02:30:28.9±2.0, 31°.5S±0°.1×179°.8W±0°.4, h200km, n6, σ1s73/7, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
URZ	**Urewera**	**7.24**	**199**	P		**Pn**	**02 32 13.8**	**+1.7**
	2.6nm,0.6s,baz=15,slow=19,SNR=1.1							
URZ				S		**Sn**	**02 33 32.4**	**-1.8**
	6.6nm,0.3s,baz=338,slow=22,SNR=6.7							
ASAR	**Alice Springs**	**41.49**	**269**	P		**P**	**02 37 56.9**	**+0.3**
	0.5nm,0.4s,baz=106,slow=7.4,SNR=7.8							
	0.5nm,0.4s							
WRA	**Warramunga Arr**	**42.58**	**274**	P		**P**	**02 38 05.5**	**+0.1**
	1.5nm,0.5s,baz=114,slow=7.8,SNR=32							
	1.5nm,0.5s							
FINES	**FINESS Array B**	**145.56**	**338**	PKPbc		**PKPdf**	**02 49 40.4**	**-2.0**
	4.7nm,1.0s,baz=64,slow=4.4,SNR=11							
HFS	**Hagfors**	**149.92**	**346**	PKPbc		**PKPdf**	**02 49 50.7**	**+1.1**
	1.5nm,0.8s,baz=28,slow=3.4,SNR=1.0							
MMAI	**Mount Meron Ar**	**150.23**	**282**	PKPbc		**PKPbc**	**02 49 55.5**	**-0.8**
	0.4nm,0.4s,baz=86,slow=3.2,SNR=4.1							

IDC ***16*** *02:41:37.0±1.8, 32°.29S×178°.16W, h0km, mb4.0/2, mbtmp4.0/3, ML3.8/1, Error ellipse: s-maj=57.3km s-min=31.5km az=129.0*
WEL ***16*** *02:41:37.1±1.2, 32°S±7°×17°8W±2°.0, h100km, M4.5/6, mB4.5/6, ML4.3/7, MLv4.6/6, Mw(mB)3.6/3, Error ellipse: s-maj=26.7km s-min=4.3km az=106.2, confirmed*
ISC 16 02:41:38.7±1.6, 32°.2S±0°.1×178°.1W±0°.3, h24km, n21, σ1s30/29, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
GLKZ	**Green Lake**	**2.94**	**2**	P		**Pn**	**02 42 23.3**	**-0.6**
GLKZ				S		**Sn**	**02 42 56.4**	**-2.1**
PKGZ	**Pakihiroa**	**6.47**	**208**	P		**Pn**	**02 43 11.9**	**-0.6**
PKGZ				S		**Sn**	**02 44 24.9**	**-0.7**
HAZ	**Te Kaha**	**6.50**	**211**	P		**Pn**	**02 43 13.1**	**+0.2**
HAZ				S		**Sn**	**02 44 27.7**	**+1.4**
PUZ	**Puketiti**	**6.58**	**206**	S		**Sn**	**02 44 28.7**	**+0.3**
RUGZ	**Raukumara Rang**	**6.72**	**210**	P		**Pn**	**02 43 16.1**	**0.0**
RUGZ				S		**Sn**	**02 44 32.3**	**+0.4**
TWGZ	**Tauwhareparae**	**6.78**	**208**	P		**Pn**	**02 43 15.0**	**-1.8**
TWGZ				S		**Sn**	**02 44 33.1**	**-0.1**
CNGZ	**Carnagh Statio**	**6.97**	**205**	P		**Pn**	**02 43 17.9**	**-1.4**
MWZ	**Matawai**	**7.10**	**209**	P		**Pn**	**02 43 20.0**	**-1.1**
MWZ				S		**Sn**	**02 44 39.2**	**-1.8**
URZ	**Urewera**	**7.22**	**212**	Pn		**Pn**	**02 43 22.3**	**-0.4**
	1.7nm,0.3s,baz=240,slow=4.7,SNR=13							
URZ				Sn		**Sn**	**02 44 42.5**	**-1.4**
	3.1nm,0.3s,baz=106,slow=17,SNR=15							
	3.7nm,0.3s							
URZ	**Urewera**	**7.22**	**212**	P		**Pn**	**02 43 21.6**	**-1.1**
URZ				S		**Sn**	**02 44 42.4**	**-1.5**
RAGZ	**Rawiri**	**7.28**	**209**	S		**Sn**	**02 44 44.3**	**-1.3**
RIGZ	**Rimuhau**	**7.33**	**207**	S		**Sn**	**02 44 45.5**	**-1.1**
MUGZ	**Murupara**	**7.55**	**213**	S		**Sn**	**02 44 50.8**	**-1.3**
OUZ	**Omahuta**	**7.58**	**244**	P		Pn	02 43 33.2	+5.5
MTHZ	**Maungataniwha**	**7.83**	**211**	P		**Pn**	**02 43 33.1**	**+2.0**
MTHZ				S		**Sn**	**02 44 57.1**	**-1.9**
BKZ	**Black Stump Fm**	**8.24**	**211**	P		**Pn**	**02 43 35.9**	**-0.9**
ASAR	**Alice Springs**	**43.00**	**269**	P		**P**	**02 49 37.5**	**+1.1**
	0.7nm,0.6s,baz=109,slow=7.6,SNR=6.7							
	0.7nm,0.6s							
WRA	**Warramunga Arr**	**44.15**	**274**	P		**P**	**02 49 46.7**	**+1.0**
	1.5nm,0.3s,baz=112,slow=8.1,SNR=59							
	1.5nm,0.3s							
FINES	**FINESS Array B**	**146.82**	**339**	PKPbc		**PKPab**	**03 01 19.4**	**+0.1**
	4.7nm,1.0s,baz=55,slow=4.1,SNR=14							
HFS	**Hagfors**	**151.00**	**348**	PKPbc		**PKiKP**	**03 01 30.6**	**+1.2**
	4.9nm,1.0s,baz=38,slow=3.3,SNR=5.3							
MMAI	**Mount Meron Ar**	**151.87**	**281**	PKPbc		**PKiKP**	**03 01 34.3**	**+2.1**
	1.3nm,0.6s,baz=87,slow=4.3,SNR=5.0							

NEIC ***16*** *02:45:29.9±1.3, 32°.21S±0°.08×178°.0W±0°.2, h10km±2km, mb4.6/11, Error ellipse: s-maj=29.0km s-min=11.6km az=103.0*
IDC ***16*** *02:45:29.0±1.3, 32°.41S×177°.97W, h0km, mb4.3/3, mbtmp4.2/4, ML3.9/1, MS3.5/7, Error ellipse: s-maj=53.9km s-min=26.4km az=141.0*
ISC 16 02:45:32.7±0.8, 32°.22S±0°.09×178°.1W±0°.2, h24km, n41, σ1s32/35, mb4.5/12, MS3.5/6, 2C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
RAO	**Raoul Island**	**2.97**	**3**	LR		LR	02 47 49.6	
	comp=Z,420nm,18.7s,baz=144,slow=45							
RAO	**Raoul Island**	**2.97**	**3**	Pn		**Pn**	**02 46 16.1**	**-2.1**
MXZ	**Matakaoa Point**	**6.08**	**208**	Pn		**Pn**	**02 46 57.9**	**-3.2**
URZ	**Urewera**	**7.18**	**212**	Pn		**Pn**	**02 47 13.0**	**-3.1**
	2.0nm,0.3s,baz=256,slow=3.1,SNR=7.4							
URZ				Sn		**Sn**	**02 48 35.4**	**-1.4**
	2.5nm,0.3s,baz=225,slow=3.8,SNR=9.7							
	5.7nm,0.5s							
RTZ	**Ruatahuna**	**7.53**	**211**	Pn		**Pn**	**02 47 20.1**	**-0.9**
BKZ	**Black Stump Fm**	**8.20**	**211**	Pn		**Pn**	**02 47 30.2**	**0.0**
MRZ	**Mangatainoka R**	**9.83**	**209**			**Pn**	**02 47 52.2**	**-0.3**
BHW	**Baring Head**	**10.75**	**209**	Pn		**Pn**	**02 48 04.1**	**-0.9**
WHZ	**Wether Hill Ro**	**17.38**	**214**			**P**	**02 49 35.2**	**+0.5**
EIDS	**Eidsvold**	**27.78**	**276**	P		**P**	**02 51 22.2**	**+2.4**
EIDS				IAmb		IAmb	02 51 38.6	
	comp=Z,15nm,1.1s							
PPT	**Papeete**	**29.60**	**67**	LR		LR	03 00 11.5	
	comp=Z,30nm,21.4s,baz=189,slow=30							
STKA	**Stephens Creek**	**34.01**	**260**	P		**P**	**02 52 17.1**	**+2.4**
	comp=Z,1.5nm,0.5s,baz=109,slow=9.8,SNR=5.0							
	comp=Z,1.5nm,0.5s							
CTA	**Charters Tower**	**34.03**	**282**	LR		LR	03 04 40.0	
	comp=Z,71nm,18.0s,baz=46,slow=34							
CTAO	**Charters Tower**	**34.03**	**282**	P		**P**	**02 52 15.2**	**+0.2**
CTAO				IAmb		IAmb	02 52 17.9	
	comp=Z,9.4nm,0.9s							
COEN	**Coen**	**39.71**	**288**	P		**P**	**02 53 02.8**	**-0.5**
COEN				IAmb		IAmb	02 53 31.2	
	comp=Z,7.0nm,1.1s							
AS31	**Alice Springs**	**42.94**	**269**	P		**P**	**02 53 29.0**	**-0.9**
ASAR	**Alice Springs**	**42.94**	**269**	P		**P**	**02 53 30.2**	**+0.3**
	comp=Z,1.9nm,0.7s,baz=114,slow=7.7,SNR=12							
	comp=Z,1.9nm,0.7s							
ASAR	**Alice Springs**	**42.94**	**269**	P		**P**	**02 53 28.7**	**-1.2**
WR8	**Warramunga Arr**	**43.95**	**274**	P		**P**	**02 53 37.7**	**-0.4**
WR8				IAmb		IAmb	02 53 59.1	
	comp=Z,7.1nm,0.9s							
WRA	**Warramunga Arr**	**44.09**	**274**	P		**P**	**02 53 39.5**	**+0.3**
	comp=Z,3.4nm,0.3s,baz=112,slow=8.1,SNR=66							
	comp=Z,3.4nm,0.3s							
WRA	**Warramunga Arr**	**44.09**	**274**	P		**P**	**02 53 38.2**	**-1.0**
WB0	**Warramunga Arr**	**44.13**	**274**	P		**P**	**02 53 39.5**	**0.0**
FORT	**Forrest**	**45.51**	**257**	P		**P**	**02 53 50.1**	**-0.2**
MTN	**Manton Dam**	**50.19**	**281**			**P**	**02 54 25.0**	**-1.8**
MTN				IAmb		IAmb	02 54 28.9	
	comp=Z,6.0nm,1.0s							
CASY	**Casey**	**53.49**	**208**	P		**P**	**02 54 51.8**	**+1.1**
CASY				IAmb		IAmb	02 55 01.2	
	comp=Z,6.0nm,1.0s							
BATI	**Baumata**	**57.80**	**279**	LR		LR	03 19 52.3	
	comp=Z,158nm,18.8s,baz=108,slow=36							
QSPA	**South Pole Qui**	**57.89**	**180**	P		**P**	**02 55 21.8**	**-0.7**
QSPA				IAmb		IAmb	02 55 36.7	
	comp=Z,6.3nm,0.8s							
RPN	**Rapa Nui**	**59.07**	**104**	LR		LR	03 17 53.8	
	comp=Z,21nm,18.2s,baz=90,slow=33							
KAPI	**Kappang**	**63.84**	**281**	LR		LR	03 23 23.0	
	comp=Z,64nm,19.0s,baz=112,slow=36							
VNA3	**Neumayer Olymp**	**76.50**	**176**	⇑P		**P**	**02 57 21.4**	**+1.2**
	comp=Z,12nm,0.8s							
VNA2	**Neumayer--Watz**	**76.93**	**177**	⇑P		**P**	**02 57 23.5**	**+0.9**
	comp=Z,2.8nm,0.7s,baz=162,slow=4.7							
KSRS	**Korea Array**	**85.67**	**320**	LR		LR	03 34 00.5	
	comp=Z,23nm,18.8s,baz=35,slow=34							
BVAR	**Borovoye Array**	**127.62**	**315**	PKP		**PKiKP**	**03 04 36.2**	**+0.3**
	comp=Z,0.8nm,0.4s,baz=132,slow=1.7,SNR=4.6							
FINES	**FINESS Array B**	**146.81**	**339**	PKPbc		**PKPab**	**03 05 12.6**	**-0.7**
	comp=Z,2.8nm,0.4s,baz=44,slow=3.8,SNR=31							
FINES	**FINESS Array B**	**146.81**	**339**			**PKPbc**	**03 05 12.0**	**0.0**
NB2	**NORSAR Subarra**	**150.53**	**351**	PKP		**PKiKP**	**03 05 21.9**	**-0.5**
	comp=Z,2.1nm,0.8s,baz=24,slow=3.0							
NOA	**NORSAR Array B**	**150.53**	**351**	PKPbc		**PKPbc**	**03 05 21.3**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=18,slow=1.6,SNR=4.4							
HFS	**Hagfors**	**151.00**	**348**	PKPbc		**PKPbc**	**03 05 22.4**	**-0.4**
	comp=Z,1.6nm,0.5s,baz=64,slow=6.8,SNR=11							
MMAI	**Mount Meron Ar**	**151.82**	**281**	PKPbc		**PKiKP**	**03 05 27.3**	**+1.3**
	comp=Z,2.9nm,0.6s,baz=42,slow=6.7,SNR=11							
AKASG	**Malin Array Be**	**152.66**	**321**	PKPbc		**PKiKP**	**03 05 28.3**	**+1.2**
	comp=Z,0.3nm,0.4s,baz=55,slow=3.1,SNR=3.4							
BRTR	**Keskin Array B**	**153.33**	**295**	PKPbc		**PKiKP**	**03 05 29.6**	**+0.6**
	comp=Z,1.3nm,0.9s,baz=64,slow=5.6,SNR=4.0							

IDC ***16*** *02:58:51.4±1.1, 43°.95N×87°.66E, h0km, mb3.7/3, mbtmp3.8/8, ML3.4/5, MS3.1/4, Error ellipse: s-maj=27.9km s-min=11.8km az=46.0*
SOME ***16*** *02:58:59.1, 44°.02N×86°.73E, h10km*
NNC ***16*** *02:59:00.4±1.4, 43°.77N×86°.73E, h14km±5km, mb4.2, mpv4.0, Error ellipse: s-maj=10.3km s-min=7.3km az=119.0*
ISC 16 02:58:52.4±0.6, 43°.95N±0°.04×87°.02E±0°.03, h10km, n44, σ2s55/55, mb3.7/3, MS3.1/3, 8C-7D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
WMQ	**Urumqi**	**0.50**	**104**	Pg		**Pb**	**02 59 01.8**	**-1.5**
WMQ				Sg		**Sg**	**02 59 05.8**	**-3.0**
WMQ				smax	smax			
	comp=N,7μm,1.3s							
WMQ				smax	smax			
	comp=E,6μm,1.1s							
ZSN	**Zaisan**	**3.82**	**337**	Pg		**Pg**	**03 00 06.1**	**+0.7**
	comp=E,45nm,0.5s							
ZSN				Lg		Lg

KST					Lg	Lg	03 03 11.2		
	comp=E,13nm,0.9s								
KST	**Kastek**	**8.09**	**267**	*eP*	**Pg**	**Pg**	**03 01 25.7**	**-1.5**
	comp=E,4.4nm,0.5s								
KST					*eS*	**Sg**	**03 03 11.2**	**-0.8**
	comp=E,13nm,0.9s								
KRBS	**Karabastau**	**8.21**	**272**	Pg	**Pg**	**Pg**	**03 01 27.5**	**-2.0**
	comp=E,2.0nm,0.5s								
KRBS					Lg	Lg	03 03 13.8		
	comp=E,2.7nm,0.7s								
KRBS	**Karabastau**	**8.21**	**272**	*eP*	**Pg**	**Pg**	**03 01 27.5**	**-2.0**
	comp=E,2.0nm,0.5s								
KRBS					*eS*	**Sg**	**03 03 13.8**	**-1.9**
	comp=E,2.7nm,0.7s								
KURBB	**Kurchatov Arra**	**8.82**	**322**	⇓Pn	Pn	Pn	03 01 05.6	+5.7	
	comp=E,4.0nm,0.4s								
KURBB				⇑Sn	Sn	Sn	03 02 47.6	+8.3	
	comp=E,20nm,0.6s								
KURBB				⇓Lg	Lg	Lg	03 03 42.3		
	comp=E,56nm,0.7s								
AAK	**Ala-Archa**	**9.23**	**266**	Pn	Pn	Pn	03 01 14.0	+8.3	
	comp=E,0.3nm,0.3s,baz=145,slow=4.2,SNR=2.8								
AAK					Lg	Lg	03 03 57.9		
	comp=E,0.2nm,0.3s,baz=275,slow=19,SNR=2.3								
	comp=E,0.7nm,0.3s								
GOMU	**GeErMu**	**9.77**	**140**	Pn	**Pn**	**Pn**	**03 01 09.8**	**-3.4**	
GOMU				Sn	Sn	Sn	03 02 20.9	-42	
GOMU				smax	smax				
	comp=N,7.0nm,0.7s								
GOMU				smax	smax				
	comp=E,6.0nm,0.6s								
ZALV	**Zalesovo Beam**	**10.12**	**353**	Pn	**Pn**	**Pn**	**03 01 20.1**	**+2.6**	
	comp=E,0.7nm,0.3s,baz=167,slow=12,SNR=7.1								
ZALV				Sn	**Sn**	**Sn**	**03 03 13.7**	**+2.7**	
	comp=E,0.6nm,0.3s,baz=170,slow=24,SNR=2.8								
ZALV				Lg	Lg	Lg	03 04 12.4		
	comp=E,0.3nm,0.3s,baz=170,slow=25,SNR=2.3								
	comp=E,2.2nm,0.4s								
TLY	**Talaya**	**13.57**	**49**	LR	LR	LR	03 07 29.9		
	comp=E,57nm,18.5s,baz=263,slow=39								
SONM	**Songino Array**	**14.04**	**67**	Lg	Lg	Lg	03 06 06.6		
	comp=E,0.1nm,0.3s,baz=274,slow=22,SNR=4.1								
BVA0	**Borovoye Array**	**14.26**	**315**	⇑Pn	**P**	**P**	**03 02 23.2**	**+1.7**	
	comp=E,0.9nm,0.5s,baz=0.0,slow=0.1,SNR=4.0								
BVAR	**Borovoye Array**	**14.26**	**315**	Pn	**P**	**P**	**03 02 17.3**	**-4.2**	
	comp=E,0.1nm,0.3s,baz=119,slow=15,SNR=5.6								
BVAR				Sn	**Sn**	**Sn**	**03 04 51.5**	**-0.8**	
	comp=E,0.1nm,0.3s,baz=115,slow=23,SNR=5.7								
BVAR				Lg	Lg	Lg	03 06 33.3		
	baz=109,slow=27,SNR=2.4								
	comp=E,0.5nm,0.3s								
BTO2	**Baotou**	**17.18**	**93**	*eP*	**P**	**P**	**03 02 59.4**	**+5.2**	
BTO2				S	**S**	**S**	**03 06 12.9**	**-0.2**	
BTO2				pmax	pmax				
	comp=Z,8.0nm,0.6s								
BTO2				pmax	pmax				
	comp=Z,260nm,5.0s								
BTO2				LR	LR				
	comp=N,360nm,6.6s								
BTO2				LR	LR				
	comp=E,350nm,4.9s								
BTO2				LR	LR				
	comp=Z,180nm,4.9s								
AB31	**Akbulak array**	**19.30**	**295**	Pn	**Pn**	**Pn**	**03 03 22.6**	**+4.4**	
	comp=Z,0.7nm,0.6s,baz=90,slow=12,SNR=6.4								
YAK	**Yakutsk**	**30.65**	**39**	LR	LR		03 16 34.0		
	comp=Z,29nm,18.9s,baz=273,slow=35								
TIXI	**Tiksi**	**34.27**	**22**	LR	LR		03 20 44.0		
	comp=Z,37nm,18.6s,baz=195,slow=38								
NOA	**NORSAR Array B**	**46.35**	**319**	P	**P**	**P**	**03 07 21.7**	**+3.4**	
	comp=Z,0.4nm,0.8s,baz=62,slow=4.8,SNR=1.4								
	comp=Z,0.4nm,0.8s								
FURI	**Furi**	**54.51**	**245**	LR	LR		03 35 03.3		
	comp=Z,23nm,18.2s,baz=189,slow=40								
WRA	**Warramunga Arr**	**76.92**	**135**	P	**P**	**P**	**03 10 43.4**	**-1.6**	
	comp=Z,0.8nm,0.7s,baz=334,slow=5.2,SNR=10.0								
	comp=Z,0.8nm,0.7s								
ASAR	**Alice Springs**	**79.83**	**137**	P	**P**	**P**	**03 10 59.4**	**-1.5**	
	comp=Z,0.5nm,0.6s,baz=336,slow=5.5,SNR=7.1								
	comp=Z,0.5nm,0.6s								

IDC ***16*** *03:04:43.7±1.9, 19˚.40S×178˚.21W, h611km±21km, mb2.9/6, mbtmp3.9/7, Error ellipse: s-maj=28.0km s-min=22.0km az=140.0*

ISC 16 03:04:42.4±0.8, 19˚.6S±0˚.2×178˚.1W±0˚.2, h600km, n10, σ1§10/11, mb3.4/8, 2C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.09**	**296**	P		**P**	**03 06 09.6**	**+1.0**
	68nm,0.9s,baz=149,slow=3.9,SNR=23							
WRA	**Warramunga Arr**	**44.67**	**261**	P		**P**	**03 12 02.9**	**-0.6**
	0.3nm,0.4s,baz=98,slow=8.2,SNR=7.4							
	0.3nm,0.4s							
ASAR	**Alice Springs**	**44.67**	**256**	P		**P**	**03 12 03.6**	**+0.1**
	1.0nm,0.6s,baz=90,slow=7.4,SNR=9.9							
ASAR				PcP		**PcP**	**03 13 31.9**	**-0.9**
	0.6nm,0.7s,baz=96,slow=4.1,SNR=4.7							
	1.0nm,0.6s							
QSPA	**South Pole Qui**	**70.51**	**180**	P		**P**	**03 14 59.0**	**+1.3**
	4.3nm,0.6s,baz=312,slow=0.6,SNR=22							
	4.3nm,0.6s							
TXAR	**Lajitas Array**	**86.61**	**57**	P		**P**	**03 16 24.6**	**+0.9**
	0.3nm,0.6s,baz=208,slow=4.8,SNR=3.6							
	0.3nm,0.6s							
ILAR	**Eielson Array**	**87.41**	**13**	P		**P**	**03 16 25.1**	**-1.3**
	0.4nm,0.8s,baz=205,slow=5.1,SNR=4.9							
	0.4nm,0.8s							
PDAR	**Pinedale Array**	**88.32**	**43**	P		**P**	**03 16 31.7**	**+0.2**
	0.2nm,0.5s,baz=208,slow=5.3,SNR=2.2							
	0.2nm,0.5s							
VNA3	**Neumayer Olymp**	**89.09**	**176**	⇑P		**P**	**03 16 33.2**	**-1.2**
	comp=Z,4.6nm,0.5s							
VNA2	**Neumayer--Watz**	**89.53**	**177**	⇑P		**P**	**03 16 35.2**	**-1.2**
	comp=Z,3.7nm,0.6s,baz=175,slow=4.1							
MMAI	**Mount Meron Ar**	**147.27**	**301**	PKPbc		**PKPbc**	**03 23 20.4**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=30,slow=5.2,SNR=3.8							

IDC ***16*** *03:26:34.1±2.6, 25˚.97N×128˚.18E, h0km, mb3.7/7, mbtmp3.7/7, Error ellipse: s-maj=166.8km s-min=22.6km az=67.0*

JMA ***16*** *03:26:36.3±0.4, 26˚N±1˚×12˚9E±˚, h35km, MV3.0/14, NEAR OKINAWAJIMA ISLAND*

ISC 16 03:26:36.8±0.8, 26˚.11N±0˚.06×128˚.67E±0˚.05, h27km, n18, σ0§83/21, mb3.5/7, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JNTH	**Nagotoyohara**	**0.71**	**305**	P		**Pb**	**03 26 49.6**	**-0.9**
JJT3	**Tamagusuku3**	**0.80**	**272**	P		**Pb**	**03 26 51.3**	**-0.7**
JJT3				*eS*		**Sb**	**03 27 03.0**	**+0.5**
JOW	**Kunigami**	**0.80**	**334**	P		**Pb**	**03 26 51.7**	**-0.4**
JOW				*eS*		**Sb**	**03 27 02.1**	**-0.4**
JYRO	**Yoronjima**	**0.93**	**348**	P		**Pb**	**03 26 53.8**	**-0.5**
JIH	**Iheya**	**1.11**	**326**	P		**Pn**	**03 26 56.5**	**-0.1**
JIH				*eS*		**Sb**	**03 27 10.9**	**-0.6**
JOKE	**Okinoerabujima**	**1.25**	**356**	P		**Pb**	**03 26 58.7**	**-1.0**
JAGN	**Aguni-jima**	**1.37**	**291**	*eP*		**Pn**	**03 26 59.7**	**-0.4**
JTK	**Tokunoshima**	**1.69**	**8**	*eP*		**Pn**	**03 27 04.7**	**+0.2**
JKE	**Kume jima 2**	**1.71**	**278**	*eP*		**Pn**	**03 27 03.6**	**-1.2**
JMZ	**Minamidaito 2**	**2.32**	**97**	*eP*		**Pn**	**03 27 12.4**	**-0.7**
JKDJ	**Kitadaitoujima**	**2.37**	**93**	*eP*		**Pn**	**03 27 12.8**	**-1.1**
SONM	**Songino Array**	**27.87**	**327**	P		**P**	**03 32 25.7**	**+1.4**
	0.4nm,0.4s,baz=130,slow=9.1,SNR=2.1							
	0.4nm,0.4s							
MKAR	**Makanchi Array**	**41.91**	**312**	P		**P**	**03 34 24.4**	**-0.5**
	0.4nm,0.6s,baz=99,slow=11,SNR=5.5							
	0.4nm,0.6s							
KURBB	**Kurchatov Arra**	**45.21**	**316**	P		**P**	**03 34 51.3**	**-0.1**
	0.3nm,0.5s,baz=103,slow=9.1,SNR=3.9							
	0.3nm,0.5s							
WRA	**Warramunga Arr**	**46.11**	**173**	P		**P**	**03 34 59.6**	**+0.8**
	0.3nm,0.6s,baz=354,slow=8.0,SNR=2.1							
	0.3nm,0.6s							
ASAR	**Alice Springs**	**49.74**	**174**	P		**P**	**03 35 27.8**	**+0.8**
	0.4nm,0.9s,baz=353,slow=7.5,SNR=2.1							
	0.4nm,0.9s							
FINES	**FINESS Array B**	**73.16**	**331**	P		**P**	**03 38 06.0**	**+1.2**
	7.3nm,1.0s,baz=72,slow=6.5,SNR=2.7							
	7.3nm,1.0s							
AKASG	**Malin Array Be**	**75.88**	**320**	P		**P**	**03 38 20.1**	**-0.6**
	0.3nm,0.4s,baz=69,slow=6.2,SNR=1.8							
	0.3nm,0.4s							

CATAC ***16*** *03:53:25.0±1.1, 1˚N±7˚×7˚9W±˚, h6km±15km, M5.5/6, mb5.6/5, mB5.7/5, MLv5.5/6, Mw(mB)5.3/5, MwMwp4.8/2, Mwp5.1/2, Error ellipse: s-maj=21.4km s-min=7.0km az=49.4, confirmed*

VAO ***16*** *03:53:24.3±0.3, 1˚.16N×78˚.51W, h10km, mb5.0, Presumed earthquake*

MOS ***16*** *03:53:27.1±1.1, 1˚.14N×78˚.65W, h55km, mb5.1/19, Error ellipse: s-maj=13.4km s-min=6.7km az=110.1*

IGQ ***16*** *03:53:27.2±0.2, 1˚N±1˚×7˚9W±˚, h3km±1km, M5.5/43, mB6.1/3, mb6.2/3, Mjma5.6/4, Mjma5.4/41, MLv5.5/5, MLv5.2/43, Ms(BB)5.1/17, Mw(mB)5.8/3*

NEIC ***16*** *03:53:28.8±1.4, 1˚.16N±0˚.07×78˚.6W±0˚.1, h42km±7km, mb5.0/306, Error ellipse: s-maj=18.8km s-min=9.7km az=77.0*

GCMT ***16*** *03:53:29.8±0.2, 1˚.23N±0˚.01×78˚.76W±0˚.01, h30km, MW5.0/111, Moment Tensor Solution. s64,c73; s111,c167; Duration: 0 Moment tensor: Scale 1016Nm; Mrr-1.35±.14; Mθθ1.76±.11; Mϕϕ-0.41±.13; Mrθ0.79±.16; Mrϕ-4.33±.08; Mθϕ-0.08±.20; Best double couple: M⊚4.53500×1016 NP1:ϕs173.00000°, δ79.00000°, λ-3.00000°. NP2:ϕs263.00000°, δ87.00000°, λ-169.00000°. Principal axes: T 5.2050, Plg6.0000°, Azm38.0000°; N -1.3460, Plg79.0000°, Azm277.0000°; P -3.8660, Plg10.0000°, Azm129.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***16*** *03:53:29.7±1.6, 1˚.15N×78˚.58W, h61km±14km, mb4.2/22, mbtmp4.5/26, MS3.9/42 Error ellipse: s-maj=12.8km s-min=8.7km az=69.0*

ISC 16 03:53:26.4±0.5, 1˚.13N±0˚.02×78˚.74W±0˚.02, h33km±2km, n523, σ1§45/474, mb4.9/158, MS3.8/41, 43C-28D, Colombia-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ALOR	**Ecuador-San Lo**	**0.20**	**327**	⇓P		**Pb**	**03 53 34.3**	**+1.3**
SNLR	**San Lorenzo-Es**	**0.20**	**327**	⇓P		**Pb**	**03 53 34.2**	**+1.2**
ALIT	**Ecuador-Imbabu**	**0.50**	**131**	⇓P		**Pb**	**03 53 37.1**	**0.0**
ALIT				S		**Sn**	**03 53 45.0**	**0.0**
LITE1	**Lita**	**0.50**	**131**	⇓P		**Pb**	**03 53 37.1**	**0.0**
LITE1				S		**Sn**	**03 53 45.0**	**0.0**
CHMA	**Chilma**	**0.72**	**111**	⇓P		**Pn**	**03 53 39.6**	**-1.0**
ECEN	**Cerro Negro**	**0.82**	**111**	⇓P		**Pb**	**03 53 42.7**	**0.0**
LNGL	**El Angel-Carch**	**0.83**	**118**	⇓P		**Pb**	**03 53 43.0**	**+0.2**
LNGL				S		**Sb**	**03 53 54.9**	**+1.0**
URCU	**Urcuqui**	**0.84**	**145**	⇓P		**Pb**	**03 53 43.0**	**+0.1**
URCU				S		**Sb**	**03 53 54.3**	**+0.3**
PAC1	**Pacto, Paraso**	**0.86**	**184**	⇑P		**Pn**	**03 53 41.5**	**-0.9**
PAC1	**Pacto, Paraso**	**0.86**	**184**	P		**Pn**	**03 53 41.4**	**-0.9**
PAC1				S		**Sn**	**03 53 52.0**	**-1.8**
CHL1	**Volc¡n Chiles**	**0.86**	**113**	⇓P		**Pb**	**03 53 43.2**	**-0.1**
CHL1				S		**Sb**	**03 53 54.9**	**+0.2**
CHL2	**Volc¡n Chiles**	**0.88**	**111**	⇓P		**Pb**	**03 53 43.5**	**-0.1**
COTA	**Cotacachi**	**0.88**	**153**	⇓P		**Pb**	**03 53 43.7**	**0.0**
COTA				S		**Sb**	**03 53 55.9**	**+0.5**
CUSE	**Cuicocha Este**	**0.88**	**157**	⇓P		**Pb**	**03 53 43.3**	**-0.3**
CUSE	**Cuicocha Este**	**0.88**	**157**	P		**Pb**	**03 53 43.4**	**-0.3**
CUSE				S		**Sb**	**03 53 55.3**	**0.0**
CUIC	**Cuicocha-Domo**	**0.90**	**155**	⇓P		**Pb**	**03 53 43.6**	**-0.3**
CUIC				S		**Sn**	**03 53 55.5**	**+0.2**
AES2	**Ecuador-Puerto**	**0.92**	**262**	⇑P		**Pn**	**03 53 42.4**	**-0.6**
AES2				S		**Sn**	**03 53 55.3**	**+0.2**
OTAV	**Otavalo**	**0.93**	**162**	Pn		**Pn**	**03 53 43.7**	**+0.2**
OTAV				Sn		**Sn**	**03 53 56.2**	**+0.2**
OTAV	**Otavalo**	**0.93**	**162**	P		**Pn**	**03 53 43.7**	**+0.2**
OTAV				SG		**Sn**	**03 53 55.4**	**-0.6**
OTAV	**Otavalo**	**0.93**	**162**	P		**Pn**	**03 53 43.8**	**+0.2**
OTAV				S		**Sn**	**03 53 56.2**	**+0.2**
OTAV	**Otavalo**	**0.93**	**162**	⇑P		**Pn**	**03 53 43.8**	**+0.2**
OTAV	**Otavalo**	**0.93**	**162**	P		**Pn**	**03 53 43.7**	**+0.2**
OTAV				S		**Sn**	**03 53 56.0**	**0.0**
OTAV	**Otavalo**	**0.93**	**162**	*eP*		**Pn**	**03 53 43.8**	**+0.2**
AV21	**Acelerografo,**	**0.93**	**240**	⇑P		**Pn**	**03 53 43.4**	**+0.2**
CMBC	**Cumbal**	**0.93**	**101**	⇑P		**Pn**	**03 53 43.9**	**+0.3**
CMBC	**Cumbal**	**0.93**	**101**	P		**Pn**	**03 53 43.8**	**+0.2**
AAT1	**Ecuador-Atunta**	**0.95**	**146**	⇓P		**Pb**	**03 53 45.0**	**+0.4**
AAT1				S		**Sb**	**03 53 58.6**	**+1.6**
IMBA	**Imbabura, San**	**1.00**	**147**	⇓P		**Pb**	**03 53 46.3**	**+0.7**
IMBA				S		**Sb**	**03 54 01.1**	**+2.4**
AMA1	**Acelerografo,**	**1.00**	**259**	⇑P		**Pn**	**03 53 44.8**	**+0.6**
AMA1				S		**Sb**	**03 53 58.5**	**+0.1**
YAHU	**Yahuarcocha**	**1.00**	**138**	⇓P		**Pb**	**03 53 45.9**	**+0.3**
YAHU				S		**Sb**	**03 54 00.2**	**+1.4**
TULM	**Tulcn-Chalpat**	**1.03**	**113**	⇓P		**Pb**	**03 53 46.4**	**+0.2**
TULM	**Tulcn-Chalpat**	**1.03**	**113**	P		**Pb**	**03 53 46.4**	**+0.2**
APR2	**Miler**	**1.07**	**192**	P		**Pn**	**03 53 45.0**	**-0.2**
ATUL	**Tulcn**	**1.07**	**109**	⇓P		**Pb**	**03 53 47.1**	**+0.3**
BV15	**Puerto Quito-O**	**1.08**	**207**	⇑P		**Pn**	**03 53 44.5**	**-0.7**
AV18	**Acelerografo,**	**1.10**	**222**	⇑P		**Pb**	**03 53 46.5**	**-0.4**
ATON	**Ecuador-Tonsup**	**1.10**	**258**	P		**Pn**	**03 53 45.0**	**-0.5**
PULU	**Pululahua**	**1.12**	**168**	⇑P		**Pb**	**03 53 47.0**	**-0.6**
PULU				S		**Sb**	**03 54 02.0**	**-0.1**
AATC	**Ecuador-Atacam**	**1.16**	**257**	P		**Pn**	**03 53 45.6**	**-0.7**
APR1	**Acelerografo,**	**1.17**	**174**	⇑P		**Pn**	**03 53 47.5**	**+0.6**
APR1				S		**Sb**	**03 54 02.9**	**-0.6**
AV11	**Acelerografo,**	**1.25**	**163**	P		**Pb**	**03 53 50.3**	**+0.7**
YANA	**Yana**	**1.25**	**172**	P		**Pb**	**03 53 49.1**	**-0.7**
FENY	**Casa Vinicio C**	**1.29**	**169**	P		**Pb**	**03 53 50.7**	**+0.3**
FENY				S		**Sb**	**03 54 07.8**	**+1.0**
ANGU	**Angureal**	**1.30**	**146**	⇑P		**Pb**	**03 53 51.1**	**+0.4**
TERV	**Terraza Guagua**	**1.30**	**174**	⇑P		**Pb**	**03 53 49.9**	**-0.8**
GGPC	**Guagua Pichinc**	**1.30**	**174**	⇑P		**Pb**	**03 53 50.1**	**-0.7**
PUEM	**Granja Avicola**	**1.31**	**164**	⇑P		**Pb**	**03 53 51.1**	**+0.4**
PUEM				S		**Sb**	**03 54 08.7**	**+1.4**
CAYR	**Refugio Cayamb**	**1.32**	**146**	P		**Pb**	**03 53 51.1**	**0.0**
CAYR				S		**Sb**	**03 54 09.5**	**+1.4**
JUA2	**San Juan 2**	**1.34**	**174**	⇑P		**Pb**	**03 53 50.3**	**-1.0**
GGPT	**Toaza - Volcan**	**1.35**	**175**	⇑P		**Pn**	**03 53 50.3**	**+1.0**
CIVI	**Edificio de In**	**1.35**	**169**	P		**Pb**	**03 53 51.3**	**-0.2**
BONI	**La Bonita**	**1.38**	**119**	⇓P		**Pb**	**03 53 51.9**	**0.0**
BONI	**La Bonita**	**1.38**	**119**	P		**Pb**	**03 53 51.9**	**0.0**
GCUF	**Volcan Galeras**	**1.40**	**86**	P		**Pb**	**03 53 51.2**	**-1.1**
GCUF				S		**Sb**	**03 54 09.6**	**-0.4**
ZALD	**Colegio Gonzal**	**1.40**	**172**	⇑P		**Pb**	**03 53 51.7**	**-0.6**
ZALD				S		**Sb**	**03 54 10.1**	**+0.2**
TING	**Casa Alexandra**	**1.43**	**168**	⇑P		**Pb**	**03 53 52.7**	**-0.1**
TING				S		**Sb**	**03 54 11.7**	**+1.0**
ASDO	**Santo Domingo**	**1.43**	**196**	P		**Pn**	**03 53 49.5**	**-0.6**
APS4	**Papallacta**	**1.62**	**157**	P		**Pb**	**03 53 56.0**	**+0.1**
APS4				S		**Sb**	**03 54 16.3**	**+0.2**
TOMA	**Boca Toma-Volc**	**1.64**	**169**	⇑P		**Pb**	**03 53 56.3**	**-0.1**
TOMA				S		**Sb**	**03 54 17.2**	**+0.3**
REVS	**Reventador Sur**	**1.66**	**138**	⇓P		**Pb**	**03 53 56.7**	**+0.2**
AMAC	**Ecuador-Machac**	**1.66**	**175**	P		**Pb**	**03 53 56.5**	**-0.2**
ANTI	**Antisana**	**1.67**	**160**	P		**Pb**	**03 53 56.8**	**-0.1**
AV05	**Acelerografo,**	**1.69**	**141**	P		**Pb**	**03 53 57.3**	**+0.3**
ANTG	**Antisana-Guama**	**1.69**	**163**	P		**Pb**	**03 53 56.9**	**-0.4**
ANTG				S		**Sb**	**03 54 18.0**	**-0.4**
PITA	**Cotopaxi Volc**	**1.70**	**170**	P		**Pb**	**03 53 57.3**	**-0.2**
ANTS	**Antisana-Sarah**	**1.71**	**161**	⇓P		**Pb**	**03 53 57.2**	**-0.4**
CASC	**Dorado de Casc**	**1.71**	**125**	⇓P		**Pb**	**03 53 57.5**	**+0.1**
CASC	**Dorado de Casc**	**1.71**	**125**	P		**Pb**	**03 53 57.3**	**0.0**
CASC				S		**Sb**	**03 54 20.8**	**+2.2**
ANTM	**Antisana-La Mi**	**1.73**	**163**	⇓P		**Pb**	**03 53 57.3**	**-0.7**
ANTM				S		**Sb**	**03 54 19.2**	**-0.4**
BBAC	**Balboa, Cauca**	**1.74**	**59**	⇑P		**Pn**	**03 53 54.9**	**+0.4**
BBAC	**Balboa, Cauca**	**1.74**	**59**	P		**Pn**	**03 53 54.8**	**+0.4**
BBAC				S		**Sn**	**03 54 15.8**	**+0.2**
SUCR	**Mariscal Sucre**	**1.77**	**172**	⇑P		**Pb**	**03 53 58.5**	**-0.2**
SUCR				S		**Sb**	**03 54 20.9**	**+0.3**
AV03	**Acelerografo,**	**1.78**	**127**	P		**Pb**	**03 53 58.7**	**+0.3**
NAS2	**Nasa**	**1.78**	**171**	⇓P		**Pb**	**03 53 58.7**	**-0.1**
VC1	**Cotopaxi 1**	**1.79**	**169**	⇑P		**Pb**	**03 53 58.8**	**-0.1**
BVC2	**Cotopaxi Volca**	**1.80**	**170**	⇑P		**Pb**	**03 53 59.2**	**0.0**
BVC2				S		**Sb**	**03 54 22.5**	**+0.9**
BNAS	**Cotopaxi Volca**	**1.81**	**172**	⇑P		**Pb**	**03 54 02.2**	**+3.0**
BREF	**Cotopaxi Volca**	**1.81**	**171**	⇑P		**Pb**	**03 53 59.4**	**0.0**
BREF				S		**Sb**	**03 54 22.4**	**+0.5**
BTAM	**Cotopaxi Volca**	**1.82**	**169**	⇑P		**Pb**	**03 53 59.4**	**-0.1**
BTAM				S		**Sb**	**03 54 23.1**	**+0.9**

ILLI	**Illinizas Sur**	**1.83**	**180**	⇑P		**Pb**	**03 53 58.2**	**-1.4**
ILLI				S		**Sb**	**03 54 21.2**	**-1.2**
TAMB	**Tambo**	**1.85**	**168**	⇑P		**Pb**	**03 53 59.8**	**-0.2**
SLOR	**San Lorenzo -**	**1.86**	**173**	Pn		**Pb**	**03 53 59.6**	**-0.5**
SLOR	**San Lorenzo -**	**1.86**	**173**	⇑P		**Pb**	**03 54 00.1**	**0.0**
BMOR	**Cotopaxi Volca**	**1.87**	**171**	⇑P		**Pb**	**03 53 59.9**	**-0.4**
BMOR				S		**Sb**	**03 54 23.3**	**-0.2**
SRAM	**San Ramn-Vol**	**1.87**	**175**	⇑P		**Pb**	**03 53 59.8**	**-0.5**
BRRN	**Barrancas-Volc**	**1.92**	**172**	⇑P		**Pb**	**03 54 00.7**	**-0.4**
VCES	**Cotopaxi**	**1.94**	**170**	⇑P		**Pb**	**03 54 01.2**	**-0.3**
VCES				S		**Sb**	**03 54 25.2**	**-0.4**
GR1C	**Gorgona, Isla**	**1.95**	**17**	P		**Pn**	**03 53 56.2**	**-1.0**
ASLC	**Ecuador-Salced**	**2.16**	**176**	P		**Pb**	**03 54 04.3**	**-0.8**
PIS1	**Pisayambo**	**2.20**	**171**	⇑P		**Pb**	**03 54 05.5**	**-0.3**
PIS1				S		**Sb**	**03 54 34.2**	**+1.2**
ARDO	**Archidona, Ten**	**2.31**	**156**	⇓P		**Pb**	**03 54 05.6**	**-1.9**
ARDO				S		**Sb**	**03 54 37.8**	**+2.2**
ABH3	**Manabi, Bahia**	**2.40**	**225**	P		**Pn**	**03 54 05.2**	**+1.7**
ABH2	**Ecuador-Univer**	**2.43**	**223**	P		**Pn**	**03 54 06.3**	**+2.5**
POPC	**Popayan, Colom**	**2.49**	**56**	P		**Pn**	**03 54 06.4**	**+1.5**
POPC				S		**Sn**	**03 54 35.8**	**+1.4**
BBIL	**Ulba Tungurahu**	**2.57**	**174**	P		**Pb**	**03 54 10.4**	**-1.7**
PORT	**Chimborazo Vol**	**2.57**	**181**	P		**Pb**	**03 54 10.5**	**-1.8**
PORT				S		**Sb**	**03 54 44.3**	**+0.5**
CHSH	**Refugio Sur-Vo**	**2.61**	**183**	⇑P		**Pb**	**03 54 10.7**	**-2.1**
BMAS	**Trigal station**	**2.62**	**174**	P		**Pn**	**03 54 08.9**	**+2.0**
BPAT	**Tungurahua Vol**	**2.63**	**173**	⇑P		**Pb**	**03 54 10.7**	**-2.5**
TAMH	**Tambohuasha Ch**	**2.65**	**181**	⇑P		**Pb**	**03 54 11.5**	**-2.1**
PUYO	**Puyo, Santa Ro**	**2.70**	**165**	P		**Pb**	**03 54 11.5**	**-2.6**
JSCH	**Cashca Totoras**	**2.84**	**185**	⇑P		**Pn**	**03 54 12.7**	**+2.9**
JSCH				S		**Sb**	**03 54 48.0**	**-3.1**
JAMC	**Jamundi, Valle**	**2.93**	**45**	P		**Pn**	**03 54 10.7**	**-0.2**
PKYU	**Pakayacu**	**2.98**	**157**	⇓P		**Pn**	**03 54 15.1**	**+3.6**
FLOC	**Florencia**	**3.12**	**82**	S		**Sb**	**03 54 54.4**	**-4.4**
FLOC	**Florencia**	**3.12**	**82**	P		**Pn**	**03 54 16.3**	**+3.0**
FLOC	**Florencia**	**3.12**	**82**	P		**Pn**	**03 54 16.5**	**+3.2**
FLOC				S		**Sb**	**03 54 59.3**	**+0.4**
SANGA	**Volcan Sangay**	**3.18**	**173**	P		**Pn**	**03 54 18.3**	**+3.7**
GARC	**Garzon, Huila**	**3.41**	**72**	P		**Pn**	**03 54 20.0**	**+2.4**
MILO	**Milagro-Astudi**	**3.48**	**194**	⇑P		**Pn**	**03 54 17.9**	**-0.4**
COHC	**Cochancay**	**3.61**	**188**	Pn		**Pn**	**03 54 20.5**	**+0.5**
TAIS	**Taisha**	**3.70**	**160**	P		**Pn**	**03 54 24.6**	**+3.3**
YOTC	**Yotoco, Valle**	**3.71**	**40**	P		**Pn**	**03 54 20.6**	**-1.0**
YOTC				S		**Sn**	**03 55 04.2**	**-0.1**
SALI	**Salinas**	**3.99**	**214**	⇑P		**Pn**	**03 54 26.2**	**+0.9**
PIZC	**Pizarro, Choco**	**4.05**	**20**	P		**Pb**	**03 54 32.6**	**-4.5**
PTLC	**Puerto Leguiza**	**4.05**	**104**	⇓P		**Pn**	**03

LPAZ La Paz 20.23 149 P **P** 03 57 59.9 +0.4
LPAZ IAmb IAmb 03 58 01.4
comp=Z,59nm,1.1s
LPAZ La Paz 20.23 149 P **P** 03 57 59.9 +0.4
LPAZ pmax pmax
comp=Z,59nm,1.1s
LPAZ La Paz 20.23 149 *e*P **P** 03 58 00.3 +0.8
PRSN Puerto Rico Se 20.45 33 P **P** 03 58 01.3 +0.1
OBIP Obispado Ponce 20.61 35 P **P** 03 58 02.4 -0.6
CELP Cerrillos 20.65 35 P **P** 03 58 03.2 -0.2
UUPR Utuado, UPR, P 20.71 34 P **P** 03 58 04.0 -0.1
UUPR IAmb IAmb 03 58 13.3
comp=Z,73nm,0.8s
PB18 Visviri 20.71 154 P **P** 03 58 05.7 +1.0
PB18 IAmb IAmb 03 58 09.6
comp=Z,100nm,1.1s
AOPR Arecibo Observ 20.77 34 P **P** 03 58 04.6 -0.1
SJG San Juan 20.92 35 P **P** 03 58 07.0 +0.6
comp=Z,65nm,0.9s,baz=214,slow=9.2,SNR=17
SJG LR LR 04 07 28.6
comp=Z,408nm,21.2s,baz=197,slow=40
comp=Z,65nm,0.9s
SJG San Juan 20.92 35 P **P** 03 58 06.5 +0.1
SJG IAmb IAmb 03 58 08.1
comp=Z,85nm,0.9s
SJG San Juan 20.92 35 P **P** 03 58 06.5 +0.1
SJG pmax pmax
comp=Z,85nm,0.9s
PDPR Patillas Dam, 20.92 36 IAmb IAmb 03 58 18.7
comp=Z,84nm,1.1s
ECPR Experimental S 20.96 35 P **P** 03 58 07.6 +0.7
HUMP Col San Antoni 21.12 36 P **P** 03 58 07.9 -0.6
PB12 IPOC Station P 21.29 158 P **P** 03 58 10.4 -0.1
PB12 IAmb IAmb 03 58 11.7
comp=Z,60nm,0.8s
BIM Bigot 21.95 52 P **P** 03 58 15.8 -1.7
BIM Bigot 21.95 52 x x 03 58 15.5
CXM Morne La Croix 22.05 51 IAmb IAmb 03 58 20.9
comp=Z,193nm,0.8s
MPOM Morne Pois Mar 22.08 52 P **P** 03 58 16.8 -2.1
CMIG Matias Romero 22.45 316 P **P** 03 58 24.6 +1.7
comp=Z,20nm,0.9s,baz=130,slow=9.9,SNR=9.5
CMIG LR LR 04 05 27.9
comp=Z,385nm,20.4s,baz=130,slow=32
comp=Z,20nm,0.9s
GO01 Chusmiza 22.69 156 P **P** 03 58 25.7 -0.1
GO01 IAmb IAmb 03 58 32.0
comp=Z,56nm,1.0s
SMRT St. Maarten 22.79 42 P **P** 03 58 23.5 -3.0
SMRT IAmb IAmb 03 58 50.3
comp=Z,47nm,0.9s
VILB Vilhena 23.11 128 P **P** 03 58 28.6 -1.1
VILB Vilhena 23.11 128 *e*P **P** 03 58 29.3 -0.4
PB08 IPOC Station P 23.13 157 IAmb IAmb 03 58 35.7
comp=Z,87nm,1.1s
TA01 Itaituba 23.13 159 P **P** 03 58 30.6 +0.7
PATCX Punta Patache 23.38 159 P **P** 03 58 34.0 +1.6
ITTB Itaituba 23.62 104 *e*P **P** 03 58 34.3 -0.5
PB01 IPOC Station P 23.82 158 IAmb IAmb 03 58 39.2
comp=Z,78nm,1.4s
PB02 IPOC Station P 23.93 159 IAmb IAmb 03 58 42.5
comp=Z,88nm,1.4s
SIV San Ignacio 24.37 135 LR LR 04 08 48.1
comp=Z,1µm,20.3s,baz=304,slow=38
PB09 IPOC Station P 24.60 158 IAmb IAmb 03 59 14.3
comp=Z,42nm,1.1s
PB03 IPOC Station P 24.65 160 IAmb IAmb 03 58 57.4
comp=Z,44nm,1.0s
NPGB Novo Progresso 24.70 110 *e*P **P** 03 58 43.4 -1.5
PB05 IPOC Station P 25.24 161 P **P** 03 58 50.3 +0.6
PB05 IAmb IAmb 03 58 54.1
comp=Z,37nm,1.0s
PDRB Porto dos Gac 25.27 121 *e*P **P** 03 58 48.9 -1.0
PB06 IPOC Station P 25.32 160 P **P** 03 58 50.8 +0.4
PB06 IAmb IAmb 03 58 54.6
comp=Z,34nm,0.9s
PTLB Pontes e Lacer 25.43 131 P **P** 03 58 50.8 -0.5
PTLB IAmb IAmb 03 58 52.7
comp=Z,30nm,0.9s
PTLB Pontes e Lacer 25.43 131 *e*P **P** 03 58 51.3 -0.1
TLIG Tlapa 25.43 311 P **P** 03 58 53.2 +1.7
CLDB Colider 25.74 118 *e*P **P** 03 58 53.0 -1.3
MDP Montagnes des 26.35 81 LR LR 04 09 29.9
comp=Z,1µm,18.5s,baz=266,slow=37
PB14 IPOC Station P 26.85 163 P **P** 03 59 05.2 +0.8
PB14 IAmb IAmb 03 59 07.0
comp=Z,47nm,1.2s
SALV Santo Antonio 28.36 128 *e*P **P** 03 59 17.4 -0.4
AC02 Maricunga 29.30 162 IAmb IAmb 03 59 30.1
comp=Z,28nm,1.1s
PRPB Parauapebas 29.77 104 *e*P **P** 03 59 29.6 -0.7
PP1B Ponte de Pedra 29.98 129 *e*P **P** 03 59 32.4 +0.3
SNDB Serra Nova Dou 30.21 116 *e*P **P** 03 59 33.2 -1.0
BDQN Bodoquena, MS 30.39 136 *e*P **P** 03 59 35.1 -0.6
MURT Porto Murtinho 30.64 139 *e*P **P** 03 59 37.1 -0.8
AC05 El Transito 30.88 165 P **P** 03 59 41.1 +1.1
AC05 IAmb IAmb 03 59 42.9
comp=Z,32nm,0.8s
AQDB Aquidauana 31.15 135 P **P** 03 59 41.6 -0.8
AQDB IAmb IAmb 03 59 44.4
comp=Z,14nm,0.7s
AQDB Aquidauana 31.15 135 *e*P **P** 03 59 42.2 -0.2
ARAG Araguaiana, MT 31.43 123 *e*P **P** 03 59 44.5 -0.5
ZAIG Zacatecas 31.61 315 P **P** 03 59 47.8 +1.1
CO01 Juntas del Tor 32.01 166 IAmb IAmb 03 59 53.3
comp=Z,21nm,1.2s
C2SB Chapadao do Su 32.23 129 *e*P **P** 03 59 52.7 +0.8
GOGA Godfrey 32.42 353 P **P** 03 59 53.7 +0.3
GOGA IAmb IAmb 04 00 06.8
comp=Z,31nm,1.6s
GOGA Godfrey 32.42 353 P **P** 03 59 53.7 +0.3
GOGA pmax pmax
comp=Z,31nm,1.6s
SMTB Santa Maria do 32.59 108 *e*P **P** 03 59 54.4 -0.8
HKT Hockley 32.95 332 *i* P **P** 03 59 58.5 +0.4
HKT pmax pmax
comp=Z,111nm,1.5s
JSC Jenkinsville 33.07 356 P **P** 04 00 00.0 +0.9
JSC IAmb IAmb 04 00 01.2
comp=Z,19nm,1.0s
JSC Jenkinsville 33.07 356 P **P** 04 00 00.0 +0.9
JSC pmax pmax
comp=Z,19nm,1.0s
HODGE Hodges 33.10 355 IAmb IAmb 04 00 13.1
comp=Z,27nm,1.3s
AMBA Amambai (Brazi 33.26 137 *e*P **P** 04 00 00.9 -0.1
Y49A Blount Mountai 33.34 348 IAmb IAmb 04 00 14.2
comp=Z,20nm,1.1s
PAULI Pauline 33.64 355 P **P** 04 00 02.9 -1.2
PAULI IAmb IAmb 04 00 20.5
comp=Z,31nm,1.3s
ZON Zonda 33.87 164 IAmb IAmb 04 00 09.8
comp=Z,25nm,1.2s
W57A Gilead 33.87 358 IAmb IAmb 04 00 07.8
comp=Z,15nm,0.8s
BG3 Lake Jocassee 33.92 354 IAmb IAmb 04 00 20.3
comp=Z,34nm,1.4s
KMSC Kings Mountain 33.93 356 P **P** 04 00 07.5 +0.9
KMSC IAmb IAmb 04 00 08.7
comp=Z,18nm,0.9s
X48A Hartselle 34.05 348 IAmb IAmb 04 00 20.2
comp=Z,22nm,1.1s
Y45A Yeager Farm, C 34.11 344 P **P** 04 00 08.5 +0.4
CPUP Villa Florida 34.24 144 P **P** 04 00 08.5 -0.9
comp=Z,8.0nm,0.9s,baz=329,slow=10.0,SNR=20
CPUP LR LR 04 15 56.7
comp=Z,531nm,19.5s,baz=308,slow=39
comp=Z,8.0nm,0.9s
CPUP Villa Florida 34.24 144 *e*P **P** 04 00 08.1 -1.2
CPUP Villa Florida 34.24 144 P **P** 04 00 08.0 -1.3
CPUP pP **pP** 04 00 19.3 +0.2
CPUP sP **sP** 04 00 24.2 +1.2
CPUP x x 04 00 27.1
HNDO Hondo 34.36 327 P **P** 04 00 11.6 +1.1
W50A Signal Mountai 34.45 350 IAmb IAmb 04 00 24.9
comp=Z,15nm,1.0s
V58A Windy Hill, Pi 34.49 359 IAmb IAmb 04 00 13.3
comp=Z,17nm,0.7s
SWET Sewanee 34.57 350 IAmb IAmb 04 00 24.9
comp=Z,33nm,1.4s
V53A Saluda 34.58 354 IAmb IAmb 04 00 25.7
comp=Z,39nm,1.6s
BDFB Brasilia 34.63 120 P **P** 04 00 11.9 -1.2
comp=Z,13nm,1.0s,baz=295,slow=10.0,SNR=16
BDFB LR LR 04 15 03.0
comp=Z,380nm,19.6s,baz=309,slow=38
comp=Z,13nm,1.0s
BDFB Brasilia 34.63 120 IAmb IAmb 04 00 13.5
comp=Z,22nm,1.1s
TKL Tuckaleechee C 34.67 353 LR LR 04 15 22.4
comp=Z,125nm,18.8s,baz=164,slow=38
ITRB Iturama 34.69 128 *e*P **P** 04 00 13.3 -0.2
IPMB Inameri, GO 35.54 124 *e*P **P** 04 00 20.2 -0.7
BRDY Brady 35.60 329 P **P** 04 00 22.5 +1.3
UALR University of 35.80 341 P **P** 04 00 22.9 +0.1
UALR IAmb IAmb 04 00 35.0
comp=Z,22nm,1.0s
WVT Waverly 35.84 347 P **P** 04 00 22.1 -0.9
WVT IAmb IAmb 04 00 34.7
comp=Z,18nm,0.9s
WVT Waverly 35.84 347 P **P** 04 00 22.1 -0.9
WVT pmax pmax
comp=Z,18nm,1.0s
WVT Waverly 35.84 347 P **P** 04 00 22.3 -0.7
WVT pP **pP** 04 00 33.7 +1.1
SDBA SAO DESIDERIO 36.18 113 *e*P **P** 04 00 25.2 -1.1
WHAR Wooly Hollow 36.26 341 IAmb IAmb 04 00 31.2
comp=Z,14nm,0.9s
LDASE Londrina, Braz 36.27 134 *e*P **P** 04 00 25.8 -1.2
SAND Sanderson 36.28 324 IAmb IAmb 04 00 33.8
comp=Z,18nm,1.0s
OZNA Ozona 36.44 327 IAmb IAmb 04 01 19.8
comp=Z,27nm,1.6s
PTGB Pitanga 36.45 137 *e*P **P** 04 00 27.8 -0.7
S51A Beattyville 36.61 354 IAmb IAmb 04 00 31.0
comp=Z,14nm,0.8s
LCAR Lake Charles 36.63 343 IAmb IAmb 04 00 41.8
comp=Z,27nm,1.0s
FCAR Ozark Folk Cen 36.76 342 IAmb IAmb 04 00 42.8
comp=Z,20nm,1.2s
TXAR Lajitas Array 36.76 322 P **P** 04 00 33.0 +1.9
comp=Z,3.5nm,1.0s,baz=140,slow=9.6,SNR=9.8
TXAR PcP **PcP** 04 02 54.1 +1.0
comp=Z,1.2nm,0.7s,baz=142,slow=6.2,SNR=4.6
TXAR LR LR 04 17 12.1
comp=Z,118nm,20.3s,baz=124,slow=39
comp=Z,3.5nm,1.0s
TXAR Lajitas Array 36.76 322 P **P** 04 00 32.3 +1.1
T45A Paducah 36.87 347 P **P** 04 00 31.0 -0.8
BB19B Bebedouro 36.87 128 *e*P **P** 04 00 31.6 -0.6
LOOK Love County 36.98 334 P **P** 04 00 33.6 +0.8
LOOK IAmb IAmb 04 00 36.6
comp=Z,15nm,0.8s
R55A Marlinton 37.00 358 IAmb IAmb 04 00 35.4
comp=Z,20nm,0.8s
SGCY Sterling City 37.21 328 IAmb IAmb 04 00 39.9
comp=Z,25nm,0.9s
PMNB Patos De Minas 37.29 123 *e*P **P** 04 00 34.7 -1.0
R50A Paris 37.33 353 IAmb IAmb 04 00 51.2
comp=Z,44nm,1.7s
CGM3 Cape Girardeau 37.38 346 P **P** 04 00 36.0 -0.1
R49A Shelbyville 37.45 352 IAmb IAmb 04 00 50.1
comp=Z,22nm,1.2s
ALPN Alpine 37.48 323 P **P** 04 00 38.8 +1.5
ALPN IAmb IAmb 04 00 51.4
comp=Z,12nm,0.9s
229A Bryant Ranch, 37.62 327 IAmb IAmb 04 00 43.0
comp=Z,18nm,0.9s
JANB Januaria 37.66 117 *e*P **P** 04 00 37.5 -1.4
NBPS Pedro II - PI 37.66 99 *e*P **P** 04 00 38.4 -0.6
SIUC Southern Illin 37.67 346 P **P** 04 00 39.5 +0.9
MNHN Monahans 37.67 325 IAmb IAmb 04 00 52.9
comp=Z,26nm,0.9s
Q56A Snyder Ridge, 37.74 359 P **P** 04 00 39.9 +0.7
Q56A IAmb IAmb 04 00 53.9
comp=Z,26nm,1.1s
Q52A Bidwell 37.79 356 IAmb IAmb 04 00 53.0
comp=Z,30nm,1.1s
APMT Aspermont 37.80 330 P **P** 04 00 41.4 +1.6
APMT IAmb IAmb 04 00 53.2
comp=Z,26nm,1.5s
PSAL Palomas, Salto 37.81 150 *e*P **P** 04 00 39.2 -0.7
W35A Tecumseh 37.84 335 IAmb IAmb 04 00 51.9
comp=Z,20nm,1.3s
TPB01 Permian Basin 37.98 324 IAmb IAmb 04 00 56.1
comp=Z,15nm,0.9s
RLO Rose Lookout 37.99 338 IAmb IAmb 04 00 53.8
comp=Z,38nm,1.5s
ITAB Concordia 38.09 140 *e*P **P** 04 00 41.5 -0.8
ODSA Odessa 38.14 326 P **P** 04 00 43.9 +1.1
ODSA IAmb IAmb 04 00 46.9
comp=Z,28nm,0.9s
LPIG La Paz 38.15 309 LR LR 04 13 01.3
comp=Z,115nm,20.9s,baz=120,slow=31
129A Stewart Farms, 38.16 328 IAmb IAmb 04 00 56.5
comp=Z,24nm,1.3s
TPB06 Permian Basin 38.16 325 IAmb IAmb 04 00 57.0
comp=Z,26nm,0.9s
P53A Whipple 38.26 357 IAmb IAmb 04 00 45.3
comp=Z,18nm,0.9s
DEOK Depew 38.28 336 P **P** 04 00 44.1 +0.3
DEOK IAmb IAmb 04 00 55.9
comp=Z,15nm,0.8s
PECS Pecos 38.34 324 IAmb IAmb 04 00 58.2
comp=Z,15nm,0.9s
RCLB Rio Claro- Sao 38.38 129 *e*P **P** 04 00 44.6 -0.4
128A Castleberry Fa 38.48 327 IAmb IAmb 04 00 59.3
comp=Z,9.9nm,1.1s
CCM Cathedral Cave 38.51 344 P **P** 04 00 44.2 -1.5
CCM Cathedral Cave 38.51 344 P **P** 04 00 44.2 -1.5
CCM pmax pmax
comp=Z,37nm,1.0s
CCM Cathedral Cave 38.51 344 P **P** 04 00 45.0 -0.7
CCM pP **pP** 04 00 56.3 +0.9
OK052 Battle Ridge R 38.53 336 P **P** 04 00 46.0 +0.1
OK052 IAmb IAmb 04 00 48.8
comp=Z,18nm,0.7s
NBMO Morrinhos-CE 38.93 97 *e*P **P** 04 00 48.7 -0.9
CLNB Carlsbad 39.00 325 P **P** 04 00 51.4 +1.4
SSPA Standing Stone 39.33 1 P **P** 04 00 52.1 -0.5
SSPA IAmb IAmb 04 00 54.9
comp=Z,26nm,0.8s
SSPA Standing Stone 39.33 1 P **P** 04 00 54.0 +1.5
SSPA pP **sP** 04 01 05.9 -0.5
DIAM Diamantina, MG 39.52 121 *e*P **P** 04 00 53.4 -1.3
CPSB Cacapava Do Su 39.55 145 *e*P **P** 04 00 53.5 -1.0
N58A Sunbury 39.57 2 P **P** 04 00 54.6 0.0
N58A IAmb IAmb 04 01 11.6
comp=Z,38nm,1.4s
PAMR Moraine State 39.65 358 IAmb IAmb 04 00 57.0
comp=Z,21nm,0.8s
BSCB Bom Sucesso 39.84 125 *e*P **P** 04 00 56.6 -0.5
NOKA Waynoka 39.97 334 IAmb IAmb 04 01 01.3
comp=Z,22nm,0.7s
M57A Sunshine Farm, 40.05 2 P **P** 04 00 59.9 +1.3
KSPA Keystone Colle 40.34 3 IAmb IAmb 04 01 03.5
comp=Z,27nm,0.8s
PARB Paraibuna 40.36 129 *e*P **P** 04 01 00.9 -0.6
HDIL Hopedale 40.40 348 P **P** 04 01 01.4 0.0
RPN Rapa Nui 40.70 224 LR LR 04 14 54.2
comp=Z,147nm,20.8s,baz=42,slow=32
NBMA Muriti-CE 40.76 103 *e*P **P** 04 01 04.0 -0.8
L56A Greenwood 40.84 1 IAmb IAmb 04 01 07.2
comp=Z,25nm,1.0s
KSU1 Kansas State U 41.18 339 IAmb IAmb 04 01 20.1
comp=Z,26nm,0.9s
R32A Long Quarter, 41.39 336 P **P** 04 01 11.4 +1.7
K57A Scipio Center 41.47 2 P **P** 04 01 10.4 +0.2
121A Cookes Peak, D 41.52 322 P **P** 04 01 13.0 +2.0
121A IAmb IAmb 04 01 33.8
comp=Z,25nm,1.0s
RTBA Rita Blanca 41.57 330 P **P** 04 01 12.4 +1.1
N38A Joes South For 41.61 343 IAmb IAmb 04 01 23.1
comp=Z,33nm,1.1s
LR05 Currie 41.62 172 P **P** 04 01 12.1 +0.7
319A Douglas 41.70 319 P **P** 04 01 14.7 +2.2
SJMB Sao Joao De Ma 41.84 120 *e*P **P** 04 01 12.4 -1.2
TRQA Tornquist 41.95 160 P **P** 04 01 14.5 +0.3
TRQA IAmb IAmb 04 01 15.9
comp=Z,44nm,1.1s
TRQA Tornquist 41.95 160 P **P** 04 01 14.5 +0.3
TRQA pmax pmax
comp=Z,45nm,1.2s
J55A Hilton 41.96 1 IAmb IAmb 04 01 15.8
comp=Z,26nm,1.0s
Y22A Socorro 41.99 324 P **P** 04 01 15.5 +0.7
CMC01 Camacan, BA 42.09 114 *e*P **P** 04 01 15.1 -0.6
NBPA Parau_RN 42.12 100 *e*P **P** 04 01 15.2 -0.8
SBM South Baldy 42.15 324 P **P** 04 01 17.3 +1.0
CBKS Cedar Bluff 42.15 335 IAmb IAmb 04 01 20.0
comp=Z,25nm,0.8s
J57A Williamstown 42.17 3 IAmb IAmb 04 01 17.7
comp=Z,17nm,0.8s
BSFB Barra de Sao F 42.18 120 *e*P **P** 04 01 15.2 -1.2
GUA01 Guaratinga, BA 42.25 116 *e*P **P** 04 01 16.2 -0.8
L40A Anamosa 42.27 346 IAmb IAmb 04 01 29.0
comp=Z,39nm,1.3s
J59A Piesco 42.32 5 IAmb IAmb 04 01 19.3
comp=Z,28nm,0.8s
PLCA Paso Flores 42.33 171 P **P** 04 01 18.4 +1.0
comp=Z,15nm,0.8s,baz=343,slow=9.9,SNR=39
PLCA LR LR 04 18 19.3
comp=Z,57nm,21.8s,baz=354,slow=35
comp=Z,15nm,0.8s
PLCA Paso Flores 42.33 171 P **P** 04 01 18.0 +0.7
PLCA IAmb IAmb 04 01 19.6
comp=Z,19nm,0.9s
PLCA Paso Flores 42.33 171 P **P** 04 01 18.0 +0.7
PLCA pmax pmax
comp=Z,19nm,0.9s
PLCA Paso Flores 42.33 171 *e*P **P** 04 01 18.5 +1.2
PLCA Paso Flores 42.33 171 P **P** 04 01 18.5 +1.2
PLCA pP **sP** 04 01 29.7 -1.4
DUN6 Lazy B Ranch 42.35 321 IAmb IAmb 04 01 22.9
comp=Z,28nm,1.0s
ANMO Albuquerque 42.42 325 P **P** 04 01 20.5 +2.1
comp=Z,18nm,0.9s,baz=150,slow=8.3,SNR=45
ANMO LR LR 04 22 11.2
comp=Z,124nm,18.3s,baz=128,slow=40
comp=Z,18nm,0.9s
ANMO Albuquerque 42.42 325 P **P** 04 01 19.8 +1.4
ANMO IAmb IAmb 04 01 33.0
comp=Z,29nm,0.8s
ANMO Albuquerque 42.42 325 P **P** 04 01 19.9 +1.4
ANMO IAmb IAmb 04 01 33.0
comp=Z,26nm,0.8s
ANMO Albuquerque 42.42 325 *i* P **P** 04 01 20.2 +1.8
ANMO pmax pmax
comp=Z,22nm,0.9s
SCIA State Center 42.64 344 IAmb IAmb 04 01 31.4
comp=Z,23nm,0.9s
RIB01 Linhares ES 42.77 120 *e*P **P** 04 01 20.0 -1.2
CAM01 Campos-RJ 42.78 124 *e*P **P** 04 01 20.4 -0.8
NCB Newcomb 42.85 5 IAmb IAmb 04 01 36.2
comp=Z,58nm,1.8s
JFWS Jewell Farm 42.86 348 IAmb IAmb 04 01 33.8
comp=Z,28nm,1.1s
T25A Trinidad 42.96 329 IAmb IAmb 04 01 37.8
comp=Z,31nm,1.1s
TUC Tucson 43.28 319 P **P** 04 01 26.0 +0.7
TUC Tucson 43.28 319 P **P** 04 01 26.0 +0.7
TUC pmax pmax
comp=Z,10.0nm,1.1s
SADO Sadowa 43.46 360 LR LR 04 21 07.6
comp=Z,87nm,20.6s,baz=200,slow=38
LONY Lake Ozonia 43.47 4 P **P** 04 01 26.8 +0.3
KSCO Kaye Shedlock' 43.58 333 IAmb IAmb 04 01 32.2
comp=Z,25nm,0.7s
L34A Svendsen Farm, 43.65 341 IAmb IAmb 04 01 38.8
comp=Z,16nm,0.7s
FRNY Flat Rock 43.76 5 P **P** 04 01 29.1 +0.3
I40A Norwalk 43.88 348 IAmb IAmb 04 01 41.3
comp=Z,23nm,1.2s
SDCO Great Sand Dun 43.98 329 P **P** 04 01 32.2 +1.1
SDCO IAmb IAmb 04 01 45.9
comp=Z,39nm,1.1s
BUKO Buck Lake 44.13 359 IAmb IAmb 04 01 32.4
comp=Z,15nm,0.8s
X18A Snowflake 44.19 322 P **P** 04 01 34.5 +1.9
214A Organ Pipe Nat 44.42 317 P **P** 04 01 35.0 +0.7
214A IAmb IAmb 04 01 49.1
comp=Z,51nm,1.7s
MNTQ Montreal, Queb 44.42 5 IAmb IAmb 04 01 36.1
comp=Z,22nm,0.9s
OGNE Ogallala 44.90 335 P **P** 04 01 38.6 +0.5
G40A Rib Lake 45.11 349 IAmb IAmb 04 01 52.2
comp=Z,21nm,1.1s
AY01 Puyuhuapi 45.67 174 IAmb IAmb 04 01 45.8
comp=Z,13nm,0.9s
PV13 Radium Mtn., P 46.05 327 P **P** 04 01 48.9 +1.4
PV11 David Mesa, Pa 46.18 327 P **P** 04 01 49.8 +1.4
PV11 IAmb IAmb 04 02 02.7
comp=Z,29nm,1.1s
D62A Allapoint, All 46.55 9 P **P** 04 01 51.6 +0.8
ESJX Sierra Juarez 46.62 315 P **P** 04 01 53.3 +1.3
BC3 Big Chuckawall 47.21 317 P **P** 04 01 57.6 +1.1
CBX Cerro Bola 47.30 315 P **P** 04 01 59.2 +2.1
BAR Barrett 47.51 315 P **P** 04 01 59.9 +1.3
BAR IAmb IAmb 04 02 19.7
comp=Z,18nm,1.4s
KNB Kanab 47.59 323 IAmb IAmb 04 02 06.3
comp=Z,14nm,1.2s
SRU San Rafael Swe 47.66 326 P **P** 04 02 00.9 +0.9
SRU IAmb IAmb 04 02 14.1
comp=Z,18nm,1.0s
SRU San Rafael Swe 47.66 326 P **P** 04 02 00.9 +0.9
SRU pmax pmax
comp=Z,18nm,1.0s
PFO Pinyon Flats O 47.88 316 P **P** 04 02 03.0 +1.3
comp=Z,1.9nm,0.9s,baz=132,slow=7.8,SNR=3.4
PFO LR LR 04 21 38.7
comp=Z,84nm,19.0s,baz=98,slow=35
comp=Z,1.9nm,0.9s
PFO Pinyon Flats O 47.88 316 P **P** 04 02 03.5 +1.9
PFO Pinyon Flats O 47.88 316 P **P** 04 02 03.5 +1.9
PFO pmax pmax
comp=Z,5.0nm,1.1s
Q16A Castle Valley 47.89 326 IAmb IAmb 04 02 20.9
comp=Z,24nm,1.7s
CPE Camp Elliot 47.92 315 P **P** 04 02 03.4 +1.6
CPE IAmb IAmb 04 02 15.7
comp=Z,25nm,1.2s
V12A Nelson 48.04 320 IAmb IAmb 04 02 17.4
comp=Z,13nm,1.1s
SZCU Shurtz Canyon 48.12 323 P **P** 04 02 04.0 +0.4
RSSD Black Hills 48.35 336 P **P** 04 02 05.3 +0.1
RSSD Black Hills 48.35 336 P **P** 04 02 05.3 +0.1
RSSD pmax pmax
comp=Z,26nm,1.0s
BSUT Blindstream Ca 48.80 328 IAmb IAmb 04 02 23.2
comp=Z,17nm,1.2s
GSC Goldstone, Bar 49.08 318 P **P** 04 02 11.8 +1.0
GSC IAmb IAmb 04 02 24.9
comp=Z,12nm,1.0s
GSC Goldstone, Bar 49.08 318 P **P** 04 02 11.8 +1.0
GSC pmax pmax
comp=Z,12nm,1.0s
AGMN Agassiz Nation 49.27 345 IAmb IAmb 04 02 29.4
comp=Z,19nm,1.4s
PDAR Pinedale Array 49.80 330 P **P** 04 02 16.7 +0.3
comp=Z,1.2nm,0.8s,baz=111,slow=8.1,SNR=10
PDAR LR LR 04 25 32.8
comp=Z,63nm,18.4s,baz=119,slow=39
comp=Z,1.2nm,0.8s
PDAR Pinedale Array 49.80 330 P **P** 04 02 16.5 +0.1
DSP Deep Springs 51.04 320 IAmb IAmb 04 02 44.9
comp=Z,32nm,1.8s
ULM Lac du Bonnet 51.07 346 P **P** 04 02 24.4 -1.1
comp=Z,7.0nm,0.7s,baz=148,slow=8.3,SNR=20
comp=Z,7.0nm,0.7s
MOOW Moose Ponds 51.11 330 P **P** 04 02 26.8 +0.5
FLWY Flagg Ranch 51.33 331 IAmb IAmb 04 03 01.0
comp=Z,35nm,1.5s
ELK Elko 51.44 325 P **P** 04 02 29.3 +0.5
comp=Z,1.9nm,0.9s,baz=164,slow=3.8,SNR=5.3
comp=Z,1.9nm,0.9s
NVAR Mina Array Bea 51.87 321 P **P** 04 02 33.8 +1.7
comp=Z,9.0nm,1.0s,baz=128,slow=6.0,SNR=16
NVAR LR LR 04 27 28.9
comp=Z,104nm,19.1s,baz=96,slow=39
comp=Z,9.0nm,1.0s
NVAR Mina Array Bea 51.87 321 P **P** 04 02 32.5 +0.5
LHV Little Huntoon 51.89 320 IAmb IAmb 04 03 06.4
comp=Z,29nm,1.4s
MDPB Devils Postpil 51.91 319 P **P** 04 02 33.8 +1.4
MDPB IAmb IAmb 04 02 47.0
comp=Z,14nm,0.9s
SCHQ Schefferville 54.41 8 P **P** 04 02 50.5 +0.2
comp=Z,13nm,0.7s,baz=211,slow=6.2,SNR=34
SCHQ LR LR 04 26 14.7
comp=Z,105nm,21.5s,baz=190,slow=36
comp=Z,13nm,0.7s
SCHQ Schefferville 54.41 8 P **P** 04 02 49.4 -0.8
SCHQ IAmb IAmb 04 02 51.3
comp=Z,16nm,0.8s
WVOR Wild Horse Val 54.48 324 IAmb IAmb 04 03 08.4
comp=Z,27nm,1.2s

J08A	**Circle Bar Ran**	**54.96**	**325**	P		**P**	**04 02 55.3**	**+0.8**
M03C	**McCloud**	**55.91**	**321**	lAmb		lAmb	04 03 13.2	
	comp=Z,13nm,1.0s							
YBH	**Yreka Blue Hor**	**56.53**	**321**	P		**P**	**04 03 05.4**	**-0.3**
	comp=Z,0.2nm,0.9s,baz=153,slow=6.7,SNR=5.2							
YBH				LR		LR	04 28 53.5	
	comp=Z,7.3nm,18.4s,baz=118,slow=38							
PINE	**Pine Mountain**	**56.65**	**324**	lAmb		lAmb	04 03 28.2	
	comp=Z,28nm,1.4s							
FFC	**Flin Flon**	**56.71**	**344**	P		**P**	**04 03 06.3**	**-0.4**
FFC				lAmb		lAmb	04 03 23.0	
	comp=Z,26nm,1.7s							
FFC	**Flin Flon**	**56.71**	**344**	P		**P**	**04 03 06.3**	**-0.4**
FFC				pmax		pmax		
	comp=Z,27nm,1.7s							
NEW	**Newport**	**57.44**	**331**	LR		LR	04 28 38.5	
	comp=Z,103nm,21.7s,baz=125,slow=37							
EDM	**Edmonton**	**59.31**	**337**	lAmb		lAmb	04 03 45.0	
	comp=Z,8.9nm,0.8s							
TAOE	**Nuku Hiva Isla**	**61.98**	**259**	*e*LR		LR	04 22 07.7	
	comp=Z,64nm,32.0s							
FRB	**Frobisher Bay**	**62.93**	**5**	LR		LR	04 31 44.2	
	comp=Z,93nm,21.7s,baz=243,slow=36							
BLKN	**Baker Lake**	**64.30**	**352**	P		**P**	**04 03 56.9**	**-1.4**
BLKN				lAmb		lAmb	04 04 13.4	
	comp=Z,12nm,1.1s							
YKA	**Yellowknife Ar**	**66.83**	**343**	P		**P**	**04 04 14.3**	**-0.3**
	comp=Z,1.7nm,0.7s,baz=140,slow=5.1,SNR=42							
	comp=Z,1.7nm,0.7s							
YKA	**Yellowknife Ar**	**66.83**	**343**	P		**P**	**04 04 14.1**	**-0.6**
YKAW3	**Yellowknife Wh**	**66.88**	**343**	P		**P**	**04 04 13.8**	**-1.2**
YKAW3				lAmb		lAmb	04 04 28.1	
	comp=Z,9.0nm,0.9s							
SFJD	**Kangerlussuaq**	**68.62**	**11**	LR		LR	04 34 18.2	
	comp=Z,67nm,20.7s,baz=202,slow=36							
DLBC	**Dease Lake**	**69.79**	**334**	LR		LR	04 39 48.2	
	comp=Z,84nm,18.1s,baz=90,slow=40							
WRGLY	**Wrigley**	**70.18**	**340**	lAmb		lAmb	04 04 49.8	
	comp=Z,17nm,0.9s							
POIN	**Pond Inlet**	**71.47**	**0**	P		**P**	**04 04 42.1**	**-1.2**
SAATT	**Saattut**	**71.78**	**9**	*i* P		**P**	**04 04 45.0**	**-0.2**
SAATT				lAmb		lAmb	04 04 46.0	
	comp=Z,8.0nm,1.0s							
PPT	**Papeete**	**72.11**	**251**	LR		LR	04 29 26.6	
	comp=Z,125nm,20.8s,baz=128,slow=30							
PPT2	**Papeete2**	**72.11**	**251**	*e*LR		LR	04 26 53.3	
	comp=Z,132nm,26.5s							
PPT2				*e*LR		LR	04 26 56.4	
	comp=Z,137nm,25.2s							
NUUG	**Nuugaatsiaq**	**72.19**	**8**	*i* P		**P**	**04 04 46.8**	**-0.7**
NUUG				lAmb		lAmb	04 04 49.6	
	comp=Z,7.2nm,0.7s							
TBI	**Tubuai**	**72.80**	**245**	*e*LR		LR	04 27 04.8	
	comp=Z,502nm,25.5s							
DBIC	**Dimbokro**	**73.86**	**83**	P		**P**	**04 04 57.2**	**-1.4**
	comp=Z,4.8nm,0.9s,baz=296,slow=8.7,SNR=5.1							
	comp=Z,4.8nm,0.9s							
DBIC	**Dimbokro**	**73.86**	**83**	P		**P**	**04 04 58.0**	**-0.6**
DBIC	**Dimbokro**	**73.86**	**83**	P		**P**	**04 04 58.1**	**-0.6**
DBIC				pmax		pmax		
	comp=Z,9.0nm,1.1s							
RES	**Resolute Bay**	**74.10**	**356**	LR		LR	04 38 46.7	
	comp=Z,92nm,19.7s,baz=94,slow=37							
TULEG	**Thule**	**75.54**	**2**	*i* P		**P**	**04 05 04.3**	**-2.8**
TULEG				lAmb		lAmb	04 05 05.5	
	comp=Z,9.4nm,1.2s							
BORG	**Borgarnes**	**75.60**	**22**	LR		LR	04 38 05.4	
	comp=Z,50nm,19.2s,baz=183,slow=35							
SUMG	**Summit**	**75.62**	**12**	*i* P		**P**	**04 05 08.0**	**-0.2**
SUMG				lAmb		lAmb	04 05 09.1	
	comp=Z,6.5nm,0.9s							
INK	**Inuvik**	**76.56**	**342**	LR		LR	04 40 15.9	
	comp=Z,90nm,21.6s,baz=342,slow=37							
EPYK	**Eagle Plains**	**76.61**	**339**	lAmb		lAmb	04 06 31.9	
	comp=Z,7.9nm,0.4s							
F30M	**Barrier River**	**76.92**	**341**	lAmb		lAmb	04 05 29.1	
	comp=Z,11nm,1.0s							
BCAR	**Beaver Creek A**	**77.07**	**335**	P		**P**	**04 05 16.9**	**+0.7**
ESDC	**Sonseca Array**	**77.58**	**50**	P		**P**	**04 05 19.9**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=251,slow=6.4,SNR=6.6							
ESDC				LR		LR	04 35 52.8	
	comp=Z,31nm,20.4s,baz=254,slow=33							
	comp=Z,1.5nm,0.8s							
NEEM	**North Greenlan**	**77.72**	**6**	*i* P		**P**	**04 05 20.1**	**+0.2**
NEEM				lAmb		lAmb	04 05 21.2	
	comp=Z,8.6nm,0.9s							
MENT	**Mentasta**	**77.83**	**335**	lAmb		lAmb	04 07 50.3	
	comp=Z,9.8nm,0.6s							
SCO	**Scoresbysund**	**78.32**	**17**	*i* P		**P**	**04 05 23.6**	**+0.7**
SCO				lAmb		lAmb	04 05 23.8	
	comp=Z,9.9nm,0.9s							
IL31		**79.80**	**336**	P		**P**	**04 05 31.1**	**0.0**
ILAR	**Eielson Array**	**79.80**	**336**	P		**P**	**04 05 30.9**	**-0.2**
	comp=Z,1.8nm,0.8s,baz=111,slow=4.8,SNR=15							
ILAR				LR		LR	04 43 37.2	
	comp=Z,75nm,19.8s,baz=96,slow=38							
	comp=Z,1.8nm,0.8s							
ILAR	**Eielson Array**	**79.80**	**336**	P		**P**	**04 05 31.5**	**+0.4**
ILAR	**Eielson Array**	**79.80**	**336**	P		**P**	**04 05 31.5**	**+0.4**
BMAR	**Burnt Mountain**	**79.86**	**339**	P		**P**	**04 05 31.6**	**+0.1**
COLA	**College**	**80.22**	**336**	*i* P		**P**	**04 05 34.0**	**+0.6**
COLA				pmax		pmax		
	comp=Z,9.0nm,1.3s							
TORD	**Torodi Ar. Bea**	**80.43**	**77**	P		**P**	**04 05 34.5**	**-1.1**
	comp=Z,1.5nm,1.0s,baz=267,slow=7.0,SNR=7.4							
	comp=Z,1.5nm,1.0s							
E25K	**Arctic Village**	**80.47**	**340**	P		**P**	**04 05 36.0**	**+1.3**
KDAK	**Kodiak Island**	**80.47**	**329**	LR		LR	04 42 52.9	
	comp=Z,111nm,19.2s,baz=101,slow=37							
EKA	**Eskdalemuir Ar**	**80.89**	**34**	P		**P**	**04 05 37.2**	**0.0**
	comp=Z,4.4nm,0.9s,baz=270,slow=4.2,SNR=6.0							
EKA				LR		LR	04 40 07.9	
	comp=Z,32nm,19.6s,baz=232,slow=35							
	comp=Z,4.4nm,0.9s							
RAR	**Rarotonga**	**82.05**	**249**	LR		LR	04 34 43.4	
	comp=Z,79nm,21.0s,baz=110,slow=30							
C24K	**Franklin Bluff**	**82.08**	**341**	lAmb		lAmb	04 05 57.5	
	comp=Z,27nm,1.3s							
DAG	**Danmarks Havn**	**82.31**	**12**	*i* P		**P**	**04 05 43.2**	**-1.1**
DAG				lAmb		lAmb	04 05 45.1	
	comp=Z,2.1nm,0.6s							
TAM	**Tamanrasset**	**84.27**	**67**	P		**P**	**04 05 55.6**	**-0.1**
TAM	**Tamanrasset**	**84.27**	**67**	P		**P**	**04 05 55.6**	**-0.1**
TAM				pmax		pmax		
	comp=Z,16nm,0.3s							
VNA3	**Neumayer Olymp**	**84.43**	**162**	⇓P		**P**	**04 05 57.6**	**+2.2**
	comp=Z,6.6nm,0.7s							
ECH	**Echery**	**86.42**	**42**	P		**P**	**04 06 05.3**	**-0.4**
ECH				lAmb		lAmb	04 06 09.8	
	comp=Z,15nm,1.2s							
ECH	**Echery**	**86.42**	**42**	P		**P**	**04 06 05.3**	**-0.4**
ECH				pmax		pmax		
	comp=Z,15nm,1.2s							
SNAA	**Sanae**	**86.64**	**162**	*i* P		**P**	**04 06 05.3**	**-1.1**
SNAA				pmax		pmax		
	comp=Z,32nm,2.5s							
F15K	**North Star Dit**	**87.29**	**336**	lAmb		lAmb	04 06 24.7	
	comp=Z,12nm,1.1s							
C16K	**Lisburne Hills**	**87.70**	**338**	lAmb		lAmb	04 06 29.5	
	comp=Z,6.6nm,0.8s							
TUE	**Stuetta**	**87.87**	**44**	P		**P**	**04 06 13.4**	**+0.4**
TUE				lAmb		lAmb	04 06 51.0	
	comp=Z,12nm,1.4s							
TUE	**Stuetta**	**87.87**	**44**	P		**P**	**04 06 13.6**	**+0.6**
DAVA	**Damuels**	**88.24**	**43**	*e*P		**P**	**04 06 15.6**	**+0.9**
	comp=Z,3.0nm,0.5s							
FETA	**Feichten**	**88.82**	**43**	*e*P		**P**	**04 06 18.4**	**+0.9**
	comp=Z,6.7nm,0.9s							
NOA	**NORSAR Array B**	**89.00**	**29**	LR		LR	04 44 07.1	
	comp=Z,26nm,20.3s,baz=265,slow=34							
MOTA	**Moosalm**	**89.07**	**43**	*e*P		**P**	**04 06 19.3**	**+0.6**
	comp=Z,4.9nm,1.1s							
SQTA	**Sankt Quirin**	**89.14**	**43**	*i* P		**P**	**04 06 19.8**	**+0.9**
	comp=Z,3.8nm,0.8s							
WATA	**Walderalm**	**89.39**	**43**	*e*P		**P**	**04 06 20.1**	**0.0**
	comp=Z,1.7nm,0.6s							
SPITS	**Spitsbergen Ar**	**89.96**	**12**	LR		LR	04 46 22.6	
	comp=Z,54nm,21.3s,baz=221,slow=35							
HFS	**Hagfors**	**90.25**	**30**	LR		LR	04 44 13.1	
	comp=Z,23nm,20.9s,baz=318,slow=34							
KHC	**Kasperske Hory**	**90.68**	**41**	*i* P		**P**	**04 06 23.1**	**-2.8**
GERES	**GERESS Array B**	**90.77**	**41**	P		**P**	**04 06 26.6**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=336,slow=2.9,SNR=3.5							
GERES				LR		LR	04 43 19.6	
	comp=Z,36nm,18.6s,baz=280,slow=33							
	comp=Z,0.3nm,0.4s							
QSPA	**South Pole Qui**	**91.17**	**180**	P		**P**	**04 06 28.9**	**+1.0**
	comp=Z,4.1nm,1.0s,baz=143,slow=1.5,SNR=7.1							
	comp=Z,4.1nm,1.0s							
QSPA	**South Pole Qui**	**91.17**	**180**	P		**P**	**04 06 29.9**	**+1.9**
VRAC	**Vranov**	**92.64**	**41**	LR		LR	04 42 25.1	
	comp=Z,37nm,21.1s,baz=284,slow=32							
ARCES	**ARCESS Array B**	**93.91**	**20**	LR		LR	04 46 38.1	
	comp=Z,27nm,18.8s,baz=214,slow=34							
LANS	**Liptovska Anna**	**94.53**	**41**	*e*P		**P**	**04 06 46.7**	**+3.0**
LANS	**Liptovska Anna**	**94.53**	**41**	*e*P		**P**	**04 06 46.7**	**+3.0**
FINES	**FINESS Array B**	**96.07**	**28**	LR		LR	04 47 58.2	
	comp=Z,37nm,21.3s,baz=226,slow=34							
TSUM	**Tsumeb**	**96.34**	**109**	LR		LR	04 48 00.7	
	comp=Z,164nm,19.4s,baz=266,slow=34							
BILL	**Bilibino**	**98.09**	**340**	*i* P		Pdif	04 07 00.0	+0.5
BILL				pmax		pmax		
	comp=Z,13nm,2.7s							
SUR	**Sutherland**	**98.67**	**122**	LR		LR	04 48 27.8	
	comp=Z,162nm,19.5s,baz=270,slow=34							
KIV	**Kislovodsk**	**111.28**	**41**	*i* PKIKP		**PKiKP**	**04 11 56.3**	**-1.1**
KIV				pmax		pmax		
	comp=Z,5.0nm,1.0s							
KIV				MLR		MLR		
	comp=Z,27nm,21.0s							
ARTI	**Arti**	**113.03**	**24**	P		**Pdif**	**04 08 14.6**	**+8.4**
ZALV	**Zalesovo Beam**	**123.44**	**12**	PKP		**PKPdf**	**04 12 19.7**	**-0.6**
	comp=Z,1.2nm,0.4s,baz=288,slow=1.8,SNR=6.5							
KURK	**Kurchatov**	**124.86**	**17**	PKIKP		**PKPdf**	**04 12 22.8**	**-0.3**
KURBB	**Kurchatov Arra**	**124.91**	**17**	PKP		**PKPdf**	**04 12 22.8**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=327,slow=2.3,SNR=7.6							
USRK	**Ussuriysk Ar.**	**127.20**	**333**	PKP		**PKPdf**	**04 12 27.0**	**-0.7**
	comp=Z,2.5nm,0.8s,baz=56,slow=1.5,SNR=2.0							
BNX	**BinXian**	**127.92**	**337**	⇑P		**PKPdf**	**04 12 29.3**	**+0.2**
BNX				pmax		pmax		
	comp=Z,5.0nm,1.3s							
MKAR	**Makanchi Array**	**129.45**	**17**	PKP		**PKPdf**	**04 12 28.9**	**-3.1**
	comp=Z,0.8nm,0.8s,baz=338,slow=2.9,SNR=5.0							
HHC	**Hu-ho-hao-te**	**137.18**	**348**	*e*P		**PKPdf**	**04 12 42.8**	**-4.1**
ASAR	**Alice Springs**	**141.24**	**232**	PKhKP		PKPpre	04 12 48.1	
	comp=Z,0.8nm,0.7s,baz=123,slow=3.6,SNR=6.9							
WRA	**Warramunga Arr**	**142.63**	**238**	PKhKP		PKPpre	04 12 53.5	
	comp=Z,1.0nm,0.6s,baz=117,slow=2.3,SNR=17							
NJ2	**Nanjing**	**143.03**	**335**	*e*P		**PKPdf**	**04 12 58.5**	**+1.0**
NJ2				pmax		pmax		
	comp=Z,17nm,0.5s							
WHN	**Wuhan**	**146.13**	**339**	PKPbc		**PKPbc**	**04 13 03.6**	**-0.3**
FITZ	**Fitzroy Crossi**	**150.72**	**233**	PKPbc		**PKPbc**	**04 13 15.4**	**-0.8**
	comp=Z,5.1nm,0.9s,baz=170,slow=3.2,SNR=12							
GYA	**Guiyang**	**152.08**	**350**	pmax		pmax		
	comp=Z,7.0nm,0.5s							
GYA	**Guiyang**	**152.08**	**350**	P		**PKPdf**	**04 13 14.8**	**+2.0**
PZH	**PanZhiHua**	**152.53**	**359**	PKPbc		**PKPdf**	**04 13 13.8**	**+0.3**

DJA ***16*** *03:56:40.9±0.3, 8°S±2°×10°7E±°, h34km±5km, M4.7/52, mb4.6/11, mB5.5/7, MLv4.4/52, Mw(mB)5.0/7*
NEIC ***16*** *03:56:41.7±1.6, 7°.5S±0°.1×106°.7E±0°.09, h73km±6km, mb4.5/19, Error ellipse: s-maj=20.7km s-min=9.5km az=205.0*
IDC ***16*** *03:56:44.6±2.5, 7°.45S×106°.66E, h102km±18km, mb3.7/12, mbtmp4.1/12, MS3.5/3, Error ellipse: s-maj=37.0km s-min=15.3km az=56.0*

ISC 16 03:56:41.1±1.0, 7.70S±0°.07×106°.63E±0°.05, h81km±8km, n91, σ1°32/93, mb4.3/21, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.69**	**354**	P		P	**Pn**	**03 56 56.1**	**-0.7**
SKJI				S		S	**Sn**	**03 57 08.6**	**+0.2**
BBJI	**Bungbulang**	**1.04**	**77**	Pn		P	**Pn**	**03 56 59.2**	**-1.5**
BBJI	**Bungbulang**	**1.04**	**77**	P		P	**Pn**	**03 56 59.5**	**-1.3**
DBJI	**Dramaga**	**1.14**	**6**	P		P	**Pn**	**03 57 02.3**	**+0.3**
DBJI				S		S	**Sn**	**03 57 19.2**	**+1.6**
LEM	**Lembang**	**1.31**	**49**	P		P	**Pn**	**03 57 05.4**	**+1.2**
	969nm,0.4s,baz=305,slow=22,SNR=106								
LEM				S		S	**Sn**	**03 57 23.9**	**+2.4**
	3μm,0.6s,baz=353,slow=23,SNR=54								
LEM				LR		LR		03 57 40.2	
	comp=Z,356nm,20.4s,baz=26,slow=49								
LEM	**Lembang**	**1.31**	**49**	P		P	**Pn**	**03 57 04.9**	**+0.7**
LEM				S		S	**Sn**	**03 57 22.9**	**+1.4**
CGJI	**Cibinong**	**1.42**	**319**	P		P	**Pn**	**03 57 05.6**	**+0.2**
CGJI				S		S	**Sn**	**03 57 24.3**	**+0.5**
TNG	**Tangerang**	**1.52**	**1**	P		P	**Pn**	**03 57 07.4**	**+0.7**
TNG				P				03 57 08.0	
TNG				S		S	**Sn**	**03 57 28.0**	**+2.0**
TNG				S				03 57 28.1	
SBJI	**Serang**	**1.64**	**343**	P		P	**Pn**	**03 57 10.4**	**+2.1**
SBJI				S		S	**Sn**	**03 57 31.7**	**+2.8**
JCJI	**Jatiwangi**	**2.02**	**54**	P		P	**Pn**	**03 57 11.2**	**-2.1**
JCJI				S		S	**Sn**	**03 57 37.2**	**-0.7**
KPJI	**Karang Pucung**	**2.31**	**81**	P		P	**Pn**	**03 57 18.1**	**+0.9**
KPJI				S		S	**Sn**	**03 57 46.5**	**+1.7**
SCJI	**Gunung Srandil**	**2.52**	**90**	P		P	**Pn**	**03 57 19.9**	**-0.1**
SCJI				S		S	**Sn**	**03 57 50.8**	**+1.0**
CTJI	**Waduk Cacaban**	**2.63**	**75**	P		P	**Pn**	**03 57 21.0**	**-0.4**
BLSI	**Bandar Lampung**	**2.69**	**329**	P		P	**Pn**	**03 57 24.1**	**+1.8**
BLSI				S		S	**Sn**	**03 57 56.3**	**+2.3**
KASI	**Kota Agung**	**3.02**	**315**	P		P	**Pn**	**03 57 27.7**	**+0.9**
KLJI	**Kotabumi**	**3.32**	**328**	P		P	**Pn**	**03 57 32.3**	**+1.5**
KLSI		**3.53**	**328**	P		P	**Pn**	**03 57 36.4**	**+2.7**
YOGI	**Yogyakarta**	**3.64**	**82**	P		P	**Pn**	**03 57 35.8**	**+0.7**
LWLI	**Liwa**	**3.69**	**316**	P		P	**Pn**	**03 57 37.5**	**+1.6**
SMRI	**Semarang**	**3.84**	**81**	Pn		P	**Pn**	**03 57 40.3**	**+2.5**
SMRI	**Semarang**	**3.84**	**81**	P		P	**Pn**	**03 57 40.5**	**+2.7**
UGM	**Wanagama**	**3.87**	**93**	Pn		P	**Pn**	**03 57 37.8**	**-0.5**
UGM	**Wanagama**	**3.87**	**93**	P		P	**Pn**	**03 57 37.7**	**-0.5**
MDSI	**Maura Dua**	**4.01**	**323**	P		P	**Pn**	**03 57 41.6**	**+1.4**
PCJI	**Pacitan**	**4.54**	**97**	P		P	**Pn**	**03 57 46.9**	**-0.4**
EGSI	**Enggano, Bengk**	**4.91**	**298**	P		P	**Pn**	**03 57 52.4**	**0.0**
MNAI	**Manna**	**4.93**	**312**	Pn		P	**Pn**	**03 57 53.6**	**+0.9**
MNAI	**Manna**	**4.93**	**312**	P		P	**Pn**	**03 57 53.3**	**+0.6**
TPI	**Tanjungpandan**	**5.01**	**12**	P		P	**Pn**	**03 57 54.1**	**+0.2**
	0.1nm37nm,0.6s								
SNJI	**Sawahan-Nganju**	**5.09**	**91**	P		P	**Pn**	**03 57 56.6**	**+1.6**
SJI	**Sawahan**	**5.09**	**91**	P		P	**Pn**	**03 57 55.5**	**+0.5**
	106nm,0.7s								
UBSI	**University, Be**	**5.84**	**312**	P		P	**Pn**	**03 58 04.7**	**-0.4**
GMJI	**Gumukmas**	**6.78**	**95**	P		P	**Pn**	**03 58 19.2**	**+1.3**
	0.3nm34nm,1.0s								
JAGI	**Jajag, Banyuwa**	**7.49**	**96**	Pn		P	**Pn**	**03 58 26.3**	**-1.4**
JAGI	**Jajag, Banyuwa**	**7.49**	**96**	P		P	**Pn**	**03 58 28.6**	**+0.9**
	0.3nm25nm,0.6s								
ABJI	**Asem Bagus**	**7.54**	**91**	P		P	**Pn**	**03 58 31.3**	**+2.9**
	0.2nm48nm,0.7s								
KLNI	**Mataram**	**9.40**	**95**	P		P	**Pn**	**03 58 55.8**	**+2.0**
KAPI	**Kappang**	**13.31**	**79**	LR		LR		04 04 45.1	
	comp=Z,43nm,18.8s,baz=278,slow=36								
GIRL	**Giralia**	**16.57**	**155**	Pn		P	**Pn**	**04 00 26.7**	**-1.7**
GIRL				lAmb		lAmb		04 00 55.6	
	comp=Z,49nm,1.5s								
TOLI2	**Tolitoli**	**16.61**	**59**	Pn		P	**Pn**	**04 00 25.7**	**-3.3**
SOEI	**Soe**	**17.56**	**98**	P		P	**P**	**04 00 40.1**	**-0.7**
SOEI				lAmb		lAmb		04 01 10.6	
	comp=Z,17nm,0.7s								
MBWA	**Marble Bar**	**18.42**	**138**	P		P	**Pn**	**04 00 50.8**	**-0.3**
PSA00	**Pilbara Seismi**	**18.79**	**139**	P		P	**Pn**	**04 00 56.3**	**+0.8**
MTN	**Manton Dam**	**24.64**	**104**	P		P	**P**	**04 01 54.7**	**+0.4**
MTN				lAmb		lAmb		04 02 16.9	
	comp=Z,19nm,1.3s								
CMAR	**Chiang Mai Arr**	**27.07**	**344**	P		P	**P**	**04 02 14.1**	**-2.2**
	comp=Z,1.2nm,0.3s,baz=179,slow=9.2,SNR=5.4								
	comp=Z,1.2nm,0.3s								
WRA	**Warramunga Arr**	**29.48**	**117**	P		P	**P**	**04 02 39.5**	**+1.8**
	comp=Z,0.5nm,0.8s,baz=286,slow=12,SNR=4.8								
	comp=Z,0.5nm,0.8s								
WRA	**Warramunga Arr**	**29.48**	**117**	P		P	**P**	**04 02 38.7**	**+1.0**
WR8	**Warramunga Arr**	**29.62**	**117**	P		P	**P**	**04 02 39.8**	**+0.8**
WR8				lAmb		lAmb		04 03 05.5	
	comp=Z,6.8nm,1.4s								
ASAR	**Alice Springs**	**30.59**	**124**	P		P	**P**	**04 02 50.0**	**+2.5**
	comp=Z,0.2nm,0.7s,baz=304,slow=9.1,SNR=3.2								
	comp=Z,0.2nm,0.7s								
H08S2	**Diego Garcia H**	**33.82**	**268**	T		T		04 38 44.7	
	baz=91,slow=76,SNR=38								
H08S3	**Diego Garcia H**	**33.83**	**268**	T		T		04 38 50.3	
	baz=91,slow=76,SNR=56								
H08S1	**Diego Garcia H**	**33.84**	**268**	T		T		04 38 54.5	
	baz=91,slow=76,SNR=46								
STKA	**Stephens Creek**	**40.46**	**131**	P		P	**P**	**04 04 13.2**	**+1.3**
	comp=Z,1.3nm,0.4s,baz=314,slow=11,SNR=4.0								
	comp=Z,1.3nm,0.4s								
KSRS	**Korea Array**	**49.13**	**22**	P		P	**P**	**04 05 19.6**	**-1.0**
	comp=Z,1.5nm,0.6s,baz=219,slow=9.7,SNR=4.6								
	comp=Z,1.5nm,0.6s								
SONM	**Songino Array**	**55.29**	**360**	P		P	**P**	**04 06 06.0**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=194,slow=7.9,SNR=3.5								
SONM				PcP		PcP	**PcP**	**04 07 07.0**	**+0.9**
	comp=Z,1.0nm,0.5s,baz=175,slow=2.9,SNR=4.9								
	comp=Z,0.5nm,0.6s								
SONM	**Songino Array**	**55.29**	**360**	P		P	**P**	**04 06 06.0**	**-0.3**
TARG	**Taragay, Kyrgy**	**55.83**	**334**	P		P	**P**	**04 06 10.9**	**+0.4**
TARG				lAmb		lAmb		04 06 43.9	
	comp=Z,1.9nm,0.8s								
KDJ	**Kajisay**	**56.42**	**334**	P		P	**P**	**04 06 14.3**	**-0.2**
KDJ				lAmb		lAmb		04 06 15.6	
	comp=Z,5.8nm,0.6s								
USRK	**Ussuriysk Ar.**	**56.52**	**22**	P		P	**P**	**04 06 13.6**	**-1.3**
	comp=Z,1.4nm,0.5s,baz=214,slow=6.7,SNR=2.2								
	comp=Z,1.4nm,0.5s								
BOOM	**Boomskoye usch**	**57.26**	**333**	P		P	**P**	**04 06 19.9**	**-0.5**
BOOM				lAmb		lAmb		04 06 20.9	
	comp=Z,2.1nm,0.8s								
GAR	**Garm**	**57.39**	**327**	P		P	**P**	**04 06 20.2**	**-1.2**
CHGR	**Chuyangaron**	**57.78**	**326**	P		P	**P**	**04 06 22.2**	**-1.9**
MKAR	**Makanchi Array**	**58.41**	**341**	P		P	**P**	**04 06 26.9**	**-1.4**
	comp=Z,1.7nm,0.5s,baz=146,slow=7.5,SNR=25								
	comp=Z,1.7nm,0.5s								
MKAR	**Makanchi Array**	**58.41**	**341**	P		P	**P**	**04 06 26.6**	**-1.7**
KKAR	**Karatay Array**	**60.28**	**330**	P		P	**P**	**04 06 41.1**	**-0.1**
H04N2	**CROZET ISLANDS**	**60.49**	**221**	T		T		05 12 41.6	
	baz=69,slow=76,SNR=33								
H04N1	**CROZET ISLANDS**	**60.51**	**221**	T		T		05 12 41.9	
	baz=69,slow=76,SNR=41								
H04N3	**CROZET ISLANDS**	**60.51**	**221**	T		T		05 12 40.0	
	baz=69,slow=76,SNR=35								
KURBB	**Kurchatov Arra**	**62.98**	**340**	P		P	**P**	**04 06 59.6**	**+0.5**
	comp=Z,4.1nm,0.6s,baz=152,slow=6.2,SNR=26								
	comp=Z,4.1nm,0.6s								
KURK	**Kurchatov**	**63.03**	**340**	P		P	**P**	**04 06 59.4**	**0.0**
KURK				lAmb		lAmb		04 07 00.3	
	comp=Z,5.0nm,0.5s								
ZALV	**Zalesovo Beam**	**64.11**	**346**	P		P	**P**	**04 07 06.1**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=173,slow=5.4,SNR=3.6								
	comp=Z,0.7nm,0.3s								
ZALV	**Zalesovo Beam**	**64.11**	**346**	P		P	**P**	**04 07 06.0**	**-0.6**
BVAR	**Borovoye Array**	**67.86**	**337**	P		P	**P**	**04 07 30.9**	**+0.3**
	comp=Z,7.8nm,0.5s,baz=148,slow=8.6,SNR=26								
	comp=Z,7.8nm,0.5s								
BORK	**Borovoye**	**67.91**	**337**	P		P	**P**	**04 07 31.1**	**+0.2**
AB31	**Akbulak array**	**69.82**	**329**	P		P	**P**	**04 07 43.1**	**+0.3**
AB31				lAmb		lAmb		04 07 44.0	
	comp=Z,8.8nm,0.7s								
ABKAR	**Akbulak array**	**69.82**	**329**	P		P	**P**	**04 07 43.2**	**+0.4**
ARTI	**Arti**	**75.14**	**335**	P		P	**P**	**04 08 14.0**	**-0.3**
BRTR	**Keskin Array B**	**82.01**	**312**	P		P	**P**	**04 08 53.4**	**+0.7**
	comp=Z,0.8nm,0.7s,baz

JRA	**Rausu**	**2.13**	**274**	*e*P		**Pn**	04 15 04.2	+0.2
JRA				*e*S		**Sn**	04 15 28.3	-1.2
JNSB	**Nemuroshibetsu**	**2.22**	**270**	*e*P		**Pn**	04 15 05.4	+0.3
JNSB				*e*S		**Sn**	04 15 30.5	-1.1
JKHN	**Kushirohamanak**	**2.24**	**252**	*e*P		**Pn**	04 15 05.3	-0.1
JKHN				*e*S		**Sn**	04 15 30.1	-1.9
JNK	**Nakash**	**2.44**	**266**	*e*P		**Pn**	04 15 07.7	-0.3
JNK				*e*S		**Sn**	04 15 34.9	-2.0
AKK	**Akkeshi**	**2.48**	**252**	*e*P		**Pn**	04 15 08.3	-0.3
JAK	**Akkeshi**	**2.59**	**253**	*e*P		**Pn**	04 15 09.7	-0.4
JAK				*e*S		**Sn**	04 15 37.6	-2.9
JTKR	**Abashiri--Toko**	**3.01**	**275**	*e*P		**Pn**	04 15 16.4	+0.7
JAR	**Ashorobuto**	**3.17**	**262**	*e*P		**Pn**	04 15 18.5	+0.6
JAR				*e*S		**Sn**	04 15 53.4	-1.1
JOB	**Onbets**	**3.22**	**255**	*e*P		**Pn**	04 15 18.9	+0.2
JOB				*e*S		**Sn**	04 15 53.7	-2.1
JMP	**Maruseppu**	**3.41**	**275**	*e*P		**Pn**	04 15 22.1	+0.8
JEM	**Erimo**	**4.03**	**245**	*e*P		**Pn**	04 15 31.4	+1.7
H11N2	**WAKE ISLAND Hy** baz=332,slow=76,SNR=35	**28.72**	**141**	T		T	04 51 24.3	
H11N1	**WAKE ISLAND Hy** baz=332,slow=76,SNR=28	**28.73**	**141**	T		T	04 51 18.8	
H11N3	**WAKE ISLAND Hy** baz=332,slow=76,SNR=23	**28.74**	**141**	T		T	04 51 22.0	
SONM	**Songino Array** comp=E,0.6nm,0.5s,baz=72,slow=10,SNR=2.8 comp=E,0.6nm,0.5s	**29.06**	**293**	P		**P**	**04 20 24.5**	**+0.9**
H11S1	**WAKE ISLAND Hy** baz=332,slow=76,SNR=64	**29.70**	**142**	T		T	04 52 36.4	
H11S3	**WAKE ISLAND Hy** baz=332,slow=76,SNR=46	**29.70**	**142**	T		T	04 52 31.4	
H11S2	**WAKE ISLAND Hy** baz=332,slow=76,SNR=40	**29.72**	**142**	T		T	04 52 28.1	
MKAR	**Makanchi Array** comp=E,0.6nm,0.5s,baz=80,slow=9.4,SNR=16 comp=E,0.6nm,0.5s	**45.15**	**298**	P		**P**	**04 22 39.9**	**+0.5**
KURK	**Kurchatov**	**46.05**	**304**	P		**P**	**04 22 47.4**	**+1.0**
KURK	**Kurchatov**	**46.05**	**304**	*e*P		**P**	**04 22 47.4**	**+1.0**
KURBB	**Kurchatov Arra** comp=E,0.7nm,0.3s,baz=73,slow=9.0,SNR=4.6 comp=E,0.7nm,0.3s	**46.13**	**304**	P		**P**	**04 22 47.4**	**+0.3**
FINES	**FINESS Array B** comp=E,6.1nm,1.0s,baz=42,slow=7.1,SNR=4.1 comp=E,6.1nm,1.0s	**65.12**	**333**	P		**P**	**04 25 02.5**	**-0.3**
NOA	**NORSAR Array B** comp=E,0.4nm,0.6s,baz=31,slow=6.6,SNR=4.5 comp=E,0.4nm,0.6s	**69.78**	**339**	P		**P**	**04 25 32.5**	**+0.2**
HFS	**Hagfors** comp=E,3.4nm,0.9s,baz=37,slow=5.1,SNR=4.4 comp=E,3.4nm,0.9s	**69.89**	**338**	P		**P**	**04 25 32.6**	**-0.3**
EKA	**Eskdalemuir Ar** comp=E,0.7nm,0.6s,baz=23,slow=4.5,SNR=3.9 comp=E,0.7nm,0.6s	**78.26**	**344**	P		**P**	**04 26 21.9**	**+0.1**
H03N2	**Juan Fernandez** baz=304,slow=77,SNR=5.2	**142.30**	**90**	T		T	07 12 49.8	
H03N3	**Juan Fernandez** baz=304,slow=77,SNR=6.8	**142.31**	**90**	T		T	07 13 03.8	
H03N1	**Juan Fernandez** baz=304,slow=77,SNR=3.8	**142.31**	**90**	T		T	07 13 04.2	

JMA ***16*** *04:18:04.2±0.5,46°N±1°×14°3E±°, h1km, MV2.5/16, SOUTH SAKHALIN*

SKHL ***16*** *04:18:04.5±0.3,45°.80N×142°.50E, h13km±2km, mb3.5/2*

ISC 16 04:18:05.4±1.2, 45.81N±0.05×142.3E±0.1, h10km, n5, σ1°92/7, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWK2	**Keihoku**	**0.59**	**213**	*e*P	**Pb**	**04 18 19.2**	**+1.5**
JSE	**Soyaes**	**0.87**	**169**	*e*P	**Pn**	04 18 23.1	-0.6
JSE				*e*S	**Sn**	04 18 35.9	-0.4
JRBN	**Rebuntou**	**0.98**	**247**	*e*P	**Pb**	04 18 23.9	-0.6
YSS	**Yuzhno-Sakhali**	**1.18**	**14**	*e*Pg	**Pn**	**04 18 27.6**	**-0.4**
YSS	80nm,0.6s			AMB	AMB	04 18 28.5	
YSS				*e*Sg	**Sn**	**04 18 43.7**	**-0.4**
YSS	60nm,0.3s			A	A	04 18 45.0	
YSS	40nm,0.3s			A	A	04 18 45.0	
KHLM	**Kholmsk**	**1.26**	**351**	*e*Sg	**Sn**	**04 18 47.0**	**+0.9**
KHLM	180nm,0.4s			A	A	04 18 48.1	
KHLM	170nm,0.4s			A	A	04 18 48.1	

RSNC ***16*** *04:23:34.4±0.3,1°N±2°×7°9W±°, h26km±3km, M3.4, mB4.7, mb4.3, ML3.0, Mw(mB)3.9*

IGQ ***16*** *04:23:35.6±0.2,1°N±2°×7°9W±°, h4km±1km, M3.5/31, Mjma3.5/30, ML3.8/31, MLv3.4/31, Ms(BB)3.4/7*

ISC 16 04:23:34.5±1.1, 1.09N±0.03×78.78W±0.03, h32km±5km, n89, σ1°14/104, 8C-26D, Colombia-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALOR	**Ecuador-San Lo**	**0.22**	**341**	P	**Pn**	**04 23 42.1**	**+0.6**
SNLR	**San Lorenzo-Es**	**0.22**	**341**	↓P	**Pn**	**04 23 41.9**	**+0.4**
SNLR				S	**Sb**	**04 23 48.2**	**+2.6**
ALIT	**Ecuador-Imbabu**	**0.51**	**125**	P	**Pb**	**04 23 44.6**	**-0.6**
ALIT				S	**Sb**	**04 23 52.7**	**0.0**
LITE1	**Lita**	**0.51**	**125**	↓P	**Pb**	**04 23 44.6**	**-0.6**
LITE1				S	**Sb**	**04 23 52.5**	**-0.1**
CHMA	**Chilma**	**0.75**	**107**	↓P	**Pb**	**04 23 47.1**	**-2.2**
CHMA				S	**Sb**	**04 23 57.3**	**-2.1**
PAC1	**Pacto, Paraso**	**0.81**	**181**	↑↑P	**Pn**	**04 23 48.9**	**-1.0**
PAC1	**Pacto, Paraso**	**0.81**	**181**	P	**Pn**	**04 23 48.8**	**-1.1**
PAC1				S	**Sb**	**04 23 59.4**	**-1.7**
URCU	**Urcuqui**	**0.83**	**141**	↓↓P	**Pb**	**04 23 50.3**	**-0.4**
URCU				S	**Sn**	**04 24 02.2**	**+0.5**
ECEN	**Cerro Negro**	**0.85**	**108**	↓↓P	**Pb**	**04 23 50.2**	**-0.9**
LNGL	**El Angel-Carch**	**0.85**	**114**	↓↓P	**Pb**	**04 23 50.5**	**-0.6**
LNGL				S	**Sb**	**04 24 02.2**	**-0.2**
CUSE	**Cuicocha Este**	**0.86**	**154**	P	**Pn**	**04 23 50.7**	**-0.1**
CUSE				S	**Sb**	**04 24 02.9**	**+0.2**
COTA	**Cotacachi**	**0.87**	**149**	↓↓P	**Pn**	**04 23 51.1**	**+0.2**
AES2	**Ecuador-Puerto**	**0.87**	**264**	↑↑P	**Pn**	**04 23 49.8**	**-0.7**
AV21	**Acelerografo,**	**0.88**	**241**	P	**Pn**	**04 23 51.1**	**+0.5**
CHL1	**Volc¡n Chiles**	**0.88**	**109**	↓↓P	**Pn**	**04 23 50.7**	**-0.5**
CUIC	**Cuicocha-Domo**	**0.88**	**152**	↓↓P	**Pn**	**04 23 51.1**	**0.0**
CHL2	**Volc¡n Chiles**	**0.91**	**108**	↓↓P	**Pn**	**04 23 51.0**	**-0.4**
OTAV	**Otavalo**	**0.91**	**159**	↓↓P	**Pn**	**04 23 51.4**	**0.0**
OTAV	**Otavalo**	**0.91**	**159**	P	**Pn**	**04 23 51.0**	**-0.4**
OTAV				S	**Sb**	**04 24 03.6**	**-0.3**
AMA1	**Acelerografo,**	**0.96**	**261**	↓↓P	**Pn**	**04 23 52.4**	**+0.6**
CMBC	**Cumbal**	**0.96**	**99**	P	**Pn**	**04 23 52.1**	**-0.1**
CMBC	**Cumbal**	**0.96**	**99**	P	**Pn**	**04 23 51.9**	**-0.3**
IMBA	**Imbabura, San**	**0.99**	**144**	↓↓P	**Pb**	**04 23 53.7**	**+0.3**
YAHU	**Yahuarcocha**	**1.00**	**135**	P	**Pn**	**04 23 53.4**	**+0.7**
APR2	**Miler**	**1.02**	**191**	P	**Pn**	**04 23 52.8**	**+0.1**
BV15	**Puerto Quito-O**	**1.02**	**206**	P	**Pn**	**04 23 52.2**	**-0.4**
AV18	**Acelerografo,**	**1.04**	**222**	P	**Pb**	**04 23 54.0**	**0.0**
ATON	**Ecuador-Tonsup**	**1.05**	**259**	P	**Pn**	**04 23 52.6**	**-0.4**
TULM	**Tulcn-Chalpat**	**1.06**	**110**	P	**Pn**	**04 23 54.0**	**+0.5**
TULM	**Tulcn-Chalpat**	**1.06**	**110**	P	**Pn**	**04 23 53.8**	**+0.3**
TULM				S	**Sn**	**04 24 08.1**	**+0.7**
PULU	**Pululahua**	**1.09**	**165**	P	**Pn**	**04 23 54.5**	**+0.6**
AATC	**Ecuador-Atacam**	**1.11**	**258**	P	**Pn**	**04 23 53.1**	**-0.7**
YANA	**Yana**	**1.22**	**170**	P	**Pn**	**04 23 56.5**	**+0.8**
TERV	**Terraza Guagua**	**1.27**	**172**	↑↑P	**Pn**	**04 23 57.3**	**+0.8**
GGPC	**Guagua Pichinc**	**1.27**	**172**	↑↑P	**Pn**	**04 23 57.3**	**+0.8**
PUEM	**Granja Avicola**	**1.28**	**161**	↓↓P	**Pb**	**04 23 58.5**	**+0.2**
ANGU	**Angureal**	**1.29**	**143**	P	**Pb**	**04 23 58.6**	**+0.1**
JUA2	**San Juan 2**	**1.30**	**172**	↑↑P	**Pn**	**04 23 58.0**	**+1.0**
GGPT	**Toaza - Volcan**	**1.31**	**173**	↓↓P	**Pn**	**04 23 58.2**	**+1.2**
CAYR	**Refugio Cayamb**	**1.31**	**144**	↑↑P	**Pb**	**04 23 58.7**	**-0.3**
BONI	**La Bonita**	**1.40**	**117**	↓↓P	**Pn**	**04 23 59.4**	**+1.4**
BONI	**La Bonita**	**1.40**	**117**	P	**Pn**	**04 23 59.3**	**+1.3**
BONI				S	**Sb**	**04 24 17.5**	**-0.3**
TING	**Casa Alexandra**	**1.40**	**166**	P	**Pb**	**04 24 00.4**	**+0.2**
GCUF	**Volcan Galeras**	**1.44**	**84**	P	**Pb**	**04 23 58.8**	**0.0**
GCUF				S	**Sn**	**04 24 16.6**	**-0.3**
REVS	**Reventador Sur**	**1.66**	**136**	P	**Pb**	**04 24 04.3**	**-0.2**
ANTG	**Antisana-Guama**	**1.66**	**162**	↓↓P	**Pb**	**04 24 04.0**	**-0.8**
ANTS	**Antisana-Sarah**	**1.69**	**159**	↓↓P	**Pb**	**04 24 04.6**	**-0.7**
ANTM	**Antisana-La Mi**	**1.71**	**161**	↓↓P	**Pb**	**04 24 04.7**	**-0.9**
CASC	**Dorado de Casc**	**1.72**	**123**	↓↓P	**Pb**	**04 24 05.4**	**-0.2**
CASC	**Dorado de Casc**	**1.72**	**123**	P	**Pb**	**04 24 05.2**	**-0.3**
CASC				S	**Sb**	**04 24 27.9**	**+1.0**
BVC2	**Cotopaxi Volca**	**1.77**	**168**	↓↓P	**Pb**	**04 24 06.5**	**-0.2**
BNAS	**Cotopaxi Volca**	**1.77**	**170**	↓↓P	**Pb**	**04 24 09.8**	**+3.2**
BREF	**Cotopaxi Volca**	**1.78**	**169**	↓↓P	**Pb**	**04 24 06.7**	**-0.1**
BBAC	**Balboa, Cauca**	**1.79**	**59**	↑↑P	**Pn**	**04 24 02.5**	**-0.9**
BBAC	**Balboa, Cauca**	**1.79**	**59**	P	**Pn**	**04 24 02.4**	**-0.9**
BBAC				S	**Sn**	**04 24 23.5**	**-1.6**
ILLI	**Illinizas Sur**	**1.79**	**178**	P	**Pb**	**04 24 05.9**	**-1.1**
BTAM	**Cotopaxi Volca**	**1.79**	**168**	↓↓P	**Pb**	**04 24 06.8**	**-0.2**
SLOR	**San Lorenzo -**	**1.83**	**171**	P	**Pb**	**04 24 07.4**	**-0.1**
BMOR	**Cotopaxi Volca**	**1.83**	**170**	↓↓P	**Pb**	**04 24 07.2**	**-0.5**
BRRN	**Barrancas-Volc**	**1.88**	**171**	P	**Pb**	**04 24 08.1**	**-0.4**
VCES	**Cotopaxi**	**1.91**	**168**	↓↓P	**Pb**	**04 24 08.5**	**-0.6**
GR1C	**Gorgona, Isla**	**2.00**	**18**	P	Pn	04 24 03.9	-2.1
GR1C				S	**Sn**	**04 24 28.1**	**-1.9**
PIS1	**Pisayambo**	**2.17**	**170**	↑↑P	**Pb**	**04 24 12.9**	**-0.4**
ARDO	**Archidona, Ten**	**2.29**	**155**	↑↑P	**Pb**	**04 24 15.5**	**+0.3**
PORT	**Chimborazo Vol**	**2.53**	**180**	P	**Pb**	**04 24 18.9**	**-0.8**
POPC	**Popayan, Colom**	**2.55**	**55**	P	**Pn**	**04 24 14.0**	**+0.2**
POPC				S	**Sn**	**04 24 45.3**	**+1.4**
CHSH	**Refugio Sur-Vo**	**2.56**	**182**	P	**Pb**	**04 24 19.9**	**-0.3**
BMAS	**Trigal station**	**2.59**	**173**	P	**Pn**	**04 24 17.2**	**+2.7**
TAMH	**Tambohuasha Ch**	**2.61**	**180**	P	**Pb**	**04 24 19.8**	**-1.2**
JAMC	**Jamundi, Valle**	**2.98**	**45**	P	**Pn**	**04 24 18.2**	**-1.6**
FLOC	**Florencia**	**3.16**	**81**	P	**Pn**	**04 24 24.1**	**+1.9**
FLOC	**Florencia**	**3.16**	**81**	P	**Pn**	**04 24 24.0**	**+1.9**
GARC	**Garzon, Huila**	**3.46**	**72**	P	**Pn**	**04 24 27.6**	**+1.2**
COHC	**Cochancay**	**3.56**	**188**	P	**Pn**	**04 24 26.7**	**-0.9**
YOTC	**Yotoco, Valle**	**3.77**	**40**	P	**Pn**	**04 24 28.9**	**-1.6**
PLMC	**San Jos del P**	**4.54**	**33**	P	**Pn**	**04 24 39.0**	**-2.1**
PRAC	**Prado**	**4.68**	**56**	P	**Pn**	**04 24 43.9**	**+0.9**
URMC	**La Uribe, Meta**	**4.89**	**64**	P	**Pn**	**04 24 46.9**	**+1.0**
MACC	**Macarena, Meta** 28nm,0.7s	**5.04**	**78**	P	**Pn**	**04 24 49.2**	**+1.3**
GUY2C	**Guyana, Caldas** 9.9nm,0.5s	**5.34**	**40**	P	**Pn**	**04 24 53.0**	**+0.6**
CBOC	**Ciudad Bolivar** 573nm36nm,0.7s	**5.49**	**30**	P	**Pn**	**04 24 54.2**	**0.0**
MCRA	**Macar, Loja** 5.4nm,0.7s	**5.55**	**192**	P	**Pn**	**04 24 56.0**	**+1.1**
ROSC	**El Rosal**	**5.81**	**50**	P	**Pn**	**04 25 01.3**	**+2.5**
VILC	**Villavicencio,** 739nm67nm,0.7s	**5.90**	**59**	P	**Pn**	**04 25 02.7**	**+2.8**
CHIC	**Chingaza** 36nm,0.6s	**6.15**	**55**	P	**Pn**	**04 25 05.1**	**+1.6**
DBBC	**Dabeiba**	**6.42**	**23**	P	**Pn**	**04 25 10.9**	**+3.9**
SPBC	**San Pablo de B** 6.0nm,0.5s	**6.53**	**46**	P	**Pn**	**04 25 09.6**	**+1.1**
PTBC	**PUERTO BERRIO,** 7.4nm,0.5s	**6.92**	**38**	P	**Pn**	**04 25 14.0**	**+0.2**
RUSC	**La Rusia**	**7.42**	**50**	P	**Pn**	**04 25 22.5**	**+1.4**

IDC 16 04:23:39.7±11.0, 16.83S×176.31W, h429km±46km, mb3.1/3, mbtmp3.9/4, Error ellipse: s-maj=316.2km s-min=32.6km az=139.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu** 6.0nm,0.4s,baz=194,slow=22,SNR=7.5	**5.47**	**260**	P	P	04 25 07.5	-0.2
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=94,slow=6.9,SNR=11 0.2nm,0.3s	**46.81**	**258**	P	P	04 31 28.0	-1.4
ASAR	**Alice Springs** 4.8nm,0.5s,baz=84,slow=7.8,SNR=69 4.8nm,0.5s	**47.02**	**253**	P	P	04 31 31.6	+0.6
ILAR	**Eielson Array** 0.4nm,0.8s,baz=208,slow=5.0,SNR=4.3 0.4nm,0.8s	**84.40**	**12**	P	P	04 35 24.4	-0.7
BRTR	**Keskin Array B** 1.1nm,0.8s,baz=72,slow=3.2,SNR=3.9	**145.40**	**317**	PKPbc	PKPbc	04 42 29.4	+0.3

JMA ***16*** *05:01:56.5±0.3,24°.4N±0°.4×12°1E±°, h1km±3km, MV3.0/8, TAIWAN REGION*

TAP ***16*** *05:01:56.8,24°.42N×121°.40E, h5km, ML3.5, B*

ISC 16 05:01:57.1±0.8, 24.42N±0.01×121.39E±0.01, h4km±4km, n150, σ0°63/242, 26C-5D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNSB	**Datong**	**0.01**	**305**	↓*i*P	**Pg**	**05 01 58.3**	**+0.1**
NNSB				*i* S	**Sg**	**05 01 58.9**	**0.0**
NNS	**Nan Shan**	**0.03**	**314**	↓↓P	**Pg**	**05 01 58.3**	**+0.1**
NNS				*i* S	**Sg**	**05 01 59.1**	**0.0**
LATG	**Datong**	**0.17**	**47**	↑*i*P	**Pg**	**05 02 00.5**	**0.0**
LATG				S	**Sg**	**05 02 03.2**	**+0.5**
NDT	**Datong Townshi**	**0.21**	**31**	↑*i*P	**Pg**	**05 02 01.3**	**0.0**
NDT				S	**Sg**	**05 02 04.2**	**+0.2**
FUSS	**Fushou**	**0.22**	**219**	↑*i*P	**Pg**	**05 02 02.0**	**+0.5**
FUSS				*i* S	**Sg**	**05 02 05.5**	**+1.0**
ETLH	**Xiulin Townshi**	**0.23**	**159**	*i* P	**Pg**	**05 02 02.4**	**+0.8**
ETLH				*i* S	**Sg**	**05 02 05.7**	**+1.1**
YHNB	**Yeheng**	**0.25**	**356**	P	**Pg**	**05 02 02.7**	**+0.7**
YHNB	**Yeheng**	**0.25**	**356**	S	**Sg**	**05 02 05.8**	**+0.5**
YHNB	**Yeheng**	**0.25**	**356**	*i* P	**Pg**	**05 02 02.4**	**+0.4**
YHNB				*i* S	**Sg**	**05 02 05.6**	**+0.3**
NSK	**Sanguang**	**0.26**	**353**	↓↓*i*P	**Pg**	**05 02 02.5**	**+0.3**
NSK				S	**Sg**	**05 02 05.8**	**+0.2**
TWT	**Tachien**	**0.26**	**230**	↑↑*i*P	**Pg**	**05 02 02.7**	**+0.4**
TWT				S	**Sg**	**05 02 07.0**	**+1.3**
ENTT	**Nioudou**	**0.27**	**36**	↑↑*i*P	**Pg**	**05 02 02.5**	**+0.1**
ENTT				S	**Sg**	**05 02 06.7**	**+0.8**
TDCB	**Techi**	**0.27**	**232**	↑↑*i*P	**Pg**	**05 02 02.7**	**+0.2**
TDCB				S	**Sg**	**05 02 06.5**	**+0.4**
WHF	**Hehuan Shan**	**0.30**	**203**	↓↓*i*P	**Pg**	**05 02 03.5**	**+0.5**
WHF				S	**Sg**	**05 02 07.6**	**+0.5**
NACB	**Ninganchiao**	**0.31**	**143**	P	**Pg**	**05 02 03.7**	**+0.6**
NACB	**Ninganchiao**	**0.31**	**143**	S	**Sg**	**05 02 07.9**	**+0.8**
NACB	**Ninganchiao**	**0.31**	**143**	↓↓*i*P	**Pg**	**05 02 03.7**	**+0.6**
NACB				S	**Sg**	**05 02 07.9**	**+0.8**
ENA	**Nanau**	**0.32**	**89**	↑↑*i*P	**Pg**	**05 02 03.9**	**+0.6**
ENA				S	**Sg**	**05 02 08.2**	**+0.8**
EAHA	**Aohua**	**0.33**	**106**	P	**Pg**	**05 02 03.9**	**+0.4**
EAHA				S	**Sg**	**05 02 08.2**	**+0.4**
NFF	**Wufeng Townshi**	**0.33**	**310**	*e*P	**Pg**	**05 02 04.2**	**+0.7**
NFF				S	**Sg**	**05 02 08.9**	**+1.0**
ETL	**Fush Village**	**0.33**	**141**	P	**Pg**	**05 02 04.2**	**+0.6**
ETL				S	**Sg**	**05 02 08.7**	**+0.7**
EHP	**Heping Village**	**0.34**	**109**	*e*P	**Pg**	**05 02 04.4**	**+0.8**
EWUT	**Wuta**	**0.35**	**86**	↑↑*i*P	**Pg**	**05 02 04.0**	**0.0**
EWUT				S	**Sg**	**05 02 08.5**	**0.0**
NDS	**Dongshan**	**0.36**	**54**	↑↑*i*P	**Pg**	**05 02 04.1**	**-0.1**
NDS				S	**Sg**	**05 02 10.2**	**+1.3**
NWLT	**Wulai**	**0.37**	**16**	↑↑P	**Pg**	**05 02 04.5**	**+0.2**
NWLT				*e*S	**Sg**	**05 02 09.5**	**+0.4**
FUSB	**Fushanzhiwuyua**	**0.38**	**28**	↑↑*i*P	**Pg**	**05 02 04.6**	**0.0**
TWD	**Chiawan**	**0.39**	**151**	P	**Pg**	**05 02 05.2**	**+0.6**
TWD				S	**Sg**	**05 02 10.8**	**+1.1**
TWE	**Neicheng**	**0.39**	**40**	↑↑*i*P	**Pg**	**05 02 05.0**	**+0.3**
KSHI	**Guanxi Townshi**	**0.41**	**331**	*e*P	**Pb**	**05 02 06.3**	**-0.6**
KSHI				*e*S	**Sb**	**05 02 12.1**	**-1.3**
LIOB	**Emei**	**0.41**	**303**	P	**Pg**	**05 02 06.2**	**+1.1**
LIOB				S	**Sg**	**05 02 11.9**	**+1.5**
NSTT	**Nanjuang**	**0.41**	**300**	↑↑P	**Pg**	**05 02 06.1**	**+0.9**
NSTT				S	**Sg**	**05 02 11.8**	**+1.2**
NJD	**Zhudong**	**0.42**	**318**	*e*P	**Pb**	**05 02 07.6**	**+0.5**
NJD				*e*S	**Sb**	**05 02 14.0**	**+0.2**
WHP	**Taichung City**	**0.43**	**251**	↑↑*i*P	**Pg**	**05 02 06.3**	**+0.7**
WHP				S	**Sg**	**05 02 11.7**	**+0.5**
ESAO	**Su ao**	**0.44**	**69**	*e*P	**Pg**	**05 02 05.2**	**-0.4**
TWC	**Suao**	**0.46**	**66**	↑↑*i*P	**Pg**	**05 02 05.7**	**-0.2**
TWC				*e*S	**Sg**	**05 02 13.0**	**+1.2**
ETM	**Tongmen**	**0.46**	**169**	P	**Pg**	**05 02 06.5**	**+0.5**
ETM				*e*S	**Sg**	**05 02 12.4**	**+0.3**
HWA	**Hwalien**	**0.48**	**156**	*e*P	**Pg**	**05 02 07.5**	**+1.1**
HWA				*e*S	**Sb**	**05 02 14.7**	**-0.9**
WUSB	**Renai**	**0.50**	**211**	↑↑*i*P	**Pg**	**05 02 06.7**	**0.0**
WUSB				*e*S	**Sg**	**05 02 13.0**	**-0.2**
OWD	**Renai**	**0.51**	**203**	↑↑*i*P	**Pg**	**05 02 06.6**	**-0.3**
OWD				S	**Sg**	**05 02 13.4**	**0.0**
SBCB	**Hsinchu**	**0.53**	**315**	*e*P	**Pb**	**05 02 08.8**	**-0.1**
HSN	**Hsinchu**	**0.54**	**315**	*e*P	**Pg**	**05 02 08.0**	**+0.4**
TATO	**Taipei**	**0.56**	**9**	P	**Pg**	**05 02 08.6**	**+0.7**
TATO	**Taipei**	**0.56**	**9**	P	**Pg**	**05 02 08.5**	**+0.6**
TATO				S	**Sg**	**05 02 15.8**	**+0.6**
NMLH	**Miaoli**	**0.56**	**282**	*e*P	**Pb**	**05 02 09.6**	**+0.1**
NMLH				*e*S	**Sb**	**05 02 18.0**	**+0.1**
WCS	**Beigang Elemen**	**0.57**	**231**	*e*P	**Pg**	**05 02 08.4**	**+0.3**
WCS				*e*S	**Sg**	**05 02 15.3**	**-0.2**
WPL	**Puli Township**	**0.57**	**225**	P	**Pg**	**05 02 08.1**	**0.0**
WPL				*e*S	**Sg**	**05 02 15.2**	**-0.3**
TWQ1	**Liyutan**	**0.57**	**263**	*e*P	**Pb**	**05 02 09.4**	**-0.3**
TWQ1				*e*S	**Sb**	**05 02 17.1**	**-1.1**
BACT	**New Taipei Cit**	**0.58**	**4**	*e*P	**Pb**	**05 02 09.3**	**-0.5**
DPDB	**Guoxing**	**0.58**	**228**	↑↑*i*P	**Pg**	**05 02 08.5**	**+0.3**
DPDB				*e*S	**Sb**	**05 02 18.1**	**-0.3**
NCUH	**Zhongli**	**0.58**	**341**	*e*P	**Pb**	**05 02 09.4**	**-0.5**
NSY	**Sanyi**	**0.58**	**270**	P	**Pb**	**05 02 10.0**	**+0.2**
NSY				S	**Sb**	**05 02 18.3**	**-0.1**
NCU	**National Centr**	**0.58**	**341**	*e*P	**Pg**	**05 02 08.6**	**+0.3**
NCU				*e*S	**Sg**	**05 02 17.0**	**+1.2**
TEYL	**Yanliau Villag**	**0.58**	**161**	P	**Pg**	**05 02 08.6**	**+0.3**
TEYL				S	**Sg**	**05 02 16.0**	**+0.2**
NTY	**Taoyuan**	**0.58**	**351**	*e*P	**Pb**	**05 02 10.1**	**+0.1**
NTY				*e*S	**Sb**	**05 02 18.5**	**0.0**
TWA	**Mucha**	**0.58**	**17**	*e*P	**Pg**	**05 02 08.9**	**+0.5**
TWA				*e*S	**Sg**	**05 02 16.8**	**+0.8**
ESL	**Shilin**	**0.60**	**177**	*e*P	**Pg**	**05 02 09.3**	**+0.5**
ESL				*e*S	**Sg**	**05 02 16.6**	**0.0**
TAP	**Taipei**	**0.62**	**9**	*e*P	**Pg**	**05 02 09.9**	**+0.7**
TAP				*e*S	**Sb**	**05 02 19.3**	**-0.4**
EGS		**0.65**	**49**	*e*P	**Pg**	**05 02 09.8**	**+0.2**
SHUL	**Shoufeng**	**0.65**	**166**	*e*P	**Pb**	**05 02 10.8**	**-0.2**
SHUL				*e*S	**Sg**	**05 02 19.1**	**+1.1**
TIPB	**Shuangxi**	**0.67**	**35**	↑↑P	**Pg**	**05 02 10.1**	**-0.1**
TWS1	**Kuangyinshan**	**0.68**	**2**	*e*P	**Pb**	**05 02 11.9**	**+0.4**
TWS1				*e*S	**Sb**	**05 02 21.1**	**-0.2**
WDJ	**Dajia District**	**0.69**	**264**	*e*P	**Pb**	**05 02 12.3**	**+0.6**
WDJ				*e*S	**Sb**	**05 02 21.7**	**+0.1**
WARBT	**Fenglin Townsh**	**0.70**	**181**	↑↑P	**Pg**	**05 02 10.7**	**+0.1**
WARBT				S	**Sg**	**05 02 19.5**	**-0.2**
SMLT	**Sun Moon Lake**	**0.70**	**220**	↑↑*e*P	**Pg**	**05 02 10.7**	**+0.1**
SMLT				*e*S	**Sg**	**05 02 19.9**	**+0.1**
VWDT	**VWDT**	**0.70**	**199**	*e*P	**Pg**	**05 02 10.7**	**-0.4**
VWDT				*e*S	**Sg**	**05 02 19.4**	**-0.3**
TCU	**Taichung**	**0.71**	**248**	*e*P	**Pb**	**05 02 12.8**	**+0.7**
TCU				*e*S	**Sb**	**05 02 22.8**	**+0.6**
TYC	**Yuchr**	**0.71**	**224**	↑↑P	**Pg**	**05 02 10.8**	**0.0**
TYC				*e*S	**Sg**	**05 02 19.4**	**-0.6**
TEGC	**Jichi Village**	**0.72**	**169**	*e*P	**Pb**	**05 02 11.9**	**-0.3**
NWF	**Wu-fen Shan**	**0.74**	**28**	*e*P	**Pg**	**05 02 11.8**	**+0.5**
WFSB	**Wu-fen Shan**	**0.74**	**28**	*e*P	**Pg**	**05 02 11.7**	**+0.3**
WWF	**Wufeng**	**0.74**	**239**	*e*P	**Pb**	**05 02 12.4**	**-0.2**
YM01	**YM01**	**0.74**	**12**	↑↑P	**Pb**	**05 02 12.3**	**-0.3**
NTST	**Danshui**	**0.74**	**4**	*e*P	**Pb**	**05 02 12.6**	**0.0**
NTST				*e*S	**Sn**	**05 02 24.4**	**-1.7**
SSLB	**Suanglung**	**0.75**	**213**	P	**Pg**	**05 02 10.9**	**-0.6**
SSLB	**Suanglung**	**0.75**	**213**	↑↑*e*P	**Pg**	**05 02 10.8**	**-

AXDP	**Jialang**	**3.15**	**279**	*eP*	**Pn**	**05 02 47.9**	**+0.3**

IDC ***16*** *05:06:27.1±0.8,4.°76S×153.°85E,h114km±6km,mb4.2/21, mbtmp4.6/24,MS3.1/8,Error ellipse: s-maj=15.4km s-min=9.7km az=107.0*

NEIC ***16*** *05:06:28.7±1.6,4.°64S±0.°09×153.°72E±0.°09,h116km±5km, mb4.6/42,Error ellipse: s-maj=16.4km s-min=8.2km az=48.0*

DJA ***16*** *05:06:36.6±2.1,5.°5S±15.°4E±1.°4,h189km±14km, M5.3/26,mb4.9/26,mB5.3/6,MLv6.0/1,Mw(mB)4.7/6*

ISC 16 05:06:26.1±0.4,**4.°60S**±0.°05×**153.°78E**±0.°05,**h100**km,**n157,** σ1§**45**/157,**mb4.7**/53,**2C-1D,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.66**	**284**		**Pn**	**05 06 57.2**	**+2.9**
MANU	**Manus Island**	**6.88**	**291**		**Pn**	**05 08 07.2**	**+2.7**
TATA	**Tatamba Isabel**	**7.07**	**122**	P	**Pn**	**05 08 10.0**	**+3.0**
TATA	**Tatamba Isabel**	**7.07**	**122**	S	**Sn**	**05 09 28.2**	**+2.3**
SAVO	**Savo Central**	**7.50**	**127**	P	**Pn**	**05 08 16.1**	**+3.2**
PMG	**Port Moresby**	**8.12**	**234**	P	**Pn**	**05 08 23.5**	**+2.3**
	149nm,0.4s,baz=49,slow=3.3,SNR=42						
PMG				S	**Sn**	**05 09 52.8**	**+1.4**
	225nm,0.7s,baz=143,slow=12,SNR=3.8						
PMG	**Port Moresby**	**8.12**	**234**	S	**Sn**	**05 09 55.4**	**+4.0**
PMG	**Port Moresby**	**8.12**	**234**	P	Pn	05 08 25.9	+4.7
PMG	**Port Moresby**	**8.12**	**234**	S	**Sn**	**05 09 55.6**	**+4.2**
PMG	**Port Moresby**	**8.12**	**234**	P	**Pn**	**05 08 25.3**	**+4.1**
PMG	**Port Moresby**	**8.12**	**234**	S	**Sn**	**05 09 53.5**	**+2.1**
PMG	**Port Moresby**	**8.12**	**234**	P	**Pn**	**05 08 25.4**	**+4.2**
PMG	**Port Moresby**	**8.12**	**234**	S	**Sn**	**05 09 53.7**	**+2.3**
PMG	**Port Moresby**	**8.12**	**234**		**Pn**	**05 08 23.0**	**+1.7**
PMG	**Port Moresby**	**8.12**	**234**	P	Pn	05 08 25.9	+4.7
	2.9nm3µm338nm,1.0s						
JAY	**Jayapura**	**13.21**	**279**	P	**Pn**	**05 09 31.4**	**+1.6**
	46nm,1.0s,baz=130,slow=9.5,SNR=4.5						
JAY	**Jayapura**	**13.21**	**279**	P	**P**	**05 09 35.0**	**-1.1**
	88nm,1.2s						
GENI	**Genyem**	**13.73**	**278**	P	**P**	**05 09 40.3**	**-1.5**
GENI	**Genyem**	**13.73**	**278**	P	**P**	**05 09 42.1**	**+0.3**
	169nm,0.6s						
COEN	**Coen**	**13.99**	**228**	P	**P**	**05 09 42.8**	**-1.9**
COEN	**Coen**	**13.99**	**228**	P	**P**	**05 09 42.6**	**-2.1**
COEN	**Coen**	**13.99**	**228**		**P**	**05 09 43.4**	**-1.2**
MTSU	**Mount Surprise**	**16.32**	**214**	P	**P**	**05 10 12.1**	**+1.5**
CTA	**Charters Tower**	**17.05**	**205**	P	**Pn**	**05 10 16.4**	**-2.0**
	47nm,1.0s,baz=22,slow=13,SNR=26						
CTA				LR	LR	05 16 47.5	
	comp=Z,82nm,18.9s,baz=42,slow=37						
CTA	**Charters Tower**	**17.05**	**205**	P	**P**	**05 10 20.1**	**+1.5**
CTAO	**Charters Tower**	**17.05**	**205**	P	**P**	**05 10 20.1**	**+1.5**
CTAO	**Charters Tower**	**17.05**	**205**		**P**	**05 10 19.9**	**+1.3**
CTAO				IAmb	IAmb	05 10 21.2	
	comp=Z,38nm,0.9s						
BAKI	**Biak**	**17.97**	**280**	P	**Pn**	**05 10 31.5**	**+1.9**
	comp=Z,94nm,0.8s						
GD1S	**Gladstone Soft**	**19.29**	**187**	P	**Pn**	**05 10 44.3**	**-0.9**
RKPI	**Ransiki, Papua**	**19.81**	**278**	P	**Pn**	**05 10 51.0**	**-0.3**
	comp=Z,123nm,1.0s						
GUMO	**Guam**	**20.12**	**334**	P	Pn	05 10 54.8	-0.1
	comp=Z,65nm,0.5s,baz=175,slow=12,SNR=3.6						
GUMO				LR	LR	05 18 54.0	
	comp=Z,25nm,18.6s,baz=109,slow=37						
	comp=Z,65nm,0.5s						
EIDS	**Eidsvold**	**20.81**	**187**	P	**P**	**05 11 00.3**	**+0.7**
EIDS	**Eidsvold**	**20.81**	**187**		**P**	**05 11 00.4**	**+0.9**
EIDS				IAmb	IAmb	05 11 02.8	
	comp=Z,38nm,0.8s						
QIS	**Mount Isa**	**21.01**	**220**	P	**P**	**05 11 01.9**	**+0.1**
QIS	**Mount Isa**	**21.01**	**220**	P	**P**	**05 11 01.8**	**0.0**
FAKI	**Fak Fak**	**21.55**	**274**	P	**P**	**05 11 08.3**	**+0.7**
FAKI	**Fak Fak**	**21.55**	**274**		**P**	**05 11 07.6**	**+0.1**
SIJI	**Sorong**	**22.78**	**279**	P	**P**	**05 11 20.5**	**0.0**
	comp=Z,46nm,0.7s,baz=64,slow=8.0,SNR=14						
	comp=Z,46nm,0.7s						
SIJI	**Sorong**	**22.78**	**279**	P	**P**	**05 11 20.2**	**-0.3**
	comp=Z,3µmcomp=Z,65nm,0.9s						
SWI	**Sorong**	**22.79**	**279**	P	**P**	**05 11 21.4**	**+0.8**
	comp=Z,82nm,0.9s						
TW1H	**Toowoomba 1 Ha**	**22.88**	**184**	P	**P**	**05 11 21.0**	**-0.4**
QLP	**Quilpie**	**23.68**	**202**	P	**P**	**05 11 28.5**	**-0.2**
QLP	**Quilpie**	**23.68**	**202**	P	**P**	**05 11 28.6**	**-0.2**
MTN	**Manton Dam**	**23.81**	**248**		**P**	**05 11 31.4**	**+1.3**
MTN				IAmb	IAmb	05 11 33.8	
	comp=Z,25nm,0.8s						
DRS	**Darwin Rock St**	**23.91**	**250**	P	**P**	**05 11 31.6**	**+0.7**
WB0	**Warramunga Arr**	**24.16**	**230**		**P**	**05 11 32.7**	**-0.5**
WR8	**Warramunga Arr**	**24.19**	**229**		**P**	**05 11 32.9**	**-0.5**
WR8				IAmb	IAmb	05 11 34.8	
	comp=Z,51nm,0.9s						
WRAB	**Tennant Creek**	**24.29**	**230**	P	**P**	**05 11 33.9**	**-0.5**
WRAB	**Tennant Creek**	**24.29**	**230**	P	**P**	**05 11 34.5**	**+0.1**
WRA	**Warramunga Arr**	**24.31**	**230**	P	**P**	**05 11 34.1**	**-0.4**
	comp=Z,53nm,0.8s,baz=55,slow=10.0,SNR=214						
WRA				ScP	**ScP**	**05 18 38.7**	**-3.1**
	comp=Z,0.5nm,0.7s,baz=54,slow=3.1,SNR=5.5						
	comp=Z,53nm,0.8s						
WRA	**Warramunga Arr**	**24.31**	**230**	P	**P**	**05 11 33.4**	**-1.1**
AULRC	**Lightning Ridg**	**25.30**	**192**	P	**P**	**05 11 43.5**	**+0.2**
ARMA	**Armidale**	**25.76**	**184**	P	**P**	**05 11 48.1**	**+0.5**
ARMA	**Armidale**	**25.76**	**184**	P	**P**	**05 11 48.2**	**+0.5**
ARMA	**Armidale**	**25.76**	**184**	P	**P**	**05 11 48.1**	**+0.5**
KNRA	**Kununurra**	**26.93**	**244**		**P**	**05 11 58.3**	**0.0**
KNRA				IAmb	IAmb	05 12 06.4	
	comp=Z,22nm,0.8s						
AS31	**Alice Springs**	**26.95**	**223**	P	**P**	**05 11 57.9**	**-0.6**
ASAR	**Alice Springs**	**26.96**	**223**	P	**P**	**05 11 57.8**	**-0.7**
	comp=Z,21nm,0.9s,baz=55,slow=9.0,SNR=150						
ASAR				S	**S**	**05 16 25.5**	**-3.0**
	comp=Z,2.7nm,1.0s,baz=30,slow=21,SNR=5.8						
ASAR				ScP	**ScP**	**05 18 46.1**	**-3.3**
	comp=Z,1.1nm,0.7s,baz=44,slow=3.4,SNR=6.7						
	comp=Z,21nm,0.9s						
CMSA	**Cobar Meteorol**	**27.85**	**195**	P	**P**	**05 12 06.0**	**-0.3**
AUDCS	**Dubbo College**	**27.91**	**189**	P	**P**	**05 12 06.7**	**-0.1**
STKA	**Stephens Creek**	**29.44**	**201**	P	**P**	**05 12 19.2**	**-1.2**
	comp=Z,8.3nm,0.6s,baz=2.5,slow=10,SNR=15						
STKA				LR	LR	05 24 07.6	
	comp=Z,42nm,18.8s,baz=22,slow=36						
	comp=Z,8.3nm,0.6s						
STKA	**Stephens Creek**	**29.44**	**201**	P	**P**	**05 12 19.7**	**-0.7**
STKA	**Stephens Creek**	**29.44**	**201**	P	**P**	**05 12 19.6**	**-0.8**
STKA	**Stephens Creek**	**29.44**	**201**		**P**	**05 12 19.7**	**-0.7**
CAN	**Canberra**	**30.89**	**188**	P	**P**	**05 12 33.9**	**+0.7**
GTOI	**Gorontalo**	**31.17**	**279**	P	**P**	**05 12 37.1**	**+1.2**
	comp=Z,24nm,0.6s						
HTT	**Hallett**	**31.85**	**204**	P	**P**	**05 12 41.1**	**-0.6**
HTT	**Hallett**	**31.85**	**204**	P	**P**	**05 12 41.2**	**-0.5**
BBOO	**Buckleboo**	**32.58**	**208**	P	**P**	**05 12 47.3**	**-0.8**
BBOO	**Buckleboo**	**32.58**	**208**	P	**P**	**05 12 47.2**	**-0.9**
BBOO				IAmb	IAmb	05 12 48.4	
	comp=Z,30nm,1.2s						
AUMBR	**Murray Bridge**	**33.21**	**202**	P	**P**	**05 12 53.2**	**-0.2**
TOO	**Toolangi**	**33.68**	**192**	P	**P**	**05 12 57.5**	**-0.1**
TOO				IAmb	IAmb	05 12 58.4	
	comp=Z,4.2nm,0.8s						
BRAT	**Ballarat**	**34.01**	**194**	P	**P**	**05 13 00.3**	**0.0**
AUMTC	**Mt Clear Colle**	**34.08**	**194**	P	**P**	**05 13 00.8**	**-0.1**
MYLDM	**Lahad Datu**	**36.55**	**285**	P	**P**	**05 13 23.4**	**+0.9**
MYLDM	**Lahad Datu**	**36.55**	**285**		**P**	**05 13 21.6**	**-0.9**
MYLDM	**Lahad Datu**	**36.55**	**285**	P	**P**	**05 13 23.2**	**+0.7**
	comp=Z,32nm,1.3s						
GLAD	**Gladstone**	**36.59**	**187**	P	**P**	**05 13 22.3**	**-0.2**
GLAD	**Gladstone**	**36.59**	**187**	P	**P**	**05 13 22.9**	**+0.4**
MBWA	**Marble Bar**	**36.91**	**240**	P	**P**	**05 13 24.2**	**-1.3**
PSA00	**Pilbara Seismi**	**36.97**	**240**	P	**P**	**05 13 25.6**	**-0.4**
PSA00	**Pilbara Seismi**	**36.97**	**240**	P	**P**	**05 13 25.0**	**-1.0**
PSA00				IAmb	IAmb	05 13 25.6	
	comp=Z,11nm,0.8s						
PSA00				PcP	**PcP**	**05 15 44.2**	**-1.1**
MOO	**Moorlands**	**38.13**	**188**	P	**P**	**05 13 36.0**	**+0.5**
TAU	**Tasmania Unive**	**38.58**	**188**	P	**P**	**05 13 39.7**	**+0.5**
TAU	**Tasmania Unive**	**38.58**	**188**	P	**P**	**05 13 39.9**	**+0.8**
MEEK	**Meekatharra**	**40.10**	**233**	P	**P**	**05 13 51.0**	**-1.2**
TCW	**Tory Channel**	**40.82**	**156**	P	**P**	**05 13 58.2**	**+0.3**
DCZ	**Deep Cove**	**42.35**	**166**	P	**P**	**05 14 09.8**	**-0.4**
KLBR	**Kellerberrin**	**43.15**	**227**	P	**P**	**05 14 15.6**	**-1.4**
KLBR	**Kellerberrin**	**43.15**	**227**	P	**P**	**05 14 15.2**	**-1.8**
MORW	**Morawa**	**43.23**	**231**	P	**P**	**05 14 16.4**	**-1.3**
MORW	**Morawa**	**43.23**	**231**	P	**P**	**05 14 16.6**	**-1.0**
MORW	**Morawa**	**43.23**	**231**	P	**P**	**05 14 16.3**	**-1.3**
MORW				IAmb	IAmb	05 14 17.1	
	comp=Z,17nm,0.7s						
BLDU	**Ballidu**	**43.44**	**229**	P	**P**	**05 14 17.8**	**-1.5**
NWAO	**Narrogin (SRO)**	**44.22**	**226**	P	**P**	**05 14 25.1**	**-0.4**
NWAO	**Narrogin (SRO)**	**44.22**	**226**	P	**P**	**05 14 24.3**	**-1.2**
NWAO				IAmb	IAmb	05 14 57.8	
	comp=Z,30nm,1.4s						
MUN	**Mundaring**	**44.48**	**228**	P	**P**	**05 14 26.5**	**-1.1**
BBJI	**Bungbulang**	**45.94**	**264**	P	**P**	**05 14 38.8**	**-0.8**
BBJI				IAmb	IAmb	05 14 40.0	
	comp=Z,11nm,0.7s						
KSRS	**Korea Array**	**48.27**	**332**	P	**P**	**05 14 58.1**	**+1.0**
	comp=Z,1.5nm,0.7s,baz=144,slow=7.1,SNR=4.8						
	comp=Z,1.5nm,0.7s						
NJ2	**Nanjing**	**49.31**	**320**	*eP*	**P**	**05 15 05.0**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
ASAJ	**Asahikawa**	**49.53**	**349**	LR	LR	05 34 43.9	
	comp=Z,18nm,19.4s,baz=71,slow=34						
USRK	**Ussuriysk Ar.**	**52.38**	**340**	P	**P**	**05 15 28.1**	**+0.1**
	comp=Z,3.2nm,0.6s,baz=179,slow=5.7,SNR=4.8						
	comp=Z,3.2nm,0.6s						
ENH	**Enshi**	**54.74**	**312**		**P**	**05 15 46.1**	**+0.5**
BNX	**BinXian**	**55.35**	**338**	⇑P	**P**	**05 15 49.8**	**+0.2**
BNX				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HNS	**HongShan**	**55.38**	**322**	⇑P	**P**	**05 15 50.8**	**+0.9**
HNS				pP	**sP**	**05 16 21.4**	**-2.5**
HNS				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KLR	**Kul'dur**	**56.94**	**343**	LR	LR	05 36 28.3	
	comp=Z,14nm,21.9s,baz=358,slow=32						
XAN	**Xi'an**	**57.15**	**316**	⇓P	**P**	**05 16 03.0**	**+0.3**
XAN				pP	pP	05 16 06.9	-19
XAN				pmax	pmax		
	comp=Z,18nm,0.7s						
XAN				LR	LR		
	comp=N,820nm,22.8s						
XAN				LR	LR		
	comp=E,620nm,21.4s						
XAN				LR	LR		
	comp=Z,970nm,15.4s						
PETK	**Petropavlovsk-**	**57.59**	**3**	P	**P**	**05 16 07.1**	**+1.7**
	comp=Z,3.7nm,0.6s,baz=145,slow=4.6,SNR=5.2						
	comp=Z,3.7nm,0.6s						
KMI2	**Kunming**	**57.69**	**304**	P	**P**	**05 16 08.9**	**+2.0**
KMI2				pmax	pmax		
	comp=Z,17nm,1.2s						
CMAR	**Chiang Mai Arr**	**58.68**	**295**	P	**P**	**05 16 14.7**	**+1.1**
	comp=Z,1.4nm,0.5s,baz=116,slow=5.7,SNR=11						
CMAR				pP	**pwP**	**05 16 41.0**	**-1.1**
	comp=Z,0.7nm,0.3s,baz=119,slow=12,SNR=1.7						
	comp=Z,1.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**58.68**	**295**	P	**P**	**05 16 13.7**	**+0.1**
XLT	**XiLinHaoTe**	**59.00**	**329**	*eP*	**P**	**05 16 15.6**	**+0.2**
XLT				pmax	pmax		
	comp=Z,20nm,0.5s						
XLT				pmax	pmax		
	comp=Z,310nm,5.9s						
PZH	**PanZhiHua**	**59.06**	**305**	P	**P**	**05 16 18.5**	**+2.3**
HEH	**HeiHe**	**59.19**	**341**	*eP*	**P**	**05 16 17.1**	**+0.6**
HEH				pmax	pmax		
	comp=Z,11nm,0.6s						
CD2	**Chengdu**	**59.35**	**310**	P	**P**	**05 16 18.4**	**+0.3**
CD2				pmax	pmax		
	comp=Z,50nm,0.6s						
HHC	**Hu-ho-hao-te**	**59.46**	**324**	*eP*	**P**	**05 16 22.9**	**+4.2**
HHC				pmax	pmax		
	comp=Z,16nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,4.6s						
LZH	**Lanzhou**	**61.77**	**315**	*eP*	**P**	**05 16 36.4**	**+1.8**
LZH				sP	PcP	05 17 30.0	+15
LZH				pmax	pmax		
	comp=Z,28nm,1.5s						
LZDM	**Lanzhou Array**	**61.81**	**315**	P	**P**	**05 16 36.6**	**+1.5**
	comp=Z,9.8nm,0.5s,baz=134,slow=6.4,SNR=20						
	comp=Z,9.8nm,0.5s						
MA2	**Magadan**	**64.02**	**358**	LR	LR	05 45 44.5	
	comp=Z,9.8nm,18.7s,baz=108,slow=37						
GTA2	**Gaotai**	**66.25**	**317**	P	**P**	**05 17 05.3**	**+1.5**
GTA2				pP	PcP	05 17 34.8	+1.6
GTA2				pmax	pmax		
	comp=Z,12nm,0.9s						
SONM	**Songino Array**	**66.68**	**327**	P	**P**	**05 17 07.3**	**+0.9**
	comp=Z,2.0nm,0.6s,baz=142,slow=6.4,SNR=11						
	comp=Z,2.0nm,0.6s						
SONM	**Songino Array**	**66.68**	**327**	P	**P**	**05 17 06.6**	**+0.2**
SHL	**Shillong**	**67.05**	**300**	P	**P**	**05 17 09.2**	**0.0**
SHL				IAmb	IAmb	05 17 11.2	
	comp=Z,7.1nm,0.6s						
CASY	**Casey**	**68.49**	**197**	P	**P**	**05 17 16.2**	**-1.0**
CASY				IAmb	IAmb	05 17 16.6	
	comp=Z,12nm,0.7s						
VNDA	**Vanda**	**72.99**	**178**	P	**P**	**05 17 44.0**	**-0.5**
	comp=Z,2.3nm,0.5s,baz=330,slow=6.8,SNR=23						
	comp=Z,2.3nm,0.5s						
VNDA	**Vanda**	**72.99**	**178**	P	**P**	**05 17 44.3**	**-0.1**
ACHA	**Angle Creek He**	**74.62**	**25**	P	**P**	**05 17 55.4**	**+1.1**
P17K	**Kvichak River**	**74.76**	**24**	P	**P**	**05 17 54.0**	**-0.9**
P17K				IAmb	IAmb	05 18 35.6	
	comp=Z,12nm,1.0s						
KDAK	**Kodiak Island**	**75.56**	**26**	P	**P**	**05 17 58.7**	**-0.9**
KDAK				IAmb	IAmb	05 18 31.9	
	comp=Z,18nm,1.1s						
L18K	**Granite Mounta**	**76.54**	**22**	P	**P**	**05 18 07.1**	**+2.0**
L18K				IAmb	IAmb	05 18 42.1	
	comp=Z,11nm,1.4s						
G16K	**Koyuk River**	**76.79**	**17**	P	**P**	**05 18 08.7**	**+2.4**
L19K	**White Mountain**	**77.20**	**22**	P	**P**	**05 18 10.7**	**+1.9**
MCK	**McKinley**	**80.31**	**22**	P	**P**	**05 18 26.4**	**+0.6**
MCK				IAmb	IAmb	05 19 02.7	
	comp=Z,8.4nm,1.1s						
MK31	**Makanchi Array**	**80.82**	**319**	P	**P**	**05 18 29.3**	**+0.4**
MKAR	**Makanchi Array**	**80.82**	**319**	P	**P**	**05 18 29.2**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=93,slow=7.9,SNR=19						
MKAR				pP	**pwP**	**05 18 58.2**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=114,slow=8.1,SNR=2.3						
	comp=Z,0.9nm,0.5s						
CCB	**Clear Creek Bu**	**81.21**	**22**	P	**P**	**05 18 30.4**	**-0.1**
ZALV	**Zalesovo Beam**	**81.53**	**326**	P	**P**	**05 18 31.6**	**-0.9**
	comp=Z,1.2nm,0.4s,baz=110,slow=5.7,SNR=5.3						
	comp=Z,1.2nm,0.4s						
ILAR	**Eielson Array**	**81.61**	**22**	P	**P**	**05 18 32.2**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=244,slow=5.9,SNR=11						
ILAR				pP	**pwP**	**05 19 01.4**	**-0.4**
	comp=Z,1.5nm,0.9s,baz=251,slow=6.0,SNR=5.9						
ILAR				LR	LR	05 58 01.1	
	comp=Z,8.9nm,18.0s,baz=149,slow=38						
	comp=Z,0.8nm,0.7s						
J25K	**Salcha River,**	**82.10**	**22**	P	**P**	**05 18 36.3**	**+0.9**
J25K				IAmb	IAmb	05 19 13.4	
	comp=Z,4.5nm,0.9s						
D23K	**Nanushuk River**	**82.57**	**17**	IAmb	IAmb	05 19 22.6	
	comp=Z,5.5nm,1.0s						
KDJ	**Kajisay**	**83.19**	**313**	P	**P**	**05 18 40.1**	**-1.6**
BMAR	**Burnt Mountain**	**83.73**	**20**	P	**P**	**05 18 44.5**	**+0.8**
KURBB	**Kurchatov Arra**	**84.25**	**322**	P	**P**	**05 18 45.9**	**-0.6**
	comp=Z,1.4nm,1.0s,baz=111,slow=4.0,SNR=7.3						
	comp=Z,1.4nm,1.0s						
K29M	**Barlow Dome**	**84.89**	**24**	IAmb	IAmb	05 19 30.1	
	comp=Z,4.1nm,1.1s						
QSPA	**South Pole Qui**	**85.36**	**180**	P	**P**	**05 18 50.9**	**-1.2**
	comp=Z,3.5nm,0.5s,baz=170,slow=1.0,SNR=48						
	comp=Z,3.5nm,0.5s						
QSPA	**South Pole Qui**	**85.36**	**180**	P	**P**	**05 18 50.8**	**-1.2**
QSPA				IAmb	IAmb	05 19 25.7	
	comp=Z,2.8nm,0.7s						
J30M	**Hart River**	**85.64**	**24**	IAmb	IAmb	05 19 33.4	
	comp=Z,5.1nm,1.1s						
MAW	**Mawson**	**86.12**	**203**	P	**P**	**05 18 53.7**	**-1.9**
	comp=Z,14nm,0.6s,baz=116,slow=5.6,SNR=10.0						
	comp=Z,14nm,0.6s						
BVAR	**Borovoye Array**	**89.67**	**323**	P	**P**	**05 19 12.0**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=94,slow=4.5,SNR=5.2						
BVAR				LR	LR	06 02 59.1	
	comp=Z,9.8nm,18.1s,baz=58,slow=38						
	comp=Z,1.1nm,0.6s						
NVAR	**Mina Array Bea**	**91.20**	**52**	P	**P**	**05 19 20.1**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=268,slow=5.4,SNR=4.4						
	comp=Z,0.5nm,0.7s						
YKA	**Yellowknife Ar**	**94.80**	**28**	P	**P**	**05 19 36.0**	**-0.3**
	comp=Z,0.1nm,0.6s,baz=276,slow=5.2,SNR=5.2						
	comp=Z,0.1nm,0.6s						
GERES	**GERESS Array B**	**124.39**	**329**	PKP	**PKPdf**	**05 25 12.8**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=48,slow=2.6,SNR=2.7						
LPAZ	**La Paz**	**133.65**	**118**	PKP	**PKPdf**	**05 25 32.0**	**-0.9**
	comp=Z,0.8nm,0.5s,baz=227,slow=4.1,SNR=5.7						
BOAV	**Boa Vista**	**145.70**	**92**	PKPdf	**PKPdf**	**05 25 53.0**	**-1.0**
BDFB	**Brasilia**	**150.50**	**133**	PKPbc	**PKPbc**	**05 26 05.6**	**-1.8**
	comp=Z,6.5nm,0.5s,baz=294,slow=1.0,SNR=18						
BDFB	**Brasilia**	**150.50**	**133**		**PKPbc**	**05 26 05.9**	**-1.5**
TORD	**Torodi Ar. Bea**	**151.17**	**289**	PKPbc	**PKPbc**	**05 26 07.3**	**-1.5**
	comp=Z,2.6nm,0.5s,baz=106,slow=1.9,SNR=29						

NEIC ***16*** *05:06:52.0±0.7,13.°6N±0.°1×120.°7E±0.°1,h107km±16km, mb4.4/13,Error ellipse: s-maj=18.9km s-min=17.2km az=98.0*

IDC ***16*** *05:06:52.7±0.9,13.°64N×120.°87E,h115km±9km,mb3.6/7, mbtmp4.0/7,Error ellipse: s-maj=47.0km s-min=17.5km az=61.0*

MAN ***16*** *05:06:53.0,13.°61N×120.°53E,h101km,MS3.4*

ISC 16 05:06:51.6±0.6,**13.°52N**±0.°07×**120.°50E**±0.°08,**h100**km,**n30,** σ1§**37**/34,**mb4.2**/14,**Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGP	**Puerto Galera**	**0.44**	**93**	*eP*	**Pn**	**05 07 08.6**	**+1.6**
PGP				*eS*	**Sn**	**05 07 18.8**	**+0.2**
TGY	**Tagaytay City**	**0.71**	**36**	P	**Pn**	**05 07 10.9**	**+1.6**
	2µm,0.3s,baz=243,slow=1.5,SNR=49						
TGY				S	**Sn**	**05 07 24.6**	**+2.1**
	2µm,0.3s,baz=340,slow=22,SNR=7.5						
TGY	**Tagaytay City**	**0.71**	**36**	*i P*	**Pn**	**05 07 10.9**	**+1.6**
TGY				*eS*	**Sn**	**05 07 24.3**	**+1.9**
GQP	**Guinayangan**	**1.93**	**78**	*i P*	**Pn**	**05 07 20.9**	**-2.3**
GQP				*eS*	**Sn**	**05 07 50.7**	**+3.3**
RCP	**Roxas**	**2.93**	**131**	*eP*	**Pn**	**05 07 38.8**	**+2.3**
DAV	**Davao City (W)**	**8.13**	**142**	Pn	**Pn**	**05 08 46.2**	**-0.7**
YOJ	**Yonaguni jima**	**11.14**	**12**	Pn	**Pn**	**05 09 26.2**	**-1.5**
CM31	**Chiang Mai Arr**	**21.29**	**286**	P	**P**	**05 11 30.8**	**+0.5**
CM31				IAmb	IAmb	05 11 35.8	
	comp=Z,7.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**21.29**	**286**	P	**P**	**05 11 33.3**	**+2.9**
	comp=Z,1.5nm,0.3s,baz=95,slow=7.4,SNR=23						
	comp=Z,1.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**21.29**	**286**	P	**P**	**05 11 30.5**	**+0.1**
CHTO	**Chiang Mai**	**21.36**	**287**		**P**	**05 11 32.0**	**+1.0**
MMRI	**Maumere**	**22.08**	**175**	P	**P**	**05 11 38.4**	**-0.3**
MMRI				IAmb	IAmb	05 11 54.4	
	comp=Z,25nm,0.5s						
GSI	**Gunungsitoli**	**25.73**	**244**	P	**P**	**05 12 13.4**	**+0.4**
SHL	**Shillong**	**29.44**	**298**	P	**P**	**05 12 46.6**	**+0.4**
SHL				IAmb	IAmb	05 12 47.8	
	comp=Z,14nm,0.7s						
WRA	**Warramunga Arr**	**35.94**	**157**	P	**P**	**05 13 42.7**	**0.0**
	comp=Z,1.3nm,0.8s,baz=332,slow=10.0,SNR=1.0						
	comp=Z,1.3nm,0.8s						
ASAR	**Alice Springs**	**39.22**	**160**	P	**P**	**05 14 09.3**	**-1.0**
	comp=Z,0.9nm,0.6s,baz=341,slow=9.3,SNR=1.4						
	comp=Z,0.9nm,0.6s						
MK31	**Makanchi Array**	**46.06**	**324**	P	**P**	**05 15 04.9**	**-0.5**
MKAR	**Makanchi Array**	**46.06**	**324**	P	**P**	**05 15 06.1**	**+0.7**
	comp=Z,0.8nm,0.4s,baz=130,slow=8.8,SNR=20						
	comp=Z,0.8nm,0.4s						
MKAR	**Makanchi Array**	**46.06**	**324**	P	**P**	**05 15 04.9**	**-0.6**
KDJ	**Kajisay**	**47.03**	**316**	P	**P**	**05 15 13.0**	**-0.3**
NRN	**Naryn**	**47.56**	**314**	P	**P**	**05 15 16.9**	**-0.7**
NRN				IAmb	IAmb	05 15 19.6	
	comp=Z,2.5nm,0.5s						
ZALV	**Zalesovo Beam**	**49.13**	**333**	P	**P**	**05 15 28.4**	**-0.5**
	comp=Z,1.2nm,0.3s,baz=116,slow=6.9,SNR=5.5						
	comp=Z,1.2nm,0.3s						
ARSB	**Arslanbob**	**49.64**	**313**	P	**P**	**05 15 33.1**	**-0.2**
ARSB				IAmb	IAmb	05 15 37.4	
	comp=Z

mb4.5/30,Error ellipse: s-maj=22.3km s-min=17.9km az=67.0
*IDC **16** 05:40:20.6±1.8,23°.90×179°.66E,h517^{km}±18^{km}, mb3.6/10,mbtmp4.4/11,Error ellipse: s-maj=15.1km s-min=14.6km az=70.0*
ISC 16 05:40:21.2±0.5,24°.15S±0°.07×179°.76E±0°.08,h526^{km},n93, σ1°35/96,mb4.4/25,3C,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.49**	**158**	P	**P**	**05 41 52.5**	**-1.3**
GLKZ	**Green Lake**	**5.50**	**158**	P	**P**	**05 41 54.5**	**+0.6**
GLKZ				S	**S**	**05 43 09.2**	**-0.5**
MSVF	**Nonsavu**	**6.58**	**346**	P	P	05 41 59.7	-4.8
	6.1nm,0.5s,baz=98,slow=23,SNR=8.9						
FUTU	**Fugatoga**	**10.00**	**12**	P	P	05 42 33.7	-5.3
NIUE	**Niue**	**10.84**	**64**	S	**S**	**05 44 47.7**	**-0.4**
OUZ	**Omahuta**	**12.26**	**204**	P	**P**	**05 43 05.0**	**+2.8**
WCZ	**Waipu Caves**	**12.64**	**200**	P	**P**	**05 43 08.2**	**+1.9**
MXZ	**Matakaoa Point**	**13.42**	**185**	P	**P**	**05 43 14.8**	**+0.4**
MXZ	**Matakaoa Point**	**13.42**	**185**	P	**P**	**05 43 14.6**	**+0.2**
MYRZ	**Mayor Island**	**13.43**	**192**	P	**P**	**05 43 18.1**	**+3.6**
MKAZ	**Moumakai**	**13.50**	**196**	P	**P**	**05 43 16.7**	**+1.5**
HAZ	**Te Kaha**	**13.66**	**187**	P	**P**	**05 43 15.5**	**-1.4**
HAZ				S	**S**	**05 45 40.9**	**-0.8**
WMGZ	**Waiomatatini S**	**13.67**	**185**	P	**P**	**05 43 17.7**	**+0.7**
PKGZ	**Pakihiroa**	**13.74**	**186**	P	**P**	**05 43 17.5**	**-0.2**
RUGZ	**Raukumara Rang**	**13.88**	**187**	P	**P**	**05 43 18.9**	**-0.5**
RUGZ				S	**S**	**05 45 42.9**	**-3.2**
OPRZ	**Ohinepanea**	**13.92**	**191**	P	**P**	**05 43 21.9**	**+2.3**
PUZ	**Puketiti**	**13.93**	**185**	P	**P**	**05 43 19.2**	**-0.5**
PUZ				S	**S**	**05 45 44.8**	**-2.2**
TOZ	**Tahuroa Road**	**14.02**	**194**	P	**P**	**05 43 21.2**	**+0.7**
TOZ	**Tahuroa Road**	**14.02**	**194**	P	**P**	**05 43 22.2**	**+1.6**
KMRZ	**Kaimai**	**14.03**	**193**	P	**P**	**05 43 23.6**	**+2.8**
TWGZ	**Tauwhareparae**	**14.06**	**186**	P	**P**	**05 43 21.0**	**-0.1**
URZ	**Urewera**	**14.24**	**188**	P	**P**	**05 43 21.3**	**-1.6**
	88nm,0.6s,baz=358,slow=1.8,SNR=84						
URZ				S	**S**	**05 45 48.2**	**-4.6**
	19nm,0.5s,baz=187,slow=23,SNR=14						
URZ	**Urewera**	**14.24**	**188**	P	**P**	**05 43 21.0**	**-1.9**
MWZ	**Matawai**	**14.26**	**187**	P	**P**	**05 43 22.7**	**-0.6**
MWZ				S	**S**	**05 45 51.6**	**-1.7**
CNGZ	**Carnagh Statio**	**14.35**	**185**	P	**P**	**05 43 23.8**	**-0.2**
RAGZ	**Rawiri**	**14.44**	**187**	P	**P**	**05 43 24.3**	**-0.7**
MUGZ	**Murupara**	**14.50**	**189**	P	**P**	**05 43 24.7**	**-1.0**
TLZ	**Tolley Road**	**14.58**	**193**	P	**P**	**05 43 27.7**	**+1.2**
RIGZ	**Rimuhau**	**14.61**	**186**	P	**P**	**05 43 26.6**	**-0.2**
RTZ	**Ruatahuna**	**14.61**	**189**		**P**	**05 43 27.0**	**+0.2**
PRGZ	**Paritu Road**	**14.81**	**186**	P	**P**	**05 43 28.8**	**-0.1**
HIZ	**Hauiti**	**14.91**	**195**	P	P	05 43 35.5	+5.6
MHGZ	**Mahia Peninsul**	**15.04**	**186**	P	**P**	**05 43 31.7**	**+0.4**
BKZ	**Black Stump Fm**	**15.22**	**190**		**P**	**05 43 32.3**	**-0.9**
QRZ	**Quartz Range**	**17.70**	**198**	P	**P**	**05 43 58.5**	**+1.2**
TKNZ	**Takaka Hill**	**17.77**	**197**	P	**P**	**05 43 59.7**	**+1.7**
LTZ	**Lake Taylor**	**19.59**	**197**		**P**	**05 44 16.1**	**+1.6**
INZ	**Inchbonnie**	**19.76**	**198**	P	**P**	**05 44 17.7**	**+1.6**
OXZ	**Oxford**	**20.15**	**197**	P	**P**	**05 44 20.3**	**+0.6**
RPZ	**Rata Peaks**	**20.78**	**198**	P	**P**	**05 44 26.8**	**+1.4**
	11nm,0.4s,baz=183,slow=0.1,SNR=11						
	11nm,0.4s						
ARMA	**Armidale**	**25.73**	**250**	P	**P**	**05 45 11.5**	**+1.7**
ARMA				IAmb	IAmb	05 45 23.4	
	comp=Z,40nm,1.4s						
EIDS	**Eidsvold**	**26.05**	**261**	P	**P**	**05 45 13.3**	**+0.7**
EIDS				IAmb	IAmb	05 45 33.8	
	comp=Z,32nm,1.5s						
CAN	**Canberra**	**28.82**	**240**	P	**P**	**05 45 38.7**	**+1.8**
CAN				IAmb	IAmb	05 45 47.9	
	comp=Z,53nm,1.5s						
CTAO	**Charters Tower**	**31.26**	**271**	P	**P**	**05 45 58.5**	**+0.5**
STKA	**Stephens Creek**	**34.42**	**248**	P	**P**	**05 46 25.4**	**+0.7**
	comp=Z,1.9nm,0.5s,baz=92,slow=10,SNR=5.9						
	comp=Z,1.9nm,0.5s						
STKA	**Stephens Creek**	**34.42**	**248**	P	**P**	**05 46 25.3**	**+0.7**
STKA				IAmb	IAmb	05 46 39.2	
	comp=Z,56nm,1.5s						
COEN	**Coen**	**35.94**	**280**	P	**P**	**05 46 37.0**	**-0.5**
COEN				IAmb	IAmb	05 47 08.2	
	comp=Z,12nm,1.4s						
BBOO	**Buckleboo**	**39.14**	**247**	P	**P**	**05 47 03.4**	**-0.1**
BBOO				IAmb	IAmb	05 47 05.5	
	comp=Z,32nm,1.5s						
AS31	**Alice Springs**	**41.77**	**261**		**P**	**05 47 24.5**	**-0.2**
ASAR	**Alice Springs**	**41.77**	**261**	P	**P**	**05 47 24.5**	**-0.2**
	comp=Z,3.3nm,0.5s,baz=96,slow=7.9,SNR=28						
	comp=Z,3.3nm,0.5s						
ASAR	**Alice Springs**	**41.77**	**261**	P	**P**	**05 47 24.2**	**-0.5**
WR8	**Warramunga Arr**	**42.02**	**267**	P	**P**	**05 47 25.8**	**-0.8**
WR8				IAmb	IAmb	05 47 26.1	
	comp=Z,5.0nm,0.4s						
WB0	**Warramunga Arr**	**42.16**	**267**		**P**	**05 47 26.9**	**-0.9**
WB0				IAmb	IAmb	05 47 27.6	
	comp=Z,8.9nm,0.7s						
WRA	**Warramunga Arr**	**42.17**	**266**	P	**P**	**05 47 27.0**	**-0.8**
	comp=Z,5.9nm,0.5s,baz=97,slow=8.4,SNR=146						
WRA				S	**S**	**05 53 08.5**	**-1.4**
	comp=Z,0.4nm,0.8s,baz=102,slow=16,SNR=3.3						
	comp=Z,5.9nm,0.5s						
WRA	**Warramunga Arr**	**42.17**	**266**		**P**	**05 47 25.9**	**-1.9**
FORT	**Forrest**	**46.02**	**250**	P	**P**	**05 47 56.8**	**-0.7**
FORT				IAmb	IAmb	05 47 57.4	
	comp=Z,8.6nm,0.6s						
VNDA	**Vanda**	**54.11**	**185**	P	**P**	**05 48 58.0**	**+2.0**
	comp=Z,0.6nm,0.4s,baz=18,slow=8.4,SNR=6.1						
	comp=Z,0.6nm,0.4s						
VNDA	**Vanda**	**54.11**	**185**	P	**P**	**05 48 58.1**	**+2.1**
PSA00	**Pilbara Seismi**	**54.90**	**260**	P	**P**	**05 49 01.8**	**-0.7**
PSA00	**Pilbara Seismi**	**54.90**	**260**	P	**P**	**05 49 01.7**	**-0.7**
PSA00				IAmb	IAmb	05 49 14.1	
	comp=Z,5.6nm,0.9s						
MBWA	**Marble Bar**	**55.11**	**260**	P	**P**	**05 49 03.2**	**-0.7**
CASY	**Casey**	**59.79**	**206**	P	**P**	**05 49 35.4**	**+0.4**
CASY				IAmb	IAmb	05 49 36.3	
	comp=Z,19nm,1.3s						
JAGI	**Jajag, Banyuwa**	**64.36**	**272**	P	**P**	**05 50 04.4**	**-1.2**
JAGI				IAmb	IAmb	05 50 39.3	
	comp=Z,26nm,1.4s						
QSPA	**South Pole Qui**	**65.93**	**180**	P	**P**	**05 50 16.3**	**+1.4**
	comp=Z,7.2nm,0.6s,baz=228,slow=1.2,SNR=54						
	comp=Z,7.2nm,0.6s						
QSPA	**South Pole Qui**	**65.93**	**180**	P	**P**	**05 50 16.6**	**+1.7**
QSPA				IAmb	IAmb	05 50 17.2	
	comp=Z,7.1nm,0.7s						
BELA	**Belgrano 2**	**76.21**	**173**	P	**P**	**05 51 14.3**	**-0.5**
MAW	**Mawson**	**77.44**	**200**	P	**P**	**05 51 22.7**	**+1.1**
	comp=Z,4.4nm,0.5s,baz=52,slow=22,SNR=1.8						
	comp=Z,4.4nm,0.5s						
MAW	**Mawson**	**77.44**	**200**	P	**P**	**05 51 23.0**	**+1.4**
TROLL	**Troll, Antarti**	**84.08**	**181**	P	**P**	**05 51 56.6**	**+0.5**
VNA3	**Neumayer Olymp**	**84.64**	**177**	⇑P	**P**	**05 51 58.6**	**-0.2**
	comp=Z,3.2nm,0.3s						
COYC	**Coyhaique**	**84.86**	**138**	P	**P**	**05 52 01.6**	**+1.3**
COYC				IAmb	IAmb	05 52 02.6	
	comp=Z,6.2nm,0.6s						
VNA2	**Neumayer--Watz**	**85.05**	**178**	⇑P	**P**	**05 52 00.7**	**-0.1**
	comp=Z,4.8nm,0.6s,baz=179,slow=5.4						
VNA1	**Neumayer--Stat**	**85.29**	**177**	⇑P	**P**	**05 51 59.9**	**-2.0**
	comp=Z,1.0nm,0.3s						
PLCA	**Paso Flores**	**88.25**	**134**	P	**P**	**05 52 18.1**	**+1.4**
	comp=Z,1.4nm,0.9s,baz=246,slow=5.8,SNR=5.0						
	comp=Z,1.4nm,0.9s						
PLCA	**Paso Flores**	**88.25**	**134**	P	**P**	**05 52 17.8**	**+1.2**
PLCA				IAmb	IAmb	05 52 46.9	
	comp=Z,9.4nm,1.5s						
CMAR	**Chiang Mai Arr**	**89.41**	**290**	P	**P**	**05 52 22.7**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=128,slow=4.6,SNR=4.3						
	comp=Z,0.6nm,0.3s						
BI02	**San Fabin de**	**89.82**	**130**	P	**P**	**05 52 25.1**	**+1.1**
BI02				IAmb	IAmb	05 52 25.9	
	comp=Z,3.6nm,0.8s						
TXAR	**Lajitas Array**	**90.75**	**58**	P	**P**	**05 52 29.0**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=211,slow=6.9,SNR=10						
	comp=Z,0.9nm,0.7s						
MT01	**Popeta**	**91.24**	**128**	P	**P**	**05 52 31.0**	**+0.4**
MT01				IAmb	IAmb	05 53 12.3	
	comp=Z,14nm,1.2s						
KURBB	**Kurchatov Arra**	**115.28**	**316**	PKP	**PKPdf**	**05 58 00.9**	**-1.6**
	comp=Z,0.4nm,0.4s,baz=92,slow=1.6,SNR=6.5						
BVAR	**Borovoye Array**	**120.48**	**319**	PKP	**PKPdf**	**05 58 11.6**	**-1.0**
	comp=Z,1.0nm,0.3s,baz=91,slow=1.3,SNR=5.6						
SPITS	**Spitsbergen Ar**	**125.36**	**356**	PKP	**PKPdf**	**05 58 20.6**	**-0.7**
	comp=Z,6.7nm,1.0s,baz=91,slow=5.8,SNR=5.8						
ARCES	**ARCESS Array B**	**132.09**	**348**	PKP	**PKPdf**	**05 58 33.6**	**-0.7**
	comp=Z,2.3nm,0.8s,baz=57,slow=2.3,SNR=6.3						
FINES	**FINESS Array B**	**138.61**	**341**	PKP	**PKPdf**	**05 58 46.6**	**+0.1**
	comp=Z,5.6nm,1.0s,baz=35,slow=2.1,SNR=6.5						
HFS	**Hagfors**	**142.75**	**349**	PKhKP	PKPpre	05 58 50.0	
	comp=Z,4.7nm,0.4s,baz=64,slow=3.4,SNR=44						
ARPR	**Arapgir-MALATY**	**144.22**	**304**	PKPdf	**PKPab**	**05 58 58.0**	**+0.5**
AKASG	**Malin Array Be**	**145.06**	**327**	PKP	**PKPdf**	**05 58 57.4**	**-0.9**
	comp=Z,0.9nm,0.3s,baz=47,slow=4.2,SNR=4.4						
KIEV	**Kiev**	**145.07**	**327**	PKPdf	**PKPdf**	**05 58 58.0**	**-0.3**
BRTR	**Keskin Array B**	**147.55**	**307**	PKPbc	**PKPbc**	**05 59 05.7**	**-0.9**
	comp=Z,1.4nm,0.6s,baz=143,slow=4.6,SNR=6.0						
BRTR	**Keskin Array B**	**147.55**	**307**		**PKPbc**	**05 59 04.8**	**-1.7**
MMAI	**Mount Meron Ar**	**147.60**	**294**	PKPbc	**PKPbc**	**05 59 06.5**	**-0.3**
	comp=Z,2.5nm,0.4s,baz=56,slow=5.1,SNR=7.7						
EKA	**Eskdalemuir Ar**	**148.78**	**3**	PKPbc	**PKPbc**	**05 59 07.9**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=344,slow=2.7,SNR=15						
TORD	**Torodi Ar. Bea**	**168.90**	**190**	PKPab	**PKPab**	**06 00 43.5**	**+0.6**
	comp=Z,2.5nm,0.9s,baz=192,slow=4.6,SNR=8.8						

*PDG **16** 05:53:46.8±0.1,42°.69N×18°.24E,h12^{km}±1^{km},MD2.5/1, ML2.4/10,Error ellipse: s-maj=0.3km s-min=0.2km az=90.0*
*RHSSO **16** 05:53:47.2±0.6,42°.67N×18°.21E,h4^{km}±3^{km},ML2.2/6*
*BEO **16** 05:53:47.3±0.5,42°.60N×18°.15E,h4^{km}±3^{km},ML2.1/5*
ISC 16 05:53:46.8±0.9,42°.63N±0°.03×18°.20E±0°.02,h7^{km}±6^{km}, n41,σ1°11/78,8C-5D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DBRK	**Dubrovnik**	**0.06**	**316**	*i* Pg		**Pg**	**05 53 48.9**	**+0.4**
DBRK				Sg		**Sg**	**05 53 50.2**	**+0.5**
TREB	**Trebinje**	**0.14**	**52**	⇓*i* Pg		**Pg**	**05 53 49.1**	**-0.7**
TREB				*e*Sg		**Sg**	**05 53 50.7**	**-1.2**
HCY	**Herceg Novi**	**0.28**	**130**	⇑*i* Pg		**Pb**	**05 53 52.8**	**-1.4**
HCY				*i* Sg		**Sb**	**05 53 57.9**	**-1.3**
HCY	**Herceg Novi**	**0.28**	**130**	⇑*i* Pg		**Pb**	**05 53 52.9**	**-1.3**
HCY				*e*Sg		**Sb**	**05 53 58.1**	**-1.1**
BRY	**Bratogost**	**0.37**	**43**	⇑*i* Pg		**Pg**	**05 53 52.8**	**-1.3**
BRY				*e*Sg		**Sg**	**05 53 57.7**	**-1.3**
BRY	**Bratogost**	**0.37**	**43**	⇓*i* Pg		**Pg**	**05 53 52.8**	**-1.3**
BRY				*e*Sg		**Sg**	**05 53 59.2**	**+0.2**
STON	**Ston**	**0.44**	**304**	*i* Pg		**Pg**	**05 53 55.1**	**-0.3**
STON				Sg		**Sg**	**05 54 02.2**	**+1.0**
STON	**Ston**	**0.44**	**304**	*e*Pg		**Pg**	**05 53 55.1**	**-0.3**
STON				*e*Sg		**Sg**	**05 54 02.2**	**+1.0**
CEME	**Cevo**	**0.54**	**99**	⇓*i* Pg		**Pg**	**05 53 56.2**	**-1.0**
CEME				*e*Sg		**Sg**	**05 54 04.8**	**+0.6**
NKME	**Niksic**	**0.57**	**76**	⇓*i* Pg		**Pg**	**05 53 56.6**	**-1.3**
NKME				*e*Sg		**Sg**	**05 54 05.5**	**+0.1**
BUM	**Brajici-Budva**	**0.61**	**122**	⇑*i* Pg		**Pg**	**05 53 58.5**	**-0.1**
BUM				*i* Sg		**Sb**	**05 54 08.0**	**-0.7**
PDG	**Podgorica**	**0.81**	**104**	*e*Pg		**Pg**	**05 54 02.0**	**-0.3**
PDG				*e*Sg		**Sb**	**05 54 14.4**	**+0.2**
PDG	**Podgorica**	**0.81**	**104**	*e*Pg		**Pg**	**05 54 01.8**	**-0.5**
PDG				*e*Sg		**Sb**	**05 54 14.3**	**+0.1**
PDG	**Podgorica**	**0.81**	**104**	⇑*i* Pg		**Pg**	**05 54 01.8**	**-0.5**
PDG				*e*Sg		**Sg**	**05 54 13.3**	**+0.5**
DRME	**Dracevica, Mon**	**0.85**	**121**	⇑*i* Pg		**Pg**	**05 54 02.7**	**-0.5**
DRME				*i* Sg		**Sb**	**05 54 16.4**	**+0.8**
DRME	**Dracevica, Mon**	**0.85**	**121**	⇑*i* Pg		**Pg**	**05 54 02.5**	**-0.7**
DRME				*e*Sg		**Sb**	**05 54 15.1**	**-0.5**
LSTV	**Lastovo**	**0.97**	**279**	*e*Pg		**Pg**	**05 54 04.1**	**-1.5**
LSTV				Sg		**Sb**	**05 54 18.6**	**-0.4**
KOME	**Kolasin**	**0.99**	**77**	⇓*i* Pg		**Pg**	**05 54 04.7**	**-1.2**
KOME				*e*Sg		**Sg**	**05 54 19.6**	**+0.8**
MAKA	**Makarska**	**1.09**	**308**	*i* Pg		**Pg**	**05 54 06.2**	**-1.5**
MAKA				Sg		**Sn**	**05 54 23.6**	**-0.2**
PLE	**Pljevlja**	**1.12**	**51**	*e*Pg		**Pg**	**05 54 06.3**	**-2.0**
PLE				*i* Sg		**Sg**	**05 54 23.5**	**+0.6**
RICI	**Ricice**	**1.17**	**318**	*e*Pg		**Pg**	**05 54 08.0**	**-1.2**
RICI				Sg		**Sb**	**05 54 25.6**	**+0.9**
IVA	**Berane**	**1.27**	**78**	*e*Pg		**Pg**	**05 54 10.0**	**-1.2**
IVA				*i* Sg		**Sn**	**05 54 29.4**	**+1.0**
PVY	**Plav**	**1.30**	**91**	*e*Pg		**Pg**	**05 54 10.7**	**-1.1**
PVY				*i* Sg		**Sn**	**05 54 30.5**	**+1.3**
RUDO	**Rudo**	**1.31**	**41**	*e*Pg		**Pg**	**05 54 10.3**	**-1.6**
RUDO				*e*Sg		**Sg**	**05 54 27.5**	**-1.4**
HVAR	**Hvar**	**1.40**	**294**	*e*Pn		**Pn**	**05 54 11.7**	**-1.0**
HVAR				Sg		**Sn**	**05 54 31.8**	**+0.4**
SJES	**Sjenica**	**1.45**	**64**	*e*Pg		**Pn**	**05 54 13.7**	**+0.2**
SJES				*e*Sg		**Sn**	**05 54 35.4**	**+2.6**
SJES	**Sjenica**	**1.45**	**64**	*e*Pg		**Pn**	**05 54 13.1**	**-0.4**
SJES				*e*Sg		**Sg**	**05 54 32.2**	**-1.2**
BBLS	**Lazi&#263i**	**1.52**	**35**	*e*Pn		**Pb**	**05 54 15.8**	**+0.5**
BBLS				*e*Sn		**Sg**	**05 54 36.4**	**+0.8**
BBLS	**Lazi&#263i**	**1.52**	**35**	⇑*i* Pg		**Pn**	**05 54 14.2**	**-0.3**
BBLS				*e*Sg		**Sn**	**05 54 34.7**	**+0.2**
IVAS	**Ivanjica**	**1.71**	**56**	*e*Pn		**Pn**	**05 54 18.2**	**+1.0**
IVAS				*e*Sn		**Sb**	**05 54 41.2**	**+0.7**
DIVS	**Divibare**	**1.97**	**41**	*e*Pn		**Pn**	**05 54 21.4**	**+1.5**
ZIRJ	**Zirje**	**2.13**	**300**	*e*Pn		**Pn**	**05 54 22.2**	**-0.6**
ZIRJ				Sn		**Sb**	**05 54 51.4**	**-1.0**
MORI	**Morici**	**2.20**	**305**	*e*Pn		**Pn**	**05 54 23.7**	**0.0**
MORI				Sn		**Sn**	**05 54 52.9**	**+1.7**
SELS	**Selova**	**2.22**	**74**	*e*Pn		**Pn**	**05 54 25.6**	**+1.5**
SELS				*e*Sn		**Sn**	**05 54 54.0**	**+2.1**
BLY	**Banja Luka**	**2.24**	**341**	*e*Pn		**Pn**	**05 54 24.7**	**+0.3**
BLY				*e*Sn		**Sn**	**05 54 51.9**	**-0.4**
TRUS	**Trudelj**	**2.26**	**45**	*e*Pn		**Pn**	**05 54 25.5**	**+0.8**
UDBI	**Udbina**	**2.59**	**318**	Sn		**Sn**	**05 55 03.4**	**+2.4**
DUGI	**Dugi Otok**	**2.67**	**302**	*e*Pn		**Pn**	**05 54 30.8**	**+0.6**
DUGI				Sn		**Sn**	**05 55 03.4**	**+0.7**
VIRC	**Vir**	**2.83**	**307**	*e*Pn		**Pn**	**05 54 32.6**	**+0.2**
VIRC				Sn		**Sn**	**05 55 08.6**	**+1.9**
NVLJ	**Novalja**	**3.10**	**310**	Sn		**Sn**	**05 55 14.7**	**+1.4**
ZAPS	**Zavoj**	**3.32**	**77**	*e*Pn		**Pn**	**05 54 41.3**	**+2.1**
ZAPS				*e*Sn		**Sn**	**05 55 20.5**	**+1.6**

IDC 16 06:22:38.8±2.1,59°.86N×29°.80W,h0^{km},mb3.4/5, mbtmp3.4/5,MS3.9/1,Error ellipse: s-maj=68.3km s-min=25.6km az=3.0,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**6.30**	**35**	LR	LR		06 26 10.5	
	comp=Z,1µm,20.1s,baz=225,slow=34							
AKASG	**Malin Array Be**	**33.76**	**79**	P	P		06 29 22.0	+0.3
	0.2nm,0.3s,baz=295,slow=8.8,SNR=4.6							
	0.2nm,0.3s							
YKA	**Yellowknife Ar**	**38.20**	**312**	P	P		06 29 59.5	-0.1
	0.9nm,1.0s,baz=51,slow=9.0,SNR=5.6							
	0.9nm,1.0s							
ILAR	**Eielson Array**	**47.04**	**329**	P	P		06 31 11.4	+0.1
	0.4nm,0.7s,baz=30,slow=9.0,SNR=5.0							
	0.4nm,0.7s							
TXAR	**Lajitas Array**	**57.09**	**272**	P	P		06 32 26.6	-0.2
	0.5nm,1.0s,baz=40,slow=6.5,SNR=3.9							
	0.5nm,1.0s							
MKAR	**Makanchi Array**	**60.21**	**47**	P	P		06 32 47.7	-0.5
	0.3nm,0.5s,baz=338,slow=5.5,SNR=5.7							
	0.3nm,0.5s							

*IDC **16** 06:29:05.8±0.8,59°.68N×29°.87W,h0^{km},mb3.9/16, mbtmp3.9/18,ML3.9/2,Error ellipse: s-maj=23.4km s-min=14.7km az=10.0*
*NEIC **16** 06:29:07.7±2.0,59°.9N±0°.1×29°.79W±0°.04,h10^{km}±1^{km}, mb4.4/61,Error ellipse: s-maj=18.5km s-min=4.3km az=180.0*
ISC 16 06:29:07.2±0.5,59°.82N±0°.09×29°.83W±0°.06,h10^{km},n84, σ0°85/67,mb4.4/45,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**6.34**	**35**	Pn		**Pn**	**06 30 42.5**	**+2.0**
	3.7nm,0.3s,baz=210,slow=5.5,SNR=8.5							
BORG				Sn		**Sn**	**06 31 52.6**	**-0.3**
	1.5nm,0.3s,baz=6.5,slow=22,SNR=6.2							
	15nm,0.4s							
BORG	**Borgarnes**	**6.34**	**35**			**Pn**	**06 30 38.7**	**-1.9**
EKA	**Eskdalemuir Ar**	**14.94**	**96**	Pn		**Pn**	**06 32 39.4**	**+1.2**
	baz=303,slow=9.6							
	0.2nm,0.3s							
KUQ	**Kuujjuuaa**	**19.78**	**282**	P		**P**	**06 33 37.0**	**-0.2**
SCHQ	**Schefferville**	**20.40**	**272**	P		**P**	**06 33 44.8**	**+0.8**
	2.5nm,0.8s,baz=165,slow=2.6,SNR=3.9							
	2.5nm,0.8s							
SCHQ	**Schefferville**	**20.40**	**272**	P		**P**	**06 33 43.2**	**-0.7**
ILON	**Igloolik, Nuna**	**23.48**	**316**			**P**	**06 34 15.0**	**-1.5**
ILON					IAmb	IAmb	06 34 18.7	
	comp=Z,16nm,1.5s							
ESDC	**Sonseca Array**	**25.89**	**130**	P		**P**	**06 34 39.0**	**0.0**
	comp=Z,3.1nm,1.2s,baz=335,slow=9.8,SNR=5.7							
	comp=Z,3.1nm,1.2s							
FINES	**FINESS Array B**	**26.76**	**62**	P		**P**	**06 34 47.1**	**+0.5**
	comp=Z,6.6nm,1.0s,baz=286,slow=8.2,SNR=2.5							
	comp=Z,6.6nm,1.0s							
FINES	**FINESS Array B**	**26.76**	**62**	P		**P**	**06 34 45.0**	**-1.6**
FIA1	**FINESS Array S**	**26.76**	**62**	P		**P**	**06 34 44.9**	**-1.8**
RES	**Resolute Bay**	**27.31**	**328**			**P**	**06 34 49.7**	**-1.8**
BUR08	**Bucovina Ar. S**	**33.74**	**86**	P		**P**	**06 35 46.8**	**-1.9**
BUR08				IAmb		IAmb	06 35 56.7	
	comp=Z,7.3nm,1.4s							
BURAR	**Bucovina Array**	**33.76**	**86**	P		**P**	**06 35 47.7**	**-1.2**
AKASG	**Malin Array Be**	**33.77**	**79**	P		**P**	**06 35 48.1**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=299,slow=8.5,SNR=7.8							
	comp=Z,0.2nm,0.3s							
A36M	**Sachs Harbour**	**36.36**	**329**			**P**	**06 36 10.7**	**-0.1**
A36M				IAmb		IAmb	06 36 17.7	
	comp=Z,3.5nm,0.8s							
YKAW1	**Yellowknife Wh**	**38.18**	**312**			**P**	**06 36 26.4**	**+0.1**
YKAW3	**Yellowknife Wh**	**38.18**	**312**	P		**P**	**06 36 25.8**	**-0.6**
YKA	**Yellowknife Ar**	**38.22**	**312**	P		**P**	**06 36 27.3**	**+0.6**
	comp=Z,1.5nm,1.0s,baz=51,slow=8.5,SNR=15							
	comp=Z,1.5nm,1.0s							
YKA	**Yellowknife Ar**	**38.22**	**312**	P		**P**	**06 36 26.8**	**+0.1**
TZTN	**Tazewell**	**41.20**	**260**	P		**P**	**06 36 52.2**	**+0.4**
F31M	**Tsiigehtchic**	**41.48**	**326**			**P**	**06 36 54.5**	**+0.9**
F31M				IAmb		IAmb	06 36 57.8	
	comp=Z,12nm,1.4s							
G31M	**Satah River**	**41.98**	**325**	P		**P**	**06 36 58.5**	**+0.7**
T47A	**Sharon Grove**	**42.64**	**264**	P		**P**	**06 37 03.2**	**-0.3**
T47A				IAmb		IAmb	06 37 08.2	
	comp=Z,10nm,1.1s							
H31M	**Peel River**	**42.77**	**324**			**P**	**06 37 04.7**	**+0.3**
H31M				IAmb		IAmb	06 37 06.7	
	comp=Z,8.6nm,1.1s							
F28M	**Old Crow**	**43.05**	**328**			**P**	**06 37 07.1**	**+0.6**
E27K	**Coleen River**	**43.08**	**329**			**P**	**06 37 07.5**	**+0.7**
E27K				IAmb		IAmb	06 37 10.7	
	comp=Z,12nm,1.4s							
BRTR	**Keskin Array B**	**43.66**	**88**	P		**P**	**06 37 12.8**	**+0.9**
	comp=Z,1.5nm,0.9s,baz=336,slow=5.8,SNR=4.0							
	comp=Z,1.5nm,0.9s							
BRTR	**Keskin Array B**	**43.66**	**88**	P		**P**	**06 37 11.9**	**0.0**
I30M	**Mount Dempster**	**43.79**	**324**	P		**P**	**06 37 13.2**	**+0.6**
B22K	**Teshekpuk Lake**	**44.16**	**336**	IAmb		IAmb	06 37 21.5	
	comp=Z,11nm,1.4s							
I29M	**Ogilvie Camp,**	**44.25**	**325**	IAmb		IAmb	06 37 18.2	
	comp=Z,8.3n

baz=288,slow=6.4
13nm,0.4s
EKA Eskdalemuir Ar 14.94 96 Pn **Pn 06 33 58.8 -1.0**
baz=315,slow=9.4
1.7nm,0.7s
KUQ Kuujjuuaa 19.78 282 Pn **Pn 06 35 00.3 +0.1**
NOA NORSAR Array B 20.09 69 P Pn 06 35 03.4 -0.6
1.9nm,1.1s,baz=286,slow=9.8,SNR=1.4
1.9nm,1.1s
SCHQ Schefferville 20.39 272 P **P 06 35 05.2 -0.2**
2.3nm,0.6s,baz=54,slow=6.4,SNR=4.2
2.3nm,0.6s
HFS Hagfors 21.52 70 P **P 06 35 16.4 -1.2**
4.2nm,1.1s,baz=287,slow=11,SNR=1.6
4.2nm,1.1s
ICQ Pointe Anglais 23.63 261 P **P 06 35 39.4 -0.4**
ICQ IAmb IAmb 06 36 19.9
comp=Z,18nm,1.3s
ESDC Sonseca Array 25.86 129 P **P 06 36 01.2 +0.8**
comp=Z,3.3nm,0.8s,baz=331,slow=8.8,SNR=9.1
comp=Z,3.3nm,0.8s
FINES FINESS Array B 26.80 62 P **P 06 36 10.6 +2.1**
comp=Z,2.1nm,0.8s,baz=151,slow=28,SNR=0.9
comp=Z,2.1nm,0.8s
RES Resolute Bay 27.36 328 P **P 06 36 13.6 +0.2**
BLKN Baker Lake 30.07 307 P **P 06 36 37.2 -0.4**
BUR08 Bucovina Ar. S 33.75 86 P **P 06 37 10.0 -0.3**
BUR08 IAmb IAmb 06 37 17.3
comp=Z,6.5nm,1.3s
BURAR Bucovina Array 33.78 86 P **P 06 37 10.2 -0.3**
KIEV Kiev 33.79 79 P **P 06 37 09.9 -0.5**
AKASG Malin Array Be 33.80 79 P **P 06 37 09.4 -1.1**
comp=Z,1.6nm,0.7s,baz=307,slow=8.3,SNR=5.2
comp=Z,1.6nm,0.7s
A36M Sachs Harbour 36.41 329 **P 06 37 33.0 +0.2**
A36M IAmb IAmb 06 37 37.1
comp=Z,4.3nm,0.8s
FFC Flin Flon 37.57 295 P **P 06 37 42.2 -0.7**
YKAW1 Yellowknife Wh 38.21 312 **P 06 37 48.0 -0.2**
YKA Yellowknife Ar 38.25 312 P **P 06 37 48.3 -0.1**
comp=Z,1.3nm,1.0s,baz=52,slow=8.5,SNR=6.2
comp=Z,1.3nm,1.0s
YKA Yellowknife Ar 38.25 312 P **P 06 37 47.8 -0.7**
S54A Dingess, Beckl 39.09 259 P **P 06 37 54.7 -1.1**
S54A IAmb IAmb 06 38 41.1
comp=Z,21nm,1.4s
INK Inuvik 40.88 326 P **P 06 38 10.2 -0.1**
F31M Tsiigehtchic 41.52 326 P **P 06 38 15.1 -0.4**
F31M IAmb IAmb 06 38 21.0
comp=Z,12nm,1.4s
G31M Satah River 42.02 325 P **P 06 38 19.3 -0.3**
F28M Old Crow 43.09 328 **P 06 38 28.4 0.0**
F28M IAmb IAmb 06 38 40.6
comp=Z,8.9nm,1.5s
E27K Coleen River 43.13 329 P **P 06 38 28.9 +0.2**
P40A Paris 43.17 271 IAmb IAmb 06 38 31.7
comp=Z,15nm,1.3s
BR131 Keskin Array S 43.68 88 P **P 06 38 32.4 -1.2**
BR131 IAmb IAmb 06 38 35.7
comp=Z,5.7nm,1.1s
BRTR Keskin Array B 43.68 88 P **P 06 38 35.0 +1.3**
comp=Z,1.7nm,0.9s,baz=1.3,slow=5.4,SNR=4.1
comp=Z,1.7nm,0.9s
BRTR Keskin Array B 43.68 88 P **P 06 38 32.9 -0.7**
CCM Cathedral Cave 43.89 269 P **P 06 38 34.7 -0.5**
CCM IAmb IAmb 06 38 37.5
comp=Z,15nm,1.4s
I29M Ogilvie Camp, 44.29 325 IAmb IAmb 06 38 51.5
comp=Z,12nm,1.4s
H27K Steamboat Moun 44.55 328 IAmb IAmb 06 38 42.6
comp=Z,3.6nm,0.8s
G26K Porcupine Rive 44.61 329 IAmb IAmb 06 38 44.5
comp=Z,4.0nm,0.8s
MGMO Mountain Grove 45.10 269 IAmb IAmb 06 38 46.8
comp=Z,5.1nm,0.9s
DAWY Dawson 45.56 325 IAmb IAmb 06 38 53.6
comp=Z,9.4nm,1.3s
LRAL Lakeview Retre 45.69 260 IAmb IAmb 06 39 00.1
comp=Z,7.7nm,1.1s
M29M Somme Creek 46.50 323 IAmb IAmb 06 39 01.3
comp=Z,8.4nm,1.1s
WHAR Wooly Hollow 46.56 267 **P 06 38 56.1 -0.3**
L27K Beaver Creek, 47.04 325 IAmb IAmb 06 39 05.7
comp=Z,7.2nm,1.4s
ILAR Eielson Array 47.11 329 P **P 06 39 00.8 +0.4**
comp=Z,1.0nm,0.8s,baz=36,slow=7.5,SNR=7.1
ILAR PcP **PcP 06 40 32.0 +0.1**
comp=Z,0.8nm,1.0s,baz=28,slow=3.8,SNR=3.4
comp=Z,1.0nm,0.8s
ILAR Eielson Array 47.11 329 P **P 06 38 59.9 -0.4**
ILAR PcP **PcP 06 40 31.8 -0.1**
E19K Redstone River 47.37 335 IAmb IAmb 06 39 04.5
comp=Z,4.2nm,0.8s
TIXI Tiksi 48.04 9 P **P 06 39 08.3 +0.9**
comp=Z,4.2nm,0.3s,baz=20,slow=6.5,SNR=6.2
comp=Z,4.2nm,0.3s
TIXI Tiksi 48.04 9 **P 06 39 08.1 +0.6**
TIXI IAmb IAmb 06 39 10.4
comp=Z,6.4nm,1.1s
BPAW Bear Paw Mtn. 48.71 330 IAmb IAmb 06 39 13.5
comp=Z,3.2nm,0.7s
AB31 Akbulak array 49.25 60 **P 06 39 17.7 +0.7**
AB31 IAmb IAmb 06 39 18.6
comp=Z,7.9nm,1.1s
ABKAR Akbulak array 49.25 60 P **P 06 39 17.7 +0.6**
PDAR Pinedale Array 49.45 288 P **P 06 39 18.2 -0.7**
comp=Z,0.5nm,0.6s,baz=68,slow=7.2,SNR=4.2
comp=Z,0.5nm,0.6s
PDAR Pinedale Array 49.45 288 P **P 06 39 18.6 -0.3**
BVAR Borovoye Array 50.73 50 P **P 06 39 29.8 +1.5**
comp=Z,0.9nm,0.7s,baz=307,slow=5.4,SNR=3.7
comp=Z,0.9nm,0.7s
TORD Torodi Ar. Bea 52.04 140 P **P 06 39 37.5 -0.9**
comp=Z,1.4nm,0.7s,baz=323,slow=7.6,SNR=6.9
comp=Z,1.4nm,0.7s
TORD Torodi Ar. Bea 52.04 140 P **P 06 39 39.0 +0.5**
TORD IAmb IAmb 06 40 18.3
comp=Z,3.8nm,0.8s
DKNS Dickens 52.21 273 IAmb IAmb 06 39 42.1
comp=Z,7.7nm,1.0s
ABTX Abilene, Hawle 52.39 271 IAmb IAmb 06 39 43.0
comp=Z,6.9nm,1.0s
BRDY Brady 53.14 270 IAmb IAmb 06 39 47.4
comp=Z,3.9nm,0.8s
SAND Sanderson 55.79 272 IAmb IAmb 06 40 08.0
comp=Z,5.6nm,0.9s
ALPN Alpine 56.22 273 **P 06 40 09.7 +0.8**
ALPN IAmb IAmb 06 40 10.9
comp=Z,4.4nm,1.1s
KVN Kaiserville 56.41 291 P **P 06 40 10.8 +0.5**
NVAR Mina Array Bea 57.01 291 P **P 06 40 15.0 +0.4**
comp=Z,0.5nm,0.8s,baz=39,slow=7.4,SNR=2.5
comp=Z,0.5nm,0.8s
NVAR Mina Array Bea 57.01 291 P **P 06 40 14.7 +0.1**
TXAR Lajitas Array 57.08 273 P **P 06 40 15.7 +0.6**
comp=Z,0.4nm,0.8s,baz=42,slow=6.5,SNR=4.3
comp=Z,0.4nm,0.8s
TXAR Lajitas Array 57.08 273 P **P 06 40 15.0 -0.1**
KKAR Karatay Array 58.63 58 **P 06 40 25.6 -0.1**
MK31 Makanchi Array 60.29 47 P **P 06 40 37.3 +0.2**
MKAR Makanchi Array 60.29 47 P **P 06 40 37.2 0.0**
comp=Z,1.0nm,0.7s,baz=332,slow=5.7,SNR=5.1
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 60.29 47 P **P 06 40 36.9 -0.2**
OTAV Otavalo 70.23 233 **P 06 41 42.6 +0.2**
OTAV IAmb IAmb 06 41 45.6
comp=Z,4.2nm,1.1s
BDFB Brasilia 76.57 198 P **P 06 42 18.9 -0.3**
comp=Z,5.5nm,0.9s,baz=335,slow=3.7,SNR=6.2
comp=Z,5.5nm,0.9s
BDFB Brasilia 76.57 198 **P 06 42 19.9 +0.7**
SIV San Ignacio 79.62 210 P **P 06 42 37.5 +1.5**
comp=Z,3.4nm,0.9s,baz=20,slow=4.2,SNR=8.8
comp=Z,3.4nm,0.9s
MJB9 Matsu-Tunnel 83.54 10 P **P 06 42 56.6 -0.1**
MAJO Matsushiro 83.54 10 P **P 06 42 55.2 -1.5**
MJAR Matsushiro Arr 83.54 10 P **P 06 42 55.8 -0.9**
comp=Z,2.2nm,0.8s,baz=355,slow=8.8,SNR=4.3
comp=Z,2.2nm,0.8s
MJAR Matsushiro Arr 83.54 10 P **P 06 42 56.9 +0.2**
QSPA South Pole Qui 149.66 180 PKPbc **PKPbc 06 50 16.2 -0.8**
comp=Z,4.7nm,1.1s,baz=151,slow=1.0,SNR=5.0
QSPA South Pole Qui 149.66 180 **PKPbc 06 50 16.5 -0.4**

*IDC **16** 06:33:08.5±0.4,59°.83N×30°.02W,h0km,mb4.2/32, mbtmp4.2/35,ML4.0/3,MS4.6/25,Error ellipse:*
s-maj=13.6km s-min=9.7km az=176.0
*MOS **16** 06:33:09.0±0.9,59°.84N×29°.96W,h10km,mb4.9/42, MS4.6/10,Error ellipse: s-maj=9.2km s-min=7.0km az=69.1*
*BJI **16** 06:33:10.0,60°.45N×30°.18W,h7km,mB5.2/8,mb4.7/37, Ms5.0/19,Ms7 4.8/20*
*NEIC **16** 06:33:11.0±1.4,59°.86N±0°.04×30°.0W±0°.1,h10km±1km, mb4.9/364,Error ellipse: s-maj=12.8km s-min=4.0km az=120.0*
*GFZ **16** 06:33:11.4,59°.91N×29°.93W,h11km,MW5.1,Moment Tensor Solution. s26 Moment tensor: Mrr=5.44; Mθθ 1.47; Mφφ3.98; Mrθ-0.17; Mrφ 0.87; Mθφ-1.12; Fault plane solution: NP1:φs198.00000°,δ38.00000°, λ-87.00000°. NP2:φs15.00000°,δ51.00000°,λ-91.00000°. Principal axes: T 4.3800, Plg6.0000°, Azm107.0000°; N 1.2000, Plg1.0000°, Azm16.0000°; P -5.5800, Plg83.0000°, Azm274.0000°;*
*GCMT **16** 06:33:12.0±0.2,59°.88N±0°.02×29°.73W±0°.02,h12km, MW5.1/137,Moment Tensor Solution. s34,c39; s137,c242; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-6.17±.12; Mθθ0.15±.14; Mφφ6.02±.10; Mrθ2.05±.55; Mθφ1.22±.10; Mrφ0.50±.45; Best double couple: Mo6.55400×10¹⁶ NP1:φs356.00000°,δ43.00000°, λ-114.00000°. NP2:φs207.00000°,δ51.00000°, λ-70.00000°. Principal axes: T 6.3290, Plg4.0000°, Azm283.0000°; N 0.4460, Plg16.0000°, Azm14.0000°; P -6.7780, Plg74.0000°, Azm178.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*INMG **16** 06:33:14.0±6.2,59°.73N×29°.95W,h10km,M4.5,mb5.0, Ms4.4,#DIST_RANGE: DISTANT*
*BGR **16** 06:33:18.3,59°.47N×29°.04W,h33km,mb4.8*
ISC 16 06:33:10.4±0.3,59°.86N±0°.05×29°.97W±0°.04,h10km,n695, σ1§47/561,**mb4.8**/254,**MS4.6**/37,**25C-27D,Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
BORG	**Borgarnes**	**6.35**	**36**	Pn		**Pn**	**06 34 43.6**	**-0.2**
	8.6nm,0.3s,baz=234,slow=4.7,SNR=13							
BORG				Sn		**Sn**	**06 35 55.2**	**-1.1**
	1.2nm,0.3s,baz=275,slow=17,SNR=1.5							
	35nm,0.5s							
BORG	**Borgarnes**	**6.35**	**36**	Pn		**Pn**	**06 34 43.9**	**0.0**
BORG	**Borgarnes**	**6.35**	**36**	P		**Pn**	**06 34 43.9**	**0.0**
ANGG	**Ammassalik, Gr**	**6.76**	**332**	Pn		**Pn**	**06 34 49.5**	**-0.1**
SFJD	**Kangerlussuaq**	**11.64**	**317**	LR		LR	06 39 40.8	
	comp=Z,6μm,21.3s,baz=121,slow=34							
SUMG	**Summit**	**13.20**	**349**			**Pn**	**06 36 19.0**	**+1.0**
SUMG	**Summit**	**13.20**	**349**	P		**Pn**	**06 36 19.0**	**+1.0**
ESK	**Eskdalemuir**	**15.00**	**96**	Pn		**Pn**	**06 36 42.3**	**+0.1**
ESK				IAmb		IAmb	06 36 48.7	
	comp=Z,64nm,1.4s							
ESK	**Eskdalemuir**	**15.00**	**96**	P		**Pn**	**06 36 42.3**	**+0.1**
ESK				pmax		pmax		
	comp=Z,65nm,1.4s							
EKA	**Eskdalemuir Ar**	**15.01**	**96**	Pn		**Pn**	**06 36 40.3**	**-2.1**
	baz=303,slow=9.1							
EKA				LR		LR	06 41 35.6	
	comp=Z,4μm,18.5s,baz=266,slow=34							
	comp=Z,1.5nm,0.7s							
DAG	**Danmarks Havn**	**17.43**	**9**	P		**Pn**	**06 37 10.6**	**-2.7**
FRB	**Frobisher Bay**	**18.43**	**299**	P		**P**	**06 37 25.3**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=79,slow=11,SNR=5.6							
FRB				LR		LR	06 43 41.4	
	comp=Z,4μm,19.1s,baz=107,slow=34							
	comp=Z,3.5nm,0.8s							
KUQ	**Kuujjuuaa**	**19.70**	**282**	P		**P**	**06 37 39.7**	**+0.2**
KONO	**Kongsberg**	**19.74**	**73**	*ce*P		**Pn**	**06 37 40.6**	**-0.8**
KONO				pmax		pmax		
	comp=Z,145nm,2.5s							
NOA	**NORSAR Array B**	**20.11**	**69**	LR		LR	06 44 25.0	
	comp=Z,2μm,21.6s,baz=285,slow=34							
SCHQ	**Schefferville**	**20.32**	**272**	P		**P**	**06 37 45.7**	**-0.6**
	comp=Z,7.1nm,0.6s,baz=66,slow=6.9,SNR=14							
SCHQ				LR		LR	06 44 24.9	
	comp=Z,2μm,18.6s,baz=60,slow=33							
	comp=Z,7.1nm,0.6s							
SCHQ	**Schefferville**	**20.32**	**272**			**P**	**06 37 46.4**	**+0.1**
SCHQ				IAmb		IAmb	06 37 51.1	
	comp=Z,65nm,1.6s							
UCC	**Uccle**	**21.30**	**100**			**P**	**06 37 58.3**	**+1.4**
UCC				IAmb		IAmb	06 38 02.2	
	comp=Z,87nm,1.5s							
UCC	**Uccle**	**21.30**	**100**	P		**P**	**06 37 58.3**	**+1.4**
UCC				pmax		pmax		
	comp=Z,87nm,1.5s							
UCC	**Uccle**	**21.30**	**100**	*d*P		**P**	**06 37 59.8**	**+2.9**
TULEG	**Thule**	**21.35**	**336**			**P**	**06 37 58.3**	**+1.0**
TULEG				IAmb		IAmb	06 38 02.2	
	comp=Z,99nm,1.7s							
HFS	**Hagfors**	**21.55**	**70**	P		**P**	**06 37 59.6**	**+0.1**
	comp=Z,6.4nm,0.9s,baz=289,slow=9.2,SNR=5.1							
HFS				LR		LR	06 45 18.1	
	comp=Z,2μm,20.7s,baz=288,slow=34							
	comp=Z,6.4nm,0.9s							
BMRD	**Maredsous**	**21.82**	**100**	*d*P		**P**	**06 38 01.6**	**-0.9**
	comp=Z,22nm,1.3s							
DOU	**Dourbes**	**21.86**	**101**	*d*P		**P**	**06 38 02.6**	**-0.3**
BGES	**Gesves**	**21.92**	**100**	*d*P		**P**	**06 38 03.3**	**-0.3**
	comp=Z,26nm,1.2s							
BCLA	**Clavier**	**22.01**	**100**	*d*P		**P**	**06 38 04.4**	**-0.1**
IBBN	**Ibbenburen**	**22.11**	**93**	*e*P		**P**	**06 38 05.1**	**-0.5**
	comp=Z,42nm,1.1s,baz=307,slow=9.0							
CLF	**Chambon-Foret**	**22.11**	**108**			**P**	**06 38 06.6**	**+1.0**
RCHB	**Rochefort**	**22.14**	**100**	*d*P		**P**	**06 38 04.7**	**-1.2**
MEM	**Membach**	**22.24**	**99**	*d*P		**P**	**06 38 06.5**	**-0.6**
BTNL	**Ternell**	**22.32**	**98**	*d*P		**P**	**06 38 07.1**	**-0.7**
	comp=Z,14nm,1.5s							
PGAV	**Gavieira, Arco**	**22.36**	**134**	*e*LR		LR	06 41 02.2	
PGAV				*i* IAms_20		IAms_20	06 45 15.0	
	comp=Z,1μm,18.0s							
POIN	**Pond Inlet**	**22.36**	**324**			**P**	**06 38 08.1**	**0.0**
BHOU	**Houvegnez**	**22.40**	**99**	*d*P		**P**	**06 38 08.7**	**0.0**
BSEG	**Bad Segeberg**	**22.50**	**87**	*e*P		**P**	**06 38 10.1**	**+0.3**
	comp=Z,46nm,1.5s,baz=307,slow=9.0							
RETH	**Rethem/Aller,**	**22.67**	**91**	*e*P		**P**	**06 38 11.7**	**+0.2**
	comp=Z,142nm,1.9s,baz=307,slow=9.0							
WLF	**Walferdange**	**22.91**	**100**	*d*P		**P**	**06 38 14.7**	**+0.6**
POLO	**Lamas de Ólo**	**23.05**	**133**	P		**P**	**06 38 18.4**	**+2.7**
PBRG	**Braganca**	**23.07**	**131**	*e*P		**P**	**06 38 16.7**	**+0.8**
PBRG				*i* IAmb		IAmb	06 38 20.7	
	comp=Z,47nm,1.7s							
PVRL	**Vila Real**	**23.16**	**133**	*e*P		**P**	**06 38 17.6**	**+0.8**
PVRL				*i* IAmb		IAmb	06 38 20.1	
	comp=Z,98nm,1.7s							
ILON	**Igloolik, Nuna**	**23.40**	**315**			**P**	**06 38 18.2**	**-0.7**
ILON				IAmb		IAmb	06 38 22.2	
	comp=Z,28nm,1.1s							
MVO	**Moncorvo**	**23.51**	**132**	*e*P		**P**	**06 38 22.5**	**+2.2**
MVO				*e*LR		LR	06 41 45.9	
MVO				*i* IAMs_20		IAMs_20	06 45 58.9	
	comp=Z,1μm,18.0s							
ICQ	**Pointe Anglais**	**23.59**	**261**	P		**P**	**06 38 20.3**	**-0.7**
ICQ				IAmb		IAmb	06 38 25.6	
	comp=Z,70nm,1.7s							
CLZ	**Clausthal**	**23.69**	**92**	*e*P		**P**	**06 38 22.0**	**-0.1**
	comp=Z,72nm,1.6s,baz=307,slow=9.0							
FLTG	**Flechtingen**	**23.85**	**90**	*e*P		**P**	**06 38 22.7**	**-0.7**
	comp=Z,55nm,1.4s,baz=307,slow=9.0							
PCAS	**Casmilo, Conde**	**23.96**	**136**	*e*P		**P**	**06 38 25.7**	**+1.0**
MTE	**Manteigas**	**23.99**	**134**	*e*P		**P**	**06 38 23.8**	**-1.2**
MTE				*i* IAmb		IAmb	06 38 38.0	
	comp=Z,50nm,2.1s							
MTE				*e*LR		LR	06 41 01.1	
MTE				*i* IAMs_20		IAMs_20	06 46 02.3	
	comp=Z,1μm,18.0s							
PSBE	**So Bento**	**24.34**	**137**	*e*P		**P**	**06 38 30.4**	**+2.3**
PSBE				*i* IAmb		IAmb	06 38 39.2	
	comp=Z,114nm,1.8s							
ECH	**Echery**	**24.37**	**102**	P		**P**	**06 38 27.8**	**-0.6**
ECH	**Echery**	**24.37**	**102**	P		**P**	**06 38 27.8**	**-0.6**
ECH				pmax		pmax		
	comp=Z,25nm,1.4s							
PSARD	**Sardoal**	**24.48**	**136**	*e*P		**P**	**06 38 30.5**	**+1.1**
BATG	**Bathurst New B**	**24.50**	**255**	P		**P**	**06 38 28.1**	**-1.5**
BATG				IAmb		IAmb	06 38 33.9	
	comp=Z,27nm,1.2s							
PCBR	**Castelo Branco**	**24.51**	**135**	*e*P		**P**	**06 38 30.4**	**+0.7**
ARCES	**ARCESS Array B**	**24.67**	**44**	P		**P**	**06 38 30.9**	**0.0**
	comp=Z,15nm,0.9s,baz=318,slow=4.9,SNR=8.2							
ARCES				LR		LR	06 46 24.6	
	comp=Z,1μm,18.9s,baz=279,slow=32							
	comp=Z,15nm,0.9s							
ARCES	**ARCESS Array B**	**24.67**	**44**	P		**P**	**06 38 31.5**	**+0.6**
ARCES	**ARCESS Array B**	**24.67**	**44**	P		**P**	**06 38 31.5**	**+0.6**
ARCES				pmax		pmax		
	comp=Z,103nm,1.8s							
PMRV	**Marv??o**	**24.90**	**135**	*e*P		**P**	**06 38 36.0**	**+2.7**
PMRV				*i* IAmb		IAmb	06 38 37.3	
	comp=Z,59nm,1.8s							
PMRV				*e*LR		LR	06 42 15.0	
PMRV				*i* IAMs_20		IAMs_20	06 46 29.0	
	comp=Z,1μm,18.0s							
PMTG	**Montargil**	**24.93**	**137**	*e*P		**P**	**06 38 33.6**	**+0.1**
PMTG				*i* IAmb		IAmb	06 38 37.6	
	comp=Z,73nm,1.4s							
STU	**Stuttgart**	**25.01**	**99**	P		**P**	**06 38 34.7**	**+0.6**
STU	**Stuttgart**	**25.01**	**99**	P		**P**	**06 38 34.7**	**+0.6**
STU				pmax		pmax		
	comp=Z,25nm,0.5s							
PARRA	**Arraiolos**	**25.22**	**137**	*e*P		**P**	**06 38 36.1**	**0.0**
PARRA				*i* IAmb		IAmb	06 38 38.0	
	comp=Z,52nm,1.6s							
PESTR	**Estremoz**	**25.33**	**136**			**P**	**06 38 37.5**	**+0.4**
PESTR				IAmb		IAmb	06 38 41.1	
	comp=Z,44nm,1.2s							
PESTR	**Estremoz**	**25.33**	**136**	*e*P		**P**	**06 38 37.5**	**+0.4**
PESTR				*i* IAmb		IAmb	06 38 40.7	
	comp=Z,51nm,1.2s							
CLL	**Collm**	**25.34**	**90**	*e*P		**P**	**06 38 36.0**	**-1.0**
CLL				*e*S		**S**	**06 42 56.0**	**-6.9**
CLL				pmax		pmax		
	comp=Z,20nm,1.5s							
CLL				MLR		MLR		
	comp=Z,2μm,19.0s							
CLL	**Collm**	**25.34**	**90**	*e*P		**P**	**06 38 36.0**	**-1.0**
	comp=Z,20nm,1.5s							
CLL				*i* x		x	06 38 49.2	
CLL				*e*PP		**PnPn**	**06 39 14.0**	**+2.5**
CLL				*e*S		**S**	**06 42 56.0**	**-6.9**
CLL				*e*x		x	06 43 50.0	
CLL				*e*SSS		SSS	06 44 15.0	
CLL				AMS		AMS	06 48 00.0	
	comp=Z,2μm,19.0s							
CLL	**Collm**	**25.34**	**90**	P		**P**	**06 38 36.4**	**-0.6**
	comp=Z,8.1nm,1.3s							
GRF	**Grafenberg Arr**	**25.43**	**95**	*e*P		**P**	**06 38 37.9**	**-0.1**
	comp=Z,24nm,1.4s,baz=307,slow=9.0							
EVO	**Evora**	**25.48**	**137**	*e*P		**P**	**06 38 41.2**	**+2.7**
ESDC	**Sonseca Array**	**25.97**	**129**	P		**P**	**06 38 43.3**	**+0.3**
	comp=Z,3.4nm,0.8s,baz=331,slow=8.8,SNR=13							
ESDC				LR		LR	06 48 24.3	
	comp=Z,530nm,18.0s,baz=334,slow=35							
	comp=Z,3.4nm,0.8s							
MESJ	**Messejana**	**26.04**	**138**	*e*P		**P**	**06 38 44.0**	**+0.4**
MESJ				*i* IAmb		IAmb	06 39 04.0	
	comp=Z,61nm,1.7s							
BRG	**Berggiesshubel**	**26.07**	**90**	*e*P		**P**	**06 38 43.9**	**+0.2**
	comp=Z,15nm,1.6s,baz=307,slow=9.0							
PTEO	**Sao Teotonio**	**26.14**	**139**	*e*P		**P**	**06 38 46.8**	**+2.4**
PTEO				*i* IAmb		IAmb	06 38 54.5	
	comp=Z,120nm,1.7s							
BNI	**Bardonecchia**	**26.37**	**108**	P		**P**	**06 38 47.2**	**+0.6**
BNI				IAmb		IAmb	06 38 59.6	
	comp=Z,50nm,1.8s							
BNI	**Bardonecchia**	**26.37**	**108**	P		**P**	**06 38 47.3**	**+0.6**
BNI				pmax		pmax		
	comp=Z,50nm,1.8s							
LDAQ	**Lac Daran**	**26.59**	**262**			**P**	**06 38 49.4**	**+0.8**
LDAQ				IAmb		IAmb	06 38 54.1	
	comp=Z,27nm,1.3s							
PVAQ	**Vaqueiros**	**26.60**	**138**	*e*LR		LR	06 41 49.7	
PVAQ				*i* IAMs_20		IAMs_20	06 47 19.7	
	comp=Z,2μm,20.0s							
TUE	**Stuetta**	**26.65**	**102**			**P**	**06 38 50.0**	**+0.8**
TUE				IAmb		IAmb	06 39 08.9	
	comp=Z,63nm,2.0s							
TUE	**Stuetta**	**26.65**	**102**	P		**P**	**06 38 49.2**	**0.0**
DAVOX	**Davos/Dischmat**	**26.70**	**101**	P		**P**	**06 38 49.3**	**-0.4**
	comp=Z,0.9nm,0.4s,baz=327,slow=13,SNR=4.0							
DAVOX				LR		LR	06 49 07.1	
	comp=Z,388nm,19.3s,baz=313,slow=36							
	comp=Z,0.9nm,0.4s							
FINES	**FINESS Array B**	**26.81**	**62**	P		**P**	**06 38 50.9**	**+0.6**
	comp=Z,2.7nm,0.8s,baz=270,slow=11,SNR=5.1							
FINES				LR		LR	06 48 52.1	
	comp=Z,1μm,18.2s,baz=266,slow=35							
	comp=Z,2.7nm,0.8s							
FINES	**FINESS Array B**	**26.81**	**62**	P		**P**	**06 38 51.2**	**+0.9**
FINES	**FINESS Array B**	**26.81**	**62**	P		**P**	**06 38 51.2**	**+0.9**
KHC	**Kasperske Hory**	**26.97**	**94**	*ce*P		**P**	**06 38 51.3**	**-0.7**
KHC				pmax		pmax		
	comp=Z,7.0nm,1.7s							
KHC	**Kasperske Hory**	**26.97**	**94**	P		**P**	**06 38 51.7**	**-0.3**
FUORN	**Ofenpass-Fuorn**	**27.00**	**101**	IAmb		IAmb	06 38 55.4	
	comp=Z,42nm,2.0s							
GERES	**GERESS Array B**	**27.22**	**94**	P		**P**	**06 38 55.0**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=276,slow=13,SNR=3.7							
GERES				LR		LR	06 49 56.7	
	comp=Z,3μm,18.3s,baz=307,slow=37							
	comp=Z,0.2nm,0.3s							
RES	**Resolute Bay**	**27.24**	**328**	LR		LR	06 49 28.3	
	comp=Z,1μm,18.6s,baz=109,slow=36							
RES	**Resolute Bay**	**27.24**	**328**			**P**	**06 38 55.0**	**+1.0**
RES	**Resolute Bay**	**27.24**	**328**	P		**P**	**06 38 55.0**	**+1.0**
RES				pmax		pmax		
	comp=Z,4.0nm,0.9s							
KSP	**Ksiaz**	**27.27**	**89**	P		**P**	**06 38 55.0**	**+0.4**
	comp=Z,6.7nm,1.2s							
DPC	**Dobruska-Polom**	**27.59**	**89**	P		**P**	**06 38 56.4**	**-1.1**
	comp=Z,14nm,2.7s							
APA	**Apatity**	**27.87**	**47**	↓*e*P		**P**	**06 38 58.8**	**-1.0**
APA				*e*			06 39 44.0	
APA				*e*S		**S**	**06 43 39.5**	**-3.2**
APA				pmax		pmax		
	comp=Z,9.0nm,1.5s							
APA				MLR		MLR		
	comp=Z,1μm,12.6s							
PMOZ	**Porto Moniz, M**	**28.34**	**157**	*e*LR		LR	06 45 51.9	
PMOZ				*i* IAMs_20		IAMs_20	06 47 39.6	
	comp=Z,636nm,18.0s							
VRAC	**Vranov**	**28.38**	**91**	LR		LR	06 50 45.3	
	comp=Z,1μm,19.2s,baz=312,slow=37							
VRAC	**Vranov**	**28.38**	**91**	*e*P		**P**	**06 39 03.9**	**-0.6**
KRUC	**Moravsky**	**28.44**	**91**	*e*P		**P**	**06 39 05.8**	**+0.8**
VLDQ	**Val d'Or**	**29.62**	**268**	IAmb		IAmb	06 39 18.9	
	comp=Z,28nm,1.6s							
NACGM	**Naroch**	**30.17**	**74**	*e*P		P	06 39 26.5	+6.2
	comp=Z,23nm,0.8s,baz=304							
MNK	**Minsk**	**30.92**	**74**	*i* P		**P**	**06 39 26.0**	**-1.0**
	comp=E,10.0nm,0.8s							
MNK				*i* P		**P**	**06 39 26.0**	**-1.0**
	comp=N,18nm,1.4s							
MNK				*i* P		**P**	**06 39 26.0**	**-1.0**
	comp=Z,13nm,1.1s,baz=304							
MNK

MD31 IAmb IAmb 06 39 37.2
comp=Z,19nm,1.3s
RNPP9 Sopachiv 31.75 80 P **P** **06 39 34.2 0.0**
SHIU Shidnytsya 31.85 85 P **P** **06 39 36.2 +1.0**
DELO Deloro Mine 32.17 263 IAmb IAmb 06 39 42.0
comp=Z,18nm,1.1s
STNU Starunia 32.75 85 P **P** **06 39 43.2 +0.1**
SADO Sadowa 32.76 265 LR LR 06 51 35.9
comp=Z,3µm,19.4s,baz=64,slow=34
SADO Sadowa 32.76 265 IAmb IAmb 06 39 46.0
comp=Z,21nm,1.1s
MI28 Mi28,Pidlybu 32.92 80 P **P** **06 39 43.8 -0.7**
KLMR Klimovskoe 32.93 58 *e*P **P** **06 39 43.3 -1.2**
KLMR *e* 06 40 52.7
KLMR pmax pmax
comp=Z,75nm,1.4s
KLMR MLR MLR
comp=Z,776nm,14.0s
DRGR 33.13 89 ⇓P **P** **06 39 47.4 +0.9**
DRGR 33.13 89 ⇓P **P** **06 39 47.4 +0.9**
BZS Buzias 33.38 92 ⇑P **P** **06 39 49.7 +1.1**
BZS Buzias 33.38 92 ⇑P **P** **06 39 49.7 +1.1**
LUBAR Lubar, Ukraine 33.60 81 P **P** **06 39 49.5 -1.0**
AK21 Malin Array Si 33.70 79 P **P** **06 39 50.2 -1.1**
AK20 Malin Array Si 33.71 79 P **P** **06 39 50.3 -1.1**
AK19 Malin Array Si 33.72 79 P **P** **06 39 50.4 -1.1**
AK22 Malin Array Si 33.73 79 P **P** **06 39 49.9 -1.6**
AK18 Malin Array Si 33.75 79 P **P** **06 39 51.0 -0.7**
AK17 Malin Array Si 33.77 79 P **P** **06 39 50.7 -1.2**
AK15 Malin Array Si 33.79 79 P **P** **06 39 51.2 -0.9**
AK04 Malin Array Si 33.80 79 P **P** **06 39 51.5 -0.6**
AK16 Malin Array Si 33.80 79 P **P** **06 39 51.3 -0.9**
BUR08 Bucovina Ar. S 33.81 86 IAmb IAmb 06 39 55.0
comp=Z,32nm,1.6s
AK13 Malin Array Si 33.81 79 P **P** **06 39 51.3 -1.0**
AK03 Malin Array Si 33.82 79 P **P** **06 39 51.3 -1.1**
AK11 Malin Array Si 33.83 79 P **P** **06 39 51.6 -0.8**
AK14 Malin Array Si 33.83 79 P **P** **06 39 51.6 -0.8**
KMPD K-Podol'skiy 33.83 84 P **P** **06 39 51.5 -1.0**
BURAR Bucovina Array 33.84 86 ⇓P **P** **06 39 54.2 +1.5**
BURAR Bucovina Array 33.84 86 P **P** **06 39 52.7 0.0**
BURAR Bucovina Array 33.84 86 ⇓P **P** **06 39 54.2 +1.5**
AKASG Malin Array Be 33.84 79 P **P** **06 39 50.9 -1.6**
comp=Z,3.7nm,0.9s,baz=305,slow=8.5,SNR=16
AKASG LR LR 06 52 00.5
comp=Z,542nm,21.6s,baz=298,slow=33
comp=Z,3.7nm,0.9s
AKASG Malin Array Be 33.84 79 *i* P **P** **06 39 52.2 -0.3**
AKASG pmax pmax
comp=Z,3.0nm,0.8s
AKBB Malin Array Si 33.84 79 P **P** **06 39 52.1 -0.5**
AKBB IAmb IAmb 06 39 55.6
comp=Z,27nm,1.3s
AKBB Malin Array Si 33.84 79 *ce*P **P** **06 39 52.8 +0.3**
AKBB pmax pmax
comp=Z,30nm,1.5s
AKBB Malin Array Si 33.84 79 P **P** **06 39 52.0 -0.5**
AK01 Malin Array Si 33.84 79 P **P** **06 39 51.6 -0.9**
AK12 Malin Array Si 33.84 79 P **P** **06 39 51.8 -0.7**
AK02 Malin Array Si 33.86 79 P **P** **06 39 51.8 -0.9**
AK05 Malin Array Si 33.88 79 P **P** **06 39 52.1 -0.8**
AK08 Malin Array Si 33.90 79 P **P** **06 39 51.9 -1.1**
AK06 Malin Array Si 33.90 79 P **P** **06 39 52.1 -0.9**
AK10 Malin Array Si 33.92 79 P **P** **06 39 52.5 -0.7**
AK09 Malin Array Si 33.92 79 P **P** **06 39 51.7 -1.5**
AK07 Malin Array Si 33.92 79 P **P** **06 39 52.0 -1.2**
GZR Gura Zlata 34.12 91 ⇓P **P** **06 39 56.1 +1.0**
GZR Gura Zlata 34.12 91 ⇓P **P** **06 39 56.1 +1.0**
NDNU Novodnistrovsk 34.27 83 P **P** **06 39 55.3 -0.9**
HERR Herculane 34.30 92 ⇓P **P** **06 39 57.1 +0.5**
LOT Lotru 34.59 90 ⇓P **P** **06 39 59.7 +0.5**
OBN Obninsk 34.71 68 LR LR 06 53 08.2
comp=Z,1µm,21.9s,baz=342,slow=34
OBN Obninsk 34.71 68 ⇓*e*P **P** **06 40 00.9 +0.9**
OBN *i* *PP **pwP** **06 40 03.5 +0.8**
OBN *e**SP **sP** **06 40 05.6 +1.8**
OBN *e* 06 41 23.5
OBN 06 42 34.0
OBN *i* S **S** **06 45 33.9 +4.3**
OBN *i* SS **SnSn** **06 47 43.0 +1.1**
OBN pmax pmax
comp=Z,53nm,1.7s
OBN MLR MLR
comp=Z,502nm,14.0s
MOS Moscow 34.84 66 *e*P **P** **06 40 00.6 -0.5**
MOS *e* 06 41 35.1
KEST Kesra 34.95 116 P **P** **06 40 02.4 0.0**
comp=Z,6.2nm,0.9s,baz=312,slow=21,SNR=5.9
comp=Z,6.2nm,0.9s
SORM Soroca 35.06 83 ⇑P **P** **06 40 03.0 -0.1**
SORM Soroca 35.06 83 ⇑P **P** **06 40 03.0 -0.1**
SORM Soroca 35.06 83 P **P** **06 40 02.3 -0.8**
ARR Arges 35.08 89 ⇑P **P** **06 40 03.6 +0.2**
VOIR 35.24 89 ⇓P **P** **06 40 04.6 -0.2**
VOIR 35.24 89 ⇓P **P** **06 40 04.6 -0.2**
ONER Baraj Valea Uz 35.30 87 ⇓P **P** **06 40 05.4 +0.2**
PLOR Plostina 35.76 87 ⇓P **P** **06 40 09.3 +0.1**
PLOR Plostina 35.76 87 ⇓P **P** **06 40 09.3 +0.1**
VRI Vrincioaia 35.79 87 ⇓P **P** **06 40 09.8 +0.4**
VRI Vrincioaia 35.79 87 ⇓P **P** **06 40 09.8 +0.4**
VAE Valguarnera 35.90 108 LR LR 06 52 40.5
comp=Z,743nm,19.8s,baz=360,slow=33
A36M Sachs Harbour 36.29 328 P **P** **06 40 12.1 -1.3**
baz=58
O54A Avella 36.75 261 IAmb IAmb 06 40 21.1
comp=Z,32nm,1.3s
C36M Paulatuk 37.41 324 P **P** **06 40 21.5 -1.4**
baz=56
ULM Lac du Bonnet 37.42 285 P **P** **06 40 22.9 -0.4**
comp=Z,6.7nm,1.0s,baz=58,slow=9.5,SNR=7.6
ULM LR LR 06 54 37.8
comp=Z,2µm,19.2s,baz=22,slow=34
comp=Z,6.7nm,1.0s
ULM Lac du Bonnet 37.42 285 IAmb IAmb 06 40 37.2
comp=Z,45nm,1.9s
FFC Flin Flon 37.47 295 **P** **06 40 24.1 +0.4**
FFC Flin Flon 37.47 295 P **P** **06 40 24.1 +0.4**
FFC pmax pmax
comp=Z,14nm,1.2s
O52A Adamsville 37.53 262 IAmb IAmb 06 40 27.8
comp=Z,30nm,1.1s
P53A Whipple 37.78 261 IAmb IAmb 06 40 30.9
comp=Z,31nm,1.1s
N49A Columbus Grove 38.10 265 IAmb IAmb 06 40 32.4
comp=Z,28nm,1.1s
YKA Yellowknife Ar 38.14 312 P **P** **06 40 29.1 0.0**
comp=Z,4.9nm,0.9s,baz=50,slow=8.5,SNR=32
comp=Z,4.9nm,0.9s
YKA Yellowknife Ar 38.14 312 P **P** **06 40 29.5 +0.3**
YKA Yellowknife Ar 38.14 312 *i* P **P** **06 40 29.7 +0.5**
YKA pmax pmax
comp=Z,5.0nm,0.9s
KIRV Kirov 38.37 56 LR LR 06 55 10.8
comp=Z,793nm,19.2s,baz=313,slow=34
KIRV Kirov 38.37 56 *ce*P **P** **06 40 32.6 +1.5**
P51A Williamsport 38.62 262 IAmb IAmb 06 40 36.6
comp=Z,24nm,1.2s
O48B Farmland 39.08 265 IAmb IAmb 06 40 40.9
comp=Z,36nm,1.4s
Q51A Peebles 39.11 262 IAmb IAmb 06 40 41.4
comp=Z,24nm,1.3s
P48A Milroy 39.82 265 IAmb IAmb 06 40 46.9
comp=Z,47nm,1.4s
S51A Beattyville 40.30 261 IAmb IAmb 06 40 51.3
comp=Z,23nm,1.1s
F33A 5 Mile Ranch, 40.62 280 P **P** **06 40 51.1 +1.0**
INK Inuvik 40.76 326 LR LR 06 57 31.3
comp=Z,521nm,19.5s,baz=55,slow=36
INK Inuvik 40.76 326 **P** **06 40 50.8 -0.2**
INK Inuvik 40.76 326 P **P** **06 40 50.8 -0.2**
INK pmax pmax
comp=Z,20nm,1.8s
INK Inuvik 40.76 326 P **P** **06 40 49.4 -1.5**
baz=49
L40A Anamosa 40.80 272 IAmb IAmb 06 40 54.8
comp=Z,40nm,1.3s
WRGLY Wrigley 40.91 316 P **P** **06 40 52.1 -0.1**
WRGLY Wrigley 40.91 316 P **P** **06 40 51.2 -1.0**
baz=50
TZTN Tazewell 41.14 260 IAmb IAmb 06 40 58.2
comp=Z,28nm,1.2s
WCI Wyandotte Cave 41.20 264 P **P** **06 40 55.8 +0.8**
WCI IAmb IAmb 06 40 58.6
comp=Z,25nm,1.1s
WCI Wyandotte Cave 41.20 264 P **P** **06 40 55.8 +0.8**
WCI pmax pmax
comp=Z,25nm,1.2s
F31M Tsiigehtchic 41.40 325 IAmb IAmb 06 40 59.0
comp=Z,39nm,1.5s
F31M Tsiigehtchic 41.40 325 P **P** **06 40 54.5 -1.7**
baz=48,SNR=11
D28M Stokes Point 41.46 329 P **P** **06 40 55.4 -1.3**
baz=46
PAULI Pauline 41.65 257 IAmb IAmb 06 41 02.1
comp=Z,27nm,1.4s
P43A Skaggs, Pawnee 41.75 269 IAmb IAmb 06 41 03.3
comp=Z,22nm,1.0s
F30M Barrier River 41.86 326 P **P** **06 40 58.6 -1.4**
baz=47
E29M Blow River 41.90 328 P **P** **06 40 58.5 -1.8**
baz=46
G31M Satah River 41.91 325 P **P** **06 40 58.5 -1.8**
baz=47
SCIA State Center 41.92 274 IAmb IAmb 06 41 04.7
comp=Z,33nm,1.6s
TKL Tuckaleechee C 41.95 259 LR LR 06 57 03.0
comp=Z,2µm,18.2s,baz=38,slow=34
Q44A Meyer Farm, Va 42.05 267 IAmb IAmb 06 41 05.0
comp=Z,25nm,1.1s
BG3 Lake Jocassee 42.06 258 IAmb IAmb 06 41 05.4
comp=Z,38nm,1.4s
D27M Malcolm River 42.09 330 P **P** **06 41 00.1 -1.8**
baz=45
E28M Babbage River 42.18 329 P **P** **06 41 01.0 -1.6**
baz=45
G30M tAoh Zraii Nji 42.42 326 P **P** **06 41 02.7 -1.9**
baz=46
CPCT Cooper Cave 42.48 260 IAmb IAmb 06 41 09.1
comp=Z,32nm,1.3s
C26K Camden Bay 42.55 332 P **P** **06 41 04.8 -0.8**
baz=43
T47A Sharon Grove 42.57 264 IAmb IAmb 06 41 09.9
comp=Z,24nm,1.2s
H31M Peel River 42.70 324 IAmb IAmb 06 41 10.3
comp=Z,30nm,1.2s
H31M Peel River 42.70 324 P **P** **06 41 05.7 -1.2**
baz=46
ERBR Yeremizino-Bor 42.75 77 *e*P **P** **06 41 08.1 +0.5**
IDI Anoyia 42.77 100 LR LR 07 00 30.2
comp=Z,737nm,19.1s,baz=286,slow=38
F28M Old Crow 42.98 328 P **P** **06 41 07.2 -1.9**
baz=44,SNR=12
G29M Pine Creek 42.98 327 P **P** **06 41 07.7 -1.5**
baz=45
EPYK Eagle Plains 42.99 326 **P** **06 41 10.1 +0.8**
EPYK Eagle Plains 42.99 326 P **P** **06 41 08.1 -1.3**
baz=45
E27K Coleen River 43.01 329 P **P** **06 41 08.0 -1.5**
baz=44
S44A Carbondale 43.10 266 IAmb IAmb 06 41 14.1
comp=Z,27nm,1.1s
P40A Paris 43.11 271 IAmb IAmb 06 41 13.8
comp=Z,27nm,1.2s
KOTAN Kotaneelee Air 43.16 313 P **P** **06 41 08.9 -1.8**
baz=47
D25K Kavik River 43.34 332 P **P** **06 41 10.7 -1.4**
baz=41
SWET Sewanee 43.37 261 IAmb IAmb 06 41 16.1
comp=Z,19nm,1.2s
V48A Smith Brothers 43.40 262 IAmb IAmb 06 41 16.7
comp=Z,16nm,1.1s
ARTI Arti 43.49 54 LR LR 06 58 09.2
comp=Z,1µm,19.3s,baz=317,slow=34
ARTI Arti 43.49 54 P **P** **06 41 14.2 +0.8**
ARTI IAmb IAmb 06 41 15.7
comp=Z,19nm,1.1s
ARTI Arti 43.49 54 *c i*P **P** **06 41 15.2 +1.8**
ARTI 06 42 52.2
ARTI S **S** **06 47 45.2 +3.7**
ARTI SS **SS** **06 50 56.2 +1.0**
ARTI pmax pmax
comp=Z,22nm,1.3s
EDM Edmonton 43.55 300 P **P** **06 41 14.4 +0.4**
EDM Edmonton 43.55 300 P **P** **06 41 14.4 +0.4**
EDM pmax pmax
comp=Z,12nm,0.9s
C24K Franklin Bluff 43.57 334 P **P** **06 41 12.8 -1.1**
baz=40
H29M Whitestone 43.57 326 P **P** **06 41 12.5 -1.5**
baz=44
WVT Waverly 43.60 264 P **P** **06 41 13.8 -0.7**
WVT Waverly 43.60 264 P **P** **06 41 13.8 -0.7**
WVT pmax pmax
comp=Z,11nm,1.1s
CGM3 Cape Girardeau 43.61 266 IAmb IAmb 06 41 18.1
comp=Z,24nm,1.6s
I30M Mount Dempster 43.71 324 P **P** **06 41 13.7 -1.5**
baz=44
TGTN Hyland Airport 43.72 317 P **P** **06 41 13.2 -2.0**
baz=46
BR131 Keskin Array S 43.73 88 *i* P **P** **06 41 16.4 +0.7**
BRTR Keskin Array B 43.74 88 P **P** **06 41 16.1 +0.4**
comp=Z,4.1nm,1.0s,baz=322,slow=7.0,SNR=7.2
comp=Z,4.1nm,1.0s
BRTR Keskin Array B 43.74 88 P **P** **06 41 17.2 +1.5**
BRTR Keskin Array B 43.74 88 P **P** **06 41 17.2 +1.5**
CCM Cathedral Cave 43.83 269 P **P** **06 41 16.8 +0.5**
CCM IAmb IAmb 06 41 19.6
comp=Z,34nm,1.2s
CCM Cathedral Cave 43.83 269 P **P** **06 41 16.8 +0.5**
CCM pmax pmax
comp=Z,34nm,1.2s
A22K Sinclair Lake 43.87 337 P **P** **06 41 14.6 -1.6**
baz=37
C23K Itkillik River 43.90 335 P **P** **06 41 15.0 -1.5**
baz=39
SOC Sochi 43.91 79 *e*P P 06 41 12.1 -4.8
SOC *e* 06 43 01.6
SOC *e*PPP PPP 06 43 44.1
SOC *e*S **S** **06 47 44.2 -3.8**
SOC *e*SS SS 06 50 52.0 -12
SOC *e*SSS SSS 06 51 56.1
SOC pmax pmax
comp=Z,44nm,1.0s
SOC MLR MLR
comp=Z,392nm,15.0s
A21K Barrow 43.93 338 P **P** **06 41 14.8 -1.8**
baz=36
F26K Sheenjek River 44.03 330 P **P** **06 41 15.8 -1.8**
baz=42
D24K Happy Valley 44.04 333 P **P** **06 41 15.4 -2.2**
baz=40
G27K Doyon Strip 44.04 328 P **P** **06 41 15.2 -2.5**
baz=42
E25K Arctic Village 44.06 331 P **P** **06 41 15.7 -2.2**
baz=41
B22K Teshekpuk Lake 44.09 336 P **P** **06 41 16.1 -2.0**
baz=37
R40A Maddies Statio 44.16 270 IAmb IAmb 06 41 22.0
comp=Z,22nm,1.3s
J30M Hart River 44.16 324 P **P** **06 41 17.4 -1.5**
baz=44
I29M Ogilvie Camp, 44.17 325 IAmb IAmb 06 41 21.8
comp=Z,34nm,1.4s
I29M Ogilvie Camp, 44.17 325 P **P** **06 41 17.2 -1.6**
baz=43,SNR=14
BMAR Burnt Mountain 44.34 330 P **P** **06 41 20.5 +0.4**
H27K Steamboat Moun 44.44 327 IAmb IAmb 06 41 23.9
comp=Z,21nm,1.4s
H27K Steamboat Moun 44.44 327 P **P** **06 41 18.9 -2.0**
baz=42
F25K Christian Rive 44.48 330 IAmb IAmb 06 42 44.9
comp=Z,26nm,1.9s
F25K Christian Rive 44.48 330 P **P** **06 41 19.3 -2.0**
baz=40
GOF Gofitskoye 44.48 75 *ce*P **P** **06 41 22.8 +1.3**
G26K Porcupine Rive 44.50 329 P **P** **06 41 20.0 -1.3**
baz=41
X48A Hartselle 44.53 262 IAmb IAmb 06 41 24.6
comp=Z,22nm,1.2s
T42A Van Buren 44.54 267 IAmb IAmb 06 41 24.0
comp=Z,24nm,1.5s
I28M Miner Creek 44.58 326 P **P** **06 41 20.2 -1.9**
baz=42,SNR=9.0
D23K Nanushuk River 44.60 334 P **P** **06 41 20.5 -1.7**
baz=38
TOLK Toolik Lake Re 44.61 333 P **P** **06 41 20.2 -2.1**
baz=39
TAM Tamanrasset 44.62 130 **P** **06 41 24.0 +1.0**
TAM Tamanrasset 44.62 130 P **P** **06 41 24.0 +1.0**
Y49A Blount Mountai 44.69 260 IAmb IAmb 06 41 26.2
comp=Z,15nm,1.1s
BGNE Belgrade 44.77 277 IAmb IAmb 06 41 26.5
comp=Z,23nm,1.2s
E24K Your Creek 44.80 332 P **P** **06 41 22.8 -1.0**
baz=39
152A Waverly Hall 44.81 258 IAmb IAmb 06 41 25.8
comp=Z,39nm,1.9s
J29N Klondike Camp 44.81 324 IAmb IAmb 06 41 28.1
comp=Z,15nm,1.1s
J29N Klondike Camp 44.81 324 P **P** **06 41 22.3 -1.7**
baz=43
WTLY Watson Lake, Y 44.89 315 IAmb IAmb 06 41 29.0
comp=Z,31nm,1.4s
WTLY Watson Lake, Y 44.89 315 P **P** **06 41 22.7 -1.8**
baz=45,SNR=8.9
B21K Ikpikpuk River 44.92 336 P **P** **06 41 22.9 -1.8**
baz=36
I27K Kandik River 44.93 327 IAmb IAmb 06 41 27.8
comp=Z,20nm,1.5s
I27K Kandik River 44.93 327 P **P** **06 41 22.4 -2.5**
baz=42
MGMO Mountain Grove 45.04 269 IAmb IAmb 06 41 29.4
comp=Z,26nm,1.2s
K29M Barlow Dome 45.05 323 IAmb IAmb 06 41 29.8
comp=Z,29nm,1.4s
K29M Barlow Dome 45.05 323 P **P** **06 41 24.1 -1.9**
baz=43
E23K Chandalar 45.08 333 P **P** **06 41 24.0 -2.0**
baz=38
F24K Squaw Lake 45.09 331 P **P** **06 41 25.1 -1.0**
baz=39
KIV Kislovodsk 45.11 77 *e*P **P** **06 41 26.4 -0.2**
KIV pmax pmax
comp=Z,12nm,1.0s
KIV MLR MLR
comp=Z,520nm,16.0s
B20K Meade River 45.11 337 P **P** **06 41 24.9 -1.3**
baz=35
S39A Bolivar 45.16 270 IAmb IAmb 06 41 30.1
comp=Z,24nm,1.2s
FYU Fort Yukon 45.16 329 IAmb IAmb 06 41 30.5
comp=Z,19nm,1.1s
M31M Drury Creek, Y 45.28 320 IAmb IAmb 06 41 32.3
comp=Z,11nm,1.1s
M31M Drury Creek, Y 45.28 320 P **P** **06 41 26.0 -1.6**
baz=43
LCAR Lake Charles 45.32 267 IAmb IAmb 06 41 31.4
comp=Z,19nm,1.2s
C21K Knifeblade Rid 45.33 336 P **P** **06 41 26.5 -1.5**
baz=36
KBZ Khabaz 45.38 77 P **P** **06 41 29.7 +1.1**
comp=Z,7.6nm,1.1s,baz=336,slow=12,SNR=5.4
comp=Z,7.6nm,1.1s
KBZ Khabaz 45.38 77 *ce*P **P** **06 41 31.2 +2.6**
KBZ pmax pmax
comp=Z,13nm,1.1s
DAWY Dawson 45.45 324 IAmb IAmb 06 41 33.4
comp=Z,18nm,1.1s
DAWY Dawson 45.45 324 P **P** **06 41 27.3 -1.6**
baz=42
BNN Bunyan 45.51 87 P **P** **06 41 29.7 -0.2**
BNN IAmb IAmb 06 41 33.1
comp=Z,11nm,1.0s
E22K Anaktuvuk Pass 45.52 334 P **P** **06 41 27.7 -1.8**
baz=37
EGMT Eagleton 45.58 292 IAmb IAmb 06 41 33.8
comp=Z,20nm,1.2s
I26K Coal Creek Min 45.58 327 P **P** **06 41 29.0 -0.9**
baz=40
N32M Quiet Lake 45.62 319 P **P** **06 41 28.8 -1.5**
baz=43
G24K Hadweenzic Riv 45.63 330 P **P** **06 41 28.8 -1.5**
baz=39
A19K Wainwright 45.68 339 P **P** **06 41 29.0 -1.6**
baz=32
KSU1 Kansas State U 45.73 274 IAmb IAmb 06 41 34.3
comp=Z,25nm,1.3s
E21K Killik River 45.74 335 P **P** **06 41 29.4 -1.9**
baz=36
M30M Minto, Yukon 45.77 322 P **P** **06 41 29.9 -1.7**
baz=42
L29M L29M 45.78 323 P **P** **06 41 29.7 -2.0**
baz=42
COLD Coldfoot 45.87 332 P **P** **06 41 30.3 -1.9**
baz=37
FCAR Ozark Folk Cen 45.95 267 IAmb IAmb 06 41 35.2
comp=Z,15nm,1.3s
Z47A Carrollton 46.04 261 IAmb IAmb 06 41 36.3
comp=Z,20nm,1.0s
PRP Porcupine Dome 46.05 329 P **P** **06 41 34.3 +0.5**
PRP Porcupine Dome 46.05 329 P **P** **06 41 32.3 -1.6**
baz=39
D20K Etivluk River 46.08 336 P **P** **06 41 31.9 -2.0**
baz=34
R33M Jennings River 46.17 316 IAmb IAmb 06 41 40.2
comp=Z,20nm,1.1s
R33M Jennings River 46.17 316 P **P** **06 41 33.5 -1.4**
baz=43
P33M Teslin, Yukon 46.22 318 IAmb IAmb 06 41 39.8
comp=Z,8.6nm,1.0s
P33M Teslin, Yukon 46.22 318 P **P** **06 41 33.8 -1.4**
baz=43
G23K Bananza Creek 46.24 332 P **P** **06 41 33.4 -1.8**
baz=37
N31M Braeburn, Yuko 46.26 320 P **P** **06 41 33.9 -1.5**
baz=42
C19K Lookout Ridge 46.34 338 P **P** **06 41 34.1 -1.9**
baz=32
E20K Nigu River 46.37 335 P **P** **06 41 34.2 -2.0**
baz=34
M29M Somme Creek 46.38 322 P **P** **06 41 34.2 -2.3**
baz=41
H24K Noodor Dome 46.41 330 IAmb IAmb 06 41 40.3
comp=Z,12nm,1.4s
H24K Noodor Dome 46.41 330 P **P** **06 41 34.2 -2.4**
baz=38
G22K Bettles 46.42 332 P **P** **06 41 34.2 -2.4**
baz=36
DLBC Dease Lake 46.54 314 P **P** **06 41 36.7 -0.9**
baz=43
D19K Kuna River 46.57 336 P **P** **06 41 36.5 -1.2**
baz=33
WHY Whitehorse 46.58 319 P **P** **06 41 36.8 -1.2**
baz=42
F21K Alatna River 46.63 333 P **P** **06 41 37.6 -0.6**
baz=35
N30M Aishikik Lake 46.70 321 P **P** **06 41 37.6 -1.2**
baz=42
J25K Salcha River, 46.71 328 P **P** **06 41 37.4 -1.6**
baz=39
SCRK Sand Creek 46.83 326 IAmb IAmb 06 41 44.6
comp=Z,13nm,1.3s
SCRK Sand Creek 46.83 326 P **P** **06 41 38.5 -1.4**
baz=39,SNR=8.3
POKR Poker Plat Res 46.86 329 P **P** **06 41 38.3 -1.8**
baz=38
O30N Mendenhall 46.89 320 P **P** **06 41 38.9 -1.5**
baz=42
BCAR Beaver Creek A 46.91 325 P **P** **06 41 40.3 -0.2**
L27K Beaver Creek, 46.92 325 P **P** **06 41 39.0 -1.6**
baz=40
UALR University of 46.94 267 IAmb IAmb 06 41 44.2
comp=Z,12nm,1.0s
Q32M Nakina River 46.95 316 P **P** **06 41 39.9 -1.1**
baz=42
P32M Atlin 46.98 317 P **P** **06 41 39.8 -1.3**
baz=42
IL31 46.99 328 IAmb IAmb 06 41 44.5
comp=Z,15nm,1.5s
ILAR Eielson Array 46.99 328 P **P** **06 41 41.4 +0.3**
comp=Z,3.1nm,1.1s,baz=32,slow=7.3,SNR=15
ILAR LR LR 07 01 25.1
comp=Z,331nm,20.3s,baz=29,slow=36
comp=Z,3.1nm,1.1s
ILAR Eielson Array 46.99 328 P **P** **06 41 42.0 +1.0**
ILAR Eielson Array 46.99 328 P **P** **06 41 42.1 +1.0**
C18K Utukok River 47.04 338 P **P** **06 41 40.0 -1.5**
baz=31
DOT Dot Lake 47.11 326 IAmb IAmb 06 41 46.6
comp=Z,9.8nm,1.0s
BVCY Beaver Creek 47.13 324 P **P** **06 41 40.5 -1.8**
baz=40
COLA College 47.16 329 *e*P **P** **06 41 41.9 -0.5**
COLA pmax pmax
comp=Z,19nm,2.0s
COLA College 47.16 329 P **P** **06 41 40.9 -1.4**
baz=38
G21K Allakaket 47.22 333 P **P** **06 41 41.4 -1.4**

baz=35
H22K Ishtalitna Cre 47.23 331 P P 06 41 40.8 -2.1
baz=36
RIDG Independent Ri 47.26 327 P P 06 41 41.1 -2.0
baz=38,SNR=7.0
E19K Redstone River 47.26 335 IAmb IAmb 06 41 48.8
comp=Z,8.5nm,0.8s
E19K Redstone River 47.26 335 P P 06 41 41.1 -2.0
baz=33
YUK4 Talbot Arm 47.27 322 P P 06 41 41.0 -2.5
baz=41
F20K Avaraart Lake 47.27 334 P P 06 41 41.9 -1.2
baz=34
HDA Harding Lake 47.30 328 P P 06 41 41.7 -1.8
baz=38
HYT Haines Junctio 47.31 321 IAmb IAmb 06 41 48.2
comp=Z,17nm,1.1s
HYT Haines Junctio 47.31 321 P P 06 41 41.6 -2.1
baz=41
I23K Minto, Yukon-K 47.33 330 P P 06 41 42.6 -1.0
baz=37
L26K Log Cabin Wild 47.39 325 P P 06 41 43.1 -1.1
baz=39
K24K Donnelly Dome 47.46 327 P P 06 41 43.7 -1.1
baz=38
RLMT Red Lodge 47.46 289 IAmb IAmb 06 41 49.0
comp=Z,12nm,1.3s
M27K Edge Creek, AK 47.48 324 P P 06 41 43.4 -1.7
baz=39
YUK6 Outpost Mounta 47.49 321 P P 06 41 43.6 -1.7
baz=40
YUK3 Moose Creek 47.51 323 P P 06 41 43.6 -1.8
baz=40
C17K DeLong Mountai 47.56 339 P P 06 41 43.1 -2.3
baz=30
SKAG Skagway 47.62 318 P P 06 41 43.7 -2.3
baz=41
P30M Million Dollar 47.66 320 P P 06 41 45.1 -1.3
baz=41
YUK8 Steele Glacier 47.67 322 P P 06 41 44.6 -2.1
baz=40
T35M Bob Quinn 47.69 313 P P 06 41 44.9 -1.7
baz=42
NEA2 Nenana 47.70 329 P P 06 41 44.5 -2.1
baz=37
H21K Melozitna Rive 47.76 332 P P 06 41 45.2 -1.9
baz=35
MLY Manley 47.77 330 P P 06 41 44.9 -2.3
baz=36
M26K Nabesna, AK 47.78 325 P P 06 41 45.8 -1.5
baz=39
TUL3 Leonard 47.78 271 IAmb IAmb 06 41 49.4
comp=Z,17nm,1.2s
RDOG Red Dog Mine 47.88 338 P P 06 41 45.8 -2.1
baz=30
F19K Shaleruckik Mo 47.90 335 P P 06 41 47.0 -1.0
baz=32
YNE Yellowstone No 47.90 290 IAmb IAmb 06 41 52.5
comp=Z,8.1nm,1.1s
TIXI Tiksi 47.95 9 P P 06 41 48.7 +0.4
comp=Z,5.1nm,0.3s,baz=23,slow=4.5,SNR=11
comp=Z,5.1nm,0.3s
TIXI Tiksi 47.95 9 P P 06 41 49.5 +1.2
TIXI IAmb IAmb 06 41 51.8
comp=Z,15nm,1.2s
TIXI Tiksi 47.95 9 *ce* P P 06 41 49.8 +1.4
TIXI pmax pmax
comp=Z,21nm,1.7s
I21K Tanana 47.96 331 IAmb IAmb 06 42 43.6
comp=Z,10.0nm,1.3s
I21K Tanana 47.96 331 P P 06 41 47.1 -1.4
baz=35
E18K Tukpahlearik C 47.98 337 P P 06 41 47.3 -1.4
baz=31,SNR=6.6
PAX Paxson 48.04 326 IAmb IAmb 06 41 53.8
comp=Z,9.1nm,1.0s
PAX Paxson 48.04 326 P P 06 41 48.0 -1.3
baz=38,SNR=9.7
O29M Mount Kennedy 48.05 321 P P 06 41 47.6 -1.9
baz=40
143A Socs Landing, 48.11 264 P P 06 41 49.7 -0.4
C16K Lisburne Hills 48.13 339 P P 06 41 48.3 -1.5
baz=28
YMP Mirror Lake Pl 48.17 290 IAmb IAmb 06 41 55.0
comp=Z,9.9nm,1.1s
O28M Mount Upton 48.20 322 P P 06 41 48.7 -2.1
baz=39
MAK Makhachkala 48.20 74 *d i* P P 06 41 47.7 -3.0
MAK *e* 06 43 42.7
MAK *e* S S 06 48 46.3 -3.2
MAK *e* SS SS 06 52 19.7 +1.5
MAK MLR MLR
comp=Z,797nm,15.0s
D17K Noatak River 48.22 338 P P 06 41 49.2 -1.3
baz=30
BOZ Bozeman (W) 48.23 291 IAmb IAmb 06 41 54.0
comp=Z,17nm,1.5s
R32K Eaglecrest 48.24 317 P P 06 41 48.8 -2.1
baz=41
G19K Purcell Mounta 48.33 334 P P 06 41 49.8 -1.6
baz=33
MCK McKinley 48.37 329 P P 06 41 49.5 -2.2
baz=36
H20K Anotleneega Mo 48.38 333 P P 06 41 49.7 -2.1
baz=34
CTG Chitna Glacier 48.40 323 P P 06 41 50.1 -2.2
baz=39
U35K Hyder 48.40 312 P P 06 41 50.2 -1.9
baz=42
DHY Denali Highway 48.48 327 IAmb IAmb 06 41 57.2
comp=Z,29nm,1.8s
DHY Denali Highway 48.48 327 P P 06 41 50.5 -2.3
baz=37
F18K Selawik 48.49 336 P P 06 41 50.8 -1.8
baz=31
MCARA McCarthy VSAT 48.58 324 P P 06 41 50.5 -2.9
baz=38
BPAW Bear Paw Mtn. 48.60 330 P P 06 41 50.9 -2.6
baz=35
RND Reindeer 48.61 328 IAmb IAmb 06 41 57.1
comp=Z,12nm,1.2s
H17A Grant Village 48.63 290 IAmb IAmb 06 42 00.5
comp=Z,9.0nm,1.0s
DLMT Dillon 48.86 292 IAmb IAmb 06 42 46.1
comp=Z,27nm,2.0s
N25K Chitina, Valde 48.87 325 P P 06 41 54.9 -0.9
baz=38
S32K Killisnoo 48.88 316 P P 06 41 54.3 -1.4
baz=40
WRAK Wrangell Islan 48.88 314 P P 06 41 54.5 -1.3
baz=41
G18K Tagagawik 48.88 335 P P 06 41 54.0 -1.7
baz=32
M24K Tolsona, Glenn 48.92 326 P P 06 41 54.2 -2.0
baz=37
TRF Thorofare Moun 48.95 329 P P 06 41 54.8 -1.6
baz=35
F17K Baldwin Pennin 48.95 336 P P 06 41 54.3 -1.8
baz=30
GNI Garni 48.97 79 P P 06 41 57.5 +0.6
GNI Garni 48.97 79 *ce* P P 06 41 59.5 +2.6
GNI pmax pmax
comp=Z,46nm,1.7s
WAT6 Susitna Watana 48.98 327 P P 06 41 54.3 -2.3
baz=36
WAT1 Susitna Watana 49.00 328 P P 06 41 55.0 -1.6
baz=36
S31K Pelican 49.07 317 P P 06 41 55.3 -1.9
baz=40
CRQE Cirque 49.10 323 P P 06 41 56.2 -1.4
baz=38
CHUM Lake Minchumin 49.11 330 P P 06 41 55.7 -1.7
baz=34
SJG San Juan 49.14 228 LR LR 06 59 26.2
comp=Z,235nm,21.8s,baz=44,slow=32
MESA MESA 49.21 322 P P 06 41 56.6 -1.9
baz=38
AB31 Akbulak array 49.26 60 IAmb IAmb 06 42 03.3
comp=Z,14nm,1.1s
ABKAR Akbulak array 49.26 60 P P 06 41 59.5 +0.8
ABKAR PcP PcP 06 43 22.7 +1.2
J20K Nowinta River 49.31 331 P P 06 41 56.8 -2.2
baz=33
KLU Klutina 49.34 325 IAmb IAmb 06 42 03.4
comp=Z,8.2nm,0.9s
KLU Klutina 49.34 325 P P 06 41 57.7 -1.6
baz=37
PDAR Pinedale Array 49.36 287 P P 06 41 58.8 -1.2
comp=Z,2.3nm,0.9s,baz=71,slow=7.2,SNR=11
comp=Z,2.3nm,0.9s
PDAR Pinedale Array 49.36 287 P P 06 41 59.6 -0.3
PDAR PcP PcP 06 43 23.5 +1.2
BMRM Bremner River 49.38 324 P P 06 41 58.1 -1.5
baz=37
U33K Whale Pass 49.39 314 P P 06 41 58.1 -1.6
baz=40
AKT Akhty 49.43 75 *e* P P 06 42 01.0 +0.7
AKT MLR MLR
comp=Z,1μm,21.0s
V35K Ketchikan 49.44 313 P P 06 41 58.6 -1.4
baz=40
SIT Sitka 49.46 316 P P 06 41 58.2 -1.9
baz=40
H18K Honhosa River 49.46 334 P P 06 41 58.8 -1.3
baz=31
SCM Sheep Creek Mo 49.47 326 P P 06 41 58.6 -1.7
baz=36
GCSA Galena City Sc 49.47 333 P P 06 41 58.7 -1.5
baz=32
M23K Glacier View 49.61 326 P P 06 42 00.1 -1.2
baz=36
C09A Chrisman Ranch 49.63 298 IAmb IAmb 06 42 04.3
comp=Z,12nm,1.0s
G17K Kiwalik Mounta 49.65 335 P P 06 41 60.0 -1.5
baz=30
ISCO Idaho Springs 49.70 282 IAmb IAmb 06 42 04.8
comp=Z,21nm,1.9s
SML Sawmill 49.77 327 IAmb IAmb 06 42 06.2
comp=Z,17nm,1.1s
SML Sawmill 49.77 327 P P 06 42 01.3 -1.3
baz=36
CUT Chulitna 49.80 328 P P 06 42 01.4 -1.3
baz=35
J19K Poorman 49.82 332 IAmb IAmb 06 42 06.3
comp=Z,20nm,1.5s
J19K Poorman 49.82 332 P P 06 42 01.5 -1.3
baz=32
L22K Petersville 49.84 329 IAmb IAmb 06 42 06.2
comp=Z,20nm,1.6s
CRAG Craig 49.89 314 P P 06 42 02.5 -0.9
baz=40
PPLA Purkeypile 49.90 330 IAmb IAmb 06 42 07.1
comp=Z,30nm,1.6s
PPLA Purkeypile 49.90 330 P P 06 42 02.5 -1.2
baz=34
H17K Granite Mounta 49.98 335 P P 06 42 03.1 -1.0
baz=30
K20K Telida 49.98 331 IAmb IAmb 06 42 07.7
comp=Z,19nm,1.4s
K20K Telida 49.98 331 P P 06 42 03.0 -1.1
baz=33
EYAK Cordova Ski Ar 50.06 325 P P 06 42 03.8 -0.8
baz=36
G16K Koyuk River 50.09 336 P P 06 42 03.9 -0.9
baz=29
KNK Knik Glacier 50.13 327 P P 06 42 04.2 -1.0
baz=35
KAIM Kayak Island 50.16 323 P P 06 42 04.0 -1.5
baz=37
PMR Palmer 50.16 327 IAmb IAmb 06 42 09.2
comp=Z,31nm,1.7s
PMR Palmer 50.16 327 P P 06 42 04.5 -0.9
baz=35
GLI Glacier Island 50.18 325 P P 06 42 04.4 -1.2
baz=36
WMOK Wichita Mounta 50.21 272 IAmb IAmb 06 42 08.9
comp=Z,16nm,1.2s
F15K North Star Dit 50.27 338 P P 06 42 04.6 -1.7
baz=28
SKT Skwentna 50.49 329 P P 06 42 07.0 -1.0
baz=34
J18K Innoko River 50.53 332 P P 06 42 06.7 -1.6
baz=32
PLID Pearl Lake 50.65 294 IAmb IAmb 06 42 12.3
comp=Z,12nm,1.1s
SMWD Samnorwood 50.66 274 IAmb IAmb 06 42 12.3
comp=Z,12nm,1.2s
BORK Borovoye 50.67 50 P P 06 42 11.3 +1.9
BORK Borovoye 50.67 50 *ce* P P 06 42 11.7 +2.3
BORK pmax pmax
comp=Z,10.0nm,1.7s
BVAR Borovoye Array 50.72 50 P P 06 42 09.7 -0.1
comp=Z,3.6nm,0.9s,baz=316,slow=6.2,SNR=14
comp=Z,3.6nm,0.9s
H16K Elim 50.73 336 P P 06 42 08.9 -0.8
baz=29
RC01 Rabbit Creek A 50.75 327 IAmb IAmb 06 42 14.4
comp=Z,22nm,1.2s
RC01 Rabbit Creek A 50.75 327 P P 06 42 08.6 -1.3
baz=34
G15K Niukluk 50.79 337 P P 06 42 09.0 -1.1
baz=28
F14K Arctic Creek 50.80 338 P P 06 42 08.7 -1.5
baz=27
RTBA Rita Blanca 50.87 277 IAmb IAmb 06 42 14.2
comp=Z,12nm,1.2s
STLK Strandline Lak 50.97 328 IAmb IAmb 06 42 14.7
comp=Z,16nm,1.4s
P23K Montague Islan 50.99 325 P P 06 42 10.1 -1.6
baz=35
M20K Styx River 50.99 329 P P 06 42 10.8 -1.0
baz=33
TNA Tin City 51.02 339 P P 06 42 10.3 -1.5
baz=26
RDMU Red Mountain 51.04 286 IAmb IAmb 06 42 16.5
comp=Z,15nm,1.1s
I17K Unalakleet 51.06 334 P P 06 42 11.5 -0.7
baz=29
Q23K Middleton Isla 51.14 324 P P 06 42 10.9 -2.0
baz=36
L19K White Mountain 51.17 330 P P 06 42 10.9 -2.2
baz=32
HWUT Hardware Ranch 51.21 288 IAmb IAmb 06 42 15.0
comp=Z,30nm,1.9s
O22K Cooper Landing 51.25 327 P P 06 42 12.4 -1.2
baz=34
ASF Jabal al Asfar 51.27 91 P P 06 42 14.1 -0.2
comp=Z,0.8nm,0.4s,baz=351,slow=2.4,SNR=4.7
comp=Z,0.8nm,0.4s
M19K Big River Lodg 51.29 330 P P 06 42 12.4 -1.6
baz=32
SPU Mount Spurr 51.30 328 IAmb IAmb 06 42 17.7
comp=Z,18nm,1.2s
N20K Mount Spurr 51.32 328 P P 06 42 12.9 -1.4
baz=33,SNR=7.1
SPCR Spurr Chakacha 51.32 328 P P 06 42 13.4 -0.9
baz=33
SLKM Skilak Lake 51.36 327 IAmb IAmb 06 42 18.6
comp=Z,13nm,1.0s
ANM Nome 51.43 337 P P 06 42 14.5 -0.5
baz=27
SEW Seward 51.48 326 P P 06 42 13.9 -1.5
baz=34
K17K Iditarod 51.54 333 P P 06 42 14.8 -1.1
baz=30
AMTX Amarillo 51.56 275 IAmb IAmb 06 42 19.7
comp=Z,22nm,1.4s
J16K Anvik River 51.57 334 P P 06 42 15.4 -0.6
baz=29
L18K Granite Mounta 51.59 331 IAmb IAmb 06 42 19.6
comp=Z,16nm,1.2s
L18K Granite Mounta 51.59 331 P P 06 42 15.2 -1.0
baz=31,SNR=9.0
BILL Bilibino 51.86 352 P P 06 42 19.2 +1.0
BILL IAmb IAmb 06 42 21.0
comp=Z,21nm,1.8s
BILL Bilibino 51.86 352 *ce* P P 06 42 17.8 -0.3
BILL pmax pmax
comp=Z,9.0nm,2.5s
M18K Stony River 52.00 330 P P 06 42 18.4 -0.9
baz=31
L17K Donlin 52.05 332 P P 06 42 18.8 -0.8
baz=30
RED Redoubt Volcan 52.13 328 IAmb IAmb 06 42 23.1
comp=Z,11nm,1.1s
DKNS Dickens 52.14 273 IAmb IAmb 06 42 23.7
comp=Z,20nm,1.1s
BRSE Bradley Lake S 52.15 327 P P 06 42 19.7 -0.7
baz=33
TORD Torodi Ar. Bea 52.15 140 P P 06 42 20.7 -0.2
comp=Z,2.6nm,0.6s,baz=326,slow=7.9,SNR=12
comp=Z,2.6nm,0.6s
N19K Bonanza Creek 52.24 329 P P 06 42 20.8 -0.4
baz=32
EIL Elat 52.31 95 P P 06 42 20.6 -1.5
comp=Z,2.9nm,0.6s,baz=14,slow=6.1,SNR=5.9
comp=Z,2.9nm,0.6s
PV11 David Mesa, Pa 52.46 283 IAmb IAmb 06 42 27.1
comp=Z,14nm,1.3s
HOM Homer 52.47 327 P P 06 42 21.9 -0.8
baz=33
PV02 Paradox Valley 52.47 283 IAmb IAmb 06 42 27.1
comp=Z,14nm,1.2s
PV16 Nyswonger Mesa 52.48 283 IAmb IAmb 06 42 27.2
comp=Z,15nm,1.5s
M17K Holitna River 52.48 331 P P 06 42 22.0 -0.8
baz=30
PV10 Paradox Valley 52.48 283 IAmb IAmb 06 43 37.1
comp=Z,18nm,1.3s
PV18 Skein Mesa, Pa 52.52 283 IAmb IAmb 06 42 27.3
comp=Z,19nm,1.4s
PV13 Radium Mtn., P 52.55 283 IAmb IAmb 06 42 27.7
comp=Z,18nm,1.4s
HKT Hockley 52.56 266 P P 06 42 23.9 +0.2
HKT IAmb IAmb 06 42 27.3
comp=Z,26nm,1.1s
HKT Hockley 52.56 266 P P 06 42 23.9 +0.2
HKT pmax pmax
comp=Z,26nm,1.2s
K15K Wolf Creek Mou 52.65 334 P P 06 42 22.3 -1.8
baz=28
J14K Nanvaranak Lak 52.68 335 P P 06 42 22.8 -1.5
baz=27
L16K Owhat River 52.69 332 P P 06 42 22.7 -1.7
baz=29
N18K Kilae Creek 52.72 330 P P 06 42 23.0 -1.6
baz=31
O19K Port Alsworth 52.73 329 P P 06 42 23.4 -1.3
baz=32
PV05 Paradox Valley 52.75 283 IAmb IAmb 06 42 28.4
comp=Z,18nm,1.4s
435B Jarrell 52.77 268 IAmb IAmb 06 42 28.4
comp=Z,17nm,1.2s
I07A Izee 53.02 296 IAmb IAmb 06 43 52.6
comp=Z,20nm,1.9s
BRDY Brady 53.07 270 IAmb IAmb 06 42 30.0
comp=Z,11nm,1.0s
J08A Circle Bar Ran 53.12 294 IAmb IAmb 06 42 30.9
comp=Z,9.4nm,0.9s
MVCO Mesa Verde 53.13 282 IAmb IAmb 06 42 40.0
comp=Z,37nm,1.9s
M16K Timber Creek 53.17 332 P P 06 42 25.7 -2.3
baz=29
N17K Nushagak Hills 53.17 331 P P 06 42 25.5 -2.5
baz=30
L15K Ungalak Mounta 53.18 334 P P 06 42 26.3 -1.7
baz=28
O18K Koktuh Hills 53.25 329 P P 06 42 26.8 -1.8
baz=31
GAMB Gambell 53.32 340 P P 06 42 27.0 -2.0
baz=23
Q20K Shuyak Island 53.56 327 P P 06 42 28.5 -2.3
baz=32
N16K Nishlik Lake 53.61 331 P P 06 42 29.4 -1.8
baz=29
Q19K Cape Douglas, 53.63 328 P P 06 42 29.2 -2.2
baz=31
K13K Kusilvak Mount 53.65 335 P P 06 42 29.2 -2.2
baz=26
P18K Big Mountain, 53.66 329 IAmb IAmb 06 42 33.5
comp=Z,20nm,1.5s
P18K Big Mountain, 53.66 329 P P 06 42 29.5 -2.1
baz=31
L14K Kuka Creek 53.75 334 P P 06 42 30.3 -1.9
baz=27
O17K Koliganek Bris 53.80 330 P P 06 42 30.7 -1.9
baz=30
M15K Kasigluk River 53.87 333 P P 06 42 31.3 -1.8
baz=28
ANMO Albuquerque 53.90 279 P P 06 42 34.2 +0.3
ANMO Albuquerque 53.90 279 P P 06 42 34.2 +0.3
ANMO pmax pmax
comp=Z,5.0nm,1.4s
WVOR Wild Horse Val 53.91 294 IAmb IAmb 06 42 36.6
comp=Z,8.2nm,1.0s
M14K Bethel 54.11 333 P P 06 42 32.8 -2.0
baz=28
P17K Kvichak River 54.14 329 P P 06 42 32.7 -2.3
baz=30
N15K Kwethluk River 54.19 332 P P 06 42 33.1 -2.4
baz=28
O16K Kokwok River B 54.21 330 P P 06 42 33.7 -1.9
baz=29
Q18K Katmai Hardscr 54.24 328 P P 06 42 33.5 -2.4
baz=31
KDAK Kodiak Island 54.32 326 P P 06 42 33.7 -2.7
baz=32
OZNA Ozona 54.44 271 IAmb IAmb 06 42 40.5
comp=Z,12nm,1.0s
Q16K King Salmon 54.65 329 P P 06 42 36.2 -2.5
baz=30
P16K Nushagak River 54.68 330 P P 06 42 36.7 -2.2
baz=29
M13K Dall Lake 54.73 334 P P 06 42 36.9 -2.3
baz=27
N14K Kuskokwak Cree 54.78 333 P P 06 42 37.7 -2.0
baz=27
PKCU Pink Cliffs 54.82 285 IAmb IAmb 06 42 43.9
comp=Z,23nm,1.5s
Y22A Socorro 54.96 278 IAmb IAmb 06 42 46.0
comp=Z,11nm,1.4s
OHAK Old Harbor 55.00 326 P P 06 42 39.3 -2.0
baz=31
O15K Ungalikthiuk R 55.01 331 P P 06 42 38.9 -2.5
baz=28
ZALV Zalesovo Beam 55.16 41 P P 06 42 42.4 -0.2
comp=Z,0.5nm,0.4s,baz=320,slow=6.4,SNR=1.8
comp=Z,0.5nm,0.4s
O14K Tigyukauivet M 55.28 332 P P 06 42 40.4 -2.9
baz=27
M11K Mekoryuk 55.37 335 P P 06 42 40.7 -3.2
baz=25
KNB Kanab 55.40 285 IAmb IAmb 06 42 48.0
comp=Z,12nm,1.3s
R17L Mt. Paulik Vol 55.48 328 P P 06 42 42.5 -2.3
baz=30
KURK Kurchatov 55.66 47 P 06 42 46.3 +0.1
KURK Kurchatov 55.66 47 *ce* P P 06 42 48.0 +1.8
KURK pmax pmax
comp=Z,16nm,2.5s
833A Chaparral WMA, 55.68 268 IAmb IAmb 06 42 50.4
comp=Z,8.4nm,0.9s
KURBB Kurchatov Arra 55.70 47 P P 06 42 46.0 -0.5
comp=Z,2.6nm,1.0s,baz=321,slow=7.5,SNR=11
comp=Z,2.6nm,1.0s
SAND Sanderson 55.73 271 IAmb IAmb 06 42 50.1
comp=Z,13nm,1.1s
TPB01 Permian Basin 55.76 274 IAmb IAmb 06 42 50.3
comp=Z,29nm,1.6s
SII Sitkinak Islan 55.82 326 P P 06 42 44.8 -2.5
baz=30
R16K Pilot Point 55.86 329 P P 06 42 45.1 -2.3
baz=29
WUAZ Wupatki 55.88 283 IAmb IAmb 06 42 51.5
comp=Z,15nm,1.4s
ALPN Alpine 56.15 273 IAmb IAmb 06 42 52.8
comp=Z,18nm,1.3s
PRN Pahroc Range 56.17 287 IAmb IAmb 06 42 54.6
comp=Z,11nm,1.2s
KVN Kaiserville 56.32 291 IAmb IAmb 06 42 54.6
comp=Z,9.9nm,1.1s
DBIC Dimbokro 56.39 150 P P 06 42 52.5 +0.8
DBIC IAmb IAmb 06 42 53.4
comp=Z,21nm,1.4s
DBIC Dimbokro 56.39 150 P P 06 42 52.5 +0.8
DBIC pmax pmax
comp=Z,21nm,1.4s
PAHR Pah Rah Range 56.41 292 IAmb IAmb 06 42 55.5
comp=Z,15nm,1.0s
X16A Lo Mia Camp, P 56.80 282 IAmb IAmb 06 42 59.1
comp=Z,11nm,1.4s
NVAR Mina Array Bea 56.91 290 P P 06 42 54.9 -0.7
comp=Z,1.1nm,0.8s,baz=50,slow=6.9,SNR=4.6
comp=Z,1.1nm,0.8s
PNTR Pine Nut 57.00 292 IAmb IAmb 06 42 59.8
comp=Z,7.6nm,0.9s
TX31 Lajitas Ar. Si 57.01 272 IAmb IAmb 06 42 59.6
comp=Z,21nm,1.8s
TXAR Lajitas Array 57.01 272 P P 06 42 55.6 -0.6
comp=Z,1.3nm,0.8s,baz=42,slow=8.7,SNR=3.9
comp=Z,1.3nm,0.8s
TXAR Lajitas Array 57.01 272 P P 06 42 55.8 -0.4
TXAR Lajitas Array 57.01 272 P P 06 42 55.8 -0.4
O03E Paynes Creek 57.06 294 IAmb IAmb 06 42 58.8

comp=Z,18nm,1.2s
CHGN Chignik 57.19 329 P P 06 42 54.8 -2.2
baz=28
YAK Yakutsk 57.44 11 *e*P P 06 42 58.8 +0.2
YAK *e* 06 43 52.0
YAK *e* 06 45 05.8
YAK *e*S S 06 50 57.1 +2.0
YAK *e* 06 52 47.6
YAK *e*SS SS 06 54 44.8 +1.2
YAK pmax pmax
comp=Z,13nm,1.0s
YAK pmax pmax
comp=N,5.0nm,1.4s
YAK pmax pmax
comp=E,3.0nm,1.4s
YAK pmax pmax
comp=Z,264nm,5.8s
YAK pmax pmax
comp=E,217nm,6.1s
YAK smax smax
comp=E,161nm,4.4s
YAK smax smax
comp=N,112nm,4.3s
SEY Seymchan 57.52 359 *ce*P P 06 43 02.2 +3.0
SEY pmax pmax
comp=Z,11nm,1.7s
SUTB Sutter Butte 57.90 294 IAmb IAmb 06 43 04.1
comp=Z,14nm,1.0s
GWY Greenwater Val 57.93 288 IAmb IAmb 06 43 06.9
comp=Z,17nm,1.2s
TUC Tucson 58.17 280 P P 06 43 06.9 +2.6
TUC Tucson 58.17 280 P P 06 43 06.9 +2.6
TUC pmax pmax
comp=Z,3.0nm,1.1s
SDPT Sand Point 58.57 329 P P 06 43 04.6 -2.1
baz=27
KK31 Karatay Array 58.63 58 P P 06 43 07.8 +0.4
KK31 IAmb IAmb 06 43 12.3
comp=Z,16nm,1.5s
KK31 Karatay Array 58.63 58 P P 06 43 07.8 +0.4
KK31 pmax pmax
comp=Z,16nm,1.5s
KKAR Karatay Array 58.63 58 P P 06 43 07.8 +0.4
KKAR Karatay Array 58.63 58 P P 06 43 07.8 +0.4
GSC Goldstone, Bar 58.70 287 IAmb IAmb 06 43 11.6
comp=Z,9.4nm,1.1s
CHNA Chernabura Isl 58.81 329 P P 06 43 06.2 -2.1
baz=27
BLYC Blythe 58.85 284 IAmb IAmb 06 43 12.3
comp=Z,6.8nm,1.1s
SPIA Saint Paul Isl 59.16 336 P P 06 43 08.4 -2.3
baz=22
BC3 Big Chuckawall 59.38 285 IAmb IAmb 06 43 16.0
comp=Z,13nm,1.3s
DGZ Jazzator, Alta 59.62 42 *i* P P 06 43 14.7 +0.4
DGZ pmax pmax
comp=Z,9.0nm,1.6s
FALS False Pass 59.76 331 P P 06 43 12.7 -2.2
baz=25
PMD Palm Desert 59.83 286 IAmb IAmb 06 43 19.8
comp=Z,13nm,1.5s
PFO Pinyon Flats O 59.90 286 P P 06 43 16.6 +0.2
PFO IAmb IAmb 06 43 20.0
comp=Z,9.2nm,1.1s
PFO Pinyon Flats O 59.90 286 P P 06 43 16.6 +0.2
PFO pmax pmax
comp=Z,9.0nm,1.2s
DNR Dunn Ranch,Anz 60.02 286 P P 06 43 16.4 -0.8
DNR IAmb IAmb 06 43 21.1
comp=Z,12nm,1.1s
BORC Borrego Spring 60.16 285 P P 06 43 19.0 +1.0
BORC IAmb IAmb 06 43 22.7
comp=Z,13nm,1.3s
MK31 Makanchi Array 60.27 47 P P 06 43 18.5 -0.1
MK31 IAmb IAmb 06 43 20.6
comp=Z,18nm,1.9s
MK31 Makanchi Array 60.27 47 P P 06 43 18.5 -0.1
MK31 pmax pmax
comp=Z,18nm,1.9s
MKAR Makanchi Array 60.27 47 P P 06 43 17.8 -0.8
comp=Z,1.8nm,0.7s,baz=341,slow=5.9,SNR=11
comp=Z,1.8nm,0.7s
MKAR Makanchi Array 60.27 47 06 43 18.4 -0.2
MKAR PcP PcP 06 44 04.1 +0.2
MKAR Makanchi Array 60.27 47 *i* P P 06 43 18.8 +0.2
MKAR pmax pmax
comp=Z,2.0nm,0.7s
AAK Ala-Archa 60.69 55 P P 06 43 22.3 +0.6
AAK IAmb IAmb 06 43 27.1
comp=Z,11nm,1.3s
AAK Ala-Archa 60.69 55 *ce*P P 06 43 22.6 +0.9
AAK pmax pmax
comp=Z,14nm,1.7s
BAR Barrett 60.76 285 P P 06 43 23.2 +1.1
BAR IAmb IAmb 06 43 38.0
comp=Z,28nm,1.9s
UNV Unalaska Valle 61.42 332 P P 06 43 23.9 -2.3
baz=23
CHGR Chuyangaron 61.68 61 P P 06 43 28.9 +0.5
CHGR Chuyangaron 61.68 61 P P 06 43 28.9 +0.5
CHGR pmax pmax
comp=Z,21nm,1.1s
ZAIG Zacatecas 61.87 267 P 06 43 31.8 +1.8
KNGR Kungurtug, Tuv 61.99 35 *e*P P 06 43 32.5 +2.2
KNGR pmax pmax
comp=Z,14nm,1.6s
SHAA Shahritus 62.12 63 P P 06 43 32.9 +1.5
SHAA IAmb IAmb 06 43 46.5
comp=Z,62nm,1.6s
KDJ Kajisay 62.21 53 IAmb IAmb 06 43 36.3
comp=Z,24nm,2.0s
TARG Taragay, Kyrgy 62.80 53 IAmb IAmb 06 43 39.7
comp=Z,9.8nm,1.2s
KSH2 Kashi 64.05 56 P P 06 43 44.4 +0.2
KSH2 pmax pmax
comp=Z,12nm,1.7s
KSH2 L L
comp=Z,940nm,18.6s
KSH2 L L
comp=Z,720nm,16.1s
KSH2 L L
comp=Z,1μm,18.5s
TLIG Tlapa 64.24 260 P P 06 43 45.4 -0.2
ROSC El Rosal 64.41 231 P P 06 43 46.7 -0.4
comp=Z,6.2nm,0.6s,baz=59,slow=5.6,SNR=9.7
comp=Z,6.2nm,0.6s
ROSC El Rosal 64.41 231 P P 06 43 48.1 +1.0
ROSC El Rosal 64.41 231 P P 06 43 48.1 +1.0
ROSC pmax pmax
comp=Z,45nm,1.5s
WMQ Urumqi 64.78 45 *e*P P 06 43 52.6 +3.7
WMQ pP pwP 06 43 55.9 +4.2
WMQ pmax pmax
comp=Z,9.0nm,1.1s
WMQ L L
comp=Z,300nm,21.3s
ZEA Zeya 65.29 15 *e*P P 06 43 55.4 +3.5
SONM Songino Array 66.93 30 P P 06 44 02.8 +0.1
comp=Z,0.4nm,0.4s,baz=335,slow=6.6,SNR=4.7
comp=Z,0.4nm,0.4s
SONM Songino Array 66.93 30 P P 06 44 02.6 -0.1
SONM Songino Array 66.93 30 P P 06 44 02.6 -0.1
SONM pmax pmax
comp=Z,8.0nm,1.7s
ULN Ulaanbaatar 67.07 30 *ce*P P 06 44 04.6 +1.0
ULN pmax pmax
comp=Z,9.0nm,1.7s
HEH HeiHe 68.72 15 *e*P P 06 44 13.9 +0.1
HEH pmax pmax
comp=Z,13nm,1.0s
OTAV Otavalo 70.24 233 P 06 44 24.8 +0.7
OTAV IAmb IAmb 06 44 27.1
comp=Z,21nm,1.5s
OTAV Otavalo 70.24 233 P P 06 44 24.8 +0.7
OTAV pmax pmax
comp=Z,21nm,1.5s
KLR Kul'dur 70.26 13 *ce*P P 06 44 25.5 +2.2
KLR pmax pmax
comp=Z,3.0nm,1.7s
GTA2 Gaotai 72.72 39 *e*P P 06 44 38.8 +0.4
GTA2 pP pwP 06 44 41.8 +0.5
GTA2 pmax pmax
comp=Z,9.0nm,1.7s
GTA2 L L
comp=Z,330nm,14.6s
GTA2 L L
comp=Z,250nm,12.7s
GTA2 L L
comp=Z,450nm,14.3s
BNX BinXian 73.14 16 ⇑P P 06 44 39.8 -0.9
BNX pmax pmax
comp=Z,6.0nm,0.9s
YSS Yuzhno-Sakhali 73.38 5 *e*P P 06 44 42.2 +0.2
YSS pmax pmax
comp=Z,20nm,0.5s
GOMU GeErMu 74.06 44 P P 06 44 46.1 -0.6
GOMU pmax pmax
comp=Z,3.0nm,1.0s
GOMU L L
comp=Z,290nm,18.7s
GOMU L L
comp=Z,180nm,17.9s
GOMU L L
comp=Z,440nm,18.4s
HHC Hu-ho-hao-te 74.77 29 *e*P P 06 44 50.6 +0.2
HHC pmax pmax
comp=Z,14nm,0.6s
HHC pmax pmax
comp=Z,95nm,4.9s
HHC L L
comp=Z,370nm,17.9s
HHC L L
comp=Z,170nm,17.0s
HHC L L
comp=Z,220nm,16.2s
CZSB Cruzeiro do Su 75.40 224 P P 06 44 52.0 -2.2
CZSB IAmb IAmb 06 44 54.6
comp=Z,22nm,1.4s
VILB Vilhena 76.53 210 P 06 45 01.4 +0.8
BDFB Brasilia 76.64 198 P P 06 45 00.1 -1.1
comp=Z,3.0nm,0.6s,baz=9.7,slow=2.5,SNR=8.3
comp=Z,3.0nm,0.6s
BDFB Brasilia 76.64 198 P 06 45 01.3 +0.1
BDFB Brasilia 76.64 198 P P 06 45 01.3 +0.1
BDFB pmax pmax
comp=Z,29nm,1.7s
LZH Lanzhou 77.10 37 *e*P P 06 45 05.8 +1.9
LZH pP PcP 06 45 12.8 -1.9
LZH pmax pmax
comp=Z,23nm,1.6s
LZH L L
comp=Z,280nm,15.8s
LZH L L
comp=Z,290nm,17.5s
LZH L L
comp=Z,480nm,16.2s
PTLB Pontes e Lacer 78.67 209 P 06 45 12.4 0.0
PTLB IAmb IAmb 06 45 13.5
comp=Z,20nm,1.7s
HNS HongShan 78.81 28 ⇑P P 06 45 13.9 +0.8
HNS pmax pmax
comp=Z,11nm,1.0s
SIV San Ignacio 79.67 210 P P 06 45 18.1 +0.2
comp=Z,2.5nm,0.6s,baz=12,slow=3.4,SNR=15
comp=Z,2.5nm,0.6s
TIA Tai'an 80.50 26 P P 06 45 24.0 +1.7
TIA pmax pmax
comp=Z,16nm,1.9s
KSAR Wonju Array Be 81.34 18 P P 06 45 27.4 +0.6
KSAR Wonju Array Be 81.34 18 P P 06 45 27.4 +0.6
LPAZ La Paz 81.92 217 P P 06 45 30.0 -0.7
comp=Z,0.7nm,0.8s,baz=31,slow=12,SNR=5.8
comp=Z,0.7nm,0.8s
LPAZ La Paz 81.92 217 P P 06 45 30.4 -0.3
LPAZ La Paz 81.92 217 P P 06 45 30.4 -0.3
LPAZ pmax pmax
comp=Z,6.0nm,1.5s
MJAR Matsushiro Arr 83.46 10 P P 06 45 38.4 +0.5
comp=Z,4.6nm,0.9s,baz=334,slow=5.9,SNR=5.2
comp=Z,4.6nm,0.9s
NJ2 Nanjing 84.88 26 *e*P P 06 45 45.8 +0.6
NJ2 pmax pmax
comp=Z,18nm,0.5s
PZH PanZhiHua 85.28 42 P P 06 45 48.4 +1.0
CM31 Chiang Mai Arr 91.68 48 P P 06 46 18.3 +0.4
CMAR Chiang Mai Arr 91.68 48 P P 06 46 16.8 -1.1
comp=Z,1.6nm,0.6s,baz=324,slow=5.4,SNR=10
comp=Z,1.6nm,0.6s
CMAR Chiang Mai Arr 91.68 48 P P 06 46 18.3 +0.4
CMAR Chiang Mai Arr 91.68 48 *i* P P 06 46 18.2 +0.4
CMAR pmax pmax
comp=Z,2.0nm,0.6s
QIZ Qiongzhong 94.88 38 P P 06 46 32.3 -0.3
QIZ S S 06 57 45.8 -0.7
QIZ L L
comp=Z,210nm,15.7s
QIZ L L
comp=Z,220nm,17.2s
QIZ L L
comp=Z,290nm,11.7s
TAOE Nuku Hiva Isla 107.70 283 *e*LR LR 07 23 06.1
comp=Z,370nm,25.4s
PPT2 Papeete2 119.81 287 *e*SS SS 07 09 50.1 +1.1
comp=Z,320nm,30.0s
PPT2 *e*LR LR 07 28 41.1
comp=Z,357nm,36.2s
PPT2 *e*LR LR 07 28 47.5
comp=Z,362nm,21.5s
TBI Tubuai 124.65 283 *e*SS SS 07 10 50.6 +0.1
comp=Z,1μm,30.0s
TBI *e*LR LR 07 30 54.5
comp=Z,950nm,22.5s
WRA Warramunga Arr 138.58 23 PKP PKPdf 06 52 34.2 -1.9
comp=Z,0.3nm,0.8s,baz=359,slow=3.2,SNR=4.7
ASAR Alice Springs 142.11 24 PKhKP PKPpre 06 52 37.2
comp=Z,1.2nm,0.8s,baz=347,slow=2.5,SNR=8.1
QSPA South Pole Qui 149.76 180 PKPbc PKPbc 06 52 57.4 -1.5
comp=Z,4.7nm,0.8s,baz=247,slow=1.2,SNR=12
QSPA South Pole Qui 149.76 180 PKPbc PKPbc 06 52 58.2 -0.7
STKA Stephens Creek 151.46 15 PKPbc PKPbc 06 53 01.4 -2.5
comp=Z,3.0nm,0.9s,baz=342,slow=8.2,SNR=4.1

IDC ***16*** *06:34:32.6±0.6,59.°81N×29.°98W,h0km,mb4.1/24, mbtmp4.1/26,ML3.9/2, Error ellipse: s-maj=17.8km s-min=11.9km az=180.0*
NEIC ***16*** *06:34:34.6±1.1,59.°91N±0.°09×30.°0W±0.°1,h10km±1km, mb4.5/45, Error ellipse: s-maj=17.2km s-min=8.9km az=215.0*

ISC 16 06:34:34.4±0.5,59.89N±0.°08×29.97W±0.°06,h10km,n71, σ0s77/63,mb4.4/42,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**6.31**	**36**	Pn	**Pn**	**06 36 07.7**	**+0.3**
	6.8nm,0.3s,baz=278,slow=6.2,SNR=5.7						
BORG				Sn	**Sn**	**06 37 18.0**	**-1.5**
	2.9nm,0.3s,baz=284,slow=22,SNR=6.6						
	50nm,0.7s						
BORG	**Borgarnes**	**6.31**	**36**		**Pn**	**06 36 07.0**	**-0.4**
EKA	**Eskdalemuir Ar**	**15.01**	**96**	Pn	**Pn**	**06 38 07.6**	**+1.2**
	baz=299,slow=8.8						
	11nm,0.9s						
KUQ	**Kuujjuuaa**	**19.70**	**282**	P	**P**	**06 39 03.2**	**-0.1**
NOA	**NORSAR Array B**	**20.10**	**69**	P	**P**	**06 39 07.3**	**-0.5**
	0.9nm,0.8s,baz=153,slow=16,SNR=2.4						
	0.9nm,0.8s						
SCHQ	**Schefferville**	**20.32**	**272**	P	**P**	**06 39 10.1**	**-0.2**
	5.9nm,0.8s,baz=54,slow=9.4,SNR=3.9						
	5.9nm,0.8s						
SCHQ	**Schefferville**	**20.32**	**272**	P	**P**	**06 39 10.2**	**-0.1**
HFS	**Hagfors**	**21.53**	**70**	P	**P**	**06 39 23.1**	**-0.1**
	6.3nm,1.0s,baz=195,slow=33,SNR=3.1						
	6.3nm,1.0s						
CLF	**Chambon-Foret**	**22.12**	**108**		**P**	**06 39 29.8**	**+0.1**
ILON	**Igloolik, Nuna**	**23.38**	**315**	P	**P**	**06 39 42.5**	**-0.2**
ARCES	**ARCESS Array B**	**24.64**	**44**	P	**P**	**06 39 54.4**	**-0.2**
	8.1nm,0.9s,baz=273,slow=4.7,SNR=4.3						
	8.1nm,0.9s						
ESDC	**Sonseca Array**	**25.99**	**129**	P	**P**	**06 40 06.0**	**-1.1**
	5.5nm,1.0s,baz=330,slow=9.2,SNR=7.9						
	5.5nm,1.0s						
FINES	**FINESS Array B**	**26.79**	**62**	P	**P**	**06 40 15.2**	**+1.2**
	4.8nm,1.0s,baz=222,slow=20,SNR=2.1						
	4.8nm,1.0s						
FINES	**FINESS Array B**	**26.79**	**62**	P	**P**	**06 40 14.9**	**+0.9**
RES	**Resolute Bay**	**27.21**	**328**		**P**	**06 40 17.4**	**-0.3**
GERES	**GERESS Array B**	**27.22**	**94**	P	**P**	**06 40 19.4**	**+1.2**
	0.2nm,0.4s,baz=144,slow=23,SNR=1.5						
	0.2nm,0.4s						
AKASG	**Malin Array Be**	**33.83**	**79**	P	**P**	**06 41 15.0**	**-1.3**
	4.1nm,0.9s,baz=316,slow=8.4,SNR=6.7						
	4.1nm,0.9s						
A36M	**Sachs Harbour**	**36.26**	**328**		**P**	**06 41 37.4**	**+0.3**
A36M				IAmb	IAmb	06 41 39.5	
	comp=Z,7.5nm,0.9s						
ULM	**Lac du Bonnet**	**37.41**	**285**	P	**P**	**06 41 46.8**	**-0.4**
	comp=Z,2.9nm,0.8s,baz=85,slow=7.0,SNR=4.3						
	comp=Z,2.9nm,0.8s						
YKAW1	**Yellowknife Wh**	**38.08**	**311**	P	**P**	**06 41 52.6**	**+0.1**
YKA	**Yellowknife Ar**	**38.12**	**312**	P	**P**	**06 41 53.2**	**+0.3**
	comp=Z,2.3nm,0.9s,baz=50,slow=8.8,SNR=9.2						
YKA				PcP	**PcP**	**06 44 06.4**	**-1.1**
	comp=Z,0.3nm,0.8s,baz=30,slow=3.8,SNR=3.9						
	comp=Z,2.3nm,0.9s						
YKA	**Yellowknife Ar**	**38.12**	**312**	P	**P**	**06 41 53.0**	**+0.1**
T47A	**Sharon Grove**	**42.58**	**264**		**P**	**06 42 31.5**	**+1.4**
T47A				IAmb	IAmb	06 42 33.7	
	comp=Z,8.1nm,0.9s						
I30M	**Mount Dempster**	**43.68**	**324**	P	**P**	**06 42 39.9**	**+0.9**
I30M				IAmb	IAmb	06 42 41.0	
	comp=Z,6.3nm,0.9s						
BRTR	**Keskin Array B**	**43.73**	**88**	P	**P**	**06 42 40.9**	**+1.3**
	comp=Z,3.6nm,1.0s,baz=352,slow=5.2,SNR=6.1						
	comp=Z,3.6nm,1.0s						
BRTR	**Keskin Array B**	**43.73**	**88**	P	**P**	**06 42 40.7**	**+1.1**
CCM	**Cathedral Cave**	**43.83**	**268**	P	**P**	**06 42 40.0**	**-0.3**
CCM				IAmb	IAmb	06 42 43.0	
	comp=Z,8.1nm,1.1s						
I29M	**Ogilvie Camp,**	**44.15**	**325**	IAmb	IAmb	06 42 43.7	
	comp=Z,7.9nm,1.0s						
G26K	**Porcupine Rive**	**44.47**	**329**	IAmb	IAmb	06 42 47.4	
	comp=Z,7.8nm,1.1s						
B21K	**Ikpikpuk River**	**44.89**	**336**	IAmb	IAmb	06 42 51.4	
	comp=Z,6.8nm,1.1s						
I27K	**Kandik River**	**44.90**	**327**		**P**	**06 42 48.9**	**+0.3**
I27K				IAmb	IAmb	06 42 49.6	
	comp=Z,4.2nm,0.8s						
DAWY	**Dawson**	**45.42**	**324**	IAmb	IAmb	06 42 54.5	
	comp=Z,7.0nm,1.0s						
COLD	**Coldfoot**	**45.84**	**332**	IAmb	IAmb	06 42 53.6	
	comp=Z,9.4nm,1.3s						
R33M	**Jennings River**	**46.15**	**316**	P	**P**	**06 42 56.6**	**-2.0**
R33M				IAmb	IAmb	06 43 01.5	
	comp=Z,6.0nm,1.0s						
ILAR	**Eielson Array**	**46.96**	**328**	P	**P**	**06 43 05.4**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=29,slow=7.1,SNR=7.7						
ILAR				PcP	**PcP**	**06 44 36.5**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=3.2,slow=3.0,SNR=5.5						
	comp=Z,1.8nm,0.8s						
ILAR	**Eielson Array**	**46.96**	**328**	P	**P**	**06 43 04.3**	**-0.4**
ILAR					**PcP**	**06 44 36.6**	**-0.4**
E19K	**Redstone River**	**47.22**	**335**	IAmb	IAmb	06 43 19.4	
	comp=Z,5.9nm,0.9s						
F20K	**Avaraart Lake**	**47.24**	**334**	IAmb	IAmb	06 43 12.1	
	comp=Z,6.3nm,1.2s						
TIXI	**Tiksi**	**47.91**	**9**	P	**P**	**06 43 12.7**	**+0.7**
	comp=Z,6.8nm,0.3s,baz=22,slow=5.5,SNR=3.9						
	comp=Z,6.8nm,0.3s						
TIXI	**Tiksi**	**47.91**	**9**	P	**P**	**06 43 12.6**	**+0.5**
TIXI				IAmb	IAmb	06 43 13.6	
	comp=Z,3.0nm,0.9s						
E18K	**Tukpahlearik C**	**47.94**	**337**	P	**P**	**06 43 12.8**	**+0.4**
E18K				IAmb	IAmb	06 43 14.8	
	comp=Z,3.3nm,0.9s						
PAX	**Paxson**	**48.01**	**326**	IAmb	IAmb	06 43 14.9	
	comp=Z,5.6nm,0.9s						
H17A	**Grant Village**	**48.62**	**290**	IAmb	IAmb	06 43 22.3	
	comp=Z,4.7nm,0.9s						
AB31	**Akbulak array**	**49.23**	**60**		**P**	**06 43 22.9**	**+0.4**
PDAR	**Pinedale Array**	**49.36**	**287**	P	**P**	**06 43 22.9**	**-1.0**
	comp=Z,1.1nm,0.8s,baz=65,slow=7.0,SNR=4.3						
	comp=Z,1.1nm,0.8s						
PLID	**Pearl Lake**	**50.64**	**294**		**P**	**06 43 32.9**	**-0.6**
PLID				IAmb	IAmb	06 43 36.6	
	comp=Z,6.6nm,1.2s						
BVAR	**Borovoye Array**	**50.69**	**50**	P	**P**	**06 43 34.8**	**+1.3**
	comp=Z,2.7nm,0.9s,baz=298,slow=6.6,SNR=5.5						
	comp=Z,2.7nm,0.9s						
DKNS	**Dickens**	**52.14**	**273**		**P**	**06 43 44.0**	**-0.7**
DKNS				IAmb	IAmb	06 43 45.8	
	comp=Z,7.7nm,1.1s						
TORD	**Torodi Ar. Bea**	**52.18**	**140**	P	**P**	**06 43 43.5**	**-1.5**
	comp=Z,1.8nm,0.7s,baz=325,slow=7.7,SNR=5.4						
	comp=Z,1.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**52.18**	**140**	P	**P**	**06 43 45.0**	**0.0**
J08A	**Circle Bar Ran**	**53.10**	**294**	IAmb	IAmb	06 44 31.3	
	comp=Z,11nm,1.4s						
OZNA	**Ozona**	**54.45**	**271**	IAmb	IAmb	06 44 03.8	
	comp=Z,5.5nm,0.8s						
KURK	**Kurchatov**	**55.63**	**47**	P	**P**	**06 44 09.8**	**-0.1**
KURBB	**Kurchatov Arra**	**55.67**	**47**	P	**P**	**06 44 09.6**	**-0.6**
	comp=Z,1.8nm,1.0s,baz=320,slow=7.6,SNR=5.4						
	comp=Z,1.8nm,1.0s						
SAND	**Sanderson**	**55.73**	**271**		**P**	**06 44 10.8**	**-0.1**
SAND				IAmb	IAmb	06 44 12.4	
	comp=Z,3.3nm,0.8s						
KVN	**Kaiserville**	**56.31**	**291**	P	**P**	**06 44 15.9**	**+0.7**
NVAR	**Mina Array Bea**	**56.90**	**290**	P	**P**	**06 44 19.8**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=38,slow=5.2,SNR=3.9						
	comp=Z,0.8nm,0.7s						
TXAR	**Lajitas Array**	**57.01**	**272**	P	**P**	**06 44 21.1**	**+1.0**
	comp=Z,0.6nm,0.8s,baz=7.0,slow=32,SNR=2.2						
	comp=Z,0.6nm,0.8s						
MKAR	**Makanchi Array**	**60.24**	**47**	P	**P**	**06 44 41.8**	**-0.5**
	comp=Z,1.2nm,0.8s,baz=319,slow=6.2,SNR=5.1						
	comp=Z,1.2nm,0.8s						
MKAR	**Makanchi Array**	**60.24**	**47**	P	**P**	**06 44 42.2**	**-0.1**
ZAIG	**Zacatecas**	**61.87**	**267**		**P**	**06 44 54.2**	**+0.2**
GAR	**Garm**	**61.89**	**60**		**P**	**06 44 53.9**	**+0.2**
BDFB	**Brasilia**	**76.68**	**198**	P	**P**	**06 46 24.5**	**-0.9**
	comp=Z,2.6nm,0.8s,baz=32,slow=6.9,SNR=4.0						
	comp=Z,2.6nm,0.8s						
BDFB	**Brasilia**	**76.68**	**198**	P	**P**	**06 46 24.9**	**-0.5**
BDFB				IAmb	IAmb	06 46 29.0	
	comp=Z,9.9nm,1.4s						
SIV	**San Ignacio**	**79.71**	**210**	P	**P**	**06 46 42.2**	**+0.1**
	comp=Z,3.4nm,0.9s,baz=54,slow=4.3,SNR=6.0						
	comp=Z,3.4nm,0.9s						
MJAR	**Matsushiro Arr**	**83.42**	**10**	P	**P**	**06 47 02.0**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=224,slow=56,SNR=2.2						
	comp=Z,1.5nm,0.7s						
MJAR	**Matsushiro Arr**	**83.42**	**10**	P	**P**	**06 47 01.0**	**-0.6**
CMAR	**Chiang Mai Arr**	**91.65**	**48**	P	**P**	**06 47 41.8**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=328,slow=6.3,SNR=4.9						
	comp=Z,0.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**91.65**	**48**	P	**P**	**06 47 41.1**	**-0.6**
ASAR	**Alice Springs**	**142.07**	**24**	PKhKP	PKPpre	06 54 01.9	
	comp=Z,0.5nm,0.7s,baz=355,slow=2.6,SNR=2.9						
ASAR	**Alice Springs**	**142.07**	**24**	PKPdf	**PKPdf**	**06 54 07.5**	**+1.2**

PGC 16 06:38:15.0±1.0,50.12N×129.75W,h10km,MLSn3.0/20, Mw3.6/20,165km west of Port Alice, Bc Vancouver Island, Canada Region,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPEB	**Brooks Peninsu**	**1.27**	**88**	P	Pn	06 38 36.6	-2.3
PACB	**Port Alice, BC**	**1.48**	**77**	P	Pn	06 38 38.2	-3.4
PACB				Sn	Sn	06 38 57.3	-3.7
PHC	**Port Hardy**	**1.59**	**68**	P	Pn	06 38 41.7	-1.4
PHC				Sn	Sn	06 39 00.3	-3.4
FHBB	**Fair Harbour**	**1.70**	**91**	Pn	Pn	06 38 43.1	-1.5
FHBB				Sn	Sn	06 39 02.4	-4.0
EDB	**Eliza Dome**	**1.71**	**97**	Pn	Pn	06 38 42.9	-1.9
EDB				Sn	Sn	06 39 02.4	-4.3
TAHB	**Tahsis**	**1.99**	**95**	Pn	Pn	06 38 47.4	-1.4
WOSB	**Woss**	**2.04**	**88**	Pn	Pn	06 38 48.5	-0.9
WOSB				Sn	Sn	06 39 13.2	-1.9
NTKA	**Nootka**	**2.09**	**104**	Pn	Pn	06 38 48.5	-1.6
BBB	**Bella Bella**	**2.31**	**26**	Pn	Pn	06 38 51.6	-1.4
BBB				Sn	Sn	06 39 16.8	-4.6
JEDB	**Jedway, Haida**	**2.36**	**338**	Pn	Pn	06 38 50.9	-2.8
NCSB	**Newcastle Ridg**	**2.38**	**82**	Pn	Pn	06 38 53.1	-1.1
GDR	**Gold River**	**2.42**	**97**	Pn	Pn	06 38 53.1	-1.5
BAIB	**Barry Inlet**	**2.76**	**334**	Pn	Pn	06 38 56.4	-2.9
MYRA	**Myra Falls**	**2.76**	**100**	Pn	Pn	06 38 58.6	-0.7
CBB	**Campbell River**	**2.82**	**90**	Pn	Pn	06 38 59.9	-0.3
B012	**Ucluelet**	**2.99**	**112**	Sn	Sn	06 39 38.7	+0.4
GRIB	**Gribbell Islan**	**3.24**	**6**	Pn	Pn	06 39 03.8	-2.1
MOBC	**Moresby Island**	**3.33**	**336**	Pn	Pn	06 39 04.5	-2.6
BNAB	**Bonilla**	**3.42**	**351**	Pn	Pn	06 39 06.5	-1.8
TXDB	**Texada**	**3.46**	**95**	Pn	Pn	06 39 08.2	-0.7
DIB	**Dawson Inlet,**	**3.52**	**332**	Pn	Pn	06 39 07.5	-2.1
GRNB	**Grenville Isla**	**3.73**	**358**	Pn	Pn	06 39 10.7	-1.9
GRNB				Sn	Sn	06 39 52.7	-3.9
SHB	**Sechelt**	**3.83**	**96**	Pn	Pn	06 39 14.0	-0.1
RUBB	**Prince Rupert**	**4.22**	**356**	Pn	Pn	06 39 18.9	-0.4

LLLB	**Lillooet**	**5.06**	**81**	Pn	Pn	06 39 31.1	+0.3
LTY	**Liberty**	**6.66**	**112**	Pn	Pn	06 39 56.0	+3.1
B08A	**Colville Reser**	**7.04**	**101**	Pn	Pn	06 40 00.0	+1.9
NBC8	**Simpson Ranch**	**7.81**	**31**	Pn	Pn	06 40 10.6	+2.0
C09A	**Chrísman Ranch**	**7.90**	**103**	Pn	Pn	06 40 11.5	+1.7
DLBC	**Dease Lake**	**8.33**	**359**	Pn	Pn	06 40 17.4	+1.6
NBC5	**NorthernBC 5**	**8.51**	**27**	Pn	Pn	06 40 19.5	+1.3

SJA ***16*** *06:51:15.2±0.7, 27°.96S×66°.66W, h184km±3km, ML3.4, MW3.5*
IDC ***16*** *06:51:16.7±3.4, 28°.04S×66°.67W, h153km±35km, mbtmp3.7/2, Error ellipse: s-maj=113.2km s-min=22.8km az=97.0*
ISC 16 06:51:15.9±1.0, **27°.92S**±0°.04×**66°.63W**±0°.06, **h173**km±7km, **n34**, σ1**°49**/53, **Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TINO	**Tinogasta**	**0.84**	**260**	*eP*	**Pn**	**06 51 43.0**	**+1.0**
TINO				*eS*	**Sn**	**06 52 02.7**	**+0.7**
AANI	**Anillaco**	**0.93**	**197**	*eP*	**Pn**	**06 51 43.1**	**+0.5**
AANI				*eS*	**Sn**	**06 52 01.8**	**-1.6**
AANI				IAML		06 52 02.4	
	comp=Z,398nm,1.0s						
ACLC	**CERRO LA CRUZ**	**1.53**	**191**	*eP*	**Pn**	**06 51 48.3**	**+0.5**
ACLC				*eS*	**Sn**	**06 52 11.8**	**-0.7**
VCA	**Vinchina**	**1.61**	**239**	*eP*	**Pn**	**06 51 48.7**	**+0.2**
VCA				*eS*	**Sn**	**06 52 12.7**	**-1.2**
VCA				IAML		06 52 15.4	
	comp=Z,408nm,0.3s						
AHML	**Horco Molle**	**1.61**	**46**	*eP*	Pn	06 51 38.7	-10
AHML				*eS*	Sn	06 52 03.7	-10
FSA	**Cafayete**	**1.89**	**18**	*eP*	**Pn**	**06 51 48.5**	**-3.1**
AC02	**Maricunga**	**2.47**	**295**	*eP*	**Pn**	**06 51 59.9**	**+1.5**
AC02				*eS*	Sn	06 52 43.4	+12
AVFE	**Valle Fertil**	**2.82**	**195**	*eP*	**Pn**	**06 52 01.9**	**-0.3**
AVFE				*eS*	**Sn**	**06 52 37.0**	**-1.3**
AVFE				IAML		06 52 39.0	
	comp=Z,67nm,0.4s						
ACDV	**Cuesta del Vie**	**3.13**	**224**	*eP*	**Pn**	**06 52 06.2**	**+0.2**
ACDV				*eS*	**Sn**	**06 52 44.0**	**-1.0**
ACDV				IAML		06 52 46.2	
	comp=Z,38nm,0.3s						
GO03	**Copiapo**	**3.21**	**275**	*eP*	**Pn**	**06 52 06.4**	**-0.5**
GO03				*eS*	**Sn**	**06 52 44.3**	**-2.3**
ACHE	**Chepes**	**3.23**	**180**	*eP*	**Pn**	**06 52 07.6**	**+0.3**
ACHE				*eS*	**Sn**	**06 52 45.2**	**-2.1**
AC05	**El Transito**	**3.34**	**253**	*eP*	**Pn**	**06 52 08.2**	**-0.3**
AC05				*eS*	**Sn**	**06 52 48.0**	**-1.5**
SLA	**San Lorenzo**	**3.34**	**18**	*eP*	**Pn**	**06 52 08.0**	**-0.7**
AROD	**Rodeo**	**3.35**	**227**	*eP*	**Pn**	**06 52 09.2**	**+0.3**
AROD				*eS*	**Sn**	**06 52 49.4**	**-0.8**
ACCO	**Cerro Coronel**	**3.41**	**218**	*eP*	**Pn**	**06 52 09.5**	**-0.1**
ACCO				*eS*	**Sn**	**06 52 50.3**	**-1.1**
CO01	**Juntas del Tor**	**3.66**	**235**	*eP*	**Pn**	**06 52 12.9**	**+0.2**
CO01				*eS*	**Sn**	**06 52 57.5**	**+0.5**
SALTA		**3.69**	**4**	*eP*	**Pn**	**06 52 14.6**	**+1.2**
SALTA				*eP*		06 52 26.8	
LCO	**Las Campanas**	**3.74**	**252**	*eP*	**Pn**	**06 52 13.4**	**-0.4**
LCO				*eS*	**Sn**	**06 52 56.6**	**-2.4**
RTLL	**Cerro Villicun**	**3.76**	**205**	*eP*	**Pn**	**06 52 13.6**	**-0.2**
RTLL				*eS*	**Sn**	**06 52 56.8**	**-2.2**
RTLL				IAML		06 52 57.5	
	comp=Z,57nm,0.4s						
CFA	**Coronel Fontan**	**3.93**	**200**	P	**Pn**	**06 52 15.5**	**-0.4**
	comp=Z,14nm,0.3s,baz=59,slow=23,SNR=633						
CFA				S	**Sn**	**06 52 59.4**	**-3.6**
	comp=Z,25nm,0.3s,baz=26,slow=16,SNR=14						
CFA	**Coronel Fontan**	**3.93**	**200**	*eP*	**Pn**	**06 52 15.6**	**-0.4**
CFA				*eS*	**Sn**	**06 53 00.2**	**-2.7**
CFA				IAML		06 53 01.7	
	comp=Z,68nm,0.2s						
AC04	**Llanos de Chal**	**3.94**	**265**	*eP*	**Pn**	**06 52 14.3**	**-1.7**
AC01	**Pan de Azucar**	**3.95**	**296**	*eP*	**Pn**	**06 52 16.1**	**-0.1**
AC01				*eS*	**Sn**	**06 52 59.9**	**-3.4**
ZON	**Zonda**	**4.03**	**206**	*eP*	**Pn**	**06 52 17.0**	**-0.2**
GO04	**Tololo Observa**	**4.28**	**237**	*eP*	**Pn**	**06 52 20.0**	**-0.7**
ACAN	**Cantantal**	**4.37**	**186**	*eP*	**Pn**	**06 52 20.7**	**-0.8**
RTLS	**Leoncito**	**4.51**	**210**	*eP*	**Pn**	**06 52 23.3**	**-0.3**
RTLS				*eS*	**Sn**	**06 53 15.2**	**-1.4**
MRA	**San Martin**	**4.55**	**170**	*eP*	**Pn**	**06 52 24.0**	**0.0**
MRA				*eS*	Sn	06 53 03.8	-14
CO03	**El Pedregal**	**4.58**	**230**	*eP*	**Pn**	**06 52 24.2**	**-0.2**
CO03				*eS*	**Sn**	**06 53 16.5**	**-1.5**
CO02	**Combarbal**	**5.02**	**228**	*eP*	**Pn**	**06 52 28.8**	**-1.3**
CO02				*eS*	**Sn**	**06 53 25.6**	**-2.6**
LPAZ	**La Paz**	**11.66**	**353**	P	**Pn**	**06 54 00.1**	**+2.3**
	comp=Z,0.5nm,0.3s,baz=169,slow=8.8,SNR=6.4						
WRA	**Warramunga Arr**	**128.27**	**205**	PKP	**PKiKP**	**07 10 04.9**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=156,slow=2.0,SNR=1.3						
KURBB	**Kurchatov Arra**	**145.25**	**40**	PKPbc	**PKiKP**	**07 10 35.9**	**-0.7**
	comp=Z,0.5nm,0.9s,baz=309,slow=3.5,SNR=4.5						
MKAR	**Makanchi Array**	**149.22**	**44**	PKPbc	**PKiKP**	**07 10 46.5**	**+1.6**
	comp=Z,0.4nm,0.6s,baz=298,slow=2.6,SNR=3.7						

IDC ***16*** *07:00:54.8±2.8, 23°.75N×126°.64E, h289km±39km, mb3.4/6, mbtmp4.1/8, Error ellipse: s-maj=61.4km s-min=19.8km az=63.0*
JMA ***16*** *07:01:17.4±0.3, 27°.N±2°.×12°.5E±°, h223km, MV4.1/24, EAST CHINA SEA REGION*
ISC 16 07:01:16.8±0.8, **26°.8N**±0°.1×**125°.18E**±0°.08, **h234**km±13km, **n28**, σ1**°65**/44, **mb3.8**/4, **Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**1.53**	**109**	*i* P	**Pn**	**07 01 54.9**	**+1.1**
JKE				S	**S**	**07 02 23.3**	**+0.7**
JAGN	**Aguni-jima**	**1.86**	**97**	P	**Pn**	**07 01 57.5**	**+0.9**
JAGN				S	**S**	**07 02 27.6**	**-0.1**
JIKM	**Ikemajima**	**1.91**	**178**	P	**Pn**	**07 01 57.8**	**+0.6**
JIKM				*eS*	**S**	**07 02 28.4**	**-0.3**
JOGS	**Gusukube**	**2.08**	**174**	*eP*	**Pn**	**07 01 59.9**	**+1.1**
JOGS				*eS*	**S**	**07 02 31.8**	**+0.2**
JTJ	**Tarama**	**2.23**	**191**	P	**Pn**	**07 02 00.9**	**+0.7**
JTJ				S	**S**	**07 02 32.6**	**-1.6**
JISG	**Ishigakijimahi**	**2.38**	**199**	*i* P	**Pn**	**07 02 02.0**	**+0.4**
JISG				S	**S**	**07 02 34.7**	**-2.2**
JJT3	**Tamagusuku3**	**2.44**	**106**	P	**Pn**	**07 02 03.4**	**+1.2**
JJT3				*eS*	**S**	**07 02 38.3**	**+0.5**
JIH	**Iheya**	**2.50**	**85**	P	**Pn**	**07 02 03.9**	**+1.1**
JIH				S	**S**	**07 02 37.7**	**-1.2**
JNTH	**Nagotoyohara**	**2.56**	**97**	P	**Pn**	**07 02 04.8**	**+1.2**
JNTH				S	**S**	**07 02 38.5**	**-1.6**
JIJ	**Ishigaki jima**	**2.64**	**201**	*i* P	**Pn**	**07 02 04.1**	**-0.3**
JIJ				S	**S**	**07 02 38.2**	**-3.5**
JOW	**Kunigami**	**2.77**	**90**	P	Pn	07 01 53.8	-12
	11nm,0.5s,baz=115,slow=19,SNR=1.3						
JOW				S	**S**	**07 02 41.8**	**-2.3**
	178nm,0.2s,baz=139,slow=26,SNR=24						
JOW	**Kunigami**	**2.77**	**90**	P	**Pn**	**07 02 06.8**	**+1.1**
JOW				S	**S**	**07 02 42.0**	**-2.1**
IRIF	**Iriomote-Funau**	**2.82**	**208**	P	**Pn**	**07 02 06.1**	**-0.2**
IRIF				*eS*	**S**	**07 02 43.6**	**-1.6**
JYRO	**Yoronjima**	**2.93**	**86**	P	**Pn**	**07 02 08.2**	**+0.8**
JYRO				S	**S**	**07 02 44.8**	**-2.4**
YOJ	**Yonaguni jima**	**3.07**	**220**	*eP*	**Pn**	**07 02 09.2**	**+0.1**
YOJ				S	**S**	**07 02 49.5**	**-0.7**
JYNG	**Yonagunijimaku**	**3.12**	**221**	P	**Pn**	**07 02 09.9**	**+0.2**
JTK	**Tokunoshima**	**3.49**	**74**	P	**Pn**	**07 02 13.7**	**0.0**
JTK				S	**S**	**07 02 55.6**	**-3.0**
JAMN	**Amaminishikomi**	**3.81**	**68**	P	**Pn**	**07 02 17.4**	**-0.2**
JAMN				S	**S**	**07 03 01.9**	**-3.7**
JMZ	**Minamidaito 2**	**5.52**	**99**	P	**Pn**	**07 02 40.0**	**+1.5**
JMZ				S	**S**	**07 03 40.9**	**-2.7**
JTZ	**Takazaki**	**7.21**	**44**	*eP*	**Pn**	**07 03 00.7**	**+0.8**
JNU	**Nakatsue**	**7.97**	**37**	P	**Pn**	**07 03 12.7**	**+3.1**
	19nm,0.6s,baz=171,slow=17,SNR=7.2						
KSRS	**Korea Array**	**10.83**	**12**	P	**P**	**07 03 52.5**	**+1.3**
	0.4nm,0.3s,baz=198,slow=11,SNR=4.7						
LZDM	**Lanzhou Array**	**20.43**	**302**	P	**P**	**07 05 36.6**	**-0.2**
	5.4nm,0.3s,baz=144,slow=9.1,SNR=9.3						
	5.4nm,0.3s						
SONM	**Songino Array**	**25.60**	**330**	P	**P**	**07 06 27.4**	**+2.6**
	1.2nm,0.5s,baz=145,slow=10,SNR=5.6						
	1.2nm,0.5s						
MKAR	**Makanchi Array**	**39.09**	**312**	P	**P**	**07 08 20.4**	**-1.0**
	1.9nm,0.4s,baz=96,slow=8.1,SNR=28						
	1.9nm,0.4s						
ZALV	**Zalesovo Beam**	**40.12**	**324**	P	**P**	**07 08 28.4**	**-1.3**
	1.6nm,0.4s,baz=121,slow=7.5,SNR=5.1						
	1.6nm,0.4s						
KURBB	**Kurchatov Arra**	**42.53**	**317**	P	**P**	**07 08 47.7**	**-1.6**
	0.6nm,0.4s,baz=106,slow=7.9,SNR=7.0						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**50.92**	**170**				
	0.3nm,0.7s						

AFAD ***16*** *07:05:58.8, 38°.46N×44°.60E, h6km±4km, ML2.5*
AZER ***16*** *07:05:59.6, 38°.39N×44°.54E, h10km, ml2.7*
TEH ***16*** *07:06:00.1, 38°.44N×44°.46E, h7km±146km, ML2.6, Presumed earthquake*
ISK ***16*** *07:06:02.7, 38°.45N×44°.31E, h5km, ML2.6/5*
ISC 16 07:06:00.3±1.1, **38°.43N**±0°.02×**44°.52E**±0°.02, **h6**km±10km, **n29**, σ1**°54**/49, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**299**	P	**Pg**	**07 06 08.6**	**-0.9**
OZAP				S	**Sg**	**07 06 17.0**	**+1.3**
OZAP				IAML		07 06 19.0	
	comp=E,389nm,0.5s						
OZAP				IAML		07 06 23.0	
	comp=N,568nm,0.7s						
YOVA	**Hakkari_Yksek**	**0.86**	**192**	P	**Pg**	**07 06 16.5**	**-0.3**
YOVA				S	**Sb**	**07 06 30.1**	**+0.5**
YOVA				IAML		07 06 36.0	
	comp=N,68nm,0.8s						
YOVA				IAML		07 06 37.0	
	comp=E,112nm,0.6s						
ISHB	**Shabestar**	**0.88**	**99**	Pg	**Pg**	**07 06 17.1**	**-0.1**
TVAN	**Van**	**0.88**	**277**	P	**Pg**	**07 06 14.9**	**-2.2**
TVAN				IAML		07 06 44.0	
	comp=N,192nm,0.7s						
TVAN				IAML		07 06 45.0	
	comp=E,166nm,0.6s						
VMUR	**Van-Muradiye**	**0.93**	**307**	P	**Pg**	**07 06 17.0**	**-1.2**
VMUR				S	**Sb**	**07 06 32.3**	**+0.7**
VMUR				IAML		07 06 35.0	
	comp=N,172nm,0.3s						
VMUR				IAML		07 06 35.0	
	comp=E,170nm,0.4s						
MAKU	**Maku**	**0.93**	**8**	Pg	**Pg**	**07 06 18.0**	**-0.2**
MAKU				Sg	**Sb**	**07 06 30.4**	**-1.3**
IMRD	**Marand**	**0.97**	**73**	Pg	**Pn**	**07 06 19.9**	**-0.7**
NAX	**Nakhchivan**	**1.06**	**45**	P	**Pn**	**07 06 21.7**	**-0.2**
NAX				S	**Sn**	**07 06 37.6**	**+0.6**
HAKT	**HAKKARI**	**1.08**	**217**	P	**Pg**	**07 06 20.4**	**-0.7**
HAKT				S	**Sn**	**07 06 37.6**	**0.0**
HAKT				IAML		07 06 39.0	
	comp=E,152nm,0.4s						
HAKT				IAML		07 06 41.0	
	comp=N,112nm,0.3s						
HAKT	**HAKKARI**	**1.08**	**217**	P	**Pg**	**07 06 20.8**	**-0.3**
HAKT				S	**Sn**	**07 06 37.6**	**0.0**
GEVA	**Gevas**	**1.15**	**265**	P	**Pb**	**07 06 19.6**	**-3.2**
GEVA				S	**Sn**	**07 06 38.8**	**-0.5**
GEVA				IAML		07 06 46.0	
	comp=N,62nm,0.5s						
GEVA				IAML		07 06 55.0	
	comp=E,67nm,0.5s						
ORD	**Ordubad**	**1.26**	**66**	P	**Pg**	**07 06 24.8**	**+0.4**
ORD				S	**Sn**	**07 06 43.3**	**+1.5**
SBZ	**Shahbuz**	**1.26**	**40**	P	**Pg**	**07 06 25.1**	**+0.6**
SBZ				S	**Sn**	**07 06 44.2**	**+2.3**
ITBZ	**Tabriz**	**1.30**	**98**	Pg	**Pg**	**07 06 24.8**	**-0.4**
IAZR	**Azarshahr**	**1.38**	**123**	Pg	**Pg**	**07 06 26.6**	**-0.1**
CUKT	**Cukurca**	**1.38**	**212**	Pn	**Pg**	**07 06 28.6**	**+1.8**
CUKT				Sn	**Sg**	**07 06 47.0**	**+2.2**
ADCV	**BITLIS_Adilcev**	**1.46**	**286**	P	**Pn**	**07 06 26.3**	**-1.1**
ADCV				S	**Sg**	**07 06 50.4**	**+3.3**
ADCV				IAML		07 06 53.0	
	comp=N,40nm,0.6s						
ADCV				IAML		07 06 53.0	
	comp=E,54nm,0.8s						
IGDI	**IGDIR**	**1.48**	**347**	P	**Pb**	**07 06 27.9**	**-0.4**
IGDI				S	**Sg**	**07 06 49.9**	**+2.1**
IGDI				IAML		07 06 52.0	
	comp=N,58nm,1.0s						
IGDI				IAML		07 06 52.0	
	comp=E,78nm,0.6s						
IGDI	**IGDIR**	**1.48**	**347**	P	**Pg**	**07 06 29.5**	**+0.8**
IGDI				S	**Sg**	**07 06 52.4**	**+4.6**
PERV	**Siirt/Pervari-**	**1.63**	**253**	P	**Pb**	**07 06 30.4**	**-0.4**
PERV				IAML		07 07 05.0	
	comp=N,123nm,0.5s						
PERV				IAML		07 07 05.0	
	comp=E,111nm,0.6s						
AGRB	**Hanur-Agry**	**1.65**	**314**	Pn	**Pb**	**07 06 30.9**	**-0.3**
AGRB				Sn	**Sb**	**07 06 51.9**	**-0.5**
MLAZ	**Malazgirt-MUS**	**1.69**	**295**	Pn	**Pb**	**07 06 31.3**	**-0.7**
MLAZ				Sn	**Sn**	**07 06 52.4**	**-0.3**
KOTA	**Agri, Merkez-K**	**1.71**	**324**	P	**Pb**	**07 06 31.7**	**-0.6**
KOTA				S	**Sb**	**07 06 53.5**	**-0.5**
GNI	**Garni**	**1.73**	**6**	Pn	**Pg**	**07 06 34.2**	**+0.8**
GURO	**Guroymak-BITLI**	**1.96**	**274**	Pn	**Pn**	**07 06 35.1**	**+1.0**
IHRS	**Heris**	**1.99**	**92**	Pn	**Pg**	**07 06 37.8**	**-0.6**
GDB	**GEDABAY**	**2.48**	**22**	P	**Pb**	**07 06 44.9**	**-0.5**
GDB				S	**Sg**	**07 07 18.3**	**-1.7**
QZX	**Qazax, Azerbai**	**2.71**	**14**	P	**Pb**	**07 06 47.4**	**-1.8**
QZX				S	**Sg**	**07 07 24.3**	**-2.9**
YRD	**Yardimli**	**2.95**	**79**	P	**Pn**	**07 06 49.9**	**+2.0**
YRD				S	**Sg**	**07 07 32.6**	**-2.6**

MOS ***16*** *07:13:56.5±1.2, 35°.75N×44°.43E, h15km, mb4.2/12, Error ellipse: s-maj=7.6km s-min=4.8km az=102.8*
MCSM ***16*** *07:13:57.8±0.3, 36°.N±5°.×4°.4E±°, h8km, mb4.4*
NEIC ***16*** *07:13:58.2±2.4, 35°.81N±0°.04×44°.49E±0°.03, h10km±1km, mb4.4/72, Error ellipse: s-maj=6.6km s-min=4.6km az=172.0*
IDC ***16*** *07:14:02.7±2.3, 36°.04N×44°.08E, h35km±17km, mb3.6/10, mbtmp3.9/17, ML3.8/6, MS3.4/16, Error ellipse: s-maj=24.4km s-min=11.0km az=136.0*
ISK ***16*** *07:14:10.7, 36°.16N×44°.15E, h4km, ML4.7/20*
GII ***16*** *07:14:47.9±0.0, 35°.639N±0°.002×44°.133E±0°.001, h0km, Md4.5/4, confirmed*
ISC 16 07:13:57.1±0.3, **35°.69N**±0°.04×**44°.43E**±0°.03, **h10**km, **n270**, σ1**°52**/247, **mb4.3**/59, **MS3.4**/13, **4C-7D**, **Iraq**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUKT	**Cukurca**	**1.69**	**337**	Pn	**Pg**	**07 14 31.6**	**+2.0**
CUKT				Sn	**Sb**	**07 14 50.5**	**+0.7**
GEVA	**Gevas**	**2.84**	**338**	Pn	**Pn**	**07 14 45.1**	**+2.4**
GEVA				Sn	**Sn**	**07 15 19.6**	**+2.6**
VANB	**Van**	**3.02**	**344**	Pn	**Pb**	**07 14 52.0**	**+1.0**
VANB				Sn	**Sn**	**07 15 22.6**	**+1.2**
GURO	**Guroymak-BITLI**	**3.44**	**327**	Pn	**Pn**	**07 14 53.4**	**+2.5**
GURO	**Guroymak-BITLI**	**3.44**	**327**	Pn	**Pb**	**07 14 59.6**	**+1.4**
GURO				Sn	**Sn**	**07 15 34.9**	**+3.1**
SVAN	**Silvan-Diyarba**	**3.57**	**314**	Pn	**Pb**	**07 15 01.2**	**+0.8**
SVAN				Sn	**Sn**	**07 15 38.8**	**+3.9**
MLAZ	**Malazgirt-MUS**	**3.76**	**337**	Pn	**Pb**	**07 15 03.9**	**+0.2**
AGRB	**Hanur-Agry**	**4.04**	**344**	Pn	**Pb**	**07 15 07.8**	**-0.8**
DYBB	**Diyarbakir**	**4.12**	**305**	Pn	**Pb**	**07 15 09.9**	**+0.2**
VRTB	**Varto-Mus**	**4.20**	**327**	Pn	**Pb**	**07 15 10.3**	**-0.8**
BNGB	**Bingl**	**4.45**	**319**	Pn	**Pb**	**07 15 13.8**	**-1.6**
GNI	**Garni**	**4.46**	**3**	Pn	**Pn**	**07 15 05.3**	**+0.3**
	2.3nm,0.3s,baz=194,slow=2.0,SNR=6.1						
GNI				Pg	**Pg**	**07 15 20.2**	**-2.4**
	2.6nm,0.3s,baz=192,slow=15,SNR=16						
GNI				Lg	Lg	07 16 15.8	
	0.7nm,0.3s,baz=172,slow=19,SNR=1.5						
	9.2nm,0.5s						
GNI	**Garni**	**4.46**	**3**	Pn	**Pn**	**07 15 06.3**	**+1.3**
GNI	**Garni**	**4.46**	**3**	Pn	**Pb**	**07 15 14.9**	**-0.8**
KARO	**Karliova-Bingo**	**4.50**	**324**	Pn	**Pb**	**07 15 14.7**	**-1.7**
YEDI	**Yedisu-Bingol**	**4.85**	**322**	Pn	**Pb**	**07 15 19.4**	**-2.9**
SVRC	**Sivrice-ELAZID**	**4.90**	**305**	Pn	**Pb**	**07 15 21.2**	**-1.9**
ESIJ	**Sivrice-Elazig**	**4.93**	**305**	Pn	**Pb**	**07 15 21.6**	**-2.1**
KARS	**Kars**	**5.04**	**348**	Pn	**Pn**	**07 15 13.7**	**+0.7**
KARS	**Kars**	**5.04**	**348**	P	**Pn**	**07 15 13.7**	**+0.7**
MDYL	**Doganyol-Malat**	**5.05**	**303**	Pn	**Pb**	**07 15 23.4**	**-2.2**
KOPT	**Kop Dagi**	**5.33**	**325**	Pn	**Pn**	**07 15 18.4**	**+1.5**
ERZN	**Erzincan**	**5.39**	**318**	Pn	**Pb**	**07 15 27.6**	**-3.9**
BAYT	**Aydintepe-Bayb**	**5.79**	**326**	Pn	**Pb**	07 15 32.7	-5.6
ARPR	**Arapgir-MALATY**	**5.92**	**307**	Pn	**Pn**	**07 15 27.3**	**+2.2**
ARPR	**Arapgir-MALATY**	**5.92**	**307**	Pn	**Pb**	07 15 35.6	-4.9
ILIC	**ilic-Erzincan**	**5.98**	**311**	Pn	**Pb**	07 15 36.2	-5.3
GAZ	**Gaziantep**	**6.00**	**286**	Pn	**Pn**	**07 15 27.2**	**+1.1**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZ	**Gaziantep**	**6.00**	**286**	Pn	Pb	07 15 38.5	-3.4
KMRS	**Kahramanmaras**	**6.32**	**289**	Pn	Pb	07 15 42.9	-4.4
FKH	**Fakeheh**	**6.74**	**260**	*eP*	**Pn**	**07 15 39.1**	**+2.9**
BEIL	**Beino**	**6.85**	**263**	*eP*	**Pn**	**07 15 40.1**	**+2.3**
SARI	**SarD1z-Kayseri**	**6.96**	**295**	Pn	Pb	07 15 51.3	-6.9
HWQ	**Hawqa**	**7.10**	**261**	*eP*	**Pn**	**07 15 43.8**	**+2.6**
ASF	**Jabal al Asfar**	**7.17**	**243**	Pn	**Pn**	**07 15 45.9**	**+3.7**
	1.1nm,0.3s,baz=56,slow=11,SNR=4.1						
ASF				Pg	**Pg**	**07 16 12.2**	**-2.3**
	2.5nm,0.3s,baz=37,slow=19,SNR=5.6						
ASF				Lg	Lg	07 17 47.6	
	2.2nm,0.3s,baz=54,slow=22,SNR=16						
	3.5nm,0.4s						
SVSK	**Karacayir**	**7.24**	**308**	Pn	Pb	07 15 54.1	-8.7
RCY	**Rachaya**	**7.41**	**255**	*eP*	**Pn**	**07 15 49.5**	**+3.9**
BHL	**Bhannes**	**7.43**	**259**	*eP*	**Pn**	**07 15 48.8**	**+3.0**
QRWL	**Qaraoun**	**7.52**	**256**	*eP*	**Pn**	**07 15 51.3**	**+4.4**
BNN	**Bunyan**	**7.54**	**297**	Pn	**Pn**	**07 15 48.6**	**+1.4**
BNN	**Bunyan**	**7.54**	**297**	Pn	Pb	07 15 58.8	-9.2
DQRL	**Deir Qamar**	**7.56**	**257**	*eP*	**Pn**	**07 15 51.3**	**+3.9**
NATI	**Neve Ativ**	**7.57**	**254**	P	Pg	07 16 36.5	+14
NATI				S	**Sg**	**07 18 00.9**	**+0.7**
KSHT	**Keshet**	**7.62**	**252**	P	Pg	07 16 37.1	+14
KSHT				S	**Sg**	**07 18 02.2**	**+0.5**
MAK	**Makhachkala**	**7.64**	**17**	*d* *iP*	**Pn**	**07 15 47.0**	**-1.5**
MAK				*eS*	**Sn**	**07 17 15.3**	**+0.2**
MAK				pmax	pmax		
	comp=Z,195nm,1.1s						
MAK				MLR	MLR		
	comp=Z,312nm,8.0s						
GEM	**Giv'at Ha'Em**	**7.65**	**254**	P	Pg	07 16 37.3	+14
GEM				S	**Sg**	**07 18 02.0**	**-0.7**
NEUR	**Neytrino**	**7.68**	**351**	*i* P	**Pn**	**07 15 48.7**	**-0.5**
TOKA	**Tokat**	**7.79**	**309**	Pn	**Pn**	**07 15 52.9**	**+2.2**
CMRD	**Camardi-Nigde**	**7.83**	**287**	Pn	Pb	07 16 03.9	-9.2
MMA0B	**Mount Meron ar**	**7.92**	**253**	P	Pg	07 16 41.4	+13
MMAI	**Mount Meron Ar**	**7.92**	**253**	Pn	**Pn**	**07 15 52.4**	**0.0**
	comp=Z,3.8nm,0.3s,baz=51,slow=15,SNR=5.9						
MMAI				Lg	Lg	07 18 08.3	
	comp=Z,4.3nm,0.3s,baz=92,slow=37,SNR=6.1						
	comp=Z,1.3nm,0.3s						
HNTI	**Hanita**	**8.08**	**254**	P	Pg	07 16 43.2	+11
KBZ	**Khabaz**	**8.12**	**352**	Pn	Pn	07 15 59.9	+5.0
	comp=Z,0.1nm,0.3s,baz=181,slow=8.8,SNR=7.8						
KBZ				LR	LR	07 18 24.6	
	comp=Z,72nm,18.8s,baz=170,slow=34						
KBZ	**Khabaz**	**8.12**	**352**	*i* P	**Pn**	**07 15 56.3**	**+1.3**
HMDT	**Nahal Hemdat**	**8.15**	**248**	P	Pg	07 16 44.3	+11
HMDT				S	**Sg**	**07 18 14.4**	**-4.2**
SHA1	**Shidzhatmaz**	**8.15**	**351**	*i* P	**Pn**	**07 15 55.2**	**-0.6**
BLGI	**Bet Lehem HaGe**	**8.20**	**252**	P	Pg	07 16 45.0	+11
KVAR	**Kislovodsk Arr**	**8.36**	**351**	LR	LR	07 19 14.3	
	comp=Z,1μm,18.0s,baz=78,slow=39						
KIV	**Kislovodsk**	**8.37**	**351**	Pn	**Pn**	**07 15 59.5**	**+1.0**
KIV	**Kislovodsk**	**8.37**	**351**	*eP*	**Pn**	**07 15 58.3**	**-0.2**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,37nm,11.0s						
OFRI	**`Ofer**	**8.40**	**251**	P	Pg	07 16 47.6	+10
OFRI				S	**Sg**	**07 18 21.4**	**-5.4**
SLTI	**Sal'it**	**8.52**	**249**	P	Pg	07 16 49.3	+9.0
GHAJ	**Ghor Haditha**	**8.59**	**242**	Pn	**Pn**	**07 16 05.8**	**+4.3**
SOC	**Sochi**	**8.68**	**337**	*i* P	**Pn**	**07 16 02.3**	**-0.4**
SOC				*eS*	**Sn**	**07 17 40.4**	**-0.2**
SOC				pmax	pmax		
	comp=Z,43nm,1.4s						
SOC				MLR	MLR		
	comp=Z,248nm,18.0s						
MSBI	**Mazada**	**8.74**	**243**	P	Pg	07 16 52.6	+8.1
**YTI

BURAR	Bucovina Array	18.60	316	⇑P		P		07 18 15.3	+0.7
KIEV	Kiev	18.60	328	P		P		07 18 12.9	-1.5
KIEV	Kiev	18.60	328	P		P		07 18 12.9	-1.5
KIEV				pmax	pmax				
	comp=Z,9.0nm,1.3s								
AK13	Malin Array Si	18.60	328	P		P		07 18 14.6	+0.2
AK11	Malin Array Si	18.61	328	P		P		07 18 14.7	+0.2
BUR08	Bucovina Ar. S	18.62	316	P		P		07 18 13.5	-1.3
AK16	Malin Array Si	18.63	328	P		P		07 18 15.0	+0.3
AK15	Malin Array Si	18.64	328	P		P		07 18 15.3	+0.5
AK04	Malin Array Si	18.64	328	P		P		07 18 14.7	-0.1
LUBAR	Lubar, Ukraine	18.70	325	P		Pn		07 18 16.6	+0.8
HOLU	Horodok	18.89	321	P		P		07 18 16.9	-0.7
GZR	Gura Zlata	19.05	307	⇓P		Pn		07 18 23.0	+2.8
GZR	Gura Zlata	19.05	307	⇓P		Pn		07 18 23.0	+2.8
KSV	Kosov	19.07	317	P		P		07 18 19.3	-0.3
SHAA	Shahritus	19.10	77	P		P		07 18 19.4	-0.7
SHAA				lAmb	lAmb			07 18 41.4	
	comp=Z,12nm,1.0s								
MI28	Mi28,Pidlybu	19.44	327	P		P		07 18 23.7	+0.1
STNU	Starunia	19.60	318	P		P		07 18 26.0	+0.6
DRGR		19.68	311	⇑P		Pn		07 18 29.5	+1.8
DRGR		19.68	311	⇑P		Pn		07 18 29.5	+1.8
KORU	Korolevo	20.08	315	P		P		07 18 30.8	+0.2
KBL	Kabul	20.16	86	P		P		07 18 31.7	-0.2
KBL	Kabul	20.16	86	P		P		07 18 31.7	-0.2
KBL				pmax	pmax				
	comp=Z,4.0nm,0.9s								
OBN	Obninsk	20.17	347	P		P		07 18 32.2	+0.7
	comp=Z,25nm,1.6s								
BRIU	Brid	20.23	315	P		P		07 18 33.1	+0.8
RNPP8	Varash	20.55	325	P		P		07 18 36.6	+0.9
RNPP9	Sopachiv	20.59	326	P		P		07 18 35.9	-0.2
HOLU	Holmets	20.70	315	P		P		07 18 38.0	+0.7
GAR	Garm	20.82	73	P		P		07 18 39.3	+0.4
GAR				lAmb	lAmb			07 18 53.4	
	comp=Z,18nm,1.2s								
KWP	Kalwaria Pacla	21.09	318	P		P		07 18 42.0	+0.4
BTK	Batken	21.25	70	P		P		07 18 43.3	-0.2
BTK	Batken	21.25	70	P		P		07 18 43.3	-0.2
BTK				pmax	pmax				
	comp=Z,6.0nm,1.0s								
KK31	Karatay Array	21.42	62	P		P		07 18 45.3	+0.1
KK31	Karatay Array	21.42	62	P		P		07 18 45.3	+0.1
KK31				pmax	pmax				
	comp=Z,7.0nm,1.1s								
KKAR	Karatay Array	21.42	62	P		P		07 18 45.1	-0.1
KKAR	Karatay Array	21.42	62	P		P		07 18 45.1	-0.1
PSZ	Piszkesteto	21.89	311	P		P		07 18 51.4	+1.1
PSZ				lAmb	lAmb			07 19 12.3	
	comp=Z,14nm,1.5s								
PSZ	Piszkesteto	21.89	311	P		P		07 18 51.4	+1.1
PSZ				pmax	pmax				
	comp=Z,14nm,1.5s								
MORH	Mrgy, Hungar	22.04	306	P		P		07 18 51.6	-0.2
	comp=Z,4.6nm,0.8s								
ARTI	Arti	22.77	20	P		P		07 19 00.1	+0.6
ARTI				lAmb	lAmb			07 19 07.0	
	comp=Z,12nm,0.6s								
ARTI	Arti	22.77	20	*d i* P		P		07 19 03.1	+3.6
ARTI								07 19 27.9	
ARTI				SS	Sn			07 23 51.0	+28
ARTI				pmax	pmax				
	comp=Z,9.0nm,0.7s								
CEL	Celeste	22.90	285	P		P		07 19 02.8	+1.7
CEL				lAmb	lAmb			07 19 10.6	
	comp=Z,19nm,1.0s								
ARSB	Arslanbob	22.99	67	P		P		07 19 03.8	+1.7
ARSB				lAmb	lAmb			07 19 19.4	
	comp=Z,7.9nm,1.1s								
ARSB	Arslanbob	22.99	67	P		P		07 19 03.8	+1.7
ARSB				pmax	pmax				
	comp=Z,8.0nm,1.1s								
MPLH	Magyarpolny	23.08	308	P		P		07 19 03.7	+0.9
	comp=Z,20nm,1.1s								
NIL	Nilore	23.76	87	P		P		07 19 10.3	+0.5
NIL				lAmb	lAmb			07 19 14.4	
	comp=Z,8.7nm,0.9s								
NIL	Nilore	23.76	87	P		P		07 19 10.3	+0.5
NIL				pmax	pmax				
	comp=Z,9.0nm,1.0s								
AAK	Ala-Archa	24.24	64	*i* P		P		07 19 15.9	+1.5
AAK				pmax	pmax				
	comp=Z,1.0nm,0.8s								
ARSA	Arzberg	24.40	307	P		P		07 19 17.2	+1.5
VRAC	Vranov	24.46	312	LR		LR		07 30 20.8	
	comp=Z,88nm,19.8s,baz=98,slow=41								
KSH2	Kashi	24.91	73	P		P		07 19 20.8	+0.3
KSH2				pmax	pmax				
	comp=Z,8.0nm,0.5s								
BORK	Borovoye	25.16	38	P		P		07 19 22.7	+0.4
BORK				lAmb	lAmb			07 19 40.7	
	comp=Z,5.6nm,0.9s								
BORK	Borovoye	25.16	38	P		P		07 19 22.7	+0.4
BORK				pmax	pmax				
	comp=Z,6.0nm,0.9s								
BVAR	Borovoye Array	25.18	38	P		P		07 19 24.3	+1.7
	comp=Z,2.5nm,0.6s,baz=242,slow=8.6,SNR=11								
BVAR				LR		LR		07 30 30.4	
	comp=Z,94nm,18.4s,baz=241,slow=39								
	comp=Z,2.5nm,0.6s								
NRN	Naryn	25.26	67	P		P		07 19 27.4	+3.6
NRN				pmax	pmax				
	comp=Z,7.0nm,1.0s								
BOOM	Boomskoye usch	25.29	65	P		P		07 19 23.1	-0.8
BOOM				lAmb	lAmb			07 19 51.1	
	comp=Z,4.0nm,0.8s								
BOOM	Boomskoye usch	25.29	65	P		P		07 19 23.1	-0.8
BOOM				pmax	pmax				
	comp=Z,4.0nm,0.8s								
PRED	Cave del Predi	25.48	304	P		P		07 19 26.4	+1.0
GEC2	GERESS Array S	26.07	310	P		P		07 19 31.4	+0.7
GERES	GERESS Array B	26.07	310	P		P		07 19 29.4	-1.4
	comp=Z,0.4nm,0.4s,baz=131,slow=7.5,SNR=4.5								
GERES				LR		LR		07 30 28.4	
	comp=Z,32nm,19.3s,baz=84,slow=38								
	comp=Z,0.4nm,0.4s								
KDJ	Kajisay	26.18	66	P		P		07 19 32.5	+0.5
KDJ	Kajisay	26.18	66	P		P		07 19 32.5	+0.5
KDJ				pmax	pmax				
	comp=Z,3.0nm,0.9s								
TARG	Taragay, Kyrgy	26.62	67	P		P		07 19 36.9	+0.6
TARG	Taragay, Kyrgy	26.62	67	P		P		07 19 36.9	+0.6
TARG				pmax	pmax				
	comp=Z,2.0nm,0.9s								
FURI	Furi	27.18	193	LR		LR		07 30 05.5	
	comp=Z,143nm,18.1s,baz=1.5,slow=35								
CLL	Collm	27.36	315	P		P		07 19 41.5	-0.8
CLL				lAmb	lAmb			07 20 17.2	
	comp=Z,8.9nm,1.3s								
CLL	Collm	27.36	315	P		P		07 19 41.5	-0.8
CLL				pmax	pmax				
	comp=Z,9.0nm,1.3s								
CLL	Collm	27.36	315	*e*P		P		07 19 41.0	-1.3
CLL				AMS	AMS			07 31 00.0	
	comp=Z,100nm,21.0s								
GRA1	Grafenberg Arr	27.87	310	P		P		07 19 47.2	+0.3
GRF	Grafenberg Arr	27.87	310	P		P		07 19 47.2	+0.3
GRF				pmax	pmax				
	comp=Z,23nm,1.4s								
DAVOX	Davos/Dischmat	28.03	304	LR		LR		07 31 30.9	
	comp=Z,69nm,21.0s,baz=82,slow=38								
KURBB	Kurchatov Arra	28.71	48	P		P		07 19 57.0	+2.7
	comp=Z,1.9nm,0.8s,baz=258,slow=9.1,SNR=15								
	comp=Z,1.9nm,0.8s								
KURK	Kurchatov	28.79	48	P		P		07 19 55.8	+0.8
KURK	Kurchatov	28.79	48	*i* P		P		07 19 56.3	+1.2
KURK				pmax	pmax				
	comp=Z,2.0nm,0.8s								
BNI	Bardonecchia	30.01	300	P		P		07 20 07.7	+1.6
BNI				lAmb	lAmb			07 20 19.6	
	comp=Z,8.9nm,1.1s								
BNI	Bardonecchia	30.01	300	P		P		07 20 07.7	+1.6
BNI				pmax	pmax				
	comp=Z,9.0nm,1.1s								
MK31	Makanchi Array	30.28	57	P		P		07 20 07.7	-0.7
MK31	Makanchi Array	30.28	57	P		P		07 20 07.7	-0.7
MK31				pmax	pmax				
	comp=Z,1.0nm,0.8s								
MKAR	Makanchi Array	30.28	57	P		P		07 20 10.1	+1.8
	comp=Z,0.7nm,0.7s,baz=263,slow=7.7,SNR=6.9								
	comp=Z,0.7nm,0.7s								
MKAR	Makanchi Array	30.28	57	P		P		07 20 08.6	+0.2
WLF	Walferdange	31.05	309	P		P		07 20 14.7	-0.4
WLF	Walferdange	31.05	309	P		P		07 20 14.7	-0.4
WLF				pmax	pmax				
	comp=Z,22nm,1.3s								
HFS	Hagfors	31.46	331	P		P		07 20 15.0	-3.5
	comp=Z,7.0nm,1.2s,baz=123,slow=16,SNR=6.9								
HFS				LR		LR		07 35 36.0	
	comp=Z,120nm,18.8s,baz=135,slow=42								
	comp=Z,7.0nm,1.2s								
NOA	NORSAR Array B	32.98	331	LR		LR		07 35 13.9	
	comp=Z,72nm,19.1s,baz=135,slow=39								
NBO00	NORSAR Array S	33.15	330	P		P		07 20 33.9	+0.4
ZALV	Zalesovo Beam	33.39	44	LR		LR		07 36 50.8	
	comp=Z,60nm,20.0s,baz=141,slow=41								
CEST	Esterri de Car	33.90	295	P		P		07 20 40.4	+0.1
WMQ	Urumqi	33.92	63	*e*P		P		07 20 41.6	+1.2
WMQ				pP	sP			07 20 47.3	+2.3
WMQ				pmax	pmax				
	comp=Z,11nm,0.7s								
ARCES	ARCESS Array B	35.46	349	LR		LR		07 37 03.1	
	comp=Z,74nm,20.3s,baz=152,slow=39								
ARCES	ARCESS Array B	35.46	349	P		P		07 20 53.4	+0.1
ARCES	ARCESS Array B	35.46	349	P		P		07 20 53.4	+0.1
ARCES				pmax	pmax				
	comp=Z,27nm,1.5s								
EVN	Everest	36.61	90	P		P		07 21 04.6	+0.2
EVN				lAmb	lAmb			07 21 19.9	
	comp=Z,4.9nm,0.8s								
EKA	Eskdalemuir Ar	37.78	316	P		P		07 21 11.4	-1.8
	comp=Z,2.6nm,1.0s,baz=112,slow=8.2,SNR=5.5								
EKA				LR		LR		07 38 19.1	
	comp=Z,118nm,18.1s,baz=300,slow=39								
	comp=Z,2.6nm,1.0s								
ESDC	Sonseca Array	38.14	291	P		P		07 21 14.4	-2.1
	comp=Z,2.0nm,0.9s,baz=62,slow=8.8,SNR=8.3								
	comp=Z,2.0nm,0.9s								
MBAR	Mbarara	38.30	202	LR		LR		07 40 09.2	
	comp=Z,22nm,18.7s,baz=340,slow=41								
DSB	Dublin	39.34	313	P		P		07 21 25.0	-1.4
MTE	Manteigas	40.72	293	P		P		07 21 37.4	-0.6
MSEY	Mahe Island	41.47	163	P		P		07 21 45.4	+1.0
MSEY				lAmb	lAmb			07 22 26.8	
	comp=Z,12nm,0.8s								
MSEY	Mahe Island	41.47	163	P		P		07 21 45.4	+1.0
MSEY				pmax	pmax				
	comp=Z,13nm,0.9s								
SPB2	Spitsbergen Ar	44.23	352	P		P		07 22 04.2	-1.9
SPITS	Spitsbergen Ar	44.24	352	P		P		07 22 03.7	-2.5
SPITS				pmax	pmax				
	comp=Z,29nm,1.4s								
TLY	Talaya	44.45	50	P		P		07 22 06.7	-1.5
TLY				lAmb	lAmb			07 22 42.1	
	comp=Z,3.2nm,1.0s								
TORD	Torodi Ar. Bea	44.46	251	P		P		07 22 11.1	+2.4
	comp=Z,0.4nm,0.5s,baz=15,slow=6.1,SNR=3.0								
	comp=Z,0.4nm,0.5s								
PZH	PanZhiHua	49.33	84	P		P		07 22 47.8	+1.0
DGAR	Diego Garcia	50.34	143	P		P		07 22 56.0	+1.7
DGAR	Diego Garcia	50.34	143	P		P		07 22 56.0	+1.7
HHC	Hu-ho-hao-te	51.80	63	*e*P		P		07 23 04.8	-0.5
HHC				S		S		07 30 23.5	-4.1
HHC				sS	sS			07 30 35.4	+2.3
HHC				pmax	pmax				
	comp=Z,11nm,0.6s								
HHC				pmax	pmax				
	comp=Z,190nm,7.3s								
TIXI	Tiksi	54.84	23	LR		LR		07 50 40.3	
	comp=Z,68nm,18.2s,baz=319,slow=40								
TULEG	Thule	60.70	346	P		P		07 24 07.5	-0.6
MDJ	Mudanjiang	62.90	53	P		P		07 24 22.6	-0.9
BOSA	Boshof	66.46	198	P		P		07 24 46.8	-0.1
BOSA	Boshof	66.46	198	P		P		07 24 46.8	-0.1
BOSA				pmax	pmax				
	comp=Z,32nm,1.5s								
SHEL	Horse Pasture	69.95	232	P		P		07 25 09.4	+0.5
SHEL	Horse Pasture	69.95	232	P		P		07 25 09.4	+0.5
KUQ	Kuujjuuaa	71.07	329	P		P		07 25 15.0	-0.1
SCHQ	Schefferville	72.37	326	P		P		07 25 23.4	+0.3
A36M	Sachs Harbour	72.37	357	P		P		07 25 23.4	+0.6
JMZ	Minamidaito 2	72.99	70	P		P		07 25 26.1	-1.1
B20K	Meade River	73.44	8	P		P		07 25 29.4	+0.3
B20K				lAmb	lAmb			07 25 36.1	
	comp=Z,3.2nm,1.0s								
B22K	Teshekpuk Lake	73.49	6	P		P		07 25 28.8	-0.5
B22K				lAmb	lAmb			07 25 41.9	
	comp=Z,3.7nm,1.0s								
C23K	Itkillik River	74.21	5	P		P		07 25 33.1	-0.6
C23K				lAmb	lAmb			07 26 12.3	
	comp=Z,6.5nm,1.2s								
C18K	Utukok River	74.24	9	P		P		07 25 33.3	-0.7
C18K				lAmb	lAmb			07 25 41.2	
	comp=Z,4.5nm,0.9s								
RDOG	Red Dog Mine	74.55	10	P		P		07 25 36.1	+0.4
RDOG				lAmb	lAmb			07 25 49.3	
	comp=Z,3.8nm,0.6s								
C27K	Jago River	74.82	3	P		P		07 25 37.1	-0.1
C27K				lAmb	lAmb			07 25 45.1	
	comp=Z,3.4nm,1.0s								
D25K	Kavik River	75.00	4	P		P		07 25 36.8	-1.5
D25K				lAmb	lAmb			07 25 45.8	
	comp=Z,3.9nm,1.1s								
D23K	Nanushuk River	75.06	6	P		P		07 25 38.7	+0.1
D23K				lAmb	lAmb			07 25 49.5	
	comp=Z,5.3nm,1.3s								
D27M	Malcolm River	75.30	2	P		P		07 25 39.0	-1.1
D27M				lAmb	lAmb			07 26 00.2	
	comp=Z,3.1nm,1.4s								
E18K	Tukpahlearik C	75.47	10	P		P		07 25 40.3	-0.7
E18K				lAmb	lAmb			07 25 48.2	
	comp=Z,2.1nm,0.8s								
E22K	Anaktuvuk Pass	75.78	6	P		P		07 25 42.6	-0.2
E22K				lAmb	lAmb			07 25 49.6	
	comp=Z,2.1nm,1.0s								
E19K	Redstone River	75.87	8	P		P		07 25 43.5	+0.2
E19K				lAmb	lAmb			07 25 55.5	
	comp=Z,2.4nm,0.8s								
E28M	Babbage River	75.98	1	P		P		07 25 44.3	+0.4
E28M				lAmb	lAmb			07 26 03.3	
	comp=Z,3.2nm,1.2s								
E29M	Blow River	76.22	1	P		P		07 25 46.0	+0.8
E29M				lAmb	lAmb			07 25 52.7	
	comp=Z,3.8nm,0.9s								
E25K	Arctic Village	76.23	4	P		P		07 25 45.0	-0.4
E25K				lAmb	lAmb			07 25 52.3	
	comp=Z,2.1nm,0.9s								
E27K	Coleen River	76.34	2	P		P		07 25 45.8	-0.2
E27K				lAmb	lAmb			07 25 53.1	
	comp=Z,3.2nm,0.9s								
F19K	Shaleruckik Mo	76.40	9	P		P		07 25 45.5	-0.7
F19K				lAmb	lAmb			07 25 52.8	
	comp=Z,4.2nm,1.1s								
BMAR	Burnt Mountain	76.97	4	P		P		07 25 49.5	-0.1
G19K	Purcell Mounta	77.14	9	P		P		07 25 50.8	+0.3
G19K				lAmb	lAmb			07 25 57.8	
	comp=Z,4.6nm,1.1s								
IMAR	Indian Mountai	77.68	8	P		P		07 25 53.7	+0.2
ILAR	Eielson Array	79.48	5	P		P		07 26 03.5	0.0
	comp=Z,0.4nm,0.9s,baz=337,slow=3.5,SNR=8.6								
	comp=Z,0.4nm,0.9s								
J30M	Hart River	80.07	0	P		P		07 26 07.6	+0.8
J30M				lAmb	lAmb			07 26 13.8	
	comp=Z,2.4nm,0.9s								
YKAW3	Yellowknife Wh	80.64	350	P		P		07 26 09.1	-0.7
YKA	Yellowknife Ar	80.71	350	P		P		07 26 08.1	-2.0
	comp=Z,0.1nm,0.6s,baz=10.0,slow=5.6,SNR=4.4								
	comp=Z,0.1nm,0.6s								
DOT	Dot Lake	80.77	4	P		P		07 26 10.3	-0.2
DOT				lAmb	lAmb			07 26 18.2	
	comp=Z,3.4nm,0.9s								
BCAR	Beaver Creek A	81.46	3	P		P		07 26 14.2	0.0
SKT	Skwentna	81.82	8	P		P		07 26 15.4	-0.7
SKT				lAmb	lAmb			07 26 56.8	
	comp=Z,9.2nm,1.4s								
M24K	Tolsona, Glenn	82.17	5	P		P		07 26 18.4	+0.4
SML	Sawmill	82.30	6	P		P		07 26 17.9	-0.7
SML				lAmb	lAmb			07 26 31.4	
	comp=Z,5.9nm,1.0s								
SML	Sawmill	82.30	6	P		P		07 26 17.7	-0.9
FFC	Flin Flon	85.43	341	*i* P		P		07 26 32.9	-1.8

IDC **16** *07:32:44.0±1.1, 7.°02S×128.°33E, h0km, mb4.0/3, mbtmp4.1/6, ML4.4/4, Error ellipse: s-maj=43.9km s-min=20.5km az=71.0*
DJA **16** *07:33:00.0±1.0, 8.°S±3.°×12.°8E±.°, h22km±8km, M4.3/12, mb4.2/4, MLv4.4/12*
NEIC **16** *07:33:02.7±1.3, 7.°72S±0.°10×127.°45E±0.°06, h150km±8km, mb4.4/10, Error ellipse: s-maj=16.4km s-min=2.7km az=147.0*

ISC 16 07:33:02.4±0.6, 7.°68S±0.°07×127.°53E±0.°06, h162km, n39, σ2.°12/36, mb4.2/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.75	95	Pn	Pn	07 34 00.4	+0.8
SAUI	Saumlaki	3.75	95	P	Pn	07 33 57.0	-2.7
SOEI	Soe	3.83	237		Pn	07 33 59.9	-0.9
SOEI	Soe	3.83	237	P	Pn	07 33 59.4	-1.5
SOEI				S	Sn	07 34 45.4	-1.0
KRAI	Karang Ratu	4.42	11	P	Pn	07 34 03.9	-4.5
NLAI	Namlea	4.43	354	P	Pn	07 34 05.0	-3.6
MSAI	Masohi	4.53	18	P	Pn	07 34 06.1	-3.7
BATI	Baumata	4.57	236	Pn	Pn	07 34 09.2	-1.2
	98nm,0.3s,baz=112,slow=3.7,SNR=23						
BATI				Sn	Sn	07 35 00.8	-2.8
	70nm,0.3s,baz=105,slow=20,SNR=14						
BATI	Baumata	4.57	236	P	Pn	07 34 09.3	-1.1
EDFI	Ende, Flores	5.88	259	P	Pn	07 34 27.9	+0.2
	0.1nm6.3nm,0.5s						
MTN	Manton Dam	6.23	146		Pn	07 34 29.6	-2.7
FAKI	Fak Fak	6.67	45	Pn	Pn	07 34 35.1	-3.0
KNRA	Kununurra	8.04	171		Pn	07 34 52.7	-3.5
FITZ	Fitzroy Crossi	10.52	190	Pn	Pn	07 35 25.2	-3.8
	3.5nm,0.3s,baz=27,slow=12,SNR=61						
FITZ				Sn	Sn	07 37 14.8	-11
	3.6nm,0.3s,baz=275,slow=23,SNR=9.5						
	11nm,0.3s						
WB0	Warramunga Arr	13.73	152		Pn	07 36 06.0	-4.5
WRAB	Tennant Creek	13.86	152	Pn	Pn	07 36 08.1	-3.9
WRA	Warramunga Arr	13.86	152	Pn	Pn	07 36 06.6	-5.5
	0.5nm,0.3s,baz=330,slow=12,SNR=27						
WRA				Sn	Sn	07 38 30.0	-16
	2.5nm,0.3s,baz=351,slow=20,SNR=12						
	1.3nm,0.6s						
WRA	Warramunga Arr	13.86	152		Pn	07 36 06.7	-5.4
WR8	Warramunga Arr	13.95	152		Pn	07 36 09.2	-4.0
PSA00	Pilbara Seismi	15.68	207	P	Pn	07 36 33.1	-1.5
COEN	Coen	16.58	113		P	07 36 45.0	-0.3
COEN				lAmb	lAmb	07 36 46.2	
	comp=Z,18nm,1.5s						
ASAR	Alice Springs	17.03	160	P	P	07 36 49.5	-0.8
	comp=Z,0.6nm,0.3s,baz=338,slow=10,SNR=50						
ASAR				S	S	07 39 43.8	-16
	comp=Z,1.6nm,0.9s,baz=320,slow=18,SNR=6.1						
	comp=Z,2.7nm,0.5s						
ASAR	Alice Springs	17.03	160		Pn	07 36 51.6	+0.6
BBOO	Buckleboo	26.23	164	P	P	07 38 23.9	+1.6
BBOO				lAmb	lAmb	07 38 36.2	
	comp=Z,24nm,1.4s						
STKA	Stephens Creek	27.41	153	P	P	07 38 34.1	+1.3
	comp=Z,1.3nm,0.5s,baz=318,slow=9.0,SNR=7.3						
	comp=Z,1.3nm,0.5s						
STKA	Stephens Creek	27.41	153	P	P	07 38 34.3	+1.4
STKA				lAmb	lAmb	07 38 47.8	
	comp=Z,19nm,1.2s						
GSI	Gunungsitoli	31.18	285	P	P	07 39 05.9	-0.6
MKAR	Makanchi Array	67.48	328	P	P	07 43 41.2	+0.4
	comp=Z,0.5nm,0.5s,baz=135,slow=8.1,SNR=11						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	67.48	328	P	P	07 43 41.7	+0.9
BOOM	Boomskoye usch	68.53	321	P	P	07 43 49.5	+1.9
BOOM				lAmb	lAmb	07 43 58.5	
	comp=Z,3.6nm,1.0s						
ZALV	Zalesovo Beam	71.13	335	P	P	07 44 02.6	-0.4
	comp=Z,0.8nm,0.5s,baz=122,slow=5.2,SNR=3.9						
	comp=Z,0.8nm,0.5s						
ZALV	Zalesovo Beam	71.13	335	P	P	07 44 04.5	+1.5
KURK	Kurchatov	71.84	330	P	P	07 44 09.3	+2.0
KURK				lAmb	lAmb	07 44 23.0	
	comp=Z,5.7nm,0.7s						
VNDA	Vanda	72.08	173	P	P	07 44 11.3	+2.9
AMKA	Amchitka	73.69	31	P	P	07 44 19.9	+1.7
QSPA	South Pole Qui	82.30	180	P	P	07 45 07.1	+1.5
QSPA				lAmb	lAmb	07 45 12.6	
	comp=Z,7.1nm,1.5s						
CAMR	Camarioca	148.31	58	PKPbc	PKPbc	07 52 29.7	-0.6
HDC	Heredia	148.65	83	PKPbc	PKPdf	07 52 29.9	+2.2
LPAZ	La Paz	151.58	147	PKPbc	PKiKP	07 52 41.0	+1.4
	comp=Z,0.7nm,0.5s,baz=315,slow=1.4,SNR=5.5						

IDC **16** *07:46:38.6±2.0, 60.°17N×30.°03W, h0km, mb3.6/4, mbtmp3.7/6, ML3.8/2, Error ellipse: s-maj=55.2km s-min=24.9km az=177.0*
NEIC **16** *07:46:40.0±1.2, 60.°18N±0.°08×29.°9W±0.°2, h10km±1km, mb4.2/46, Error ellipse: s-maj=14.1km s-min=12.8km az=205.0*

ISC 16 07:46:39.8±0.6, 60.°16N±0.°09×30.°01W±0.°07, h10km, n58, σ0.°67/58, mb4.1/26, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	Borgarnes	6.11	37	Pn	Pn	07 48 10.3	+0.3
	2.2nm,0.3s,baz=218,slow=7.6,SNR=7.3						
	32nm,0.9s						
BORG	Borgarnes	6.11	37	Pn	Pn	07 48 09.4	-0.6
ANGG	Ammassalik, Gr	6.49	331	Pn	Pn	07 48 14.6	-0.6
NRS	Narsarsuaq	7.64	284	Pn	Pn	07 48 30.5	-0.4
SUMG	Summit	12.90	349	Pn	Pn	07 49 42.8	-0

J30M					IAmb	IAmb	07 54 50.4		
	comp=Z,5.3nm,1.4s								
BMAR	**Burnt Mountain**	**44.06**	**330**		P	**P**	**07 54 47.9**	**+0.6**	
H27K	**Steamboat Moun**	**44.17**	**327**		P	**P**	**07 54 49.0**	**+0.8**	
F25K	**Christian Rive**	**44.20**	**330**		P	**P**	**07 54 47.9**	**-0.6**	
G26K	**Porcupine Rive**	**44.22**	**329**		P	**P**	**07 54 49.0**	**+0.5**	
G26K					IAmb	IAmb	07 54 59.6		
	comp=Z,3.0nm,1.1s								
D23K	**Nanushuk River**	**44.32**	**334**		P	**P**	**07 54 50.3**	**+1.1**	
D23K					IAmb	IAmb	07 55 15.5		
	comp=Z,3.6nm,1.4s								
E24K	**Your Creek**	**44.52**	**332**		P	**P**	**07 54 51.4**	**+0.4**	
E24K					IAmb	IAmb	07 55 07.9		
	comp=Z,3.1nm,1.5s								
I27K	**Kandik River**	**44.66**	**327**		P	**P**	**07 54 52.7**	**+0.6**	
I27K					IAmb	IAmb	07 54 57.6		
	comp=Z,2.9nm,1.1s								
F24K	**Squaw Lake**	**44.81**	**331**		P	**P**	**07 54 52.6**	**-0.7**	
F24K					IAmb	IAmb	07 55 08.1		
	comp=Z,2.7nm,1.1s								
H24K	**Noodor Dome**	**46.13**	**330**		P	**P**	**07 55 05.1**	**+1.4**	
H24K					IAmb	IAmb	07 55 11.3		
	comp=Z,4.3nm,1.4s								
ILAR	**Eielson Array**	**46.72**	**328**		P	**P**	**07 55 08.8**	**+0.4**	
	comp=Z,0.4nm,0.7s,baz=41,slow=9.1,SNR=6.2								
	comp=Z,0.4nm,0.7s								
ILAR	**Eielson Array**	**46.72**	**328**		P	**P**	**07 55 08.8**	**+0.4**	
AKTO	**Aktyubinsk**	**47.41**	**60**		P	**P**	**07 55 13.6**	**-0.3**	
	comp=Z,2.6nm,0.6s,baz=331,slow=6.5,SNR=9.4								
	comp=Z,2.6nm,0.6s								
AKTO	**Aktyubinsk**	**47.41**	**60**		P	**P**	**07 55 13.6**	**-0.3**	
AB31	**Akbulak array**	**49.12**	**60**		P	**P**	**07 55 26.7**	**-0.3**	
AB31					IAmb	IAmb	07 55 27.9		
	comp=Z,1.9nm,0.9s								
ABKAR	**Akbulak array**	**49.12**	**60**		P	**P**	**07 55 27.2**	**+0.1**	
SPUT	**South Promonto**	**51.75**	**288**		P	**P**	**07 55 48.5**	**+1.2**	
WUAZ	**Wupatki**	**55.80**	**283**		P	**P**	**07 56 17.3**	**+0.3**	
WUAZ					IAmb	IAmb	07 56 34.9		
	comp=Z,4.4nm,1.2s								
TXAR	**Lajitas Array**	**56.98**	**272**		P	**P**	**07 56 25.7**	**+0.3**	
	comp=Z,0.3nm,0.9s,baz=30,slow=4.5,SNR=3.6								
	comp=Z,0.3nm,0.9s								
TXAR	**Lajitas Array**	**56.98**	**272**		P	**P**	**07 56 24.7**	**-0.7**	
KMPM	**Mount Pierce**	**57.87**	**296**		P	**P**	**07 56 31.9**	**+0.4**	
CMB	**Columbia Colle**	**58.08**	**292**		P	**P**	**07 56 32.6**	**-0.4**	
CMB					IAmb	IAmb	07 56 55.7		
	comp=Z,3.8nm,1.4s								
ROSC	**El Rosal**	**64.59**	**230**		P	**P**	**07 57 18.2**	**+0.6**	
PB18	**Visviri**	**83.80**	**218**		P	**P**	**07 59 09.0**	**-0.7**	

IDC ***16*** *07:47:14.9±0.5,59.˙76N×29.˙93W,h0km,mb4.1/27, mbtmp4.1/30,ML3.7/3,MS4.8/52,Error ellipse: s-maj=16.2km s-min=10.4km az=3.0*

MOS ***16*** *07:47:16.9±1.3,59.˙90N×29.˙85W,h10km,mb4.8/40, MS4.7/7,Error ellipse: s-maj=9.3km s-min=7.7km az=84.5*

GCMT ***16*** *07:47:18.0±0.1,59.˙90N±0.˙01×29.˙63W±0.˙01,h12km, MW5.2/143,Moment Tensor Solution. s62,c80; s143,c262; Duration: 1s0 Moment tensor: Scale 10¹⁷ Nm; Mrr-0.81±.01; Mθθ0.03±.01; Mϕϕ0.77±.01; Mrθ0.32±.05; Mrϕ0.13±.01; Mθϕ-0.20±.04; Best double couple: M₀0.87900×10¹⁷ NP1:ϕs208.00000°,δ43.00000°, λ-61.00000°. NP2:ϕs350.00000°,δ54.00000°, λ-114.00000°. Principal axes: T 0.8130, Plg6.0000°, Azm97.0000°; N 0.1300, Plg20.0000°, Azm5.0000°; P -0.9440, Plg70.0000°, Azm203.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***16*** *07:47:19.1,59.˙99N×29.˙71W,h12km*

NEIC ***16*** *07:47:19.1,59.˙69N×29.˙71W,h12km,Moment Tensor Solution. Duration: 2s3 Moment tensor: Scale 10¹⁷Nm; Mrr-0.56; Mθθ0.02; Mϕϕ0.54; Mrθ0.15; Mθϕ0.13; Mϕr-0.94; Fault plane solution: M₀1.11000×10¹⁷ NP1: ϕs208.40000°,δ17.67000°,λ-57.41000°. NP2: ϕs354.54000°,δ75.18000°,λ-99.74000°. Principal axes: T 1.0800, Plg30.0000°, Azm92.0000°; N 0.0535, Plg9.0000°, Azm357.0000°; P -1.1334, Plg59.0000°, Azm251.0000°;*

NEIC ***16*** *07:47:19.1±1.5,59.˙99N±0.˙09×29.˙7W±0.˙1,h10km±1km, mb4.8/370,Mww5.3/63 Error ellipse: s-maj=14.4km s-min=11.0km az=177.0*

INMG ***16*** *07:47:21.0±4.3,59.˙59N×29.˙71W,h10km,M4.5,mb4.9, Ms4.5, #DIST_RANGE: DISTANT*

ISC 16 07:47:18.5±0.3,59.˙96N±0.˙05×29.˙84W±0.˙03,h10km,n724, σ1s21/618,mb4.7/239,MS4.8/58,11C-10D,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**6.22**	**36**	Pn		**Pn**	**07 48 51.2**	**+1.0**
	5.3nm,0.3s,baz=256,slow=6.4,SNR=11							
BORG				Sn		**Sn**	**07 50 01.5**	**+0.2**
	0.6nm,0.3s,baz=258,slow=19,SNR=1.0							
	45nm,0.5s							
BORG	**Borgarnes**	**6.22**	**36**	Pn		**Pn**	**07 48 51.4**	**+1.2**
BORG	**Borgarnes**	**6.22**	**36**	P		**Pn**	**07 48 51.4**	**+1.2**
ANGG	**Ammassalik, Gr**	**6.70**	**331**	Pn		**Pn**	**07 48 56.9**	**+0.1**
NRS	**Narsarsuaq**	**7.77**	**286**	Pn		**Pn**	**07 49 12.7**	**+1.2**
NRS	**Narsarsuaq**	**7.77**	**286**	P		**Pn**	**07 49 12.7**	**+1.2**
SCO	**Scoresbysund**	**11.06**	**14**	Pn		**Pn**	**07 49 54.6**	**-1.8**
SCO	**Scoresbysund**	**11.06**	**14**	P		**Pn**	**07 49 54.6**	**-1.8**
SFJD	**Kangerlussuaq**	**11.61**	**316**	Pn		**Pn**	**07 50 04.0**	**+0.1**
	0.3nm,0.3s,baz=114,slow=12,SNR=1.3							
SFJD				Sn		**Sn**	**07 52 07.8**	**-5.6**
	0.5nm,0.3s,baz=173,slow=16,SNR=1.9							
SFJD				LR		LR	07 53 48.2	
	comp=Z,8μm,21.2s,baz=122,slow=34							
	2.6nm,0.7s							
SFJD	**Kangerlussuaq**	**11.61**	**316**	Pn		**Pn**	**07 50 05.2**	**+1.3**
SFJD	**Kangerlussuaq**	**11.61**	**316**	P		**Pn**	**07 50 05.2**	**+1.3**
SUMG	**Summit**	**13.11**	**349**	Pn		**Pn**	**07 50 26.8**	**+2.0**
SUMG	**Summit**	**13.11**	**349**	P		**Pn**	**07 50 26.8**	**+2.0**
SUMG	**Summit**	**13.11**	**349**	*i* P		**Pn**	**07 50 26.0**	**+1.2**
SUMG				*i* S		**P**	**07 50 32.0**	**-3.1**
JMIC	**Jan Mayen**	**14.05**	**29**	Sn		**Sn**	**07 53 12.1**	**-0.9**
	8.9nm,0.3s,baz=88,slow=15,SNR=6.3							
EKA	**Eskdalemuir Ar**	**14.96**	**96**	Pn		**Pn**	**07 50 51.1**	**+1.4**
	baz=301,slow=4.7							
EKA				LR		LR	07 55 43.0	
	comp=Z,6μm,18.2s,baz=268,slow=34							
EKA	**Eskdalemuir Ar**	**14.96**	**96**	P		**Pn**	**07 50 47.8**	**-1.9**
FRB	**Frobisher Bay**	**18.44**	**298**	P		**P**	**07 51 32.3**	**-1.4**
	0.1nm,0.3s,baz=77,slow=11,SNR=5.4							
FRB				LR		LR	07 57 49.0	
	comp=Z,5μm,19.0s,baz=106,slow=34							
	3.1nm,0.8s							
DRLN	**Deer Lake**	**19.12**	**248**	P		**Pn**	**07 51 42.4**	**+0.3**
KUQ	**Kuujjuuaa**	**19.75**	**282**	P		**Pn**	**07 51 49.6**	**+0.1**
NAO01	**NORSAR Array S**	**19.91**	**70**	P		**P**	**07 51 48.4**	**-1.5**
NAO01					IAmb	IAmb	07 51 54.8	
	comp=Z,100nm,1.9s							
NOA	**NORSAR Array B**	**20.02**	**69**	P		**P**	**07 51 49.6**	**-1.4**
	comp=Z,1.0nm,0.8s,baz=283,slow=11,SNR=2.6							
NOA				LR		LR	07 58 42.4	
	comp=Z,2μm,20.4s,baz=285,slow=34							
	comp=Z,1.0nm,0.8s							
SCHQ	**Schefferville**	**20.38**	**272**	P		**P**	**07 51 53.0**	**-2.1**
	comp=Z,6.1nm,0.9s,baz=54,slow=7.3,SNR=9.3							
SCHQ				LR		LR	07 58 32.4	
	comp=Z,2μm,18.6s,baz=64,slow=33							
	comp=Z,6.1nm,0.9s							
SCHQ	**Schefferville**	**20.38**	**272**	P		**P**	**07 51 54.9**	**-0.2**
UCC	**Uccle**	**21.25**	**100**	P		**P**	**07 52 04.7**	**+0.2**
UCC	**Uccle**	**21.25**	**100**	P		**P**	**07 52 04.7**	**+0.2**
UCC				pmax		pmax		
	comp=Z,141nm,1.8s							
UCC	**Uccle**	**21.25**	**100**	*d*P		**P**	**07 52 05.1**	**+0.6**
TULEG	**Thule**	**21.28**	**336**	P		**P**	**07 52 04.9**	**+0.3**
HFS	**Hagfors**	**21.45**	**71**	P		**P**	**07 52 05.5**	**-1.0**
	comp=Z,4.1nm,0.8s,baz=285,slow=11,SNR=3.7							
HFS				LR		LR	07 59 35.4	
	comp=Z,2μm,20.1s,baz=288,slow=34							
	comp=Z,4.1nm,0.8s							
BMRD	**Maredsous**	**21.77**	**101**	*d*P		**P**	**07 52 10.1**	**+0.1**
	comp=Z,24nm,1.3s							
DOU	**Dourbes**	**21.82**	**102**	*d*P		**P**	**07 52 09.6**	**-0.9**
	comp=Z,11nm,1.6s							
BGES	**Gesves**	**21.88**	**100**	*d*P		**P**	**07 52 10.8**	**-0.3**
	comp=Z,22nm,1.3s							
BCLA	**Clavier**	**21.96**	**100**	*d*P		**P**	**07 52 12.3**	**+0.2**
BCLA				*d*PP		**PnPn**	**07 52 33.5**	**0.0**
MFF	**Saint Martin d**	**21.98**	**114**	P		**P**	**07 52 12.2**	**-0.1**
MFF				pmax		pmax		
	comp=Z,9.0nm,1.5s							
CLF	**Chambon-Foret**	**22.08**	**108**			**P**	**07 52 13.3**	**0.0**
RCHB	**Rochefort**	**22.09**	**101**	*d*P		**P**	**07 52 13.2**	**-0.2**
MEM	**Membach**	**22.19**	**99**	*d*P		**P**	**07 52 13.9**	**-0.7**
BTNL	**Ternell**	**22.27**	**99**	*d*P		**P**	**07 52 15.0**	**-0.4**
	comp=Z,16nm,1.3s							
POIN	**Pond Inlet**	**22.32**	**324**	P		**P**	**07 52 15.3**	**-0.3**
BHOU	**Houvegnez**	**22.35**	**99**	*d*P		**P**	**07 52 16.6**	**+0.3**
	comp=Z,13nm,1.4s							
PGAV	**Gavieira, Arco**	**22.38**	**134**	*e*LR		LR	07 57 32.2	
PGAV				*i* IAMs_20		IAMs_20	07 59 19.0	
	comp=Z,2μm,18.0s							
WLF	**Walferdange**	**22.87**	**101**	P		**P**	**07 52 20.0**	**-1.7**
WLF				IAmb		IAmb	07 52 39.4	
	comp=Z,52nm,1.6s							
WLF	**Walferdange**	**22.87**	**101**	P		**P**	**07 52 20.0**	**-1.7**
WLF				pmax		pmax		
	comp=Z,53nm,1.6s							
POLO	**Lamas de Olo**	**23.07**	**134**	*e*P		**P**	**07 52 23.4**	**-0.6**
ILON	**Igloolik, Nuna**	**23.37**	**315**			**P**	**07 52 26.8**	**+0.1**
SPB2	**Spitsbergen Ar**	**23.45**	**22**	P		**P**	**07 52 28.4**	**+1.0**
MVO	**Moncorvo**	**23.53**	**133**	*e*P		**P**	**07 52 28.9**	**+0.2**
MVO				*i* IAmb		IAmb	07 52 32.2	
	comp=Z,64nm,1.5s							
MVO				*e*LR		LR	07 58 11.5	
MVO				*i* IAMs_20		IAMs_20	08 00 04.8	
	comp=Z,2μm,18.0s							
PVIS	**Viseu**	**23.61**	**135**	*e*P		**P**	**07 52 29.6**	**+0.2**
ICQ	**Pointe Anglais**	**23.67**	**261**	P		**P**	**07 52 29.8**	**-0.1**
ICQ				IAmb		IAmb	07 52 37.4	
	comp=Z,23nm,1.1s							
GBN	**Guysborough**	**23.79**	**246**	P		**P**	**07 52 31.6**	**+0.6**
GBN				IAmb		IAmb	07 52 32.0	
	comp=Z,32nm,1.1s							
PCAS	**Casmilo, Conde**	**23.99**	**137**	*e*P		**P**	**07 52 30.5**	**-2.4**
MTE	**Manteigas**	**24.02**	**135**	P		**P**	**07 52 33.0**	**-0.3**
MTE				IAmb		IAmb	07 52 35.3	
	comp=Z,49nm,1.3s							
MTE	**Manteigas**	**24.02**	**135**	*e*P		**P**	**07 52 33.3**	**0.0**
MTE				*e*LR		LR	07 58 08.4	
MTE				*i* IAMs_20		IAMs_20	08 00 07.5	
	comp=Z,1μm,18.0s							
ECH	**Echery**	**24.32**	**102**			**P**	**07 52 35.0**	**-1.0**
ECH	**Echery**	**24.32**	**102**	P		**P**	**07 52 35.0**	**-1.0**
ECH				pmax		pmax		
	comp=Z,18nm,1.3s							
PSBE	**So Bento**	**24.37**	**138**	*e*P		**P**	**07 52 37.1**	**+0.6**
PSARD	**Sardoal**	**24.51**	**137**	*e*P		**P**	**07 52 37.3**	**-0.4**
PSARD				*i* IAmb		IAmb	07 52 38.0	
	comp=Z,86nm,1.0s							
PCBR	**Castelo Branco**	**24.54**	**135**	*e*P		**P**	**07 52 37.5**	**-0.5**
PCBR				*i* IAmb		IAmb	07 53 00.2	
	comp=Z,59nm,1.8s							
ARCES	**ARCESS Array B**	**24.55**	**44**	P		**P**	**07 52 37.5**	**-0.4**
	comp=Z,8.7nm,1.0s,baz=280,slow=10.0,SNR=5.5							
ARCES				LR		LR	08 00 41.2	
	comp=Z,1μm,18.2s,baz=276,slow=33							
	comp=Z,8.7nm,1.0s							
ARCES	**ARCESS Array B**	**24.55**	**44**	P		**P**	**07 52 37.3**	**-0.5**
ARCES	**ARCESS Array B**	**24.55**	**44**	P		**P**	**07 52 37.3**	**-0.5**
ARCES				pmax		pmax		
	comp=Z,83nm,1.8s							
BATG	**Bathurst New B**	**24.59**	**255**			**P**	**07 52 39.2**	**+0.7**
PMRV	**Marv??o**	**24.93**	**135**	*e*P		**P**	**07 52 43.1**	**+1.6**
PMRV				*i* IAmb		IAmb	07 52 45.3	
	comp=Z,40nm,1.6s							
PMRV				*e*LR		LR	07 58 52.7	
PMRV				*i* IAMs_20		IAMs_20	08 00 34.0	
	comp=Z,1μm,20.0s							
PMTG	**Montargil**	**24.96**	**137**	*e*P		**P**	**07 52 43.3**	**+1.4**
PMTG				*i* IAmb		IAmb	07 52 45.3	
	comp=Z,58nm,1.5s							
MOX	**Moxa**	**24.97**	**93**	P		**P**	**07 52 41.9**	**0.0**
MOX				pmax		pmax		
	comp=Z,11nm,1.4s							
PARRA	**Arraiolos**	**25.25**	**137**	*e*P		**P**	**07 52 43.5**	**-1.0**
PARRA				*i* IAmb		IAmb	07 52 46.9	
	comp=Z,52nm,1.6s							
CLL	**Collm**	**25.27**	**91**	*i* P		**P**	**07 52 45.1**	**+0.6**
CLL				*e*S		**S**	**07 57 12.0**	**+2.1**
CLL				MLR		MLR		
	comp=Z,2μm,18.5s							
CLL	**Collm**	**25.27**	**91**	*i* P		**P**	**07 52 45.1**	**+0.6**
CLL				*i* x		x	07 52 57.7	
CLL				*e*PP		**PnPn**	**07 53 19.0**	**+0.3**
CLL				*e*x		x	07 55 18.0	
CLL				*e*S		**S**	**07 57 12.0**	**+2.1**
CLL				*e*SS		**SnSn**	**07 57 54.0**	**-6.4**
CLL				AMS		AMS	08 02 00.0	
	comp=Z,2μm,18.5s							
CLL				AMS		AMS	08 03 00.0	
CLL	**Collm**	**25.27**	**91**	P		**P**	**07 52 43.8**	**-0.7**
	comp=Z,9.5nm,1.0s							
PESTR	**Estremoz**	**25.36**	**136**			**P**	**07 52 45.5**	**0.0**
PESTR				IAmb		IAmb	07 52 45.6	
	comp=Z,25nm,1.0s							
PESTR	**Estremoz**	**25.36**	**136**	*e*P		**P**	**07 52 44.5**	**-1.0**
PESTR				*i* IAmb		IAmb	07 52 48.9	
	comp=Z,57nm,1.7s							
PAB	**San Pablo**	**25.95**	**130**	P		**P**	**07 52 51.5**	**+0.6**
PAB				IAmb		IAmb	07 52 53.2	
	comp=Z,26nm,1.2s							
PAB	**San Pablo**	**25.95**	**130**	P		**P**	**07 52 51.5**	**+0.6**
PAB				pmax		pmax		
	comp=Z,26nm,1.2s							
ESDC	**Sonseca Array**	**25.98**	**130**	P		**P**	**07 52 49.4**	**-1.8**
	comp=Z,12nm,1.0s,baz=330,slow=9.3,SNR=19							
	comp=Z,12nm,1.0s							
PBEJ	**Beja**	**26.02**	**138**	*e*P		**P**	**07 52 51.4**	**-0.1**
PBAR	**Barrancos**	**26.17**	**136**	*e*P		**P**	**07 52 52.7**	**-0.1**
PBAR				*i* IAmb		IAmb	07 52 57.2	
	comp=Z,37nm,2.0s							
D62A	**Allapoint, All**	**26.19**	**258**	P		**P**	**07 52 53.6**	**+0.8**
TUE	**Stuetta**	**26.61**	**103**	P		**P**	**07 52 57.6**	**+0.7**
TUE				IAmb		IAmb	07 53 00.8	
	comp=Z,25nm,1.4s							
TUE	**Stuetta**	**26.61**	**103**	P		**P**	**07 52 56.8**	**-0.1**
	comp=Z,50nm,2.1s							
PVAQ	**Vaqueiros**	**26.64**	**138**	*e*LR		LR	07 59 28.5	
PVAQ				*i* IAMs_20		IAMs_20	08 01 22.8	
	comp=Z,2μm,20.0s							
FINES	**FINESS Array B**	**26.70**	**62**	P		**P**	**07 52 57.0**	**-0.4**
	comp=Z,4.4nm,0.9s,baz=206,slow=8.3,SNR=4.6							
FINES				LR		LR	08 02 59.2	
	comp=Z,1μm,18.4s,baz=270,slow=35							
	comp=Z,4.4nm,0.9s							
FINES	**FINESS Array B**	**26.70**	**62**	P		**P**	**07 52 57.8**	**+0.5**
FINES	**FINESS Array B**	**26.70**	**62**	P		**P**	**07 52 57.8**	**+0.5**
GERES	**GERESS Array B**	**27.16**	**95**	LR		LR	08 03 54.9	
	comp=Z,3μm,18.3s,baz=306,slow=37							
RES	**Resolute Bay**	**27.19**	**328**	LR		LR	08 03 35.7	
	comp=Z,1μm,18.1s,baz=100,slow=36							
RES	**Resolute Bay**	**27.19**	**328**			**P**	**07 53 02.4**	**+0.8**
RES	**Resolute Bay**	**27.19**	**328**	P		**P**	**07 53 02.4**	**+0.8**
RES				pmax		pmax		
	comp=Z,9.0nm,1.5s							
KSP	**Ksiaz**	**27.20**	**89**	*e*P		**P**	**07 53 03.0**	**+1.0**
KSP	**Ksiaz**	**27.20**	**89**	P		**P**	**07 53 01.1**	**-0.9**
	comp=Z,12nm,2.6s							
DPC	**Dobruska-Polom**	**27.52**	**90**	P		**P**	**07 53 04.1**	**-0.8**
	comp=Z,12nm,2.8s							
VRAC	**Vranov**	**28.32**	**91**	LR		LR	08 05 21.0	
	comp=Z,2μm,18.1s,baz=310,slow=38							
PMOZ	**Porto Moniz, M**	**28.41**	**157**	*e*LR		LR	08 00 23.8	
PMOZ				*i* IAMs_20		IAMs_20	08 01 42.2	
	comp=Z,909nm,20.0s							
SUW	**Suwalki**	**28.80**	**78**	*e*P		**P**	**07 53 18.3**	**+2.1**
OJC	**Ojcow**	**29.35**	**87**	*e*P		**P**	**07 53 22.1**	**+0.9**
OJC	**Ojcow**	**29.35**	**87**	P		**P**	**07 53 21.1**	**-0.1**
OJC				pmax		pmax		
	comp=Z,10.0nm,1.6s							
OJC	**Ojcow**	**29.35**	**87**	P		**P**	**07 53 20.3**	**-0.9**
	comp=Z,10.0nm,1.5s							
VLDQ	**Val d'Or**	**29.69**	**268**			**P**	**07 53 26.3**	**+2.2**
VLDQ				IAmb		IAmb	07 53 26.5	
	comp=Z,13nm,1.2s							
BLKN	**Baker Lake**	**29.95**	**307**	P		**P**	**07 53 27.3**	**+1.1**
NACGM	**Naroch**	**30.07**	**74**	*e*P		**P**	**07 53 30.5**	**+3.0**
	comp=Z,25nm,0.8s,baz=303							
NIE	**Niedzica**	**30.11**	**88**	P		**P**	**07 53 27.2**	**-0.7**
MPLH	**Magyarpolny**	**30.20**	**94**	P		**P**	**07 53 28.2**	**-0.5**
	comp=Z,18nm,0.8s							
MNK	**Minsk**	**30.83**	**74**	*i* P		**P**	**07 53 36.6**	**+2.4**
	comp=E,28nm,0.8s							
MNK				*i* P		**P**	**07 53 36.6**	**+2.4**
	comp=N,12nm,0.7s							
MNK				*i* P		**P**	**07 53 36.6**	**+2.4**
	comp=Z,12nm,0.7s,baz=304							
MNK				*i* PP		**PnPn**	**07 54 36.5**	**+2.4**
MNK				*i* PPP		PPP	07 54 46.0	
MNK				*i* S		**S**	**07 58 41.4**	**+4.1**
MNK				*i* SS		**SnSn**	**08 00 19.8**	**+4.0**
MNK				*i* SSS		SSS	08 00 38.9	
MNK	**Minsk**	**30.83**	**74**	*i* P		**P**	**07 53 36.5**	**+2.4**
MNK				*i*			07 54 36.5	
MNK				*i* PPP		PPP	07 54 46.0	
MNK				*i* S		**S**	**07 58 41.4**	**+4.1**
MNK				*i* SS		**SnSn**	**08 00 19.8**	**+4.0**
MNK				*i* SSS		SSS	08 00 38.8	
MNK				pmax		pmax		
	comp=E,28nm,0.8s							
MNK				pmax		pmax		
	comp=Z,12nm,0.7s							
MNK				pmax		pmax		
	comp=N,12nm,0.7s							
MNK				MLR		MLR		
	comp=Z,2μm,18.0s							
MNK				MLR		MLR		
	comp=E,876nm,20.0s							
MNK				MLR		MLR		
	comp=N,1μm,18.0s							
MORH	**Mrgy, Hungar**	**31.41**	**94**	P		**P**	**07 53 37.4**	**-1.9**
	comp=N,8.6nm,1.2s							
J59A	**Piesco**	**31.47**	**259**	P		**P**	**07 53 41.5**	**+1.6**
J59A				IAmb		IAmb	07 53 42.1	
	comp=Z,9.0nm,1.1s							
FCC	**Fort Churchill**	**31.62**	**296**	P		**P**	**07 53 42.6**	**+1.6**
FCC				IAmb		IAmb	07 53 44.3	
	comp=Z,9.7nm,1.1s							
FCC	**Fort Churchill**	**31.62**	**296**	P		**P**	**07 53 42.7**	**+1.6**
FCC				pmax		pmax		
	comp=Z,10.0nm,1.1s							
MD01	**Midelt array s**	**31.76**	**137**	P		**P**	**07 53 43.5**	**+0.8**
STNU	**Starunia**	**32.68**	**85**	P		**P**	**07 53 50.3**	**-0.2**
L59A	**Walton**	**32.68**	**258**	P		**P**	**07 53 51.4**	**+0.7**
L59A				IAmb		IAmb	07 53 52.6	
	comp=Z,16nm,1.1s							
KLMR	**Klimovskoe**	**32.82**	**58**	*e*P		**P**	**07 53 51.3**	**-0.2**
KLMR				pmax		pmax		
	comp=Z,31nm,1.4s							
KLMR				MLR		MLR		
	comp=Z,1μm,14.0s							
SADO	**Sadowa**	**32.83**	**265**	LR		LR	08 05 52.5	
	comp=Z,4μm,18.3s,baz=66,slow=34							
SADO	**Sadowa**	**32.83**	**265**	P		**P**	**07 53 52.5**	**+0.7**
DRGR		**33.06**	**90**	P		**P**	**07 53 54.9**	**+1.0**
DRGR				pmax		pmax		
	comp=Z,8.0nm,2.9s							
KSV	**Kosov**	**33.22**	**86**	P		**P**	**07 53 54.4**	**-0.8**
LUBAR	**Lubar, Ukraine**	**33.52**	**81**	P		**P**	**07 53 57.3**	**-0.5**
AK21	**Malin Array Si**	**33.62**	**79**	P		**P**	**07 53 57.8**	**-0.8**
AK20	**Malin Array Si**	**33.62**	**79**	P		**P**	**07 53 57.8**	**-0.9**
AK19	**Malin Array Si**	**33.63**	**79**	P		**P**	**07 53 57.9**	**-0.9**
AK17	**Malin Array Si**	**33.68**	**79**	P		**P**	**07 53 58.8**	**-0.4**
AK16	**Malin Array Si**	**33.71**	**79**	P		**P**	**07 53 58.8**	**-0.7**
BUR08	**Bucovina Ar. S**	**33.73**	**86**	P		**P**	**07 54 00.0**	**+0.2**
BUR08				IAmb		IAmb	07 54 02.6	
	comp=Z,16nm,1.4s							
AK11	**Malin Array Si**	**33.74**	**79**	P		**P**	**07 53 59.5**	**-0.2**
KIEV	**Kiev**	**33.75**	**79**	P		**P**	**07 53 59.4**	**-0.4**
KIEV				IAmb		IAmb	07 54 01.3	
	comp=Z,17nm,1.2s							
KIEV	**Kiev**	**33.75**	**79**	P		**P**	**07 53 59.4**	**-0.4**
KIEV				pmax		pmax		
	comp=Z,17nm,1.3s							
AKASG	**Malin Array Be**	**33.75**	**79**	P		**P**	**07 53 58.0**	**-1.9**
	comp=Z,4.6nm,0.9s,baz=310,slow=8.5,SNR=15							
AKASG				LR		LR	08 07 51.6	
	comp=Z,838nm,18.1s,baz=294,slow=37							
	comp=Z,4.6nm,0.9s							
AKASG	**Malin Array Be**	**33.75**	**79**	P		**P**	**07 53 59.8**	**+0.1**
AKASG	**Malin Array Be**	**33.75**	**79**	*ce*P		**P**	**07 53 59.9**	**+0.1**
AKASG				pmax		pmax		
	comp=Z,5.0nm,0.9s							
AKBB	**Malin Array Si**	**33.75**	**79**	P		**P**	**07 53 60.0**	**+0.2**
AKBB				IAmb		IAmb	07 54 01.3	
	comp=Z,19nm,1.2s							
AKBB	**Malin Array Si**	**33.75**	**79**	P		**P**	**07 54 00.0**	**+0.2**
AKBB				pmax		pmax		
	comp=Z,19nm,1.3s							
AKBB	**Malin Array Si**	**33.75**	**79**	P		**P**	**07 53 58.5**	**-1.3**
**AK01

comp=Z,3.5nm,1.0s
KIRV Kirov 38.25 56 LR LR 08 09 18.4
comp=Z,1μm,19.8s,baz=312,slow=34
P51A Williamsport 38.70 262 P **P** **07 54 42.6 +0.4**
P51A IAmb IAmb 07 54 45.1
comp=Z,38nm,1.5s
AGMN Agassiz Nation 38.75 283 P **P** **07 54 43.1 +0.6**
O49A Covington 38.80 264 P **P** **07 54 43.1 +0.1**
BLA Blacksburg 39.15 258 P **P** **07 54 45.6 -0.5**
BLA IAmb IAmb 07 54 54.9
comp=Z,22nm,1.2s
BLA Blacksburg 39.15 258 P **P** **07 54 45.6 -0.5**
BLA pmax pmax
comp=Z,22nm,1.2s
Q51A Peebles 39.19 262 P **P** **07 54 45.9 -0.4**
U56A King 39.82 257 P **P** **07 54 52.6 +1.0**
U56A IAmb IAmb 07 54 54.1
comp=Z,19nm,1.0s
P48A Milroy 39.90 265 P **P** **07 54 53.1 +0.9**
P48A IAmb IAmb 07 54 53.9
comp=Z,25nm,1.0s
R50A Paris 40.25 262 P **P** **07 54 56.4 +1.2**
R50A IAmb IAmb 07 54 57.3
comp=Z,17nm,1.1s
S51A Beattyville 40.39 261 P **P** **07 54 57.9 +1.6**
S51A IAmb IAmb 07 54 58.4
comp=Z,26nm,1.0s
P46A Rosedale 40.67 266 P **P** **07 54 58.2 -0.5**
INK Inuvik 40.71 326 P **P** **07 54 59.5 +0.9**
INK Inuvik 40.71 326 P **P** **07 54 59.5 +0.9**
INK pmax pmax
comp=Z,3.0nm,1.0s
INK Inuvik 40.71 326 P **P** **07 54 57.4 -1.2**
baz=48
L40A Anamosa 40.86 272 P **P** **07 55 00.1 -0.1**
L40A IAmb IAmb 07 55 02.0
comp=Z,21nm,1.2s
WRGLY Wrigley 40.88 316 P **P** **07 55 01.8 +1.8**
WRGLY Wrigley 40.88 316 P **P** **07 54 59.6 -0.4**
baz=50
HDIL Hopedale 41.01 269 P **P** **07 55 02.1 +0.7**
HDIL IAmb IAmb 07 55 04.1
comp=Z,25nm,1.0s
TZTN Tazewell 41.22 260 P **P** **07 55 03.8 +0.6**
TZTN IAmb IAmb 07 55 05.8
comp=Z,27nm,1.2s
WCI Wyandotte Cave 41.28 264 P **P** **07 55 03.8 +0.2**
WCI IAmb IAmb 07 55 05.7
comp=Z,15nm,0.9s
WCI Wyandotte Cave 41.28 264 P **P** **07 55 03.8 +0.2**
WCI pmax pmax
comp=Z,15nm,1.0s
F31M Tsiigehtchic 41.35 325 P **P** **07 55 05.2 +1.3**
F31M Tsiigehtchic 41.35 325 P **P** **07 55 03.5 -0.4**
baz=48
D28M Stokes Point 41.41 329 P **P** **07 55 03.7 -0.6**
baz=46
T50A Nancy 41.49 262 P **P** **07 55 06.2 +0.8**
N41A Harden Midland 41.69 271 P **P** **07 55 07.3 +0.3**
N41A IAmb IAmb 07 55 09.4
comp=Z,26nm,1.1s
F30M Barrier River 41.81 326 P **P** **07 55 07.3 -0.4**
baz=46
P43A Skaggs, Pawnee 41.82 269 P **P** **07 55 09.4 +1.3**
P43A IAmb IAmb 07 55 10.4
comp=Z,26nm,1.1s
E29M Blow River 41.84 328 P **P** **07 55 07.7 -0.2**
baz=46
G31M Satah River 41.86 325 P **P** **07 55 07.0 -1.0**
baz=47
D27M Malcolm River 42.03 330 P **P** **07 55 08.9 -0.7**
baz=44
TKL Tuckaleechee C 42.03 259 LR LR 08 11 10.6
comp=Z,3μm,18.7s,baz=42,slow=34
E28M Babbage River 42.12 329 P **P** **07 55 09.9 -0.3**
E28M Babbage River 42.12 329 P **P** **07 55 09.8 -0.4**
baz=45
Q44A Meyer Farm, Va 42.13 267 P **P** **07 55 11.2 +0.6**
BG3 Lake Jocassee 42.15 258 P **P** **07 55 11.2 +0.5**
BG3 IAmb IAmb 07 55 13.1
comp=Z,17nm,1.0s
USIN University of 42.17 265 P **P** **07 55 12.2 +1.2**
ECSD EROS Data Cent 42.34 278 P **P** **07 55 13.8 +1.5**
U49A Red Boiling Sp 42.35 262 P **P** **07 55 13.3 +0.8**
U49A IAmb IAmb 07 55 14.3
comp=Z,16nm,1.1s
G30M tAoh Zraii Nji 42.37 326 P **P** **07 55 11.8 -0.5**
baz=46
C27K Jago River 42.42 332 P **P** **07 55 11.7 -0.9**
baz=43
HODGE Hodges 42.43 257 P **P** **07 55 12.4 -0.7**
HODGE IAmb IAmb 07 55 16.0
comp=Z,42nm,1.6s
C26K Camden Bay 42.49 332 P **P** **07 55 12.4 -0.8**
baz=42
CPCT Cooper Cave 42.57 260 P **P** **07 55 15.0 +0.8**
CPCT IAmb IAmb 07 55 16.8
comp=Z,22nm,1.2s
H31M Peel River 42.65 324 IAmb IAmb 07 55 17.5
comp=Z,18nm,1.3s
H31M Peel River 42.65 324 P **P** **07 55 13.8 -0.8**
baz=46
IDI Anoyia 42.72 100 LR LR 08 14 28.8
comp=Z,720nm,19.3s,baz=310,slow=38
F28M Old Crow 42.92 328 P **P** **07 55 17.1 +0.3**
F28M Old Crow 42.92 328 P **P** **07 55 15.9 -0.9**
baz=44
G29M Pine Creek 42.92 327 P **P** **07 55 15.8 -1.0**
baz=45
EPYK Eagle Plains 42.95 326 P **P** **07 55 18.9 +2.0**
EPYK Eagle Plains 42.95 326 P **P** **07 55 16.2 -0.8**
baz=45
E27K Coleen River 42.95 329 P **P** **07 55 16.4 -0.7**
baz=43
CLTN Cedars of Leba 42.96 262 P **P** **07 55 18.0 +0.7**
SIUC Southern Illin 43.14 266 P **P** **07 55 19.4 +0.6**
SIUC IAmb IAmb 07 55 21.0
comp=Z,22nm,1.1s
KOTAN Kotaneelee Air 43.14 313 P **P** **07 55 18.4 -0.2**
baz=47
W50A Signal Mountai 43.16 261 P **P** **07 55 20.3 +1.3**
W50A IAmb IAmb 07 55 21.3
comp=Z,17nm,0.9s
P40A Paris 43.17 271 P **P** **07 55 20.1 +1.0**
P40A IAmb IAmb 07 55 20.9
comp=Z,28nm,1.2s
S44A Carbondale 43.17 266 P **P** **07 55 20.2 +1.2**
S44A IAmb IAmb 07 55 21.8
comp=Z,18nm,1.1s
D25K Kavik River 43.28 332 P **P** **07 55 18.7 -0.9**
baz=41
ARTI Arti 43.37 54 P **P** **07 55 19.0 -1.5**
comp=Z,2.9nm,0.7s,baz=273,slow=11,SNR=4.1
ARTI LR LR 08 12 25.6
comp=Z,2μm,18.1s,baz=314,slow=35
comp=Z,2.9nm,0.7s
ARTI Arti 43.37 54 P **P** **07 55 19.3 -1.2**
ARTI IAmb IAmb 07 56 56.9
comp=Z,29nm,1.8s
ARTI Arti 43.37 54 P **P** **07 55 19.3 -1.2**
ARTI pmax pmax
comp=Z,29nm,1.8s
T45A Paducah 43.39 265 P **P** **07 55 22.1 +1.2**
X51A Calhoun 43.44 260 IAmb IAmb 07 55 23.5
comp=Z,24nm,1.0s
SWET Sewanee 43.45 261 IAmb IAmb 07 55 23.2
comp=Z,13nm,1.0s
V48A Smith Brothers 43.48 262 IAmb IAmb 07 55 24.4
comp=Z,14nm,1.1s
C24K Franklin Bluff 43.51 334 P **P** **07 55 20.7 -0.7**
baz=40
H29M Whitestone 43.52 326 P **P** **07 55 20.9 -0.6**
baz=44
FVM French Village 43.54 268 IAmb IAmb 07 55 24.1
comp=Z,16nm,1.1s
EDM Edmonton 43.55 300 P **P** **07 55 22.9 +0.8**
EDM IAmb IAmb 07 55 24.7
comp=Z,11nm,0.9s
EDM Edmonton 43.55 300 P **P** **07 55 22.9 +0.8**
EDM pmax pmax
comp=Z,11nm,0.9s
BR131 Keskin Array S 43.66 88 P **P** **07 55 23.3 +0.1**
BR131 IAmb IAmb 07 55 54.5
comp=Z,38nm,1.9s
BR131 Keskin Array S 43.66 88 P **P** **07 55 23.3 +0.1**
BR131 pmax pmax
comp=Z,38nm,1.9s
BRTR Keskin Array B 43.66 88 P **P** **07 55 22.1 -1.2**
comp=Z,1.9nm,0.9s,baz=308,slow=6.1,SNR=5.4
BRTR LR LR 08 16 32.3
comp=Z,1μm,18.1s,baz=300,slow=40
comp=Z,1.9nm,0.9s
BRTR Keskin Array B 43.66 88 P **P** **07 55 21.9 -1.3**
BRTR Keskin Array B 43.66 88*ce*P **P** **07 55 25.1 +1.9**
BRTR pmax pmax
comp=Z,3.0nm,1.0s
I30M Mount Dempster 43.67 324 P **P** **07 55 21.9 -1.0**
baz=44
GOGA Godfrey 43.68 257 IAmb IAmb 07 55 25.4
comp=Z,12nm,1.0s
WVT Waverly 43.68 264 P **P** **07 55 23.6 +0.5**
WVT IAmb IAmb 07 55 24.8
comp=Z,12nm,1.0s
WVT Waverly 43.68 264 P **P** **07 55 23.6 +0.5**
WVT pmax pmax
comp=Z,12nm,1.0s
CGM3 Cape Girardeau 43.68 266 IAmb IAmb 07 56 55.9
comp=Z,27nm,1.7s
A22K Sinclair Lake 43.80 337 P **P** **07 55 22.8 -0.9**
baz=36
SOC Sochi 43.83 79 *e*P **P** **07 55 26.8 +2.5**
SOC *e* 07 57 06.8
SOC *e*S **S** **08 02 00.2 +5.4**
SOC *e*SS **SS** **08 05 01.2 -9.2**
SOC pmax pmax
comp=Z,37nm,1.0s
SOC MLR MLR
comp=Z,545nm,18.0s
C23K Itkillik River 43.84 335 P **P** **07 55 23.5 -0.5**
baz=39
A21K Barrow 43.86 338 P **P** **07 55 23.7 -0.5**
baz=36
CCM Cathedral Cave 43.90 269 P **P** **07 55 25.0 +0.1**
CCM Cathedral Cave 43.90 269 P **P** **07 55 25.0 +0.1**
CCM pmax pmax
comp=Z,25nm,1.1s
F26K Sheenjek River 43.97 330 P **P** **07 55 24.0 -1.1**
baz=41
D24K Happy Valley 43.97 333 P **P** **07 55 24.5 -0.6**
baz=39
G27K Doyon Strip 43.99 328 P **P** **07 55 24.8 -0.6**
baz=42
E25K Arctic Village 44.00 331 P **P** **07 55 24.5 -0.9**
baz=41
B22K Teshekpuk Lake 44.02 336 P **P** **07 55 24.7 -0.8**
baz=37
J30M Hart River 44.12 324 P **P** **07 55 25.6 -0.9**
baz=44
I29M Ogilvie Camp, 44.13 325 IAmb IAmb 07 55 29.7
comp=Z,12nm,1.0s
I29M Ogilvie Camp, 44.13 325 P **P** **07 55 26.2 -0.2**
baz=43,SNR=8.1
R40A Maddies Statio 44.23 270 IAmb IAmb 07 55 29.0
comp=Z,14nm,1.2s
H27K Steamboat Moun 44.38 327 P **P** **07 55 27.9 -0.6**
baz=42
F25K Christian Rive 44.42 330 P **P** **07 55 28.3 -0.5**
baz=40
G26K Porcupine Rive 44.44 329 P **P** **07 55 28.3 -0.6**
baz=41
I28M Miner Creek 44.53 326 P **P** **07 55 29.0 -0.8**
baz=42
D23K Nanushuk River 44.54 334 P **P** **07 55 29.4 -0.3**
baz=38
TOLK Toolik Lake Re 44.54 333 P **P** **07 55 29.5 -0.3**
baz=38
T42A Van Buren 44.61 267 P **P** **07 55 31.5 +0.8**
X48A Hartselle 44.61 262 IAmb IAmb 07 55 32.3
comp=Z,14nm,0.9s
TAM Tamanrasset 44.64 131 P **P** **07 55 31.6 +0.4**
TAM Tamanrasset 44.64 131 P **P** **07 55 31.6 +0.4**
MAYO Mayo, Yukon 44.70 322 P **P** **07 55 31.0 0.0**
baz=43
E24K Your Creek 44.73 332 P **P** **07 55 30.9 -0.4**
baz=39
J29N Klondike Camp 44.77 324 IAmb IAmb 07 55 35.4
comp=Z,9.4nm,1.1s
J29N Klondike Camp 44.77 324 P **P** **07 55 30.6 -1.1**
baz=43
Y49A Blount Mountai 44.77 260 IAmb IAmb 07 55 33.9
comp=Z,14nm,1.0s
B21K Ikpikpuk River 44.85 336 IAmb IAmb 07 55 47.2
comp=Z,18nm,1.9s
B21K Ikpikpuk River 44.85 336 P **P** **07 55 31.7 -0.4**
baz=36
WTLY Watson Lake, Y 44.86 315 IAmb IAmb 07 55 36.8
comp=Z,10nm,1.1s
WTLY Watson Lake, Y 44.86 315 P **P** **07 55 31.7 -0.7**
baz=45,SNR=6.1
I27K Kandik River 44.88 327 P **P** **07 55 32.7 +0.2**
I27K Kandik River 44.88 327 P **P** **07 55 31.4 -1.1**
baz=41
GNAR Gesnell 44.90 266 P **P** **07 55 32.7 -0.2**
K29M Barlow Dome 45.01 323 P **P** **07 55 33.0 -0.7**
baz=43
E23K Chandalar 45.01 333 P **P** **07 55 32.6 -1.0**
baz=38
KIV Kislovodsk 45.02 77 *e*P **P** **07 55 35.1 +1.2**
KIV *e*S **S** **08 02 13.4 +1.1**
KIV pmax pmax
comp=Z,6.0nm,1.1s
KIV MLR MLR
comp=Z,569nm,16.0s
KVAR Kislovodsk Arr 45.02 77 LR LR 08 14 40.6
comp=Z,656nm,18.4s,baz=315,slow=36
F24K Squaw Lake 45.03 331 IAmb IAmb 07 56 25.6
comp=Z,20nm,1.9s
F24K Squaw Lake 45.03 331 P **P** **07 55 33.6 0.0**
baz=39
B20K Meade River 45.04 337 P **P** **07 55 33.7 +0.1**
baz=34
M31M Drury Creek, Y 45.24 320 P **P** **07 55 34.7 -0.7**
baz=43
C21K Knifeblade Rid 45.27 336 P **P** **07 55 35.3 -0.2**
baz=36
KBZ Khabaz 45.29 77 P **P** **07 55 35.1 -0.8**
comp=Z,5.2nm,1.0s,baz=336,slow=4.5,SNR=5.6
KBZ LR LR 08 15 13.5
comp=Z,869nm,18.6s,baz=324,slow=37
comp=Z,5.2nm,1.0s
KBZ Khabaz 45.29 77*ce*P **P** **07 55 39.1 +3.2**
KBZ pmax pmax
comp=Z,11nm,1.1s
LCAR Lake Charles 45.39 267 **P** **07 55 37.7 +0.9**
LCAR IAmb IAmb 07 55 38.5
comp=Z,12nm,1.0s
DAWY Dawson 45.40 324 IAmb IAmb 07 55 41.1
comp=Z,16nm,1.2s
DAWY Dawson 45.40 324 P **P** **07 55 35.8 -0.8**
baz=42,SNR=7.5
E22K Anaktuvuk Pass 45.45 334 P **P** **07 55 36.7 -0.3**
baz=37
I26K Coal Creek Min 45.52 327 P **P** **07 55 37.3 -0.2**
baz=40
HBAR Harrisburg 45.55 266 P **P** **07 55 38.6 +0.5**
G24K Hadweenzic Riv 45.57 330 P **P** **07 55 37.3 -0.6**
baz=39
N32M Quiet Lake 45.58 319 P **P** **07 55 38.8 +0.7**
N32M Quiet Lake 45.58 319 P **P** **07 55 37.6 -0.5**
baz=43
EGMT Eagleton 45.60 292 IAmb IAmb 07 55 41.0
comp=Z,15nm,1.3s
A19K Wainwright 45.61 339 P **P** **07 55 37.5 -0.6**
baz=32
E21K Killik River 45.68 335 P **P** **07 55 38.5 -0.3**
baz=36
M30M Minto, Yukon 45.73 322 P **P** **07 55 39.1 -0.2**
baz=42
L29M L29M 45.74 323 IAmb IAmb 07 55 42.9
comp=Z,9.7nm,1.2s
L29M L29M 45.74 323 P **P** **07 55 39.1 -0.3**
baz=42
KSU1 Kansas State U 45.79 274 **P** **07 55 40.7 +0.7**
KSU1 IAmb IAmb 07 55 41.4
comp=Z,14nm,0.9s
COLD Coldfoot 45.81 332 P **P** **07 55 41.5 +1.7**
COLD IAmb IAmb 07 56 01.8
comp=Z,17nm,1.9s
COLD Coldfoot 45.81 332 P **P** **07 55 39.6 -0.2**
baz=37
PRP Porcupine Dome 45.99 329 P **P** **07 55 42.9 +1.5**
PRP Porcupine Dome 45.99 329 P **P** **07 55 41.0 -0.4**
baz=39
D20K Etivluk River 46.01 336 P **P** **07 55 41.1 -0.3**
baz=34
FCAR Ozark Folk Cen 46.02 267 P **P** **07 55 42.7 +0.9**
FCAR IAmb IAmb 07 55 51.6
comp=Z,15nm,1.3s
Z47A Carrollton 46.12 261 P **P** **07 55 42.9 +0.2**
R33M Jennings River 46.14 316 IAmb IAmb 07 55 48.0
comp=Z,15nm,1.2s
R33M Jennings River 46.14 316 P **P** **07 55 42.3 -0.4**
baz=43
G23K Bananza Creek 46.18 332 IAmb IAmb 07 56 33.7
comp=Z,12nm,1.6s
G23K Bananza Creek 46.18 332 P **P** **07 55 42.8 0.0**
baz=37
P33M Teslin, Yukon 46.18 318 IAmb IAmb 07 55 47.0
comp=Z,6.7nm,1.0s
P33M Teslin, Yukon 46.18 318 P **P** **07 55 42.5 -0.4**
baz=43
N31M Braeburn, Yuko 46.22 320 P **P** **07 55 43.0 -0.1**
baz=42,SNR=7.0
C19K Lookout Ridge 46.27 338 IAmb IAmb 07 56 05.7
comp=Z,18nm,1.8s
C19K Lookout Ridge 46.27 338 P **P** **07 55 43.0 -0.4**
baz=32
E20K Nigu River 46.30 335 P **P** **07 55 43.3 -0.4**
baz=34
M29M Somme Creek 46.34 322 IAmb IAmb 07 55 48.9
comp=Z,13nm,1.0s
M29M Somme Creek 46.34 322 P **P** **07 55 43.0 -1.2**
baz=41
H24K Noodor Dome 46.35 330 P **P** **07 55 43.4 -0.8**
baz=38
G22K Bettles 46.36 332 P **P** **07 55 43.6 -0.6**
baz=36
D19K Kuna River 46.50 336 P **P** **07 55 45.3 +0.1**
baz=33
DLBC Dease Lake 46.51 314 LR LR 08 14 59.8
comp=Z,2μm,18.1s,baz=26,slow=36
DLBC Dease Lake 46.51 314 P **P** **07 55 45.1 -0.4**
baz=43
WHY Whitehorse 46.54 319 P **P** **07 55 45.6 -0.1**
baz=42
F21K Alatna River 46.57 333 IAmb IAmb 07 55 48.9
comp=Z,11nm,1.5s
F21K Alatna River 46.57 333 P **P** **07 55 46.1 +0.3**
baz=35
WHAR Wooly Hollow 46.57 267 P **P** **07 55 46.0 -0.2**
N30M Aishikik Lake 46.66 321 P **P** **07 55 46.7 +0.1**
baz=41
J25K Salcha River, 46.66 328 IAmb IAmb 07 55 50.4
comp=Z,7.3nm,1.2s
J25K Salcha River, 46.66 328 P **P** **07 55 46.5 -0.1**
baz=39,SNR=6.6
U38A Gravette 46.73 270 IAmb IAmb 07 55 48.6
comp=Z,16nm,1.4s
SCRK Sand Creek 46.78 326 IAmb IAmb 07 55 51.2
comp=Z,15nm,1.4s
SCRK Sand Creek 46.78 326 P **P** **07 55 46.9 -0.7**
baz=39,SNR=5.2
POKR Poker Plat Res 46.81 329 P **P** **07 55 47.3 -0.4**
baz=38
O30N Mendenhall 46.85 320 P **P** **07 55 47.5 -0.6**
baz=41
BCAR Beaver Creek A 46.86 325 **P** **07 55 49.2 +1.0**
L27K Beaver Creek, 46.88 325 P **P** **07 55 48.1 -0.2**
baz=40
Q32M Nakina River 46.92 316 P **P** **07 55 48.3 -0.6**
baz=42
IL31 46.94 329 P **P** **07 55 48.7 +0.1**
IL31 IAmb IAmb 07 55 51.8
comp=Z,11nm,1.4s
ILAR Eielson Array 46.94 329 P **P** **07 55 48.6 0.0**
comp=Z,2.1nm,0.9s,baz=30,slow=6.9,SNR=16
ILAR PcP **PcP** **07 57 19.6 -1.4**
comp=Z,0.9nm,0.8s,baz=8.2,slow=2.9,SNR=6.6
comp=Z,2.1nm,0.9s
ILAR Eielson Array 46.94 329 P **P** **07 55 49.3 +0.6**
ILAR PcP **PcP** **07 57 20.1 -0.8**
ILAR Eielson Array 46.94 329 P **P** **07 55 49.3 +0.6**
ILAR 07 57 20.1
P32M Atlin 46.95 317 P **P** **07 55 48.3 -0.6**
baz=42
C18K Utukok River 46.97 338 IAmb IAmb 07 56 50.4
comp=Z,21nm,1.9s
C18K Utukok River 46.97 338 P **P** **07 55 47.7 -1.2**
baz=31
BVCY Beaver Creek 47.09 324 P **P** **07 55 50.0 0.0**
baz=40
COLA College 47.11 329 *i*P **P** **07 55 49.5 -0.5**
COLA pmax pmax
comp=Z,10.0nm,1.1s
G21K Allakaket 47.16 333 P **P** **07 55 50.1 -0.3**
baz=35
H22K Ishtalitna Cre 47.17 331 P **P** **07 55 50.2 -0.3**
baz=36
E19K Redstone River 47.19 335 IAmb IAmb 07 55 56.9
comp=Z,5.6nm,0.8s
E19K Redstone River 47.19 335 P **P** **07 55 50.0 -0.6**
baz=33
RIDG Independent Ri 47.20 327 P **P** **07 55 51.6 +0.7**
RIDG IAmb IAmb 07 55 55.0
comp=Z,11nm,1.1s
RIDG Independent Ri 47.20 327 P **P** **07 55 50.6 -0.2**
baz=38
F20K Avaraart Lake 47.21 334 P **P** **07 55 50.1 -0.7**
baz=34
YUK4 Talbot Arm 47.23 322 P **P** **07 55 49.9 -1.4**
baz=40
HDA Harding Lake 47.24 328 P **P** **07 55 50.4 -0.7**
baz=38
RLO Rose Lookout 47.26 270 P **P** **07 55 52.1 +0.5**
HYT Haines Junctio 47.27 321 IAmb IAmb 07 55 56.5
comp=Z,14nm,1.1s
HYT Haines Junctio 47.27 321 P **P** **07 55 50.6 -0.9**
baz=41
I23K Minto, Yukon-K 47.27 330 P **P** **07 55 50.8 -0.4**
baz=37
S34M Telegraph Cree 47.30 315 P **P** **07 55 51.1 -0.4**
baz=42
L26K Log Cabin Wild 47.34 325 P **P** **07 55 50.4 -1.5**
baz=39
K24K Donnelly Dome 47.41 327 P **P** **07 55 52.2 -0.2**
baz=38,SNR=5.1
AKTO Aktyubinsk 47.43 60 P **P** **07 55 53.0 +0.3**
comp=Z,7.7nm,0.8s,baz=318,slow=8.0,SNR=8.3
AKTO LR LR 08 15 50.6
comp=Z,1μm,18.0s,baz=6.0,slow=36
comp=Z,7.7nm,0.8s
M27K Edge Creek, AK 47.44 324 P **P** **07 55 51.7 -1.1**
baz=39
YUK6 Outpost Mounta 47.45 321 P **P** **07 55 52.5 -0.5**
baz=40
YUK3 Moose Creek 47.46 323 P **P** **07 55 52.7 -0.4**
baz=40
C17K DeLong Mountai 47.48 339 P **P** **07 55 52.9 -0.1**
baz=30
RLMT Red Lodge 47.49 289 IAmb IAmb 07 55 57.4
comp=Z,14nm,1.4s
HRY Holter Researc 47.52 292 P **P** **07 55 54.6 +1.0**
LYMT Lyon Mountain 47.54 293 P **P** **07 55 53.9 0.0**
SKAG Skagway 47.59 318 P **P** **07 55 53.9 +0.1**
baz=41
P30M Million Dollar 47.63 320 P **P** **07 55 54.2 0.0**
baz=41
YUK8 Steele Glacier 47.63 322 P **P** **07 55 54.2 -0.2**
baz=40
NEA2 Nenana 47.65 329 P **P** **07 55 54.3 +0.1**
baz=36
T35M Bob Quinn 47.67 313 IAmb IAmb 07 55 59.0
comp=Z,8.1nm,1.1s
T35M Bob Quinn 47.67 313 P **P** **07 55 54.2 -0.3**
baz=42
H21K Melozitna Rive 47.70 332 IAmb IAmb 07 56 18.0
comp=Z,23nm,1.9s
H21K Melozitna Rive 47.70 332 P **P** **07 55 54.5 -0.2**
baz=35
MLY Manley 47.71 331 P **P** **07 55 54.1 -0.7**
baz=36
M26K Nabesna, AK 47.73 325 IAmb IAmb 07 55 59.3
comp=Z,7.3nm,1.0s
M26K Nabesna, AK 47.73 325 P **P** **07 55 54.5 -0.5**
baz=39
RDOG Red Dog Mine 47.80 338 P **P** **07 55 54.9 -0.5**
baz=30
F19K Shaleruckik Mo 47.83 335 P **P** **07 55 55.2 -0.3**
baz=32
TIXI Tiksi 47.84 9 P **P** **07 55 57.1 +1.6**
TIXI IAmb IAmb 07 55 59.1

comp=Z,6.7nm,1.1s
TIXI Tiksi 47.84 9*ce* P **P** 07 55 57.8 +2.2
TIXI pmax pmax
comp=Z,6.0nm,1.0s
KAN01 Argonia South 47.87 273 P **P** 07 55 56.1 -0.2
KAN01 IAmb IAmb 07 55 57.5
comp=Z,11nm,0.9s
I21K Tanana 47.90 331 IAmb IAmb 07 56 16.3
comp=Z,20nm,1.8s
I21K Tanana 47.90 331 P **P** 07 55 55.7 -0.4
baz=35
E18K Tukpahlearik C 47.91 337 P **P** 07 55 57.3 +1.1
E18K Tukpahlearik C 47.91 337 P **P** 07 55 55.9 -0.3
baz=31
OK051 E0350 and S346 47.91 272 P **P** 07 55 56.6 +0.1
YNE Yellowstone No 47.93 290 P **P** 07 55 56.8 -0.2
YNE IAmb IAmb 07 56 00.1
comp=Z,8.1nm,1.1s
PAX Paxson 47.99 326 IAmb IAmb 07 56 01.6
comp=Z,14nm,1.2s
PAX Paxson 47.99 326 P **P** 07 55 57.0 +0.1
baz=38,SNR=7.3
O29M Mount Kennedy 48.01 321 P **P** 07 55 56.9 -0.3
baz=40
C16K Lisburne Hills 48.05 339 P **P** 07 55 57.2 0.0
baz=28
MAK Makhachkala 48.11 74*c i* P **P** 07 55 55.5 -2.5
MAK *e* 07 57 50.0
MAK eS **S** **08 02 53.1 -3.2**
MAK eSS **SS** **08 06 25.2 +0.4**
MAK eSSS SSS 08 07 36.7
MAK MLR MLR
comp=Z,934nm,16.0s
D17K Noatak River 48.15 338 P **P** 07 55 57.4 -0.6
baz=30
O28M Mount Upton 48.16 322 P **P** 07 55 57.9 -0.6
baz=39
YMP Mirror Lake Pl 48.20 290 IAmb IAmb 07 56 02.1
comp=Z,12nm,1.1s
R32K Eaglecrest 48.21 317 P **P** 07 55 58.5 -0.1
baz=41
BOZ Bozeman (W) 48.25 291 P **P** 07 56 01.0 +1.7
BOZ IAmb IAmb 07 56 02.7
comp=Z,7.6nm,1.2s
BOZ Bozeman (W) 48.25 291 P **P** 07 56 01.0 +1.7
BOZ pmax pmax
comp=Z,8.0nm,1.2s
WLAR White Oak Lake 48.26 266 P **P** 07 56 00.3 +1.0
G19K Purcell Mounta 48.27 334 IAmb IAmb 07 56 03.5
comp=Z,9.6nm,1.6s
G19K Purcell Mounta 48.27 334 P **P** 07 55 58.5 -0.5
baz=32
346A Big Creek Wild 48.28 261 P **P** 07 56 00.0 +0.5
MCK McKinley 48.31 329 P **P** 07 55 58.7 -0.6
baz=36
H20K Anotleneega Mo 48.32 333 P **P** 07 55 59.2 -0.2
baz=34
CTG Chitna Glacier 48.36 323 P **P** 07 55 59.7 -0.2
baz=39
U35K Hyder 48.38 312 P **P** 07 56 00.0 +0.1
baz=41
F18K Selawik 48.42 336 P **P** 07 55 59.9 -0.2
baz=31
DHY Denali Highway 48.43 327 P **P** 07 56 00.1 -0.4
baz=37
BPAW Bear Paw Mtn. 48.54 330 P **P** 07 56 01.4 +0.3
baz=35
MCARA McCarthy VSAT 48.54 324 P **P** 07 56 01.3 +0.2
baz=38
YHL Hebgen Lake 48.60 290 IAmb IAmb 07 56 05.6
comp=Z,6.2nm,1.1s
H17A Grant Village 48.66 290 P **P** 07 56 03.7 +1.1
H17A IAmb IAmb 07 56 07.3
comp=Z,6.9nm,0.9s
YHB Horse Butte 48.68 290 P **P** 07 56 04.1 +1.4
PINM Pinnacle 48.70 321 P **P** 07 56 02.6 +0.1
baz=39
NEW Newport 48.78 297 LR LR 08 16 00.0
comp=Z,4µm,19.2s,baz=44,slow=35
I20K Naaghedeneel 48.81 332 P **P** 07 56 03.0 -0.1
baz=33
G18K Tagagawik 48.82 335 P **P** 07 56 02.7 -0.5
baz=31
N25K Chitina, Valde 48.82 325 P **P** 07 56 03.2 -0.3
baz=37,SNR=6.0
S32K Killisnoo 48.85 316 P **P** 07 56 03.7 +0.1
baz=40
WRAK Wrangell Islan 48.86 314 P **P** 07 56 03.4 -0.2
baz=41
YPP Pitchstone Pla 48.86 290 P **P** 07 56 05.7 +1.5
M24K Tolsona, Glenn 48.87 326 P **P** 07 56 03.4 -0.4
baz=37
F17K Baldwin Pennin 48.88 336 P **P** 07 56 03.4 -0.2
baz=30
GNI Garni 48.88 79*ce* P **P** 07 56 07.6 +3.3
GNI pmax pmax
comp=Z,35nm,1.7s
GNI Garni 48.88 79 P **P** 07 56 03.6 -0.7
comp=Z,20nm,1.4s
TRF Thorofare Moun 48.89 329 P **P** 07 56 03.4 -0.6
baz=35
WAT6 Susitna Watana 48.92 327 P **P** 07 56 03.7 -0.6
baz=36,SNR=5.5
WAT1 Susitna Watana 48.94 328 P **P** 07 56 03.6 -0.7
baz=36
W35A Tecumseh 48.99 271 **P** 07 56 05.5 +0.5
S31K Pelican 49.04 317 P **P** 07 56 04.6 -0.4
baz=40
CHUM Lake Minchumin 49.05 330 P **P** 07 56 04.6 -0.4
baz=34
CRQE Cirque 49.06 323 P **P** 07 56 04.5 -0.8
baz=38
AB31 Akbulak array 49.15 60 P **P** 07 56 07.0 +1.0
AB31 IAmb IAmb 07 56 10.9
comp=Z,8.5nm,1.0s
ABKAR Akbulak array 49.15 60 P **P** 07 56 06.9 +1.0
MESA MESA 49.17 322 P **P** 07 56 05.5 -0.7
baz=38
J20K Nowinta River 49.25 331 IAmb IAmb 07 56 10.7
comp=Z,14nm,1.5s
J20K Nowinta River 49.25 331 P **P** 07 56 06.2 -0.4
baz=33
KLU Klutina 49.30 325 P **P** 07 56 06.9 -0.2
baz=36
AKT Akhty 49.34 75 *e* P **P** 07 56 08.7 +1.1
AKT MLR MLR
comp=Z,1µm,23.0s
BMRM Bremner River 49.34 324 P **P** 07 56 06.9 -0.5
baz=37
U33K Whale Pass 49.37 314 P **P** 07 56 06.7 -0.8
baz=40
H18K Honhosa River 49.39 334 IAmb IAmb 07 56 11.5
comp=Z,19nm,1.6s
H18K Honhosa River 49.39 334 P **P** 07 56 07.7 0.0
baz=31
BW06 Boulder Array 49.40 287 P **P** 07 56 08.3 +0.1
PD31 Pinedale Array 49.40 287 **P** 07 56 08.6 +0.4
PDAR Pinedale Array 49.40 287 P **P** 07 56 05.1 -3.2
comp=Z,0.7nm,0.5s,baz=59,slow=7.1,SNR=11
PDAR LR LR 08 16 10.6
comp=Z,2µm,19.1s,baz=13,slow=35
comp=Z,0.7nm,0.5s
PDAR Pinedale Array 49.40 287 P **P** 07 56 08.6 +0.4
MCMT McKenzie Canyo 49.40 292 P **P** 07 56 09.0 +0.8
GCSA Galena City Sc 49.41 333 P **P** 07 56 07.5 -0.2
baz=32
SCM Sheep Creek Mo 49.42 326 P **P** 07 56 07.8 -0.1
baz=36
V35K Ketchikan 49.42 313 P **P** 07 56 07.5 -0.4
baz=40
SIT Sitka 49.43 316 P **P** 07 56 07.3 -0.7
baz=40
M23K Glacier View 49.56 327 P **P** 07 56 08.8 -0.2
baz=36
G17K Kiwalik Mounta 49.58 336 P **P** 07 56 08.3 -0.7
baz=30
BGLC Bering Glacier 49.62 323 P **P** 07 56 09.3 -0.1
baz=37
C09A Chrisman Ranch 49.64 298 IAmb IAmb 07 56 11.5
comp=Z,12nm,1.3s
B08A Colville Reser 49.69 299 **P** 07 56 11.7 +1.5
B08A IAmb IAmb 07 56 12.1
comp=Z,10.0nm,1.2s
SML Sawmill 49.72 327 IAmb IAmb 07 56 14.5
comp=Z,17nm,1.4s
SML Sawmill 49.72 327 P **P** 07 56 09.6 -0.6
baz=35
ISCO Idaho Springs 49.74 282 P **P** 07 56 12.3 +1.3
ISCO Idaho Springs 49.74 282 P **P** 07 56 12.3 +1.3
ISCO pmax pmax
comp=Z,9.0nm,1.4s
CUT Chulitna 49.75 328 P **P** 07 56 11.7 +1.4
CUT Chulitna 49.75 328 P **P** 07 56 08.7 -1.6
baz=35
J19K Poorman 49.76 332 P **P** 07 56 10.0 -0.4
baz=32
PPLA Purkeypile 49.84 330 **P** 07 56 12.8 +1.6
PPLA IAmb IAmb 07 56 15.4
comp=Z,10nm,1.2s
PPLA Purkeypile 49.84 330 P **P** 07 56 10.5 -0.7
baz=34
CRAG Craig 49.87 314 P **P** 07 56 11.0 -0.3
baz=40
GHO Glory Hole Cre 49.91 327 IAmb IAmb 07 56 16.1
comp=Z,18nm,1.5s
H17K Granite Mounta 49.91 335 P **P** 07 56 11.4 -0.2
baz=30
K20K Telida 49.92 331 IAmb IAmb 07 56 15.5
comp=Z,14nm,1.4s
K20K Telida 49.92 331 P **P** 07 56 11.4 -0.3
baz=33
EYAK Cordova Ski Ar 50.01 325 P **P** 07 56 11.3 -1.0
baz=36
G16K Koyuk River 50.02 336 P **P** 07 56 11.4 -1.0
baz=29
KNK Knik Glacier 50.08 327 IAmb IAmb 07 56 17.0
comp=Z,13nm,1.1s
KNK Knik Glacier 50.08 327 P **P** 07 56 12.8 -0.1
baz=35
PMR Palmer 50.11 327 IAmb IAmb 07 56 16.4
comp=Z,17nm,1.6s
PMR Palmer 50.11 327 P **P** 07 56 12.7 -0.4
baz=35
KAIM Kayak Island 50.12 323 P **P** 07 56 13.3 +0.1
baz=37
GLI Glacier Island 50.13 325 P **P** 07 56 13.0 -0.3
baz=36
F15K North Star Dit 50.20 338 IAmb IAmb 07 57 53.6
comp=Z,19nm,1.8s
F15K North Star Dit 50.20 338 P **P** 07 56 13.8 0.0
baz=28
M22K Willow 50.25 328 P **P** 07 56 13.9 -0.2
baz=34
SKT Skwentna 50.44 329 IAmb IAmb 07 56 18.4
comp=Z,8.4nm,1.0s
SKT Skwentna 50.44 329 P **P** 07 56 15.4 -0.2
baz=34
J18K Innoko River 50.47 332 P **P** 07 56 15.8 0.0
baz=31
BBB Bella Bella 50.48 308 LR LR 08 17 21.6
comp=Z,1µm,18.4s,baz=44,slow=36
BORK Borovoye 50.55 50 *i* P **P** 07 56 18.9 +2.3
BORK pmax pmax
comp=Z,2.0nm,0.9s
BVAR Borovoye Array 50.60 50 P **P** 07 56 15.3 -1.7
comp=Z,0.8nm,0.7s,baz=318,slow=2.0,SNR=6.2
comp=Z,0.8nm,0.7s
H16K Elim 50.67 336 P **P** 07 56 16.3 -1.0
baz=29
PLID Pearl Lake 50.67 294 IAmb IAmb 07 56 20.0
comp=Z,11nm,1.1s
RC01 Rabbit Creek A 50.69 327 IAmb IAmb 07 56 21.6
comp=Z,8.2nm,0.9s
RC01 Rabbit Creek A 50.69 327 P **P** 07 56 17.0 -0.5
baz=34
G15K Niukluk 50.72 337 P **P** 07 56 17.3 -0.3
baz=28
SMWD Samnorwood 50.72 274 P **P** 07 56 18.8 +0.7
SMWD IAmb IAmb 07 56 20.0
comp=Z,22nm,1.6s
F14K Arctic Creek 50.73 338 P **P** 07 56 17.5 -0.2
baz=27
O20A White River Ci 50.77 284 IAmb IAmb 07 56 55.4
comp=Z,19nm,1.7s
STLK Strandline Lak 50.92 328 P **P** 07 56 21.2 +1.9
RTBA Rita Blanca 50.92 277 IAmb IAmb 07 56 21.4
comp=Z,23nm,1.4s
M20K Styx River 50.93 329 P **P** 07 56 19.1 -0.3
baz=33
P23K Montague Islan 50.94 325 P **P** 07 56 18.9 -0.5
baz=35
TNA Tin City 50.94 339 P **P** 07 56 18.7 -0.6
baz=26
I17K Unalakleet 51.00 334 P **P** 07 56 19.3 -0.5
baz=29
RDMU Red Mountain 51.08 286 IAmb IAmb 07 56 24.1
comp=Z,13nm,1.1s
Q23K Middleton Isla 51.10 324 P **P** 07 56 20.2 -0.4
baz=35
L19K White Mountain 51.11 330 P **P** 07 56 19.7 -1.0
baz=32
O22K Cooper Landing 51.20 327 P **P** 07 56 20.7 -0.6
baz=34
T25A Trinidad 51.21 279 P **P** 07 56 23.2 +1.2
T25A IAmb IAmb 07 56 24.1
comp=Z,14nm,1.3s
ASF Jabal al Asfar 51.21 92 LR LR 08 20 38.0
comp=Z,734nm,19.9s,baz=314,slow=39
M19K Big River Lodg 51.23 330 P **P** 07 56 20.9 -0.7
baz=32
SPU Mount Spurr 51.24 328 IAmb IAmb 07 56 24.8
comp=Z,9.2nm,1.1s
HWUT Hardware Ranch 51.24 288 P **P** 07 56 22.8 +0.6
SPCR Spurr Chakacha 51.27 328 P **P** 07 56 20.9 -1.1
baz=33
N20K Mount Spurr 51.27 328 P **P** 07 56 21.1 -0.9
baz=33
CAPN Captain Cook N 51.35 328 P **P** 07 56 21.2 -1.2
baz=38
ANM Nome 51.36 337 P **P** 07 56 21.9 -0.7
baz=27
SEW Seward 51.43 326 P **P** 07 56 22.5 -0.6
baz=34
K17K Iditarod 51.48 333 P **P** 07 56 23.0 -0.4
baz=30
J16K Anvik River 51.51 334 P **P** 07 56 23.0 -0.7
baz=29
L18K Granite Mounta 51.53 331 P **P** 07 56 24.9 +1.1
L18K IAmb IAmb 07 56 28.0
comp=Z,11nm,1.2s
L18K Granite Mounta 51.53 331 P **P** 07 56 23.0 -0.8
baz=31
PLPT Palo Pinto 51.57 270 P **P** 07 56 25.2 +0.7
AMTX Amarillo 51.62 275 **P** 07 56 26.3 +1.4
AMTX IAmb IAmb 07 56 27.9
comp=Z,8.9nm,0.9s
BILL Bilibino 51.76 352 *i* P **P** 07 56 25.3 -0.2
BILL pmax pmax
comp=Z,1.0nm,0.4s
MFID Camas Ranch 51.87 292 IAmb IAmb 07 56 29.7
comp=Z,18nm,1.9s
M18K Stony River 51.95 330 P **P** 07 56 26.1 -0.8
baz=31
L17K Donlin 51.99 332 P **P** 07 56 26.7 -0.5
baz=30
APMT Aspermont 52.07 272 IAmb IAmb 07 56 29.6
comp=Z,16nm,1.3s
BRSE Bradley Lake S 52.10 327 P **P** 07 56 27.6 -0.4
baz=33
P18A Preston Nutter 52.14 285 P **P** 07 56 29.6 +0.6
P18A IAmb IAmb 07 56 31.8
comp=Z,28nm,1.9s
N19K Bonanza Creek 52.19 329 P **P** 07 56 28.2 -0.7
baz=32
TORD Torodi Ar. Bea 52.19 140 P **P** 07 56 25.1 -4.2
comp=Z,2.7nm,0.7s,baz=323,slow=7.5,SNR=14
comp=Z,2.7nm,0.7s
DKNS Dickens 52.20 273 P **P** 07 56 29.7 +0.4
ABTX Abilene, Hawle 52.39 271 IAmb IAmb 07 56 32.7
comp=Z,18nm,1.0s
HOM Homer 52.41 327 P **P** 07 56 30.0 -0.4
baz=33
M17K Holitna River 52.42 331 P **P** 07 56 30.0 -0.4
baz=30
P17A Butcher Ranch, 52.50 286 IAmb IAmb 07 56 34.4
comp=Z,16nm,1.4s
MPU Maple Canyon 52.51 287 P **P** 07 56 32.9 +1.2
PV02 Paradox Valley 52.51 283 IAmb IAmb 07 56 34.8
comp=Z,13nm,1.1s
PV10 Paradox Valley 52.52 283 IAmb IAmb 07 56 34.8
comp=Z,24nm,1.4s
PV03 Paradox Valley 52.53 283 P **P** 07 56 31.0 -0.8
PV03 IAmb IAmb 07 56 34.9
comp=Z,17nm,1.5s
K15K Wolf Creek Mou 52.58 334 P **P** 07 56 32.2 +0.6
K15K IAmb IAmb 07 57 07.9
comp=Z,23nm,1.8s
K15K Wolf Creek Mou 52.58 334 P **P** 07 56 31.2 -0.4
baz=28
PV13 Radium Mtn., P 52.59 283 IAmb IAmb 07 56 35.3
comp=Z,8.8nm,1.1s
J14K Nanvaranak Lak 52.62 335 P **P** 07 56 31.4 -0.4
baz=27
L16K Owhat River 52.63 333 P **P** 07 56 31.6 -0.4
baz=29
HKT Hockley 52.63 266 P **P** 07 56 33.5 +1.2
HKT Hockley 52.63 266 P **P** 07 56 33.5 +1.2
HKT pmax pmax
comp=Z,22nm,1.1s
SN07 Snyder 07 52.64 273 P **P** 07 56 32.5 0.0
N18K Kilae Creek 52.66 330 P **P** 07 56 31.8 -0.5
baz=31
O19K Port Alsworth 52.67 329 P **P** 07 56 31.9 -0.4
baz=31
P19K Oil Pt 52.85 328 P **P** 07 56 33.3 -0.4
baz=32
I07A Izee 53.04 296 IAmb IAmb 07 56 43.1
comp=Z,16nm,1.6s
M16K Timber Creek 53.11 332 P **P** 07 56 35.4 -0.2
baz=29
N17K Nushagak Hills 53.12 331 P **P** 07 56 35.5 -0.1
baz=30
L15K Ungalak Mounta 53.12 334 P **P** 07 56 35.3 -0.3
baz=28
J08A Circle Bar Ran 53.13 294 IAmb IAmb 07 56 38.6
comp=Z,11nm,1.0s
Q16A Castle Valley 53.14 285 IAmb IAmb 07 56 39.1
comp=Z,11nm,1.3s
BRDY Brady 53.14 270 IAmb IAmb 07 56 37.1
comp=Z,10nm,1.0s
MVCO Mesa Verde 53.17 282 P **P** 07 56 37.1 +0.5
MVCO IAmb IAmb 07 57 02.4
comp=Z,12nm,1.4s
O18K Koktuh Hills 53.20 329 P **P** 07 56 35.4 -0.8
baz=31
GAMB Gambell 53.24 340 P **P** 07 56 35.9 -0.5
baz=23
Q20K Shuyak Island 53.51 327 P **P** 07 56 37.8 -0.7
baz=32
N16K Nishlik Lake 53.55 331 P **P** 07 56 38.5 -0.3
baz=29
K13K Kusilvak Mount 53.58 335 P **P** 07 56 39.1 +0.1
baz=26
Q19K Cape Douglas, 53.58 328 P **P** 07 56 39.2 +0.1
baz=31
P18K Big Mountain, 53.60 329 P **P** 07 56 39.2 0.0
baz=31
ELK Elko 53.66 290 LR LR 08 18 52.7
comp=Z,2µm,19.1s,baz=46,slow=35
L14K Kuka Creek 53.68 334 P **P** 07 56 39.8 +0.1
baz=27
O17K Koliganek Bris 53.75 330 P **P** 07 56 39.6 -0.6
baz=30
M15K Kasigluk River 53.81 333 P **P** 07 56 40.0 -0.7
baz=28
PINE Pine Mountain 53.91 296 IAmb IAmb 07 56 45.5
comp=Z,13nm,1.3s
WVOR Wild Horse Val 53.93 294 IAmb IAmb 07 56 44.3
comp=Z,6.7nm,1.1s
ANMO Albuquerque 53.95 279 LR LR 08 19 17.4
comp=Z,1µm,18.0s,baz=47,slow=36
ANMO Albuquerque 53.95 279*ce* P **P** 07 56 43.7 +1.4
ANMO pmax pmax
comp=Z,1.0nm,0.9s
M14K Bethel 54.05 333 IAmb IAmb 07 56 51.8
comp=Z,16nm,1.4s
M14K Bethel 54.05 333 P **P** 07 56 41.4 -1.0
baz=27
P17K Kvichak River 54.08 329 P **P** 07 56 42.0 -0.6
baz=30
N15K Kwethluk River 54.13 332 P **P** 07 56 42.7 -0.4
baz=28
O16K Kokwok River B 54.15 330 P **P** 07 56 42.6 -0.5
baz=29
Q18K Katmai Hardscr 54.19 328 P **P** 07 56 43.2 -0.4
baz=30
KDAK Kodiak Island 54.27 326 LR LR 08 19 24.2
comp=Z,408nm,19.6s,baz=36,slow=36
KDAK Kodiak Island 54.27 326 P **P** 07 56 43.6 -0.4
baz=31
OZNA Ozona 54.51 271 IAmb IAmb 07 56 48.8
comp=Z,9.5nm,0.9s
Q16K King Salmon 54.59 329 P **P** 07 56 46.0 -0.4
baz=30
P16K Nushagak River 54.62 330 P **P** 07 56 45.8 -0.7
baz=29
M13K Dall Lake 54.66 334 P **P** 07 56 45.9 -1.0
baz=26
HNDO Hondo 54.71 269 IAmb IAmb 07 56 48.8
comp=Z,8.3nm,1.2s
N14K Kuskokwak Cree 54.72 333 P **P** 07 56 46.2 -1.1
baz=27
PSUT Pine Spring 54.74 287 P **P** 07 56 49.3 +1.3
PSUT IAmb IAmb 07 56 51.9
comp=Z,16nm,1.7s
O15K Ungalikthiuk R 54.95 331 P **P** 07 56 47.9 -1.0
baz=28
OHAK Old Harbor 54.95 326 P **P** 07 56 47.3 -1.6
baz=31
O14K Tigyukauivet M 55.22 332 P **P** 07 56 49.2 -1.7
baz=27
R17L Mt. Peulik Vol 55.43 328 P **P** 07 56 50.5 -2.0
baz=29
KNB Kanab 55.44 285 IAmb IAmb 07 56 55.7
comp=Z,10nm,1.3s
DRIO Del Rio 55.47 270 P **P** 07 56 53.4 +0.3
DRIO IAmb IAmb 07 56 56.7
comp=Z,9.5nm,1.1s
KURK Kurchatov 55.54 47 P **P** 07 56 52.4 -0.9
KURK Kurchatov 55.54 47 P **P** 07 56 52.4 -0.9
KURK pmax pmax
comp=Z,5.0nm,1.2s
KURBB Kurchatov Arra 55.58 47 P **P** 07 56 51.9 -1.8
comp=Z,0.9nm,0.8s,baz=326,slow=7.0,SNR=2.2
comp=Z,0.9nm,0.8s
TPB05 Hovey Rd 55.61 273 IAmb IAmb 07 56 57.2
comp=Z,10nm,1.1s
LCMT Little Creek M 55.65 286 IAmb IAmb 07 56 57.4
comp=Z,8.8nm,1.4s
833A Chaparral WMA, 55.75 268 P **P** 07 56 55.0 -0.1
833A IAmb IAmb 07 56 57.0
comp=Z,14nm,1.1s
SII Sitkinak Islan 55.77 326 P **P** 07 56 52.6 -2.4
baz=30
SAND Sanderson 55.79 272 P **P** 07 56 54.4 -1.1
SAND IAmb IAmb 07 56 57.8
comp=Z,10nm,0.9s
R16K Pilot Point 55.80 329 P **P** 07 56 52.9 -2.2
baz=29
TPB01 Permian Basin 55.82 274 IAmb IAmb 07 56 58.6
comp=Z,9.9nm,1.1s
WUAZ Wupatki 55.93 283 IAmb IAmb 07 56 59.7
comp=Z,9.1nm,1.2s
MNTX Cornudas Mount 56.02 275 P **P** 07 56 57.7 +0.6
PRN Pahroc Range 56.21 287 IAmb IAmb 07 57 02.3
comp=Z,11nm,1.3s
ALPN Alpine 56.21 273 IAmb IAmb 07 57 00.6
comp=Z,12nm,1.1s
PAHR Pah Rah Range 56.43 292 P **P** 07 57 00.3 +0.2
PAHR IAmb IAmb 07 57 03.2
comp=Z,12nm,1.0s
DBIC Dimbokro 56.45 150 LR LR 08 18 43.6
comp=Z,820nm,18.9s,baz=16,slow=34
NVAR Mina Array Bea 56.94 290 P **P** 07 57 01.7 -2.1
comp=Z,1.1nm,0.9s,baz=14,slow=7.1,SNR=5.4
NVAR LR LR 08 21 06.2
comp=Z,2µm,18.1s,baz=72,slow=36
comp=Z,1.1nm,0.9s
NVAR Mina Array Bea 56.94 290 P **P** 07 57 03.5 -0.3
SHPR Sheep Range 56.98 287 **P** 07 57 04.9 +0.9
PNTR Pine Nut 57.02 292 P **P** 07 57 05.5 +1.1
TX31 Lajitas Ar. Si 57.07 272 IAmb IAmb 07 57 07.4
comp=Z,26nm,1.9s
TXAR Lajitas Array 57.07 272 P **P** 07 57 03.3 -1.4
comp=Z,1.4nm,0.9s,baz=39,slow=7.1,SNR=15
TXAR LR LR 08 20 54.5
comp=Z,1µm,19.4s,baz=48,slow=35
comp=Z,1.4nm,0.9s
TXAR Lajitas Array 57.07 272 P **P** 07 57 05.2 +0.5
TXAR Lajitas Array 57.07 272 P **P** 07 57 05.2 +0.5
O03E Paynes Creek 57.08 294 P **P** 07 57 05.6 +1.1
O03E IAmb IAmb 07 57 06.9
comp=Z,15nm,1.1s

CHGN	**Chignik**	**57.14**	**329**	P		**P**	**07 57 03.0**	**-1.6**
	baz=28							
DSP	**Deep Springs**	**57.63**	**289**	IAmb		IAmb	07 57 10.6	
	comp=Z,8.6nm,1.3s							
SUTB	**Sutter Butte**	**57.92**	**294**	IAmb		IAmb	07 57 11.8	
	comp=Z,11nm,1.1s							
GWY	**Greenwater Val**	**57.96**	**288**	IAmb		IAmb	07 57 14.5	
	comp=Z,16nm,1.2s							
MTPC	**Mountain Pass**	**57.99**	**286**	IAmb		IAmb	07 57 14.2	
	comp=Z,11nm,1.4s							
TUC	**Tucson**	**58.21**	**280**	P		**P**	**07 57 12.8**	**+0.1**
TUC	**Tucson**	**58.21**	**280**	P		**P**	**07 57 12.8**	**+0.1**
TUC				pmax		pmax		
	comp=Z,6.0nm,1.4s							
CMB	**Columbia Colle**	**58.23**	**292**	IAmb		IAmb	07 57 15.5	
	comp=Z,12nm,1.6s							
SDPT	**Sand Point**	**58.52**	**329**	P		**P**	**07 57 12.8**	**-1.5**
	baz=27							
KKAR	**Karatay Array**	**58.52**	**58**	P		**P**	**07 57 16.3**	**+1.7**
KKAR	**Karatay Array**	**58.52**	**58**	P		**P**	**07 57 16.3**	**+1.7**
CHNA	**Chernabura Isl**	**58.75**	**329**	P		**P**	**07 57 14.3**	**-1.7**
	baz=27							
SPIA	**Saint Paul Isl**	**59.09**	**336**	P		**P**	**07 57 17.1**	**-1.2**
	baz=22							
ISA	**Isabella, Lake**	**59.24**	**289**	IAmb		IAmb	07 57 23.3	
	comp=Z,9.3nm,1.1s							
113A	**Mohawk Valley,**	**59.31**	**283**	IAmb		IAmb	07 57 23.4	
	comp=Z,7.8nm,1.3s							
BC3	**Big Chuckawall**	**59.41**	**285**	IAmb		IAmb	07 57 26.0	
	comp=Z,8.4nm,1.4s							
PFO	**Pinyon Flats O**	**59.94**	**286**	LR		LR	08 23 20.7	
	comp=Z,2µm,18.1s,baz=40,slow=36							
PFO	**Pinyon Flats O**	**59.94**	**286**	P		**P**	**07 57 26.0**	**+1.3**
PFO				IAmb		IAmb	07 57 28.3	
	comp=Z,11nm,1.4s							
PFO	**Pinyon Flats O**	**59.94**	**286**	P		**P**	**07 57 26.0**	**+1.3**
PFO				pmax		pmax		
	comp=Z,11nm,1.5s							
DNR	**Dunn Ranch,Anz**	**60.06**	**286**	P		**P**	**07 57 26.2**	**+0.7**
TRKS	**Terek-Say**	**60.07**	**58**	P		**P**	**07 57 28.9**	**+3.3**
TRKS				pmax		pmax		
	comp=Z,18nm,0.8s							
MK31	**Makanchi Array**	**60.15**	**47**	*i* P		**P**	**07 57 25.0**	**-0.8**
MKAR	**Makanchi Array**	**60.15**	**47**	P		**P**	**07 57 24.6**	**-1.3**
	comp=Z,0.8nm,0.6s,baz=340,slow=4.3,SNR=5.6							
	comp=Z,0.8nm,0.6s							
MKAR	**Makanchi Array**	**60.15**	**47**	P		**P**	**07 57 25.9**	**0.0**
MKAR	**Makanchi Array**	**60.15**	**47**	*ce*P		**P**	**07 57 26.7**	**+0.9**
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.6s							
BORC	**Borrego Spring**	**60.20**	**285**	P		**P**	**07 57 26.5**	**+0.2**
BORC				IAmb		IAmb	07 57 29.6	
	comp=Z,12nm,1.3s							
ARK	**Arkit**	**60.20**	**58**	P		**P**	**07 57 29.8**	**+3.4**
ARK				pmax		pmax		
	comp=Z,4.0nm,0.8s							
AAK	**Ala-Archa**	**60.57**	**55**	LR		LR	08 22 51.9	
	comp=Z,676nm,19.2s,baz=329,slow=35							
AAK	**Ala-Archa**	**60.57**	**55**	P		**P**	**07 57 30.0**	**+1.0**
AAK				IAmb		IAmb	07 57 38.5	
	comp=Z,9.0nm,1.4s							
AAK	**Ala-Archa**	**60.57**	**55**	*ce*P		**P**	**07 57 31.8**	**+2.8**
AAK				pmax		pmax		
	comp=Z,8.0nm,1.7s							
BAR	**Barrett**	**60.80**	**285**	P		**P**	**07 57 30.6**	**+0.2**
BAR				IAmb		IAmb	07 57 33.0	
	comp=Z,6.3nm,1.1s							
ARLS	**Aral**	**61.15**	**56**	P		**P**	**07 57 34.5**	**+1.6**
ARLS				pmax		pmax		
	comp=Z,6.0nm,1.1s							
ZAIG	**Zacatecas**	**61.94**	**267**			**P**	**07 57 38.6**	**0.0**
SHAA	**Shahritus**	**62.02**	**63**	P		**P**	**07 57 40.2**	**+1.5**
SHAA				IAmb		IAmb	07 57 43.6	
	comp=Z,9.1nm,0.7s							
RAYN	**Ar Rayn**	**62.62**	**90**	P		**P**	**07 57 43.7**	**+0.8**
RAYN				IAmb		IAmb	07 57 44.8	
	comp=Z,17nm,1.8s							
RAYN	**Ar Rayn**	**62.62**	**90**	P		**P**	**07 57 43.7**	**+0.8**
RAYN				pmax		pmax		
	comp=Z,17nm,1.8s							
CMIG	**Matias Romero**	**62.91**	**257**	LR		LR	08 25 18.4	
	comp=Z,486nm,21.8s,baz=30,slow=36							
KSH2	**Kashi**	**63.93**	**57**	P		**P**	**07 57 53.1**	**+1.6**
KSH2				pmax		pmax		
	comp=Z,8.0nm,1.2s							
KSH2				LR		LR		
	comp=N,860nm,17.2s							
KSH2				LR		LR		
	comp=E,800nm,19.2s							
KSH2				LR		LR		
	comp=Z,1µm,18.2s							
JTS	**Las Juntas de**	**64.11**	**244**	LR		LR	08 22 46.8	
	comp=Z,566nm,20.6s,baz=41,slow=33							
TLIG	**Tlapa**	**64.32**	**261**	P		**P**	**07 57 55.3**	**+1.1**
ROSC	**El Rosal**	**64.52**	**231**	P		**P**	**07 57 56.6**	**+0.7**
ROSC	**El Rosal**	**64.52**	**231**	P		**P**	**07 57 56.6**	**+0.7**
ROSC				pmax		pmax		
	comp=Z,40nm,1.4s							
SONM	**Songino Array**	**66.81**	**30**	LR		LR	08 29 41.0	
	comp=Z,498nm,19.9s,baz=332,slow=38							
KLR	**Kul'dur**	**70.14**	**13**	*ce*P		**P**	**07 58 33.3**	**+2.7**
OTAV	**Otavalo**	**70.35**	**233**			**P**	**07 58 33.0**	**+0.2**
OTAV				IAmb		IAmb	07 58 35.5	
	comp=Z,16nm,1.4s							
OTAV	**Otavalo**	**70.35**	**233**	P		**P**	**07 58 33.0**	**+0.2**
OTAV				pmax		pmax		
	comp=Z,16nm,1.4s							
YSS	**Yuzhno-Sakhali**	**73.27**	**5**	*ce*P		**P**	**07 58 53.1**	**+3.7**
YSS				pmax		pmax		
	comp=Z,13nm,1.3s							
CZSB	**Cruzeiro do Su**	**75.52**	**224**	IAmb		IAmb	07 59 02.4	
	comp=Z,11nm,1.0s							
MBAR	**Mbarara**	**76.22**	**116**	LR		LR	08 34 12.2	
	comp=Z,443nm,18.8s,baz=330,slow=37							
VILB	**Vilhena**	**76.66**	**210**			**P**	**07 59 10.0**	**+0.7**
BDFB	**Brasilia**	**76.76**	**198**	P		**P**	**07 59 07.4**	**-2.5**
	comp=Z,1.8nm,0.6s,baz=348,slow=7.7,SNR=4.1							
	comp=Z,1.8nm,0.6s							
EVN	**Everest**	**78.27**	**54**			**P**	**07 59 18.4**	**-0.7**
EVN				IAmb		IAmb	07 59 26.8	
	comp=Z,5.7nm,1.0s							
PTLB	**Pontes e Lacer**	**78.79**	**209**			**P**	**07 59 21.4**	**+0.3**
PTLB				IAmb		IAmb	07 59 22.8	
	comp=Z,10nm,1.3s							
SIV	**San Ignacio**	**79.80**	**210**	LR		LR	08 30 10.6	
	comp=Z,475nm,20.1s,baz=34,slow=32							
KSRS	**Korea Array**	**81.22**	**18**	P		**P**	**07 59 33.6**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=352,slow=8.0,SNR=1.9							
	comp=Z,0.5nm,0.3s							
LPAZ	**La Paz**	**82.05**	**217**	P		**P**	**07 59 36.3**	**-3.1**
	comp=Z,0.7nm,0.7s,baz=184,slow=4.0,SNR=3.8							
	comp=Z,0.7nm,0.7s							
MJAR	**Matsushiro Arr**	**83.34**	**10**	P		**P**	**07 59 43.9**	**-1.5**
	comp=Z,2.9nm,0.8s,baz=356,slow=6.0,SNR=4.2							
	comp=Z,2.9nm,0.8s							
HYB	**Hyderabad**	**83.94**	**66**	*eP*		**P**	**07 59 49.2**	**+0.5**
PZH	**PanZhiHua**	**85.16**	**42**	P		**P**	**07 59 55.5**	**+0.6**
PZH				pmax		pmax		
	comp=Z,10.0nm,1.4s							
TSUM	**Tsumeb**	**87.76**	**136**	LR		LR	08 41 16.7	
	comp=Z,343nm,18.1s,baz=333,slow=37							
LSZ	**Lusaka**	**88.23**	**125**	LR		LR	08 41 02.4	
	comp=Z,862nm,20.0s,baz=342,slow=37							
CPUP	**Villa Florida**	**88.89**	**204**	LR		LR	08 34 43.7	
	comp=Z,172nm,21.5s,baz=28,slow=32							
CMAR	**Chiang Mai Arr**	**91.56**	**48**	P		**P**	**08 00 24.7**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=356,slow=4.2,SNR=4.7							
	comp=Z,0.6nm,0.3s							
PALK	**Pallekele**	**93.81**	**69**	LR		LR	08 47 24.7	
	comp=Z,260nm,18.0s,baz=340,slow=38							
QIZ	**Qiongzhong**	**94.75**	**38**	P		**P**	**08 00 39.5**	**-0.6**
QIZ	**Qiongzhong**	**94.75**	**38**	S		**S**	**08 11 53.3**	**-0.2**
QIZ				LR		LR		
	comp=N,220nm,15.2s							
QIZ				LR		LR		
	comp=E,260nm,11.8s							
QIZ				LR		LR		
	comp=Z,320nm,11.7s							
LBTB	**Lobatse**	**96.00**	**131**	LR		LR	08 43 06.5	
	comp=Z,311nm,21.0s,baz=344,slow=35							
BOSA	**Boshof**	**99.13**	**133**	LR		LR	08 45 30.7	
	comp=Z,292nm,20.1s,baz=355,slow=35							
OPO	**Ambohidratompo**	**99.58**	**110**	LR		LR	08 44 56.1	
	comp=Z,129nm,21.9s,baz=178,slow=35							
TAOE	**Nuku Hiva Isla**	**107.74**	**283**	*e*LR		LR	08 37 12.3	
	comp=Z,501nm,26.5s							
PPT2	**Papeete2**	**119.84**	**287**	*e*SS		SS	08 23 57.2	-0.2
	comp=Z,342nm,28.2s							
PPT2				*e*LR		LR	08 42 46.8	
	comp=Z,407nm,21.0s							
PPT2				*e*LR		LR	08 42 48.1	
	comp=Z,417nm,39.8s							
TBI	**Tubuai**	**124.69**	**284**	*e*LR		LR	08 44 57.9	
	comp=Z,2µm,32.5s							
TBI				*e*LR		LR	08 44 58.0	
	comp=Z,1µm,34.8s							
NVL	**N'lazarevskaya**	**133.70**	**162**	*e*PKIKP		**PKiKP**	**08 06 35.4**	**+0.7**
NVL				*e*			08 09 04.6	
NVL				*e*PPP		PPP	08 11 57.8	
NVL				*e*			08 13 46.6	
NVL				*e*SS		SS	08 26 52.4	+2.8
NVL				*e*SSS		SSS	08 31 49.3	
WRA	**Warramunga Arr**	**138.45**	**23**	PKP		**PKPdf**	**08 06 42.3**	**-1.6**
	comp=Z,0.3nm,0.7s,baz=337,slow=2.4,SNR=2.2							
ASAR	**Alice Springs**	**141.98**	**25**	PKhKP		PKPpre	08 06 43.0	
	comp=Z,0.3nm,0.6s,baz=347,slow=2.8,SNR=6.9							
INKA	**Innaminka**	**147.15**	**16**	PKPbc		**PKPbc**	**08 07 01.3**	**+0.1**
QSPA	**South Pole Qui**	**149.87**	**180**	PKPbc		**PKPdf**	**08 07 04.2**	**+1.9**
	comp=Z,2.5nm,0.9s,baz=182,slow=1.0,SNR=8.4							
QSPA	**South Pole Qui**	**149.87**	**180**	PKPdf		**PKPbc**	**08 07 05.6**	**-1.5**
STKA	**Stephens Creek**	**151.34**	**15**	PKPbc		**PKPbc**	**08 07 09.5**	**-2.1**
	comp=Z,1.5nm,0.9s,baz=293,slow=7.9,SNR=3.8							

*IDC **16** 07:56:08.1±1.5,0.43N×125.86E,h0km,mb3.6/5, mbtmp3.7/5,Error ellipse: s-maj=175.8km s-min=19.9km az=64.0*
*DJA **16** 07:56:12.3±1.0,1.1N±3.1×12.6E±.1,h10km±8km,M3.5/13, MLv3.5/13*
ISC 16 07:56:14.3±0.9,**0.49N**±0.07×**126.16E**±0.06,**h44**km,**n10**, σ1@**31**/11,**mb3.6/5**,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.24**	**77**	P	**Pn**	**07 56 36.0**	**+0.8**
MNI	**Manado**	**1.62**	**306**	P	**Pn**	**07 56 39.6**	**-0.9**
MNI				S	**Sn**	**07 57 00.0**	**-0.2**
GAMI	**Galela, Maluku**	**2.11**	**51**	P	**Pn**	**07 56 48.5**	**+1.4**
SANI	**Sanana**	**2.53**	**184**	P	**Pn**	**07 56 53.2**	**+0.2**
GTOI	**Gorontalo**	**3.15**	**273**	P	**Pn**	**07 57 04.3**	**+2.8**
WRA	**Warramunga Arr**	**21.84**	**159**	P	**P**	**08 01 02.2**	**-1.0**
	1.0nm,0.5s,baz=336,slow=11,SNR=21 1.0nm,0.5s						
ASAR	**Alice Springs**	**25.17**	**163**	P	**P**	**08 01 36.5**	**+0.7**
	0.6nm,0.3s,baz=345,slow=11,SNR=23 0.6nm,0.3s						
STKA	**Stephens Creek**	**35.36**	**157**	P	**P**	**08 03 05.5**	**-0.3**
	1.6nm,1.0s,baz=323,slow=18,SNR=2.9 1.6nm,1.0s						
MKAR	**Makanchi Array**	**59.90**	**327**	P	**P**	**08 06 15.2**	**-0.7**
	0.2nm,0.3s,baz=128,slow=8.5,SNR=7.1 0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**64.16**	**328**	P	**P**	**08 06 43.7**	**-0.6**
	0.4nm,0.8s,baz=127,slow=5.9,SNR=4.1 0.4nm,0.8s						

*JMA **16** 08:10:37.5±0.1,24.4N±0.2×121.4E±0.8,h1km±1km, MV3.1/11,TAIWAN REGION*
*TAP **16** 08:10:37.7,24.42N×121.40E,h6km,ML3.7,B*
*IDC **16** 08:10:37.9±9.8,24.14N×121.03E,h0km,mb3.3/3, mbtmp3.3/3,Error ellipse: s-maj=735.3km s-min=29.1km az=59.0*
ISC 16 08:10:38.1±0.8,**24.43N**±0.01×**121.39E**±0.01,**h5**km±4km, **n156**,σ0@**62**/235,**mb3.4**/3,**29C-4D**,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNSB	**Datong**	**0.01**	**321**	*i*P	**Pg**	**08 10 39.2**	**0.0**
NNSB				*i* S	**Sg**	**08 10 39.9**	**-0.1**
NNS	**Nan Shan**	**0.02**	**322**	⇓*i*P	**Pg**	**08 10 39.3**	**0.0**
NNS				*i* S	**Sg**	**08 10 40.0**	**0.0**
LATG	**Datong**	**0.17**	**49**	⇑*i*P	**Pg**	**08 10 41.4**	**-0.1**
LATG				S	**Sg**	**08 10 44.2**	**+0.4**
NDT	**Datong Townshi**	**0.21**	**33**	P	**Pg**	**08 10 42.3**	**0.0**
NDT				*e*S	**Sg**	**08 10 45.5**	**+0.4**
FUSS	**Fushou**	**0.22**	**216**	⇑*i*P	**Pg**	**08 10 42.9**	**+0.5**
FUSS				S	**Sg**	**08 10 46.2**	**+0.9**
ETLH	**Xiulin Townshi**	**0.23**	**158**	P	**Pg**	**08 10 43.5**	**+0.8**
ETLH				S	**Sg**	**08 10 46.5**	**+0.7**
YHNB	**Yeheng**	**0.24**	**358**	P	**Pg**	**08 10 43.3**	**+0.4**
YHNB	**Yeheng**	**0.24**	**358**	S	**Sg**	**08 10 46.6**	**+0.5**
YHNB	**Yeheng**	**0.24**	**358**	⇑*i*P	**Pg**	**08 10 43.3**	**+0.4**
YHNB				S	**Sg**	**08 10 46.2**	**01.7**
NSK	**Sanguang**	**0.25**	**354**	⇑*i*P	**Pg**	**08 10 43.4**	**+0.4**
NSK				S	**Sg**	**08 10 46.3**	**0.0**
TWT	**Tachien**	**0.26**	**228**	⇑*i*P	**Pg**	**08 10 43.6**	**+0.5**
TWT				S	**Sb**	**08 10 48.2**	**-1.9**
TDCB	**Techi**	**0.27**	**231**	⇑*i*P	**Pg**	**08 10 43.6**	**+0.3**
TDCB				S	**Sg**	**08 10 47.5**	**+0.5**
ENTT	**Nioudou**	**0.27**	**37**	⇑*i*P	**Pg**	**08 10 43.4**	**0.0**
WHF	**Hehuan Shan**	**0.30**	**202**	⇓P	**Pg**	**08 10 44.5**	**+0.5**
WHF				*e*S	**Sg**	**08 10 48.8**	**+0.7**
NACB	**Ninganchiao**	**0.31**	**143**	P	**Pg**	**08 10 44.6**	**+0.4**
NACB	**Ninganchiao**	**0.31**	**143**	S	**Sg**	**08 10 48.9**	**+0.6**
NACB	**Ninganchiao**	**0.31**	**143**	⇓P	**Pg**	**08 10 44.8**	**+0.6**
NACB				S	**Sg**	**08 10 48.9**	**+0.6**
NFF	**Wufeng Townshi**	**0.32**	**310**	P	**Pb**	**08 10 45.1**	**-1.2**
NFF				*e*S	**Sg**	**08 10 49.5**	**+1.0**
ENA	**Nanau**	**0.32**	**89**	⇑P	**Pg**	**08 10 44.8**	**+0.5**
ENA				*e*S	**Sg**	**08 10 49.2**	**+0.6**
EAHA	**Aohua**	**0.34**	**106**	*e*P	**Pg**	**08 10 44.9**	**+0.3**
EAHA				*e*S	**Sg**	**08 10 49.1**	**0.0**
ETL	**Fush Village**	**0.34**	**141**	*e*P	**Pg**	**08 10 45.2**	**+0.5**
ETL				*e*S	**Sg**	**08 10 50.2**	**+1.0**
EHP	**Heping Village**	**0.34**	**109**	*e*S	**Sg**	**08 10 50.1**	**+0.8**
EWUT	**Wuta**	**0.36**	**87**	⇑P	**Pg**	**08 10 44.8**	**-0.2**
EWUT				*e*S	**Sg**	**08 10 49.8**	**+0.1**
NDS	**Dongshan**	**0.36**	**55**	⇑P	**Pg**	**08 10 45.0**	**-0.2**
NDS				*e*S	**Sg**	**08 10 51.1**	**+1.1**
NWLT	**Wulai**	**0.37**	**17**	*e*P	**Pg**	**08 10 45.2**	**0.0**
NWLT				*e*S	**Sg**	**08 10 50.0**	**-0.1**
FUSB	**Fushanzhiwuyua**	**0.38**	**29**	⇑P	**Pg**	**08 10 45.5**	**0.0**
FUSB				*e*S	**Sg**	**08 10 51.1**	**+0.6**
TWE	**Neicheng**	**0.39**	**41**	⇑*i*P	**Pg**	**08 10 45.9**	**+0.2**
TWD	**Chiawan**	**0.39**	**151**	*e*P	**Pg**	**08 10 46.3**	**+0.6**
TWD				*e*S	**Sg**	**08 10 51.9**	**+1.0**
KSHI	**Guanxi Townshi**	**0.40**	**331**	*e*P	**Pb**	**08 10 47.1**	**-0.5**
KSHI				*e*S	**Sb**	**08 10 52.9**	**-1.2**
LIOB	**Emei**	**0.40**	**303**	*e*P	**Pb**	**08 10 47.1**	**-0.6**
LIOB				*e*S	**Sb**	**08 10 53.0**	**-1.2**
NSTT	**Nanjuang**	**0.41**	**300**	⇑P	**Pb**	**08 10 47.0**	**-0.8**
NSTT				*e*S	**Sb**	**08 10 52.7**	**-1.6**
NJD	**Zhudong**	**0.41**	**319**	*e*P	**Pb**	**08 10 48.2**	**+0.3**
NJD				*e*S	**Sb**	**08 10 54.8**	**+0.3**
WHP	**Taichung City**	**0.43**	**250**	⇑P	**Pb**	**08 10 47.2**	**-1.0**
WHP				*e*S	**Sg**	**08 10 52.6**	**+0.6**
ESAO	**Su ao**	**0.44**	**70**	*e*P	**Pg**	**08 10 46.3**	**-0.3**
TWC	**Suao**	**0.46**	**66**	⇑P	**Pg**	**08 10 46.7**	**-0.3**
TWC				*e*S	**Sg**	**08 10 53.2**	**+0.3**
ETM	**Tongmen**	**0.47**	**168**	*e*P	**Pg**	**08 10 47.6**	**+0.5**
ETM				*e*S	**Sg**	**08 10 53.4**	**+0.2**
HSN1	**Hsinchu**	**0.49**	**316**	*e*P	**Pb**	**08 10 48.8**	**-0.3**
HSN1				*e*S	**Sb**	**08 10 56.6**	**0.0**
HWA	**Hwalien**	**0.49**	**156**	*e*P	**Pb**	**08 10 48.6**	**-0.5**
HWA				*e*S	**Sb**	**08 10 55.8**	**-0.8**
WUSB	**Renai**	**0.50**	**210**	⇑*i*P	**Pg**	**08 10 47.7**	**0.0**
WUSB				*e*S	**Sg**	**08 10 54.1**	**-0.1**
OWD	**Renai**	**0.51**	**202**	⇑*e*P	**Pg**	**08 10 47.5**	**-0.3**
SBCB	**Hsinchu**	**0.52**	**315**	*e*P	**Pb**	**08 10 49.9**	**+0.2**
HSN	**Hsinchu**	**0.53**	**315**	*e*P	**Pb**	**08 10 49.8**	**-0.1**
HSN				*e*S	**Sb**	**08 10 58.0**	**0.0**
NJN	**Zhunan**	**0.54**	**299**	*e*P	**Pb**	**08 10 49.9**	**0.0**
NMLH	**Miaoli**	**0.55**	**282**	*e*S	**Sb**	**08 10 58.2**	**-0.3**
TATO	**Taipei**	**0.56**	**10**	P	**Pb**	**08 10 49.5**	**-0.8**
TATO	**Taipei**	**0.56**	**10**	S	**Sg**	**08 10 56.8**	**+0.7**
TATO	**Taipei**	**0.56**	**10**	P	**Pg**	**08 10 49.3**	**+0.5**
TATO				*e*S	**Sg**	**08 10 56.0**	**-0.1**
TWQ1	**Liyutan**	**0.56**	**262**	⇑P	**Pb**	**08 10 50.4**	**-0.1**
TWQ1				*e*S	**Sb**	**08 10 58.2**	**-0.6**
WCS	**Beigang Elemen**	**0.57**	**230**	⇑P	**Pg**	**08 10 49.4**	**+0.4**
WCS				*e*S	**Sg**	**08 10 56.5**	**+0.1**
WPL	**Puli Township**	**0.57**	**224**	*e*P	**Pg**	**08 10 48.7**	**-0.3**
NSY	**Sanyi**	**0.57**	**269**	⇑P	**Pb**	**08 10 51.0**	**+0.5**
NSY				*e*S	**Sb**	**08 10 59.1**	**+0.1**
NCUH	**Zhongli**	**0.57**	**341**	*e*P	**Pb**	**08 10 50.8**	**+0.2**
NCU	**National Centr**	**0.57**	**342**	*e*P	**Pb**	**08 10 49.6**	**-1.0**
DPDB	**Guoxing**	**0.57**	**227**	⇑P	**Pg**	**08 10 49.4**	**+0.3**
DPDB				*e*S	**Sb**	**08 10 58.2**	**-0.9**
TWA	**Mucha**	**0.58**	**18**	*e*P	**Pg**	**08 10 49.6**	**+0.3**
TEYL	**Yanliau Villag**	**0.59**	**161**	*e*P	**Pg**	**08 10 49.7**	**+0.3**
TEYL				*e*S	**Sg**	**08 10 56.9**	**-0.1**
NTC	**Toucheng**	**0.59**	**43**	*e*P	**Pg**	**08 10 49.9**	**+0.5**
ESL	**Shilin**	**0.61**	**176**	*e*P	**Pg**	**08 10 50.2**	**+0.4**
ESL				*e*S	**Sg**	**08 10 57.9**	**+0.2**
EGS		**0.65**	**50**	*e*P	**Pg**	**08 10 50.6**	**+0.1**
SHUL	**Shoufeng**	**0.66**	**166**	*e*P	**Pb**	**08 10 51.7**	**-0.2**
SHUL				*e*S	**Sb**	**08 11 00.5**	**-0.9**
TWS1	**Kuangyinshan**	**0.67**	**2**	*e*P	**Pb**	**08 10 52.6**	**+0.3**
TIPB	**Shuangxi**	**0.68**	**36**	⇑*i*P	**Pg**	**08 10 51.0**	**-0.1**
TIPB				*e*S	**Sg**	**08 10 59.1**	**-0.8**
WDJ	**Dajia District**	**0.68**	**264**	*e*P	**Pb**	**08 10 53.1**	**+0.6**
WDJ				*e*S	**Sb**	**08 11 02.8**	**+0.5**
SMLT	**Sun Moon Lake**	**0.70**	**220**	⇑*i*P	**Pg**	**08 10 51.6**	**+0.1**
SMLT				*e*S	**Sb**	**08 11 01.7**	**-1.1**
TCU	**Taichung**	**0.70**	**247**	*e*P	**Pn**	**08 10 53.7**	**-1.0**
TCU				*e*S	**Sb**	**08 11 04.0**	**+1.2**
VWDT	**VWDT**	**0.70**	**199**	⇑*i*P	**Pg**	**08 10 51.2**	**-0.4**
VWDT				*e*S	**Sg**	**08 11 00.6**	**-0.2**
WARBT	**Fenglin Townsh**	**0.70**	**180**	P	**Pg**	**08 10 51.6**	**0.0**
WARBT				S	**Sg**	**08 11 00.4**	**-0.3**
TYC	**Yuchr**	**0.71**	**223**	⇑*i*P	**Pg**	**08 10 51.7**	**0.0**
TYC				*e*S	**Sg**	**08 11 00.3**	**-0.6**
TEGC	**Jichi Village**	**0.73**	**169**	*e*P	**Pg**	**08 10 52.2**	**+0.1**
WWF	**Wufeng**	**0.73**	**239**	*e*P	**Pb**	**08 10 53.7**	**+0.3**
NWF	**Wu-fen Shan**	**0.74**	**29**	*e*P	**Pg**	**08 10 52.6**	**+0.4**
WFSB	**Wu-fen Shan**	**0.74**	**29**	⇑P	**Pb**	**08 10 52.5**	**+0.3**
YM01	**YM01**	**0.74**	**13**	*e*P	**Pb**	**08 10 53.2**	**-0.3**
YM01				*e*S	**Sg**	**08 11 02.3**	**+0.4**
NTST	**Danshui**	**0.74**	**4**	*e*P	**Pb**	**08 10 53.8**	**+0.3**
SSLB	**Suanglung**	**0.75**	**212**	P	**Pg**	**08 10 51.7**	**-0.7**
SSLB	**Suanglung**	**0.75**	**212**	⇑*i*P	**Pg**	**08 10 51.8**	**-0.7**
SSLB				*e*S	**Sg**	**08 11 00.9**	**-1.3**
ZUZH	**Zhuzihu**	**0.75**	**11**	*e*P	**Pb**	**08 10 53.3**	**-0.3**
ZUZH				*e*S	**Sb**	**08 11 04.2**	**+0.1**
EGFH	**Guangfu**	**0.75**	**177**	*e*P	**Pg**	**08 10 52.8**	**+0.2**
EGFH				*e*S	**Sb**	**08 11 03.3**	**-0.9**
ANP	**Anpu**	**0.77**	**9**	*e*P	**Pb**	**08 10 53.5**	**-0.5**
EOS2	**EOS2**	**0.77**	**90**	*e*P	**Pg**	**08 10 52.8**	**-0.1**
YM08	**YM08**	**0.78**	**14**	⇑*i*P	**Pb**	**08 10 53.6**	**-0.5**
TWB1	**Santiao Chiao**	**0.80**	**43**	*e*P	**Pg**	**08 10 52.9**	**-0.5**
SXI1	**Grass Mountain**	**0.80**	**34**	⇑*i*P	**Pg**	**08 10 53.6**	**+0.1**
TNOU	**National Taiwa**	**0.80**	**26**	*e*P	**Pg**	**08 10 53.4**	**-0.1**
TNOU				*e*S	**Sb**	**08 11 05.3**	**-0.4**
WCHH	**Zhanghua**	**0.83**	**246**	*e*P	**Pn**	**08 10 56.2**	**-0.2**
WNT	**Mingjian**	**0.84**	**230**	*e*P	**Pn**	**08 10 56.0**	**-0.6**
WNT				*e*S	**Sn**	**08 11 08.5**	**-0.8**
WJS	**Zhushan**	**0.85**	**225**	*e*P	**Pb**	**08 10 55.4**	**+0.1**
WJS				*e*S	**Sn**	**08 11 08.4**	**-1.2**
EOS3	**EOS3**	**0.86**	**99**	*e*P	**Pb**	**08 10 54.9**	**-0.5**
TWY	**Chenhua**	**0.87**	**13**	*e*P	**Pb**	**08 10 55.8**	**+0.1**
WYL	**Yuanlin Townsh**	**0.87**	**238**	*e*P	**Pb**	**08 10 55.5**	**-0.2**
WHYT	**Xinyi Township**	**0.87**	**214**	*e*P	**Pg**	**08 10 55.0**	**+0.1**
EOS4	**EOS4**	**0.90**	**109**	*e*P	**Pb**	**08 10 56.1**	**+0.1**
EHY	**Hungye**	**0.92**	**184**	*e*P	**Pg**	**08 10 55.5**	**-0.2**
EHY				*e*S	**Sb**	**08 11 08.0**	**-0.9**
EHYH	**Wan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNSB	**Datong**	**0.01**	**270**	⇓*iP*	**Pg**	**08 15 26.7**	**+0.2**
NNSB				*i* S	**Sg**	**08 15 27.3**	**+0.1**
NNS	**Nan Shan**	**0.02**	**309**	⇓*iP*	**Pg**	**08 15 26.7**	**+0.1**
NNS				*i* S	**Sg**	**08 15 27.5**	**+0.2**
LATG	**Datong**	**0.16**	**50**	⇑*iP*	**Pg**	**08 15 28.8**	**0.0**
LATG				*i* S	**Sg**	**08 15 31.5**	**+0.5**
NDT	**Datong Townshi**	**0.21**	**33**	⇑*iP*	**Pg**	**08 15 29.7**	**+0.1**
FUSS	**Fushou**	**0.22**	**216**	⇑*iP*	**Pg**	**08 15 30.3**	**+0.4**
FUSS				*i* S	**Sg**	**08 15 33.7**	**+0.9**
ETLH	**Xiulin Townshi**	**0.24**	**159**	P	**Pg**	**08 15 30.8**	**+0.7**
ETLH				S	**Sg**	**08 15 34.0**	**+0.8**
YHNB	**Yeheng**	**0.24**	**357**	P	**Pg**	**08 15 30.7**	**+0.5**
YHNB	**Yeheng**	**0.24**	**357**	S	**Sg**	**08 15 33.8**	**+0.4**
YHNB	**Yeheng**	**0.24**	**357**	⇑*iP*	**Pg**	**08 15 30.7**	**+0.5**
YHNB				*i* S	**Sg**	**08 15 33.8**	**+0.4**
NSK	**Sanguang**	**0.25**	**354**	⇑*iP*	**Pg**	**08 15 30.8**	**+0.5**
NSK				*i* S	**Sg**	**08 15 34.0**	**+0.3**
TWT	**Tachien**	**0.26**	**228**	*i* P	**Pg**	**08 15 31.1**	**+0.5**
TWT				*eS*	**Sg**	**08 15 34.5**	**+0.4**
ENTT	**Nioudou**	**0.27**	**37**	⇑*iP*	**Pg**	**08 15 30.8**	**+0.2**
ENTT				*i* S	**Sg**	**08 15 34.3**	**+0.2**
TDCB	**Techi**	**0.27**	**230**	⇑*iP*	**Pg**	**08 15 31.1**	**+0.3**
TDCB				S	**Sg**	**08 15 34.5**	**0.0**
WHF	**Hehuan Shan**	**0.30**	**202**	*i* P	**Pg**	**08 15 32.0**	**+0.5**
WHF				*eS*	**Sb**	**08 15 37.3**	**-1.8**
NACB	**Ninganchiao**	**0.32**	**143**	P	**Pb**	**08 15 32.4**	**-1.2**
NACB	**Ninganchiao**	**0.32**	**143**	S	**Sb**	**08 15 37.3**	**-1.7**
NACB	**Ninganchiao**	**0.32**	**143**	⇓*iP*	**Pg**	**08 15 32.2**	**+0.6**
NACB				S	**Sg**	**08 15 36.7**	**+0.9**
NFF	**Wufeng Townshi**	**0.32**	**309**	*i* P	**Pg**	**08 15 32.6**	**-1.1**
NFF				*eS*	**Sb**	**08 15 37.1**	**-2.1**
ENA	**Nanau**	**0.32**	**90**	P	**Pg**	**08 15 32.3**	**+0.6**
EAHA	**Aohua**	**0.33**	**107**	P	**Pg**	**08 15 32.2**	**+0.2**
EAHA				S	**Sg**	**08 15 36.7**	**+0.4**
ETL	**Fush Village**	**0.34**	**141**	P	**Pb**	**08 15 32.8**	**-1.3**
ETL				*eS*	**Sg**	**08 15 37.6**	**+1.0**
EWUT	**Wuta**	**0.35**	**87**	⇑*iP*	**Pg**	**08 15 32.2**	**-0.1**
EWUT				S	**Sg**	**08 15 36.8**	**-0.2**
NDS	**Dongshan**	**0.36**	**55**	*i* P	**Pg**	**08 15 32.4**	**-0.1**
NDS				*eS*	**Sb**	**08 15 38.7**	**-1.6**
NWLT	**Wulai**	**0.36**	**17**	⇑*iP*	**Pg**	**08 15 32.8**	**+0.3**
NWLT				*i* S	**Sg**	**08 15 37.4**	**+0.1**
FUSB	**Fushanzhiwuyua**	**0.38**	**29**	⇑*iP*	**Pg**	**08 15 32.9**	**+0.1**
FUSB				*i* S	**Sg**	**08 15 37.6**	**-0.2**
TWE	**Neicheng**	**0.39**	**41**	⇑*iP*	**Pg**	**08 15 33.3**	**+0.4**
TWE				S	**Sg**	**08 15 38.1**	**+0.1**
TWD	**Chiawan**	**0.40**	**151**	P	**Pb**	**08 15 33.9**	**-1.1**
TWD				S	**Sg**	**08 15 39.1**	**+0.8**
KSHI	**Guanxi Townshi**	**0.40**	**331**	*i* P	**Pb**	**08 15 34.6**	**-0.4**
KSHI				S	**Sb**	**08 15 40.6**	**-0.9**
LIOB	**Emei**	**0.40**	**303**	*i* P	**Pb**	**08 15 34.6**	**-0.5**
LIOB				S	**Sb**	**08 15 40.6**	**-1.1**
NSTT	**Nanjuang**	**0.41**	**300**	*i* P	**Pb**	**08 15 34.5**	**-0.7**
NSTT				S	**Sb**	**08 15 40.2**	**-1.5**
WHP	**Taichung City**	**0.43**	**250**	⇑*iP*	**Pb**	**08 15 34.7**	**-1.0**
WHP				S	**Sg**	**08 15 40.2**	**+0.8**
ESAO	**Su ao**	**0.44**	**70**	*eP*	**Pg**	**08 15 33.6**	**-0.4**
TWC	**Suao**	**0.46**	**67**	*i* P	**Pg**	**08 15 34.1**	**-0.2**
TWC				S	**Sg**	**08 15 40.4**	**+0.2**
ILA	**Ilan**	**0.47**	**44**	*eP*	**Pg**	**08 15 34.8**	**+0.3**
ETM	**Tongmen**	**0.47**	**168**	P	**Pb**	**08 15 35.1**	**-1.1**
ETM				*eS*	**Sg**	**08 15 41.4**	**+0.8**
HWA	**Hwalien**	**0.49**	**156**	*eP*	**Pb**	**08 15 36.0**	**-0.5**
HWA				S	**Sb**	**08 15 42.7**	**-1.4**
WUSB	**Renai**	**0.50**	**210**	⇑*iP*	**Pg**	**08 15 35.2**	**+0.1**
WUSB				S	**Sg**	**08 15 41.7**	**+0.1**
OWD	**Renai**	**0.51**	**202**	*i* P	**Pg**	**08 15 35.1**	**-0.2**
OWD				S	**Sg**	**08 15 42.0**	**+0.1**
SBCB	**Hsinchu**	**0.52**	**315**	*eP*	**Pb**	**08 15 37.6**	**+0.5**
SBCB				S	**Sb**	**08 15 46.0**	**+1.2**
HSN	**Hsinchu**	**0.53**	**314**	*eP*	**Pb**	**08 15 37.5**	**+0.2**
HSN				*eS*	**Sb**	**08 15 45.5**	**+0.2**
TATO	**Taipei**	**0.55**	**9**	P	**Pb**	**08 15 36.7**	**-1.0**
TATO	**Taipei**	**0.55**	**9**	S	**Sg**	**08 15 43.9**	**+0.6**
NCUH	**Zhongli**	**0.57**	**341**	*eP*	**Pb**	**08 15 38.5**	**+0.5**
NCUH				*eS*	**Sb**	**08 15 46.9**	**+0.5**
WCS	**Beigang Elemen**	**0.57**	**230**	P	**Pg**	**08 15 36.7**	**+0.2**
TWA	**Mucha**	**0.58**	**18**	*i* P	**Pb**	**08 15 37.3**	**-0.8**
TWA				S	**Sg**	**08 15 44.4**	**+0.3**
TEYL	**Yanliau Villag**	**0.59**	**161**	*eP*	**Pg**	**08 15 36.9**	**+0.1**
ESL	**Shilin**	**0.61**	**176**	*eP*	**Pb**	**08 15 37.8**	**-0.9**
ESL				*eS*	**Sg**	**08 15 45.8**	**+0.6**
TAP	**Taipei**	**0.62**	**10**	*eP*	**Pb**	**08 15 38.0**	**-0.8**
TAP				*eS*	**Sb**	**08 15 46.7**	**-1.1**
EGS		**0.65**	**50**	*eP*	**Pg**	**08 15 38.1**	**+0.2**
SHUL	**Shoufeng**	**0.66**	**166**	*eP*	**Pb**	**08 15 39.5**	**+0.1**
TWS1	**Kuangyinshan**	**0.67**	**2**	*eP*	**Pb**	**08 15 40.2**	**+0.5**
TWS1				*eS*	**Sb**	**08 15 49.4**	**+0.1**
TIPB	**Shuangxi**	**0.67**	**36**	*i* P	**Pg**	**08 15 38.4**	**0.0**
TIPB				*i* S	**Sg**	**08 15 46.7**	**-0.4**
WDJ	**Dajia District**	**0.69**	**263**	*eP*	**Pn**	**08 15 41.0**	**-0.9**
WDJ				S	**Sb**	**08 15 50.9**	**+1.2**
SMLT	**Sun Moon Lake**	**0.70**	**220**	*i* P	**Pg**	**08 15 39.1**	**+0.1**
SMLT				S	**Sg**	**08 15 48.0**	**-0.1**
WARBT	**Fenglin Townsh**	**0.71**	**180**	*i* P	**Pg**	**08 15 39.2**	**+0.1**
WARBT				*eS*	**Sg**	**08 15 48.1**	**-0.1**
TCU	**Taichung**	**0.71**	**247**	P	**Pn**	**08 15 41.0**	**-1.1**
TCU				S	**Sb**	**08 15 51.4**	**+1.1**
VWDT	**VWDT**	**0.71**	**199**	*i* P	**Pg**	**08 15 38.7**	**-0.3**
VWDT				*eS*	**Sg**	**08 15 47.8**	**-0.5**
TYC	**Yuchr**	**0.71**	**223**	*eP*	**Pg**	**08 15 39.2**	**+0.1**
TEGC	**Jichi Village**	**0.73**	**169**	*eP*	**Pb**	**08 15 39.9**	**-0.7**
NWF	**Wu-fen Shan**	**0.73**	**29**	*eP*	**Pb**	**08 15 40.0**	**-0.8**
WFSB	**Wu-fen Shan**	**0.73**	**29**	P	**Pb**	**08 15 39.9**	**-0.9**
YM01	**YM01**	**0.73**	**13**	P	**Pb**	**08 15 40.5**	**-0.2**
YM01				S	**Sg**	**08 15 49.7**	**+0.5**
NTST	**Danshui**	**0.73**	**4**	P	**Pb**	**08 15 41.3**	**+0.5**
NTST				S	**Sb**	**08 15 51.9**	**+0.7**
ZUZH	**Zhuzihu**	**0.74**	**11**	*i* P	**Pb**	**08 15 40.9**	**-0.1**
SSLB	**Suanglung**	**0.75**	**212**	P	**Pg**	**08 15 39.0**	**-0.9**
SSLB	**Suanglung**	**0.75**	**212**	*i* P	**Pg**	**08 15 39.4**	**-0.5**
SSLB				*eS*	**Sg**	**08 15 49.3**	**-0.3**
ANP	**Anpu**	**0.76**	**9**	P	**Pb**	**08 15 41.3**	**0.0**
ANP				*eS*	**Sb**	**08 15 51.9**	**-0.2**
EOS2	**EOS2**	**0.77**	**91**	*eP*	**Pb**	**08 15 41.1**	**-0.1**
YM08	**YM08**	**0.78**	**14**	P	**Pb**	**08 15 41.2**	**-0.3**
YM08				*eS*	**Sb**	**08 15 53.1**	**+0.7**
TWB1	**Santiao Chiao**	**0.79**	**43**	*i* P	**Pg**	**08 15 40.4**	**-0.3**
SXI1	**Grass Mountain**	**0.80**	**34**	*eP*	**Pb**	**08 15 41.1**	**-0.8**
TNOU	**National Taiwa**	**0.80**	**26**	*eP*	**Pb**	**08 15 41.3**	**-0.6**
WCHH	**Zhanghua**	**0.83**	**246**	P	**Pn**	**08 15 43.6**	**-0.3**
WCHH				S	**Sn**	**08 15 55.4**	**-1.1**
WNT	**Mingjian**	**0.84**	**230**	P	**Pn**	**08 15 43.1**	**-0.9**
WNT				*eS*	**Sn**	**08 15 55.8**	**-1.0**
EOS3	**EOS3**	**0.86**	**99**	*eP*	**Pb**	**08 15 42.9**	**+0.1**
TWY	**Chenhua**	**0.86**	**13**	*eP*	**Pn**	**08 15 43.7**	**-0.6**
EOS4	**EOS4**	**0.90**	**110**	*eP*	**Pn**	**08 15 44.5**	**0.0**
EHY	**Hungye**	**0.92**	**184**	*eP*	**Pb**	**08 15 43.3**	**-0.6**
EHYH	**Wanrong**	**0.93**	**182**	*eP*	**Pb**	**08 15 43.5**	**-0.6**
EHYH				*eS*	**Sb**	**08 15 56.1**	**-0.7**
HGSD	**Ruisui**	**0.93**	**178**	*eP*	**Pn**	**08 15 44.4**	**-0.8**
YULB	**Yu-li**	**1.03**	**185**	P	**Pb**	**08 15 45.5**	**-0.4**
YULB	**Yu-li**	**1.03**	**185**	S	**Sb**	**08 16 00.1**	**+0.3**
YULB	**Yu-li**	**1.03**	**185**	*eP*	**Pb**	**08 15 45.2**	**-0.6**
YULB				S	**Sg**	**08 15 58.6**	**-0.2**
CHN5	**Tsauling**	**1.05**	**218**	*i* P	**Pn**	**08 15 46.7**	**-0.9**
CHN5				*eS*	**Sn**	**08 16 01.1**	**-0.9**
ALS	**Alishan**	**1.06**	**210**	P	**Pn**	**08 15 45.7**	**-0.8**
WRL	**Guolierlin Hig**	**1.06**	**241**	P	**Pn**	**08 15 46.8**	**-0.2**
WRL				*eS*	**Sn**	**08 16 01.2**	**-1.0**
WDLH	**Douliu**	**1.07**	**227**	*eP*	**Pn**	**08 15 47.1**	**-0.1**
WDLH				S	**Sn**	**08 16 02.9**	**+0.4**
TWF1	**Yuli**	**1.07**	**185**	P	**Pb**	**08 15 45.9**	**-0.6**
TWF1				*eS*	**Sb**	**08 16 01.2**	**+0.3**
RLNB	**Erlin**	**1.08**	**241**	*eP*	**Pb**	**08 15 46.5**	**-0.2**
RLNB				*eS*	**Sn**	**08 16 02.5**	**-0.2**
WTCT	**Ta-ch'eng**	**1.16**	**241**	*eP*	**Pb**	**08 15 47.4**	**-0.6**
WTCT				*eS*	**Sn**	**08 16 04.7**	**+0.2**
WCKO	**Fanlu**	**1.22**	**216**	*eP*	**Pn**	**08 15 49.5**	**+0.3**
WCKO				*eS*	**Sn**	**08 16 05.9**	**-0.2**
FULB	**Fuli**	**1.23**	**184**	*eP*	**Pn**	**08 15 49.8**	**+0.5**
CHKH	**Chenggong**	**1.23**	**180**	*eP*	**Pn**	**08 15 49.9**	**+0.6**
CHY	**Chiayi**	**1.28**	**224**	*eP*	**Pn**	**08 15 50.8**	**+0.8**
CHY				*eS*	**Sn**	**08 16 09.7**	**+2.2**
ELDTW	**Lidau**	**1.28**	**196**	*eP*	**Pn**	**08 15 50.2**	**+0.1**
ELDTW				*eS*	**Sb**	**08 16 06.8**	**-0.2**
EHD	**Haiduan**	**1.28**	**188**	P	**Pn**	**08 15 49.8**	**-0.3**
EHD				S	**Sb**	**08 16 06.6**	**-0.4**
CHN4	**Tsaushan**	**1.30**	**214**	P	**Pn**	**08 15 50.9**	**+0.7**
CHN4				*eS*	**Sn**	**08 16 10.6**	**+2.6**
TPUB	**Ta-pu**	**1.32**	**212**	P	**Pb**	**08 15 51.0**	**+0.2**
TPUB	**Ta-pu**	**1.32**	**212**	S	**Sn**	**08 16 09.2**	**+0.6**
TPUB	**Ta-pu**	**1.32**	**212**	P	**Pb**	**08 15 51.0**	**+0.2**
TPUB				S	**Sn**	**08 16 10.1**	**+1.4**
CHKT	**Chengkung**	**1.32**	**181**	*eP*	**Pb**	**08 15 52.2**	**+1.4**
PCYT	**Pengchaiyu**	**1.35**	**27**	*eP*	**Pn**	**08 15 50.7**	**-0.2**
STYH	**Taoyuan**	**1.37**	**204**	*eP*	**Pg**	**08 15 51.2**	**-0.6**
STYH				*eS*	**Sn**	**08 16 10.4**	**+0.6**
WTP	**Ta-pu**	**1.37**	**211**	*eP*	**Pb**	**08 15 51.4**	**-0.3**
WTP				*eS*	**Sn**	**08 16 11.2**	**+1.2**
WSL	**Shuilin Townsh**	**1.39**	**230**	*eP*	**Pg**	**08 15 52.0**	**-0.2**
WSL				*eS*	**Sn**	**08 16 11.9**	**+1.5**
JYNG	**Yonagunijimaku**	**1.42**	**89**	*eP*	**Pn**	**08 15 51.7**	**-0.2**
TWK	**Hsinying**	**1.42**	**216**	*eP*	**Pg**	**08 15 52.9**	**+0.2**
TWK				*eS*	**Sn**	**08 16 13.5**	**+2.4**
CHN1	**Nanshi**	**1.47**	**213**	*eP*	**Pg**	**08 15 54.0**	**+0.4**
CHN1				*eS*	**Sn**	**08 16 13.7**	**+1.4**
ICHU	**Yijhu**	**1.47**	**224**	*eP*	**Pg**	**08 15 54.5**	**+0.8**
ICHU				*eS*	**Sg**	**08 16 15.2**	**+2.5**
YOJ	**Yonaguni jima**	**1.48**	**88**	P	**Pb**	**08 15 53.1**	**-0.3**
YOJ	**Yonaguni jima**	**1.48**	**88**	P	**Pn**	**08 15 52.6**	**-0.1**
YOJ	**Yonaguni jima**	**1.48**	**88**	P	**Pn**	**08 15 52.8**	**+0.1**
CHN8	**Yiju**	**1.52**	**225**	*eP*	**Pg**	**08 15 54.7**	**0.0**
CHN8				*eS*	**Sg**	**08 16 15.3**	**+0.8**
SGST	**Jiashian**	**1.53**	**209**	*eP*	**Pg**	**08 15 54.3**	**-0.5**
SGST				*eS*	**Sg**	**08 16 15.9**	**+1.2**
LONT	**Longtian**	**1.53**	**189**	*eP*	**Pg**	**08 15 55.0**	**+0.1**
SLGT	**Liugui**	**1.58**	**206**	*eP*	**Pg**	**08 15 56.3**	**+0.5**
TWG	**Pinlang**	**1.63**	**190**	*eP*	**Pg**	**08 15 57.0**	**+0.3**
TWGBT	**Beinan**	**1.63**	**190**	P	**Pg**	**08 15 56.4**	**-0.3**
TWGBT	**Beinan**	**1.63**	**190**	*eP*	**Pg**	**08 15 56.3**	**-0.3**
TWM1	**Shoushan**	**1.83**	**209**	*eP*	**Pg**	**08 16 00.4**	**-0.1**
VWUC	**VWUC**	**1.85**	**288**	*eP*	**Pn**	**08 15 57.7**	**-0.2**
ECL	**Taimali**	**1.87**	**192**	*eP*	**Pg**	**08 16 00.5**	**-0.8**
PNG	**Penghu**	**1.88**	**243**	*eP*	**Pb**	**08 16 00.1**	**-0.3**
PNG				*eS*	**Sb**	**08 16 23.3**	**-0.9**
PHUB	**P'eng-hu**	**1.90**	**242**	*eP*	**Pb**	**08 15 59.3**	**-1.3**
PHUB				*eS*	**Sn**	**08 16 22.6**	**-0.2**
MASBT	**Mashibuluo**	**1.94**	**201**	*eP*	**Pg**	**08 16 01.9**	**-0.7**
MASBT				*eS*	**Sg**	**08 16 27.8**	**0.0**
WDGT	**Dungji**	**1.96**	**234**	*eP*	**Pb**	**08 16 01.1**	**-0.6**
WDGT				*eS*	**Sb**	**08 16 26.2**	**-0.3**
EAST	**Anshuo**	**2.10**	**194**	*eP*	**Pb**	**08 16 03.1**	**-0.9**
IRIF	**Iriomote-Funau**	**2.14**	**92**	*eP*	**Pn**	**08 16 01.9**	**+0.1**
IRIF				*eS*	**Sn**	**08 16 29.0**	**+0.3**
PTMZ	**Houxiangcun**	**2.15**	**287**	*eP*	**Pn**	**08 16 02.0**	**0.0**
MATB	**Ma-tsu**	**2.16**	**323**	*eP*	**Pn**	**08 16 02.8**	**+0.7**
MATB				*eS*	**Sb**	**08 16 31.1**	**-1.0**
SCZT	**Fangliau**	**2.17**	**199**	*eP*	**Pb**	**08 16 05.0**	**-0.2**
VCHM	**Qimei**	**2.17**	**236**	*eP*	**Pb**	**08 16 03.9**	**-1.3**
SLIU	**Shizi**	**2.27**	**194**	*eP*	**Pb**	**08 16 06.3**	**-0.6**
SLIU				*eS*	**Sg**	**08 16 37.7**	**-0.7**
LAY	**Lan-yu**	**2.38**	**176**	*eP*	**Pn**	**08 16 05.5**	**+0.3**
LYUB	**Lan-yu**	**2.42**	**176**	*eP*	**Pn**	**08 16 06.8**	**+1.1**
SMST	**Manzhou Townsh**	**2.45**	**192**	*eP*	**Pb**	**08 16 08.6**	**-1.4**
JIJ	**Ishigaki jima**	**2.51**	**91**	*eP*	**Pn**	**08 16 08.5**	**+1.5**
TWKBT	**Hengchun**	**2.53**	**192**	*eP*	**Pn**	**08 16 09.0**	**+1.7**
MHZQ	**Yeshan**	**2.71**	**308**	*eP*	**Pb**	**08 16 11.9**	**-2.5**
XPSS	**Dashiqiu**	**2.72**	**337**	*eP*	**Pn**	**08 16 10.7**	**+1.0**

*IDC **16** 08:19:52.3±1.4,59.°65N×153.°71W,h95km±17km,mb3.6/8, mbtmp3.9/13,MS3.4/1, Error ellipse: s-maj=17.5km s-min=15.3km az=80.0*

*NEIC **16** 08:19:54.2±1.1,59.°65N±0.°03×153.°35W±0.°07, h116km±1km,mb4.1/24,ML3.7/178,ML3.5(AEIC), Error ellipse: s-maj=5.0km s-min=4.1km az=89.0*

*AEIC **16** 08:19:55.5±1.2,59.°65N±0.°03×153.°31W±0.°06, h110km±3km, Error ellipse: s-maj=4.9km s-min=4.0km az=181.0*

ISC 16 08:19:54.2±0.6,**59.°65N**±0.°03×**153.°31W**±0.°04, **h116**km±5km,**n226,** σ0.**80**/240,**mb4.1**/17,**Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
P19K	**Oil Pt**	**0.04**	**83**		**Pn**	**08 20 10.1**	**+0.1**
P19K				Sn	**Sn**	**08 20 22.1**	**0.0**
AU22	**Augustine Moun**	**0.28**	**185**		**Pn**	**08 20 10.6**	**+0.1**
AU22					**Sn**	**08 20 23.0**	**+0.2**
AUCH	**Augustine Cone**	**0.29**	**194**		**Pn**	**08 20 10.8**	**+0.1**
AUCH					**Sn**	**08 20 23.4**	**+0.2**
ILS	**Iliamna Low So**	**0.33**	**21**		**Pn**	**08 20 10.7**	**-0.2**
ILSW	**Iliamna Southw**	**0.35**	**14**		**Pn**	**08 20 10.8**	**-0.2**
ILSW				Sn	**Sn**	**08 20 23.1**	**-0.6**
ILSW				IAML		08 20 24.1	
	comp=E,3μm,0.8s						
Q19K	**Cape Douglas,**	**0.74**	**194**		**Pn**	**08 20 13.5**	**0.0**
Q19K				Sn	**Sn**	**08 20 28.0**	**-0.1**
Q19K				IAML		08 20 29.9	
	comp=E,3μm,0.7s						
Q19K				IAML		08 20 33.4	
	comp=N,3μm,0.8s						
O19K	**Port Alsworth**	**0.75**	**318**		**Pn**	**08 20 13.3**	**-0.2**
O19K				Sn	**Sn**	**08 20 27.6**	**-0.5**
RED	**Redoubt Volcan**	**0.82**	**19**		**Pn**	**08 20 14.2**	**0.0**
RED				Sn	**Sn**	**08 20 29.1**	**-0.3**
RED				IAML		08 20 29.6	
	comp=E,2μm,0.8s						
RED				IAML		08 20 29.6	
	comp=N,895nm,0.5s						
HOM	**Homer**	**0.84**	**89**		**Pn**	**08 20 14.9**	**+0.6**
HOM				Sn	**Sn**	**08 20 30.6**	**+1.1**
RDSO	**Redoubt South**	**0.86**	**19**		**Pn**	**08 20 14.6**	**0.0**
RDSO					**Sn**	**08 20 29.7**	**-0.4**
NCT	**North Crescent**	**0.94**	**11**		**Pn**	**08 20 15.3**	**0.0**
O18K	**Koktuh Hills**	**0.98**	**283**		**Pn**	**08 20 15.2**	**-0.4**
O18K				Sn	**Sn**	**08 20 31.0**	**-1.0**
O18K				IAML		08 20 31.4	
	comp=N,528nm,0.8s						
DFR	**Drift River**	**1.00**	**18**		**Pn**	**08 20 16.0**	**+0.1**
P18K	**Big Mountain,**	**1.01**	**256**		**Pn**	**08 20 15.3**	**-0.7**
P18K				Sn	**Sn**	**08 20 31.3**	**-1.2**
RDT	**Redoubt**	**1.03**	**26**		**Pn**	**08 20 16.2**	**+0.1**
CNPM	**China Poot**	**1.06**	**96**		**Pn**	**08 20 16.7**	**+0.3**
CNPM				IAML		08 20 35.9	
	comp=E,1μm,0.5s						
SYI	**Shuyak Island**	**1.14**	**155**		**Pn**	**08 20 17.4**	**+0.2**
SYI				IAML		08 20 35.6	
	comp=E,2μm,0.4s						
SYI				IAML		08 20 36.2	
	comp=N,1μm,0.4s						
BRLK	**Bradley Lake**	**1.23**	**84**		**Pn**	**08 20 18.1**	**-0.2**
BRLK				IAML		08 20 38.2	
	comp=E,1μm,0.2s						
BRLK				IAML		08 20 40.3	
	comp=N,1μm,0.5s						
BRSE	**Bradley Lake S**	**1.30**	**85**		**Pn**	**08 20 18.9**	**-0.2**
N19K	**Bonanza Creek**	**1.31**	**334**		**Pn**	**08 20 19.1**	**0.0**
N19K				IAML		08 20 38.2	
	comp=E,552nm,0.9s						
N19K				IAML		08 20 38.2	
	comp=N,374nm,0.6s						
KAHG	**Katmai Hook Gl**	**1.32**	**209**		**Pn**	**08 20 19.5**	**+0.1**
KAHC	**Katmai Hardscr**	**1.33**	**222**		**Pn**	**08 20 19.4**	**-0.1**
KARR	**Katmai Rainbow**	**1.36**	**213**		**Pn**	**08 20 19.9**	**+0.2**
KAWH	**Katmai**	**1.48**	**212**		**Pn**	**08 20 21.1**	**-0.1**
CKL	**Chakachamna La**	**1.63**	**17**		**Pn**	**08 20 23.3**	**+0.4**
KAKN	**Katmai Knife C**	**1.63**	**215**		**Pn**	**08 20 22.9**	**0.0**
N18K	**Kilae Creek**	**1.66**	**310**		**Pn**	**08 20 22.9**	**-0.3**
N18K				IAML		08 20 44.6	
	comp=N,281nm,0.9s						
SPU	**Mount Spurr**	**1.66**	**21**		**Pn**	**08 20 23.4**	**+0.2**
P17K	**Kvichak River**	**1.67**	**256**		**Pn**	**08 20 23.4**	**+0.2**
P17K				IAML		08 20 45.6	
	comp=N,344nm,1.0s						
P17K				IAML		08 21 23.7	
	comp=E,352nm,0.9s						
SPWE	**Spurr West**	**1.67**	**12**		**Pn**	**08 20 24.1**	**+0.6**
SPCN	**Chakachatna No**	**1.68**	**19**		**Pn**	**08 20 23.9**	**+0.5**
KABU	**Katmai Buttres**	**1.72**	**217**		**Pn**	**08 20 24.3**	**+0.2**
SPNN	**North Nagishla**	**1.75**	**10**		**Pn**	**08 20 24.8**	**+0.4**
SPCG	**Spurr Capps Gl**	**1.77**	**21**		**Pn**	**08 20 25.0**	**+0.3**
SLKM	**Skilak Lake**	**1.77**	**60**		**Pn**	**08 20 24.7**	**+0.1**
SLKM				IAML		08 20 48.6	
	comp=E,932nm,0.4s						
ACHA	**Angle Creek He**	**1.78**	**217**		**Pn**	**08 20 24.9**	**+0.1**
ANCK	**Angle Creek**	**1.84**	**219**		**Pn**	**08 20 25.7**	**+0.2**
KDAK	**Kodiak Island**	**1.91**	**168**	P	**Pn**	**08 20 25.4**	**-0.7**
KDAK				S	**Sn**	**08 20 48.6**	**-2.1**
	comp=E,37nm,0.3s,baz=21,slow=2.5,SNR=1074						
KDAK	**Kodiak Island**	**1.91**	**168**		**Pn**	**08 20 25.5**	**-0.7**
O17K	**Koliganek Bris**	**1.92**	**275**		**Pn**	**08 20 26.4**	**0.0**
Q16K	**King Salmon**	**1.98**	**242**		**Pn**	**08 20 27.5**	**+0.4**
O22K	**Cooper Landing**	**1.98**	**63**		**Pn**	**08 20 27.6**	**+0.5**
STLK	**Strandline Lak**	**2.00**	**21**		**Pn**	**08 20 27.7**	**+0.4**
SEW	**Seward**	**2.00**	**75**		**Pn**	**08 20 27.4**	**+0.1**
SEW				IAML		08 20 53.2	
	comp=N,479nm,0.7s						
SEW				IAML		08 21 00.3	
	comp=E,531nm,0.6s						
N17K	**Nushagak Hills**	**2.13**	**296**		**Pn**	**08 20 29.1**	**0.0**
N17K				IAML		08 20 55.3	
	comp=N,175nm,0.7s						
M18K	**Stony River**	**2.23**	**327**		**Pn**	**08 20 30.0**	**-0.3**
M20K	**Styx River**	**2.24**	**2**		**Pn**	**08 20 31.0**	**+0.5**
RC01	**Rabbit Creek A**	**2.29**	**49**		**Pn**	**08 20 31.4**	**+0.4**
M19K	**Big River Lodg**	**2.33**	**347**		**Pn**	**08 20 31.4**	**-0.1**
O16K	**Kokwok River B**	**2.43**	**271**		**Pn**	**08 20 33.1**	**+0.3**
OHAK	**Old Harbor**	**2.43**	**180**	P	**Pn**	**08 20 31.5**	**-1.4**
OHAK	**Old Harbor**	**2.43**	**180**		**Pn**	**08 20 31.7**	**-1.1**
OHAK				IAML		08 21 01.6	
	comp=E,297nm,0.3s						
OHAK				IAML		08 21 02.9	
	comp=N,274nm,0.5s						
P16K	**Nushagak River**	**2.48**	**258**		**Pn**	**08 20 34.0**	**+0.6**
P16K				IAML		08 21 04.6	
	comp=N,163nm,1.0s						
P16K				IAML		08 21 05.3	
	comp=E,116nm,0.8s						
PLK5	**Peulik 5**	**2.49**	**230**		**Pn**	**08 20 34.2**	**+0.6**
SKT	**Skwentna**	**2.50**	**20**		**Pn**	**08 20 34.0**	**+0.3**
SKT				IAML		08 21 08.6	
	comp=N,129nm,0.4s						
SKT				IAML		08 21 12.9	
	comp=E,134nm,0.6s						
PLK3	**Peulik 3**	**2.50**	**219**		**Pn**	**08 20 34.2**	**+0.4**
PLK1	**Peulik 1**	**2.53**	**224**		**Pn**	**08 20 34.4**	**+0.3**
PLK4	**Peulik 4**	**2.58**	**220**		**Pn**	**08 20 35.3**	**+0.5**
PLK4				IAML		08 21 12.5	
	comp=N,118nm,1.1s						
PLK4				IAML		08 21 29.1	
	comp=E,102nm,1.0s						
M22K	**Willow**	**2.63**	**35**		**Pn**	**08 20 35.8**	**+0.4**
L19K	**White M

RND	**Reindeer**	**4.33**	**28**	Pn		**Pn**	**08 20 57.9**	**-0.1**
RND				IAML			08 21 47.9	
	comp=N,41nm,0.7s							
RND				IAML			08 21 51.0	
	comp=E,41nm,0.4s							
RAGM	**Ragged Mountai**	**4.39**	**77**			**Pn**	**08 20 58.9**	**+0.1**
M14K	**Bethel**	**4.46**	**288**			**Pn**	**08 21 00.7**	**+1.1**
DHY	**Denali Highway**	**4.47**	**37**			**Pn**	**08 20 59.6**	**-0.3**
DHY				IAML			08 21 51.4	
	comp=E,101nm,0.4s							
DHY				IAML			08 21 54.1	
	comp=N,66nm,0.5s							
J19K	**Poorman**	**4.50**	**347**			**Pn**	**08 20 59.9**	**-0.3**
KAIM	**Kayak Island**	**4.50**	**83**	Pn		**Pn**	**08 21 00.9**	**+0.7**
KAIM				IAML			08 21 56.0	
	comp=N,121nm,0.7s							
BMRM	**Bremner River**	**4.53**	**69**			**Pn**	**08 21 00.8**	**+0.2**
BMRM				IAML			08 21 51.5	
	comp=E,140nm,0.4s							
J20K	**Nowinta River**	**4.56**	**355**			**Pn**	**08 21 01.1**	**+0.1**
MCK	**McKinley**	**4.60**	**25**			**Pn**	**08 21 01.7**	**+0.2**
MCK				IAML			08 22 11.6	
	comp=E,30nm,0.6s							
MCK				IAML			08 22 33.4	
	comp=N,45nm,1.1s							
BPAW	**Bear Paw Mtn.**	**4.60**	**13**			**Pn**	**08 21 01.7**	**+0.1**
BPAW				IAML			08 21 54.9	
	comp=N,22nm,0.7s							
N25K	**Chitina, Valde**	**4.72**	**62**			**Pn**	**08 21 02.8**	**-0.4**
K15K	**Wolf Creek Mou**	**4.80**	**307**			**Pn**	**08 21 05.3**	**+1.0**
SUCK	**Suckling Hills**	**4.82**	**81**	Pn		**Pn**	**08 21 04.8**	**+0.2**
SUCK				IAML			08 22 02.4	
	comp=N,61nm,0.6s							
SUCK				IAML			08 22 03.9	
	comp=E,61nm,0.5s							
BERG	**Berg Lake**	**4.88**	**77**			**Pn**	**08 21 05.5**	**+0.2**
L14K	**Kuka Creek**	**4.94**	**294**			**Pn**	**08 21 07.2**	**+1.1**
L14K				IAML			08 22 28.9	
	comp=E,24nm,1.3s							
L14K				IAML			08 22 29.6	
	comp=N,18nm,1.2s							
WACK	**Wrangell Chich**	**4.98**	**58**			**Pn**	**08 21 06.5**	**-0.4**
GLB	**Gilahina Butte**	**5.02**	**65**			**Pn**	**08 21 07.1**	**-0.2**
GLB				IAML			08 22 05.5	
	comp=E,100nm,0.4s							
PAX	**Paxson**	**5.04**	**45**			**Pn**	**08 21 07.5**	**0.0**
PAX				IAML			08 22 08.9	
	comp=N,40nm,0.6s							
PAX				IAML			08 22 19.4	
	comp=E,40nm,0.5s							
J16K	**Anvik River**	**5.05**	**319**			**Pn**	**08 21 07.7**	**+0.1**
M13K	**Dall Lake**	**5.09**	**283**	Pn		**Pn**	**08 21 09.7**	**+1.5**
VRDI	**Verde Repeater**	**5.13**	**68**			**Pn**	**08 21 09.0**	**+0.1**
VRDI				IAML			08 22 05.6	
	comp=N,89nm,0.4s							
VRDI				IAML			08 22 06.1	
	comp=E,67nm,0.5s							
CRQM	**Cirque**	**5.19**	**73**			**Pn**	**08 21 10.3**	**+0.6**
I20K	**Naaghedeneel**	**5.20**	**354**			**Pn**	**08 21 09.4**	**-0.1**
I20K				IAML			08 23 07.9	
	comp=N,50nm,0.9s							
I20K				IAML			08 23 20.4	
	comp=E,52nm,1.4s							
TGL	**Tana Glacier**	**5.34**	**73**			**Pn**	**08 21 11.9**	**+0.2**
TGL				IAML			08 22 12.4	
	comp=N,71nm,0.7s							
NEA2	**Nenana**	**5.35**	**20**			**Pn**	**08 21 11.0**	**-0.5**
NEA2				IAML			08 22 15.9	
	comp=E,13nm,0.5s							
MCARA	**McCarthy VSAT**	**5.37**	**67**			**Pn**	**08 21 12.4**	**+0.4**
WRH	**Wood River Hil**	**5.42**	**25**			**Pn**	**08 21 12.0**	**-0.6**
K24K	**Donnelly Dome**	**5.49**	**37**			**Pn**	**08 21 14.5**	**+1.0**
I17K	**Unalakleet**	**5.51**	**324**			**Pn**	**08 21 13.2**	**-0.6**
MLY	**Manley**	**5.53**	**11**			**Pn**	**08 21 13.5**	**-0.6**
I21K	**Tanana**	**5.59**	**6**			**Pn**	**08 21 14.8**	**0.0**
PTPK	**Patty Peak**	**5.59**	**69**			**Pn**	**08 21 15.4**	**+0.4**
BALM	**Baldy**	**5.62**	**71**			**Pn**	**08 21 15.2**	**-0.2**
HDA	**Harding Lake**	**5.64**	**29**			**Pn**	**08 21 14.9**	**-0.5**
CCB	**Clear Creek Bu**	**5.64**	**25**			**Pn**	**08 21 14.5**	**-1.0**
MENT	**Mentasta**	**5.68**	**50**			**Pn**	**08 21 16.6**	**+0.6**
M26K	**Nabesna, AK**	**5.72**	**57**			**Pn**	**08 21 17.1**	**+0.4**
MESA	**MESA**	**5.74**	**80**			**Pn**	**08 21 17.1**	**0.0**
RIDG	**Independent Ri**	**5.75**	**41**			**Pn**	**08 21 17.1**	**0.0**
SDPT	**Sand Point**	**5.79**	**225**	P		**Pn**	**08 21 16.3**	**-1.2**
SDPT	**Sand Point**	**5.79**	**225**	Pn		**Pn**	**08 21 16.8**	**-0.8**
I23K	**Minto, Yukon-K**	**5.82**	**17**			**Pn**	**08 21 17.6**	**-0.3**
COLA	**College**	**5.83**	**24**	P		**Pn**	**08 21 17.4**	**-0.7**
COLA	**College**	**5.83**	**24**			**Pn**	**08 21 17.3**	**-0.7**
GRNC	**Granite Creek**	**5.87**	**74**			**Pn**	**08 21 19.4**	**+0.6**
L26K	**Log Cabin Wild**	**5.87**	**50**			**Pn**	**08 21 18.5**	**-0.1**
CHNA	**Chernabura Isl**	**5.91**	**218**	P		**Pn**	**08 21 17.5**	**-1.7**
CNBA	**Chernabura Isl**	**5.92**	**218**	Pn		**Pn**	**08 21 17.7**	**-1.6**
BARN	**Barnard Glacie**	**5.95**	**71**			**Pn**	**08 21 20.6**	**+0.6**
IL31		**5.95**	**28**			**Pn**	**08 21 19.0**	**-0.7**
ILAR	**Eielson Array**	**5.95**	**28**	P		**Pn**	**08 21 18.7**	**-1.0**
	comp=E,17nm,0.4s,baz=216,slow=14,SNR=386							
ILAR				S		**Sn**	**08 22 22.9**	**-3.7**
	comp=E,3.0nm,0.4s,baz=211,slow=24,SNR=4.5							
DOT	**Dot Lake**	**5.96**	**44**			**Pn**	**08 21 19.7**	**-0.1**
H18K	**Honhosa River**	**6.00**	**339**			**Pn**	**08 21 20.3**	**-0.1**
CTGM	**Chitina Glacie**	**6.10**	**72**			**Pn**	**08 21 21.6**	**-0.3**
M27K	**Edge Creek, AK**	**6.19**	**59**			**Pn**	**08 21 24.1**	**+1.1**
SCRK	**Sand Creek**	**6.19**	**41**			**Pn**	**08 21 22.1**	**-1.0**
LOGN	**Logan Glacier**	**6.24**	**74**			**Pn**	**08 21 24.0**	**+0.2**
PS4A	**Pavlof South-4**	**6.31**	**231**			**Pn**	**08 21 25.1**	**+0.5**
HAG	**Hague Volcano**	**6.35**	**231**			**Pn**	**08 21 25.3**	**+0.1**
IMAR	**Indian Mountai**	**6.36**	**358**			**Pn**	**08 21 25.6**	**+0.4**
YUK2	**White River**	**6.48**	**65**			**Pn**	**08 21 26.6**	**-0.4**
BCAR	**Beaver Creek A**	**6.51**	**53**			**Pn**	**08 21 27.6**	**+0.2**
H16K	**Elim**	**6.52**	**324**			**Pn**	**08 21 27.1**	**-0.3**
PCA	**Pinnacle**	**6.59**	**80**			**Pn**	**08 21 29.0**	**+0.5**
DT1	**Dutton Round H**	**6.65**	**231**			**Pn**	**08 21 29.1**	**-0.1**
BVCY	**Beaver Creek**	**6.65**	**60**			**Pn**	**08 21 29.7**	**+0.5**
PRP	**Porcupine Dome**	**6.89**	**28**			**Pn**	**08 21 32.3**	**-0.3**
G15K	**Niukluk**	**7.32**	**322**			**Pn**	**08 21 39.2**	**+1.0**
ANM	**Nome**	**7.50**	**316**			**Pn**	**08 21 41.8**	**+1.2**
YUK6	**Outpost Mounta**	**7.54**	**74**			**Pn**	**08 21 41.5**	**+0.1**
COLD	**Coldfoot**	**7.74**	**9**			**Pn**	**08 21 43.3**	**-0.5**
YUK5	**Granite Creek**	**7.79**	**72**			**Pn**	**08 21 45.0**	**+0.2**
DAWY	**Dawson**	**7.92**	**50**			**Pn**	**08 21 46.2**	**-0.2**
HYT	**Haines Junctio**	**7.95**	**75**			**Pn**	**08 21 47.5**	**+0.5**
I27K	**Kandik River**	**8.03**	**37**			**Pn**	**08 21 47.3**	**-0.7**
SKAG	**Skagway**	**9.13**	**83**	P		**Pn**	**08 22 04.3**	**+1.6**
UNV	**Unalaska Valle**	**9.28**	**237**	P		**Pn**	**08 22 03.8**	**-1.0**
SIT	**Sitka**	**9.80**	**98**	P		**Pn**	**08 22 12.9**	**+1.2**
JIS	**Juneau Island**	**9.87**	**90**	P		**Pn**	**08 22 15.0**	**+2.4**
CRAG	**Craig**	**11.60**	**102**	P		**Pn**	**08 22 37.5**	**+1.6**
DLBC	**Dease Lake**	**12.03**	**86**	P		**Pn**	**08 22 45.0**	**+3.3**
	comp=E,2.9nm,0.4s,baz=293,slow=7.2,SNR=42							
DLBC				S		**Sn**	**08 24 51.8**	**-2.1**
	comp=E,1.3nm,0.7s,baz=96,slow=22,SNR=3.5							
INK	**Inuvik**	**12.21**	**36**	P		**Pn**	**08 22 43.7**	**-0.2**
	comp=E,0.6nm,0.4s,baz=226,slow=6.5,SNR=10							
INK	**Inuvik**	**12.21**	**36**	Pn		**Pn**	**08 22 44.1**	**+0.3**
MOBC	**Moresby Island**	**13.45**	**110**	Pn		**Pn**	**08 23 00.1**	**-0.1**
RUBB	**Prince Rupert**	**13.61**	**103**	Pn		**Pn**	**08 23 02.6**	**+0.5**
ADK	**Adak**	**15.21**	**250**	P		**P**	**08 23 24.4**	**-0.4**
ADK	**Adak**	**15.21**	**250**	Pn		**Pn**	**08 23 22.4**	**-0.2**
KIWB	**Kanaga Island**	**15.46**	**250**	Pn		**Pn**	**08 23 24.1**	**-1.4**
C36M	**Paulatuk**	**15.71**	**40**	Pn		**Pn**	**08 23 27.4**	**-1.2**
BBB	**Bella Bella**	**15.90**	**107**	P		**P**	**08 23 34.4**	**+2.0**
	comp=E,3.7nm,0.8s,baz=298,slow=15,SNR=1.6							
BBB	**Bella Bella**	**15.90**	**107**	Pn		**Pn**	**08 23 30.3**	**-0.8**
BBB				IAmb		IAmb	08 23 50.9	
	comp=Z,20nm,1.2s							
A36M	**Sachs Harbour**	**16.64**	**31**			**Pn**	**08 23 39.3**	**-0.7**
YKAW3	**Yellowknife Wh**	**18.73**	**64**	P		**P**	**08 24 04.5**	**+1.1**
YKA	**Yellowknife Ar**	**18.74**	**65**	P		**P**	**08 24 04.8**	**+1.3**
	comp=Z,0.3nm,0.6s,baz=292,slow=13,SNR=6.3							
YKA				S		**S**	**08 27 30.0**	**-0.4**
	comp=Z,0.2nm,0.7s,baz=197,slow=27,SNR=2.5							
YKA	**Yellowknife Ar**	**18.74**	**65**	P		**P**	**08 24 04.1**	**+0.6**
YKAW1	**Yellowknife Wh**	**18.80**	**65**	P		**P**	**08 24 03.8**	**-0.3**
HOOD	**Mount Hood Mea**	**23.72**	**113**	P		**P**	**08 24 54.7**	**-0.8**
HOOD				IAmb		IAmb	08 24 60.0	
	comp=Z,4.9nm,0.6s							
RES	**Resolute Bay**	**25.69**	**31**	P		**P**	**08 25 13.7**	**+0.9**
KMRM	**Mail Ridge**	**26.85**	**123**	P		**P**	**08 25 24.4**	**+0.8**
O03E	**Paynes Creek**	**27.61**	**120**	P		**P**	**08 25 29.8**	**-0.7**
BEKR	**Beckworth**	**28.60**	**119**	P		**P**	**08 25 37.3**	**-2.1**
BEKR				IAmb		IAmb	08 26 02.4	
	comp=Z,2.9nm,1.2s							
YHH	**Holmes Hill**	**29.35**	**101**	P		**P**	**08 25 47.5**	**+1.3**

FCC	**Fort Churchill**	**29.46**	**66**	P		**P**	**08 25 46.1**	**-0.4**
FCC				IAmb		IAmb	08 26 13.9	
	comp=Z,4.1nm,1.4s							
PNTR	**Pine Nut**	**29.57**	**119**	P		**P**	**08 25 47.8**	**-0.2**
PNTR				IAmb		IAmb	08 26 09.9	
	comp=Z,6.4nm,1.2s							
CMB	**Columbia Colle**	**30.10**	**121**	P		**P**	**08 25 52.0**	**-0.5**
CMB				IAmb		IAmb	08 26 08.8	
	comp=Z,5.5nm,1.4s							
SNOW	**Snow King Moun**	**30.36**	**103**	P		**P**	**08 25 55.6**	**+0.6**
SNOW				IAmb		IAmb	08 26 14.0	
	comp=Z,8.7nm,1.5s							
ILON	**Igloolik, Nuna**	**30.38**	**42**	P		**P**	**08 25 53.5**	**-1.0**
ILON				IAmb		IAmb	08 26 18.7	
	comp=Z,3.1nm,1.2s							
POIN	**Pond Inlet**	**30.64**	**35**	P		**P**	**08 25 57.0**	**+0.2**
NVAR	**Mina Array Bea**	**30.69**	**118**	P		**P**	**08 25 59.6**	**+1.8**
	comp=Z,0.9nm,0.6s,baz=317,slow=11,SNR=6.3							
	comp=Z,0.9nm,0.6s							
NVAR	**Mina Array Bea**	**30.69**	**118**	P		**P**	**08 25 57.2**	**-0.7**
MDPB	**Devils Postpil**	**31.00**	**120**	P		**P**	**08 26 01.1**	**+0.4**
MDPB				IAmb		IAmb	08 26 23.0	
	comp=Z,2.7nm,0.9s							
CCCA	**Chr Cany lake**	**33.52**	**120**	P		**P**	**08 26 21.5**	**-0.9**
CCCA				IAmb		IAmb	08 26 26.5	
	comp=Z,3.6nm,0.6s							
TXAR	**Lajitas Array**	**45.01**	**110**	P		**P**	**08 27 59.5**	**+1.6**
	comp=Z,0.3nm,0.7s,baz=331,slow=5.5,SNR=5.0							
	comp=Z,0.3nm,0.7s							
TXAR	**Lajitas Array**	**45.01**	**110**	P		**P**	**08 27 58.8**	**+0.9**
KSRS	**Korea Array**	**53.10**	**283**	P		**P**	**08 28 58.9**	**-0.4**
	comp=Z,1.0nm,0.4s,baz=39,slow=7.4,SNR=2.5							
	comp=Z,1.0nm,0.4s							
SONM	**Songino Array**	**54.87**	**306**	P		**P**	**08 29 12.3**	**+0.1**
	comp=Z,2.2nm,0.6s,baz=42,slow=6.6,SNR=11							
	comp=Z,2.2nm,0.6s							
SONM	**Songino Array**	**54.87**	**306**	P		**P**	**08 29 13.0**	**+0.8**
SONM				IAmb		IAmb	08 29 13.5	
	comp=Z,2.0nm,0.7s							
UNM	**Universidad Na**	**55.64**	**112**	P		**P**	**08 29 17.7**	**-0.5**
ZALV	**Zalesovo Beam**	**57.57**	**324**	P		**P**	**08 29 30.8**	**-0.3**
	comp=Z,1.4nm,0.4s,baz=40,slow=6.6,SNR=4.1							
	comp=Z,1.4nm,0.4s							
ZALV	**Zalesovo Beam**	**57.57**	**324**	P		**P**	**08 29 31.7**	**+0.6**
FINES	**FINESS Array B**	**59.24**	**0**	LR		LR	08 55 24.8	
	comp=Z,33nm,21.4s,baz=197,slow=36							
BVAR	**Borovoye Array**	**62.31**	**332**	P		**P**	**08 30 02.8**	**-0.7**
	comp=Z,2.2nm,0.6s,baz=16,slow=7.7,SNR=11							
	comp=Z,2.2nm,0.6s							
KURBB	**Kurchatov Arra**	**62.34**	**326**	P		**P**	**08 30 02.1**	**-1.6**
	comp=Z,0.4nm,0.5s,baz=30,slow=6.7,SNR=2.8							
	comp=Z,0.4nm,0.5s							
MKAR	**Makanchi Array**	**64.61**	**321**	P		**P**	**08 30 17.8**	**-1.0**
	comp=Z,0.2nm,0.4s,baz=53,slow=5.6,SNR=1.5							
	comp=Z,0.2nm,0.4s							
ABKAR	**Akbulak array**	**68.13**	**337**	P		**P**	**08 30 40.9**	**-0.2**
KKAR	**Karaay Array**	**71.45**	**328**	P		**P**	**08 31 00.8**	**-0.7**
BOSA	**Boshof**	**148.96**	**2**			**PKPdf**	**08 39 26.8**	**+2.9**
QSPA	**South Pole Qui**	**149.44**	**180**	PKPbc		**PKiKP**	**08 39 29.9**	**+1.0**

*IDC **16** 08:54:33.6±1.4,28°.63N×141°.71E,h0km,mb3.7/8, mbtmp3.7/8,MS3.0/2,Error ellipse: s-maj=53.7km s-min=22.0km az=69.0*
ISC 16 08:54:37.2±1.5,29°.2N±0°.2×141°.9E±0°.3,h10km,n14, σ0°56/9,mb3.8/8,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**7.92**	**338**	Pn	**Pn**	**08 56 32.6**	**+0.2**
	0.3nm,0.3s,baz=166,slow=5.9,SNR=12						
MJAR				Sn	**Sn**	**08 58 02.0**	**-0.1**
	0.1nm,0.3s,baz=297,slow=19,SNR=1.5						
KSRS	**Korea Array**	**14.27**	**309**	LR	LR	09 03 16.0	
	comp=Z,44nm,19.3s,baz=295,slow=36						
H11N2	**WAKE ISLAND Hy**	**24.58**	**107**	T	T	09 25 28.3	
	baz=297						
H11N1	**WAKE ISLAND Hy**	**24.59**	**107**	T	T	09 25 22.8	
	baz=297						
H11N3	**WAKE ISLAND Hy**	**24.60**	**107**	T	T	09 25 28.5	
	baz=297						
SONM	**Songino Array**	**33.03**	**314**	P	**P**	**09 01 13.1**	**+0.3**
	0.6nm,0.6s,baz=128,slow=9.3,SNR=4.2						
	0.6nm,0.6s						
CMAR	**Chiang Mai Arr**	**40.54**	**264**	LR	LR	09 19 16.3	
	comp=Z,28nm,20.5s,baz=115,slow=37						
ZALV	**Zalesovo Beam**	**47.73**	**318**	P	**P**	**09 03 13.8**	**-0.4**
	0.7nm,0.4s,baz=92,slow=8.9,SNR=3.8						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**48.95**	**308**	P	**P**	**09 03 22.6**	**-1.0**
	0.7nm,0.6s,baz=92,slow=10,SNR=8.4						
MKAR				PcP	**PcP**	**09 04 48.4**	**+0.6**
	0.3nm,0.6s,baz=106,slow=5.1,SNR=2.5						
	0.7nm,0.6s						
WRA	**Warramunga Arr**	**49.44**	**189**	P	P	09 03 20.6	-6.9
	0.4nm,0.6s,baz=6.3,slow=7.8,SNR=4.7						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**51.39**	**313**	P	**P**	**09 03 42.2**	**+0.1**
	1.3nm,0.5s,baz=89,slow=6.6,SNR=21						
	1.3nm,0.5s						
ASAR	**Alice Springs**	**53.16**	**189**	P	P	09 03 48.4	-7.1
	0.2nm,0.8s,baz=12,slow=6.1,SNR=4.6						
	0.2nm,0.8s						
BVAR	**Borovoye Array**	**56.32**	**316**	P	**P**	**09 04 18.6**	**+0.4**
	1.5nm,0.5s,baz=91,slow=7.6,SNR=9.7						
	1.5nm,0.5s						
TXAR	**Lajitas Array**	**94.51**	**53**	P	**P**	**09 07 58.1**	**-0.2**
	0.1nm,0.6s,baz=306,slow=4.9,SNR=3.7						
	0.1nm,0.6s						

*CATAC **16** 08:54:57.8±0.6,12°.N±5°.×9°.1W±°.,h13km±7km,M3.7/18, MLv3.7/18,Error ellipse: s-maj=12.9km s-min=5.9km az=43.9,confirmed*
*GCG **16** 08:55:01.5±0.9,12°.73N×90°.97W,h35km±46km,MD4.3, Presumed earthquake*
*SNET **16** 08:55:09.0±10.0,12°.47N×90°.05W,h32km,ML3.6, Presumed earthquake*
ISC 16 08:54:57.0±3.5,12°.5N±0°.1×90°.85W±0°.09,h4km±29km,n37, σ0°56/66,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	**Alcaldia de Sa**	**1.59**	**30**	P	**Pn**	**08 55 24.9**	**-1.1**
FAME				S	**Sn**	**08 55 46.2**	**-0.9**
JAYA	**Jayaque - finc**	**1.81**	**49**	P	**Pn**	**08 55 28.4**	**-0.7**
JAYA				S	**Sn**	**08 55 51.7**	**-0.9**
JAYA	**Jayaque - finc**	**1.81**	**49**	*eP*	**Pn**	**08 55 28.6**	**-0.5**
JAYA	**Jayaque - finc**	**1.81**	**49**	*eP*	**Pn**	**08 55 28.7**	**-0.5**
JAYA				*eS*	**Sn**	**08 55 52.5**	**-0.1**
CEVE	**Cerro Verde**	**1.81**	**41**	P	**Pn**	**08 55 28.6**	**-0.6**
CEVE				S	**Sn**	**08 55 53.5**	**+0.8**
CEVE	**Cerro Verde**	**1.81**	**41**	*eP*	**Pn**	**08 55 29.0**	**-0.2**
CEVE				*eS*	**Sb**	**08 55 54.0**	**+0.1**
FG8	**Yepocapa, Chim**	**1.81**	**9**	*iP*	**Pn**	**08 55 29.7**	**+0.6**
SBLS	**San Blas**	**1.81**	**41**	*eP*	**Pn**	**08 55 28.8**	**-0.5**
SBLS				*eS*	**Sn**	**08 55 53.0**	**+0.1**
RTR	**El Retiro**	**1.84**	**39**	*eP*	**Pn**	**08 55 29.4**	**-0.2**
SLOZ	**Alcaldia de Sa**	**1.87**	**34**	P	**Pn**	**08 55 28.9**	**-0.9**
SLOZ				S	**Sn**	**08 55 53.5**	**-0.5**
PMON	**Piamonte**	**1.94**	**50**	P	**Pn**	**08 55 30.6**	**-0.4**
PMON	**Piamonte**	**1.94**	**50**	*eP*	**Pn**	**08 55 30.9**	**-0.1**
PMON				*eS*	**Sn**	**08 55 56.8**	**+0.9**
UNIC	**Universidad Ca**	**1.97**	**40**	P	**Pn**	**08 55 30.4**	**-0.9**
UNIC				S	**Sn**	**08 55 56.4**	**-0.1**
STG5	**El Palmar, Qui**	**1.99**	**346**	*eP*	**Pb**	**08 55 33.6**	**-0.3**
STG5				*eS*	**Sb**	**08 55 58.6**	**-0.5**
UEES	**Universidad Ev**	**2.00**	**51**	P	**Pn**	**08 55 31.5**	**-0.3**
UEES				S	**Sn**	**08 55 57.5**	**+0.2**
SEMO	**Seminario San**	**2.00**	**52**	P	**Pn**	**08 55 31.5**	**-0.2**
SEMO				S	**Sn**	**08 55 57.6**	**+0.2**
UTEC	**Universidad Te**	**2.02**	**52**	P	**Pn**	**08 55 31.5**	**-0.5**
UTEC				S	**Sn**	**08 55 58.2**	**+0.4**
STG2	**El Palmar, Qui**	**2.03**	**345**	*eP*	**Pb**	**08 55 34.6**	**+0.1**
STG2				*eS*	**Sb**	**08 56 00.4**	**+0.2**
STG8	**El Palmar, Qui**	**2.04**	**346**	*eP*	**Pb**	**08 55 34.9**	**+0.2**
STG8				*eS*	**Sb**	**08 56 01.0**	**+0.4**
SJTE	**Alcalda de S**	**2.13**	**57**	*eP*	**Pn**	**08 55 33.0**	**-0.4**
SJTE				*eS*	**Sn**	**08 56 00.8**	**+0.4**
COEG	**Centro de Oper**	**2.23**	**59**	P	**Pn**	**08 55 34.3**	**-0.6**
COEG				S	**Sn**	**08 56 02.6**	**-0.4**
PAVA	**Las Pavas**	**2.24**	**56**	P	**Pn**	**08 55 35.2**	**+0.2**
PAVA				S	**Sn**	**08 56 03.8**	**+0.6**
SCLA	**Alcaldia de Sa**	**2.40**	**59**	P	**Pn**	**08 55 37.0**	**-0.2**
SCLA				S	**Sn**	**08 56 08.2**	**+1.1**

MTO3	**Montecristo**	**2.41**	**37**	P		**Pn**	**08 55 37.5**	**+0.1**
MTO3				S		**Sn**	**08 56 08.0**	**+0.5**
MTO3	**Montecristo**	**2.41**	**37**	*i* P		**Pn**	**08 55 37.3**	**-0.1**
LLGN	**La Laguna**	**2.51**	**47**	P		**Pn**	**08 55 38.3**	**-0.4**
LLGN				S		**Sn**	**08 56 10.0**	**+0.2**
P5NO	**Presa 5 de nov**	**2.54**	**53**	P		**Pn**	**08 55 38.7**	**-0.3**
P5NO				S		**Sn**	**08 56 10.4**	**0.0**
ESQI	**Esquipulas**	**2.55**	**35**	P		**Pn**	**08 55 39.1**	**-0.2**
ESQI				S		**Sn**	**08 56 10.8**	**0.0**
PACA	**Pacayal**	**2.66**	**68**	P		**Pn**	**08 55 41.0**	**+0.3**
PACA	**Pacayal**	**2.66**	**68**	*eP*		**Pn**	**08 55 41.0**	**+0.3**
PACA				*eS*		**Sn**	**08 56 14.4**	**+0.8**
HUEH	**Huehuetenango**	**2.91**	**347**	P		**Pn**	**08 55 45.1**	**+0.7**
HUEH				S		**Sn**	**08 56 18.9**	**-1.0**
LCND	**La Caada**	**3.00**	**73**	P		**Pn**	**08 55 45.4**	**0.0**
LCND				S		**Sn**	**08 56 22.4**	**+0.5**
LCND	**La Caada**	**3.00**	**73**	*eP*		**Pn**	**08 55 45.6**	**+0.1**
SARH	**Santa Rosa de**	**3.07**	**41**	P		**Pn**	**08 55 47.1**	**+0.7**
SARH				S		**Sn**	**08 56 23.6**	**+0.1**
SARH	**Santa Rosa de**	**3.07**	**41**	*i* P		**Pn**	**08 55 46.8**	**+0.4**
HERN	**Volcan Telica**	**3.92**	**87**	P		**Pn**	**08 55 58.3**	**+0.1**
HERN				S		**Sn**	**08 56 43.0**	**-1.8**
YUSH	**Yuscaran**	**4.17**	**69**	P		**Pn**	**08 56 01.6**	**0.0**
YUSH				S		**Sn**	**08 56 51.4**	**+0.4**

*THE **16** 09:04:58.2,35°.N±28°.×2°.7E±2°.2,h1km±25km,M3.4/4, MLh3.4/4*
*AFAD **16** 09:04:59.9,35°.14N×27°.15E,h3km±2km,ML2.9*
*ISK **16** 09:05:00.2,35°.19N×26°.99E,h5km,ML3.5/9*
*ATH **16** 09:05:00.5,35°.16N×27°.01E,h6km±2km,MLv3.2/7,Latitude uncertainty: 3 km; Longitude uncertainty: 2 km*
ISC 16 09:04:60.0±1.5,35°.08N±0°.06×26°.98E±0°.03,h1km±11km, n51,σ1s45/69,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.49**	**18**	P	**Pg**	**09 05 08.6**	**-0.7**
KARP				S	**Sg**	**09 05 16.8**	**+1.1**
KARP	**Karpathos**	**0.49**	**18**	Pg	**Pg**	**09 05 08.4**	**-0.9**
KARP				Sg	**Sg**	**09 05 15.2**	**-0.4**
KARP	**Karpathos**	**0.49**	**18**	P	**Pg**	**09 05 08.6**	**-0.7**
KARP				S	**Sg**	**09 05 14.1**	**-1.5**
ZKR	**Zakros**	**0.62**	**273**	P	**Pg**	**09 05 12.4**	**+0.5**
ZKR	**Zakros**	**0.62**	**273**	Pg	**Pg**	**09 05 12.1**	**+0.1**
ZKR	**Zakros**	**0.62**	**273**	P	**Pg**	**09 05 12.0**	**+0.1**
ZKR				S	**Sb**	**09 05 22.6**	**-0.3**
SIT2	**Siteia**	**0.72**	**280**	P	**Pb**	**09 05 14.9**	**-0.5**
STIA	**Sitia Lasithi**	**0.74**	**280**	P	**Pb**	**09 05 15.1**	**-0.5**
NPS	**Neapolis**	**1.13**	**279**	P	**Pb**	**09 05 22.4**	**0.0**
NPS				S	**Sn**	**09 05 40.3**	**+1.0**
NPS	**Neapolis**	**1.13**	**279**	P	**Pb**	**09 05 22.5**	**0.0**
ARG	**Arkhangelos**	**1.47**	**39**	P	**Pn**	**09 05 24.9**	**-2.8

n83,σ0⁰91/96, mb4.2/5, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZON	**Zonda**	**0.38**	**111**		**Pn**	**09 12 16.6**	**+0.1**
RTLS	**Leoncito**	**0.42**	**203**	*i* P	**Pn**	**09 12 17.2**	**+0.2**
RTLS				*e*S	**Sn**	**09 12 30.5**	**+0.2**
RTLS				IAML		09 12 31.9	
	comp=Z,4μm,0.2s						
SJA	**San Juan**	**0.47**	**105**	*i* P	**Pn**	**09 12 16.6**	**-0.3**
SJA				*e*S	**Sn**	**09 12 29.4**	**-0.9**
SJA				IAML		09 12 31.7	
	comp=Z,3μm,0.3s						
RTLL	**Cerro Villicun**	**0.54**	**82**	*i* P	**Pn**	**09 12 17.3**	**-0.1**
RTLL				*e*S	**Sn**	**09 12 30.6**	**-0.3**
RTLL				IAML		09 12 31.2	
	comp=Z,8μm,0.3s						
CFA	**Coronel Fontan**	**0.76**	**105**	P	**Pn**	**09 12 19.1**	**+0.1**
	comp=Z,225nm,0.3s,baz=266,slow=4.8,SNR=3408						
CFA				S	**Sn**	**09 12 33.9**	**-0.1**
	comp=Z,1μm,0.2s,baz=217,slow=20,SNR=28						
CFA	**Coronel Fontan**	**0.76**	**105**	*i* P	**Pn**	**09 12 18.4**	**-0.7**
CFA				*e*S	**Sn**	**09 12 33.9**	**-0.1**
CFA				IAML		09 12 35.9	
	comp=Z,4μm,0.2s						
ACCO	**Cerro Coronel**	**0.82**	**2**	*i* P	**Pn**	**09 12 20.3**	**+0.4**
ACCO				*e*S	**Sn**	**09 12 36.6**	**+1.2**
ACDV	**Cuesta del Vie**	**1.23**	**359**	*i* P	**Pn**	**09 12 24.4**	**+0.6**
ACDV				*e*S	**Sn**	**09 12 43.2**	**+0.8**
ACDV				IAML		09 12 43.6	
	comp=Z,3μm,0.6s						
AROD	**Rodeo**	**1.28**	**345**	*i* P	**Pn**	**09 12 25.2**	**+0.7**
ARCO	**CERRO ARCO**	**1.44**	**174**	*i* P	**Pn**	**09 12 26.7**	**+0.6**
ARCO				*e*S	**Sn**	**09 12 48.0**	**+1.6**
ARCO				IAML		09 12 49.9	
	comp=Z,692nm,0.7s						
CO03	**El Pedregal**	**1.48**	**292**		**Pn**	**09 12 27.0**	**+0.5**
CO03	**El Pedregal**	**1.48**	**292**	*i* P	**Pn**	**09 12 26.2**	**-0.3**
CO03				IAML		09 12 48.7	
	comp=Z,2μm,0.3s						
AVFE	**Valle Fertil**	**1.60**	**63**	*i* P	**Pn**	**09 12 28.1**	**+0.2**
AVFE				*e*S	**Sn**	**09 12 49.6**	**+0.1**
AVFE				IAML		09 12 50.4	
	comp=Z,2μm,0.3s						
CO02	**Combarbal**	**1.64**	**277**		**Pn**	**09 12 28.7**	**+0.3**
CO02	**Combarbal**	**1.64**	**277**	*i* P	**Pn**	**09 12 27.8**	**-0.6**
CO02				IAML		09 12 53.7	
	comp=Z,2μm,0.3s						
CO01	**Juntas del Tor**	**1.67**	**329**		**Pn**	**09 12 30.3**	**+1.4**
CO01	**Juntas del Tor**	**1.67**	**329**	*i* P	**Pn**	**09 12 29.6**	**+0.7**
CO01				IAML		09 12 55.8	
	comp=Z,562nm,0.3s						
AAGR	**Agrelo**	**1.69**	**172**	*i* P	**Pn**	**09 12 29.6**	**+0.6**
AAGR				IAML		09 12 54.9	
	comp=Z,569nm,0.3s						
CO04	**Los Peladeros**	**1.72**	**248**		**Pn**	**09 12 29.4**	**-0.1**
VA03	**San Esteban**	**1.83**	**222**		**Pn**	**09 12 31.3**	**+0.7**
VA03	**San Esteban**	**1.83**	**222**	*i* P	**Pn**	**09 12 31.4**	**+0.7**
VA03				IAML		09 12 59.5	
	comp=Z,292nm,0.3s						
ACAN	**Cantantal**	**1.84**	**118**	*i* P	**Pn**	**09 12 31.5**	**+0.8**
ACAN				*e*S	**Sn**	**09 12 54.3**	**-0.4**
ACAN				IAML		09 12 55.7	
	comp=Z,3μm,0.5s						
GO04	**Tololo Observa**	**1.91**	**310**		**Pn**	**09 12 31.8**	**-0.1**
GO04	**Tololo Observa**	**1.91**	**310**	*i* P	**Pn**	**09 12 31.8**	**-0.1**
GO04				IAML		09 13 00.4	
	comp=Z,4μm,0.3s						
ACHE	**Chepes**	**2.10**	**84**	*i* P	**Pn**	**09 12 34.4**	**+0.3**
AVIZ	**Vizcacheras**	**2.12**	**167**	*i* P	**Pn**	**09 12 34.9**	**+0.7**
AVIZ				*e*S	**Sn**	**09 13 00.7**	**-0.3**
MT08	**Bocatoma Ro**	**2.17**	**201**		**Pn**	**09 12 36.4**	**+1.2**
PEL	**Peldehue**	**2.19**	**217**		**Pn**	**09 12 35.4**	**+0.2**
VA06	**Catapilco**	**2.19**	**238**		**Pn**	**09 12 34.5**	**-0.6**
CO06	**Fray Jorge**	**2.30**	**288**		**Pn**	**09 12 35.0**	**-1.5**
MT16	**CCHEN**	**2.35**	**211**		**Pn**	**09 12 37.8**	**+0.6**
CO05	**La Serena**	**2.37**	**308**		**Pn**	**09 12 36.7**	**-0.6**
MT03	**Universidad Ad**	**2.40**	**209**		**Pn**	**09 12 38.3**	**+0.5**
MT03	**Universidad Ad**	**2.40**	**209**	*e*P	**Pn**	**09 12 38.6**	**+0.8**
MT03				IAML		09 13 15.9	
	comp=Z,220nm,0.4s						
MT05	**Renca**	**2.42**	**215**		**Pn**	**09 12 38.4**	**+0.4**
MT05	**Renca**	**2.42**	**215**	*e*P	**Pn**	**09 12 38.4**	**+0.4**
MT05				IAML		09 13 10.4	
	comp=Z,244nm,0.7s						
MT02	**Curacav**	**2.53**	**223**		**Pn**	**09 12 39.0**	**-0.4**
MT02	**Curacav**	**2.53**	**223**	*e*P	**Pn**	**09 12 38.7**	**-0.7**
MT02				IAML		09 13 15.2	
	comp=Z,80nm,0.3s						
MT13	**San Alfonso**	**2.54**	**203**		**Pn**	**09 12 40.6**	**+1.0**
MT13	**San Alfonso**	**2.54**	**203**	*i* P	**Pn**	**09 12 40.5**	**+0.9**
MT13				IAML		09 13 17.8	
	comp=Z,103nm,0.9s						
ACLC	**CERRO LA CRUZ**	**2.71**	**44**	*i* P	**Pn**	**09 12 42.0**	**0.0**
ACLC				*e*S	**Sn**	**09 13 14.8**	**0.0**
ACLC				IAML		09 13 16.0	
	comp=Z,204nm,0.5s						
AC05	**El Transito**	**2.76**	**338**		**Pn**	**09 12 43.6**	**+1.0**
AC05	**El Transito**	**2.76**	**338**	*i* P	**Pn**	**09 12 43.5**	**+1.0**
AC05				IAML		09 13 19.8	
	comp=Z,252nm,0.5s						
LCO	**Las Campanas**	**2.76**	**329**		**Pn**	**09 12 42.3**	**-0.4**
VCA	**Vinchina**	**2.77**	**16**	*i* P	**Pn**	**09 12 43.5**	**+0.7**
VCA				*e*S	**Sn**	**09 13 16.8**	**+0.6**
VCA				IAML		09 13 20.9	
	comp=Z,599nm,0.3s						
MT09	**Talagante**	**2.85**	**214**		**Pn**	**09 12 43.2**	**-0.5**
BO04	**La Punta**	**2.87**	**206**		**Pn**	**09 12 44.2**	**+0.2**
MRA	**San Martin**	**3.05**	**110**	*e*P	**Pn**	**09 12 46.6**	**+0.3**
MRA				*i* P		09 12 46.7	
MRA				IAML		09 13 46.5	
	comp=Z,259nm,0.7s						
MT01	**Popeta**	**3.05**	**216**	*e*P	**Pn**	**09 12 44.7**	**-1.5**
RFA	**San Rafael**	**3.39**	**171**	*e*P	**Pn**	**09 12 50.4**	**-0.5**
RFA				IAML		09 13 31.4	
	comp=Z,140nm,0.5s						
BO01	**Tunca**	**3.41**	**209**		**Pn**	**09 12 49.9**	**-1.1**
BO01	**Tunca**	**3.41**	**209**	*i* P	**Pn**	**09 12 49.1**	**-1.9**
BO01				IAML		09 13 38.3	
	comp=Z,41nm,0.7s						
TINO	**Tinogasta**	**3.59**	**22**	*i* P	**Pn**	**09 12 54.2**	**+0.6**
TINO				*i* P	**Pn**	**09 12 54.2**	**+0.6**
AC04	**Llanos de Chal**	**3.62**	**331**		**Pn**	**09 12 52.9**	**-1.0**
AC04	**Llanos de Chal**	**3.62**	**331**	*i* P	**Pn**	**09 12 52.6**	**-1.2**
AC04				*i* P	**Pn**	**09 12 52.6**	**-1.2**
AC04				IAML		09 14 02.0	
	comp=Z,108nm,0.8s						
BO02	**Sierra Bellavi**	**3.66**	**202**		**Pn**	**09 12 54.1**	**-0.2**
BO02	**Sierra Bellavi**	**3.66**	**202**	*i* P	**Pn**	**09 12 53.4**	**-0.9**
BO02				*i* P	**Pn**	**09 12 53.4**	**-0.9**
BO02				IAML		09 13 50.9	
	comp=Z,50nm,0.2s						
TCA	**Tanti**	**3.85**	**90**	*i* P	**Pn**	**09 12 56.6**	**-0.4**
TCA				IAML		09 13 57.0	
	comp=Z,149nm,1.1s						
GO03	**Copiapo**	**3.93**	**345**	*i* P	**Pn**	**09 12 57.5**	**-0.5**
GO03				IAML		09 13 46.5	
	comp=Z,128nm,0.3s						
AC02	**Maricunga**	**4.56**	**360**		**Pn**	**09 13 07.0**	**+0.3**
AC02	**Maricunga**	**4.56**	**360**	*i* P	**Pn**	**09 13 07.1**	**+0.3**
AC02				IAML		09 14 08.4	
	comp=Z,68nm,0.4s						
BI02	**San Fabin de**	**5.54**	**198**		**Pn**	**09 13 18.2**	**-1.4**
GO06	**Curarrehue**	**8.38**	**193**	Pn	**Pn**	**09 13 55.9**	**-2.1**
TRQA	**Tornquist**	**8.85**	**140**		**Pn**	**09 14 03.5**	**-0.7**
PLCA	**Paso Flores**	**9.38**	**187**	P	**Pn**	**09 14 10.7**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=17,slow=19,SNR=1.9						
PB09	**IPOC Station P**	**9.57**	**359**	Pn	**Pn**	**09 14 11.3**	**-3.0**
CPUP	**Villa Florida**	**11.49**	**67**	P	**Pn**	**09 14 36.8**	**-3.0**
	comp=Z,0.9nm,0.6s,baz=244,slow=11,SNR=5.7						
LPAZ	**La Paz**	**15.08**	**4**	P	**Pn**	**09 15 27.8**	**+0.8**
	comp=Z,3.1nm,0.7s,baz=188,slow=6.0,SNR=12						
LPAZ	**La Paz**	**15.08**	**4**		**Pn**	**09 15 28.5**	**+1.6**
SIV	**San Ignacio**	**17.00**	**27**	P	**P**	**09 15 50.1**	**0.0**
	comp=Z,0.4nm,0.5s,baz=195,slow=12,SNR=2.4						
MG03	**Isla Dawson**	**22.45**	**182**	P	**P**	**09 16 49.1**	**+0.8**
MG03				IAmb	IAmb	09 17 10.5	
	comp=Z,14nm,1.1s						
ATAH	**Atahualpa**	**25.67**	**338**	LR	LR	09 27 29.6	
	comp=Z,40nm,18.5s,baz=69,slow=36						
BELA	**Belgrano 2**	**49.01**	**171**	P	**P**	**09 20 34.9**	**+1.4**
BELA				IAmb	IAmb	09 20 43.7	
	comp=Z,6.0nm,1.5s						
SNAA	**Sanae**	**53.07**	**159**	P	**P**	**09 21 04.4**	**+0.3**
	comp=Z,2.1nm,0.4s,baz=226,slow=5.7,SNR=3.8						
	comp=Z,2.1nm,0.4s						
SNAA	**Sanae**	**53.07**	**159**	IAmb	IAmb	09 21 05.4	
	comp=Z,4.2nm,0.9s						
QSPA	**South Pole Qui**	**58.82**	**180**	P	**P**	**09 21 46.0**	**+0.9**
	comp=Z,3.3nm,0.7s,baz=164,slow=1.4,SNR=19						
	comp=Z,3.3nm,0.7s						
QSPA	**South Pole Qui**	**58.82**	**180**	IAmb	IAmb	09 21 47.1	
	comp=Z,3.4nm,0.7s						
TXAR	**Lajitas Array**	**68.78**	**328**	P	**P**	**09 22 52.3**	**+1.5**
	comp=Z,0.5nm,1.1s,baz=150,slow=5.9,SNR=2.8						
	comp=Z,0.5nm,1.1s						
TORD	**Torodi Ar. Bea**	**80.98**	**69**	P	**P**	**09 24 01.3**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=236,slow=7.9,SNR=3.8						
	comp=Z,0.7nm,0.8s						
ASAR	**Alice Springs**	**120.97**	**205**	PKP	**PKPdf**	**09 30 37.6**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=139,slow=1.5,SNR=2.4						
WRA	**Warramunga Arr**	**124.21**	**207**	PKP	**PKPdf**	**09 30 43.9**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=155,slow=1.9,SNR=11						
ZALV	**Zalesovo Beam**	**150.72**	**32**	PKPbc	**PKiKP**	**09 31 37.8**	**0.0**
	comp=Z,1.5nm,0.6s,baz=298,slow=3.2,SNR=4.3						
MKAR	**Makanchi Array**	**153.19**	**47**	PKPbc	**PKPbc**	**09 31 42.3**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=296,slow=2.1,SNR=4.2						

VAO ***16*** *09:24:59.0±0.4, 15.°05S×56.°22W, h0km, mbR2.5, Presumed earthquake*
OSUNB ***16*** *09:25:00.1±0.4, 15.°07S×56.°21W, h0km, mR2.3/1, Error ellipse: s-maj=2.5km s-min=2.4km az=0.0*

ISC 16 09:24:59.2±0.9, 15.°09S±0.°04×56.°29W±0.°05, h10km, n7, σ1⁰47/14, Brazil

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAS01	**UHE Manso**	**0.50**	**66**	P	**Pg**	**09 25 08.5**	**-0.5**
MAS01				S	**Sg**	**09 25 14.7**	**-0.8**
SALV	**Santo Antonio**	**0.99**	**145**	P	**Pg**	**09 25 17.6**	**-0.7**
SALV				S	**Sg**	**09 25 30.6**	**-0.6**
SALV	**Santo Antonio**	**0.99**	**145**	*e*P	**Pg**	**09 25 17.4**	**-0.9**
SALV				*e*S	**Sg**	**09 25 30.3**	**-0.9**
PTLB	**Pontes e Lacer**	**2.77**	**262**	P	**Pb**	**09 25 48.7**	**-0.2**
PTLB				S	**Sb**	**09 26 22.3**	**-0.7**
PTLB	**Pontes e Lacer**	**2.77**	**262**	*e*P	**Pb**	**09 25 46.6**	**-2.4**
PTLB				*e*S	**Sn**	**09 26 19.7**	**+2.4**
PP1B	**Ponte de Pedra**	**2.84**	**152**	*e*P	**Pn**	**09 25 46.1**	**+1.4**
PP1B				*e*S	**Sn**	**09 26 21.1**	**+2.1**
PDRB	**Porto dos Gac**	**3.48**	**353**	*e*P	**Pn**	**09 25 54.9**	**+1.4**
PDRB				*e*S	**Sn**	**09 26 35.3**	**+0.4**

IDC 16 09:26:58.3±10.0, 28.°48N×139.°45E, h385km±70km, mb3.2/4, mbtmp3.8/5, Error ellipse: s-maj=100.7km s-min=82.3km az=156.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**8.11**	**353**	P	Pn	09 28 53.8	-0.4
	0.4nm,0.3s,baz=240,slow=5.5,SNR=5.8						
MJAR				S	S	09 30 28.7	-0.4
	11nm,1.4s,baz=183,slow=21,SNR=2.9						
SONM	**Songino Array**	**32.04**	**316**	P	P	09 32 52.0	+1.2
	0.5nm,0.4s,baz=126,slow=8.2,SNR=3.7						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**47.73**	**309**	P	P	09 34 57.5	-0.5
	0.4nm,0.6s,baz=92,slow=8.8,SNR=5.9						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**50.34**	**314**	P	P	09 35 17.3	-0.1
	1.2nm,0.4s,baz=92,slow=8.1,SNR=18						
	1.2nm,0.4s						
FINES	**FINESS Array B**	**75.63**	**333**	P	P	09 38 01.3	-0.4
	4.0nm,1.0s,baz=59,slow=5.4,SNR=2.1						
	4.0nm,1.0s						

IDC 16 09:28:39.4±2.3, 6.°39S×129.°04E, h0km, mb3.5/1, mbtmp3.3/3, ML3.3/2, MS2.7/1, Error ellipse: s-maj=133.2km s-min=32.8km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.92**	**22**	LR	LR	09 33 09.7	
	comp=Z,72nm,19.2s,baz=80,slow=46						
WRA	**Warramunga Arr**	**14.43**	**160**	Pn	Pn	09 32 04.2	-0.9
	0.2nm,0.3s,baz=338,slow=13,SNR=11						
WRA				Sn	Sn	09 34 32.3	-14
	0.2nm,0.3s,baz=359,slow=22,SNR=7.4						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**17.81**	**165**	P	P	09 32 49.5	-0.3
	0.1nm,0.3s,baz=343,slow=9.6,SNR=12						
ASAR				S	Sn	09 35 55.8	-12
	0.1nm,0.5s,baz=356,slow=26,SNR=1.7						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**67.19**	**327**	P	P	09 39 35.4	0.0
	0.2nm,0.4s,baz=121,slow=8.3,SNR=2.9						
	0.2nm,0.4s						

IDC ***16*** *09:35:44.9±1.6, 0.°59N×126.°55E, h0km, mb3.8/3, mbtmp3.8/4, ML3.2/1, MS3.1/1, Error ellipse: s-maj=112.4km s-min=23.9km az=68.0*
DJA ***16*** *09:35:50.3±0.8, 0.°N±3.°×12.°6E±.°, h12km±6km, M3.8/12, MLv3.8/12*

ISC 16 09:35:51.4±1.0, 0.°32N±0.°07×125.°99E±0.°09, h35km, n9, σ1⁰30/9, mb3.8/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.44**	**72**	P	**Pn**	**09 36 15.9**	**+0.9**
MNI	**Manado**	**1.60**	**314**	P	**Pn**	**09 36 18.2**	**+0.9**
SANI	**Sanana**	**2.35**	**180**	P	**Pn**	**09 36 28.1**	**+0.5**
NLAI	**Namlea**	**3.71**	**163**	P	**Pn**	**09 36 47.0**	**+0.9**
JAY	**Jayapura**	**14.97**	**101**	LR	LR	09 45 14.7	
	comp=Z,81nm,21.4s,baz=276,slow=39						
FITZ	**Fitzroy Crossi**	**18.31**	**181**	P	**Pn**	**09 40 04.2**	**+1.6**
	0.1nm,0.3s,baz=27,slow=6.8,SNR=2.2						
	1.4nm,0.8s						
WRA	**Warramunga Arr**	**21.73**	**158**	P	**P**	**09 40 38.0**	**-1.9**
	2.8nm,0.6s,baz=338,slow=12,SNR=18						
	2.8nm,0.6s						
ASAR	**Alice Springs**	**25.05**	**163**	P	**P**	**09 41 11.8**	**-0.8**
	0.6nm,0.5s,baz=340,slow=8.2,SNR=23						
ASAR				PcP	**PcP**	**09 44 46.8**	**-0.2**
	0.3nm,0.6s,baz=353,slow=1.6,SNR=5.1						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**59.95**	**327**	P	**P**	**09 45 53.3**	**-0.9**
	0.8nm,0.5s,baz=124,slow=8.3,SNR=6.8						
	0.8nm,0.5s						

IDC ***16*** *09:38:26.9±0.6, 54.°84N×111.°78E, h0km, mb3.8/19, mbtmp3.9/24, ML3.8/4, MS3.2/14, Error ellipse: s-maj=16.1km s-min=12.1km az=142.0*
MOS ***16*** *09:38:27.5±1.2, 54.°85N×111.°75E, h12km, mb4.1/6, Error ellipse: s-maj=8.7km s-min=5.4km az=74.1*
BJI ***16*** *09:38:27.7, 54.°81N×112.°09E, h7km, mB4.4/1, mb4.1/7, ML4.7/1, Ms4.2/2, Ms7 4.0/2*
BYKL ***16*** *09:38:28.6±0.1, 54.°87N×111.°71E, h8km±2km*
NEIC ***16*** *09:38:29.2±2.2, 54.°85N±0.°10×111.°8E±0.°1, h10km±1km, mb4.1/30, Error ellipse: s-maj=16.7km s-min=12.7km az=186.0*

ISC 16 09:38:28.1±0.4, 54.°82N±0.°02×111.°79E±0.°02, h10km, n147, σ2⁰42/207, mb4.1/31, MS3.0/11, 16C-6D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YLYR	**Ulyunkhan**	**0.37**	**279**	⇑*i*PG	**Pg**	**09 38 34.6**	**-0.9**
YLYR				*e*		09 38 39.2	
YLYR				pmax	pmax		
	comp=Z,7μm,0.3s						
YLYR				smax	smax		
	comp=N,27μm,0.6s						
YLYR	**Ulyunkhan**	**0.37**	**279**	⇑*i*Pg	**Pg**	**09 38 34.6**	**-0.9**
YLYR				Pmax		09 38 34.8	
	comp=N,7μm,0.4s						
YLYR				*e*Sg	**Sg**	**09 38 38.7**	**-1.7**
YLYR				Smax		09 38 39.6	
	comp=N,28μm,0.5s						
KMO	**Kumora**	**1.12**	**343**	⇑*i*PG	**Pb**	**09 38 47.4**	**-2.2**
KMO				*e*		09 39 01.5	
KMO				pmax	pmax		
	comp=Z,2μm,0.4s						
KMO				smax	smax		
	comp=E,5μm,1.1s						
KMO	**Kumora**	**1.12**	**343**	⇑*i*Pg	**Pb**	**09 38 47.5**	**-2.2**
KMO				Pmax		09 38 48.0	
	comp=E,2μm,0.4s						
KMO				*e*Sg	**Sg**	**09 39 01.5**	**-2.8**
KMO				*e*		09 39 08.0	
KMO				max		09 39 10.9	
	comp=E,5μm,1.1s						
UKT	**Uakit**	**1.25**	**57**	⇑*i*PG	**Pb**	**09 38 50.9**	**-0.9**
UKT				*e*		09 39 07.7	
UKT				pmax	pmax		
	comp=Z,168nm,0.2s						
UKT				smax	smax		
	comp=N,7μm,0.3s						
UKT	**Uakit**	**1.25**	**57**	⇑*i*Pg	**Pn**	**09 38 50.8**	**-0.9**
UKT				*e*		09 38 53.2	
UKT				max		09 38 56.8	
	comp=N,929nm,0.5s						
UKT				*e*Sg	**Sn**	**09 39 07.6**	**-1.0**
UKT				*e*		09 39 12.4	
UKT				max		09 39 13.0	
	comp=N,11μm,0.5s						
YOAB	**Uoyan, Buryati**	**1.32**	**358**	*e*PG	**Pb**	**09 38 52.1**	**-1.0**
YOAB				*e*		09 39 08.9	
YOAB				pmax	pmax		
	comp=Z,703nm,0.2s						
YOAB				smax	smax		
	comp=N,4μm,0.4s						
YOAB	**Uoyan, Buryati**	**1.32**	**358**	*e*Pg	**Pg**	**09 38 52.2**	**-1.4**
YOAB				*e*		09 38 54.4	
YOAB				max		09 38 54.5	
	comp=N,698nm,0.2s						
YOAB				*e*Sg	**Sb**	**09 39 08.9**	**-1.2**
YOAB				Smax		09 39 17.6	
	comp=N,5μm,0.5s						
SYVR	**Suvo**	**1.57**	**223**	⇓*i*PN	**Pg**	**09 38 57.2**	**-1.0**
SYVR				*e*		09 39 18.9	
SYVR				pmax	pmax		
	comp=Z,729nm,0.8s						
SYVR				smax	smax		
	comp=E,3μm,1.4s						
SYVR	**Suvo**	**1.57**	**223**	*e*Pg	**Pg**	**09 38 57.1**	**-1.1**
SYVR				Pmax		09 39 00.7	
	comp=E,722nm,0.8s						
SYVR				*e*Sg	**Sg**	**09 39 18.2**	**-0.4**
SYVR				*e*		09 39 24.3	
SYVR				max		09 39 25.2	
	comp=E,3μm,1.2s						
NIZB	**Nizh Angarsk**	**1.60**	**307**	⇑*i*PN	**Pb**	**09 38 56.1**	**-1.7**
NIZB				*e*		09 39 17.2	
NIZB				pmax	pmax		
	comp=Z,706nm,0.5s						
NIZB				smax	smax		
	comp=E,7μm,0.6s						
NIZB	**Nizh Angarsk**	**1.60**	**307**	⇑*i*Pg	**Pb**	**09 38 56.1**	**-1.7**
NIZB				Pmax		09 38 59.2	
	comp=E,708nm,0.4s						
NIZB				*e*Sg	**Sb**	**09 39 17.2**	**-0.9**
NIZB				Smax		09 39 20.9	
	comp=E,8μm,0.7s						
SVKR	**Severomuysk**	**1.64**	**37**	*e*PN	**Pg**	**09 38 59.0**	**-0.6**
SVKR				*e*		09 39 20.7	
SVKR				pmax	pmax		
	comp=Z,1μm,0.3s						
SVKR				smax	smax		
	comp=E,7μm,0.4s						
SVKR	**Severomuysk**	**1.64**	**37**	*e*Pg	**Pg**	**09 38 58.8**	**-0.8**
SVKR				Pmax		09 38 59.9	
	comp=E,1μm,0.3s						
SVKR				*e*Sg	**Sg**	**09 39 20.7**	**-0.2**
SVKR				Smax		09 39 29.9	
	comp=E,7μm,0.6s						
OGRR	**Ongureny**	**2.73**	**246**	⇓*i*PN	**Pn**	**09 39 13.2**	**+1.2**
OGRR				*e*		09 39 17.8	
OGRR				*e*		09 39 52.5	
OGRR				pmax	pmax		
	comp=Z,310nm,1.5s						
OGRR				smax	smax		
	comp=E,1μm,1.1s						
OGRR	**Ongureny**	**2.73**	**246**	⇓*i*Pn	**Pn**	**09 39 13.2**	**+1.2**
OGRR				*e*Pg	**Pb**	**09 39 16.4**	**-0.6**
OGRR				Pmax		09 39 19.6	
	comp=E,193nm,0.4s						
OGRR				*e*Sn	**Sn**	**09 39 44.5**	**-0.6**
OGRR				*e*		09 39 47.4	
OGRR				*e*Sg	**Sg**	**09 39 52.4**	**-3.4**
OGRR				Smax		09 39 56.4	
	comp=E,1μm,0.6s						
GORB	**Goryachinsk**	**2.77**	**230**	⇓*i*Pn	**Pn**	**09 39 14.0**	**+1.4**
GORB				*e*Pg	**Pb**	**09 39 17.9**	**+0.2**
GORB				*e*Sn	**Sn**	**09 39 46.3**	**+0.2**
GORB				*e*Sg	**Sg**	**09 39 53.8**	**-3.3**
NLYR	**Nelyaty**	**2.78**	**51**	⇓*i*PN	**Pn**	**09 39 14.0**	**+1.4**
NLYR				*e*		09 39 19.2	
NLYR				*e*		09 39 53.9	
NLYR				pmax	pmax		
	comp=Z,267nm,0.8s						
NLYR				smax	smax		
	comp=N,2μm,0.8s						
NLYR	**Nelyaty**	**2.78**	**51**	⇓*i*Pn	**Pn**	**09 39 14.1**	**+1.4**
NLYR				*e*		09 39 17.0	
NLYR				*e*Pg	**Pg**	**09 39 19.0**	**-2.3**
NLYR				Pmax		09 39 22.2	
	comp=N,281nm,0.8s						
NLYR				*e*		09 39 44.7	
NLYR				*e*Sg	**Sg**	**09 39 55.1**	**-2.2**
NLYR				Smax		09 39 56.2	
	comp=N,2μm,0.8s						
NLYR				*e*SgSg	**SbSb**	**09 40 01.9**	**+4.9**
UZR	**Uzur**	**2.82**	**240**	*e*Pn	**Pn**	**09 39 14.1**	**+0.9**
UZR				*e*Pg	**Pb**	**09 39 18.2**	**-0.3**
UZR				Pmax		09 39 21.3	
	comp=N,182nm,0.7s						
UZR				*e*Sn	**Sn**	**09 39 46.2**	**-1.1**
UZR				*e*Sg	**Sg**	**09 39 55.2**	**-3.4**
UZR				Smax		09 39 58.3	
	comp=N,963nm,0.6s						
CIT	**Chita**	**2.99**	**159**	*e*PN	**Pb**	**09 39 18.5**	**-3.0**
CIT				*e*		09 39 23.5	
CIT				*e*S	**Sn**	**09 39 53.4

comp=N,452nm,0.5s
TRG Tyrgan 3.83 240 *e*Pn **Pn 09 39 28.0 +0.8**
TRG *e*Pg **Pb 09 39 36.8 +1.0**
TRG Pmax 09 39 45.4
comp=N,76nm,0.9s
TRG *e*Sn **Sn 09 40 12.1 -0.2**
TRG *e*Sg **Sg 09 40 25.7 -5.4**
TRG Smax 09 40 39.1
comp=N,471nm,0.8s
UUDB Ulan-Yde 3.86 222 *e*Pn **Pn 09 39 28.8 +1.3**
UUDB *e*Pg **Pb 09 39 37.4 +1.2**
UUDB Pmax 09 39 42.6
comp=N,197nm,0.6s
UUDB *e*Sn **Sn 09 40 13.4 +0.6**
UUDB *e*Sg **Sg 09 40 29.4 -2.5**
UUDB Smax 09 40 36.1
comp=N,844nm,0.8s
FFNB Fofonovo 4.09 229 *e*Pn **Pn 09 39 31.7 +1.0**
FFNB *e*Pg **Pb 09 39 41.9 +1.6**
FFNB *e*Sn **Sn 09 40 17.7 -1.0**
FFNB *e*Sg **Sg 09 40 34.2 -5.3**
KAB Kabansk 4.14 230 *e*Sg **Sg 09 40 37.6 -3.4**
KAB Smax 09 40 58.7
comp=N,2μm,1.3s
STDB Stepnoy Dvoret 4.19 233 *e* **Pg 09 39 46.0 -2.3**
STDB *e*Sg **Sg 09 40 38.9 -3.6**
CRS Chara 4.20 58 *e*PN **Pn 09 39 35.9 +3.7**
CRS *e* 09 39 44.4
CRS *e* 09 40 39.2
CRS pmax pmax
comp=Z,218nm,0.9s
CRS smax smax
comp=E,921nm,0.7s
CRS Chara 4.20 58 *e*Pn **Pn 09 39 33.9 +1.7**
CRS *e* 09 39 35.8
CRS *e*Pg **Pg 09 39 44.5 -4.1**
CRS Pmax 09 39 49.4
comp=E,230nm,1.1s
CRS *e*Sn **Sn 09 40 20.5 -0.9**
CRS *e*Sg **Sg 09 40 38.8 -4.1**
CRS *e* 09 40 48.6
CRS max 09 41 01.6
comp=E,896nm,1.4s
HRMR Khuramsha 4.32 224 *e*Pn **Pn 09 39 35.2 +1.3**
HRMR *e*Pg **Pb 09 39 46.0 +1.9**
HRMR Pmax 09 39 49.5
comp=E,192nm,0.5s
HRMR *e*Sg **Sg 09 40 43.0 -3.8**
HRMR Smax 09 40 53.2
comp=E,896nm,0.7s
VTMR Vitim 4.65 5 *e*Pn **Pn 09 39 38.5 +0.2**
VTMR *e*Pg **Pb 09 39 51.1 +1.4**
VTMR *e*Sn **Sn 09 40 30.5 -1.8**
VTMR *e*Sg **Sg 09 40 51.3 -6.0**
BGT Bolshoye Golou 4.72 237 *e*Pn **Pn 09 39 40.2 +0.8**
BGT *e*Pg **Pb 09 39 53.0 +2.0**
BGT Pmax 09 40 04.6
comp=E,48nm,0.7s
BGT *e*Sn **Sn 09 40 33.8 -0.4**
BGT *e*Sg **Sg 09 40 54.0 -5.6**
BGT Smax 09 41 12.3
comp=E,300nm,1.0s
TUP Tupik 4.76 91 *e*PN **Pn 09 39 41.3 +1.4**
TUP *e* 09 39 52.6
TUP *e*S **Sn 09 40 35.0 -0.1**
TUP *e* 09 40 56.5
TUP pmax pmax
comp=Z,124nm,0.7s
TUP smax smax
comp=E,1μm,0.9s
TUP Tupik 4.76 91 ⇑*i*Pn **Pn 09 39 41.4 +1.5**
TUP *e*Pg **Pb 09 39 54.1 +2.5**
TUP Pmax 09 39 58.3
comp=E,124nm,0.7s
TUP *e*Sn **Sn 09 40 34.8 -0.3**
TUP *e*Sg **Sg 09 40 56.8 -4.0**
TUP Smax 09 41 10.5
comp=E,1μm,1.0s
LSTR Listvyanka 5.11 238 *e*Pn **Pn 09 39 45.7 +1.0**
LSTR *e*Pg **Pb 09 40 00.5 +2.9**
LSTR Pmax 09 40 08.5
comp=E,25nm,0.8s
LSTR *e*Sn **Sn 09 40 41.4 -2.3**
LSTR *e*Sg **Sg 09 41 06.5 -5.6**
LSTR Smax 09 41 19.6
comp=E,242nm,1.1s
KPC Khapcheranga 5.14 176 *e*PN **Pn 09 39 46.5 +1.3**
KPC *e* 09 40 02.4
KPC *e* 09 41 08.2
KPC pmax pmax
comp=Z,404nm,0.5s
KPC smax smax
comp=E,6μm,1.3s
KPC Khapcheranga 5.14 176 *e*Pn **Pn 09 39 46.4 +1.3**
KPC *e*Pg **Pg 09 40 02.2 -4.2**
KPC Pmax 09 40 08.7
comp=E,37nm,0.5s
KPC *e*Sn **Sn 09 40 43.7 -0.8**
KPC *e*Sg **Sg 09 41 09.3 -3.6**
KPC Smax 09 41 12.0
comp=E,1μm,1.4s
IRK Irkutsk 5.18 243 *e*Pn **Pn 09 39 46.1 +0.5**
IRK max 09 39 47.8
comp=E,790nm,0.1s
IRK *e* 09 40 03.2
IRK *e*Sg **Sg 09 41 07.4 -6.8**
IRK Smax 09 41 24.7
comp=E,923nm,0.7s
TLY Talaya 5.81 241 Pn **Pn 09 39 54.6 +0.3**
comp=E,4.1nm,0.4s,baz=12,slow=14
TLY Lg Lg 09 41 26.2
baz=270,slow=17
TLY LR LR 09 42 15.5
comp=E,135nm,20.8s,baz=34,slow=39
TLY Talaya 5.81 241 *e*Pn **Pn 09 39 55.5 +1.1**
TLY *e*Pg **Pb 09 40 12.7 +3.1**
TLY Pmax 09 40 21.5
comp=E,22nm,0.5s
TLY *e*Sn **Sn 09 41 00.3 -0.8**
TLY *e*Sg **Sg 09 41 27.6 -7.0**
TLY Smax 09 41 35.5
comp=E,265nm,1.2s
TLY *e* 09 41 38.9
YKLR Yuktali 5.85 68 *e*Pn **Pn 09 39 56.4 +1.6**
YKLR *e* 09 39 59.3
YKLR *e*Pg **Pb 09 40 14.0 +3.8**
YKLR *e*Sn **Sn 09 41 01.1 -0.8**
YKLR *e*Sg **Sg 09 41 29.9 -5.9**
YKLR *e* 09 41 49.0
ARS Arshan 6.32 246 *e*Pn **Pn 09 40 03.3 +2.0**
ARS *e* 09 40 07.7
ARS *e*Pg Pb 09 40 22.2 +4.1
ARS Pmax 09 40 27.9
comp=E,87nm,0.6s
ARS *e*Sn **Sn 09 41 10.6 -2.9**
ARS *e*Sg **Sg 09 41 43.5 -7.2**
ARS Smax 09 41 47.1
comp=E,1μm,1.0s
ZAK Zakamensk 6.83 233 *e*PN **Pn 09 40 09.9 +1.6**
ZAK *e* 09 40 31.7
ZAK *e* 09 42 00.9
ZAK pmax pmax
comp=Z,22nm,1.0s
ZAK smax smax
comp=N,140nm,1.2s
ZAK Zakamensk 6.83 233 *e*Pn **Pn 09 40 10.1 +1.8**
ZAK *e*Pg Pb 09 40 31.5 +4.7
ZAK Pmax 09 41 02.2
comp=N,36nm,1.4s
ZAK *e*Sn **Sn 09 41 23.4 -2.7**
ZAK *e*Sg **Sg 09 42 00.8 -6.3**
ZAK *e* 09 42 18.0
ZAK max 09 42 46.9
comp=N,163nm,1.4s
MOY Mondy 7.21 248 *e*PN **Pn 09 40 15.5 +1.9**
MOY *e* 09 40 37.6
MOY *e*S **Sn 09 41 35.5 0.0**
MOY *e* 09 42 09.1
MOY pmax pmax
comp=Z,42nm,0.8s
MOY smax smax
comp=E,433nm,1.1s
MOY Mondy 7.21 248 *e*Pn **Pn 09 40 15.3 +1.7**
MOY *e* 09 40 28.9
MOY *e*Pg Pb 09 40 37.3 +4.0
MOY Pmax 09 41 07.2
comp=E,44nm,1.0s
MOY *e*Sn **Sn 09 41 32.8 -2.7**
MOY *e*Sg Sg 09 42 09.1 -10
MOY Smax 09 42 24.6
comp=E,433nm,1.1s
HIA Hailar 7.41 135 Pn **Pn 09 40 16.6 +0.3**
HIA Hailar 7.41 135 PN **Pn 09 40 16.6 +0.3**
HIA Hailar 7.41 135 *e*Pn **Pn 09 40 19.3 +3.0**
HIA *e*Pg Pg 09 40 43.5 -6.4
HIA Pmax 09 40 50.4
comp=E,31nm,1.1s
HIA *e*Sn **Sn 09 41 39.1 -1.2**
HIA *e*Sg **Sg 09 42 19.4 -6.3**
HIA Smax 09 42 43.2
comp=E,447nm,2.2s
ORL Orlik 7.47 257 *e*Pn **Pn 09 40 18.5 +1.2**
ORL *e* 09 40 30.9
ORL max 09 40 32.2
comp=E,53nm,1.2s
ORL *e* 09 41 43.1
ORL *e*Sg Sg 09 42 18.1 -10
ORL Smax 09 42 25.3
comp=E,449nm,1.1s
ULN Ulaanbaatar 7.57 205 **Pn 09 40 20.9 +2.4**
ULN Ulaanbaatar 7.57 205*ce*PN **Pn 09 40 20.9 +2.4**
ULN pmax pmax
comp=Z,7.0nm,1.3s
ULN Ulaanbaatar 7.57 205 *e*Pn **Pn 09 40 20.2 +1.6**
ULN *e* 09 40 26.8
ULN *e*Pg Pg 09 40 45.7 -7.2
ULN Pmax 09 40 49.5
comp=E,43nm,1.3s
ULN *e* 09 42 04.0
ULN *e*Sg **Sg 09 42 25.2 -5.7**
ULN Smax 09 42 38.4
comp=Z,419nm,2.2s
CLNS Chul'man 7.65 69 *e*Pn **Pn 09 40 22.2 +2.7**
CLNS *e* 09 40 31.9
CLNS *e*Pg Pg 09 40 46.8 -7.6
CLNS *e*Sn **Sn 09 41 44.2 -2.0**
CLNS *e*Sg **Sg 09 42 26.3 -7.1**
SONM Songino Array 7.77 208 Pn **Pn 09 40 22.8 +1.6**
comp=Z,3.0nm,0.3s,baz=18,slow=13,SNR=31
SONM Lg Lg 09 42 32.8
comp=Z,3.8nm,0.3s,baz=21,slow=26,SNR=8.2
comp=Z,4.8nm,0.4s
SONM Songino Array 7.77 208 **Pn 09 40 23.7 +2.5**
ZEA Zeya 9.11 91 *e*P **Pn 09 40 42.6 +3.1**
ZEA pmax pmax
comp=E,10.0nm,0.7s
ZEA pmax pmax
comp=Z,10.0nm,1.0s
ZEA MLR MLR
comp=E,300nm,5.0s
ZEA MLR MLR
comp=Z,500nm,4.0s
KNGR Kungurtug, Tuv 9.63 250 *i*P **Pn 09 40 49.6 +2.8**
KNGR Kungurtug, Tuv 9.63 250 *e*Sg Sn 09 43 25.6 +51
KNGR *e* 09 44 00.9
TDJR Todzha 9.64 262 *e* Pn 09 40 53.7 +6.9
TDJR *e*Pg 09 41 20.4
TDJR *e* 09 42 39.2
TDJR *e*Sg Sn 09 43 24.9 +50
HEH HeiHe 10.55 109 *e*P **Pn 09 41 01.5 +2.3**
HEH S **Sn 09 42 52.9 -4.4**
ARDR Aradan 11.11 266 *e* Pn 09 41 17.2 +10
ARDR *e*Sg 09 44 11.1
YAK Yakutsk 11.80 45 Lg Lg 09 44 29.6
comp=Z,6.4nm,0.3s,baz=281,slow=18,SNR=7.4
YAK Yakutsk 11.80 45 *e*P **Pn 09 41 15.7 -0.6**
YAK pmax pmax
comp=Z,12nm,1.1s
KLR Kul'dur 13.48 106 Pn **Pn 09 41 39.4 +0.2**
comp=Z,0.3nm,0.3s,baz=309,slow=12,SNR=9.0
KLR Sn **Sn 09 44 10.9 +1.9**
comp=Z,0.2nm,0.3s,baz=336,slow=14,SNR=2.7
KLR Lg Lg 09 45 25.3
comp=Z,0.2nm,0.3s,baz=242,slow=19,SNR=4.3
KLR LR LR 09 47 32.3
comp=Z,47nm,19.0s,baz=302,slow=40
comp=Z,1.2nm,0.5s
BTO2 Baotou 14.14 186 *e*P **Pn 09 41 51.1 +2.6**
BTO2 PP **PnPn 09 42 02.5 +6.3**
BTO2 S **Sn 09 44 30.4 +5.0**
BTO2 pmax pmax
comp=Z,13nm,0.6s
BTO2 L L
comp=Z,340nm,6.3s
BTO2 L L
comp=Z,280nm,4.9s
ZAA0 Zalesovo Array 15.71 278 **Pn 09 42 09.6 +0.3**
ZAA0 IAmb IAmb 09 42 13.1
comp=Z,17nm,1.1s
ZALV Zalesovo Beam 15.71 278 Pn **Pn 09 42 09.0 -0.2**
comp=Z,0.2nm,0.3s,baz=79,slow=11,SNR=16
ZALV Lg Lg 09 46 37.0
baz=81,slow=24
ZALV LR LR 09 48 25.0
comp=Z,57nm,21.3s,baz=62,slow=38
comp=Z,9.7nm,0.8s
ZALV Zalesovo Beam 15.71 278 **Pn 09 42 09.2 0.0**
ZALV Zalesovo Beam 15.71 278 P **Pn 09 42 09.2 0.0**
DGZ Jazzator, Alta 15.73 261 *i*P **P 09 42 11.5 -2.3**
USRK Ussuriysk Ar. 16.81 121 Lg Lg 09 47 15.6
comp=Z,0.5nm,0.3s,baz=140,slow=43,SNR=5.9
TIXI Tiksi 18.42 17 P **Pn 09 42 43.4 +0.3**
comp=Z,0.6nm,0.3s,baz=211,slow=6.3,SNR=3.8
TIXI Lg Lg 09 48 04.1
comp=Z,0.2nm,0.3s,baz=334,slow=17,SNR=3.4
comp=Z,3.6nm,0.3s
TIXI Tiksi 18.42 17*ce*P **P 09 42 41.9 -1.2**
TIXI pmax pmax
comp=Z,8.0nm,1.7s
MK31 Makanchi Array 20.18 259*ce*P Pn 09 43 04.8 +0.3
MKAR Makanchi Array 20.18 259 P Pn 09 43 03.6 -0.9
comp=Z,1.2nm,0.7s,baz=53,slow=8.0,SNR=10.0
comp=Z,1.2nm,0.7s
MKAR Makanchi Array 20.18 259*ce*P Pn 09 43 06.1 +1.6
MKAR pmax pmax
comp=Z,2.0nm,0.7s
KURK Kurchatov 20.37 272 P Pn 09 43 05.2 -1.5
KURK Kurchatov 20.37 272 P Pn 09 43 05.2 -1.5
KURK pmax pmax
comp=Z,6.0nm,1.0s
KURBB Kurchatov Arra 20.46 272 P Pn 09 43 05.8 -1.9
comp=Z,1.9nm,0.6s,baz=64,slow=11,SNR=15
KURBB Lg Lg 09 49 00.5
comp=Z,0.4nm,0.3s,baz=78,slow=29,SNR=4.4
comp=Z,1.9nm,0.6s
KSRS Korea Array 20.57 141 LR LR 09 51 58.6
comp=Z,46nm,19.8s,baz=320,slow=39
ASAJ Asahikawa 22.52 106 LR LR 09 52 56.7
comp=Z,47nm,18.6s,baz=328,slow=39
BVAR Borovoye Array 24.20 283 P **P 09 43 44.0 -0.5**
comp=Z,2.6nm,0.6s,baz=69,slow=8.1,SNR=10
BVAR Lg Lg 09 51 11.7
comp=Z,0.1nm,0.3s,baz=108,slow=25,SNR=4.4
comp=Z,2.6nm,0.6s
BVAR Borovoye Array 24.20 283 P **P 09 43 44.0 -0.5**
BORK Borovoye 24.23 283 P **P 09 43 45.4 +0.6**
BORK IAmb IAmb 09 43 49.1
comp=Z,3.9nm,0.7s
BORK Borovoye 24.23 283*ce*P **P 09 43 46.7 +1.9**
BORK pmax pmax
comp=Z,3.0nm,0.6s
JNU Nakatsue 25.51 140 LR LR 09 53 23.9
comp=Z,37nm,20.6s,baz=43,slow=35
MJAR Matsushiro Arr 25.73 124 LR LR 09 53 18.0
comp=Z,40nm,18.6s,baz=316,slow=35
ARTI Arti 29.59 295 LR LR 09 59 21.4
comp=Z,20nm,19.1s,baz=276,slow=42
ABKAR Akbulak array 31.75 282 P **P 09 44 52.8 +0.7**
AKTO Aktyubinsk 32.26 285 LR LR 09 58 46.9
comp=Z,31nm,19.0s,baz=250,slow=38
C18K Utukok River 39.66 35 P **P 09 46 01.1 +1.4**
C19K Lookout Ridge 39.98 34 P **P 09 46 04.6 +2.3**
C19K IAmb IAmb 09 46 05.1
comp=Z,6.4nm,1.4s
B20K Meade River 40.35 32 P **P 09 46 07.2 +1.9**
B20K IAmb IAmb 09 46 10.6
comp=Z,4.6nm,0.8s
D19K Kuna River 40.74 34 **P 09 46 09.4 +0.8**
D19K IAmb IAmb 09 46 11.6
comp=Z,4.1nm,0.8s
B21K Ikpikpuk River 41.31 32 P **P 09 46 15.4 +2.1**
B21K IAmb IAmb 09 46 28.2
comp=Z,6.0nm,1.4s
C23K Itkillik River 42.41 31 P **P 09 46 23.6 +1.5**
C23K IAmb IAmb 09 47 02.5
comp=Z,5.7nm,1.4s
FINES FINESS Array B 42.61 315 P **P 09 46 24.0 0.0**
comp=Z,3.8nm,0.9s,baz=48,slow=7.6,SNR=3.4
comp=Z,3.8nm,0.9s
FINES FINESS Array B 42.61 315 *i*P **P 09 46 24.5 +0.6**
FINES pmax pmax
comp=Z,4.0nm,0.9s
D23K Nanushuk River 42.85 32 P **P 09 46 27.7 +1.8**
D23K IAmb IAmb 09 46 31.2
comp=Z,2.9nm,0.8s
IMAR Indian Mountai 43.48 36 P **P 09 46 32.1 +1.2**
COLD Coldfoot 43.96 34 P **P 09 46 36.4 +1.6**
COLD IAmb IAmb 09 46 44.6
comp=Z,4.2nm,1.4s
H21K Melozitna Rive 43.98 36 P **P 09 46 36.8 +1.8**
H21K IAmb IAmb 09 46 38.3
comp=Z,6.6nm,1.3s
F24K Squaw Lake 44.53 33 P **P 09 46 40.8 +1.4**
F24K IAmb IAmb 09 46 42.1
comp=Z,1.8nm,0.8s
F26K Sheenjek River 45.57 31 P **P 09 46 49.2 +1.5**
F26K IAmb IAmb 09 46 52.4
comp=Z,1.7nm,0.9s
BMAR Burnt Mountain 45.60 32 P **P 09 46 50.2 +2.3**
COLA College 46.13 36 P **P 09 46 54.2 +2.2**
COLA College 46.13 36 P **P 09 46 54.2 +2.2**
ILAR Eielson Array 46.52 35 P **P 09 46 56.2 +1.1**
comp=Z,1.6nm,0.8s,baz=299,slow=6.4,SNR=20
comp=Z,1.6nm,0.8s
E29M Blow River 46.91 28 IAmb IAmb 09 47 03.6
comp=Z,1.6nm,0.7s
AKASG Malin Array Be 47.39 301 P **P 09 47 01.4 -0.7**
comp=Z,0.3nm,0.4s,baz=48,slow=8.3,SNR=1.4
AKASG LR LR 10 08 49.3
comp=Z,40nm,18.3s,baz=62,slow=38
comp=Z,0.3nm,0.4s
DHY Denali Highway 47.42 37 P **P 09 47 04.0 +1.6**
INK Inuvik 48.15 27 P **P 09 47 08.7 +1.0**
INK Inuvik 48.15 27 P **P 09 47 08.7 +1.0**
INK pmax pmax
comp=Z,4.0nm,1.5s
HFS Hagfors 48.30 318 P **P 09 47 08.9 -0.1**
comp=Z,1.7nm,0.6s,baz=90,slow=5.9,SNR=5.1
comp=Z,1.7nm,0.6s
NOA NORSAR Array B 48.65 320 P **P 09 47 12.0 +0.3**
comp=Z,0.3nm,0.5s,baz=49,slow=7.4,SNR=2.0
NOA LR LR 10 07 23.0
comp=Z,20nm,18.2s,baz=40,slow=36
comp=Z,0.3nm,0.5s
NOA NORSAR Array B 48.65 320 P **P 09 47 12.0 +0.3**
BCAR Beaver Creek A 49.34 35 P **P 09 47 18.9 +1.8**
DAWY Dawson 49.43 33 P **P 09 47 18.4 +0.6**
DAWY IAmb IAmb 09 47 29.5
comp=Z,3.9nm,1.4s
M31M Drury Creek, Y 52.35 33 P **P 09 47 41.5 +1.8**
M31M IAmb IAmb 09 47 44.5
comp=Z,2.4nm,0.8s
BRTR Keskin Array B 52.36 288 P **P 09 47 40.5 +0.3**
comp=Z,2.6nm,1.2s,baz=38,slow=5.4,SNR=3.6
comp=Z,2.6nm,1.2s
BRTR Keskin Array B 52.36 288*ce*P **P 09 47 42.0 +1.8**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
MLR Muntele Rosu 52.47 298 LR LR 10 10 38.1
comp=Z,49nm,20.2s,baz=76,slow=37
P33M Teslin, Yukon 54.36 34 P **P 09 47 55.9 +1.3**
ILON Igloolik, Nuna 55.72 6 P **P 09 48 04.1 0.0**
ILON IAmb IAmb 09 48 08.0
comp=Z,1.9nm,1.1s
GERES GERESS Array B 56.05 308 LR LR 10 16 15.6
comp=Z,61nm,18.2s,baz=30,slow=40
YKA Yellowknife Ar 57.52 23 P **P 09 48 16.7 -0.3**
comp=Z,0.2nm,0.6s,baz=334,slow=7.8,SNR=6.9
comp=Z,0.2nm,0.6s
YKA Yellowknife Ar 57.52 23*ce*P **P 09 48 18.2 +1.2**
EKA Eskdalemuir Ar 58.01 322 P **P 09 48 20.8 +0.3**
comp=Z,1.4nm,0.7s,baz=32,slow=5.1,SNR=3.6
comp=Z,1.4nm,0.7s
DAVOX Davos/Dischmat 59.32 309 LR LR 10 14 18.3
comp=Z,23nm,20.5s,baz=75,slow=36
SCHQ Schefferville 70.71 359 P **P 09 49 43.8 +0.1**
comp=Z,2.9nm,0.9s,baz=13,slow=9.8,SNR=3.6
comp=Z,2.9nm,0.9s
SCHQ Schefferville 70.71 359 IAmb IAmb 09 49 45.5
comp=Z,7.6nm,1.2s
ESDC Sonseca Array 71.07 313 P **P 09 49 47.5 +1.3**
comp=Z,1.2nm,0.9s,baz=33,slow=6.1,SNR=5.5
comp=Z,1.2nm,0.9s
PDAR Pinedale Array 76.60 30 P **P 09 50 19.0 +0.2**
comp=Z,0.5nm,0.7s,baz=27,slow=3.6,SNR=4.3
comp=Z,0.5nm,0.7s
WRA Warramunga Arr 76.92 158 P **P 09 50 20.9 +0.5**
comp=Z,0.5nm,0.6s,baz=350,slow=6.1,SNR=11
comp=Z,0.5nm,0.6s
WRA Warramunga Arr 76.92 158 IAmb IAmb 09 50 22.6
comp=Z,0.2nm,1.2s
WRA Warramunga Arr 76.92 158 *i*P **P 09 50 22.0 +1.6**
NVAR Mina Array Bea 77.69 38 P **P 09 50 25.0 0.0**
comp=Z,0.7nm,0.7s,baz=321,slow=5.4,SNR=3.8
comp=Z,0.7nm,0.7s
ASAR Alice Springs 80.44 160 P **P 09 50 40.2 +0.4**
comp=Z,0.3nm,0.7s,baz=353,slow=5.6,SNR=7.4
comp=Z,0.3nm,0.7s
TORD Torodi Ar. Bea 90.54 294 P **P 09 51 29.7 -0.7**
comp=Z,0.8nm,0.7s,baz=21,slow=2.6,SNR=4.7
comp=Z,0.8nm,0.7s
TXAR Lajitas Array 90.81 30 P **P 09 51 32.3 +0.6**
comp=Z,0.2nm,0.6s,baz=344,slow=4.5,SNR=2.2
comp=Z,0.2nm,0.6s
QSPA South Pole Qui 144.58 180 PKP **PKPdf 09 58 01.9 -1.4**
comp=Z,2.7nm,1.0s,baz=73,slow=0.8,SNR=7.1

IDC ***16*** *09:44:52.1±0.9,44°.24N×89°.58E,h0km,mb3.8/4, mbtmp3.8/9,ML3.4/5,MS3.0/4,Error ellipse: s-maj=30.2km s-min=12.3km az=44.0*
NNC ***16*** *09:44:57.3±2.8,44°.52N×89°.37E,h10km±11km,mb4.2, mpv4.0,Error ellipse: s-maj=20.5km s-min=19.6km az=71.0*
ISC 16 09:44:53.8±1.0,44°.35N±0°.09×89°.67E±0°.08,h10km,n20, σ1s90/22,mb3.8/4,MS3.2/4,12C-2D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
MK31	**Makanchi Array**	**5.73**	**298**	⇑Pn	**Pn**	**09 46 19.5**	**+0.6**
	2.5nm,0.4s,baz=133,slow=15,SNR=174						
MK31				⇑Pg	**Pb**	**09 46 37.3**	**+3.6**
	11nm,0.5s						
MK31				Sn	**Sn**	**09 47 25.0**	**+0.4**
	17nm,0.2s,baz=116,slow=37,SNR=3.1						
MK31				Lg	Lg	09 47 52.0	
	78nm,0.8s,baz=105,slow=25,SNR=5.8						
MKAR	**Makanchi Array**	**5.73**	**298**	Pn	**Pn**	**09 46 19.2**	**+0.3**
	2.4nm,0.3s,baz=113,slow=14,SNR=25						
MKAR				Sn	**Sn**	**09 47 23.4**	**-1.2**
	9.9nm,0.3s,baz=110,slow=16,SNR=5.2						
MKAR				Lg	Lg	09 47 53.1	
	17nm,0.3s,baz=111,slow=30,SNR=6.5						
	6.4nm,0.4s						
MAKZ	**Makanchi**	**5.93**	**297**	⇑Pn	**Pn**	**09 46 22.3**	**+0.6**
	3.7nm,0.5s						
MAKZ				⇑Pg	**Pb**	**09 46 39.5**	**+2.3**
	8.6nm,0.4s						
MAKZ				⇓Sn	**Sn**	**09 47 26.0**	**-3.6**
	22nm,0.7s						
MAKZ				⇑Lg	Lg	09 47 58.6	
	96nm,0.8s						
PDGK	**Podgornoye**	**7.43**	**266**	⇑Pn	**Pn**	**09 46 41.4**	**-1.0**
	6.8nm,0.2s						
PDGK				⇓Sn	**Sn**	**09 48 08.5**	**+1.7**
	17nm,0.6s						
PDGK				⇑Lg	Lg	09 48 48.1	
	60nm,0.8s						
KURBB	**Kurchatov Arra**	**9.80**	**314**	Pn	**Pn**	**09 47 14.3**	**-0.4**
	0.3nm,0.3s,baz=126,slow=14,SNR=8.2						
KURBB				Lg	Lg	09 50 04.9	
	0.7nm,0.3s,baz=128,slow=28,SNR=6.4						
	0.8nm,0.3s						
KURBB	**Kurchatov Arra**	**9.80**	**314**	⇑Pn	**Pn**	**09 47 14.8**	**+0.1**
	3.9nm,0.7s						

KURBB				⇑Lg		Lg	09 49 59.9	
	131nm,0.8s							
KURK	**Kurchatov**	**9.81**	**314**	⇑Pn		**Pn**	**09 47 15.1**	**+0.3**
	0.5nm,0.3s							
KURK				⇑Sn		**Sn**	**09 49 03.8**	**-1.1**
	2.5nm,0.4s							
KURK				⇑Lg		Lg	09 50 00.6	
	27nm,0.8s							
ZALV	**Zalesovo Beam**	**10.11**	**343**	Pn		**Pn**	**09 47 19.9**	**+0.9**
	0.9nm,0.3s,baz=162,slow=14,SNR=6.2							
ZALV				Sn		**Sn**	**09 49 08.3**	**-4.0**
	0.5nm,0.3s,baz=163,slow=25,SNR=2.7							
ZALV				Lg		Lg	09 50 14.6	
	0.7nm,0.3s,baz=173,slow=25,SNR=4.4							
	1.8nm,0.5s							
AAK	**Ala-Archa**	**11.16**	**266**	Pn		**Pn**	**09 47 31.7**	**-1.8**
	0.7nm,0.3s,baz=103,slow=6.4,SNR=6.0							
AAK				Lg		Lg	09 50 47.7	
	0.2nm,0.3s,baz=115,slow=19,SNR=1.3							
	1.5nm,0.3s							
TLY	**Talaya**	**11.87**	**47**	Lg		Lg	09 51 13.4	
	baz=6.7,slow=17							
SONM	**Songino Array**	**12.12**	**67**	Lg		Lg	09 51 19.1	
	0.3nm,0.3s,baz=253,slow=22,SNR=3.8							
BVAR	**Borovoye Array**	**15.37**	**311**	Pn		**Pn**	**09 48 28.0**	**-2.6**
	baz=115,slow=12,SNR=1.9							
BVAR				LR		LR	09 54 44.7	
	comp=Z,34nm,21.1s,baz=98,slow=38							
	0.5nm,0.5s							
CMAR	**Chiang Mai Arr**	**26.97**	**160**	P		**P**	**09 50 35.6**	**0.0**
	0.7nm,0.3s,baz=338,slow=9.3,SNR=5.9							
	0.7nm,0.3s							
KBZ	**Khabaz**	**33.27**	**286**	LR		LR	10 06 29.7	
	comp=Z,31nm,20.1s,baz=326,slow=39							
JHJ	**Hachijo jima 2**	**40.10**	**89**	LR		LR	10 09 05.4	
	comp=Z,438nm,21.5s,baz=104,slow=36							
BRTR	**Keskin Array B**	**41.18**	**284**	LR		LR	10 12 08.7	
	comp=Z,15nm,18.2s,baz=282,slow=40							
VRAC	**Vranov**	**48.44**	**303**	LR		LR	10 15 06.8	
	comp=Z,39nm,19.2s,baz=279,slow=38							
YKA	**Yellowknife Ar**	**71.73**	**12**	P		**P**	**09 56 16.8**	**+1.2**
	0.2nm,0.5s,baz=345,slow=6.3,SNR=5.7							
	0.2nm,0.5s							
WRA	**Warramunga Arr**	**75.89**	**137**	P		**P**	**09 56 39.7**	**-0.8**
	0.7nm,0.7s,baz=339,slow=6.2,SNR=15							
	0.7nm,0.7s							
ASAR	**Alice Springs**	**78.86**	**139**	P		**P**	**09 56 56.6**	**-0.4**
	0.4nm,0.4s,baz=329,slow=5.3,SNR=11							
	0.4nm,0.4s							

IDC 16 10:02:50.6±7.5, 6°25S×146°68E, h75km±68km, mb2.8/1, mbtmp3.3/3, ML3.4/1, MS3.5/1, Error ellipse: s-maj=61.4km s-min=52.5km az=114.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
PMG	**Port Moresby**	**3.17**	**171**	P	Pn	10 03 39.5		+1.3
	12nm,0.3s,baz=323,slow=19,SNR=16							
PMG				S	Sn	10 04 15.3		+0.4
	15nm,0.4s,baz=131,slow=23,SNR=10							
CTA	**Charters Tower**	**13.76**	**182**	P	P	10 06 05.9		-2.5
	3.0nm,0.8s,baz=359,slow=18,SNR=1.2							
WRA	**Warramunga Arr**	**18.14**	**220**	P	P	10 06 56.3		-0.6
	0.1nm,0.3s,baz=46,slow=12,SNR=16							
	0.2nm,0.3s							
ASAR	**Alice Springs**	**21.23**	**214**	P	P	10 07 31.0		+0.5
	0.4nm,0.5s,baz=50,slow=8.8,SNR=15							
	0.4nm,0.5s							
FITZ	**Fitzroy Crossi**	**23.66**	**238**	LR	LR	10 17 57.5		
	comp=Z,98nm,18.8s,baz=286,slow=38							
TORD	**Torodi Ar. Bea**	**144.84**	**284**	PKP	PKPab	10 22 18.7		-0.5
	1.0nm,0.7s,baz=71,slow=3.9,SNR=6.3							

*IDC **16** 10:07:20.0±2.4, 17°.61S×178°.68W, h630km±22km, mb2.7/6, mbtmp3.7/7, Error ellipse: s-maj=90.6km s-min=23.6km az=151.0*

ISC 16 10:07:21.4±1.6, 17°.5S±0°.5×178°.8W±0°.3, h650km, n7, σ1s40/8, mb3.4/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
MSVF	**Nonsavu**	**3.00**	**266**	P	**P**	**10 08 42.1**		**-2.7**
	7.2nm,0.5s,baz=190,slow=3.1,SNR=7.2							
CTA	**Charters Tower**	**33.13**	**260**	P	**P**	**10 13 08.0**		**+0.8**
	3.8nm,0.8s,baz=82,slow=7.1,SNR=2.3							
	3.8nm,0.8s							
STKA	**Stephens Creek**	**38.47**	**241**	P	**P**	**10 13 51.1**		**+0.4**
	0.9nm,0.5s,baz=83,slow=7.7,SNR=2.9							
	0.9nm,0.5s							
WRA	**Warramunga Arr**	**44.32**	**259**	P	**P**	**10 14 37.1**		**+0.4**
	0.4nm,0.3s,baz=95,slow=7.4,SNR=27							
	0.4nm,0.3s							
ASAR	**Alice Springs**	**44.52**	**254**	P	**P**	**10 14 39.1**		**+0.9**
	2.3nm,0.6s,baz=86,slow=8.7,SNR=57							
ASAR				PcP	**PcP**	**10 16 06.3**		**-0.4**
	0.3nm,0.9s,baz=86,slow=3.5,SNR=1.7							
	2.3nm,0.6s							
ILAR	**Eielson Array**	**85.62**	**13**	P	**P**	**10 18 53.3**		**+0.6**
	0.2nm,0.7s,baz=227,slow=5.3,SNR=1.5							
	0.2nm,0.7s							
TXAR	**Lajitas Array**	**86.13**	**58**	P	**P**	**10 18 56.2**		**+0.2**
	0.1nm,0.5s,baz=248,slow=4.9,SNR=1.8							
	0.1nm,0.5s							

*TAP **16** 10:12:15.7, 24°.54N×122°.39E, h91km, ML3.1, C*
*JMA **16** 10:12:16.4±0.2, 24°.N±1°.×122°.4E±0°.4, h84km±1km, MV2.2/11, TAIWAN REGION*

ISC 16 10:12:16.0±1.3, 24°.52N±0°.04×122°.40E±0°.03, h89km±7km, n86, σ1s02/151, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
EOS2	**EOS2**	**0.18**	**238**	*e*P	**Pn**	**10 12 29.4**		**+0.8**
EOS2				*e*S	**Sn**	**10 12 39.5**		**+1.6**
EOS3	**EOS3**	**0.24**	**199**	*e*P	**Pn**	**10 12 29.7**		**+0.8**
EOS3				*e*S	**Sn**	**10 12 39.4**		**+1.1**
EOS4	**EOS4**	**0.40**	**191**	*e*P	**Pn**	**10 12 29.7**		**+0.3**
EOS4				*e*S	**Sn**	**10 12 39.9**		**+0.5**
JYNG	**Yonagunijimaku**	**0.50**	**98**	*e*P	**Pn**	**10 12 30.9**		**+0.3**
TWC	**Suao**	**0.51**	**280**	*e*P	**Pn**	**10 12 30.4**		**-0.3**
TWC				*e*S	**Sn**	**10 12 40.2**		**-1.5**
YOJ	**Yonaguni jima**	**0.56**	**96**	P	**Pn**	**10 12 31.3**		**+0.2**
YOJ	**Yonaguni jima**	**0.56**	**96**	*i* P	**Pn**	**10 12 31.2**		**+0.2**
YOJ				S	**Sn**	**10 12 42.1**		**-0.2**
YOJ	**Yonaguni jima**	**0.56**	**96**	*e*P	**Pn**	**10 12 31.1**		**+0.1**
YOJ				*e*S	**Sn**	**10 12 42.2**		**-0.1**
EWUT	**Wuta**	**0.57**	**263**	P	**Pn**	**10 12 31.1**		**-0.1**
EWUT				*e*S	**Sn**	**10 12 42.5**		**-0.1**
EAHA	**Aohua**	**0.63**	**253**	*e*P	**Pn**	**10 12 32.1**		**+0.3**
EAHA				S	**Sn**	**10 12 43.4**		**-0.1**
NDS	**Dongshan**	**0.64**	**281**	*e*P	**Pn**	**10 12 32.0**		**+0.2**
NDS				*e*S	**Sn**	**10 12 43.6**		**+0.1**
TIPB	**Shuangxi**	**0.69**	**311**	*e*P	**Pn**	**10 12 32.4**		**0.0**
TIPB				*e*S	**Sn**	**10 12 43.5**		**-1.1**
TWE	**Neicheng**	**0.70**	**287**	*e*P	**Pn**	**10 12 32.6**		**+0.3**
TWE				*e*S	**Sn**	**10 12 44.3**		**-0.2**
SXI1	**Grass Mountain**	**0.75**	**320**	*e*P	**Pn**	**10 12 31.6**		**-1.4**
SXI1				*e*S	**Sn**	**10 12 45.9**		**+0.2**
ENTT	**Nioudou**	**0.77**	**279**	*e*P	**Pn**	**10 12 34.0**		**+0.8**
ENTT				*e*S	**Sn**	**10 12 46.1**		**+0.2**
FUSB	**Fushanzhiwuyua**	**0.78**	**288**	*i* P	**Pn**	**10 12 33.6**		**+0.3**
FUSB				*e*S	**Sn**	**10 12 45.4**		**-0.8**
ETL	**Fush Village**	**0.80**	**243**	*e*P	**Pn**	**10 12 33.1**		**-0.4**
ETL				*e*S	**Sn**	**10 12 45.5**		**-0.9**
LATG	**Datong**	**0.80**	**271**	*i* P	**Pn**	**10 12 33.6**		**+0.1**
LATG				S	**Sn**	**10 12 46.3**		**-0.3**
NACB	**Ninganchiao**	**0.81**	**245**	P	**Pn**	**10 12 33.3**		**-0.2**
NACB	**Ninganchiao**	**0.81**	**245**	*i* P	**Pn**	**10 12 33.0**		**-0.5**
NACB				S	**Sn**	**10 12 45.6**		**-1.0**
NDT	**Datong Townshi**	**0.81**	**276**	*e*P	**Pn**	**10 12 33.9**		**+0.3**
NDT				*e*S	**Sn**	**10 12 46.9**		**+0.2**
NWLT	**Wulai**	**0.86**	**288**	*e*P	**Pn**	**10 12 34.5**		**+0.4**
NWLT				*e*S	**Sn**	**10 12 48.0**		**+0.4**
ETLH	**Xiulin Townshi**	**0.89**	**250**	*i* P	**Pn**	**10 12 34.4**		**-0.2**
ETLH				S	**Sn**	**10 12 47.9**		**-0.5**
HWA	**Hwalien**	**0.91**	**234**	P	**Pn**	**10 12 34.6**		**+0.1**
HWA				*e*S	**Sn**	**10 12 47.7**		**-0.7**
NNSB	**Datong**	**0.93**	**265**	P	**Pn**	**10 12 35.1**		**+0.1**
NNSB				*e*S	**Sn**	**10 12 48.7**		**-0.5**
NNS	**Nan Shan**	**0.94**	**265**	*e*P	**Pn**	**10 12 35.3**		**+0.2**
NNS				*e*S	**Sn**	**10 12 48.7**		**-0.6**
YHNB	**Yeheng**	**0.95**	**279**	P	**Pn**	**10 12 35.9**		**+0.8**
YHNB	**Yeheng**	**0.95**	**279**	S	**Sn**	**10 12 49.3**		**-0.1**
YHNB	**Yeheng**	**0.95**	**279**	P	**Pn**	**10 12 35.5**		**+0.4**
YHNB				S	**Sn**	**10 12 49.2**		**-0.1**
NSK	**Sanguang**	**0.96**	**280**	*e*P	**Pn**	**10 12 34.6**		**-0.7**
NSK				S	**Sn**	**10 12 49.5**		**-0.2**
TEYL	**Yanliau Villag**	**0.98**	**229**	P	**Pn**	**10 12 35.1**		**-0.3**
TEYL				S	**Sn**	**10 12 49.7**		**-0.2**
YM01	**YM01**	**0.98**	**310**	*e*P	**Pn**	**10 12 34.4**		**-1.1**
YM01				*e*S	**Sn**	**10 12 49.5**		**-0.5**
ETM	**Tongmen**	**0.99**	**237**	*i* P	**Pn**	**10 12 35.3**		**-0.3**
ETM				S	**Sn**	**10 12 49.3**		**-1.0**
ZUZH	**Zhuzihu**	**1.01**	**310**	*e*P	**Pn**	**10 12 36.6**		**+0.9**
ZUZH				*e*S	**Sn**	**10 12 49.1**		**-1.5**
SHUL	**Shoufeng**	**1.06**	**227**	P	**Pn**	**10 12 36.2**		**-0.1**
SHUL				S	**Sn**	**10 12 50.6**		**-0.8**
FUSS	**Fushou**	**1.09**	**256**	P	**Pn**	**10 12 37.4**		**+0.5**
FUSS				S	**Sn**	**10 12 52.5**		**-0.1**
WHF	**Hehuan Shan**	**1.10**	**251**	P	**Pn**	**10 12 37.4**		**+0.1**
WHF				S	**Sn**	**10 12 52.6**		**-0.5**
ESL	**Shilin**	**1.13**	**232**	*i* P	**Pn**	**10 12 36.7**		**-0.5**
ESL				S	**Sn**	**10 12 51.7**		**-1.3**
KSHI	**Guanxi Townshi**	**1.15**	**283**	*e*P	**Pn**	**10 12 38.2**		**+0.9**
KSHI				*e*S	**Sn**	**10 12 53.9**		**+0.5**
TWT	**Tachien**	**1.15**	**257**	P	**Pn**	**10 12 38.4**		**+0.8**
TWT				S	**Sn**	**10 12 53.8**		**+0.1**
TDCB	**Techi**	**1.16**	**257**	*i* P	**Pn**	**10 12 38.5**		**+0.8**
TDCB				S	**Sn**	**10 12 53.6**		**-0.4**
NFF	**Wufeng Townshi**	**1.18**	**276**	*e*P	**Pn**	**10 12 38.4**		**+0.6**
NFF				S	**Sn**	**10 12 54.1**		**+0.1**
WARBT	**Fenglin Townsh**	**1.22**	**230**	*i* P	**Pn**	**10 12 37.7**		**-0.6**
WARBT				*e*S	**Sn**	**10 12 53.4**		**-1.7**
IRIF	**Iriomote-Funau**	**1.22**	**98**	*e*P	**Pn**	**10 12 38.7**		**+0.4**
IRIF				*e*S	**Sn**	**10 12 53.9**		**-1.1**
OWD	**Renai**	**1.25**	**244**	P	**Pn**	**10 12 38.9**		**+0.1**
OWD				S	**Sn**	**10 12 54.9**		**-1.0**
LIOB	**Emei**	**1.27**	**276**	*e*P	**Pn**	**10 12 39.6**		**+0.7**
LIOB				*e*S	**Sn**	**10 12 56.5**		**+0.4**
NSTT	**Nanjuang**	**1.28**	**275**	S	**Sn**	**10 12 56.2**		**-0.1**
WUSB	**Renai**	**1.28**	**246**	P	**Pn**	**10 12 39.8**		**+0.6**
WUSB				*e*S	**Sn**	**10 12 56.1**		**-0.4**
WHP	**Taichung City**	**1.35**	**260**	P	**Pn**	**10 12 41.4**		**+1.5**
WHP				*e*S	**Sn**	**10 12 58.5**		**+0.5**
HGSD	**Ruisui**	**1.36**	**221**	P	**Pn**	**10 12 39.7**		**-0.2**
HGSD				*e*S	**Sn**	**10 12 57.3**		**-0.7**
VWDT	**VWDT**	**1.38**	**237**	P	**Pn**	**10 12 40.6**		**+0.4**
VWDT				S	**Sn**	**10 12 57.7**		**-0.7**
EHYH	**Wanrong**	**1.41**	**224**	P	**Pn**	**10 12 40.0**		**-0.5**
EHYH				*e*S	**Sn**	**10 12 57.2**		**-1.8**
EHY	**Hungye**	**1.41**	**225**	P	**Pn**	**10 12 40.0**		**-0.6**
EHY				*e*S	**Sn**	**10 12 56.6**		**-2.5**
WCS	**Beigang Elemen**	**1.44**	**252**	P	**Pn**	**10 12 42.0**		**+1.1**
WCS				*e*S	**Sn**	**10 13 00.8**		**+1.2**
JKRS	**Kuro-shima**	**1.49**	**100**	*e*P	**Pn**	**10 12 42.6**		**+1.0**
JKRS				*e*S	**Sn**	**10 13 01.4**		**+0.4**
SSLB	**Suanglung**	**1.51**	**242**	P	**Pn**	**10 12 42.8**		**+0.9**
SSLB	**Suanglung**	**1.51**	**242**	S	**Sn**	**10 13 00.6**		**-0.8**
SSLB	**Suanglung**	**1.51**	**242**	P	**Pn**	**10 12 42.8**		**+0.9**
SSLB				S	**Sn**	**10 13 01.1**		**-0.3**
YULB	**Yu-li**	**1.51**	**222**	P	**Pn**	**10 12 41.4**		**-0.5**
YULB	**Yu-li**	**1.51**	**222**	S	**Sn**	**10 12 59.6**		**-1.8**
YULB	**Yu-li**	**1.51**	**222**	P	**Pn**	**10 12 41.2**		**-0.6**
YULB				*e*S	**Sn**	**10 12 59.1**		**-2.3**
SMLT	**Sun Moon Lake**	**1.51**	**246**	P	**Pn**	**10 12 43.5**		**+1.6**
SMLT				S	**Sn**	**10 13 04.2**		**+2.6**
TYC	**Yuchr**	**1.54**	**247**	P	**Pn**	**10 12 43.8**		**+1.6**
TYC				*e*S	**Sn**	**10 13 04.0**		**+2.1**
TWF1	**Yuli**	**1.54**	**221**	P	**Pn**	**10 12 41.7**		**-0.5**
TWF1				*e*S	**Sn**	**10 13 04.4**		**-1.7**
JIJ	**Ishigaki jima**	**1.59**	**95**	*e*P	**Pn**	**10 12 43.1**		**+0.2**
JIJ				*e*S	**Sn**	**10 13 02.6**		**-0.7**
CHKH	**Chenggong**	**1.61**	**215**	*e*P	**Pn**	**10 12 43.0**		**-0.1**
CHKH				*e*S	**Sn**	**10 13 02.1**		**-1.6**
WHYT	**Xinyi Township**	**1.64**	**240**	P	**Pn**	**10 12 44.8**		**+1.3**
WHYT				*e*S	**Sn**	**10 13 06.4**		**+2.1**
FULB	**Fuli**	**1.66**	**218**	*e*P	**Pn**	**10 12 43.7**		**-0.1**
FULB				*e*S	**Sn**	**10 13 04.3**		**-0.5**
JISG	**Ishigakijimahi**	**1.74**	**87**	P	**Pn**	**10 12 45.4**		**+0.7**
JISG				*e*S	**Sn**	**10 13 07.0**		**+0.4**
EHD	**Haiduan**	**1.75**	**219**	*e*P	**Pn**	**10 12 44.1**		**-0.9**
EHD				*e*S	**Sn**	**10 13 05.0**		**-1.9**
ALS	**Alishan**	**1.77**	**236**	P	**Pn**	**10 12 46.8**		**+1.3**
ALS				S	**Sn**	**10 13 08.4**		**+0.6**
ELDTW	**Lidau**	**1.83**	**224**	P	**Pn**	**10 12 45.8**		**-0.3**
ELDTW				*e*S	**Sn**	**10 13 07.7**		**-1.3**
LDLH	**Douliu**	**1.89**	**245**	*e*S	**Sn**	**10 13 13.3**		**+3.1**
STYH	**Taoyuan**	**2.00**	**228**	P	**Pn**	**10 12 49.4**		**+1.1**
STYH				*e*S	**Sn**	**10 13 13.8**		**+1.0**
TPUB	**Ta-pu**	**2.02**	**234**	P	**Pn**	**10 12 49.7**		**+1.2**
TPUB	**Ta-pu**	**2.02**	**234**	P	**Pn**	**10 12 50.1**		**+1.6**
TPUB				S	**Sn**	**10 13 15.2**		**+1.9**
TWGBT	**Beinan**	**2.08**	**216**	P	**Pn**	**10 12 49.6**		**+0.3**
TWGBT	**Beinan**	**2.08**	**216**	*e*P	**Pn**	**10 12 49.1**		**-0.2**
TWG	**Pinlang**	**2.08**	**216**	*e*P	**Pn**	**10 12 48.8**		**-0.5**
TWK	**Hsinying**	**2.15**	**235**	*e*S	**Sn**	**10 13 17.8**		**+1.4**
CHN1	**Nanshi**	**2.17**	**233**	*e*P	**Pn**	**10 12 52.4**		**+2.0**
CHN1				*e*S	**Sn**	**10 13 18.6**		**+1.8**
MASBT	**Mashibuluo**	**2.50**	**221**	*e*P	**Pn**	**10 12 56.1**		**+1.3**
LYUB	**Lan-yu**	**2.62**	**197**	*e*P	**Pn**	**10 12 55.0**		**-1.4**
VWUC	**VWUC**	**2.73**	**281**	*e*S	**Sn**	**10 13 27.1**		**-2.8**
MATB	**Ma-tsu**	**2.75**	**307**	*e*S	**Sn**	**10 13 28.8**		**-1.8**
PTMZ	**Houxiangcun**	**3.03**	**281**	*e*S	**Sn**	**10 13 34.7**		**-2.6**

*DJA **16** 10:18:54.1±0.4, 8°.S±2°.×12°.5E±°., h10km, M3.4/7, mb3.1/1, MLv3.5/7*
*IDC **16** 10:18:59.0±4.0, 8°.63S×125°.45E, h88km±48km, mb3.6/5, mbtmp3.8/9, ML3.7/4, MS2.5/1, Error ellipse: s-maj=39.2km s-min=16.8km az=33.0*

ISC 16 10:18:51.2±0.8, 8°.38S±0°.07×125°.54E±0°.09, h10km, n14, σ1s90/17, mb4.0/5, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
SOEI	**Soe**	**1.86**	**222**	P	**Pn**	**10 19 25.4**		**+2.2**
BATI	**Baumata**	**2.59**	**225**	P	**Pn**	**10 19 35.4**		**+2.1**
	6.5nm,0.3s,baz=345,slow=6.8,SNR=4.2							
BATI				S	**Sn**	**10 20 05.2**		**+0.3**
	84nm,0.6s,baz=132,slow=23,SNR=6.4							
	30nm,0.5s							
BATI	**Baumata**	**2.59**	**225**	P	**Pn**	**10 19 36.8**		**+3.5**
MMRI	**Maumere**	**3.28**	**265**	P	**Pn**	**10 19 41.0**		**-1.6**
EDFI	**Ende, Flores**	**3.83**	**264**	P	**Pn**	**10 19 48.4**		**-1.9**
LBFI	**Labuhan Bajo,**	**5.59**	**269**	P	Pn	10 20 11.6		-2.9
FITZ	**Fitzroy Crossi**	**9.66**	**179**	P	**Pn**	**10 21 11.3**		**+1.0**
	0.8nm,0.3s,baz=20,slow=9.8,SNR=17							
FITZ				S	**Sn**	**10 22 56.1**		**-3.0**
	3.7nm,0.4s,baz=185,slow=2.2,SNR=5.3							
	2.1nm,0.3s							
WRA	**Warramunga Arr**	**14.31**	**144**	P	**Pn**	**10 22 15.7**		**+1.7**
	0.5nm,0.3s,baz=319,slow=14,SNR=26							
WRA				S	**Sn**	**10 24 51.6**		**-1.3**
	0.6nm,0.4s,baz=312,slow=26,SNR=5.7							
	1.8nm,0.6s							
ASAR	**Alice Springs**	**17.18**	**153**	P	**Pn**	**10 22 51.7**		**+0.1**
	0.3nm,0.3s,baz=322,slow=11,SNR=19							
ASAR				S	**Sn**	**10 26 01.0**		**-1.8**
	0.3nm,0.5s,baz=314,slow=21,SNR=2.2							
	0.2nm,0.6s							
CMAR	**Chiang Mai Arr**	**37.42**	**316**	P	**P**	**10 26 03.6**		**-1.1**
	0.6nm,0.3s,baz=124,slow=8.7,SNR=4.2							
CMAR				LR	LR	10 42 51.0		
	comp=Z,6.9nm,21.0s,baz=160,slow=38							
	0.6nm,0.3s							
MJAR	**Matsushiro Arr**	**46.24**	**14**	P	**P**	**10 27 17.3**		**+0.6**
	2.6nm,0.9s,baz=182,slow=8.8,SNR=4.6							
	2.6nm,0.9s							
USRK	**Ussuriysk Ar.**	**52.66**	**6**	P	**P**	**10 28 06.9**		**+1.4**
	1.3nm,0.7s,baz=155,slow=7.9,SNR=2.4							
	1.3nm,0.7s							
MKAR	**Makanchi Array**	**67.05**	**329**	P	**P**	**10 29 44.1**		**-0.5**
	0.9nm,0.5s,baz=136,slow=7.2,SNR=13							
	0.9nm,0.5s							
KURBB	**Kurchatov Arra**	**71.45**	**331**	P	**P**	**10 30 10.8**		**-0.9**
	0.4nm,0.6s,baz=139,slow=5.8,SNR=2.4							
	0.4nm,0.6s							

JMA 16 10:31:23.8±0.0, 34°.0N±0°.1×135°.3E±0°.1, h7km, MV0.8/28, CENTRAL WAKAYAMA PREF, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
JWM	**Minabe**	**0.13**	**144**	*i* P		Pg	10 31 26.6	+0.1
JWM				S		Sg	10 31 28.5	+0.1
JTNC	**Tanabenakahech**	**0.32**	**115**	P		Pg	10 31 30.3	+0.3
JTNC				*e*S		Sg	10 31 34.4	+0.2
JWY	**Kouya**	**0.38**	**46**	*e*S		Sg	10 31 36.5	+0.2
JAI	**Aioi**	**0.69**	**257**	*e*P		Pg	10 31 37.1	-0.1
JAI				S		Sg	10 31 45.6	-0.5
JKN2	**Miekihoku**	**0.89**	**71**	P		Pg	10 31 40.6	-0.2
JKN2				*e*S		Sg	10 31 52.0	-0.3

*JMA **16** 10:31:32.9±0.2, 35°.6N±0°.6×141°.8E±0°.9, h21km±2km, MV3.0/23, FAR E OFF IBARAKI PREF*
*IDC **16** 10:31:38.3±3.1, 35°.14N×135°.65E, h0km, mb3.2/2, mbtmp3.2/2, ML1.5/1, Error ellipse: s-maj=90.3km s-min=26.0km az=130.0*

ISC 16 10:31:35.3±1.9, 35°.61N±0°.09×141°.7E±0°.1, h25km, n8, σ1s20/11, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
JIHU	**Itakohorinouch**	**1.00**	**291**	*e*S	**Sn**	**10 32 08.8**		**+1.7**
JSMT	**Sammumatsuo**	**1.01**	**272**	*e*P	**Pn**	**10 31 53.5**		**-0.3**
JSMT				*e*S	**Sn**	**10 32 07.7**		**+0.5**
BSO1	**Boso 1**	**1.12**	**211**	*e*P	**Pn**	**10 31 54.3**		**-0.5**
JHYU	**Hitachinakayam**	**1.15**	**309**	*e*P	**Pn**	**10 31 55.1**		**-0.6**
JHYU				*e*S	**Sb**	**10 32 11.2**		**+0.3**
BSO3	**Boso 3**	**1.26**	**230**	*e*P	**Pn**	**10 31 56.5**		**-0.5**
MJAR	**Matsushiro Arr**	**2.96**	**289**	Pn	**Pn**	**10 32 20.6**		**-0.2**
	0.1nm,0.3s,baz=238,slow=22,SNR=4.5							
MJAR				Sn	**Sn**	**10 32 53.5**		**-2.0**
	0.1nm,0.3s,baz=59,slow=28,SNR=1.8							
WRA	**Warramunga Arr**	**55.69**	**188**	P	**P**	**10 41 11.1**		**+1.6**
	0.2nm,0.4s,baz=1.9,slow=8.0,SNR=7.0							
	0.2nm,0.4s							
ASAR	**Alice Springs**	**59.42**	**188**	P	**P**	**10 41 35.0**		**-0.8**
	0.3nm,1.0s,baz=3.4,slow=6.2,SNR=5.0							
	0.3nm,1.0s							

IDC 16 10:46:53.1±7.9, 19°.06S×179°.05W, h598km±30km, mb2.9/3, mbtmp3.8/4, Error ellipse: s-maj=244.3km s-min=33.0km az=142.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
MSVF	**Nonsavu**	**3.05**	**295**	P	P	10 48 12.5		0.0
	9.2nm,0.4s,baz=105,slow=12,SNR=17							
WRA	**Warramunga Arr**	**43.84**	**261**	P	P	10 54 08.1		+0.1
	1.2nm,0.3s,baz=97,slow=7.6,SNR=63							
	1.2nm,0.3s							
ASAR	**Alice Springs**	**43.91**	**255**	P	P	10 54 08.1		-0.4
	1.7nm,0.5s,baz=89,slow=8.2,SNR=49							
	1.7nm,0.5s							
ILAR	**Eielson Array**	**87.14**	**13**	P	P	10 58 35.9		-0.1
	0.1nm,0.6s,baz=203,slow=6.6,SNR=1.5							
	0.1nm,0.6s							

*NEIC **16** 10:48:26.9±1.1, 21°.7S±0°.2×179°.3W±0°.1, h600km±9km, mb4.2/16, Error ellipse: s-maj=22.0km s-min=19.3km az=166.0*
*IDC **16** 10:48:27.6±1.1, 21°.62S×179°.52W, h610km, 12km, mb3.4/11, mbtmp4.4/13, Error ellipse: s-maj=19.9km s-min=12.0km az=166.0*

ISC 16 10:48:26.9±0.6, 21°.7S±0°.1×179°.45W±0°.09, h604km, n36, σ0s86/38, mb4.2/19, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
MSVF	**Nonsavu**	**4.56**	**328**	P	**P**	**10 49 56.7**		**-0.2**
	21nm,0.6s,baz=264,slow=22,SN

Explosion., Hungary

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSKK	**Cskako**	**0.12**	**274**	Pg	Pg	10 57 50.3	+0.5
CSKK				Lg	Lg	10 57 52.0	
MPLH	**Magyarpolny**	**0.63**	**253**	Lg	Lg	10 58 10.3	
PSZ	**Piszkesteto**	**1.14**	**60**	Sn	Sn	10 58 27.8	+0.6
MORH	**Mrgy, Hungar**	**1.15**	**173**	Lg	Lg	10 58 27.2	

MOS ***16*** *10:59:09.2±1.0, 1°.20S×126°.48E, h27km, mb5.1/31, Error ellipse: s-maj=9.9km s-min=5.6km az=122.8*

DJA ***16*** *10:59:10.6±0.1, 1°.5S±1°×12°.6E±°, h10km, M5.1/54, mB5.5/34, mb5.5/42, MLv5.4/54, Mw4.8/34, Mw(mB)5.0/34, MwMwp4.7/5, Mwp5.0/5*

NEIC ***16*** *10:59:11±1.7, 1°.20S±0°.06×126°.45E±0°.05, h21km±4km, mb5.0/78, Error ellipse: s-maj=8.3km s-min=7.3km az=160.0*

IDC ***16*** *10:59:12.6±1.3, 1°.25S×126°.44E, h42km±11km, mb4.4/19, mbtmp4.7/25, ML4.7/6, MS3.7/32, Error ellipse: s-maj=11.1km s-min=8.8km az=72.0*

BJI ***16*** *10:59:12.0, 1°.29S×126°.16E, h38km, mB5.2/14, mb4.7/41, Ms4.5/5, Ms7 4.3/6*

GCMT ***16*** *10:59:14.0±0.3, 1°.26S±0°.02×126°.45E±0°.02, h25km±1km, MW4.8/64, Moment Tensor Solution. s14,c15; s64,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=0.97±.14; $M_{\theta\theta}$-1.25±.08; $M_{\phi\phi}$2.22±.11; $M_{r\theta}$0.89±.19; $M_{\theta\phi}$0.01±.07; $M_{\phi r}$0.30±.17; Best double couple: M_o2.13400×10^{16} NP1:ϕ_s323.00000°, δ58.00000°, λ-152.00000°. NP2: ϕ_s217.00000°, δ67.00000°, λ-35.00000°. Principal axes: T 2.2510, Plg6.0000°, Azm272.0000°; N -0.2380, Plg49.0000°, Azm8.0000°; P -2.0170, Plg41.0000°, Azm177.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 10:59:12.3±0.3, 1°.20S±0°.03×126°.43E±0°.04, h35km, n332, σ1$47/303, mb5.0/96, MS3.8/31, 11C-1D, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANI	**Sanana**	**0.96**	**208**	P	**Pn**	**10 59 30.6**	**+1.3**
SANI	**Sanana**	**0.96**	**208**	P	**Pn**	**10 59 28.2**	**-1.1**
SANI				S	**Sn**	**10 59 43.8**	**+2.1**
NLAI	**Namlea**	**2.14**	**162**	P	**Pn**	**10 59 44.3**	**-1.2**
NLAI				S	**Sn**	**11 00 13.5**	**+2.7**
TNTI	**Ternate**	**2.17**	**26**	P	**Pn**	**10 59 47.7**	**+1.8**
TNTI	**Ternate**	**2.17**	**26**		**Pn**	**10 59 46.9**	**+1.0**
TNTI	**Ternate**	**2.17**	**26**	P	**Pn**	**10 59 46.8**	**+0.9**
TNTI				S	**Sn**	**11 00 14.2**	**+2.6**
KRAI	**Karang Ratu**	**2.88**	**137**	P	**Pn**	**10 59 57.0**	**+1.2**
AAI	**Ambon**	**3.04**	**145**	P	**Pn**	**10 59 59.1**	**+1.2**
MNI	**Manado**	**3.07**	**329**	P	**Pn**	**10 59 59.6**	**+1.2**
MSAI	**Masohi**	**3.28**	**131**	P	**Pn**	**11 00 02.9**	**+1.6**
LUWI	**Luwuk**	**3.66**	**272**	P	**Pn**	**11 00 06.7**	**+0.2**
LUWI	**Luwuk**	**3.66**	**272**		**Pn**	**11 00 06.7**	**+0.2**
LUWI	**Luwuk**	**3.66**	**272**	P	**Pn**	**11 00 06.4**	**-0.2**
BNDI	**Bandanaira**	**4.79**	**134**	P	**Pn**	**11 00 22.8**	**+0.8**
BNDI	**Bandanaira**	**4.79**	**134**	P	**Pn**	**11 00 22.9**	**+0.9**
MRSI	**Marisa**	**4.79**	**290**	P	**Pn**	**11 00 22.0**	**0.0**
APSI	**Ampana**	**4.79**	**273**	P	**Pn**	**11 00 23.2**	**+1.1**
SWI	**Sorong**	**4.84**	**86**	P	**Pn**	**11 00 23.2**	**+0.5**
SWI				S	**Sn**	**11 01 19.2**	**+1.7**
SIJI	**Sorong**	**4.84**	**86**	P	**Pn**	**11 00 23.8**	**+1.0**
	25nm,0.3s,baz=72,slow=11,SNR=145						
SIJI				S	**Sn**	**11 01 19.2**	**+1.5**
	138nm,0.6s,baz=66,slow=18,SNR=5.7						
	70nm,0.3s						
SIJI	**Sorong**	**4.84**	**86**	P	**Pn**	**11 00 23.5**	**+0.7**
SGSI	**Sangihe**	**4.93**	**349**	P	**Pn**	**11 00 23.1**	**-0.9**
KKSI	**Kolaka, Sulawe**	**5.62**	**238**	P	**Pn**	**11 00 35.5**	**+2.1**
FAKI	**Fak Fak**	**6.06**	**107**	P	**Pn**	**11 00 38.6**	**-0.9**
FAKI	**Fak Fak**	**6.06**	**107**		**Pn**	**11 00 38.4**	**-1.1**
FAKI	**Fak Fak**	**6.06**	**107**	P	**Pn**	**11 00 38.6**	**-0.9**
	1.2nm3μm239nm,0.6s						
TOLI2	**Tolitoli**	**6.10**	**292**	P	**Pn**	**11 00 41.1**	**+1.1**
TOLI2	**Tolitoli**	**6.10**	**292**		**Pn**	**11 00 40.9**	**+0.9**
PCI	**Palu**	**6.60**	**272**	P	**Pn**	**11 00 47.5**	**+0.5**
MPSI	**Mapaga**	**6.71**	**283**	P	**Pn**	**11 00 49.4**	**+1.0**
	0.8nm3μm171nm,0.6s						
TTSI	**Tana Toraja**	**6.86**	**254**	P	**Pn**	**11 00 51.9**	**+1.4**
SPSI	**Sidrap Palu**	**7.20**	**247**	P	**Pn**	**11 00 57.5**	**+2.3**
	1.5nm5μm387nm,0.6s						
DDMP	**Don Marcelino,**	**7.29**	**354**	*e*P	**Pn**	**11 00 55.8**	**-0.6**
DDMP				*e*S	**Sn**	**11 02 12.3**	**-5.7**
MWPI	**Manokwari, Pap**	**7.61**	**88**	P	**Pn**	**11 01 03.1**	**+2.3**
	1.2nm4μm360nm,0.9s						
MMSI	**Mamuju**	**7.66**	**259**	P	**Pn**	**11 01 03.1**	**+1.5**
	0.6nm2μm183nm,0.8s						
KMPI	**Kaimana, Papua**	**7.67**	**109**	P	**Pn**	**11 01 01.0**	**-0.6**
	5μm455nm,0.7s						
KAPI	**Kappang**	**7.67**	**240**	P	**Pn**	**11 01 02.2**	**+0.5**
	6.5nm,0.3s,baz=55,slow=3.1,SNR=17						
KAPI				S	**Sn**	**11 02 26.6**	**-0.9**
	42nm,0.6s,baz=218,slow=22,SNR=5.7						
KAPI				LR	LR	11 04 24.0	
	comp=Z,835nm,21.0s,baz=60,slow=41						
	37nm,0.5s						
KAPI	**Kappang**	**7.67**	**240**	P	**Pn**	**11 01 03.9**	**+2.3**
KAPI	**Kappang**	**7.67**	**240**		**Pn**	**11 01 03.6**	**+1.9**
KAPI	**Kappang**	**7.67**	**240**	P	**Pn**	**11 01 03.6**	**+1.9**
KAPI						11 02 26.6	
KAPI	**Kappang**	**7.67**	**240**	P	**Pn**	**11 01 04.0**	**+2.3**
BSSI	**Bau Bau, Buton**	**7.70**	**230**	P	**Pn**	**11 01 03.9**	**+1.8**
	0.7nm2μm209nm,0.6s						
RKPI	**Ransiki, Papua**	**7.75**	**92**	P	**Pn**	**11 01 02.7**	**0.0**
	2μm6μm153nm,0.7s						
PMSI	**Majene**	**7.85**	**253**	P	**Pn**	**11 01 05.9**	**+1.7**
	1.0nm3μm279nm,0.8s						
MKS	**Makassar**	**8.02**	**240**	P	**Pn**	**11 01 08.8**	**+2.4**
	2μm193nm,1.2s						
KCP	**Kidapawan**	**8.26**	**351**	*e*P	**Pn**	**11 01 09.4**	**-0.4**
SOEI	**Soe**	**8.77**	**194**	P	**Pn**	**11 01 17.9**	**+1.0**
SOEI	**Soe**	**8.77**	**194**		**Pn**	**11 01 21.4**	**+4.5**
SOEI	**Soe**	**8.77**	**194**	P	**Pn**	**11 01 18.4**	**+1.5**
	2μm290nm,0.9s						
EDFI	**Ende, Flores**	**8.87**	**212**	P	**Pn**	**11 01 20.1**	**+1.9**
	2μm249nm,0.7s						
CDOP	**Cateel, Davao**	**8.92**	**0**	*e*P	**Pn**	**11 01 18.8**	**0.0**
CDOP				*e*S	**Sn**	**11 02 51.6**	**-6.5**
BIPH	**Bislig**	**9.32**	**360**	*e*P	**Pn**	**11 01 25.1**	**+0.8**
BIPH				*e*S	**Sn**	**11 03 04.8**	**-3.1**
BATI	**Baumata**	**9.37**	**197**	P	**Pn**	**11 01 25.1**	**+0.2**
	16nm,0.3s,baz=6.6,slow=4.0,SNR=9.7						
BATI				LR	LR	11 05 15.9	
	comp=Z,1μm,21.7s,baz=28,slow=39						
	7.3nm,0.4s						
BATI	**Baumata**	**9.37**	**197**	P	**Pn**	**11 01 27.2**	**+2.2**
	151nm,1.0s						
BKB	**Balikpapan**	**9.54**	**270**	P	**Pn**	**11 01 29.9**	**+2.7**
BKB	**Balikpapan**	**9.54**	**270**		**Pn**	**11 01 28.3**	**+1.1**
BKB	**Balikpapan**	**9.54**	**270**	P	**Pn**	**11 01 28.3**	**+1.1**
BAKI	**Biak**	**9.67**	**90**	P	**Pn**	**11 01 29.6**	**+0.5**
	107nm,0.9s						
LBFI	**Labuhan Bajo,**	**9.74**	**222**	P	**Pn**	**11 01 31.5**	**+1.5**
MYLDM	**Lahad Datu**	**10.14**	**309**	P	**Pn**	**11 01 39.4**	**+3.8**
MYLDM	**Lahad Datu**	**10.14**	**309**		**Pn**	**11 01 39.1**	**+3.5**
PLAI	**Plampang**	**11.48**	**228**	P	**Pn**	**11 01 55.8**	**+1.9**
AUDHS	**Darwin High Sc**	**11.99**	**159**	P	**Pn**	**11 02 02.8**	**+1.9**
DRS	**Darwin Rock St**	**12.01**	**159**	P	**Pn**	**11 02 01.6**	**+0.5**
MTN	**Manton Dam**	**12.47**	**158**	P	**Pn**	**11 02 06.7**	**-0.8**
	comp=Z,50nm,1.0s						
MTN	**Manton Dam**	**12.47**	**158**		**Pn**	**11 02 06.7**	**-0.8**
KDU	**Kakadu**	**12.89**	**153**	P	**Pn**	**11 02 10.9**	**-2.2**
	comp=Z,36nm,0.8s						
GENI	**Genyem**	**13.80**	**96**	P	**Pn**	**11 02 26.8**	**+1.2**
JAGI	**Jajag, Banyuwa**	**14.21**	**239**	P	**Pn**	**11 02 33.6**	**+2.4**
JAGI	**Jajag, Banyuwa**	**14.21**	**239**		**Pn**	**11 02 33.3**	**+2.1**
JAY	**Jayapura**	**14.32**	**95**	P	**Pn**	**11 02 31.7**	**-1.1**
	comp=Z,1.1nm,0.3s,baz=78,slow=23,SNR=4.4						
JAY				LR	LR	11 08 33.6	
	comp=Z,276nm,19.9s,baz=270,slow=39						
	comp=Z,11nm,0.7s						
KNRA	**Kununurra**	**14.57**	**171**	P	**Pn**	**11 02 35.1**	**-1.1**
	comp=Z,90nm,1.1s						
KNRA	**Kununurra**	**14.57**	**171**		**Pn**	**11 02 34.9**	**-1.3**
SBUM	**Sibu**	**14.66**	**284**	P	**P**	**11 02 40.9**	**-2.3**
SBUM	**Sibu**	**14.66**	**284**		**P**	**11 02 40.5**	**-2.7**
FITZ	**Fitzroy Crossi**	**16.82**	**183**	P	**Pn**	**11 03 04.3**	**-0.9**
	comp=Z,2.4nm,0.3s,baz=15,slow=8.2,SNR=38						
FITZ				LR	LR	11 10 40.6	
	comp=Z,110nm,19.4s,baz=359,slow=41						
	comp=Z,34nm,0.7s						
SMRI	**Semarang**	**16.97**	**250**		**P**	**11 03 09.7**	**+0.8**
LEM	**Lembang**	**19.58**	**253**	P	**P**	**11 03 37.4**	**-0.3**
	comp=Z,3.4nm,0.3s,baz=70,slow=15,SNR=4.2						
	comp=Z,11nm,0.4s						
BBJI	**Bungbulang**	**19.73**	**251**	P	**Pn**	**11 03 41.5**	**+0.6**
BBJI	**Bungbulang**	**19.73**	**251**		**P**	**11 03 40.1**	**+0.9**
WRAB	**Tennant Creek**	**20.17**	**158**	P	**P**	**11 03 42.4**	**-1.5**
WRAB	**Tennant Creek**	**20.17**	**158**	P	**P**	**11 03 42.5**	**-1.5**
WRAB				IAmb	IAmb	11 03 43.2	
	comp=Z,79nm,0.8s						
WRAB	**Tennant Creek**	**20.17**	**158**	*ce*P	**P**	**11 03 41.7**	**-2.2**
WRAB				pmax	pmax		
	comp=Z,102nm,0.9s						
WRA	**Warramunga Arr**	**20.17**	**158**	P	**P**	**11 03 42.1**	**-1.9**
	comp=Z,79nm,0.8s,baz=339,slow=11,SNR=506						
	comp=Z,79nm,0.8s						
WRA	**Warramunga Arr**	**20.17**	**158**	*i* P	**P**	**11 03 42.0**	**-2.0**
WRA				pmax	pmax		
	comp=Z,87nm,0.8s						
WR8	**Warramunga Arr**	**20.25**	**158**	P	**P**	**11 03 43.0**	**-1.7**
WR8				IAmb	IAmb	11 03 44.0	
	comp=Z,74nm,0.8s						
COEN	**Coen**	**20.86**	**128**	P	**P**	**11 03 49.4**	**-2.0**
	comp=Z,109nm,0.9s						
COEN	**Coen**	**20.86**	**128**	P	**P**	**11 03 51.5**	**+0.1**
COEN	**Coen**	**20.86**	**128**	IAmb	IAmb	11 04 05.9	
	comp=Z,64nm,1.0s						
MBWA	**Marble Bar**	**20.89**	**198**	P	**P**	**11 03 51.2**	**-0.5**
	comp=Z,55nm,1.3s						
MBWA	**Marble Bar**	**20.89**	**198**	P	**P**	**11 03 51.9**	**+0.2**
MBWA	**Marble Bar**	**20.89**	**198**		**P**	**11 03 51.3**	**-0.5**
MBWA				IAmb	IAmb	11 03 56.3	
	comp=Z,50nm,0.9s						
PSAC1	**Pilbara Seismi**	**21.22**	**197**	P	**P**	**11 03 53.6**	**-1.7**
	comp=Z,82nm,1.0s						
PSA00	**Pilbara Seismi**	**21.25**	**197**	P	**P**	**11 03 56.8**	**+1.2**
PSA00	**Pilbara Seismi**	**21.25**	**197**	P	**P**	**11 03 54.6**	**-1.0**
PSA00				IAmb	IAmb	11 04 00.5	
	comp=Z,68nm,0.8s						
PSA00	**Pilbara Seismi**	**21.25**	**197**	P	**P**	**11 03 54.5**	**-1.0**
PSA00				IAmb	IAmb	11 04 00.5	
	comp=Z,51nm,1.1s						
PMG	**Port Moresby**	**22.17**	**112**	P	**P**	**11 04 05.5**	**-0.1**
	comp=Z,19nm,0.6s,baz=10,slow=2.3,SNR=11						
	comp=Z,19nm,0.6s						
PMG	**Port Moresby**	**22.17**	**112**	P	**P**	**11 04 07.2**	**+1.6**
PMG	**Port Moresby**	**22.17**	**112**	P	**P**	**11 04 07.0**	**+1.4**
PMG	**Port Moresby**	**22.17**	**112**	P	**P**	**11 04 04.5**	**-1.1**
PMG	**Port Moresby**	**22.17**	**112**	P	**P**	**11 04 04.5**	**-1.1**
PMG				pmax	pmax		
	comp=Z,30nm,0.8s						
QIS	**Mount Isa**	**23.15**	**147**	P	**P**	**11 04 13.9**	**-2.0**
	comp=Z,114nm,0.8s						
QIS	**Mount Isa**	**23.15**	**147**	P	**P**	**11 04 15.0**	**-0.8**
GUMO	**Guam**	**23.45**	**51**	LR	LR	11 11 19.1	
	comp=Z,139nm,22.0s,baz=231,slow=31						
AS31	**Alice Springs**	**23.48**	**163**	IAmb	IAmb	11 04 19.0	
	comp=Z,29nm,0.7s						
ASAR	**Alice Springs**	**23.48**	**163**	P	**P**	**11 04 17.2**	**-1.9**
	comp=Z,126nm,0.9s,baz=339,slow=10,SNR=1292						
ASAR				S	**S**	**11 08 27.7**	**-2.8**
	comp=Z,5.1nm,1.0s,baz=347,slow=21,SNR=6.1						
ASAR				ScP	**ScP**	**11 11 38.6**	**-1.6**
	comp=Z,0.9nm,0.7s,baz=334,slow=2.4,SNR=4.1						
ASAR				LR	LR	11 14 05.7	
	comp=Z,232nm,21.5s,baz=348,slow=38						
	comp=Z,126nm,0.9s						
ASAR	**Alice Springs**	**23.48**	**163**	P	**P**	**11 04 17.6**	**-1.5**
AUALC	**St Philip's Co**	**23.50**	**163**	P	**P**	**11 04 18.4**	**-0.8**
WRKA	**Warakurna**	**23.77**	**176**	P	**P**	**11 04 20.5**	**-1.3**
	comp=Z,47nm,1.1s						
MTSU	**Mount Surprise**	**24.33**	**135**	P	**P**	**11 04 27.0**	**0.0**
	comp=Z,16nm,0.9s						
MTSU	**Mount Surprise**	**24.33**	**135**	P	**P**	**11 04 28.2**	**+1.2**
GIRL	**Giralia**	**24.40**	**208**	P	**P**	**11 04 27.5**	**-0.1**
	comp=Z,105nm,1.3s						
TWGBT	**Beinan**	**24.43**	**348**	P	**P**	**11 04 29.9**	**+2.0**
YULB	**Yu-li**	**24.95**	**349**	P	**P**	**11 04 32.6**	**0.0**
YULB				IAmb	IAmb	11 05 00.9	
	comp=Z,45nm,1.4s						
TPUB	**Ta-pu**	**25.00**	**347**	P	**P**	**11 04 33.4**	**+0.4**
TPUB	**Ta-pu**	**25.00**	**347**	P	**P**	**11 04 32.9**	**-0.1**
KRVT	**Keravat (AS076**	**25.75**	**97**	LR	LR	11 14 47.5	
QIZ	**Qiongzhong**	**25.88**	**322**	P	**P**	**11 04 42.3**	**+1.2**
QIZ				S	**S**	**11 09 11.3**	**+2.5**
QIZ				pmax	pmax		
	comp=Z,340nm,3.9s						
QIZ				L	L		
	comp=Z,210nm,15.4s						
QIZ				L	L		
	comp=Z,220nm,14.0s						
QIZ				L	L		
	comp=Z,170nm,17.3s						
MEEK	**Meekatharra**	**26.39**	**196**	P	**P**	**11 04 43.7**	**-2.0**
	comp=Z,33nm,0.6s						
MEEK	**Meekatharra**	**26.39**	**196**	P	**P**	**11 04 44.6**	**-1.1**
CTA	**Charters Tower**	**26.99**	**135**	P	**P**	**11 04 51.5**	**+0.4**
	comp=Z,44nm,0.8s,baz=310,slow=11,SNR=30						
CTA				LR	LR	11 16 31.9	
	comp=Z,232nm,21.1s,baz=318,slow=39						
	comp=Z,44nm,0.8s						
CTA	**Charters Tower**	**26.99**	**135**	P	**P**	**11 04 51.8**	**+0.7**
CTAO	**Charters Tower**	**26.99**	**135**	P	**P**	**11 04 52.0**	**+0.9**
CTAO	**Charters Tower**	**26.99**	**135**	P	**P**	**11 04 50.9**	**-0.2**
CTAO				IAmb	IAmb	11 04 55.2	
	comp=Z,49nm,0.8s						
CTAO	**Charters Tower**	**26.99**	**135**	P	**P**	**11 04 50.9**	**-0.2**
CTAO				pmax	pmax		
	comp=Z,49nm,0.9s						
AUAYR	**Ayr State High**	**27.49**	**133**	P	**P**	**11 04 57.2**	**+1.6**
RPSI	**Rantau Prapat**	**27.77**	**278**	P	**P**	**11 04 57.6**	**-0.6**
PSI	**Prapat**	**27.79**	**278**	P	**P**	**11 04 59.3**	**+0.8**
PSI	**Prapat**	**27.79**	**278**	P	**P**	**11 04 57.6**	**-0.9**
PSI				pmax	pmax		
	comp=Z,14nm,0.8s						
MORW	**Morawa**	**29.44**	**199**	P	**P**	**11 05 10.9**	**-1.9**
	comp=Z,20nm,1.2s						
MORW	**Morawa**	**29.44**	**199**	P	**P**	**11 05 11.6**	**-1.2**
MORW	**Morawa**	**29.44**	**199**	IAmb	IAmb	11 05 14.0	
	comp=Z,14nm,0.7s						
FORT	**Forest**	**29.46**	**177**	P	**P**	**11 05 11.2**	**-1.8**
	comp=Z,31nm,0.8s						
FORT	**Forrest**	**29.46**	**177**	IAmb	IAmb	11 05 13.5	
	comp=Z,22nm,0.8s						
QLP	**Quilpie**	**30.50**	**147**	P	**P**	**11 05 21.8**	**-0.4**
	comp=Z,52nm,1.1s						
QLP	**Quilpie**	**30.50**	**147**	P	**P**	**11 05 23.0**	**+0.7**
BLDU	**Ballidu**	**30.68**	**197**	P	**P**	**11 05 23.0**	**-0.8**
KLBR	**Kellerberrin**	**31.33**	**194**	P	**P**	**11 05 28.9**	**-0.6**
AUKUL	**Kulin High Sch**	**32.27**	**193**	P	**P**	**11 05 36.8**	**-1.0**
BBOO	**Buckleboo**	**32.73**	**165**	P	**P**	**11 05 41.9**	**+0.1**
NWAO	**Narrogin (SRO)**	**32.73**	**194**	P	**P**	**11 05 41.0**	**-0.9**
	comp=Z,16nm,0.7s,baz=11,slow=8.5,SNR=13						
NWAO				LR	LR	11 21 12.8	
	comp=Z,141nm,18.8s,baz=114,slow=40						
	comp=Z,16nm,0.7s						
NWAO	**Narrogin (SRO)**	**32.73**	**194**	P	**P**	**11 05 40.9**	**-0.9**
NWAO				IAmb	IAmb	11 05 43.0	
	comp=Z,19nm,0.8s						
NWAO	**Narrogin (SRO)**	**32.73**	**194**	P	**P**	**11 05 40.9**	**-0.9**
NWAO				pmax	pmax		
	comp=Z,19nm,0.8s						
AUHAR	**St Anne's Scho**	**33.24**	**196**	P	**P**	**11 05 48.2**	**+2.0**
CMAR	**Chiang Mai Arr**	**33.35**	**307**	P	**P**	**11 05 47.1**	**-0.3**
	comp=Z,1.3nm,0.3s,baz=139,slow=8.1,SNR=9.3						
CMAR				PcP	**PcP**	**11 08 28.2**	**-0.7**
	comp=Z,1.4nm,0.4s,baz=152,slow=1.7,SNR=5.2						
CMAR				ScP	**ScP**	**11 12 10.9**	**0.0**
	comp=Z,0.6nm,0.3s,baz=119,slow=3.7,SNR=7.0						
	comp=Z,1.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**33.35**	**307**	*ce*P	**P**	**11 05 49.0**	**+1.6**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CHTO	**Chiang Mai**	**33.54**	**308**	P	**P**	**11 05 50.6**	**+1.5**
CHTO	**Chiang Mai**	**33.54**	**308**	P	**P**	**11 05 47.6**	**-1.5**
CHTO	**Chiang Mai**	**33.54**	**308**	P	**P**	**11 05 47.6**	**-1.5**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
STKA	**Stephens Creek**	**33.71**	**156**	P	**P**	**11 05 49.9**	**-0.4**
	comp=Z,17nm,0.7s,baz=324,slow=9.3,SNR=41						
STKA				LR	LR	11 21 38.2	
	comp=Z,169nm,18.4s,baz=331,slow=40						
	comp=Z,17nm,0.7s						
STKA	**Stephens Creek**	**33.71**	**156**	P	**P**	**11 05 50.0**	**-0.4**
NJ2	**Nanjing**	**33.84**	**348**	*e*P	**P**	**11 05 53.1**	**+1.7**
NJ2				sP	**sP**	**11 06 05.1**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,30nm,0.5s						
HTT	**Hallett**	**34.14**	**161**	P	**P**	**11 05 54.9**	**+0.7**
AULRC	**Lightning Ridg**	**34.78**	**146**	P	**P**	**11 06 00.2**	**+0.5**
ENH	**Enshi**	**35.22**	**334**	P	**P**	**11 06 06.5**	**+3.0**
CMSA	**Cobar Meteorol**	**35.24**	**151**	P	**P**	**11 06 04.3**	**+0.6**
PZH	**PanZhiHua**	**36.41**	**321**	P	**P**	**11 06 14.9**	**+1.0**
AUDCS	**Dubbo College**	**37.29**	**148**	P	**P**	**11 06 22.0**	**+0.8**
TNCH	**TengChong**	**37.56**	**316**	*e*P	**P**	**11 06 25.5**	**+1.8**
KSRS	**Korea Array**	**38.48**	**2**	P	**P**	**11 06 31.1**	**0.0**
	comp=Z,1.3nm,0.5s,baz=180,slow=9.3,SNR=6.4						
	comp=Z,1.3nm,0.5s						
MJAR	**Matsushiro Arr**	**39.11**	**15**	P	**P**	**11 06 34.4**	**-2.1**
	comp=Z,1.3nm,0.4s,baz=194,slow=10,SNR=7.6						
	comp=Z,1.3nm,0.4s						
HNS	**HongShan**	**39.91**	**345**	⇑P	**P**	**11 06 45.0**	**+2.0**
HNS				pP	**sP**	**11 06 57.5**	**+1.1**
HNS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
AUMTS	**Mt Stromlo**	**39.92**	**151**	P	**P**	**11 06 44.9**	**+1.6**
CAN	**Canberra**	**39.92**	**151**	P	**P**	**11 06 44.8**	**+1.5**
CAN	**Canberra**	**39.92**	**151**	P	**P**	**11 06 44.8**	**+1.5**
CAN				pmax	pmax		
	comp=Z,113nm,0.9s						
AUDAR	**Daramalan Coll**	**39.94**	**151**	P	**P**	**11 06 44.2**	**+0.8**
AUMHS	**Melrose High S**	**40.00**	**151**	P	**P**	**11 06 44.8**	**+0.9**
CNB	**Canberra Magne**	**40.10**	**150**	P	**P**	**11 06 46.9**	**+2.1**
TOO	**Toolangi**	**40.23**	**156**	P	**P**	**11 06 45.6**	**-0.2**
TOO	**Toolangi**	**40.23**	**156**	P	**P**	**11 06 45.6**	**-0.2**
TOO				pmax	pmax		
	comp=Z,20nm,1.1s						
AUSMG	**Snowy Mountain**	**40.62**	**152**	P	**P**	**11 06 50.9**	**+1.8**
BJT	**Baijiatuau**	**42.08**	**348**	P	**P**	**11 07 02.5**	**+1.6**
LZH	**Lanzhou**	**42.65**	**333**	*e*P	**P**	**11 07 03.8**	**-2.0**
LZH				sP	sP	11 07 19.3	+0.2
LZH				pmax	pmax		
	comp=Z,9.0nm,1.5s						
SHL	**Shillong**	**42.70**	**311**	P	**P**	**11 07 05.2**	**-1.2**
SHL				IAmb	IAmb	11 07 31.6	
	comp=Z,18nm,0.5s						
SHL	**Shillong**	**42.70**	**311**	P	**P**	**11 07 05.3**	**-1.2**
SHL				pmax	pmax		
	comp=Z,18nm,0.5s						
HHC	**Hu-ho-hao-te**	**43.98**	**344**	*e*P	**P**	**11 07 19.3**	**+2.9**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,5.5s						
BTO2	**Baotou**	**44.38**	**342**	*e*P	**P**	**11 07 22.3**	**+2.6**
BTO2				S	**S**	**11 13 56.1**	**+4.1**
BTO2				pmax	pmax		
	comp=Z,17nm,0.5s						
BTO2				pmax	pmax		
	comp=Z,610nm,4.9s						
BTO2				L	L		
	comp=Z,150nm,3.9s						
BTO2				L	L		
	comp=Z,300nm,5.3s						
BTO2				L	L		
	comp=Z,290nm,5.6s						
USRK	**Ussuriysk Ar.**	**45.47**	**6**	P	**P**	**11 07 26.3**	**-1.8**
	comp=Z,3.0nm,0.7s,baz=185,slow=7.5,SNR=4.5						
	comp=Z,3.0nm,0.7s						
LSA	**Lhasa**	**45.58**	**315**	P	**P**	**11 07 27.3**	**-2.5**
PALK	**Pallekele**	**46.39**	**281**	LR	LR	11 28 28.0	
	comp=Z,141nm,20.2s,baz=97,slow=38						
BNX	**BinXian**	**46.74**	**1**	⇑P	**P**	**11 07 40.3**	**+2.2**
BNX				pmax	pmax		
	comp=Z,6.0nm,1.5s						
GTA2	**Gaotai**	**47.29**	**332**	*e*P	**P**	**11 07 44.0**	**+1.3**
GTA2				pP	pP	11 07 53.4	+1.2
GTA2				pmax	pmax		
	comp=Z,13nm,1.1s						
ASAJ	**Asahikawa**	**47.37**	**16**	LR	LR	11 30 06.7	
	comp=Z,41nm,18.6s,baz=176,slow=39						
GOMU	**GeErMu**	**47.43**	**325**	P	**P**	**11 07 45.5**	**+1.4**
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
EVN	**Everest**	**47.81**	**310**	P	**P**	**11 07 47.0**	**-0.5**
YSS	**Yu

NRN	Naryn	62.28	319		IAmb	IAmb	11 09 48.4		
	comp=Z,20nm,1.0s								
AFI	Afiamalu	62.36	105		LR	LR	11 36 29.1		
	comp=Z,75nm,19.5s,baz=281,slow=36								
TNSS	Tian-Shan	62.48	321	*eP*		P	11 09 33.4	+0.6	
TNSS	Tian-Shan	62.48	321	*eP*		P	11 09 33.5	+0.6	
MDOK	Medeo	62.48	321	*eP*		P	11 09 33.4	+0.9	
MDOK	Medeo	62.48	321	*eP*		P	11 09 33.5	+0.9	
ARXS	Arharly	62.55	323	*eP*		P	11 09 32.2	-0.7	
AAA	Alma-Ata	62.59	321	*eP*		P	11 09 33.9	+0.8	
AAA	Alma-Ata	62.59	321	*eP*		P	11 09 33.1	0.0	
TDK	Taldyqorghan	62.63	324	*eP*		P	11 09 34.0	+0.7	
TDK					pmax	pmax			
	comp=Z,8.0nm,0.7s								
TDK	Taldyqorghan	62.63	324	*eP*		P	11 09 34.0	+0.7	
	comp=Z,7.5nm,0.7s								
YAK	Yakutsk	63.11	2	*eP*		P	11 09 36.5	+0.4	
YAK				*e*			11 10 12.9		
YAK				*e*			11 11 59.9		
YAK				*e*PPP		PPP	11 13 24.0		
YAK				*e*S		S	11 18 05.5	+1.1	
YAK				*e*			11 19 27.5		
YAK				*e*SS		SS	11 22 10.1	-0.8	
YAK					pmax	pmax			
	comp=Z,20nm,0.9s								
YAK					pmax	pmax			
	comp=N,3.0nm,0.9s								
YAK					pmax	pmax			
	comp=E,4.0nm,1.1s								
YAK					pmax	pmax			
	comp=Z,369nm,6.1s								
YAK					pmax	pmax			
	comp=E,183nm,5.8s								
YAK					pmax	pmax			
	comp=N,325nm,6.5s								
YAK					smax	smax			
	comp=E,150nm,4.5s								
YAK					smax	smax			
	comp=N,72nm,4.1s								
MA2	Magadan	63.53	14		P	P	11 09 39.6	+0.6	
MA2	Magadan	63.53	14		P	P	11 09 39.6	+0.6	
MA2					pmax	pmax			
	comp=Z,25nm,0.8s								
ARLS	Aral	63.58	319		P	P	11 09 42.1	+2.2	
AAK	Ala-Archa	63.84	320			P	11 09 42.9	+1.3	
AAK					IAmb	IAmb	11 09 59.1		
	comp=Z,16nm,1.0s								
AAK	Ala-Archa	63.84	320		P	P	11 09 42.9	+1.3	
AAK					pmax	pmax			
	comp=Z,16nm,1.0s								
KBL	Kabul	64.34	310		P	P	11 09 46.3	+1.2	
KBL					pmax	pmax			
	comp=Z,38nm,0.9s								
ZAA0	Zalesovo Array	64.84	334		IAmb	IAmb	11 10 07.6		
	comp=Z,12nm,0.9s								
ZALV	Zalesovo Beam	64.84	334		P	P	11 09 46.8	-0.8	
	comp=Z,2.3nm,0.7s,baz=127,slow=3.9,SNR=7.7								
	comp=Z,2.3nm,0.7s								
ZALV	Zalesovo Beam	64.84	334		P	P	11 09 46.2	-1.5	
ZALV	Zalesovo Beam	64.84	334	*i* P		P	11 09 46.7	-1.0	
ZALV					pmax	pmax			
	comp=Z,2.0nm,0.6s								
ARK	Arkit	65.12	318		P	P	11 09 51.3	+1.4	
KURBB	Kurchatov Arra	65.73	329		P	P	11 09 54.0	+0.4	
	comp=Z,7.0nm,0.5s,baz=125,slow=6.1,SNR=49								
	comp=Z,7.0nm,0.5s								
KURK	Kurchatov	65.74	329		P	P	11 09 53.8	+0.2	
KURK	Kurchatov	65.74	329		P	P	11 09 53.8	+0.2	
KURK					pmax	pmax			
	comp=Z,64nm,0.9s								
CHGR	Chuyangaron	65.78	314		P	P	11 09 54.9	+0.7	
CHGR					pmax	pmax			
	comp=Z,76nm,1.1s								
DZA	Taraz	66.03	319	*eP*		P	11 09 56.5	+0.9	
DZA	Taraz	66.03	319	*eP*		P	11 09 56.6	+0.9	
IUG	Iuzhnay	66.57	318	*eP*		P	11 10 00.1	+0.9	
IUG					pmax	pmax			
	comp=Z,16nm,1.2s								
IUG	Iuzhnay	66.57	318	*eP*		P	11 10 00.2	+0.9	
	comp=Z,16nm,1.2s								
KK31	Karatay Array	66.66	319		P	P	11 10 00.4	+0.7	
KK31	Karatay Array	66.66	319		P	P	11 10 00.4	+0.7	
KK31					pmax	pmax			
	comp=Z,26nm,1.1s								
KKAR	Karatay Array	66.66	319		P	P	11 10 00.1	+0.4	
KKAR	Karatay Array	66.66	319		P	P	11 10 00.1	+0.4	
SHEM	Shemya Is, Ala	66.86	29		LR	LR	11 34 45.2		
	comp=Z,83nm,20.0s,baz=290,slow=32								
SEY	Seymchan	66.87	13	*ceP*		P	11 10 01.3	+0.8	
SEY					pmax	pmax			
	comp=Z,18nm,0.9s								
CHM	Chimkent	66.93	318	*eP*		P	11 10 02.2	+0.8	
CHM	Chimkent	66.93	318	*eP*		P	11 10 02.2	+0.8	
BVAR	Borovoye Array	71.29	328		P	P	11 10 27.9	-0.4	
	comp=Z,1.7nm,0.5s,baz=134,slow=8.5,SNR=12								
	comp=Z,1.7nm,0.5s								
BORK	Borovoye	71.34	328		P	P	11 10 28.2	-0.3	
BORK	Borovoye	71.34	328	*ceP*		P	11 10 28.4	-0.1	
BORK					pmax	pmax			
	comp=Z,9.0nm,1.3s								
TIXI	Tiksi	72.74	1		P	P	11 10 35.2	-1.3	
TIXI	Tiksi	72.74	1	*ceP*		P	11 10 35.2	-1.3	
TIXI					pmax	pmax			
	comp=Z,4.0nm,0.4s								
AB31	Akbulak array	75.78	322		IAmb	IAmb	11 11 14.8		
	comp=Z,29nm,1.6s								
ABKAR	Akbulak array	75.78	322			P	11 10 54.2	-0.4	
VNDA	Vanda	78.61	173		P	P	11 11 09.6	-0.4	
	comp=Z,6.9nm,0.8s,baz=310,slow=6.1,SNR=18								
VNDA					LR	LR	11 44 07.8		
	comp=Z,112nm,21.8s,baz=332,slow=34								
	comp=Z,6.9nm,0.8s								
VNDA	Vanda	78.61	173		P	P	11 11 10.2	+0.2	
VNDA	Vanda	78.61	173		P	P	11 11 10.2	+0.2	
VNDA					pmax	pmax			
	comp=Z,6.0nm,0.8s								
MAW	Mawson	79.06	200		LR	LR	11 45 27.7		
	comp=Z,33nm,19.0s,baz=56,slow=35								
RAYN	Ar Rayn	82.16	294		P	P	11 11 30.3	0.0	
RAYN					IAmb	IAmb	11 11 48.6		
	comp=Z,12nm,1.1s								
RAYN	Ar Rayn	82.16	294		P	P	11 11 30.3	0.0	
RAYN					pmax	pmax			
	comp=Z,12nm,1.1s								
F15K	North Star Dit	82.54	23		IAmb	IAmb	11 11 53.4		
	comp=Z,11nm,1.1s								
K15K	Wolf Creek Mou	82.77	27		IAmb	IAmb	11 12 00.2		
	comp=Z,39nm,1.9s								
C16K	Lisburne Hills	83.17	20		IAmb	IAmb	11 11 56.4		
	comp=Z,17nm,1.1s								
G16K	Koyuk River	83.34	24		IAmb	IAmb	11 11 51.5		
	comp=Z,15nm,1.2s								
J16K	Anvik River	83.46	26		IAmb	IAmb	11 11 52.6		
	comp=Z,15nm,1.1s								
L16K	Owhat River	83.55	27			P	11 11 36.8	+0.2	
I17K	Unalakleet	83.58	25		P	P	11 11 36.8	+0.1	
I17K					IAmb	IAmb	11 11 53.3		
	comp=Z,14nm,1.1s								
PPT	Papeete	83.91	107		LR	LR	11 45 28.0		
	comp=Z,58nm,21.2s,baz=282,slow=33								
PPT2	Papeete2	83.91	107	*e*	LR	LR	11 37 59.2		
PPT2				*e*	LR	LR	11 38 01.7		
	comp=Z,120nm,24.8s								
TBI	Tubuai	84.11	113	*e*	LR	LR	11 38 02.3		
	comp=Z,392nm,27.2s								
H17K	Granite Mounta	84.20	24		IAmb	IAmb	11 11 58.9		
	comp=Z,20nm,1.4s								
KIRV	Kirov	84.26	329	*ce*	P	P	11 11 40.3	+0.1	
K17K	Iditarod	84.33	27		IAmb	IAmb	11 11 57.4		
	comp=Z,13nm,0.9s								
GNI	Garni	84.41	310		LR	LR	11 56 08.5		
	comp=Z,12nm,18.6s,baz=76,slow=40								
C18K	Utukok River	84.74	21		IAmb	IAmb	11 11 60.0		
	comp=Z,6.2nm,0.7s								
C19K	Lookout Ridge	85.43	20		IAmb	IAmb	11 12 03.9		
	comp=Z,8.6nm,0.7s								
G19K	Purcell Mounta	85.63	23		IAmb	IAmb	11 12 04.2		
	comp=Z,5.9nm,0.6s								
N19K	Bonanza Creek	85.71	29		IAmb	IAmb	11 12 13.6		
	comp=Z,13nm,1.0s								
D19K	Kuna River	85.79	21		IAmb	IAmb	11 12 10.9		
	comp=Z,6.6nm,0.8s								
KDAK	Kodiak Island	86.19	32		LR	LR	11 44 40.3		
	comp=Z,113nm,21.9s,baz=244,slow=32								
KIV	Kislovodsk	86.31	314	*eP*		P	11 11 50.1	-0.9	
KIV					pmax	pmax			
	comp=Z,7.0nm,1.1s								
KIV	Kislovodsk	86.31	314		P	P	11 11 50.4	-0.6	
D20K	Etivluk River	86.38	21		IAmb	IAmb	11 12 07.7		
	comp=Z,5.9nm,0.7s								
VRH	Novokhopyorsk	87.60	321	*eP*		P	11 11 59.8	+2.9	
VRH					pmax	pmax			
	comp=Z,20nm,0.4s								
FURI	Furi	87.97	279		LR	LR	11 50 16.0		
	comp=Z,23nm,21.1s,baz=89,slow=35								
E22K	Anaktuvuk Pass	88.02	22		IAmb	IAmb	11 12 15.3		
	comp=Z,18nm,1.6s								
D23K	Nanushuk River	88.55	21		IAmb	IAmb	11 12 18.1		
	comp=Z,19nm,1.6s								
QSPA	South Pole Qui	88.74	180		P	P	11 12 01.7	-0.5	
	comp=Z,12nm,0.7s,baz=296,slow=0.7,SNR=72								
QSPA					LR	LR	11 51 01.7		
	comp=Z,58nm,21.2s,baz=360,slow=35								
	comp=Z,12nm,0.7s								
QSPA	South Pole Qui	88.74	180			P	11 12 02.3	+0.1	
E23K	Chandalar	88.83	22		IAmb	IAmb	11 12 27.9		
	comp=Z,6.8nm,1.1s								
VORD	Divnogorie	89.11	321	*eP*		P	11 12 01.6	-2.5	
VORD					pmax	pmax			
	comp=Z,6.0nm,0.5s								
VSR	Storozhevoye	89.20	321	*eP*		P	11 12 07.2	+2.7	
VSR					pmax	pmax			
	comp=Z,3.0nm,0.7s								
LPSR	Galich'ya Gora	89.42	322	*eP*		P	11 12 13.5	+8.0	
LPSR					pmax	pmax			
	comp=Z,7.0nm,0.8s								
ILAR	Eielson Array	89.65	25		P	P	11 12 04.3	-2.1	
	comp=Z,0.5nm,0.8s,baz=240,slow=5.0,SNR=7.1								
	comp=Z,0.5nm,0.8s								
ASF	Jabal al Asfar	90.24	302		LR	LR	11 58 28.5		
	comp=Z,26nm,20.6s,baz=31,slow=39								
MMAI	Mount Meron Ar	91.51	303		LR	LR	11 59 14.6		
	comp=Z,27nm,20.6s,baz=90,slow=39								
EIL	Elat	91.88	299		LR	LR	11 56 45.9		
	comp=Z,43nm,21.9s,baz=56,slow=38								
I27K	Kandik River	91.89	25		IAmb	IAmb	11 12 42.2		
	comp=Z,4.7nm,0.8s								
TAOE	Nuku Hiva Isla	93.20	99	*e*	LR	LR	11 42 22.2		
	comp=Z,100nm,24.9s								
G29M	Pine Creek	93.28	23		IAmb	IAmb	11 12 56.8		
	comp=Z,8.5nm,1.2s								
L29M	L29M	93.53	27		IAmb	IAmb	11 12 40.5		
	comp=Z,4.4nm,0.9s								
ARCES	ARCESS Array B	94.94	340		LR	LR	12 01 23.5		
	comp=Z,28nm,21.4s,baz=66,slow=39								
NVL	N'lazarevskaya	96.80	198	*eP*		P	11 12 38.0	-1.2	
NVL				*e*			11 16 33.1		
NVL				*e*PPP		PPP	11 18 37.0		
NVL				*e*S		SKSac	11 23 11.3	-1.9	
NVL				*e*SS		SS	11 30 33.8	+0.5	
NVL				*e*SSS		SSS	11 34 19.3		
NVL					MLR	MLR			
	comp=Z,736nm,17.0s								
LSZ	Lusaka	97.64	255		LR	LR	11 53 16.9		
	comp=Z,63nm,19.8s,baz=128,slow=33								
DLBC	Dease Lake	98.09	31		LR	LR	11 52 16.3		
	comp=Z,48nm,21.9s,baz=260,slow=32								
MLR	Muntele Rosu	98.21	316		LR	LR	12 01 52.0		
	comp=Z,34nm,21.9s,baz=65,slow=38								
BOSA	Boshof	99.24	241		LR	LR	11 52 41.4		
	comp=Z,26nm,20.3s,baz=88,slow=32								
LBTB	Lobatse	99.31	245		LR	LR	11 50 54.0		
	comp=Z,30nm,21.6s,baz=120,slow=31								
VNA3	Neumayer Olymp	102.33	193		⇓Pdiff	Pdif	11 13 07.6	+3.7	
	comp=Z,4.5nm,0.9s								
YKA	Yellowknife Ar	104.07	25		PKiKP	PKiKP	11 17 28.4	-0.4	
	comp=Z,0.4nm,0.5s,baz=312,slow=2.3,SNR=20								
PDAR	Pinedale Array	115.20	42		PKP	PKiKP	11 17 50.5	-0.3	
	comp=Z,0.3nm,0.5s,baz=166,slow=2.0,SNR=6.1								
O20A	White River Ci	117.16	45			PKPdf	11 17 53.8	-0.7	
ULM	Lac du Bonnet	119.38	30		PKP	PKPdf	11 17 56.8	-1.4	
	comp=Z,2.0nm,0.6s,baz=267,slow=3.7,SNR=5.0								
HOPE	Hope Point	122.93	192	*i*	PKiKP	PKiKP	11 18 05.3	+0.2	
ECSD	EROS Data Cent	122.95	36			PKPdf	11 18 04.9	-0.4	
TORD	Torodi Ar. Bea	124.03	285		PKP	PKPdf	11 18 07.7	-0.4	
	comp=Z,3.0nm,0.8s,baz=139,slow=0.3,SNR=14								
TXAR	Lajitas Array	124.75	55		PKP	PKPdf	11 18 09.0	-0.3	
	comp=Z,0.5nm,0.7s,baz=278,slow=0.6,SNR=9.5								
SCHQ	Schefferville	125.44	9		PKP	PKPdf	11 18 09.8	+0.1	
	comp=Z,3.2nm,0.9s,baz=342,slow=0.6,SNR=8.1								
S39A	Bolivar	128.49	40			PKPdf	11 18 15.6	-0.4	
R40A	Maddies Statio	128.81	39			PKPdf	11 18 16.3	-0.4	
ZON	Zonda	144.42	158			PKPbc	11 18 44.4	+0.3	
ZON	Zonda	144.42	158		PKIKP	PKPbc	11 18 44.4	+0.3	
AC02	Maricunga	148.35	153			PKPbc	11 18 57.2	+0.7	
CPUP	Villa Florida	152.40	173		PKPbc	PKPbc	11 19 05.1	-0.4	
	comp=Z,5.7nm,0.8s,baz=176,slow=1.2,SNR=16								

*VIE **16** 10:59:21.2±0.3,46.17N×11.19E,h0km,mb1.3/2,ml1.7/5, Error ellipse: s-maj=2.1km s-min=1.9km az=30.0 6 km WNW of Salurn Suspected Mining explosion.*

ROM 16 10:59:20.7±0.1,46.152N±0.006×11.169E±0.009,h0km, ML1.1/17,7C,Error ellipse: s-maj=0.8km s-min=0.7km az=353.0,Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PANI	Panarotta	0.15	131	*e*Pg		Pg	Pg	10 59 24.6	+0.9
PANI	Panarotta	0.15	131	P		Pg	Pg	10 59 24.5	+0.9
GAGG	Gaggia	0.16	245	*e*Pg		Pg	Pg	10 59 25.0	+1.2
GAGG	Gaggia	0.16	245	P		Pg	Pg	10 59 25.1	+1.2
LUSI	Trento, Gardas	0.25	219	⇑P		Pg	Pg	10 59 26.6	+1.2
LUSI					AML	AML			
	comp=E,126μm,0.3s								
LUSI					AML	AML			
	comp=N,202μm,0.2s								
OZOL	Ozolo	0.27	342	*e*Pg		Pb	Pb	10 59 27.4	-1.1
OZOL	Ozolo	0.27	342	P		Pb	Pb	10 59 27.2	-1.2
DOSS	Dosso del Somm	0.27	177	⇑*e*Pg		Pg	Pg	10 59 26.8	+0.9
DOSS	Dosso del Somm	0.27	177	⇑P		Pg	Pg	10 59 26.8	+0.9
DOSS					AML	AML			
	comp=E,80μm,0.4s								
DOSS					AML	AML			
	comp=E,54μm,0.3s								
DOSS					AML	AML			
	comp=N,114μm,0.6s								
DOSS					AML	AML			
	comp=N,57μm,0.4s								
ZIAN	Ziano	0.30	65	⇑*e*Pg		Pg	Pg	10 59 27.5	+1.1
ZIAN	Ziano	0.30	65	P		Pg	Pg	10 59 27.5	+1.1
ZIAN					AML	AML			
	comp=E,40μm,0.3s								
ZIAN					AML	AML			
	comp=N,27μm,0.3s								
CTI	Castel Tesino	0.35	107	P		Pg	Pg	10 59 28.2	+0.8
CTI					AML	AML			
	comp=N,56μm,0.3s								
CTI					AML	AML			
	comp=E,32μm,0.3s								
VARA	Varagna	0.38	210	*e*Pg		Pg	Pg	10 59 29.0	+1.1
VARA	Varagna	0.38	210	P		Pg	Pg	10 59 29.1	+1.1
VARA					AML	AML			
	comp=E,77μm,0.3s								
VARA					AML	AML			
	comp=N,36μm,0.1s								
RONC	Roncone	0.42	246	P		Pb	Pb	10 59 30.0	-1.0
CARE	Lago del Cares	0.43	310	⇑*e*Pg		Pb	Pb	10 59 30.2	-1.1
CARE	Lago del Cares	0.43	310	P		Pb	Pb	10 59 30.2	-1.1
CARE					AML	AML			
	comp=E,19μm,1.4s								
CARE					AML	AML			
	comp=N,23μm,1.6s								
CARE					AML	AML			
	comp=E,19μm,1.4s								
CARE					AML	AML			
	comp=N,23μm,1.6s								
CARE					AML	AML			
	comp=E,19μm,0.6s								
MABI	Malga Bissina	0.47	258	P		Pb	Pb	10 59 30.8	-1.1
MABI					AML	AML			
	comp=E,15μm,1.4s								
MABI					AML	AML			
	comp=N,15μm,0.4s								
MABI					AML	AML			
	comp=E,15μm,0.6s								
MABI					AML	AML			
	comp=N,13μm,0.3s								
MABI					AML	AML			
	comp=E,13μm,0.2s								
MBAL	Monte Baldo -	0.50	206	P		Pg	Pg	10 59 31.4	+1.0
CGRP	Cima Grappa	0.52	121	P		Pb	Pb	10 59 31.8	-0.9
MAGA	Magasa	0.53	225	P		Pb	Pb	10 59 32.1	-0.8
MOSI	Grossmontoni	0.63	318	P		Pb	Pb	10 59 34.2	-0.6
BRMO	Bormio	0.64	301	P		Pg	Pg	10 59 33.6	+0.7
VARN	Col Varnada, M	0.67	103	*e*Pg		Pg	Pb	10 59 34.8	-0.5
VARN	Col Varnada, M	0.67	103	P		Pb	Pb	10 59 34.8	-0.5
VARN					AML	AML			
	comp=N,20μm,0.3s								
VARN					AML	AML			
	comp=E,25μm,0.3s								
FUORN	Ofenpass-Fuorn	0.78	307		P	Pg	Pg	10 59 36.5	+0.8
ROSI	Rosskopf	0.80	12		P	Pb	Pb	10 59 37.0	-0.5
ROSI					AML	AML			
	comp=E,19μm,0.4s								
FETA	Feichten	0.92	341	*i*	Pg	Pg	Pg	10 59 38.9	+0.6
	comp=E,0.2nm,0.2s								
FETA				*i*	Sg	Sb	10 59 51.5	-1.0	
	comp=E,0.2nm,0.1s								
LESA	Schwarzleotal	1.64	39	*i*	Pg	Pg	10 59 52.6	+0.5	
	comp=E,0.3nm,0.1s								
LESA				*i*	Sg	Sg	11 00 14.5	+1.0	
	comp=E,0.4nm,0.1s								

*UCR **16** 11:12:18.3±1.1,11.09N×85.65W,h104km±4km,MW3.5, Presumed earthquake*

*CATAC **16** 11:12:19.6±0.4,11.N±2.×8.6W±.,h88km±4km,M3.0/17, MLv3.0/17,Error ellipse: s-maj=8.9km s-min=3.7km az=61.1,confirmed*

ISC 16 11:12:18.7±1.5,11.12N±0.04×85.65W±0.06,h105km±8km, n56,σ0.71/81,22C-1D,Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LCRUZ	La Cruz	0.05	152	⇑*i*P			Pn	11 12 33.1	-0.2
LCRUZ				*e*S			Sn	11 12 44.2	0.0
CARN	Rivas	0.14	63	P			Pn	11 12 33.5	+0.1
CARN				S			Sn	11 12 44.4	0.0
CARN	Rivas	0.14	63	⇑*i*P			Pn	11 12 33.5	+0.1
CARN				*e*S			Sn	11 12 45.0	+0.6
BUAI	Buenos Aires	0.40	128	⇑*i*P			Pn	11 12 34.7	+0.2
BUAI				*e*S			Sn	11 12 47.0	+0.7
JAPN	Al SSO del Vol	0.40	356	P			Pn	11 12 34.9	+0.5
JAPN	Al SSO del Vol	0.40	356	*e*P			Pn	11 12 35.0	+0.5
PEJA	Penjamo Buenos	0.40	124	⇑*i*P			Pn	11 12 34.6	+0.1
LAPC	Finca la Perla	0.41	148	⇑*i*P			Pn	11 12 34.2	-0.4
LAPC				*e*S			Sn	11 12 46.3	-0.1
MORN	Al O del Volca	0.42	1	P			Pn	11 12 34.7	0.0
MORN				S			Sn	11 12 46.3	-0.3
GPS3	Bodega del ICE	0.46	142	*e*P			Pn	11 12 35.1	+0.2
GPS2	Hotel Rincn d	0.47	141	*e*P			Pn	11 12 34.4	-0.5
ELI1	Hacienda Flor	0.48	168	P			Pn	11 12 34.9	-0.1
ELI1				S			Sn	11 12 48.3	+1.2
ELI1	Hacienda Flor	0.48	168	*e*P			Pn	11 12 34.9	-0.1
ELI1				*e*S			Sn	11 12 48.6	+1.5
ALIBA	Liberia Airpor	0.54	169	*e*P			Pn	11 12 35.2	-0.1
CLARA	Aguas Claras	0.58	125	⇑*i*P			Pn	11 12 35.7	0.0
MESS	Mesas	0.59	130	⇑*i*P			Pn	11 12 35.7	-0.1
VMAR	Armenia, Volca	0.61	120	⇑*i*P			Pn	11 12 35.8	-0.2
HORNC	Hornillas	0.62	131	*e*P			Pn	11 12 35.7	-0.3
COLC	Colonia	0.63	136	⇑*e*P			Pn	11 12 36.0	-0.1
COLC				*e*S			Sn	11 12 51.1	+1.9
CUI	Cuipilapa	0.67	134	⇑*i*P			Pn	11 12 36.5	+0.1
DELF	Filadelfia	0.68	172	*e*P			Pn	11 12 36.6	+0.1
NADN	Granada	0.73	329	P			Pn	11 12 36.4	-0.5
NADN				S			Sn	11 12 50.2	-0.3
ELVJ	El Viejo (Barb	0.74	154	*e*P			Pn	11 12 37.0	0.0
ELVJ				*e*S			Sn	11 12 50.2	-0.5
TIMP	Tierras Morena	0.82	131	⇑*i*P			Pn	11 12 37.7	-0.2
TIMP				*e*S			Sn	11 12 51.9	-0.3
PLVR	Palo Verde	0.82	159	⇑*e*P			Pn	11 12 37.5	-0.5
PLVR				*e*S			Sn	11 12 52.1	-0.2
QUEB	Quebradon, Cot	0.89	124	⇑*e*P			Pn	11 12 38.4	-0.1
NANN	Nandasmo	0.93	331	P			Pn	11 12 39.9	+1.0
NANN				S			Sn	11 12 53.0	-1.0
TILA	Tilaran	0.93	134	⇑*i*P			Pn	11 12 38.1	-0.8
TILA				*e*S			Sn	11 12 52.9	-1.2
JUD3	Juan Diaz 3	0.96	173	⇑*i*P			Pn	11 12 39.0	-0.2
ACON	Acoyapa	0.96	29	P			Pn	11 12 38.8	-0.4
ACON				S			Sn	11 12 54.2	-0.3
MASN	Masaya	0.99	330	P			Pn	11 12 39.5	-0.1
NICO	Nicoya	1.00	168	⇑*i*P			Pn	11 12 39.4	-0.2
NICO				*e*S			Sn	11 12 54.3	-1.0
MAS3	Al N del Volca	1.03	330	P			Pn	11 12 39.8	-0.2
JTS	Las Juntas de	1.07	140	P			Pn	11 12 39.7	-0.7
JTS				S			Sn	11 12 56.0	-0.8
JTS	Las Juntas de	1.07	140	⇑*i*P			Pn	11 12 39.8	-0.6
CMARA	Lajas Hojancha	1.12	168	P			Pn	11 12 40.7	-0.2
CMARA				S			Sn	11 12 56.6	-1.1
CMARA	Lajas Hojancha	1.12	168	⇑*i*P			Pn	11 12 40.6	-0.3
CMARA				*e*S			Sn	11 12 56.6	-1.1
CEDE	Laguna Cedeo	1.13	124	*e*P			Pn	11 12 41.2	+0.2
ARE1	Arenal 1	1.13	125	⇑*i*P			Pn	11 12 41.2	+0.2
ARE1				*e*S			Sn	11 12 58.5	+0.7
VARE2	V. Arenal	1.13	125	⇑*i*P			Pn	11 12 41.3	+0.2
VARE2				*e*S			Sn	11 12 58.4	+0.5
VACR	Volcan Arenal	1.16	124

GBOS				S	Sg	11 28 37.7	+0.8	
SPIF	**crte de Spivo**	**0.28**	**221**	Pg	Pg	11 28 34.7	+0.3	
SPIF				Sg	Sg	11 28 38.8	+0.8	
SAOF	**Saorge**	**0.29**	**171**	Pg	Pg	11 28 34.6	+0.2	
SAOF				Sg	Sg	11 28 38.6	+0.4	
SAOF	**Saorge**	**0.29**	**171**	P	Pg	11 28 34.3	-0.1	
SAOF				S	Sg	11 28 39.1	+0.9	
ISO	**Isola**	**0.33**	**255**	Pg	Pg	11 28 35.6	+0.2	
ISO				Sg	Sg	11 28 40.0	+0.4	
ISO	**Isola**	**0.33**	**255**	P	Pg	11 28 34.9	-0.4	
ISO				S	Sg	11 28 40.0	+0.4	
PZZ	**Stroppo**	**0.36**	**311**	Pg	Pg	11 28 35.8	-0.1	
PZZ				Sg	Sg	11 28 41.4	+0.8	
PZZ	**Stroppo**	**0.36**	**311**	P	Pg	11 28 35.6	-0.3	
PZZ				S	Sg	11 28 41.3	+0.7	
BHB	**Bricherasio**	**0.59**	**344**	P	Pg	11 28 38.6	-1.8	
BHB				S	Sg	11 28 47.1	-1.1	

NIED ***16*** *11:42:16.3, 33˚.67N × 130˚.42E, h13km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}=0.99; $M_{\theta\theta}$2.43; $M_{\phi\phi}$-1.45; $M_{r\theta}$-0.81; $M_{\theta\phi}$2.27; $M_{r\phi}$0.48; Fault plane solution: $M_0$3.19000×10^{14} NP1: ϕ_s202.00000°, δ69.00000°, λ-168.00000°. NP2: ϕ_s107.00000°, δ79.00000°, λ-22.00000°.*
IDC ***16*** *11:42:16.4±1.6, 33˚.73N × 130˚.68E, h0km, mbtmp3.2/3, ML2.6/3 Error ellipse: s-maj=28.0km s-min=10.3km az=76.0*
JMA ***16*** *11:42:16.3±0.0, 33˚.67N±0˚.08 × 130˚.42E±0˚.07, h13km, MV3.8/39, NE FUKUOKA PREF*
JMA Felt III J1 at NE FUKUOKA PREF .
NEIC ***16*** *11:42:20.8±1.0, 33˚.33N±0˚.06 × 130˚.81E±0˚.07, h10km±2km, ML3.8/8, Error ellipse: s-maj=12.5km s-min=6.2km az=312.0*

ISC 16 11:42:15.3±0.8, 33°75N±0˚.03 × 130°31E±0˚.04, h10km, n18, σ2s04/25, 4D, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JFI	**Itaya**	**0.32**	**168**	*i* P	**Pg**	**11 42 21.5**	**-0.3**
JFI				A	A	11 42 21.5	
	comp=N,22nm,0.3s,comp=E,40nm,0.4s						
JFI				S	**Sg**	**11 42 25.1**	**-1.0**
JFA	**Akaike**	**0.41**	**95**	⇓*i* P	**Pg**	**11 42 22.8**	**-0.5**
JFA				⇓S	**Sg**	**11 42 27.3**	**-1.4**
JII	**Iki**	**0.48**	**276**	⇓*i* P	**Pn**	**11 42 27.8**	**-0.5**
JII				⇓S	**Sb**	**11 42 35.7**	**+2.8**
JNU	**Nakatsue**	**0.78**	**142**	Pg	**Pg**	**11 42 28.3**	**-2.1**
	comp=E,233nm,0.3s,baz=347,slow=9.6,SNR=4861						
JNU				Lg	Lg	11 42 37.5	
	comp=E,295nm,0.3s,baz=342,slow=20,SNR=13						
JTA	**Tamana**	**0.80**	**166**	*i* P	**Pg**	**11 42 29.8**	**-1.0**
JTA				*e*S	**Sg**	**11 42 39.3**	**-1.9**
JTU	**Tsushima**	**1.08**	**316**	A	A	11 42 38.4	
	comp=N,4.0nm,1.3s,comp=E,5.0nm,2.2s						
JSU	**Suzuyama**	**2.24**	**177**	Pn	**Pn**	**11 42 52.2**	**-0.2**
JMN	**Monobe**	**2.98**	**89**	Pn	**Pn**	**11 43 02.8**	**+0.2**
JMN				IAML		11 43 49.2	
	comp=N,302nm,0.9s						
JMN				IAML		11 43 58.0	
	comp=E,250nm,0.8s						
TJN	**Taejon**	**3.57**	**318**	Pn	**Pg**	**11 43 22.0**	**-1.6**
TJN				Sn	**Sg**	**11 44 09.6**	**-0.2**
KSRS	**Korea Array**	**4.18**	**333**	Pn	**Pb**	**11 43 24.2**	**-4.7**
	comp=E,0.5nm,0.3s,baz=150,slow=14,SNR=7.8						
KSRS				Pg	**Pg**	**11 43 35.5**	**+0.1**
	comp=E,3.6nm,0.3s,baz=150,slow=17,SNR=37						
KSRS				Lg	Lg	11 44 29.2	
	comp=E,4.2nm,0.3s,baz=154,slow=30,SNR=11						
	comp=E,1.4nm,0.5s						
KSAR	**Wonju Array Be**	**4.18**	**333**	Pn	**Pg**	**11 43 33.2**	**-2.2**
KSAR				Sn	**Sg**	**11 44 28.2**	**-1.4**
KS19	**Wonju Array Si**	**4.24**	**333**	Pn	**Pb**	**11 43 32.1**	**+2.1**
KS19				Sn	**Sg**	**11 44 27.6**	**-3.9**
INCN	**Inchon**	**4.78**	**322**	Pn	**Pb**	**11 43 40.8**	**+1.6**
INCN				IAML		11 44 58.2	
	comp=E,69nm,0.8s						
INCN				IAML		11 44 58.6	
	comp=E,84nm,0.7s						
INU	**Inuyama**	**5.76**	**72**	Pn	**Pn**	**11 43 42.7**	**+1.9**
JGF	**Kuroka**	**6.10**	**70**	Pn	**Pn**	**11 43 47.6**	**+2.1**
MJAR	**Matsushiro Arr**	**7.05**	**64**	Pn	**Pn**	**11 43 57.1**	**-1.4**
	baz=248,slow=12,SNR=1.6						
	comp=E,0.7nm,0.5s						
JMZ	**Minamidaito 2**	**7.94**	**174**	Pn	**Pn**	**11 44 10.3**	**-0.5**
USRK	**Ussuriysk Ar.**	**10.52**	**7**	Pn	**Pn**	**11 44 48.8**	**+2.7**
	comp=E,0.2nm,0.3s,baz=191,slow=14,SNR=1.7						
	comp=E,0.9nm,0.4s						

AEIC ***16*** *11:49:17.1±0.8, 51˚.6N±0˚.2 × 179˚.52E±0˚.07, h72km±4km, Error ellipse: s-maj=22.0km s-min=5.2km az=188.0*

NEIC 16 11:49:17.6±0.8, 51˚.6N±0˚.1 × 179˚.49E±0˚.06, h70km±7km, mb3.7/8, ML3.3/12, ML3.0(AEIC), Error ellipse: s-maj=15.4km s-min=5.7km az=183.0, Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AMKA	**Amchitka**	**0.21**	**213**	Pn	Pn	11 49 28.6	+0.4
AMKA					Sn	11 49 36.8	+0.7
CESW	**Semis' Southwe**	**0.35**	**8**		Pn	11 49 28.9	-0.3
CERB	**Semis' Cerberu**	**0.39**	**13**		Pn	11 49 29.4	-0.1
CERB					Sn	11 49 38.4	+0.1
LSSE	**Little Sitkin**	**0.69**	**304**		Pn	11 49 32.6	+0.2
LSPA	**Little Sitkin**	**0.70**	**306**		Pn	11 49 32.4	-0.1
LSPA					Sn	11 49 43.6	+0.1
LSNW	**Little Sitkin**	**0.73**	**305**		Pn	11 49 32.8	-0.1
GAKI	**Gareloi-Kavalg**	**1.06**	**89**		Pn	11 49 36.7	-0.1
GAKI					Sn	11 49 51.3	+0.1
GANO	**Gareloi North**	**1.10**	**75**		Pn	11 49 37.0	-0.3
GANO					Sn	11 49 52.1	0.0
GALAA	**Gareloi Lava P**	**1.10**	**78**		Pn	11 49 37.4	0.0
GALAA					Sn	11 49 52.7	+0.5
GANE	**Gareloi Northe**	**1.11**	**76**		Pn	11 49 37.3	-0.2
TANO	**Tanaga North**	**1.53**	**75**		Pn	11 49 43.0	0.0
TANO					Sn	11 50 01.7	-0.4
TASE	**Tanaga Southea**	**1.57**	**79**		Pn	11 49 43.4	-0.1
TASE					Sn	11 50 03.0	-0.1
TAFL	**Tanaga Flats**	**1.64**	**82**		Pn	11 49 44.4	0.0
TAFL					Sn	11 50 05.4	+0.6
TAPA	**Tanaga Point A**	**1.70**	**80**		Pn	11 49 45.3	+0.1
KIMD	**Kanaga Island**	**2.05**	**83**		Pn	11 49 49.9	-0.1
KIMD					Sn	11 50 14.8	+0.3
KIKV	**Kanaga Island**	**2.10**	**80**		Pn	11 49 50.5	-0.1
KIKV					Sn	11 50 16.7	+0.8
KIWB	**Kanaga Island**	**2.11**	**81**	Pn	Pn	11 49 50.5	-0.2
KIWB				IAML		11 50 18.1	
	comp=E,228nm,0.4s						
KIWB				IAML		11 50 21.4	
	comp=N,154nm,0.5s						
ADK	**Adak**	**2.41**	**81**		Pn	11 49 54.3	-0.3
ADK				IAML		11 50 24.1	
	comp=N,121nm,0.6s						
ADK				IAML		11 50 25.8	
	comp=N,134nm,0.4s						
ADAG	**Mount Adagdak**	**2.47**	**79**		Pn	11 49 55.2	-0.3
ETKA	**Kagalaska Isla**	**2.57**	**82**		Pn	11 49 56.6	-0.4
GSTD	**Great Sitkin T**	**2.76**	**78**		Pn	11 49 59.2	-0.3
GSMY	**Great Sitkin M**	**2.81**	**78**		Pn	11 49 59.7	-0.5
GSTR	**Great Sitkin T**	**2.82**	**77**	Pn	Pn	11 50 00.1	-0.2
GSTR				IAML		11 50 49.0	
	comp=E,136nm,1.2s						
SHEM	**Shemya Is, Ala**	**3.52**	**292**	Pn	Pn	11 50 10.6	+0.7
SHEM				IAML		11 52 23.1	
	comp=E,41nm,1.1s						
SMY	**Shemya**	**3.52**	**292**	Pn	Pn	11 50 10.1	+0.3
SPIA	**Saint Paul Isl**	**8.22**	**43**	Pn	Pn	11 51 14.8	+0.8
PEA0B	**Petropavlovsk-**	**13.41**	**285**	Pn	Pn	11 52 23.1	-1.5
M17K	**Holitna River**	**16.02**	**43**		Pn	11 52 59.3	+1.0
M17K				IAmb	IAmb	11 53 04.4	
	comp=Z,12nm,1.5s						
L18K	**Granite Mounta**	**16.72**	**41**	Pn	Pn	11 53 06.4	-0.6
L18K				IAmb	IAmb	11 53 11.2	
	comp=Z,5.0nm,1.4s						
OHAK	**Old Harbor**	**16.77**	**60**	Pn	Pn	11 53 06.4	-1.2
SEW	**Seward**	**19.27**	**52**	P	Pn	11 53 37.4	-0.4
F20K	**Avaraart Lake**	**19.80**	**29**	P	P	11 53 41.5	-0.4
IL31		**21.79**	**40**	P	P	11 54 03.3	+0.1
IL31				IAmb	IAmb	11 54 09.2	
	comp=Z,2.5nm,1.2s						
F25K	**Christian Rive**	**23.39**	**34**	P	P	11 54 20.6	+0.8

IDC ***16*** *11:52:19.5±0.9, 42˚.91N × 84˚.21E, h0km, mb3.7/6, mbtmp3.6/12, ML3.2/6, MS2.9/4, Error ellipse: s-maj=19.4km s-min=10.0km az=62.0*
SOME ***16*** *11:52:20.1, 43˚.63N × 84˚.33E, h15km*
NNC ***16*** *11:52:26.2±2.0, 43˚.18N × 83˚.97E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=17.4km s-min=8.4km az=144.0*

ISC 16 11:52:23.3±0.9, 43°01N±0˚.06 × 84°60E±0˚.05, h24km, n57, σ2s80/75, mb3.6/5, 11C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**3.13**	**280**	Pg	**Pn**	**11 53 11.5**	**+0.2**
	10nm,0.2s						
KTMS				Lg	Lg	11 53 49.7	
	140nm,0.3s						
KTMS	**Ketmen**	**3.13**	**280**	*e*P	**Pn**	**11 53 11.5**	**+0.2**
	10nm,0.2s						
KTMS				*e*S	**Sn**	**11 53 48.9**	**+0.9**
	140nm,0.3s						
PDGK	**Podgornoye**	**3.75**	**277**	⇑Pn	**Pn**	**11 53 20.2**	**+0.4**
	3.4nm,0.2s						
PDGK				⇑Pg	**Pb**	**11 53 30.0**	**+1.1**
	48nm,0.6s						
PDGK				⇑Lg	Lg	11 54 13.1	
	116nm,0.5s						
SHLS	**Shalkode**	**3.77**	**274**	Pg	**Pn**	**11 53 20.2**	**+0.3**
	51nm,0.3s						
SHLS				Lg	Lg	11 54 04.4	
	327nm,0.4s						
SHLS	**Shalkode**	**3.77**	**274**	*e*P	**Pn**	**11 53 20.2**	**+0.3**
	51nm,0.3s						
SHLS				*e*S	**Sn**	**11 54 03.6**	**+0.1**
	327nm,0.4s						
UZB	**Uzynbulak**	**4.09**	**274**	Pg	**Pb**	**11 53 30.2**	**-4.4**
	31nm,0.3s						
UZB				Lg	Lg	11 54 21.6	
	88nm,0.4s						
UZB	**Uzynbulak**	**4.09**	**274**	*e*P	**Pb**	**11 53 30.2**	**-4.4**
	31nm,0.3s						
UZB				*e*S	**Sb**	**11 54 21.1**	**-2.5**
	88nm,0.4s						
MK31	**Makanchi Array**	**4.13**	**337**	⇑Pn	**Pn**	**11 53 27.3**	**+2.5**
	1.4nm,0.3s,baz=313,slow=29,SNR=5.1						
MK31				⇑Pg	**Pb**	**11 53 35.9**	**+0.7**
	16nm,0.5s,baz=0.0,slow=0.1,SNR=38						
MK31				⇓Lg	Lg	11 54 28.7	
	82nm,0.6s,baz=159,slow=27,SNR=11						
MKAR	**Makanchi Array**	**4.13**	**337**	Pn	**Pn**	**11 53 26.6**	**+1.8**
	2.2nm,0.3s,baz=159,slow=14,SNR=95						
MKAR				Pg	**Pb**	**11 53 35.4**	**+0.1**
	7.6nm,0.3s,baz=153,slow=16,SNR=23						
MKAR				Sn	**Sn**	**11 54 14.2**	**+1.9**
	12nm,0.3s,baz=160,slow=25,SNR=6.4						
MKAR				Lg	Lg	11 54 28.6	
	24nm,0.3s,baz=162,slow=24,SNR=14						
MKAR				LR	LR	11 55 15.6	
	comp=Z,61nm,18.2s,baz=168,slow=43						
	3.4nm,0.3s						
KNOS	**Konyrlen**	**4.16**	**291**	Pg	Pn	11 53 30.2	+4.9
	7.9nm,0.1s						
KNOS				Lg	Lg	11 54 20.5	
	71nm,0.5s						
MAKZ	**Makanchi**	**4.23**	**335**	⇑Pn	**Pn**	**11 53 28.4**	**+2.2**
	7.4nm,0.7s						
MAKZ				⇑Pg	**Pb**	**11 53 38.3**	**+1.3**
	22nm,0.8s						
MAKZ				⇑Lg	Lg	11 54 30.7	
	120nm,1.2s						
KPKS	**Kokpek**	**4.35**	**278**	Pg	**Pb**	**11 53 37.1**	**-1.9**
	0.3nm,0.2s						
KPKS				Lg	Lg	11 54 33.0	
	76nm,0.5s						
KPKS	**Kokpek**	**4.35**	**278**	*e*P	**Pb**	**11 53 37.1**	**-1.9**
	0.3nm,0.2s						
KPKS				*e*S	**Sb**	**11 54 33.0**	**+2.0**
	76nm,0.5s						
ZSN	**Zaisan**	**4.45**	**2**	Pg	**Pn**	**11 53 31.2**	**+2.0**
	1.7nm,0.2s						
ZSN				Lg	Lg	11 54 22.7	
	39nm,0.4s						
ZSN	**Zaisan**	**4.45**	**2**	*e*P	**Pn**	**11 53 31.2**	**+2.0**
	1.7nm,0.2s						
ZSN				*e*S	**Sn**	**11 54 22.7**	**+2.5**
	39nm,0.4s						
SATY	**Saty**	**4.54**	**273**	Pg	**Pb**	**11 53 39.9**	**-2.4**
	42nm,0.4s						
SATY				Lg	Lg	11 54 37.5	
	169nm,0.4s						
BLB	**Baldybastay**	**4.58**	**286**	Pg	**Pb**	**11 53 38.5**	**-4.5**
	24nm,0.2s						
BLB				Lg	Lg	11 54 35.2	
	79nm,0.4s						
KURS	**Kuram**	**4.72**	**278**	Pg	**Pb**	**11 53 43.1**	**-2.3**
	7.4nm,0.4s						
KURS				Lg	Lg	11 54 42.9	
	42nm,0.4s						
TDK	**Taldyqorghan**	**4.89**	**296**	Pg	Pb	11 53 42.5	-5.7
	67nm,0.3s						
TDK				Lg	Lg	11 54 42.3	
	260nm,0.5s						
TDK	**Taldyqorghan**	**4.89**	**296**	*e*P	Pb	11 53 42.5	-5.7
	67nm,0.3s						
TDK				*e*S	**Sb**	**11 54 42.3**	**-4.3**
	260nm,0.5s						
ARXS	**Arharly**	**5.06**	**286**	Pg	**Pb**	**11 53 46.6**	**-4.6**
	6.9nm,0.3s						
ARXS				Lg	Lg	11 54 49.2	
	38nm,0.3s						
ARXS	**Arharly**	**5.06**	**286**	*e*P	**Pb**	**11 53 46.6**	**-4.6**
	6.9nm,0.3s						
ARXS				*e*S	**Sb**	**11 54 49.2**	**-2.4**
	38nm,0.3s						
KOTS	**Kotyrbulak**	**5.49**	**275**	Pg	**Pb**	**11 53 59.0**	**+0.6**
	19nm,0.4s						
KOTS				Lg	Lg	11 55 09.9	
	119nm,0.5s						
KOTS	**Kotyrbulak**	**5.49**	**275**	*e*P	**Pb**	**11 53 59.0**	**+0.6**
	19nm,0.4s						
KOTS				*e*S	**Sb**	**11 55 09.9**	**+6.1**
	119nm,0.5s						
MDOK	**Medeo**	**5.53**	**274**	Pg	**Pb**	**11 53 59.2**	**0.0**
	8.9nm,0.3s						
MDOK				Lg	Lg	11 55 10.7	
	50nm,0.8s						
TNSS	**Tian-Shan**	**5.61**	**273**	Pg	**Pb**	**11 54 00.1**	**-0.6**
	4.8nm,0.2s						
TNSS				Lg	Lg	11 55 12.1	
	12nm,0.9s						
TNSS	**Tian-Shan**	**5.61**	**273**	*e*P	**Pb**	**11 54 00.1**	**-0.6**
	4.8nm,0.2s						
TNSS				*e*S	**Sb**	**11 55 12.1**	**+4.5**
	12nm,0.9s						
KTBS	**Karatobe**	**5.81**	**280**	Pg	**Pb**	**11 54 03.1**	**-0.8**
	6.1nm,0.6s						
KTBS				Lg	Lg	11 55 17.3	
	0.4nm,0.3s						
KTBS	**Karatobe**	**5.81**	**280**	*e*P	**Pb**	**11 54 03.1**	**-0.8**
	6.1nm,0.6s						
KTBS				*e*S	**Sb**	**11 55 17.3**	**+4.1**
	0.4nm,0.3s						
IZV	**Izvestkoviy**	**5.85**	**273**	Pg	**Pb**	**11 54 04.9**	**+0.2**
	8.0nm,0.3s						
IZV				Lg	Lg	11 55 20.2	
	72nm,0.7s						
IZV	**Izvestkoviy**	**5.85**	**273**	*e*P	**Pb**	**11 54 04.9**	**+0.2**
	8.0nm,0.3s						
IZV				*e*S	**Sb**	**11 55 20.2**	**+5.7**
	72nm,0.7s						
MTBS	**Maitube**	**5.99**	**274**	Pg	**Pb**	**11 54 06.2**	**-0.7**
	4.5nm,0.4s						
MTBS				Lg	Lg	11 55 22.5	
	36nm,0.5s						
MTBS	**Maitube**	**5.99**	**274**	*e*P	**Pb**	**11 54 06.2**	**-0.7**
	4.5nm,0.4s						
MTBS				*e*S	**Sb**	**11 55 22.5**	**+4.4**
	36nm,0.5s						
KUU	**Kurty**	**6.08**	**281**	Pg	**Pb**	**11 54 09.5**	**+1.1**
	2.9nm,0.2s						
KUU				Lg	Lg	11 55 28.2	
	34nm,0.3s						
KUU	**Kurty**	**6.08**	**281**	*e*P	**Pb**	**11 54 09.5**	**+1.1**
	2.9nm,0.2s						
KUU				*e*S	**Sb**	**11 55 28.2**	**+7.5**
	34nm,0.3s						
KST	**Kastek**	**6.33**	**273**	Pg	**Pb**	**11 54 13.9**	**+1.1**
	7.3nm,0.5s						
KST				Lg	Lg	11 55 35.8	
	27nm,0.7s						
KST	**Kastek**	**6.33**	**273**	*e*P	**Pb**	**11 54 13.9**	**+1.1**
	7.3nm,0.5s						
KST				*e*S	**Sb**	**11 55 35.8**	**+7.7**
	27nm,0.7s						
DGS	**Degeres**	**6.46**	**275**	Pg	**Pb**	**11 54 15.2**	**+0.1**
	5.2nm,0.4s						
DGS				Lg	Lg	11 55 37.7	
	29nm,0.7s						
DGS	**Degeres**	**6.46**	**275**	*e*P	**Pb**	**11 54 15.2**	**+0.1**
	5.2nm,0.4s						
DGS				*e*S	**Sb**	**11 55 37.7**	**+5.8**
	29nm,0.7s						
KRBS	**Karabastau**	**6.54**	**279**	Pg	**Pb**	**11 54 16.7**	**+0.4**
	2.1nm,0.4s						
KRBS				Lg	Lg	11 55 40.3	
	14nm,0.5s						
KRBS	**Karabastau**	**6.54**	**279**	*e*P	**Pb**	**11 54 16.7**	**+0.4**
	2.1nm,0.4s						
KRBS				*e*S	**Sb**	**11 55 40.3**	**+6.2**
	14nm,0.5s						
AAK	**Ala-Archa**	**7.44**	**271**	Pn	**Pn**	**11 54 08.5**	**-2.0**
	0.7nm,0.3s,baz=118,slow=3.1,SNR=5.7						
AAK				Pg	**Pb**	**11 54 29.5**	**-2.2**
	0.3nm,0.3s,baz=219,slow=3.2,SNR=4.6						
AAK				Lg	Lg	11 56 06.1	
	0.4nm,0.3s,baz=87,slow=17,SNR=1.6						
AAK				LR	LR	11 57 16.6	
	comp=Z,48nm,18.0s,baz=56,slow=42						
	1.4nm,0.3s						
AAK	**Ala-Archa**	**7.44**	**271**	⇑Pg	**Pb**	**11 54 34.5**	**+2.8**
	2.8nm,0.8s						
AAK				⇓Lg	Lg	11 56 09.2	
	7.1nm,0.7s						
KURBB	**Kurchatov Arra**	**8.68**	**333**	Pn	**Pn**	**11 54 27.3**	**+0.1**
	0.1nm,0.3s,baz=153,slow=13,SNR=5.5						
KURBB					Sn	**11 56 02.5**	**-1.7**
	0.3nm,0.3s,baz=151,slow=30,SNR=5.4						
KURBB				Lg	Lg	11 56 53.3	
	0.4nm,0.3s,baz=144,slow=27,SNR=7.7						
	0.9nm,0.4s						
KURBB	**Kurchatov Arra**	**8.68**	**333**	⇑Pn	**Pn**	**11 54 27.0**	**-0.2**
	4.0nm,0.8s						
KURBB				⇓Lg	Lg	11 56 50.3	
	55nm,0.8s						
KURK	**Kurchatov**	**8.73**	**334**	⇑Lg	Lg	11 56 49.2	
	11nm,0.8s						
ZALV	**Zalesovo Beam**	**10.95**	**1**	Pn	**Pn**	**11 54 58.3**	**0.0**
	0.9nm,0.3s,baz=178,slow=13,SNR=9.2						
ZALV					Sn	**11 56 58.5**	**-1.4**
	1.1nm,0.3s,baz=184,slow=25,SNR=7.4						
ZALV				Lg	Lg	11 58 08.7	
	baz=179,slow=32						
	1.6nm,0.3s						
BVAR	**Borovoye Array**	**13.79**	**322**	Pn	**Pn**	**11 55 34.0**	**-3.1**
	baz=128,slow=13,SNR=3.6						
BVAR					Sn	11 58 00.4	-9.0
	baz=132,slow=24,SNR=1.4						
BVAR				Lg	Lg	11 59 31.9	
	baz=135,slow=25,SNR=2.2						
	0.5nm,0.4s						
SONM	**Songino Array**	**16.03**	**65**	Pn	**P**	**11 56 10.7**	**+0.3**
	0.1nm,0.3s,baz=258,slow=12,SNR=1.1						
	0.3nm,0.5s						
ARTI	**Arti**	**21.43**	**318**	P	**P**	**11 57 05.9**	**-3.4**
	1.1nm,0.4s,baz=180,slow=8.5,SNR=3.1						
	1.1nm,0.4s						
CMAR	**Chiang Mai Arr**	**27.32**	**149**	P	**P**	**11 58 06.5**	**+0.3**
	0.5nm,0.4s,baz=340,slow=9.2,SNR=1.6						
	0.5nm,0.4s						
GNI	**Garni**	**29.76**	**278**	LR	LR	12 12 19.7	
	comp=Z,22nm,18.2s,baz=21,slow=41						
NOA	**NORSAR Array B**	**45.91**	**320**	P	**P**	**12 00 42.1**	**-1.5**
	0.4nm,0.3s,baz=84,slow=6.7,SNR=3.8						
	0.4nm,0.3s						
OPO	**Ambohidratompo**	**70.27**	**218**	LR	LR	12 33 40.8	
	comp=Z,46nm,19.7s,baz=296,slow=35						
TORD	**Torodi Ar. Bea**	**76.00**	**275**	P	**P**	**12 04 07.4**	**-1.2**
	1.1nm,0.5s,baz=38,slow=3.4,SNR=16						
	1.1nm,0.5s						
WRA	**Warramunga Arr**	**77.55**	**133**	P	**P**	**12 04 18.2**	**+1.1**
	0.5nm,0.8s,baz=328,slow=4.8,SNR=7.1						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**80.37**	**135**	P	**P**	**12 04 32.6**	**+0.1**
	0.2nm,0.7s,baz=336,slow=5.1,SNR=5.6						
	0.2nm,0.7s						

NOU ***16*** *12:08:10.4, 45˚.09S × 167˚.66E, h105km, MLv3.9/8, South Island, New Zealand*
WEL ***16*** *12:08:10.6±0.9, 45˚.S±4˚ × 16˚.7E±˚, h95km±6km, M3.9/19, MLv3.9/19, Error ellipse: s-maj=10.4km s-min=4.1km az=115.7, confirmed*

ISC 16 12:08:07.0±1.9, 45°.08S±0˚.05 × 167°.45E±0˚.07, h133km±10km, n51, σ1s09/64, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAFS	**Te Anau Fire S**	**0.39**	**150**	P	**Pn**	**12 08 26.7**	**+0.8**
TAFS				S	**Sn**	**12 08 39.2**	**-1.0**
DCZ	**Deep Cove**	**0.44**	**208**	P	**Pn**	**12 08 26.3**	**+0.2**
DCZ				S	**Sn**	**12 08 38.3**	**-2.3**
MSZ	**Milford Sound**	**0.53**	**40**	P	**Pn**	**12 08 27.8**	**+1.2**
MSZ				S	**Sn**	**12 08 41.0**	**-0.4**
MLZ	**Mavora Lakes**	**0.56**	**121**	P	**Pn**	**12 08 27.5**	**+0.7**
MLZ				S	**Sn**	**12 08 40.6**	**-1.3**
GLNY	**Glenorchy**	**0.71**	**73**	P	**Pn**	**12 08 28.9**	**+1.0**
GLNY				S	**Sn**	**12 08 42.5**	**-1.2**
MOSS	**Mossburn Schoo**	**0.81**	**137**	P	**Pn**	**12 08 29.9**	**+1.3**
MOSS				S	**Sn**	**12 08 44.7**	**-0.3**
QTPS	**Queenstown Pol**	**0.86**	**87**	P	**Pn**	**12 08 30.2**	**+1.2**
QTPS				S	**Sn**	**12 08 44.9**	**-0.8**
WHZ	**Wether Hill Ro**	**0.89**	**157**	P	**Pn**	**12 08 30.0**	**+0.8**
WHZ				S	**Sn**	**12 08 45.0**	**-1.2**
RRKS	**Rarakau**	**1.07**	**179**	P	**Pn**	**12 08 32.1**	**+1.3**
RRKS				S	**Sn**	**12 08 48.2**	**-0.7**
WKZ	**Wanaka**	**1.15**	**78**	P	**Pn**	**12 08 33.2**	**+1.5**
WKZ				S	**Sn**	**12 08 49.0**	**-0.4**
PYZ	**Puysegur Point**	**1.21**	**206**	P	**Pn**	**12 08 33.5**	**+1.2**
PYZ	**Puysegur Point**	**1.21**	**206**	P	**Pn**	**12 08 33.3**	**+1.1**
ORPS

*JMA **16** 12:08:19.8±0.1,24°.4N±0°.1×121°.4E±0°.3,h1km,MV2.8/13, TAIWAN REGION*
*TAP **16** 12:08:20.2,24°.40N×121°.42E,h6km,ML3.5,B*
ISC 16 12:08:20.7±0.8,**24°41N**±0°.01×**121°40E**±0°.01,**h5**km±5km, **n151**,σ0**62**/227,**15C-3D**,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNSB	**Datong**	**0.03**	**321**	*iP*	**Pg**	**12 08 22.0**	**+0.1**
NNSB				*i* S	**Sg**	**12 08 22.9**	**0.0**
NNS	**Nan Shan**	**0.04**	**321**	⇓*iP*	**Pg**	**12 08 22.2**	**+0.1**
NNS				*i* S	**Sg**	**12 08 23.2**	**+0.1**
LATG	**Datong**	**0.17**	**41**	⇑*iP*	**Pg**	**12 08 24.1**	**-0.1**
LATG				*i* S	**Sg**	**12 08 26.8**	**+0.4**
ETLH	**Xiulin Townshi**	**0.21**	**160**	*iP*	**Pg**	**12 08 25.4**	**+0.5**
ETLH				*i* S	**Sg**	**12 08 28.2**	**+0.6**
FUSS	**Fushou**	**0.21**	**223**	⇑*iP*	**Pg**	**12 08 25.2**	**+0.2**
FUSS				*i* S	**Sg**	**12 08 28.4**	**+0.6**
NDT	**Datong Townshi**	**0.22**	**27**	*iP*	**Pg**	**12 08 25.2**	**+0.1**
NDT				S	**Sg**	**12 08 28.3**	**+0.3**
TWT	**Tachien**	**0.26**	**234**	⇑*iP*	**Pg**	**12 08 26.0**	**+0.3**
YHNB	**Yeheng**	**0.27**	**354**	*iP*	**Pg**	**12 08 25.9**	**0.0**
YHNB	**Yeheng**	**0.27**	**354**	⇑*iP*	**Pg**	**12 08 26.3**	**+0.4**
YHNB				*i* S	**Sg**	**12 08 29.6**	**+0.2**
TDCB	**Techi**	**0.27**	**236**	⇑*iP*	**Pg**	**12 08 26.1**	**+0.1**
NSK	**Sanguang**	**0.27**	**351**	⇑*iP*	**Pg**	**12 08 26.4**	**+0.4**
NSK				*i* S	**Sg**	**12 08 29.8**	**+0.1**
ENTT	**Nioudou**	**0.28**	**32**	⇑*iP*	**Pg**	**12 08 26.2**	**+0.1**
ENTT				S	**Sg**	**12 08 29.9**	**+0.1**
NACB	**Ninganchiao**	**0.29**	**143**	P	**Pg**	**12 08 26.7**	**+0.4**
NACB	**Ninganchiao**	**0.29**	**143**	S	**Sg**	**12 08 31.0**	**+0.9**
NACB	**Ninganchiao**	**0.29**	**143**	⇓*iP*	**Pg**	**12 08 26.6**	**+0.4**
NACB				*i* S	**Sg**	**12 08 30.6**	**+0.5**
WHF	**Hehuan Shan**	**0.29**	**206**	*iP*	**Pg**	**12 08 26.6**	**+0.1**
ENA	**Nanau**	**0.31**	**86**	⇑P	**Pg**	**12 08 27.1**	**+0.5**
ENA				S	**Sg**	**12 08 31.2**	**+0.5**
EAHA	**Aohua**	**0.32**	**104**	*iP*	**Pg**	**12 08 26.9**	**+0.1**
EAHA				*i* S	**Sg**	**12 08 30.8**	**-0.1**
ETL	**Fush Village**	**0.32**	**141**	*eP*	**Pg**	**12 08 27.2**	**+0.4**
ETL				S	**Sg**	**12 08 31.8**	**+0.8**
EWUT	**Wuta**	**0.34**	**83**	*iP*	**Pg**	**12 08 27.2**	**-0.1**
EWUT				*e*S	**Sg**	**12 08 31.6**	**-0.3**
NFF	**Wufeng Townshi**	**0.34**	**311**	*iP*	**Pg**	**12 08 28.1**	**+0.7**
NFF				S	**Sg**	**12 08 32.8**	**+0.8**
NDS	**Dongshan**	**0.36**	**51**	⇑*iP*	**Pg**	**12 08 27.6**	**-0.2**
NDS				S	**Sg**	**12 08 33.1**	**+0.6**
TWD	**Chiawan**	**0.37**	**151**	P	**Pg**	**12 08 28.2**	**+0.5**
TWD				*i* S	**Sg**	**12 08 33.0**	**+0.4**
NWLT	**Wulai**	**0.38**	**14**	*iP*	**Pg**	**12 08 28.3**	**+0.2**
NWLT				S	**Sg**	**12 08 33.0**	**-0.1**
FUSB	**Fushanzhiwuyua**	**0.39**	**25**	⇑*iP*	**Pg**	**12 08 28.4**	**+0.1**
FUSB				*i* S	**Sg**	**12 08 33.0**	**-0.5**
TWE	**Neicheng**	**0.40**	**37**	⇑*iP*	**Pg**	**12 08 28.6**	**+0.3**
TWE				*e*S	**Sg**	**12 08 34.2**	**+0.7**
KSHI	**Guanxi Townshi**	**0.42**	**331**	P	**Pb**	**12 08 30.3**	**-0.4**
KSHI				S	**Sb**	**12 08 36.3**	**-1.1**
LIOB	**Emei**	**0.43**	**304**	*iP*	**Pb**	**12 08 30.1**	**-0.6**
LIOB				S	**Sb**	**12 08 36.0**	**-1.4**
NSTT	**Nanjuang**	**0.43**	**302**	⇑*iP*	**Pb**	**12 08 29.9**	**-0.8**
NSTT				S	**Sg**	**12 08 35.6**	**+1.0**
ESAO	**Su ao**	**0.44**	**67**	P	**Pg**	**12 08 28.6**	**-0.5**
ESAO				*e*S	**Sg**	**12 08 36.0**	**+1.3**
WHP	**Taichung City**	**0.44**	**253**	⇑*iP*	**Pg**	**12 08 29.7**	**+0.6**
ETM	**Tongmen**	**0.45**	**169**	*iP*	**Pg**	**12 08 29.5**	**+0.3**
ETM				S	**Sg**	**12 08 34.9**	**-0.2**
TWC	**Suao**	**0.45**	**63**	*iP*	**Pg**	**12 08 29.2**	**-0.2**
TWC				S	**Sg**	**12 08 34.9**	**-0.5**
HWA	**Hwalien**	**0.46**	**157**	P	**Pb**	**12 08 30.4**	**-0.9**
HWA				*e*S	**Sb**	**12 08 37.0**	**-1.4**
ILA	**Ilan**	**0.48**	**41**	*eP*	**Pg**	**12 08 30.1**	**+0.3**
ILA				*e*S	**Sg**	**12 08 36.8**	**+0.7**
WUSB	**Renai**	**0.49**	**213**	⇑*iP*	**Pg**	**12 08 29.8**	**-0.2**
WUSB				S	**Sb**	**12 08 38.2**	**-1.0**
OWD	**Renai**	**0.49**	**205**	⇑*eP*	**Pg**	**12 08 29.7**	**-0.5**
OWD				*e*S	**Sb**	**12 08 38.3**	**-1.2**
SBCB	**Hsinchu**	**0.54**	**315**	P	**Pb**	**12 08 32.8**	**+0.2**
HSN	**Hsinchu**	**0.56**	**315**	P	**Pb**	**12 08 33.5**	**+0.5**
HSN				*e*S	**Sb**	**12 08 41.3**	**+0.3**
TEYL	**Yanliau Villag**	**0.56**	**162**	*eP*	**Pg**	**12 08 31.5**	**0.0**
TEYL				*e*S	**Sg**	**12 08 39.4**	**+0.5**
NHDH	**Xindian Distri**	**0.57**	**11**	*eP*	**Pg**	**12 08 32.1**	**+0.5**
NHDH				*i* S	**Sg**	**12 08 39.3**	**+0.4**
TATO	**Taipei**	**0.57**	**8**	P	**Pb**	**12 08 32.6**	**-0.6**
TATO	**Taipei**	**0.57**	**8**	S	**Sg**	**12 08 39.8**	**+0.6**
TATO	**Taipei**	**0.57**	**8**	*iP*	**Pb**	**12 08 32.4**	**-0.8**
TATO				*i* S	**Sg**	**12 08 39.5**	**+0.3**
NMLH	**Miaoli**	**0.57**	**283**	*eP*	**Pb**	**12 08 33.2**	**0.0**
TWQ1	**Liyutan**	**0.58**	**265**	*iP*	**Pb**	**12 08 33.0**	**-0.3**
TWQ1				S	**Sb**	**12 08 41.1**	**-0.6**
ESL	**Shilin**	**0.59**	**177**	*eP*	**Pg**	**12 08 32.0**	**+0.1**
ESL				S	**Sg**	**12 08 40.1**	**+0.5**
NTC	**Toucheng**	**0.59**	**41**	*eP*	**Pg**	**12 08 32.4**	**+0.3**
NCUH	**Zhongli**	**0.59**	**340**	P	**Pb**	**12 08 34.0**	**+0.5**
NCUH				*i* S	**Sb**	**12 08 41.6**	**-0.7**
TWA	**Mucha**	**0.60**	**16**	P	**Pb**	**12 08 32.7**	**-0.8**
TWA				S	**Sg**	**12 08 40.1**	**+0.2**
SHUL	**Shoufeng**	**0.63**	**167**	P	**Pb**	**12 08 33.6**	**-0.5**
SHUL				S	**Sg**	**12 08 41.6**	**+0.6**
NHY	**Taipei**	**0.65**	**13**	*eP*	**Pb**	**12 08 33.9**	**-0.6**
NHY				*e*S	**Sb**	**12 08 43.0**	**-0.8**
EGS		**0.65**	**48**	*eP*	**Pg**	**12 08 33.5**	**+0.3**
TIPB	**Shuangxi**	**0.68**	**34**	*iP*	**Pg**	**12 08 33.8**	**0.0**
TIPB				*i* S	**Sg**	**12 08 42.0**	**-0.6**
WARBT	**Fenglin Townsh**	**0.68**	**181**	*iP*	**Pg**	**12 08 33.6**	**-0.2**
WARBT				S	**Sg**	**12 08 42.8**	**+0.1**
VWDT	**VWDT**	**0.69**	**200**	*eP*	**Pg**	**12 08 33.3**	**-0.6**
TWS1	**Kuangyinshan**	**0.69**	**1**	*iP*	**Pb**	**12 08 35.7**	**+0.4**
TWS1				S	**Sb**	**12 08 45.3**	**+0.2**
SMLT	**Sun Moon Lake**	**0.69**	**222**	*eP*	**Pg**	**12 08 33.9**	**-0.1**
WDJ	**Dajia District**	**0.70**	**266**	*eP*	**Pn**	**12 08 36.1**	**-1.1**
WDJ				*e*S	**Sb**	**12 08 45.9**	**+0.7**
TEGC	**Jichi Village**	**0.70**	**170**	P	**Pb**	**12 08 34.9**	**-0.5**
TEGC				*e*S	**Sb**	**12 08 45.0**	**-0.3**
TYC	**Yuchr**	**0.71**	**225**	*eP*	**Pg**	**12 08 34.1**	**-0.2**
TCU	**Taichung**	**0.71**	**249**	*eP*	**Pn**	**12 08 36.4**	**-1.0**
TCU				*e*S	**Sb**	**12 08 45.9**	**+0.3**
SSLB	**Suanglung**	**0.74**	**214**	P	**Pg**	**12 08 33.9**	**-1.0**
SSLB	**Suanglung**	**0.74**	**214**	*eP*	**Pg**	**12 08 34.1**	**-0.8**
NWF	**Wu-fen Shan**	**0.75**	**27**	P	**Pg**	**12 08 35.4**	**+0.3**
NWF				S	**Sg**	**12 08 44.5**	**-0.3**
WFSB	**Wu-fen Shan**	**0.75**	**27**	*iP*	**Pg**	**12 08 35.3**	**+0.3**
WFSB				*e*S	**Sg**	**12 08 44.4**	**-0.3**
YM01	**YM01**	**0.75**	**12**	P	**Pb**	**12 08 36.2**	**0.0**
YM01				*e*S	**Sg**	**12 08 45.5**	**+0.5**
EOS2	**EOS2**	**0.76**	**89**	*eP*	**Pb**	**12 08 35.9**	**-0.3**
NTST	**Danshui**	**0.76**	**3**	*eP*	**Pn**	**12 08 36.9**	**-1.0**
NTST				*e*S	**Sb**	**12 08 47.5**	**+0.6**
ZUZH	**Zhuzihu**	**0.77**	**10**	P	**Pb**	**12 08 36.3**	**-0.1**
ANP	**Anpu**	**0.79**	**8**	*eP*	**Pb**	**12 08 36.8**	**0.0**
YM08	**YM08**	**0.80**	**12**	P	**Pb**	**12 08 36.7**	**-0.3**
YM08				*e*S	**Sg**	**12 08 45.8**	**-0.6**
TWB1	**Santiao Chiao**	**0.80**	**41**	*eP*	**Pg**	**12 08 35.7**	**-0.4**
TWB1				*e*S	**Sg**	**12 08 46.5**	**0.0**
SXI1	**Grass Mountain**	**0.81**	**32**	*eP*	**Pg**	**12 08 36.4**	**+0.2**
TNOU	**National Taiwa**	**0.81**	**24**	P	**Pg**	**12 08 36.6**	**+0.3**
WCHH	**Zhanghua**	**0.84**	**247**	P	**Pn**	**12 08 38.2**	**-0.8**
WNT	**Mingjian**	**0.84**	**232**	*eP*	**Pb**	**12 08 37.9**	**+0.2**
EOS3	**EOS3**	**0.84**	**98**	*eP*	**Pb**	**12 08 37.8**	**+0.1**
WCH1	**Changhua City**	**0.85**	**247**	*eP*	**Pb**	**12 08 38.2**	**+0.3**
WHYT	**Xinyi Township**	**0.87**	**216**	*eP*	**Pg**	**12 08 36.7**	**-0.6**
EOS4	**EOS4**	**0.88**	**109**	*eP*	**Pb**	**12 08 38.0**	**-0.2**
TWY	**Chenhua**	**0.89**	**12**	P	**Pb**	**12 08 38.6**	**+0.1**
EHY	**Hungye**	**0.90**	**185**	P	**Pg**	**12 08 37.5**	**-0.4**
EHY				*e*S	**Sb**	**12 08 50.1**	**-0.8**
EHYH	**Wanrong**	**0.91**	**183**	*iP*	**Pg**	**12 08 37.7**	**-0.4**
EHYH				*i* S	**Sb**	**12 08 50.5**	**-0.7**
HGSD	**Ruisui**	**0.91**	**179**	*eP*	**Pb**	**12 08 38.5**	**-0.4**
YULB	**Yu-li**	**1.01**	**186**	P	**Pg**	**12 08 39.5**	**-0.5**
YULB	**Yu-li**	**1.01**	**186**	S	**Sb**	**12 08 53.8**	**-0.5**
YULB	**Yu-li**	**1.01**	**186**	P	**Pg**	**12 08 39.6**	**-0.6**
YULB				S	**Sg**	**12 08 53.3**	**+0.1**
CHN5	**Tsauling**	**1.04**	**220**	*iP*	**Pn**	**12 08 41.5**	**-0.5**
CHN5				S	**Sn**	**12 08 56.6**	**-0.3**
ALS	**Alishan**	**1.04**	**212**	P	**Pg**	**12 08 40.2**	**-0.5**
WGK	**Gukeng**	**1.05**	**227**	*eP*	**Pn**	**12 08 42.1**	**+0.1**
TWF1	**Yuli**	**1.05**	**185**	P	**Pg**	**12 08 40.6**	**-0.2**
TWF1				S	**Sg**	**12 08 54.6**	**+0.1**
EYUL	**Yuli**	**1.06**	**184**	P	**Pg**	**12 08 40.8**	**-0.1**
EYUL				*e*S	**Sb**	**12 08 55.9**	**+0.4**
WRL	**Guolierlin Hig**	**1.06**	**242**	*eP*	**Pb**	**12 08 41.5**	**0.0**
WRL				*e*S	**Sb**	**12 08 56.1**	**+0.4**
WDLH	**Douliu**	**1.06**	**228**	*eP*	**Pn**	**12 08 41.8**	**-0.4**
WDLH				*e*S	**Sn**	**12 08 59.3**	**+2.0**
RLNB	**Erlin**	**1.08**	**242**	*eP*	**Pn**	**12 08 42.3**	**-0.1**
ECBN	**Changbin**	**1.08**	**178**	*eP*	**Pn**	**12 08 42.8**	**+0.3**
FULB	**Fuli**	**1.21**	**185**	*eP*	**Pn**	**12 08 44.3**	**+0.1**
FULB				*e*S	**Sn**	**12 09 01.5**	**+0.6**
CHKH	**Chenggong**	**1.21**	**180**	*eP*	**Pn**	**12 08 44.8**	**+0.6**
WCKO	**Fanlu**	**1.21**	**217**	P	**Pn**	**12 08 44.4**	**+0.2**
WCKO				S	**Sn**	**12 09 01.2**	**+0.3**
ELDTW	**Lidau**	**1.26**	**196**	*eP*	**Pg**	**12 08 43.8**	**-1.0**
ELDTW				*e*S	**Sg**	**12 09 01.0**	**-0.3**
EHD	**Haiduan**	**1.26**	**188**	P	**Pn**	**12 08 44.3**	**-0.6**
EHD				*e*S	**Sn**	**12 09 01.8**	**-0.5**
CHY	**Chiayi**	**1.27**	**225**	*eP**	**Pg**	**12 08 45.1**	**0.0**
CHKT	**Chengkung**	**1.30**	**182**	*eP*	**Pg**	**12 08 45.7**	**+0.1**
TPUB	**Ta-pu**	**1.31**	**213**	P	**Pn**	**12 08 45.3**	**-0.3**
TPUB	**Ta-pu**	**1.31**	**213**	S	**Sn**	**12 09 03.3**	**-0.1**
TPUB	**Ta-pu**	**1.31**	**213**	*eP*	**Pn**	**12 08 45.3**	**-0.3**
TPUB				*e*S	**Sn**	**12 09 03.8**	**+0.4**
ECS	**Chishang**	**1.31**	**187**	*eP*	**Pn**	**12 08 45.3**	**-0.3**
WSF	**Szhu**	**1.32**	**235**	*eP*	**Pg**	**12 08 46.0**	**0.0**
STYH	**Taoyuan**	**1.36**	**205**	*eP*	**Pb**	**12 08 46.3**	**-0.2**
PCYT	**Pengchaiyu**	**1.36**	**26**	*eP*	**Pn**	**12 08 46.2**	**-0.1**
PCYT				*e*S	**Sn**	**12 09 05.0**	**+0.3**
WTP	**Ta-pu**	**1.36**	**212**	*eP*	**Pg**	**12 08 46.6**	**-0.2**
WSL	**Shuilin Townsh**	**1.39**	**231**	*eP*	**Pg**	**12 08 47.1**	**-0.2**
JYNG	**Yonagunijimaku**	**1.41**	**88**	P	**Pn**	**12 08 46.9**	**0.0**
TWK	**Hsinying**	**1.41**	**217**	*iP*	**Pg**	**12 08 47.8**	**0.0**
CHN1	**Nanshi**	**1.46**	**214**	*eP*	**Pg**	**12 08 48.7**	**+0.1**
CHN1				*e*S	**Sg**	**12 09 09.6**	**+2.1**
ICHU	**Yijhu**	**1.46**	**225**	*eP*	**Pg**	**12 08 49.2**	**+0.5**
YOJ	**Yonaguni jima**	**1.47**	**87**	*eP*	**Pn**	**12 08 47.6**	**-0.1**
YOJ				*e*S	**Sn**	**12 09 06.8**	**-0.5**
YOJ	**Yonaguni jima**	**1.47**	**87**	P	**Pb**	**12 08 47.9**	**-0.5**
YOJ				*e*S	**Sb**	**12 09 07.3**	**0.0**
SGST	**Jiashian**	**1.52**	**210**	*eP*	**Pb**	**12 08 48.8**	**-0.5**
SGST				*e*S	**Sg**	**12 09 11.2**	**+1.8**
SLGT	**Liugui**	**1.57**	**206**	*eP*	**Pg**	**12 08 50.8**	**0.0**
TWG	**Pinlang**	**1.61**	**191**	*eP*	**Pg**	**12 08 50.9**	**-0.5**
TWGBT	**Beinan**	**1.61**	**191**	P	**Pb**	**12 08 50.3**	**-0.5**
TWGBT	**Beinan**	**1.61**	**191**	S	**Sg**	**12 09 12.4**	**+0.1**
TWGBT	**Beinan**	**1.61**	**191**	*eP*	**Pn**	**12 08 49.9**	**+0.2**
TSCK	**Chigu Township**	**1.74**	**224**	*eP*	**Pb**	**12 08 53.2**	**+0.1**
TSCK				*e*S	**Sg**	**12 09 17.2**	**+0.7**
SSD	**Sandimen**	**1.80**	**203**	*eP*	**Pg**	**12 08 54.5**	**-0.6**
TWM1	**Shoushan**	**1.81**	**210**	*eP*	**Pg**	**12 08 55.9**	**+0.5**
TSMG	**Majia**	**1.83**	**203**	*eP*	**Pb**	**12 08 54.2**	**-0.3**
ECL	**Taimali**	**1.85**	**193**	*eP*	**Pb**	**12 08 54.8**	**-0.1**
VWUC	**VWUC**	**1.87**	**289**	*eP*	**Pn**	**12 08 53.9**	**+0.6**
PNG	**Penghu**	**1.89**	**244**	*eP*	**Pb**	**12 08 54.7**	**-0.8**
PHUB	**P'eng-hu**	**1.90**	**242**	*eP*	**Pn**	**12 08 52.7**	**-1.0**
MASBT	**Mashibuluo**	**1.92**	**202**	*eP*	**Pb**	**12 08 56.1**	**0.0**
MASBT				*e*S	**Sg**	**12 09 23.3**	**+0.9**
WDGT	**Dungji**	**1.96**	**235**	*eP*	**Pn**	**12 08 55.3**	**+0.8**
SSPT	**Xinbi**	**2.06**	**202**	*eP*	**Pb**	**12 08 58.2**	**-0.3**
EAST	**Anshuo**	**2.08**	**194**	*eP*	**Pb**	**12 08 58.8**	**0.0**
IRIF	**Iriomote-Funau**	**2.12**	**91**	*eP*	**Pn**	**12 08 56.9**	**+0.2**
IRIF				S	**Sn**	**12 09 24.3**	**+0.9**
SCZT	**Fangliau**	**2.15**	**200**	*eP*	**Pb**	**12 08 59.2**	**-0.8**
VCHM	**Qimei**	**2.17**	**237**	*eP*	**Pb**	**12 08 58.8**	**-1.5**
PTMZ	**Houxiangcun**	**2.17**	**287**	*eP*	**Pn**	**12 08 56.5**	**-0.9**
MATB	**Ma-tsu**	**2.18**	**323**	*eP*	**Pn**	**12 08 58.8**	**+1.2**
SLIU	**Shizi**	**2.25**	**194**	*eP*	**Pb**	**12 09 00.9**	**-0.9**
JKRS	**Kuro-shima**	**2.38**	**93**	*eP*	**Pn**	**12 09 01.1**	**+0.8**
JKRS				*e*S	**Sn**	**12 09 30.9**	**+1.0**
LYIB	**Lan-yu**	**2.40**	**176**	*eP*	**Pn**	**12 09 01.2**	**+0.7**
SMST	**Manzhou Townsh**	**2.43**	**193**	*eP*	**Pb**	**12 09 03.0**	**-1.8**
JIJ	**Ishigaki jima**	**2.50**	**90**	*eP*	**Pn**	**12 09 03.1**	**+1.2**
JIJ				*e*S	**Sn**	**12 09 32.6**	**-0.2**
TWKBT	**Hengchun**	**2.51**	**193**	*eP*	**Pn**	**12 09 03.8**	**+1.6**
JISG	**Ishigakijimahi**	**2.65**	**85**	*eP*	**Pn**	**12 09 04.3**	**+0.3**
JISG				*e*S	**Sn**	**12 09 37.8**	**+1.2**
MHZQ	**Yeshan**	**2.73**	**309**	*eP*	**Pb**	**12 09 07.7**	**-2.3**
AXDP	**Jialang**	**3.16**	**280**	*eP*	**Pn**	**12 09 11.1**	**+0.1**

JMA 16 12:23:29.6±0.1,**35°.4N**±0°.2×**133°.8E**±0°.1,**h10**km,**MV0.3/8**, **EASTERN TOTTORI PREF,Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKR	**Kurayoshi**	**0.04**	**184**	P	Pg	12 23 31.4	0.0
JKR				S	Sg	12 23 32.7	-0.1

*JMA **16** 12:23:33.0±0.2,34°.N±1°.×13°.7E±°,h347km±1km,MV3.3/37, ENSYUNADA*
*IDC **16** 12:23:32.5±0.6,33°.99N×137°.38E,h343km±9km,mb3.2/8, mbtmp3.9/15,Error ellipse: s-maj=22.0km s-min=9.8km az=64.0*
*NEIC **16** 12:23:33.1±0.9,34°.05N±0°.08×137°.44E±0°.09, h349km±6km,mb4.1/22,Error ellipse: s-maj=12.6km s-min=9.6km az=217.0*
ISC 16 12:23:32.5±0.6,**34°04N**±0°.06×**137°39E**±0°.06,**h349**km±6km, **n70**,σ0**79**/74,**mb3.8**/17,**Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTO4	**TONANKAI O.B.S**	**0.13**	**104**	*eP*	**Pn**	**12 24 16.7**	**+0.8**
TTO2	**TONANKAI O.B.S**	**0.43**	**225**	P	**Pn**	**12 24 17.0**	**+0.8**
TTO1	**TONANKAI O.B.S**	**0.65**	**231**	P	**Pn**	**12 24 17.4**	**+0.7**
JIE	**Ise**	**0.67**	**302**	P	**Pn**	**12 24 17.4**	**+0.4**
JHMK	**Hamakita**	**0.83**	**21**	P	**Pn**	**12 24 17.8**	**+0.4**
HMMJ	**Hamamatsu 2**	**0.86**	**19**	*eP*	**Pn**	**12 24 18.1**	**+0.5**
JKN2	**Miekihoku**	**0.95**	**282**	P	**Pn**	**12 24 18.1**	**+0.2**
JKN2				*e*S	**S**	**12 24 53.4**	**-0.9**
JAO	**Obara**	**1.23**	**355**	P	**Pn**	**12 24 19.8**	**+0.6**
INU	**Inuyama**	**1.34**	**347**	P	**Pn**	**12 24 19.8**	**+0.2**
INU	**Inuyama**	**1.34**	**347**		**Pn**	**12 24 20.2**	**+0.6**
JEG	**Eigenji**	**1.37**	**323**	P	**Pn**	**12 24 20.5**	**+0.7**
JNY	**Yasuok**	**1.37**	**16**	P	**Pn**	**12 24 20.4**	**+0.5**
JTNC	**Tanabenakahech**	**1.49**	**262**	P	**Pn**	**12 24 20.6**	**0.0**
JTNC				S	**S**	**12 24 58.2**	**-0.9**
JWY	**Kouya**	**1.50**	**277**	*eP*	**Pn**	**12 24 20.9**	**+0.2**
JGF	**Kuroka**	**1.56**	**359**	P	**Pn**	**12 24 20.8**	**-0.1**
JGF	**Kuroka**	**1.56**	**359**		**Pn**	**12 24 21.1**	**+0.3**
JHJ	**Hachijo jima 2**	**2.20**	**114**	P	**Pn**	**12 24 25.6**	**+0.4**
	107nm,0.3s,baz=60,slow=23,SNR=1.9						
JHJ				S	**S**	**12 25 07.3**	**-0.2**
	121nm,0.7s,baz=248,slow=21,SNR=0.9						
JHJ2	**Mitsune**	**2.23**	**114**	Pn	**Pn**	**12 24 25.4**	**0.0**
MJAR	**Matsushiro Arr**	**2.58**	**15**	P	**Pn**	**12 24 28.4**	**+0.2**
	30nm,0.6s,baz=182,slow=10,SNR=91						
MJAR				S	**S**	**12 25 12.1**	**-0.8**
	9.6nm,0.9s,baz=192,slow=16,SNR=6.8						
MJAR	**Matsushiro Arr**	**2.58**	**15**		**Pn**	**12 24 28.2**	**0.0**
MAJO	**Matsushiro**	**2.59**	**15**	P	**Pn**	**12 24 28.2**	**+0.1**
MAJO	**Matsushiro**	**2.59**	**15**		**Pn**	**12 24 28.3**	**+0.1**
MJB9	**Matsu-Tunnel**	**2.59**	**15**		**Pn**	**12 24 29.8**	**+1.6**
JMN	**Monobe**	**2.94**	**265**	P	**Pn**	**12 24 29.0**	**-2.3**
JMN	**Monobe**	**2.94**	**265**	Pn	**Pn**	**12 24 31.0**	**-0.3**
JNU	**Nakatsue**	**5.51**	**262**	P	**Pn**	**12 24 57.8**	**0.0**
	9.6nm,0.7s,baz=97,slow=1.2,SNR=9.8						
JSU	**Suzuyama**	**6.36**	**249**	P	**Pn**	**12 25 05.9**	**-1.6**
JSU	**Suzuyama**	**6.36**	**249**	Pn	**Pn**	**12 25 08.0**	**+0.5**
KSRS	**Korea Array**	**8.41**	**297**	P	**Pn**	**12 25 32.5**	**+1.1**
	5.8nm,0.7s,baz=109,slow=13,SNR=20						
KSAR	**Wonju Array Be**	**8.44**	**296**	Pn	**Pn**	**12 25 32.2**	**+0.5**
KS19	**Wonju Array Si**	**8.47**	**297**	Pn	**Pn**	**12 25 33.0**	**+0.9**
JEM	**Erimo**	**9.17**	**28**	P	**Pn**	**12 25 37.8**	**-2.6**
ASAJ	**Asahikawa**	**10.84**	**20**	P	**P**	**12 26 01.2**	**0.0**
	2.7nm,0.3s,baz=228,slow=14,SNR=15						
JKA	**Kamikawa-asahi**	**10.84**	**20**	P	**P**	**12 26 01.1**	**-0.1**
USRK	**Ussuriysk Ar.**	**10.97**	**339**	P	**Pn**	**12 26 02.0**	**+0.1**
	3.4nm,0.8s,baz=165,slow=12,SNR=3.5						
KLR	**Kul'dur**	**15.74**	**346**	P	**P**	**12 26 56.0**	**+1.0**
	0.9nm,0.5s,baz=166,slow=12,SNR=4.2						
NACB	**Ninganchiao**	**16.93**	**239**	P	**P**	**12 27 08.6**	**+0.5**
NACB				IAmb	IAmb	12 27 20.3	
	comp=Z,20nm,1.1s						
SSLB	**Suanglung**	**17.62**	**239**	P	**P**	**12 27 15.8**	**+0.2**
SSLB				IAmb	IAmb	12 27 32.6	
	comp=Z,34nm,1.5s						
BJT	**Baijiatuao**	**17.95**	**296**	P	**P**	**12 27 18.9**	**0.0**
BJT				IAmb	IAmb	12 27 19.2	
	comp=Z,3.7nm,0.5s						
TPUB	**Ta-pu**	**18.16**	**238**	P	**P**	**12 27 20.7**	**-0.7**
GUMO	**Guam**	**21.46**	**160**	P	**P**	**12 27 54.1**	**+0.1**
SONM	**Songino Array**	**26.96**	**310**	P	**P**	**12 28 43.9**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=116,slow=9.2,SNR=5.2						
	comp=Z,1.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**37.56**	**255**	P	**P**	**12 30 13.8**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=62,slow=9.3,SNR=3.2						
	comp=Z,0.6nm,0.3s						
CMAR	**Chiang Mai Arr**	**37.56**	**255**	P	**P**	**12 30 14.5**	**-0.3**
MKAR	**Makanchi Array**	**43.01**	**304**	P	**P**	**12 30 59.6**	**+1.0**
	comp=Z,1.4nm,0.7s,baz=90,slow=10,SNR=12						
	comp=Z,1.4nm,0.7s						
MAKZ	**Makanchi**	**43.22**	**304**	P	**P**	**12 31 01.7**	**+1.4**
KURK	**Kurchatov**	**45.27**	**310**	P	**P**	**12 31 16.9**	**+0.6**
KURBB	**Kurchatov Arra**	**45.33**	**310**	P	**P**	**12 31 16.9**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=86,slow=6.6,SNR=6.8						
	comp=Z,0.6nm,0.5s						
MTN	**Manton Dam**	**47.00**	**188**	P	**P**	**12 31 29.5**	**-0.5**
MTN				IAmb	IAmb	12 32 05.1	
	comp=Z,7.6nm,1.4s						
PMBI	**Palembang**	**47.91**	**227**	P	**P**	**12 31 38.2**	**+1.2**
COEN	**Coen**	**48.05**	**172**	P	**P**	**12 31 37.3**	**-0.7**
COEN				IAmb	IAmb	12 31 38.0	
	comp=Z,9.9nm,1.1s						
KNRA	**Kununurra**	**50.12**	**191**	P	**P**	**12 31 53.7**	**+0.2**
KNRA				IAmb	IAmb	12 32 37.6	
	comp=Z,14nm,1.4s						
BVAR	**Borovoye Array**	**50.20**	**314**	P	**P**	**12 31 55.0**	**+1.2**
	comp=Z,0.7nm,0.6s,baz=72,slow=4.7,SNR=2.6						
	comp=Z,0.7nm,0.6s						
WB0	**Warramunga Arr**	**53.58**	**184**	P	**P**	**12 32 18.8**	**0.0**
WB0				IAmb	IAmb	12 32 20.4	
	com

$M_{\Phi\Phi}$4.41±.07; $M_{\Phi r}$0.22±.24; Best double couple: M_{o}4.53200×10^16 NP1:ϕ_{Φ}6.00000°,δ84.00000°, λ179.00000°. NP2:ϕ_{Φ}96.00000°,δ89.00000°,λ6.00000°. Principal axes: T 5.1660, Plg5.0000°, Azm321.0000°; N -1.2760, Plg84.0000°, Azm105.0000°; P -3.8980, Plg4.0000°, Azm231.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

*RSNC **16** 12:43:03.7±0.3,3˚N±3˚×8˚4W±˚, h28km,M4.9,mb5.2, mB5.5,ML4.8,Mw(mB)4.9,MwMwp4.8,Mwp5.1*

*CATAC **16** 12:43:08.9±0.4,3˚N±3˚×8˚4W±˚, h51km±23km,M5.2/25, mb5.5/25,mB5.7/17,MLv5.3/15,Mw(mB)5.2/17,Error ellipse: s-maj=7.1km s-min=3.7km az=48.6,Moment Tensor Solution. Moment tensor: Scale 10^16Nm; M_{rr}0.46; $M_{\Phi\Phi}$1.31; $M_{\Phi\phi}$-1.76; $M_{r\Phi}$0.00; $M_{\Phi\phi}$4.64; $M_{\phi r}$5.39; Fault plane solution: M_{o}7.29142×10^16 NP1:ϕ_{Φ}97.76959°, δ41.96158°,λ2.37643°. NP2:ϕ_{Φ}6.00205°,δ88.41130°, λ131.93707°. Principal axes: T 6.7795, Plg33.0523°, Azm310.3216°; N 0.9339, Plg41.9173°, Azm184.5752°; P -7.7134, Plg30.4108°, Azm62.7750°; confirmed*

ISC 16 12:43:01.5±2.2,2°92N±0'04×84°27W±0'05,h24km±15km, n775,σ1$49/653,mb4.9/236,MS4.2/47,3D,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIRO	**Carate, Puerto**	**5.53**	**10**	Pn	**Pn**	**12 44 20.7**	**-1.7**
PIRO				Sn	**Sn**	**12 45 24.8**	**-0.5**
PIRO	**Carate, Puerto**	**5.53**	**10**	P	Pn	12 44 19.5	-2.9
PIRO				S	**Sn**	**12 45 19.7**	**-5.6**
CDITO	**Canoas**	**5.79**	**14**	P	Pn	12 44 22.6	-3.4
CDITO				S	**Sn**	**12 45 24.8**	**-6.9**
BRU2	**Volcan**	**6.04**	**15**		**Pn**	**12 44 29.4**	**-0.2**
BRU2	**Volcan**	**6.04**	**15**	P	**Pn**	**12 44 29.0**	**-0.7**
BRU2				S	**Sn**	**12 45 31.2**	**-7.0**
PAC1	**Pacto, Paraso** 43µm3µm,0.6s	**6.08**	**116**	P	**Pn**	**12 44 29.6**	**-0.5**
PAC1				S	**Sn**	**12 45 37.8**	**-1.2**
	43µm3µm,0.6s						
GR1C	**Gorgona, Isla**	**6.09**	**89**	P	**Pn**	**12 44 30.8**	**+0.6**
GR1C				S	**Sn**	**12 45 35.5**	**-3.7**
OCHAL	**Ojochal**	**6.17**	**6**	P	Pn	12 44 27.7	-3.6
OCHAL				S	**Sn**	**12 45 34.2**	**-6.9**
DRK0	**Durika**	**6.39**	**9**	P	Pn	12 44 30.6	-3.8
DRK0				S	**Sn**	**12 45 40.3**	**-6.4**
OTAV	**Otavalo**	**6.40**	**114**		**Pn**	**12 44 34.2**	**-0.6**
OTAV	**Otavalo**	**6.40**	**114**	P	**Pn**	**12 44 32.0**	**-2.7**
OTAV				S	**Sn**	**12 45 46.8**	**-0.6**
OTAV	**Otavalo** 5µm2µm318nm,0.7s	**6.40**	**114**	P	**Pn**	**12 44 34.1**	**-0.6**
OTAV				S	**Sn**	**12 45 46.7**	**-0.6**
	5µm2µm318nm,0.7s						
OTAV	**Otavalo**	**6.40**	**114**	*eP*	**Pn**	**12 44 34.3**	**-0.4**
CUSE	**Cuicocha Este** 8µm487nm,0.6s	**6.42**	**114**	P	**Pn**	**12 44 34.4**	**-0.6**
CUSE				S	**Sn**	**12 45 42.9**	**-4.9**
	8µm487nm,0.6s						
QUEP	**Quepos**	**6.47**	**1**	P	**Pn**	**12 44 34.6**	**-0.8**
CMBC	**Cumbal**	**6.73**	**107**	P	**Pn**	**12 44 40.0**	**+0.6**
CMBC				S	**Sn**	**12 45 52.6**	**-3.0**
LCR2	**La Lucha 2**	**6.79**	**2**	P	**Pn**	**12 44 39.7**	**-0.2**
LCR2				S	**Sn**	**12 45 51.8**	**-4.7**
SLOR	**San Lorenzo -**	**6.81**	**122**		**Pn**	**12 44 40.4**	**-0.1**
RGM0	**Gandoca**	**6.83**	**14**	Pn	**Pn**	**12 44 39.0**	**-1.4**
TULM	**Tulcn-Chalpat** 8µm990nm,1.1s	**6.84**	**109**	P	**Pn**	**12 44 42.1**	**+1.2**
TULM				S	**Sn**	**12 46 01.9**	**+3.7**
	8µm990nm,1.1s						
RAFA	**San Farael, Vo**	**7.01**	**4**	Pn	**Pn**	**12 44 43.2**	**+0.2**
HDC	**Heredia**	**7.04**	**1**		**Pn**	**12 44 43.1**	**-0.2**
HDC	**Heredia**	**7.04**	**1**	*eP*	**Pn**	**12 44 43.7**	**+0.4**
BBAC	**Balboa, Cauca** 3µm2µm179nm,1.2s	**7.07**	**97**	P	**Pn**	**12 44 43.9**	**+0.1**
BBAC				S	**Sn**	**12 46 02.7**	**-0.9**
	3µm2µm179nm,1.2s						
GCUF	**Volcan Galeras** 2µm274nm,0.7s	**7.12**	**104**	P	**Pn**	**12 44 44.5**	**-0.3**
GCUF				S	**Sn**	**12 46 03.9**	**-1.3**
	2µm274nm,0.7s						
CMARA	**Lajas Hojancha**	**7.15**	**351**	P	Pn	12 44 41.8	-3.0
CMARA				S	**Sn**	**12 45 59.9**	**-5.4**
BONI	**La Bonita** 3µm6µm640nm,1.1s	**7.17**	**110**	P	**Pn**	**12 44 47.1**	**+1.9**
BONI				S	**Sn**	**12 46 08.3**	**+2.2**
	3µm6µm640nm,1.1s						
PIZC	**Pizarro, Choco**	**7.19**	**73**	P	**Pn**	**12 44 44.1**	**-1.1**
PIZC				S	Sn	12 46 16.9	+11
EGUB	**Earth Gu¡pi**	**7.28**	**5**		**Pn**	**12 44 47.6**	**+1.1**
JUD3	**Juan Diaz 3**	**7.31**	**350**	Pn	**Pn**	**12 44 46.7**	**-0.3**
COHC	**Cochancay**	**7.33**	**137**		**Pn**	**12 44 45.0**	**-2.2**
JTS	**Las Juntas de** 76nm,0.3s,baz=232,slow=6.3,SNR=118	**7.36**	**355**	Pn	**Pn**	**12 44 45.6**	**-2.0**
JTS				Sn	**Sn**	**12 46 08.2**	**-2.2**
	2.1nm,0.3s,baz=126,slow=22,SNR=6.4						
JTS	**Las Juntas de**	**7.36**	**355**		**Pn**	**12 44 47.7**	**+0.2**
JTS	**Las Juntas de**	**7.36**	**355**	P	**Pn**	**12 44 47.8**	**+0.2**
JTS				S	**Sn**	**12 46 06.8**	**-3.6**
JTS	**Las Juntas de**	**7.36**	**355**	P	**Pn**	**12 44 47.6**	**0.0**
CASC	**Dorado de Casc** 4µm439nm,1.2s	**7.46**	**112**	P	**Pn**	**12 44 50.8**	**+1.8**
JAMC	**Jamundi, Valle** 2µm83nm,0.8s	**7.59**	**88**	P	**Pn**	**12 44 51.3**	**+0.3**
JAMC				S	**Sn**	**12 46 14.2**	**-2.2**
	2µm83nm,0.8s						
POPC	**Popayan, Colom** 824nm56nm,1.2s	**7.59**	**93**	P	**Pn**	**12 44 51.0**	**0.0**
POPC				S	**Sn**	**12 46 17.8**	**+1.3**
	824nm56nm,1.2s						
TRT2	**Tortugero**	**7.61**	**4**	P	**Pn**	**12 44 51.2**	**+0.2**
TRT2				S	**Sn**	**12 46 10.5**	**-6.0**
BCIP	**Isla Barro Col**	**7.61**	**35**	P	**Pn**	**12 44 50.8**	**-0.3**
BCIP				S	Sn	12 46 08.4	-8.3
BCIP	**Isla Barro Col** 145nm,1.3s	**7.61**	**35**	P	**Pn**	**12 44 55.3**	**+4.2**
BCIP				S	Sn	12 46 29.1	+12
	145nm,1.3s						
PTAC	**Punta Ardita,** 2µm125nm,1.1s	**7.69**	**57**	P	**Pn**	**12 44 54.9**	**+2.8**
COVE	**Coope Vega, Sa**	**7.75**	**359**	P	**Pn**	**12 44 53.7**	**+0.7**
COVE				S	**Sn**	**12 46 16.6**	**-3.5**
ELI1	**Hacienda Flor**	**7.78**	**351**	P	**Pn**	**12 44 54.3**	**+0.9**
ELI1				S	**Sn**	**12 46 17.9**	**-3.0**
YOTC	**Yotoco, Valle** 812nm62nm,1.0s	**7.98**	**82**	P	**Pn**	**12 44 57.1**	**+0.9**
YOTC				S	**Sn**	**12 46 25.3**	**-0.6**
	812nm62nm,1.0s						
PLMC	**San Jos del P** 2µm109nm,0.8s	**8.21**	**76**	P	**Pn**	**12 45 00.4**	**+1.1**
PLMC				S	Sn	12 46 41.6	+10
	2µm109nm,0.8s						
CARN	**Rivas**	**8.31**	**351**	P	**Pn**	**12 45 00.3**	**-0.4**
CARN				S	**Sn**	**12 46 29.0**	**-4.8**
MCRA	**Macar, Loja** 27nm,1.3s	**8.43**	**149**	P	**Pn**	**12 45 01.3**	**-1.0**
MCRA				S	**Sn**	**12 46 36.3**	**-0.5**
	27nm,1.3s						
OMEN	**Al SSO del Vol**	**8.64**	**351**	P	**Pn**	**12 45 04.8**	**-0.4**
FLOC	**Florencia**	**8.71**	**99**	P	**Pn**	**12 45 08.4**	**+2.2**
FLOC				S	**Sn**	**12 46 44.6**	**+0.8**
FLOC	**Florencia** 2µm2µm173nm,1.2s	**8.71**	**99**	P	**Pn**	**12 45 07.7**	**+1.5**
FLOC				S	**Sn**	**12 46 44.0**	**+0.2**
	2µm2µm173nm,1.2s						
CBOC	**Ciudad Bolivar** 1µm131nm,1.0s	**8.74**	**70**	P	**Pn**	**12 45 08.1**	**+1.4**
CBOC				S	**Sn**	**12 46 49.2**	**+4.6**
	1µm131nm,1.0s						
GARC	**Garzon, Huila** 935nm22nm,0.6s	**8.80**	**95**	P	**Pn**	**12 45 10.1**	**+2.5**
DBBC	**Dabeiba** 13µm76nm,1.3s	**9.00**	**63**	P	**Pn**	**12 45 13.2**	**+3.0**
ACON	**Acoyapa**	**9.04**	**354**	P	**Pn**	**12 45 09.7**	**-1.0**
ACON				S	**Sn**	**12 46 46.7**	**-5.0**
ORTC	**Ortega, Tolima** 2µm223nm,0.8s	**9.06**	**84**	P	**Pn**	**12 45 12.8**	**+1.8**
NANN	**Nandasmo**	**9.15**	**349**	P	**Pn**	**12 45 15.0**	**+2.8**
NANN				S	**Sn**	**12 46 51.0**	**-3.5**
GUY2C	**Guyana, Caldas** 1µm140nm,0.8s	**9.17**	**75**	P	**Pn**	**12 45 15.3**	**+2.4**
GUY2C				S	**Sn**	**12 47 03.0**	**+7.3**
	1µm140nm,0.8s						
HELC	**Santa Helena**	**9.30**	**69**	P	**Pn**	**12 45 16.5**	**+1.9**
HELC	**Santa Helena** 1µm120nm,1.3s	**9.30**	**69**	P	**Pn**	**12 45 17.3**	**+2.8**
USIM	**UNAN**	**9.35**	**348**	Pn	**Pn**	**12 45 16.3**	**+1.3**
TISN	**Laguna Tiscapa**	**9.38**	**348**	P	**Pn**	**12 45 15.4**	**+0.1**
PRAC	**Prado**	**9.40**	**85**	P	**Pn**	**12 45 17.7**	**+2.0**
PRAC	**Prado** 1µm101nm,1.1s	**9.40**	**85**	P	**Pn**	**12 45 16.8**	**+1.1**
SAPS	**Ciudad Sandino**	**9.43**	**347**	P	**Pn**	**12 45 16.2**	**+0.1**
SAPS				S	**Sn**	**12 46 57.3**	**-4.1**
COPN	**Copaltepe**	**9.49**	**346**	P	**Pn**	**12 45 17.9**	**+1.1**
BOAB	**BOACC BROADBAN**	**9.57**	**352**	Pn	**Pn**	**12 45 18.9**	**+0.9**
CNGN	**Cerro Negro**	**9.82**	**346**		**Pn**	**12 45 22.9**	**+1.5**
CNGN	**Cerro Negro** 18µm2µm,0.7s	**9.82**	**346**	P	**Pn**	**12 45 26.0**	**+4.6**
CNGN				S	**Sn**	**12 47 10.8**	**-0.2**
	18µm2µm,0.7s						
PTLC	**Puerto Leguiza** 2µm135nm,1.3s	**9.85**	**106**	P	**Pn**	**12 45 23.6**	**+1.8**
URMC	**La Uribe, Meta** 65nm,1.0s	**9.88**	**88**	P	**Pn**	**12 45 25.0**	**+2.7**
UREC	**San Jos de Ur** 1µm65nm,1.3s	**9.93**	**61**	P	**Pn**	**12 45 26.5**	**+3.5**
HERN	**Volcan Telica**	**9.96**	**345**	Pn	**Pn**	**12 45 26.4**	**+3.0**
MATN	**Matagalpa**	**10.08**	**351**	P	**Pn**	**12 45 25.6**	**+0.5**
CRIN	**San Cristobal**	**10.10**	**344**	Pn	**Pn**	**12 45 28.5**	**+3.2**
CRIN	**San Cristobal** 7µm677nm,0.8s	**10.10**	**344**	P	**Pn**	**12 45 28.3**	**+3.0**
ROSC	**El Rosal** 3.8nm,0.3s,baz=226,slow=6.2,SNR=19	**10.11**	**79**	Pn	**Pn**	**12 45 23.3**	**-2.4**
ROSC				LR	LR	12 49 13.8	
	comp=Z,2µm,18.9s,baz=257,slow=38 8.3nm,0.4s						
ROSC	**El Rosal**	**10.11**	**79**	Pn	**Pn**	**12 45 29.2**	**+3.6**
ROSC	**El Rosal**	**10.11**	**79**	P	**Pn**	**12 45 29.8**	**+4.1**
PTBC	**PUERTO BERRIO,** 2µm288nm,1.3s	**10.42**	**69**	P	**Pn**	**12 45 33.0**	**+3.4**
MACC	**Macarena, Meta** 1µm100nm,1.3s	**10.44**	**94**	P	**Pn**	**12 45 31.6**	**+1.7**
MACC				S	**Sn**	**12 47 28.3**	**+2.1**
	1µm100nm,1.3s						
CSGN	**Cosiguina Volc**	**10.51**	**342**	P	**Pn**	**12 45 33.4**	**+2.5**
CSGN				S	**Sn**	**12 47 26.5**	**-1.6**
SPBC	**San Pablo de B** 2µm72nm,1.5s	**10.52**	**75**	P	**Pn**	**12 45 34.5**	**+3.4**
VILC	**Villavicencio,** 1µm136nm,0.7s	**10.62**	**83**	P	**Pn**	**12 45 35.8**	**+3.3**
VILC				S	**Sn**	**12 47 33.7**	**+2.8**
	1µm136nm,0.7s						
CHIC	**Chingaza** 1µm123nm,1.0s	**10.65**	**80**	P	**Pn**	**12 45 35.8**	**+2.7**
CNCH	**Conchagua**	**10.88**	**341**	P	**Pn**	**12 45 38.6**	**+2.6**
CNCH				S	**Sn**	**12 47 32.9**	**-4.2**
PACA	**Pacayal**	**11.22**	**339**	P	**Pn**	**12 45 42.0**	**+1.3**
PACA				S	**Sn**	**12 47 44.0**	**-1.5**
BRJC	**Barrancabermej** 2µm126nm,0.8s	**11.23**	**69**	P	**Pn**	**12 45 43.6**	**+2.9**
SJCC	**San Jacinto, C** 2µm99nm,2.1s	**11.38**	**52**	P	**Pn**	**12 45 45.1**	**+2.3**
TGUH	**Tegucigalpa,Un**	**11.46**	**345**	Pn	**Pn**	**12 45 45.7**	**+1.8**
TGUH	**Tegucigalpa,Un** 2µm255nm,0.7s	**11.46**	**345**	P	**Pn**	**12 45 47.5**	**+3.6**
RUSC	**La Rusia** 1µm74nm,1.1s	**11.54**	**75**	P	**Pn**	**12 45 47.9**	**+2.6**
RUSC				S	**Sn**	**12 47 58.9**	**+5.1**
	1µm74nm,1.1s						
ATAH	**Atahualpa** 0.3nm,0.3s,baz=312,slow=20,SNR=11	**11.58**	**150**	Pn	**Pn**	**12 45 45.5**	**-0.4**
ATAH				LR	LR	12 49 46.8	
	comp=Z,2µm,19.0s,baz=324,slow=35 4.6nm,0.6s						
BARC	**Barichara** 1µm124nm,1.2s	**11.63**	**71**	P	**Pn**	**12 45 49.9**	**+3.5**
PAMC	**Pamplona, Colo**	**12.33**	**69**	P	Pn	12 46 01.7	+5.5
MTO3	**Montecristo**	**12.47**	**337**		**Pn**	**12 46 00.0**	**+2.2**
ESQI	**Esquipulas**	**12.61**	**337**		**Pn**	**12 46 01.1**	**+1.5**
APG	**El Apazote** baz=171,slow=9.4,SNR=17	**13.47**	**333**	Pn	**Pn**	**12 46 10.0**	**-1.6**
APG				LR	LR	12 50 32.2	
	comp=Z,250nm,19.7s,baz=259,slow=34 1.9nm,1.1s						
RTAL	**Retalhuleu**	**13.66**	**328**		**Pn**	**12 46 17.2**	**+3.3**
HUEH	**Huehuetenango**	**14.24**	**330**		**P**	**12 46 28.1**	**-1.1**
SDV	**Santo Domingo** 0.2nm,0.3s,baz=234,slow=8.3,SNR=11	**14.80**	**66**	Pn	**Pn**	**12 46 27.2**	**-2.5**
SDV				LR	LR	12 51 56.1	
	comp=Z,968nm,20.2s,baz=229,slow=37 12nm,0.9s						
SDV	**Santo Domingo**	**14.80**	**66**		**Pn**	**12 46 30.6**	**+0.9**
SDV	**Santo Domingo**	**14.80**	**66**	P	**Pn**	**12 46 29.8**	**+0.2**
SDV	**Santo Domingo**	**14.80**	**66**	*eP*	**Pn**	**12 46 28.7**	**-1.0**
PETF	**Flores**	**14.96**	**339**	Pn	**Pn**	**12 46 33.3**	**+1.7**
URIC	**Uribia, Colomb**	**14.97**	**54**	P	**Pn**	**12 46 31.9**	**+0.1**
CCIG	**Comitan**	**15.37**	**330**		**Pn**	**12 46 37.9**	**+0.6**
CCIG				IAmb	IAmb	12 46 44.2	
	comp=Z,51nm,1.1s						
CZSB	**Cruzeiro do Su**	**15.65**	**133**		**Pn**	**12 46 39.5**	**-1.2**
CZSB				IAmb	IAmb	12 46 47.9	
	comp=Z,91nm,0.9s						
CZSB	**Cruzeiro do Su**	**15.65**	**133**	*eP*	**Pn**	**12 46 39.4**	**-1.4**
NNA	**Nana** comp=Z,0.8nm,0.3s,baz=311,slow=12,SNR=7.5	**16.55**	**154**	Pn	**Pn**	**12 46 52.6**	**+0.4**
NNA				LR	LR	12 52 47.9	
	comp=Z,511nm,20.3s,baz=312,slow=36 comp=Z,42nm,1.0s						
NNA	**Nana**	**16.55**	**154**		**Pn**	**12 46 52.0**	**-0.2**
NNA				IAmb	IAmb	12 46 57.3	
	comp=Z,157nm,1.4s						
NNA	**Nana**	**16.55**	**154**	P	**Pn**	**12 46 46.8**	**-5.4**
MTDJ	**Mount Denham**	**16.58**	**23**		**Pn**	**12 46 53.8**	**+1.1**
MTDJ	**Mount Denham** comp=Z,145nm,1.6s	**16.58**	**23**	P	**P**	**12 46 56.7**	**+1.6**
CMIG	**Matias Romero** comp=Z,0.2nm,0.3s,baz=125,slow=7.2,SNR=11	**17.52**	**324**	P	**Pn**	**12 47 04.5**	**0.0**
CMIG				LR	LR	12 52 29.4	
	comp=Z,2µm,21.4s,baz=150,slow=33 comp=Z,10nm,0.9s						
TEIG	**Tepich**	**17.64**	**347**		**P**	**12 47 06.9**	**+0.2**
TEIG				IAmb	IAmb	12 47 14.6	
	comp=Z,120nm,1.6s						
CHIV	**Chivirico**	**18.61**	**24**	P	**P**	**12 47 16.4**	**-0.9**
NMDO	**Nuevo Mundo**	**19.73**	**27**	P	**P**	**12 47 29.5**	**-0.1**
NMDO				IAmb	IAmb	12 47 34.9	
	comp=Z,54nm,1.2s						
TLIG	**Tlapa**	**20.21**	**317**		**P**	**12 47 35.1**	**0.0**
TLIG				IAmb	IAmb	12 47 42.6	
	comp=Z,86nm,1.6s						
SDDR	**Presa de Saban**	**20.40**	**38**	P	**P**	**12 47 36.4**	**-0.6**
SDDR				IAmb	IAmb	12 47 50.6	
	comp=Z,84nm,1.1s						
SDDR	**Presa de Saban** comp=Z,1µmcomp=Z,75nm,1.5s	**20.40**	**38**	P	Pn	12 47 39.0	-0.2
BANI	**BANI**	**20.55**	**41**	P	**P**	**12 47 38.2**	**-0.5**
SDD	**Santo Domingo**	**20.89**	**41**	P	**P**	**12 47 41.9**	**-0.3**
SC01	**Santiago de lo**	**21.08**	**38**	P	**P**	**12 47 43.2**	**-1.1**
DR12	**Loma Pena Alta**	**21.47**	**42**		**P**	**12 47 47.4**	**-1.2**
UNM	**Universidad Na**	**21.88**	**319**	P	**P**	**12 47 52.7**	**-0.4**
CRPR	**Cabo Rojo, PR**	**22.54**	**47**	P	**P**	**12 47 59.1**	**-0.8**
MLPR	**Magueyes Islan**	**22.56**	**47**	P	**P**	**12 47 58.5**	**-1.7**
OBIP	**Obispado Ponce**	**22.93**	**48**	P	**P**	**12 48 02.6**	**-1.5**
OBIP				IAmb	IAmb	12 48 08.1	
	comp=Z,50nm,1.2s						
CELP	**Cerrillos**	**22.97**	**48**	P	**P**	**12 48 03.5**	**-1.1**
UUPR	**Utuado, UPR, P**	**22.98**	**47**	P	**P**	**12 48 04.2**	**-0.4**
AOPR	**Arecibo Observ**	**23.01**	**47**	P	**P**	**12 48 03.2**	**-1.8**
ECPR	**Experimental S**	**23.28**	**48**	P	**P**	**12 48 07.5**	**-0.2**
SJG	**San Juan** comp=Z,247nm,18.0s,baz=264,slow=39	**23.31**	**48**	LR	LR	12 57 55.6	
SJG	**San Juan**	**23.31**	**48**	P	**P**	**12 48 08.2**	**+0.2**
PDPR	**Patillas Dam,**	**23.35**	**49**	P	**P**	**12 48 07.3**	**-1.0**
HUMP	**Col San Antoni**	**23.55**	**49**		**P**	**12 48 09.6**	**-0.8**
BOAV	**Boa Vista**	**23.73**	**91**		**P**	**12 48 12.2**	**+0.1**
BOAV				IAmb	IAmb	12 48 22.6	
	comp=Z,29nm,0.9s						
BOAV	**Boa Vista** comp=Z,34nm,1.1s	**23.73**	**91**	P	**P**	**12 48 13.7**	**+1.6**
BOAV	**Boa Vista**	**23.73**	**91**	*eP*	**P**	**12 48 11.8**	**-0.4**
CUPR	**Culebra, Puert**	**24.08**	**49**	P	**P**	**12 48 14.7**	**-0.6**
060A	**Indiantown**	**24.27**	**9**	P	**P**	**12 48 18.3**	**+1.2**
MACA	**Manacapuru-AM**	**24.34**	**104**	P	**P**	**12 48 17.8**	**0.0**
LPAZ	**La Paz** comp=Z,11nm,0.8s,baz=334,slow=8.0,SNR=28	**24.87**	**141**	P	**P**	**12 48 22.3**	**-1.0**
LPAZ				LR	LR	12 59 13.7	
	comp=Z,1µm,20.1s,baz=296,slow=39 comp=Z,11nm,0.8s						
LPAZ	**La Paz**	**24.87**	**141**		**P**	**12 48 22.9**	**-0.4**
LPAZ				IAmb	IAmb	12 48 39.4	
	comp=Z,49nm,1.4s						
LPAZ	**La Paz**	**24.87**	**141**	P	**P**	**12 48 23.3**	**0.0**
LPAZ	**La Paz**	**24.87**	**141**	*eP*	**P**	**12 48 24.1**	**+0.8**
PB18	**Visviri**	**25.06**	**145**		**P**	**12 48 25.9**	**+1.0**
PB12	**IPOC Station P**	**25.42**	**148**	P	**P**	**12 48 26.4**	**-1.3**
BIM	**Bigot**	**25.63**	**62**		**P**	**12 48 29.1**	**-0.4**
FDFM	**Morne la Roset**	**25.64**	**61**	P	**P**	**12 48 30.6**	**+1.0**
PB16	**IPOC Station P**	**25.64**	**146**		**P**	**12 48 28.5**	**-1.7**
CXM	**Morne La Croix**	**25.66**	**61**	P	**P**	**12 48 29.3**	**-0.7**
CXM				IAmb	IAmb	12 48 31.2	
	comp=Z,86nm,1.2s						
TDBA	**Terre de Bas,**	**25.72**	**59**	P	**P**	**12 48 29.5**	**-0.8**
MPOM	**Morne Pois Mar**	**25.78**	**62**		**P**	**12 48 31.1**	**+0.2**
GDHS	**Morne Mazeau,**	**25.81**	**58**	P	**P**	**12 48 31.3**	**+0.1**
CBE	**Ff, Capester**	**25.85**	**58**	P	**P**	**12 48 30.8**	**-0.7**
ZAIG	**Zacatecas**	**26.54**	**320**	P	**P**	**12 48 38.2**	**+0.3**
PB11	**IPOC Station P**	**26.72**	**148**	P	**P**	**12 48 39.3**	**-0.2**
PB11				IAmb	IAmb	12 48 51.7	
	comp=Z,49nm,1.5s						
GO01	**Chusmiza**	**26.89**	**147**	P	**P**	**12 48 41.9**	**+0.5**
GO01				IAmb	IAmb	12 48 49.4	
	comp=Z,49nm,1.6s						
VILB	**Vilhena**	**28.63**	**124**	P	**P**	**12 48 56.3**	**-0.2**
HKT	**Hockley**	**29.04**	**339**	P	**P**	**12 49 00.8**	**+1.0**
EF02	**Christine**	**29.08**	**334**	P	**P**	**12 48 59.7**	**-0.6**
EF02				IAmb	IAmb	12 49 02.4	
	comp=Z,65nm,0.4s						
833A	**Chaparral WMA,**	**29.09**	**332**	P	**P**	**12 49 00.7**	**+0.2**
833A				IAmb	IAmb	12 49 45.5	
	comp=Z,28nm,1.1s						
SIV	**San Ignacio** comp=Z,2µm,19.3s,baz=306,slow=37	**29.65**	**130**	LR	LR	13 01 19.9	
HNDO	**Hondo**	**30.06**	**333**	P	**P**	**12 49 09.8**	**+0.7**
HNDO				IAmb	IAmb	12 49 11.7	
	comp=Z,34nm,1.9s						
LRAL	**Lakeview Retre**	**30.07**	**355**		**P**	**12 49 10.3**	**+1.3**
LRAL				IAmb	IAmb	12 49 24.4	
	comp=Z,18nm,0.9s						
GOGA	**Godfrey**	**30.35**	**1**	P	**P**	**12 49 12.0**	**+0.6**
143A	**Socs Landing,**	**30.38**	**348**	P	**P**	**12 49 12.9**	**+1.2**
NPGB	**Novo Progresso**	**30.51**	**109**	*eP*	**P**	**12 49 13.4**	**+0.2**
DRIO	**Del Rio**	**30.60**	**331**		**P**	**12 49 13.9**	**+0.1**
DRIO				IAmb	IAmb	12 50 01.5	
	comp=Z,12nm,0.8s						
PTLB	**Pontes e Lacer**	**30.85**	**127**		**P**	**12 49 16.3**	**+0.1**
PTLB	**Pontes e Lacer**	**30.85**	**127**	*eP*	**P**	**12 49 16.2**	**+0.1**
JCT	**Junction City**	**31.11**	**333**	P	**P**	**12 49 19.0**	**+0.7**
JCT				IAmb	IAmb	12 49 29.2	
	comp=Z,16nm,1.2s						
HODGE	**Hodges**	**31.21**	**3**	P	**P**	**12 49 21.0**	**+1.9**
HODGE				IAmb	IAmb	12 49 34.3	
	comp=Z,23nm,1.0s						
BRDY	**Brady**	**31.45**	**335**		**P**	**12 49 23.3**	**+2.0**
BRDY				IAmb	IAmb	12 49 32.5	
	comp=Z,15nm,0.9s						
X48A	**Hartselle**	**31.48**	**356**	P	**P**	**12 49 21.7**	**+0.2**
X48A				IAmb	IAmb	12 49 35.8	
	comp=Z,12nm,1.0s						
MDP	**Montagnes des** comp=Z,335nm,19.2s,baz=273,slow=37	**31.62**	**85**	LR	LR	13 02 16.2	
TXAR	**Lajitas Array** comp=Z,0.7nm,0.7s,baz=146,slow=8.8,SNR=10	**32.09**	**327**	P	**P**	**12 49 25.6**	**-1.5**
TXAR				PcP	**PcP**	**12 52 16.0**	**-0.2**
	comp=Z,0.8nm,1.0s,baz=164,slow=5.1,SNR=3.9						
TXAR				LR	LR	13 01 40.2	
	comp=Z,474nm,21.1s,baz=122,slow=35 comp=Z,0.7nm,0.7s						
TXAR	**Lajitas Array**	**32.09**	**327**	P	**P**	**12 49 26.6**	**-0.5**
TXAR					**PcP**	**12 52 15.8**	**-0.5**
TX31	**Lajitas Ar. Si**	**32.09**	**327**	P	**P**	**12 49 27.1**	**0.0**
SWET	**Sewanee**	**32.17**	**357**	P	**P**	**12 49 26.4**	**-1.3**
SWET				IAmb	IAmb	12 49 41.8	
	comp=Z,14nm,1.0s						
KMSC	**Kings Mountain**	**32.18**	**5**	P	**P**	**12 49 27.2**	**-0.4**
W57A	**Gilead**	**32.32**	**7**	P	**P**	**12 49 28.3**	**-0.5**
TKL	**Tuckaleechee C** comp=Z,364nm,18.0s,baz=188,slow=36	**32.58**	**1**	LR	LR	13 02 38.2	
MIAR	**Mount Ida** comp=Z,18nm,1.3s	**32.64**	**346**	IAmb	IAmb	12 49 34.5	
ABTX	**Abilene, Hawle** comp=Z,21nm,1.0s	**32.89**	**336**	IAmb	IAmb	12 49 42.2	
ALPN	**Alpine** comp=Z,18nm,1.5s	**32.89**	**328**	IAmb	IAmb	12 49 42.5	
SGCY	**Sterling City**	**32.92**	**333**		**P**	**12 49 35.4**	**+1.2**
SGCY				IAmb	IAmb	12 49 43.6	
	comp=Z,32nm,1.6s						
AC02	**Maricunga** comp=Z,24nm,1.6s	**33.00**	**155**	IAmb	IAmb	12 49 56.5	
WHAR	**Wooly Hollow**	**33.06**	**348**		**P**	**12 49 35.

H03N2 Juan Fernandez 36.51 172 T T 13 28 48.1
baz=28,slow=73,SNR=74
H03N1 Juan Fernandez 36.52 172 T T 13 28 48.9
baz=28,slow=73,SNR=89
H03N3 Juan Fernandez 36.53 172 T T 13 28 48.1
baz=28,slow=73,SNR=72
P43A Skaggs, Pawnee 36.86 353 IAmb IAmb 12 50 22.1
comp=Z,33nm,1.2s
ARAG Araguaiana, MT 37.06 121 *e*P **P 12 50 10.0 -0.1**
P40A Paris 37.12 350 IAmb IAmb 12 50 17.8
comp=Z,21nm,1.0s
O48B Farmland 37.18 359 IAmb IAmb 12 50 19.7
comp=Z,20nm,0.8s
O53A New Philadelph 37.27 4 IAmb IAmb 12 50 33.6
comp=Z,30nm,1.2s
CRNM Carthage 37.32 328 P **P 12 50 13.5 +1.2**
ZON Zonda 37.34 158 P **P 12 50 12.4 0.0**
ZON IAmb IAmb 12 50 15.3
comp=Z,40nm,1.7s
SFIN Lafayette 37.38 356 P **P 12 50 12.8 +0.4**
SFIN IAmb IAmb 12 50 26.1
comp=Z,18nm,0.9s
Y22A Socorro 37.43 328 **P 12 50 13.7 +0.5**
Y22A IAmb IAmb 12 50 27.0
comp=Z,14nm,0.8s
RTBA Rita Blanca 37.46 335 **P 12 50 13.6 +0.3**
RTBA IAmb IAmb 12 50 21.9
comp=Z,23nm,1.2s
P38A Dawn 37.49 348 **P 12 50 13.9 +0.5**
P38A IAmb IAmb 12 50 21.4
comp=Z,18nm,0.8s
MVL Millersville 37.60 10 IAmb IAmb 12 50 24.1
comp=Z,17nm,0.9s
KSU1 Kansas State U 37.73 344 P **P 12 50 16.8 +1.4**
HDIL Hopedale 37.74 354 P **P 12 50 16.1 +0.6**
PAGS Pennsylvania G 37.76 9 P **P 12 50 16.3 +0.6**
VA03 San Esteban 37.79 161 P **P 12 50 16.0 -0.2**
VA03 IAmb IAmb 12 50 17.9
comp=Z,23nm,0.9s
ANMO Albuquerque 37.95 330 LR LR 13 05 25.5
comp=Z,191nm,18.6s,baz=133,slow=36
ANMO Albuquerque 37.95 330 **P 12 50 18.7 +1.0**
SSPA Standing Stone 37.99 8 P **P 12 50 17.9 +0.2**
SSPA IAmb IAmb 12 50 32.5
comp=Z,23nm,1.1s
N58A Sunbury 38.36 9 IAmb IAmb 12 50 30.1
comp=Z,21nm,1.0s
SMTB Santa Maria do 38.39 108 *e*P **P 12 50 21.7 +0.3**
TUC Tucson 38.41 323 **P 12 50 22.2 +0.8**
AMBA Amambai (Brazi 38.41 133 *e*P **P 12 50 21.1 -0.3**
CBKS Cedar Bluff 38.41 340 **P 12 50 22.1 +0.7**
CBKS IAmb IAmb 12 50 29.9
comp=Z,30nm,1.1s
RPN Rapa Nui 38.43 217 LR LR 13 01 51.6
comp=Z,528nm,21.2s,baz=50,slow=29
N38A Joes South For 38.56 349 IAmb IAmb 12 50 30.6
comp=Z,28nm,0.8s
MT08 Bocatoma Ro 38.59 161 IAmb IAmb 12 50 25.7
comp=Z,29nm,0.9s
MT13 San Alfonso 38.78 161 **P 12 50 25.3 +0.8**
M57A Sunshine Farm, 38.78 9 **P 12 50 24.9 +0.5**
M57A IAmb IAmb 12 50 33.8
comp=Z,25nm,0.8s
CPUP Villa Florida 39.04 140 P **P 12 50 25.9 -0.7**
comp=Z,1.5nm,0.7s,baz=333,slow=15,SNR=5.4
CPUP LR LR 13 09 02.2
comp=Z,590nm,20.0s,baz=326,slow=40
comp=Z,1.5nm,0.7s
CPUP Villa Florida 39.04 140 IAmb IAmb 12 50 29.6
comp=Z,41nm,2.0s
BO01 Tunca 39.13 163 P **P 12 50 26.9 -0.4**
BO01 IAmb IAmb 12 50 28.9
comp=Z,44nm,1.6s
L42A Oliver, Polo 39.22 354 IAmb IAmb 12 50 35.4
comp=Z,21nm,0.9s
KSPA Keystone Colle 39.22 10 IAmb IAmb 12 50 43.1
comp=Z,22nm,0.9s
214A Organ Pipe Nat 39.43 320 IAmb IAmb 12 50 38.9
comp=Z,28nm,1.4s
BINY Binghamton 39.81 10 IAmb IAmb 12 50 47.3
comp=Z,32nm,1.1s
W18A Petrified Fore 39.81 327 IAmb IAmb 12 50 43.1
comp=Z,32nm,1.3s
SFX San Felipe 40.19 317 P **P 12 50 36.8 +0.6**
K57A Scipio Center 40.24 9 P **P 12 50 35.9 -0.5**
K57A IAmb IAmb 12 50 51.0
comp=Z,21nm,0.9s
BGNE Belgrade 40.30 344 P **P 12 50 37.5 +0.4**
BGNE IAmb IAmb 12 50 47.1
comp=Z,19nm,0.8s
BDFB Brasilia 40.33 118 LR LR 13 07 31.0
comp=Z,630nm,19.5s,baz=296,slow=37
L34A Svendsen Farm, 40.37 346 P **P 12 50 38.5 +1.0**
L34A IAmb IAmb 12 50 59.4
comp=Z,15nm,0.8s
M65A Busby, Falmout 40.38 16 P **P 12 50 39.1 +1.5**
baz=201
113A Mohawk Valley, 40.57 320 P **P 12 50 39.8 +0.4**
Q24A Divide 40.61 335 IAmb IAmb 12 50 48.6
comp=Z,35nm,1.8s
MVCO Mesa Verde 40.75 330 IAmb IAmb 12 50 50.6
comp=Z,19nm,0.8s
WUAZ Wupatki 41.02 326 IAmb IAmb 12 50 53.0
comp=Z,19nm,1.0s
OGNE Ogallala 41.11 339 IAmb IAmb 12 50 53.0
comp=Z,26nm,1.0s
IPMB Ipameri, GO 41.16 122 *e*P **P 12 50 44.3 -0.1**
I40A Norwalk 41.19 353 P **P 12 50 45.5 +1.3**
I40A IAmb IAmb 12 50 47.3
comp=Z,24nm,1.3s
BI02 San Fabin de 41.20 164 **P 12 50 44.6 +0.1**
BI02 IAmb IAmb 12 50 45.9
comp=Z,24nm,1.4s
LDASE Londrina, Braz 41.56 131 *e*P **P 12 50 46.4 -1.3**
J61A Chester 41.58 13 IAmb IAmb 12 50 49.0
comp=Z,31nm,1.2s
PV15 Paradox Valley 41.63 331 IAmb IAmb 12 50 57.8
comp=Z,24nm,0.9s
PV02 Paradox Valley 41.65 331 IAmb IAmb 12 50 57.9
comp=Z,34nm,1.0s
PV13 Radium Mtn., P 41.65 330 IAmb IAmb 12 50 58.3
comp=Z,19nm,0.8s
BLYC Blythe 41.69 321 **P 12 50 49.2 +0.7**
PV18 Skein Mesa, Pa 41.76 330 IAmb IAmb 12 50 59.6
comp=Z,18nm,0.7s
PV07 Paradox Valley 41.78 331 IAmb IAmb 12 50 58.8
comp=Z,17nm,0.9s
PV11 David Mesa, Pa 41.78 331 IAmb IAmb 12 51 05.3
comp=Z,16nm,0.7s
PV19 Morning Glory 41.85 330 IAmb IAmb 12 50 59.1
comp=Z,15nm,0.8s
PV20 West Nyswonger 41.86 331 **P 12 50 51.1 +1.0**
PV04 Paradox Valley 41.87 331 P **P 12 50 50.9 +0.7**
PV04 IAmb IAmb 12 50 58.8
comp=Z,46nm,1.7s
K30B Basset 41.89 343 **P 12 50 51.0 +0.9**
K30B IAmb IAmb 12 50 58.6
comp=Z,25nm,1.0s
YUH Yuha Desert 41.90 318 P **P 12 50 49.0 -1.2**
PV14 Lion Creek, Pa 41.92 330 P **P 12 50 51.0 +0.3**
SADO Sadowa 41.92 5 LR LR 13 08 01.6
comp=Z,428nm,19.4s,baz=225,slow=36
PV22 Blue Mesa, Par 41.93 331 **P 12 50 51.4 +0.7**
SDBA SAO DESIDERIO 41.97 112 *e*P **P 12 50 52.1 +0.9**
PV23 Carpenter Ridg 41.97 331 IAmb IAmb 12 51 06.3
comp=Z,15nm,0.8s
HNH Hanover 41.98 13 P **P 12 50 50.3 -0.5**
HNH IAmb IAmb 12 51 06.4
comp=Z,17nm,0.9s
PV21 Cone Mtn., Par 42.04 331 P **P 12 50 52.1 +0.5**
CBX Cerro Bola 42.19 318 IAmb IAmb 12 51 04.3
comp=Z,22nm,1.2s
U15A North Rim 42.19 326 IAmb IAmb 12 51 02.3
comp=Z,34nm,1.4s
BC3 Big Chuckawall 42.22 320 **P 12 50 54.0 +1.0**
BC3 IAmb IAmb 12 51 01.9
comp=Z,31nm,1.5s
PSAL Palomas, Salto 42.29 145 *e*P **P 12 50 54.1 +0.7**
IRM Iron Mountain 42.35 321 P **P 12 50 54.8 +0.8**
IRM IAmb IAmb 12 51 03.5
comp=Z,22nm,1.1s
LONY Lake Ozonia 42.40 10 IAmb IAmb 12 51 07.7
comp=Z,32nm,1.5s
HMU Henry Mountain 42.45 329 IAmb IAmb 12 51 04.6
comp=Z,24nm,0.8s
BUKO Buck Lake 42.57 5 P **P 12 50 54.7 -0.8**
BUKO IAmb IAmb 12 51 04.1
comp=Z,20nm,0.9s
BORC Borrego Spring 42.60 319 P **P 12 50 56.4 +0.4**
BORC IAmb IAmb 12 51 06.2
comp=Z,32nm,1.7s
I63A Otisfield 42.72 15 IAmb IAmb 12 50 58.2
comp=Z,44nm,1.2s
SPMN Marine on St. 42.80 351 IAmb IAmb 12 51 11.8
comp=Z,32nm,1.1s
PFO Pinyon Flats O 42.85 319 LR LR 13 07 20.5
comp=Z,556nm,19.7s,baz=154,slow=34
PFO Pinyon Flats O 42.85 319 **P 12 50 59.2 +1.1**
KNB Kanab 42.91 326 P **P 12 50 57.9 -0.8**
DNR Dunn Ranch,Anz 42.93 319 P **P 12 50 58.1 -0.7**
DNR IAmb IAmb 12 51 08.9
comp=Z,17nm,0.9s
O20A White River Ci 42.94 333 **P 12 50 59.5 +0.6**
V12A Nelson 43.20 323 IAmb IAmb 12 51 10.2
comp=Z,17nm,1.0s
SRU San Rafael Swe 43.23 330 IAmb IAmb 12 51 10.3
comp=Z,24nm,1.2s
SUSD Miller 43.34 345 IAmb IAmb 12 51 11.7
comp=Z,23nm,1.0s
P17A Butcher Ranch, 43.62 330 IAmb IAmb 12 51 13.2
comp=Z,14nm,0.8s
G62A West of Eustis 43.83 14 **P 12 51 06.5 +0.8**
TCRU Three Creeks R 43.85 328 P **P 12 51 07.1 +0.7**
TCRU IAmb IAmb 12 51 17.3
comp=Z,14nm,0.8s
RDMU Red Mountain 43.90 332 P **P 12 51 07.1 +0.5**
SHPR Sheep Range 43.91 323 P **P 12 51 06.6 -0.1**
TRQ Mont Tremblant 43.96 10 IAmb IAmb 12 51 20.6
comp=Z,26nm,1.1s
F33A 5 Mile Ranch, 44.03 348 IAmb IAmb 12 51 14.4
comp=Z,15nm,0.9s
K22A Casper 44.27 336 IAmb IAmb 12 51 31.7
comp=Z,29nm,1.5s
MWC Mount Wilson 44.27 319 IAmb IAmb 12 51 19.1
comp=Z,18nm,1.1s
QSM Queen of Sheba 44.59 321 IAmb IAmb 12 51 21.2
comp=Z,17nm,1.0s
RSSD Black Hills 44.60 340 **P 12 51 13.1 +0.9**
RSSD IAmb IAmb 12 51 21.8
comp=Z,11nm,0.8s
FURC Furnace Creek, 44.91 322 IAmb IAmb 12 51 24.0
comp=Z,16nm,1.0s
S11A Rachel 45.02 324 IAmb IAmb 12 51 24.9
comp=Z,25nm,1.3s
CTU Camp Tracy 45.05 330 IAmb IAmb 12 51 24.6
comp=Z,12nm,1.0s
PLTB Pedras Altas 45.15 142 P **P 12 51 16.5 +0.1**
PLTB IAmb IAmb 12 51 17.5
comp=Z,24nm,1.2s
PLTB Pedras Altas 45.15 142 *e*P **P 12 51 16.4 -0.1**
TCUT Toone Canyon 45.20 331 P **P 12 51 17.6 +0.5**
PLCA Paso Flores 45.22 165 P **P 12 51 16.9 0.0**
comp=Z,4.2nm,0.8s,baz=334,slow=9.0,SNR=9.5
PLCA LR LR 13 06 11.8
comp=Z,261nm,19.1s,baz=334,slow=31
comp=Z,4.2nm,0.8s
PLCA Paso Flores 45.22 165 P **P 12 51 17.1 +0.2**
PLCA Paso Flores 45.22 165 *e*P **P 12 51 17.1 +0.2**
E62A Clayton Lake 45.38 14 IAmb IAmb 12 51 33.5
comp=Z,17nm,0.9s
ISA Isabella, Lake 45.42 320 IAmb IAmb 12 51 40.9
comp=Z,26nm,1.6s
BW06 Boulder Array 45.64 334 IAmb IAmb 12 51 28.7
comp=Z,12nm,1.1s
PD31 Pinedale Array 45.64 334 **P 12 51 20.2 -0.2**
PD31 IAmb IAmb 12 51 28.7
comp=Z,11nm,1.1s
PDAR Pinedale Array 45.64 334 P **P 12 51 20.1 -0.4**
comp=Z,3.6nm,0.8s,baz=129,slow=8.6,SNR=35
PDAR PcP **PcP 12 52 57.9 -0.7**
comp=Z,1.4nm,0.9s,baz=155,slow=5.1,SNR=3.4
PDAR LR LR 13 11 21.0
comp=Z,604nm,19.4s,baz=146,slow=37
comp=Z,3.6nm,0.8s
PDAR Pinedale Array 45.64 334 P **P 12 51 20.4 -0.1**
HWUT Hardware Ranch 45.65 331 **P 12 51 20.6 +0.1**
TRQA Tornquist 45.70 155 P **P 12 51 20.8 0.0**
TRQA IAmb IAmb 12 51 23.3
comp=Z,26nm,1.5s
SPUT South Promonto 45.86 330 P **P 12 51 22.6 +0.4**
SPUT IAmb IAmb 12 51 30.9
comp=Z,15nm,0.9s
BGU Big Grassy Mou 45.86 329 P **P 12 51 22.9 +0.7**
BGU IAmb IAmb 12 51 30.5
comp=Z,20nm,1.2s
D62A Allapoint, All 45.93 14 IAmb IAmb 12 51 37.2
comp=Z,21nm,1.1s
AHID Auburn Hatcher 46.33 333 IAmb IAmb 12 51 33.4
comp=Z,12nm,1.1s
HVU Hansel Valley 46.37 330 IAmb IAmb 12 51 34.1
comp=Z,17nm,1.1s
LOHW Long Hollow 46.77 334 IAmb IAmb 12 51 37.2
comp=Z,14nm,1.4s
ELK Elko 46.88 328 LR LR 13 11 10.2
comp=Z,835nm,18.7s,baz=128,slow=36
ELK Elko 46.88 328 IAmb IAmb 12 51 38.6
comp=Z,12nm,1.1s
MDPB Devils Postpil 47.02 322 IAmb IAmb 12 51 41.0
comp=Z,10nm,0.8s
NVAR Mina Array Bea 47.05 323 P **P 12 51 32.1 +0.4**
comp=Z,4.4nm,0.7s,baz=133,slow=7.6,SNR=34
NVAR PcP **PcP 12 53 04.9 +1.3**
comp=Z,1.1nm,0.7s,baz=125,slow=4.1,SNR=2.1
NVAR LR LR 13 10 31.9
comp=Z,370nm,21.0s,baz=90,slow=35
comp=Z,4.4nm,0.7s
LHV Little Huntoon 47.06 323 P **P 12 51 32.5 +1.1**
LHV IAmb IAmb 12 51 41.1
comp=Z,13nm,1.0s
FLWY Flagg Ranch 47.19 334 P **P 12 51 32.8 +0.1**
FLWY IAmb IAmb 12 51 59.3
comp=Z,18nm,1.2s
LL02 Futaleuf 47.24 168 **P 12 51 32.9 +0.2**
LL02 IAmb IAmb 12 51 41.4
comp=Z,16nm,1.1s
EPLO Experimental L 47.28 352 **P 12 51 32.6 -0.3**
KVN Kaiserville 47.34 324 P **P 12 51 34.0 +0.2**
RLMT Red Lodge 47.43 336 IAmb IAmb 12 51 42.1
comp=Z,11nm,1.2s
YMP Mirror Lake Pl 47.48 335 IAmb IAmb 12 51 55.2
comp=Z,8.1nm,0.9s
LAO LASA Array 47.60 340 IAmb IAmb 12 51 43.2
comp=Z,17nm,1.1s
YNE Yellowstone No 47.64 335 IAmb IAmb 12 51 44.6
comp=Z,7.3nm,0.9s
YHL Hegen Lake 48.01 334 IAmb IAmb 12 51 48.6
comp=Z,17nm,1.2s
ULM Lac du Bonnet 48.18 350 P **P 12 51 39.0 -0.9**
comp=Z,13nm,1.0s,baz=158,slow=8.6,SNR=16
ULM LR LR 13 12 31.2
comp=Z,120nm,18.8s,baz=180,slow=37
comp=Z,13nm,1.0s
BOZ Bozeman (W) 48.80 335 IAmb IAmb 12 51 53.1
comp=Z,9.2nm,1.1s
RCBR Riachuelo 49.08 100 LR LR 13 13 14.6
comp=Z,281nm,18.7s,baz=280,slow=37
MFID Camas Ranch 49.10 330 IAmb IAmb 12 51 56.2
comp=Z,12nm,1.2s
ORV Oroville 49.70 322 IAmb IAmb 12 52 01.0
comp=Z,11nm,1.1s
PLID Pearl Lake 50.40 331 IAmb IAmb 12 52 05.0
comp=Z,11nm,0.9s
J08A Circle Bar Ran 50.43 328 IAmb IAmb 12 52 05.0
comp=Z,15nm,1.4s
MSO Missoula 50.76 334 IAmb IAmb 12 52 08.2
comp=Z,14nm,1.1s
DRLN Deer Lake 51.51 22 P **P 12 52 05.5 +0.3**
JTMT Jette 51.62 334 P **P 12 52 06.5 +0.3**
F10A Beach Ranch, E 51.64 331 **P 12 52 07.0 +0.6**
F10A IAmb IAmb 12 52 15.9
comp=Z,15nm,0.9s
PINE Pine Mountain 52.05 327 IAmb IAmb 12 52 17.9
comp=Z,20nm,1.2s
G06A Carlson Farm, 52.84 328 IAmb IAmb 12 52 23.9
comp=Z,16nm,1.1s
NEW Newport 53.26 333 LR LR 13 15 26.6
comp=Z,295nm,21.1s,baz=132,slow=37
E07A Sunnyside 53.34 330 IAmb IAmb 12 52 28.6
comp=Z,8.2nm,0.7s
MXC Moxie City 53.57 330 IAmb IAmb 12 52 30.1
comp=Z,8.4nm,0.9s
FFC Flin Flon 53.62 347 P **P 12 52 22.0 +1.2**
SCHQ Schefferville 53.66 12 P **P 12 52 19.4 -1.7**
comp=Z,6.2nm,1.0s,baz=234,slow=7.1,SNR=4.2
SCHQ PcP **PcP 12 53 26.4 -0.9**
comp=Z,2.8nm,0.8s,baz=207,slow=12,SNR=1.7
comp=Z,6.2nm,1.0s
SCHQ Schefferville 53.66 12 P **P 12 52 19.7 -1.4**
SCHQ IAmb IAmb 12 52 35.0
comp=Z,11nm,1.0s
G04A Mulino 53.80 327 P **P 12 52 23.3 +1.0**
B08A Colville Reser 54.35 332 P **P 12 52 27.6 +1.3**
EDM Edmonton 55.58 339 **P 12 52 34.8 -0.3**
NLWA Neilton Lookou 55.95 328 P **P 12 52 38.9 +1.0**
FCC Fort Churchill 56.22 354 P **P 12 52 39.8 +0.3**
TAOE Nuku Hiva Isla 56.91 258 *e*LR LR 13 09 21.6
comp=Z,312nm,22.9s
EFI East Falkland 58.77 161 P **P 12 52 58.8 +1.2**
BBB Bella Bella 61.10 331 LR LR 13 20 14.7
comp=Z,143nm,18.3s,baz=152,slow=37
BBB Bella Bella 61.10 331 P **P 12 53 14.9 +1.3**
FRB Frobisher Bay 61.78 8 LR LR 13 20 12.2
comp=Z,218nm,18.6s,baz=208,slow=36
BLKN Baker Lake 61.86 354 P **P 12 53 19.5 +0.9**
BLKN IAmb IAmb 12 53 28.7
comp=Z,9.1nm,1.1s
YKAW1 Yellowknife Wh 63.54 345 P **P 12 53 29.1 -0.6**
YKAW1 IAmb IAmb 12 53 37.1
comp=Z,6.7nm,1.0s
YKA Yellowknife Ar 63.58 345 P **P 12 53 28.4 -1.7**
comp=Z,1.2nm,0.9s,baz=143,slow=5.6,SNR=13
YKA LR LR 13 23 06.1
comp=Z,208nm,20.0s,baz=99,slow=38
comp=Z,1.2nm,0.9s
YKA Yellowknife Ar 63.58 345 P **P 12 53 30.0 0.0**
YKAW3 Yellowknife Wh 63.63 345 P **P 12 53 30.5 +0.1**
U35K Hyder 64.27 333 P **P 12 53 36.0 +1.3**
baz=128
V35K Ketchikan 64.65 332 P **P 12 53 37.5 +0.3**
baz=126
KOTAN Kotaneelee Air 64.66 339 P **P 12 53 38.2 +1.0**
baz=135
T35M Bob Quinn 65.02 334 P **P 12 53 40.5 +0.9**
baz=128
CRAG Craig 65.43 332 P **P 12 53 43.1 +0.9**
baz=124
WRAK Wrangell Islan 65.62 333 P **P 12 53 44.4 +0.9**
baz=125
U33K Whale Pass 65.80 332 P **P 12 53 45.4 +0.8**
baz=124
DLBC Dease Lake 65.83 336 LR LR 13 24 05.1
comp=Z,267nm,19.1s,baz=114,slow=38
DLBC Dease Lake 65.83 336 P **P 12 53 45.8 +0.9**
baz=128
S34M Telegraph Cree 65.97 335 P **P 12 53 46.6 +0.9**
baz=127
ILON Igloolik, Nuna 66.37 1 P **P 12 53 47.5 -0.5**
ILON IAmb IAmb 12 54 03.0
comp=Z,7.5nm,0.8s
WTLY Watson Lake, Y 66.40 337 P **P 12 53 48.3 -0.2**
WTLY IAmb IAmb 12 54 05.7
comp=Z,8.9nm,1.2s
WTLY Watson Lake, Y 66.40 337 P **P 12 53 49.5 +1.0**
baz=130
WRGLY Wrigley 66.70 342 P **P 12 53 50.4 +0.1**
WRGLY IAmb IAmb 12 54 00.8
comp=Z,10nm,1.2s
WRGLY Wrigley 66.70 342 P **P 12 53 51.3 +1.1**
baz=137
R33M Jennings River 66.80 336 P **P 12 53 52.0 +0.8**
R33M IAmb IAmb 12 53 59.8
comp=Z,9.1nm,1.1s
R33M Jennings River 66.80 336 P **P 12 53 52.5 +1.3**
baz=128
Q32M Nakina River 67.08 335 P **P 12 53 54.5 +1.4**
baz=126
S32K Killisnoo 67.22 333 P **P 12 53 55.0 +1.3**
baz=124
SIT Sitka 67.33 333 P **P 12 53 56.2 +1.8**
baz=123
PPT Papeete 67.49 250 LR LR 13 15 48.7
comp=Z,407nm,18.1s,baz=90,slow=29
PPT2 Papeete2 67.50 250 *e*S **S 13 02 54.7 +2.9**
comp=Z,44nm,23.2s
PPT2 *e*LR LR 13 14 14.5
comp=Z,455nm,29.0s
PPT2 *e*LR LR 13 14 18.5
comp=Z,629nm,26.5s
R32K Eaglecrest 67.64 334 P **P 12 53 58.1 +1.8**
baz=124
P33M Teslin, Yukon 68.04 336 **P 12 54 00.3 +1.4**
P33M IAmb IAmb 12 54 07.4
comp=Z,10nm,1.2s
P33M Teslin, Yukon 68.04 336 P **P 12 54 00.4 +1.5**
baz=126
P32M Atlin 68.05 335 P **P 12 54 00.7 +1.7**
baz=125
SFJD Kangerlussuaq 68.08 14 LR LR 13 24 10.0
comp=Z,126nm,20.0s,baz=218,slow=36
SFJD Kangerlussuaq 68.08 14 P **P 12 54 00.2 +1.3**
S31K Pelican 68.23 333 P **P 12 54 01.7 +1.7**
baz=122
TBI Tubuai 68.58 244 *e*S **S 13 03 04.2 -0.2**
comp=Z,401nm,29.0s
TBI *e*LR LR 13 14 41.3
comp=Z,2μm,25.8s
TBI *e*LR LR 13 14 41.4
comp=Z,666nm,26.0s
SKAG Skagway 68.65 335 P **P 12 54 04.0 +1.3**
baz=124
N32M Quiet Lake 68.70 337 P **P 12 54 04.3 +1.3**
baz=126
WHY Whitehorse 69.14 336 P **P 12 54 07.4 +1.5**
baz=124
O30N Mendenhall 69.69 336 P **P 12 54 10.8 +1.6**
baz=123
P30M Million Dollar 69.71 335 P **P 12 54 10.7 +1.4**
baz=122
POIN Pond Inlet 69.80 2 P **P 12 54 09.2 -0.4**
POIN IAmb IAmb 12 54 24.7
comp=Z,7.7nm,1.1s
M31M Drury Creek, Y 69.83 337 P **P 12 54 11.2 +1.3**
M31M Drury Creek, Y 69.83 337 P **P 12 54 11.8 +1.9**
baz=125
N31M Braeburn, Yuko 69.96 336 P **P 12 54 11.9 +1.1**
N31M IAmb IAmb 12 54 21.4
comp=Z,9.6nm,0.9s
N31M Braeburn, Yuko 69.96 336 P **P 12 54 12.8 +1.9**
baz=124
HYT Haines Junctio 70.31 335 P **P 12 54 14.8 +1.7**
baz=122
N30M Aishikik Lake 70.47 336 P **P 12 54 13.8 -0.2**
N30M Aishikik Lake 70.47 336 P **P 12 54 15.6 +1.5**
baz=122
O29M Mount Kennedy 70.49 335 P **P 12 54 15.7 +1.5**
baz=121
YUK6 Outpost Mounta 70.73 335 P **P 12 54 16.3 +0.5**
baz=121
M30M Minto, Yukon 70.96 337 P **P 12 54 17.3 +0.4**
M30M Minto, Yukon 70.96 337 P **P 12 54 18.2 +1.2**
baz=123
YUK4 Talbot Arm 71.05 336 P **P 12 54 18.4 +0.7**
baz=121
PINM Pinnacle 71.11 334 P **P 12 54 18.5 +0.6**
baz=119
MAYO Mayo, Yukon 71.19 338 P **P 12 54 19.0 +0.8**
MAYO Mayo, Yukon 71.19 338 P **P 12 54 19.8 +1.5**
baz=124
MLH Mauna Loa 71.23 289 P **P 12 54 19.9 +0.3**
C36M Paulatuk 71.37 346 P **P 12 54 20.6 +1.4**
baz=138
O28M Mount Upton 71.42 335 P **P 12 54 21.4 +1.4**
baz=119
YUK8 Steele Glacier 71.49 335 P **P 12 54 21.1 +0.7**
baz=120
M29M Somme Creek 71.55 337 P **P 12 54 21.3 +0.7**
M29M IAmb IAmb 12 54 29.8
comp=Z,9.3nm,0.8s
L29M L29M 71.77 337 P **P 12 54 21.8 0.0**
L29M IAmb IAmb 12 54 38.3
comp=Z,11nm,1.1s
L29M L29M 71.77 337 P **P 12 54 20.9 -0.9**
baz=122
J30M Hart River 71.90 339 P **P 12 54 23.5 +0.9**
J30M Hart River 71.90 339 P **P 12 54 22.2 -0.4**
baz=124
MESA MESA 71.90 334 P **P 12 54 21.4 -1.4**
baz=117
H31M Peel River 71.93 341 **P 12 54 23.5 +0.9**
H31M IAmb IAmb 12 54 38.4

comp=Z,9.0nm,0.9s
H31M **Peel River** **71.93 341** P **P** **12 54 22.4 -0.3**
baz=126
K29M **Barlow Dome** **71.93 338** **P** **12 54 24.0 +1.2**
K29M **Barlow Dome** **71.93 338** P **P** **12 54 21.9 -0.9**
baz=123
RES **Resolute Bay** **71.97 357** LR LR 13 26 13.5
comp=Z,92nm,18.7s,baz=182,slow=36
CTG **Chitna Glacier** **72.00 334** P **P** **12 54 22.5 -0.9**
baz=118
YUK3 **Moose Creek** **72.02 335** P **P** **12 54 22.9 -0.6**
baz=119
I30M **Mount Dempster** **72.28 340** **P** **12 54 25.4 +0.5**
I30M IAmb IAmb 12 54 48.2
comp=Z,22nm,1.6s
I30M **Mount Dempster** **72.28 340** P **P** **12 54 24.3 -0.7**
baz=124
BGLC **Bering Glacier** **72.47 333** P **P** **12 54 25.6 -0.3**
baz=116
BVCY **Beaver Creek** **72.50 336** P **P** **12 54 25.3 -0.9**
baz=119
J29N **Klondike Camp** **72.52 338** P **P** **12 54 25.5 -0.7**
baz=122
CRQE **Cirque** **72.67 334** P **P** **12 54 25.0 -2.3**
baz=116
F31M **Tsiigehtchic** **72.72 342** P **P** **12 54 27.9 +0.6**
F31M IAmb IAmb 12 54 42.8
comp=Z,12nm,1.1s
F31M **Tsiigehtchic** **72.72 342** P **P** **12 54 26.2 -1.1**
baz=127
DAWY **Dawson** **72.75 338** P **P** **12 54 27.7 +0.1**
DAWY **Dawson** **72.75 338** P **P** **12 54 27.0 -0.6**
baz=121
M27K **Edge Creek, AK** **72.89 336** P **P** **12 54 28.8 +0.2**
M27K IAmb IAmb 12 54 51.2
comp=Z,18nm,1.5s
M27K **Edge Creek, AK** **72.89 336** P **P** **12 54 27.5 -1.1**
baz=118
KAIM **Kayak Island** **72.90 333** P **P** **12 54 28.0 -0.5**
baz=115
MCARA **McCarthy VSAT** **72.92 334** P **P** **12 54 29.5 +0.9**
MCARA IAmb IAmb 12 54 53.9
comp=Z,9.8nm,1.0s
MCARA **McCarthy VSAT** **72.92 334** P **P** **12 54 27.9 -0.7**
baz=117
VRDI **Verde Repeater** **73.03 334** P **P** **12 54 30.2 +0.6**
VRDI IAmb IAmb 12 54 44.5
comp=Z,22nm,1.7s
I29M **Ogilvie Camp,** **73.04 339** P **P** **12 54 28.0 -1.2**
baz=122
EPYK **Eagle Plains** **73.05 340** **P** **12 54 30.5 +1.2**
EPYK IAmb IAmb 12 54 50.9
comp=Z,21nm,1.6s
EPYK **Eagle Plains** **73.05 340** P **P** **12 54 28.4 -0.9**
baz=124
INK **Inuvik** **73.19 343** P **P** **12 54 30.4 +0.4**
INK IAmb IAmb 12 54 52.2
comp=Z,12nm,1.1s
INK **Inuvik** **73.19 343** P **P** **12 54 29.3 -0.7**
baz=128
BCAR **Beaver Creek A** **73.19 336** P **P** **12 54 31.2 +0.9**
L27K **Beaver Creek,** **73.20 336** P **P** **12 54 31.0 +0.6**
L27K IAmb IAmb 12 54 47.2
comp=Z,8.7nm,1.1s
L27K **Beaver Creek,** **73.20 336** P **P** **12 54 29.3 -1.0**
baz=118
G30M **tAoh Zraii Nji** **73.23 341** P **P** **12 54 29.5 -0.9**
baz=125
GLB **Gilahina Butte** **73.28 334** P **P** **12 54 31.9 +1.0**
GLB IAmb IAmb 12 54 52.9
comp=Z,16nm,1.3s
KULLO **Kullorsuaq** **73.34 7** *i* P **P** **12 54 32.5 +1.7**
KULLO IAmb IAmb 12 54 32.8
comp=Z,10nm,1.0s
M26K **Nabesna, AK** **73.37 335** P **P** **12 54 30.8 -0.6**
baz=117
BMRM **Bremner River** **73.43 334** P **P** **12 54 30.8 -0.9**
baz=115
F30M **Barrier River** **73.45 342** P **P** **12 54 31.4 -0.3**
baz=125,SNR=11
H29M **Whitestone** **73.52 340** IAmb IAmb 12 54 54.6
comp=Z,20nm,1.4s
H29M **Whitestone** **73.52 340** P **P** **12 54 31.6 -0.5**
baz=122
A36M **Sachs Harbour** **73.58 348** P **P** **12 54 32.7 +0.4**
A36M IAmb IAmb 12 54 47.3
comp=Z,14nm,0.9s
A36M **Sachs Harbour** **73.58 348** P **P** **12 54 32.0 -0.3**
baz=137
Q23K **Middleton Isla** **73.59 332** P **P** **12 54 32.1 -0.4**
baz=113
I28M **Miner Creek** **73.66 339** IAmb IAmb 12 54 47.7
comp=Z,14nm,1.6s
I28M **Miner Creek** **73.66 339** P **P** **12 54 32.1 -1.0**
baz=121
N25K **Chitina, Valde** **73.70 334** P **P** **12 54 34.3 +0.9**
N25K IAmb IAmb 12 54 48.3
comp=Z,28nm,1.8s
N25K **Chitina, Valde** **73.70 334** P **P** **12 54 32.3 -1.0**
baz=115
EYAK **Cordova Ski Ar** **73.76 333** P **P** **12 54 33.1 -0.5**
baz=114
G29M **Pine Creek** **73.78 341** IAmb IAmb 12 54 49.2
comp=Z,9.0nm,0.8s
G29M **Pine Creek** **73.78 341** P **P** **12 54 33.3 -0.3**
baz=123
L26K **Log Cabin Wild** **73.80 336** IAmb IAmb 12 54 51.0
comp=Z,13nm,1.2s
L26K **Log Cabin Wild** **73.80 336** P **P** **12 54 33.9 0.0**
baz=117
MENT **Mentasta** **73.91 336** P **P** **12 54 35.3 +0.8**
KLU **Klutina** **74.22 334** P **P** **12 54 36.6 +0.1**
baz=114
P23K **Montague Islan** **74.31 332** P **P** **12 54 36.9 +0.1**
baz=112
I27K **Kandik River** **74.35 339** IAmb IAmb 12 54 59.4
comp=Z,21nm,1.2s
I27K **Kandik River** **74.35 339** P **P** **12 54 36.9 -0.1**
baz=119
SCRK **Sand Creek** **74.48 337** P **P** **12 54 37.6 -0.3**
baz=116
GLI **Glacier Island** **74.50 333** P **P** **12 54 37.9 0.0**
baz=113
E29M **Blow River** **74.55 342** P **P** **12 54 38.9 +0.9**
baz=124,SNR=7.1
M24K **Tolsona, Glenn** **74.58 335** P **P** **12 54 38.8 +0.3**
baz=114
H27K **Steamboat Moun** **74.62 339** P **P** **12 54 38.5 0.0**
baz=119
PAX **Paxson** **74.65 335** IAmb IAmb 12 54 54.0
comp=Z,14nm,1.4s
PAX **Paxson** **74.65 335** P **P** **12 54 39.1 +0.3**
baz=115
RIDG **Independent Ri** **74.72 336** P **P** **12 54 39.9 +0.7**
RIDG IAmb IAmb 12 54 56.2
comp=Z,11nm,1.0s
RIDG **Independent Ri** **74.72 336** P **P** **12 54 39.6 +0.3**
baz=116
F28M **Old Crow** **74.76 341** P **P** **12 54 39.7 +0.4**
F28M **Old Crow** **74.76 341** P **P** **12 54 39.1 -0.2**
baz=121
I26K **Coal Creek Min** **74.77 338** P **P** **12 54 39.2 -0.2**
baz=118
G27K **Doyon Strip** **74.95 340** IAmb IAmb 12 54 50.2
comp=Z,19nm,1.9s
G27K **Doyon Strip** **74.95 340** P **P** **12 54 40.5 0.0**
baz=119
SCM **Sheep Creek Mo** **74.98 334** P **P** **12 54 40.7 -0.1**
baz=113
SUMG **Summit** **75.05 13** *i* P **P** **12 54 40.0 -1.4**
SUMG IAmb IAmb 12 54 41.8
comp=Z,3.3nm,1.0s
K24K **Donnelly Dome** **75.12 336** IAmb IAmb 12 54 46.7
comp=Z,9.7nm,1.0s
K24K **Donnelly Dome** **75.12 336** P **P** **12 54 41.5 0.0**
baz=115
M23K **Glacier View** **75.14 334** P **P** **12 54 41.3 -0.3**
baz=112
E28M **Babbage River** **75.18 342** IAmb IAmb 12 54 57.4
comp=Z,14nm,1.4s
E28M **Babbage River** **75.18 342** P **P** **12 54 41.2 -0.5**
baz=122
SEW **Seward** **75.30 332** P **P** **12 54 41.4 -1.1**
baz=110
J25K **Salcha River,** **75.30 337** IAmb IAmb 12 54 59.0
comp=Z,17nm,1.5s
J25K **Salcha River,** **75.30 337** P **P** **12 54 42.2 -0.4**
baz=115
KNK **Knik Glacier** **75.32 333** P **P** **12 54 43.0 +0.3**
KNK IAmb IAmb 12 54 46.7
comp=Z,19nm,1.3s
KNK **Knik Glacier** **75.32 333** P **P** **12 54 43.0 +0.3**
baz=112
D28M **Stokes Point** **75.32 343** P **P** **12 54 42.5 0.0**
baz=123
SML **Sawmill** **75.41 334** P **P** **12 54 42.9 -0.3**
baz=112
WAT6 **Susitna Watana** **75.44 335** P **P** **12 54 43.0 -0.5**
baz=113
DHY **Denali Highway** **75.48 335** P **P** **12 54 43.1 -0.6**
baz=113
E27K **Coleen River** **75.62 341** P **P** **12 54 43.7 -0.6**
baz=120,SNR=9.1
PMR **Palmer** **75.68 333** P **P** **12 54 44.0 -0.7**
baz=111
PRP **Porcupine Dome** **75.75 338** P **P** **12 54 44.8 -0.5**
baz=115
G26K **Porcupine Rive** **75.76 340** P **P** **12 54 44.7 -0.3**
baz=117
RC01 **Rabbit Creek A** **75.78 333** P **P** **12 54 45.1 -0.1**
baz=110
BRSE **Bradley Lake S** **75.79 331** P **P** **12 54 45.5 +0.1**
baz=109
HDA **Harding Lake** **75.84 337** IAmb IAmb 12 55 02.1
comp=Z,12nm,1.0s
HDA **Harding Lake** **75.84 337** P **P** **12 54 45.7 +0.1**
baz=114
WAT1 **Susitna Watana** **75.89 335** P **P** **12 54 45.5 -0.4**
baz=112
D27M **Malcolm River** **75.95 342** P **P** **12 54 45.2 -1.0**
baz=121
IL31 **75.96 337** IAmb IAmb 12 55 02.8
comp=Z,10.0nm,1.2s
ILAR **Eielson Array** **75.96 337** P **P** **12 54 45.8 -0.5**
comp=Z,3.5nm,1.0s,baz=130,slow=3.5,SNR=17
ILAR LR LR 13 29 56.3
comp=Z,414nm,20.0s,baz=102,slow=37
comp=Z,3.5nm,1.0s
ILAR **Eielson Array** **75.96 337** P **P** **12 54 46.6 +0.3**
KDAK **Kodiak Island** **76.09 329** LR LR 13 27 23.5
comp=Z,138nm,18.3s,baz=110,slow=35
KDAK **Kodak Island** **76.09 329** P **P** **12 54 46.4 -0.7**
baz=107
HOM **Homer** **76.19 331** P **P** **12 54 47.6 0.0**
baz=108
F26K **Sheenjek River** **76.23 340** IAmb IAmb 12 55 10.1
comp=Z,11nm,1.3s
F26K **Sheenjek River** **76.23 340** P **P** **12 54 47.4 -0.4**
baz=117,SNR=6.1
Q20K **Shuyak Island** **76.24 330** P **P** **12 54 47.2 -0.8**
baz=108
BMAR **Burnt Mountain** **76.26 340** P **P** **12 54 49.3 +1.4**
OHAK **Old Harbor** **76.29 328** P **P** **12 54 47.3 -0.9**
baz=106
POKR **Poker Plat Res** **76.32 337** P **P** **12 54 49.1 +0.8**
baz=114
CAPN **Captain Cook N** **76.32 332** P **P** **12 54 48.6 +0.3**
baz=109
MCK **McKinley** **76.38 336** P **P** **12 54 50.4 +1.7**
baz=112
NEEM **North Greenlan** **76.58 7** *i* P **P** **12 54 50.2 +0.3**
NEEM IAmb IAmb 12 54 51.3
comp=Z,11nm,0.9s
F25K **Christian Rive** **76.69 340** P **P** **12 54 51.5 +1.0**
baz=116
NEA2 **Nenana** **76.76 336** IAmb IAmb 12 54 58.5
comp=Z,8.4nm,1.1s
NEA2 **Nenana** **76.76 336** P **P** **12 54 52.5 +1.7**
baz=112
H24K **Noor Dome** **76.77 338** IAmb IAmb 12 55 07.2
comp=Z,9.1nm,1.1s
H24K **Noodor Dome** **76.77 338** P **P** **12 54 50.8 -0.1**
baz=113
TRF **Thorofare Moun** **76.85 335** P **P** **12 54 51.8 +0.3**
baz=110
SKT **Skwentna** **76.89 333** IAmb IAmb 12 54 55.5
comp=Z,15nm,1.4s
SKT **Skwentna** **76.89 333** P **P** **12 54 50.9 -0.7**
baz=109
E25K **Arctic Village** **76.90 340** IAmb IAmb 12 54 53.9
comp=Z,12nm,1.2s
E25K **Arctic Village** **76.90 340** P **P** **12 54 52.0 +0.4**
baz=116
N20K **Mount Spurr** **76.95 333** P **P** **12 54 51.8 -0.2**
baz=108
SPCR **Spurr Chakacha** **76.95 333** P **P** **12 54 51.5 -0.5**
baz=108
Q19K **Cape Douglas,** **76.96 330** P **P** **12 54 51.2 -0.9**
baz=106
P19K **Oil Pt** **76.96 331** P **P** **12 54 51.6 -0.5**
baz=107
G24K **Hadweenzic Riv** **76.97 339** P **P** **12 54 52.4 +0.5**
baz=114
C27K **Jago River** **76.99 342** P **P** **12 54 52.4 +0.5**
baz=118
I23K **Minto, Yukon-K** **77.08 337** IAmb IAmb 12 55 14.0
comp=Z,14nm,1.3s
I23K **Minto, Yukon-K** **77.08 337** P **P** **12 54 52.6 +0.1**
baz=112
KTH **Kantishna Hill** **77.15 335** IAmb IAmb 12 55 08.8
comp=Z,8.9nm,1.1s
BPAW **Bear Paw Mtn.** **77.36 336** IAmb IAmb 12 55 15.2
comp=Z,15nm,1.3s
BPAW **Bear Paw Mtn.** **77.36 336** P **P** **12 54 54.6 +0.4**
baz=110
F24K **Squaw Lake** **77.45 339** P **P** **12 54 55.2 +0.6**
baz=114
PPLA **Purkeypile** **77.47 334** IAmb IAmb 12 55 02.6
comp=Z,18nm,1.2s
PPLA **Purkeypile** **77.47 334** P **P** **12 54 55.5 +0.4**
baz=109
C26K **Camden Bay** **77.49 342** P **P** **12 54 55.4 +0.6**
baz=117
Q18K **Katmai Hardscr** **77.56 330** P **P** **12 54 55.4 -0.2**
baz=105
M20K **Styx River** **77.58 333** P **P** **12 54 55.7 +0.1**
baz=108
RAR **Rarotonga** **77.58 248** LR LR 13 21 10.9
comp=Z,116nm,20.7s,baz=105,slow=30
MLY **Manley** **77.58 337** P **P** **12 54 55.9 +0.4**
baz=110
O19K **Port Alsworth** **77.64 331** P **P** **12 54 56.2 +0.4**
baz=106
D25K **Kavik River** **77.69 341** IAmb IAmb 12 55 18.0
comp=Z,10nm,1.1s
D25K **Kavik River** **77.69 341** P **P** **12 54 56.5 +0.5**
baz=115,SNR=7.1
CHUM **Lake Minchumin** **77.84 335** P **P** **12 54 57.1 +0.2**
baz=109
E24K **Your Creek** **77.88 340** P **P** **12 54 57.4 +0.3**
baz=113
N19K **Bonanza Creek** **77.89 332** P **P** **12 54 57.4 +0.1**
baz=106
G23K **Bananza Creek** **77.91 338** IAmb IAmb 12 55 13.9
comp=Z,19nm,1.6s
G23K **Bananza Creek** **77.91 338** P **P** **12 54 57.8 +0.5**
baz=111,SNR=6.2
O18K **Koktuh Hills** **77.98 331** P **P** **12 54 57.7 -0.1**
baz=105
R17L **Mt. Peulik Vol** **78.00 328** P **P** **12 54 57.6 -0.3**
baz=104
I21K **Tanana** **78.13 336** IAmb IAmb 12 55 19.3
comp=Z,11nm,1.1s
I21K **Tanana** **78.13 336** P **P** **12 54 58.4 0.0**
baz=109
H22K **Ishtalitna Cre** **78.13 337** P **P** **12 54 58.5 +0.1**
baz=110
M19K **Big River Lodg** **78.15 333** P **P** **12 54 58.8 +0.1**
baz=106
COLD **Coldfoot** **78.16 339** IAmb IAmb 12 55 21.3
comp=Z,18nm,1.4s
COLD **Coldfoot** **78.16 339** P **P** **12 54 58.6 0.0**
baz=111
E23K **Chandalar** **78.26 340** IAmb IAmb 12 55 08.2
comp=Z,7.5nm,0.9s
E23K **Chandalar** **78.26 340** P **P** **12 54 59.4 +0.1**
baz=112,SNR=9.0
D24K **Happy Valley** **78.42 341** P **P** **12 55 00.0 +0.1**
baz=113
P17K **Kvichak River** **78.42 330** P **P** **12 54 59.8 -0.4**
baz=104
K20K **Telida** **78.43 334** IAmb IAmb 12 55 21.0
comp=Z,14nm,1.3s
K20K **Telida** **78.43 334** P **P** **12 55 00.2 0.0**
baz=107
L19K **White Mountain** **78.44 333** P **P** **12 55 00.2 0.0**
baz=106
TOLK **Toolik Lake Re** **78.47 340** P **P** **12 55 00.3 0.0**
baz=112
N18K **Kilae Creek** **78.52 332** IAmb IAmb 12 55 08.7
comp=Z,8.2nm,0.8s
N18K **Kilae Creek** **78.52 332** P **P** **12 55 00.4 -0.3**
baz=105
G22K **Bettles** **78.53 338** P **P** **12 55 00.8 +0.1**
baz=110
C24K **Franklin Bluff** **78.60 341** IAmb IAmb 12 55 17.6
comp=Z,19nm,1.3s
C24K **Franklin Bluff** **78.60 341** P **P** **12 55 01.2 +0.3**
baz=113
H21K **Melozitna Rive** **78.61 337** P **P** **12 55 01.4 +0.3**
baz=109
M18K **Stony River** **78.70 332** P **P** **12 55 01.8 +0.1**
baz=105
J20K **Nowinta River** **78.70 335** IAmb IAmb 12 55 23.0
comp=Z,21nm,1.6s
J20K **Nowinta River** **78.70 335** P **P** **12 55 01.9 +0.3**
baz=107
CHGN **Chignik** **78.81 327** P **P** **12 55 02.3 0.0**
baz=102
O17K **Koliganek Bris** **78.88 330** P **P** **12 55 03.3 +0.7**
baz=104
D23K **Nanushuk River** **78.96 340** IAmb IAmb 12 55 25.5
comp=Z,11nm,1.1s
D23K **Nanushuk River** **78.96 340** P **P** **12 55 03.9 +0.9**
baz=111
I20K **Naaghedeneel** **79.02 336** P **P** **12 55 03.9 +0.6**
baz=107
E22K **Anaktuvuk Pass** **79.06 339** IAmb IAmb 12 55 25.4
comp=Z,18nm,1.6s
E22K **Anaktuvuk Pass** **79.06 339** P **P** **12 55 03.8 +0.2**
baz=110
IMAR **Indian Mountai** **79.08 337** P **P** **12 55 03.5 -0.2**
N17K **Nushagak Hills** **79.10 331** P **P** **12 55 04.3 +0.4**
baz=104
G21K **Allakaket** **79.15 338** IAmb IAmb 12 55 26.8
comp=Z,18nm,1.8s
G21K **Allakaket** **79.15 338** P **P** **12 55 04.7 +0.6**
baz=108
DBIC **Dimbokro** **79.16 84** P **P** **12 55 04.0 -1.2**
comp=Z,4.6nm,1.0s,baz=263,slow=4.1,SNR=3.6
DBIC LR LR 13 27 57.5
comp=Z,101nm,18.8s,baz=270,slow=34
comp=Z,4.6nm,1.0s
DBIC **Dimbokro** **79.16 84** P **P** **12 55 04.1 -1.1**
DBIC IAmb IAmb 12 55 24.6
comp=Z,27nm,1.6s
P16K **Nushagak River** **79.16 330** P **P** **12 55 04.2 0.0**
baz=103
C23K **Itkillik River** **79.26 341** IAmb IAmb 12 55 20.9
comp=Z,9.5nm,1.1s
C23K **Itkillik River** **79.26 341** P **P** **12 55 05.5 +1.0**
baz=111
J19K **Poorman** **79.27 335** IAmb IAmb 12 55 26.0
comp=Z,17nm,1.7s
J19K **Poorman** **79.27 335** P **P** **12 55 05.5 +0.7**
baz=106
L18K **Granite Mounta** **79.28 333** P **P** **12 55 05.6 +0.8**
baz=104
O16K **Kokwok River B** **79.34 330** P **P** **12 55 05.4 +0.3**
baz=103
F21K **Alatna River** **79.36 338** P **P** **12 55 05.3 +0.1**
baz=108,SNR=5.3
H20K **Anotleneega Mo** **79.38 336** P **P** **12 55 06.3 +0.9**
baz=107
M17K **Holitna River** **79.43 332** P **P** **12 55 06.1 +0.4**
baz=104
J18K **Innoko River** **79.60 334** IAmb IAmb 12 55 24.2
comp=Z,29nm,2.0s
J18K **Innoko River** **79.60 334** P **P** **12 55 06.9 +0.3**
baz=104
MDT **Midelt** **79.74 57** LR LR 13 24 49.1
comp=Z,64nm,19.5s,baz=4.0,slow=32
SDPT **Sand Point** **79.78 326** P **P** **12 55 08.0 +0.4**
baz=100
E21K **Killik River** **79.92 339** P **P** **12 55 08.7 +0.5**
baz=108
L17K **Donlin** **79.99 333** P **P** **12 55 09.2 +0.5**
baz=103
GCSA **Galena City Sc** **80.00 335** P **P** **12 55 09.7 +1.1**
baz=105
M16K **Timber Creek** **80.06 332** P **P** **12 55 10.0 +0.9**
baz=102
O15K **Ungalikthiuk R** **80.12 330** P **P** **12 55 09.7 +0.2**
baz=101
K17K **Iditarod** **80.13 333** P **P** **12 55 09.8 +0.4**
baz=103
F20K **Avaraart Lake** **80.15 338** P **P** **12 55 10.2 +0.8**
baz=106
B22K **Teshekpuk Lake** **80.34 341** P **P** **12 55 11.0 +0.6**
baz=109
C21K **Knifeblade Rid** **80.42 340** P **P** **12 55 10.6 -0.3**
baz=107
G19K **Purcell Mounta** **80.43 337** IAmb IAmb 12 55 33.8
comp=Z,20nm,1.6s
G19K **Purcell Mounta** **80.43 337** P **P** **12 55 12.0 +0.9**
baz=105
N15K **Kwethluk River** **80.44 331** P **P** **12 55 11.6 +0.5**
baz=101
L16K **Owhat River** **80.45 332** IAmb IAmb 12 55 21.7
comp=Z,11nm,1.1s
L16K **Owhat River** **80.45 332** P **P** **12 55 11.7 +0.5**
baz=102
B21K **Ikpikpuk River** **80.50 340** P **P** **12 55 12.0 +0.7**
baz=108
E20K **Nigu River** **80.65 339** P **P** **12 55 13.0 +0.8**
baz=106
ESDC **Sonseca Array** **80.68 50** P **P** **12 55 11.3 -1.7**
comp=Z,3.5nm,1.0s,baz=279,slow=6.5,SNR=11
ESDC LR LR 13 31 35.8
comp=Z,54nm,18.7s,baz=273,slow=36
comp=Z,3.5nm,1.0s
H18K **Honhosa River** **80.71 336** **P** **12 55 13.3 +0.8**
H18K IAmb IAmb 12 55 30.2
comp=Z,12nm,1.1s
H18K **Honhosa River** **80.71 336** P **P** **12 55 13.1 +0.5**
baz=103,SNR=5.8
E19K **Redstone River** **80.82 338** P **P** **12 55 14.4 +1.3**
baz=105
M15K **Kasigluk River** **80.83 331** P **P** **12 55 14.4 +1.2**
baz=100
F19K **Shaleruckik Mo** **80.87 337** P **P** **12 55 14.3 +1.0**
baz=104
D20K **Etivluk River** **80.93 339** P **P** **12 55 14.9 +1.3**
baz=106
G18K **Tagagawik** **81.00 336** P **P** **12 55 16.0 +1.9**
baz=103
A22K **Sinclair Lake** **81.03 342** P **P** **12 55 16.2 +2.1**
baz=107
N14K **Kuskokwak Cree** **81.18 330** P **P** **12 55 16.8 +1.7**
baz=100
J16K **Anvik River** **81.27 334** IAmb IAmb 12 55 32.3
comp=Z,31nm,1.9s
J16K **Anvik River** **81.27 334** P **P** **12 55 17.5 +2.0**
baz=101
H17K **Granite Mounta** **81.30 335** P **P** **12 55 17.8 +2.1**
baz=102
FALS **False Pass** **81.38 325** P **P** **12 55 17.7 +1.5**
baz=97
L15K **Ungalak Mounta** **81.38 332** P **P** **12 55 17.6 +1.5**
baz=100
D19K **Kuna River** **81.41 339** P **P** **12 55 17.7 +1.5**
baz=104
I17K **Unalakleet** **81.43 334** P **P** **12 55 17.9 +1.6**
baz=101
M14K **Bethel** **81.45 331** IAmb IAmb 12 55 32.6
comp=Z,8.9nm,0.8s
M14K **Bethel** **81.45 331** P **P** **12 55 17.9 +1.4**
baz=99
B20K **Meade River** **81.46 341** P **P** **12 55 18.3 +1.9**
baz=105
K15K **Wolf Creek Mou** **81.51 333** P **P** **12 55 18.1 +1.3**
baz=100
F18K **Selawik** **81.55 337** P **P** **12 55 18.5 +1.6**
baz=102
DAG **Danmarks Havn** **81.71 12** *i* P **P** **12 55 16.0 -1.6**
DAG IAmb IAmb 12 55 17.6
comp=Z,11nm,1.2s
G17K **Kiwalik Mounta** **81.72 336** P **P** **12 55 19.4 +1.6**
baz=101
L14K **Kuka Creek** **81.89 332** P **P** **12 55 19.9 +1.1**
baz=99
C19K **Lookout Ridge** **82.07 339** IAmb IAmb 12 55 34.9
comp=Z,19nm,1.6s

C19K	**Lookout Ridge** baz=103	**82.07 339**	P	**P**	**12 55 20.3**	**+0.6**
M13K	**Dall Lake** baz=98	**82.08 331**	P	**P**	**12 55 20.9**	**+1.1**
E18K	**Tukpahlearik C** baz=102	**82.08 338**	P	**P**	**12 55 21.0**	**+1.3**
F17K	**Baldwin Pennin** comp=Z,8.2nm,1.1s	**82.14 337**	IAmb	IAmb	12 55 37.0	
F17K	**Baldwin Pennin** baz=101,SNR=5.3	**82.14 337**	P	**P**	**12 55 21.2**	**+1.2**
H16K	**Elim** baz=100	**82.22 335**	P	**P**	**12 55 21.8**	**+1.3**
G16K	**Koyuk River** comp=Z,10.0nm,1.3s	**82.40 336**	IAmb	IAmb	12 55 39.0	
G16K	**Koyuk River** baz=100,SNR=6.1	**82.40 336**	P	**P**	**12 55 22.9**	**+1.5**
J14K	**Nanvaranak Lak** comp=Z,5.7nm,0.8s	**82.51 333**	IAmb	IAmb	12 55 31.5	
J14K	**Nanvaranak Lak** baz=98	**82.51 333**	P	**P**	**12 55 23.2**	**+1.2**
C18K	**Utukok River** comp=Z,14nm,1.6s	**82.54 339**	IAmb	IAmb	12 55 50.6	
C18K	**Utukok River** baz=101	**82.54 339**	P	**P**	**12 55 23.1**	**+0.9**
EKA	**Eskdalemuir Ar** comp=Z,6.4nm,0.9s,baz=263,slow=5.5,SNR=5.6	**82.55 35**	P	**P**	**12 55 21.2**	**-1.2**
EKA		LR		LR	13 30 37.1	
	comp=Z,54nm,18.2s,baz=191,slow=35 comp=Z,6.4nm,0.9s					
A19K	**Wainwright** baz=102	**82.81 340**	P	**P**	**12 55 24.6**	**+1.2**
K13K	**Kusilvak Mount** baz=97	**82.91 332**	P	**P**	**12 55 25.2**	**+1.1**
G15K	**Niukluk** baz=98,SNR=7.6	**83.04 335**	P	**P**	**12 55 25.5**	**+0.7**
RDOG	**Red Dog Mine** baz=100	**83.06 338**	P	**P**	**12 55 25.4**	**+0.5**
D17K	**Noatak River** baz=99	**83.07 338**	P	**P**	**12 55 25.8**	**+1.0**
UNV	**Unalaska Valle** baz=95	**83.07 324**	P	**P**	**12 55 25.9**	**+0.8**
C17K	**DeLong Mountai** baz=99	**83.23 339**	P	**P**	**12 55 26.2**	**+0.5**
F15K	**North Star Dit** baz=98,SNR=10	**83.39 336**	P	**P**	**12 55 27.6**	**+1.1**
ANM	**Nome** comp=Z,5.6nm,1.0s	**83.55 335**	IAmb	IAmb	12 55 43.3	
ANM	**Nome** baz=97	**83.55 335**	P	**P**	**12 55 28.2**	**+0.8**
C16K	**Lisburne Hills** comp=Z,5.1nm,0.9s	**84.00 338**	IAmb	IAmb	12 55 38.7	
C16K	**Lisburne Hills** baz=97	**84.00 338**	P	**P**	**12 55 30.7**	**+1.1**
F14K	**Arctic Creek** baz=96	**84.06 335**	P	**P**	**12 55 31.4**	**+1.5**
TNA	**Tin City** baz=95	**84.73 335**	P	**P**	**12 55 34.7**	**+1.4**
BELA	**Belgrano 2**	**84.99 171**	P	**P**	**12 55 34.9**	**+0.5**
TORD	**Torodi Ar. Bea** comp=Z,2.8nm,0.8s,baz=252,slow=6.6,SNR=12 comp=Z,2.8nm,0.8s	**85.42 77**	P	**P**	**12 55 36.9**	**-1.0**
TORD	**Torodi Ar. Bea**	**85.42 77**	P	**P**	**12 55 37.2**	**-0.7**
TORD			IAmb	IAmb	12 55 39.4	
	comp=Z,6.8nm,1.1s					
VNA3	**Neumayer Olymp** comp=Z,40nm,0.8s	**87.83 162**	⇓P	**P**	**12 55 49.2**	**+0.7**
VNA1	**Neumayer--Stat** comp=Z,20nm,0.8s	**88.12 161**	⇓P	**P**	**12 55 50.8**	**+1.0**
AFI	**Afiamalu** comp=Z,71nm,20.3s,baz=104,slow=29	**88.28 256**	LR	LR	13 26 13.4	
VNA2	**Neumayer--Watz** comp=Z,16nm,0.8s,baz=297,slow=6.4	**88.46 161**	⇓P	**P**	**12 55 52.3**	**+0.7**
SPITS	**Spitsbergen Ar** comp=Z,114nm,19.5s,baz=276,slow=36	**89.34 12**	LR	LR	13 36 48.4	
SNAA	**Sanae** comp=Z,1.2nm,0.5s,baz=348,slow=3.3,SNR=4.7 comp=Z,1.2nm,0.5s	**90.05 162**	P	**P**	**12 55 59.5**	**+0.5**
SNAA	**Sanae**	**90.05 162**	P	**P**	**12 55 59.6**	**+0.5**
SNAA			IAmb	IAmb	12 56 06.4	
	comp=Z,10nm,1.1s					
NOA	**NORSAR Array B** comp=Z,52nm,21.4s,baz=260,slow=32	**90.13 29**	LR	LR	13 31 39.2	
DAVOX	**Davos/Dischmat** comp=Z,52nm,21.0s,baz=260,slow=31	**90.74 43**	LR	LR	13 29 43.1	
KEST	**Kesra** comp=Z,42nm,18.9s,baz=330,slow=35	**91.25 54**	LR	LR	13 35 44.4	
HFS	**Hagfors** comp=Z,69nm,21.7s,baz=264,slow=32	**91.46 30**	LR	LR	13 31 42.5	
TROLL	**Troll, Antarti**	**91.76 162**	P	**P**	**12 56 08.6**	**+1.5**
CLL	**Collm**	**92.29 39**	*eP*	**P**	**12 56 10.0**	**+0.2**
QSPA	**South Pole Qui** comp=Z,7.3nm,0.7s,baz=157,slow=1.7,SNR=36	**92.94 180**	P	**P**	**12 56 12.7**	**+0.1**
QSPA			LR	LR	13 30 13.0	
	comp=Z,96nm,19.0s,baz=160,slow=30 comp=Z,7.3nm,0.7s					
QSPA	**South Pole Qui**	**92.94 180**		**P**	**12 56 14.0**	**+1.4**
ARCES	**ARCESS Array B** comp=Z,45nm,20.4s,baz=237,slow=32	**94.10 19**	LR	LR	13 33 09.7	
VRAC	**Vranov** comp=Z,106nm,21.1s,baz=298,slow=32	**94.87 40**	LR	LR	13 33 01.0	
VAE	**Valgurnera** comp=Z,62nm,19.2s,baz=266,slow=33	**95.12 52**	LR	LR	13 34 41.9	
FINES	**FINESS Array B** comp=Z,45nm,21.8s,baz=284,slow=33	**97.04 27**	LR	LR	13 35 58.3	
VNDA	**Vanda** comp=Z,40nm,18.3s,baz=138,slow=33	**97.89 192**	LR	LR	13 36 12.8	
URZ	**Urewera** comp=Z,111nm,18.8s,baz=140,slow=30	**98.57 232**	LR	LR	13 31 53.4	
ZALV	**Zalesovo Beam** comp=Z,0.7nm,0.5s,baz=328,slow=2.7,SNR=5.3	**122.61 8**	PKP	**PKPdf**	**13 01 54.4**	**-0.8**
KURK	**Kurchatov**	**124.59 13**		**PKPdf**	**13 01 59.1**	**0.0**
KURBB	**Kurchatov Arra** comp=Z,1.1nm,0.6s,baz=335,slow=2.4,SNR=8.4	**124.66 13**	PKP	**PKPdf**	**13 01 59.1**	**-0.1**
STKA	**Stephens Creek** comp=Z,2.9nm,0.9s,baz=106,slow=0.6,SNR=2.9	**128.19 231**	PKP	**PKPdf**	**13 02 06.6**	**+0.1**
SONM	**Songino Array** comp=Z,0.5nm,0.7s,baz=349,slow=2.3,SNR=3.7	**128.60 351**	PKP	**PKPdf**	**13 02 06.1**	**-0.9**
MKAR	**Makanchi Array** comp=Z,0.8nm,0.8s,baz=35,slow=3.0,SNR=7.5	**129.10 12**	PKP	**PKPdf**	**13 02 06.7**	**-1.2**
KSRS	**Korea Array** comp=Z,1.0nm,0.7s,baz=48,slow=1.8,SNR=2.9	**129.34 326**	PKP	**PKPdf**	**13 02 09.1**	**-0.6**
WMQ	**Urumqi**	**132.91 8**	*e*PKP	**PKiKP**	**13 02 17.1**	**+0.7**
WMQ	comp=Z,130nm,20.3s		LR	LR		
HHC	**Hu-ho-hao-te**	**134.10 343**	*eP*	**PKPdf**	**13 02 13.9**	**-3.7**
ASAR	**Alice Springs** comp=Z,0.6nm,0.6s,baz=119,slow=2.6,SNR=9.6	**137.74 237**	PKhKP	PKPpre	13 02 14.7	
ASAR			PKP	**PKPdf**	**13 02 25.0**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=115,slow=1.9,SNR=4.4					
WRA	**Warramunga Arr** comp=Z,1.7nm,0.8s,baz=112,slow=2.9,SNR=15	**138.71 243**	PKP	**PKPdf**	**13 02 25.8**	**-0.8**
WRA	**Warramunga Arr**	**138.71 243**		**PKPdf**	**13 02 26.6**	**0.0**
NJ2	**Nanjing**	**138.87 330**	*eP*	**PKPdf**	**13 02 27.6**	**+1.0**
NJ2	comp=Z,25nm,0.5s		pmax	pmax		
FITZ	**Fitzroy Crossi** comp=Z,7.0nm,0.9s,baz=207,slow=2.1,SNR=8.7	**147.04 241**	PKPbc	**PKPdf**	**13 02 42.1**	**+0.8**
EVN	**Everest**	**148.13 15**	PKPbc	**PKPbc**	**13 02 46.0**	**-1.0**
PZH	**PanZhiHua**	**150.18 349**	PKPbc	**PKPdf**	**13 02 46.5**	**+0.1**
PZH			PKPab	**PKPab**	**13 02 57.4**	**+0.1**
BATI	**Baumata** comp=Z,6.0nm,0.4s,baz=266,slow=19,SNR=1.7	**151.34 254**	PKPbc	**PKiKP**	**13 02 55.0**	**+0.1**
CMAR	**Chiang Mai Arr** comp=Z,0.6nm,0.3s,baz=352,slow=5.8,SNR=6.3	**158.53 352**	PKPab	**PKPab**	**13 03 31.1**	**-1.6**

*IDC **16** 12:43:22.3±2.0,8.°40S×125.°26E,h0km,mb3.1/1, mbtmp3.7/5,ML3.8/4,MS2.9/1,Error ellipse: s-maj=47.3km s-min=28.1km az=76.0*

*DJA **16** 12:43:27.7±0.3,9.°S±2.°×12.°5E±.°,h10km,M3.6/10, MLv3.6/10*

ISC 16 12:43:25.4±1.4,8.°58S±0.°10×125.°14E±0.°09,h24km,n10, σ2s49/14,Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**1.46**	**216**	P	**Pn**	**12 43 52.7**	**+2.4**
BATI	**Baumata**	**2.18**	**222**	Pn	**Pn**	**12 44 02.8**	**+2.5**
BATI	24nm,0.3s,baz=83,slow=2.8,SNR=16			Sn	**Sn**	**12 44 24.3**	**-2.2**
	14nm,0.3s,baz=19,slow=21,SNR=6.1 76nm,0.4s						
BATI	**Baumata**	**2.18**	**222**	P	**Pn**	**12 44 02.7**	**+2.5**
BATI				S	**Sn**	**12 44 26.9**	**+0.4**
MMRI	**Maumere**	**2.88**	**269**	P	**Pn**	**12 44 09.0**	**-0.7**
MMRI				S	**Sn**	**12 44 41.7**	**-1.9**
EDFI	**Ende, Flores**	**3.42**	**267**	P	**Pn**	**12 44 16.5**	**-0.8**
LBFI	**Labuhan Bajo,**	**5.20**	**271**	P	**Pn**	**12 44 42.9**	**+1.2**
FITZ	**Fitzroy Crossi** 0.7nm,0.3s,baz=353,slow=9.5,SNR=20	**9.48**	**177**	Pn	**Pn**	**12 45 41.9**	**+1.4**
FITZ	1.1nm,0.3s,baz=351,slow=13,SNR=12 1.4nm,0.3s			Sn	Sn	12 47 18.1	-8.2
WRA	**Warramunga Arr** 0.6nm,0.3s,baz=320,slow=14,SNR=35	**14.38**	**143**	Pn	**Pn**	**12 46 48.7**	**+1.1**
WRA	0.4nm,0.3s,baz=300,slow=24,SNR=7.8 3.9nm,0.8s			Sn	Sn	12 49 20.8	-5.7
ASAR	**Alice Springs** 0.2nm,0.3s,baz=325,slow=12,SNR=43	**17.19**	**152**	P	**Pn**	**12 47 25.6**	**+1.5**
ASAR	1.4nm,0.7s,baz=322,slow=23,SNR=9.3			S	**Sn**	**12 50 29.1**	**-5.7**
ASAR	comp=Z,36nm,19.0s,baz=20,slow=40 1.2nm,0.7s			LR	LR	12 54 54.6	
MKAR	**Makanchi Array** 0.2nm,0.8s,baz=120,slow=6.4,SNR=1.1 0.2nm,0.8s	**67.02**	**329**	P	**P**	**12 54 16.7**	**+0.2**

*IDC **16** 12:48:09.8±1.1,48.°67N×77.°54E,h0km,mbtmp2.8/3, ML2.4/3,Error ellipse: s-maj=14.9km s-min=8.2km az=100.0*

*NNC **16** 12:48:13.6±1.8,48.°74N×78.°13E,h0km,mb3.1,mpv2.7, Error ellipse: s-maj=28.6km s-min=7.0km az=69.0, Suspected Mining explosion.*

ISC 16 12:48:10.4±1.5,48.°65N±0.°06×77.°57E±0.°10,h0km,n9, σ0s90/11,4C-3D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra** 1.5nm,0.3s,baz=198,slow=16,SNR=61	**2.07**	**17**	Pg	**Pn**	**12 48 47.4**	**+1.0**
KURBB	0.9nm,0.3s,baz=201,slow=28,SNR=9.4			Lg	Lg	12 49 14.7	
KURBB	**Kurchatov Arra** 12nm,0.4s	**2.07**	**17**	⇑Pn	**Pn**	**12 48 46.9**	**+0.5**
KURBB	23nm,0.5s			⇑Lg	Lg	12 49 15.2	
KURK	**Kurchatov** 4.0nm,0.4s	**2.17**	**18**	⇑Pn	**Pn**	**12 48 48.5**	**+0.7**
KURK	3.8nm,0.4s			⇓Lg	Lg	12 49 16.9	
MAKZ	**Makanchi** 1.0nm,0.7s	**3.50**	**120**	⇓Pn	**Pn**	**12 49 06.3**	**+0.3**
MAKZ	5.2nm,0.8s			Lg	Lg	12 49 53.9	
MK31	**Makanchi Array** 0.2nm,0.2s,baz=261,slow=12,SNR=16	**3.69**	**119**	⇑Pn	**Pn**	**12 49 08.6**	**-0.1**
MK31	5.3nm,0.7s,baz=313,slow=28,SNR=19			⇓Lg	Lg	12 50 02.5	
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=301,slow=12,SNR=11	**3.69**	**119**	Pn	**Pn**	**12 49 08.7**	**0.0**
MKAR	1.0nm,0.3s,baz=306,slow=27,SNR=14 0.4nm,0.5s			Sn	**Sn**	**12 49 53.8**	**+1.0**
AAK	**Ala-Archa** 0.2nm,0.3s,baz=3.8,slow=18,SNR=1.5	**6.39**	**201**	Pn	**Pn**	**12 49 46.7**	**+0.8**
AAK	0.2nm,0.3s,baz=319,slow=7.3,SNR=1.3			Sn	**Sn**	**12 50 59.0**	**-0.7**
AAK	0.2nm,0.3s,baz=43,slow=23,SNR=1.7 0.4nm,0.3s			Lg	Lg	12 51 32.5	
ZALV	**Zalesovo Beam** 0.2nm,0.3s,baz=223,slow=12,SNR=5.0	**6.98**	**38**	Pn	**Pn**	**12 49 54.1**	**+0.3**
ZALV	0.2nm,0.3s,baz=225,slow=23,SNR=7.0			Sn	**Sn**	**12 51 12.2**	**-1.6**
ZALV	0.1nm,0.3s,baz=224,slow=26,SNR=1.7 0.9nm,0.5s			Lg	Lg	12 51 47.7	
I46RU	**ZALESOVO INFRA** baz=219,slow=323,SNR=3.6	**6.98**	**38**	I	I	13 28 20.0	

KRSC 16 12:54:13.4±1.6,53.°99N×169.°51E,h42km±35km,Ml4.2, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**2.39**	**302**	*e*S	Sn	12 55 21.7	+3.7
TUMD	**Tumrok D**	**5.44**	**287**	*e*S	Sn	12 56 36.3	+3.3
OSSR	**Ossora**	**6.36**	**329**	*e*P	Pn	12 55 50.9	+6.5
SDLR	**Sedlovina**	**6.36**	**268**	*e*P	Pn	12 55 50.2	+5.6
SDLR				*e*S	Sn	12 57 01.1	+5.1
UGLR	**Uglovaya**	**6.41**	**267**	*e*P	Pn	12 55 50.1	+4.8
SMAR	**Somma**	**6.42**	**268**	*e*P	Pn	12 55 50.7	+5.3
KRER	**Koryakskii**	**6.44**	**268**	*e*P	Pn	12 55 50.5	+4.8
KRER				*e*S	Sn	12 57 01.7	+3.7
KRX	**Arik**	**6.49**	**269**	*e*P	Pn	12 55 50.8	+4.4
DALK	**Dalny**	**6.49**	**266**	*e*P	Pn	12 55 51.3	+5.1
KOK	**Koryaka**	**6.51**	**268**	*e*P	Pn	12 55 51.1	+4.6
KRMR	**Karymshinskiy**	**6.91**	**265**	*e*P	Pn	12 55 56.7	+4.8
KMSK	**Kamenskaya**	**8.68**	**350**	*e*P	Pn	12 56 20.3	+4.2

*IDC **16** 13:02:15.4±4.4,7.°67S×119.°23E,h0km,mb3.3/2, mbtmp3.3/5,ML3.0/3,Error ellipse: s-maj=113.9km s-min=29.3km az=78.0*

*DJA **16** 13:02:15.7±1.6,8.°S±4.°×11.°9E±.°,h23km±16km,M3.4/8, MLv3.4/8*

ISC 16 13:02:16.9±1.0,7.°72S±0.°05×118.°86E±0.°06,h35km,n13, σ1s55/15,Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DBNI	**Kabupaten Domp**	**0.95**	**215**	P	**Pn**	**13 02 32.4**	**-1.4**
LBFI	**Labuhan Bajo,**	**1.27**	**127**	P	**Pn**	**13 02 38.7**	**+0.5**
PLAI	**Plampang**	**1.54**	**224**	P	**Pn**	**13 02 41.8**	**-0.1**
PLAI				S	**Sn**	**13 03 01.0**	**+0.4**
WBSI	**Waikabubak, Su**	**1.98**	**165**	P	**Pn**	**13 02 47.3**	**-0.7**
TWSI	**Taliwang, Sumb**	**2.20**	**243**	P	**Pn**	**13 02 49.6**	**-1.4**
BSSI	**Bau Bau, Buton**	**2.25**	**46**	P	**Pn**	**13 02 52.0**	**+0.2**
KAPI	**Kappang** 2.1nm,0.3s,baz=188,slow=20,SNR=2.2	**2.83**	**18**	Pn	**Pn**	**13 02 59.7**	**0.0**
KAPI	2.2nm,0.3s,baz=219,slow=16,SNR=3.8 5.4nm,0.3s			Sn	**Sn**	**13 03 29.6**	**-3.0**
KAPI	**Kappang**	**2.83**	**18**	P	**Pn**	**13 03 00.6**	**+0.9**
EDFI	**Ende, Flores**	**2.98**	**110**	P	**Pn**	**13 02 59.0**	**-2.9**
FITZ	**Fitzroy Crossi** baz=328,slow=15,SNR=2.2 1.5nm,0.9s	**12.25**	**148**	Pn	**Pn**	**13 05 09.1**	**+0.1**
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=303,slow=12,SNR=7.1 0.1nm,0.3s	**19.30**	**131**	P	**Pn**	**13 06 39.5**	**-0.8**
ASAR	**Alice Springs** 0.3nm,0.6s,baz=316,slow=10.0,SNR=15 0.3nm,0.6s	**21.44**	**139**	P	**P**	**13 07 04.1**	**+1.8**
STKA	**Stephens Creek** 1.0nm,0.7s,baz=321,slow=13,SNR=1.9 1.0nm,0.7s	**32.03**	**142**	P	**P**	**13 08 41.5**	**+1.2**

IDC 16 13:11:48.5±2.1,3.°39N×125.°79E,h0km,mb3.6/5, mbtmp3.6/5,Error ellipse: s-maj=119.9km s-min=21.3km az=57.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.5nm,0.4s,baz=339,slow=10,SNR=16 0.5nm,0.4s	**24.66**	**160**	P	P	13 17 09.4	-1.8
ASAR	**Alice Springs** 0.3nm,0.4s,baz=349,slow=9.4,SNR=18 0.3nm,0.4s	**28.03**	**164**	P	P	13 17 42.3	+0.7
CMAR	**Chiang Mai Arr** 0.6nm,0.3s,baz=118,slow=8.5,SNR=4.5 0.6nm,0.3s	**30.24**	**302**	P	P	13 18 01.4	+0.1
STKA	**Stephens Creek** 1.2nm,0.7s,baz=344,slow=15,SNR=3.3 1.2nm,0.7s	**38.16**	**158**	P	P	13 19 11.1	+1.3
MKAR	**Makanchi Array** 0.3nm,0.7s,baz=133,slow=6.1,SNR=2.2 0.3nm,0.7s	**57.30**	**326**	P	P	13 21 37.9	-0.3

IDC 16 13:24:49.1±2.0,3.°14N×124.°86E,h0km,mb3.2/4, mbtmp3.2/4,Error ellipse: s-maj=127.3km s-min=27.6km az=68.0,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi** 0.7nm,0.3s,baz=12,slow=9.3,SNR=8.2	**21.12**	**178**	P	P	13 29 37.0	+1.4
WRA	**Warramunga Arr** 0.1nm,0.4s,baz=334,slow=10,SNR=9.8 0.1nm,0.4s	**24.76**	**158**	P	P	13 30 12.4	-0.3
ASAR	**Alice Springs** 0.2nm,0.8s,baz=342,slow=11,SNR=2.2 0.2nm,0.8s	**28.07**	**162**	P	P	13 30 41.8	-0.7
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=124,slow=5.6,SNR=2.4 0.2nm,0.6s	**56.99**	**326**	P	P	13 34 36.6	0.0

IDC 16 13:42:08.6±1.9,5.°26S×147.°55E,h0km,mb3.1/2, mbtmp3.1/4,ML1.8/2,Error ellipse: s-maj=102.9km s-min=29.3km az=116.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby** 0.5nm,0.3s,baz=210,slow=18,SNR=1.6	**4.13**	**185**	Pn	Pn	13 43 14.1	+1.1
PMG	1.1nm,0.3s,baz=17,slow=21,SNR=2.6 6.8nm,0.9s			Sn	Sn	13 43 54.1	-8.0
WRA	**Warramunga Arr** baz=45,slow=12,SNR=2.2 0.4nm,1.0s	**19.45**	**220**	P	P	13 46 36.8	-0.1
ASAR	**Alice Springs** 0.2nm,0.8s,baz=52,slow=9.5,SNR=5.7 0.2nm,0.8s	**22.53**	**214**	P	P	13 47 09.9	-0.4
ILAR	**Eielson Array** 0.7nm,1.1s,baz=233,slow=7.5,SNR=4.1 0.7nm,1.1s	**84.59**	**23**	P	P	13 54 43.6	0.0

*IDC **16** 14:27:13.9±2.1,20.°83S×178.°41W,h569km±18km,mb3.6/5, mbtmp4.5/8,Error ellipse: s-maj=33.3km s-min=22.5km az=42.0*

*NEIC **16** 14:27:15.2±0.8,20.°9S±0.°1×178.°5W±0.°1,h577km±13km, mb4.4/27,Error ellipse: s-maj=24.7km s-min=11.4km az=45.0*

ISC 16 14:27:15.1±0.8,21.°0S±0.°1×178.°5W±0.°1,h579km,n39, σ0s92/42,mb4.2/17,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu** 15nm,0.6s,baz=117,slow=23,SNR=15	**4.57**	**314**	P	**P**	**14 28 42.9**	**-0.6**
NIUE	**Niue**	**8.31**	**78**	P	**P**	**14 29 16.5**	**-0.3**
MARNC	**Mare, Loyalty**	**12.54**	**265**	P	**P**	**14 29 59.2**	**-0.2**
DZM	**Mont Dzumac** 7.9nm,0.5s,baz=109,slow=24,SNR=9.2	**14.03**	**263**	P	**P**	**14 30 13.9**	**-0.8**
TOZ	**Tahuroa Road**	**17.48**	**196**	P	**P**	**14 30 47.8**	**+1.1**
TOZ	comp=Z,13nm,1.0s			IAmb	IAmb	14 31 07.2	
URZ	**Urewera** comp=Z,3.2nm,0.3s,baz=306,slow=2.0,SNR=10	**17.63**	**191**	P	**P**	**14 30 47.3**	**-0.8**
URZ	comp=Z,3.0nm,0.7s,baz=114,slow=16,SNR=0.8			S	**S**	**14 33 37.7**	**-3.6**
BKZ	**Black Stump Fm**	**18.62**	**192**	P	**P**	**14 30 57.2**	**0.0**
BKZ	comp=Z,41nm,1.4s			IAmb	IAmb	14 31 32.6	
MRZ	**Mangatainoka R**	**20.25**	**193**	P	**P**	**14 31 12.3**	**+0.4**
THZ	**Tophouse**	**21.95**	**197**	P	**P**	**14 31 27.7**	**+0.5**
LTZ	**Lake Taylor**	**23.07**	**197**	P	**P**	**14 31 37.5**	**+0.3**
MLZ	**Mavora Lakes**	**26.69**	**201**	P	**P**	**14 32 09.8**	**+0.7**
EIDS	**Eidsvold**	**28.24**	**255**	P	**P**	**14 32 23.1**	**+0.2**
EIDS	comp=Z,24nm,1.3s			IAmb	IAmb	14 33 03.6	
ARMA	**Armidale**	**28.41**	**245**	P	**P**	**14 32 25.4**	**+1.0**
CTA	**Charters Tower** comp=Z,13nm,0.5s,baz=88,slow=10,SNR=27 comp=Z,13nm,0.5s	**32.95**	**265**	P	**P**	**14 33 03.7**	**+0.5**
CTAO	**Charters Tower**	**32.95**	**265**	P	**P**	**14 33 03.8**	**+0.5**
CTAO	comp=Z,20nm,1.1s			IAmb	IAmb	14 33 04.3	
PMG	**Port Moresby**	**34.97**	**284**	P	**P**	**14 33 20.2**	**0.0**
PMG	comp=Z,19nm,1.0s			IAmb	IAmb	14 33 34.5	
TOO	**Toolangi**	**35.21**	**234**	P	**P**	**14 33 22.5**	**+0.5**
TOO	comp=Z,6.7nm,1.2s			IAmb	IAmb	14 33 55.0	
COEN	**Coen**	**37.12**	**274**	P	**P**	**14 33 38.1**	**+0.2**
COEN	comp=Z,11nm,1.2s			IAmb	IAmb	14 33 51.4	
STKA	**Stephens Creek** comp=Z,3.4nm,0.5s,baz=82,slow=11,SNR=13 comp=Z,3.4nm,0.5s	**37.13**	**245**	P	**P**	**14 33 38.9**	**+1.1**
STKA	**Stephens Creek**	**37.13**	**245**	P	**P**	**14 33 38.5**	**+0.7**
INKA	**Innaminka**	**37.58**	**251**	P	**P**	**14 33 42.0**	**+0.5**
BBOO	**Buckleboo**	**41.89**	**244**	P	**P**	**14 34 16.3**	**+0.4**
BBOO	comp=Z,9.8nm,0.8s			IAmb	IAmb	14 34 16.9	
WR8	**Warramunga Arr**	**43.89**	**263**	P	**P**	**14 34 31.1**	**-0.6**
AS31	**Alice Springs**	**43.92**	**257**	P	**P**	**14 34 31.9**	**-0.1**
ASAR	**Alice Springs** 2.8nm,0.7s,baz=91,slow=8.3,SNR=193	**43.93**	**257**	P	**P**	**14 34 32.2**	**+0.3**
ASAR	comp=Z,0.4nm,0.5s,baz=103,slow=4.2,SNR=4.8			PcP	**PcP**	**14 36 05.5**	**+0.6**
ASAR	comp=Z,0.2nm,0.8s,baz=88,slow=4.0,SNR=2.2 comp=Z,8.2nm,0.7s			ScP	**ScP**	**14 39 04.3**	**+2.2**
ASAR	**Alice Springs**	**43.93**	**257**	P	**P**	**14 34 31.6**	**-0.3**
WB0	**Warramunga Arr**	**44.02**	**263**	P	**P**	**14 34 32.5**	**-0.2**
WB0	comp=Z,8.5nm,0.5s			IAmb	IAmb	14 34 32.9	
WRAB	**Tennant Creek**	**44.03**	**263**	P	**P**	**14 34 32.3**	**-0.5**
WRAB	comp=Z,5.3nm,1.0s			IAmb	IAmb	14 34 33.0	
WRA	**Warramunga Arr** comp=Z,2.7nm,0.3s,baz=97,slow=7.4,SNR=146 comp=Z,2.7nm,0.3s	**44.04**	**263**	P	**P**	**14 34 32.3**	**-0.6**
FORT	**Forrest**	**48.65**	**247**	P	**P**	**14 35 07.2**	**-0.2**
FORT	comp=Z,9.6nm,1.2s			IAmb	IAmb	14 35 40.4	
MTN	**Manton Dam**	**48.67**	**271**	P	**P**	**14 35 07.2**	**-0.6**
MTN	comp=Z,7.2nm,0.9s			IAmb	IAmb	14 35 08.2	
KNRA	**Kununurra**	**50.13**	**267**	P	**P**	**14 35 18.1**	**-0.4**
KNRA	comp=Z,5.6nm,0.8s			IAmb	IAmb	14 35 19.5	
FAKI	**Fak Fak**	**51.13**	**284**	P	**P**	**14 35 25.8**	**0.0**
FAKI	comp=Z,11nm,1.0s			IAmb	IAmb	14 35 42.8	
SOEI	**Soe**	**56.02**	**272**	P	**P**	**14 36 00.0**	**-0.4**
SOEI	comp=Z,12nm,0.7s			IAmb	IAmb	14 36 02.7	
PSA00	**Pilbara Seismi**	**57.08**	**257**	P	**P**	**14 36 07.6**	**+0.1**
MBWA	**Marble Bar**	**57.27**	**258**	P	**P**	**14 36 08.4**	**-0.4**
QSPA	**South Pole Qui** comp=Z,1.8nm,0.9s,baz=101,slow=10,SNR=8.3 comp=Z,1.8nm,0.9s	**69.09**	**180**	P	**P**	**14 37 24.9**	**+1.2**
QSPA	**South Pole Qui**	**69.09**	**180**	P	**P**	**14 37 24.8**	**+1.0**
BVAR	**Borovoye Array** comp=Z,0.5nm,0.4s,baz=90,slow=2.9,SNR=5.0	**119.12**	**320**	PKP	**PKPdf**	**14 44 57.1**	**-1.5**

NNC 16 14:35:48.7±2.6,35.°25N×68.°07E,h0km,mb3.7,mpv3.5, 2C-1D,Error ellipse: s-maj=30.9km s-min=23.7km az=103.0,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array** 1.7nm,0.5s,baz=199,slow=17,SNR=5.7	**8.07**	**13**	⇑P	Pn	14 37 47.3	+0.1
KK31	6.2nm,0.6s,baz=196,slow=27,SNR=5.5			⇓S	Sn	14 39 20.4	+1.2
AAK	**Ala-Archa** 0.8nm,0.5s	**8.92**	**32**	⇑P	Pn	14 37 58.6	-0.3
AB31	**Akbulak array** 0.9nm,0.6s,baz=156,slow=12,SNR=21	**15.22**	**339**	P	Pn	14 39 23.4	-1.4

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I02E	**Swisshome, OR**	**3.79**	**94**	Pn	**Pn**	**14 45 38.4**	**-1.3**
I02E				IAML		14 47 47.7	
	comp=E,56nm,2.8s						
F03A	**Seaside**	**4.17**	**68**	Pn	**Pn**	**14 45 45.1**	**+0.1**
F03A				IAML		14 48 39.7	
	comp=E,44nm,1.9s						
RADR	**Rader Ridge**	**4.20**	**61**	Pn	**Pn**	**14 45 45.5**	**+0.1**
RADR				IAML		14 48 10.0	
	comp=N,37nm,2.6s						
RADR				IAML		14 48 40.8	
	comp=E,39nm,3.5s						
NLWA	**Neilton Lookou**	**4.67**	**50**	Pn	**Pn**	**14 45 51.8**	**0.0**
C03A	**Quillayute Air**	**4.68**	**41**	Pn	**Pn**	**14 45 51.8**	**-0.1**
BBOR	**Butler Butte**	**4.92**	**107**	Pn	**Pn**	**14 45 55.6**	**+0.3**
H04A	**Detroit Lake**	**4.94**	**85**	Pn	**Pn**	**14 45 56.2**	**+0.7**
GNW	**Green Mountain**	**5.34**	**53**		**Pn**	**14 46 00.7**	**-0.4**
CLRS	**Cowichan Lake**	**5.52**	**36**		**Pn**	**14 46 03.4**	**-0.1**
LON	**Longmire**	**5.59**	**63**		**Pn**	**14 46 03.8**	**-0.7**
MXC	**Moxie City**	**6.53**	**68**	Pn	**Pn**	**14 46 17.7**	**+0.4**
NVAR	**Mina Array Bea**	**10.10**	**123**	LR	LR	14 50 06.5	
	comp=E,32nm,18.4s,baz=263,slow=31						
DLBC	**Dease Lake**	**13.99**	**358**	LR	LR	14 52 23.1	
	comp=E,43nm,18.4s,baz=150,slow=33						
PDAR	**Pinedale Array**	**14.26**	**90**	LR	LR	14 53 53.8	
	comp=E,40nm,18.9s,baz=286,slow=38						
YKA	**Yellowknife Ar**	**19.91**	**20**	P	**P**	**14 49 13.1**	**+0.4**
	baz=218,slow=10,SNR=5.0						
	comp=E,0.2nm,0.8s						
ILAR	**Eielson Array**	**22.63**	**340**	P	**P**	**14 49 41.5**	**-0.5**
	comp=E,0.4nm,0.9s,baz=158,slow=8.3,SNR=4.3						
	comp=E,0.4nm,0.9s						
ULM	**Lac du Bonnet**	**23.10**	**64**	LR	LR	14 59 07.2	
	comp=E,39nm,21.2s,baz=319,slow=37						
SADO	**Sadowa**	**35.10**	**72**	LR	LR	15 05 38.9	
	comp=E,50nm,18.7s,baz=264,slow=36						
TKL	**Tuckaleechee C**	**35.40**	**88**	LR	LR	15 06 40.7	
	comp=E,99nm,18.2s,baz=236,slow=37						
H11N2	**WAKE ISLAND Hy**	**58.00**	**267**	T	T	15 56 43.2	
	baz=49,slow=75,SNR=86						
H11N3	**WAKE ISLAND Hy**	**58.00**	**267**	T	T	15 56 43.1	
	baz=49,slow=75,SNR=120						
H11N1	**WAKE ISLAND Hy**	**58.02**	**267**	T	T	15 56 44.3	
	baz=49,slow=75,SNR=44						
H11S1	**WAKE ISLAND Hy**	**58.94**	**266**	T	T	15 57 58.0	
	baz=48,slow=75,SNR=37						
H11S2	**WAKE ISLAND Hy**	**58.95**	**266**	T	T	15 57 56.2	
	baz=48,slow=75,SNR=26						
H11S3	**WAKE ISLAND Hy**	**58.96**	**266**	T	T	15 57 58.4	
	baz=48,slow=75,SNR=23						
SONM	**Songino Array**	**75.95**	**325**	P	**P**	**14 56 28.5**	**+0.2**
	comp=E,0.3nm,0.5s,baz=46,slow=6.2,SNR=2.2						
	comp=E,0.3nm,0.5s						

IDC **16** *14:45:22.5±4.8, 36.32N×70.76E, h110km±40km, mb3.6/12, mbtmp4.0/17, MS3.5/2, Error ellipse: s-maj=32.8km s-min=19.4km az=21.0*

MOS **16** *14:45:23.2±0.8, 36.43N×70.80E, h125km, mb4.1/7, Error ellipse: s-maj=9.4km s-min=4.0km az=78.3*

NEIC **16** *14:45:24.4±1.4, 36.41N±0.07×70.69E±0.09, h124km±8km, mb4.2/13, Error ellipse: s-maj=11.2km s-min=9.2km az=65.0*

BJI **16** *14:45:24.6, 36.43N×70.69E, h136km, mb4.2/7*

NNC **16** *14:45:26.6±5.7, 36.65N×70.43E, h95km±82km, mb3.8, mpv4.1, Error ellipse: s-maj=43.3km s-min=36.7km az=24.0*

ISC 16 14:45:22.9±0.6,**36.44N**±0.06×**70.61E**±0.05,**h100**km,**n127,** σ1§**89**/130,**mb4.1**/18,**8C-3D**,**Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.28**	**214**		**Pn**	**14 46 02.0**	**+2.7**
KBL	**Kabul**	**2.28**	**214**	PN	**Pn**	**14 46 02.0**	**+2.7**
SHAA	**Shahritus**	**2.28**	**300**		**Pn**	**14 46 01.8**	**+2.6**
CHGR	**Chuyangaron**	**2.50**	**333**		**Pn**	**14 46 04.7**	**+2.7**
CHGR	**Chuyangaron**	**2.50**	**333**	PN	**Pn**	**14 46 04.7**	**+2.7**
GAR	**Garm**	**2.57**	**355**		**Pn**	**14 46 06.0**	**+3.0**
DRK	**Karamyk**	**3.18**	**17**	Pn	**Pn**	**14 46 14.0**	**+2.7**
DRK	**Karamyk**	**3.18**	**17**	PN	**Pn**	**14 46 14.0**	**+2.7**
NIL	**Nilore**	**3.53**	**141**	Pn	**Pn**	**14 46 17.4**	**+1.7**
NIL	**Nilore**	**3.53**	**141**	PN	**Pn**	**14 46 17.4**	**+1.7**
BTK	**Batken**	**3.62**	**3**		**Pn**	**14 46 19.8**	**+2.8**
BTK	**Batken**	**3.62**	**3**	PN	**Pn**	**14 46 19.8**	**+2.8**
KSH2	**Kashi**	**4.77**	**54**	P	**Pn**	**14 46 37.3**	**+4.8**
KSH2				S	**Sn**	**14 47 29.8**	**+3.1**
KSH2				SMN			
	310nm,0.5s						
KSH2				SME			
	310nm,0.4s						
ARSB	**Arslanbob**	**5.22**	**20**		**Pn**	**14 46 39.6**	**+1.0**
ARSB	**Arslanbob**	**5.22**	**20**	PN	**Pn**	**14 46 39.6**	**+1.0**
IUG	**Iuzhnay**	**5.72**	**356**	*e*PN	**Pn**	**14 46 47.2**	**+1.8**
IUG	**Iuzhnay**	**5.72**	**356**	*e*P	**Pn**	**14 46 47.3**	**+1.8**
CHM	**Chimkent**	**5.92**	**353**	*e*PN	**Pn**	**14 46 50.3**	**+2.2**
CHM	**Chimkent**	**5.92**	**353**	*e*P	**Pn**	**14 46 50.4**	**+2.2**
DZA	**Taraz**	**6.47**	**5**	*e*PN	**Pn**	**14 46 57.0**	**+1.5**
DZA	**Taraz**	**6.47**	**5**	*e*P	**Pn**	**14 46 57.0**	**+1.5**
NRN	**Naryn**	**6.52**	**38**		**Pn**	**14 46 56.2**	**-0.2**
NRN	**Naryn**	**6.52**	**38**	PN	**Pn**	**14 46 56.3**	**-0.2**
UCH	**Uchtor**	**6.53**	**26**	P	**Pn**	**14 46 58.0**	**+1.4**
	SNR=21						
KK31	**Karatay Array**	**6.66**	**359**		**Pn**	**14 46 59.2**	**+1.2**
KK31	**Karatay Array**	**6.66**	**359**	P	**Pn**	**14 46 59.1**	**+1.0**
	9.1nm,0.3s,baz=191,slow=15,SNR=101						
KK31				S	**Sn**	**14 48 13.4**	**+1.0**
	8.7nm,0.4s,baz=194,slow=27,SNR=14						
KK31	**Karatay Array**	**6.66**	**359**	PN	**Pn**	**14 46 59.1**	**+1.0**
KKAR	**Karatay Array**	**6.66**	**359**		**Pn**	**14 46 59.2**	**+1.1**
KKAR	**Karatay Array**	**6.66**	**359**	PN	**Pn**	**14 46 59.2**	**+1.1**
EKS2	**Erkin-Say**	**6.68**	**21**	P	**Pn**	**14 47 00.2**	**+1.7**
	SNR=15						
AAK	**Ala-Archa**	**6.88**	**25**	P	**Pn**	**14 47 02.8**	**+1.7**
	15nm,0.4s,baz=194,slow=6.7,SNR=79						
AAK				S	**Sn**	**14 48 18.1**	**+0.1**
	18nm,0.6s,baz=343,slow=22,SNR=17						
AAK	**Ala-Archa**	**6.88**	**25**	P	**Pn**	**14 47 02.9**	**+1.7**
	SNR=32						
AAK	**Ala-Archa**	**6.88**	**25**		**Pn**	**14 47 02.2**	**+1.0**
AAK	**Ala-Archa**	**6.88**	**25**	⇓P	**Pn**	**14 47 02.5**	**+1.3**
	5.3nm,0.5s						
AAK				⇓S	**Sn**	**14 48 17.9**	**-0.2**
	6.7nm,0.4s						
KBK	**Karagaybulak**	**7.06**	**27**	P	**Pn**	**14 47 05.9**	**+2.3**
	SNR=9.0						
CHMS	**Chumysh**	**7.29**	**25**	P	**Pn**	**14 47 07.9**	**+1.2**
	SNR=8.0						
BOOM	**Boomskoye usch**	**7.32**	**33**		**Pn**	**14 47 07.7**	**+0.5**
BOOM	**Boomskoye usch**	**7.32**	**33**	PN	**Pn**	**14 47 07.7**	**+0.5**
USP	**Ospenovka**	**7.45**	**22**	P	**Pn**	**14 47 10.2**	**+1.4**
	SNR=15						
TKM2	**Tokmak 2**	**7.53**	**29**	P	**Pn**	**14 47 11.5**	**+1.4**
	SNR=13						
KDJ	**Kajisay**	**7.63**	**40**		**Pn**	**14 47 12.1**	**+0.6**
KDJ	**Kajisay**	**7.63**	**40**	PN	**Pn**	**14 47 12.1**	**+0.6**
TARG	**Taragay, Kyrgy**	**7.70**	**44**		**Pn**	**14 47 13.0**	**+0.4**
TARG	**Taragay, Kyrgy**	**7.70**	**44**	PN	**Pn**	**14 47 13.0**	**+0.4**
TNSS	**Tian-Shan**	**8.20**	**35**	*e*PN	**Pn**	**14 47 18.9**	**-0.5**
TNSS	**Tian-Shan**	**8.20**	**35**	*e*P	**Pn**	**14 47 19.0**	**-0.5**
WUS	**Wushi**	**8.23**	**52**		**Pn**	**14 47 19.6**	**0.0**
AAA	**Alma-Ata**	**8.32**	**34**	*e*PN	**Pn**	**14 47 20.6**	**-0.1**
AAA	**Alma-Ata**	**8.32**	**34**	*e*P	**Pn**	**14 47 20.6**	**-0.1**
MDOK	**Medeo**	**8.35**	**34**	*e*PN	**Pn**	**14 47 20.9**	**-0.2**
MDOK	**Medeo**	**8.35**	**34**	*e*P	**Pn**	**14 47 20.9**	**-0.2**
KUU	**Kurty**	**8.64**	**29**	*e*PN	**Pn**	**14 47 25.2**	**+0.2**
KUU	**Kurty**	**8.64**	**29**	*e*P	**Pn**	**14 47 25.2**	**+0.2**
SATY	**Saty**	**8.93**	**40**	*e*PN	**Pn**	**14 47 28.5**	**-0.5**
SATY	**Saty**	**8.93**	**40**	*e*P	**Pn**	**14 47 28.6**	**-0.5**
UZB	**Uzynbulak**	**9.31**	**41**	*e*P	**Pn**	**14 47 33.6**	**-0.7**
UZB	**Uzynbulak**	**9.31**	**41**	*e*P	**Pn**	**14 47 33.6**	**-0.7**
SHLS	**Shalkode**	**9.56**	**43**	*e*P	**Pn**	**14 47 39.9**	**+2.3**
SHLS	**Shalkode**	**9.56**	**43**	*e*P	**Pn**	**14 47 40.0**	**+2.3**
TDK	**Taldyqorghan**	**10.40**	**32**	*e*P	**Pn**	**14 47 48.8**	**-0.1**
TDK	**Taldyqorghan**	**10.40**	**32**	*e*P	**Pn**	**14 47 48.8**	**-0.1**
MAKZ	**Makanchi**	**13.39**	**36**		**Pn**	**14 48 28.6**	**-0.1**
MAKZ	**Makanchi**	**13.39**	**36**	P	**Pn**	**14 48 28.6**	**-0.1**
MK31	**Makanchi Array**	**13.53**	**36**	⇑P	**P**	**14 48 36.2**	**0.0**
	1.5nm,0.7s,baz=214,slow=11,SNR=12						
MK31	**Makanchi Array**	**13.53**	**36**	*ce*P	**Pn**	**14 48 29.7**	**-0.9**
MKAR	**Makanchi Array**	**13.53**	**36**	P	**Pn**	**14 48 29.8**	**-0.8**
	0.6nm,0.7s,baz=222,slow=14,SNR=8.2						
MKAR	**Makanchi Array**	**13.53**	**36**	Pn	**Pn**	**14 48 30.3**	**-0.3**
MKAR	**Makanchi Array**	**13.53**	**36**	P	**Pn**	**14 48 30.3**	**-0.3**
BRZS	**Berezniki**	**13.62**	**6**	*e*P	**Pn**	**14 48 32.3**	**+0.6**
BRZS	**Berezniki**	**13.62**	**6**	*e*P	**Pn**	**14 48 32.4**	**+0.6**
AB31	**Akbulak array**	**14.99**	**332**		**Pn**	**14 48 49.3**	**0.0**
AB31				IAmb	IAmb	14 48 51.1	
	comp=Z,15nm,0.5s						
AB31	**Akbulak array**	**14.99**	**332**	⇑P	**Pn**	**14 48 49.5**	**+0.2**
	comp=Z,7.5nm,0.4s,baz=152,slow=12,SNR=445						
AB31				⇑S	**Sn**	**14 51 29.1**	**-5.4**
	comp=Z,4.1nm,0.6s,baz=152,slow=21,SNR=12						
AB31	**Akbulak array**	**14.99**	**332**	P	**Pn**	**14 48 49.5**	**+0.2**
AB31				S	**Sn**	**14 51 29.7**	**-4.8**
ABKAR	**Akbulak array**	**14.99**	**332**		**Pn**	**14 48 49.2**	**0.0**
WMQ	**Urumqi**	**14.99**	**55**	*e*P	**Pn**	**14 48 51.3**	**+1.9**
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ZSN	**Zaisan**	**15.26**	**39**	*e*P	**Pn**	**14 48 51.7**	**-1.0**
ZSN	**Zaisan**	**15.26**	**39**	*e*P	**Pn**	**14 48 51.8**	**-1.0**
KURBB	**Kurchatov Arra**	**15.28**	**19**	P	**Pn**	**14 48 53.9**	**+0.9**
	comp=Z,0.7nm,0.2s,baz=210,slow=10,SNR=6.8						
KURK	**Kurchatov**	**15.39**	**20**	Pn	**Pn**	**14 48 54.5**	**+0.2**
KURK	**Kurchatov**	**15.39**	**20**	P	**Pn**	**14 48 54.5**	**+0.2**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
EVN	**Everest**	**16.10**	**117**	Pn	**Pn**	**14 49 00.2**	**-3.9**
EVN				IAmb	IAmb	14 49 07.0	
	comp=Z,8.7nm,0.6s						
BVA0	**Borovoye Array**	**16.59**	**360**	P	**Pn**	**14 49 09.1**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=175,slow=8.0,SNR=9.0						
BVA0	**Borovoye Array**	**16.59**	**360**	P	**Pn**	**14 49 09.1**	**-0.1**
BVAR	**Borovoye Array**	**16.59**	**360**	P	**Pn**	**14 49 09.8**	**+0.7**
	comp=Z,1.5nm,0.6s,baz=170,slow=12,SNR=11						
BORK	**Borovoye**	**16.61**	**359**		**Pn**	**14 49 09.4**	**0.0**
BORK	**Borovoye**	**16.61**	**359**	*i* P	**Pn**	**14 49 09.5**	**0.0**
AKTO	**Aktyubinsk**	**16.68**	**331**	P	**Pn**	**14 49 11.2**	**+0.9**
	comp=Z,15nm,0.7s,baz=139,slow=10,SNR=52						
AKTO				S	**Sn**	**14 52 09.3**	**-5.9**
	comp=Z,2.4nm,0.5s,baz=296,slow=21,SNR=6.3						
AKTO	**Aktyubinsk**	**16.68**	**331**	⇑P	**P**	**14 49 12.3**	**+1.3**
	comp=Z,10nm,0.8s						
DGZ	**Jazzator, Alta**	**18.02**	**37**	*i* P	**P**	**14 49 25.1**	**-0.9**
ZAA0	**Zalesovo Array**	**20.10**	**25**	P	**P**	**14 49 47.9**	**-0.5**
ZALV	**Zalesovo Beam**	**20.10**	**25**	P	**P**	**14 49 48.8**	**+0.3**
	comp=Z,23nm,0.4s,baz=220,slow=11,SNR=119						
	comp=Z,23nm,0.4s						
ZALV	**Zalesovo Beam**	**20.10**	**25**	P	**P**	**14 49 48.1**	**-0.3**
ZALV	**Zalesovo Beam**	**20.10**	**25**	*i* P	**P**	**14 49 48.7**	**+0.3**
ZALV				pmax	pmax		
	comp=Z,22nm,0.4s						
GNI	**Garni**	**20.61**	**288**	*i* P	**P**	**14 49 56.9**	**+2.7**
GNI				pmax	pmax		
	comp=Z,13nm,0.8s						
ARTI	**Arti**	**21.60**	**341**	P	**P**	**14 50 04.7**	**+0.3**
	comp=Z,5.7nm,0.8s,baz=165,slow=5.2,SNR=5.6						
	comp=Z,5.7nm,0.8s						
ARTI	**Arti**	**21.60**	**341**	IAmb	IAmb	14 50 07.7	
	comp=Z,7.2nm,0.5s						
ARTI	**Arti**	**21.60**	**341**	*d* P	**P**	**14 50 06.4**	**+2.0**
ARTI						14 50 34.1	
ARTI				S	**S**	**14 53 58.7**	**+1.0**
ARTI				SS	**SnSn**	**14 54 42.2**	**+11**
ARTI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KIV	**Kislovodsk**	**22.54**	**298**	*e*P	**P**	**14 50 15.6**	**+1.1**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PZH	**PanZhiHua**	**28.24**	**102**	P	**P**	**14 51 06.5**	**-0.1**
BRTR	**Keskin Array B**	**29.15**	**288**	P	**P**	**14 51 15.2**	**+0.6**
	comp=Z,1.3nm,0.7s,baz=96,slow=8.8,SNR=6.1						
	comp=Z,1.3nm,0.7s						
BRTR	**Keskin Array B**	**29.15**	**288**	*ce*P	**P**	**14 51 16.5**	**+1.8**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PALK	**Pallekele**	**30.46**	**160**	LR	LR	15 05 14.5	
	comp=Z,38nm,18.5s,baz=184,slow=39						
HHC	**Hu-ho-hao-te**	**32.08**	**69**	*e*P	**P**	**14 51 40.6**	**+0.2**
HHC				pmax	pmax		
	comp=Z,16nm,0.7s						
AKASG	**Malin Array Be**	**32.74**	**309**	P	**P**	**14 51 45.5**	**-0.4**
	comp=Z,0.2nm,0.2s,baz=83,slow=7.3,SNR=5.1						
	comp=Z,0.2nm,0.2s						
AKASG	**Malin Array Be**	**32.74**	**309**	IAmb	IAmb	14 52 09.4	
	comp=Z,2.9nm,1.2s						
NACGM	**Naroch**	**35.04**	**316**	*e*P	**P**	**14 52 04.8**	**-0.9**
	comp=Z,17nm,0.7s,baz=103						
FINES	**FINESS Array B**	**37.36**	**326**	P	**P**	**14 52 25.7**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=101,slow=8.0,SNR=6.8						
	comp=Z,0.9nm,0.5s						
FINES	**FINESS Array B**	**37.36**	**326**	P	**P**	**14 52 25.2**	**-0.2**
FINES	**FINESS Array B**	**37.36**	**326**	*i* P	**P**	**14 52 26.1**	**+0.7**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARCES	**ARCESS Array B**	**41.08**	**338**	P	**P**	**14 52 56.1**	**-0.2**
	comp=Z,2.0nm,0.6s,baz=114,slow=8.4,SNR=6.7						
	comp=Z,2.0nm,0.6s						
ARCES	**ARCESS Array B**	**41.08**	**338**	IAmb	IAmb	14 52 57.9	
	comp=Z,1.8nm,0.7s						
HFS	**Hagfors**	**42.92**	**322**	P	**P**	**14 53 11.0**	**-0.3**
	comp=Z,1.7nm,0.4s,baz=96,slow=11,SNR=14						
	comp=Z,1.7nm,0.4s						
HFS	**Hagfors**	**42.92**	**322**	P	**P**	**14 53 11.0**	**-0.3**
NC405	**NORSAR Array S**	**44.01**	**323**	P	**P**	**14 53 19.7**	**-0.4**
NB201	**NORSAR Array S**	**44.20**	**323**	P	**P**	**14 53 21.1**	**-0.5**
NB2	**NORSAR Subarra**	**44.24**	**323**	P	**P**	**14 53 21.6**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.24**	**323**	P	**P**	**14 53 21.4**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=104,slow=7.3,SNR=6.1						
	comp=Z,0.8nm,0.5s						
NBO00	**NORSAR Array S**	**44.45**	**323**	P	**P**	**14 53 23.1**	**-0.5**
NBO00				IAmb	IAmb	14 53 50.2	
	comp=Z,11nm,1.1s						
FUORN	**Ofenpass-Fuorn**	**45.29**	**303**	P	**P**	**14 53 29.4**	**-1.4**
FUORN				IAmb	IAmb	14 54 07.0	
	comp=Z,3.7nm,1.1s						
TIXI	**Tiksi**	**45.95**	**22**	P	**P**	**14 53 35.0**	**-0.2**
TIXI				IAmb	IAmb	14 53 35.9	
	comp=Z,2.1nm,0.6s						
TIXI	**Tiksi**	**45.95**	**22**	*ce*P	**P**	**14 53 34.9**	**-0.3**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SPITS	**Spitsbergen Ar**	**47.48**	**347**	P	**P**	**14 53 47.9**	**+0.8**
	comp=Z,7.8nm,1.1s,baz=124,slow=13,SNR=5.2						
	comp=Z,7.8nm,1.1s						
MBAR	**Mbarara**	**52.21**	**234**	*ce*P	**P**	**14 54 23.6**	**-0.4**
MBAR				pmax	pmax		
	comp=Z,9.0nm,2.5s						
BATI	**Baumata**	**68.10**	**122**	LR	LR	15 32 18.6	
	comp=Z,80nm,21.1s,baz=46,slow=42						
YKA	**Yellowknife Ar**	**81.32**	**2**	P	**P**	**14 57 26.9**	**-0.9**
	comp=Z,0.1nm,0.6s,baz=350,slow=5.5,SNR=3.1						
	comp=Z,0.1nm,0.6s						
WRA	**Warramunga Arr**	**82.23**	**122**	P	P	14 57 29.9	-3.3
	comp=Z,0.2nm,0.8s,baz=320,slow=5.1,SNR=1.7						
	comp=Z,0.2nm,0.8s						
ASAR	**Alice Springs**	**84.48**	**125**	P	**P**	**14 57 42.9**	**-1.8**
	comp=Z,0.3nm,1.0s,baz=309,slow=4.6,SNR=2.1						
	comp=Z,0.3nm,1.0s						

BJI **16** *15:09:13.3, 6.39S×151.64E, h15km, mB5.1/9, mb4.6/29, Ms5.1/4, Ms7 4.8/4*

DJA **16** *15:09:14.2±1.2, 6°S±9°×15°2E±1°3, h12km±4km, M4.7/14, mb4.8/14, MLv4.6/1*

NEIC **16** *15:09:16.3±1.1, 6.22S±0.06×151.44E±0.04, h10km±1km, mb5.0/79, Error ellipse: s-maj=10.5km s-min=4.6km az=208.0*

IDC **16** *15:09:21.0±3.5, 6.27S×151.35E, h47km±31km, mb4.1/18, mbtmp4.3/19, ML2.5/1, MS3.3/13, Error ellipse: s-maj=25.7km s-min=14.6km az=95.0*

ISC 16 15:09:19.0±0.3,**6.27S**±0.05×**151.46E**±0.06,**h30**km,**n373,** σ1§**13**/344,**mb4.8**/63,**MS3.3**/11,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.18**	**19**		**Pn**	**15 09 51.9**	**-1.4**
PMG	**Port Moresby**	**5.28**	**234**	P	**Pn**	**15 10 37.4**	**+1.5**
	11nm,0.3s,baz=43,slow=4.9,SNR=38						
PMG				S	**Sn**	**15 11 34.9**	**-0.9**
	41nm,0.6s,baz=67,slow=11,SNR=4.0						
	23nm,0.3s						
PMG	**Port Moresby**	**5.28**	**234**	S	**Sn**	**15 11 36.9**	**+1.1**
PMG	**Port Moresby**	**5.28**	**234**	P	**Pn**	**15 10 38.0**	**+2.1**
PMG	**Port Moresby**	**5.28**	**234**	S	**Sn**	**15 11 37.1**	**+1.3**
PMG	**Port Moresby**	**5.28**	**234**		**Pn**	**15 10 35.4**	**-0.5**
PMG	**Port Moresby**	**5.28**	**234**	P	**Pn**	**15 10 39.2**	**+3.3**
	0.4nm67nm,0.7s						
TATA	**Tatamba Isabel**	**8.54**	**105**	P	**Pn**	**15 11 22.5**	**+1.8**
SAVO	**Savo Central**	**8.76**	**110**	P	**Pn**	**15 11 24.3**	**+0.6**
HURO	**Huro Makira**	**11.14**	**113**	P	**Pn**	**15 11 57.5**	**+1.1**
COEN	**Coen**	**11.17**	**226**	P	**Pn**	**15 11 57.9**	**+1.1**
COEN	**Coen**	**11.17**	**226**	Pn	**Pn**	**15 11 56.5**	**-0.3**
JAY	**Jayapura**	**11.35**	**289**	LR	LR	15 17 03.5	
	comp=Z,249nm,18.1s,baz=248,slow=41						
MTSU	**Mount Surprise**	**13.70**	**210**	P	**Pn**	**15 12 31.0**	**-0.4**
CTA	**Charters Tower**	**14.64**	**200**	LR	LR	15 17 15.2	
	comp=Z,73nm,21.7s,baz=16,slow=32						
SANVU	**Saraoutou**	**17.94**	**122**	P	**P**	**15 13 26.1**	**-0.6**
SANVU				IAmb	IAmb	15 13 30.2	
	comp=Z,183nm,1.9s						
QIS	**Mount Isa**	**18.27**	**218**	P	**P**	**15 13 31.4**	**+0.9**
EIDS	**Eidsvold**	**19.00**	**181**	P	**Pn**	**15 13 38.0**	**-1.2**
EIDS	**Eidsvold**	**19.00**	**181**	P	**Pn**	**15 13 38.6**	**-0.5**
MTN	**Manton Dam**	**21.07**	**250**		**P**	**15 14 00.5**	**-0.5**
DRS	**Darwin Rock St**	**21.18**	**252**	P	**P**	**15 14 06.2**	**+4.0**
QLP	**Quilpie**	**21.34**	**198**	P	**P**	**15 14 04.3**	**+0.5**
DZM	**Mont Dzumac**	**21.36**	**139**	LR	LR	15 21 12.2	
	comp=Z,211nm,18.7s,baz=1.0,slow=33						
WR8	**Warramunga Arr**	**21.36**	**229**		**P**	**15 14 03.1**	**-1.1**
WRAB	**Tennant Creek**	**21.46**	**229**	P	**P**	**15 14 07.6**	**+2.4**
WRAB	**Tennant Creek**	**21.46**	**229**	P	**P**	**15 14 03.9**	**-1.4**
WRA	**Warramunga Arr**	**21.48**	**229**	P	**P**	**15 14 05.0**	**-0.4**
	comp=Z,4.8nm,0.6s,baz=50,slow=10,SNR=58						
WRA				PcP	**PcP**	**15 18 07.0**	**-1.0**
	comp=Z,0.8nm,0.8s,baz=55,slow=2.1,SNR=4.0						
	comp=Z,4.8nm,0.6s						
INKA	**Innaminka**	**23.65**	**204**		**P**	**15 14 26.4**	**-1.5**
KNRA	**Kununurra**	**24.14**	**245**		**P**	**15 14 32.1**	**-0.5**
AS31	**Alice Springs**	**24.17**	**222**		**P**	**15 14 32.6**	**-0.3**
ASAR	**Alice Springs**	**24.17**	**222**	P	**P**	**15 14 32.6**	**-0.3**
	comp=Z,11nm,0.8s,baz=53,slow=9.7,SNR=155						
ASAR				PcP	**PcP**	**15 18 12.7**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=41,slow=4.9,SNR=1.9						
	comp=Z,11nm,0.8s						
ASAR	**Alice Springs**	**24.17**	**222**	P	**P**	**15 14 32.5**	**-0.4**
CMSA	**Cobar Meteorol**	**25.71**	**191**	P	**P**	**15 14 46.9**	**+0.1**
STKA	**Stephens Creek**	**27.09**	**199**	P	**P**	**15 14 59.4**	**+0.1**
	comp=Z,8.2nm,0.8s,baz=359,slow=8.8,SNR=14						
STKA				LR	LR	15 25 31.8	
	comp=Z,38nm,18.4s,baz=247,slow=36						
	comp=Z,8.2nm,0.8s						
STKA	**Stephens Creek**	**27.09**	**199**	P	**P**	**15 15 00.7**	**+1.4**
STKA	**Stephens Creek**	**27.09**	**199**		**P**	**15 14 59.4**	**+0.1**
SOEI	**Soe**	**27.14**	**261**	P	**P**	**15 14 59.1**	**-1.0**
SOEI				IAmb	IAmb	15 15 30.1	
	comp=Z,17nm,0.8s						
SOEI	**Soe**	**27.14**	**261**	P	**P**	15 15 09.3	+9.3
BATI	**Baumata**	**27.78**	**260**	P	**P**	**15 15 05.6**	**0.0**
MMRI	**Maumere**	**29.07**	**264**	P	**P**	**15 15 15.1**	**-2.0**
MMRI				IAmb	IAmb	15 15 28.2	
	comp=Z,20nm,0.7s						
EDFI	**Ende, Flores**	**29.61**	**263**	P	**P**	**15 15 22.3**	**+0.3**
	comp=Z,15nm,0.8s						
WSI	**Waingapu**	**31.04**	**262**	P	**P**	**15 15 35.8**	**+1.3**
KAPI	**Kappang**	**31.58**	**271**	LR	LR	15 30 03.7	
	comp=Z,18nm,20.7s,baz=90,slow=40						
FORT	**Forr

baz=231
CHNA Chernabura Isl 73.19 27 P P 15 20 47.9 +1.1
baz=232
M11K Mekoryuk 74.29 20 P P 15 20 54.4 +1.2
baz=224
CHGN Chignik 74.62 26 P P 15 20 55.3 +0.1
CHGN Chignik 74.62 26 P P 15 20 56.2 +1.0
baz=232
GAMB Gambell 75.15 16 P P 15 20 58.6 +0.5
GAMB Gambell 75.15 16 P P 15 20 59.3 +1.2
baz=218,SNR=6.1
M13K Dall Lake 75.32 21 P P 15 21 00.7 +1.6
baz=227
O14K Tigyukauivet M 75.32 23 P P 15 21 00.7 +1.6
baz=229
N14K Kuskokwak Cree 75.60 22 P P 15 21 02.2 +1.4
baz=228
HYB Hyderabad 75.72 290 eP P 15 21 02.0 -0.4
R16K Pilot Point 75.76 26 P P 15 21 03.1 +1.4
baz=233
O15K Ungalikthiuk R 75.83 24 P P 15 21 03.4 +1.3
baz=230
K13K Kusilvak Mount 75.92 20 P P 15 21 04.1 +1.5
baz=225
WMQ Urumqi 75.92 318 eP P 15 21 04.6 +1.5
M14K Bethel 76.05 22 P P 15 21 04.8 +1.5
baz=228
L14K Kuka Creek 76.19 21 P P 15 21 05.7 +1.6
baz=227
R17L Mt. Peulik Vol 76.32 26 P P 15 21 06.4 +1.4
baz=234
N15K Kwethluk River 76.37 23 P P 15 21 06.6 +1.4
baz=230
P16K Nushagak River 76.48 24 P P 15 21 07.1 +1.3
baz=232
M15K Kasigluk River 76.48 22 P P 15 21 06.9 +1.2
baz=229
SII Sitkinak Islan 76.68 28 P P 15 21 08.1 +1.0
baz=236
O16K Kokwok River B 76.79 24 P P 15 21 08.7 +1.2
baz=232
Q16K King Salmon 76.82 25 P P 15 21 08.9 +1.2
baz=233
L15K Ungalak Mounta 76.84 21 P P 15 21 09.2 +1.5
baz=228
J14K Nanvaranak Lak 76.86 20 P P 15 21 09.5 +1.7
baz=226
Q17K Contact Creek 76.90 26 P P 15 21 09.5 +1.1
baz=234
N16K Nishlik Lake 77.07 23 P P 15 21 10.7 +1.5
baz=231,SNR=5.8
K15K Wolf Creek Mou 77.24 21 P P 15 21 11.5 +1.4
baz=228,SNR=31
O17K Koliganek Bris 77.30 24 P P 15 21 11.5 +1.1
baz=233
M16K Timber Creek 77.34 22 P P 15 21 12.3 +1.7
baz=231,SNR=14
OHAK Old Harbor 77.46 27 P P 15 21 10.7 -0.6
OHAK Old Harbor 77.46 27 P P 15 21 12.6 +1.3
baz=237
Q18K Katmai Hardscr 77.50 26 P P 15 21 12.2 +0.5
baz=235
TNA Tin City 77.57 16 P P 15 21 12.6 +0.9
baz=222
ANM Nome 77.57 18 P 15 21 12.0 +0.2
ANM IAmb IAmb 15 21 14.0
comp=Z,7.9nm,0.8s
ANM Nome 77.57 18 P P 15 21 12.8 +0.9
baz=224,SNR=12
L16K Owhat River 77.59 22 P P 15 21 13.0 +1.1
baz=230
N17K Nushagak Hills 77.72 23 P P 15 21 14.2 +1.5
baz=233,SNR=5.3
P18K Big Mountain, 77.84 25 P P 15 21 14.3 +0.9
baz=235
F14K Arctic Creek 77.95 17 P P 15 21 14.9 +1.0
baz=223
KDAK Kodiak Island 78.08 27 P P 15 21 15.7 +0.9
comp=Z,11nm,1.1s,baz=191,slow=1.8,SNR=7.7
comp=Z,11nm,1.1s
KDAK Kodiak Island 78.08 27 P P 15 21 15.7 +0.9
baz=237
O18K Koktuh Hills 78.11 24 P P 15 21 15.8 +0.8
baz=235
M17K Holitna River 78.16 22 P P 15 21 16.7 +1.5
baz=232
J16K Anvik River 78.22 20 P P 15 21 17.0 +1.5
baz=229
Q19K Cape Douglas, 78.25 26 P 15 21 15.8 +0.1
Q19K Cape Douglas, 78.25 26 P P 15 21 16.1 +0.3
baz=236
G15K Niukluk 78.28 18 P P 15 21 17.0 +1.3
baz=225
L17K Donlin 78.29 22 P P 15 21 17.5 +1.6
baz=231
N18K Kilae Creek 78.32 24 P P 15 21 17.6 +1.4
baz=234
I17K Unalakleet 78.58 20 P P 15 21 19.2 +1.7
baz=229,SNR=7.8
H16K Elim 78.59 19 P P 15 21 18.3 +0.8
baz=227,SNR=11
F15K North Star Dit 78.60 17 P P 15 21 18.6 +1.0
baz=225
Q20K Shuyak Island 78.61 26 P P 15 21 18.6 +0.9
baz=237
K17K Iditarod 78.66 21 P P 15 21 19.4 +1.5
baz=231
O19K Port Alsworth 78.67 24 P P 15 21 18.7 +0.7
baz=235
P19K Oil Pt 78.82 25 P P 15 21 19.5 +0.6
baz=236
M18K Stony River 78.83 23 P P 15 21 20.0 +1.1
baz=234
L18K Granite Mounta 78.94 22 P P 15 21 20.7 +1.3
baz=233
N19K Bonanza Creek 78.96 24 P P 15 21 20.5 +0.7
baz=235
G16K Koyuk River 79.07 18 P P 15 21 21.3 +1.3
baz=227,SNR=21
TIXI Tiksi 79.17 353 P P 15 21 20.8 +0.2
comp=Z,6.2nm,0.4s,baz=189,slow=3.9,SNR=6.1
comp=Z,6.2nm,0.4s
HOM Homer 79.50 26 P P 15 21 23.5 +0.9
baz=238
H17K Granite Mounta 79.53 19 P P 15 21 24.2 +1.5
baz=229
L19K White Mountain 79.61 23 P P 15 21 24.5 +1.3
baz=234
M19K Big River Lodg 79.63 23 P P 15 21 24.6 +1.4
baz=235
G17K Kiwalik Mounta 79.67 18 P P 15 21 24.6 +1.2
baz=229
J18K Innoko River 79.69 21 P P 15 21 24.6 +1.0
baz=233
BRSE Bradley Lake S 79.94 26 P P 15 21 25.9 +0.9
baz=239
M20K Styx River 80.11 23 P P 15 21 27.0 +1.1
baz=236
F17K Baldwin Pennin 80.11 17 P P 15 21 27.1 +1.4
baz=228,SNR=16
H18K Honhosa River 80.17 19 P P 15 21 27.1 +0.9
baz=231
C16K Lisburne Hills 80.26 15 P P 15 21 27.5 +1.0
baz=224
J19K Poorman 80.39 21 P P 15 21 28.7 +1.4
baz=234,SNR=5.8
GCSA Galena City Sc 80.41 20 P P 15 21 28.5 +1.1
baz=232
D17K Noatak River 80.45 16 P P 15 21 28.7 +1.1
baz=226
G18K Tagagawik 80.55 19 P P 15 21 29.3 +1.1
baz=230
MKAR Makanchi Array 80.56 319 P P 15 21 28.2 -0.4
comp=Z,0.5nm,0.4s,baz=99,slow=6.8,SNR=8.9
comp=Z,0.5nm,0.4s
SLKM Skilak Lake 80.56 25 P 15 21 28.1 -0.2
K20K Telida 80.58 22 P P 15 21 29.4 +1.1
baz=235
SEW Seward 80.68 26 P P 15 21 29.8 +0.9
baz=240
F18K Selawik 80.70 18 P P 15 21 29.7 +0.9
baz=229
RDOG Red Dog Mine 80.75 16 P P 15 21 30.2 +1.0
baz=226
O22K Cooper Landing 80.76 25 P P 15 21 29.9 +0.6
baz=240
MAKZ Makanchi 80.77 319 P P 15 21 29.0 -0.8
SKT Skwentna 80.79 24 P P 15 21 30.4 +0.9
baz=238
E18K Tukpahlearik C 80.96 17 P P 15 21 31.2 +0.9
baz=228
C17K DeLong Mountai 80.97 15 P P 15 21 31.2 +0.9
baz=226
J20K Nowinta River 81.03 21 P P 15 21 32.0 +1.3
baz=235,SNR=11
RC01 Rabbit Creek A 81.06 25 IAmb IAmb 15 21 45.1
comp=Z,11nm,0.9s
RC01 Rabbit Creek A 81.06 25 P P 15 21 31.5 +0.5
baz=239
G19K Purcell Mounta 81.21 19 P P 15 21 32.8 +1.2
baz=232
I20K Naaghedeneel 81.27 21 P P 15 21 32.7 +0.8
baz=234
L22K Petersville 81.39 23 P 15 21 32.3 -0.4
L22K IAmb IAmb 15 21 45.9
comp=Z,5.9nm,0.6s
F19K Shaleruckik Mo 81.42 18 P P 15 21 33.5 +0.7
baz=231
CUT Chulitna 81.52 24 P P 15 21 33.7 +0.3
baz=239
P23K Montague Islan 81.53 26 P P 15 21 34.2 +0.7
baz=242
CHUM Lake Minchumin 81.53 22 P P 15 21 34.2 +0.8
baz=237,SNR=18
H20K Anofleneega Mo 81.54 20 P P 15 21 34.4 +0.9
baz=234
PMR Palmer 81.57 25 P P 15 21 34.2 +0.6
baz=240
C18K Utukok River 81.62 16 P P 15 21 34.6 +0.8
baz=228
ZALV Zalesovo Beam 81.64 327 P P 15 21 32.6 -1.5
comp=Z,1.4nm,0.6s,baz=104,slow=4.9,SNR=6.6
comp=Z,1.4nm,0.6s
KNK Knik Glacier 81.76 25 P P 15 21 35.5 +0.8
baz=240
KTH Kantishna Hill 81.87 22 P P 15 21 35.0 -0.3
KTH IAmb IAmb 15 21 35.8
comp=Z,11nm,1.0s
E19K Redstone River 81.98 18 P P 15 21 36.8 +1.1
baz=232
SML Sawmill 82.00 25 P P 15 21 36.7 +0.7
baz=241
TRF Thorofare Moun 82.06 23 IAmb IAmb 15 21 50.0
comp=Z,6.6nm,0.8s
TRF Thorofare Moun 82.06 23 P P 15 21 36.5 +0.1
baz=239
GLI Glacier Island 82.08 26 P P 15 21 36.8 +0.5
baz=242
BPAW Bear Paw Mtn. 82.14 22 P P 15 21 37.0 +0.4
baz=238
F20K Avaraart Lake 82.19 18 P P 15 21 37.8 +1.0
baz=233
IMAR Indian Mountai 82.21 20 P P 15 21 37.3 +0.4
M23K Glacier View 82.25 25 P P 15 21 37.9 +0.6
baz=241
H21K Melozitna Rive 82.34 20 P P 15 21 38.6 +0.9
baz=236
C19K Lookout Ridge 82.36 16 P P 15 21 38.8 +1.1
baz=229
I21K Tanana 82.36 21 P P 15 21 38.9 +1.2
baz=237,SNR=10
D19K Kuyu River 82.38 17 P P 15 21 38.4 +0.6
baz=231
WAT1 Susitna Watana 82.42 24 P P 15 21 38.3 +0.1
baz=240
SCM Sheep Creek Mo 82.44 25 P P 15 21 38.6 +0.3
baz=242
EYAK Cordova Ski Ar 82.51 26 P P 15 21 39.4 +0.8
baz=243
RND Reindeer 82.59 23 P 15 21 38.8 -0.3
G21K Allakaket 82.59 19 P P 15 21 39.7 +0.8
baz=235
WAT6 Susitna Watana 82.63 24 P P 15 21 39.7 +0.3
baz=241
A19K Wainwright 82.71 15 P P 15 21 40.3 +0.9
baz=228
MCK McKinley 82.72 23 P 15 21 39.4 -0.4
MCK McKinley 82.72 23 P P 15 21 39.5 -0.2
baz=240,SNR=19
MLY Manley 82.73 21 P P 15 21 40.0 +0.3
baz=238,SNR=11
E20K Nigu River 82.79 17 P P 15 21 40.9 +0.9
baz=232
KLU Klutina 82.87 25 IAmb IAmb 15 21 55.9
comp=Z,15nm,1.0s
KLU Klutina 82.87 25 P P 15 21 41.4 +0.8
baz=243
D20K Etivluk River 82.94 17 P P 15 21 41.3 +0.6
baz=232,SNR=7.9
H22K Ishtalitna Cre 82.97 20 P P 15 21 41.7 +0.8
baz=237
F21K Alatna River 83.01 19 P P 15 21 42.1 +1.0
baz=235
DHY Denali Highway 83.01 24 P P 15 21 41.9 +0.6
baz=241
M24K Tolsona, Glenn 83.05 25 P P 15 21 41.5 0.0
baz=242
KSH2 Kashi 83.10 311 P P 15 21 42.5 +0.1
KSH2 pmax pmax
comp=Z,3.0nm,0.9s
NEA2 Nenana 83.11 22 P P 15 21 41.2 -0.5
NEA2 IAmb IAmb 15 21 55.0
comp=Z,10.0nm,0.7s
NEA2 Nenana 83.11 22 P P 15 21 41.4 -0.3
baz=240,SNR=11
I23K Minto, Yukon-K 83.29 21 IAmb IAmb 15 21 56.2
comp=Z,5.1nm,0.6s
I23K Minto, Yukon-K 83.29 21 P P 15 21 43.1 +0.6
baz=239
WRH Wood River Hil 83.42 22 IAmb IAmb 15 21 56.5
comp=Z,9.3nm,0.8s
BGLC Bering Glacier 83.43 27 P P 15 21 43.4 +0.1
baz=245
G22K Bettles 83.48 19 P P 15 21 44.4 +0.9
baz=237
N25K Chitina, Valde 83.49 26 P P 15 21 44.5 +0.7
baz=244
E21K Killik River 83.56 18 P P 15 21 44.8 +0.9
baz=235
B20K Meade River 83.60 16 P P 15 21 45.0 +1.0
baz=231
CCB Clear Creek Bu 83.61 22 IAmb IAmb 15 21 57.3
comp=Z,9.8nm,0.7s
QSPA South Pole Qui 83.70 180 P P 15 21 43.9 -0.9
comp=Z,1.9nm,0.9s,baz=329,slow=5.9,SNR=7.3
comp=Z,1.9nm,0.9s
QSPA South Pole Qui 83.70 180 IAmb IAmb 15 23 22.7
comp=Z,8.1nm,0.7s
COLA College 83.70 22 P P 15 21 44.1 -0.6
COLA College 83.70 22 P P 15 21 44.9 +0.2
baz=241
PAX Paxson 83.73 24 P P 15 21 45.5 +0.5
baz=243
C21K Knifeblade Rid 83.74 17 P P 15 21 45.5 +0.7
baz=234
GLB Gilahina Butte 83.76 26 IAmb IAmb 15 21 59.6
comp=Z,7.9nm,0.8s
CRQE Cirque 83.78 27 P P 15 21 46.1 +0.7
baz=245
HDA Harding Lake 83.82 23 IAmb IAmb 15 21 58.5
comp=Z,6.5nm,0.7s
HDA Harding Lake 83.82 23 P P 15 21 46.0 +0.7
baz=242
G23K Bananza Creek 83.86 20 P P 15 21 46.5 +0.9
baz=238
POKR Poker Flat Res 83.98 22 P P 15 21 46.1 0.0
baz=241
K24K Donnelly Dome 83.99 23 IAmb IAmb 15 22 01.6
comp=Z,12nm,0.9s
K24K Donnelly Dome 83.99 23 P P 15 21 46.8 +0.6
baz=243
ILAR Eielson Array 84.02 22 P P 15 21 45.5 -0.8
comp=Z,5.8nm,0.8s,baz=253,slow=4.6,SNR=51
comp=Z,5.8nm,0.8s
E22K Anaktuvuk Pass 84.05 18 IAmb IAmb 15 21 48.3
comp=Z,8.7nm,0.9s
E22K Anaktuvuk Pass 84.05 18 P P 15 21 47.1 +0.7
baz=237
MESA MESA 84.06 27 P P 15 21 47.5 +0.6
baz=246
B21K Ikpikpuk River 84.06 17 P P 15 21 47.4 +0.9
baz=234
MCARA McCarthy VSAT 84.07 26 P P 15 21 47.6 +0.9
baz=245
COLD Coldfoot 84.08 19 IAmb IAmb 15 21 48.6
comp=Z,7.8nm,1.0s
COLD Coldfoot 84.08 19 P P 15 21 47.6 +1.0
baz=238
KURK Kurchatov 84.11 322 P P 15 21 46.8 -0.2
KURBB Kurchatov Arra 84.13 322 P P 15 21 46.2 -0.9
comp=Z,1.1nm,0.7s,baz=104,slow=3.7,SNR=9.1
comp=Z,1.1nm,0.7s
H24K Noodor Dome 84.17 21 IAmb IAmb 15 22 01.6
comp=Z,4.7nm,0.6s
H24K Noodor Dome 84.17 21 P P 15 21 48.0 +0.9
baz=241
RIDG Independent Ri 84.33 24 IAmb IAmb 15 22 02.1
comp=Z,13nm,1.0s
RIDG Independent Ri 84.33 24 P P 15 21 48.7 +0.7
baz=244
MENT Mentasta 84.44 25 IAmb IAmb 15 22 07.3
comp=Z,5.9nm,0.8s
M26K Nabesna, AK 84.51 25 P P 15 21 49.5 +0.5
baz=245
J25K Salcha River, 84.52 23 P P 15 21 49.3 +0.3
baz=243
L26K Log Cabin Wild 84.63 25 IAmb IAmb 15 22 04.0
comp=Z,8.3nm,0.6s
L26K Log Cabin Wild 84.63 25 P P 15 21 50.5 +1.0
baz=245,SNR=6.5
CTG Chitna Glacier 84.65 27 P P 15 21 50.5 +0.7
baz=247
CTGM Chitina Glacie 84.65 27 IAmb IAmb 15 22 04.8
comp=Z,9.3nm,0.7s
E23K Chandalar 84.70 19 P P 15 21 51.0 +1.1
baz=239
AAK Ala-Archa 84.71 314 LR LR 16 02 36.9
comp=Z,14nm,18.1s,baz=40,slow=38
AAK Ala-Archa 84.71 314 P P 15 21 50.0 -0.6
G24K Hadweenzic Riv 84.73 20 P P 15 21 51.0 +1.0
baz=241
SCRK Sand Creek 84.78 24 IAmb IAmb 15 22 04.6
comp=Z,6.3nm,0.8s
SCRK Sand Creek 84.78 24 P P 15 21 50.8 +0.5
baz=244
A22K Sinclair Lake 84.79 15 P P 15 21 50.9 +0.8
baz=233
PINM Pinnacle 84.81 28 P P 15 21 51.4 +0.8
baz=248
B22K Teshekpuk Lake 84.82 16 P P 15 21 51.1 +0.9
baz=235
D23K Nanushuk River 84.85 18 P P 15 21 51.9 +1.5
baz=238
PRP Porcupine Dome 84.87 22 P P 15 21 52.1 +1.3
baz=243
M27K Edge Creek, AK 84.97 25 P P 15 21 52.6 +1.3
baz=246,SNR=7.3
F24K Squaw Lake 85.00 20 P P 15 21 52.7 +1.4
baz=240
TOLK Toolik Lake Re 85.02 18 P P 15 21 52.3 +0.9
baz=239
E24K Your Creek 85.08 19 P P 15 21 52.5 +0.8
baz=240
O28M Mount Upton 85.10 27 P P 15 21 52.8 +0.6
baz=248
L27K Beaver Creek, 85.27 25 P P 15 21 54.0 +1.2
baz=246
BCAR Beaver Creek A 85.29 25 P P 15 21 52.0 -0.8
C23K Itkilik River 85.34 17 P P 15 21 53.9 +1.1
baz=238,SNR=7.7
YUK3 Moose Creek 85.36 26 P P 15 21 54.1 +0.7
baz=248
BVCY Beaver Creek 85.43 26 P P 15 21 54.5 +1.0
baz=247
YUK8 Steele Glacier 85.48 27 P P 15 21 54.9 +0.8
baz=248
D24K Happy Valley 85.52 18 P P 15 21 54.9 +1.1
baz=239
O29M Mount Kennedy 85.67 28 P P 15 21 55.9 +1.1
baz=250
I26K Coal Creek Min 85.67 23 P P 15 21 55.7 +1.1
baz=245
F25K Christian Rive 85.79 20 P P 15 21 56.2 +1.0
baz=243
C24K Franklin Bluff 85.84 18 P P 15 21 56.6 +1.2
baz=240
YUK6 Outpost Mounta 85.99 27 P P 15 21 57.4 +0.8
baz=250
YUK4 Talbot Arm 86.01 27 P P 15 21 57.7 +1.1
baz=249
S31K Pelican 86.03 31 P P 15 21 57.5 +1.1
baz=252
E25K Arctic Village 86.06 20 P P 15 21 57.6 +1.1
baz=243
BMAR Burnt Mountain 86.08 20 P P 15 21 57.6 +0.9
G26K Porcupine Rive 86.15 21 P P 15 21 58.2 +1.3
baz=244
F26K Sheenjek River 86.35 20 P P 15 21 59.2 +1.3
baz=243
HYT Haines Junctio 86.35 28 P P 15 21 59.3 +1.1
baz=250
D25K Kavik River 86.36 18 P P 15 21 58.7 +0.7
baz=242,SNR=11
P30M Million Dollar 86.37 28 P P 15 21 59.3 +1.0
baz=251
I27K Kandik River 86.38 23 IAmb IAmb 15 22 00.3
comp=Z,13nm,1.1s
I27K Kandik River 86.38 23 P P 15 21 59.3 +1.1
baz=246
M29M Somme Creek 86.47 26 P P 15 21 59.9 +1.1
baz=250
H27K Steamboat Moun 86.67 22 P P 15 22 00.9 +1.3
baz=246
DAWY Dawson 86.67 24 IAmb IAmb 15 22 14.8
comp=Z,7.6nm,0.9s
DAWY Dawson 86.67 24 P P 15 22 00.6 +1.0
baz=248,SNR=6.8
S32K Killisnoo 86.73 31 P P 15 22 01.3 +1.4
baz=253
N30M Aishikik Lake 86.75 27 P P 15 22 01.4 +1.3
baz=251
G27K Doyon Strip 86.85 21 P P 15 22 01.7 +1.2
baz=246
L29M L29M 86.85 25 P P 15 22 02.0 +1.5
baz=250,SNR=7.5
I28M Miner Creek 86.97 23 P P 15 22 02.1 +1.0
baz=248
O30N Mendenhall 86.98 28 P P 15 22 02.5 +1.3
baz=252
R32K Eaglecrest 86.99 31 P P 15 22 02.6 +1.3
baz=253
C26K Camden Bay 87.09 18 P P 15 22 03.3 +1.8
baz=243
M30M Minto, Yukon 87.25 26 P P 15 22 03.8 +1.3
baz=251
C27K Jago River 87.34 18 P P 15 22 04.0 +1.3
baz=244
N31M Braeburn, Yuko 87.35 27 P P 15 22 04.5 +1.5
baz=252
K29M Barlow Dome 87.36 25 P P 15 22 04.4 +1.3
baz=250,SNR=14
E27K Coleen River 87.43 20 P P 15 22 04.5 +1.3
baz=246,SNR=11
WHY Whitehorse 87.52 28 P P 15 22 05.1 +1.2
baz=253
I29M Ogilvie Camp, 87.57 23 IAmb IAmb 15 22 18.5
comp=Z,13nm,1.1s
I29M Ogilvie Camp, 87.57 23 P P 15 22 05.2 +1.2
baz=250
WRAK Wrangell Islan 87.61 33 P P 15 22 05.5 +1.3
baz=255
KKAR Karatay Array 87.67 314 P P 15 22 04.1 -0.9
V35K Ketchikan 87.74 34 P P 15 22 05.9 +1.1
baz=256
P32M Atlin 87.77 29 P P 15 22 06.1 +1.0
baz=254
F28M Old Crow 87.81 21 IAmb IAmb 15 22 07.1
comp=Z,6.6nm,1.1s
F28M Old Crow 87.81 21 P P 15 22 06.2 +1.2
baz=248
H29M Whitestone 87.85 22 P P 15 22 06.4 +1.2
baz=249
D27M Malcolm River 88.06 19 P P 15 22 07.4 +1.1
baz=247
J30M Hart River 88.09 24 P P 15 22 07.9 +1.3
baz=251
M31M Drury Creek, Y 88.20 27 IAmb IAmb 15 22 21.7
comp=Z,7.5nm,0.9s
M31M Drury Creek, Y 88.20 27 P P 15 22 08.0 +1.0
baz=253
G29M Pine Creek 88.22 22 P P 15 22 08.0 +1.0
baz=250
I30M Mount Dempster 88.28 24 P P 15 22 08.6 +1.1
baz=251

E28M	**Babbage River**	**88.29**	**20**	P	**P**	15 22 08.4	**+1.1**
	baz=248							
Q32M	**Nakina River**	**88.31**	**30**	P	**P**	15 22 08.4	**+0.6**
	baz=255							
P33M	**Teslin, Yukon**	**88.37**	**29**	P	**P**	15 22 08.9	**+0.9**
	baz=255							
N32M	**Quiet Lake**	**88.50**	**28**	P	**P**	15 22 09.6	**+1.1**
	baz=254							
EPYK	**Eagle Plains**	**88.53**	**23**	IAmb	IAmb	15 22 23.1		
	comp=Z,10nm,0.9s							
EPYK	**Eagle Plains**	**88.53**	**23**	P	**P**	15 22 09.7	**+1.3**
	baz=251							
S34M	**Telegraph Cree**	**88.63**	**31**	P	**P**	15 22 10.1	**+1.0**
	baz=256							
E29M	**Blow River**	**88.78**	**20**	P	**P**	15 22 10.9	**+1.4**
	baz=250							
D28M	**Stokes Point**	**88.83**	**19**	P	**P**	15 22 11.0	**+1.3**
	baz=249							
T35M	**Bob Quinn**	**88.87**	**32**	P	**P**	15 22 11.2	**+0.9**
	baz=257							
G30M	**tAoh Zraii Nji**	**88.91**	**22**	P	**P**	15 22 11.0	**+0.7**
	baz=251							
R33M	**Jennings River**	**89.07**	**30**	P	**P**	15 22 11.9	**+0.6**
	baz=256							
H31M	**Peel River**	**89.27**	**23**	P	**P**	15 22 12.8	**+0.8**
	baz=253							
F30M	**Barrier River**	**89.27**	**21**	P	**P**	15 22 12.7	**+0.7**
	baz=252							
DLBC	**Dease Lake**	**89.32**	**31**	P	**P**	15 22 12.9	**+0.4**
	baz=257							
BVAR	**Borovoye Array**	**89.61**	**323**	P	**P**	15 22 12.9	**-0.9**
	comp=Z,0.7nm,0.5s,baz=104,slow=5.8,SNR=5.6							
	comp=Z,0.7nm,0.5s							
F31M	**Tsiigehtchic**	**89.97**	**22**	P	**P**	15 22 15.7	**+0.5**
	baz=254							
INK	**Inuvik**	**90.30**	**21**	P	**P**	15 22 16.7	**+0.1**
	comp=Z,0.9nm,0.5s,baz=270,slow=4.4,SNR=5.1							
	comp=Z,0.9nm,0.5s							
INK	**Inuvik**	**90.30**	**21**	P	**P**	15 22 16.8	**+0.1**
INK				IAmb	IAmb	15 22 30.0		
	comp=Z,14nm,1.6s							
INK	**Inuvik**	**90.30**	**21**	P	**P**	15 22 17.5	**+0.9**
	baz=254							
WTLY	**Watson Lake, Y**	**90.30**	**30**	P	**P**	15 22 17.6	**+0.6**
	baz=258							
KOTAN	**Kotaneelee Air**	**92.64**	**30**	P	**P**	15 22 28.0	**+0.2**
	baz=262							
WRGLY	**Wrigley**	**93.33**	**27**	P	**P**	15 22 31.3	**+0.4**
	baz=263							
A36M	**Sachs Harbour**	**93.84**	**18**	P	**P**	15 22 33.8	**+0.8**
	baz=262							
YKA	**Yellowknife Ar**	**97.34**	**28**	P	Pdif	15 22 50.0	**+0.8**
	comp=Z,0.4nm,0.7s,baz=277,slow=5.2,SNR=10							
	comp=Z,0.4nm,0.7s							
PDAR	**Pinedale Array**	**100.82**	**48**	P	**Pdif**	15 23 05.4	**-0.1**
	comp=Z,0.5nm,0.8s,baz=272,slow=4.0,SNR=4.7							
PLCA	**Paso Flores**	**119.39**	**144**	PKP	**PKiKP**	15 28 05.9	**-0.3**
	comp=Z,0.9nm,0.7s,baz=145,slow=5.4,SNR=3.0							
CLL	**Collm**	**123.47**	**330**	*e*PKPdf	**PKPdf**	15 28 13.0	**-0.4**
GERES	**GERESS Array B**	**124.58**	**327**	PKP	**PKPdf**	15 28 15.4	**-0.4**
	comp=Z,0.3nm,0.4s,baz=66,slow=3.3,SNR=2.2							
ESDC	**Sonseca Array**	**140.06**	**330**	PKP	**PKPdf**	15 28 43.6	**-1.5**
	comp=Z,0.7nm,1.0s,baz=51,slow=1.6,SNR=2.1							
TORD	**Torodi Ar. Bea**	**149.45**	**285**	PKPbc	**PKPbc**	15 29 05.7	**-0.7**
	comp=Z,5.4nm,0.7s,baz=105,slow=1.0,SNR=36							
BDFB	**Brasilia**	**150.91**	**139**	PKPbc	**PKiKP**	15 29 09.3	**-1.3**
	comp=Z,6.3nm,0.7s,baz=133,slow=2.5,SNR=9.3							
BDFB	**Brasilia**	**150.91**	**139**		**PKiKP**	15 29 10.0	**-0.6**
DBIC	**Dimbokro**	**156.46**	**272**	PKPab	**PKPab**	15 29 41.2	**+0.4**
	comp=Z,2.6nm,0.6s,baz=85,slow=2.9,SNR=4.3							

*SOME **16** 15:12:05.5,41.°87N×81.°52E, h15km*
*NNC **16** 15:12:07.2±0.8,41.°88N×81.°41E, h0km, mb3.5, mpv3.2,*
Error ellipse: s-maj=5.8km s-min=4.0km az=161.0
ISC 16 15:12:06.0±1.9**, 41.°86N**±0.°09×**81.°39E**±0.°05**, h10**km**, n36,**
σ1§92/55, 4C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.76**	**335**	P	**Pb**	**15 12 38.4**	**-0.1**
	6.7nm,0.3s						
KTMS				S	**Sg**	15 13 01.9	**-0.8**
	71nm,0.3s						
KTMS	**Ketmen**	**1.76**	**335**	*e*P	**Pb**	**15 12 38.5**	**-0.1**
	6.7nm,0.3s						
KTMS				*e*S	**Sg**	15 13 01.9	**-0.8**
	71nm,0.3s						
SHLS	**Shalkode**	**1.93**	**313**	P	**Pn**	**15 12 38.5**	**-0.5**
	16nm,0.4s						
SHLS				S	**Sn**	15 13 02.8	**-0.6**
	77nm,0.4s						
SHLS	**Shalkode**	**1.93**	**313**	*e*P	**Pn**	**15 12 38.5**	**-0.5**
	16nm,0.4s						
SHLS				*e*S	**Sn**	15 13 02.6	**-0.9**
	77nm,0.4s						
PDGK	**Podgornoye**	**2.04**	**317**	⇓Pn	**Pb**	**15 12 43.0**	**-0.1**
	6.6nm,0.5s						
PDGK				⇑Lg	Lg	15 13 12.8	
	61nm,0.6s						
UZB	**Uzunbulak**	**2.18**	**307**	Pg	**Pg**	**15 12 47.0**	**-0.8**
	8.1nm,0.2s						
UZB				Lg	Lg	15 13 17.1	
	36nm,0.5s						
UZB	**Uzunbulak**	**2.18**	**307**	*e*P	**Pg**	**15 12 47.0**	**-0.8**
	8.1nm,0.2s						
UZB				*e*S	**Sg**	**15 13 17.1**	**+1.1**
	36nm,0.5s						
SATY	**Saty**	**2.52**	**300**	Pg	**Pb**	**15 12 52.5**	**+1.1**
	6.2nm,0.2s						
SATY				Lg	Lg	15 13 26.4	
	50nm,0.4s						
KPKS	**Kokpek**	**2.56**	**310**	Pg	**Pb**	**15 12 53.4**	**+1.3**
	0.4nm,0.2s						
KPKS				Lg	Lg	15 13 28.1	
	27nm,0.6s						
KPKS	**Kokpek**	**2.56**	**310**	*e*P	**Pb**	**15 12 53.4**	**+1.3**
	0.4nm,0.2s						
KPKS				*e*S	**Sg**	**15 13 28.1**	**-0.3**
	27nm,0.6s						
DJR	**Jarkent**	**2.74**	**335**	Pg	**Pg**	**15 12 56.9**	**-1.6**
	4.3nm,0.5s						
DJR				Lg	Lg	15 13 34.2	
	13nm,0.5s						
DJR	**Jarkent**	**2.74**	**335**	*e*P	**Pg**	**15 12 56.9**	**-1.6**
	4.3nm,0.5s						
DJR				*e*S	**Sg**	**15 13 34.2**	**+0.3**
	13nm,0.5s						
KURS	**Kuram**	**2.88**	**306**	Pg	**Pb**	**15 12 58.9**	**+1.3**
	5.4nm,0.6s						
KURS				Lg	Lg	15 13 37.4	
	9.1nm,0.6s						
KNOS	**Konyrlen**	**2.98**	**328**	Pg	**Pg**	**15 13 00.8**	**-2.3**
	3.2nm,0.2s						
KNOS				Lg	Lg	15 13 40.4	
	19nm,0.3s						
BLB	**Baldybastay**	**3.10**	**317**	Pg	**Pg**	**15 13 03.6**	**-1.7**
	7.4nm,0.2s						
BLB				Lg	Lg	15 13 45.4	
	13nm,0.4s						
KOTS	**Kotyrbulak**	**3.45**	**295**	Pg	**Pb**	**15 13 09.5**	**+2.2**
	4.3nm,0.4s						
KOTS				Lg	Lg	15 13 55.4	
	26nm,0.4s						
KOTS	**Kotyrbulak**	**3.45**	**295**	*e*P	**Pb**	**15 13 09.5**	**+2.2**
	4.3nm,0.4s						
KOTS				*e*S	**Sg**	**15 13 55.4**	**-1.4**
	26nm,0.4s						
MDOK	**Medeo**	**3.47**	**294**	Pg	**Pg**	**15 13 10.6**	**-1.8**
	3.9nm,0.5s						
MDOK				Lg	Lg	15 13 57.2	
	12nm,0.3s						
TNSS	**Tian-Shan**	**3.50**	**291**	Pg	**Pg**	**15 13 11.2**	**-1.8**
	1.0nm,0.2s						
TNSS				Lg	Lg	15 13 58.7	
	2.3nm,0.4s						
TNSS	**Tian-Shan**	**3.50**	**291**	*e*P	**Pg**	**15 13 11.2**	**-1.8**
	1.0nm,0.2s						
TNSS				*e*S	**Sg**	**15 13 58.7**	**+0.4**
	2.3nm,0.4s						
ARXS	**Arharly**	**3.52**	**313**	Pg	**Pg**	**15 13 11.2**	**-2.2**
	3.1nm,0.4s						
ARXS				Lg	Lg	15 13 58.4	
	10nm,0.5s						
ARXS	**Arharly**	**3.52**	**313**	*e*P	**Pg**	**15 13 11.2**	**-2.2**
	3.1nm,0.4s						
ARXS				*e*S	**Sg**	**15 13 58.4**	**-0.6**
	10nm,0.5s						
MTBS	**Maitube**	**3.89**	**291**	Pg	**Pg**	**15 13 18.1**	**-2.3**
	2.1nm,0.2s						
MTBS				Lg	Lg	15 14 10.0	
	5.7nm,0.2s						
MTBS	**Maitube**	**3.89**	**291**	*e*P	**Pg**	**15 13 18.1**	**-2.3**
	2.1nm,0.2s						
MTBS				*e*S	**Sg**	**15 14 10.0**	**-0.8**
	5.7nm,0.2s						
KTBS	**Karatobe**	**3.93**	**300**	Pg	**Pg**	**15 13 19.2**	**-2.1**
	2.0nm,0.3s						
KTBS				Lg	Lg	15 14 11.7	
	1.1nm,0.4s						
KTBS	**Karatobe**	**3.93**	**300**	*e*P	**Pg**	**15 13 19.2**	**-2.1**
	2.0nm,0.3s						
KTBS				*e*S	**Sg**	**15 14 11.7**	**-0.5**
	1.1nm,0.4s						
KST	**Kastek**	**4.19**	**288**	Pg	**Pg**	**15 13 23.9**	**-2.3**
	3.1nm,0.5s						
KST				Lg	Lg	15 14 20.0	
	6.3nm,0.9s						
KST	**Kastek**	**4.19**	**288**	*e*P	**Pg**	**15 13 23.9**	**-2.3**
	3.1nm,0.5s						
KST				*e*S	**Sg**	**15 14 20.0**	**-0.5**
	6.3nm,0.9s						
DGS	**Degeres**	**4.38**	**290**	Pg	**Pg**	**15 13 27.7**	**-2.2**
	1.7nm,0.4s						
DGS				Lg	Lg	15 14 26.6	
	3.4nm,0.4s						
DGS	**Degeres**	**4.38**	**290**	*e*P	**Pg**	**15 13 27.7**	**-2.2**
	1.7nm,0.4s						
DGS				*e*S	**Sg**	**15 14 26.6**	**+0.1**
	3.4nm,0.4s						
KRBS	**Karabastau**	**4.59**	**295**	Pg	**Pg**	**15 13 31.3**	**-2.6**
	1.4nm,0.6s						
KRBS				Lg	Lg	15 14 32.7	
	2.4nm,0.6s						
KRBS	**Karabastau**	**4.59**	**295**	*e*P	**Pg**	**15 13 31.3**	**-2.6**
	1.4nm,0.6s						
KRBS				*e*S	**Sg**	**15 14 32.7**	**-0.7**
	2.4nm,0.6s						
MAKZ	**Makanchi**	**4.97**	**5**	⇓Pn	**Pn**	**15 13 23.1**	**+2.5**
	1.7nm,0.7s						
MAKZ				⇑Sn	**Sn**	**15 14 21.0**	**+2.9**
	2.0nm,0.6s						
MAKZ				⇑Lg	Lg	15 14 41.7	
	4.3nm,0.6s						
MK31	**Makanchi Array**	**4.98**	**7**	Pn	**Pn**	**15 13 22.5**	**+1.7**
	0.3nm,0.3s,baz=195,slow=14,SNR=29						
MK31				⇓Pg	**Pb**	**15 13 36.0**	**+2.8**
	0.3nm,0.3s,baz=184,slow=15,SNR=4.8						
MK31				⇓Sn	**Sn**	**15 14 22.4**	**+4.1**
	1.3nm,0.5s,baz=186,slow=24,SNR=4.0						
MK31				⇑Lg	Lg	15 14 42.6	
	4.3nm,0.6s,baz=186,slow=30,SNR=4.9						
ZSN	**Zaisan**	**6.12**	**23**	Pg	**Pg**	**15 13 59.0**	**-4.0**
	1.5nm,0.2s						
ZSN				Lg	Lg	15 15 20.1	
	4.8nm,0.5s						
ZSN	**Zaisan**	**6.12**	**23**	*e*P	**Pg**	**15 13 59.0**	**-4.0**
	1.5nm,0.2s						
ZSN				*e*S	**Sg**	**15 15 20.1**	**-2.1**
	4.8nm,0.5s						

*IDC **16** 15:13:24.2±1.2,55.°41N×166.°18E, h0km, mb3.5/6,*
mbtmp3.5/7, ML2.5/1, Error ellipse: s-maj=78.0km
s-min=20.8km az=143.0
*KRSC **16** 15:13:26.3±0.9,55.°43N×166.°03E, h31km±9km, Ml3.7*
ISC 16 15:13:27.4±0.8**, 55.°53N**±0.°06×**166.°12E**±0.°07**, h20**km**, n21,**
σ1§16/30, mb3.6/6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.34**	**194**	*e*P	**Pb**	**15 13 33.4**	**-1.3**
BKI				*e*S	**Sb**	**15 13 38.2**	**-1.4**
KBTR	**Krutoberegovo**	**1.98**	**291**	*e*P	**Pn**	**15 13 58.8**	**-0.9**
KBTR				*e*S	**Sn**	**15 14 23.2**	**-0.7**
SMKR	**Semkarok**	**2.81**	**294**	*e*P	**Pn**	**15 14 12.7**	**+1.5**
SMKR				*e*S	**Sn**	**15 14 45.6**	**+1.1**
KLY	**Klyuchi**	**3.17**	**286**	*e*P	**Pn**	**15 14 16.0**	**-0.1**
KLY				*e*S	**Sn**	**15 14 51.7**	**-1.6**
TUMD	**Tumrok D**	**3.28**	**267**	*e*S	**Sn**	**15 14 58.0**	**+2.0**
KMNR	**Kamenistaya**	**3.34**	**276**	*e*P	**Pn**	**15 14 18.7**	**+0.2**
SDLR	**Sedlovina**	**4.79**	**245**	*e*P	**Pn**	**15 14 39.9**	**+1.5**
SDLR				*e*S	**Sn**	**15 15 33.1**	**-0.3**
SMAR	**Somma**	**4.84**	**245**	*e*P	**Pn**	**15 14 40.5**	**+1.2**
SMAR				*e*S	**Sn**	**15 15 34.2**	**-0.6**
KRX	**Arik**	**4.87**	**247**	*e*P	**Pn**	**15 14 40.9**	**+1.3**
KRX				*e*S	**Sn**	**15 15 35.2**	**-0.2**
KOK	**Koryaka**	**4.91**	**246**	*e*P	**Pn**	**15 14 41.8**	**+1.7**
KOK				*e*S	**Sn**	**15 15 36.9**	**+0.6**
DALK	**Dalny**	**4.99**	**243**	*e*S	**Sn**	**15 15 38.4**	**+0.3**
PET	**Petropavlovsk**	**5.05**	**243**	*e*S	**Sn**	**15 15 41.0**	**+1.6**
GNL	**Ganaly**	**5.10**	**252**	*e*P	**Pn**	**15 14 44.1**	**+1.5**
KRMR	**Karymshinskiy**	**5.42**	**243**	*e*P	**Pn**	**15 14 48.2**	**+1.3**
KRMR				*e*S	**Sn**	**15 15 49.2**	**+0.6**
PETK	**Petropavlovsk-**	**5.50**	**247**	Pn	**Pn**	**15 14 49.2**	**+1.2**
	0.8nm,0.3s,baz=81,slow=18,SNR=11						
	3.5nm,0.6s						
ILAR	**Eielson Array**	**24.57**	**49**	P	**P**	**15 18 45.1**	**-0.4**
	1.5nm,0.9s,baz=259,slow=7.7,SNR=11						
	1.5nm,0.9s						
YKA	**Yellowknife Ar**	**38.95**	**47**	P	**P**	**15 20 51.5**	**+0.2**
	0.2nm,0.6s,baz=303,slow=8.6,SNR=4.8						
	0.2nm,0.6s						
NVAR	**Mina Array Bea**	**51.65**	**76**	P	**P**	**15 22 34.0**	**+1.3**
	0.4nm,0.3s,baz=308,slow=5.4,SNR=5.5						
	0.4nm,0.3s						
TXAR	**Lajitas Array**	**66.48**	**72**	P	**P**	**15 24 15.7**	**+0.3**
	0.3nm,0.5s,baz=323,slow=5.6,SNR=5.0						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**79.88**	**210**	P	**P**	**15 25 33.5**	**-0.9**
	0.3nm,1.0s,baz=26,slow=5.6,SNR=1.9						
	0.3nm,1.0s						
ASAR	**Alice Springs**	**83.53**	**209**	P	**P**	**15 25 52.5**	**-1.1**
	0.5nm,1.0s,baz=12,slow=6.1,SNR=4.4						
	0.5nm,1.0s						

*NOU **16** 15:13:43.1,32.°89S×179.°07W, h372km, mb4.4/9, South of*
Kermadec Islands
*WEL **16** 15:14:06.8±2.0,34.°S±18.°×17.°9E±2.°0, h205km±37km,*
M4.6/18, mB4.7/4, ML4.2/6, MLv4.8/18, Mw(mB)3.9/4, Error
ellipse: s-maj=31.2km s-min=15.4km az=51.1, confirmed
ISC 16 15:14:06.2±3.9**, 34.°0S**±0.°2×**179.°5E**±0.°2**, h200**km**, n51,**
σ1§62/55, 1C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.73**	**195**	P	**Pn**	**15 15 05.8**	**+1.2**
MXZ	**Matakaoa Point**	**3.73**	**195**	P	**Pn**	**15 15 06.8**	**+2.2**
MXZ				S	**Sn**	**15 15 51.1**	**+0.6**
HAZ	**Te Kaha**	**4.04**	**200**	P	**Pn**	**15 15 09.8**	**+1.4**
HAZ				S	**Sn**	**15 15 59.8**	**+2.3**
PUZ	**Puketiti**	**4.23**	**193**	P	**Pn**	**15 15 12.9**	**+2.1**
PUZ				S	**Sn**	**15 16 04.4**	**+2.6**
MWZ	**Matawai**	**4.65**	**200**	P	**Pn**	**15 15 16.8**	**+0.6**
WCZ	**Waipu Caves**	**4.68**	**244**	P	**Pn**	**15 15 16.8**	**+0.3**
URZ	**Urewera**	**4.71**	**204**	P	**Pn**	**15 15 16.1**	**-0.8**
URZ	**Urewera**	**4.71**	**204**	P	**Pn**	**15 15 17.2**	**+0.3**
TOZ	**Tahuroa Road**	**4.98**	**220**	P	**Pn**	**15 15 22.5**	**+2.2**
RRRZ	**Republican Roa**	**5.00**	**208**	P	**Pn**	**15 15 21.9**	**+1.3**
OUZ	**Omahuta**	**5.03**	**254**	P	**Pn**	**15 15 20.3**	**-0.8**
OUZ	**Omahuta**	**5.03**	**254**	P	**Pn**	**15 15 20.2**	**-0.8**
HRRZ	**Handcock Road**	**5.13**	**210**	P	**Pn**	**15 15 24.2**	**+1.9**
PRRZ	**Plateau Road**	**5.18**	**208**	P	**Pn**	**15 15 23.6**	**+0.7**
KNZ	**Kokohu**	**5.27**	**196**	P	**Pn**	**15 15 23.1**	**-0.8**
RAHZ	**Arahi**	**5.32**	**201**	P	**Pn**	**15 15 22.6**	**-2.1**
MTHZ	**Maungataniwha**	**5.34**	**203**	P	**Pn**	**15 15 24.5**	**-0.4**
MHGZ	**Mahia Peninsul**	**5.34**	**193**	P	**Pn**	**15 15 25.1**	**+0.2**
MHGZ				S	**Sn**	**15 16 28.5**	**+1.2**
TLZ	**Tolley Road**	**5.42**	**215**	P	**Pn**	**15 15 28.0**	**+2.1**
NMHZ	**Naumai**	**5.57**	**202**	P	**Pn**	**15 15 28.1**	**+0.1**
NMHZ				S	**Sn**	**15 16 32.4**	**-0.3**
WATZ	**Wairara**	**5.63**	**212**	P	**Pn**	**15 15 29.6**	**+0.8**
ARHZ	**Aropaoanui**	**5.67**	**200**	P	**Pn**	**15 15 28.7**	**-0.4**
ARHZ				S	**Sn**	**15 16 34.1**	**-0.7**
BKZ	**Black Stump Fm**	**5.74**	**204**	P	**Pn**	**15 15 28.0**	**-2.1**
BKZ	**Black Stump Fm**	**5.74**	**204**	P	**Pn**	**15 15 28.0**	**-2.1**
BKZ				S	**Sn**	**15 16 34.3**	**-2.1**
HIZ	**Hauiti**	**5.90**	**218**	P	**Pn**	**15 15 32.6**	**+0.5**
HIZ	**Hauiti**	**5.90**	**218**	P	**Pn**	**15 15 33.6**	**+1.5**
MCHZ	**McNeill Hill**	**5.92**	**202**	P	**Pn**	**15 15 31.8**	**-0.6**
MCHZ				S	**Sn**	**15 16 41.0**	**+0.3**

TMVZ	**Te Maari**	**5.99**	**210**	P	**Pn**	**15 15 32.9**	**-0.5**
KWHZ	**Kaweka Forest**	**5.99**	**204**	P	**Pn**	**15 15 32.5**	**-0.9**
OTVZ	**Oturere**	**6.05**	**210**	P	**Pn**	**15 15 33.3**	**-0.9**
SNVZ	**South Ngauruho**	**6.08**	**210**	P	**Pn**	**15 15 33.6**	**-1.0**
COVZ	**Chateau Observ**	**6.13**	**210**	P	**Pn**	**15 15 34.7**	**-0.5**
TUVZ	**Tukino**	**6.14**	**209**	P	**Pn**	**15 15 34.5**	**-0.9**
FWVZ	**Far West T-bar**	**6.17**	**210**	P	**Pn**	**15 15 34.6**	**-1.3**
WHVZ	**Whangaehu Hut**	**6.18**	**209**	P	**Pn**	**15 15 34.8**	**-1.1**
KAHZ	**Kahuranaki**	**6.20**	**199**	P	**Pn**	**15 15 34.9**	**-1.1**
KRHZ	**Kereru**	**6.21**	**203**	P	**Pn**	**15 15 33.5**	**-2.6**
WNVZ	**Wahianoa**	**6.21**	**209**	P	**Pn**	**15 15 35.0**	**-1.4**
MOVZ	**Moawhango**	**6.22**	**208**	P	**Pn**	**15 15 34.1**	**-2.2**
MTVZ	**Mangateitei**	**6.31**	**210**	P	**Pn**	**15 15 36.5**	**-1.0**
PXZ	**Pawanui**	**6.42**	**198**	P	**Pn**	**15 15 36.9**	**-1.9**
PNHZ	**Pukenui**	**6.51**	**203**	P	**Pn**	**15 15 37.3**	**-2.7**
WPHZ	**Waipukurau**	**6.57**	**201**	P	**Pn**	**15 15 38.7**	**-2.2**
PRHZ	**Porangahau**	**6.70**	**199**	P	**Pn**	**15 15 40.4**	**-2.1**
LREZ	**Lake Rotokare**	**6.85**	**215**	P	**Pn**	**15 15 44.1**	**-0.3**
DVHZ	**Dannevirke**	**6.87**	**202**	P	**Pn**	**15 15 41.6**	**-3.1**
BFZ	**Birch Farm**	**7.20**	**200**	P	**Pn**	**15 15 44.7**	**-4.2**
SNZO	**South Karori**	**8.27**	**206**	P	Pn	15 15 57.5	-5.3
QRZ	**Quartz Range**	**8.82**	**217**	P	Pn	15 16 04.6	-5.5
KHZ	**Kahutara**	**9.66**	**207**	P	Pn	15 16 14.6	-6.3
VNA3	**Neumayer Olymp**	**74.89**	**177**	⇑P	P	15 25 19.6	-4.9
	comp=Z,13nm,0.8s							

IDC 16 15:50:47.8±2.0**, 0.°98N**×**124.°28E, h0**km**, mb3.0/3,**
mbtmp3.0/3, Error ellipse: s-maj=212.4km
s-min=27.7km az=63.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.02**	**155**	P	P	15 55 55.5	**+0.9**
	0.5nm,1.0s,baz=334,slow=10,SNR=4.7						
	0.5nm,1.0s						
ASAR	**Alice Springs**	**26.23**	**160**	P	P	15 56 23.7	**-1.0**
	0.1nm,0.9s,baz=335,slow=8.4,SNR=1.4						
	0.1nm,0.9s						
MKAR	**Makanchi Array**	**58.47**	**327**	P	P	16 00 45.8	**+0.1**
	0.1nm,0.3s,baz=131,slow=6.8,SNR=4.1						
	0.1nm,0.3s						

*UPA **16** 15:52:27.5±3.2,9.°70N×83.°68W, h143km±91km, ML4.2,*
Presumed earthquake
*UCR **16** 15:52:27.5±1.1,9.°59N×83.°99W, h60km±2km, MW3.5,*
Presumed earthquake
ISC 16 15:52:29.1±1.3**, 9.°58N**±0.°03×**83.°97W**±0.°03**, h48**km±6km**,**
n59, σ1§00/96, 11C-7D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIEC	**Cerro El Cedra**	**0.04**	**20**	⇓*i*P	**Pn**	**15 52 36.4**	**-0.6**
PIEC				*e*S	**Sn**	**15 52 43.2**	**+0.7**
RAZU	**San Marcos de**	**0.09**	**327**	⇓*i*P	**Pn**	**15 52 36.3**	**-0.7**
RAZU				*e*S	**Sn**	**15 52 43.4**	**+0.9**
BUS1	**Rivas**	**0.22**	**97**	⇓*i*P	**Pn**	**15 52 37.3**	**-0.7**
BUS1				*e*S	**Sn**	**15 52 45.1**	**+0.9**
SVQ2	**Quepos**	**0.24**	**232**	*e*P	**Pn**	**15 52 36.8**	**-0.8**
SVQ2				*e*S	**Sn**	**15 52 44.1**	**+0.5**
REPA	**Paraso**	**0.27**	**23**	*e*P	**Pn**	**15 52 37.3**	**-0.7**
REPA				*e*S	**Sn**	**15 52 45.1**	**+0.9**
ACOS	**Acosta**	**0.28**	**318**	*e*P	**Pn**	**15 52 37.1**	**-1.0**
ACOS				*e*S	**Sn**	**15 52 44.7**	**+0.2**
TAGO	**Cartago**	**0.29**	**10**	*e*P	**Pn**	**15 52 37.7**	**-0.5**
TAGO				*e*S	**Sn**	**15 52 45.4**	**+0.8**
LUJA	**Lujan**	**0.36**	**344**	*e*P	**Pn**	**15 52 37.9**	**-0.9**
LUJA				*e*S	**Sn**	**15 52 46.0**	**+0.3**
PCAYA	**Pacayas**	**0.37**	**26**	*e*P	**Pn**	**15 52 38.4**	**-0.7**
PCAYA				*e*S	**Sn**	**15 52 46.6**	**+0.6**
RAFA	**San Farael, Vo**	**0.41**	**23**	*e*P	**Pn**	**15 52 38.8**	**-0.7**
RAFA				*e*S	**Sn**	**15 52 47.5**	**+0.6**
SANTA	**Santa Ana**	**0.41**	**329**	⇑*i*P	**Pn**	**15 52 38.2**	**-1.1**
SANTA				*e*S	**Sn**	**15 52 46.4**	**-0.1**
DOMI	**Santo Domingo**	**0.41**	**344**	*e*P	**Pn**	**15 52 38.6**	**-0.8**
DOMI				*e*S	**Sn**	**15 52 47.6**	**+0.9**
VICA	**Volcano Irazu**	**0.42**	**17**	⇑*e*P	**Pn**	**15 52 39.1**	**-0.7**
VICA				*e*S	**Sn**	**15 52 48.3**	**+0.9**
HDC	**Heredia**	**0.44**	**342**	*e*P	**Pn**	**15 52 37.6**	**-2.1**
HDC				*e*S	**Sn**	**15 52 47.8**	**+0.6**
CVIMO	**Finca Echandi**	**0.44**	**4**	*e*P	**Pn**	**15 52 39.1**	**-0.7**
HEME	**Heredia, Merce**	**0.44**	**339**	⇑*i*P	**Pn**	**15 52 40.0**	**+0.3**
HEME				*e*S	**Sn**	**15 52 49.1**	**+1.8**
BELE	**Belen**	**0.45**	**332**	⇑*i*P	**Pn**	**15 52 38.8**	**-1.0**
BELE				*e*S	**Sn**	**15 52 47.4**	**+0.1**
VERB	**Verbena**	**0.45**	**37**	⇓*e*P	**Pn**	**15 52 39.2**	**-0.6**
VERB				*e*S	**Sn**	**15 52 48.

LKRN			S	**Sb**	**15 59 56.7**	**+1.7**
ASTR	**Astara**	**0.32 179**	P	**Pb**	**15 59 51.6**	**-0.7**
ASTR			S	**Sb**	**15 59 58.7**	**+0.9**
LRK	**Lerik**	**0.42 236**	P	**Pb**	**15 59 53.4**	**-0.5**
LRK			S	**Sn**	**16 00 01.8**	**+1.1**
YRD	**Yardimli**	**0.43 275**	P	**Pb**	**15 59 53.5**	**-0.5**
YRD			S	**Sn**	**16 00 01.8**	**+0.9**
GLBA	**Clilabad**	**0.47 320**	P	**Pb**	**15 59 54.1**	**-0.4**
GLBA			S	**Sn**	**16 00 03.5**	**+1.6**
GAS1	**Astara - Iran**	**0.49 175**	Pg	**Pb**	**15 59 53.1**	**-1.7**
GRMI	**Germi**	**0.70 265**	Pg	**Pn**	**15 59 57.0**	**-0.9**
SAAT	**Saatly**	**1.02 344**	P	**Pn**	**16 00 02.2**	**-0.1**
SAAT			S	**Sb**	**16 00 17.6**	**+0.9**
BLQ	**Beylaqan**	**1.27 312**	P	**Pn**	**16 00 04.8**	**-0.9**
BLQ			S	**Sn**	**16 00 22.7**	**+1.1**
QRD	**Qoradiz**	**1.28 298**	P	**Pn**	**16 00 05.2**	**-0.6**
QRD			S	**Sn**	**16 00 22.5**	**+0.7**
ISRB	**Sarab**	**1.37 220**	Pg	**Pn**	**16 00 06.9**	**-0.4**
IHRS	**Heris**	**1.48 248**	Pg	**Pn**	**16 00 08.4**	**-0.3**
GBS	**Qobustan**	**1.66 4**	Sn	**Sn**	**16 00 33.1**	**+1.9**
BRDA	**Brd**	**1.86 319**	Pn	**Pn**	**16 00 13.8**	**0.0**
BRDA			Sn	**Sn**	**16 00 37.5**	**+1.5**
PQL	**Pirkuli**	**1.91 356**	Sn	**Sn**	**16 00 37.6**	**-0.1**
IML	**Ismayilli**	**1.97 347**	Sn	**Sn**	**16 00 39.1**	**+0.2**
ORD	**Ordubad**	**2.18 272**	Pn	**Pn**	**16 00 18.0**	**-0.2**
ORD			Sn	**Sn**	**16 00 45.2**	**+1.1**
QBL	**Gabala**	**2.19 341**	Pn	**Pn**	**16 00 17.1**	**-1.3**
QBL			Sn	**Sn**	**16 00 44.5**	**+0.2**
ZNJK	**Zanjan**	**2.21 182**	Pn	**Pn**	**16 00 18.5**	**-0.3**
XNQ	**Khinaliq**	**2.34 348**	Pn	**Pn**	**16 00 20.2**	**-0.5**
XNQ			Sn	**Sn**	**16 00 47.5**	**-0.9**
SBZ	**Shahbuz**	**2.57 283**	Pn	**Pn**	**16 00 23.9**	**+0.2**
SBZ			Sn	**Sn**	**16 00 55.6**	**+1.9**
GANJ	**Ganja**	**2.59 314**	Sn	**Sn**	**16 00 52.4**	**-1.8**
QSAR	**Qusar**	**2.66 352**	Pn	**Pn**	**16 00 27.5**	**+2.7**
QSAR			Sn	**Sn**	**16 00 56.0**	**0.0**
GDB	**GEDABAY**	**2.97 309**	Pn	**Pn**	**16 00 29.3**	**+0.1**
GDB			Sn	**Sn**	**16 01 03.7**	**-0.1**
VSHL	**Vashlovani**	**2.98 323**	P	**Pn**	**16 00 29.4**	**+0.2**
VSHL			S	**Sn**	**16 00 59.9**	**-3.8**
ZKTA	**Zakatala**	**3.21 330**	Pn	**Pn**	**16 00 32.3**	**-0.1**
ZKTA			Sn	**Sn**	**16 01 08.9**	**-0.6**
CHRG	**Chargali**	**4.53 321**	P	**Pn**	**16 00 49.9**	**-0.7**
CHRG			S	**Sn**	**16 01 39.2**	**-2.9**

WEL ***16*** *16:02:25.0±0.7,30°S±8°×17°8W±1°6,h147km±15km, M4.4/6,mB4.8/5,MLv4.6/1,Mw(mB)4.1/6,Error ellipse: s-maj=23.2km s-min=5.4km az=114.8,confirmed*

IDC ***16*** *16:02:27.7±0.5,29°46S×178°59W,h149km±6km,mb3.9/6, mbtmp4.4/7,MS3.1/1,Error ellipse: s-maj=20.5km s-min=18.0km az=58.0*

NEIC ***16*** *16:02:28.1±1.8,29°6S±0°1×178°6W±0°1,h146km±5km, mb4.5/27,Error ellipse: s-maj=18.8km s-min=12.1km az=162.0*

ISC 16 16:02:27.3±0.5,**30°05S**±0°05×**178°47W**±0°08,**h150**km, **n80,σ2ⁱ9/77,mb4.5**/21,**1C,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.93**	**32**	P	**Pn**	**16 02 50.3**	**-1.2**
	4μm,0.3s,baz=118,slow=7.5,SNR=57						
RAO				S	**Sn**	**16 03 07.2**	**-2.7**
	3μm,0.2s,baz=101,slow=23,SNR=9.8						
RAO	**Raoul Island**	**0.93**	**32**		**Pn**	**16 02 50.2**	**-1.3**
RAO	**Raoul Island**	**0.93**	**32**	P	**Pn**	**16 02 50.5**	**-1.1**
MXZ	**Matakaoa Point**	**7.96**	**199**	Pn	**Pn**	**16 04 23.6**	**+3.4**
HAZ	**Te Kaha**	**8.30**	**201**	P	**Pn**	**16 04 23.1**	**-1.5**
HAZ				S	**Sn**	**16 05 59.2**	**+2.3**
PKGZ	**Pakihiroa**	**8.31**	**199**	P	**Pn**	**16 04 22.5**	**-2.3**
PKGZ				S	**Sn**	**16 06 00.6**	**+3.4**
WCZ	**Waipu Caves**	**8.42**	**224**	P	Pn	16 04 30.6	+4.3
OUZ	**Omahuta**	**8.45**	**230**	P	Pn	16 04 33.1	+6.5
PUZ	**Puketiti**	**8.45**	**198**	P	**Pn**	**16 04 24.2**	**-2.5**
PUZ				S	**Sn**	**16 05 58.9**	**-1.8**
MWZ	**Matawai**	**8.91**	**201**	P	**Pn**	**16 04 30.8**	**-2.0**
TKGZ	**Te Karaka**	**8.91**	**199**	P	**Pn**	**16 04 29.0**	**-3.8**
URZ	**Urewera**	**8.97**	**203**	P	**Pn**	**16 04 31.5**	**-2.1**
	6.6nm,0.3s,baz=251,slow=4.7,SNR=8.8						
URZ				S	**Sn**	**16 06 13.8**	**+0.7**
	25nm,0.3s,baz=167,slow=22,SNR=13						
URZ	**Urewera**	**8.97**	**203**	P	**Pn**	**16 04 30.5**	**-3.1**
URZ				S	**Sn**	**16 06 15.0**	**+1.8**
TOZ	**Tahuroa Road**	**9.15**	**212**	Pn	**Pn**	**16 04 39.1**	**+3.1**
RIGZ	**Rimuhau**	**9.18**	**199**	P	**Pn**	**16 04 33.6**	**-2.9**
KNZ	**Kokohu**	**9.50**	**198**	P	Pn	16 04 33.3	+7.3
RAHZ	**Arahi**	**9.58**	**201**	P	Pn	16 04 36.7	-5.0
RAHZ				P	**Sn**	**16 06 28.4**	**+0.6**
MTHZ	**Maungataniwha**	**9.60**	**202**	P	**Pn**	**16 04 42.1**	**+0.1**
MTHZ				P	**Sn**	**16 06 30.0**	**+1.7**
BKZ	**Black Stump Fm**	**10.00**	**203**	P	**Pn**	**16 04 43.9**	**-3.4**
HIZ	**Hauiti**	**10.09**	**211**	P	**Pn**	**16 04 51.9**	**+3.5**
MCHZ	**McNeill Hill**	**10.18**	**202**	P	Pn	16 04 43.9	-5.8
MCHZ				P	**Sn**	**16 06 43.8**	**+1.5**
KWHZ	**Kaweka Forest**	**10.25**	**203**	P	Pn	16 04 45.0	-5.7
KWHZ				P	**Sn**	**16 06 43.5**	**-0.6**
KAHZ	**Kahuranaki**	**10.45**	**200**	P	**Pn**	**16 04 49.1**	**-4.1**
KAHZ				P	**Sn**	**16 06 42.3**	**-6.4**
KRHZ	**Kereru**	**10.47**	**202**	P	**Pn**	**16 04 49.2**	**-4.3**
KRHZ				P	**Sn**	**16 06 46.9**	**-2.4**
PXZ	**Pawanui**	**10.67**	**200**	P	**Pn**	**16 04 53.7**	**-2.3**
PXZ				P	**Sn**	**16 06 50.2**	**-3.8**
TSZ	**Takapari Road**	**10.98**	**203**	P	**Pn**	**16 04 56.3**	**-3.9**
MSVF	**Nonsavu**	**12.66**	**345**	P	Pn	16 05 16.9	-5.4
	14nm,0.6s,baz=152,slow=16,SNR=3.7						
MSVF				LR	LR	16 08 17.2	
	comp=Z,78nm,19.1s,baz=14,slow=29						
NIUE	**Niue**	**13.40**	**37**	Pn	Pn	16 05 24.8	-6.9
NIUE	**Niue**	**13.40**	**37**	P	Pn	16 05 24.8	-6.9
CTZ	**Chatham Island**	**13.74**	**174**	P	**P**	**16 05 41.6**	**+2.1**
RAR	**Rarotonga**	**19.00**	**67**	P	Pn	16 06 46.0	+6.1
	6.9nm,0.6s,baz=250,slow=12,SNR=1.9						
RAR	**Rarotonga**	**19.00**	**67**	Pn	**Pn**	**16 06 39.5**	**-0.4**
RAR				IAmb	IAmb	16 07 14.5	
	comp=Z,60nm,1.4s						
ARMA	**Armidale**	**25.80**	**262**	P	**P**	**16 07 47.7**	**+3.0**
ARMA				IAmb	IAmb	16 08 09.8	
	comp=Z,20nm,1.2s						
EIDS	**Eidsvold**	**27.31**	**272**	P	**P**	**16 07 59.1**	**+1.0**
EIDS				IAmb	IAmb	16 08 22.7	
	comp=Z,24nm,1.3s						
CAN	**Canberra**	**27.80**	**251**	P	**P**	**16 08 04.0**	**+1.5**
PPTF	**Pamatai, Papee**	**29.12**	**71**	P	**P**	**16 08 14.0**	**-0.3**
CTAO	**Charters Tower**	**33.34**	**279**	P	**P**	**16 08 51.9**	**+0.7**
CTAO				IAmb	IAmb	16 08 52.9	
	comp=Z,12nm,0.8s						
STKA	**Stephens Creek**	**34.16**	**257**	P	**P**	**16 08 59.8**	**+1.6**
	comp=Z,4.3nm,0.5s,baz=98,slow=12,SNR=12						
	comp=Z,4.3nm,0.5s						
STKA	**Stephens Creek**	**34.16**	**257**	P	**P**	**16 09 00.1**	**+1.9**
INKA	**Innaminka**	**35.65**	**263**		**P**	**16 09 11.8**	**+0.8**
INKA				IAmb	IAmb	16 09 13.6	
	comp=Z,4.0nm,0.8s						
BBOO	**Buckleboo**	**38.67**	**254**	P	**P**	**16 09 36.5**	**0.0**
BBOO				IAmb	IAmb	16 09 45.4	
	comp=Z,11nm,1.4s						
AS31	**Alice Springs**	**42.72**	**267**		**P**	**16 10 08.7**	**-1.1**
ASAR	**Alice Springs**	**42.72**	**267**	P	**P**	**16 10 08.9**	**-0.9**
	comp=Z,2.8nm,0.4s,baz=105,slow=7.3,SNR=78						
	comp=Z,2.8nm,0.4s						
ASAR	**Alice Springs**	**42.72**	**267**	P	**P**	**16 10 08.6**	**-1.2**
WR8	**Warramunga Arr**	**43.53**	**272**	P	**P**	**16 10 16.1**	**-0.2**
WRAB	**Tennant Creek**	**43.67**	**272**	P	**P**	**16 10 16.6**	**-0.9**
WRA	**Warramunga Arr**	**43.67**	**272**	P	**P**	**16 10 16.5**	**-1.0**
	comp=Z,4.3nm,0.7s,baz=110,slow=8.1,SNR=54						
	comp=Z,4.3nm,0.7s						
WRA	**Warramunga Arr**	**43.67**	**272**		**P**	**16 10 16.5**	**-1.0**
WB0	**Warramunga Arr**	**43.70**	**272**		**P**	**16 10 16.7**	**-1.0**
FORT	**Forrest**	**45.74**	**255**	P	**P**	**16 10 33.0**	**-0.7**
FORT				IAmb	IAmb	16 10 34.6	
	comp=Z,7.4nm,0.7s						
SBA	**Scott Base**	**48.36**	**184**	P	P	16 10 59.6	+6.3
SBA				IAmb	IAmb	16 11 00.3	
	comp=Z,13nm,0.8s						
VNDA	**Vanda**	**48.41**	**186**	P	P	16 10 58.4	+4.7
	comp=Z,1.4nm,0.6s,baz=6.7,slow=7.4,SNR=10						
	comp=Z,1.4nm,0.6s						
VNDA	**Vanda**	**48.41**	**186**	P	P	16 10 58.8	+5.1
KNRA	**Kununurra**	**50.27**	**274**	P	**P**	**16 11 08.8**	**+0.2**
KNRA				IAmb	IAmb	16 11 48.3	
	comp=Z,7.2nm,1.1s						
FITZ	**Fitzroy Crossi**		**51.95 270**	P	**P**	**16 11 20.9**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=163,slow=11,SNR=1.4						
	comp=Z,0.8nm,0.7s						
CASY	**Casey**		**55.26 208**	P	**P**	**16 11 46.0**	**+1.4**
CASY				IAmb	IAmb	16 12 18.4	
	comp=Z,7.9nm,1.1s						
MBWA	**Marble Bar**		**55.86 264**	P	**P**	**16 11 47.0**	**-2.5**
MBWA				IAmb	IAmb	16 12 13.7	
	comp=Z,11nm,1.3s						
MORW	**Morawa**		**56.24 253**	P	**P**	**16 11 50.9**	**-1.3**
MORW				IAmb	IAmb	16 11 52.1	
	comp=Z,11nm,1.4s						
QSPA	**South Pole Qui**		**60.06 180**	P	P	16 12 23.0	+4.7
	comp=Z,7.0nm,0.6s,baz=348,slow=0.3,SNR=79						
	comp=Z,7.0nm,0.6s						
QSPA	**South Pole Qui**		**60.06 180**	P	P	16 12 22.6	+4.3
BELA	**Belgrano 2**		**70.19 172**	P	**P**	**16 13 26.0**	**+2.7**
BELA				IAmb	IAmb	16 13 57.7	
	comp=Z,8.4nm,1.5s						
TROLL	**Troll, Antarti**		**78.22 180**	P	P	16 14 14.0	+4.0
VNA3	**Neumayer Olymp**		**78.68 176** ⇑	P	**P**	**16 14 15.5**	**+3.1**
	comp=Z,9.2nm,0.7s						
PLCA	**Paso Flores**		**83.05 133**	P	**P**	**16 14 38.9**	**+2.7**
PLCA				IAmb	IAmb	16 15 09.1	
	comp=Z,4.6nm,1.2s						
SLBS	**Sierra La Lagu**		**84.72 59**	P	**P**	**16 14 44.2**	**-0.6**
SLBS				IAmb	IAmb	16 14 48.5	
	comp=Z,20nm,1.4s						
KMRM	**Mail Ridge**		**86.41 39**	P	**P**	**16 14 52.6**	**-0.2**
CO02	**Combarbal**		**88.07 125**	P	**P**	**16 15 03.4**	**+2.2**
MKAR	**Makanchi Array**		**117.23 310**	PKP	**PKPdf**	**16 20 52.5**	**-2.1**
	comp=Z,0.4nm,0.6s,baz=123,slow=5.0,SNR=2.7						
ZALV	**Zalesovo Beam**		**117.50 319**	PKP	**PKiKP**	**16 20 54.9**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=117,slow=5.5,SNR=5.8						
KURK	**Kurchatov**		**120.51 314**		**PKPdf**	**16 20 59.2**	**-1.4**
KURBB	**Kurchatov Arra**		**120.55 314**	PKP	**PKPdf**	**16 20 59.2**	**-1.5**
	comp=Z,0.9nm,0.5s,baz=119,slow=1.7,SNR=14						
FINES	**FINESS Array B**		**144.67 340**	PKP	**PKPab**	**16 21 42.9**	**-1.7**
	comp=Z,3.4nm,0.5s,baz=64,slow=3.2,SNR=33						
NB2	**NORSAR Subarra**		**148.34 351**	PKP	**PKPbc**	**16 21 54.2**	**-1.1**
	comp=Z,1.6nm,0.8s,baz=13,slow=4.3						
NOA	**NORSAR Array B**		**148.34 351**	PKPbc	**PKPbc**	**16 21 54.1**	**-1.1**
	comp=Z,0.9nm,0.6s,baz=15,slow=4.2,SNR=3.9						
HFS	**Hagfors**		**148.81 348**	PKPbc	**PKPbc**	**16 21 54.6**	**-1.9**
	comp=Z,2.8nm,0.9s,baz=20,slow=4.6,SNR=6.7						
AKASG	**Malin Array Be**		**150.77 323**	PKPbc	**PKPbc**	**16 22 00.5**	**-1.0**
	comp=Z,2.4nm,0.5s,baz=51,slow=2.7,SNR=14						
AKASG	**Malin Array Be**		**150.77 323**		**PKiKP**	**16 22 01.0**	**-1.1**
MMAI	**Mount Meron Ar**		**151.04 285**	PKPbc	**PKiKP**	**16 22 03.3**	**0.0**
	comp=Z,3.3nm,0.6s,baz=38,slow=7.3,SNR=12						
BRTR	**Keskin Array B**		**152.07 299**	PKPbc	**PKPbc**	**16 22 04.1**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=147,slow=6.3,SNR=4.5						
TORD	**Torodi Ar. Bea**		**163.18 181**	PKPab	**PKPab**	**16 23 05.9**	**+2.6**
	comp=Z,1.6nm,0.7s,baz=202,slow=4.6,SNR=7.3						

IDC ***16*** *16:10:41.1±1.1,0°47N×120°75E,h0km,mb3.6/4, mbtmp3.6/5,ML3.7/1,MS2.6/2,Error ellipse: s-maj=132.1km s-min=19.2km az=65.0*

DJA ***16*** *16:10:48.0±0.3,0°N±2°×12°0E±°,h33km±6km,M4.4/27, mB5.4/2,mb4.4/4,MLv4.4/27,Mw(mB)4.9/2*

ISC 16 16:10:47.7±1.1,**0°15N**±0°06×**119°90E**±0°06,**h50**km±10km, **n20,σ1ⁱ9/14,mb3.5**/4,**Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPSI	**Mapaga**	**0.18**	**359**	P	**Pn**	**16 10 56.1**	**+0.1**
PCI	**Palu**	**1.05**	**184**	P	**Pn**	**16 11 05.7**	**-0.5**
PCI				S	**Sn**	**16 11 20.3**	**+0.5**
APSI	**Ampana**	**2.04**	**121**	P	**Pn**	**16 11 18.8**	**-0.8**
MRSI	**Marisa**	**2.06**	**81**	P	**Pn**	**16 11 20.8**	**+0.9**
SGKI	**Sangatta, Kali**	**2.40**	**254**	P	**Pn**	**16 11 24.3**	**-0.2**
MMSI	**Mamuju**	**2.99**	**199**	P	**Pn**	**16 11 32.3**	**-0.4**
LUWI	**Luwuk**	**3.10**	**112**	P	**Pn**	**16 11 35.4**	**+1.2**
GTOI	**Gorontalo**	**3.15**	**81**	P	**Pn**	**16 11 33.8**	**-0.9**
TTSI	**Tana Toraja**	**3.18**	**182**	P	**Pn**	**16 11 36.2**	**+1.0**
PMSI	**Majene**	**3.76**	**195**	P	**Pn**	**16 11 43.9**	**+0.6**
SPSI	**Sidrap Palu**	**4.09**	**182**	P	**Pn**	**16 11 48.5**	**+0.7**
KKSI	**Kolaka, Sulawe**	**4.64**	**158**	P	**Pn**	**16 11 56.9**	**+1.6**
KAPI	**Kappang**	**5.14**	**182**	LR	LR	16 14 13.1	
	comp=Z,85nm,21.4s,baz=356,slow=38						
MKS	**Makassar**	**5.35**	**185**	P	**Pn**	**16 12 05.8**	**+0.7**
	0.2nm56nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.00**	**163**	P	**P**	**16 15 03.3**	**-2.0**
	0.2nm,0.3s,baz=8.6,slow=6.5,SNR=2.1						
	0.7nm,0.4s						
WRA	**Warramunga Arr**	**24.47**	**146**	P	**P**	**16 16 00.4**	**-1.9**
	0.6nm,0.6s,baz=336,slow=8.5,SNR=12						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**27.30**	**151**	P	**P**	**16 16 26.8**	**-1.1**
	0.3nm,0.5s,baz=346,slow=15,SNR=13						
	0.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**27.47**	**313**	LR	LR	16 27 24.0	
	comp=Z,11nm,21.6s,baz=125,slow=36						
SONM	**Songino Array**	**48.92**	**348**	P	**P**	**16 19 29.2**	**+0.4**
	0.4nm,0.5s,baz=167,slow=8.8,SNR=4.0						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**56.89**	**330**	P	**P**	**16 20 28.7**	**+1.2**
	0.8nm,0.3s,baz=129,slow=8.9,SNR=20						
	0.8nm,0.3s						

IDC ***16*** *16:17:45.6±5.8,6°98S×150°42E,h59km±48km,mb3.5/8, mbtmp3.8/9,ML1.6/1,MS2.9/3,Error ellipse: s-maj=46.9km s-min=29.7km az=109.0*

ISC 16 16:17:41.2±1.3,**6°9S**±0°2×**150°6E**±0°3,**h26**km,**n14,** **σ1ⁱ9/08/11,mb3.8/7,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.96**	**29**	LR	LR	16 19 26.1	
	comp=Z,6.5nm,19.2s,baz=35,slow=32						
PMG	**Port Moresby**	**4.21**	**234**	P	**Pn**	**16 18 45.3**	**+1.5**
	2.7nm,0.3s,baz=37,slow=7.3,SNR=11						
PMG				S	**Sn**	**16 19 31.7**	**-0.4**
	17nm,0.5s,baz=3.2,slow=11,SNR=3.5						
	6.4nm,0.3s						
CTA	**Charters Tower**	**13.75**	**197**	LR	LR	16 25 10.6	
	comp=Z,50nm,19.1s,baz=39,slow=33						
WRA	**Warramunga Arr**	**20.41**	**229**	P	**P**	**16 22 16.6**	**+0.1**
	1.9nm,0.5s,baz=45,slow=9.7,SNR=52						
	1.9nm,0.5s						
GUMO	**Guam**	**21.16**	**344**	LR	LR	16 30 52.3	
	comp=Z,34nm,18.1s,baz=134,slow=37						
ASAR	**Alice Springs**	**23.12**	**222**	P	**P**	**16 22 45.4**	**-0.2**
	2.9nm,0.7s,baz=56,slow=9.8,SNR=51						
	2.9nm,0.7s						
STKA	**Stephens Creek**	**26.21**	**198**	P	**P**	**16 23 13.4**	**-0.7**
	1.5nm,0.6s,baz=24,slow=10.0,SNR=4.2						
	1.5nm,0.6s						
FITZ	**Fitzroy Crossi**	**26.74**	**243**	P	**P**	**16 23 16.9**	**-2.0**
	1.0nm,0.3s,baz=78,slow=10,SNR=6.3						
	1.0nm,0.3s						
YAK	**Yakutsk**	**70.63**	**350**	LR	LR	17 03 09.3	
	comp=Z,9.0nm,19.5s,baz=216,slow=38						
MKAR	**Makanchi Array**	**80.50**	**320**	P	**P**	**16 29 51.6**	**+0.5**
	0.2nm,0.7s,baz=98,slow=6.8,SNR=4.1						
	0.2nm,0.7s						
ZALV	**Zalesovo Beam**	**81.71**	**327**	P	**P**	**16 29 56.5**	**-0.9**
	0.4nm,0.4s,baz=94,slow=6.4,SNR=2.1						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**84.12**	**322**	P	**P**	**16 30 09.2**	**-0.7**
	0.3nm,0.7s,baz=107,slow=3.6,SNR=3.4						
	0.3nm,0.7s						
ILAR	**Eielson Array**	**84.94**	**22**	P	**P**	**16 30 14.5**	**+0.7**
	1.3nm,0.9s,baz=258,slow=6.0,SNR=11						
	1.3nm,0.9s						
TORD	**Torodi Ar. Bea**	**148.79**	**284**	PKPbc	**PKPbc**	**16 37 28.0**	**+0.5**
	1.2nm,0.6s,baz=101,slow=0.8,SNR=8.4						

DJA ***16*** *16:19:47.5±0.5,8°S±2°×11°7E±°,h11km±5km,M4.0/24, mb3.6/3,MLv4.1/24*

IDC ***16*** *16:19:50.5±7.6,8°13S×117°33E,h42km±73km,mb3.1/4, mbtmp3.5/6,ML3.6/2,MS3.1/1,Error ellipse: s-maj=122.3km s-min=31.9km az=58.0*

ISC 16 16:19:49.9±0.9,**7°93S**±0°05×**117°47E**±0°04,**h35**km,**n27,** **σ1ⁱ9/71/28,mb3.5/3,Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.95**	**161**	P	**Pn**	**16 20 06.3**	**-0.4**
PLAI				S	**Sn**	**16 20 20.7**	**+1.7**
TWSI	**Taliwang, Sumb**	**0.99**	**216**	P	**Pn**	**16 20 05.7**	**-1.6**
DBNI	**Kabupaten Domp**	**1.01**	**124**	P	**Pn**	**16 20 08.1**	**+0.4**
KHKI	**Kahang-Kahang**	**1.89**	**257**	P	**Pn**	**16 20 20.4**	**+0.7**
KHKI				S	**Sn**	**16 20 43.7**	**+1.4**
DNP	**Denpasar**	**2.35**	**251**	Pg	Pn	16 20 33.1	+7.1
IGBI	**Denpasar**	**2.46**	**249**	P	**Pn**	**16 20 27.8**	**+0.3**
LBFI	**Labuhan Bajo,**	**2.46**	**103**	P	**Pn**	**16 20 26.9**	**-0.7**
RTBI	**Rangdo, Negare**	**2.55**	**258**	P	**Pn**	**16 20 30.4**	**+1.6**
WBSI	**Waikabubak, Su**	**2.56**	**132**	P	**Pn**	**16 20 31.1**	**+2.2**
ABJI	**Asem Bagus**	**3.20**	**272**	P	**Pn**	**16 20 36.3**	**-1.4**
WSI	**Waingapu**	**3.29**	**122**	P	**Pn**	**16 20 40.0**	**+1.0**
WSI				S	**Sn**	**16 21 20.0**	**+3.1**
JAGI	**Jajag, Banyuwa**	**3.32**	**260**	P	**Pn**	**16 20 37.7**	**-1.7**
MKS	**Makassar**	**3.35**	**37**	P	**Pn**	**16 20 40.1**	**+0.3**
BSSI	**Bau Bau, Buton**	**3.49**	**60**	P	**Pn**	**16 20 40.6**	**-1.1**
KMMI	**Kalianget**	**3.58**	**284**	P	**Pn**	**16 20 42.2**	**-0.7**
KAPI	**Kappang**	**3.68**	**38**	P	**Pn**	**16 20 42.7**	**-1.6**
EDFI	**Ende, Flores**	**4.26**	**101**	P	**Pn**	**16 20 52.8**	**+0.4**
SPSI	**Sidrap Palu**	**4.55**	**30**	P	**Pn**	**16 20 56.9**	**+0.5**
MMRI	**Maumere**	**4.78**	**99**	P	**Pn**	**16 20 59.6**	**+0.2**
SNJI	**Sawahan-Nganju**	**5.66**	**271**	P	**Pn**	**16 21 12.1**	**+0.5**
	0.1nm13nm,1.4s						
BATI	**Baumata**	**6.53**	**111**	P	**Pn**	**16 21 24.8**	**+1.2**
	2.3nm,0.3s,baz=276,slow=11,SNR=2.1						
	4.7nm,0.3s						
LEM	**Lembang**	**9.83**	**276**	LR	LR	16 26 05.9	
	comp=Z,103nm,20.6s,baz=99,slow=39						
FITZ	**Fitzroy Crossi**	**12.87**	**143**	P	**Pn**	**16 22 50.9**	**+0.5**
	0.1nm,0.3s,baz=305,slow=12,SNR=3.4						
FITZ				S	**Sn**	**16 25 06.8**	**-5.6**
	2.3nm,0.5s,baz=187,slow=22,SNR=8.4						
	0.6nm,0.5s						
WRA	**Warramunga Arr**	**20.25**	**128**	P	Pn	16 24 22.6	-1.8
	0.8nm,0.8s,baz=303,slow=12,SNR=5.8						
	0.8nm,0.8s						
ASAR	**Alice Springs**	**22.21**	**137**	P	**P**	**16 24 43.6**	**+0.1**
	0.8nm,0.7s,baz=324,slow=12,SNR=7.4						
	0.8nm,0.7s						
MKAR	**Makanchi Array**	**62.82**	**334**	P	**P**	**16 30 11.7**	**-0.4**
	0.4nm,0.8s,baz=142,slow=7.0,SNR=5.9						
	0.4nm,0.8s						
KURBB	**Kurchatov Arra**	**67.34**	**334**	P	**P**	**16 30 42.9**	**+1.7**
	0.3nm,0.8s,baz=140,slow=5.9,SNR=2.8						
	0.3nm,0.8s						

JMA ***16*** *16:23:10.3±0.1,22°3N±0°6×121°6E±0°3,h15km,MV3.9/17, TAIWAN REGION*

TAP ***16*** *16:23:10.1,22°23N×121°46E,h21km,ML3.6,C*

ISC 16 16:23:09.2±0.9,**22°26N**±0°02×**121°50E**±0°02,**h16**km±7km, **n147,σ1ⁱ9/08/255,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.22**	**167**	*i* P	**Pb**	**16 23 15.7**	**+0.8**
LAY				*eS*	**Sb**	**16 23 19.3**	**+0.5**
LYUB	**Lan-yu**	**0.27**	**163**	*i* P	**Pg**	**16 23 15.1**	**+0.3**
LYUB				*i* S	**Sg**	**16 23 18.7**	**-0.3**
LDUT	**Ludao**	**0.41**	**356**	*i* P	**Pb**	**16 23 19.1**	**+1.0**
LDUT				S	**Sb**	**16 23 25.7**	**+1.5**
TAW	**Tawu**	**0.57**	**280**	*i* P	**Pb**	**16 23 20.4**	**-0.3**
TAW				*eS*	**Sg**	**16 23 27.1**	**-0.8**
TTN	**Taitung**	**0.59**	**327**	*eP*	**Pn**	**16 23 22.8**	**-0.1**
TTN				*eS*	**Sn**	**16 23 32.6**	**+0.3**
ECL	**Taimali**	**0.61**	**304**	*i* P	**Pb**	**16 23 21.2**	**-0.2**
ECL				*eS*	**Sg**	**16 23 28.4**	**-0.9**
EAST	**Anshuo**	**0.61**	**282**	*i* P	**Pb**	**16 23 21.2**	**-0.4**
EAST				*eS*	**Sg**

CHY					eS		Sb	16 23 57.2	-0.6
SSLB	**Suanglung**	**1.60**	**342**		*e*P		**Pg**	**16 23 39.1**	**-0.9**
SSLB					eS		**Sg**	**16 23 59.9**	**-1.0**
TEYL	**Yanliau Villag**	**1.60**	**3**	P			**Pb**	**16 23 38.2**	**-0.2**
TEYL					eS		**Sg**	**16 23 59.7**	**-1.2**
CHN8	**Yiju**	**1.61**	**313**		*e*P		**Pg**	**16 23 39.6**	**-0.6**
CHN8					eS		**Sb**	**16 23 58.7**	**+0.1**
WGK	**Gukeng**	**1.66**	**329**	P			**Pb**	**16 23 39.8**	**+0.3**
WGK					eS		**Sg**	**16 24 02.6**	**-0.2**
WDLH	**Douliu**	**1.68**	**328**	P			**Pb**	**16 23 40.0**	**+0.3**
WDLH					eS		**Sg**	**16 24 02.4**	**-0.8**
ETM	**Tongmen**	**1.70**	**360**		*e*P		**Pn**	**16 23 38.8**	**+0.6**
ETM					eS		**Sn**	**16 23 59.6**	**0.0**
SMLT	**Sun Moon Lake**	**1.71**	**341**		*e*P		**Pg**	**16 23 41.7**	**-0.4**
SMLT					eS		**Sg**	**16 24 04.1**	**-0.2**
WJS	**Zhushan**	**1.71**	**336**		*e*P		**Pg**	**16 23 41.4**	**-0.7**
WJS					eS		**Sg**	**16 24 03.8**	**-0.5**
HWA	**Hwalien**	**1.71**	**3**		*e*P		**Pb**	**16 23 40.1**	**-0.2**
HWA					eS		**Sb**	**16 24 01.5**	**-0.2**
OWD	**Renai**	**1.71**	**350**		*e*P		**Pb**	**16 23 40.2**	**-0.2**
OWD					eS		**Sb**	**16 24 00.7**	**-1.1**
WSL	**Shuilin Townsh**	**1.72**	**317**	P			**Pb**	**16 23 39.7**	**-0.8**
WSL					S		**Sb**	**16 24 01.2**	**-0.6**
WTK	**Tuku**	**1.75**	**324**	P			**Pb**	**16 23 40.8**	**-0.2**
WTK					S		**Sg**	**16 24 04.2**	**-1.5**
WUSB	**Renai**	**1.76**	**349**	P			**Pb**	**16 23 41.1**	**-0.1**
WUSB					eS		**Sb**	**16 24 02.2**	**-1.0**
WNT	**Mingjian**	**1.78**	**335**	P			**Pb**	**16 23 42.1**	**+0.6**
WNT					S		**Sg**	**16 24 05.3**	**-1.2**
WSF	**Szhu**	**1.81**	**320**		*e*S		**Sb**	**16 24 02.7**	**-1.7**
TWD	**Chiawan**	**1.81**	**3**	P			**Pn**	**16 23 40.2**	**+0.4**
TWD					eS		**Sn**	**16 23 59.4**	**+0.2**
WCS	**Beigang Elemen**	**1.87**	**343**		*e*P		**Pn**	**16 23 43.4**	**+0.4**
WCS					eS		**Sg**	**16 24 07.8**	**-1.7**
NACB	**Ninganchiao**	**1.91**	**3**	P			**Pn**	**16 23 41.4**	**+0.3**
NACB	**Ninganchiao**	**1.91**	**3**	S			**Sb**	**16 24 07.6**	**+0.3**
NACB	**Ninganchiao**	**1.91**	**3**	P			**Pn**	**16 23 41.4**	**+0.3**
NACB					eS		**Sn**	**16 24 05.5**	**+0.7**
RLNB	**Erlin**	**1.93**	**327**		*e*P		**Pb**	**16 23 43.4**	**-0.7**
RLNB					eS		**Sb**	**16 24 07.9**	**-0.1**
WRL	**Guolierlin Hig**	**1.93**	**328**	P			**Pb**	**16 23 43.0**	**-1.1**
WRL					eS		**Sb**	**16 24 07.6**	**-0.4**
ETLH	**Xiulin Townshi**	**1.94**	**360**		*e*P		**Pn**	**16 23 42.6**	**+1.0**
WDGT	**Dungji**	**1.97**	**301**	P			**Pn**	**16 23 41.9**	**0.0**
WDGT					eS		**Sn**	**16 24 05.0**	**-1.3**
FUSS	**Fushou**	**1.99**	**353**		*e*P		**Pb**	**16 23 44.3**	**-1.0**
FUSS					eS		**Sb**	**16 24 09.3**	**-0.7**
EOS4	**EOS4**	**2.00**	**22**		*e*P		**Pn**	**16 23 43.0**	**+0.9**
EOS4					eS		**Sn**	**16 24 06.0**	**-0.6**
WCH1	**Changhua City**	**2.01**	**334**		eS		**Sb**	**16 24 10.2**	**+0.1**
TWT	**Tachien**	**2.01**	**352**		*e*P		**Pb**	**16 23 45.0**	**-0.5**
WCHH	**Zhanghua**	**2.01**	**335**		*e*P		**Pb**	**16 23 45.2**	**-0.2**
WCHH					eS		**Sg**	**16 24 12.4**	**-1.5**
TDCB	**Techi**	**2.01**	**351**		*e*P		**Pb**	**16 23 46.4**	**+0.9**
TCU	**Taichung**	**2.03**	**338**		*e*P		**Pb**	**16 23 45.9**	**+0.2**
TCU					eS		**Sg**	**16 24 12.4**	**-2.0**
WHP	**Taichung City**	**2.07**	**346**	P			**Pb**	**16 23 47.0**	**+0.5**
WHP					eS		**Sb**	**16 24 13.1**	**+1.0**
VCHM	**Qimei**	**2.13**	**297**	*i* P			**Pn**	**16 23 44.0**	**-0.1**
VCHM					eS		**Sn**	**16 24 08.7**	**-1.6**
EOS3	**EOS3**	**2.15**	**20**		*e*P		**Pn**	**16 23 45.6**	**+1.3**
EOS3					eS		**Sn**	**16 24 10.6**	**-0.1**
NNSB	**Datong**	**2.16**	**357**		*e*P		**Pn**	**16 23 46.2**	**+1.5**
NNSB					eS		**Sb**	**16 24 13.8**	**-1.0**
PHUB	**P'eng-hu**	**2.17**	**305**	P			**Pn**	**16 23 44.7**	**0.0**
PHUB					eS		**Sn**	**16 24 10.7**	**-0.6**
NNS	**Nan Shan**	**2.17**	**357**		*e*P		**Pb**	**16 23 48.4**	**+0.1**
NNS					eS		**Sb**	**16 24 13.5**	**-1.6**
TWQ1	**Liyutan**	**2.18**	**342**		*e*P		**Pb**	**16 23 47.9**	**-0.5**
TWQ1					eS		**Sb**	**16 24 16.5**	**+1.3**
EWUT	**Wuta**	**2.19**	**7**		*e*P		**Pn**	**16 23 46.2**	**+1.2**
PNG	**Penghu**	**2.21**	**306**	P			**Pn**	**16 23 45.4**	**+0.1**
EOS2	**EOS2**	**2.25**	**17**		*e*P		**Pn**	**16 23 47.7**	**+2.0**
EOS2					eS		**Sb**	**16 24 15.5**	**-1.6**
LATG	**Datong**	**2.27**	**1**		*e*P		**Pb**	**16 23 48.6**	**-1.3**
NDT	**Datong Townshi**	**2.33**	**0**		*e*P		**Pb**	**16 23 50.7**	**-0.2**
NDT					eS		**Sb**	**16 24 18.2**	**-1.4**
TWC	**Suao**	**2.36**	**8**		*e*P		**Pn**	**16 23 48.8**	**+1.4**
TWC					eS		**Sn**	**16 24 17.5**	**+1.5**
ENTT	**Nioudou**	**2.37**	**1**		*e*P		**Pb**	**16 23 49.9**	**-1.7**
NDS	**Dongshan**	**2.37**	**5**		*e*P		**Pb**	**16 23 50.0**	**-1.6**
NDS					eS		**Sn**	**16 24 17.5**	**+1.2**
NFF	**Wufeng Townshi**	**2.39**	**352**		*e*P		**Pb**	**16 23 51.2**	**-0.7**
NFF					eS		**Sb**	**16 24 20.7**	**-0.5**
YHNB	**Yeheng**	**2.40**	**357**		P		**Pb**	**16 24 02.8**	**+1.9**
YHNB	**Yeheng**	**2.40**	**357**		*e*P		**Pn**	**16 23 50.0**	**+1.9**
YHNB					eS		**Sb**	**16 24 20.2**	**-1.4**
NSTT	**Nanjuang**	**2.41**	**349**		*e*P		**Pb**	**16 23 52.5**	**+0.3**
NSTT					eS		**Sb**	**16 24 21.9**	**+0.3**
NSK	**Sanguang**	**2.41**	**357**		*e*P		**Pb**	**16 23 50.6**	**-1.6**
NSK					eS		**Sb**	**16 24 20.2**	**-1.6**
LIOB	**Emei**	**2.42**	**350**		*e*P		**Pb**	**16 23 52.3**	**-0.1**
LIOB					eS		**Sb**	**16 24 21.8**	**-0.2**
TWE	**Neicheng**	**2.46**	**4**		*e*P		**Pb**	**16 23 52.9**	**-0.2**
FUSB	**Fushanzhiwuyua**	**2.49**	**2**		*e*P		**Pn**	**16 23 51.1**	**+1.9**
FUSB					eS		**Sn**	**16 24 20.8**	**+1.4**
NWLT	**Wulai**	**2.51**	**0**		*e*P		**Pb**	**16 23 51.7**	**-2.2**
NWLT					eS		**Sn**	**16 24 21.9**	**+2.2**
KSHI	**Guanxi Townshi**	**2.52**	**353**		*e*P		**Pb**	**16 23 53.5**	**-0.6**
KSHI					eS		**Sb**	**16 24 26.6**	**+1.6**
JYNG	**Yonagunijimaku**	**2.56**	**31**	P			**Pn**	**16 23 51.1**	**+1.1**
JYNG					eS		**Sn**	**16 24 19.8**	**-1.0**
YOJ	**Yonaguni jima**	**2.60**	**32**	P			**Pn**	**16 23 50.8**	**+0.3**
YOJ	**Yonaguni jima**	**2.60**	**32**		*e*P		**Pn**	**16 23 50.8**	**+0.3**
YOJ					eS		**Sn**	**16 24 19.6**	**-2.1**
YOJ	**Yonaguni jima**	**2.60**	**32**	P			**Pn**	**16 23 51.8**	**+1.2**
YOJ					eS		**Sn**	**16 24 22.0**	**+0.2**
TIPB	**Shuangxi**	**2.72**	**6**		*e*P		**Pb**	**16 23 55.0**	**-2.4**
TIPB					eS		**Sn**	**16 24 26.9**	**+2.0**
HATJ	**Hateruma jima**	**2.78**	**49**	P			**Pn**	**16 23 54.0**	**+1.0**
HATJ					S		**Sn**	**16 24 25.1**	**-1.1**
SXI1	**Grass Mountain**	**2.84**	**7**		*e*P		**Pn**	**16 23 56.8**	**+2.7**
SXI1					eS		**Sn**	**16 24 30.4**	**+2.3**
YM01	**YM01**	**2.88**	**1**		*e*P		**Pb**	**16 23 58.6**	**-1.5**
YM01					eS		**Sb**	**16 24 32.6**	**-2.6**
ZUZH	**Zhuzihu**	**2.89**	**1**		*e*P		**Pn**	**16 23 57.0**	**+2.3**
ZUZH					eS		**Sn**	**16 24 32.0**	**+2.9**
IRIF	**Iriomote-Funau**	**2.91**	**44**	*i* P			**Pn**	**16 23 56.1**	**+1.2**
IRIF					S		**Sn**	**16 24 30.0**	**+0.4**
JKRS	**Kuro-shima**	**3.04**	**49**	P			**Pn**	**16 23 57.3**	**+1.2**
JKRS					S		**Sn**	**16 24 31.8**	**-0.9**
JIJ	**Ishigaki jima**	**3.21**	**49**	P			**Pn**	**16 23 59.7**	**+0.7**
JIJ					S		**Sn**	**16 24 35.4**	**-1.6**
VWUC	**VWUC**	**3.31**	**326**		*e*P		**Pn**	**16 24 01.0**	**+0.7**
VWUC					eS		**Sn**	**16 24 39.2**	**-0.1**
JISG	**Ishigakijimahi**	**3.47**	**48**	P			**Pn**	**16 24 03.1**	**+0.5**
JISG					S		**Sn**	**16 24 42.4**	**-0.9**
PTMZ	**Houxiangcun**	**3.52**	**322**		*e*P		**Pn**	**16 24 03.8**	**+0.5**
PTMZ					eS		**Sn**	**16 24 44.3**	**-0.4**
JTJ	**Tarama**	**3.78**	**51**	P			**Pn**	**16 24 07.9**	**+1.1**
JTJ					S		**Sn**	**16 24 50.4**	**-0.5**
ZPLA	**Ao Xicun**	**3.83**	**296**		*e*P		**Pn**	**16 24 07.1**	**-0.4**
DSXP	**Dongshan**	**4.02**	**292**	P			**Pn**	**16 24 10.1**	**0.0**
MATB	**Ma-tsu**	**4.13**	**340**		*e*P		**Pn**	**16 24 13.1**	**+1.5**
MATB					eS		**Sn**	**16 24 58.6**	**-1.0**
AXDP	**Jialang**	**4.17**	**310**	P			**Pn**	**16 24 12.6**	**+0.4**
JMJ2	**Miyako jima3**	**4.30**	**54**		*e*P		**Pn**	**16 24 15.0**	**+1.0**
JMJ2					eS		**Sn**	**16 25 03.4**	**-0.4**
JIKM	**Ikemajima**	**4.34**	**52**	P			**Pn**	**16 24 15.5**	**+0.9**
JIKM					S		**Sn**	**16 25 05.1**	**+0.1**
JOGS	**Gusukube**	**4.37**	**54**	P			**Pn**	**16 24 16.2**	**+1.3**
JOGS					eS		**Sn**	**16 25 05.6**	**+0.1**
MHZQ	**Yeshan**	**4.44**	**330**		*e*P		**Pn**	**16 24 16.5**	**+0.6**
MHZQ					eS		**Sn**	**16 25 06.0**	**-1.2**
SXFK	**Yanhouchang**	**5.42**	**320**	P			**Pn**	**16 24 29.6**	**+0.2**

IDC 16 16:24:02.8±1.4,2°.50S×140°.34E, h0km, mb3.3/2, mbtmp3.4/3, ML3.4/1, Error ellipse: s-maj=16.8km s-min=9.3km az=178.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**0.36**	**93**	Pg	Pg	16 24 10.1	+0.3
	431nm,0.3s,baz=271,slow=12,SNR=6870						
JAY				Lg	Lg	16 24 14.2	
WRA	**Warramunga Arr**	**18.31**	**198**	P	Pn	16 28 17.9	-0.5
	0.1nm,0.3s,baz=20,slow=12,SNR=5.5 0.7nm,0.6s						
ASAR	**Alice Springs**	**21.95**	**196**	P	P	16 28 58.6	+0.3

0.5nm,0.7s,baz=29,slow=10.0,SNR=9.9 0.5nm,0.7s

MKAR	**Makanchi Array**	**70.62**	**322**		P		P	16 35 19.7	-0.5
	0.4nm,0.8s,baz=110,slow=6.5,SNR=5.4 0.4nm,0.8s									

*WEL **16** 16:30:43.1±0.3, 42°.5S×17°.4E±°, h12km±3km, M2.5/12, ML2.6/18, MLv2.5/12, Error ellipse: s-maj=3.1km s-min=2.5km az=160.0, confirmed*
*NOU **16** 16:30:46.6, 41°.70S×174°.09E, h18km, MLv3.5/8, Cook Strait, New Zealand*
ISC 16 16:30:43.0±1.0, 41°.66S±0°.03×174°.32E±0°.02, h14km±8km, n48, σ0s88/58, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.12**	**223**	P	**Pb**	**16 30 50.1**	**+3.1**
SEDS	**Seddon Fire St**	**0.18**	**267**	P	**Pg**	**16 30 47.6**	**+0.3**
WDFS	**Ward Fire Stat**	**0.21**	**219**	P	**Pb**	**16 30 48.4**	**-0.3**
WDFS				S	**Sb**	**16 30 52.6**	**+0.2**
MGCS	**Blenheim Marlb**	**0.32**	**299**	P	**Pg**	**16 30 49.7**	**+0.2**
TUWZ	**Tuamarina**	**0.37**	**309**	P	**Pb**	**16 30 51.3**	**0.0**
TUWZ				S	**Sb**	**16 30 56.7**	**-0.2**
BWRS	**Waikakaho Road**	**0.38**	**306**	P	**Pg**	**16 30 50.8**	**+0.1**
BWRS				S	**Sg**	**16 30 56.2**	**+0.3**
QCCS	**Picton Queen C**	**0.44**	**330**	P	**Pg**	**16 30 51.5**	**-0.3**
QCCS				S	**Sg**	**16 30 57.5**	**-0.3**
TCW	**Tory Channel**	**0.45**	**356**	P	**Pg**	**16 30 52.0**	**0.0**
TCW				S	**Sg**	**16 30 58.2**	**+0.1**
SNZO	**South Karori**	**0.46**	**40**	P	Pn	16 30 59.7	+4.6
BHW	**Baring Head**	**0.49**	**59**	P	**Pb**	**16 30 53.2**	**-0.1**
TRTW	**Torrens Terrac**	**0.50**	**43**	P	**Pb**	**16 30 53.3**	**-0.2**
WNHS	**Wellington Hig**	**0.50**	**44**	P	**Pb**	**16 30 53.3**	**-0.2**
WEL	**Wellington**	**0.51**	**42**	P	**Pb**	**16 30 53.5**	**-0.2**
WEL				S	**Sb**	**16 31 01.1**	**+0.1**
PLWZ	**Palliser**	**0.71**	**83**	P	**Pn**	**16 30 57.8**	**-0.8**
PLWZ				S	**Sn**	**16 31 09.3**	**0.0**
MSWZ	**Moikau Station**	**0.74**	**71**	P	**Pn**	**16 30 58.1**	**-1.0**
MSWZ				S	**Sn**	**16 31 10.5**	**+0.3**
CAW	**Cannon Point**	**0.79**	**46**	P	**Pb**	**16 30 58.4**	**-0.1**
NNZ	**Nelson**	**0.84**	**302**	P	**Pb**	**16 30 58.6**	**-0.7**
NNZ				S	**Sb**	**16 31 10.7**	**+0.3**
PAWZ	**Paruwai Farm**	**0.88**	**72**	P	**Pn**	**16 31 00.2**	**-0.8**
DUWZ	**D'Urville Isla**	**0.91**	**341**	P	**Pb**	**16 30 60.0**	**-0.6**
DUWZ				S	**Sb**	**16 31 12.0**	**-0.6**
KIW	**Kapiti Island**	**0.92**	**29**	P	**Pb**	**16 31 00.3**	**-0.3**
KHZ	**Kahutara**	**0.95**	**217**	P	**Pb**	**16 31 01.2**	**0.0**
KHZ	**Kahutara**	**0.95**	**217**	S	**Sn**	**16 31 15.7**	**+0.4**
KHZ	**Kahutara**	**0.95**	**217**	P	**Pb**	**16 31 01.1**	**-0.1**
KHZ				S	**Sn**	**16 31 15.4**	**+0.2**
MTW	**Mount Morrison**	**1.02**	**61**	P	**Pb**	**16 31 02.2**	**-0.3**
TRWZ	**Traveller**	**1.06**	**76**	P	**Pb**	**16 31 02.5**	**-0.7**
OGWZ	**Otaki Gorge**	**1.06**	**37**	P	**Pn**	**16 31 03.1**	**-0.3**
THZ	**Tophouse**	**1.06**	**264**	P	**Pb**	**16 31 02.7**	**-0.6**
HOWZ	**Holdsworth Sta**	**1.18**	**50**	P	**Pn**	**16 31 04.4**	**-0.7**
TKNZ	**Takaka Hill**	**1.20**	**301**	P	**Pn**	**16 31 05.0**	**-0.4**
MRNZ	**Matariki Terra**	**1.20**	**282**	P	**Pn**	**16 31 05.3**	**-0.1**
MRZ	**Mangatainoka R**	**1.38**	**44**	P	**Pn**	**16 31 07.3**	**-0.5**
QRZ	**Quartz Range**	**1.59**	**301**	P	**Pn**	**16 31 11.1**	**+0.4**
QRZ	**Quartz Range**	**1.59**	**301**	S	**Sb**	**16 31 32.4**	**+0.3**
QRZ	**Quartz Range**	**1.59**	**301**	P	**Pn**	**16 31 11.4**	**+0.7**
GVZ	**Greta Valley S**	**1.61**	**216**	P	**Pn**	**16 31 09.9**	**-1.1**
PRWZ	**Pori Road**	**1.67**	**49**	P	**Pn**	**16 31 10.9**	**-0.9**
BFZ	**Birch Farm**	**1.75**	**57**	P	**Pg**	**16 31 18.7**	**+2.0**
BFZ	**Birch Farm**	**1.75**	**57**	P	**Pg**	**16 31 17.9**	**+1.2**
DSZ	**Denniston Nort**	**1.89**	**267**	P	**Pb**	**16 31 16.1**	**-1.1**
LTZ	**Lake Taylor**	**1.89**	**233**	P	**Pn**	**16 31 14.0**	**-0.9**
DVHZ	**Dannevirke**	**1.95**	**46**	P	**Pn**	**16 31 14.3**	**-1.4**
WAZ	**Wanganui**	**1.97**	**15**	P	**Pb**	**16 31 18.7**	**0.0**
TSZ	**Takapari Road**	**2.03**	**38**	P	**Pn**	**16 31 16.1**	**-0.7**
OXZ	**Oxford**	**2.37**	**225**	P	**Pb**	**16 31 25.3**	**-0.1**
MQZ	**McQueen's Vall**	**2.38**	**210**	P	**Pn**	**16 31 18.9**	**-2.7**
MOVZ	**Moawhango**	**2.50**	**26**	P	**Pb**	**16 31 27.9**	**+0.1**
BKZ	**Black Stump Fm**	**3.00**	**34**	P	**Pb**	**16 31 36.1**	**-0.1**
HIZ	**Hauiti**	**3.17**	**8**	P	**Pn**	**16 31 34.8**	**+2.3**

*ISK **16** 16:57:26.1, 36°.44N×28°.72E, h5km, ML2.8/10*
*THE **16** 16:57:26.2, 36°.N±2°.×2°.9E±°, h2km±2km, M2.8/7, MLh2.8/7*
*AFAD **16** 16:57:27.1, 36°.46N×28°.71E, h11km±2km, ML2.7*
ISC 16 16:57:26.3±1.1, 36°.43N±0°.03×28°.72E±0°.02, h5km±10km, n49, σ0s84/64, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.35**	**55**	P	**Pg**	**16 57 33.3**	**+0.2**
FETY				S	**Sg**	**16 57 37.7**	**-0.1**
FETY	**Fethiye**	**0.35**	**55**	Pg	**Pg**	**16 57 33.4**	**+0.2**
FETY	**Fethiye**	**0.35**	**55**	P	**Pb**	**16 57 34.1**	**-1.1**
FETY				S	**Sb**	**16 57 40.1**	**-1.0**
IZZE	**Mula-Seydike**	**0.41**	**89**	P	**Pb**	**16 57 35.1**	**-0.9**
IZZE				S	**Sb**	**16 57 41.6**	**-0.9**
IZZE				IAML		16 57 44.0	
	comp=E,757nm,0.3s						
SABU	**Mula-Dalaman**	**0.44**	**27**	P	**Pg**	**16 57 35.3**	**+0.6**
SABU				S	**Sg**	**16 57 41.5**	**+1.1**
SABU				IAML		16 57 44.0	
	comp=N,628nm,0.3s						
TURN	**Turunc**	**0.52**	**312**	Pg	**Pg**	**16 57 36.1**	**-0.1**
TURN				Sg	**Sb**	**16 57 44.1**	**-1.5**
TURN	**Turunc**	**0.52**	**312**	P	**Pg**	**16 57 36.3**	**+0.1**
ARG	**Arkhangelos**	**0.53**	**246**	P	**Pg**	**16 57 36.5**	**+0.2**
ARG				S	**Sb**	**16 57 45.0**	**-1.0**
ARG	**Arkhangelos**	**0.53**	**246**	Pg	**Pg**	**16 57 36.6**	**+0.2**
CAME	**Cameli-Denizli**	**0.69**	**42**	Pg	**Pg**	**16 57 40.0**	**+0.4**
CAME				Sg	**Sb**	**16 57 49.9**	**-1.0**
AKAS	**Kas**	**0.74**	**105**	Pg	**Pb**	**16 57 41.4**	**-0.4**
AKAS	**Kas**	**0.74**	**105**	P	**Pb**	**16 57 42.1**	**+0.3**
KSL	**Kastellorizon**	**0.75**	**112**	P	**Pg**	**16 57 39.9**	**-0.8**
KSL				S	**Sg**	**16 57 49.4**	**-1.1**
YER	**Yerkesik**	**0.78**	**333**	P	**Pg**	**16 57 41.5**	**+0.1**
YER				S	**Sb**	**16 57 53.3**	**-0.2**
YER	**Yerkesik**	**0.78**	**333**	Pg	**Pg**	**16 57 41.5**	**+0.1**
CAEL	**Denizli, Camel**	**0.84**	**35**	P	**Pb**	**16 57 42.8**	**-0.7**
DNZT	**Denizli-Tavas-**	**0.88**	**16**	P	**Pb**	**16 57 43.7**	**-0.4**
MULA	**Mugla, Merkez-**	**0.88**	**339**	P	**Pb**	**16 57 43.7**	**-0.5**
DAT	**Datca**	**0.97**	**288**	P	**Pn**	**16 57 46.4**	**-0.3**
DAT				S	**Sb**	**16 57 59.4**	**+0.6**
DAT	**Datca**	**0.97**	**288**	Pg	**Pb**	**16 57 45.3**	**-0.3**
ELL	**Elmali**	**1.00**	**71**	Pg	**Pb**	**16 57 45.9**	**-0.4**
TAVA	**DENIZLI_Tavas**	**1.04**	**8**	P	**Pb**	**16 57 46.7**	**-0.2**
GOLH	**Golhisar**	**1.05**	**40**	P	**Pb**	**16 57 46.7**	**-0.3**
YAZI	**Mula-Datşa-**	**1.05**	**284**	P	**Pn**	**16 57 47.1**	**-0.6**
APMY	**Acipayam-Deniz**	**1.14**	**24**	Pn	**Pg**	**16 57 48.0**	**-0.1**
APMY				Sn	**Sn**	**16 58 04.1**	**-1.0**
MLSB	**Milas**	**1.15**	**319**	Pn	**Pb**	**16 57 48.5**	**-0.2**
BDRM	**Kayabasi**	**1.21**	**302**	P	**Pn**	**16 57 50.0**	**+0.2**
DNIZ	**Denizli-Tavas-**	**1.22**	**12**	P	**Pn**	**16 57 51.1**	**+1.0**
BODT	**Bodrum**	**1.30**	**299**	P	**Pb**	**16 57 51.7**	**+0.5**
BODT				S	**Sn**	**16 58 10.0**	**+1.1**
AKUM	**Antalya-Kumluc**	**1.31**	**94**	P	**Pg**	**16 57 53.5**	**+2.0**
ESEN	**Aydn-Nazilli**	**1.40**	**348**	P	**Pg**	**16 57 52.9**	**-0.1**
AYDN	**Tasoluk**	**1.40**	**331**	P	**Pg**	**16 57 53.3**	**+0.2**
KORT	**Korkueli**	**1.43**	**66**	P	**Pg**	**16 57 55.6**	**+2.0**
INCE	**Denizli-Bozkur**	**1.45**	**28**	P	**Pg**	**16 57 55.3**	**+1.3**
KARP	**Karpathos**	**1.54**	**236**	P	**Pb**	**16 57 55.3**	**-0.1**
KARP				S	**Sg**	**16 58 15.5**	**-0.4**
SULTU	**Buldan**	**1.62**	**1**	P	**Pg**	**16 57 57.2**	**-0.1**
BRDR	**BURDUR-Merkez**	**1.66**	**40**	P	**Pg**	**16 57 58.4**	**+0.3**
IZMR	**zmir-demi**	**1.81**	**340**	P	**Pb**	**16 57 59.1**	**-0.8**
SMG	**Samos**	**1.97**	**311**	P	**Pb**	**16 58 01.6**	**-1.2**
SMG				S	**Sb**	**16 58 27.5**	**-0.2**
PASA	**Karahalli, USA**	**2.01**	**17**	P	**Pb**	**16 58 03.4**	**0.0**
DUVT	**Torbali**	**2.05**	**331**	P	**Pn**	**16 57 59.8**	**-1.8**
KZIL	**AFYON_Kizioren**	**2.14**	**31**	P	**Pb**	**16 58 04.9**	**-0.8**
DGB	**zmir**	**2.18**	**318**	P	**Pn**	**16 58 04.3**	**+1.1**
BLCB	**Balcova**	**2.36**	**326**	P	**Pn**	**16 58 05.6**	**-0.2**
BLCB				S	**Sn**	**16 58 36.2**	**+1.0**
SEDI	**Konya, Seydise**	**2.63**	**66**	P	**Pb**	**16 58 12.9**	**-1.2**
THR3	**Thira Island,**	**2.68**	**270**	P	**Pn**	**16 58 10.0**	**-0.1**
NPS	**Neapolis**	**2.78**	**246**	P	**Pn**	**16 58 12.6**	**+1.0**
PRK	**Paraskevi**	**3.41**	**326**	P	**Pn**	**16 58 21.8**	**+1.6**
KARY	**Karystos**	**3.77**	**296**	P	**Pn**	**16 58 26.7**	**+1.5**

*IDC **16** 16:58:07.6±1.6, 2°.13S×133°.56E, h0km, mb3.8/3, mbtmp3.9/6, ML4.0/3, MS3.1/2, Error ellipse: s-maj=46.7km s-min=20.3km az=70.0*

*DJA **16** 16:58:10.0±0.2, 2°.S±2°.×13°.4E±°, h10km, M4.3/19, mB5.3/1, mb4.5/4, MLv4.2/19, Mw(mB)4.7/1*
*NEIC **16** 16:58:12.8±2.0, 2°.20S±0°.05×133°.52E±0°.08, h39km±7km, mb4.1/11, Error ellipse: s-maj=12.2km s-min=7.5km az=103.0*
ISC 16 16:58:10.7±0.6, 2°.14S±0°.05×133°.62E±0°.05, h26km, n38, σ1s78/38, mb4.2/6, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**0.84**	**42**	P	**Pb**	**16 58 25.3**	**-1.3**
MWPI	**Manokwari, Pap**	**1.27**	**19**	P	**Pn**	**16 58 33.4**	**+0.7**
KMPI	**Kaimana, Papua**	**1.52**	**177**	P	**Pn**	**16 58 37.5**	**+1.3**
FAKI	**Fak Fak**	**1.57**	**240**		**Pn**	**16 58 36.7**	**-0.2**
FAKI	**Fak Fak**	**1.57**	**240**	P	**Pn**	**16 58 38.0**	**+1.1**
FAKI				S	**Sn**	**16 58 59.2**	**+2.7**
SRPI	**Serui, Papua**	**2.63**	**84**	P	**Pn**	**16 58 52.8**	**+1.3**
BAKI	**Biak**	**2.66**	**69**	P	**Pn**	**16 58 53.9**	**+2.0**
SIJI	**Sorong**	**2.67**	**298**	Pn	**Pn**	**16 58 52.0**	**+0.1**
	16nm,0.3s,baz=60,slow=23,SNR=97						
SIJI				Sn	**Sn**	**16 59 23.0**	**-0.4**
	34nm,0.3s,baz=322,slow=24,SNR=9.7 29nm,0.3s						
SIJI	**Sorong**	**2.67**	**298**	P	**Pn**	**16 58 51.8**	**-0.2**
SWI	**Sorong**	**2.67**	**298**	P	**Pn**	**16 58 52.2**	**+0.1**
BNDI	**Bandanaira**	**4.40**	**237**	P	**Pn**	**16 59 17.6**	**+1.8**
KRAI	**Karang Ratu**	**5.35**	**257**	P	**Pn**	**16 59 32.8**	**+3.9**
SAUI	**Saumlaki**	**6.25**	**202**	Pn	**Pn**	**16 59 41.5**	**+0.2**
NLAI	**Namlea**	**6.60**	**260**	P	**Pn**	**16 59 47.3**	**+1.2**
MTN	**Manton Dam**	**10.92**	**193**		**Pn**	**17 00 44.9**	**-0.5**
SOEI	**Soe**	**11.99**	**230**	Pn	**Pn**	**17 00 57.2**	**-2.9**
KAPI	**Kappang**	**14.13**	**258**	P	Pn	17 01 34.9	+5.6
KNRA	**Kununurra**	**14.28**	**199**		**Pn**	**17 01 29.6**	**-1.8**
COEN	**Coen**	**15.07**	**142**	Pn	**Pn**	**17 01 41.5**	**-0.6**
COEN				IAmb	IAmb	17 01 53.6	
	comp

WCS	**Beigang Elemen**	**1.86**	**255**	*eP*	**Pn**	**16 59 03.9**	**+0.9**
TWF1	**Yuli**	**1.87**	**231**	P	**Pn**	**16 59 02.9**	**-0.3**
SSLB	**Suanglung**	**1.91**	**247**	*eP*	**Pn**	**16 59 04.0**	**+0.3**
SMLT	**Sun Moon Lake**	**1.92**	**250**	*eP*	**Pn**	**16 59 05.0**	**+1.1**
TYC	**Yuchr**	**1.95**	**251**	P	**Pn**	**16 59 05.6**	**+1.4**
TYC				*eS*	**Sn**	**16 59 30.3**	**+1.7**
FULB	**Fuli**	**1.98**	**228**	P	**Pn**	**16 59 04.2**	**-0.3**
FULB				S	**Sn**	**16 59 28.0**	**-1.2**
WHYT	**Xinyi Township**	**2.03**	**246**	P	**Pn**	**16 59 06.4**	**+1.1**
WHYT				*eS*	**Sn**	**16 59 31.4**	**+0.8**
EHD	**Haiduan**	**2.07**	**228**	P	**Pn**	**16 59 05.4**	**-0.3**
ALS	**Alishan**	**2.16**	**242**	*eP*	**Pn**	**16 59 08.2**	**+1.0**
ELDTW	**Lidau**	**2.17**	**232**	*i* P	**Pn**	**16 59 06.9**	**-0.3**
CHNS	**Tsauling**	**2.22**	**245**	*eP*	**Pn**	**16 59 08.5**	**+0.7**
WCKO	**Fanlu**	**2.35**	**243**	P	**Pn**	**16 59 11.0**	**+1.6**
STYH	**Taoyuan**	**2.36**	**235**	P	**Pn**	**16 59 10.6**	**+1.1**
TPUB	**Ta-pu**	**2.40**	**239**	P	**Pn**	**16 59 11.8**	**+1.8**
WTP	**Ta-pu**	**2.44**	**238**	*eP*	**Pn**	**16 59 12.6**	**+2.0**
MASBT	**Mashibuluo**	**2.82**	**227**	*eP*	**Pn**	**16 59 16.4**	**+0.9**

*TEH **16** 17:09:13.8,34°.45N×46°.87E,h10km±49km,ML2.7, Presumed earthquake*
*ISN **16** 17:09:14.4±3.1,34°.36N×46°.51E,h10km,ML2.7, Presumed earthquake*
ISC 16 17:09:13.5±1.3,34°.50N±0°.07×46°.80E±0°.03,h12km±15km, n10,σ0°.94/11,Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGHG	**Ghaleghazi**	**0.25**	**228**	Pg	**Pg**	**17 09 19.7**	**+0.7**
KCHF	**Cheshme Sefid,**	**0.30**	**138**	Pg	**Pg**	**17 09 18.5**	**-1.3**
IDHR	**Dehrash**	**0.39**	**301**	Pg	**Pb**	**17 09 23.2**	**+0.7**
SNQR	**Sonqor, Kerman**	**0.77**	**62**	Pg	**Pg**	**17 09 28.5**	**0.0**
GLG1	**Gilan-e-Gharb**	**0.83**	**242**	Pg	**Pn**	**17 09 31.0**	**-0.1**
IBZA	**Bozab**	**0.88**	**92**	Pg	**Pg**	**17 09 29.9**	**-0.7**
IALM	**Almabolaq**	**1.19**	**72**	Pg	**Pn**	**17 09 36.4**	**+0.2**
BDRS	**Dareh Seyedi**	**1.81**	**107**	Pg	**Pb**	**17 09 47.7**	**+0.9**
HAGD	**Aghdareh**	**1.96**	**80**	Pn	**Pn**	**17 09 47.5**	**+0.7**
IKRK	**Kirkuk** baz=120	**2.21**	**295**	*ePg*	**Pn**	**17 09 49.0**	**-1.0**
IKRK				*eSg*	**Sb**	**17 10 20.0**	**-0.7**

*JMA **16** 17:13:23.1±0.2,25°.N±2°.×123°.3E±0°.5,h122km±2km, MV3.1/17,NW OFF ISHIGAKIJIMA IS*
ISC 16 17:13:23.7±1.6,24°.9N±0°.1×123°.33E±0°.04,h121km±11km, n23,σ0°.64/34,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.48**	**216**	P	**Pn**	**17 13 41.4**	**-0.2**
YOJ	**Yonaguni jima**	**0.48**	**216**	S	**Sn**	**17 13 55.4**	**+0.3**
YOJ	**Yonaguni jima**	**0.48**	**216**	P	**Pn**	**17 13 41.5**	**-0.1**
YOJ				*eS*	**Sn**	**17 13 55.2**	**+0.1**
JYNG	**Yonagunijimaku**	**0.53**	**221**	P	**Pn**	**17 13 41.8**	**-0.1**
JYNG				*eS*	**Sn**	**17 13 55.8**	**+0.2**
IRIF	**Iriomote-Funau**	**0.64**	**144**	*i* P	**Pn**	**17 13 42.3**	**-0.3**
IRIF				*eS*	**Sn**	**17 13 56.8**	**-0.1**
JKRS	**Kuro-shima**	**0.88**	**134**	*i* P	**Pn**	**17 13 44.8**	**+0.2**
JKRS				*eS*	**Sn**	**17 14 01.0**	**+0.6**
JIJ	**Ishigaki jima**	**0.89**	**123**	*i* P	**Pn**	**17 13 44.5**	**-0.2**
JIJ				*eS*	**Sn**	**17 14 00.4**	**-0.2**
HATJ	**Hateruma jima**	**0.91**	**151**	*eP*	**Pn**	**17 13 45.2**	**+0.3**
HATJ				*eS*	**Sn**	**17 14 01.6**	**+0.7**
JISG	**Ishigakijimahi**	**0.94**	**106**	*i* P	**Pn**	**17 13 44.8**	**-0.3**
JISG				*eS*	**Sn**	**17 14 01.2**	**-0.1**
JTJ	**Tarama**	**1.27**	**99**	*i* P	**Pn**	**17 13 48.5**	**-0.1**
JTJ				*eS*	**Sn**	**17 14 07.4**	**-0.1**
TATO	**Taipei**	**1.67**	**275**	P	**Pn**	**17 13 53.2**	**0.0**
NACB	**Ninganchiao**	**1.71**	**247**	P	**Pn**	**17 13 52.6**	**-1.1**
JIKM	**Ikemajima**	**1.75**	**87**	*eP*	**Pn**	**17 13 53.8**	**-0.2**
JIKM				*eS*	**Sn**	**17 14 16.8**	**-0.4**
YHNB	**Yeheng**	**1.78**	**265**	P	**Pn**	**17 13 54.6**	**0.0**
JMJ	**Miyako jima 2**	**1.79**	**91**	P	**Pn**	**17 13 55.0**	**+0.4**
JMJ2	**Miyako jima3**	**1.82**	**93**	*eP*	**Pn**	**17 13 55.0**	**0.0**
JMJ2				*eS*	**Sn**	**17 14 18.5**	**-0.4**
JOGS	**Gusukube**	**1.89**	**92**	*eP*	**Pn**	**17 13 56.0**	**+0.1**
JOGS				*eS*	**Sn**	**17 14 20.7**	**+0.3**
YULB	**Yu-li**	**2.35**	**232**	P	**Pn**	**17 14 00.4**	**-1.3**
YULB	**Yu-li**	**2.35**	**232**	S	**Sn**	**17 14 29.2**	**-1.6**
SSLB	**Suanglung**	**2.41**	**244**	P	**Pn**	**17 14 02.0**	**-0.4**
SSLB	**Suanglung**	**2.41**	**244**	S	**Sn**	**17 14 33.4**	**+1.3**
TPUB	**Ta-pu**	**2.91**	**238**	P	**Pn**	**17 14 09.5**	**+0.7**
TPUB	**Ta-pu**	**2.91**	**238**	S	**Sn**	**17 14 45.1**	**+1.5**

*SJA **16** 17:39:14.7±0.7,29°.48S×72°.13W,h16km±2km,ML4.1, MW4.1*
*NEIC **16** 17:39:17.3±1.2,29°.46S±0°.01×71°.97W±0°.06,h10km±2km, mb4.3/1,ML4.0(GUC),Error ellipse: s-maj=9.1km s-min=3.0km az=276.0*
*GUC **16** 17:39:19.0±0.6,29°.56S×71°.95W,h24km±11km,ML4.0*
ISC 16 17:39:15.7±1.7,29°.53S±0°.03×72°.08W±0°.06,h8km±10km, n71,σ1°.73/93,4C,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.83**	**118**		**Pg**	**17 39 32.0**	**+0.4**
CO05	**La Serena**	**0.83**	**118**	*i* P	**Pg**	**17 39 32.1**	**+0.6**
CO05				*eS*	**Sg**	**17 39 41.7**	**-0.7**
CO05				IAML		17 39 45.1	
	comp=N,7μm,0.7s						
CO06	**Fray Jorge**	**1.21**	**162**		**Pn**	**17 39 39.1**	**+0.2**
CO06				Sn	**Sb**	**17 39 53.7**	**-0.9**
CO06	**Fray Jorge**	**1.21**	**162**	*i* P	**Pn**	**17 39 39.0**	**+0.2**
GO04	**Tololo Observa**	**1.28**	**120**		**Pn**	**17 39 39.9**	**-0.2**
GO04	**Tololo Observa**	**1.28**	**120**	*i* P	**Pn**	**17 39 39.8**	**-0.3**
GO04	**Tololo Observa**	**1.28**	**120**	*eP*	**Pn**	**17 39 39.9**	**-0.2**
GO04				*eS*	**Sg**	**17 39 59.3**	**+2.3**
GO04				IAML		17 40 03.6	
	comp=Z,9μm,0.3s						
LCO	**Las Campanas**	**1.31**	**67**		**Pb**	**17 39 40.0**	**-0.7**
LCO	**Las Campanas**	**1.31**	**67**	*eP*	**Pb**	**17 39 40.1**	**-0.6**
LCO				*eS*	**Sg**	**17 39 59.0**	**+1.3**
LCO				IAML		17 39 59.7	
	comp=Z,5μm,0.4s						
AC04	**Llanos de Chal**	**1.58**	**34**		**Pn**	**17 39 44.0**	**-0.1**
AC04	**Llanos de Chal**	**1.58**	**34**	*i* P	**Pn**	**17 39 44.0**	**-0.1**
AC04				IAML		17 40 13.5	
	comp=E,1μm,0.3s						
AC04	**Llanos de Chal**	**1.58**	**34**	*eP*	**Pn**	**17 39 44.1**	**-0.1**
AC04				*eS*	**Sg**	**17 40 10.7**	**+4.1**
AC05	**El Transito**	**1.72**	**67**		**Pb**	**17 39 46.7**	**-0.9**
AC05	**El Transito**	**1.72**	**67**	*i* P	**Pb**	**17 39 46.8**	**-0.9**
AC05				*eS*	**Sb**	**17 40 07.8**	**-1.6**
AC05				IAML		17 40 12.9	
	comp=N,3μm,0.6s						
AC05	**El Transito**	**1.72**	**67**	*eP*	**Pb**	**17 39 47.1**	**-0.6**
AC05				*eS*	**Sg**	**17 40 10.3**	**-0.6**
AC05				IAML		17 40 12.8	
	comp=Z,1μm,0.5s						
CO03	**El Pedregal**	**1.78**	**138**		**Pn**	**17 39 47.5**	**+0.6**
CO03	**El Pedregal**	**1.78**	**138**	*i* P	**Pn**	**17 39 47.5**	**+0.6**
CO03				*eS*	**Sn**	**17 40 09.1**	**-0.6**
CO03				IAML		17 40 14.2	
	comp=N,2μm,0.4s						
CO03	**El Pedregal**	**1.78**	**138**	*eP*	**Pn**	**17 39 47.7**	**+0.9**
CO03				*eS*	**Sg**	**17 40 12.3**	**-0.5**
CO03				IAML		17 40 13.4	
	comp=Z,915nm,0.5s						
CO01	**Juntas del Tor**	**1.78**	**105**		**Pb**	**17 39 47.7**	**-1.1**
CO01	**Juntas del Tor**	**1.78**	**105**	*i* P	**Pb**	**17 39 47.8**	**-0.9**
CO01				*eS*	**Sb**	**17 40 09.6**	**-1.8**
CO01	**Juntas del Tor**	**1.78**	**105**	*eP*	**Pb**	**17 39 48.2**	**-0.6**
CO01				*eS*	**Sb**	**17 40 10.4**	**-1.0**
CO01				IAML		17 40 14.5	
	comp=Z,1μm,0.2s						
CO02	**Combarbal**	**1.91**	**151**		**Pn**	**17 39 50.0**	**+1.2**
CO02	**Combarbal**	**1.91**	**151**	*i* P	**Pn**	**17 39 50.0**	**+1.2**
CO02				*eS*	**Sb**	**17 40 15.2**	**+0.1**
CO02				IAML		17 40 22.1	
	comp=E,5μm,0.3s						
CO02	**Combarbal**	**1.91**	**151**	*eP*	**Pn**	**17 39 50.0**	**+1.2**
CO02				*eS*	**Sb**	**17 40 15.2**	**+0.1**
CO02				IAML		17 40 17.5	
	comp=Z,1μm,0.6s						
AROD	**Rodeo**	**2.35**	**106**	*eP*	**Pb**	**17 39 57.6**	**-0.9**
AROD				*eS*	**Sg**	**17 40 28.4**	**-2.8**
GO03	**Copiapo**	**2.52**	**41**	*eP*	**Pn**	**17 39 57.8**	**+0.8**
GO03	**Copiapo**	**2.52**	**41**	*eP*	**Pn**	**17 39 57.8**	**+0.8**
GO03				IAML		17 40 42.9	
	comp=N,591nm,0.5s						
GO03	**Copiapo**	**2.52**	**41**	*eP*	**Pn**	**17 39 58.0**	**+1.1**
GO03				*eS*	**Sb**	**17 40 28.9**	**-3.4**
GO03				IAML		17 40 41.6	
	comp=Z,762nm,0.6s						
AC06	**Mina Casimiro**	**2.64**	**35**		**Pn**	**17 39 59.4**	**+0.8**
AC06	**Mina Casimiro**	**2.64**	**35**	*i* P	**Pn**	**17 39 59.5**	**+0.8**
AC06				IAML		17 40 45.2	
	comp=N,579nm,0.3s						
ACDV	**Cuesta del Vie**	**2.65**	**105**	*eP*	**Pb**	**17 40 03.8**	**+0.4**
CO04	**Los Peladeros**	**2.68**	**160**		**Pn**	**17 40 00.9**	**+1.4**
CO04	**Los Peladeros**	**2.68**	**160**	*eP*	**Pn**	**17 40 01.1**	**+1.7**
ACCO	**Cerro Coronel**	**2.82**	**113**	*eP*	**Pb**	**17 40 05.3**	**-1.1**
VA06	**Catapilco**	**3.10**	**168**		**Pn**	**17 40 06.2**	**+1.3**
VA06	**Catapilco**	**3.10**	**168**	⇑*eP*	**Pn**	**17 40 05.8**	**+0.9**
RTLS	**Leoncito**	**3.30**	**134**	*eP*	**Pb**	**17 40 11.9**	**-2.8**
RTLS				*eS*	**Sb**	**17 40 51.4**	**-3.7**
VCA	**Vinchina**	**3.48**	**78**	*eP*	**Pb**	**17 40 14.5**	**-3.1**
VCA				*eS*	**Sg**	**17 41 07.1**	**-0.3**
VA03	**San Esteban**	**3.48**	**158**		**Pn**	**17 40 12.5**	**+2.2**
VA03	**San Esteban**	**3.48**	**158**	*eP*	**Pn**	**17 40 12.6**	**+2.2**
VA03				IAML		17 41 06.8	
	comp=N,639nm,0.6s						
VA03	**San Esteban**	**3.48**	**158**	*eP*	**Pn**	**17 40 12.3**	**+2.0**
VA03				*eS*	**Sb**	**17 40 57.4**	**-2.8**
ROCH	**El Roble**	**3.56**	**165**	*eP*	**Pn**	**17 40 12.6**	**+1.2**
ROCH				⇑*eP*	Pb	17 40 12.7	-6.3
ROCH				IAML		17 41 14.0	
	comp=N,469nm,0.6s						
ZON	**Zonda**	**3.56**	**125**		**Pn**	**17 40 12.1**	**+0.9**
AC01	**Pan de Azucar**	**3.61**	**22**		**Pn**	**17 40 11.1**	**-0.9**
AC01	**Pan de Azucar**	**3.61**	**22**	*eP*	**Pn**	**17 40 11.2**	**-0.8**
AC01	**Pan de Azucar**	**3.61**	**22**	*eP*	**Pn**	**17 40 10.7**	**-1.3**
AC02	**Maricunga**	**3.73**	**45**		**Pn**	**17 40 15.3**	**+1.2**
AC02	**Maricunga**	**3.73**	**45**	⇑*iP*	**Pn**	**17 40 15.7**	**+1.6**
AC02				IAML		17 41 20.5	
	comp=E,296nm,0.3s						
AC02	**Maricunga**	**3.73**	**45**	*eP*	**Pn**	**17 40 15.1**	**+1.0**
AC02				*eS*	**Sn**	**17 41 00.4**	**+1.8**
PEL	**Peldehue**	**3.80**	**162**		**Pn**	**17 40 16.0**	**+1.4**
MT02	**Curacav**	**3.81**	**168**		**Pn**	**17 40 15.8**	**+1.2**
MT02	**Curacav**	**3.81**	**168**	*eP*	**Pn**	**17 40 15.6**	**+0.9**
MT02	**Curacav**	**3.81**	**168**	*eP*	**Pn**	**17 40 16.1**	**+1.5**
MT02				*eS*	**Sg**	**17 41 17.6**	**-0.4**
MT10	**Hacienda Santa**	**3.96**	**161**	⇑*eP*	**Pn**	**17 40 18.7**	**+1.8**
MT05	**Renca**	**4.02**	**164**	Pn	**Pn**	**17 40 17.8**	**+0.1**
MT14	**Cerro Cal¡n**	**4.08**	**162**	*eP*	**Pn**	**17 40 16.1**	**-2.3**
AVFE	**Valle Fertil**	**4.16**	**107**	*eP*	**Pn**	**17 40 22.5**	**+2.9**
MT03	**Universidad Ad**	**4.18**	**162**		**Pn**	**17 40 21.6**	**+1.8**
MT03	**Universidad Ad**	**4.18**	**162**	*eP*	**Pn**	**17 40 20.9**	**+1.1**
MT03	**Universidad Ad**	**4.18**	**162**	*eP*	**Pn**	**17 40 22.0**	**+2.2**
MT03				*eS*	**Sn**	**17 41 12.9**	**+4.0**
MT04	**Ro Olivares**	**4.21**	**157**	*eP*	**Pn**	**17 40 23.8**	**+3.4**
MT04	**Ro Olivares**	**4.21**	**157**	*eP*	**Pn**	**17 40 23.2**	**+2.9**
TINO	**Tinogasta**	**4.22**	**71**	*eP*	**Pn**	**17 40 23.2**	**+2.8**
TINO				*eS*	**Sb**	**17 41 22.9**	**+1.6**
MT08	**Bocatoma Ro**	**4.29**	**156**		**Pn**	**17 40 23.7**	**+2.3**
MT08	**Bocatoma Ro**	**4.29**	**156**	*eP*	**Pn**	**17 40 25.5**	**+4.0**
MT09	**Talagante**	**4.34**	**168**		**Pn**	**17 40 23.1**	**+1.0**
MT13	**San Alfonso**	**4.47**	**161**		**Pn**	**17 40 25.6**	**+1.6**
TRQA	**Tornquist**	**11.95**	**138**	Pn	**Pn**	**17 42 06.6**	**+0.2**
QSPA	**South Pole Qui**	**60.70**	**180**	P	**P**	**17 49 29.0**	**+1.6**
QSPA				IAmb	IAmb	17 50 05.5	
	comp=Z,3.0nm,1.3s						
HHC	**Hu-ho-hao-te**	**168.32**	**346**	*eP*	**PKPdf**	**17 59 19.3**	**-3.8**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,4.8s						
PZH	**PanZhiHua**	**173.76**	**117**	PKP	**PKPdf**	**17 59 26.9**	**+0.5**

IDC 16 18:27:44.5±411.0,63°.34N×42°.03E,h0km,Error ellipse: s-maj=199.5km s-min=123.7km az=174.0,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON** baz=18,slow=333,SNR=1.3	**7.06**	**202**	I	I	19 11 00.0	
I31KZ	**AKTYUBINSK INF** baz=330,slow=329,SNR=2.8	**15.57**	**139**	I	I	20 02 13.5	
I46RU	**ZALESOVO INFRA** 0.2nm,1.1s,baz=308,slow=321,SNR=6.6	**23.72**	**93**	I	I	20 51 45.0	

IDC 16 18:30:19.5±2.4,2°.24N×126°.91E,h0km,mb3.1/3, mbtmp3.1/3,Error ellipse: s-maj=194.6km s-min=27.1km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=341,slow=10.0,SNR=5.1 0.1nm,0.3s	**23.22**	**162**	P	P	18 35 28.6	+0.2
ASAR	**Alice Springs** 0.2nm,0.5s,baz=347,slow=8.9,SNR=6.9 0.2nm,0.5s	**26.64**	**166**	P	P	18 35 59.6	-0.5
MKAR	**Makanchi Array** 0.1nm,0.5s,baz=113,slow=7.5,SNR=4.1 0.1nm,0.5s	**58.88**	**326**	P	P	18 40 20.5	+0.2

*JMA **16** 18:49:56.3±0.2,35°.9N±0°.6×14°.1E±°,h34km±1km, MV2.9/33,NEAR CHOSHI CITY*
*IDC **16** 18:49:58.7±3.5,35°.96N×140°.75E,h59km±32km,mb2.9/4, mbtmp3.2/6,ML2.9/2,MS2.8/2,Error ellipse: s-maj=43.4km s-min=27.0km az=74.0*
ISC 16 18:49:57.2±1.3,35°.88N±0°.06×140°.8E±0°.1,h44km±8km, n20,σ0°.56/17,mb3.1/4,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIHU	**Itakohorinouch**	**0.22**	**292**	*i* P	**Pn**	**18 50 04.9**	**-0.1**
JIHU				*eS*	**Sn**	**18 50 11.1**	**+0.5**
JSMT	**Sammumatsuo**	**0.36**	**229**	P	**Pn**	**18 50 06.1**	**-0.3**
JSMT				*eS*	**Sn**	**18 50 13.3**	**+0.5**
JHYU	**Hitachinakayam**	**0.48**	**341**	*i* P	**Pn**	**18 50 07.7**	**-0.2**
JHYU				*eS*	**Sn**	**18 50 15.6**	**+0.1**
JYT	**Yasato**	**0.59**	**306**	*i* P	**Pn**	**18 50 09.1**	**-0.1**
JYT				S	**Sn**	**18 50 17.6**	**-0.2**
JHO	**Hitachi**	**0.75**	**347**	*i* P	**Pn**	**18 50 11.1**	**-0.3**
JHO				S	**Sn**	**18 50 22.0**	**+0.4**
JAG	**Ashikaga**	**1.20**	**297**	P	**Pn**	**18 50 17.9**	**+0.4**
MJAR	**Matsushiro Arr** 0.7nm,0.3s,baz=97,slow=8.9,SNR=18 1.5nm,0.3s	**2.18**	**288**	P	**Pn**	**18 50 31.5**	**+0.5**
ASAJ	**Asahikawa** 0.3nm,0.3s,baz=141,slow=14,SNR=1.2 4.9nm,1.0s	**8.34**	**9**	P	**Pn**	**18 51 56.0**	**+0.6**
KSRS	**Korea Array** comp=Z,33nm,18.4s,baz=285,slow=33	**10.45**	**282**	LR	LR	18 55 46.9	
H11N2	**WAKE ISLAND Hy** baz=311,slow=75,SNR=4.9	**28.03**	**118**	T	T	19 24 53.3	
H11N1	**WAKE ISLAND Hy** baz=311,slow=75,SNR=5.1	**28.04**	**118**	T	T	19 24 53.4	
H11N3	**WAKE ISLAND Hy** baz=311,slow=75,SNR=6.3	**28.05**	**118**	T	T	19 24 53.4	
H11S1	**WAKE ISLAND Hy** baz=312,slow=75,SNR=8.2	**28.69**	**120**	T	T	19 25 39.6	
H11S3	**WAKE ISLAND Hy** baz=312,slow=75,SNR=6.6	**28.69**	**120**	T	T	19 25 39.8	
H11S2	**WAKE ISLAND Hy** baz=312,slow=75,SNR=6.1	**28.71**	**120**	T	T	19 25 42.8	
CMAR	**Chiang Mai Arr** comp=Z,14nm,18.3s,baz=205,slow=39	**40.72**	**256**	LR	LR	19 16 23.8	
MKAR	**Makanchi Array** 0.2nm,0.7s,baz=97,slow=12,SNR=2.3 0.2nm,0.7s	**44.31**	**303**	P	**P**	**18 58 01.2**	**-1.4**
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=82,slow=7.5,SNR=1.7 0.1nm,0.3s	**46.31**	**309**	P	**P**	**18 58 18.4**	**0.0**
WRA	**Warramunga Arr** 0.3nm,0.5s,baz=6.1,slow=7.4,SNR=7.0 0.3nm,0.5s	**55.85**	**187**	P	**P**	**18 59 30.4**	**+0.1**
ASAR	**Alice Springs** 0.1nm,0.7s,baz=14,slow=9.6,SNR=5.1 0.1nm,0.7s	**59.58**	**187**	P	**P**	**18 59 57.0**	**+0.6**

*IDC **16** 19:46:49.5±1.7,59°.44N×153°.02W,h67km±28km,mb3.5/7, mbtmp3.7/11,ML3.7/4,Error ellipse: s-maj=31.7km s-min=10.3km az=109.0*
*NEIC **16** 19:46:50.8±1.0,59°.41N±0°.03×152°.84W±0°.08,h85km±2km, ML3.4/152,ML3.1(AEIC),Error ellipse: s-maj=6.2km s-min=4.5km az=109.0*
*AEIC **16** 19:46:52.2±1.6,59°.42N±0°.04×152°.88W±0°.09,h76km±4km, Error ellipse: s-maj=6.7km s-min=5.8km az=87.0*
ISC 16 19:46:50.8±0.7,59°.42N±0°.04×152°.84W±0°.05,h85km±6km, n132,σ0°.57/113,mb3.8/7,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AU22	**Augustine Moun**	**0.27**	**259**		**Pn**	**19 47 03.6**	**+0.1**
AU22					**Sn**	**19 47 12.7**	**-0.2**
AUJK	**Augustine Jueg**	**0.30**	**257**		**Pn**	**19 47 03.4**	**-0.2**
AUJK					**Sn**	**19 47 12.8**	**-0.4**
P19K	**Oil Pt**	**0.31**	**320**		**Pn**	**19 47 03.7**	**-0.1**
P19K	**Oil Pt**	**0.31**	**320**		**Sn**	**19 47 13.1**	**-0.3**
AGU	**Augustine-Summ**	**0.31**	**259**		**Pn**	**19 47 03.9**	**0.0**
AUI	**Augustine Isla**	**0.31**	**254**		**Pn**	**19 47 03.7**	**0.0**
AUI					**Sn**	**19 47 12.8**	**-0.5**
ILS	**Iliamna Low So**	**0.55**	**348**		**Pn**	**19 47 05.3**	**-0.3**
ILS					**Sn**	**19 47 16.2**	**-0.4**
ILSW	**Iliamna Southw**	**0.58**	**345**		**Pn**	**19 47 05.7**	**-0.3**
ILSW				IAML		19 47 16.9	
	comp=N,1μm,0.4s						
ILSW				IAML		19 47 17.0	
	comp=E,1μm,0.9s						
ILSW	**Iliamna Southw**	**0.58**	**345**		**Sn**	**19 47 16.5**	**-0.7**
Q19K	**Cape Douglas,**	**0.64**	**220**		**Pn**	**19 47 06.1**	**-0.3**
Q19K				IAML		19 47 18.7	
	comp=N,1μm,0.6s						
Q19K				IAML		19 47 18.8	
	comp=E,2μm,1.0s						
Q19K	**Cape Douglas,**	**0.64**	**220**		**Sn**	**19 47 17.4**	**-0.5**
HOM	**Homer**	**0.66**	**68**		**Pn**	**19 47 07.2**	**+0.8**
CNPM	**China Poot**	**0.83**	**82**		**Pn**	**19 47 08.6**	**+0.4**
CNPM				IAML		19 47 23.1	
	comp=N,1μm,0.5s						
CNPM				IAML		19 47 23.3	
	comp=E,1μm,0.4s						
SYI	**Shuyak Island**	**0.85**	**164**		**Pn**	**19 47 08.7**	**+0.4**
SYI				IAML		19 47 22.6	
	comp=E,1μm,0.2s						
SYI	**Shuyak Island**	**0.85**	**164**		**Sn**	**19 47 21.8**	**+0.3**
BRLK	**Bradley Lake**	**1.05**	**70**		**Pn**	**19 47 11.1**	**+0.3**
BRLK				IAML		19 47 29.5	
	comp=E,1μm,0.3s						
O19K	**Port Alsworth**	**1.08**	**317**		**Pn**	**19 47 10.9**	**-0.1**
RDT	**Redoubt**	**1.18**	**11**		**Pn**	**19 47 12.5**	**+0.1**
DFR	**Drift River**	**1.18**	**4**		**Pn**	**19 47 12.6**	**+0.2**
P18K	**Big Mountain,**	**1.22**	**270**		**Pn**	**19 47 12.2**	**-0.7**
O18K	**Koktuh Hills**	**1.28**	**291**		**Pn**	**19 47 13.2**	**-0.3**
O18K				IAML		19 47 30.1	
	comp=N,440nm,0.6s						
O18K				IAML		19 47 30.6	
	comp=E,319nm,0.6s						
KAWH	**Katmai**	**1.45**	**225**		**Pn**	**19 47 15.7**	**-0.1**
KAKN	**Katmai Knife C**	**1.61**	**227**		**Pn**	**19 47 17.8**	**0.0**
N19K	**Bonanza Creek**	**1.62**	**330**		**Pn**	**19 47 18.2**	**+0.3**
N19K				IAML		19 47 38.7	
	comp=N,342nm,0.6s						
N19K				IAML		19 47 38.9	
	comp=E,509nm,0.9s						
KDAK	**Kodiak Island** comp=E,68nm,0.3s,baz=23,slow=3.2,SNR=573	**1.65**	**175**	P	**Pn**	**19 47 17.9**	**-0.3**
KDAK				S	**Sn**	**19 47 37.2**	**-1.7**
	comp=E,106nm,0.3s,baz=360,slow=12,SNR=24						
KDAK	**Kodiak Island**	**1.65**	**175**		**Pn**	**19 47 17.9**	**-0.3**
KDAK				IAML		19 47 38.5	
	comp=E,320nm,0.4s						
KDAK				IAML		19 47 40.0	
	comp=E,290nm,0.3s						
SLKM	**Skilak Lake**	**1.71**	**49**		**Pn**	**19 47 19.4**	**+0.3**
SLKM				IAML		19 47 41.8	
	comp=N,336nm,0.3s						
SLKM				IAML		19 47 45.2	
	comp=E,424nm,0.2s						
SPU	**Mount Spurr**	**1.81**	**12**		**Pn**	**19 47 20.9**	**+0.6**
SEW	**Seward**	**1.85**	**67**		**Pn**	**19 47 21.1**	**+0.3**
SEW				IAML		19 47 44.3	
	comp=N,222nm,0.8s						
SEW				IAML		19 47 44.8	
	comp=E,291nm,0.4s						
P17K	**Kvichak River**	**1.86**	**265**		**Pn**	**19 47 20.8**	**-0.1**
P17K				IAML		19 47 54.0	
	comp=N,302nm,0.8s						
O22K	**Cooper Landing**	**1.90**	**55**		**Pn**	**19 47 21.9**	**+0.5**
N18K	**Kilae Creek**	**1.98**	**311**		**Pn**	**19 47 22.7**	**+0.1**
N18K				IAML		19 47 46.4	
	comp=N,176nm,0.7s						
N18K				IAML		19 47 47.0	
	comp=E,133nm,0.6s						
STLK	**Strandline Lak**	**2.15**	**13**		**Pn**	**19 47 25.5**	**+0.7**
OHAK	**Old Harbor**	**2.22**	**186**		**Pn**	**19 47 25.0**	**-0.6**
OHAK				IAML		19 47

comp=E,30nm,0.7s
TRF IAML 19 49 17.2
comp=N,30nm,0.7s
M24K Tolsona, Glenn 4.24 48 IAML 19 48 52.9
comp=N,75nm,0.8s
K17K Iditarod 4.24 324 IAML 19 48 55.3
comp=N,39nm,1.0s
K17K IAML 19 49 09.7
comp=E,42nm,0.8s
KTH Kantishna Hill 4.25 12 Pn 19 47 53.4 +0.3
KTH Kantishna Hill 4.25 12 IAML 19 48 51.6
comp=N,27nm,0.8s
KTH IAML 19 49 12.0
comp=E,22nm,0.8s
CHGN Chignik 4.32 226 Pn 19 47 54.3 +0.3
CHGN Chignik 4.32 226 IAML 19 48 33.6
comp=N,25nm,0.1s
CHGN IAML 19 48 42.1
comp=E,28nm,0.1s
O14K Tigyukauivet M 4.32 271 Pn 19 47 54.6 +0.7
O14K IAML 19 48 44.8
comp=E,23nm,0.8s
O14K IAML 19 49 12.3
comp=N,24nm,1.2s
BMRM Bremner River 4.39 66 IAML 19 49 01.6
comp=N,55nm,0.6s
RND Reindeer 4.43 24 IAML 19 48 50.0
comp=E,21nm,0.4s
N14K Kuskokwak Cree 4.51 280 IAML 19 49 14.9
comp=N,25nm,0.8s
N14K IAML 19 49 39.3
comp=E,20nm,0.9s
DHY Denali Highway 4.52 33 IAML 19 48 50.0
comp=N,29nm,0.5s
DHY IAML 19 48 52.9
comp=E,35nm,0.4s
N25K Chitina, Valde 4.63 58 IAML 19 48 49.9
comp=N,58nm,0.6s
MCK McKinley 4.71 22 Pn 19 47 60.0 +0.6
MCK McKinley 4.71 22 IAML 19 48 55.2
comp=E,16nm,0.8s
MCK IAML 19 49 00.3
comp=N,18nm,0.7s
M14K Bethel 4.76 290 Pn 19 48 00.0 +0.1
BPAW Bear Paw Mtn. 4.78 10 Pn 19 48 00.5 +0.2
J20K Nowinta River 4.81 353 IAML 19 48 55.5
comp=E,14nm,0.5s
GLB Gilahina Butte 4.91 62 IAML 19 48 57.0
comp=E,24nm,0.4s
VRDI Verde Repeater 5.01 65 IAML 19 48 59.2
comp=E,26nm,0.6s
PAX Paxson 5.04 42 IAML 19 49 02.1
comp=E,21nm,0.9s
PAX IAML 19 49 14.4
comp=N,15nm,0.5s
CRQM Cirque 5.04 70 Pn 19 48 03.3 -0.6
K15K Wolf Creek Mou 5.13 308 Pn 19 48 04.5 -0.5
K15K Wolf Creek Mou 5.13 308 IAML 19 49 17.1
comp=N,11nm,1.0s
L14K Kuka Creek 5.25 296 IAML 19 49 50.4
comp=E,12nm,1.1s
MCARA McCarthy VSAT 5.25 64 Pn 19 48 06.3 -0.3
BARK Barkley Ridge 5.30 75 Pn 19 48 07.3 -0.2
KIAG Kiagna River 5.45 69 Pn 19 48 09.0 -0.5
I20K Naaghedeneel 5.45 353 Pn 19 48 09.5 +0.2
PTPK Patty Peak 5.46 67 Pn 19 48 09.4 -0.2
GRNC Granite Creek 5.71 72 Pn 19 48 13.0 0.0
MLY Manley 5.72 9 Pn 19 48 13.3 +0.3
BARN Barnard Glacie 5.81 69 Pn 19 48 14.7 +0.2
I17K Unalakleet 5.83 324 Pn 19 48 14.9 +0.4
L26K Log Cabin Wild 5.84 48 Pn 19 48 14.9 +0.2
CTGM Chitina Glacie 5.95 70 Pn 19 48 16.5 +0.2
COLA College 5.95 21 Pn 19 48 16.2 +0.1
I23K Minto, Yukon-K 5.97 14 Pn 19 48 16.5 0.0
ILAR Eielson Array 6.05 25 P **Pn 19 48 17.4 -0.1**
comp=E,2.4nm,0.3s,baz=210,slow=14,SNR=70
ILAR S **Sn 19 49 23.5 -1.8**
comp=E,2.8nm,0.6s,baz=208,slow=27,SNR=6.3
comp=E,3.9nm,0.4s
ILAR Eielson Array 6.05 25 Pn 19 48 17.3 -0.3
LOGN Logan Glacier 6.08 72 Pn 19 48 18.0 -0.2
H21K Melozitna Rive 6.26 0 Pn 19 48 20.3 -0.1
YUK2 White River 6.37 63 Pn 19 48 22.1 +0.1
BCAR Beaver Creek A 6.47 51 Pn 19 48 24.3 +1.0
YUK3 Moose Creek 6.54 64 Pn 19 48 24.5 +0.1
IMAR Indian Mountai 6.60 357 Pn 19 48 25.8 +0.8
H16K Elim 6.85 324 Pn 19 48 28.2 -0.1
N30M Aishikik Lake 8.05 69 Pn **Pn 19 48 44.8 -0.1**
I27K Kandik River 8.08 35 Pn 19 48 44.5 -0.7
M30M Minto, Yukon 8.41 61 Pn **Pn 19 48 49.6 -0.2**
F24K Squaw Lake 8.42 13 Pn **Pn 19 48 49.9 0.0**
I28M Miner Creek 8.49 39 Pn **Pn 19 48 51.3 +0.4**
H27K Steamboat Moun 8.56 32 Pn **Pn 19 48 51.8 0.0**
N31M Braeburn, Yuko 8.68 69 Pn **Pn 19 48 53.5 +0.1**
BMAR Burnt Mountain 8.84 21 Pn **Pn 19 48 54.8 -0.8**
E24K Your Creek 8.90 11 Pn **Pn 19 48 56.1 -0.2**
F26K Sheenjek River 9.15 21 Pn **Pn 19 48 58.9 -0.9**
E25K Arctic Village 9.30 17 Pn **Pn 19 49 01.0 -0.8**
D23K Nanushuk River 9.63 5 Pn **Pn 19 49 08.2 +1.9**
P32M Atlin 9.72 81 Pn **Pn 19 49 08.7 +1.1**
C24K Franklin Bluff 10.49 8 Pn **Pn 19 49 17.6 -0.3**
C23K Itkillik River 10.50 4 Pn **Pn 19 49 18.4 +0.3**
H31M Peel River 10.62 45 Pn **Pn 19 49 19.4 -0.4**
E29M Blow River 11.11 30 Pn **Pn 19 49 26.4 0.0**
R33M Jennings River 11.14 81 Pn **Pn 19 49 28.6 +1.7**
DLBC Dease Lake 11.82 85 P **Pn 19 49 37.4 +1.4**
comp=E,0.9nm,0.3s,baz=214,slow=9.8,SNR=14
comp=E,2.3nm,0.5s
INK Inuvik 12.26 35 P **Pn 19 49 42.0 +0.2**
comp=E,0.1nm,0.3s,baz=228,slow=13,SNR=7.2
comp=E,1.5nm,0.7s
YKA Yellowknife Ar 18.63 64 P **Pn 19 51 02.7 +0.3**
comp=E,0.1nm,0.3s,baz=282,slow=10,SNR=8.4
comp=E,0.3nm,0.4s
YKA Yellowknife Ar 18.63 64 P **P 19 51 01.1 0.0**
PETK Petropavlovsk- 27.62 279 P **P 19 52 30.0 +0.2**
comp=E,3.0nm,0.7s,baz=67,slow=13,SNR=6.9
comp=E,3.0nm,0.7s
KLR Kul'dur 42.82 291 P **P 19 54 39.3 -0.5**
comp=E,0.7nm,0.5s,baz=44,slow=5.3,SNR=3.6
comp=E,0.7nm,0.5s
SONM Songino Array 55.20 306 P **P 19 56 15.1 +0.6**
comp=E,0.8nm,0.6s,baz=46,slow=6.5,SNR=8.4
comp=E,0.8nm,0.6s
ZALV Zalesovo Beam 57.89 324 P **P 19 56 33.3 +0.1**
comp=E,0.5nm,0.5s,baz=30,slow=6.5,SNR=2.8
comp=E,0.5nm,0.5s
BVAR Borovoye Array 62.62 332 P **P 19 57 05.8 +0.3**
comp=E,0.4nm,0.4s,baz=26,slow=4.0,SNR=4.3
comp=E,0.4nm,0.4s
KURBB Kurchatov Arra 62.66 326 P **P 19 57 05.8 0.0**
comp=E,0.3nm,0.3s,baz=4.9,slow=7.6,SNR=5.0
comp=E,0.3nm,0.3s
MKAR Makanchi Array 64.94 322 P **P 19 57 20.2 -0.7**
comp=E,0.1nm,0.5s,baz=15,slow=6.0,SNR=2.0
comp=E,0.1nm,0.5s

*IDC **16** 20:15:34.7±1.8, 17°.73S×178°.70W, h569km±17km, mb2.8/5, mbtmp3.8/7, Error ellipse: s-maj=88.9km s-min=17.5km az=149.0*

ISC 16 20:15:33.6±1.3, 17°.5S±0°.5×178°.9W±0°.3, h550km, n9, s0§27/8, mb3.2/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.95**	**264**	P		P		20 16 53.5	+5.1
	13nm,0.7s,baz=102,slow=20,SNR=4.7								
AFI	**Afiamalu**	**7.69**	**64**	P		**P**		**20 17 28.3**	**-0.1**
	7.9nm,0.3s,baz=76,slow=7.2,SNR=4.1								
STKA	**Stephens Creek**	**38.47**	**241**	P		**P**		**20 22 09.2**	**+0.3**
	0.8nm,0.4s,baz=82,slow=7.4,SNR=8.0								
	0.8nm,0.4s								
WRA	**Warramunga Arr**	**44.28**	**259**	P		**P**		**20 22 55.1**	**0.0**
	0.2nm,0.6s,baz=92,slow=6.9,SNR=7.4								
	0.2nm,0.6s								
ASAR	**Alice Springs**	**44.49**	**254**	P		**P**		**20 22 56.3**	**-0.4**
	2.9nm,0.5s,baz=89,slow=8.2,SNR=68								
	2.9nm,0.5s								
ILAR	**Eielson Array**	**85.55**	**13**	P		**P**		**20 27 13.4**	**+0.1**
	0.2nm,0.4s,baz=208,slow=4.6,SNR=4.1								
	0.2nm,0.4s								
PDAR	**Pinedale Array**	**87.33**	**44**	P		**P**		**20 27 22.9**	**+0.2**
	0.3nm,0.6s,baz=277,slow=5.1,SNR=3.6								
	0.3nm,0.6s								
BRTR	**Keskin Array B**	**144.15**	**315**	PKP		**PKPdf**		**20 34 07.2**	**-0.2**
	0.4nm,0.4s,baz=43,slow=0.8,SNR=2.4								
GERES	**GERESS Array B**	**147.06**	**345**	PKPbc		**PKPbc**		**20 34 15.0**	**-0.1**
	0.1nm,0.3s,baz=40,slow=4.4,SNR=3.8								

IDC 16 20:17:35.3±1.4, 0°.46N×123°.97E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=147.6km s-min=25.4km az=64.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.68**	**154**	P		P	P	20 22 38.6	0.0
	0.3nm,0.3s,baz=333,slow=11,SNR=12								
	0.3nm,0.3s								
SONM	**Songino Array**	**49.59**	**345**	P		P	P	20 26 28.9	+0.5
	0.2nm,0.4s,baz=150,slow=6.8,SNR=5.0								
	0.2nm,0.4s								
MKAR	**Makanchi Array**	**58.74**	**328**	P		P	P	20 27 36.0	+0.9
	0.2nm,0.4s,baz=111,slow=8.4,SNR=5.6								
	0.2nm,0.4s								
KURBB	**Kurchatov Arra**	**63.05**	**329**	P		P	P	20 28 03.0	-1.3
	0.4nm,0.5s,baz=128,slow=5.5,SNR=7.3								
	0.4nm,0.5s								

*JMA **16** 20:52:16.2±0.1, 23°.2N±0°.2×121°.6E±0°.6, h8km±2km, MV3.2/15, TAIWAN REGION*
*TAP **16** 20:52:18.0, 23°.23N×121°.37E, h18km, ML3.8, B*

ISC 16 20:52:16.8±0.8, 23°.21N±0°.01×121°.47E±0°.02, h17km±1km, n156, s0§97/237, 4C-2D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHKH	**Chenggong**	**0.07**	**255**	↑	*i*	P	**Pg**	**20 52 21.3**	**+1.3**
CHKH					*i*	S	**Sg**	20 52 23.7	+1.4
ECBN	**Changbin**	**0.11**	**351**	↑	*i*	P	**Pb**	20 52 22.2	+1.7
ECBN					*i*	S	**Sb**	20 52 25.4	+2.5
CHKT	**Chengkung**	**0.15**	**221**	↑	*i*	P	**Pb**	20 52 22.4	+1.4
CHKT					*i*	S	**Sb**	20 52 25.7	+1.8
FULB	**Fuli**	**0.16**	**266**		*i*	P	**Pb**	20 52 21.8	+0.4
FULB						S	**Sb**	20 52 25.4	+1.0
EYUL	**Yuli**	**0.19**	**314**		*i*	P	**Pb**	20 52 22.7	+0.8
EYUL						S	**Sb**	20 52 26.7	+1.3
TWF1	**Yuli**	**0.21**	**312**		*i*	P	**Pb**	20 52 22.5	+0.3
TWF1						S	**Sb**	20 52 26.1	+0.2
YULB	**Yu-li**	**0.24**	**319**			P	**Pg**	20 52 22.5	+0.2
YULB	**Yu-li**	**0.24**	**319**			S	**Sb**	20 52 26.9	+0.2
YULB	**Yu-li**	**0.24**	**319**	↓	*i*	P	**Pb**	20 52 22.9	+0.1
YULB					*i*	S	**Sb**	20 52 26.7	0.0
EHD	**Haiduan**	**0.25**	**256**		*i*	P	**Pb**	20 52 22.9	+0.1
EHD						S	**Sg**	20 52 26.7	+0.4
ECS	**Chishang**	**0.26**	**244**		*i*	P	**Pb**	20 52 23.9	+0.9
ECS						S	**Sb**	20 52 28.7	+1.6
HGSD	**Ruisui**	**0.28**	**351**		*i*	P	**Pb**	20 52 24.1	+0.7
HGSD						S	**Sn**	20 52 31.8	-0.9
EHYH	**Wanrong**	**0.30**	**338**	↓	*i*	P	**Pb**	20 52 24.5	+0.7
EHYH					*i*	S	**Sb**	20 52 29.3	+0.7
EHY	**Hungye**	**0.32**	**335**		*i*	P	**Pb**	20 52 24.5	+0.3
EHY					*i*	S	**Sb**	20 52 29.1	0.0
ELDTW	**Lidau**	**0.42**	**267**		*i*	P	**Pg**	20 52 25.0	-0.3
ELDTW						S	**Sg**	20 52 29.9	-1.3
LONT	**Longtian**	**0.44**	**226**		*i*	P	**Pb**	20 52 26.3	+0.3
LONT						S	**Sb**	20 52 32.8	+0.6
TEGC	**Jichi Village**	**0.50**	**7**		*e*	P	**Pb**	20 52 28.4	+1.3
TEGC						eS	**Sn**	20 52 37.3	-0.1
WARBT	**Fenglin Townsh**	**0.51**	**351**		*e*	P	**Pg**	20 52 27.1	0.0
TWGBT	**Beinan**	**0.53**	**223**			P	**Pg**	20 52 27.3	-0.1
TWGBT	**Beinan**	**0.53**	**223**			S	**Sg**	20 52 34.9	+0.4
TWGBT	**Beinan**	**0.53**	**223**	↑	*i*	P	**Pg**	20 52 27.4	0.0
TWGBT					*i*	S	**Sg**	20 52 34.9	+0.4
TWG	**Pinlang**	**0.53**	**223**		*i*	P	**Pg**	20 52 27.4	0.0
TWG					*i*	S	**Sg**	20 52 34.8	+0.2
LDUT	**Ludao**	**0.54**	**180**			P	**Pb**	20 52 28.5	+0.8
LDUT						S	**Sb**	20 52 37.4	+2.3
TTN	**Taitung**	**0.54**	**213**		*i*	P	**Pb**	20 52 29.0	+1.1
TTN					*i*	S	**Sb**	20 52 37.8	+2.5
SHUL	**Shoufeng**	**0.58**	**8**		*e*	P	**Pb**	20 52 29.7	+1.2
SHUL						S	**Sb**	20 52 38.9	+2.4
ESL	**Shilin**	**0.60**	**357**		*e*	P	**Pg**	20 52 28.7	0.0
VWDT	**VWDT**	**0.62**	**331**		*i*	P	**Pg**	20 52 29.4	+0.3
VWDT						S	**Sg**	20 52 37.2	-0.1
STYH	**Taoyuan**	**0.64**	**267**			P	**Pg**	20 52 29.1	-0.3
STYH						S	**Sg**	20 52 36.6	-1.3
TEYL	**Yanliau Villag**	**0.67**	**10**		*e*	P	**Pn**	20 52 31.9	+0.5
TEYL					*e*	S	**Sn**	20 52 43.4	+2.0
ALS	**Alishan**	**0.68**	**296**		*i*	P	**Pg**	20 52 30.2	0.0
ALS					*i*	S	**Sg**	20 52 38.3	-1.1
SSLB	**Suanglung**	**0.74**	**321**			P	**Pg**	20 52 31.0	-0.3
SSLB	**Suanglung**	**0.74**	**321**			S	**Sg**	20 52 40.3	-1.0
SSLB	**Suanglung**	**0.74**	**321**			P	**Pg**	20 52 31.1	-0.3
SSLB						S	**Sg**	20 52 40.0	-1.2
WHYT	**Xinyi Township**	**0.74**	**311**		*i*	P	**Pg**	20 52 31.5	+0.1
WHYT					*i*	S	**Sg**	20 52 40.6	-0.6
ETM	**Tongmen**	**0.75**	**2**		*e*	P	**Pg**	20 52 30.7	-0.8
HWA	**Hwalien**	**0.77**	**9**			P	**Pb**	20 52 32.7	+0.9
HWA						eS	**Sn**	20 52 46.3	+2.2
ECL	**Taimali**	**0.77**	**218**		*i*	P	**Pg**	20 52 30.7	-1.2
ECL						S	**Sg**	20 52 39.8	-2.4
TPUB	**Ta-pu**	**0.78**	**277**			P	**Pb**	20 52 32.3	+0.4
TPUB	**Ta-pu**	**0.78**	**277**			S	**Sg**	20 52 42.0	-0.3
TPUB	**Ta-pu**	**0.78**	**277**			P	**Pg**	20 52 32.0	0.0
TPUB						S	**Sg**	20 52 41.7	-0.6
OWD	**Renai**	**0.79**	**340**			P	**Pg**	20 52 31.6	-0.7
OWD						S	**Sg**	20 52 41.0	-1.7
WTP	**Ta-pu**	**0.79**	**273**			P	**Pg**	20 52 32.4	+0.2
WTP						S	**Sg**	20 52 42.7	0.0
SLGT	**Liugui**	**0.79**	**254**			P	**Pg**	20 52 32.0	-0.2
SLGT						eS	**Sg**	20 52 41.7	-0.9
CHN5	**Tsauling**	**0.82**	**298**		*i*	P	**Pb**	20 52 33.2	+0.5
CHN5						eS	**Sg**	20 52 43.6	-0.2
SGST	**Jiashian**	**0.83**	**261**			P	**Pg**	20 52 32.1	-0.8
SGST						S	**Sg**	20 52 43.5	-0.4
WCKO	**Fanlu**	**0.83**	**286**			P	**Pb**	20 52 33.5	+0.8
WCKO						S	**Sb**	20 52 44.5	+1.0
WUSB	**Renai**	**0.84**	**337**			P	**Pg**	20 52 32.8	-0.5
WUSB						S	**Sg**	20 52 43.2	-1.2
SMLT	**Sun Moon Lake**	**0.85**	**322**			P	**Pg**	20 52 33.2	-0.2
SMLT						S	**Sg**	20 52 43.9	-0.8
CHN1	**Nanshi**	**0.87**	**269**			P	**Pb**	20 52 34.0	+0.6
CHN1						S	**Sb**	20 52 45.8	+1.1
TWD	**Chiawan**	**0.87**	**8**		*e*	P	**Pg**	20 52 33.3	-0.5
TYC	**Yuchr**	**0.89**	**321**		*e*	P	**Pg**	20 52 34.0	-0.1
TYC					*e*	S	**Sg**	20 52 45.8	-0.1
SSD	**Sandimen**	**0.90**	**239**		*e*	P	**Pg**	20 52 33.4	-0.9
TWK	**Hsinying**	**0.91**	**274**			P	**Pg**	20 52 34.4	0.0
TWK						eS	**Sg**	20 52 46.3	0.0
TSMG	**Majia**	**0.91**	**237**		*e*	P	**Pg**	20 52 33.7	-0.8
WHF	**Hehuan Shan**	**0.95**	**349**		*e*	P	**Pg**	20 52 35.2	-0.2
ETL	**Fush Village**	**0.95**	**8**		*e*	P	**Pg**	20 52 34.1	-1.2
SCST	**Cishan**	**0.96**	**250**		*e*	P	**Pb**	20 52 35.7	+0.8
WGK	**Gukeng**	**0.96**	**300**		*e*	P	**Pn**	20 52 35.9	+0.5
WGK						eS	**Sn**	20 52 49.6	+0.9
NACB	**Ninganchiao**	**0.97**	**7**			P	**Pb**	20 52 34.7	-0.4
NACB	**Ninganchiao**	**0.97**	**7**			S	**Sb**	20 52 48.5	+0.9
NACB	**Ninganchiao**	**0.97**	**7**		*e*	P	**Pb**	20 52 34.3	-0.8
MASBT	**Mashibuluo**	**0.97**	**232**			P	**Pb**	20 52 34.5	-0.7
MASBT						eS	**Sg**	20 52 46.9	-1.7
WDLH	**Douliu**	**0.98**	**299**			P	**Pn**	20 52 36.2	+0.5
WDLH						eS	**Sn**	20 52 49.5	+0.3
WNT	**Mingjian**	**0.98**	**313**			P	**Pn**	20 52 36.5	+0.7
WNT						S	**Sn**	20 52 49.9	+0.6
WCS	**Beigang Elemen**	**0.99**	**329**		*e*	P	**Pb**	20 52 35.5	+0.1
WCS					*e*	eS	**Sg**	20 52 48.5	-0.4
WDL	**Douliou City**	**0.99**	**301**		*e*	P	**Pg**	20 52 36.1	+0.1
WDL					*e*	eS	**Sn**	20 52 50.8	+1.3
ETLH	**Xiulin Townshi**	**0.99**	**1**		*e*	P	**Pb**	20 52 34.8	-0.8
TAW	**Tawu**	**1.00**	**212**		*e*	P	**Pb**	20 52 34.4	-1.3
CHY	**Chiayi**	**1.00**	**287**			P	**Pn**	20 52 36.6	+0.5
CHY						S	**Sn**	20 52 50.8	+1.0
EAST	**Anshuo**	**1.00**	**215**			P	**Pb**	20 52 34.4	-1.4
SGLT	**Jiouru**	**1.02**	**242**		*e*	P	**Pn**	20 52 39.1	+2.8
TWM1	**Shoushan**	**1.04**	**248**			P	**Pn**	20 52 38.7	+2.1
FUSS	**Fushou**	**1.05**	**349**		*e*	P	**Pb**	20 52 36.5	-0.2
FUSS						eS	**Sb**	20 52 48.8	-1.5
TWT	**Tachien**	**1.07**	**345**		*e*	P	**Pb**	20 52 37.1	+0.1
TDCB	**Techi**	**1.08**	**345**		*e*	P	**Pb**	20 52 36.2	-0.8
SSHA	**Shanhua**	**1.09**	**266**		*e*	P	**Pn**	20 52 39.0	+1.7
SSHA						eS	**Sn**	20 52 55.0	+3.1
SSPT	**Xinbi**	**1.10**	**229**		*e*	P	**Pb**	20 52 37.8	+0.4
ICHU	**Yijhu**	**1.10**	**278**			P	**Pg**	20 52 38.3	+0.1
ICHU						S	**Sn**	20 52 53.6	+1.3
EAHA	**Aohua**	**1.14**	**12**		*e*	P	**Pb**	20 52 37.8	-0.2
SCZT	**Fangliau**	**1.15**	**223**		*e*	P	**Pb**	20 52 38.0	-0.2
CHN8	**Yiju**	**1.17**	**277**			P	**Pn**	20 52 39.0	+0.7
CHN8						S	**Sn**	20 52 55.8	+2.0
WHP	**Taichung City**	**1.17**	**336**			P	**Pg**	20 52 40.3	+0.9
SLIU	**Shizi**	**1.17**	**212**		*e*	P	**Pb**	20 52 37.2	-1.3
LAY	**Lan-yu**	**1.17**	**176**		*e*	P	**Pb**	20 52 37.5	-1.1
LAY						eS	**Sb**	20 52 52.3	-1.1
TCU	**Taichung**	**1.18**	**322**		*e*	P	**Pg**	20 52 39.9	+0.2
TCU						eS	**Sn**	20 52 55.9	+1.6
WSL	**Shuilin Townsh**	**1.18**	**285**			P	**Pg**	20 52 39.6	-0.1
WSL						eS	**Sb**	20 52 54.3	+0.5
EOS4	**EOS4**	**1.19**	**40**		*e*	P	**Pn**	20 52 39.3	+0.9
EOS4						eS	**Sb**	20 52 53.9	+0.1
WCHH	**Zhanghua**	**1.20**	**316**		*e*	P	**Pn**	20 52 39.3	+0.5
WCHH						eS	**Sn**	20 52 56.6	+1.8
WCH1	**Changhua City**	**1.21**	**316**		*e*	P	**Pg**	20 52 40.1	0.0
LYUB	**Lan-yu**	**1.21**	**175**		*e*	P	**Pn**	20 52 37.0	-1.8
NNSB	**Datong**	**1.22**	**356**			P	**Pn**	20 52 38.8	-0.3
NNSB						eS	**Sb**	20 52 53.9	-1.0
WRL	**Guolierlin Hig**	**1.22**	**305**		*e*	P	**Pn**	20 52 39.6	+0.6
WRL						eS	**Sg**	20 52 56.9	+0.7
WSF	**Szhu**	**1.22**	**291**		*e*	P	**Pn**	20 52 39.8	+0.7
WSF						eS	**Sn**	20 52 56.0	+0.8
RLNB	**Erlin**	**1.22**	**304**		*e*	P	**Pb**	20 52 40.2	+0.8
RLNB						eS	**Sg**	20 52 57.0	+0.5
NNS	**Nan Shan**	**1.23**	**356**		*e*	P	**Pn**	20 52 39.2	-0.1
NNS						eS	**Sb**	20 52 54.9	-0.3
WSSB	**Gushan**	**1.25**	**243**		*e*	P	**Pg**	20 52 41.9	+1.0
WSSB						eS	**Sg**	20 52 59.8	+2.5
TSCK	**Chigu Township**	**1.27**	**267**			P	**Pn**	20 52 40.6	+0.8
TSCK						eS	**Sg**	20 52 57.8	-0.3
TWQ1	**Liyutan**	**1.30**	**331**			P	**Pg**	20 52 42.2	+0.3
TWQ1						eS	**Sg**	20 52 59.0	+0.1
LATG	**Datong**	**1.32**	**2**		*e*	P	**Pn**	20 52 40.2	-0.3
SMST	**Manzhou Townsh**	**1.32**	**206**		*e*	P	**Pn**	20 52 40.4	-0.1
WLCH	**Liuqiu**	**1.32**	**230**		*e*	P	**Pg**	20 52 44.4	+2.1
EOS3	**EOS3**	**1.32**	**36**		*e*	P	**Pn**	20 52 41.4	+1.1
EOS3						eS	**Sb**	20 52 58.2	+0.6
TWP	**Hsiaoliuchiu**	**1.34**	**230**		*e*	P	**Pg**	20 52 43.6	+1.0
WDJ	**Dajia District**	**1.36**	**326**		*e*	P	**Pg**	20 52 43.2	+0.1
HEN	**Hengchun**	**1.38**	**210**		*e*	P	**Pb**	20 52 42.6	+0.5
NDT	**Datong Townshi**	**1.39**	**2**		*e*	P	**Pg**	20 52 43.6	0.0
EOS2	**EOS2**	**1.39**	**30**		*e*	P	**Pb**	20 52 43.2	+1.0
EOS2						eS	**Sg**	20 53 01.7	0.0
TWKBT	**Hengchun**	**1.40**	**206**		*e*	P	**Pn**	20 52 42.0	+0.4
TWK1	**Hengchun**	**1.40**	**206**		*e*	P	**Pn**	20 52 42.3	+0.7
ENTT	**Nioudou**	**1.43**	**4**		*e*	P	**Pn**	20 52 41.6	-0.3
NDS	**Dongshan**	**1.43**	**9**		*e*	P	**Pn**	20 52 43.7	+0.6
TWC	**Suao**	**1.44**	**14**		*e*	P	**Pb**	20 52 43.4	+0.3
TWC						eS	**Sg**	20 53 03.3	+0.2
NFF	**Wufeng Townshi**	**1.45**	**347**		*e*	P	**Pb**	20 52 44.1	+0.7
YHNB	**Yeheng**	**1.46**	**357**			P	**Pn**	20 52 43.3	+0.9
YHNB	**Yeheng**	**1.46**	**357**		*e*	P	**Pn**	20 52 43.1	+0.7
NMLH	**Miaoli**	**1.46**	**335**		*e*	P	**Pb**	20 52 44.4	+0.9
NSK	**Sanguang**	**1.46**	**356**		*e*	P	**Pn**	20 52 42.9	+0.4
NSK						eS	**Sn**	20 53 01.6	+0.3
NSTT	**Nanjuang**	**1.48**	**343**		*e*	P	**Pb**	20 52 44.4	+0.6
NSTT						eS	**Sg**	20 53 04.4	-0.1
LIOB	**Emei**	**1.49**	**344**		*e*	P	**Pb**	20 52 44.5	+0.5
LIOB						eS	**Sg**	20 53 04.8	0.0
TWE	**Neicheng**	**1.52**	**7**		*e*	P	**Pn**	20 52 43.5	+0.4
FUSB	**Fushanzhiwuyua**	**1.55**	**4**		*e*	P	**Pn**	20 52 44.3	+0.7
NWLT	**Wulai**	**1.56**	**1**		*e*	P	**Pn**	20 52 44.5	+0.7
KSHI	**Guanxi Townshi**	**1.58**	**350**		*e*	P	**Pb**	20 52 46.6	+1.0
WDGT	**Dungji**	**1.67**	**272**		*e*	P	**Pn**	20 52 45.6	+0.4
WDGT						eS	**Sb**	20 52 59.4	+0.1
TATO	**Taipei**	**1.76**	**1**			P	**Pn**	20 52 46.6	+0.1
PHUB	**P'eng-hu**	**1.77**	**280**		*e*	P	**Pn**	20 52 46.4	-0.3
PHUB						eS	**Sn**	20 53 07.4	-1.3
TIPB	**Shuangxi**	**1.78**	**10**		*e*	P	**Pn**	20 52 47.6	+0.8
PNG	**Penghu**	**1.79**	**282**		*e*	P	**Pn**	20 52 47.2	+0.2
PNG						eS	**Sn**	20 53 09.9	+0.5
JYNG	**Yonagunijimaku**	**1.83**	**47**			P	**Pn**	20 52 48.7	+1.2
JYNG						eS	**Sn**	20 53 11.6	+1.3
VCHM	**Qimei**	**1.88**	**270**		*e*	P	**Pn**	20 52 47.2	-0.9
TWS1	**Kuangyinshan**	**1.88**	**359**		*e*	P	**Pg**	20 52 52.3	-0.7
YOJ	**Yonaguni jima**	**1.88**	**48**			P	**Pn**	20 52 49.5	+1.3
**Y

RAJF	**Raja-Jooseppi**	**3.08**	**74**	SG		**Sb**	**20**	**57**	**20.4**	**0.0**
RANF	**Ranua**	**3.15**	**122**	SG		**Sg**	**20**	**57**	**26.2**	**-1.5**

*MEX **16** 21:00:08.1±0.3,14°.24N×92°.29W, h16^{km}±58^{km}, MD3.8*
*GCG **16** 21:00:10.3±1.8, 14°.71N×92°.16W, h40^{km}±16^{km}, MD4.0, Presumed earthquake*
ISC 16 21:00:05.8±2.2,**14°.3N**±0°.1×**92°.19W**±0°.07,**h25^{km}**±15^{km}, **n10**,σ1^{s}**18**/17,**Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
STG2	**El Palmar, Qui**	**0.80**	**79**	*e*P			**Pb**	**21 00 21.5**	**+0.3**
STG2				*e*S			**Sb**	**21 00 30.9**	**-0.9**
CHUJ	**Union Juarez**	**0.81**	**6**	*e*P			**Pb**	**21 00 21.8**	**+0.5**
CHUJ				*e*S			**Sn**	**21 00 32.6**	**-0.6**
PATR	**El Naranjo**	**0.82**	**357**	*e*P			**Pb**	**21 00 21.9**	**+0.2**
PATR				*e*S			**Sn**	**21 00 33.0**	**-0.7**
STG5	**El Palmar, Qui**	**0.82**	**82**	*e*P			**Pn**	**21 00 21.3**	**-0.7**
STG5				*e*S			**Sb**	**21 00 31.6**	**-0.7**
STG8	**El Palmar, Qui**	**0.83**	**79**	*i* P			**Pn**	**21 00 21.7**	**-0.5**
STG8				*e*S			**Sb**	**21 00 32.1**	**-0.5**
PAVE	**Pavencul**	**0.90**	**1**	*e*P			**Pb**	**21 00 23.2**	**+0.2**
PAVE				*e*S			**Sn**	**21 00 34.9**	**-0.6**
FG8	**Yepocapa, Chim**	**1.58**	**91**	*e*P			Pn	21 00 30.7	-1.7
FG8				*e*S			Sn	21 00 44.1	-8.0
PCIG		**1.72**	**325**	*e*P			**Pn**	**21 00 34.4**	**+0.2**
PCIG				*e*S			**Sn**	**21 00 53.3**	**-2.2**
PCIG				e				21 00 53.5	
APG	**El Apazote**	**1.82**	**67**	*e*P			**Pn**	**21 00 38.6**	**+2.9**
CMIG	**Matias Romero**	**3.81**	**317**	*e*P			**Pn**	**21 01 03.5**	**+0.5**
CMIG				*e*S			**Sn**	**21 01 48.0**	**+1.0**

*GII **16** 21:04:19.7±0.0,33°.291N×0°.002×35°.220E±0°.001, h0^{km}, Mws2.0, confirmed*
*GRAL **16** 21:04:21.2±0.2,33°.24N×35°.16E, h5^{km}±3^{km}, MD2.7*
ISC 16 21:04:20.7±1.1,**33°.28N**±0°.03×**35°.22E**±0°.05,**h10**^{km}±8^{km}, **n24**,σ0^{s}**64**/43,**Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HNTI	**Hanita**	**0.20**	**190**	P			**Pg**	**21 04 24.0**	**-0.9**
HNTI				S			**Sg**	**21 04 28.5**	**+0.9**
MMC7	**Mount Meron ar**	**0.29**	**150**	P			**Pg**	**21 04 26.2**	**-0.5**
MMA0B	**Mount Meron ar**	**0.31**	**149**	P			**Pg**	**21 04 26.4**	**-0.4**
MMA0B				S			**Sg**	**21 04 32.1**	**+1.1**
GEM	**Giv'at Ha'Em**	**0.38**	**100**	P			**Pg**	**21 04 28.2**	**0.0**
GEM				S			**Sb**	**21 04 34.5**	**-1.0**
NATI	**Neve Ativ**	**0.44**	**92**	P			**Pg**	**21 04 29.6**	**+0.3**
NATI				S			**Sb**	**21 04 36.9**	**-0.2**
QRWL	**Qaraoun**	**0.47**	**55**	*e*P			**Pb**	**21 04 30.8**	**-0.4**
DQRL	**Deir Qamar**	**0.52**	**35**	*e*P			**Pb**	**21 04 31.6**	**-0.4**
DQRL				*e*S			**Sb**	**21 04 39.3**	**-0.3**
BLGI	**Bet Lehem HaGe**	**0.54**	**182**	P			**Pg**	**21 04 31.7**	**+0.5**
BLGI				S			**Sb**	**21 04 40.8**	**+0.6**
RCY	**Rachaya**	**0.56**	**67**	*e*P			**Pb**	**21 04 32.5**	**-0.3**
RCY				*e*S			**Sb**	**21 04 40.6**	**-0.3**
KSHT	**Keshet**	**0.58**	**120**	P			**Pg**	**21 04 32.4**	**+0.5**
KSHT				S			**Sb**	**21 04 41.6**	**+0.3**
OFRI	**`Ofer**	**0.68**	**197**	P			**Pg**	**21 04 33.8**	**-0.1**
OFRI				S			**Sb**	**21 04 44.8**	**+0.6**
BHL	**Bhannes**	**0.72**	**30**	*e*P			**Pb**	**21 04 35.3**	**-0.2**
BHL				*e*S			**Sb**	**21 04 45.7**	**+0.1**
ZAHL	**Zahle**	**0.81**	**44**	*e*P			**Pb**	**21 04 36.7**	**-0.2**
MMLI	**Mount Malkishu**	**0.85**	**168**	P			**Pg**	**21 04 36.6**	**-0.6**
MMLI				S			**Sn**	**21 04 50.5**	**-1.0**
SLTI	**Sal'it**	**1.04**	**188**	P			**Pb**	**21 04 40.4**	**-0.5**
SLTI				S			**Sn**	**21 04 56.2**	**+0.1**
HMDT	**Nahal Hemdat**	**1.05**	**166**	P			**Pb**	**21 04 39.8**	**-1.2**
HMDT				S			**Sn**	**21 04 56.2**	**-0.1**
HWQ	**Hawqa**	**1.17**	**31**	*e*P			**Pn**	**21 04 42.8**	**-0.5**
BEIL	**Beino**	**1.50**	**32**	*e*P			**Pb**	**21 04 48.2**	**-0.4**
DSI	**Dead Sea**	**1.71**	**175**	P			**Pn**	**21 04 50.6**	**0.0**
DSI				S			**Sb**	**21 05 13.4**	**-0.4**
AMAZ	**Amatzia**	**1.76**	**188**	P			**Pn**	**21 04 51.4**	**+0.1**
AMAZ				S			**Sb**	**21 05 15.5**	**+0.2**
YTIR	**Yattir**	**1.91**	**183**	P			**Pn**	**21 04 53.8**	**+0.4**
YTIR				S			**Sb**	**21 05 19.4**	**-0.3**
MSBI	**Mazada**	**1.96**	**176**	P			**Pn**	**21 04 54.3**	**+0.3**
MSBI				S			**Sb**	**21 05 20.2**	**-0.8**
GHAJ	**Ghor Haditha**	**1.99**	**171**	P			**Pn**	**21 04 54.8**	**+0.4**
GHAJ				S			**Sb**	**21 05 20.8**	**-1.0**
PRNI	**Paran**	**2.92**	**184**	P			**Pn**	**21 05 07.8**	**+0.5**
PRNI				S			**Sn**	**21 05 44.3**	**+1.8**

*SKO **16** 21:13:24.4, 42°.47N×21°.09E, h15^{km}, ML2.3*
*SOF **16** 21:13:25.8, 42°.39N±0°.02×21°.24E±0°.05, h10^{km}±3^{km}, MD2.9/3*
*NEIC **16** 21:13:25.3±1.7, 42°.43N±0°.07×21°.08E±0°.03, h10^{km}±2^{km}, ML3.0/22, Error ellipse: s-maj=12.1km s-min=3.0km az=15.0*
*RHSSO **16** 21:13:25.2±0.7, 42°.57N×21°.14E, h6^{km}±3^{km}, ML2.8/8*
*BEO **16** 21:13:25.6±0.2, 42°.49N×21°.08E, h17^{km}±2^{km}, ML2.6/16*
*PDG **16** 21:13:27.2±0.1, 42°.50N×20°.90E, h4^{km}, ML2.8/12, Error ellipse: s-maj=0.3km s-min=0.3km az=0.0*
ISC 16 21:13:24.8±1.0,**42°.49N**±0°.02×**21°.08E**±0°.02,**h9**^{km}±9^{km}, **n90**,σ0^{s}**97**/135,**12C-6D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SKO	**Skopje**	**0.58**	**152**	*i* Pg			**Pg**	**21 13 35.5**	**-0.6**
SKO				*i* Sg			**Sg**	**21 13 42.5**	**-1.1**
BARS	**Barje**	**0.64**	**59**	*e*Pg			**Pb**	**21 13 37.7**	**-0.5**
BARS				*e*Sg			**Sb**	**21 13 46.9**	**-0.4**
SELS	**Selova**	**0.73**	**3**	*e*Pg			**Pb**	**21 13 39.6**	**-0.3**
SELS				*e*Sg			**Sb**	**21 13 49.5**	**-0.6**
PVY	**Plav**	**0.83**	**278**	⇑*i*Pg			**Pg**	**21 13 40.2**	**-0.7**
PVY				*i* Sg			**Sg**	**21 13 51.2**	**-0.5**
IVA	**Berane**	**0.95**	**294**	⇑*i*Pg			**Pg**	**21 13 42.6**	**-0.6**
IVA				*i* Sg			**Sb**	**21 13 56.3**	**-0.1**
BOSS	**Bosilegrad**	**1.04**	**89**	*e*Pg			**Pg**	**21 13 44.7**	**-0.1**
BOSS				*e*Sg			**Sg**	**21 13 58.1**	**-0.2**
GOCS	**Kraljevo Serbi**	**1.09**	**352**	*e*Pg			**Pg**	**21 13 45.6**	**-0.1**
GOCS				*e*Sg			**Sg**	**21 14 00.0**	**+0.2**
SJES	**Sjenica**	**1.12**	**314**	*e*Pg			**Pg**	**21 13 45.8**	**-0.6**
SJES				*e*Sg			**Sb**	**21 14 01.9**	**+0.6**
SJES	**Sjenica**	**1.12**	**314**	⇑*i*Pg			**Pg**	**21 13 45.5**	**-0.9**
SJES				*e*Sg			**Sg**	**21 14 00.4**	**-0.5**
KOME	**Kolasin**	**1.21**	**288**	⇓*i*Pg			**Pb**	**21 13 47.1**	**-0.8**
KOME				*i* Sg			**Sb**	**21 14 04.2**	**+0.5**
IVAS	**Ivanjica**	**1.28**	**328**	*e*Pg			**Pn**	**21 13 48.4**	**-0.7**
PDG	**Podgorica**	**1.35**	**268**	Pn			**Pn**	**21 13 49.1**	**-0.7**
PDG				Sn			**Sn**	**21 14 08.2**	**+0.3**
PDG				IAML				21 14 10.3	
	comp=N,231nm,0.9s								
PDG	**Podgorica**	**1.35**	**268**	*e*Pg			**Pn**	**21 13 49.5**	**-0.3**
PDG				*e*Sg			**Sg**	**21 14 08.8**	**+0.6**
PDG	**Podgorica**	**1.35**	**268**	⇑*i*Pg			**Pn**	**21 13 49.6**	**-0.3**
PDG				*i* Sg			**Sg**	**21 14 08.7**	**+0.6**
PDG	**Podgorica**	**1.35**	**268**	⇑*i*Pg			**Pn**	**21 13 49.7**	**-0.2**
PDG				*e*Sg			**Sg**	**21 14 08.8**	**+0.6**
ZAPS	**Zavoj**	**1.39**	**55**	*e*Pg			**Pg**	**21 13 51.5**	**0.0**
ZAPS				*e*Sg			**Sg**	**21 14 09.5**	**0.0**
GRUS	**Gruza**	**1.43**	**350**	*e*Pg			**Pn**	**21 13 50.8**	**-0.2**
GRUS				*e*Sg			**Sg**	**21 14 11.2**	**+0.5**
DRME	**Dracevica, Mon**	**1.43**	**259**	⇓*i*Pg			**Pn**	**21 13 51.3**	**+0.2**
DRME				*i* Sg			**Sg**	**21 14 11.8**	**+0.9**
DRME	**Dracevica, Mon**	**1.43**	**259**	⇑*i*Pg			**Pb**	**21 13 51.9**	**+0.2**
DRME				*e*Sg			**Sg**	**21 14 12.7**	**+1.8**
ULC	**Ulcinj**	**1.46**	**250**	⇑*i*Pg			**Pn**	**21 13 51.9**	**+0.5**
ULC				*i* Sg			**Sg**	**21 14 12.9**	**+1.3**
PLE	**Pljevlja**	**1.50**	**305**	⇓*i*Pg			**Pb**	**21 13 52.8**	**-0.1**
PLE				*i* Sg			**Sg**	**21 14 14.5**	**+1.5**
ZAGS	**Zajecar**	**1.57**	**32**	*e*Pg			**Pn**	**21 13 53.3**	**+0.3**
ZAGS				*e*Sg			**Sg**	**21 14 15.7**	**+0.3**
NKME	**Niksic**	**1.59**	**281**	⇓*i*Pg			**Pb**	**21 13 54.2**	**-0.3**
NKME				*i* Sg			**Sg**	**21 14 17.0**	**+1.0**
CEME	**Cevo**	**1.60**	**273**	⇑*i*Pg			**Pb**	**21 13 54.6**	**0.0**
CEME				*i* Sg			**Sg**	**21 14 17.0**	**+0.9**
VTS	**Vitosha**	**1.60**	**85**	P			**Pn**	**21 13 53.4**	**-0.1**
VTS				S			**Sb**	**21 14 15.6**	**+0.5**
VTS	**Vitosha**	**1.60**	**85**	*e*Pg			**Pn**	**21 13 53.6**	**+0.1**
VTS				*e*Sg			**Sb**	**21 14 15.6**	**+0.5**
VAY	**Valandovo**	**1.61**	**136**	*i* Pn			**Pn**	**21 13 53.5**	**0.0**
VAY				*i* Sn			**Sg**	**21 14 18.7**	**+2.0**
VAY				*e*Lg			Lg	21 14 19.7	
	comp=E,26nm,0.5s								
VAY				*e*Lg			Lg	21 14 20.4	
	comp=N,22nm,0.5s								
BUM	**Brajici-Budva**	**1.63**	**264**	⇑*i*Pg			**Pb**	**21 13 54.9**	**-0.2**
BUM				*i* Sg			**Sg**	**21 14 18.4**	**+1.3**
BLKB	**Belogradchik**	**1.63**	**45**	*e*Sg			**Sg**	**21 14 17.2**	**-0.1**
KKB	**Krupnik**	**1.66**	**112**	P			**Pn**	**21 13 54.0**	**-0.2**
BLSH	**Balsha**	**1.67**	**76**	P			**Pg**	**21 13 57.8**	**+1.0**
RUDO	**Rudo**	**1.69**	**313**	*e*Pn			**Pn**	**21 13 53.7**	**-0.8**
RUDO	**Rudo**	**1.69**	**313**	*e*Pn			**Pn**	**21 13 53.9**	**-0.6**
RUDO				*e*Sn			**Sn**	**21 14 16.8**	**+0.5**
PLNA	**Plana**	**1.74**	**90**	P			**Pg**	**21 13 57.8**	**-0.4**
PLNA				S			**Sg**	**21 14 20.5**	**-0.2**
BORS2	**Bor- Borsko je**	**1.75**	**23**	*e*Pg			**Pn**	**21 13 55.8**	**+0.4**
BORS2				*e*Sg			**Sb**	**21 14 20.0**	**+0.9**
UPM	**Unac-Piva**	**1.75**	**295**	*e*Pn			**Pn**	**21 13 55.9**	**+0.3**
UPM				*e*Sn			**Sn**	**21 14 18.9**	**+0.8**
SVIS	**Svilajnac**	**1.78**	**3**	*e*Sg			**Sg**	**21 14 22.8**	**+0.7**
DIVS	**Divibare**	**1.79**	**334**	*e*Pn			**Pn**	**21 13 55.9**	**-0.2**
DIVS				*e*Sn			**Sn**	**21 14 17.9**	**-1.2**
TRUS	**Trudelj**	**1.80**	**345**	*e*Pn			**Pn**	**21 13 57.0**	**+0.8**
BBLS	**Lazi&#263i**	**1.84**	**319**	*e*Pn			**Pn**	**21 13 56.7**	**-0.1**
BBLS	**Lazi&#263i**	**1.84**	**319**	⇑*i*Pn			**Pn**	**21 13 56.7**	**-0.1**
BBLS				*e*Sn			**Sn**	**21 14 20.3**	**0.0**
HCY	**Herceg Novi**	**1.91**	**270**	⇓*i*Pn			**Pb**	**21 14 00.0**	**+0.1**
HCY				*i* Sn			**Sg**	**21 14 26.3**	**+0.1**
HCY	**Herceg Novi**	**1.91**	**270**	*e*Pn			**Pb**	**21 13 59.1**	**-0.8**
HCY				*e*Sn			**Sb**	**21 14 23.9**	**+0.1**
BRY	**Bratogost**	**1.92**	**283**	⇓*i*Pn			**Pb**	**21 14 00.2**	**+0.2**
BRY				*i* Sn			**Sg**	**21 14 26.6**	**+0.2**
BRY	**Bratogost**	**1.92**	**283**	*e*Pn			**Pn**	**21 13 58.6**	**+0.8**
BRY				*e*Sn			**Sb**	**21 14 23.4**	**-0.7**
KLINJ	**Klinje**	**1.96**	**291**	*e*Pn			**Pn**	**21 13 58.7**	**+0.4**
KLINJ				*e*Sn			**Sn**	**21 14 23.9**	**+0.8**
KUBS	**Kucevo**	**1.98**	**13**	*e*Pn			**Pn**	**21 13 58.0**	**-0.5**
KUBS				*e*Sn			**Sn**	**21 14 21.4**	**-2.0**
TREB	**Trebinje**	**2.02**	**277**	*e*Pn			**Pn**	**21 13 57.8**	**-1.4**
TREB	**Trebinje**	**2.02**	**277**	⇑*i*Pn			**Pb**	**21 14 00.9**	**-0.9**
TREB				*e*Sn			**Sb**	**21 14 26.5**	**-0.7**
MPEP	**Malo Peshtene**	**2.14**	**65**	P			**Pb**	**21 14 04.2**	**+0.4**
MPEP				S			**Sg**	**21 14 34.5**	**+0.9**
MMB	**Musomishta**	**2.20**	**114**	P			**Pn**	**21 14 02.8**	**+1.1**
SRS	**Serrai**	**2.33**	**125**	*e*Pn			**Pn**	**21 14 02.4**	**-0.9**
TEKS	**Tekeris**	**2.35**	**332**	*e*Pn			**Pn**	**21 14 03.1**	**-0.6**
STON	**Ston**	**2.52**	**280**	*e*Pn			**Pn**	**21 14 06.9**	**+1.0**
FRGS	**Fruska Gora**	**2.82**	**342**	*e*Pn			**Pn**	**21 14 09.7**	**-0.4**
FRGS	**Fruska Gora**	**2.82**	**342**	*e*Pn			**Pn**	**21 14 09.8**	**-0.4**
FRGS				*e*Sn			**Sn**	**21 14 43.6**	**-0.8**
RZN	**Rozhen**	**2.84**	**105**	P			**Pn**	**21 14 11.8**	**+1.2**
KEK	**Kerkira**	**2.93**	**200**	Pn			**Pn**	**21 14 10.0**	**-1.7**
KEK				IAML				21 15 05.2	
	comp=E,41nm,2.5s								
IGT	**Igoumenitsa**	**3.00**	**191**	*e*Pn			**Pn**	**21 14 13.8**	**+1.1**
GZR	**Gura Zlata**	**3.16**	**22**	*e*Pn			**Pn**	**21 14 15.1**	**+0.3**
RDO	**Rodhopi**	**3.59**	**110**	Pn			**Pn**	**21 14 19.6**	**-1.1**
RDO				IAML				21 16 01.4	
	comp=N,28nm,3.0s								
BLY	**Banja Luka**	**3.62**	**310**	Pn			**Pn**	**21 14 22.1**	**+1.0**
BLY	**Banja Luka**	**3.62**	**310**	*e*Pn			**Pn**	**21 14 21.9**	**+0.8**
BLY	**Banja Luka**	**3.62**	**310**	⇑*i*Pn			**Pn**	**21 14 21.8**	**+0.7**
BLY				*e*Sn			**Sn**	**21 15 03.6**	**-0.4**
SGRT	**San Giovanni R**	**4.03**	**261**	Pn			**Pn**	**21 14 26.4**	**-0.5**
SGRT				IAML				21 15 58.5	
	comp=E,26nm,1.8s								
SGRT				IAML				21 15 59.4	
	comp=N,30nm,1.8s								
ALN	**Alexandroupoli**	**4.05**	**111**	Pn			**Pn**	**21 14 27.2**	**+0.2**
MORH	**Mrgy, Hungar**	**4.12**	**336**	*e*Pn			**Pn**	**21 14 27.6**	**-0.3**
MORH				*e*Sn			**Sn**	**21 15 14.0**	**-2.2**
ACER	**Acerenza**	**4.20**	**248**	Pn			**Pn**	**21 14 28.2**	**-1.0**
ACER				IAML				21 15 19.0	
	comp=E,23nm,2.4s								
MLR	**Muntele Rosu**	**4.62**	**48**	Pn			**Pn**	**21 14 35.6**	**+0.6**
TIP	**Timpagrande**	**4.65**	**226**	Pn			**Pn**	**21 14 33.1**	**-2.3**
TIP				IAML				21 16 34.9	
	comp=E,12nm,3.7s								
TIP				IAML				21 16 58.0	
	comp=N,11nm,2.8s								
CUC	**Castrococo**	**4.68**	**240**	Pn			**Pn**	**21 14 35.7**	**-0.1**
CUC				IAML				21 15 11.8	
	comp=N,11nm,4.2s								
CUC				IAML				21 16 43.8	
	comp=E,15nm,3.8s								
PAOL	**Paolisi**	**5.08**	**256**	Pn			**Pn**	**21 14 39.3**	**-1.9**
PAOL				IAML				21 15 54.8	
	comp=E,9.5nm,4.9s								
PAOL				IAML				21 16 50.5	
	comp=N,9.8nm,2.5s								
ITM	**Ithomi**	**5.34**	**173**	Pn			**Pn**	**21 14 45.4**	**+0.7**
PSZ	**Piszkesteto**	**5.50**	**352**	Pn			**Pn**	**21 14 46.7**	**-0.2**
NRCA	**Norcia**	**5.88**	**276**	Pn			**Pn**	**21 14 53.0**	**+0.8**
FDMO	**Fiordimonte**	**5.91**	**278**	Pn			**Pn**	**21 14 53.3**	**+0.7**
SOKA	**Soboth**	**6.01**	**316**	*i* Pn			**Pn**	**21 14 54.6**	**+0.5**
	comp=N,1.3nm,0.3s								
OBKA	**Obir**	**6.16**	**313**	*i* Pn			**Pn**	**21 14 56.8**	**+0.7**
	comp=N,1.0nm,0.3s								
ARSA	**Arzberg**	**6.18**	**322**	Pn			**Pn**	**21 14 56.6**	**+0.3**
ARSA	**Arzberg**	**6.18**	**322**	*i* Pn			**Pn**	**21 14 57.0**	**+0.6**
	comp=N,2.0nm,0.3s								
RONA	**Rosalia, Austr**	**6.21**	**329**	*i* Pn			**Pn**	**21 14 58.1**	**+1.3**
	comp=N,0.5nm,0.2s								
SABO	**M.te Sabotino**	**6.41**	**306**	Pn			**Pn**	**21 15 00.5**	**+1.1**
MODS	**Modra-Piesok**	**6.46**	**337**	*e*PN			**Pn**	**21 15 01.4**	**+1.2**
MODS				*e*SN			**Sn**	**21 16 13.9**	**-0.2**
CONA	**Conrad Observa**	**6.57**	**328**	*i* Pn			**Pn**	**21 15 03.7**	**+2.0**
	comp=N,0.5nm,0.3s								
ABTA	**Abfaltersbach**	**7.45**	**308**	*i* Pn			**Pn**	**21 15 14.7**	**+1.0**
	comp=N,0.7nm,0.4s								
LESA	**Schwarzleotal**	**7.73**	**313**	*e*Pn			**Pn**	**21 15 19.5**	**+1.9**
	comp=N,1.1nm,0.4s								
WTTA	**Wattenberg**	**8.23**	**309**	*i* Pn			**Pn**	**21 15 27.3**	**+2.7**
	comp=N,1.4nm,0.3s								
SQTA	**Sankt Quirin**	**8.46**	**307**	*e*Pn			**Pn**	**21 15 30.8**	**+3.2**
	comp=N,0.4nm,0.2s								
MOTA	**Moosalm**	**8.58**	**308**	*i* Pn			**Pn**	**21 15 33.5**	**+4.1**
	comp=N,1.0nm,0.4s								
FETA	**Feichten**	**8.64**	**305**	*e*Pn			**Pn**	**21 15 29.6**	**-0.6**
	comp=N,0.1nm,0.2s								

*PRE **16** 21:17:05.2±1.0, 26°.91S×26°.73E, h2^{km}, ML2.3, Presumed earthquake*
*BGSI **16** 21:17:09.2±0.9, 27°.05S×26°.98E, h50^{km}±35^{km}, ML2.6*
ISC 16 21:17:05.8±1.4,**26°.93S**±0°.04×**26°.73E**±0°.04,**h8**^{km}±11^{km}, **n17**,σ1^{s}**36**/32,**South Africa**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PRYS	**Parys**	**0.57**	**90**	*e*P			**Pg**	**21 17 17.0**	**+0.2**
PRYS				*e*S			**Sg**	**21 17 23.8**	**-0.4**
PRYS				IAML				21 17 24.0	
	comp=Z,98nm,0.2s								
WDLM	**Western Deep L**	**0.80**	**51**	*e*P			**Pg**	**21 17 20.0**	**-1.3**
WDLM				*e*S			**Sg**	**21 17 31.1**	**-0.6**
WDLM				IAML				21 17 32.0	
	comp=Z,250nm,0.2s								
HRAO	**HartRAO**	**1.35**	**40**	*e*P			**Pn**	**21 17 30.4**	**-0.7**
HRAO				*e*S			**Sn**	**21 17 48.8**	**-0.5**
HRAO				IAML				21 17 49.7	
	comp=Z,49nm,0.4s								
SNKL	**Senekal, Frees**	**1.63**	**146**	*e*P			**Pb**	**21 17 36.5**	**+0.2**
SNKL				*e*S			**Sb**	**21 17 57.6**	**+0.5**
SNKL				IAML				21 18 01.4	
	comp=Z,56nm,0.4s								
MAKGR	**Makgori**	**2.06**	**302**	*i* P			**Pb**	**21 17 43.5**	**0.0**
MAKGR				*i* S			**Sb**	**21 18 09.5**	**+0.2**
MAKGR				IAML				21 18 11.9	
	comp=N,181nm,0.3s								
LBTB	**Lobatse**	**2.16**	**332**	*e*P			**Pn**	**21 17 42.8**	**+0.5**
LBTB				*e*S			**Sn**	**21 18 10.8**	**+1.5**
LBTB				IAML				21 18 13.4	
	comp=Z,54nm,0.5s								
LPHEP	**Lephephe**	**3.64**	**347**	*i* P			**Pn**	**21 18 03.8**	**+1.2**
LPHEP				*i* S			**Sn**	**21 18 44.5**	**-1.2**
LPHEP				IAML				21 19 01.9	
	comp=N,8.5nm,0.3s								
KDWAN	**Kaudwane**	**4.00**	**332**	*i* P			**Pn**	**21 18 10.2**	**+2.6**
KDWAN				IAML				21 19 14.4	
	comp=N,34nm,0.4s								
PILG	**Pilgrimsrest,**	**4.10**	**62**	*e*P			**Pn**	**21 18 10.2**	**+1.1**
PILG				*e*S			**Sn**	**21 18 56.7**	**-0.7**
PILG				IAML				21 19 17.1	
	comp=Z,12nm,0.3s								
PMBG	**Pietermaritzbu**	**4.21**	**128**	*e*P			**Pn**	**21 18 12.2**	**+1.8**
PMBG				*e*S			**Sn**	**21 19 00.7**	**+0.8**
PMBG				IAML				21 19 17.6	
	comp=Z,7.8nm,0.6s								
UPI	**Upington**	**5.06**	**252**	*e*P			**Pn**	**21 18 23.2**	**+1.1**
UPI				*e*S			**Sn**	**21 19 20.5**	**-0.3**
UPI				IAML				21 19 47.6	
	comp=Z,4.5nm,0.3s								
BFON	**Badsfontein, M**	**5.53**	**208**	*e*P			**Pn**	**21 18 29.8**	**+1.2**
BFON				*e*S			**Sn**	**21 19 31.2**	**-1.3**
BFON				IAML				21 20 00.3	
	comp=Z,6.1nm,0.5s								
GRAF	**Camdeboo Natio**	**5.67**	**200**	*e*P			**Pn**	**21 18 32.1**	**+1.5**
GRAF				*e*S			**Sn**	**21 19 35.1**	**-0.9**
GRAF				IAML				21 20 07.2	
	comp=Z,3.7nm,0.4s								
KGCAE	**Kacgae**	**5.77**	**314**	*i* P			**Pn**	**21 18 33.5**	**+1.6**
KGCAE				IAML				21 20 11.9	
	comp=N,13nm,0.4s								
BRAK	**Brakfontein**	**5.88**	**214**	*e*P			**Pn**	**21 18 35.2**	**+1.9**
BRAK				*e*S			**Sn**	**21 19 40.0**	**-1.0**
BRAK				IAML				21 20 19.1	
	comp=Z,3.9nm,0.4s								
FRAZ	**Fraserburg**	**6.80**	**222**	*e*P			**Pn**	**21 18 48.0**	**+1.9**
FRAZ				*e*S			**Sn**	**21 20 01.8**	**-2.1**
FRAZ				IAML				21 20 22.4	
	comp=Z,1.8nm,0.3s								
SUR	**Sutherland**	**7.48**	**222**	*e*P			**Pn**	**21 18 57.0**	**+1.6**
SUR				*e*S			**Sn**	**21 20 18.2**	**-2.4**
SUR				IAML				21 20 44.0	
	comp=Z,1.6nm,0.5s								

*DJA **16** 21:59:18.0±0.7, 6°.5S×107°.4E±°, h10^{km}, M3.6/13, MLv3.6/13*
*IDC **16** 21:59:20.0±3.8, 5°.73S×103°.17E, h0^{km}, mb3.5/7, mbtmp3.5/7, Error ellipse: s-maj=164.4km s-min=23.0km az=53.0*
ISC 16 21:59:15.6±1.6,**6°.4S**±0°.1×**103°.57E**±0°.08,**h10**^{km},**n20**, σ0^{s}**58**/12,**mb3.5/7,Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**1.29**	**45**	P			**Pg**	**21 59 40.7**	**+0.3**
LWLI	**Liwa**	**1.49**	**19**	P			**Pg**	**21 59 44.1**	**-0.2**
MDSI	**Maura Dua**	**2.03**	**17**	P			**Pb**	**21 59 52.0**	**-0.6**
KLSI		**2.09**	**34**	P			**Pb**	**21 59 53.3**	**-0.2**
CGJI	**Cibinong**	**2.12**	**95**	P			**Pb**	**21 59 53.1**	**-0.9**
MNAI	**Manna**	**2.15**	**343**	P			**Pb**	**21 59 53.8**	**-0.9**
KSI

COEG	**Centro de Oper**	**1.79**	**340**	P	**Pn**	**22 11 01.7**	**+0.4**
COEG				S	**Sn**	**22 11 24.0**	**+0.8**
MOM2	**El Cardon**	**1.80**	**74**	⇓P	**Pn**	**22 11 02.5**	**+1.1**
MOM2				S	**Sn**	**22 11 25.3**	**+2.0**
SAPS	**Ciudad Sandino**	**1.82**	**82**	S	**Sn**	**22 11 25.8**	**+1.9**
SCLA	**Alcaldia de Sa**	**1.82**	**345**	P	**Pn**	**22 11 02.4**	**+0.6**
SCLA				S	**Sn**	**22 11 24.3**	**+0.3**
LALI	**Alcalda de L**	**1.87**	**326**	S	**Sn**	**22 11 25.4**	**+0.3**
APQ3	**Volcan Apoyequ**	**1.87**	**79**	S	**Sn**	**22 11 27.1**	**+2.0**
PAVA	**Las Pavas**	**1.89**	**339**	P	**Pn**	**22 11 02.6**	**-0.3**
PAVA				S	**Sn**	**22 11 26.3**	**+0.4**
MGAN	**Managua**	**1.97**	**84**	P	**Pn**	**22 11 05.1**	**+1.3**
MGAN				S	**Sn**	**22 11 29.4**	**+1.8**
UDBS	**Universidad Do**	**1.98**	**334**	S	**Sn**	**22 11 27.9**	**0.0**
UEES	**Universidad Ev**	**2.02**	**332**	P	**Pn**	**22 11 04.8**	**+0.2**
MAS3	**Al N del Volca**	**2.03**	**87**	P	**Pn**	**22 11 06.9**	**+2.2**
MAS3				S	**Sn**	**22 11 31.8**	**+2.7**
PMON	**Piamonte**	**2.05**	**330**	S	**Sn**	**22 11 29.6**	**-0.1**
JAYA	**Jayaque - finc**	**2.07**	**326**	P	**Pn**	**22 11 06.7**	**+1.3**
JAYA				S	**Sn**	**22 11 31.5**	**+1.1**
P5NO	**Presa 5 de nov**	**2.10**	**346**	P	**Pn**	**22 11 06.1**	**+0.5**
P5NO				S	**Sn**	**22 11 31.2**	**+0.3**
LIMN	**Finca el Limon**	**2.16**	**58**	⇓P	**Pn**	**22 11 06.7**	**+0.3**
LIMN				S	**Sn**	**22 11 34.2**	**+1.8**
MARCA	**Marcala la Paz**	**2.23**	**5**	P	**Pn**	**22 11 08.6**	**+1.1**
TGUH	**Tegucigalpa,Un**	**2.32**	**24**	P	**Pn**	**22 11 09.4**	**+0.6**
TGUH				S	**Sn**	**22 11 37.9**	**+1.5**
LLGN	**La Laguna**	**2.32**	**343**	P	**Pn**	**22 11 09.7**	**+1.0**
LLGN				S	**Sn**	**22 11 37.6**	**+1.2**
OCON	**Estacion meteo**	**2.42**	**45**	P	**Pn**	**22 11 11.0**	**+1.0**
YUSH	**Yuscaran**	**2.44**	**34**	⇓P	**Pn**	**22 11 11.0**	**+0.7**
MATN	**Matagalpa**	**2.48**	**66**	P	**Pn**	**22 11 10.8**	**-0.1**
RCFN	**Al S de San Ju**	**2.55**	**51**	⇓P	**Pn**	**22 11 12.6**	**+0.7**
RCON	**San Juan de Ri**	**2.56**	**53**	P	**Pn**	**22 11 13.6**	**+1.5**
FAME	**Alcaldia de Sa**	**2.56**	**318**	S	**Sn**	**22 11 43.9**	**+1.7**
BOAB	**BOACO BROADBAN**	**2.58**	**78**	P	**Pn**	**22 11 15.2**	**+3.1**
RCVN	**Varillal2**	**2.59**	**50**	⇓P	**Pn**	**22 11 13.4**	**+0.9**
RCVN				S	**Sn**	**22 11 44.0**	**+0.8**
JTS	**Las Juntas de**	**3.62**	**116**	P	**Pn**	**22 11 27.3**	**+0.7**
	2.2nm,0.3s,baz=317,slow=19,SNR=1.6						
JTS				S	**Sn**	**22 12 02.4**	**-6.1**
	6.2nm,0.4s,baz=311,slow=20,SNR=4.3						
APG	**El Apazote**	**3.74**	**325**	P	**Pb**	**22 11 39.2**	**+1.4**
	0.5nm,0.7s,baz=145,slow=12,SNR=4.5						
APG				S	**Sb**	**22 12 24.4**	**+1.7**
	0.7nm,0.6s,baz=102,slow=12,SNR=3.7						
TXAR	**Lajitas Array**	**22.49**	**323**	P	**P**	**22 15 31.7**	**+1.9**
	0.8nm,0.7s,baz=145,slow=10.0,SNR=10						
	0.8nm,0.7s						
PDAR	**Pinedale Array**	**35.87**	**333**	P	**P**	**22 17 28.7**	**-1.3**
	0.2nm,0.6s,baz=111,slow=13,SNR=1.9						
	0.2nm,0.6s						
ULM	**Lac du Bonnet**	**38.72**	**352**	P	**P**	**22 17 52.0**	**-1.8**
	4.0nm,0.7s,baz=181,slow=9.2,SNR=7.2						
	4.0nm,0.7s						
RPN	**Rapa Nui**	**43.89**	**208**	LR	LR	22 32 26.8	
	comp=Z,70nm,18.1s,baz=42,slow=30						
YKA	**Yellowknife Ar**	**53.91**	**345**	P	**P**	**22 19 52.5**	**-0.4**
	0.2nm,0.6s,baz=141,slow=6.7,SNR=7.2						
	0.2nm,0.6s						

IDC ***16*** *22:12:39.4±8.9,5°.59S×153°.20E,h103km±63km,mb3.4/4, mbtmp3.8/5,ML1.9/1,Error ellipse: s-maj=87.2km s-min=36.1km az=106.0*

ISC 16 22:12:37.7±2.2,5.7S±0.4×153.4E±0.4,h100km,n6, σ0.991/7,mb3.4/4,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.22**	**239**	P	**Pn**	**22 14 19.4**	**-1.2**
	1.2nm,0.3s,baz=341,slow=9.4,SNR=1.9						
PMG				S	**Sn**	**22 15 41.9**	**+0.8**
	10nm,0.5s,baz=143,slow=20,SNR=4.5						
	6.6nm,0.5s						
WRA	**Warramunga Arr**	**23.34**	**231**	P	**P**	**22 17 37.8**	**+0.5**
	0.6nm,0.5s,baz=55,slow=9.9,SNR=6.3						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**25.92**	**225**	P	**P**	**22 18 01.5**	**+0.8**
	6.1nm,1.3s,baz=52,slow=9.2,SNR=9.2						
	6.1nm,1.3s						
MKAR	**Makanchi Array**	**81.44**	**319**	P	**P**	**22 24 44.4**	**+0.5**
	0.6nm,0.8s,baz=112,slow=4.0,SNR=6.3						
	0.6nm,0.8s						
KURBB	**Kurchatov Arra**	**84.92**	**322**	P	**P**	**22 25 01.4**	**-0.1**
	0.3nm,0.9s,baz=117,slow=3.2,SNR=3.4						
	0.3nm,0.9s						
TORD	**Torodi Ar. Bea**	**151.19**	**287**	PKPbc	**PKiKP**	**22 32 20.7**	**-0.2**
	0.5nm,0.8s,baz=65,slow=3.8,SNR=2.4						

IDC 16 22:54:42.5±1.3,13°.17S×167°.53E,h0km,mb3.7/5, mbtmp3.7/5,Error ellipse: s-maj=45.7km s-min=33.0km az=126.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.48**	**254**	P	P	23 01 15.1	+0.1
	0.1nm,0.3s,baz=82,slow=6.8,SNR=1.4						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**33.49**	**247**	P	P	23 01 23.9	0.0
	0.2nm,0.3s,baz=80,slow=9.2,SNR=4.3						
	0.2nm,0.3s						
QSPA	**South Pole Qui**	**76.85**	**180**	P	P	23 06 36.4	+0.1
	1.8nm,0.8s,baz=9.5,slow=6.1,SNR=8.1						
	1.8nm,0.8s						
ILAR	**Eielson Array**	**84.97**	**18**	P	P	23 07 19.6	+0.2
	0.4nm,0.6s,baz=232,slow=5.2,SNR=8.1						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**96.25**	**316**	P	P	23 08 12.4	-0.5
	0.3nm,0.5s,baz=86,slow=6.1,SNR=7.8						
	0.3nm,0.5s						

GII ***16*** *23:36:06.8±0.0,33°.313N±0°.002×35°.215E±0°.001, h0km,Mws2.2,confirmed*

GRAL ***16*** *23:36:08.6±0.3,33°.21N×35°.21E,h3km±3km,MD2.9*

ISC 16 23:36:08.5±1.2,33°.27N±0°.03×35°.23E±0°.04,h8km±8km, n26,σ0.977/47,Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNTI	**Hanita**	**0.19**	**194**	P	**Pg**	**23 36 11.5**	**-0.7**
HNTI				S	**Sg**	**23 36 16.4**	**+1.5**
MMC7	**Mount Meron ar**	**0.28**	**150**	P	**Pg**	**23 36 13.7**	**-0.4**
MMA0B	**Mount Meron ar**	**0.29**	**149**	P	**Pg**	**23 36 14.1**	**-0.1**
MMA0B				S	**Sb**	**23 36 20.3**	**-0.7**
GEM	**Giv'at Ha'Em**	**0.37**	**98**	P	**Pg**	**23 36 15.8**	**+0.1**
GEM				S	**Sb**	**23 36 22.0**	**-1.2**
NATI	**Neve Ativ**	**0.43**	**90**	P	**Pg**	**23 36 16.6**	**-0.1**
NATI				S	**Sb**	**23 36 24.1**	**-0.7**
DQRL	**Deir Qamar**	**0.52**	**33**	*eP*	**Pg**	**23 36 18.9**	**+0.3**
DQRL				*eS*	**Sb**	**23 36 26.6**	**-1.1**
BLGI	**Bet Lehem HaGe**	**0.53**	**183**	P	**Pb**	**23 36 19.1**	**-0.9**
BLGI				S	**Sb**	**23 36 28.3**	**+0.5**
RCY	**Rachaya**	**0.56**	**66**	*eP*	**Pg**	**23 36 19.3**	**0.0**
RCY				*eS*	**Sg**	**23 36 27.1**	**+0.5**
KSHT	**Keshet**	**0.57**	**120**	P	**Pg**	**23 36 19.2**	**-0.2**
KSHT				S	**Sb**	**23 36 29.2**	**+0.2**
OFRI	**`Ofer**	**0.67**	**198**	P	**Pg**	**23 36 20.8**	**-0.6**
OFRI				S	**Sb**	**23 36 32.8**	**+0.8**
BHL	**Bhannes**	**0.73**	**29**	*eP*	**Pg**	**23 36 22.6**	**+0.1**
ZAHL	**Zahle**	**0.81**	**43**	*eP*	**Pg**	**23 36 23.9**	**-0.1**
MMLI	**Mount Malkishu**	**0.84**	**169**	P	**Pg**	**23 36 24.3**	**-0.4**
MMLI				S	**Sb**	**23 36 38.0**	**+1.2**
SLTI	**Sal'it**	**1.03**	**189**	P	**Pg**	**23 36 27.1**	**-1.2**
SLTI				S	**Sn**	**23 36 43.8**	**-0.1**
HMDT	**Nahal Hemdat**	**1.04**	**166**	P	**Pg**	**23 36 27.5**	**-0.9**
HMDT				S	**Sn**	**23 36 44.0**	**-0.1**
HWQ	**Hawqa**	**1.17**	**30**	*eP*	**Pg**	**23 36 30.4**	**-0.7**
BEIL	**Beino**	**1.50**	**32**	*eP*	**Pn**	**23 36 35.7**	**0.0**
DSI	**Dead Sea**	**1.70**	**176**	P	**Pn**	**23 36 37.9**	**-0.5**
DSI				S	**Sn**	**23 37 00.9**	**+0.6**
AMAZ	**Amatzia**	**1.75**	**189**	P	**Pn**	**23 36 38.9**	**-0.2**
AMAZ				S	**Sb**	**23 37 02.8**	**-0.2**
YTIR	**Yattir**	**1.90**	**183**	P	**Pn**	**23 36 41.3**	**+0.1**
YTIR				S	**Sb**	**23 37 06.7**	**-0.7**
MSBI	**Mazada**	**1.95**	**177**	P	**Pn**	**23 36 41.8**	**0.0**
MSBI				S	**Sn**	**23 37 07.7**	**+1.2**
GHAJ	**Ghor Haditha**	**1.98**	**172**	P	**Pn**	**23 36 42.2**	**0.0**
GHAJ				S	**Sb**	**23 37 08.7**	**-0.8**
KZIT	**Kziot**	**2.46**	**197**	P	**Pn**	**23 36 48.8**	**0.0**
KZIT				S	**Sn**	**23 37 20.3**	**+1.3**
PRNI	**Paran**	**2.91**	**184**	P	**Pn**	**23 36 55.1**	**0.0**
PRNI				S	**Sn**	**23 37 31.9**	**+1.5**
KRMI	**Paran Flat**	**3.17**	**188**	P	**Pn**	**23 36 58.8**	**+0.2**
KRMI				S	**Sn**	**23 37 38.1**	**+1.5**
HRFI	**Mount Harif**	**3.22**	**183**	P	**Pn**	**23 36 59.6**	**+0.2**
HRFI				S	**Sn**	**23 37 39.5**	**+1.4**

MDD ***17*** *00:32:44.8±1.0,37°.31N×14°.97W,h0km,Mb4.6/13, M_mb4.0/13,Error ellipse: s-maj=9.8km s-min=7.3km az=19.0*

CNRM ***17*** *00:32:46.6,36°.86N×14°.83W,h22km*

IGIL ***17*** *00:32:46.7,37°.03N×15°.03W,h23km,ML2.6*

INMG ***17*** *00:32:48.1±1.7,37°.17N×15°.22W,h18km,ML2.5,Error ellipse: s-maj=6.6km s-min=6.5km az=155.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Madeira-Tore*

ISC 17 00:32:51.9±3.3,37°.37N±0°.07×14°.2W±0°.2,h10km,n50, σ2.940/90,12C,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**4.21**	**66**	Pn	**Pn**	**00 33 57.2**	**+1.0**
PMAFR				Sn	**Sn**	**00 34 50.0**	**+4.5**
PMAFR	**Mafra**	**4.21**	**66**	*eP*	**Pn**	**00 33 57.7**	**+1.5**
PMAFR				*eS*	**Sn**	**00 34 50.5**	**+5.1**
PMAFR				*i* IAML		00 34 52.6	
PMAFR				*i* IAML		00 34 53.1	
PMAFR				*i* IAML		00 34 54.5	
PFVI	**Vila Bisbo**	**4.33**	**92**	*eP*	**Pn**	**00 33 58.8**	**+1.0**
PFVI				*eS*	**Sn**	**00 34 52.5**	**+4.3**
PFVI				*i* IAML		00 34 52.8	
PFVI				*i* IAML		00 34 53.3	
PTEO	**Sao Teotonio**	**4.39**	**86**	*eP*	**Pn**	**00 33 59.4**	**+0.7**
PTEO				*eS*	**Sn**	**00 34 51.9**	**+2.0**
PTEO				*i* IAML		00 34 54.3	
PTEO				*i* IAML		00 34 56.4	
PTEO				*i* IAML		00 34 58.3	
MORF	**Marmelete**	**4.45**	**89**	*eP*	**Pn**	**00 34 00.4**	**+0.8**
MORF				*eS*	**Sn**	**00 34 53.9**	**+2.5**
MORF				IAML		00 34 56.0	
	comp=N,9.2nm,0.5s						
MORF	**Marmelete**	**4.45**	**89**	*eP*	**Pn**	**00 34 00.8**	**+1.2**
MORF				*eS*	**Sn**	**00 34 54.1**	**+2.7**
MORF				*i* IAML		00 34 56.4	
MORF				*i* IAML		00 34 59.0	
MORF				*i* IAML		00 35 01.6	
MESJ	**Messejana**	**4.80**	**83**	*eP*	**Pn**	**00 34 05.2**	**+0.9**
MESJ	**Messejana**	**4.80**	**83**	*eP*	**Pn**	**00 34 05.4**	**+1.2**
MESJ				*eS*	**Sn**	**00 35 03.4**	**+3.4**
MESJ				*i* IAML		00 35 05.8	
MESJ				*i* IAML		00 35 06.8	
MESJ				*i* IAML		00 35 07.5	
PCVE	**Castro Verde**	**4.94**	**85**	Pn	**Pn**	**00 34 06.9**	**+0.8**
PCVE				Sn	**Sn**	**00 35 04.7**	**+1.4**
PCVE	**Castro Verde**	**4.94**	**85**	*eP*	**Pn**	**00 34 07.3**	**+1.2**
PCVE				*eS*	**Sn**	**00 35 06.3**	**+3.0**
PCVE				*i* IAML		00 35 07.6	
PCVE				*i* IAML		00 35 09.5	
PCVE				*i* IAML		00 35 10.2	
PMTG	**Montargil**	**5.03**	**69**	*eP*	**Pn**	**00 34 08.8**	**+1.4**
PMTG				*eS*	**Sn**	**00 35 08.8**	**+3.3**
PMTG				*i* IAML		00 35 10.8	
PMTG				*i* IAML		00 35 16.8	
PMTG				*i* IAML		00 35 17.4	
PBDV	**Barranco-do-Ve**	**5.03**	**90**	Pn	**Pn**	**00 34 08.0**	**+0.5**
PBDV				Sn	**Sn**	**00 35 08.1**	**+2.5**
PBDV	**Barranco-do-Ve**	**5.03**	**90**	*eP*	**Pn**	**00 34 09.5**	**+2.0**
PBDV				*eS*	**Sn**	**00 35 08.4**	**+2.8**
PBDV				*i* IAML		00 35 10.2	
PBDV				*i* IAML		00 35 10.4	
PBDV				*i* IAML		00 35 11.2	
EVO	**Evora**	**5.05**	**75**	Pn	**Pn**	**00 34 09.2**	**+1.4**
EVO				Sn	**Sn**	**00 35 08.1**	**+1.9**
EVO	**Evora**	**5.05**	**75**	*eP*	**Pn**	**00 34 09.9**	**+2.2**
EVO				*eS*	**Sn**	**00 35 09.1**	**+2.9**
EVO				*i* IAML		00 35 12.4	
EVO				*i* IAML		00 35 12.5	
EVO				*i* IAML		00 35 14.1	
PBEJ	**Beja**	**5.10**	**81**	*eS*	**Sn**	**00 35 10.6**	**+3.4**
PBEJ				*i* IAML		00 35 13.6	
PBEJ				*i* IAML		00 35 14.7	
PBEJ				*i* IAML		00 35 14.9	
PARRA	**Arraiolos**	**5.10**	**72**	*eP*	**Pn**	**00 34 09.3**	**+0.9**
PARRA				*eS*	**Sn**	**00 35 09.7**	**+2.4**
PARRA				*i* IAML		00 35 12.4	
PARRA				*i* IAML		00 35 17.6	
PARRA				*i* IAML		00 35 19.2	
PVAQ	**Vaqueiros**	**5.19**	**88**	*eP*	**Pn**	**00 34 10.8**	**+1.1**
PVAQ				*eS*	**Sn**	**00 35 12.2**	**+2.5**
PVAQ				*i* IAML		00 35 16.2	
PVAQ				*i* IAML		00 35 17.8	
PVAQ				*i* IAML		00 35 18.3	
PVAQ	**Vaqueiros**	**5.19**	**88**	P	**Pn**	**00 34 08.8**	**-0.9**
PVAQ				S	**Sn**	**00 35 14.4**	**+4.8**
PCAS	**Casmilo, Conde**	**5.23**	**57**	*eP*	**Pn**	**00 34 11.3**	**+1.2**
PCAS				*eS*	**Sn**	**00 35 14.0**	**+3.6**
PCAS				*i* IAML		00 35 18.5	
PCAS				*i* IAML		00 35 18.5	
PCAS				*i* IAML		00 35 18.5	
PSARD	**Sardoal**	**5.26**	**63**	*eP*	**Pn**	**00 34 12.2**	**+1.6**
PSARD				*eS*	**Sn**	**00 35 14.3**	**+3.0**
PSARD				*i* IAML		00 35 16.8	
PSARD				*i* IAML		00 35 17.0	
PSARD				*i* IAML		00 35 20.4	
EGRO	**El Granado**	**5.38**	**86**	Pn	**Pn**	**00 34 12.4**	**+0.2**
EGRO				Sn	**Sn**	**00 35 16.4**	**+2.2**
EGRO	**El Granado**	**5.38**	**86**	Pn	**Pn**	**00 34 14.1**	**+1.9**
EGRO				⇑*i*VmB_VC		00 34 18.9	
	comp=N,111nm,SNR=0.6						
EGRO				Sn	**Sn**	**00 35 16.7**	**+2.5**
PESTR	**Estremoz**	**5.45**	**72**	Sn	**Sn**	**00 35 19.1**	**+3.1**
PESTR	**Estremoz**	**5.45**	**72**	*eS*	**Sn**	**00 35 18.6**	**+2.6**
PESTR				*i* IAML		00 35 23.1	
PESTR				*i* IAML		00 35 23.1	
PESTR				*i* IAML		00 35 23.3	
PESTR	**Estremoz**	**5.45**	**72**	P	**Pn**	**00 34 14.1**	**+0.9**
PESTR				S	**Sb**	**00 35 25.5**	**-7.2**
PMRV	**Marv??o**	**5.76**	**67**	*eP*	**Pn**	**00 34 18.1**	**+0.7**
PMRV				*eS*	**Sn**	**00 35 26.1**	**+2.5**
PMRV				*i* IAML		00 35 28.7	
PMRV				*i* IAML		00 35 30.2	
PMRV				*i* IAML		00 35 31.7	
PBAR	**Barrancos**	**5.76**	**80**	Pn	**Pn**	**00 34 17.4**	**0.0**
PBAR				Sn	**Sn**	**00 35 25.2**	**+1.6**
PBAR	**Barrancos**	**5.76**	**80**	*eP*	**Pn**	**00 34 18.4**	**+1.0**
PBAR				*eS*	**Sn**	**00 35 26.2**	**+2.6**
PBAR				*i* IAML		00 35 30.5	
PBAR				*i* IAML		00 35 37.1	
PBAR				*i* IAML		00 35 39.9	
PCBR	**Castelo Branco**	**5.84**	**63**	*eP*	**Pn**	**00 34 19.8**	**+1.3**
PCBR				*eS*	**Sn**	**00 35 28.1**	**+2.6**
PCBR				*i* IAML		00 35 29.3	
PCBR				*i* IAML		00 35 33.6	
PCBR				*i* IAML		00 35 34.1	
PVIS	**Viseu**	**5.96**	**54**	*eP*	**Pn**	**00 34 20.4**	**+0.2**
PVIS				*eS*	**Sn**	**00 35 29.9**	**+1.3**
PVRL	**Vila Real**	**6.38**	**50**	*eP*	**Pn**	**00 34 25.4**	**-0.6**
PVRL				*eS*	**Sn**	**00 35 39.9**	**+0.9**
PVRL				*i* IAML		00 35 43.1	
PVRL				*i* IAML		00 35 44.6	
PVRL				*i* IAML		00 35 45.2	
POLO	**Lamas de Olo**	**6.39**	**49**	*eP*	**Pn**	**00 34 28.9**	**+0.4**
POLO				*eS*	**Sn**	**00 35 39.8**	**+0.5**
POLO				*i* IAML		00 35 41.4	
POLO				*i* IAML		00 35 42.7	
PGAV	**Gavieira, Arco**	**6.50**	**43**	*eP*	**Pn**	**00 34 27.0**	**-0.7**
PGAV				*eS*	**Sn**	**00 35 41.6**	**-0.3**
PGAV				*i* IAML		00 35 42.5	
PGAV				*i* IAML		00 35 47.5	
ELOB	**Lobios**	**6.55**	**45**	Pn	**Pn**	**00 34 27.2**	**-1.1**
ELOB				⇑*i*VmB_VC		00 34 30.0	
	comp=N,273nm,SNR=1.7						
ELOB				Sn	**Sn**	**00 35 41.4**	**-1.7**
ESPR	**Espera**	**6.72**	**92**	⇑*i*VmB_VC		00 34 32.6	
	comp=N,169nm,SNR=1.3						
ESPR				Sn	**Sn**	**00 35 50.4**	**+3.3**
MVO	**Moncorvo**	**6.75**	**54**	*eP*	**Pn**	**00 34 31.6**	**+0.4**
MVO				*eS*	**Sn**	**00 35 48.9**	**+0.7**
MVO				*i* IAML		00 35 50.1	
MVO				*i* IAML		00 35 50.9	
MVO				*i* IAML		00 35 53.4	
EPLA	**Plasencia**	**6.92**	**65**	Pn	**Pn**	**00 34 34.8**	**+1.4**
EPLA				⇑*i*VmB_VC		00 34 35.2	
	comp=N,126nm,SNR=1.0						
EPLA				Sn	**Sn**	**00 35 54.3**	**+2.1**
ECAB	**El Cabril**	**7.03**	**82**	Pn	**Pn**	**00 34 35.4**	**+0.5**
ECAB				⇑*i*VmB_VC		00 34 39.0	
	comp=N,81nm,SNR=0.9						
ECAB				Sn	**Sn**	**00 35 56.7**	**+1.8**
EAGO	**Agolada(Pontev**	**7.18**	**39**	Pn	**Pn**	**00 34 35.4**	**-1.6**
EAGO				⇑*i*VmB_VC		00 34 39.3	
	comp=N,313nm,SNR=1.4						
EAGO				Sn	**Sn**	**00 35 55.7**	**-3.0**
ECAL	**Calabor**	**7.37**	**49**	Pn	**Pn**	**00 34 38.8**	**-0.7**
ECAL				⇑*i*VmB_VC		00 34 39.2	
	comp=N,472nm,SNR=1.1						
EADA	**Adamuz**	**7.69**	**81**	Pn	**Pn**	**00 34 44.4**	**+0.4**
EADA				⇑*i*VmB_VC		00 34 47.5	
	comp=N,182nm,SNR=1.6						
EADA				Sn	**Sn**	**00 36 14.1**	**+2.8**
EPON	**Pontenova**	**8.04**	**40**	Pn	**Pn**	**00 34 47.7**	**-1.1**
EPON				⇑*i*VmB_VC		00 34 51.3	
	comp=N,285nm,SNR=0.9						
PAB	**San Pablo**	**8.06**	**71**	Pn	**Pn**	**00 34 49.7**	**+0.7**
PAB				⇑*i*VmB_VC		00 34 53.3	
	comp=N,89nm,SNR=0.7						
PAB				Sn	**Sn**	**00 36 22.0**	**+1.7**
PSIM	**Granatula de C**	**8.39**	**77**	Pn	**Pn**	**00 34 55.0**	**+1.3**
PSIM				Sn	**Sn**	**00 36 30.4**	**+1.9**
OUZM	**OUZ**	**8.94**	**134**	P	Pn	00 34 54.8	-6.5
OUZM				S	**Sn**	**00 36 34.1**	**-8.0**
MD31	**MD31**	**8.97**	**117**	P	**Pn**	**00 34 58.0**	**-3.6**
MD31				S	**Sn**	**00 36 41.5**	**-1.3**
EARI	**Arriondas**	**9.08**	**47**	Pn	**Pn**	**00 35 03.5**	**+0.4**
EARI				⇑*i*VmB_VC		00 35 06.7	
	comp=N,283nm,SNR=0.7						
MDT	**Midelt**	**9.11**	**117**	P	**Pn**	**00 34 59.8**	**-3.7**
MDT				S	**Sn**	**00 36 45.1**	**-1.0**
YEBES	**Yebes (Guadala**	**9.24**	**67**	Pn	**Pn**	**00 35 05.7**	**+0.5**
YEBES				⇑*i*VmB_VC		00 35 06.6	
	comp=N,408nm,SNR=1.2						

NNC ***17*** *00:38:32.6±2.0,36°.82N×70°.63E,h0km,mb4.2,mpv4.1, Error ellipse: s-maj=17.3km s-min=14.8km az=157.0*

IDC ***17*** *00:38:35.5±4.4,36°.42N×71°.09E,h194km±37km,mb3.2/9, mbtmp3.8/14,Error ellipse: s-maj=36.1km s-min=16.6km az=37.0*

NEIC ***17*** *00:38:36.5±1.5,36°.57N±0°.04×71°.0E±0°.1,h209km±15km, mb4.0/5,Error ellipse: s-maj=12.9km s-min=5.7km az=93.0*

ISC 17 00:38:35.4±0.6,36°.53N±0°.04×71°.01E±0°.05,h188km,n64, σ1.984/81,mb3.6/10,2C-1D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHAA	**Shahritus**	**2.52**	**295**		**Pn**	**00 39 20.9**	**+2.0**
GAR	**Garm**	**2.52**	**348**		**Pn**	**00 39 21.0**	**+2.0**
GAR				Sn	**Sn**	**00 39 52.8**	**-0.3**
KBL	**Kabul**	**2.55**	**219**		**Pn**	**00 39 22.2**	**+2.7**
KBL				Sn	**Sn**	**00 39 55.2**	**+1.6**
CHGR	**Chuyangaron**	**2.58**	**326**		**Pn**	**00 39 21.4**	**+1.8**
CHGR				Sn	**Sn**	**00 39 53.7**	**-0.4**
DRK	**Karamyk**	**3.01**	**12**		**Pn**	**00 39 27.1**	**+2.2**
DRK				Sn	**Sn**	**00 40 03.7**	**+0.2**
NIL	**Nilore**	**3.41**	**147**		**Pn**	**00 39 32.0**	**+2.5**
NIL				Sn	**Sn**	**00 40 15.0**	**+3.2**
BTK	**Batken**	**3.52**	**358**		**Pn**	**00 39 33.4**	**+2.5**
BTK				Sn	**Sn**	**00 40 15.3**	**+0.9**
KSH2	**Kashi**	**4.46**	**53**	Pn	**Pn**	**00 39 46.3**	**+3.6**
KSH2				Sn	**Sn**	**00 40 37.9**	**+2.4**
KSH2				smax	smax		
	comp=N,41nm,0.4s						
KSH2				smax	smax		
	comp=E,39nm,0.5s						
JMU	**Jammu**	**4.89**	**139**	*eS*	**Sn**	**00 40 46.5**	**+1.1**
ARSB	**Arslanbob**	**5.03**	**17**		**Pn**	**00 39 50.8**	**+0.8**
ALCI	**Alchi Leh**	**5.55**	**113**	*eP*	**Pn**	**00 39 58.4**	**+1.3**
ALCI				*eS*	**Sn**	**00 40 59.2**	**-2.0**
ALCI				IAML		00 41 03.6	
	comp=E,608nm,0.3s						
ALCI				IAML		00 41 06.6	
	comp=N,564nm,0.5s						
TSSA	**Tissa**	**5.62**	**130**	*eP*	**Pn**	**00 39 59.4**	**+1.7**
TSSA				*eS*	**Sn**	**00 41 01.4**	**-1.1**
TSSA				IAML		00 41 02.8	
	comp=N,148nm,0.4s						
TSSA				IAML		00 41 03.7	
	comp=E,103nm,0.3s						
THN	**Thein Dam**	**5.66**	**135**	*eP*	**Pn**	**00 40 00.2**	**+2.0**
THN				*eS*	**Sn**	**00 41 03.4**	**0.0**
THN				IAML		00 41 05.5	
	comp=E,67nm,0.3s						
THN				IAML		00 41 07.5	
	comp=N,70nm,0.3s						
DHRM	**D

AB31	**Akbulak array**	**15.06**	**331**	P		**P**	**00 42 01.1**	**+1.6**
	comp=Z,3.3nm,0.6s,baz=141,slow=10,SNR=52							
ABKAR	**Akbulak array**	**15.06**	**331**			**Pn**	**00 41 57.8**	**-0.9**
KURBB	**Kurchatov Arra**	**15.09**	**19**	P		**Pn**	**00 41 58.5**	**-0.6**
	comp=Z,0.1nm,0.4s,baz=210,slow=10,SNR=5.4							
EVN	**Everest**	**15.86**	**118**			**P**	**00 42 09.2**	**-0.1**
EVN				IAmb		IAmb	00 42 11.0	
	comp=Z,5.2nm,0.6s							
BVA0	**Borovoye Array**	**16.50**	**359**	P		**Pn**	**00 42 20.7**	**+4.6**
	comp=Z,0.8nm,0.7s,baz=164,slow=10,SNR=5.7							
BVAR	**Borovoye Array**	**16.50**	**359**	P		**P**	**00 42 15.4**	**0.0**
	comp=Z,1.4nm,0.6s,baz=171,slow=11,SNR=7.7							
BORK	**Borovoye**	**16.52**	**359**	Pn		**Pn**	**00 42 16.5**	**+0.2**
AKTO	**Aktyubinsk**	**16.75**	**330**	P		**Pn**	**00 42 19.6**	**+0.4**
	comp=Z,4.2nm,0.8s,baz=140,slow=5.8,SNR=10							
AKTO				S		**S**	**00 45 20.8**	**-2.4**
	comp=Z,0.7nm,0.6s,baz=127,slow=20,SNR=1.8							
AKTO	**Aktyubinsk**	**16.75**	**330**	P		**Pn**	**00 42 23.1**	**+3.9**
UOSS	**Minazif**	**17.16**	**232**	P		**P**	**00 42 21.6**	**-1.3**
ZAA0	**Zalesovo Array**	**19.89**	**25**	P		**P**	**00 42 52.2**	**+0.1**
ZAA0				IAmb		IAmb	00 42 53.6	
	comp=Z,2.3nm,0.7s							
ZALV	**Zalesovo Beam**	**19.89**	**25**	P		**P**	**00 42 52.4**	**+0.3**
	comp=Z,2.3nm,0.3s,baz=216,slow=12,SNR=10.0							
ZALV	**Zalesovo Beam**	**19.89**	**25**	P		**P**	**00 42 51.0**	**-1.2**
ARTI	**Arti**	**21.61**	**341**	P		**P**	**00 43 11.5**	**+1.1**
	comp=Z,0.7nm,0.3s,baz=323,slow=4.9,SNR=2.0							
	comp=Z,0.7nm,0.3s							
PZH	**PanZhiHua**	**27.94**	**102**	P		**P**	**00 44 09.0**	**+0.5**
SONM	**Songino Array**	**28.31**	**55**	P		**P**	**00 44 11.9**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=267,slow=8.7,SNR=2.6							
	comp=Z,0.3nm,0.5s							
HHC	**Hu-ho-hao-te**	**31.75**	**70**	*e*P		**P**	**00 44 41.5**	**-0.3**
HHC				pmax		pmax		
	comp=Z,10.0nm,0.7s							
FINES	**FINESS Array B**	**37.46**	**326**	P		**P**	**00 45 31.1**	**+0.8**
	comp=Z,2.5nm,1.0s,baz=111,slow=8.5,SNR=1.3							
	comp=Z,2.5nm,1.0s							
HFS	**Hagfors**	**43.05**	**322**	P		**P**	**00 46 16.8**	**+0.6**
	comp=Z,2.0nm,0.8s,baz=98,slow=9.5,SNR=7.1							
	comp=Z,2.0nm,0.8s							
NOA	**NORSAR Array B**	**44.36**	**323**	P		**P**	**00 46 27.0**	**+0.3**
	comp=Z,0.9nm,0.9s,baz=95,slow=7.9,SNR=1.7							
	comp=Z,0.9nm,0.9s							
ILAR	**Eielson Array**	**74.75**	**16**	P		**P**	**00 49 54.2**	**0.0**
	comp=Z,0.3nm,0.9s,baz=324,slow=5.2,SNR=3.0							
	comp=Z,0.3nm,0.9s							
YKA	**Yellowknife Ar**	**81.21**	**3**	P		**P**	**00 50 29.7**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=354,slow=5.8,SNR=12							
	comp=Z,0.2nm,0.5s							
WRA	**Warramunga Arr**	**82.00**	**122**	P		**P**	**00 50 33.2**	**-1.4**
	comp=Z,0.6nm,0.5s,baz=317,slow=5.2,SNR=17							
	comp=Z,0.6nm,0.5s							
ASAR	**Alice Springs**	**84.27**	**125**	P		**P**	**00 50 45.2**	**-1.0**
	comp=Z,0.9nm,0.6s,baz=313,slow=4.9,SNR=11							
	comp=Z,0.9nm,0.6s							

*IDC **17** 00:39:24.9±0.9,20.˙18S×69.˙06W,h100km±7km,mb3.4/8, mbtmp3.9/13,MS2.5/1,Error ellipse: s-maj=22.2km s-min=17.0km az=61.0*
*SJA **17** 00:39:24.5±1.2,20.˙16S×69.˙27W,h98km±4km,ML4.2, MW4.0*
*GUC **17** 00:39:25.9±0.9,20.˙15S×69.˙22W,h95km±4km,ML4.1*
*NEIC **17** 00:39:25.5±1.8,20.˙19S±0.˙03×69.˙24W±0.˙07,h93km±4km, mb4.0/6,ML4.1(GUC),Error ellipse: s-maj=8.9km s-min=4.9km az=89.0*

ISC 17 00:39:24.7±0.5,20.˙16S±0.˙03×69.˙23W±0.˙04,h98km±4km, n110,σt1s32/140,mb3.5/5,5C-3D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.07**	**72**		**Pn**	**00 39 38.2**	**-0.6**
PB08				Sn	**Sn**	**00 39 49.6**	**+0.3**
PB08	**IPOC Station P**	**0.07**	**72**	*i* P	**Pn**	**00 39 39.3**	**+0.5**
PB08				*e*S	**Sn**	**00 39 49.8**	**+0.5**
PB08				IAML		00 39 50.7	
	comp=E,14μm,0.3s						
PB08	**IPOC Station P**	**0.07**	**72**	*i* P	**Pn**	**00 39 39.2**	**+0.4**
PB08				*i* S	**Sn**	**00 39 50.0**	**+0.6**
PB08				IAML		00 39 50.7	
	comp=Z,7μm,0.1s						
GO01	**Chusmiza**	**0.49**	**4**		**Pn**	**00 39 41.2**	**+0.4**
GO01				Sn	**Sn**	**00 39 53.1**	**+0.3**
GO01	**Chusmiza**	**0.49**	**4**	⇓*i* P	**Pn**	**00 39 41.2**	**+0.4**
GO01				*e*S	**Sn**	**00 39 53.1**	**+0.3**
GO01				IAML		00 39 54.8	
	comp=E,35μm,0.1s						
GO01	**Chusmiza**	**0.49**	**4**	*i* P	**Pn**	**00 39 41.1**	**+0.4**
GO01				*i* S	**Sn**	**00 39 54.0**	**+1.2**
GO01				IAML		00 39 55.2	
	comp=Z,7μm,0.5s						
PB11	**IPOC Station P**	**0.57**	**315**		**Pn**	**00 39 41.3**	**+0.4**
PB11				Sn	**Sn**	**00 39 53.4**	**+0.2**
PB11	**IPOC Station P**	**0.57**	**315**	⇓*i* P	**Pn**	**00 39 41.3**	**+0.4**
PB11				*e*S	**Sn**	**00 39 53.5**	**+0.4**
PB11	**IPOC Station P**	**0.57**	**315**	*i* P	**Pn**	**00 39 41.4**	**+0.4**
PB11				*i* S	**Sn**	**00 39 53.5**	**+0.4**
TA02	**Huaiquique**	**0.86**	**263**	⇑*e*P	**Pn**	**00 39 43.8**	**+0.4**
TA02				*e*S	**Sn**	**00 39 58.1**	**+0.6**
TA02	**Huaiquique**	**0.86**	**263**	*i* P	**Pn**	**00 39 43.9**	**+0.4**
TA02				*i* S	**Sn**	**00 39 58.1**	**+0.6**
TA02				IAML		00 40 00.9	
	comp=Z,10μm,0.1s						
PB01	**IPOC Station P**	**0.91**	**196**		**Pn**	**00 39 44.4**	**+0.3**
PB01				Sn	**Sn**	**00 39 57.8**	**-0.8**
PB01	**IPOC Station P**	**0.91**	**196**	*i* P	**Pn**	**00 39 44.5**	**+0.5**
PB01				*e*S	**Sn**	**00 39 59.1**	**+0.5**
PB01				IAML		00 39 59.7	
	comp=N,13μm,0.2s						
PB01	**IPOC Station P**	**0.91**	**196**	*i* P	**Pn**	**00 39 44.6**	**+0.5**
PB01				*i* S	**Sn**	**00 39 59.5**	**+0.8**
PB01				IAML		00 39 59.6	
	comp=Z,8μm,0.2s						
TA01	**Diego Aracena**	**0.98**	**246**		**Pn**	**00 39 44.6**	**-0.1**
TA01				Sn	**Sn**	**00 39 59.2**	**-0.6**
TA01	**Diego Aracena**	**0.98**	**246**	⇑*i* P	**Pn**	**00 39 44.8**	**+0.1**
TA01				*e*S	**Sn**	**00 39 59.7**	**-0.1**
TA01				IAML		00 40 02.4	
	comp=N,3μm,0.3s						
TA01	**Diego Aracena**	**0.98**	**246**	*i* P	**Pn**	**00 39 44.8**	**+0.1**
TA01				*i* S	**Sn**	**00 40 00.2**	**+0.5**
TA01				IAML		00 40 01.5	
	comp=Z,2μm,0.5s						
PATCX	**Punta Patache**	**1.09**	**233**		**Pn**	**00 39 45.0**	**-1.0**
PATCX				Sn	**Sn**	**00 40 01.6**	**-0.4**
PATCX	**Punta Patache**	**1.09**	**233**	⇑*i* P	**Pn**	**00 39 46.3**	**+0.3**
PATCX				*e*S	**Sn**	**00 40 02.3**	**+0.2**
PATCX				IAML		00 40 03.0	
	comp=E,3μm,0.1s						
PATCX	**Punta Patache**	**1.09**	**233**	*i* P	**Pn**	**00 39 46.4**	**+0.3**
PATCX				*e*S	**Sn**	**00 40 02.4**	**+0.4**
PATCX				IAML		00 40 06.9	
	comp=Z,2μm,0.5s						
PB02	**IPOC Station P**	**1.31**	**208**		**Pn**	**00 39 48.8**	**+0.1**
PB02				Sn	**Sn**	**00 40 05.8**	**-0.9**
PB02	**IPOC Station P**	**1.31**	**208**	*e*P	**Pn**	**00 39 49.2**	**+0.6**
PB02				*e*S	**Sn**	**00 40 07.6**	**+0.9**
PB02				IAML		00 40 12.0	
	comp=E,4μm,0.4s						
PB02	**IPOC Station P**	**1.31**	**208**	*i* P	**Pn**	**00 39 49.5**	**+0.8**
PB02				*e*S	**Sn**	**00 40 08.0**	**+1.3**
PB02				IAML		00 40 12.0	
	comp=Z,4μm,0.4s						
PB09	**IPOC Station P**	**1.62**	**180**		**Pn**	**00 39 53.2**	**+0.6**
PB09				Sn	**Sn**	**00 40 14.7**	**+1.0**
PB09	**IPOC Station P**	**1.62**	**180**	*e*P	**Pn**	**00 39 53.8**	**+1.2**
PB09				*e*S	**Sn**	**00 40 15.7**	**+2.0**
PB09				IAML		00 40 19.7	
	comp=E,2μm,0.4s						
PB09	**IPOC Station P**	**1.62**	**180**	*i* P	**Pn**	**00 39 53.9**	**+1.3**
PB09				*i* S	**Sn**	**00 40 15.8**	**+2.0**
PB09				IAML		00 40 17.3	
	comp=Z,2μm,0.7s						
PB07	**IPOC Station P**	**1.67**	**201**		**Pn**	**00 39 53.7**	**+0.5**
PB07				Sn	**Sn**	**00 40 12.2**	**-2.6**
PB07	**IPOC Station P**	**1.67**	**201**	*e*P	**Pn**	**00 39 53.3**	**+0.2**
PB07	**IPOC Station P**	**1.67**	**201**	*i* P	**Pn**	**00 39 53.9**	**+0.7**
PB07				*i* S	**Sn**	**00 40 16.1**	**+1.3**
PB07				IAML		00 40 18.3	
	comp=Z,1μm,0.1s						
PB16	**IPOC Station P**	**1.84**	**352**		**Pn**	**00 39 57.5**	**+1.8**
PB16				Sn	**Sn**	**00 40 20.6**	**+1.4**
PB16	**IPOC Station P**	**1.84**	**352**	⇑*e*P	**Pn**	**00 39 57.4**	**+1.8**
PB16	**IPOC Station P**	**1.84**	**352**	*i* P	**Pn**	**00 39 57.7**	**+2.0**
PB16				IAML		00 40 26.9	
	comp=Z,717nm,0.3s						
PB12	**IPOC Station P**	**1.86**	**326**		**Pn**	**00 39 55.8**	**+0.4**
PB12				Sn	**Sn**	**00 40 18.1**	**-0.8**
PB12	**IPOC Station P**	**1.86**	**326**	⇑*e*P	**Pn**	**00 39 55.8**	**+0.4**
PB12				*i* S	**Sn**	**00 40 19.2**	**+0.3**
PB12				IAML		00 40 24.6	
	comp=N,3μm,0.4s						
PB12	**IPOC Station P**	**1.86**	**326**	*i* P	**Pn**	**00 39 55.9**	**+0.4**
PB12				*i* S	**Sn**	**00 40 20.1**	**+1.3**
PB12				IAML		00 40 23.8	
	comp=Z,2μm,0.3s						
PB03	**IPOC Station P**	**1.94**	**195**		**Pn**	**00 39 56.8**	**+0.2**
PB03				Sn	**Sn**	**00 40 19.4**	**-1.4**
PB03	**IPOC Station P**	**1.94**	**195**	*e*P	**Pn**	**00 39 56.7**	**+0.2**
PB03	**IPOC Station P**	**1.94**	**195**	*i* P	**Pn**	**00 39 57.1**	**+0.5**
PB03				*i* S	**Sn**	**00 40 20.8**	**0.0**
PB03				IAML		00 40 27.9	
	comp=Z,1μm,0.5s						
AP01	**Chacalluta**	**2.07**	**329**		**Pn**	**00 39 58.8**	**+0.6**
AP01				Sn	**Sn**	**00 40 24.6**	**+1.0**
AP01	**Chacalluta**	**2.07**	**329**	*e*P	**Pn**	**00 39 58.7**	**+0.6**
AP01	**Chacalluta**	**2.07**	**329**	*i* P	**Pn**	**00 39 58.7**	**+0.6**
AP01				*i* S	**Sn**	**00 40 23.4**	**-0.2**
AP01				IAML		00 40 33.7	
	comp=Z,3μm,0.2s						
PB06	**IPOC Station P**	**2.55**	**187**		**Pn**	**00 40 05.7**	**+1.1**
PB06	**IPOC Station P**	**2.55**	**187**	*e*P	**Pn**	**00 40 05.1**	**+0.6**
PB06	**IPOC Station P**	**2.55**	**187**	*i* P	**Pn**	**00 40 04.8**	**+0.2**
PB06				IAML		00 40 42.8	
	comp=Z,509nm,0.3s						
PB18	**Visviri**	**2.57**	**355**		**Pn**	**00 40 08.2**	**+3.0**
PB18	**Visviri**	**2.57**	**355**	⇓*e*P	**Pn**	**00 40 09.2**	**+4.0**
PB05	**IPOC Station P**	**2.83**	**199**		**Pn**	**00 40 08.2**	**0.0**
PB05	**IPOC Station P**	**2.83**	**199**	*e*P	**Pn**	**00 40 07.8**	**-0.4**
PB05	**IPOC Station P**	**2.83**	**199**	*i* P	**Pn**	**00 40 08.4**	**+0.3**
PB05				IAML		00 41 03.1	
	comp=Z,409nm,0.5s						
AF01	**San Pedro de A**	**2.94**	**161**		**Pn**	**00 40 11.2**	**+1.3**
AF01	**San Pedro de A**	**2.94**	**161**	*e*P	**Pn**	**00 40 13.0**	**+3.1**
AF01	**San Pedro de A**	**2.94**	**161**	*i* P	**Pn**	**00 40 13.8**	**+3.9**
AF01				IAML		00 41 15.1	
	comp=Z,770nm,0.5s						
PB10	**IPOC Station P**	**3.55**	**200**		**Pn**	**00 40 16.5**	**-1.4**
LPAZ	**La Paz**	**3.99**	**15**	P	**Pn**	**00 40 26.2**	**+1.9**
	comp=Z,45nm,0.6s,baz=186,slow=7.6,SNR=147						
LPAZ				S	**Sn**	**00 41 06.5**	**-4.0**
	comp=Z,14nm,0.7s,baz=196,slow=15,SNR=1.5						
LPAZ				LR	LR	00 42 08.5	
	comp=Z,68nm,20.6s,baz=266,slow=41						
LPAZ	**La Paz**	**3.99**	**15**		**Pn**	**00 40 27.1**	**+2.8**
LPAZ	**La Paz**	**3.99**	**15**	*i* P	**Pn**	**00 40 27.8**	**+3.4**
PB14	**IPOC Station P**	**4.57**	**194**		**Pn**	**00 40 32.1**	**+0.2**
HJA	**Humahuaca**	**4.67**	**131**	*i* P	**Pn**	**00 40 35.9**	**+2.7**
SALTA		**4.85**	**147**	*i* P	**Pn**	**00 40 39.2**	**+3.5**
AC01	**Pan de Azucar**	**6.09**	**192**	Pn	**Pn**	**00 40 49.2**	**-3.0**
AC02	**Maricunga**	**6.64**	**179**		**Pn**	**00 40 59.5**	**-0.6**
AC06	**Mina Casimiro**	**7.24**	**188**	Pn	**Pn**	**00 41 08.3**	**+0.6**
AC05	**El Transito**	**8.69**	**186**	Pn	**Pn**	**00 41 26.9**	**-0.7**
SIV	**San Ignacio**	**8.79**	**63**	P	**Pn**	**00 41 27.0**	**-2.0**
	comp=Z,7.9nm,0.4s,baz=246,slow=11,SNR=67						
SIV				S	Sn	00 42 56.8	-10
	comp=Z,0.9nm,0.5s,baz=276,slow=19,SNR=1.1						
LCO	**Las Campanas**	**8.91**	**188**	Pn	**Pn**	**00 41 31.2**	**+0.4**
CO01	**Juntas del Tor**	**9.80**	**184**	Pn	**Pn**	**00 41 44.6**	**+1.7**
PTLB	**Pontes e Lacer**	**10.69**	**66**		**Pn**	**00 41 53.9**	**-1.0**
NNA	**Nana**	**10.94**	**317**	P	**Pn**	**00 41 59.6**	**+1.3**
	comp=Z,4.0nm,0.4s,baz=123,slow=8.3,SNR=2.0						
CO02	**Combarbal**	**11.11**	**188**	Pn	**Pn**	**00 42 01.4**	**+0.9**
VILB	**Vilhena**	**11.23**	**52**	Pn	**Pn**	**00 42 03.0**	**+0.7**
CFA	**Coronel Fontan**	**11.43**	**176**	P	**Pn**	**00 42 03.3**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=352,slow=16,SNR=2.3						
CO04	**Los Peladeros**	**11.93**	**187**	Pn	**Pn**	**00 42 13.6**	**+1.8**
VA06	**Catapilco**	**12.48**	**188**	Pn	**Pn**	**00 42 19.4**	**+0.6**
CPUP	**Villa Florida**	**12.54**	**122**	P	**Pn**	**00 42 16.9**	**-2.7**
	comp=Z,4.0nm,0.7s,baz=297,slow=16,SNR=15						
CPUP	**Villa Florida**	**12.54**	**122**		**Pn**	**00 42 17.3**	**-2.2**
AQDB	**Aquidauana**	**12.70**	**94**	Pn	**Pn**	**00 42 21.4**	**-0.3**
MT02	**Curacav**	**13.15**	**187**	Pn	**Pn**	**00 42 28.9**	**+1.2**
MT09	**Talagante**	**13.65**	**186**	P	**P**	**00 42 40.3**	**+0.6**
MT01	**Popeta**	**13.77**	**187**	Pn	**Pn**	**00 42 35.9**	**+0.3**
BO01	**Tunca**	**14.27**	**186**	P	**P**	**00 42 47.4**	**+1.0**
BO02	**Sierra Bellavi**	**14.64**	**185**	Pn	**Pn**	**00 42 47.1**	**+0.2**
TRCB	**Terra Rica**	**15.67**	**103**	Pn	**Pn**	**00 42 59.5**	**-0.5**
H03N1	**Juan Fernandez**	**15.79**	**211**	T	T	00 59 03.8	
	baz=33,slow=72,SNR=35						
H03N2	**Juan Fernandez**	**15.79**	**211**	T	T	00 59 05.5	
	baz=33,slow=72,SNR=23						
H03N3	**Juan Fernandez**	**15.80**	**211**	T	T	00 59 04.6	
	baz=33,slow=72,SNR=12						
ITAB	**Concordia**	**17.16**	**117**		**Pn**	**00 43 18.2**	**-0.1**
ITAB				IAmb	IAmb	00 43 54.3	
	comp=Z,12nm,1.1s						
LR05	**Currie**	**20.14**	**186**	P	**P**	**00 43 52.2**	**+1.3**
LR05				IAmb	IAmb	00 43 53.0	
	comp=Z,7.1nm,0.7s						
PLCA	**Paso Flores**	**20.53**	**183**	P	**P**	**00 43 56.6**	**+1.3**
	comp=Z,4.0nm,0.7s,baz=6.0,slow=14,SNR=12						
	comp=Z,4.0nm,0.7s						
PLCA	**Paso Flores**	**20.53**	**183**	P	**P**	**00 43 56.2**	**+1.0**
PLCA				IAmb	IAmb	00 43 59.8	
	comp=Z,5.5nm,0.9s						
BDFB	**Brasilia**	**20.68**	**81**	P	**P**	**00 43 55.6**	**-1.5**
	comp=Z,1.2nm,0.3s,baz=248,slow=8.9,SNR=4.5						
	comp=Z,1.2nm,0.3s						
BDFB	**Brasilia**	**20.68**	**81**	P	**P**	**00 43 56.2**	**-0.9**
VAO	**Valinhos**	**20.89**	**102**	P	**P**	**00 43 57.2**	**-2.1**
VAO				IAmb	IAmb	00 44 30.0	
	comp=Z,8.6nm,0.9s						
TXAR	**Lajitas Array**	**59.37**	**325**	P	**P**	**00 49 16.4**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=133,slow=3.1,SNR=2.1						
	comp=Z,0.2nm,0.5s						
PDAR	**Pinedale Array**	**72.81**	**330**	P	**P**	**00 50 44.1**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=157,slow=3.3,SNR=2.0						
	comp=Z,0.2nm,0.5s						
ULM	**Lac du Bonnet**	**73.96**	**343**	P	**P**	**00 50 48.4**	**-0.8**
	comp=Z,1.7nm,0.5s,baz=146,slow=9.4,SNR=3.6						
	comp=Z,1.7nm,0.5s						
NVAR	**Mina Array Bea**	**74.26**	**322**	P	**P**	**00 50 52.1**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=146,slow=5.5,SNR=1.5						
	comp=Z,0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**77.19**	**71**	P	**P**	**00 51 07.3**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=247,slow=6.6,SNR=2.6						
TORD				pP	**pP**	**00 51 33.7**	**-1.3**
	comp=Z,1.8nm,0.6s,baz=246,slow=6.7,SNR=6.2						
	comp=Z,0.3nm,0.3s						
YKA	**Yellowknife Ar**	**89.83**	**341**	P	**P**	**00 52 12.4**	**+0.5**
	comp=Z,1.2nm,0.8s,baz=134,slow=3.9,SNR=29						
YKA				pP	**pP**	**00 52 39.0**	**+0.4**
	comp=Z,0.2nm,0.8s,baz=139,slow=3.9,SNR=2.5						
	comp=Z,1.2nm,0.8s						
H11S2	**WAKE ISLAND Hyd**	**27.41**	**278**	T	T	03 18 07.6	
	baz=102,slow=75,SNR=83						
H11S1	**WAKE ISLAND Hyd**	**27.41**	**278**	T	T	03 18 05.3	
	baz=102,slow=75,SNR=59						
H11S3	**WAKE ISLAND Hyd**	**27.42**	**278**	T	T	03 18 06.1	
	baz=102,slow=75,SNR=58						
H11N3	**WAKE ISLAND Hyd**	**27.45**	**280**	T	T	03 18 11.1	
	baz=102,slow=74,SNR=19						
H11N2	**WAKE ISLAND Hyd**	**27.47**	**280**	T	T	03 18 08.1	
	baz=102,slow=74,SNR=22						
H11N1	**WAKE ISLAND Hyd**	**27.47**	**280**	T	T	03 18 11.8	
	baz=102,slow=74,SNR=20						
WRA	**Warramunga Arr**	**133.94**	**211**	PKP	**PKPdf**	**00 58 31.2**	**0.0**
	comp=Z,0.2nm,0.4s,baz=140,slow=1.8,SNR=2.4						
ZALV	**Zalesovo Beam**	**140.87**	**24**	PKhKP	PKPpre	00 58 35.8	
	comp=Z,0.3nm,0.5s,baz=336,slow=3.2,SNR=1.8						
MKAR	**Makanchi Array**	**144.72**	**35**	PKP	**PKPab**	**00 58 49.0**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=303,slow=3.1,SNR=17						
MKAR				pPKP	**pPKPdf**	**00 59 15.6**	**-2.7**
	comp=Z,0.2nm,0.5s,baz=286,slow=1.9,SNR=1.7						
SONM	**Songino Array**	**152.17**	**6**	PKPbc	**PKPbc**	**00 59 09.5**	**+0.5**
	comp=Z,1.1nm,0.4s,baz=5.7,slow=1.4,SNR=13						
HHC	**Hu-ho-hao-te**	**159.37**	**358**	*e*P	**PKPdf**	**00 59 11.6**	**-0.4**
PZH	**PanZhiHua**	**169.58**	**51**	PKP	**PKPdf**	**00 59 22.0**	**+0.6**

*IDC **17** 00:52:51.9±0.7,39.˙09N×16.˙04E,h0km,mb3.9/16, mbtmp3.9/28,ML3.5/10,MS3.3/12,Error ellipse: s-maj=14.2km s-min=13.2km az=146.0*
*MOS **17** 00:52:53.0±1.0,39.˙03N×15.˙95E,h22km,mb4.4/21,Error ellipse: s-maj=7.1km s-min=4.4km az=61.0*
*PDG **17** 00:52:55.1±0.3,39.˙05N×15.˙99E,h28km±2km,ML4.0/12, Error ellipse: s-maj=1.0km s-min=1.9km az=0.0*
*ROM **17** 00:52:55.1±0.1,39.˙040N±0.˙002×16.˙014E±0.˙004, h23km,ML3.9/320,Mw3.9,Error ellipse: s-maj=0.3km s-min=0.1km az=297.0,Moment Tensor Solution. Moment tensor: Scale 10^14Nm; Mrr4.40; Mθθ-3.67; Mφφ-0.73; Mrθ4.38; Mθφ4.02; Mφr-2.72; Fault plane solution: M0 7.50136×10^14 NP1:φs122.00000°,δ67.00000°, λ87.00000°. NP2:φs310.00000°,δ23.00000°,λ97.00000°.*
*NEIC **17** 00:52:57.0±2.5,39.˙05N±0.˙05×16.˙04E±0.˙07,h35km±1km, mb4.4/32,Mwr4.1/20 Error ellipse: s-maj=7.7km s-min=6.5km az=110.0,Moment Tensor Solution. Moment tensor: Scale 10^15Nm; Mrr0.49; Mθθ-0.98; Mφφ0.49; Mrθ0.90; Mθφ1.22; Mφr-1.11; Fault plane solution: M0 2.06000×10^15 NP1:φs253.39000°,δ40.98000°, λ12.00000°. NP2:φs154.27000°,δ82.16000°,λ130.35000°. Principal axes: T 1.6304, Plg39.0000°, Azm100.0000°; N 0.6821, Plg40.0000°, Azm328.0000°; P -2.3125, Plg26.0000°, Azm214.0000°;*
*NEIC **17** 00:52:57.1,39.˙05N×16.˙03E,h35km*

ISC 17 00:52:55.4±0.6,39.˙05N±0.˙02×16.˙03E±0.˙02,h28km±4km, n291,σt1s47/348,mb4.3/38,MS3.4/7,53C-38D,Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAR1	**CAROLEI**	**0.25**	**35**	⇓P	**Pb**	**00 53 02.3**	**+0.2**
CAR1				S	**Sb**	**00 53 06.6**	**-0.1**
CAR1				AML	AML		
CAR1				AML	AML		
CAR1				AML	AML		
CAR1				AML	AML		
CAR1				AML	AML		
CAR1				AML	AML		
SPS2	**Spezzano della**	**0.35**	**44**	⇓P	**Pb**	**00 53 03.5**	**+0.1**
SPS2				S	**Sb**	**00 53 08.8**	**-0.1**
SPS2				AML	AML		
	comp=N,45300μm,0.5s						
SPS2				AML	AML		
	comp=E,22250μm,0.3s						
GRI	**Girifalco**	**0.38**	**126**	⇓P	**Pb**	**00 53 03.7**	**-0.2**
GRI				S	**Sb**	**00 53 09.1**	**-0.5**
GRI				AML	AML		
	comp=E,59750μm,0.6s						
GRI				AML	AML		
	comp=N,67400μm,0.5s						
JOPP	**Joppolo**	**0.45**	**194**	⇓P	**Pb**	**00 53 05.3**	**+0.2**
JOPP				S	**Sb**	**00 53 11.8**	**+0.3**
JOPP				AML	AML		
	comp=E,28500μm,1.1s						
JOPP				AML	AML		
	comp=N,38100μm,1.1s						
JOPP				AML	AML		
	comp=E,28500μm,0.9s						
CET2	**Cetraro**	**0.48**	**353**	P	**Pb**	**00 53 05.8**	**+0.2**
CET2				S	**Sb**	**00 53 12.3**	**-0.2**
CET2				AML	AML		
	comp=N,88450μm,0.8s						
CET2				AML	AML		
	comp=E,49400μm,0.6s						
SERS	**Sersale**	**0.52**	**91**	⇑P	**Pb**	**00 53 05.9**	**-0.1**
SERS				S	**Sb**	**00 53 13.0**	**-0.4**
SERS				AML	AML		
	comp=E,29150μm,0.5s						
SERS				AML	AML		
	comp=E,29050μm,0.5s						
SERS				AML	AML		
	comp=N,25300μm,0.5s						
SERS				AML	AML		
	comp=N,25150μm,0.4s						
SERS				AML	AML		
	comp=E,29050μm,0.5s						
CELI	**Celico**	**0.52**	**46**	⇓P	**Pb**	**00 53 06.1**	**0.0**
CELI				S	**Sb**	**00 53 13.4**	**0.0**
CELI				AML	AML		
	comp=E,55700μm,0.6s						
CELI				AML	AML		
	comp=N,46650μm,0.6s						
CELI				AML	AML		
	comp=E,56100μm,0.6s						
CELI				AML	AML		
	comp=N,45800μm,0.6s						
TIP	**Timpagrande**	**0.58**	**77**	⇓P	**Pb**	**00 53 07.3**	**+0.1**
TIP	**Timpagrande**	**0.58**	**77**		**Pb**	**00 53 05.7**

MMN AML AML
comp=N,21000µm,0.5s
MMN AML AML
comp=E,13800µm,0.3s
MMN AML AML
comp=E,13800µm,1.7s
SALB San Lorenzo Be 0.87 16 ⇓P Pb 00 53 12.0 0.0
SALB AML AML
comp=E,4060µm,0.8s
SALB AML AML
comp=N,3805µm,0.7s
MSRU Castanea 0.88 208 ⇓P Pn 00 53 11.5 -0.4
MSRU S Sb 00 53 23.2 -0.3
MSRU AML AML
comp=N,15350µm,1.0s
MSRU AML AML
comp=E,35050µm,0.6s
GMB Gambarie 0.89 190 ⇓P Pn 00 53 11.4 -0.8
GMB S Sb 00 53 23.9 0.0
GMB AML AML
comp=E,33750µm,0.4s
GMB AML AML
comp=N,37150µm,0.5s
GMB AML AML
comp=N,37150µm,1.5s
CUC Castrocucco 0.96 350 Pn 00 53 12.1 -0.9
CUC Castrocucco 0.96 350 ⇑P Pn 00 53 12.2 -0.9
CUC S Sb 00 53 25.3 -0.5
CUC AML AML
comp=N,3485µm,0.9s
CUC AML AML
comp=E,6185µm,1.1s
CUC AML AML
comp=E,6190µm,1.1s
CUC AML AML
comp=N,3505µm,0.9s
CUC AML AML
comp=E,6185µm,0.9s
CUC AML AML
comp=E,6190µm,0.9s
CUC AML AML
comp=N,3480µm,0.9s
RCU Reggio Calabri 0.97 197 P Pn 00 53 12.3 -0.8
SOI Samo 0.97 179 ⇓P Pn 00 53 12.9 -0.2
SOI AML AML
comp=E,6350µm,0.4s
SOI AML AML
comp=N,8935µm,0.5s
MILZ Milazzo 0.99 219 ⇓P Pn 00 53 13.2 -0.3
MILZ AML AML
comp=N,17250µm,0.4s
MILZ AML AML
comp=E,24700µm,0.5s
MILZ AML AML
comp=E,24700µm,1.5s
LLI Lipari 1.04 235 ⇓P Pb 00 53 14.4 -0.3
LLI AML AML
comp=E,79900µm,0.7s
LLI AML AML
comp=E,79900µm,1.3s
LLI AML AML
MPNC Port Mandanici 1.04 211 ⇓P Pn 00 53 13.6 -0.6
MPNC AML AML
comp=E,19300µm,0.6s
MPNC AML AML
comp=N,27300µm,1.0s
VPL Vulcano Piano 1.05 231 ⇓P Pn 00 53 14.3 0.0
VPL AML AML
comp=E,17050µm,0.7s
VPL AML AML
comp=E,17050µm,1.3s
VPL AML AML
comp=N,10950µm,0.5s
IVGP Vulcano Grotta 1.06 232 ⇓P Pn 00 53 14.1 -0.2
ORI Oriolo Calabro 1.07 18 P Pb 00 53 15.1 -0.1
ORI AML AML
comp=E,9255µm,0.5s
ORI AML AML
comp=N,9580µm,0.4s
ORI AML AML
comp=N,9580µm,1.6s
MTTG Motta San Giov 1.07 194 ⇓P Pn 00 53 14.1 -0.6
MTTG AML AML
comp=N,11675µm,0.5s
MTTG AML AML
comp=E,8535µm,0.5s
SIRI Monte Sirino - 1.14 354 ⇑P Pn 00 53 15.1 -0.5
SIRI AML AML
comp=N,4405µm,1.0s
SIRI AML AML
comp=E,4885µm,1.1s
SIRI AML AML
comp=N,4485µm,1.0s
SIRI AML AML
comp=E,4820µm,1.1s
BULG Bulgheria - Ca 1.15 334 ⇑P Pn 00 53 16.0 +0.3
BULG S Sb 00 53 31.7 +0.5
BULG AML AML
comp=N,6370µm,1.6s
BULG AML AML
comp=N,6615µm,1.6s
BULG AML AML
comp=N,6615µm,0.4s
BULG AML AML
comp=N,6370µm,0.4s
BULG AML AML
comp=E,5215µm,0.6s
BULG AML AML
comp=E,5390µm,0.6s
MGR Morigerati 1.15 342 ⇑P Pn 00 53 15.3 -0.3
MGR S Sn 00 53 30.1 -0.3
MGR AML AML
comp=E,8150µm,0.6s
MGR AML AML
comp=N,3950µm,0.8s
MGR AML AML
comp=N,4415µm,0.2s
MGR AML AML
comp=E,7710µm,0.6s
SCHR S. Chirico Rap 1.15 2 P Pn 00 53 15.6 -0.1
SCHR AML AML
comp=E,2285µm,1.5s
SCHR AML AML
comp=N,1900µm,0.6s
SCHR AML AML
comp=E,2285µm,0.5s
STN3 Satriano di Lu 1.51 349 AML AML
STN3 AML AML
STN3 AML AML
MATE Matera 1.68 18 ⇓P Pn 00 53 24.1 +1.1
ACER Acerenza 1.74 358 Pn 00 53 24.6 +0.9
VAE Valguarnera 2.02 220 Pn Pb 00 53 30.3 -1.1
comp=E,97nm,0.5s,baz=11,slow=16,SNR=49
RAFF Raffo Rosso 2.25 216 Pn 00 53 32.2 +1.5
PAOL Paolisi 2.28 331 Pn 00 53 32.1 +0.9
SGRT San Giovanni R 2.71 356 Pn Pn 00 53 37.9 +0.7
KEK Kerkira 3.00 76 Pn 00 53 41.5 +0.5
VLO Vlora 3.03 61 P Pn 00 53 43.2 +1.8
VLO S Sn 00 54 16.1 -0.6
WDD Wied Dalam 3.42 201 Pn 00 53 46.3 -0.5
CERT Cerreto 3.71 322 AML AML
comp=E,69µm,0.5s
CERT AML AML
comp=E,69µm,1.5s
CERT AML AML
comp=N,46µm,0.7s
ULC Ulcinj 3.81 39 ⇑*i*Pn Pn 00 53 52.5 +0.3
ULC *i* Sn Sn 00 54 34.3 -1.8
AQU L'Aquila 3.86 330 P Pn 00 53 56.7 +3.8
AQU L'Aquila 3.86 330 *e*Pn Pn 00 53 56.0 +3.1
HCY Herceg Novi 3.88 28 ⇓*i*Pn Pn 00 53 53.0 -0.1
HCY *i* Sn Sn 00 54 35.8 -2.0
HCY Herceg Novi 3.88 28 *e*Pn Pn 00 53 53.9 +0.8
BUM Brajici-Budva 3.91 33 ⇓*i*Pn Pn 00 53 53.8 +0.1
BUM *i* Sn Sn 00 54 36.7 -2.0
DRME Dracevica, Mon 3.95 36 ⇓*i*Pn Pn 00 53 54.5 +0.4
DRME *i* Sn Sn 00 54 38.3 -1.2
DRME Dracevica, Mon 3.95 36 ⇑*i*Pn Pn 00 53 54.2 +0.1
TREB Trebinje 4.07 25 *e*Pn Pn 00 53 55.0 -0.7
CEME Cevo 4.13 31 ⇓*i*Pn Pn 00 53 56.3 -0.3
CEME *i* Sn Sn 00 54 42.4 -1.6
PDG Podgorica 4.18 35 ⇓P Pn 00 53 57.2 0.0
PDG Podgorica 4.18 35 Pn 00 53 56.9 -0.3
PDG Podgorica 4.18 35 ⇑*i*Pn Pn 00 53 57.3 +0.1
PDG *i* Sn Sn 00 54 43.5 -1.5

PDG Podgorica 4.18 35 ⇑*i*Pn Pn 00 53 57.3 +0.1
BRY Bratogost 4.29 25 ⇑*i*Pn Pn 00 53 58.8 -0.2
BRY *i* Sn Sn 00 54 46.8 -1.4
BRY Bratogost 4.29 25 *e*Pn Pn 00 53 58.8 -0.2
NKME Niksic 4.33 30 ⇑*i*Pn Pn 00 53 59.5 +0.2
NKME *i* Sn Sn 00 54 46.8 -2.1
NRCA Norcia 4.38 331 Pn 00 54 00.3 +0.2
CESX Cesi 4.42 325 Pn 00 54 01.0 +0.4
GUMA Gualdo di Mace 4.50 334 Pn 00 54 03.6 +1.9
KLINJ Klinje 4.55 24 *e*Pn Pn 00 54 02.0 -0.4
FDMO Fiordimonte 4.56 332 Pn 00 54 03.0 +0.4
KOME Kolasin 4.63 34 ⇓*i*Pn Pn 00 54 04.6 +1.1
KOME *i* Sn Sn 00 54 54.2 -2.1
PVY Plav 4.63 39 ⇓*i*Pn Pn 00 54 04.0 +0.4
PVY *i* Sn Sn 00 54 54.5 -2.0
IVA Berane 4.81 36 ⇑*i*Pn Pn 00 54 06.7 +0.6
IVA *i* Sn Sn 00 54 58.6 -2.3
MURB Monte Urbino 4.97 329 Pn 00 54 09.5 +1.2
PLE Pljevlja 4.97 30 ⇑*i*Pn Pn 00 54 08.4 +0.1
PLE *i* Sn Sn 00 55 02.4 -2.5
ITM Ithomi 5.01 110 Pn Pn 00 54 08.2 -0.6
SKO Skopje 5.05 53 *i* Pn Pn 00 54 12.5 +3.2
SJES Sjenica 5.16 34 ⇑*i*Pn Pn 00 54 12.3 +1.5
VSL Villasalto 5.18 277 Pn Pn 00 54 10.5 -0.6
RUDO Rudo 5.21 28 *e*Pn Pn 00 54 11.6 +0.1
CASP Castiglione de 5.41 315 Pn Pn 00 54 15.8 +1.6
BBLS Lazi&#263i 5.44 27 ⇑*i*Pn Pn 00 54 15.7 +1.0
VAY Valandovo 5.50 64 *i* Pn Pn 00 54 17.3 +1.8
BLY Banja Luka 5.76 8 ⇑P Pn 00 54 24.9 +5.9
BLY Banja Luka 5.76 8 ⇑*i*Pn Pn 00 54 20.9 +1.9
KEST Kesra 6.26 240 Pn Pn 00 54 28.0 +2.0
comp=N,0.6nm,0.3s,baz=42,slow=15,SNR=9.2
KEST LR LR 00 57 36.4
comp=N,123nm,18.3s,baz=31,slow=45
comp=N,3.2nm,0.6s
KEST Kesra 6.26 240 Pn 00 54 27.9 +1.9
ZCCA Zocca 6.51 326 Pn Pn 00 54 32.1 +2.8
FRGS Fruska Gora 6.72 24 ⇑*i*Pn Pn 00 54 31.8 -0.4
TRI Trieste 6.87 347 Pn Pn 00 54 34.3 +0.2
TRI Trieste 6.87 347 P Pn 00 54 34.3 +0.2
TEOL Teolo 7.09 334 Pn Pn 00 54 38.2 +1.0
MDVR Moldovita 7.13 35 ⇑P Pn 00 54 36.8 -1.0
SABO M.te Sabotino 7.16 346 Pn 00 54 38.4 +0.2
MORH Mrgy, Hungar 7.42 14 ⇑P Pn 00 54 41.8 +0.1
MORH Mrgy, Hungar 7.42 14 *e*Pn Pn 00 54 40.7 -1.0
BEHE Becsehely 7.44 4 Pn Pn 00 54 42.0 0.0
BEHE Becsehely 7.44 4 *e*Pn Pn 00 54 42.9 +0.9
HERR Herculane 7.52 37 ⇓P Pn 00 54 43.3 +0.2
OBKA Obir 7.54 352 *i* Pn Pn 00 54 43.3 -0.2
comp=N,1.7nm,0.4s
OBKA *i* Sn Sn 00 56 06.8 -1.2
comp=N,14nm,0.7s
RDO Rodhopi 7.59 71 Pn Pn 00 54 44.3 +0.2
STAL STALIGIAL 7.61 342 Pn Pn 00 54 44.9 +0.5
SOKA Soboth 7.66 355 *i* Pn Pn 00 54 45.4 +0.3
comp=N,0.7nm,0.4s
SOKA *i* Sn Sn 00 56 10.3 -0.7
comp=N,1.9nm,0.5s
CTI Castel Tesino 7.71 337 Pn 00 54 46.0 +0.2
CTI Castel Tesino 7.71 337 P Pn 00 54 46.0 +0.2
SALO Salr 7.73 330 Pn Pn 00 54 46.9 +0.9
APE Apeiranthos 7.75 102 *i* P Pn 00 54 49.7 +3.3
BZS Buzias 7.76 30 ⇑P Pn 00 54 48.2 +1.8
BZS Buzias 7.76 30 ⇑P Pn 00 54 48.2 +1.8
MYKA Terra Mystica 7.78 348 *e*Pn Pn 00 54 46.4 -0.3
comp=N,2.7nm,0.4s
MYKA *i* Sn Sn 00 56 11.6 -2.2
comp=N,3.3nm,0.5s
PLVB Pleven 7.79 53 ⇑P Pn 00 54 47.1 +0.2
ALN Alexandroupoli 7.91 73 Pn 00 54 48.7 +0.2
ALN Alexandroupoli 7.91 73 P Pn 00 54 48.7 +0.2
VLAD Vladila 8.00 49 ⇑P Pn 00 54 51.5 +1.8
IDI Anoyia 8.01 115 Pn Pn 00 54 50.8 +0.9
comp=N,18nm,0.8s,baz=308,slow=18,SNR=6.5
IDI Sn Sn 00 56 14.5 -5.0
comp=N,3.1nm,0.3s,baz=311,slow=20,SNR=11
GZR Gura Zlata 8.08 36 ⇑P Pn 00 54 52.3 +1.5
GZR Gura Zlata 8.08 36 ⇑P Pn 00 54 52.3 +1.5
ABTA Abfaltersbach 8.12 343 *e*Pn Pn 00 54 51.1 -0.3
comp=N,1.4nm,0.5s
ABTA *i* Sn Sn 00 56 21.3 -0.9
comp=N,13nm,1.1s
ARSA Arzberg 8.21 358 Pn Pn 00 54 53.4 +0.8
ARSA Arzberg 8.21 358 *i* Pn Pn 00 54 53.2 +0.6
comp=N,1.8nm,0.3s
ARSA *e*Sn Sn 00 56 21.3 -3.1
comp=N,1.8nm,0.4s
KBA Koelnbreinsper 8.26 347 *e*Pn Pn 00 54 52.6 -0.9
comp=N,1.7nm,0.5s
KBA *i* Sn Sn 00 56 24.4 -1.5
comp=N,3.8nm,0.8s
ELND Elena 8.40 59 ⇓P Pn 00 54 57.1 +2.0
DEV Deva 8.51 34 ⇑P Pn 00 54 59.3 +2.6
DEV Deva 8.51 34 ⇑P Pn 00 54 59.3 +2.6
LOT Lotru 8.59 39 ⇓P Pn 00 54 58.6 +0.7
HUMR Humele 8.64 48 ⇑P Pn 00 54 58.2 -0.3
RONA Rosalia, Austr 8.65 1 *i* Pn Pn 00 54 59.2 +0.6
comp=N,4.6nm,0.4s
RONA *i* Sn Sn 00 56 30.1 -5.2
comp=N,2.1nm,0.5s
FUORN Ofenpass-Fuorn 8.67 333 Pn 00 55 01.8 +2.6
LESA Schwarzleotal 8.72 345 *i* Pn Pn 00 54 58.8 -0.9
comp=N,1.4nm,0.3s
LESA *e*Sn Sn 00 56 36.0 -1.1
comp=N,4.6nm,0.5s
BIOA Bad Ischl, Aus 8.81 349 *i* Pn Pn 00 55 01.3 +0.4
comp=N,1.7nm,0.4s
BIOA *e*Sn Sn 00 56 37.8 -1.5
comp=N,7.2nm,0.6s
WTTA Wattenberg 8.82 340 *e*Pn Pn 00 55 00.4 -0.7
comp=N,0.5nm,0.3s
WTTA *e*Sn Sn 00 56 39.2 -0.3
comp=N,7.4nm,0.8s
FETA Feichten 8.86 336 *i* Pn Pn 00 55 01.1 -0.6
comp=N,1.2nm,0.5s
FETA *i* Sn Sn 00 56 40.9 +0.3
comp=N,0.5nm,0.4s
CONA Conrad Observa 8.88 359 *i* Pn Pn 00 55 01.6 -0.2
comp=N,2.3nm,0.5s
CONA *i* Sn Sn 00 56 36.3 -4.6
comp=N,2.6nm,0.6s
MOA Molln 8.89 352 *i* Pn Pn 00 55 01.6 -0.4
comp=N,5.7nm,0.7s
MOA *i* Sn Sn 00 56 38.1 -3.1
comp=N,2.4nm,0.4s
SQTA Sankt Quirin 8.89 338 *i* Pn Pn 00 55 02.2 +0.1
comp=N,1.6nm,0.4s
SQTA *i* Sn Sn 00 56 42.2 +0.8
comp=N,2.5nm,0.4s
TUE Stuetta 8.90 329 Pn Pn 00 55 04.1 +1.9
WATA Walderalm 8.90 340 *e*Pn Pn 00 55 01.6 -0.5
comp=N,1.0nm,0.3s
WATA *i* Sn Sn 00 56 40.5 -1.0
comp=N,6.5nm,0.7s
DAVOX Davos/Dischmat 8.95 332 Pn Pn 00 55 03.3 +0.4
comp=N,0.3nm,0.3s,baz=146,slow=18,SNR=7.7
DAVOX Sn Sn 00 56 39.0 -3.7
baz=146,slow=12
DAVOX LR LR 00 59 13.9
comp=N,105nm,19.8s,baz=123,slow=43
comp=N,1.4nm,0.6s
ARR Arges 8.98 43 ⇓P Pn 00 55 05.9 +2.7
MOTA Moosalm 9.04 338 *e*Pn Pn 00 55 03.7 -0.3
comp=N,1.4nm,0.4s
MOTA *i* Sn Sn 00 56 43.9 -1.0
comp=N,2.2nm,0.6s
DRGR 9.16 30 ⇑P Pn 00 55 07.3 +1.7
DRGR 9.16 30 P Pn 00 55 10.0 +4.3
BNI Bardonecchia 9.18 314 Pn Pn 00 55 06.5 +0.5
BNI Bardonecchia 9.18 314 P Pn 00 55 06.5 +0.5
BALB Balikesir 9.20 83 Pn 00 55 07.1 +0.9
MARR Marisel-Cluj 9.23 32 ⇑P Pn 00 55 04.8 -1.8
VOIR 9.24 43 ⇓P Pn 00 55 08.8 +2.0
VOIR 9.24 43 ⇓P Pn 00 55 08.8 +2.0
RETA Reutte 9.27 337 *i* Pn Pn 00 55 06.5 -0.6
comp=N,1.8nm,0.5s
RETA *e*Sn Sn 00 56 52.3 +1.9
comp=N,2.1nm,0.4s
MODS Modra-Piesok 9.37 5 *e*P Pn 00 55 11.8 +3.3
MODS Modra-Piesok 9.37 5 *e*PN Pn 00 55 11.8 +3.3
MODS *e*SN Sn 00 56 45.9 -6.9
DAVA Damuels 9.38 333 *i* Pn Pn 00 55 07.8 -0.9
comp=N,1.9nm,0.5s
DAVA *e*Sn Sn 00 56 51.7 -1.6

comp=N,4.6nm,0.7s
SENIN Lac Senin/Sane 9.73 322 Pn Pn 00 55 15.3 +1.7
MLR Muntele Rosu 9.77 46 Pn Pn 00 55 14.4 +0.3
comp=N,0.4nm,0.3s,baz=189,slow=14,SNR=10
MLR Sn Sn 00 56 59.9 -2.9
comp=N,0.1nm,0.3s,baz=292,slow=16,SNR=1.3
MLR LR LR 01 00 33.1
comp=N,227nm,18.3s,baz=248,slow=47
comp=N,3.7nm,0.7s
MLR Muntele Rosu 9.77 46 ⇓P Pn 00 55 13.8 -0.3
MLR Muntele Rosu 9.77 46 Pn 00 55 15.5 +1.4
MLR Muntele Rosu 9.77 46 P Pn 00 55 15.5 +1.4
MLR 00 56 59.9
DOPR Dopca 9.77 42 ⇑P Pn 00 55 16.3 +2.3
MANT Manisa 9.80 89 Pn Pn 00 55 15.9 +1.3
GEC2 GERESS Array S 9.94 351 Pn Pn 00 55 17.2 +0.8
GERES GERESS Array B 9.94 351 Pn Pn 00 55 17.0 +0.7
baz=166,slow=14,SNR=10
GERES Sn Sn 00 57 01.6 -5.3
comp=N,0.1nm,0.3s,baz=166,slow=24,SNR=9.6
comp=N,1.6nm,0.8s
ARG Arkhangelos 10.00 103 Pn Pn 00 55 16.9 -0.3
ARG Arkhangelos 10.00 103 P Pn 00 55 16.9 -0.3
COVR Voineasa-Covas 10.13 45 ⇑P Pn 00 55 22.6 +3.7
TURR Turia 10.16 43 ⇑P Pn 00 55 22.8 +3.4
KHC Kasperske Hory 10.23 351 Pn Pn 00 55 20.0 -0.4
KHC Kasperske Hory 10.23 351 *e*P Pn 00 55 21.1 +0.8
KHC *e* 00 57 08.7
KHC Kasperske Hory 10.23 351 *e*PN Pn 00 55 21.1 +0.8
KHC *e*SN Sn 00 57 08.7 -5.4
VRAC Vranov 10.27 2 LR LR 01 00 06.7
comp=N,81nm,20.9s,baz=200,slow=42
PLOR Plostina 10.38 46 ⇑P Pn 00 55 22.4 0.0
PLOR Plostina 10.38 46 ⇑P Pn 00 55 22.4 0.0
VRI Vrincioaia 10.43 46 ⇑P Pn 00 55 25.6 +2.5
VRI Vrincioaia 10.43 46 ⇑P Pn 00 55 25.6 +2.5
ONER Baraj Valea Uz 10.54 43 ⇑P Pn 00 55 26.4 +1.9
BURAR Bucovina Array 10.86 35 ⇑P Pn 00 55 34.4 +5.4
BURAR Bucovina Array 10.86 35 Pn Pn 00 55 31.6 +2.6
BURAR Bucovina Array 10.86 35 ⇑P Pn 00 55 34.4 +5.4
BUR08 Bucovina Ar. S 10.88 35 Pn 00 55 31.2 +2.0
CFR Carcaliu 10.88 52 ⇑P Pn 00 55 31.2 +2.1
CFR Carcaliu 10.88 52 ⇑P Pn 00 55 31.2 +2.1
GIRR Girov 11.01 41 ⇑P Pn 00 55 33.5 +2.6
AKAS Kas 11.13 100 Pn Pn 00 55 33.0 +0.2
ELL Elmali 11.21 97 Pn Pn 00 55 34.0 +0.2
ELL Elmali 11.21 97 P Pn 00 55 34.0 +0.2
BR131 Keskin Array S 13.64 82 *i* P Pn 00 56 09.9 +2.8
BRTR Keskin Array B 13.64 82 Pn Pn 00 56 08.7 +1.6
comp=N,0.1nm,0.3s,baz=275,slow=12,SNR=4.6
BRTR LR LR 01 02 12.7
comp=N,55nm,19.9s,baz=272,slow=41
comp=N,1.0nm,0.7s
CSS Mathiatis 14.41 101 Pn Pn 00 56 17.1 -0.4
AKASG Malin Array Be 14.91 34 Pn Pn 00 56 21.6 -2.6
comp=N,0.5nm,0.3s,baz=228,slow=9.9,SNR=9.0
AKASG LR LR 01 02 29.9
comp=N,105nm,19.3s,baz=259,slow=39
comp=N,0.3nm,0.4s
ESDC Sonseca Array 15.48 279 Pn Pn 00 56 31.2 -0.5
comp=N,0.1nm,0.3s,baz=90,slow=11,SNR=10
comp=N,1.0nm,1.0s
MMAI Mount Meron Ar 16.78 105 Pn Pn 00 56 47.5 -0.9
comp=N,0.6nm,0.3s,baz=308,slow=16,SNR=5.1
comp=N,0.7nm,0.5s
ANN Anapa 16.92 63 *e*P Pn 00 56 50.1 +0.1
ANN *e*S Sn 00 59 56.8 -0.2
ANN pmax pmax
comp=Z,16nm,0.9s
MNK Minsk 17.42 24 *i* P Pn 00 56 56.3 +0.1
comp=E,12nm,1.0s
MNK *i* P Pn 00 56 56.3 +0.1
comp=N,20nm,1.1s
MNK *i* P Pn 00 56 56.3 +0.1
comp=Z,5.0nm,0.7s,baz=212
MNK *i* PP PnPn 00 57 06.6 +0.1
MNK *i* S Sn 01 00 08.7 -0.4
MNK *i* SS SnSn 01 00 23.6 +1.0
MNK *i* LQ LQ 01 01 32.2
MNK *i* LR LR 01 04 00.3
MNK *i* LRM MLR 01 05 13.8
comp=N,105nm,18.4s
MNK *i* LRM MLR 01 05 18.2
comp=Z,54nm,10.0s
MNK *i* LRM MLR 01 05 20.8
comp=E,139nm,17.6s
MNK Minsk 17.42 24 *i* P Pn 00 56 56.3 +0.1
MNK *i* S Sn 01 00 08.7 -0.4
MNK pmax pmax
comp=N,20nm,1.1s
MNK pmax pmax
comp=Z,5.0nm,0.7s
MNK pmax pmax
comp=E,12nm,1.0s
MNK MLR MLR
comp=N,105nm,18.0s
MNK MLR MLR
comp=Z,54nm,10.0s
MNK MLR MLR
comp=E,139nm,18.0s
EIL Elat 18.18 115 P Pn 00 57 05.3 -0.4
comp=E,0.4nm,0.3s,baz=321,slow=6.5,SNR=5.2
comp=E,1.5nm,0.4s
ASF Jabal al Asfar 18.28 106 P Pn 00 57 07.9 +0.8
comp=E,0.1nm,0.3s,baz=294,slow=19,SNR=3.5
comp=E,1.6nm,0.8s
PVAQ Vaqueiros 18.72 272 P P 00 57 10.5 -1.2
PVAQ IAmb IAmb 00 57 27.7
comp=Z,56nm,1.5s
MESJ Messejana 19.02 274 P P 00 57 14.5 -0.5
MESJ Messejana 19.02 274 P P 00 57 14.5 -0.5
MESJ pmax pmax
comp=Z,14nm,1.0s
VSR Storozhevoye 20.26 46 *e*P P 00 57 28.3 -0.1
VSR pmax pmax
comp=Z,8.0nm,0.6s
SHA1 Shidzhatmaz 20.48 68 *ce*P Pn 00 57 33.2 -0.2
VORR Voronezh 20.50 44 *e*P P 00 57 31.5 +0.5
VSU Vasula 20.62 16 *ce*P P 00 57 32.4 +0.1
VSU pmax pmax
comp=Z,36nm,1.7s
KBZ Khabaz 20.66 68 P P 00 57 33.4 +0.7
comp=Z,4.4nm,0.9s,baz=264,slow=12,SNR=7.6
comp=Z,4.4nm,0.9s
KBZ Khabaz 20.66 68 *ce*P Pn 00 57 34.4 -0.7
KBZ pmax pmax
comp=Z,7.0nm,1.0s
EKA Eskdalemuir Ar 20.75 328 P P 00 57 33.7 0.0
comp=Z,4.9nm,0.9s,baz=128,slow=13,SNR=3.9
comp=Z,4.9nm,0.9s
LPSR Galich'ya Gora 20.82 42 *e*P P 00 57 34.4 0.0
LPSR pmax pmax
comp=Z,9.0nm,0.6s
HFS Hagfors 21.16 357 P P 00 57 37.7 -0.3
comp=Z,3.2nm,0.9s,baz=168,slow=8.8,SNR=2.4
comp=Z,3.2nm,0.9s
OBN Obninsk 21.18 34 *e*P P 00 57 38.6 +0.3
OBN *e* 00 57 59.4
OBN *e* 01 01 43.8
OBN pmax pmax
comp=Z,26nm,1.0s
OBN MLR MLR
comp=Z,89nm,17.0s
VRH Novokhopyorsk 21.70 48 *e*P P 00 57 39.4 -4.5
VRH pmax pmax
comp=Z,10.0nm,0.5s
MOS Moscow 22.04 34 *e*P P 00 57 47.8 +0.3
NAO01 NORSAR Array S 22.06 353 P P 00 57 47.0 -0.7
NAO01 IAmb IAmb 00 58 05.0
comp=Z,14nm,1.1s
GNI Garni 22.12 78 P P 00 57 48.8 +0.1
comp=Z,7.7nm,0.8s,baz=287,slow=19,SNR=4.7
comp=Z,7.7nm,0.8s
GNI Garni 22.12 78 P P 00 57 49.1 +0.4
GNI IAmb IAmb 00 57 51.2
comp=Z,10nm,0.9s
GNI Garni 22.12 78 *i* P P 00 57 49.5 +0.8
GNI pmax pmax
comp=Z,7.0nm,0.8s
NOA NORSAR Array B 22.22 354 P P 00 57 50.6 +1.1
comp=Z,1.5nm,0.9s,baz=173,slow=10,SNR=2.4
NOA LR LR 01 07 26.1
comp=Z,42nm,18.2s,baz=295,slow=39
comp=Z,1.5nm,0.9s
NBO00 NORSAR Array S 22.25 353 P P 00 57 48.3 -1.5
NBO00 IAmb IAmb 00 57 52.3

comp=Z,25nm,1.2s
NC303 NORSAR Array S 22.39 354 P P 00 57 50.9 -0.4
NC303 IAmb IAmb 00 57 53.1
comp=Z,18nm,1.1s
FINES FINESS Array B 23.27 12 P P 00 57 59.9 -0.4
comp=Z,6.5nm,0.9s,baz=197,slow=9.1,SNR=11
comp=Z,6.5nm,0.9s
FINES FINESS Array B 23.27 12 P P 00 58 00.4 0.0
FINES FINESS Array B 23.27 12 P P 00 58 00.4 0.0
FIA1 FINESS Array S 23.27 12 P P 00 58 00.6 +0.2
BELG Belogornoye 25.55 48 P P 00 58 21.9 +0.4
comp=Z,28nm,0.8s,baz=245,slow=1.1,SNR=13
BELG Belogornoye 25.55 48 *i* P **P 00 58 23.6 +2.1**
BELG pmax pmax
comp=Z,5.0nm,0.9s
KLMR Klimovskoe 26.27 26 *e*P **P 00 58 27.0 -1.0**
KLMR *e**PP **sP 00 58 39.2 -0.4**
KLMR pmax pmax
comp=Z,20nm,1.0s
TORD Torodi Ar. Bea 28.75 210 P P 00 58 51.2 +0.6
comp=Z,0.2nm,0.3s,baz=8.8,slow=7.9,SNR=1.9
comp=Z,0.2nm,0.3s
KIRV Kirov 28.95 37*ce*P **P 00 58 51.5 -0.5**
AKTO Aktyubinsk 31.52 55 LR LR 01 13 38.8
comp=Z,52nm,19.7s,baz=284,slow=40
AB31 Akbulak array 32.70 57 P P 00 59 26.4 +1.2
ABKAR Akbulak array 32.70 57 P P 00 59 26.5 +1.3
ARTI Arti 32.71 44 LR LR 01 14 03.9
comp=Z,79nm,18.3s,baz=225,slow=39
ARTI Arti 32.71 44*c i*P **P 00 59 25.7 +0.5**
ARTI 01 00 34.3
ARTI 01 02 07.7
ARTI S **S 01 04 41.3 +1.6**
ARTI SS **SnSn 01 06 35.0 -0.9**
ARTI pmax pmax
comp=Z,23nm,2.0s
BORK Borovoye 39.24 51 P P 01 00 22.7 +1.6
BORK IAmb IAmb 01 00 24.6
comp=Z,5.4nm,0.9s
BORK Borovoye 39.24 51 P P 01 00 22.7 +1.6
BORK pmax pmax
comp=Z,5.0nm,1.0s
BVAR Borovoye Array 39.28 51 P P 01 00 21.9 +0.5
comp=Z,2.1nm,0.7s,baz=271,slow=6.9,SNR=12
comp=Z,2.1nm,0.7s
KKAR Karatay Array 40.67 66 P P 01 00 34.0 +0.8
KKAR Karatay Array 40.67 66 P P 01 00 34.0 +0.8
GAR Garm 41.63 72 P P 01 00 41.1 -0.2
GAR IAmb IAmb 01 00 51.3
comp=Z,7.2nm,1.2s
AAK Ala-Archa 43.62 66 *i* P **P 01 00 59.1 +1.7**
AAK pmax pmax
comp=Z,2.0nm,1.1s
IVI Ivigtut 44.52 322 P P 01 01 05.2 +1.2
KURBB Kurchatov Arra 44.55 54 P P 01 01 05.3 +0.9
comp=Z,1.8nm,0.8s,baz=286,slow=9.0,SNR=14
KURBB PcP **PcP 01 02 47.6 +0.4**
comp=Z,0.6nm,0.9s,baz=288,slow=3.8,SNR=5.1
comp=Z,1.8nm,0.8s
KURK Kurchatov 44.59 54 P P 01 01 05.9 +1.1
KURK IAmb IAmb 01 01 07.4
comp=Z,3.0nm,0.7s
KURK Kurchatov 44.59 54 PcP 01 02 47.6 +0.3
KURK Kurchatov 44.59 54*ce*P **P 01 01 05.6 +0.8**
KURK pmax pmax
comp=Z,4.0nm,0.9s
BOOM Boomskoye usch 44.69 66 P P 01 01 07.2 +1.3
BOOM Boomskoye usch 44.69 66 P P 01 01 07.2 +1.3
BOOM pmax pmax
comp=Z,1.0nm,0.8s
KDJ Kajisay 45.67 66 P P 01 01 13.0 -0.8
KDJ Kajisay 45.67 66 P P 01 01 13.0 -0.8
KDJ pmax pmax
comp=Z,2.0nm,1.1s
MAKZ Makanchi 47.63 58 P P 01 01 29.9 +1.0
MAKZ Makanchi 47.63 58 P P 01 01 29.9 +1.0
MAKZ pmax pmax
comp=Z,1.0nm,1.0s
ZAA0 Zalesovo Array 47.73 48 P 01 01 30.7 +1.2
ZAA0 IAmb IAmb 01 01 31.4
comp=Z,5.6nm,0.8s
ZALV Zalesovo Beam 47.73 48 P P 01 01 30.3 +0.8
comp=Z,5.2nm,0.7s,baz=282,slow=8.2,SNR=30
comp=Z,5.2nm,0.7s
ZALV Zalesovo Beam 47.73 48 P 01 01 30.4 +0.9
ZALV Zalesovo Beam 47.73 48 *i* P **P 01 01 30.6 +1.1**
ZALV pmax pmax
comp=Z,5.0nm,0.7s
MK31 Makanchi Array 47.84 58 P P 01 01 31.9 +1.4
MK31 Makanchi Array 47.84 58 P P 01 01 31.9 +1.4
MK31 pmax pmax
comp=Z,3.0nm,1.0s
MKAR Makanchi Array 47.84 58 P P 01 01 31.5 +1.0
comp=Z,1.9nm,0.6s,baz=284,slow=7.1,SNR=41
MKAR PcP **PcP 01 02 59.6 +0.7**
comp=Z,0.4nm,0.8s,baz=279,slow=2.8,SNR=1.8
MKAR LR LR 01 22 45.1
comp=Z,35nm,19.2s,baz=306,slow=38
comp=Z,1.9nm,0.6s
MKAR Makanchi Array 47.84 58 P 01 01 31.8 +1.2
MKAR Makanchi Array 47.84 58*ce*P **P 01 01 31.7 +1.2**
MKAR pmax pmax
comp=Z,2.0nm,0.6s
DGZ Jazzator, Alta 50.33 53 *i* P **P 01 01 50.8 +1.1**
DGZ pmax pmax
comp=Z,3.0nm,0.6s
SCHQ Schefferville 55.41 316 P P 01 02 26.6 -0.3
SCHQ IAmb IAmb 01 02 34.1
comp=Z,8.0nm,1.2s
BATG Bathurst New B 57.83 307 P P 01 02 45.2 +1.0
EVN Everest 58.72 78 P P 01 02 51.7 +0.3
EVN IAmb IAmb 01 03 01.2
comp=Z,3.2nm,0.8s
TLY Talaya 59.26 46 LR LR 01 32 09.9
comp=Z,59nm,18.2s,baz=319,slow=40
D62A Allapoint, All 59.76 308 P P 01 02 59.5 +2.0
EMMW East Machias 59.81 305 P P 01 02 59.7 +1.7
SONM Songino Array 62.60 49 P P 01 03 17.9 +0.9
comp=Z,3.1nm,0.8s,baz=293,slow=7.5,SNR=23
comp=Z,3.1nm,0.8s
SONM Songino Array 62.60 49 P P 01 03 18.2 +1.2
SONM IAmb IAmb 01 03 19.1
comp=Z,3.0nm,0.9s
SONM Songino Array 62.60 49 P P 01 03 18.2 +1.2
SONM pmax pmax
comp=Z,3.0nm,0.9s
LPHEP Lephephe 62.76 170 P P 01 03 18.8 +0.6
ULN Ulaanbaatar 62.97 49*ce*P **P 01 03 21.1 +1.6**
ULN pmax pmax
comp=Z,2.0nm,0.9s
KSPA Keystone Colle 66.65 305 P P 01 03 46.0 +2.6
BOSA Boshof 67.86 171 LR LR 01 35 08.5
comp=Z,40nm,19.5s,baz=18,slow=37
E29M Blow River 71.12 350 IAmb IAmb 01 04 12.0
comp=Z,4.0nm,0.8s
YKA Yellowknife Ar 71.32 338 P P 01 04 11.3 -0.7
comp=Z,0.1nm,0.6s,baz=25,slow=5.1,SNR=2.5
comp=Z,0.1nm,0.6s
CMAR Chiang Mai Arr 73.23 80 P P 01 04 25.1 +1.0
comp=Z,1.0nm,0.3s,baz=309,slow=4.4,SNR=1.4
comp=Z,1.0nm,0.3s
ILAR Eielson Array 75.65 353 P P 01 04 38.0 +0.5
comp=Z,0.3nm,0.8s,baz=0.0,slow=8.6,SNR=4.6
comp=Z,0.3nm,0.8s
ILAR Eielson Array 75.65 353 P P 01 04 38.0 +0.5
USRK Ussuriysk Ar. 79.01 41 P P 01 04 56.7 +0.1
comp=Z,3.3nm,0.8s,baz=336,slow=3.2,SNR=4.3
comp=Z,3.3nm,0.8s
RC01 Rabbit Creek A 79.54 353 P P 01 04 57.5 -1.7
RC01 IAmb IAmb 01 05 02.3
comp=Z,5.5nm,0.8s
SPU Mount Spurr 79.65 354 P P 01 05 01.7 +1.8
SPU IAmb IAmb 01 05 07.0
comp=Z,4.6nm,1.4s
O18K Koktuh Hills 81.19 356 P P 01 05 08.7 +0.6
O18K IAmb IAmb 01 05 12.7
comp=Z,6.0nm,1.4s
CAMR Camarioca 81.26 292 P P 01 05 06.9 -2.2
YSS Yuzhno-Sakhali 82.06 34 *e*P **P 01 05 08.7 -4.2**
OHAK Old Harbor 83.67 354 P P 01 05 21.7 +0.6
LENM Lemitar 90.06 316 P P 01 05 52.0 -0.9
SBM South Baldy 90.31 316 P P 01 05 53.6 -0.7
WRA Warramunga Arr 124.07 89 PKP **PKPdf 01 11 50.4 -1.1**
comp=Z,0.2nm,0.5s,baz=306,slow=2.7,SNR=2.4
ASAR Alice Springs 125.75 93 PKP **PKPdf 01 11 54.5 -0.1**
comp=Z,0.2nm,0.4s,baz=299,slow=2.5,SNR=4.1

*IDC **17** 00:55:48.9±1.2,39.˚16N×16.˚03E,h0km,mb3.7/5, mbtmp3.7/10,ML3.2/3,Error ellipse: s-maj=34.9km s-min=19.3km az=133.0*
*ROM **17** 00:55:51.3±0.1,39.˚041N±0.˚003×16.˚028E±0.˚004, h24km,ML3.4/206,Error ellipse: s-maj=0.3km s-min=0.0km az=304.0*
ISC 17 00:55:51.6±0.8,39.˚03N±0.˚02×16.˚03E±0.˚03,h28km±7km, n46,σ0s80/59,mb3.9/5,1C-17D,Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAR1	**CAROLEI**	**0.26**	**32**	⇓P	**Pb**	**00 55 58.3**	**-0.1**
CAR1				S	**Sb**	**00 56 02.7**	**-0.3**
CAR1				AML	AML		
	comp=N,68400μm,0.5s						
CAR1				AML	AML		
	comp=E,47550μm,0.3s						
CAR1				AML	AML		
	comp=N,63250μm,0.5s						
CAR1				AML	AML		
	comp=N,68400μm,0.5s						
CAR1				AML	AML		
	comp=N,68400μm,1.5s						
CAR1				AML	AML		
	comp=N,63250μm,1.5s						
CAR1				AML	AML		
	comp=E,55000μm,0.4s						
SPS2	**Spezzano della**	**0.35**	**42**	⇓P	**Pb**	**00 55 59.5**	**-0.1**
SPS2				S	**Sb**	**00 56 05.0**	**-0.2**
SPS2				AML	AML		
	comp=N,21200μm,0.8s						
SPS2				AML	AML		
	comp=E,17800μm,0.5s						
GRI	**Girifalco**	**0.37**	**125**	⇓P	**Pb**	**00 55 59.8**	**-0.1**
GRI				S	**Sb**	**00 56 05.2**	**-0.3**
GRI				AML	AML		
	comp=E,23050μm,0.7s						
GRI				AML	AML		
	comp=N,26800μm,0.5s						
JOPP	**Joppolo**	**0.44**	**195**	⇓P	**Pb**	**00 56 01.3**	**+0.3**
JOPP				S	**Sb**	**00 56 07.9**	**+0.5**
JOPP				AML	AML		
	comp=E,19200μm,0.2s						
JOPP				AML	AML		
	comp=N,20900μm,0.2s						
JOPP				AML	AML		
	comp=E,19200μm,1.8s						
CET2	**Cetraro**	**0.50**	**353**	⇑P	**Pb**	**00 56 01.8**	**-0.2**
CET2				S	**Sb**	**00 56 08.9**	**-0.2**
CET2				AML	AML		
	comp=N,21550μm,0.3s						
CET2				AML	AML		
	comp=E,13250μm,0.6s						
SERS	**Sersale**	**0.51**	**89**	⇓P	**Pb**	**00 56 02.0**	**-0.2**
SERS				S	**Sb**	**00 56 09.1**	**-0.3**
SERS				AML	AML		
	comp=E,8905μm,0.5s						
SERS				AML	AML		
	comp=N,7955μm,0.5s						
SERS				AML	AML		
	comp=N,12550μm,0.3s						
SERS				AML	AML		
	comp=E,12950μm,0.6s						
SERS				AML	AML		
	comp=N,7955μm,1.5s						
SERS				AML	AML		
	comp=E,8905μm,1.5s						
CELI	**Celico**	**0.52**	**45**	⇓P	**Pb**	**00 56 02.1**	**-0.3**
CELI				S	**Sb**	**00 56 09.5**	**-0.3**
CELI				AML	AML		
	comp=N,14370μm,0.9s						
CELI				AML	AML		
	comp=N,14300μm,0.9s						
CELI				AML	AML		
	comp=E,16450μm,0.6s						
CELI				AML	AML		
	comp=N,14365μm,0.9s						
CELI				AML	AML		
	comp=E,16450μm,1.4s						
CELI				AML	AML		
	comp=E,16350μm,0.6s						
TIP	**Timpagrande**	**0.58**	**75**	⇓P	**Pb**	**00 56 03.2**	**-0.2**
TIP				S	**Sb**	**00 56 11.6**	**+0.3**
TIP				AML	AML		
	comp=N,4500μm,0.3s						
TIP				AML	AML		
	comp=E,9505μm,0.4s						
TIP				AML	AML		
	comp=E,9480μm,0.4s						
TIP				AML	AML		
	comp=N,4370μm,0.4s						
TIP				AML	AML		
	comp=E,9480μm,1.6s						
TIP				AML	AML		
	comp=E,9505μm,1.6s						
FERC	**Galatro**	**0.58**	**173**	⇓P	**Pb**	**00 56 03.4**	**+0.1**
FERC				S	**Sn**	**00 56 12.1**	**-0.6**
PLAC	**Placanica**	**0.66**	**151**	⇓P	**Pb**	**00 56 04.6**	**-0.1**
PLAC				AML	AML		
	comp=E,3540μm,0.2s						
PLAC				AML	AML		
	comp=N,4795μm,0.3s						
PLAC				AML	AML		
	comp=E,4835μm,0.3s						
PLAC				AML	AML		
	comp=N,3670μm,0.2s						
IST3	**Stromboli F**	**0.67**	**250**	P	**Pb**	**00 56 04.8**	**+0.1**
IST3				AML	AML		
	comp=E,8015μm,1.4s						
IST3				AML	AML		
	comp=E,8015μm,0.6s						
IST3				AML	AML		
	comp=N,10760μm,0.1s						
TDS	**Terranova Siba**	**0.67**	**21**	P	**Pb**	**00 56 04.1**	**-0.6**
TDS				S	**Sb**	**00 56 13.3**	**-0.4**
TDS				AML	AML		
	comp=N,1580μm,1.4s						
TDS				AML	AML		
	comp=E,1314μm,0.9s						
ISTR	**Stromboli Gino**	**0.70**	**250**	P	**Pn**	**00 56 05.3**	**-0.3**
GRIS	**Grisolia**	**0.72**	**349**	P	**Pb**	**00 56 05.0**	**-0.6**
PIPA	**Pietrapaola**	**0.76**	**53**	P	**Pb**	**00 56 06.2**	**-0.1**
PIPA				AML	AML		
	comp=E,7360μm,1.2s						
PIPA				AML	AML		
	comp=E,7300μm,1.2s						
PIPA				AML	AML		
	comp=N,6305μm,1.1s						
PIPA				AML	AML		
	comp=E,7300μm,0.8s						
PIPA				AML	AML		
	comp=E,7360μm,0.8s						
PIPA				AML	AML		
	comp=N,6315μm,1.1s						
LADO	**San Nicola del**	**0.78**	**71**	P	**Pb**	**00 56 06.5**	**-0.1**
CEL	**Celeste**	**0.78**	**188**	⇓P	**Pb**	**00 56 06.0**	**-0.6**
CEL				AML	AML		
	comp=N,3370μm,0.3s						
CEL				AML	AML		
	comp=N,3360μm,0.3s						
CEL				AML	AML		
	comp=N,3360μm,1.7s						
CEL				AML	AML		
	comp=E,3955μm,0.4s						
CEL				AML	AML		
	comp=N,3370μm,1.7s						
CEL				AML	AML		
	comp=E,3940μm,0.4s						
SICLA	**Scilla**	**0.81**	**198**	⇓P	**Pb**	**00 56 06.6**	**-0.6**
SICLA				AML	AML		
	comp=N,3585μm,0.3s						
SICLA				AML	AML		
	comp=E,3690μm,0.3s						
MMN	**Mormanno**	**0.86**	**358**	⇓P	**Pb**	**00 56 07.2**	**-0.7**
MMN				S	**Sb**	**00 56 18.8**	**-0.2**
MMN				AML	AML		
	comp=N,12100μm,0.3s						
MMN				AML	AML		
	comp=E,4940μm,0.3s						
MSRU	**Castanea**	**0.87**	**208**	⇓P	**Pb**	**00 56 07.5**	**-0.6**
MSRU				AML	AML		
	comp=E,8425μm,0.7s						
MSRU				AML	AML		
	comp=N,6820μm,0.3s						
GMB	**Gambarie**	**0.88**	**191**	P	**Pb**	**00 56 07.6**	**-0.8**
GMB				AML	AML		
	comp=N,11700μm,0.6s						
GMB				AML	AML		
	comp=E,11765μm,0.2s						
SALB	**San Lorenzo Be**	**0.88**	**16**	P	**Pb**	**00 56 07.6**	**-0.7**
SALB				AML	AML		
	comp=E,1365μm,0.3s						
SALB				AML	AML		
	comp=N,1205μm,0.3s						
SALB				AML	AML		
	comp=N,1205μm,1.7s						
RCU	**Reggio Calabri**	**0.95**	**198**	P	**Pb**	**00 56 08.5**	**-1.0**
SOI	**Samo**	**0.96**	**179**	⇓P	**Pb**	**00 56 09.0**	**-0.6**
SOI				AML	AML		
	comp=N,1500μm,1.5s						
SOI				AML	AML		
	comp=E,1465μm,0.5s						
SOI				AML	AML		
	comp=N,1500μm,0.5s						
CUC	**Castrocucco**	**0.97**	**350**	P	**Pb**	**00 56 08.2**	**-1.7**
CUC				AML	AML		
	comp=N,1350μm,0.3s						
CUC				AML	AML		
	comp=N,1365μm,0.3s						
CUC				AML	AML		
	comp=E,2015μm,0.3s						
CUC				AML	AML		
	comp=E,2005μm,0.3s						
MILZ	**Milazzo**	**0.99**	**220**	⇓P	**Pn**	**00 56 09.2**	**-0.4**
MILZ				AML	AML		
	comp=E,7135μm,0.3s						
MILZ				AML	AML		
	comp=N,5785μm,0.3s						
MILZ				AML	AML		
	comp=N,5785μm,1.7s						
LLI	**Lipari**	**1.03**	**236**	P	**Pb**	**00 56 10.4**	**-0.4**
LLI				AML	AML		
	comp=E,18150μm,0.5s						
LLI				AML	AML		
	comp=N,27900μm,0.3s						
LLI				AML	AML		
	comp=E,18150μm,1.5s						
MPNC	**Port Mandanici**	**1.03**	**211**	⇓P	**Pn**	**00 56 09.6**	**-0.7**
MPNC				AML	AML		
	comp=N,5705μm,0.9s						
MPNC				AML	AML		
	comp=E,6240μm,0.5s						
VPL	**Vulcano Piano**	**1.05**	**232**	P	**Pn**	**00 56 10.3**	**-0.1**
VPL				AML	AML		
	comp=E,3450μm,0.7s						
VPL				AML	AML		
	comp=N,3365μm,0.4s						
VPL				AML	AML		
	comp=N,3365μm,1.6s						
VPL				AML	AML		
	comp=E,3450μm,1.3s						
IVGP	**Vulcano Grotta**	**1.05**	**233**	P	**Pn**	**00 56 10.1**	**-0.4**
MTTG	**Motta San Giov**	**1.06**	**195**	⇓P	**Pn**	**00 56 10.1**	**-0.6**
MTTG				AML	AML		
	comp=E,1910μm,1.2s						
MTTG				AML	AML		
	comp=N,3180μm,0.5s						
MTTG				AML	AML		
	comp=E,1910μm,0.8s						
ORI	**Oriolo Calabro**	**1.08**	**17**	P	**Pb**	**00 56 11.7**	**0.0**
ORI				AML	AML		
	comp=E,4485μm,0.4s						
ORI				AML	AML		
	comp=N,3090μm,0.4s						
ORI				AML	AML		
	comp=N,3090μm,1.6s						
SIRI	**Monte Sirino -**	**1.16**	**354**	P	**Pn**	**00 56 11.2**	**-0.9**
SIRI				AML	AML		
	comp=E,1630μm,1.1s						
SIRI				AML	AML		
	comp=N,1520μm,1.0s						
SIRI				AML	AML		
	comp=E,1645μm,0.4s						
SIRI				AML	AML		
	comp=N,1555μm,1.0s						
SIRI				AML	AML		
	comp=N,1555μm,1.0s						
SIRI				AML	AML		
	comp=N,1520μm,1.0s						
SIRI				AML	AML		
	comp=E,1630μm,0.9s						
BULG	**Bulgheria - Ca**	**1.16**	**334**	P	**Pn**	**00 56 12.2**	**+0.1**
BULG				AML	AML		
	comp=E,1455μm,0.3s						
BULG				AML	AML		
	comp=N,2300μm,0.4s						
BULG				AML	AML		
	comp=N,2245μm,0.3s						
BULG				AML	AML		
	comp=E,1520μm,0.2s						
MGR	**Morigerati**	**1.16**	**342**	P	**Pn**	**00 56 11.3**	**-0.7**
MGR				S	**Sn**	**00 56 27.2**	**+0.2**
MGR				AML	AML		
	comp=N,1425μm,0.4s						
MGR				AML	AML		
	comp=N,1625μm,0.3s						
MGR				AML	AML		
	comp=E,2105μm,0.9s						
MGR				AML	AML		
	comp=E,2110μm,0.3s						
SCHR	**S. Chirico Rap**	**1.17**	**2**	P	**Pn**	**00 56 11.9**	**-0.3**
SCHR				AML	AML		
	comp=E,646μm,0.4s						
SCHR				AML	AML		
	comp=N,534μm,0.7s						
VAE	**Valguarnera**	**2.01**	**220**	Pn	**Pb**	**00 56 26.5**	**-1.0**
	comp=N,17nm,0.3s,baz=18,slow=20,SNR=9.6						
KEST	**Kesra**	**6.26**	**240**	Pn	**Pn**	**00 57 23.0**	**+0.9**
	comp=N,0.1nm,0.3s,baz=52,slow=17,SNR=1.8						
	comp=N,4.0nm,1.0s						
IDI	**Anoyia**	**8.00**	**115**	Pn	**Pn**	**00 57 46.7**	**+0.7**
	comp=N,17nm,0.9s,baz=293,slow=15,SNR=1.9						
IDI				Sn	**Sn**	**00 59 11.6**	**-4.0**
	comp=N,1.0nm,0.3s,baz=288,slow=20,SNR=2.4						
MLR	**Muntele Rosu**	**9.77**	**45**	Pn	**Pn**	**00 58 11.0**	**+0.6**
	comp=N,0.1nm,0.3s,baz=197,slow=18,SNR=1.3						
	comp=N,1.4nm,0.8s						
EIL	**Elat**	**18.17**	**115**	P	**P**	**01 00 03.4**	**+1.5**
	comp=N,0.2nm,0.3s,baz=295,slow=19,SNR=2.4						
	comp=N,2.5nm,0.8s						
FINES	**FINESS Array B**	**23.28**	**12**	P	**P**	**01 00 56.3**	**-0.4**
	comp=N,1.4nm,0.8s,baz=196,slow=8.7,SNR=3.6						
	comp=N,1.4nm,0.8s						
KURBB	**Kurchatov Arra**	**44.55**	**54**	P	**P**	**01 04 01.7**	**+0.9**
	comp=N,0.6nm,0.8s,baz=289,slow=8.6,SNR=2.9						
	comp=N,0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**47.74**	**48**	P	**P**	**01 04 26.6**	**+0.8**
	comp=N,0.9nm,0.5s,baz=284,slow=9.2,SNR=5.0						
	comp=N,0.9nm,0.5s						
MKAR	**Makanchi Array**	**47.84**	**58**	P	**P**	**01 04 27.5**	**+0.7**
	comp=N,0.4nm,0.3s,baz=280,slow=7.2,SNR=13						
	comp=N,0.4nm,0.3s						
SONM	**Songino Array**	**62.60**	**49**	P	**P**	**01 06 14.0**	**+0.7**
	comp=N,0.9nm,0.9s,baz=280,slow=8.6,SNR=4.5						
	comp=N,0.9nm,0.9s						

*IDC **17** 01:02:41.4±1.1,39.˚14N×16.˚04E,h0km,mb3.6/6, mbtmp3.6/12,ML2.3/5,MS2.9/1,Error ellipse: s-maj=24.5km s-min=16.6km az=134.0*
*PDG **17** 01:02:43.7±0.3,39.˚06N×16.˚02E,h25km±2km,ML3.6/12, Error ellipse: s-maj=1.0km s-min=1.9km az=0.0*
*ROM **17** 01:02:43.5±0.1,39.˚047N±0.˚002×16.˚020E±0.˚004, h25km,ML3.4/186,Error ellipse: s-maj=0.3km s-min=0.1km az=286.0*
ISC 17 01:02:44.1±0.8,39.˚04N±0.˚02×16.˚05E±0.˚03,h28km±6km, n99,σ1s34/120,mb3.6/6,5C-26D,Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAR1	**CAROLEI**	**0.25**	**31**	⇓P	**Pb**	**01 02 50.5**	**-0.2**
CAR1				S	**Sb**	**01 02 54.8**	**-0.4**
CAR1				AML	AML		
	comp=E,67600μm,0.4s						
CAR1				AML	AML		
	comp=N,64150μm,0.6s						
CAR1				AML	AML		
	comp=E,67550μm,0.2s						
CAR1				AML	AML		
	comp=N,66150μm,0.6s						
CAR1				AML	AML		
	comp=E,67600μm,0.4s						

CAR1 AML AML
comp=N,64150µm,0.6s
CAR1 AML AML
comp=N,61655µm,0.2s
CAR1 AML AML
comp=N,62116µm,0.3s
CAR1 AML AML
comp=N,61655µm,1.8s
CAR1 AML AML
comp=N,62116µm,1.7s
CAR1 AML AML
comp=E,67538µm,0.2s
CAR1 AML AML
comp=E,63502µm,0.2s
SPS2 Spezzano della 0.34 42 ⇓P Pb 01 02 51.8 -0.3
SPS2 S Sb **01 02 57.0 -0.4**
SPS2 AML AML
comp=N,18700µm,0.4s
SPS2 AML AML
comp=E,13200µm,0.5s
SPS2 AML AML
comp=N,18696µm,0.4s
SPS2 AML AML
comp=E,12405µm,0.3s
GRI Girifalco 0.36 126 ⇓P Pb 01 02 52.0 -0.3
GRI S Sb **01 02 57.5 -0.3**
GRI AML AML
comp=E,22750µm,0.5s
GRI AML AML
comp=N,40900µm,0.5s
GRI AML AML
comp=E,18511µm,0.4s
GRI AML AML
comp=N,37684µm,0.2s
JOPP Joppolo 0.45 196 ⇓P Pb 01 02 53.6 -0.1
JOPP S Sb **01 03 00.2 +0.1**
JOPP AML AML
comp=N,17150µm,1.0s
JOPP AML AML
comp=E,20650µm,0.2s
JOPP AML AML
comp=E,20661µm,0.2s
JOPP AML AML
comp=N,16764µm,0.3s
CET2 Cetraro 0.49 352 ⇓P Pn 01 02 54.1 -1.4
CET2 S Sb **01 03 00.6 -0.8**
CET2 AML AML
comp=N,41350µm,0.3s
CET2 AML AML
comp=E,20400µm,0.6s
CET2 AML AML
comp=E,18718µm,0.2s
CET2 AML AML
comp=N,41319µm,0.3s
CET2 AML AML
comp=N,41319µm,1.7s
SERS Sersale 0.50 90 ⇓P Pb 01 02 54.3 -0.3
SERS S Sb **01 03 01.2 -0.4**
SERS AML AML
comp=N,4495µm,0.3s
SERS AML AML
comp=E,5625µm,0.4s
SERS AML AML
comp=N,5555µm,0.5s
SERS AML AML
comp=E,6265µm,0.5s
SERS AML AML
comp=E,6264µm,0.5s
SERS AML AML
comp=N,4494µm,0.3s
SERS AML AML
comp=N,5555µm,0.5s
SERS AML AML
comp=E,5624µm,0.4s
CELI Celico 0.51 45 ⇓P Pb 01 02 54.4 -0.3
CELI S Sb **01 03 01.7 -0.2**
CELI AML AML
comp=E,12050µm,0.6s
CELI AML AML
comp=N,12285µm,0.8s
CELI AML AML
comp=E,11950µm,0.6s
CELI AML AML
comp=N,12160µm,0.8s
CELI AML AML
comp=E,11941µm,0.6s
CELI AML AML
comp=N,11721µm,0.6s
CELI AML AML
comp=E,12061µm,0.6s
CELI AML AML
comp=N,11890µm,0.6s
TIP Timpagrande 0.57 76 ⇓P Pb 01 02 55.4 -0.3
TIP S Sb **01 03 04.0 +0.5**
TIP AML AML
comp=N,2525µm,1.5s
TIP AML AML
comp=E,4420µm,0.6s
TIP AML AML
comp=N,2515µm,1.5s
TIP AML AML
comp=E,4410µm,0.6s
TIP AML AML
comp=N,2252µm,0.5s
TIP AML AML
comp=E,4408µm,0.6s
TIP AML AML
comp=N,2269µm,0.5s
TIP AML AML
comp=E,4420µm,0.6s
FERC Galatro 0.59 174 ⇓P Pb 01 02 55.7 -0.3
TDS Terranova Siba 0.66 20 P Pb 01 02 56.3 -0.8
TDS S Sb **01 03 05.3 -0.6**
TDS AML AML
comp=E,1620µm,0.4s
TDS AML AML
comp=N,2080µm,1.5s
TDS AML AML
comp=E,1616µm,0.4s
TDS AML AML
comp=N,1488µm,0.5s
TDS AML AML
comp=N,1488µm,1.5s
PLAC Placanica 0.66 152 P Pb 01 02 56.8 -0.4
PLAC AML AML
comp=E,2940µm,0.4s
PLAC AML AML
comp=N,3930µm,0.3s
PLAC AML AML
comp=E,3975µm,0.4s
PLAC AML AML
comp=N,3195µm,0.4s
PLAC AML AML
comp=E,2938µm,0.4s
PLAC AML AML
comp=N,3930µm,0.3s
PLAC AML AML
comp=E,3979µm,0.4s
PLAC AML AML
comp=N,3195µm,0.4s
PLAC AML AML
comp=N,3930µm,1.7s
PLAC AML AML
comp=E,3979µm,1.6s
IST3 Stromboli F 0.68 250 P Pn 01 02 57.0 -0.9
IST3 AML AML
comp=N,12600µm,0.1s
IST3 AML AML
comp=E,10160µm,0.1s
IST3 AML AML
comp=E,10161µm,0.1s
IST3 AML AML
comp=N,12605µm,0.1s
GRIS Grisolia 0.72 348 ⇑P Pb 01 02 57.4 -0.7
GRIS S Sb **01 03 06.4 -1.2**
PIPA Pietrapaola 0.74 53 P Pn 01 02 58.2 -0.6
PIPA AML AML
comp=N,4330µm,1.1s
PIPA AML AML
comp=E,5080µm,1.2s
PIPA AML AML
comp=N,4330µm,1.1s
PIPA AML AML
comp=E,5045µm,1.2s
PIPA AML AML
comp=N,4375µm,1.1s
PIPA AML AML
comp=E,4916µm,0.8s
PIPA AML AML
comp=N,4072µm,0.4s
PIPA AML AML
comp=E,4920µm,0.8s
PIPA AML AML
comp=N,3951µm,0.4s
LADO San Nicola del 0.77 71 ⇓P Pb 01 02 58.4 -0.5
LADO AML AML
comp=N,160µm,0.5s
LADO AML AML
comp=E,238µm,0.4s
LADO AML AML
comp=E,238µm,0.4s
LADO AML AML
comp=N,161µm,0.5s
CEL Celeste 0.79 189 ⇓P Pb 01 02 58.3 -1.0
CEL S Sn **01 03 09.9 -0.5**
CEL AML AML
comp=E,2960µm,0.4s
CEL AML AML
comp=E,2970µm,0.4s
CEL AML AML
comp=N,2790µm,0.3s
CEL AML AML
comp=N,2815µm,0.3s
CEL AML AML
comp=E,2971µm,0.4s
CEL AML AML
comp=N,2790µm,0.3s
CEL AML AML
comp=N,2814µm,0.3s
CEL AML AML
comp=E,2962µm,0.4s
SICLA Scilla 0.82 198 ⇓P Pb 01 02 58.8 -1.0
SICLA AML AML
comp=E,3330µm,0.3s
SICLA AML AML
comp=N,3335µm,0.5s
SICLA AML AML
comp=E,3332µm,0.3s
SICLA AML AML
comp=N,3235µm,0.4s
MMN Mormanno 0.85 357 ⇑P Pn 01 02 59.5 -0.8
MMN S Sn **01 03 10.9 -0.9**
MMN AML AML
comp=E,9535µm,0.3s
MMN AML AML
comp=N,18900µm,0.3s
MMN AML AML
comp=N,18872µm,0.3s
MMN AML AML
comp=E,9537µm,0.3s
SALB San Lorenzo Be 0.87 15 P Pb 01 02 59.8 -0.9
SALB AML AML
comp=E,2330µm,0.3s
SALB AML AML
comp=N,1470µm,0.3s
SALB AML AML
comp=E,2329µm,0.3s
SALB AML AML
comp=N,1472µm,0.3s
MSRU Castanea 0.88 209 ⇓P Pb 01 02 59.8 -1.0
MSRU AML AML
comp=E,6560µm,0.8s
MSRU AML AML
comp=N,5090µm,0.2s
MSRU AML AML
comp=E,6559µm,0.8s
MSRU AML AML
comp=N,5091µm,0.2s
GMB Gambarie 0.89 191 P Pb 01 02 59.7 -1.2
GMB AML AML
comp=E,11135µm,0.9s
GMB AML AML
comp=N,13550µm,0.8s
GMB AML AML
comp=E,11089µm,0.3s
GMB AML AML
comp=N,13359µm,0.2s
SOI Samo 0.96 180 ⇓P Pn 01 03 01.3 -0.6
SOI AML AML
comp=N,1665µm,0.5s
SOI AML AML
comp=E,976µm,0.4s
SOI AML AML
comp=E,979µm,0.4s
SOI AML AML
comp=N,1667µm,0.5s
CUC Castrocucco 0.97 349 P Pn 01 03 00.5 -1.4
CUC AML AML
comp=E,3465µm,0.3s
CUC AML AML
comp=N,2310µm,0.3s
CUC AML AML
comp=E,3480µm,0.3s
CUC AML AML
comp=N,2325µm,0.3s
CUC AML AML
comp=E,3141µm,0.2s
CUC AML AML
comp=N,2326µm,0.3s
CUC AML AML
comp=N,2313µm,0.3s
CUC AML AML
comp=E,3152µm,0.2s
MILZ Milazzo 1.00 220 P Pn 01 03 01.5 -0.8
MILZ AML AML
comp=E,6350µm,0.5s
MILZ AML AML
comp=N,4510µm,0.5s
MILZ AML AML
comp=E,6353µm,0.5s
MILZ AML AML
comp=N,4513µm,0.5s
MILZ AML AML
comp=N,4513µm,1.5s
MILZ AML AML
comp=E,6353µm,1.5s
LLI Lipari 1.04 236 ⇓P Pb 01 03 02.7 -0.8
LLI AML AML
comp=E,14300µm,0.6s
LLI AML AML
comp=N,27650µm,0.7s
LLI AML AML
comp=E,14323µm,0.6s
LLI AML AML
comp=N,23953µm,0.4s
LLI AML AML
comp=N,23953µm,1.6s
LLI AML AML
comp=E,14323µm,1.4s
MPNC Port Mandanici 1.04 212 ⇓P Pn 01 03 01.9 -1.0
MPNC AML AML
comp=N,5430µm,1.1s
MPNC AML AML
comp=E,5980µm,0.4s
MPNC AML AML
comp=N,4931µm,0.3s
MPNC AML AML
comp=N,4931µm,1.7s
MPNC AML AML
comp=E,5980µm,0.4s
VPL Vulcano Piano 1.06 232 ⇓P Pn 01 03 02.6 -0.6
VPL AML AML
comp=E,3125µm,0.5s
VPL AML AML
comp=N,2500µm,0.7s
VPL AML AML
comp=E,3126µm,0.5s
VPL AML AML
comp=N,2407µm,0.4s
ORI Oriolo Calabro 1.07 17 P Pb 01 03 03.9 -0.1
ORI AML AML
comp=E,5145µm,0.3s
ORI AML AML
comp=N,3450µm,0.4s
ORI AML AML
comp=E,5146µm,0.3s
ORI AML AML
comp=N,3450µm,0.4s
MTTG Motta San Giov 1.07 195 ⇓P Pn 01 03 02.4 -0.9
MTTG AML AML
comp=N,2740µm,0.5s
MTTG AML AML
comp=E,1785µm,0.5s
MTTG AML AML
comp=E,1784µm,0.5s
MTTG AML AML
comp=N,2742µm,0.5s
SIRI Monte Sirino - 1.15 353 P Pn 01 03 03.4 -1.1
SIRI AML AML
comp=E,2300µm,0.4s
SIRI AML AML
comp=N,2615µm,1.5s
SIRI AML AML
comp=E,2365µm,0.4s
SIRI AML AML
comp=N,2660µm,1.5s
SIRI AML AML
comp=E,2299µm,0.4s
SIRI AML AML
comp=N,2499µm,0.4s
SIRI AML AML
comp=N,2548µm,0.4s
SIRI AML AML
comp=E,2365µm,0.4s
BULG Bulgheria - Ca 1.16 334 P Pb 01 03 04.4 -1.2
BULG AML AML
comp=N,3450µm,0.3s
BULG AML AML
comp=E,3185µm,0.2s
BULG AML AML
comp=E,3300µm,0.2s
BULG AML AML
comp=N,3600µm,0.3s
BULG AML AML
comp=E,3300µm,0.2s
BULG AML AML
comp=N,3601µm,0.3s
BULG AML AML
comp=N,3448µm,0.3s
BULG AML AML
comp=E,3187µm,0.2s
SCHR S. Chirico Rap 1.16 1 P Pn 01 03 04.1 -0.5
SCHR AML AML
comp=E,806µm,0.5s
SCHR AML AML
comp=N,687µm,0.3s
SCHR AML AML
comp=N,688µm,0.3s
SCHR AML AML
comp=E,785µm,0.5s
SCHR AML AML
comp=N,687µm,0.3s
MGR Morigerati 1.16 341 P Pn 01 03 03.6 -1.0
MGR AML AML
comp=E,4360µm,0.5s
MGR AML AML
comp=N,2295µm,1.4s
MGR AML AML
comp=E,3930µm,0.5s
MGR AML AML
comp=N,3015µm,0.6s
MGR AML AML
comp=E,4360µm,0.5s
MGR AML AML
comp=N,2295µm,1.4s
MGR AML AML
comp=N,2127µm,0.3s
MGR AML AML
comp=N,2869µm,0.3s
MGR AML AML
comp=E,3928µm,0.5s
MGR AML AML
comp=E,4361µm,0.5s
MGR AML AML
comp=N,2127µm,1.7s
STN3 Satriano di Lu 1.52 349 AML AML
VAE Valguarnera 2.02 220 Pn Pb 01 03 18.4 -1.8
comp=N,6.5nm,0.3s,baz=38,slow=18,SNR=18
comp=N,19nm,0.3s
SCIAC Sciacca 2.77 238 AML AML
comp=N,101µm,0.9s
SCIAC AML AML
comp=E,82µm,0.9s
SCIAC AML AML
comp=N,101µm,1.1s
MIDA Miranda 2.94 333 AML AML
comp=E,63µm,0.4s
MIDA AML AML
comp=E,63µm,0.4s
MIDA AML AML
comp=N,69µm,0.4s
MIDA AML AML
comp=N,69µm,0.4s
MIDA AML AML
comp=E,84µm,0.8s
MIDA AML AML
comp=N,343µm,0.9s
MIDA AML AML
comp=N,343µm,1.1s
TRIV Trivento 2.95 338 AML AML
comp=N,187µm,0.6s
TRIV AML AML
comp=E,166µm,0.6s
TRIV AML AML
comp=N,187µm,0.6s
TRIV AML AML
comp=N,181µm,0.6s
TRIV AML AML
comp=E,166µm,0.6s
TRIV AML AML
comp=E,177µm,0.6s
KEK Kerkira 2.98 76 AML AML
comp=N,91µm,1.2s
KEK AML AML
comp=E,101µm,0.7s
KEK AML AML
comp=N,97µm,1.5s
KEK AML AML
comp=E,101µm,0.5s
KEK AML AML
comp=E,101µm,1.5s
CERA Filignano 2.99 329 AML AML
comp=E,82µm,0.6s
CERA AML AML
comp=E,89µm,1.5s
CERA AML AML
comp=N,98µm,0.3s
CERA AML AML
comp=N,98µm,0.4s
CERA AML AML
comp=E,92µm,0.4s
CERA AML AML
comp=N,98µm,0.3s
RNI2 Rionero Sannit 3.03 332 AML AML
comp=N,74µm,0.4s
RNI2 AML AML
comp=E,91µm,0.5s
RNI2 AML AML
comp=N,81µm,0.9s
RNI2 AML AML
comp=E,91µm,0.5s
RNI2 AML AML
comp=N,74µm,0.4s
RNI2 AML AML
comp=E,92µm,1.0s
LRP Arpino 3.21 325 AML AML
comp=E,49µm,0.4s
LRP AML AML
comp=N,20µm,1.4s
LRP AML AML
comp=N,17µm,0.4s
LRP AML AML
comp=E,49µm,0.4s
LRP AML AML
comp=N,17µm,1.6s
LRP AML AML
comp=E,49µm,1.6s
POFI Posta Fibreno 3.21 327 AML AML
comp=N,30µm,0.5s
POFI AML AML
comp=E,23µm,1.4s
POFI AML AML
comp=N,146µm,1.1s
POFI AML AML
comp=E,23µm,0.5s
POFI AML AML
comp=E,130µm,0.9s
POFI AML AML
comp=N,146µm,0.9s
POFI AML AML
comp=N,30µm,0.5s
GIUL Giuliano Di Ro 3.30 321 AML AML
comp=E,26µm,0.2s

GIUL AML AML
comp=E,27µm,0.7s
GIUL AML AML
comp=N,35µm,0.3s
GIUL AML AML
comp=N,35µm,0.3s
VVLD Villa Vallelon 3.38 328 AML AML
comp=E,36µm,1.3s
VVLD AML AML
comp=N,37µm,0.5s
VVLD AML AML
comp=E,34µm,0.9s
VVLD AML AML
comp=N,37µm,0.5s
VVLD AML AML
comp=E,125µm,0.6s
VVLD AML AML
comp=N,126µm,0.8s
VVLD AML AML
comp=N,126µm,1.2s
VVLD AML AML
comp=E,34µm,1.1s
T0110 Collepietro 3.62 332 AML AML
comp=E,68µm,0.7s
T0110 AML AML
comp=E,79µm,1.4s
T0110 AML AML
comp=N,62µm,0.7s
T0110 AML AML
comp=N,62µm,0.7s
TIR Tirane 3.72 51 AML AML
comp=N,124µm,0.5s
TIR AML AML
comp=E,116µm,1.1s
TIR AML AML
comp=N,132µm,1.6s
TIR AML AML
comp=E,98µm,0.3s
CERT Cerreto 3.73 322 AML AML
comp=N,13µm,0.8s
CERT AML AML
comp=E,26µm,1.4s
CERT AML AML
comp=N,19µm,1.6s
CERT AML AML
comp=E,26µm,0.5s
CERT AML AML
comp=N,13µm,1.2s
ULC Ulcinj 3.81 39 *e*Pn **Pn 01 03 40.3 -0.6**
ULC *i* Sn **Sn 01 04 23.3 -1.5**
AQU L'Aquila 3.87 330 *e*Pn **Pn 01 03 44.2 +2.3**
HCY Herceg Novi 3.88 28 ⇊*i* Pn **Pn 01 03 41.6 -0.4**
HCY *i* Sn **Sn 01 04 24.8 -1.7**
HCY Herceg Novi 3.88 28 *e*Pn **Pn 01 03 41.5 -0.4**
BUM Brajici-Budva 3.91 33 ⇊*i* Pn **Pn 01 03 42.1 -0.3**
BUM *i* Sn **Sn 01 04 26.1 -1.3**
DRME Dracevica, Mon 3.95 36 ⇊*i* Pn **Pn 01 03 42.9 0.0**
DRME *i* Sn **Sn 01 04 26.2 -2.0**
DRME Dracevica, Mon 3.95 36 *e*Pn **Pn 01 03 42.4 -0.5**
TREB Trebinje 4.07 25 *e*Pn **Pn 01 03 43.3 -1.2**
CEME Cevo 4.13 31 ⇑*i* Pn **Pn 01 03 44.9 -0.5**
CEME *i* Sn **Sn 01 04 31.2 -1.5**
PDG Podgorica 4.17 35 AML AML
comp=E,108µm,1.7s
PDG AML AML
comp=E,114µm,0.6s
PDG AML AML
comp=N,122µm,0.4s
PDG AML AML
comp=E,96µm,0.3s
PDG AML AML
comp=N,118µm,0.4s
PDG AML AML
comp=N,118µm,0.4s
PDG AML AML
comp=E,108µm,0.3s
PDG AML AML
comp=N,123µm,0.4s
PDG AML AML
comp=E,96µm,0.3s
PDG AML AML
comp=E,96µm,1.7s
PDG AML AML
comp=N,118µm,1.6s
PDG AML AML
comp=N,123µm,1.6s
PDG Podgorica 4.17 35 ⇊*i* Pn **Pn 01 03 45.4 -0.5**
PDG *i* Sn **Sn 01 04 32.4 -1.4**
PDG Podgorica 4.17 35 *e*Pn **Pn 01 03 45.5 -0.5**
BRY Bratogost 4.29 25 ⇑*i* Pn **Pn 01 03 47.2 -0.6**
BRY *i* Sn **Sn 01 04 35.0 -2.0**
BRY Bratogost 4.29 25 *e*Pn **Pn 01 03 46.9 -0.9**
NKME Niksic 4.33 30 ⇊*i* Pn **Pn 01 03 47.9 -0.2**
NKME *i* Sn **Sn 01 04 36.0 -1.6**
KLINJ Klinje 4.55 24 *e*Pn **Pn 01 03 50.7 -0.5**
KOME Kolasin 4.63 33 ⇊*i* Pn **Pn 01 03 52.1 -0.1**
KOME *i* Sn **Sn 01 04 43.1 -2.0**
PVY Plav 4.63 39 ⇑*i* Pn **Pn 01 03 52.4 +0.1**
PVY *i* Sn **Sn 01 04 43.2 -2.0**
IVA Berane 4.81 36 ⇊*i* Pn **Pn 01 03 54.7 -0.1**
IVA *i* Sn **Sn 01 04 47.7 -1.9**
PLE Pljevlja 4.97 29 ⇊*i* Pn **Pn 01 03 56.8 -0.2**
PLE *i* Sn **Sn 01 04 51.6 -2.1**
SJES Sjenica 5.16 34 *e*Pn **Pn 01 04 00.6 +1.1**
RUDO Rudo 5.21 28 *e*Pn **Pn 01 03 59.9 -0.3**
BBLS Lazi&#263i 5.44 27 *e*Pn **Pn 01 04 03.2 -0.2**
BLY Banja Luka 5.77 8 *e*Pn **Pn 01 04 08.4 +0.6**
KEST Kesra 6.27 240 Pn **Pn 01 04 16.5 +1.6**
comp=N,0.1nm,0.3s,baz=38,slow=12,SNR=1.7
comp=N,2.3nm,0.6s
FRGS Fruska Gora 6.72 23 *e*Pn **Pn 01 04 17.5 -3.5**
MORH Mrgy, Hungar 7.42 14 *e*Pn **Pn 01 04 29.6 -0.9**
OBKA Obir 7.55 352 *i* Pn **Pn 01 04 33.4 +1.1**
comp=N,0.6nm,0.2s
OBKA *e*Sn **Sn 01 05 55.8 -1.2**
comp=N,4.3nm,0.7s
SOKA Soboth 7.67 355 *i* Pn **Pn 01 04 34.0 0.0**
comp=N,0.5nm,0.3s
SOKA *e*Sn **Sn 01 06 02.6 +2.6**
comp=N,0.8nm,0.6s
IDI Anoyia 7.99 115 Pn **Pn 01 04 39.6 +1.2**
comp=N,0.5nm,0.3s,baz=302,slow=15,SNR=2.5
IDI Sn **Sn 01 06 05.5 -2.4**
comp=N,0.6nm,0.3s,baz=319,slow=19,SNR=2.0
comp=N,22nm,0.9s
ABTA Abfaltersbach 8.13 343 *i* Pn **Pn 01 04 40.9 +0.6**
comp=N,1.1nm,0.5s
ABTA *e*Sn **Sn 01 06 12.8 +1.5**
comp=N,1.5nm,0.5s
ARSA Arzberg 8.22 358 *e*Pn **Pn 01 04 41.5 0.0**
comp=N,1.1nm,0.5s
ARSA *e*Sn **Sn 01 06 09.8 -3.5**
comp=N,0.4nm,0.3s
KBA Koelnbreinsper 8.27 347 *e*Pn **Pn 01 04 43.5 +1.1**
comp=N,0.4nm,0.3s
KBA *e*Sn **Sn 01 06 14.2 -0.8**
comp=N,0.3nm,0.3s
RONA Rosalia, Austr 8.66 1 *i* Pn **Pn 01 04 47.9 +0.3**
comp=N,1.2nm,0.3s
RONA *e*Sn **Sn 01 06 26.4 +2.2**
comp=N,0.6nm,0.4s
LESA Schwarzleotal 8.73 345 *i* Pn **Pn 01 04 47.3 -1.3**
comp=N,0.7nm,0.3s
LESA *i* Sn **Sn 01 06 27.5 +1.3**
comp=N,1.0nm,0.4s
BIOA Bad Ischl, Aus 8.82 349 *e*Pn **Pn 01 04 52.3 +2.5**
comp=N,1.2nm,0.3s
BIOA *e*Sn **Sn 01 06 29.2 +0.9**
comp=N,2.0nm,0.5s
FETA Feichten 8.88 336 *e*Pn **Pn 01 04 53.7 +3.1**
comp=N,0.4nm,0.3s
FETA *e*Sn **Sn 01 06 32.0 +2.3**
comp=N,0.1nm,0.2s
CONA Conrad Observa 8.89 359 *i* Pn **Pn 01 04 51.1 +0.4**
comp=N,0.4nm,0.3s
CONA *e*Sn **Sn 01 06 31.3 +1.4**
comp=N,1.3nm,0.4s
SQTA Sankt Quirin 8.91 338 *e*Pn **Pn 01 04 50.7 -0.3**
comp=N,0.3nm,0.2s
SQTA *i* Sn **Sn 01 06 31.0 +0.6**
comp=N,1.4nm,0.4s
DAVOX Davos/Dischmat 8.96 332 Pn **Pn 01 04 52.3 +0.5**
comp=N,0.1nm,0.3s,baz=150,slow=20,SNR=2.6
comp=N,0.9nm,0.5s
MLR Muntele Rosu 9.76 45 Pn **Pn 01 05 04.0 +1.3**
comp=N,0.7nm,0.5s,baz=206,slow=16,SNR=5.9
MLR Sn **Sn 01 06 50.5 -1.0**
baz=195,slow=12,SNR=2.6
GERES GERESS Array B 9.95 351 Pn **Pn 01 05 05.0 -0.3**
baz=168,slow=16,SNR=2.5
GERES Sn **Sn 01 06 49.6 -6.3**
baz=165,slow=23,SNR=5.5
comp=N,0.2nm,0.3s
KHC Kasperske Hory 10.24 351 *e*PN **Pn 01 05 10.1 +0.9**
VRAC Vranov 10.28 2 LR LR 01 10 15.4
comp=N,66nm,19.0s,baz=330,slow=45
AKASG Malin Array Be 14.91 34 Sn Sn 01 08 46.6 -11
comp=N,0.4nm,0.3s,baz=220,slow=25,SNR=6.9
FINES FINESS Array B 23.27 12 P **P 01 07 48.1 -1.0**
comp=N,1.0nm,0.7s,baz=201,slow=10,SNR=5.3
comp=N,1.0nm,0.7s
BVAR Borovoye Array 39.27 51 P **P 01 10 10.8 +0.7**
comp=N,0.6nm,0.7s,baz=267,slow=7.2,SNR=3.7
comp=N,0.6nm,0.7s
KURBB Kurchatov Arra 44.54 54 P **P 01 10 53.8 +0.5**
comp=N,0.2nm,0.6s,baz=287,slow=8.9,SNR=2.8
comp=N,0.2nm,0.6s
ZALV Zalesovo Beam 47.73 48 P **P 01 11 18.7 +0.4**
comp=N,0.9nm,0.5s,baz=279,slow=6.5,SNR=6.3
comp=N,0.9nm,0.5s
MKAR Makanchi Array 47.83 58 P **P 01 11 20.0 +0.8**
comp=N,0.4nm,0.3s,baz=281,slow=7.3,SNR=18
comp=N,0.4nm,0.3s
SONM Songino Array 62.59 49 P **P 01 13 06.9 +1.1**
comp=N,0.5nm,0.6s,baz=305,slow=5.1,SNR=4.0
comp=N,0.5nm,0.6s

IDC 17 01:38:55.0±3.3, 32°.59S×177°.95W, h0km, mb3.7/2, mbtmp3.7/3, ML2.6/1, MS2.5/1, Error ellipse: s-maj=75.8km s-min=38.1km az=117.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.95**	**214**	Pn	Pn	01 40 37.5	-0.5
	0.1nm,0.3s,baz=41,slow=9.3,SNR=1.2						
URZ				Sn	Sn	01 41 59.5	+1.7
	2.0nm,0.3s,baz=36,slow=8.9,SNR=8.6						
	6.0nm,0.8s						
KRVT	**Keravat (AS076**	**39.75**	**309**	LR	LR	01 58 27.6	
	comp=Z,7.1nm,21.5s,baz=208,slow=30						
ASAR	**Alice Springs**	**43.08**	**269**	P	P	01 46 57.1	+0.1
	0.6nm,0.7s,baz=107,slow=8.5,SNR=6.5						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**44.26**	**274**	P	P	01 47 06.3	-0.3
	0.8nm,0.4s,baz=116,slow=8.0,SNR=19						
	0.8nm,0.4s						
FINES	**FINESS Array B**	**147.20**	**339**	PKPbc	PKPbc	01 58 38.7	-0.7
	3.5nm,1.0s,baz=48,slow=2.1,SNR=4.0						

*PAS **17** 01:57:03.7±1.2, 35°.955N±0°.006×117°.364W±0°.009, h2km±2km, Error ellipse: s-maj=1.2km s-min=0.6km az=50.0*

NEIC 17 01:57:03.1±1.3, 35°.959N±0°.008×117°.35W±0°.01, h2km±2km, ML3.1/124, ML3.5/111(PAS), Error ellipse: s-maj=1.3km s-min=1.1km az=79.0, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCWM	**Renegade Canyo**	**0.24**	**268**		Pg	01 57 08.5	+0.8
RCWM					Sg	01 57 12.4	+1.6
CLC	**China Lake**	**0.24**	**234**		Pg	01 57 08.4	+0.6
CLC				Sg	Sg	01 57 11.4	+0.4
CLC				IAML		01 57 12.1	
	comp=N,3µm,0.5s						
WCSM	**Coso Springs S**	**0.34**	**282**		Pg	01 57 10.4	+0.7
WCSM					Sg	01 57 15.1	+1.0
TOW	**Tower One**	**0.36**	**246**		Pb	01 57 11.2	-1.1
TOW					Sb	01 57 17.1	-1.5
JRC2	**Joshua Ridge**	**0.37**	**274**		Pg	01 57 11.0	+0.7
JRC2					Sg	01 57 16.3	+1.3
DAC	**Darwin (Calif)**	**0.37**	**329**		Pg	01 57 10.9	+0.6
DAC					Sg	01 57 15.9	+0.8
WVPM	**Volcano Peak E**	**0.38**	**269**		Pg	01 57 11.1	+0.8
WVPM					Sg	01 57 16.6	+1.4
QSM	**Queen of Sheba**	**0.39**	**89**		Pg	01 57 11.3	+0.7
QSM				Sg	Sg	01 57 16.0	+0.2
QSM				IAML		01 57 17.6	
	comp=E,2µm,0.4s						
QSM				IAML		01 57 17.8	
	comp=N,2µm,0.3s						
GPO	**China Lake**	**0.40**	**219**		Pg	01 57 11.4	+0.7
GPO					Sg	01 57 17.1	+1.2
SRTC	**Snort**	**0.42**	**230**		Pg	01 57 12.1	+1.0
SRTC					Sb	01 57 18.8	-1.3
CCCA	**Chr Cany lake**	**0.43**	**181**		Pg	01 57 12.3	+0.9
CCCA				Sg	Sg	01 57 18.6	+1.6
CCCA				IAML		01 57 19.6	
	comp=E,3µm,0.5s						
MFS	**McCloud Flat S**	**0.44**	**291**		Pg	01 57 12.2	+0.7
MFS					Sg	01 57 18.4	+1.2
WRVM	**Rose V. Centra**	**0.44**	**277**		Pg	01 57 12.1	+0.6
WRVM					Sg	01 57 18.3	+1.1
WNMM	**Nine Mile Cany**	**0.46**	**256**		Pg	01 57 12.7	+0.8
LRMC	**Laurel Mtn Rad**	**0.55**	**209**		Pg	01 57 13.0	-0.6
LRMC				Sg	Sg	01 57 20.4	-0.2
LRMC				IAML		01 57 24.3	
	comp=N,2µm,0.4s						
WCHM	**Chimney Peak**	**0.59**	**263**		Pg	01 57 14.9	+0.5
WCHM					Sg	01 57 22.9	+0.8
GWY	**Greenwater Val**	**0.60**	**68**		Pg	01 57 15.4	+0.8
GWY				IAML		01 57 28.0	
	comp=N,801nm,0.4s						
GWY				IAML		01 57 28.5	
	comp=E,799nm,0.3s						
GWY	**Greenwater Val**	**0.60**	**68**		Sb	01 57 24.2	-1.2
FURC	**Furnace Creek,**	**0.64**	**38**	Pg	Pg	01 57 15.8	+0.3
FURC				IAML		01 57 29.9	
	comp=N,1µm,0.8s						
FURC	**Furnace Creek,**	**0.64**	**38**		Sb	01 57 25.6	-0.9
CGO	**Cerro Gordo**	**0.69**	**329**		Pg	01 57 16.8	+0.4
CGO					Sg	01 57 26.8	+1.4
CWC	**Cottonwood Cre**	**0.76**	**309**		Pg	01 57 18.1	+0.4
CWC					Sg	01 57 28.2	+0.7
CWC				IAML		01 57 29.2	
	comp=N,672nm,0.2s						
WBSM	**Bird Springs**	**0.77**	**237**		Pg	01 57 18.0	+0.3
WBSM					Sg	01 57 28.6	+0.9
WORM	**Onyx Ranch**	**0.77**	**250**		Pg	01 57 18.0	+0.2
WORM					Sg	01 57 28.2	+0.5
GSC	**Goldstone, Bar**	**0.79**	**146**		Sb	01 57 29.7	-1.1
GSC	**Goldstone, Bar**	**0.79**	**146**		Pg	01 57 18.7	+0.4
DTP	**Desert Tortois**	**0.80**	**210**		Pg	01 57 18.4	+0.1
DTP					Sg	01 57 29.5	+0.8
WHFM	**Hanning Flat**	**0.85**	**252**		Pg	01 57 19.6	+0.3
WHFM					Sg	01 57 30.8	+0.4
SHOC	**Shoshone, Teco**	**0.88**	**94**	Pg	Pb	01 57 20.6	-0.5
ISA	**Isabella, Lake**	**0.96**	**252**		Pg	01 57 21.6	+0.1
ISA	**Isabella, Lake**	**0.96**	**252**		Sg	01 57 34.2	+0.4
WASM	**Alta Sierra Ca**	**1.00**	**258**		Pg	01 57 22.6	+0.3
WCT	**Wildcat Mounta**	**1.02**	**35**		Pg	01 57 22.9	+0.3
WCT					Sg	01 57 36.5	+0.6
WCT				IAML		01 57 37.6	
	comp=E,464nm,0.5s						
WCT				IAML		01 57 38.7	
	comp=N,390nm,0.6s						
GRAC	**Grapevine Rang**	**1.03**	**359**		Pg	01 57 23.3	+0.4
SGV	**South Grapevin**	**1.05**	**14**		Pb	01 57 23.7	-0.4
SGV					Sb	01 57 38.1	-0.3
ALV	**Alvord Mountai**	**1.07**	**146**		Pg	01 57 23.9	+0.2
HYS	**Haystack Butte**	**1.11**	**189**		Pg	01 57 24.1	-0.1
RRX	**Edison Barstow**	**1.12**	**165**		Pn	01 57 25.9	+0.1
RRX					Sn	01 57 41.5	-0.3
SPG2	**Springville 2**	**1.17**	**282**		Pg	01 57 25.6	+0.1
EDW2	**Edwards Air Fo**	**1.20**	**206**		Pb	01 57 26.5	0.0
EDW2					Sb	01 57 42.8	+0.4
TUQ	**Turquoise Moun**	**1.27**	**114**		Pb	01 57 28.0	+0.1
TUQ					Sn	01 57 45.9	+0.1
LCH	**Last Change Ra**	**1.29**	**350**		Pg	01 57 27.6	-0.3
TPO	**Tropico Hills**	**1.29**	**214**		Pb	01 57 28.2	0.0
TPO				IAML		01 57 48.9	
	comp=N,474nm,0.7s						
TIN	**Tinemaha, Big**	**1.30**	**327**		Sg	01 57 43.9	-1.0
TIN	**Tinemaha, Big**	**1.30**	**327**		Pg	01 57 28.0	0.0
TIN				IAML		01 57 51.0	
	comp=N,379nm,1.0s						
TIN				IAML		01 57 51.3	
	comp=E,427nm,1.2s						
DSCC	**Desert Studies**	**1.30**	**128**		Pn	01 57 28.5	+0.1
DSCC					Sb	01 57 45.8	+0.3
SBB	**Saddle Back Bu**	**1.32**	**197**		Pn	01 57 28.7	0.0
SBB					Sn	01 57 46.6	-0.4
TPNV	**Topopah Spring**	**1.33**	**42**		Pg	01 57 28.7	+0.1
TPNV				IAML		01 57 49.8	
	comp=E,348nm,1.0s						
TPNV				IAML		01 57 50.7	
	comp=E,361nm,0.4s						
GMN	**Gold Mountain**	**1.34**	**3**		Pn	01 57 29.0	-0.1
GMN				IAML		01 57 53.4	
	comp=N,220nm,0.6s						
VTV	**Victorville**	**1.40**	**179**		Sn	01 57 49.5	+0.8
HEC	**Hector,Ludlow**	**1.40**	**143**		Pn	01 57 29.7	0.0
HEC					Sn	01 57 48.8	-0.1
FOXC	**Fox Airport**	**1.41**	**211**		Sn	01 57 50.1	+1.1
VES	**Vestal, Richgr**	**1.41**	**266**		Pn	01 57 29.9	+0.1
VES					Sb	01 57 48.5	0.0
VES				IAML		01 57 54.2	
	comp=N,352nm,0.7s						
VES				IAML		01 57 56.9	
	comp=E,235nm,0.7s						
DSP	**Deep Springs**	**1.49**	**341**		Pn	01 57 30.8	-0.1
LRRC	**Littlerock Res**	**1.53**	**201**		Pg	01 57 32.9	+0.4
MTPC	**Mountain Pass**	**1.54**	**107**		Sg	01 57 53.4	+0.8
MTPC	**Mountain Pass**	**1.54**	**107**		Pn	01 57 31.4	-0.3
MTPC				IAML		01 57 55.1	
	comp=N,396nm,0.3s						
MTPC				IAML		01 57 55.3	
	comp=E,414nm,0.3s						
HOLC	**Holcomb Ridge**	**1.55**	**195**		Pg	01 57 32.7	-0.1
HOLC					Sg	01 57 53.9	+1.1
JNH	**Juniper Hills**	**1.59**	**198**		Pg	01 57 33.7	+0.2
JNH					Sg	01 57 54.9	+0.8
SIL	**Silver Peak**	**1.66**	**165**		Pg	01 57 35.0	0.0
MTUM	**Tungsten Hills**	**1.70**	**325**		Pb	01 57 35.0	-0.2
BBRC	**Big Bear Solar**	**1.73**	**168**		Pg	01 57 36.7	+0.4
OSI	**Osito Audit: C**	**1.75**	**220**		Pn	01 57 34.6	+0.1
OSI				IAML		01 58 04.2	
	comp=N,297nm,1.1s						
OSI				IAML		01 58 06.4	
	comp=E,215nm,1.1s						
MWC	**Mount Wilson**	**1.82**	**199**		Pn	01 57 35.7	0.0
MWC				IAML		01 58 04.5	
	comp=N,257nm,0.6s						
MWC				IAML		01 58 05.6	
	comp=E,243nm,0.6s						
SHPR	**Sheep Range**	**1.86**	**72**		Pn	01 57 36.1	0.0
SVD	**Seven Oaks Dam**	**1.86**	**173**		Pg	01 57 38.8	+0.1
MLL	**Mill Creek**	**1.89**	**169**		Pg	01 57 39.2	-0.1
PASC	**Pasadena Art C**	**1.91**	**201**	Pn	Pn	01 57 37.0	+0.3
PASC				IAML		01 58 10.9	
	comp=E,131nm,0.7s						
V12A	**Nelson**	**2.05**	**96**		Pn	01 57 38.3	-0.3
V12A				IAML		01 58 18.6	
	comp=E,103nm,0.6s						
V12A				IAML		01 58 19.9	
	comp=N,108nm,0.7s						
DANC	**Danby, Needles**	**2.08**	**129**		Pn	01 57 38.5	-0.6
S11A	**Rachel**	**2.12**	**37**	Pn	Pn	01 57 39.8	+0.1
S11A				IAML		01 58 16.1	
	comp=N,213nm,0.8s						
MDPB	**Devils Postpil**	**2.17**	**321**	Pn	Pn	01 57 41.1	+0.6
MDPB				IAML		01 58 14.6	
	comp=N,91nm,1.1s						
MDPB				IAML		01 58 16.9	
	comp=E,106nm,0.9s						
POB	**Polly Butte**	**2.29**	**171**		Pg	01 57 46.5	-0.6
ELS	**Elsinore Mount**	**2.31**	**182**		Pn	01 57 42.0	-0.2
ELS				IAML		01 58 17.3	
	comp=N,76nm,0.4s						
ELS				IAML		01 58 18.1	
	comp=E,97nm,0.2s						
PRN	**Pahroc Range**	**2.35**	**51**	Pn	Pn	01 57 43.2	+0.3
PRN				IAML		01 58 23.9	
	comp=N,127nm,0.7s						
PRN				IAML		01 58 24.0	
	comp=E,142nm,0.8s						
PMD	**Palm Desert**	**2.44**	**161**	Pn	Pn	01 57 43.5	-0.5
PFO	**Pinyon Flats O**	**2.45**	**162**	Pn	Pn	01 57 44.1	-0.2
XPFO	**Pinon Flat**	**2.46**	**162**		Pn	01 57 44.5	+0.2
DNR	**Dunn Ranch,Anz**	**2.46**	**166**	Pn	Pn	01 57 43.6	-0.8
LHV	**Little Huntoon**	**2.47**	**338**	Pn	Pn	01 57 44.8	+0.5
NV11	**Mina Array Sit**	**2.55**	**346**		Pn	01 57 45.7	+0.1
IRM	**Iron Mountain**	**2.55**	**134**		Pn	01 57 44.5	-1.0
IRM				IAML		01 58 26.8	
	comp=E,81nm,0.4s						
IRM				IAML		01 58 37.8	
	comp=N,63nm,1.0s						
PKD	**Bear Valley Ra**	**2.59**	**271**	Pn	Pn	01 57 46.1	+0.1
BC3	**Big Chuckawall**	**2.78**	**145**	Pn	Pn	01 57 48.0	-0.7
BC3				IAML		01 58 36.0	
	comp=E,72nm,0.5s						
BC3				IAML		01 58 37.3	
	comp=N,94nm,0.5s						
BORC	**Borrego Spring**	**2.79**	**164**		Pn	01 57 49.0	+0.3
BORC				IAML		01 58 34.0	
	comp=E,82nm,0.6s						
BORC				IAML		01 58 37.7	
	comp=N,87nm,0.8s						
PMPB	**Monarch Peak**	**2.80**	**276**	Pn	Pn	01 57 49.1	0.0
PMPB				IAML		01 58 47.6	
	comp=N,74nm,1.0s						
PMPB				IAML		01 58 51.9	
	comp=E,84nm,1.2s						
Q09A	**Carvers**	**2.87**	**3**	Pn	Pn	01 57 50.0	-0.1
Q09A				IAML		01 58 39.0	
	comp=E,98nm,0.9s						
Q09A				IAML		01 58 56.4	
	comp=N,107nm,0.9s						
W13A	**Hualapai Mount**	**2.96**	**106**		Pn	01 57 51.0	-0.3
W13A				IAML		01 58 44.4	
	comp=N,42nm,0.8s						
DPP	**Dos Picos Cty**	**2.97**	**173**	Pn	Pn	01 57 51.1	-0.2
DPP				IAML		01 58 37.6	
	comp=E,85nm,0.3s						
BBGB	**Big Mountain B**	**3.04**	**283**	Pn	Pn	01 57 52.3	0.0
BBGB				IAML		01 58 47.0	
	comp=N,91nm,0.8s						
KVN	**Kaiserville**	**3.14**	**349**		Pn	01 57 53.0	-0.8
BLYC	**Blythe**	**3.20**	**133**		Pn	01 57 53.7	-0.7
BLYC				IAML		01 58 48.6	
	comp=N,59nm,0.6s						
BLYC				IAML		01 58 48.6	
	comp=E,53nm,0.5s						
BAR	**Barrett**	**3.32**	**170**		Pn	01 57 55.9	-0.1
BAR				IAML		01 58 48.8	
	comp=E,52nm,0.6s						
BAR				IAML		01 58 50.2	
	comp=N,45nm,0.3s						
SAO	**San Andreas Ge**	**3.40**	**285**		Pn	01 57 57.6	+0.5
LCMT	**Little Creek M**	**3.48**	**71**		Pn	01 57 58.8	+0.5
PNTR	**Pine Nut**	**3.60**	**331**	Pn	Pn	01 57 59.5	-0.6

*IDC **17** 02:22:18.2±3.0, 9°.31S×119°.08E, h0km, mb3.4/2, mbtmp3.4/3, ML3.1/1, MS2.9/3, Error ellipse: s-maj=256.5km s-min=28.4km az=50.0*

*DJA **17** 02:22:23.5±0.3, 10°.5±5°×11°.9E±°, h10km, M4.1/15, MLv4.1/15*

ISC 17 02:22:21.5±0.9, 9°.99S±0°.08×118°.64E±0°.05, h37km, n21, σ2s96/19, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.82**	**65**	P	**Pn**	**02 22 37.4**	**+0.9**
WBSI				S	**Sn**	**02 22 49.4**	**+1.9**
PLAI	**Plampang**	**1.43**	**323**	P	**Pn**	**02 22 44.4**	**-0.5**
PLAI				S	**Sn**	**02 23 00.0**	**-2.5**
DBNI	**Kabupaten Domp**	**1.51**	**348**	P	**Pn**	**02 22 45.8**	**-0.2**
WSI	**Waingapu**	**1.67**	**79**	P	Pn	02 22 53.1	+5.0
TWSI	**Taliwang, Sumb**	**2.13**	**305**	P	**Pn**	**02 22 55.3**	**+0.8**
KLNI	**Mataram**	**2.95**	**302**	P	**Pn**	**02 23 08.4**	**+2.6**
KHKI	**Kahang-Kahang**	**3.40**	**298**	P	**Pn**	**02 23 14.9**	**+2.9**
IGBI	**Denpasar**	**3.54**	**288**	P	**Pn**	**02 23 17.6**	**+2.4**
MMRI	**Maumere**	**3.80**	**70**	P	**Pn**	**02 23 21.2**	**+3.7**
SRBI	**Singaraja**	**3.88**	**299**	P	**Pn**	**02 23 20.4**	**+1.9**
RTBI	**Rangdo, Negare**	**3.95**	**292**	P	**Pn**	**02 23 22.0**	**+2.4**
BSSI	**Bau Bau, Buton**	**4.24**	**26**	P	**Pn**	**02 23 25.0**	**+1.5**
BYJI	**Banyuwangi**	**4.58**	**292**	P	Pn	02 23 33.7	+5.5
JAGI	**Jajag, Banyuwa**	**4.68**	**288**	P	**Pn**	**02 23 31.6**	**+2.0**
KAPI	**Kappang**	**5.06**	**13**	LR	LR	02 25 27.8	
	comp=Z,49nm,20.3s,baz=184,slow=44						

WRA	**Warramunga Arr**	**18.10**	**125**	P		**P**	**02 26 31.5**	**+1.3**
	0.1nm,0.3s,baz=301,slow=13,SNR=5.3							
WRA				S		**Sn**	**02 29 43.9**	**-7.2**
	0.6nm,0.9s,baz=297,slow=19,SNR=3.2							
	0.3nm,0.8s							
ASAR	**Alice Springs**	**19.94**	**135**	P		**Pn**	**02 26 54.2**	**+1.9**
	1.0nm,0.9s,baz=313,slow=10,SNR=11							
ASAR				S		**S**	**02 30 28.3**	**-4.6**
	0.1nm,0.3s,baz=304,slow=23,SNR=2.5							
	1.0nm,0.9s							
CMAR	**Chiang Mai Arr**	**34.30**	**325**	LR		LR	02 44 44.2	
	comp=Z,14nm,18.8s,baz=5.0,slow=40							
BTO2	**Baotou**	**51.12**	**351**	*e*P		P	02 31 26.0	+5.3
BTO2				S		S	02 38 45.8	+10
BTO2				pmax		pmax		
	comp=Z,7.0nm,0.6s							
BTO2				pmax		pmax		
	comp=Z,420nm,4.8s							
BTO2				LR		LR		
	comp=N,230nm,5.4s							
BTO2				LR		LR		
	comp=E,250nm,4.9s							
BTO2				LR		LR		
	comp=Z,280nm,5.9s							
TLY	**Talaya**	**62.77**	**350**	LR		LR	03 03 31.2	
	comp=Z,33nm,18.1s,baz=330,slow=40							
MKAR	**Makanchi Array**	**65.17**	**333**	P		**P**	**02 32 58.5**	**-0.4**
	comp=Z,0.8nm,0.9s,baz=144,slow=6.4,SNR=4.9							
	comp=Z,0.8nm,0.9s							

IDC ***17*** *02:25:31.8±1.1,35˚.32N×28˚.05E,h0km,mb3.5/4, mbtmp3.5/10,ML2.8/4,MS2.9/2,Error ellipse: s-maj=24.1km s-min=17.0km az=176.0*
ISK ***17*** *02:25:32.6,35˚.10N×28˚.15E,h8km,ML3.3/6*
NIC ***17*** *02:25:34.7,35˚.14N×27˚.94E,h31km±1km,Ml3.1/12*
GII ***17*** *02:25:35.2±0.0,34˚.895N±0˚.002×27˚.968E±0˚.001,h0km, Mws3.3,confirmed*

ISC 17 02:25:32.3±1.7,35˚.10N±0˚.04×27˚.99E±0˚.05,h7km±12km, n63,σ1§14/99,mb3.6/3,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**1.12**	**6**	Pn	**Pg**	**02 25 54.0**	**+0.1**
ARG				Sn	**Sn**	**02 26 10.6**	**+0.3**
ARG	**Arkhangelos**	**1.12**	**6**	P	**Pg**	**02 25 53.2**	**-0.8**
ARG				S	**Sg**	**02 26 08.3**	**-0.2**
ARG				AML	AML	02 26 12.2	
	1.1nm,1.0s						
ARG				AML	AML	02 26 21.1	
	1.6nm,0.4s						
ZKR	**Zakros**	**1.45**	**271**	Pn	**Pn**	**02 26 02.2**	**+3.2**
ZKR	**Zakros**	**1.45**	**271**	P	**Pn**	**02 25 58.5**	**-0.6**
ZKR				S	**Sn**	**02 26 16.3**	**-2.0**
ZKR				AML	AML	02 26 37.0	
	0.7nm,1.1s						
ZKR				AML	AML	02 26 37.8	
	1.3nm,0.7s						
DAT	**Datca**	**1.67**	**349**	Pn	**Pn**	**02 26 02.5**	**+0.4**
DAT				Sn	**Sb**	**02 26 25.7**	**+1.1**
TURN	**Turunc**	**1.69**	**7**	Pn	**Pn**	**02 26 03.0**	**+0.7**
TURN				Sn	**Sn**	**02 26 25.2**	**+1.0**
AKAS	**Kas**	**1.74**	**49**	Pn	**Pn**	**02 26 02.5**	**-0.6**
YER	**Yerkesik**	**2.05**	**7**	Pn	**Pn**	**02 26 08.3**	**+1.0**
CAME	**Cameli-Denizli**	**2.13**	**30**	Pn	**Pn**	**02 26 08.6**	**+0.1**
MLSB	**Milas**	**2.20**	**356**	Pn	**Pn**	**02 26 09.7**	**+0.3**
ELL	**Elmali**	**2.27**	**43**	Pn	**Pn**	**02 26 10.2**	**-0.2**
IDI	**Anoyia**	**2.55**	**275**	Pn	**Pn**	**02 26 17.1**	**+3.0**
	11nm,0.3s,baz=101,slow=10,SNR=9.5						
APMY	**Acipayam-Deniz**	**2.60**	**24**	Pn	**Pn**	**02 26 15.4**	**+0.5**
KORT	**Korkueli**	**2.70**	**44**	Pn	**Pn**	**02 26 16.2**	**-0.1**
ANTB	**Antalya**	**2.81**	**49**	Pn	**Pn**	**02 26 17.7**	**0.0**
NAZL	**Nazilli-Aydin**	**2.87**	**5**	Pn	**Pn**	**02 26 19.7**	**+1.1**
OSC1	**CSNet OBS 1**	**3.15**	**119**	P	**Pn**	**02 26 23.1**	**+0.7**
AKMS	**Akamas**	**3.57**	**90**	P	**Pn**	**02 26 28.8**	**+0.7**
AKMS				AML	AML	02 27 04.5	
	0.1nm,0.9s						
AKMS				S	**Sn**	**02 27 11.0**	**+0.5**
AKMS				AML	AML	02 27 15.4	
	0.1nm,0.3s						
NATA	**Nata**	**3.78**	**93**	P	**Pn**	**02 26 32.2**	**+1.2**
NATA				S	**Sn**	**02 27 16.3**	**+0.6**
NATA				AML	AML	02 27 21.8	
	0.4nm,0.4s						
NATA				AML	AML	02 27 26.1	
	0.4nm,1.0s						
ALFC	**Alefka**	**3.78**	**88**	P	**Pn**	**02 26 31.6**	**+0.6**
ALFC				S	**Sn**	**02 27 15.5**	**-0.3**
ALFC				AML	AML	02 27 19.2	
	0.2nm,0.5s						
ALFC				AML	AML	02 27 24.4	
	0.1nm,0.6s						
TROD	**Troodos**	**4.00**	**91**	P	**Pn**	**02 26 35.0**	**+0.6**
TROD				S	**Sn**	**02 27 22.4**	**+0.8**
TROD				AML	AML	02 27 28.9	
	0.1nm,0.5s						
TROD				AML	AML	02 27 35.0	
	0.1nm,0.8s						
OSC2	**CSNet OBS 4**	**4.08**	**118**	P	**Pn**	**02 26 36.2**	**+1.0**
OSC2				AML	AML	02 27 36.4	
	0.1nm,0.8s						
OSC2				AML	AML	02 27 45.9	
	0.1nm,0.7s						
XYLS	**Xyliatos**	**4.15**	**90**	P	**Pn**	**02 26 37.2**	**+1.1**
XYLS				S	**Sn**	**02 27 25.8**	**+0.7**
XYLS				AML	AML	02 27 29.7	
	0.1nm,0.4s						
XYLS				AML	AML	02 27 32.2	
	0.1nm,0.3s						
ASGA	**Asgata**	**4.33**	**93**	P	**Pn**	**02 26 39.3**	**+0.7**
ASGA				S	**Sn**	**02 27 30.0**	**+0.7**
ASGA				AML	AML	02 27 36.3	
	0.1nm,0.4s						
ASGA				AML	AML	02 27 39.0	
	0.1nm,0.3s						
CSS	**Mathiatis**	**4.38**	**90**	P	**Pn**	**02 26 40.2**	**+0.8**
CSS				S	**Sn**	**02 27 32.1**	**+1.4**
CSS				AML	AML	02 27 43.5	
	0.1nm,0.9s						
CSS				AML	AML	02 27 47.3	
	0.1nm,0.8s						
CSS	**Mathiatis**	**4.38**	**90**	P	**Pn**	**02 26 40.4**	**+1.0**
CSS				S	**Sn**	**02 27 32.4**	**+1.6**
ATHAL	**Athalassa**	**4.43**	**88**	P	**Pn**	**02 26 41.4**	**+1.4**
ATHAL				S	**Sn**	**02 27 32.8**	**+1.0**
ATHAL				AML	AML	02 27 33.2	
	0.5nm,1.8s						
ATHAL				AML	AML	02 27 35.4	
	0.4nm,1.5s						
MVOU	**Mavrovouni**	**4.63**	**89**	P	**Pn**	**02 26 43.9**	**+1.2**
MVOU				S	**Sn**	**02 27 37.2**	**+0.5**
MVOU				AML	AML	02 27 39.3	
	0.1nm,0.8s						
MVOU				AML	AML	02 27 45.8	
	0.1nm,0.9s						
HNTI	**Hanita**	**6.29**	**107**	P	**Pn**	**02 27 06.8**	**+1.3**
HNTI				S	**Sn**	**02 28 18.0**	**+0.4**
OFRI	**`Ofer**	**6.32**	**111**	P	**Pn**	**02 27 07.1**	**+1.1**
OFRI				S	**Sn**	**02 28 18.2**	**-0.3**
BRTR	**Keskin Array B**	**6.45**	**43**	Pn	**Pn**	**02 27 07.1**	**-0.8**
	0.1nm,0.3s,baz=220,slow=18,SNR=1.9						
BRTR				Sn	**Sn**	**02 28 19.3**	**-2.4**
	0.1nm,0.3s,baz=214,slow=26,SNR=2.0						
	0.3nm,0.5s						
MMC7	**Mount Meron ar**	**6.48**	**106**	P	**Pn**	**02 27 09.7**	**+1.5**
MMA0B	**Mount Meron ar**	**6.49**	**107**	P	**Pn**	**02 27 08.8**	**+0.4**
MMA0B				S	**Sn**	**02 28 23.2**	**+0.4**
MMAI	**Mount Meron Ar**	**6.49**	**107**	Pn	**Pn**	**02 27 09.1**	**+0.7**
	1.2nm,0.3s,baz=289,slow=13,SNR=25						
MMAI				Sn	**Sn**	**02 28 22.3**	**-0.5**
	3.2nm,0.3s,baz=318,slow=29,SNR=5.8						
GEM	**Giv'at Ha'Em**	**6.63**	**104**	P	**Pn**	**02 27 11.6**	**+1.4**
GEM				S	**Sn**	**02 28 26.7**	**+0.6**
NATI	**Neve Ativ**	**6.68**	**104**	P	**Pn**	**02 27 12.3**	**+1.5**
NATI				S	**Sn**	**02 28 27.9**	**+0.8**
MMLI	**Mount Malkishu**	**6.73**	**111**	P	**Pn**	**02 27 12.9**	**+1.3**
MMLI				S	**Sn**	**02 28 28.2**	**-0.4**
AMAZ	**Amatzia**	**6.80**	**120**	P	**Pn**	**02 27 13.3**	**+0.8**
AMAZ				S	**Sn**	**02 28 29.4**	**-0.8**
KZIT	**Kziot**	**6.81**	**126**	P	**Pn**	**02 27 13.3**	**+0.6**
KZIT				S	**Sn**	**02 28 29.2**	**-1.4**
KSHT	**Keshet**	**6.83**	**106**	P	**Pn**	**02 27 14.1**	**+1.2**
KSHT				S	**Sn**	**02 28 31.2**	**+0.2**
HMDT	**Nahal Hemdat**	**6.89**	**112**	P	**Pn**	**02 27 14.9**	**+1.1**
HMDT				S	**Sn**	**02 28 32.3**	**-0.2**
YTIR	**Yattir**	**7.04**	**120**	P	**Pn**	**02 27 16.9**	**+1.0**
YTIR				S	**Sn**	**02 28 35.2**	**-0.9**
DSI	**Dead Sea**	**7.11**	**118**	P	**Pn**	**02 27 17.7**	**+0.9**
DSI				S	**Sn**	**02 28 36.9**	**-1.0**
MSBI	**Mazada**	**7.24**	**119**	P	**Pn**	**02 27 19.1**	**+0.6**
MSBI				S	**Sn**	**02 28 39.9**	**-0.9**
RMNI	**Mount Ramon**	**7.25**	**126**	P	**Pn**	**02 27 19.5**	**+0.7**
RMNI				S	**Sn**	**02 28 40.2**	**-1.3**
GHAJ	**Ghor Haditha**	**7.39**	**119**	P	**Pn**	**02 27 21.1**	**+0.5**
GHAJ				S	**Sn**	**02 28 43.7**	**-1.0**
KRMI	**Paran Flat**	**7.54**	**129**	P	**Pn**	**02 27 23.1**	**+0.3**
KRMI				S	**Sn**	**02 28 47.2**	**-1.4**
PRNI	**Paran**	**7.57**	**127**	P	**Pn**	**02 27 23.6**	**+0.5**
PRNI				S	**Sn**	**02 28 47.2**	**-2.0**
HRFI	**Mount Harif**	**7.80**	**128**	P	**Pn**	**02 27 26.6**	**+0.4**
HRFI				S	**Sn**	**02 28 53.2**	**-1.6**
ASF	**Jabal al Asfar**	**7.98**	**109**	Pn	**Pn**	**02 27 30.4**	**+1.5**
	0.5nm,0.3s,baz=300,slow=14,SNR=4.2						
ASF				Sn	**Sn**	**02 28 58.5**	**-0.9**
	0.2nm,0.3s,baz=299,slow=19,SNR=1.4						
	1.1nm,0.3s						
EIL	**Elat**	**7.99**	**131**	Pn	**Pn**	**02 27 30.5**	**+1.6**
	0.6nm,0.3s,baz=315,slow=16,SNR=17						
EIL				Sn	**Sn**	**02 28 56.3**	**-3.3**
	2.4nm,0.3s,baz=333,slow=17,SNR=8.1						
	2.0nm,0.3s						
EIL	**Elat**	**7.99**	**131**	P	**Pn**	**02 27 29.1**	**+0.2**
EIL				S	**Sn**	**02 28 57.6**	**-2.0**
SOKA	**Soboth**	**15.14**	**324**	*i* Pn	**Pn**	**02 29 05.9**	**-0.7**
	5.3nm,1.5s						
KBA	**Koelnbreinsper**	**16.25**	**322**	*i* Pn	**Pn**	**02 29 21.7**	**+0.5**
	3.9nm,1.2s						
ABTA	**Abfaltersbach**	**16.47**	**320**	*e*Pn	**Pn**	**02 29 24.4**	**+0.5**
	1.8nm,0.9s						
GERES	**GERESS Array B**	**17.33**	**327**	P	**Pn**	**02 29 33.9**	**-0.8**
	baz=150,slow=14,SNR=6.9						
	0.9nm,0.9s						
FETA	**Feichten**	**17.60**	**318**	*i* Pn	**Pn**	**02 29 39.0**	**+0.8**
	7.6nm,1.2s						
ESDC	**Sonseca Array**	**25.72**	**290**	P	**P**	**02 31 03.2**	**-0.1**
	0.9nm,0.7s,baz=82,slow=9.1,SNR=8.3						
	0.9nm,0.7s						
FINES	**FINESS Array B**	**26.40**	**358**	P	**P**	**02 31 06.8**	**-2.4**
	1.5nm,1.0s,baz=172,slow=13,SNR=1.3						
	1.5nm,1.0s						
FURI	**Furi**	**27.85**	**157**	LR	LR	02 44 24.0	
	comp=Z,9.8nm,19.9s,baz=26,slow=40						
TORD	**Torodi Ar. Bea**	**32.27**	**234**	P	**P**	**02 32 03.1**	**+1.3**
	0.8nm,0.8s,baz=25,slow=7.5,SNR=5.5						
	0.8nm,0.8s						
AAK	**Ala-Archa**	**36.61**	**64**	LR	LR	02 49 29.8	
	comp=Z,50nm,18.5s,baz=109,slow=39						
MKAR	**Makanchi Array**	**41.87**	**57**	P	**P**	**02 33 22.5**	**-0.6**
	0.2nm,0.5s,baz=274,slow=7.1,SNR=2.0						
	0.2nm,0.5s						

IDC ***17*** *02:30:35.4±0.6,28˚.64N×104˚.94E,h0km,mb3.9/19, mbtmp3.9/22,ML4.4/3,MS3.1/4,Error ellipse: s-maj=22.5km s-min=12.0km az=60.0*
NEIC ***17*** *02:30:40.8±1.2,28˚.63N±0˚.08×104˚.91E±0˚.09,h34km±5km, mb4.2/12,Error ellipse: s-maj=12.3km s-min=10.8km az=215.0*

ISC 17 02:30:38.9±1.9,28˚.62N±0˚.06×104˚.92E±0˚.06,h23km±13km, n47,σ0§80/56,mb4.0/22,MS3.0/4,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**2.49**	**336**	Pn	**Pn**	**02 31 19.1**	**+1.0**
CD2				Pg	**Pb**	**02 31 21.8**	**-1.2**
CD2				Sg	**Sb**	**02 31 55.3**	**+2.0**
CD2				smax	smax		
	comp=N,2μm,0.5s						
CD2				smax	smax		
	comp=E,3μm,0.5s						
ENH	**Enshi**	**4.31**	**66**		**Pn**	**02 31 43.9**	**+0.8**
ENH				Sn	**Sn**	**02 32 32.3**	**-0.3**
LZDM	**Lanzhou Array**	**7.38**	**352**	Pn	**Pn**	**02 32 26.1**	**+0.6**
	baz=172,slow=14						
LZDM				Sn	**Sn**	**02 33 48.0**	**-0.7**
	baz=76,slow=26						
LZDM				Lg	Lg	02 34 30.1	
	baz=230,slow=31						
	comp=E,1.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**11.50**	**210**	Pn	**Pn**	**02 33 22.9**	**+1.1**
	comp=E,1.0nm,0.3s,baz=31,slow=11,SNR=8.8						
	comp=E,2.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**11.50**	**210**		**Pn**	**02 33 22.5**	**+0.7**
EVN	**Everest**	**15.96**	**272**	Pn	**Pn**	**02 34 21.1**	**-1.5**
SONM	**Songino Array**	**19.22**	**3**	P	**P**	**02 35 01.6**	**+0.3**
	comp=E,0.3nm,0.3s,baz=184,slow=11,SNR=12						
	comp=E,3.7nm,1.0s						
SONM	**Songino Array**	**19.22**	**3**	P	**P**	**02 35 00.8**	**-0.5**
JOW	**Kunigami**	**20.75**	**89**	P	**P**	**02 35 16.9**	**-1.2**
	comp=E,4.5nm,0.3s,baz=90,slow=12,SNR=2.4						
	comp=E,4.5nm,0.3s						
JOW	**Kunigami**	**20.75**	**89**	P	**P**	**02 35 18.2**	**+0.1**
JOW				IAmb	IAmb	02 35 45.6	
	comp=Z,25nm,1.3s						
KSRS	**Korea Array**	**21.16**	**59**	P	**P**	**02 35 22.1**	**-0.3**
	comp=Z,2.7nm,0.8s,baz=249,slow=10,SNR=6.0						
KSRS				LR	LR	02 44 43.4	
	comp=Z,29nm,19.7s,baz=330,slow=40						
	comp=Z,2.7nm,0.8s						
MKAR	**Makanchi Array**	**25.34**	**322**	P	**P**	**02 36 04.5**	**+0.6**
	comp=Z,1.5nm,0.7s,baz=127,slow=9.7,SNR=21						
MKAR				PcP	**PcP**	**02 39 36.4**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=116,slow=3.4,SNR=3.2						
MKAR				LR	LR	02 46 46.5	
	comp=Z,48nm,19.1s,baz=49,slow=38						
	comp=Z,1.5nm,0.7s						
MKAR	**Makanchi Array**	**25.34**	**322**	P	**P**	**02 36 04.2**	**+0.2**
MKAR					**PcP**	**02 39 36.4**	**+0.1**
MAKZ	**Makanchi**	**25.52**	**322**	P	**P**	**02 36 05.9**	**+0.3**
MAKZ				IAmb	IAmb	02 36 08.7	
	comp=Z,3.0nm,1.0s						
MJAR	**Matsushiro Arr**	**29.03**	**66**	LR	LR	02 49 29.1	
	comp=Z,46nm,20.8s,baz=328,slow=39						
ZALV	**Zalesovo Beam**	**29.26**	**335**	P	**P**	**02 36 39.1**	**+0.1**
	comp=Z,2.9nm,0.6s,baz=137,slow=9.5,SNR=12						
	comp=Z,2.9nm,0.6s						
ZALV	**Zalesovo Beam**	**29.26**	**335**	P	**P**	**02 36 39.2**	**+0.2**
KURBB	**Kurchatov Arra**	**29.66**	**325**	P	**P**	**02 36 42.3**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=128,slow=9.6,SNR=5.6						
KURBB				PcP	**PcP**	**02 39 46.5**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=121,slow=2.7,SNR=3.0						
	comp=Z,0.4nm,0.4s						
KURK	**Kurchatov**	**29.67**	**325**	P	**P**	**02 36 42.3**	**-0.4**
KURK				IAmb	IAmb	02 37 25.8	
	comp=Z,2.1nm,1.1s						
KURK					**PcP**	**02 39 46.1**	**-0.4**
BTK	**Batken**	**30.20**	**301**	P	**P**	**02 36 45.5**	**-2.2**
PALK	**Pallekele**	**31.20**	**232**	LR	LR	02 51 19.4	
	comp=Z,34nm,18.2s,baz=24,slow=40						
BVAR	**Borovoye Array**	**35.19**	**324**	P	**P**	**02 37 31.3**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=116,slow=6.6,SNR=2.9						
BVAR				PcP	**PcP**	**02 40 02.1**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=107,slow=3.7,SNR=2.4						
	comp=Z,0.4nm,0.5s						
AB31	**Akbulak array**	**39.87**	**314**	P	**P**	**02 38 10.2**	**-0.5**
AB31				IAmb	IAmb	02 38 13.5	
	comp=Z,2.6nm,1.2s						
WRA	**Warramunga Arr**	**56.03**	**146**	P	**P**	**02 40 16.1**	**+0.2**
	comp=Z,2.0nm,0.6s,baz=338,slow=8.1,SNR=38						
	comp=Z,2.0nm,0.6s						
WRA	**Warramunga Arr**	**56.03**	**146**	P	**P**	**02 40 15.4**	**-0.6**
WR8	**Warramunga Arr**	**56.12**	**146**	P	**P**	**02 40 16.8**	**+0.2**
WR8				IAmb	IAmb	02 40 18.4	
	comp=Z,3.9nm,0.6s						
BRTR	**Keskin Array B**	**58.60**	**301**	P	**P**	**02 40 34.0**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=101,slow=7.5,SNR=2.6						
	comp=Z,0.5nm,0.7s						
BRTR	**Keskin Array B**	**58.60**	**301**	P	**P**	**02 40 35.2**	**+0.9**
ASAR	**Alice Springs**	**59.01**	**149**	P	**P**	**02 40 37.2**	**+0.2**
	comp=Z,1.6nm,0.7s,baz=334,slow=6.8,SNR=20						
ASAR				PcP	**PcP**	**02 41 26.0**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=320,slow=3.6,SNR=2.2						
	comp=Z,1.6nm,0.7s						
ASAR	**Alice Springs**	**59.01**	**149**	P	**P**	**02 40 36.8**	**-0.2**
ASAR					**PcP**	**02 41 26.0**	**+0.2**
AKASG	**Malin Array Be**	**59.61**	**314**	P	**P**	**02 40 39.7**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=68,slow=7.2,SNR=4.5						
	comp=Z,0.4nm,0.5s						
AKASG	**Malin Array Be**	**59.61**	**314**	P	**P**	**02 40 42.2**	**+1.4**
AKASG				IAmb	IAmb	02 41 22.3	
	comp=Z,3.8nm,1.4s						
ARCES	**ARCESS Array B**	**59.81**	**336**	P	**P**	**02 40 41.9**	**0.0**
	comp=Z,2.7nm,0.8s,baz=84,slow=9.2,SNR=4.7						
	comp=Z,2.7nm,0.8s						
ARCES	**ARCESS Array B**	**59.81**	**336**	P	**P**	**02 40 44.0**	**+2.1**
FINES	**FINESS Array B**	**60.02**	**327**	P	**P**	**02 40 43.9**	**+0.4**
	comp=Z,2.1nm,0.7s,baz=107,slow=6.4,SNR=8.9						
	comp=Z,2.1nm,0.7s						
FINES	**FINESS Array B**	**60.02**	**327**	P	**P**	**02 40 43.5**	**+0.1**
HFS	**Hagfors**	**66.22**	**327**	P	**P**	**02 41 24.7**	**+0.1**
	comp=Z,1.9nm,0.6s,baz=116,slow=6.8,SNR=9.9						
	comp=Z,1.9nm,0.6s						
NB2	**NORSAR Subarra**	**67.13**	**328**	P	**P**	**02 41 30.2**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=72,slow=6.5						
NOA	**NORSAR Array B**	**67.13**	**328**	P	**P**	**02 41 29.4**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=71,slow=6.6,SNR=4.6						
	comp=Z,1.2nm,0.7s						
STKA	**Stephens Creek**	**69.55**	**147**	P	**P**	**02 41 45.7**	**-0.2**
	comp=Z,0.9nm,0.4s,baz=349,slow=7.9,SNR=4.2						
	comp=Z,0.9nm,0.4s						
STKA	**Stephens Creek**	**69.55**	**147**	P	**P**	**02 41 45.3**	**-0.6**
GERES	**GERESS Array B**	**69.79**	**315**	P	**P**	**02 41 47.6**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=64,slow=9.1,SNR=4.8						
	comp=Z,0.6nm,0.5s						
ILAR	**Eielson Array**	**71.76**	**25**	P	**P**	**02 41 59.0**	**0.0**
	comp=Z,0.2nm,0.6s,baz=289,slow=4.5,SNR=2.6						
	comp=Z,0.2nm,0.6s						
ILAR	**Eielson Array**	**71.76**	**25**	P	**P**	**02 41 59.1**	**+0.1**
YKA	**Yellowknife Ar**	**83.84**	**17**	P	**P**	**02 43 06.3**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=329,slow=5.7,SNR=17						
	comp=Z,0.5nm,0.5s						
YKA	**Yellowknife Ar**	**83.84**	**17**	P	**P**	**02 43 06.0**	**-0.2**
ESDC	**Sonseca Array**	**85.21**	**313**	P	**P**	**02 43 15.0**	**+1.3**
	comp=Z,0.5nm,0.8s,baz=64,slow=5.5,SNR=2.3						
	comp=Z,0.5nm,0.8s						

NEIC ***17*** *02:54:47.7±1.1,6˚.76N±0˚.07×72˚.95W±0˚.04,h157km±6km, mb4.3/11,Error ellipse: s-maj=11.2km s-min=5.6km az=162.0*
IDC ***17*** *02:54:47.5±0.6,6˚.76N×72˚.90W,h163km±6km,mb3.5/13, mbtmp4.0/16,MS3.6/1,Error ellipse: s-maj=13.4km s-min=7.2km az=128.0*
FUNV ***17*** *02:54:48.8,7˚.18N×73˚.10W,h5km,MW4.0,Presumed earthquake*
RSNC ***17*** *02:54:48.1±0.0,7˚.N±1˚×7˚.3W±˚,h146km±1km,M4.1, mB4.9,mb4.3,ML3.8,MLv4.4,Mw(mB)4.2*

ISC 17 02:54:46.5±0.6,6˚.87N±0˚.03×73˚.06W±0˚.04,h154km±5km, n91,σ1§46/138,mb3.9/13,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.30**	**205**	P	**Pn**	**02 55 07.8**	**-0.1**
BARC				S	**Sn**	**02 55 23.3**	**-0.8**
PAMC	**Pamplona, Colo**	**0.59**	**37**	P	**Pn**	**02 55 10.6**	**+1.2**
PAMC				S	**Sn**	**02 55 27.5**	**+0.7**
BRJC	**Barrancabermej**	**0.69**	**279**	P	**Pn**	**02 55 09.5**	**+0.1**
BRJC				S	**Sn**	**02 55 26.1**	**-0.7**
RUSC	**La Rusia**	**0.97**	**182**	P	**Pn**	**02 55 11.8**	**-0.2**
RUSC				S	**Sn**	**02 55 30.2**	**-1.2**
RUSC	**La Rusia**	**0.97**	**182**	*e*P	**Pn**	**02 55 11.8**	**-0.2**
RUSC				*e*S	**Sn**	**02 55 30.5**	**-0.9**
OCAC	**Ocana**	**1.39**	**349**	P	**Pn**	**02 55 15.9**	**+0.5**
OCAC				S	**Sn**	**02 55 37.6**	**-0.1**
PTBC	**PUERTO BERRIO,**	**1.43**	**257**	P	**Pn**	**02 55 14.2**	**-1.5**
PTBC				S	**Sn**	**02 55 35.6**	**-2.4**
SPBC	**San Pablo de B**	**1.57**	**220**	P	**Pn**	**02 55 16.7**	**-0.6**
SPBC				S	**Sn**	**02 55 38.7**	**-2.1**
NORC	**Norcasia**	**2.22**	**234**	P	**Pn**	**02 55 23.5**	**-1.0**
NORC				S	**Sn**	**02 55 51.8**	**-2.0**
CHIC	**Chingaza**	**2.32**	**197**	P	**Pn**	**02 55 25.9**	**-0.2**
CHIC				S	**Sn**	**02 55 55.3**	**-1.3**
ROSC	**El Rosal**	**2.37**	**212**	P	**Pn**	**02 55 27.9**	**+1.2**
	405nm,0.3s,baz=96,slow=18,SNR=301						
ROSC				S	**Sn**	**02 55 59.9**	**+2.3**
	1μm,0.4s,baz=11,slow=23,SNR=10						
ROSC	**El Rosal**	**2.37**	**212**		**Pn**	**02 55 27.5**	**+0.9**
ROSC					**Sn**	**02 55 56.6**	**-1.1**
ROSC	**El Rosal**	**2.37**	**212**	P	**Pn**	**02 55 27.6**	**+0.9**
ROSC				S	**Sn**	**02 55 58.4**	**+0.8**
CVER	**Cruz Verde, Cu**	**2.54**	**204**	P	**Pn**	**02 55 29.4**	**+0.6**
CVER				S	**Sn**	**02 56 01.2**	**-0.2**
UREC	**San Jos de Ur**	**2.61**	**290**	P	**Pn**	**02 55 28.0**	**-1.2**
UREC				S	**Sn**	**02 55 59.5**	**-2.7**
VILC	**Villavicencio,**	**2.81**	**193**	P	**Pn**	**02 55 31.7**	**-0.1**
VILC				S	**Sn**	**02 56 05.7**	**-1.1**
GUY2C	**Guyana, Caldas**	**2.82**	**235**	P	**Pn**	**02 55 32.1**	**-0.1**
GUY2C				S	**Sn**	**02 56 06.7**	**-0.8**
RECRC	**Villamaria, Ca**	**2.97**	**231**	P	**Pn**	**02 55 36.7**	**+2.5**
RECRC				S	**Sn**	**02 56 13.4**	**+2.5**
NIZA	**Niza -

LPAZ	**La Paz**	**23.52**	**168**	P		**P**	**02 59 41.9**	**-1.5**
BDFB	**Brasilia**	**33.40**	**132**	P		**P**	**03 01 09.1**	**-1.6**
	comp=Z,2.2nm,0.4s,baz=296,slow=7.6,SNR=5.6							
	comp=Z,2.2nm,0.4s							
BDFB	**Brasilia**	**33.40**	**132**	P		**P**	**03 01 09.4**	**-1.3**
BDFB				IAmb		IAmb	03 01 11.6	
	comp=Z,3.0nm,0.6s							
CPUP	**Villa Florida**	**36.36**	**156**	P		**P**	**03 01 34.8**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=25,slow=20,SNR=1.5							
	comp=Z,0.4nm,0.6s							
CPUP	**Villa Florida**	**36.36**	**156**	P		**P**	**03 01 34.7**	**-1.1**
CPUP				IAmb		IAmb	03 01 46.3	
	comp=Z,5.5nm,1.5s							
TX31	**Lajitas Ar. Si**	**36.48**	**312**	P		**P**	**03 01 38.5**	**+1.4**
TXAR	**Lajitas Array**	**36.48**	**312**	P		**P**	**03 01 38.4**	**+1.3**
	comp=Z,0.6nm,0.6s,baz=128,slow=8.6,SNR=11							
TXAR				PcP		**PcP**	**03 03 58.4**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=104,slow=2.4,SNR=4.9							
	comp=Z,0.6nm,0.6s							
TXAR	**Lajitas Array**	**36.48**	**312**	P		**P**	**03 01 38.4**	**+1.3**
TXAR						**PcP**	**03 03 59.0**	**+1.2**
MNTX	**Cornudas Mount**	**38.99**	**314**	P		**P**	**03 01 59.4**	**+1.4**
MNTX				IAmb		IAmb	03 02 00.7	
	comp=Z,1.7nm,0.7s							
ULM	**Lac du Bonnet**	**47.27**	**340**	P		**P**	**03 03 04.3**	**+0.2**
	comp=Z,2.1nm,0.4s,baz=128,slow=5.8,SNR=6.8							
	comp=Z,2.1nm,0.4s							
ULM	**Lac du Bonnet**	**47.27**	**340**	P		**P**	**03 03 04.4**	**+0.3**
ULM				IAmb		IAmb	03 03 41.5	
	comp=Z,9.8nm,1.5s							
PDAR	**Pinedale Array**	**48.08**	**324**	P		**P**	**03 03 12.1**	**+1.3**
	comp=Z,0.4nm,0.8s,baz=113,slow=10,SNR=2.7							
PDAR				PcP		**PcP**	**03 04 38.3**	**+2.1**
	comp=Z,0.3nm,0.5s,baz=140,slow=3.5,SNR=4.0							
	comp=Z,0.4nm,0.8s							
PDAR	**Pinedale Array**	**48.08**	**324**	P		**P**	**03 03 12.1**	**+1.3**
PDAR						**PcP**	**03 04 36.1**	**-0.1**
SCHQ	**Schefferville**	**48.09**	**5**	P		**P**	**03 03 12.1**	**+1.7**
	comp=Z,7.1nm,0.6s,baz=186,slow=6.5,SNR=22							
	comp=Z,7.1nm,0.6s							
SCHQ	**Schefferville**	**48.09**	**5**	P		**P**	**03 03 11.7**	**+1.3**
SCHQ				IAmb		IAmb	03 03 12.5	
	comp=Z,8.1nm,0.7s							
NEW	**Newport**	**55.59**	**326**	LR		LR	03 32 58.9	
	comp=Z,50nm,18.4s,baz=37,slow=41							
YKA	**Yellowknife Ar**	**63.24**	**340**	P		**P**	**03 04 59.0**	**+0.7**
	comp=Z,1.0nm,0.5s,baz=74,slow=7.7,SNR=37							
	comp=Z,1.0nm,0.5s							
DBIC	**Dimbokro**	**67.67**	**86**	P		**P**	**03 05 26.4**	**-1.2**
	comp=Z,3.5nm,0.8s,baz=318,slow=9.0,SNR=3.8							
	comp=Z,3.5nm,0.8s							
DBIC	**Dimbokro**	**67.67**	**86**	P		**P**	**03 05 26.9**	**-0.7**
DBIC				IAmb		IAmb	03 05 27.8	
	comp=Z,4.8nm,0.8s							
TORD	**Torodi Ar. Bea**	**73.67**	**78**	P		**P**	**03 06 02.3**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=296,slow=5.7,SNR=9.6							
	comp=Z,0.2nm,0.3s							
NOA	**NORSAR Array B**	**81.26**	**29**	P		**P**	**03 06 46.3**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=268,slow=5.3,SNR=1.7							
	comp=Z,0.9nm,0.7s							
HFS	**Hagfors**	**82.47**	**30**	P		**P**	**03 06 51.3**	**-0.3**
	comp=Z,2.3nm,0.8s,baz=301,slow=11,SNR=1.8							
	comp=Z,2.3nm,0.8s							
GERES	**GERESS Array B**	**82.75**	**42**	P		**P**	**03 06 53.5**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=242,slow=4.2,SNR=2.7							
	comp=Z,0.4nm,0.6s							
SNAA	**Sanae**	**90.36**	**163**	P		**P**	**03 07 30.5**	**+0.7**
QSPA	**South Pole Qui**	**96.88**	**180**	P		**P**	**03 08 00.1**	**+0.2**
ZALV	**Zalesovo Beam**	**116.61**	**14**	PKP		**PKPdf**	**03 13 12.2**	**0.0**
	comp=Z,0.9nm,0.4s,baz=304,slow=2.7,SNR=3.7							
ZALV	**Zalesovo Beam**	**116.61**	**14**			**PKPdf**	**03 13 12.1**	**-0.1**
KURK	**Kurchatov**	**117.64**	**20**			**PKiKP**	**03 13 14.7**	**+0.4**
KURBB	**Kurchatov Arra**	**117.69**	**20**	PKP		**PKiKP**	**03 13 14.8**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=322,slow=2.5,SNR=3.0							
MKAR	**Makanchi Array**	**122.26**	**20**	PKP		**PKPdf**	**03 13 23.2**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=313,slow=2.5,SNR=13							
MKAR	**Makanchi Array**	**122.26**	**20**			**PKPdf**	**03 13 23.1**	**-0.3**
SONM	**Songino Array**	**125.53**	**0**	PKP		**PKPdf**	**03 13 30.1**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=321,slow=1.8,SNR=2.6							
ASAR	**Alice Springs**	**149.19**	**234**	PKPbc		**PKPbc**	**03 14 17.2**	**-0.5**
	comp=Z,1.3nm,0.5s,baz=121,slow=3.6,SNR=18							
ASAR	**Alice Springs**	**149.19**	**234**			**PKPbc**	**03 14 17.4**	**-0.3**
WRA	**Warramunga Arr**	**150.41**	**241**	PKP		**PKPdf**	**03 14 15.6**	**+0.3**
	comp=Z,1.2nm,0.4s,baz=109,slow=2.3,SNR=2.2							
WRA				PKPbc		**PKPbc**	**03 14 20.5**	**-0.3**
	comp=Z,1.3nm,0.4s,baz=109,slow=2.4,SNR=36							
WRA				pPKPbc		**pPKPbc**	**03 15 01.0**	**-0.8**
	comp=Z,0.8nm,0.5s,baz=108,slow=2.7,SNR=6.1							
WRA	**Warramunga Arr**	**150.41**	**241**	PKPbc		**PKPbc**	**03 14 20.4**	**-0.4**
CMAR	**Chiang Mai Arr**	**153.63**	**17**	PKPbc		**PKiKP**	**03 14 28.8**	**+0.6**
	comp=Z,1.5nm,0.4s,baz=325,slow=3.6,SNR=5.2							
CMAR				PKPab		**PKPab**	**03 14 40.2**	**-0.8**
	comp=Z,1.0nm,0.3s,baz=340,slow=3.5,SNR=1.6							
CMAR	**Chiang Mai Arr**	**153.63**	**17**			**PKPbc**	**03 14 28.2**	**+0.2**

*JMA **17** 02:55:25.3±0.3,44°N±2°×14°8E±°, h137km, MV3.5/28, NEAR ETOROFU ISLAND*
*SKHL **17** 02:55:26.2±0.2,44°.20N×147°.80E, h102km±1km, mb4.4/3, msh5.2/2*
ISC 17 02:55:23.1±2.9,44°.3N±0°.1×147°.8E±0°.1, h139km±19km, **n18,σ1°59/29, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SHO	**Shikotan**	**0.83**	**236**	*eP*		Pn	02 55 57.9	+13
SHO				AMB		AMB	02 55 58.3	
	290nm,0.5s							
SHO				*eS*		Sn	02 56 14.1	+12
SHO				A		A	02 56 14.8	
	570nm,0.3s							
SHO				A		A	02 56 14.8	
	510nm,0.3s							
KUR	**Kuril'sk**	**0.90**	**4**	*eP*		**Pn**	**02 55 46.6**	**+0.7**
KUR				AMB		AMB	02 55 48.1	
	50nm,0.3s							
KUR				*eS*		**Sn**	**02 56 02.0**	**-1.3**
KUR				A		A	02 56 05.1	
	90nm,0.3s							
KUR				A		A	02 56 05.1	
	140nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**1.41**	**258**	*i* P		**Pn**	**02 55 51.5**	**+0.7**
YUK				AMB		AMB	02 55 52.5	
	180nm,0.5s							
YUK				*i* S		**Sn**	**02 56 09.5**	**-2.4**
YUK				A		A	02 56 14.2	
	100nm,0.3s							
YUK				A		A	02 56 14.2	
	290nm,0.3s							
NEM2	**Nemuro 2**	**1.76**	**237**	P		**Pn**	**02 55 56.2**	**+1.4**
NEM2				*eS*		**Sn**	**02 56 19.0**	**+0.1**
NMR	**Nemuro--Hokkai**	**1.77**	**238**	*i* P		**Pn**	**02 55 55.8**	**+1.0**
NMR				*i* S		**Sn**	**02 56 16.5**	**-2.6**
JRA	**Rausu**	**1.95**	**259**	*eP*		**Pn**	**02 55 57.8**	**+0.9**
JNSB	**Nemuroshibetsu**	**2.08**	**255**	*eP*		**Pn**	**02 55 59.8**	**+1.4**
JNSB				*eS*		**Sn**	**02 56 26.1**	**+0.6**
JKHN	**Kushirohamanak**	**2.27**	**237**	P		**Pn**	**02 56 02.3**	**+1.5**
JKHN				*eS*		**Sn**	**02 56 30.0**	**+0.1**
JNK	**Nakash**	**2.33**	**252**	P		**Pn**	**02 56 02.8**	**+1.2**
JNK				*eS*		**Sn**	**02 56 31.4**	**+0.3**
AKK	**Akkeshi**	**2.50**	**239**	*eP*		**Pn**	**02 56 04.8**	**+1.1**
JAK	**Akkeshi**	**2.61**	**240**	*eP*		**Pn**	**02 56 06.2**	**+1.2**
JAK				*eS*		**Sn**	**02 56 36.9**	**-0.3**
JTKR	**Abashiri--Toko**	**2.81**	**264**	*eP*		**Pn**	**02 56 08.0**	**+0.5**
JTKR				*eS*		**Sn**	**02 56 41.9**	**+0.1**
JAR	**Ashorobuto**	**3.08**	**252**	P		**Pn**	**02 56 12.8**	**+1.7**
JAR				*eS*		**Sn**	**02 56 48.6**	**+0.6**
JOB	**Onbets**	**3.20**	**245**	*eP*		**Pn**	**02 56 14.2**	**+1.6**
JOB				*eS*		**Sn**	**02 56 50.1**	**-0.7**
JCH	**Churui**	**3.65**	**243**	*eP*		**Pn**	**02 56 19.2**	**+0.9**
JCH				*eS*		**Sn**	**02 56 59.4**	**-1.8**
JKK2	**Kamakawa 2**	**3.65**	**264**	*eP*		**Pn**	**02 56 19.5**	**+1.0**
JNBK	**Urakawa-nobuka**	**4.20**	**242**	*eP*		**Pn**	**02 56 25.9**	**+0.2**
JOT	**Ohata**	**5.76**	**241**	*eS*		**Sn**	**02 57 46.5**	**-4.9**

IDC 17 03:50:47.7±5.9,30°.45S×178°.25W, h0km**, mb3.9/2, mbtmp3.9/2, MS2.7/1, Error ellipse: s-maj=228.7km s-min=58.1km az=155.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
KRVT	**Keravat (AS076**	**38.23**	**307**	LR		LR	04 09 35.4	
	comp=Z,9.4nm,19.4s,baz=17,slow=30							
ASAR	**Alice Springs**	**42.89**	**267**	P		P	03 58 47.8	-0.4
	0.5nm,0.5s,baz=103,slow=7.5,SNR=8.2							
	0.5nm,0.5s							
WRA	**Warramunga Arr**	**43.88**	**272**	P		P	03 58 56.4	+0.2
	1.2nm,0.3s,baz=114,slow=8.3,SNR=22							
	1.2nm,0.3s							
FINES	**FINESS Array B**	**145.12**	**340**	PKPbc		PKPbc	04 10 24.9	-1.0
	1.6nm,0.7s,baz=29,slow=3.2,SNR=5.0							

*IDC **17** 04:02:07.7±0.5,34°.39N×85°.62E, h0km, mb4.3/22, mbtmp4.4/27, ML3.3/4, MS3.6/36, Error ellipse: s-maj=18.4km s-min=11.5km az=47.0*
*MOS **17** 04:02:08.2±1.1,34°.50N×85°.80E, h11km, mb4.7/17, Error ellipse: s-maj=8.4km s-min=4.3km az=119.4*
*BJI **17** 04:02:08.1,34°.53N×85°.71E, h5km, mB4.6/4, mb4.3/39, Ms4.1/26, Ms7 4.0/24*
*NEIC **17** 04:02:10.3±1.5,34°.54N±0°.07×85°.84E±0°.10, h10km±1km, mb4.6/67, Error ellipse: s-maj=15.1km s-min=10.8km az=51.0*
ISC 17 04:02:09.9±0.3,34°.46N±0°.05×85°.72E±0°.04, h10km**, n264, σ1°53/255, mb4.6/87, MS3.8/41, 15C-8D, Xizang**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
EVN	**Everest**	**6.55**	**171**			**Pn**	**04 03 49.3**	**+2.5**
LSA	**Lhasa**	**6.61**	**134**	Pn		**Pn**	**04 03 51.3**	**+3.7**
LSA				L		L		
	comp=N,2μm,10.8s							
LSA				L		L		
	comp=E,1μm,11.2s							
GOMU	**GeErMu**	**7.63**	**74**	Pn		**Pn**	**04 04 00.5**	**-1.0**
GOMU				L		L		
	comp=N,2μm,12.5s							
GOMU				L		L		
	comp=E,590nm,11.5s							
GOMU				L		L		
	comp=Z,1μm,10.0s							
WUS	**Wushi**	**8.47**	**325**			**Pn**	**04 04 12.8**	**+0.2**
WMQ	**Urumqi**	**9.47**	**9**	P		**Pn**	**04 04 30.1**	**+3.7**
TARG	**Taragay, Kyrgy**	**9.56**	**322**			**Pn**	**04 04 29.2**	**+1.2**
TARG	**Taragay, Kyrgy**	**9.56**	**322**	P		**Pn**	**04 04 29.2**	**+1.2**
PRZ	**Przheval'sk**	**9.85**	**327**	Pn		**Pn**	**04 04 32.1**	**+0.4**
PRZ	**Przheval'sk**	**9.85**	**327**	P		**Pn**	**04 04 32.1**	**+0.4**
KDJ	**Kajisay**	**10.18**	**321**			**Pn**	**04 04 37.9**	**+1.8**
KDJ	**Kajisay**	**10.18**	**321**	P		**Pn**	**04 04 37.9**	**+1.8**
SHL	**Shillong**	**10.35**	**147**			**Pn**	**04 04 38.2**	**-0.3**
SHL	**Shillong**	**10.35**	**147**	P		**Pn**	**04 04 38.2**	**-0.3**
NRN	**Naryn**	**10.36**	**315**	Pn		**Pn**	**04 04 40.8**	**+2.0**
NRN	**Naryn**	**10.36**	**315**	P		**Pn**	**04 04 40.8**	**+2.0**
NIL	**Nilore**	**10.37**	**269**			**Pn**	**04 04 40.5**	**+1.7**
NIL	**Nilore**	**10.37**	**269**	P		**Pn**	**04 04 40.5**	**+1.7**
BOOM	**Boomskoye usch**	**11.09**	**319**	Pn		**Pn**	**04 04 47.3**	**-1.3**
BOOM	**Boomskoye usch**	**11.09**	**319**	P		**Pn**	**04 04 47.3**	**-1.3**
ARLS	**Aral**	**11.61**	**313**	P		**Pn**	**04 04 57.5**	**+1.7**
AAK	**Ala-Archa**	**11.99**	**316**	Pn		**Pn**	**04 05 01.5**	**+0.6**
	0.3nm,0.3s,baz=133,slow=10,SNR=15							
AAK				LR		LR	04 10 13.2	
	comp=Z,357nm,19.2s,baz=132,slow=40							
	5.7nm,0.6s							
AAK	**Ala-Archa**	**11.99**	**316**			**Pn**	**04 05 02.5**	**+1.6**
AAK	**Ala-Archa**	**11.99**	**316**	*ce*P		**Pn**	**04 05 03.5**	**+2.6**
AAK				pmax		pmax		
	comp=Z,7.0nm,0.8s							
ARSB	**Arslanbob**	**12.17**	**308**	Pn		**Pn**	**04 05 04.3**	**+0.9**
ARSB	**Arslanbob**	**12.17**	**308**	P		**Pn**	**04 05 04.3**	**+0.9**
DRK	**Karamyk**	**12.20**	**298**	Pn		**Pn**	**04 05 03.2**	**-0.8**
DRK	**Karamyk**	**12.20**	**298**	P		**Pn**	**04 05 03.2**	**-0.8**
GTA2	**Gaotai**	**12.30**	**62**	*eP*		**Pn**	**04 05 08.5**	**+3.4**
GTA2				pP			04 05 12.5	
GTA2				pmax		pmax		
	comp=Z,2.0nm,0.6s							
GTA2				L		L		
	comp=Z,500nm,14.9s							
GTA2				L		L		
	comp=Z,510nm,10.2s							
MK31	**Makanchi Array**	**12.59**	**349**	*ce*P		**Pn**	**04 05 09.0**	**0.0**
MKAR	**Makanchi Array**	**12.59**	**349**	Pn		**Pn**	**04 05 08.7**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=164,slow=14,SNR=44							
MKAR				LR		LR	04 11 01.6	
	comp=Z,135nm,18.2s,baz=160,slow=42							
	comp=Z,6.4nm,0.8s							
MKAR	**Makanchi Array**	**12.59**	**349**	Pn		**Pn**	**04 05 08.4**	**-0.6**
MORE	**Moreh**	**12.63**	**141**	Pn		**Pn**	**04 05 11.3**	**+1.6**
MAKZ	**Makanchi**	**12.66**	**348**			**Pn**	**04 05 09.4**	**-0.5**
MAKZ	**Makanchi**	**12.66**	**348**	P		**Pn**	**04 05 09.4**	**-0.5**
BRDH	**Bariadhala**	**12.84**	**155**	LR		LR	04 11 31.6	
	comp=Z,103nm,21.5s,baz=21,slow=44							
ARK	**Arkit**	**13.06**	**308**	P		**Pn**	**04 05 17.7**	**+2.1**
BTK	**Batken**	**13.11**	**300**			**Pn**	**04 05 19.2**	**+3.0**
BTK	**Batken**	**13.11**	**300**	P		**Pn**	**04 05 19.2**	**+3.0**
GAR	**Garm**	**13.16**	**295**			**Pn**	**04 05 20.4**	**+3.5**
KBL	**Kabul**	**13.76**	**275**			**Pn**	**04 05 26.9**	**+1.7**
KBL	**Kabul**	**13.76**	**275**	P		**Pn**	**04 05 26.9**	**+1.7**
CHGR	**Chuyangaron**	**13.95**	**292**			**Pn**	**04 05 28.3**	**+0.6**
CHGR	**Chuyangaron**	**13.95**	**292**	P		**Pn**	**04 05 28.3**	**+0.6**
SHAA	**Shahritus**	**14.57**	**287**			**Pn**	**04 05 36.3**	**+0.1**
KK31	**Karatay Array**	**14.65**	**311**	Pn		**Pn**	**04 05 40.2**	**+3.0**
KK31	**Karatay Array**	**14.65**	**311**	P		**Pn**	**04 05 40.2**	**+3.0**
KKAR	**Karatay Array**	**14.65**	**311**	Pn		**Pn**	**04 05 41.0**	**+3.8**
KKAR	**Karatay Array**	**14.65**	**311**	P		**Pn**	**04 05 41.0**	**+3.8**
LZDM	**Lanzhou Array**	**14.78**	**79**	Pn		**P**	**04 05 43.5**	**-1.8**
	baz=266,slow=11							
LZDM				LR		LR	04 11 27.4	
	comp=Z,94nm,19.4s,baz=295,slow=38							
LZH	**Lanzhou**	**14.90**	**79**	*eP*		**P**	**04 05 50.0**	**+3.5**
LZH				pP		Pn	04 05 54.3	+14
LZH				pmax		pmax		
	comp=Z,16nm,1.5s							
LZH				LR		LR		
	comp=N,680nm,14.4s							
LZH				LR		LR		
	comp=E,200nm,13.5s							
LZH				LR		LR		
	comp=Z,330nm,16.8s							
DGZ	**Jazzator, Alta**	**15.28**	**4**	*i* P		**Pn**	**04 05 44.9**	**-0.9**
CD2	**Chengdu**	**15.60**	**98**	P		**P**	**04 05 55.5**	**+1.4**
CD2				S		**Sn**	**04 08 46.5**	**+3.7**
CD2				L		L		
	comp=Z,640nm,7.9s							
CD2				L		L		
	comp=Z,780nm,7.2s							
PZH	**PanZhiHua**	**15.92**	**116**	P		**Pn**	**04 05 54.6**	**+0.5**
KURBB	**Kurchatov Arra**	**16.98**	**344**	P		**Pn**	**04 06 07.4**	**0.0**
	comp=Z,0.1nm,0.3s,baz=168,slow=9.8,SNR=4.8							
KURBB				LR		LR	04 14 00.3	
	comp=Z,87nm,19.1s,baz=170,slow=42							
	comp=Z,8.0nm,0.9s							
KURK	**Kurchatov**	**17.05**	**344**			**Pn**	**04 06 08.2**	**0.0**
KURK				IAmb		IAmb	04 06 13.8	
	comp=Z,30nm,1.0s							
KURK	**Kurchatov**	**17.05**	**344**	P		**Pn**	**04 06 08.3**	**0.0**
KURK				pmax		pmax		
	comp=Z,30nm,1.0s							
KMI2	**Kunming**	**17.43**	**118**	⇑P		**P**	**04 06 16.1**	**+1.4**
KMI2				pmax		pmax		
	comp=Z,25nm,0.9s							
KMI2				L		L		
	comp=Z,300nm,14.2s							
KMI2				L		L		
	comp=Z,240nm,17.3s							
KMI2				L		L		
	comp=Z,390nm,18.0s							
HYB	**Hyderabad**	**18.14**	**202**	*eP*		P	04 06 32.3	+10
KNGR	**Kungurtug, Tuv**	**18.29**	**25**	*i* P		**P**	**04 06 24.8**	**+0.9**
KNGR				pmax		pmax		
	comp=Z,25nm,0.9s							
HRA	**Herat**	**19.36**	**276**	P		**Pn**	**04 06 37.9**	**+0.9**
ZAAG	**Zalesovo Array**	**19.50**	**358**			**P**	**04 06 36.5**	**-0.4**
ZALV	**Zalesovo Beam**	**19.50**	**358**	P		**P**	**04 06 37.0**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=181,slow=11,SNR=26							
ZALV				LR		LR	04 14 38.2	
	comp=Z,88nm,18.9s,baz=200,slow=38							
	comp=Z,12nm,0.8s							
ZALV	**Zalesovo Beam**	**19.50**	**358**	P		**P**	**04 06 37.0**	**+0.1**
CHTO	**Chiang Mai**	**19.53**	**140**	P		**P**	**04 06 37.2**	**-0.3**
CHTO	**Chiang Mai**	**19.53**	**140**	P		**P**	**04 06 37.2**	**-0.3**
CHTO				pmax		pmax		
	comp=Z,12nm,1.1s							
CM31	**Chiang Mai Arr**	**19.82**	**140**	P		**P**	**04 06 41.7**	**+0.9**
CM31				IAmb		IAmb	04 06 44.2	
	comp=Z,18nm,0.9s							
CMAR	**Chiang Mai Arr**	**19.82**	**140**	P		**P**	**04 06 41.2**	**+0.5**
	comp=Z,5.2nm,0.7s,baz=326,slow=12,SNR=20							
CMAR				LR		LR	04 15 12.3	
	comp=Z,113nm,20.4s,baz=320,slow=40							
CMAR	**Chiang Mai Arr**	**19.82**	**140**	P		**Pn**	**04 06 42.1**	**-0.2**
CMAR	**Chiang Mai Arr**	**19.82**	**140**	*i* P		**Pn**	**04 06 43.5**	**+1.2**
CMAR				pmax		pmax		
	comp=Z,3.0nm,0.4s							
BTO2	**Baotou**	**20.11**	**65**	*eP*		**Pn**	**04 06 44.6**	**-1.2**
BTO2				S		**Sn**	**04 10 32.1**	**0.0**
BTO2				pmax		pmax		
	comp=Z,15nm,0.8s							
BTO2				L		L		
	comp=Z,460nm,16.0s							
BTO2				L		L		
	comp=Z,490nm,15.3s							
MOY	**Mondy**	**20.43**	**28**	*eP*		Pn	04 06 48.6	-0.8
MOY				pmax		pmax		
	comp=Z,16nm,1.5s							
SONM	**Songino Array**	**20.44**	**43**	P		Pn	04 06 48.5	-1.0
	comp=Z,10nm,1.1s,baz=233,slow=11,SNR=21							
	comp=Z,10nm,1.1s							
SONM	**Songino Array**	**20.44**	**43**	P		**P**	**04 06 46.1**	**-1.3**
SONM	**Songino Array**	**20.44**	**43**	P		**P**	**04 06 46.1**	**-1.3**
SONM				pmax		pmax		
	comp=Z,17nm,1.3s							
ZAK	**Zakamensk**	**20.44**	**34**	*eP*		Pn	04 06 47.7	-1.8
ZAK				pmax		pmax		
	comp=Z,9.0nm,1.7s							
ENH	**Enshi**	**20.49**	**95**			**P**	**04 06 46.3**	**-1.8**
ULN	**Ulaanbaatar**	**20.83**	**44**			**P**	**04 06 50.2**	**-1.5**
ULN	**Ulaanbaatar**	**20.83**	**44**	*ce*P		**P**	**04 06 51.9**	**+0.3**
ULN				pmax		pmax		
	comp=Z,7.0nm,0.8s							
HHC	**Hu-ho-hao-te**	**21.39**	**65**	⇑P		**P**	**04 06 59.1**	**+1.3**
HHC				pP		sP	04 07 03.5	-0.7
HHC				S		**S**	**04 10 50.8**	**-4.4**
HHC				pmax		pmax		
	comp=Z,15nm,1.1s							
HHC				L		L		
	comp=Z,330nm,18.0s							
HHC				L		L		
	comp=Z,280nm,12.5s							
BVAR	**Borovoye Array**	**21.53**	**334**	P		**P**	**04 06 59.4**	**+0.4**
	comp=Z,8.6nm,0.8s,baz=139,slow=12,SNR=28							
BVAR				LR		LR	04 16 34.3	
	comp=Z,207nm,18.0s,baz=145,slow=40							
	comp=Z,8.6nm,0.8s							
TLY	**Talaya**	**21.53**	**31**	LR		LR	04 15 32.1	
	comp=Z,82nm,18.3s,baz=226,slow=37							
TLY	**Talaya**	**21.53**	**31**	P		**P**	**04 06 57.2**	**-1.8**
TLY	**Talaya**	**21.53**	**31**	P		**P**	**04 06 57.2**	**-1.8**
TLY				pmax		pmax		
	comp=Z,5.0nm,0.7s							
BORK	**Borovoye**	**21.57**	**334**			**P**	**04 06 59.3**	**-0.2**
BORK	**Borovoye**	**21.57**	**334**	*ce*P		**P**	**04 06 59.9**	**+0.5**
BORK				pmax		pmax		
	comp=Z,7.0nm,0.8s							
LYN	**LuoYang**	**22.03**	**82**	P		**P**	**04 07 09.8**	**+5.3**
LYN				pmax		pmax		
	comp=Z,14nm,1.1s							
GULI	**GuiLin**	**23.20**	**107**	P		**P**	**04 07 19.0**	**+2.1**
GULI				S		**S**	**04 11 34.4**	**+5.6**
GULI				pmax		pmax		
	comp=Z,14nm,0.9s							
GULI				L		L		
	comp=Z,220nm,8.1s							
GULI				L		L		
	comp=Z,190nm,11.9s							
GULI				L		L		
	comp=Z,280nm,7.6s							
HNS	**HongShan**	**23.62**	**74**	⇓P		**P**	**04 07 23.1**	**+2.1**
HNS				pmax		pmax		
	comp=Z,10.0nm,0.9s							
HNS				L		L		
	comp=Z,240nm,8.6s							
HNS				L		L		
	comp=Z,320nm,7.5s							
AB31	**Akbulak array**	**24.07**	**316**	P		**P**	**04 07 24.7**	**-0.5**
ABKAR	**Akbulak array**	**24.07**	**316**	P		**P**	**04 07 25.2**	**-0.1**
WHN	**Wuhan**	**24.43**	**91**	P		**P**	**04 07 29.5**	**+0.8**
BJI2	**Beijing**	**24.80**	**68**	P		**P**	**04 07 33.6**	**+1.6**
BJI2				S		**S**	**04 11 58.1**	**+3.6**
BJI2				pmax		pmax		
	comp=Z,4.0nm,0.7s							
BJI2				L		L		
	comp=Z,280nm,21.0s							
BJI2				L		L		
	comp=Z,130nm,16.0s							
BJI2				L		L		
	comp=Z,120nm,15.1s							
XLT	**XiLinHaoTe**	**25.24**	**59**	*eP*		**P**	**04 07 37.5**	**+1.5**
XLT				pmax		pmax		
	comp=Z,21nm,1.1s							
XLT				L		L		
	comp

KLR Kul'dur 36.74 52 *ce*P **P 04 09 17.1 -0.1**
KLR pmax pmax
comp=Z,4.0nm,0.9s
JOW Kunigami 37.18 90 LR LR 04 25 51.9
comp=Z,159nm,19.6s,baz=290,slow=38
JNU Nakatsue 37.32 79 LR LR 04 24 46.5
comp=Z,73nm,19.0s,baz=204,slow=36
ARPR Arapgir-MALATY 37.90 291 P **P 04 09 28.3 +0.9**
YAK Yakutsk 39.00 31 LR LR 04 26 59.2
comp=Z,59nm,18.9s,baz=280,slow=38
OBN Obninsk 39.51 317 *e*P **P 04 09 41.1 +0.7**
OBN *e* 04 11 09.4
OBN *e*PPP PPP 04 11 35.0
OBN *e* 04 11 48.6
OBN pmax pmax
comp=Z,5.0nm,0.8s
KLMR Klimovskoe 39.55 326 *e*P **P 04 09 41.7 +1.0**
KLMR pmax pmax
comp=Z,25nm,1.3s
ASF Jabal al Asfar 40.55 281 LR LR 04 31 05.3
comp=Z,37nm,18.8s,baz=47,slow=43
BR131 Keskin Array S 41.39 293 P **P 04 09 56.2 -0.3**
BR131 Keskin Array S 41.39 293 P **P 04 09 56.2 -0.3**
BR131 pmax pmax
comp=Z,4.0nm,1.2s
BRTR Keskin Array B 41.39 293 P **P 04 09 55.8 -0.7**
comp=Z,1.1nm,0.8s,baz=90,slow=8.2,SNR=7.8
BRTR LR LR 04 31 02.7
comp=Z,57nm,19.0s,baz=100,slow=42
comp=Z,1.1nm,0.8s
BRTR Keskin Array B 41.39 293 **P 04 09 57.1 +0.7**
BRTR Keskin Array B 41.39 293 *ce*P **P 04 10 00.7 +4.2**
BRTR pmax pmax
comp=Z,3.0nm,1.0s
MMAI Mount Meron Ar 41.52 283 LR LR 04 30 43.6
comp=Z,57nm,18.4s,baz=80,slow=41
MJAR Matsushiro Arr 42.35 72 LR LR 04 27 54.2
comp=Z,69nm,20.2s,baz=288,slow=36
EIL Elat 42.93 278 LR LR 04 30 44.1
comp=Z,77nm,20.7s,baz=60,slow=40
TIXI Tiksi 43.52 18 P **P 04 10 12.4 -0.7**
TIXI Tiksi 43.52 18 *ce*P **P 04 10 12.7 -0.4**
TIXI pmax pmax
comp=Z,23nm,1.0s
AKASG Malin Array Be 43.55 310 P **P 04 10 13.3 -0.4**
comp=Z,1.2nm,0.7s,baz=79,slow=7.9,SNR=11
AKASG LR LR 04 31 35.9
comp=Z,122nm,19.9s,baz=79,slow=41
comp=Z,1.2nm,0.7s
AKASG Malin Array Be 43.55 310 P **P 04 10 12.9 -0.8**
AKASG Malin Array Be 43.55 310 *i* P **P 04 10 13.5 -0.2**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKBB Malin Array Si 43.55 310 *ce*P **P 04 10 12.9 -0.8**
AKBB pmax pmax
comp=Z,5.0nm,0.7s
KIEV Kiev 43.56 310 P **P 04 10 13.7 0.0**
KIEV IAmb IAmb 04 10 16.7
comp=Z,18nm,1.4s
KIEV Kiev 43.56 310 P **P 04 10 13.7 0.0**
KIEV pmax pmax
comp=Z,18nm,1.5s
YSS Yuzhno-Sakhali 44.09 56 *e*P P 04 10 08.2 -10
YSS MLR MLR
comp=Z,300nm,15.0s
MNK Minsk 44.43 315 *i* P **P 04 10 22.9 +2.2**
comp=E,12nm,1.1s
MNK *i* P **P 04 10 22.9 +2.2**
comp=N,16nm,1.0s
MNK *i* P **P 04 10 22.9 +2.2**
comp=Z,17nm,1.0s,baz=92
MNK *i* PP **PP 04 12 06.8 +2.7**
MNK *i* PPP PPP 04 12 43.2
MNK *i* S **S 04 16 58.9 +3.6**
MNK *i* SS **ScS 04 20 19.7 +1.0**
MNK *i* SSS SSS 04 21 13.6
MNK *i* LQ LQ 04 24 16.8
MNK *i* LR LR 04 27 40.9
MNK *i* LRM MLR 04 29 20.3
comp=Z,149nm,16.1s
MNK *i* LRM MLR 04 29 27.4
comp=E,108nm,15.4s
MNK *i* LRM MLR 04 29 33.1
comp=N,88nm,14.8s
MNK Minsk 44.43 315 *i* P **P 04 10 22.9 +2.2**
MNK *i* 04 12 06.8
MNK *i* PPP PPP 04 12 43.1
MNK *i* S **S 04 16 58.9 +3.6**
MNK *i* SS **ScS 04 20 19.7 +1.0**
MNK pmax pmax
comp=N,16nm,1.0s
MNK pmax pmax
comp=E,12nm,1.1s
MNK pmax pmax
comp=Z,17nm,1.0s
MNK MLR MLR
comp=Z,149nm,16.0s
MNK MLR MLR
comp=E,108nm,15.0s
MNK MLR MLR
comp=N,88nm,15.0s
NACGM Naroch 45.09 316 *e*P **P 04 10 26.6 +0.7**
comp=Z,16nm,0.9s,baz=92
LEM Lembang 45.99 149 LR LR 04 32 41.2
comp=Z,127nm,18.8s,baz=314,slow=40
FINES FINESS Array B 46.00 325 P **P 04 10 32.2 -0.9**
comp=Z,3.0nm,0.7s,baz=66,slow=6.6,SNR=6.1
comp=Z,3.0nm,0.7s
FINES FINESS Array B 46.00 325 P **P 04 10 33.2 +0.2**
FINES FINESS Array B 46.00 325 P **P 04 10 33.3 +0.2**
MLR Muntele Rosu 46.14 303 LR LR 04 32 47.2
comp=Z,148nm,20.0s,baz=62,slow=40
MLR Muntele Rosu 46.14 303 **P 04 10 35.2 +0.7**
MLR Muntele Rosu 46.14 303 P **P 04 10 35.2 +0.7**
MLR pmax pmax
comp=Z,12nm,1.0s
ARCES ARCESS Array B 47.81 336 P **P 04 10 47.0 -0.1**
comp=Z,4.1nm,0.7s,baz=108,slow=8.9,SNR=5.7
comp=Z,4.1nm,0.7s
ARCES ARCESS Array B 47.81 336 P **P 04 10 47.0 -0.1**
SEY Seymchan 49.42 34 *ce*P **P 04 11 00.0 +0.5**
SEY pmax pmax
comp=Z,10.0nm,1.0s
LANS Liptovska Anna 49.96 308 *e*P **P 04 11 05.0 +1.0**
LANS Liptovska Anna 49.96 308 *e*P **P 04 11 05.0 +1.0**
KAPI Kappang 50.71 134 LR LR 04 38 53.0
comp=Z,28nm,19.0s,baz=292,slow=44
MORC Moravsky Berou 51.10 309 *e*P **P 04 11 13.0 +0.4**
MODS Modra-Piesok 51.52 308 *e*P **P 04 11 15.9 +0.2**
MODS Modra-Piesok 51.52 308 *e*P **P 04 11 15.9 +0.2**
VRAC Vranov 51.79 309 LR LR 04 36 38.7
comp=Z,104nm,19.1s,baz=72,slow=40
VRAC Vranov 51.79 309 *e*P **P 04 11 18.3 +0.6**
KRUC Moravsky 51.96 309 *e*P **P 04 11 18.6 -0.4**
HFS Hagfors 52.03 323 P **P 04 11 18.8 -0.4**
comp=Z,5.7nm,0.8s,baz=101,slow=7.7,SNR=5.3
HFS LR LR 04 34 46.8
comp=Z,157nm,19.1s,baz=356,slow=38
comp=Z,5.7nm,0.8s
CONA Conrad Observa 52.54 307 *i* P **P 04 11 22.8 -0.6**
comp=Z,3.0nm,0.8s
NB2 NORSAR Subarra 53.17 324 P **P 04 11 26.9 -0.9**
comp=Z,2.1nm,0.9s,baz=84,slow=7.4
NOA NORSAR Array B 53.17 324 P **P 04 11 27.2 -0.6**
comp=Z,5.0nm,1.0s,baz=84,slow=7.3,SNR=5.6
NOA LR LR 04 34 38.5
comp=Z,92nm,19.6s,baz=295,slow=37
comp=Z,5.0nm,1.0s
SOKA Soboth 53.37 306 *e*P **P 04 11 29.6 +0.1**
comp=Z,3.6nm,0.9s
MOA Molln 53.60 308 *e*P **P 04 11 32.6 +1.4**
comp=Z,4.1nm,0.9s
CLL Collm 53.66 312 *i* P **P 04 11 33.8 +2.3**
CLL Collm 53.66 312 *i* P **P 04 11 33.8 +2.3**
CLL AMS AMS 04 37 00.0
comp=Z,100nm,19.7s
OBKA Obir 53.73 306 *ep*P **P 04 11 34.5 +2.3**
comp=Z,3.4nm,1.1s
GEC2 GERESS Array S 53.75 309 **P 04 11 31.9 -0.3**
GEC2 IAmb IAmb 04 11 35.8
comp=Z,7.2nm,1.1s
GERES GERESS Array B 53.75 309 P **P 04 11 32.5 +0.2**
comp=Z,2.4nm,0.9s,baz=86,slow=7.2,SNR=11
GERES LR LR 04 37 36.9
comp=Z,141nm,18.6s,baz=74,slow=40
comp=Z,2.4nm,0.9s

LESA Schwarzleotal 54.75 307 *i* P **P 04 11 40.6 +1.0**
comp=Z,3.3nm,0.7s
WATA Walderalm 55.50 307 *ep*P **P 04 11 46.7 +1.7**
comp=Z,2.1nm,0.5s
MOTA Moosalm 55.80 308 *e*P **P 04 11 48.0 +0.7**
comp=Z,5.4nm,1.3s
RETA Reutte 55.99 308 *e*P **P 04 11 48.0 -0.5**
comp=Z,6.2nm,1.5s
FETA Feichten 56.14 307 *i* P **P 04 11 49.3 -0.4**
comp=Z,5.7nm,1.6s
VAE Valguarnera 56.50 295 LR LR 04 39 46.1
comp=Z,103nm,18.2s,baz=294,slow=40
DAVOX Davos/Dischmat 56.76 307 LR LR 04 38 40.5
comp=Z,119nm,18.0s,baz=59,slow=39
BATI Baumata 57.16 134 LR LR 04 38 29.2
comp=Z,44nm,20.2s,baz=320,slow=38
WLF Walferdange 58.31 311 *d*P **P 04 12 05.0 +0.3**
comp=Z,5.8nm,1.0s
BMRD Maredsous 58.97 312 *d*P **P 04 12 09.5 +0.1**
BMRD *d*PcP **PcP 04 12 58.8 +0.5**
DOU Dourbes 59.14 312 *d*P **P 04 12 11.1 +0.6**
DOU *d*PcP **PcP 04 12 59.6 +0.5**
EKA Eskdalemuir Ar 61.87 320 P **P 04 12 28.6 -0.5**
comp=Z,7.0nm,1.1s,baz=66,slow=8.6,SNR=3.2
comp=Z,7.0nm,1.1s
MBAR Mbarara 62.08 248 LR LR 04 39 23.5
comp=Z,30nm,20.3s,baz=2.0,slow=36
MBAR Mbarara 62.08 248 *ce*P **P 04 12 31.5 +0.2**
MBAR pmax pmax
comp=Z,5.0nm,1.0s
PSA00 Pilbara Seismi 64.48 145 **P 04 12 46.2 -0.6**
PSA00 IAmb IAmb 04 12 46.9
comp=Z,6.2nm,1.1s
KNRA Kununurra 64.50 133 **P 04 12 46.4 -0.6**
FITZ Fitzroy Crossi 64.61 137 P **P 04 12 47.5 -0.1**
comp=Z,3.8nm,0.6s,baz=338,slow=4.6,SNR=9.7
comp=Z,3.8nm,0.6s
C16K Lisburne Hills 64.98 23 **P 04 12 49.2 -0.3**
C16K IAmb IAmb 04 12 53.0
comp=Z,4.4nm,0.8s
B20K Meade River 66.47 20 **P 04 12 58.6 -0.4**
B20K IAmb IAmb 04 13 02.4
comp=Z,4.7nm,0.8s
E18K Tukpahlearik C 66.96 23 **P 04 13 02.5 +0.3**
E18K IAmb IAmb 04 13 05.9
comp=Z,3.8nm,0.8s
B22K Teshekpuk Lake 67.26 18 **P 04 13 03.4 -0.6**
B22K IAmb IAmb 04 13 04.9
comp=Z,4.6nm,0.9s
F17K Baldwin Pennin 67.31 24 **P 04 13 04.5 +0.1**
G16K Koyuk River 67.53 25 **P 04 13 05.6 -0.3**
G16K IAmb IAmb 04 13 09.9
comp=Z,4.8nm,0.9s
ESDC Sonseca Array 68.80 304 P **P 04 13 13.6 -0.8**
comp=Z,1.8nm,0.9s,baz=48,slow=6.6,SNR=6.3
ESDC LR LR 04 49 20.6
comp=Z,49nm,19.1s,baz=8.5,slow=41
comp=Z,1.8nm,0.9s
I17K Unalakleet 68.98 26 **P 04 13 14.5 -0.5**
I17K IAmb IAmb 04 13 19.1
comp=Z,5.0nm,0.8s
G21K Allakaket 69.72 22 **P 04 13 19.3 -0.2**
G21K IAmb IAmb 04 13 22.3
comp=Z,3.4nm,0.8s
E23K Chandalar 69.80 19 **P 04 13 20.2 +0.1**
E23K IAmb IAmb 04 13 22.7
comp=Z,4.6nm,1.0s
E24K Your Creek 70.09 19 **P 04 13 21.5 -0.4**
E24K IAmb IAmb 04 13 25.1
comp=Z,3.1nm,0.7s
C27K Jago River 70.16 16 **P 04 13 22.3 +0.1**
C27K IAmb IAmb 04 13 25.8
comp=Z,4.5nm,0.8s
COLD Coldfoot 70.21 20 **P 04 13 21.9 -0.6**
COLD IAmb IAmb 04 13 25.8
comp=Z,5.3nm,0.9s
K17K Iditarod 70.55 26 **P 04 13 25.0 +0.4**
WB0 Warramunga Arr 71.06 132 P **P 04 13 28.2 -0.2**
WRA Warramunga Arr 71.16 132 P **P 04 13 28.9 0.0**
comp=Z,5.6nm,0.6s,baz=325,slow=6.1,SNR=37
comp=Z,5.6nm,0.6s
WRA Warramunga Arr 71.16 132 **P 04 13 28.0 -1.0**
WRA Warramunga Arr 71.16 132 P **P 04 13 29.0 0.0**
WRAB Tennant Creek 71.16 132 *ce*P **P 04 13 29.5 +0.6**
WRAB pmax pmax
comp=Z,12nm,1.3s
F25K Christian Rive 71.19 18 **P 04 13 28.4 -0.2**
F25K IAmb IAmb 04 13 32.3
comp=Z,2.9nm,0.8s
WR8 Warramunga Arr 71.27 132 **P 04 13 30.0 +0.4**
A36M Sachs Harbour 71.65 10 **P 04 13 31.2 +0.1**
L19K White Mountain 72.12 25 **P 04 13 34.2 -0.1**
E29M Blow River 72.45 16 **P 04 13 35.3 -0.8**
PRP Porcupine Dome 72.76 20 **P 04 13 37.5 -0.6**
PRP IAmb IAmb 04 13 42.6
comp=Z,4.1nm,1.0s
ILAR Eielson Array 72.91 21 P **P 04 13 38.2 -0.6**
comp=Z,3.1nm,0.9s,baz=311,slow=5.1,SNR=34
ILAR PP **PP 04 16 18.8 -1.7**
comp=Z,2.3nm,0.9s,baz=315,slow=8.6,SNR=15
comp=Z,3.1nm,0.9s
ILAR Eielson Array 72.91 21 P **P 04 13 37.6 -1.3**
ILAR **PP 04 16 18.6 -1.9**
ILAR Eielson Array 72.91 21 P **P 04 13 37.6 -1.3**
ILAR 04 16 18.6
F30M Barrier River 73.55 15 **P 04 13 42.5 -0.1**
F30M IAmb IAmb 04 13 43.5
comp=Z,7.0nm,0.9s
AS31 Alice Springs 73.72 135 **P 04 13 43.7 -0.5**
ASAR Alice Springs 73.72 135 P **P 04 13 44.3 +0.1**
comp=Z,6.4nm,0.9s,baz=319,slow=6.0,SNR=46
comp=Z,6.4nm,0.9s
ASAR Alice Springs 73.72 135 P **P 04 13 44.4 +0.2**
I27K Kandik River 73.76 19 **P 04 13 43.8 -0.2**
I27K IAmb IAmb 04 14 11.8
comp=Z,5.8nm,1.4s
F31M Tsiigehtchic 74.13 15 **P 04 13 45.5 -0.5**
F31M IAmb IAmb 04 13 45.9
comp=Z,3.7nm,0.9s
C36M Paulatuk 74.21 11 **P 04 13 45.0 -1.4**
C36M IAmb IAmb 04 13 48.7
comp=Z,7.6nm,1.1s
RIDG Independent Ri 74.28 21 **P 04 13 45.9 -1.1**
RIDG IAmb IAmb 04 13 49.3
comp=Z,6.8nm,0.8s
I28M Miner Creek 74.31 18 **P 04 13 46.7 -0.5**
SCRK Sand Creek 74.35 20 **P 04 13 46.8 -0.7**
SCRK IAmb IAmb 04 13 50.3
comp=Z,6.7nm,1.0s
H31M Peel River 75.37 16 **P 04 13 52.4 -0.8**
H31M IAmb IAmb 04 14 04.1
comp=Z,3.7nm,0.9s
I30M Mount Dempster 75.38 17 **P 04 13 52.6 -0.8**
I30M IAmb IAmb 04 13 56.0
comp=Z,5.8nm,0.8s
BCAR Beaver Creek A 75.69 20 **P 04 13 54.8 -0.3**
KDAK Kodiak Island 75.94 28 P **P 04 13 56.6 +0.1**
comp=Z,5.2nm,0.7s,baz=315,slow=8.6,SNR=2.5
comp=Z,5.2nm,0.7s
KDAK Kodiak Island 75.94 28 P **P 04 13 56.0 -0.5**
KDAK Kodiak Island 75.94 28 P **P 04 13 56.0 -0.5**
KDAK pmax pmax
comp=Z,20nm,1.3s
N25K Chitina, Valde 75.97 22 **P 04 13 56.4 -0.4**
N25K IAmb IAmb 04 14 00.5
comp=Z,5.5nm,0.8s
K29M Barlow Dome 76.23 18 **P 04 13 57.7 -0.6**
K29M IAmb IAmb 04 14 01.4
comp=Z,4.6nm,0.8s
TORD Torodi Ar. Bea 77.81 278 P **P 04 14 06.9 -1.0**
comp=Z,2.8nm,0.8s,baz=42,slow=2.8,SNR=14
comp=Z,2.8nm,0.8s
TORD Torodi Ar. Bea 77.81 278 P **P 04 14 07.2 -0.6**
TORD IAmb IAmb 04 14 07.6
comp=Z,2.6nm,0.8s
HYT Haines Junctio 78.70 20 **P 04 14 12.5 +0.3**
HYT IAmb IAmb 04 14 13.7
comp=Z,6.6nm,0.9s
YKAW3 Yellowknife Wh 81.94 9 **P 04 14 28.8 -0.6**
YKAW3 IAmb IAmb 04 14 30.0
comp=Z,8.4nm,1.4s
YKA Yellowknife Ar 82.01 9 P **P 04 14 28.7 -1.1**
comp=Z,1.2nm,1.0s,baz=339,slow=5.7,SNR=13
comp=Z,1.2nm,1.0s
YKA Yellowknife Ar 82.01 9 P **P 04 14 28.2 -1.5**
YKAW1 Yellowknife Wh 82.03 9 **P 04 14 29.3 -0.6**

DLBC Dease Lake 82.75 18 P **P 04 14 34.4 +0.6**
comp=Z,1.9nm,0.8s,baz=302,slow=0.7,SNR=3.6
comp=Z,1.9nm,0.8s
STKA Stephens Creek 84.36 135 P **P 04 14 41.8 -0.5**
comp=Z,5.7nm,0.9s,baz=11,slow=5.2,SNR=7.1
comp=Z,5.7nm,0.9s
STKA Stephens Creek 84.36 135 P **P 04 14 41.6 -0.5**
STKA Stephens Creek 84.36 135 P **P 04 14 41.7 -0.5**
STKA pmax pmax
comp=Z,42nm,1.1s
DBIC Dimbokro 86.75 276 P **P 04 14 53.8 -0.9**
comp=Z,6.9nm,0.9s,baz=82,slow=2.5,SNR=4.2
comp=Z,6.9nm,0.9s
DBIC Dimbokro 86.75 276 P **P 04 14 54.1 -0.5**
DBIC Dimbokro 86.75 276 P **P 04 14 54.1 -0.5**
DBIC pmax pmax
comp=Z,25nm,1.5s
DZM Mont Dzumac 94.99 113 LR LR 05 01 16.3
comp=Z,35nm,18.1s,baz=356,slow=37
TXAR Lajitas Array 115.93 9 PKP **PKiKP 04 20 51.3 -2.0**
comp=Z,0.5nm,0.9s,baz=8.7,slow=3.0,SNR=1.6
TXAR Lajitas Array 115.93 9 **PKiKP 04 20 49.9 -3.4**
NVL N'lazarevskaya 117.09 201 PKIKP **PKPdf 04 20 53.1 -0.9**
QSPA South Pole Qui 124.24 180 PKP **PKPdf 04 21 05.1 -2.8**
comp=Z,0.9nm,0.8s,baz=321,slow=3.9,SNR=2.1
SIV San Ignacio 145.00 293 PKP **PKPbc 04 21 46.5 -0.7**
comp=Z,5.0nm,0.7s,baz=80,slow=3.1,SNR=29
CPUP Villa Florida 147.25 274 PKPbc **PKPdf 04 21 52.7 +1.3**
comp=Z,2.7nm,0.9s,baz=72,slow=8.9,SNR=7.6
CPUP Villa Florida 147.25 274 **PKPdf 04 21 52.1 +0.6**
LPAZ La Paz 150.38 301 PKPbc **PKPdf 04 22 00.2 +2.6**
comp=Z,1.7nm,0.8s,baz=348,slow=5.3,SNR=6.0
LPAZ La Paz 150.38 301 **PKPbc 04 22 01.1 -1.6**
LPAZ La Paz 150.38 301 PKIKP **PKPbc 04 22 01.2 -1.6**
CFA Coronel Fontan 158.00 270 PKPab **PKPab 04 22 38.7 -1.8**
comp=Z,0.3nm,0.3s,baz=42,slow=6.3,SNR=4.4

IDC ***17*** *04:14:16.7±1.1, 44.32N×129.71W, h0km, mb3.8/12, mbtmp3.8/17, ML3.4/5, MS3.5/18, Error ellipse: s-maj=27.9km s-min=12.8km az=38.0*
NEIC ***17*** *04:14:18.5±1.1, 44.41N±0.09×129.5W±0.1, h10km±1km, mb4.2/48, ML3.3/50, Error ellipse: s-maj=18.2km s-min=11.6km az=232.0*
ISC 17 04:14:19.8±0.6, 44.50N±0.07×129.21W±0.08, h10km, n372, σ1s75/328, mb4.1/12, MS3.5/10, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
I02E	**Swisshome, OR**	**3.87**	**94**	Pn	**Pn**	**Pn**	**04 15 20.4**	**+1.0**
I02E				IAML			04 16 13.1	
	comp=E,40nm,3.4s							
J01E	**Myrtle Point**	**4.05**	**107**	Pn	**Pn**	**Pn**	**04 15 22.6**	**+0.8**
J01E				IAML			04 17 43.0	
	comp=E,39nm,3.9s							
COR	**Corvallis**	**4.23**	**87**			**Pn**	**04 15 25.3**	**+1.0**
COR				IAML			04 16 41.1	
	comp=E,38nm,2.5s							
COR				IAML			04 16 48.2	
	comp=E,38nm,2.3s							
F03A	**Seaside**	**4.24**	**68**			**Pn**	**04 15 25.7**	**+1.2**
RADR	**Rader Ridge**	**4.27**	**61**	Pn	**Pn**	**Pn**	**04 15 25.8**	**+0.9**
RADR				IAML			04 16 04.1	
	comp=E,34nm,1.6s							
RADR				IAML			04 16 41.2	
	comp=N,35nm,1.8s							
G03D	**McMinnville, O**	**4.29**	**78**			**Pn**	**04 15 26.9**	**+1.8**
G03D				IAML			04 16 28.6	
	comp=E,36nm,1.9s							
G03D				IAML			04 16 34.7	
	comp=N,30nm,1.9s							
KBO	**Bosley Butte**	**4.29**	**120**	Pn	**Pn**	**Pn**	**04 15 26.9**	**+1.7**
I03D	**Drain, OR**	**4.30**	**99**			**Pn**	**04 15 25.8**	**+0.5**
K02D	**Willamette Mer**	**4.41**	**112**			**Pn**	**04 15 26.7**	**-0.2**
K02D				IAML			04 17 45.4	
	comp=N,28nm,3.7s							
BUCK	**Buck Mountain**	**4.48**	**92**			**Pn**	**04 15 29.1**	**+1.3**
BUCK				IAML			04 17 58.3	
	comp=E,43nm,3.0s							
BUCK				IAML			04 17 58.8	
	comp=N,34nm,3.5s							
WISH	**Wishkah**	**4.62**	**54**			**Pn**	**04 15 31.8**	**+2.2**
H04D	**Lebanon**	**4.63**	**87**			**Pn**	**04 15 31.4**	**+1.5**
H04D				IAML			04 16 14.9	
	comp=N,33nm,2.7s							
H04D				IAML			04 16 59.3	
	comp=E,38nm,2.1s							
NLWA	**Neilton Lookou**	**4.72**	**50**			**Pn**	**04 15 32.3**	**+1.3**
NLWA				IAML			04 16 48.7	
	comp=E,20nm,2.5s							
NLWA				IAML			04 17 45.2	
	comp=E,19nm,4.7s							
C03A	**Quillayute Air**	**4.72**	**41**	Pn	**Pn**	**Pn**	**04 15 33.5**	**+2.5**
L02F	**Cave Junction**	**4.75**	**118**			**Pn**	**04 15 32.1**	**+0.6**
L02F				IAML			04 16 54.7	
	comp=E,19nm,3.9s							
G04A	**Mulino**	**4.84**	**79**			**Pn**	**04 15 35.3**	**+2.6**
I04A	**Tendick Farm,**	**4.95**	**96**			**Pn**	**04 15 35.0**	**+0.8**
I04A				IAML			04 16 59.2	
	comp=E,22nm,3.1s							
BBOR	**Butler Butte**	**5.00**	**107**			**Pn**	**04 15 35.7**	**+0.6**
H04A	**Detroit Lake**	**5.02**	**85**			**Pn**	**04 15 36.5**	**+1.3**
H04A				IAML			04 16 24.6	
	comp=E,15nm,1.7s							
H04A				IAML			04 16 37.6	
	comp=N,15nm,1.4s							
J04A	**Umpqua Nationa**	**5.29**	**101**			**Pn**	**04 15 41.6**	**+2.6**
B04A	**Port Angeles**	**5.32**	**46**			**Pn**	**04 15 41.6**	**+2.3**
GNW	**Green Mountain**	**5.40**	**53**			**Pn**	**04 15 42.3**	**+1.9**
HOOD	**Mount Hood Mea**	**5.43**	**79**			**Pn**	**04 15 42.8**	**+1.8**
YBH	**Yreka Blue Hor**	**5.50**	**118**	Pn	**Pn**	**Pn**	**04 15 44.8**	**+2.8**
	baz=320,slow=9.2,SNR=7.6							
YBH	**Yreka Blue Hor**	**5.50**	**118**			**Pn**	**04 15 44.9**	**+3.0**
L04D	**Klamath Falls**	**5.53**	**112**			**Pn**	**04 15 44.3**	**+2.0**
CLRS	**Cowichan Lake**	**5.56**	**37**			**Pn**	**04 15 44.9**	**+2.3**
M02C	**Callahan**	**5.61**	**121**			**Pn**	**04 15 47.1**	**+3.9**
I05D	**Terrebonne, OR**	**5.64**	**89**			**Pn**	**04 15 44.5**	**+0.7**
LON	**Longmire**	**5.66**	**64**			**Pn**	**04 15 44.2**	**+0.2**
G05A	**Wamic**	**5.66**	**80**			**Pn**	**04 15 46.4**	**+2.4**
D05A	**Enumclaw**	**5.72**	**59**			**Pn**	**04 15 47.6**	**+2.9**
PGC	**Sidney**	**5.75**	**42**			**Pn**	**04 15 46.8**	**+1.8**
KHBM	**Hayfork Bally**	**5.86**	**129**	Pn		**Pn**	**04 15 50.6**	**+3.7**
PINE	**Pine Mountain**	**5.99**	**94**			**Pn**	**04 15 51.6**	**+2.9**
CBB	**Campbell River**	**6.12**	**24**			**Pn**	**04 15 52.9**	**+2.6**
M03C	**McCloud**	**6.12**	**119**			**Pn**	**04 15 53.1**	**+2.6**
G06A	**Carlson Farm,**	**6.14**	**80**			**Pn**	**04 15 52.1**	**+1.5**
K05A	**Summer Lake**	**6.29**	**103**			**Pn**	**04 15 55.3**	**+2.5**
LTY	**Liberty**	**6.57**	**62**			**Pn**	**04 15 58.1**	**+1.6**
MXC	**Moxie City**	**6.60**	**69**			**Pn**	**04 15 58.5**	**+1.7**
E07A	**Sunnyside**	**6.89**	**69**			**Pn**	**04 16 03.0**	**+2.1**
O03E	**Paynes Creek**	**6.91**	**125**			**Pn**	**04 16 04.7**	**+3.5**
I07A	**Izee**	**6.98**	**90**			**Pn**	**04 16 03.4**	**+1.2**
HAWA	**Hanford**	**7.07**	**71**			**Pn**	**04 16 04.5**	**+1.2**
WAH2	**Wahluke Slope**	**7.13**	**68**			**Pn**	**04 16 05.0**	**+0.9**
EPH	**Ephrata**	**7.29**	**64**			**Pn**	**04 16 09.3**	**+3.0**
G08A	**Pilot Rock**	**7.33**	**80**			**Pn**	**04 16 07.8**	**+0.8**
E08A	**Dider Farm, El**	**7.41**	**71**			**Pn**	**04 16 09.6**	**+1.7**
ORV	**Oroville**	**7.57**	**128**			**Pn**	**04 16 12.7**	**+2.5**
D08A	**Wollman Farm,**	**7.64**	**67**			**Pn**	**04 16 12.4**	**+1.3**
BBB	**Bella Bella**	**7.73**	**5**	Pn		**Pn**	**04 16 14.5**	**+2.2**
	comp=N,0.3nm,0.3s,baz=203,slow=4.6,SNR=6.4							
BBB				LR		LR	04 18 52.9	
	comp=N,276nm,18.5s,baz=176,slow=35							
	comp=N,17nm,1.1s							
J08A	**Circle Bar Ran**	**7.84**	**95**			**Pn**	**04 16 16.8**	**+2.8**
B08A	**Colville Reser**	**7.84**	**57**			**Pn**	**04 16 17.4**	**+3.4**
LLLB	**Lillooet**	**7.87**	**36**			**Pn**	**04 16 16.0**	**+1.7**
WVOR	**Wild Horse Val**	**7.96**	**101**			**Pn**	**04 16 16.9**	**+1.2**
E09A	**Wood Farm, Sta**	**8.03**	**72**			**Pn**	**04 16 18.1**	**+1.6**
C09A	**Chrisman Ranch**	**8.28**	**63**			**Pn**	**04 16 21.7**	**+1.8**
AFDM	**Forest Hills D**	**8.29**	**129**			**Pn**	**04 16 21.9**	**+1.9**
NEW	**Newport**	**9.16**	**61**	Pn		**Pn**	**04 16 36.3**	**+4.3**
	comp=N,0.2nm,0.3s,baz=249,slow=8.2,SNR=5.6							
NEW				LR		LR	04 20 04.5	
	comp=N,471nm,21.3s,baz=270,slow=36							
	comp=N,1.4nm,0.7s							
NEW	**Newport**	**9.16**	**61**			**Pn**	**04 16 33.6**	**+1.5**
NVAR	**Mina Array Bea**	**10.18**	**123**	Pn		**Pn**	**04 16 49.8**	**+3.6**
	comp=N,0.1nm,0.3s,baz=290,slow=13,SNR=8.0							
	comp=N,1.9nm,0.9s							
NVAR	**Mina Array Bea**	**10.18**	**123**			**Pn**	**04 16 46.2**	**0.0**
V35K	**Ketchikan**	**10.95**	**353**	P		Pn	04 17 01.5	+5.2
	baz=172							

ELK Elko 10.96 105 Pn **Pn** **04 17 01.2 +4.4**
comp=N,0.1nm,0.3s,baz=289,slow=14,SNR=5.5
ELK LR LR 04 20 52.6
comp=N,163nm,18.5s,baz=295,slow=35
comp=N,3.8nm,1.1s
ELK Elko 10.96 105 Pn 04 16 56.1 -0.7
CRAG Craig 11.26 349 P Pn 04 17 05.0 +4.3
baz=167
U33K Whale Pass 11.89 349 P Pn 04 17 13.9 +4.6
baz=167
WRAK Wrangell Islan 12.10 352 P Pn 04 17 16.5 +4.5
baz=170
T35M Bob Quinn 12.52 357 P Pn 04 17 22.9 +5.0
baz=178
SIT Sitka 13.15 345 P **Pn** **04 17 29.7 +3.3**
baz=161
S32K Killisnoo 13.41 347 P P 04 17 34.6 -4.9
baz=164
S34M Telegraph Cree 13.48 356 P **P** **04 17 36.5 -3.8**
baz=175
DLBC Dease Lake 13.97 358 LR LR 04 22 28.2
comp=N,366nm,18.5s,baz=145,slow=35
DLBC Dease Lake 13.97 358 P **P** **04 17 42.5 -3.3**
baz=178
S31K Pelican 14.17 345 P **P** **04 17 45.2 -2.7**
baz=160
R32K Eaglecrest 14.18 348 P **P** **04 17 45.5 -2.5**
baz=165
PDAR Pinedale Array 14.34 90 Pn **P** **04 17 49.5 -0.7**
baz=279,slow=12,SNR=8.0
PDAR LR LR 04 23 27.1
comp=N,235nm,18.8s,baz=276,slow=38
comp=N,2.2nm,1.1s
PDAR Pinedale Array 14.34 90 Pn Pn 04 17 42.4 -0.7
R31K City Hall, Gus 14.50 346 P **P** **04 17 49.4 -2.2**
baz=162
Q32M Nakina River 14.60 354 P **P** **04 17 51.0 -2.0**
baz=172
PFO Pinyon Flats O 14.69 133 LR LR 04 23 34.7
comp=N,113nm,18.4s,baz=232,slow=38
P18A Preston Nutter 14.90 102 P 04 17 54.3 -2.2
P18A IAmb IAmb 04 18 06.2
comp=Z,6.7nm,1.1s
SRU San Rafael Swe 14.93 105 P 04 17 54.7 -2.1
R33M Jennings River 14.96 357 P **P** **04 17 54.7 -2.2**
baz=176,SNR=8.7
RDMU Red Mountain 15.00 98 Pn Pn 04 17 54.2 +2.2
RDMU IAmb IAmb 04 18 00.9
comp=Z,13nm,1.3s
U15A North Rim 15.18 116 Pn Pn 04 17 56.7 +2.3
U15A IAmb IAmb 04 18 33.4
comp=Z,19nm,1.3s
HMU Henry Mountain 15.35 109 Pn Pn 04 17 57.3 +0.5
P32M Atlin 15.36 351 P **P** **04 18 00.6 -0.6**
baz=168
SKAG Skagway 15.44 348 P **P** **04 18 01.8 -0.2**
baz=164
BLYC Blythe 15.63 128 Pn Pn 04 17 58.6 -1.6
BLYC IAmb IAmb 04 18 12.9
comp=Z,23nm,1.4s
WTLY Watson Lake, Y 15.64 1 P **P** **04 18 03.6 -0.7**
baz=182
P33M Teslin, Yukon 15.89 353 P **P** **04 18 07.0 -0.1**
baz=171
KOTAN Kotaneelee Air 15.96 9 P **P** **04 18 08.2 +0.4**
baz=194
O20A White River Ci 16.10 98 Pn Pn 04 18 06.5 +0.1
O20A IAmb IAmb 04 18 19.1
comp=Z,19nm,1.0s
LAO LASA Array 16.23 74 Pn 04 18 10.1 +2.3
LAO IAmb IAmb 04 18 40.3
comp=Z,16nm,1.2s
PV23 Carpenter Ridg 16.28 105 Pn Pn 04 18 09.7 +0.9
WUAZ Wupatki 16.32 117 Pn 04 18 10.6 +1.4
P30M Million Dollar 16.33 346 P **P** **04 18 13.8 +1.8**
baz=161
Y14A Wickenburg 16.37 125 Pn Pn 04 18 09.1 -0.6
K22A Casper 16.54 88 Pn Pn 04 18 12.2 +0.3
WHY Whitehorse 16.54 350 Pn Pn 04 18 10.3 -1.4
WHY IAmb IAmb 04 18 18.6
comp=Z,24nm,1.4s
WHY Whitehorse 16.54 350 P **P** **04 18 15.6 +1.2**
baz=166
HAYD Hayden 16.66 96 Pn Pn 04 18 14.1 +0.6
HAYD IAmb IAmb 04 18 26.1
comp=Z,44nm,1.5s
PV15 Paradox Valley 16.70 104 Pn Pn 04 18 14.1 0.0
PV15 IAmb IAmb 04 18 21.9
comp=Z,24nm,1.3s
113A Mohawk Valley, 16.78 129 Pn 04 18 14.9 0.0
O29M Mount Kennedy 16.80 344 P **P** **04 18 19.0 +1.7**
baz=157
O30N Mendenhall 16.81 348 P **P** **04 18 18.2 +1.0**
baz=164
PINM Pinnacle 16.98 341 P **P** **04 18 20.1 +1.0**
baz=153
X16A Lo Mia Camp, P 16.99 120 P 04 18 19.0 -0.6
TGTN Hyland Airport 17.07 2 P **P** **04 18 20.8 +0.7**
baz=183
HYT Haines Junctio 17.08 346 P **P** **04 18 20.8 +0.4**
baz=160
MVCO Mesa Verde 17.25 108 P 04 18 22.3 -0.3
MVCO IAmb IAmb 04 19 00.1
comp=Z,37nm,1.5s
YUK6 Outpost Mounta 17.35 345 P **P** **04 18 25.2 +1.8**
baz=158,SNR=6.3
N31M Braeburn, Yuko 17.45 349 P **P** **04 18 26.5 +2.1**
baz=165
MESA MESA 17.47 338 P **P** **04 18 25.5 +0.7**
baz=149
O28M Mount Upton 17.57 342 P **P** **04 18 27.7 +1.9**
baz=154
N30M Aishikik Lake 17.61 347 P **P** **04 18 27.7 +1.5**
baz=162
YUK4 Talbot Arm 17.77 345 P **P** **04 18 31.0 +2.9**
baz=158
X18A Snowflake 17.85 117 Pn 04 18 27.9 -0.5
YUK8 Steele Glacier 17.94 343 P **P** **04 18 31.5 +1.5**
baz=156
KAIM Kayak Island 17.97 335 Pn 04 18 27.3 -2.2
KAIM Kayak Island 17.97 335 P **P** **04 18 31.9 +1.9**
baz=143
M31M Drury Creek, Y 17.99 352 P **P** **04 18 32.0 +1.7**
baz=169
CTG Chitna Glacier 18.00 341 P **P** **04 18 31.6 +1.0**
baz=152
ISCO Idaho Springs 18.10 97 Pn 04 18 32.1 +0.5
BARN Barnard Glacie 18.16 340 Pn 04 18 29.6 -2.4
CRQE Cirque 18.26 338 P **P** **04 18 35.0 +1.6**
baz=148
CRQM Cirque 18.28 338 Pn 04 18 31.1 -2.4
CRQM IAmb IAmb 04 18 42.2
comp=Z,36nm,1.4s
YUK3 Moose Creek 18.52 343 P **Pn** **04 18 37.9 +1.4**
baz=155
M30M Minto, Yukon 18.64 349 P **Pn** **04 18 38.5 +0.8**
baz=164
M29M Somme Creek 18.77 347 P **Pn** **04 18 41.0 +1.6**
baz=160
MCARA McCarthy VSAT 18.78 339 P **Pn** **04 18 40.8 +1.4**
baz=149
BMRM Bremner River 18.86 336 P **Pn** **04 18 42.3 +1.8**
baz=145
EYAK Cordova Ski Ar 18.87 334 P **Pn** **04 18 42.5 +2.0**
baz=142
P23K Montague Islan 19.00 331 P **Pn** **04 18 44.8 +2.8**
baz=137
WRGLY Wrigley 19.05 8 Pn **Pn** **04 18 42.8 +0.1**
WRGLY IAmb IAmb 04 18 48.3
comp=Z,33nm,1.5s
WRGLY Wrigley 19.05 8 P **Pn** **04 18 43.0 +0.3**
baz=193
BVCY Beaver Creek 19.18 343 P **Pn** **04 18 46.1 +1.7**
baz=155
L29M L29M 19.34 348 P **P** **04 18 43.8 -1.3**
L29M L29M 19.34 348 P **Pn** **04 18 47.4 +1.2**
baz=161
M27K Edge Creek, AK 19.35 342 P **Pn** **04 18 47.8 +1.4**
baz=152
N25K Chitina, Valde 19.38 338 P **Pn** **04 18 48.2 +1.5**
baz=146
MAYO Mayo, Yukon 19.51 351 P Pn 04 18 47.1 -1.1
GLI Glacier Island 19.55 333 P **P** **04 18 46.0 -1.4**
GLI IAmb IAmb 04 19 20.2
comp=Z,12nm,1.2s
GLI Glacier Island 19.55 333 P **Pn** **04 18 49.9 +1.3**
baz=140
M26K Nabesna, AK 19.64 341 P Pn 04 18 51.4 +1.6
baz=150
KDAK Kodiak Island 19.66 321 LR LR 04 24 14.7
comp=Z,144nm,20.0s,baz=127,slow=31
KLU Klutina 19.66 336 P **Pn** **04 18 52.1 +2.0**
baz=143
DUN6 Lazy B Ranch 19.69 120 P P 04 18 46.3 -3.0
OHAK Old Harbor 19.69 319 P **Pn** **04 18 52.6 +2.3**
baz=121
SEW Seward 19.80 329 P **Pn** **04 18 53.3 +1.7**
baz=134
ANMO Albuquerque 19.88 111 P Pn 04 18 53.7 +0.7
comp=Z,1.0nm,1.0s,baz=297,slow=11,SNR=5.0
ANMO LR LR 04 26 35.9
comp=Z,112nm,22.0s,baz=302,slow=37
comp=Z,1.0nm,1.0s
YKA Yellowknife Ar 19.92 20 P Pn 04 18 52.8 -0.2
comp=Z,1.2nm,0.8s,baz=220,slow=12,SNR=19
comp=Z,1.2nm,0.8s
YKA Yellowknife Ar 19.92 20 P P 04 18 51.4 0.0
YKAW1 Yellowknife Wh 19.94 20 P P 04 18 50.7 -0.9
K29M Barlow Dome 19.95 349 P Pn 04 18 53.6 +0.1
baz=163
BCAR Beaver Creek A 19.96 343 P P 04 18 50.2 -1.7
L27K Beaver Creek, 19.96 343 P Pn 04 18 54.3 +0.7
baz=153
YKAW3 Yellowknife Wh 19.98 20 P P 04 18 52.0 0.0
YKAW3 IAmb IAmb 04 19 01.8
comp=Z,10nm,1.4s
LENM Lemitar 20.00 113 P P 04 18 52.2 -0.5
E28A Huff 20.04 74 P P 04 18 51.8 -1.1
BRSE Bradley Lake S 20.05 327 P Pn 04 18 54.7 +0.1
baz=131
T25A Trinidad 20.11 103 P P 04 18 54.9 +0.9
T25A IAmb IAmb 04 19 11.8
comp=Z,13nm,1.2s
O22K Cooper Landing 20.16 330 P Pn 04 18 56.5 +0.6
baz=134
M24K Tolsona, Glenn 20.23 337 Pn Pn 04 18 55.0 -1.7
M24K Tolsona, Glenn 20.23 337 P Pn 04 18 56.7 -0.1
baz=144
L26K Log Cabin Wild 20.27 341 P Pn 04 18 57.4 +0.3
baz=150
HOM Homer 20.35 326 P Pn 04 18 58.6 +0.5
baz=129
SCM Sheep Creek Mo 20.35 335 P Pn 04 18 58.1 -0.1
baz=141
SLKM Skilak Lake 20.36 329 P P 04 18 53.3 -2.9
KNK Knik Glacier 20.39 333 P P 04 18 55.1 -1.4
KNK IAmb IAmb 04 19 14.9
comp=Z,24nm,1.4s
KNK Knik Glacier 20.39 333 P Pn 04 18 58.7 +0.1
baz=138
DAWY Dawson 20.44 347 P Pn 04 18 59.0 -0.2
baz=159
M23K Glacier View 20.44 334 P Pn 04 18 59.3 +0.1
baz=140
J30M Hart River 20.51 351 P Pn 04 18 59.4 -0.8
baz=166
RC01 Rabbit Creek A 20.59 331 P Pn 04 19 01.1 +0.2
baz=135
J29N Klondike Camp 20.63 349 P Pn 04 19 01.2 -0.2
baz=162
SML Sawmill 20.64 334 P Pn 04 19 01.7 +0.1
baz=139
PMR Palmer 20.74 333 P Pn 04 19 02.5 -0.2
baz=137
Q19K Cape Douglas, 20.75 323 P Pn 04 19 03.5 +0.6
baz=124
P19K Oil Pt 20.99 325 P Pn 04 19 06.2 +0.5
baz=126
WAT6 Susitna Watana 21.05 336 P **P** **04 19 06.3 +2.4**
baz=141
I30M Mount Dempster 21.15 352 P **P** **04 19 07.2 +2.4**
baz=166,SNR=5.6
M22K Willow 21.18 332 P **P** **04 19 07.8 +2.7**
baz=136
Q18K Katmai Hardscr 21.21 321 P **P** **04 19 07.2 +1.7**
baz=121
RIDG Independent Ri 21.23 341 P **P** **04 19 08.3 +2.6**
baz=148
SCRK Sand Creek 21.23 342 P **P** **04 19 08.6 +2.8**
baz=150
DHY Denali Highway 21.34 337 P **P** **04 19 07.5 +0.6**
baz=143
Q17K Ceacet Creek 21.42 319 P **P** **04 19 09.7 +1.9**
baz=119
WAT1 Susitna Watana 21.48 335 P **P** **04 19 09.1 +0.8**
baz=140
I29M Ogilvie Camp, 21.50 350 P **P** **04 19 09.4 +0.9**
baz=163
K24K Donnelly Dome 21.51 340 P **P** **04 19 09.4 +0.8**
baz=147
H31M Peel River 21.54 354 P **P** **04 19 09.6 +0.6**
baz=170,SNR=6.8
N20K Mount Spurr 21.55 329 P **P** **04 19 09.8 +0.7**
baz=131,SNR=7.6
SPCR Spurr Chakacha 21.55 329 P **P** **04 19 10.5 +1.4**
baz=131
P18K Big Mountain, 21.69 323 P **P** **04 19 11.9 +1.3**
baz=122
CUT Chulitna 21.70 333 P **P** **04 19 11.3 +0.7**
baz=137
O19K Port Alsworth 21.75 325 P **P** **04 19 11.4 +0.3**
baz=126
I28M Miner Creek 21.82 348 P **P** **04 19 11.8 -0.2**
baz=160
SKT Skwentna 21.82 331 P **P** **04 19 12.4 +0.5**
baz=134
CHGN Chignik 21.86 313 P **P** **04 19 13.6 +1.3**
baz=111
O18K Koktuh Hills 21.93 324 P **P** **04 19 15.2 +2.1**
baz=124
J25K Salcha River, 22.09 341 P **P** **04 19 15.6 +0.7**
baz=149
P17K Kvichak River 22.12 321 P **P** **04 19 17.0 +1.8**
baz=120
N19K Bonanza Creek 22.18 326 P **P** **04 19 16.9 +1.0**
baz=127
I27K Kandik River 22.23 346 P **P** **04 19 16.8 +0.4**
baz=157
I26K Coal Creek Min 22.23 344 P **P** **04 19 17.4 +1.1**
baz=154
MCK McKinley 22.29 337 P **P** **04 19 16.6 -0.4**
baz=141
EPYK Eagle Plains 22.30 352 P **P** **04 19 17.2 +0.2**
baz=166,SNR=10
HDA Harding Lake 22.30 340 P **P** **04 19 16.3 -0.7**
baz=146
M20K Styx River 22.32 330 P **P** **04 19 16.8 -0.6**
baz=131
H29M Whitestone 22.33 350 P **P** **04 19 16.7 -0.7**
baz=163
TRF Thorofare Moun 22.47 335 P **P** **04 19 18.4 -0.7**
baz=138
ILAR Eielson Array 22.58 340 P **P** **04 19 19.7 -0.4**
ILAR LR LR 04 26 40.4
comp=Z,3.2nm,1.1s,baz=151,slow=8.1,SNR=21
comp=Z,139nm,20.2s,baz=147,slow=33
comp=Z,3.2nm,1.1s
ILAR Eielson Array 22.58 340 P 04 19 17.8 -2.3
N18K Kilae Creek 22.67 325 P **P** **04 19 20.9 -0.1**
baz=124,SNR=7.4
PPLA Purkeypile 22.68 332 P **P** **04 19 19.4 -1.9**
baz=134
O17K Koliganek Bris 22.70 322 P **P** **04 19 21.1 -0.2**
baz=120
P16K Nushagak River 22.75 320 P **P** **04 19 24.4 +2.6**
baz=118
H27K Steamboat Moun 22.79 347 P **P** **04 19 22.2 -0.1**
baz=157
G30M tAoh Zraii Nji 22.85 353 P **P** **04 19 23.0 +0.1**
baz=168
PRP Porcupine Dome 22.90 342 P **P** **04 19 25.5 +1.9**
baz=150
G29M Pine Creek 22.96 351 P **P** **04 19 24.9 +0.9**
baz=164
NEA2 Nenana 23.00 338 P **P** **04 19 26.1 +1.7**
baz=142
POKR Poker Plat Res 23.00 340 P **P** **04 19 26.3 +1.8**
baz=146
O16K Kokwok River B 23.06 321 P **P** **04 19 25.0 0.0**
baz=119
M18K Stony River 23.10 327 P **P** **04 19 22.7 -2.8**
baz=126
F31M Tsiigehtchic 23.12 356 P **P** **04 19 27.3 +1.7**
baz=172
N17K Nushagak Hills 23.12 324 P **P** **04 19 24.3 -1.4**
baz=122
L19K White Mountain 23.14 329 P **P** **04 19 21.8 -4.2**
baz=129
BPAW Bear Paw Mtn. 23.16 336 P **P** **04 19 23.6 -2.6**
baz=138
ULM Lac du Bonnet 23.17 64 P **P** **04 19 28.7 +2.4**
comp=Z,6.6nm,1.0s,baz=264,slow=8.5,SNR=6.7
ULM LR LR 04 28 41.3
comp=Z,244nm,18.6s,baz=190,slow=37
comp=Z,6.6nm,1.0s
ULM Lac du Bonnet 23.17 64 P 04 19 26.9 +0.6
ULM IAmb IAmb 04 19 46.8
comp=Z,11nm,1.1s
G27K Doyon Strip 23.34 348 P **P** **04 19 25.5 -2.5**
baz=158
CHUM Lake Minchumin 23.41 334 P **P** **04 19 26.2 -2.4**
baz=136
F30M Barrier River 23.43 354 P **P** **04 19 25.5 -3.3**
baz=169
I23K Minto, Yukon-K 23.51 339 P **P** **04 19 29.6 0.0**
baz=142,SNR=8.1
K20K Telida 23.62 332 P **P** **04 19 28.4 -2.3**
baz=132
O15K Ungalikthiuk R 23.66 319 P **P** **04 19 29.3 -1.9**
baz=115
M17K Holitna River 23.69 326 P **P** **04 19 30.0 -1.5**
baz=123
H24K Noodor Dome 23.70 341 P **P** **04 19 30.1 -1.5**
baz=146
N16K Nishlik Lake 23.78 323 P **P** **04 19 30.8 -1.4**
baz=119
MLY Manley 23.79 337 P **P** **04 19 30.4 -2.0**
baz=140,SNR=5.4
G26K Porcupine Rive 23.82 346 P **P** **04 19 28.4 -4.2**
baz=154
F28M Old Crow 23.85 350 P **P** **04 19 31.0 -1.9**
baz=161
L18K Granite Mounta 23.86 328 P **P** **04 19 30.7 -2.2**
baz=126
INK Inuvik 23.97 356 P **P** **04 19 31.9 -2.1**
baz=173
G25K Bearman Lake 24.10 344 P **P** **04 19 32.3 -2.9**
baz=150
M16K Timber Creek 24.13 324 P **P** **04 19 30.8 -4.8**
baz=120
J20K Nowinta River 24.20 333 P **P** **04 19 33.6 -2.5**
baz=133,SNR=6.7
FALS False Pass 24.20 308 P **P** **04 19 35.9 -0.4**
baz=102
N15K Kwethluk River 24.22 321 P **P** **04 19 37.4 +1.0**
baz=117
I21K Tanana 24.25 337 P **P** **04 19 34.0 -2.7**
baz=138
G24K Hadweenzic Riv 24.33 342 P **P** **04 19 35.1 -2.3**
baz=148
O14K Tigyukauivet M 24.37 319 P **P** **04 19 38.1 +0.3**
baz=114
E29M Blow River 24.38 352 P **P** **04 19 35.7 -2.1**
baz=165
L17K Donlin 24.43 326 P **P** **04 19 38.9 +0.5**
baz=123
F26K Sheenjek River 24.56 346 P **P** **04 19 38.4 -1.1**
baz=154
J19K Poorman 24.56 332 P **P** **04 19 39.3 -0.2**
baz=131,SNR=5.2
J18K Innoko River 24.61 330 P **P** **04 19 39.3 -0.7**
baz=128
E27K Coleen River 24.62 349 P **P** **04 19 39.6 -0.4**
baz=159,SNR=6.8
H22K Ishtalitna Cre 24.62 338 P **P** **04 19 39.1 -1.0**
baz=140
L16K Owhat River 24.69 325 P **P** **04 19 40.5 -0.2**
baz=121,SNR=6.6
M15K Kasigluk River 24.72 322 P **P** **04 19 39.3 -1.6**
baz=117
I20K Naaghedeneel 24.73 334 P **P** **04 19 40.7 -0.2**
baz=134
F25K Christian Rive 24.73 345 P **P** **04 19 41.1 0.0**
baz=152,SNR=6.8
E28M Babbage River 24.75 351 P **P** **04 19 40.8 -0.4**
baz=163,SNR=6.6
K17K Iditarod 24.76 328 P **P** **04 19 42.1 +0.8**
baz=124
N14K Kuskokwak Cree 24.84 320 P **P** **04 19 44.4 +2.4**
baz=114
H21K Melozitna Rive 24.84 337 P **P** **04 19 42.8 +0.8**
baz=138
G23K Bananza Creek 24.92 340 P **P** **04 19 43.9 +1.1**
baz=143,SNR=8.7
C36M Paulatuk 25.05 4 P **P** **04 19 44.5 +0.7**
baz=189
F24K Squaw Lake 25.11 343 P **P** **04 19 44.0 -0.4**
baz=148
E25K Arctic Village 25.18 346 P **P** **04 19 46.0 +0.9**
baz=152
TXAR Lajitas Array 25.28 118 P **P** **04 19 47.2 +0.8**
comp=Z,0.5nm,0.8s,baz=315,slow=7.5,SNR=6.9
comp=Z,0.5nm,0.8s
TXAR Lajitas Array 25.28 118 P P 04 19 46.0 -0.4
M14K Bethel 25.30 322 P **P** **04 19 44.1 -2.1**
baz=116
H20K Anotleneega Mo 25.33 335 P **P** **04 19 47.7 +1.3**
baz=134
D28M Stokes Point 25.37 352 P **P** **04 19 46.0 -0.7**
baz=164
COLD Coldfoot 25.38 341 P **P** **04 19 45.9 -0.9**
baz=144
J17K VABM Dome 25.43 329 P **P** **04 19 46.3 -1.1**
baz=124
G22K Bettles 25.45 340 P **P** **04 19 44.7 -2.8**
baz=141
GCSA Galena City Sc 25.46 332 P **P** **04 19 46.4 -1.2**
baz=130
D27M Malcolm River 25.53 350 P **P** **04 19 47.5 -0.8**
baz=161
LPIG La Paz 25.54 137 LR LR 04 28 21.2
comp=Z,58nm,18.4s,baz=352,slow=33
G21K Allakaket 25.66 338 P **P** **04 19 50.5 +1.1**
baz=138
E24K Your Creek 25.70 343 P **P** **04 19 48.7 -1.1**
baz=148
M13K Dall Lake 25.80 320 P **P** **04 19 50.9 +0.2**
baz=113
K15K Wolf Creek Mou 25.82 325 P **P** **04 19 52.6 +1.7**
baz=119
H19K Roundabout Mou 25.84 334 P **P** **04 19 52.5 +1.5**
baz=132
UNV Unalaska Valle 25.84 305 P **P** **04 19 55.3 +4.1**
baz=96
L14K Kuka Creek 25.88 322 P **P** **04 19 51.6 +0.3**
baz=116
E23K Chandalar 25.93 343 P **P** **04 19 51.4 -0.5**
baz=146
J16K Anvik River 25.95 327 P **P** **04 19 54.8 +2.7**
baz=122,SNR=7.0
F21K Alatna River 26.18 339 P **P** **04 19 55.5 +1.3**
baz=139
H18K Honhosa River 26.21 332 P **P** **04 19 55.8 +1.4**
baz=128
C27K Jago River 26.25 349 P **P** **04 19 56.2 +1.5**
baz=157
I17K Unalakleet 26.30 329 P **P** **04 19 57.9 +2.7**
baz=123,SNR=5.6
D25K Kavik River 26.39 346 P **P** **04 19 56.7 +0.7**
baz=152
TOLK Toolik Lake Re 26.40 343 P **P** **04 19 55.6 -0.5**
baz=146,SNR=6.5
G19K Purcell Mounta 26.44 335 P **P** **04 19 56.4 -0.1**
baz=132,SNR=7.5
E22K Anaktuvuk Pass 26.48 341 P **P** **04 19 56.4 -0.4**
baz=142
H17K Granite Mounta 26.61 331 P **P** **04 19 59.9 +1.8**
baz=126
F20K Avaraart Lake 26.66 337 P **P** **04 20 00.2 +1.8**
baz=135
D24K Happy Valley 26.68 344 P **P** **04 20 00.4 +1.8**
baz=148
C26K Camden Bay 26.69 348 P **P** **04 20 00.9 +2.2**
baz=155
G18K Tagagawik 26.77 333 P **P** **04 20 00.9 +1.4**
baz=129
J14K Nanvaranak Lak 26.86 325 P **P** **04 20 01.5 +1.2**
baz=117
D23K Nanushuk River 26.90 343 P **P** **04 20 02.5 +2.0**
baz=145
K13K Kusilvak Mount 26.98 323 P **P** **04 20 03.2 +1.9**
baz=114
F19K Shaleruckik Mo 27.10 335 P **P** **04 20 04.4 +2.0**
baz=132

M11K	**Mekoryuk**	**27.11**	**319**	P		**P**	**04 20 02.4**	**-0.1**
	baz=110							
C24K	**Franklin Bluff**	**27.14**	**345**	P		**P**	**04 20 04.6**	**+1.8**
	baz=149							
G17K	**Kiwalik Mounta**	**27.19**	**332**	P		**P**	**04 20 04.6**	**+1.3**
	baz=126							
H16K	**Elim**	**27.28**	**329**	P		**P**	**04 20 05.8**	**+1.8**
	baz=122							
E19K	**Redstone River**	**27.37**	**337**	P		**P**	**04 20 06.3**	**+1.5**
	baz=134							
F18K	**Selawik**	**27.53**	**334**	P		**P**	**04 20 07.6**	**+1.4**
	baz=129							
C23K	**Itkillik River**	**27.60**	**344**	P		**P**	**04 20 08.6**	**+1.8**
	baz=146							
A36M	**Sachs Harbour**	**27.63**	**3**	P		**P**	**04 20 09.5**	**+2.4**
	baz=186							
E20K	**Nigu River**	**27.65**	**339**	P		**P**	**04 20 09.1**	**+1.7**
	baz=136							
G16K	**Koyuk River**	**27.72**	**331**	P		**P**	**04 20 09.5**	**+1.6**
	baz=123							
F17K	**Baldwin Pennin**	**27.94**	**333**	P		**P**	**04 20 09.2**	**-0.7**
	baz=126							
C21K	**Knifeblade Rid**	**27.96**	**341**	P		**P**	**04 20 11.9**	**+1.8**
	baz=139							
D20K	**Etivluk River**	**28.08**	**339**	P		**P**	**04 20 11.8**	**+0.5**
	baz=136							
G15K	**Niukluk**	**28.12**	**329**	P		**P**	**04 20 11.8**	**+0.3**
	baz=120							
B21K	**Ikpikpuk River**	**28.27**	**342**	P		**P**	**04 20 13.5**	**+0.7**
	baz=140							
D19K	**Kuna River**	**28.32**	**338**	P		**P**	**04 20 13.9**	**+0.5**
	baz=134							
E18K	**Tukpahlearik C**	**28.33**	**335**	P		**P**	**04 20 13.8**	**+0.4**
	baz=129							
ANM	**Nome**	**28.42**	**328**	P		**P**	**04 20 14.4**	**+0.2**
	baz=118							
B22K	**Teshekpuk Lake**	**28.58**	**343**	P		**P**	**04 20 16.5**	**+1.0**
	baz=143							
F15K	**North Star Dit**	**28.70**	**330**	P		**P**	**04 20 18.0**	**+1.2**
	baz=121							
C19K	**Lookout Ridge**	**29.13**	**338**	P		**P**	**04 20 22.0**	**+1.4**
	baz=132							
F14K	**Arctic Creek**	**29.20**	**329**	P		**P**	**04 20 21.9**	**+0.7**
	baz=118							
D17K	**Noatak River**	**29.26**	**334**	P		**P**	**04 20 21.8**	**+0.2**
	baz=126							
RDOG	**Red Dog Mine**	**29.42**	**335**	P		**P**	**04 20 23.4**	**+0.4**
	baz=126							
A22K	**Sinclair Lake**	**29.42**	**343**	P		**P**	**04 20 24.2**	**+1.2**
	baz=141							
TNA	**Tin City**	**29.83**	**328**	P		**P**	**04 20 24.2**	**-2.5**
	baz=116							
A21K	**Barrow**	**30.01**	**343**	P		**P**	**04 20 25.8**	**-2.4**
	baz=139							
A19K	**Wainwright**	**30.26**	**339**	P		**P**	**04 20 28.8**	**-1.6**
	baz=132							
C16K	**Lisburne Hills**	**30.29**	**334**	P		**P**	**04 20 29.3**	**-1.4**
	baz=124							
GAMB	**Gambell**	**30.66**	**324**	P		**P**	**04 20 32.3**	**-1.7**
	baz=109							
SADO	**Sadowa**	**35.17**	**71**	LR		LR	04 35 54.5	
	comp=Z,238nm,18.6s,baz=303,slow=36							
TKL	**Tuckaleechee C**	**35.48**	**88**	LR		LR	04 36 22.9	
	comp=Z,372nm,18.0s,baz=328,slow=37							
CMIG	**Matias Romero**	**39.72**	**122**	LR		LR	04 37 58.8	
	comp=Z,58nm,19.8s,baz=333,slow=36							
SCHQ	**Schefferville**	**40.39**	**52**	LR		LR	04 38 48.9	
	comp=Z,79nm,21.1s,baz=342,slow=36							
H11N3	**WAKE ISLAND Hy**	**57.92**	**267**	T		T	05 26 27.6	
	baz=49,slow=75,SNR=486							
H11N2	**WAKE ISLAND Hy**	**57.92**	**267**	T		T	05 26 25.0	
	baz=49,slow=75,SNR=250							
H11N1	**WAKE ISLAND Hy**	**57.94**	**267**	T		T	05 26 29.1	
	baz=49,slow=75,SNR=256							
SJG	**San Juan**	**58.39**	**95**	LR		LR	04 53 09.5	
	comp=Z,35nm,18.3s,baz=122,slow=40							
H11S1	**WAKE ISLAND Hy**	**58.86**	**266**	T		T	05 27 36.5	
	baz=48,slow=75,SNR=77							
H11S2	**WAKE ISLAND Hy**	**58.87**	**266**	T		T	05 27 36.5	
	baz=48,slow=75,SNR=45							
H11S3	**WAKE ISLAND Hy**	**58.88**	**266**	T		T	05 27 40.5	
	baz=48,slow=75,SNR=31							
OTAV	**Otavalo**	**62.90**	**120**	P		**P**	**04 24 46.4**	**-0.5**
SONM	**Songino Array**	**75.89**	**325**	P		**P**	**04 26 05.2**	**-1.2**
	comp=Z,1.0nm,0.8s,baz=64,slow=3.4,SNR=4.1							
	comp=Z,1.0nm,0.8s							
SONM	**Songino Array**	**75.89**	**325**	P		**P**	**04 26 04.6**	**-1.9**
SONM				IAmb		IAmb	04 26 11.8	
	comp=Z,2.4nm,1.0s							
ZALV	**Zalesovo Beam**	**77.71**	**340**	P		**P**	**04 26 15.2**	**-1.2**
	comp=Z,0.7nm,0.5s,baz=15,slow=6.2,SNR=4.7							
	comp=Z,0.7nm,0.5s							
ZALV	**Zalesovo Beam**	**77.71**	**340**	P		**P**	**04 26 14.7**	**-1.7**
BVAR	**Borovoye Array**	**81.41**	**348**	P		**P**	**04 26 35.9**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=15,slow=6.2,SNR=5.5							
	comp=Z,1.4nm,0.7s							
LPAZ	**La Paz**	**82.09**	**122**	P		**P**	**04 26 40.3**	**-1.0**
	comp=Z,2.9nm,1.0s,baz=1.8,slow=6.0,SNR=4.8							
	comp=Z,2.9nm,1.0s							
LPAZ	**La Paz**	**82.09**	**122**			**P**	**04 26 39.9**	**-1.4**
KURK	**Kurchatov**	**82.13**	**343**	P		**P**	**04 26 39.1**	**-1.2**
KURK				IAmb		IAmb	04 26 39.6	
	comp=Z,2.6nm,0.9s							
KURBB	**Kurchatov Arra**	**82.24**	**343**	P		**P**	**04 26 39.3**	**-1.7**
	comp=Z,5.5nm,0.2s,baz=19,slow=4.7,SNR=7.3							
ESDC	**Sonseca Array**	**82.80**	**39**	P		**P**	**04 26 43.9**	**-0.3**
	comp=Z,0.9nm,1.1s,baz=317,slow=7.4,SNR=1.7							
	comp=Z,0.9nm,1.1s							
AKASG	**Malin Array Be**	**83.35**	**14**	P		**P**	**04 26 45.3**	**-1.4**
	comp=Z,0.6nm,0.6s,baz=347,slow=4.7,SNR=1.7							
	comp=Z,0.6nm,0.6s							
AKASG	**Malin Array Be**	**83.35**	**14**	P		**P**	**04 26 46.0**	**-0.7**
AKASG				IAmb		IAmb	04 26 56.9	
	comp=Z,3.3nm,1.3s							
MKAR	**Makanchi Array**	**84.93**	**339**	P		**P**	**04 26 53.1**	**-1.8**
	comp=Z,0.3nm,0.7s,baz=7.6,slow=4.4,SNR=1.7							
	comp=Z,0.3nm,0.7s							
MKAR	**Makanchi Array**	**84.93**	**339**	P		**P**	**04 26 54.1**	**-0.9**
KRVT	**Keravat (AS076**	**85.01**	**259**	LR		LR	05 00 36.3	
	comp=Z,5.4nm,19.0s,baz=21,slow=33							
AB31	**Akbulak array**	**86.28**	**354**	P		**P**	**04 27 00.5**	**-1.0**
ABKAR	**Akbulak array**	**86.28**	**354**	P		**P**	**04 27 00.8**	**-0.8**
RCBR	**Riachuelo**	**96.41**	**92**	LR		LR	05 06 49.5	
	comp=Z,13nm,21.0s,baz=56,slow=33							

*UPP **17** 04:34:22.2±2.3, 65°.72N×13°.10E, h0km, ML2.1, Presumed earthquake*
*IDC **17** 04:34:23.5±1.4, 65°.82N×13°.27E, h0km, mbtmp3.1/4, ML1.9/4, Error ellipse: s-maj=18.2km s-min=7.2km az=114.0*
*BER **17** 04:34:24.9±2.4, 65°.84N×13°.02E, h5km, ML1.7, MW2.1, Confirmed Earthquake*

ISC 17 04:34:22.8±1.3, **65°.78N**±0°.04×**13°.10E**±0°.06, **h6**km±11km, **n29**,σ1°**37**/50, **Northern Norway**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEIR	**Leirfjorden**	**0.33**	**1**	*e*P	**Pg**	**04 34 29.0**	**-0.2**
LEIR				*e*S	**Sg**	**04 34 33.3**	**-0.2**
LEIR				IAML		04 34 33.7	
	comp=Z,119nm,0.6s						
STOK	**Stokkvaagen**	**0.55**	**357**	*e*P	**Pg**	**04 34 33.1**	**-0.2**
STOK				*e*S	**Sg**	**04 34 40.3**	**-0.3**
STOK				IAML		04 34 40.7	
	comp=Z,31nm,0.2s						
MOR8	**Moi Rana**	**0.67**	**54**	*e*P	**Pb**	**04 34 37.5**	**+0.7**
MOR8				*e*S	**Sn**	**04 34 49.2**	**-0.4**
MOR8				IAML		04 34 49.7	
	comp=Z,26nm,0.5s						
VAGH	**Vaagaholmen**	**0.95**	**4**	*e*P	**Pg**	**04 34 40.4**	**-0.6**
VAGH				*e*S	**Sg**	**04 34 53.5**	**+0.1**
VAGH				IAML		04 35 06.1	
	comp=Z,13nm,0.6s						
NSS	**Namsos**	**1.35**	**201**	*e*P	**Pn**	**04 34 47.6**	**-0.4**
NSS				*e*S	**Sb**	**04 35 06.2**	**+0.4**
NSS				IAML		04 35 08.7	
	comp=Z,51nm,0.3s						
FAUS	**Fauske**	**1.83**	**28**	*e*P	**Pn**	**04 34 55.1**	**+0.5**
FAUS				*e*Sg	**Sg**	**04 35 20.4**	**-0.9**
FAUS				IAML		04 35 22.7	
	comp=Z,20nm,0.7s						
STEI	**Steigen**	**2.32**	**20**	*e*Pg	**Pn**	**04 35 03.0**	**+1.7**
STEI				*e*Sg	**Sb**	**04 35 33.9**	**+0.3**
STEI				IAML		04 35 39.8	
	comp=Z,9.7nm,0.7s						

LOF	**Lofoten**	**2.36**	**4**	*e*S		**Sn**	**04 35 29.8**	**-1.4**
LOF				IAML			04 35 40.0	
	comp=Z,6.0nm,0.6s							
SALU	**Saltoluokta**	**2.69**	**51**	*e*P		**Pn**	**04 35 07.2**	**+0.8**
SALU				*e*S		**Sn**	**04 35 41.7**	**+2.4**
SALU	**Saltoluokta**	**2.69**	**51**	P		**Pn**	**04 35 07.3**	**+0.8**
SALU				S		**Sn**	**04 35 42.0**	**+2.7**
NIKU	**Nikkaluokta**	**3.14**	**46**	P		**Pn**	**04 35 13.2**	**+0.6**
HARU	**Harads**	**3.24**	**80**	P		**Pn**	**04 35 14.1**	**+0.1**
	baz=275							
HARU				S		**Sn**	**04 35 53.6**	**+0.7**
DUNU	**Dundret**	**3.29**	**62**	P		**Pn**	**04 35 15.5**	**+0.8**
RATU	**Laukkuluspa**	**3.29**	**48**	P		**Pn**	**04 35 15.6**	**+1.0**
SJUU	**Sjulsmark**	**3.54**	**91**	P		**Pn**	**04 35 18.4**	**+0.4**
KUA	**Kurravaara**	**3.59**	**49**	P		**Pn**	**04 35 19.5**	**+0.7**
ERTU	**Ertsjaerv**	**3.77**	**74**	P		**Pn**	**04 35 21.1**	**-0.2**
ERTU				S		**Sn**	**04 36 05.5**	**-0.3**
MOL	**Molde**	**4.04**	**220**	*e*P		**Pn**	**04 35 25.9**	**+1.0**
MOL				*e*S		**Sn**	**04 36 12.3**	**-0.1**
KIF	**Kilpisjarvi**	**4.39**	**39**	*e*P		**Pn**	**04 35 31.1**	**+1.4**
KIF				*e*S		**Sn**	**04 36 21.1**	**0.0**
NC204	**NORSAR Array S**	**4.64**	**194**	*e*P		**Pn**	**04 35 33.6**	**+0.3**
NC204				IAML			04 36 55.0	
	comp=Z,3.2nm,0.4s							
JETT	**Jettan, Norway**	**4.70**	**33**	*e*P		**Pn**	**04 35 34.6**	**+0.5**
JETT				*e*S		**Sn**	**04 36 27.3**	**-1.6**
NOA	**NORSAR Array B**	**4.84**	**191**	Pn		**Pn**	**04 35 38.5**	**+2.5**
	baz=4.5,slow=14,SNR=1.4							
NOA				Sn		**Sn**	**04 36 34.1**	**+1.9**
	baz=35,slow=14,SNR=1.7							
NOA				Lg		Lg	04 36 53.6	
	comp=Z,0.1nm,0.3s,baz=358,slow=19,SNR=6.9							
	comp=Z,1.0nm,1.0s							
HEF	**Hetta**	**4.89**	**53**	*e*P		**Pn**	**04 35 37.2**	**+0.5**
HEF				*e*S		**Sn**	**04 36 32.6**	**-1.0**
KTK1	**Kautokeino**	**5.08**	**46**	*e*P		**Pn**	**04 35 39.9**	**+0.7**
KTK1				*e*S		**Sn**	**04 36 36.4**	**-1.6**
SKAR	**Skarslia**	**5.56**	**205**	*e*S		**Sn**	**04 36 47.4**	**-2.7**
HFS	**Hagfors**	**5.68**	**177**	Pn		**Pn**	**04 35 48.6**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=0.0,slow=10,SNR=7.1							
HFS				Sn		**Sn**	**04 36 53.7**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=357,slow=24,SNR=6.8							
HFS				Lg		Lg	04 37 20.2	
	comp=Z,0.5nm,0.3s,baz=359,slow=30,SNR=7.4							
	comp=Z,3.3nm,1.1s							
ARA0	**ARCESS Array S**	**6.04**	**46**	*e*P		**Pn**	**04 35 52.2**	**-0.2**
ARA0				*e*S		**Sn**	**04 36 58.2**	**-3.5**
ARCES	**ARCESS Array B**	**6.04**	**46**	Pn		**Pn**	**04 35 52.0**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=233,slow=14,SNR=18							
ARCES				Sn		**Sn**	**04 36 57.8**	**-3.9**
	comp=Z,0.3nm,0.3s,baz=234,slow=23,SNR=6.4							
ARCES				Lg		Lg	04 37 28.5	
	comp=Z,0.2nm,0.3s,baz=240,slow=35,SNR=2.4							
	comp=Z,2.7nm,0.8s							
FINES	**FINESS Array B**	**7.23**	**121**	Pn		**Pn**	**04 36 09.0**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=312,slow=11,SNR=1.2							
FINES				Sn		**Sn**	**04 37 29.1**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=312,slow=18,SNR=3.4							
FINES				Lg		Lg	04 38 07.0	
	comp=Z,0.4nm,0.3s,baz=318,slow=26,SNR=7.5							
	comp=Z,2.5nm,1.0s							

*SNET **17** 04:54:44.0±1.1, 12°.90N×90°.45W, h15km±10km, ML3.2, Presumed earthquake*
*CATAC **17** 04:54:46.4±0.7, 13°.N±3°×9°.0W±°, h3km±3km, M3.5/24, MLv3.5/24, Error ellipse: s-maj=7.1km s-min=3.0km az=26.0, confirmed*
*GCG **17** 04:54:48.3±1.2, 12°.99N×90°.48W, h13km±15km, MD4.0, Presumed earthquake*

ISC 17 04:54:49.2±2.3, **12°.92N**±0°.07×**90°.27W**±0°.04, **h9**km±14km, **n49**,σ1°**35**/75, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	**Alcaldia de Sa**	**0.95**	**15**	P		**Pb**	**04 55 06.0**	**-1.9**
JAYA	**Jayaque - finc**	**1.08**	**48**	P		**Pb**	**04 55 09.1**	**-1.1**
JAYA				S		**Sb**	**04 55 24.8**	**+0.3**
JAYA	**Jayaque - finc**	**1.08**	**48**	*i* P		**Pb**	**04 55 08.9**	**-1.3**
JAYA	**Jayaque - finc**	**1.08**	**48**	*e*P		**Pb**	**04 55 09.0**	**-1.1**
CEVE	**Cerro Verde**	**1.10**	**35**	P		**Pb**	**04 55 09.5**	**-1.1**
CEVE				S		**Sb**	**04 55 24.9**	**-0.2**
CEVE	**Cerro Verde**	**1.10**	**35**	*e*P		**Pb**	**04 55 09.2**	**-1.4**
CEVE				*e*S		**Sn**	**04 55 30.1**	**+3.6**
SBLS	**San Blas**	**1.11**	**35**	*e*P		**Pb**	**04 55 09.3**	**-1.4**
SBLS				*e*P		**Pn**	**04 55 09.4**	**-1.7**
SNJE	**San Jose**	**1.14**	**34**	*e*P		**Pb**	**04 55 09.5**	**-1.7**
RTR	**El Retiro**	**1.14**	**32**	*e*P		**Pb**	**04 55 09.8**	**-1.5**
SLOZ	**Alcaldia de Sa**	**1.19**	**23**	P		**Pb**	**04 55 27.2**	**-2.0**
SLOZ				S		**Sb**	**04 55 27.3**	**-0.3**
PMON	**Piamonte**	**1.22**	**50**	P		**Pn**	**04 55 11.2**	**-1.4**
PMON				S		**Sb**	**04 55 28.2**	**-0.2**
PMON	**Piamonte**	**1.22**	**50**	*e*P		**Pn**	**04 55 11.2**	**-1.4**
CEDA	**San Andres**	**1.22**	**44**	P		**Pn**	**04 55 09.9**	**-2.6**
CEDA				S		**Sn**	**04 55 29.4**	**+0.2**
PANCS	**Alcalda de**	**1.26**	**57**	P		**Pn**	**04 55 12.6**	**-0.6**
UNIC	**Universidad Ca**	**1.26**	**34**	P		**Pn**	**04 55 11.7**	**-1.5**
UNIC				S		**Sn**	**04 55 30.6**	**+0.2**
UEES	**Universidad Ev**	**1.27**	**52**	P		**Pn**	**04 55 12.5**	**-0.8**
UEES				S		**Sb**	**04 55 30.4**	**+0.3**
SEMO	**Seminario San**	**1.28**	**53**	P		**Pn**	**04 55 11.5**	**-1.9**
SEMO				S		**Sg**	**04 55 31.4**	**+1.0**
UTEC	**Universidad Te**	**1.29**	**53**	P		**Pn**	**04 55 11.4**	**-2.2**
UTEC				S		**Sb**	**04 55 30.9**	**+0.3**
IGN	**Direccin Gen**	**1.33**	**54**	S		**Sb**	**04 55 32.5**	**+0.9**
FG8	**Yepocapa, Chim**	**1.36**	**348**	*i* P		**Pb**	**04 55 15.4**	**+0.4**
FG8				*e*S		**Sg**	**04 55 36.4**	**+3.4**
FG16	**Alotenango, Sa**	**1.36**	**350**	*i* P		**Pb**	**04 55 15.3**	**+0.3**
SJTE	**Alcalda de S**	**1.41**	**61**	*e*P		**Pn**	**04 55 13.7**	**-1.5**
PAVA	**Las Pavas**	**1.52**	**59**	P		**Pn**	**04 55 16.5**	**-0.2**
PAVA				S		**Sb**	**04 55 38.3**	**+1.3**
PAVA	**Las Pavas**	**1.52**	**59**	*e*P		**Pn**	**04 55 15.9**	**-0.7**
COEG	**Centro de Oper**	**1.52**	**63**	P		**Pn**	**04 55 15.5**	**-1.2**
COEG				S		**Sb**	**04 55 37.6**	**+0.5**
COEG	**Centro de Oper**	**1.52**	**63**	*e*P		**Pn**	**04 55 15.2**	**-1.5**
ESSG	**Sabana Grande**	**1.55**	**339**	*i* P		**Pn**	**04 55 14.1**	**-3.0**
TECO	**Alcaldia de Te**	**1.57**	**67**	P		**Pn**	**04 55 15.7**	**-1.6**
TECO				S		**Sn**	**04 55 38.4**	**+0.5**
SCLA	**Alcaldia de Sa**	**1.69**	**63**	P		**Pn**	**04 55 18.3**	**-0.6**
MTO3	**Montecristo**	**1.71**	**31**	P		**Pn**	**04 55 18.5**	**-1.0**
MTO3				S		**Sb**	**04 55 42.2**	**-0.5**
MTO3	**Montecristo**	**1.71**	**31**	*i* P		**Pn**	**04 55 19.4**	**-0.1**
MTO3	**Montecristo**	**1.71**	**31**	*e*P		**Pn**	**04 55 18.1**	**-1.4**
LLGN	**La Laguna**	**1.78**	**46**	P		**Pn**	**04 55 20.2**	**-0.2**
LLGN				S		**Sb**	**04 55 44.7**	**+0.1**
STG5	**El Palmar, Qui**	**1.81**	**325**	*i* P		**Pn**	**04 55 21.4**	**+0.7**
STG5				*i* S		**Sg**	**04 55 47.0**	**-0.4**
P5NO	**Presa 5 de nov**	**1.81**	**54**	P		**Pn**	**04 55 19.8**	**-0.8**
P5NO				S		**Sb**	**04 55 45.1**	**-0.3**
P5NO	**Presa 5 de nov**	**1.81**	**54**	*e*P		**Pn**	**04 55 18.8**	**-1.8**
STG8	**El Palmar, Qui**	**1.85**	**325**	*i* P		**Pb**	**04 55 22.6**	**-0.8**
STG2	**El Palmar, Qui**	**1.85**	**325**	*i* P		**Pb**	**04 55 22.6**	**-0.7**
ESQI	**Esquipulas**	**1.86**	**29**	P		**Pn**	**04 55 20.8**	**-0.7**
ESQI				S		**Sb**	**04 55 46.9**	**-0.1**
PACA	**Pacayal**	**1.97**	**74**	P		**Pn**	**04 55 22.6**	**-0.4**
PACA				S		**Sb**	**04 55 49.6**	**-0.5**
PACA	**Pacayal**	**1.97**	**74**	*e*P		**Pn**	**04 55 22.1**	**-0.9**
PACA				*e*S		**Sb**	**04 55 51.7**	**+1.5**
RANC	**El Ranchito**	**1.99**	**75**	P		**Pn**	**04 55 21.5**	**-1.8**
RANC				S		**Sb**	**04 55 50.3**	**-0.5**
APG	**El Apazote**	**2.08**	**355**	*i* P		**Pn**	**04 55 22.5**	**-2.0**
LCND	**La Caada**	**2.35**	**80**	P		**Pn**	**04 55 27.3**	**-0.8**
LCND				S		**Sn**	**04 55 58.6**	**+1.6**
SARH	**Santa Rosa de**	**2.35**	**38**	P		**Pn**	**04 55 28.0**	**-0.2**
CNCH	**Conchagua**	**2.40**	**81**	P		**Pn**	**04 55 27.7**	**-1.1**
CNCH				S		**Sn**	**04 56 00.7**	**+2.3**
MARCA	**Marcala la Paz**	**2.50**	**60**	P		**Pn**	**04 55 29.4**	**-0.7**
CSGN	**Cosiguina Volc**	**2.64**	**89**	P		**Pn**	**04 55 31.4**	**-0.7**
CSGN				S		**Sn**	**04 56 05.5**	**+1.1**
TGUH	**Tegucigalpa,Un**	**3.12**	**69**	P		**Pn**	**04 55 38.7**	**-0.2**

*MAN **17** 05:06:28.0, 13°.51N×120°.64E, h109km, MS4.2*
MAN INTENSITY I - CALAPAN CITY.
*IDC **17** 05:06:28.3±0.4, 13°.53N×120°.84E, h122km±3km, mb4.1/29, mbtmp4.5/29, MS3.3/8, Error ellipse: s-maj=15.4km s-min=8.2km az=75.0*
*NEIC **17** 05:06:29.4±1.6, 13°.60N±0°.07×120°.9E±0°.1, h124km±4km, mb4.5/154, Error ellipse: s-maj=14.5km s-min=9.7km az=86.0*

*BJI **17** 05:06:30.6, 13°.60N×120°.85E, h151km, mB5.0/9, mb4.9/60*

ISC 17 05:06:28.7±0.4, **13°.54N**±0°.04×**120°.85E**±0°.06, **h125**km±4km, **h126**km:**pP-P, n485**,σ1°**16**/437, **mb4.5**/129, **2C-3D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.11**	**108**	*e*P		**Pn**	**05 06 45.0**	**-0.8**
PGP				*e*S		**Sn**	**05 06 56.0**	**-2.7**
TGY	**Tagaytay City**	**0.57**	**9**	P		**Pn**	**05 06 47.9**	**+0.1**
	6μm,0.3s,baz=234,slow=1.9,SNR=96							
TGY				S		**Sn**	**05 07 02.4**	**+0.3**
	11μm,0.4s,baz=164,slow=19,SNR=8.1							
TGY				LR		LR	05 07 08.2	
	comp=Z,1μm,19.9s,baz=204,slow=69							
TGY	**Tagaytay City**	**0.57**	**9**	*e*P		**Pn**	**05 06 47.8**	**+0.1**
TGY				*e*S		**Sn**	**05 07 01.9**	**-0.2**
BOAC	**Boac**	**0.97**	**94**	*i* P		**Pn**	**05 06 52.3**	**+1.5**
BOAC				*i* S		**Sn**	**05 07 09.6**	**+2.0**
BOLP	**Bolinao**	**2.97**	**342**	*e*P		**Pn**	**05 07 14.6**	**-0.1**
BOLP				*e*S		**Sn**	**05 07 50.2**	**-0.1**
SIPP	**Brgy, Tapao**	**4.38**	**355**	*e*P		**Pn**	**05 07 34.9**	**+1.5**
SIPP				*e*S		**Sn**	**05 08 21.9**	**-1.7**
DCPH	**Dipolog City**	**5.50**	**153**	*e*P		**Pn**	**05 07 51.4**	**+2.9**
MYLDM	**Lahad Datu**	**8.62**	**196**			Pn	05 08 34.4	+3.8
YULB	**Yu-li**	**9.81**	**2**			**Pn**	**05 08 45.4**	**-1.2**
SSLB	**Suanglung**	**10.20**	**1**	Pn		**Pn**	**05 08 51.1**	**-0.6**
YHNB	**Yeheng**	**11.09**	**2**			**Pn**	**05 09 02.9**	**-0.8**
QIZ	**Qiongzhong**	**11.89**	**299**	Pn		**Pn**	**05 09 14.7**	**+0.3**
QIZ	**Qiongzhong**	**11.89**	**299**	P		**Pn**	**05 09 15.8**	**+1.5**
QIZ				sP		P	05 09 51.3	+29
QIZ				S		**Sn**	**05 11 28.0**	**+2.6**
QIZ				pmax		pmax		
	comp=Z,26nm,0.7s							
QIZ				L		L		
	comp=N,240nm,9.0s							
QIZ				L		L		
	comp=E,210nm,9.6s							
SBUM	**Sibu**	**13.93**	**218**			**P**	**05 09 42.0**	**-2.9**
JOW	**Kunigami**	**14.95**	**27**	P		**P**	**05 09 58.4**	**+2.4**
	86nm,0.8s,baz=230,slow=7.7,SNR=23							
JOW				LR		LR	05 15 45.3	
	comp=Z,61nm,18.9s,baz=296,slow=37							
JOW	**Kunigami**	**14.95**	**27**			**Pn**	**05 09 55.2**	**+1.6**
WHN	**Wuhan**	**17.96**	**342**	P		**Pn**	**05 10 31.6**	**+1.2**
WHN				pmax		pmax		
	comp=Z,36nm,0.8s							
KAPI	**Kappang**	**18.46**	**183**	P		**Pn**	**05 10 38.6**	**+2.1**
	17nm,0.6s,baz=344,slow=7.8,SNR=14							
KAPI	**Kappang**	**18.46**	**183**			**Pn**	**05 10 36.6**	**+0.1**
KAPI				IAmb		IAmb	05 10 40.2	
	comp=Z,17nm,0.7s							
GYA	**Guiyang**	**18.50**	**316**	⇓P		**Pn**	**05 10 37.8**	**+0.8**
GYA				pmax		pmax		
	comp=Z,30nm,0.7s							
NJ2	**Nanjing**	**18.52**	**355**	*e*P		**Pn**	**05 10 38.3**	**+1.3**
NJ2				pmax		pmax		
	comp=Z,22nm,0.6s							
ENH	**Enshi**	**19.68**	**330**			**P**	**05 10 46.6**	**-1.5**
ENH				IAmb		IAmb	05 10 59.3	
	comp=Z,21nm,0.7s							
FAKI	**Fak Fak**	**19.88**	**145**	P		**P**	**05 10 51.1**	**+0.8**
FAKI				IAmb		IAmb	05 10 55.2	
	comp=Z,9.8nm,0.6s							
JSU	**Suzuyama**	**19.95**	**25**			**P**	**05 10 51.4**	**+0.5**
KMI2	**Kunming**	**20.59**	**307**	P		Pn	05 11 00.4	-1.2
KMI2				S		**S**	**05 14 42.3**	**+0.6**
KMI2				pmax		pmax		
	comp=Z,25nm,0.7s							
JNU	**Nakatsue**	**21.54**	**23**	P		**P**	**05 11 08.5**	**+0.5**
	comp=Z,39nm,0.9s,baz=162,slow=4.9,SNR=14							
	comp=Z,39nm,0.9s							
CM31	**Chiang Mai Arr**	**21.61**	**286**	P		**P**	**05 11 10.7**	**+1.8**
CM31				IAmb		IAmb	05 11 13.5	
	comp=Z,26nm,0.8s							
CMAR	**Chiang Mai Arr**	**21.61**	**286**	P		**P**	**05 11 10.2**	**+1.3**
	comp=Z,17nm,0.8s,baz=93,slow=7.6,SNR=57							
CMAR				PcP		**PcP**	**05 15 06.6**	**+0.7**
	comp=Z,1.5nm,0.5s,baz=26,slow=0.7,SNR=8.3							
	comp=Z,17nm,0.8s							
CMAR	**Chiang Mai Arr**	**21.61**	**286**	P		**P**	**05 11 10.0**	**+1.1**
CHTO	**Chiang Mai**	**21.67**	**287**			**P**	**05 11 09.7**	**+0.2**
CHTO				IAmb		IAmb	05 11 13.4	
	comp=Z,14nm,0.8s							

PSA00 IAmb IAmb 05 13 09.3
comp=Z,10nm,0.9s
PSA00 Pilbara Seismi 34.90 182 IAmb IAmb 05 13 09.3
comp=Z,16nm,0.9s
WB0 Warramunga Arr 35.68 158 P **P** **05 13 14.2 -0.9**
WB0 IAmb IAmb 05 13 43.2
comp=Z,8.1nm,0.8s
WRA Warramunga Arr 35.82 158 P **P** **05 13 15.4 -0.9**
comp=Z,3.5nm,0.6s,baz=336,slow=9.5,SNR=78
WRA pP **pP** **05 13 42.9 -1.4**
comp=Z,7.6nm,0.8s,baz=335,slow=9.6,SNR=8.5
WRA PcP **PcP** **05 15 41.4 +0.1**
comp=Z,0.3nm,0.4s,baz=338,slow=2.7,SNR=2.5
WRA ScP **ScP** **05 19 15.6 -0.4**
comp=Z,0.4nm,0.7s,baz=342,slow=4.0,SNR=2.6
comp=Z,3.5nm,0.6s
WRA Warramunga Arr 35.82 158 **P** **05 13 15.7 -0.6**
WR8 Warramunga Arr 35.89 158 P **P** **05 13 16.4 -0.5**
WR8 IAmb IAmb 05 13 45.9
comp=Z,16nm,1.1s
ULN Ulaanbaatar 36.10 344 P **P** **05 13 18.4 -0.2**
ULN IAmb IAmb 05 13 19.3
comp=Z,6.8nm,0.6s
SONM Songino Array 36.25 343 P **P** **05 13 19.9 +0.1**
comp=Z,6.3nm,0.6s,baz=164,slow=10,SNR=39
SONM pP **pP** **05 13 47.7 +0.2**
comp=Z,1.2nm,0.7s,baz=165,slow=9.5,SNR=1.8
SONM PcP **PcP** **05 15 41.8 -0.5**
comp=Z,0.6nm,0.6s,baz=168,slow=4.3,SNR=2.5
comp=Z,6.3nm,0.6s
SONM Songino Array 36.25 343 P **P** **05 13 20.1 +0.2**
SONM IAmb IAmb 05 13 20.5
comp=Z,5.2nm,0.7s
KLR Kul'dur 36.71 12 LR LR 05 29 52.1
comp=Z,37nm,19.2s,baz=262,slow=38
HEH HeiHe 37.01 7 *eP* **P** **05 13 26.8 +0.8**
HEH pmax pmax
comp=Z,20nm,1.2s
AS31 Alice Springs 39.12 161 P **P** **05 13 44.1 0.0**
ASAR Alice Springs 39.12 161 P **P** **05 13 43.8 -0.3**
comp=Z,2.6nm,0.4s,baz=337,slow=6.6,SNR=71
ASAR pP **pP** **05 14 12.4 -0.1**
comp=Z,4.3nm,0.8s,baz=342,slow=8.1,SNR=7.3
ASAR PcP **PcP** **05 15 51.0 -0.4**
comp=Z,0.7nm,0.4s,baz=352,slow=3.1,SNR=4.3
comp=Z,2.6nm,0.4s
ASAR Alice Springs 39.12 161 P **P** **05 13 44.0 -0.1**
ASAR **pP** **05 14 12.7 +0.2**
TLY Talaya 40.50 344 LR LR 05 31 58.9
comp=Z,42nm,18.7s,baz=319,slow=38
WMQ Urumqi 41.42 323 *eP* **P** **05 14 04.8 +1.9**
WMQ sP sP 05 14 51.1 +5.8
WMQ S **S** **05 20 07.4 -1.3**
WMQ pmax pmax
comp=Z,20nm,1.1s
MORW Morawa 42.61 186 P **P** **05 14 12.6 +0.1**
MORW IAmb IAmb 05 14 13.4
comp=Z,15nm,0.8s
FORT Forrest 44.60 171 P **P** **05 14 28.4 -0.1**
FORT IAmb IAmb 05 14 57.8
comp=Z,6.1nm,0.8s
WUS Wushi 45.48 315 P **P** **05 14 36.9 +1.3**
WUS IAmb IAmb 05 14 37.2
comp=Z,10.0nm,0.6s
MKAR Makanchi Array 46.25 324 P **P** **05 14 42.1 +0.8**
comp=Z,13nm,0.6s,baz=131,slow=8.9,SNR=124
MKAR PcP **PcP** **05 16 14.6 -0.3**
comp=Z,2.1nm,0.7s,baz=124,slow=1.7,SNR=3.8
MKAR ScP **ScP** **05 19 56.9 +0.2**
comp=Z,0.3nm,0.8s,baz=134,slow=4.2,SNR=2.5
comp=Z,13nm,0.6s
NWAO Narrogin (SRO) 46.33 184 P **P** **05 14 42.5 +0.4**
MAKZ Makanchi 46.44 323 P **P** **05 14 43.6 +0.7**
TARG Taragay, Kyrgy 46.66 315 IAmb IAmb 05 14 54.6
comp=Z,6.9nm,0.8s
KSH2 Kashi 47.28 311 P **P** **05 14 51.0 +1.3**
KSH2 pmax pmax
comp=Z,21nm,0.4s
NIL Nilore 47.52 303 P **P** **05 14 51.9 +0.4**
NIL Nilore 47.52 303 P **P** **05 14 51.6 +0.1**
ULHL Ulahol 47.94 315 P **P** **05 14 56.2 +1.4**
SNR=21
BOOM Boomskoye usch 48.24 316 IAmb IAmb 05 14 59.0
comp=Z,6.6nm,0.6s
BBOO Buckleboo 48.33 163 P **P** **05 14 56.9 -0.7**
BBOO IAmb IAmb 05 15 28.2
comp=Z,18nm,1.2s
TKM2 Tokmak 2 48.64 316 P **P** **05 15 00.9 +0.7**
SNR=19
KBK Karagaybulak 48.98 315 P **P** **05 15 04.1 +1.3**
SNR=17
PETK Petropavlovsk- 49.10 29 P **P** **05 15 04.5 +1.3**
comp=Z,6.5nm,0.9s,baz=186,slow=3.0,SNR=4.2
comp=Z,6.5nm,0.9s
UCH Uchtor 49.12 315 P **P** **05 15 05.8 +1.6**
SNR=24
CHMS Chumysh 49.24 316 P **P** **05 15 05.3 +0.8**
SNR=6.1
ZALV Zalesovo Beam 49.27 333 P **P** **05 15 04.2 -0.3**
comp=Z,11nm,0.6s,baz=119,slow=6.7,SNR=38
comp=Z,11nm,0.6s
AAK Ala-Archa 49.28 315 P **P** **05 15 06.2 +1.2**
SNR=10
AAK Ala-Archa 49.28 315 P **P** **05 15 05.5 +0.5**
AAK IAmb IAmb 05 15 07.8
comp=Z,5.8nm,0.7s
AAK Ala-Archa 49.28 315 P **P** **05 15 06.2 +1.2**
STKA Stephens Creek 49.34 157 P **P** **05 15 05.0 -0.3**
comp=Z,1.0nm,0.3s,baz=339,slow=6.0,SNR=3.3
STKA pP **pP** **05 15 33.7 -1.1**
comp=Z,2.9nm,0.5s,baz=334,slow=9.2,SNR=4.2
comp=Z,1.0nm,0.3s
USP Ospenovka 49.52 316 P **P** **05 15 07.5 +0.9**
SNR=6.8
EKS2 Erkin-Say 49.78 315 P **P** **05 15 10.0 +1.2**
SNR=9.6
KURBB Kurchatov Arra 50.40 326 P **P** **05 15 13.7 +0.5**
comp=Z,22nm,0.7s,baz=119,slow=8.6,SNR=148
comp=Z,22nm,0.7s
KURK Kurchatov 50.41 326 P **P** **05 15 13.9 +0.8**
KBL Kabul 51.12 304 P **P** **05 15 19.4 +0.3**
KBL Kabul 51.12 304 P **P** **05 15 19.7 +0.7**
KKAR Karatay Array 52.19 314 P **P** **05 15 27.1 +0.4**
SHAA Shahritus 52.46 307 IAmb IAmb 05 15 30.7
comp=Z,13nm,0.8s
BVAR Borovoye Array 55.99 326 P **P** **05 15 54.2 +0.2**
comp=Z,3.6nm,0.5s,baz=115,slow=6.9,SNR=21
comp=Z,3.6nm,0.5s
BORK Borovoye 56.04 326 P **P** **05 15 54.8 +0.4**
NGCH Negor - Chabah 57.12 292 P **P** **05 16 04.1 +1.6**
TIXI Tiksi 58.29 3 P **P** **05 16 09.7 -0.2**
JLN Jalan Bani Buh 58.78 288 P **P** **05 16 12.3 -1.8**
WBK Wadi Bani Khal 59.17 288 P **P** **05 16 14.9 -1.9**
SNR=7.2
WSAR Wadi Sarin 59.45 289 P **P** **05 16 18.4 -0.3**
BIDO Bidbid 59.90 289 P **P** **05 16 22.0 +0.1**
JMDO Jabal Madar 59.98 288 P **P** **05 16 21.7 -0.7**
SMDO Samad 60.00 289 P **P** **05 16 21.8 -0.8**
JASK Jask - Hormozg 60.07 292 P **P** **05 16 24.3 +1.4**
MHTO MHTO 60.19 287 P **P** **05 16 23.1 -0.7**
HOQ Hoqain 60.65 290 P **P** **05 16 25.8 -1.1**
BSY Bisya 60.80 289 P **P** **05 16 28.5 +0.5**
ABKAR Akbulak array 60.95 319 P **P** **05 16 28.5 0.0**
SOHO SOHO 61.33 290 P **P** **05 16 31.2 -0.3**
ARQ Araqi 61.38 289 P **P** **05 16 30.9 -1.0**
MASF Masafi 61.62 292 P **P** **05 16 34.6 +1.1**
ASHO Ashiyiah 61.74 291 P **P** **05 16 34.3 0.0**
BILL Bilibino 61.82 18 P **P** **05 16 34.1 +0.1**
ALNE Al Ain 62.05 290 P **P** **05 16 36.5 +0.1**
SHAO Shalim 62.65 283 P **P** **05 16 40.6 +0.2**
SNR=25
DMTO DMTO 63.33 283 P **P** **05 16 44.7 -0.2**
SNR=9.4
DOK Doka 64.00 284 P **P** **05 16 48.5 -0.8**
SNR=5.8
MZR Muzera 64.20 289 P **P** **05 16 50.4 -0.1**
WHFO Wadi Hawf 64.42 284 P **P** **05 16 51.3 -0.9**
SNR=6.8
ABTO Aybut 64.94 283 P **P** **05 16 55.3 -0.2**
TRNA Turayna 66.14 291 P **P** **05 17 03.1 +0.1**
SMRA Abu-Samra 66.49 291 P **P** **05 17 05.5 +0.2**
SAKB Bahrain 66.66 293 P **P** **05 17 06.5 +0.2**
GAMB Gambell 68.03 26 P **P** **05 17 15.0 +0.7**
baz=256
KBD Kabd 68.94 296 P **P** **05 17 20.7 +0.1**
UNV Unalaska Valle 68.95 37 P **P** **05 17 19.4 -0.7**
baz=264
M11K Mekoryuk 69.91 30 P **P** **05 17 26.4 +0.5**
baz=262
TNA Tin City 70.02 25 P **P** **05 17 25.2 -1.3**
baz=258
F14K Arctic Creek 70.66 25 P **P** **05 17 30.1 -0.3**
baz=260
K13K Kusilvak Mount 70.86 29 P **P** **05 17 29.8 -1.9**
baz=263
ANM Nome 70.91 26 P **P** **05 17 31.8 -0.1**
baz=261
M13K Dall Lake 71.32 31 P **P** **05 17 34.3 -0.2**
baz=264
F15K North Star Dit 71.38 25 IAmb IAmb 05 17 37.5
comp=Z,7.7nm,1.2s
F15K North Star Dit 71.38 25 P **P** **05 17 35.2 +0.4**
baz=261
RAYN Ar Rayn 71.45 290 P **P** **05 17 36.5 +0.4**
RAYN Ar Rayn 71.45 290 P **P** **05 17 36.5 +0.4**
J14K Nanvaranak Lak 71.47 28 IAmb IAmb 05 17 38.6
comp=Z,13nm,1.5s
J14K Nanvaranak Lak 71.47 28 P **P** **05 17 35.2 -0.1**
baz=263
C16K Lisburne Hills 71.53 22 P **P** **05 17 35.0 -0.6**
C16K IAmb IAmb 05 18 08.1
comp=Z,12nm,1.4s
C16K Lisburne Hills 71.53 22 P **P** **05 17 35.8 +0.2**
baz=260
G15K Niukluk 71.53 26 P **P** **05 17 36.5 +0.7**
baz=262
L14K Kuka Creek 71.73 30 IAmb IAmb 05 17 39.8
comp=Z,12nm,1.1s
L14K Kuka Creek 71.73 30 P **P** **05 17 37.1 +0.2**
baz=265
M14K Bethel 72.03 30 P **P** **05 17 38.9 +0.2**
baz=266
KBZ Khbaz 72.10 312 P **P** **05 17 39.4 -0.1**
comp=Z,6.6nm,1.0s,baz=162,slow=3.6,SNR=8.3
comp=Z,6.6nm,1.0s
N14K Kuskokwak Cree 72.11 31 P **P** **05 17 39.8 +0.6**
baz=266
H16K Elim 72.26 26 P **P** **05 17 40.9 +0.8**
baz=264
O14K Tigyukauivet M 72.28 32 P **P** **05 17 40.6 +0.4**
baz=267
D17K Noatak River 72.28 23 P **P** **05 17 41.0 +0.9**
baz=262,SNR=11
G16K Koyuk River 72.29 25 IAmb IAmb 05 17 42.6
comp=Z,7.1nm,1.1s
G16K Koyuk River 72.29 25 P **P** **05 17 41.0 +0.9**
baz=264
C17K DeLong Mountai 72.35 22 P **P** **05 17 41.1 +0.5**
baz=262
K15K Wolf Creek Mou 72.36 29 P **P** **05 17 41.3 +0.6**
baz=265
RDOG Red Dog Mine 72.39 23 P **P** **05 17 41.2 +0.4**
baz=262
SDPT Sand Point 72.54 36 P **P** **05 17 42.5 +0.6**
baz=268
M15K Kasigluk River 72.65 30 P **P** **05 17 42.7 +0.3**
baz=267
F17K Baldwin Pennin 72.85 24 P **P** **05 17 44.4 +0.9**
F17K Baldwin Pennin 72.85 24 P **P** **05 17 44.1 +0.7**
baz=264
J16K Anvik River 72.86 28 P **P** **05 17 43.9 +0.3**
baz=266
I17K Unalakleet 72.86 27 IAmb IAmb 05 17 46.5
comp=Z,11nm,1.1s
I17K Unalakleet 72.86 27 P **P** **05 17 44.4 +0.8**
baz=266
N15K Kwethluk River 72.92 31 IAmb IAmb 05 17 46.6
comp=Z,16nm,1.1s
N15K Kwethluk River 72.92 31 P **P** **05 17 44.9 +0.8**
baz=267
G17K Kiwalik Mounta 73.01 25 P **P** **05 17 45.5 +1.0**
baz=265
O15K Ungalikthiuk R 73.02 32 P **P** **05 17 45.2 +0.6**
baz=268
CHNA Chernabura Isl 73.04 37 P **P** **05 17 44.9 0.0**
baz=269
C18K Utukok River 73.10 22 P **P** **05 17 46.0 +1.0**
C18K Utukok River 73.10 22 P **P** **05 17 45.7 +0.7**
baz=264
E18K Tukpahlearik C 73.20 23 P **P** **05 17 46.7 +1.2**
baz=265
H17K Granite Mounta 73.28 26 IAmb IAmb 05 17 48.3
comp=Z,6.2nm,0.9s
H17K Granite Mounta 73.28 26 P **P** **05 17 46.6 +0.6**
baz=266
L16K Owhat River 73.29 29 P **P** **05 17 47.3 +1.1**
L16K IAmb IAmb 05 17 48.7
comp=Z,9.8nm,1.2s
L16K Owhat River 73.29 29 P **P** **05 17 46.7 +0.5**
baz=267
A19K Wainwright 73.32 20 P **P** **05 17 46.9 +0.7**
baz=263
F18K Selawik 73.50 24 P **P** **05 17 48.2 +0.9**
baz=266,SNR=7.6
M16K Timber Creek 73.51 30 P **P** **05 17 47.8 +0.2**
baz=268
J17K VABM Dome 73.55 28 IAmb IAmb 05 17 50.6
comp=Z,14.4nm,0.9s
J17K VABM Dome 73.55 28 P **P** **05 17 47.5 -0.2**
baz=267
N16K Nishlik Lake 73.59 31 P **P** **05 17 48.7 +0.6**
baz=268
CHGN Chignik 73.72 35 P **P** **05 17 48.9 +0.2**
baz=270
C19K Lookout Ridge 73.72 22 IAmb IAmb 05 17 51.3
comp=Z,12nm,1.2s
C19K Lookout Ridge 73.72 22 P **P** **05 17 48.6 -0.1**
baz=265
G18K Tagagawik 73.86 25 P **P** **05 17 49.6 +0.1**
baz=267
L17K Donlin 73.86 29 P **P** **05 17 49.8 +0.3**
baz=268
K17K Iditarod 73.88 28 IAmb IAmb 05 17 52.5
comp=Z,18nm,1.2s
K17K Iditarod 73.88 28 P **P** **05 17 49.8 +0.2**
baz=268
O16K Kovuk River B 73.91 32 P **P** **05 17 50.2 +0.3**
baz=269
H18K Honhosa River 73.94 26 P **P** **05 17 49.9 0.0**
baz=267
P16K Nushagak River 73.96 32 P **P** **05 17 50.2 +0.1**
baz=270
D19K Kuna River 74.21 22 IAmb IAmb 05 17 53.7
comp=Z,13nm,1.2s
D19K Kuna River 74.21 22 P **P** **05 17 51.7 +0.2**
baz=267
M17K Holitna River 74.26 30 P **P** **05 17 52.1 +0.2**
baz=269
F19K Shaleruckik Mo 74.26 24 P **P** **05 17 52.2 +0.5**
baz=267
N17K Nushagak Hills 74.37 31 P **P** **05 17 53.1 +0.6**
baz=270
O17K Koliganek Bris 74.42 31 P **P** **05 17 52.5 -0.2**
baz=270
E19K Redstone River 74.50 23 P **P** **05 17 53.3 +0.1**
baz=268
G19K Purcell Mounta 74.51 25 P **P** **05 17 53.6 +0.3**
baz=268,SNR=6.0
GCSA Galena City Sc 74.56 26 P **P** **05 17 54.0 +0.5**
baz=269
J18K Innoko River 74.62 28 P **P** **05 17 53.8 -0.1**
baz=269
L18K Granite Mounta 74.62 29 IAmb IAmb 05 17 56.8
comp=Z,16nm,1.5s
L18K Granite Mounta 74.62 29 P **P** **05 17 53.9 0.0**
baz=270
B20K Meade River 74.63 21 IAmb IAmb 05 17 55.9
comp=Z,11nm,1.1s
B20K Meade River 74.63 21 P **P** **05 17 54.0 +0.1**
baz=267
Q16K King Salmon 74.65 32 P **P** **05 17 54.3 +0.2**
baz=271
H19K Roundabout Mou 74.76 25 IAmb IAmb 05 17 56.8
comp=Z,8.2nm,0.9s
H19K Roundabout Mou 74.76 25 P **P** **05 17 54.3 -0.3**
baz=269
P17K Kvichak River 74.76 32 P **P** **05 17 54.5 -0.2**
baz=271
D20K Etivluk River 74.77 22 IAmb IAmb 05 17 56.9
comp=Z,9.7nm,1.1s
D20K Etivluk River 74.77 22 P **P** **05 17 54.9 +0.1**
baz=268
R17L Mt. Peulik Vol 74.83 34 P **P** **05 17 55.2 0.0**
baz=271
A21K Barrow 74.88 19 P **P** **05 17 55.5 +0.3**
baz=267
E20K Nigu River 74.92 23 P **P** **05 17 55.9 +0.3**
baz=268
N18K Kilae Creek 75.01 30 P **P** **05 17 56.4 +0.2**
baz=271
M18K Stony River 75.03 30 P **P** **05 17 56.1 -0.2**
baz=271
Q17K Contact Creek 75.06 33 P **P** **05 17 56.3 -0.4**
baz=272
F20K Avaraart Lake 75.07 24 IAmb IAmb 05 17 58.8
comp=Z,9.7nm,1.3s
F20K Avaraart Lake 75.07 24 P **P** **05 17 56.7 +0.3**
baz=269
J19K Poorman 75.10 27 P **P** **05 17 56.7 0.0**
baz=270
CHIR Chirikof Islan 75.29 35 P **P** **05 17 58.0 +0.1**
baz=272
O18K Koktuh Hills 75.37 31 P **P** **05 17 57.8 -0.5**
baz=272,SNR=6.2
P18K Big Mountain, 75.37 32 IAmb IAmb 05 18 17.0
comp=Z,14nm,1.4s
P18K Big Mountain, 75.37 32 P **P** **05 17 57.8 -0.6**
baz=272
A22K Sinclair Lake 75.40 20 P **P** **05 17 57.9 -0.3**
baz=269
H20K Anofleneega Mo 75.41 25 P **P** **05 17 57.8 -0.6**
baz=270,SNR=7.9
C21K Knifeblade Rid 75.44 22 P **P** **05 17 58.0 -0.5**
baz=270
L19K White Mountain 75.48 29 IAmb IAmb 05 18 01.6
comp=Z,14nm,1.3s
L19K White Mountain 75.48 29 P **P** **05 17 58.1 -0.8**
baz=271
B21K Ikpikpuk River 75.51 21 P **P** **05 17 58.8 0.0**
baz=270
Q18K Katmai Hardscr 75.51 32 P **P** **05 17 59.0 -0.2**
baz=272
I20K Naaghedeneel 75.59 26 IAmb IAmb 05 18 02.3
comp=Z,14nm,1.0s
I20K Naaghedeneel 75.59 26 P **P** **05 17 59.4 0.0**
baz=271
N19K Bonanza Creek 75.70 30 IAmb IAmb 05 18 04.1
comp=Z,10nm,1.2s
N19K Bonanza Creek 75.70 30 P **P** **05 17 59.8 -0.5**
baz=272
E21K Killik River 75.74 22 P **P** **05 18 00.0 -0.3**
baz=270
J20K Nowinta River 75.75 27 P **P** **05 18 00.3 -0.1**
baz=272
O19K Port Alsworth 75.80 31 P **P** **05 18 00.4 -0.3**
baz=272
K20K Telida 75.81 28 IAmb IAmb 05 18 03.6
comp=Z,9.0nm,1.2s
K20K Telida 75.81 28 P **P** **05 18 00.5 -0.2**
baz=272
B22K Teshekpuk Lake 75.92 20 IAmb IAmb 05 18 03.0
comp=Z,6.7nm,0.9s
B22K Teshekpuk Lake 75.92 20 P **P** **05 18 01.0 -0.1**
baz=271,SNR=5.8
F21K Alatna River 75.95 24 P **P** **05 18 01.4 -0.1**
baz=271
G21K Allakaket 75.96 24 IAmb IAmb 05 18 03.8
comp=Z,10nm,1.1s
G21K Allakaket 75.96 24 P **P** **05 18 01.7 +0.2**
baz=272
SII Sitkinak Islan 76.06 35 P **P** **05 18 01.3 -1.0**
baz=273
H21K Melozitna Rive 76.27 25 IAmb IAmb 05 18 05.9
comp=Z,11nm,1.3s
H21K Melozitna Rive 76.27 25 P **P** **05 18 03.5 +0.1**
baz=272,SNR=7.2
M20K Styx River 76.30 29 IAmb IAmb 05 18 06.3
comp=Z,12nm,1.3s
M20K Styx River 76.30 29 P **P** **05 18 03.5 -0.1**
baz=273
P19K Oil Pt 76.38 31 P **P** **05 18 03.6 -0.5**
baz=273
OHAK Old Harbor 76.51 34 P **P** **05 18 04.9 +0.1**
baz=274
E22K Anaktuvuk Pass 76.55 23 P **P** **05 18 05.2 +0.3**
baz=273
RED Redoubt Volcan 76.56 31 IAmb IAmb 05 18 07.8
comp=Z,14nm,1.2s
CHUM Lake Minchumin 76.57 27 P **P** **05 18 04.8 -0.2**
baz=273
I21K Tanana 76.64 26 IAmb IAmb 05 18 08.0
comp=Z,8.3nm,1.1s
I21K Tanana 76.64 26 P **P** **05 18 05.5 +0.2**
baz=273,SNR=6.2
PPLA Purkeypile 76.68 28 P **P** **05 18 05.8 -0.1**
baz=274
G22K Bettles 76.73 24 P **P** **05 18 06.5 +0.7**
baz=273
N20K Mount Spurr 76.78 30 P **P** **05 18 06.2 -0.2**
baz=274
SPCR Spurr Chakacha 76.78 30 P **P** **05 18 06.2 -0.2**
baz=274
H22K Ishtalitna Cre 76.85 25 IAmb IAmb 05 18 09.3
comp=Z,9.3nm,1.2s
H22K Ishtalitna Cre 76.85 25 P **P** **05 18 06.6 0.0**
baz=274
KDAK Kodiak Island 76.85 33 P **P** **05 18 06.7 +0.1**
comp=Z,1.7nm,0.5s,baz=241,slow=7.6,SNR=5.1
comp=Z,1.7nm,0.5s
KDAK Kodiak Island 76.85 33 IAmb IAmb 05 18 50.6
comp=Z,22nm,1.4s
KDAK Kodiak Island 76.85 33 P **P** **05 18 06.3 -0.3**
baz=274
C23K Itkillik River 76.89 21 IAmb IAmb 05 18 08.8
comp=Z,16nm,1.4s
C23K Itkillik River 76.89 21 P **P** **05 18 06.9 +0.2**
baz=273,SNR=5.8
D23K Nanushuk River 76.92 22 IAmb IAmb 05 18 09.4
comp=Z,11nm,1.2s
D23K Nanushuk River 76.92 22 P **P** **05 18 07.6 +0.7**
baz=274
SKT Skwentna 77.05 29 IAmb IAmb 05 18 08.3
comp=Z,9.4nm,1.2s
SKT Skwentna 77.05 29 P **P** **05 18 07.5 -0.3**
baz=274
BPAW Bear Paw Mtn. 77.14 27 P **P** **05 18 07.8 -0.5**
BPAW IAmb IAmb 05 18 10.3
comp=Z,7.7nm,0.7s
BPAW Bear Paw Mtn. 77.14 27 P **P** **05 18 08.1 -0.2**
baz=274,SNR=7.1
MLY Manley 77.17 26 P **P** **05 18 09.1 +0.7**
MLY IAmb IAmb 05 18 10.7
comp=Z,7.7nm,1.1s
MLY Manley 77.17 26 P **P** **05 18 08.5 +0.1**
baz=274,SNR=8.3
HOM Homer 77.18 31 P **P** **05 18 08.3 -0.2**
baz=275
COLD Coldfoot 77.22 24 P **P** **05 18 08.3 -0.3**
baz=274
CAPN Captain Cook N 77.33 30 P **P** **05 18 09.0 -0.2**
baz=275
G23K Bananza Creek 77.33 24 P **P** **05 18 08.8 -0.5**
baz=275
TOLK Toolik Lake Re 77.35 22 P **P** **05 18 08.9 -0.4**
baz=275
L22K Petersville 77.36 28 IAmb IAmb 05 18 11.7
comp=Z,4.3nm,0.6s
E23K Chandalar 77.38 23 IAmb IAmb 05 18 11.8
comp=Z,10nm,1.4s
E23K Chandalar 77.38 23 P **P** **05 18 08.5 -1.1**
baz=275
TRF Thorofare Moun 77.50 27 P **P** **05 18 08.6 -1.8**
baz=275
C24K Franklin Bluff 77.57 21 P **P** **05 18 09.3 -1.1**
baz=275
D24K Happy Valley 77.58 22 P **P** **05 18 09.3 -1.2**
baz=275
M22K Willow 77.74 29 P **P** **05 18 09.4 -2.1**
baz=276
I23K Minto, Yukon-K 77.74 26 P **P** **05 18 09.2 -2.3**
baz=276
E24K Your Creek 77.80 23 P **P** **05 18 10.1 -1.8**
baz=276
NEA2 Nenana 77.92 26 P **P** **05 18 11.7 -0.8**
baz=276,SNR=5.0
RC01 Rabbit Creek A 77.99 30 P **P** **05 18 11.1 -1.9**
baz=276
O22K Cooper Landing 78.06 30 P **P** **05 18 11.7 -1.6**
baz=276
MCK McKinley 78.07 27 IAmb IAmb 05 18 14.8
comp=Z,7.7nm,0.8s
MCK McKinley 78.07 27 P **P** **05 18 12.1 -1.4**

baz=276,SNR=7.3
F24K **Squaw Lake** 78.09 23 P P 05 18 11.9 -1.6
baz=276
PMR **Palmer** 78.22 29 P P 05 18 12.1 -2.1
baz=276
SEW **Seward** 78.24 31 P P 05 18 11.4 -2.9
baz=277
H24K **Noodor Dome** 78.28 25 P P 05 18 13.2 -1.4
baz=277
G24K **Hadweenzic Riv** 78.34 24 P P 05 18 14.3 -0.5
baz=277
WAT1 **Susitna Watana** 78.35 28 P P 05 18 13.6 -1.4
baz=277
D25K **Kavik River** 78.42 21 IAmb IAmb 05 18 17.1
comp=Z,7.1nm,1.1s
D25K **Kavik River** 78.42 21 P P 05 18 14.0 -1.3
baz=277,SNR=7.6
POKR **Poker Plat Res** 78.56 26 P P 05 18 14.2 -1.8
baz=277
KNK **Knik Glacier** 78.57 29 P P 05 18 14.5 -1.7
baz=277
SML **Sawmill** 78.58 29 P P 05 18 15.3 -1.0
baz=277
WAT6 **Susitna Watana** 78.75 28 P P 05 18 15.0 -2.3
baz=278
ILAR **Eielson Array** 78.83 26 P P 05 18 17.2 -0.4
comp=Z,0.9nm,0.9s,baz=259,slow=4.2,SNR=7.2
ILAR pP pP 05 18 47.3 -1.8
comp=Z,0.2nm,0.8s,baz=242,slow=7.3,SNR=1.4
comp=Z,0.9nm,0.9s
C26K **Camden Bay** 78.85 21 P P 05 18 16.6 -0.9
baz=279
DHY **Denali Highway** 78.85 28 P P 05 18 16.3 -1.6
baz=278
HDA **Harding Lake** 78.86 26 P P 05 18 16.3 -1.4
baz=278
M23K **Glacier View** 78.86 29 P P 05 18 16.6 -1.2
baz=278
G25K **Bearman Lake** 78.88 24 P P 05 18 17.2 -0.5
baz=278
E25K **Arctic Village** 78.88 22 P P 05 18 16.5 -1.3
baz=278
F25K **Christian Rive** 78.93 23 P P 05 18 18.0 -0.1
baz=278,SNR=6.3
MMAI **Mount Meron Ar** 78.99 301 P P 05 18 19.6 +0.5
comp=Z,1.8nm,0.5s,baz=107,slow=7.9,SNR=3.6
comp=Z,1.8nm,0.5s
SCM **Sheep Creek Mo** 79.05 29 P P 05 18 17.4 -1.5
baz=278
P23K **Montague Islan** 79.27 31 P P 05 18 18.1 -1.9
baz=278
ARA0 **ARCESS Array S** 79.29 339 eP P 05 18 19.7 -0.2
ARCES **ARCESS Array B** 79.29 339 P P 05 18 19.7 -0.3
comp=Z,17nm,1.1s,baz=84,slow=6.6,SNR=13
comp=Z,17nm,1.1s
ARCES **ARCESS Array B** 79.29 339 IAmb IAmb 05 18 20.8
comp=Z,58nm,1.4s
GLI **Glacier Island** 79.29 30 P P 05 18 18.4 -1.7
baz=278
PRP **Porcupine Dome** 79.29 25 P P 05 18 19.0 -1.3
baz=279
C27K **Jago River** 79.31 21 P P 05 18 19.1 -1.0
baz=280
BMAR **Burnt Mountain** 79.36 23 P P 05 18 21.3 +0.9
BRTR **Keskin Array B** 79.36 308 P P 05 18 20.9 -0.3
comp=Z,1.3nm,0.7s,baz=85,slow=4.0,SNR=5.9
comp=Z,1.3nm,0.7s
K24K **Donnelly Dome** 79.45 27 P P 05 18 20.1 -0.9
baz=279
F26K **Sheenjek River** 79.48 23 P P 05 18 19.7 -1.3
baz=280
J25K **Salcha River,** 79.50 26 P P 05 18 18.8 -2.5
baz=279
M24K **Tolsona, Glenn** 79.54 29 P P 05 18 19.5 -2.0
baz=279
PAX **Paxson** 79.73 28 P P 05 18 20.5 -2.0
baz=279
G26K **Porcupine Rive** 79.75 23 P P 05 18 21.2 -1.3
baz=280,SNR=5.7
KLU **Klutina** 79.76 29 P P 05 18 21.0 -1.8
baz=279
SPA0 **Spitsbergen Ar** 79.78 348 eP P 05 18 22.5 0.0
SPA0 IAmb IAmb 05 18 24.8
comp=Z,51nm,1.4s
SPITS **Spitsbergen Ar** 79.78 348 P P 05 18 22.4 -0.1
comp=Z,2.2nm,0.4s,baz=91,slow=8.6,SNR=18
comp=Z,2.2nm,0.4s
RIDG **Independent Ri** 79.87 27 IAmb IAmb 05 18 24.1
comp=Z,7.3nm,1.0s
RIDG **Independent Ri** 79.87 27 P P 05 18 21.8 -1.5
baz=280
EYAK **Cordova Ski Ar** 80.00 30 P P 05 18 21.2 -2.7
baz=280
KTK1 **Kautokeino** 80.18 339 eP P 05 18 24.7 -0.1
SCRK **Sand Creek** 80.21 26 P P 05 18 22.8 -2.3
baz=281
I26K **Coal Creek Min** 80.31 25 IAmb IAmb 05 18 27.0
comp=Z,5.2nm,0.8s
I26K **Coal Creek Min** 80.31 25 P P 05 18 24.2 -1.4
baz=281,SNR=6.2
D27M **Malcolm River** 80.33 21 P P 05 18 23.8 -1.9
baz=282
E27K **Coleen River** 80.33 22 IAmb IAmb 05 18 27.2
comp=Z,7.0nm,1.1s
E27K **Coleen River** 80.33 22 P P 05 18 24.6 -1.1
baz=282,SNR=6.4
N25K **Chitina, Valde** 80.36 29 P P 05 18 24.5 -1.6
baz=280
BMRM **Bremner River** 80.48 30 P P 05 18 24.6 -2.0
baz=280
FINES **FINESS Array B** 80.50 331 P P 05 18 24.7 -1.9
comp=Z,2.2nm,0.6s,baz=52,slow=4.4,SNR=9.6
comp=Z,2.2nm,0.6s
G27K **Doyon Strip** 80.60 23 P P 05 18 24.7 -2.4
baz=282
L26K **Log Cabin Wild** 80.67 27 P P 05 18 26.6 -1.0
baz=281
AKASG **Malin Array Be** 80.68 320 P P 05 18 26.7 -1.1
comp=Z,1.0nm,0.7s,baz=70,slow=4.2,SNR=5.4
comp=Z,1.0nm,0.7s
AKASG **Malin Array Be** 80.68 320 IAmb IAmb 05 18 27.8
comp=Z,5.5nm,1.4s
H27K **Steamboat Moun** 80.78 24 P P 05 18 25.9 -2.2
baz=282
I27K **Kandik River** 80.88 25 P P 05 18 26.7 -2.0
baz=282
M26K **Nabesna, AK** 80.95 28 P P 05 18 26.1 -3.0
baz=282
E28M **Babbage River** 80.98 21 P P 05 18 27.5 -1.6
baz=284
JETT **Jettan, Norway** 81.03 340 eP P 05 18 30.1 +0.7
JETT IAmb IAmb 05 18 33.2
comp=Z,3µm,4.3s
D28M **Stokes Point** 81.08 21 P P 05 18 28.8 -0.7
baz=284
F28M **Old Crow** 81.10 22 IAmb IAmb 05 18 31.7
comp=Z,6.7nm,0.8s
F28M **Old Crow** 81.10 22 P P 05 18 28.1 -1.6
baz=284,SNR=11
MCARA **McCarthy VSAT** 81.15 29 P P 05 18 28.9 -1.2
baz=282
CRQE **Cirque** 81.25 30 P P 05 18 29.1 -1.6
baz=282
L27K **Beaver Creek,** 81.34 27 P P 05 18 29.6 -1.5
baz=283
I28M **Miner Creek** 81.59 25 P P 05 18 30.7 -1.8
baz=284
E29M **Blow River** 81.62 22 P P 05 18 31.3 -1.1
baz=285
BVCY **Beaver Creek** 81.92 28 P P 05 18 32.1 -2.0
baz=284
MESA **MESA** 81.92 30 P P 05 18 32.7 -1.8
baz=283
G29M **Pine Creek** 81.97 23 IAmb IAmb 05 18 36.3
comp=Z,9.8nm,0.8s
G29M **Pine Creek** 81.97 23 P P 05 18 33.4 -0.9
baz=285
H29M **Whitestone** 82.02 24 IAmb IAmb 05 18 36.5
comp=Z,8.8nm,0.8s
H29M **Whitestone** 82.02 24 P P 05 18 33.4 -1.2
baz=285
CTG **Chitna Glacier** 82.04 29 P P 05 18 34.3 -0.7
baz=283
CTGM **Chitina Glacie** 82.04 29 IAmb IAmb 05 18 37.5
comp=Z,10.0nm,0.9s
DAWY **Dawson** 82.16 26 P P 05 18 34.4 -1.0
baz=285
YUK3 **Moose Creek** 82.26 28 P P 05 18 34.6 -1.5
baz=284

I29M **Ogilvie Camp,** 82.27 25 P P 05 18 35.2 -0.7
baz=285
J29N **Klondike Camp** 82.56 25 P P 05 18 36.4 -1.0
baz=286
F30M **Barrier River** 82.61 22 IAmb IAmb 05 18 39.0
comp=Z,7.3nm,0.9s
F30M **Barrier River** 82.61 22 P P 05 18 36.2 -1.4
baz=287
EPYK **Eagle Plains** 82.62 23 IAmb IAmb 05 18 39.1
comp=Z,6.9nm,0.8s
EPYK **Eagle Plains** 82.62 23 P P 05 18 36.8 -1.0
baz=287
O28M **Mount Upton** 82.63 29 P P 05 18 36.8 -1.4
baz=284
G30M **tAoh Zraii Nji** 82.63 23 IAmb IAmb 05 18 39.4
comp=Z,8.0nm,0.9s
G30M **tAoh Zraii Nji** 82.63 23 P P 05 18 35.8 -2.0
baz=287
YUK8 **Steele Glacier** 82.70 29 P P 05 18 36.7 -1.9
baz=285
PINM **Pinnacle** 82.77 30 P P 05 18 37.3 -1.4
baz=284
L29M **L29M** 82.96 27 P P 05 18 37.8 -1.8
baz=286
M29M **Somme Creek** 82.99 27 IAmb IAmb 05 18 43.1
comp=Z,3.7nm,0.7s
M29M **Somme Creek** 82.99 27 P P 05 18 38.2 -1.6
baz=286,SNR=5.0
K29M **Barlow Dome** 83.02 26 P P 05 18 38.6 -1.4
baz=286
I30M **Mount Dempster** 83.09 24 P P 05 18 38.9 -1.4
baz=287,SNR=5.8
INK **Inuvik** 83.19 21 P 05 18 41.0 +0.5
INK IAmb IAmb 05 18 41.9
comp=Z,5.0nm,1.0s
INK **Inuvik** 83.19 21 P P 05 18 37.7 -2.8
baz=289
YUK4 **Talbot Arm** 83.21 29 P P 05 18 38.6 -2.4
baz=286
J30M **Hart River** 83.30 25 P P 05 18 40.8 -0.6
baz=287
STEI **Steigen** 83.31 339 eP P 05 18 40.3 -0.8
STEI IAmb IAmb 05 18 40.7
comp=Z,59nm,1.1s
F31M **Tsiigehtchic** 83.41 22 IAmb IAmb 05 18 42.8
comp=Z,5.8nm,0.7s
F31M **Tsiigehtchic** 83.41 22 P P 05 18 41.0 -0.6
baz=289
YUK6 **Outpost Mounta** 83.45 29 P P 05 18 41.8 -0.6
baz=286
FAUS **Fauske** 83.48 338 eP P 05 18 41.0 -1.0
O29M **Mount Kennedy** 83.52 30 P P 05 18 42.4 -0.2
baz=286
KIBK **Kibwezi** 83.55 266 P P 05 18 45.3 +1.7
M30M **Minto, Yukon** 83.70 27 IAmb IAmb 05 18 46.4
comp=Z,7.4nm,1.2s
M30M **Minto, Yukon** 83.70 27 P P 05 18 42.8 -0.6
baz=287,SNR=6.1
H31M **Peel River** 83.72 24 P P 05 18 43.1 -0.2
baz=289
MLR **Muntele Rosu** 83.87 315 IAmb IAmb 05 18 45.0
comp=Z,7.4nm,1.1s
BUR08 **Bucovina Ar. S** 83.88 317 P P 05 18 44.2 -0.4
BUR08 IAmb IAmb 05 18 46.7
comp=Z,11nm,1.4s
HYT **Haines Junctio** 83.89 29 P P 05 18 43.7 -0.7
baz=287
N30M **Aishikik Lake** 83.89 28 P P 05 18 43.5 -0.9
baz=287,SNR=5.2
MOR8 **Moi Rana** 84.21 337 eP P 05 18 42.1 -3.8
P30M **Million Dollar** 84.35 29 P P 05 18 44.6 -2.2
baz=287
A36M **Sachs Harbour** 84.35 17 P P 05 18 44.3 -2.0
baz=297
N31M **Braeburn, Yuko** 84.48 28 P P 05 18 47.6 +0.2
N31M IAmb IAmb 05 18 50.1
comp=Z,9.3nm,0.9s
N31M **Braeburn, Yuko** 84.48 28 P P 05 18 45.5 -1.8
baz=288
O30N **Mendenhall** 84.56 29 P P 05 18 46.4 -1.4
baz=288
LEIR **Leirfjorden** 84.73 337 eP P 05 18 47.6 -0.8
LODK **Lodwar** 84.83 272 P P 05 18 50.6 +0.6
LODK **Lodwar** 84.83 272 P P 05 18 51.6 +1.6
M31M **Drury Creek, Y** 84.88 27 P P 05 18 46.7 -2.6
baz=289
WHY **Whitehorse** 85.16 29 P P 05 18 49.1 -1.7
baz=289
SKAG **Skagway** 85.34 30 P P 05 18 49.7 -1.8
baz=289
NSS **Namsos** 85.78 336 eP P 05 18 52.6 -1.1
C36M **Paulatuk** 85.92 19 P P 05 18 52.3 -1.9
baz=298,SNR=17
P32M **Atlin** 86.07 29 P P 05 18 51.8 -3.4
baz=290
SIT **Sitka** 86.11 32 P P 05 18 53.6 -1.9
baz=289
R32K **Eaglecrest** 86.12 31 P P 05 18 53.9 -1.6
baz=289
P33M **Teslin, Yukon** 86.28 29 P P 05 18 53.3 -3.0
baz=291
S32K **Killisnoo** 86.36 32 P P 05 18 54.7 -1.9
baz=289
HFS **Hagfors** 86.69 331 P P 05 18 57.1 -1.1
comp=Z,2.7nm,0.6s,baz=96,slow=6.7,SNR=15
comp=Z,2.7nm,0.6s
Q32M **Nakina River** 86.99 30 P P 05 18 57.1 -2.8
baz=291
LANS **Liptovska Anna** 87.17 320 eP P 05 19 01.8 +1.0
R33M **Jennings River** 87.45 29 P P 05 18 59.2 -2.8
baz=292
NB2 **NORSAR Subarra** 87.47 333 P P 05 19 00.6 -1.4
comp=Z,1.6nm,0.7s,baz=68,slow=4.4
NB2 **NORSAR Subarra** 87.47 333 P P 05 19 00.6 -1.4
NOA **NORSAR Array B** 87.47 333 P P 05 19 00.7 -1.4
comp=Z,2.5nm,0.8s,baz=67,slow=4.6,SNR=7.6
comp=Z,2.5nm,0.8s
U33K **Whale Pass** 87.58 33 P P 05 18 59.6 -2.9
baz=291
CRAG **Craig** 87.81 33 P P 05 19 01.0 -2.7
baz=291
TGTN **Hyland Airport** 87.82 27 P P 05 19 02.0 -1.7
baz=295
WRAK **Wrangell Islan** 87.87 32 P P 05 19 01.7 -2.3
baz=291
S34M **Telegraph Cree** 87.93 31 P P 05 19 01.3 -2.9
baz=292
WTLY **Watson Lake, Y** 88.17 28 P P 05 19 03.2 -2.2
baz=294
DLBC **Dease Lake** 88.27 30 P P 05 19 02.1 -3.8
baz=293
V35K **Ketchikan** 88.66 33 P P 05 19 04.2 -3.5
baz=292
T35M **Bob Quinn** 88.73 31 P P 05 19 05.0 -3.0
baz=293
MODS **Modra-Piesok** 88.79 320 eP P 05 19 09.1 +0.6
WRGLY **Wrigley** 89.06 24 P P 05 19 06.8 -2.6
baz=299
U35K **Hyder** 89.27 32 P P 05 19 07.8 -2.7
baz=293
MBAR **Mbarara** 90.25 269 LR LR 05 57 33.8
comp=Z,20nm,19.7s,baz=350,slow=34
ARSA **Arzberg** 90.28 319 ePcP P 05 19 16.1 +0.6
comp=Z,1.2nm,0.5s
GERES **GERESS Array B** 90.85 321 P P 05 19 18.1 -0.2
comp=Z,1.2nm,0.8s,baz=66,slow=4.5,SNR=5.2
comp=Z,1.2nm,0.8s
MOA **Molln** 90.86 320 *i* P P 05 19 18.2 0.0
comp=Z,5.0nm,0.9s
MYKA **Terra Mystica** 91.70 319 eP P 05 19 21.8 -0.3
comp=Z,4.9nm,1.1s
LESA **Schwarzlhotal** 92.02 320 *i* P P 05 19 23.0 -0.7
comp=Z,4.9nm,1.1s
ABTA **Abfaltersbach** 92.38 319 eP P 05 19 23.8 -1.5
comp=Z,4.7nm,1.3s
WTTA **Wattenberg** 92.73 320 *i* P P 05 19 26.4 -0.7
comp=Z,7.2nm,1.0s
YKA **Yellowknife Ar** 92.87 23 P P 05 19 27.8 +0.7
comp=Z,1.6nm,0.9s,baz=310,slow=5.2,SNR=26
comp=Z,1.6nm,0.9s
SQTA **Sankt Quirin** 93.02 320 *i* P P 05 19 28.0 -0.3
comp=Z,5.2nm,0.8s
MOTA **Moosalm** 93.03 320 *i* P P 05 19 28.2 -0.2
comp=Z,4.1nm,0.8s
RETA **Reutte** 93.19 320 eP P 05 19 28.6 -0.4
comp=Z,5.9nm,1.4s
FETA **Feichten** 93.40 320 *i* P P 05 19 29.4 -0.7
comp=Z,4.2nm,1.0s

DAVA **Damuels** 93.82 320 eP P 05 19 30.6 -1.5
comp=Z,6.5nm,1.1s
VNDA **Vanda** 93.86 172 P P 05 19 31.2 0.0
comp=Z,1.4nm,1.0s,baz=350,slow=4.5,SNR=2.3
comp=Z,1.4nm,1.0s
VNDA **Vanda** 93.86 172 IAmb IAmb 05 19 58.1
comp=Z,6.9nm,1.4s
TORD **Torodi Ar. Bea** 114.14 291 PKP PKiKP 05 24 53.1 -1.1
comp=Z,0.9nm,0.7s,baz=63,slow=0.6,SNR=5.8
TXAR **Lajitas Array** 119.49 45 PKP PKPdf 05 25 05.1 +0.8
comp=Z,0.9nm,0.5s,baz=173,slow=1.2,SNR=25
DBIC **Dimbokro** 122.48 287 PKP PKPdf 05 25 09.8 -0.5
comp=Z,3.0nm,0.7s,baz=70,slow=3.7,SNR=3.9
PLCA **Paso Flores** 151.13 162 PKPbc PKPbc 05 26 08.8 +1.3
comp=Z,3.2nm,1.1s,baz=222,slow=3.2,SNR=11
CPUP **Villa Florida** 167.16 187 PKPab PKPab 05 27 24.7 -0.4
comp=Z,1.4nm,0.8s,baz=155,slow=5.9,SNR=4.7
BDFB **Brasilia** 169.02 258 PKPab PKPab 05 27 34.5 +0.5
comp=Z,3.2nm,0.6s,baz=89,slow=3.9,SNR=7.2

IDC ***17*** *05:16:00.8±1.5, 44.39N×130.12W, h0km, mb3.4/7, mbtmp3.4/9, ML3.6/2, MS2.8/2, Error ellipse: s-maj=47.5km s-min=16.8km az=42.0*
NEIC ***17*** *05:16:01.7±1.7, 44.37N±0.09×129.6W±0.2, h10km±2km, ML3.3/38, Error ellipse: s-maj=22.9km s-min=15.3km az=256.0*

ISC 17 05:16:03.4±1.1, 44.54N±0.09×129.6W±0.1, h10km, n51, σ1973/44, mb3.6/6, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I02E	**Swisshome, OR**	**4.12**	**94**	Pn	**Pn**	**05 17 02.8**	**-3.6**
I02E				IAML		05 17 57.1	
	comp=E,35nm,2.9s						
I02E				IAML		05 18 32.9	
	comp=N,40nm,3.3s						
J01E	**Myrtle Point**	**4.30**	**107**	Pn	**Pn**	**05 17 07.3**	**-1.6**
J01E				IAML		05 17 49.6	
	comp=N,29nm,2.9s						
J01E				IAML		05 18 55.6	
	comp=E,34nm,2.3s						
F03A	**Seaside**	**4.46**	**70**		**Pn**	**05 17 09.2**	**-1.8**
COR	**Corvallis**	**4.47**	**87**		**Pn**	**05 17 08.4**	**-2.7**
COR				IAML		05 17 46.4	
	comp=E,28nm,2.7s						
COR				IAML		05 20 10.0	
	comp=E,26nm,2.9s						
G03D	**McMinnville, O**	**4.52**	**79**		**Pn**	**05 17 09.5**	**-2.4**
G03D				IAML		05 17 58.9	
	comp=N,24nm,1.9s						
G03D				IAML		05 18 05.5	
	comp=E,27nm,2.6s						
I03D	**Drain, OR**	**4.55**	**99**		**Pn**	**05 17 09.1**	**-3.2**
BUCK	**Buck Mountain**	**4.72**	**92**	Pn	**Pn**	**05 17 13.1**	**-1.7**
BUCK				IAML		05 18 21.5	
	comp=E,26nm,3.0s						
BUCK				IAML		05 19 17.2	
	comp=N,24nm,4.2s						
WISH	**Wishkah**	**4.79**	**55**		**Pn**	**05 17 15.5**	**-0.1**
C03A	**Quillayute Air**	**4.86**	**44**	Pn	**Pn**	**05 17 16.5**	**+0.1**
H04D	**Lebanon**	**4.88**	**88**		**Pn**	**05 17 14.5**	**-2.3**
H04D				IAML		05 17 54.7	
	comp=N,25nm,3.5s						
H04D				IAML		05 19 19.7	
	comp=E,24nm,2.7s						
NLWA	**Neilton Lookou**	**4.88**	**52**		**Pn**	**05 17 16.6**	**-0.3**
G04A	**Mulino**	**5.08**	**80**		**Pn**	**05 17 18.8**	**-0.7**
I04A	**Tendick Farm,**	**5.20**	**96**		**Pn**	**05 17 18.8**	**-2.4**
I04A				IAML		05 19 02.0	
	comp=N,14nm,3.3s						
I04A				IAML		05 19 10.0	
	comp=E,14nm,2.6s						
BBOR	**Butler Butte**	**5.25**	**106**		**Pn**	**05 17 19.7**	**-2.4**
H04A	**Detroit Lake**	**5.26**	**86**	Pn	**Pn**	**05 17 19.8**	**-2.4**
B04A	**Port Angeles**	**5.47**	**48**		**Pn**	**05 17 24.4**	**-0.6**
GNW	**Green Mountain**	**5.57**	**55**		**Pn**	**05 17 25.8**	**-0.6**
HOOD	**Mount Hood Mea**	**5.67**	**79**		**Pn**	**05 17 26.7**	**-1.1**
CLRS	**Cowichan Lake**	**5.68**	**39**		**Pn**	**05 17 27.6**	**-0.1**
YBH	**Yreka Blue Hor**	**5.74**	**117**	Pn	**Pn**	**05 17 31.2**	**+2.3**
	baz=270,slow=5.5,SNR=8.2						
YBH	**Yreka Blue Hor**	**5.74**	**117**		**Pn**	**05 17 27.2**	**-1.6**
LON	**Longmire**	**5.86**	**65**		**Pn**	**05 17 29.7**	**-0.7**
PGC	**Sidney**	**5.88**	**44**		**Pn**	**05 17 30.1**	**-0.5**
D05A	**Enumclaw**	**5.91**	**61**		**Pn**	**05 17 31.3**	**+0.3**
CBB	**Campbell River**	**6.19**	**26**	Pn	**Pn**	**05 17 36.3**	**+1.5**
PINE	**Pine Mountain**	**6.24**	**94**		**Pn**	**05 17 35.2**	**-0.5**
G06A	**Carlson Farm,**	**6.38**	**81**	Pn	**Pn**	**05 17 35.5**	**-2.0**
LTY	**Liberty**	**6.77**	**63**		**Pn**	**05 17 42.5**	**-0.4**
MXC	**Moxie City**	**6.81**	**69**		**Pn**	**05 17 43.2**	**-0.3**
E07A	**Sunnyside**	**7.10**	**70**		**Pn**	**05 17 46.8**	**-0.6**
I07A	**Izee**	**7.23**	**90**	Pn	**Pn**	**05 17 47.5**	**-1.7**
WAH2	**Wahluke Slope**	**7.34**	**69**		**Pn**	**05 17 49.7**	**-1.0**
G08A	**Pilot Rock**	**7.56**	**81**		**Pn**	**05 17 52.0**	**-1.8**
E08A	**Dider Farm, El**	**7.63**	**72**		**Pn**	**05 17 54.4**	**-0.2**
D08A	**Wollman Farm,**	**7.85**	**68**		**Pn**	**05 17 57.4**	**-0.2**
NEW	**Newport**	**9.36**	**62**	LR	LR	05 21 03.9	
	comp=E,69nm,18.2s,baz=300,slow=31						
NVAR	**Mina Array Bea**	**10.41**	**122**	Pn	**Pn**	**05 18 36.5**	**+3.5**
	comp=E,0.1nm,0.3s,baz=294,slow=20,SNR=2.2						
	comp=E,0.7nm,0.8s						
PDAR	**Pinedale Array**	**14.59**	**90**	Pn	**P**	**05 19 38.2**	**+1.6**
	comp=E,0.1nm,0.3s,baz=300,slow=12,SNR=4.9						
PDAR				LR	LR	05 25 20.7	
	comp=E,30nm,20.6s,baz=352,slow=37						
	comp=E,0.3nm,0.6s						
YKA	**Yellowknife Ar**	**19.96**	**21**	P	**Pn**	**05 20 38.2**	**+1.1**
	comp=E,0.4nm,0.8s,baz=215,slow=12,SNR=7.1						
	comp=E,0.4nm,0.8s						
ILAR	**Eielson Array**	**22.46**	**340**	P	**P**	**05 21 02.0**	**-0.3**
	comp=E,0.4nm,1.0s,baz=151,slow=8.3,SNR=6.3						
	comp=E,0.4nm,1.0s						
TXAR	**Lajitas Array**	**25.52**	**118**	P	**P**	**05 21 34.4**	**+2.2**
	comp=E,0.2nm,0.7s,baz=311,slow=10,SNR=5.7						
	comp=E,0.2nm,0.7s						
H11N3	**WAKE ISLAND Hy**	**57.68**	**266**	T	T	06 28 10.9	
	baz=49,slow=75,SNR=374						
H11N2	**WAKE ISLAND Hy**	**57.68**	**266**	T	T	06 28 12.8	
	baz=49,slow=75,SNR=177						
H11N1	**WAKE ISLAND Hy**	**57.69**	**266**	T	T	06 28 19.8	
	baz=49,slow=75,SNR=216						
H11S1	**WAKE ISLAND Hy**	**58.62**	**265**	T	T	06 29 21.4	
	baz=48,slow=75,SNR=75						
H11S2	**WAKE ISLAND Hy**	**58.63**	**265**	T	T	06 29 28.6	
	baz=48,slow=75,SNR=38						
H11S3	**WAKE ISLAND Hy**	**58.63**	**265**	T	T	06 29 24.1	
	baz=48,slow=75,SNR=33						
SONM	**Songino Array**	**75.71**	**325**	P	**P**	**05 27 47.4**	**-1.7**
	comp=E,0.5nm,0.8s,baz=35,slow=3.5,SNR=2.7						
	comp=E,0.5nm,0.8s						
BVAR	**Borovoye Array**	**81.31**	**348**	P	**P**	**05 28 18.0**	**-1.7**
	comp=E,0.5nm,0.5s,baz=7.6,slow=4.4,SNR=2.5						
	comp=E,0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**82.12**	**342**	P	**P**	**05 28 22.7**	**-1.3**
	comp=E,0.4nm,0.7s,baz=15,slow=5.2,SNR=4.4						
	comp=E,0.4nm,0.7s						
LPAZ	**La Paz**	**82.32**	**122**	P	**P**	**05 28 27.5**	**+1.4**
	comp=E,0.9nm,0.6s,baz=345,slow=4.9,SNR=3.7						
	comp=E,0.9nm,0.6s						

ISK ***17*** *05:18:13.7, 38.52N×39.50E, h3km, ML3.8/20*
AFAD ***17*** *05:18:14.7, 38.51N×39.47E, h5km±2km, ML3.6*

ISC 17 05:18:14.8±0.9, 38.52N±0.02×39.48E±0.02, h11km±8km, n58, σ0.87/63, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESIJ	**Sivrice-Elazig**	**0.15**	**243**	Pg	**Pg**	**05 18 18.1**	**-0.2**
ESIJ				Sg	**Sg**	**05 18 20.7**	**-0.1**
SVRC	**Sivrice-ELAZID**	**0.20**	**225**	Pg	**Pg**	**05 18 18.2**	**-0.9**
SVRC				Sg	**Sg**	**05 18 22.5**	**+0.4**
MDNT	**Maden**	**0.20**	**129**	P	**Pg**	**05 18 19.4**	**+0.3**
ELZ	**Elazig**	**0.28**	**308**	P	**Pb**	**05 18 21.0**	**-0.8**
KOVA	**Elazig, Kovanc**	**0.32**	**54**	P	**Pg**	**05 18 21.2**	**-0.1**
KOVA				S	**Sb**	**05 18 26.5**	**-1.3**
KOVA				IAML		05 18 28.0	
	comp=E,6µm,0.5s						
ESGZ	**Sivrice-Elazig**	**0.34**	**255**	Pg	**Pg**	**05 18 21.5**	**-0.2**
ELZG	**Elazig**	**0.39**	**267**	P	**Pg**	**05 18 22.5**	**-0.1**
ELZG				S	**Sg**	**05 18 28.5**	**+0.7**
ELZG				IAML		05 18 31.0	
	comp=N,7µm,0.7s						
ELZG				IAML		05 18 32.0	
	comp=E,10µm,0.4s						

MDYL	**Doganyol-Malat**	**0.41**	**240**	Pg	**Pg**	**05 18 22.9**	**+0.1**
MDYL				Sg	**Sb**	**05 18 29.3**	**-1.0**
TNCL	**Tunceli-Merkez**	**0.60**	**4**	P	**Pb**	**05 18 26.6**	**-0.8**
MCKZ	**Bingol**	**0.72**	**327**	P	**Pg**	**05 18 28.4**	**-0.4**
MCKZ				S	**Sb**	**05 18 39.1**	**-0.4**
DYBB	**Diyarbakir**	**0.77**	**137**	Pg	**Pg**	**05 18 28.7**	**-0.9**
NARI	**Adyaman-Kaht**	**0.85**	**222**	P	**Pg**	**05 18 31.0**	**-0.2**
MAYA	**Malatya/Merkez**	**0.85**	**257**	P	**Pg**	**05 18 30.8**	**-0.4**
KAHTU	**Kahta**	**0.99**	**224**	P	**Pn**	**05 18 34.8**	**+0.1**
BNGB	**Bingl**	**1.05**	**63**	Pg	**Pg**	**05 18 34.5**	**-0.5**
HANM	**anlurfa/Hi**	**1.05**	**207**	P	**Pb**	**05 18 34.7**	**-0.3**
ARPR	**Arapgir-MALATY**	**1.06**	**303**	Pg	**Pg**	**05 18 34.5**	**-0.8**
ERZN	**Erzincan**	**1.08**	**10**	Pg	**Pg**	**05 18 34.7**	**-0.9**
ILIC	**ilic-Erzincan**	**1.18**	**323**	Pn	**Pg**	**05 18 36.3**	**-1.1**
EUZM	**Uzumlu**	**1.20**	**8**	P	**Pn**	**05 18 37.8**	**+0.2**
AZEY	**Adyaman-Merk**	**1.20**	**234**	P	**Pb**	**05 18 37.7**	**+0.1**
YEDI	**Yedisu-Bingol**	**1.24**	**42**	Pn	**Pb**	**05 18 38.1**	**-0.2**
AKCD	**Akcadag**	**1.25**	**260**	P	**Pg**	**05 18 37.6**	**-1.1**
HEKM	**Malatya_Hekimh**	**1.25**	**287**	P	**Pg**	**05 18 37.8**	**-1.0**
SLHN	**Bingol, Solhan**	**1.28**	**70**	P	**Pg**	**05 18 38.8**	**-0.7**
MDIV		**1.38**	**306**	P	**Pg**	**05 18 41.6**	**+0.3**
MIMR	**Divri**	**1.38**	**306**	P	Pg	05 18 46.8	+5.6
SVAN	**Silvan-Diyarba**	**1.40**	**105**	Pn	**Pn**	**05 18 39.8**	**-0.5**
SVAN	**Silvan-Diyarba**	**1.40**	**105**	P	**Pn**	**05 18 40.2**	**-0.1**
SANL	**SANLIURFA_Merk**	**1.40**	**196**	P	**Pn**	**05 18 40.5**	**+0.2**
ATAB	**Bozova**	**1.41**	**222**	P	**Pn**	**05 18 40.5**	**+0.1**
KARO	**Karliova-Bingo**	**1.46**	**57**	Pn	**Pn**	**05 18 41.4**	**+0.2**
BTMN	**Batman**	**1.54**	**113**	P	**Pn**	**05 18 42.9**	**+0.6**
AKCA	**Adyaman/G¶l**	**1.59**	**244**	P	**Pg**	**05 18 44.7**	**-0.6**
MUSM	**Mu-Merkez**	**1.60**	**82**	P	**Pn**	**05 18 43.7**	**+0.6**
KELT	**Kelkit**	**1.64**	**354**	P	**Pg**	**05 18 46.1**	**-0.2**
VRTB	**Varto-Mus**	**1.67**	**67**	Pn	**Pn**	**05 18 45.0**	**+0.9**
KOPT	**Kop Dagi**	**1.69**	**27**	P	**Pg**	**05 18 48.1**	**+0.9**
BAYB	**BAYBURT**	**1.84**	**19**	P	**Pg**	**05 18 49.9**	**-0.1**
ELBS	**KAHRAMANMARAS**	**1.86**	**265**	P	**Pg**	**05 18 50.2**	**-0.2**
ALUC	**Giresun/Alucra**	**1.91**	**343**	P	**Pg**	**05 18 50.4**	**-1.0**
BAYT	**Aydıntepe-Bayb**	**1.94**	**15**	Pn	**Pn**	**05 18 48.8**	**+0.9**
SUSE	**Susehri**	**1.96**	**330**	P	**Pg**	**05 18 51.5**	**-0.8**
GURO	**Guroymak-BITLI**	**2.00**	**88**	Pn	**Pn**	**05 18 49.2**	**+0.5**
KHMN	**Narli-Kahraman**	**2.15**	**239**	Pn	**Pn**	**05 18 51.8**	**+1.1**
GAZ	**Gaziantep**	**2.25**	**234**	Pn	**Pn**	**05 18 52.5**	**+0.5**
KMRS	**Kahramanmaras**	**2.28**	**244**	Pn	**Pn**	**05 18 53.3**	**+0.9**
SVSK	**Karacayir**	**2.38**	**307**	Pn	**Pn**	**05 18 55.3**	**+1.5**
SARI	**SarD1z-Kayseri**	**2.41**	**268**	Pn	**Pn**	**05 18 55.6**	**+1.3**
MLAZ	**Malazgirt-MUS**	**2.47**	**74**	Pn	**Pn**	**05 18 56.3**	**+1.1**
AKDM	**Akdamar-Van**	**2.75**	**93**	Pn	**Pn**	**05 19 00.2**	**+1.2**
BNN	**Bunyan**	**2.87**	**278**	Pn	**Pn**	**05 19 02.1**	**+1.5**
TOKT	**Tokat**	**2.90**	**309**	Pn	**Pn**	**05 19 02.3**	**+1.3**
AGRB	**Hanur-Agry**	**2.93**	**68**	Pn	**Pn**	**05 19 02.8**	**+1.3**
VANB	**Van**	**3.06**	**87**	Pn	**Pn**	**05 19 05.1**	**+1.8**
YOZ	**Yozgat**	**3.43**	**290**	Pn	**Pn**	**05 19 09.8**	**+1.5**
CUKT	**Cukurca**	**3.50**	**110**	Pn	**Pn**	**05 19 11.0**	**+1.7**
CMRD	**Camardi-Nigde**	**3.65**	**258**	Pn	**Pn**	**05 19 13.1**	**+1.8**

*MDD **17** 05:42:04.7±0.9,37°.26N×13°.36W,h14^{km}±7^{km},Mb4.0/13, M_mb3.3/10,Error ellipse: s-maj=6.2km s-min=4.7km az=103.0*
*INMG **17** 05:42:06.3±1.1,37°.07N×13°.61W,h4^{km},ML2.5,Error ellipse: s-maj=5.8km s-min=4.1km az=92.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Josephine*
*CNRM **17** 05:42:08.8,36°.79N×13°.00W,h94^{km}*

ISC 17 05:42:03.6±3.1,37°.14N±0°.06×13°.1W±0°.2,h10^{km},n62, σ2^{s}43/105,12C,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.44**	**89**	Pn	**Pn**	**05 42 58.8**	**+1.6**
PFVI				Sn	**Sn**	**05 43 38.6**	**+0.5**
PFVI	**Vila Bisbo**	**3.44**	**89**	*e*P	**Pn**	**05 42 59.3**	**+2.1**
PFVI				*e*S	**Sn**	**05 43 39.0**	**+0.9**
PFVI				*i* IAML		05 43 41.5	
PFVI				*i* IAML		05 43 42.3	
PFVI				*i* IAML		05 43 42.5	
PFVI	**Vila Bisbo**	**3.44**	**89**	P	**Pn**	**05 42 58.3**	**+1.0**
PFVI				S	**Sn**	**05 43 38.8**	**+0.7**
PTEO	**Sao Teotonio**	**3.54**	**82**	*e*P	**Pn**	**05 43 01.0**	**+2.4**
PTEO				*e*S	**Sn**	**05 43 41.8**	**+1.3**
PTEO				*i* IAML		05 43 45.8	
PTEO				*i* IAML		05 43 47.6	
PTEO				*i* IAML		05 43 49.2	
PMAFR	**Mafra**	**3.54**	**58**	Pn	**Pn**	**05 43 00.4**	**+1.8**
PMAFR				Sn	**Sn**	**05 43 40.7**	**+0.2**
PMAFR	**Mafra**	**3.54**	**58**	*e*P	**Pn**	**05 43 00.7**	**+2.1**
PMAFR				*e*S	**Sn**	**05 43 40.9**	**+0.4**
PMAFR				*i* IAML		05 43 44.3	
PMAFR				*i* IAML		05 43 46.1	
PMAFR				*i* IAML		05 43 51.2	
MORF	**Marmelete**	**3.58**	**86**	*e*S	**Sn**	**05 43 42.6**	**+1.0**
MORF				*i* IAML		05 43 43.3	
MORF				*i* IAML		05 43 45.4	
MORF				*i* IAML		05 43 47.8	
MESJ	**Messejana**	**3.97**	**78**	*e*P	**Pn**	**05 43 07.1**	**+2.6**
MESJ				*e*S	**Sn**	**05 43 52.1**	**+1.0**
MESJ				*i* IAML		05 43 56.0	
MESJ				*i* IAML		05 43 56.8	
MESJ				*i* IAML		05 43 57.7	
MOE	**Montemor**	**4.03**	**69**	*e*P	**Pn**	**05 43 07.5**	**+2.2**
MOE				*e*S	**Sn**	**05 43 53.7**	**+1.1**
MOE				*i* IAML		05 43 55.5	
MOE				*i* IAML		05 43 58.1	
MOE				*i* IAML		05 43 58.9	
PCVE	**Castro Verde**	**4.09**	**82**	Pn	**Pn**	**05 43 08.0**	**+1.9**
PCVE				Sn	**Sn**	**05 43 54.2**	**+0.2**
PCVE	**Castro Verde**	**4.09**	**82**	*e*S	**Sn**	**05 43 55.0**	**+1.0**
PCVE				*i* IAML		05 43 57.8	
PCVE				*i* IAML		05 43 58.8	
PCVE				*i* IAML		05 43 59.2	
PSBE	**So Bento**	**4.15**	**54**	*e*S	**Sn**	**05 43 58.1**	**+2.4**
PBDV	**Barranco-do-Ve**	**4.16**	**87**	Sn	**Sn**	**05 43 55.6**	**-0.2**
PBDV	**Barranco-do-Ve**	**4.16**	**87**	*e*S	**Sn**	**05 43 56.7**	**+1.0**
PBDV				*i* IAML		05 44 01.8	
PBDV				*i* IAML		05 44 02.0	
PBDV				*i* IAML		05 44 02.3	
PBEJ	**Beja**	**4.28**	**76**	*e*S	**Sn**	**05 43 59.2**	**+0.5**
PBEJ				*i* IAML		05 44 00.3	
PBEJ				*i* IAML		05 44 03.5	
PBEJ				*i* IAML		05 44 04.0	
EVO	**Evora**	**4.29**	**70**	Sn	**Sn**	**05 43 58.4**	**-0.5**
EVO	**Evora**	**4.29**	**70**	*e*S	**Sn**	**05 43 59.8**	**+0.9**
EVO				*i* IAML		05 44 03.0	
EVO				*i* IAML		05 44 03.6	
EVO				*i* IAML		05 44 05.0	
PMTG	**Montargil**	**4.32**	**62**	*e*P	**Pn**	**05 43 59.1**	**+1.7**
PMTG				*e*S	**Sn**	**05 44 00.4**	**+0.6**
PMTG				*i* IAML		05 44 05.4	
PMTG				*i* IAML		05 44 07.4	
PMTG				*i* IAML		05 44 08.5	
PVAQ	**Vaqueiros**	**4.33**	**85**	*e*P	**Pn**	**05 43 12.1**	**+2.7**
PVAQ				*e*S	**Sn**	**05 44 01.0**	**+1.0**
PVAQ				*i* IAML		05 44 05.3	
PVAQ				*i* IAML		05 44 05.4	
PVAQ				*i* IAML		05 44 05.8	
PVAQ	**Vaqueiros**	**4.33**	**85**	P	**Pn**	**05 43 11.0**	**+1.5**
PVAQ				S	**Sn**	**05 44 01.3**	**+1.4**
PARRA	**Arraiolos**	**4.36**	**66**	*e*P	**Pn**	**05 43 11.5**	**+1.6**
PARRA				*e*S	**Sn**	**05 44 01.2**	**+0.5**
PARRA				*i* IAML		05 44 05.1	
PARRA				*i* IAML		05 44 05.4	
PARRA				*i* IAML		05 44 07.4	
EGRO	**El Granado**	**4.52**	**83**	Pn	**Pn**	**05 43 15.3**	**+3.2**
EGRO				Sn	**Sn**	**05 44 04.7**	**0.0**
EGRO	**El Granado**	**4.52**	**83**	P	**Pn**	**05 43 14.2**	**+2.1**
EGRO				⇑*i*VmbVC		05 43 19.6	
	266nm,SNR=1.8						
EGRO				S	**Sn**	**05 44 04.1**	**-0.6**
PSARD	**Sardoal**	**4.62**	**56**	*e*P	**Pn**	**05 43 15.3**	**+1.9**
PSARD				*e*S	**Sn**	**05 44 07.0**	**-0.1**
PSARD				*i* IAML		05 44 10.0	
PSARD				*i* IAML		05 44 10.1	
PSARD				*i* IAML		05 44 11.6	
PCAS	**Casmilo, Conde**	**4.65**	**50**	*e*P	**Pn**	**05 43 15.2**	**+1.3**
PCAS				*e*S	**Sn**	**05 44 07.7**	**-0.3**
PCAS				*i* IAML		05 44 10.3	
PCAS				*i* IAML		05 44 10.6	
PCAS				*i* IAML		05 44 11.9	
PESTR	**Estremoz**	**4.71**	**67**	Sn	**Sn**	**05 44 09.8**	**+0.5**
PESTR	**Estremoz**	**4.71**	**67**	*e*S	**Sn**	**05 44 10.1**	**+0.8**
PESTR				*i* IAML		05 44 11.7	
PESTR				*i* IAML		05 44 12.6	
PESTR				*i* IAML		05 44 14.2	
PESTR	**Estremoz**	**4.71**	**67**	P	**Pn**	**05 43 17.6**	**+3.0**
PESTR				S	**Sn**	**05 44 12.2**	**+2.9**
PBAR	**Barrancos**	**4.95**	**76**	Pn	**Pn**	**05 43 20.6**	**+2.6**
PBAR				Sn	**Sn**	**05 44 15.3**	**+0.1**
PBAR	**Barrancos**	**4.95**	**76**	*e*S	**Sn**	**05 44 16.4**	**+1.3**
PBAR				*i* IAML		05 44 18.1	
PBAR				*i* IAML		05 44 18.6	
PBAR				*i* IAML		05 44 20.8	
PMRV	**Marv??o**	**5.06**	**61**	*e*P	**Pn**	**05 43 21.2**	**+1.7**
PMRV				*e*S	**Sn**	**05 44 18.0**	**-0.1**
PMRV				*i* IAML		05 44 20.9	
PMRV				*i* IAML		05 44 21.0	
PMRV				*i* IAML		05 44 21.1	
EMIN	**Mina Concepcio**	**5.18**	**81**	Sn	**Sn**	**05 44 21.2**	**+0.3**
EMIN	**Mina Concepcio**	**5.18**	**81**	P	**Pn**	**05 43 22.4**	**+1.2**
EMIN				⇑*i*VmbVC		05 43 25.7	
	32nm,SNR=0.3						
EMIN				S	**Sn**	**05 44 20.1**	**-0.8**
PCBR	**Castelo Branco**	**5.19**	**57**	*e*P	**Pn**	**05 43 23.1**	**+1.8**
PCBR				*e*S	**Sn**	**05 44 22.0**	**+0.8**
PCBR				*i* IAML		05 44 24.6	
PCBR				*i* IAML		05 44 25.0	
PCBR				*i* IAML		05 44 25.3	
PVIS	**Viseu**	**5.42**	**47**	*e*P	**Pn**	**05 43 26.2**	**+1.7**
PVIS				*e*S	**Sn**	**05 44 26.9**	**-0.2**
MTE	**Manteigas**	**5.45**	**52**	*e*P	**Pn**	**05 43 26.3**	**+1.4**
MTE				*e*S	**Sn**	**05 44 27.4**	**-0.2**
MTE				*i* IAML		05 44 29.3	
MTE				*i* IAML		05 44 29.8	
MTE				*i* IAML		05 44 30.1	
ESPR	**Espera**	**5.83**	**90**	Sn	**Sn**	**05 44 38.0**	**+1.0**
ESPR	**Espera**	**5.83**	**90**	P	**Pn**	**05 43 29.7**	**-0.4**
ESPR				⇑*i*VmbVC		05 43 32.0	
	97nm,SNR=0.6						
ESPR				S	**Sn**	**05 44 38.0**	**+1.0**
PVRL	**Vila Real**	**5.89**	**44**	*e*S	**Sn**	**05 44 37.1**	**-1.6**
PVRL				*i* IAML		05 44 38.0	
PVRL				*i* IAML		05 44 39.1	
PVRL				*i* IAML		05 44 39.1	
POLO	**Lamas de Olo**	**5.92**	**43**	*e*S	**Sn**	**05 44 37.4**	**-1.9**
POLO				*i* IAML		05 44 40.1	
POLO				*i* IAML		05 44 41.2	
POLO				*i* IAML		05 44 42.3	
PCAB	**Cabril**	**6.04**	**39**	*e*S	**Sn**	**05 44 39.9**	**-2.3**
PCAB				*i* IAML		05 44 41.0	
PCAB				*i* IAML		05 44 41.3	
PCAB				*i* IAML		05 44 45.8	
EZAM	**Zamans**	**6.06**	**33**	⇑*i*VmbVC		05 43 32.8	
	248nm,SNR=1.4						
EZAM				S	**Sn**	**05 44 36.2**	**-6.5**
PGAV	**Gavieira, Arco**	**6.11**	**36**	*e*P	**Pn**	**05 43 34.8**	**+0.7**
PGAV				*e*S	**Sn**	**05 44 40.3**	**-3.7**
PGAV				*i* IAML		05 44 44.2	
PGAV				*i* IAML		05 44 45.7	
PGAV				*i* IAML		05 44 46.5	
ELOB	**Lobios**	**6.14**	**38**	P	**Pn**	**05 43 34.4**	**0.0**
ELOB				⇑*i*VmbVC		05 43 37.1	
	162nm,SNR=0.9						
ELOB				S	**Sn**	**05 44 38.9**	**-5.8**
ECAB	**El Cabril**	**6.20**	**79**	Pn	**Pn**	**05 43 37.7**	**+2.6**
ECAB				Sn	**Sn**	**05 44 45.8**	**-0.3**
ECAB	**El Cabril**	**6.20**	**79**	P	**Pn**	**05 43 37.7**	**+2.6**
ECAB				⇑*i*VmbVC		05 43 43.5	
	59nm,SNR=0.7						
ECAB				S	**Sn**	**05 44 43.3**	**-2.7**
MVO	**Moncorvo**	**6.22**	**48**	*e*P	**Pn**	**05 43 36.9**	**+1.5**
MVO				*e*S	**Sn**	**05 44 44.7**	**-1.9**
MVO				*i* IAML		05 44 47.5	
MVO				*i* IAML		05 44 48.2	
MVO				*i* IAML		05 44 48.5	
EPLA	**Plasencia**	**6.25**	**60**	P	**Pn**	**05 43 37.4**	**+1.6**
EPLA				⇑*i*VmbVC		05 43 40.0	
	65nm,SNR=0.5						
EPLA				S	**Sn**	**05 44 45.1**	**-2.2**
SRHM	**Skhour des Reh**	**6.34**	**136**	P	**Pn**	**05 43 36.5**	**-0.7**
SRHM				S	**Sn**	**05 44 46.6**	**-3.1**
ZHG	**ZHG**	**6.46**	**123**	P	**Pn**	**05 43 37.2**	**-1.7**
ZHG				S	**Sn**	**05 44 47.0**	**-5.7**
PBRG	**Braganca**	**6.79**	**45**	*e*P	**Pn**	**05 43 45.3**	**+2.0**
PBRG				*e*S	**Sn**	**05 44 59.4**	**-1.3**
PBRG				*i* IAML		05 45 01.7	
PBRG				*i* IAML		05 45 01.8	
PBRG				*i* IAML		05 45 02.3	
EAGO	**Agolada(Pontev**	**6.85**	**33**	P	**Pn**	**05 43 42.0**	**-2.1**
EAGO				⇑*i*VmbVC		05 43 44.7	
	94nm,SNR=0.5						
EAGO				S	**Sn**	**05 44 54.4**	**-7.8**
EADA	**Adamuz**	**6.87**	**79**	P	**Pn**	**05 43 47.8**	**+3.4**
EADA				⇑*i*VmbVC		05 43 50.9	
	13nm,SNR=0.1						
EADA				S	**Sn**	**05 45 01.2**	**-1.4**
ECAL	**Calabor**	**6.88**	**44**	⇑*i*VmbVC		05 43 47.7	
	79nm,SNR=0.2						
ECAL				S	**Sn**	**05 44 58.4**	**-4.6**
PAB	**San Pablo**	**7.31**	**68**	P	**Pn**	**05 43 51.9**	**+1.4**
PAB				⇑*i*VmbVC		05 43 55.3	
	26nm,SNR=0.2						
PAB				S	**Sn**	**05 45 10.6**	**-3.0**
PSIM	**Granatula de C**	**7.59**	**74**	P	**Pn**	**05 43 56.6**	**+2.3**
PSIM				S	**Sn**	**05 45 19.0**	**-1.5**
EPON	**Pontenova**	**7.69**	**35**	P	**Pn**	**05 43 54.6**	**-1.0**
EPON				⇑*i*VmbVC		05 43 55.5	
	141nm,SNR=0.5						
EPON				S	**Sn**	**05 45 16.8**	**-5.9**
TISM	**Timmit**	**7.73**	**132**	P	**Pn**	**05 43 55.3**	**-0.8**
TISM				S	**Sn**	**05 45 17.0**	**-6.7**
EQES	**Quesada**	**8.03**	**82**	P	**Pn**	**05 44 01.4**	**+1.0**
EQES				S	**Sn**	**05 45 30.2**	**-1.1**
MD31	**MD31**	**8.09**	**119**	P	**Pn**	**05 44 00.3**	**-0.8**
MD31				S	**Sn**	**05 45 27.6**	**-5.1**
OUZM	**OUZ**	**8.16**	**138**	P	**Pn**	**05 44 00.7**	**-1.5**
OUZM				S	**Sn**	**05 45 27.5**	**-7.1**
MDT	**Midelt**	**8.22**	**119**	P	**Pn**	**05 44 01.8**	**-1.2**

*NNC **17** 06:17:22.9±10.0,49°.78N×84°.52E,h0^{km},mb3.0,mpv2.5, Error ellipse: s-maj=92.0km s-min=34.4km az=65.0, Suspected Mining explosion.*
*IDC **17** 06:17:28.1±1.8,49°.64N×83°.94E,h0^{km},mbtmp2.3/2, ML2.3/1,Error ellipse: s-maj=23.8km s-min=11.9km az=92.0*

ISC 17 06:17:15.5±1.6,49°.80N±0°.04×84°.50E±0°.09,h0^{km},n8, σ0^{s}92/12,5C-2D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**3.35**	**207**	Pn	**Pb**	**06 18 17.1**	**+1.3**
	0.1nm,0.1s,baz=21,slow=13,SNR=13						
MK31				⇑Sn	**Sb**	**06 18 56.6**	**-0.5**
	2.0nm,0.6s,baz=24,slow=26						
MKAR	**Makanchi Array**	**3.35**	**207**	Pn	**Pg**	**06 18 18.9**	**-0.7**
	0.3nm,0.3s,baz=21,slow=13,SNR=13						
MKAR				Sn	**Sb**	**06 18 55.6**	**-1.4**
	0.6nm,0.3s,baz=23,slow=27,SNR=12						
	0.7nm,0.5s						
MAKZ	**Makanchi**	**3.44**	**210**	⇑Pn	**Pb**	**06 18 18.1**	**+0.9**
	0.8nm,0.6s						
MAKZ				⇑Sn	**Sb**	**06 18 59.0**	**-0.4**
	2.9nm,0.7s						
KURK	**Kurchatov**	**3.88**	**286**	⇑Pn	**Pb**	**06 18 24.4**	**-0.4**
	1.2nm,1.4s						
KURK				⇓Sn	**Sb**	**06 19 11.5**	**-0.7**
	0.8nm,0.5s						
KURBB	**Kurchatov Arra**	**3.92**	**284**	Pg	**Pg**	**06 18 31.6**	**+1.1**
	0.1nm,0.3s,baz=104,slow=20,SNR=4.5						
KURBB				Lg	Lg	06 19 17.6	
	0.2nm,0.3s,baz=108,slow=29,SNR=7.3						
KURBB	**Kurchatov Arra**	**3.92**	**284**	⇑Pn	**Pb**	**06 18 25.2**	**-0.3**
	6.5nm,1.6s,baz=62,slow=14						
KURBB				⇓Sn	**Sb**	**06 19 13.1**	**-0.3**
	5.2nm,0.6s						
ZALV	**Zalesovo Beam**	**4.16**	**3**	Pn	**Pg**	**06 18 35.1**	**0.0**
	0.5nm,0.5s,baz=213,slow=16,SNR=1.0						
ZALV				Pg	Pb	06 18 46.5	+17
	0.1nm,0.3s,baz=189,slow=17,SNR=2.3						
ZALV				Lg	Lg	06 19 47.0	
	0.2nm,0.3s,baz=193,slow=26,SNR=5.6						
I46RU	**ZALESOVO INFRA**	**4.16**	**3**	I	I	06 44 10.0	
	baz=188,slow=330,SNR=1.6						

*SJA **17** 06:21:29.2±0.8,21°.16S×69°.45W,h82^{km}±4^{km},ML3.6, MW3.7*
*GUC **17** 06:21:31.1±0.6,21°.16S×69°.38W,h74^{km}±3^{km},ML3.6*

ISC 17 06:21:32.7±1.2,21°.18S±0°.02×69°.44W±0°.05,h62^{km}±7^{km}, n31,σ2^{s}15/50,1C-2D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.14**	**341**	*e*P	**Pn**	**06 21 41.5**	**-0.8**
PB01				*i* S	**Sn**	**06 21 49.6**	**+0.4**
PB01	**IPOC Station P**	**0.14**	**341**	*e*S	**Sn**	**06 21 50.5**	**+1.4**
PB01				IAML		06 21 53.0	
	comp=Z,2μm,0.1s						
PB02	**IPOC Station P**	**0.45**	**252**	⇓*i*P	**Pn**	**06 21 44.0**	**-0.5**
PB02				*i* S	**Sn**	**06 21 54.0**	**+0.9**
PB02				IAML		06 21 54.9	
	comp=E,8μm,0.2s						
PB02	**IPOC Station P**	**0.45**	**252**	*e*S	**Sn**	**06 21 54.4**	**+1.4**
PB02				IAML		06 21 55.2	
	comp=Z,7μm,0.4s						
PB09	**IPOC Station P**	**0.64**	**164**	*e*P	**Pn**	**06 21 46.2**	**-0.4**
PB09				*i* S	**Sn**	**06 21 57.4**	**+0.7**
PB09				IAML		06 21 59.5	
	comp=E,2μm,0.2s						
PB09	**IPOC Station P**	**0.64**	**164**	*e*S	**Sn**	**06 21 58.0**	**+1.3**
PB09				IAML		06 21 59.4	
	comp=Z,2μm,0.2s						
PB07	**IPOC Station P**	**0.69**	**217**	*e*P	**Pn**	**06 21 46.3**	**-0.8**
PB07				*i* S	**Sn**	**06 21 58.1**	**+0.4**
PB07				IAML		06 21 58.4	
	comp=N,4μm,0.2s						
PB07	**IPOC Station P**	**0.69**	**217**	*e*P	**Pn**	**06 21 45.7**	**-1.4**
PB07				*e*S	**Sn**	**06 21 58.7**	**+1.0**
PB07				IAML		06 21 59.4	
	comp=Z,2μm,0.2s						
PATCX	**Punta Patache**	**0.76**	**298**	⇓*i*P	**Pn**	**06 21 47.1**	**-0.8**
PATCX				*i* S	**Sn**	**06 21 59.3**	**+0.3**
PATCX				IAML		06 22 02.0	
	comp=E,8μm,0.1s						
PATCX	**Punta Patache**	**0.76**	**298**	*e*S	**Sn**	**06 22 00.5**	**+1.5**
PATCX				IAML		06 22 01.1	
	comp=Z,1μm,0.1s						
PB03	**IPOC Station P**	**0.91**	**199**	*e*P	**Pn**	**06 21 49.1**	**-0.8**
PB03				*i* S	**Sn**	**06 22 02.5**	**-0.1**
PB03				IAML		06 22 03.5	
	comp=E,2μm,0.2s						
PB03	**IPOC Station P**	**0.91**	**199**	*e*S	**Sn**	**06 22 03.3**	**+0.7**
PB03				IAML		06 22 06.2	
	comp=Z,2μm,0.2s						
TA01	**Diego Aracena**	**0.93**	**311**	*e*P	**Pn**	**06 21 47.8**	**-2.0**
TA01				*e*S	**Sn**	**06 22 03.0**	**+0.4**
TA01				IAML		06 22 04.0	
	comp=Z,806nm,0.2s						
PB08	**IPOC Station P**	**1.07**	**15**	⇑*i*P	**Pn**	**06 21 50.5**	**-1.6**
PB08				*i* S	**Sn**	**06 22 05.0**	**-1.3**
TA02	**Huaiquique**	**1.11**	**324**	*e*P	**Pn**	**06 21 50.3**	**-1.9**
TA02				*e*S	**Sn**	**06 22 07.2**	**+0.3**
TA02				IAML		06 22 09.3	
	comp=Z,2μm,0.1s						
PB11	**IPOC Station P**	**1.43**	**352**	*e*P	**Pn**	**06 21 54.7**	**-1.9**
PB11				*i* S	**Sn**	**06 22 13.5**	**-1.0**
PB11				IAML		06 22 15.4	
	comp=N,2μm,0.2s						
PB11	**IPOC Station P**	**1.43**	**352**	*e*P	**Pn**	**06 21 54.8**	**-1.9**
PB11				*e*S	**Sn**	**06 22 14.2**	**-0.3**
PB11				IAML		06 22 15.3	
	comp=Z,673nm,0.2s						
GO01	**Chusmiza**	**1.52**	**9**	*e*P	**Pn**	**06 21 56.4**	**-1.8**
GO01				*i* S	**Sn**	**06 22 15.7**	**-1.6**
GO01	**Chusmiza**	**1.52**	**9**	*e*P	**Pn**	**06 21 56.5**	**-1.7**
GO01				*e*S	**Sn**	**06 22 17.1**	**-0.1**
GO01				IAML		06 22 18.2	
	comp=Z,715nm,0.1s						
PB06	**IPOC Station P**	**1.52**	**185**	*e*P	**Pn**	**06 21 56.9**	**-1.1**
PB06				*i* S	**Sn**	**06 22 17.0**	**+0.1**
PB06				IAML		06 22 20.1	
	comp=E,1μm,0.3s						
PB06	**IPOC Station P**	**1.52**	**185**	*e*P	**Pn**	**06 21 55.3**	**-2.6**
PB06				*e*S	**Sn**	**06 22 18.7**	**+1.8**
PB06				IAML		06 22 20.3	
	comp=Z,687nm,0.3s						
PB05	**IPOC Station P**	**1.81**	**203**	*e*P	**Pn**	**06 21 59.8**	**-2.0**
PB05				*i* S	**Sn**	**06 22 23.1**	**-0.7**
PB05				IAML		06 22 29.1	
	comp=E,579nm,0.4s						
PB05	**IPOC Station P**	**1.81**	**203**	*e*S	**Sn**	**06 22 20.9**	**-2.9**
PB05				IAML		06

GBPR					Sb	06 48 53.9	-0.4
MLPR	**Magueyes Islan**	**0.17**	**293**		**Pb**	**06 48 52.8**	**-0.4**
CRPR	**Cabo Rojo, PR**	**0.24**	**296**		**Pb**	**06 48 53.8**	**0.0**
CRPR					**Sb**	**06 48 57.4**	**-0.4**
CRPR	**Cabo Rojo, PR**	**0.24**	**296**	IAML		06 48 57.6	
	741nm,0.3s						
CRPR				IAML		06 48 57.8	
	993nm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.24**	**296**	*i* P	**Pb**	**06 48 53.8**	**0.0**
CRPR				*e*S	**Sb**	**06 48 57.4**	**-0.4**
CRPR				IAML		06 48 57.6	
	comp=Z,844nm,0.2s						
OBIP	**Obispado Ponce**	**0.30**	**62**		**Pb**	**06 48 54.6**	**-0.1**
OBIP					**Sb**	**06 48 59.2**	**+0.1**
OBIP	**Obispado Ponce**	**0.30**	**62**	*i* P	**Pb**	**06 48 54.5**	**-0.1**
OBIP				*e*S	**Sb**	**06 48 59.2**	**+0.1**
OBIP				IAML		06 48 59.7	
	comp=Z,96nm,0.1s						
LSP	**Las Mesas**	**0.33**	**325**		**Pb**	**06 48 55.2**	**+0.1**
LSP					**Sb**	**06 49 00.5**	**+0.5**
CELP	**Cerrillos**	**0.34**	**60**		**Pb**	**06 48 55.2**	**0.0**
CELP				IAML		06 49 00.6	
	comp=Z,457nm,0.4s						
CELP	**Cerrillos**	**0.34**	**60**	⇓*e*Pg	**Pb**	**06 48 55.2**	**0.0**
CELP				IAML	**Sb**	**06 49 00.5**	**+0.3**
	comp=N,152nm,0.4s						
CELP				⇓*e*Sg	**Sb**	**06 49 00.5**	**+0.3**
UUPR	**Utuado, UPR, P**	**0.38**	**24**		**Pb**	**06 48 55.7**	**-0.3**
PRSN	**Puerto Rico Se**	**0.40**	**322**		**Pb**	**06 48 56.1**	**0.0**
PRSN				IAML		06 49 04.2	
	comp=N,524nm,0.3s						
PRSN	**Puerto Rico Se**	**0.40**	**322**	⇑*e*Pg	**Pb**	**06 48 56.2**	**0.0**
PRSN				⇓*e*Sg	**Sb**	**06 49 01.8**	**0.0**
PRSN				IAML		06 49 02.4	
	comp=N,412nm,0.2s						
AOPR	**Arecibo Observ**	**0.46**	**16**		**Pb**	**06 48 57.0**	**-0.4**
AOPR				IAML		06 49 05.7	
	comp=N,452nm,0.3s						
AOPR	**Arecibo Observ**	**0.46**	**16**	⇑*e*Pg	**Pb**	**06 48 57.0**	**-0.4**
AOPR				⇑*e*Sg	**Sb**	**06 49 03.1**	**-0.6**
AOPR				IAML		06 49 05.7	
	comp=N,396nm,0.2s						
AGPR	**Aguadilla, PR**	**0.60**	**339**		**Pb**	**06 48 59.5**	**-0.3**
AGPR	**Aguadilla, PR**	**0.60**	**339**	⇑*e*Pg	**Pb**	**06 48 59.5**	**-0.3**
AGPR				⇑*e*Sg	**Sn**	**06 49 09.8**	**-0.7**
AGPR				IAML		06 49 11.0	
	comp=N,83nm,0.7s						
ECPR	**Experimental S**	**0.65**	**50**		**Pb**	**06 49 00.1**	**-0.5**
ECPR				IAML		06 49 09.4	
	comp=N,176nm,0.2s						
ECPR				IAML		06 49 10.5	
	comp=N,222nm,0.2s						
EMPR	**Esperanza - Ma**	**0.66**	**31**		**Pb**	**06 49 00.9**	**+0.1**
EMPR					**Sb**	**06 49 10.2**	**+0.5**
SJG	**San Juan**	**0.73**	**73**		**Pb**	**06 49 01.7**	**-0.3**
SJG				IAML		06 49 12.3	
	comp=N,174nm,0.4s						
SJG	**San Juan**	**0.73**	**73**	⇑*e*Pg	**Pb**	**06 49 01.6**	**-0.3**
SJG				⇑*e*Sg	**Sb**	**06 49 11.6**	**+0.1**
SJG	**San Juan**	**0.73**	**73**	*i* P	**Pb**	**06 49 01.6**	**-0.3**
SJG				*e*S	**Sb**	**06 49 11.6**	**+0.1**
SJG				IAML		06 49 12.4	
	comp=Z,66nm,0.2s						
IDE	**Isla Desecheo**	**0.74**	**311**		**Pb**	**06 49 02.2**	**+0.1**
IDE					**Sb**	**06 49 12.1**	**+0.3**
PDPR	**Patillas Dam,**	**0.83**	**82**		**Pb**	**06 49 03.5**	**-0.1**
HUMP	**Col San Antoni**	**1.01**	**76**		**Pb**	**06 49 06.6**	**-0.2**
HUMP					**Sb**	**06 49 19.8**	**+0.1**
HUMP	**Col San Antoni**	**1.01**	**76**	IAML		06 49 23.1	
	comp=Z,94nm,0.4s						
HUMP				IAML		06 49 23.1	
	comp=Z,131nm,0.3s						
CUPR	**Culebra, Puert**	**1.58**	**75**	Pn	**Pn**	**06 49 14.8**	**+0.1**
HIDR	**Higuey Centro**	**1.87**	**292**	⇑*e*Pg	**Pb**	**06 49 20.5**	**-0.9**
HIDR				IAML		06 49 53.1	
	comp=N,36nm,2.0s						
DR12	**Loma Pena Alta**	**2.53**	**291**	Pn	**Pn**	**06 49 28.9**	**+1.0**
HATOM	**Hato Mayor del**	**2.53**	**291**	⇑*e*Pg	**Pb**	**06 49 32.3**	**-0.4**
HATOM				IAML		06 50 48.8	
	comp=N,15nm,3.9s						

*IDC **17** 06:50:34.0±6.4,5°.83S×150°.42E,h64km±54km,mb3.4/5, mbtmp3.8/6,ML2.0/1,Error ellipse: s-maj=57.2km s-min=29.7km az=97.0*

ISC 17 06:50:32.5±1.1,5°.9S±0°.2×150°.5E±0°.3,h48km,n7,σ1ᵎ78/8, mb3.6/5,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.82**	**223**	P		**Pn**	**06 51 45.1**	**+2.6**
	4.8nm,0.3s,baz=52,slow=17,SNR=9.2							
PMG				S		**Sn**	**06 52 34.4**	**-2.6**
	58nm,0.6s,baz=135,slow=20,SNR=7.1							
	16nm,0.4s							
WRA	**Warramunga Arr**	**21.03**	**227**	P		**P**	**06 55 11.6**	**-0.7**
	1.2nm,0.4s,baz=50,slow=10.0,SNR=18							
	1.2nm,0.4s							
ASAR	**Alice Springs**	**23.82**	**220**	P		**P**	**06 55 40.9**	**-0.4**
	1.1nm,0.7s,baz=52,slow=8.8,SNR=19							
	1.1nm,0.7s							
SONM	**Songino Array**	**66.07**	**329**	P		**P**	**07 01 15.0**	**+0.5**
	0.3nm,0.4s,baz=123,slow=5.3,SNR=2.3							
	0.3nm,0.4s							
ILAR	**Eielson Array**	**84.03**	**22**	P		**P**	**07 02 56.4**	**-1.2**
	0.3nm,0.8s,baz=259,slow=5.3,SNR=4.2							
	0.3nm,0.8s							
QSPA	**South Pole Qui**	**84.07**	**180**	P		**P**	**07 02 58.1**	**+0.1**
	1.9nm,0.8s,baz=142,slow=0.6,SNR=8.9							
	1.9nm,0.8s							
BDFB	**Brasilia**	**151.81**	**140**	PKPbc		**PKPbc**	**07 10 23.1**	**0.0**
	1.2nm,0.4s,baz=180,slow=2.0,SNR=4.3							

*IDC **17** 06:58:50.0±1.0,51°.90N×74°.35E,h0km,mbtmp2.8/4, ML2.3/4,Error ellipse: s-maj=32.9km s-min=9.4km az=29.0*

*NNC **17** 06:58:52.4±0.7,51°.88N×74°.19E,h0km,mb3.0,mpv2.7, Error ellipse: s-maj=17.7km s-min=4.4km az=26.0, Suspected Mining explosion.*

ISC 17 06:58:49.2±1.0,51°.95N±0°.10×74°.28E±0°.06,h0km,n11, σ2ᵎ26/17,5C-6D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BVA0	**Borovoye Array**	**2.61**	**296**	Pn		**Pb**	**06 59 35.8**	**-1.1**
	2.2nm,0.5s,baz=118,slow=15,SNR=35							
BVA0				⇓Sn		**Sb**	**07 00 08.6**	**-0.8**
	22nm,0.6s,baz=116,slow=24							
BVAR	**Borovoye Array**	**2.61**	**296**	Pn		**Pn**	**06 59 34.0**	**+1.3**
	0.4nm,0.3s,baz=117,slow=14,SNR=34							
BVAR				Lg		Lg	07 00 10.6	
	0.2nm,0.3s,baz=115,slow=26,SNR=4.7							
	3.4nm,0.3s							
KURBB	**Kurchatov Arra**	**2.98**	**115**	Pn		**Pn**	**06 59 37.6**	**-0.1**
	0.3nm,0.3s,baz=300,slow=14,SNR=6.8							
KURBB				Pg		**Pb**	**06 59 41.8**	**-1.4**
	0.3nm,0.3s,baz=302,slow=16,SNR=6.8							
KURBB				Lg		Lg	07 00 19.6	
	0.7nm,0.3s,baz=294,slow=30,SNR=16							
	1.1nm,0.4s							
KURBB	**Kurchatov Arra**	**2.98**	**115**	⇑Pn		**Pb**	**06 59 41.5**	**-1.7**
	3.1nm,0.4s							
KURBB				⇓Sn		**Sb**	**07 00 19.1**	**-1.1**
	37nm,0.7s							
KURK	**Kurchatov**	**2.99**	**113**	⇓Pn		**Pb**	**06 59 42.1**	**-1.3**
	0.5nm,0.4s							
KURK				⇑Sn		**Sb**	**07 00 19.1**	**-1.3**
	14nm,0.8s							
I46RU	**ZALESOVO INFRA**	**6.68**	**68**	I		I	07 35 50.0	
	baz=257,slow=336,SNR=7.2							
ZALV	**Zalesovo Beam**	**6.68**	**68**	Pn		**Pn**	**07 00 29.8**	**+1.3**
	0.2nm,0.3s,baz=258,slow=12,SNR=8.7							
ZALV				Sn		**Sn**	**07 01 45.3**	**+0.1**
	baz=257,slow=26							
	2.0nm,0.6s							
MAKZ	**Makanchi**	**7.19**	**133**	⇓Pn		**Pn**	**07 00 38.7**	**+3.1**
	0.3nm,0.6s							
MAKZ				⇑Sn		**Sn**	**07 02 00.8**	**+2.8**
	9.7nm,2.4s							
MAKZ				⇓Lg		Lg	07 02 38.8	
	4.6nm,0.8s							
MK31	**Makanchi Array**	**7.35**	**131**	⇓Pn		**Pn**	**07 00 41.0**	**+3.3**
	0.1nm,0.3s,baz=321,slow=13,SNR=5.9							
MK31				⇑Sn		**Sn**	**07 02 05.4**	**+3.6**
	0.6nm,0.4s,baz=322,slow=26							
MK31				⇑Lg		Lg	07 02 44.1	
	5.8nm,0.8s,baz=319,slow=27							
MKAR	**Makanchi Array**	**7.35**	**131**	Pn		**Pn**	**07 00 37.3**	**-0.4**
	0.1nm,0.3s,baz=320,slow=12,SNR=5.8							
MKAR				Sn		**Sn**	**07 01 57.9**	**-3.9**
	0.2nm,0.3s,baz=322,slow=25,SNR=5.4							
MKAR				Lg		Lg	07 02 34.9	
	0.2nm,0.3s,baz=320,slow=29,SNR=7.8							
	0.2nm,0.3s							
AAK	**Ala-Archa**	**9.32**	**179**	Lg		Lg	07 03 39.2	
	0.2nm,0.3s,baz=183,slow=22,SNR=3.2							

*IDC **17** 07:32:25.9±1.2,7°.29N×124°.93E,h0km,mb3.7/6, mbtmp3.7/6,MS3.0/5,Error ellipse: s-maj=23.7km s-min=11.2km az=18.0*

*MAN **17** 07:32:25.0,7°.32N×124°.96E,h3km,MS4.2*

MAN INTENSITY III - PRESIDENT ROXAS COTABATO; ANTIPAS COTABATO; . INTENSITY II - ARAKEN MAGPET AND MATALAM COTABATO.

ISC 17 07:32:26.9±1.2,7°.34N±0°.03×124°.97E±0°.03,h7km±9km, n24,σ1ᵎ81/29,mb3.7/6,MS2.9/3,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**0.34**	**160**	*i* P		**Pg**	**07 32 32.4**	**-1.3**
KCP				*i* S		**Sb**	**07 32 44.3**	**+3.2**
BUKP	**Musuan**	**0.55**	**9**	*i* P		**Pb**	**07 32 37.4**	**-1.5**
BUKP				*i* S		**Sn**	**07 32 49.6**	**-1.0**
DMPH	**Davao City--Mi**	**0.59**	**115**	*i* P		**Pg**	**07 32 37.2**	**-1.1**
DMPH				*e*S		Sn	07 33 05.3	+14
DAV	**Davao City (W)**	**0.66**	**114**	Pg		**Pb**	**07 32 39.1**	**-1.6**
	311nm,0.3s,baz=302,slow=2.0,SNR=15							
DAV				Lg		Lg	07 32 48.2	
	595nm,0.3s,baz=302,slow=23,SNR=6.9							
CTBH	**Cotabato--PC H**	**0.73**	**261**	*e*P		**Pg**	**07 32 39.7**	**-1.3**
CTBH				*i* S		**Sn**	**07 32 54.5**	**-0.5**
CGP	**Cagayan de Oro**	**1.15**	**346**	*i* P		**Pg**	**07 32 47.6**	**-1.3**
CGP				*i* S		**Sn**	**07 33 04.9**	**-0.4**
GSPH	**General Santos**	**1.24**	**181**	*i* P		**Pn**	**07 32 51.5**	**+0.7**
GSPH				*i* S		**Sn**	**07 33 08.1**	**+0.3**
DDMP	**Don Marcelino,**	**1.43**	**149**	*e*P		**Pn**	**07 32 52.1**	**-1.2**
DDMP				*e*S		**Sn**	**07 33 12.1**	**-0.2**
CDOP	**Cateel, Davao**	**1.52**	**73**	*i* P		**Pn**	**07 32 53.8**	**-0.7**
CDOP				*i* S		**Sg**	**07 33 17.2**	**+1.4**
BIPH	**Bislig**	**1.61**	**58**	*e*P		**Pg**	**07 32 56.5**	**-1.4**
BIPH				*e*S		**Sg**	**07 33 20.2**	**+1.3**
DCPH	**Dipolog City**	**2.03**	**308**	*e*P		**Pg**	**07 33 04.1**	**-1.7**
DCPH				*i* S		**Sg**	**07 33 34.7**	**+2.6**
TSSP	**Tandag City**	**2.09**	**36**	*e*P		**Pb**	**07 33 02.9**	**-2.2**
TSSP				*e*S		**Sg**	**07 33 39.9**	**+5.8**
SCPH	**Surigao**	**2.48**	**12**	*e*P		**Pn**	**07 33 08.8**	**+1.0**
KAPI	**Kappang**	**13.33**	**203**	LR		LR	07 41 00.6	
	comp=Z,60nm,20.4s,baz=34,slow=39							
BATI	**Baumata**	**17.48**	**184**	LR		LR	07 43 51.3	
	comp=Z,50nm,18.7s,baz=333,slow=39							
FITZ	**Fitzroy Crossi**	**25.28**	**179**	P		**P**	**07 37 53.4**	**-0.6**
	2.4nm,0.8s,baz=357,slow=7.3,SNR=7.7							
	2.4nm,0.8s							
JNU	**Nakatsue**	**26.24**	**11**	LR		LR	07 46 56.9	
	comp=Z,42nm,21.1s,baz=216,slow=33							
CMAR	**Chiang Mai Arr**	**27.53**	**296**	LR		LR	07 49 37.3	
	comp=Z,27nm,18.2s,baz=115,slow=37							
WRA	**Warramunga Arr**	**28.63**	**161**	P		**P**	**07 38 23.5**	**-0.7**
	1.1nm,1.1s,baz=334,slow=11,SNR=6.5							
	1.1nm,1.1s							
KSRS	**Korea Array**	**30.10**	**5**	LR		LR	07 50 05.0	
	comp=Z,22nm,22.0s,baz=135,slow=35							
ASAR	**Alice Springs**	**32.02**	**164**	P		**P**	**07 38 54.4**	**+0.1**
	0.4nm,0.5s,baz=336,slow=6.6,SNR=9.2							
	0.5nm,0.8s							
STKA	**Stephens Creek**	**42.10**	**159**	P		**P**	**07 40 20.5**	**+0.8**
	2.3nm,0.8s,baz=342,slow=9.4,SNR=6.3							
	2.3nm,0.8s							
SONM	**Songino Array**	**43.35**	**342**	P		**P**	**07 40 30.2**	**+0.4**
	0.6nm,0.4s,baz=156,slow=7.4,SNR=3.6							
	0.6nm,0.4s							
ILAR	**Eielson Array**	**82.62**	**26**	P		**P**	**07 44 50.5**	**-0.2**
	0.2nm,0.8s,baz=261,slow=6.0,SNR=1.6							
	0.2nm,0.8s							

*IDC **17** 07:37:08.1±1.2,31°.72S×177°.39W,h0km,mb4.1/4, mbtmp4.1/5,ML3.7/1,Error ellipse: s-maj=42.0km s-min=28.4km az=142.0*

*NEIC **17** 07:37:10.7±1.9,31°.81S±0°.08×177°.5W±0°.2,h10km±1km, mb4.6/8,Error ellipse: s-maj=28.6km s-min=12.9km az=101.0*

ISC 17 07:37:09.4±1.1,31°.77S±0°.10×177°.3W±0°.2,h10km,n26, σ1ᵎ20/28,mb4.3/7,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.57**	**347**	Pn		**Pn**	**07 37 52.5**	**+1.4**
URZ	**Urewera**	**7.96**	**214**	Pn		**Pn**	**07 39 05.1**	**0.0**
	1.0nm,0.3s,baz=260,slow=3.3,SNR=6.2							
URZ				Sn		**Sn**	**07 40 37.9**	**+2.7**
	2.7nm,0.3s,baz=231,slow=24,SNR=8.9							
	12nm,1.0s							
RTZ	**Ruatahuna**	**8.30**	**213**	Pn		**Pn**	**07 39 08.5**	**-1.5**
BKZ	**Black Stump Fm**	**8.97**	**213**	Pn		**Pn**	**07 39 18.9**	**-0.2**
MRZ	**Mangatainoka R**	**10.60**	**211**	Pn		**Pn**	**07 39 40.9**	**-0.3**
LTZ	**Lake Taylor**	**13.79**	**214**	Pn		**Pn**	**07 40 25.2**	**+0.2**
CTAO	**Charters Tower**	**34.67**	**281**	P		**P**	**07 43 58.9**	**-0.5**
STKA	**Stephens Creek**	**34.82**	**259**	P		**P**	**07 44 01.3**	**+0.8**
	1.5nm,0.8s,baz=97,slow=8.5,SNR=3.1							
	1.5nm,0.8s							
STKA	**Stephens Creek**	**34.82**	**259**	P		**P**	**07 44 00.4**	**-0.1**
STKA				IAmb		IAmb	07 44 04.4	
	comp=Z,14nm,1.1s							
AS31	**Alice Springs**	**43.69**	**268**	P		**P**	**07 45 13.8**	**-1.0**
ASAR	**Alice Springs**	**43.69**	**268**	P		**P**	**07 45 13.7**	**-1.1**
	comp=Z,1.7nm,0.7s,baz=104,slow=6.9,SNR=24							
ASAR				PcP		**PcP**	**07 47 02.0**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=110,slow=3.2,SNR=2.3							
	comp=Z,1.7nm,0.7s							
WR8	**Warramunga Arr**	**44.66**	**273**	P		**P**	**07 45 20.7**	**-1.8**
WR8				IAmb		IAmb	07 45 25.4	
	comp=Z,7.7nm,1.1s							
WRAB	**Tennant Creek**	**44.80**	**273**	P		**P**	**07 45 22.1**	**-1.5**
WRAB				IAmb		IAmb	07 45 34.8	
	comp=Z,10nm,1.2s							
WRA	**Warramunga Arr**	**44.81**	**273**	P		**P**	**07 45 22.2**	**-1.6**
	comp=Z,1.8nm,0.4s,baz=112,slow=8.0,SNR=62							
	comp=Z,1.8nm,0.4s							
WRA	**Warramunga Arr**	**44.81**	**273**	P		**P**	**07 45 22.1**	**-1.6**
WB0	**Warramunga Arr**	**44.84**	**273**	P		**P**	**07 45 22.3**	**-1.6**
WB0				IAmb		IAmb	07 45 34.6	
	comp=Z,7.2nm,0.9s							
FITZ	**Fitzroy Crossi**	**53.01**	**271**	P		**P**	**07 46 24.9**	**-1.8**
	comp=Z,1.5nm,0.7s,baz=122,slow=9.1,SNR=1.8							
	comp=Z,1.5nm,0.7s							
CASY	**Casey**	**54.24**	**208**	P		**P**	**07 46 34.6**	**-0.4**
MKAR	**Makanchi Array**	**119.14**	**309**	PKP		**PKPdf**	**07 55 58.1**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=80,slow=0.6,SNR=2.1							
KURK	**Kurchatov**	**122.45**	**313**	PKP		**PKPdf**	**07 56 04.2**	**-0.3**
KURBB	**Kurchatov Arra**	**122.49**	**313**	PKP		**PKPdf**	**07 56 04.2**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=112,slow=1.9,SNR=6.8							
FINES	**FINESS Array B**	**146.65**	**340**	PKPbc		**PKPdf**	**07 56 50.4**	**+1.5**
	comp=Z,8.9nm,1.0s,baz=52,slow=4.7,SNR=22							
MMAI	**Mount Meron Ar**	**152.46**	**281**	PKPbc		**PKPbc**	**07 57 06.7**	**+0.6**
	comp=Z,0.9nm,0.3s,baz=108,slow=4.7,SNR=2.1							
AKASG	**Malin Array Be**	**152.77**	**322**	PKPbc		**PKPbc**	**07 57 06.3**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=51,slow=2.6,SNR=6.8							
BRTR	**Keskin Array B**	**153.80**	**296**	PKPbc		**PKPbc**	**07 57 09.8**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=127,slow=3.8,SNR=2.1							
TORD	**Torodi Ar. Bea**	**161.44**	**177**	PKPab		**PKPab**	**07 57 54.0**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=197,slow=4.5,SNR=1.6							

*NNC **17** 07:38:37.2±0.9,50°.07N×78°.97E,h0km,mb2.8,mpv2.8, Error ellipse: s-maj=23.6km s-min=4.7km az=64.0, Suspected Mining explosion.*

*IDC **17** 07:38:38.0±1.0,50°.07N×78°.73E,h0km,mbtmp2.6/2, ML2.2/1,Error ellipse: s-maj=13.9km s-min=6.3km az=65.0*

ISC 17 07:38:37.6±1.2,50°.00N±0°.05×78°.67E±0°.09,h0km,n10, σ1ᵎ08/13,3C-4D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**0.63**	**352**	Pg		**Pg**	**07 38 48.8**	**-0.9**
	1.4nm,0.3s,baz=164,slow=19,SNR=58							
KURBB				Lg		Lg	07 38 57.5	
	2.5nm,0.3s,baz=168,slow=31,SNR=11							
KURBB	**Kurchatov Arra**	**0.63**	**352**	⇑P		**Pg**	**07 38 48.9**	**-0.8**
	29nm,0.6s							
KURBB				⇓S		**Sg**	**07 38 58.4**	**+0.4**
	140nm,0.8s							
KURK	**Kurchatov**	**0.72**	**357**	⇓P		**Pg**	**07 38 50.3**	**-1.1**
	4.6nm,0.5s							
KURK				⇓S		**Sg**	**07 39 00.4**	**-0.4**
	15nm,0.5s							
SEM	**Semipalatinsk**	**1.09**	**67**	P		**Pn**	**07 39 01.9**	**+1.5**
	6.2nm,0.1s							
SEM				S		**Sg**	**07 39 11.3**	**-1.4**
	10.0nm,0.1s							
MAKZ	**Makanchi**	**3.88**	**144**	⇓Pn		**Pn**	**07 39 39.2**	**+0.8**
	1.2nm,1.2s							
MAKZ				⇑Lg		Lg	07 40 39.5	
	13nm,1.0s							
MK31	**Makanchi Array**	**4.01**	**142**	Pn		**Pn**	**07 39 39.2**	**-1.1**
	baz=328,slow=11,SNR=17							
MK31				⇑Lg		Lg	07 40 43.0	
	26nm,0.8s,baz=328,slow=28							
MKAR	**Makanchi Array**	**4.01**	**142**	Pn		**Pn**	**07 39 41.1**	**+0.8**
	0.1nm,0.3s,baz=322,slow=12,SNR=13							
MKAR				Pg		**Pb**	**07 39 49.2**	**+0.1**
	0.4nm,0.3s,baz=333,slow=15,SNR=11							
MKAR				Sn		**Sn**	**07 40 28.8**	**+0.8**
	0.5nm,0.3s,baz=329,slow=19,SNR=7.6							
MKAR				Lg		Lg	07 40 41.5	
	0.7nm,0.3s,baz=320,slow=26,SNR=4.1							
	0.5nm,0.6s							
ZSN	**Zaisan**	**4.83**	**119**	Lg		Lg	07 41 07.5	
	4.0nm,0.2s							
ZALV	**Zalesovo Beam**	**5.49**	**41**	Pn		**Pn**	**07 40 01.5**	**+1.0**
	0.9nm,0.4s,baz=230,slow=13,SNR=2.1							
I46RU	**ZALESOVO INFRA**	**5.49**	**41**	I		I	08 08 30.0	
	baz=225,slow=332,SNR=1.9							

*IDC **17** 07:54:52.8±0.8,38°.17N×141°.90E,h63km±5km,mb3.6/15, mbtmp3.9/19,MS2.4/2,Error ellipse: s-maj=14.8km s-min=11.1km az=120.0*

*NIED **17** 07:54:52.4,38°.19N×141°.68E,h51km,MW3.8,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr4.13; Mθθ-0.20; Mϕϕ-3.93; Mrθ1.56; Mϕθ-0.60; Mϕr3.07; Fault plane solution: M₀5.33000×10¹⁴ NP1: ϕs179.00000°,δ26.00000°,λ71.00000°. NP2:ϕs20.00000°, δ65.00000°,λ99.00000°.*

*NEIC **17** 07:54:52.5±1.6,38°.20N±0°.06×141°.9E±0°.1,h57km±8km, mb4.2/8 Error ellipse: s-maj=14.5km s-min=7.8km az=107.0*

*JMA **17** 07:54:52.4±0.1,38°.2N±0°.4×141°.7E±0°.6,h51km,MV3.6/38, E OFF MIYAGI PREF*

JMA Felt I J1 at E OFF MIYAGI PREF .

ISC 17 07:54:51.4±0.7,38°.18N±0°.04×141°.85E±0°.07,h48km±5km, n56,σ1ᵎ24/63,mb4.1/19,16D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.33**	**294**	P		**Pn**	**07 55 00.8**	**+0.2**
JIKH				S		**Sn**	**07 55 06.6**	**-0.6**
JIO	**Ouri**	**0.48**	**305**	⇓*i*P		**Pn**	**07 55 02.3**	**0.0**
JIO				⇓S		**Sn**	**07 55 09.1**	**-1.0**
JKMT	**Kesennumamotoy**	**0.70**	**335**	⇓*i*P		**Pn**	**07 55 05.3**	**+0.3**
JKMT				⇓S		**Sn**	**07 55 14.2**	**-0.7**
JMM	**Marumori**	**0.89**	**250**	⇓*i*P		**Pn**	**07 55 06.6**	**-0.9**
JMM				⇓S		**Sn**	**07 55 16.9**	**-2.5**
OFUJ	**Ofunato**	**0.91**	**351**	⇓*i*P		**Pn**	**07 55 08.4**	**+0.5**
JMK	**Ichinoseki**	**0.92**	**328**	⇓*i*P		**Pn**	**07 55 08.2**	**+0.3**
JOU	**Okura**	**0.95**	**282**	⇓*i*P		**Pn**	**07 55 07.9**	**-0.6**
JOU				⇓S		**Sn**	**07 55 19.2**	**-1.7**
JFK	**Kawauchi**	**1.12**	**224**	⇓P		**Pn**	**07 55 10.2**	**-0.5**
JFK				⇓S		**Sn**	**07 55 23.3**	**-1.7**
JOTO	**OTAMA OYAMA**	**1.35**	**243**	*i* P		**Pn**	**07 55 13.5**	**-0.3**
JOM	**Ohasama**	**1.36**	**342**	⇓*i*P		**Pn**	**07 55 14.7**	**+0.7**
JYK	**Kaneyama**	**1.38**	**303**	⇓*i*P		**Pn**	**07 55 14.0**	**-0.3**
JYS	**Shirataka**	**1.41**	**272**	⇓*i*P		**Pn**	**07 55 14.1**	**-0.5**
JRG	**Rokugo**	**1.54**	**322**	⇓*i*P		**Pn**	**07 55 17.1**	**+0.6**
JTM	**Tenmabayashi**	**2.68**	**347**	Pn		**Pn**	**07 55 33.5**	**+1.5**
MJAR	**Matsushiro Arr**	**3.33**	**242**	P		**Pn**	**07 55 41.7**	**+0.8**
	9.9nm,0.7s,baz=55,slow=11,SNR=19							
MJAR				S		**Sn**	**07 56 22.2**	**+2.9**
	3.4nm,0.4s,baz=312,slow=30,SNR=4.7							
MJAR				LR		LR	07 57 21.7	
	comp=Z,48nm,21.5s,baz=14,slow=44							
MJAR	**Matsushiro Arr**	**3.33**	**242**			**Pn**	**07 55 41.9**	**+0.9**
MAJO	**Matsushiro**	**3.33**	**242**			**Pn**	**07 55 42.3**	**+1.4**
MJB9	**Matsu-Tunnel**	**3.33

comp=Z,0.9nm,0.5s,baz=7.8,slow=7.7,SNR=34
WRA pP **pP** **08 04 55.4 +1.2**
comp=Z,0.6nm,0.6s,baz=6.0,slow=7.2,SNR=4.3
comp=Z,0.9nm,0.5s
ASAR Alice Springs 61.97 188 P **P** **08 05 06.8 +0.4**
comp=Z,0.4nm,0.6s,baz=1.1,slow=4.7,SNR=9.6
comp=Z,0.4nm,0.6s
FINES FINESS Array B 67.97 332 P **P** **08 05 43.8 -1.1**
comp=Z,3.6nm,1.0s,baz=130,slow=5.6,SNR=2.2
comp=Z,3.6nm,1.0s
HFS Hagfors 73.19 336 P **P** **08 06 17.3 +0.6**
comp=Z,1.0nm,0.4s,baz=39,slow=7.6,SNR=6.9
comp=Z,1.0nm,0.4s
NOA NORSAR Array B 73.27 337 P **P** **08 06 17.2 -0.1**
comp=Z,0.5nm,0.5s,baz=53,slow=7.0,SNR=1.6
comp=Z,0.5nm,0.5s
AKASG Malin Array Be 73.61 322 P **P** **08 06 19.1 -0.2**
comp=Z,0.8nm,0.5s,baz=52,slow=5.7,SNR=6.1
comp=Z,0.8nm,0.5s
PDAR Pinedale Array 76.62 46 P **P** **08 06 36.8 -0.4**
comp=Z,0.3nm,0.6s,baz=281,slow=5.1,SNR=3.0
comp=Z,0.3nm,0.6s
BRTR Keskin Array B 78.35 312 P **P** **08 06 46.1 -0.7**
comp=Z,0.4nm,0.6s,baz=67,slow=1.9,SNR=1.9
comp=Z,0.4nm,0.6s
TXAR Lajitas Array 89.15 53 P **P** **08 07 42.8 +0.7**
comp=Z,0.1nm,0.6s,baz=306,slow=4.9,SNR=1.9
comp=Z,0.1nm,0.6s
LPAZ La Paz 145.81 59 PKPbc **PKPdf** **08 14 25.2 -0.6**
comp=Z,0.6nm,0.5s,baz=284,slow=4.7,SNR=2.2

UPP ***17*** *07:55:40.9±0.1, 67.87N×20.15E, h0km, ML2.5, Confirmed Induced event*
HEL ***17*** *07:55:42.3±0.3, 67.83N×20.28E, h0km, ML1.3, Suspected explosion*

ISC 17 07:55:40.7±0.8, 67.82N±0.03×20.22E±0.03, h0km, n20, σ0s90/33, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.14**	**19**	P	**Pg**	**07 55 43.2**	**-0.1**
KUA				S	**Sg**	**07 55 45.0**	**-0.1**
RATU	**Laukkuluspa**	**0.24**	**270**	P	**Pg**	**07 55 45.3**	**+0.1**
RATU				S	**Sg**	**07 55 48.7**	**+0.4**
KOVU	**Salmi**	**0.40**	**357**	P	**Pg**	**07 55 47.9**	**-0.4**
	baz=152						
KOVU				S	**Sg**	**07 55 53.0**	**-0.6**
NIKU	**Nikkaluokta**	**0.45**	**276**	P	**Pg**	**07 55 49.1**	**-0.2**
NIKU				S	**Sg**	**07 55 55.3**	**+0.1**
LANU	**Lannavaara**	**0.71**	**71**	P	**Pb**	**07 55 55.0**	**-0.9**
LANU				S	**Sg**	**07 56 03.8**	**+0.5**
LANU	**Lannavaara**	**0.71**	**71**	PG	**Pb**	**07 55 54.9**	**-0.9**
LANU				SG	**Sg**	**07 56 03.1**	**-0.2**
SALU	**Saltoluokta**	**0.79**	**237**	P	**Pg**	**07 55 55.7**	**-0.2**
KIF	**Kilpisjarvi**	**1.21**	**10**	*eP*	**Pb**	**07 56 03.9**	**-0.4**
KIF	**Kilpisjarvi**	**1.21**	**10**	PG	**Pb**	**07 56 04.1**	**-0.2**
KIF				smax	smax	07 56 19.6	
	comp=Z,3.2nm,0.2s						
KIF				SG	**Sb**	**07 56 20.8**	**+0.4**
HEF	**Hetta**	**1.42**	**64**	*eP*	**Pn**	**07 56 06.6**	**-1.0**
HEF	**Hetta**	**1.42**	**64**	PG	**Pn**	**07 56 06.9**	**-0.8**
	baz=251						
HEF				smax	smax	07 56 24.3	
	comp=Z,1.6nm,0.2s						
HEF				SN	**Sn**	**07 56 29.2**	**+2.2**
ERTU	**Ertsjaerv**	**1.49**	**148**	P	**Pb**	**07 56 09.1**	**0.0**
ERTU	**Ertsjaerv**	**1.49**	**148**	PG	**Pb**	**07 56 08.9**	**-0.2**
ERTU				SN	**Sn**	**07 56 30.4**	**+1.6**
KLF	**Kolari**	**1.56**	**111**	PG	**Pb**	**07 56 09.8**	**-0.5**
	baz=296						
KLF				smax	smax	07 56 28.4	
	comp=Z,1.9nm,0.2s						
KLF				SN	**Sg**	**07 56 31.8**	**+1.2**
KTK1	**Kautokeino**	**1.63**	**42**	PG	**Pg**	**07 56 11.5**	**-0.5**
KTK1				SN	**Sg**	**07 56 35.4**	**+2.3**
TRO	**Tromso**	**1.88**	**346**	SG	**Sg**	**07 56 41.0**	**+0.1**
TOF	**Tornio**	**2.38**	**135**	PG	**Pb**	**07 56 23.7**	**-0.7**
	baz=321						
TOF				smax	smax	07 56 52.5	
	comp=Z,1.0nm,0.2s						
TOF				SG	**Sg**	**07 56 55.6**	**-1.4**
RNF	**Rovaniemi**	**2.56**	**116**	PB	**Pb**	**07 56 26.4**	**-1.1**
RNF				SG	**Sb**	**07 56 59.8**	**+0.4**
ARA0	**ARCESS Array S**	**2.59**	**46**	SG	**Sb**	**07 57 00.1**	**-0.1**
RAJF	**Raja-Jooseppi**	**3.10**	**74**	SG	**Sb**	**07 57 15.6**	**+0.8**

SJA ***17*** *08:11:58.8±0.7, 36.14S×73.46W, h50km±9km, ML5.3, MW5.5*
PTWC ***17*** *08:11:59, 36.20S×73.20W, h10km, Mwp5.7/10*
VAO ***17*** *08:12:00.1±0.3, 36.19S×73.01W, h10km, mb5.6, Presumed earthquake*
GFZ ***17*** *08:12:00.1, 36.11S×73.18W, h34km, MW5.5, Moment Tensor Solution. s56 Moment tensor: Mrr2.19; Mθθ-1.75; Mϕϕ-0.45; Mrθ-0.77; Mϕθ0.81; Mϕr0.98; Fault plane solution: NP1:ϕs104.00000°, δ32.00000°, λ70.00000°. NP2:ϕs307.00000°, δ59.00000°, λ102.00000°. Principal axes: T 2.5700, Plg72.0000°, Azm246.0000°; N -0.1600, Plg10.0000°, Azm121.0000°; P -2.4100, Plg14.0000°, Azm28.0000°;*
GUC ***17*** *08:12:01.4±0.7, 36.19S×73.28W, h41km±2km, ML5.6*
MOS ***17*** *08:12:01.7±0.9, 36.16S×73.10W, h31km, mb5.8/35, MS5.2/8, Error ellipse: s-maj=11.7km s-min=6.5km az=91.3*
NEIC ***17*** *08:12:03.4, 36.16S×73.14W, h36km*
NEIC ***17*** *08:12:03.6, 36.16S×73.17W, h33km*
NEIC ***17*** *08:12:03.4, 36.16S×73.14W, h36km, Moment Tensor Solution. Duration: 3s1 Moment tensor: Scale 1017Nm; Mrr2.16; Mθθ-1.95; Mϕϕ-0.21; Mrθ-0.97; Mθϕ1.04; Mϕr0.98; Fault plane solution: Mo2.69000×1017 NP1: ϕs102.72000°, δ31.49000°, λ69.74000°. NP2: ϕs306.12000°, δ60.65000°, λ101.98000°. Principal axes: T 2.5883, Plg72.0000°, Azm244.0000°; N 0.1887, Plg10.0000°, Azm120.0000°; P -2.7770, Plg15.0000°, Azm27.0000°;*
NEIC ***17*** *08:12:03.6±2.0, 36.16S±0.02×73.17W±0.07, h33km±2km, mb5.7/703, Ms_20 5.2/94, Mwb5.4/102, Mwr5.4/66, Mww5.6/51, Mww5.6(GUC) Error ellipse: s-maj=8.2km s-min=2.4km az=101.0, Moment Tensor Solution. Moment tensor: Scale 1017Nm; Mrr1.01; Mθθ-1.05; Mϕϕ0.05; Mrθ-0.32; Mθϕ0.62; Mϕr0.59; Fault plane solution: Mo1.38000×1017 NP1:ϕs91.38000°, δ37.36000°, λ53.22000°. NP2:ϕs314.62000°, δ60.92000°, λ114.57000°. Principal axes: T 1.2850, Plg65.0000°, Azm269.0000°; N 0.1659, Plg21.0000°, Azm122.0000°; P -1.4509, Plg13.0000°, Azm27.0000°; Moment Tensor Solution. Moment tensor: Scale 1017 Nm; Mrr1.12; Mθθ-1.20; Mϕϕ0.08; Mrθ-0.67; Mθϕ0.08; Mϕr0.58; Fault plane solution: Mo1.46000×1017 NP1:ϕs294.15000°, δ63.78000°, λ109.58000°. NP2:ϕs75.31000°, δ32.30000°, λ55.76000°. Principal axes: T 1.5038, Plg66.0000°, Azm239.0000°; N -0.0890, Plg17.0000°, Azm105.0000°; P -1.4148, Plg17.0000°, Azm10.0000°;*
NEIC ***17*** *08:12:03.6, 36.16S×73.17W, h33km*
IDC ***17*** *08:12:03.7±2.2, 36.19S×73.01W, h40km±18km, mb5.2/24, mbtmp5.4/27, ML5.4/3, MS5.0/43, Error ellipse: s-maj=14.2km s-min=8.5km az=88.0*
GCMT ***17*** *08:12:03.6±0.1, 36.17S±0.01×73.13W±0.01, h38km, MW5.5/140, Moment Tensor Solution. s139, c235; s140, c264; Duration: 1s5 Moment tensor: Scale 1017 Nm; Mrr1.99±.03; Mθθ-1.86±.02; Mϕϕ-0.13±.03; Mrθ-1.26±.03; Mθϕ1.08±.02; Mϕr0.85±.04; Best double couple: Mo2.66300×1017 NP1:ϕs109.00000°, δ28.00000°, λ79.00000°. NP2:ϕs301.00000°, δ62.00000°, λ96.00000°. Principal axes: T 2.4780, Plg72.0000°, Azm224.0000°; N 0.3670, Plg5.0000°, Azm118.0000°; P -2.8480, Plg17.0000°, Azm27.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 08:12:01.9±0.3, 36.11S±0.03×73.29W±0.03, h29km±2km, h29km:pP-P, n975, σ1s53/737, mb5.7/345, MS5.2/90, 17C-33D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ML02	**Panimavida**	**1.56**	**78**			**Pn**	**08 12 27.8**	**+0.2**
ML02	**Panimavida**	**1.56**	**78**	||*i*	*P*	**Pn**	**08 12 27.9**	**+0.2**
ML02					*eS*	**Sn**	**08 12 47.0**	**+0.2**
ML02					IAML		08 12 57.2	
	comp=E,112μm,0.5s							
ML02	**Panimavida**	**1.56**	**78**	*e*	*P*	**Pn**	**08 12 27.9**	**+0.3**
ML02					*eS*	**Sb**	**08 12 47.9**	**-1.4**
ML02					IAML		08 12 55.6	
	comp=Z,40μm,0.3s							
GO05	**Hualane**	**1.56**	**46**			**Pn**	**08 12 27.5**	**-0.2**
GO05	**Hualane**	**1.56**	**46**	||	*iP*	**Pn**	**08 12 27.5**	**-0.2**
GO05					IAML		08 12 59.2	
	comp=E,65μm,0.9s							
GO05	**Hualane**	**1.56**	**46**	*e*	*P*	**Pn**	**08 12 27.4**	**-0.2**
GO05					*eS*	**Sb**	**08 12 48.5**	**-0.9**
GO05					IAML		08 12 59.4	
	comp=Z,30μm,0.9s							
GO05	**Hualane**	**1.56**	**46**		P	**Pn**	**08 12 27.6**	**-0.2**
BI02	**San Fabin de**	**1.71**	**109**			**Pn**	**08 12 29.4**	**-0.6**
BI02	**San Fabin de**	**1.71**	**109**	*i*	*P*	**Pn**	**08 12 29.3**	**-0.6**
BI02					*eS*	**Sn**	**08 12 49.7**	**-1.2**
BI02					IAML		08 12 51.3	
	comp=N,44μm,0.6s							
BI02	**San Fabin de**	**1.71**	**109**	*e*	*P*	**Pn**	**08 12 28.6**	**-1.4**
BI02					IAML		08 12 54.7	
	comp=Z,25μm,1.2s							
BI02	**San Fabin de**	**1.71**	**109**		P	**Pn**	**08 12 27.2**	**-2.7**
BO03	**Pichilemu**	**1.94**	**34**	||	*iP*	**Pn**	**08 12 33.0**	**+0.1**
BI04	**Isla Mocha**	**2.35**	**192**	||	*iP*	**Pn**	**08 12 35.8**	**-2.7**
BI04	**Isla Mocha**	**2.35**	**192**		P	**Pn**	**08 12 35.9**	**-2.6**
BO02	**Sierra Bellavi**	**2.43**	**58**			**Pn**	**08 12 40.0**	**+0.2**
BO02	**Sierra Bellavi**	**2.43**	**58**	||	*iP*	**Pn**	**08 12 39.9**	**+0.2**
BO02					*eS*	**Sn**	**08 13 08.9**	**+0.4**
BO02					IAML		08 13 18.1	
	comp=N,31μm,0.2s							
BO02	**Sierra Bellavi**	**2.43**	**58**	*e*	*P*	**Pn**	**08 12 39.9**	**+0.2**
BO02					IAML		08 13 20.1	
	comp=Z,16μm,0.1s							
BO01	**Tunca**	**2.49**	**47**			**Pn**	**08 12 41.1**	**+0.6**
BO01	**Tunca**	**2.49**	**47**	||	*eP*	**Pn**	**08 12 40.8**	**+0.3**
BO01	**Tunca**	**2.49**	**47**	*e*	*P*	**Pn**	**08 12 40.6**	**+0.2**
BO01					IAML		08 13 28.2	
	comp=Z,11μm,2.0s							
CANA	**Caviahue**	**2.51**	**136**	*e*	*P*	**Pn**	**08 12 41.5**	**+0.5**
CANA					*eS*	**Sb**	**08 13 24.0**	**+7.0**
CANA					IAML		08 13 29.4	
	comp=Z,5μm,0.8s							
LC02	**Puerto Saavedr**	**2.68**	**182**	*i*	*P*	**Pn**	**08 12 40.9**	**-2.1**
MT01	**Popeta**	**2.80**	**37**			**Pn**	**08 12 45.7**	**+1.0**
MT01	**Popeta**	**2.80**	**37**	*i*	*P*	**Pn**	**08 12 44.6**	**-0.2**
MT01					IAML		08 12 47.4	
	comp=E,17μm,0.3s							
MT01	**Popeta**	**2.80**	**37**	*e*	*P*	**Pn**	**08 12 44.5**	**-0.2**
MT01					IAML		08 13 41.4	
	comp=Z,6μm,0.7s							
MT09	**Talagante**	**3.00**	**40**			**Pn**	**08 12 49.1**	**+1.5**
MT09	**Talagante**	**3.00**	**40**	||	*iP*	**Pn**	**08 12 48.1**	**+0.5**
LC01	**Cunco**	**3.00**	**158**	*e*	*P*	**Pn**	**08 12 46.0**	**-1.5**
BO04	**La Punta**	**3.05**	**47**			**Pn**	**08 12 49.4**	**+1.2**
BO04	**La Punta**	**3.05**	**47**	||	*iP*	**Pn**	**08 12 48.5**	**+0.3**
EDS3	**Malargue**	**3.17**	**85**	*e*	*P*	**Pn**	**08 12 51.9**	**+1.9**
MT12	**Pirque**	**3.27**	**44**	||	*iP*	**Pn**	**08 12 51.7**	**+0.4**
MT02	**Curacav**	**3.35**	**32**			**Pn**	**08 12 53.1**	**+0.8**
MT02	**Curacav**	**3.35**	**32**	*i*	*P*	**Pn**	**08 12 52.2**	**-0.1**
MT02	**Curacav**	**3.35**	**32**	*e*	*P*	**Pn**	**08 12 52.2**	**-0.1**
MT02					IAML		08 13 55.6	
	comp=Z,4μm,1.1s							
VA01	**Torpederas**	**3.36**	**24**			**Pn**	**08 12 52.8**	**+0.2**
VA01	**Torpederas**	**3.36**	**24**	*i*	*P*	**Pn**	**08 12 52.6**	**+0.2**
VA01					IAML		08 12 55.4	
	comp=N,14μm,0.1s							
VA01	**Torpederas**	**3.36**	**24**	*e*	*P*	**Pn**	**08 12 52.0**	**-0.5**
VA01					IAML		08 14 02.9	
	comp=Z,3μm,1.6s							
VA01	**Torpederas**	**3.36**	**24**		P	**Pn**	**08 12 52.7**	**+0.2**
LMEL	**Las Melosas**	**3.39**	**49**	||	*iP*	**Pn**	**08 12 53.6**	**+0.6**
MT15	**Las Vizcachas**	**3.39**	**43**	||	*iP*	**Pn**	**08 12 53.4**	**+0.4**
MT13	**San Alfonso**	**3.41**	**47**			**Pn**	**08 12 53.8**	**+0.5**
MT13	**San Alfonso**	**3.41**	**47**	*i*	*P*	**Pn**	**08 12 54.0**	**+0.7**
MT13					IAML		08 13 02.5	
	comp=N,8μm,0.2s							
MT13	**San Alfonso**	**3.41**	**47**	*e*	*P*	**Pn**	**08 12 54.3**	**+1.0**
MT13					IAML		08 13 59.3	
	comp=Z,8μm,1.5s							
MT05	**Renca**	**3.43**	**38**			**Pn**	**08 12 54.6**	**+1.2**
MT05	**Renca**	**3.43**	**38**	||	*iP*	**Pn**	**08 12 54.0**	**+0.6**
MT05	**Renca**	**3.43**	**38**	*e*	*P*	**Pn**	**08 12 53.6**	**+0.1**
MT05					IAML		08 14 02.4	
	comp=Z,9μm,1.4s							
MT03	**Universidad Ad**	**3.47**	**42**			**Pn**	**08 12 55.1**	**+1.1**
MT03	**Universidad Ad**	**3.47**	**42**	*i*	*P*	**Pn**	**08 12 54.4**	**+0.4**
MT03	**Universidad Ad**	**3.47**	**42**	*e*	*P*	**Pn**	**08 12 54.8**	**+0.7**
MT03					IAML		08 14 03.1	
	comp=Z,8μm,0.6s							
MT16	**CCHEN**	**3.51**	**41**			**Pn**	**08 12 55.9**	**+1.3**
MT14	**Cerro Calן n**	**3.53**	**41**	*i*	*P*	**Pn**	**08 12 55.3**	**+0.5**
MT10	**Hacienda Santa**	**3.63**	**39**	||	*iP*	**Pn**	**08 12 56.8**	**+0.5**
ROCH	**El Roble**	**3.65**	**32**	*i*	*P*	**Pn**	**08 12 57.1**	**+0.4**
ROCH				*i*	*P*		**08 12 57.0**	**+0.4**
PEL	**Peldehue**	**3.66**	**37**			**Pn**	**08 12 58.0**	**+1.4**
PEL	**Peldehue**	**3.66**	**37**		P	**Pn**	**08 12 58.0**	**+1.4**
PEL	**Peldehue**	**3.66**	**37**	||	*iP*	**Pn**	**08 12 56.9**	**+0.4**
PEL	**Peldehue**	**3.66**	**37**		P	**Pn**	**08 12 57.1**	**+0.5**
LR02	**Universidad Au**	**3.69**	**180**	*e*	*P*	**Pn**	**08 12 55.2**	**-1.8**
MT04	**Ro Olivares**	**3.74**	**45**	*i*	*P*	**Pn**	**08 12 58.8**	**+0.8**
MT04	**Ro Olivares**	**3.74**	**45**	*e*	*P*	**Pn**	**08 12 58.6**	**+0.6**
MT04					IAML		08 14 03.7	
	comp=Z,4μm,0.9s							
GO06	**Curarrehue**	**3.75**	**158**			**Pn**	**08 12 57.2**	**-0.7**
GO06	**Curarrehue**	**3.75**	**158**	||	*iP*	**Pn**	**08 12 56.9**	**-1.1**
GO06	**Curarrehue**	**3.75**	**158**	*e*	*P*	**Pn**	**08 12 57.4**	**-0.6**
GO06					IAML		08 14 03.4	
	comp=Z,2μm,0.8s							
GO06	**Curarrehue**	**3.75**	**158**		P	**Pn**	**08 12 57.3**	**-0.7**
LR04	**Corral**	**3.76**	**182**			**Pn**	**08 12 55.7**	**-2.3**
LR04	**Corral**	**3.76**	**182**	||	*iP*	**Pn**	**08 12 55.2**	**-2.7**
LR04	**Corral**	**3.76**	**182**	*e*	*P*	**Pn**	**08 12 54.7**	**-3.3**
LR04					IAML		08 14 00.4	
	comp=Z,4μm,0.8s							
LR04	**Corral**	**3.76**	**182**		P	**Pn**	**08 12 55.3**	**-2.7**
MT08	**Bocatoma Ro**	**3.78**	**46**	||	*iP*	**Pn**	**08 12 59.5**	**+1.1**
MT08	**Bocatoma Ro**	**3.78**	**46**	*e*	*P*	**Pn**	**08 12 59.6**	**+1.1**
MT08					IAML		08 14 03.1	
	comp=Z,4μm,1.5s							
VA06	**Catapilco**	**3.91**	**25**			**Pn**	**08 13 00.6**	**+0.6**
VA06	**Catapilco**	**3.91**	**25**	||	*iP*	**Pn**	**08 13 00.1**	**+0.2**
VA03	**San Esteban**	**4.03**	**35**			**Pn**	**08 13 02.7**	**+0.9**
VA03	**San Esteban**	**4.03**	**35**	*e*	*P*	**Pn**	**08 13 02.4**	**+0.6**
VA03					IAML		08 14 26.0	
	comp=Z,5μm,1.0s							
RFA	**San Rafael**	**4.16**	**73**	*e*	*P*	**Pn**	**08 13 04.9**	**+1.4**
RFA					IAML		08 14 15.1	
	comp=Z,3μm,1.0s							
LR05	**Currie**	**4.23**	**167**			**Pn**	**08 13 03.9**	**-0.5**
LR05	**Currie**	**4.23**	**167**	*e*	*P*	**Pn**	**08 13 03.9**	**-0.5**
LR05					*eS*	**Sn**	**08 13 53.5**	**+0.5**
LR05					IAML		08 14 12.8	
	comp=Z,4μm,0.9s							
CO04	**Los Peladeros**	**4.49**	**26**			**Pn**	**08 13 08.5**	**+0.3**
LL04	**Puerto Octay**	**4.84**	**172**	*e*	*P*	**Pn**	**08 13 11.6**	**-1.2**
LL04					*eS*	**Sn**	**08 14 03.6**	**-4.3**
PLCA	**Paso Flores**	**5.09**	**156**		P	**Pn**	**08 13 15.7**	**-0.6**
	comp=Z,24nm,0.3s,baz=319,slow=9.8,SNR=716							
PLCA					S	**Sn**	**08 14 10.1**	**-4.0**
	comp=Z,338nm,0.6s,baz=274,slow=17,SNR=3.4							
PLCA					LR	LR	08 15 31.2	
	comp=Z,12μm,19.3s,baz=350,slow=42							
	comp=Z,70nm,0.4s							
PLCA	**Paso Flores**	**5.09**	**156**			**Pn**	**08 13 16.0**	**-0.3**
PLCA	**Paso Flores**	**5.09**	**156**	*e*	*P*	**Pn**	**08 13 16.0**	**-0.3**
PLCA					IAML		08 14 46.4	
	comp=Z,827nm,0.9s							
PLCA	**Paso Flores**	**5.09**	**156**	*e*	*P*	**Pn**	**08 13 15.3**	**-0.9**
H03S1	**Juan Fernandez**	**5.14**	**294**		P	**Pn**	**08 13 17.6**	**+1.0**
	baz=79,slow=13,SNR=2980							
H03S1					S	**Sn**	**08 14 09.1**	**-5.8**
H03S1					T	T	08 18 32.0	
	baz=114,slow=76							
H03S3	**Juan Fernandez**	**5.15**	**295**		P	**Pn**	**08 13 17.8**	**+1.0**
	baz=79,slow=13,SNR=2178							
H03S3					S	**Sn**	**08 14 09.1**	**-6.1**
H03S3					T	T	08 18 31.4	
	baz=114,slow=76							
H03S2	**Juan Fernandez**	**5.16**	**294**		P	**Pn**	**08 13 17.6**	**+0.7**
	baz=79,slow=13,SNR=4118							
H03S2					S	**Sn**	**08 14 09.1**	**-6.2**
H03S2					T	T	08 18 29.2	
	baz=114,slow=76							
VA04	**Juan Fernndez**	**5.18**	**297**			**Pn**	**08 13 18.5**	**+1.0**
VA04	**Juan Fernndez**	**5.18**	**297**	*eP*		**Pn**	**08 13 18.4**	**+1.0**
VA04	**Juan Fernndez**	**5.18**	**297**	P		**Pn**	**08 13 18.7**	**+1.2**
CO02	**Combarbal**	**5.25**	**22**	*eP*		**Pn**	**08 13 18.3**	**-0.3**
CO02					IAML		08 14 25.2	
	comp=Z,3μm,0.8s							
CO02	**Combarbal**	**5.25**	**22**	P		**Pn**	**08 13 19.3**	**+0.7**
LL05	**Los Muermos**	**5.29**	**182**	P		**Pn**	**08 13 16.7**	**-2.2**
H03N1	**Juan Fernandez**	**5.34**	**298**	P		**Pn**	**08 13 21.2**	**+1.8**
	baz=200,slow=74							
H03N1					S	**Sn**	**08 14 15.6**	**-4.2**
H03N3	**Juan Fernandez**	**5.34**	**298**	P		**Pn**	**08 13 21.2**	**+1.7**
H03N3					S	**Sn**	**08 14 15.6**	**-4.3**
H03N2	**Juan Fernandez**	**5.36**	**298**	P		**Pn**	**08 13 21.4**	**+1.8**
	baz=61,slow=74,SNR=8855							
H03N2					S	**Sn**	**08 14 15.6**	**-4.6**
ZON	**Zonda**	**5.95**	**41**	P		**Pn**	**08 13 29.0**	**+0.9**
ZON	**Zonda**	**5.95**	**41**	P		**Pn**	**08 13 29.1**	**+0.9**
CFA	**Coronel Fontan**	**6.15**	**44**	P		**Pn**	**08 13 31.2**	**+0.4**
	comp=Z,156nm,0.3s,baz=222,slow=12,SNR=1883							
CFA					S	**Sn**	**08 14 36.6**	**-3.6**
	comp=Z,145nm,0.3s,baz=112,slow=19,SNR=1.3							
CFA					LR	LR	08 16 11.0	
	comp=Z,13μm,20.1s,baz=217,slow=41							
	comp=Z,571nm,0.5s							
GO04	**Tololo Observa**	**6.28**	**20**	P		**Pn**	**08 13 33.1**	**+0.3**
LL01	**San Ignacio de**	**6.29**	**174**			**Pn**	**08 13 32.9**	**+0.1**
LL07	**Hotel Espejo d**	**6.71**	**181**			**Pn**	**08 13 35.9**	**-2.6**
GO07	**Milladeo Hill,**	**7.00**	**182**	P		**Pn**	**08 13 39.5**	**-2.9**
LCO	**Las Campanas**	**7.41**	**18**			**Pn**	**08 13 48.0**	**-0.3**
LCO	**Las Campanas**	**7.41**	**18**	P		**Pn**	**08 13 48.0**	**-0.3**
LCO	**Las Campanas**	**7.41**	**18**	P		**Pn**	**08 13 48.1**	**-0.3**
AC05	**El Transito**	**7.69**	**20**			**Pn**	**08 13 52.7**	**+0.6**
AC05	**El Transito**	**7.69**	**20**	P		**Pn**	**08 13 52.3**	**+0.3**
AC04	**Llanos de Chal**	**8.10**	**14**	P		**Pn**	**08 13 56.6**	**-1.0**
GO03	**Copiapo**	**8.88**	**18**	P		**Pn**	**08 14 07.4**	**-0.9**
TRQA	**Tornquist**	**9.24**	**105**			**Pn**	**08 14 13.4**	**+0.2**
TRQA	**Tornquist**	**9.24**	**105**	P		**Pn**	**08 14 13.4**	**+0.2**
PB14	**IPOC Station P**	**11.71**	**13**			**Pn**	**08 14 43.9**	**-3.5**
GO08	**Villa O'Higgin**	**12.36**	**178**			**Pn**	**08 14 55.9**	**+0.1**
LPA	**La Plata**	**12.57**	**89**	*i*	P	Pn	08 14 43.9	-15
LPA	**La Plata**	**12.57**	**89**	PN		Pn	08 14 49.5	-9.2
LPA				pP			08 14 55.7	
LPA				sP			08 15 15.9	
LPA				PP		P	08 15 34.3	+24
LPA				PPP		PPP	08 15 55.0	
LPA				pPP			08 17 13.5	
LPA	**La Plata**	**12.57**	**89**	SN		**Sn**	**08 17 20.8**	**+3.1**
LPA				sS			08 17 29.4	
LPA				SS		**SnSn**	**08 17 43.9**	**+14**
LPA				SSS		SSS	08 18 55.2	
LPA				PCP		PcP	08 20 48.6	+12
LPA				SCS		**ScS**	**08 27 43.5**	**0.0**
LPA				PKIKP		**PKiKP**	**08 28 29.0**	**-4.7**
LPA				SKIKP			08 31 59.0	
LPA				PKIKS			08 32 31.2	
LPA				SKIKS			08 35 35.7	
PB10	**IPOC Station P**	**12.78**	**11**			**Pn**	**08 14 59.4**	**-2.2**
PSAL	**Palomas, Salto**	**13.99**	**73**	*eP*		**Pn**	**08 15 15.6**	**-2.6**
PATCX	**Punta Patache**	**15.48**	**11**	IAmb		IAmb	08 15 46.3	
	comp=Z,720nm,1.1s							
MG05	**Puerto Natales**	**15.57**	**178**			**Pn**	**08 15 40.6**	**+1.3**
TA01	**Diego Aracena**	**15.73**	**11**			**Pn**	**08 15 41.3**	**-0.1**
TA01				IAmb		IAmb	08 15 49.0	
	comp=Z,836nm,1.1s							
CPUP	**Villa Florida**	**16.75**	**59**	P		**Pn**	**08 15 47.9**	**-6.6**
	comp=Z,12nm,0.5s,baz=234,slow=12,SNR=27							
CPUP				LR		LR	08 22 53.6	
	comp=Z,11μm,21.9s,baz=238,slow=39							
CPUP	**Villa Florida**	**16.75**	**59**			**Pn**	**08 15 50.2**	**-4.2**
CPUP	**Villa Florida**	**16.75**	**59**	P		**Pn**	**08 15 50.2**	**-4.2**
CPUP				pmax		pmax		
	comp=Z,174nm,1.2s							
CPSB	**Cacapava Do Su**	**17.54**	**77**	*eP*		**Pn**	**08 16 03.0**	**-1.3**
PB12	**IPOC Station P**	**17.62**	**9**	IAmb		IAmb	08 16 10.3	
	comp=Z,988nm,1.4s							
MG03	**Isla Dawson**	**17.84**	**175**			**P**	**08 16 09.0**	**+0.7**
AP01	**Chacalluta**	**17.86**	**9**	IAmb		IAmb	08 16 14.3	
	comp=Z,1μm,1.3s							
PB16	**IPOC Station P**	**18.02**	**12**	IAmb		IAmb	08 16 16.1	
	comp=Z,790nm,1.2s							
EFI	**East Falkland**	**18.98**	**150**			**P**	**08 16 19.9**	**-0.9**
EFI	**East Falkland**	**18.98**	**150**	P		**P**	**08 16 19.9**	**-0.9**
EFI				pmax		pmax		
	comp=Z,481nm,1.9s							
USHA	**Ushuaia**	**19.02**	**171**	P		**P**	**08 16 20.6

comp=Z,19nm,0.8s
BDFB Brasilia 30.38 54 P P 08 18 11.2 -0.4
BDFB Brasilia 30.38 54 P **P** 08 18 11.2 -0.4
BDFB pmax pmax
comp=Z,123nm,1.5s
CAM01 Campos-RJ 30.96 71 *e*P **P 08 18 15.5 -1.1**
SNDB Serra Nova Dou 31.17 45 *e*P **P 08 18 17.8 -0.6**
HOPE Hope Point 31.18 137 P **P 08 18 18.1 -0.1**
HOPE Hope Point 31.18 137 P **P 08 18 18.1 -0.1**
HOPE pmax pmax
comp=Z,99nm,1.1s
DIAM Diamantina, MG 31.58 64 *e*P **P 08 18 21.6 -0.6**
RPN Rapa Nui 31.83 276 LR LR 08 27 40.9
comp=Z,3µm,20.5s,baz=113,slow=29
VA02 Isla de Pascua 31.90 276 IAMs_20 IAMs_20 08 27 21.3
comp=Z,4µm,21.0s
MCRA Macar, Loja 32.18 347 P **P 08 18 26.6 -0.8**
comp=Z,1µmcomp=Z,39nm,0.7s
SJMB Sao Joao De Ma 33.15 67 *e*P **P 08 18 35.2 -0.7**
JANB Januaria 33.29 58 *e*P **P 08 18 36.0 -1.1**
BSFB Barra de Sao F 33.33 68 *e*P **P 08 18 36.2 -1.2**
RIB01 Linhares ES 33.38 69 *e*P **P 08 18 37.2 -0.6**
TEFE Tefe 33.41 16 *e*P **P 08 18 38.5 +0.4**
SDBA SAO DESIDERIO 34.79 54 *e*P **P 08 18 49.5 -0.7**
MACA Manacapuru-AM 34.80 22 IAmb IAmb 08 19 06.1
comp=Z,140nm,1.0s
MACA Manacapuru-AM 34.80 22 *e*P **P 08 18 50.1 0.0**
ITTB Itaituba 35.49 31 *e*P **P 08 18 55.5 -0.6**
GUA01 Guaratinga, BA 35.50 66 *e*P **P 08 18 55.5 -0.8**
SMTB Santa Maria do 35.82 47 *e*P **P 08 18 58.9 -0.1**
PTLC Puerto Leguiza 36.12 357 P **P 08 18 59.8 -1.8**
comp=Z,1µmcomp=Z,2µmcomp=Z,156nm,0.9s
SGC2 Sao Gabriel da 36.26 11 P **P 08 19 01.5 -1.1**
comp=Z,95nmcomp=Z,76nm,0.8s
CASC Dorado de Casc 36.26 353 P **P 08 19 04.8 +2.0**
comp=Z,2µmcomp=Z,169nm,0.8s
OTAV Otavalo 36.48 351 P **P 08 19 07.7 +2.5**
OTAV IAmb IAmb 08 19 21.2
comp=Z,229nm,1.9s
OTAV Otavalo 36.48 351 P **P 08 19 07.7 +2.5**
OTAV pmax pmax
comp=Z,229nm,2.0s
OTAV Otavalo 36.48 351 P **P 08 19 07.0 +1.9**
comp=Z,1µmcomp=Z,43nm,1.6s
OTAV Otavalo 36.48 351 *e*P **P 08 19 07.6 +2.5**
CMC01 Camacan, BA 36.50 64 *e*P **P 08 19 03.5 -1.2**
CUSE Cuicocha Este 36.54 351 P **P 08 19 09.0 +3.4**
comp=Z,2µmcomp=Z,85nm,1.1s
PAC1 Pacto, Paraso 36.55 351 P P 08 19 16.1 +11
comp=Z,1µmcomp=Z,104nm,1.0s
FLOC Florencia 37.56 356 P **P 08 19 14.1 +0.3**
comp=Z,1µmcomp=Z,61nm,1.6s
MACC Macarena, Meta 38.06 359 P **P 08 19 19.6 +1.6**
comp=Z,2µmcomp=Z,173nm,0.8s
BBAC Balboa, Cauca 38.12 354 P **P 08 19 20.1 +1.4**
comp=Z,1µmcomp=Z,76nm,1.1s
GARC Garzon, Huila 38.16 356 P **P 08 19 20.6 +1.5**
comp=Z,3µmcomp=Z,986nmcomp=Z,24nm,0.8s
POPC Popayan, Colom 38.58 355 P **P 08 19 21.8 -0.8**
comp=Z,829nmcomp=Z,40nm,1.3s
GR1C Gorgona, Isla 39.18 352 P **P 08 19 29.9 +2.6**
JAMC Jamundi, Valle 39.25 355 P P 08 19 38.9 +11
comp=Z,35nm,2.2s
PRAC Prado 39.65 357 P **P 08 19 33.9 +2.6**
comp=Z,3µmcomp=Z,167nm,1.2s
YOTC Yotoco, Valle 39.99 355 P **P 08 19 35.4 +1.2**
comp=Z,781nmcomp=Z,61nm,0.8s
VILC Villavicencio, 40.02 359 P **P 08 19 37.6 +3.1**
comp=Z,1µmcomp=Z,130nm,0.7s
BOAV Boa Vista 40.12 20 P **P 08 19 34.2 -1.0**
BOAV Boa Vista 40.12 20 *e*P **P 08 19 35.2 0.0**
ROSC El Rosal 40.75 358 P **P 08 19 42.4 +1.6**
comp=Z,13nm,0.7s,baz=173,slow=6.8,SNR=8.7
ROSC LR LR 08 36 11.3
comp=Z,2µm,19.2s,baz=207,slow=35
comp=Z,13nm,0.7s
ROSC El Rosal 40.75 358 P **P 08 19 43.8 +3.0**
ROSC El Rosal 40.75 358 P **P 08 19 43.8 +3.0**
ROSC pmax pmax
comp=Z,59nm,0.7s
PLMC San Jos del P 40.90 355 P **P 08 19 45.2 +3.5**
comp=Z,2µmcomp=Z,98nm,1.2s
RUSC La Rusia 41.78 0 P **P 08 19 50.2 +0.8**
comp=Z,2µmcomp=Z,4µmcomp=Z,246nm,0.9s
CBOC Ciudad Bolivar 41.83 356 P **P 08 19 50.9 +1.4**
comp=Z,2µmcomp=Z,114nm,0.8s
NBMA Muriti-CE 42.57 56 *e*P **P 08 19 55.3 -0.1**
DBBC Dabeiba 42.99 356 P **P 08 20 01.2 +2.4**
NBPS Pedro II - PI 43.07 50 *e*P **P 08 19 59.3 -0.2**
NBMO Morrinhos-CE 44.78 51 *e*P **P 08 20 12.9 -0.3**
SDV Santo Domingo 44.83 4 LR LR 08 38 48.1
comp=Z,1µm,20.6s,baz=193,slow=36
SDV Santo Domingo 44.83 4 P **P 08 20 13.8 +0.2**
SDV Santo Domingo 44.83 4 *e*P **P 08 20 14.3 +0.6**
NBPA Parau_RN 44.86 56 *e*P **P 08 20 14.3 +0.4**
BELA Belgrano 2 44.99 169 P **P 08 20 14.5 +0.3**
MDP Montagnes des 45.33 30 LR LR 08 41 00.3
comp=Z,4µm,18.9s,baz=200,slow=38
MPGF Montagnes des 45.34 30 P **P 08 20 17.2 -0.4**
MPGF pP **sP 08 20 26.9 -2.5**
MPGF PcP **PcP 08 21 57.8 +0.9**
BRU2 Volcan 45.53 347 P **P 08 20 21.6 +2.4**
NBPV Pedro Velho 45.63 59 *e*P **P 08 20 20.9 +1.0**
RCBR Riachuelo 45.63 58 LR LR 08 41 08.6
comp=Z,3µm,18.5s,baz=212,slow=38
RCBR Riachuelo 45.63 58 P **P 08 20 19.6 -0.4**
RCBR Riachuelo 45.63 58 P **P 08 20 19.6 -0.4**
RCBR pmax pmax
comp=Z,25nm,0.9s
RCBR MLR MLR
comp=Z,8µm,18.0s
RCBR Riachuelo 45.63 58 *e*P **P 08 20 20.9 +1.0**
JTS Las Juntas de 47.45 344 LR LR 08 36 03.4
comp=Z,1µm,21.3s,baz=135,slow=30
JTS Las Juntas de 47.45 344 P **P 08 20 36.5 +2.4**
JTS Las Juntas de 47.45 344 P **P 08 20 36.5 +2.4**
JTS pmax pmax
comp=Z,36nm,1.1s
VNA3 Neumayer Olymp 47.81 157 ⇑P **P 08 20 36.5 +0.1**
comp=Z,82nm,1.0s
VNA1 Neumayer--Stat 48.15 156 ⇑P **P 08 20 39.4 +0.5**
comp=Z,64nm,1.0s
VNA2 Neumayer--Watz 48.48 156 ⇑P **P 08 20 41.8 +0.3**
comp=Z,58nm,0.6s,baz=274,slow=7.3
GRGR Grenville 49.22 15 IAMs_20 IAMs_20 08 43 48.2
comp=Z,2µm,19.0s
GRGR Grenville 49.22 15 *e*P **P 08 20 48.4 +0.7**
GRW Mount Saint Ca 49.25 15 *e*P **P 08 20 51.5 +3.5**
GRSS Sisters 49.39 15 *e*P **P 08 20 50.3 +1.2**
GCMP Grenada, Carri 49.62 15 *e*P **P 08 20 51.3 +0.6**
SNAA Sanae 50.03 157 ⇑P **P 08 20 53.1 -0.4**
comp=Z,2µm,0.7s
SNAA Sanae 50.03 157 P **P 08 20 52.9 -0.5**
comp=Z,133nm,1.0s,baz=274,slow=7.0,SNR=61
SNAA PcP **PcP 08 22 12.2 -0.6**
comp=Z,21nm,0.6s,baz=207,slow=2.3,SNR=6.1
SNAA LR LR 08 39 38.4
comp=Z,2µm,21.8s,baz=278,slow=33
comp=Z,133nm,1.0s
SNAA Sanae 50.03 157 P **P 08 20 52.5 -0.9**
SNAA Sanae 50.03 157 P **P 08 20 52.5 -0.9**
SNAA pmax pmax
comp=Z,187nm,1.0s
HERN Volcan Telica 50.12 343 IAmb IAmb 08 20 55.3
comp=Z,51nm,0.7s
SVB Belmont 50.41 15 *e*P **P 08 20 57.5 +0.6**
MCLT Moule a Chique 50.91 16 *e*P **P 08 21 00.8 +0.3**
SLAC Saint Lucia, A 51.10 16 *e*P **P 08 21 02.7 +0.8**
SLBI Saint Lucia, B 51.20 15 *e*P **P 08 21 03.5 +0.8**
TGUH Tegucigalpa,Un 51.62 343 IAmb IAmb 08 21 20.8
comp=Z,86nm,1.1s
BIM Bigot 51.66 15 IAMs_20 IAMs_20 08 45 29.8
comp=Z,2µm,21.0s
TROLL Troll, Antarti 51.73 157 P **P 08 21 05.8 -0.5**
CXM Morne La Croix 51.93 15 IAmb IAmb 08 21 21.5
comp=Z,86nm,0.8s
SVN Savane Anatole 51.96 15 IAMs_20 IAMs_20 08 45 39.6
comp=Z,2µm,20.0s
SVN Savane Anatole 51.96 15 *e*P **P 08 21 08.1 -0.3**
DSLB Salisbury 52.48 14 *e*P **P 08 21 11.1 -1.2**
DWS Wesley 52.63 15 *e*P **P 08 21 13.1 -0.3**
MAGL Barre de l'ile 53.01 15 IAMs_20 IAMs_20 08 46 21.4
comp=Z,2µm,21.0s
CBE Ff, Capester 53.06 14 IAmb IAmb 08 21 28.9
comp=Z,166nm,1.5s
CBE IAMs_20 IAMs_20 08 46 04.7
comp=Z,2µm,21.0s
DHSZ Broadband at M 53.23 14 *e*P **P 08 21 16.9 -0.8**
GDHS Morne Mazeau, 53.23 14 IAmb IAmb 08 21 30.3
comp=Z,99nm,1.1s
GDHS IAMs_20 IAMs_20 08 45 57.6
comp=Z,2µm,21.0s
DSDZ La Diserade, G 53.41 15 *e*P **P 08 21 15.8 -3.3**
GDSD La Dsirade Is 53.41 15 IAmb IAmb 08 21 31.0
comp=Z,106nm,1.1s
GDSD IAMs_20 IAMs_20 08 46 33.9
comp=Z,2µm,21.0s
ABD La Joyeuse, An 53.48 14 IAMs_20 IAMs_20 08 46 15.8
comp=Z,2µm,21.0s
HUEH Huehuetenango 53.98 338 P **P 08 21 25.0 +1.5**
QSPA South Pole Qui 54.13 180 P **P 08 21 24.1 +0.1**
comp=Z,50nm,0.8s,baz=154,slow=1.0,SNR=205
QSPA PcP **PcP 08 22 28.5 +0.1**
comp=Z,20nm,0.7s,baz=162,slow=1.7,SNR=3.5
QSPA LR LR 08 43 09.1
comp=Z,1µm,20.1s,baz=163,slow=34
comp=Z,50nm,0.8s
QSPA South Pole Qui 54.13 180 P **P 08 21 23.7 -0.4**
QSPA IAmb IAmb 08 21 25.9
comp=Z,106nm,1.1s
QSPA South Pole Qui 54.13 180 P **P 08 21 24.2 +0.1**
SEUS St. Eustatius 54.20 12 IAmb IAmb 08 21 37.5
comp=Z,106nm,0.9s
SEUS IAMs_20 IAMs_20 08 46 29.0
comp=Z,3µm,22.0s
OBIP Obispado Ponce 54.23 8 IAmb IAmb 08 21 26.1
comp=Z,43nm,0.7s
PDPR Patillas Dam, 54.27 9 IAmb IAmb 08 21 37.7
comp=Z,88nm,1.0s
SABA Saba 54.28 12 IAMs_20 IAMs_20 08 48 11.2
comp=Z,2µm,19.0s
PRSN Puerto Rico Se 54.34 7 IAmb IAmb 08 21 38.6
comp=Z,124nm,1.2s
SJG San Juan 54.35 8 P **P 08 21 25.2 -0.7**
SJG IAmb IAmb 08 21 38.3
comp=Z,107nm,1.1s
SJG San Juan 54.35 8 P **P 08 21 25.2 -0.7**
SJG pmax pmax
comp=Z,107nm,1.1s
SJG MLR MLR
comp=Z,2µm,21.0s
HUMP Col San Antoni 54.41 9 IAmb IAmb 08 21 39.4
comp=Z,101nm,1.5s
AOPR Arecibo Observ 54.51 8 IAmb IAmb 08 21 39.3
comp=Z,87nm,0.9s
ANWB Willy Bob 54.58 13 P **P 08 21 26.1 -1.5**
ANWB IAMs_20 IAMs_20 08 47 55.2
comp=Z,2µm,20.0s
ANWB Willy Bob 54.58 13 *e*P **P 08 21 25.4 -2.2**
SMRT St. Maarten 54.73 12 IAMs_20 IAMs_20 08 47 09.1
comp=Z,2µm,21.0s
NVL N'lazarevskaya 54.80 156 *e*P **P 08 21 27.6 -1.0**
NVL *e* 08 22 29.9
NVL *e* 08 23 30.5
NVL *e*PPP PPP 08 24 41.2
NVL *e*S **S 08 29 06.2 -1.1**
NVL *e*SS **SS 08 32 50.8 +0.8**
NVL *e*SSS SSS 08 34 55.7
NVL pmax pmax
comp=Z,50nm,1.6s
CMIG Matias Romero 56.72 335 LR LR 08 40 20.2
comp=Z,776nm,21.1s,baz=174,slow=30
TEIG Tepich 57.80 343 P **P 08 21 51.2 +0.7**
TEIG Tepich 57.80 343 P **P 08 21 51.6 +1.0**
TEIG pP **sP 08 22 02.3 -0.4**
TEIG x x 08 22 03.6
TEIG sP **pP 08 22 05.9 +6.6**
SOR Soroa 59.30 350 IAmb IAmb 08 22 15.0
comp=Z,93nm,0.9s
UNM Universidad Na 60.34 332 IAMs_20 IAMs_20 08 42 12.6
comp=Z,2µm,20.0s
SBA Scott Base 60.80 192 P **P 08 22 12.0 +1.3**
SBA Scott Base 60.80 192 P **P 08 22 12.0 +1.3**
SBA pmax pmax
comp=Z,230nm,1.9s
VNDA Vanda 61.83 192 P **P 08 22 18.4 +0.7**
comp=Z,18nm,0.8s,baz=121,slow=6.3,SNR=56
VNDA LR LR 08 44 37.3
comp=Z,897nm,20.1s,baz=106,slow=32
comp=Z,18nm,0.8s
VNDA Vanda 61.83 192 IAmb IAmb 08 22 20.5
comp=Z,114nm,1.6s
VNDA Vanda 61.83 192 P **P 08 22 19.0 +1.3**
VNDA pP **sP 08 22 29.0 -1.0**
VNDA PcP **PcP 08 22 60.0 +1.5**
TAOE Nuku Hiva Isla 66.16 277 P **P 08 22 48.9 +1.7**
TAOE IAmb IAmb 08 22 50.5
comp=Z,124nm,1.2s
HBVL Hebbronville 67.24 336 IAmb IAmb 08 22 57.1
comp=Z,60nm,1.0s
451A Vernon 67.40 348 IAmb IAmb 08 22 56.5
comp=Z,96nm,1.1s
KVTX Kingsville 67.43 336 IAmb IAmb 08 22 58.7
comp=Z,88nm,0.9s
TIGA Tifton 67.89 351 IAmb IAmb 08 23 11.3
comp=Z,100nm,0.9s
BRAL Brewton 68.16 347 IAmb IAmb 08 23 01.6
comp=Z,80nm,0.8s
CCD Concordia, Ant 68.53 185 P **P 08 23 01.4 -0.2**
CCD pP **sP 08 23 12.2 -1.7**
CCD PcP **PcP 08 23 27.4 +0.8**
833A Chaparral WMA, 68.65 335 IAmb IAmb 08 23 05.5
comp=Z,115nm,1.0s
EF02 Christine 68.78 336 IAmb IAmb 08 23 06.2
comp=Z,98nm,0.8s
250A Grady 68.82 348 IAmb IAmb 08 23 17.3
comp=Z,100nm,1.3s
SLBS Sierra La Lagu 68.83 324 P **P 08 23 05.3 +1.6**
SLBS IAmb IAmb 08 23 07.5
comp=Z,149nm,1.8s
SLBS Sierra La Lagu 68.83 324 P **P 08 23 06.2 +2.5**
SLBS sP **sP 08 23 20.4 +4.4**
SLBS PcP **PcP 08 23 28.9 +0.8**
PPTF Pamatai, Papee 68.94 263 P **P 08 23 06.7 +2.0**
PPTF Pamatai, Papee 68.94 263 P **P 08 23 07.1 +2.5**
PPT Papeete 68.95 263 P **P 08 23 06.7 +2.0**
comp=Z,99nm,1.0s,baz=106,slow=7.2,SNR=24
PPT LR LR 08 45 31.7
comp=Z,2µm,18.4s,baz=126,slow=29
comp=Z,99nm,1.0s
RGRS Roger Stewart 68.96 354 IAmb IAmb 08 23 19.0
comp=Z,268nm,1.4s
HKT Hockley 69.05 339 P **P 08 23 05.8 +1.0**
HKT Hockley 69.05 339*c i*P **P 08 23 06.6 +1.9**
HKT pmax pmax
comp=Z,42nm,1.4s
SACV Santiago Islan 69.16 52 IAMs_20 IAMs_20 08 53 08.1
comp=Z,1µm,19.0s
152A Waverly Hall 69.25 350 IAmb IAmb 08 23 19.8
comp=Z,60nm,1.0s
LPIG La Paz 69.36 324 LR LR 08 47 16.6
comp=Z,593nm,18.1s,baz=156,slow=30
HPIG 69.75 329 IAmb IAmb 08 23 12.7
comp=Z,60nm,1.0s
GOGA Godfrey 69.81 351 IAmb IAmb 08 23 23.3
comp=Z,61nm,0.9s
LRAL Lakeview Retre 69.97 348 IAmb IAmb 08 23 24.9
comp=Z,98nm,1.3s
Y57A Sumter 70.08 354 IAmb IAmb 08 23 25.0
comp=Z,79nm,1.0s
Y52A Lilburn 70.34 350 IAmb IAmb 08 23 26.7
comp=Z,111nm,1.0s
435B Jarrell 70.35 338 IAmb IAmb 08 23 15.8
comp=Z,75nm,0.8s
JSC Jenkinsville 70.43 353 IAmb IAmb 08 23 27.1
comp=Z,59nm,0.9s
HODGE Hodges 70.48 352 IAmb IAmb 08 23 27.6
comp=Z,60nm,0.9s
X58A Rowland 70.53 355 IAmb IAmb 08 23 15.7
comp=Z,77nm,0.9s
JCT Junction City 70.77 336 IAmb IAmb 08 23 18.2
comp=Z,99nm,0.8s
PAULI Pauline 71.02 353 IAmb IAmb 08 23 30.9
comp=Z,104nm,1.0s
W59A Clinton 71.08 356 IAmb IAmb 08 23 31.6
comp=Z,132nm,1.2s
W59A IAMs_20 IAMs_20 08 52 44.2
comp=Z,972nm,18.0s
SAND Sanderson 71.09 334 IAmb IAmb 08 23 20.4
comp=Z,103nm,1.0s
TXAR Lajitas Array 71.10 332 P **P 08 23 19.4 +1.8**
comp=Z,24nm,0.7s,baz=150,slow=8.7,SNR=287
TXAR LR LR 08 49 14.7
comp=Z,1µm,20.8s,baz=140,slow=31
comp=Z,24nm,0.7s
TXAR Lajitas Array 71.10 332 P **P 08 23 19.0 +1.4**
W57A Gilead 71.17 354 IAmb IAmb 08 23 31.5
comp=Z,81nm,1.0s
BRDY Brady 71.25 337 IAmb IAmb 08 23 20.7
comp=Z,59nm,0.9s
KMSC Kings Mountain 71.28 353 IAmb IAmb 08 23 32.3
comp=Z,89nm,1.1s
BG3 Lake Jocassee 71.31 352 IAmb IAmb 08 23 32.9
comp=Z,101nm,1.0s
MAW Mawson 71.45 164 P **P 08 23 18.7 -0.4**
comp=Z,66nm,0.8s,baz=202,slow=6.7,SNR=25
MAW LR LR 08 53 37.1
comp=Z,3µm,21.9s,baz=229,slow=35
comp=Z,66nm,0.8s
W52A Murphy 71.53 351 IAmb IAmb 08 23 34.2
comp=Z,83nm,1.1s
OZNA Ozona 71.62 335 IAmb IAmb 08 23 23.2
comp=Z,137nm,1.1s
CCAR Cane Creek 71.78 344 IAmb IAmb 08 23 36.5
comp=Z,137nm,1.1s
WLAR White Oak Lake 71.87 343 IAmb IAmb 08 23 37.2
comp=Z,135nm,1.0s
CPCT Cooper Cave 71.96 350 IAmb IAmb 08 23 24.4
comp=Z,86nm,0.8s
V53A Saluda 71.96 352 IAmb IAmb 08 23 36.5
comp=Z,86nm,1.0s
V55A Taylorsville 71.98 353 IAmb IAmb 08 23 36.6
comp=Z,129nm,1.0s
ALPN Alpine 72.02 333 IAmb IAmb 08 23 26.2
comp=Z,126nm,1.6s
TKL Tuckaleechee C 72.07 351 P **P 08 23 23.3 +0.1**
comp=Z,39nm,0.8s,baz=168,slow=7.7,SNR=60
comp=Z,39nm,0.8s
TKL Tuckaleechee C 72.07 351 IAmb IAmb 08 23 36.9
comp=Z,64nm,0.8s
U56A King 72.39 354 IAmb IAmb 08 23 27.0
comp=Z,69nm,0.8s
TPB05 Hovey Rd 72.40 333 IAmb IAmb 08 23 28.2
comp=Z,49nm,0.9s
PLPT Palo Pinto 72.46 338 IAmb IAmb 08 23 27.9
comp=Z,103nm,0.9s
SGCY Sterling City 72.53 335 IAmb IAmb 08 23 28.2
comp=Z,75nm,0.9s
MNHN Monahans 72.57 334 IAmb IAmb 08 23 28.8
comp=Z,92nm,0.7s
TPB01 Permian Basin 72.59 333 IAmb IAmb 08 23 29.5
comp=Z,75nm,0.8s
MIAR Mount Ida 72.80 343 IAmb IAmb 08 23 42.1
comp=Z,121nm,1.8s
229A Bryant Ranch, 72.81 335 IAmb IAmb 08 23 30.2
comp=Z,57nm,0.8s
T59A Double "B" Far 72.82 356 IAmb IAmb 08 23 41.9
comp=Z,174nm,1.3s
CLTN Cedars of Leba 72.85 349 IAmb IAmb 08 23 42.1
comp=Z,78nm,1.0s
TZTN Tazewell 72.92 351 IAmb IAmb 08 23 42.0
comp=Z,191nm,1.6s
SRIG Santa Rosalia 73.00 324 IAmb IAmb 08 23 32.5
comp=Z,96nm,1.3s
TPB06 Permian Basin 73.02 334 IAmb IAmb 08 23 31.7
comp=Z,118nm,1.8s
HBAR Harrisburg 73.11 345 IAmb IAmb 08 23 43.5
comp=Z,80nm,1.0s
WVT Waverly 73.14 348 P **P 08 23 29.8 +0.4**
WVT Waverly 73.14 348 P **P 08 23 29.8 +0.4**
WVT pmax pmax
comp=Z,206nm,1.0s
WVT Waverly 73.14 348 P **P 08 23 30.0 +0.5**
WVT PcP sP 08 23 43.1 +1.3
U49A Red Boiling Sp 73.18 350 IAmb IAmb 08 23 31.0
comp=Z,48nm,0.6s
LOOK Love County 73.23 339 IAmb IAmb 08 23 32.5
comp=Z,112nm,0.9s
129A Stewart Farms, 73.43 335 IAmb IAmb 08 23 33.7
comp=Z,45nm,0.9s
APMT Aspermont 73.50 337 IAmb IAmb 08 23 34.1
comp=Z,90nm,0.7s
SN07 Snyder 07 73.53 336 IAmb IAmb 08 23 34.0
comp=Z,69nm,0.8s
128A Castleberry Fa 73.64 335 IAmb IAmb 08 23 35.1
comp=Z,64nm,0.8s
S57A Dark Hollow, R 73.69 355 IAmb IAmb 08 23 46.9
comp=Z,107nm,1.2s
POST Post 73.71 336 IAmb IAmb 08 23 36.2
comp=Z,66nm,0.9s
FCAR Ozark Folk Cen 73.75 344 IAmb IAmb 08 23 34.7
comp=Z,72nm,0.8s
R58B Mineral 73.83 356 IAmb IAmb 08 23 48.3
comp=Z,195nm,1.6s
T47A Sharon Grove 73.85 349 IAmb IAmb 08 23 35.2
comp=Z,78nm,0.9s
S54A Dingess, Beckl 73.92 353 IAmb IAmb 08 23 47.7
comp=Z,111nm,1.2s
S51A Beattyville 74.00 352 IAmb IAmb 08 23 48.4
comp=Z,133nm,1.0s
DKNS Dickens 74.07 336 IAmb IAmb 08 23 37.2
comp=Z,86nm,0.7s
W35A Tecumseh 74.23 340 IAmb IAmb 08 23 37.0
comp=Z,76nm,0.6s
PBMO Poplar Bluff 74.25 346 IAmb IAmb 08 23 37.2
comp=Z,67nm,0.6s
R55A Marlinton 74.29 354 IAmb IAmb 08 23 50.8
comp=Z,157nm,1.2s
EPT El Paso 74.36 331 IAMs_20 IAMs_20 08 51 01.2
comp=Z,1µm,21.0s
DRV Dumont d'Urvil 74.42 193 P **P 08 23 36.0 -0.7**
DRV sP **PcP 08 23 49.9 -1.3**
CGM3 Cape Girardeau 74.60 347 IAmb IAmb 08 23 52.0
comp=Z,89nm,1.2s
SUR Sutherland 74.71 119 LR LR 08 53 09.7
comp=Z,916nm,19.4s,baz=239,slow=33
SUR Sutherland 74.71 119 P **P 08 23 40.0 +0.7**
SUR IAmb IAmb 08 23 41.4
comp=Z,96nm,1.0s
R50A Paris 74.72 351 IAmb IAmb 08 23 52.4
comp=Z,68nm,1.0s
R49A Shelbyville 74.84 350 IAmb IAmb 08 23 53.0
comp=Z,174nm,1.4s
S44A Carbondale 74.91 347 IAmb IAmb 08 23 41.4
comp=Z,83nm,0.8s
SIUC Southern Illin 74.93 347 IAmb IAmb 08 23 41.5
comp=Z,94nm,0.9s
WCI Wyandotte Cave 74.94 349 P **P 08 23 39.6 -0.4**
WCI Wyandotte Cave 74.94 349 P **P 08 23 39.6 -0.4**
WCI pmax pmax
comp=Z,26nm,0.9s
MSTX Muleshoe 74.96 335 IAmb IAmb 08 23 42.6
comp=Z,81nm,0.9s
Q56A Snyder Ridge, 74.98 355 IAmb IAmb 08 23 55.0
comp=Z,189nm,1.8s
MGMO Mountain Grove 75.00 344 IAmb IAmb 08 23 54.6
comp=Z,83nm,1.1s
RAR Rarotonga 75.09 255 LR LR 08 47 54.4
comp=Z,614nm,20.8s,baz=132,slow=29
Q51A Peebles 75.34 352 IAmb IAmb 08 23 56.1
comp=Z,111nm,1.0s
P57A Homestead Farm 75.35 356 IAmb IAmb 08 23 57.1
comp=Z,111nm,1.3s
FVM French Village 75.42 346 IAmb IAmb 08 23 57.0
comp=Z,115nm,1.1s
121A Cookes Peak, D 75.54 330 IAmb IAmb 08 23 47.4
comp=Z,67nm,0.9s
MCWV Mont Chateau 75.64 355 IAmb IAmb 08 23 58.0
comp=Z,76nm,1.2s
CCM Cathedral Cave 75.65 345 P **P 08 23 44.5 +0.5**
CCM Cathedral Cave 75.65 345 P **P 08 23 44.5 +0.5**
CCM pmax pmax
comp=Z,179nm,0.9s
CCM Cathedral Cave 75.65 345 P **P 08 23 44.7 +0.7**
CCM pP **sP 08 23 55.8 -0.6**
CCM PcP **PcP 08 23 57.4 +0.7**
OLIL Olney 75.72 348 IAmb IAmb 08 23 57.9
comp=Z,73nm,1.1s
S39A Bolivar 75.74 344 IAmb IAmb 08 23 58.8
comp=Z,89nm,1.1s
T35A Sooner Cattle 75.79 341 IAmb IAmb 08 23 47.2
comp=Z,113nm,0.8s
ELIS Ellis County 75.81 338 IAmb IAmb 08 23 47.9
comp=Z,137nm,1.0s
BLO Bloomington 75.90 349 IAmb IAmb 08 23 46.6
comp=Z,72nm,0.8s
PH02 Texas Public H 75.98 336 IAmb IAmb 08 23 48.8
comp=Z,104nm,0.9s
P48A Milroy 76.03 350 IAmb IAmb 08 23 59.5

comp=Z,131nm,1.0s
PAGS Pennsylvania G 76.03 357 IAmb IAmb 08 24 00.5
comp=Z,92nm,1.2s
Q44A Meyer Farm, Va 76.05 347 IAmb IAmb 08 23 59.7
comp=Z,64nm,0.9s
R40A Maddies Statio 76.09 345 IAmb IAmb 08 24 00.7
comp=Z,114nm,1.1s
NOKA Waynoka 76.20 339 IAmb IAmb 08 23 49.8
comp=Z,94nm,1.0s
O52A Adamsville 76.26 353 IAmb IAmb 08 24 01.2
comp=Z,102nm,1.0s
O53A New Philadelph 76.34 354 IAmb IAmb 08 24 01.8
comp=Z,209nm,1.6s
P46A Rosedale 76.44 349 IAmb IAmb 08 24 01.8
comp=Z,134nm,1.2s
SSPA Standing Stone 76.49 356 P **P** **08 23 49.1 +0.3**
SSPA IAmb IAmb 08 24 03.2
comp=Z,117nm,1.4s
TUC Tucson 76.59 328 P **P** **08 23 51.7 +2.1**
TUC Tucson 76.59 328 P **P** **08 23 51.7 +2.1**
TUC pmax pmax
comp=Z,54nm,1.1s
O49A Covington 76.61 351 IAmb IAmb 08 24 03.1
comp=Z,168nm,1.3s
O48B Farmland 76.78 351 IAmb IAmb 08 23 50.9
comp=Z,46nm,0.6s
DBIC Dimbokro 76.82 72 P **P** **08 23 50.8 -0.5**
comp=Z,49nm,0.7s,baz=251,slow=5.6,SNR=58
DBIC LR LR 08 54 04.0
comp=Z,2µm,21.1s,baz=242,slow=33
comp=Z,49nm,0.7s
DBIC Dimbokro 76.82 72 P **P** **08 23 51.4 +0.1**
DBIC IAmb IAmb 08 23 52.7
comp=Z,60nm,0.8s
DBIC Dimbokro 76.82 72 P **P** **08 23 51.4 +0.1**
DBIC pmax pmax
comp=Z,60nm,0.8s
DBIC Dimbokro 76.82 72 P **P** **08 23 51.2 -0.1**
N53A Lisbon 76.86 354 IAmb IAmb 08 24 05.0
comp=Z,85nm,1.1s
ANMO Albuquerque 77.16 333 P **P** **08 23 53.9 +1.0**
comp=Z,47nm,1.0s,baz=157,slow=7.7,SNR=126
ANMO LR LR 08 53 01.5
comp=Z,1µm,20.6s,baz=152,slow=32
comp=Z,47nm,1.0s
ANMO Albuquerque 77.16 333 P **P** **08 23 54.4 +1.5**
ANMO Albuquerque 77.16 333 P **P** **08 23 54.4 +1.5**
ANMO pmax pmax
comp=Z,47nm,1.0s
ANMO Albuquerque 77.16 333 P **P** **08 23 54.7 +1.7**
ANMO sP **PcP** **08 24 08.3 +4.7**
SFIN Lafayette 77.17 349 IAmb IAmb 08 23 53.3
comp=Z,110nm,1.6s
WIN Windhoek 77.36 109 IAmb IAmb 08 24 11.4
comp=Z,59nm,0.9s
M50A Fremont 77.66 353 IAmb IAmb 08 24 09.0
comp=Z,130nm,1.2s
KSU1 Kansas State U 77.88 342 IAmb IAmb 08 23 58.4
comp=Z,56nm,0.9s
CASY Casey 77.89 182 P **P** **08 23 56.8 +0.3**
CASY Casey 77.89 182 IAMs_20 IAMs_20 08 58 01.9
comp=Z,2µm,19.0s
L59A Walton 77.94 359 IAmb IAmb 08 24 11.7
comp=Z,155nm,1.6s
GRHM Grahamstown, E 78.08 122 P **P** **08 23 58.2 0.0**
VTX Valle De La Tr 78.09 324 IAmb IAmb 08 24 02.0
comp=Z,99nm,1.2s
WES Weston 78.14 1 IAmb IAmb 08 24 13.0
comp=Z,104nm,1.4s
L61B Northampton 78.19 0 IAmb IAmb 08 24 13.0
comp=Z,210nm,1.8s
HRV Adam Dziewonsk 78.26 1 P **P** **08 24 00.5 +1.9**
HRV Adam Dziewonsk 78.26 1 P **P** **08 24 00.5 +1.9**
HRV pmax pmax
comp=Z,59nm,1.0s
T25A Trinidad 78.39 335 IAmb IAmb 08 24 03.2
comp=Z,122nm,0.9s
K62A Royalston 78.41 1 IAmb IAmb 08 24 14.7
comp=Z,150nm,1.4s
CBKS Cedar Bluff 78.46 339 IAmb IAmb 08 24 02.5
comp=Z,97nm,0.8s
TRY Troy 78.47 360 IAmb IAmb 08 24 14.7
comp=Z,104nm,1.1s
MMNY Mt. Morris Dam 78.58 357 IAmb IAmb 08 24 14.7
comp=Z,151nm,1.4s
W18A Petrified Fore 78.58 330 IAmb IAmb 08 24 04.4
comp=Z,136nm,1.2s
AAM Ann Arbor 78.61 352 IAmb IAmb 08 24 14.2
comp=Z,125nm,1.4s
L46A Eue Claire 78.66 350 IAmb IAmb 08 24 14.0
comp=Z,141nm,1.4s
CPBX Cerro Prieto 78.71 325 IAmb IAmb 08 24 05.5
comp=Z,106nm,1.1s
K50A Casco 78.97 353 IAmb IAmb 08 24 03.6
comp=Z,101nm,0.8s
GLA Glamis 79.02 325 IAmb IAmb 08 24 06.9
comp=Z,84nm,1.2s
L44A Lake County Fo 79.06 349 IAmb IAmb 08 24 16.9
comp=Z,158nm,1.2s
L42A Oliver, Polo 79.17 348 IAmb IAmb 08 24 05.1
comp=Z,100nm,0.8s
J57A Williamstown 79.19 358 IAmb IAmb 08 24 17.9
comp=Z,100nm,1.3s
BLYC Blythe 79.46 326 IAmb IAmb 08 24 09.4
comp=Z,91nm,1.1s
KOOLE Kule 79.48 111 *i* P **P** **08 24 04.0 -2.2**
KOOLE Kule 79.48 111 IAmb IAmb 08 24 07.5
comp=Z,111nm,1.1s
KSCO Kaye Shedlock' 79.51 337 IAmb IAmb 08 24 21.4
comp=Z,197nm,1.5s
L40A Anamosa 79.51 347 IAmb IAmb 08 24 06.9
comp=Z,98nm,1.0s
LKGWB Lokgwabe 79.61 112 P **P** **08 24 08.8 +1.9**
LKGWB IAmb IAmb 08 24 10.2
comp=Z,173nm,1.4s
TSUM Tsumeb 79.62 106 LR LR 08 55 28.7
comp=Z,915nm,20.1s,baz=159,slow=33
TSUM Tsumeb 79.62 106 P **P** **08 24 07.1 +0.1**
TSUM IAmb IAmb 08 24 24.6
comp=Z,102nm,1.6s
K43A Burlington 79.64 349 IAmb IAmb 08 24 07.6
comp=Z,132nm,1.3s
J47A Sunmer 79.67 351 IAmb IAmb 08 24 07.4
comp=Z,63nm,0.9s
SCIA State Center 79.76 345 IAmb IAmb 08 24 21.2
comp=Z,115nm,1.1s
I63A Otisfield 79.82 2 IAmb IAmb 08 24 22.7
comp=Z,136nm,1.2s
MVCO Mesa Verde 79.93 332 IAmb IAmb 08 24 11.4
comp=Z,89nm,1.2s
MVCO IAMs_20 IAMs_20 08 54 41.2
comp=Z,2µm,20.0s
LBNH Lisbon 79.99 1 IAmb IAmb 08 24 22.4
comp=Z,68nm,1.1s
BOSA Boshof 79.99 118 P **P** **08 24 08.1 -0.8**
comp=Z,75nm,1.0s,baz=235,slow=4.7,SNR=47
BOSA LR LR 08 55 47.9
comp=Z,736nm,19.9s,baz=220,slow=33
comp=Z,75nm,1.0s
BOSA Boshof 79.99 118 IAmb IAmb 08 24 09.8
comp=Z,114nm,1.1s
BOSA Boshof 79.99 118 P **P** **08 24 08.7 -0.2**
BOSA pP **sP** **08 24 19.7 -1.5**
JFWS Jewell Farm 80.16 347 IAmb IAmb 08 24 10.7
comp=Z,100nm,1.1s
PFO Pinyon Flats O 80.24 325 P **P** **08 24 11.6 +1.7**
comp=Z,52nm,0.9s,baz=135,slow=3.7,SNR=36
PFO LR LR 08 52 59.2
comp=Z,413nm,18.6s,baz=100,slow=30
comp=Z,52nm,0.9s
PFO Pinyon Flats O 80.24 325 P **P** **08 24 12.0 +2.1**
PFO IAmb IAmb 08 24 13.9
comp=Z,88nm,1.1s
PFO Pinyon Flats O 80.24 325 P **P** **08 24 12.0 +2.1**
PFO pmax pmax
comp=Z,89nm,1.1s
PFO Pinyon Flats O 80.24 325 P **P** **08 24 12.5 +2.7**
DNR Dunn Ranch,Anz 80.28 324 IAmb IAmb 08 24 14.2
comp=Z,114nm,1.0s
DELO Deloro Mine 80.35 357 IAmb IAmb 08 24 24.2
comp=Z,160nm,1.9s
LONY Lake Ozonia 80.36 359 IAmb IAmb 08 24 24.6
comp=Z,122nm,1.4s
L34A Svendsen Farm, 80.53 343 IAmb IAmb 08 24 12.6
comp=Z,66nm,0.7s
DANC Danby, Needles 80.59 326 IAmb IAmb 08 24 15.6
comp=Z,117nm,1.0s

SADO Sadowa 80.68 356 P **P** **08 24 11.9 +0.2**
comp=Z,26nm,0.8s,baz=197,slow=3.3,SNR=15
SADO LR LR 09 04 16.8
comp=Z,224nm,18.4s,baz=163,slow=39
comp=Z,26nm,0.8s
ODZ Otahua Downs 80.70 220 P **P** **08 24 13.7 +1.4**
WBO Williamsburg 80.76 359 IAmb IAmb 08 24 26.5
comp=Z,166nm,1.1s
U15A North Rim 80.76 329 IAmb IAmb 08 24 16.6
comp=Z,73nm,0.9s
HAL Halifax 80.85 7 IAmb IAmb 08 24 27.9
comp=Z,84nm,1.2s
MRZ Mangatainoka R 80.87 226 IAmb IAmb 08 24 15.8
comp=Z,96nm,1.1s
PV13 Radium Mtn., P 80.88 332 IAmb IAmb 08 24 16.3
comp=Z,69nm,1.0s
PV02 Paradox Valley 80.90 332 IAmb IAmb 08 24 16.5
comp=Z,145nm,1.1s
PV05 Paradox Valley 80.92 332 IAmb IAmb 08 24 16.4
comp=Z,70nm,0.9s
G62A West of Eustis 80.99 2 IAmb IAmb 08 24 28.4
comp=Z,80nm,1.1s
PV18 Skein Mesa, Pa 80.99 332 IAmb IAmb 08 24 16.8
comp=Z,101nm,0.9s
PV12 Saucer Basin, 81.02 332 IAmb IAmb 08 24 17.2
comp=Z,99nm,1.1s
PV11 David Mesa, Pa 81.03 332 IAmb IAmb 08 24 17.0
comp=Z,156nm,1.6s
PV16 Nyswonger Mesa 81.05 332 IAmb IAmb 08 24 17.2
comp=Z,116nm,1.6s
KGCAE Kacgae 81.08 112 *i* P **P** **08 24 12.6 -2.2**
KGCAE Kacgae 81.08 112 IAmb IAmb 08 24 31.8
comp=Z,68nm,0.9s
PV19 Morning Glory 81.08 332 IAmb IAmb 08 24 17.3
comp=Z,211nm,1.6s
OGNE Ogallala 81.10 338 IAmb IAmb 08 24 16.4
comp=Z,45nm,0.7s
PV20 West Nyswonger 81.10 332 IAmb IAmb 08 24 17.3
comp=Z,123nm,1.3s
PV10 Paradox Valley 81.16 332 IAmb IAmb 08 24 17.3
comp=Z,117nm,1.0s
GRTLG Ghanzi 81.18 110 *i* P **P** **08 24 14.4 -0.9**
GRTLG Ghanzi 81.18 110 IAmb IAmb 08 24 16.7
comp=Z,98nm,1.2s
ISCO Idaho Springs 81.20 335 IAmb IAmb 08 24 18.0
comp=Z,192nm,1.9s
GLMI Grayling 81.21 352 IAmb IAmb 08 24 15.9
comp=Z,89nm,1.1s
PV23 Carpenter Ridg 81.21 332 IAmb IAmb 08 24 18.1
comp=Z,81nm,1.0s
V12A Nelson 81.27 327 IAmb IAmb 08 24 18.6
comp=Z,64nm,1.0s
MAKGR Makgori 81.29 115 *i* P **P** **08 24 13.5 -2.4**
LTZ Lake Taylor 81.35 223 IAmb IAmb 08 24 18.0
comp=Z,79nm,1.1s
BUKO Buck Lake 81.37 356 IAmb IAmb 08 24 29.6
comp=Z,130nm,1.4s
RPZ Rata Peaks 81.38 221 LR LR 08 51 34.6
comp=Z,2µm,21.6s,baz=178,slow=29
KNB Kanab 81.48 329 IAmb IAmb 08 24 20.3
comp=Z,123nm,1.0s
URZ Urewera 81.49 229 LR LR 08 51 35.9
comp=Z,2µm,21.8s,baz=136,slow=29
WHZ Wether Hill Ro 81.50 218 IAmb IAmb 08 24 18.5
comp=Z,137nm,1.6s
PKCU Pink Cliffs 81.64 330 IAmb IAmb 08 24 20.9
comp=Z,54nm,0.9s
F64A Sherman 81.72 3 IAmb IAmb 08 24 32.4
comp=Z,118nm,1.5s
GBN Guysborough 81.84 8 IAmb IAmb 08 24 32.9
comp=Z,84nm,1.4s
INZ Inchbonnie 81.84 222 P **P** **08 24 19.3 +1.0**
LMN Caledonia Moun 81.95 6 IAmb IAmb 08 26 00.9
comp=Z,135nm,1.3s
TRQ Mont Trembant 81.97 359 IAmb IAmb 08 24 32.7
comp=Z,106nm,1.2s
MTPU Mount Pierson 82.10 330 IAmb IAmb 08 24 23.1
comp=Z,52nm,0.8s
TPO Tropico Hills 82.11 324 IAmb IAmb 08 24 23.1
comp=Z,82nm,1.3s
OSI Osito Audit: C 82.14 324 IAmb IAmb 08 24 23.4
comp=Z,85nm,0.9s
CCUT Cedar City 82.16 329 IAmb IAmb 08 24 24.2
comp=Z,106nm,1.0s
CCCA Chr Cany lake 82.24 325 IAmb IAmb 08 24 24.2
comp=Z,81nm,0.9s
LBTB Lobatse 82.34 115 LR LR 08 58 45.7
comp=Z,559nm,18.7s,baz=228,slow=34
LBTB Lobatse 82.34 115 IAmb IAmb 08 24 22.2
comp=Z,164nm,1.4s
LBTB Lobatse 82.34 115 P **P** **08 24 20.8 -0.6**
LBTB pP **sP** **08 24 32.0 -1.7**
SRU San Rafael Swe 82.36 332 IAmb IAmb 08 24 23.8
comp=Z,69nm,0.9s
E62A Clayton Lake 82.43 3 IAmb IAmb 08 24 23.4
comp=Z,48nm,0.8s
Q16A Castle Valley 82.45 331 IAmb IAmb 08 24 24.9
comp=Z,91nm,0.8s
F42A Maple Grove Fa 82.59 350 IAmb IAmb 08 24 23.6
comp=Z,66nm,1.1s
KDWAN Kaudwane 82.61 113 *i* P **P** **08 24 21.7 -1.1**
P17A Butcher Ranch, 82.76 332 IAmb IAmb 08 24 26.0
comp=Z,101nm,1.1s
FURC Funace Creek, 82.78 326 IAmb IAmb 08 24 26.9
comp=Z,68nm,0.9s
TOZ Tahuroa Road 82.80 228 P **P** **08 24 23.2 -0.2**
SPMN Marine on St. 82.86 346 IAmb IAmb 08 24 24.4
comp=Z,74nm,1.2s
ISA Isabella, Lake 82.87 324 IAmb IAmb 08 24 27.5
comp=Z,54nm,0.8s
D62A Allapoint, All 82.91 3 P **P** **08 24 24.2 +0.8**
D62A IAmb IAmb 08 24 37.9
comp=Z,96nm,1.0s
TPNV Topopah Spring 82.91 327 IAmb IAmb 08 24 27.8
comp=Z,72nm,1.1s
S11A Rachel 83.26 327 IAmb IAmb 08 24 29.8
comp=Z,81nm,1.1s
RDMU Red Mountain 83.28 333 IAmb IAmb 08 24 28.5
comp=Z,76nm,0.9s
LMQ La Malbaie 83.33 2 P **P** **08 24 26.1 +0.5**
LMQ IAmb IAmb 08 24 39.3
comp=Z,66nm,1.0s
LPHEP Lephephe 83.51 114 *i* P **P** **08 24 26.7 -0.8**
LPHEP Lephephe 83.51 114 IAmb IAmb 08 24 44.5
comp=Z,102nm,1.1s
MPU Maple Canyon 83.57 331 IAmb IAmb 08 24 30.4
comp=Z,98nm,1.1s
GMN Gold Mountain 83.65 326 IAmb IAmb 08 24 31.4
comp=Z,55nm,0.9s
BSUT Blindstream Ca 83.69 332 IAmb IAmb 08 24 31.3
comp=Z,115nm,1.3s
LDAQ Lac Daran 83.72 1 IAmb IAmb 08 24 41.2
comp=Z,73nm,1.2s
VLDQ Val d'Or 83.93 357 IAmb IAmb 08 24 43.0
comp=Z,117nm,1.4s
E38A The Farm, Brul 83.97 347 IAmb IAmb 08 24 42.7
comp=Z,69nm,1.2s
DSP Deep Springs 84.03 326 IAmb IAmb 08 24 33.2
comp=Z,57nm,1.1s
KHWEE KHWEE 84.04 113 *i* P **P** **08 24 28.5 -1.7**
PKD Bear Valley Ra 84.08 323 IAmb IAmb 08 24 33.5
comp=Z,102nm,1.1s
F33A 5 Mile Ranch, 84.18 344 IAmb IAmb 08 24 31.4
comp=Z,45nm,0.9s
DUG Dugway, Tooele 84.19 331 P **P** **08 24 32.3 +1.9**
DUG pmax pmax
comp=Z,109nm,1.2s
PMPB Monarch Peak 84.43 323 IAmb IAmb 08 24 49.3
comp=Z,116nm,1.5s
HULI Fort Hunter Li 84.48 323 IAmb IAmb 08 24 36.0
comp=Z,81nm,1.0s
RSSD Black Hills 84.60 338 P **P** **08 24 33.3 +0.8**
RSSD IAmb IAmb 08 24 34.6
comp=Z,61nm,1.1s
RSSD Black Hills 84.60 338 P **P** **08 24 33.3 +0.8**
RSSD pmax pmax
comp=Z,61nm,1.1s
RSSD Black Hills 84.60 338 P **P** **08 24 33.5 +1.1**
RSSD pP **sP** **08 24 44.8 -0.1**
BBGB Big Mountain B 84.83 323 IAmb IAmb 08 24 39.6
comp=Z,63nm,0.9s
NVAR Mina Array Bea 85.05 326 P **P** **08 24 36.3 +1.5**
comp=Z,30nm,0.6s,baz=152,slow=6.1,SNR=231
NVAR PKKPbc **PKKPbc** **08 42 42.5 -0.3**
comp=Z,1.4nm,0.6s,baz=304,slow=1.9,SNR=13
NVAR PKPPKP **P'P'df** **08 50 48.5 +4.9**
comp=Z,0.3nm,0.6s,baz=281,slow=3.5,SNR=3.6
comp=Z,30nm,0.6s

NVAR Mina Array Bea 85.05 326 P **P** **08 24 36.7 +1.9**
BW06 Boulder Array 85.19 334 IAmb IAmb 08 24 37.9
comp=Z,52nm,1.2s
PD31 Pinedale Array 85.19 334 IAmb IAmb 08 24 37.8
comp=Z,58nm,1.2s
PDAR Pinedale Array 85.19 334 P **P** **08 24 36.2 +0.7**
comp=Z,7.2nm,0.6s,baz=145,slow=3.6,SNR=71
PDAR PKKPbc **PKKPbc** **08 42 40.4 -2.3**
comp=Z,1.5nm,0.6s,baz=95,slow=0.5,SNR=18
PDAR PKPPKP 08 50 48.3
comp=Z,0.5nm,0.7s,baz=40,slow=4.8,SNR=5.0
comp=Z,7.2nm,0.6s
PDAR Pinedale Array 85.19 334 P **P** **08 24 36.4 +0.8**
EYMN Ely 85.25 348 IAmb IAmb 08 24 36.9
comp=Z,44nm,1.1s
ICQ Pointe Anglais 85.43 4 P **P** **08 24 36.7 +0.5**
ICQ IAmb IAmb 08 24 50.3
comp=Z,99nm,1.4s
SOOWA Sowa 85.43 112 *i* P **P** **08 24 35.8 -1.4**
KVN Kaiserville 85.46 327 IAmb IAmb 08 24 40.0
comp=Z,58nm,1.2s
TBO Thunder Bay 85.60 349 IAmb IAmb 08 24 51.1
comp=Z,46nm,1.1s
ELK Elko 85.64 329 P **P** **08 24 39.1 +1.3**
comp=Z,31nm,0.9s,baz=174,slow=3.4,SNR=97
comp=Z,31nm,0.9s
ELK Elko 85.64 329 IAmb IAmb 08 24 40.7
comp=Z,55nm,1.1s
CMB Columbia Colle 85.69 325 IAmb IAmb 08 24 41.1
comp=Z,51nm,1.3s
MHC Mount Hamilton 85.73 323 IAmb IAmb 08 24 42.3
comp=Z,94nm,1.4s
TORD Torodi Ar. Bea 85.88 71 P **P** **08 24 38.6 -0.7**
comp=Z,24nm,0.9s,baz=242,slow=6.2,SNR=84
TORD PKKPbc **PKKPbc** **08 42 40.2 +1.1**
comp=Z,0.9nm,0.8s,baz=260,slow=1.9,SNR=3.6
TORD LR LR 09 02 45.0
comp=Z,974nm,18.4s,baz=234,slow=36
comp=Z,24nm,0.9s
TORD Torodi Ar. Bea 85.88 71 P **P** **08 24 39.0 -0.3**
BROLN Tlhalogang 85.95 113 *i* P **P** **08 24 38.8 -1.0**
DRLN Deer Lake 86.14 10 IAmb IAmb 08 24 53.2
comp=Z,63nm,0.9s
SNOW Snow King Moun 86.23 334 IAmb IAmb 08 24 43.2
comp=Z,44nm,0.9s
KSANE Kasane 86.28 109 *i* P **P** **08 24 40.8 -0.7**
KSANE Kasane 86.28 109 IAmb IAmb 08 24 59.3
comp=Z,71nm,1.1s
LOHW Long Hollow 86.31 334 IAmb IAmb 08 24 43.4
comp=Z,48nm,1.1s
LOHW IAMs_20 IAMs_20 08 58 35.2
comp=Z,1µm,21.0s
AGMN Agassiz Nation 86.42 345 IAmb IAmb 08 24 42.9
comp=Z,43nm,0.8s
MOOW Moose Ponds 86.47 334 IAmb IAmb 08 24 55.9
comp=Z,60nm,1.6s
PAHR Pah Rah Range 86.57 326 IAmb IAmb 08 24 45.3
comp=Z,39nm,1.0s
AFDM Forest Hills D 86.69 325 IAmb IAmb 08 24 45.9
comp=Z,80nm,1.3s
FLWY Flagg Ranch 86.75 334 IAMs_20 IAMs_20 08 59 00.9
comp=Z,1µm,21.0s
EDA Edea 86.91 83 IAMs_20 IAMs_20 08 56 29.0
comp=Z,784nm,21.0s
H17A Grant Village 86.98 334 IAmb IAmb 08 25 08.6
comp=Z,73nm,1.9s
YFT Old Faithful 87.12 334 IAmb IAmb 08 24 49.5
comp=Z,78nm,1.3s
BEKR Beckworth 87.14 326 IAmb IAmb 08 24 48.5
comp=Z,53nm,1.1s
RLMT Red Lodge 87.16 335 IAmb IAmb 08 24 47.5
comp=Z,78nm,1.4s
YNR Norris Junctio 87.29 334 IAmb IAmb 08 25 01.7
comp=Z,56nm,1.6s
EPLO Experimental L 87.31 347 IAmb IAmb 08 24 46.9
comp=Z,59nm,1.2s
YNE Yellowstone No 87.31 335 IAmb IAmb 08 24 59.8
comp=Z,72nm,1.8s
MNRC McLaughlin Min 87.33 324 IAmb IAmb 08 24 49.8
comp=Z,45nm,1.1s
LAO LASA Array 87.58 338 IAmb IAmb 08 24 48.8
comp=Z,67nm,1.1s
YHL Hebgen Lake 87.59 334 IAmb IAmb 08 24 50.6
comp=Z,48nm,1.3s
HLID Hailey 87.68 331 IAmb IAmb 08 24 51.0
comp=Z,71nm,1.3s
MFID Camas Ranch 88.11 330 IAmb IAmb 08 24 52.6
comp=Z,77nm,1.2s
O03E Paynes Creek 88.15 325 IAmb IAmb 08 24 52.2
comp=Z,76nm,1.1s
ULM Lac du Bonnet 88.28 346 P **P** **08 24 50.2 +0.1**
comp=Z,40nm,0.8s,baz=157,slow=4.4,SNR=64
ULM PKKP **PKKPdf** **08 42 30.8 +0.1**
comp=Z,1.5nm,0.4s,baz=19,slow=4.0,SNR=5.0
comp=Z,40nm,0.8s
ULM Lac du Bonnet 88.28 346 IAmb IAmb 08 24 51.5
comp=Z,64nm,0.9s
BOZ Bozeman (W) 88.39 334 IAmb IAmb 08 26 47.2
comp=Z,25nm,0.6s
O02D Mt. Diablo Mer 88.52 324 IAmb IAmb 08 24 54.9
comp=Z,56nm,1.6s
DLMT Dillon 88.53 333 IAmb IAmb 08 24 54.7
comp=Z,81nm,1.3s
AFI Afiamalu 88.62 254 LR LR 08 54 29.6
comp=Z,1µm,21.4s,baz=122,slow=29
M03C McCloud 89.08 325 IAmb IAmb 08 25 09.6
comp=Z,83nm,1.3s
KHBM Hayfork Bally 89.10 324 IAmb IAmb 08 25 10.0
comp=Z,114nm,1.8s
N02D Trinity Center 89.11 325 IAmb IAmb 08 24 57.2
comp=Z,56nm,1.4s
KMPM Mount Pierce 89.34 324 IAmb IAmb 08 25 00.3
comp=Z,41nm,1.1s
M02C Callahan 89.51 325 IAmb IAmb 08 24 59.4
comp=Z,80nm,1.5s
KHMM Horse Mountain 89.51 324 IAmb IAmb 08 25 00.2
comp=Z,101nm,1.7s
YBH Yreka Blue Hor 89.71 325 P **P** **08 24 57.9 +0.8**
comp=Z,0.8nm,0.7s,baz=129,slow=1.5,SNR=25
L04D Klamath Falls 89.91 326 IAmb IAmb 08 25 00.8
comp=Z,82nm,1.4s
K04D Chiloquin, OR 89.98 326 IAmb IAmb 08 25 02.3
comp=Z,50nm,0.9s
LSZ Lusaka 90.10 109 LR LR 09 02 24.5
comp=Z,1µm,19.4s,baz=232,slow=34
LSZ Lusaka 90.10 109 P **P** **08 25 00.6 +0.8**
LSZ IAmb IAmb 08 25 02.5
comp=Z,49nm,1.1s
LSZ Lusaka 90.10 109 P **P** **08 25 00.6 +0.8**
LSZ pmax pmax
comp=Z,49nm,1.2s
I07A Izee 90.17 329 IAmb IAmb 08 25 02.7
comp=Z,70nm,1.1s
BBOR Butler Butte 90.60 326 IAmb IAmb 08 25 16.3
comp=Z,53nm,1.8s
J04A Umpqua Nationa 90.63 327 IAmb IAmb 08 25 04.5
comp=Z,36nm,0.9s
SCHQ Schefferville 90.75 4 P **P** **08 25 01.3 -0.3**
comp=Z,9.4nm,0.9s,baz=162,slow=4.9,SNR=13
SCHQ LR LR 09 06 13.4
comp=Z,222nm,19.6s,baz=178,slow=36
comp=Z,9.4nm,0.9s
F10A Beach Ranch, E 90.80 331 IAmb IAmb 08 25 04.7
comp=Z,80nm,1.5s
K02D Willamette Mer 90.90 325 IAmb IAmb 08 25 06.3
comp=Z,40nm,1.1s
G08A Pilot Rock 90.93 330 IAmb IAmb 08 25 05.8
comp=Z,34nm,1.0s
WIFE Three Sisters- 91.15 327 IAmb IAmb 08 25 07.2
comp=Z,43nm,1.2s
I05D Terrebonne, OR 91.16 328 IAmb IAmb 08 25 07.1
comp=Z,85nm,1.5s
G06A Carlson Farm, 91.58 329 IAmb IAmb 08 25 09.2
comp=Z,80nm,1.5s
BUCK Buck Mountain 91.77 327 IAmb IAmb 08 25 09.5
comp=Z,33nm,0.9s
H04A Detroit Lake 91.80 327 IAmb IAmb 08 25 09.0
comp=Z,25nm,0.9s
F07A Phinny Hill Vi 91.82 329 IAmb IAmb 08 25 10.0
comp=Z,33nm,0.9s
E08A Dider Farm, El 91.95 330 IAmb IAmb 08 25 09.8
comp=Z,47nm,0.9s
HAWA Hanford 92.06 330 IAmb IAmb 08 25 11.6
comp=Z,53nm,1.1s
HOOD Mount Hood Mea 92.08 328 IAmb IAmb 08 25 11.0
comp=Z,42nm,1.5s
COR Corvallis 92.22 327 P **P** **08 25 10.8 +2.2**
COR Corvallis 92.22 327 P **P** **08 25 10.8 +2.2**

COR pmax pmax
comp=Z,56nm,1.0s
E07A Sunnyside 92.32 330 IAmb IAmb 08 25 12.0
comp=Z,30nm,0.9s
D08A Wollman Farm, 92.35 331 IAmb IAmb 08 25 11.8
comp=Z,41nm,0.9s
WAH2 Wahluke Slope 92.37 330 IAmb IAmb 08 25 11.8
comp=Z,24nm,0.9s
MXC Moxie City 92.52 330 IAmb IAmb 08 25 13.1
comp=Z,36nm,1.1s
NEW Newport 92.65 332 P **P** **08 25 11.4 +0.8**
comp=Z,8.8nm,0.8s,baz=142,slow=3.6,SNR=24
NEW LR LR 09 04 01.5
comp=Z,279nm,18.1s,baz=132,slow=34
comp=Z,8.8nm,0.8s
C09A Chrisman Ranch 92.71 332 IAmb IAmb 08 25 13.3
comp=Z,51nm,1.1s
EPH Ephrata 92.86 331 IAmb IAmb 08 25 15.7
comp=Z,30nm,1.2s
TAU Tasmania Unive 93.07 209 P **P** **08 25 13.4 +0.5**
TAU IAmb IAmb 08 25 14.1
comp=Z,30nm,0.9s
TAU Tasmania Unive 93.07 209 P **P** **08 25 13.4 +0.5**
TAU pmax pmax
comp=Z,30nm,0.9s
B08A Colville Reser 93.58 331 IAmb IAmb 08 25 16.8
comp=Z,62nm,1.8s
D05A Enumclaw 93.70 329 IAmb IAmb 08 25 18.4
comp=Z,59nm,1.2s
FFC Flin Flon 93.78 344 P **P** **08 25 15.2 -0.3**
FFC Flin Flon 93.78 344 P **P** **08 25 15.2 -0.3**
FFC pmax pmax
comp=Z,14nm,1.4s
MDT Midelt 93.93 52 LR LR 09 07 41.2
comp=Z,2μm,19.1s,baz=236,slow=36
MSVF Nonsavu 93.98 245 LR LR 08 58 55.1
comp=Z,506nm,21.0s,baz=181,slow=30
WISH Wishkah 94.40 328 IAmb IAmb 08 25 21.6
comp=Z,27nm,1.0s
TAM Tamanrasset 94.64 65 P **P** **08 25 20.9 +0.4**
TAM IAMs_20 IAMs_20 09 08 32.0
comp=Z,1μm,19.0s
TAM Tamanrasset 94.64 65 P **P** **08 25 20.9 +0.4**
TAM MLR MLR
comp=Z,1μm,19.0s
NLWA Neilton Lookou 94.66 328 IAmb IAmb 08 25 22.6
comp=Z,35nm,1.4s
A04D Lummi Island 95.21 330 IAmb IAmb 08 25 24.8
comp=Z,35nm,1.0s
EDM Edmonton 95.52 337 IAmb IAmb 08 25 23.9
comp=Z,33nm,1.1s
CBB Campbell River 97.33 329 IAmb IAmb 08 25 34.3
comp=Z,30nm,1.4s
ESDC Sonseca Array 98.77 47 P **P** **08 25 38.6 -0.1**
comp=Z,1.0nm,0.8s,baz=240,slow=5.6,SNR=2.4
ESDC LR LR 09 10 03.7
comp=Z,511nm,19.1s,baz=211,slow=35
comp=Z,1.0nm,0.8s
DZM Mont Dzumac 99.17 234 P **Pdif** **08 25 41.0 -0.2**
comp=Z,14nm,1.0s,baz=120,slow=10,SNR=3.5
DZM LR LR 09 00 15.2
comp=Z,578nm,21.2s,baz=180,slow=29
comp=Z,14nm,1.0s
FRB Frobisher Bay 99.59 2 LR LR 09 10 37.7
comp=Z,238nm,20.8s,baz=156,slow=35
MBAR Mbarara 100.96 99 IAMs_20 IAMs_20 09 10 29.3
comp=Z,694nm,19.0s
ABPO Ambohimpanom 101.47 124 IAMs_20 IAMs_20 09 05 02.1
comp=Z,902nm,21.0s
YKA Yellowknife Ar 103.73 342 Pdiff **Pdif** **08 25 59.4 -0.7**
comp=Z,1.4nm,0.9s,baz=150,slow=3.5,SNR=16
YKA PKIKP **PKiKP** **08 30 18.6 +0.7**
comp=Z,0.4nm,0.7s,baz=133,slow=1.5,SNR=4.7
YKA PKKPbc **PKKPbc** **08 41 50.0 -3.0**
comp=Z,0.6nm,0.6s,baz=325,slow=4.0,SNR=14
STKA Stephens Creek 104.88 210 Pdiff **Pdif** **08 26 05.0 -1.2**
comp=Z,1.2nm,0.5s,baz=125,slow=16,SNR=7.5
LODK Lodwar 107.05 98 IAMs_20 IAMs_20 09 14 44.9
comp=Z,599nm,18.0s
FURI Furi 112.92 96 IAMs_20 IAMs_20 09 14 37.5
comp=Z,586nm,21.0s
A36M Sachs Harbour 113.73 344 IAMs_20 IAMs_20 09 24 04.7
comp=Z,668nm,20.0s
GERES GERESS Array B 114.36 46 PKP PKPdf 08 30 37.7 -0.8
comp=Z,1.0nm,0.5s,baz=169,slow=1.4,SNR=7.5
KHC Kasperske Hory 114.42 46⇑*i* PKIKP PKPdf 08 30 37.2 -1.3
CLL Collm 115.08 44 *i* PKIKP **PKPdf** **08 30 39.7 +0.1**
CLL pmax pmax
comp=Z,7.0nm,1.1s
CLL Collm 115.08 44 *i* PKiKP **PKPdf** **08 30 39.7 +0.1**
comp=Z,7.0nm,1.1s
CLL *e*PP **PP** **08 31 36.0 -4.1**
CLL *e*PS **PKKPab** **08 41 19.0 +0.2**
CLL *e*PPS PPS 08 42 24.0
CLL *e*SS SS 08 47 36.0 +1.1
CLL *e*SSS SSS 08 51 36.0
CLL *e*SSSS 08 55 42.0
ASAR Alice Springs 115.23 208 Pdiff **Pdif** **08 26 52.8 +0.3**
comp=Z,0.6nm,1.0s,baz=160,slow=4.6,SNR=5.2
ASAR PKP **PKiKP** **08 30 39.6 -1.4**
comp=Z,5.4nm,0.6s,baz=134,slow=1.8,SNR=110
ASAR PKKPbc **PKKPbc** **08 41 15.3 +0.3**
comp=Z,2.6nm,0.6s,baz=338,slow=3.0,SNR=39
ILAR Eielson Array 115.61 333 Pdiff **Pdif** **08 26 53.9 +1.0**
comp=Z,0.5nm,0.9s,baz=157,slow=3.3,SNR=4.1
ILAR PKP **PKPdf** **08 30 40.1 -0.1**
comp=Z,1.4nm,0.8s,baz=162,slow=1.9,SNR=16
ILAR PP **PP** **08 31 48.0 +4.5**
comp=Z,2.2nm,1.0s,baz=113,slow=6.5,SNR=6.3
ILAR PKKPbc **PKKPbc** **08 41 12.8 -1.7**
comp=Z,0.9nm,0.8s,baz=315,slow=4.2,SNR=9.3
ILAR Eielson Array 115.61 333 **PKPdf** **08 30 40.3 +0.1**
ILAR Eielson Array 115.61 333 PKIKP **PKPdf** **08 30 40.3 +0.1**
COLA College 116.01 333⇓*i* PKIKP **PKPdf** **08 30 40.9 -0.1**
D27M Malcolm River 116.01 338 IAMs_20 IAMs_20 09 20 39.5
comp=Z,636nm,20.0s
KRUC Moravsky 116.04 47 *e*PKP **PKPdf** **08 30 41.7 +0.2**
F26K Sheenjek River 116.17 336 IAMs_20 IAMs_20 09 30 14.8
comp=Z,670nm,20.0s
VRAC Vranov 116.26 47 *e*PKP **PKiKP** **08 30 42.6 +0.6**
I23K Minto, Yukon-K 116.71 333 IAMs_20 IAMs_20 09 19 52.1
comp=Z,462nm,19.0s
G24K Hadweenzic Riv 116.78 335 IAMs_20 IAMs_20 09 18 59.2
comp=Z,468nm,19.0s
MORC Moravsky Berou 117.02 47 *e*PKP **PKPdf** **08 30 42.7 -0.8**
MSEY Mahe Island 117.25 119 IAMs_20 IAMs_20 09 13 26.5
comp=Z,548nm,21.0s
F24K Squaw Lake 117.32 335 IAMs_20 IAMs_20 09 31 56.3
comp=Z,588nm,18.0s
ATD Arta Tunnel 117.78 96 IAMs_20 IAMs_20 09 20 47.4
comp=Z,585nm,19.0s
COLD Coldfoot 117.98 335 IAMs_20 IAMs_20 09 32 13.5
comp=Z,518nm,20.0s
E23K Chandalar 118.15 336 IAMs_20 IAMs_20 09 29 43.2
comp=Z,515nm,20.0s
NOA NORSAR Array B 118.35 33 PKP **PKPdf** **08 30 45.2 -0.4**
comp=Z,1.0nm,0.7s,baz=249,slow=2.3,SNR=2.4
NOA PKKPbc **PKKPbc** **08 41 05.9 +1.2**
comp=Z,3.0nm,0.7s,baz=66,slow=4.5,SNR=7.4
WRA Warramunga Arr 118.42 210 PKP **PKPdf** **08 30 46.1 -1.0**
comp=Z,0.2nm,0.6s,baz=158,slow=1.6,SNR=4.7
WRA PP **PP** **08 32 01.1 -1.5**
comp=Z,1.0nm,0.8s,baz=153,slow=5.9,SNR=6.7
WRA PKKPbc **PKKPbc** **08 41 04.6 +0.9**
comp=Z,1.2nm,0.7s,baz=341,slow=4.0,SNR=13
WRAB Tennant Creek 118.43 210 **PKPdf** **08 30 46.1 -1.0**
WRAB Tennant Creek 118.43 210 IAMs_20 IAMs_20 09 14 33.3
comp=Z,869nm,20.0s
WRAB Tennant Creek 118.43 210*c* *i* PKIKP **PKPdf** **08 30 45.9 -1.3**
WRAB pmax pmax
comp=Z,9.0nm,0.7s
WB0 Warramunga Arr 118.56 210 **PKPdf** **08 30 46.2 -1.2**
IMAR Indian Mountai 118.72 333 **PKPdf** **08 30 46.2 +0.1**
DRGR 118.98 51 PKIKP **PKPdf** **08 30 47.6 +0.2**
HFS Hagfors 119.12 35 PKP **PKPdf** **08 30 45.8 -1.3**
comp=Z,4.8nm,0.9s,baz=254,slow=9.1,SNR=4.0
HFS PKKPbc **PKKPbc** **08 41 02.8 +1.0**
comp=Z,5.6nm,0.7s,baz=103,slow=3.2,SNR=8.4
VOIR 119.96 54 PKIKP **PKPdf** **08 30 49.4 +0.1**
MLR Muntele Rosu 120.56 54 PKIKP **PKPdf** **08 30 50.9 +0.4**
MLR Muntele Rosu 120.56 54 PKP **PKPdf** **08 30 50.4 -0.1**
BURAR Bucovina Array 120.87 51 **PKPdf** **08 30 51.3 +0.3**
VRI Vrincioaia 121.21 54 PKIKP **PKPdf** **08 30 51.0 -0.6**
PSA00 Pilbara Seismi 121.30 194 **PKPdf** **08 30 51.5 -1.2**
MBWA Marble Bar 121.72 194 **PKPdf** **08 30 52.1 -1.4**
TIRR Tirgusor 121.81 56 IAMs_20 IAMs_20 09 25 46.2
comp=Z,815nm,20.0s

MMAI Mount Meron Ar 122.42 71 PKP **PKPdf** **08 30 54.1 -0.3**
comp=Z,5.7nm,0.5s,baz=13,slow=7.8,SNR=7.5
RNPP9 Sopachiv 122.57 47 PKP **PKPdf** **08 30 53.8 -0.2**
LUBAR Lubar, Ukraine 123.23 49 PKP **PKPdf** **08 30 55.0 -0.3**
BR104 Keskin Array S 123.73 63 PKP **PKPdf** **08 30 56.3 -0.5**
BR131 Keskin Array S 123.73 63*c* *i* PKIKP **PKPdf** **08 30 56.5 -0.3**
BRTR Keskin Array B 123.73 63 PKP **PKPdf** **08 30 56.5 -0.3**
comp=Z,5.5nm,0.7s,baz=198,slow=3.3,SNR=22
BRTR Keskin Array B 123.73 63 **PKPdf** **08 30 55.8 -1.0**
KIEV Kiev 124.35 49 **PKPdf** **08 30 56.2 -1.2**
KIEV Kiev 124.35 49 PKIKP **PKPdf** **08 30 56.2 -1.2**
AKASG Malin Array Be 124.36 49 PKP **PKPdf** **08 30 56.6 -0.9**
comp=Z,2.3nm,0.5s,baz=267,slow=2.9,SNR=15
AKASG PP **PP** **08 32 42.6 -1.3**
comp=Z,0.5nm,0.6s,baz=251,slow=8.0,SNR=5.4
AKASG Malin Array Be 124.36 49 **PKPdf** **08 30 56.0 -1.5**
AKBB Malin Array Si 124.36 49⇓*e* PKIKP **PKPdf** **08 30 56.7 -0.8**
MNK Minsk 124.62 44 *i* PKP **PKPdf** **08 30 57.3 -0.5**
comp=E,22nm,0.6s
MNK *i* PKP **PKPdf** **08 30 57.3 -0.5**
comp=N,30nm,0.8s
MNK *i* PKP **PKPdf** **08 30 57.3 -0.5**
comp=Z,26nm,0.7s,baz=254
MNK *i* PP **PP** **08 32 44.1 -1.4**
MNK *i* PPP PPP 08 35 23.6
MNK *i* SKS **SKSdf** **08 38 06.5 -0.8**
MNK *i* PS PS 08 42 45.3 +0.4
MNK *i* SS **SS** **08 49 36.5 -1.0**
MNK *i* SSS SSS 08 54 12.8
MNK *i* LRM MLR 09 23 37.9
comp=N,573nm,22.0s
MNK *i* LRM MLR 09 23 43.6
comp=Z,592nm,22.6s
MNK *i* LRM MLR 09 25 21.1
comp=E,306nm,22.5s
MNK Minsk 124.62 44 *i* PKIKP **PKPdf** **08 30 57.3 -0.5**
MNK *i* 08 32 44.1
MNK *i* PPP PPP 08 35 23.5
MNK *i* 08 38 06.5
MNK *i* PS PS 08 42 45.3 +0.4
MNK *i* SS SS 08 49 36.4 -1.0
MNK *i* SSS SSS 08 54 12.7
MNK pmax pmax
comp=E,22nm,0.6s
MNK pmax pmax
comp=Z,26nm,0.7s
MNK pmax pmax
comp=N,30nm,0.8s
MNK MLR MLR
comp=N,573nm,22.0s
MNK MLR MLR
comp=Z,592nm,23.0s
MNK MLR MLR
comp=E,306nm,22.0s
H11S2 WAKE ISLAND Hyl 24.70 268 T T 10 48 08.0
baz=118,slow=75,SNR=26
H11S1 WAKE ISLAND Hyl 24.72 268 T T 10 48 08.0
baz=118,slow=75,SNR=21
H11S3 WAKE ISLAND Hyl 24.72 268 T T 10 48 08.0
baz=118,slow=75,SNR=18
SPITS Spitsbergen Ar 124.97 15 PKP **PKPdf** **08 30 58.1 +0.2**
comp=E,10nm,0.8s,baz=160,slow=2.7,SNR=10
VSU Vasula 124.98 39⇓*e* PKIKP **PKPdf** **08 30 57.3 -1.1**
H11N3 WAKE ISLAND Hyl 25.17 270 T T 10 48 30.4
baz=121,slow=76,SNR=16
H11N1 WAKE ISLAND Hyl 25.18 270 T T 10 48 34.2
baz=121,slow=76,SNR=28
H11N2 WAKE ISLAND Hyl 25.18 270 T T 10 48 33.4
baz=121,slow=76,SNR=24
FINES FINESS Array B 125.30 36 PKP **PKPdf** **08 30 58.5 -0.4**
comp=E,3.1nm,1.0s,baz=300,slow=7.7,SNR=3.4
RAYN Ar Rayn 126.21 86 **PKPdf** **08 31 01.6 -0.4**
RAYN Ar Rayn 126.21 86 IAMs_20 IAMs_20 09 23 09.2
comp=Z,655nm,20.0s
RAYN Ar Rayn 126.21 86 PKIKP **PKPdf** **08 31 01.6 -0.4**
RAYN MLR MLR
comp=Z,700nm,20.0s
ARCES ARCESS Array B 126.36 26 PKP **PKPdf** **08 31 00.9 +0.1**
comp=Z,4.2nm,0.8s,baz=245,slow=3.9,SNR=5.6
ARCES PKKP **PKKPdf** **08 41 16.8 -2.3**
comp=Z,4.3nm,0.8s,baz=359,slow=6.1,SNR=3.7
APA Apatity 129.13 28⇓*i* PKIKP **PKPdf** **08 31 05.6 -0.5**
APA *e* 08 33 25.3
APA pmax pmax
comp=Z,13nm,1.1s
OBN Obninsk 129.66 45 *e*PKIKP **PKPdf** **08 31 07.8 +0.4**
OBN *e* 08 33 19.2
OBN *e*PPP PPP 08 36 05.4
OBN pmax pmax
comp=Z,26nm,1.4s
JAY Jayapura 130.18 227 PKP **PKPdf** **08 31 09.8 0.0**
comp=Z,20nm,0.9s,baz=251,slow=2.7,SNR=6.7
MOS Moscow 130.34 44 *e*PKIKP **PKPdf** **08 31 08.4 -0.3**
MOS *e* 08 33 24.0
GENI Genyem 130.43 226 PKP **PKPdf** **08 31 08.4 -1.9**
GENI PKP **PKiKP** **08 31 11.8 +0.7**
VSR Storozhevoye 130.59 50 *e*PKIKP **PKPdf** **08 31 07.8 -1.5**
VSR pmax pmax
comp=Z,10.0nm,1.0s
VORD Divnogorie 130.63 50 *e*PKIKP **PKPdf** **08 31 09.1 -0.3**
VORD pmax pmax
comp=Z,10.0nm,0.8s
LPSR Galich'ya Gora 130.67 48 *e*PKIKP **PKPdf** **08 31 09.4 0.0**
LPSR pmax pmax
comp=Z,30nm,1.3s
VORR Voronezh 130.69 49 *e*PKIKP **PKiKP** **08 31 10.6 +0.2**
VORR pmax pmax
comp=Z,54nm,0.4s
NEUR Neytrino 131.29 61⇑*e* PKIKP **PKPdf** **08 31 09.7 -1.5**
SHA1 Shidzhatmaz 131.38 60⇓*i* PKIKP **PKPdf** **08 31 10.9 -0.5**
KIV Kislovodsk 131.45 60 **PKPdf** **08 31 11.3 -0.1**
KIV Kislovodsk 131.45 60 *i* PKIKP **PKPdf** **08 31 09.7 -1.7**
KIV pmax pmax
comp=Z,24nm,1.0s
KIV MLR MLR
comp=Z,268nm,23.0s
KIV Kislovodsk 131.45 60 PKP **PKPdf** **08 31 11.6 +0.2**
SOEI Soe 131.47 203 PKP **PKiKP** **08 31 14.2 +0.8**
KBZ Khabaz 131.54 60 PKP **PKPdf** **08 31 11.3 -0.1**
comp=Z,6.2nm,0.9s,baz=218,slow=2.2,SNR=8.4
KLMR Klimovskoe 131.71 37 *e*PKIKP **PKPdf** **08 31 09.7 -1.4**
KLMR *e* 08 31 22.6
KLMR pmax pmax
comp=Z,68nm,1.7s
GOF Gofitskoye 131.95 59*ce* PKIKP **PKPdf** **08 31 12.7 +0.6**
NCK Nalchik 131.98 61⇓*e* PKIKP **PKPdf** **08 31 12.1 -0.2**
VRH Novokhopyorsk 132.18 50 *e*PKIKP **PKPdf** **08 31 12.0 -0.3**
VRH pmax pmax
comp=Z,32nm,1.1s
WBSI Waikabubak, Su 132.95 197 PKP **PKiKP** **08 31 17.4 +1.1**
EDFI Ende, Flores 133.20 201 PKP **PKPdf** **08 31 08.8 -6.9**
EDFI PKP **PKiKP** **08 31 14.6 -2.2**
BILL Bilibino 134.27 333 **PKPdf** **08 31 16.6 +0.8**
BILL Bilibino 134.27 333⇓*e* PKIKP **PKPdf** **08 31 16.4 +0.6**
DBNI Kabupaten Domp 134.30 196 PKP **PKiKP** **08 31 18.9 -0.1**
TWSI Taliwang, Sumb 134.38 194 PKP **PKPdf** **08 31 17.4 -0.3**
MAK Makhachkala 134.65 62 *i* P **Pdif** **08 28 16.5 -1.5**
MAK *i* 08 31 18.0
MAK *e* 08 33 49.7
MAK *e* 08 38 29.6
MAK pmax pmax
comp=Z,186nm,1.6s
BELG Belogornoye 135.94 49⇓*e* PKIKP **PKPdf** **08 31 18.6 -0.7**
BSSI Bau Bau, Buton 136.02 200 PKP **PKiKP** **08 31 22.1 -0.3**
SNJI Sawahan-Nganju 136.09 187 PKP **PKiKP** **08 31 25.2 +2.4**
SIJI Sorong 136.69 217 PKP **PKPdf** **08 31 22.6 +0.6**
comp=Z,27nm,0.7s,baz=38,slow=8.2,SNR=9.4
SIJI Sorong 136.69 217 PKP **PKPdf** **08 31 22.5 +0.4**
SWI Sorong 136.69 217 PKP **PKiKP** **08 31 23.7 -0.1**
KIRV Kirov 136.80 40*de* PKIKP **PKPdf** **08 31 21.0 +0.3**
KAPI Kappang 137.30 199 **PKPdf** **08 31 23.2 +0.1**
KAPI Kappang 137.30 199 PKIKP **PKPdf** **08 31 23.2 +0.1**
KAPI Kappang 137.30 199 PKP **PKiKP** **08 31 24.9 -0.1**
SPSI Sidrap Palu 138.30 200 PKP **PKPdf** **08 31 26.0 +1.0**
KLSI 139.37 177 PKP **PKPdf** **08 31 28.5 +1.5**
MDSI Maura Dua 139.55 176 PKP **PKPdf** **08 31 25.9 -1.4**
PEA0B Petropavlovsk- 140.85 312⇓*e* PKIKP **PKPdf** **08 31 29.0 +0.6**
PETK Petropavlovsk- 140.85 312 PKhKP PKPpre 08 31 21.6
comp=Z,4.0nm,0.5s,baz=76,slow=8.1,SNR=5.9
PETK PKP **PKPdf** **08 31 28.8 +0.4**
comp=Z,9.2nm,0.6s,baz=92,slow=4.3,SNR=7.8
PMBI Palembang 141.12 177 IAMs_20 IAMs_20 09 36 37.4
comp=Z,512nm,19.0s
SEY Seymchan 141.32 328 PKhKP PKPpre 08 31 22.7
comp=Z,5.6nm,0.7s,baz=99,slow=2.8,SNR=26
SEY PKP **PKPdf** **08 31 28.7 -0.2**
comp=Z,6.0nm,1.0s,baz=96,slow=3.2,SNR=4.6
SEY Seymchan 141.32 328⇑*e* PKIKP **PKPdf** **08 31 28.1 -0.8**
TPI Tanjungpandan 141.32 182 PKP **PKPdf** **08 31 31.5 +1.0**
ARTI Arti 141.91 42 *i* PKIKP **PKPdf** **08 31 28.1 -2.1**
ARTI MLR MLR
comp=Z,1μm,21.0s
MPSI Mapaga 142.36 202 PKP **PKPdf** **08 31 26.6 -5.7**
AKTO Aktyubinsk 142.46 52 PKhKP PKPpre 08 31 25.2
comp=Z,3.3nm,0.7s,baz=216,slow=2.7,SNR=7.5
TIXI Tiksi 142.57 349 PKhKP PKPpre 08 31 25.5
comp=Z,16nm,0.6s,baz=45,slow=4.0,SNR=46
TIXI Tiksi 142.57 349⇓*i* PKIKP **PKPdf** **08 31 31.0 +0.1**
PALK Pallekele 142.72 134 IAMs_20 IAMs_20 09 30 26.4
comp=Z,445nm,22.0s
KOD Kodaikanal 143.03 127 *e*P **PKiKP** **08 31 36.3 -0.7**
KOD IAmb IAmb 08 31 47.9
comp=Z,35nm,1.2s
PPI Padang Panjang 143.15 169 PKP PKPbc 08 31 32.0 +1.4
MNSI Mandailing Nat 144.24 168 PKP **PKPab** **08 31 33.2 -0.2**
GSI Gunungsitoli 144.34 164 PKP PKPbc 08 31 34.8 +0.6
SALM Salem 144.54 126 *e*P **PKPab** **08 31 34.6 +0.1**
SBSI Sibolga 144.85 166 PKP **PKPab** **08 31 34.9 -0.8**
TPRI Tanjung Pinang 144.93 176 PKP **PKPab** **08 31 35.8 -0.2**
BHUJ Bhuj 145.55 102 *e*P **PKPab** **08 31 38.5 +0.5**
KAD Karad 145.66 114 *e*P **PKPdf** **08 31 36.9 -1.1**
KAD IAmb IAmb 08 31 39.7
comp=Z,368nm,1.7s
MYKOM Kota Tinggi 145.75 175 PKP **PKPdf** **08 31 38.2 -0.1**
RPSI Rantau Prapat 145.98 166 **PKPdf** **08 31 38.5 -0.1**
RPSI IAMs_20 IAMs_20 09 29 56.4
comp=Z,614nm,21.0s
PSI Prapat 146.08 166 PKP2 **PKPdf** **08 31 38.5 -0.4**
PSI Prapat 146.08 166 PKP **PKPdf** **08 31 38.6 -0.4**
SBUM Sibu 146.12 190 PKP **PKPbc** **08 31 39.9 +0.1**
TPTI 146.14 163 PKP **PKPdf** **08 31 39.4 +0.5**
POO Poona 146.17 112 *e*P **PKPdf** **08 31 39.0 +0.1**
POO IAmb IAmb 08 31 40.0
comp=Z,70nm,0.9s
POO ⇓*ex* x 08 31 40.6
KCSI Kotacane, Aceh 146.53 164 PKP **PKPdf** **08 31 40.1 +0.5**
TSI Tuntungan 146.69 165 PKP **PKPbc** **08 31 41.2 -0.2**
MLSI Meulaboh, Aceh 146.91 161 PKP **PKPbc** **08 31 41.7 -0.4**
MYLDM Lahad Datu 147.36 202 PKP **PKPab** **08 31 44.8 -0.4**
BSI Banda Aceh 147.77 158 PKP **PKPdf** **08 31 42.9 +1.2**
KULM Kulim 148.82 168 IAMs_20 IAMs_20 09 38 07.9
comp=Z,440nm,18.0s
KULM Kulim 148.82 168 PKP **PKPbc** **08 31 46.5 -0.7**
KKM Kota Kinabalu 148.83 198 PKP **PKPbc** **08 31 47.0 -0.4**
HYB Hyderabad 148.88 119 *e*PKPbc **PKPbc** **08 31 47.1 -0.2**
KBL Kabul 149.35 82 **PKPdf** **08 31 44.1 +0.3**
KBL Kabul 149.35 82 PKHKP PKPpre 08 31 44.1
BORK Borovoye 149.46 45 **PKPdf** **08 31 43.4 +0.2**
BORK Borovoye 149.46 45*de* PKHKP PKPpre 08 31 44.1
BVAR Borovoye Array 149.51 45 PKP **PKPdf** **08 31 43.2 0.0**
comp=Z,18nm,0.6s,baz=270,slow=1.5,SNR=30
BVAR PKPbc **PKPbc** **08 31 48.1 +0.3**
comp=Z,18nm,0.6s,baz=305,slow=4.4,SNR=44
VJD Vijayawada 149.72 123 *e*P **PKPbc** **08 31 47.6 -1.7**
AKL Akola 149.85 113 *e*P **PKPdf** **08 31 46.4 +1.8**
AKL IAmb IAmb 08 32 02.6
comp=Z,59nm,0.9s
CHGR Chuyangaron 150.18 74*ce* PKIKP **PKPdf** **08 31 45.1 +0.2**
YAK Yakutsk 150.34 338 PKPbc **PKPbc** **08 31 49.3 -0.1**
comp=Z,236nm,0.6s,baz=63,slow=1.1,SNR=49
YAK Yakutsk 150.34 338 **PKPbc** **08 31 49.8 +0.3**
YAK Yakutsk 150.34 338 *e*PKIKP **PKPbc** **08 31 48.9 -0.6**
YAK *e* 08 31 55.7
YAK *e* 08 35 30.4
YAK *e*SS SS 08 54 49.7 +8.5
YAK pmax pmax
comp=Z,105nm,1.4s
YAK pmax pmax
comp=N,17nm,1.4s
YAK pmax pmax
comp=E,25nm,1.0s
YAK pmax pmax
comp=Z,182nm,3.4s
YAK pmax pmax
comp=N,134nm,3.2s
YAK pmax pmax
comp=E,96nm,4.4s
TYV Tymovskoe 150.38 311 *e*PKIKP **PKPbc** **08 31 50.5 +0.6**
TYV pmax pmax
comp=Z,500nm,3.3s
TYV pmax pmax
comp=Z,45nm,1.4s
CHM Chimkent 150.75 66 *e*PKIKP **PKPdf** **08 31 45.6 +0.1**
CHM Chimkent 150.75 66 *e*PKP **PKPdf** **08 31 45.7 +0.1**
BRLS Boroldav 150.92 65 *e*PKIKP **PKPdf** **08 31 45.4 -0.4**
BRLS *e* 08 35 28.6
BRLS Boroldav 150.92 65 *e*PKP **PKPdf** **08 31 45.4 -0.4**
BRLS *e*PP **PP** **08 35 28.6 -1.0**
AJM Ajmer 151.04 100 *e*P **PKPdf** **08 31 48.0 +1.5**
IUG Iuzhnay 151.07 67 *e*PKIKP **PKPdf** **08 31 45.9 -0.3**
IUG *e* 08 35 30.0
IUG Iuzhnay 151.07 67 *e*PKP **PKPdf** **08 31 46.0 -0.3**
IUG *e*PP **PP** **08 35 30.0 -0.7**
NRDN NARMADA NAGAR 151.13 109 *e*P **PKPdf** **08 31 45.1 -1.6**
NRDN IAmb IAmb 08 31 58.7
comp=Z,109nm,1.3s
YSS Yuzhno-Sakhali 151.16 303 PKPdf **PKPdf** **08 31 44.7 -1.3**
YSS **PKPbc** **08 31 51.6 -0.3**
YSS **PKPab** **08 32 00.9 +1.0**
YSS Yuzhno-Sakhali 151.16 303 *i* PKIKP **PKPdf** **08 31 45.9 -0.1**
YSS *e* 08 35 30.4
YSS *e*SS SS 08 54 54.1 +2.0
YSS pmax pmax
comp=Z,60nm,0.9s
KKAR Karatay Array 151.41 65 **PKPdf** **08 31 46.4 -0.2**
KKAR PKPbc **PKPbc** **08 31 52.5 -0.1**
KKAR Karatay Array 151.41 65 PKIKP **PKPdf** **08 31 46.4 -0.2**
KKAR 08 31 52.5
ASAJ Asahikawa 151.59 297 PKPbc **PKPbc** **08 31 53.7 +0.7**
comp=Z,39nm,0.9s,baz=68,slow=5.4,SNR=16
BTK Batken 151.59 71 PKIKP **PKPdf** **08 31 47.8 +0.8**
BHPL Bhopal 151.62 109 *e*P **PKPdf** **08 31 48.4 +0.8**
BHPL IAmb IAmb 08 31 53.9
comp=Z,43nm,0.7s
TRKS Terek-Say 151.89 68 PKIKP **PKPdf** **08 31 48.7 +1.2**
DZA Taraz 152.02 65 *e*PKIKP **PKPdf** **08 31 47.5 0.0**
DZA Taraz 152.02 65 *e*PKP **PKPdf** **08 31 47.5 0.0**
GUNA GUNA 152.30 106 *e*P **PKPdf** **08 31 49.0 +0.5**
VIS Vishakhapatnam 152.37 125 *e*P **PKPdf** **08 31 49.0 +0.3**
VIS IAmb IAmb 08 32 08.6
comp=Z,64nm,0.9s
VIS ⇓*ex* x 08 32 08.6
ARK Arkit 152.51 67 PKIKP **PKPdf** **08 31 49.5 +1.1**
NIL Nilore 152.51 85 **PKPdf** **08 31 47.5 -1.1**
NIL **PKPbc** **08 31 54.8 -0.7**
NIL Nilore 152.51 85 PKIKP **PKPbc** **08 31 54.8 -0.7**
PBA Port Blair 152.57 149 *e*P **PKPdf** **08 31 50.0 +1.0**
OHH Osh 153.12 70 PKIKP **PKPdf** **08 31 48.3 -1.0**
KUDL Kundal 153.28 99 *e*P **PKPdf** **08 31 51.3 +1.5**
KUDL IAmb IAmb 08 31 57.5
comp=Z,183nm,1.4s
RAGD RAYAGADA 153.53 123 *e*P **PKPdf** **08 31 52.5 +2.1**
EKS2 Erkin-Say 153.83 65 P **PKPdf** **08 31 51.4 +1.1**
SNR=9.7
THN Thein Dam 154.21 89 *e*P **PKPdf** **08 31 52.0 +0.9**
ARLS Aral 154.27 67 PKIKP **PKPdf** **08 31 52.1 +1.1**
USP Ospenovka 154.31 64 P **PKPdf** **08 31 51.6 +0.8**
SNR=7.8
AAK Ala-Archa 154.36 65 PKP **PKPdf** **08 31 51.0 0.0**
comp=Z,6.6nm,0.9s,baz=221,slow=1.6,SNR=13
AAK PKPbc **pPKPdf** **08 31 59.4 -1.2**
comp=Z,22nm,0.8s,baz=201,slow=1.8,SNR=31
AAK PKPab **PKPab** **08 32 13.0 -0.6**
comp=Z,24nm,0.6s,baz=151,slow=1.7,SNR=14
AAK Ala-Archa 154.36 65 P **PKPdf** **08 31 52.2 +1.1**
SNR=8.0
AAK Ala-Archa 154.36 65 **PKPdf** **08 31 52.0 +0.9**
SGDS Sogindy 154.39 63 *e*PKP **PKPdf** **08 31 50.8 -0.2**
UCH Uchtor 154.40 66 P **PKPdf** **08 31 52.8 +1.3**
SNR=17
DHRM DHARAMSHALA 154.60 90 *e*P **PKPdf** **08 31 52.6 +0.7**
DHRM IAmb IAmb 08 32 15.9
comp=Z,129nm,1.1s
MJAR Matsushiro Arr 154.68 280 PKP **PKPdf** **08 31 50.8 -0.7**
comp=Z,3.3nm,1.0s,baz=199,slow=2.7,SNR=6.0
MJAR PKPbc **pPKPdf** **08 31 60.0 -1.0**
comp=Z,5.6nm,1.1s,baz=206,slow=1.6,SNR=5.3

MJAR PKPab **PKPab** 08 32 16.3 +1.2
comp=Z,22nm,1.2s,baz=136,slow=2.9,SNR=12
MJAR PP **PP** 08 35 52.2 +1.0
comp=Z,3.5nm,1.2s,baz=132,slow=6.7,SNR=2.4
MJAR Matsushiro Arr 154.68 280 PKPdf PKPdf 08 31 50.5 -1.0
MJAR **PKPbc** 08 32 00.4 +0.3
MJAR **PKPab** 08 32 16.4 +1.4
MAJO Matsushiro 154.68 280 PKPdf **PKPdf** 08 31 50.2 -1.3
MAJO PKPbc **PKiKP** 08 32 00.7 +0.6
MAJO **PKPab** 08 32 16.5 +1.4
MAJO Matsushiro 154.68 280 PKIKP **PKPdf** 08 31 50.2 -1.3
MAJO 08 32 00.7
MAJO 08 32 16.5
SMLA Simla 154.95 93 *e*P **PKPdf** 08 31 52.1 +0.1
SMLA IAmb IAmb 08 32 18.2
comp=Z,102nm,1.2s
KURBB Kurchatov Arra 155.09 46 PKP **PKPdf** 08 31 51.7 +0.1
comp=Z,8.8nm,1.1s,baz=295,slow=1.9,SNR=28
KURBB PP **PP** 08 35 49.1 -3.6
comp=Z,1.9nm,0.9s,baz=280,slow=6.0,SNR=5.1
KURK Kurchatov 155.10 45 PKPdf 08 31 51.9 +0.3
KURK Kurchatov 155.10 45 IAMs_20 IAMs_20 09 45 41.6
comp=Z,505nm,19.0s
KURK Kurchatov 155.10 45 PKIKP **PKPdf** 08 31 51.9 +0.3
TKM2 Tokmak 2 155.15 65 P **PKPdf** 08 31 52.1 -0.1
SNR=13
KSH2 Kashi 155.21 74 PKP **PKPdf** 08 31 53.4 +1.0
KSH2 pPKP sPKPdf 08 32 02.0 -3.1
ULHL Ulahol 155.68 66 P **PKPdf** 08 31 54.1 +1.1
SNR=8.6
AAA Alma-Ata 156.07 64 *e*PKIKP **PKPdf** 08 31 53.3 0.0
AAA Alma-Ata 156.07 64 *e*PKP **PKPdf** 08 31 53.3 0.0
TNSS Tian-Shan 156.12 64 *e*PKIKP **PKPdf** 08 31 53.2 -0.6
TNSS Tian-Shan 156.12 64 *e*PKP **PKPdf** 08 31 53.2 -0.6
MDOK Medeo 156.18 64 *e*PKIKP **PKPdf** 08 31 53.4 -0.1
MDOK Medeo 156.18 64 *e*PKP **PKPdf** 08 31 53.4 -0.1
KDJ Kajisay 156.38 66 PKIKP **PKPdf** 08 31 54.5 +0.6
ZALV Zalesovo Beam 156.55 34 PKP **PKPdf** 08 31 53.1 -0.3
comp=Z,20nm,0.8s,baz=318,slow=2.0,SNR=41
ZALV PKPab **PKPab** 08 32 22.5 +0.1
comp=Z,12nm,1.0s,baz=306,slow=5.3,SNR=4.8
ZALV Zalesovo Beam 156.55 34 PKPdf 08 31 52.7 -0.7
ARXS Arharly 156.58 61 *i* PKIKP **PKPdf** 08 31 53.9 0.0
LGTI Lohaghat 156.67 99 *e*P **PKPdf** 08 31 54.8 +0.2
TDK Taldyqorghan 156.82 59 *e*PKIKP **PKPdf** 08 31 54.1 0.0
TDK Taldyqorghan 156.82 59 *e*PKP **PKPdf** 08 31 54.2 0.0
TARG Taragay, Kyrgy 156.88 67 PKIKP **PKPdf** 08 31 55.4 +0.6
HNLY HANLEY 156.91 90 *e*P **PKPdf** 08 31 56.0 +0.7
SATY Saty 157.18 64 *e*PKIKP **PKPdf** 08 31 54.6 -0.2
SATY Saty 157.18 64 *e*PKP **PKPdf** 08 31 54.7 -0.2
ZEA Zeya 157.29 327 *i* PKIKP **PKPdf** 08 31 54.5 +0.1
ZEA *e* 08 56 03.9
ZEA pmax pmax
comp=Z,10.0nm,1.6s
KLR Kul'dur 157.53 313 PKP **PKPdf** 08 31 53.4 -1.4
comp=Z,4.3nm,0.9s,baz=22,slow=3.5,SNR=8.8
KLR PKPab **PKPab** 08 32 28.0 +1.2
comp=Z,7.7nm,1.0s,baz=68,slow=4.1,SNR=6.3
UZB Uzynbulak 157.61 63 *e*PKIKP **PKPdf** 08 31 55.1 -0.2
UZB Uzynbulak 157.61 63 *e*PKP **PKPdf** 08 31 55.1 -0.2
BOD Bodaibo 157.75 350 *e*PKIKP **PKPdf** 08 31 52.0 -2.8
BOD pmax pmax
comp=Z,55nm,1.9s
SHLS Shalkode 157.93 63 *e*PKIKP **PKPdf** 08 31 56.0 +0.3
SHLS Shalkode 157.93 63 *e*PKP **PKPdf** 08 31 56.0 +0.3
WUS Wushi 157.98 68 IAMs_20 IAMs_20 09 46 19.4
comp=Z,510nm,20.0s
MAKZ Makanchi 158.69 52 PKPdf 08 31 56.0 -0.4
MAKZ Makanchi 158.69 52 PKIKP **PKPdf** 08 31 56.0 -0.4
MK31 Makanchi Array 158.89 52 *c i* PKIKP **PKPdf** 08 31 56.4 -0.2
MKAR Makanchi Array 158.89 52 PKP **PKPdf** 08 31 56.4 -0.2
comp=Z,11nm,0.7s,baz=301,slow=0.4,SNR=90
MKAR PKPab **PKPab** 08 32 32.9 0.0
comp=Z,7.0nm,0.8s,baz=286,slow=4.5,SNR=8.1
MKAR PP **PP** 08 36 14.3 +0.3
comp=Z,2.0nm,0.8s,baz=288,slow=5.0,SNR=4.7
MKAR Makanchi Array 158.89 52 PKPdf 08 31 56.2 -0.4
USRK Ussuriysk Ar. 159.12 301 PKPab **PKPab** 08 32 35.5 +1.7
comp=Z,5.8nm,0.7s,baz=64,slow=4.4,SNR=11
HEH HeiHe 159.42 320 PKP **PKPdf** 08 31 54.6 -2.4
HEH PKPab **PKPab** 08 32 35.5 +0.6
HEH PPMZ
comp=Z,410nm,4.6s
HEH L L
comp=Z,150nm,19.1s
HEH L L
comp=Z,270nm,17.2s
HEH L L
comp=Z,490nm,19.8s
ZSN Zaisan 160.23 48 *e*PKIKP **PKPdf** 08 31 58.1 0.0
ZSN Zaisan 160.23 48 *e*PKP **PKPdf** 08 31 58.2 +0.1
DGZ Jazzator, Alta 160.48 40 ⇓ *i* PKIKP **PKPdf** 08 31 58.8 +0.3
MDJ Mudanjiang 160.65 303 PKP **PKPdf** 08 31 57.0 -1.6
MDJ L L
comp=Z,430nm,17.9s
CMAR Chiang Mai Arr 161.12 157 PKP **PKPdf** 08 31 59.5 -0.4
comp=Z,0.9nm,0.3s,baz=252,slow=2.0,SNR=4.5
CMAR PKPab **PKPab** 08 32 43.1 +0.1
comp=Z,9.4nm,1.0s,baz=223,slow=4.8,SNR=17
CMAR PP **PP** 08 36 23.9 -1.3
comp=Z,1.2nm,0.4s,baz=212,slow=5.2,SNR=4.1
CMAR Chiang Mai Arr 161.12 157 PKPdf 08 31 59.0 -0.9
CMAR **PKPab** 08 32 41.6 -1.5
CHTO Chiang Mai 161.46 156 PKPdf 08 32 00.1 -0.2
CHTO **PKPab** 08 32 44.1 -0.4
CHTO Chiang Mai 161.46 156 PKP2 **PKPab** 08 32 44.1 -0.4
CHTO 09 32 00.1
CHTO Chiang Mai 161.46 156 PKP **PKPdf** 08 32 00.2 -0.1
BNX BinXian 161.69 308 ⇑ PKP **PKPdf** 08 31 56.6 -3.1
BNX PP **PP** 08 36 28.8 -0.2
BNX SS SS 08 56 47.1 +2.1
BNX PPMZ
comp=Z,210nm,8.4s
BNX L L
comp=Z,280nm,23.4s
BNX L L
comp=Z,220nm,17.0s
BNX L L
comp=Z,320nm,19.6s
SAIH SAIHA 161.93 135 *e*P **PKPdf** 08 32 01.7 +0.9
QIZ Qiongzhong 162.76 190 PKP **PKPdf** 08 32 00.8 -0.8
QIZ PP **PP** 08 36 32.8 -0.9
QIZ SS SS 08 56 57.3 +3.0
QIZ L L
comp=Z,270nm,16.5s
KSRS Korea Array 162.96 281 PKP **PKPdf** 08 32 01.1 -0.2
comp=Z,6.5nm,1.1s,baz=195,slow=1.9,SNR=13
KSRS PKPab **PKPab** 08 32 52.9 +2.0
comp=Z,12nm,1.0s,baz=108,slow=3.9,SNR=16
KSAR Wonju Array Be 162.99 281 PKPdf 08 32 00.3 -0.9
KSAR **PKPab** 08 32 52.1 +1.1
KSAR Wonju Array Be 162.99 281 PKIKP **PKPdf** 08 32 00.4 -0.9
KSAR PKP **PKPab** 08 32 52.1 +1.1
WMQ Urumqi 163.53 56 *e*PKP **PKPdf** 08 32 02.3 +0.6
WMQ pPKP sPKPdf 08 32 14.1 -0.4
WMQ PKPab **PKPab** 08 32 54.3 +1.0
WMQ L L
comp=Z,600nm,14.7s
WMQ L L
comp=Z,750nm,17.9s
WMQ L L
comp=Z,460nm,21.3s
SILR SILCHAR 163.55 130 *e*P **PKPdf** 08 32 03.2 +1.1
CN2 Changchun 163.73 304 PKP **PKPdf** 08 31 59.4 -2.4
CN2 L L
comp=Z,200nm,16.0s
CN2 L L
comp=Z,500nm,16.0s
CN2 L L
comp=Z,400nm,21.0s
GUWA GUWAHATI 163.80 123 *e*P **PKPdf** 08 32 01.8 -0.6
IMP Imphal 164.28 132 *e*P **PKPdf** 08 32 03.5 +0.5
TEZP TEZPUR 164.82 125 *e*P **PKPdf** 08 32 02.6 -0.6
KOHI KOHIMA 165.04 130 ⇑ *e*P **PKPdf** 08 32 04.7 +0.9
MOKO MOKOCHONG 165.72 130 *e*P **PKPdf** 08 32 04.9 +0.7
ITAN ITANAGAR 165.78 125 *e*P **PKPdf** 08 32 04.4 +0.3
JORH JORHAT 165.85 128 *e*P **PKPdf** 08 32 04.7 +0.5
TNCH TengChong 166.90 145 PKP **PKPdf** 08 32 03.3 -2.0
TNCH PKPab **PKPab** 08 33 05.3 -3.3
TNCH PP **PP** 08 36 53.8 -2.2
TNCH PPMZ
comp=Z,400nm,4.6s
TNCH L L
comp=Z,1μm,33.8s
TNCH L L
comp=Z,2μm,25.7s
TNCH L L
comp=Z,500nm,19.2s
PASG PASIGHAT 167.45 127 *e*P **PKPdf** 08 32 06.4 +1.0
DL2 Dalian 167.83 288 PKP **PKPdf** 08 32 05.9 +0.7
DL2 PKPab **PKPab** 08 33 13.3 +1.0
DL2 *e*PP **PP** 08 37 03.0 +1.4
DL2 PPMZ
comp=Z,290nm,6.8s
DL2 L L
comp=Z,400nm,21.3s
DL2 L L
comp=Z,480nm,20.0s
DL2 L L
comp=Z,550nm,20.5s
ULN Ulaanbaatar 168.25 359 PKPdf 08 32 04.9 -0.6
ULN **PKPab** 08 33 14.8 +0.9
ULN Ulaanbaatar 168.25 359 PKIKP **PKPdf** 08 32 04.9 -0.6
ULN 08 33 14.8
ULN Ulaanbaatar 168.25 359 PKP **PKPdf** 08 32 05.2 -0.3
SONM Songino Array 168.28 1 PKP **PKPdf** 08 32 04.8 -0.6
comp=Z,1.8nm,0.8s,baz=233,slow=0.5,SNR=12
SONM PKPab **PKPab** 08 33 15.4 +1.4
comp=Z,11nm,0.8s,baz=340,slow=4.3,SNR=33
SONM PP **PP** 08 37 02.3 -0.2
comp=Z,2.4nm,1.0s,baz=353,slow=5.2,SNR=5.4
SONM Songino Array 168.28 1 PKPdf 08 32 04.5 -0.9
SONM **PKPab** 08 33 14.8 +0.8
KMI2 Kunming 168.55 162 PKP **PKPdf** 08 32 06.8 +0.3
KMI2 pPKP sPKPdf 08 32 17.6 -1.6
NJ2 Nanjing 169.15 252 PKP **PKPdf** 08 32 06.3 0.0
XLT XiLinHaoTe 169.42 320 *e*PKP **PKPdf** 08 32 05.9 -0.4
XLT PP **PP** 08 37 09.4 +0.5
XLT L L
comp=Z,350nm,15.1s
XLT L L
comp=Z,550nm,21.1s
PZH PanZhiHua 169.52 155 PKP **PKPdf** 08 32 06.4 -0.5
GOMU GeErMu 170.38 86 PKP **PKPdf** 08 32 07.3 -0.1
GOMU PP **PP** 08 37 15.3 +0.2
GOMU PPMZ
comp=Z,440nm,6.0s
GOMU L L
comp=Z,230nm,18.0s
GOMU L L
comp=Z,340nm,19.6s
GOMU L L
comp=Z,590nm,20.8s
GYA Guiyang 170.38 180 PKP **PKPdf** 08 32 07.5 +0.1
GYA PP **PP** 08 37 10.9 -2.1
GYA PPMZ
comp=Z,190nm,5.9s
WHN Wuhan 171.54 231 PKP **PKPdf** 08 32 07.8 +0.1
WHN PKPab **PKPab** 08 33 30.1 +1.2
WHN PP **PP** 08 37 23.5 +3.8
TIA Tai'an 171.58 274 PKP **PKPdf** 08 32 07.3 -0.3
TIA PP **PP** 08 37 18.8 -1.8
TIA PPMZ
comp=Z,370nm,5.1s
TIA L L
comp=Z,270nm,21.2s
TIA L L
comp=Z,230nm,17.3s
TIA Tai'an 171.58 274 PKP **PKPdf** 08 32 07.5 -0.1
TIA PP **PP** 08 37 19.3 -1.3
BJI2 Beijing 171.59 300 PKP **PKPdf** 08 32 07.3 -0.1
BJI2 PP **PP** 08 37 22.6 +2.4
BJI2 PPMZ
comp=Z,160nm,14.3s
BJI2 L L
comp=Z,250nm,19.6s
BJI2 L L
comp=Z,140nm,19.6s
BJI2 L L
comp=Z,280nm,21.6s
HNS HongShan 173.46 284 ⇓ PKP **PKPdf** 08 32 08.6 +0.3
HNS PKPab **PKPab** 08 33 38.9 +1.6
HNS L L
comp=Z,400nm,19.6s
HNS L L
comp=Z,330nm,19.4s
HNS L L
comp=Z,510nm,21.6s
GTA2 Gaotai 173.54 56 PKP **PKPdf** 08 32 08.8 +0.3
GTA2 pPKP sPKPdf 08 32 20.6 -0.7
GTA2 SS SS 08 58 44.1 -0.8
GTA2 PPMZ
comp=Z,610nm,6.0s
GTA2 L L
comp=Z,380nm,21.3s
GTA2 L L
comp=Z,480nm,19.0s
GTA2 L L
comp=Z,660nm,20.6s
ENH Enshi 173.73 203 PKPdf 08 32 08.3 -0.4
HHC Hu-ho-hao-te 173.93 323 ⇑ *i* PKP **PKPdf** 08 32 08.1 -0.5
HHC PP PP 08 37 39.8 +8.6
HHC SS SS 08 58 48.3 +0.8
HHC PPMZ
comp=Z,170nm,7.1s
HHC L L
comp=Z,420nm,18.0s
HHC L L
comp=Z,300nm,17.1s
HHC L L
comp=Z,520nm,19.9s
CD2 Chengdu 174.25 154 PKP **PKPdf** 08 32 08.6 -0.3
CD2 sPKP sPKPdf 08 32 22.1 +0.4
CD2 SKS **SKSdf** 08 39 07.9 -2.2
CD2 PPMZ
comp=Z,370nm,8.6s
CD2 L L
comp=Z,540nm,19.8s
CD2 L L
comp=Z,590nm,19.0s
CD2 L L
comp=Z,760nm,18.6s
BTO2 Baotou 174.75 333 *e*PKP **PKPdf** 08 32 08.6 -0.2
BTO2 PKPab **PKPab** 08 33 41.4 -1.5
BTO2 PP **PP** 08 37 34.6 -0.3
BTO2 SS SS 08 58 53.9 -1.0
BTO2 PPMZ
comp=Z,750nm,5.1s
BTO2 L L
comp=Z,1μm,19.2s
BTO2 L L
comp=Z,750nm,13.5s
BTO2 L L
comp=Z,950nm,19.4s
LYN LuoYang 175.05 253 PKP **PKPdf** 08 32 09.1 +0.2
LYN pPKP sPKPdf 08 32 19.8 -1.9
LYN PKPab **PKPab** 08 33 48.0 +3.5
LYN PP **PP** 08 37 36.1 -1.4
LYN SS SS 08 59 02.5 +2.7
LYN PPMZ
comp=Z,660nm,5.7s
LYN L L
comp=Z,460nm,21.3s
LYN L L
comp=Z,500nm,20.6s
LYN L L
comp=Z,840nm,19.9s
XAN Xi'an 177.25 222 PKP **PKPdf** 08 32 08.9 -0.6
XAN pPKP sPKPdf 08 32 19.1 -3.2
LZDM Lanzhou Array 177.55 93 PKP **PKPdf** 08 32 09.9 0.0
comp=Z,0.9nm,0.3s,baz=101,slow=4.6,SNR=1.3
LZDM PKPab PKPab 08 33 56.5 +0.5
comp=Z,4.4nm,0.6s,baz=220,slow=3.9,SNR=6.1
LZDM PP **PP** 08 37 49.8 -0.1
comp=Z,1.9nm,0.4s,baz=147,slow=8.3,SNR=1.6
LZH Lanzhou 177.68 90 *e*PKP **PKPdf** 08 32 10.8 +1.1
LZH pPKP sPKPdf 08 32 22.3 -0.2
LZH PP **PP** 08 37 51.1 +0.8
LZH SKKS 08 44 27.0
LZH PPMZ
comp=Z,400nm,5.2s
LZH L L
comp=Z,440nm,17.9s
LZH L L
comp=Z,540nm,16.5s
LZH L L
comp=Z,560nm,18.2s

NEIC ***17*** *08:14:02.0±0.5, 17°.99N×0°.06×66°.73W×0°.02, h20km±2km, ML3.2/35, Md3.3/5(RSPR), Error ellipse: s-maj=9.0km s-min=2.3km az=177.0*
OSPL ***17*** *08:14:02.7±0.4, 17°.88N×66°.72W, h1km±999km, ML2.7, Presumed earthquake*
SDD ***17*** *08:14:02.9±1.2, 17°.99N×66°.74W, h19km±7km, MD3.2, ML2.9, MW3.0, Presumed earthquake*

ISC 17 08:14:02.1±0.9, 17°.99N±0°.04×66°.74W±0°.02, h18km±4km, n32, σ0°52/46, 7C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.13**	**263**		**Pg**	**08 14 06.4**	**+0.3**
GBPR					**Sg**	**08 14 09.5**	**+0.7**
OBIP	**Obispado Ponce**	**0.14**	**68**		**Pg**	**08 14 06.2**	**+0.1**
OBIP					**Sg**	**08 14 09.0**	**0.0**
OBIP	**Obispado Ponce**	**0.14**	**68**	*i* P	**Pg**	**08 14 06.3**	**+0.1**
OBIP				*e*S	**Sg**	**08 14 08.9**	**0.0**
OBIP				IAML		08 14 09.4	
	comp=Z,2μm,0.3s						
CELP	**Cerrillos**	**0.17**	**61**		**Pg**	**08 14 06.9**	**+0.2**
CELP	**Cerrillos**	**0.17**	**61**	⇓ *e*Pg	**Pg**	**08 14 06.9**	**+0.2**
CELP				⇑ *e*Sg	**Sg**	**08 14 09.9**	**+0.2**
CELP				IAML		08 14 10.3	
	comp=N,6μm,0.2s						
UUPR	**Utuado, UPR, P**	**0.26**	**4**		**Pb**	**08 14 08.2**	**-0.1**
MLPR	**Magueyes Islan**	**0.29**	**266**		**Pb**	**08 14 08.6**	**-0.1**
MLPR				IAML		08 14 14.2	
	comp=N,1μm,0.2s						
MLPR				IAML		08 14 14.3	
	comp=N,1μm,0.3s						
MLPR	**Magueyes Islan**	**0.29**	**266**	⇓ *e*Pg	**Pb**	**08 14 08.7**	**-0.1**
MLPR				⇑ *e*Sg	**Sb**	**08 14 13.7**	**+0.4**
MLPR				IAML		08 14 14.1	
	comp=N,401nm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.35**	**273**		**Pb**	**08 14 09.7**	**-0.1**
CRPR					**Sb**	**08 14 15.1**	**0.0**
CRPR	**Cabo Rojo, PR**	**0.35**	**273**	IAML		08 14 15.6	
	comp=N,850nm,0.2s						
CRPR				IAML		08 14 18.1	
	comp=N,816nm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.35**	**273**	*i* P	**Pb**	**08 14 09.7**	**-0.1**
CRPR				*e*S	**Sb**	**08 14 15.0**	**0.0**
CRPR				IAML		08 14 16.9	
	comp=Z,707nm,0.1s						
AOPR	**Arecibo Observ**	**0.35**	**358**		**Pg**	**08 14 09.7**	**+0.1**
AOPR				IAML		08 14 14.8	
	comp=Z,3μm,0.3s						
AOPR				IAML		08 14 15.0	
	comp=Z,4μm,0.2s						
AOPR	**Arecibo Observ**	**0.35**	**358**	⇑ *e*Pg	**Pg**	**08 14 09.7**	**+0.1**
AOPR				⇑ *e*Sg	**Sg**	**08 14 14.6**	**-0.1**
AOPR				IAML		08 14 14.8	
	comp=N,3μm,0.2s						
LSP	**Las Mesas**	**0.38**	**299**		**Pb**	**08 14 10.2**	**-0.2**
LSP					**Sb**	**08 14 16.2**	**+0.3**
PRSN	**Puerto Rico Se**	**0.45**	**300**		**Pg**	**08 14 10.9**	**-0.2**
PRSN				IAML		08 14 18.7	
	comp=N,4μm,0.2s						
PRSN				IAML		08 14 19.5	
	comp=N,3μm,0.2s						
PRSN	**Puerto Rico Se**	**0.45**	**300**	⇓ *e*Pg	**Pg**	**08 14 11.1**	**0.0**
PRSN				⇑ *e*Sg	**Sg**	**08 14 17.4**	**+0.1**
PRSN				IAML		08 14 20.0	
	comp=N,1μm,0.2s						
ECPR	**Experimental S**	**0.48**	**48**		**Pg**	**08 14 11.8**	**-0.1**
ECPR				IAML		08 14 18.7	
	comp=N,1μm,0.3s						
ECPR				IAML		08 14 20.1	
	comp=N,3μm,0.2s						
EMPR	**Esperanza - Ma**	**0.52**	**23**		**Pg**	**08 14 12.9**	**+0.3**
EMPR					**Sg**	**08 14 20.8**	**+1.1**
SJG	**San Juan**	**0.57**	**78**		**Pb**	**08 14 13.2**	**-0.4**
SJG				IAML		08 14 22.8	
	comp=N,662nm,0.3s						
SJG	**San Juan**	**0.57**	**78**		**Sb**	**08 14 20.9**	**-0.6**
SJG	**San Juan**	**0.57**	**78**	⇓ *e*Pg	**Pb**	**08 14 13.2**	**-0.4**
SJG				⇑ *e*Sg	**Sg**	**08 14 22.1**	**+0.8**
SJG	**San Juan**	**0.57**	**78**	*i* P	**Pb**	**08 14 13.2**	**-0.4**
SJG				*e*S	**Sg**	**08 14 21.4**	**+0.1**
SJG				IAML		08 14 22.6	
	comp=Z,292nm,0.3s						
AGPR	**Aguadilla, PR**	**0.59**	**323**		**Pb**	**08 14 13.5**	**-0.4**
AGPR	**Aguadilla, PR**	**0.59**	**323**	⇑ *e*Pg	**Pb**	**08 14 13.6**	**-0.4**
AGPR				⇓ *e*Sg	**Sg**	**08 14 22.1**	**+0.3**
AGPR				IAML		08 14 25.5	
	comp=N,360nm,0.2s						
PDPR	**Patillas Dam,**	**0.69**	**88**		**Pb**	**08 14 15.2**	**-0.3**
PDPR				IAML		08 14 25.8	
	comp=N,472nm,0.4s						
IDE	**Isla Desecheo**	**0.80**	**300**		**Pb**	**08 14 17.1**	**-0.4**
IDE					**Sg**	**08 14 28.3**	**-0.1**
HUMP	**Col San Antoni**	**0.86**	**80**		**Pb**	**08 14 17.8**	**-0.7**
HUMP					**Sb**	**08 14 29.8**	**0.0**
HUMP	**Col San Antoni**	**0.86**	**80**	IAML		08 14 31.5	
	comp=N,321nm,0.2s						
CUPR	**Culebra, Puert**	**1.42**	**77**	Pn	**Pb**	**08 14 27.6**	**-0.4**
DR12	**Loma Pena Alta**	**2.63**	**288**	Pn	**Pb**	**08 14 47.0**	**-1.7**
HATOM	**Hato Mayor del**	**2.63**	**286**	⇓ *e*Pg	**Pb**	**08 14 47.1**	**-1.7**
HATOM				IAML		08 15 28.2	
	comp=N,24nm,0.9s						
SDDR	**Presa de Saban**	**4.43**	**284**	Pn	**Pn**	**08 15 09.0**	**+0.6**

IDC 17 08:15:53.8±3.6, 32°.99N×85°.73E, h0km, mb3.0/2, mbtmp3.4/5, ML3.4/3, MS2.6/1, Error ellipse: s-maj=85.4km s-min=29.7km az=64.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**13.09**	**321**	LR	LR	08 23 44.1	
	comp=Z,25nm,19.4s,baz=151,slow=36						
MKAR	**Makanchi Array**	**14.04**	**350**	Pn	Pn	08 19 13.7	-0.3
	baz=173,slow=12,SNR=4.8						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**18.40**	**345**	P	Pn	08 20 09.5	-0.7
	baz=160,slow=10,SNR=7.5						
	0.9nm,0.7s						
CMAR	**Chiang Mai Arr**	**18.71**	**137**	P	P	08 20 13.9	-0.1
	0.4nm,0.3s,baz=322,slow=12,SNR=4.6						
	0.8nm,0.3s						
ZALV	**Zalesovo Beam**	**20.96**	**358**	P	P	08 20 38.0	-0.3
	0.6nm,0.6s,baz=169,slow=11,SNR=3.7						
	0.6nm,0.6s						
SONM	**Songino Array**	**21.52**	**40**	P	P	08 20 45.0	+0.5
	0.5nm,0.7s,baz=251,slow=9.0,SNR=2.7						
	0.5nm,0.7s						

IDC 17 08:51:05.8±25.0, 27°.81S×174°.40W, h0km, mb3.8/4, mbtmp3.9/5, ML3.3/1, MS3.7/4, Error ellipse: s-maj=481.9km s-min=69.0km az=89.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**12.61**	**212**	Pn	Pn	08 54 04.7	-1.8
	0.2nm,0.3s,baz=182,slow=21,SNR=1.4						
URZ				Sn	Sn	08 56 18.2	-9.5
	0.3nm,0.3s,baz=211,slow=16,SNR=1.4						
	10nm,0.9s						
HNR	**Honiara**	**30.30**	**302**	LR	LR	09 09 00.1	
	comp=Z,26nm,19.3s,baz=249,slow=36						
STKA	**Stephens Creek**	**38.19**	**253**	P	P	08 58 28.3	+1.0
	0.8nm,0.6s,baz=90,slow=10,SNR=2.9						
	0.8nm,0.6s						
KRVT	**Keravat (AS076**	**39.59**	**300**	LR	LR	09 13 18.1	
	comp=Z,32nm,21.6s,baz=32,slow=34						
ASAR	**Alice Springs**	**46.48**	**263**	P	P	08 59 34.9	-0.1
	0.3nm,0.4s,baz=96,slow=7.2,SNR=15						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**47.25**	**268**	P	P	08 59 39.9	-1.1
	0.7nm,0.6s,baz=108,slow=7.6,SNR=8.2						
	0.7nm,0.6s						
FITZ	**Fitzroy Crossi**	**55.59**	**266**	P	P	09 00 44.2	+0.6
	2.1nm,0.9s,baz=119,slow=6.4,SNR=4.0						
	2.1nm,0.9s						
GUMO	**Guam**	**57.02**	**311**	LR	LR	09 23 25.5	
	comp=Z,155nm,19.5s,baz=152,slow=34						
SIJI	**Sorong**	**58.44**	**288**	LR	LR	09 25 48.9	
	comp=Z,340nm,20.3s,baz=120,slow=36						

IDC ***17*** *08:52:30.8±1.0, 29°.67N×130°.00E, h0km, mb3.5/8, mbtmp3.4/10, ML3.0/2, MS4.0/1, Error ellipse:*

s-maj=29.2km s-min=19.5km az=87.0
JMA 17 08:52:32.1±0.3,29.6°N±0.6°×129.7°E±1.0°,h1km±2km, MV3.1/20,NEAR TOKARA ISLANDS
JMA Felt III J1 at NEAR TOKARA ISLANDS .
ISC 17 08:52:31.9±1.2,29°58'N±0.04°×129°86.E±0.07',h8km±8km, n24,σ1°07/30,mb3.4/8,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**0.27**	**3**	P		P	**Pg**	**08 52 37.9**	**+0.7**
JNN						eS	**Sg**	**08 52 42.2**	**+1.3**
JTAJ	**Takarajima**	**0.71**	**234**	P		P	**Pg**	**08 52 45.0**	**-0.6**
JTAJ						eS	**Sg**	**08 52 53.6**	**-1.2**
JYAK	**Yakushimahirau**	**0.87**	**40**	P		P	**Pn**	**08 52 50.0**	**-0.5**
JYAK						eS	**Sn**	**08 53 02.2**	**-1.1**
JKC	**Kuchinoerabu**	**0.93**	**18**	P		P	**Pn**	**08 52 50.4**	**-0.8**
JAM	**Amami Oshima**	**1.18**	**191**	P		P	**Pg**	**08 52 53.6**	**-1.0**
JAM						eS	**Sg**	**08 53 09.9**	**0.0**
JMTN	**Minamitane**	**1.22**	**48**	P		P	**Pn**	**08 52 55.6**	**+0.4**
JMTN						eS	**Sn**	**08 53 12.6**	**+0.6**
JZK	**Kikaishima**	**1.26**	**175**	eP		P	**Pn**	**08 52 57.1**	**+1.4**
JTN	**Tanegashima 3**	**1.45**	**42**	eP		P	**Pb**	**08 52 58.7**	**-0.5**
JAMN	**Amaminishikomi**	**1.46**	**204**	P		P	**Pn**	**08 52 57.1**	**-1.3**
JTK	**Tokunoshima**	**1.95**	**204**	eP		P	**Pn**	**08 53 04.2**	**-1.1**
JTK						eS	**Sn**	**08 53 29.6**	**-0.4**
JOKE	**Okinoerabujima**	**2.48**	**207**	eP		P	**Pn**	**08 53 12.1**	**-0.5**
JYRO	**Yoronjima**	**2.83**	**206**	eP		P	**Pn**	**08 53 17.4**	**0.0**
JOW	**Kunigami**	**3.07**	**207**	Pn		P	**Pn**	**08 53 22.2**	**+1.6**
	3.5nm,0.3s,baz=43,slow=8.4,SNR=5.0								
JOW						Sn	**Sn**	**08 53 60.0**	**+2.4**
	baz=10.0,slow=25								
	11nm,0.4s								
JNU	**Nakatsue**	**3.64**	**14**	Pn		P	**Pn**	**08 53 27.4**	**-1.1**
	1.7nm,0.3s,baz=188,slow=4.6,SNR=14								
	8.5nm,0.9s								
JKE	**Kume Jima 2**	**4.22**	**221**	eP		P	**Pn**	**08 53 37.5**	**+1.0**
LZDM	**Lanzhou Array**	**22.86**	**293**	P		P	**P**	**08 57 37.3**	**+1.2**
	1.5nm,0.3s,baz=115,slow=13,SNR=2.1								
	1.5nm,0.3s								
SONM	**Songino Array**	**25.67**	**322**	P		P	**P**	**08 58 02.5**	**+0.2**
	0.5nm,0.6s,baz=150,slow=9.0,SNR=4.3								
	0.5nm,0.6s								
SHEM	**Shemya Is, Ala**	**39.71**	**42**	LR		LR		09 15 47.4	
	comp=Z,243nm,21.7s,baz=116,slow=35								
MKAR	**Makanchi Array**	**40.48**	**309**	P		P	**P**	**09 00 11.3**	**+0.3**
	0.4nm,0.7s,baz=105,slow=7.6,SNR=3.6								
	0.4nm,0.7s								
ZALV	**Zalesovo Beam**	**40.54**	**320**	P		P	**P**	**09 00 11.3**	**-0.1**
	0.7nm,0.5s,baz=91,slow=7.2,SNR=3.5								
	0.7nm,0.5s								
WRA	**Warramunga Arr**	**49.42**	**174**	P		P	**P**	**09 01 22.2**	**-0.2**
	0.6nm,1.1s,baz=353,slow=8.4,SNR=2.3								
	0.6nm,1.1s								
ASAR	**Alice Springs**	**53.08**	**175**	P		P	**P**	**09 01 51.6**	**+1.8**
	0.2nm,0.8s,baz=359,slow=6.6,SNR=2.2								
	0.2nm,0.8s								
ILAR	**Eielson Array**	**60.82**	**29**	P		P	**P**	**09 02 43.0**	**-1.2**
	0.3nm,0.8s,baz=219,slow=7.0,SNR=2.4								
	0.3nm,0.8s								
YKA	**Yellowknife Ar**	**74.90**	**26**	P		P	**P**	**09 04 12.5**	**-0.4**
	0.2nm,0.7s,baz=305,slow=6.4,SNR=5.7								
	0.2nm,0.7s								

IDC 17 08:52:38.2±7.3,36°41N×70°56E,h222km±48km, mb3.5/5, mbtmp4.1/10,MS4.4/1,Error ellipse: s-maj=74.0km s-min=34.9km az=167.0
ISC 17 08:52:33.0±2.8,36°0N±0°2'×70°5E±0°2',h200km,n20, σ2°02/20,mb4.0/4,3C-1D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**6.96**	**25**	P		P	**Pn**	**08 54 13.9**	**+0.8**
	SNR=26								
KK31	**Karatay Array**	**7.11**	**360**	⇑Pn		Pn		08 54 07.4	-7.2
	9.1nm,0.3s,baz=200,slow=17,SNR=102								
KK31						⇓Sn	Sn	08 55 20.3	-15
	2.5nm,0.3s,baz=203,slow=20								
EKS2	**Erkin-Say**	**7.13**	**20**	P		P	**Pn**	**08 54 15.5**	**+0.5**
	SNR=20								
AAK	**Ala-Archa**	**7.32**	**24**	P		P	**Pn**	**08 54 18.2**	**+0.8**
	16nm,0.3s,baz=200,slow=5.5,SNR=58								
AAK						S	**Sn**	**08 55 36.1**	**-4.3**
	6.1nm,0.5s,baz=138,slow=23,SNR=12								
AAK	**Ala-Archa**	**7.32**	**24**	P		P	**Pn**	**08 54 18.3**	**+0.8**
	SNR=35								
AAK	**Ala-Archa**	**7.32**	**24**	⇑Pn		Pn		08 54 23.2	+5.8
	6.5nm,0.5s								
AAK						⇑Sn	**Sn**	**08 55 46.3**	**+5.8**
	7.7nm,0.6s								
KBK	**Karagaybulak**	**7.49**	**26**	P		P	**Pn**	**08 54 20.9**	**+1.2**
	SNR=7.9								
ULHL	**Ulahol**	**7.67**	**34**	P		P	**Pn**	**08 54 23.2**	**+1.1**
	SNR=22								
USP	**Ospenovka**	**7.89**	**22**	P		P	**Pn**	**08 54 25.1**	**+0.3**
	SNR=11								
TKM2	**Tokmak 2**	**7.96**	**28**	P		P	**Pn**	**08 54 26.5**	**+0.7**
	SNR=17								
MKAR	**Makanchi Array**	**13.93**	**36**	P		P	**Pn**	**08 55 41.7**	**-0.3**
	0.9nm,0.5s,baz=225,slow=16,SNR=18								
MKAR						S	**Sn**	**08 58 15.8**	**-1.7**
	0.1nm,0.5s,baz=289,slow=14,SNR=1.4								
KURBB	**Kurchatov Arra**	**15.73**	**19**	P		P	**Pn**	**08 56 02.5**	**-1.4**
	1.1nm,0.2s,baz=208,slow=12,SNR=4.5								
BVAR	**Borovoye Array**	**17.04**	**360**	P		P	**P**	**08 56 16.3**	**-1.8**
	0.6nm,0.4s,baz=166,slow=10,SNR=7.1								
AKTO	**Aktyubinsk**	**17.05**	**332**	P		P	**Pn**	**08 56 19.7**	**+0.1**
	4.4nm,0.5s,baz=141,slow=9.0,SNR=15								
ZALV	**Zalesovo Beam**	**20.54**	**25**	P		P	**P**	**08 56 55.9**	**0.0**
	1.4nm,0.4s,baz=218,slow=9.6,SNR=7.1								
	1.4nm,0.4s								
ARTI	**Arti**	**22.01**	**342**	P		P	**P**	**08 57 12.0**	**+1.0**
	3.3nm,0.5s,baz=148,slow=9.6,SNR=3.6								
	3.3nm,0.5s								
FINES	**FINESS Array B**	**37.70**	**327**	P		P	**P**	**08 59 28.0**	**-0.9**
	2.4nm,0.9s,baz=112,slow=7.5,SNR=7.4								
	2.4nm,0.9s								
ARCES	**ARCESS Array B**	**41.48**	**338**	P		P	**P**	**08 59 59.2**	**-0.7**
	5.5nm,1.0s,baz=113,slow=8.3,SNR=4.5								
	5.5nm,1.0s								
HFS	**Hagfors**	**43.24**	**322**	P		P	**P**	**09 00 15.2**	**+1.0**
	4.0nm,0.9s,baz=91,slow=7.6,SNR=5.0								
	4.0nm,0.9s								
MJAR	**Matsushiro Arr**	**53.50**	**68**	LR		LR		09 28 28.5	
	comp=Z,380nm,21.6s,baz=113,slow=40								

ASRS 17 09:06:11.0±0.7,54°59N×83°66E,h0km,M2.3(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.
IDC 17 09:06:13.4±1.5,54°58N×83°78E,h0km,mbtmp2.9/3, ML2.4/3,Error ellipse: s-maj=13.8km s-min=9.3km az=6.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.88**	**136**	I		I		09 11 30.0	
	0.1nm,0.9s,baz=316,slow=333,SNR=3.2								
ZALV	**Zalesovo Beam**	**0.88**	**136**	Pg		Pg		09 06 29.5	-0.7
	1.0nm,0.3s,baz=321,slow=16,SNR=11								
ZALV						Lg	Lg	09 06 43.3	
	7.0nm,0.3s,baz=316,slow=29,SNR=35								
KURBB	**Kurchatov Arra**	**5.09**	**221**	Pn		Pn		09 07 30.9	-0.1
	0.1nm,0.3s,baz=39,slow=13,SNR=5.0								
KURBB						Pg	Pb	09 07 45.6	+2.3
	0.1nm,0.3s,baz=34,slow=16,SNR=6.3								
KURBB						Lg	Lg	09 08 53.4	
	0.1nm,0.3s,baz=40,slow=34,SNR=5.7								
	0.5nm,0.5s								
MKAR	**Makanchi Array**	**7.85**	**188**	Pn		Pn		09 08 09.4	+0.6
	0.1nm,0.3s,baz=13,slow=15,SNR=3.0								
	0.3nm,0.4s								
BVAR	**Borovoye Array**	**8.08**	**264**	Pn		Pn		09 08 11.2	-0.7
	0.1nm,0.3s,baz=68,slow=14,SNR=6.2								
	0.9nm,0.4s								

IDC 17 09:09:12.8±3.0,9°89S×113°24E,h0km,mb3.1/3, mbtmp3.1/3,Error ellipse: s-maj=160.8km s-min=27.1km az=46.0
DJA 17 09:09:22.1±0.6,9°S±4°×11°4E±°,h10km,M3.6/13, MLv3.6/13
ISC 17 09:09:19.6±1.3,9°52S±0°09×113°92E±0°06,h31km,n14, σ1°20/17,mb2.8/3,South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	**1.07**	**12**	P		P	**Pn**	**09 09 39.5**	**+1.1**
JAGI						S	**Sn**	**09 09 53.2**	**+1.0**
BYJI	**Banyuwangi**	**1.36**	**18**	P		P	**Pb**	**09 09 44.4**	**-0.1**
IGBI	**Denpasar**	**1.39**	**60**	P		P	**Pn**	**09 09 43.7**	**+0.8**
IGBI						S	**Sn**	**09 09 58.7**	**-1.5**
RTBI	**Rangdo, Negare**	**1.46**	**44**	P		P	**Pb**	**09 09 45.5**	**-0.6**
RTBI						S	**Sn**	**09 10 01.4**	**-0.5**
ABJI	**Asem Bagus**	**1.74**	**10**	P		P	**Pb**	**09 09 51.2**	**+0.3**
BLJI	**Banyuglugur**	**1.79**	**350**	P		P	**Pb**	**09 09 51.9**	**+0.1**
KHKI	**Kahang-Kahang**	**2.02**	**56**	P		P	**Pb**	**09 09 54.3**	**-1.4**
KLNI	**Mataram**	**2.41**	**63**	P		P	**Pn**	**09 09 58.6**	**+1.8**
KMMI	**Kalianget**	**2.45**	**1**	P		P	**Pb**	**09 10 01.1**	**-1.9**
SNJI	**Sawahan-Nganju**	**2.75**	**309**	P		P	**Pb**	**09 10 07.3**	**-0.9**
TWSI	**Taliwang, Sumb**	**3.02**	**75**	P		P	**Pn**	**09 10 06.7**	**+1.4**
WRA	**Warramunga Arr**	**22.27**	**120**	P		P	**P**	**09 14 14.7**	**+0.3**
	0.4nm,1.0s,baz=297,slow=9.7,SNR=1.8								
	0.4nm,1.0s								
ASAR	**Alice Springs**	**23.71**	**129**	P		P	**P**	**09 14 30.2**	**+1.2**
	0.1nm,0.4s,baz=302,slow=9.6,SNR=5.4								
	0.1nm,0.4s								
MKAR	**Makanchi Array**	**62.76**	**336**	P		P	**P**	**09 19 40.7**	**-1.2**
	0.4nm,0.5s,baz=154,slow=7.0,SNR=5.4								
	0.4nm,0.5s								

OSPL 17 09:10:58.3±0.4,17°93N×66°76W,h14km±10km,ML1.8, Presumed earthquake
SDD 17 09:10:58.4±0.7,18°00N×66°75W,h20km±4km,MD2.9, ML2.1,MW2.5,Presumed earthquake
ISC 17 09:10:57.0±1.5,18°00N±0°07×66°76W±0°03,h26km±8km, n10,σ0°44/19,8C-5D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OBIP	**Obispado Ponce**	**0.16**	**74**	*i* P		P	**Pb**	**09 11 02.2**	**0.0**
OBIP						eS	**Sb**	**09 11 05.2**	**-0.7**
OBIP						IAML		09 11 05.6	
	comp=Z,195nm,0.1s								
CELP	**Cerrillos**	**0.19**	**67**	⇓ePg		Pg	**Pb**	**09 11 02.9**	**+0.2**
CELP						⇑eSg	**Sb**	**09 11 06.3**	**-0.3**
CELP						IAML		09 11 06.3	
	comp=N,255nm,0.4s								
MLPR	**Magueyes Islan**	**0.27**	**264**	⇑ePg		Pg	**Pb**	**09 11 03.9**	**+0.3**
MLPR						⇓eSg	**Sb**	**09 11 08.6**	**+0.4**
MLPR						IAML		09 11 09.6	
	comp=N,74nm,0.2s								
CRPR	**Cabo Rojo, PR**	**0.33**	**271**	*i* P		P	**Pb**	**09 11 05.0**	**+0.5**
CRPR						eS	**Sb**	**09 11 09.5**	**-0.1**
CRPR						IAML		09 11 11.9	
	comp=Z,120nm,0.5s								
AOPR	**Arecibo Observ**	**0.35**	**2**	⇑ePg		Pg	**Pb**	**09 11 05.2**	**+0.3**
AOPR						⇑eSg	**Sb**	**09 11 10.2**	**0.0**
AOPR						IAML		09 11 11.4	
	comp=N,308nm,0.2s								
PRSN	**Puerto Rico Se**	**0.42**	**301**	⇑ePg		Pg	**Pb**	**09 11 06.5**	**+0.5**
PRSN						⇑eSg	**Sb**	**09 11 12.4**	**+0.3**
PRSN						IAML		09 11 16.5	
	comp=N,300nm,0.2s								
AGPR	**Aguadilla, PR**	**0.57**	**325**	⇓ePg		Pg	**Pb**	**09 11 08.8**	**+0.4**
AGPR						⇑eSg	**Sn**	**09 11 17.4**	**-0.6**
AGPR						IAML		09 11 20.1	
	comp=N,54nm,0.5s								
SJG	**San Juan**	**0.59**	**79**	⇓ePg		Pg	**Pb**	**09 11 09.1**	**+0.3**
SJG						⇑eSg	**Sb**	**09 11 17.2**	**+0.3**
SJG	**San Juan**	**0.59**	**79**	*i* P		Pb	**Pb**	**09 11 09.1**	**+0.3**
SJG						eS	**Sb**	**09 11 17.4**	**+0.5**
SJG						IAML		09 11 19.0	
	comp=Z,57nm,0.1s								
HATOM	**Hato Mayor del**	**2.61**	**288**	⇓ePg		Pg	**Pb**	**09 11 42.5**	**-0.6**
HATOM						IAML		09 12 24.7	
	comp=N,21nm,2.1s								

MOS 17 09:18:04.6±1.1,46°59N×150°43E,h182km,mb4.1/19, Error ellipse: s-maj=8.2km s-min=6.2km az=83.9
SKHL 17 09:18:04.3±0.1,46°40N×150°60E,h163km±7km,mb5.2/5, msh5.9/5
NEIC 17 09:18:05.4±1.3,46°7N±0°1×150°2E±0°1,h166km±8km, mb4.1/36,Error ellipse: s-maj=20.9km s-min=13.4km az=162.0
IDC 17 09:18:07.0±1.8,46°71N×150°25E,h187km±16km, mb3.5/26,mbtmp4.0/31,Error ellipse: s-maj=14.3km s-min=10.1km az=156.0
JMA 17 09:18:07.3±0.9,46°N±7°×15°E±°,h196km,MV4.0/12, KURILE ISLANDS REGION
ISC 17 09:18:04.3±0.5,46°46N±0°05×150°56E±0°06,h167km, n195,σ1°68/204,mb4.0/59,7C-9D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.24**	**238**	*d* iPN		Pn		**09 18 44.8**	**+1.6**
KUR				*i* S		**Sn**		**09 19 16.9**	**+3.6**
KUR				pmax		pmax			
	comp=N,101nm,0.5s								
KUR				pmax		pmax			
	comp=Z,430nm,0.5s								
KUR				pmax		pmax			
	comp=E,59nm,0.4s								
KUR				smax		smax			
	comp=N,603nm,0.7s								
KUR				smax		smax			
	comp=E,358nm,0.5s								
KUR	**Kuril'sk**	**2.24**	**238**	eP		Pn		**09 18 44.1**	**+0.9**
KUR				AMB		AMB		09 18 45.4	
	comp=E,400nm,0.5s								
KUR				eS		**Sn**		**09 19 15.2**	**+1.9**
KUR				A		A		09 19 20.5	
	comp=E,1μm,0.3s								
KUR				A		A		09 19 20.5	
	comp=E,530nm,0.3s								
SHO	**Shikotan**	**3.69**	**227**	eP		Pn		09 19 10.9	+10
SHO				AMB		AMB		09 19 11.6	
	comp=E,190nm,0.5s								
SHO				eS		**Sn**		**09 19 51.6**	**+6.4**
SHO				A		A		09 19 54.6	
	comp=E,130nm,0.3s								
SHO				A		A		09 19 54.6	
	comp=E,270nm,0.3s								
YUK	**Yuzh-Kuril'sk**	**4.11**	**236**	ePN		**Pn**		**09 19 07.0**	**+0.7**
YUK				*i* S		**Sn**		**09 19 53.9**	**-0.8**
YUK				pmax		pmax			
	comp=Z,457nm,0.5s								
YUK				pmax		pmax			
	comp=N,44nm,0.2s								
YUK				pmax		pmax			
	comp=E,77nm,0.2s								
YUK				smax		smax			
	comp=N,291nm,0.5s								
YUK				smax		smax			
	comp=E,210nm,0.5s								
YUK	**Yuzh-Kuril'sk**	**4.11**	**236**	eP		**Pn**		**09 19 06.9**	**+0.7**
YUK				AMB		AMB		09 19 07.6	
	comp=E,310nm,0.6s								
YUK				eS		**Sn**		**09 19 55.7**	**+1.0**
YUK				A		A		09 19 58.9	
	comp=E,350nm,0.6s								
YUK				A		A		09 19 58.9	
	comp=E,220nm,0.6s								
RUSJ	**Misakicho**	**4.42**	**240**	ePN		**Pn**		**09 19 11.4**	**+1.0**
RUSJ				*i* S		**Sn**		**09 20 07.0**	**+4.9**
GLVR	**Golovnino**	**4.49**	**234**	ePN		**Pn**		**09 19 11.6**	**+0.4**
GLVR				*i* S		**Sn**		**09 20 02.5**	**-1.0**
GLVR				pmax		pmax			
	comp=N,31nm,0.5s								
GLVR				pmax		pmax			
	comp=Z,72nm,0.5s								
GLVR				pmax		pmax			
	comp=E,77nm,0.6s								
GLVR				smax		smax			
	comp=E,248nm,0.4s								
GLVR				smax		smax			
	comp=N,414nm,0.5s								
GLVR	**Golovnino**	**4.49**	**234**	eP		**Pn**		**09 19 11.6**	**+0.4**
GLVR				AMB		AMB		09 19 13.7	
	comp=N,70nm,0.5s								
GLVR				*i* S		**Sn**		**09 20 02.5**	**-1.0**
GLVR				A		A		09 20 08.0	
	comp=N,410nm,0.5s								
GLVR				A		A		09 20 08.0	
	comp=N,250nm,0.5s								
JRA	**Rausu**	**4.59**	**239**	P		Pn		**09 19 13.5**	**+0.9**
NEM2	**Nemuro 2**	**4.61**	**230**	eP		**Pn**		**09 19 11.5**	**-1.3**
NEM2				eS		**Sn**		**09 20 01.9**	**-4.5**
NMR	**Nemuro--Hokkai**	**4.62**	**230**	ePN		**Pn**		**09 19 11.5**	**-1.4**
NMR	**Nemuro--Hokkai**	**4.62**	**230**	eP		**Pn**		**09 19 11.5**	**-1.4**
JNK	**Nakash**	**5.04**	**237**	eP		**Pn**		**09 19 19.9**	**+1.5**
JTKR	**Abashiri--Toko**	**5.32**	**244**	P		Pn		**09 19 23.1**	**+1.1**
JTKR				eS		**Sn**		**09 20 23.6**	**+0.6**
AKK	**Akkeshi**	**5.33**	**232**	eP		**Pn**		**09 19 21.2**	**-1.0**
YSS	**Yuzhno-Sakhali**	**5.39**	**278**	Pn		**Pn**		**09 19 20.1**	**-2.9**
YSS	**Yuzhno-Sakhali**	**5.39**	**278**	ePN		**Pn**		**09 19 24.5**	**+1.5**
YSS				eS		**Sn**		**09 20 27.7**	**+3.1**
YSS				pmax		pmax			
	comp=Z,10.0nm,0.6s								
YSS				smax		smax			
	comp=N,20nm,1.1s								
YSS				smax		smax			
	comp=E,20nm,1.2s								
YSS	**Yuzhno-Sakhali**	**5.39**	**278**	eP		**Pn**		**09 19 24.5**	**+1.5**
JAK	**Akkeshi**	**5.42**	**232**	eP		**Pn**		**09 19 22.4**	**-1.1**
JAK				eS		**Sn**		**09 20 20.6**	**-4.9**
SKR	**Severo-Kuril's**	**5.61**	**39**	ePN		**Pn**		**09 19 25.1**	**-0.7**
SKR				eS		**Sn**		**09 20 24.6**	**-5.2**
SKR				smax		smax			
	comp=N,88nm,0.6s								
SKR				smax		smax			
	comp=E,165nm,0.7s								
SKR				MLR		MLR			
	comp=Z,1μm,13.0s								
SKR	**Severo-Kuril's**	**5.61**	**39**	eP		**Pn**		**09 19 26.1**	**+0.3**
SKR				eS		**Sn**		**09 20 30.9**	**+1.1**
SKR				A		A		09 20 33.3	
	comp=Z,110nm,0.5s								
SKR				A		A		09 20 33.3	
	comp=Z,500nm,0.5s								
JAR	**Ashorobuto**	**5.77**	**239**	P		**Pn**		**09 19 29.1**	**+1.1**
JAR				eS		**Sn**		**09 20 32.0**	**-1.7**
JOB	**Onbets**	**5.97**	**236**	eS		**Sn**		**09 20 34.7**	**-3.6**
JKA	**Kamikawa-asahi**	**6.08**	**250**	Pn		**Pn**		**09 19 34.0**	**+1.9**
JKA	**Kamikawa-asahi**	**6.08**	**250**	eP		**Pn**		**09 19 34.9**	**+2.8**
ASAJ	**Asahikawa**	**6.08**	**250**	P		**Pn**		**09 19 34.9**	**+2.7**
	comp=Z,85nm,0.6s,baz=72,slow=13,SNR=105								
JKK2	**Kamakawa 2**	**6.09**	**248**	P		**Pn**		**09 19 33.9**	**+1.6**
JCH	**Churui**	**6.42**	**236**	eP		**Pn**		**09 19 35.6**	**-0.9**
JCH				eS		**Sn**		**09 20 44.3**	**-4.8**
PAU	**Pauzhetka**	**6.49**	**37**	eP		**Pn**		**09 19 36.8**	**-0.6**
TYV	**Tymovskoe**	**6.84**	**313**	ePN		**Pn**		**09 19 43.2**	**+1.1**
TYV				eS		**Sn**		**09 20 59.8**	**+0.8**
TYV				pmax		pmax			
	comp=Z,6.0nm,1.4s								
TYV				pmax		pmax			
	comp=Z,100nm,4.3s								
TYV				smax		smax			
	comp=E,7.0nm,1.7s								
TYV				smax		smax			
	comp=N,200nm,5.4s								
TYV				smax		smax			
	comp=E,500nm,5.4s								
TYV	**Tymovskoe**	**6.84**	**313**	eP		**Pn**		**09 19 44.3**	**+2.2**
JNBK	**Urakawa-nobuka**	**6.98**	**236**	eP		**Pn**		**09 19 41.6**	**-2.4**
PEA0B	**Petropavlovsk-**	**8.10**	**32**	Pn		**Pn**		**09 19 59.1**	**+0.3**
PEA0B	**Petropavlovsk-**	**8.10**	**32**	⇑ePN		**Pn**		**09 19 59.4**	**+0.7**
PETK	**Petropavlovsk-**	**8.10**	**32**	P		**Pn**		**09 19 58.9**	**+0.1**
	comp=E,5.1nm,0.6s,baz=198,slow=11,SNR=8.7								
PET	**Petropavlovsk**	**8.40**	**36**	⇓ePN		**Pn**		**09 20 03.5**	**+0.8**
PET	**Petropavlovsk**	**8.40**	**36**	eP		**Pn**		**09 20 03.5**	**+0.8**
JTM	**Tenmabayashi**	**8.91**	**234**	Pn		Pn		09 20 06.4	-3.2
JANG	**Nango**	**8.96**	**230**	P		Pn		09 20 06.5	-3.7
NKL	**Nikolayevsk**	**9.25**	**320**	eP		**Pn**		**09 20 16.0**	**+2.1**
TEY	**Ternei**	**9.86**	**267**	eP		**Pn**		**09 20 21.9**	**-0.1**
KLR	**Kul'dur**	**12.93**	**289**	P		**Pn**		**09 21 01.2**	**-0.6**
	comp=E,3.3nm,0.7s,baz=98,slow=12,SNR=13								
KLR	**Kul'dur**	**12.93**	**289**	⇓*i* PN		**Pn**		**09 21 02.7**	**+0.9**
KLR	**Kul'dur**	**12.93**	**289**	eP		**Pn**		**09 21 00.7**	**-1.1**
USRK	**Ussuriysk Ar.**	**13.26**	**267**	P		**Pn**		**09 21 08.1**	**+2.1**
	comp=E,4.6nm,0.6s,baz=71,slow=11,SNR=4.2								
MAJO	**Matsushiro**	**13.54**	**227**	⇓eP		**Pn**		**09 21 12.7**	**+3.0**
HEH	**HeiHe**	**15.83**	**292**	eP		**P**		**09 21 38.0**	**-0.2**
HEH				pmax		pmax			
	comp=Z,12nm,0.8s								
SEY	**Seymchan**	**16.54**	**3**	P		**P**		**09 21 45.2**	**-0.7**
	comp=Z,1.7nm,0.6s,baz=175,slow=8.4,SNR=8.0								
SEY	**Seymchan**	**16.54**	**3**	⇑eP		**P**		**09 21 46.2**	**+0.3**
SEY				pmax		pmax			
	comp=Z,9.0nm,2.0s								
SEY	**Seymchan**	**16.54**	**3**	eP		**P**		**09 21 46.3**	**+0.3**
ZEA	**Zeya**	**16.58**	**305**	eP		**Pn**		**09 21 47.5**	**+0.6**
ZEA				pmax		pmax			
	comp=N,10.0nm,0.6s								
ZEA				pmax		pmax			
	comp=Z,10.0nm,1.3s								
ZEA	**Zeya**	**16.58**	**305**	eP		**Pn**		**09 21 47.5**	**+0.6**
KSRS	**Korea Array**	**19.03**	**250**	P		**P**		**09 22 15.0**	**+1.6**
	comp=Z,0.7nm,0.5s,baz=52,slow=9.7,SNR=1.9								
YAK	**Yakutsk**	**19.65**	**330**	eP		**P**		**09 22 19.5**	**-0.3**
YAK				pmax		pmax			
	comp=Z,13nm,0.9s								
YAK	**Yakutsk**	**19.65**	**330**	eP		**P**		**09 22 21.3**	**+1.5**
BILL	**Bilibino**	**23.10**	**15**	⇓*i* P		**P**		**09 22 54.5**	**-0.4**
BILL				pmax		pmax			
	comp=Z,10.0nm,2.1s								
BILL

comp=Z,9.0nm,2.0s
ZALV Zalesovo Beam 41.34 305 P **P** **09 25 30.7 -2.6**
comp=Z,0.7nm,0.4s,baz=60,slow=9.0,SNR=2.6
comp=Z,0.7nm,0.4s
ZALV Zalesovo Beam 41.34 305 P **P** **09 25 31.3 -2.0**
ZALV Zalesovo Beam 41.34 305 P **P** **09 25 31.3 -2.0**
F30M Barrier River 42.10 33 IAmb IAmb 09 25 46.5
comp=Z,3.6nm,0.8s
INK Inuvik 42.84 32 **P** **09 25 46.6 +1.5**
INK Inuvik 42.84 32 P **P** **09 25 46.7 +1.5**
INK pmax pmax
comp=Z,2.0nm,0.6s
F31M Tsiigehtchic 42.90 33 IAmb IAmb 09 25 58.2
comp=Z,5.8nm,1.4s
QIZ Qiongzhong 43.12 245 P **P** **09 25 50.3 +2.2**
QIZ sP **sP** **09 26 42.8 +0.1**
QIZ S **S** **09 32 04.9 +3.2**
QIZ SS **SS** **09 35 19.0 -1.9**
QIZ LR LR
comp=N,430nm,17.3s
QIZ LR LR
comp=E,310nm,16.4s
QIZ LR LR
comp=Z,530nm,17.3s
MK31 Makanchi Array 45.50 297 P **P** **09 26 05.3 -1.4**
MK31 IAmb IAmb 09 26 06.7
comp=Z,3.8nm,0.9s
MK31 Makanchi Array 45.50 297 P **P** **09 26 05.3 -1.4**
MK31 pmax pmax
comp=Z,4.0nm,0.9s
MKAR Makanchi Array 45.50 297 P **P** **09 26 05.3 -1.3**
comp=Z,2.4nm,0.7s,baz=68,slow=8.0,SNR=30
MKAR ScP **ScP** **09 31 17.4 -1.9**
comp=Z,0.4nm,0.8s,baz=25,slow=4.8,SNR=3.3
comp=Z,2.4nm,0.7s
MKAR Makanchi Array 45.50 297 **P** **09 26 05.6 -1.1**
MKAR Makanchi Array 45.50 297 *i* P **P** **09 26 05.8 -0.9**
MKAR pmax pmax
comp=Z,2.0nm,0.7s
MKAR Makanchi Array 45.50 297 *eP* **P** **09 26 05.8 -0.9**
MAKZ Makanchi 45.69 297 **P** **09 26 06.8 -1.4**
MAKZ Makanchi 45.69 297 P **P** **09 26 06.8 -1.4**
MAKZ pmax pmax
comp=Z,3.0nm,0.9s
KURK Kurchatov 46.05 303 **P** **09 26 08.6 -2.3**
KURK IAmb IAmb 09 26 09.7
comp=Z,2.7nm,0.7s
KURK Kurchatov 46.05 303⇓ *eP* **P** **09 26 09.0 -1.8**
KURK pmax pmax
comp=Z,5.0nm,0.9s
KURK Kurchatov 46.05 303 *eP* **P** **09 26 09.1 -1.8**
KURBB Kurchatov Arra 46.14 303 P **P** **09 26 09.3 -2.2**
comp=Z,1.7nm,0.7s,baz=68,slow=8.4,SNR=9.4
KURBB PcP **PcP** **09 27 44.4 -0.2**
comp=Z,0.3nm,0.7s,baz=79,slow=4.8,SNR=2.0
comp=Z,1.7nm,0.7s
BVAR Borovoye Array 49.67 309 P **P** **09 26 37.1 -1.6**
comp=Z,1.4nm,0.7s,baz=36,slow=7.9,SNR=5.7
BVAR PcP **PcP** **09 27 57.2 -0.1**
comp=Z,0.5nm,0.3s,baz=87,slow=4.4,SNR=2.5
comp=Z,1.4nm,0.7s
BORK Borovoye 49.70 309⇓ *eP* **P** **09 26 37.6 -1.3**
BORK pmax pmax
comp=Z,13nm,3.8s
CHTO Chiang Mai 50.34 255 P **P** **09 26 45.4 +1.3**
CHTO pmax pmax
comp=Z,4.0nm,0.7s
CMAR Chiang Mai Arr 50.59 254 P **P** **09 26 47.4 +1.3**
comp=Z,0.6nm,0.3s,baz=35,slow=8.0,SNR=4.1
comp=Z,0.6nm,0.3s
SHL Shillong 50.60 267 P **P** **09 26 45.6 -0.6**
SHL pmax pmax
comp=Z,14nm,0.7s
KDJ Kajisay 50.95 293 P **P** **09 26 48.6 0.0**
KDJ pmax pmax
comp=Z,6.0nm,1.0s
BOOM Boomskoye usch 51.54 294 P **P** **09 26 53.1 0.0**
BOOM pmax pmax
comp=Z,5.0nm,1.2s
RES Resolute Bay 51.66 18 P **P** **09 26 53.5 +0.3**
comp=Z,3.9nm,0.7s,baz=333,slow=8.4,SNR=21
comp=Z,3.9nm,0.7s
RES Resolute Bay 51.66 18 **P** **09 26 53.5 +0.3**
RES IAmb IAmb 09 26 54.5
comp=Z,5.1nm,0.8s
YKA Yellowknife Ar 52.20 36 P **P** **09 26 58.4 +1.1**
comp=Z,0.1nm,0.3s,baz=305,slow=7.5,SNR=6.0
comp=Z,0.1nm,0.3s
YKA Yellowknife Ar 52.20 36 P **P** **09 26 57.8 +0.4**
AAK Ala-Archa 52.37 295⇑ *iP* **P** **09 26 59.3 +0.1**
AAK pmax pmax
comp=Z,14nm,3.5s
AAK Ala-Archa 52.37 295 *eP* **P** **09 26 59.4 +0.2**
SPITS Spitsbergen Ar 52.58 349 P **P** **09 26 57.9 -2.1**
comp=Z,5.8nm,1.1s,baz=64,slow=9.8,SNR=12
comp=Z,5.8nm,1.1s
ARLS Aral 52.90 295 P **P** **09 27 03.0 0.0**
ARLS pmax pmax
comp=Z,3.0nm,0.7s
KSH2 Kashi 53.59 291 P **P** **09 27 07.3 -0.8**
KSH2 pmax pmax
comp=Z,5.0nm,0.8s
ARTI Arti 54.13 317 *c iP* **P** **09 27 08.8 -2.8**
ARTI S **S** **09 34 33.8 -1.1**
ARTI SS **SS** **09 38 18.5 +0.3**
ARTI pmax pmax
comp=Z,5.0nm,0.8s
KK31 Karatay Array 54.58 298 P **P** **09 27 13.5 -1.6**
KK31 IAmb IAmb 09 27 15.0
comp=Z,3.9nm,1.1s
KK31 Karatay Array 54.58 298 P **P** **09 27 13.5 -1.6**
KK31 pmax pmax
comp=Z,4.0nm,1.1s
KKAR Karatay Array 54.58 298 P **P** **09 27 13.5 -1.6**
KKAR Karatay Array 54.58 298 P **P** **09 27 13.5 -1.6**
NEEM North Greenlan 55.63 6 *i* P **P** **09 27 21.8 -0.6**
AB31 Akbulak array 57.25 309 P **P** **09 27 32.7 -1.2**
ABKAR Akbulak array 57.25 309 P **P** **09 27 32.7 -1.2**
CHGR Chuyangaron 57.96 294⇑ *eP* **P** **09 27 39.0 -0.2**
CHGR pmax pmax
comp=Z,11nm,0.7s
SUMG Summit 61.10 3 P **P** **09 28 00.5 +0.1**
SUMG Summit 61.10 3 *i* P **P** **09 28 00.0 -0.4**
SUMG IAmb IAmb 09 28 02.7
comp=Z,14nm,0.7s
SAATT Saattut 61.95 8 *i* P **P** **09 28 04.8 -0.9**
SAATT IAmb IAmb 09 28 06.0
comp=Z,17nm,0.7s
FINES FINESS Array B 63.53 334 P **P** **09 28 13.8 -2.4**
comp=Z,3.5nm,0.9s,baz=44,slow=7.2,SNR=10
comp=Z,3.5nm,0.9s
FINES FINESS Array B 63.53 334 P **P** **09 28 14.2 -2.0**
FINES FINESS Array B 63.53 334 *i* P **P** **09 28 14.3 -2.0**
FINES pmax pmax
comp=Z,2.0nm,0.6s
NVAR Mina Array Bea 64.12 61 P **P** **09 28 21.8 +1.0**
comp=Z,1.0nm,0.7s,baz=296,slow=7.4,SNR=7.1
comp=Z,1.0nm,0.7s
NVAR Mina Array Bea 64.12 61 P **P** **09 28 21.9 +1.2**
OBN Obninsk 64.54 324 *eP* **P** **09 28 23.2 +0.3**
OBN *e* 09 28 56.2
OBN *e**PP **pP** **09 29 04.0 +3.0**
OBN *e**SP **sP** **09 29 23.2 +4.5**
OBN *e* 09 30 44.3
OBN pmax pmax
comp=Z,4.0nm,0.9s
OBN Obninsk 64.54 324 *eP* **P** **09 28 23.2 +0.3**
PDAR Pinedale Array 66.33 52 P **P** **09 28 36.0 +1.0**
comp=Z,0.7nm,0.6s,baz=282,slow=1.9,SNR=11
comp=Z,0.7nm,0.6s
PDAR Pinedale Array 66.33 52 P **P** **09 28 35.7 +0.8**
WRA Warramunga Arr 67.70 196 P **P** **09 28 43.5 +0.1**
comp=Z,0.4nm,0.7s,baz=13,slow=5.4,SNR=3.0
comp=Z,0.4nm,0.7s
WRA Warramunga Arr 67.70 196 P **P** **09 28 45.9 +2.5**
WRA Warramunga Arr 67.70 196 P **P** **09 28 45.9 +2.5**
NOA NORSAR Array B 67.92 340 P **P** **09 28 42.6 -1.8**
comp=Z,1.4nm,0.7s,baz=30,slow=6.6,SNR=5.5
comp=Z,1.4nm,0.7s
HFS Hagfors 68.09 338 P **P** **09 28 43.6 -1.8**
comp=Z,2.5nm,0.7s,baz=52,slow=5.8,SNR=7.8
comp=Z,2.5nm,0.7s
KBZ Khabaz 69.78 313 P **P** **09 28 53.1 -2.9**
comp=Z,2.1nm,0.9s,baz=0.0,slow=4.0,SNR=2.2
comp=Z,2.1nm,0.9s
AK03 Malin Array Si 70.77 325 P **P** **09 29 00.9 -1.1**
AKASG Malin Array Be 70.79 325 P **P** **09 29 00.3 -1.8**
comp=Z,3.0nm,0.4s,baz=38,slow=6.4,SNR=11
comp=Z,3.0nm,0.4s
AKASG Malin Array Be 70.79 325 P **P** **09 29 00.8 -1.3**
AKASG IAmb IAmb 09 29 09.6
comp=Z,3.4nm,1.4s
AKASG Malin Array Be 70.79 325 P **P** **09 29 00.8 -1.3**
AKASG pmax pmax
comp=Z,3.0nm,1.4s
AKBB Malin Array Si 70.79 325 P **P** **09 29 01.2 -0.9**
AK04 Malin Array Si 70.79 325 P **P** **09 29 01.1 -1.0**
AK01 Malin Array Si 70.80 325 P **P** **09 29 01.2 -1.0**
KIEV Kiev 70.80 325 P **P** **09 29 01.1 -1.1**
comp=Z,46nm,1.5s
AK21 Malin Array Si 70.80 325 P **P** **09 29 01.1 -1.1**
AK22 Malin Array Si 70.80 325 P **P** **09 29 01.1 -1.1**
AK08 Malin Array Si 70.83 325 P **P** **09 29 01.6 -0.7**
AK11 Malin Array Si 70.83 325 P **P** **09 29 01.4 -0.9**
AK02 Malin Array Si 70.83 325 P **P** **09 29 01.4 -0.9**
AK09 Malin Array Si 70.83 325 P **P** **09 29 01.4 -1.0**
AK15 Malin Array Si 70.83 325 P **P** **09 29 01.5 -0.9**
AK06 Malin Array Si 70.89 325 P **P** **09 29 01.8 -0.9**
AK14 Malin Array Si 70.89 325 P **P** **09 29 01.7 -1.0**
AK13 Malin Array Si 70.92 325 P **P** **09 29 01.9 -1.0**
ASAR Alice Springs 71.41 196 P **P** **09 29 07.2 +1.2**
comp=Z,0.7nm,0.8s,baz=12,slow=5.8,SNR=8.6
comp=Z,0.7nm,0.8s
ASAR Alice Springs 71.41 196 P **P** **09 29 07.6 +1.5**
ASAR Alice Springs 71.41 196 P **P** **09 29 07.6 +1.5**
RNPP9 Sopachiv 71.51 327 P **P** **09 29 05.8 -0.6**
NDNU Novodnistrovsk 73.19 325 P **P** **09 29 15.7 -0.7**
KMPD K-Podol'skiy 73.58 325 P **P** **09 29 18.0 -0.7**
SCHQ Schefferville 74.24 21 P **P** **09 29 22.8 +0.3**
comp=Z,1.5nm,0.5s,baz=332,slow=7.3,SNR=3.5
comp=Z,1.5nm,0.5s
SCHQ Schefferville 74.24 21 P **P** **09 29 22.9 +0.5**
STHS Stebnicka Huta 74.86 328 *eP* **P** **09 29 25.9 -0.2**
STHS Stebnicka Huta 74.86 328 *eP* **P** **09 29 25.9 -0.2**
LANS Liptovska Anna 75.72 329 *eP* **P** **09 29 32.3 +1.2**
LANS Liptovska Anna 75.72 329 *eP* **P** **09 29 32.3 +1.2**
CLL Collm 75.98 334 *eP* **P** **09 29 31.0 -1.4**
CLL Collm 75.98 334 *eP* **P** **09 29 31.0 -1.4**
EKA Eskdalemuir Ar 76.18 345 P **P** **09 29 32.7 -0.8**
comp=Z,1.1nm,0.5s,baz=12,slow=5.0,SNR=4.1
comp=Z,1.1nm,0.5s
MLR Muntele Rosu 76.27 323 P **P** **09 29 33.9 -0.5**
comp=Z,3.5nm,0.8s,baz=242,slow=6.4,SNR=4.2
comp=Z,3.5nm,0.8s
BRTR Keskin Array B 77.37 315 P **P** **09 29 39.6 -1.1**
comp=Z,0.9nm,0.9s,baz=76,slow=6.1,SNR=3.7
comp=Z,0.9nm,0.9s
BRTR Keskin Array B 77.37 315 *ce* P **P** **09 29 42.0 +1.3**
GERES GERESS Array B 77.92 332 P **P** **09 29 42.7 -0.8**
comp=Z,0.4nm,0.4s,baz=36,slow=4.8,SNR=3.6
comp=Z,0.4nm,0.4s
TXAR Lajitas 79.16 59 P **P** **09 29 51.4 +0.8**
comp=Z,0.6nm,0.5s,baz=296,slow=4.2,SNR=18
comp=Z,0.6nm,0.5s
DAVOX Davos/Dischmat 80.94 334 P **P** **09 29 59.6 -0.4**
comp=Z,1.8nm,0.7s,baz=85,slow=6.2,SNR=3.9
comp=Z,1.8nm,0.7s
H03N2 Juan Fernandez 140.52 89 T T 12 13 32.8
baz=308,slow=77,SNR=5.8
H03N1 Juan Fernandez 140.53 89 T T 12 13 33.0
baz=308,slow=77,SNR=8.9
H03N3 Juan Fernandez 140.53 89 T T 12 13 35.4
baz=308,slow=77,SNR=7.5
PLCA Paso Flores 149.94 94 PKPbc **PKPbc** **09 37 34.7 +0.4**
comp=Z,1.5nm,0.9s,baz=286,slow=1.4,SNR=5.5

IDC 17 09:26:34.2±3.7, 55.92N×86.39E, h0km, mbtmp2.6/3, ML1.9/3, Error ellipse: s-maj=30.9km s-min=29.4km az=16.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**2.17**	**205**	I		I	I	09 40 50.0	
	baz=24,slow=337,SNR=9.5								
ZALV	**Zalesovo Beam**	**2.17**	**205**	Pn		Pn	Pn	09 27 12.3	+0.7
	0.7nm,0.3s,baz=21,slow=16,SNR=24								
ZALV				Lg		Lg	Lg	09 27 43.2	
	2.3nm,0.3s,baz=26,slow=25,SNR=12								
	7.6nm,0.7s								
KURBB	**Kurchatov Arra**	**7.09**	**225**	Pn		Pn	Pn	09 28 18.8	-0.3
	baz=42,slow=14,SNR=4.1								
KURBB				Lg		Lg	Lg	09 30 19.4	
	baz=42,slow=32,SNR=1.7								
	0.4nm,0.6s								
MKAR	**Makanchi Array**	**9.49**	**197**	Pn		Pn	Pn	09 28 51.7	-0.3
	baz=18,slow=19,SNR=1.9								
	0.1nm,0.6s								

IDC 17 09:30:34.0±1.6, 54.62N×83.75E, h0km, mbtmp2.8/3, ML2.5/3, Error ellipse: s-maj=15.3km s-min=9.7km az=8.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.92**	**137**	I		I	I	09 36 10.0	
	0.1nm,0.8s,baz=317,slow=335,SNR=5.5								
ZALV	**Zalesovo Beam**	**0.92**	**137**	Pg		Pg	Pg	09 30 51.4	-0.2
	2.4nm,0.3s,baz=317,slow=12,SNR=14								
ZALV				Lg		Lg	Lg	09 31 05.0	
	10nm,0.3s,baz=320,slow=30,SNR=15								
KURBB	**Kurchatov Arra**	**5.11**	**221**	Pn		Pn	Pn	09 31 52.2	+0.4
	0.1nm,0.3s,baz=40,slow=13,SNR=8.1								
KURBB				Lg		Lg	Lg	09 33 12.7	
	0.1nm,0.3s,baz=38,slow=32,SNR=5.0								
	0.2nm,0.3s								
MKAR	**Makanchi Array**	**7.89**	**187**	Pn		Pn	Pn	09 32 29.9	0.0
	0.1nm,0.3s,baz=6.1,slow=12,SNR=5.5								
	0.1nm,0.3s								
BVAR	**Borovoye Array**	**8.07**	**264**	Pn		Pn	Pn	09 32 31.5	-0.8
	0.1nm,0.3s,baz=67,slow=13,SNR=4.3								
	0.7nm,0.3s								

IDC 17 09:30:43.2±2.4, 6.84S×128.60E, h0km, mb3.2/1, mbtmp3.4/4, ML3.6/3, Error ellipse: s-maj=106.3km s-min=29.6km az=74.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.55**	**194**	Pn		Pn	Pn	09 33 30.2	+0.6
	0.2nm,0.3s,baz=20,slow=10,SNR=8.4								
FITZ				Sn		Sn	Sn	09 35 25.9	-14
	0.2nm,0.3s,baz=45,slow=10,SNR=2.9								
	0.7nm,0.5s								
WRA	**Warramunga Arr**	**14.17**	**157**	Pn		Pn	Pn	09 34 05.0	-0.3
	0.2nm,0.3s,baz=332,slow=13,SNR=18								
WRA				Sn		Sn	Sn	09 36 28.1	-15
	0.4nm,0.3s,baz=321,slow=24,SNR=11								
	0.2nm,0.3s								
ASAR	**Alice Springs**	**17.49**	**164**	P		Pn	Pn	09 34 48.5	-0.3
	0.2nm,0.3s,baz=337,slow=9.9,SNR=42								
ASAR				S		Sn	Sn	09 37 45.8	-18
	0.2nm,0.5s,baz=339,slow=25,SNR=4.1								
	1.1nm,0.5s								
MKAR	**Makanchi Array**	**67.34**	**327**	P		P	P	09 41 40.2	0.0
	0.1nm,0.4s,baz=121,slow=7.2,SNR=1.9								
	0.1nm,0.4s								

*KRNET **17** 09:40:47.0±0.1, 42.86N×78.09E, h19km, mb2.7*
*SOME **17** 09:40:47.7, 42.88N×78.07E, h15km*

ISC 17 09:40:46.8±1.1, 42.85N±0.03×78.05E±0.02, h4km±11km, n19, σ1§51/38, 6C-2D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SATY	**Saty**	**0.33**	**51**	*eP*		**Pg**	**Pg**	**09 40 53.4**	**+0.1**
	20nm,0.1s								
SATY				*eS*		**Sg**	**Sg**	**09 40 57.7**	**0.0**
	67nm,0.1s								
PRZ	**Przheval'sk**	**0.45**	**145**⇓	*iP*		**Pg**		**09 40 56.4**	**+0.9**
PRZ				⇓*iS*		**Sg**		**09 41 01.8**	**+0.4**
KPKS	**Kokpek**	**0.77**	**37**	*eP*		**Pb**		**09 41 01.2**	**-1.6**
	1.3nm,0.1s								
KPKS				*eS*		**Sg**		**09 41 11.1**	**-0.5**
	14nm,0.2s								
UZB	**Uzynbulak**	**0.77**	**67**	*eP*		**Pg**		**09 41 00.7**	**-1.0**
	5.6nm,0.1s								
UZB				*eS*		**Sg**		**09 41 10.2**	**-1.5**
	21nm,0.1s								
KOTS	**Kotyrbulak**	**0.79**	**299**	*eP*		**Pb**		**09 41 02.6**	**-0.6**
	28nm,0.2s								
KOTS				*eS*		**Sb**		**09 41 13.3**	**-0.9**
	30nm,0.3s								
TNSS	**Tian-Shan**	**0.83**	**283**	*eP*		**Pb**		**09 41 03.4**	**-0.6**
	0.9nm,0.1s								
TNSS				*eS*		**Sb**		**09 41 14.8**	**-1.0**
	7.0nm,0.2s								
KDJ	**Kajisay**	**0.97**	**222**⇑	*iP*		**Pb**		**09 41 05.5**	**-0.7**
KDJ				⇑*iS*		**Sb**		**09 41 18.7**	**-0.7**
IZV	**Izvestkoviy**	**1.07**	**280**	*eP*		**Pb**		**09 41 06.9**	**-1.2**
	6.4nm,0.2s								
IZV				*eS*		**Sb**		**09 41 20.9**	**-1.6**
	52nm,0.4s								
SHLS	**Shalkode**	**1.08**	**73**	*eP*		**Pg**		**09 41 12.0**	**+4.5**
	8.4nm,0.2s								
SHLS				*eS*		**Sn**		**09 41 29.7**	**+5.4**
	8.8nm,0.2s								
TARG	**Taragay, Kyrgy**	**1.14**	**189**⇑	*iP*		**Pn**		**09 41 08.1**	**-1.8**
TARG				⇑*iS*		**Sb**		**09 41 23.8**	**-0.7**
MTBS	**Maitube**	**1.22**	**284**	*eP*		**Pb**		**09 41 10.2**	**-0.3**
	3.1nm,0.1s								
MTBS				*eS*		**Sn**		**09 41 26.4**	**-1.4**
	11nm,0.1s								
KTBS	**Karatobe**	**1.32**	**311**	*eP*		**Pb**		**09 41 12.0**	**-0.2**
	2.9nm,0.1s								
KTBS				*eS*		**Sg**		**09 41 29.7**	**+0.5**
	2.7nm,0.1s								
ARXS	**Arharly**	**1.37**	**353**	*eP*		**Pb**		**09 41 12.5**	**-0.6**
	2.2nm,0.1s								
ARXS				*eS*		**Sg**		**09 41 30.6**	**-0.3**
	19nm,0.1s								
KST	**Kastek**	**1.54**	**278**	*eP*		**Pb**		**09 41 16.1**	**0.0**
	1.4nm,0.2s								
KST				*eS*		**Sg**		**09 41 36.8**	**+0.3**
	9.6nm,0.2s								
BOOM	**Boomskoye usch**	**1.60**	**258**⇑	*iP*		**Pn**		**09 41 16.0**	**0.0**
BOOM				⇑*iS*		**Sb**		**09 41 38.2**	**+0.6**
DGS	**Degeres**	**1.72**	**284**	*eP*		**Pb**		**09 41 19.1**	**+0.2**
	0.6nm,0.1s								
DGS				*eS*		**Sg**		**09 41 41.8**	**-0.1**
	7.9nm,0.2s								
KTMS	**Ketmen**	**1.79**	**70**	*eP*		**Pb**		**09 41 18.8**	**-1.4**
	0.5nm,0.1s								
KTMS				*eS*		**Sb**		**09 41 41.1**	**-1.9**
	4.8nm,0.1s								
KRBS	**Karabastau**	**1.93**	**297**	*eP*		**Pb**		**09 41 22.5**	**-0.1**
	1.6nm,0.2s								
KRBS				*eS*		**Sb**		**09 41 47.8**	**+0.8**
	14nm,0.2s								
DJR	**Jarkent**	**1.95**	**40**	*eP*		**Pb**		**09 41 22.3**	**-0.6**
	1.5nm,0.2s								
DJR				*eS*		**Sb**		**09 41 47.2**	**-0.3**
	3.5nm,0.3s								

IDC 17 10:17:22.6±364.0, 50.31N×46.63E, h0km, Error ellipse: s-maj=138.5km s-min=131.2km az=58.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**7.30**	**85**	I		I	I	11 01 50.0	
	0.2nm,0.6s,baz=273,slow=321,SNR=5.3								
I43RU	**DUBNA INFRASON**	**8.52**	**323**	I		I	I	11 08 10.0	
	baz=135,slow=332,SNR=1.2								
I46RU	**ZALESOVO INFRA**	**23.53**	**66**	I		I	I	12 41 10.0	
	baz=276,slow=326,SNR=1.4								

IDC 17 10:37:03.9±313.0, 56.93N×30.45E, h0km, Error ellipse: s-maj=126.7km s-min=74.3km az=89.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**3.73**	**90**	I		I	I	11 00 02.0	
	baz=272,slow=328,SNR=2.9								
I26DE	**FREYUNG INFRAS**	**12.91**	**238**	I		I	I	12 00 00.0	
	baz=42,slow=336,SNR=1.1								
I37NO	**I37NO**	**13.29**	**341**	I		I	I	11 48 10.0	
	baz=148,slow=321,SNR=0.7								
I31KZ	**AKTYUBINSK INF**	**17.52**	**100**	I		I	I	12 26 00.0	
	baz=300,slow=326,SNR=0.9								

IDC 17 10:45:56.5±1.9, 10.56S×124.58E, h0km, mb3.4/1, mbtmp3.6/4, ML3.6/3, Error ellipse: s-maj=45.6km s-min=13.1km az=30.0, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**0.97**	**291**	Pg		Pb	Pb	10 46 16.4	+0.2
	107nm,0.3s,baz=167,slow=4.8,SNR=51								
BATI				Lg		Lg	Lg	10 46 27.7	
	115nm,0.3s,baz=353,slow=3.9,SNR=10								
FITZ	**Fitzroy Crossi**	**7.57**	**172**	Pn		Pn	Pn	10 47 47.8	-0.4
	0.9nm,0.3s,baz=358,slow=9.1,SNR=50								
FITZ				Sn		Sn	Sn	10 49 06.3	-8.5
	2.2nm,0.3s,baz=254,slow=22,SNR=12								
	3.4nm,0.5s								
WRA	**Warramunga Arr**	**13.25**	**136**	Pn		Pn	Pn	10 49 07.0	+0.9
	0.2nm,0.3s,baz=307,slow=15,SNR=20								
WRA				Sn		Sn	Sn	10 51 26.6	-7.7
	0.5nm,0.3s,baz=310,slow=24,SNR=8.1								
	1.2nm,0.8s								
ASAR	**Alice Springs**	**15.78**	**147**	Pn		Pn	Pn	10 49 40.2	-0.1
	0.4nm,0.3s,baz=318,slow=12,SNR=57								
ASAR				Sn		Sn	Sn	10 52 27.1	-8.9
	0.3nm,0.3s,baz=319,slow=23,SNR=9.8								
	1.4nm,0.6s								
MKAR	**Makanchi Array**	**68.44**	**330**	P		P	P	10 56 59.6	-0.7
	0.2nm,0.5s,baz=147,slow=6.8,SNR=3.1								
	0.2nm,0.5s								

*LDG **17** 10:47:10.9±0.1, 43.09N×0.59W, h2km, Md2.7/2, Ml2.6/10, Error ellipse: s-maj=1.2km s-min=1.1km az=169.0*
*MDD **17** 10:47:11.7±0.2, 43.05N×0.60W, h0km, mb_Lg2.5/23, Error ellipse: s-maj=2.3km s-min=1.2km az=9.0*
*STR **17** 10:47:11.1±0.0, 43.1N±0.1×0.63W±0.07, h2km, MLv2.1/10, LOCSAT earthModelID pyrenees_taup-2.11 preliminary*

ISC 17 10:47:09.9±0.8, 43.09N±0.02×0.60W±0.02, h16km±5km, n34, σ1§15/68, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ATE	**Arette**	**0.07**	**263**	Pg		**Pg**	**Pg**	**10 47 12.6**	**-0.5**
ATE				Sg		Sg	Sg	10 47 14.3	-0.9
REYF	**Montagne du Re**	**0.15**	**99**	Pg		**Pb**	**Pb**	**10 47 14.2**	**-0.3**
REYF				Sg		**Sg**	**Sg**	**10 47 17.1**	**+0.2**
ETSF	**Etsaut**	**0.20**	**171**	*e*Pg		**Pb**	**Pb**	**10 47 14.5**	**-0.8**
ETSF				*e*Sg		**Sg**	**Sg**	**10 47 17.2**	**-0.7**
	294nm,0.3s								
ORDF	**Ordiarp**	**0.27**	**296**	Pg		**Pg**	**Pg**	**10 47 16.1**	**+0.3**
ORDF				Sg		Sg	**Sb**	**10 47 21.0**	**+0.1**
URDF	**Urds**	**0.34**	**1**	Pg		**Pb**	**Pb**	**10 47 18.1**	**+0.3**
URDF				Sg		Sg	**Sb**	**10 47 24.8**	**+1.8**
SJPF	**Ste Jean**	**0.46**	**273**	*e*Pg		**Pb**	**Pb**	**10 47 19.5**	**-0.1**
SJPF				*e*Sg		**Sg**	**Sg**	**10 47 25.9**	**+0.6**
	52nm,0.2s								
LABF	**Labassere**	**0.50**	**95**	Pg		**Pb**	**Pb**	**10 47 20.1**	**-0.2**
LABF				Sg		Sg	**Sb**	**10 47 28.2**	**+0.8**
VIEF	**Viey**	**0.50**	**114**	Pg		**Pb**	**Pb**	**10 47 20.3**	**-0.2**
VIEF				Sg		Sg	**Sb**	**10 47 27.4**	**-0.2**
EORO	**Oroz-Betelu**	**0.56**	**249**	Pg		**Pb**	**Pb**	**10 47 21.8**	**+0.4**
EORO				Sg		Sg	**Sb**	**10 47 29.1**	**0.0**
EORO				*i*	IVmb_Lg			10 47 33.0	
EPF	**Esparros**	**0.69**	**95**	*e*Pg		**Pb**	**Pb**	**10 47 24.3**	**+0.6**
EPF				*e*Sg		**Sg**	**Sb**	**10 47 32.8**	**-0.2**
	18nm,0.2s								
TERF	**Tercis-les-Bai**	**0.69**	**328**	Pg		**Pb**	**Pb**	**10 47 24.6**	**+0.9**
TERF				Sg		Sg	**Sn**	**10 47 36.3**	**+0.8**
ECHI	**Chisagues Biel**	**0.73**	**126**	Pg		**Pb**	**Pb**	**10 47 24.2**	**-0.1**
ECHI				Sg		Sg	**Sb**	**10 47 33.3**	**-0.7**
EARA	**Aranguren**	**0.79**	**246**	Pg		**Pn**	**Pn**	**10 47 26.1**	**-0.3**
EARA				Sg		Sg	**Sn**	**10 47 37.2**	**-0.7**
EARA				*i*	IVmb_Lg			10 47 46.8	
MLZA	**Monlezun-d-Arm**	**0.81**	**25**	Pg		**Pb**	**Pb**	**10 47 26.9**	**+1.2**
MLZA				Sg		Sg	**Sn**	**10 47 39.9**	**+1.5**
MELF	**Melles**	**1.02**	**102**	Pg		**Pn**	**Pn**	**10 47 30.3**	**+0.6**
MELF				Sg		Sg

GENF					Sg	**Sg**	**10 48 03.5**	**+1.4**
DUNF	**Dun**	**1.77**	**91**		Pg	**Pg**	**10 47 43.4**	**-0.5**
DUNF					Sg	**Sg**	**10 48 09.6**	**+2.7**
EMIR	**Miracle**	**1.97**	**126**		Pg	**Pg**	**10 47 47.7**	**+0.1**
EMIR					Sg	**Sg**	**10 48 13.6**	**+0.4**
EMIR					*i* IVmb_Lg		10 48 17.2	
MTLF	**Montolieu**	**2.08**	**82**		*e*Pg	**Pg**	**10 47 48.6**	**-1.2**
MTLF					*e*Sg	**Sg**	**10 48 15.5**	**-1.2**
	9.0nm,0.3s							
LFF	**La Frestale**	**2.08**	**27**		*e*Pg	**Pb**	**10 47 49.2**	**+1.8**
LFF					*e*Sg	**Sg**	**10 48 16.5**	**-0.4**
	3.4nm,0.2s							
EPOB	**Poblet**	**2.14**	**144**		Pg	**Pg**	**10 47 50.0**	**-1.0**
EPOB					Sg	**Sg**	**10 48 18.2**	**-0.6**
EPOB					*i* IVmb_Lg		10 48 21.1	
ERTA	**Horta de San J**	**2.25**	**162**		Pg	**Pg**	**10 47 51.9**	**-1.1**
ERTA					Sg	**Sg**	**10 48 21.3**	**-0.8**
ERTA					*i* IVmb_Lg		10 48 27.1	
E0901	**Celadas (Terue**	**2.64**	**189**		Sn	**Sn**	**10 48 24.0**	**+0.2**
CAF	**Calviac**	**2.66**	**45**		*e*Pn	**Pn**	**10 47 52.7**	**+0.6**
CAF					*e*Pg	**Pg**	**10 48 00.4**	**-0.4**
CAF					*e*Sg	**Sg**	**10 48 34.8**	**-0.5**
	4.2nm,0.2s							
RJF	**Les Rejaudoux**	**2.68**	**34**		*e*Pg	**Pg**	**10 48 00.6**	**-0.8**
RJF					*e*Sn	**Sn**	**10 48 24.2**	**-0.5**
RJF					*e*Sg	**Sg**	**10 48 35.8**	**-0.4**
	2.9nm,0.2s							
EMOS	**Mosqueruela**	**2.73**	**178**		Pg	**Pb**	**10 47 59.3**	**+0.8**
EMOS					*i* IVmb_Lg		10 48 26.9	
EMOS					Sn	**Sn**	**10 48 27.5**	**+1.4**
EMOS					Sg	**Sg**	**10 48 35.9**	**-1.7**
LASF	**Ste Croix**	**3.38**	**72**		*e*Pn	**Pn**	**10 48 02.9**	**+0.8**
LASF					*e*Pg	**Pg**	**10 48 14.2**	**-0.6**
LASF					*e*Sn	**Sn**	**10 48 41.5**	**-0.5**
LASF					*e*Sg	**Sg**	**10 48 56.6**	**-2.0**
	2.1nm,0.2s							
MFF	**Saint Martin d**	**3.52**	**5**		*e*Sg	**Sg**	**10 49 01.0**	**-2.0**
	3.4nm,0.4s							
TCF	**Toulx Ste Croi**	**3.77**	**31**		*e*Pg	**Pg**	**10 48 20.6**	**-1.5**
TCF					*e*Sg	**Sg**	**10 49 08.6**	**-2.4**
	2.5nm,0.2s							
BGF	**Bois d'Agland**	**4.24**	**34**		*e*Sg	**Sg**	**10 49 24.1**	**-2.0**
	4.7nm,0.3s							
AVF	**Avril sur Loir**	**4.64**	**36**		*e*Sg	**Sg**	**10 49 35.2**	**-3.6**
	1.4nm,0.3s							
SMF	**Signal de Mont**	**4.75**	**40**		*e*Sg	**Sg**	**10 49 40.0**	**-2.4**
	1.1nm,0.2s							

ISC 17 10:51:23.9±1.4,**48°.78N**±0°.06×**18°.07E**±0°.07,**h10**km,**n5,**
σ**0°56/9,Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAVC	**Velka Javorina**	**0.27**	**286**	*e*PG	**Pg**	**10 51 29.2**	**-0.3**
JAVC				*e*SG	**Sg**	**10 51 33.7**	**+0.5**
MODS	**Modra-Piesok**	**0.67**	**232**	*e*PG	**Pg**	**10 51 36.0**	**-0.8**
MODS				*e*SG	**Sb**	**10 51 47.3**	**+0.4**
LANS	**Liptovska Anna**	**0.99**	**68**	*e*PG	**Pb**	**10 51 43.6**	**+0.4**
MORC	**Moravsky Berou**	**1.05**	**341**	*e*PG	**Pg**	**10 51 43.6**	**-0.5**
MORC				*e*SG	**Sg**	**10 51 57.4**	**-0.4**
VRAC	**Vranov**	**1.10**	**299**	*e*PG	**Pg**	**10 51 44.7**	**-0.4**
VRAC				*e*SG	**Sb**	**10 51 59.8**	**+0.3**

*IDC **17** 10:55:24.2±0.8,22°.60N×45°.05W,h0km,mb3.8/10,*
mbtmp3.8/10,MS3.5/19,Error ellipse: s-maj=24.5km
s-min=23.1km az=53.0

ISC 17 10:55:26.0±0.7,**22°.5N**±0°.1×**45°.1W**±0°.2,**h14**km,**n34,**
σ**1s51/11,mb4.0/10,MS3.5/19,Northern Mid-Atlantic**
Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**20.25**	**261**	LR	LR	11 06 09.0	
	comp=Z,86nm,20.9s,baz=82,slow=32						
ROSC	**El Rosal**	**33.30**	**243**	LR	LR	11 14 16.8	
	comp=Z,70nm,21.2s,baz=59,slow=34						
SADO	**Sadowa**	**35.65**	**317**	LR	LR	11 16 39.5	
	comp=Z,79nm,18.6s,baz=121,slow=36						
TKL	**Tuckaleechee C**	**36.06**	**300**	LR	LR	11 14 06.2	
	comp=Z,100nm,19.2s,baz=66,slow=31						
MDT	**Midelt**	**37.08**	**65**	LR	LR	11 15 35.1	
	comp=Z,56nm,18.4s,baz=250,slow=33						
BDFB	**Brasilia**	**38.01**	**185**	P	**P**	**11 02 44.1**	**0.0**
	3.9nm,0.8s,baz=331,slow=8.4,SNR=3.9						
	3.9nm,0.8s						
JTS	**Las Juntas de**	**40.02**	**259**	LR	LR	11 16 46.9	
	comp=Z,59nm,21.1s,baz=41,slow=32						
DBIC	**Dimbokro**	**41.80**	**106**	LR	LR	11 18 39.8	
	comp=Z,54nm,18.2s,baz=329,slow=33						
H10N2	**ASCENSION HYDR**	**42.48**	**132**	T	T	11 48 18.8	
	baz=316,slow=75,SNR=72						
H10N3	**ASCENSION HYDR**	**42.48**	**132**	T	T	11 48 17.2	
	baz=316,slow=75,SNR=83						
H10N1	**ASCENSION HYDR**	**42.50**	**132**	T	T	11 48 18.5	
	baz=316,slow=75,SNR=145						
H10S3	**ASCENSION HYDR**	**43.17**	**133**	T	T	11 49 13.7	
	baz=314,slow=74,SNR=14						
H10S2	**ASCENSION HYDR**	**43.19**	**133**	T	T	11 49 20.5	
	baz=266,slow=74,SNR=17						
LPAZ	**La Paz**	**44.68**	**212**	P	**P**	**11 03 41.7**	**+2.3**
	1.4nm,0.8s,baz=339,slow=4.0,SNR=4.7						
	1.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**45.31**	**94**	P	**P**	**11 03 42.8**	**-1.1**
	1.8nm,1.0s,baz=285,slow=9.1,SNR=5.2						
	1.8nm,1.0s						
ULM	**Lac du Bonnet**	**48.18**	**318**	LR	LR	11 22 25.4	
	comp=Z,93nm,18.3s,baz=16,slow=34						
CPUP	**Villa Florida**	**49.97**	**194**	P	**P**	**11 04 17.7**	**-2.1**
	1.7nm,0.8s,baz=24,slow=12,SNR=6.0						
TXAR	**Lajitas Array**	**52.70**	**290**	P	**P**	**11 04 40.8**	**+0.3**
	0.5nm,0.9s,baz=57,slow=9.1,SNR=4.8						
	0.5nm,0.9s						
VAE	**Valguarnera**	**52.83**	**59**	LR	LR	11 25 16.9	
	comp=Z,58nm,18.5s,baz=187,slow=34						
NOA	**NORSAR Array B**	**54.39**	**30**	LR	LR	11 23 31.8	
	comp=Z,52nm,19.1s,baz=351,slow=31						
ANMO	**Albuquerque**	**54.51**	**298**	LR	LR	11 26 42.5	
	comp=Z,37nm,20.8s,baz=65,slow=34						
PDAR	**Pinedale Array**	**56.59**	**307**	P	**P**	**11 05 08.4**	**-0.3**
	0.6nm,0.8s,baz=114,slow=6.6,SNR=5.9						
	0.6nm,0.8s						
LPIG	**La Paz**	**59.45**	**285**	LR	LR	11 34 16.6	
	comp=Z,38nm,19.0s,baz=12,slow=39						
YKA	**Yellowknife Ar**	**60.86**	**330**	P	**P**	**11 05 36.0**	**-1.8**
	0.2nm,0.8s,baz=98,slow=7.0,SNR=7.6						
	0.2nm,0.8s						
ELK	**Elko**	**60.95**	**305**	LR	LR	11 29 43.4	
	comp=Z,71nm,21.0s,baz=84,slow=34						
NVAR	**Mina Array Bea**	**63.58**	**303**	LR	LR	11 31 15.2	
	comp=Z,74nm,20.3s,baz=70,slow=34						
YBH	**Yreka Blue Hor**	**66.40**	**307**	LR	LR	11 33 19.2	
	comp=Z,5.1nm,19.8s,baz=57,slow=34						
BRTR	**Keskin Array B**	**67.54**	**55**	P	**P**	**11 06 24.2**	**+1.9**
	0.8nm,0.7s,baz=308,slow=7.1,SNR=3.5						
	0.8nm,0.7s						
TSUM	**Tsumeb**	**73.90**	**119**	LR	LR	11 30 52.6	
	comp=Z,25nm,20.0s,baz=332,slow=29						
ILAR	**Eielson Array**	**74.78**	**334**	P	**P**	**11 07 06.0**	**+0.5**
	2.2nm,0.8s,baz=72,slow=4.6,SNR=19						
ILAR				LR	LR	11 39 58.6	
	comp=Z,44nm,18.4s,baz=77,slow=36						
	2.2nm,0.8s						
BVAR	**Borovoye Array**	**86.38**	**33**	P	**P**	**11 08 08.1**	**+0.2**
	0.6nm,0.7s,baz=307,slow=5.2,SNR=1.7						
	0.6nm,0.7s						
KURBB	**Kurchatov Arra**	**91.87**	**32**	P	**P**	**11 08 34.0**	**+0.2**
	0.4nm,0.5s,baz=304,slow=4.7,SNR=4.7						
	0.4nm,0.5s						
SNAA	**Sanae**	**98.29**	**168**	LR	LR	11 47 38.3	
	comp=Z,35nm,19.8s,baz=182,slow=32						
OPO	**Ambohidratompo**	**98.91**	**106**	LR	LR	11 48 28.7	
	comp=Z,54nm,21.6s,baz=208,slow=32						

*IDC **17** 11:14:09.2±1.7,32°.77S×178°.26W,h0km,mb4.2/4,*
mbtmp4.2/5,ML4.0/1,MS4.3/2,Error ellipse: s-maj=40.8km
s-min=34.7km az=57.0
*NEIC **17** 11:14:10.4±1.1,32°.74S±0°.05×178°.1W±0°.2,h10km±1km,*
mb4.5/11,Error ellipse: s-maj=29.3km s-min=3.5km
az=106.0

ISC 17 11:14:13.4±0.9,**32°.72S**±0°.09×**178°.3W**±0°.2,**h33**km,**n22,**
σ**1s02/21,mb4.4/10,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.47**	**5**	Pn	**Pn**	**11 15 03.3**	**-1.8**
URZ	**Urewera**	**6.68**	**213**	Pn	**Pn**	**11 15 47.8**	**-1.3**
	2.7nm,0.3s,baz=263,slow=3.5,SNR=20						
URZ				Sn	**Sn**	**11 17 02.0**	**-2.0**
	5.2nm,0.3s,baz=240,slow=6.1,SNR=16						
	7.6nm,0.3s						
RTZ	**Ruatahuna**	**7.03**	**212**	Pn	**Pn**	**11 15 52.7**	**-1.3**
CTA	**Charters Tower**	**34.00**	**283**	P	**P**	**11 20 54.4**	**+0.2**
	5.6nm,0.9s,baz=99,slow=14,SNR=2.0						
	5.6nm,0.9s						
CTAO	**Charters Tower**	**34.00**	**283**	P	**P**	**11 20 54.7**	**+0.5**
BBOO	**Buckleboo**	**38.15**	**257**	P	**P**	**11 21 30.8**	**+1.1**
BBOO				IAmb	IAmb	11 21 42.8	
	comp=Z,20nm,1.5s						
ASAR	**Alice Springs**	**42.79**	**270**	P	**P**	**11 22 09.3**	**+1.2**
	comp=Z,2.0nm,0.8s,baz=112,slow=7.6,SNR=15						
	comp=Z,2.0nm,0.8s						
WR0	**Warramunga Arr**	**43.81**	**275**	P	**P**	**11 22 17.3**	**+0.9**
WR0				IAmb	IAmb	11 22 48.5	
	comp=Z,7.1nm,1.4s						
WRAB	**Tennant Creek**	**43.98**	**275**	P	**P**	**11 22 17.7**	**-0.1**
WRAB				IAmb	IAmb	11 23 00.1	
	comp=Z,10nm,1.4s						
WRA	**Warramunga Arr**	**43.99**	**275**	P	**P**	**11 22 18.8**	**+1.1**
	comp=Z,1.3nm,0.3s,baz=115,slow=7.9,SNR=14						
	comp=Z,1.3nm,0.3s						
WRA	**Warramunga Arr**	**43.99**	**275**	P	**P**	**11 22 18.9**	**+1.1**
WB0	**Warramunga Arr**	**44.02**	**275**	P	**P**	**11 22 18.5**	**+0.4**
WB0				IAmb	IAmb	11 22 19.5	
	comp=Z,3.9nm,0.6s						
FORT	**Forrest**	**45.26**	**257**	P	**P**	**11 22 28.5**	**+0.7**
FORT				IAmb	IAmb	11 23 05.0	
	comp=Z,6.6nm,1.0s						
VNDA	**Vanda**	**45.77**	**186**	P	**P**	**11 22 31.8**	**+0.6**
CASY	**Casey**	**52.98**	**209**	P	**P**	**11 23 26.6**	**+0.2**
QSPA	**South Pole Qui**	**57.40**	**180**	P	**P**	**11 23 58.9**	**+0.5**
	comp=Z,1.6nm,1.0s,baz=109,slow=3.1,SNR=2.8						
	comp=Z,1.6nm,1.0s						
QSPA	**South Pole Qui**	**57.40**	**180**	P	**P**	**11 23 59.1**	**+0.7**
QSPA				IAmb	IAmb	11 24 13.3	
	comp=Z,2.9nm,0.8s						
RPN	**Rapa Nui**	**59.09**	**104**	LR	LR	11 45 43.6	
	comp=Z,27nm,19.2s,baz=25,slow=32						
BELA	**Belgrano 2**	**67.53**	**172**	P	**P**	**11 25 06.1**	**+0.3**
BELA				IAmb	IAmb	11 25 11.0	
	comp=Z,4.3nm,1.3s						
USHA	**Ushuaia**	**74.15**	**146**	LR	LR	11 51 13.3	
	comp=Z,μm,20.6s,baz=118,slow=30						
KURBB	**Kurchatov Arra**	**122.49**	**313**	PKP	**PKiKP**	**11 33 05.2**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=94,slow=1.0,SNR=5.5						
FINES	**FINESS Array B**	**147.22**	**339**	PKPbc	**PKPab**	**11 33 53.7**	**-0.5**
	comp=Z,3.7nm,0.9s,baz=58,slow=4.4,SNR=6.1						

*TAP **17** 11:47:21.5,24°.89N×122°.09E,h111km,ML3.5,C*
*JMA **17** 11:47:21.5±0.2,24°.8N±1°.0×122°.0E±0°.5,h112km±2km,*
MV2.4/12,TAIWAN REGION

ISC 17 11:47:21.4±1.4,**24°.87N**±0°.03×**122°.08E**±0°.03,**h114**km±6km,
n127,σ**0s83/252,11C-1D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.14**	**258**	*i* P	**Pn**	**11 47 37.3**	**+0.2**
EGS				*e*S	**Sn**	**11 47 48.5**	**-0.4**
TWB1	**Santiao Chiao**	**0.16**	**329**	↑*i*P	**Pn**	**11 47 37.2**	**0.0**
TWB1				S	**Sn**	**11 47 47.8**	**-1.3**
TIPB	**Shuangxi**	**0.25**	**293**	↑*i*P	**Pn**	**11 47 37.4**	**0.0**
TIPB				*i* S	**Sn**	**11 47 48.3**	**-1.3**
SXI1	**Grass Mountain**	**0.29**	**320**	↑*i*P	**Pn**	**11 47 37.4**	**-0.3**
SXI1				S	**Sn**	**11 47 49.0**	**-1.0**
ILA	**Ilan**	**0.32**	**250**	*i* P	**Pn**	**11 47 37.8**	**+0.1**
ILA				*i* S	**Sn**	**11 47 49.8**	**-0.1**
NWF	**Wu-fen Shan**	**0.33**	**306**	*i* P	**Pn**	**11 47 37.7**	**-0.2**
NWF				S	**Sn**	**11 47 49.8**	**-0.5**
WFSB	**Wu-fen Shan**	**0.33**	**306**	*i* P	**Pn**	**11 47 37.6**	**-0.2**
WFSB				S	**Sn**	**11 47 49.4**	**-0.7**
TWC	**Suao**	**0.34**	**218**	↑*i*P	**Pn**	**11 47 37.7**	**-0.1**
TWC				*i* S	**Sn**	**11 47 48.9**	**-1.2**
ESAO	**Su ao**	**0.37**	**216**	*i* P	**Pn**	**11 47 37.7**	**-0.3**
ESAO				*i* S	**Sn**	**11 47 50.5**	**+0.1**
TNOU	**National Taiwa**	**0.39**	**315**	↑*i*P	**Pn**	**11 47 38.0**	**0.0**
TNOU				S	**Sn**	**11 47 49.3**	**-1.3**
TWE	**Neicheng**	**0.40**	**248**	*i* P	**Pn**	**11 47 38.1**	**0.0**
TWE				S	**Sn**	**11 47 50.9**	**+0.3**
NDS	**Dongshan**	**0.41**	**234**	*i* P	**Pn**	**11 47 38.5**	**+0.3**
NDS				*i* S	**Sn**	**11 47 51.5**	**+0.8**
FUSB	**Fushanzhiwuyua**	**0.46**	**256**	↑*i*P	**Pn**	**11 47 38.5**	**-0.1**
FUSB				*i* S	**Sn**	**11 47 51.3**	**-0.1**
TWA	**Mucha**	**0.46**	**283**	↑*i*P	**Pn**	**11 47 38.3**	**-0.2**
TWA				*e*S	**Sn**	**11 47 52.0**	**+0.7**
EOS2	**EOS2**	**0.47**	**163**	*e*P	**Pn**	**11 47 39.4**	**+0.9**
EOS2				*e*S	**Sn**	**11 47 51.9**	**+0.8**
NHDH	**Xindian Distri**	**0.51**	**280**	*i* P	**Pn**	**11 47 38.7**	**0.0**
NHDH				*e*S	**Sn**	**11 47 52.4**	**+0.6**
ENTT	**Nioudou**	**0.52**	**244**	↑*i*P	**Pn**	**11 47 39.2**	**+0.4**
ENTT				*i* S	**Sn**	**11 47 52.5**	**+0.5**
NWLT	**Wulai**	**0.53**	**260**	*i* P	**Pn**	**11 47 38.8**	**-0.1**
NWLT				*i* S	**Sn**	**11 47 51.5**	**-0.6**
YM01	**YM01**	**0.54**	**301**	*i* P	**Pn**	**11 47 38.9**	**-0.1**
YM01				*e*S	**Sn**	**11 47 52.2**	**0.0**
ENA	**Nanau**	**0.54**	**215**	*i* P	**Pn**	**11 47 39.9**	**+0.9**
ENA				*i* S	**Sn**	**11 47 52.4**	**+0.2**
YM08	**YM08**	**0.54**	**305**	↓*i*P	**Pn**	**11 47 38.8**	**-0.2**
YM08				*e*S	**Sn**	**11 47 52.9**	**+0.7**
ZUZH	**Zhuzihu**	**0.56**	**301**	*i* P	**Pn**	**11 47 39.0**	**-0.2**
ZUZH				*e*S	**Sn**	**11 47 52.9**	**+0.3**
NDT	**Datong Townshi**	**0.58**	**242**	*i* P	**Pn**	**11 47 40.0**	**+0.7**
NDT				*i* S	**Sn**	**11 47 52.8**	**+0.2**
TWY	**Chenhua**	**0.59**	**313**	*i* P	**Pn**	**11 47 39.4**	**+0.1**
TWY				*e*S	**Sn**	**11 47 52.6**	**-0.2**
ANP	**Anpu**	**0.59**	**302**	*i* P	**Pn**	**11 47 39.3**	**-0.1**
ANP				*e*S	**Sn**	**11 47 52.2**	**-0.8**
LATG	**Datong**	**0.60**	**236**	↑*i*P	**Pn**	**11 47 40.3**	**+0.7**
LATG				*i* S	**Sn**	**11 47 53.4**	**+0.2**
EAHA	**Aohua**	**0.62**	**210**	*i* P	**Pn**	**11 47 40.2**	**+0.6**
EAHA				*i* S	**Sn**	**11 47 53.4**	**+0.2**
EOS3	**EOS3**	**0.62**	**160**	*e*P	**Pn**	**11 47 39.6**	**+0.2**
EOS3				*e*S	**Sn**	**11 47 52.7**	**-0.2**
NTST	**Danshui**	**0.64**	**297**	*i* P	**Pn**	**11 47 40.2**	**+0.6**
NTST				*i* S	**Sn**	**11 47 53.9**	**+0.5**
TWS1	**Kuangyinshan**	**0.64**	**291**	*i* P	**Pn**	**11 47 39.8**	**+0.2**
TWS1				*e*S	**Sn**	**11 47 54.7**	**+1.3**
YHNB	**Yeheng**	**0.67**	**252**	↑*i*P	**Pn**	**11 47 40.2**	**+0.2**
YHNB				*i* S	**Sn**	**11 47 53.0**	**-1.0**
NSK	**Sanguang**	**0.68**	**253**	↑*i*P	**Pn**	**11 47 40.2**	**+0.1**
NSK				*i* S	**Sn**	**11 47 53.1**	**-1.0**
NTY	**Taoyuan**	**0.72**	**280**	*e*P	**Pn**	**11 47 40.8**	**+0.6**
NTY				*i* S	**Sn**	**11 47 55.2**	**+0.7**
PCYT	**Pengchaiyu**	**0.75**	**360**	*i* P	**Pn**	**11 47 41.0**	**+0.4**
PCYT				*e*S	**Sn**	**11 47 55.2**	**+0.1**
NNSB	**Datong**	**0.77**	**235**	*i* P	**Pn**	**11 47 41.4**	**+0.5**
NNSB				*i* S	**Sn**	**11 47 55.3**	**-0.3**
NNS	**Nan Shan**	**0.77**	**236**	*i* P	**Pn**	**11 47 41.0**	**+0.1**
NNS				*i* S	**Sn**	**11 47 55.1**	**-0.5**
EOS4	**EOS4**	**0.78**	**164**	*e*P	**Pn**	**11 47 41.6**	**+1.2**
EOS4				*i* S	**Sn**	**11 47 54.6**	**-0.2**
NCUH	**Zhongli**	**0.82**	**277**	*i* P	**Pn**	**11 47 41.6**	**+0.5**
NCUH				*i* S	**Sn**	**11 47 56.3**	**+0.3**
ETL	**Fush Village**	**0.82**	**210**	*i* P	**Pn**	**11 47 41.1**	**-0.1**
ETL				S	**Sn**	**11 47 55.8**	**-0.5**
KSHI	**Guanxi Townshi**	**0.82**	**263**	*i* P	**Pn**	**11 47 41.9**	**+0.7**
KSHI				*i* S	**Sn**	**11 47 56.7**	**+0.5**
NACB	**Ninganchiao**	**0.82**	**212**	*i* P	**Pn**	**11 47 41.0**	**-0.3**
NACB				*i* S	**Sn**	**11 47 55.4**	**-0.8**
ETLH	**Xiulin Townshi**	**0.86**	**219**	*i* P	**Pn**	**11 47 41.9**	**+0.2**
ETLH				*i* S	**Sn**	**11 47 56.0**	**-0.9**
JYNG	**Yonagunijimaku**	**0.89**	**118**	P	**Pn**	**11 47 42.1**	**+0.3**
TWD	**Chiawan**	**0.90**	**209**	*i* P	**Pn**	**11 47 41.1**	**-0.9**
TWD				*i* S	**Sn**	**11 47 56.4**	**-1.1**
NFF	**Wufeng Townshi**	**0.91**	**255**	*i* P	**Pn**	**11 47 42.1**	**+0.1**
NFF				*i* S	**Sn**	**11 47 57.0**	**-0.6**
YOJ	**Yonaguni jima**	**0.94**	**116**	*i* P	**Pn**	**11 47 42.6**	**+0.3**
YOJ				S	**Sn**	**11 47 58.1**	**0.0**
YOJ	**Yonaguni jima**	**0.94**	**116**	*e*P	**Pn**	**11 47 42.6**	**+0.3**
YOJ				*e*S	**Sn**	**11 47 58.2**	**0.0**
FUSS	**Fushou**	**0.98**	**231**	*i* P	**Pn**	**11 47 43.9**	**+0.8**
FUSS				*i* S	**Sn**	**11 47 59.9**	**+0.6**
HWA	**Hwalien**	**0.99**	**206**	*e*P	**Pn**	**11 47 43.8**	**+0.9**
HWA				*i* S	**Sn**	**11 47 59.2**	**+0.2**
LIOB	**Emei**	**0.99**	**257**	*i* P	**Pn**	**11 47 43.2**	**+0.4**
LIOB				*i* S	**Sn**	**11 47 58.2**	**-0.8**
SBCB	**Hsinchu**	**1.00**	**266**	*i* P	**Pn**	**11 47 43.6**	**+0.7**
SBCB				*i* S	**Sn**	**11 47 59.2**	**+0.1**
NSTT	**Nanjuang**	**1.01**	**256**	*i* P	**Pn**	**11 47 43.3**	**+0.3**
NSTT				*i* S	**Sn**	**11 47 58.7**	**-0.6**
HSN	**Hsinchu**	**1.01**	**266**	*i* P	**Pn**	**11 47 43.2**	**+0.2**
HSN				S	**Sn**	**11 47 58.8**	**-0.6**
TWT	**Tachien**	**1.03**	**233**	*i* P	**Pn**	**11 47 44.8**	**+1.4**
TWT				*i* S	**Sn**	**11 48 00.3**	**+0.3**
WHF	**Hehuan Shan**	**1.04**	**226**	*i* P	**Pn**	**11 47 44.5**	**+0.8**
WHF				S	**Sn**	**11 48 00.8**	**+0.2**
TDCB	**Techi**	**1.04**	**234**	*i* P	**Pn**	**11 47 44.5**	**+0.9**
TDCB				*i* S	**Sn**	**11 48 00.3**	**+0.1**
LXIB	**Xiulin Townshi**	**1.04**	**216**	*i* P	**Pn**	**11 47 43.5**	**0.0**
LXIB				*i* S	**Sn**	**11 47 59.3**	**-1.0**
ETM	**Tongmen**	**1.05**	**211**	*i* P	**Pn**	**11 47 43.1**	**-0.4**
ETM				*i* S	**Sn**	**11 47 58.6**	**-1.5**
TEYL	**Yanliau Villag**	**1.09**	**204**	*i* P	**Pn**	**11 47 44.2**	**+0.3**
TEYL				*i* S	**Sn**	**11 48 00.7**	**-0.1**
SHUL	**Shoufeng**	**1.18**	**204**	*i* P	**Pn**	**11 47 45.0**	**+0.2**
SHUL				*i* S	**Sn**	**11 48 02.6**	**+0.1**
WHP	**Taichung City**	**1.19**	**240**	*i* P	**Pn**	**11 47 46.0**	**+1.0**
WHP				*i* S	**Sn**	**11 48 02.6**	**-0.3**
ESL	**Shilin**	**1.21**	**209**	*i* P	**Pn**	**11 47 44.6**	**-0.6**
ESL				*i* S	**Sn**	**11 48 01.6**	**-1.5**
OWD	**Renai**	**1.23**	**222**	*i* P	**Pn**	**11 47 46.3**	**+0.8**
OWD				*i* S	**Sn**	**11 48 03.6**	**-0.2**
WUSB	**Renai**	**1.24**	**225**	*i* P	**Pn**	**11 47 46.8**	**+1.2**
WUSB				*i* S	**Sn**	**11 48 03.9**	**0.0**
TEGC	**Jichi Village**	**1.26**	**203**	*e*P	**Pn**	**11 47 44.2**	**-1.4**
TEGC				*e*S	**Sn**	**11 48 03.2**	**-0.9**
NSY	**Sanyi**	**1.28**	**249**	*i* P	**Pn**	**11 47 46.9**	**+0.9**
NSY				*i* S	**Sn**	**11 48 04.8**	**+0.3**
TWQ1	**Liyutan**	**1.30**	**246**	*i* P	**Pn**	**11 47 46.7**	**+0.6**
TWQ1				*i* S	**Sn**	**11 48 03.8**	**-1.0**
WARBT	**Fenglin Townsh**	**1.31**	**209**	*i* P	**Pn**	**11 47 45.5**	**-0.8**
WARBT				*i* S	**Sn**	**11 48 03.4**	**-1.8**
WCS	**Beigang Elemen**	**1.34**	**233**	*i* P	**Pn**	**11 47 47.5**	**+0.9**
WCS				*e*S	**Sn**	**11 48 04.8**	**-0.9**
VWDT	**VWDT**	**1.41**	**218**	*i* P	**Pn**	**11 47 48.5**	**+1.2**
VWDT				S	**Sn**	**11 48 07.5**	**+0.5**
WDJ	**Dajia District**	**1.41**	**248**	*i* P	**Pn**	**11 47 48.2**	**+0.8**
WDJ				S	**Sn**	**11 48 07.1**	**0.0**
SMLT	**Sun Moon Lake**	**1.46**	**228**	*i* P	**Pn**	**11 47 49.2**	**+1.1**
SMLT				*i* S	**Sn**	**11 48 10.0**	**+1.7**
TCU	**Taichung**	**1.47**	**241**	*e*P	**Pn**	**11 47 50.0**	**+1.9**
TCU				*i* S	**Sn**	**11 48 08.5**	**+0.2**
TYC	**Yuchr**	**1.47**	**229**	*i* P	**Pn**	**11 47 49.0**	**+0.8**
TYC				*i* S	**Sn**	**11 48 09.0**	**+0.6**
SSLB	**Suanglung**	**1.49**	**224**	*i* P	**Pn**	**11 47 49.5**	**+1.1**
SSLB				*i* S	**Sn**	**11 48 09.5**	**+0.6**
HGSD	**Ruisui**	**1.50**	**204**	*i* P	**Pn**	**11 47 48.9**	**+0.4**
HGSD				*i* S	**Sn**	**11 48 09.1**	**+0.1**
EHY	**Hungye**	**1.53**	**207**	*i* P	**Pn**	**11 47 48.9**	**+0.1**
EHY				S	**Sn**	**11 48 08.4**	**-1.2**
EHYH	**Wanrong**	**1.53**	**206**	*i* P	**Pn**	**11 47 48.8**	**0.0**
EHYH				S	**Sn**	**11 48 08.4**	**-1.2**
WCHH	**Zhanghua**	**1.59**	**241**	P	**Pn**	**11 47 50.1**	**+0.6**
WCHH				*i* S	**Sn**	**11 48 10.3**	**-0.7**
IRIF	**Iriomote-Funau**	**1.60**	**109**	*e*P	**

*NOU **17** 12:19:31.7, 47°.17S× 169°.87E, h0km, MLv5.1/14, Off E. Coast of S. Island, N.Z.*
*WEL **17** 12:19:31.6±0.9, 47°.S±6°×17°.0E±°, h12km, M4.7/21, ML4.6/8, MLv4.7/21, Error ellipse: s-maj=7.7km s-min=5.0km az=164.2, confirmed*
*NEIC **17** 12:19:31.7±1.1, 47°.18S±0°.10×169°.65E±0°.10, h10km±1km, mb4.4/11, Error ellipse: s-maj=16.4km s-min=11.3km az=171.0*
*WEL **17** 12:19:32.1, 47°.17S× 169°.59E, h10km, ML4.7, Mw4.2, Moment Tensor Solution. s6 Moment tensor: Scale 10^15 Nm; Mrr2.37; Mθθ-0.68; Mϕϕ-1.69; Mrθ0.60; Mθϕ-1.32; Mϕr-1.13; Fault plane solution: M0 2.79000×10^15 NP1: ϕs193.00000°, δ56.00000°, λ63.00000°. NP2: ϕs55.00000°, δ42.00000°, λ124.00000°. Principal axes: T -2.6738, Plg67.0000°, Azm50.0000°; N -0.2410, Plg22.0000°, Azm208.0000°; P 2.9148, Plg7.0000°, Azm302.0000°; Stations used: APZ OPZ ODZ PYZ WKZ LBZ REVERSE FAULTING*

ISC 17 12:19:31.9±1.6, 47°.16S±0°.05× 169°.64E±0°.04, h14km±9km, n133, σ1s03/137, mb4.2/10, MS3.3/5, Off east coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SYZ	**Scrubby Hill**	**0.71**	**331**	P	**Pn**	**12 19 47.2**	**-0.3**
SYZ	**Scrubby Hill**	**0.71**	**331**	S	**Sn**	**12 19 57.8**	**-0.5**
SYZ	**Scrubby Hill**	**0.71**	**331**	P	**Pb**	**12 19 46.5**	**+0.5**
SYZ				S	**Sb**	**12 19 56.9**	**+1.2**
BDCS	**Balclutha Dist**	**0.91**	**3**	P	**Pb**	**12 19 50.2**	**+0.7**
BDCS				S	**Sn**	**12 20 03.1**	**-0.1**
TMBS	**Taieri Mouth B**	**1.15**	**20**	P	**Pg**	**12 19 54.3**	**+0.2**
TMBS				S	**Sn**	**12 20 09.7**	**+0.5**
ICCS	**Invercargill C**	**1.16**	**310**	P	**Pb**	**12 19 53.4**	**-0.4**
ICCS				S	**Sb**	**12 20 08.7**	**+0.1**
APZ	**The Paps**	**1.18**	**286**	P	**Pb**	**12 19 52.3**	**-1.8**
APZ				S	**Sb**	**12 20 09.5**	**+0.4**
TUZ	**Tuapeka**	**1.21**	**360**	P	**Pn**	**12 19 53.9**	**-0.5**
TUZ				S	**Sb**	**12 20 09.7**	**-0.3**
DUNS	**Dunedin Corsto**	**1.38**	**25**	P	**Pn**	**12 19 57.2**	**+0.5**
DUNS				S	**Sg**	**12 20 16.3**	**-0.1**
HHSZ	**Highcliff Hill**	**1.44**	**28**	P	**Pn**	**12 19 57.6**	**+0.1**
WHZ	**Wether Hill Ro**	**1.73**	**317**		**Pn**	**12 20 01.5**	**0.0**
WHZ	**Wether Hill Ro**	**1.73**	**317**	P	**Pn**	**12 20 01.5**	**0.0**
EAZ	**Earnscleugh**	**1.94**	**353**	P	**Pn**	**12 20 04.4**	**-0.1**
MLZ	**Mavora Lakes**	**2.08**	**329**		**Pn**	**12 20 07.0**	**+0.5**
MLZ	**Mavora Lakes**	**2.08**	**329**	P	**Pn**	**12 20 06.9**	**+0.5**
ODZ	**Otahua Downs**	**2.23**	**19**	P	**Pn**	**12 20 10.1**	**+1.7**
ODZ	**Otahua Downs**	**2.23**	**19**		**Pn**	**12 20 08.5**	**+0.1**
ODZ	**Otahua Downs**	**2.23**	**19**	P	**Pn**	**12 20 08.6**	**+0.1**
PYZ	**Puysegur Point**	**2.27**	**295**	P	**Pb**	**12 20 12.3**	**-0.3**
PYZ	**Puysegur Point**	**2.27**	**295**	S	**Sg**	**12 20 43.3**	**-1.5**
PYZ	**Puysegur Point**	**2.27**	**295**		**Pn**	**12 20 09.0**	**0.0**
PYZ	**Puysegur Point**	**2.27**	**295**	P	**Pn**	**12 20 10.7**	**+1.7**
WKZ	**Wanaka**	**2.37**	**349**		**Pn**	**12 20 11.2**	**+0.8**
WKZ	**Wanaka**	**2.37**	**349**	P	**Pn**	**12 20 11.3**	**+0.9**
DCZ	**Deep Cove**	**2.42**	**314**		**Pn**	**12 20 11.4**	**+0.4**
DCZ	**Deep Cove**	**2.42**	**314**	P	**Pn**	**12 20 11.9**	**+0.9**
MSZ	**Milford Sound**	**2.76**	**334**	P	**Pn**	**12 20 16.7**	**+1.0**
LBZ	**Lake Benmore**	**2.80**	**8**		**Pn**	**12 20 16.6**	**+0.3**
LBZ	**Lake Benmore**	**2.80**	**8**	P	**Pn**	**12 20 16.5**	**+0.3**
TMZ	**Timaru**	**2.94**	**19**	P	**Pn**	**12 20 18.8**	**+0.6**
JCZ	**Jackson Bay**	**3.15**	**349**	P	**Pn**	**12 20 23.3**	**+2.2**
JCZ	**Jackson Bay**	**3.15**	**349**	P	**Pn**	**12 20 22.1**	**+1.0**
ARCZ	**Arundel**	**3.39**	**19**	P	**Pn**	**12 20 24.9**	**+0.5**
WACZ	**Wakanui South**	**3.57**	**26**	P	**Pn**	**12 20 27.0**	**+0.2**
RPZ	**Rata Peaks**	**3.59**	**17**	Pn	**Pn**	**12 20 27.1**	**0.0**
	15nm,0.3s,baz=19,slow=0.3,SNR=48 51nm,0.4s						
RPZ	**Rata Peaks**	**3.59**	**17**	P	**Pn**	**12 20 27.8**	**+0.7**
RPZ	**Rata Peaks**	**3.59**	**17**		**Pn**	**12 20 27.7**	**+0.7**
RPZ	**Rata Peaks**	**3.59**	**17**	P	**Pn**	**12 20 27.8**	**+0.7**
FOZ	**Fox Glacier**	**3.63**	**2**		**Pn**	**12 20 28.7**	**+1.1**
FOZ	**Fox Glacier**	**3.63**	**2**	P	**Pn**	**12 20 29.2**	**+1.6**
RACZ	**Rakaia**	**3.86**	**28**	P	**Pn**	**12 20 31.1**	**+0.3**
GCSZ	**Gaunt Creek Bo**	**3.88**	**7**	P	**Pn**	**12 20 32.3**	**+1.3**
MHCZ	**Mount Hutt**	**3.88**	**21**	P	**Pn**	**12 20 31.5**	**+0.4**
AKCZ	**Akaroa Harbour**	**4.01**	**36**	P	**Pn**	**12 20 33.0**	**+0.1**
MQZ	**McQueen's Vall**	**4.05**	**33**		**Pn**	**12 20 33.4**	**-0.1**
MQZ	**McQueen's Vall**	**4.05**	**33**	P	**Pn**	**12 20 33.4**	**-0.1**
WVZ	**Waitaha Valley**	**4.16**	**11**	P	**Pn**	**12 20 36.0**	**+1.1**
OXZ	**Oxford**	**4.19**	**25**		**Pn**	**12 20 35.5**	**+0.1**
OXZ	**Oxford**	**4.19**	**25**	P	**Pn**	**12 20 35.7**	**+0.3**
OKCZ	**Okains Bay**	**4.20**	**36**	P	**Pn**	**12 20 35.8**	**+0.3**
AMCZ	**Amberley**	**4.52**	**29**	Pn	**Pn**	**12 20 40.2**	**+0.4**
AMCZ	**Amberley**	**4.52**	**29**	P	**Pn**	**12 20 40.4**	**+0.5**
INZ	**Inchbonnie**	**4.62**	**17**		**Pn**	**12 20 41.8**	**+0.6**
INZ	**Inchbonnie**	**4.62**	**17**	P	**Pn**	**12 20 41.8**	**+0.6**
LTZ	**Lake Taylor**	**4.76**	**24**		**Pn**	**12 20 43.5**	**+0.3**
LTZ	**Lake Taylor**	**4.76**	**24**	P	**Pn**	**12 20 43.5**	**+0.3**
GVZ	**Greta Valley S**	**4.83**	**31**		**Pn**	**12 20 44.5**	**+0.3**
GVZ	**Greta Valley S**	**4.83**	**31**	P	**Pn**	**12 20 44.5**	**+0.3**
KHZ	**Kahutara**	**5.50**	**32**	P	**Pn**	**12 20 53.7**	**+0.4**
KHZ	**Kahutara**	**5.50**	**32**	S	**Sn**	**12 21 57.6**	**+1.4**
KHZ	**Kahutara**	**5.50**	**32**	P	**Pn**	**12 20 53.5**	**+0.3**
DSZ	**Denniston Nort**	**5.63**	**17**	P	**Pn**	**12 20 55.8**	**+0.6**
THZ	**Tophouse**	**5.88**	**25**		**Pn**	**12 20 59.2**	**+0.6**
THZ	**Tophouse**	**5.88**	**25**	P	**Pn**	**12 20 59.5**	**+0.8**
MRNZ	**Matariki Terra**	**6.18**	**22**	P	**Pn**	**12 21 04.2**	**+1.5**
NNZ	**Nelson**	**6.52**	**26**	P	**Pn**	**12 21 08.9**	**+1.5**
QRZ	**Quartz Range**	**6.67**	**19**	P	**Pn**	**12 21 09.7**	**+0.3**
QRZ	**Quartz Range**	**6.67**	**19**	S	**Sn**	**12 22 26.9**	**+1.8**
QRZ	**Quartz Range**	**6.67**	**19**	P	**Pn**	**12 21 10.6**	**+1.2**
SNZO	**South Karori**	**6.89**	**34**	P	**Pn**	**12 21 13.2**	**+0.8**
CAW	**Cannon Point**	**7.20**	**35**	P	**Pn**	**12 21 16.4**	**-0.3**
TRWZ	**Traveller**	**7.21**	**39**	P	**Pn**	**12 21 16.6**	**-0.3**
OGWZ	**Otaki Gorge**	**7.49**	**34**	P	**Pn**	**12 21 20.7**	**0.0**
HOWZ	**Holdsworth Sta**	**7.56**	**36**	P	**Pn**	**12 21 22.6**	**+1.0**
MRZ	**Mangatainoka R**	**7.78**	**36**	P	**Pn**	**12 21 24.8**	**+0.1**
PRWZ	**Pori Road**	**8.03**	**37**	P	**Pn**	**12 21 29.1**	**+1.0**
BFZ	**Birch Farm**	**8.04**	**39**	P	**Pn**	**12 21 28.3**	**+0.1**
BFZ	**Birch Farm**	**8.04**	**39**	P	**Pn**	**12 21 28.2**	**0.0**
DVHZ	**Dannevirke**	**8.33**	**37**	P	**Pn**	**12 21 32.4**	**+0.3**
TSZ	**Takapari Road**	**8.45**	**35**	P	**Pn**	**12 21 33.7**	**-0.2**
PKE	**Pukeiti**	**8.57**	**23**	P	**Pn**	**12 21 37.8**	**+2.3**
WPHZ	**Waipukurau**	**8.64**	**37**	P	**Pn**	**12 21 36.9**	**+0.5**
PNHZ	**Pukenui**	**8.67**	**36**	P	**Pn**	**12 21 37.1**	**+0.3**
VRZ	**Vera Road**	**8.86**	**27**	P	**Pn**	**12 21 41.1**	**+1.6**
WNVZ	**Wahianoa**	**8.95**	**31**	P	**Pn**	**12 21 42.3**	**+1.4**
TRVZ	**Turoa**	**8.96**	**31**	P	**Pn**	**12 21 38.7**	**-2.3**
KRHZ	**Kereru**	**8.97**	**35**	P	**Pn**	**12 21 40.8**	**-0.1**
BKZ	**Black Stump Fm**	**9.43**	**34**	P	**Pn**	**12 21 47.3**	**0.0**
BKZ	**Black Stump Fm**	**9.43**	**34**	P	**Pn**	**12 21 46.8**	**-0.5**
CTZ	**Chatham Island**	**10.25**	**75**	P	**Pn**	**12 21 57.8**	**-0.6**
URZ	**Urewera**	**10.45**	**34**	Pn	**Pn**	**12 22 00.5**	**-0.7**
	0.5nm,0.3s,baz=229,slow=12,SNR=2.7						
URZ				Sn	**Sn**	**12 23 50.5**	**-7.6**
	0.3nm,0.3s,baz=205,slow=11,SNR=1.9 18nm,1.1s						
HAZ	**Te Kaha**	**11.15**	**35**	P	**Pn**	**12 22 10.5**	**-0.3**
TAU	**Tasmania Unive**	**16.32**	**277**		**P**	**12 23 22.5**	**-1.0**
TAU				IAmb	IAmb	12 23 41.0	
	comp=Z,56nm,1.4s						
STKA	**Stephens Creek**	**26.29**	**295**	P	**P**	**12 25 07.3**	**+0.4**
	comp=Z,1.6nm,0.8s,baz=122,slow=13,SNR=4.9						
STKA				LR	LR	12 34 03.4	
	comp=Z,59nm,19.3s,baz=44,slow=33 comp=Z,1.6nm,0.8s						
CTA	**Charters Tower**	**33.04**	**317**	LR	LR	12 38 01.5	
	comp=Z,42nm,19.1s,baz=66,slow=34						
CASY	**Casey**	**35.88**	**216**	P	**P**	**12 26 30.3**	**-0.7**
AS31	**Alice Springs**	**36.90**	**297**	P	**P**	**12 26 40.6**	**+0.4**
ASAR	**Alice Springs**	**36.90**	**297**	P	**P**	**12 26 39.7**	**-0.5**
	comp=Z,3.3nm,1.1s,baz=138,slow=7.3,SNR=15						
ASAR				PcP	**PcP**	**12 29 01.3**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=135,slow=4.0,SNR=5.6						
ASAR				LR	LR	12 40 53.8	
	comp=Z,46nm,18.8s,baz=133,slow=35 comp=Z,3.3nm,1.1s						
ASAR	**Alice Springs**	**36.90**	**297**	P	**P**	**12 26 40.0**	**-0.2**
WR8	**Warramunga Arr**	**39.38**	**301**	P	**P**	**12 26 59.9**	**-1.2**
WR8				IAmb	IAmb	12 27 18.0	
	comp=Z,6.6nm,1.2s						
WRA	**Warramunga Arr**	**39.49**	**301**	P	**P**	**12 27 00.9**	**-1.0**
	comp=Z,1.8nm,1.0s,baz=136,slow=7.9,SNR=8.1						
WRA				PcP	**PcP**	**12 29 09.5**	**-0.1**
	comp=Z,1.1nm,0.9s,baz=144,slow=3.0,SNR=6.2 comp=Z,1.8nm,1.0s						
WRA	**Warramunga Arr**	**39.49**	**301**	P	**P**	**12 27 01.6**	**-0.4**
WRAB	**Tennant Creek**	**39.49**	**301**	P	**P**	**12 27 01.7**	**-0.3**
WB0	**Warramunga Arr**	**39.59**	**301**	P	**P**	**12 27 02.7**	**-0.1**
WB0				IAmb	IAmb	12 27 03.8	
	comp=Z,8.2nm,1.5s						
QSPA	**South Pole Qui**	**42.97**	**180**	P	**P**	**12 27 31.3**	**+1.1**
	comp=Z,2.8nm,1.0s,baz=14,slow=6.2,SNR=4.6						
QSPA				PcP	**PcP**	**12 29 21.1**	**+0.7**
	comp=Z,2.5nm,0.9s,baz=36,slow=1.0,SNR=3.7 comp=Z,2.8nm,1.0s						
QSPA	**South Pole Qui**	**42.97**	**180**	P	**P**	**12 27 29.6**	**-0.6**
QSPA				IAmb	IAmb	12 27 34.5	
	comp=Z,9.0nm,1.4s						
QSPA				PcP	**PcP**	**12 29 21.5**	**+1.1**
MORW	**Morawa**	**44.94**	**274**	P	**P**	**12 27 47.3**	**+0.9**
KNRA	**Kununurra**	**46.11**	**299**	P	**P**	**12 27 55.2**	**-0.4**
KNRA				IAmb	IAmb	12 28 06.1	
	comp=Z,9.7nm,1.1s						
MTN	**Manton Dam**	**46.98**	**304**	P	**P**	**12 28 02.5**	**0.0**
MTN				IAmb	IAmb	12 28 03.5	
	comp=Z,5.4nm,0.8s						
BELA	**Belgrano 2**	**54.34**	**174**	P	**P**	**12 28 57.8**	**+0.5**
BELA				IAmb	IAmb	12 28 59.1	
	comp=Z,2.0nm,0.8s						
BELA				PcP	**PcP**	**12 30 01.2**	**+0.1**
KAPI	**Kappang**	**59.90**	**298**	LR	LR	12 57 45.2	
	comp=Z,20nm,18.2s,baz=98,slow=38						
RPN	**Rapa Nui**	**64.76**	**103**	LR	LR	12 53 42.4	
	comp=Z,32nm,19.4s,baz=297,slow=32						
H03S2	**Juan Fernandez**	**78.60**	**128**	T	T	13 58 15.1	
	baz=219,slow=74,SNR=13						
H03S1	**Juan Fernandez**	**78.61**	**128**	T	T	13 58 20.2	
	baz=219,slow=74,SNR=14						
H03S3	**Juan Fernandez**	**78.62**	**128**	T	T	13 58 17.3	
	baz=219,slow=74,SNR=15						
H03N3	**Juan Fernandez**	**78.89**	**128**	T	T	13 58 33.7	
	baz=222,slow=72,SNR=20						
H03N2	**Juan Fernandez**	**78.90**	**128**	T	T	13 58 33.1	
	baz=222,slow=72,SNR=17						
H03N1	**Juan Fernandez**	**78.91**	**128**	T	T	13 58 32.5	
	baz=222,slow=72,SNR=29						
CMAR	**Chiang Mai Arr**	**90.91**	**296**	P	**P**	**12 32 36.6**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=110,slow=3.8,SNR=1.2 comp=Z,0.2nm,0.3s						
ILAR	**Eielson Array**	**116.63**	**19**	PKP	**PKPdf**	**12 38 13.8**	**-0.4**
	comp=Z,0.5nm,1.0s,baz=232,slow=4.4,SNR=4.2						
MKAR	**Makanchi Array**	**120.63**	**307**	PKP	**PKPdf**	**12 38 22.0**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=130,slow=2.3,SNR=4.3						
ZALV	**Zalesovo Beam**	**123.59**	**315**	PKP	**PKiKP**	**12 38 28.8**	**+0.7**
	comp=Z,3.9nm,0.4s,baz=143,slow=3.6,SNR=1.9						
YKA	**Yellowknife Ar**	**124.71**	**33**	PKP	**PKPdf**	**12 38 29.6**	**-0.2**
	baz=277,slow=2.3,SNR=4.2						
TORD	**Torodi Ar. Bea**	**144.62**	**201**	PKP	**PKPab**	**12 39 06.6**	**-0.2**
	comp=Z,7.0nm,0.8s,baz=195,slow=2.8,SNR=35						
NEEM	**North Greenlan**	**145.74**	**15**	*i* P	**PKPbc**	**12 39 09.6**	**+0.4**
KULLO	**Kullorsuaq**	**146.01**	**20**	*i* P	**PKPbc**	**12 39 10.1**	**+0.4**
SPITS	**Spitsbergen Ar**	**147.24**	**350**	PKPbc	**PKPbc**	**12 39 13.3**	**0.0**
	comp=Z,6.6nm,0.5s,baz=72,slow=4.7,SNR=31						
SPB2	**Spitsbergen Ar**	**147.24**	**350**	PKPbc	**PKPbc**	**12 39 14.5**	**+1.2**
BRTR	**Keskin Array B**	**147.55**	**273**	PKPbc	**PKPbc**	**12 39 15.7**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=132,slow=6.0,SNR=7.1						
BRTR	**Keskin Array B**	**147.55**	**273**	PKPbc	**PKPbc**	**12 39 15.8**	**+0.4**
DAG	**Danmarks Havn**	**150.09**	**4**	*i* P	**PKPbc**	**12 39 20.2**	**-0.3**
ARCES	**ARCESS Array B**	**151.50**	**334**	PKPbc	**PKPbc**	**12 39 23.3**	**-0.7**
	comp=Z,3.9nm,0.8s,baz=66,slow=4.1,SNR=5.3						
ARCES	**ARCESS Array B**	**151.50**	**334**		**PKPbc**	**12 39 24.3**	**+0.3**

*IDC **17** 12:38:29.1±0.8, 37°.78N× 141°.23E, h0km, mb3.7/10, mbtmp3.7/13, ML3.1/3, MS3.3/2, Error ellipse: s-maj=20.1km s-min=18.5km az=136.0*
*NIED **17** 12:38:34.2, 37°.13N× 141°.25E, h61km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^14 Nm; Mrr0.49; Mθθ0.57; Mθϕ-1.06; Mrθ1.24; Mϕϕ0.24; Mϕr-3.06; Fault plane solution: M0 3.40000×10^14 NP1: ϕs25.00000°, δ9.00000°, λ137.00000°. NP2: ϕs157.00000°, δ84.00000°, λ83.00000°.*
*JMA **17** 12:38:34.2±0.1, 37°.1N±0°.3× 141°.3E±0°.6, h61km, MV3.9/40, E OFF FUKUSHIMA PREF*
JMA Felt II J1 at E OFF FUKUSHIMA PREF .

ISC 17 12:38:33.7±1.1, 37°.13N±0°.05× 141°.28E±0°.09, h59km±8km, n37, σ0s92/38, mb3.7/10, 6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.39**	**267**	P	**Pn**	**12 38 44.9**	**+0.3**
ONAJ				S	**Sn**	**12 38 52.6**	**+0.1**
JFK	**Kawauchi**	**0.40**	**307**	P	**Pn**	**12 38 44.9**	**+0.2**
JFK				S	**Sn**	**12 38 52.8**	**+0.1**
JFFD	**Fukushimafurud**	**0.58**	**267**	*i* P	**Pn**	**12 38 46.8**	**+0.3**
JFFD				*e*S	**Sn**	**12 38 55.7**	**-0.1**
JMST	**Minamisoumatoc**	**0.68**	**332**	*i* P	**Pn**	**12 38 47.9**	**+0.2**
JMST				*e*S	**Sn**	**12 38 57.9**	**+0.1**
JHO	**Hitachi**	**0.77**	**228**	P	**Pn**	**12 38 48.8**	**0.0**
JHO				S	**Sn**	**12 38 59.3**	**-0.5**
JMM	**Marumori**	**0.83**	**332**	P	**Pn**	**12 38 50.0**	**+0.4**
JMM				S	**Sn**	**12 39 01.6**	**+0.3**
JOTO	**OTAMA OYAMA**	**0.87**	**300**	*i* P	**Pn**	**12 38 50.8**	**+0.7**
JOTO				*e*S	**Sn**	**12 39 03.0**	**+0.8**
JFY	**Yanaizu**	**1.29**	**283**	⇓P	**Pn**	**12 38 56.1**	**+0.5**
JFY				⇓S	**Sn**	**12 39 11.9**	**0.0**
JIO	**Ouri**	**1.33**	**2**	⇓P	**Pn**	**12 38 56.4**	**+0.3**
JIO				⇓S	**Sn**	**12 39 12.8**	**0.0**
JOU	**Okura**	**1.33**	**339**	P	**Pn**	**12 38 56.3**	**+0.1**
JYS	**Shirataka**	**1.46**	**319**	⇓P	**Pn**	**12 38 58.2**	**+0.3**
JYS				⇓S	**Sn**	**12 39 16.8**	**+0.8**
JAG	**Ashikaga**	**1.63**	**245**	P	**Pn**	**12 39 00.4**	**+0.3**
JAG				S	**Sn**	**12 39 19.9**	**-0.1**
MJAR	**Matsushiro Arr**	**2.53**	**258**	Pn	**Pn**	**12 39 13.4**	**+0.9**
	1.8nm,0.3s,baz=86,slow=15,SNR=63						
MJAR				Sn	Sn	12 39 47.9	+5.7
	3.3nm,0.3s,baz=86,slow=28,SNR=12 9.1nm,0.3s						
JHJ	**Hachijo jima 2**	**4.18**	**198**	Pn	**Pn**	**12 39 34.9**	**-0.2**
	16nm,0.3s,baz=244,slow=23,SNR=2.0						
JHJ				Sn	**Sn**	**12 40 20.2**	**-2.4**
	21nm,0.3s,baz=254,slow=13,SNR=2.0						
ASAJ	**Asahikawa**	**7.05**	**8**	Pn	**Pn**	**12 40 12.6**	**-1.8**
	0.8nm,0.3s,baz=207,slow=17,SNR=18						
ASAJ				Sn	**Sn**	**12 41 29.9**	**-3.1**
	0.5nm,0.3s,baz=259,slow=16,SNR=1.6						
JNU	**Nakatsue**	**9.41**	**248**	Pn	**Pn**	**12 40 48.2**	**+1.5**
	0.2nm,0.3s,baz=39,slow=13,SNR=1.7 6.9nm,0.9s						
KSRS	**Korea Array**	**10.65**	**276**	Pn	**Pn**	**12 41 03.3**	**-0.2**
	0.1nm,0.3s,baz=83,slow=14,SNR=5.2						
KSRS				LR	LR	12 45 31.5	
	comp=Z,32nm,18.1s,baz=65,slow=40 2.3nm,0.9s						
SONM	**Songino Array**	**27.65**	**304**	P	**P**	**12 44 14.7**	**-1.2**
	0.8nm,0.4s,baz=113,slow=10,SNR=5.2 0.8nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**28.29**	**121**	T	T	13 14 23.3	
	baz=314,slow=75,SNR=24						
H11N1	**WAKE ISLAND Hy**	**28.29**	**121**	T	T	13 14 23.4	
	baz=314,slow=75,SNR=45						
H11N3	**WAKE ISLAND Hy**	**28.30**	**121**	T	T	13 14 24.0	
	baz=314,slow=75,SNR=46						
H11S1	**WAKE ISLAND Hy**	**29.00**	**123**	T	T	13 15 23.7	
	baz=316,slow=76,SNR=39						
H11S3	**WAKE ISLAND Hy**	**29.00**	**123**	T	T	13 15 26.5	
	baz=316,slow=76,SNR=32						
H11S2	**WAKE ISLAND Hy**	**29.01**	**123**	T	T	13 15 21.3	
	baz=316,slow=76,SNR=25						
ZALV	**Zalesovo Beam**	**41.77**	**312**	P	**P**	**12 46 16.8**	**-0.3**
	1.2nm,0.5s,baz=91,slow=5.9,SNR=6.9 1.2nm,0.5s						
MKAR	**Makanchi Array**	**43.98**	**302**	P	**P**	**12 46 34.8**	**-0.3**
	0.4nm,0.5s,baz=90,slow=11,SNR=6.3 0.4nm,0.5s						
KURBB	**Kurotov Arra**	**45.86**	**308**	P	**P**	**12 46 49.1**	**-0.8**
	1.6nm,0.3s,baz=84,slow=8.2,SNR=8.7 1.6nm,0.3s						
ILAR	**Eielson Array**	**49.47**	**32**	P	**P**	**12 47 18.1**	**+0.4**
	0.6nm,0.8s,baz=272,slow=6.6,SNR=6.0 0.6nm,0.8s						
BVAR	**Borovoye Array**	**50.43**	**312**	P	**P**	**12 47 24.4**	**-0.7**
	0.6nm,0.6s,baz=86,slow=9.2,SNR=3.4 0.6nm,0.6s						
WRA	**Warramunga Arr**	**57.14**	**188**	P	P	12 48 22.2	+7.9
	0.6nm,0.5s,baz=0.3,slow=7.5,SNR=15 0.6nm,0.5s						
ASAR	**Alice Springs**	**60.87**	**188**	P	P	12 48 48.0	+7.9
	0.3nm,0.8s,baz=8.0,slow=13,SNR=6.8 0.3nm,0.8s						
HFS	**Hagfors**	**73.96**	**336**	LR	LR	13 26 07.0	
	comp=Z,78nm,18.2s,baz=324,slow=39						
PDAR	**Pinedale Array**	**77.68**	**45**	P	**P**	**12 50 24.4**	**+0.2**
	0.2nm,0.6s,baz=35,slow=5.4,SNR=3.5 0.2nm,0.6s						
TXAR	**Lajitas Array**	**90.15**	**52**	P	**P**	**12 51 28.8**	**+0.9**
	0.3nm,0.7s,baz=327,slow=6.1,SNR=4.5 0.3nm,0.7s						
H03N2	**Juan Fernandez**	**147.14**	**96**	T	T	15 42 54.8	
	baz=287						
H03N3	**Juan Fernandez**	**147.15**	**96**	T	T	15 43 00.4	
	baz=287,slow=74,SNR=2.8						
H03N1	**Juan Fernandez**	**147.15**	**96**	T	T	15 43 00.1	
	baz=287,slow=74,SNR=4.8						

*IDC **17** 12:40:28.1±3.1, 9°.31S× 119°.13E, h88km±28km, mb2.9/2, mbtmp3.4/6, Error ellipse: s-maj=35.8km s-min=11.2km az=57.0*
*DJA **17** 12:40:29.6±0.3, 9°.S±4°×11°.9E±°, h43km±8km, M3.8/15, MLv3.8/15*

ISC 17 12:40:27.7±0.9, 9°.38S±0°.06× 119°.06E±0°.04, h77km±9km, n19, σ1s54/27, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.42**	**129**	P	**Pn**	**12 40 41.0**	**+0.5**
WBSI				S	**Sn**	**12 40 49.7**	**-0.2**
DBNI	**Kabupaten Domp**	**1.14**	**320**	P	**Pn**	**12 40 49.3**	**+1.0**
DBNI				S	**Sn**	**12 41 03.8**	**0.0**
LBFI	**Labuhan Bajo,**	**1.21**	**43**	P	**Pn**	**12 40 49.6**	**+0.4**
WSI	**Waingapu**	**1.25**	**103**	P	**Pn**	**12 40 50.8**	**+1.1**
WSI				S	**Sn**	**12 41 07.7**	**+1.4**
TWSI	**Taliwang, Sumb**	**2.24**	**286**	P	**Pn**	**12 41 04.5**	**+1.7**
TWSI				S	**Sn**	**12 41 31.0**	**+1.4**
EDFI	**Ende, Flores**	**2.67**	**77**	P	**Pn**	**12 41 10.1**	**+1.4**
EDFI				S	**Sn**	**12 41 42.0**	**+1.9**
MMRI	**Maumere**	**3.22**	**77**	P	**Pn**	**12 41 18.2**	**+2.1**
BSSI	**Bau Bau, Buton**	**3.51**	**24**	P	**Pn**	**12 41 21.2**	**+1.2**
IGBI	**Denpasar**	**3.91**	**278**	P	**Pn**	**12 41 28.0**	**+2.7**
MKS	**Makassar**	**4.15**	**6**	P	**Pn**	**12 41 30.2**	**+1.5**
KAPI	**Kapang**	**4.39**	**9**	P	**Pn**	**12 41 33.3**	**+1.3**
	6.8nm,0.3s,baz=187,slow=4.5,SNR=6.6						
KAPI				S	**Sn**	**12 42 20.3**	**-1.6**
	38nm,0.4s,baz=79,slow=23,SNR=15						
KAPI	**Kappang**	**4.39**	**9**	P	**Pn**	**12 41 33.8**	**+1.8**
BATI	**Baumata**	**4.61**	**101**	P	**Pn**	**12 41 36.5**	**+1.5**
	15nm,0.3s,baz=286,slow=3.5,SNR=9.5						
BATI				S	**Sn**	**12 42 26.1**	**-1.2**
	27nm,0.5s,baz=129,slow=23,SNR=6.5						
BATI	**Baumata**	**4.61**	**101**	P	**Pn**	**12 41 36.8**	**+1.8**
JAGI	**Jajag, Banyuwa**	**4.93**	**280**	P	**Pn**	**12 41 38.1**	**-1.3**
FITZ	**Fitzroy Crossi**	**10.77**	**144**	P	**Pn**	**12 42 58.1**	**-0.9**
	0.9nm,0.3s,baz=328,slow=13,SNR=13						
FITZ				S	Sn	12 44 49.0	-8.9
	1.3nm,0.3s,baz=12,slow=20,SNR=12						
WRA	**Warramunga Arr**	**18.11**	**127**	P	**P**	**12 44 35.0**	**+1.3**
	0.2nm,0.6s,baz=296,slow=12,SNR=6.8						
WRA				S	Sn	12 47 46.3	-10
	0.2nm,0.8s,baz=

MACC	**Macarena, Meta**	**3.90**	**182**	P	**Pn**	**12 53 35.1**	**-1.4**
SJCC	**San Jacinto, C**	**4.08**	**339**	P	**Pn**	**12 53 37.9**	**-0.9**
SJCC				S	**Sn**	**12 54 22.4**	**-3.5**
SJCC	**San Jacinto, C**	**4.08**	**339**	*e*P	**Pn**	**12 53 38.1**	**-0.7**
SJCC				*e*S	**Sn**	**12 54 21.3**	**-4.6**
JAMC	**Jamundi, Valle**	**4.11**	**226**	P	**Pn**	**12 53 39.4**	**0.0**
SDV	**Santo Domingo**	**4.13**	**47**	P	**Pn**	**12 53 40.3**	**+0.7**
	49nm,0.3s,baz=183,slow=3.2,SNR=74						
SDV				S	**Sn**	**12 54 28.9**	**+1.5**
	93nm,0.4s,baz=302,slow=18,SNR=12						
SDV	**Santo Domingo**	**4.13**	**47**		**Pn**	**12 53 40.1**	**+0.5**
SDV	**Santo Domingo**	**4.13**	**47**	*e*P	**Pn**	**12 53 40.2**	**+0.5**
SDV				*e*S	**Sn**	**12 54 27.2**	**-0.2**
PTAC	**Punta Ardita,**	**4.22**	**285**	P	**Pn**	**12 53 41.7**	**+1.0**
GARC	**Garzon, Huila**	**4.25**	**205**	P	**Pn**	**12 53 40.3**	**-1.1**
CAP2	**Capurgana**	**4.45**	**305**	S	**Sn**	**12 54 31.4**	**-3.4**
POPC	**Popayan, Colom**	**4.60**	**220**	P	**Pn**	**12 53 46.1**	**+0.1**
FLOC	**Florencia**	**4.87**	**204**	P	**Pn**	**12 53 48.8**	**-0.6**
URIC	**Uribia, Colomb**	**5.84**	**17**	*e*P	**Pn**	**12 54 02.2**	**-0.2**
GCUF	**Volcan Galeras**	**6.04**	**217**	P	**Pn**	**12 54 08.0**	**+2.5**
	11nm,0.5s						
BCIP	**Isla Barro Col**	**6.82**	**297**	P	**Pn**	**12 54 15.5**	**-0.1**
LPAZ	**La Paz**	**22.89**	**166**	P	**P**	**12 57 30.0**	**-1.8**
	1.1nm,0.6s,baz=4.7,slow=12,SNR=3.8						
LPAZ				LR	LR	13 08 28.1	
	comp=Z,39nm,18.8s,baz=247,slow=42						
	1.1nm,0.6s						
LPAZ	**La Paz**	**22.89**	**166**	P	**P**	**12 57 29.7**	**-2.1**
PB05	**IPOC Station P**	**28.95**	**173**	P	**P**	**12 58 22.1**	**-3.8**
CCM	**Cathedral Cave**	**35.61**	**336**	P	**P**	**12 59 24.3**	**+0.6**
TXAR	**Lajitas Array**	**36.54**	**313**	P	**P**	**12 59 31.3**	**-0.6**
	0.2nm,0.6s,baz=125,slow=7.7,SNR=4.3						
TXAR				PcP	**PcP**	**13 01 53.4**	**+0.4**
	0.2nm,0.5s,baz=140,slow=7.1,SNR=4.8						
	0.2nm,0.6s						
TXAR	**Lajitas Array**	**36.54**	**313**	P	**P**	**12 59 32.5**	**+0.7**
TXAR					**PcP**	**13 01 51.7**	**-1.2**
TX31	**Lajitas Ar. Si**	**36.54**	**313**	P	**P**	**12 59 32.7**	**+0.8**
P40A	**Paris**	**37.20**	**336**	P	**P**	**12 59 37.6**	**+0.4**
P40A				IAmb	IAmb	12 59 37.7	
	comp=Z,4.0nm,0.6s						
SADO	**Sadowa**	**38.84**	**354**	P	**P**	**12 59 51.0**	**+0.1**
	comp=Z,3.9nm,0.7s,baz=202,slow=5.4,SNR=1.7						
	comp=Z,3.9nm,0.7s						
MNTX	**Cornudas Mount**	**39.08**	**315**	P	**P**	**12 59 53.9**	**+0.7**
MNTX				IAmb	IAmb	12 59 54.5	
	comp=Z,1.0nm,0.6s						
ABQ	**Albuquerque**	**41.67**	**318**	P	**P**	**13 00 14.4**	**-0.2**
SDCO	**Great Sand Dun**	**42.78**	**322**	P	**P**	**13 00 24.2**	**+0.5**
K30B	**Basset**	**43.06**	**332**	P	**P**	**13 00 25.7**	**+0.1**
TBO	**Thunder Bay**	**44.48**	**345**	P	**P**	**13 00 37.2**	**+0.4**
EPLO	**Experimental L**	**46.62**	**342**	P	**P**	**13 00 53.7**	**+0.2**
EPLO				IAmb	IAmb	13 01 14.4	
	comp=Z,6.7nm,1.3s						
BSUT	**Blindstream Ca**	**47.72**	**322**	P	**P**	**13 01 03.7**	**+1.0**
BSUT				IAmb	IAmb	13 01 11.4	
	comp=Z,4.5nm,1.5s						
ULM	**Lac du Bonnet**	**47.80**	**341**	P	**P**	**13 01 02.3**	**-0.4**
	baz=140,slow=10						
ULM	**Lac du Bonnet**	**47.80**	**341**	P	**P**	**13 01 02.7**	**0.0**
ULM				IAmb	IAmb	13 01 06.8	
	comp=Z,9.5nm,1.4s						
PDAR	**Pinedale Array**	**48.35**	**325**	P	**P**	**13 01 07.5**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=138,slow=4.6,SNR=2.0						
PDAR				PcP	**PcP**	**13 02 31.6**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=156,slow=5.3,SNR=2.2						
	comp=Z,0.2nm,0.6s						
SCHQ	**Schefferville**	**48.93**	**5**	P	**P**	**13 01 12.2**	**+0.9**
	comp=Z,2.8nm,0.5s,baz=196,slow=8.5						
	comp=Z,2.8nm,0.5s						
SCHQ	**Schefferville**	**48.93**	**5**	P	**P**	**13 01 12.8**	**+1.4**
SCHQ				IAmb	IAmb	13 01 21.6	
	comp=Z,6.6nm,1.4s						
NVAR	**Mina Array Bea**	**51.60**	**315**	P	**P**	**13 01 32.8**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=123,slow=6.4,SNR=6.4						
NVAR				PcP	**PcP**	**13 02 44.6**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=140,slow=4.2,SNR=7.5						
	comp=Z,0.5nm,0.6s						
FFC	**Flin Flon**	**53.59**	**340**	P	**P**	**13 01 46.3**	**+0.2**
FFC				IAmb	IAmb	13 02 05.8	
	comp=Z,2.9nm,1.4s						
FCC	**Fort Churchill**	**54.87**	**347**	P	**P**	**13 01 55.5**	**+0.2**
FCC				IAmb	IAmb	13 01 56.2	
	comp=Z,4.5nm,1.3s						
O02D	**Mt. Diablo Mer**	**55.50**	**315**	P	**P**	**13 01 59.8**	**-0.5**
YKA	**Yellowknife Ar**	**63.77**	**340**	P	**P**	**13 02 56.0**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=135,slow=5.8,SNR=22						
	comp=Z,1.1nm,0.7s						
YKAW3	**Yellowknife Wh**	**63.82**	**340**	P	**P**	**13 02 56.9**	**+0.2**
YKAW3				IAmb	IAmb	13 02 57.4	
	comp=Z,2.0nm,0.7s						
SUMG	**Summit**	**69.83**	**11**	P	**P**	**13 03 36.0**	**+0.9**
SUMG				IAmb	IAmb	13 03 40.7	
	comp=Z,2.2nm,1.0s						
F31M	**Tsiigehtchic**	**73.23**	**340**	P	**P**	**13 03 55.5**	**+0.4**
F31M				IAmb	IAmb	13 04 03.0	
	comp=Z,4.6nm,1.4s						
ILAR	**Eielson Array**	**77.40**	**335**	P	**P**	**13 04 18.8**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=107,slow=5.1,SNR=5.8						
	comp=Z,0.3nm,0.5s						
PPLA	**Purkeypile**	**79.38**	**333**	P	**P**	**13 04 30.7**	**+0.5**
PPLA				IAmb	IAmb	13 04 32.6	
	comp=Z,5.9nm,1.2s						
NOA	**NORSAR Array B**	**82.26**	**29**	P	**P**	**13 04 46.6**	**+1.2**
	comp=Z,1.8nm,0.8s,baz=268,slow=5.2,SNR=3.3						
	comp=Z,1.8nm,0.8s						
HFS	**Hagfors**	**83.48**	**30**	P	**P**	**13 04 51.6**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=254,slow=10,SNR=1.1						
	comp=Z,1.5nm,0.8s						
ASAR	**Alice Springs**	**148.21**	**234**	PKPbc	**PKPbc**	**13 12 09.2**	**-1.1**
	comp=Z,1.2nm,0.5s,baz=119,slow=3.9,SNR=20						
ASAR	**Alice Springs**	**148.21**	**234**		**PKPdf**	**13 12 07.0**	**+0.2**
WRAB	**Tennant Creek**	**149.47**	**241**	PKPbc	**PKPbc**	**13 12 13.1**	**-0.5**
WRA	**Warramunga Arr**	**149.47**	**241**	PKPbc	**PKPbc**	**13 12 12.7**	**-0.8**
	comp=Z,1.1nm,0.3s,baz=107,slow=3.0,SNR=49						
WRA	**Warramunga Arr**	**149.47**	**241**	PKPbc	**PKPbc**	**13 12 12.2**	**-1.4**
WB0	**Warramunga Arr**	**149.50**	**241**	PKPbc	**PKPbc**	**13 12 13.0**	**-0.6**

NEIC ***17*** *12:56:32.9±1.3, 4.°6S±0.°1×153.°9E±0.°1, h225km±6km, mb4.4/29, Error ellipse: s-maj=18.8km s-min=14.7km az=66.0*

IDC ***17*** *12:56:36.4±1.5, 4.°61S×153.°83E, h267km±1.3km, mb3.5/19, mbtmp4.2/21, Error ellipse: s-maj=16.0km s-min=8.5km az=105.0*

ISC 17 12:56:34.3±0.5, **4.°49S**±0.°06×**153.°82E**±0.°07, **h250**km, **n81,**
σ1°**23/88, mb4.2/32, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RABL	**Rabaul**	**1.68**	**280**			**Pn**	**12 57 10.8**	**-3.2**
RABL				Sn		**S**	**12 57 40.3**	**-5.0**
MANU	**Manus Island**	**6.89**	**290**			**Pn**	**12 58 13.4**	**-0.2**
TATA	**Tatamba Isabel**	**7.09**	**123**	P		**Pn**	**12 58 15.4**	**-0.8**
PMG	**Port Moresby**	**8.22**	**233**	P		**Pn**	**12 58 32.9**	**+2.5**
	20nm,0.9s,baz=44,slow=12,SNR=13							
PMG				S		**S**	**13 00 06.1**	**+2.1**
	40nm,0.8s,baz=11,slow=9.1,SNR=9.9							
PMG	**Port Moresby**	**8.22**	**233**	P		Pn	12 58 36.2	+5.8
PMG	**Port Moresby**	**8.22**	**233**	P		Pn	12 58 36.3	+5.9
PMG	**Port Moresby**	**8.22**	**233**	Pn		**Pn**	**12 58 34.3**	**+3.9**
MTSU	**Mount Surprise**	**16.44**	**214**	P		**Pn**	**13 00 12.4**	**+0.7**
CTA	**Charters Tower**	**17.16**	**205**	P		**Pn**	**13 00 19.0**	**-1.2**
	5.9nm,0.6s,baz=15,slow=13,SNR=9.7							
CTAO	**Charters Tower**	**17.16**	**205**	P		**Pn**	**13 00 19.8**	**-0.4**
EIDS	**Eidsvold**	**20.92**	**187**	P		**P**	**13 00 58.2**	**+0.1**
EIDS	**Eidsvold**	**20.92**	**187**	P		**P**	**13 00 57.5**	**-0.6**
EIDS				IAmb		IAmb	13 01 00.2	
	comp=Z,20nm,1.1s							
QIS	**Mount Isa**	**21.12**	**220**	P		**P**	**13 01 00.5**	**+0.3**
DZM	**Mont Dzumac**	**21.33**	**146**	P		**P**	**13 01 01.3**	**-1.0**
	comp=Z,7.6nm,0.8s,baz=319,slow=17,SNR=2.1							
	comp=Z,7.6nm,0.8s							
QLP	**Quilpie**	**23.80**	**202**	P		**P**	**13 01 24.9**	**+0.1**
WB0	**Warramunga Arr**	**24.27**	**230**			**P**	**13 01 29.6**	**+0.5**
WB0				IAmb		IAmb	13 01 30.3	
	comp=Z,9.7nm,0.8s							
WR8	**Warramunga Arr**	**24.30**	**229**	P		**P**	**13 01 29.8**	**+0.4**
WR8				IAmb		IAmb	13 01 30.1	
	comp=Z,8.9nm,0.8s							
WRAB	**Tennant Creek**	**24.40**	**229**	P		**P**	**13 01 30.6**	**+0.3**
WRAB	**Tennant Creek**	**24.40**	**229**	P		**P**	**13 01 30.6**	**+0.3**
WRAB				IAmb		IAmb	13 01 31.3	
	comp=Z,9.9nm,0.8s							
WRA	**Warramunga Arr**	**24.41**	**229**	P		**P**	**13 01 30.7**	**+0.3**
	comp=Z,9.2nm,0.7s,baz=54,slow=10,SNR=103							
WRA				PcP		**PcP**	**13 05 02.6**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=61,slow=2.1,SNR=3.8							
WRA				S		**S**	**13 05 29.4**	**-2.3**
	comp=Z,0.5nm,0.6s,baz=52,slow=16,SNR=3.1							
WRA				ScP		**ScP**	**13 08 17.1**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=54,slow=2.7,SNR=9.3							
	comp=Z,9.2nm,0.7s							
WRA	**Warramunga Arr**	**24.41**	**229**	P		**P**	**13 01 29.6**	**-0.8**
WRA						**PcP**	**13 05 00.6**	**-1.9**
WB1	**Warramunga Ar.**	**24.42**	**229**	P		**P**	**13 01 30.3**	**-0.2**
ARMA	**Armidale**	**25.87**	**184**	P		**P**	**13 01 44.1**	**+0.6**
ARMA	**Armidale**	**25.87**	**184**	P		**P**	**13 01 44.3**	**+0.8**
INKA	**Innaminka**	**26.26**	**207**			**P**	**13 01 47.0**	**+0.1**
INKA				IAmb		IAmb	13 01 48.0	
	comp=Z,4.2nm,0.6s							
KNRA	**Kununurra**	**27.02**	**244**	P		**P**	**13 01 54.0**	**+0.2**
KNRA				IAmb		IAmb	13 02 35.5	
	comp=Z,14nm,1.5s							
AS31	**Alice Springs**	**27.06**	**223**			**P**	**13 01 54.1**	**-0.1**
AS31				IAmb		IAmb	13 01 56.4	
	comp=Z,3.1nm,0.3s							
ASAR	**Alice Springs**	**27.07**	**223**	P		**P**	**13 01 54.0**	**-0.2**
	comp=Z,3.5nm,0.4s,baz=54,slow=8.8,SNR=110							
ASAR				PcP		**PcP**	**13 05 08.5**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=40,slow=2.6,SNR=2.9							
ASAR				S		**S**	**13 06 11.5**	**-1.9**
	comp=Z,0.7nm,0.7s,baz=60,slow=15,SNR=5.2							
ASAR				ScP		**ScP**	**13 08 24.5**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=50,slow=2.8,SNR=7.5							
	comp=Z,3.5nm,0.4s							
ASAR	**Alice Springs**	**27.07**	**223**	P		**P**	**13 01 53.7**	**-0.5**
CMSA	**Cobar Meteorol**	**27.97**	**195**	P		**P**	**13 02 02.1**	**+0.1**
STKA	**Stephens Creek**	**29.56**	**201**	P		**P**	**13 02 15.6**	**-0.5**
	comp=Z,12nm,0.6s,baz=32,slow=12,SNR=33							
	comp=Z,12nm,0.6s							
STKA	**Stephens Creek**	**29.56**	**201**	P		**P**	**13 02 15.8**	**-0.3**
STKA	**Stephens Creek**	**29.56**	**201**			**P**	**13 02 15.8**	**-0.3**
CNB	**Canberra Magne**	**30.95**	**187**	P		**P**	**13 02 27.3**	**-1.0**
CAN	**Canberra**	**31.00**	**188**	P		**P**	**13 02 29.6**	**+0.9**
CAN	**Canberra**	**31.00**	**188**	P		**P**	**13 02 28.9**	**+0.2**
HTT	**Hallett**	**31.97**	**204**	P		**P**	**13 02 37.7**	**+0.5**
BBOO	**Buckleboo**	**32.70**	**208**	P		**P**	**13 02 43.0**	**-0.6**
BBOO	**Buckleboo**	**32.70**	**208**			**P**	**13 02 43.1**	**-0.4**
BBOO				IAmb		IAmb	13 02 46.9	
	comp=Z,20nm,1.2s							
FORT	**Forrest**	**35.67**	**220**			**P**	**13 03 09.0**	**0.0**
FORT				IAmb		IAmb	13 03 09.8	
	comp=Z,10nm,0.7s							
PLAI	**Plampang**	**36.05**	**261**	P		**P**	**13 03 10.2**	**-2.3**
PSA00	**Pilbara Seismi**	**37.06**	**240**	P		**P**	**13 03 18.9**	**-2.0**
PSA00	**Pilbara Seismi**	**37.06**	**240**	P		**P**	**13 03 20.3**	**-0.7**
PSA00	**Pilbara Seismi**	**37.06**	**240**	P		**P**	**13 03 20.2**	**-0.7**
PSA00				IAmb		IAmb	13 03 21.1	
	comp=Z,7.8nm,0.7s							
MOO	**Moorlands**	**38.24**	**188**	P		**P**	**13 03 28.8**	**-1.7**
TAU	**Tasmania Unive**	**38.69**	**188**	P		**P**	**13 03 35.4**	**+1.3**
MEEK	**Meekatharra**	**40.20**	**233**	P		**P**	**13 03 45.7**	**-1.2**
LTZ	**Lake Taylor**	**41.50**	**159**	P		**P**	**13 03 56.8**	**-0.4**
LTZ				IAmb		IAmb	13 04 28.1	
	comp=Z,14nm,1.1s							
WHZ	**Wether Hill Ro**	**43.03**	**166**	P		**P**	**13 04 08.8**	**-0.7**
WHZ				IAmb		IAmb	13 04 18.3	
	comp=Z,16nm,1.3s							
MJAR	**Matsushiro Arr**	**43.35**	**342**	P		**P**	**13 04 12.6**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=146,slow=12,SNR=2.3							
	comp=Z,1.8nm,0.8s							
MJAR	**Matsushiro Arr**	**43.35**	**342**	P		**P**	**13 04 12.9**	**+0.7**
MAJO	**Matsushiro**	**43.36**	**342**	P		**P**	**13 04 12.2**	**0.0**
MAJO				IAmb		IAmb	13 04 52.6	
	comp=Z,31nm,1.5s							
MJB9	**Matsu-Tunnel**	**43.36**	**342**	P		**P**	**13 04 13.2**	**+1.0**
MJB9				IAmb		IAmb	13 04 56.7	
	comp=Z,26nm,1.4s							
NWAO	**Narrogin (SRO)**	**44.33**	**226**	P		**P**	**13 04 19.3**	**-0.7**
KSRS	**Korea Array**	**46.20**	**332**	P		**P**	**13 04 51.0**	**+1.2**
	comp=Z,1.8nm,0.6s,baz=148,slow=7.5,SNR=8.8							
	comp=Z,1.8nm,0.6s							
JKA	**Kamikawa-asahi**	**49.43**	**349**	P		**P**	**13 05 00.1**	**+1.0**
USRK	**Ussuriysk Ar.**	**52.30**	**340**	P		**P**	**13 05 21.4**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=151,slow=4.6,SNR=5.0							
	comp=Z,0.8nm,0.3s							
PETK	**Petropavlovsk-**	**57.48**	**3**	P		**P**	**13 05 58.5**	**+1.2**
	comp=Z,2.1nm,0.8s,baz=156,slow=6.3,SNR=17							
	comp=Z,2.1nm,0.8s							
CMAR	**Chiang Mai Arr**	**58.67**	**295**	P		**P**	**13 06 06.7**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=112,slow=6.8,SNR=4.5							
	comp=Z,0.4nm,0.4s							
LZDM	**Lanzhou Array**	**61.77**	**315**	P		**P**	**13 06 28.7**	**+1.5**
	comp=Z,2.1nm,0.4s,baz=115,slow=13,SNR=3.9							
	comp=Z,2.1nm,0.4s							
SONM	**Songino Array**	**66.61**	**327**	P		**P**	**13 06 59.7**	**+1.5**
	comp=Z,2.3nm,0.6s,baz=136,slow=5.4,SNR=7.4							
	comp=Z,2.3nm,0.6s							
SONM	**Songino Array**	**66.61**	**327**	P		**P**	**13 06 60.0**	**+1.8**
CASY	**Casey**	**68.61**	**197**	P		**P**	**13 07 10.2**	**+0.1**
VNDA	**Vanda**	**73.10**	**178**	P		**P**	**13 07 37.0**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=329,slow=5.9,SNR=6.1							
	comp=Z,0.6nm,0.4s							
VNDA	**Vanda**	**73.10**	**178**	P		**P**	**13 07 37.6**	**+0.7**
MK31	**Makanchi Array**	**80.77**	**319**	P		**P**	**13 08 21.5**	**+1.3**
MKAR	**Makanchi Array**	**80.77**	**319**	P		**P**	**13 08 21.3**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=97,slow=4.3,SNR=7.6							
	comp=Z,0.6nm,0.6s							
MKAR	**Makanchi Array**	**80.77**	**319**	P		**P**	**13 08 21.6**	**+1.5**
ZALV	**Zalesovo Beam**	**81.47**	**326**	P		**P**	**13 08 23.9**	**+0.3**
	comp=Z,0.9nm,0.4s,baz=116,slow=6.1,SNR=5.6							
	comp=Z,0.9nm,0.4s							
ZALV	**Zalesovo Beam**	**81.47**	**326**	P		**P**	**13 08 24.4**	**+0.8**
ILAR	**Eielson Array**	**81.50**	**22**	P		**P**	**13 08 23.9**	**+0.4**
	comp=Z,0.2nm,0.7s,baz=206,slow=5.1,SNR=1.9							
	comp=Z,0.2nm,0.7s							
KURK	**Kurchatov**	**84.16**	**322**	P		**P**	**13 08 39.0**	**+1.6**
KURBB	**Kurchatov Arra**	**84.19**	**322**	P		**P**	**13 08 38.5**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=114,slow=4.1,SNR=4.3							
	comp=Z,0.3nm,0.3s							
QSPA	**South Pole Qui**	**85.46**	**180**	P		**P**	**13 08 43.4**	**-0.5**
	comp=Z,1.9nm,0.6s,baz=326,slow=1.4,SNR=17							
	comp=Z,1.9nm,0.6s							
QSPA	**South Pole Qui**	**85.46**	**180**	P		**P**	**13 08 43.9**	**+0.1**
QSPA				IAmb		IAmb	13 09 01.8	
	comp=Z,5.1nm,1.5s							
BVAR	**Borovoye Array**	**89.61**	**323**	P		**P**	**13 09 04.4**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=189,slow=7.5,SNR=2.6							
	comp=Z,0.5nm,0.6s							
NVAR	**Mina Array Bea**	**91.10**	**52**	P		**P**	**13 09 11.8**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=252,slow=3.0,SNR=2.0							
	comp=Z,0.2nm,0.5s							
MD01	**Midelt array s**	**145.40**	**327**	PKPab		**PKPab**	**13 15 45.4**	**+1.3**
BOAV	**Boa Vista**	**145.66**	**92**	PKPab		**PKPab**	**13 15 44.9**	**-0.6**
BDFB	**Brasilia**	**150.54**	**133**	PKPbc		**PKPbc**	**13 15 57.0**	**-0.6**
	comp=Z,1.9nm,0.3s,baz=166,slow=7.9,SNR=4.1							
TORD	**Torodi Ar. Bea**	**151.18**	**289**	PKPbc		**PKPbc**	**13 15 58.9**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=61,slow=3.0,SNR=8.6							

IDC ***17*** *13:08:55.0±1.4, 14.°63N×144.°29E, h0km, mb3.6/6, mbtmp3.6/6, MS2.7/3, Error ellipse: s-maj=50.5km s-min=15.3km az=62.0*

ISC 17 13:08:58.7±1.7, **14.°6N**±0.°2×**144.°4E**±0.°3, **h27**km, **n12,**
σ0°**95/8, mb3.7/6, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GUMO	**Guam**	**1.15**	**154**	Pn		**Pn**	**13 09 18.3**	**-0.7**
	26nm,0.3s,baz=325,slow=12,SNR=8.7							
GUMO				Sn		**Sb**	**13 09 34.5**	**+0.1**
	31nm,0.3s,baz=168,slow=23,SNR=21							
JOW	**Kunigami**	**19.30**	**312**	LR		LR	13 19 04.7	
	comp=Z,41nn,21.2s,baz=116,slow=32							
H11S3	**WAKE ISLAND Hy**	**21.74**	**77**	T		T	13 36 48.7	
	baz=262,slow=75,SNR=6.3							
H11S1	**WAKE ISLAND Hy**	**21.76**	**77**	T		T	13 36 48.9	
	baz=262,slow=75,SNR=5.9							
H11S2	**WAKE ISLAND Hy**	**21.76**	**77**	T		T	13 36 49.6	
	baz=262,slow=75,SNR=7.0							
KSRS	**Korea Array**	**27.02**	**330**	LR		LR	13 25 11.7	
	comp=Z,14nn,18.8s,baz=40,slow=36							
WRA	**Warramunga Arr**	**35.74**	**196**	P		**P**	**13 15 56.1**	**+0.6**
	1.3nm,0.9s,baz=14,slow=9.2,SNR=6.3							
	1.3nm,0.9s							
ASAR	**Alice Springs**	**39.41**	**195**	P		**P**	**13 16 27.7**	**+1.2**
	0.1nm,0.2s,baz=9.1,slow=7.3,SNR=1.7							
	0.1nm,0.2s							
CMAR	**Chiang Mai Arr**	**43.62**	**281**	P		**P**	**13 17 00.1**	**-1.1**
	0.2nm,0.3s,baz=80,slow=6.4,SNR=7.9							
CMAR				LR		LR	13 34 09.2	
	comp=Z,7.2nm,19.6s,baz=325,slow=35							
	0.2nm,0.3s							
MKAR	**Makanchi Array**	**60.40**	**316**	P		**P**	**13 19 06.3**	**+0.5**
	0.6nm,0.8s,baz=89,slow=8.3,SNR=6.5							
	0.6nm,0.8s							
ZALV	**Zalesovo Beam**	**60.49**	**324**	P		**P**	**13 19 07.1**	**+0.9**
	0.2nm,0.3s,baz=109,slow=7.9,SNR=1.5							
	0.2nm,0.3s							
KURBB	**Kurchatov Arra**	**63.51**	**320**	P		**P**	**13 19 26.5**	**-0.1**
	1.6nm,0.9s,baz=102,slow=6.7,SNR=15							
	1.6nm,0.9s							

IDC ***17*** *13:12:27.6±5.6, 15.°46S×167.°71E, h107km±47km, mb3.5/5, mbtmp3.9/6, Error ellipse: s-maj=38.3km s-min=32.6km az=14.0*

NEIC ***17*** *13:12:29.0±1.2, 15.°5S±0.°1×167.°92E±0.°06, h124km±5km, mb4.3/14, Error ellipse: s-maj=18.4km s-min=7.8km az=170.0*

ISC 17 13:12:27.4±0.8, **15.°60S**±0.°08×**167.°99E**±0.°09, **h100**km, **n26,**
σ2°**11/28, mb4.1/11, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SANVU	**Saraoutou**	**0.78**	**281**	Pn		**Pn**	**13 12 48.8**	**+3.3**
SANVU				Sn		**Sn**	**13 13 03.3**	**+4.2**
MARNC	**Mare, Loyalty**	**5.85**	**180**	Pn		**Pn**	**13 13 53.1**	**+1.4**
DZM	**Mont Dzumac**	**6.61**	**193**	P		**Pn**	**13 14 04.6**	**+2.6**
	4.5nm,0.3s,baz=22,slow=11,SNR=51							
DZM				S		**Sn**	**13 15 16.7**	**+0.8**
	9.3nm,0.6s,baz=150,slow=22,SNR=2.1							
ONTNC	**Quen Toro**	**6.83**	**192**	Pn		**Pn**	**13 14 07.7**	**+2.7**
FUTU	**Fugatoga**	**13.48**	**86**	Pn		**Pn**	**13 15 35.5**	**+0.8**
EIDS	**Eidsvold**	**18.57**	**236**	P		**P**	**13 16 35.3**	**-1.2**
EIDS				IAmb		IAmb	13 16 46.9	
	comp=Z,20nm,1.4s							
BKZ	**Black Stump Fm**	**24.64**	**164**	P		**P**	**13 17 40.6**	**+2.0**
MRNZ	**Matariki Terra**	**26.04**	**172**	P		**P**	**13 17 52.0**	**+0.8**
TCW	**Tory Channel**	**26.10**	**169**	P		**P**	**13 17 52.6**	**+0.9**
LTZ	**Lake Taylor**	**27.34**	**173**	P		**P**	**13 18 04.4**	**+1.5**
INKA	**Innaminka**	**27.99**	**240**	P		**P**	**13 18 08.2**	**-0.6**
STKA	**Stephens Creek**	**28.98**	**231**	P		**P**	**13 18 17.1**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=41,slow=9.3,SNR=1.8							
	comp=Z,0.7nm,0.5s							
STKA	**Stephens Creek**	**28.98**	**231**	P		**P**	**13 18 17.0**	**-0.6**
STKA				IAmb		IAmb	13 18 17.7	
	comp=Z,20nm,1.4s							
WR8	**Warramunga Arr**	**32.16**	**257**	P		**P**	**13 18 43.2**	**-2.5**
WR8				IAmb		IAmb	13 19 02.9	
	comp=Z,9.4nm,1.5s							
WB0	**Warramunga Arr**	**32.25**	**258**	P		**P**	**13 18 43.8**	**-2.8**
WB0				IAmb		IAmb	13 18 44.9	
	comp=Z,11nm,1.5s							
WRAB	**Tennant Creek**	**32.30**	**257**	P		**P**	**13 18 44.3**	**-2.7**
WRAB				I

	comp=Z,3.3nm,0.9s							
LOHW	**Long Hollow**	**66.90**	**5**	P	**P**	**13 32 38.1**	**-0.2**
FLWY	**Flagg Ranch**	**67.36**	**4**	P	**P**	**13 32 41.2**	**0.0**
MDP	**Montagnes des**	**68.22**	**74**	LR	LR	13 58 35.8	
	comp=Z,45nm,19.2s,baz=136,slow=32						
LYMT	**Lyon Mountain**	**70.15**	**3**	P	**P**	**13 32 57.6**	**-0.9**
EMMW	**East Machias**	**81.14**	**33**	P	**P**	**13 34 00.6**	**-0.7**
FCC	**Fort Churchill**	**83.92**	**11**	P	**P**	**13 34 14.9**	**-0.4**
FCC				IAmb	IAmb	13 34 17.0	
	comp=Z,4.5nm,1.1s						
YKA	**Yellowknife Ar**	**85.62**	**1**	P	**P**	**13 34 23.1**	**-0.8**
	comp=Z,1.5nm,1.0s,baz=184,slow=4.3,SNR=16						
	comp=Z,1.5nm,1.0s						
YKAW3	**Yellowknife Wh**	**85.69**	**1**	P	**P**	**13 34 24.0**	**-0.2**
YKAW3				IAmb	IAmb	13 34 26.2	
	comp=Z,3.1nm,1.1s						
H11S2	**WAKE ISLAND Hy**	**85.89**	**292**	T	T	15 10 08.6	
	baz=116						
H11S1	**WAKE ISLAND Hy**	**85.90**	**292**	T	T	15 10 08.8	
	baz=116						
H11S3	**WAKE ISLAND Hy**	**85.90**	**292**	T	T	15 10 10.2	
	baz=116						
H11N3	**WAKE ISLAND Hy**	**86.25**	**293**	T	T	15 10 35.5	
	baz=117						
H11N1	**WAKE ISLAND Hy**	**86.27**	**293**	T	T	15 10 42.9	
	baz=117						
H11N2	**WAKE ISLAND Hy**	**86.27**	**293**	T	T	15 10 38.7	
	baz=117						
UNV	**Unalaska Valle**	**88.27**	**333**	P	**P**	**13 34 38.2**	**+1.2**
ZALV	**Zalesovo Beam**	**145.61**	**338**	PKPbc	**PKPdf**	**13 41 22.8**	**-1.1**
	comp=Z,2.2nm,0.8s,baz=60,slow=3.5,SNR=7.6						
ZALV	**Zalesovo Beam**	**145.61**	**338**		**PKPdf**	**13 41 23.7**	**-0.3**
CMAR	**Chiang Mai Arr**	**146.76**	**268**	PKPbc	**PKPdf**	**13 41 27.0**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=97,slow=0.9,SNR=4.7						
BRTR	**Keskin Array B**	**149.85**	**50**	PKPbc	**PKPdf**	**13 41 33.6**	**+1.9**
	comp=Z,2.3nm,1.0s,baz=276,slow=1.3,SNR=6.3						
BVAR	**Borovoye Array**	**150.00**	**352**	PKPbc	**PKPbc**	**13 41 35.0**	**-1.2**
	comp=Z,2.3nm,0.9s,baz=15,slow=2.3,SNR=6.0						
BVAR	**Borovoye Array**	**150.00**	**352**		**PKPbc**	**13 41 35.0**	**-1.2**
KURK	**Kurchatov**	**150.38**	**341**		**PKPbc**	**13 41 37.2**	**0.0**
KURBB	**Kurchatov Arra**	**150.49**	**341**	PKPbc	**PKPbc**	**13 41 36.2**	**-1.2**
	comp=Z,2.6nm,0.9s,baz=25,slow=1.8,SNR=16						
MKAR	**Makanchi Array**	**152.29**	**332**	PKPbc	**PKPbc**	**13 41 40.7**	**-1.1**
	comp=Z,1.0nm,0.7s,baz=27,slow=1.3,SNR=11						

*JSN **17** 13:51:14.6±0.9, 17°.60N×80°.25W, h0km±42km, MD4.3, Presumed earthquake*
*SSNC **17** 13:51:27.0±1.8, 17°.95N×79°.56W, h20km±25km, MD3.6, ML3.6, Presumed earthquake*

ISC 17 13:51:25.7±2.6, 17°.9N±0°.1×79°.63W±0°.10, h35km, n17, σ1§82/27, 2D, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCCY	**Blossom Villag**	**1.80**	**346**	*e*P	**Pn**	**13 51 54.4**	**+0.2**
LCCY				*e*S	**Sn**	**13 52 15.3**	**-0.6**
LCCY				IAML		13 52 16.3	
	comp=N,370nm,0.4s						
LCCY				IAML		13 52 16.4	
	comp=E,386nm,0.3s						
CBCY	**The Bluff, Cay**	**1.82**	**356**	*e*P	**Pn**	**13 51 54.2**	**-0.4**
CBCY				*e*S	**Sn**	**13 52 15.2**	**-1.2**
CBCY				IAML		13 52 17.1	
	comp=E,268nm,0.3s						
CBCY				IAML		13 52 17.2	
	comp=N,318nm,0.2s						
MTDJ	**Mount Denham**	**2.02**	**81**	*i* P	**Pn**	**13 51 57.3**	**0.0**
MTDJ	**Mount Denham**	**2.02**	**81**	⇓*e*P	**Pn**	**13 51 57.1**	**-0.1**
MTDJ				*e*S	**Sn**	**13 52 22.1**	**+0.8**
MTDJ				IAML		13 52 30.2	
	comp=N,1μm,0.6s						
MTDJ				IAML		13 52 31.8	
	comp=N,1μm,0.4s						
STH	**Stony Hill**	**2.69**	**86**	*i* P	**Pn**	**13 52 06.9**	**+0.4**
STH	**Stony Hill**	**2.69**	**86**	*e*P	**Pn**	**13 52 05.9**	**-0.6**
STH				*e*S	**Sn**	**13 52 38.9**	**+1.1**
HOJ	**Hope**	**2.74**	**88**	*i* P	**Pn**	**13 52 07.6**	**+0.5**
GWJ	**Greenwich**	**2.76**	**86**	*i* P	**Pn**	**13 52 08.2**	**+0.6**
LMGC	**Las Mercedes**	**3.28**	**49**	*e*P	**Pn**	**13 52 14.2**	**-0.3**
LMGC				*e*S	**Sn**	**13 52 49.1**	**-3.2**
CHIV	**Chivirico**	**3.67**	**55**	*e*P	**Pn**	**13 52 19.5**	**-0.5**
CHIV				*e*S	Sn	13 52 57.8	-4.2
CHIV				*e*Sg		13 53 00.5	
CCCC	**Cccc**	**3.71**	**28**	*e*P	**Pn**	**13 52 25.0**	**+4.4**
CCCC				*e*S	**Sn**	**13 53 07.2**	**+4.2**
YAR	**Yar**	**3.94**	**51**	*e*P	**Pn**	**13 52 24.1**	**+0.5**
YAR				*e*S	**Sn**	**13 53 06.4**	**-2.3**
MARVS	**Santiago de Cu**	**4.09**	**59**	*e*P	**Pn**	**13 52 25.3**	**-0.5**
MARVS				*e*S	**Sn**	**13 53 10.6**	**-1.9**
MGV	**Manicaragua**	**4.19**	**356**	⇓*e*P	**Pn**	**13 52 28.2**	**+1.1**
MGV				*e*S	**Sn**	**13 53 12.1**	**-2.8**
GTBY	**Guantanamo Bay**	**4.72**	**64**	*e*P	**Pn**	**13 52 36.3**	**+1.9**
GTBY				*e*S	Sn	13 53 23.6	-4.4
QMBU	**Quimbuelo**	**5.09**	**63**	*e*P	**Pn**	**13 52 39.2**	**-0.4**
QMBU				*e*S	Sn	13 53 31.2	-5.9
MASC	**Masc**	**5.58**	**65**	*e*P	**Pn**	**13 52 47.7**	**+1.5**
MASC				*e*S	**Sn**	**13 53 47.6**	**-1.5**

*CATAC **17** 13:59:22.5±0.3, 13°.N±2°×9°.1W±°, h12km±2km, M4.7/40, MLv4.7/40, Error ellipse: s-maj=4.3km s-min=2.0km az=31.5, confirmed*
*SNET **17** 13:59:24.9±2.1, 13°.56N×90°.87W, h52km, ML4.4, Presumed earthquake*
*NEIC **17** 13:59:24.8±2.4, 13°.44N±0°.05×90°.95W±0°.06, h35km±2km, mb4.3/25, Error ellipse: s-maj=13.3km s-min=3.0km az=231.0*
*GCG **17** 13:59:24.7±1.8, 13°.55N×90°.92W, h48km±26km, MD4.0, Presumed earthquake*
*IDC **17** 13:59:25.1±2.5, 13°.42N×90°.78W, h60km±22km, mb3.4/6, mbtmp3.8/9, ML4.2/3, MS3.0/1, Error ellipse: s-maj=26.4km s-min=12.3km az=59.0*

ISC 17 13:59:25.5±1.1, 13°.48N±0°.06×90°.85W±0°.04, h55km±9km, n124, σ1§21/157, mb4.2/12, 2C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESSJ	**San Jos, E**	**0.35**	**76**	*i* P	**Pn**	**13 59 35.6**	**+0.1**
FG8	**Yepocapa, Chim**	**0.83**	**20**	*i* P	**Pn**	**13 59 40.8**	**-0.5**
FG8				*i* S	**Sn**	**13 59 53.1**	**+0.3**
FG16	**Alotenango, Sa**	**0.86**	**23**	*i* P	**Pn**	**13 59 41.0**	**-0.7**
PCG5	**San Vicente Pa**	**0.87**	**32**	*i* P	**Pn**	**13 59 40.1**	**-1.7**
FAME	**Alcaldia de Sa**	**0.89**	**66**	P	**Pn**	**13 59 50.0**	**-2.0**
FAME				S	**Sn**	**13 59 52.9**	**-1.2**
STG5	**El Palmar, Qui**	**1.04**	**332**	*i* P	**Pn**	**13 59 46.0**	**+2.0**
STG2	**El Palmar, Qui**	**1.08**	**332**	*i* P	**Pn**	**13 59 47.0**	**+2.4**
STG8	**El Palmar, Qui**	**1.08**	**334**	*i* P	**Pn**	**13 59 47.0**	**+2.3**
STG8				*i* S	**Sn**	**14 00 04.0**	**+5.1**
SLOZ	**Alcaldia de Sa**	**1.17**	**62**	P	**Pn**	**13 59 45.1**	**-0.7**
SLOZ				S	**Sn**	**14 00 01.3**	**+0.5**
CEVE	**Cerro Verde**	**1.25**	**74**	P	**Pn**	**13 59 45.7**	**-1.1**
CEVE	**Cerro Verde**	**1.25**	**74**	⇑*i*P	**Pn**	**13 59 46.2**	**-0.7**
CEVE				*e*S	**Sn**	**14 00 03.9**	**+1.1**
RTAL	**Retalhuleu**	**1.32**	**322**		**Pn**	**13 59 45.5**	**-2.3**
RTAL	**Retalhuleu**	**1.32**	**322**	P	**Pn**	**13 59 45.7**	**-2.0**
UNIC	**Universidad Ca**	**1.36**	**68**	P	**Pn**	**13 59 47.1**	**-1.2**
UNIC				S	**Sn**	**14 00 06.0**	**+0.6**
JAYA	**Jayaque - finc**	**1.38**	**82**	P	**Pn**	**13 59 47.4**	**-1.2**
JAYA				S	**Sn**	**14 00 05.5**	**-0.3**
JAYA	**Jayaque - finc**	**1.38**	**82**	*i* P	**Pn**	**13 59 47.7**	**-0.9**
CEDA	**San Andres**	**1.45**	**77**	P	**Pn**	**13 59 48.6**	**-0.9**
CEDA				S	**Sn**	**14 00 07.3**	**-0.2**
CEDA	**San Andres**	**1.45**	**77**	*e*P	**Pn**	**13 59 49.1**	**-0.4**
CEDA				*e*S	**Sn**	**14 00 05.7**	**-1.9**
LALI	**Alcalda de L**	**1.49**	**89**	P	**Pn**	**13 59 49.2**	**-0.7**
LALI				S	**Sn**	**14 00 09.5**	**+1.1**
LALI	**Alcalda de L**	**1.49**	**89**	*i* P	**Pn**	**13 59 50.2**	**+0.2**
PMON	**Piamonte**	**1.51**	**81**	P	**Pn**	**13 59 50.0**	**-0.4**
PMON				S	**Sn**	**14 00 09.9**	**+0.8**
BOQS	**Boqueron**	**1.55**	**80**	*i* P	**Pn**	**13 59 51.0**	**0.0**
APG	**El Apazote**	**1.56**	**14**	P	**Pn**	**13 59 50.8**	**-0.5**
	63nm,0.5s,baz=167,slow=10,SNR=630						
APG				S	**Sn**	**14 00 11.5**	**+1.0**
	123nm,0.4s,baz=119,slow=11,SNR=30						
APG	**El Apazote**	**1.56**	**14**	*i* P	**Pn**	**13 59 50.2**	**-1.0**
APG				*i* S	**Sn**	**14 00 11.6**	**+1.1**
UEES	**Universidad Ev**	**1.59**	**81**	P	**Pn**	**13 59 50.9**	**-0.5**
SEMO	**Seminario San**	**1.60**	**82**	P	**Pn**	**13 59 51.2**	**-0.3**
SEMO				S	**Sn**	**14 00 12.3**	**+1.2**
UTEC	**Universidad Te**	**1.62**	**82**	P	**Pn**	**13 59 51.7**	**-0.1**
UTEC				S	**Sn**	**14 00 12.6**	**+0.9**
PANCS	**Alcalda de**	**1.63**	**85**	P	**Pn**	**13 59 51.3**	**-0.7**
PANCS				S	**Sn**	**14 00 12.3**	**+0.4**
IGN	**Direccin Gen**	**1.65**	**82**	P	**Pn**	**13 59 52.4**	**+0.2**
IGN				S	**Sn**	**14 00 13.5**	**+1.1**
MTO3	**Montecristo**	**1.71**	**58**		**Pn**	**13 59 52.7**	**-0.5**
MTO3	**Montecristo**	**1.71**	**58**	P	**Pn**	**13 59 52.8**	**-0.5**
MTO3				S	**Sn**	**14 00 15.6**	**+1.4**
MTO3	**Montecristo**	**1.71**	**58**	*i* P	**Pn**	**13 59 52.8**	**-0.5**
SMCA	**Catarina**	**1.81**	**319**	*i* P	**Pn**	**13 59 52.8**	**-1.5**
QUIS	**Sacapulas**	**1.82**	**353**	*e*P	**Pn**	**13 59 54.5**	**-0.1**
QUIS				*e*S	**Sn**	**14 00 18.4**	**+1.8**
ESQI	**Esquipulas**	**1.82**	**54**	P	**Pn**	**13 59 54.3**	**-0.2**
ESQI	**Esquipulas**	**1.82**	**54**	P	**Pn**	**13 59 54.5**	**-0.1**
ESQI				S	**Sn**	**14 00 19.4**	**+2.8**
ESQI	**Esquipulas**	**1.82**	**54**	⇑*i*P	**Pn**	**13 59 54.4**	**-0.2**
ESQI				*e*S	**Sn**	**14 00 17.9**	**+1.4**
PAVA	**Las Pavas**	**1.88**	**83**	P	**Pn**	**13 59 55.4**	**+0.1**
PAVA				S	**Sn**	**14 00 20.2**	**+2.2**
COEG	**Centro de Oper**	**1.92**	**86**	P	**Pn**	**13 59 56.2**	**+0.3**
COEG				S	**Sn**	**14 00 21.4**	**+2.4**
HUEH	**Huehuetenango**	**1.94**	**341**		**Pn**	**13 59 55.9**	**-0.4**
HUEH	**Huehuetenango**	**1.94**	**341**	P	**Pn**	**13 59 55.9**	**-0.4**
HUEH	**Huehuetenango**	**1.94**	**341**	*e*P	**Pn**	**13 59 56.2**	**-0.1**
HUEH				*e*S	**Sn**	**14 00 20.2**	**+0.7**
LLGN	**La Laguna**	**1.98**	**70**	P	**Pn**	**13 59 55.6**	**-1.0**
LLGN				S	**Sn**	**14 00 22.1**	**+1.8**
THIG		**1.98**	**316**	*i* P	**Pn**	**13 59 55.0**	**-1.5**
TECO	**Alcaldia de Te**	**2.02**	**88**	P	**Pn**	**13 59 56.8**	**-0.3**
TECO				S	**Sn**	**14 00 23.0**	**+1.7**
SCLA	**Alcaldia de Sa**	**2.08**	**84**	P	**Pn**	**13 59 58.3**	**+0.2**
SCLA				S	**Sn**	**14 00 25.8**	**+3.0**
P5NO	**Presa 5 de nov**	**2.10**	**76**	P	**Pn**	**13 59 57.5**	**-0.7**
P5NO				S	**Sn**	**14 00 25.1**	**+1.9**
SARH	**Santa Rosa de**	**2.41**	**57**	P	**Pn**	**14 00 22.2**	**-0.3**
SARH				S	**Sn**	**14 00 32.7**	**+1.8**
SARH	**Santa Rosa de**	**2.41**	**57**	*i* P	**Pn**	**14 00 22.7**	**+0.2**
PACA	**Pacayal**	**2.46**	**90**	P	**Pn**	**14 00 03.1**	**-0.3**
PACA				S	**Sn**	**14 00 34.6**	**+2.2**
RANC	**El Ranchito**	**2.50**	**91**	P	**Pn**	**14 00 03.6**	**-0.2**
RANC				S	**Sn**	**14 00 35.1**	**+1.9**
BLLM	**Bellamira**	**2.54**	**90**	*e*P	**Pn**	**14 00 04.9**	**+0.5**
MARCA	**Marcala la Paz**	**2.82**	**76**	P	**Pn**	**14 00 08.0**	**-0.3**
MARCA	**Marcala la Paz**	**2.82**	**76**	*i* P	**Pn**	**14 00 08.0**	**-0.3**
LCND	**La Caada**	**2.89**	**93**	P	**Pn**	**14 00 09.0**	**-0.1**
CNCH	**Conchagua**	**2.94**	**94**	P	**Pn**	**14 00 10.2**	**+0.3**
CNCH				S	**Sn**	**14 00 46.4**	**+2.2**
CCIG	**Comitan**	**3.05**	**336**		**Pn**	**14 00 11.5**	**0.0**
CCIG	**Comitan**	**3.05**	**336**	P	**Pn**	**14 00 11.9**	**+0.4**
CCIG				S	**Sn**	**14 00 47.4**	**+0.5**
CSGN	**Cosiguina Volc**	**3.25**	**98**	P	**Pn**	**14 00 14.2**	**+0.1**
CSGN				S	**Sn**	**14 00 52.9**	**+1.4**
TGUH	**Tegucigalpa,Un**	**3.53**	**80**		**Pn**	**14 00 17.3**	**-0.6**
TGUH	**Tegucigalpa,Un**	**3.53**	**80**	P	**Pn**	**14 00 17.5**	**-0.4**
CRIN	**San Cristobal**	**3.79**	**101**		**Pn**	**14 00 21.3**	**-0.1**
CRIN	**San Cristobal**	**3.79**	**101**	P	**Pn**	**14 00 21.4**	**-0.1**
PKGN	**Cerro Pekin**	**3.86**	**102**	P	**Pn**	**14 00 22.3**	**-0.1**
YUSH	**Yuscaran**	**3.93**	**83**	P	**Pn**	**14 00 23.3**	**-0.1**
TEL3	**Telica 3**	**4.01**	**103**	P	**Pn**	**14 00 25.0**	**+0.6**
HERN	**Volcan Telica**	**4.01**	**102**		**Pn**	**14 00 23.7**	**-0.8**
HERN	**Volcan Telica**	**4.01**	**102**	P	**Pn**	**14 00 23.8**	**-0.8**
POLN	**Al Sur del Vol**	**4.02**	**101**	P	**Pn**	**14 00 24.2**	**-0.5**
CNGA	**Al SSO del Vol**	**4.16**	**103**	P	**Pn**	**14 00 26.3**	**-0.3**
CNGN	**Cerro Negro**	**4.16**	**103**		**Pn**	**14 00 26.2**	**-0.4**
CNGN	**Cerro Negro**	**4.16**	**103**	P	**Pn**	**14 00 26.0**	**-0.6**
CNGN				S	**Sn**	**14 01 14.2**	**+0.2**
MACN	**El Madrono**	**4.20**	**103**	P	**Pn**	**14 00 26.4**	**-0.7**
OCON	**Estacion meteo**	**4.26**	**87**	P	**Pn**	**14 00 27.6**	**-0.3**
COPN	**Copaltepe**	**4.35**	**107**	P	**Pn**	**14 00 28.9**	**-0.2**
MOM2	**El Cardon**	**4.38**	**103**	P	**Pn**	**14 00 28.9**	**-0.6**
LIMN	**Finca el Limon**	**4.39**	**95**	P	**Pn**	**14 00 29.7**	**-0.1**
LIMN				S	**Sn**	**14 01 20.5**	**+0.8**
SAPS	**Ciudad Sandino**	**4.53**	**106**	P	**Pn**	**14 00 31.5**	**0.0**
RCVN	**Varillal2**	**4.53**	**88**	P	**Pn**	**14 00 31.4**	**-0.3**
APQ3	**Volcan Apoyequ**	**4.53**	**105**	P	**Pn**	**14 00 31.2**	**-0.5**
BOAB	**BOACO BROADBAN**	**5.16**	**101**		**Pn**	**14 00 39.5**	**-0.7**
CMIG	**Matias Romero**	**5.29**	**313**	P	**Pn**	**14 00 41.3**	**-0.8**
	4.5nm,0.3s,baz=110,slow=9.9,SNR=31						
CMIG				S	**Sn**	**14 01 37.6**	**-4.2**
	63nm,0.5s,baz=296,slow=22,SNR=8.2						
CMIG				LR	LR	14 02 58.1	
	comp=Z,141nm,18.7s,baz=35,slow=40						
	10.0nm,0.3s						
SIUN	**Universidad Ur**	**5.92**	**87**		**Pn**	**14 00 51.0**	**+0.4**
JTS	**Las Juntas de**	**6.59**	**118**	P	**Pn**	**14 00 59.2**	**-0.6**
	4.2nm,0.3s,baz=292,slow=6.7,SNR=10						
JTS				S	**Sn**	**14 02 11.8**	**-1.8**
	4.3nm,0.4s,baz=288,slow=22,SNR=0.9						
	11nm,0.3s						
JTS	**Las Juntas de**	**6.59**	**118**		**Pn**	**14 01 00.5**	**+0.7**
TEIG	**Tepich**	**7.15**	**20**		**Pn**	**14 01 07.2**	**-0.3**
BILN	**Bilwi Airport**	**7.29**	**85**	Pn	**Pn**	**14 01 10.8**	**+1.4**
BRU2	**Volcan**	**9.26**	**119**		**Pn**	**14 01 38.1**	**+1.5**
NMDO	**Nuevo Mundo**	**16.72**	**63**	P	**P**	**14 03 19.7**	**+2.0**
NMDO				IAmb	IAmb	14 03 34.6	
	comp=Z,28nm,1.2s						
SAND	**Sanderson**	**19.43**	**329**		**Pn**	**14 03 48.3**	**-0.8**
TXAR	**Lajitas Array**	**19.75**	**325**	P	**Pn**	**14 03 51.8**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=150,slow=12,SNR=18						
	comp=Z,1.2nm,0.4s						
TX31	**Lajitas Ar. Si**	**19.75**	**325**		**Pn**	**14 03 51.7**	**-1.3**
SDV	**Santo Domingo**	**20.35**	**101**	P	**P**	**14 03 55.2**	**-2.6**
	comp=Z,2.0nm,0.5s,baz=244,slow=22,SNR=1.3						
	comp=Z,2.0nm,0.5s						
ALPN	**Alpine**	**20.55**	**327**		Pn	14 04 00.8	-1.6
ALPN				IAmb	IAmb	14 04 01.9	
	comp=Z,8.2nm,0.6s						
MNHN	**Monahans**	**20.88**	**330**	P	**P**	**14 04 03.9**	**+0.7**
MNHN				IAmb	IAmb	14 04 04.8	
	comp=Z,11nm,0.9s						
PECS	**Pecos**	**21.45**	**328**	P	**P**	**14 04 09.3**	**-0.1**
VHRN	**Van Horn**	**21.60**	**325**		**P**	**14 04 11.1**	**+0.1**
VHRN				IAmb	IAmb	14 04 11.7	
	comp=Z,7.8nm,0.8s						
MNTX	**Cornudas Mount**	**22.51**	**326**		**P**	**14 04 20.0**	**-0.7**
MNTX				IAmb	IAmb	14 04 22.1	
	comp=Z,6.6nm,0.7s						
TKL	**Tuckaleechee C**	**22.99**	**15**	P	**P**	**14 04 26.1**	**+0.5**
	comp=Z,2.2nm,0.5s,baz=220,slow=7.9,SNR=4.3						
	comp=Z,2.2nm,0.5s						
TKL	**Tuckaleechee C**	**22.99**	**15**	IAmb	IAmb	14 04 57.8	
	comp=Z,12nm,1.3s						
S39A	**Bolivar**	**24.22**	**355**	IAmb	IAmb	14 04 37.7	
	comp=Z,6.8nm,0.7s						
121A	**Cookes Peak, D**	**24.48**	**324**	IAmb	IAmb	14 04 43.0	
	comp=Z,7.6nm,0.8s						
LENM	**Lemitar**	**25.26**	**327**	P	**P**	**14 04 48.0**	**+1.1**
HAYD	**Hayden**	**30.54**	**335**	IAmb	IAmb	14 05 36.5	
	comp=Z,3.6nm,0.6s						
PDAR	**Pinedale Array**	**33.36**	**335**	P	**P**	**14 05 59.3**	**+0.6**
	comp=Z,0.1nm,0.4s,baz=128,slow=12,SNR=4.4						
	comp=Z,0.1nm,0.4s						
NVAR	**Mina Array Bea**	**34.78**	**321**	P	**P**	**14 06 12.6**	**+1.5**
	comp=Z,2.4nm,0.7s,baz=136,slow=8.4,SNR=12						
	comp=Z,2.4nm,0.7s						
J08A	**Circle Bar Ran**	**38.08**	**327**	P	**P**	**14 06 39.4**	**+0.3**
H04A	**Detroit Lake**	**40.97**	**326**	P	**P**	**14 07 03.0**	**0.0**
H04A				IAmb	IAmb	14 07 05.8	
	comp=Z,10nm,1.3s						
HOOD	**Mount Hood Mea**	**41.09**	**327**	P	**P**	**14 07 05.1**	**+1.0**
I02E	**Swisshome, OR**	**41.55**	**324**	P	**P**	**14 07 09.3**	**+1.6**
YKA	**Yellowknife Ar**	**51.79**	**346**	P	**P**	**14 08 25.3**	**-2.1**
	comp=Z,0.1nm,0.4s,baz=146,slow=7.4,SNR=2.4						
	comp=Z,0.1nm,0.4s						
BCAR	**Beaver Creek A**	**60.96**	**336**	P	**P**	**14 09 32.0**	**-0.9**
HIN	**Hinchinbrook I**	**61.73**	**332**	P	**P**	**14 09 37.8**	**-0.2**
RC01	**Rabbit Creek A**	**63.47**	**332**	P	**P**	**14 09 48.9**	**-0.7**
ILAR	**Eielson Array**	**63.76**	**337**	P	**P**	**14 09 49.9**	**-1.5**
	comp=Z,0.3nm,0.4s,baz=116,slow=5.5,SNR=16						
	comp=Z,0.3nm,0.4s						
BMAR	**Burnt Mountain**	**64.16**	**340**	P	**P**	**14 09 53.0**	**-1.1**
TRF	**Thorofare Moun**	**64.58**	**335**	P	**P**	**14 09 56.2**	**-0.9**
MLY	**Manley**	**65.36**	**336**	P	**P**	**14 10 01.1**	**-0.9**
MLY				IAmb	IAmb	14 10 29.7	
	comp=Z,3.7nm,1.3s						
D20K	**Etivluk River**	**68.81**	**339**	P	**P**	**14 10 23.1**	**-0.6**
SCO	**Scoresbysund**	**70.38**	**19**	P	**P**	**14 10 34.3**	**+1.0**
HHC	**Hu-ho-hao-te**	**122.09**	**340**	*e*P	**PKiKP**	**14 18 15.8**	**+1.1**
PZH	**PanZhiHua**	**138.42**	**343**	PKP	**PKiKP**	**14 18 47.4**	**-0.5**
CMAR	**Chiang Mai Arr**	**146.83**	**343**	PKPbc	**PKPdf**	**14 19 01.6**	**+0.9**
	comp=Z,2.1nm,0.6s,baz=15,slow=2.4,SNR=9.0						
CMAR	**Chiang Mai Arr**	**146.83**	**343**		**PKPbc**	**14 19 02.0**	**-0.6**

*KRSC **17** 14:24:02.8±2.7, 48°.67N×154°.25E, h161km±33km, Ml4.9*
*BJI **17** 14:24:02.8, 48°.82N×153°.85E, h170km, mB4.8/13, mb4.8/69*
*SKHL **17** 14:24:02.6±0.8, 48°.50N×154°.20E, h150km±5km, mb5.0/6, msh5.8/5*
*BGR **17** 14:24:03.2, 50°.90N×152°.59E, h33km, mb5.1*
*MOS **17** 14:24:03.5±1.0, 48°.78N×153°.81E, h165km, mb4.8/51, Error ellipse: s-maj=5.9km s-min=3.6km az=77.6*
*NEIC **17** 14:24:04.6±1.2, 48°.84N±0°.09×153°.6E±0°.1, h155km±6km, mb4.6/210, Error ellipse: s-maj=15.4km s-min=10.4km az=142.0*
*IDC **17** 14:24:04.1±0.7, 48°.82N×153°.69E, h152km±6km, mb4.2/31, mbtmp4.7/38, MS3.6/12, Error ellipse: s-maj=11.5km s-min=7.9km az=153.0*
*GCMT **17** 14:24:05.6±0.4, 48°.67N±0°.03×154°.08E±0°.04, h176km±5km, MW4.9/89, Moment Tensor Solution. s10, c11; s89, c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.09±.14; $M_{\theta\theta}$-0.05±.20; $M_{\phi\phi}$0.13±.18; $M_{r\theta}$1.94±.11; $M_{\theta\phi}$-0.01±.18; $M_{\phi r}$1.74±.10; Best double couple: M_o2.60800×10^{16} NP1:ϕ_s336.00000°, δ2.00000°, λ-162.00000°. NP2:ϕ_s228.00000°, δ89.00000°, λ-88.00000°. Principal axes: T 2.5790, Plg44.0000°, Azm316.0000°; N 0.0580, Plg2.0000°, Azm48.0000°; P -2.6370, Plg46.0000°, Azm140.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 14:24:03.4±0.5, 48°.64N±0°.05×153°.96E±0°.04, h156km±3km, h155km:pP-P, n639, σ1§25/606, mb4.7/233, 51C-26D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.48**	**34**	⇑*i*PN	**Pn**	**14 24 43.8**	**-0.6**
SKR				*i* S	**Sn**	**14 25 13.1**	**-3.1**
SKR				pmax	pmax		
	comp=Z,313nm,0.4s						
SKR				smax	smax		
	comp=N,6μm,0.4s						
SKR				smax	smax		
	comp=E,5μm,0.5s						
SKR				MLR	MLR		
	comp=Z,1μm,16.0s						
SKR	**Severo-Kuril's**	**2.48**	**34**	*e*P	**Pn**	**14 24 43.8**	**-0.6**
SKR				*e*S	**Sn**	**14 25 14.0**	**-2.2**
SKR	**Severo-Kuril's**	**2.48**	**34**	*e*P	**Pn**	**14 24 43.9**	**-0.5**
SKR				AMB	AMB	14 24 46.4	
	comp=Z,70nm,0.3s						
SKR				*i* S	**Sn**	**14 25 14.1**	**-2.1**
SKR				A	A	14 25 18.8	
	comp=Z,1μm,0.5s						
SKR				A	A	14 25 18.8	
	comp=Z,1μm,0.5s						
PAU	**Pauzhetka**	**3.37**	**32**	PN	**Pn**	**14 24 55.3**	**-0.2**
PAU				S	**Sn**	**14 25 34.7**	**-1.4**
PAU	**Pauzhetka**	**3.37**	**32**	*e*P	**Pn**	**14 24 55.4**	**-0.2**
PAU				*e*S	**Sn**	**14 25 34.8**	**-1.4**
PAU	**Pauzhetka**	**3.37**	**32**	*e*P	**Pn**	**14 24 55.4**	**-0.2**
PAU				AMB	AMB	14 25 01.3	
	comp=Z,80nm,0.3s						
PAU				*e*S	**Sn**	**14 25 34.8**	**-1.4**
PAU				A	A	14 25 36.7	
	comp=Z,750nm,0.4s						
PAU				A	A	14 25 36.7	
	comp=Z,1μm,0.4s						
KDTR	**Khodutka, Kamc**	**4.13**

comp=E,150nm,0.5s
YUK eS Sn 14 27 05.0 -2.9
YUK A A 14 27 15.9
comp=E,190nm,0.5s
YUK A A 14 27 15.9
comp=E,130nm,0.5s
RUSJ Misakicho 7.54 236 ePN **Pn 14 25 49.9 -0.7**
GLVR Golovnino 7.64 233 ePN **Pn 14 25 51.2 -0.6**
GLVR i S **Sn 14 27 13.7 -3.4**
GLVR pmax pmax
comp=N,34nm,0.5s
GLVR pmax pmax
comp=E,55nm,0.5s
GLVR pmax pmax
comp=E,18nm,0.2s
GLVR Golovnino 7.64 233 eP **Pn 14 25 51.2 -0.6**
GLVR AMB AMB 14 25 52.6
comp=E,60nm,0.5s
TYV Tymovskoe 7.65 291 ePN **Pn 14 25 53.7 +1.7**
TYV pmax pmax
comp=Z,200nm,2.5s
TYV pmax pmax
comp=Z,34nm,1.2s
TYV Tymovskoe 7.65 291 eP **Pn 14 25 52.5 +0.5**
TYV AMB AMB 14 25 55.0
comp=Z,10.0nm,0.9s
TYV eS **Sn 14 27 16.8 -0.6**
YSS Yuzhno-Sakhali 7.73 262⇓ePN **Pn 14 25 55.3 +2.2**
YSS eS **Sn 14 27 22.3 +2.9**
YSS pmax pmax
comp=Z,20nm,1.1s
YSS smax smax
comp=N,30nm,1.0s
YSS smax smax
comp=E,20nm,1.0s
YSS MLR MLR
comp=Z,300nm,15.0s
YSS Yuzhno-Sakhali 7.73 262 eP **Pn 14 25 54.2 +1.1**
YSS eS **Sn 14 27 18.4 -1.0**
NMR Nemuro--Hokkai 7.78 230 ePN **Pn 14 25 50.0 -3.8**
ESO Esso 7.85 20 PN **Pn 14 25 58.2 +3.6**
ESO Esso 7.85 20 eP **Pn 14 25 58.2 +3.6**
AKK Akkeshi 8.49 232 eP **Pn 14 26 01.7 -1.5**
OKH Okha 8.50 309 eP **Pn 14 26 05.1 +1.9**
JKA Kamikawa-asahi 9.06 244 **Pn 14 26 11.2 +0.5**
JKA Kamikawa-asahi 9.06 244 eP **Pn 14 26 11.2 +0.5**
ASAJ Asahikawa 9.06 244 P **Pn 14 26 11.9 +1.2**
comp=Z,20nm,0.7s,baz=81,slow=11,SNR=27
ASAJ Asahikawa 9.06 244 PN **Pn 14 26 12.0 +1.2**
KBTR Krutoberegovo 9.30 32 PN **Pn 14 26 11.4 -2.4**
KBTR Krutoberegovo 9.30 32 eP **Pn 14 26 11.5 -2.4**
NKL Nikolayevsk 9.52 303 eP **Pn 14 26 17.2 +0.4**
GRNR Gornyy 11.55 287⇑i PN **Pn 14 26 44.5 +1.0**
GRNR pmax pmax
comp=Z,10.0nm,1.1s
GRNR Gornyy 11.55 287 eP **Pn 14 26 44.5 +1.0**
TEY Ternei 12.42 260 ePN **Pn 14 26 55.8 +1.1**
TEY Ternei 12.42 260 eP **Pn 14 26 53.2 -1.5**
SHEM Shemya Is, Ala 13.40 65 P **P 14 27 09.8 -1.3**
comp=Z,77nm,0.9s,baz=267,slow=19,SNR=2.7
SHEM S **Sn 14 29 30.4 -5.0**
comp=Z,29nm,0.4s,baz=207,slow=23,SNR=6.6
SHEM Shemya Is, Ala 13.40 65 Pn **P 14 27 10.4 -0.8**
SMY Shemya 13.40 65 Pn **P 14 27 10.4 -0.7**
SMY Shemya 13.40 65 PN **P 14 27 10.4 -0.7**
SEY Seymchan 14.35 357 P **Pn 14 27 18.3 -0.8**
comp=Z,3.1nm,0.3s,baz=170,slow=8.7,SNR=8.8
SEY Seymchan 14.35 357⇓i P **Pn 14 27 18.4 -0.8**
SEY pmax pmax
comp=Z,14nm,1.4s
SEY Seymchan 14.35 357 eP **Pn 14 27 18.5 -0.6**
KLR Kul'dur 14.60 281 P **Pn 14 27 22.4 0.0**
comp=Z,12nm,0.4s,baz=85,slow=12,SNR=53
KLR Kul'dur 14.60 281⇑eP **Pn 14 27 23.0 +0.6**
KLR pmax pmax
comp=Z,19nm,1.3s
KLR Kul'dur 14.60 281 eP **Pn 14 27 21.2 -1.2**
USRK Ussuriysk Ar. 15.77 262 P **P 14 27 37.0 -0.6**
comp=Z,9.9nm,0.7s,baz=60,slow=13,SNR=19
USRK Ussuriysk Ar. 15.77 262 P **P 14 27 37.0 -0.6**
USRK Ussuriysk Ar. 15.77 262 eP **P 14 27 37.0 -0.6**
VLA Vladivostok 16.31 258ceP **P 14 27 44.3 +0.8**
VLA pmax pmax
comp=Z,25nm,1.0s
VLA Vladivostok 16.31 258 eP **P 14 27 44.3 +0.8**
MJB9 Matsu-Tunnel 16.71 229 P **Pn 14 27 46.4 -2.1**
MAJO Matsushiro 16.71 229 P **P 14 27 46.3 -1.7**
MAJO IAmb IAmb 14 27 53.3
comp=Z,16nm,0.9s
MAJO Matsushiro 16.71 229⇓eP **Pn 14 27 46.7 -1.7**
MAJO pmax pmax
comp=Z,68nm,2.2s
MJAR Matsushiro Arr 16.71 229 P **Pn 14 27 47.4 -1.1**
comp=Z,2.3nm,0.5s,baz=25,slow=10,SNR=9.5
MJAR LR LR 14 34 59.4
comp=Z,60nm,19.0s,baz=12,slow=39
MDJ Mudanjiang 17.19 266 **P 14 27 51.8 -1.3**
MDJ IAmb IAmb 14 27 56.8
comp=Z,27nm,1.0s
MDJ Mudanjiang 17.19 266 P **P 14 27 52.8 -0.4**
MDJ pmax pmax
comp=Z,29nm,1.2s
PSTR Posyet 17.23 258ceP **Pn 14 27 55.1 +0.6**
PSTR Posyet 17.23 258 eP **P 14 27 53.2 -0.4**
HEH HeiHe 17.31 285 eP **P 14 27 54.1 -0.3**
HEH pmax pmax
comp=Z,21nm,0.9s
HEH pmax pmax
comp=Z,390nm,4.1s
ZEA Zeya 17.45 297 eP **P 14 27 55.5 -0.4**
ZEA pmax pmax
comp=E,10.0nm,1.5s
ZEA pmax pmax
comp=Z,30nm,1.5s
ZEA Zeya 17.45 297 eP **P 14 27 55.5 -0.4**
JGF Kuroka 17.88 229 P **Pn 14 28 01.8 -0.5**
JGF IAmb IAmb 14 28 05.5
comp=Z,25nm,1.1s
BNX BinXian 18.25 271⇑P **Pn 14 28 07.0 +0.5**
BNX pmax pmax
comp=Z,43nm,0.9s
YAK Yakutsk 19.08 324 P **P 14 28 12.3 -1.3**
comp=Z,24nm,0.4s,baz=135,slow=11,SNR=16
YAK Yakutsk 19.08 324 **P 14 28 12.5 -1.1**
YAK Yakutsk 19.08 324 eP **P 14 28 12.5 -1.1**
YAK eS **S 14 31 35.6 -5.9**
YAK pmax pmax
comp=Z,47nm,1.3s
YAK pmax pmax
comp=N,8.0nm,1.3s
YAK pmax pmax
comp=E,21nm,1.2s
YAK smax smax
comp=N,115nm,2.7s
YAK smax smax
comp=E,115nm,3.1s
CN2 Changchun 20.25 267 P **P 14 28 22.9 -3.5**
CN2 pmax pmax
comp=E,20nm,0.8s
BILL Bilibino 20.42 13 **P 14 28 27.7 -0.3**
BILL IAmb IAmb 14 28 29.3
comp=Z,17nm,1.1s
BILL Bilibino 20.42 13*d i* P **P 14 28 27.0 -0.9**
BILL pmax pmax
comp=Z,20nm,1.2s
BILL Bilibino 20.42 13 eP **P 14 28 27.7 -0.3**
JMN Monobe 21.13 233 P **P 14 28 35.3 -0.6**
JMN IAmb IAmb 14 28 53.2
comp=Z,44nm,1.1s
KSRS Korea Array 21.96 249 P **P 14 28 44.9 +0.4**
comp=Z,18nm,0.9s,baz=47,slow=10,SNR=38
comp=Z,18nm,0.9s
KSAR Wonju Array Be 21.99 249 **P 14 28 43.6 -1.3**
KSAR Wonju Array Be 21.99 249 P **P 14 28 43.6 -1.3**
KSAR Wonju Array Be 21.99 249 eP **P 14 28 43.6 -1.3**
INCN Inchon 22.75 251 P **P 14 28 53.9 +1.7**
GAMB Gambell 23.96 38 P **P 14 29 04.6 +1.7**
GAMB IAmb IAmb 14 29 16.1
comp=Z,13nm,1.0s
JSU Suzuyama 24.67 235 P **P 14 29 10.0 +0.3**
JSU IAmb IAmb 14 29 11.9
comp=Z,22nm,1.1s
DL2 Dalian 25.12 259 P **P 14 29 15.0 +1.3**
DL2 pmax pmax
comp=Z,38nm,1.0s

TIXI Tiksi 25.83 342 LR LR 14 39 11.7
comp=Z,65nm,18.8s,baz=168,slow=36
TIXI Tiksi 25.83 342 **P 14 29 17.8 -1.9**
TIXI Tiksi 25.83 342⇑eP **P 14 29 17.9 -1.8**
TIXI pmax pmax
comp=Z,63nm,1.7s
TIXI Tiksi 25.83 342 eP **P 14 29 17.9 -1.8**
XLT XiLinHaoTe 26.42 274 eP **P 14 29 24.9 -0.6**
XLT pmax pmax
comp=Z,51nm,0.9s
ANM Nome 26.84 39 P **P 14 29 30.6 +1.7**
ANM Nome 26.84 39 P **P 14 29 30.6 +1.7**
ANM pmax pmax
comp=Z,4.0nm,1.0s
BJI2 Beijing 28.13 266 P **P 14 29 40.3 -0.3**
BJI2 pmax pmax
comp=Z,5.0nm,0.9s
C16K Lisburne Hills 28.14 31 P **P 14 29 41.1 +0.8**
TIA Tai'an 29.60 259 P **P 14 29 54.3 +0.6**
TIA pmax pmax
comp=Z,13nm,0.9s
G18K Tagagawik 29.91 37 P **P 14 29 57.5 +1.4**
HNS HongShan 30.50 263⇑P **P 14 30 01.3 -0.2**
HNS pP **pwP 14 30 38.3 +0.8**
HNS pmax pmax
comp=Z,36nm,1.2s
H11N2 WAKE ISLAND Hy 30.67 156 T T 15 02 45.2
baz=342,slow=76,SNR=144
H11N1 WAKE ISLAND Hy 30.69 156 T T 15 02 46.3
baz=342,slow=76,SNR=215
H11N3 WAKE ISLAND Hy 30.69 156 T T 15 02 28.7
baz=342,slow=76,SNR=100
HHC Hu-ho-hao-te 30.77 271⇓i P **P 14 30 03.9 -0.2**
HHC pmax pmax
comp=Z,37nm,1.1s
ULN Ulaanbaatar 30.86 287 **P 14 30 02.8 -2.0**
ULN IAmb IAmb 14 30 05.4
comp=Z,18nm,1.1s
ULN Ulaanbaatar 30.86 287*d i* P **P 14 30 04.1 -0.7**
ULN pmax pmax
comp=Z,15nm,1.0s
ULN Ulaanbaatar 30.86 287 P **P 14 30 02.9 -2.0**
ULN Ulaanbaatar 30.86 287 P **P 14 30 03.8 -1.0**
comp=Z,52nm,1.1s
ULN Ulaanbaatar 30.86 287 eP **P 14 30 04.1 -0.7**
J19K Poorman 30.90 41 P **P 14 30 06.0 +1.1**
ACHA Angle Creek He 30.99 53 P **P 14 30 07.4 +1.7**
NJ2 Nanjing 31.13 251 eP **P 14 30 07.4 +0.3**
NJ2 pmax pmax
comp=Z,21nm,0.5s
SONM Songino Array 31.29 287 P **P 14 30 07.8 -0.8**
comp=Z,6.9nm,0.9s,baz=76,slow=8.4,SNR=28
comp=Z,6.9nm,0.9s
SONM Songino Array 31.29 287 P **P 14 30 06.9 -1.7**
SONM IAmb IAmb 14 30 09.2
comp=Z,7.3nm,1.0s
SONM Songino Array 31.29 287 P **P 14 30 06.9 -1.7**
SONM pmax pmax
comp=Z,7.0nm,1.0s
H11S1 WAKE ISLAND Hy 31.79 157 T T 15 03 40.9
baz=345,slow=76,SNR=1079
H11S3 WAKE ISLAND Hy 31.80 157 T T 15 03 33.8
baz=345,slow=76,SNR=616
H11S2 WAKE ISLAND Hy 31.80 157 T T 15 03 26.2
baz=345,slow=76,SNR=670
TLY Talaya 31.86 295 LR LR 14 44 57.1
comp=Z,44nm,18.7s,baz=46,slow=40
TLY Talaya 31.86 295 P **P 14 30 11.7 -1.7**
TLY Talaya 31.86 295*c i* P **P 14 30 13.1 -0.3**
TLY pmax pmax
comp=Z,30nm,0.9s
TLY Talaya 31.86 295 P **P 14 30 12.0 -1.4**
TLY Talaya 31.86 295 eP **P 14 30 13.1 -0.3**
IMAR Indian Mountai 31.91 38 P **P 14 30 14.7 +1.1**
G21K Allakaket 32.08 37 P **P 14 30 16.8 +1.7**
ZAK Zakamensk 32.44 293 eP **P 14 30 17.7 -0.8**
ZAK pmax pmax
comp=Z,23nm,1.5s
ZAK Zakamensk 32.44 293 eP **P 14 30 17.7 -0.8**
KDAK Kodiak Island 32.49 53⇑i P **P 14 30 19.1 +0.4**
I21K Tanana 32.56 39 P **P 14 30 21.4 +2.1**
I21K IAmb IAmb 14 30 21.9
comp=Z,11nm,1.4s
KTH Kantishna Hill 32.96 42 P **P 14 30 24.8 +1.9**
KTH IAmb IAmb 14 30 26.3
comp=Z,11nm,1.2s
MOY Mondy 33.45 296 eP **P 14 30 26.8 -0.6**
MOY pmax pmax
comp=Z,29nm,1.7s
LYN LuoYang 33.63 261 P **P 14 30 30.5 +1.5**
LYN pmax pmax
comp=Z,27nm,0.5s
KNK Knik Glacier 34.19 46 IAmb IAmb 14 30 35.7
comp=Z,7.0nm,0.9s
WRH Wood River Hil 34.21 41 IAmb IAmb 14 30 35.9
comp=Z,14nm,1.5s
SML Sawmill 34.22 46 P **P 14 30 35.0 +1.2**
SML IAmb IAmb 14 30 36.0
comp=Z,8.9nm,0.8s
SML Sawmill 34.22 46 P **P 14 30 35.0 +1.2**
SML pmax pmax
comp=Z,9.0nm,0.8s
COLA College 34.31 40 P **P 14 30 35.6 +1.3**
COLA IAmb IAmb 14 30 38.4
comp=Z,15nm,1.3s
COLA College 34.31 40*d i* P **P 14 30 36.0 +1.6**
COLA pmax pmax
comp=Z,12nm,1.3s
TATO Taipei 34.70 239 P P 14 30 42.6 +4.4
ILAR Eielson Array 34.72 40 P **P 14 30 38.4 +0.4**
comp=Z,4.7nm,1.1s,baz=265,slow=5.3,SNR=30
comp=Z,4.7nm,1.1s
WHN Wuhan 34.99 254 P **P 14 30 40.8 +0.2**
WHN pmax pmax
comp=Z,46nm,0.9s
PRP Porcupine Dome 35.28 39 P **P 14 30 43.7 +0.8**
PRP IAmb IAmb 14 30 46.0
comp=Z,11nm,1.4s
FYU Fort Yukon 35.38 37 IAmb IAmb 14 30 47.2
comp=Z,22nm,1.4s
RIDG Independent Ri 35.67 42 IAmb IAmb 14 30 56.1
comp=Z,10nm,1.3s
KNGR Kungurtug, Tuv 35.87 295⇓eP **P 14 30 47.2 -0.9**
MENT Mentasta 36.25 43 P **P 14 30 52.3 +1.2**
BCAR Beaver Creek A 37.11 43 P **P 14 31 00.1 +1.7**
CTGM Chitina Glacie 37.67 46 IAmb IAmb 14 31 18.1
comp=Z,11nm,1.4s
DAWY Dawson 38.02 41 P **P 14 31 07.0 +0.9**
ENH Enshi 38.30 258 P **P 14 31 07.9 -0.8**
ENH IAmb IAmb 14 31 09.3
comp=Z,25nm,1.1s
LZH Lanzhou 38.43 270 eP **P 14 31 10.4 +0.5**
LZH pP pP 14 31 41.4 -1.2
LZH pmax pmax
comp=Z,21nm,1.5s
LZDM Lanzhou Array 38.60 270 P **P 14 31 11.5 -0.1**
comp=Z,5.1nm,0.3s,baz=53,slow=7.4,SNR=2.4
comp=Z,5.1nm,0.3s
EPYK Eagle Plains 38.80 37 IAmb IAmb 14 31 15.1
comp=Z,10.0nm,1.1s
GTA2 Gaotai 39.26 277 P **P 14 31 16.4 -0.4**
GTA2 pP pwP 14 31 53.8 +0.2
GTA2 PP **PnPn 14 32 53.8 -0.5**
GTA2 PcP **PcP 14 33 23.6 +1.2**
GTA2 pmax pmax
comp=Z,32nm,1.0s
INK Inuvik 39.75 34 P **P 14 31 20.8 +0.6**
comp=Z,1.4nm,0.3s,baz=290,slow=6.4,SNR=21
comp=Z,1.4nm,0.3s
F31M Tsiigehtchic 39.80 35 IAmb IAmb 14 31 31.2
comp=Z,11nm,1.3s
CD2 Chengdu 41.63 264 P **P 14 31 35.5 -0.7**
CD2 pmax pmax
comp=Z,50nm,0.8s
A36M Sachs Harbour 41.90 27 P **P 14 31 38.9 +1.1**
A36M IAmb IAmb 14 31 40.9
comp=Z,12nm,0.7s
ZAA0 Zalesovo Array 41.99 304 P **P 14 31 36.8 -1.9**
ZAA0 IAmb IAmb 14 31 38.1
comp=Z,9.1nm,0.4s
ZALV Zalesovo Beam 41.99 304 P **P 14 31 37.0 -1.7**
comp=Z,9.4nm,0.3s,baz=63,slow=7.0,SNR=58
ZALV PcP **PcP 14 33 31.7 +0.9**
comp=Z,2.0nm,0.3s,baz=86,slow=3.1,SNR=6.1
comp=Z,9.4nm,0.3s

ZALV Zalesovo Beam 41.99 304 P **P 14 31 36.8 -1.9**
ZALV **PcP 14 33 31.5 +0.6**
ZALV Zalesovo Beam 41.99 304 *i* P **P 14 31 37.0 -1.7**
ZALV pmax pmax
comp=Z,10.0nm,0.3s
DGZ Jazzator, Alta 42.21 298*c i* P **P 14 31 40.8 0.0**
DGZ pmax pmax
comp=Z,35nm,1.0s
GYA Guiyang 42.70 256 ⇑P **P 14 31 44.9 -0.1**
GYA pmax pmax
comp=Z,46nm,1.1s
GYA pmax pmax
comp=Z,160nm,3.4s
GYA L L
comp=Z,2μm,23.9s
GYA L L
comp=Z,960nm,20.9s
GYA L L
comp=Z,2μm,28.4s
C36M Paulatuk 42.90 31 IAmb IAmb 14 31 48.2
comp=Z,25nm,1.4s
DLBC Dease Lake 43.88 47 P **P 14 31 56.0 +2.1**
comp=Z,1.7nm,0.9s,baz=264,slow=6.8,SNR=6.3
comp=Z,1.7nm,0.9s
GOMU GeErMu 44.34 277 P **P 14 31 55.9 -2.4**
GOMU pmax pmax
comp=Z,24nm,1.1s
WMQ Urumqi 44.80 290 eP **P 14 32 01.6 +0.1**
WMQ pmax pmax
comp=Z,19nm,1.1s
PZH PanZhiHua 45.87 261 P **P 14 32 09.8 -0.3**
PZH pmax pmax
comp=Z,10.0nm,0.5s
KMI2 Kunming 46.14 258 P **P 14 32 13.5 +1.1**
KMI2 pmax pmax
comp=Z,36nm,0.8s
MK31 Makanchi Array 46.60 296*c i* P **P 14 32 14.4 -1.1**
MKAR Makanchi Array 46.60 296 P **P 14 32 14.4 -1.1**
comp=Z,16nm,0.5s,baz=69,slow=7.9,SNR=303
MKAR PcP **PcP 14 33 49.2 +2.3**
comp=Z,1.7nm,0.3s,baz=64,slow=4.8,SNR=8.1
comp=Z,16nm,0.5s
MAKZ Makanchi 46.78 296 P **P 14 32 15.6 -1.3**
MAKZ Makanchi 46.78 296 P **P 14 32 15.6 -1.3**
MAKZ pmax pmax
comp=Z,27nm,0.7s
KURK Kurchatov 46.81 302 **PcP 14 33 50.0 +2.5**
KURK Kurchatov 46.81 302 P **P 14 32 15.7 -1.3**
KURK Kurchatov 46.81 302*c i* P **P 14 32 15.7 -1.3**
KURK pmax pmax
comp=Z,71nm,0.9s
KURK Kurchatov 46.81 302 P **P 14 32 16.2 -0.8**
KURK Kurchatov 46.81 302 eP **P 14 32 15.7 -1.3**
KURBB Kurchatov Arra 46.91 302 P **P 14 32 16.4 -1.3**
comp=Z,32nm,0.8s,baz=66,slow=8.1,SNR=109
KURBB PcP **PcP 14 33 50.0 +2.2**
comp=Z,1.2nm,0.4s,baz=60,slow=3.3,SNR=4.2
comp=Z,32nm,0.8s
RES Resolute Bay 48.86 19 IAmb IAmb 14 32 35.3
comp=Z,8.1nm,0.9s
RES Resolute Bay 48.86 19 P **P 14 32 33.7 +1.3**
RES pmax pmax
comp=Z,6.0nm,0.9s
YKA Yellowknife Ar 49.07 38 P **P 14 32 35.3 +1.1**
comp=Z,2.0nm,0.8s,baz=301,slow=8.5,SNR=24
comp=Z,2.0nm,0.8s
POHA Pohakuloa 49.55 107 P **P 14 32 41.5 +2.8**
BVAR Borovoye Array 50.11 309 P **P 14 32 41.2 -1.0**
comp=Z,34nm,0.4s,baz=58,slow=7.4,SNR=342
BVAR PcP **PcP 14 34 01.0 +1.6**
comp=Z,3.3nm,0.4s,baz=59,slow=2.5,SNR=6.1
BVAR LR LR 14 57 17.9
comp=Z,76nm,18.4s,baz=342,slow=40
comp=Z,34nm,0.4s
BORK Borovoye 50.14 309 P **P 14 32 41.1 -1.2**
BORK Borovoye 50.14 309 P **P 14 32 41.2 -1.2**
BORK pmax pmax
comp=Z,18nm,0.6s
KBS Kingsbay 50.71 351 eP **P 14 32 45.8 -0.5**
KBS Kingsbay 50.71 351 *i* P **P 14 32 46.7 +0.3**
LSA Lhasa 50.76 272 P **P 14 32 45.4 -2.6**
LSA pmax pmax
comp=Z,9.0nm,0.6s
SPA0 Spitsbergen Ar 50.85 350 eP **P 14 32 46.5 -0.9**
SPITS Spitsbergen Ar 50.85 350 P **P 14 32 46.3 -1.2**
comp=Z,1.9nm,0.4s,baz=49,slow=8.9,SNR=33
SPITS PcP **PcP 14 34 03.3 +1.6**
comp=Z,6.4nm,0.8s,baz=59,slow=5.6,SNR=2.8
comp=Z,1.9nm,0.4s
SPITS Spitsbergen Ar 50.85 350 P **P 14 32 46.2 -1.2**
SPITS 14 34 03.3
SPITS pmax pmax
comp=Z,41nm,1.3s
SPB2 Spitsbergen Ar 50.85 350 P **P 14 32 46.2 -1.2**
HSPB Hornsund (broa 51.93 349 eP **P 14 32 55.5 +0.1**
TARG Taragay, Kyrgy 52.04 293 IAmb IAmb 14 32 58.4
comp=Z,5.7nm,0.6s
TARG Taragay, Kyrgy 52.04 293 P **P 14 32 57.0 -0.3**
TARG pmax pmax
comp=Z,8.0nm,1.2s
TULEG Thule 52.16 12 IAmb IAmb 14 32 58.1
comp=Z,28nm,1.3s
TULEG Thule 52.16 12 *i* P **P 14 32 56.8 -0.3**
TULEG IAmb IAmb 14 32 57.6
comp=Z,21nm,1.2s
KDJ Kajisay 52.19 294 P **P 14 32 57.2 -0.9**
KDJ Kajisay 52.19 294 P **P 14 32 57.2 -0.9**
KDJ pmax pmax
comp=Z,19nm,0.4s
TKM2 Tokmak 2 52.69 295 P **P 14 33 01.4 -0.5**
SNR=15
ULHL Ulahol 52.69 294 P **P 14 33 01.4 -0.4**
SNR=24
SVE Sverdlovsk 52.84 316 eP **P 14 33 02.0 -0.4**
SHL Shillong 53.00 268 P **P 14 33 04.2 -0.1**
SHL pmax pmax
comp=Z,26nm,0.8s
SHL Shillong 53.00 268 P **P 14 33 04.2 -0.1**
SNR=5.5
CHTO Chiang Mai 53.12 256 P **P 14 33 05.1 +0.1**
CHTO Chiang Mai 53.12 256 P **P 14 33 05.1 +0.1**
CHTO pmax pmax
comp=Z,34nm,1.0s
CHTO Chiang Mai 53.12 256 P **P 14 33 06.4 +1.5**
CHTO Chiang Mai 53.12 256 P **P 14 33 05.9 +0.9**
comp=Z,483nmcomp=Z,37nm,1.1s
USP Ospenovka 53.15 296 P **P 14 33 04.5 -0.5**
SNR=28
CHMS Chumysh 53.15 296 P **P 14 33 04.4 -0.6**
SNR=9.4
NEEM North Greenlan 53.22 7 *i* P **P 14 33 04.8 -0.4**
NEEM IAmb IAmb 14 33 06.6
comp=Z,18nm,0.8s
KBK Karagaybulak 53.23 295 P **P 14 33 05.5 -0.2**
SNR=8.4
NRN Naryn 53.31 294 IAmb IAmb 14 33 06.8
comp=Z,4.9nm,0.4s
CM31 Chiang Mai Arr 53.38 256 P **P 14 33 08.4 +1.5**
SNR=9.1
CMAR Chiang Mai Arr 53.38 256 P **P 14 33 07.6 +0.7**
comp=Z,14nm,0.8s,baz=33,slow=7.3,SNR=74
comp=Z,14nm,0.8s
CMAR Chiang Mai Arr 53.38 256 P **P 14 33 07.1 +0.2**
CMAR Chiang Mai Arr 53.38 256 *i* P **P 14 33 08.1 +1.2**
CMAR pmax pmax
comp=Z,15nm,0.8s
AAK Ala-Archa 53.52 296 P **P 14 33 07.4 -0.4**
SNR=16
AAK Ala-Archa 53.52 296 P **P 14 33 07.3 -0.5**
AAK IAmb IAmb 14 33 08.4
comp=Z,18nm,1.0s
AAK Ala-Archa 53.52 296 *i* P **P 14 33 07.4 -0.4**
SNR=21
AAK Ala-Archa 53.52 296⇑i P **P 14 33 07.3 -0.5**
AAK pmax pmax
comp=Z,20nm,1.0s
AAK Ala-Archa 53.52 296 P **P 14 33 07.5 -0.4**
AAK Ala-Archa 53.52 296 eP **P 14 33 07.3 -0.5**
POIN Pond Inlet 53.72 17 IAmb IAmb 14 33 10.6
comp=Z,3.7nm,0.6s
EKS2 Erkin-Say 53.93 296 P **P 14 33 10.5 -0.3**
SNR=14
ARTI Arti 54.12 317 P **P 14 33 10.1 -1.6**
ARTI Arti 54.12 317*de*P **P 14 33 10.8 -0.9**
ARTI pmax pmax
comp=Z,34nm,1.0s

EVN Everest 54.77 274 P P 14 33 17.3 -0.3
EVN IAmb IAmb 14 33 19.6
comp=E,11nm,0.8s
DAG Danmarks Havn 54.77 358 *i* P **P 14 33 15.0 -1.2**
DAG IAmb IAmb 14 33 16.6
comp=E,4.3nm,0.3s
BLKN Baker Lake 54.93 30 IAmb IAmb 14 33 19.2
comp=E,17nm,1.3s
VADS Vadso 54.94 340 *e*P **P 14 33 16.1 -1.4**
KSH2 Kashi 54.95 291 P **P 14 33 18.1 -0.1**
KSH2 pmax pmax
comp=E,11nm,1.0s
BRDH Bariadhala 55.15 265 LR LR 14 57 03.9
comp=E,40nm,18.2s,baz=39,slow=36
LVZ Lovozero 55.26 336 P **P 14 33 19.5 -0.3**
LVZ Lovozero 55.26 336 P **P 14 33 19.5 -0.3**
LVZ pmax pmax
comp=E,97nm,1.5s
KULLO Kullorsuaq 55.30 10 *i* P **P 14 33 19.5 -0.4**
KULLO IAmb IAmb 14 33 20.9
comp=E,35nm,1.1s
ILON Igloolik, Nuna 55.41 21 IAmb IAmb 14 33 24.2
comp=E,13nm,1.1s
KK31 Karatay Array 55.60 298 IAmb IAmb 14 33 22.9
comp=E,16nm,1.1s
KKAR Karatay Array 55.60 298 P **P 14 33 21.4 -1.2**
KKAR Karatay Array 55.60 298 P **P 14 33 21.4 -1.2**
ARA0 ARCESS Array S 56.25 341 *e*P **P 14 33 25.5 -1.3**
ARCES ARCESS Array B 56.25 341 P **P 14 33 25.4 -1.4**
comp=E,3.2nm,0.7s,baz=34,slow=7.4,SNR=19
comp=E,3.2nm,0.7s
KIRV Kirov 56.61 323 LR LR 14 58 49.2
comp=E,52nm,18.6s,baz=302,slow=37
KIRV Kirov 56.61 323⇑ *e*P **P 14 33 29.1 -0.4**
DRK Karamyk 57.05 294 IAmb IAmb 14 33 35.3
comp=E,16nm,1.0s
UPNV Upernavik 57.08 10 *i* P **P 14 33 32.6 +0.1**
UPNV IAmb IAmb 14 33 33.2
comp=E,12nm,0.6s
KTK1 Kautokeino 57.16 341 *e*P **P 14 33 33.3 0.0**
DBG Daneborg 57.28 358 *i* P **P 14 33 33.5 -0.4**
JETT Jettan, Norway 57.31 342 *e*P **P 14 33 33.9 -0.4**
TRO Tromso 57.54 343 *e*P **P 14 33 35.4 -0.4**
BMO Blue Mountains 57.56 57 P **P 14 33 38.2 +1.7**
BMO Blue Mountains 57.56 57 P **P 14 33 38.2 +1.7**
BMO pmax pmax
comp=E,3.0nm,1.4s
AB31 Akbulak array 57.66 309 P **P 14 33 35.5 -1.5**
ABKAR Akbulak array 57.66 309 P **P 14 33 35.7 -1.4**
O03E Paynes Creek 57.79 64 P **P 14 33 39.8 +1.7**
O03E IAmb IAmb 14 33 40.8
comp=E,12nm,1.1s
PLID Pearl Lake 58.14 57 IAmb IAmb 14 33 43.6
comp=E,8.1nm,0.8s
MSO Missoula 58.17 54 IAmb IAmb 14 33 43.7
comp=E,7.7nm,1.1s
WVOR Wild Horse Val 58.31 60 IAmb IAmb 14 33 45.0
comp=E,5.7nm,1.0s
SUMG Summit 58.77 4 P **P 14 33 44.8 0.0**
SUMG Summit 58.77 4 P **P 14 33 44.8 0.0**
SUMG pmax pmax
comp=E,73nm,1.4s
SUMG Summit 58.77 4 *i* P **P 14 33 45.0 +0.1**
SUMG IAmb IAmb 14 33 46.6
comp=E,27nm,0.5s
KLMR Klimovskoe 58.78 329 *e*P **P 14 33 42.5 -2.1**
KLMR pmax pmax
comp=E,24nm,1.4s
BEKR Beckworth 58.92 64 P **P 14 33 47.9 +1.7**
BEKR IAmb IAmb 14 33 48.9
comp=E,4.9nm,1.0s
CHGR Chuyangaron 59.16 295*c* *i* P **P 14 33 47.0 -0.7**
CHGR pmax pmax
comp=E,79nm,1.3s
FCC Fort Churchill 59.37 34 P **P 14 33 49.5 +0.8**
FCC IAmb IAmb 14 33 50.3
comp=E,10nm,1.4s
FCC Fort Churchill 59.37 34 P **P 14 33 49.5 +0.8**
FCC pmax pmax
comp=E,10.0nm,1.4s
SAATT Saattut 59.44 10 *i* P **P 14 33 48.7 -0.2**
SAATT IAmb IAmb 14 33 50.3
comp=E,44nm,1.1s
STEI Steigen 59.70 343 *e*P **P 14 33 49.4 -1.4**
LOF Lofoten 59.84 344 *e*P **P 14 33 50.5 -1.3**
NIL Nilore 59.86 288 P **P 14 33 51.8 -0.7**
NIL Nilore 59.86 288 P **P 14 33 51.8 -0.7**
NIL pmax pmax
comp=E,55nm,1.1s
FAUS Fauske 60.16 343 *e*P **P 14 33 52.9 -1.1**
BOZ Bozeman (W) 60.19 54 IAmb IAmb 14 33 57.9
comp=E,7.6nm,0.8s
SHAA Shahritus 60.49 294 P **P 14 33 56.2 -0.6**
SHAA IAmb IAmb 14 34 02.3
comp=E,22nm,1.2s
YHL Hebgen Lake 60.92 54 IAmb IAmb 14 34 03.1
comp=E,8.0nm,1.1s
YHB Horse Butte 60.98 54 IAmb IAmb 14 34 03.4
comp=E,7.4nm,0.9s
LHV Little Huntoon 61.06 64 IAmb IAmb 14 34 04.7
comp=E,14nm,1.3s
NVAR Mina Array Bea 61.06 64 P **P 14 34 02.7 +1.8**
comp=E,1.5nm,0.5s,baz=291,slow=7.5,SNR=13
comp=E,1.5nm,0.5s
NVAR Mina Array Bea 61.06 64 P **P 14 34 02.4 +1.6**
MOR8 Moi Rana 61.39 343 *e*P **P 14 34 00.2 -2.1**
BELG Belogornoye 61.50 318*d* *i*P **P 14 34 02.5 -0.7**
BELG pmax pmax
comp=E,8.0nm,1.1s
H17A Grant Village 61.54 54 IAmb IAmb 14 34 08.7
comp=E,6.7nm,1.0s
LEIR Leirfjorden 61.70 343 *e*P **P 14 34 03.3 -1.0**
RLMT Red Lodge 61.76 53 IAmb IAmb 14 34 08.8
comp=E,16nm,1.4s
KBL Kabul 61.91 291 P **P 14 34 04.9 -1.6**
KBL Kabul 61.91 291 P **P 14 34 04.9 -1.6**
KBL pmax pmax
comp=E,17nm,1.1s
KBL Kabul 61.91 291 P **P 14 34 05.2 -1.3**
SNR=5.3
DSP Deep Springs 61.96 64 IAmb IAmb 14 34 09.9
comp=E,8.9nm,1.2s
LOHW Long Hollow 62.05 55 IAmb IAmb 14 34 11.1
comp=E,12nm,1.4s
FIA1 FINESS Array S 62.57 335 P **P 14 34 09.2 -1.0**
FINES FINESS Array B 62.57 335 P **P 14 34 09.3 -0.9**
comp=E,8.3nm,0.4s,baz=35,slow=7.2,SNR=122
FINES LR LR 15 04 40.9
comp=E,95nm,18.7s,baz=305,slow=39
comp=E,8.3nm,0.4s
FINES FINESS Array B 62.57 335 P **P 14 34 09.0 -1.2**
DUG Dugway, Tooele 63.10 59 IAmb IAmb 14 34 17.4
comp=E,7.1nm,1.1s
DUG Dugway, Tooele 63.10 59 P **P 14 34 16.7 +2.5**
DUG pmax pmax
comp=E,9.0nm,2.1s
S11A Rachel 63.10 63 IAmb IAmb 14 34 17.3
comp=E,9.6nm,0.8s
BW06 Boulder Array 63.18 55 IAmb IAmb 14 34 17.7
comp=E,4.5nm,0.8s
PD31 Pinedale Array 63.18 55 IAmb IAmb 14 34 17.6
comp=E,4.5nm,0.8s
PDAR Pinedale Array 63.18 55 P **P 14 34 16.5 +1.6**
comp=E,6.1nm,1.0s,baz=311,slow=1.5,SNR=35
comp=E,6.1nm,1.0s
PDAR Pinedale Array 63.18 55 P **P 14 34 16.1 +1.2**
SFJD Kangerlussuaq 63.19 11 P **P 14 34 14.2 0.0**
SFJD Kangerlussuaq 63.19 11 P **P 14 34 14.2 0.0**
SFJD pmax pmax
comp=E,33nm,1.4s
CLC China Lake 63.22 66 IAmb IAmb 14 34 17.5
comp=E,5.3nm,1.0s
TPNV Topopah Spring 63.27 64 IAmb IAmb 14 34 18.2
comp=E,8.0nm,1.1s
NSS Namsos 63.33 343 *e*P **P 14 34 14.5 -0.7**
GWY Greenwater Val 63.52 65 IAmb IAmb 14 34 19.7
comp=E,7.0nm,1.0s
BSUT Blindstream Ca 64.02 58 IAmb IAmb 14 34 31.4
comp=E,11nm,1.5s
OBN Obninsk 64.07 325 *e*P **P 14 34 19.5 -0.6**
OBN *e**PP **pP 14 34 55.8 -0.3**
OBN *e**SP **sP 14 35 14.2 +1.5**
OBN *e* 14 36 42.2
OBN pmax pmax
comp=E,8.0nm,1.0s
OBN Obninsk 64.07 325 *e*P **P 14 34 19.7 -0.4**

RDMU Red Mountain 64.67 57 IAmb IAmb 14 34 27.7
comp=E,13nm,0.9s
VSU Vasula 64.80 332⇑ *e*P **P 14 34 25.5 +0.7**
VSU pmax pmax
comp=E,26nm,1.2s
VRH Novokhopyorsk 64.92 320 *e*P **P 14 34 22.9 -2.9**
VRH pmax pmax
comp=E,10.0nm,0.9s
LPSR Galich'ya Gora 65.05 322 *e*P **P 14 34 24.5 -2.0**
LPSR pmax pmax
comp=E,20nm,1.2s
SRU San Rafael Swe 65.13 59 P **P 14 34 29.3 +1.7**
SRU IAmb IAmb 14 34 30.3
comp=E,7.3nm,0.9s
SRU San Rafael Swe 65.13 59 P **P 14 34 29.3 +1.7**
SRU pmax pmax
comp=E,7.0nm,0.9s
RSSD Black Hills 65.17 51 P **P 14 34 29.4 +1.6**
RSSD IAmb IAmb 14 34 30.3
comp=E,4.6nm,0.8s
RSSD Black Hills 65.17 51 P **P 14 34 29.4 +1.6**
RSSD pmax pmax
comp=E,5.0nm,0.8s
VORR Voronezh 65.63 322 *e*P **P 14 34 28.9 -1.4**
VORR pmax pmax
comp=E,40nm,0.5s
MOL Molde 65.96 344 *e*P **P 14 34 32.7 +0.5**
VSR Storozhevoye 65.99 321 *e*P **P 14 34 30.9 -1.7**
VSR pmax pmax
comp=E,20nm,1.2s
VORD Divnogorie 66.12 321 *e*P **P 14 34 31.5 -2.0**
VORD pmax pmax
comp=E,10.0nm,0.8s
DOMB Dombas 66.15 343 *e*P **P 14 34 34.1 +0.6**
HRA Herat 66.15 295 IAmb IAmb 14 34 34.4
comp=E,9.6nm,1.2s
PV23 Carpenter Ridg 66.44 58 IAmb IAmb 14 34 39.3
comp=E,14nm,1.2s
NC405 NORSAR Array S 66.45 341 P **P 14 34 35.0 -0.4**
PV20 West Nyswonger 66.54 58 IAmb IAmb 14 34 39.3
comp=E,10nm,0.8s
PV17 East Wray Mesa 66.59 58 IAmb IAmb 14 34 39.6
comp=E,9.4nm,0.7s
PV16 Nyswonger Mesa 66.59 58 IAmb IAmb 14 34 39.6
comp=E,5.9nm,0.8s
NB2 NORSAR Subarra 66.62 341 P **P 14 34 36.0 -0.5**
comp=E,1.5nm,0.4s,baz=29,slow=6.5
NB2 NORSAR Subarra 66.62 341 P **P 14 34 36.0 -0.5**
NOA NORSAR Array B 66.62 341 P **P 14 34 36.0 -0.5**
comp=E,1.5nm,0.5s,baz=26,slow=6.4,SNR=9.2
comp=E,1.5nm,0.5s
PV18 Skein Mesa, Pa 66.64 58 P **P 14 34 38.5 +1.2**
PV18 IAmb IAmb 14 34 39.9
comp=E,14nm,0.9s
PV05 Paradox Valley 66.65 59 IAmb IAmb 14 34 40.1
comp=E,7.2nm,0.8s
PV12 Saucer Basin, 66.65 58 IAmb IAmb 14 34 41.7
comp=E,14nm,1.3s
PV03 Paradox Valley 66.67 58 IAmb IAmb 14 34 40.1
comp=E,5.9nm,0.9s
PV13 Radium Mtn., P 66.75 58 IAmb IAmb 14 34 40.7
comp=E,6.9nm,0.7s
NC602 NORSAR Array S 66.82 341 *e*P **P 14 34 39.2 +1.5**
NORES NORESS Array B 66.82 341 P **P 14 34 39.4 +1.6**
HFS Hagfors 66.88 340 P **P 14 34 37.5 -0.7**
comp=E,5.2nm,0.3s,baz=66,slow=4.9,SNR=3.7
comp=E,5.2nm,0.3s
HYA Hoyanger 67.51 344 *e*P **P 14 34 42.3 +0.3**
SKAR Skarslia 67.55 343 *e*P **P 14 34 43.6 +1.3**
MVCO Mesa Verde 67.59 59 IAmb IAmb 14 34 46.0
comp=E,5.3nm,0.9s
MNK Minsk 67.66 329 *i* P **P 14 34 43.4 +0.3**
comp=E,18nm,0.9s
MNK *i* P **P 14 34 43.4 +0.3**
comp=N,19nm,0.9s
MNK *i* P **P 14 34 43.4 +0.3**
comp=E,9.0nm,0.8s,baz=35
MNK *i* pP **pP 14 35 21.6 +2.1**
MNK *i* PP **PP 14 37 14.3 +0.7**
MNK *i* PPP PPP 14 38 54.1
MNK *i* S **S 14 43 27.9 +0.5**
MNK *i* sS **sS 14 44 34.8 +3.6**
MNK *i* SS **SS 14 47 52.8 +2.5**
MNK *i* SSS SSS 14 51 09.2
MNK *i* LR LR 15 06 16.3
MNK *i* LRM MLR 15 08 33.1
comp=Z,119nm,16.0s
MNK Minsk 67.66 329 *i* P **P 14 34 43.4 +0.3**
MNK *i* *PP **pP 14 35 21.6 +2.1**
MNK *i* 14 37 14.3
MNK *i* PPP PPP 14 38 54.0
MNK *i* S **S 14 43 27.9 +0.5**
MNK *i* SS **SS 14 47 52.7 +2.5**
MNK pmax pmax
comp=N,19nm,0.9s
MNK pmax pmax
comp=Z,9.0nm,0.8s
MNK pmax pmax
comp=E,18nm,0.9s
MNK MLR MLR
comp=Z,119nm,16.0s
MNK MLR MLR
comp=N,100nm,14.0s
MNK MLR MLR
comp=E,111nm,16.0s
GOF Gofitskoye 68.89 315*c* *e*P **P 14 34 51.7 +0.7**
SDCO Great Sand Dun 68.90 57 IAmb IAmb 14 34 55.1
comp=E,8.7nm,1.5s
IVI Ivigtut 69.06 11 P **P 14 34 52.7 +1.0**
AFI Afiamalu 69.30 144 LR LR 15 02 26.1
comp=Z,55nm,21.2s,slow=33
BORU Boraas 69.33 339 *i* P **P 14 34 53.0 -0.5**
BLEU Blekinge 69.76 337 *i* P **P 14 34 54.9 -1.2**
NCK Nalchik 69.80 313⇓ *e*P **P 14 34 56.7 +0.1**
NCK pmax pmax
comp=E,18nm,1.0s
KIV Kislovodsk 69.89 314 *e*P **P 14 34 56.5 -0.7**
KIV pmax pmax
comp=E,17nm,1.0s
KIV Kislovodsk 69.89 314 *e*P **P 14 34 57.8 +0.6**
FABU Falkenberg 69.92 339 *i* P **P 14 34 57.3 +0.3**
SNART Snartemo 69.92 342 *e*P **P 14 34 57.3 +0.2**
KBZ Khabaz 69.96 314 P **P 14 34 57.2 -0.3**
comp=Z,6.4nm,0.6s,baz=30,slow=1.7,SNR=13
comp=Z,6.4nm,0.6s
KBZ Khabaz 69.96 314⇑ *e*P **P 14 34 57.5 0.0**
KBZ pmax pmax
comp=E,20nm,1.1s
KBZ Khabaz 69.96 314 *e*P **P 14 34 57.5 0.0**
SHA1 Shidzhatmaz 70.06 314⇓ *i*P **P 14 34 58.9 +0.4**
DEL Delary 70.11 338 *i* P **P 14 34 57.3 -0.8**
AK03 Malin Array Si 70.27 326 P **P 14 34 58.7 -0.6**
AKASG Malin Array Be 70.29 326 P **P 14 34 58.1 -1.2**
comp=Z,1.4nm,0.3s,baz=34,slow=6.4,SNR=15
comp=Z,1.4nm,0.3s
AKASG Malin Array Be 70.29 326 IAmb IAmb 14 35 00.3
comp=E,6.7nm,1.2s
AKBB Malin Array Si 70.29 326 IAmb IAmb 14 34 60.0
comp=Z,11nm,1.0s
AKBB Malin Array Si 70.29 326⇓ *i*P **P 14 34 58.2 -1.2**
AKBB pmax pmax
comp=Z,18nm,1.3s
KIEV Kiev 70.30 326⇑ P **P 14 34 58.5 -0.9**
KIEV Kiev 70.30 326 P **P 14 34 58.5 -0.9**
KIEV IAmb IAmb 14 34 60.0
comp=Z,9.2nm,0.9s
KIEV Kiev 70.30 326 P **P 14 34 58.6 -0.9**
KIEV pmax pmax
comp=Z,9.0nm,1.0s
AK15 Malin Array Si 70.33 326 P **P 14 34 58.5 -1.2**
AK10 Malin Array Si 70.36 326 P **P 14 34 58.7 -1.1**
ANMO Albuquerque 70.36 59⇑ *i*P **P 14 35 01.7 +1.3**
ANMO pmax pmax
comp=Z,3.0nm,0.9s
AK06 Malin Array Si 70.39 326 P **P 14 34 58.9 -1.1**
NEUR Neytrino 70.40 314⇑ *i*P **P 14 35 02.5 +2.0**
NEUR pmax pmax
comp=Z,9.0nm,1.4s
WR8 Warramunga Arr 70.47 199 P **P 14 35 01.1 +0.3**
WR8 IAmb IAmb 14 35 02.6
comp=Z,14nm,1.3s
WRAB Tennant Creek 70.48 200 P **P 14 35 01.1 +0.3**
WRAB Tennant Creek 70.48 200⇑ *i*P **P 14 35 01.1 +0.3**
WRAB pmax pmax
comp=Z,8.0nm,1.1s

WRA Warramunga Arr 70.49 200 P **P 14 35 01.5 +0.6**
comp=Z,4.6nm,1.0s,baz=18,slow=6.7,SNR=15
WRA pP **pwP 14 35 38.6 -1.7**
comp=Z,2.2nm,0.9s,baz=15,slow=6.1,SNR=4.6
comp=Z,4.6nm,1.0s
WRA Warramunga Arr 70.49 200 P **P 14 35 01.0 +0.1**
WRA **pwP 14 35 39.8 -0.6**
WRA Warramunga Arr 70.49 200 P **P 14 35 01.0 +0.1**
WRA *PP **pwP 14 35 39.8 -0.6**
RNPP9 Sopachiv 70.89 329 P **P 14 35 02.5 -0.5**
BSD Bornholm Skovb 71.05 337 *i* P **P 14 35 03.6 -0.2**
BSD IAmb IAmb 14 35 04.4
comp=E,22nm,1.1s
SCHQ Schefferville 71.34 24 P **P 14 35 06.3 +0.6**
comp=Z,4.7nm,0.4s,baz=333,slow=5.0,SNR=20
SCHQ LR LR 15 09 28.4
comp=E,65nm,18.6s,baz=59,slow=38
comp=Z,4.7nm,0.4s
SCHQ Schefferville 71.34 24 P **P 14 35 06.2 +0.4**
SCHQ IAmb IAmb 14 35 07.4
comp=E,6.6nm,0.6s
LUBAR Lubar, Ukraine 71.47 327 P **P 14 35 05.5 -1.0**
VSLR Vesyoloye 71.51 315⇑ *i*P **P 14 35 07.7 +0.8**
VSLR pmax pmax
comp=Z,44nm,1.0s
NDNU Novodnistrovsk 72.71 326 P **P 14 35 13.6 -0.3**
SORM Soroca 72.72 325 P **P 14 35 13.0 -1.0**
comp=E,14nm,1.5s
KMPD K-Podol'skiy 73.07 327 P **P 14 35 15.5 -0.5**
STNU Starunia 73.65 328 P **P 14 35 19.4 -0.1**
KOPT Kop Dagi 73.95 313 IAmb IAmb 14 35 24.1
comp=Z,17nm,1.0s
GEVA Gevas 73.98 310 IAmb IAmb 14 35 24.2
comp=Z,18nm,1.3s
ASAR Alice Springs 74.19 199 P **P 14 35 23.9 +1.1**
comp=Z,2.9nm,0.8s,baz=14,slow=5.2,SNR=44
ASAR pP **pwP 14 36 02.2 -0.4**
comp=Z,4.4nm,0.8s,baz=9.9,slow=5.8,SNR=11
comp=Z,2.9nm,0.8s
VHRN Van Horn 74.23 61 P **P 14 35 24.4 +1.1**
BUR08 Bucovina Ar. S 74.30 327 P **P 14 35 23.2 -0.2**
BUR08 IAmb IAmb 14 35 24.3
comp=E,15nm,1.2s
BURAR Bucovina Array 74.32 327⇑ P **P 14 35 23.5 -0.1**
BURAR Bucovina Array 74.32 327 P **P 14 35 23.4 -0.1**
KSP Ksiaz 74.46 334 P **P 14 35 24.2 +0.1**
comp=Z,24nm,1.2s
FLTG Flechtingen 74.51 337 *e*P **P 14 35 23.8 -0.6**
comp=Z,28nm,1.2s,baz=24,slow=5.8
HOLU Holmets 74.54 329 P **P 14 35 24.1 -0.5**
EKA Eskdalemuir Ar 74.63 347 P **P 14 35 24.7 -0.3**
comp=Z,2.9nm,0.4s,baz=18,slow=5.1,SNR=32
comp=Z,2.9nm,0.4s
BERU Beregovo 74.70 329 P **P 14 35 26.1 +0.6**
TESR Tescani 74.72 325⇑ P **P 14 35 25.9 +0.2**
TESR Tescani 74.72 325 P **P 14 35 25.5 -0.2**
comp=Z,29nm,1.1s
STEB Steborice 74.82 332 *e*P **P 14 35 26.7 +0.5**
ASSE Asse, Remlinge 74.84 338 *e*P **P 14 35 26.2 0.0**
comp=Z,900nm,4.8s,baz=24,slow=5.8
UPC Upice 74.84 334 *e*P **P 14 35 27.5 +1.2**
UPC Upice 74.84 334 *e*P **P 14 35 27.5 +1.2**
DPC Dobruska-Polom 74.89 333 *e*P **P 14 35 27.2 +0.5**
DPC Dobruska-Polom 74.89 333 *e*P **P 14 35 27.2 +0.5**
ONER Baraj Valea Uz 74.96 325⇑ P **P 14 35 26.2 -0.9**
LANS Liptovska Anna 74.97 331 *e*P **P 14 35 27.8 +0.6**
LANS pmax pmax
comp=E,14nm,1.2s
LANS Liptovska Anna 74.97 331 *e*P **P 14 35 27.8 +0.6**
CLL Collm 74.97 336⇑ *i*P **P 14 35 26.7 -0.4**
CLL pmax pmax
comp=E,31nm,0.9s
CLL Collm 74.97 336⇑ *i*P **P 14 35 26.7 -0.4**
comp=E,31nm,0.9s
CLL Collm 74.97 336 *e*P **P 14 35 26.6 -0.4**
comp=E,33nm,1.0s,baz=24,slow=5.8
CLL Collm 74.97 336 P **P 14 35 26.9 -0.2**
comp=Z,40nm,1.1s
TLCR 74.98 323⇓ P **P 14 35 27.3 +0.1**
TLCR 74.98 323 P **P 14 35 27.2 +0.1**
MORC Moravsky Berou 75.03 332 IAmb IAmb 14 35 28.9
comp=Z,27nm,1.1s
MORC Moravsky Berou 75.03 332 P **P 14 35 27.7 +0.2**
MORC pmax pmax
comp=Z,27nm,1.2s
MORC Moravsky Berou 75.03 332 *e*P **P 14 35 27.5 0.0**
BRG Berggiesshubel 75.11 335 *e*P **P 14 35 27.4 -0.5**
comp=Z,18nm,1.2s,baz=24,slow=5.8
CLZ Clausthal 75.18 338 *e*P **P 14 35 28.5 +0.2**
comp=Z,30nm,1.1s,baz=24,slow=5.8
VRI Vrincioaia 75.23 325⇑ P **P 14 35 29.1 +0.4**
VRI Vrincioaia 75.23 325 P **P 14 35 29.0 +0.4**
CFR Carcaliu 75.26 324⇑ P **P 14 35 28.1 -0.6**
CFR Carcaliu 75.26 324 P **P 14 35 28.1 -0.6**
TURR Turia 75.34 325⇑ P **P 14 35 29.8 +0.5**
TPGR Topolog 75.41 323⇑ P **P 14 35 29.3 -0.4**
HSKC Hora Svate Kat 75.49 335 *e*P **P 14 35 30.0 -0.1**
TOKA Tokat 75.62 316 IAmb IAmb 14 35 32.9
comp=Z,20nm,1.0s
PRU Pruhonice 75.73 334 *e*P **P 14 35 31.5 +0.1**
PRU Pruhonice 75.73 334 *e*P **P 14 35 31.5 +0.1**
VRAC Vranov 75.73 333⇑ P **P 14 35 31.1 -0.4**
VRAC Vranov 75.73 333 P **P 14 35 31.0 -0.4**
VRAC Vranov 75.73 333 *e*P **P 14 35 31.8 +0.3**
BANOM Banah 75.77 293 P **P 14 35 32.1 0.0**
BANOM Banah 75.77 293 P **P 14 35 32.2 +0.1**
SHME Shamm 75.78 293 *i* P **P 14 35 31.8 -0.3**
SNR=6.1
SHME Shamm 75.78 293 P **P 14 35 31.9 -0.1**
JAVC Velka Javorina 75.80 332 *e*P **P 14 35 32.7 +0.8**
MLR Muntele Rosu 75.84 325⇓ P **P 14 35 32.5 +0.2**
MLR Muntele Rosu 75.84 325 P **P 14 35 31.7 -0.6**
MLR IAmb IAmb 14 35 34.2
comp=Z,19nm,1.0s
MLR Muntele Rosu 75.84 325 P **P 14 35 31.7 -0.6**
MLR pmax pmax
comp=Z,19nm,1.0s
MLR Muntele Rosu 75.84 325 P **P 14 35 32.2 -0.1**
comp=Z,22nm,1.5s
MARR Marisel-Cluj 75.87 328⇑ P **P 14 35 32.0 -0.4**
PSZ Piszkesteto 75.91 330⇑ P **P 14 35 32.6 0.0**
PSZ Piszkesteto 75.91 330 IAmb IAmb 14 35 34.0
comp=Z,16nm,1.1s
PSZ Piszkesteto 75.91 330 P **P 14 35 32.6 0.0**
DRGR 75.92 328⇑ P **P 14 35 31.4 -1.2**
DRGR 75.92 328 P **P 14 35 31.4 -1.2**
MBWA Marble Bar 75.92 213 P **P 14 35 39.0 +6.3**
ISR Istrita 75.92 325⇓ P **P 14 35 32.3 -0.4**
ISR Istrita 75.92 325 P **P 14 35 32.2 -0.4**
ISR Istrita 75.92 325 P **P 14 35 32.5 -0.2**
comp=Z,56nm,1.1s
TANN Tannenbergstha 75.93 336 *e*P **P 14 35 32.6 0.0**
comp=Z,18nm,1.4s,baz=24,slow=5.8
MOX Moxa 75.95 336 P **P 14 35 33.1 +0.5**
MOX pmax pmax
comp=Z,17nm,1.7s
MOX Moxa 75.95 336 *e*P **P 14 35 32.6 0.0**
comp=Z,12nm,0.8s,baz=24,slow=5.8
PLN Plauen 75.95 336 *e*P **P 14 35 32.5 -0.1**
comp=Z,9.4nm,1.3s,baz=24,slow=5.8
KRUC Moravsky 76.01 333 *e*P **P 14 35 33.0 0.0**
TX31 Lajitas Ar. Si 76.07 61 IAmb IAmb 14 35 36.4
comp=Z,5.3nm,0.8s
TXAR Lajitas Array 76.08 61 P **P 14 35 35.2 +1.4**
comp=Z,3.4nm,0.5s,baz=300,slow=5.2,SNR=60
TXAR pP **pP 14 36 12.4 +0.7**
comp=Z,1.2nm,0.8s,baz=299,slow=4.7,SNR=3.6
comp=Z,3.4nm,0.5s
TXAR Lajitas Array 76.08 61 P **P 14 35 35.4 +1.5**
SMOL Smolenice 76.18 332 *e*P **P 14 35 35.4 +1.4**
SMOL pmax pmax
comp=Z,12nm,1.2s
VOIR 76.22 326⇑ P **P 14 35 34.5 +0.1**
VOIR 76.22 326 P **P 14 35 34.4 +0.1**
VOIR 76.22 326 P **P 14 35 34.3 -0.1**
comp=Z,24nm,1.1s
MDH Madha 76.23 293 P **P 14 35 33.8 -0.8**
MDH Madha 76.23 293 P **P 14 35 34.1 -0.5**
KASTN Kahler Asten 76.25 339 *e*P **P 14 35 34.5 +0.1**
comp=Z,16nm,1.0s,baz=24,slow=5.8
MASF Masafi 76.26 293 P **P 14 35 35.2 +0.3**
MSFE Esma-Masafi 76.27 293 P **P 14 35 34.9 0.0**
ICOR Ion Corvin 76.27 323⇑ P **P 14 35 35.0 +0.5**
WSAR Wadi Sarin 76.29 289 P **P 14 35 35.6 +0.6**
ZVC Zvikov 76.33 334 *e*P **P 14 35 35.2 +0.4**

MODS	Modra-Piesok	76.35	332	eP		P	14 35 35.6	+0.6
MODS				pmax		pmax		
	comp=Z,43nm,1.2s							
MODS	Modra-Piesok	76.35	332	eP		P	14 35 35.6	+0.6
ARR	Arges	76.44	326	⇑P		P	14 35 36.1	+0.6
SRO	Srobarova	76.52	331	eP		P	14 35 36.9	+1.0
SRO	Srobarova	76.52	331	eP		P	14 35 36.9	+1.0
WBK	Wadi Bani Khal	76.54	289	P		P	14 35 37.6	+1.2
UOSS	Minazif	76.55	292	P		P	14 35 35.8	-0.6
UOSS	Minazif	76.55	292	iP		P	14 35 36.3	-0.1
	SNR=6.6							
UOSS	Minazif	76.55	292	P		P	14 35 36.3	-0.1
ROTZ	Rotzenmuhle	76.59	336	eP		P	14 35 36.6	+0.3
	comp=Z,7.6nm,1.3s,baz=24,slow=5.8							
JLN	Jalan Bani Buh	76.60	288	P		P	14 35 38.4	+1.6
HATD	Hatta, Dubai	76.68	292	iP		P	14 35 38.0	+0.8
	SNR=7.5							
HATD	Hatta, Dubai	76.68	292	P		P	14 35 37.6	+0.5
KHC	Kasperske Hory	76.78	335	IAmb		IAmb	14 35 39.0	
	comp=Z,20nm,0.9s							
KHC	Kasperske Hory	76.78	335	⇑iP		P	14 35 37.8	+0.4
KHC				pmax		pmax		
	comp=Z,24nm,0.9s							
KHC	Kasperske Hory	76.78	335	eP		P	14 35 38.0	+0.6
KHC	Kasperske Hory	76.78	335	P		P	14 35 37.7	+0.4
	comp=Z,28nm,1.2s							
SMDO	Samad	76.79	290	P		P	14 35 38.3	+0.4
CKRC	Cesky Krumlov	76.85	334	eP		P	14 35 37.9	+0.1
CKRC	Cesky Krumlov	76.85	334	eP		P	14 35 37.9	+0.1
HOQ	Hoqain	76.86	291	P		P	14 35 38.5	+0.2
GRF	Grafenberg Arr	76.92	336	eP		P	14 35 38.8	+0.7
	comp=Z,28nm,0.7s,baz=24,slow=5.8							
GRFO	Grafenberg	76.92	336	P		P	14 35 39.8	+1.7
GRFO	Grafenberg	76.92	336	P		P	14 35 39.8	+1.7
SOHO	SOHO	76.94	292	iP		P	14 35 38.7	+0.1
	SNR=6.7							
SOHO	SOHO	76.94	292	P		P	14 35 39.2	+0.6
WINA	Alland / Wiene	76.96	333	iP		P	14 35 39.1	+0.7
	comp=Z,7.6nm,0.6s,SNR=6.0							
WET	Wettzell	76.97	335	eP		P	14 35 38.7	+0.3
	comp=Z,19nm,0.8s,baz=24,slow=5.8							
GEC2	GERESS Array S	77.00	334	IAmb		IAmb	14 35 39.9	
	comp=Z,10nm,0.9s							
GEC2	GERESS Array S	77.00	334	eP		P	14 35 38.7	-0.1
	comp=Z,19nm,1.3s,baz=24,slow=5.8							
GERES	GERESS Array B	77.00	334	P		P	14 35 38.5	-0.3
	comp=Z,3.3nm,0.6s,baz=27,slow=3.3,SNR=20							
GERES				LR		LR	15 15 22.9	
	comp=Z,97nm,19.6s,baz=309,slow=40							
	comp=Z,3.3nm,0.6s							
FAQ	Al Faqa, Dubai	77.07	293	P		P	14 35 39.2	-0.2
BNN	Bunyan	77.08	315	IAmb		IAmb	14 35 41.5	
	comp=Z,21nm,1.0s							
GZR	Gura Zlata	77.10	327	⇑P		P	14 35 38.4	-0.9
GZR	Gura Zlata	77.10	327	P		P	14 35 38.3	-0.9
CONA	Conrad Observa	77.18	333	eP		P	14 35 40.5	+0.8
	comp=Z,28nm,1.5s,SNR=10							
RAZG	Razgrad	77.24	324	⇓P		P	14 35 40.2	+0.2
RONA	Rosalia, Austr	77.25	332	iP		P	14 35 41.0	+0.9
	comp=Z,13nm,1.0s,SNR=7.4							
JMDO	Jabal Madar	77.26	289	P		P	14 35 41.1	+0.6
ASUD	Al Ashush, Dub	77.32	293	iP		P	14 35 40.5	-0.2
	SNR=6.0							
BZS	Buzias	77.32	328	⇑P		P	14 35 40.0	-0.4
BZS	Buzias	77.32	328	P		P	14 35 40.0	-0.4
MPLH	Magyarpolny	77.33	331	P		P	14 35 40.9	+0.5
	comp=Z,78nm,1.3s							
BTNL	Ternell	77.36	340	dP		P	14 35 40.6	0.0
MEM	Membach	77.37	340	dP		P	14 35 41.0	+0.4
FCAR	Ozark Folk Cen	77.38	50	P		P	14 35 41.5	+0.6
FCAR				IAmb		IAmb	14 36 08.8	
	comp=Z,12nm,1.5s							
BR131	Keskin Array S	77.40	317	c iP		P	14 35 41.3	+0.2
BR131	Keskin Array S	77.40	317	P		P	14 35 41.9	+0.8
	SNR=9.2							
BRTR	Keskin Array B	77.40	317	P		P	14 35 41.4	+0.2
	comp=Z,15nm,0.8s,baz=64,slow=3.4,SNR=60							
	comp=Z,15nm,0.8s							
BRTR	Keskin Array B	77.40	317	P		P	14 35 40.6	-0.5
BR106	Keskin Array S	77.40	317	P		P	14 35 41.4	+0.2
	comp=Z,196nmcomp=Z,20nm,1.0s							
BR104	Keskin Array S	77.41	317	P		P	14 35 41.5	+0.3
	comp=Z,222nmcomp=Z,24nm,1.0s							
BR105	Keskin Array S	77.41	317	P		P	14 35 41.6	+0.4
	comp=Z,245nmcomp=Z,22nm,1.0s							
ALNE	Al Ain	77.48	292	P		P	14 35 41.9	+0.2
	SNR=5.8							
ARQ	Araqi	77.53	291	P		P	14 35 42.6	+0.6
BSY	Bisya	77.55	290	P		P	14 35 42.3	+0.2
AJN	Ajban	77.57	293	P		P	14 35 41.7	-0.4
BHOU	Houvegnez	77.61	340	dP		P	14 35 42.3	+0.4
BHOU				dPcP		PcP	14 35 50.8	-0.8
HERR	Herculane	77.67	327	⇑P		P	14 35 41.2	-1.2
BCLA	Clavier	77.71	340	dP		P	14 35 42.2	-0.2
MOA	Molln	77.73	334	iP		P	14 35 43.1	+0.4
	comp=Z,13nm,1.3s							
KIRS	Kirsehir-Merke	77.75	316	⇑P		P	14 35 43.5	+0.5
DRIO	Del Rio	77.77	59	IAmb		IAmb	14 35 46.0	
	comp=Z,12nm,1.1s							
BGES	Gesves	77.79	340	dP		P	14 35 43.2	+0.3
	comp=Z,10nm,1.3s							
MORH	Mrgy, Hungar	77.81	330	⇑P		P	14 35 41.7	-1.5
ARSA	Arzberg	77.89	332	eP		P	14 35 44.8	+1.2
	comp=Z,17nm,1.6s							
BMRD	Maredsous	77.94	340	dP		P	14 35 43.8	0.0
	comp=Z,18nm,1.1s							
RCHB	Rochefort	77.97	340	dP		P	14 35 43.3	-0.6
	comp=Z,11nm,1.2s							
MDVR	Moldovita	78.00	327	⇑P		P	14 35 43.4	-1.0
ELND	Elena	78.03	324	⇑P		P	14 35 43.6	-0.8
BIOA	Bad Ischl, Aus	78.06	334	eP		P	14 35 45.3	+0.8
	comp=Z,8.7nm,0.6s,SNR=6.0							
PLVB	Pleven	78.13	325	⇑P		P	14 35 43.8	-1.1
DOU	Dourbes	78.17	340	dP		P	14 35 45.8	+0.7
RJOB	Jochberg	78.26	334	eP		P	14 35 46.3	+0.6
	comp=Z,11nm,1.0s,baz=24,slow=5.8							
MHTO	MHTO	78.36	288	P		P	14 35 47.4	+0.9
	SNR=8.8							
KBD	Kabd	78.43	301	P		P	14 35 47.3	+0.5
SOKA	Soboth	78.55	333	eP		P	14 35 47.5	+0.2
	comp=Z,25nm,1.4s,SNR=16							
PERS	Pernice	78.56	332	iP		P	14 35 47.4	0.0
LESA	Schwarzleotal	78.58	334	iP		P	14 35 48.2	+0.7
	comp=Z,6.4nm,0.6s,SNR=12							
KBA	Koelnbreinsper	78.70	334	iP		P	14 35 49.1	+0.9
	comp=Z,12nm,0.5s,SNR=15							
UMZA	Um Al Zommool	78.83	292	P		P	14 35 49.0	-0.1
OBKA	Obir	78.85	333	iP		P	14 35 49.4	+0.5
	comp=Z,2.6nm,0.5s							
BFO	Black Forest	78.93	337	P		P	14 35 49.1	-0.2
BFO				IAmb		IAmb	14 35 50.5	
	comp=Z,29nm,1.3s							
BFO	Black Forest	78.93	337	P		P	14 35 49.1	-0.2
BFO				pmax		pmax		
	comp=Z,29nm,1.3s							
BFO	Black Forest	78.93	337	eP		P	14 35 49.4	+0.1
	comp=Z,30nm,1.3s,baz=24,slow=5.8							
WATA	Walderalm	78.97	335	eP		P	14 35 50.2	+0.6
	comp=Z,17nm,0.5s,SNR=11							
MYKA	Terra Mystica	79.02	333	iP		P	14 35 49.8	0.0
	comp=Z,27nm,0.4s							
WTTA	Wattenberg	79.02	335	iP		P	14 35 50.8	+0.8
	comp=Z,11nm,0.6s,SNR=14							
SHMA	Al-Shehemyia	79.03	297	P		P	14 35 50.0	-0.2
RETA	Reutte	79.06	336	iP		P	14 35 50.7	+0.7
	comp=Z,15nm,1.2s							
MOTA	Moosalm	79.10	335	iP		P	14 35 50.9	+0.5
	comp=Z,38nm,1.3s,SNR=12							
SQTA	Sankt Quirin	79.18	335	iP		P	14 35 51.5	+0.7
	comp=Z,42nm,1.2s,SNR=11							
PRED	Cave del Predi	79.21	333	P		P	14 35 50.5	-0.4
PRED				IAmb		IAmb	14 35 51.4	
	comp=Z,16nm,1.2s							
ABTA	Abfaltersbach	79.24	334	iP		P	14 35 51.3	+0.2
	comp=Z,5.0nm,0.8s,SNR=5.4							
GHWR	Ruwais	79.30	294	P		P	14 35 51.2	-0.4
ECH	Echery	79.33	338	IAmb		IAmb	14 35 52.8	
	comp=Z,24nm,1.2s							
DAVA	Damuels	79.48	336	iP		P	14 35 52.9	+0.4
	comp=Z,14nm,1.0s,SNR=5.3							
FETA	Feichten	79.50	335	iP		P	14 35 53.2	+0.6
	comp=Z,15nm,1.2s,SNR=8.0							
BOJS	Bojanci	79.54	332	iP		P	14 35 52.2	-0.4
STAL	STALIGIAL	79.62	334	IAmb		IAmb	14 35 53.1	
	comp=Z,15nm,1.2s							
MZR	Muzera	79.65	293	iP		P	14 35 53.5	-0.1
	SNR=32							
MZR	Muzera	79.65	293	P		P	14 35 53.8	+0.2
	SNR=9.9							
KNDS	Knezji Dol	79.78	332	iP		P	14 35 53.5	-0.6
FUORN	Ofenpass-Fuorn	79.99	336	IAmb		IAmb	14 35 57.3	
	comp=Z,24nm,1.1s							
CTI	Castel Tesino	80.12	334	IAmb		IAmb	14 35 56.3	
	comp=Z,9.3nm,0.6s							
TUE	Stuetta	80.38	336	IAmb		IAmb	14 36 02.1	
	comp=Z,23nm,1.0s							
TUE	Stuetta	80.38	336	P		P	14 35 57.4	+0.1
	comp=Z,86nm,1.2s							
SALO	Salr	80.84	335	IAmb		IAmb	14 36 00.6	
	comp=Z,23nm,1.1s							
SENIN	Lac Senin/Sane	81.02	337	IAmb		IAmb	14 36 06.0	
	comp=Z,20nm,1.4s							
MMAI	Mount Meron Ar	81.98	312	P		P	14 36 06.5	+0.6
	comp=Z,4.7nm,0.4s,baz=29,slow=10,SNR=10							
	comp=Z,4.7nm,0.4s							
BNI	Bardonecchia	82.39	337	IAmb		IAmb	14 36 10.1	
	comp=Z,22nm,1.4s							
FDMO	Fiordimonte	82.43	332	IAmb		IAmb	14 36 09.4	
	comp=Z,20nm,1.2s							
DOK	Doka	82.52	290	P		P	14 36 09.1	+0.4
NRCA	Norcia	82.61	332	IAmb		IAmb	14 36 10.6	
	comp=Z,24nm,1.1s							
DMTO	DMTO	82.68	288	P		P	14 36 09.4	-0.2
SSB	Saint Sauveur	82.71	339	IAmb		IAmb	14 36 12.1	
	comp=Z,18nm,1.2s							
KEK	Kerkira	83.12	326	P		P	14 36 11.5	-0.1
WHFO	Wadi Hawf	83.27	289	P		P	14 36 11.9	-0.8
ABTO	Aybut	83.99	289	P		P	14 36 15.8	-0.6
RAYN	Ar Rayn	84.01	299	P		P	14 36 16.2	-0.3
RAYN	Ar Rayn	84.01	299	iP		P	14 36 16.6	+0.2
	SNR=12							
RAYN	Ar Rayn	84.01	299	P		P	14 36 16.2	-0.3
RAYN				pmax		pmax		
	comp=Z,43nm,1.5s							
RAYN	Ar Rayn	84.01	299	P		P	14 36 16.9	+0.5
ESDC	Sonseca Array	89.91	343	P		P	14 36 44.3	-0.4
	comp=Z,2.7nm,0.9s,baz=356,slow=4.6,SNR=9.4							
ESDC				LR		LR	15 22 29.1	
	comp=Z,78nm,18.3s,baz=326,slow=39							
	comp=Z,2.7nm,0.9s							
KEST	Kesra	90.28	332	P		P	14 36 46.6	+0.1
	comp=Z,6.0nm,0.5s,baz=26,slow=3.7,SNR=11							
	comp=Z,6.0nm,0.5s							
KEST	Kesra	90.28	332	P		P	14 36 46.5	+0.1
KEST				IAmb		IAmb	14 37 10.1	
	comp=Z,13nm,1.1s							
H03N2	Juan Fernandez	138.17	89	T		T	17 17 10.5	
	baz=310,slow=77,SNR=32							
H03N1	Juan Fernandez	138.18	89	T		T	17 17 11.9	
	baz=310,slow=77,SNR=21							
H03N3	Juan Fernandez	138.18	89	T		T	17 17 11.3	
	baz=310,slow=77,SNR=19							
PLCA	Paso Flores	147.77	93	PKPbc		PKiKP	14 43 29.8	-1.3
	comp=Z,1.6nm,0.7s,baz=306,slow=4.1,SNR=4.4							

*IDC **17** 14:30:24.0±1.6, 58.24N×153.06W, h41km±26km, mb3.5/9, mbtmp3.8/13, ML3.9/4, MS2.7/1, Error ellipse: s-maj=31.8km s-min=20.2km az=129.0*

*NEIC **17** 14:30:25.8±1.2, 58.23N±0.03×152.52W±0.06, h35km±2km, mb4.0/3, ML3.8/131, ML3.6(AEIC), Error ellipse: s-maj=6.1km s-min=4.1km az=300.0*

*AEIC **17** 14:30:26.7±0.8, 58.24N±0.04×152.63W±0.04, h60km±7km, Error ellipse: s-maj=8.3km s-min=5.2km az=113.0*

ISC 17 14:30:25.8±0.7, 58.24N±0.04×152.53W±0.04, h60km±7km, n242, σ0=95/225, mb3.8/10, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SYI	Shuyak Island	0.38	12		Pn		14 30 35.2	-1.3
SYI				IAML			14 30 42.7	
	comp=E,6μm,0.6s							
SYI	Shuyak Island	0.38	12		Sn		14 30 42.2	-2.0
KDAK	Kodiak Island	0.46	183	P	Pn		14 30 36.9	-0.4
	comp=E,1μm,0.3s,baz=47,slow=4.1							
KDAK				S	Sn		14 30 45.0	-0.7
	comp=E,8μm,0.5s,baz=221,slow=16,SNR=98							
KDAK	Kodiak Island	0.46	183		Pn		14 30 36.6	-0.7
KDAK				IAML			14 30 45.5	
	comp=E,9μm,0.6s							
KDAK				IAML			14 30 46.9	
	comp=E,11μm,0.6s							
KDAK	Kodiak Island	0.46	183		Sn		14 30 45.1	-0.6
Q19K	Cape Douglas,	0.90	320		Pn		14 30 41.7	-0.9
Q19K	Cape Douglas,	0.90	320		Sn		14 30 54.6	-0.2
KAHG	Katmai Hook Gl	1.09	284		Pn		14 30 44.5	-0.5
KAHG					Sn		14 30 59.2	-0.1
OHAK	Old Harbor	1.10	202	P	Pn		14 30 44.6	-0.5
OHAK	Old Harbor	1.10	202	S	Sn		14 31 01.3	+1.9
OHAK	Old Harbor	1.10	202		Pn		14 30 44.8	-0.3
OHAK				IAML			14 31 06.4	
	comp=N,1μm,0.5s							
OHAK	Old Harbor	1.10	202		Sn		14 30 58.8	-0.6
KARR	Katmai Rainbow	1.17	283		Pn		14 30 46.0	0.0
KARR					Sn		14 31 01.3	+0.1
AUI	Augustine Isla	1.19	337		Pn		14 30 46.1	-0.1
AUI					Sn		14 31 01.7	+0.2
AUJK	Augustine Jueg	1.20	338		Pn		14 30 46.6	+0.2
AUJK					Sn		14 31 01.9	+0.1
KAWH	Katmai	1.20	278		Pn		14 30 46.1	-0.4
KAWH					Sn		14 31 01.4	-0.5
AU22	Augustine Moun	1.21	340		Pn		14 30 46.9	+0.4
AU22					Sn		14 31 02.3	+0.3
AGU	Augustine-Summ	1.21	338		Pn		14 30 46.9	+0.2
AGU					Sn		14 31 03.1	+0.8
AUCH	Augustine Cone	1.22	337		Pn		14 30 47.1	+0.4
AUCH					Sn		14 31 03.3	+1.0
AUW	Augustine West	1.23	337		Pn		14 30 47.0	+0.2
AUW					Sn		14 31 02.7	+0.2
KAKN	Katmai Knife C	1.34	273		Sn		14 31 05.3	+0.1
KAHC	Katmai Hardscr	1.36	288		Sn		14 31 05.7	-0.2
CNPM	China Poot	1.45	27		Pn		14 30 50.2	+0.4
CNPM				IAML			14 31 16.8	
	comp=E,1μm,0.5s							
CNPM	China Poot	1.45	27		Sn		14 31 08.4	+0.6
KABU	Katmai Buttres	1.45	272		Pn		14 30 50.0	+0.2
P19K	Oil Pt	1.46	346		Pn		14 30 50.2	+0.3
P19K	Oil Pt	1.46	346		Sn		14 31 08.2	+0.1
ACHA	Angle Creek He	1.48	270		Sn		14 31 09.2	+0.7
ACHA	Angle Creek He	1.48	270		Pn		14 30 49.6	-0.6
HOM	Homer	1.49	18		Pn		14 30 50.9	+0.6
HOM				IAML			14 31 24.7	
	comp=E,2μm,0.6s							
HOM	Homer	1.49	18		Sn		14 31 09.8	+1.0
ILS	Iliamna Low So	1.74	351		Sn		14 31 15.8	+0.8
BRLK	Bradley Lake	1.75	29		Pn		14 30 53.7	0.0
BRLK				IAML			14 31 25.2	
	comp=E,632nm,0.6s							
ILSW	Iliamna Southw	1.77	350		Pn		14 30 54.0	-0.2
ILSW				IAML			14 31 21.7	
	comp=N,916nm,0.8s							
ILSW	Iliamna Southw	1.77	350		Sn		14 31 16.5	+0.8
P18K	Big Mountain,	1.81	311		Pn		14 30 53.9	-0.8
SII	Sitkinak Islan	1.91	209		Pn		14 30 55.9	-0.1
SII	Sitkinak Islan	1.91	209	IAML			14 31 40.5	
	comp=N,1μm,0.7s							
PLK3	Peulik 3	2.07	256		Pn		14 30 58.3	+0.2
O18K	Koktuh Hills	2.12	321		Pn		14 30 58.3	-0.6
O18K				IAML			14 31 36.8	
	comp=E,446nm,0.8s							
O18K				IAML			14 31 38.2	
	comp=N,581nm,0.8s							
PLK4	Peulik 4	2.13	255		Pn		14 30 59.2	+0.2
PLK4	Peulik 4	2.13	255	IAML			14 31 39.4	
	comp=N,874nm,0.7s							
O19K	Port Alsworth	2.16	336		Pn		14 30 59.3	0.0
O19K	Port Alsworth	2.16	336		Sn		14 31 24.1	-0.9
RED	Redoubt Volcan	2.19	357		Pn		14 30 59.9	+0.1
RED				IAML			14 31 30.2	
	comp=E,524nm,0.8s							
RED				IAML			14 31 34.1	
	comp=N,515nm,0.8s							
Q16K	King Salmon	2.21	283		Pn		14 30 59.9	-0.1
PLK1	Peulik 1	2.21	260		Pn		14 31 00.1	+0.1
P17K	Kvichak River	2.25	297		Pn		14 31 00.4	-0.1
PLK5	Peulik 5	2.32	266		Pn		14 31 01.6	+0.2
PLBL	Peulik Blue Cr	2.35	258		Pn		14 31 02.3	+0.4
SEW	Seward	2.45	39		Pn		14 31 02.8	-0.4
SEW				IAML			14 31 47.0	
	comp=E,361nm,0.9s							
SLKM	Skilak Lake	2.56	27		Pn		14 31 04.6	-0.2
SLKM				IAML			14 31 51.5	
	comp=N,322nm,0.7s							
SLKM				IAML			14 31 52.9	
	comp=E,385nm,0.9s							
CAPN	Captain Cook N	2.63	15		Pn		14 31 07.2	+1.5
N19K	Bonanza Creek	2.76	340		Pn		14 31 07.6	+0.1
N19K	Bonanza Creek	2.76	340	IAML			14 31 54.6	
	comp=E,273nm,0.7s							
N19K				IAML			14 31 57.8	
	comp=N,217nm,1.1s							
O17K	Koliganek Bris	2.81	305		Pn		14 31 08.1	-0.1
P16K	Nushagak River	2.96	288		Pn		14 31 09.5	-0.7
P16K				IAML			14 32 03.5	
	comp=E,428nm,0.9s							
N18K	Kilae Creek	2.98	326		Pn		14 31 10.4	-0.2
N18K	Kilae Creek	2.98	326	IAML			14 32 01.1	
	comp=E,296nm,1.2s							
N18K				IAML			14 32 01.7	
	comp=N,205nm,1.0s							
P23K	Montague Islan	3.18	54		Pn		14 31 13.5	+0.3
P23K				IAML			14 32 13.6	
	comp=N,340nm,0.8s							
P23K				IAML			14 32 21.5	
	comp=E,223nm,1.1s							
O16K	Kokwok River B	3.19	298		Pn		14 31 13.2	-0.1
RC01	Rabbit Creek A	3.19	25		Pn		14 31 13.5	+0.1
RC01				IAML			14 32 16.9	
	comp=E,175nm,0.7s							
N17K	Nushagak Hills	3.30	316		Pn		14 31 14.7	-0.2
N17K	Nushagak Hills	3.30	316	IAML			14 32 10.5	
	comp=N,157nm,0.8s							
N17K				IAML			14 32 14.4	
	comp=E,135nm,0.8s							
M18K	Stony River	3.66	334		Pn		14 31 19.7	0.0
M20K	Styx River	3.66	356		Pn		14 31 20.2	+0.3
M20K	Styx River	3.66	356	IAML			14 32 21.9	
	comp=E,111nm,0.8s							
M22K	Willow	3.72	18		Pn		14 31 20.9	+0.3
CHGN	Chignik	3.74	241		Pn		14 31 21.0	+0.2
CHGN	Chignik	3.74	241	IAML			14 32 19.1	
	comp=N,114nm,0.6s							
HIN	Hinchinbrook I	3.77	53		Pn		14 31 21.4	+0.1
HIN				IAML			14 32 06.5	
	comp=E,182nm,0.8s							
PMR	Palmer	3.77	26	P	Pn		14 31 20.7	-0.6
PMR	Palmer	3.77	26	S	Sn		14 32 06.2	+1.9
PMR	Palmer	3.77	26		Pn		14 31 20.9	-0.4
SKT	Skwentna	3.78	7	IAML			14 32 16.1	
	comp=E,99nm,0.6s							
KNK	Knik Glacier	3.79	31	IAML			14 32 31.4	
	comp=E,195nm,0.7s							
KNK				IAML			14 32 36.9	
	comp=N,156nm,1.0s							
M19K	Big River Lodg	3.79	347		Pn		14 31 21.7	+0.1
M19K	Big River Lodg	3.79	347	IAML			14 32 27.4	
	comp=E,100nm,0.6s							
GLI	Glacier Island	3.83	44		Pn		14 31 21.4	-0.7
GLI				IAML			14 32 02.7	
	comp=E,119nm,0.8s							
GLI				IAML			14 32 34.2	
	comp=N,138nm,1.1s							
N16K	Nishlik Lake	3.90	308		Pn		14 31 23.3	+0.2
GHO	Glory Hole Cre	3.98	26		Pn		14 31 24.0	-0.2
GHO				IAML			14 32 32.4	
	comp=E,141nm,0.8s							
GHO				IAML			14 32 42.2	
	comp=N,169nm,1.1s							
M17K	Holitna River	4.02	324		Pn		14 31 25.0	+0.3
L19K	White Mountain	4.12	345	IAML			14 32 39.3	
	comp=N,147nm,0.8s							
SML	Sawmill	4.15	29	IAML			14 32 39.9	
	comp=E,112nm,1.1s							
SML				IAML			14 32 44.5	
	comp=N,100nm,1.1s							
EYAK	Cordova Ski Ar	4.17	53	P	Pn		14 31 26.5	-0.2
M16K	Timber Creek	4.29	313		Pn		14 31 28.7	+0.3
M16K	Timber Creek	4.29	313	IAML			14 32 47.2	
	comp=N,64nm,0.9s							
M16K				IAML			14 32 48.0	
	comp=E,97nm,0.9s							
M23K	Glacier View	4.30	32		Pn		14 31 29.0	+0.4
CUT	Chulitna	4.32	14		Pn		14 31 29.0	+0.2
VNKR	Veniaminof 5	4.33	242		Pn		14 31 29.1	0.0
N15K	Kwethluk River	4.34	300		Pn		14 31 30.0	+0.9
N15K	Kwethluk River	4.34	300	IAML			14 32 47.1	
	comp=E,82nm,0.8s							
N15K				IAML			14 32 47.7	
	comp=N,110nm,1.0s							
L22K	Petersville	4.38	11		Pn		14 31 30.1	+0.3
L22K	Petersville	4.38	11	IAML			14 32 33.7	
	comp=E,82nm,0.8s							
L22K				IAML			14 32 34.7	
	comp=N,99nm,0.5s							
SCM	Sheep Creek Mo	4.45	34	IAML			14 32 22.1	
	comp=E,120nm,0.9s							
SCM				IAML			14 32 48.2	
	comp=N,102nm,1.1s							
L18K	Granite Mounta	4.49	334		Pn		14 31 31.5	+0.3
L18K	Granite Mounta	4.49	334	IAML			14 32 50.9	
	comp=N,112nm,1.0s							
L18K				IAML			14 32 50.9

M13K	**Dall Lake**	**5.95**	**296**			**Pn**	**14 31 52.0**	**+0.9**
J19K	**Poorman**	**5.96**	**347**			**Pn**	**14 31 51.5**	**+0.3**
L14K	**Kuka Creek**	**5.99**	**306**			**Pn**	**14 31 52.1**	**+0.5**
J20K	**Nowinta River**	**6.00**	**353**			**Pn**	**14 31 51.7**	**-0.2**
GRNC	**Granite Creek**	**6.03**	**61**			**Pn**	**14 31 53.2**	**+0.8**
K15K	**Wolf Creek Mou**	**6.04**	**316**			**Pn**	**14 31 52.8**	**+0.5**
J17K	**VABM Dome**	**6.08**	**331**			**Pn**	**14 31 53.0**	**+0.1**
RKAV	**Rock Avalanche**	**6.09**	**66**			**Pn**	**14 31 54.3**	**+1.0**
BARN	**Barnard Glacie**	**6.19**	**58**			**Pn**	**14 31 54.9**	**+0.3**
CTGM	**Chitina Glacie**	**6.30**	**60**			**Pn**	**14 31 56.8**	**+0.6**
LOGN	**Logan Glacier**	**6.41**	**61**			**Pn**	**14 31 58.0**	**+0.4**
J16K	**Anvik River**	**6.41**	**325**			**Pn**	**14 31 57.3**	**-0.1**
K24K	**Donnelly Dome**	**6.47**	**28**			**Pn**	**14 31 59.5**	**+1.2**
PCA	**Pinnacle**	**6.58**	**68**			**Pn**	**14 32 00.8**	**+1.0**
NEA2	**Nenana**	**6.58**	**13**			**Pn**	**14 31 59.2**	**-0.6**
WRH	**Wood River Hil**	**6.60**	**17**			**Pn**	**14 31 59.4**	**-0.6**
RIDG	**Independent Ri**	**6.66**	**31**			**Pn**	**14 32 00.7**	**-0.1**
M27K	**Edge Creek, AK**	**6.71**	**48**			**Pn**	**14 32 01.5**	**-0.1**
HDA	**Harding Lake**	**6.74**	**21**			**Pn**	**14 32 02.0**	**+0.1**
O28M	**Mount Upton**	**6.77**	**63**			**Pn**	**14 32 03.6**	**+1.0**
YKU2	**Yakutat**	**6.79**	**74**	P		**Pn**	**14 32 05.0**	**+2.4**
YKU2	**Yakutat**	**6.79**	**74**	S		**Sn**	**14 33 21.9**	**+3.5**
CCB	**Clear Creek Bu**	**6.81**	**17**			**Pn**	**14 32 01.7**	**-1.2**
YUK2	**White River**	**6.85**	**54**			**Pn**	**14 32 04.0**	**+0.5**
MLY	**Manley**	**6.87**	**6**			**Pn**	**14 32 03.2**	**-0.4**
I21K	**Tanana**	**6.97**	**2**			**Pn**	**14 32 04.9**	**-0.1**
YUK3	**Moose Creek**	**7.01**	**55**			**Pn**	**14 32 06.6**	**+0.8**
COLA	**College**	**7.02**	**17**	P		**Pn**	**14 32 05.4**	**-0.3**
MDM	**Murphy Dome**	**7.04**	**15**			**Pn**	**14 32 05.4**	**-0.7**
J14K	**Nanvaranak Lak**	**7.07**	**314**			**Pn**	**14 32 06.7**	**+0.3**
IL31		**7.08**	**20**			**Pn**	**14 32 05.6**	**-0.9**
ILAR	**Eielson Array**	**7.08**	**20**	P		**Pn**	**14 32 06.0**	**-0.6**
	comp=E,2.3nm,0.3s,baz=212,slow=14,SNR=99							
ILAR				S		**Sn**	**14 33 18.0**	**-7.5**
	comp=E,2.4nm,0.5s,baz=208,slow=24,SNR=4.6							
ILAR				LR		LR	14 34 30.4	
	comp=E,56nm,21.3s,baz=40,slow=34 comp=E,7.7nm,0.5s							
SCRK	**Sand Creek**	**7.08**	**32**			**Pn**	**14 32 05.9**	**-0.8**
I23K	**Minto, Yukon-K**	**7.09**	**11**			**Pn**	**14 32 05.7**	**-1.0**
K13K	**Kusilvak Mount**	**7.10**	**307**			**Pn**	**14 32 07.1**	**+0.3**
YUK8	**Steele Glacier**	**7.13**	**59**			**Pn**	**14 32 08.7**	**+1.2**
BC01	**Beaver Creek A**	**7.14**	**43**			**Pn**	**14 32 07.7**	**+0.3**
L27K	**Beaver Creek,**	**7.14**	**43**			**Pn**	**14 32 07.7**	**+0.3**
J25K	**Salcha River,**	**7.25**	**25**			**Pn**	**14 32 08.4**	**-0.6**
M11K	**Mekoryuk**	**7.32**	**293**			**Pn**	**14 32 10.7**	**+0.9**
H20K	**Anotleneega Mo**	**7.36**	**352**			**Pn**	**14 32 10.2**	**-0.1**
H21K	**Melozitna Rive**	**7.44**	**359**			**Pn**	**14 32 10.8**	**-0.7**
H18K	**Honhosa River**	**7.46**	**341**			**Pn**	**14 32 11.3**	**-0.5**
H19K	**Roundabout Mou**	**7.54**	**347**			**Pn**	**14 32 11.8**	**-1.0**
H17K	**Granite Mounta**	**7.58**	**335**			**Pn**	**14 32 12.8**	**-0.6**
YUK6	**Outpost Mounta**	**7.68**	**63**			**Pn**	**14 32 15.9**	**+0.9**
H22K	**Ishtalitna Cre**	**7.70**	**4**			**Pn**	**14 32 14.5**	**-0.6**
H16K	**Elim**	**7.91**	**328**			**Pn**	**14 32 18.2**	**+0.2**
H24K	**Noodor Dome**	**7.93**	**14**			**Pn**	**14 32 17.3**	**-0.8**
YUK5	**Granite Creek**	**7.97**	**63**			**Pn**	**14 32 19.9**	**+1.1**
PRP	**Porcupine Dome**	**8.01**	**21**			**Pn**	**14 32 18.8**	**-0.6**
M29M	**Somme Creek**	**8.14**	**53**			**Pn**	**14 32 22.0**	**+0.8**
G18K	**Tagagawik**	**8.19**	**342**			**Pn**	**14 32 20.4**	**-1.4**
G19K	**Purcell Mounta**	**8.21**	**347**			**Pn**	**14 32 21.1**	**-0.8**
P30M	**Million Dollar**	**8.22**	**70**			**Pn**	**14 32 23.6**	**+1.4**
G21K	**Allakaket**	**8.31**	**357**			**Pn**	**14 32 22.4**	**-1.1**
I26K	**Coal Creek Min**	**8.36**	**28**			**Pn**	**14 32 22.8**	**-1.2**
N30M	**Aishikik Lake**	**8.41**	**61**			**Pn**	**14 32 24.8**	**0.0**
G16K	**Koyuk River**	**8.54**	**331**			**Pn**	**14 32 26.9**	**+0.5**
G23K	**Bananza Creek**	**8.58**	**7**			**Pn**	**14 32 26.8**	**-0.2**
L29M	**L29M**	**8.58**	**49**			**Pn**	**14 32 27.4**	**+0.3**
DAWY	**Dawson**	**8.62**	**42**			**Pn**	**14 32 28.0**	**+0.4**
S31K	**Pelican**	**8.64**	**85**			**Pn**	**14 32 27.2**	**-0.6**
G15K	**Niukluk**	**8.70**	**326**			**Pn**	**14 32 28.9**	**+0.3**
G24K	**Hadweenzic Riv**	**8.80**	**13**			**Pn**	**14 32 29.3**	**-0.8**
ANM	**Nome**	**8.82**	**321**			**Pn**	**14 32 31.4**	**+1.0**
F19K	**Shaleruckik Mo**	**8.95**	**347**			**Pn**	**14 32 32.5**	**+0.4**
F20K	**Avaraart Lake**	**8.96**	**352**			**Pn**	**14 32 32.4**	**+0.3**
UNV	**Unalaska Valle**	**8.97**	**247**			**Pn**	**14 32 31.6**	**-0.8**
I27K	**Kandik River**	**8.99**	**30**			**Pn**	**14 32 33.3**	**+0.6**
SKAG	**Skagway**	**9.00**	**75**	P		**Pn**	**14 32 34.5**	**+1.7**
F21K	**Alatna River**	**9.02**	**358**			**Pn**	**14 32 32.7**	**-0.4**
MNAT	**Makushin Natee**	**9.04**	**247**			**Pn**	**14 32 32.7**	**-0.7**
G25K	**Bearman Lake**	**9.05**	**16**			**Pn**	**14 32 33.0**	**-0.4**
BESE	**Bessie Mountai**	**9.29**	**80**			**Pn**	**14 32 37.0**	**+0.2**
SIT	**Sitka**	**9.30**	**90**	P		**Pn**	**14 32 38.2**	**+1.3**
I28M	**Miner Creek**	**9.35**	**34**			**Pn**	**14 32 36.7**	**-0.9**
F15K	**North Star Dit**	**9.39**	**328**			**Pn**	**14 32 39.2**	**+1.0**
E19K	**Redstone River**	**9.49**	**349**			**Pn**	**14 32 40.0**	**+0.5**
H27K	**Steamboat Moun**	**9.50**	**28**			**Pn**	**14 32 39.5**	**-0.1**
F24K	**Squaw Lake**	**9.54**	**11**			**Pn**	**14 32 39.4**	**-0.9**
JIS	**Juneau Island**	**9.57**	**82**	P		**Pn**	**14 32 41.9**	**+1.4**
S32K	**Killisnoo**	**9.60**	**87**			**Pn**	**14 32 40.9**	**-0.1**
P32M	**Atlin**	**9.82**	**74**			**Pn**	**14 32 43.7**	**-0.4**
F25K	**Christian Rive**	**9.89**	**16**			**Pn**	**14 32 43.1**	**-1.9**
E18K	**Tukpahlearik C**	**9.91**	**342**			**Pn**	**14 32 44.2**	**-1.0**
BM01	**Burnt Mountain**	**9.93**	**18**			**Pn**	**14 32 43.6**	**-1.8**
DLBC	**Dease Lake**	**11.82**	**79**	P		**Pn**	**14 33 13.1**	**+1.7**
	comp=E,1.0nm,0.3s,baz=246,slow=11,SNR=22							
DLBC				S		**Sn**	**14 35 18.4**	**-3.0**
	comp=E,0.9nm,0.4s,baz=327,slow=26,SNR=5.5 comp=E,5.5nm,0.6s							
INK	**Inuvik**	**13.15**	**32**	P		**Pn**	**14 33 28.8**	**-0.6**
	comp=E,0.1nm,0.3s,baz=227,slow=14,SNR=5.1 comp=E,2.5nm,0.9s							
C36M	**Paulatuk**	**16.57**	**36**			**P**	**14 34 16.1**	**+0.7**
C36M				IAmb		IAmb	14 34 17.1	
	comp=Z,6.9nm,0.8s							
A36M	**Sachs Harbour**	**17.67**	**28**			**Pn**	**14 34 27.6**	**+0.3**
A36M				IAmb		IAmb	14 34 30.8	
	comp=Z,11nm,0.8s							
YKA	**Yellowknife Ar**	**19.03**	**61**	P		**Pn**	**14 34 44.6**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=277,slow=11,SNR=26 comp=Z,4.0nm,0.8s							
KLR	**Kul'dur**	**43.41**	**292**	P		**P**	**14 38 20.0**	**-2.1**
	comp=Z,0.7nm,0.4s,baz=33,slow=12,SNR=3.1 comp=Z,0.7nm,0.4s							
SPITS	**Spitsbergen Ar**	**43.66**	**3**	P		**P**	**14 38 23.6**	**-0.1**
	comp=Z,1.0nm,0.4s,baz=357,slow=7.2,SNR=7.8 comp=Z,1.0nm,0.4s							
KSRS	**Korea Array**	**53.82**	**284**	P		**P**	**14 39 39.9**	**-2.2**
	comp=Z,0.5nm,0.4s,baz=39,slow=6.7,SNR=2.1 comp=Z,0.5nm,0.4s							
FINES	**FINESS Array B**	**60.64**	**1**	P		**P**	**14 40 29.8**	**0.0**
	comp=Z,2.7nm,0.9s,baz=7.1,slow=7.7,SNR=6.0 comp=Z,2.7nm,0.9s							
FINES	**FINESS Array B**	**60.64**	**1**	P		**P**	**14 40 30.6**	**+0.9**
KURK	**Kurchatov**	**63.62**	**326**	P		**P**	**14 40 49.5**	**-0.4**
KURK	**Kurchatov**	**63.62**	**326**	IAmb		IAmb	14 40 56.1	
	comp=Z,1.3nm,1.0s							
KURBB	**Kurchatov Arra**	**63.73**	**326**	P		**P**	**14 40 49.5**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=29,slow=6.6,SNR=2.3 comp=Z,0.2nm,0.5s							
BVAR	**Borovoye Array**	**63.74**	**333**	P		**P**	**14 40 50.8**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=36,slow=7.6,SNR=3.6 comp=Z,0.6nm,0.7s							
EKA	**Eskdalemuir Ar**	**64.12**	**19**	P		**P**	**14 40 53.9**	**+0.8**
	comp=Z,2.1nm,0.9s,baz=336,slow=7.0,SNR=2.2 comp=Z,2.1nm,0.9s							
MKAR	**Makanchi Array**	**65.96**	**322**	P		**P**	**14 41 03.6**	**-1.6**
	comp=Z,0.2nm,0.6s,baz=40,slow=7.5,SNR=1.8 comp=Z,0.2nm,0.6s							
MKAR	**Makanchi Array**	**65.96**	**322**	P		**P**	**14 41 06.2**	**+1.0**
CLL	**Collm**	**70.17**	**10**	*eP*		**P**	**14 41 33.0**	**+5.7**
GERES	**GERESS Array B**	**72.67**	**9**	P		**P**	**14 41 48.6**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=339,slow=5.2,SNR=1.9 comp=Z,0.2nm,0.3s							

RSNC ***17*** *14:30:29.4±0.0, 7°N±1°×7°3W±°, h148km±2km, M2.7, mb3.5, ML2.5*

FUNV ***17*** *14:30:31.0, 7.°17N×73.°21W, h5km, MW2.8, Presumed earthquake*

ISC 17 14:30:27.8±1.5, 6°89N±0.°03×73°11W±0.°05, h154km±9km, n30, σ1°32/56, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.30**	**194**	P	**Pn**	**14 30 49.2**	**0.0**
BARC				S	**Sn**	**14 31 04.4**	**-1.1**
PAMC	**Pamplona, Colo**	**0.60**	**42**	P	**Pn**	**14 30 51.9**	**+1.1**
PAMC				S	**Sn**	**14 31 08.8**	**+0.5**
BRJC	**Barrancabermej**	**0.64**	**278**	P	**Pn**	**14 30 50.9**	**+0.5**
BRJC				S	**Sn**	**14 31 08.1**	**+0.5**
RUSC	**La Rusia**	**0.99**	**179**	P	**Pn**	**14 30 53.3**	**-0.2**
RUSC				S	**Sn**	**14 31 12.1**	**-1.0**
RUSC	**La Rusia**	**0.99**	**179**	*eP*	**Pn**	**14 30 53.4**	**-0.2**
RUSC				*eS*	**Sn**	**14 31 12.0**	**-1.1**
OCAC	**Ocana**	**1.36**	**351**	P	**Pn**	**14 30 57.2**	**+0.7**
OCAC				S	**Sn**	**14 31 19.7**	**+1.3**
PTBC	**PUERTO BERRIO,**	**1.39**	**256**	P	**Pn**	**14 30 55.9**	**-0.7**
PTBC				S	**Sn**	**14 31 16.8**	**-1.7**
SPBC	**San Pablo de B**	**1.56**	**218**	P	**Pn**	**14 30 58.4**	**0.0**
SPBC				S	**Sn**	**14 31 20.7**	**-1.2**
NORC	**Norcasia**	**2.19**	**233**	P	**Pn**	**14 31 05.3**	**-0.2**
NORC				S	**Sn**	**14 31 34.2**	**-0.3**
CHIC	**Chingaza**	**2.33**	**196**	P	**Pn**	**14 31 07.7**	**+0.2**
CHIC				S	**Sn**	**14 31 37.5**	**-0.6**
ROSC	**El Rosal**	**2.37**	**211**	P	**Pn**	**14 31 09.0**	**+1.1**
ROSC				S	**Sn**	**14 31 41.6**	**+2.8**
HELC	**Santa Helena**	**2.50**	**254**	P	**Pn**	**14 31 09.8**	**+0.2**
HELC				S	**Sn**	**14 31 42.6**	**+0.9**
HELC	**Santa Helena**	**2.50**	**254**	*eP*	**Pn**	**14 31 11.2**	**+1.6**
HELC				*eS*	**Sn**	**14 31 42.4**	**+0.6**
CVER	**Cruz Verde, Cu**	**2.54**	**202**	P	**Pn**	**14 31 10.8**	**+0.6**
UREC	**San Jos de Ur**	**2.56**	**290**	P	**Pn**	**14 31 09.9**	**+0.1**
UREC				S	**Sn**	**14 31 39.9**	**-2.4**
GUY2C	**Guyana, Caldas**	**2.79**	**234**	P	**Pn**	**14 31 13.8**	**+0.6**
GUY2C				S	**Sn**	**14 31 49.8**	**+1.6**
VILC	**Villavicencio,**	**2.82**	**192**	P	**Pn**	**14 31 13.6**	**+0.3**
VILC				S	**Sn**	**14 31 49.0**	**+0.6**
PTGC	**Puerto Gaitan,**	**2.84**	**160**	P	**Pn**	**14 31 13.1**	**-0.3**
PTGC				S	**Sn**	**14 31 46.5**	**-2.2**
CBOC	**Ciudad Bolivar**	**3.06**	**251**	P	**Pn**	**14 31 17.2**	**+0.9**
DBBC	**Dabeiba**	**3.08**	**273**	P	**Pn**	**14 31 16.9**	**+0.4**
DBBC				S	**Sn**	**14 31 53.4**	**-0.8**
SDV	**Santo Domingo**	**3.15**	**51**	P	**Pn**	**14 31 18.7**	**+1.2**
SDV				S	**Sn**	**14 31 56.3**	**+0.3**
ARGC	**Ariguani, Magd**	**3.16**	**339**	P	**Pn**	**14 31 19.6**	**+2.2**
ANIL	**Santa Ana**	**3.30**	**224**	P	**Pn**	**14 31 21.4**	**+1.9**
ANIL				S	**Sn**	**14 32 01.4**	**+1.9**
APAC	**Apartado, Choc**	**3.59**	**286**	P	**Pn**	**14 31 23.1**	**+0.2**
APAC				S	**Sn**	**14 32 05.0**	**-0.6**
PRAC	**Prado**	**3.62**	**209**	P	**Pn**	**14 31 22.9**	**-0.4**
PRAC				S	**Sn**	**14 32 04.9**	**-1.5**
SJCC	**San Jacinto, C**	**3.62**	**326**	*eP*	**Pn**	**14 31 23.3**	**-0.1**
SJCC				*eS*	**Sn**	**14 32 01.3**	**-5.3**
ORTC	**Ortega, Tolima**	**3.65**	**216**	P	**Pn**	**14 31 23.7**	**0.0**
ORTC				S	**Sn**	**14 32 07.2**	**+0.1**
PLMC	**San Jos del P**	**3.72**	**238**	P	**Pn**	**14 31 25.0**	**+0.3**
URMC	**La Uribe, Meta**	**3.83**	**199**	P	**Pn**	**14 31 26.4**	**+0.2**
URMC				S	**Sn**	**14 32 10.8**	**-0.7**
BBAC	**Balboa, Cauca**	**6.36**	**221**	P	**Pn**	**14 32 01.1**	**+1.5**
BBAC				S	**Sn**	**14 33 10.1**	**-1.3**

AFAD ***17*** *14:36:30.7, 38.°27N×38.°76E, h7km±2km, ML3.4*

ISK ***17*** *14:36:30.6, 38.°27N×38.°77E, h7km, ML3.3/13*

ISC 17 14:36:31.2±0.9, 38°30N±0.°03×38°76E±0.°02, h11km±9km, n22, σ0°79/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDYL	**Doganyol-Malat**	**0.22**	**85**	Pg	**Pg**	**14 36 35.6**	**-0.3**
MDYL				Sg	**Sg**	**14 36 38.9**	**-0.2**
MAYA	**Malatya/Merkez**	**0.26**	**277**	P	**Pg**	**14 36 36.5**	**-0.1**
MAYA				S	**Sg**	**14 36 41.0**	**+0.7**
ELZG	**Elazig**	**0.27**	**41**	P	**Pg**	**14 36 36.8**	**0.0**
ELZG				IAML		14 36 41.0	
	comp=E,9μm,0.2s						
ELZG				S	**Sg**	**14 36 41.1**	**+0.6**
ELZG				IAML		14 36 42.0	
	comp=N,1μm,0.2s						
ESGZ	**Sivrice-Elazig**	**0.28**	**61**	Pg	**Pg**	**14 36 36.6**	**-0.3**
ESGZ				Sg	**Sg**	**14 36 40.8**	**+0.1**
SVRC	**Sivrice-ELAZID**	**0.44**	**79**	Pg	**Pg**	**14 36 39.4**	**-0.5**
SVRC				Sg	**Sg**	**14 36 45.9**	**+0.1**
ESIJ	**Sivrice-Elazig**	**0.46**	**70**	Pg	**Pg**	**14 36 40.3**	**0.0**
ESIJ				Sg	**Sg**	**14 36 47.1**	**+0.7**
AZEY	**Adyaman-Merk**	**0.63**	**220**	P	**Pg**	**14 36 42.7**	**-0.7**
AKCD	**Akcadag**	**0.66**	**270**	P	**Pg**	**14 36 43.6**	**-0.4**
AKCD				S	**Sg**	**14 36 53.2**	**+0.6**
AKCD				IAML		14 36 54.0	
	comp=N,2μm,0.4s						
AKCD				IAML		14 36 57.0	
	comp=E,1μm,0.4s						
MCKZ	**Bingol**	**0.84**	**12**	P	**Pb**	**14 36 46.8**	**-1.1**
MCKZ				IAML		14 36 59.0	
	comp=E,1μm,0.4s						
MCKZ				S	**Sg**	**14 36 59.5**	**+1.0**
MCKZ				IAML		14 37 00.0	
	comp=N,759nm,0.2s						
HEKM	**Malatya_Hekimh**	**0.85**	**313**	P	**Pb**	**14 36 47.3**	**-0.9**
HEKM				IAML		14 37 05.0	
	comp=E,1μm,0.5s						
ARPR	**Arapgir-MALATY**	**0.86**	**338**	Pg	**Pb**	**14 36 47.9**	**-0.4**
ARPR				Sg	**Sg**	**14 37 01.1**	**+1.9**
TNCL	**Tunceli-Merkez**	**1.02**	**37**	P	**Pb**	**14 36 49.6**	**-1.4**
TNCL				S	**Sg**	**14 37 05.8**	**+1.5**
TNCL				IAML		14 37 09.0	
	comp=N,313nm,0.3s						
SANL	**SANLIURFA_Merk**	**1.14**	**171**	P	**Pb**	**14 36 52.5**	**-0.5**
SANL				S	**Sg**	**14 37 08.9**	**+1.1**
SANL				IAML		14 37 10.0	
	comp=N,1μm,0.7s						
DYBB	**Diyarbakir**	**1.14**	**107**	Pn	**Pb**	**14 36 52.6**	**-0.4**
ILIC	**ilic-Erzincan**	**1.17**	**353**	Pn	**Pn**	**14 36 53.1**	**-0.5**
ERZN	**Erzincan**	**1.49**	**30**	Pn	**Pn**	**14 36 58.3**	**+0.1**
BNGB	**Bingl**	**1.66**	**65**	Pn	**Pn**	**14 37 00.9**	**+0.5**
GAZ	**Gaziantep**	**1.66**	**228**	Pn	**Pn**	**14 37 00.6**	**+0.2**
KMRS	**Kahramanmaras**	**1.67**	**242**	Pn	**Pn**	**14 37 00.8**	**+0.4**
YEDI	**Yedisu-Bingol**	**1.80**	**50**	Pn	**Pn**	**14 37 03.3**	**+0.9**
SVAN	**Silvan-Diyarba**	**1.93**	**94**	Pn	**Pn**	**14 37 04.5**	**+0.5**
GURO	**Guroymak-BITLI**	**2.58**	**83**	Pn	**Pn**	**14 37 14.0**	**+0.8**

IDC 17 14:52:28.5±7.1, 5°84S×150°44E, h0km, mb3.0/3, mbtmp3.0/3, Error ellipse: s-maj=217.9km s-min=39.5km az=106.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.01**	**227**	P	P	14 57 13.3	-0.5
	0.3nm,1.0s,baz=53,slow=10,SNR=1.3 0.3nm,1.0s						
ASAR	**Alice Springs**	**23.82**	**220**	P	P	14 57 43.7	+0.3
	0.4nm,0.8s,baz=50,slow=10.0,SNR=7.0 0.4nm,0.8s						
MKAR	**Makanchi Array**	**79.57**	**320**	P	P	15 04 37.6	0.0
	0.2nm,0.7s,baz=127,slow=6.2,SNR=3.2 0.2nm,0.7s						

BJI ***17*** *15:10:30.1, 42.°25N×138.°49E, h249km, mB4.9/27, mb5.2/77*

SKHL ***17*** *15:10:31.6±0.2, 42.°30N×138.°50E, h220km±5km, mb5.3/2, msh5.7/7*

MOS ***17*** *15:10:31.4±0.9, 42.°30N×138.°40E, h238km, mb5.2/71, Error ellipse: s-maj=5.6km s-min=3.8km az=114.2*

JMA ***17*** *15:10:32.7±0.2, 42.°2N±0.°7×13.°9E±°, h237km±1km, MD4.9/40, MW4.9/40, SW OFF HOKKAIDO*

JMA Felt I J1 at SW OFF HOKKAIDO .

NEIC ***17*** *15:10:32.4±1.0, 42.°32N±0.°06×138.°35E±0.°05, h230km±5km, mb5.0/618, Error ellipse: s-maj=9.3km s-min=5.0km az=195.0*

NIED ***17*** *15:10:32.7, 42.°24N×138.°54E, h237km, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr0.68; Mθθ-0.63; Mφφ-0.05; Mrθ-1.21; Mθφ-0.34; Mφr-2.59; Fault plane solution: M₀2.94000×10¹⁶ NP1: φs84.00000°, δ10.00000°, λ147.00000°. NP2: φs207.00000°, δ84.00000°, λ81.00000°.*

IDC ***17*** *15:10:32.6±0.5, 42.°29N×138.°37E, h234km±4km, mb4.6/34, mbtmp5.2/40 Error ellipse: s-maj=6.9km s-min=6.0km az=96.0*

GCMT ***17*** *15:10:33.4±0.4, 42.°23N±0.°02×138.°26E±0.°03, h246km±2km, MW5.0/91, Moment Tensor Solution. s33,c37; s91,c122; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.19±.14; Mθθ-1.53±.13; Mφφ-0.65±.13; Mrθ-1.44±.13; Mθφ-1.70±.10; Mφr-2.71±.13; Best double couple: M₀4.00300×10¹⁶ NP1:φs75.00000°, δ25.00000°, λ130.00000°. NP2:φs213.00000°, δ72.00000°, λ74.00000°. Principal axes: T 3.8540, Plg60.0000°, Azm99.0000°; N 0.2990, Plg16.0000°, Azm218.0000°; P -4.1520, Plg25.0000°, Azm315.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

Triangular moment-rate function

ISC 17 15:10:32.3±0.3, 42°29N±0.°03×138°43E±0.°03, h235km±2km, h235km:pP-P, n1263, σ1°45/1160, mb5.0/450, 36C-87D, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOSM	**Okushiri--Mats**	**0.81**	**104**	↓*eP*	**Pn**	**15 11 04.8**	**+0.2**
JOSM				A	A	15 11 04.8	
	comp=N,18nm,6.2s,comp=E,41nm,2.9s						
JOSM				↓*eS*	**S**	**15 11 29.9**	**0.0**
JHST	**Hiyamasetana**	**1.08**	**82**	↓*eP*	**Pn**	**15 11 06.5**	**+0.4**
JHST				A	A	15 11 06.5	
	comp=N,29nm,2.8s,comp=E,22nm,2.8s						
JHST				↓*eS*	**S**	**15 11 32.2**	**-0.4**
JSH	**Shimam**	**1.25**	**73**	↓*eP*	**Pn**	**15 11 07.7**	**+0.5**
JSH				A	A	15 11 07.7	
	comp=N,17nm,2.3s,comp=E,17nm,3.3s						
JSH				↓*eS*	**S**	**15 11 35.0**	**+0.4**
JOMM	**Oshimamatsumae**	**1.40**	**122**	*eP*	**Pn**	**15 11 08.5**	**+0.1**
JOMM				*eS*	**S**	**15 11 36.1**	**-0.5**
JYM2	**Yakumo 2**	**1.45**	**96**	↓*eP*	**Pn**	**15 11 09.2**	**+0.5**
JYM2				A	A	15 11 09.2	
	comp=N,24nm,2.0s,comp=E,16nm,1.8s						
JYM2				↓*eS*	**S**	**15 11 37.9**	**+0.7**
JSR	**Shiriuchi**	**1.67**	**116**	↓*eP*	**Pn**	**15 11 10.7**	**+0.2**
JSR				A	A	15 11 10.7	
	comp=N,6.0nm,1.3s,comp=E,6.0nm,1.1s						
JSK	**Shakotan**	**1.84**	**54**	A	A	15 11 12.5	
	comp=N,9.0nm,2.4s,comp=E,10.0nm,2.4s						
JSI2	**Shiura 2**	**1.93**	**129**	A	A	15 11 12.7	
	comp=N,10.0nm,1.0s,comp=E,13nm,1.4s						
JNB	**Noboribetsu**	**1.94**	**84**	↓*iP*	**Pn**	**15 11 12.7**	**-0.2**
JKB	**Kayabe**	**1.98**	**101**	↓*iP*	**Pn**	**15 11 13.3**	**+0.1**
JKB				↓*eS*	**S**	**15 11 45.3**	**0.0**
JIW	**Iwasaki**	**2.07**	**144**	↓*iP*	**Pn**	**15 11 14.5**	**+0.3**
JIW				A	A	15 11 14.5	
	comp=N,14nm,0.8s,comp=E,14nm,1.6s						
JOT	**Ohata**	**2.16**	**114**	↓*iP*	**Pn**	**15 11 14.7**	**-0.2**
JOT				A	A	15 11 14.7	
	comp=N,9.0nm,1.9s,comp=E,10.0nm,1.8s						
JOT				↓*eS*	**S**	**15 11 47.6**	**-0.8**
JHHS	**Hirosakihyakuz**	**2.19**	**138**	A	A	15 11 15.2	
	comp=N,22nm,1.1s,comp=E,14nm,1.1s						
JEW	**Eniwo**	**2.30**	**75**	Pn	**Pn**	**15 11 15.7**	**-0.6**
JEW	**Eniwo**	**2.30**	**75**	↓*iP*	**Pn**	**15 11 17.0**	**+0.6**
JEW				A	A	15 11 17.0	
	comp=N,18nm,1.8s,comp=E,18nm,2.2s						
JNTW	**Noshirotokiwa**	**2.40**	**146**	A	A	15 11 17.3	
	comp=N,23nm,4.4s,comp=E,16nm,3.6s						
JAHD	**Aomorihigashid**	**2.40**	**114**	A	A	15 11 17.3	
	comp=N,15nm,1.2s,comp=E,12nm,1.7s						
JISS	**Ishikarishitsu**	**2.41**	**65**	A	A	15 11 17.8	
	comp=N,16nm,3.3s,comp=E,13nm,3.9s						
JOG3	**Oga3**	**2.42**	**168**	A	A	15 11 19.3	
	comp=N,12nm,3.0s,comp=E,9.0nm,2.6s						
JARK	**Aomorirokkasho**	**2.55**	**119**	A	A	15 11 18.7	
	comp=N,7.0nm,7.2s,comp=E,7.0nm,1.9s						
JIAM	**Iburiatsuma**	**2.61**	**81**	A	A	15 11 19.6	
	comp=N,24nm,1.2s,comp=E,49nm,1.1s						
JHR	**Hokuryu**	**2.82**	**58**	↓*iP*	**Pn**	**15 11 22.9**	**+1.1**
JHR				A	A	15 11 22.9	
	comp=N,9.0nm,4.1s,comp=E,14nm,4.7s						

RUSJ S **S** **15 12 57.0 +2.9**
GLVR Golovnino 5.40 72 *e*P **Pn** **15 11 51.5 -0.9**
GLVR *i* S **S** **15 12 51.8 -4.4**
GLVR pmax pmax
comp=Z,975nm,0.5s
GLVR pmax pmax
comp=N,873nm,0.3s
GLVR pmax pmax
comp=E,812nm,0.3s
GLVR smax smax
comp=N,4μm,0.3s
GLVR smax smax
comp=E,7μm,0.4s
GLVR Golovnino 5.40 72 *e*P **Pn** **15 11 51.5 -0.9**
GLVR AMB AMB 15 12 01.3
comp=E,980nm,0.6s
GLVR *i* S **S** **15 12 51.8 -4.4**
GLVR A A 15 13 06.9
comp=E,4μm,0.6s
GLVR A A 15 13 06.9
comp=E,7μm,0.6s
NMR Nemuro--Hokkai 5.48 76⇓ *i* P **Pn** **15 11 50.9 -2.5**
NMR *i* S **S** **15 12 50.8 -7.1**
NMR Nemuro--Hokkai 5.48 76 *i* P **Pn** **15 11 51.0 -2.5**
YSS Yuzhno-Sakhali 5.59 32 P **Pn** **15 11 55.9 +1.1**
YSS Yuzhno-Sakhali 5.59 32 **Pn** **15 11 54.7 -0.2**
YSS Yuzhno-Sakhali 5.59 32ĸ *i* P **Pn** **15 11 55.7 +0.9**
YSS *e* S **S** **15 13 01.9 +1.3**
YSS pmax pmax
comp=Z,150nm,0.6s
YSS pmax pmax
comp=Z,400nm,3.0s
YSS smax smax
comp=N,190nm,0.6s
YSS smax smax
comp=E,90nm,0.7s
YSS smax smax
comp=Z,700nm,3.4s
YSS MLR MLR
comp=Z,300nm,15.0s
YSS Yuzhno-Sakhali 5.59 32 *i* P **Pn** **15 11 55.7 +0.9**
YSS AMB AMB 15 11 57.5
comp=Z,430nm,3.0s
YSS AMB AMB 15 11 57.6
comp=Z,250nm,0.5s
YSS *e* S **S** **15 13 01.2 +0.6**
YSS A A 15 13 01.3
comp=Z,620nm,3.4s
YSS A A 15 13 01.3
comp=Z,420nm,3.4s
YSS A A 15 13 02.9
comp=Z,150nm,0.6s
YSS A A 15 13 02.9
comp=Z,60nm,0.6s
PSTR Posyet 5.65 276*de* P **Pn** **15 11 56.5 +0.9**
PSTR Posyet 5.65 276 *e* P **Pn** **15 11 56.5 +0.9**
YUK Yuzh-Kuril'sk 5.71 70 *e* P **Pn** **15 11 55.6 -0.7**
YUK *i* S **S** **15 12 59.1 -4.2**
YUK pmax pmax
comp=N,69nm,0.3s
YUK pmax pmax
comp=Z,996nm,0.3s
YUK smax smax
comp=N,4μm,0.4s
YUK smax smax
comp=E,4μm,0.4s
YUK Yuzh-Kuril'sk 5.71 70 *e* P **Pn** **15 11 55.9 -0.4**
YUK AMB AMB 15 11 59.0
comp=E,1μm,0.8s
YUK *e* S **S** **15 13 02.5 -0.8**
YUK A A 15 13 06.3
comp=E,6μm,0.7s
YUK A A 15 13 06.3
comp=E,6μm,0.7s
MJB9 Matsu-Tunnel 5.74 182 **Pn** **15 11 57.8 +0.9**
MAJO Matsushiro 5.74 182 P **Pn** **15 11 57.3 +0.3**
MAJO Matsushiro 5.74 182 **Pn** **15 11 57.2 +0.3**
MAJO Matsushiro 5.74 182 P **Pn** **15 11 57.2 +0.3**
MJAR Matsushiro Arr 5.74 182 P **Pn** **15 11 57.1 +0.2**
comp=E,76nm,0.6s,baz=1.7,slow=13,SNR=166
MJAR Matsushiro Arr 5.74 182 **Pn** **15 11 57.0 +0.1**
KHBR Khabarovsk 6.62 340 *e* P **Pn** **15 12 08.5 +0.7**
JGF Kuroka 6.73 187 P **Pn** **15 12 09.8 +0.4**
JGF Kuroka 6.73 187 **Pn** **15 12 09.9 +0.4**
MDJ Mudanjiang 6.84 293 P **Pn** **15 12 11.6 +1.0**
MDJ Mudanjiang 6.84 293 P **Pn** **15 12 11.3 +0.7**
MDJ S **S** **15 13 30.3 +1.1**
MDJ ScP **ScP** **15 21 45.5 +0.9**
MDJ pmax pmax
comp=E,390nm,0.8s
MDJ pmax pmax
comp=E,1μm,3.5s
INU Inuyama 7.02 189 P **Pn** **15 12 13.4 +0.4**
INU Inuyama 7.02 189 **Pn** **15 12 13.4 +0.4**
UGL Uglegorsk 7.25 19 *e* P **Pn** **15 12 19.1 +3.3**
UGL *e* S **S** **15 13 37.2 -1.5**
UGL pmax pmax
comp=Z,101nm,1.0s
UGL smax smax
comp=N,1μm,3.9s
UGL smax smax
comp=E,700nm,4.7s
UGL Uglegorsk 7.25 19 *e* P **Pn** **15 12 16.9 +1.1**
UGL *e* S **S** **15 13 38.8 +0.1**
KUR Kuril'sk 7.44 64 *i* P **Pn** **15 12 18.1 -0.1**
KUR *i* S **S** **15 13 41.8 -1.4**
KUR Kuril'sk 7.44 64 *i* P **Pn** **15 12 18.3 +0.1**
KUR AMB AMB 15 12 34.4
comp=E,180nm,0.5s
KUR *i* S **S** **15 13 42.7 -0.5**
KUR A A 15 13 57.3
comp=E,330nm,0.4s
KUR A A 15 13 57.3
comp=E,370nm,0.4s
JSG Sagara 7.61 182 P **Pn** **15 12 22.0 +1.5**
KLR Kul'dur 8.36 328 P **Pn** **15 12 29.8 -0.1**
comp=E,56nm,0.6s,baz=140,slow=12,SNR=157
KLR Kul'dur 8.36 328*d* *i* P **Pn** **15 12 29.6 -0.4**
KLR pmax pmax
comp=Z,21nm,0.6s
KLR Kul'dur 8.36 328 *e* P **Pn** **15 12 29.6 -0.4**
GRNR Gornyy 8.60 351⇓ *i* P **Pn** **15 12 32.8 -0.2**
GRNR pmax pmax
comp=N,20nm,0.4s
GRNR pmax pmax
comp=Z,20nm,0.4s
GRNR MLR MLR
comp=E,150nm,18.0s
GRNR MLR MLR
comp=N,120nm,15.0s
GRNR MLR MLR
comp=Z,250nm,15.0s
GRNR Gornyy 8.60 351 *e* P **Pn** **15 12 32.8 -0.2**
BNX BinXian 8.66 297⇓ P **Pn** **15 12 33.8 0.0**
BNX S **S** **15 14 10.8 -0.9**
BNX pmax pmax
comp=Z,330nm,0.9s
BNX pmax pmax
comp=Z,460nm,5.4s
BNX L L
comp=Z,940nm,14.3s
TYV Tymovskoe 9.06 17 *e* P **Pn** **15 12 39.7 +0.9**
TYV *e* S **S** **15 14 22.2 +1.3**
TYV pmax pmax
comp=Z,200nm,3.8s
TYV pmax pmax
comp=Z,30nm,0.8s
TYV smax smax
comp=N,33nm,1.1s
TYV smax smax
comp=E,14nm,1.1s
TYV smax smax
comp=N,600nm,4.6s
TYV smax smax
comp=E,400nm,4.6s
TYV Tymovskoe 9.06 17 *e* P **Pn** **15 12 39.6 +0.8**
TYV *e* S **S** **15 14 20.5 -0.4**
JHJ Hachijo jima 2 9.22 173 P Pn 15 12 36.4 -4.7
comp=E,112nm,0.3s,baz=217,slow=23,SNR=8.8
JHJ S S 15 14 15.2 -10
comp=E,276nm,0.4s,baz=220,slow=23,SNR=7.7
JMN Monobe 9.27 204 P **Pn** **15 12 41.9 +0.1**
JMN Monobe 9.27 204 **Pn** **15 12 41.9 +0.1**
KSRS Korea Array 9.41 243 P **Pn** **15 12 44.8 +1.4**
comp=E,27nm,0.8s,baz=59,slow=12,SNR=66

KSRS ScP **ScP** **15 21 47.8 +0.5**
comp=E,6.5nm,0.8s,baz=73,slow=1.0,SNR=21
KS19 Wonju Array Si 9.42 243 **Pn** **15 12 42.9 -0.7**
KSAR Wonju Array Be 9.44 243 **Pn** **15 12 42.6 -1.2**
KSAR Wonju Array Be 9.44 243 P **Pn** **15 12 42.6 -1.2**
KSAR Wonju Array Be 9.44 243 *e* P **Pn** **15 12 42.6 -1.2**
CN2 Changchun 9.62 283 P **Pn** **15 12 45.3 -0.8**
CN2 S **S** **15 14 29.9 -4.5**
CN2 pmax pmax
comp=E,80nm,1.0s
CN2 pmax pmax
comp=E,300nm,3.0s
JNU Nakatsue 10.93 216 P **Pn** **15 13 02.7 -0.1**
comp=E,12nm,0.8s,baz=34,slow=7.3,SNR=16
NKL Nikolayevsk 10.97 7 *e* P **Pn** **15 13 03.4 +0.3**
HEH HeiHe 11.02 320 *e* P **Pn** **15 13 02.4 -1.3**
HEH S **S** **15 15 06.6 +0.7**
HEH ScP **ScP** **15 21 49.4 +0.3**
HEH ScS **ScS** **15 25 22.8 -1.4**
HEH pmax pmax
comp=E,200nm,1.0s
OKH Okha 11.66 13*de* P Pn 15 13 06.9 -4.9
OKH *i* S S 15 15 13.8 -7.2
OKH pmax pmax
comp=Z,100nm,13.1s
OKH smax smax
comp=N,100nm,9.0s
OKH smax smax
comp=E,200nm,14.0s
OKH MLR MLR
comp=E,100nm,15.0s
OKH MLR MLR
comp=N,100nm,12.0s
OKH MLR MLR
comp=Z,100nm,11.0s
OKH Okha 11.66 13 *e*rx rx 15 13 04.0
JSU Suzuyama 12.50 213 Pn **Pn** **15 13 22.7 +0.1**
DL2 Dalian 13.21 261 P **Pn** **15 13 31.1 0.0**
DL2 S **S** **15 15 51.8 -5.5**
DL2 PcP **PcP** **15 18 38.3 -3.6**
DL2 ScP **ScP** **15 21 53.0 +0.4**
DL2 PcS **PcS** **15 22 17.8 +1.4**
DL2 ScS **ScS** **15 25 27.8 -1.5**
DL2 pmax pmax
comp=Z,100nm,0.8s
DL2 pmax pmax
comp=Z,610nm,3.7s
ZEA Zeya 13.66 331 *e* P **Pn** **15 13 35.4 -1.1**
ZEA pmax pmax
comp=N,200nm,0.9s
ZEA pmax pmax
comp=E,100nm,0.9s
ZEA pmax pmax
comp=Z,400nm,0.9s
ZEA pmax pmax
comp=E,110nm,0.8s
ZEA pmax pmax
comp=N,150nm,0.7s
ZEA pmax pmax
comp=Z,400nm,0.7s
ZEA Zeya 13.66 331 *e* P **Pn** **15 13 37.0 +0.5**
HIA Hailar 14.77 305 P **P** **15 13 50.0 -0.3**
SKR Severo-Kuril's 14.77 49 *e* P P 15 13 43.1 -7.1
SKR *e* S S 15 16 23.0 -10
SKR pmax pmax
comp=Z,146nm,0.6s
SKR smax smax
comp=E,243nm,0.8s
SKR smax smax
comp=N,145nm,0.7s
SKR MLR MLR
comp=Z,1μm,18.0s
SKR Severo-Kuril's 14.77 49 *e* P **P** **15 13 49.0 -1.2**
JCJ Chichijima 15.46 167 P **P** **15 13 56.1 -2.0**
comp=Z,90nm,0.5s,baz=24,slow=20,SNR=6.0
JCJ S S 15 16 36.7 -12
comp=Z,80nm,0.5s,baz=329,slow=23,SNR=5.1
JCJ Chichijima 15.46 167 P **Pn** **15 13 58.7 0.0**
XLT XiLinHaoTe 16.40 283 *e* P **P** **15 14 07.4 -0.9**
XLT sP sP 15 15 09.9 -5.1
XLT S **S** **15 17 02.8 -5.2**
XLT pmax pmax
comp=Z,97nm,0.9s
XLT pmax pmax
comp=Z,390nm,4.1s
PEA0B Petropavlovsk- 16.84 43⇑ *e* P **P** **15 14 12.8 -0.1**
PETK Petropavlovsk- 16.84 43 P **P** **15 14 12.2 -0.8**
comp=Z,7.0nm,0.7s,baz=218,slow=6.8,SNR=19
PETK ScP **ScP** **15 21 59.3 +0.3**
comp=Z,3.8nm,0.7s,baz=255,slow=4.3,SNR=6.5
PETK Petropavlovsk- 16.84 43 P **P** **15 14 12.7 -0.2**
PETK Petropavlovsk- 16.84 43 P **P** **15 14 12.7 -0.2**
BJI2 Beijing 16.91 270 P **P** **15 14 13.4 -0.5**
BJI2 sP **sP** **15 15 16.8 -2.5**
BJI2 S **S** **15 17 13.0 -5.1**
BJI2 pmax pmax
comp=Z,50nm,1.0s
BJI2 pmax pmax
comp=Z,170nm,3.7s
BJT Baijiatuan 16.91 270 P **P** **15 14 14.8 +0.9**
PET Petropavlovsk 17.29 45 *e* P **Pn** **15 14 19.8 -0.1**
PET *e* S **S** **15 17 20.7 -4.5**
PET pmax pmax
comp=Z,37nm,0.9s
PET MLR MLR
comp=Z,200nm,10.0s
PET Petropavlovsk 17.29 45 *e* P **Pn** **15 14 19.8 -0.1**
JOW Kunigami 17.52 212 P **P** **15 14 18.3 -2.3**
comp=Z,7.7nm,0.7s,baz=97,slow=23,SNR=5.6
JOW Kunigami 17.52 212 P **P** **15 14 21.3 +0.7**
TIA Tai'an 17.56 257 P **P** **15 14 20.6 -0.4**
TIA pmax pmax
comp=Z,62nm,0.7s
TIA pmax pmax
comp=Z,260nm,3.5s
TIA L L
comp=Z,180nm,7.4s
TIA L L
comp=Z,230nm,7.3s
TIA L L
comp=Z,270nm,6.7s
NJ2 Nanjing 18.61 243⇓ P **P** **15 14 32.3 0.0**
NJ2 pmax pmax
comp=Z,90nm,0.7s
HNS HongShan 18.84 263⇓ P **P** **15 14 33.3 -1.4**
HNS S **S** **15 17 50.8 -5.4**
HNS ScP **ScP** **15 22 04.0 +0.5**
HNS pmax pmax
comp=Z,110nm,1.1s
CIT Chita 19.43 309 *e* P **P** **15 14 38.2 -2.8**
CIT *e* 15 18 07.8
CIT pmax pmax
comp=Z,237nm,1.4s
HHC Hu-ho-hao-te 20.12 275⇓ *i* P **P** **15 14 51.0 +2.3**
HHC pmax pmax
comp=Z,40nm,0.9s
HHC pmax pmax
comp=Z,97nm,6.6s
YAK Yakutsk 20.45 348 P **P** **15 14 49.5 -2.3**
comp=Z,206nm,0.7s,baz=335,slow=1.7,SNR=65
YAK S **S** **15 18 18.0 -8.7**
comp=Z,94nm,0.9s,baz=354,slow=23,SNR=16
YAK Yakutsk 20.45 348 **P** **15 14 49.3 -2.5**
YAK Yakutsk 20.45 348 *e* P **P** **15 14 49.0 -2.8**
YAK *e* S **S** **15 18 21.1 -5.6**
YAK *e* 15 18 55.5
YAK *e* 15 25 45.2
YAK pmax pmax
comp=Z,58nm,1.4s
YAK pmax pmax
comp=N,39nm,0.9s
YAK pmax pmax
comp=E,12nm,0.9s
YAK smax smax
comp=N,485nm,2.1s
YAK smax smax
comp=E,472nm,2.0s
BTO2 Baotou 21.39 276 *e* P **P** **15 14 58.6 -3.3**
BTO2 S **S** **15 18 38.8 -4.6**
BTO2 pmax pmax
comp=E,17nm,0.6s
BTO2 pmax pmax
comp=E,300nm,5.2s
BTO2 L L
comp=E,920nm,5.6s

BTO2 L L
comp=E,540nm,4.9s
BTO2 L L
comp=E,500nm,4.9s
LYN LuoYang 21.70 258 P **P** **15 15 02.8 -1.9**
LYN S **S** **15 18 43.5 -4.7**
LYN SS 15 19 52.9
LYN ScS **ScS** **15 25 53.8 -1.3**
LYN pmax pmax
comp=E,77nm,0.9s
LYN pmax pmax
comp=E,290nm,5.2s
BOD Bodaibo 21.89 324 *e* P **P** **15 15 03.0 -3.2**
BOD pmax pmax
comp=Z,87nm,1.3s
TATO Taipei 22.23 224 P **P** **15 15 11.0 +1.4**
TATO S **S** **15 19 02.5 +5.8**
SEY Seymchan 22.25 17⇓ *i* P **P** **15 15 09.2 -0.2**
SEY pmax pmax
comp=E,25nm,0.8s
SEY Seymchan 22.25 17 *e* P **P** **15 15 09.3 -0.2**
WHN Wuhan 22.56 247 P **P** **15 15 11.8 -0.8**
WHN S **S** **15 18 58.0 -4.1**
WHN PcP **PcP** **15 18 59.3 +1.6**
WHN SS SS 15 20 21.0 -25
WHN pmax pmax
comp=Z,69nm,0.7s
WHN pmax pmax
comp=Z,960nm,4.0s
ULN Ulaanbaatar 22.75 295 **P** **15 15 12.9 -1.5**
ULN Ulaanbaatar 22.75 295*d* *i* P **P** **15 15 12.9 -1.5**
ULN pmax pmax
comp=Z,122nm,0.7s
ULN Ulaanbaatar 22.75 295 P **P** **15 15 13.1 -1.2**
ULN S **S** **15 19 14.8 +10**
ULN Ulaanbaatar 22.75 295 P **P** **15 15 09.4 -5.0**
ULN Ulaanbaatar 22.75 295 *e* P **P** **15 15 12.9 -1.5**
SONM Songino Array 23.19 295 P **P** **15 15 17.6 -0.7**
comp=Z,64nm,0.6s,baz=102,slow=8.7,SNR=111
SONM ScP **ScP** **15 22 14.2 -0.1**
comp=Z,1.7nm,0.7s,baz=114,slow=1.7,SNR=5.0
comp=Z,64nm,0.6s
SONM Songino Array 23.19 295 **P** **15 15 17.3 -1.0**
YULB Yu-li 23.63 222 P **P** **15 15 24.0 +1.6**
TPUB Ta-pu 24.04 224 P **P** **15 15 26.8 +0.6**
TPUB Ta-pu 24.04 224 P **P** **15 15 26.3 +0.1**
TWG Pinlang 24.22 222 P **P** **15 15 27.6 -0.2**
XAN Xi'an 24.53 260⇑ P **P** **15 15 29.8 -0.7**
XAN pmax pmax
comp=Z,51nm,0.6s
IRK Irkutsk 25.01 305 *e* P **P** **15 15 32.7 -1.9**
IRK pmax pmax
comp=Z,118nm,1.1s
TLY Talaya 25.31 304 **P** **15 15 36.5 -0.8**
TLY IAmb IAmb 15 15 39.7
comp=Z,40nm,0.7s
TLY Talaya 25.31 304*c* *i* P **P** **15 15 37.4 +0.1**
TLY pmax pmax
comp=Z,64nm,0.8s
TLY Talaya 25.31 304 P **P** **15 15 37.6 +0.3**
TLY Talaya 25.31 304 *e* P **P** **15 15 37.5 +0.1**
ZAK Zakamensk 25.39 301 *e* P **P** **15 15 36.2 -2.0**
ZAK pmax pmax
comp=Z,45nm,1.0s
ZAK pmax pmax
comp=Z,34nm,1.5s
ENH Enshi 26.10 252 P **P** **15 15 44.3 -0.4**
MOY Mondy 26.94 303 *e* P **P** **15 15 50.7 -1.4**
MOY pmax pmax
comp=Z,46nm,1.8s
LZH Lanzhou 27.38 269 *e* P **P** **15 15 55.1 -1.1**
LZH pP pwP 15 16 47.8 +1.7
LZH pmax pmax
comp=Z,26nm,1.5s
LZDM Lanzhou Array 27.54 268 P **P** **15 15 56.6 -1.2**
comp=Z,25nm,0.7s,baz=76,slow=6.3,SNR=9.0
LZDM pP **pP** **15 16 44.6 +1.6**
comp=Z,5.7nm,0.4s,baz=74,slow=8.0,SNR=1.0
comp=Z,25nm,0.7s
AMKA Amchitka 29.07 58 **P** **15 16 11.3 +0.6**
KNGR Kungurtug, Tuv 29.07 301⇑ *i* P **P** **15 16 10.2 -0.7**
KNGR pmax pmax
comp=Z,40nm,0.8s
GTA2 Gaotai 29.20 278 P **P** **15 16 11.1 -1.1**
GTA2 pP pwP 15 17 04.8 +2.3
GTA2 ScP **ScP** **15 22 32.3 +0.2**
GTA2 ScS **ScS** **15 26 25.5 -1.4**
GTA2 pmax pmax
comp=Z,10.0nm,0.7s
GTA2 pmax pmax
comp=Z,230nm,5.4s
BILL Bilibino 29.78 21 P **P** **15 16 16.7 -0.1**
BILL Bilibino 29.78 21*d* *i* P **P** **15 16 17.0 +0.3**
BILL pmax pmax
comp=Z,14nm,0.6s
BILL Bilibino 29.78 21 *e* P **P** **15 16 17.1 +0.3**
TIXI Tiksi 29.82 354 **P** **15 16 16.1 -0.9**
TIXI IAmb IAmb 15 16 18.0
comp=Z,38nm,0.8s
TIXI Tiksi 29.82 354⇓ *i* P **P** **15 16 16.3 -0.7**
TIXI pmax pmax
comp=Z,40nm,0.8s
TIXI Tiksi 29.82 354 *e* P **P** **15 16 16.4 -0.6**
CD2 Chengdu 29.87 259 P **P** **15 16 16.0 -2.0**
CD2 pmax pmax
comp=Z,40nm,0.7s
GYA Guiyang 30.39 249⇑ P **P** **15 16 22.8 +0.1**
GYA pmax pmax
comp=Z,22nm,0.6s
GYA pmax pmax
comp=Z,160nm,4.4s
GYA L L
comp=Z,1μm,11.8s
GYA L L
comp=Z,4μm,12.6s
GYA L L
comp=Z,1μm,15.0s
KIWB Kanaga Island 31.29 57 P **P** **15 16 29.9 -0.3**
ADK Adak 31.58 57 P **P** **15 16 32.5 -0.2**
ADK Adak 31.58 57 P **P** **15 16 32.2 -0.5**
ADK Adak 31.58 57 P **P** **15 16 32.2 -0.5**
ADK pmax pmax
comp=Z,74nm,0.8s
PZH PanZhiHua 33.82 254 P **P** **15 16 50.8 -1.8**
PZH pmax pmax
comp=Z,10.0nm,0.7s
KMI2 Kunming 33.95 251 P **P** **15 16 52.3 -1.5**
KMI2 pP pP 15 17 41.9 +1.8
KMI2 ScP **ScP** **15 22 49.1 +0.6**
KMI2 pmax pmax
comp=Z,28nm,0.8s
GOMU GeErMu 34.03 274 P **P** **15 16 53.0 -1.6**
GOMU pmax pmax
comp=Z,79nm,0.7s
DGZ Jazzator, Alta 35.60 300*d* *i* P **P** **15 17 08.0 +0.4**
DGZ pmax pmax
comp=Z,177nm,0.7s
GAMB Gambell 35.60 36 P **P** **15 17 07.6 +0.5**
baz=257
WMQ Urumqi 36.63 290 *e* P **P** **15 17 17.3 +1.1**
WMQ PcS **PcS** **15 23 22.9 +0.9**
WMQ pmax pmax
comp=Z,29nm,1.1s
WMQ L L
comp=Z,420nm,7.3s
WMQ L L
comp=Z,95nm,24.1s
WMQ Urumqi 36.63 290 P **P** **15 17 17.4 +1.1**
ZAA0 Zalesovo Array 36.78 307 **P** **15 17 16.7 -0.5**
ZALV Zalesovo Beam 36.78 307 P **P** **15 17 17.3 0.0**
comp=Z,126nm,0.6s,baz=85,slow=8.3,SNR=578
ZALV PcP **PcP** **15 19 34.2 +0.3**
comp=Z,5.1nm,0.6s,baz=100,slow=4.4,SNR=3.5
ZALV ScP **ScP** **15 22 58.0 0.0**
comp=Z,33nm,0.9s,baz=85,slow=3.4,SNR=38
comp=Z,126nm,0.6s
ZALV Zalesovo Beam 36.78 307 **ScP** **15 22 57.9 0.0**
ZALV Zalesovo Beam 36.78 307 **P** **15 17 16.9 -0.4**
TNCH TengChong 37.02 255 P **P** **15 17 18.8 -1.1**
TNCH pP pP 15 18 08.1 +1.3
TNCH pmax pmax
comp=Z,170nm,2.6s
TNA Tin City 37.57 33 **P** **15 17 24.0 +0.2**
TNA Tin City 37.57 33 P **P** **15 17 23.7 -0.1**
baz=259

UNV Unalaska Valle 37.65 53 P P 15 17 25.2 +0.7
baz=275
ZSN Zaisan 37.68 297 *e*P P 15 17 24.7 -0.2
ZSN pmax pmax
comp=Z,46nm,0.8s
ZSN Zaisan 37.68 297 *e*P P 15 17 24.8 -0.2
comp=Z,46nm,0.8s
M11K Mekoryuk 37.70 42 P P 15 17 26.5 +1.7
baz=267
F14K Arctic Creek 38.21 34 P P 15 17 29.9 +0.9
baz=260,SNR=9.1
ANM Nome 38.47 35 P 15 17 31.9 +0.6
ANM Nome 38.47 35 P P 15 17 31.9 +0.6
ANM pmax pmax
comp=Z,12nm,0.8s
ANM Nome 38.47 35 P P 15 17 32.1 +0.8
baz=262,SNR=9.2
K13K Kusilvak Mount 38.53 40 P P 15 17 32.9 +1.1
baz=266,SNR=6.6
F15K North Star Dit 38.94 33 P P 15 17 35.5 +0.4
baz=262,SNR=14
G15K Niukluk 39.09 35 P P 15 17 36.8 +0.4
baz=263
J14K Nanvaranak Lak 39.10 38 P P 15 17 37.0 +0.6
baz=266
M13K Dall Lake 39.11 42 P P 15 17 38.0 +1.4
baz=270,SNR=14
C16K Lisburne Hills 39.13 29 P P 15 17 36.5 -0.2
baz=259,SNR=22
L14K Kuka Creek 39.45 41 P P 15 17 41.2 +1.8
baz=269
MK31 Makanchi Array 39.54 296*d* iP P 15 17 39.9 -0.5
MKAR Makanchi Array 39.54 296 P P 15 17 40.0 -0.4
comp=Z,72nm,0.6s,baz=84,slow=9.4,SNR=434
MKAR ScP ScP 15 23 08.1 -0.7
comp=Z,3.1nm,0.8s,baz=66,slow=4.1,SNR=5.6
comp=Z,72nm,0.6s
MKAR Makanchi Array 39.54 296 P 15 17 39.9 -0.6
MKAR ScP 15 23 08.2 -0.6
MAKZ Makanchi 39.75 296 P 15 17 41.9 -0.2
MAKZ Makanchi 39.75 296 P P 15 17 41.9 -0.2
MAKZ pmax pmax
comp=Z,112nm,0.7s
MAKZ Makanchi 39.75 296 P P 15 17 41.7 -0.4
MAKZ sP sP 15 18 54.7 -1.1
LSA Lhasa 39.78 267 *i* P P 15 17 43.8 +0.7
SNR=8.1
LSA Lhasa 39.78 267 P P 15 17 43.8 +0.7
LSA Lhasa 39.78 267 P P 15 17 40.8 -2.3
LSA pmax pmax
comp=Z,38nm,1.0s
M14K Bethel 39.80 41 P P 15 17 43.8 +1.6
baz=270
H16K Elim 39.82 35 P P 15 17 43.1 +0.6
baz=265,SNR=37
G16K Koyuk River 39.84 34 P P 15 17 42.8 +0.2
baz=264,SNR=20
D17K Noatak River 39.86 31 P P 15 17 43.0 +0.3
baz=261
N14K Kuskokwak Cree 39.95 43 P P 15 17 45.0 +1.5
baz=272,SNR=11
C17K DeLong Mountai 39.95 29 P P 15 17 43.8 +0.3
baz=260,SNR=9.0
RDOG Red Dog Mine 39.98 30 P P 15 17 43.5 -0.1
baz=261,SNR=7.1
K15K Wolf Creek Mou 40.02 39 P P 15 17 44.8 +0.7
baz=269
O14K Tigyukauivet M 40.19 44 P P 15 17 46.9 +1.4
baz=273
F17K Baldwin Pennin 40.40 33 P P 15 17 47.3 +0.2
baz=264
M15K Kasigluk River 40.42 42 P P 15 17 48.5 +1.1
baz=272,SNR=25
I17K Unalakleet 40.45 37 P P 15 17 48.4 +0.8
baz=268
J16K Anvik River 40.47 38 P P 15 17 48.6 +0.8
baz=268
MORE Moreh 40.55 258 IAmb IAmb 15 17 50.2
comp=Z,27nm,0.6s
G17K Kiwalik Mounta 40.56 34 P P 15 17 48.9 +0.4
baz=266,SNR=14
C18K Utukok River 40.70 29 P P 15 17 49.7 0.0
baz=262
N15K Kwethluk River 40.74 42 P P 15 17 51.7 +1.7
baz=273,SNR=18
E18K Tukpahlearik C 40.76 31 P P 15 17 50.5 +0.4
baz=264,SNR=14
CHTO Chiang Mai 40.77 247 P P 15 17 51.5 +0.8
CHTO Chiang Mai 40.77 247 P 15 17 50.4 -0.3
CHTO IAmb IAmb 15 17 53.7
comp=Z,36nm,0.7s
CHTO Chiang Mai 40.77 247 P P 15 17 50.4 -0.3
CHTO pmax pmax
comp=Z,36nm,0.7s
CHTO Chiang Mai 40.77 247 P P 15 17 51.1 +0.4
CHTO Chiang Mai 40.77 247 P P 15 17 49.5 -1.2
comp=Z,472nmcomp=Z,52nm,0.7s
CHTO Chiang Mai 40.77 247 P P 15 17 50.6 -0.2
CHTO pP pP 15 18 36.8 -1.6
CHTO x x 15 18 43.3
H17K Granite Mounta 40.84 35 P P 15 17 51.4 +0.6
baz=267
O15K Ungalikthiuk R 40.93 44 IAmb IAmb 15 17 54.1
comp=Z,31nm,0.8s
O15K Ungalikthiuk R 40.93 44 P P 15 17 53.1 +1.6
baz=274,SNR=7.8
SDPT Sand Point 40.96 50 P P 15 17 51.9 +0.1
SDPT Sand Point 40.96 50 P P 15 17 51.6 -0.3
baz=278
L16K Owhat River 40.99 40 P P 15 17 53.1 +1.1
baz=271
A19K Wainwright 41.00 27 P P 15 17 52.6 +0.7
baz=260,SNR=22
KURK Kurchatov 41.00 303 ScP 15 23 14.3 0.0
KURK Kurchatov 41.00 303 P 15 17 52.2 0.0
KURK Kurchatov 41.00 303*d* iP P 15 17 51.9 -0.3
KURK pmax pmax
comp=Z,294nm,0.8s
KURK Kurchatov 41.00 303 P P 15 17 52.6 +0.4
KURK Kurchatov 41.00 303 *e*P P 15 17 51.9 -0.3
KURK Kurchatov 41.00 303 P P 15 17 52.0 -0.2
CM31 Chiang Mai Arr 41.01 247 P P 15 17 55.4 +2.7
SNR=8.5
CMAR Chiang Mai Arr 41.01 247 P P 15 17 53.6 +0.9
comp=Z,10.0nm,0.8s,baz=41,slow=6.8,SNR=68
CMAR pP pP 15 18 41.6 +1.1
comp=Z,5.8nm,0.9s,baz=38,slow=6.7,SNR=3.5
CMAR ScP ScP 15 23 14.3 -0.6
comp=Z,5.2nm,0.8s,baz=16,slow=3.2,SNR=24
comp=Z,10.0nm,0.8s
CMAR Chiang Mai Arr 41.01 247 P 15 17 52.5 -0.2
CMAR pP 15 18 40.7 +0.2
CMAR ScP 15 23 15.0 +0.1
KURBB Kurchatov Arra 41.08 303 P P 15 17 52.6 -0.2
comp=Z,199nm,0.5s,baz=80,slow=8.8,SNR=1475
KURBB ScP ScP 15 23 14.3 -0.3
comp=Z,9.0nm,1.2s,baz=82,slow=3.4,SNR=12
comp=Z,199nm,0.5s
J17K VABM Dome 41.16 37 P P 15 17 54.6 +1.2
baz=270
M16K Timber Creek 41.26 41 P P 15 17 55.7 +1.5
baz=273,SNR=21
C19K Lookout Ridge 41.34 29 P P 15 17 55.2 +0.4
baz=263,SNR=13
N16K Nishlik Lake 41.38 42 P P 15 17 57.0 +1.8
baz=273,SNR=16
G18K Tagagawik 41.41 34 P P 15 17 55.9 +0.5
baz=267
H18K Honhosa River 41.50 35 P P 15 17 56.8 +0.6
baz=266,SNR=21
K17K Iditarod 41.52 38 P P 15 17 57.8 +1.6
baz=271
SHL Shillong 41.52 262 IAmb IAmb 15 17 59.5
comp=Z,40nm,0.6s
SHL Shillong 41.52 262 P P 15 17 56.0 -1.0
SHL pmax pmax
comp=Z,61nm,0.6s
SHL Shillong 41.52 262 P P 15 17 57.6 +0.6
SNR=9.1
L17K Donlin 41.53 39 P P 15 17 58.4 +2.0
baz=272,SNR=15
CHNA Chernabura Isl 41.54 50 P P 15 17 57.0 +0.4
CHNA Chernabura Isl 41.54 50 P P 15 17 56.5 0.0
baz=279
O16K Kokwok River B 41.78 43 P P 15 17 60.0 +1.6
baz=275,SNR=5.7
D19K Kuna River 41.81 30 P P 15 17 58.7 +0.1
baz=265
F19K Shaleruckik Mo 41.81 32 P P 15 17 58.8 +0.2
baz=267,SNR=26
M17K Holitna River 41.98 40 P P 15 18 01.8 +1.8
baz=273,SNR=32
E19K Redstone River 42.06 31 P P 15 18 01.0 +0.4
baz=267,SNR=29
G19K Purcell Mounta 42.06 33 P P 15 18 00.7 +0.1
baz=268,SNR=20
GCSA Galena City Sc 42.13 35 P P 15 18 01.1 0.0
baz=270,SNR=6.3
N17K Nushagak Hills 42.16 42 P P 15 18 03.4 +2.0
baz=275
J18K Innoko River 42.22 37 P P 15 18 02.9 +0.9
baz=272,SNR=10
O17K Koliganek Bris 42.27 43 P P 15 18 04.2 +1.9
baz=276
L18K Granite Mounta 42.28 39 P P 15 18 04.2 +1.7
baz=273,SNR=17
B20K Meade River 42.29 27 P P 15 18 03.0 +0.6
baz=264
H19K Roundabout Mou 42.31 34 P P 15 18 03.5 +0.9
baz=270
D20K Etivluk River 42.37 29 P P 15 18 03.6 +0.5
baz=266,SNR=34
E20K Nigu River 42.50 30 P P 15 18 04.5 +0.3
baz=267
TNTI Ternate 42.51 196 P P 15 18 05.6 +0.8
comp=Z,29nm,0.7s
SHLS Shalkode 42.54 292 *e*P P 15 18 02.2 -2.7
SHLS pmax pmax
comp=Z,30nm,0.6s
SHLS Shalkode 42.54 292 *e*P P 15 18 02.2 -2.7
comp=Z,30nm,0.6s
Q16K King Salmon 42.61 44 P P 15 18 06.3 +1.2
baz=277
A21K Barrow 42.62 26 P P 15 18 05.6 +0.6
baz=263
F20K Avaraart Lake 42.63 32 P P 15 18 05.9 +0.8
baz=269
TDK Taldyqorghan 42.65 295 *e*P P 15 18 05.5 -0.2
TDK pmax pmax
comp=Z,69nm,0.5s
TDK Taldyqorghan 42.65 295 *e*P P 15 18 05.6 -0.2
comp=Z,68nm,0.5s
P17K Kvichak River 42.66 44 IAmb IAmb 15 18 08.3
comp=Z,50nm,1.0s
P17K Kvichak River 42.66 44 P P 15 18 07.1 +1.6
baz=277
J19K Poorman 42.69 36 P P 15 18 06.6 +0.9
baz=272,SNR=18
M18K Stony River 42.74 40 P P 15 18 08.1 +1.9
baz=275
N18K Kilae Creek 42.78 41 P 15 18 08.2 +1.7
N18K IAmb IAmb 15 18 09.6
comp=Z,55nm,0.9s
N18K Kilae Creek 42.78 41 P P 15 18 08.5 +2.0
baz=276,SNR=23
UZB Uzynbulak 42.84 292 *e*P P 15 18 06.9 -0.5
UZB pmax pmax
comp=Z,14nm,0.9s
UZB Uzynbulak 42.84 292 *e*P P 15 18 07.1 -0.4
R17L Mt. Peulik Vol 42.91 46 P P 15 18 09.9 +2.3
baz=278
KPKS Kokpek 42.97 293 *e*P P 15 18 08.3 0.0
KPKS Kokpek 42.97 293 *e*P P 15 18 08.3 0.0
H20K Anotleneega Mo 42.97 34 P P 15 18 08.8 +0.8
baz=271,SNR=47
C21K Knifeblade Rid 43.06 29 P P 15 18 09.4 +0.8
baz=267,SNR=18
A22K Sinclair Lake 43.12 26 P P 15 18 09.8 +0.8
baz=265
B21K Ikpikpuk River 43.14 28 P P 15 18 10.0 +0.8
baz=267
L19K White Mountain 43.15 39 P P 15 18 10.7 +1.2
baz=275
I20K Naagheneel 43.16 35 P P 15 18 10.7 +1.3
baz=272
O18K Koktuh Hills 43.21 42 IAmb IAmb 15 18 12.8
comp=Z,78nm,1.6s
O18K Koktuh Hills 43.21 42 P P 15 18 11.7 +1.8
baz=277,SNR=6.4
P18K Big Mountain, 43.25 43 P 15 18 11.3 +1.0
P18K IAmb IAmb 15 19 56.9
comp=Z,101nm,2.0s
P18K Big Mountain, 43.25 43 P P 15 18 11.7 +1.4
baz=277,SNR=5.4
SATY Saty 43.30 292 *e*P P 15 18 10.7 -0.3
SATY Saty 43.30 292 *e*P P 15 18 10.7 -0.3
ARXS Arharly 43.30 294 *e*P P 15 18 10.8 -0.2
E21K Killik River 43.33 30 P P 15 18 11.2 +0.4
baz=269
J20K Nowinta River 43.33 36 P P 15 18 11.9 +1.1
baz=273,SNR=41
BAKI Biak 43.33 183 P P 15 18 13.1 +1.7
comp=Z,57nm,1.1s
M19K Big River Lodg 43.39 39 P P 15 18 12.9 +1.6
baz=275
WUS Wushi 43.41 289 P P 15 18 11.9 -0.1
WUS pP pP 15 18 58.8 -1.5
WUS sP sP 15 19 25.4 -1.2
K20K Telida 43.41 37 P P 15 18 12.8 +1.2
baz=274,SNR=22
IMAR Indian Mountai 43.42 33 P 15 18 12.0 +0.5
SWI Sorong 43.44 190 P P 15 18 12.9 +0.7
comp=Z,1µmcomp=Z,119nm,0.9s
SIJI Sorong 43.44 190 P P 15 18 12.9 +0.6
comp=Z,945nmcomp=Z,94nm,0.9s
N19K Bonanza Creek 43.45 41 P P 15 18 13.7 +1.7
baz=276,SNR=7.9
Q18K Katmai Hardscr 43.47 44 P P 15 18 12.7 +0.6
baz=278,SNR=6.7
PRZ Przheval'sk 43.50 291 IAmb IAmb 15 18 14.5
comp=Z,70nm,1.0s
F21K Alatna River 43.51 32 P P 15 18 12.6 +0.4
baz=271
G21K Allakaket 43.51 33 P P 15 18 13.0 +0.8
baz=271,SNR=29
B22K Teshekpuk Lake 43.59 27 P P 15 18 13.3 +0.5
baz=267
O19K Port Alsworth 43.61 42 P P 15 18 14.3 +1.3
baz=277,SNR=6.4
RKPI Ransiki, Papua 43.77 186 P P 15 18 15.6 +0.8
comp=Z,2µmcomp=Z,80nm,0.8s
H21K Medina River 43.82 34 P P 15 18 15.4 +0.6
baz=273,SNR=14
EVN Everest 43.92 268 P 15 18 16.2 -0.6
EVN IAmb IAmb 15 18 20.2
comp=Z,56nm,0.7s
TOLI2 Tolitoli 43.95 206 P P 15 18 16.9 +0.6
M20K Styx River 43.98 39 P P 15 18 18.1 +2.0
baz=276
SRPI Serui, Papua 44.00 183 P P 15 18 20.1 +3.4
comp=Z,57nm,0.9s
Q19K Cape Douglas, 44.13 44 P P 15 18 17.5 +0.2
baz=279
E22K Anaktuvuk Pass 44.13 30 P P 15 18 18.0 +0.8
baz=271
CHUM Lake Minchumin 44.16 36 P P 15 18 19.0 +1.6
baz=275,SNR=25
MRSI Marisa 44.19 204 P P 15 18 19.0 +0.8
comp=Z,1µmcomp=Z,77nm,0.9s
MDOK Medeo 44.19 293 *e*P P 15 18 17.8 -0.3
MDOK Medeo 44.19 293 *e*P P 15 18 17.9 -0.3
I21K Tanana 44.20 35 P P 15 18 18.9 +1.2
baz=274,SNR=13
P19K Oil Pt 44.23 43 P P 15 18 19.5 +1.5
baz=279
AAA Alma-Ata 44.27 293 *e*P P 15 18 18.4 -0.2
AAA pmax pmax
comp=Z,51nm,0.7s
AAA Alma-Ata 44.27 293 *e*P P 15 18 18.4 -0.2
comp=Z,51nm,0.7s
TNSS Tian-Shan 44.30 293 *e*P P 15 18 18.8 -0.6
TNSS Tian-Shan 44.30 293 *e*P P 15 18 18.8 -0.6
PPLA Purkeypile 44.31 38 P P 15 18 20.6 +1.8
baz=276,SNR=17
H22K Ishtalitna Cre 44.40 34 P P 15 18 20.5 +1.2
baz=274,SNR=29
KDJ Kajisay 44.48 291 IAmb IAmb 15 18 23.0
comp=Z,56nm,0.8s
N20K Mount Spurr 44.51 40 P P 15 18 21.9 +1.7
baz=278,SNR=30
SPCR Spurr Chakacha 44.51 40 P P 15 18 21.9 +1.6
baz=278,SNR=20
D23K Nanushuk River 44.53 29 P P 15 18 21.3 +1.0
baz=271,SNR=12
C23K Itkillik River 44.54 28 P P 15 18 21.2 +0.9
baz=270,SNR=18
OHAK Old Harbor 44.61 46 P P 15 18 21.6 +0.6
OHAK Old Harbor 44.61 46 P P 15 18 21.5 +0.4
baz=281,SNR=5.0
JAY Jayapura 44.64 177 P P 15 18 22.5 +0.7
comp=Z,676nmcomp=Z,51nm,0.8s
GENI Genyem 44.70 178 P P 15 18 23.4 +1.2
comp=Z,38nm,0.5s
BPAW Bear Paw Mtn. 44.72 36 P P 15 18 22.8 +0.9
baz=276,SNR=17
SKT Skwentna 44.72 39 P P 15 18 23.0 +1.1
baz=278,SNR=6.3
MLY Manley 44.73 35 P P 15 18 23.0 +1.1
baz=275,SNR=9.7
COLD Coldfoot 44.78 32 P P 15 18 23.1 +0.9
baz=274,SNR=20
Q20K Shuyak Island 44.82 44 P P 15 18 23.0 +0.3
baz=280
MANU Manus Island 44.86 167 P 15 18 23.9 +0.4
MANU IAmb IAmb 15 18 25.0
comp=Z,61nm,0.8s
BRZS Berezniki 44.87 303 *e*P P 15 18 23.2 0.0
BRZS Berezniki 44.87 303 *e*P P 15 18 23.2 0.0
KDAK Kodiak Island 44.88 45 P P 15 18 23.5 +0.3
KDAK Kodiak Island 44.88 45‖ *i*P P 15 18 23.7 +0.6
KDAK pmax pmax
comp=Z,39nm,0.8s
KDAK Kodiak Island 44.88 45 P P 15 18 23.4 +0.3
baz=281
KDAK Kodiak Island 44.88 45 P P 15 18 22.8 -0.3
KDAK pP pP 15 19 11.0 -1.5
KDAK PcP PcP 15 20 00.8 +0.5
G23K Bananza Creek 44.89 32 P P 15 18 23.9 +0.7
baz=274,SNR=27
TOLK Toolik Lake Re 44.95 30 P P 15 18 24.3 +0.7
baz=273,SNR=12
E23K Chandalar 44.96 30 P P 15 18 24.8 +1.0
baz=273
L22K Petersville 45.00 38 IAmb IAmb 15 18 26.0
comp=Z,34nm,0.6s
HOM Homer 45.02 42 P P 15 18 24.9 +0.7
baz=280
CAPN Captain Cook N 45.08 41 P P 15 18 26.1 +1.5
baz=279
ULHL Ulahol 45.08 292 P P 15 18 25.3 +0.1
SNR=51
TRF Thorofare Moun 45.10 37 P P 15 18 26.2 +1.1
baz=277,SNR=26
D24K Happy Valley 45.19 29 P P 15 18 26.3 +0.9
baz=273
C24K Franklin Bluff 45.21 28 P P 15 18 26.4 +0.8
baz=272
CUT Chulitna 45.25 38 IAmb IAmb 15 18 27.8
comp=Z,39nm,0.7s
CUT Chulitna 45.25 38 P P 15 18 26.8 +0.9
baz=278,SNR=11
TKM2 Tokmak 2 45.27 293 P P 15 18 27.4 +0.7
SNR=26
I23K Minto, Yukon-K 45.30 34 P P 15 18 27.7 +1.4
baz=276,SNR=38
FAKI Fak Fak 45.34 189 P P 15 18 28.1 +0.8
FAKI Fak Fak 45.34 189 P 15 18 27.7 +0.4
FAKI Fak Fak 45.34 189 P P 15 18 27.6 +0.4
E24K Your Creek 45.38 30 P P 15 18 28.1 +1.0
baz=274
BVAR Borovoye Array 45.42 308 P P 15 18 27.9 +0.4
comp=Z,86nm,0.5s,baz=62,slow=7.9,SNR=323
BVAR ScP ScP 15 23 33.1 +0.8
comp=Z,3.1nm,0.6s,baz=85,slow=3.1,SNR=6.7
comp=Z,86nm,0.5s
BORK Borovoye 45.46 308 P 15 18 27.5 -0.2
BORK Borovoye 45.46 308*d* iP P 15 18 28.2 +0.4
BORK pmax pmax
comp=Z,57nm,0.6s
BRSE Bradley Lake S 45.46 42 P P 15 18 28.2 +0.5
baz=281
NEA2 Nenana 45.49 35 P P 15 18 29.1 +1.2
baz=277,SNR=7.9
SANI Sanana 45.55 198 P P 15 18 28.8 0.0
SANI Sanana 45.55 198 P P 15 18 28.2 -0.6
comp=Z,63nm,0.8s
F24K Squaw Lake 45.65 31 P P 15 18 30.1 +0.9
baz=275
MCK McKinley 45.66 36 IAmb IAmb 15 18 31.7
comp=Z,83nm,1.3s
MCK McKinley 45.66 36 P P 15 18 30.0 +0.8
baz=278,SNR=38
RC01 Rabbit Creek A 45.71 40 P P 15 18 30.0 +0.4
baz=280,SNR=12
SGDS Sogindy 45.73 294 *e*P P 15 18 29.9 -0.2
KBK Karagaybulak 45.81 293 P P 15 18 31.5 +0.6
SNR=124
CHMS Chumysh 45.82 294 P P 15 18 30.9 +0.1
SNR=17
O22K Cooper Landing 45.82 41 IAmb IAmb 15 18 48.8
comp=Z,34nm,0.7s
O22K Cooper Landing 45.82 41 P P 15 18 30.9 +0.5
baz=281,SNR=5.7
H24K Noodor Dome 45.84 33 P P 15 18 32.3 +1.7
baz=277,SNR=47
USP Ospenovka 45.89 294 P P 15 18 31.6 +0.2
SNR=71
G24K Hadweenzic Riv 45.90 32 P P 15 18 32.6 +1.5
baz=276,SNR=30
PMR Palmer 45.91 39 P P 15 18 31.7 +0.6
baz=280,SNR=16
WAT1 Susitna Watana 45.97 38 P P 15 18 32.2 +0.5
baz=279
FRU1 Bishkek 45.97 293 IAmb IAmb 15 18 33.4
comp=Z,120nm,1.1s
COLA College 45.97 35 P P 15 18 33.3 +1.7
COLA College 45.97 35 P P 15 18 32.6 +1.1
COLA College 45.97 35*c* iP P 15 18 32.8 +1.2
COLA pmax pmax
comp=Z,123nm,0.7s
COLA College 45.97 35 P P 15 18 32.9 +1.4
baz=278
GHO Glory Hole Cre 45.98 39 IAmb IAmb 15 18 33.9
comp=Z,96nm,0.9s
SEW Seward 46.03 41 P P 15 18 32.6 +0.5
baz=281,SNR=11
D25K Kavik River 46.05 28 P P 15 18 33.0 +0.7
baz=275
POKR Poker Plat Res 46.11 34 P P 15 18 34.2 +1.5
baz=278
AAK Ala-Archa 46.13 293 P P 15 18 33.6 +0.2
SNR=15
AAK Ala-Archa 46.13 293 P 15 18 32.9 -0.5
AAK IAmb IAmb 15 18 36.4
comp=Z,47nm,0.8s
AAK Ala-Archa 46.13 293 *i* P P 15 18 33.3 0.0
SNR=9.4
AAK Ala-Archa 46.13 293*d* iP P 15 18 33.5 +0.1
AAK pmax pmax
comp=Z,82nm,1.3s
AAK Ala-Archa 46.13 293 P P 15 18 33.6 +0.2
AAK Ala-Archa 46.13 293 *e*P P 15 18 33.5 +0.1
AAK Ala-Archa 46.13 293 P P 15 18 33.5 +0.1
AAK pP pP 15 19 22.5 +0.2
AAK x x 15 19 27.1
AAK PcP PcP 15 20 05.1 -0.1
MSAI Masohi 46.23 193 P P 15 18 36.2 +2.0
comp=Z,93nm,0.6s
SML Sawmill 46.24 39 IAmb IAmb 15 18 37.0
comp=Z,63nm,1.0s
SML Sawmill 46.24 39 P P 15 18 34.7 +0.9
baz=280,SNR=23
KNK Knik Glacier 46.26 40 IAmb IAmb 15 18 36.0
comp=Z,77nm,1.4s
KNK Knik Glacier 46.26 40 P P 15 18 35.0 +1.1
baz=281,SNR=18
UCH Uchtor 46.27 293 P P 15 18 35.4 +0.5
SNR=27
KRAI Karang Ratu 46.30 194 P P 15 18 36.6 +1.9
WAT6 Susitna Watana 46.38 38 P P 15 18 35.6 +0.6
baz=280,SNR=18
IL31 46.40 35 IAmb IAmb 15 18 36.5
comp=Z,49nm,0.7s
ILAR Eielson Array 46.40 35 P P 15 18 35.5 +0.5
comp=Z,42nm,0.8s,baz=269,slow=7.0,SNR=628
ILAR ScP ScP 15 23 36.3 +0.2
comp=Z,1.1nm,0.8s,baz=270,slow=5.4,SNR=5.0
comp=Z,42nm,0.8s
ILAR Eielson Array 46.40 35 P 15 18 35.2 +0.3
HDA Harding Lake 46.42 35 IAmb IAmb 15 18 36.6
comp=Z,65nm,1.0s

HDA	Harding Lake	46.42	35	P		P	15 18 35.5	+0.4
	baz=279,SNR=20							
G25K	Bearman Lake	46.43	32	P		P	15 18 36.9	+1.7
	baz=278,SNR=20							
DHY	Denali Highway	46.46	37	IAmb		IAmb	15 18 37.3	
	comp=Z,69nm,0.6s							
DHY	Denali Highway	46.46	37	P		P	15 18 36.4	+0.8
	baz=280,SNR=78							
E25K	Arctic Village	46.47	30	P		P	15 18 36.7	+1.2
	baz=277,SNR=19							
F25K	Christian Rive	46.50	31	P		P	15 18 37.5	+1.7
	baz=277,SNR=42							
C26K	Camden Bay	46.51	28	P		P	15 18 37.1	+1.5
	baz=276							
M23K	Glacier View	46.53	39	P		P	15 18 37.1	+1.1
	baz=281,SNR=14							
EKS2	Erkin-Say	46.61	293	P		P	15 18 37.3	+0.2
	SNR=78							
AAI	Ambon	46.69	194	P		P	15 18 38.4	+0.6
	comp=Z,126nm,0.8s							
SCM	Sheep Creek Mo	46.71	39	IAmb		IAmb	15 18 39.7	
	comp=Z,55nm,1.0s							
SCM	Sheep Creek Mo	46.71	39	P		P	15 18 38.6	+1.1
	baz=281,SNR=19							
KSH2	Kashi	46.79	288	P		P	15 18 38.6	+0.1
KSH2				pmax		pmax		
	comp=Z,30nm,1.1s							
PRP	Porcupine Dome	46.85	34			P	15 18 39.4	+0.9
PRP	Porcupine Dome	46.85	34	P		P	15 18 40.3	+1.8
	baz=279,SNR=252							
BMAR	Burnt Mountain	46.93	31			P	15 18 40.7	+1.6
C27K	Jago River	46.95	28	P		P	15 18 40.6	+1.4
	baz=277							
GLI	Glacier Island	47.01	40	IAmb		IAmb	15 18 41.5	
	comp=Z,109nm,1.7s							
GLI	Glacier Island	47.01	40	P		P	15 18 40.3	+0.6
	baz=282,SNR=61							
K24K	Donnelly Dome	47.03	36	IAmb		IAmb	15 18 41.4	
	comp=Z,94nm,0.8s							
K24K	Donnelly Dome	47.03	36	P		P	15 18 40.4	+0.5
	baz=281,SNR=46							
P23K	Montague Islan	47.05	41	P		P	15 18 41.0	+1.0
	baz=283							
F26K	Sheenjek River	47.06	31	P		P	15 18 41.9	+1.9
	baz=278							
J25K	Salcha River,	47.06	35	P		P	15 18 39.7	-0.5
	baz=280,SNR=34							
M24K	Tolsona, Glenn	47.19	38	IAmb		IAmb	15 18 44.0	
	comp=Z,49nm,0.9s							
M24K	Tolsona, Glenn	47.19	38	P		P	15 18 42.8	+1.7
	baz=282,SNR=16							
BNDI	Bandanaira	47.23	192	P		P	15 18 42.3	+0.4
	comp=Z,168nm,1.1s							
G26K	Porcupine Rive	47.31	32	P		P	15 18 43.9	+2.0
	baz=280							
PAX	Paxson	47.33	37	P		P	15 18 43.0	+0.7
	baz=282,SNR=19							
KLU	Klutina	47.44	39	IAmb		IAmb	15 18 45.5	
	comp=Z,66nm,1.3s							
KLU	Klutina	47.44	39	P		P	15 18 44.3	+1.3
	baz=283,SNR=28							
RIDG	Independent Ri	47.45	36	P		P	15 18 43.4	+0.2
	baz=282,SNR=24							
EYAK	Cordova Ski Ar	47.73	40	P		P	15 18 46.9	+1.7
EYAK	Cordova Ski Ar	47.73	40	P		P	15 18 46.6	+1.4
	baz=284,SNR=12							
SCRK	Sand Creek	47.78	36	P		P	15 18 46.4	+0.7
	baz=282,SNR=201							
DOT	Dot Lake	47.81	36	IAmb		IAmb	15 18 47.3	
	comp=Z,67nm,1.2s							
I26K	Coal Creek Min	47.86	34	P		P	15 18 46.4	+0.3
	baz=282,SNR=40							
RABL	Rabaul	47.92	161			P	15 18 47.7	+0.5
RABL				IAmb		IAmb	15 18 50.2	
	comp=Z,74nm,0.7s							
E27K	Coleen River	47.93	30	P		P	15 18 48.2	+1.5
	baz=280,SNR=40							
D27M	Malcolm River	47.97	28	P		P	15 18 48.4	+1.3
	baz=280							
N25K	Chitina, Valde	48.03	39	P		P	15 18 49.3	+1.7
	baz=284,SNR=24							
MENT	Mentasta	48.12	37	P		P	15 18 50.0	+1.8
G27K	Doyon Strip	48.16	32	P		P	15 18 50.3	+1.8
	baz=281							
DZA	Taraz	48.17	295	*e*P		P	15 18 48.7	-0.2
DZA				pmax		pmax		
	comp=Z,92nm,0.7s							
DZA	Taraz	48.17	295	*e*P		P	15 18 48.7	-0.2
	comp=Z,92nm,0.7s							
BMRM	Bremner River	48.18	40	P		P	15 18 50.1	+1.4
	baz=284,SNR=18							
L26K	Log Cabin Wild	48.27	37	P		P	15 18 51.0	+1.7
	baz=283,SNR=24							
H27K	Steamboat Moun	48.33	32	P		P	15 18 52.0	+2.1
	baz=282,SNR=71							
I27K	Kandik River	48.43	33	P		P	15 18 52.7	+2.2
	baz=282,SNR=55							
KAIM	Kayak Island	48.53	41	P		P	15 18 53.1	+1.8
	baz=285							
M26K	Nabesna, AK	48.57	38	P		P	15 18 53.7	+1.9
	baz=284,SNR=40							
E28M	Babbage River	48.60	29	P		P	15 18 53.2	+1.4
	baz=282							
KKAR	Karatay Array	48.64	295			P	15 18 52.3	-0.2
KKAR	Karatay Array	48.64	295	P		P	15 18 52.3	-0.2
F28M	Old Crow	48.68	30	P		P	15 18 54.0	+1.6
	baz=282,SNR=41							
KKSI	Kolaka, Sulawe	48.69	203	P		P	15 18 53.3	+0.2
	comp=Z,39nm,0.8s							
D28M	Stokes Point	48.73	28	P		P	15 18 54.2	+1.5
	baz=282,SNR=39							
MCARA	McCarthy VSAT	48.81	39	P		P	15 18 55.3	+1.8
	baz=285,SNR=17							
L27K	Beaver Creek,	48.93	36	P		P	15 18 56.3	+1.9
	baz=284,SNR=65							
BCAR	Beaver Creek A	48.95	36			P	15 18 56.2	+1.7
CRQE	Cirque	48.95	40	P		P	15 18 56.2	+1.6
	baz=286,SNR=15							
BGLC	Bering Glacier	49.03	40	P		P	15 18 57.3	+2.3
	baz=286							
M27K	Edge Creek, AK	49.09	37	IAmb		IAmb	15 18 58.5	
	comp=Z,43nm,0.8s							
M27K	Edge Creek, AK	49.09	37	P		P	15 18 57.6	+1.9
	baz=285,SNR=46							
BRLS	Borolday	49.12	295	*e*P		P	15 18 57.5	+1.4
BRLS	Borolday	49.12	295	*e*P		P	15 18 57.6	+1.4
I28M	Miner Creek	49.15	33	IAmb		IAmb	15 18 59.0	
	comp=Z,47nm,0.8s							
I28M	Miner Creek	49.15	33	P		P	15 18 57.8	+1.8
	baz=284,SNR=75							
E29M	Blow River	49.23	29	P		P	15 18 58.3	+1.7
	baz=283,SNR=44							
DRK	Karamyk	49.28	290	IAmb		IAmb	15 18 58.9	
	comp=Z,112nm,1.3s							
IUG	Iuzhnay	49.36	294	*e*P		P	15 18 57.7	-0.3
IUG				pmax		pmax		
	comp=Z,47nm,0.7s							
IUG	Iuzhnay	49.36	294	*e*P		P	15 18 57.8	-0.3
	comp=Z,47nm,0.7s							
BVCY	Beaver Creek	49.53	37	P		P	15 19 00.7	+1.8
	baz=286,SNR=22							
BARN	Barnard Glacie	49.54	39	IAmb		IAmb	15 19 01.7	
	comp=Z,44nm,0.6s							
G29M	Pine Creek	49.54	31	P		P	15 19 01.0	+2.1
	baz=284							
CHM	Chimkent	49.57	295	*e*P		P	15 18 59.4	-0.1
CHM				pmax		pmax		
	comp=Z,62nm,0.6s							
CHM	Chimkent	49.57	295	*e*P		P	15 18 59.4	-0.1
	comp=Z,62nm,0.6s							
H29M	Whitestone	49.58	32	P		P	15 19 00.9	+1.7
	baz=285							
MESA	MESA	49.65	40	IAmb		IAmb	15 19 02.6	
	comp=Z,36nm,0.8s							
MESA	MESA	49.65	40	P		P	15 19 01.2	+1.1
	baz=287,SNR=5.9							
BTK	Batken	49.71	292	IAmb		IAmb	15 19 01.6	
	comp=Z,94nm,1.2s							
CTG	Chitna Glacier	49.71	39	P		P	15 19 01.9	+1.5
	baz=287,SNR=49							
CTGM	Chitina Glacie	49.72	39	IAmb		IAmb	15 19 03.0	
	comp=Z,49nm,0.7s							
DAWY	Dawson	49.72	35			P	15 19 01.0	+0.6
DAWY	Dawson	49.72	35	P		P	15 19 01.3	+0.9
	baz=286,SNR=10.0							
SVE	Sverdlovsk	49.74	315	*c i*P		P	15 19 01.6	+1.1
SVE				pmax		pmax		
	comp=Z,215nm,0.7s							
I29M	Ogilvie Camp,	49.83	33	P		P	15 19 02.6	+1.5
	baz=285,SNR=6.8							
YUK3	Moose Creek	49.89	38	P		P	15 19 03.0	+1.2
	baz=287,SNR=19							
KAPI	Kappang	50.05	205	P		P	15 19 03.5	+0.2
KAPI				IAmb		IAmb	15 19 04.8	
	comp=Z,56nm,0.8s							
KAPI	Kappang	50.05	205	P		P	15 19 03.6	+0.2
KAPI				pmax		pmax		
	comp=Z,56nm,0.8s							
KAPI	Kappang	50.05	205	P		P	15 19 04.3	+1.0
KAPI	Kappang	50.05	205	P		P	15 19 03.8	+0.5
	comp=Z,48nm,0.9s							
J29N	Klondike Camp	50.11	34	P		P	15 19 04.8	+1.5
	baz=286,SNR=7.0							
EPYK	Eagle Plains	50.18	32	IAmb		IAmb	15 19 06.3	
	comp=Z,56nm,0.8s							
EPYK	Eagle Plains	50.18	32	P		P	15 19 05.3	+1.5
	baz=286,SNR=18							
F30M	Barrier River	50.20	30	IAmb		IAmb	15 19 06.8	
	comp=Z,88nm,1.2s							
F30M	Barrier River	50.20	30	P		P	15 19 05.8	+1.9
	baz=286,SNR=50							
G30M	tAoh Zraii Nji	50.21	31	P		P	15 19 05.1	+1.2
	baz=286,SNR=43							
O28M	Mount Upton	50.31	39	P		P	15 19 06.4	+1.3
	baz=288,SNR=13							
MKS	Makassar	50.33	205	P		P	15 19 06.2	+0.8
	comp=Z,1µmcomp=Z,146nm,1.0s							
YUK8	Steele Glacier	50.35	38	P		P	15 19 06.9	+1.5
	baz=288,SNR=8.3							
SAUI	Saumlaki	50.45	189	P		P	15 19 07.5	+1.2
	comp=Z,171nm,1.0s							
PINM	Pinnacle	50.49	40	P		P	15 19 07.4	+1.2
	baz=288							
L29M	L29M	50.54	36	P		P	15 19 08.9	+2.4
	baz=287							
K29M	Barlow Dome	50.58	35	P		P	15 19 08.7	+1.9
	baz=287							
M29M	Somme Creek	50.59	37	P		P	15 19 09.3	+2.3
	baz=288,SNR=77							
I30M	Mount Dempster	50.64	33	P		P	15 19 09.1	+1.7
	baz=287,SNR=76							
INK	Inuvik	50.82	29	IAmb		IAmb	15 19 10.0	
	comp=Z,28nm,0.6s							
INK	Inuvik	50.82	29	P		P	15 19 09.5	+1.1
	baz=287,SNR=48							
YUK4	Talbot Arm	50.85	38	P		P	15 19 10.8	+1.8
	baz=288,SNR=24							
J30M	Hart River	50.86	34	P		P	15 19 10.6	+1.7
	baz=288,SNR=51							
BSSI	Bau Bau, Buton	50.90	203	P		P	15 19 08.9	-0.7
F31M	Tsiigehtchic	51.00	30	P		P	15 19 10.7	+0.9
	baz=288,SNR=17							
ARTI	Arti	51.06	315			P	15 19 10.4	0.0
ARTI	Arti	51.06	315	*d i*P		P	15 19 10.9	+0.5
ARTI				*PP		pP	15 20 02.0	+1.8
ARTI							15 20 23.1	
ARTI				S		S	15 26 11.7	+2.6
ARTI				SS		SS	15 29 48.5	+1.7
ARTI				pmax		pmax		
	comp=Z,264nm,0.7s							
ARTI	Arti	51.06	315	P		P	15 19 10.9	+0.5
ARTI				pP		pP	15 20 00.7	+0.4
ARTI				x		x	15 20 04.5	
YUK6	Outpost Mounta	51.10	39	P		P	15 19 13.0	+2.0
	baz=289,SNR=18							
O29M	Mount Kennedy	51.21	39	IAmb		IAmb	15 19 15.0	
	comp=Z,43nm,0.8s							
O29M	Mount Kennedy	51.21	39	P		P	15 19 13.9	+2.3
	baz=289,SNR=29							
H31M	Peel River	51.27	32	P		P	15 19 13.4	+1.5
	baz=288,SNR=47							
M30M	Minto, Yukon	51.28	36	IAmb		IAmb	15 19 15.3	
	comp=Z,26nm,0.7s							
M30M	Minto, Yukon	51.28	36	P		P	15 19 14.1	+2.1
	baz=289,SNR=50							
MAYO	Mayo, Yukon	51.34	35	P		P	15 19 14.4	+2.0
	baz=289,SNR=12							
CHGR	Chuyangaron	51.49	291	*d i*P		P	15 19 13.8	-0.2
CHGR				pmax		pmax		
	comp=Z,492nm,0.7s							
N30M	Aishikik Lake	51.52	38	P		P	15 19 15.6	+1.8
	baz=290,SNR=15							
HYT	Haines Junctio	51.54	38	P		P	15 19 16.6	+2.5
	baz=290,SNR=72							
P30M	Million Dollar	52.03	39	P		P	15 19 20.0	+2.4
	baz=291							
PMG	Port Moresby	52.06	169	P		P	15 19 18.4	+0.2
	comp=Z,11nm,0.7s,baz=62,slow=6.2,SNR=8.6							
	comp=Z,11nm,0.7s							
PMG	Port Moresby	52.06	169	P		P	15 19 18.3	+0.2
N31M	Braeburn, Yuko	52.10	37	IAmb		IAmb	15 19 21.3	
	comp=Z,55nm,0.8s							
N31M	Braeburn, Yuko	52.10	37	P		P	15 19 20.5	+2.4
	baz=290,SNR=41							
O30N	Mendenhall	52.21	38	P		P	15 19 20.9	+2.0
	baz=291,SNR=18							
A36M	Sachs Harbour	52.29	23	IAmb		IAmb	15 19 21.6	
	comp=Z,38nm,0.8s							
A36M	Sachs Harbour	52.29	23	P		P	15 19 20.7	+1.5
	baz=291,SNR=42							
M31M	Drury Creek, Y	52.47	36	P		P	15 19 22.6	+1.9
	baz=291,SNR=19							
SHAA	Shahritus	52.72	290	IAmb		IAmb	15 19 24.4	
	comp=Z,318nm,0.7s							
MMRI	Maumere	52.80	200			P	15 19 22.8	-0.8
MMRI	Maumere	52.80	200	P		P	15 19 22.8	-0.8
	comp=Z,1µmcomp=Z,72nm,0.8s							
WHY	Whitehorse	52.80	38	IAmb		IAmb	15 19 26.2	
	comp=Z,47nm,0.8s							
WHY	Whitehorse	52.80	38	P		P	15 19 25.4	+2.0
	baz=292,SNR=23							
AB31	Akbulak array	52.88	306	*i*P		P	15 19 24.3	+0.4
AB31				pmax		pmax		
	comp=Z,49nm,0.5s							
ABKAR	Akbulak array	52.88	306			P	15 19 24.1	+0.2
SKAG	Skagway	53.04	40	P		P	15 19 27.0	+2.1
	baz=292							
EDFI	Ende, Flores	53.05	201	P		P	15 19 23.6	-2.0
	comp=Z,23nm,0.7s							
S31K	Pelican	53.18	42	P		P	15 19 27.9	+2.0
	baz=293							
LBFI	Labuhan Bajo,	53.29	203	P		P	15 19 25.2	-2.0
SOEI	Soe	53.39	197	P		P	15 19 28.8	+0.7
SOEI	Soe	53.39	197	P		P	15 19 27.4	-0.7
	comp=Z,84nm,0.8s							
N32M	Quiet Lake	53.44	37	P		P	15 19 29.3	+1.5
	baz=293							
AKTO	Aktyubinsk	53.53	308	*i*P		P	15 19 28.4	-0.2
AKTO				pmax		pmax		
	comp=Z,49nm,0.9s							
KBL	Kabul	53.55	286			P	15 19 28.4	-0.9
KBL	Kabul	53.55	286	P		P	15 19 28.4	-0.9
KBL				pmax		pmax		
	comp=Z,99nm,0.9s							
KBL	Kabul	53.55	286	P		P	15 19 28.8	-0.5
	SNR=44							
C36M	Paulatuk	53.67	26	P		P	15 19 30.1	+0.8
	baz=294							
P32M	Atlin	53.75	39	P		P	15 19 31.9	+1.8
	baz=293,SNR=8.3							
DBNI	Kabupaten Domp	53.79	205	P		P	15 19 30.0	-0.8
	comp=Z,24nm,0.8s							
R32K	Eaglecrest	53.89	41	P		P	15 19 33.2	+2.1
	baz=294,SNR=7.1							
P33M	Teslin, Yukon	53.92	38	IAmb		IAmb	15 19 34.4	
	comp=Z,43nm,0.8s							
P33M	Teslin, Yukon	53.92	38	P		P	15 19 33.5	+2.1
	baz=294,SNR=47							
JIS	Juneau Island	53.96	41	P		P	15 19 34.2	+2.7
BATI	Baumata	53.96	198	P		P	15 19 32.1	0.0
	comp=Z,80nm,0.5s,baz=46,slow=4.4,SNR=17							
	comp=Z,80nm,0.5s							
BATI	Baumata	53.96	198	P		P	15 19 31.8	-0.3
SIT	Sitka	53.98	42	P		P	15 19 34.6	+2.9
SIT	Sitka	53.98	42	IAmb		IAmb	15 19 35.0	
	comp=Z,45nm,0.9s							
SIT	Sitka	53.98	42	P		P	15 19 33.9	+2.2
	baz=294							
TATA	Tatamba Isabel	54.09	154	P		P	15 19 34.3	+1.3
S32K	Killisnoo	54.19	42	P		P	15 19 35.1	+1.9
	baz=294							
PLAI	Plampang	54.27	205	P		P	15 19 33.5	-0.8
PLAI	Plampang	54.27	205	P		P	15 19 32.7	-1.6
	comp=Z,57nm,0.6s							
TWSI	Taliwang, Sumb	54.47	206	P		P	15 19 34.7	-1.0
	comp=Z,61nm,0.9s							
WBSI	Waikabubak, Su	54.54	203	P		P	15 19 32.7	-3.6
	comp=Z,47nm,0.8s							
KHKI	Kahang-Kahang	54.56	208	P		P	15 19 37.0	+0.7
	comp=Z,88nm,0.9s							
Q32M	Nakina River	54.69	39	P		P	15 19 39.4	+2.3
	baz=295							
KIRV	Kirov	54.71	320	*d i*P		P	15 19 37.4	+0.5
SAVO	Savo Central	54.80	154	P		P	15 19 38.7	+0.5
SPA0	Spitsbergen Ar	54.92	348	*e*P		P	15 19 38.7	+0.4
SPA0				IAmb		IAmb	15 19 43.8	
	comp=Z,16nm,0.8s							
SPB2	Spitsbergen Ar	54.92	348			P	15 19 38.4	+0.3
SPB2				IAmb		IAmb	15 19 53.9	
	comp=Z,50nm,1.3s							
SPITS	Spitsbergen Ar	54.92	348	P		P	15 19 38.6	+0.4
	comp=Z,11nm,0.7s,baz=80,slow=11,SNR=21							
	comp=Z,11nm,0.7s							
SPITS	Spitsbergen Ar	54.92	348	P		P	15 19 38.7	+0.4
SPITS				pmax		pmax		
	comp=Z,22nm,1.0s							
KBS	Kingsbay	55.08	349	P		P	15 19 40.0	+0.7
KBS	Kingsbay	55.08	349	*e*P		P	15 19 40.5	+1.3
KBS				IAmb		IAmb	15 19 41.0	
	comp=Z,20nm,0.9s							
KBS	Kingsbay	55.08	349	⇑ *i*P		P	15 19 40.6	+1.3
KBS				pmax		pmax		
	comp=Z,18nm,0.8s							
KBS	Kingsbay	55.08	349	*i*P		P	15 19 40.6	+1.3
R33M	Jennings River	55.11	39	P		P	15 19 42.4	+2.4
	baz=295							
HNR	Honiara	55.11	154	P		P	15 19 41.2	+0.8
	comp=Z,4.0nm,0.8s,baz=9.6,slow=2.6,SNR=10							
HNR	Honiara	55.11	154	P		P	15 19 41.1	+0.8
HNR	Honiara	55.11	154	P		P	15 19 41.1	+0.8
HNR				pmax		pmax		
	comp=Z,103nm,0.8s							
MTN	Manton Dam	55.27	189	IAmb		IAmb	15 19 42.2	
	comp=Z,43nm,0.7s							
SNJI	Sawahan-Nganju	55.47	213	P		P	15 19 42.2	-0.9
	comp=Z,32nm,0.8s							
U33K	Whale Pass	55.49	43	IAmb		IAmb	15 19 45.8	
	comp=Z,30nm,0.8s							
U33K	Whale Pass	55.49	43	P		P	15 19 44.9	+2.4
	baz=296							
NOR	Nord	55.66	356	*i*P		P	15 19 43.9	+0.5
NOR				IAmb		IAmb	15 19 44.6	
	comp=Z,13nm,0.7s							
S34M	Telegraph Cree	55.68	40	P		P	15 19 46.2	+2.4
	baz=296,SNR=8.3							
WRAK	Wrangell Islan	55.74	42	P		P	15 19 46.5	+2.2
	baz=296							
CRAG	Craig	55.77	44	P		P	15 19 45.2	+0.7
CRAG	Craig	55.77	44	P		P	15 19 46.6	+2.1
	baz=296							
WTLY	Watson Lake, Y	55.79	37	P		P	15 19 46.5	+1.9
	baz=296,SNR=19							
HSPB	Hornsund (broa	55.82	347	*e*P		P	15 19 46.1	+1.5
HSPB	Hornsund (broa	55.82	347	*e*P		P	15 19 45.0	+0.4
DLBC	Dease Lake	55.97	39	P		P	15 19 48.2	+2.2
	baz=297,SNR=13							
MDSI	Maura Dua	55.98	223	P		P	15 19 52.8	+6.2
UGM	Wanagama	56.09	214	P		P	15 19 47.9	+0.6
COEN	Coen	56.13	174	P		P	15 19 48.0	+0.5
KPJI	Karang Pucung	56.25	216	P		P	15 19 48.1	-0.3
	comp=Z,47nm,0.8s							
HYB	Hyderabad	56.29	263	*e*P		P	15 19 48.4	-0.4
HYB				*e*PcP		PcP	15 20 43.9	+0.6
HYB				*es*P		sP	15 21 05.8	+0.8
T35M	Bob Quinn	56.52	41	IAmb		IAmb	15 19 53.7	
	comp=Z,23nm,0.9s							
T35M	Bob Quinn	56.52	41	P		P	15 19 52.6	+2.7
	baz=297,SNR=9.5							
V35K	Ketchikan	56.60	43	P		P	15 19 51.9	+1.5
	baz=297							
WRGLY	Wrigley	56.61	32	IAmb		IAmb	15 19 53.1	
	comp=Z,45nm,1.2s							
WRGLY	Wrigley	56.61	32	P		P	15 19 52.0	+1.7
	baz=298,SNR=20							
BJO1	Bjornoya	56.79	344	*e*P		P	15 19 51.0	-0.4
VADS	Vadso	56.84	337	*e*P		P	15 19 52.0	+0.2
VADS				IAmb		IAmb	15 20 03.5	
	comp=Z,321nm,1.8s							
APA	Apatity	56.96	334	⇓ *e*P		P	15 19 51.8	-0.9
APA				*e*PP		PcP	15 20 44.2	-0.9
APA				*e*			15 22 01.1	
APA				pmax		pmax		
	comp=Z,22nm,1.0s							
APA				MLR		MLR		
	comp=Z,2µm,4.7s							
KOTAN	Kotaneelee Air	57.88	36	P		P	15 20 00.8	+1.5
	baz=300,SNR=9.7							
HAMF	Hammerfest	58.10	339	*e*P		P	15 20 00.0	-0.6
HAMF				IAmb		IAmb	15 20 05.9	
	comp=Z,23nm,0.7s							
KLMR	Klimovskoe	58.11	325	*e*P		P	15 19 59.8	-1.0
KLMR				*e*PP		pP	15 20 53.3	+1.3
KLMR				pmax		pmax		
	comp=Z,73nm,1.3s							
ARA0	ARCESS Array S	58.27	338	*e*P		P	15 20 02.2	+0.4
ARCES	ARCESS Array B	58.27	338	P		P	15 20 02.0	+0.1
	comp=Z,8.1nm,0.7s,baz=50,slow=8.5,SNR=17							
ARCES				ScP		ScP	15 24 27.7	+0.1
	comp=Z,8.9nm,0.9s,baz=68,slow=3.8,SNR=4.2							
	comp=Z,8.1nm,0.7s							
ARCES	ARCESS Array B	58.27	338	P		P	15 20 02.1	+0.3
ARCES	ARCESS Array B	58.27	338	P		P	15 20 02.1	+0.3
ARCES				pmax		pmax		
	comp=Z,167nm,2.0s							
HRA	Herat	58.44	290	IAmb		IAmb	15 20 05.6	
	comp=Z,93nm,1.7s							
BELG	Belogornoye	58.44	314	*d i*P		P	15 20 03.5	+0.3
BELG				pmax		pmax		
	comp=Z,22nm,0.8s							
KTK1	Kautokeino	59.23	338	*e*P		P	15 20 08.6	+0.2
KTK1				IAmb		IAmb	15 20 09.9	
	comp=Z,28nm,0.8s							
POHA	Pohakuloa	59.40	90	P		P	15 20 11.4	+0.8
POHA	Pohakuloa	59.40	90	P		P	15 20 11.4	+0.8
JETT	Jettan, Norway	59.66	339	*e*P		P	15 20 10.9	-0.4
JETT				IAmb		IAmb	15 20 38.3	
	comp=Z,232nm,1.7s							
TRO	Tromso	60.00	339	*e*P		P	15 20 13.5	-0.1
TRO				IAmb		IAmb	15 20 14.8	
	comp=Z,58nm,0.9s							
TULEG	Thule	60.19	7	IAmb		IAmb	15 20 20.1	
	comp=Z,11nm,0.

WRAB x x 15 21 24.0
WRA Warramunga Arr 62.03 184 P **P** **15 20 27.0 -0.8**
comp=Z,38nm,0.5s,baz=3.0,slow=7.2,SNR=445
WRA PcP **PcP** **15 21 06.5 +0.5**
comp=Z,11nm,0.7s,baz=359,slow=4.8,SNR=11
WRA PKP2bc **P'P'bc** **15 49 38.0 0.0**
comp=Z,1.1nm,1.0s,baz=197,slow=2.6,SNR=7.3
comp=Z,38nm,0.5s
STEI Steigen 62.15 339 *e*P **P** **15 20 28.2 +0.2**
STEI lAmb lAmb 15 20 31.1
comp=Z,258nm,1.9s
VRH Novokhopyorsk 62.19 315 *e*P **P** **15 20 28.2 -0.4**
VRH pmax pmax
comp=Z,87nm,0.6s
CTA Charters Tower 62.48 172 P **P** **15 20 30.4 -0.4**
comp=Z,14nm,1.0s,baz=352,slow=4.1,SNR=9.5
comp=Z,14nm,1.0s
CTAO Charters Tower 62.48 172 P **P** **15 20 31.2 +0.4**
PUL Pulkovo 62.51 327⇓ *e*P **P** **15 20 30.9 +0.3**
PUL pmax pmax
comp=Z,89nm,0.6s
FAUS Fauske 62.53 339 *e*P **P** **15 20 30.8 +0.3**
FAUS lAmb lAmb 15 20 31.4
comp=Z,55nm,0.9s
QIS Mount Isa 62.54 179 P **P** **15 20 30.9 -0.3**
OBN Obninsk 62.54 321 P **P** **15 20 30.6 -0.3**
OBN Obninsk 62.54 321 *d e*P **P** **15 20 30.8 -0.1**
OBN *e**PP **pP** **15 21 23.1 +0.3**
OBN *e* 15 22 50.9
OBN *e*S **S** **15 28 39.2 +0.1**
OBN *e*SS **SS** **15 32 49.8 +3.0**
OBN pmax pmax
comp=Z,43nm,0.7s
OBN Obninsk 62.54 321 *e*P **P** **15 20 30.9 +0.1**
OBN Obninsk 62.54 321 P **P** **15 20 30.7 -0.1**
POIN Pond Inlet 62.55 12 P **P** **15 20 30.4 -0.2**
LPSR Galich'ya Gora 62.84 317 *e*P **P** **15 20 32.8 0.0**
LPSR pmax pmax
comp=Z,88nm,0.8s
FIA1 FINESS Array S 63.10 330 P **P** **15 20 34.2 -0.2**
FINES FINESS Array B 63.11 330 P **P** **15 20 34.3 -0.1**
comp=Z,48nm,0.8s,baz=54,slow=7.5,SNR=64
comp=Z,48nm,0.8s
FINES FINESS Array B 63.11 330 P **P** **15 20 34.2 -0.3**
FINES FINESS Array B 63.11 330 *i* P **P** **15 20 34.5 0.0**
FINES pmax pmax
comp=Z,47nm,0.8s
VORR Voronezh 63.22 316 *e*P **P** **15 20 35.1 -0.3**
VORR pmax pmax
comp=Z,96nm,0.6s
SANVU Saraoutou 63.27 149 P **P** **15 20 37.7 +1.6**
SANVU Saraoutou 63.27 149 P **P** **15 20 36.3 +0.3**
VSR Storozhevoye 63.51 316 *e*P **P** **15 20 37.1 -0.2**
VSR pmax pmax
comp=Z,80nm,0.6s
VAGH Vaagaholmen 63.55 339 *e*P **P** **15 20 37.4 +0.1**
VAGH lAmb lAmb 15 20 41.0
comp=Z,29nm,0.9s
VORD Divnogorie 63.59 316 *e*P **P** **15 20 37.5 -0.3**
VORD pmax pmax
comp=Z,50nm,0.8s
MOR8 Moi Rana 63.64 338 *e*P **P** **15 20 36.6 -1.3**
MOR8 lAmb lAmb 15 20 37.8
comp=Z,129nm,1.3s
KONS Konsvik 63.76 339 *e*P **P** **15 20 38.3 -0.3**
CLRS Cowichan Lake 63.92 47 P **P** **15 20 40.6 +0.6**
CLRS lAmb lAmb 15 20 42.1
comp=Z,43nm,1.5s
LEIR Leirfjorden 64.05 338 *e*P **P** **15 20 40.8 +0.3**
LLLB Lillooet 64.08 44 lAmb lAmb 15 20 43.2
comp=Z,20nm,0.9s
AKT Akhty 64.18 303 *e*P **P** **15 20 42.0 0.0**
AKT *e* 15 21 14.9
AKT *e**PP **pP** **15 21 34.4 +0.2**
AKT *e* 15 23 06.0
AKT *e*SS SS 15 33 13.4 +0.2
AKT pmax pmax
comp=Z,41nm,0.6s
NGCH Negor - Chabah 64.33 282 P **P** **15 20 44.9 +1.8**
PGC Sidney 64.39 47 lAmb lAmb 15 20 44.9
comp=Z,24nm,0.6s
SEKA Sheki 64.66 303 P **P** **15 20 44.9 -0.1**
B04A Port Angeles 64.71 47 lAmb lAmb 15 20 47.0
comp=Z,18nm,0.7s
ILON Igloolik, Nuna 64.78 15 lAmb lAmb 15 20 56.8
comp=Z,19nm,0.7s
VSU Vasula 64.78 327 *d i*P **P** **15 20 44.3 -1.0**
VSU pmax pmax
comp=Z,70nm,1.0s
GOF Gofitskoye 64.94 309 *c i*P **P** **15 20 47.3 +0.6**
MNGR Mingechevir, A 64.98 303 P **P** **15 20 47.6 +0.6**
LKRN Lenkeran, Azer 65.10 300 P **P** **15 20 48.1 +0.3**
SUMG Summit 65.42 359 lAmb lAmb 15 20 57.0
comp=Z,26nm,1.0s
SUMG Summit 65.42 359 *i* P **P** **15 20 50.7 +0.9**
SUMG lAmb lAmb 15 20 56.7
comp=Z,25nm,1.1s
MBWA Marble Bar 65.45 199 P **P** **15 20 50.2 +0.1**
MBWA Marble Bar 65.45 199 P **P** **15 20 49.8 -0.3**
MBWA lAmb lAmb 15 20 50.9
comp=Z,28nm,0.9s
MBWA Marble Bar 65.45 199 P **P** **15 20 50.1 0.0**
NCK Nalchik 65.52 307⇑ *i*P **P** **15 20 51.4 +0.9**
NCK pmax pmax
comp=Z,62nm,1.0s
GANJ Ganja 65.53 303 P **P** **15 20 50.0 -0.6**
ASAR Alice Springs 65.75 185 P **P** **15 20 52.0 0.0**
comp=Z,13nm,0.8s,baz=8.5,slow=6.4,SNR=103
ASAR PKP2bc **P'P'bc** **15 49 26.1 -2.1**
comp=Z,0.4nm,0.8s,baz=180,slow=2.4,SNR=5.3
comp=Z,13nm,0.8s
ASAR Alice Springs 65.75 185 P **P** **15 20 51.9 -0.2**
KIV Kislovodsk 65.79 308⇓ P **P** **15 20 53.4 +1.2**
KIV Kislovodsk 65.79 308 P **P** **15 20 52.8 +0.5**
KIV Kislovodsk 65.79 308 *i* P **P** **15 20 53.3 +1.0**
SNR=46
KIV Kislovodsk 65.79 308 *e*P **P** **15 20 52.6 +0.3**
KIV *e**PP **pP** **15 21 45.9 +1.1**
KIV *e*S **S** **15 29 20.6 +1.1**
KIV pmax pmax
comp=Z,167nm,1.0s
KIV pmax pmax
comp=Z,46nm,3.8s
KIV Kislovodsk 65.79 308 P **P** **15 20 52.0 -0.3**
KIV Kislovodsk 65.79 308 *e*P **P** **15 20 52.6 +0.3**
KBZ Khabaz 65.80 308 P **P** **15 20 52.2 0.0**
comp=Z,33nm,0.8s,baz=27,slow=5.9,SNR=14
comp=Z,33nm,0.8s
KBZ Khabaz 65.80 308 *d i*P **P** **15 20 52.6 +0.4**
KBZ pmax pmax
comp=Z,49nm,0.9s
KBZ Khabaz 65.80 308 *e*P **P** **15 20 52.6 +0.4**
PSA00 Pilbara Seismi 65.82 199 P **P** **15 20 52.6 +0.2**
PSA00 Pilbara Seismi 65.82 199 P **P** **15 20 52.0 -0.5**
PSA00 lAmb lAmb 15 20 53.3
comp=Z,23nm,1.0s
PSA00 Pilbara Seismi 65.82 199 lAmb lAmb 15 20 53.3
comp=Z,28nm,1.0s
SHA1 Shidzhatmaz 65.94 308 *d i*P **P** **15 20 54.1 +0.7**
ERBR Yeremizino-Bor 66.02 311 *e*P **P** **15 20 53.9 +0.4**
ERBR *e**PP **pP** **15 21 46.2 +0.1**
ERBR *e*S **S** **15 29 22.8 +0.8**
ERBR pmax pmax
comp=Z,138nm,0.7s
D05A Enumclaw 66.05 47 lAmb lAmb 15 20 56.1
comp=Z,26nm,0.7s
NEUR Neytrino 66.19 307⇑ *i*P **P** **15 20 57.0 +2.1**
NEUR pmax pmax
comp=Z,23nm,1.2s
JASK Jask - Hormozg 66.39 284 P **P** **15 20 57.6 +1.4**
LABN Labinsk 66.52 310 *e*P **P** **15 20 57.4 +0.6**
LABN *e**PP **pP** **15 21 50.5 +1.1**
LABN *e*S **S** **15 29 29.9 +1.8**
LABN pmax pmax
comp=Z,114nm,0.8s
EDM Edmonton 66.66 38 P **P** **15 20 58.1 +0.5**
EDM lAmb lAmb 15 20 59.3
comp=Z,42nm,1.0s
EDM Edmonton 66.66 38 P **P** **15 20 58.1 +0.5**
EDM pmax pmax
comp=Z,42nm,1.0s
LTY Liberty 66.72 47 lAmb lAmb 15 20 59.9
comp=Z,41nm,1.5s
B08A Colville Reser 66.76 45 lAmb lAmb 15 21 00.2
comp=Z,45nm,1.5s

GNI Garni 66.80 304 P **P** **15 20 59.9 +1.1**
GNI Garni 66.80 304⇓ *e*P **P** **15 20 58.9 +0.1**
GNI pmax pmax
comp=Z,34nm,1.0s
GNI Garni 66.80 304 P **P** **15 21 00.3 +1.5**
MNK Minsk 66.88 324 *i* P **P** **15 21 00.1 +1.2**
comp=E,29nm,0.8s
MNK *i* P **P** **15 21 00.1 +1.2**
comp=N,27nm,0.9s
MNK *i* P **P** **15 21 00.1 +1.2**
comp=Z,75nm,0.8s,baz=49
MNK *i* pP **pP** **15 21 53.0 +1.4**
MNK *i* PP **PP** **15 23 30.5 +1.7**
MNK *i* PPP PPP 15 25 10.4
MNK *i* S **S** **15 29 34.8 +2.8**
MNK *i* sS **sS** **15 31 08.2 +1.7**
MNK *i* SS **SS** **15 33 59.0 +4.8**
MNK *i* SSS SSS 15 37 15.6
MNK *i* LR LR 15 54 38.5
MNK Minsk 66.88 324 *i* P **P** **15 21 00.0 +1.2**
MNK *i* *PP **pP** **15 21 52.9 +1.4**
MNK *i* 15 23 30.4
MNK *i* PPP PPP 15 25 10.3
MNK *i* S **S** **15 29 34.8 +2.8**
MNK *i* SS **SS** **15 33 58.9 +4.8**
MNK pmax pmax
comp=N,27nm,0.9s
MNK pmax pmax
comp=Z,75nm,0.8s
MNK pmax pmax
comp=E,29nm,0.8s
MNK MLR MLR
comp=N,78nm,13.0s
MNK MLR MLR
comp=Z,102nm,12.0s
MNK MLR MLR
comp=E,53nm,10.0s
NAX Nakhchivan 66.91 302 P **P** **15 21 00.0 +0.6**
H04D Lebanon 67.24 50 lAmb lAmb 15 21 04.0
comp=Z,25nm,0.8s
EPH Ephrata 67.24 46 lAmb lAmb 15 21 02.4
comp=Z,17nm,0.6s
BUCK Buck Mountain 67.29 50 lAmb lAmb 15 21 04.8
comp=Z,37nm,0.8s
MXC Moxie City 67.34 47 lAmb lAmb 15 21 04.3
comp=Z,18nm,0.9s
WSAR Wadi Sarin 67.42 281 P **P** **15 21 04.7 +1.9**
BANOM Banah 67.48 285 *i* P **P** **15 21 03.4 +0.3**
SNR=8.6
BANOM Banah 67.48 285 P **P** **15 21 04.0 +0.9**
SHME Shamm 67.52 285 *i* P **P** **15 21 03.4 +0.1**
SNR=15
SHME Shamm 67.52 285 P **P** **15 21 03.8 +0.5**
JLN Jalan Bani Buh 67.52 280 P **P** **15 21 04.3 +0.9**
WBK Wadi Bani Khal 67.56 281 P **P** **15 21 05.4 +1.7**
SNR=5.9
E07A Sunnyside 67.59 47 lAmb lAmb 15 21 05.8
comp=Z,26nm,0.9s
G05A Wamic 67.60 49 lAmb lAmb 15 21 11.8
comp=Z,32nm,0.8s
BIDO Bidbid 67.62 282 P **P** **15 21 05.6 +1.6**
VSLR Vesyoloye 67.63 309 *d i*P **P** **15 21 04.3 +0.6**
VSLR pmax pmax
comp=Z,60nm,0.7s
C09A Chrisman Ranch 67.66 45 P **P** **15 21 04.6 +0.7**
C09A lAmb lAmb 15 21 05.8
comp=Z,38nm,0.8s
D08A Wollman Farm, 67.78 46 lAmb lAmb 15 21 06.1
comp=Z,18nm,0.7s
MDH Madha 67.86 285 P **P** **15 21 08.2 +2.7**
HAWA Hanford 67.87 47 lAmb lAmb 15 21 07.3
comp=Z,29nm,0.7s
MASF Masafi 67.92 285 P **P** **15 21 06.3 +0.5**
MSFE Esma-Masafi 67.92 285 P **P** **15 21 06.5 +0.6**
SMDO Samad 67.96 282 P **P** **15 21 07.2 +0.9**
F07A Phinny Hill Vi 67.96 48 lAmb lAmb 15 21 08.2
comp=Z,34nm,0.8s
NEW Newport 67.97 44 lAmb lAmb 15 21 07.8
comp=Z,20nm,0.8s
WIFE Three Sisters- 68.04 50 lAmb lAmb 15 21 09.0
comp=Z,20nm,0.8s
E08A Dider Farm, El 68.06 47 lAmb lAmb 15 21 08.4
comp=Z,30nm,0.7s
I05D Terrebonne, OR 68.14 50 lAmb lAmb 15 21 09.2
comp=Z,38nm,0.8s
UOSS Minazif 68.14 284 P **P** **15 21 07.2 -0.1**
UOSS Minazif 68.14 284 *i* P **P** **15 21 07.4 +0.2**
SNR=14
UOSS Minazif 68.14 284 P **P** **15 21 08.1 +0.8**
HOQ Hoqain 68.17 282 P **P** **15 21 07.9 +0.5**
SNR=6.5
L02F Cave Junction 68.22 53 lAmb lAmb 15 21 10.0
comp=Z,24nm,0.9s
HATD Hatta, Dubai 68.27 284 *i* P **P** **15 21 09.0 +1.0**
SNR=30
HATD Hatta, Dubai 68.27 284 P **P** **15 21 08.3 +0.3**
SNR=6.2
ANN Anapa 68.28 311 *e*P **P** **15 21 08.0 +0.3**
ANN *e**PP **pP** **15 22 01.0 +0.4**
ANN *e* 15 23 40.7
ANN *e*S **S** **15 29 50.0 +1.0**
ANN *e*SS **SS** **15 34 18.9 +2.7**
ANN pmax pmax
comp=Z,48nm,0.7s
DOMB Dombas 68.32 337 *e*P **P** **15 21 08.0 +0.2**
DOMB lAmb lAmb 15 21 08.3
comp=Z,18nm,0.6s
EIDS Eidsvold 68.33 168 P **P** **15 21 09.1 +1.0**
MOL Molde 68.33 338 *e*P **P** **15 21 08.0 +0.2**
MOL lAmb lAmb 15 21 08.5
comp=Z,27nm,0.9s
JMDO Jabal Madar 68.34 281 P **P** **15 21 09.1 +0.6**
SNR=6.4
HFS Hagfors 68.36 334 P **P** **15 21 07.9 -0.1**
comp=Z,4.3nm,0.5s,baz=50,slow=4.6,SNR=25
HFS pP **pP** **15 22 03.6 +2.7**
comp=Z,6.8nm,0.7s,baz=60,slow=8.9,SNR=3.1
HFS PP **PP** **15 23 37.9 -3.5**
comp=Z,5.0nm,0.7s,baz=48,slow=4.4,SNR=3.7
comp=Z,4.3nm,0.5s
YPT Yellepit 68.39 47 lAmb lAmb 15 21 10.7
comp=Z,28nm,0.8s
SOHO SOHO 68.40 283 P **P** **15 21 09.3 +0.5**
SOHO SOHO 68.40 283 P **P** **15 21 09.3 +0.5**
NC204 NORSAR Array S 68.41 336 lAmb lAmb 15 21 09.7
comp=Z,33nm,0.9s
NB2 NORSAR Subarra 68.46 335 P **P** **15 21 08.4 -0.2**
comp=Z,15nm,0.7s,baz=40,slow=6.5
NB2 PP **PP** **15 23 42.3 0.0**
comp=Z,14nm,1.0s,baz=43,slow=9.3
NB2 NORSAR Subarra 68.46 335 P **P** **15 21 08.4 -0.2**
NOA NORSAR Array B 68.46 335 P **P** **15 21 08.7 0.0**
comp=Z,13nm,0.8s,baz=39,slow=6.2,SNR=28
NOA PP **PP** **15 23 39.2 -3.1**
comp=Z,5.5nm,0.8s,baz=42,slow=8.8,SNR=6.3
comp=Z,13nm,0.8s
NAZ Nazwa, Dubai 68.50 285 P **P** **15 21 09.7 +0.3**
NAZ Nazwa, Dubai 68.50 285 P **P** **15 21 10.1 +0.7**
NC602 NORSAR Array S 68.59 335 *e*P **P** **15 21 08.8 -0.5**
NORES NORESS Array B 68.59 335 P **P** **15 21 10.5 +1.1**
FAQ Al Faqa, Dubai 68.70 284 P **P** **15 21 10.6 -0.1**
FAQ Al Faqa, Dubai 68.70 284 P **P** **15 21 10.8 +0.1**
QLP Quilpie 68.73 174 P **P** **15 21 12.2 +1.6**
AK03 Malin Array Si 68.75 320 P **P** **15 21 10.3 -0.2**
AKASG Malin Array Be 68.77 320 P **P** **15 21 10.6 0.0**
comp=Z,38nm,0.7s,baz=46,slow=6.1,SNR=205
AKASG PP **PP** **15 23 41.0 -4.2**
comp=Z,5.7nm,0.8s,baz=46,slow=8.8,SNR=4.2
comp=Z,38nm,0.7s
AKASG Malin Array Be 68.77 320 P **P** **15 21 10.4 -0.2**
AKASG Malin Array Be 68.77 320 P **P** **15 21 10.4 -0.2**
AKASG pmax pmax
comp=Z,141nm,1.2s
AKBB Malin Array Si 68.77 320 *d i*P **P** **15 21 10.3 -0.3**
AKBB pmax pmax
comp=Z,62nm,0.8s
AKBB Malin Array Si 68.77 320 P **P** **15 21 10.5 -0.1**
BSY Bisya 68.77 282 P **P** **15 21 12.2 +1.0**
SNR=8.6
KIEV Kiev 68.78 320⇑ P **P** **15 21 11.0 +0.3**
KIEV Kiev 68.78 320 P **P** **15 21 10.3 -0.3**
KIEV Kiev 68.78 320 *i* P **P** **15 21 10.4 -0.3**
SNR=24
KIEV Kiev 68.78 320 P **P** **15 21 10.3 -0.3**
KIEV pmax pmax
comp=Z,49nm,0.8s
KIEV Kiev 68.78 320 P **P** **15 21 10.4 -0.3**
comp=Z,279nm,1.2s
KIEV Kiev 68.78 320 P **P** **15 21 10.3 -0.3**
KIEV pP **pP** **15 22 03.2 -0.4**
AK08 Malin Array Si 68.80 320 P **P** **15 21 10.8 0.0**
AK21 Malin Array Si 68.80 320 P **P** **15 21 10.7 -0.2**
AK10 Malin Array Si 68.82 320 P **P** **15 21 11.0 0.0**
LNOR Lincton Mounta 68.87 47 lAmb lAmb 15 21 14.7
comp=Z,15nm,0.7s
AK07 Malin Array Si 68.88 320 P **P** **15 21 11.2 -0.1**
ARQ Araqi 68.89 283 P **P** **15 21 13.2 +1.3**
SNR=5.7
GEVA Gevas 68.94 303 lAmb lAmb 15 21 13.9
comp=Z,25nm,1.2s
YBH Yreka Blue Hor 68.96 52 lAmb lAmb 15 21 14.8
comp=Z,21nm,0.9s
ASUD Al Ashush, Dub 68.96 285 *i* P **P** **15 21 12.5 +0.2**
SNR=6.3
ALNE Al Ain 69.01 284 *i* P **P** **15 21 13.1 +0.4**
SNR=24
ALNE Al Ain 69.01 284 P **P** **15 21 13.2 +0.6**
SNR=13
MHTO MHTO 69.29 280 P **P** **15 21 15.3 +1.0**
SNR=14
KHBM Hayfork Bally 69.32 54 lAmb lAmb 15 21 17.1
comp=Z,28nm,1.1s
N02D Trinity Center 69.43 53 lAmb lAmb 15 21 17.8
comp=Z,22nm,0.8s
KOPT Kop Dagi 69.47 306 lAmb lAmb 15 21 18.6
comp=Z,53nm,1.3s
M03C McCloud 69.59 52 lAmb lAmb 15 21 18.4
comp=Z,49nm,1.0s
SKAR Skarslia 69.62 336 *e*P **P** **15 21 16.3 +0.5**
KCPM Cahto Peak 69.71 55 lAmb lAmb 15 21 19.2
comp=Z,33nm,0.9s
INKA Innaminka 69.71 178 lAmb lAmb 15 21 18.6
comp=Z,22nm,0.8s
HYA Hoyanger 69.85 338 *e*P **P** **15 21 17.7 +0.7**
RNPP9 Sopachiv 69.85 322 P **P** **15 21 17.5 +0.3**
O02D Mt. Diablo Mer 69.88 54 lAmb lAmb 15 21 20.5
comp=Z,55nm,1.2s
RNPP8 Varash 69.92 322 P **P** **15 21 17.6 0.0**
RNPP5 Staryi Chortor 69.97 322 P **P** **15 21 18.1 +0.1**
LUBAR Lubar, Ukraine 69.99 320 P **P** **15 21 18.1 0.0**
MSVF Nonsavu 70.02 140 P **P** **15 21 19.2 +0.5**
MSVF Nonsavu 70.02 140 P **P** **15 21 21.0 +2.3**
MSVF lAmb lAmb 15 21 22.4
comp=Z,42nm,0.9s
MSVF Nonsavu 70.02 140 P **P** **15 21 21.0 +2.3**
MSVF pmax pmax
comp=Z,42nm,0.9s
SIM Simferopol' 70.02 313 *e*P **P** **15 21 17.9 -0.5**
SIM *e* 15 21 40.0
SIM *e*S **S** **15 30 03.0 -6.3**
SIM pmax pmax
comp=Z,95nm,1.1s
KONO Kongsberg 70.05 335 *e*P **P** **15 21 18.8 +0.5**
BMO Blue Mountains 70.05 47 lAmb lAmb 15 21 20.8
comp=Z,24nm,0.9s
FCC Fort Churchill 70.32 26 lAmb lAmb 15 21 21.3
comp=Z,24nm,1.0s
J08A Circle Bar Ran 70.37 49 lAmb lAmb 15 21 23.2
comp=Z,25nm,0.8s
FFC Flin Flon 70.52 32 P **P** **15 21 21.8 +0.5**
FFC lAmb lAmb 15 21 22.9
comp=Z,37nm,0.8s
FFC Flin Flon 70.52 32 P **P** **15 21 21.8 +0.5**
FFC pmax pmax
comp=Z,37nm,0.8s
FFC Flin Flon 70.52 32 P **P** **15 21 21.9 +0.7**
FFC PcP **PcP** **15 21 41.5 +0.5**
FFC pP **pP** **15 22 14.3 -0.5**
GDXM Geysers 70.73 55 lAmb lAmb 15 21 25.7
comp=Z,36nm,1.1s
WVOR Wild Horse Val 70.87 50 lAmb lAmb 15 21 26.0
comp=Z,30nm,1.1s
SORM Soroca 70.91 318⇓ P **P** **15 21 23.6 -0.2**
SORM Soroca 70.91 318 P **P** **15 21 23.5 -0.2**
SORM Soroca 70.91 318 P **P** **15 21 23.5 -0.2**
MEEK Meekatharra 70.98 199 P **P** **15 21 24.7 +0.4**
NDNU Novodnistrovsk 71.08 319 P **P** **15 21 24.8 +0.1**
SUTB Sutter Butte 71.08 54 lAmb lAmb 15 21 26.4
comp=Z,27nm,1.0s
CVS Carmenet Viney 71.23 55 lAmb lAmb 15 21 28.4
comp=Z,27nm,1.0s
MZR Muzera 71.30 284 *i* P **P** **15 21 26.4 -0.1**
SNR=38
MZR Muzera 71.30 284 P **P** **15 21 26.6 +0.2**
SNR=6.3
BEKR Beckworth 71.52 53 lAmb lAmb 15 21 29.7
comp=Z,29nm,0.8s
KBD Kabd 71.53 293 P **P** **15 21 27.1 -0.7**
TOKA Tokat 71.66 308 lAmb lAmb 15 21 30.3
comp=Z,56nm,1.4s
BSD Bornholm Skovb 71.74 330 *i* P **P** **15 21 28.4 -0.1**
BSD lAmb lAmb 15 21 29.1
comp=Z,22nm,0.8s
AFDM Forest Hills D 71.74 54 lAmb lAmb 15 21 30.9
comp=Z,26nm,1.2s
MFID Camas Ranch 71.80 48 lAmb lAmb 15 21 31.6
comp=Z,30nm,1.1s
BEL Belsk 71.81 325 *e*P **P** **15 21 30.8 +1.8**
JRSC Jasper Ridge 71.96 56 lAmb lAmb 15 21 31.9
comp=Z,40nm,0.9s
BZK Bozkurt 72.02 311⇑ P **P** **15 21 31.6 +1.2**
SMRA Abu-Samra 72.11 287 P **P** **15 21 30.4 -0.8**
PAHR Pah Rah Range 72.20 52 lAmb lAmb 15 21 33.8
comp=Z,38nm,0.9s
GKP Gorka Klasztor 72.23 327 *e*P **P** **15 21 29.8 -1.6**
KWP Kalwaria Pacla 72.55 322 *e*P **P** **15 21 34.7 +1.3**
BOZ Bozeman (W) 72.56 44 lAmb lAmb 15 21 35.9
comp=Z,30nm,0.8s
GIRR Girov 72.63 318⇑ P **P** **15 21 34.9 +0.9**
TLCR 72.67 316⇓ P **P** **15 21 34.7 +0.5**
TLCR 72.67 316 P **P** **15 21 34.7 +0.5**
CMB Columbia Colle 72.68 54 lAmb lAmb 15 21 36.7
comp=Z,44nm,1.2s
BUR08 Bucovina Ar. S 72.78 319 lAmb lAmb 15 21 36.7
comp=Z,25nm,0.8s
GHRR 72.79 317⇓ P **P** **15 21 36.0 +1.1**
BURAR Bucovina Array 72.80 319⇓ P **P** **15 21 35.9 +0.8**
BURAR Bucovina Array 72.80 319 P **P** **15 21 35.4 +0.3**
BURAR lAmb lAmb 15 21 37.0
comp=Z,26nm,0.8s
BURAR Bucovina Array 72.80 319 P **P** **15 21 35.9 +0.8**
TESR Tescani 72.86 318⇑ P **P** **15 21 36.1 +0.8**
SHAO Shalim 72.86 279 P **P** **15 21 34.7 -1.1**
SHAO Shalim 72.86 279 P **P** **15 21 34.9 -0.9**
CFR Carcaliu 73.03 316⇓ P **P** **15 21 36.6 +0.3**
CFR Carcaliu 73.03 316 P **P** **15 21 36.6 +0.3**
TPGR Topolog 73.10 316⇑ P **P** **15 21 37.6 +0.8**
ONER Baraj Valea Uz 73.11 318⇑ P **P** **15 21 38.1 +1.3**
GAZ Gaziantep 73.26 305 lAmb lAmb 15 21 40.1
comp=Z,42nm,0.9s
VRI Vrincioaia 73.27 317⇓ P **P** **15 21 38.3 +0.5**
VRI Vrincioaia 73.27 317 P **P** **15 21 38.2 +0.5**
YHL Hebgen Lake 73.30 44 lAmb lAmb 15 21 40.7
comp=Z,26nm,0.8s
PLOR Plostina 73.32 317⇑ P **P** **15 21 39.0 +0.9**
PLOR Plostina 73.32 317 P **P** **15 21 38.9 +0.9**
FORT Forrest 73.33 189 lAmb lAmb 15 21 39.1
comp=Z,14nm,0.7s
ARMA Armidale 73.36 168 lAmb lAmb 15 21 41.1
comp=Z,26nm,1.0s
STHS Stebnicka Huta 73.36 323 *e*P **P** **15 21 39.0 +0.7**
STHS pmax pmax
comp=Z,13nm,0.7s
STHS Stebnicka Huta 73.36 323 *e*P **P** **15 21 39.0 +0.7**
STHS *e*PP **PP** **15 24 26.5 +2.1**
YHB Horse Butte 73.36 44 lAmb lAmb 15 21 41.0
comp=Z,37nm,0.8s
KVN Kaiserville 73.38 52 lAmb lAmb 15 21 41.1
comp=Z,29nm,1.1s
OJC Ojcow 73.42 324 *e*P **P** **15 21 40.0 +1.4**
TURR Turia 73.49 318⇓ P **P** **15 21 40.8 +1.7**
OZUR 73.58 318⇓ P **P** **15 21 41.3 +1.7**
LHV Little Huntoon 73.67 53 lAmb lAmb 15 21 43.3
comp=Z,49nm,1.0s
NVAR Mina Array Bea 73.67 53 P **P** **15 21 41.8 +1.3**
comp=Z,14nm,0.8s,baz=292,slow=5.4,SNR=49
comp=Z,14nm,0.8s
NVAR Mina Array Bea 73.67 53 P **P** **15 21 41.7 +1.2**
BR131 Keskin Array S 73.70 309 lAmb lAmb 15 21 42.0
comp=Z,20nm,0.7s

BR131 **Keskin Array S** 73.70 309 *d* iP P 15 21 41.0 +0.5
BR131 **Keskin Array S** 73.70 309 P P 15 21 41.2 +0.6
SNR=8.5
BRTR **Keskin Array B** 73.70 309 P P 15 21 41.0 +0.5
comp=Z,14nm,0.6s,baz=81,slow=3.6,SNR=95
BRTR PP PP 15 24 23.8 -4.0
comp=Z,2.2nm,0.7s,baz=70,slow=7.3,SNR=4.7
comp=Z,14nm,0.6s
BRTR **Keskin Array B** 73.70 309 P P 15 21 40.5 -0.1
YFT **Old Faithful** 73.76 44 IAmb IAmb 15 21 44.6
comp=Z,22nm,0.8s
CMSA **Cobar Meteorol** 73.77 174 P P 15 21 42.1 +1.5
NIE **Niedzica** 73.78 323 *e*P P 15 21 42.0 +1.3
NEHR **Nehoiu** 73.79 317 ⇓P P 15 21 42.3 +1.4
STKA **Stephens Creek** 73.86 177 P P 15 21 42.1 +1.0
comp=Z,15nm,0.7s,baz=347,slow=6.5,SNR=40
comp=Z,15nm,0.7s
STKA **Stephens Creek** 73.86 177 P P 15 21 42.2 +1.1
STKA **Stephens Creek** 73.86 177 *c* iP P 15 21 41.9 +0.8
DOPR **Dopca** 73.87 318 ⇑P P 15 21 43.0 +1.7
ISR **Istrita** 73.88 317 ⇑P P 15 21 43.1 +1.6
ISR **Istrita** 73.88 317 P P 15 21 43.0 +1.6
YPP **Pitchstone Pla** 73.90 44 IAmb IAmb 15 21 45.2
comp=Z,65nm,1.9s
ELK **Elko** 73.90 49 P P 15 21 43.3 +1.5
YMP **Mirror Lake Pl** 73.91 44 IAmb IAmb 15 21 44.5
comp=Z,25nm,1.3s
MLR **Muntele Rosu** 73.92 317 ⇑P P 15 21 42.2 +0.5
MLR **Muntele Rosu** 73.92 317 IAmb IAmb 15 21 44.1
comp=Z,36nm,1.5s
MLR **Muntele Rosu** 73.92 317 P P 15 21 42.2 +0.5
H17A **Grant Village** 73.93 44 IAmb IAmb 15 21 45.9
comp=Z,32nm,0.8s
ICOR **Ion Corvin** 73.93 315 ⇑P P 15 21 42.2 +0.6
KIRS **Kirsehir-Merke** 73.93 308 ⇓P P 15 21 42.7 +0.9
MORW **Morawa** 73.94 200 P P 15 21 42.8 +1.1
MORW **Morawa** 73.94 200 P P 15 21 41.9 +0.3
MORW IAmb IAmb 15 21 43.1
comp=Z,29nm,0.8s
PKD **Bear Valley Ra** 73.94 56 P P 15 21 42.7 +0.8
PKD IAmb IAmb 15 21 43.9
comp=Z,29nm,0.8s
FLWY **Flagg Ranch** 74.08 44 IAmb IAmb 15 21 46.1
comp=Z,25nm,1.1s
CJR **Cluj-Napoca** 74.21 320 ⇑P P 15 21 44.9 +1.6
CJR **Cluj-Napoca** 74.21 320 P P 15 21 44.8 +1.6
FXWY **Fox Creek** 74.22 45 IAmb IAmb 15 21 46.4
comp=Z,24nm,1.1s
MOOW **Moose Ponds** 74.29 45 IAmb IAmb 15 21 46.9
comp=Z,38nm,1.2s
LANS **Liptovska Anna** 74.35 323 *e*P P 15 21 46.0 +2.0
LANS *e* 15 22 43.6
LANS *e* 15 24 33.2
LANS pmax pmax
comp=Z,8.0nm,0.9s
LANS **Liptovska Anna** 74.35 323 *e*P P 15 21 46.0 +2.0
LANS *e* 15 22 43.6
LANS *e*PP PP 15 24 33.2 +0.4
VOIR 74.41 318 ⇑P P 15 21 45.4 +1.0
VOIR 74.41 318 P P 15 21 45.4 +1.0
KSP **Ksiaz** 74.44 326 *e*P P 15 21 45.6 +1.2
LOHW **Long Hollow** 74.46 45 IAmb IAmb 15 21 47.7
comp=Z,54nm,1.9s
MARR **Marisel-Cluj** 74.47 320 ⇓P P 15 21 45.9 +1.1
LAO **LASA Array** 74.48 40 IAmb IAmb 15 21 47.0
comp=Z,28nm,0.9s
SNOW **Snow King Moun** 74.48 45 IAmb IAmb 15 21 48.0
comp=Z,38nm,1.3s
STEB **Steborice** 74.50 325 *e*P P 15 21 45.8 +1.0
DSP **Deep Springs** 74.57 53 IAmb IAmb 15 21 48.2
comp=Z,37nm,1.1s
ARR **Arges** 74.67 318 ⇑P P 15 21 47.7 +1.8
MORC **Moravsky Berou** 74.72 325 ⇓P P 15 21 47.1 +1.0
MORC **Moravsky Berou** 74.72 325 IAmb IAmb 15 21 48.1
comp=Z,24nm,0.7s
MORC **Moravsky Berou** 74.72 325 P P 15 21 47.1 +1.0
MORC **Moravsky Berou** 74.72 325 *e*P P 15 21 47.0 +0.9
MORC *e* 15 22 38.7
MORC *e* 15 22 44.6
CHVC **Chvalec** 74.73 326 *e*P P 15 21 47.2 +1.0
CHVC *e* 15 21 54.7
CHVC **Chvalec** 74.73 326 *e*P P 15 21 47.2 +1.0
CHVC *e*PCP PcP 15 21 54.7 -4.4
BBOO **Buckleboo** 74.76 182 P P 15 21 47.1 +0.8
BBOO **Buckleboo** 74.76 182 IAmb IAmb 15 21 47.8
comp=Z,23nm,0.8s
AHID **Auburn Hatcher** 74.79 46 IAmb IAmb 15 21 48.8
comp=Z,79nm,1.9s
DPC **Dobruska-Polom** 74.81 326 *e*P P 15 21 48.0 +1.4
DPC *e* 15 21 58.7
DPC *e**PP pwP 15 22 46.2 +0.9
DPC **Dobruska-Polom** 74.81 326 *e*P P 15 21 48.0 +1.4
DPC *e*PCP PcP 15 21 58.7 -0.8
DPC *e*pP pwP 15 22 46.2 +0.9
UPC **Upice** 74.81 326 *e*P P 15 21 47.9 +1.3
UPC **Upice** 74.81 326 *e*P P 15 21 47.9 +1.3
KRLC **Kraliky** 74.82 325 *e*P P 15 21 47.7 +1.0
KRLC *e**PP pwP 15 22 46.1 +0.7
KRLC **Kraliky** 74.82 325 *e*P P 15 21 47.7 +1.0
KRLC *e*pP pwP 15 22 46.1 +0.7
ABTO **Aybut** 75.00 280 P P 15 21 47.5 -0.7
LOT **Lotru** 75.03 319 ⇑P P 15 21 49.1 +1.0
SPUT **South Promonto** 75.06 47 IAmb IAmb 15 21 50.8
comp=Z,23nm,1.1s
PSZ **Piszkesteto** 75.07 322 ⇓P P 15 21 49.6 +1.3
PSZ **Piszkesteto** 75.07 322 IAmb IAmb 15 21 50.4
comp=Z,20nm,1.0s
PSZ **Piszkesteto** 75.07 322 P P 15 21 49.5 +1.3
COPA **Copaceanca** 75.25 317 ⇓P P 15 21 49.5 +0.4
BLDU **Ballidu** 75.25 199 P P 15 21 49.7 +0.6
HWUT **Hardware Ranch** 75.34 47 IAmb IAmb 15 21 52.4
comp=Z,32nm,0.9s
HTT **Hallett** 75.35 180 P P 15 21 51.3 +1.6
JAVC **Velka Javorina** 75.36 324 *e*P P 15 21 51.7 +1.9
JAVC *e* 15 22 49.4
PVCC **Panska Ves** 75.39 327 *e*P P 15 21 50.8 +0.9
PVCC *e* 15 21 58.9
PVCC **Panska Ves** 75.39 327 *e*P P 15 21 50.8 +0.9
PVCC *e*PCP PcP 15 21 58.9 -3.0
BORA **Eskisehir** 75.41 311 IAmb IAmb 15 21 51.7
comp=Z,16nm,0.7s
CLL **Collm** 75.41 328 IAmb IAmb 15 21 51.2
comp=Z,24nm,0.7s
CLL **Collm** 75.41 328 *i* P P 15 21 50.3 +0.4
CLL *i* *PP pP 15 22 48.1 +4.2
CLL pmax pmax
comp=Z,24nm,0.7s
CLL **Collm** 75.41 328 *i* P P 15 21 50.3 +0.4
comp=Z,24nm,0.7s
CLL *i* x x 15 21 59.0
CLL *i* x x 15 22 42.3
CLL *i* pP pP 15 22 48.1 +4.2
CLL *es*P sP 15 23 17.0 +8.5
CLL *ex* x 15 24 31.0
CLL *e*PP PP 15 24 41.0 -0.6
comp=Z,24nm,1.2s
VRAC **Vranov** 75.48 325 ⇑P P 15 21 52.1 +1.6
VRAC **Vranov** 75.48 325 P P 15 21 52.0 +1.6
VRAC **Vranov** 75.48 325 *e*P P 15 21 51.7 +1.3
VRAC *e* 15 22 43.4
VRAC *e* 15 22 49.8
GZR **Gura Zlata** 75.56 319 ⇓P P 15 21 51.7 +0.6
GZR **Gura Zlata** 75.56 319 P P 15 21 51.6 +0.6
BW06 **Boulder Array** 75.60 45 IAmb IAmb 15 21 53.2
comp=Z,39nm,0.9s
PD31 **Pinedale Array** 75.60 45 IAmb IAmb 15 21 53.2
comp=Z,38nm,0.9s
PDAR **Pinedale Array** 75.60 45 P P 15 21 52.2 +0.7
comp=Z,29nm,0.7s,baz=286,slow=0.9,SNR=272
comp=Z,29nm,0.7s
PDAR **Pinedale Array** 75.60 45 P P 15 21 52.0 +0.5
DUG **Dugway, Tooele** 75.63 48 IAmb IAmb 15 21 54.0
comp=Z,30nm,0.8s
S11A **Rachel** 75.69 52 IAmb IAmb 15 21 54.5
comp=Z,36nm,1.1s
SMOL **Smolenice** 75.72 324 *e*P P 15 21 53.4 +1.6
SMOL pmax pmax
comp=Z,12nm,1.2s
KRUC **Moravsky** 75.75 325 *e*P P 15 21 52.8 +0.9
KRUC *e* 15 22 50.7
ELND **Elena** 75.76 316 ⇓P P 15 21 52.8 +0.7
HSKC **Hora Svate Kat** 75.79 327 *e*P P 15 21 53.0 +0.9
HSKC *e*pP pwP 15 22 51.1 +0.1

PRU **Pruhonice** 75.82 326 *e*P P 15 21 53.2 +0.9
PRU *e* 15 22 02.1
PRU **Pruhonice** 75.82 326 *e*P P 15 21 53.2 +0.9
PRU *e*PCP PcP 15 22 02.1 -1.7
CLC **China Lake** 75.82 54 IAmb IAmb 15 21 54.7
comp=Z,29nm,0.9s
SRO **Srobarova** 75.86 323 *e*P P 15 21 53.8 +1.3
SRO *e* 15 22 52.0
SRO pmax pmax
comp=Z,29nm,0.9s
SRO **Srobarova** 75.86 323 *e*P P 15 21 53.8 +1.3
SRO *e* 15 22 52.0
TPNV **Topopah Spring** 75.87 53 IAmb IAmb 15 21 55.3
comp=Z,30nm,0.8s
MODS **Modra-Piesok** 75.89 324 *e*P P 15 21 54.6 +1.8
MODS *e* 15 22 52.6
MODS *e* 15 24 44.3
MODS pmax pmax
comp=Z,45nm,1.4s
MODS **Modra-Piesok** 75.89 324 *e*P P 15 21 54.6 +1.8
MODS *e* 15 22 52.6
MODS *e*PP PP 15 24 44.3 -1.5
KLBR **Kellerberrin** 75.94 198 P P 15 21 53.5 +0.5
BZS **Buzias** 75.96 320 ⇓P P 15 21 53.7 +0.5
BZS **Buzias** 75.96 320 P P 15 21 53.6 +0.5
LRMC **Laurel Mtn Rad** 76.00 55 IAmb IAmb 15 21 55.6
comp=Z,23nm,1.2s
TPO **Tropico Hills** 76.06 56 IAmb IAmb 15 21 56.3
comp=Z,34nm,0.8s
PLVB **Pleven** 76.08 317 ⇑P P 15 21 54.8 +0.9
GWY **Greenwater Val** 76.13 54 IAmb IAmb 15 21 56.6
comp=Z,32nm,1.0s
ULM **Lac du Bonnet** 76.35 32 P P 15 21 55.1 -0.1
comp=Z,37nm,0.7s,baz=322,slow=6.0,SNR=47
comp=Z,37nm,0.7s
ULM **Lac du Bonnet** 76.35 32 IAmb IAmb 15 21 56.3
comp=Z,36nm,0.7s
BAND **Balkesir-Ban** 76.38 312 ⇑P P 15 21 56.7 +1.0
ZVC **Zvikov** 76.39 326 *e*P P 15 21 56.7 +1.2
MDVR **Moldovita** 76.52 319 ⇓P P 15 21 56.7 +0.3
SHOC **Shoshone, Teco** 76.56 54 IAmb IAmb 15 21 58.9
comp=Z,27nm,1.0s
MWC **Mount Wilson** 76.61 56 IAmb IAmb 15 21 58.5
comp=Z,19nm,0.8s
WINA **Alland / Wiene** 76.62 324 *i* P P 15 21 58.0 +1.2
WINA comp=Z,10nm,0.7s *i* pP pwP 15 22 56.5 +0.7
comp=Z,9.2nm,0.8s
RAYN **Ar Rayn** 76.63 290 P P 15 21 56.8 -0.6
RAYN **Ar Rayn** 76.63 290 *i* P P 15 21 57.3 0.0
SNR=8.9
RAYN **Ar Rayn** 76.63 290 P P 15 21 56.8 -0.6
RAYN pmax pmax
comp=Z,8.0nm,0.6s
GSC **Goldstone, Bar** 76.65 54 IAmb IAmb 15 21 59.3
comp=Z,24nm,0.9s
RONA **Rosalia, Austr** 76.84 324 *i* P P 15 21 59.4 +1.3
comp=Z,17nm,0.8s,SNR=8.0
RONA *i* pP pwP 15 22 58.2 +1.1
comp=Z,15nm,1.0s
RONA *e*PP PP 15 24 48.1 -5.6
comp=Z,9.7nm,1.1s
CONA **Conrad Observa** 76.85 324 *e*P P 15 21 59.4 +1.1
comp=Z,13nm,0.9s,SNR=6.3
CONA *e*pP pwP 15 22 58.0 +0.7
comp=Z,9.9nm,0.9s
CONA *e*PP PP 15 24 45.3 -8.5
comp=Z,7.9nm,1.5s
KHC **Kasperske Hory** 76.88 326 ⇓ *i* P P 15 21 59.1 +0.8
KHC pmax pmax
comp=Z,13nm,0.7s
KHC **Kasperske Hory** 76.88 326 *e*P P 15 21 59.3 +1.0
KHC *e*PCP PcP 15 22 07.7 -0.8
KHC *e*pP pwP 15 22 57.9 +0.6
KHC *ex* x 15 24 33.5
MORH **Mrgy, Hungar** 76.91 322 ⇓P P 15 21 58.8 +0.4
GERES **GERESS Array B** 77.05 326 P P 15 21 59.5 +0.1
comp=Z,3.9nm,0.7s,baz=39,slow=5.1,SNR=21
GERES PP PP 15 24 54.1 -1.4
comp=Z,0.9nm,0.6s,baz=55,slow=7.2,SNR=4.9
comp=Z,3.9nm,0.7s
MMAI **Mount Meron Ar** 77.11 303 P P 15 22 00.6 +0.6
comp=Z,16nm,0.8s,baz=28,slow=14,SNR=12
comp=Z,16nm,0.8s
ALN **Alexandroupoli** 77.11 314 IAmb IAmb 15 22 01.3
comp=Z,26nm,0.8s
E28A **Huff** 77.14 37 IAmb IAmb 15 22 00.9
comp=Z,23nm,0.7s
RDMU **Red Mountain** 77.14 46 IAmb IAmb 15 22 02.4
comp=Z,47nm,1.0s
MTPC **Mountain Pass** 77.27 54 IAmb IAmb 15 22 03.1
comp=Z,24nm,1.0s
P17A **Butcher Ranch,** 77.28 48 IAmb IAmb 15 22 03.2
comp=Z,30nm,0.7s
NWAO **Narrogin (SRO)** 77.34 198 P P 15 22 01.4 +0.5
comp=Z,28nm,0.9s,baz=39,slow=5.1,SNR=8.4
comp=Z,28nm,0.9s
NWAO **Narrogin (SRO)** 77.34 198 P P 15 22 01.6 +0.8
ELS **Elsinore Mount** 77.38 56 IAmb IAmb 15 22 03.3
comp=Z,47nm,1.6s
GRA1 **Grafenberg Arr** 77.39 328 IAmb IAmb 15 22 03.2
comp=Z,20nm,0.8s
GRFO **Grafenberg** 77.39 328 P P 15 22 02.7 +1.6
GRFO **Grafenberg** 77.39 328 P P 15 22 02.7 +1.6
RSSD **Black Hills** 77.41 41 P P 15 22 01.5 -0.1
RSSD IAmb IAmb 15 22 03.1
comp=Z,24nm,0.8s
RSSD **Black Hills** 77.41 41 P P 15 22 01.5 -0.1
RSSD pmax pmax
comp=Z,24nm,0.9s
RSSD **Black Hills** 77.41 41 P P 15 22 02.1 +0.5
EKA **Eskdalemuir Ar** 77.41 339 P P 15 22 01.2 +0.2
comp=Z,4.4nm,0.8s,baz=22,slow=5.6,SNR=6.0
EKA PP PP 15 24 57.0 -1.1
comp=Z,9.3nm,1.0s,baz=34,slow=8.1,SNR=5.7
comp=Z,4.4nm,0.8s
Q16A **Castle Valley** 77.43 49 IAmb IAmb 15 22 04.4
comp=Z,62nm,1.6s
P18A **Preston Nutter** 77.44 47 IAmb IAmb 15 23 58.0
comp=Z,34nm,0.7s
MTPU **Mount Pierson** 77.47 50 IAmb IAmb 15 22 05.1
comp=Z,57nm,1.6s
ARSA **Arzberg** 77.52 324 *e*P P 15 22 02.8 +0.9
comp=Z,10nm,1.2s
V12A **Nelson** 77.53 53 IAmb IAmb 15 22 04.7
comp=Z,56nm,1.7s
MOA **Molln** 77.59 325 *i* P P 15 22 03.1 +0.9
comp=Z,4.7nm,0.8s
MOA *e*pP pwP 15 23 02.4 +0.9
comp=Z,6.3nm,1.2s
MOA *e*PP PP 15 24 52.8 -7.1
comp=Z,5.6nm,1.0s
EPLO **Experimental L** 77.65 32 IAmb IAmb 15 22 03.3
comp=Z,28nm,0.9s
SRU **San Rafael Swe** 77.65 48 IAmb IAmb 15 22 05.0
comp=Z,42nm,1.0s
PKCU **Pink Cliffs** 77.82 50 IAmb IAmb 15 22 07.0
comp=Z,49nm,1.4s
CAN **Canberra** 77.84 171 P P 15 22 04.5 +0.9
CAN **Canberra** 77.84 171 IAmb IAmb 15 22 06.2
comp=Z,27nm,1.1s
ELL **Elmali** 77.87 309 IAmb IAmb 15 22 12.8
comp=Z,46nm,1.2s
DANC **Danby, Needles** 77.95 54 IAmb IAmb 15 22 06.9
comp=Z,25nm,0.8s
BIOA **Bad Ischl, Aus** 77.98 325 *i* P P 15 22 05.5 +1.1
comp=Z,9.4nm,0.7s,SNR=5.3
BIOA *i* pP pwP 15 23 04.3 +0.6
comp=Z,15nm,1.3s
PFO **Pinyon Flats O** 78.00 55 P P 15 22 05.3 +0.4
PFO IAmb IAmb 15 22 06.8
comp=Z,27nm,1.1s
PFO **Pinyon Flats O** 78.00 55 P P 15 22 05.3 +0.4
PFO pmax pmax
comp=Z,27nm,1.1s
O20A **White River Ci** 78.16 46 IAmb IAmb 15 22 07.5
comp=Z,49nm,1.5s
PERS **Pernice** 78.17 324 *i* P P 15 22 06.3 +0.8
PERS *e*pP pwP 15 23 04.8 +0.1
SOKA **Soboth** 78.17 324 *i* P P 15 22 06.2 +0.6
comp=Z,19nm,1.0s,SNR=12
SOKA *i* pP pwP 15 23 05.2 +0.4
comp=Z,24nm,1.3s
SOKA *e*PP PP 15 24 59.8 -5.1
comp=Z,5.2nm,1.4s
BORC **Borrego Spring** 78.26 56 IAmb IAmb 15 22 08.0
comp=Z,25nm,1.1s
IRM **Iron Mountain** 78.42 54 IAmb IAmb 15 22 09.5
comp=Z,39nm,1.4s
BAR **Barrett** 78.50 56 IAmb IAmb 15 22 09.2
comp=Z,68nm,1.8s
OBKA **Obir** 78.51 324 *i* P P 15 22 07.8 +0.4
OBKA comp=Z,7.0nm,0.8s *e*pP pwP 15 23 06.5 -0.2
OBKA comp=Z,5.0nm,1.0s *e*PP PP 15 25 01.5 -6.3
comp=Z,7.6nm,1.3s
U15A **North Rim** 78.54 51 IAmb IAmb 15 22 10.7
comp=Z,35nm,0.8s
BTNL **Ternell** 78.57 331 *d*P P 15 22 08.0 +0.4
comp=Z,7.7nm,1.0s
KBA **Koelnbreinsper** 78.58 325 *i* P P 15 22 08.5 +0.5
comp=Z,9.3nm,0.7s,SNR=9.5
KBA *e*pP pwP 15 23 07.8 +0.6
KBA comp=Z,5.7nm,0.5s *e*PP PP 15 25 01.3 -7.1
comp=Z,3.5nm,0.8s
LESA **Schwarzleotal** 78.59 326 *i* P P 15 22 08.7 +0.9
comp=Z,5.1nm,0.7s,SNR=7.2
LESA *i* pP pwP 15 23 08.3 +1.1
comp=Z,11nm,1.0s
LESA *i* PP PP 15 25 03.0 -5.4
comp=Z,4.8nm,1.0s
MYKA **Terra Mystica** 78.81 325 *i* P P 15 22 09.1 +0.1
comp=Z,13nm,1.2s
MYKA *i* pP pwP 15 23 08.8 +0.5
comp=Z,10nm,1.0s
MYKA *e*PP PP 15 25 04.0 -6.1
comp=Z,3.4nm,0.7s
LJU **Ljubljana** 78.89 324 *e*P P 15 22 09.4 0.0
BOJS **Bojanci** 78.98 323 *i* P P 15 22 10.2 +0.4
BOJS *i* 15 22 21.7
YUH **Yuha Desert** 78.98 56 IAmb IAmb 15 22 12.0
comp=Z,27nm,1.3s
PV04 **Paradox Valley** 79.05 48 IAmb IAmb 15 22 13.0
comp=Z,29nm,0.9s
BLYC **Blythe** 79.08 54 IAmb IAmb 15 22 12.9
comp=Z,32nm,1.1s
PV17 **East Wray Mesa** 79.10 48 IAmb IAmb 15 22 13.1
comp=Z,39nm,0.9s
PV16 **Nyswonger Mesa** 79.11 48 IAmb IAmb 15 22 13.2
comp=Z,42nm,1.2s
WATA **Walderalm** 79.12 326 *i* P P 15 22 11.5 +0.7
comp=Z,5.0nm,0.6s
WATA *e*pP pwP 15 23 10.4 +0.3
comp=Z,17nm,1.4s
WATA *e*PP PP 15 25 09.4 -3.4
comp=Z,11nm,1.2s
PV11 **David Mesa, Pa** 79.14 48 IAmb IAmb 15 22 13.4
comp=Z,64nm,1.4s
WTTA **Wattenberg** 79.15 326 *i* P P 15 22 11.8 +0.8
comp=Z,6.2nm,0.7s
WTTA *e*pP pwP 15 23 10.8 +0.4
comp=Z,8.9nm,1.2s
WTTA *e*PP PP 15 25 11.6 -1.5
comp=Z,12nm,1.1s
PV18 **Skein Mesa, Pa** 79.16 48 IAmb IAmb 15 22 12.9
comp=Z,38nm,0.8s
PV07 **Paradox Valley** 79.16 47 IAmb IAmb 15 22 13.3
comp=Z,20nm,0.9s
PV12 **Saucer Basin,** 79.16 48 IAmb IAmb 15 22 15.7
comp=Z,22nm,0.7s
PV03 **Paradox Valley** 79.18 48 IAmb IAmb 15 22 13.6
comp=Z,17nm,0.7s
ABTA **Abfaltersbach** 79.20 325 *i* P P 15 22 11.2 0.0
comp=Z,2.9nm,0.7s
ABTA *e*pP pwP 15 23 10.2 -0.2
comp=Z,3.1nm,0.6s
ABTA *e*PP PP 15 25 08.6 -4.8
comp=Z,2.4nm,0.7s
PV13 **Radium Mtn., P** 79.27 48 IAmb IAmb 15 22 14.7
comp=Z,26nm,0.7s
PV02 **Paradox Valley** 79.28 48 IAmb IAmb 15 22 13.9
comp=Z,27nm,0.6s
BMRD **Maredsous** 79.29 332 *d*P P 15 22 11.7 +0.3
comp=Z,12nm,0.8s
MOTA **Moosalm** 79.31 327 *i* P P 15 22 12.3 +0.5
comp=Z,5.8nm,0.6s,SNR=7.9
MOTA *e*pP pwP 15 23 12.0 +0.8
comp=Z,21nm,1.3s
MOTA *e*PP PP 15 25 09.6 -4.7
comp=Z,4.0nm,0.9s
PV15 **Paradox Valley** 79.32 47 IAmb IAmb 15 22 14.2
comp=Z,28nm,0.9s
RETA **Reutte** 79.33 327 *i* P P 15 22 12.8 +1.0
comp=Z,19nm,0.8s
RETA *e*pP pwP 15 23 11.6 +0.4
comp=Z,7.3nm,0.7s
SQTA **Sankt Quirin** 79.36 326 *i* P P 15 22 12.6 +0.6
comp=Z,5.6nm,0.7s
SQTA *e*pP pwP 15 23 12.2 +0.7
comp=Z,6.9nm,0.9s
SQTA *e*PP PP 15 25 14.3 -0.5
comp=Z,9.1nm,1.0s
GLA **Glamis** 79.38 55 IAmb IAmb 15 22 14.5
comp=Z,26nm,0.8s
ESJX **Sierra Juarez** 79.41 56 IAmb IAmb 15 22 14.8
comp=Z,37nm,1.4s
PV01 **Paradox Valley** 79.42 48 IAmb IAmb 15 22 14.7
comp=Z,18nm,0.7s
PDG **Podgorica** 79.46 319 ⇓P P 15 22 13.3 +0.8
BFO **Black Forest** 79.61 329 P P 15 22 13.2 -0.1
BFO **Black Forest** 79.61 329 *e*P P 15 22 13.1 -0.1
BFO **Black Forest** 79.61 329 P P 15 22 14.0 +0.7
BFO PcP PcP 15 22 19.8 -0.5
BFO pP pP 15 23 07.0 -0.7
BFO x x 15 23 12.6
FETA **Feichten** 79.72 327 *e*P P 15 22 14.7 +0.7
comp=Z,9.7nm,0.8s
FETA *e*pP pwP 15 23 13.5 +0.1
comp=Z,9.1nm,1.2s
FETA *e*PP PP 15 25 15.0 -2.8
comp=Z,12nm,1.4s
DAVA **Damuels** 79.85 327 *i* P P 15 22 15.4 +0.7
comp=Z,18nm,0.7s,SNR=6.4
DAVA *e*pP pwP 15 23 14.5 +0.4
comp=Z,21nm,1.4s
Y14A **Wickenburg** 79.86 53 IAmb IAmb 15 22 17.2
comp=Z,45nm,1.5s
EYMN **Ely** 79.92 32 IAmb IAmb 15 22 15.8
comp=Z,26nm,0.7s
MVCO **Mesa Verde** 80.12 48 IAmb IAmb 15 22 18.6
comp=Z,22nm,0.8s
ECH **Echery** 80.15 329 P P 15 22 16.0 -0.2
ECH pP pP 15 23 09.0 -1.7
ECH x x 15 23 15.7
TEOL **Teolo** 80.66 325 IAmb IAmb 15 22 20.0
comp=Z,20nm,0.8s
SCHQ **Scheffervill** 80.88 14 P P 15 22 20.1 +0.2
comp=Z,7.8nm,0.7s,baz=333,slow=4.1,SNR=15
comp=Z,7.8nm,0.7s
SALO **Salr** 80.93 326 IAmb IAmb 15 22 21.2
comp=Z,22nm,0.8s
E38A **The Farm, Brul** 80.99 32 IAmb IAmb 15 22 21.5
comp=Z,32nm,0.9s
ECSD **EROS Data Cent** 81.16 37 IAmb IAmb 15 22 22.7
comp=Z,24nm,0.8s
X18A **Snowflake** 81.23 51 IAmb IAmb 15 22 24.8
comp=Z,22nm,1.1s
SGRT **San Giovanni R** 81.67 320 IAmb IAmb 15 22 25.4
comp=Z,33nm,0.8s
ZCCA **Zocca** 81.76 325 IAmb IAmb 15 22 27.6
comp=Z,19nm,0.8s
FDMO **Fiordimonte** 81.88 323 IAmb IAmb 15 22 27.1
comp=Z,59nm,1.5s
MURB **Monte Urbino** 81.95 323 IAmb IAmb 15 22 28.8
comp=Z,37nm,1.3s
ITM **Ithomi** 82.01 314 IAmb IAmb 15 22 26.5
comp=Z,28nm,0.7s
NRCA **Norcia** 82.03 323 IAmb IAmb 15 22 28.1
comp=Z,38nm,0.9s
ACER **Acerenza** 82.32 320 IAmb IAmb 15 22 29.5
comp=Z,37nm,1.1s
TUC **Tucson** 82.32 53 P P 15 22 28.6 +0.7
TUC **Tucson** 82.32 53 P P 15 22 28.6 +0.7
TUC pmax pmax
comp=Z,10.0nm,0.8s
T25A **Trinidad** 82.40 46 IAmb IAmb 15 22 30.0
comp=Z,22nm,0.8s
ANMO **Albuquerque** 82.90 49 P P 15 22 31.5 +0.5
ANMO **Albuquerque** 82.90 49 *e*P P 15 22 31.5 +0.5
TIP **Timpagrande** 83.17 318 IAmb IAmb 15 22 34.0
comp=Z,40nm,1.4s
CBKS **Cedar Bluff** 83.53 42 IAmb IAmb 15 22 34.7

	comp=Z,23nm,0.8s						
RTBA	**Rita Blanca**	**83.81**	**45**	IAmb	IAmb	15 22 36.9	
	comp=Z,20nm,0.9s						
319A	**Douglas**	**83.88**	**53**	IAmb	IAmb	15 22 38.1	
	comp=Z,24nm,0.8s						
121A	**Cookes Peak, D**	**83.92**	**51**	IAmb	IAmb	15 22 38.7	
	comp=Z,27nm,0.8s						
KSU1	**Kansas State U**	**84.82**	**40**	IAmb	IAmb	15 22 41.3	
	comp=Z,29nm,0.8s						
L40A	**Anamosa**	**84.85**	**35**	IAmb	IAmb	15 22 41.3	
	comp=Z,27nm,0.8s						
PH02	**Texas Public H**	**85.02**	**45**	IAmb	IAmb	15 22 43.3	
	comp=Z,33nm,0.7s						
AMTX	**Amarillo**	**85.55**	**46**	IAmb	IAmb	15 22 45.9	
	comp=Z,34nm,1.1s						
ICQ	**Pointe Anglais**	**85.83**	**16**	IAmb	IAmb	15 22 46.5	
	comp=Z,21nm,0.6s						
N41A	**Harden Midland**	**86.13**	**35**	IAmb	IAmb	15 22 47.9	
	comp=Z,21nm,1.0s						
LDAQ	**Lac Daran**	**86.38**	**19**	IAmb	IAmb	15 22 49.0	
	comp=Z,15nm,0.6s						
P40A	**Paris**	**86.57**	**37**	IAmb	IAmb	15 22 50.6	
	comp=Z,33nm,0.9s						
OK048	**Pawnee Station**	**86.78**	**42**	IAmb	IAmb	15 22 51.7	
	comp=Z,32nm,1.2s						
128A	**Castleberry Fa**	**86.83**	**48**	IAmb	IAmb	15 22 52.1	
	comp=Z,7.7nm,1.1s						
DKNS	**Dickens**	**86.88**	**46**	IAmb	IAmb	15 22 52.8	
	comp=Z,17nm,0.7s						
LMQ	**La Malbaie**	**86.99**	**19**	IAmb	IAmb	15 22 51.5	
	comp=Z,17nm,0.6s						
POST	**Post**	**87.03**	**47**	IAmb	IAmb	15 22 52.9	
	comp=Z,20nm,1.0s						
QUOK	**Quay**	**87.09**	**42**	IAmb	IAmb	15 22 53.3	
	comp=Z,42nm,1.3s						
TPB06	**Permian Basin**	**87.16**	**49**	IAmb	IAmb	15 22 54.2	
	comp=Z,18nm,0.8s						
WMOK	**Wichita Mounta**	**87.17**	**44**	IAmb	IAmb	15 23 34.3	
	comp=Z,14nm,0.7s						
OK052	**Battle Ridge R**	**87.19**	**42**	IAmb	IAmb	15 22 53.7	
	comp=Z,51nm,1.4s						
SN07	**Snyder 07**	**87.34**	**46**	IAmb	IAmb	15 24 37.1	
	comp=Z,11nm,0.5s						
TPB01	**Permian Basin**	**87.38**	**50**	IAmb	IAmb	15 22 54.8	
	comp=Z,8.0nm,1.0s						
DEOK	**Depew**	**87.46**	**42**	IAmb	IAmb	15 22 54.9	
	comp=Z,25nm,0.9s						
APMT	**Aspermont**	**87.57**	**46**	IAmb	IAmb	15 22 55.2	
	comp=Z,24nm,1.3s						
TPB05	**Hovey Rd**	**87.65**	**49**	IAmb	IAmb	15 22 57.1	
	comp=Z,12nm,0.8s						
D62A	**Allapoint, All**	**87.73**	**18**	IAmb	IAmb	15 22 55.6	
	comp=Z,13nm,0.6s						
TUL3	**Leonard**	**87.75**	**41**	IAmb	IAmb	15 22 57.1	
	comp=Z,17nm,0.6s						
X34A	**Smith Ranch, M**	**87.77**	**43**	IAmb	IAmb	15 22 56.9	
	comp=Z,23nm,0.9s						
W35A	**Tecumseh**	**87.81**	**42**	IAmb	IAmb	15 22 56.6	
	comp=Z,53nm,1.5s						
RLO	**Rose Lookout**	**87.92**	**41**	IAmb	IAmb	15 22 56.4	
	comp=Z,15nm,0.5s						
U38A	**Gravette**	**88.01**	**40**	IAmb	IAmb	15 22 57.0	
	comp=Z,20nm,0.7s						
SGCY	**Sterling City**	**88.11**	**47**	IAmb	IAmb	15 22 58.6	
	comp=Z,36nm,1.1s						
BKZ	**Black Stump Fm**	**88.14**	**151**	P	**P**	**15 22 56.6**	**+0.5**
CCM	**Cathedral Cave**	**88.14**	**37**	P	**P**	**15 22 56.7**	**+0.3**
CCM	**Cathedral Cave**	**88.14**	**37**	P	**P**	**15 22 56.7**	**+0.3**
CCM				pmax	pmax		
	comp=Z,35nm,0.8s						
BATG	**Bathurst New B**	**88.21**	**16**	IAmb	IAmb	15 22 58.3	
	comp=Z,16nm,0.8s						
HHAR	**Hobbs**	**88.34**	**40**	IAmb	IAmb	15 22 58.0	
	comp=Z,12nm,0.6s						
Q44A	**Meyer Farm, Va**	**88.41**	**35**	IAmb	IAmb	15 22 59.2	
	comp=Z,22nm,0.7s						
MGMO	**Mountain Grove**	**88.42**	**38**	IAmb	IAmb	15 22 58.9	
	comp=Z,23nm,0.8s						
FVM	**French Village**	**88.56**	**37**	IAmb	IAmb	15 22 59.9	
	comp=Z,18nm,0.8s						
LOOK	**Love County**	**88.58**	**43**	IAmb	IAmb	15 23 00.1	
	comp=Z,24nm,0.7s						
N49A	**Columbus Grove**	**88.65**	**31**	IAmb	IAmb	15 23 00.5	
	comp=Z,32nm,1.0s						
TX31	**Lajitas Ar. Si**	**88.65**	**51**	IAmb	IAmb	15 23 00.9	
	comp=Z,11nm,0.8s						
TXAR	**Lajitas Array**	**88.65**	**51**	P	**P**	**15 22 59.8**	**+0.7**
	comp=Z,9.2nm,0.6s,baz=292,slow=3.2,SNR=68						
	comp=Z,9.2nm,0.6s						
O48B	**Farmland**	**88.84**	**32**	IAmb	IAmb	15 23 01.1	
	comp=Z,22nm,0.9s						
OZNA	**Ozona**	**88.87**	**48**	IAmb	IAmb	15 23 01.2	
	comp=Z,8.5nm,0.6s						
PLPT	**Palo Pinto**	**88.92**	**45**	IAmb	IAmb	15 23 01.7	
	comp=Z,15nm,0.8s						
T42A	**Van Buren**	**89.05**	**38**	IAmb	IAmb	15 23 02.3	
	comp=Z,26nm,0.9s						
HPIG		**89.28**	**53**	IAmb	IAmb	15 23 04.1	
	comp=Z,16nm,0.8s						
FCAR	**Ozark Folk Cen**	**89.52**	**39**	IAmb	IAmb	15 23 04.0	
	comp=Z,16nm,0.9s						
J59A	**Piesco**	**89.65**	**23**	IAmb	IAmb	15 23 04.6	
	comp=Z,21nm,0.8s						
BRDY	**Brady**	**89.75**	**46**	IAmb	IAmb	15 23 05.6	
	comp=Z,12nm,0.7s						
LCAR	**Lake Charles**	**89.82**	**38**	IAmb	IAmb	15 23 06.0	
	comp=Z,21nm,1.4s						
L56A	**Greenwood**	**89.91**	**26**	IAmb	IAmb	15 23 06.0	
	comp=Z,16nm,0.8s						
MIAR	**Mount Ida**	**89.92**	**41**	IAmb	IAmb	15 23 06.6	
	comp=Z,21nm,0.8s						
JCT	**Junction City**	**89.94**	**47**	IAmb	IAmb	15 23 06.4	
	comp=Z,16nm,0.7s						
O52A	**Adamsville**	**90.23**	**30**	IAmb	IAmb	15 23 07.8	
	comp=Z,31nm,1.2s						
DRIO	**Del Rio**	**90.30**	**48**	IAmb	IAmb	15 23 08.9	
	comp=Z,24nm,0.9s						
X40A	**Basin Creek Fa**	**90.33**	**40**	IAmb	IAmb	15 23 08.5	
	comp=Z,11nm,0.8s						
OXZ	**Oxford**	**90.42**	**156**	P	**P**	**15 23 07.0**	**+0.4**
L59A	**Walton**	**90.66**	**24**	IAmb	IAmb	15 23 09.6	
	comp=Z,22nm,0.7s						
R50A	**Paris**	**90.87**	**32**	IAmb	IAmb	15 23 10.9	
	comp=Z,13nm,1.0s						
ESDC	**Sonseca Array**	**91.57**	**332**	P	**P**	**15 23 12.5**	**0.0**
	comp=Z,1.4nm,0.8s,baz=20,slow=4.3,SNR=7.3						
	comp=Z,1.4nm,0.8s						
T50A	**Nancy**	**91.75**	**33**	IAmb	IAmb	15 23 14.7	
	comp=Z,14nm,0.6s						
U49A	**Red Boiling Sp**	**91.80**	**34**	IAmb	IAmb	15 23 15.1	
	comp=Z,12nm,0.7s						
V48A	**Smith Brothers**	**92.01**	**35**	IAmb	IAmb	15 23 16.0	
	comp=Z,13nm,1.0s						
SWET	**Sewanee**	**92.84**	**35**	IAmb	IAmb	15 23 19.4	
	comp=Z,11nm,1.0s						
X48A	**Hartselle**	**93.01**	**36**	IAmb	IAmb	15 26 51.8	
	comp=Z,18nm,1.2s						
CPCT	**Cooper Cave**	**93.23**	**34**	IAmb	IAmb	15 23 21.5	
	comp=Z,12nm,0.8s						
TORD	**Torodi Ar. Bea**	**112.01**	**314**	PKiKP	**PKiKP**	**15 28 39.2**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=212,slow=1.5,SNR=6.1						
TORD				PKKPbc	**PKKPbc**	**15 39 31.4**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=217,slow=4.8,SNR=7.2						
VNDA	**Vanda**	**120.41**	**174**	PKP	**PKPdf**	**15 28 53.9**	**-0.2**
	comp=Z,3.5nm,0.7s,baz=312,slow=4.7,SNR=21						
DBIC	**Dimbokro**	**120.90**	**316**	PKP	**PKPdf**	**15 28 56.4**	**-0.6**
	comp=Z,4.5nm,0.5s,baz=76,slow=4.2,SNR=8.6						
SDV	**Santo Domingo**	**122.55**	**35**	*eP*	**PKPdf**	**15 29 00.6**	**+0.1**
MAW	**Mawson**	**123.25**	**206**	PKP	**PKPdf**	**15 28 59.8**	**+0.1**
	comp=Z,4.5nm,0.8s,baz=95,slow=5.8,SNR=4.8						
OTAV	**Otavalo**	**126.21**	**48**	*eP*	**PKPdf**	**15 29 06.8**	**-1.0**
QSPA	**South Pole Qui**	**132.03**	**180**	PKhKP	PKPpre	15 29 05.4	
QSPA				PKP	**PKPdf**	**15 29 16.6**	**-0.1**
	comp=Z,2.0nm,0.9s,baz=271,slow=1.5,SNR=7.0						
QSPA				SKPbc	**SKPbc**	**15 32 19.5**	**-0.9**
	comp=Z,6.9nm,0.7s,baz=0.2,slow=1.5,SNR=27						
	comp=Z,14nm,0.9s,baz=336,slow=1.4,SNR=18						
QSPA	**South Pole Qui**	**132.03**	**180**		**PKPdf**	**15 29 17.0**	**+0.3**
CZSB	**Cruzeiro do Su**	**135.97**	**47**	*eP*	**PKPdf**	**15 29 26.3**	**+0.6**
TEFE	**Tefe**	**136.24**	**34**	*eP*	**PKPdf**	**15 29 26.6**	**+0.4**
NVL	**N'lazarevskaya**	**141.18**	**205**	*e*PKHKP	PKPpre	15 29 28.5	
NVL				pmax	pmax		
	comp=Z,17nm,1.7s						
NPGB	**Novo Progresso**	**142.84**	**23**	*eP*	**PKPdf**	**15 29 37.4**	**-0.8**
TROLL	**Troll, Antarti**	**143.40**	**201**	PKPdf	PKPbc	15 29 35.3	-0.2
NBPV	**Pedro Velho**	**143.85**	**349**	*eP*	**PKPdf**	**15 29 40.4**	**+0.5**
SNAA	**Sanae**	**144.99**	**200**	⇑PKPdf	**PKPdf**	**15 29 40.2**	**0.0**
	comp=Z,681nm,0.7s						
SNAA	**Sanae**	**144.99**	**200**	PKP	**PKPdf**	**15 29 40.2**	**0.0**
	comp=Z,19nm,0.6s,baz=173,slow=4.6,SNR=37						
NBMA	**Muriti-CE**	**145.13**	**355**	*eP*	**PKPbc**	**15 29 42.4**	**+0.2**
LPAZ	**La Paz**	**145.51**	**49**	PKPbc	**PKPbc**	**15 29 44.1**	**+0.1**
	comp=Z,22nm,0.8s,baz=318,slow=3.5,SNR=49						
LPAZ	**La Paz**	**145.51**	**49**	*eP*	**PKPdf**	**15 29 42.4**	**-1.0**
SMTB	**Santa Maria do**	**146.29**	**11**	*eP*	**PKPdf**	**15 29 43.9**	**-0.2**
CLDB	**Colider**	**146.32**	**26**	*eP*	**PKPbc**	**15 29 45.5**	**-0.2**
VILB	**Vilhena**	**146.59**	**34**	*eP*	**PKPbc**	**15 29 45.8**	**-0.6**
VNA2	**Neumayer--Watz**	**146.61**	**200**	⇑PKPdf	**PKPbc**	**15 29 45.0**	**+0.1**
	comp=Z,76nm,0.6s,baz=109,slow=5.0						
PDRB	**Porto dos Gac**	**146.70**	**28**	*eP*	**PKPdf**	**15 29 44.9**	**+0.1**
VNA3	**Neumayer Olymp**	**146.94**	**198**	⇑PKPdf	**PKPbc**	**15 29 45.6**	**-0.2**
	comp=Z,29nm,0.8s						
VNA1	**Neumayer--Stat**	**147.01**	**200**	⇑PKPdf	**PKPbc**	**15 29 45.1**	**-0.9**
	comp=Z,54nm,0.9s						
SNDB	**Serra Nova Dou**	**148.63**	**19**	*eP*	**PKPdf**	**15 29 48.7**	**+0.8**
SIV	**San Ignacio**	**148.90**	**38**	PKPbc	**PKPbc**	**15 29 52.6**	**+0.1**
	comp=Z,21nm,0.8s,baz=294,slow=1.6,SNR=28						
PTLB	**Pontes e Lacer**	**149.28**	**35**	*eP*	**PKPdf**	**15 29 50.2**	**+1.4**
SDBA	**SAO DESIDERIO**	**150.09**	**7**	*eP*	**PKPdf**	**15 29 52.4**	**+2.1**
SALV	**Santo Antonio**	**151.04**	**29**	*eP*	**PKPdf**	**15 29 53.1**	**+1.4**
ARAG	**Araguaiana, MT**	**152.08**	**21**	*eP*	**PKPdf**	**15 29 54.4**	**+1.2**
JANB	**Januaria**	**152.76**	**6**	*eP*	**PKPdf**	**15 29 54.6**	**+0.3**
BDFB	**Brasilia**	**152.87**	**14**	PKPbc	**PKiKP**	**15 30 02.1**	**+0.1**
	comp=Z,3.0nm,0.4s,baz=63,slow=1.7,SNR=7.8						
PP1B	**Ponte de Pedra**	**152.90**	**29**	*eP*	**PKPdf**	**15 29 55.5**	**+1.2**
BDQN	**Bodoquena, MS**	**154.74**	**35**	*eP*	**PKPdf**	**15 29 56.5**	**-0.4**
AMBA	**Amambai (Brazi**	**157.68**	**34**	*eP*	**PKPdf**	**15 30 01.0**	**+0.3**
PLCA	**Paso Flores**	**158.28**	**96**	PKPab	**PKPab**	**15 30 38.1**	**+1.5**
	comp=Z,11nm,0.8s,baz=255,slow=4.0,SNR=20						
CPUP	**Villa Florida**	**159.49**	**44**	PKPab	**PKPab**	**15 30 42.5**	**+0.5**
	comp=Z,7.2nm,0.9s,baz=336,slow=6.1,SNR=16						
CPSB	**Cacapava Do Su**	**164.79**	**43**	*eP*	**PKPdf**	**15 30 07.6**	**-0.4**

RSNC 17 15:24:40.6±0.0, 10°N±1°×7°5W±°, h14km±1km, M2.8, mb4.0, ML2.5, Near north coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJCC	**San Jacinto, C**	**0.51**	**181**	P	Pg	15 24 49.5	-1.2
SJCC				S	Sg	15 24 57.5	-0.1
ARGC	**Ariguani, Magd**	**1.06**	**121**	P	Pb	15 24 59.3	-1.5
ARGC				S	Sb	15 25 13.5	-1.1
SMRC	**Santa Marta, M**	**1.19**	**51**	P	Pn	15 25 01.3	-1.6
SMRC				S	Sb	15 25 17.7	-0.6
UREC	**San Jos de Ur**	**2.67**	**188**	P	Pn	15 25 23.2	0.0
UREC				S	Sn	15 25 54.0	-1.3
URIC	**Uribia, Colomb**	**3.37**	**67**	P	Pn	15 25 31.3	-1.6
URIC				S	Sn	15 26 12.0	-0.8
DBBC	**Dabeiba**	**3.52**	**197**	P	Pn	15 25 34.7	-0.4
BRJC	**Barrancabermej**	**3.69**	**157**	P	Pn	15 25 36.8	-0.5
BRJC				S	Sn	15 26 18.7	-2.0
PAMC	**Pamplona, Colo**	**3.91**	**141**	P	Pn	15 25 41.1	+0.4
PAMC				S	Sn	15 26 25.8	-0.8
PTBC	**PUERTO BERRIO,**	**3.91**	**170**	P	Pn	15 25 38.6	-1.7
PTBC				S	Sn	15 26 21.8	-4.3
HELC	**Santa Helena**	**4.21**	**185**	P	Pn	15 25 44.6	-0.1
BARC	**Barichara**	**4.27**	**152**	P	Pn	15 25 44.8	-0.7
BARC				S	Sn	15 26 32.6	-2.7
CBOC	**Ciudad Bolivar**	**4.59**	**191**	P	Pn	15 25 49.9	+0.1
SDV	**Santo Domingo**	**4.72**	**108**	P	Pn	15 25 50.4	-1.2
SDV				S	Sn	15 26 44.2	-2.2
BCIP	**Isla Barro Col**	**4.76**	**255**	P	Pn	15 25 51.8	-0.2
BCIP				S	Sn	15 26 42.7	-4.4
SPBC	**San Pablo de B**	**4.85**	**167**	P	Pn	15 25 53.6	+0.3
SPBC				S	Sn	15 26 44.8	-4.6
RUSC	**La Rusia**	**4.94**	**155**	P	Pn	15 25 54.4	-0.5
RUSC				S	Sn	15 26 49.4	-2.7
GUY2C	**Guyana, Caldas**	**5.16**	**182**	P	Pn	15 25 58.2	+0.3

IDC 17 15:29:26.1±0.9, 2°.51S×140°.20E, h0km, mb3.5/7, mbtmp3.6/8, ML3.7/1, Error ellipse: s-maj=22.2km s-min=8.0km az=2.0
DJA 17 15:29:28.7±0.9, 2°.5S×6°×14°.0E±°, h10km±3km, M3.9/6, MLv3.9/6
ISC 17 15:29:29.1±0.9, 2°.6S±0°.1×140°.38E±0°.06, h26km±7km, n15, σ0°.78/15, mb3.6/7, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.22**	**276**	P	**Pn**	**15 29 35.4**	**-1.2**
GENI				S	**Sb**	**15 29 40.2**	**+1.0**
JAY	**Jayapura**	**0.34**	**73**	Pg	**Pb**	**15 29 36.5**	**-0.3**
	320nm,0.3s,baz=264,slow=9.8,SNR=2635						
JAY				Lg	Lg	15 29 42.4	
	2µm,0.3s,baz=110,slow=14,SNR=103						
JAY				LR	LR	15 29 55.0	
	comp=Z,376nm,18.3s,baz=342,slow=57						
JAY	**Jayapura**	**0.34**	**73**	P	**Pb**	**15 29 36.6**	**-0.2**
JAY				S	**Sb**	**15 29 41.7**	**-0.3**
WAMI	**Wamena**	**2.09**	**233**	P	**Pb**	**15 30 05.3**	**-1.0**
WAMI				S	**Sb**	**15 30 32.6**	**+0.7**
WRA	**Warramunga Arr**	**18.20**	**198**	P	**P**	**15 33 40.7**	**+0.6**
	0.3nm,0.3s,baz=16,slow=12,SNR=18						
	0.4nm,0.3s						
FITZ	**Fitzroy Crossi**	**21.11**	**222**	P	**P**	**15 34 11.9**	**+0.1**
	1.6nm,0.8s,baz=51,slow=13,SNR=5.6						
	1.6nm,0.8s						
ASAR	**Alice Springs**	**21.85**	**196**	P	**P**	**15 34 20.8**	**+1.0**
	0.7nm,0.6s,baz=27,slow=11,SNR=27						
	0.7nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**34.21**	**48**	T	T	16 12 16.4	
	baz=234						
H11N2	**WAKE ISLAND Hy**	**34.22**	**48**	T	T	16 12 19.2	
	baz=234						
H11N3	**WAKE ISLAND Hy**	**34.23**	**48**	T	T	16 12 12.1	
	baz=234						
CMAR	**Chiang Mai Arr**	**45.85**	**299**	P	**P**	**15 37 49.9**	**+0.5**
	0.4nm,0.7s,baz=114,slow=8.7,SNR=2.0						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**70.74**	**322**	P	**P**	**15 40 43.3**	**+0.3**
	0.6nm,0.8s,baz=106,slow=7.7,SNR=5.5						
	0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**72.70**	**329**	P	**P**	**15 40 54.2**	**-0.4**
	0.4nm,0.4s,baz=113,slow=5.2,SNR=2.0						
	0.4nm,0.4s						
BVAR	**Borovoye Array**	**80.19**	**325**	P	**P**	**15 41 37.8**	**+0.7**
	0.5nm,0.6s,baz=122,slow=5.4,SNR=2.9						
	0.5nm,0.6s						
ILAR	**Eielson Array**	**85.06**	**24**	P	**P**	**15 42 01.8**	**-0.4**
	0.4nm,0.9s,baz=259,slow=5.3,SNR=3.0						
	0.4nm,0.9s						

NOU 17 15:35:09.1, 42°.52S×173°.35E, h0km, MLv4.1/13, South Island, New Zealand
WEL 17 15:35:10.3±0.3, 42°.5S±2°×17°.3E±°, h5km, M3.3/24, ML3.3/8, MLv3.3/24, Error ellipse: s-maj=3.2km s-min=2.4km az=122.4, confirmed
ISC 17 15:35:09.7±0.8, 42°.45S±0°.02×173°.39E±0°.03, h14km±6km, n85, σ1°.27/98, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.11**	**73**	P	**Pg**	**15 35 12.9**	**-0.2**
KHZ				S	**Sg**	**15 35 15.2**	**0.0**
KIKS	**Kaikoura**	**0.21**	**84**	P	**Pg**	**15 35 15.3**	**+0.8**
KIKS				S	**Sb**	**15 35 20.0**	**+0.8**
WTMC	**Te Mara Farm W**	**0.30**	**236**	P	**Pg**	**15 35 16.3**	**+0.2**
WTMC				S	**Sb**	**15 35 21.6**	**-0.2**
CECS	**Cheviot Emerge**	**0.37**	**193**	P	**Pb**	**15 35 18.5**	**+0.4**
CECS				S	**Sb**	**15 35 25.4**	**+1.6**
MOLW	**Molesworth Sta**	**0.38**	**344**	P	**Pg**	**15 35 16.7**	**-0.7**
MOLW				S	**Sg**	**15 35 21.8**	**-0.8**
HSES	**Hanmer Springs**	**0.42**	**260**	P	**Pg**	**15 35 17.8**	**-0.5**
HSES				S	**Sg**	**15 35 23.6**	**-0.3**
LOKS	**Mount Lookout**	**0.44**	**9**	P	**Pg**	**15 35 18.6**	**-0.1**
GVZ	**Greta Valley S**	**0.58**	**207**	P	**Pb**	**15 35 22.4**	**+0.7**
GVZ				S	**Sn**	**15 35 31.8**	**-1.1**
SCAC	**Scargill**	**0.60**	**215**	P	**Pb**	**15 35 22.5**	**+0.5**
SCAC				S	**Sn**	**15 35 32.2**	**-1.1**
KEKS	**Kekerengu Vall**	**0.66**	**42**	P	**Pb**	**15 35 24.0**	**+1.0**
GLOS	**29 km south-we**	**0.67**	**28**	P	**Pg**	**15 35 22.9**	**0.0**
THZ	**Tophouse**	**0.78**	**332**	P	**Pg**	**15 35 24.3**	**-0.6**
THZ				S	**Sg**	**15 35 33.9**	**-1.1**
LTZ	**Lake Taylor**	**0.89**	**248**	P	**Pb**	**15 35 26.4**	**+0.5**
AMCZ	**Amberley**	**0.91**	**217**	P	**Pn**	**15 35 28.2**	**+0.2**
AMCZ				S	**Sn**	**15 35 42.1**	**+1.2**
CMWZ	**Cape Campbell**	**0.93**	**41**	P	**Pn**	**15 35 28.9**	**+0.6**
TUWZ	**Tuamarina**	**1.10**	**22**	P	**Pb**	**15 35 30.8**	**+0.3**
MRNZ	**Matariki Terra**	**1.15**	**335**	P	**Pn**	**15 35 31.6**	**+0.2**
MRNZ				S	**Sg**	**15 35 47.7**	**+0.7**
NNZ	**Nelson**	**1.23**	**360**	P	**Pn**	**15 35 32.4**	**-0.1**
NNZ				S	**Sg**	**15 35 50.2**	**+0.7**
OKCZ	**Okains Bay**	**1.30**	**191**	P	**Pn**	**15 35 33.4**	**0.0**
OXZ	**Oxford**	**1.33**	**228**	P	**Pn**	**15 35 33.4**	**-0.4**
MQZ	**McQueen's Vall**	**1.37**	**203**	P	**Pn**	**15 35 33.5**	**-0.8**
MQZ				S	**Sn**	**15 35 51.9**	**-0.4**
DSZ	**Denniston Nort**	**1.38**	**300**	P	**Pb**	**15 35 35.2**	**-0.1**
TCW	**Tory Channel**	**1.40**	**28**	P	**Pn**	**15 35 35.2**	**+0.4**
TKNZ	**Takaka Hill**	**1.45**	**347**	P	**Pb**	**15 35 36.6**	**+0.1**
AKCZ	**Akaroa Harbour**	**1.47**	**194**	P	**Pn**	**15 35 35.3**	**-0.4**
INZ	**Inchbonnie**	**1.47**	**259**	P	**Pb**	**15 35 36.6**	**-0.1**
SNZO	**South Karori**	**1.50**	**41**	P	**Pn**	**15 35 36.4**	**+0.2**
BHW	**Baring Head**	**1.52**	**47**	P	**Pn**	**15 35 36.4**	**0.0**
WEL	**Wellington**	**1.55**	**42**	P	**Pn**	**15 35 37.2**	**+0.4**
RACZ	**Rakaia**	**1.57**	**215**	P	**Pn**	**15 35 36.7**	**-0.4**
PLWZ	**Palliser**	**1.64**	**58**	P	**Pn**	**15 35 37.7**	**-0.5**
DUWZ	**D'Urville Isla**	**1.69**	**14**	P	**Pb**	**15 35 40.4**	**-0.3**
MHCZ	**Mount Hutt**	**1.72**	**230**	P	**Pn**	**15 35 38.8**	**-0.5**
MSWZ	**Moikau Station**	**1.73**	**54**	P	**Pn**	**15 35 38.9**	**-0.4**
QRZ	**Quartz Range**	**1.75**	**338**	P	**Pb**	**15 35 41.3**	**-0.3**
QRZ	**Quartz Range**	**1.75**	**338**	S	**Sb**	**15 36 04.3**	**+1.0**
QRZ	**Quartz Range**	**1.75**	**338**	P	**Pb**	**15 35 41.2**	**-0.3**
CAW	**Cannon Point**	**1.83**	**44**	P	**Pn**	**15 35 40.7**	**0.0**
WACZ	**Wakanui South**	**1.88**	**217**	P	**Pn**	**15 35 40.9**	**-0.5**
KIW	**Kapiti Island**	**1.95**	**36**	P	**Pn**	**15 35 42.8**	**+0.4**
TRWZ	**Traveller**	**2.01**	**59**	P	**Pn**	**15 35 43.3**	**+0.1**
WVZ	**Waitaha Valley**	**2.05**	**251**	P	**Pn**	**15 35 44.5**	**+0.8**
OGWZ	**Otaki Gorge**	**2.11**	**40**	P	**Pn**	**15 35 44.5**	**0.0**
RPZ	**Rata Peaks**	**2.13**	**233**	P	**Pn**	**15 35 44.7**	**-0.1**
RPZ	**Rata Peaks**	**2.13**	**233**	P	**Pn**	**15 35 44.7**	**-0.1**
ARCZ	**Arundel**	**2.21**	**227**	P	**Pn**	**15 35 45.4**	**-0.5**
HOWZ	**Holdsworth Sta**	**2.22**	**46**	P	**Pn**	**15 35 45.5**	**-0.6**
TMWZ	**Te Maipa**	**2.30**	**55**	P	**Pn**	**15 35 46.2**	**-1.0**
GCSZ	**Gaunt Creek Bo**	**2.41**	**248**	P	**Pn**	**15 35 50.1**	**+1.3**
MRZ	**Mangatainoka R**	**2.43**	**43**	P	**Pn**	**15 35 48.3**	**-0.6**
TIWZ	**Tintock**	**2.51**	**49**	P	**Pb**	**15 35 53.5**	**-1.0**
TMZ	**Timaru**	**2.60**	**221**	P	**Pn**	**15 35 50.9**	**-0.5**
PRWZ	**Pori Road**	**2.71**	**47**	P	**Pn**	**15 35 53.2**	**+0.4**
POWZ	**Post Office Ro**	**2.72**	**42**	P	**Pn**	**15 35 52.8**	**-0.1**
BFZ	**Birch Farm**	**2.77**	**51**	P	**Pn**	**15 35 56.2**	**+2.5**
FOZ	**Fox Glacier**	**2.84**	**246**	P	**Pn**	**15 35 56.0**	**+1.5**
WAZ	**Wanganui**	**2.95**	**25**	P	**Pn**	**15 35 59.1**	**+3.0**
DVHZ	**Dannevirke**	**3.00**	**45**	P	**Pn**	**15 35 55.3**	**-1.5**
LBZ	**Lake Benmore**	**3.04**	**229**	P	**Pn**	**15 35 57.4**	**+0.1**
TSZ	**Takapari Road**	**3.08**	**40**	P	**Pn**	**15 35 57.1**	**-0.8**
LREZ	**Lake Rotokare**	**3.08**	**15**	P	**Pb**	**15 36 02.7**	**-1.6**
PREZ	**Palmer Road**	**3.16**	**11**	P	**Pn**	**15 36 02.3**	**+3.3**
KHEZ	**Kahui Hut**	**3.19**	**9**	P	**Pn**	**15 36 01.8**	**+2.4**
KHEZ	**Kahui Hut**	**3.19**	**9**	S	**Sb**	**15 36 41.7**	**-3.1**
KHEZ	**Kahui Hut**	**3.19**	**9**	P	**Pb**	**15 36 03.8**	**-2.4**
NBEZ	**Newall Road No**	**3.20**	**7**	P	**Pb**	**15 36 03.5**	**-2.8**
ODZ	**Otahua Downs**	**3.27**	**217**	P

JMK				eS	**Sn**	**15 43 36.0**	**-0.3**	
JOM	**Ohasama**	**2.61**	**305**	P	Pn	15 43 11.2	+0.6	
JOM				eS	**Sn**	**15 43 41.3**	**+0.1**	
JOTO	**OTAMA OYAMA**	**2.97**	**263**	eS	**Sn**	**15 43 49.4**	**-0.6**	
JYK	**Kaneyama**	**3.04**	**289**	P	**Pn**	**15 43 17.5**	**+1.0**	
JYK				eS	**Sn**	**15 43 52.1**	**+0.6**	
JANG	**Nango**	**3.09**	**321**	eP	Pn	15 43 18.1	+1.0	
JRY	**Ryogami san**	**4.56**	**246**	P	**Pn**	**15 43 37.1**	**-0.3**	
JRY				eS	**Sn**	**15 44 26.1**	**-3.1**	
JCH	**Churui**	**4.65**	**354**	eP	Pn	15 43 39.0	+0.3	
JCH				eS	Sn	15 44 28.5	-2.9	
MJAR	**Matsushiro Arr**	**4.87**	**255**	Pn	**Pn**	**15 43 42.8**	**+1.1**	
	0.2nm,0.3s,baz=86,slow=15,SNR=9.6							
MJAR				Sn	**Sn**	**15 44 41.0**	**+4.2**	
	baz=75,slow=23,SNR=1.8 1.8nm,0.4s							
KURBB	**Kurchatov Arra**	**47.07**	**308**	P	P	15 51 06.7	+7.7	
	0.4nm,0.4s,baz=82,slow=8.8,SNR=4.5 0.4nm,0.4s							
WRA	**Warramunga Arr**	**58.34**	**191**	P	**P**	**15 52 22.3**	**-0.2**	
	0.6nm,0.7s,baz=11,slow=7.0,SNR=6.6 0.6nm,0.7s							
ASAR	**Alice Springs**	**62.06**	**191**	P	**P**	**15 52 48.1**	**+0.1**	
	0.3nm,0.9s,baz=7.2,slow=7.9,SNR=5.6 0.3nm,0.9s							

IDC 17 15:50:57.9±2.3, 5°18S×128°43E, h0km, mb3.3/1, mbtmp3.1/3, ML3.1/2, Error ellipse: s-maj=162.5km s-min=31.2km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.77**	**159**	Pn	Pn	15 54 41.8	+0.3
	0.1nm,0.3s,baz=341,slow=13,SNR=6.4						
WRA				Sn	Sn	15 57 29.2	-7.9
	0.1nm,0.3s,baz=331,slow=22,SNR=5.3 0.3nm,0.8s						
ASAR	**Alice Springs**	**19.13**	**165**	P	P	15 55 22.6	-0.1
	0.1nm,0.3s,baz=349,slow=11,SNR=8.7						
ASAR				S	Sn	15 58 50.6	-8.0
	0.2nm,1.0s,baz=0.9,slow=29,SNR=5.0 0.2nm,0.6s						
MKAR	**Makanchi Array**	**65.85**	**327**	P	P	16 01 45.3	0.0
	0.2nm,0.6s,baz=128,slow=5.7,SNR=3.4 0.2nm,0.6s						

*IDC **17** 16:06:20.8±0.3, 16°.13S×172°.25W, h0km, mb5.4/40, mbtmp5.3/40, MS5.7/70, Error ellipse: s-maj=10.9km s-min=6.4km az=171.0*

*MOS **17** 16:06:21.9±1.2, 16°.07S×172°.28W, h11km, mb5.8/42, MS5.8/59, Error ellipse: s-maj=8.1km s-min=7.4km az=31.2*

*NEIC **17** 16:06:22.2, 15°.80S×171°.93W, h26km, Moment Tensor Solution. Duration: 5s2 Moment tensor: Scale 10^18^Nm; Mrr=1.10; Mθθ=0.31; Mϕϕ 1.41; Mrθ=0.52; Mθϕ 0.11; Mϕr 0.52; Fault plane solution: M0 1.48000×10^18^ NP1:ϕs28.10000°, δ40.00000°, λ-49.73000°. NP2:ϕs160.22000°, δ60.63000°, λ-118.47000°. Principal axes: T 1.5133, Plg11.0000°, Azm270.0000°; N -0.0586, Plg25.0000°, Azm175.0000°; P -1.4547, Plg63.0000°, Azm23.0000°:*

*ISC-PP **17** 16:06:22, 16°.03S×172°.19W, h17km, Mwppsm6.3, Moment Tensor Solution. s27 Moment tensor: Scale 10^18^Nm; Mrr=0.53±.11; Mθθ 0.35±.16; Mϕϕ 0.20±.17; Mrθ 0.05±.14; Mθϕ 0.47±.14; Mϕr 0.23±.22; Fault plane solution: M0 3.39000×10^18^ NP1:ϕs69.90000°, δ31.40000°, λ308.40000°. NP2:ϕs207.10000°, δ65.90000°, λ-110.80000°.*

*BJI **17** 16:06:22.2, 16°.05S×172°.10W, h10km, mB6.2/79, mb5.5/76, Ms6.0/95, Ms7 5.8/92*

*IPGP **17** 16:06:22.0, 16°.00S×172°.14W, h20km, Mw6.0, Fault plane solution: NP1:ϕs323.00000°, δ38.00000°, λ-144.00000°. NP2:ϕs203.00000°, δ69.00000°, λ-58.00000°.*

*NEIC **17** 16:06:22.2, 16°.00S×172°.14W, h26km*

*NEIC **17** 16:06:22.4±1.3, 16°.03S±0°.08×172°.19W±0°.07, h10km±1km, mb5.8/595, Ms_20 5.8/745, Mww6.0/27, Error ellipse: s-maj=14.8km s-min=9.5km az=24.0*

*GFZ **17** 16:06:23.5, 16°.12S×172°.35W, h30km, MW6.1, Moment Tensor Solution. s153 Moment tensor: Mrr=1.26; Mθθ-0.34; Mϕϕ 1.60; Mrθ-0.15; Mθϕ 0.11; Mϕr 0.76; Fault plane solution: NP1:ϕs174.00000°, δ59.00000°, λ-100.00000°. NP2:ϕs14.00000°, δ32.00000°, λ-73.00000°. Principal axes: T 1.7900, Plg13.0000°, Azm272.0000°; N -0.3200, Plg8.0000°, Azm179.0000°; P -1.4700, Plg73.0000°, Azm58.0000°;*

*PTWC **17** 16:06:24, 16°.00S×171°.90W, h55km, Mwp6.2/11, SAMOA ISLANDS REGION*

*NOU **17** 16:06:25.4, 16°.09S×172°.01W, h36km, ML6.0/97, Samoa Islands Region*

*BGR **17** 16:06:27.1, 15°.80S×172°.03W, h33km, Ms6.0*

*GCMT **17** 16:06:29.4±0.1, 16°.01S×172°.06W, h23km, MW6.1/169, Moment Tensor Solution. s161,c357; s169,c588; Duration: 2s6 Moment tensor: Scale 10^18^Nm; Mrr-0.71±.01; Mθθ-0.91±.01; Mϕϕ 1.62±.01; Mrθ 0.51±.01; Mθϕ-0.06±.01; Mϕr 0.46±.01; Best double couple: M0 1.53800×10^18^ NP1:ϕs320.00000°, δ53.00000°, λ-156.00000°. NP2:ϕs215.00000°, δ71.00000°, λ-39.00000°. Principal axes: T 1.7080, Plg11.0000°, Azm271.0000°; N -0.3390, Plg47.0000°, Azm13.0000°; P -1.3670, Plg41.0000°, Azm171.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 17 16:06:23.4±0.6, 16°.16S±0°.03×172°.15W±0°.03, h16km±2km, n1681, σ2s34/1458, mb5.8/395, MS5.8/504, 141C-80D, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**3.59**	**144**	P	**Pn**	**16 07 17.1**	**-1.4**
NIUE				S	**Sn**	**16 07 55.6**	**-5.0**
NIUE	**Niue**	**3.59**	**144**	P	**Pn**	**16 07 18.2**	**-0.3**
NIUE	**Niue**	**3.59**	**144**		**Pn**	**16 07 17.2**	**-1.2**
NIUE	**Niue**	**3.59**	**144**	P	**Pn**	**16 07 17.4**	**-1.1**
NIUE	**Niue**	**3.59**	**144**	P	**Pn**	**16 07 17.7**	**-0.8**
NIUE				S	**Sn**	**16 07 55.4**	**-5.2**
NIUE	**Niue**	**3.59**	**144**	↑P	**Pn**	**16 07 17.1**	**-1.4**
FUTU	**Fugatoga**	**6.05**	**287**	P	**Pn**	**16 07 53.6**	**+1.2**
FUTU	**Fugatoga**	**6.05**	**287**		**Pn**	**16 07 51.3**	**-1.0**
FUTU	**Fugatoga**	**6.05**	**287**	P	**Pn**	**16 07 54.2**	**+1.8**
LKBA	**Tubou, Lakemba**	**6.70**	**251**	P	**Pn**	**16 08 04.5**	**+3.3**
TAVE	**Taveuni**	**7.47**	**265**	P	**Pn**	**16 08 15.7**	**+3.9**
TAVE	**Taveuni**	**7.47**	**265**	P	**Pn**	**16 08 16.0**	**+4.2**
DGTI	**Dogotuki**	**7.80**	**268**	P	**Pn**	**16 08 20.2**	**+3.8**
DGTI	**Dogotuki**	**7.80**	**268**	P	**Pn**	**16 08 17.9**	**+1.5**
MSVF	**Nonsavu**	**9.51**	**259**	Pn	**Pn**	**16 08 43.9**	**+3.9**
	11nm,0.3s,baz=98,slow=14,SNR=150						
MSVF				LR	LR	16 11 52.9	
	comp=Z,106μm,18.5s,baz=77,slow=35						
MSVF	**Nonsavu**	**9.51**	**259**	P	**Pn**	**16 08 43.7**	**+3.7**
MSVF	**Nonsavu**	**9.51**	**259**		**Pn**	**16 08 43.0**	**+3.0**
MSVF	**Nonsavu**	**9.51**	**259**	↓eP	**Pn**	**16 08 42.6**	**+2.6**
MSVF	**Nonsavu**	**9.51**	**259**	P	**Pn**	**16 08 44.5**	**+4.5**
MSVF	**Nonsavu**	**9.51**	**259**	↑P	**Pn**	**16 08 44.1**	**+4.2**
FUNA	**Funafuti**	**11.36**	**311**	P	**Pn**	**16 09 04.7**	**-0.5**
FUNA	**Funafuti**	**11.36**	**311**		**Pn**	**16 09 02.3**	**-2.8**
FUNA	**Funafuti**	**11.36**	**311**	↓P	**Pn**	**16 09 07.2**	**+2.0**
RAR	**Rarotonga**	**12.75**	**115**	Pn	**Pn**	**16 09 21.8**	**-2.4**
	26nm,0.3s,baz=270,slow=10.0,SNR=56						
RAR				Sn	Sn	16 11 31.8	-14
	baz=241,slow=5.4						
RAR				LR	LR	16 13 20.6	
	comp=Z,41μm,19.0s,baz=280,slow=33						
RAR	**Rarotonga**	**12.75**	**115**	P	**Pn**	**16 09 22.1**	**-2.2**
RAR	**Rarotonga**	**12.75**	**115**		**Pn**	**16 09 22.0**	**-2.2**
RAR	**Rarotonga**	**12.75**	**115**	P	**Pn**	**16 09 22.2**	**-2.0**
RAR	**Rarotonga**	**12.75**	**115**	P	**Pn**	**16 09 22.2**	**-2.0**
RAR	**Rarotonga**	**12.75**	**115**	P	**Pn**	**16 09 21.9**	**-2.4**
RAR				S	Sn	16 11 30.7	-15
RAR	**Rarotonga**	**12.75**	**115**	↓P	**Pn**	**16 09 21.9**	**-2.3**
RTV	**Rentapao**	**18.66**	**262**	P	**Pn**	**16 10 42.0**	**+0.8**
MARNC	**Mare, Loyalty**	**19.49**	**251**	P	**P**	**16 10 49.2**	**-0.8**
MARNC	**Mare, Loyalty**	**19.49**	**251**		**P**	**16 10 48.6**	**-1.4**
MARNC	**Mare, Loyalty**	**19.49**	**251**	↑P	**P**	**16 10 48.0**	**-2.0**
SANVU	**Saraoutou**	**19.89**	**269**	P	**Pn**	**16 10 55.3**	**-0.7**
SANVU	**Saraoutou**	**19.89**	**269**	S	**Sn**	**16 14 39.6**	**+0.3**
SANVU	**Saraoutou**	**19.89**	**269**		**P**	**16 10 53.1**	**-1.2**
SANVU	**Saraoutou**	**19.89**	**269**	P	**P**	**16 10 53.7**	**-0.6**
SANVU	**Saraoutou**	**19.89**	**269**	↑P	**P**	**16 10 52.4**	**-1.9**
YATNC	**Mamie plateau,**	**20.65**	**250**	P	**P**	**16 11 03.7**	**+1.1**
OUENC	**Ouen Island, N**	**20.78**	**249**	P	Pn	16 11 05.3	-1.1
DZM	**Mont Dzumac**	**21.06**	**250**	P	**P**	**16 11 04.7**	**-2.4**
	41nm,0.7s,baz=78,slow=19,SNR=16						
DZM				S	**S**	**16 15 04.2**	**+2.9**
	26nm,1.1s,baz=135,slow=20,SNR=3.4						
DZM				LR	LR	16 18 13.1	
	comp=Z,27μm,20.0s,baz=86,slow=34 41nm,0.7s						
ONTNC	**Ouen Toro**	**21.10**	**250**	P	**P**	**16 11 08.5**	**+1.0**
ONTNC	**Ouen Toro**	**21.10**	**250**		**P**	**16 11 07.3**	**-0.2**
ONTNC				IAmb	IAmb	16 11 24.0	
	comp=Z,585nm,1.3s						
ONTNC	**Ouen Toro**	**21.10**	**250**	↑P	**P**	**16 11 08.2**	**+0.7**
PPT	**Papeete**	**21.64**	**97**	P	**P**	**16 11 15.6**	**+2.3**
	comp=Z,138nm,0.9s,baz=284,slow=17,SNR=17						
PPT				S	**S**	**16 15 13.4**	**+0.7**
	comp=Z,16nm,0.5s,baz=252,slow=20,SNR=2.0						
PPT				LR	LR	16 17 24.2	
	comp=Z,21μm,20.8s,baz=282,slow=30 comp=Z,138nm,0.9s						
PPTF	**Pamatai, Papee**	**21.65**	**97**	P	**P**	**16 11 12.1**	**-1.4**
PPTF	**Pamatai, Papee**	**21.65**	**97**	S	**S**	**16 15 09.5**	**-3.5**
PPTF	**Pamatai, Papee**	**21.65**	**97**	↓P	**P**	**16 11 16.8**	**+3.3**
NFK	**Norfolk Island**	**22.37**	**232**	P	**P**	**16 11 25.5**	**+4.4**
GRZ	**Great Barrier**	**22.85**	**207**	P	**P**	**16 11 29.2**	**+3.1**
OUZ	**Omahuta**	**22.87**	**211**	P	**P**	**16 11 27.4**	**+1.1**
OUZ	**Omahuta**	**22.87**	**211**	P	**P**	**16 11 27.4**	**+1.1**
OUZ	**Omahuta**	**22.87**	**211**	↑P	**P**	**16 11 27.8**	**+1.5**
MXZ	**Matakaoa Point**	**22.93**	**200**	P	**P**	**16 11 27.8**	**+0.9**
MXZ	**Matakaoa Point**	**22.93**	**200**	S	**S**	**16 15 36.3**	**0.0**
MXZ	**Matakaoa Point**	**22.93**	**200**	P	**P**	**16 11 33.6**	**+6.8**
WCZ	**Waipu Caves**	**23.09**	**209**	P	**P**	**16 11 30.4**	**+1.9**
WMGZ	**Waiomatatini S**	**23.13**	**199**	P	**P**	**16 11 32.5**	**+3.6**
XMAS	**Kiritimati**	**23.20**	**40**	↓P	**P**	**16 11 36.2**	**+6.4**
HAZ	**Te Kaha**	**23.28**	**201**	P	**P**	**16 11 33.3**	**+2.9**
HAZ				S	**S**	**16 15 42.5**	**+0.3**
PUZ	**Puketiti**	**23.41**	**199**	P	**P**	**16 11 33.8**	**+2.0**
PUZ				S	**S**	**16 15 42.2**	**-2.2**
WIAZ	**Waiheke Island**	**23.45**	**206**	P	**P**	**16 11 35.4**	**+3.3**
RUGZ	**Raukumara Rang**	**23.50**	**200**	P	**P**	**16 11 37.8**	**+5.0**
RUGZ				S	**S**	**16 15 48.5**	**+2.4**
MBAZ	**Motutapu North**	**23.53**	**207**	P	**P**	**16 11 36.3**	**+3.4**
TWGZ	**Tauwhareparae**	**23.60**	**200**	P	**P**	**16 11 36.5**	**+2.9**
TWGZ				S	**S**	**16 15 49.0**	**+1.6**
HBAZ	**Herne Bay Bore**	**23.67**	**207**	P	**P**	**16 11 36.9**	**+2.6**
ETAZ	**East Tamaki Re**	**23.67**	**207**	P	**P**	**16 11 38.4**	**+4.0**
MKAZ	**Moumakai**	**23.70**	**206**	P	**P**	**16 11 36.6**	**+2.0**
OPRZ	**Ohinepanea**	**23.79**	**203**	P	**P**	**16 11 36.8**	**+1.3**
TGRZ	**Tauranga**	**23.80**	**203**	P	**P**	**16 11 37.4**	**+1.8**
CNGZ	**Carnagh Statio**	**23.80**	**199**	P	**P**	**16 11 39.3**	**+3.7**
CNGZ				S	**S**	**16 15 54.8**	**+4.1**
KBAZ	**Karaka Road Bo**	**23.81**	**206**	P	**P**	**16 11 37.7**	**+2.1**
WTAZ	**Waiatarua**	**23.81**	**207**	P	**P**	**16 11 37.7**	**+2.1**
TKGZ	**Te Karaka**	**23.88**	**200**	P	**P**	**16 11 38.7**	**+2.4**
MWZ	**Matawai**	**23.89**	**200**	P	**P**	**16 11 38.3**	**+1.8**
MWZ				S	**S**	**16 15 54.6**	**+2.5**
URZ	**Urewera**	**23.96**	**201**	LR	LR	16 20 02.8	
	comp=Z,15μm,20.3s,baz=16,slow=34						
URZ	**Urewera**	**23.96**	**201**	P	**P**	**16 11 37.5**	**+0.4**
URZ	**Urewera**	**23.96**	**201**	S	**S**	**16 15 53.8**	**+0.6**
URZ	**Urewera**	**23.96**	**201**	P	**P**	**16 11 37.8**	**+0.7**
URZ				S	**S**	**16 15 56.5**	**+3.3**
URZ	**Urewera**	**23.96**	**201**	↑P	**P**	**16 11 37.6**	**+0.6**
TOZ	**Tahuroa Road**	**24.10**	**205**		**P**	**16 11 38.1**	**-0.2**
BKZ	**Black Stump Fm**	**24.99**	**201**	P	**P**	**16 11 47.0**	**+0.5**
BKZ	**Black Stump Fm**	**24.99**	**201**		**P**	**16 11 46.2**	**-0.4**
BKZ				IAmb	IAmb	16 11 58.2	
	comp=Z,109nm,0.7s						
HIZ	**Hauiti**	**25.03**	**205**	P	**P**	**16 11 47.7**	**+0.9**
HIZ	**Hauiti**	**25.03**	**205**	S	**S**	**16 16 12.4**	**+2.0**
HIZ	**Hauiti**	**25.03**	**205**	P	**P**	**16 11 47.3**	**+0.5**
KHEZ	**Kahui Hut**	**26.04**	**205**	P	**P**	**16 11 57.2**	**+1.1**
BFZ	**Birch Farm**	**26.43**	**200**	P	**P**	**16 12 00.3**	**+0.8**
MRZ	**Mangatainoka R**	**26.64**	**201**	P	**P**	**16 12 01.3**	**-0.1**
MSWZ	**Moikau Station**	**27.42**	**201**	P	**P**	**16 12 08.6**	**+0.1**
SNZO	**South Karori**	**27.52**	**202**	P	**P**	**16 12 09.6**	**+0.3**
SNZO	**South Karori**	**27.52**	**202**	P	**P**	**16 12 08.6**	**-0.7**
SNZO				IAmb	IAmb	16 12 32.0	
	comp=Z,161nm,0.8s						
BHW	**Baring Head**	**27.55**	**201**	P	**P**	**16 12 09.6**	**+0.1**
BHW				IAmb	IAmb	16 12 25.7	
	comp=Z,463nm,1.8s						
NNZ	**Nelson**	**27.93**	**204**	IAmb	IAmb	16 12 21.6	
	comp=Z,212nm,1.0s						
QRZ	**Quartz Range**	**27.94**	**205**	P	**P**	**16 12 13.7**	**+0.6**
HNR	**Honiara**	**28.00**	**280**	LR	LR	16 22 01.9	
	comp=Z,2μm,19.2s,baz=205,slow=34						
HNR	**Honiara**	**28.00**	**280**	P	**P**	**16 12 11.7**	**-2.2**
HNR	**Honiara**	**28.00**	**280**	IAMs_20	IAMs_20	16 21 40.6	
	comp=Z,34μm,20.0s						
HNR	**Honiara**	**28.00**	**280**	P	**P**	**16 12 11.7**	**-2.2**
HNR				pmax	pmax		
	comp=Z,383nm,1.0s						
HNR				MLR	MLR		
	comp=Z,34μm,20.0s						
HNR	**Honiara**	**28.00**	**280**	↓P	**P**	**16 12 14.0**	**+0.1**
SAVO	**Savo Central**	**28.21**	**281**	P	**P**	**16 12 16.3**	**+0.5**
TATA	**Tatamba Isabel**	**28.45**	**282**	P	**P**	**16 12 16.4**	**-1.5**
THZ	**Tophouse**	**28.58**	**204**	IAmb	IAmb	16 12 46.1	
	comp=Z,142nm,0.8s						
KHZ	**Kahutara**	**28.91**	**202**	IAmb	IAmb	16 12 32.5	
	comp=Z,414nm,1.5s						
KHZ				IAMs_20	IAMs_20	16 25 34.6	
	comp=Z,22μm,21.0s						
KHZ	**Kahutara**	**28.91**	**202**	↓P	**P**	**16 12 22.0**	**+0.3**
INZ	**Inchbonnie**	**29.97**	**205**	IAMs_20	IAMs_20	16 23 34.5	
	comp=Z,25μm,22.0s						
LHI	**Lord Howe Isla**	**30.33**	**235**	P	**P**	**16 12 35.3**	**+0.9**
	comp=Z,208nm,1.2s						
LHI	**Lord Howe Isla**	**30.33**	**235**	IAmb	IAmb	16 12 35.9	
	comp=Z,305nm,1.2s						
RPZ	**Rata Peaks**	**30.96**	**204**	LR	LR	16 26 04.1	
	comp=Z,11μm,18.4s,baz=285,slow=38						
RPZ	**Rata Peaks**	**30.96**	**204**	P	**P**	**16 12 40.4**	**+0.5**
RPZ	**Rata Peaks**	**30.96**	**204**	IAMs_20	IAMs_20	16 24 02.8	
	comp=Z,23μm,22.0s						
FOZ	**Fox Glacier**	**31.31**	**206**	IAmb	IAmb	16 13 19.6	
	comp=Z,118nm,0.7s						
LBZ	**Lake Benmore**	**31.86**	**204**	IAmb	IAmb	16 13 41.4	
	comp=Z,106nm,1.1s						
LBZ				IAMs_20	IAMs_20	16 24 51.7	
	comp=Z,23μm,22.0s						
JCZ	**Jackson Bay**	**32.18**	**206**	P	**P**	**16 12 51.2**	**+0.5**
ODZ	**Otahua Downs**	**32.24**	**203**	P	**P**	**16 12 52.1**	**+1.0**
ODZ	**Otahua Downs**	**32.24**	**203**	IAmb	IAmb	16 13 05.0	
	comp=Z,90nm,1.0s						
ODZ	**Otahua Downs**	**32.24**	**203**	↑P	**P**	**16 12 51.5**	**+0.5**
WKZ	**Wanaka**	**32.70**	**205**	IAmb	IAmb	16 13 40.5	
	comp=Z,108nm,1.0s						
JOHN	**Johnston Islan**	**32.78**	**5**	IAMs_20	IAMs_20	16 22 49.2	
	comp=Z,21μm,21.0s						
MLZ	**Mavora Lakes**	**33.51**	**206**	IAmb	IAmb	16 13 10.0	
	comp=Z,191nm,1.3s						
DCZ	**Deep Cove**	**33.99**	**206**	IAmb	IAmb	16 13 13.0	
	comp=Z,197nm,1.3s						
SYZ	**Scrubby Hill**	**34.06**	**203**	P	**P**	**16 13 07.5**	**+0.5**
TW1H	**Toowoomba 1 Ha**	**35.06**	**245**	P	**P**	**16 13 15.2**	**-0.7**
EIDS	**Eidsvold**	**35.49**	**249**	P	**P**	**16 13 17.1**	**-2.6**
EIDS	**Eidsvold**	**35.49**	**249**	P	**P**	**16 13 20.3**	**+0.7**
EIDS	**Eidsvold**	**35.49**	**249**	↓P	**P**	**16 13 17.0**	**-2.6**
ARMA	**Armidale**	**36.00**	**240**	P	**P**	**16 13 22.5**	**-1.6**
	comp=Z,102nm,1.3s,comp=Z,0.0nm						
ARMA	**Armidale**	**36.00**	**240**	P	**P**	**16 13 23.6**	**-0.5**
ARMA	**Armidale**	**36.00**	**240**	P	**P**	**16 13 22.2**	**-1.8**
ARMA	**Armidale**	**36.00**	**240**	↓P	**P**	**16 13 22.7**	**-1.4**
RABL	**Rabaul**	**37.01**	**285**	P	**P**	**16 13 29.9**	**-2.9**
RABL	**Rabaul**	**37.01**	**285**	↑P	**P**	**16 13 29.3**	**-3.5**
KRVT	**Keravat (AS076**	**37.10**	**285**	LR	LR	16 27 34.7	
	comp=Z,847nm,20.5s,baz=35,slow=34						
PATS	**Pohnpei**	**37.11**	**306**	IAMs_20	IAMs_20	16 24 44.4	
	comp=Z,20μm,21.0s						
MGCD	**Mangrove Creek**	**37.22**	**236**	P	**P**	**16 13 34.4**	**+0.1**
	comp=Z,115nm,1.1s						
RIV	**Riverview**	**37.38**	**235**	P	**P**	**16 13 35.8**	**+0.2**
	comp=Z,182nm,1.1s						
SYDH	**Sydney Hard Ro**	**37.68**	**235**	P	**P**	**16 13 38.3**	**+0.1**
POHA	**Pohakuloa**	**39.25**	**25**	↓P	**P**	16 13 56.8	+5.0
CNB	**Canberra Magne**	**39.26**	**234**	P	**P**	**16 13 51.3**	**-0.3**
CAN	**Canberra**	**39.54**	**234**	P	**P**	**16 13 53.4**	**-0.4**
	comp=Z,111nm,1.5s,comp=Z,0.0nm						
CAN	**Canberra**	**39.54**	**234**	P	**P**	**16 13 54.4**	**+0.5**
CAN	**Canberra**	**39.54**	**234**	P	**P**	**16 13 53.5**	**-0.4**
CAN				pmax	pmax		
	comp=Z,111nm,1.5s						
CAN	**Canberra**	**39.54**	**234**	↑P	**P**	**16 13 53.0**	**-0.9**
CTA	**Charters Tower**	**39.66**	**258**	S	**S**	**16 19 54.4**	**-3.6**
	comp=Z,6.1nm,1.0s,baz=93,slow=14,SNR=1.9						
CTA				LR	LR	16 29 29.4	
	comp=Z,8μm,18.9s,baz=90,slow=35						
CTAO	**Charters Tower**	**39.66**	**258**	P	**P**	**16 13 55.2**	**+0.2**
CTAO	**Charters Tower**	**39.66**	**258**	P	**P**	**16 13 52.4**	**-2.6**
CTAO	**Charters Tower**	**39.66**	**258**	P	**P**	**16 13 52.4**	**-2.6**
CTAO				pmax	pmax		
	comp=Z,40nm,0.9s						
CTAO				MLR	MLR		
	comp=Z,8μm,19.0s						
CTAO	**Charters Tower**	**39.66**	**258**	↓P	**P**	**16 13 53.1**	**-1.9**
YNG	**Young**	**39.70**	**235**	P	**P**	**16 13 54.3**	**-0.9**
	comp=Z,48nm,2.7s						
MILA	**Mila**	**40.01**	**231**	P	**P**	**16 13 57.5**	**-0.2**
	comp=Z,21nm,1.7s						
PMG	**Port Moresby**	**40.20**	**275**	P	**P**	**16 13 57.9**	**-1.5**
	comp=Z,75nm,0.8s,baz=86,slow=6.5,SNR=29						
PMG				S	**S**	**16 20 04.8**	**-1.3**
	comp=Z,3.7nm,0.7s,baz=53,slow=20,SNR=1.2						
PMG				LR	LR	16 26 36.9	
	comp=Z,10μm,21.5s,baz=88,slow=30 comp=Z,75nm,0.8s						
PMG	**Port Moresby**	**40.20**	**275**	P	**P**	**16 13 59.7**	**+0.2**
PMG	**Port Moresby**	**40.20**	**275**	P	**P**	**16 13 59.6**	**+0.1**
PMG	**Port Moresby**	**40.20**	**275**	P	**P**	**16 13 57.9**	**-1.5**
PMG				IAmb	IAmb	16 14 00.6	
	comp=Z,509nm,1.8s						
PMG	**Port Moresby**	**40.20**	**275**	IAMs_20	IAMs_20	16 26 25.3	
	comp=Z,12μm,20.0s						
PMG	**Port Moresby**	**40.20**	**275**	↑P	**P**	**16 13 58.0**	**-1.5**
PTCN	**Pitcairn Islan**	**40.21**	**110**	IAMs_20	IAMs_20	16 26 05.7	
	comp=Z,13μm,19.0s						
H11S2	**WAKE ISLAND Hy**	**40.24**	**328**	T	T	16 56 47.9	
	baz=145,slow=76,SNR=3.7						
H11S3	**WAKE ISLAND Hy**	**40.25**	**328**	T	T	16 56 41.4	
	baz=145,slow=76,SNR=4.6						
H11S1	**WAKE ISLAND Hy**	**40.26**	**328**	T	T	16 56 50.2	
	baz=145,slow=76,SNR=18						
H11N3	**WAKE ISLAND Hy**	**41.17**	**329**	T	T	16 57 45.3	
	baz=145,slow=76,SNR=70						
H11N1	**WAKE ISLAND Hy**	**41.18**	**329**	T	T	16 57 46.2	
	baz=145,slow=76,SNR=34						
H11N2	**WAKE ISLAND Hy**	**41.19**	**329**	T	T	16 57 44.4	
	baz=145,slow=76,SNR=8.3						
CMSA	**Cobar Meteorol**	**41.22**	**240**	P	**P**	**16 14 05.9**	**-1.8**
	comp=Z,318nm,1.1s,comp=Z,0.0nm						
CMSA	**Cobar Meteorol**	**41.22**	**240**	P	**P**	**16 14 06.3**	**-1.5**
MTSU	**Mount Surprise**	**41.58**	**261**	P	**P**	**16 14 08.3**	**-2.6**
MTSU	**Mount Surprise**	**41.58**	**261**	P	**P**	**16 14 10.5**	**-0.4**
QLP	**Quilpie**	**41.75**	**248**	P	**P**	**16 14 09.1**	**-3.1**
QLP	**Quilpie**	**41.75**	**248**	P	**P**	**16 14 11.1**	**-1.1**
QLP	**Quilpie**	**41.75**	**248**	↓P	**P**	**16 14 09.7**	**-2.5**
MANU	**Manus Island**	**42.25**	**285**	P	**P**	**16 14 15.0**	**-1.4**
MANU				IAmb	IAmb	16 14 17.5	
	comp=Z,274nm,1.6s						
MANU	**Manus Island**	**42.25**	**285**	↑P	**P**	**16 14 15.7**	**-0.7**
TOO	**Toolangi**	**42.94**	**232**	P	**P**	**16 14 20.6**	**-1.1**
	comp=Z,70nm,1.4s,comp=Z,0.0nm						
TOO	**Toolangi**	**42.94**	**232**	P	**P**	**16 14 20.5**	**-1.3**
TOO	**Toolangi**	**42.94**	**232**	P	**P**	**16 14 20.5**	**-1.3**
TOO				pmax	pmax		
	comp=Z,65nm,1.0s						
TOO	**Toolangi**	**42.94**	**232**	↑P	**P**	**16 14 20.8**	**-1.0**
COEN	**Coen**	**43.14**	**267**	P	**P**	**16 14 22.4**	**-1.3**
	comp=Z,186nm,1.5s,comp=Z,0.0nm						
COEN	**Coen**	**43.14**	**267**	P	**P**	**16 14 23.9**	**+0.3**
COEN	**Coen**	**43.14**	**267**	P	**P**	**16 14 22.8**	**-0.8**
COEN	**Coen**	**43.14**	**267**	↓P	**P**	**16 14 22.7**	**-0.9**
MOO	**Moorlands**	**43.49**	**224**	P	**P

	comp=Z,56nm,0.8s									
FAKI	**Fak Fak**	**56.21 277**		P		**P**		**16 16 03.5**	**+0.2**
FAKI	**Fak Fak**	**56.21 277**		IAmb		IAmb		16 16 21.7	
	comp=Z,86nm,1.1s									
FAKI				IAMs_20		IAMs_20		16 38 25.6	
	comp=Z,7µm,21.0s									
FAKI	**Fak Fak**	**56.21 277**	⇑	P		**P**		**16 16 02.4**	**-0.9**
KNRA	**Kununurra**	**56.65 262**		P		**P**		**16 16 03.9**	**-2.5**
	comp=Z,185nm,0.8s,comp=Z,0.0nm									
KNRA	**Kununurra**	**56.65 262**		IAmb		IAmb		16 16 07.6	
	comp=Z,131nm,0.8s									
SIJI	**Sorong**	**57.77 279**		P		**P**		**16 16 13.3**	**-1.0**
	comp=Z,208nm,0.8s,baz=90,slow=7.8,SNR=134									
SIJI				LR		LR		16 40 20.4		
	comp=Z,7µm,21.5s,baz=110,slow=35									
	comp=Z,208nm,0.8s									
BNDI	**Bandanaira**	**57.99 275**		P		**P**		**16 16 16.2**	**+0.3**
BNDI	**Bandanaira**	**57.99 275**	⇑	P		**P**		**16 16 15.2**	**-0.7**
RPN	**Rapa Nui**	**58.88 112**		LR		LR		16 35 11.4	
	comp=Z,4µm,19.5s,baz=268,slow=29									
RPN	**Rapa Nui**	**58.88 112**		IAMs_20		IAMs_20		16 34 58.5	
	comp=Z,6µm,19.0s									
FITZ	**Fitzroy Crossi**	**59.24 258**		P		**P**		**16 16 23.5**	**-1.0**
	comp=Z,32nm,0.8s,baz=95,slow=11,SNR=52									
FITZ				S		**S**		**16 24 30.8**	**-1.5**
	comp=Z,1.4nm,1.0s,baz=108,slow=20,SNR=0.9									
FITZ				LR		LR		16 39 40.2		
	comp=Z,9µm,21.3s,baz=104,slow=34									
	comp=Z,32nm,0.8s									
KMBL	**Kambalda**	**61.45 243**		P		**P**		**16 16 38.1**	**-1.4**
	comp=Z,36nm,1.7s									
JCJ	**Chichijima**	**61.75 314**		LR		LR		16 38 40.3		
	comp=Z,7µm,20.9s,baz=134,slow=32									
TNTI	**Ternate**	**61.99 280**		P		**P**		**16 16 41.0**	**-2.4**
TNTI				IAmb		IAmb		16 17 04.5		
	comp=Z,95nm,1.0s									
TNTI	**Ternate**	**61.99 280**	⇑	P		**P**		**16 16 42.3**	**-1.1**
SOEI	**Soe**	**62.10 267**		P		**P**		**16 16 44.3**	**0.0**
SOEI	**Soe**	**62.10 267**	⇑	P		**P**		**16 16 44.4**	**+0.1**
SANI	**Sanana**	**62.44 276**	⇑	P		**P**		**16 16 44.7**	**-1.7**
BATI	**Baumata**	**62.58 267**		P		**P**		**16 16 46.8**	**-0.5**
	comp=Z,53nm,0.7s,baz=140,slow=5.9,SNR=24									
BATI				LR		LR		16 42 00.6		
	comp=Z,8µm,21.8s,baz=136,slow=34									
	comp=Z,53nm,0.7s									
SBA	**Scott Base**	**62.60 185**		P		**P**		**16 16 49.4**	**+3.0**
SBA	**Scott Base**	**62.60 185**		IAMs_20		IAMs_20		16 39 19.7	
	comp=Z,6µm,19.0s									
SBA	**Scott Base**	**62.60 185**		P		**P**		**16 16 49.4**	**+3.0**
SBA				MLR		MLR				
	comp=Z,6µm,19.0s									
VNDA	**Vanda**	**62.75 186**		P		**P**		**16 16 49.1**	**+1.7**
	comp=Z,58nm,0.9s,baz=14,slow=7.6,SNR=133									
VNDA				LR		LR		16 39 48.9		
	comp=Z,2µm,20.9s,baz=20,slow=32									
VNDA				PKP2bc		**P'P'bc**		**16 45 56.5**	**-4.6**
	comp=Z,1.8nm,0.9s,baz=225,slow=5.7,SNR=3.9									
	comp=Z,58nm,0.9s									
VNDA	**Vanda**	**62.75 186**		P		**P**		**16 16 49.1**	**+1.7**
PSAC2	**Pilbara Seismi**	**64.10 254**		P		**P**		**16 16 55.5**	**-1.8**
	comp=Z,148nm,1.1s									
PSA00	**Pilbara Seismi**	**64.15 254**		P		**P**		**16 16 57.0**	**-0.7**
PSA00	**Pilbara Seismi**	**64.15 254**		P		**P**		**16 16 56.5**	**-1.2**
PSA00	**Pilbara Seismi**	**64.15 254**		P		**P**		**16 16 56.5**	**-1.2**
PSA00				IAmb		IAmb		16 17 05.0		
	comp=Z,692nm,1.9s									
MMRI	**Maumere**	**64.31 268**		P		**P**		**16 16 58.1**	**-0.7**
MMRI	**Maumere**	**64.31 268**	⇑	P		**P**		**16 16 57.3**	**-1.5**
MBWA	**Marble Bar**	**64.31 254**		P		**P**		**16 16 57.7**	**-1.0**
	comp=Z,180nm,1.8s,comp=Z,0.0nm									
MBWA	**Marble Bar**	**64.31 254**		P		**P**		**16 16 58.0**	**-0.7**
MBWA	**Marble Bar**	**64.31 254**		P		**P**		**16 16 57.3**	**-1.4**
MBWA	**Marble Bar**	**64.31 254**		IAMs_20		IAMs_20		16 42 44.9	
	comp=Z,8µm,20.0s									
MBWA	**Marble Bar**	**64.31 254**	⇑	P		**P**		**16 16 57.5**	**-1.2**
MEEK	**Meekatharra**	**64.65 248**		P		**P**		**16 16 59.5**	**-1.4**
	comp=Z,156nm,1.2s,comp=Z,0.0nm									
MEEK	**Meekatharra**	**64.65 248**		P		**P**		**16 16 59.8**	**-1.1**
KLBR	**Kellerberrin**	**64.96 242**		P		**P**		**16 17 02.1**	**-0.7**
	comp=Z,306nm,1.1s									
KLBR	**Kellerberrin**	**64.96 242**		P		**P**		**16 17 03.7**	**+0.9**
NWAO	**Narrogin (SRO)**	**65.30 241**		P		**P**		**16 17 04.8**	**-0.2**
	comp=Z,175nm,2.2s									
NWAO	**Narrogin (SRO)**	**65.30 241**		LR		LR		16 44 37.6		
	comp=Z,3µm,18.8s,baz=84,slow=35									
NWAO	**Narrogin (SRO)**	**65.30 241**		P		**P**		**16 17 05.7**	**+0.7**
NWAO	**Narrogin (SRO)**	**65.30 241**		P		**P**		**16 17 04.8**	**-0.2**
NWAO	**Narrogin (SRO)**	**65.30 241**		IAMs_20		IAMs_20		16 45 15.7	
	comp=Z,7µm,19.0s									
NWAO	**Narrogin (SRO)**	**65.30 241**		P		**P**		**16 17 04.8**	**-0.2**
NWAO				pmax		pmax				
	comp=Z,217nm,1.3s									
NWAO				MLR		MLR				
	comp=Z,7µm,19.0s									
RKGY	**Rocky Gully**	**65.42 239**		P		**P**		**16 17 06.3**	**+0.6**
	comp=Z,386nm,2.1s,comp=Z,0.0nm									
DAV	**Davao City (W)**	**65.80 286**		P		**P**		**16 17 09.2**	**+0.7**
	comp=Z,97nm,0.4s,baz=90,slow=3.0,SNR=1.1									
DAV				LR		LR		16 46 13.0		
	comp=Z,4µm,18.0s,baz=98,slow=36									
	comp=Z,97nm,0.4s									
DAV	**Davao City (W)**	**65.80 286**		P		**P**		**16 17 07.2**	**-1.3**
DAV	**Davao City (W)**	**65.80 286**		IAMs_20		IAMs_20		16 46 37.2	
	comp=Z,6µm,20.0s									
LUWI	**Luwuk**	**65.81 276**		P		**P**		**16 17 08.9**	**+0.4**
LUWI	**Luwuk**	**65.81 276**	⇓	P		**P**		**16 17 08.7**	**+0.2**
BLDU	**Ballidu**	**65.93 243**		P		**P**		**16 17 08.5**	**-0.6**
	comp=Z,172nm,1.4s									
BLDU	**Ballidu**	**65.93 243**		P		**P**		**16 17 09.4**	**+0.3**
MUN	**Mundaring**	**66.24 242**		P		**P**		**16 17 11.1**	**0.0**
	comp=Z,148nm,0.9s,comp=Z,0.0nm									
MUN	**Mundaring**	**66.24 242**		P		**P**		**16 17 11.2**	**+0.1**
MORW	**Morawa**	**66.66 245**		P		**P**		**16 17 13.3**	**-0.5**
	comp=Z,128nm,2.1s,comp=Z,0.0nm									
MORW	**Morawa**	**66.66 245**		P		**P**		**16 17 14.0**	**+0.2**
MORW	**Morawa**	**66.66 245**	⇑	P		**P**		**16 17 14.0**	**+0.2**
JHJ	**Hachijo jima 2**	**67.14 317**		LR		LR		16 41 03.4	
	comp=Z,3µm,22.0s,baz=104,slow=31									
KAPI	**Kappang**	**67.60 271**		P		**P**		**16 17 19.2**	**-0.8**
	comp=Z,33nm,0.7s,baz=86,slow=7.5,SNR=18									
KAPI				S		**S**		**16 26 19.4**	**+2.6**
	comp=Z,6.6nm,0.4s,baz=90,slow=15,SNR=2.4									
KAPI				LR		LR		16 47 32.8		
	comp=Z,1µm,18.8s,baz=92,slow=37									
	comp=Z,33nm,0.7s									
KAPI	**Kappang**	**67.60 271**		IAmb		IAmb		16 17 21.8		
	comp=Z,53nm,0.9s									
KAPI	**Kappang**	**67.60 271**	*c*	*i*P		**P**		**16 17 19.8**	**-0.2**
KAPI				pmax		pmax				
	comp=Z,73nm,1.0s									
KAPI				MLR		MLR				
	comp=Z,2µm,20.0s									
ADK	**Adak**	**67.87 357**		P		**P**		**16 17 20.3**	**-0.5**
ADK	**Adak**	**67.87 357**		P		**P**		**16 17 24.0**	**+3.2**
ADK	**Adak**	**67.87 357**	⇑	P		**P**		**16 17 24.5**	**+3.7**
TOLI2	**Tolitoli**	**68.35 278**		P		**P**		**16 17 24.8**	**+0.1**
PLAI	**Plampang**	**68.55 267**		P		**P**		**16 17 25.7**	**-0.2**
SHEM	**Shemya Is, Ala**	**69.63 351**		LR		LR		16 41 08.5	
	comp=Z,10µm,21.8s,baz=128,slow=30									
SMY	**Shemya**	**69.63 351**		P		**P**		**16 17 30.7**	**-1.0**
UNV	**Unalaska Valle**	**69.89 4**		IAmb		IAmb		16 17 56.8		
	comp=Z,119nm,1.2s									
UNV				IAMs_20		IAMs_20		16 40 42.4		
	comp=Z,6µm,22.0s									
UNV	**Unalaska Valle**	**69.89 4**		P		**P**		**16 17 32.2**	**-1.1**
	baz=186									
CASY	**Casey**	**70.23 205**		P		**P**		**16 17 35.3**	**-0.1**
JGF	**Kuroka**	**70.25 318**		P		**P**		**16 17 35.5**	**-0.6**
JGF	**Kuroka**	**70.25 318**		P		**P**		**16 17 34.9**	**-1.1**
JGF	**Kuroka**	**70.25 318**	⇑	P		**P**		**16 17 37.0**	**+0.9**
MJAR	**Matsushiro Arr**	**70.30 319**		P		**P**		**16 17 35.3**	**-1.0**
	comp=Z,33nm,1.0s,baz=149,slow=6.0,SNR=26									
MJAR				S		**S**		**16 26 49.0**	**+1.0**
	comp=Z,1.6nm,1.0s,baz=98,slow=13,SNR=1.9									
MJAR				LR		LR		16 43 02.1		
	comp=Z,9µm,21.6s,baz=115,slow=31									
	comp=Z,33nm,1.0s									
MJAR	**Matsushiro Arr**	**70.30 319**		P		**P**		**16 17 35.1**	**-1.2**
MJAR				IAmb		IAmb		16 17 54.3		
	comp=Z,149nm,1.6s									
MAJO	**Matsushiro**	**70.30 319**		P		**P**		**16 17 36.0**	**-0.3**
MAJO	**Matsushiro**	**70.30 319**		P		**P**		**16 17 35.2**	**-1.1**
MAJO				IAmb		IAmb		16 17 54.5		
	comp=Z,178nm,1.5s									
MAJO	**Matsushiro**	**70.30 319**		IAMs_20		IAMs_20		16 42 38.8		
	comp=Z,8µm,21.0s									
MAJO	**Matsushiro**	**70.30 319**	⇓	*e*P		**P**		**16 17 37.1**	**+0.8**
MAJO				pmax		pmax				
	comp=Z,131nm,1.5s									
MAJO				MLR		MLR				
	comp=Z,2µm,18.0s									
MAJO	**Matsushiro**	**70.30 319**	⇑	P		**P**		**16 17 37.0**	**+0.7**
MJB9	**Matsu-Tunnel**	**70.30 319**		IAmb		IAmb		16 17 55.5		
	comp=Z,166nm,1.5s									
FARB	**Farallon Islan**	**70.72 39**		IAmb		IAmb		16 17 57.9		
	comp=Z,92nm,0.9s									
FARB				IAMs_20		IAMs_20		16 41 15.1		
	comp=Z,5µm,20.0s									
HULI	**Fort Hunter Li**	**70.77 42**		IAmb		IAmb		16 17 58.7		
	comp=Z,83nm,0.8s									
HULI				IAMs_20		IAMs_20		16 45 08.8		
	comp=Z,6µm,18.0s									
FORD	**Fort Ord Natur**	**70.84 41**		IAMs_20		IAMs_20		16 46 11.4		
	comp=Z,6µm,18.0s									
JRSC	**Jasper Ridge**	**71.00 40**		IAmb		IAmb		16 18 09.1		
	comp=Z,70nm,0.9s									
JRSC				IAMs_20		IAMs_20		16 41 13.6		
	comp=Z,6µm,20.0s									
MCCM	**Marconi Confer**	**71.07 39**		IAMs_20		IAMs_20		16 41 25.5		
	comp=Z,6µm,21.0s									
SAO	**San Andreas Ge**	**71.10 41**		P		**P**		**16 17 40.0**	**-1.2**
SAO				IAmb		IAmb		16 18 00.5		
	comp=Z,79nm,1.0s									
SAO				IAMs_20		IAMs_20		16 41 17.2		
	comp=Z,5µm,21.0s									
SAO	**San Andreas Ge**	**71.10 41**		P		**P**		**16 17 40.0**	**-1.2**
SAO				pmax		pmax				
	comp=Z,79nm,1.0s									
SAO				MLR		MLR				
	comp=Z,5µm,21.0s									
SAO	**San Andreas Ge**	**71.10 41**	⇑	P		**P**		**16 17 42.3**	**+1.2**
FALS	**False Pass**	**71.12 5**		IAMs_20		IAMs_20		16 41 16.1		
	comp=Z,8µm,22.0s									
FALS	**False Pass**	**71.12 5**		P		**P**		**16 17 39.9**	**-0.9**
	baz=189									
YUK	**Yuzh-Kuril'sk**	**71.12 329**		*e*P		**P**		**16 17 38.7**	**-2.4**
YUK				*i*				16 17 55.3		
YUK				*i*	S	**S**		**16 26 51.8**	**-5.3**
YUK				*i*				16 27 35.5		
YUK					SS	**SS**		**16 31 24.5**	**-6.7**
YUK				pmax		pmax				
	comp=Z,158nm,0.9s									
YUK				pmax		pmax				
	comp=N,70nm,0.4s									
YUK				pmax		pmax				
	comp=Z,266nm,1.6s									
PKD	**Bear Valley Ra**	**71.17 42**		IAmb		IAmb		16 18 01.0		
	comp=Z,85nm,1.1s									
PKD				IAMs_20		IAMs_20		16 48 09.4		
	comp=Z,7µm,18.0s									
BBGB	**Big Mountain B**	**71.24 41**		IAmb		IAmb		16 18 07.2		
	comp=Z,124nm,1.0s									
MHC	**Mount Hamilton**	**71.33 40**		IAmb		IAmb		16 17 59.4		
	comp=Z,94nm,1.3s									
MHC				IAMs_20		IAMs_20		16 41 25.4		
	comp=Z,6µm,21.0s									
JTM	**Tenmabayashi**	**71.36 324**	⇑	P		**P**		**16 17 45.7**	**+3.1**
JMN	**Monobe**	**71.45 315**		P		**P**		**16 17 43.7**	**+0.3**
JMN	**Monobe**	**71.45 315**	⇓	P		**P**		**16 17 44.8**	**+1.4**
CVS	**Carmenet Viney**	**71.46 39**		IAmb		IAmb		16 18 11.1		
	comp=Z,102nm,1.1s									
CVS				IAMs_20		IAMs_20		16 41 46.7		
	comp=Z,7µm,21.0s									
HOPS	**Hopland Field**	**71.50 38**		IAmb		IAmb		16 18 05.7		
	comp=Z,80nm,0.9s									
CHNA	**Chernabura Isl**	**71.51 8**		P		**P**		**16 17 42.2**	**-0.9**
	baz=193									
KCPM	**Cahto Peak**	**71.65 38**		IAmb		IAmb		16 18 03.9		
	comp=Z,68nm,1.0s									
KMPM	**Mount Pierce**	**71.81 37**		IAmb		IAmb		16 18 07.2		
	comp=Z,93nm,0.9s									
JOW	**Kunigami**	**71.90 306**		P		**P**		**16 17 46.8**	**+0.6**
	comp=Z,23nm,0.5s,baz=113,slow=5.0,SNR=21									
JOW				S		**S**		**16 27 08.4**	**+1.5**
	comp=Z,7.8nm,0.8s,baz=114,slow=19,SNR=2.2									
JOW				LR		LR		16 43 17.1		
	comp=Z,6µm,21.8s,baz=124,slow=31									
	comp=Z,23nm,0.5s									
JOW	**Kunigami**	**71.90 306**		P		**P**		**16 17 45.9**	**-0.3**
JOW	**Kunigami**	**71.90 306**	⇑	P		**P**		**16 17 46.8**	**+0.6**
SDPT	**Sand Point**	**71.91 7**		P		**P**		**16 17 44.5**	**-1.1**
SDPT	**Sand Point**	**71.91 7**		P		**P**		**16 17 44.6**	**-1.0**
	baz=192									
VES	**Vestal, Richgr**	**72.06 43**		IAmb		IAmb		16 18 05.7		
	comp=Z,135nm,1.0s									
TPO	**Tropico Hills**	**72.07 44**		IAmb		IAmb		16 18 14.7		
	comp=Z,138nm,1.4s									
JAGI	**Jajag, Banyuwa**	**72.11 266**		P		**P**		**16 17 47.7**	**-0.1**
JAGI	**Jajag, Banyuwa**	**72.11 266**	⇑	P		**P**		**16 17 46.1**	**-1.6**
JCC	**Jacoby Creek,**	**72.13 36**		IAMs_20		IAMs_20		16 41 02.3		
	comp=Z,6µm,22.0s									
SKR	**Severo-Kuril's**	**72.15 339**		*e*P		**P**		**16 17 44.4**	**-2.7**
SKR				*e*S		**S**		**16 27 01.8**	**-6.9**
SKR				pmax		pmax				
	comp=Z,1µm,6.4s									
SKR				MLR		MLR				
	comp=Z,4µm,18.0s									
KHMM	**Horse Mountain**	**72.34 37**		IAmb		IAmb		16 18 06.3		
	comp=Z,79nm,1.1s									
ISA	**Isabella, Lake**	**72.36 44**		IAmb		IAmb		16 18 10.4		
	comp=Z,82nm,1.2s									
KRPM	**Rodgers**	**72.36 36**		IAMs_20		IAMs_20		16 46 44.3		
	comp=Z,7µm,18.0s									
SRIG	**Santa Rosalia**	**72.39 54**		IAmb		IAmb		16 17 55.2		
	comp=Z,76nm,1.1s									
LPIG	**La Paz**	**72.41 58**		LR		LR		16 42 33.6		
	comp=Z,4µm,19.3s,baz=240,slow=30									
DNR	**Dunn Ranch,Anz**	**72.42 46**		IAmb		IAmb		16 18 10.8		
	comp=Z,71nm,1.1s									
O02D	**Mt. Diablo Mer**	**72.43 38**		IAmb		IAmb		16 18 08.9		
	comp=Z,72nm,0.9s									
KHBM	**Hayfork Bally**	**72.49 37**		IAmb		IAmb		16 18 17.2		
	comp=Z,67nm,1.1s									
SLBS	**Sierra La Lagu**	**72.52 58**	⇑	P		**P**		**16 17 51.5**	**+1.4**
CMB	**Columbia Colle**	**72.54 41**		IAmb		IAmb		16 18 08.8		
	comp=Z,60nm,0.9s									
CMB				IAMs_20		IAMs_20		16 41 51.5		
	comp=Z,6µm,22.0s									
PFO	**Pinyon Flats O**	**72.56 46**		P		**P**		**16 17 50.8**	**+0.6**
	comp=Z,5.6nm,0.8s,baz=236,slow=5.7,SNR=10									
PFO				LR		LR		16 44 01.4		
	comp=Z,4µm,18.8s,baz=238,slow=31									
	comp=Z,5.6nm,0.8s									
PFO	**Pinyon Flats O**	**72.56 46**		P		**P**		**16 17 49.5**	**-0.6**
PFO	**Pinyon Flats O**	**72.56 46**		P		**P**		**16 17 49.6**	**-0.6**
PFO				pmax		pmax				
	comp=Z,39nm,1.2s									
PFO				MLR		MLR				
	comp=Z,4µm,20.0s									
WELL	**Weller Preserv**	**72.58 40**		IAMs_20		IAMs_20		16 42 03.4		
	comp=Z,6µm,22.0s									
TGY	**Tagaytay City**	**72.63 291**		P		**P**		**16 17 50.8**	**0.0**
	comp=Z,125nm,0.3s,baz=129,slow=13,SNR=4.2									
TGY				S		**S**		**16 27 18.9**	**+3.2**
	comp=Z,46nm,0.3s,baz=158,slow=19,SNR=1.4									
TGY				LR		LR		16 45 37.7		
	comp=Z,6µm,21.5s,baz=111,slow=32									
JSU	**Suzuyama**	**72.64 311**		P		**P**		**16 17 50.5**	**-0.1**
JSU	**Suzuyama**	**72.64 311**	⇓	P		**P**		**16 17 51.2**	**+0.7**
AFDM	**Forest Hills D**	**72.74 40**		IAmb		IAmb		16 18 09.8		
	comp=Z,58nm,0.9s									
ORV	**Oroville**	**72.80 39**		IAMs_20		IAMs_20		16 46 43.2		
	comp=Z,5µm,18.0s									
JKA	**Kamikawa-asahi**	**72.82 328**		IAmb		IAmb		16 18 03.3		
	comp=Z,105nm,1.1s									
ASAJ	**Asahikawa**	**72.82 328**		LR		LR		16 43 37.6		
	comp=Z,4µm,21.9s,baz=147,slow=31									
KBO	**Bosley Butte**	**72.94 35**		IAMs_20		IAMs_20		16 42 31.7		
	comp=Z,7µm,20.0s									
N02D	**Trinity Center**	**72.99 37**		IAmb		IAmb		16 18 12.1		
	comp=Z,76nm,1.1s									
N02D				IAMs_20		IAMs_20		16 41 43.2		
	comp=Z,8µm,22.0s									
CWC	**Cottonwood Cre**	**73.07 43**		IAMs_20		IAMs_20		16 44 00.6		
	comp=Z,4µm,20.0s									
SPIA	**Saint Paul Isl**	**73.07 1**		P		**P**		**16 17 51.8**	**-0.6**
	baz=182									
O03E	**Paynes Creek**	**73.09 38**		IAMs_20		IAMs_20		16 47 03.7		
	comp=Z,6µm,18.0s									
CHGN	**Chignik**	**73.10 8**		P		**P**		**16 17 51.9**	**-0.7**
	baz=194									
M02C	**Callahan**	**73.18 37**		IAMs_20		IAMs_20		16 42 11.0		
	comp=Z,7µm,21.0s									
JNU	**Nakatsue**	**73.20 313**		P		**P**		**16 17 53.3**	**-0.5**
	comp=Z,43nm,0.8s,baz=100,slow=5.7,SNR=21									
JNU				S		**S**		**16 27 23.4**	**+1.9**
	comp=Z,3.9nm,0.8s,baz=181,slow=18,SNR=1.2									
JNU				LR		LR		16 45 11.7		
	comp=Z,3µm,20.4s,baz=119,slow=32									
	comp=Z,43nm,0.8s									
JNU	**Nakatsue**	**73.20 313**		IAmb		IAmb		16 18 11.8		
	comp=Z,85nm,0.8s									
TIN	**Tinemaha, Big**	**73.33 42**		IAMs_20		IAMs_20		16 43 10.5		
	comp=Z,4µm,20.0s									
PET	**Petropavlovsk**	**73.36 342**		IAMs_20		IAMs_20		16 46 01.4		
	comp=Z,7µm,20.0s									
PET	**Petropavlovsk**	**73.36 342**		*e*P		**P**		**16 17 54.5**	**+0.2**
PET				*e*				16 20 41.0		
PET				*e*S		**S**		**16 27 22.2**	**-0.2**
PET				*e*SS		**SS**		**16 32 10.8**	**+5.6**
PET				pmax		pmax				
	comp=Z,1µm,8.0s									
PET				pmax		pmax				
	comp=Z,53nm,1.5s									
PET				pmax		pmax				
	comp=Z,900nm,11.2s									
PET				MLR		MLR				
	comp=Z,4µm,16.0s									
PET				MLR		MLR				
	comp=Z,4µm,15.0s									
YBH	**Yreka Blue Hor**	**73.48 36**		LR		LR		16 42 31.0		
	comp=Z,489nm,21.8s,baz=250,slow=30									
YBH	**Yreka Blue Hor**	**73.48 36**		IAmb		IAmb		16 18 14.8		
	comp=Z,72nm,0.9s									
M03C	**McCloud**	**73.52 37**		IAmb		IAmb		16 18 14.6		
	comp=Z,90nm,0.9s									
HATC	**Hat Creek Radi**	**73.62 38**		IAmb		IAmb		16 18 22.3		
	comp=Z,109nm,1.0s									
BEKR	**Beckworth**	**73.68 39**		IAmb		IAmb		16 18 15.6		
	comp=Z,66nm,0.9s									
PEA0B	**Petropavlovsk-**	**73.72 342**	⇑	*e*P		**P**		**16 17 55.5**	**-0.9**
PETK	**Petropavlovsk-**	**73.72 342**		P		**P**		**16 17 55.9**	**-0.6**
	comp=Z,35nm,1.0s,baz=154,slow=5.3,SNR=22									
PETK				LR		LR		16 47 11.6		
	comp=Z,3µm,19.6s,baz=158,slow=33									
	comp=Z,35nm,1.0s									
PETK	**Petropavlovsk-**	**73.72 342**		P		**P**		**16 17 55.2**	**-1.2**
LHV	**Little Huntoon**	**73.86 41**		IAmb		IAmb		16 18 17.0		
	comp=Z,68nm,1.0s									
GRAC	**Grapevine Rang**	**73.86 43**		IAmb		IAmb		16 18 16.7		
	comp=Z,89nm,0.9s									
FURC	**Furnace Creek,**	**73.89 44**		IAmb		IAmb		16 18 19.1		
	comp=Z,78nm,1.1s									
FURC				IAMs_20		IAMs_20		16 43 29.3		
	comp=Z,4µm,20.0s									
QSPA	**South Pole Qui**	**73.89 180**		P		**P**		**16 17 58.6**	**+1.0**
	comp=Z,144nm,0.8s,baz=35,slow=4.0,SNR=335									
QSPA				PP		**PP**		**16 20 41.8**	**-0.2**
	comp=Z,15nm,1.1s,baz=38,slow=12,SNR=3.0									
QSPA				LR		LR		16 44 14.2		
	comp=Z,5µm,21.9s,baz=43,slow=31									
	comp=Z,144nm,0.8s									
QSPA	**South Pole Qui**	**73.89 180**		P		**P**		**16 17 59.0**	**+1.5**
QSPA	**South Pole Qui**	**73.89 180**		IAMs_20		IAMs_20		16 48 04.1		
	comp=Z,4µm,20.0s									
SHOC	**Shoshone, Teco**	**73.96 44**		IAmb		IAmb		16 18 21.7		
	comp=Z,100nm,1.2s									
SII	**Sitkinak Islan**	**73

O14K	**Tigyukauivet M**	**75.67**	**6**	P	**P**	**16 18 07.1**	**-0.4**
	baz=191							
O14K				S	**S**	**16 27 45.9**	**-2.1**
	baz=191							
H04A	**Detroit Lake**	**75.69**	**34**	IAmb	IAmb	16 18 32.4		
	comp=Z,92nm,1.1s							
UGM	**Wanagama**	**75.72**	**266**	P	**P**	**16 18 09.2**	**+0.2**
O15K	**Ungalikthiuk R**	**75.74**	**7**	IAMs_20	IAMs_20	16 44 44.2		
	comp=Z,8µm,21.0s							
O15K	**Ungalikthiuk R**	**75.74**	**7**	P	**P**	**16 18 07.6**	**-0.4**
	baz=192							
O15K				S	**S**	**16 27 46.5**	**-2.3**
	baz=192							
P16K	**Nushagak River**	**75.81**	**7**	IAMs_20	IAMs_20	16 44 34.1		
	comp=Z,7µm,21.0s							
P16K	**Nushagak River**	**75.81**	**7**	P	**P**	**16 18 07.7**	**-0.6**
	baz=194							
P16K				S	**S**	**16 27 48.9**	**-0.6**
	baz=194							
Q18K	**Katmai Hardscr**	**75.86**	**9**	P	**P**	**16 18 08.1**	**-0.7**
	baz=197,SNR=12							
Q18K				S	**S**	**16 27 50.0**	**-0.5**
	baz=197							
I05D	**Terrebonne, OR**	**75.93**	**35**	IAmb	IAmb	16 18 41.0		
	comp=Z,76nm,1.0s							
TUC	**Tucson**	**75.94**	**50**	P	**P**	**16 18 08.6**	**-1.3**
TUC	**Tucson**	**75.94**	**50**	P	**P**	**16 18 08.6**	**-1.3**
TUC				pmax	pmax			
	comp=Z,55nm,1.1s							
TUC				MLR	MLR			
	comp=Z,3µm,18.0s							
TUC	**Tucson**	**75.94**	**50**	⇓P	**P**	**16 18 10.9**	**+1.0**
TWG	**Pinlang**	**75.94**	**299**	IAmb	IAmb	16 18 17.8		
	comp=Z,161nm,1.5s							
YULB	**Yu-li**	**75.99**	**300**	P	**P**	**16 18 09.9**	**-0.4**
YULB	**Yu-li**	**75.99**	**300**	IAmb	IAmb	16 18 11.8		
	comp=Z,58nm,0.8s							
NACB	**Ninganchiao**	**76.07**	**301**	P	**P**	**16 18 10.4**	**-0.3**
P17K	**Kvichak River**	**76.17**	**8**	P	**P**	**16 18 09.5**	**-0.9**
P17K				IAMs_20	IAMs_20	16 44 22.8		
	comp=Z,6µm,21.0s							
P17K	**Kvichak River**	**76.17**	**8**	P	**P**	**16 18 09.9**	**-0.5**
	baz=196,SNR=28							
P17K				S	**S**	**16 27 52.5**	**-1.1**
	baz=196							
Q20K	**Shuyak Island**	**76.25**	**10**	P	**P**	**16 18 10.9**	**0.0**
	baz=200							
Q20K				S	**S**	**16 27 54.4**	**0.0**
	baz=200							
SYI	**Shuyak Island**	**76.25**	**10**	IAMs_20	IAMs_20	16 44 53.8		
	comp=Z,6µm,20.0s							
WVOR	**Wild Horse Val**	**76.28**	**38**	IAmb	IAmb	16 18 30.7		
	comp=Z,74nm,0.9s							
WVOR	**Wild Horse Val**	**76.28**	**38**	⇓P	**P**	**16 18 12.0**	**+0.3**
N14K	**Kuskokwak Cree**	**76.29**	**5**	IAMs_20	IAMs_20	16 45 43.7		
	comp=Z,6µm,20.0s							
N14K	**Kuskokwak Cree**	**76.29**	**5**	P	**P**	**16 18 11.3**	**+0.3**
	baz=190							
Q19K	**Cape Douglas,**	**76.34**	**10**	P	**P**	**16 18 11.2**	**-0.3**
	baz=198							
O16K	**Kokwok River B**	**76.34**	**7**	IAMs_20	IAMs_20	16 46 03.3		
	comp=Z,6µm,20.0s							
O16K	**Kokwok River B**	**76.34**	**7**	P	**P**	**16 18 11.1**	**-0.3**
	baz=194							
O16K				S	**S**	**16 27 52.7**	**-2.7**
	baz=194							
HOOD	**Mount Hood Mea**	**76.39**	**34**	IAmb	IAmb	16 18 34.5		
	comp=Z,103nm,1.1s							
M11K	**Mekoryuk**	**76.43**	**3**	IAMs_20	IAMs_20	16 47 53.3		
	comp=Z,5µm,20.0s							
M11K	**Mekoryuk**	**76.43**	**3**	P	**P**	**16 18 12.2**	**+0.4**
	baz=186							
SSLB	**Suanglung**	**76.44**	**300**	P	**P**	**16 18 12.4**	**-0.4**
SSLB	**Suanglung**	**76.44**	**300**	IAmb	IAmb	16 18 14.8		
	comp=Z,69nm,0.7s							
SSLB				IAMs_20	IAMs_20	16 48 52.0		
	comp=Z,4µm,20.0s							
YHNB	**Yeheng**	**76.46**	**301**	P	**P**	**16 18 12.4**	**-0.6**
YHNB	**Yeheng**	**76.46**	**301**	IAMs_20	IAMs_20	16 48 38.4		
	comp=Z,6µm,20.0s							
TATO	**Taipei**	**76.50**	**301**	P	**P**	**16 18 11.9**	**-1.2**
TATO	**Taipei**	**76.50**	**301**	IAMs_20	IAMs_20	16 48 28.1		
	comp=Z,4µm,20.0s							
TPUB	**Ta-pu**	**76.51**	**299**	P	**P**	**16 18 12.9**	**-0.3**
X16A	**Lo Mia Camp, P**	**76.52**	**48**	IAmb	IAmb	16 18 34.5		
	comp=Z,62nm,1.0s							
G05A	**Wamic**	**76.52**	**34**	IAmb	IAmb	16 18 35.3		
	comp=Z,139nm,1.1s							
P18K	**Big Mountain,**	**76.54**	**9**	P	**P**	**16 18 11.7**	**-0.9**
	baz=197,SNR=44							
P18K				S	**S**	**16 27 56.6**	**-1.1**
	baz=197							
UGL	**Uglegorsk**	**76.57**	**331**	*e*P	**P**	**16 18 08.6**	**-4.3**
UGL				*e*		16 21 00.0		
UGL				*e*S	**S**	**16 27 52.4**	**-6.0**
UGL				pmax	pmax			
	comp=Z,60nm,1.2s							
UGL				pmax	pmax			
	comp=Z,1µm,4.3s							
UGL				smax	smax			
	comp=E,2µm,10.0s							
UGL				smax	smax			
	comp=N,2µm,13.0s							
NLWA	**Neilton Lookou**	**76.61**	**31**	IAmb	IAmb	16 18 38.3		
	comp=Z,96nm,1.0s							
NLWA				IAMs_20	IAMs_20	16 44 18.4		
	comp=Z,6µm,20.0s							
NLWA	**Neilton Lookou**	**76.61**	**31**	⇑P	**P**	**16 18 14.5**	**+1.2**
319A	**Douglas**	**76.61**	**51**	IAmb	IAmb	16 18 24.4		
	comp=Z,92nm,1.0s							
TEY	**Ternei**	**76.62**	**325**	*e*P	**P**	**16 18 15.2**	**+1.9**
M13K	**Dall Lake**	**76.63**	**4**	IAMs_20	IAMs_20	16 46 36.8		
	comp=Z,5µm,20.0s							
M13K	**Dall Lake**	**76.63**	**4**	P	**P**	**16 18 13.2**	**+0.2**
	baz=189,SNR=28							
M13K				S	**S**	**16 28 00.2**	**+1.6**
	baz=189							
O17K	**Koliganek Bris**	**76.64**	**8**	P	**P**	**16 18 12.9**	**-0.2**
	baz=195							
O17K				S	**S**	**16 27 57.7**	**-1.1**
	baz=195							
N15K	**Kwethluk River**	**76.68**	**6**	P	**P**	**16 18 13.1**	**-0.3**
	baz=192							
I07A	**Izee**	**76.79**	**36**	IAmb	IAmb	16 18 33.6		
	comp=Z,71nm,0.9s							
G06A	**Carlson Farm,**	**76.89**	**35**	IAmb	IAmb	16 18 37.2		
	comp=Z,86nm,1.3s							
KNB	**Kanab**	**76.90**	**45**	IAmb	IAmb	16 18 50.8		
	comp=Z,196nm,1.6s							
J08A	**Circle Bar Ran**	**76.94**	**37**	IAmb	IAmb	16 18 34.3		
	comp=Z,82nm,1.0s							
U15A	**North Rim**	**76.95**	**46**	IAmb	IAmb	16 18 41.9		
	comp=Z,71nm,1.1s							
O18K	**Koktuh Hills**	**76.98**	**9**	P	**P**	**16 18 14.1**	**-1.0**
O18K				IAmb	IAmb	16 18 20.0		
	comp=Z,171nm,1.2s							
O18K				IAMs_20	IAMs_20	16 46 23.2		
	comp=Z,7µm,20.0s							
O18K	**Koktuh Hills**	**76.98**	**9**	P	**P**	**16 18 14.7**	**-0.4**
	baz=197,SNR=26							
O18K				S	**S**	**16 28 01.1**	**-1.4**
	baz=197							
PSUT	**Pine Spring**	**77.02**	**43**	IAmb	IAmb	16 18 41.6		
	comp=Z,59nm,0.9s							
SZCU	**Shurtz Canyon**	**77.03**	**44**	IAmb	IAmb	16 19 48.1		
	comp=Z,58nm,0.9s							
M14K	**Bethel**	**77.08**	**5**	IAMs_20	IAMs_20	16 45 46.6		
	comp=Z,5µm,21.0s							
M14K	**Bethel**	**77.08**	**5**	P	**P**	**16 18 15.6**	**+0.1**
	baz=190							
M14K				S	**S**	**16 28 03.2**	**-0.3**
	baz=190							
P19K	**Oil Pt**	**77.09**	**10**	P	**P**	**16 18 15.4**	**-0.3**
	baz=199							
P19K				S	**S**	**16 28 02.7**	**-1.0**
	baz=199							
N16K	**Nishlik Lake**	**77.12**	**7**	P	**P**	**16 18 15.5**	**-0.4**
	baz=193							
N16K				S	**S**	**16 28 03.2**	**-0.9**
	baz=193							
M15K	**Kasigluk River**	**77.14**	**6**	P	**P**	**16 18 15.7**	**-0.1**
	baz=191							
M15K				S	**S**	**16 28 03.3**	**-0.9**
	baz=191							
B04A	**Port Angeles**	**77.24**	**31**	IAmb	IAmb	16 18 36.2		
	comp=Z,67nm,1.0s							
GNW	**Green Mountain**	**77.25**	**32**	IAmb	IAmb	16 18 35.9		
	comp=Z,78nm,1.1s							
CNPM	**China Poot**	**77.31**	**11**	IAmb	IAmb	16 18 35.4		
	comp=Z,104nm,1.0s							
ELK	**Elko**	**77.36**	**41**	P	**P**	**16 18 18.6**	**+0.7**
	comp=Z,17nm,0.9s,baz=234,slow=5.5,SNR=30							
ELK				LR	LR	16 45 18.1		
	comp=Z,6µm,21.6s,baz=240,slow=30							
	comp=Z,17nm,0.9s							
ELK	**Elko**	**77.36**	**41**	IAMs_20	IAMs_20	16 45 18.0		
	comp=Z,6µm,21.0s							
ELK	**Elko**	**77.36**	**41**	⇓P	**P**	**16 18 18.2**	**+0.3**
N17K	**Nushagak Hills**	**77.36**	**8**	IAMs_20	IAMs_20	16 45 22.2		
	comp=Z,6µm,21.0s							
N17K	**Nushagak Hills**	**77.36**	**8**	P	**P**	**16 18 16.7**	**-0.5**
	baz=195							
N17K				S	**S**	**16 28 05.3**	**-1.4**
	baz=195							
HOM	**Homer**	**77.37**	**10**	P	**P**	**16 18 17.1**	**0.0**
	baz=200							
HOM				S	**S**	**16 28 07.3**	**+0.6**
	baz=200							
HPIG		**77.42**	**57**	IAmb	IAmb	16 18 37.9		
	comp=Z,103nm,1.2s							
ILSW	**Iliamna Southw**	**77.42**	**10**	P	**P**	**16 18 16.4**	**-1.2**
O19K	**Port Alsworth**	**77.44**	**9**	IAmb	IAmb	16 18 22.3		
	comp=Z,185nm,1.2s							
O19K	**Port Alsworth**	**77.44**	**9**	P	**P**	**16 18 17.0**	**-0.6**
	baz=198,SNR=32							
O19K				S	**S**	**16 28 06.9**	**-0.5**
	baz=198							
CLRS	**Cowichan Lake**	**77.45**	**30**	IAmb	IAmb	16 18 37.0		
	comp=Z,87nm,1.1s							
KSRS	**Korea Array**	**77.54**	**315**	P	**P**	**16 18 19.3**	**+0.6**
	comp=Z,31nm,1.0s,baz=128,slow=5.8,SNR=42							
KSRS				S	**S**	**16 28 13.0**	**+3.5**
	comp=Z,0.4nm,0.4s,baz=132,slow=1.4,SNR=1.4							
KSRS				LR	LR	16 47 18.7		
	comp=Z,3µm,21.6s,baz=110,slow=32							
	comp=Z,31nm,1.0s							
TYV	**Tymovskoe**	**77.57**	**333**	*e*P	**P**	**16 18 19.3**	**+0.8**
TYV				*e*S	**S**	**16 28 09.8**	**+0.6**
TYV				pmax	pmax			
	comp=Z,1µm,5.0s							
TYV				pmax	pmax			
	comp=Z,56nm,1.6s							
TYV				smax	smax			
	comp=E,7.0nm,1.9s							
TYV				smax	smax			
	comp=N,300nm,6.9s							
TYV				smax	smax			
	comp=E,400nm,6.9s							
BRLK	**Bradley Lake**	**77.60**	**11**	IAmb	IAmb	16 18 23.6		
	comp=Z,142nm,1.0s							
L14K	**Kuka Creek**	**77.61**	**5**	IAMs_20	IAMs_20	16 47 06.5		
	comp=Z,4µm,20.0s							
L14K	**Kuka Creek**	**77.61**	**5**	P	**P**	**16 18 18.7**	**+0.3**
	baz=189							
L14K				S	**S**	**16 28 10.6**	**+1.5**
	baz=189							
BRSE	**Bradley Lake S**	**77.61**	**11**	P	**P**	**16 18 18.4**	**-0.2**
	baz=201,SNR=25							
BRSE				S	**S**	**16 28 07.9**	**-1.5**
	baz=201							
M16K	**Timber Creek**	**77.64**	**7**	P	**P**	**16 18 18.9**	**+0.2**
	baz=193							
M16K				S	**S**	**16 28 08.6**	**-1.0**
	baz=193							
PGC	**Sidney**	**77.66**	**31**	IAmb	IAmb	16 18 38.1		
	comp=Z,92nm,0.9s							
N18K	**Kilae Creek**	**77.68**	**8**	IAMs_20	IAMs_20	16 45 52.6		
	comp=Z,6µm,21.0s							
N18K	**Kilae Creek**	**77.68**	**8**	P	**P**	**16 18 18.6**	**-0.4**
	baz=196,SNR=6.8							
N18K				S	**S**	**16 28 09.3**	**-0.8**
	baz=196							
CBB	**Campbell River**	**77.70**	**29**	IAmb	IAmb	16 18 27.4		
	comp=Z,106nm,1.1s							
G08A	**Pilot Rock**	**77.84**	**35**	IAmb	IAmb	16 18 49.4		
	comp=Z,86nm,1.1s							
TCRU	**Three Creeks R**	**77.99**	**44**	IAmb	IAmb	16 18 51.8		
	comp=Z,95nm,1.0s							
N19K	**Bonanza Creek**	**78.01**	**9**	IAmb	IAmb	16 18 38.7		
	comp=Z,91nm,0.9s							
N19K	**Bonanza Creek**	**78.01**	**9**	P	**P**	**16 18 20.1**	**-0.7**
	baz=197,SNR=34							
N19K				S	**S**	**16 28 12.1**	**-1.7**
	baz=197							
BBB	**Bella Bella**	**78.03**	**26**	LR	LR	16 45 46.8		
	comp=Z,3µm,20.0s,baz=232,slow=30							
K13K	**Kusilvak Mount**	**78.06**	**4**	IAmb	IAmb	16 18 31.0		
	comp=Z,84nm,1.2s							
K13K				IAMs_20	IAMs_20	16 45 14.4		
	comp=Z,6µm,22.0s							
K13K	**Kusilvak Mount**	**78.06**	**4**	P	**P**	**16 18 21.2**	**+0.2**
	baz=187,SNR=28							
K13K				S	**S**	**16 28 16.4**	**+2.4**
	baz=187							
E07A	**Sunnyside**	**78.14**	**34**	IAmb	IAmb	16 18 40.9		
	comp=Z,81nm,1.0s							
VLA	**Vladivostok**	**78.15**	**322**	*ce*P	**P**	**16 18 21.2**	**-0.7**
VLA				pmax	pmax			
	comp=Z,57nm,1.1s							
VLA				MLR	MLR			
	comp=Z,2µm,17.0s							
M17K	**Holitna River**	**78.18**	**7**	IAMs_20	IAMs_20	16 45 57.8		
	comp=Z,7µm,21.0s							
M17K	**Holitna River**	**78.18**	**7**	P	**P**	**16 18 21.9**	**+0.2**
	baz=194							
M17K				S	**S**	**16 28 16.1**	**+0.7**
	baz=194							
SEW	**Seward**	**78.18**	**11**	IAmb	IAmb	16 18 29.9		
	comp=Z,109nm,0.9s							
SEW				IAMs_20	IAMs_20	16 47 10.0		
	comp=Z,5µm,20.0s							
SEW	**Seward**	**78.18**	**11**	P	**P**	**16 18 21.3**	**-0.4**
	baz=202,SNR=17							
SEW				S	**S**	**16 28 15.6**	**+0.2**
	baz=202							
Q23K	**Middleton Isla**	**78.20**	**13**	P	**P**	**16 18 21.7**	**-0.1**
	baz=205							
HAWA	**Hanford**	**78.21**	**34**	IAmb	IAmb	16 18 46.9		
	comp=Z,90nm,1.2s							
HAWA	**Hanford**	**78.21**	**34**	⇑P	**P**	**16 18 22.6**	**+0.4**
L16K	**Owhat River**	**78.26**	**6**	P	**P**	**16 18 22.4**	**+0.3**
	baz=192							
L16K				S	**S**	**16 28 18.3**	**+2.1**
	baz=192							
121A	**Cookes Peak, D**	**78.27**	**51**	IAmb	IAmb	16 18 49.2		
	comp=Z,82nm,1.1s							
SLKM	**Skilak Lake**	**78.42**	**11**	IAmb	IAmb	16 18 28.0		
	comp=Z,156nm,1.0s							
SLKM				IAMs_20	IAMs_20	16 45 50.2		
	comp=Z,5µm,21.0s							
WAH2	**Wahluke Slope**	**78.42**	**34**	IAmb	IAmb	16 18 56.6		
	comp=Z,138nm,1.5s							
INCN	**Inchon**	**78.44**	**315**	⇑P	**P**	**16 18 25.7**	**+2.0**
M18K	**Stony River**	**78.47**	**8**	P	**P**	**16 18 22.6**	**-0.7**
	baz=196							
M18K				S	**S**	**16 28 18.7**	**+0.2**
	baz=196							
O22K	**Cooper Landing**	**78.48**	**11**	IAMs_20	IAMs_20	16 45 38.9		
	comp=Z,5µm,21.0s							
O22K	**Cooper Landing**	**78.48**	**11**	P	**P**	**16 18 22.5**	**-0.9**
	baz=202							
O22K				S	**S**	**16 28 17.7**	**-0.9**
	baz=202							
P23K	**Montague Islan**	**78.49**	**12**	IAmb	IAmb	16 18 29.7		
	comp=Z,129nm,1.0s							
P23K	**Montague Islan**	**78.49**	**12**	P	**P**	**16 18 22.9**	**-0.6**
	baz=204							
P23K				S	**S**	**16 28 16.3**	**-2.5**
	baz=204							
CAPN	**Captain Cook N**	**78.50**	**10**	P	**P**	**16 18 23.0**	**-0.4**
	baz=201							
CAPN				S	**S**	**16 28 19.8**	**+1.1**
	baz=201							
BMO	**Blue Mountains**	**78.51**	**36**	IAMs_20	IAMs_20	16 45 13.1		
	comp=Z,6µm,22.0s							
BMO	**Blue Mountains**	**78.51**	**36**	⇓P	**P**	**16 18 23.9**	**-0.1**
MFID	**Camas Ranch**	**78.52**	**38**	IAMs_20	IAMs_20	16 50 36.6		
	comp=Z,4µm,18.0s							
PSTR	**Posyet**	**78.53**	**321**	⇓*e*P	**P**	**16 18 26.2**	**+2.2**
BBJI	**Bungbulang**	**78.59**	**265**	P	**P**	**16 18 25.0**	**-0.2**
BBJI	**Bungbulang**	**78.59**	**265**	IAmb	IAmb	16 18 29.9		
	comp=Z,60nm,0.8s							
CRAG	**Craig**	**78.59**	**21**	P	**P**	**16 18 22.8**	**-1.3**
CRAG	**Craig**	**78.59**	**21**	P	**P**	**16 18 23.2**	**-0.9**
	baz=218							
CRAG				S	**S**	**16 28 23.3**	**+3.3**
	baz=218							
CRAG	**Craig**	**78.59**	**21**	⇓P	P	16 18 29.5	+5.5
DUG	**Dugway, Tooele**	**78.60**	**42**	IAMs_20	IAMs_20	16 52 58.9		
	comp=Z,4µm,18.0s							
DUG	**Dugway, Tooele**	**78.60**	**42**	P	**P**	**16 18 24.0**	**-0.7**
DUG	**Dugway, Tooele**	**78.60**	**42**	⇓P	**P**	**16 18 25.0**	**+0.3**
K15K	**Wolf Creek Mou**	**78.64**	**5**	IAMs_20	IAMs_20	16 47 06.9		
	comp=Z,5µm,20.0s							
K15K	**Wolf Creek Mou**	**78.64**	**5**	P	**P**	**16 18 24.5**	**+0.2**
	baz=190							
K15K				S	**S**	**16 28 22.1**	**+1.8**
	baz=190							
USRK	**Ussuriysk Ar.**	**78.72**	**323**	P	**P**	**16 18 25.2**	**+0.2**
	comp=Z,16nm,1.1s,baz=123,slow=3.4,SNR=23							
	comp=Z,16nm,1.1s							
N20K	**Mount Spurr**	**78.73**	**10**	P	**P**	**16 18 23.6**	**-1.3**
	baz=200,SNR=29							
N20K				S	**S**	**16 28 18.6**	**-2.9**
	baz=200							
SPCR	**Spurr Chakacha**	**78.73**	**10**	P	**P**	**16 18 23.9**	**-0.9**
	baz=200,SNR=21							
SPCR				S	**S**	**16 28 19.6**	**-1.9**
	baz=200							
EPH	**Ephrata**	**78.78**	**33**	IAmb	IAmb	16 18 47.6		
	comp=Z,152nm,1.4s							
LEM	**Lembang**	**78.79**	**266**	P	**P**	**16 18 27.1**	**+0.7**
	comp=Z,172nm,0.9s,baz=110,slow=6.8,SNR=41							
LEM				S	**S**	**16 28 24.0**	**-0.2**
	comp=Z,5.9nm,0.4s,baz=127,slow=20,SNR=8.3							
LEM				LR	LR	16 56 02.4		
	comp=Z,1µm,18.3s,baz=111,slow=38							
	comp=Z,172nm,0.9s							
HMU	**Henry Mountain**	**78.79**	**45**	IAmb	IAmb	16 18 52.6		
	comp=Z,94nm,1.1s							
L17K	**Donlin**	**78.80**	**7**	P	**P**	**16 18 25.7**	**+0.6**
	baz=194							
L17K				S	**S**	**16 28 24.3**	**+2.3**
	baz=194							
QZH2	**Quanzhou**	**78.87**	**300**	P	**P**	**16 18 24.8**	**-1.5**
QZH2				PP	**PP**	**16 21 22.4**	**-2.9**
QZH2				S	**S**	**16 28 23.6**	**-0.7**
QZH2				pmax	pmax			
	comp=Z,85nm,1.4s							
QZH2				pmax	pmax			
	comp=Z,3µm,4.4s							
QZH2				L	L			
	comp=Z,640nm,14.1s							
QZH2				L	L			
	comp=Z,2µm,21.0s							
QZH2				L	L			
	comp=Z,4µm,26.8s							
J14K	**Nanvaranak Lak**	**78.94**	**4**	IAMs_20	IAMs_20	16 49 30.7		
	comp=Z,6µm,20.0s							
J14K	**Nanvaranak Lak**	**78.94**	**4**	P	**P**	**16 18 25.7**	**-0.1**
	baz=188							
J14K				S	**S**	**16 28 25.3**	**+1.9**
	baz=188							
D08A	**Wollman Farm,**	**78.96**	**34**	IAmb	IAmb	16 18 48.8		
	comp=Z,154nm,1.4s							
Q16A	**Castle Valley**	**79.00**	**44**	IAmb	IAmb	16 18 46.3		
	comp=Z,61nm,0.9s							
V35K	**Ketchikan**	**79.02**	**22**	IAmb	IAmb	16 18 48.2		
	comp=Z,96nm,1.1s							
V35K				IAMs_20	IAMs_20	16 55 57.7		
	comp=Z,4µm,18.0s							
V35K	**Ketchikan**	**79.02**	**22**	P	**P**	**16 18 25.9**	**-0.5**
	baz=220							
V35K				S	**S**	**16 28 26.2**	**+1.6**
	baz=220							
E09A	**Wood Farm, Sta**	**79.04**	**35**	IAmb	IAmb	16 18 48.8		
	comp=Z,99nm,1.3s							
HIN	**Hinchinbrook I**	**79.04**	**13**	IAmb	IAmb	16 18 33.1		
	comp=Z,148nm,0.9s							
RC01	**Rabbit Creek A**	**79.05**	**11**	IAmb	IAmb	16 18 34.8		
	comp=Z,108nm,0.9s							
RC01				IAMs_20	IAMs_20	16 46 28.8		
	comp=Z,5µm,21.0s							
RC01	**Rabbit Creek A**	**79.05**	**11**	P	**P**	**16 18 26.1**	**-0.4**
	baz=202,SNR=38							
RC01				S	**S**	**16 28 23.6**	**-1.1**
	baz=202							
M19K	**Big River Lodg**	**79.07**	**8**	IAMs_20	IAMs_20	16 47 49.2		
	comp=Z,6µm,20.0s							
M19K	**Big River Lodg**	**79.07**	**8**	P	**P**	**16 18 25.9**	**-0.7**
	baz=197							
M19K				S	**S**	**16 28 23.7**	**-1.2**
	baz=197							
L18K	**Granite Mounta**	**79.07**	**7**	IAMs_20	IAMs_20	16 45 41.2		
	comp=Z,7µm,22.0s							
L18K	**Granite Mounta**	**79.07**	**7**	P	**P**	**16 18 26.9**	**+0.4**
	baz=195							
L18K				S	**S**	**16 28 24.7**	**-0.1**
	baz=195							
STLK	**Strandline Lak**	**79.07**	**10**	IAmb	IAmb	16 18 34.2		
	comp=Z,58nm,0.8s							
KAIM	**Kayak Island**	**79.08**	**14**	P	**P**	**16 18 27.0**	**+0.3**
	baz=207,SNR=19							
U33K	**Whale Pass**	**79.10**	**21**	IAmb	IAmb	16 18 32.9		
	comp=Z,80nm,1.0s							
U33K				IAMs_20	IAMs_20	16 46 54.8		
	comp=Z,4µm,19.0s							
U33K	**Whale Pass**	**79.10**	**21**	P	**P**	**16 18 27.2**	**+0.3**
	baz=218,SNR=9.9							
U33K				S	**S**	**16 28 27.9**	**+2.5**
	baz=218							
SIT	**Sitka**	**79.12**	**19**	P	**P**	**16 18 26.8**	**-0.1**
	baz=216							
SIT				S	**S**	**16 28 27.5**	**+1.9**
	baz=216							
F10A	**Beach Ranch, E**	**79.22**	**36**	IAmb	IAmb	16 18 49.8		
	comp=Z,75nm,0.9s							
M20K	**Styx River**	**79.23**	**9**	P	**P**	**16 18 27.4**	**-0.2**
	baz=199							
M20K				S	**S**	**16 28 25.1**	**-1.7**
	baz=199							
L19K	**White Mountain**	**79.27**	**8**	IAMs_20	IAMs_20	16 47 53.6		
	comp=Z,5µm,20.0s							
L19K	**White Mountain**	**79.27**	**8**	P	**P**	**16 18 27.3**	**-0.4**
	baz=197							
L19K				S	**S**	**16 28 26.8**	**-0.3**
	baz=197							
EYAK	**Cordova Ski Ar**	**79.34**	**13**	P	**P**	**16 18 26.8**	**-1.3**
EYAK	**Cordova Ski Ar**	**79.34**	**13**	P	**P**	**16 18 27.5**	**-0.5**
	baz=206,SNR=23							
EYAK				S	**S**	**16 28 26.7**	**-1.1**
	baz=206							
SUCK	**Suckling Hills**	**79.36**	**14**	IAmb	IAmb	16 18 52.4		
	comp=Z,103nm,1.0s							
GLI	**Glacier Island**	**79.36**	**12**	IAMs_20	IAMs_20	16 46 10.1		
	comp=Z,7µm,21.0s							
GLI	**Glacier Island**	**79.36**	**12**	P	**P**	**16 18 27.5**	**-0.7**
	baz=204,SNR=56							
GLI				S	**S**	**16 28 26.0**	**-2.0**
	baz=204							
**K

	comp=Z,4µm,18.0s							
S31K	**Pelican**	**79.58**	**19**	P	**P**	**16 18 28.5**	**-0.9**
	baz=215							
S31K				S	**S**	**16 28 30.0**	**-0.4**
	baz=215							
KNK	**Knik Glacier**	**79.58**	**11**	IAmb	IAmb	16 18 36.1	
	comp=Z,75nm,0.8s							
KNK				IAMs_20	IAMs_20	16 46 00.0		
	comp=Z,5µm,21.0s							
KNK	**Knik Glacier**	**79.58**	**11**	P	**P**	**16 18 29.0**	**-0.4**
	baz=203,SNR=34							
KNK				S	**S**	**16 28 27.3**	**-3.2**
	baz=203							
M22K	**Willow**	**79.60**	**10**	IAMs_20	IAMs_20	16 46 21.4		
	comp=Z,7µm,22.0s							
M22K	**Willow**	**79.60**	**10**	P	**P**	**16 18 28.8**	**-0.6**
	baz=202							
M22K				S	**S**	**16 28 29.4**	**-1.1**
	baz=202							
WRAK	**Wrangell Islan**	**79.61**	**21**	IAMs_20	IAMs_20	16 45 51.2		
	comp=Z,4µm,20.0s							
WRAK	**Wrangell Islan**	**79.61**	**21**	P	**P**	**16 18 29.5**	**-0.1**
	baz=219							
WRAK				S	**S**	**16 28 32.1**	**+1.4**
	baz=219							
VHRN	**Van Horn**	**79.62**	**54**	IAmb	IAmb	16 18 38.4		
	comp=Z,79nm,0.9s							
PMR	**Palmer**	**79.62**	**11**	IAmb	IAmb	16 18 38.5		
	comp=Z,100nm,0.9s							
PMR	**Palmer**	**79.62**	**11**	P	**P**	**16 18 29.1**	**-0.5**
	baz=202,SNR=34							
PMR				S	**S**	**16 28 30.3**	**-0.5**
	baz=202							
GAMB	**Gambell**	**79.68**	**0**	P	**P**	**16 18 30.0**	**+0.2**
	baz=180							
GAMB				S	**S**	**16 28 33.6**	**+2.4**
	baz=180							
J16K	**Anvik River**	**79.70**	**5**	IAmb	IAmb	16 18 39.7		
	comp=Z,152nm,0.9s							
J16K				IAMs_20	IAMs_20	16 47 49.8		
	comp=Z,6µm,20.0s							
J16K	**Anvik River**	**79.70**	**5**	P	**P**	**16 18 30.7**	**+0.7**
	baz=191,SNR=101							
J16K				S	**S**	**16 28 35.2**	**+3.7**
	baz=191							
S32K	**Killisnoo**	**79.70**	**20**	IAMs_20	IAMs_20	16 47 32.4		
	comp=Z,4µm,20.0s							
S32K	**Killisnoo**	**79.70**	**20**	P	**P**	**16 18 30.0**	**0.0**
	baz=216							
T33K	**Petersburg**	**79.71**	**21**	P	**P**	**16 18 30.4**	**+0.2**
	baz=218							
MNTX	**Cornudas Mount**	**79.71**	**53**	IAmb	IAmb	16 18 56.6		
	comp=Z,98nm,1.1s							
MNTX	**Cornudas Mount**	**79.71**	**53**	⇓P	**P**	**16 18 31.6**	**+0.8**
LLLB	**Lillooet**	**79.73**	**30**	IAmb	IAmb	16 18 39.7		
	comp=Z,89nm,0.8s							
GHO	**Glory Hole Cre**	**79.83**	**11**	IAMs_20	IAMs_20	16 56 12.5		
	comp=Z,5µm,18.0s							
DIV	**Divide**	**79.86**	**13**	IAMs_20	IAMs_20	16 46 03.4		
	comp=Z,7µm,22.0s							
MESA	**MESA**	**79.89**	**15**	IAmb	IAmb	16 18 55.9		
	comp=Z,189nm,1.0s							
MESA	**MESA**	**79.89**	**15**	P	**P**	**16 18 31.5**	**+0.2**
	baz=209,SNR=20							
MESA				S	**S**	**16 28 33.4**	**-0.6**
	baz=209							
J17K	**VABM Dome**	**79.95**	**6**	P	**P**	**16 18 31.6**	**+0.2**
	baz=193							
J17K				S	**S**	**16 28 36.3**	**+2.1**
	baz=193							
BMRM	**Bremner River**	**79.97**	**13**	P	**P**	**16 18 31.3**	**-0.2**
	baz=207,SNR=59							
BMRM				S	**S**	**16 28 32.3**	**-2.2**
	baz=207							
SML	**Sawmill**	**79.97**	**11**	IAmb	IAmb	16 18 49.8		
	comp=Z,202nm,1.4s							
SML				IAMs_20	IAMs_20	16 46 23.3		
	comp=Z,5µm,22.0s							
SML	**Sawmill**	**79.97**	**11**	P	**P**	**16 18 31.1**	**-0.5**
	baz=203,SNR=22							
SML				S	**S**	**16 28 32.4**	**-2.2**
	baz=203							
MVCO	**Mesa Verde**	**79.98**	**47**	IAmb	IAmb	16 19 01.9		
	comp=Z,135nm,1.8s							
MVCO	**Mesa Verde**	**79.98**	**47**	⇑P	**P**	**16 18 33.3**	**+0.9**
PV05	**Paradox Valley**	**79.98**	**46**	IAmb	IAmb	16 18 40.6		
	comp=Z,69nm,0.8s							
TXAR	**Lajitas Array**	**80.03**	**56**	P	**P**	**16 18 33.6**	**+0.9**
	comp=Z,19nm,1.0s,baz=247,slow=4.2,SNR=93							
TXAR				S	**S**	**16 28 43.0**	**+6.3**
	comp=Z,0.1nm,0.3s,baz=311,slow=4.5,SNR=1.3							
TXAR				LR	LR	16 47 17.5		
	comp=Z,3µm,20.5s,baz=249,slow=31							
	comp=Z,19nm,1.0s							
TXAR	**Lajitas Array**	**80.03**	**56**	P	**P**	**16 18 31.6**	**-1.1**
U35K	**Hyder**	**80.05**	**23**	IAMs_20	IAMs_20	16 45 23.0		
	comp=Z,4µm,22.0s							
U35K	**Hyder**	**80.05**	**23**	P	**P**	**16 18 31.9**	**-0.1**
	baz=221							
U35K				S	**S**	**16 28 36.8**	**+1.3**
	baz=221							
M23K	**Glacier View**	**80.07**	**12**	P	**P**	**16 18 32.0**	**-0.1**
	baz=204,SNR=27							
M23K				S	**S**	**16 28 34.2**	**-1.4**
	baz=204							
R31K	**City Hall, Gus**	**80.10**	**18**	P	**P**	**16 18 32.2**	**0.0**
	baz=215							
CRQE	**Cirque**	**80.12**	**14**	P	**P**	**16 18 32.3**	**-0.2**
	baz=208,SNR=33							
CRQE				S	**S**	**16 28 34.2**	**-2.2**
	baz=208							
HWUT	**Hardware Ranch**	**80.15**	**42**	IAMs_20	IAMs_20	16 46 36.0		
	comp=Z,6µm,22.0s							
HWUT	**Hardware Ranch**	**80.15**	**42**	⇓P	**P**	**16 18 33.1**	**-0.1**
KLU	**Klutina**	**80.16**	**12**	IAmb	IAmb	16 18 39.4		
	comp=Z,84nm,0.9s							
KLU				IAMs_20	IAMs_20	16 46 45.2		
	comp=Z,7µm,21.0s							
KLU	**Klutina**	**80.16**	**12**	P	**P**	**16 18 32.2**	**-0.4**
	baz=206,SNR=56							
KLU				S	**S**	**16 28 34.9**	**-1.8**
	baz=206							
PV10	**Paradox Valley**	**80.17**	**45**	IAmb	IAmb	16 19 02.8		
	comp=Z,156nm,1.0s							
PV17	**East Wray Mesa**	**80.18**	**45**	IAmb	IAmb	16 18 52.6		
	comp=Z,115nm,1.4s							
CUT	**Chulitna**	**80.18**	**10**	P	**P**	**16 18 31.9**	**-0.7**
	baz=201,SNR=51							
CUT				S	**S**	**16 28 35.3**	**-1.3**
	baz=201							
TGL	**Tana Glacier**	**80.18**	**14**	IAmb	IAmb	16 18 54.3		
	comp=Z,213nm,1.2s							
SCM	**Sheep Creek Mo**	**80.19**	**12**	IAMs_20	IAMs_20	16 48 10.9		
	comp=Z,5µm,20.0s							
SCM	**Sheep Creek Mo**	**80.19**	**12**	P	**P**	**16 18 32.5**	**-0.3**
	baz=204,SNR=61							
SCM				S	**S**	**16 28 36.3**	**-0.6**
	baz=204							
PV18	**Skein Mesa, Pa**	**80.20**	**46**	IAmb	IAmb	16 18 52.8		
	comp=Z,136nm,1.0s							
L22K	**Petersville**	**80.21**	**10**	IAmb	IAmb	16 18 50.5		
	comp=Z,118nm,0.9s							
PV13	**Radium Mtn., P**	**80.22**	**46**	IAmb	IAmb	16 19 03.5		
	comp=Z,112nm,1.3s							
PCA	**Pinnacle**	**80.24**	**16**	IAmb	IAmb	16 18 59.5		
	comp=Z,86nm,1.1s							
PINM	**Pinnacle**	**80.24**	**16**	P	**P**	**16 18 32.7**	**-0.4**
	baz=211,SNR=12							
PINM				S	**S**	**16 28 37.1**	**-0.5**
	baz=211							
J18K	**Innoko River**	**80.27**	**7**	IAMs_20	IAMs_20	16 47 56.1		
	comp=Z,6µm,20.0s							
J18K	**Innoko River**	**80.27**	**7**	P	**P**	**16 18 33.2**	**0.0**
	baz=195							
J18K				S	**S**	**16 28 38.5**	**+0.9**
	baz=195							
I17K	**Unalakleet**	**80.28**	**5**	IAMs_20	IAMs_20	16 48 08.3		
	comp=Z,5µm,20.0s							
I17K	**Unalakleet**	**80.28**	**5**	P	**P**	**16 18 33.6**	**+0.5**
	baz=191							
I17K				S	**S**	**16 28 41.1**	**+3.5**
	baz=191							
PV02	**Paradox Valley**	**80.30**	**46**	IAmb	IAmb	16 18 53.4		
	comp=Z,120nm,0.9s							
PV21	**Cone Mtn., Par**	**80.31**	**45**	IAmb	IAmb	16 19 01.0		
	comp=Z,96nm,1.0s							
PPLA	**Purkeypile**	**80.33**	**9**	P	**P**	**16 18 33.5**	**-0.1**
	baz=199							
MDJ	**Mudanjiang**	**80.36**	**322**	IAmb	IAmb	16 18 46.7		
	comp=Z,201nm,1.7s							
MDJ	**Mudanjiang**	**80.36**	**322**	P	**P**	**16 18 35.8**	**+1.8**
MDJ				pP	sP	16 18 38.4	+0.4
MDJ				PP	**PP**	**16 21 36.9**	**-0.3**
MDJ				S	**S**	**16 28 40.0**	**+0.7**
MDJ				SS	**SS**	**16 33 52.3**	**+0.9**
MDJ				pmax	pmax			
	comp=Z,48nm,1.4s							
MDJ				pmax	pmax			
	comp=Z,2µm,5.5s							
MDJ				L	L			
	comp=Z,4µm,20.6s							
MDJ				L	L			
	comp=Z,5µm,22.7s							
MDJ				L	L			
	comp=Z,12µm,23.4s							
R32K	**Eaglecrest**	**80.36**	**19**	IAMs_20	IAMs_20	16 52 08.0		
	comp=Z,3µm,18.0s							
R32K	**Eaglecrest**	**80.36**	**19**	P	**P**	**16 18 33.7**	**0.0**
	baz=216							
R32K				S	**S**	**16 28 41.8**	**+3.0**
	baz=216							
ANMO	**Albuquerque**	**80.37**	**49**	P	**P**	**16 18 33.8**	**-0.7**
	comp=Z,18nm,1.0s,baz=219,slow=8.7,SNR=30							
ANMO				LR	LR	16 49 06.1		
	comp=Z,2µm,19.0s,baz=245,slow=32							
	comp=Z,18nm,1.0s							
ANMO	**Albuquerque**	**80.37**	**49**	P	**P**	**16 18 33.6**	**-0.9**
ANMO	**Albuquerque**	**80.37**	**49**	IAMs_20	IAMs_20	16 50 10.4		
	comp=Z,3µm,18.0s							
ANMO	**Albuquerque**	**80.37**	**49**	IAMs_20	IAMs_20	16 50 10.4		
	comp=Z,3µm,18.0s							
ANMO	**Albuquerque**	**80.37**	**49**	*de*P	**P**	**16 18 35.3**	**+0.8**
ANMO				pmax	pmax			
	comp=Z,35nm,0.9s							
ANMO				MLR	MLR			
	comp=Z,2µm,16.0s							
ANMO	**Albuquerque**	**80.37**	**49**	⇑P	**P**	**16 18 33.0**	**-1.5**
GRNR	**Gornyy**	**80.40**	**330**	⇓*i*P	**P**	**16 18 33.4**	**-0.7**
GRNR				pmax	pmax			
	comp=Z,6.0nm,1.1s							
GRNC	**Granite Creek**	**80.42**	**15**	IAmb	IAmb	16 18 52.7		
	comp=Z,126nm,0.9s							
VRDI	**Verde Repeater**	**80.46**	**14**	IAmb	IAmb	16 18 52.7		
	comp=Z,95nm,0.9s							
VRDI				IAMs_20	IAMs_20	16 47 11.2		
	comp=Z,6µm,20.0s							
ALPN	**Alpine**	**80.49**	**55**	IAmb	IAmb	16 18 54.7		
	comp=Z,88nm,0.9s							
K20K	**Telida**	**80.50**	**8**	IAmb	IAmb	16 18 53.5		
	comp=Z,139nm,1.1s							
K20K				IAMs_20	IAMs_20	16 46 59.2		
	comp=Z,5µm,22.0s							
K20K	**Telida**	**80.50**	**8**	P	**P**	**16 18 34.7**	**+0.4**
	baz=198,SNR=57							
K20K				S	**S**	**16 28 38.3**	**-1.8**
	baz=198							
BESE	**Bessie Mountai**	**80.51**	**19**	IAmb	IAmb	16 18 56.6		
	comp=Z,102nm,1.3s							
BESE				IAMs_20	IAMs_20	16 53 12.7		
	comp=Z,4µm,18.0s							
PV15	**Paradox Valley**	**80.54**	**46**	IAmb	IAmb	16 18 53.3		
	comp=Z,82nm,1.1s							
N25K	**Chitina, Valde**	**80.54**	**13**	IAmb	IAmb	16 18 41.6		
	comp=Z,104nm,0.8s							
N25K				IAMs_20	IAMs_20	16 46 13.4		
	comp=Z,7µm,22.0s							
N25K	**Chitina, Valde**	**80.54**	**13**	P	**P**	**16 18 34.4**	**-0.3**
	baz=207,SNR=74							
N25K				S	**S**	**16 28 38.7**	**-2.0**
	baz=207							
GLB	**Gilahina Butte**	**80.57**	**13**	IAmb	IAmb	16 18 41.1		
	comp=Z,92nm,0.8s							
GLB				IAMs_20	IAMs_20	16 52 44.1		
	comp=Z,5µm,19.0s							
TPB01	**Permian Basin**	**80.62**	**54**	IAmb	IAmb	16 18 55.3		
	comp=Z,100nm,0.8s							
ANM	**Nome**	**80.64**	**3**	IAMs_20	IAMs_20	16 48 43.7		
	comp=Z,5µm,21.0s							
ANM	**Nome**	**80.64**	**3**	P	**P**	**16 18 35.2**	**+0.2**
	baz=187,SNR=23							
ANM				S	**S**	**16 28 43.8**	**+2.4**
	baz=187							
NEW	**Newport**	**80.66**	**34**	LR	LR	16 46 40.7		
	comp=Z,7µm,21.4s,baz=234,slow=30							
NEW	**Newport**	**80.66**	**34**	IAMs_20	IAMs_20	16 46 28.7		
	comp=Z,7µm,21.0s							
NEW	**Newport**	**80.66**	**34**	P	**P**	**16 18 35.5**	**-0.1**
NEW	**Newport**	**80.66**	**34**	⇑P	**P**	**16 18 35.5**	**-0.1**
M24K	**Tolsona, Glenn**	**80.66**	**12**	IAMs_20	IAMs_20	16 47 21.6		
	comp=Z,5µm,21.0s							
M24K	**Tolsona, Glenn**	**80.66**	**12**	P	**P**	**16 18 35.4**	**+0.1**
	baz=205,SNR=58							
M24K				S	**S**	**16 28 42.1**	**+0.2**
	baz=205							
LOGN	**Logan Glacier**	**80.68**	**15**	IAmb	IAmb	16 18 42.0		
	comp=Z,94nm,0.9s							
MCARA	**McCarthy VSAT**	**80.69**	**14**	IAmb	IAmb	16 19 00.2		
	comp=Z,144nm,1.0s							
MCARA				IAMs_20	IAMs_20	16 47 08.4		
	comp=Z,5µm,21.0s							
MCARA	**McCarthy VSAT**	**80.69**	**14**	P	**P**	**16 18 35.0**	**-0.4**
	baz=208,SNR=43							
MCARA				S	**S**	**16 28 41.0**	**-1.1**
	baz=208							
CTG	**Chitna Glacier**	**80.72**	**15**	P	**P**	**16 18 35.5**	**-0.2**
	baz=210,SNR=31							
CTG				S	**S**	**16 28 42.7**	**0.0**
	baz=210							
CTGM	**Chitina Glacie**	**80.72**	**15**	IAmb	IAmb	16 18 54.3		
	comp=Z,83nm,0.9s							
BARN	**Barnard Glacie**	**80.73**	**14**	IAmb	IAmb	16 18 42.4		
	comp=Z,128nm,0.9s							
T35M	**Bob Quinn**	**80.78**	**22**	IAMs_20	IAMs_20	16 47 39.2		
	comp=Z,4µm,20.0s							
T35M	**Bob Quinn**	**80.78**	**22**	P	**P**	**16 18 36.3**	**+0.3**
	baz=221,SNR=14							
T35M				S	**S**	**16 28 44.5**	**+1.2**
	baz=221							
WAT6	**Susitna Watana**	**80.79**	**11**	P	**P**	**16 18 35.7**	**-0.5**
	baz=204,SNR=105							
WAT6				S	**S**	**16 28 41.1**	**-2.4**
	baz=204							
O28M	**Mount Upton**	**80.84**	**15**	P	**P**	**16 18 36.2**	**-0.4**
	baz=211							
O28M				S	**S**	**16 28 42.8**	**-1.4**
	baz=211							
O29M	**Mount Kennedy**	**80.86**	**16**	IAMs_20	IAMs_20	16 46 09.0		
	comp=Z,7µm,22.0s							
O29M	**Mount Kennedy**	**80.86**	**16**	P	**P**	**16 18 36.6**	**+0.1**
	baz=213							
O29M				S	**S**	**16 28 44.9**	**+0.8**
	baz=213							
WAT1	**Susitna Watana**	**80.88**	**11**	P	**P**	**16 18 35.9**	**-0.5**
	baz=203							
WAT1				S	**S**	**16 28 42.5**	**-1.5**
	baz=203							
H16K	**Elim**	**80.90**	**4**	P	**P**	**16 18 36.8**	**+0.4**
	baz=190,SNR=68							
H16K				S	**S**	**16 28 45.7**	**+1.6**
	baz=190							
J19K	**Poorman**	**80.91**	**7**	IAMs_20	IAMs_20	16 47 33.1		
	comp=Z,7µm,21.0s							
J19K	**Poorman**	**80.91**	**7**	P	**P**	**16 18 37.1**	**+0.6**
	baz=196							
J19K				S	**S**	**16 28 45.5**	**+1.2**
	baz=196							
TPB05	**Hovey Rd**	**80.97**	**54**	IAmb	IAmb	16 19 03.2		
	comp=Z,100nm,1.1s							
AHID	**Auburn Hatcher**	**81.05**	**41**	IAMs_20	IAMs_20	16 47 34.8		
	comp=Z,4µm,20.0s							
AHID	**Auburn Hatcher**	**81.05**	**41**	⇓P	**P**	**16 18 38.1**	**+0.1**
SKAG	**Skagway**	**81.08**	**18**	IAmb	IAmb	16 18 47.7		
	comp=Z,89nm,1.0s							
SKAG	**Skagway**	**81.08**	**18**	P	**P**	**16 18 38.2**	**+0.7**
	baz=216,SNR=14							
SKAG				S	**S**	**16 28 45.8**	**-0.3**
	baz=216							
SKAG	**Skagway**	**81.08**	**18**	⇑P	**P**	**16 18 38.5**	**+1.1**
HARP	**HAARP**	**81.14**	**12**	P	**P**	**16 18 37.7**	**0.0**
	baz=206							
HARP				S	**S**	**16 28 44.9**	**-1.8**
	baz=206							
G15K	**Niukluk**	**81.14**	**3**	P	**P**	**16 18 37.9**	**+0.2**
	baz=188							
G15K				S	**S**	**16 28 49.2**	**+2.6**
	baz=188							
KTH	**Kantishna Hill**	**81.15**	**9**	IAmb	IAmb	16 18 56.3		
	comp=Z,96nm,0.9s							
P30M	**Million Dollar**	**81.15**	**17**	P	**P**	**16 18 38.2**	**+0.2**
	baz=214,SNR=30							
P30M				S	**S**	**16 28 49.2**	**+2.2**
	baz=214							
TRF	**Thorofare Moun**	**81.16**	**10**	IAmb	IAmb	16 18 45.0		
	comp=Z,142nm,0.9s							
TRF	**Thorofare Moun**	**81.16**	**10**	P	**P**	**16 18 36.9**	**-1.1**
	baz=201,SNR=61							
TRF				S	**S**	**16 28 45.0**	**-2.2**
	baz=201							
S34M	**Telegraph Cree**	**81.19**	**21**	IAmb	IAmb	16 19 00.6		
	comp=Z,119nm,1.4s							
S34M				IAMs_20	IAMs_20	16 47 40.9		
	comp=Z,4µm,20.0s							
S34M	**Telegraph Cree**	**81.19**	**21**	P	**P**	**16 18 38.3**	**+0.2**
	baz=220,SNR=27							
S34M				S	**S**	**16 28 48.4**	**+1.0**
	baz=220							
CHUM	**Lake Minchumin**	**81.25**	**9**	P	**P**	**16 18 37.2**	**-1.1**
	baz=199,SNR=57							
CHUM				S	**S**	**16 28 49.8**	**+2.0**
	baz=199							
MA2	**Magadan**	**81.25**	**342**	IAMs_20	IAMs_20	16 49 59.0		
	comp=Z,4µm,20.0s							
J20K	**Nowinta River**	**81.28**	**8**	IAMs_20	IAMs_20	16 48 05.7		
	comp=Z,5µm,21.0s							
J20K	**Nowinta River**	**81.28**	**8**	P	**P**	**16 18 38.2**	**-0.2**
	baz=198							
J20K				S	**S**	**16 28 48.7**	**+0.6**
	baz=198							
DHY	**Denali Highway**	**81.32**	**11**	IAmb	IAmb	16 18 57.6		
	comp=Z,92nm,1.0s							
DHY				IAMs_20	IAMs_20	16 55 54.8		
	comp=Z,5µm,18.0s							
DHY	**Denali Highway**	**81.32**	**11**	P	**P**	**16 18 38.3**	**-0.6**
	baz=204,SNR=48							
DHY				S	**S**	**16 28 46.1**	**-2.8**
	baz=204							
TPB06	**Permian Basin**	**81.36**	**54**	IAmb	IAmb	16 18 50.0		
	comp=Z,50nm,1.0s							
H17K	**Granite Mounta**	**81.38**	**5**	IAMs_20	IAMs_20	16 49 24.4		
	comp=Z,6µm,20.0s							
H17K	**Granite Mounta**	**81.38**	**5**	P	**P**	**16 18 39.1**	**+0.1**
	baz=192							
H17K				S	**S**	**16 28 50.2**	**+1.1**
	baz=192							
YUK8	**Steele Glacier**	**81.39**	**15**	P	**P**	**16 18 39.1**	**-0.4**
	baz=211,SNR=39							
YUK8				S	**S**	**16 28 50.7**	**+0.9**
	baz=211							
YUK6	**Outpost Mounta**	**81.46**	**16**	P	**P**	**16 18 39.8**	**0.0**
	baz=213,SNR=16							
YUK6				S	**S**	**16 28 51.1**	**+0.5**
	baz=213							
GCSA	**Galena City Sc**	**81.50**	**7**	P	**P**	**16 18 39.9**	**+0.3**
	baz=195							
GCSA				S	**S**	**16 28 51.6**	**+1.4**
	baz=195							
F14K	**Arctic Creek**	**81.50**	**2**	P	**P**	**16 18 39.7**	**+0.1**
	baz=186							
F14K				S	**S**	**16 28 52.1**	**+1.8**
	baz=186							
DLMT	**Dillon**	**81.53**	**38**	IAMs_20	IAMs_20	16 52 44.3		
	comp=Z,6µm,18.0s							
TNA	**Tin City**	**81.53**	**2**	IAmb	IAmb	16 19 00.5		
	comp=Z,57nm,0.8s							
TNA				IAMs_20	IAMs_20	16 50 03.9		
	comp=Z,4µm,20.0s							
TNA	**Tin City**	**81.53**	**2**	P	**P**	**16 18 40.0**	**+0.3**
	baz=184,SNR=15							
TNA				S	**S**	**16 28 52.3**	**+1.7**
	baz=184							
MSO	**Missoula**	**81.57**	**36**	⇑P	**P**	**16 18 40.0**	**-0.5**
O20A	**White River Ci**	**81.58**	**44**	IAmb	IAmb	16 19 10.2		
	comp=Z,83nm,1.2s							
MNHN	**Monahans**	**81.58**	**54**	IAmb	IAmb	16 18 60.0		
	comp=Z,76nm,0.8s							
NJ2	**Nanjing**	**81.58**	**307**	⇑P	**P**	**16 18 42.8**	**+2.0**
NJ2				pP	**PcP**	**16 18 47.4**	**+0.7**
NJ2				S	**S**	**16 28 55.5**	**+3.0**
NJ2				pmax	pmax			
	comp=Z,93nm,1.0s							
NJ2				pmax	pmax			
	comp=Z,5µm,5.0s							
NJ2				L	L			
	comp=Z,4µm,19.9s							
NJ2				L	L			
	comp=Z,6µm,18.0s							
NJ2				L	L			
	comp=Z,9µm,22.7s							
HYT	**Haines Junctio**	**81.59**	**16**	IAmb	IAmb	16 18 50.2		
	comp=Z,78nm,1.0s							
HYT	**Haines Junctio**	**81.59**	**16**	P	**P**	**16 18 40.4**	**+0.1**
	baz=214,SNR=40							
HYT				S	**S**	**16 28 53.0**	**+1.4**
	baz=214							
PAX	**Paxson**	**81.59**	**12**	IAmb	IAmb	16 18 58.2		
	comp=Z,71nm,1.0s							
PAX				IAMs_20	IAMs_20	16 46 49.0		
	comp=Z,7µm,22.0s							
PAX	**Paxson**	**81.59**	**12**	P	**P**	**16 18 39.3**	**-1.0**
	baz=206,SNR=39							
PAX				S	**S**	**16 28 48.0**	**-3.5**
	baz=206							
M26K	**Nabesna, AK**	**81.60**	**13**	IAMs_20	IAMs_20	16 46 48.3		
	comp=Z,6µm,22.0s							
M26K	**Nabesna, AK**	**81.60**	**13**	P	**P**	**16 18 40.2**	**-0.1**
	baz=208,SNR=91							
M26K				S	**S**	**16 28 50.3**	**-1.2**
	baz=208							
Q32M	**Nakina River**	**81.63**	**20**	IAMs_20	IAMs_20	17 00 24.4		
	comp=Z,4µm,18.0s							
Q32M	**Nakina River**	**81.63**	**20**	P	**P**	**16 18 40.8**	**+0.2**
	baz=218							
Q32M				S	**S**	**16 28 53.0**	**+0.7**
	baz=218							
SNOW	**Snow King Moun**	**81.63**	**40**	IAmb	IAmb	16 19 00.4		
	comp=Z,77nm,1.0s							
YUK3	**Moose Creek**	**81.64**	**15**	P	**P**	**16 18 40.6**	**-0.1**
	baz=211,SNR=43							
YUK3				S	**S**	**16 28 50.8**	**-1.6**
	baz=211							
HKPS	**Hong Kong Po S**	**81.64**	**296**	IAMs_20	IAMs_20	16 49 30.1		
	comp=Z,5µm,22.0s							
G16K	**Koyuk River**	**81.64**	**4**	IAMs_20	IAMs_20	16 50 15.2		
	comp=Z,6µm,20.0s							
G16K	**Koyuk River**	**81.64**	**4**	P	**P**	**16 18 40.1**	**-0.3**
	baz=190							
G16K				S	**S**	**16 28 53.4**	**+1.6**
	baz=190							
MCK	**McKinley**	**81.64**	**10**	P	**P**	**16 18 39.8**	**-0.6**
	baz=202,SNR=123							
MCK				S	**S**	**16 28 49.3**	**-2.6**
	baz=202							
BPAW	**Bear Paw Mtn.**	**81.66**	**9**	P	**P**	**16 18 39.1**	**-1.4**
	baz=200,SNR=29							
BPAW				S	**S**	**16 28 48.4**	**-3.7**
	baz=200							
P32M	**Atlin**	**81.67**	**19**	IAMs_20	IAMs_20	16 55 06.5		
	comp=Z,4µm,18.0s							
P32M	**Atlin**	**81.67**	**19**	P	**P**	**16 18 40.3**	**-0.4**
	baz=217	

baz=187,SNR=12
F15K S **S** **16 28 55.3 +1.7**
baz=187
I20K **Naaghedeneel** **81.83 8** IAMs_20 IAMs_20 16 48 22.2
comp=Z,7µm,21.0s
I20K **Naaghedeneel** **81.83 8** P **P** **16 18 41.4 +0.1**
baz=197
I20K S **S** **16 28 55.6 +1.9**
baz=197
G17K **Kiwalik Mounta** **81.88 5** P **P** **16 18 41.6 0.0**
baz=191,SNR=36
G17K S **S** **16 28 56.1 +1.9**
baz=191
MENT **Mentasta** **81.92 13** IAmb IAmb 16 18 50.4
comp=Z,65nm,0.9s
O30N **Mendenhall** **81.93 17** IAmb IAmb 16 19 04.2
comp=Z,91nm,1.1s
O30N IAMs_20 IAMs_20 16 47 45.3
comp=Z,6µm,21.0s
O30N **Mendenhall** **81.93 17** P **P** **16 18 42.1 +0.1**
baz=215,SNR=37
O30N S **S** **16 28 55.3 +0.3**
baz=215
DLBC **Dease Lake** **81.97 21** LR LR 16 48 37.1
comp=Z,4µm,19.8s,baz=208,slow=31
DLBC **Dease Lake** **81.97 21** P **P** **16 18 42.5 +0.1**
baz=221,SNR=22
DLBC S **S** **16 28 57.5 +1.9**
baz=221
BW06 **Boulder Array** **82.03 41** IAMs_20 IAMs_20 16 50 00.6
comp=Z,4µm,20.0s
BW06 **Boulder Array** **82.03 41** ⇑P **P** **16 18 42.9 -0.3**
PDAR **Pinedale Array** **82.03 41** P **P** **16 18 43.3 0.0**
comp=Z,9.2nm,0.9s,baz=244,slow=4.0,SNR=58
PDAR S **SKSac** **16 29 00.8 -2.5**
comp=Z,0.1nm,0.3s,baz=222,slow=10,SNR=1.0
PDAR PKKPbc **PKKPbc** **16 37 13.1 -1.5**
comp=Z,0.7nm,0.8s,baz=20,slow=3.8,SNR=5.4
PDAR PKPPKP **P'P'df** **16 45 17.7 +2.3**
comp=Z,1.2nm,1.1s,baz=55,slow=1.8,SNR=4.7
PDAR LR LR 16 50 11.9
comp=Z,3µm,19.6s,baz=237,slow=32
comp=Z,9.2nm,0.9s
PDAR **Pinedale Array** **82.03 41** P **P** **16 18 42.6 -0.6**
YHB **Horse Butte** **82.04 39** IAmb IAmb 16 19 07.1
comp=Z,72nm,1.0s
L26K **Log Cabin Wild** **82.07 13** IAmb IAmb 16 18 51.7
comp=Z,64nm,1.0s
L26K IAMs_20 IAMs_20 16 48 17.9
comp=Z,7µm,20.0s
L26K **Log Cabin Wild** **82.07 13** P **P** **16 18 42.8 0.0**
baz=208,SNR=13
L26K S **S** **16 28 56.4 -0.1**
baz=208
BVCY **Beaver Creek** **82.09 14** P **P** **16 18 42.9 +0.1**
baz=210,SNR=30
BVCY S **S** **16 28 54.9 -1.7**
baz=210
YHL **Hebgen Lake** **82.10 39** IAmb IAmb 16 19 04.1
comp=Z,115nm,1.0s
WHY **Whitehorse** **82.19 18** IAmb IAmb 16 18 52.1
comp=Z,67nm,0.9s
WHY **Whitehorse** **82.19 18** P **P** **16 18 43.6 +0.2**
baz=216,SNR=21
WHY S **S** **16 28 57.7 -0.2**
baz=216
N30M **Aishikik Lake** **82.23 16** IAMs_20 IAMs_20 16 47 15.2
comp=Z,5µm,21.0s
N30M **Aishikik Lake** **82.23 16** P **P** **16 18 43.6 0.0**
baz=214
N30M S **S** **16 28 58.7 +0.5**
baz=214
BOZ **Bozeman (W)** **82.23 38** IAMs_20 IAMs_20 16 53 15.8
comp=Z,6µm,18.0s
BOZ **Bozeman (W)** **82.23 38** ⇓P **P** **16 18 44.0 -0.2**
BNX **BinXian** **82.27 322** ⇑P **P** **16 18 43.6 -0.5**
BNX S **SKSac** **16 29 01.4 -2.8**
BNX pmax pmax
comp=Z,14nm,0.8s
BNX pmax pmax
comp=Z,520nm,3.6s
BNX L L
comp=Z,3µm,20.4s
BNX L L
comp=Z,5µm,21.4s
BNX L L
comp=Z,7µm,20.9s
K24K **Donnelly Dome** **82.28 11** P **P** **16 18 43.8 0.0**
baz=206,SNR=44
K24K S **S** **16 28 58.7 +0.2**
baz=206
H19K **Roundabout Mou** **82.30 7** IAMs_20 IAMs_20 16 48 47.7
comp=Z,7µm,21.0s
H19K **Roundabout Mou** **82.30 7** P **P** **16 18 44.2 +0.4**
baz=195
H19K S **S** **16 29 00.3 +1.8**
baz=195
128A **Castleberry Fa** **82.33 53** IAmb IAmb 16 19 04.0
comp=Z,78nm,0.8s
SDCO **Great Sand Dun** **82.33 47** ⇑P **P** **16 18 45.5 +0.4**
R33M **Jennings River** **82.39 20** IAmb IAmb 16 18 50.4
comp=Z,90nm,1.4s
R33M IAMs_20 IAMs_20 16 49 25.6
comp=Z,3µm,19.0s
R33M **Jennings River** **82.39 20** P **P** **16 18 44.5 -0.1**
baz=220
R33M S **S** **16 29 00.2 +0.2**
baz=220
RIDG **Independent Ri** **82.40 12** IAmb IAmb 16 19 02.9
comp=Z,113nm,1.0s
RIDG **Independent Ri** **82.40 12** P **P** **16 18 44.0 -0.4**
baz=206,SNR=82
RIDG S **S** **16 28 58.6 -1.3**
baz=206
HAYD **Hayden** **82.42 44** IAmb IAmb 16 19 12.2
comp=Z,57nm,1.0s
NEA2 **Nenana** **82.42 10** IAmb IAmb 16 19 03.6
comp=Z,94nm,0.9s
NEA2 **Nenana** **82.42 10** P **P** **16 18 44.1 -0.4**
baz=202,SNR=19
NEA2 S **S** **16 28 57.2 -2.7**
baz=202
G18K **Tagagawik** **82.44 6** IAMs_20 IAMs_20 16 49 46.2
comp=Z,6µm,20.0s
G18K **Tagagawik** **82.44 6** P **P** **16 18 44.4 -0.2**
baz=193
G18K S **S** **16 29 01.5 +1.6**
baz=193
L27K **Beaver Creek,** **82.44 13** IAMs_20 IAMs_20 16 54 48.5
comp=Z,5µm,18.0s
L27K **Beaver Creek,** **82.44 13** P **P** **16 18 44.6 -0.1**
baz=209
L27K S **S** **16 28 58.7 -1.4**
baz=209
P33M **Teslin, Yukon** **82.44 19** IAmb IAmb 16 18 50.3
comp=Z,146nm,2.0s
P33M IAMs_20 IAMs_20 16 57 19.9
comp=Z,4µm,18.0s
P33M **Teslin, Yukon** **82.44 19** P **P** **16 18 44.6 -0.1**
baz=218,SNR=13
P33M S **S** **16 28 59.0 -1.4**
baz=218
CN2 **Changchun** **82.44 320** P **P** **16 18 45.3 +0.3**
CN2 PP **PP** **16 21 53.1 -1.4**
CN2 S **S** **16 29 00.4 -0.5**
CN2 SS **SS** **16 34 24.8 +2.3**
CN2 pmax pmax
comp=Z,30nm,0.9s
CN2 pmax pmax
comp=Z,1µm,4.0s
CN2 L L
comp=Z,1µm,19.0s
CN2 L L
comp=Z,3µm,19.0s
CN2 L L
comp=Z,3µm,19.0s
H20K **Anotleneega Mo** **82.45 7** P **P** **16 18 44.8 +0.2**
baz=197
H20K S **S** **16 29 00.8 +0.7**
baz=197
BCAR **Beaver Creek A** **82.45 13** P **P** **16 18 43.8 -1.0**
WRH **Wood River Hil** **82.47 10** IAMs_20 IAMs_20 16 47 50.3
comp=Z,7µm,22.0s
DOT **Dot Lake** **82.48 12** IAmb IAmb 16 19 03.3
comp=Z,130nm,1.0s
DOT IAMs_20 IAMs_20 16 49 32.6
comp=Z,5µm,20.0s
DRIO **Del Rio** **82.50 57** IAmb IAmb 16 18 55.9
comp=Z,70nm,1.1s
I21K **Tanana** **82.53 8** IAMs_20 IAMs_20 17 00 20.7
comp=Z,5µm,18.0s
I21K **Tanana** **82.53 8** P **P** **16 18 44.5 -0.5**
baz=200
I21K S **S** **16 28 59.5 -1.4**
baz=200
GZH2 **Guangzhou** **82.55 297** P **P** **16 18 43.8 -2.3**
GZH2 S **SKSac** **16 29 05.4 -1.7**
GZH2 SS **SS** **16 34 30.3 +5.4**
GZH2 pmax pmax
comp=Z,2µm,4.6s
GZH2 L L
comp=Z,1µm,24.1s
GZH2 L L
comp=Z,2µm,22.1s
GZH2 L L
comp=Z,4µm,22.0s
MLY **Manley** **82.57 9** IAmb IAmb 16 19 03.6
comp=Z,110nm,0.9s
MLY IAMs_20 IAMs_20 16 48 57.8
comp=Z,4µm,20.0s
MLY **Manley** **82.57 9** P **P** **16 18 44.3 -1.0**
baz=201,SNR=26
MLY S **S** **16 28 58.9 -2.5**
baz=201
DL2 **Dalian** **82.57 314** P **P** **16 18 44.8 -1.0**
DL2 S **S** **16 29 02.1 -0.3**
DL2 pmax pmax
comp=Z,70nm,1.1s
DL2 pmax pmax
comp=Z,3µm,7.1s
DL2 L L
comp=Z,2µm,19.4s
DL2 L L
comp=Z,2µm,18.8s
DL2 L L
comp=Z,3µm,18.5s
229A **Bryant Ranch,** **82.58 54** IAmb IAmb 16 19 11.4
comp=Z,97nm,1.2s
N31M **Braeburn, Yuko** **82.61 17** IAmb IAmb 16 19 20.3
comp=Z,95nm,1.1s
N31M IAMs_20 IAMs_20 17 00 25.2
comp=Z,5µm,18.0s
N31M **Braeburn, Yuko** **82.61 17** P **P** **16 18 45.5 0.0**
baz=215,SNR=28
N31M S **S** **16 29 03.4 +1.4**
baz=215
HDA **Harding Lake** **82.61 11** IAmb IAmb 16 19 05.0
comp=Z,118nm,0.9s
HDA IAMs_20 IAMs_20 16 57 49.1
comp=Z,4µm,18.0s
HDA **Harding Lake** **82.61 11** P **P** **16 18 44.9 -0.6**
baz=204,SNR=59
HDA S **S** **16 28 59.9 -1.9**
baz=204
SNY **Shenyang** **82.65 317** ⇑P **P** **16 18 46.4 +0.3**
SNY S **S** **16 29 02.9 -0.1**
SNY pmax pmax
comp=Z,25nm,1.3s
SNY pmax pmax
comp=Z,2µm,7.0s
SNY L L
comp=Z,1µm,19.3s
SNY L L
comp=Z,2µm,18.0s
SNY L L
comp=Z,2µm,19.6s
MSTX **Muleshoe** **82.67 52** IAmb IAmb 16 19 05.8
comp=Z,116nm,0.9s
MSTX IAMs_20 IAMs_20 16 51 41.6
comp=Z,4µm,19.0s
CCB **Clear Creek Bu** **82.68 10** IAMs_20 IAMs_20 16 47 55.9
comp=Z,7µm,22.0s
M29M **Somme Creek** **82.70 15** P **P** **16 18 46.0 -0.1**
baz=212
M29M S **S** **16 29 03.1 +0.1**
baz=212
F17K **Baldwin Pennin** **82.76 4** IAMs_20 IAMs_20 16 51 08.7
comp=Z,5µm,20.0s
F17K **Baldwin Pennin** **82.76 4** P **P** **16 18 46.2 +0.1**
baz=190
F17K S **S** **16 29 03.7 +0.6**
baz=190
SCRK **Sand Creek** **82.79 12** IAmb IAmb 16 19 05.2
comp=Z,71nm,0.9s
SCRK IAMs_20 IAMs_20 16 47 36.7
comp=Z,7µm,22.0s
SCRK **Sand Creek** **82.79 12** P **P** **16 18 46.2 -0.3**
baz=207,SNR=55
SCRK S **S** **16 29 04.1 +0.2**
baz=207
129A **Stewart Farms,** **82.81 53** IAmb IAmb 16 19 12.7
comp=Z,100nm,1.2s
G19K **Purcell Mounta** **82.83 6** IAmb IAmb 16 19 05.6
comp=Z,89nm,1.0s
G19K IAMs_20 IAMs_20 16 49 36.7
comp=Z,7µm,21.0s
G19K **Purcell Mounta** **82.83 6** P **P** **16 18 46.7 +0.1**
baz=195
G19K S **S** **16 29 04.8 +0.8**
baz=195
H21K **Melozitna Rive** **82.87 8** IAMs_20 IAMs_20 16 49 26.7
comp=Z,5µm,20.0s
H21K **Melozitna Rive** **82.87 8** P **P** **16 18 46.5 -0.3**
baz=199
H21K S **S** **16 29 03.5 -0.9**
baz=199
COLA **College** **82.88 10** P **P** **16 18 45.9 -1.0**
COLA **College** **82.88 10** *de*P **P** **16 18 46.1 -0.7**
COLA pmax pmax
comp=Z,267nm,1.0s
COLA MLR MLR
comp=Z,2µm,16.0s
COLA **College** **82.88 10** P **P** **16 18 46.1 -0.7**
baz=204
COLA S **S** **16 29 04.1 -0.4**
baz=204
COLA **College** **82.88 10** ⇓P **P** **16 18 46.1 -0.7**
I23K **Minto, Yukon-K** **82.89 9** IAmb IAmb 16 18 55.6
comp=Z,123nm,1.0s
I23K **Minto, Yukon-K** **82.89 9** P **P** **16 18 46.2 -0.7**
baz=202,SNR=39
I23K S **S** **16 29 01.6 -2.9**
baz=202
IL31 **82.96 11** IAmb IAmb 16 19 05.3
comp=Z,94nm,0.8s
ILAR **Eielson Array** **82.96 11** P **P** **16 18 46.2 -1.0**
comp=Z,12nm,0.7s,baz=205,slow=4.9,SNR=131
ILAR PP **PP** **16 21 58.0 -0.2**
comp=Z,4.8nm,0.9s,baz=216,slow=8.5,SNR=4.8
ILAR S **S** **16 29 03.1 -2.2**
comp=Z,0.3nm,0.8s,baz=224,slow=3.8,SNR=2.1
ILAR PKPPKP **P'P'df** **16 45 15.9 +4.7**
comp=Z,0.6nm,0.9s,baz=1.9,slow=2.7,SNR=4.3
ILAR LR LR 16 51 02.7
comp=Z,4µm,19.9s,baz=198,slow=32
comp=Z,12nm,0.7s
PMSA **Palmer Station** **82.99 156** LR LR 16 48 33.3
comp=Z,7µm,19.1s,baz=247,slow=30
PMSA **Palmer Station** **82.99 156** *e*P **P** **16 18 50.6 +3.0**
CMIG **Matias Romero** **83.00 70** P **P** **16 18 48.2 -0.3**
comp=Z,7.9nm,1.0s,baz=246,slow=3.9,SNR=11
CMIG LR LR 16 47 54.8
comp=Z,5µm,19.0s,baz=245,slow=30
comp=Z,7.9nm,1.0s
IMAR **Indian Mountai** **83.06 7** P **P** **16 18 47.3 -0.4**
SGCY **Sterling City** **83.09 54** IAmb IAmb 16 19 14.5
comp=Z,98nm,1.1s
J25K **Salcha River,** **83.09 11** IAMs_20 IAMs_20 16 55 25.7
comp=Z,4µm,19.0s
J25K **Salcha River,** **83.09 11** P **P** **16 18 47.7 -0.4**
baz=206
J25K S **S** **16 29 05.4 -1.4**
baz=206
N32M **Quiet Lake** **83.11 18** P **P** **16 18 48.0 -0.2**
baz=218
N32M S **S** **16 29 07.5 +0.4**
baz=218
POKR **Poker Plat Res** **83.18 10** P **P** **16 18 47.9 -0.5**
baz=204
POKR S **S** **16 29 05.9 -1.7**
baz=204
HBVL **Hebbronville** **83.19 59** IAmb IAmb 16 18 59.9
comp=Z,64nm,0.9s
ISCO **Idaho Springs** **83.19 45** ⇓P **P** **16 18 49.9 +0.4**
M30M **Minto, Yukon** **83.24 16** IAmb IAmb 16 19 07.3
comp=Z,46nm,0.9s
M30M **Minto, Yukon** **83.24 16** P **P** **16 18 48.5 -0.3**
baz=214,SNR=50
M30M S **S** **16 29 07.1 -1.2**
baz=214
POST **Post** **83.27 53** IAmb IAmb 16 19 08.4
comp=Z,91nm,0.9s
H22K **Ishtalitna Cre** **83.29 8** IAmb IAmb 16 19 07.6
comp=Z,68nm,1.0s
H22K IAMs_20 IAMs_20 16 57 02.8
comp=Z,3µm,19.0s
H22K **Ishtalitna Cre** **83.29 8** P **P** **16 18 48.9 -0.1**
baz=200,SNR=50
H22K S **S** **16 29 07.4 -1.2**
baz=200
L29M **L29M** **83.35 15** P **P** **16 18 49.5 +0.1**
baz=213
L29M S **S** **16 29 09.5 0.0**
baz=213
RLMT **Red Lodge** **83.41 39** IAmb IAmb 16 19 09.7
comp=Z,55nm,0.9s
RLMT **Red Lodge** **83.41 39** ⇓P **P** **16 18 50.9 +0.5**
F19K **Shaleruckik Mo** **83.44 6** IAMs_20 IAMs_20 16 50 16.7
comp=Z,6µm,20.0s
F19K **Shaleruckik Mo** **83.44 6** P **P** **16 18 49.4 -0.3**
baz=194
F19K S **SKSac** **16 29 10.5 -0.5**
baz=194
GO09 **Cerro Castillo** **83.55 141** IAmb IAmb 16 19 03.5
comp=Z,147nm,1.4s
SEY **Seymchan** **83.56 345** LR LR 16 50 39.5
comp=Z,6µm,21.6s,baz=149,slow=32
SEY **Seymchan** **83.56 345** ⇓*i*P **P** **16 18 49.5 -0.9**
SEY pmax pmax
comp=Z,38nm,0.9s
SEY MLR MLR
comp=Z,1µm,16.0s
M31M **Drury Creek, Y** **83.58 17** IAMs_20 IAMs_20 16 47 44.8
comp=Z,5µm,22.0s
M31M **Drury Creek, Y** **83.58 17** P **P** **16 18 50.0 -0.5**
baz=216,SNR=38
M31M S **SKSac** **16 29 13.2 +0.9**
baz=216
G21K **Allakaket** **83.60 7** IAMs_20 IAMs_20 16 49 16.9
comp=Z,6µm,21.0s
G21K **Allakaket** **83.60 7** P **P** **16 18 50.6 0.0**
baz=198
G21K S **SKSac** **16 29 12.3 +0.1**
baz=198
HNDO **Hondo** **83.62 57** IAmb IAmb 16 19 17.9
comp=Z,70nm,1.0s
WTLY **Watson Lake, Y** **83.65 20** P **P** **16 18 51.2 +0.2**
baz=222,SNR=12
WTLY S **SKSac** **16 29 13.5 +0.7**
baz=222
RTBA **Rita Blanca** **83.74 49** IAmb IAmb 16 19 10.5
comp=Z,59nm,0.9s
SN07 **Snyder 07** **83.74 53** IAmb IAmb 16 19 16.8
comp=Z,65nm,1.1s
H24K **Noodor Dome** **83.77 10** P **P** **16 18 50.9 -0.5**
baz=203
H24K S **S** **16 29 11.9 -1.7**
baz=203
E18K **Tukpahlearik C** **83.77 4** IAMs_20 IAMs_20 16 49 04.5
comp=Z,6µm,22.0s
E18K **Tukpahlearik C** **83.77 4** P **P** **16 18 51.6 +0.3**
baz=191,SNR=120
E18K S **SKSac** **16 29 14.7 +1.5**
baz=191
H03S2 **Juan Fernandez** **83.78 123** T T 17 52 43.8
baz=250,slow=75,SNR=9.3
H03S1 **Juan Fernandez** **83.79 123** T T 17 52 43.8
baz=250,slow=75,SNR=11
H03S3 **Juan Fernandez** **83.79 123** T T 17 52 46.1
baz=250,slow=75,SNR=16
MG03 **Isla Dawson** **83.83 144** P **P** **16 18 52.2 +0.1**
DAWY **Dawson** **83.86 14** P **P** **16 18 51.9 -0.1**
baz=212,SNR=62
DAWY S **S** **16 29 14.8 +0.3**
baz=212
AMTX **Amarillo** **83.87 51** IAMs_20 IAMs_20 16 54 12.3
comp=Z,4µm,18.0s
AMTX **Amarillo** **83.87 51** ⇓P **P** **16 18 53.1 +0.3**
H03N2 **Juan Fernandez** **83.88 123** T T 17 52 56.6
baz=257,slow=72,SNR=7.7
H03N3 **Juan Fernandez** **83.88 123** T T 17 52 56.9
baz=257,slow=72,SNR=4.9
PRP **Porcupine Dome** **83.88 11** IAMs_20 IAMs_20 16 51 07.6
comp=Z,5µm,20.0s
PRP **Porcupine Dome** **83.88 11** P **P** **16 18 52.0 -0.2**
baz=206,SNR=164
PRP S **S** **16 29 14.2 -0.7**
baz=206
D17K **Noatak River** **83.88 3** P **P** **16 18 52.1 +0.2**
baz=189
D17K S **S** **16 29 16.8 +2.3**
baz=189
H03N1 **Juan Fernandez** **83.89 123** T T 17 53 04.0
baz=257,slow=72,SNR=3.5
K22A **Casper** **83.92 43** IAmb IAmb 16 19 13.7
comp=Z,47nm,0.9s
K22A IAMs_20 IAMs_20 16 56 25.7
comp=Z,5µm,18.0s
DKNS **Dickens** **83.95 53** IAmb IAmb 16 19 18.4
comp=Z,90nm,1.2s
E19K **Redstone River** **84.10 6** IAMs_20 IAMs_20 16 50 28.1
comp=Z,5µm,20.0s
E19K **Redstone River** **84.10 6** P **P** **16 18 53.2 +0.2**
baz=194,SNR=222
E19K S **S** **16 29 16.8 +0.1**
baz=194
K29M **Barlow Dome** **84.11 15** P **P** **16 18 53.5 +0.1**
baz=213
K29M S **S** **16 29 17.1 -0.1**
baz=213
I26K **Coal Creek Min** **84.14 12** IAMs_20 IAMs_20 16 50 45.4
comp=Z,5µm,20.0s
I26K **Coal Creek Min** **84.14 12** P **P** **16 18 53.4 0.0**
baz=208
I26K S **S** **16 29 17.0 -0.2**
baz=208
RDOG **Red Dog Mine** **84.25 3** IAmb IAmb 16 19 13.4
comp=Z,60nm,1.0s
RDOG IAMs_20 IAMs_20 16 54 06.0
comp=Z,5µm,20.0s
RDOG **Red Dog Mine** **84.25 3** P **P** **16 18 54.1 +0.2**
baz=189,SNR=13
RDOG S **S** **16 29 18.9 +0.6**
baz=189
G23K **Bananza Creek** **84.25 9** IAmb IAmb 16 19 12.7
comp=Z,79nm,1.1s
G23K IAMs_20 IAMs_20 16 49 08.2
comp=Z,5µm,22.0s
G23K **Bananza Creek** **84.25 9** P **P** **16 18 53.8 -0.1**
baz=201
G23K S **S** **16 29 18.4 0.0**
baz=201
GO08 **Villa O'Higgin** **84.27 139** IAmb IAmb 16 19 01.1
comp=Z,152nm,1.4s
F21K **Alatna River** **84.27 7** IAmb IAmb 16 19 12.8
comp=Z,122nm,1.2s
F21K IAMs_20 IAMs_20 16 49 27.9
comp=Z,7µm,22.0s
F21K **Alatna River** **84.27 7** P **P** **16 18 53.9 -0.1**
baz=198,SNR=67
F21K S **S** **16 29 18.7 +0.2**
baz=198
QIZ **Qiongzhong** **84.31 292** P **P** **16 18 57.3 +2.1**
QIZ S **S** **16 29 23.4 +2.6**
QIZ SS **SS** **16 34 52.3 +1.3**
QIZ pmax pmax
comp=Z,53nm,1.8s
QIZ pmax pmax
comp=Z,2µm,3.8s
QIZ L L
comp=Z,840nm,17.9s
QIZ L L
comp=Z,2µm,23.4s
QIZ L L
comp=Z,4µm,20.6s
MAYO **Mayo, Yukon** **84.31 15** P **P** **16 18 54.3 0.0**
baz=215
MAYO S **S** **16 29 19.9 +0.9**
baz=215
C16K **Lisburne Hills** **84.34 3** IAmb IAmb 16 19 13.5
comp=Z,55nm,0.9s
C16K IAMs_20 IAMs_20 16 50 08.5
comp=Z,5µm,22.0s
C16K **Lisburne Hills** **84.34 3** P **P** **16 18 54.1 -0.2**

C16K baz=187,SNR=46 S **S** **16 29 19.1 0.0**

APMT **Aspermont** **84.43 53** IAmb IAmb 16 19 14.4
comp=Z,75nm,0.8s

J29N **Klondike Camp** **84.46 14** IAMs_20 IAMs_20 16 55 17.0
comp=Z,6µm,19.0s

J29N **Klondike Camp** **84.46 14** P **P** **16 18 55.6 +0.5**
baz=213,SNR=30

J29N S **S** **16 29 20.4 -0.2**
baz=213

WHN **Wuhan** **84.52 304** P **P** **16 18 56.9 +0.9**
WHN S **SKSac** **16 29 18.3 -1.3**
WHN pmax pmax
comp=Z,450nm,1.9s

WHN pmax pmax
comp=Z,4µm,4.8s

WHN L L
comp=Z,4µm,18.7s

WHN L L
comp=Z,4µm,16.7s

WHN L L
comp=Z,11µm,23.5s

ABTX **Abilene, Hawle** **84.52 54** IAMs_20 IAMs_20 16 49 50.8
comp=Z,4µm,20.0s

735A **Kenedy** **84.56 58** IAmb IAmb 16 19 06.9
comp=Z,52nm,0.7s

735A IAMs_20 IAMs_20 16 49 52.1
comp=Z,3µm,20.0s

EGMT **Eagleton** **84.61 37** IAmb IAmb 16 19 14.8
comp=Z,43nm,0.9s

EGMT **Eagleton** **84.61 37** ⇑P **P** **16 18 56.3 +0.1**
TIA **Tai'an** **84.62 310** P **P** **16 18 56.9 +0.5**
TIA SKS **SKSac** **16 29 15.3 -4.8**
TIA S **SKSac** **16 29 20.3 +0.2**
TIA pmax pmax
comp=Z,10.0nm,0.8s

TIA pmax pmax
comp=Z,3µm,5.0s

TIA L L
comp=Z,2µm,22.1s

TIA L L
comp=Z,3µm,22.3s

TIA L L
comp=Z,5µm,21.6s

G24K **Hadweenzic Riv** **84.63 10** P **P** **16 18 55.9 +0.1**
baz=204

G24K S **S** **16 29 20.5 -1.6**
baz=204

C17K **DeLong Mountai** **84.65 3** P **P** **16 18 55.7 -0.1**
baz=189

C17K S **S** **16 29 23.1 +0.9**
baz=189

COLD **Coldfoot** **84.71 8** IAMs_20 IAMs_20 16 48 59.3
comp=Z,4µm,22.0s

COLD **Coldfoot** **84.71 8** P **P** **16 18 56.5 +0.4**
baz=201,SNR=51

COLD S **S** **16 29 22.7 -0.2**
baz=201

HEH **HeiHe** **84.71 326** *e*P **P** **16 18 56.0 -0.5**
HEH sP **sP** **16 19 01.9 +1.4**
HEH PP **PP** **16 22 18.0 +5.2**
HEH S **S** **16 29 21.3 -2.2**
HEH pmax pmax
comp=Z,12nm,1.0s

HEH pmax pmax
comp=Z,2µm,6.3s

HEH L L
comp=Z,2µm,19.4s

HEH L L
comp=Z,3µm,20.3s

HEH L L
comp=Z,4µm,21.2s

I27K **Kandik River** **84.71 12** IAMs_20 IAMs_20 16 50 52.5
comp=Z,6µm,20.0s

I27K **Kandik River** **84.71 12** P **P** **16 18 56.2 -0.1**
baz=209

I27K S **S** **16 29 22.7 -0.4**
baz=209

CNSH **ChangSha** **84.80 301** P **P** **16 18 58.8 +1.3**
CNSH SKS **SKSac** **16 29 18.9 -2.6**
CNSH S **SKKSac** **16 29 29.5 +2.0**
CNSH pmax pmax
comp=Z,19nm,1.2s

CNSH L L
comp=Z,1µm,18.2s

CNSH L L
comp=Z,2µm,21.8s

CNSH L L
comp=Z,3µm,19.8s

MMPY **Sheldon Lake,** **84.80 18** P **P** **16 18 56.9 +0.1**
baz=219

MMPY S **S** **16 29 24.1 +0.1**
baz=219

TGTN **Hyland Airport** **84.88 19** P **P** **16 18 57.5 +0.2**
baz=222,SNR=39

TGTN S **S** **16 29 25.0 +0.1**
baz=222

FYU **Fort Yukon** **84.88 10** IAMs_20 IAMs_20 16 49 36.0
comp=Z,4µm,22.0s

G25K **Bearman Lake** **84.91 10** P **P** **16 18 57.0 -0.2**
baz=205

G25K S **S** **16 29 24.4 -0.4**
baz=205

KSCO **Kaye Shedlock'** **84.92 47** IAmb IAmb 16 19 26.1
comp=Z,156nm,1.6s

I28M **Miner Creek** **84.92 13** IAmb IAmb 16 19 16.0
comp=Z,71nm,0.9s

I28M IAMs_20 IAMs_20 16 48 54.3
comp=Z,6µm,21.0s

I28M **Miner Creek** **84.92 13** P **P** **16 18 57.1 -0.3**
baz=211,SNR=50

I28M S **S** **16 29 24.8 -0.5**
baz=211

C18K **Utukok River** **84.94 4** IAmb IAmb 16 19 21.9
comp=Z,55nm,1.1s

C18K IAMs_20 IAMs_20 16 52 51.4
comp=Z,6µm,20.0s

C18K **Utukok River** **84.94 4** P **P** **16 18 57.1 -0.3**
baz=191,SNR=37

C18K S **S** **16 29 25.6 +0.4**
baz=191

E20K **Nigu River** **84.97 6** P **P** **16 18 57.7 +0.1**
baz=195

E20K S **S** **16 29 25.5 -0.1**
baz=195

J30M **Hart River** **85.01 15** P **P** **16 18 57.8 -0.1**
baz=214

J30M S **S** **16 29 25.9 -0.3**
baz=214

D19K **Kuna River** **85.03 5** IAMs_20 IAMs_20 16 51 19.7
comp=Z,6µm,20.0s

D19K **Kuna River** **85.03 5** P **P** **16 18 57.6 -0.2**
baz=194

D19K S **S** **16 29 26.0 0.0**
baz=194

SMWD **Samnorwood** **85.04 51** IAmb IAmb 16 19 24.5
comp=Z,98nm,1.4s

I29M **Ogilvie Camp,** **85.21 14** IAmb IAmb 16 19 17.3
comp=Z,101nm,0.9s

I29M IAMs_20 IAMs_20 16 50 03.8
comp=Z,6µm,21.0s

I29M **Ogilvie Camp,** **85.21 14** P **P** **16 18 58.4 -0.3**
baz=212,SNR=16

I29M S **S** **16 29 26.7 -1.3**
baz=212

CCIG **Comitan** **85.23 72** IAmb IAmb 16 19 31.4
comp=Z,122nm,1.5s

H27K **Steamboat Moun** **85.28 12** IAmb IAmb 16 19 18.3
comp=Z,100nm,1.2s

H27K IAMs_20 IAMs_20 16 55 59.5
comp=Z,5µm,19.0s

H27K **Steamboat Moun** **85.28 12** P **P** **16 18 59.2 +0.1**
baz=209

H27K S **S** **16 29 28.3 -0.3**
baz=209

KOTAN **Kotaneelee Air** **85.30 22** P **P** **16 18 59.3 0.0**
baz=226,SNR=28

KOTAN S **S** **16 29 29.6 +0.6**
baz=226

F24K **Squaw Lake** **85.32 9** P **P** **16 18 59.4 +0.1**
baz=203

F24K S **S** **16 29 29.0 0.0**
baz=203

E22K **Anaktuvuk Pass** **85.35 8** P **P** **16 18 59.4 0.0**
baz=200

E22K S **S** **16 29 29.1 -0.1**
baz=200

D20K **Etivluk River** **85.38 6** IAMs_20 IAMs_20 16 51 51.9
comp=Z,5µm,20.0s

D20K **Etivluk River** **85.38 6** P **P** **16 18 59.5 0.0**
baz=195

D20K S **S** **16 29 28.3 -1.2**
baz=195

E21K **Killik River** **85.38 7** P **P** **16 18 59.3 -0.3**
baz=198

E21K S **S** **16 29 28.8 -0.8**
baz=198

BILL **Bilibino** **85.42 352** P **P** **16 18 58.7 -1.0**
BILL IAmb IAmb 16 19 04.5
comp=Z,71nm,1.1s

BILL **Bilibino** **85.42 352** *de*P **P** **16 18 58.9 -0.8**
BILL pmax pmax
comp=Z,76nm,1.1s

BILL MLR MLR
comp=Z,1µm,17.0s

AY01 **Puyuhuapi** **85.45 135** P **P** **16 19 00.8 +0.3**
AY01 IAmb IAmb 16 19 04.2
comp=Z,124nm,1.4s

COYC **Coyhaique** **85.47 136** ⇑P **P** **16 19 03.5 +2.8**
G26K **Porcupine Rive** **85.48 11** IAMs_20 IAMs_20 16 52 16.9
comp=Z,5µm,20.0s

G26K **Porcupine Rive** **85.48 11** P **P** **16 19 00.4 +0.4**
baz=207

G26K S **S** **16 29 31.1 +0.6**
baz=207

C19K **Lookout Ridge** **85.51 4** IAmb IAmb 16 19 19.8
comp=Z,107nm,0.9s

C19K **Lookout Ridge** **85.51 4** P **P** **16 19 00.3 +0.1**
baz=192,SNR=72

C19K S **S** **16 29 30.2 -0.6**
baz=192

I30M **Mount Dempster** **85.54 14** IAmb IAmb 16 19 29.4
comp=Z,112nm,1.1s

I30M **Mount Dempster** **85.54 14** P **P** **16 19 00.4 -0.2**
baz=214

I30M S **S** **16 29 30.1 -1.3**
baz=214

E23K **Chandalar** **85.57 8** P **P** **16 19 00.5 0.0**
baz=202

E23K S **S** **16 29 31.2 -0.3**
baz=202

F25K **Christian Rive** **85.74 10** P **P** **16 19 01.8 +0.3**
baz=206

F25K S **S** **16 29 34.1 +0.9**
baz=206

E24K **Your Creek** **85.74 9** P **P** **16 19 01.6 +0.2**
baz=203

E24K S **S** **16 29 34.9 +1.7**
baz=203

G27K **Doyon Strip** **85.76 12** P **P** **16 19 01.7 +0.2**
baz=209

G27K S **S** **16 29 33.7 +0.4**
baz=209

BMAR **Burnt Mountain** **85.77 10** P **P** **16 19 01.6 0.0**
H29M **Whitestone** **85.92 13** IAMs_20 IAMs_20 16 49 33.6
comp=Z,6µm,22.0s

H29M **Whitestone** **85.92 13** P **P** **16 19 02.2 0.0**
baz=212

H29M S **S** **16 29 34.2 -0.7**
baz=212

GULI **GuiLin** **85.93 298** P **P** **16 19 05.9 +2.7**
GULI S **SKSac** **16 29 30.5 +1.6**
GULI SS **SS** **16 35 14.5 -0.3**
GULI pmax pmax
comp=Z,94nm,1.6s

GULI pmax pmax
comp=Z,2µm,4.7s

GULI L L
comp=Z,1µm,20.6s

GULI L L
comp=Z,1µm,22.8s

GULI L L
comp=Z,3µm,23.9s

C21K **Knifeblade Rid** **85.98 6** P **P** **16 19 02.7 +0.1**
baz=197

C21K S **S** **16 29 35.8 +0.4**
baz=197

WHTX **Lake Whitney,** **86.00 55** IAmb IAmb 16 19 29.5
comp=Z,87nm,1.1s

LAO **LASA Array** **86.03 39** IAMs_20 IAMs_20 16 50 26.2
comp=Z,4µm,21.0s

F26K **Sheenjek River** **86.08 10** IAMs_20 IAMs_20 16 51 39.8
comp=Z,5µm,21.0s

F26K **Sheenjek River** **86.08 10** P **P** **16 19 03.5 +0.5**
baz=207

F26K S **S** **16 29 37.3 +0.8**
baz=207

TOLK **Toolik Lake Re** **86.12 8** P **P** **16 19 03.4 +0.1**
baz=202,SNR=38

TOLK S **S** **16 29 36.5 -0.3**
baz=202

FW13 **Cleburne** **86.15 55** IAmb IAmb 16 19 29.6
comp=Z,140nm,1.2s

E25K **Arctic Village** **86.23 10** IAmb IAmb 16 19 23.9
comp=Z,127nm,1.2s

E25K **Arctic Village** **86.23 10** P **P** **16 19 04.1 +0.3**
baz=206,SNR=66

E25K S **S** **16 29 39.3 +1.4**
baz=206

LL01 **San Ignacio de** **86.25 133** IAmb IAmb 16 19 10.7
comp=Z,111nm,1.4s

D23K **Nanushuk River** **86.28 8** IAMs_20 IAMs_20 16 50 52.7
comp=Z,6µm,21.0s

D23K **Nanushuk River** **86.28 8** P **P** **16 19 04.3 +0.3**
baz=201

D23K S **S** **16 29 39.5 +1.3**
baz=201

FW06 **Azle** **86.28 54** IAmb IAmb 16 19 29.5
comp=Z,80nm,1.0s

LR04 **Corral** **86.30 130** IAMs_20 IAMs_20 16 50 17.6
comp=Z,4µm,19.0s

APG **El Apazote** **86.38 73** P **P** **16 19 07.0 +1.1**
comp=Z,2.5nm,1.0s,baz=203,slow=15,SNR=15

LL02 **Futaleuf** **86.39 134** IAmb IAmb 16 19 08.9
comp=Z,99nm,1.1s

EPYK **Eagle Plains** **86.41 14** IAMs_20 IAMs_20 16 55 52.7
comp=Z,4µm,19.0s

EPYK **Eagle Plains** **86.41 14** P **P** **16 19 04.5 -0.3**
baz=214,SNR=34

EPYK S **S** **16 29 39.7 -0.1**
baz=214

B21K **Ikpikpuk River** **86.45 6** P **P** **16 19 04.5 -0.3**
baz=197

B21K S **S** **16 29 40.9 +1.0**
baz=197

A19K **Wainwright** **86.49 4** P **P** **16 19 04.6 -0.3**
baz=191

A19K S **S** **16 29 39.5 -0.6**
baz=191

H31M **Peel River** **86.51 15** P **P** **16 19 04.7 -0.5**
baz=216

H31M S **S** **16 29 38.3 -2.3**
baz=216

HKT **Hockley** **86.56 58** IAMs_20 IAMs_20 16 50 50.1
comp=Z,3µm,20.0s

HKT **Hockley** **86.56 58** *di*P **P** **16 19 07.8 +1.7**
HKT pmax pmax
comp=Z,42nm,1.4s

HKT MLR MLR
comp=Z,2µm,18.0s

G29M **Pine Creek** **86.58 13** IAMs_20 IAMs_20 16 50 05.1
comp=Z,6µm,22.0s

G29M **Pine Creek** **86.58 13** P **P** **16 19 05.4 -0.1**
baz=213

G29M S **S** **16 29 40.5 -0.9**
baz=213

B20K **Meade River** **86.58 5** IAMs_20 IAMs_20 16 50 46.9
comp=Z,6µm,22.0s

B20K **Meade River** **86.58 5** P **P** **16 19 05.4 0.0**
baz=194

B20K S **S** **16 29 41.5 +0.4**
baz=194

Z35A **Perchaven, San** **86.65 54** IAMs_20 IAMs_20 16 50 57.1
comp=Z,4µm,20.0s

ZEA **Zeya** **86.69 329** *e*P **P** **16 19 05.7 -0.6**
ZEA *e*S **S** **16 29 41.8 -1.0**
ZEA pmax pmax
comp=E,300nm,5.7s

ZEA pmax pmax
comp=N,200nm,4.8s

ZEA pmax pmax
comp=Z,700nm,7.1s

ZEA pmax pmax
comp=N,20nm,0.9s

ZEA pmax pmax
comp=Z,30nm,1.4s

ZEA smax smax
comp=N,500nm,14.3s

ZEA smax smax
comp=E,900nm,15.5s

D24K **Happy Valley** **86.69 8** IAMs_20 IAMs_20 16 53 15.9
comp=Z,4µm,20.0s

D24K **Happy Valley** **86.69 8** P **P** **16 19 06.1 +0.1**
baz=202

D24K S **S** **16 29 42.6 +0.3**
baz=202

OK038 **West end E0370** **86.70 51** IAMs_20 IAMs_20 16 56 21.1
comp=Z,4µm,18.0s

F28M **Old Crow** **86.80 12** IAmb IAmb 16 19 25.6
comp=Z,58nm,1.1s

F28M **Old Crow** **86.80 12** P **P** **16 19 06.5 0.0**
baz=211,SNR=35

F28M S **S** **16 29 45.3 +1.9**
baz=211

BJI2 **Beijing** **86.86 313** P **P** **16 19 08.0 +0.5**
BJI2 S **S** **16 29 48.8 +3.7**
BJI2 pmax pmax
comp=Z,23nm,1.9s

BJI2 pmax pmax
comp=Z,1µm,4.9s

BJI2 L L
comp=Z,630nm,18.0s

BJI2 L L
comp=Z,710nm,24.5s

BJI2 L L
comp=Z,2µm,22.7s

BJT **Baijiatuau** **86.86 313** IAmb IAmb 16 19 25.2
comp=Z,174nm,1.6s

HNS **HongShan** **86.87 310** ⇓P **P** **16 19 08.3 +0.7**
HNS SKS **SKSac** **16 29 30.8 -3.3**
HNS S **S** **16 29 44.3 -1.0**
HNS pmax pmax
comp=Z,50nm,1.1s

HNS pmax pmax
comp=Z,2µm,5.1s

HNS L L
comp=Z,2µm,20.2s

HNS L L
comp=Z,2µm,19.4s

HNS L L
comp=Z,4µm,19.8s

LOOK **Love County** **86.95 53** IAmb IAmb 16 19 25.1
comp=Z,58nm,1.1s

E27K **Coleen River** **86.97 11** IAMs_20 IAMs_20 16 52 54.4
comp=Z,5µm,20.0s

E27K **Coleen River** **86.97 11** P **P** **16 19 07.3 -0.1**
baz=209

E27K S **S** **16 29 45.7 +0.5**
baz=209

G30M **tAoh Zraii Nji** **87.03 13** IAMs_20 IAMs_20 16 49 57.0
comp=Z,5µm,22.0s

G30M **tAoh Zraii Nji** **87.03 13** P **P** **16 19 07.5 -0.3**
baz=214

G30M S **S** **16 29 44.9 -0.8**
baz=214

C23K **Itkillik River** **87.10 7** P **P** **16 19 08.0 +0.1**
baz=201

C23K S **S** **16 29 47.0 +0.9**
baz=201

D25K **Kavik River** **87.20 9** P **P** **16 19 08.2 -0.3**
baz=205

D25K S **S** **16 29 47.0 -0.3**
baz=205

MTO3 **Montecristo** **87.21 74** IAmb IAmb 16 19 36.3
comp=Z,70nm,1.2s

LR05 **Currie** **87.23 131** IAMs_20 IAMs_20 16 48 17.1
comp=Z,4µm,21.0s

C24K **Franklin Bluff** **87.24 8** IAMs_20 IAMs_20 16 49 41.2
comp=Z,4µm,22.0s

C24K **Franklin Bluff** **87.24 8** P **P** **16 19 08.6 0.0**
baz=202

C24K S **S** **16 29 48.2 +0.7**
baz=202

FNO **Franklin** **87.25 52** IAmb IAmb 16 19 27.7
comp=Z,57nm,0.9s

B22K **Teshekpuk Lake** **87.26 6** IAmb IAmb 16 19 18.3
comp=Z,68nm,1.2s

B22K IAMs_20 IAMs_20 16 51 59.8
comp=Z,6µm,21.0s

B22K **Teshekpuk Lake** **87.26 6** P **P** **16 19 08.5 -0.2**
baz=198,SNR=37

B22K S **S** **16 29 47.6 -0.1**
baz=198

MAW **Mawson** **87.46 198** P **P** **16 19 10.6 +0.6**
comp=Z,80nm,0.9s,baz=129,slow=4.9,SNR=44

MAW LR LR 16 55 42.5
comp=Z,7µm,20.8s,baz=117,slow=34
comp=Z,80nm,0.9s

MAW **Mawson** **87.46 198** P **P** **16 19 10.8 +0.9**
MAW **Mawson** **87.46 198** P **P** **16 19 10.8 +0.9**
MAW pmax pmax
comp=Z,45nm,1.3s

LYN **LuoYang** **87.48 307** P **P** **16 19 11.3 +0.7**
LYN sP sP 16 19 18.8 +4.4
LYN SKS **SKSac** **16 29 40.5 +2.5**
LYN S **ScS** **16 29 57.8 -0.5**
LYN SS **SS** **16 35 37.3 +0.2**
LYN pmax pmax
comp=Z,88nm,0.9s

LYN pmax pmax
comp=Z,3µm,4.7s

LYN L L
comp=Z,2µm,21.0s

LYN L L
comp=Z,3µm,21.0s

LYN L L
comp=Z,5µm,23.0s

W35A **Tecumseh** **87.61 52** IAmb IAmb 16 19 37.7
comp=Z,82nm,1.2s

COCO **West Island** **87.63 258** IAMs_20 IAMs_20 16 57 39.8
comp=Z,3µm,19.0s

F30M **Barrier River** **87.65 13** IAMs_20 IAMs_20 16 57 45.3
comp=Z,4µm,19.0s

F30M **Barrier River** **87.65 13** P **P** **16 19 10.5 -0.1**
baz=215

F30M S **S** **16 29 50.7 -0.9**
baz=215

WRGLY **Wrigley** **87.67 20** IAmb IAmb 16 19 29.6
comp=Z,63nm,1.0s

WRGLY **Wrigley** **87.67 20** P **P** **16 19 11.0 +0.2**
baz=226,SNR=9.8

WRGLY S **S** **16 29 50.7 -1.1**
baz=226

E28M **Babbage River** **87.72 11** P **P** **16 19 11.2 +0.2**
baz=211

E28M S **S** **16 29 51.8 -0.5**
baz=211

A22K **Sinclair Lake** **87.75 6** P **P** **16 19 10.7 -0.3**
baz=196

A22K S **S** **16 29 50.9 -1.4**
baz=196

GO06 **Curarrehue** **87.82 131** IAMs_20 IAMs_20 16 48 02.9
comp=Z,5µm,21.0s

E29M **Blow River** **87.86 12** P **P** **16 19 11.6 0.0**
baz=213

E29M S **S** **16 29 52.9 -0.6**
baz=213

C27K **Jago River** **87.89 10** P **P** **16 19 11.9 +0.1**
baz=207

C27K S **S** **16 29 53.0 -0.7**
baz=207

A21K **Barrow** **87.91 5** P **P** **16 19 11.8 0.0**
baz=195

A21K S **S** **16 29 52.1 -1.7**
baz=195

C26K **Camden Bay** **87.96 9** P **P** **16 19 12.1 0.0**
baz=206

C26K S **S** **16 29 54.6 +0.3**
baz=206

F31M **Tsiigehtchic** **87.97 14** IAMs_20 IAMs_20 16 53 28.8
comp=Z,5µm,20.0s

F31M **Tsiigehtchic** **87.97 14** P **P** **16 19 11.9 -0.2**
baz=217,SNR=74

F31M S **S** **16 29 52.7 -1.9**
baz=217

D27M **Malcolm River** **88.01 11** IAMs_20 IAMs_20 17 01 08.8
comp=Z,4µm,19.0s

D27M **Malcolm River** **88.01 11** P **P** **16 19 12.5 0.0**
baz=210

D27M S **S** **16 29 53.9 -1.2**
baz=210

OK048 **Pawnee Station** **88.02 51** IAMs_20 IAMs_20 16 56 55.1
comp=Z,3µm,18.0s

PLCA Paso Flores 88.11 132 P **P** **16 19 15.4 +1.6**
comp=Z,16nm,0.9s,baz=260,slow=7.2,SNR=33
PLCA PP **PP** **16 22 38.7 -1.6**
comp=Z,4.9nm,1.1s,baz=244,slow=4.3,SNR=3.6
PLCA LR LR 16 50 37.5
comp=Z,9μm,19.7s,baz=258,slow=30
comp=Z,16nm,0.9s
PLCA Paso Flores 88.11 132 P **P** **16 19 13.5 -0.3**
PLCA Paso Flores 88.11 132 P **P** **16 19 13.5 -0.3**
PLCA pmax pmax
comp=Z,212nm,1.6s
PLCA Paso Flores 88.11 132 *e*P **P** **16 19 16.1 +2.4**
NATX Nacogdoches 88.14 56 IAMs_20 IAMs_20 16 51 59.6
comp=Z,3μm,20.0s
Z38A Mt. Pleasant 88.40 55 IAMs_20 IAMs_20 16 51 52.4
comp=Z,3μm,20.0s
D28M Stokes Point 88.49 11 P **P** **16 19 14.3 -0.3**
baz=212
D28M S **S** **16 29 56.6 -2.8**
baz=212
XLT XiLinHaoTe 88.50 317 *e*P **P** **16 19 15.5 +0.1**
XLT SKS **SKSac** **16 29 41.3 -2.7**
XLT S **S** **16 30 03.0 +2.1**
XLT SS **SS** **16 35 52.1 +0.3**
XLT pmax pmax
comp=Z,27nm,1.4s
XLT pmax pmax
comp=Z,1μm,5.3s
XLT L L
comp=Z,1μm,19.6s
XLT L L
comp=Z,2μm,18.6s
T35A Sooner Cattle 88.53 51 IAmb IAmb 16 19 35.5
comp=Z,34nm,0.9s
T35A IAMs_20 IAMs_20 16 57 19.5
comp=Z,3μm,18.0s
HIA Hailar 88.53 323 IAmb IAmb 16 19 39.0
comp=Z,97nm,1.5s
TIY Taiyuan 88.66 310 *e*P **P** **16 19 18.4 +2.1**
TIY SKS **SKSac** **16 29 45.5 +0.3**
TIY S **SKKSac** **16 29 56.3 0.0**
TIY pmax pmax
comp=Z,850nm,4.5s
TIY L L
comp=Z,1μm,21.3s
TIY L L
comp=Z,2μm,22.7s
TIY L L
comp=Z,3μm,23.4s
INK Inuvik 88.72 13 LR LR 16 52 55.7
comp=Z,4μm,20.4s,baz=220,slow=32
INK Inuvik 88.72 13 IAmb IAmb 16 19 34.9
comp=Z,117nm,1.4s
INK Inuvik 88.72 13 P **P** **16 19 15.4 -0.3**
baz=217,SNR=26
INK S **S** **16 30 00.2 -1.4**
baz=217
BGNE Belgrade 89.02 46 IAMs_20 IAMs_20 16 53 41.1
comp=Z,4μm,20.0s
E28A Huff 89.39 41 IAMs_20 IAMs_20 16 55 30.4
comp=Z,4μm,19.0s
GYA Guiyang 89.46 298 ⇓P **P** **16 19 22.0 +1.7**
GYA SKS **SKSac** **16 29 52.0 +1.5**
GYA S **S** **16 30 08.3 -2.4**
GYA SS **SS** **16 36 09.5 +2.9**
GYA pmax pmax
comp=Z,61nm,1.1s
GYA pmax pmax
comp=Z,2μm,5.1s
GYA L L
comp=Z,2μm,37.6s
SUSD Miller 89.65 43 IAMs_20 IAMs_20 16 53 18.5
comp=Z,5μm,20.0s
TEIG Tepich 89.92 69 IAMs_20 IAMs_20 16 51 52.1
comp=Z,3μm,20.0s
XAN Xi'an 90.05 305 ⇑P **P** **16 19 24.5 +1.7**
XAN pP sP 16 19 28.6 +1.9
XAN sP pwP 16 19 33.0 -2.8
XAN SKS **SKSac** **16 29 48.8 -4.7**
XAN S **ScS** **16 30 22.3 +2.5**
XAN SS **SS** **16 36 17.6 +2.9**
XAN pmax pmax
comp=Z,44nm,1.1s
XAN pmax pmax
comp=Z,1μm,5.3s
XAN L L
comp=Z,2μm,22.4s
XAN L L
comp=Z,3μm,17.6s
XAN L L
comp=Z,5μm,21.1s
MT09 Talagante 90.11 125 IAMs_20 IAMs_20 16 50 55.4
comp=Z,6μm,20.0s
JTS Las Juntas de 90.16 79 LR LR 16 53 22.9
comp=Z,3μm,18.0s,baz=240,slow=31
JTS Las Juntas de 90.16 79 IAMs_20 IAMs_20 16 53 38.4
comp=Z,4μm,18.0s
JTS Las Juntas de 90.16 79 ⇓*i*P **P** **16 19 24.7 +1.0**
JTS pmax pmax
comp=Z,122nm,1.1s
JTS MLR MLR
comp=Z,2μm,15.0s
MT02 Curacav 90.16 125 IAmb IAmb 16 19 28.9
comp=Z,125nm,1.8s
YAK Yakutsk 90.29 336 LR LR 16 56 07.4
comp=Z,3μm,20.5s,baz=126,slow=33
YAK Yakutsk 90.29 336 IAMs_20 IAMs_20 16 56 09.2
comp=Z,3μm,20.0s
YAK Yakutsk 90.29 336 *e*P **P** **16 19 21.7 -1.4**
YAK *e* 16 22 55.1
YAK *e*S **SKSac** **16 29 52.5 -0.9**
YAK *e* 16 30 19.5
YAK *e*SP **SPn** **16 31 21.9 -0.8**
YAK *e*PS **PS** **16 31 23.6 -1.6**
YAK *e*SS **SS** **16 36 16.1 -0.6**
YAK *e*SSS SSS 16 39 52.5
YAK pmax pmax
comp=Z,25nm,0.9s
YAK pmax pmax
comp=N,8.0nm,1.7s
YAK pmax pmax
comp=E,13nm,1.8s
YAK pmax pmax
comp=Z,270nm,4.2s
YAK pmax pmax
comp=N,126nm,3.3s
YAK pmax pmax
comp=E,238nm,3.9s
YAK smax smax
comp=E,154nm,5.6s
YAK smax smax
comp=N,132nm,5.3s
YKA Yellowknife Ar 90.31 23 P **P** **16 19 22.7 -0.6**
comp=N,8.3nm,0.9s,baz=238,slow=4.6,SNR=93
YKA PKKP **PKKPdf** **16 36 49.6 -2.0**
comp=N,0.2nm,0.5s,baz=23,slow=2.2,SNR=4.7
YKA PKPPKP **P'P'df** **16 45 01.7 +3.3**
comp=N,0.2nm,0.7s,baz=34,slow=2.4,SNR=4.2
YKA LR LR 16 52 29.5
comp=N,4μm,22.0s,baz=248,slow=31
comp=N,8.3nm,0.9s
BO04 La Punta 90.33 126 IAMs_20 IAMs_20 16 50 54.4
comp=Z,5μm,20.0s
HHC Hu-ho-hao-te 90.43 313 ⇑*i*P **P** **16 19 26.3 +1.8**
HHC sP sP 16 19 32.6 +4.1
HHC SKS **SKSac** **16 29 59.5 +4.0**
HHC S **S** **16 30 20.6 +1.6**
HHC pmax pmax
comp=Z,30nm,1.3s
HHC pmax pmax
comp=Z,1μm,7.4s
HHC L L
comp=Z,1μm,18.0s
HHC L L
comp=Z,2μm,18.0s
HHC L L
comp=Z,2μm,19.9s
MT05 Renca 90.43 125 IAMs_20 IAMs_20 16 50 19.0
comp=Z,5μm,20.0s
L34A Svendsen Farm, 90.46 46 IAMs_20 IAMs_20 16 55 03.3
comp=Z,3μm,19.0s
PEL Peldehue 90.56 125 IAMs_20 IAMs_20 16 50 20.6
comp=Z,6μm,20.0s
MT03 Universidad Ad 90.58 125 IAMs_20 IAMs_20 16 49 29.9
comp=Z,5μm,21.0s
N35A Tabor 90.58 48 IAmb IAmb 16 19 49.2
comp=Z,39nm,1.1s

MDND Maddock 90.59 40 IAMs_20 IAMs_20 16 53 30.9
comp=Z,4μm,22.0s
MT16 CCHEN 90.59 125 IAMs_20 IAMs_20 16 49 31.2
comp=Z,5μm,22.0s
CO06 Fray Jorge 90.61 122 IAMs_20 IAMs_20 16 53 42.8
comp=Z,4μm,18.0s
GSI Gunungsitoli 90.63 271 P **P** **16 19 25.5 -0.4**
GSI Gunungsitoli 90.63 271 IAMs_20 IAMs_20 16 59 57.8
comp=Z,3μm,22.0s
MT13 San Alfonso 90.67 125 IAMs_20 IAMs_20 16 49 56.3
comp=Z,6μm,21.0s
HDC Heredia 90.87 80 IAMs_20 IAMs_20 16 53 34.4
comp=Z,3μm,19.0s
HDC Heredia 90.87 80 *e*P **P** **16 19 30.6 +3.4**
ECSD EROS Data Cent 90.94 45 IAMs_20 IAMs_20 16 55 43.8
comp=Z,3μm,19.0s
ECSD EROS Data Cent 90.94 45 ⇑P **P** **16 19 25.7 -1.0**
S39A Bolivar 91.18 51 IAMs_20 IAMs_20 16 56 59.7
comp=Z,3μm,18.0s
CO03 El Pedregal 91.32 123 IAmb IAmb 16 19 55.6
comp=Z,78nm,1.5s
ELIB Princess Elisa 91.49 185 *d*P **P** **16 19 29.6 +0.6**
ELIB *d*S **S** **16 30 22.2 -5.6**
BTO2 Baotou 91.59 312 *e*P **P** **16 19 30.8 +0.9**
BTO2 PP **PP** **16 23 04.0 -4.5**
BTO2 S **S** **16 30 33.3 +3.6**
BTO2 pmax pmax
comp=Z,19nm,0.6s
BTO2 pmax pmax
comp=Z,3μm,5.0s
BTO2 L L
comp=Z,3μm,18.4s
BTO2 L L
comp=Z,2μm,17.1s
BTO2 L L
comp=Z,4μm,19.2s
EFI East Falkland 91.59 145 P **P** **16 19 30.4 +0.8**
EFI East Falkland 91.59 145 ⇑*i*P **P** **16 19 31.3 +1.7**
EFI pmax pmax
comp=Z,278nm,1.6s
EFI MLR MLR
comp=Z,703nm,6.0s
ATAH Atahualpa 91.62 98 LR LR 16 51 53.4
comp=Z,9μm,19.5s,baz=252,slow=30
NNA Nana 91.71 103 LR LR 16 52 22.6
comp=Z,2μm,18.4s,baz=240,slow=30
C36M Paulatuk 91.76 15 IAMs_20 IAMs_20 16 53 52.1
comp=Z,5μm,20.0s
C36M Paulatuk 91.76 15 P **P** **16 19 29.5 -0.4**
baz=226
C36M S **S** **16 30 27.4 -2.3**
baz=226
MGMO Mountain Grove 91.80 52 IAmb IAmb 16 19 49.4
comp=Z,62nm,1.3s
AC04 Llanos de Chal 91.88 120 IAMs_20 IAMs_20 16 49 45.5
comp=Z,5μm,21.0s
F33A 5 Mile Ranch, 91.92 43 IAMs_20 IAMs_20 16 54 56.6
comp=Z,4μm,20.0s
LCO Las Campanas 91.92 121 P **P** **16 19 31.4 -0.7**
LCO Las Campanas 91.92 121 P **P** **16 19 31.4 -0.7**
LCO pmax pmax
comp=Z,148nm,1.5s
LCO MLR MLR
comp=Z,6μm,21.0s
TROLL Troll, Antarti 91.98 178 P **P** **16 19 32.6 +1.3**
VNA3 Neumayer Olymp 91.99 174 ⇑P **P** **16 19 32.1 +0.9**
comp=Z,50nm,0.9s
FFC Flin Flon 92.07 33 P **P** **16 19 30.6 -1.0**
FFC IAmb IAmb 16 19 45.0
comp=Z,69nm,1.7s
FFC Flin Flon 92.07 33 IAMs_20 IAMs_20 16 53 24.6
comp=Z,5μm,22.0s
FFC Flin Flon 92.07 33 P **P** **16 19 30.6 -1.0**
FFC pmax pmax
comp=Z,69nm,1.7s
FFC MLR MLR
comp=Z,5μm,22.0s
SNAA Sanae 92.09 177 ⇑P **P** **16 19 32.6 +0.9**
comp=Z,821nm,1.0s
SNAA Sanae 92.09 177 P **P** **16 19 32.6 +0.9**
comp=Z,36nm,0.9s,baz=213,slow=6.3,SNR=24
SNAA LR LR 16 55 05.3
comp=Z,5μm,20.9s,baz=200,slow=32
comp=Z,36nm,0.9s
SNAA Sanae 92.09 177 P **P** **16 19 32.2 +0.5**
SNAA IAMs_20 IAMs_20 16 54 54.7
comp=Z,5μm,20.0s
SNAA Sanae 92.09 177 P **P** **16 19 32.2 +0.5**
SNAA pmax pmax
comp=Z,235nm,1.4s
SNAA MLR MLR
comp=Z,5μm,20.0s
CO01 Juntas del Tor 92.10 122 IAMs_20 IAMs_20 16 53 55.2
comp=Z,3μm,18.0s
R40A Maddies Statio 92.16 51 IAmb IAmb 16 20 24.4
comp=Z,32nm,0.8s
R40A IAMs_20 IAMs_20 16 58 15.7
comp=Z,3μm,18.0s
N38A Joes South For 92.27 48 IAmb IAmb 16 19 55.0
comp=Z,29nm,0.9s
AC05 El Transito 92.33 121 IAmb IAmb 16 20 09.1
comp=Z,72nm,1.1s
AC05 IAMs_20 IAMs_20 16 51 07.5
comp=Z,5μm,21.0s
KMI2 Kunming 92.44 295 P **P** **16 19 37.0 +2.6**
KMI2 PP **PP** **16 23 13.5 -2.2**
KMI2 SKS **SKSac** **16 30 08.6 +0.7**
KMI2 S **S** **16 30 34.9 -3.3**
KMI2 SS **SS** **16 36 47.3 -2.6**
KMI2 pmax pmax
comp=Z,33nm,1.2s
KMI2 pmax pmax
comp=Z,1μm,5.5s
KMI2 L L
comp=Z,1μm,19.6s
KMI2 L L
comp=Z,2μm,22.3s
KMI2 L L
comp=Z,2μm,21.5s
VNA2 Neumayer--Watz 92.50 175 ⇑P **P** **16 19 34.8 +1.3**
comp=Z,109nm,0.9s,baz=139,slow=3.0
VNA1 Neumayer--Stat 92.69 175 ⇑P **P** **16 19 35.8 +1.4**
comp=Z,139nm,0.9s
ZON Zonda 92.70 124 P **P** **16 19 36.8 +1.5**
P40A Paris 92.72 50 IAMs_20 IAMs_20 16 58 08.4
comp=Z,3μm,19.0s
CCM Cathedral Cave 92.85 51 P **P** **16 19 34.7 -1.0**
CCM IAmb IAmb 16 20 08.2
comp=Z,31nm,0.8s
CCM Cathedral Cave 92.85 51 IAMs_20 IAMs_20 17 00 28.1
comp=Z,3μm,18.0s
CCM Cathedral Cave 92.85 51 P **P** **16 19 34.7 -1.0**
CCM pmax pmax
comp=Z,31nm,0.9s
CCM MLR MLR
comp=Z,3μm,18.0s
Y45A Yeager Farm, C 92.89 56 IAMs_20 IAMs_20 16 55 12.5
comp=Z,4μm,20.0s
146A Union 92.92 57 IAMs_20 IAMs_20 17 01 58.2
comp=Z,3μm,18.0s
CFA Coronel Fontan 93.03 124 LR LR 16 52 00.2
comp=Z,5μm,20.5s,baz=204,slow=29
AGMN Agassiz Nation 93.08 41 IAMs_20 IAMs_20 16 56 25.9
comp=Z,4μm,20.0s
OXF Oxford 93.19 55 IAMs_20 IAMs_20 16 55 10.3
comp=Z,3μm,20.0s
I37A Lemond, Waseca 93.22 45 IAmb IAmb 16 19 55.9
comp=Z,49nm,1.0s
CD2 Chengdu 93.23 301 P **P** **16 19 37.8 +0.1**
CD2 pP pP 16 19 40.1 -0.4
CD2 SKS **SKSac** **16 30 11.5 -0.2**
CD2 pmax pmax
comp=Z,20nm,1.1s
CD2 pmax pmax
comp=Z,1μm,5.1s
CD2 L L
comp=Z,4μm,21.6s
CD2 L L
comp=Z,4μm,21.8s
CD2 L L
comp=Z,3μm,23.3s
NVL N'lazarevskaya 93.25 181 *e*P **P** **16 19 37.0 +0.1**
NVL *e* 16 23 22.4
NVL *e*S **SKSac** **16 30 10.9 +0.6**
NVL *e*SS **SS** **16 37 02.1 +4.5**
NVL *e*SSS SSS 16 40 42.4
NVL pmax pmax
comp=Z,140nm,1.4s
NVL MLR MLR
comp=Z,4μm,17.0s
CIT Chita 93.26 323 *e*P **P** **16 19 36.6 -0.7**
CIT *e* 16 23 21.0
CIT *e* 16 25 25.2
CIT pmax pmax
comp=Z,201nm,1.8s
A36M Sachs Harbour 93.36 13 IAMs_20 IAMs_20 16 55 55.1
comp=Z,5μm,20.0s
A36M Sachs Harbour 93.36 13 P **P** **16 19 36.9 -0.2**
baz=225
A36M S **S** **16 30 40.3 -3.5**
baz=225
FVM French Village 93.45 52 IAmb IAmb 16 19 56.6
comp=Z,31nm,1.1s
OTAV Otavalo 93.61 91 *e*P **P** **16 19 42.0 +1.6**
PZH PanZhiHua 93.69 296 P **P** **16 19 41.8 +1.8**
PZH PP **PP** **16 23 23.3 -2.1**
PZH SKS **SKSac** **16 30 13.5 -1.0**
PZH S **ScS** **16 30 53.3 +2.8**
PZH SS **SS** **16 37 12.5 +4.9**
PZH pmax pmax
comp=Z,10.0nm,1.9s
PZH pmax pmax
comp=Z,1μm,6.5s
PZH L L
comp=Z,860nm,20.6s
PZH L L
comp=Z,2μm,21.2s
PZH L L
comp=Z,3μm,22.4s
ULM Lac du Bonnet 93.76 39 P **P** **16 19 38.2 -1.3**
comp=Z,9.2nm,1.0s,baz=243,slow=4.5,SNR=8.0
ULM S **SKSac** **16 30 14.8 +1.3**
comp=Z,0.6nm,0.4s,baz=201,slow=18,SNR=1.4
ULM LR LR 16 55 08.2
comp=Z,8μm,21.7s,baz=254,slow=31
comp=Z,9.2nm,1.0s
PB10 IPOC Station P 93.87 116 IAMs_20 IAMs_20 16 54 37.3
comp=Z,4μm,19.0s
N41A Harden Midland 93.96 49 IAmb IAmb 16 20 05.7
comp=Z,43nm,1.0s
CM31 Chiang Mai Arr 94.00 288 IAmb IAmb 16 20 01.9
comp=Z,53nm,0.9s
CMAR Chiang Mai Arr 94.00 288 P **P** **16 19 42.6 +1.2**
comp=Z,9.7nm,0.9s,baz=100,slow=4.3,SNR=42
CMAR S **SKSac** **16 30 15.4 -0.8**
comp=Z,0.3nm,0.4s,baz=96,slow=3.6,SNR=4.3
CMAR PKKPbc **PKKPdf** **16 36 43.4 0.0**
comp=Z,0.5nm,0.5s,baz=290,slow=2.9,SNR=4.9
CMAR PKPPKP **P'P'df** **16 44 56.0 -0.1**
comp=Z,0.1nm,0.3s,baz=312,slow=2.4,SNR=4.2
CMAR LR LR 16 56 19.0
comp=Z,3μm,21.9s,baz=115,slow=32
comp=Z,9.7nm,0.9s
CMAR Chiang Mai Arr 94.00 288 P **P** **16 19 40.7 -0.7**
SPMN Marine on St. 94.02 44 IAmb IAmb 16 19 58.9
comp=Z,36nm,1.1s
SPMN IAMs_20 IAMs_20 16 55 00.1
comp=Z,4μm,22.0s
CHTO Chiang Mai 94.09 288 P **P** **16 19 42.3 +0.5**
CHTO Chiang Mai 94.09 288 P **P** **16 19 40.8 -1.0**
CHTO IAmb IAmb 16 19 54.4
comp=Z,61nm,1.2s
CHTO IAMs_20 IAMs_20 16 57 13.7
comp=Z,3μm,22.0s
CHTO Chiang Mai 94.09 288 P **P** **16 19 40.8 -1.0**
CHTO pmax pmax
comp=Z,61nm,1.3s
CHTO MLR MLR
comp=Z,3μm,22.0s
L40A Anamosa 94.11 47 IAmb IAmb 16 19 59.2
comp=Z,63nm,1.2s
S44A Carbondale 94.25 52 IAMs_20 IAMs_20 17 02 06.0
comp=Z,2μm,18.0s
PB05 IPOC Station P 94.39 115 IAMs_20 IAMs_20 16 53 28.2
comp=Z,3μm,19.0s
P43A Skaggs Pawnee 94.62 50 IAMs_20 IAMs_20 16 59 15.6
comp=Z,3μm,19.0s
LZH Lanzhou 94.64 306 *e*P **P** **16 19 47.0 +2.8**
LZH sP pwP 16 19 56.4 -0.8
LZH SKS **SKSac** **16 30 19.0 -0.4**
LZH S **ScS** **16 30 58.3 +0.1**
LZH pmax pmax
comp=Z,31nm,1.5s
LZH pmax pmax
comp=Z,810nm,5.5s
LZH L L
comp=Z,1μm,14.8s
LZH L L
comp=Z,2μm,17.2s
LZH L L
comp=Z,3μm,17.9s
PAF Port-aux-Franc 94.72 216 IAMs_20 IAMs_20 16 58 59.0
comp=Z,4μm,19.0s
LZDM Lanzhou Array 94.72 306 P **P** **16 19 45.5 +0.7**
comp=Z,1.6nm,0.3s,baz=98,slow=9.3,SNR=1.2
LZDM S **SKSac** **16 30 24.5 +4.3**
comp=Z,2.1nm,0.4s,baz=118,slow=21,SNR=1.5
LZDM LR LR 17 00 17.3
comp=Z,1μm,20.1s,baz=60,slow=34
comp=Z,1.6nm,0.3s
Q44A Meyer Farm, Va 94.78 51 IAMs_20 IAMs_20 17 00 37.9
comp=Z,4μm,18.0s
EPLO Experimental L 94.87 40 IAmb IAmb 16 20 01.9
comp=Z,34nm,1.0s
WVT Waverly 94.89 54 IAMs_20 IAMs_20 16 56 04.3
comp=Z,3μm,20.0s
PB06 IPOC Station P 94.99 115 IAMs_20 IAMs_20 16 54 13.0
comp=Z,3μm,19.0s
PB07 IPOC Station P 95.05 114 IAMs_20 IAMs_20 16 51 23.4
comp=Z,3μm,20.0s
HDIL Hopedale 95.05 49 IAMs_20 IAMs_20 16 56 55.0
comp=Z,3μm,20.0s
PB03 IPOC Station P 95.05 115 IAMs_20 IAMs_20 16 51 14.6
comp=Z,3μm,22.0s
JFWS Jewell Farm 95.06 47 IAmb IAmb 16 20 03.3
comp=Z,63nm,1.2s
JFWS Jewell Farm 95.06 47 IAMs_20 IAMs_20 16 58 33.9
comp=Z,3μm,20.0s
JFWS Jewell Farm 95.06 47 ⇓P **P** **16 19 45.3 -0.4**
I40A Norwalk 95.09 46 IAmb IAmb 16 20 03.2
comp=Z,36nm,1.0s
I40A IAMs_20 IAMs_20 16 56 50.7
comp=Z,3μm,20.0s
PATCX Punta Patache 95.11 113 IAMs_20 IAMs_20 16 53 23.1
comp=Z,3μm,18.0s
TA01 Diego Aracena 95.17 113 IAMs_20 IAMs_20 16 52 16.7
comp=Z,4μm,20.0s
PB02 IPOC Station P 95.17 114 IAMs_20 IAMs_20 16 51 49.7
comp=Z,4μm,22.0s
BOD Bodaibo 95.20 329 *e*P **P** **16 19 47.3 +1.4**
BOD pmax pmax
comp=Z,32nm,2.0s
L42A Oliver, Polo 95.20 48 IAmb IAmb 16 20 10.2
comp=Z,33nm,1.0s
TRQA Tornquist 95.26 132 P **P** **16 19 46.8 -0.2**
TRQA IAMs_20 IAMs_20 16 56 01.8
comp=Z,5μm,19.0s
TRQA Tornquist 95.26 132 P **P** **16 19 46.8 -0.2**
TRQA pmax pmax
comp=Z,34nm,1.5s
TRQA MLR MLR
comp=Z,5μm,19.0s
E38A The Farm, Brul 95.28 43 IAMs_20 IAMs_20 16 56 39.4
comp=Z,4μm,21.0s
HMBC Humberstone 95.52 113 IAMs_20 IAMs_20 16 52 57.0
comp=Z,5μm,21.0s
V48A Smith Brothers 95.57 55 IAMs_20 IAMs_20 16 56 35.3
comp=Z,3μm,20.0s
PB09 IPOC Station P 95.58 114 IAMs_20 IAMs_20 16 51 28.7
comp=Z,3μm,22.0s
PB01 IPOC Station P 95.62 114 IAMs_20 IAMs_20 16 53 50.7
comp=Z,4μm,19.0s
EYMN Ely 95.73 42 IAMs_20 IAMs_20 17 05 41.1
comp=Z,3μm,18.0s
AP01 Chacalluta 95.74 111 IAMs_20 IAMs_20 16 53 18.8
comp=Z,5μm,20.0s
G40A Rib Lake 95.78 45 IAMs_20 IAMs_20 16 56 39.8
comp=Z,3μm,20.0s
ULN Ulaanbaatar 95.80 318 P **P** **16 19 48.0 -1.2**
ULN Ulaanbaatar 95.80 318 IAMs_20 IAMs_20 16 56 33.7
comp=Z,4μm,22.0s
ULN Ulaanbaatar 95.80 318 *de*P **P** **16 19 49.3 +0.1**
ULN pmax pmax
comp=Z,33nm,1.9s

ULN MLR MLR
comp=Z,3µm,20.0s
TIXI Tiksi 96.06 344 LR LR 16 57 56.2
comp=Z,4µm,21.6s,baz=132,slow=32
TIXI Tiksi 96.06 344 P **P** **16 19 48.2 -1.3**
TIXI Tiksi 96.06 344⇑ *eP* **P** **16 19 48.5 -1.1**
TIXI pmax pmax
comp=Z,9.0nm,1.0s
TIXI MLR MLR
comp=Z,3µm,19.0s
TNCH TengChong 96.10 294 ⇑P **P** **16 19 53.8 +2.7**
TNCH pP sP 16 19 56.1 +1.2
TNCH sP pP 16 19 57.6 +3.7
TNCH SKS **SKSac** **16 30 27.4 -0.2**
TNCH S **S** **16 31 03.3 -6.9**
TNCH sS sS 16 31 17.5 +2.8
TNCH pmax pmax
comp=Z,53nm,1.5s
TNCH pmax pmax
comp=Z,420nm,2.9s
TNCH L L
comp=Z,660nm,19.9s
TNCH L L
comp=Z,860nm,24.7s
TNCH L L
comp=Z,3µm,33.2s
AF01 San Pedro de A 96.12 116 IAMs_20 IAMs_20 16 53 49.8
comp=Z,4µm,19.0s
SONM Songino Array 96.21 318 P **P** **16 19 52.0 +1.0**
comp=Z,2.0nm,0.9s,baz=116,slow=3.4,SNR=4.8
SONM PP **PP** **16 23 41.8 -2.7**
comp=Z,4.5nm,1.0s,baz=105,slow=5.1,SNR=7.0
SONM S **SKSac** **16 30 31.8 +4.7**
comp=Z,0.4nm,0.4s,baz=145,slow=5.3,SNR=1.4
SONM LR LR 16 58 17.7
comp=Z,3µm,21.9s,baz=112,slow=32
comp=Z,2.0nm,0.9s
PB08 IPOC Station P 96.22 113 IAMs_20 IAMs_20 16 52 48.5
comp=Z,4µm,21.0s
I42A Draeger Farm, 96.27 46 IAMs_20 IAMs_20 16 57 37.9
comp=Z,3µm,19.0s
P46A Rosedale 96.33 51 IAMs_20 IAMs_20 17 00 10.9
comp=Z,4µm,19.0s
GO01 Chusmiza 96.34 112 IAMs_20 IAMs_20 16 52 49.7
comp=Z,5µm,21.0s
U49A Red Boiling Sp 96.59 54 IAMs_20 IAMs_20 16 56 56.2
comp=Z,3µm,20.0s
SFIN Lafayette 96.61 50 IAMs_20 IAMs_20 17 01 55.3
comp=Z,3µm,18.0s
WCI Wyandotte Cave 96.64 52 IAMs_20 IAMs_20 17 02 28.4
comp=Z,3µm,18.0s
H43A Windswept, Lux 97.22 46 IAMs_20 IAMs_20 16 59 14.0
comp=Z,3µm,19.0s
F42A Maple Grove Fa 97.31 45 IAMs_20 IAMs_20 16 57 25.4
comp=Z,4µm,21.0s
T50A Nancy 97.45 54 IAMs_20 IAMs_20 16 57 34.0
comp=Z,3µm,21.0s
FCC Fort Churchill 97.61 31 IAmb IAmb 16 20 07.8
comp=Z,23nm,1.1s
P48A Milroy 97.61 51 IAmb IAmb 16 20 00.7
comp=Z,16nm,0.7s
P48A IAMs_20 IAMs_20 17 03 24.0
comp=Z,3µm,18.0s
W52A Murphy 97.69 56 IAMs_20 IAMs_20 17 01 09.5
comp=Z,2µm,19.0s
N47A Urbana 97.77 50 IAMs_20 IAMs_20 17 06 26.0
comp=Z,3µm,18.0s
TKL Tuckaleechee C 97.95 55 P Pdif 16 20 00.6 +1.6
comp=Z,1.3nm,0.5s,baz=278,slow=14,SNR=3.6
TKL LR LR 16 58 20.9
comp=Z,2µm,20.4s,baz=261,slow=32
comp=Z,1.3nm,0.5s
O48B Farmland 98.01 51 IAMs_20 IAMs_20 17 01 12.5
comp=Z,4µm,19.0s
PBA Port Blair 98.01 280 *eP* Pdif 16 20 14.7 +15
I45A Fountain 98.17 47 IAMs_20 IAMs_20 16 58 37.3
comp=Z,3µm,20.0s
DGPR DIGLIPUR 98.22 281 *eP* Pdif 16 20 14.4 +14
DGPR *ex* x 16 28 43.1
TZTN Tazewell 98.34 54 IAMs_20 IAMs_20 16 58 30.5
comp=Z,3µm,20.0s
LPAZ La Paz 98.42 110 P Pdif 16 20 04.4 +2.0
comp=Z,1.8nm,0.8s,baz=251,slow=2.9,SNR=7.3
LPAZ LR LR 16 55 12.2
comp=Z,4µm,20.7s,baz=250,slow=30
comp=Z,1.8nm,0.8s
LPAZ La Paz 98.42 110 *eP* **P** **16 20 02.1 -0.2**
BLKN Baker Lake 98.55 25 IAmb IAmb 16 20 19.5
comp=Z,52nm,1.3s
S51A Beattyville 98.56 53 IAMs_20 IAMs_20 16 58 00.4
comp=Z,3µm,20.0s
O49A Covington 98.61 51 IAMs_20 IAMs_20 17 01 31.2
comp=Z,3µm,19.0s
GTA2 Gaotai 98.65 309 *eP* Pdif 16 20 02.6 +0.3
GTA2 pP pP 16 20 05.6 +0.5
GTA2 SKS **SKSac** **16 30 38.6 -1.4**
GTA2 S **ScS** **16 31 34.5 +3.1**
GTA2 pmax pmax
comp=Z,4.0nm,1.0s
GTA2 pmax pmax
comp=Z,460nm,7.0s
GTA2 L L
comp=Z,790nm,18.1s
GTA2 L L
comp=Z,4µm,20.9s
GTA2 L L
comp=Z,5µm,21.0s
060A Indiantown 98.73 64 IAMs_20 IAMs_20 16 58 25.9
comp=Z,4µm,20.0s
IRK Irkutsk 98.75 322 *eP* Pdif 16 20 02.3 +0.1
IRK pmax pmax
comp=Z,53nm,2.1s
ROSC El Rosal 98.83 88 LR LR 16 55 09.3
comp=Z,2µm,21.6s,baz=243,slow=30
ZAK Zakamensk 98.88 320 *eP* **P** **16 19 59.3 -3.6**
ZAK pmax pmax
comp=Z,12nm,2.2s
N49A Columbus Grove 98.89 50 IAMs_20 IAMs_20 17 03 32.8
comp=Z,3µm,18.0s
TLY Talaya 98.98 321 P Pdif 16 20 03.5 +0.2
comp=Z,1.4nm,0.6s,baz=109,slow=7.0
TLY LR LR 17 02 36.2
comp=Z,4µm,19.5s,baz=97,slow=34
comp=Z,1.4nm,0.6s
TLY Talaya 98.98 321⇓ *eP* Pdif 16 20 04.5 +1.2
TLY pmax pmax
comp=Z,22nm,1.6s
TLY MLR MLR
comp=Z,3µm,20.0s
LKP Lekhapani 98.99 296 *eP* Pdif 16 20 17.5 +14
LKP IAMs_20 IAMs_20 16 33 17.4
comp=Z,2µm,19.2s
GLMI Grayling 99.49 46 IAMs_20 IAMs_20 17 00 13.0
comp=Z,3µm,19.0s
AAM Ann Arbor 99.59 49 IAMs_20 IAMs_20 17 00 47.2
comp=Z,3µm,20.0s
PASG PASIGHAT 99.61 296 *eP* **Pdif** **16 20 20.2 +14**
ACSO Alum Creek Sta 99.62 51 IAMs_20 IAMs_20 17 02 12.2
comp=Z,3µm,19.0s
MORE Moreh 99.63 292 IAMs_20 IAMs_20 16 59 38.9
comp=Z,3µm,22.0s
M50A Fremont 99.84 50 IAMs_20 IAMs_20 17 00 00.8
comp=Z,4µm,19.0s
MOKO MOKOCHONG 99.92 295 *eP* **Pdif** **16 20 21.9 +14**
V55A Taylorsville 100.02 56 IAMs_20 IAMs_20 16 59 25.1
comp=Z,3µm,21.0s
E46A Sault Ste Mari 100.05 45 IAMs_20 IAMs_20 16 59 29.7
comp=Z,3µm,20.0s
IMP Imphal 100.08 293 *eP* **Pdif** **16 20 22.6 +14**
IMP IAMs_20 IAMs_20 16 34 13.8
comp=Z,2µm,18.5s
KOHI KOHIMA 100.14 294 *eP* **Pdif** **16 20 23.6 +14**
KOHI IAMs_20 IAMs_20 16 34 16.3
comp=Z,2µm,19.3s
N51A Ashland 100.23 50 IAMs_20 IAMs_20 17 04 40.1
comp=Z,3µm,18.0s
JORH JORHAT 100.24 295 *eP* **Pdif** **16 20 23.3 +14**
S54A Dingess, Beckl 100.36 54 IAMs_20 IAMs_20 16 59 56.1
comp=Z,3µm,20.0s
SAIH SAIHA 100.41 290 *eP* **Pdif** **16 20 24.6 +14**
SAIH IAMs_20 IAMs_20 16 34 18.0
comp=Z,2µm,20.8s
K50A Casco 100.44 48 IAMs_20 IAMs_20 17 02 38.6
comp=Z,3µm,20.0s
O52A Adamsville 100.46 51 IAMs_20 IAMs_20 17 04 55.3
comp=Z,3µm,18.0s
I49A Point Hope 100.55 47 IAMs_20 IAMs_20 17 00 11.2
comp=Z,3µm,20.0s
P53A Whipple 100.66 52 IAMs_20 IAMs_20 17 06 06.7
comp=Z,2µm,18.0s
ZIRO ZIRO 100.76 296 *eP* **Pdif** **16 20 25.8 +14**
ZIRO IAMs_20 IAMs_20 16 33 24.8
comp=Z,3µm,19.8s
U56A King 100.78 55 IAMs_20 IAMs_20 16 59 28.3
comp=Z,3µm,20.0s
ITAN ITANAGAR 100.79 295 *eP* **Pdif** **16 20 25.6 +14**
ITAN IAmb IAmb 16 20 33.9
comp=Z,2µm,19.7s
W57A Gilead 100.84 56 IAMs_20 IAMs_20 17 02 59.1
comp=Z,3µm,19.0s
BLA Blacksburg 100.93 54 IAMs_20 IAMs_20 16 59 42.2
comp=Z,3µm,20.0s
SILR SILCHAR 101.08 293 *eP* **Pdif** **16 20 26.9 +14**
M52A Chesterland 101.11 50 IAMs_20 IAMs_20 17 00 49.3
comp=Z,3µm,20.0s
N53A Lisbon 101.34 51 IAMs_20 IAMs_20 17 05 23.7
comp=Z,3µm,18.0s
R55A Marlinton 101.38 53 IAMs_20 IAMs_20 16 59 59.0
comp=Z,3µm,20.0s
TEZP TEZPUR 101.48 295 *eP* **Pdif** **16 20 28.6 +14**
O54A Avella 101.56 51 IAMs_20 IAMs_20 17 03 23.6
comp=Z,3µm,19.0s
GOMU GeErMu 101.76 304 Pdif **Pdif** **16 20 15.1 -1.4**
GOMU PP **PP** **16 24 25.0 -2.5**
GOMU SKS **SKSac** **16 30 55.4 -0.5**
GOMU L L
comp=Z,630nm,22.5s
GOMU L L
comp=Z,1µm,22.4s
GOMU L L
comp=Z,2µm,20.9s
MCWV Mont Chateau 101.86 52 IAMs_20 IAMs_20 17 07 01.6
comp=Z,2µm,18.0s
BELO BELONIA 101.96 291 *eP* **Pdif** **16 20 30.9 +14**
BELO IAMs_20 IAMs_20 16 34 13.6
comp=Z,2µm,18.1s
SHL Shillong 102.06 293 *eP* **Pdif** **16 20 32.1 +14**
W59A Clinton 102.09 57 IAMs_20 IAMs_20 17 03 55.1
comp=Z,2µm,19.0s
S57A Dark Hollow, R 102.18 54 IAMs_20 IAMs_20 17 01 12.3
comp=Z,3µm,20.0s
ERPA Erie 102.22 50 IAMs_20 IAMs_20 17 02 00.8
comp=Z,3µm,20.0s
AGT Agartala 102.28 291 *eP* **Pdif** **16 20 34.5 +16**
AGT IAMs_20 IAMs_20 16 33 56.5
comp=Z,1µm,15.2s
TAWA Tawang 102.50 295 *eP* **Pdif** **16 20 34.4 +14**
T59A Double "B" Far 103.13 55 IAMs_20 IAMs_20 17 00 49.6
comp=Z,3µm,20.0s
CBN Corbin Frederi 103.49 54 IAMs_20 IAMs_20 17 00 52.9
comp=Z,3µm,21.0s
SSPA Standing Stone 103.52 51 IAMs_20 IAMs_20 17 06 17.3
comp=Z,3µm,18.0s
V61A Roper 103.70 56 IAMs_20 IAMs_20 17 05 01.7
comp=Z,2µm,19.0s
DHUB DHUBRI 103.82 293 *eP* **Pdif** **16 20 40.4 +15**
DHUB IAMs_20 IAMs_20 16 34 34.2
comp=Z,2µm,10.0s
CPUP Villa Florida 103.88 123 Pdiff **Pdif** **16 20 27.7 +2.0**
comp=Z,1.0nm,0.4s,baz=191,slow=2.4,SNR=1.6
L56A Greenwood 104.00 50 IAMs_20 IAMs_20 17 03 16.0
comp=Z,4µm,20.0s
M57A Sunshine Farm, 104.20 51 IAMs_20 IAMs_20 17 06 30.2
comp=Z,3µm,18.0s
N58A Sunbury 104.43 51 IAMs_20 IAMs_20 17 05 38.4
comp=Z,3µm,18.0s
K57A Scipio Center 104.86 49 IAMs_20 IAMs_20 17 04 55.6
comp=Z,3µm,19.0s
SDDR Presa de Saban 105.11 74 IAMs_20 IAMs_20 17 00 00.9
comp=Z,4µm,20.0s
BINY Binghamton 105.17 50 IAMs_20 IAMs_20 17 04 10.9
comp=Z,3µm,20.0s
GTK Tadong 105.29 294 *eP* **Pdif** **16 20 46.6 +15**
GTK IAMs_20 IAMs_20 16 34 59.9
comp=Z,3µm,17.4s
P61A Hammonton 105.71 53 IAMs_20 IAMs_20 17 04 01.5
comp=Z,3µm,20.0s
CRZF Crozet Islands 106.16 210 IAMs_20 IAMs_20 17 06 51.4
comp=Z,2µm,20.0s
BWNR Bhubaneshwar 106.46 287 *eP* **Pdif** **16 20 51.3 +14**
LONY Lake Ozonia 106.49 48 IAMs_20 IAMs_20 17 03 32.6
comp=Z,2µm,20.0s
PAL Palisades 106.56 51 IAMs_20 IAMs_20 17 07 27.8
comp=Z,2µm,18.0s
N62A Cammett State 106.88 52 IAMs_20 IAMs_20 17 06 19.3
comp=Z,3µm,19.0s
TRY Troy 106.94 50 IAMs_20 IAMs_20 17 08 37.7
comp=Z,3µm,18.0s
JMUI Jamui 106.97 292 *eP* **Pdif** **16 20 53.6 +14**
WSPT Westport, CT 107.01 51 IAMs_20 IAMs_20 17 07 49.8
comp=Z,3µm,18.0s
J61A Chester 107.82 49 IAMs_20 IAMs_20 17 06 37.8
comp=Z,2µm,20.0s
GAYA Gaya 107.83 291 *eP* **Pdif** **16 20 56.9 +14**
K62A Royalston 107.98 50 IAMs_20 IAMs_20 17 07 10.3
comp=Z,3µm,18.0s
M63A Gales Ferry 108.00 51 IAMs_20 IAMs_20 17 08 28.9
comp=Z,3µm,18.0s
HNH Hanover 108.05 49 IAMs_20 IAMs_20 17 07 29.8
comp=Z,2µm,19.0s
STMR SITAMARHI 108.12 293 *eP* **Pdif** **16 20 59.1 +15**
WMQ Urumqi 108.27 311 Pdif **Pdif** **16 20 45.1 +0.2**
WMQ PP **PP** **16 25 13.4 -1.7**
WMQ SKS **SKSac** **16 31 27.5 +3.1**
WMQ S **Sdif** **16 32 45.5 -5.8**
WMQ L L
comp=Z,1µm,19.9s
WMQ L L
comp=Z,1µm,24.3s
WMQ L L
comp=Z,1µm,24.3s
LBNH Lisbon 108.35 48 IAMs_20 IAMs_20 17 04 07.8
comp=Z,3µm,22.0s
PALK Pallekele 108.42 272 IAMs_20 IAMs_20 17 10 05.3
comp=Z,3µm,20.0s
RAGD RAYAGADA 108.44 285 *eP* **Pdif** **16 20 59.5 +13**
HRV Adam Dziewonsk 108.47 50 IAMs_20 IAMs_20 17 07 25.1
comp=Z,3µm,18.0s
JHSG JHARSUGUGA 108.62 288 *eP* **Pdif** **16 20 59.6 +13**
I62A Tamworth 108.74 49 IAMs_20 IAMs_20 17 11 04.3
comp=Z,2µm,19.0s
M65A Busby, Falmout 109.06 51 IAMs_20 IAMs_20 17 09 10.0
comp=Z,3µm,18.0s
I63A Otisfield 109.30 48 IAMs_20 IAMs_20 17 03 02.0
comp=Z,3µm,22.0s
G62A West of Eustis 109.41 47 IAMs_20 IAMs_20 17 09 37.8
comp=Z,3µm,19.0s
VLK Valmikinagar 109.42 294 *eP* **Pdif** **16 21 04.4 +14**
SJG San Juan 109.71 76 IAMs_20 IAMs_20 17 06 31.9
comp=Z,2µm,19.0s
E62A Clayton Lake 110.19 46 IAMs_20 IAMs_20 17 09 24.2
comp=Z,2µm,19.0s
PKME Peaks-Kenny Pk 110.29 47 IAMs_20 IAMs_20 17 09 47.1
comp=Z,2µm,20.0s
ZSN Zaisan 110.47 315 *i* PKiKP **PKiKP** **16 24 54.8 -0.3**
ZSN Zaisan 110.47 315 *e*PKiKP **PKiKP** **16 24 54.8 -0.3**
D62A Allapoint, All 110.53 45 IAMs_20 IAMs_20 17 05 29.2
comp=Z,4µm,21.0s
ZALV Zalesovo Beam 110.56 322 Pdiff **Pdif** **16 20 54.9 +0.2**
comp=Z,0.3nm,0.3s,baz=58,slow=5.4,SNR=1.9
ZALV PKiKP **PKiKP** **16 24 53.4 -1.6**
comp=Z,0.6nm,0.4s,baz=124,slow=0.5,SNR=4.1
ZALV PP **PP** **16 25 29.0 -2.3**
comp=Z,1.5nm,0.6s,baz=88,slow=4.5,SNR=3.8
ZALV PKKPbc **PKKPab** **16 36 01.8 -2.4**
comp=Z,0.3nm,0.2s,baz=264,slow=4.3,SNR=3.6
F64A Sherman 110.97 47 IAMs_20 IAMs_20 17 13 25.1
comp=Z,3µm,18.0s
G65A Princeton 111.51 47 IAMs_20 IAMs_20 17 06 41.3
comp=Z,3µm,21.0s
EMMW East Machias 111.57 48 IAMs_20 IAMs_20 17 07 13.0
comp=Z,3µm,20.0s
DGAR Diego Garcia 111.93 255 IAMs_20 IAMs_20 17 13 22.6
comp=Z,2µm,20.0s
KULLO Kullorsuaq 112.02 15 *eP* **PKiKP** **16 24 56.3 -1.0**
MK31 Makanchi Array 112.22 314 *d* iPKiKP **PKiKP** **16 24 57.8 -0.7**
MKAR Makanchi Array 112.22 314 Pdiff **Pdif** **16 21 02.3 0.0**
comp=Z,1.0nm,0.8s,baz=91,slow=4.2,SNR=6.1
MKAR PKiKP **PKiKP** **16 24 57.1 -1.3**
comp=Z,1.0nm,0.6s,baz=74,slow=0.7,SNR=9.7
MKAR PP **PP** **16 25 40.6 -2.9**
comp=Z,1.4nm,0.7s,baz=89,slow=5.9,SNR=3.9
MKAR PKKPbc **PKKPbc** **16 35 49.9 -0.7**
comp=Z,1.0nm,0.8s,baz=277,slow=3.7,SNR=7.2
NEEM North Greenlan 112.23 12 *i* P **PKiKP** **16 24 56.9 -1.1**
MAKZ Makanchi 112.43 314 IAMs_20 IAMs_20 17 13 59.2
comp=Z,2µm,20.0s
MAKZ Makanchi 112.43 314 ⇑PKiKP **PKiKP** **16 24 56.1 -2.8**
KAAM Kaadhehdhoo 113.98 263 IAMs_20 IAMs_20 17 10 55.9
comp=Z,2µm,21.0s
SHLS Shalkode 114.23 310 *i* PKiKP PKPdf 16 25 02.1 -0.5
SHLS *e* 16 25 54.9
SHLS Shalkode 114.23 310 *e*PKiKP PKPdf 16 25 02.2 -0.4
SHLS *e*PP **PP** **16 25 54.9 -3.1**
SHLS *e*PKS **PKSdf** **16 28 38.9 -0.5**
WUS Wushi 114.41 308 IAMs_20 IAMs_20 17 13 10.3
comp=Z,2µm,21.0s
KURK Kurchatov 114.50 319 *d* iPKiKP PKPdf 16 25 01.9 -0.8
KURK MLR MLR
comp=Z,3µm,19.0s
UZB Uzynbulak 114.55 310 *e*PKiKP PKPdf 16 25 03.2 0.0
UZB *e* 16 25 59.2
UZB Uzynbulak 114.55 310 *e*PKP PKPdf 16 25 03.2 0.0
UZB *e*PP **PP** **16 25 59.2 -1.1**
KURBB Kurchatov Arra 114.57 319 PKiKP PKPdf 16 25 01.4 -1.4
comp=Z,2.1nm,0.8s,baz=86,slow=1.8,SNR=12
KURBB PP **PP** **16 25 57.6 -2.4**
comp=Z,5.5nm,1.1s,baz=87,slow=7.6,SNR=11
KURBB PKKPbc **PKKPbc** **16 35 42.5 -0.1**
comp=Z,0.5nm,0.2s,baz=287,slow=3.8,SNR=11
TDK Taldyqorghan 114.96 312 *e*PKiKP PKPdf 16 25 04.2 +0.4
TDK MLR MLR
comp=Z,2µm,21.0s
TDK Taldyqorghan 114.96 312 *e*PKP PKPdf 16 25 04.2 +0.5
TDK LR LR 17 16 02.7
comp=Z,2µm,21.2s
SATY Saty 115.00 310 *e*PKiKP **PKPdf** **16 25 04.2 +0.1**
SATY Saty 115.00 310 *e*PKP **PKPdf** **16 25 04.2 +0.1**
MDOK Medeo 116.00 310 *e*PKiKP **PKPdf** **16 25 06.0 0.0**
MDOK *e* 16 26 09.3
MDOK Medeo 116.00 310 *e*PKP **PKPdf** **16 25 06.1 0.0**
MDOK *e*PP **PP** **16 26 09.4 -1.1**
MDOK LR LR 17 16 43.6
TNSS Tian-Shan 116.07 310 *e*PKiKP **PKPdf** **16 25 06.3 -0.2**
TNSS *e* 16 26 10.2
TNSS Tian-Shan 116.07 310 *e*PKP **PKPdf** **16 25 06.3 -0.2**
TNSS *e*PP **PP** **16 26 10.2 -1.2**
AAA Alma-Ata 116.09 311 *e*PKiKP **PKPdf** **16 25 06.0 0.0**
AAA Alma-Ata 116.09 311 *e*PKP **PKPdf** **16 25 06.1 0.0**
AAA LR LR 17 16 46.6
BDFB Brasilia 116.45 117 PKP **PKiKP** **16 25 07.7 +0.1**
comp=Z,1.3nm,0.3s,baz=146,slow=3.6,SNR=3.6
KBS Kingsbay 117.17 359 IAMs_20 IAMs_20 17 07 26.8
comp=Z,2µm,22.0s
KBS Kingsbay 117.17 359 *i* P **PKiKP** **16 25 07.4 +0.3**
KSH2 Kashi 117.21 306 PKP **PKiKP** **16 25 09.0 +0.5**
KSH2 L L
comp=Z,2µm,21.0s
KSH2 L L
comp=Z,2µm,20.6s
KSH2 L L
comp=Z,2µm,19.9s
SUMG Summit 117.63 14 *i* P **PKPdf** **16 25 08.4 -0.2**
SPITS Spitsbergen Ar 117.81 358 PKP **PKPdf** **16 25 06.8 -1.5**
comp=Z,7.6nm,0.8s,baz=29,slow=3.3,SNR=12
SPITS PKKPbc **PKKPbc** **16 35 32.4 +0.5**
comp=Z,3.7nm,0.7s,baz=153,slow=1.0,SNR=3.6
DAG Danmarks Havn 117.85 7 *i* P **PKPdf** **16 25 06.6 -1.9**
AAK Ala-Archa 117.89 310 IAMs_20 IAMs_20 17 14 04.3
comp=Z,2µm,20.0s
AAK Ala-Archa 117.89 310⇑ *i* PKiKP **PKiKP** **16 25 09.8 +0.1**
AAK MLR MLR
comp=Z,1µm,19.0s
BVAR Borovoye Array 119.22 322 PKP **PKPdf** **16 25 10.8 -0.9**
comp=Z,3.3nm,0.8s,baz=77,slow=3.1,SNR=14
BVAR PP **PP** **16 26 29.2 -3.1**
comp=Z,5.9nm,1.1s,baz=91,slow=8.6,SNR=3.6
BVAR PKKP **PKKPdf** **16 35 57.5 +0.1**
comp=Z,0.5nm,0.5s,baz=256,slow=3.0,SNR=3.8
BORK Borovoye 119.26 322 *c* iPKiKP **PKPdf** **16 25 11.0 -0.8**
BORK MLR MLR
comp=Z,4µm,20.0s
SMTB Santa Maria do 119.76 110 *eP* **PKPdf** **16 25 12.8 -1.1**
DBG Daneborg 119.80 8 *i* P **PKPdf** **16 25 11.3 -0.9**
JANB Januaria 119.87 118 *eP* **PKPdf** **16 25 13.4 -0.7**
DZA Taraz 120.20 310 *e*PKiKP **PKPdf** **16 25 13.9 0.0**
DZA Taraz 120.20 310 *e*PKP **PKPdf** **16 25 14.0 0.0**
SJMB Sao Joao De Ma 120.59 124 *eP* **PKPdf** **16 25 15.0 -0.4**
SDBA SAO DESIDERIO 120.61 115 *eP* **PKPdf** **16 25 15.4 -0.1**
RIB01 Linhares ES 120.89 125 *eP* **PKiKP** **16 25 16.1 0.0**
IUG luzhnay 121.23 310 *e*PKiKP **PKPdf** **16 25 16.0 0.0**
IUG *e* 16 26 45.7
IUG luzhnay 121.23 310 *e*PKP **PKPdf** **16 25 16.0 0.0**
IUG *e*PP **PP** **16 26 45.8 -0.9**
BRLS Borolday 121.27 311 *e*PKiKP **PKiKP** **16 25 16.2 +0.1**
BRLS *e* 16 26 46.8
BRLS Borolday 121.27 311 *e*PKP **PKiKP** **16 25 16.2 +0.1**
BRLS *e*PP **PP** **16 26 46.8 0.0**
CHM Chimkent 121.53 310 *e*PKiKP **PKiKP** **16 25 16.6 0.0**
CHM *e* 16 26 47.9
CHM Chimkent 121.53 310 *e*PKP **PKiKP** **16 25 16.6 0.0**
CHM *e*PP **PP** **16 26 47.9 -0.7**
CHM LR LR 17 20 05.3
comp=Z,608nm,21.1s
CHGR Chuyangaron 122.23 306⇓ *i* PKiKP **PKPdf** **16 25 18.0 -0.1**
CHGR MLR MLR
comp=Z,3µm,20.0s
GUA01 Guaratinga, BA 122.83 122 *eP* **PKPdf** **16 25 19.1 -0.7**
SVE Sverdlovsk 123.41 328 *i* PKiKP **PKPdf** **16 25 19.6 0.0**
SVE MLR MLR
comp=Z,4µm,22.0s
CMC01 Camacan, BA 123.71 121 *eP* **PKPdf** **16 25 21.3 -0.1**
ARTI Arti 124.72 329 *i* PKiKP **PKPdf** **16 25 21.4 -0.7**
ARTI 16 32 32.9
ARTI MLR MLR
comp=Z,5µm,22.0s
ARCES ARCESS Array B 125.52 352 PKP **PKPdf** **16 25 22.3 -1.1**
comp=Z,9.7nm,0.7s,baz=18,slow=1.7,SNR=17
ARCES PP **PP** **16 27 11.4 -2.8**
comp=Z,2.6nm,0.8s,baz=34,slow=7.0,SNR=1.6
APA Apatity 126.02 348 ⇓ *i* PKiKP **PKPdf** **16 25 19.6 -4.7**
APA *e* 16 27 24.2
APA *e*SS SS 16 44 20.4 +2.1
APA pmax pmax
comp=Z,13nm,1.4s
APA MLR MLR
comp=Z,4µm,20.5s
VOI Vohitsoka 126.27 226 IAMs_20 IAMs_20 17 18 14.8
comp=Z,3µm,19.0s
NBPS Pedro II - PI 127.14 109 *eP* **PKPdf** **16 25 27.9 -0.3**
KIRV Kirov 127.75 334 *ce*PKiKP **PKPdf** **16 25 27.4 -0.4**
NBMA Muriti-CE 128.28 113 *eP* **PKPdf** **16 25 30.3 0.0**
MSEY Mahe Island 128.55 250 IAMs_20 IAMs_20 17 16 35.1
comp=Z,2µm,20.0s
NBMO Morrinhos-CE 128.86 108 *eP* **PKPdf** **16 25 31.6 +0.3**
KLMR Klimovskoe 129.91 340 *e*PKiKP **PKPdf** **16 25 30.0 -1.9**
KLMR *e* 16 27 42.3
KLMR PS **PS** **16 37 58.1 +3.6**
KLMR SS SS 16 45 12.8 +6.1
KLMR pmax pmax
comp=Z,70nm,1.5s
NBPA Parau_RN 130.47 112 *eP* **PKiKP** **16 25 35.1 -0.1**
RCBR Riachuelo 131.50 113 *eP* **PKiKP** **16 25 37.5 +0.1**
NBPV Pedro Velho 131.77 114 *eP* **PKPdf** **16 25 37.2 +0.3**
BELG Belogornoye 132.16 328⇑ *e*PKiKP **PKPdf** **16 25 34.3 -2.1**
BOSA Boshof 132.41 201 PKP **PKPdf** **16 25 36.4 -1.5**
comp=Z,14nm,1.0s,baz=145,slow=4.3,SNR=8.1
FINES FINESS Array B 132.93 348 PKhKP PKPpre 16 25 25.5
comp=Z,2.8nm,0.9s,baz=48,slow=2.1,SNR=6.2
FINES PKP **PKPdf** **16 25 36.7 -0.9**
comp=Z,9.3nm,0.8s,baz=45,slow=2.2,SNR=13
MOS Moscow 134.42 337 *e*PKiKP **PKPdf** **16 25 39.0 -1.6**
MOS *e* 16 28 16.1
NB2 NORSAR Subarra 135.11 358 PKP PKPpre 16 25 28.7
comp=Z,27nm,1.4s,baz=11,slow=4.0
NOA NORSAR Array B 135.11 358 PKhKP PKPpre 16 25 27.6
comp=Z,1.4nm,0.9s,baz=18,slow=2.9,SNR=2.7
NOA PKP **PKPdf** **16 25 41.2 -0.6**
comp=Z,2.3nm,0.8s,baz=14,slow=2.5,SNR=4.8
OBN Obninsk 135.28 337 *ce*PKiKP **PKPdf** **16 25 42.0 -0.2**
OBN *e* 16 25 46.2
OBN *e* 16 28 18.8
OBN *e*PPP PPP 16 31 14.4
OBN *e* 16 32 54.2
OBN *e*SS SS 16 46 13.9 +1.8
OBN pmax pmax
comp=Z,14nm,1.0s
OBN MLR MLR

comp=Z,4µm,19.0s
VSU Vasula 135.50 346 ⇑ *i* PKIKP **PKiKP** 16 25 44.6 +0.6
VRH Novokhopyorsk 135.81 330 *e*PKIKP **PKPdf** 16 25 42.5 -0.8
VRH pmax pmax
comp=Z,10.0nm,0.5s
VRH MLR MLR
comp=Z,4µm,20.0s
HFS Hagfors 135.88 356 PKhKP PKPpre 16 25 30.8
comp=Z,5.1nm,0.9s,baz=56,slow=3.6,SNR=5.9
LPSR Galich'ya Gora 136.15 333 *e*PKIKP **PKPdf** 16 25 41.3 -2.6
LPSR pmax pmax
comp=Z,20nm,0.9s
VORR Voronezh 136.67 332 *e*PKIKP **PKPdf** 16 25 44.7 -0.2
VORR pmax pmax
comp=Z,40nm,0.4s
MAK Makhachkala 136.97 317 *i* P **Pdif** 16 22 43.6 -8.8
MAK *e* 16 32 50.4
MAK *e* 16 40 36.4
MAK *e*SS SS 16 46 32.4 -1.1
VSR Storozhevoye 137.00 331 *e*PKIKP **PKPdf** 16 25 44.7 -0.8
VSR pmax pmax
comp=Z,10.0nm,1.0s
VSR MLR MLR
comp=Z,4µm,20.0s
VORD Divnogorie 137.12 331 *e*PKIKP **PKPdf** 16 25 45.6 -0.1
VORD pmax pmax
comp=Z,10.0nm,0.9s
AKT Akhty 137.45 315 *e*PKIKP **PKPdf** 16 25 46.1 -0.7
AKT *e* 16 28 32.6
AKT pmax pmax
comp=Z,28nm,1.5s
MNK Minsk 138.70 342 *i* PKP **PKPdf** 16 25 49.1 +0.6
comp=E,10.0nm,0.6s
MNK *i* PKP **PKPdf** 16 25 49.1 +0.6
comp=N,12nm,0.6s
MNK *i* PKP **PKPdf** 16 25 49.1 +0.6
comp=Z,18nm,0.6s,baz=30
MNK *i* PP **PP** 16 28 40.3 +1.3
MNK *i* PPP PPP 16 31 41.7
MNK *i* SKS **SKSdf** 16 32 59.6 +1.2
MNK *i* SS **SS** 16 46 56.2 +3.7
MNK *i* SSS SSS 16 52 05.5
MNK *i* LRM MLR 17 25 31.9
comp=Z,4µm,21.4s
MNK *i* LRM MLR 17 25 33.1
comp=E,3µm,20.7s
MNK *i* LRM MLR 17 26 30.4
comp=N,1µm,19.7s
MNK Minsk 138.70 342 *i* PKIKP **PKPdf** 16 25 49.1 +0.6
MNK *i* 16 28 40.3
MNK *i* PPP PPP 16 31 41.7
MNK *i* 16 32 59.6
MNK *i* SS SS 16 46 56.1 +3.6
MNK *i* SSS SSS 16 52 05.5
MNK pmax pmax
comp=N,12nm,0.6s
MNK pmax pmax
comp=E,10.0nm,0.6s
MNK pmax pmax
comp=Z,18nm,0.6s
MNK MLR MLR
comp=Z,4µm,21.0s
MNK MLR MLR
comp=N,1µm,20.0s
GOF Gofitskoye 138.74 322 *ce*PKIKP **PKPdf** 16 25 48.4 -0.6
KBZ Khabaz 139.54 320 PKP **PKPdf** 16 25 49.0 -1.4
comp=N,2.4nm,1.1s,baz=0.3,slow=1.6,SNR=3.5
KBZ PP **PP** 16 28 43.5 -1.4
comp=N,3.9nm,1.0s,baz=76,slow=4.2,SNR=4.7
KBZ Khabaz 139.54 320 ⇑ *e*PKIKP **PKPdf** 16 25 48.7 -1.7
KIV Kislovodsk 139.55 321 IAMs_20 IAMs_20 17 29 19.7
comp=Z,2µm,20.0s
KIV Kislovodsk 139.55 321 *e*PKIKP **PKPdf** 16 25 48.4 -2.2
KIV *i* 16 25 50.8
KIV *e* 16 28 42.9
KIV *e* 16 41 00.5
KIV *e*SS SS 16 47 03.7 -0.4
KIV *e*SSS SSS 16 52 14.9
KIV MLR MLR
comp=Z,2µm,24.0s
SHA1 Shidzhatmaz 139.69 320 ⇑ *e*PKIKP **PKPdf** 16 25 49.4 -1.6
ERBR Yeremizino-Bor 139.85 324 *i* PKIKP **PKiKP** 16 25 53.6 +0.2
ERBR *e* 16 25 56.8
ERBR pmax pmax
comp=Z,21nm,0.9s
NEUR Neytrino 139.91 320 ⇓ *e*PKIKP **PKPdf** 16 25 50.5 -0.9
NEUR MLR MLR
comp=Z,2µm,19.0s
EKA Eskdalemuir Ar 139.99 10 PKP **PKPdf** 16 25 50.5 -0.4
comp=Z,2.3nm,0.7s,baz=351,slow=1.3,SNR=5.7
GNI Garni 140.07 314 IAMs_20 IAMs_20 17 27 51.4
comp=Z,2µm,22.0s
GNI Garni 140.07 314 *d* / PKIKP **PKPdf** 16 25 50.5 -1.3
LABN Labinsk 140.34 323 *i* PKIKP **PKiKP** 16 25 54.7 +0.3
LABN *e* 16 25 57.7
LABN pmax pmax
comp=Z,13nm,0.5s
SUW Suwalki 140.38 346 *e*P **PKPdf** 16 25 43.9 -7.7
AK03 Malin Array Si 141.47 338 PKP **PKPdf** 16 25 53.4 -0.3
AKASG Malin Array Be 141.49 338 PKhKP PKPpre 16 25 45.6
comp=Z,2.9nm,0.8s,baz=35,slow=3.9,SNR=9.3
AKASG PKP **PKPdf** 16 25 53.2 -0.5
comp=Z,11nm,0.9s,baz=36,slow=3.9,SNR=12
AKBB Malin Array Si 141.49 338 ⇑ *e*PKIKP **PKPdf** 16 25 52.8 -0.9
AKBB Malin Array Si 141.49 338 PKP **PKPdf** 16 25 53.4 -0.3
AK04 Malin Array Si 141.50 338 PKP **PKPdf** 16 25 53.4 -0.3
AK22 Malin Array Si 141.50 338 PKP **PKPdf** 16 25 53.4 -0.3
KIEV Kiev 141.50 338 ⇑ P **PKPdf** 16 25 52.9 -0.8
KIEV Kiev 141.50 338 ⇑ PKIKP **PKPdf** 16 25 52.9 -0.8
KIEV Kiev 141.50 338 PKP **PKPdf** 16 25 53.3 -0.5
AK18 Malin Array Si 141.53 338 PKP **PKPdf** 16 25 53.1 -0.7
SOC Sochi 141.55 322 *i* PKIKP **PKPdf** 16 25 51.6 -2.5
SOC *e*PPP PPP 16 32 14.2
SOC MLR MLR
comp=Z,3µm,19.0s
ANN Anapa 142.11 325 *i* PKIKP **PKiKP** 16 25 57.6 -0.4
ANN *e* 16 26 01.3
ANN pmax pmax
comp=Z,48nm,1.2s
SIM Simferopol' 143.78 328 *e*PKIKP PKPbc 16 25 56.0 +0.4
SIM pmax pmax
comp=Z,60nm,1.5s
RAYN Ar Rayn 143.92 288 IAMs_20 IAMs_20 17 34 39.6
comp=Z,2µm,20.0s
RAYN Ar Rayn 143.92 288 ⇑ PKIKP PKPbc 16 25 56.8 +0.1
SORM Soroca 143.93 337 ⇑ P PKPbc 16 25 56.7 +0.8
SORM Soroca 143.93 337 ⇑ PKIKP PKPbc 16 25 56.7 +0.8
KWP Kalwaria Pacla 144.50 343 *e*P **PKPab** 16 25 57.3 -0.1
OJC Ojcow 144.68 347 *e*P **PKPab** 16 25 57.3 -0.7
CLL Collm 144.69 354 *i* PKIKP **PKPab** 16 25 57.4 -0.7
CLL *i* 16 25 59.6
CLL *i* 16 26 02.9
CLL pmax pmax
comp=Z,18nm,0.8s
CLL MLR MLR
comp=Z,3µm,19.2s
CLL Collm 144.69 354 *i* PKPpre PKPbc 16 25 57.4
comp=Z,18nm,0.8s
CLL *i* PKPdf **PKPdf** 16 25 59.6 +0.2
comp=Z,33nm,1.1s
CLL *i* x x 16 26 02.9
CLL *i* x x 16 26 08.0
CLL *e*PKPlp 16 26 28.0
comp=Z,1µm,17.1s
CLL *e*PP PP 16 29 05.0 -10
CLL *e*SKPdf **SKPdf** 16 29 33.0 -0.2
CLL *ex* x 16 33 17.0
CLL *e*SKKSac **SKKSac** 16 36 09.0 +1.1
CLL *e*PSKS 16 39 30.0
CLL *ex* x 16 40 03.0
CLL *e*PPS PPS 16 41 48.0
CLL *e*SS **SS** 16 48 00.0 -1.8
CLL *e*PSPS 16 49 00.0
CLL *e*SSS SSS 16 53 12.0
CLL *e*SSSS 16 57 42.0
CLL AMS AMS 17 30 00.0
comp=N,2µm,20.4s
CLL AMS AMS 17 30 00.0
comp=E,2µm,20.8s
CLL AMS AMS 17 37 00.0
comp=Z,3µm,19.2s
KSP Ksiaz 144.74 351 *e*P **PKPab** 16 25 58.2 -0.1

ARPR Arapgir-MALATY 144.90 317 IAMs_20 IAMs_20 17 32 55.0
comp=Z,2µm,21.0s
KSV Kosov 144.95 340 PKP **PKPab** 16 25 57.3 -1.9
CHVC Chvalec 145.03 351 *e*PKIKP **PKPbc** 16 25 59.2 -0.2
CHVC MLR MLR
comp=Z,3µm,24.1s
CHVC Chvalec 145.03 351 *e*PKP **PKPbc** 16 25 59.2 -0.2
CHVC AMS AMS 17 25 00.0
comp=Z,3µm,24.1s
OSTC Ostas 145.03 351 *e*PKIKP **PKiKP** 16 26 02.5 -1.4
OSTC MLR MLR
comp=Z,4µm,22.9s
OSTC Ostas 145.03 351 *e*PKP **PKiKP** 16 26 02.5 -1.4
OSTC AMS AMS 17 25 20.0
comp=Z,4µm,22.9s
KASTN Kahler Asten 145.04 359 *e*PKPbc **PKPbc** 16 25 58.7 -0.7
baz=5.6,slow=3.1
STHS Stebnicka Huta 145.08 345 *e*PKIKP **PKPbc** 16 25 58.7 -0.9
STHS Stebnicka Huta 145.08 345 *e*PKP **PKPbc** 16 25 58.7 -0.9
UPC Upice 145.11 351 *e*PKIKP **PKPbc** 16 25 59.4 -0.2
UPC MLR MLR
comp=Z,3µm,24.0s
UPC Upice 145.11 351 *e*PKP **PKPbc** 16 25 59.4 -0.2
UPC AMS AMS 17 25 10.0
comp=Z,3µm,24.0s
DPC Dobruska-Polom 145.22 350 *e*PKIKP **PKPbc** 16 26 00.0 0.0
DPC MLR MLR
comp=Z,3µm,22.3s
DPC Dobruska-Polom 145.22 350 *e*PKP **PKPbc** 16 26 00.0 0.0
DPC AMS AMS 17 25 30.0
comp=Z,3µm,22.3s
DPC Dobruska-Polom 145.22 350 PKP **PKPbc** 16 25 59.7 -0.3
PVCC Panska Ves 145.29 352 *e*PKIKP **PKPbc** 16 25 59.9 -0.3
PVCC MLR MLR
comp=Z,2µm,20.6s
PVCC Panska Ves 145.29 352 *e*PKP **PKPbc** 16 25 59.9 -0.3
PVCC AMS AMS 17 35 40.0
comp=Z,2µm,20.6s
NIE Niedzica 145.31 346 *e*P **PKPdf** 16 26 01.2 +0.6
NIE Niedzica 145.31 346 PKP **PKPbc** 16 26 00.1 -0.2
UCC Uccle 145.33 4 *d*PKP **PKPbc** 16 25 59.9 -0.4
RICC Richard 145.33 353 AMS AMS 17 23 50.0
comp=Z,3µm,29.9s
HSKC Hora Svate Kat 145.34 354 *e*PKP **PKPbc** 16 25 59.9 -0.5
HSKC AMS AMS 17 38 40.0
comp=Z,2µm,21.0s
STEB Steborice 145.36 349 *e*PKP **PKPbc** 16 26 00.4 0.0
PRAR RASCA 145.37 338 ⇑ P **PKPbc** 16 25 59.9 -0.6
OKC Ostrava-Krasne 145.38 348 *e*PKIKP **PKPbc** 16 26 00.3 -0.2
OKC MLR MLR
comp=Z,3µm,18.4s
OKC Ostrava-Krasne 145.38 348 *e*PKP **PKPbc** 16 26 00.3 -0.2
OKC AMS AMS 17 30 00.0
comp=Z,3µm,18.4s
BEBN Eben Emael 145.40 2 *d*PKP **PKPbc** 16 26 00.1 -0.4
KRLC Kraliky 145.41 350 *e*PKIKP **PKPbc** 16 26 00.4 -0.2
KRLC MLR MLR
comp=Z,3µm,21.5s
KRLC Kraliky 145.41 350 *e*PKP **PKPbc** 16 26 00.4 -0.2
KRLC AMS AMS 17 29 10.0
comp=Z,3µm,21.5s
MOX Moxa 145.47 356 *e*PKPbc **PKPbc** 16 26 00.1 -0.7
baz=5.6,slow=3.1
MOX *e*L L 17 39 41.1
comp=Z,2µm,18.6s
BURAR Bucovina Array 145.51 339 ⇓ P **PKPab** 16 26 01.7 +0.4
BURAR Bucovina Array 145.51 339 ⇓ PKIKP **PKPab** 16 26 01.7 +0.4
MORC Moravsky Berou 145.56 349 ⇓ P **PKPbc** 16 26 01.1 0.0
MORC Moravsky Berou 145.56 349 ⇓ PKIKP **PKPbc** 16 26 01.1 0.0
MORC Moravsky Berou 145.56 349 *e*PKP **PKPdf** 16 26 00.3 -0.7
MUKU Mukachevo 145.57 342 PKP **PKPdf** 16 26 01.0 0.0
BRIU Brid 145.58 342 PKP **PKPdf** 16 26 01.0 0.0
HOLU Holmets 145.59 343 PKP **PKPdf** 16 26 01.0 0.0
MEM Membach 145.60 2 *d*PKP **PKPdf** 16 26 00.6 -0.4
BSTI Sart Tilman 145.61 3 *d*PKP **PKPdf** 16 26 00.9 -0.1
GIRR Girov 145.61 337 ⇓ P **PKPdf** 16 26 00.7 -0.4
TANN Tannenbergstha 145.63 355 *e*PKPbc **PKPdf** 16 26 00.7 -0.4
baz=5.6,slow=3.1
BTNL Ternell 145.63 2 *d*PKP **PKPdf** 16 26 00.5 -0.6
LANS Liptovska Anna 145.76 346 *e*PKIKP **PKPab** 16 26 02.5 +0.4
LANS Liptovska Anna 145.76 346 *e*PKP **PKPab** 16 26 02.5 +0.4
BCLA Clavier 145.76 3 *d*PKP **PKPdf** 16 26 01.1 -0.2
BERU Beregovo 145.78 342 PKP **PKPbc** 16 26 01.6 -0.2
BGES Gesves 145.79 3 *d*PKP **PKPdf** 16 26 01.1 -0.2
NKC Novy Kostel 145.81 355 *e*PKP2 **PKPdf** 16 26 01.5 +0.1
NKC MLR MLR
comp=Z,3µm,20.6s
NKC Novy Kostel 145.81 355 *e*PKP **PKPdf** 16 26 01.5 +0.1
NKC AMS AMS 17 24 50.0
comp=Z,3µm,20.6s
PRU Pruhonice 145.82 352 *e*PKP2 **PKPdf** 16 26 01.6 +0.2
PRU MLR MLR
comp=Z,3µm,22.2s
PRU Pruhonice 145.82 352 *e*PKP **PKPdf** 16 26 01.6 +0.2
PRU AMS AMS 17 33 50.0
comp=Z,3µm,22.2s
BMRD Maredsous 145.85 4 *d*PKP **PKPdf** 16 26 01.5 +0.1
BZK Bozkurt 145.85 324 ⇑ P **PKPab** 16 26 02.8 +0.2
BHOU Houvegnez 145.86 2 *d*PKP **PKPdf** 16 26 01.3 -0.2
MAUC Maruska 145.90 348 *e*PKP **PKPbc** 16 26 02.3 +0.1
VLDR Vladesti 145.91 334 ⇑ P **PKPbc** 16 26 02.0 -0.2
TESR Tescani 145.93 337 ⇑ P **PKPbc** 16 26 02.0 -0.3
TESR Tescani 145.93 337 PKP **PKPdf** 16 26 01.8 +0.1
VARL Varlezi 145.96 335 ⇑ P **PKPbc** 16 26 02.5 +0.1
GHRR 146.00 335 ⇑ P **PKPab** 16 26 03.0 -0.1
TNS Taunus Mts 146.02 359 *e*PKPbc **PKPdf** 16 26 02.1 +0.4
baz=5.6,slow=3.1
RCHB Rochefort 146.02 3 *d*PKP **PKPdf** 16 26 01.8 +0.1
DOU Dourbes 146.05 4 *d*PKP **PKPdf** 16 26 01.8 +0.1
SCTR Scanteiesti 146.08 334 ⇑ P **PKPbc** 16 26 02.8 0.0
MANZ Manzenberg 146.08 355 *e*PKPbc **PKPbc** 16 26 02.3 -0.4
baz=5.6,slow=3.1
TATR Tatarca 146.12 334 ⇑ P **PKPbc** 16 26 02.7 -0.2
TLCR 146.12 333 ⇑ P **PKPdf** 16 26 02.3 +0.3
TLCR 146.12 333 ⇑ PKP2 **PKPdf** 16 26 02.3 +0.3
KECS Kecovo 146.14 345 *e*PKP2 **PKPab** 16 26 03.3 -0.2
KECS Kecovo 146.14 345 *e*PKP **PKPab** 16 26 03.3 -0.2
ONER Baraj Valea Uz 146.17 337 ⇑ P **PKPab** 16 26 03.5 -0.2
VRAC Vranov 146.18 350 ⇑ P **PKPbc** 16 26 03.1 +0.1
VRAC Vranov 146.18 350 ⇑ PKP2 **PKPbc** 16 26 03.1 +0.1
VRAC Vranov 146.18 350 *e*PKP **PKPdf** 16 26 02.2 +0.2
NEGRR Negrea 146.24 334 ⇑ P **PKPab** 16 26 03.6 -0.3
KMBO Kilima Mbogo 146.27 242 PKPbc **PKPdf** 16 26 04.0 +0.4
baz=129,slow=2.8
KMBO Kilima Mbogo 146.27 242 PKP2 **PKPdf** 16 26 04.0 +0.4
IZVR Izvoarele 146.28 334 ⇑ P **PKPab** 16 26 04.0 -0.1
ROTZ Rotzenmuhle 146.29 355 *e*PKPbc **PKPbc** 16 26 03.2 -0.2
baz=5.6,slow=3.1
SCHLR Schela 146.31 334 ⇑ P **PKPbc** 16 26 03.5 +0.1
TREC Trest 146.37 351 *e*PKP2 **PKPbc** 16 26 03.3 -0.3
TREC MLR MLR
comp=Z,3µm,22.6s
TREC Trest 146.37 351 *e*PKP **PKPbc** 16 26 03.3 -0.3
TREC AMS AMS 17 28 10.0
comp=Z,3µm,22.6s
ODBI Odobesti 146.39 335 ⇑ P **PKPab** 16 26 04.4 -0.2
ZVC Zvikov 146.41 353 *e*PKP **PKPbc** 16 26 03.6 -0.1
ZVC AMS AMS 17 24 30.0
comp=Z,3µm,22.8s
JAVC Velka Javorina 146.41 348 *e*PKP **PKPbc** 16 26 03.7 -0.1
CFR Carcaliu 146.42 334 ⇑ P **PKPbc** 16 26 03.8 0.0
CFR Carcaliu 146.42 334 ⇑ PKP2 **PKPbc** 16 26 03.8 0.0
JURR Jurilovca 146.42 332 ⇑ P **PKPbc** 16 26 04.0 +0.2
VRI Vrincioaia 146.43 336 ⇑ P **PKPbc** 16 26 03.8 -0.1
VRI Vrincioaia 146.43 336 ⇑ PKP2 **PKPbc** 16 26 03.8 -0.1
GRF Grafenberg Arr 146.44 356 *e*L L 17 28 21.8
comp=Z,3µm,21.6s
KRUC Moravsky 146.45 350 *e*PKP **PKPdf** 16 26 02.6 +0.1
PLOR Plostina 146.48 336 ⇑ P **PKPbc** 16 26 03.7 -0.4
PLOR Plostina 146.48 336 ⇑ PKP2 **PKPbc** 16 26 03.7 -0.4
TPGR Topolog 146.55 333 ⇑ P **PKPbc** 16 26 04.6 +0.3
TURR Turia 146.55 337 ⇑ P **PKPab** 16 26 04.9 -0.4
WLF Walferdange 146.55 2 *d*PKP **PKPbc** 16 26 04.3 +0.2
WLF Walferdange 146.55 2 *e*PKPbc **PKPbc** 16 26 04.3 +0.2
baz=5.6,slow=3.1
OZUR 146.60 337 ⇓ P **PKPbc** 16 26 04.0 -0.4
COVR Voineasa-Covas 146.65 336 ⇑ P **PKPbc** 16 26 04.2 -0.3
BOSR Bodos 146.67 337 ⇑ P **PKPbc** 16 26 04.2 -0.4
GRER 146.74 335 ⇑ P **PKPbc** 16 26 05.1 +0.4
KHC Kasperske Hory 146.78 353 *e*PKIKP **PKPdf** 16 26 03.2 +0.1
KHC MLR MLR
comp=Z,4µm,23.5s
KHC Kasperske Hory 146.78 353 *e*PKP **PKPdf** 16 26 03.2 +0.1
KHC *ex* x 16 26 21.0
KHC AMS AMS 17 34 50.0
comp=Z,4µm,23.5s
SMOL Smolenice 146.79 348 *e*PKP2 **PKPab** 16 26 05.6 -0.4
PSZ Piszkesteto 146.81 345 ⇑ P **PKPbc** 16 26 05.1 +0.1
PSZ Piszkesteto 146.81 345 ⇑ PKP2 **PKPbc** 16 26 05.1 +0.1
CJR Cluj-Napoca 146.84 340 ⇑ P **PKPab** 16 26 05.8 -0.5
DOPR Dopca 146.86 337 ⇑ P **PKPbc** 16 26 04.5 -0.6
TIRR Tirgusor 146.87 333 ⇑ P **PKPbc** 16 26 05.2 0.0
TIRR Tirgusor 146.87 333 IAMs_20 IAMs_20 17 33 39.5
comp=Z,2µm,20.0s
MODS Modra-Piesok 146.95 348 *e*PKP2 **PKPdf** 16 26 04.0 +0.6
MODS Modra-Piesok 146.95 348 *e*PKP **PKPdf** 16 26 04.0 +0.6
NEHR Nehoiu 146.97 336 ⇓ P **PKPbc** 16 26 04.8 -0.6
CKRC Cesky Krumlov 147.00 352 *e*PKP2 **PKPab** 16 26 07.3 +0.4
CKRC MLR MLR
comp=Z,3µm,21.4s
CKRC Cesky Krumlov 147.00 352 *e*PKP **PKPab** 16 26 07.3 +0.4
CKRC AMS AMS 17 32 50.0
comp=Z,3µm,21.4s
MARR Marisel-Cluj 147.03 341 ⇑ P **PKPbc** 16 26 05.6 -0.1
MLR Muntele Rosu 147.05 336 ⇑ P **PKPbc** 16 26 05.5 -0.3
MLR Muntele Rosu 147.05 336 ⇑ PKP2 **PKPbc** 16 26 05.5 -0.3
GEC2 GERESS Array S 147.05 353 *e*PKPbc **PKPbc** 16 26 05.2 -0.5
baz=5.6,slow=3.1
GERES GERESS Array B 147.05 353 PKPbc **PKPdf** 16 26 04.1 +0.5
comp=Z,12nm,0.8s,baz=22,slow=3.4,SNR=66
DRGR 147.05 341 ⇑ P **PKPbc** 16 26 05.5 -0.2
MDB Medias 147.07 339 ⇑ P **PKPbc** 16 26 05.8 +0.1
MDB Medias 147.07 339 ⇑ PKP2 **PKPbc** 16 26 05.8 +0.1
MFTR Murfatlar 147.08 332 ⇑ P **PKPdf** 16 26 03.9 +0.2
ISR Istrita 147.12 335 ⇑ P **PKPbc** 16 26 05.7 -0.2
SRO Srobarova 147.28 347 *e*PKP2 **PKPbc** 16 26 06.8 +0.6
SRO Srobarova 147.28 347 *e*PKP **PKPbc** 16 26 06.8 +0.6
ICOR Ion Corvin 147.41 333 ⇑ P **PKPbc** 16 26 06.3 -0.3
WINA Alland / Wiene 147.43 350 PKP **PKPdf** 16 26 05.3 +1.1
comp=Z,1µm,3.1s,SNR=25
VOIR 147.43 337 ⇑ P **PKPbc** 16 26 07.1 +0.3
VOIR 147.43 337 ⇑ PKP2 **PKPbc** 16 26 07.1 +0.3
BRTR Keskin Array B 147.50 321 PKPbc **PKPbc** 16 26 07.1 -0.2
comp=Z,38nm,0.9s,baz=96,slow=1.9,SNR=104
TNR Turnu Rosu 147.53 338 ⇑ P **PKPbc** 16 26 07.1 +0.1
TNR Turnu Rosu 147.53 338 ⇑ PKP2 **PKPbc** 16 26 07.1 +0.1
CONA Conrad Observa 147.64 350 *i* PKP **PKPdf** 16 26 05.1 +0.5
comp=Z,318nm,1.9s,SNR=41
ARR Arges 147.65 338 ⇓ P **PKPdf** 16 26 05.8 +1.1
KIRS Kirsehir-Merke 147.70 320 ⇑ P **PKPdf** 16 26 05.5 +0.5
RONA Rosalia, Austr 147.78 349 *i* PKP **PKPdf** 16 26 05.4 +0.5
comp=Z,135nm,1.2s,SNR=27
DEV Deva 147.80 340 ⇑ P **PKPbc** 16 26 08.0 +0.3
LOT Lotru 147.89 339 ⇓ P **PKPdf** 16 26 06.4 +1.2
BFO Black Forest 147.91 359 IAMs_20 IAMs_20 17 30 08.2
comp=Z,2µm,21.0s
BFO Black Forest 147.91 359 *e*PKPbc **PKPbc** 16 26 07.6 -0.4
baz=5.6,slow=3.1
MOA Molln 147.96 352 *e*PKP **PKPdf** 16 26 06.2 +1.1
comp=Z,294nm,2.6s,SNR=18
BIOA Bad Ischl, Aus 148.19 353 *e*PKP **PKPdf** 16 26 06.6 +1.1
comp=Z,158nm,2.1s,SNR=12
GZR Gura Zlata 148.27 340 ⇑ P **PKPbc** 16 26 08.9 -0.2
GZR Gura Zlata 148.27 340 ⇑ PKP2 **PKPbc** 16 26 08.9 -0.2
SAHE Sakarya_HENDEK 148.35 326 ⇑ P **PKPbc** 16 26 09.2 -0.2
ARSA Arzberg 148.35 350 *e*PKP **PKPdf** 16 26 06.9 +1.2
comp=Z,411nm,2.7s,SNR=13
RAZG Razgrad 148.41 334 ⇑ P **PKPbc** 16 26 08.5 -0.9
BZS Buzias 148.44 341 ⇑ P **PKPbc** 16 26 08.7 -0.7
LOZB Loznitsa 148.53 333 ⇑ P **PKPbc** 16 26 08.4 -1.3
LESA Schwarzleotal 148.57 354 *e*PKP **PKPdf** 16 26 06.2 0.0
comp=Z,430nm,2.5s,SNR=9.1
RETA Reutte 148.67 356 pPKP **PKPdf** 16 26 06.5 +0.2
comp=Z,282nm,2.0s,SNR=20
MORH Mrgy, Hungar 148.71 346 ⇑ P **PKPbc** 16 26 09.3 -0.8
MORH Mrgy, Hungar 148.71 346 *e*P **PKPdf** 16 26 05.7 -0.6
WATA Walderalm 148.76 355 *i* PKP **PKPdf** 16 26 06.5 -0.1
comp=Z,538nm,2.5s,SNR=19
SRE Strehaia 148.77 339 ⇑ P **PKPbc** 16 26 10.5 +0.2
SILT Sile 148.78 327 ⇑ P **PKPbc** 16 26 08.7 -1.7
MOTA Moosalm 148.79 356 pPKP **PKPdf** 16 26 06.7 +0.1
comp=Z,240nm,1.4s,SNR=29
BANR Banloc 148.80 342 ⇑ P **PKPbc** 16 26 10.5 +0.2
WTTA Wattenberg 148.83 355 *i* pPKP **PKPdf** 16 26 07.0 +0.2
comp=Z,296nm,1.7s,SNR=28
KBA Koelnbreinsper 148.83 353 *e*pPKP **PKPdf** 16 26 07.5 +0.7
comp=Z,406nm,2.5s,SNR=15
HERR Herculane 148.84 340 ⇓ P **PKPbc** 16 26 09.4 -1.1
BEHE Becsehely 148.88 348 *e*P **PKPbc** 16 26 08.7 -1.8
SZH Strazhitsa 148.88 334 P **PKPbc** 16 26 10.5 -0.1
SQTA Sankt Quirin 148.90 356 PKP **PKPdf** 16 26 06.8 +0.1
comp=Z,498nm,2.1s,SNR=24
DAVA Damuels 148.91 357 *e*pPKP **PKPdf** 16 26 08.2 +1.3
comp=Z,484nm,2.3s,SNR=25
SOKA Soboth 148.99 350 *e*pPKP **PKPdf** 16 26 07.1 +0.3
comp=Z,62nm,1.2s,SNR=39
HWQ Hawqa 149.39 311 *e*P **PKiKP** 16 26 12.6 -0.1
PERS Pernice 149.02 350 *i* PKPbc **PKPbc** 16 26 10.1 -0.9
FETA Feichten 149.13 356 pPKP **PKPdf** 16 26 07.3 +0.1
comp=Z,453nm,2.4s,SNR=40
MDVR Moldovita 149.16 341 ⇓ P **PKPbc** 16 26 10.5 -0.8
ELND Elena 149.19 334 ⇑ P **PKPdf** 16 26 07.8 +0.6
OBKA Obir 149.23 351 *e*pPKP **PKPdf** 16 26 07.8 +0.6
comp=Z,513nm,4.1s,SNR=14
MYKA Terra Mystica 149.24 352 *e*pPKP **PKPdf** 16 26 07.4 +0.2
comp=Z,332nm,2.1s,SNR=20
ABTA Abfaltersbach 149.25 354 *i* PKP **PKPdf** 16 26 06.7 -0.6
comp=Z,70nm,0.8s,SNR=43
PVL Pavlikeni 149.33 335 P **PKPbc** 16 26 12.1 +0.4
PLVB Pleven 149.33 336 ⇑ P **PKPbc** 16 26 11.6 -0.1
BHL Bhannes 149.38 310 *e*P **PKPbc** 16 26 12.6 +0.3
FRGS Fruska Gora 149.39 343 *e*P **PKPbc** 16 26 11.0 -0.9
FUORN Ofenpass-Fuorn 149.56 357 IAMs_20 IAMs_20 17 46 12.8
comp=Z,2µm,20.0s
SACV Santiago Islan 149.68 88 IAMs_20 IAMs_20 17 41 38.3
comp=Z,2µm,19.0s
LJU Ljubljana 149.69 351 *e*PKPdf **PKPdf** 16 26 07.8 -0.1
LJU *i* PKPbc **sPKPdf** 16 26 12.2 +0.3
MPEP Malo Peshtene 149.70 337 P **PKPbc** 16 26 12.7 0.0
MMAI Mount Meron Ar 149.98 309 PKPbc **PKPbc** 16 26 13.7 -0.1
comp=Z,24nm,0.8s,baz=38,slow=5.7,SNR=8.8
CEY Cerknica 150.00 351 *i* PKPbc **PKPbc** 16 26 12.9 -0.4
DIM Dimitrovgrad 150.04 333 P **PKPbc** 16 26 13.6 +0.1
BOJS Bojanci 150.09 350 *i* PKPdf **PKPdf** 16 26 08.8 +0.2
BOJS *i* PKPbc **PKPbc** 16 26 13.4 -0.1
LODK Lodwar 150.14 248 IAMs_20 IAMs_20 17 33 01.3
comp=Z,2µm,18.0s
BAND Balkesir-Ban 150.16 328 ⇑ P **PKPbc** 16 26 13.6 -0.3
PGB Panagyurishte 150.24 335 P **PKiKP** 16 26 14.5 -0.4
BLY Banja Luka 150.43 346 ⇓ P **PKPbc** 16 26 14.0 -0.4
BLY Banja Luka 150.43 346 *e*P **PKPbc** 16 26 13.2 -1.2
CSS Mathiatis 150.50 314 IAMs_20 IAMs_20 17 46 21.5
comp=Z,2µm,20.0s
VTS Vitosha 150.52 337 P **PKPbc** 16 26 15.1 +0.2
PLNA Plana 150.57 336 P **PKPbc** 16 26 15.1 +0.1
ISP Isparta 150.59 322 IAMs_20 IAMs_20 17 34 17.5
comp=Z,2µm,22.0s
BBLS Lazi&#263i 150.69 343 *e*P **PKPbc** 16 26 15.3 +0.2
PGAV Gavieira, Arco 150.78 25 *e*PKPbc **PKPbc** 16 26 15.5 +0.1
PGAV *e*PP PP 16 30 10.0 +19
PGAV *e*SS SS 16 49 15.9 +4.5
PGAV *e*LR LR 17 21 17.7
PGAV *i* IAMs_20 IAMs_20 17 30 44.3
comp=Z,2µm,20.0s
RUDO Rudo 150.93 343 *e*P **PKPbc** 16 26 15.3 -0.3
SJES Sjenica 151.07 342 *e*P **PKPdf** 16 26 11.6 +1.3
PCAB Cabril 151.09 25 *e*PKPbc **PKiKP** 16 26 16.5 -0.2
KKB Krupnik 151.22 336 P **PKPbc** 16 26 16.5 +0.1
UPM Unac-Piva 151.44 343 *e*P **PKPbc** 16 26 16.0 -1.1
POLO Lamas de Olo 151.47 25 *e*PKPdf **PKPdf** 16 26 11.6 +0.7
POLO *e*PKPbc **PKiKP** 16 26 17.6 +0.1
PBRG Braganca 151.52 23 *e*PKPbc **PKPbc** 16 26 17.1 0.0
KLINJ Klinje 151.56 343 *e*P **PKPbc** 16 26 17.0 -0.2
PVRL Vila Real 151.58 25 *e*PKPbc **PKPbc** 16 26 17.2 -0.1
SKO Skopje 151.74 338 *i* P **PKPbc** 16 26 17.4 -0.1
BRY Bratogost 151.82 343 *e*P **PKPbc** 16 26 17.0 -0.9
PMOZ Porto Moniz, M 151.91 49 *e*PKPdf **PKPbc** 16 26 15.2 -3.1
PMOZ *e*PP **PP** 16 30 05.5 +6.6
PMOZ *e*LR LR 17 22 03.7
PMOZ *i* IAMs_20 IAMs_20 17 27 45.3
comp=Z,2µm,20.0s
MVO Moncorvo 151.95 24 *e*PKPdf **PKPdf** 16 26 13.0 +1.3
MVO *e*PKPbc **PKiKP** 16 26 18.5 0.0
MVO *e*PP PP 16 29 45.2 -13
MVO *e*SS SS 16 49 32.2 +7.9
MVO *e*LR LR 17 22 16.2

MVO					*i* IAMs_20	IAMs_20	17 26 43.1		
	comp=Z,2µm,24.0s								
PVIS	**Viseu**	**151.98**	**26**	*e*PKPbc	**PKPbc**		**16 26 18.2**	**0.0**	
TREB	**Trebinje**	**152.05**	**343**	*e*P	**PKPbc**		**16 26 15.8**	**-2.4**	
PDG	**Podgorica**	**152.05**	**342**	⇑P	**PKPbc**		**16 26 15.9**	**-2.3**	
PDG	**Podgorica**	**152.05**	**342**		IAMs_20	IAMs_20	17 41 13.5		
	comp=Z,2µm,20.0s								
PDG	**Podgorica**	**152.05**	**342**	*e*P	**PKPbc**		**16 26 16.2**	**-2.0**	
PCAS	**Casmilo, Conde**	**152.26**	**28**	*e*PKPdf	**PKPdf**		**16 26 13.2**	**+1.1**	
PCAS				*e*PKPbc	**PKiKP**		**16 26 19.2**	**+0.1**	
DRME	**Dracevica, Mon**	**152.29**	**342**	*e*P	**PKPbc**		**16 26 18.5**	**-0.3**	
MTE	**Manteigas**	**152.39**	**26**	*e*PKPdf	**PKPdf**		**16 26 13.5**	**+1.2**	
MTE				*e*PKPbc	**PKiKP**		**16 26 19.4**	**-0.1**	
MTE				*e*PP	PP		16 29 47.9	-13	
MTE				*e*SS	SS		16 49 38.6	+9.5	
MTE				*e*LR	LR		17 23 07.3		
MTE				*i* IAMs_20	IAMs_20		17 28 20.2		
	comp=Z,2µm,20.0s								
PSARD	**Sardoal**	**152.78**	**28**	*e*PKPdf	**PKPdf**		**16 26 15.0**	**+2.1**	
PSARD				*e*PKPbc	**PKiKP**		**16 26 20.3**	**+0.2**	
PCBR	**Castelo Branco**	**152.88**	**27**	*e*PKPdf	**PKPdf**		**16 26 13.3**	**+0.3**	
LIS	**Lisbon**	**153.02**	**30**	*e*PKPdf	**PKPdf**		**16 26 12.9**	**-0.3**	
LIS					IAMs_20	IAMs_20	17 26 53.3		
	comp=Z,6µm,31.9s								
LIS	**Lisbon**	**153.02**	**30**	*e*PKIKP	**PKPdf**		**16 26 12.9**	**-0.3**	
PMTG	**Montargil**	**153.18**	**29**	*e*PKPdf	**PKPdf**		**16 26 13.5**	**+0.1**	
PMTG				*e*PKPbc	**PKPbc**		**16 26 20.7**	**-0.1**	
PMRV	**Marv??o**	**153.26**	**27**	*e*PKPdf	**PKPdf**		**16 26 14.2**	**+0.6**	
PMRV				*e*PKPbc	**PKiKP**		**16 26 21.6**	**+0.4**	
PMRV				*e*PP	PP		16 30 35.2	+30	
PMRV				*e*SS	SS		16 49 45.4	+6.7	
PMRV				*e*LR	LR		17 25 00.7		
PMRV				*i* IAMs_20	IAMs_20		17 30 12.2		
	comp=Z,2µm,20.0s								
AQU	**L'Aquila**	**153.46**	**351**	*e*P	**PKPbc**		**16 26 20.7**	**-0.7**	
PARRA	**Arraiolos**	**153.47**	**29**	*e*PKPdf	**PKPdf**		**16 26 13.8**	**0.0**	
MOE	**Montemor**	**153.56**	**29**	*e*PKPdf	**PKPdf**		**16 26 15.1**	**+1.1**	
MESJ	**Messejana**	**154.16**	**30**	*e*PKPdf	**PKPdf**		**16 26 14.6**	**-0.3**	
MESJ					IAMs_20	IAMs_20	17 28 19.4		
	comp=Z,3µm,25.5s								
MESJ	**Messejana**	**154.16**	**30**	*e*PKPdf	**PKPdf**		**16 26 16.3**	**+1.4**	
MESJ	**Messejana**	**154.16**	**30**	*e*PKIKP	**PKPdf**		**16 26 14.6**	**-0.3**	
PBEJ	**Beja**	**154.18**	**29**	*e*PKPdf	**PKPdf**		**16 26 15.4**	**+0.5**	
MORF	**Marmelete**	**154.37**	**32**	*e*PKPdf	**PKPdf**		**16 26 15.1**	**-0.1**	
MORF					IAMs_20	IAMs_20	17 30 17.5		
	comp=Z,3µm,12.8s								
MORF	**Marmelete**	**154.37**	**32**	*e*PKPdf	**PKPdf**		**16 26 16.8**	**+1.5**	
MORF	**Marmelete**	**154.37**	**32**	*e*PKIKP	**PKPdf**		**16 26 15.1**	**-0.1**	
PAB	**San Pablo**	**154.38**	**22**		IAMs_20	IAMs_20	17 41 26.0		
	comp=Z,2µm,21.0s								
ESDC	**Sonseca Array**	**154.40**	**21**	PKP	**PKPdf**		**16 26 15.3**	**+0.1**	
	comp=Z,3.2nm,0.9s,baz=346,slow=2.2,SNR=14								
ESDC				PKPbc	**PKPbc**		**16 26 23.1**	**-0.5**	
	comp=Z,4.6nm,0.9s,baz=336,slow=3.0,SNR=9.7								
PFVI	**Vila Bisbo**	**154.41**	**32**	*e*PKPdf	**PKPdf**		**16 26 16.9**	**+1.7**	
PCVE	**Castro Verde**	**154.41**	**30**	*e*PKPdf	**PKPdf**		**16 26 16.6**	**+1.3**	
PBAR	**Barrancos**	**154.45**	**28**	*e*PKPdf	**PKPdf**		**16 26 15.9**	**+0.7**	
PVAQ	**Vaqueiros**	**154.75**	**30**	*e*PP	**PP**		**16 30 21.1**	**+7.1**	
PVAQ				*e*SS	SS		16 50 10.7	+16	
PVAQ				*e*LR	LR		17 26 14.0		
PVAQ				*i* IAMs_20	IAMs_20		17 42 30.8		
	comp=Z,2µm,20.0s								
PBDV	**Barranco-do-Ve**	**154.78**	**31**	*e*PKPdf	**PKPdf**		**16 26 15.1**	**-0.6**	
CART	**Cartagena**	**157.26**	**18**		IAMs_20	IAMs_20	17 38 55.0		
	comp=Z,2µm,19.0s								
KEST	**Kesra**	**160.46**	**356**	PKP	**PKPdf**		**16 26 22.9**	**-0.1**	
	comp=Z,12nm,1.2s,baz=0.0,slow=1.0,SNR=4.1								
DBIC	**Dimbokro**	**164.38**	**126**	PKP	**PKPdf**		**16 26 26.9**	**-0.5**	
	comp=Z,15nm,0.9s,baz=230,slow=1.3,SNR=14								
DBIC				PKPab	**PKPab**		**16 27 21.6**	**-0.1**	
	comp=Z,8.7nm,0.8s,baz=244,slow=5.4,SNR=6.0								
DBIC				PP	**PP**		**16 31 06.6**	**-0.7**	
	comp=Z,9.4nm,1.2s,baz=243,slow=9.0,SNR=5.9								
TORD	**Torodi Ar. Bea**	**173.33**	**116**	PKP	**PKPdf**		**16 26 31.3**	**-1.8**	
	comp=Z,18nm,0.9s,baz=261,slow=2.5,SNR=69								
TORD				PKPab	**PKPab**		**16 28 01.1**	**-0.2**	
	comp=Z,6.4nm,0.9s,baz=252,slow=4.7,SNR=5.4								
TORD				PP	**PP**		**16 31 52.0**	**-1.0**	
	baz=252,slow=6.6,SNR=9.7								

*IDC **17** 16:09:25.7±1.3, 1.°14S×129.°06E, h0km, mb3.3/3, mbtmp3.4/6, ML3.4/3, Error ellipse: s-maj=34.4km s-min=22.6km az=69.0*
*DJA **17** 16:09:32.5±1.3, 1.°S×2.°×12.°9E±.°, h35km±27km, M3.5/16, MLv3.5/16*
ISC 17 16:09:28.8±0.9, 1.°05S±0.°06×129.°34E±0.°05, h20km, n15, σ1s30/17, mb3.5/3, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWI	**Sorong**	**1.93**	**84**	P	**Pb**	**16 10 02.4**	**-0.9**
SIJI	**Sorong**	**1.93**	**85**	Pn	**Pb**	**16 10 02.8**	**-0.6**
	35nm,0.3s,baz=260,slow=17,SNR=679						
SIJI				Sn	**Sb**	**16 10 29.0**	**+1.9**
	18nm,0.3s,baz=197,slow=19,SNR=19						
	81nm,0.3s						
SIJI	**Sorong**	**1.93**	**85**	P	**Pb**	**16 10 03.1**	**-0.3**
MSAI	**Masohi**	**2.31**	**190**	P	**Pb**	**16 10 09.2**	**-0.7**
KRAI	**Karang Ratu**	**2.44**	**203**	P	**Pb**	**16 10 11.4**	**-0.7**
TNTI	**Ternate**	**2.68**	**313**	P	**Pn**	**16 10 11.7**	**+0.8**
AAI	**Ambon**	**2.86**	**204**	P	**Pn**	**16 10 15.0**	**+1.7**
NLAI	**Namlea**	**3.12**	**226**	P	**Pn**	**16 10 18.8**	**+1.9**
NLAI				S	**Sn**	**16 10 54.4**	**+0.7**
FAKI	**Fak Fak**	**3.44**	**123**	P	**Pn**	**16 10 22.1**	**+0.7**
FITZ	**Fitzroy Crossi**	**17.32**	**192**	P	**Pn**	**16 13 27.5**	**-2.1**
	baz=9.8,slow=12,SNR=3.3						
	1.3nm,0.8s						
WRA	**Warramunga Arr**	**19.40**	**166**	P	**P**	**16 13 52.3**	**-1.5**
	0.1nm,0.3s,baz=339,slow=11,SNR=10						
	0.4nm,0.6s						
PMG	**Port Moresby**	**19.57**	**116**	P	**Pn**	**16 13 57.3**	**+0.2**
	6µm3µm165nm,1.4s						
ASAR	**Alice Springs**	**22.91**	**169**	P	**P**	**16 14 31.9**	**+0.2**
	1.3nm,0.6s,baz=350,slow=11,SNR=46						
	1.3nm,0.6s						
MKAR	**Makanchi Array**	**62.95**	**326**	P	**P**	**16 19 54.9**	**+0.8**
	0.3nm,0.8s,baz=141,slow=7.1,SNR=2.1						
	0.3nm,0.8s						
KURBB	**Kurchatov Arra**	**67.15**	**328**	P	**P**	**16 20 19.8**	**-1.4**
	0.1nm,0.4s,baz=133,slow=8.2,SNR=2.0						
	0.1nm,0.4s						

*OSPL **17** 16:16:20.7±0.4, 17.°81N×66.°88W, h28km±2km, ML3.5, Presumed earthquake*
*NEIC **17** 16:16:21.8±2.8, 17.°88N±0.°03×66.°87W±0.°01, h10km±1km, ML3.7/35, Md3.5/5(RSPR), Error ellipse: s-maj=5.9km s-min=2.7km az=8.0*
ISC 17 16:16:20.4±1.2, 17.°92N±0.°08×66.°88W±0.°03, h33km±3km, n26, σ0s38/32, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.06**	**359**		**Pb**	**16 16 26.1**	**+0.2**
GBPR					**Sb**	**16 16 30.2**	**+0.5**
MLPR	**Magueyes Islan**	**0.17**	**289**	Pg	**Pb**	**16 16 26.5**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.24**	**292**		**Pn**	**16 16 27.1**	**-0.2**
CRPR				IAML		16 16 32.8	
	7µm,0.4s						
CRPR				IAML		16 16 33.0	
	7µm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.24**	**292**		**Sb**	**16 16 32.4**	**+0.2**
CRPR	**Cabo Rojo, PR**	**0.24**	**292**	*i* P	**Pn**	**16 16 27.2**	**-0.1**
CRPR				*e*S	**Sb**	**16 16 32.3**	**+0.2**
CRPR				IAML		16 16 32.8	
	comp=Z,8µm,0.2s						
OBIP	**Obispado Ponce**	**0.29**	**64**	Pg	**Pb**	**16 16 27.9**	**-0.1**
OBIP	**Obispado Ponce**	**0.29**	**64**		**Sn**	**16 16 33.5**	**+0.5**
OBIP	**Obispado Ponce**	**0.29**	**64**	*i* P	**Pb**	**16 16 28.0**	**+0.1**
OBIP				*e*S	**Sn**	**16 16 33.6**	**+0.5**
OBIP				IAML		16 16 33.6	
	comp=Z,4µm,0.3s						
CELP	**Cerrillos**	**0.33**	**61**	Pg	**Pb**	**16 16 28.4**	**-0.1**
CELP				IAML		16 16 34.7	
	comp=Z,10µm,0.3s						
CELP				IAML		16 16 35.1	
	comp=Z,8µm,0.4s						
LSP	**Las Mesas**	**0.33**	**323**		**Pb**	**16 16 28.4**	**0.0**
UUPR	**Utuado, UPR, P**	**0.37**	**24**	Pg	**Pb**	**16 16 28.7**	**-0.3**
PRSN	**Puerto Rico Se**	**0.39**	**320**	Pg	**Pb**	**16 16 29.1**	**-0.3**
AOPR	**Arecibo Observ**	**0.44**	**15**	Pg	**Pb**	**16 16 29.8**	**-0.3**
AOPR				IAML		16 16 37.5	
	comp=Z,5µm,0.2s						

AGPR	**Aguadilla, PR**	**0.59**	**338**			**Pn**	**16 16 32.1**	**-0.3**	
AGPR					IAML		16 16 41.2		
	comp=Z,3µm,0.3s								
ECPR	**Experimental S**	**0.63**	**51**			**Pn**	**16 16 32.3**	**-0.8**	
EMPR	**Esperanza - Ma**	**0.65**	**31**			**Pn**	**16 16 33.4**	**+0.2**	
EMPR						**Sn**	**16 16 43.1**	**+0.7**	
SJG	**San Juan**	**0.72**	**74**			**Pn**	**16 16 34.1**	**-0.1**	
SJG					IAML		16 16 44.9		
	comp=Z,4µm,0.6s								
SJG					IAML		16 16 45.2		
	comp=Z,3µm,0.3s								
SJG	**San Juan**	**0.72**	**74**	*i* P		**Pn**	**16 16 34.3**	**+0.1**	
SJG				*e*S		**Sn**	**16 16 44.0**	**-0.1**	
SJG					IAML		16 16 45.1		
	comp=Z,2µm,0.2s								
IDE	**Isla Desecheo**	**0.73**	**310**			**Pn**	**16 16 34.3**	**-0.2**	
IDE						**Sn**	**16 16 44.9**	**+0.4**	
PDPR	**Patillas Dam,**	**0.82**	**83**			**Pn**	**16 16 35.5**	**-0.1**	
HUMP	**Col San Antoni**	**1.00**	**77**			**Pn**	**16 16 38.1**	**-0.1**	
HUMP					IAML		16 16 52.8		
	comp=Z,2µm,0.4s								
HUMP					IAML		16 16 55.1		
	comp=Z,2µm,0.3s								
HUMP	**Col San Antoni**	**1.00**	**77**			**Sn**	**16 16 50.4**	**-0.8**	
SDDR	**Presa de Saban**	**4.32**	**285**			**Pn**	**16 17 23.3**	**-0.5**	
MAGL	**Barre de l'ile**	**5.70**	**109**	Pn		**Pn**	**16 17 42.8**	**0.0**	
DSLB	**Salisbury**	**5.78**	**114**	*e*P		**Pn**	**16 17 43.3**	**-0.6**	
GDSD	**La Dsirade Is**	**5.78**	**105**	Pn		**Pn**	**16 17 43.6**	**-0.3**	

*IDC **17** 16:22:41.8±1.6, 7.°08S×129.°28E, h154km±18km, mb3.1/2, mbtmp3.9/7, Error ellipse: s-maj=25.7km s-min=13.2km az=115.0*
*NEIC **17** 16:22:43.5±1.6, 7.°04S±0.°08×129.°13E±0.°09, h177km±10km, mb4.8/3, Error ellipse: s-maj=13.8km s-min=11.2km az=124.0*
ISC 17 16:22:40.8±0.7, 7.°05S±0.°06×129.°41E±0.°10, h150km, n22, σ2s22/24, mb4.1/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.01**	**111**		Pn	16 23 24.6	+8.6
FAKI	**Fak Fak**	**5.15**	**33**	Pn	**Pn**	**16 23 58.4**	**+2.2**
SOEI	**Soe**	**5.66**	**244**	Pn	**Pn**	**16 24 03.7**	**+0.5**
MTN	**Manton Dam**	**5.81**	**163**		Pn	16 24 10.6	+5.5
BATI	**Baumata**	**6.39**	**242**	P	**Pn**	**16 24 14.6**	**+1.8**
	12nm,0.4s,baz=63,slow=2.3,SNR=6.9						
BATI				S	**Sn**	**16 25 25.0**	**+0.1**
	32nm,0.4s,baz=68,slow=19,SNR=9.9						
SIJI	**Sorong**	**6.60**	**16**	P	**Pn**	**16 24 16.2**	**+0.5**
	2.4nm,0.3s,baz=204,slow=20,SNR=15						
SIJI				S	**Sn**	**16 25 27.5**	**-2.4**
	2.6nm,0.3s,baz=180,slow=20,SNR=7.0						
KNRA	**Kununurra**	**8.40**	**184**		**Pn**	**16 24 43.0**	**+3.4**
FITZ	**Fitzroy Crossi**	**11.39**	**198**	P	**Pn**	**16 25 20.6**	**+1.4**
	4.0nm,0.5s,baz=24,slow=12,SNR=32						
FITZ				S	**Sn**	**16 27 20.9**	**-4.4**
	4.5nm,0.3s,baz=240,slow=20,SNR=8.2						
WB0	**Warramunga Arr**	**13.35**	**159**	Pn	**Pn**	**16 25 46.6**	**+2.0**
WRAB	**Tennant Creek**	**13.49**	**160**	Pn	**Pn**	**16 25 47.2**	**+0.9**
WRA	**Warramunga Arr**	**13.50**	**160**	P	**Pn**	**16 25 48.2**	**+1.7**
	1.4nm,0.8s,baz=341,slow=12,SNR=23						
WRA				S	Sn	16 28 09.5	-6.4
	1.6nm,0.5s,baz=338,slow=22,SNR=8.7						
WRA	**Warramunga Arr**	**13.50**	**160**		**Pn**	**16 25 47.2**	**+0.8**
AS31	**Alice Springs**	**16.89**	**166**		**Pn**	**16 26 31.9**	**+3.4**
ASAR	**Alice Springs**	**16.89**	**166**	P	**Pn**	**16 26 32.5**	**+4.0**
	7.0nm,0.5s,baz=340,slow=10.0,SNR=203						
ASAR				S	**S**	**16 29 32.7**	**-3.6**
	0.8nm,0.7s,baz=348,slow=26,SNR=5.2						
PSA00	**Pilbara Seismi**	**16.98**	**212**	P	**P**	**16 26 29.4**	**+0.5**
GIRL	**Giralia**	**21.16**	**222**	P	**P**	**16 27 13.9**	**-0.4**
MKAR	**Makanchi Array**	**68.11**	**327**	P	**P**	**16 33 24.0**	**-0.6**
	0.2nm,0.4s,baz=120,slow=7.6,SNR=6.8						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**68.11**	**327**	P	**P**	**16 33 22.5**	**-2.0**
KURBB	**Kurchatov Arra**	**72.41**	**329**	P	**P**	**16 33 49.5**	**-1.1**
	0.2nm,0.2s,baz=125,slow=4.7,SNR=1.3						
	0.2nm,0.2s						
K15K	**Wolf Creek Mou**	**86.85**	**26**	P	**P**	**16 35 07.4**	**-0.7**
F15K	**North Star Dit**	**86.95**	**22**	P	**P**	**16 35 08.0**	**-0.6**
F15K				IAmb	IAmb	16 37 49.9	
	comp=Z,24nm,2.0s						
J17K	**VABM Dome**	**88.30**	**25**	P	**P**	**16 35 14.0**	**-1.0**
J17K				IAmb	IAmb	16 35 35.0	
	comp=Z,26nm,1.9s						

IDC 17 16:23:53.2±4.0, 17.°81S×178.°53W, h605km±24km, mb2.9/4, mbtmp3.7/5, Error ellipse: s-maj=163.0km s-min=25.9km az=147.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.26**	**271**	P	P	16 25 14.3	0.0
	5.2nm,0.6s,baz=109,slow=18,SNR=5.1						
WRA	**Warramunga Arr**	**44.54**	**259**	P	P	16 31 12.4	-0.6
	0.7nm,0.5s,baz=96,slow=7.5,SNR=3.3						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**44.71**	**254**	P	P	16 31 14.4	+0.1
	3.0nm,0.6s,baz=88,slow=8.1,SNR=16						
	3.0nm,0.6s						
ILAR	**Eielson Array**	**85.82**	**13**	P	P	16 35 28.9	-0.4
	0.2nm,0.4s,baz=210,slow=4.3,SNR=5.5						
	0.2nm,0.4s						
PDAR	**Pinedale Array**	**87.36**	**43**	P	P	16 35 37.7	+0.3
	0.2nm,0.6s,baz=227,slow=3.9,SNR=2.5						
	0.2nm,0.6s						

IDC 17 16:35:28.4±4.7, 3.°58S×150.°74E, h0km, mb3.4/3, mbtmp3.5/4, ML1.1/1, Error ellipse: s-maj=140.2km s-min=29.8km az=103.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.79**	**211**	Pn	Pn	16 37 10.1	+0.6
	0.2nm,0.3s,baz=39,slow=13,SNR=3.2						
PMG				Sn	Sn	16 38 16.9	-11
	1.7nm,0.3s,baz=6.2,slow=19,SNR=6.3						
	5.3nm,0.8s						
WRA	**Warramunga Arr**	**22.82**	**223**	P	P	16 40 33.6	+0.4
	0.3nm,0.6s,baz=51,slow=10,SNR=8.6						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**25.76**	**218**	P	P	16 41 00.9	-0.2
	0.6nm,0.7s,baz=37,slow=11,SNR=16						
	0.6nm,0.7s						
SONM	**Songino Array**	**64.21**	**328**	P	P	16 46 05.1	-0.3
	0.9nm,0.7s,baz=121,slow=6.9,SNR=3.5						
	0.9nm,0.7s						

*IPEC **17** 16:38:54.3±0.2, 51.°48N×16.°21E, h1km, ML2.5/6, Error ellipse: s-maj=1.6km s-min=1.3km az=64.0*
*VIE **17** 16:38:55.8±0.7, 51.°38N×16.°39E, h0km, mb2.5/5, ml2.8/7, Error ellipse: s-maj=5.9km s-min=4.2km az=74.0 54 km NW of Wroclaw Suspected Mining induced.*
ISC 17 16:38:54.3±1.1, 51.°47N±0.°05×16.°11E±0.°03, h0km, n33, σ0s81/62, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.64**	**169**	*e*Pg	**Pg**	**16 39 07.0**	**+0.5**
KSP				*e*Sg	**Sg**	**16 39 15.4**	**+0.7**
CHVC	**Chvalec**	**0.88**	**182**	*e*PG	**Pg**	**16 39 11.6**	**+0.4**
CHVC				*e*SG	**Sg**	**16 39 23.4**	**+0.8**
	comp=Z,56nm,0.6s						
OSTC	**Ostas**	**0.92**	**176**	*e*PG	**Pg**	**16 39 12.3**	**+0.5**
OSTC				*e*SG	**Sg**	**16 39 24.7**	**+1.0**
UPC	**Upice**	**0.96**	**184**	*e*PG	**Pg**	**16 39 12.8**	**0.0**
UPC				*e*SG	**Sg**	**16 39 25.6**	**+0.4**
	comp=Z,166nm,0.4s						
DPC	**Dobruska-Polom**	**1.13**	**173**	*e*PG	**Pg**	**16 39 15.7**	**-0.2**
DPC				*e*SG	**Sg**	**16 39 30.6**	**+0.1**
	comp=Z,38nm,0.5s						
PIVO	**Bartosovice**	**1.31**	**168**	*e*Pg	**Pg**	**16 39 19.2**	**-0.3**
	baz=351						
PIVO				*e*Sg	**Sg**	**16 39 35.3**	**-1.2**
	74nm,0.3s,baz=351						
PVCC	**Panska Ves**	**1.35**	**227**	*e*PG	**Pg**	**16 39 20.2**	**0.0**
PVCC				*e*SG	**Sn**	**16 39 39.0**	**-0.1**
	comp=Z,69nm,0.5s						
KRLC	**Kraliky**	**1.46**	**163**	*e*PG	**Pn**	**16 39 22.0**	**+0.1**
KRLC				*e*SG	**Sb**	**16 39 41.6**	**+0.1**
	comp=Z,44nm,0.4s						

RYBC	**Ceska Rybna**	**1.66**	**181**	*e*Pn		**Pn**	**16 39 24.6**	**-0.1**	
	baz=3.1								
RYBC				*e*Sg		**Sn**	**16 39 46.7**	**0.0**	
	42nm,0.5s,baz=3.1								
PRU	**Pruhonice**	**1.79**	**214**	*e*PG		**Pn**	**16 39 27.1**	**+0.7**	
PRU				*e*SG		**Sg**	**16 39 51.7**	**+0.1**	
	comp=Z,19nm,0.4s								
STEB	**Steborice**	**1.87**	**145**	*e*PG		**Pb**	**16 39 28.9**	**-0.3**	
STEB				*e*SG		**Sb**	**16 39 53.2**	**+0.1**	
	comp=Z,48nm,0.3s								
MORC	**Moravsky Berou**	**1.93**	**151**	*e*Pn		**Pn**	**16 39 27.6**	**-0.7**	
	baz=334								
MORC				*e*Sg		**Sn**	**16 39 53.7**	**+0.4**	
	32nm,0.6s,baz=334								
CLL	**Collm**	**1.95**	**266**	*e*Pn		**Pn**	**16 39 28.0**	**-0.7**	
CLL				*e*Pg		**Pb**	**16 39 31.0**	**+0.3**	
CLL				*ex*		x	16 39 34.0		
CLL				*e*Sg		**Sg**	**16 39 57.0**	**0.0**	
	comp=Z,22nm,0.6s								
OKC	**Ostrava-Krasne**	**2.09**	**141**	*e*SG		**Sb**	**16 39 59.5**	**+0.1**	
	comp=Z,44nm,0.5s								
VRAC	**Vranov**	**2.19**	**172**	*e*Pn		**Pn**	**16 39 31.8**	**-0.1**	
	baz=354								
VRAC				*e*Sg		**Sb**	**16 40 02.5**	**+0.2**	
	comp=Z,28nm,0.6s,baz=354								
VRAC	**Vranov**	**2.19**	**172**	*e*PN		**Pn**	**16 39 31.9**	**0.0**	
VRAC				*e*SG		**Sb**	**16 40 02.6**	**+0.2**	
TREC	**Trest**	**2.21**	**191**	*e*SG		**Sg**	**16 40 04.8**	**-0.5**	
MAUC	**Maruska**	**2.38**	**152**	*e*SG		**Sg**	**16 40 10.2**	**-0.4**	
KRUC	**Moravsky**	**2.42**	**175**	*e*Pn		**Pn**	**16 39 34.9**	**-0.2**	
	baz=357								
KRUC				*e*Pg		**Pb**	**16 39 38.4**	**-0.2**	
	baz=357								
KRUC				*e*Sg		**Sb**	**16 40 10.2**	**+1.3**	
	comp=Z,22nm,0.8s,baz=357								
NKC	**Novy Kostel**	**2.63**	**243**	*e*Pn		**Pn**	**16 39 37.9**	**-0.1**	
NKC				*e*PG		**Pg**	**16 39 43.7**	**-0.9**	
NKC				*e*SG		**Sg**	**16 40 19.2**	**+0.5**	
	comp=Z,26nm,0.5s								
OJC	**Ojcow**	**2.65**	**117**	*e*Pg		**Pg**	**16 39 46.5**	**+1.3**	
OJC				*e*Sg		**Sg**	**16 40 20.4**	**+0.9**	
JAVC	**Velka Javorina**	**2.80**	**158**	*e*Pn		**Pn**	**16 39 40.0**	**-0.3**	
	baz=341								
JAVC	**Velka Javorina**	**2.80**	**158**	*e*PN		**Pn**	**16 39 40.1**	**-0.3**	
KHC	**Kasperske Hory**	**2.85**	**216**	*e*PN		**Pn**	**16 39 40.8**	**-0.2**	
KHC				*e*PG		**Pb**	**16 39 46.6**	**+0.6**	
KHC				*e*SN		**Sn**	**16 40 15.6**	**-0.4**	
KHC				*e*SG		**Sg**	**16 40 25.1**	**-0.6**	
	comp=Z,10nm,0.5s								
CKRC	**Cesky Krumlov**	**2.89**	**204**	*e*PG		**Pb**	**16 39 47.4**	**+0.6**	
CKRC				*e*SG		**Sg**	**16 40 25.2**	**-2.0**	
	comp=Z,11nm,0.6s								
LANS	**Liptovska Anna**	**3.17**	**136**	*e*PG		**Pg**	**16 39 54.5**	**-0.5**	
LANS				*e*SG		**Sg**	**16 40 35.0**	**-1.0**	
MODS	**Modra-Piesok**	**3.19**	**166**	*e*PN		**Pn**	**16 39 42.6**	**-3.1**	
MODS				*e*SG		**Sg**	**16 40 35.7**	**-1.0**	
WINA	**Alland / Wiene**	**3.37**	**180**	*e*Sg		**Sg**	**16 40 41.0**	**-1.4**	
	comp=Z,8.5nm,0.4s								
CONA	**Conrad Observa**	**3.55**	**183**	*i* Pn		**Pn**	**16 39 51.4**	**+0.7**	
	comp=Z,0.3nm,0.2s								
CONA				*e*Sg		**Sg**	**16 40 46.3**	**-1.9**	
	comp=Z,3.5nm,0.3s								
RONA	**Rosalia, Austr**	**3.77**	**178**	*e*Sg		**Sg**	**16 40 56.9**	**+1.4**	
	comp=Z,8.0nm,0.4s								
MOA	**Molln**	**3.81**	**199**	*e*Pn		**Pn**	**16 39 55.5**	**+1.1**	
	comp=Z,0.3nm,0.1s								
MOA				*e*Sg		**Sg**	**16 40 56.9**	**+0.1**	
	comp=Z,2.0nm,0.4s								
STHS	**Stebnicka Huta**	**3.87**	**120**	*e*PG		**Pg**	**16 40 08.2**	**-0.3**	
ARSA	**Arzberg**	**4.24**	**185**	*e*Sg		**Sg**	**16 41 10.3**	**-0.1**	
	comp=Z,3.8nm,0.5s								

**IDC 17 16:51:20.3±2.0, 8.°28S×124.°85E, h0km, mb3.1/1

MAYA				S	Sn	16 54 37.3	-2.2
MAYA				IAML		16 54 38.0	
	comp=N,2μm,0.8s						
MAYA				IAML		16 54 40.0	
	comp=E,1μm,0.6s						
KAHTU	**Kahta**	**0.98**	**224**	P	**Pg**	**16 54 26.0**	**-0.6**
KAHTU				S	**Sn**	**16 54 41.8**	**-1.0**
KAHTU				IAML		16 54 44.0	
	comp=N,2μm,0.4s						
KAHTU				IAML		16 54 46.0	
	comp=E,2μm,0.7s						
BNGB	**Bingl**	**1.06**	**63**	Pg	**Pg**	**16 54 27.1**	**-1.0**
ARPR	**Arapgir-MALATY**	**1.06**	**304**	Pn	**Pb**	**16 54 27.9**	**-1.0**
ERZN	**Erzincan**	**1.09**	**10**	Pn	**Pg**	**16 54 27.8**	**-1.0**
ERZN				Sn	**Sb**	**16 54 43.8**	**-0.3**
ILIC	**ilic-Erzincan**	**1.17**	**323**	Pn	**Pg**	**16 54 29.1**	**-1.3**
AZEY	**Adyaman-Merk**	**1.19**	**234**	P	**Pb**	**16 54 30.0**	**-1.0**
AZEY				S	**Sn**	**16 54 50.1**	**+2.0**
AZEY				IAML		16 54 51.0	
	comp=N,924nm,0.6s						
AZEY				IAML		16 54 53.0	
	comp=E,781nm,0.7s						
AKCD	**Akcadag**	**1.23**	**260**	P	**Pg**	**16 54 30.3**	**-1.2**
AKCD				S	**Sn**	**16 54 50.4**	**+1.1**
AKCD				IAML		16 54 55.0	
	comp=N,2μm,0.6s						
AKCD				IAML		16 54 59.0	
	comp=E,1μm,0.7s						
HEKM	**Malatya_Hekimh**	**1.24**	**288**	P	**Pg**	**16 54 30.4**	**-1.2**
HEKM				IAML		16 54 56.0	
	comp=N,863nm,0.7s						
HEKM				IAML		16 54 59.0	
	comp=E,640nm,0.7s						
YEDI	**Yedisu-Bingol**	**1.25**	**42**	Pn	**Pg**	**16 54 30.9**	**-0.9**
SVAN	**Silvan-Diyarba**	**1.41**	**104**	Pn	**Pn**	**16 54 32.9**	**-1.4**
SVAN				Sn	**Sb**	**16 54 52.2**	**-0.8**
KARO	**Karliova-Bingo**	**1.47**	**57**	Pn	**Pn**	**16 54 33.9**	**-1.4**
GURO	**Guroymak-BITLI**	**2.01**	**88**	Pn	**Pn**	**16 54 41.7**	**-1.0**
GAZ	**Gaziantep**	**2.23**	**234**	Pn	**Pn**	**16 54 45.4**	**-0.3**
KMRS	**Kahramanmaras**	**2.27**	**244**	Pn	**Pn**	**16 54 45.9**	**-0.3**
BRTR	**Keskin Array B**	**4.70**	**287**	Pn	**Pn**	**16 55 20.4**	**+0.8**
	0.7nm,0.3s,baz=107,slow=14,SNR=12						
BRTR				Lg	Lg	16 56 37.8	
	baz=336,slow=2.7						
	1.8nm,0.3s						
MMAI	**Mount Meron Ar**	**6.40**	**212**	Pn	**Pn**	**16 55 45.5**	**+2.5**
	1.9nm,0.3s,baz=44,slow=16,SNR=6.8						
MMAI				Lg	Lg	16 57 35.4	
	3.0nm,0.3s,baz=33,slow=16,SNR=3.5						
	1.5nm,0.5s						
FINES	**FINESS Array B**	**24.42**	**344**	P	**P**	**16 59 28.5**	**+1.3**
	2.5nm,0.9s,baz=158,slow=16,SNR=1.6						
	2.5nm,0.9s						
MKAR	**Makanchi Array**	**32.23**	**61**	P	**P**	**17 00 39.5**	**+2.4**
	0.2nm,0.8s,baz=266,slow=10,SNR=2.5						
	0.2nm,0.8s						

IDC 17 17:03:00.5±3.9, 17°.34S×177°.48W, h411km±28km, mb2.9/4, mbtmp3.7/5, Error ellipse: s-maj=121.5km s-min=25.9km az=149.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.28**	**264**	P	P	17 04 16.0	+0.1
	23nm,0.7s,baz=280,slow=18,SNR=8.7						
WRA	**Warramunga Arr**	**45.61**	**259**	P	P	17 10 41.6	-0.6
	0.3nm,0.6s,baz=97,slow=7.9,SNR=7.4						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**45.80**	**254**	P	P	17 10 44.0	+0.2
	1.6nm,0.3s,baz=90,slow=7.8,SNR=93						
	1.6nm,0.3s						
TXAR	**Lajitas Array**	**84.95**	**57**	P	P	17 14 51.3	+0.1
	0.2nm,0.7s,baz=254,slow=5.5,SNR=2.3						
	0.2nm,0.7s						
ILAR	**Eielson Array**	**85.14**	**13**	P	P	17 14 51.0	-0.2
	0.3nm,0.5s,baz=211,slow=5.1,SNR=5.1						
	0.3nm,0.5s						

HEL 17 17:09:31.3±1.1, 67°.57N×34°.31E, h0km, ML1.2, Suspected explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VRF	**Varrio**	**1.81**	**278**	PG	Pb	17 10 04.7	-0.5
VRF				smax	smax	17 10 25.2	
	comp=Z,1.6nm,0.2s						
OLKF	**Oulanka, Finla**	**2.30**	**239**	PG	Pb	17 10 12.9	-0.7
OLKF				smax	smax	17 10 39.5	
	comp=Z,0.8nm,0.2s						
OLKF				SB	Sb	17 10 41.6	-0.9
KU6	**Riekki**	**2.34**	**231**	PG	Pb	17 10 13.4	-0.8
	baz=50						
KU6				smax	smax	17 10 40.2	
	comp=Z,0.6nm,0.2s						
KU6				SG	Sb	17 10 42.4	-1.2
RAJF	**Raja-Jooseppi**	**2.43**	**295**	SN	Sn	17 10 40.6	-2.1
MSF	**Maaselka**	**2.67**	**234**	SG	Sb	17 10 53.4	+0.2
RANF	**Ranua**	**3.36**	**246**	PG	Pb	17 10 30.4	-1.2
	baz=62						
RNF	**Rovaniemi**	**3.38**	**257**	SN	Sn	17 11 05.5	-0.6
KEV	**Kevo**	**3.46**	**313**	PN	Pn	17 10 26.6	+0.3
KEV				SN	Sn	17 11 05.4	-2.5
ARA0	**ARCESS Array S**	**3.79**	**305**	SN	Sn	17 11 13.1	-3.0
RMF	**Romuvaara**	**3.81**	**210**	SB	Sb	17 11 23.7	-2.3
KLF	**Kolari**	**4.01**	**270**	SG	Sg	17 11 36.2	-3.6
HEF	**Hetta**	**4.10**	**287**	SN	Sn	17 11 20.2	-3.4
KTK1	**Kautokeino**	**4.36**	**295**	SG	Sb	17 11 44.1	+2.3

*IDC **17** 17:22:06.8±1.5, 23°.57N×121°.68E, h0km, mb3.2/3, mbtmp3.4/4, ML3.5/1, MS3.4/1, Error ellipse: s-maj=42.9km s-min=28.4km az=66.0*
*TAP **17** 17:22:12.0, 23°.67N×121°.64E, h33km, ML4.0, C*
*JMA **17** 17:22:11.5±0.1, 23°.7N±0°.5×12°.2E±°, h40km±2km, MV3.7/18, TAIWAN REGION*
ISC 17 17:22:11.8±0.8, 23°.66N±0°.01×121°.67E±0°.02, h33km±5km, n184, σ1°08/313, mb3.3/3, 10C-40D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEGC	**Jichi Village**	**0.13**	**290**	*i*P	**Pn**	**17 22 18.1**	**+2.3**
TEGC				*i* S	**Sb**	**17 22 22.8**	**+0.9**
SHUL	**Shoufeng**	**0.16**	**321**	*i*P	**Pn**	**17 22 18.4**	**+1.7**
SHUL				S	**Sb**	**17 22 23.4**	**+1.2**
TEYL	**Yanliau Villag**	**0.21**	**341**	*i*P	**Pn**	**17 22 19.2**	**+1.1**
TEYL				*i* S	**Sb**	**17 22 24.6**	**+1.5**
ESL	**Shilin**	**0.27**	**304**	*i*P	**Pb**	**17 22 18.9**	**-0.2**
ESL				S	**Sn**	**17 22 23.8**	**+0.4**
WARBT	**Fenglin Townsh**	**0.27**	**282**	*i*P	**Pb**	**17 22 18.8**	**-0.4**
WARBT				S	**Sn**	**17 22 23.4**	**-0.1**
HGSD	**Ruisui**	**0.28**	**233**	*i*P	**Pb**	**17 22 19.6**	**+0.2**
HGSD				S	**Sn**	**17 22 25.8**	**+1.8**
ETM	**Tongmen**	**0.34**	**331**	*i*P	**Pb**	**17 22 20.0**	**-0.2**
ETM				*i* S	**Sb**	**17 22 26.1**	**+0.2**
EHYH	**Wanrong**	**0.34**	**241**	P	**Pb**	**17 22 20.0**	**-0.1**
EHYH				S	**Sb**	**17 22 25.8**	**-0.1**
EHY	**Hungye**	**0.36**	**244**	P	**Pb**	**17 22 19.9**	**-0.4**
ECBN	**Changbin**	**0.40**	**210**	P	**Pb**	**17 22 21.2**	**+0.3**
ECBN				S	**Sb**	**17 22 28.0**	**+0.8**
TWD	**Chiawan**	**0.42**	**350**	*i*P	**Pb**	**17 22 20.9**	**-0.3**
TWD				S	**Sb**	**17 22 27.7**	**+0.1**
LXIB	**Xiulin Townshi**	**0.43**	**326**	*i*P	**Pb**	**17 22 20.8**	**-0.6**
LXIB				S	**Sb**	**17 22 27.2**	**-0.8**
YULB	**Yu-li**	**0.44**	**232**	P	**Pb**	**17 22 21.2**	**-0.2**
YULB	**Yu-li**	**0.44**	**232**	S	**Sb**	**17 22 27.6**	**-0.5**
YULB	**Yu-li**	**0.44**	**232**	*i*P	**Pb**	**17 22 21.1**	**-0.4**
YULB				S	**Sb**	**17 22 27.4**	**-0.7**
EYUL	**Yuli**	**0.45**	**226**	*e*P	**Pb**	**17 22 21.8**	**+0.1**
EYUL				*e*S	**Sb**	**17 22 29.3**	**+0.9**
TWF1	**Yuli**	**0.46**	**228**	*i*P	**Pb**	**17 22 21.5**	**-0.3**
ETL	**Fush Village**	**0.49**	**355**	P	**Pb**	**17 22 21.9**	**-0.4**
ETL				S	**Sb**	**17 22 29.5**	**-0.1**
VWDT	**VWDT**	**0.49**	**281**	*i*P	**Pb**	**17 22 22.2**	**-0.1**
VWDT				*e*S	**Sb**	**17 22 29.3**	**-0.2**
NACB	**Ninganchiao**	**0.51**	**352**	P	**Pb**	**17 22 22.3**	**-0.3**
NACB	**Ninganchiao**	**0.51**	**352**	S	**Sb**	**17 22 30.0**	**0.0**
NACB	**Ninganchiao**	**0.51**	**352**	*i*P	**Pb**	**17 22 22.1**	**-0.5**
NACB				S	**Sb**	**17 22 29.8**	**-0.3**
CHKH	**Chenggong**	**0.53**	**208**	*e*P	**Pb**	**17 22 22.4**	**-0.5**
CHKH				S	**Sb**	**17 22 30.5**	**0.0**
OWD	**Renai**	**0.54**	**303**	*i*P	**Pb**	**17 22 22.6**	**-0.5**
OWD				S	**Sb**	**17 22 29.6**	**-1.4**
ETLH	**Xiulin Townshi**	**0.57**	**342**	*i*P	**Pb**	**17 22 22.9**	**-0.7**
ETLH				*e*S	**Sb**	**17 22 30.3**	**-1.3**
FULB	**Fuli**	**0.58**	**217**	*e*P	**Pb**	**17 22 23.5**	**-0.2**
FULB				*e*S	**Sb**	**17 22 32.6**	**+0.8**
WUSB	**Renai**	**0.60**	**303**	*i*P	**Pn**	**17 22 23.7**	**-0.4**
WUSB				S	**Sb**	**17 22 31.6**	**-1.0**
WHF	**Hehuan Shan**	**0.61**	**322**	*i*P	**Pb**	**17 22 23.5**	**-0.9**
WHF				*e*S	**Sb**	**17 22 32.1**	**-0.9**
CHKT	**Chengkung**	**0.63**	**207**	*i*P	**Pn**	**17 22 23.7**	**-0.7**
CHKT				*e*S	**Sb**	**17 22 32.2**	**-0.8**
EAHA	**Aohua**	**0.67**	**5**	*e*P	**Pn**	**17 22 24.6**	**-0.2**
EAHA				*e*S	**Sb**	**17 22 33.7**	**-0.4**
EHD	**Haiduan**	**0.67**	**220**	P	**Pn**	**17 22 23.9**	**-1.0**
SSLB	**Suanglung**	**0.67**	**281**	P	**Pn**	**17 22 24.5**	**-0.4**
SSLB	**Suanglung**	**0.67**	**281**	S	**Sb**	**17 22 33.7**	**-0.6**
SSLB	**Suanglung**	**0.67**	**281**	*i*P	**Pn**	**17 22 24.4**	**-0.6**
SSLB				S	**Sb**	**17 22 32.9**	**-1.4**
FUSS	**Fushou**	**0.70**	**326**	P	**Pn**	**17 22 25.3**	**-0.3**
FUSS				S	**Sb**	**17 22 35.1**	**-0.3**
ECS	**Chishang**	**0.70**	**216**	*e*P	**Pn**	**17 22 25.4**	**0.0**
SMLT	**Sun Moon Lake**	**0.74**	**287**	P	**Pn**	**17 22 25.8**	**-0.2**
SMLT				*e*S	**Sn**	**17 22 35.6**	**-0.5**
TWT	**Tachien**	**0.74**	**322**	P	**Pn**	**17 22 26.1**	**0.0**
TWT				*e*S	**Sn**	**17 22 35.6**	**-0.7**
EOS4	**EOS4**	**0.75**	**52**	*e*P	**Pn**	**17 22 25.9**	**+0.3**
EOS4				*e*S	**Sn**	**17 22 36.1**	**+0.5**
TDCB	**Techi**	**0.75**	**321**	P	**Pn**	**17 22 26.1**	**-0.1**
TDCB				*e*S	**Sn**	**17 22 35.3**	**-1.3**
WHYT	**Xinyi Township**	**0.75**	**273**	P	**Pn**	**17 22 26.2**	**+0.1**
WHYT				*e*S	**Sn**	**17 22 36.0**	**-0.3**
ELDTW	**Lidau**	**0.77**	**232**	P	**Pn**	**17 22 25.5**	**-0.8**
ELDTW				*e*S	**Sn**	**17 22 35.3**	**-1.5**
EWUT	**Wuta**	**0.78**	**7**	*e*P	**Sn**	**17 22 26.5**	**0.0**
EWUT				*e*S	**Sn**	**17 22 37.1**	**0.0**
TYC	**Yuchr**	**0.78**	**288**	P	**Pn**	**17 22 26.4**	**-0.1**
TYC				*e*S	**Sn**	**17 22 37.1**	**+0.1**
WCS	**Beigang Elemen**	**0.80**	**299**	*e*P	**Pn**	**17 22 26.7**	**0.0**
WCS				*e*S	**Sn**	**17 22 36.8**	**-0.7**
NNSB	**Datong**	**0.81**	**341**	P	**Pn**	**17 22 26.4**	**-0.5**
NNSB				*e*S	**Sn**	**17 22 36.7**	**-1.1**
ALS	**Alishan**	**0.81**	**259**	P	**Pn**	**17 22 27.4**	**+0.2**
ALS				*e*S	**Sn**	**17 22 37.9**	**-0.2**
NNS	**Nan Shan**	**0.82**	**341**	*e*P	**Pn**	**17 22 26.7**	**-0.4**
NNS				*e*S	**Sn**	**17 22 37.2**	**-0.9**
EOS3	**EOS3**	**0.86**	**43**	P	**Pn**	**17 22 27.9**	**+0.6**
EOS3				*e*S	**Sb**	**17 22 39.7**	**+0.5**
LATG	**Datong**	**0.88**	**351**	P	**Pn**	**17 22 27.5**	**-0.4**
LATG				*e*S	**Sn**	**17 22 38.5**	**-0.6**
WJS	**Zhushan**	**0.88**	**281**	P	**Pn**	**17 22 28.6**	**+0.3**
WJS				*e*S	**Sn**	**17 22 40.8**	**+1.3**
WHP	**Taichung City**	**0.90**	**313**	*e*P	**Pn**	**17 22 28.5**	**+0.2**
WHP				*e*S	**Sn**	**17 22 40.1**	**-0.1**
LONT	**Longtian**	**0.90**	**214**	*e*P	**Pn**	**17 22 27.3**	**-0.9**
EOS2	**EOS2**	**0.91**	**34**	*i*P	**Pn**	**17 22 29.2**	**+1.1**
EOS2				*e*S	**Sb**	**17 22 41.7**	**+0.9**
CHN5	**Tsauling**	**0.91**	**266**	*i*P	**Pn**	**17 22 29.0**	**+0.7**
CHN5				*e*S	**Sn**	**17 22 40.3**	**-0.2**
ESAO	**Su ao**	**0.92**	**10**	*e*P	**Pn**	**17 22 28.6**	**+0.2**
WNT	**Mingjian**	**0.93**	**283**	P	**Pn**	**17 22 29.5**	**+1.0**
WNT				*e*S	**Sn**	**17 22 42.0**	**+1.3**
NDT	**Datong Townshi**	**0.95**	**351**	*e*P	**Pn**	**17 22 28.9**	**+0.2**
TWC	**Suao**	**0.95**	**10**	*e*P	**Pn**	**17 22 29.2**	**+0.3**
STYH	**Taoyuan**	**0.96**	**239**	*e*P	**Pn**	**17 22 29.3**	**+0.5**
STYH				*e*S	**Sn**	**17 22 41.6**	**+0.2**
NDS	**Dongshan**	**0.97**	**2**	*e*P	**Pn**	**17 22 29.4**	**+0.3**
NDS				*e*S	**Sn**	**17 22 42.1**	**+0.5**
ENTT	**Nioudou**	**0.98**	**354**	P	**Pn**	**17 22 29.1**	**-0.2**
ENTT				*e*S	**Sn**	**17 22 42.2**	**+0.3**
LDUT	**Ludao**	**1.00**	**191**	P	**Pn**	**17 22 28.3**	**-1.2**
LDUT				*e*S	**Sn**	**17 22 40.8**	**-1.7**
TWGBT	**Beinan**	**1.00**	**213**	P	**Pn**	**17 22 29.1**	**-0.4**
TWGBT	**Beinan**	**1.00**	**213**	*e*P	**Pn**	**17 22 28.5**	**-1.0**
TWGBT				*e*S	**Sn**	**17 22 43.2**	**+0.7**
TWG	**Pinlang**	**1.00**	**213**	*e*P	**Pn**	**17 22 28.6**	**-0.9**
TWG				*e*S	**Sn**	**17 22 42.9**	**+0.3**
WCKO	**Fanlu**	**1.00**	**257**	*e*P	**Pn**	**17 22 30.7**	**+1.1**
WCKO				*e*S	**Sn**	**17 22 44.3**	**+1.7**
WGK	**Gukeng**	**1.02**	**271**	*e*P	**Pn**	**17 22 30.6**	**+0.9**
WGK				*e*S	**Sn**	**17 22 44.2**	**+1.3**
TPUB	**Ta-pu**	**1.02**	**250**	P	**Pn**	**17 22 30.8**	**+1.0**
TPUB	**Ta-pu**	**1.02**	**250**	S	**Sn**	**17 22 44.4**	**+1.3**
TPUB	**Ta-pu**	**1.02**	**250**	*i*P	**Pn**	**17 22 30.7**	**+0.9**
TPUB				*e*S	**Sn**	**17 22 44.1**	**+1.1**
TTN	**Taitung**	**1.03**	**208**	*e*P	**Pn**	**17 22 31.1**	**+1.3**
TCU	**Taichung**	**1.03**	**298**	*e*P	**Pn**	**17 22 31.4**	**+1.5**
TCU				*e*S	**Sn**	**17 22 45.0**	**+1.8**
YHNB	**Yeheng**	**1.04**	**345**	P	**Pn**	**17 22 30.3**	**+0.2**
YHNB	**Yeheng**	**1.04**	**345**	S	**Sn**	**17 22 43.6**	**+0.1**
YHNB	**Yeheng**	**1.04**	**345**	*i*P	**Pn**	**17 22 30.3**	**+0.2**
YHNB				*e*S	**Sn**	**17 22 43.0**	**-0.5**
WDL	**Douliou City**	**1.04**	**273**	*e*P	**Pn**	**17 22 30.8**	**+0.8**
WDLH	**Douliu**	**1.04**	**272**	*e*P	**Pn**	**17 22 31.1**	**+1.0**
WDLH				*e*S	**Sn**	**17 22 44.7**	**+1.3**
NSK	**Sanguang**	**1.05**	**344**	P	**Pn**	**17 22 30.4**	**+0.2**
NSK				*e*S	**Sn**	**17 22 43.2**	**-0.5**
TWE	**Neicheng**	**1.05**	**360**	*e*P	**Pn**	**17 22 30.2**	**0.0**
WTP	**Ta-pu**	**1.06**	**247**	P	**Pn**	**17 22 31.2**	**+0.9**
WTP				*e*S	**Sn**	**17 22 45.1**	**+1.1**
TWQ1	**Liyutan**	**1.07**	**310**	P	**Pn**	**17 22 31.8**	**+1.4**
TWQ1				*e*S	**Sn**	**17 22 46.0**	**+1.8**
NFF	**Wufeng Townshi**	**1.09**	**332**	*e*P	**Pn**	**17 22 31.5**	**+0.8**
NFF				*e*S	**Sn**	**17 22 46.0**	**+0.3**
FUSB	**Fushanzhiwuyua**	**1.09**	**356**	P	**Pn**	**17 22 30.9**	**+0.2**
FUSB				*e*S	**Sn**	**17 22 45.5**	**+0.6**
ILA	**Ilan**	**1.10**	**4**	*e*P	**Pn**	**17 22 31.8**	**+1.0**
WCHH	**Zhanghua**	**1.10**	**292**	*e*P	**Pn**	**17 22 32.1**	**+1.3**
WCHH				*e*S	**Sb**	**17 22 47.0**	**+0.6**
WCH1	**Changhua City**	**1.11**	**292**	*e*P	**Pn**	**17 22 32.4**	**+1.5**
WCH1				*e*S	**Sb**	**17 22 47.8**	**+1.3**
NWLT	**Wulai**	**1.12**	**352**	*e*P	**Pn**	**17 22 31.8**	**+0.6**
NWLT				*e*S	**Sn**	**17 22 45.2**	**-0.2**
NSTT	**Nanjuang**	**1.14**	**328**	P	**Pn**	**17 22 32.6**	**+1.2**
NSTT				*e*S	**Sn**	**17 22 46.5**	**+0.6**
LIOB	**Emei**	**1.15**	**329**	P	**Pn**	**17 22 32.9**	**+1.3**
LIOB				*e*S	**Sn**	**17 22 47.4**	**+1.3**
CHN1	**Nanshi**	**1.15**	**246**	P	**Pn**	**17 22 32.6**	**+1.0**
CHN1				*e*S	**Sb**	**17 22 48.8**	**+0.9**
SLGT	**Liugui**	**1.16**	**235**	*e*P	**Pn**	**17 22 32.9**	**+1.2**
SGST	**Jiashian**	**1.16**	**240**	P	**Pn**	**17 22 32.9**	**+0.3**
SGST				*e*S	**Sn**	**17 22 47.9**	**+1.6**
CHY	**Chiayi**	**1.16**	**262**	*e*P	**Pn**	**17 22 33.0**	**+1.4**
CHY				*e*S	**Sb**	**17 22 48.6**	**+0.7**
WDJ	**Dajia District**	**1.16**	**306**	P	**Pn**	**17 22 33.2**	**+1.4**
WDJ				*e*S	**Sn**	**17 22 48.4**	**+1.9**
WTK	**Tuku**	**1.18**	**271**	*e*P	**Pn**	**17 22 33.2**	**+1.4**
WTK				*e*S	**Sb**	**17 22 49.2**	**+0.7**
NMLH	**Miaoli**	**1.19**	**317**	*e*P	**Pn**	**17 22 33.2**	**+1.2**
KSHI	**Guanxi Townshi**	**1.20**	**338**	*e*P	**Pn**	**17 22 34.0**	**+1.7**
KSHI				*e*S	**Sn**	**17 22 48.8**	**+1.5**
WRL	**Guolierlin Hig**	**1.21**	**282**	*e*P	**Pn**	**17 22 33.2**	**+0.9**
WRL				*e*S	**Sn**	**17 22 49.1**	**+1.5**
RLNB	**Erlin**	**1.22**	**281**	*e*P	**Pn**	**17 22 33.6**	**+1.1**
RLNB				*e*S	**Sn**	**17 22 50.0**	**+2.1**
ECL	**Taimali**	**1.25**	**212**	*e*P	**Pn**	**17 22 31.6**	**-1.3**
SBCB	**Hsinchu**	**1.29**	**331**	*e*P	**Pn**	**17 22 35.4**	**+2.0**
SBCB				*e*S	**Sn**	**17 22 51.6**	**+2.1**
WTCT	**Ta-ch'eng**	**1.29**	**279**	*e*S	**Sn**	**17 22 54.0**	**+2.4**
NHDH	**Xindian Distri**	**1.30**	**354**	*e*P	**Pn**	**17 22 35.1**	**+1.5**
NHDH				*e*S	**Sn**	**17 22 50.5**	**+0.6**
HSN	**Hsinchu**	**1.30**	**331**	*e*P	**Pn**	**17 22 35.4**	**+1.8**
HSN				*e*S	**Sb**	**17 22 52.6**	**+0.4**
TIPB	**Shuangxi**	**1.31**	**6**	*e*P	**Pn**	**17 22 34.7**	**+0.9**
TIPB				*e*S	**Sb**	**17 22 53.0**	**+0.6**
TWA	**Mucha**	**1.31**	**356**	*e*P	**Pn**	**17 22 34.8**	**+1.0**
ICHU	**Yijhu**	**1.31**	**257**	*e*P	**Pn**	**17 22 35.1**	**+1.3**
ICHU				*e*S	**Sn**	**17 22 52.5**	**+2.3**
TATO	**Taipei**	**1.32**	**353**	P	**Pn**	**17 22 34.6**	**+0.8**
TATO	**Taipei**	**1.32**	**353**	S	**Sn**	**17 22 51.9**	**+1.6**
SSD	**Sandimen**	**1.32**	**227**	*e*P	**Sn**	**17 22 35.0**	**+1.1**
SSD				*e*S	**Sb**	**17 22 53.0**	**+0.2**
WSF	**Szhu**	**1.33**	**269**	*e*P	**Pn**	**17 22 35.0**	**+0.9**
WSF				*e*S	**Sn**	**17 22 52.1**	**+1.5**
SCST	**Cishan**	**1.33**	**235**	*e*P	**Pb**	**17 22 36.8**	**+0.6**
SCST				*e*S	**Sb**	**17 22 54.8**	**+1.8**
WSL	**Shuilin Townsh**	**1.33**	**264**	*e*P	**Pn**	**17 22 35.1**	**+1.1**
WSL				*e*S	**Sn**	**17 22 51.8**	**+1.1**
CHN3	**Shinhua**	**1.34**	**244**	*e*P	**Pn**	**17 22 36.1**	**+2.0**
CHN3				*e*S	**Sb**	**17 22 54.5**	**+1.5**
TSMG	**Majia**	**1.34**	**225**	*e*P	**Pb**	**17 22 36.5**	**+0.1**
TSMG				*e*S	**Sb**	**17 22 54.2**	**+0.9**
TWB1	**Santiao Chiao**	**1.37**	**12**	*e*P	**Pn**	**17 22 35.8**	**+1.2**
NCUH	**Zhongli**	**1.37**	**341**	*e*P	**Pn**	**17 22 35.9**	**+1.3**
NCUH				*e*S	**Sn**	**17 22 53.9**	**+2.3**
SSHA	**Shanhua**	**1.38**	**248**	*e*P	**Pb**	**17 22 37.0**	**0.0**
SSHA				*e*S	**Sb**	**17 22 55.1**	**+0.9**
CHN8	**Yiju**	**1.38**	**257**	*e*P	**Pn**	**17 22 35.6**	**+0.9**
CHN8				*e*S	**Sn**	**17 22 53.7**	**+1.9**
JYNG	**Yonagunijimaku**	**1.40**	**56**	P	**Pn**	**17 22 36.0**	**+1.0**
JYNG				*e*S	**Sn**	**17 22 53.0**	**+0.6**
NWF	**Wu-fen Shan**	**1.41**	**4**	*e*P	**Pn**	**17 22 36.4**	**+1.2**
WFSB	**Wu-fen Shan**	**1.41**	**4**	*e*P	**Pn**	**17 22 36.3**	**+1.2**
MASBT	**Mashibuluo**	**1.42**	**223**	*e*P	**Pn**	**17 22 35.9**	**+0.6**
MASBT				*e*S	**Sb**	**17 22 55.7**	**+0.3**
TWM1	**Shoushan**	**1.42**	**234**	*e*P	**Pb**	**17 22 39.1**	**+1.4**
TWM1				*e*S	**Sb**	**17 22 58.9**	**+3.3**
SGLT	**Jiouru**	**1.43**	**230**	*e*S	**Sb**	**17 22 58.0**	**+2.1**
SXI1	**Grass Mountain**	**1.44**	**7**	*e*P	**Pn**	**17 22 36.7**	**+1.1**
SXI1				*e*S	**Sn**	**17 22 55.4**	**+2.0**
YOJ	**Yonaguni jima**	**1.46**	**57**	P	**Pn**	**17 22 37.0**	**+1.2**
YOJ	**Yonaguni jima**	**1.46**	**57**	S	**Sn**	**17 22 55.3**	**+1.6**
YOJ	**Yonaguni jima**	**1.46**	**57**	*e*P	**Pn**	**17 22 36.8**	**+0.9**
YOJ				*e*S	**Sn**	**17 22 54.8**	**+1.0**
YOJ	**Yonaguni jima**	**1.46**	**57**	*e*P	**Pn**	**17 22 36.7**	**+0.9**
YOJ				*e*S	**Sn**	**17 22 54.5**	**+0.7**
TAI1	**Yung-k'ang**	**1.47**	**245**	*e*S	**Sb**	**17 22 57.0**	**+0.3**
YM01	**YM01**	**1.48**	**356**	*e*P	**Pn**	**17 22 36.8**	**+0.7**
TNOU	**National Taiwa**	**1.48**	**4**	*e*P	**Pn**	**17 22 37.5**	**+1.4**
EAST	**Anshuo**	**1.48**	**211**	*e*P	**Pn**	**17 22 35.5**	**-0.6**
TAW	**Tawu**	**1.48**	**209**	*e*P	**Pn**	**17 22 37.1**	**+1.0**
TAW				*e*S	**Sn**	**17 22 54.2**	**-0.2**
ZUZH	**Zhuzihu**	**1.50**	**356**	*e*P	**Pn**	**17 22 36.8**	**+0.4**
ZUZH				*e*S	**Sn**	**17 22 55.0**	**+0.2**
NTST	**Danshui**	**1.51**	**352**	*e*P	**Pn**	**17 22 37.0**	**+0.5**
YM08	**YM08**	**1.52**	**357**	*e*P	**Pn**	**17 22 36.8**	**+0.1**
ANP	**Anpu**	**1.52**	**355**	*e*P	**Pn**	**17 22 37.4**	**+0.7**
TSCK	**Chigu Township**	**1.54**	**251**	*e*P	**Pn**	**17 22 38.1**	**+1.2**
TSCK				*e*S	**Sn**	**17 22 57.3**	**+1.4**
SSPT	**Xinbi**	**1.55**	**221**	*e*P	**Pb**	**17 22 39.8**	**-0.1**
SCZT	**Fangliau**	**1.61**	**217**	*e*P	**Pn**	**17 22 38.7**	**+0.8**
SCZT				*e*S	**Sb**	**17 23 00.5**	**-0.4**
LAY	**Lan-yu**	**1.62**	**184**	*e*P	**Pn**	**17 22 36.8**	**-1.2**
LAY				*e*S	**Sn**	**17 22 55.2**	**-2.6**
WSSB	**Gushan**	**1.65**	**232**	*e*S	**Sb**	**17 23 03.0**	**+1.0**
SLIU	**Shizi**	**1.65**	**209**	*e*P	**Pn**	**17 22 39.3**	**+0.9**
LYUB	**Lan-yu**	**1.66**	**183**	*e*P	**Pn**	**17 22 36.5**	**-2.0**
LYUB				*e*S	**Sn**	**17 22 54.8**	**-3.8**

GUMO				S		**Sn**	**17 44 54.1**	**+1.8**
	1µm,0.3s,baz=339,slow=22,SNR=59							
JCJ	**Chichijima**	**13.35**	**350**	Pn		**Pn**	**17 47 18.2**	**-1.4**
PATS	**Pohnpei**	**15.01**	**117**	P		**P**	**17 47 42.6**	**+0.2**
SIJI	**Sorong**	**19.90**	**224**	P		**P**	**17 48 37.9**	**+1.9**
	5.2nm,0.5s,baz=28,slow=13,SNR=7.0							
FAKI	**Fak Fak**	**20.86**	**218**	P		**P**	**17 48 47.1**	**+1.0**
SSLB	**Suanglung**	**24.59**	**297**	P		**P**	**17 49 25.1**	**+2.7**
SSLB				IAmb	IAmb		17 49 50.7	
	comp=Z,26nm,1.5s							
LUWI	**Luwuk**	**26.42**	**238**	P		**P**	**17 49 37.2**	**-1.7**
COEN	**Coen**	**27.73**	**183**	P		**P**	**17 49 50.1**	**-0.4**
MTN	**Manton Dam**	**29.84**	**208**	P		**P**	**17 50 08.0**	**-1.2**
MTN				IAmb	IAmb		17 50 44.3	
	comp=Z,4.0nm,1.1s							
KNRA	**Kununurra**	**33.41**	**209**	P		**P**	**17 50 38.7**	**-1.8**
KNRA				IAmb	IAmb		17 50 43.0	
	comp=Z,2.9nm,0.8s							
CTA	**Charters Tower**	**33.81**	**178**	P		**P**	**17 50 44.3**	**+0.4**
	comp=Z,14nm,1.2s,baz=346,slow=4.2,SNR=1.9							
	comp=Z,14nm,1.2s							
SBUM	**Sibu**	**34.16**	**253**	P		**P**	**17 50 47.1**	**0.0**
SBUM				IAmb	IAmb		17 50 47.8	
	comp=Z,2.5nm,0.7s							
WB0	**Warramunga Arr**	**35.00**	**197**	P		**P**	**17 50 53.6**	**-0.6**
WB0				IAmb	IAmb		17 50 54.3	
	comp=Z,5.4nm,0.6s							
WR8	**Warramunga Arr**	**35.15**	**197**	P		**P**	**17 50 54.9**	**-0.5**
WR8				IAmb	IAmb		17 50 55.3	
	comp=Z,4.5nm,0.7s							
WRAB	**Tennant Creek**	**35.17**	**197**	P		**P**	**17 50 55.0**	**-0.6**
WRAB				IAmb	IAmb		17 50 55.9	
	comp=Z,5.0nm,0.8s							
WRA	**Warramunga Arr**	**35.18**	**197**	P		**P**	**17 50 55.2**	**-0.6**
	comp=Z,5.5nm,0.8s,baz=21,slow=9.4,SNR=48							
WRA				PcP		**PcP**	**17 53 24.0**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=13,slow=2.8,SNR=2.6							
	comp=Z,5.5nm,0.8s							
FITZ	**Fitzroy Crossi**	**37.00**	**211**	P		**P**	**17 51 10.9**	**-0.3**
	comp=Z,3.9nm,0.8s,baz=18,slow=5.9,SNR=20							
FITZ				PcP		**PcP**	**17 53 28.9**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=315,slow=4.3,SNR=2.1							
	comp=Z,3.9nm,0.8s							
AS31	**Alice Springs**	**38.84**	**196**	P		**P**	**17 51 26.1**	**-0.6**
ASAR	**Alice Springs**	**38.84**	**196**	P		**P**	**17 51 26.0**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=16,slow=13,SNR=61							
ASAR				PcP		**PcP**	**17 53 35.6**	**+0.8**
	comp=Z,0.2nm,0.8s,baz=20,slow=3.0,SNR=1.5							
	comp=Z,0.8nm,0.4s							
ASAR	**Alice Springs**	**38.84**	**196**	P		**P**	**17 51 25.9**	**-0.7**
INKA	**Innaminka**	**41.59**	**185**	P		**P**	**17 51 47.8**	**-1.3**
MBWA	**Marble Bar**	**42.68**	**216**	P		**P**	**17 51 57.1**	**-1.0**
MBWA				IAmb	IAmb		17 52 33.6	
	comp=Z,14nm,1.4s							
CMAR	**Chiang Mai Arr**	**44.20**	**282**	P		**P**	**17 52 11.0**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=86,slow=6.2,SNR=6.6							
	comp=Z,0.6nm,0.8s							
CMAR	**Chiang Mai Arr**	**44.20**	**282**	P		**P**	**17 52 10.3**	**-0.2**
STKA	**Stephens Creek**	**45.63**	**184**	P		**P**	**17 52 20.9**	**-0.5**
	comp=Z,2.0nm,0.7s,baz=4.7,slow=9.9,SNR=4.0							
	comp=Z,2.0nm,0.7s							
STKA	**Stephens Creek**	**45.63**	**184**	P		**P**	**17 52 20.8**	**-0.5**
BBOO	**Buckleboo**	**47.20**	**190**	P		**P**	**17 52 33.3**	**-0.3**
BBOO				IAmb	IAmb		17 52 33.8	
	comp=Z,5.9nm,0.6s							
FORT	**Forrest**	**47.26**	**200**	P		**P**	**17 52 34.0**	**-0.1**
FORT				IAmb	IAmb		17 53 09.8	
	comp=Z,3.9nm,0.9s							
GSI	**Gunungsitoli**	**48.36**	**259**	P		**P**	**17 52 41.8**	**-1.2**
MORW	**Morawa**	**50.98**	**213**	P		**P**	**17 53 01.1**	**-1.3**
TOO	**Toolangi**	**51.21**	**179**	P		**P**	**17 53 04.9**	**+0.9**
NWAO	**Narrogin (SRO)**	**53.51**	**209**	P		**P**	**17 53 21.8**	**+0.7**
MK31	**Makanchi Array**	**61.23**	**316**	P		**P**	**17 54 15.6**	**+0.5**
MKAR	**Makanchi Array**	**61.23**	**316**	P		**P**	**17 54 15.8**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=87,slow=8.5,SNR=12							
	comp=Z,0.5nm,0.5s							
MKAR	**Makanchi Array**	**61.23**	**316**	P		**P**	**17 54 15.3**	**+0.2**
MAKZ	**Makanchi**	**61.44**	**316**	P		**P**	**17 54 17.1**	**+0.6**
MAKZ				IAmb	IAmb		17 54 52.5	
	comp=Z,3.0nm,1.4s							
BFZ	**Birch Farm**	**61.64**	**153**	P		**P**	**17 54 17.1**	**-0.6**
KURK	**Kurchatov**	**64.31**	**320**	P		**P**	**17 54 35.5**	**+0.2**
KURBB	**Kurchatov Arra**	**64.35**	**320**	P		**P**	**17 54 35.9**	**+0.3**
	comp=Z,1.1nm,0.5s,baz=103,slow=7.1,SNR=8.3							
	comp=Z,1.1nm,0.5s							
BRLK	**Bradley Lake**	**65.22**	**30**	P		**P**	**17 54 40.4**	**-0.7**
IMAR	**Indian Mountai**	**65.92**	**23**	P		**P**	**17 54 44.5**	**-0.9**
ILAR	**Eielson Array**	**68.30**	**25**	P		**P**	**17 55 00.1**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=258,slow=6.0,SNR=1.5							
	comp=Z,0.2nm,0.4s							
ILAR	**Eielson Array**	**68.30**	**25**	P		**P**	**17 54 59.9**	**-0.6**
BVAR	**Borovoye Array**	**69.65**	**322**	P		**P**	**17 55 09.4**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=98,slow=6.4,SNR=6.3							
	comp=Z,0.8nm,0.5s							
BMAR	**Burnt Mountain**	**69.83**	**23**	P		**P**	**17 55 11.8**	**+1.8**
F30M	**Barrier River**	**73.20**	**23**	P		**P**	**17 55 32.3**	**+2.3**
F30M				IAmb	IAmb		17 56 16.4	
	comp=Z,5.2nm,1.2s							
KMPM	**Mount Pierce**	**81.92**	**50**	P		**P**	**17 56 18.1**	**-1.0**

SJA 17 17:51:38.5±0.7, 27.89S×66.70W, h178km±4km, ML3.5, MW3.5, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TINO	**Tinogasta**	**0.79**	**257**	*eP*		Pn	17 52 06.5	+1.8
TINO				*eS*		Sn	17 52 25.0	0.0
AANI	**Anillaco**	**0.94**	**193**	*eP*		Pn	17 52 07.8	+2.0
AANI				*eS*		Sn	17 52 13.1	-14
AANI				IAML			17 52 13.1	
	comp=Z,634nm,0.1s							
ACLC	**CERRO LA CRUZ**	**1.55**	**188**	*eP*		Pn	17 52 09.2	-1.8
ACLC				*eS*		Sn	17 52 35.7	-0.5
ACLC				IAML			17 52 37.3	
	comp=Z,125nm,0.4s							
VCA	**Vinchina**	**1.58**	**237**	*eP*		Pn	17 52 12.1	+0.9
VCA				*eS*		Sn	17 52 37.5	+0.9
VCA				IAML			17 52 40.0	
	comp=Z,168nm,0.5s							
AHML	**Horco Molle**	**1.64**	**48**	*eP*		Pn	17 52 03.7	-8.1
AHML				*eS*		Sn	17 52 28.7	-8.7
FSA	**Cafayete**	**1.88**	**20**	*eP*		Pn	17 52 13.6	-0.9
AC02	**Maricunga**	**2.41**	**295**	*eP*		Pn	17 52 09.1	-11
AC02				*eS*		Sn	17 52 46.3	-6.8
AVFE	**Valle Fertil**	**2.84**	**193**	*eS*		Sn	17 52 59.3	-2.4
AVFE				IAML			17 53 03.5	
	comp=Z,122nm,0.4s							
ACDV	**Cuesta del Vie**	**3.11**	**222**	*eP*		Pn	17 52 30.1	+1.5
ACDV				IAML			17 53 21.7	
	comp=Z,92nm,0.5s							
GO03	**Copiapo**	**3.15**	**275**	*eP*		Pn	17 52 28.9	0.0
GO03				*eS*		Sn	17 53 05.2	-3.1
GO03				IAML			17 53 07.7	
	comp=Z,156nm,0.3s							
ACHE	**Chepes**	**3.26**	**180**	*eS*		Sn	17 53 10.1	-0.9
AC05	**El Transito**	**3.29**	**252**	*eP*		Pn	17 52 31.1	+0.3
AC05				IAML			17 53 10.6	
	comp=Z,34nm,0.3s							
AC05				*eS*		Sn	17 53 10.8	-0.8
AROD	**Rodeo**	**3.33**	**226**	*eP*		Pn	17 52 33.1	+1.7
AROD				*eS*		Sn	17 53 12.1	-0.6
ACCO	**Cerro Coronel**	**3.39**	**217**	*eP*		Pn	17 52 33.6	+1.4
ACCO				*eS*		Sn	17 53 14.3	+0.1
CO01	**Juntas del Tor**	**3.63**	**234**	*eP*		Pn	17 52 36.4	+1.2
CO01				*eS*		Sn	17 53 20.4	+1.0
SALTA		**3.66**	**5**	*eP*		Pn	17 52 49.5	+14
SALTA				*eP*			17 52 49.5	
SALTA				*eP*			17 52 52.2	
LCO	**Las Campanas**	**3.70**	**251**	*eP*		Pn	17 52 36.4	+0.4
LCO				*eS*		Sn	17 53 18.6	-2.3
LCO				IAML			17 53 19.0	
	comp=Z,159nm,0.2s							
RTLL	**Cerro Villicun**	**3.76**	**204**	*eP*		Pn	17 52 38.0	+1.5
RTLL				*eS*		Sn	17 53 20.4	-1.7
RTLL				IAML			17 53 21.6	
	comp=Z,92nm,0.2s							
AC04	**Llanos de Chal**	**3.88**	**264**	*eP*		Pn	17 52 38.1	0.0
AC04				IAML			17 53 25.5	
	comp=Z,29nm,0.3s							
AC01	**Pan de Azucar**	**3.89**	**296**	*eP*		Pn	17 52 38.5	+0.3
AC01				*eS*		Sn	17 53 20.7	-4.1
AC01				IAML			17 53 25.0	
	comp=Z,31nm,0.2s							
TCA	**Tanti**	**3.89**	**152**	*eP*		Pn	17 52 41.5	+3.3
TCA				*eS*		Sn	17 53 26.1	+1.0
GO04	**Tololo Observa**	**4.25**	**237**	*eP*		Pn	17 52 42.8	-0.2
GO04				IAML			17 53 34.4	
	comp=Z,48nm,0.4s							
ACAN	**Cantantal**	**4.39**	**185**	*eP*		Pn	17 52 46.1	+1.6
ACAN				IAML			17 53 42.0	
	comp=Z,137nm,0.4s							
RTLS	**Leoncito**	**4.50**	**209**	*eP*		Pn	17 52 48.1	+1.8
RTLS				*eS*		Sn	17 53 39.9	+0.5
RTLS				IAML			17 53 41.6	
	comp=Z,97nm,0.3s							
CO03	**El Pedregal**	**4.56**	**229**	*eP*		Pn	17 52 47.8	+1.0
CO03				*eS*		Sn	17 53 39.8	-0.6
CO03				IAML			17 53 41.7	
	comp=Z,27nm,0.1s							
CO02	**Combarbal**	**5.00**	**228**	*eP*		Pn	17 52 36.2	-16
CO02				*eS*		Sn	17 53 49.3	-1.3
CO02				IAML			17 53 52.9	
	comp=Z,27nm,0.2s							
ASAL	**Salagasta**	**5.04**	**201**	*eP*		Pn	17 52 55.1	+2.1
ASAL				*eS*		Sn	17 53 43.8	-7.7

MDD 17 17:52:32.6±0.8, 36.51N×7.79W, h0km, mb_Lg2.4/7, Error ellipse: s-maj=6.9km s-min=3.3km az=28.0
SFS 17 17:52:34.8, 36.54N×7.89W, h6km, ML2.5/8, ML2.5/8, MLv2.5/8
INMG 17 17:52:34.0±1.3, 36.27N×8.16W, h31km±9km, ML1.8, Error ellipse: s-maj=4.8km s-min=2.7km az=79.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Faro
IGIL 17 17:52:34.1, 36.27N×8.15W, h30km, ML1.7
ISC 17 17:52:32.3±1.8, 36.40N±0.07×7.93W±0.04, h25km±14km, n35, σ1§44/62, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PBDV	**Barranco-do-Ve**	**0.84**	**360**	P		**Pn**	**17 52 48.9**	**+0.2**
PBDV				*S*		**Sb**	**17 52 56.5**	**-2.7**
PBDV	**Barranco-do-Ve**	**0.84**	**360**	*eP*		**Pn**	**17 52 50.3**	**+1.6**
PBDV				*eS*		**Sn**	**17 53 02.3**	**+2.0**
PBDV				*i* IAML			17 53 04.7	
PBDV				*i* IAML			17 53 05.4	
PBDV				*i* IAML			17 53 05.7	
PVAQ	**Vaqueiros**	**1.01**	**10**	*eP*		**Pb**	**17 52 52.8**	**+1.6**
PVAQ				*eS*		**Sb**	**17 53 06.5**	**+2.4**
PVAQ				*i* IAML			17 53 07.2	
PVAQ				*i* IAML			17 53 07.7	
PVAQ				*i* IAML			17 53 08.9	
PFVI	**Vila Bisbo**	**1.03**	**316**	P		**Pn**	**17 52 51.6**	**+0.5**
PFVI	**Vila Bisbo**	**1.03**	**316**	*eP*		**Pn**	**17 52 50.7**	**-0.5**
PFVI				*eS*		**Sn**	**17 53 03.3**	**-1.5**
PFVI				*i* IAML			17 53 08.7	
PFVI				*i* IAML			17 53 08.9	
PFVI				*i* IAML			17 53 14.8	
MORF	**Marmelete**	**1.07**	**327**	*eS*		**Sb**	**17 53 05.5**	**-0.3**
MORF				IAML			17 53 07.3	
	comp=N,9.8nm,0.1s							
MORF	**Marmelete**	**1.07**	**327**	*eP*		**Pn**	**17 52 52.1**	**+0.3**
MORF				*eS*		**Sb**	**17 53 05.6**	**-0.3**
MORF				*i* IAML			17 53 08.5	
MORF				*i* IAML			17 53 16.9	
MORF				*i* IAML			17 53 17.7	
EGRO	**El Granado**	**1.19**	**17**	P		**Pb**	**17 52 55.0**	**+0.8**
EGRO				*S*		**Sn**	**17 53 06.5**	**-2.2**
EGRO	**El Granado**	**1.19**	**17**	Pg		**Pn**	**17 52 52.2**	**-1.2**
EGRO				Sg		**Sn**	**17 53 06.0**	**-2.7**
EGRO				*i* lVmb_Lg			17 53 15.2	
PCVE	**Castro Verde**	**1.23**	**356**	P		**Pb**	**17 52 55.0**	**0.0**
PCVE				*S*		**Sb**	**17 53 10.0**	**-0.4**
PCVE	**Castro Verde**	**1.23**	**356**	*eP*		**Pb**	**17 52 55.7**	**+0.8**
PCVE				*eS*		**Sb**	**17 53 11.4**	**+1.0**
PCVE				*i* IAML			17 53 12.0	
PCVE				*i* IAML			17 53 12.2	
PCVE				*i* IAML			17 53 12.2	
PTEO	**Sao Teotonio**	**1.31**	**331**	*eS*		**Sb**	**17 53 11.6**	**-1.0**
PTEO				*i* IAML			17 53 13.3	
PTEO				*i* IAML			17 53 13.7	
PTEO				*i* IAML			17 53 13.9	
MESJ	**Messejana**	**1.45**	**351**	*eP*		**Pb**	**17 52 58.6**	**-0.2**
MESJ				*eS*		**Sb**	**17 53 16.4**	**-0.4**
MESJ				IAML			17 53 17.4	
	comp=N,8.8nm,0.1s							
MESJ	**Messejana**	**1.45**	**351**	*eP*		**Pb**	**17 52 58.6**	**-0.2**
MESJ				*eS*		**Sb**	**17 53 16.6**	**-0.2**
MESJ				*i* IAML			17 53 17.2	
MESJ				*i* IAML			17 53 17.4	
MESJ				*i* IAML			17 53 17.9	
PBEJ	**Beja**	**1.62**	**2**	*eS*		**Sb**	**17 53 21.2**	**-0.4**
PBEJ				*i* IAML			17 53 21.8	
PBEJ				*i* IAML			17 53 23.7	
PBEJ				*i* IAML			17 53 23.7	
EMIN	**Mina Concepcio**	**1.69**	**36**	P		**Pn**	**17 53 01.1**	**+0.7**
EMIN				*S*		**Sb**	**17 53 23.2**	**-0.5**
EMIN	**Mina Concepcio**	**1.69**	**36**	Sn		**Sn**	**17 53 19.2**	**-2.1**
EMIN				*i* lVmb_Lg			17 53 28.3	
ESPR	**Espera**	**1.73**	**74**	P		**Pn**	**17 53 02.7**	**+1.9**
ESPR				*S*		**Sb**	**17 53 24.4**	**-0.3**
ESPR	**Espera**	**1.73**	**74**	Pn		**Pn**	**17 53 00.7**	**-0.1**
ESPR				Sn		**Sn**	**17 53 19.8**	**-2.4**
ESPR				*i* lVmb_Lg			17 53 32.4	
PBAR	**Barrancos**	**1.91**	**22**	P		**Pn**	**17 53 04.5**	**+1.2**
PBAR				*S*		**Sb**	**17 53 27.1**	**-2.7**
PBAR	**Barrancos**	**1.91**	**22**	*eP*		**Pb**	**17 53 05.4**	**-1.0**
PBAR				*i* IAML			17 53 29.5	
PBAR				*eS*		**Sb**	**17 53 29.6**	**-0.3**
PBAR				*i* IAML			17 53 31.1	
PBAR				*i* IAML			17 53 31.4	
EJIF	**Jimena Fronter**	**1.98**	**88**	Sn		**Sn**	**17 53 27.8**	**-0.6**
ECEU	**Ceuta**	**2.13**	**103**	*i* lVmb_Lg			17 53 31.7	
ECEU				Sn		**Sn**	**17 53 31.9**	**-0.1**
EVO	**Evora**	**2.13**	**358**	P		**Pn**	**17 53 07.3**	**+1.0**
EVO				*S*		**Sn**	**17 53 32.0**	**+0.1**
EVO	**Evora**	**2.13**	**358**	*eP*		**Pn**	**17 52 58.5**	**+1.7**
EVO				*eS*		**Sb**	**17 53 33.4**	**-2.7**
EVO				*i* IAML			17 53 34.9	
EVO				*i* IAML			17 53 35.1	
EVO				*i* IAML			17 53 36.0	
MOE	**Montemor**	**2.14**	**351**	*eP*		**Pn**	**17 53 07.9**	**+1.3**
MOE				*eS*		**Sb**	**17 53 33.1**	**-3.5**
MOE				*i* IAML			17 53 34.4	
MOE				*i* IAML			17 53 34.9	
MOE				*i* IAML			17 53 35.2	
E1302	**La Puebla de C**	**2.28**	**71**	Pn		**Pn**	**17 53 09.3**	**+0.9**
E1302				Sn		**Sn**	**17 53 35.2**	**-0.5**
E1302				*i* lVmb_Lg			17 53 49.4	
PARRA	**Arraiolos**	**2.41**	**358**	*eP*		**Pn**	**17 53 11.6**	**+1.3**
PARRA				*eS*		**Sn**	**17 53 39.4**	**+0.4**
PARRA				*i* IAML			17 53 41.0	
PARRA				*i* IAML			17 53 42.3	
PARRA				*i* IAML			17 53 42.4	
ECAB	**El Cabril**	**2.61**	**49**	P		**Pn**	**17 53 14.8**	**+1.9**
ECAB	**El Cabril**	**2.61**	**49**	Pg		**Pn**	**17 53 15.6**	**+2.7**
ECAB				Sn		**Sn**	**17 53 42.8**	**-1.1**
ECAB				*i* lVmb_Lg			17 53 53.9	
PMTG	**Montargil**	**2.67**	**355**	*eP*		**Pn**	**17 53 15.0**	**+1.2**
PMTG				*eS*		**Sn**	**17 53 46.3**	**+0.9**
PMTG				*i* IAML			17 53 47.0	
PMTG				*i* IAML			17 53 47.4	
PMTG				*i* IAML			17 53 48.6	
PMRV	**Marv??o**	**3.05**	**8**	*eP*		**Pn**	**17 53 20.6**	**+1.6**
PMRV				*eS*		**Sn**	**17 53 56.1**	**+1.4**
PMRV				*i* IAML			17 53 57.3	
PMRV				*i* IAML			17 53 58.5	
PMRV				*i* IAML			17 53 58.9	
PSARD	**Sardoal**	**3.20**	**357**	*eP*		**Pn**	**17 53 22.5**	**+1.4**
PSARD				*eS*		**Sn**	**17 53 58.8**	**+0.3**
PSARD				*i* IAML			17 54 00.6	
PSARD				*i* IAML			17 54 01.9	
PSARD				*i* IAML			17 54 02.3	
EADA	**Adamuz**	**3.20**	**56**	P		**Pn**	**17 53 22.6**	**+1.5**
EADA				*S*		**Sn**	**17 53 58.4**	**-0.2**
EADA	**Adamuz**	**3.20**	**56**	Pn		**Pn**	**17 53 22.1**	**+0.9**
EADA				Sn		**Sn**	**17 53 56.9**	**-1.6**
EADA				*i* lVmb_Lg			17 54 03.1	

UPP 17 18:00:47.7±0.1, 67.06N×20.97E, h0km, ML2.5, Suspected explosion
HEL 17 18:00:47.5±0.2, 67.06N×20.80E, h0km, ML2.0, Suspected explosion
IDC 17 18:00:48.4±0.8, 67.06N×21.23E, h0km, mbtmp3.3/5, ML2.2/5, Error ellipse: s-maj=15.4km s-min=7.5km az=107.0
ISC 17 18:00:47.4±0.7, 67.08N±0.02×20.93E±0.02, h0km, n45, σ0§84/77, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DUNU	**Dundret**	**0.15**	**285**	P		**Pg**	**18 00 51.1**	**+1.0**
DUNU				S		**Sg**	**18 00 53.4**	**+1.4**
MASU	**Masugnsbyn**	**0.56**	**47**	P		**Pg**	**18 00 58.5**	**+0.4**
MASU				S		**Sg**	**18 01 05.8**	**+0.5**
ERTU	**Ertsjaerv**	**0.73**	**136**	P		**Pg**	**18 01 00.9**	**-0.5**
ERTU				S		**Sg**	**18 01 10.5**	**-0.3**
ERTU	**Ertsjaerv**	**0.73**	**136**	PG		**Pg**	**18 01 00.6**	**-0.7**
ERTU				SB		**Sg**	**18 01 11.0**	**+0.2**
KUA	**Kurravaara**	**0.90**	**346**	P		**Pg**	**18 01 04.8**	**+0.1**
	baz=177							
KUA				S		**Sb**	**18 01 17.5**	**-1.0**
RATU	**Laukkuluspa**	**0.91**	**326**	P		**Pg**	**18 01 04.8**	**+0.1**
RATU				S		**Sb**	**18 01 17.8**	**-0.7**
HARU	**Harads**	**0.93**	**179**	P		**Pg**	**18 01 04.5**	**-0.5**
HARU				S		**Sg**	**18 01 17.0**	**0.0**
SALU	**Saltoluokta**	**0.99**	**289**	P		**Pb**	**18 01 06.5**	**-0.9**
SALU				S		**Sb**	**18 01 20.3**	**-0.7**
LANU	**Lannavaara**	**1.05**	**22**	P		**Pg**	**18 01 07.2**	**-0.3**
LANU				S		**Sb**	**18 01 21.9**	**-0.8**
LANU	**Lannavaara**	**1.05**	**22**	PG		**Pg**	**18 01 07.0**	**-0.5**
LANU				SB		**Sb**	**18 01 22.4**	**-0.4**
NIKU	**Nikkaluokta**	**1.07**	**318**	P		**Pg**	**18 01 07.9**	**0.0**
NIKU				S		**Sb**	**18 01 23.2**	**-0.1**
KOVU	**Salmi**	**1.18**	**346**	P		**Pg**	**18 01 09.8**	**-0.2**
	baz=172							
KOVU				S		**Sb**	**18 01 26.5**	**0.0**
KLF	**Kolari**	**1.20**	**81**	PG		**Pg**	**18 01 09.5**	**-0.7**
	baz=259							
KLF				smax		smax	18 01 25.4	
	comp=Z,13nm,0.2s							
KLF				SG		**Sg**	**18 01 25.8**	**+0.1**
KALU	**Kalix**	**1.57**	**140**	P		**Pn**	**18 01 15.8**	**-0.6**
SJUU	**Sjulsmark**	**1.61**	**170**	P		**Pn**	**18 01 16.8**	**-0.2**
HEF	**Hetta**	**1.69**	**37**	*eP*		**Pn**	**18 01 18.5**	**+0.4**
HEF	**Hetta**	**1.69**	**37**	PG		**Pn**	**18 01 18.0**	**-0.1**
	baz=220							
HEF				smax		smax	18 01 39.3	
	comp=Z,17nm,0.2s							
HEF				SN		**Sb**	**18 01 41.0**	**-0.1**
TOF	**Tornio**	**1.69**	**125**	PG		**Pn**	**18 01 18.0**	**-0.1**
TOF				smax		smax	18 01 38.8	
	comp=Z,10nm,0.2s							
TOF				SG		**Sn**	**18 01 40.3**	**-0.1**
KIF	**Kilpisjarvi**	**1.93**	**359**	*eP*		**Pg**	**18 01 23.8**	**-0.5**
KIF	**Kilpisjarvi**	**1.93**	**359**	PG		**Pb**	**18 01 23.1**	**-0.3**
KIF				smax		smax	18 01 46.9	
	comp=Z,28nm,0.2s							
KIF				SG		**Sg**	**18 01 50.4**	**+1.1**
RNF	**Rovaniemi**	**2.07**	**101**	PG		**Pn**	**18 01 24.0**	**+0.8**
RNF				SG		**Sb**	**18 01 51.8**	**-0.1**
KTK1	**Kautokeino**	**2.12**	**23**	PG		**Pb**	**18 01 25.5**	**-1.2**
KTK1				SG		**Sb**	**18 01 54.0**	**+0.5**
RANF	**Ranua**	**2.58**	**112**	PN		**Pn**	**18 01 30.9**	**+0.6**
	baz=299							
RANF				SB		**Sb**	**18 02 06.4**	**-0.2**
TRO	**Tromso**	**2.67**	**345**	PG		**Pb**	**18 01 35.6**	**-0.3**
TRO				SB		**Sb**	**18 02 07.9**	**-1.2**
OBF4	**Vikkela, Lumij**	**2.85**	**141**	PB		**Pn**	**18 01 35.2**	**+1.2**
OBF4				smax		smax	18 02 11.7	
	comp=Z,2.3nm,0.2s							
OUL	**Oulu**	**2.85**	**132**	PB		**Pn**	**18 01 35.5**	**+1.5**
OUL				SG		**Sb**	**18 02 15.8**	**+1.4**
OBF0	**Syolatti, Pyha**	**2.93**	**151**	PG		**Pb**	**18 01 40.6**	**+0.1**
OBF0				smax		smax	18 02 13.8	
	comp=Z,3.5nm,0.2s							
ARA0	**ARCESS Array S**	**2.99**	**33**	PN		**Pn**	**18 01 36.5**	**+0.5**
	baz=218							
ARA0				SN		**Sn**	**18 02 14.3**	**+1.7**
ARCES	**ARCESS Array B**	**2.99**	**33**	Pn		**Pn**	**18 01 36.7**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=215,slow=14,SNR=43							
ARCES				Sn		**Sn**	**18 02 12.9**	**+0.4**
	comp=Z,1.6nm,0.3s,baz=219,slow=23,SNR=13							
	comp=Z,1.5nm,0.3s							
RAJF	**Raja-Jooseppi**	**3.13**	**60**	PN		**Pn**	**18 01 38.1**	**+0.1**
RAJF				SN		**Sn**	**18 02 16.2**	**+0.2**
OUF	**Merijarvi**	**3.15**	**148**	PB		**Pn**	**18 01 39.8**	**+1.7**
UMAU	**Umeaa**	**3.22**	**182**	PB		**Pn**	**18 01 39.9**	**+0.9**
UMAU				SG		**Sb**	**18 02 26.0**	**+1.1**
KU2

DAT	**Datca**	**0.28**	**143**	Pg	**Pg**	18 14 38.8	**0.0**	**EFP**	**Efpalio**	**4.58**	**290**	P	**Pn**	18 15 43.2	**+1.7**	**HRFI**	**Mount Harif**	**9.41**	**135**	P	**Pn**	18 16 46.4	**-1.5**
DAT				Sg	**Sg**	18 14 43.4	**+0.5**	**EFP**	**Efpalio**	**4.58**	**290**	P	**Pn**	18 15 43.0	**+1.6**	HRFI				S	**Sn**	18 18 27.4	**-6.0**
DAT	**Datca**	**0.28**	**143**	P	**Pg**	18 14 38.9	**0.0**	**PLG**	**Polygyros**	**4.59**	**319**	P	**Pn**	18 15 42.1	**+0.3**	**CUC**	**Castrococco**	**9.55**	**292**		**Pn**	18 16 50.9	**+1.1**
DATC	**Datca-Mugla**	**0.30**	**129**	Pg	**Pg**	18 14 39.4	**+0.2**	**DRO**	**Drossia**	**4.61**	**284**	P	**Pn**	18 15 43.6	**+1.6**	**TESR**	**Tescani**	**9.57**	**357**	⇓P	**Pn**	18 16 50.5	**+0.5**
KLNA	**Kalymnos**	**0.32**	**271**	P	**Pg**	18 14 39.2	**-0.2**	**KAVA**	**Kavala**	**4.61**	**332**	P	**Pn**	18 15 42.0	**+0.1**	**EIL**	**Elat**	**9.64**	**137**	P	**Pn**	18 16 49.4	**-1.6**
KLNA				S	**Sg**	18 14 43.9	**0.0**	**ANX**	**Ano Chora**	**4.62**	**292**	P	**Pn**	18 15 43.6	**+1.5**		comp=E,2.1nm,0.3s,baz=337,slow=15,SNR=14						
DIDI	**Didim-Aydin**	**0.44**	**346**	Pg	**Pg**	18 14 41.1	**-0.5**	**MDUB**	**Mudurnu**	**4.62**	**39**		**Pn**	18 15 42.5	**+0.4**	EIL				Sn	Sn	18 18 30.0	**-9.1**
DDIM	**Aydin, Didim**	**0.52**	**349**	P	**Pg**	18 14 42.6	**-0.5**	**MAKR**	**Makrakomi, Fth**	**4.62**	**298**	P	**Pn**	18 15 44.0	**+1.8**		comp=E,10nm,0.3s,baz=58,slow=21,SNR=9.9						
DDIM				S	**Sb**	18 14 50.7	**-0.2**	**SAHE**	**Sakarya_HENDEK**	**4.75**	**34**	⇑P	**Pn**	18 15 44.4	**+0.5**		comp=E,13nm,0.6s						
TURN	**Turunc**	**0.72**	**104**	Pg	**Pg**	18 14 46.3	**-0.6**	**TYRN**	**Tyrnavos**	**4.89**	**306**	P	**Pn**	18 15 47.2	**+1.4**	**EIL**	**Elat**	**9.64**	**137**	P	**Pn**	18 16 49.2	**-1.8**
TURN				Sg	**Sb**	18 14 58.1	**+1.2**	**HORT**	**Hortiatis**	**4.94**	**319**	P	**Pn**	18 15 46.9	**+0.4**	EIL				S	**Sn**	18 18 33.4	**-5.6**
TURN	**Turunc**	**0.72**	**104**	P	**Pg**	18 14 46.6	**-0.3**	**THL**	**Klokotos Trika**	**4.96**	**303**	P	**Pn**	18 15 47.5	**+0.8**	**BZS**	**Buzias**	**9.68**	**335**	⇓P	**Pn**	18 16 51.5	**0.0**
TURN				S	**Sn**	18 14 58.5	**-0.8**	**SOH**	**Sokhos**	**4.97**	**322**	P	**Pn**	18 15 47.3	**+0.3**	**BZS**	**Buzias**	**9.68**	**335**	P	**Pn**	18 16 51.4	**0.0**
YER	**Yerkesik**	**0.75**	**76**	P	**Pg**	18 14 47.2	**-0.3**	**SOH**	**Sokhos**	**4.97**	**322**	P	**Pn**	18 15 47.3	**+0.3**	**ACER**	**Acerenza**	**9.70**	**297**		**Pn**	18 16 52.1	**+0.3**
YER				S	**Sb**	18 14 58.3	**+0.4**	**THE**	**Thessaloniki**	**5.03**	**318**	P	**Pn**	18 15 48.7	**+0.9**	**SGRT**	**San Giovanni R**	**10.20**	**302**	Pn	**Pn**	18 16 58.6	**-0.1**
YER	**Yerkesik**	**0.75**	**76**	Pg	**Pg**	18 14 46.9	**-0.6**	**THE**	**Thessaloniki**	**5.03**	**318**	P	**Pn**	18 15 48.5	**+0.7**	**MARR**	**Marisel-Cluj**	**10.22**	**343**	⇓P	**Pn**	18 16 58.7	**-0.3**
YER	**Yerkesik**	**0.75**	**76**	P	**Pg**	18 14 47.2	**-0.3**	**RZN**	**Rozhen**	**5.16**	**338**	P	**Pn**	18 15 50.1	**+0.5**	**RAFF**	**Raffo Rosso**	**10.40**	**275**	Pn	**Pn**	18 17 02.3	**+0.9**
YER				S	**Sb**	18 14 58.2	**+0.4**	**CSS**	**Mathiatis**	**5.23**	**111**		**Pn**	18 15 50.7	**+0.2**	**PAOL**	**Paolisi**	**10.76**	**296**	Pn	**Pn**	18 17 06.3	**-0.1**
GCAM	**G?zelcaml?**	**0.76**	**352**	Pg	**Pg**	18 14 46.8	**-0.7**	**CSS**	**Mathiatis**	**5.23**	**111**	P	**Pn**	18 15 49.5	**-0.9**	**BURAR**	**Bucovina Array**	**10.78**	**352**	⇑P	**Pn**	18 17 07.5	**+0.8**
GCAM	**G?zelcaml?**	**0.76**	**352**	P	**Pg**	18 14 46.9	**-0.7**	CSS				S	**Sn**	18 16 45.6	**-4.9**	**BURAR**	**Bucovina Array**	**10.78**	**352**	Pn	**Pn**	18 17 06.1	**-0.5**
GCAM				S	**Sb**	18 14 58.6	**+0.8**	**DIM**	**Dimitrovgrad**	**5.27**	**345**	P	**Pn**	18 15 51.3	**+0.2**	**BURAR**	**Bucovina Array**	**10.78**	**352**	P	**Pn**	18 17 07.4	**+0.8**
AYDN	**Tasoluk**	**0.82**	**30**	P	**Pg**	18 14 48.2	**-0.6**	**MMB**	**Musomishta**	**5.38**	**330**	P	**Pn**	18 15 53.5	**+0.9**	**BUR08**	**Bucovina Ar. S**	**10.80**	**352**			18 17 07.2	**+0.2**
AYDN				S	**Sg**	18 14 59.1	**-0.4**	**PLD**	**Plovdiv**	**5.57**	**339**	P	**Pn**	18 15 55.7	**+0.6**	**ANN**	**Anapa**	**10.93**	**41**	*e*P	**Pn**	18 17 09.6	**+1.0**
MULA	**Mugla, Merkez-**	**0.82**	**68**	P	**Pg**	18 14 48.2	**-0.6**	**KIRS**	**Kirsehir-Merke**	**5.61**	**65**	⇑P	**Pn**	18 15 55.7	**-0.1**	ANN				*e*S	**Sn**	18 19 12.3	**+1.8**
MULA				S	**Sg**	18 14 59.0	**-0.6**	**BR131**	**Keskin Array S**	**5.65**	**59**		**Pn**	18 15 58.1	**+1.7**	ANN				pmax	pmax		
RDI1	**Rhodes Town Ha**	**0.85**	**126**	P	**Pg**	18 14 49.7	**+0.4**	**BR131**	**Keskin Array S**	**5.65**	**59**	*c*	*i*P	**Pn**	18 15 58.3	**+1.9**	comp=Z,48nm,1.1s						
RDI1				S	**Sb**	18 15 01.4	**+1.0**	**BRTR**	**Keskin Array B**	**5.65**	**59**	Pn	**Pn**	18 15 58.4	**+2.0**	**SOC**	**Sochi**	**11.52**	**51**	*e*P	**Pn**	18 17 19.2	**+2.5**
RODB	**Rodos**	**0.85**	**126**	P	**Pg**	18 14 49.5	**+0.2**		2.8nm,0.3s,baz=237,slow=15,SNR=78							SOC				*e*S	**Sn**	18 19 29.8	**+4.7**
RODB				S	**Sb**	18 15 01.1	**+0.7**	BRTR				Sn	**Sn**	18 17 01.9	**+0.7**	SOC				pmax	pmax		
SMG	**Samos**	**0.87**	**331**	P	**Pb**	18 14 48.8	**-0.8**		baz=172,slow=26								comp=Z,9.0nm,0.8s						
SMG				S	**Sb**	18 15 01.5	**+0.4**		6.9nm,0.3s							SOC				MLR	MLR		
SMG	**Samos**	**0.87**	**331**	P	**Pb**	18 14 48.8	**-0.8**	**BRTR**	**Keskin Array B**	**5.65**	**59**		**Pn**	18 15 58.0	**+1.6**		comp=Z,262nm,18.0s						
SMG				S	**Sg**	18 15 00.0	**-1.1**	**KKB**	**Krupnik**	**5.88**	**327**	P	**Pn**	18 16 01.0	**+1.5**	**NRCA**	**Norcia**	**12.42**	**303**	Pn	**Pn**	18 17 27.9	**-1.2**
KUSD	**Kusadasi-Aydin**	**0.91**	**356**	Pg	**Pb**	18 14 49.7	**-0.6**	**ELND**	**Elena**	**6.08**	**350**	⇑P	**Pn**	18 16 01.9	**-0.3**	**FDMO**	**Fiordimonte**	**12.52**	**303**	Pn	**Pn**	18 17 29.4	**-1.0**
ARG	**Arkhangelos**	**0.95**	**140**		**Pb**	18 14 50.6	**-0.5**	**PLNA**	**Plana**	**6.30**	**332**	P	**Pn**	18 16 06.9	**+1.6**	**LABN**	**Labinsk**	**12.69**	**49**	*e*P	**Pn**	18 17 33.6	**+0.8**
ARG				Sg	**Sn**	18 15 04.7	**-0.3**	**KBN**	**Korca**	**6.31**	**308**	P	**Pn**	18 16 08.3	**+2.9**	LABN				*e*S	**Sn**	18 19 55.3	**+1.5**
ARG	**Arkhangelos**	**0.95**	**140**	P	**Pb**	18 14 50.8	**-0.3**	**ILGA**	**Ilgaz**	**6.42**	**48**	Pn	**Pn**	18 16 06.5	**-0.5**	LABN				pmax	pmax		
ARG				S	**Sn**	18 15 05.0	**0.0**	**VTS**	**Vitosha**	**6.49**	**332**	P	**Pn**	18 16 09.2	**+1.2**		comp=Z,13nm,0.6s						
ARG	**Arkhangelos**	**0.95**	**140**	Pg	**Pb**	18 14 50.7	**-0.3**	**CIDE**	**Kastamonu/Cide**	**6.55**	**40**	⇓P	**Pn**	18 16 08.5	**0.0**	**ERBR**	**Yeremizino-Bor**	**13.17**	**44**	*e*P	**Pn**	18 17 40.1	**+0.9**
ARG	**Arkhangelos**	**0.95**	**140**	P	**Pb**	18 14 50.6	**-0.5**	**KEK**	**Kerkira**	**6.56**	**297**	Pn	**Pn**	18 16 10.2	**+1.5**	ERBR				*e*S	**Sn**	18 20 06.8	**+1.4**
ARG						18 15 04.7		**PLVB**	**Pleven**	**6.76**	**343**	⇓P	**Pn**	18 16 11.5	**0.0**	ERBR				pmax	pmax		
ARG	**Arkhangelos**	**0.95**	**140**	P	**Pb**	18 14 50.8	**-0.3**	**BNN**	**Bunyan**	**6.97**	**72**	Pn	**Pn**	18 16 15.6	**+1.1**		comp=Z,4.0nm,0.5s						
ARG				S	**Sn**	18 15 05.0	**0.0**	**MPEP**	**Malo Peshtene**	**6.97**	**338**	P	**Pn**	18 16 15.6	**+1.2**	**NEUR**	**Neytrino**	**13.31**	**57**	⇓*e*P	**Pn**	18 17 41.1	**-0.3**
KRL1	**Karlovasi Samo**	**0.99**	**328**	P	**Pb**	18 14 51.3	**-0.5**	**BZK**	**Bozkurt**	**7.17**	**44**	Pn	**Pn**	18 16 18.3	**+1.3**	**SOKA**	**Soboth**	**13.37**	**320**	*e*P	**Pn**	18 17 43.5	**+1.5**
KRL1				S	**Sb**	18 15 04.5	**-0.1**	**ICOR**	**Ion Corvin**	**7.17**	**2**	⇓P	**Pn**	18 16 17.8	**+0.8**		comp=Z,0.1nm,0.2s						
AYDB	**Zeytinkoy-Aydi**	**1.08**	**23**	Pg	**Pb**	18 14 52.8	**-0.5**	**HNTI**	**Hanita**	**7.47**	**119**	P	**Pn**	18 16 20.3	**-1.0**	**OBKA**	**Obir**	**13.51**	**319**	*e*P	**Pn**	18 17 45.2	**+1.3**
ESEN	**Aydn-Nazilli**	**1.15**	**42**	P	**Pn**	18 14 54.0	**-0.4**	HNTI				S	**Sn**	18 17 40.9	**-5.0**		comp=Z,3.6nm,1.0s						
ESEN				S	**Sg**	18 15 10.6	**+0.5**	**HWQ**	**Hawqa**	**7.48**	**108**	*e*P	**Pn**	18 16 21.3	**-0.2**	**ARSA**	**Arzberg**	**13.52**	**323**	Pn	**Pn**	18 17 44.0	**0.0**
DGB	**zmir**	**1.17**	**341**	P	**Pn**	18 14 53.6	**-1.0**	**TIRR**	**Tirgusor**	**7.54**	**6**	Pn	**Pn**	18 16 21.5	**-0.7**	**ARSA**	**Arzberg**	**13.52**	**323**	*e*P	**Pn**	18 17 46.3	**+2.3**
DGB				S	**Sn**	18 15 10.6	**-0.3**	**TIRR**	**Tirgusor**	**7.54**	**6**	P	**Pn**	18 16 21.5	**-0.7**		comp=Z,5.8nm,1.1s						
GMLD	**Gumuldur**	**1.18**	**342**	Pn	**Pn**	18 14 54.1	**-0.7**	**BEIL**	**Beino**	**7.56**	**106**	*e*P	**Pn**	18 16 22.2	**-0.3**	**KBZ**	**Khabaz**	**13.63**	**55**	Pn	**Pn**	18 17 47.7	**+2.2**
NAZL	**Nazilli-Aydin**	**1.25**	**36**	Pn	**Pn**	18 14 55.7	**-0.1**	**ZAHL**	**Zahle**	**7.61**	**111**	*e*P	**Pn**	18 16 21.5	**-1.7**		comp=Z,0.1nm,0.3s,baz=258,slow=7.8,SNR=4.4						
DUVT	**Torbali**	**1.27**	**3**	P	**Pn**	18 14 55.2	**-0.9**	**OFRI**	**`Ofer**	**7.61**	**122**	P	**Pn**	18 16 22.0	**-1.2**		comp=Z,1.6nm,1.0s						
DUVT				S	**Sg**	18 15 14.3	**+0.5**	OFRI				S	**Sn**	18 17 43.9	**-5.3**	**KBZ**	**Khabaz**	**13.63**	**55**	⇑*e*P	**Pn**	18 17 45.7	**+0.2**
IZMR	**zmir-demi**	**1.27**	**21**	P	**Pn**	18 14 55.8	**-0.3**	**MMC7**	**Mount Meron ar**	**7.66**	**118**	P	**Pn**	18 16 23.2	**-0.8**	**AKASG**	**Malin Array Be**	**13.81**	**5**	Pn	**Pn**	18 17 45.6	**-2.3**
IZMR				S	**Sb**	18 15 12.1	**-0.6**	**MMA0B**	**Mount Meron ar**	**7.67**	**118**	P	**Pn**	18 16 22.7	**-1.4**		comp=Z,0.2nm,0.3s,baz=195,slow=11,SNR=1.3						
SABU	**Mula-Dalaman**	**1.29**	**95**	P	**Pb**	18 14 56.9	**+0.1**	MMA0B				S	**Sn**	18 17 45.9	**-4.9**		comp=Z,0.2nm,0.2s						
SABU				S	**Sg**	18 15 14.8	**+0.3**	**MMAI**	**Mount Meron Ar**	**7.67**	**118**	Pn	**Pn**	18 16 22.8	**-1.4**	**JAVC**	**Velka Javorina**	**13.85**	**332**	*e*PN	**P**	18 18 01.1	**+4.3**
TAVA	**DENIZLI_Tavas**	**1.34**	**67**	P	**Pb**	18 14 57.9	**+0.3**		4.7nm,0.3s,baz=310,slow=13,SNR=46							**KRUC**	**Moravsky**	**14.50**	**330**	*e*PN	**P**	18 18 04.8	**+0.7**
TAVA				S	**Sg**	18 15 16.0	**+0.1**	MMAI				Sn	**Sn**	18 17 45.3	**-5.5**	**KBA**	**Koelnbreinsper**	**14.51**	**319**	*e*P	**Pn**	18 18 00.5	**+2.8**
ODEM	**Odemis-Izmir**	**1.44**	**23**	Pn	**Pn**	18 14 58.1	**-0.3**		25nm,0.3s,baz=301,slow=22,SNR=10								comp=Z,0.7nm,0.7s						
BLCB	**Balcova**	**1.46**	**350**	P	**Pn**	18 14 57.6	**-1.0**	**BLGI**	**Bet Lehem HaGe**	**7.68**	**121**	P	**Pn**	18 16 23.1	**-1.1**	**MOA**	**Molln**	**14.55**	**323**	*e*P	**P**	18 18 02.8	**-1.8**
BLCB	**Balcova**	**1.46**	**350**	Pn	**Pn**	18 14 57.7	**-0.9**	BLGI				S	**Sn**	18 17 45.9	**-5.1**		comp=Z,0.6nm,0.5s						
CAME	**Cameli-Denizli**	**1.55**	**90**	Pn	**Pb**	18 15 01.6	**+0.3**	**RCY**	**Rachaya**	**7.74**	**114**	*e*P	**Pn**	18 16 28.7	**+3.6**	**KEST**	**Kesra**	**14.58**	**271**	Pn	**Pn**	18 17 59.0	**+0.4**
NAX1	**Naxos Island**	**1.60**	**276**	P	**Pn**	18 15 00.2	**-0.4**	**GEM**	**Giv'at Ha'Em**	**7.75**	**116**	P	**Pn**	18 16 24.1	**-1.1**		comp=Z,0.1nm,0.3s,baz=151,slow=19,SNR=2.1						
APMY	**Acipayam-Deniz**	**1.63**	**71**	Pn	**Pn**	18 15 01.2	**+0.1**	GEM				S	**Sn**	18 17 47.6	**-5.1**		comp=Z,4.5nm,1.0s						
THERA	**Ancient Thera,**	**1.63**	**260**	P	**Pn**	18 15 01.3	**+0.3**	**NATI**	**Neve Ativ**	**7.78**	**116**	P	**Pn**	18 16 24.3	**-1.2**	**KEST**	**Kesra**	**14.58**	**271**	Pn	**Pn**	18 17 59.6	**+0.9**
SNT5	**Nea Kammeni, S**	**1.68**	**252**	P	**Pn**	18 15 01.9	**+0.3**	NATI				S	**Sn**	18 17 48.6	**-4.7**	**VRAC**	**Vranov**	**14.62**	**331**	Pn	**Pn**	18 18 00.1	**+1.0**
SAP3	**Santorini-Thir**	**1.71**	**253**	P	**Pn**	18 15 02.4	**+0.4**	**GAZ**	**Gaziantep**	**7.87**	**85**		**Pn**	18 16 27.7	**+0.9**		comp=Z,0.1nm,0.3s,baz=153,slow=12,SNR=4.8						
KRBN	**Karaburun**	**1.76**	**339**	Pn	**Pn**	18 15 02.3	**-0.5**	**SLTI**	**Sal'it**	**7.88**	**124**	P	**Pn**	18 16 25.3	**-1.6**	VRAC				LR	LR	18 25 18.9	
CHOS	**Chios island**	**1.77**	**324**	P	**Pn**	18 15 02.2	**-0.8**	SLTI				S	**Sn**	18 17 50.4	**-5.4**		comp=Z,262nm,18.3s,baz=190,slow=44						
CHOS	**Chios island**	**1.77**	**324**	P	**Pn**	18 15 02.4	**-0.7**	**TOKA**	**Tokat**	**7.88**	**62**	Pn	**Pn**	18 16 27.9	**+1.0**		comp=Z,1.0nm,0.5s						
MANT	**Manisa**	**1.80**	**31**		**Pn**	18 15 03.9	**+0.2**	**SNOP**	**Sinop**	**7.89**	**48**	Pn	**Pn**	18 16 27.4	**+0.3**	**VRAC**	**Vranov**	**14.62**	**331**	*e*PN	**P**	18 18 06.8	**+1.4**
GOMA	**Golmarmara-Man**	**1.81**	**14**	Pn	**Pn**	18 15 03.4	**0.0**	**KSHT**	**Keshet**	**7.98**	**117**	P	**Pn**	18 16 27.1	**-1.3**	**BIOA**	**Bad Ischl, Aus**	**14.75**	**321**	*e*P	**Pn**	18 18 02.5	**+1.6**
FOCM	**Foa**	**1.83**	**344**	Pn	**Pn**	18 15 03.2	**-0.5**	KSHT				S	**Sn**	18 17 53.4	**-5.0**		comp=Z,0.3nm,0.4s						
KULA	**Kula-Manisa**	**1.87**	**33**	Pn	**Pn**	18 15 04.3	**0.0**	**MMLI**	**Mount Malkishu**	**8.01**	**122**	P	**Pn**	18 16 27.6	**-1.2**	**KRLC**	**Kraliky**	**15.18**	**333**	*e*P	**P**	18 18 13.5	**+1.9**
EAG2	**Marmaro, Chios**	**1.88**	**328**	P	**Pn**	18 15 04.2	**-0.2**	MMLI				S	**Sn**	18 17 53.9	**-5.3**	**KRLC**	**Kraliky**	**15.18**	**333**	*e*P	**P**	18 18 13.5	**+1.9**
AKAS	**Kas**	**1.94**	**111**		**Pn**	18 15 06.4	**+1.1**	**SALP**	**Salfit**	**8.09**	**125**	P	**Pn**	18 16 28.8	**-0.9**	**GERES**	**GERESS Array B**	**15.51**	**324**	Pn	**Pn**	18 18 10.6	**-0.5**
AKAS	**Kas**	**1.94**	**111**	Pn	**Pn**	18 15 05.6	**+0.3**	SALP				S	**Sn**	18 17 55.6	**-5.3**		baz=146,slow=14,SNR=6.8						
KSL	**Kastellorizon**	**1.95**	**113**	P	**Pn**	18 15 06.4	**+1.0**	**ISR**	**Istrita**	**8.18**	**356**	⇑P	**Pn**	18 16 30.9	**-0.2**		comp=Z,1.0nm,0.9s						
KSL	**Kastellorizon**	**1.95**	**113**	P	**Pn**	18 15 06.5	**+1.0**	**ISR**	**Istrita**	**8.18**	**356**	P	**Pn**	18 16 30.8	**-0.2**	**WATA**	**Walderalm**	**15.62**	**317**	*e*P	**P**	18 18 16.2	**-0.4**
ELL	**Elmali**	**2.05**	**95**		**Pb**	18 15 08.8	**-0.9**	**HMDT**	**Nahal Hemdat**	**8.20**	**122**	P	**Pn**	18 16 30.3	**-0.9**		comp=Z,0.5nm,0.4s						
ELL	**Elmali**	**2.05**	**95**	P	**Pb**	18 15 08.9	**-0.9**	HMDT				S	**Sn**	18 17 58.1	**-5.4**	**ZVC**	**Zvikov**	**15.72**	**327**	*e*P	**P**	18 18 19.6	**+2.0**
ZKR	**Zakros**	**2.06**	**207**	Pn	**Pn**	18 15 06.9	**0.0**	**CFR**	**Carcaliu**	**8.24**	**4**	⇑P	**Pn**	18 16 30.8	**-1.0**	**SQTA**	**Sankt Quirin**	**15.76**	**316**	*e*P	**P**	18 18 16.7	**-1.4**
ZKR	**Zakros**	**2.06**	**207**	P	**Pn**	18 15 06.8	**+1.0**	**CFR**	**Carcaliu**	**8.24**	**4**	P	**Pn**	18 16 30.7	**-1.0**		comp=Z,2.5nm,0.8s						
NPS	**Neapolis**	**2.20**	**221**	P	**Pn**	18 15 09.8	**+0.8**	**AMAZ**	**Amatzia**	**8.26**	**129**	P	**Pn**	18 16 30.8	**-1.4**	**KHC**	**Kasperske Hory**	**15.77**	**325**	*e*P	**P**	18 18 17.5	**-0.7**
NPS	**Neapolis**	**2.20**	**221**	P	**Pn**	18 15 09.7	**+0.8**	AMAZ				S	**Sn**	18 17 59.4	**-5.8**	**KHC**	**Kasperske Hory**	**15.77**	**325**	*e*P	**P**	18 18 17.5	**-0.7**
MHLO	**Agia Marina, M**	**2.40**	**265**	P	**Pn**	18 15 11.6	**+0.1**	**PDG**	**Podgorica**	**8.31**	**314**	⇑P	**Pn**	18 16 33.9	**+1.2**	KHC				epP	**pP**	18 18 21.7	**-0.7**
PRK	**Paraskevi**	**2.45**	**340**	P	**Pn**	18 15 11.7	**-0.5**	**PDG**	**Podgorica**	**8.31**	**314**		**Pn**	18 16 34.2	**+1.5**	**MOTA**	**Moosalm**	**15.89**	**316**	*e*P	**P**	18 18 20.5	**+0.9**
PRK	**Paraskevi**	**2.45**	**340**	P	**Pn**	18 15 11.8	**-0.4**	**UJAP**	**Al Uja**	**8.34**	**124**	P	**Pn**	18 16 31.8	**-1.3**		comp=Z,6.0nm,1.2s						
SIGR	**SIGRI**	**2.55**	**333**	P	**Pn**	18 15 13.5	**-0.2**	UJAP				S	**Sn**	18 18 01.6	**-5.4**	**FETA**	**Feichten**	**15.92**	**314**	*e*Pn	**Pn**	18 18 16.9	**+0.6**
KARY	**Karystos**	**2.57**	**296**	P	**Pn**	18 15 14.2	**+0.2**	**KZIT**	**Kziot**	**8.39**	**134**	P	**Pn**	18 16 32.1	**-1.8**		comp=Z,11nm,1.1s						
KARY	**Karystos**	**2.57**	**296**	P	**Pn**	18 15 13.9	**0.0**	KZIT				S	**Sn**	18 18 02.6	**-5.8**	**FUORN**	**Ofenpass-Fuorn**	**15.97**	**313**		**Pn**	18 18 17.1	**-0.1**
IDI	**Anoyia**	**2.60**	**231**	Pn	**Pn**	18 15 14.5	**0.0**	**YTIR**	**Yattir**	**8.50**	**129**	P	**Pn**	18 16 34.1	**-1.4**	**PRU**	**Pruhonice**	**15.98**	**329**	*e*P	**P**	18 18 22.2	**+1.7**
	22nm,0.3s,baz=52,slow=14,SNR=24							YTIR				S	**Sn**	18 18 05.7	**-5.5**	**PRU**	**Pruhonice**	**15.98**	**329**	*e*P	**P**	18 18 22.2	**+1.7**
IDI				Sn	**Sn**	18 15 44.8	**-1.0**	**DSI**	**Dead Sea**	**8.53**	**127**	P	**Pn**	18 16 34.3	**-1.5**	**DAVOX**	**Davos/Dischmat**	**16.28**	**313**	Pn	**Pn**	18 18 21.1	**0.0**
	15nm,0.3s,baz=342,slow=20,SNR=5.8							DSI				S	**Sn**	18 18 05.9	**-5.9**		comp=Z,0.1nm,0.3s,baz=144,slow=17,SNR=4.1						
ISP	**Isparta**	**2.66**	**70**		**Pn**	18 15 15.5	**+0.3**	**MLR**	**Muntele Rosu**	**8.60**	**353**	Pn	**Pn**	18 16 37.3	**+0.5**		comp=Z,2.3nm,0.8s						
ISP	**Isparta**	**2.66**	**70**	P	**Pn**	18 15 15.5	**+0.3**		0.3nm,0.3s,baz=201,slow=8.5,SNR=8.9							**VORD**	**Divnogorie**	**16.40**	**28**	*e*P	**P**	18 18 25.8	**+0.7**
ISP	**Isparta**	**2.66**	**70**	P	**Pn**	18 15 15.8	**+0.5**		6.6nm,0.8s							VORD				pmax	pmax		
ISP	**Isparta**	**2.66**	**70**	P	**Pn**	18 15 15.8	**+0.5**	**MLR**	**Muntele Rosu**	**8.60**	**353**	⇑P	**Pn**	18 16 36.4	**-0.4**		comp=Z,10.0nm,0.6s						
BALB	**Balikesir**	**2.71**	**8**		**Pn**	18 15 15.3	**-0.6**	**VOIR**		**8.66**	**349**	⇑P	**Pn**	18 16 37.5	**-0.1**	**VSR**	**Storozhevoye**	**16.56**	**27**	*e*P	**P**	18 18 25.7	**-1.1**
SKY	**Skiros Island**	**2.94**	**312**	P	**Pn**	18 15 19.6	**+0.5**	**VOIR**		**8.66**	**349**	P	**Pn**	18 16 37.5	**-0.1**	VSR				pmax	pmax		
SKY	**Skiros Island**	**2.94**	**312**	P	**Pn**	18 15 19.4	**+0.4**	**TIP**	**Timpagrande**	**8.66**	**288**	⇑P	**Pn**	18 16 39.0	**+1.4**		comp=Z,3.0nm,0.5s						
DION	**Dionisos Attik**	**2.95**	**293**	P	**Pn**	18 15 19.8	**+0.5**	**TIP**	**Timpagrande**	**8.66**	**288**		**Pn**	18 16 39.1	**+1.4**	**VORR**	**Voronezh**	**16.95**	**26**	*e*P	**P**	18 18 33.7	**+2.6**
DION	**Dionisos Attik**	**2.95**	**293**	P	**Pn**	18 15 19.4	**+0.2**	**MSBI**	**Mazada**	**8.69**	**128**	P	**Pn**	18 16 36.3	**-1.5**	VORR				pmax	pmax		
EZN	**Ezine**	**2.98**	**344**	P	**Pn**	18 15 19.3	**-0.3**	MSBI				S	**Sn**	18 18 09.4	**-6.2**		comp=Z,27nm,0.4s						
EZN	**Ezine**	**2.98**	**344**	P	**Pn**	18 15 19.3	**-0.3**	**HERR**	**Herculane**	**8.76**	**336**	⇑P	**Pn**	18 16 38.7	**-0.2**	**VRH**	**Novokhopyorsk**	**17.54**	**31**	*e*P	**P**	18 18 39.1	**+1.4**
VLY	**Voula,Athens**	**2.98**	**289**	P	**Pn**	18 15 20.1	**+0.5**	**GHAJ**	**Ghor Haditha**	**8.82**	**127**		**Pn**	18 16 40.0	**+0.1**	VRH				pmax	pmax		
VLY	**Voula,Athens**	**2.98**	**289**	P	**Pn**	18 15 19.9	**+0.2**	**GHAJ**	**Ghor Haditha**	**8.82**	**127**	P	**Pn**	18 16 39.9	**+0.1**		comp=Z,7.0nm,0.6s						
PTL	**Penteli**	**2.99**	**293**	P	**Pn**	18 15 20.3	**+0.5**	GHAJ				S	**Sn**	18 18 13.4	**-5.6**	**MNK**	**Minsk**	**17.56**	**1**	*i* P	**Pn**	18 18 37.2	**+0.4**
PTL	**Penteli**	**2.99**	**293**	P	**Pn**	18 15 20.2	**+0.5**	**RMNI**	**Mount Ramon**	**8.83**	**134**	P	**Pn**	18 16 38.8	**-1.2**		comp=E,29nm,0.8s						
ATHU	**Athens Univers**	**3.03**	**291**	P	**Pn**	18 15 20.6	**+0.4**	RMNI				S	**Sn**	18 18 13.9	**-5.4**	MNK				*i* P	**Pn**	18 18 37.2	**+0.4**
ATHU	**Athens Univers**	**3.03**	**291**	P	**Pn**	18 15 20.3	**+0.1**	**VLDR**	**Vladesti**	**8.90**	**3**	⇓P	**Pn**	18 16 41.0	**+0.2**		comp=N,13nm,0.7s						
ATH	**Athens Observa**	**3.08**	**290**	P	**Pn**	18 15 21.6	**+0.7**	**PLOR**	**Plostina**	**8.91**	**357**	⇑P	**Pn**	18 16 40.0	**-1.0**	MNK				*i* PP	**PnPn**	18 18 47.4	**+0.2**
ATH	**Athens Observa**	**3.08**	**290**	P	**Pn**	18 15 21.5	**+0.7**	**PLOR**	**Plostina**	**8.91**	**357**	P	**Pn**	18 16 40.0	**-1.0**	MNK				*i* PPP	PPP	18 18 55.1	
ATH	**Athens Observa**	**3.08**	**290**	P	**Pn**	18 15 21.6	**+0.7**	**MDVR**	**Moldovita**	**8.92**	**333**	⇑P	**Pn**	18 16 41.5	**+0.4**	MNK				*i* S	**Sn**	18 21 52.2	**+0.2**
KYMI	**Kymi, Euboea I**	**3.09**	**304**	P	**Pn**	18 15 21.2	**+0.2**	**VRI**	**Vrincioaia**	**8.92**	**357**	⇓P	**Pn**	18 16 41.9	**+0.7**	MNK				*i* SS	**SnSn**	18 22 07.0	**+1.6**
KYMI	**Kymi, Euboea I**	**3.

BELG pmax pmax
comp=Z,4.0nm,0.8s
VSU Vasula 21.53 359⇓ eP P 18 19 20.7 -0.4
VSU pmax pmax
comp=Z,31nm,1.2s
FINES FINESS Array B 24.53 359 P P 18 19 51.8 +0.3
comp=Z,3.9nm,0.8s,baz=153,slow=13,SNR=5.9
FINES PcP PcP 18 23 27.8 -1.5
comp=Z,2.5nm,0.9s,baz=134,slow=4.0,SNR=6.1
comp=Z,3.9nm,0.8s
FINES FINESS Array B 24.53 359 P P 18 19 51.3 -0.2
ESDC Sonseca Array 24.67 286 P P 18 19 53.5 +0.4
comp=Z,2.0nm,0.8s,baz=78,slow=8.7,SNR=9.6
comp=Z,2.0nm,0.8s
HFS Hagfors 24.80 344 P P 18 19 55.0 +1.0
comp=Z,3.3nm,0.8s,baz=174,slow=4.0,SNR=4.4
comp=Z,3.3nm,0.8s
HFS Hagfors 24.80 344 P P 18 19 55.0 +1.0
PAB San Pablo 24.98 286 P P 18 19 54.9 -1.0
PAB IAmb IAmb 18 20 32.5
comp=Z,8.5nm,1.1s
PAB San Pablo 24.98 286 P P 18 19 54.9 -1.0
PAB pmax pmax
comp=Z,9.0nm,1.2s
KLMR Klimovskoe 25.14 14 eP P 18 19 56.4 -0.6
KLMR pmax pmax
comp=Z,16nm,1.1s
NC204 NORSAR Array S 26.50 342 P 18 20 08.5 -1.0
AB31 Akbulak array 26.56 52 P 18 20 08.9 -1.1
ABKAR Akbulak array 26.56 52 P P 18 20 08.8 -1.2
MD01 Midelt array s 26.59 271 P P 18 20 10.8 +0.2
ARTI Arti 28.45 37 P P 18 20 27.1 +0.3
ARTI Arti 28.45 37⇑ eP P 18 20 27.5 +0.6
CHGR Chuyangaron 32.86 74 P P 18 21 06.1 -0.1
CHGR Chuyangaron 32.86 74⇓ eP P 18 21 06.2 +0.1
CHGR pmax pmax
comp=Z,8.0nm,0.7s
TORD Torodi Ar. Bea 33.01 231 P P 18 21 07.5 0.0
comp=Z,7.0nm,0.5s,baz=21,slow=5.5,SNR=46
comp=Z,7.0nm,0.5s
TORD Torodi Ar. Bea 33.01 231 IAmb IAmb 18 21 08.3
comp=Z,4.5nm,0.6s
KK31 Karatay Array 33.32 66 P 18 21 08.7 -1.3
KK31 IAmb IAmb 18 21 11.5
comp=Z,4.2nm,1.2s
KK31 Karatay Array 33.32 66 P P 18 21 08.7 -1.3
KK31 pmax pmax
comp=Z,4.0nm,1.2s
KKAR Karatay Array 33.32 66 P P 18 21 08.7 -1.3
KKAR Karatay Array 33.32 66 P P 18 21 08.7 -1.3
GAR Garm 33.69 73 P P 18 21 13.2 -0.2
GAR IAmb IAmb 18 21 50.6
comp=Z,4.5nm,1.0s
BVAR Borovoye Array 33.82 48 P P 18 21 15.0 +0.8
comp=Z,0.8nm,0.7s,baz=250,slow=7.5,SNR=5.3
comp=Z,0.8nm,0.7s
BVAR Borovoye Array 33.82 48 P P 18 21 15.0 +0.8
LODK Lodwar 34.17 166 P P 18 21 18.2 +0.6
ARSB Arslanbob 35.34 69 P P 18 21 26.9 -0.7
ARSB IAmb IAmb 18 21 33.8
comp=Z,2.5nm,0.5s
ARSB Arslanbob 35.34 69 P P 18 21 26.9 -0.7
ARSB pmax pmax
comp=Z,3.0nm,0.5s
AAK Ala-Archa 36.28 66 P 18 21 35.5 -0.3
AAK Ala-Archa 36.28 66⇓ eP P 18 21 36.8 +1.1
AAK pmax pmax
comp=Z,11nm,3.2s
BOOM Boomskoye usch 37.36 66 P P 18 21 44.8 -0.1
BOOM Boomskoye usch 37.36 66 P P 18 21 44.8 -0.1
BOOM pmax pmax
comp=Z,4.0nm,1.3s
NRN Naryn 37.56 68 P 18 21 47.0 +0.1
NRN Naryn 37.56 68 P P 18 21 47.0 +0.1
NRN pmax pmax
comp=Z,3.0nm,1.0s
KDJ Kajisay 38.32 66 P P 18 21 53.8 +0.7
KDJ Kajisay 38.32 66 P P 18 21 53.8 +0.7
KDJ pmax pmax
comp=Z,3.0nm,1.0s
KURBB Kurchatov Arra 38.61 53 P P 18 21 56.1 +0.9
comp=Z,7.6nm,0.9s,baz=278,slow=8.8,SNR=49
KURBB PcP PcP 18 24 07.4 +0.2
comp=Z,0.9nm,0.7s,baz=274,slow=3.9,SNR=4.8
comp=Z,7.6nm,0.9s
KURK Kurchatov 38.67 53 P 18 21 56.4 +0.7
KURK IAmb IAmb 18 21 57.3
comp=Z,5.4nm,0.9s
KURK Kurchatov 38.67 53 P P 18 21 56.4 +0.7
KURK 18 24 07.4
KURK pmax pmax
comp=Z,5.0nm,0.9s
MAKZ Makanchi 41.09 58 P P 18 22 16.4 +0.5
MAKZ Makanchi 41.09 58 P P 18 22 16.4 +0.5
MAKZ pmax pmax
comp=Z,3.0nm,0.6s
MK31 Makanchi Array 41.30 58 P P 18 22 17.9 +0.2
MK31 IAmb IAmb 18 22 19.2
comp=Z,4.1nm,0.7s
MK31 Makanchi Array 41.30 58 P P 18 22 17.9 +0.2
MK31 pmax pmax
comp=Z,4.0nm,0.7s
MKAR Makanchi Array 41.30 58 P P 18 22 18.7 +1.0
comp=Z,3.8nm,0.5s,baz=270,slow=8.6,SNR=78
MKAR PcP PcP 18 24 16.0 -0.1
comp=Z,0.9nm,0.9s,baz=270,slow=4.3,SNR=3.2
comp=Z,3.8nm,0.5s
MKAR Makanchi Array 41.30 58 P 18 22 18.0 +0.4
SPITS Spitsbergen Ar 41.60 357 P P 18 22 20.4 +0.8
comp=Z,2.9nm,0.9s,baz=187,slow=7.3,SNR=5.0
comp=Z,2.9nm,0.9s
DBIC Dimbokro 42.08 232 P P 18 22 23.9 -0.4
comp=Z,8.5nm,0.8s,baz=65,slow=7.5,SNR=8.2
comp=Z,8.5nm,0.8s
DBIC Dimbokro 42.08 232 P P 18 22 23.8 -0.4
DBIC IAmb IAmb 18 22 24.9
comp=Z,13nm,1.2s
DBIC Dimbokro 42.08 232 P P 18 22 23.8 -0.4
DBIC pmax pmax
comp=Z,13nm,1.2s
ZAA0 Zalesovo Array 42.48 48 P 18 22 27.3 +0.2
ZAA0 IAmb IAmb 18 22 28.3
comp=Z,4.8nm,0.7s
ZALV Zalesovo Beam 42.48 48 P P 18 22 27.6 +0.5
comp=Z,4.4nm,0.6s,baz=269,slow=8.3,SNR=25
comp=Z,4.4nm,0.6s
ZALV Zalesovo Beam 42.48 48 P 18 22 27.2 +0.1
DGZ Jazzator, Alta 44.37 54⇓ iP P 18 22 43.6 +0.9
DGZ pmax pmax
comp=Z,3.0nm,0.8s
KNGR Kungurtug, Tuv 50.61 51⇑ eP P 18 23 33.4 +2.3
KNGR pmax pmax
comp=Z,3.0nm,1.0s
GTA2 Gaotai 55.48 64 eP P 18 24 08.0 +0.8
GTA2 pP pP 18 24 11.0 -1.0
GTA2 pmax pmax
comp=Z,4.0nm,0.5s
SONM Songino Array 56.97 52 P P 18 24 19.2 +1.5
comp=Z,1.2nm,0.6s,baz=309,slow=9.1,SNR=1.6
comp=Z,1.2nm,0.6s
SONM Songino Array 56.97 52 P P 18 24 18.1 +0.4
SONM IAmb IAmb 18 24 27.6
comp=Z,2.2nm,1.0s
SONM Songino Array 56.97 52 P P 18 24 18.1 +0.4
SONM pmax pmax
comp=Z,2.0nm,1.0s
ULN Ulaanbaatar 57.38 52⇓ eP P 18 24 21.3 +0.7
ULN pmax pmax
comp=Z,12nm,2.9s
GRTLG Ghanzi 58.29 187 P P 18 24 27.2 +0.1
KGCAE Kacgae 59.68 186 P P 18 24 37.8 +1.1
LZH Lanzhou 59.82 66 eP P 18 24 38.3 +0.5
LZH pP sP 18 24 43.6 -0.8
LZH pmax pmax
comp=Z,18nm,1.5s
KOOLE Kule 60.00 188 P P 18 24 38.9 -0.1
LPHEP Lephephe 60.01 182 P P 18 24 40.2 +1.2
LKGWB Lokgwabe 61.01 186 P P 18 24 46.2 +0.4
LBTB Lobatse 61.66 182 P P 18 24 51.5 +1.4
LBTB Lobatse 61.66 182 P P 18 24 51.5 +1.4
LBTB pmax pmax
comp=Z,8.0nm,0.9s
ILON Igloolik, Nuna 62.20 338 P P 18 24 52.3 -0.9
ILON IAmb IAmb 18 24 53.0
comp=Z,2.7nm,0.9s
RES Resolute Bay 62.40 345 P P 18 24 54.2 -0.2
RES IAmb IAmb 18 24 58.6
comp=Z,4.1nm,1.5s
RES Resolute Bay 62.40 345 P P 18 24 54.3 -0.2
RES pmax pmax
comp=Z,4.0nm,1.5s
PZH PanZhiHua 62.68 76 P P 18 24 57.0 -0.3
PZH pmax pmax
comp=Z,10.0nm,0.7s
HHC Hu-ho-hao-te 63.16 58 eP P 18 25 01.9 +1.6
HHC pmax pmax
comp=Z,13nm,0.6s
YAK Yakutsk 63.43 31⇑ iP P 18 25 01.5 0.0
YAK pmax pmax
comp=Z,4.0nm,0.7s
CMAR Chiang Mai Arr 64.61 85 P P 18 25 09.5 -0.5
comp=Z,2.1nm,0.8s,baz=300,slow=8.2,SNR=20
comp=Z,2.1nm,0.8s
CMAR Chiang Mai Arr 64.61 85 i P P 18 25 09.8 -0.2
CMAR pmax pmax
comp=Z,2.0nm,0.8s
BOSA Boshof 65.25 182 P P 18 25 14.1 +0.3
comp=Z,3.3nm,0.6s,baz=350,slow=7.6,SNR=5.7
comp=Z,3.3nm,0.6s
BOSA Boshof 65.25 182 P P 18 25 14.3 +0.4
BOSA Boshof 65.25 182 P P 18 25 14.3 +0.4
BOSA pmax pmax
comp=Z,15nm,1.4s
ZEA Zeya 66.43 40 eP P 18 25 22.8 +1.6
HEH HeiHe 68.33 43 eP P 18 25 33.6 +0.3
HEH pmax pmax
comp=Z,9.0nm,0.7s
SUR Sutherland 69.24 186 P P 18 25 40.4 +1.1
A36M Sachs Harbour 69.66 351 P P 18 25 41.0 -0.2
A36M IAmb IAmb 18 25 42.0
comp=Z,2.3nm,0.8s
SEY Seymchan 71.22 23⇑ iP P 18 25 52.1 +1.3
KLR Kul'dur 71.24 42⇓ iP P 18 25 51.5 +0.3
KLR pmax pmax
comp=Z,11nm,3.0s
C24K Franklin Bluff 73.60 359 P P 18 26 05.9 +1.0
C24K IAmb IAmb 18 26 39.9
comp=Z,7.2nm,1.5s
E28M Babbage River 74.31 355 P P 18 26 09.4 +0.3
E28M IAmb IAmb 18 26 10.3
comp=Z,3.3nm,1.2s
USRK Ussuriysk Ar. 74.31 46 P P 18 26 09.4 -0.1
comp=Z,4.0nm,0.7s,baz=291,slow=3.6,SNR=8.3
comp=Z,4.0nm,0.7s
DELO Deloro Mine 74.33 314 P P 18 26 09.4 -0.3
E29M Blow River 74.40 354 P P 18 26 09.5 -0.1
E29M IAmb IAmb 18 26 13.8
comp=Z,7.7nm,1.4s
F31M Tsiigehtchic 74.94 353 P P 18 26 12.4 -0.3
F30M Barrier River 74.98 353 P P 18 26 12.9 -0.2
KSAR Wonju Array Be 75.76 54 P P 18 26 17.9 -0.1
KSAR Wonju Array Be 75.76 54 P P 18 26 17.9 -0.1
BMAR Burnt Mountain 75.76 357 P P 18 26 18.1 +0.5
KSRS Korea Array 75.78 54 P P 18 26 18.5 +0.4
comp=Z,2.2nm,0.6s,baz=309,slow=3.8,SNR=12
comp=Z,2.2nm,0.6s
E19K Redstone River 75.86 2 P P 18 26 18.1 +0.1
E19K IAmb IAmb 18 26 20.3
comp=Z,3.8nm,1.0s
F21K Alatna River 76.15 0 P P 18 26 20.5 +0.8
F21K IAmb IAmb 18 26 27.7
comp=Z,2.9nm,0.9s
YKA Yellowknife Ar 76.28 343 P P 18 26 19.1 -1.4
comp=Z,0.2nm,0.5s,baz=30,slow=6.2,SNR=4.7
comp=Z,0.2nm,0.5s
YKA Yellowknife Ar 76.28 343 i P P 18 26 20.0 -0.5
F19K Shaleruckik Mo 76.47 2 P P 18 26 21.4 -0.1
F19K IAmb IAmb 18 26 22.2
comp=Z,5.4nm,1.4s
H27K Steamboat Moun 76.79 355 P P 18 26 23.4 0.0
H27K IAmb IAmb 18 26 31.3
comp=Z,5.5nm,1.4s
G18K Tagagawik 77.38 3 P P 18 26 26.1 -0.5
G18K IAmb IAmb 18 26 52.3
comp=Z,4.3nm,1.4s
IMAR Indian Mountai 77.39 0 P P 18 26 27.1 +0.3
YSS Yuzhno-Sakhali 78.42 39 eP P 18 26 33.8 +1.0
YSS eS S 18 36 28.8 +0.8
YSS pmax pmax
comp=Z,10.0nm,1.0s
ILAR Eielson Array 78.51 357 P P 18 26 33.1 +0.1
comp=Z,0.4nm,0.8s,baz=349,slow=2.9,SNR=6.2
comp=Z,0.4nm,0.8s
ILAR Eielson Array 78.51 357 P P 18 26 32.8 -0.2
BCAR Beaver Creek A 79.94 355 P P 18 26 41.5 +0.6
ASAJ Asahikawa 80.25 41 P P 18 26 43.6 +0.8
comp=Z,5.0nm,0.9s,baz=270,slow=19,SNR=1.8
comp=Z,5.0nm,0.9s
ASAJ Asahikawa 80.25 41 P P 18 26 43.2 +0.3
ASAJ pmax pmax
comp=Z,35nm,1.5s
JKA Kamikawa-asahi 80.26 41 P P 18 26 43.2 +0.3
L18K Granite Mounta 81.12 2 P P 18 26 47.3 +0.1
Y58A Scranton 82.12 307 P P 18 26 53.1 +0.1
AOPR Arecibo Observ 82.38 287 P P 18 26 54.7 +0.1
WRA Warramunga Arr 115.02 97 PKP PKPdf 18 33 12.4 -1.2
comp=Z,0.2nm,0.6s,baz=308,slow=2.7,SNR=1.7
WRA Warramunga Arr 115.02 97 PKPdf 18 33 10.1 -3.6
ASAR Alice Springs 116.61 101 PKP PKPdf 18 33 15.3 -1.3
comp=Z,0.3nm,0.6s,baz=303,slow=1.6,SNR=5.2
QSPA South Pole Qui 126.80 180 PKP PKPdf 18 33 33.8 -1.1
comp=Z,1.6nm,0.9s,baz=307,slow=2.7,SNR=7.5

ISK ***17*** *18:18:05.9,36˚.97N×27˚.37E,h18km,ML3.6/11*
AFAD ***17*** *18:18:06.6,36˚.96N×27˚.39E,h12km,ML3.0*
THE ***17*** *18:18:06.8,37˚.N±2˚×2˚.7E±˚,h14km±1km,M3.3/9,*
MLh3.3/9
ATH ***17*** *18:18:06.5,37˚.00N×27˚.38E,h13km±2km,ML3.5/3,*
Latitude uncertainty: 1 km; Longitude uncertainty: 1 km
ISC 17 18:18:06.6±0.8,36˚.97N±0˚.02×27˚.38E±0˚.03,h15km±5km,
n55,σ0°42/77,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BDRM	**Kayabasi**	**0.10**	**28**	P	**Pg**	**18 18 09.7**	**-0.3**
BDRM				S	**Sg**	**18 18 11.8**	**-0.4**
BDRM				IAML		18 18 12.0	
	comp=E,2μm,0.2s						
BODT	**Bodrum**	**0.11**	**327**	P	**Pb**	**18 18 10.4**	**+0.1**
BODT				S	**Sg**	**18 18 12.6**	**+0.4**
BODT	**Bodrum**	**0.11**	**327**	Pg	**Pb**	**18 18 10.4**	**+0.1**
BODT				Sg	**Sg**	**18 18 12.6**	**+0.4**
YKAV	**Yalikavak-Bodr**	**0.17**	**331**	Pg	**Pg**	**18 18 10.5**	**-0.3**
YKAV				Sg	**Sg**	**18 18 13.7**	**0.0**
DAT	**Datca**	**0.29**	**147**	P	**Pg**	**18 18 12.8**	**0.0**
DAT				S	**Sb**	**18 18 17.9**	**-0.3**
DAT	**Datca**	**0.29**	**147**	Pg	**Pg**	**18 18 12.6**	**-0.2**
DAT				Sg	**Sg**	**18 18 17.3**	**+0.3**
DAT	**Datca**	**0.29**	**147**	P	**Pg**	**18 18 12.9**	**+0.1**
DAT				S	**Sg**	**18 18 17.3**	**+0.3**
DAT				IAML		18 18 18.0	
	comp=N,4μm,0.2s						
DAT				IAML		18 18 18.0	
	comp=E,3μm,0.2s						
YAZI	**Mula-Dat§a-**	**0.30**	**169**	P	**Pg**	**18 18 12.7**	**-0.1**
YAZI				S	**Sg**	**18 18 17.2**	**+0.1**
YAZI				IAML		18 18 19.0	
	comp=N,1μm,0.5s						
YAZI				IAML		18 18 19.0	
	comp=E,2μm,0.4s						
DATC	**Datca-Mugla**	**0.31**	**134**	Pg	**Pg**	**18 18 13.1**	**+0.1**
KLNA	**Kalymnos**	**0.33**	**267**	P	**Pg**	**18 18 13.3**	**-0.1**
KLNA				S	**Sg**	**18 18 17.9**	**-0.1**
DIDI	**Didim-Aydin**	**0.42**	**344**	Pg	**Pg**	**18 18 15.3**	**+0.3**
DDIM	**Aydin, Didim**	**0.50**	**347**	P	**Pg**	**18 18 16.5**	**+0.1**
DDIM				S	**Sb**	**18 18 24.4**	**+0.4**
DDIM				IAML		18 18 25.0	
	comp=E,3μm,0.5s						
DDIM				IAML		18 18 27.0	
	comp=N,2μm,0.5s						
TURN	**Turunc**	**0.72**	**106**	Pg	**Pg**	**18 18 20.2**	**-0.4**
TURN	**Turunc**	**0.72**	**106**	P	**Pg**	**18 18 20.4**	**-0.2**
TURN				S	**Sn**	**18 18 32.5**	**-0.4**
TURN				IAML		18 18 33.0	
	comp=N,2μm,0.5s						
TURN				IAML		18 18 34.0	
	comp=E,3μm,0.7s						
GCAM	**G?zelcaml?**	**0.74**	**351**	Pg	**Pg**	**18 18 21.1**	**+0.2**
GCAM				Sg	**Sb**	**18 18 31.9**	**+1.0**
GCAM	**G?zelcaml?**	**0.74**	**351**	P	**Pb**	**18 18 21.2**	**+0.1**
GCAM				S	**Sn**	**18 18 32.6**	**-0.7**
GCAM				IAML		18 18 35.0	
	comp=N,996nm,0.2s						
GCAM				IAML		18 18 36.0	
	comp=E,1μm,0.4s						
YER	**Yerkesik**	**0.74**	**77**	P	**Pg**	**18 18 21.2**	**+0.2**
YER				S	**Sn**	**18 18 32.7**	**-0.7**
YER	**Yerkesik**	**0.74**	**77**	Pg	**Pg**	**18 18 21.1**	**+0.2**
AYDN	**Tasoluk**	**0.79**	**30**	P	**Pg**	**18 18 21.8**	**-0.2**
AYDN				S	**Sb**	**18 18 33.3**	**+0.7**
AYDN				IAML		18 18 35.0	
	comp=E,637nm,0.3s						
AYDN				IAML		18 18 36.0	
	comp=N,1μm,0.3s						
MULA	**Mugla, Merkez-**	**0.80**	**69**	P	**Pg**	**18 18 22.0**	**-0.2**
MULA				S	**Sn**	**18 18 35.2**	**+0.1**
MULA				IAML		18 18 38.0	
	comp=E,332nm,0.7s						
MULA				IAML		18 18 39.0	
	comp=N,268nm,0.6s						
SMG	**Samos**	**0.85**	**329**	P	**Pg**	**18 18 22.8**	**-0.4**
SMG				S	**Sb**	**18 18 35.6**	**+1.2**
SMG	**Samos**	**0.85**	**329**	P	**Pg**	**18 18 22.7**	**-0.5**
SMG				S	**Sg**	**18 18 33.4**	**-1.0**
KUSD	**Kusadasi-Aydin**	**0.89**	**355**	Pg	**Pb**	**18 18 23.7**	**0.0**
ARG	**Arkhangelos**	**0.96**	**141**	P	**Pg**	**18 18 25.1**	**-0.1**
ARG				S	**Sn**	**18 18 39.3**	**+0.3**
ARG	**Arkhangelos**	**0.96**	**141**	Pg	**Pg**	**18 18 25.1**	**-0.1**
ARG	**Arkhangelos**	**0.96**	**141**	P	**Pb**	**18 18 24.9**	**0.0**
ARG				S	**Sn**	**18 18 38.7**	**-0.3**
KRL1	**Karlovasi Samo**	**0.98**	**327**	P	**Pb**	**18 18 24.1**	**-1.2**
KRL1				S	**Sg**	**18 18 38.6**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.05**	**22**	Pg	**Pb**	**18 18 26.5**	**-0.1**
ESEN	**Aydn-Nazilli**	**1.13**	**43**	P	**Pb**	**18 18 27.7**	**0.0**
ESEN				S	**Sn**	**18 18 43.7**	**+0.8**
ESEN				IAML		18 18 46.0	
	comp=E,297nm,0.8s						
ESEN				IAML		18 18 47.0	
	comp=N,181nm,0.4s						
GMLD	**Gumuldur**	**1.16**	**341**	Pn	**Pn**	**18 18 28.1**	**-0.2**
NAZL	**Nazilli-Aydin**	**1.23**	**36**	Pn	**Pn**	**18 18 28.9**	**-0.3**
ODEM	**Odemis-Izmir**	**1.41**	**23**	Pn	**Pn**	**18 18 31.4**	**-0.4**
BLCB	**Balcova**	**1.44**	**349**	P	**Pn**	**18 18 31.5**	**-0.5**
BLCB	**Balcova**	**1.44**	**349**	Pn	**Pn**	**18 18 31.5**	**-0.5**
KSL	**Kastellorizon**	**1.95**	**114**	P	**Pn**	**18 18 38.8**	**-0.3**
ZKR	**Zakros**	**2.08**	**207**	Pn	**Pn**	**18 18 40.8**	**-0.1**
PRK	**Paraskevi**	**2.43**	**339**	P	**Pn**	**18 18 45.6**	**-0.2**
PRK	**Paraskevi**	**2.43**	**339**	P	**Pn**	**18 18 45.2**	**-0.6**
SIGR	**SIGRI**	**2.54**	**332**	P	**Pn**	**18 18 47.1**	**-0.2**
SIGR	**SIGRI**	**2.54**	**332**	P	**Pn**	**18 18 47.0**	**-0.2**
DION	**Dionisos Attik**	**2.96**	**293**	P	**Pn**	**18 18 52.8**	**-0.2**
VLY	**Voula,Athens**	**2.99**	**288**	P	**Pn**	**18 18 53.8**	**+0.4**
VLY	**Voula,Athens**	**2.99**	**288**	P	**Pn**	**18 18 53.2**	**-0.2**
ATHU	**Athens Univers**	**3.03**	**290**	P	**Pn**	**18 18 54.3**	**+0.3**
LIA	**Limnos Island**	**3.39**	**330**	P	**Pn**	**18 18 59.3**	**+0.3**
LIA	**Limnos Island**	**3.39**	**330**	P	**Pn**	**18 18 59.4**	**+0.4**
GADA	**Gvkgeada**	**3.42**	**341**	P	**Pn**	**18 18 59.0**	**-0.2**
VILL	**Villia**	**3.45**	**291**	P	**Pn**	**18 19 00.6**	**+0.9**
VIL2	**Platees**	**3.50**	**292**	P	**Pn**	**18 19 00.2**	**-0.2**
AOS	**Alonnisos**	**3.53**	**309**	P	**Pn**	**18 19 01.1**	**+0.3**
VLI	**Veliai**	**3.58**	**267**	P	**Pn**	**18 19 01.1**	**-0.3**
SMTH	**Samothraki Isl**	**3.78**	**338**	P	**Pn**	**18 19 04.3**	**0.0**
SMTH	**Samothraki Isl**	**3.78**	**338**	P	**Pn**	**18 19 04.2**	**-0.1**
NEO	**Neokhori**	**4.02**	**307**	P	**Pn**	**18 19 07.8**	**+0.2**
RDO	**Rodhopi**	**4.41**	**342**	P	**Pn**	**18 19 13.4**	**+0.6**

GUC ***17*** *18:19:15.4±0.7,31˚.51S×73˚.10W,h12km±27km,ML3.4*
IDC ***17*** *18:19:17.4±0.9,31˚.60S×73˚.06W,h0km,mb3.7/3,*
mbtmp3.7/7,ML3.7/4,Error ellipse: s-maj=32.8km
s-min=23.4km az=88.0
SJA ***17*** *18:19:18.4±0.6,31˚.52S×72˚.90W,h35km,ML3.3,MW3.6*
ISC 17 18:19:17.1±0.6,31˚.57S±0˚.03×72˚.95W±0˚.04,h10km,n57,
σ2s61/79,mb3.9/3,2C,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**1.44**	**52**	**eP**	**Pb**	**18 19 42.1**	**-1.9**
CO02	**Combarbal**	**1.71**	**78⇑**	**iP**	**Pb**	**18 19 47.0**	**-1.7**
CO02	**Combarbal**	**1.71**	**78**	**eP**	**Pb**	**18 19 47.0**	**-1.7**
CO02				eS	**Sb**	**18 20 07.9**	**-2.4**
CO02				IAML		18 20 08.0	
	comp=Z,612nm,0.3s						
VA06	**Catapilco**	**1.72**	**126**	**eP**	**Pb**	**18 19 47.1**	**-1.6**
VA06				IAML		18 20 10.8	
	comp=N,883nm,0.3s						
CO04	**Los Peladeros**	**1.75**	**106⇑**	**iP**	**Pb**	**18 19 47.9**	**-1.5**
CO04				IAML		18 20 10.9	
	comp=E,586nm,0.1s						
CO03	**El Pedregal**	**2.07**	**70**	**eP**	**Pb**	**18 19 52.0**	**-2.8**
CO03				IAML		18 20 18.6	
	comp=E,453nm,0.2s						
CO03	**El Pedregal**	**2.07**	**70**	**eP**	**Pb**	**18 19 52.6**	**-2.3**
CO03				eS	**Sb**	**18 20 17.4**	**-3.3**
CO03				IAML		18 20 20.2	
	comp=Z,277nm,0.7s						
ROCH	**El Roble**	**2.16**	**131**	**eP**	**Pb**	**18 19 54.0**	**-2.5**
ROCH				eP	**Pb**	**18 19 53.9**	**-2.5**
ROCH				IAML		18 20 21.2	
	comp=N,176nm,0.4s						
ROCH				IAML		18 20 21.3	
	comp=N,356nm,0.5s						
CO05	**La Serena**	**2.21**	**42**	**eP**	**Pn**	**18 19 53.5**	**-0.4**
CO05				IAML		18 20 20.7	
	comp=E,268nm,0.3s						
MT02	**Curacav**	**2.28**	**138**	**eP**	**Pb**	**18 19 55.7**	**-2.6**
MT02	**Curacav**	**2.28**	**138**	**eP**	**Pb**	**18 19 55.9**	**-2.4**
MT02				eS	**Sn**	**18 20 21.6**	**-1.3**
MT02				IAML		18 20 24.1	
	comp=Z,102nm,0.7s						
GO04	**Tololo Observa**	**2.32**	**54**	**eP**	**Pn**	**18 19 55.4**	**-0.1**
GO04	**Tololo Observa**	**2.32**	**54**	**eP**	**Pn**	**18 19 55.0**	**-0.6**
GO04				IAML		18 20 27.9	
	comp=Z,395nm,0.4s						
VA03	**San Esteban**	**2.36**	**121**	**eP**	**Pb**	**18 19 56.9**	**-2.9**
VA03	**San Esteban**	**2.36**	**121**	**eP**	**Pb**	**18 19 57.1**	**-2.7**
VA03				eS	**Sb**	**18 20 25.5**	**-3.5**
VA03				IAML		18 20 34.8	
	comp=Z,284nm,0.9s						
PEL	**Peldehue**	**2.48**	**130**	**eP**	**Pb**	**18 19 58.6**	**-3.1**
PEL	**Peldehue**	**2.48**	**130**	**eP**	**Pb**	**18 19 58.9**	**-2.9**
PEL				eS	**Sn**	**18 20 28.6**	**+0.6**
PEL				IAML		18 20 30.4	
	comp=Z,167nm,0.5s						
MT05	**Renca**	**2.61**	**135**	**eP**	**Pn**	**18 20 00.2**	**+0.8**
MT05	**Renca**	**2.61**	**135**	**eP**	**Pb**	**18 20 01.0**	**-3.0**
MT05				eS	**Sn**	**18 20 32.4**	**+1.2**
MT05				IAML		18 20 38.4	
	comp=Z,133nm,0.5s						
MT01	**Popeta**	**2.70**	**148**	**eP**	**Pn**	**18 20 01.6**	**+1.0**
MT01				IAML		18 20 39.7	
	comp=Z,51nm,0.5s						
MT09	**Talagante**	**2.75**	**144**	**eP**	**Pn**	**18 20 02.7**	**+1.2**
MT09				IAML		18 20 39.9	
	comp=E,116nm,0.4s						
MT03	**Universidad Ad**	**2.82**	**134**	**eP**	**Pb**	**18 20 04.8**	**-2.8**
MT03				eS	**Sn**	**18 20 37.6**	**+1.2**
MT03				IAML		18 20 44.1	
	comp=Z,154nm,1.1s						
CO01	**Juntas del Tor**	**2.93**	**58**	**eP**	**Pn**	**18 20 04.6**	**+0.6**
CO01				IAML		18 20 39.7	
	comp=N,92nm,0.4s						
CO01	**Juntas del Tor**	**2.93**	**58**	**eP**	**Pn**	**18 20 05.0**	**+1.1**
CO01				eS	**Sn**	**18 20 39.4**	**+0.1**
CO01				IAML		18 20 42.0	
	comp=Z,68nm,0.3s						
MT04	**Ro Olivares**	**3.00**	**128**	**eP**	**Pn**	**18 20 06.5**	**+1.5**
MT04				IAML		18 20 44.5	
	comp=E,62nm,0.5s						
MT04	**Ro Olivares**	**3.00**	**128**	**eP**	**Pn**	**18 20 06.8**	**+1.8**
MT04				eS	**Sn**	**18 20 42.0**	**+0.9**
MT04				IAML		18 20 50.7	
	comp=Z,52nm,0.5s						
MT08	**Bocatoma Ro**	**3.11**	**128**	**eP**	**Pn**	**18 20 07.5**	**+1.1**
MT08				eS	**Sn**	**18 20 44.5**	**+0.8**
MT08				IAML		18 20 53.6	
	comp=Z,42nm,0.7s						
BO04	**La Punta**	**3.12**	**141**	**eP**	**Pn**	**18 20 08.1**	**+1.7**
MT13	**San Alfonso**	**3.12**	**135**	**eP**	**Pn**	**18 20 08.4**	**+1.9**
MT13				eS	**Sn**	**18 20 39.4**	**-4.6**
MT13				eS	**Sb**	**18 20 45.0**	**-6.0**

MT13					IAML		18 20 55.7	
	comp=Z,73nm,0.4s							
RTLS	**Leoncito**	**3.13**	**95**	*eP*	Pn	**Pn**	18 19 54.1	-13
RTLS				*eS*		**Sn**	**18 20 44.7**	**+0.4**
RTLS				IAML			18 21 01.8	
	comp=Z,210nm,0.6s							
LCO	**Las Campanas**	**3.21**	**38**	*eP*		**Pn**	**18 20 07.6**	**-0.2**
LCO				*eS*		**Sn**	**18 20 45.0**	**-1.2**
LCO				IAML			18 20 47.2	
	comp=Z,121nm,0.5s							
BO01	**Tunca**	**3.22**	**151**	*eP*		**Pn**	**18 20 09.4**	**+1.7**
BO01				*eS*		**Sn**	**18 20 45.6**	**-0.6**
BO01				IAML			18 20 46.0	
	comp=Z,33nm,0.5s							
AROD	**Rodeo**	**3.30**	**66**	*eP*		**Pb**	**18 20 12.2**	**-3.7**
ACCO	**Cerro Coronel**	**3.48**	**75**	*eP*		**Pb**	**18 20 15.0**	**-4.0**
ACCO				*eS*		**Sn**	**18 20 53.4**	**+0.4**
AC05	**El Transito**	**3.58**	**41**	*eP*		**Pn**	**18 20 13.7**	**+0.9**
AC05				*eS*		**Sn**	**18 20 55.1**	**0.0**
AC05				IAML			18 20 60.0	
	comp=Z,42nm,0.6s							
BO02	**Sierra Bellavi**	**3.69**	**151**	*eP*		**Pn**	**18 20 16.5**	**+2.2**
BO02				*eS*		**Sn**	**18 20 59.1**	**+1.2**
BO02				IAML			18 20 60.0	
	comp=Z,60nm,0.3s							
AC04	**Llanos de Chal**	**3.73**	**26**	*eP*		**Pn**	**18 20 13.9**	**-0.8**
AC04				*eS*		**Sn**	**18 20 57.8**	**-1.0**
AC04				IAML			18 21 05.3	
	comp=Z,51nm,0.9s							
CFA	**Coronel Fontan**	**4.03**	**92**	Pn		Pb	18 20 22.4	-5.7
	comp=Z,2.1nm,0.3s,baz=274,slow=14,SNR=16							
CFA				Sn		**Sn**	**18 21 08.2**	**+2.1**
	comp=Z,6.3nm,0.3s,baz=198,slow=20,SNR=11							
	comp=Z,3.6nm,0.3s							
CFA	**Coronel Fontan**	**4.03**	**92**	*eP*		Pb	18 20 22.4	-5.7
CFA				*eS*		Sn	18 20 54.4	-12
CFA				IAML			18 21 14.3	
	comp=Z,36nm,0.6s							
GO03	**Copiapo**	**4.62**	**32**	*eS*		**Sn**	**18 21 18.7**	**-2.0**
GO03				IAML			18 21 24.8	
	comp=Z,30nm,0.4s							
AVFE	**Valle Fertil**	**4.80**	**81**	*eP*		**Pn**	**18 20 26.4**	**-3.1**
AVFE				*eS*		**Sn**	**18 21 24.9**	**-0.4**
AVFE				IAML			18 21 46.1	
	comp=Z,43nm,0.8s							
VCA	**Vinchina**	**4.99**	**57**	*eP*		Pn	18 20 20.9	-11
VCA				*eS*		**Sn**	**18 21 34.8**	**+4.7**
VCA				IAML			18 21 39.9	
	comp=Z,51nm,0.5s							
H03N1	**Juan Fernandez**	**5.37**	**248**	Pn		**Pn**	**18 20 37.6**	**+0.6**
	baz=136,slow=13							
H03N1				Sn		**Sn**	**18 21 31.3**	**-7.5**
H03N1				T		T	18 26 01.9	
	baz=64,slow=72,SNR=43							
H03N3	**Juan Fernandez**	**5.38**	**248**	Pn		**Pn**	**18 20 37.6**	**+0.4**
	baz=136,slow=13							
H03N3				Sn		**Sn**	**18 21 31.1**	**-8.1**
H03N3				T		T	18 26 03.3	
	baz=64,slow=72,SNR=55							
H03N2	**Juan Fernandez**	**5.38**	**248**	Pn		**Pn**	**18 20 37.8**	**+0.6**
	baz=136,slow=13							
H03N2				Sn		**Sn**	**18 21 31.3**	**-7.8**
H03N2				T		T	18 26 03.5	
	baz=64,slow=72,SNR=37							
PLCA	**Paso Flores**	**9.35**	**169**	Pn		**Pn**	**18 21 33.9**	**+1.9**
	comp=Z,0.6nm,0.3s,baz=331,slow=13,SNR=18							
	comp=Z,1.7nm,0.4s							
LPAZ	**La Paz**	**15.84**	**17**	Pn		**P**	**18 23 03.7**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=184,slow=7.3,SNR=5.3							
	comp=Z,1.4nm,0.7s							
SIV	**San Ignacio**	**18.91**	**38**	P		**Pn**	**18 23 40.3**	**+1.6**
	baz=222,slow=10.0,SNR=12							
	comp=Z,2.3nm,0.7s							
TEIG	**Tepich**	**53.56**	**342**	P		**P**	**18 28 41.6**	**+3.5**
	comp=Z,33nm,0.4s,baz=182,slow=2.1,SNR=3.4							
QSPA	**South Pole Qui**	**58.66**	**180**	P		**P**	**18 29 16.5**	**+2.1**
	comp=Z,0.6nm,0.6s,baz=113,slow=7.5,SNR=1.5							
	comp=Z,0.6nm,0.6s							
TXAR	**Lajitas Array**	**67.24**	**331**	P		**P**	**18 30 12.7**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=143,slow=8.2,SNR=1.0							
	comp=Z,0.2nm,0.4s							
TORD	**Torodi Ar. Bea**	**84.12**	**71**	P		**P**	**18 31 50.1**	**+1.4**
	comp=Z,0.8nm,0.7s,baz=249,slow=5.8,SNR=4.9							
	comp=Z,0.8nm,0.7s							
WRA	**Warramunga Arr**	**122.48**	**211**	PKP		**PKiKP**	**18 38 14.4**	**+0.9**
	comp=Z,0.7nm,1.1s,baz=164,slow=1.8,SNR=5.2							
BVAR	**Borovoye Array**	**145.98**	**40**	PKPbc		**PKiKP**	**18 38 59.1**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=343,slow=2.0,SNR=4.2							
KURBB	**Kurchatov Arra**	**151.56**	**40**	PKPbc		**PKiKP**	**18 39 12.4**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=306,slow=3.1,SNR=4.2							
ZALV	**Zalesovo Beam**	**152.53**	**29**	PKPbc		**PKiKP**	**18 39 15.1**	**+1.7**
	comp=Z,1.3nm,0.5s,baz=301,slow=3.3,SNR=7.2							
MKAR	**Makanchi Array**	**155.66**	**44**	PKPab		**PKPab**	**18 39 39.5**	**+2.3**
	comp=Z,0.5nm,0.9s,baz=299,slow=5.9,SNR=2.9							

PGC 17 18:24:35.6±1.3, 50.44N×130.43W, h10km, MLSn2.9/12, Mw3.5/12, 209km west of Port Hardy, Bc Vancouver Island, Canada Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPEB	**Brooks Peninsu**	**1.73**	**98**	Pn	Pn	18 25 03.4	-2.4
PACB	**Port Alice, BC**	**1.88**	**89**	Pn	Pn	18 25 05.6	-2.1
JEDB	**Jedway, Haida**	**1.92**	**346**	Pn	Pn	18 25 06.4	-1.9
PHC	**Port Hardy**	**1.93**	**81**	Pn	Pn	18 25 06.7	-1.7
PHC				Sn	Sn	18 25 27.8	-4.9
FHBB	**Fair Harbour**	**2.16**	**99**	Pn	Pn	18 25 09.8	-1.8
FHBB				Sn	Sn	18 25 33.6	-4.8
EDB	**Eliza Dome**	**2.20**	**104**	Pn	Pn	18 25 10.5	-1.7
BBB	**Bella Bella**	**2.27**	**39**	Pn	Pn	18 25 11.4	-1.7
BAIB	**Barry Inlet**	**2.29**	**339**	Pn	Pn	18 25 12.3	-1.2
TAHB	**Tahsis**	**2.47**	**101**	Pn	Pn	18 25 14.0	-2.0
WOSB	**Woss**	**2.49**	**95**	Pn	Pn	18 25 15.1	-1.1
NTKA	**Nootka**	**2.60**	**108**	Pn	Pn	18 25 16.1	-1.5
NCSB	**Newcastle Ridg**	**2.79**	**89**	Pn	Pn	18 25 19.1	-1.4
GRIB	**Gribbell Islan**	**3.01**	**15**	Pn	Pn	18 25 21.8	-1.6
MYRA	**Myra Falls**	**3.26**	**104**	Pn	Pn	18 25 26.0	-0.8
GRNB	**Grenville Isla**	**3.42**	**5**	Pn	Pn	18 25 27.9	-1.1
RUBB	**Prince Rupert**	**3.89**	**1**	Pn	Pn	18 25 35.1	-0.3
LLLB	**Lillooet**	**5.45**	**85**	Pn	Pn	18 25 56.6	-0.3

PGC 17 18:27:40.3±1.2, 50.47N×130.38W, h10km, MLSn3.1/17, Mw3.7/17, 205km west of Port Hardy, Bc Vancouver Island, Canada Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPEB	**Brooks Peninsu**	**1.70**	**99**	Pn	Pn	18 28 07.5	-2.5
PACB	**Port Alice, BC**	**1.85**	**90**	Pn	Pn	18 28 09.8	-2.1
PHC	**Port Hardy**	**1.89**	**82**	Pn	Pn	18 28 10.9	-1.7
PHC				Sn	Sn	18 28 32.0	-4.6
JEDB	**Jedway, Haida**	**1.90**	**345**	Pn	Pn	18 28 10.3	-2.5
FHBB	**Fair Harbour**	**2.13**	**100**	Pn	Pn	18 28 14.0	-2.0
EDB	**Eliza Dome**	**2.18**	**105**	Pn	Pn	18 28 14.8	-1.7
BBB	**Bella Bella**	**2.23**	**39**	Pn	Pn	18 28 15.6	-1.7
BAIB	**Barry Inlet**	**2.28**	**338**	Pn	Pn	18 28 16.1	-2.0
TAHB	**Tahsis**	**2.45**	**102**	Pn	Pn	18 28 18.7	-1.7
WOSB	**Woss**	**2.46**	**96**	Pn	Pn	18 28 19.3	-1.2
NTKA	**Nootka**	**2.58**	**108**	Pn	Pn	18 28 20.4	-1.7
NCSB	**Newcastle Ridg**	**2.77**	**90**	Pn	Pn	18 28 23.3	-1.4
MOBC	**Moresby Island**	**2.86**	**340**	Pn	Pn	18 28 24.5	-1.5
GDR	**Gold River**	**2.88**	**102**	Pn	Pn	18 28 24.8	-1.5
GRIB	**Gribbell Islan**	**2.98**	**14**	Pn	Pn	18 28 26.0	-1.6
MYRA	**Myra Falls**	**3.23**	**105**	Pn	Pn	18 28 30.2	-1.0
CBB	**Campbell River**	**3.25**	**96**	Pn	Pn	18 28 30.6	-0.7
GRNB	**Grenville Isla**	**3.40**	**4**	Pn	Pn	18 28 31.9	-1.4
MGRB	**Mount Grey**	**3.97**	**110**	Pn	Pn	18 28 40.4	-0.9
SHB	**Sechelt**	**4.28**	**99**	Pn	Pn	18 28 45.5	-0.1
WSLR	**Whistler**	**4.79**	**91**	Pn	Pn	18 28 52.7	+0.1
LLLB	**Lillooet**	**5.42**	**85**	Pn	Pn	18 29 01.2	0.0

*NOU **17** 18:34:21.2, 42.03S×172.20E, h221km, mb3.8/6, South Island, New Zealand*
*WEL **17** 18:34:48.4±0.3, 41.5±4.4×17.4E±., h34km±6km, M2.9/20, ML3.1/13, MLv2.9/20, Error ellipse: s-maj=5.7km s-min=3.4km az=171.7, confirmed*

ISC 17 18:34:48.8±1.3, 40.80S±0.03×174.24E±0.03, h51km±9km, n71, σ0.99/81, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUWZ	**D'Urville Isla**	**0.24**	**270**	P	**Pn**	**18 34 57.1**	**-0.5**
DUWZ				S	**Sn**	**18 35 04.0**	**+0.1**
TCW	**Tory Channel**	**0.41**	**176**	P	**Pn**	**18 34 59.2**	**+0.1**
TCW				S	**Sn**	**18 35 07.0**	**+0.4**
QCCS	**Picton Queen C**	**0.50**	**199**	P	**Pn**	**18 35 00.1**	**-0.1**
QCCS				S	**Sn**	**18 35 09.0**	**+0.7**
KIW	**Kapiti Island**	**0.51**	**97**	P	**Pn**	**18 34 59.5**	**-0.8**
KIW				S	**Sn**	**18 35 07.9**	**-0.6**
MKBS	**Makara Bunker**	**0.55**	**141**	P	**Pn**	**18 35 00.6**	**-0.2**
MKBS				S	**Sn**	**18 35 10.2**	**+0.9**
PWES	**Porirua West**	**0.55**	**126**	P	**Pn**	**18 35 00.5**	**-0.2**
PWES				S	**Sn**	**18 35 09.6**	**+0.3**
POKS	**Katoa Kinderga**	**0.55**	**126**	P	**Pn**	**18 35 00.6**	**-0.1**
POKS				S	**Sn**	**18 35 09.9**	**+0.6**
PFAS	**Porirua Free A**	**0.57**	**126**	P	**Pn**	**18 35 00.8**	**-0.1**
SNZO	**South Karori**	**0.62**	**145**	P	**Pn**	**18 35 01.3**	**-0.2**
WEL	**Wellington**	**0.63**	**140**	P	**Pn**	**18 35 01.4**	**-0.2**
TUWZ	**Tuamarina**	**0.67**	**199**	P	**Pn**	**18 35 02.1**	**0.0**
CAW	**Cannon Point**	**0.70**	**116**	P	**Pn**	**18 35 01.9**	**-0.7**
OGWZ	**Otaki Gorge**	**0.71**	**92**	P	**Pn**	**18 35 02.1**	**-0.6**
OGWZ				S	**Sn**	**18 35 12.6**	**-0.1**
NNZ	**Nelson**	**0.77**	**237**	P	**Pn**	**18 35 03.4**	**-0.1**
NNZ				S	**Sn**	**18 35 15.3**	**+1.1**
BHW	**Baring Head**	**0.77**	**142**	P	**Pn**	**18 35 02.7**	**-0.8**
CMWZ	**Cape Campbell**	**0.95**	**181**	P	**Pn**	**18 35 08.1**	**+2.2**
HOWZ	**Holdsworth Sta**	**0.97**	**96**	P	**Pn**	**18 35 05.3**	**-0.9**
MSWZ	**Moikau Station**	**0.98**	**129**	P	**Pn**	**18 35 05.1**	**-1.2**
TKNZ	**Takaka Hill**	**0.99**	**256**	P	**Pn**	**18 35 06.6**	**+0.1**
TKNZ				S	**Sn**	**18 35 20.6**	**+1.0**
OHWZ	**Ohakea**	**1.01**	**54**	P	**Pn**	**18 35 06.2**	**-0.5**
MRZ	**Mangatainoka R**	**1.03**	**83**	P	**Pn**	**18 35 05.8**	**-1.1**
PLWZ	**Palliser**	**1.08**	**135**	P	**Pn**	**18 35 06.4**	**-1.4**
WAZ	**Wanganui**	**1.19**	**29**	P	**Pn**	**18 35 08.4**	**-0.7**
POWZ	**Post Office Ro**	**1.23**	**71**	P	**Pn**	**18 35 09.6**	**-0.1**
TIWZ	**Tintock**	**1.25**	**89**	P	**Pn**	**18 35 09.0**	**-1.0**
MRNZ	**Matariki Terra**	**1.27**	**241**	P	**Pn**	**18 35 10.8**	**+0.6**
TMWZ	**Te Maipa**	**1.29**	**104**	P	**Pn**	**18 35 09.4**	**-1.1**
QRZ	**Quartz Range**	**1.30**	**268**	P	**Pn**	**18 35 10.2**	**-0.4**
QRZ				S	**Sn**	**18 35 27.5**	**+0.7**
PRWZ	**Pori Road**	**1.34**	**80**	P	**Pn**	**18 35 11.7**	**+0.5**
LREZ	**Lake Rotokare**	**1.35**	**5**	P	**Pn**	**18 35 10.9**	**-0.3**
THZ	**Tophouse**	**1.39**	**226**	P	**Pn**	**18 35 12.3**	**+0.5**
PREZ	**Palmer Road**	**1.46**	**358**	P	**Pn**	**18 35 12.7**	**-0.1**
TSZ	**Takapari Road**	**1.51**	**61**	P	**Pn**	**18 35 13.3**	**-0.1**
KHEZ	**Kahui Hut**	**1.52**	**353**	P	**Pn**	**18 35 13.2**	**-0.4**
KHEZ	**Kahui Hut**	**1.52**	**353**	P	**Pn**	**18 35 13.2**	**-0.4**
BFZ	**Birch Farm**	**1.53**	**86**	P	**Pn**	**18 35 16.0**	**+2.3**
DVHZ	**Dannevirke**	**1.55**	**72**	P	**Pn**	**18 35 14.8**	**+0.7**
NBEZ	**Newall Road No**	**1.56**	**349**	P	**Pn**	**18 35 13.6**	**-0.5**
PKE	**Pukeiti**	**1.62**	**353**	P	**Pn**	**18 35 14.4**	**-0.5**
KHZ	**Kahutara**	**1.70**	**198**	P	**Pn**	**18 35 16.2**	**+0.2**
MTVZ	**Mangateitei**	**1.70**	**34**	P	**Pn**	**18 35 15.7**	**-0.5**
VRZ	**Vera Road**	**1.72**	**14**	P	**Pn**	**18 35 15.5**	**-0.8**
PNHZ	**Pukenui**	**1.74**	**60**	P	**Pn**	**18 35 15.0**	**-1.7**
WNVZ	**Wahianoa**	**1.81**	**36**	P	**Pn**	**18 35 17.0**	**-0.7**
MOVZ	**Moawhango**	**1.81**	**40**	P	**Pn**	**18 35 16.3**	**-1.3**
WHVZ	**Whangaehu Hut**	**1.84**	**35**	P	**Pn**	**18 35 17.4**	**-0.7**
TUVZ	**Tukino**	**1.88**	**36**	P	**Pn**	**18 35 18.1**	**-0.5**
COVZ	**Chateau Observ**	**1.89**	**32**	P	**Pn**	**18 35 18.2**	**-0.5**
SNVZ	**South Ngauruho**	**1.94**	**34**	P	**Pn**	**18 35 18.8**	**-0.7**
TWVZ	**Taurewa**	**1.96**	**28**	P	**Pn**	**18 35 18.8**	**-0.9**
OTVZ	**Oturere**	**1.97**	**34**	P	**Pn**	**18 35 19.1**	**-0.8**
WTVZ	**West Tongariro**	**1.98**	**32**	P	**Pn**	**18 35 19.0**	**-1.0**
KRHZ	**Kereru**	**2.00**	**55**	P	**Pn**	**18 35 20.9**	**+0.7**
KRVZ	**Karewarewa**	**2.02**	**33**	P	**Pn**	**18 35 19.6**	**-0.9**
DSZ	**Denniston Nort**	**2.06**	**242**	P	**Pn**	**18 35 21.2**	**+0.2**
KWHZ	**Kaweka Forest**	**2.17**	**51**	P	**Pn**	**18 35 23.7**	**+1.2**
HIZ	**Hauiti**	**2.33**	**12**	P	**Pn**	**18 35 20.9**	**-0.8**
HIZ	**Hauiti**	**2.33**	**12**	P	**Pn**	**18 35 23.7**	**-1.0**
GVZ	**Greta Valley S**	**2.34**	**202**	P	**Pn**	**18 35 24.1**	**-0.7**
BKZ	**Black Stump Fm**	**2.38**	**47**	P	**Pn**	**18 35 27.8**	**+2.4**
BKZ	**Black Stump Fm**	**2.38**	**47**	P	**Pn**	**18 35 25.6**	**+0.2**
LTZ	**Lake Taylor**	**2.46**	**216**	P	**Pn**	**18 35 26.1**	**-0.5**
NMHZ	**Naumai**	**2.61**	**50**	P	Pn	18 35 33.0	+4.5
MTHZ	**Maungataniwha**	**2.79**	**47**	P	**Pn**	**18 35 32.8**	**+1.7**
OXZ	**Oxford**	**3.01**	**212**	P	**Pn**	**18 35 32.0**	**-2.0**
MHCZ	**Mount Hutt**	**3.37**	**215**	P	**Pn**	**18 35 37.2**	**-1.7**
URZ	**Urewera**	**3.37**	**42**	P	**Pn**	**18 35 40.4**	**+1.5**
URZ	**Urewera**	**3.37**	**42**	P	**Pn**	**18 35 41.4**	**+2.5**
FOZ	**Fox Glacier**	**4.27**	**229**	P	**Pn**	**18 35 49.7**	**-1.5**
TMZ	**Timaru**	**4.30**	**213**	P	**Pn**	**18 35 49.9**	**-1.8**
JCZ	**Jackson Bay**	**5.19**	**229**	P	**Pn**	**18 36 02.3**	**-1.7**

*IDC **17** 18:57:49.0±0.9, 36.29N×139.09E, h123km±6km, mb3.2/5, mbtmp3.7/8, MS3.8/1, Error ellipse: s-maj=24.7km s-min=10.3km az=71.0*
*JMA **17** 18:57:50.5±0.2, 36.3N±0.5×139.3E±0.7, h112km±1km, MV3.5/40, WESTERN SAITAMA PREF*

ISC 17 18:57:48.9±0.8, 36.33N±0.05×139.18E±0.06, h120km±6km, n31, σ1.965/40, mb3.6/5, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAG	**Ashikaga**	**0.24**	**66**	*i* P	**Pn**	**18 58 06.5**	**+0.9**
JAG				S	**Sn**	**18 58 18.2**	**0.0**
JRY	**Ryogami san**	**0.38**	**217**	*i* P	**Pn**	**18 58 07.2**	**+1.0**
JRY				S	**Sn**	**18 58 19.5**	**+0.1**
JKT	**Katashina**	**0.44**	**7**	*i* P	**Pn**	**18 58 07.9**	**+1.3**
JKT				S	**Sn**	**18 58 21.1**	**+1.1**
MJAR	**Matsushiro Arr**	**0.81**	**286**	P	**Pn**	**18 58 09.8**	**+0.6**
	50nm,0.3s,baz=112,slow=6.3,SNR=1213						
MJAR				S	**Sn**	**18 58 24.7**	**+0.1**
	114nm,0.5s,baz=198,slow=17,SNR=11						
MAJO	**Matsushiro**	**0.82**	**286**	P	**Pn**	**18 58 10.2**	**+1.0**
MAT	**Matsushiro**	**0.82**	**286**	*i* P	**Pn**	**18 58 10.3**	**+1.1**
MAT				S	**Sn**	**18 58 25.3**	**+0.7**
JUON	**Uonuma**	**0.89**	**353**	*i* P	**Pn**	**18 58 11.6**	**+1.7**
JUON				S	**Sn**	**18 58 27.8**	**+2.1**
JYN	**Shimob**	**0.98**	**212**	*i* P	**Pn**	**18 58 11.1**	**+0.4**
JYN				S	**Sn**	**18 58 26.8**	**-0.5**
JOD2	**Odawara 2**	**1.06**	**184**	*i* P	**Pn**	**18 58 11.3**	**-0.3**
JOD2				S	**Sn**	**18 58 27.0**	**-1.8**
JNS	**Sasagawa**	**1.49**	**4**	P	**Pn**	**18 58 18.1**	**+1.9**
JOTO	**OTAMA OYAMA**	**1.54**	**36**	*i* P	**Pn**	**18 58 19.0**	**+2.3**
JGT	**Kuroka**	**1.65**	**245**	P	**Pn**	**18 58 10.0**	**+0.9**
JGF	**Kuroka**	**1.65**	**245**	S	**Sn**	**18 58 40.5**	**+4.2**
JSG	**Sagara**	**1.84**	**207**	P	**Pn**	**18 58 22.1**	**+1.8**
JSZ	**Suzu**	**1.84**	**308**	P	**Pn**	**18 58 21.5**	**+1.3**
INU	**Inuyama**	**2.01**	**242**	P	**Pn**	**18 58 23.4**	**+1.0**
INU	**Inuyama**	**2.01**	**242**	S	**Sn**	**18 58 48.7**	**+0.6**
JHJ	**Hachijo jima 2**	**3.24**	**171**	P	**Pn**	**18 58 39.6**	**+1.3**
	124nm,0.3s,baz=50,slow=4.8,SNR=12						
JHJ				S	**Sn**	**18 59 16.6**	**+0.2**
	109nm,0.3s,baz=11,slow=17,SNR=4.3						
JHJ2	**Mitsune**	**3.25**	**171**	P	**Pn**	**18 58 39.8**	**+1.4**
JTM	**Tenmabayashi**	**4.69**	**18**	P	**Pn**	**18 59 00.0**	**+2.4**
JMN	**Monobe**	**5.07**	**241**	P	**Pn**	**18 59 04.9**	**+2.2**
JEM	**Erimo**	**6.47**	**27**	P	**Pn**	**18 59 21.5**	**0.0**
JNU	**Nakatsue**	**7.55**	**247**	P	**Pn**	**18 59 36.5**	**+0.2**
	14nm,1.2s,baz=101,slow=19,SNR=1.5						
ASAJ	**Asahikawa**	**8.21**	**17**	P	**Pn**	**18 59 45.2**	**+0.2**
	2.0nm,0.2s,baz=213,slow=11,SNR=15						
ASAJ				S	**Sn**	**19 01 10.1**	**-5.9**
	1.4nm,0.4s,baz=165,slow=16,SNR=1.4						
SEY	**Seymchan**	**27.86**	**13**	LR	LR	19 15 58.4	
	comp=Z,182nm,18.5s,baz=324,slow=39						
MKAR	**Makanchi Array**	**42.98**	**302**	P	**P**	**19 05 34.0**	**-2.0**
	0.4nm,1.0s,baz=82,slow=11,SNR=2.4						
	0.4nm,1.0s						
KURBB	**Kurchatov Arra**	**45.03**	**308**	P	**P**	**19 05 53.4**	**+1.2**
	0.5nm,0.4s,baz=83,slow=7.6,SNR=6.6						
	0.5nm,0.4s						
ILAR	**Eielson Array**	**51.05**	**32**	P	**P**	**19 06 39.0**	**+0.7**
	0.2nm,0.6s,baz=277,slow=8.8,SNR=2.3						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**56.15**	**185**	P	**P**	**19 07 14.4**	**-1.6**
	1.2nm,0.4s,baz=1.2,slow=7.5,SNR=54						
	1.2nm,0.4s						
ASAR	**Alice Springs**	**59.88**	**186**	P	**P**	**19 07 42.5**	**+0.5**
	0.4nm,0.5s,baz=0.1,slow=4.6,SNR=11						
	0.4nm,0.5s						
BOSA	**Boshof**	**124.68**	**258**	PKP	**PKPdf**	**19 16 32.1**	**-2.3**
	0.9nm,0.4s,baz=38,slow=3.1,SNR=6.3						

*UPP **17** 19:14:34.4±0.2, 67.81N×20.20E, h0km, ML2.7, Confirmed Induced event*
*HEL **17** 19:14:35.6±0.2, 67.78N×20.21E, h0km, ML1.1, Suspected explosion*

ISC 17 19:14:34.7±0.8, 67.80N±0.03×20.18E±0.03, h0km, n19, σ0.83/31, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.16**	**21**	P	**Pg**	**19 14 37.5**	**-0.3**
	baz=214						
KUA				S	**Sg**	**19 14 39.6**	**-0.3**
RATU	**Laukkuluspa**	**0.23**	**276**	P	**Pg**	**19 14 38.9**	**-0.1**
RATU				S	**Sg**	**19 14 42.2**	**+0.3**
KOVU	**Salmi**	**0.42**	**359**	P	**Pg**	**19 14 42.3**	**-0.5**
KOVU				S	**Sg**	**19 14 48.5**	**+0.2**
NIKU	**Nikkaluokta**	**0.44**	**279**	P	**Pg**	**19 14 43.0**	**-0.1**
NIKU				S	**Sg**	**19 14 49.2**	**+0.4**
DUNU	**Dundret**	**0.70**	**168**	P	**Pg**	**19 14 47.6**	**-0.4**
LANU	**Lannavaara**	**0.73**	**69**	PG	**Pg**	**19 14 48.8**	**+0.2**
LANU				SG	**Sg**	**19 14 58.4**	**+0.4**
KIF	**Kilpisjarvi**	**1.23**	**10**	*eP*	**Pb**	**19 14 58.5**	**-0.3**
KIF	**Kilpisjarvi**	**1.23**	**10**	PG	**Pn**	**19 14 59.1**	**0.0**
KIF				smax	smax	19 15 14.8	
	comp=Z,2.2nm,0.2s						
KIF				SG	**Sb**	**19 15 14.9**	**-0.2**
HEF	**Hetta**	**1.44**	**63**	*eP*	**Pn**	**19 15 01.3**	**-0.7**
HEF	**Hetta**	**1.44**	**63**	PG	**Pn**	**19 15 01.4**	**-0.6**
HEF				smax	smax	19 15 18.9	
	comp=Z,1.5nm,0.2s						
HEF				SN	**Sn**	**19 15 21.9**	**+0.3**
ERTU	**Ertsjaerv**	**1.48**	**147**	PN	**Pb**	**19 15 02.9**	**-0.1**
ERTU				SN	**Sn**	**19 15 23.4**	**+0.9**
KLF	**Kolari**	**1.56**	**110**	PN	**Pb**	**19 15 04.0**	**-0.4**
KLF				smax	smax	19 15 21.7	
	comp=Z,0.8nm,0.2s						
KLF				SN	**Sg**	**19 15 25.0**	**+0.2**
KTK1	**Kautokeino**	**1.66**	**41**	PG	**Pg**	**19 15 06.1**	**-0.4**
KTK1				SN	**Sg**	**19 15 29.2**	**+1.3**
TRO	**Tromso**	**1.90**	**347**	SG	**Sg**	**19 15 36.3**	**+0.7**
TOF	**Tornio**	**2.38**	**135**	PG	**Pb**	**19 15 17.4**	**-0.9**
TOF				smax	smax	19 15 45.3	
	comp=Z,0.7nm,0.2s						
RNF	**Rovaniemi**	**2.57**	**115**	PG	**Pb**	**19 15 20.6**	**-0.9**
RNF				SG	**Sb**	**19 15 53.7**	**+0.1**
ARA0	**ARCESS Array S**	**2.61**	**46**	PB	**Pb**	**19 15 20.8**	**-1.5**
	baz=235						
ARA0				SB	**Sb**	**19 15 54.4**	**-0.5**
RAJF	**Raja-Jooseppi**	**3.12**	**74**	SG	**Sb**	**19 16 10.3**	**+0.9**
KEV	**Kevo**	**3.16**	**49**	SB	**Sn**	**19 16 07.0**	**+2.9**

*NEIC **17** 19:21:45.5±1.8, 18.15S±0.10×178.17W±0.07, h526km±5km, mb4.5/283, Error ellipse: s-maj=14.3km s-min=9.4km az=195.0*
*NOU **17** 19:21:45.6, 18.29S×178.00W, h530km, mb4.7/34, Fiji Islands Region*
*IDC **17** 19:21:46.2±0.8, 18.10S×178.27W, h526km±9km, mb3.7/21, mbtmp4.6/25, Error ellipse: s-maj=13.3km s-min=9.8km az=152.0*

ISC 17 19:21:47.2±0.3, 18.21S±0.06×178.24W±0.05, h550km, n656, σ1.513/572, mb4.5/176, 35C-15D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**0.55**	**267**	P	**P**	**19 22 50.1**	**-2.5**
TAVE	**Taveuni**	**2.18**	**313**	P	**P**	**19 22 55.4**	**-2.4**

MGBR **Mount Gambier** 40.84 233 P **P** 19 28 42.2 +0.7
MGBR IAmb IAmb 19 29 13.4
comp=Z,30nm,1.4s
AUMBR **Murray Bridge** 41.18 237 P **P** 19 28 45.0 +0.8
BBOO **Buckleboo** 43.40 241 **P** 19 29 02.1 +0.4
BBOO IAmb IAmb 19 29 03.1
comp=Z,19nm,0.9s
GENI **Genyem** 43.60 286 P **P** 19 29 05.6 +2.1
WB0 **Warramunga Arr** 44.70 260 **P** 19 29 11.1 -0.8
WB0 IAmb IAmb 19 29 12.3
comp=Z,9.4nm,0.8s
WB0 PcP **PcP** 19 30 43.3 +0.8
WRAB **Tennant Creek** 44.73 260 P **P** 19 29 12.7 +0.6
WRAB **Tennant Creek** 44.73 260 P **P** 19 29 11.3 -0.8
WRAB IAmb IAmb 19 29 12.4
comp=Z,18nm,1.2s
WRA **Warramunga Arr** 44.73 260 P **P** 19 29 11.5 -0.7
comp=Z,8.1nm,0.7s,baz=98,slow=6.7,SNR=194
WRA PcP **PcP** 19 30 43.5 +0.9
comp=Z,2.0nm,0.7s,baz=86,slow=3.3,SNR=5.1
WRA S **S** 19 35 04.3 -5.1
comp=Z,0.7nm,0.7s,baz=96,slow=13,SNR=4.8
comp=Z,8.1nm,0.7s
WRA **Warramunga Arr** 44.73 260 **P** 19 29 11.3 -0.8
WRA PcP **PcP** 19 30 43.8 +1.1
AS31 **Alice Springs** 44.86 255 **P** 19 29 12.9 -0.2
AS31 IAmb IAmb 19 29 14.1
comp=Z,15nm,0.7s
ASAR **Alice Springs** 44.86 255 P **P** 19 29 13.7 +0.6
comp=Z,50nm,0.6s,baz=94,slow=7.7,SNR=324
ASAR PcP **PcP** 19 30 44.0 +0.9
comp=Z,1.5nm,0.6s,baz=93,slow=2.6,SNR=4.6
ASAR S **S** 19 35 10.1 -1.1
comp=Z,2.2nm,0.8s,baz=90,slow=16,SNR=11
comp=Z,50nm,0.6s
ASAR **Alice Springs** 44.86 255 **P** 19 29 13.1 0.0
AUALC **St Philip's Co** 44.88 254 P **P** 19 29 14.4 +1.1
GUMO **Guam** 48.19 308 P **P** 19 29 38.1 -0.1
MTN **Manton Dam** 48.95 269 **P** 19 29 43.3 -0.7
MTN IAmb IAmb 19 29 44.4
comp=Z,20nm,0.8s
FORT **Forrest** 50.02 245 P **P** 19 29 51.6 0.0
FORT IAmb IAmb 19 29 52.4
comp=Z,8.4nm,0.7s
KNRA **Kununurra** 50.62 264 **P** 19 29 56.1 0.0
FAKI **Fak Fak** 50.79 281 P **P** 19 29 57.4 -0.1
SOEI **Soe** 56.23 270 P **P** 19 30 37.6 +1.4
SOEI **Soe** 56.23 270 **P** 19 30 37.6 +1.4
SANI **Sanana** 56.95 280 P **P** 19 30 41.3 +0.4
PSA00 **Pilbara Seismi** 57.99 256 P **P** 19 30 48.4 +0.5
PSA00 **Pilbara Seismi** 57.99 256 **P** 19 30 47.6 -0.3
PSA00 **Pilbara Seismi** 57.99 256 **P** 19 30 47.7 -0.2
PSA00 IAmb IAmb 19 30 48.8
comp=Z,18nm,0.7s
MBWA **Marble Bar** 58.16 256 **P** 19 30 48.4 -0.7
MBWA IAmb IAmb 19 30 49.5
comp=Z,10nm,0.7s
MMRI **Maumere** 58.46 271 **P** 19 30 50.3 -0.9
MMRI IAmb IAmb 19 30 51.9
comp=Z,20nm,0.9s
NWAO **Narrogin (SRO)** 59.21 242 P **P** 19 30 55.9 -0.1
VNDA **Vanda** 60.16 185 P **P** 19 31 03.4 +2.0
comp=Z,1.5nm,0.8s,baz=357,slow=6.9,SNR=6.2
comp=Z,1.5nm,0.8s
VNDA **Vanda** 60.16 185 P **P** 19 31 02.7 +1.2
MORW **Morawa** 60.51 246 P **P** 19 31 04.8 +0.1
PLAI **Plampang** 62.65 269 P **P** 19 31 19.6 +0.8
TOLI2 **Tolitoli** 62.93 281 P **P** 19 31 21.5 +0.9
TOLI2 IAmb IAmb 19 31 25.1
comp=Z,12nm,0.9s
GIRL **Giralia** 62.96 253 P **P** 19 31 22.1 +1.4
JAGI **Jajag, Banyuwa** 66.19 269 P **P** 19 31 43.0 +1.7
JAGI **Jajag, Banyuwa** 66.19 269 **P** 19 31 40.5 -0.8
JGF **Kuroka** 68.07 322 P **P** 19 31 52.4 0.0
JGF IAmb IAmb 19 32 24.9
comp=Z,28nm,1.3s
MJAR **Matsushiro Arr** 68.24 323 P **P** 19 31 53.1 -0.2
comp=Z,3.6nm,0.5s,baz=158,slow=5.9,SNR=16
comp=Z,3.6nm,0.5s
MJAR **Matsushiro Arr** 68.24 323 P **P** 19 31 52.7 -0.7
MAJO **Matsushiro** 68.24 323 P **P** 19 31 53.1 -0.3
MAJO IAmb IAmb 19 32 33.0
comp=Z,22nm,1.4s
MJB9 **Matsu-Tunnel** 68.25 323 P **P** 19 31 54.2 +0.8
MJB9 IAmb IAmb 19 32 34.0
comp=Z,23nm,1.4s
JOW **Kunigami** 68.53 309 P **P** 19 31 56.2 +0.9
JOW IAmb IAmb 19 32 07.2
comp=Z,9.5nm,1.0s
KKM **Kota Kinabalu** 68.97 284 P **P** 19 31 58.7 +0.4
KKM IAmb IAmb 19 32 01.5
comp=Z,19nm,1.1s
KIWB **Kanaga Island** 69.77 1 P **P** 19 32 01.7 -0.4
UGM **Wanagama** 69.80 268 P **P** 19 32 03.4 +0.1
ADK **Adak** 69.81 1 P **P** 19 32 02.2 -0.1
NIKH **Nikolski High** 71.35 6 P **P** 19 32 10.9 -0.4
NIKH **Nikolski High** 71.35 6 P **P** 19 32 11.0 -0.4
baz=189
SBUM **Sibu** 71.41 279 P **P** 19 32 13.4 +0.7
JKA **Kamikawa-asahi** 71.61 331 P **P** 19 32 14.1 +0.9
JKA IAmb IAmb 19 32 15.4
comp=Z,22nm,1.1s
QSPA **South Pole Qui** 71.85 180 P **P** 19 32 16.1 +1.7
comp=Z,6.6nm,0.7s,baz=76,slow=0.4,SNR=27
comp=Z,6.6nm,0.7s
QSPA **South Pole Qui** 71.85 180 P **P** 19 32 15.8 +1.4
TWG **Pinlang** 71.97 302 P **P** 19 32 14.9 -0.8
TWG IAmb IAmb 19 32 15.1
comp=Z,9.1nm,0.7s
YULB **Yu-li** 72.06 303 P **P** 19 32 15.6 -0.7
YULB IAmb IAmb 19 32 16.1
comp=Z,24nm,1.5s
UNV **Unalaska Valle** 72.47 7 P **P** 19 32 16.9 -0.9
UNV **Unalaska Valle** 72.47 7 P **P** 19 32 17.7 -0.2
baz=192
SSLB **Suanglung** 72.53 303 P **P** 19 32 17.9 -1.1
SSLB IAmb IAmb 19 32 19.6
comp=Z,12nm,1.0s
TPUB **Ta-pu** 72.55 302 P **P** 19 32 20.1 +1.0
TPUB **Ta-pu** 72.55 302 P **P** 19 32 18.1 -1.0
BBJI **Bungbulang** 72.65 268 **P** 19 32 19.4 -0.6
BBJI IAmb IAmb 19 32 20.4
comp=Z,9.1nm,0.7s
FALS **False Pass** 73.86 9 P **P** 19 32 26.1 +0.3
baz=194
PEA0B **Petropavlovsk-** 74.01 345 P **P** 19 32 27.0 +0.3
PEA0B IAmb IAmb 19 32 27.9
comp=Z,19nm,0.8s
PETK **Petropavlovsk-** 74.01 345 P **P** 19 32 26.9 +0.2
comp=Z,14nm,0.7s,baz=123,slow=8.5,SNR=15
comp=Z,14nm,0.7s
CHNA **Chernabura Isl** 74.47 11 P **P** 19 32 29.6 +0.4
baz=198
SDPT **Sand Point** 74.81 10 P **P** 19 32 30.0 -1.1
SDPT **Sand Point** 74.81 10 P **P** 19 32 31.4 +0.3
baz=197
KSRS **Korea Array** 75.03 318 P **P** 19 32 34.0 +1.1
comp=Z,1.4nm,0.7s,baz=127,slow=6.5,SNR=7.8
comp=Z,1.4nm,0.7s
SPIA **Saint Paul Isl** 75.39 4 P **P** 19 32 34.7 +0.3
baz=188
CHGN **Chignik** 76.08 11 P **P** 19 32 37.6 -0.6
CHGN **Chignik** 76.08 11 P **P** 19 32 38.2 0.0
baz=199
CHIR **Chirikof Islan** 76.19 13 P **P** 19 32 38.6 -0.2
CHIR **Chirikof Islan** 76.19 13 P **P** 19 32 39.1 +0.3
baz=202
USRK **Ussuriysk Ar.** 76.95 326 P **P** 19 32 44.9 +1.6
comp=Z,2.1nm,0.6s,baz=134,slow=11,SNR=4.1
comp=Z,2.1nm,0.6s
KMRM **Mail Ridge** 77.14 40 P **P** 19 32 46.9 +2.3
SII **Sitkinak Islan** 77.18 13 P **P** 19 32 44.6 +0.4
baz=203
R16K **Pilot Point** 77.43 11 P **P** 19 32 46.1 +0.6
baz=200
OHAK **Old Harbor** 77.99 14 P **P** 19 32 48.9 +0.3
OHAK IAmb IAmb 19 32 49.9
comp=Z,18nm,0.8s
OHAK **Old Harbor** 77.99 14 P **P** 19 32 48.8 +0.3
baz=204
AFDM **Forest Hills D** 78.09 42 **P** 19 32 50.6 +1.0
NJ2 **Nanjing** 78.25 309 eP **P** 19 32 52.3 +1.7
NJ2 pmax pmax
comp=Z,24nm,0.5s
M02C **Callahan** 78.37 39 P **P** 19 32 53.2 +2.1
M02C IAmb IAmb 19 33 08.0
comp=Z,18nm,1.5s
Q17K **Contact Creek** 78.41 12 P **P** 19 32 51.3 +0.3
baz=202
O14K **Tigyukauivet M** 78.43 9 P **P** 19 32 50.7 -0.2
O14K IAmb IAmb 19 33 10.2
comp=Z,34nm,1.5s
O14K **Tigyukauivet M** 78.43 9 P **P** 19 32 51.7 +0.8
baz=196
ACHA **Angle Creek He** 78.47 12 P **P** 19 32 50.9 -0.3
MDJ **Mudanjiang** 78.52 325 P **P** 19 32 53.2 +1.5
MDJ **Mudanjiang** 78.52 325 **P** 19 32 51.1 -0.6
MDJ IAmb IAmb 19 32 54.3
comp=Z,12nm,0.9s
MDJ **Mudanjiang** 78.52 325 P **P** 19 32 53.4 +1.7
MDJ pmax pmax
comp=Z,16nm,0.8s
O15K **Ungalikthiuk R** 78.57 10 P **P** 19 32 51.2 -0.4
O15K IAmb IAmb 19 33 30.9
comp=Z,20nm,1.3s
O15K **Ungalikthiuk R** 78.57 10 P **P** 19 32 52.2 +0.5
baz=198
Q16K **King Salmon** 78.64 11 P **P** 19 32 52.2 +0.2
baz=201
KDAK **Kodiak Island** 78.66 14 **P** 19 32 52.4 +0.3
KDAK IAmb IAmb 19 32 53.5
comp=Z,24nm,0.9s
KDAK **Kodiak Island** 78.66 14 P **P** 19 32 52.7 +0.6
baz=205
YBH **Yrekt Blue Hor** 78.66 39 P **P** 19 32 53.7 +1.0
comp=Z,0.2nm,0.8s,baz=196,slow=2.1,SNR=6.1
P16K **Nushagak River** 78.74 11 P **P** 19 32 52.2 -0.3
P16K **Nushagak River** 78.74 11 P **P** 19 32 52.6 0.0
baz=200
M11K **Mekoryuk** 78.92 6 P **P** 19 32 54.1 +0.7
baz=192
Q18K **Katmai Hardscr** 78.94 12 P **P** 19 32 53.8 +0.1
baz=202,SNR=6.5
N14K **Kuskokwak Cree** 79.01 8 P **P** 19 32 54.5 +0.6
N14K **Kuskokwak Cree** 79.01 8 P **P** 19 32 54.7 +0.8
baz=196
P17K **Kvichak River** 79.17 11 **P** 19 32 54.9 +0.1
P17K **Kvichak River** 79.17 11 P **P** 19 32 55.0 +0.2
baz=201,SNR=6.0
O16K **Kokwok River B** 79.25 10 **P** 19 32 54.5 -0.8
O16K IAmb IAmb 19 32 55.4
comp=Z,11nm,0.7s
O16K **Kokwok River B** 79.25 10 P **P** 19 32 55.2 -0.1
baz=199
M13K **Dall Lake** 79.27 7 P **P** 19 32 55.3 0.0
M13K IAmb IAmb 19 33 32.9
comp=Z,32nm,1.4s
M13K **Dall Lake** 79.27 7 P **P** 19 32 56.3 +1.0
baz=194
Q20K **Shuyak Island** 79.45 13 P **P** 19 32 56.8 +0.5
baz=205
Q19K **Cape Douglas,** 79.47 13 P **P** 19 32 57.3 +0.8
baz=204
N15K **Kwethluk River** 79.48 9 P **P** 19 32 56.5 +0.1
N15K IAmb IAmb 19 32 58.2
comp=Z,12nm,0.8s
N15K **Kwethluk River** 79.48 9 P **P** 19 32 57.2 +0.7
baz=197
NVAR **Mina Array Bea** 79.53 44 P **P** 19 32 59.2 +1.7
comp=Z,2.7nm,0.8s,baz=225,slow=9.4,SNR=12
comp=Z,2.7nm,0.8s
NVAR **Mina Array Bea** 79.53 44 P **P** 19 32 59.0 +1.4
P18K **Big Mountain,** 79.58 12 **P** 19 32 56.8 -0.2
P18K **Big Mountain,** 79.58 12 P **P** 19 32 57.1 +0.1
baz=202,SNR=8.9
O17K **Koliganek Bris** 79.59 11 P **P** 19 32 57.0 0.0
baz=200
M14K **Bethel** 79.78 8 IAmb IAmb 19 33 00.8
comp=Z,17nm,1.0s
M14K **Bethel** 79.78 8 P **P** 19 32 58.7 +0.8
baz=196
M15K **Kasigluk River** 79.90 9 P **P** 19 32 59.4 +0.8
baz=197
J04A **Umpqua Nationa** 79.92 38 **P** 19 32 59.9 +0.5
J04A IAmb IAmb 19 33 01.9
comp=Z,16nm,0.7s
N16K **Nishlik Lake** 79.98 10 P **P** 19 32 59.8 +0.7
baz=199
KVN **Kaiserville** 80.00 43 P **P** 19 33 01.3 +1.4
O18K **Koktuh Hills** 80.02 12 **P** 19 32 59.1 -0.2
O18K **Koktuh Hills** 80.02 12 P **P** 19 32 59.5 +0.2
baz=202,SNR=13
P19K **Oil Pt** 80.22 13 P **P** 19 33 00.4 0.0
P19K **Oil Pt** 80.22 13 P **P** 19 33 00.4 0.0
baz=204
L14K **Kuka Creek** 80.25 8 P **P** 19 33 01.4 +1.0
baz=195
N17K **Nushagak Hills** 80.29 10 P **P** 19 33 01.4 +0.7
baz=200
K05A **Summer Lake** 80.33 39 P **P** 19 33 02.7 +1.1
K05A IAmb IAmb 19 33 04.7
comp=Z,23nm,1.3s
CN2 **Changchun** 80.36 322 P **P** 19 33 02.8 +1.4
CN2 pmax pmax
comp=Z,10.0nm,1.0s
BNX **BinXian** 80.43 325 ⇓P **P** 19 33 02.3 +0.5
BNX pmax pmax
comp=Z,12nm,0.9s
J05D **Fort Rock, OR** 80.46 38 P **P** 19 33 03.7 +1.5
J05D IAmb IAmb 19 33 04.8
comp=Z,11nm,0.8s
M16K **Timber Creek** 80.47 9 P **P** 19 33 02.4 +0.8
baz=198,SNR=9.3
O19K **Port Alsworth** 80.50 12 P **P** 19 33 02.0 +0.2
baz=203,SNR=16
HOM **Homer** 80.57 13 P **P** 19 33 02.5 +0.4
baz=205
K13K **Kusilvak Mount** 80.60 6 P **P** 19 33 03.1 +0.9
baz=193
N18K **Kilae Creek** 80.66 11 P **P** 19 33 02.9 +0.2
baz=201
L15K **Ungalak Mounta** 80.73 8 P **P** 19 33 03.4 +0.4
baz=196
BRLK **Bradley Lake** 80.83 14 P **P** 19 33 03.5 -0.1
BRSE **Bradley Lake S** 80.84 14 P **P** 19 33 04.1 +0.5
baz=206
PINE **Pine Mountain** 80.93 38 IAmb IAmb 19 33 07.9
comp=Z,20nm,1.1s
N19K **Bonanza Creek** 81.04 12 IAmb IAmb 19 33 05.3
comp=Z,10nm,0.8s
N19K **Bonanza Creek** 81.04 12 P **P** 19 33 05.0 +0.3
baz=203
L16K **Owhat River** 81.05 9 IAmb IAmb 19 33 06.7
comp=Z,22nm,1.1s
L16K **Owhat River** 81.05 9 P **P** 19 33 05.7 +1.2
baz=198
M17K **Holitna River** 81.07 10 P **P** 19 33 06.3 +1.6
baz=200
K15K **Wolf Creek Mou** 81.32 8 P **P** 19 33 07.4 +1.4
baz=196
M18K **Stony River** 81.43 11 P **P** 19 33 07.2 +0.6
baz=201
J14K **Nanvaranak Lak** 81.52 7 IAmb IAmb 19 33 09.3
comp=Z,17nm,1.3s
J14K **Nanvaranak Lak** 81.52 7 P **P** 19 33 08.0 +1.0
baz=194
MA2 **Magadan** 81.53 345 P **P** 19 33 06.5 -0.6
MA2 IAmb IAmb 19 33 07.8
comp=Z,11nm,1.0s
L17K **Donlin** 81.63 9 P **P** 19 33 08.9 +1.4
baz=199
SLKM **Skilak Lake** 81.65 14 **P** 19 33 07.8 +0.1
O22K **Cooper Landing** 81.73 14 P **P** 19 33 08.3 +0.2
baz=207
BELA **Belgrano 2** 81.85 173 **P** 19 33 09.0 +0.4
BELA IAmb IAmb 19 33 10.4
comp=Z,7.1nm,0.7s
N20K **Mount Spurr** 81.85 12 P **P** 19 33 09.1 +0.3
baz=205,SNR=6.9
SPCR **Spurr Chakacha** 81.85 12 P **P** 19 33 09.3 +0.5
baz=205
P23K **Montague Islan** 81.86 15 P **P** 19 33 09.1 +0.4
baz=209
SPU **Mount Spurr** 81.86 12 IAmb IAmb 19 33 09.1
comp=Z,12nm,1.2s
GAMB **Gambell** 81.88 3 P **P** 19 33 09.6 +0.9
baz=186
L18K **Granite Mounta** 81.96 10 IAmb IAmb 19 33 11.1
comp=Z,14nm,0.7s
L18K **Granite Mounta** 81.96 10 P **P** 19 33 10.5 +1.3
baz=200
M19K **Big River Lodg** 82.07 11 IAmb IAmb 19 33 10.7
comp=Z,11nm,0.8s
M19K **Big River Lodg** 82.07 11 P **P** 19 33 10.1 +0.2
baz=203
K17K **Iditarod** 82.18 9 IAmb IAmb 19 33 11.9
comp=Z,7.9nm,0.7s
K17K **Iditarod** 82.18 9 P **P** 19 33 11.4 +1.0
baz=199
STLK **Strandline Lak** 82.19 12 IAmb IAmb 19 33 10.6
comp=Z,13nm,0.8s
L19K **White Mountain** 82.24 11 IAmb IAmb 19 33 13.1
comp=Z,10nm,1.0s
L19K **White Mountain** 82.24 11 P **P** 19 33 11.5 +0.8
baz=202
RC01 **Rabbit Creek A** 82.27 14 IAmb IAmb 19 33 12.0
comp=Z,14nm,1.1s
RC01 **Rabbit Creek A** 82.27 14 P **P** 19 33 11.1 +0.2
baz=207
M20K **Styx River** 82.29 12 P **P** 19 33 11.0 0.0
M20K **Styx River** 82.29 12 P **P** 19 33 11.5 +0.5
baz=204
J16K **Anvik River** 82.39 8 IAmb IAmb 19 33 13.6
comp=Z,14nm,0.8s
J16K **Anvik River** 82.39 8 P **P** 19 33 12.6 +1.2
baz=197,SNR=14
HIN **Hinchinbrook I** 82.43 15 P **P** 19 33 11.7 0.0
HIN IAmb IAmb 19 33 40.0
comp=Z,19nm,1.2s
PSUT **Pine Spring** 82.56 45 IAmb IAmb 19 33 09.3
comp=Z,9.5nm,1.0s
KAIM **Kayak Island** 82.57 16 P **P** 19 33 13.1 +0.8
baz=212
U15A **North Rim** 82.60 48 **P** 19 33 14.3 +0.9
SKT **Skwentna** 82.69 12 P **P** 19 33 12.9 -0.1
baz=205
GLI **Glacier Island** 82.70 15 P **P** 19 33 12.8 -0.3
GLI **Glacier Island** 82.70 15 P **P** 19 33 13.0 0.0
baz=210,SNR=9.0
J17K **VABM Dome** 82.71 9 IAmb IAmb 19 33 14.5
comp=Z,9.7nm,0.7s
J17K **VABM Dome** 82.71 9 P **P** 19 33 14.0 +1.0
baz=198
CRAG **Craig** 82.73 24 P **P** 19 33 13.4 +0.2
baz=223
EYAK **Cordova Ski Ar** 82.75 16 P **P** 19 33 13.4 +0.2
baz=211
ELK **Elko** 82.77 43 P **P** 19 33 15.4 +1.3
comp=Z,3.2nm,0.9s,baz=263,slow=4.5,SNR=12
comp=Z,3.2nm,0.9s
M22K **Willow** 82.78 13 P **P** 19 33 13.4 +0.1
baz=207
KNK **Knik Glacier** 82.85 14 IAmb IAmb 19 33 14.8
comp=Z,13nm,0.8s
KNK **Knik Glacier** 82.85 14 P **P** 19 33 14.0 +0.2
baz=208,SNR=5.9
PMR **Palmer** 82.86 14 P **P** 19 33 13.9 +0.2
PMR **Palmer** 82.86 14 IAmb IAmb 19 33 14.7
comp=Z,31nm,1.4s
PMR **Palmer** 82.86 14 P **P** 19 33 13.9 +0.2
baz=208
G08A **Pilot Rock** 82.95 38 IAmb IAmb 19 33 17.8
comp=Z,14nm,1.3s
I17K **Unalakleet** 82.96 8 P **P** 19 33 15.1 +0.8
baz=197
ANM **Nome** 83.11 6 P **P** 19 33 15.8 +0.8
baz=192
J18K **Innoko River** 83.13 10 IAmb IAmb 19 33 16.7
comp=Z,20nm,0.8s
J18K **Innoko River** 83.13 10 P **P** 19 33 15.8 +0.7
baz=200,SNR=18
BERG **Berg Lake** 83.16 16 IAmb IAmb 19 33 20.1
comp=Z,9.7nm,0.8s
E07A **Sunnyside** 83.17 36 IAmb IAmb 19 33 18.1
comp=Z,7.6nm,0.8s
U33K **Whale Pass** 83.20 24 P **P** 19 33 15.6 0.0
baz=223
SML **Sawmill** 83.23 14 P **P** 19 33 15.7 0.0
baz=208
DIV **Divide** 83.25 15 IAmb IAmb 19 33 16.9
comp=Z,14nm,0.8s
HEH **HeiHe** 83.25 328 eP **P** 19 33 16.5 +0.5
HEH pmax pmax
comp=Z,7.0nm,1.3s
CUT **Chulitna** 83.34 13 P **P** 19 33 16.1 -0.1
baz=206,SNR=6.3
L22K **Petersville** 83.34 12 **P** 19 33 15.5 -0.8
L22K IAmb IAmb 19 33 16.7
comp=Z,21nm,1.0s
PPLA **Purkeypile** 83.39 12 P **P** 19 33 16.9 +0.3
baz=205
BMRM **Bremner River** 83.40 16 IAmb IAmb 19 33 17.8
comp=Z,18nm,1.0s
BMRM **Bremner River** 83.40 16 P **P** 19 33 16.8 +0.2
baz=212,SNR=7.5
MESA **MESA** 83.46 17 P **P** 19 33 18.1 +1.1
baz=214,SNR=5.4
K20K **Telida** 83.47 11 P **P** 19 33 17.4 +0.6
baz=203
PMSA **Palmer Station** 83.47 157 P **P** 19 33 13.8 -3.1
S31K **Pelican** 83.47 21 P **P** 19 33 17.7 +0.8
baz=220
SCM **Sheep Creek Mo** 83.48 14 P **P** 19 33 17.3 +0.3
baz=209,SNR=10.0
H16K **Elim** 83.50 7 P **P** 19 33 17.6 +0.7
baz=195,SNR=12
KLU **Klutina** 83.52 15 IAmb IAmb 19 33 19.0
comp=Z,19nm,1.5s
KLU **Klutina** 83.52 15 P **P** 19 33 17.6 +0.4
baz=211
CRQM **Cirque** 83.61 17 IAmb IAmb 19 33 19.2
comp=Z,19nm,0.9s
CRQE **Cirque** 83.62 17 P **P** 19 33 18.2 +0.4
baz=213,SNR=8.7
G15K **Niukluk** 83.66 6 P **P** 19 33 18.5 +0.9
baz=193
S32K **Killisnoo** 83.67 22 P **P** 19 33 18.5 +0.6
baz=221
TGL **Tana Glacier** 83.69 17 P **P** 19 33 18.1 0.0
TGL IAmb IAmb 19 33 19.6
comp=Z,19nm,1.0s
EPH **Ephrata** 83.77 36 IAmb IAmb 19 33 20.8
comp=Z,6.6nm,0.9s
J19K **Poorman** 83.80 10 P **P** 19 33 19.4 +0.9
baz=201
HNS **HongShan** 83.84 312 ⇑P **P** 19 33 21.1 +1.9
HNS pmax pmax
comp=Z,6.0nm,1.0s
TNA **Tin City** 83.88 4 IAmb IAmb 19 33 20.5
comp=Z,13nm,0.9s
TNA **Tin City** 83.88 4 P **P** 19 33 19.3 +0.6
baz=190,SNR=5.3
PINM **Pinnacle** 83.88 18 P **P** 19 33 19.4 +0.4
baz=216
F14K **Arctic Creek** 83.92 5 P **P** 19 33 19.7 +0.8
baz=191
VRDI **Verde Repeater** 83.92 16 IAmb IAmb 19 33 20.6
comp=Z,11nm,1.0s
N25K **Chitina, Valde** 83.95 15 P **P** 19 33 19.9 +0.6
baz=212,SNR=15
GRNC **Granite Creek** 83.97 17 IAmb IAmb 19 33 21.1
comp=Z,15nm,1.0s
M24K **Tolsona, Glenn** 83.99 15 P **P** 19 33 20.2 +0.7
baz=210
GLB **Gilahina Butte** 84.01 16 IAmb IAmb 19 33 20.8
comp=Z,12nm,0.7s
WAT6 **Susitna Watana** 84.04 14 P **P** 19 33 19.9 0.0
baz=209,SNR=13
PSI **Prapat** 84.07 275 P **P** 19 33 22.1 +1.0
H17K **Granite Mounta** 84.07 8 P **P** 19 33 20.1 +0.3
baz=197
WAT1 **Susitna Watana** 84.08 13 P **P** 19 33 20.1 +0.2
baz=208
BJI2 **Beijing** 84.10 315 P **P** 19 33 21.4 +0.9
BJI2 pmax pmax
comp=Z,3.0nm,0.8s
LYN **LuoYang** 84.14 309 P **P** 19 33 22.8 +2.0
LYN pmax pmax
comp=Z,28nm,0.7s
MCARA **McCarthy VSAT** 84.17 16 IAmb IAmb 19 33 21.9
comp=Z,14nm,1.0s
MCARA **McCarthy VSAT** 84.17 16 P **P** 19 33 20.9 +0.6
baz=213,SNR=6.6
J20K **Nowinta River** 84.22 10 IAmb IAmb 19 33 21.9
comp=Z,12nm,0.8s
J20K **Nowinta River** 84.22 10 P **P** 19 33 21.1 +0.6
baz=203
G16K **Koyuk River** 84.22 7 P **P** 19 33 21.2 +0.8
baz=195
KTH **Kantishna Hill** 84.24 12 IAmb IAmb 19 33 22.1

comp=Z,16nm,0.9s
LOGN Logan Glacier 84.26 17 IAmb IAmb 19 33 22.4
comp=Z,13nm,0.9s
BARN Barnard Glacie 84.27 17 IAmb IAmb 19 33 22.6
comp=Z,18nm,0.9s
TRF Thorofare Moun 84.27 12 **P** **P** **19 33 20.3 -0.7**
TRF Thorofare Moun 84.27 12 P **P** **19 33 20.6 -0.4**
baz=206,SNR=26
CHUM Lake Minchumin 84.27 11 P **P** **19 33 20.3 -0.4**
baz=205,SNR=12
CTG Chitna Glacier 84.28 17 P **P** **19 33 21.6 +0.5**
baz=215,SNR=9.9
CTGM Chitina Glacie 84.28 17 IAmb IAmb 19 33 22.6
comp=Z,14nm,0.8s
F15K North Star Dit 84.29 6 P **P** **19 33 21.1 +0.3**
baz=193
F10A Beach Ranch, E 84.34 38 IAmb IAmb 19 33 24.0
comp=Z,8.3nm,0.9s
BESE Bessie Mountai 84.42 21 IAmb IAmb 19 33 23.8
comp=Z,12nm,1.0s
O28M Mount Upton 84.45 18 P **P** **19 33 22.4 +0.3**
O28M IAmb IAmb 19 33 23.5
comp=Z,14nm,0.8s
O28M Mount Upton 84.45 18 P **P** **19 33 22.6 +0.6**
baz=216
H18K Honhosa River 84.48 8 P **P** **19 33 22.4 +0.6**
baz=199
HARP HAARP 84.49 15 P **P** **19 33 22.5 +0.7**
baz=211
G17K Kiwalik Mounta 84.52 7 P **P** **19 33 22.1 +0.2**
baz=197
O29M Mount Kennedy 84.55 19 P **P** **19 33 22.5 +0.1**
baz=217
DHY Denali Highway 84.56 14 IAmb IAmb 19 33 25.7
comp=Z,5.6nm,0.7s
DHY Denali Highway 84.56 14 P **P** **19 33 22.0 -0.4**
baz=209
ENH Enshi 84.57 304 P **P** **19 33 25.1 +2.0**
ENH Enshi 84.57 304 IAmb IAmb 19 33 25.4
comp=Z,17nm,0.8s
BPAW Bear Paw Mtn. 84.72 12 **P** **19 33 21.8 -1.2**
BPAW Bear Paw Mtn. 84.72 12 P **P** **19 33 22.3 -0.7**
baz=206
I20K Naaghedeneel 84.73 10 P **P** **19 33 22.9 0.0**
baz=202
HLID Hailey 84.75 41 **P** **19 33 25.6 +1.8**
MCK McKinley 84.80 13 IAmb IAmb 19 33 24.2
comp=Z,20nm,1.0s
MCK McKinley 84.80 13 P **P** **19 33 23.3 0.0**
baz=208,SNR=14
GSI Gunungsitoli 84.88 273 P **P** **19 33 26.4 +1.5**
PAX Paxson 84.90 14 P **P** **19 33 23.9 -0.1**
baz=211
P30M Million Dollar 84.91 19 P **P** **19 33 25.2 +1.2**
baz=219
SKAG Skagway 84.92 20 P **P** **19 33 25.2 +1.2**
baz=220
YUK8 Steele Glacier 84.99 18 P **P** **19 33 25.4 +0.8**
baz=216,SNR=13
M26K Nabesna, AK 85.03 16 IAmb IAmb 19 33 26.7
comp=Z,18nm,1.0s
M26K Nabesna, AK 85.03 16 P **P** **19 33 25.2 +0.6**
baz=213
H19K Roundabout Mou 85.11 9 P **P** **19 33 25.3 +0.5**
baz=201
YUK6 Outpost Mounta 85.12 18 P **P** **19 33 25.4 +0.1**
baz=218
G18K Tagagawik 85.15 8 P **P** **19 33 25.9 +0.9**
baz=198
YUK3 Moose Creek 85.19 17 P **P** **19 33 26.2 +0.6**
baz=216,SNR=21
S34M Telegraph Cree 85.26 23 P **P** **19 33 27.1 +1.4**
baz=224
M27K Edge Creek, AK 85.28 16 IAmb IAmb 19 33 27.8
comp=Z,20nm,1.0s
M27K Edge Creek, AK 85.28 16 P **P** **19 33 26.8 +0.9**
baz=214,SNR=21
HYT Haines Junctio 85.29 19 IAmb IAmb 19 33 27.8
comp=Z,7.3nm,0.9s
HYT Haines Junctio 85.29 19 P **P** **19 33 27.0 +1.1**
baz=218,SNR=5.9
MENT Mentasta 85.30 15 P **P** **19 33 26.5 +0.7**
MENT Mentasta 85.30 15 IAmb IAmb 19 33 27.4
comp=Z,9.9nm,1.0s
H20K Anotleneega Mo 85.31 10 P **P** **19 33 26.6 +0.8**
baz=202
F17K Baldwin Pennin 85.36 7 P **P** **19 33 27.1 +1.2**
baz=196
YUK4 Talbot Arm 85.36 18 P **P** **19 33 27.5 +1.2**
baz=217,SNR=6.3
L26K Log Cabin Wild 85.46 15 IAmb IAmb 19 33 28.1
comp=Z,9.0nm,1.1s
L26K Log Cabin Wild 85.46 15 P **P** **19 33 27.1 +0.5**
baz=213
I21K Tanana 85.51 11 IAmb IAmb 19 33 28.4
comp=Z,7.2nm,0.8s
I21K Tanana 85.51 11 P **P** **19 33 26.9 +0.2**
baz=205,SNR=8.6
NEA2 Nenana 85.54 12 P **P** **19 33 26.8 -0.1**
baz=208
K24K Donnelly Dome 85.55 14 P **P** **19 33 27.8 +0.7**
baz=211,SNR=10
P32M Atlin 85.57 21 IAmb IAmb 19 33 28.8
comp=Z,7.1nm,0.9s
P32M Atlin 85.57 21 P **P** **19 33 28.2 +1.0**
baz=222,SNR=5.1
G19K Purcell Mounta 85.60 8 **P** **19 33 27.4 +0.2**
G19K Purcell Mounta 85.60 8 P **P** **19 33 28.0 +0.8**
baz=200
BVCY Beaver Creek 85.60 16 P **P** **19 33 28.2 +0.9**
baz=215,SNR=18
Q32M Nakina River 85.60 22 IAmb IAmb 19 33 29.7
comp=Z,8.6nm,0.7s
Q32M Nakina River 85.60 22 P **P** **19 33 28.7 +1.1**
baz=223
MLY Manley 85.61 11 P **P** **19 33 27.8 +0.6**
baz=206
NEW Newport 85.66 36 P **P** **19 33 28.1 +0.2**
comp=Z,2.3nm,0.7s,baz=235,slow=9.1,SNR=5.9
comp=Z,2.3nm,0.7s
O30N Mendenhall 85.68 19 IAmb IAmb 19 33 29.7
comp=Z,10nm,0.8s
O30N Mendenhall 85.68 19 P **P** **19 33 28.7 +0.9**
baz=220,SNR=11
F18K Selawik 85.69 7 P **P** **19 33 27.3 -0.2**
baz=198
RIDG Independent Ri 85.71 14 IAmb IAmb 19 33 29.0
comp=Z,9.8nm,0.8s
RIDG Independent Ri 85.71 14 P **P** **19 33 28.2 +0.4**
baz=212,SNR=6.1
H21K Melozitna River 85.81 10 P **P** **19 33 28.4 +0.2**
baz=204,SNR=5.3
HDA Harding Lake 85.81 13 IAmb IAmb 19 33 29.0
comp=Z,12nm,0.8s
HDA Harding Lake 85.81 13 P **P** **19 33 28.2 0.0**
baz=210,SNR=8.2
DOT Dot Lake 85.82 15 IAmb IAmb 19 33 29.6
comp=Z,11nm,0.8s
CCB Clear Creek Bu 85.84 13 IAmb IAmb 19 33 28.9
comp=Z,20nm,1.2s
L27K Beaver Creek, 85.88 16 P **P** **19 33 29.2 +0.6**
baz=214
E17K Hotham Inlet 85.91 6 P **P** **19 33 29.1 +0.5**
baz=196
N30M Aishikik Lake 85.91 18 P **P** **19 33 29.3 +0.5**
baz=219
IMAR Indian Mountai 85.95 10 **P** **19 33 28.6 -0.2**
I23K Minto, Yukon-K 85.97 12 P **P** **19 33 29.2 +0.3**
baz=207,SNR=5.0
WHY Whitehorse 85.98 20 IAmb IAmb 19 33 31.2
comp=Z,13nm,0.9s
WHY Whitehorse 85.98 20 P **P** **19 33 29.5 +0.2**
baz=221
TXAR Lajitas Array 86.02 58 P **P** **19 33 30.3 +0.1**
comp=Z,2.5nm,0.7s,baz=243,slow=4.8,SNR=18
comp=Z,2.5nm,0.7s
COLA College 86.03 13 P **P** **19 33 29.3 +0.1**
COLA College 86.03 13 P **P** **19 33 29.2 +0.1**
DLBC Dease Lake 86.05 23 P **P** **19 33 30.7 +1.1**
comp=Z,2.5nm,0.7s,baz=221,slow=7.9,SNR=5.8
comp=Z,2.5nm,0.7s
DLBC Dease Lake 86.05 23 P **P** **19 33 30.1 +0.6**
baz=225
SCRK Sand Creek 86.11 14 P **P** **19 33 30.1 +0.3**
baz=212,SNR=5.7
IL31 86.14 13 IAmb IAmb 19 33 30.4
comp=Z,6.7nm,0.7s
ILAR Eielson Array 86.14 13 P **P** **19 33 29.3 -0.5**
comp=Z,3.4nm,0.4s,baz=222,slow=5.0,SNR=49
comp=Z,3.4nm,0.4s
ILAR Eielson Array 86.14 13 **P** **19 33 29.5 -0.2**
F19K Shaleruckik Mo 86.16 8 P **P** **19 33 29.9 +0.2**
baz=199
ANMO Albuquerque 86.16 51 P **P** **19 33 32.6 +1.7**
comp=Z,1.6nm,0.8s,baz=180,slow=7.7,SNR=3.0
comp=Z,1.6nm,0.8s
H22K Ishtalitna Cre 86.27 11 P **P** **19 33 30.8 +0.4**
baz=205
M29M Somme Creek 86.29 17 P **P** **19 33 31.3 +0.7**
baz=217
P33M Teslin, Yukon 86.33 21 **P** **19 33 31.0 +0.1**
P33M Teslin, Yukon 86.33 21 P **P** **19 33 31.9 +1.0**
baz=223
N31M Braeburn, Yuko 86.33 19 IAmb IAmb 19 33 32.7
comp=Z,11nm,0.9s
N31M Braeburn, Yuko 86.33 19 P **P** **19 33 29.9 -0.9**
baz=220,SNR=6.7
POKR Poker Plat Res 86.33 13 P **P** **19 33 30.4 -0.3**
baz=209
J25K Salcha River, 86.34 14 IAmb IAmb 19 33 32.6
comp=Z,6.3nm,1.0s
J25K Salcha River, 86.34 14 P **P** **19 33 30.6 -0.2**
baz=211
E18K Tukpahlearik C 86.37 7 IAmb IAmb 19 33 32.1
comp=Z,6.2nm,0.8s
E18K Tukpahlearik C 86.37 7 P **P** **19 33 30.8 0.0**
baz=197
R33M Jennings River 86.38 22 P **P** **19 33 30.7 -0.4**
baz=224
D17K Noatak River 86.38 6 P **P** **19 33 31.6 +0.8**
baz=194
G21K Allakaket 86.48 10 IAmb IAmb 19 33 32.6
comp=Z,7.0nm,0.8s
G21K Allakaket 86.48 10 P **P** **19 33 31.7 +0.3**
baz=203
XAN Xi'an 86.57 307 ||P **P** **19 33 34.1 +1.5**
XAN pP PcP 19 33 38.9 +4.7
XAN pmax pmax
comp=Z,23nm,1.0s
BILL Bilibino 86.75 354 **P** **19 33 32.6 0.0**
BILL IAmb IAmb 19 33 34.2
comp=Z,8.1nm,1.0s
C16K Lisburne Hills 86.75 5 P **P** **19 33 33.1 +0.5**
baz=192
E19K Redstone River 86.82 8 IAmb IAmb 19 33 34.2
comp=Z,8.0nm,0.7s
E19K Redstone River 86.82 8 P **P** **19 33 33.1 +0.2**
baz=200
M30M Minto, Yukon 86.87 18 IAmb IAmb 19 33 34.9
comp=Z,12nm,0.8s
M30M Minto, Yukon 86.87 18 P **P** **19 33 33.7 +0.4**
baz=219,SNR=16
H24K Kodor Dome 86.88 12 P **P** **19 33 33.6 +0.4**
baz=209
L29M L29M 86.91 17 IAmb IAmb 19 33 35.6
comp=Z,14nm,1.1s
L29M L29M 86.91 17 P **P** **19 33 34.7 +1.2**
baz=218,SNR=9.5
N32M Quiet Lake 86.94 20 IAmb IAmb 19 33 35.8
comp=Z,11nm,1.1s
N32M Quiet Lake 86.94 20 P **P** **19 33 34.7 +1.1**
baz=222,SNR=5.8
PRP Porcupine Dome 87.08 13 P **P** **19 33 33.7 -0.7**
PRP Porcupine Dome 87.08 13 P **P** **19 33 34.3 -0.1**
baz=211
C17K DeLong Mountai 87.13 6 P **P** **19 33 34.8 +0.4**
baz=194
F21K Alatna River 87.13 9 P **P** **19 33 34.8 +0.3**
baz=203
G23K Bananza Creek 87.25 11 P **P** **19 33 35.6 +0.6**
baz=207
M31M Drury Creek, Y 87.31 19 P **P** **19 33 35.6 +0.3**
baz=221
DAWY Dawson 87.33 16 IAmb IAmb 19 33 37.2
comp=Z,10nm,1.2s
DAWY Dawson 87.33 16 P **P** **19 33 36.2 +0.7**
baz=216,SNR=7.9
YHL Hebgen Lake 87.41 41 IAmb IAmb 19 33 39.8
comp=Z,7.9nm,0.9s
I26K Coal Creek Min 87.43 14 P **P** **19 33 36.6 +0.8**
baz=213,SNR=5.6
PDAR Pinedale Array 87.46 43 P **P** **19 33 38.0 +1.2**
comp=Z,1.9nm,0.7s,baz=223,slow=2.6,SNR=23
comp=Z,1.9nm,0.7s
PDAR Pinedale Array 87.46 43 **P** **19 33 37.6 +0.8**
C18K Utukok River 87.49 6 P **P** **19 33 36.8 +0.7**
baz=196
H17A Grant Village 87.57 42 IAmb IAmb 19 33 41.0
comp=Z,4.7nm,0.8s
HHC Hu-ho-hao-te 87.60 314 *e*P **P** **19 33 38.4 +1.1**
HHC pmax pmax
comp=Z,10.0nm,0.7s
K29M Barlow Dome 87.66 17 IAmb IAmb 19 33 39.8
comp=Z,5.8nm,0.9s
K29M Barlow Dome 87.66 17 P **P** **19 33 37.9 +0.8**
baz=218
WTLY Watson Lake, Y 87.67 22 P **P** **19 33 38.0 +0.9**
baz=226
COLD Coldfoot 87.68 11 IAmb IAmb 19 33 39.2
comp=Z,12nm,1.0s
COLD Coldfoot 87.68 11 P **P** **19 33 37.7 +0.7**
baz=206
D19K Kuna River 87.69 7 IAmb IAmb 19 33 38.1
comp=Z,5.2nm,0.8s
D19K Kuna River 87.69 7 P **P** **19 33 37.1 +0.1**
baz=199
E20K Nigu River 87.71 8 P **P** **19 33 37.7 +0.5**
baz=201
G24K Hadweenzic Riv 87.71 12 P **P** **19 33 37.3 +0.1**
baz=209
MAYO Mayo, Yukon 87.92 18 P **P** **19 33 39.0 +0.8**
baz=220,SNR=5.7
I27K Kandik River 88.03 14 IAmb IAmb 19 33 40.0
comp=Z,12nm,1.4s
I27K Kandik River 88.03 14 P **P** **19 33 38.9 +0.2**
baz=214
G25K Bearman Lake 88.04 12 P **P** **19 33 39.1 +0.5**
baz=210
FYU Fort Yukon 88.05 13 IAmb IAmb 19 33 40.2
comp=Z,5.9nm,0.8s
D20K Etivluk River 88.08 8 IAmb IAmb 19 33 39.8
comp=Z,5.9nm,0.8s
D20K Etivluk River 88.08 8 P **P** **19 33 39.3 +0.5**
baz=200
C19K Lookout Ridge 88.10 7 P **P** **19 33 39.6 +0.6**
baz=198
E22K Anaktuvuk Pass 88.23 10 IAmb IAmb 19 33 40.9
comp=Z,10nm,1.0s
E22K Anaktuvuk Pass 88.23 10 P **P** **19 33 40.0 +0.5**
baz=205
I28M Miner Creek 88.31 15 P **P** **19 33 40.4 +0.3**
baz=216
F24K Squaw Lake 88.35 11 IAmb IAmb 19 33 41.8
comp=Z,7.9nm,0.7s
F24K Squaw Lake 88.35 11 P **P** **19 33 40.9 +0.7**
baz=209
E23K Chandalar 88.53 10 IAmb IAmb 19 33 42.5
comp=Z,6.6nm,0.8s
E23K Chandalar 88.53 10 P **P** **19 33 41.6 +0.6**
baz=207
J30M Hart River 88.56 17 P **P** **19 33 41.7 +0.4**
baz=219
H27K Steamboat Moun 88.57 14 **P** **19 33 41.5 +0.3**
H27K IAmb IAmb 19 33 43.0
comp=Z,5.1nm,0.9s
H27K Steamboat Moun 88.57 14 P **P** **19 33 41.9 +0.7**
baz=214
MMPY Sheldon Lake, 88.60 20 P **P** **19 33 42.4 +1.0**
baz=224,SNR=13
I29M Ogilvie Camp, 88.65 16 IAmb IAmb 19 33 42.6
comp=Z,8.2nm,1.1s
I29M Ogilvie Camp, 88.65 16 P **P** **19 33 41.8 +0.2**
baz=218
G26K Porcupine Rive 88.68 13 P **P** **19 33 41.8 +0.3**
baz=212
C21K Knifeblade Rid 88.74 8 P **P** **19 33 42.6 +0.8**
baz=202
E24K Your Creek 88.74 11 IAmb IAmb 19 33 43.3
comp=Z,3.2nm,0.7s
E24K Your Creek 88.74 11 P **P** **19 33 42.6 +0.7**
baz=208
TGTN Hyland Airport 88.83 22 P **P** **19 33 42.9 +0.4**
baz=227,SNR=10.0
F25K Christian Rive 88.85 12 P **P** **19 33 43.5 +1.1**
baz=211
ELIB Princess Elisa 88.88 187 *d*P **P** **19 33 43.7 +0.9**
comp=Z,4.1nm,0.8s
BMAR Burnt Mountain 88.92 12 **P** **19 33 43.2 +0.4**
A19K Wainwright 89.00 6 P **P** **19 33 44.1 +1.1**
baz=196
G27K Doyon Strip 89.02 14 P **P** **19 33 44.1 +0.8**
baz=214
I30M Mount Dempster 89.05 16 IAmb IAmb 19 33 44.9
comp=Z,9.9nm,1.1s
I30M Mount Dempster 89.05 16 P **P** **19 33 43.7 +0.2**
baz=219
TOLK Toolik Lake Re 89.05 10 P **P** **19 33 43.9 +0.5**
baz=207
CMAR Chiang Mai Arr 89.14 290 P **P** **19 33 46.8 +1.9**
comp=Z,3.6nm,0.9s,baz=110,slow=2.6,SNR=30
comp=Z,3.6nm,0.9s
CMAR Chiang Mai Arr 89.14 290 **P** **19 33 45.4 +0.5**
D23K Nanushuk River 89.17 10 P **P** **19 33 44.8 +0.9**
baz=206
B21K Ikpikpuk River 89.19 8 IAmb IAmb 19 33 44.8
comp=Z,3.9nm,0.8s
B21K Ikpikpuk River 89.19 8 P **P** **19 33 44.4 +0.5**
baz=202
F26K Sheenjek River 89.23 12 IAmb IAmb 19 33 46.3
comp=Z,4.3nm,0.9s
F26K Sheenjek River 89.23 12 P **P** **19 33 45.0 +0.7**
baz=212
B20K Meade River 89.23 7 P **P** **19 33 44.9 +0.8**
baz=200
CHTO Chiang Mai 89.25 290 P **P** **19 33 47.5 +2.1**
CHTO Chiang Mai 89.25 290 **P** **19 33 46.4 +1.0**
CHTO IAmb IAmb 19 33 47.9
comp=Z,4.5nm,0.8s
E25K Arctic Village 89.32 12 IAmb IAmb 19 33 46.4
comp=Z,5.0nm,0.9s
E25K Arctic Village 89.32 12 P **P** **19 33 44.8 +0.2**
baz=211
H29M Whitestone 89.32 15 IAmb IAmb 19 33 46.1
comp=Z,9.3nm,0.8s
H29M Whitestone 89.32 15 P **P** **19 33 45.0 +0.4**
baz=217
PZH PanZhiHua 89.44 298 P **P** **19 33 47.9 +1.7**
PZH pmax pmax
comp=Z,10.0nm,0.7s
KOTAN Kotaneelee Air 89.46 24 P **P** **19 33 45.8 +0.5**
baz=230
D24K Happy Valley 89.64 10 IAmb IAmb 19 33 47.7
comp=Z,5.9nm,0.8s
D24K Happy Valley 89.64 10 P **P** **19 33 46.7 +0.7**
baz=208
EPYK Eagle Plains 89.85 15 P **P** **19 33 47.8 +0.6**
baz=219
YAK Yakutsk 89.91 338 P **P** **19 33 46.7 -0.7**
YAK IAmb IAmb 19 33 47.5
comp=Z,5.2nm,0.8s
G29M Pine Creek 89.95 15 IAmb IAmb 19 33 49.0
comp=Z,7.4nm,1.0s
G29M Pine Creek 89.95 15 P **P** **19 33 48.0 +0.5**
baz=218
C23K Itkillik River 89.96 9 IAmb IAmb 19 33 49.2
comp=Z,8.8nm,0.8s
C23K Itkillik River 89.96 9 P **P** **19 33 48.0 +0.5**
baz=206
B22K Teshekpuk Lake 90.02 8 P **P** **19 33 48.4 +0.7**
baz=203
H31M Peel River 90.04 17 IAmb IAmb 19 33 49.6
comp=Z,6.9nm,1.0s
H31M Peel River 90.04 17 P **P** **19 33 48.7 +0.7**
baz=221
F28M Old Crow 90.08 14 IAmb IAmb 19 33 49.6
comp=Z,7.7nm,1.3s
F28M Old Crow 90.08 14 P **P** **19 33 48.5 +0.4**
baz=216
C24K Franklin Bluff 90.16 10 P **P** **19 33 49.1 +0.7**
baz=208
E27K Coleen River 90.18 13 P **P** **19 33 48.6 0.0**
baz=214
D25K Kavik River 90.21 11 IAmb IAmb 19 33 49.6
comp=Z,4.6nm,1.1s
D25K Kavik River 90.21 11 P **P** **19 33 49.0 +0.3**
baz=210
A22K Sinclair Lake 90.43 7 P **P** **19 33 50.2 +0.6**
baz=202
G30M tAoh Zraii Nji 90.45 15 P **P** **19 33 50.0 +0.1**
baz=219
C27K Jago River 90.96 11 IAmb IAmb 19 33 54.5
comp=Z,4.9nm,0.8s
C27K Jago River 90.96 11 P **P** **19 33 52.9 +0.8**
baz=212
E28M Babbage River 90.96 13 P **P** **19 33 52.9 +0.7**
baz=216
C26K Camden Bay 90.98 11 P **P** **19 33 52.6 +0.4**
baz=211
F30M Barrier River 91.05 15 IAmb IAmb 19 34 00.7
comp=Z,6.1nm,0.9s
F30M Barrier River 91.05 15 P **P** **19 33 53.1 +0.6**
baz=220
E29M Blow River 91.15 14 P **P** **19 33 53.7 +0.7**
baz=218
D27M Malcolm River 91.18 12 IAmb IAmb 19 33 56.5
comp=Z,5.5nm,1.2s
D27M Malcolm River 91.18 12 P **P** **19 33 53.6 +0.4**
baz=215
LZH Lanzhou 91.20 308 *e*P **P** **19 33 56.3 +2.1**
LZH pmax pmax
comp=Z,18nm,1.5s
F31M Tsiigehtchic 91.43 16 P **P** **19 33 54.6 +0.3**
baz=222
RSSD Black Hills 91.67 44 P **P** **19 33 56.1 -0.2**
RSSD IAmb IAmb 19 33 58.1
comp=Z,5.1nm,0.9s
D28M Stokes Point 91.72 13 P **P** **19 33 55.9 +0.4**
baz=217
INK Inuvik 92.13 15 P **P** **19 33 57.7 +0.2**
baz=222
SONM Songino Array 93.88 319 P **P** **19 34 07.0 +0.8**
comp=Z,0.7nm,0.6s,baz=116,slow=3.4,SNR=2.8
comp=Z,0.7nm,0.6s
SONM Songino Array 93.88 319 P **P** **19 34 06.5 +0.3**
YKA Yellowknife Ar 94.54 25 P **P** **19 34 09.2 +0.5**
comp=Z,1.6nm,0.9s,baz=253,slow=5.0,SNR=21
comp=Z,1.6nm,0.9s
YKA Yellowknife Ar 94.54 25 P **P** **19 34 08.4 -0.2**
C36M Paulatuk 95.34 17 IAmb IAmb 19 34 13.8
comp=Z,4.6nm,0.9s
C36M Paulatuk 95.34 17 P **P** **19 34 12.5 +0.4**
baz=231
A36M Sachs Harbour 96.73 14 P **P** **19 34 19.0 +0.7**
baz=230
WMQ Urumqi 105.25 312 Pdif **Pdif** **19 34 58.3 +1.3**
WMQ LR LR
comp=E,710nm,24.1s
WMQ LR LR
comp=Z,110nm,24.2s
MKAR Makanchi Array 109.46 314 PKiKP **PKiKP** **19 39 14.7 -0.6**
comp=Z,0.4nm,0.5s,baz=48,slow=2.1,SNR=7.7
KURBB Kurchatov Arra 112.21 318 PKiKP **PKiKP** **19 39 19.9 -0.5**
comp=Z,0.8nm,0.2s,baz=98,slow=2.0,SNR=6.4
BVAR Borovoye Array 117.18 321 PKP **PKiKP** **19 39 29.9 0.0**
comp=Z,1.5nm,0.5s,baz=134,slow=0.7,SNR=9.0
LMN Caledonia Moun 119.10 47 PKiKP **PKiKP** **19 39 32.5 -1.4**
FINES FINESS Array B 133.52 344 PKP **PKiKP** **19 40 01.1 -1.1**
comp=Z,2.0nm,0.7s,baz=98,slow=2.0,SNR=5.0
HFS Hagfors 137.25 351 PKhKP PKPpre 19 39 58.0
comp=Z,2.2nm,0.8s,baz=317,slow=5.9,SNR=4.6
AKASG Malin Array Be 140.90 332 PKhKP PKPpre 19 40 09.2
comp=Z,0.6nm,0.5s,baz=48,slow=4.6,SNR=7.5
AK04 Malin Array Si 140.91 332 PKP **PKiKP** **19 40 14.5 -3.1**
AK15 Malin Array Si 140.95 332 PKP **PKPdf** **19 40 14.5 -0.3**
AK07 Malin Array Si 141.02 332 PKP **PKiKP** **19 40 15.2 -2.6**
EKA Eskdalemuir Ar 142.75 5 PKhKP PKPpre 19 40 15.1
comp=Z,0.6nm,0.5s,baz=347,slow=3.4,SNR=3.7
SORM Soroca 143.13 330 ||P **PKPdf** **19 40 16.9 -1.9**
STNU Starunia 144.43 334 PKP **PKPab** **19 40 21.3 -0.1**
VASR Vaslui 144.45 329 ||P **PKiKP** **19 40 22.2 -2.8**
SHIU Shidnytsya 144.48 335 PKP **PKiKP** **19 40 22.3 -2.7**
VLDR Vladesti 144.85 327 ⇑P **PKiKP** **19 40 23.6 -2.2**
TLCR 144.91 326 ⇑P **PKiKP** **19 40 23.3 -2.6**
OJC Ojcow 144.95 340 **PKPab** **19 40 21.3 -2.1**
OJC Ojcow 144.95 340 PKP **PKPab** **19 40 22.7 -0.7**
BURAR Bucovina Array 144.95 332 ⇑P **PKiKP** **19 40 23.6 -2.5**
GHRR 145.04 328 ⇑P **PKiKP** **19 40 24.6 -1.6**
GHRR 145.04 328 PKP **PKiKP** **19 40 23.6 -2.6**
TESR Tescani 145.10 329 PKP **PKPab** **19 40 22.7 -1.4**
BRTR Keskin Array B 145.11 315 PKPbc **PKPab** **19 40 23.9 -0.7**
comp=Z,3.2nm,0.5s,baz=139,slow=3.3,SNR=21
BRTR Keskin Array B 145.11 315 **PKPbc** **19 40 21.6 -1.9**
BR104 Keskin Array S 145.11 315 PKP **PKPab** **19 40 23.4 -1.2**

BR106	**Keskin Array S**	**145.12**	**315**	PKP	**PKPab**	**19 40 22.7**	**-1.9**
KIRS	**Kirsehir-Merke**	**145.19**	**314**	⇑P	**PKPab**	**19 40 24.1**	**-0.8**
CFR	**Carcaliu**	**145.27**	**327**	⇑P	**PKiKP**	**19 40 24.5**	**-2.2**
TPGR	**Topolog**	**145.34**	**326**	⇓P	**PKiKP**	**19 40 24.6**	**-2.3**
ONER	**Baraj Valea Uz**	**145.35**	**329**	⇑P	**PKiKP**	**19 40 24.6**	**-2.2**
MUKU	**Mukachevo**	**145.37**	**335**	PKP	**PKiKP**	**19 40 24.6**	**-2.2**
UZHM	**Uzhgorod**	**145.38**	**336**	PKP	**PKPbc**	**19 40 22.7**	**-1.1**
KSP	**Ksiaz**	**145.44**	**344**	PKP	**PKiKP**	**19 40 25.0**	**-1.9**
NIE	**Niedzica**	**145.46**	**339**	PKP	**PKiKP**	**19 40 25.0**	**-2.0**
VRI	**Vrincioaia**	**145.52**	**329**	⇑P	**PKiKP**	**19 40 25.1**	**-2.1**
TURR	**Turia**	**145.73**	**329**	⇑P	**PKPab**	**19 40 25.5**	**-1.2**
COVR	**Voineasa-Covas**	**145.79**	**329**	⇑P	**PKPab**	**19 40 25.5**	**-1.4**
CLL	**Collm**	**145.79**	**347**	*i* PKPbc	**PKiKP**	**19 40 25.7**	**-1.9**
	comp=Z,25nm,1.0s						
CLL	**Collm**	**145.79**	**347**	PKP	**PKPab**	**19 40 25.3**	**-1.3**
OZUR		**145.81**	**330**	⇑P	**PKPab**	**19 40 25.6**	**-1.4**
UPC	**Upice**	**145.82**	**344**	⇑*e*PKP	**PKiKP**	**19 40 26.5**	**-1.2**
STEB	**Steborice**	**145.84**	**341**	⇑*e*PKP	**PKiKP**	**19 40 26.1**	**-1.7**
DPC	**Dobruska-Polom**	**145.88**	**343**	⇑*e*PKP	**PKiKP**	**19 40 26.5**	**-1.4**
LANS	**Liptovska Anna**	**145.98**	**339**	*e*PKP	**PKiKP**	**19 40 27.7**	**-0.4**
KRLC	**Kraliky**	**146.00**	**343**	⇑*e*PKP	**PKiKP**	**19 40 26.7**	**-1.5**
NEHR	**Nehoiu**	**146.04**	**328**	⇑P	**PKiKP**	**19 40 26.6**	**-1.8**
MORC	**Moravsky Berou**	**146.05**	**342**	⇓P	**PKiKP**	**19 40 27.0**	**-1.2**
MORC	**Moravsky Berou**	**146.05**	**342**	*e*PKP	**PKiKP**	**19 40 26.6**	**-1.7**
DOPR	**Dopca**	**146.10**	**330**	⇑P	**PKiKP**	**19 40 26.9**	**-1.6**
PVCC	**Panska Ves**	**146.17**	**345**	⇑*e*PKP	**PKiKP**	**19 40 27.3**	**-1.1**
MLR	**Muntele Rosu**	**146.17**	**329**	⇑P	**PKiKP**	**19 40 27.0**	**-1.8**
MAUC	**Maruska**	**146.32**	**341**	⇑*e*PKP	**PKiKP**	**19 40 28.1**	**-0.7**
HSKC	**Hora Svate Kat**	**146.36**	**347**	⇑*e*PKP	**PKPab**	**19 40 27.7**	**-1.3**
MMAI	**Mount Meron Ar**	**146.44**	**303**	PKPbc	**PKPab**	**19 40 28.9**	**-1.1**
	comp=Z,4.8nm,0.6s,baz=37,slow=8.5,SNR=15						
MARR	**Marisel-Cluj**	**146.59**	**333**	⇓P	**PKiKP**	**19 40 28.0**	**-1.6**
VOIR		**146.65**	**330**	⇑P	**PKiKP**	**19 40 27.6**	**-2.1**
PRU	**Pruhonice**	**146.68**	**345**	⇑*e*PKP	**PKPab**	**19 40 28.6**	**-1.6**
DRGR		**146.68**	**333**	⇑P	**PKiKP**	**19 40 27.8**	**-1.9**
VRAC	**Vranov**	**146.74**	**342**	⇑P	**PKPab**	**19 40 28.4**	**-2.1**
VRAC	**Vranov**	**146.74**	**342**	*e*PKP	**PKPab**	**19 40 28.6**	**-1.9**
VRAC				*e*		19 40 31.5	
JAVC	**Velka Javorina**	**146.82**	**341**	*e*PKP	**PKPab**	**19 40 29.9**	**-1.0**
ARR	**Arges**	**146.90**	**330**	⇑P	**PKiKP**	**19 40 29.0**	**-1.1**
KRUC	**Moravsky**	**147.02**	**342**	*e*PKP	**PKPab**	**19 40 29.2**	**-2.4**
KRUC				*e*		19 40 32.3	
ZVC	**Zvikov**	**147.27**	**345**	⇑*e*PKP	**PKPab**	**19 40 30.0**	**-2.6**
MODS	**Modra-Piesok**	**147.37**	**341**	*e*PKP	**PKPab**	**19 40 30.8**	**-2.3**
BTNL	**Ternell**	**147.51**	**355**	*d*PKiKP	**PKPab**	**19 40 30.8**	**-2.8**
SRO	**Srobarova**	**147.52**	**339**	*e*PKP	**PKiKP**	**19 40 30.1**	**-1.2**
BSTI	**Sart Tilman**	**147.56**	**355**	*d*PKiKP	**PKPab**	**19 40 30.9**	**-2.8**
KHC	**Kasperske Hory**	**147.71**	**345**	⇑*e*PKP	**PKiKP**	**19 40 31.2**	**-0.5**
KHC				*e*PKPAB	**PKPab**	**19 40 34.9**	**+0.4**
GZR	**Gura Zlata**	**147.74**	**332**	⇓P	**PKiKP**	**19 40 30.2**	**-1.7**
CKRC	**Cesky Krumlov**	**147.81**	**344**	⇑*e*PKP	**PKiKP**	**19 40 31.9**	**-3.0**
BMRD	**Maredsous**	**147.89**	**356**	*d*PKiKP	**PKPab**	**19 40 31.8**	**-3.3**
GERES	**GERESS Array B**	**147.94**	**345**	PKPbc	**PKiKP**	**19 40 32.0**	**-0.3**
	comp=Z,3.3nm,0.6s,baz=40,slow=2.3,SNR=22						
WINA	**Alland / Wiene**	**147.97**	**342**	*e*PKiKP	**PKiKP**	**19 40 32.0**	**-0.2**
	comp=Z,4.8nm,0.8s						
ELND	**Elena**	**148.00**	**326**	⇑P	**PKiKP**	**19 40 31.6**	**-0.9**
BZS	**Buzias**	**148.07**	**333**	⇑P	**PKiKP**	**19 40 31.1**	**-1.4**
DOU	**Dourbes**	**148.11**	**357**	*d*PKiKP	**PKiKP**	**19 40 31.9**	**-0.5**
CONA	**Conrad Observa**	**148.20**	**342**	*e*PKiKP	**PKiKP**	**19 40 32.6**	**-0.2**
	comp=Z,3.3nm,0.6s						
RONA	**Rosalia, Austr**	**148.27**	**341**	*e*PKiKP	**PKiKP**	**19 40 32.7**	**-0.2**
	comp=Z,4.8nm,0.8s						
HERR	**Herculane**	**148.29**	**331**	⇓P	**PKiKP**	**19 40 31.1**	**-1.9**
PLVB	**Pleven**	**148.34**	**327**	⇑P	**PKiKP**	**19 40 32.0**	**-1.1**
WLF	**Walferdange**	**148.42**	**355**	*d*PKiKP	**PKPab**	**19 40 33.5**	**-3.8**
MDVR	**Moldovita**	**148.69**	**332**	⇑P	**PKiKP**	**19 40 31.7**	**-2.2**
MOA	**Molln**	**148.72**	**344**	*e*PKiKP	**PKiKP**	**19 40 33.4**	**-0.4**
	comp=Z,4.5nm,1.2s						
MORH	**Mrgy, Hungar**	**148.77**	**337**	⇑P	**PKiKP**	**19 40 32.7**	**-1.2**
ARSA	**Arzberg**	**148.91**	**342**	*e*PKP	**PKiKP**	**19 40 33.5**	**-0.7**
	comp=Z,5.2nm,1.1s						
BIOA	**Bad Ischl, Aus**	**149.03**	**344**	*e*PKiKP	**PKiKP**	**19 40 34.5**	**+0.1**
	comp=Z,5.5nm,1.0s						
LESA	**Schwarzleotal**	**149.52**	**345**	*e*PKiKP	**PKiKP**	**19 40 35.8**	**+0.3**
	comp=Z,2.5nm,0.6s						
SOKA	**Soboth**	**149.57**	**342**	*e*PKiKP	**PKiKP**	**19 40 35.4**	**-0.2**
	comp=Z,6.8nm,1.0s,SNR=5.8						
KBA	**Koelnbreinsper**	**149.67**	**344**	*e*PKiKP	**PKiKP**	**19 40 35.7**	**-0.3**
	comp=Z,3.2nm,0.5s						
WATA	**Walderalm**	**149.85**	**347**	*e*PKiKP	**PKiKP**	**19 40 36.4**	**+0.1**
	comp=Z,8.7nm,1.1s						
OBKA	**Obir**	**149.86**	**342**	*e*PKP	**PKiKP**	**19 40 35.7**	**-0.5**
	comp=Z,2.2nm,0.8s						
RETA	**Reutte**	**149.88**	**348**	*e*PKiKP	**PKiKP**	**19 40 36.6**	**+0.3**
	comp=Z,2.1nm,0.5s						
WTTA	**Wattenberg**	**149.91**	**347**	*e*PKiKP	**PKiKP**	**19 40 36.7**	**+0.2**
	comp=Z,8.8nm,0.6s						
MOTA	**Moosalm**	**149.95**	**347**	*e*PKiKP	**PKiKP**	**19 40 36.5**	**0.0**
	comp=Z,8.9nm,1.0s						
MYKA	**Terra Mystica**	**150.01**	**344**	*e*PKiKP	**PKiKP**	**19 40 36.2**	**-0.4**
	comp=Z,4.2nm,0.6s						
SQTA	**Sankt Quirin**	**150.04**	**347**	*i* PKiKP	**PKiKP**	**19 40 36.8**	**+0.1**
	comp=Z,7.0nm,0.7s,SNR=6.6						
ABTA	**Abfaltersbach**	**150.19**	**345**	*e*PKiKP	**PKiKP**	**19 40 36.7**	**-0.3**
	comp=Z,8.3nm,0.6s						
DAVA	**Damuels**	**150.24**	**349**	*e*PKiKP	**PKiKP**	**19 40 36.7**	**-0.4**
	comp=Z,2.7nm,0.6s						
LJU	**Ljubljana**	**150.29**	**342**	*i* PKPbc	**PKiKP**	**19 40 37.4**	**+0.3**
LJU				*i* PKPab	**PKPab**	**19 40 45.9**	**+0.6**
FETA	**Feichten**	**150.33**	**348**	*e*PKiKP	**PKiKP**	**19 40 38.0**	**+0.6**
	comp=Z,5.8nm,0.8s,SNR=6.7						
CEY	**Cerknica**	**150.60**	**342**	*i* PKPbc	**PKiKP**	**19 40 37.9**	**+0.2**
CEY				*i* PKPab	**PKPab**	**19 40 46.8**	**+0.3**
CTI	**Castel Tesino**	**151.05**	**346**		**PKPab**	**19 40 47.0**	**-1.5**
ESDC	**Sonseca Array**	**158.04**	**12**	PKPab	**PKPab**	**19 41 18.5**	**-0.1**
	comp=Z,2.4nm,0.9s,baz=324,slow=3.9,SNR=8.7						

*IDC **17** 19:35:23.1±2.1,9.°13S×121.°21E, h0km, mb3.6/2, mbtmp3.4/4, ML3.2/2, MS3.4/1, Error ellipse: s-maj=237.9km s-min=27.1km az=54.0*
*DJA **17** 19:35:34.9±0.2,9.°5S±2.°×12.°1E±.°, h42km±9km, M3.4/13, MLv3.4/13*
ISC 17 19:35:33.0±0.9,**9.°49S**±0.°06×**121.°13E**±0.°04,**h74**km±10km, **n16**,σ1.°**34**/20,**Savu Sea**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**0.84**	**258**	P		**Pn**	**19 35 49.7**	**-0.1**
WSI				S		**Sn**	**19 36 02.4**	**+0.1**
BASI	**Baing, Sumba**	**0.91**	**217**	P		**Pn**	**19 35 50.8**	**+0.2**
BASI				S		**Sn**	**19 36 04.8**	**+1.1**
EDFI	**Ende, Flores**	**0.92**	**37**	P		**Pn**	**19 35 51.0**	**+0.2**
EDFI				S		**Sn**	**19 36 03.7**	**-0.4**
MMRI	**Maumere**	**1.38**	**52**	P		**Pn**	**19 35 56.8**	**+0.2**
MMRI				S		**Sn**	**19 36 14.4**	**+0.1**
LBFI	**Labuhan Bajo,**	**1.58**	**309**	P		**Pn**	**19 36 00.3**	**+1.1**
WBSI	**Waikabubak, Su**	**1.72**	**265**	P		**Pn**	**19 36 01.0**	**-0.1**
WBSI				S		**Sn**	**19 36 22.9**	**+0.5**
BATI	**Baumata**	**2.59**	**106**	P		**Pn**	**19 36 14.1**	**+1.3**
DBNI	**Kabupaten Domp**	**2.95**	**289**	P		**Pn**	**19 36 19.7**	**+2.1**
SOEI	**Soe**	**3.10**	**95**	P		**Pn**	**19 36 21.6**	**+1.8**
PLAI	**Plampang**	**3.38**	**281**	P		**Pn**	**19 36 24.6**	**+1.2**
BSSI	**Bau Bau, Buton**	**3.38**	**349**	P		**Pn**	**19 36 25.1**	**+1.6**
WRA	**Warramunga Arr**	**16.45**	**131**	Pn		**Pn**	**19 39 16.9**	**-2.4**
	0.1nm,0.3s,baz=305,slow=14,SNR=6.3							
WRA				Sn		Sn	19 42 08.0	-13
	0.1nm,0.3s,baz=297,slow=21,SNR=6.9							
	0.5nm,0.9s							
ASAR	**Alice Springs**	**18.65**	**141**	P		**P**	**19 39 46.8**	**+1.8**
	0.1nm,0.3s,baz=324,slow=12,SNR=10							
ASAR				S		S	19 43 04.5	-8.9
	0.2nm,0.8s,baz=316,slow=25,SNR=2.3							
	0.5nm,0.6s							
STKA	**Stephens Creek**	**29.26**	**143**	P		**P**	**19 41 28.4**	**+0.2**
	1.0nm,0.6s,baz=324,slow=11,SNR=2.1							
	1.0nm,0.6s							
BRDH	**Bariadhala**	**43.09**	**318**	LR		LR	20 06 10.9	
	comp=Z,38nm,18.3s,baz=262,slow=43							
MKAR	**Makanchi Array**	**65.86**	**332**	P		**P**	**19 46 08.8**	**-1.9**
	0.3nm,0.8s,baz=132,slow=8.3,SNR=4.0							
	0.3nm,0.8s							

*JMA **17** 19:58:12.9±0.4,33.°N±1.°×14.°3E±.°, h77km, MV3.8/22, FAR E OFF IZU ISLANDS*
*IDC **17** 19:58:16.0±3.8,32.°16N×140.°59E, h0km, mb3.7/3, mbtmp3.6/4, ML2.8/1, MS3.5/1, Error ellipse: s-maj=145.3km s-min=24.3km az=72.0*
ISC 17 19:58:13.1±1.5,**32.°97N**±0.°09×**142.°8E**±0.°1,**h35**km,**n17**, σ1.°**51**/24,**mb3.7/3**,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**2.27**	**318**	*e*P		**Pn**	**19 58 48.4**	**+0.9**
BSO1				*e*S		**Sn**	**19 59 15.2**	**+1.2**
BSO2	**Boso 2**	**2.46**	**317**	*e*S		**Sn**	**19 59 20.1**	**+0.9**
JHJ2	**Mitsune**	**2.51**	**274**	*e*P		**Pn**	**19 58 50.5**	**-1.0**
BSO3	**Boso 3**	**2.64**	**314**	*e*P		**Pn**	**19 58 53.9**	**+0.9**
BSO3				*e*S		**Sn**	**19 59 24.4**	**+0.7**
JMYK	**Miyake Tsubota**	**2.93**	**293**	*e*S		**Sn**	**19 59 29.4**	**-1.7**
JOD2	**Odawara 2**	**3.84**	**308**	*e*P		**Pn**	**19 59 09.1**	**-0.6**
JOD2				*e*S		**Sn**	**19 59 51.5**	**-2.1**
JYN	**Shimob**	**4.34**	**307**	*e*P		**Pn**	**19 59 16.9**	**+0.3**
JYN				*e*S		**Sn**	**20 00 05.5**	**-0.5**
JAG	**Ashikaga**	**4.42**	**322**	*e*P		**Pn**	**19 59 18.5**	**+0.9**
JRY	**Ryogami san**	**4.43**	**314**	*e*P		**Pn**	**19 59 18.8**	**+1.0**
JRY				*e*S		**Sn**	**20 00 08.3**	**+0.1**
JOTO	**OTAMA OYAMA**	**5.01**	**337**	*e*P		**Pn**	**19 59 26.8**	**+1.0**
JOTO				*e*S		**Sn**	**20 00 19.9**	**-2.5**
MJAR	**Matsushiro Arr**	**5.20**	**315**	Pn		**Pn**	**19 59 29.6**	**+1.2**
	0.4nm,0.3s,baz=160,slow=12,SNR=28							
MJAR				Sn		**Sn**	**20 00 25.2**	**-1.9**
	0.2nm,0.3s,baz=242,slow=4.0,SNR=4.4							
	2.5nm,0.3s							
MAT	**Matsushiro**	**5.20**	**315**	*e*P		**Pn**	**19 59 29.7**	**+1.4**
JMK	**Ichinoseki**	**6.11**	**348**	*e*P		**Pn**	**19 59 41.1**	**+0.3**
JMK				*e*S		**Sn**	**20 00 45.2**	**-4.2**
MKAR	**Makanchi Array**	**47.33**	**306**	P		**P**	**20 06 44.2**	**+0.9**
	0.2nm,0.5s,baz=100,slow=6.0,SNR=2.3							
	0.2nm,0.5s							
KURBB	**Kurchatov Arra**	**49.46**	**311**	P		**P**	**20 07 00.0**	**+0.4**
	0.7nm,0.2s,baz=83,slow=7.6,SNR=4.4							
	0.7nm,0.2s							
WRA	**Warramunga Arr**	**53.23**	**190**	P		**P**	**20 07 28.1**	**0.0**
	0.4nm,0.5s,baz=6.4,slow=7.6,SNR=10							
	0.4nm,0.5s							
INK	**Inuvik**	**57.51**	**26**	LR		LR	20 36 37.6	
	comp=Z,42nm,19.1s,baz=318,slow=39							

*IDC **17** 20:01:17.3±1.2,33.°01N×86.°06E, h0km, mb3.4/7, mbtmp3.5/12, ML3.2/4, MS3.3/4, Error ellipse: s-maj=42.3km s-min=16.9km az=60.0*
*NDI **17** 20:01:19.4±3.4,32.°91N×85.°83E, h10km, ML3.4, MW3.5, Presumed earthquake*
*BJI **17** 20:01:23.7,32.°74N×85.°47E, h157km, mb3.9/11*
ISC 17 20:01:18.2±0.7,**32.°89N**±0.°08×**85.°73E**±0.°06,**h10**km,**n27**, σ2.°**18**/29,**mb3.6/7**,**MS3.4**/3,**Xizang**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**5.63**	**123**	P		**Pn**	**20 02 45.3**	**+2.9**
JOSI	**Joshimath**	**5.75**	**248**	*e*P		**Pn**	**20 02 46.6**	**+2.7**
JOSI				IAmb		IAmb	20 02 51.2	
	comp=Z,18nm,0.4s							
JOSI				*e*S		**Sn**	**20 03 50.2**	**+0.1**
JOSI				IAML			20 04 03.2	
	comp=E,25nm,0.6s							
JOSI				IAML			20 04 06.8	
	comp=N,32nm,0.8s							
PTH	**Pithoragarh**	**5.77**	**237**	*e*P		**Pn**	**20 02 43.8**	**-0.2**
PTH				*e*S		**Sn**	**20 03 47.6**	**-2.7**
PTH				IAML			20 03 55.0	
	comp=N,41nm,1.0s							
PTH				IAML			20 03 58.2	
	comp=E,52nm,0.7s							
GTK	**Tadong**	**6.09**	**155**	*e*P		**Pn**	**20 02 50.7**	**+2.3**
KLP	**Kalpa**	**6.48**	**260**	*e*P		**Pn**	**20 02 56.8**	**+2.8**
KLP				*e*S		**Sn**	**20 04 07.9**	**-0.3**
KLP				IAML			20 04 22.5	
	comp=E,33nm,1.1s							
KLP				IAML			20 04 23.2	
	comp=N,32nm,0.9s							
ALCI	**Alchi Leh**	**7.25**	**283**	*e*P		**Pn**	**20 03 04.6**	**0.0**
SMLA	**Simla**	**7.48**	**259**	*e*P		**Pn**	**20 03 07.3**	**-0.1**
SMLA				*e*S		**Sn**	**20 04 28.6**	**-3.7**
SMLA				IAML			20 04 31.4	
	comp=N,27nm,0.8s							
SMLA				IAML			20 04 31.6	
	comp=E,32nm,0.8s							
DHRM	**DHARAMSHALA**	**7.99**	**268**	*e*P		**Pn**	**20 03 14.8**	**+0.3**
DHRM				*e*S		**Sn**	**20 04 42.1**	**-2.9**
DHRM				IAML			20 04 46.4	
	comp=E,21nm,1.3s							
DHRM				IAML			20 04 47.1	
	comp=N,23nm,0.8s							
TSSA	**Tissa**	**8.06**	**272**	*e*P		**Pn**	**20 03 15.2**	**-0.4**
TSSA				*e*S		**Sn**	**20 04 44.4**	**-2.5**
TSSA				IAML			20 04 52.0	
	comp=E,27nm,1.0s							
TSSA				IAML			20 04 52.5	
	comp=N,20nm,1.0s							
KOHI	**KOHIMA**	**10.22**	**132**	*e*P		**Pn**	**20 03 45.4**	**+0.2**
KSH2	**Kashi**	**10.32**	**310**	P		**Pn**	**20 03 50.8**	**+4.3**
KSH2				pmax		pmax		
	comp=N,2.0nm,0.9s							
BHPL	**Bhopal**	**12.09**	**219**	*e*S		Sn	20 06 15.9	-10
AAK	**Ala-Archa**	**13.16**	**321**	Pn		**Pn**	**20 04 29.4**	**+4.1**
	comp=N,0.1nm,0.3s,baz=192,slow=9.3,SNR=2.4							
	comp=N,0.3nm,0.4s							
MKAR	**Makanchi Array**	**14.13**	**350**	Pn		**Pn**	**20 04 37.5**	**-1.0**
	comp=N,0.1nm,0.3s,baz=168,slow=12,SNR=9.2							
	comp=N,1.1nm,0.9s							
LZDM	**Lanzhou Array**	**15.14**	**73**	Pn		**Pn**	**20 04 49.2**	**-3.2**
	comp=N,1.3nm,0.3s,baz=238,slow=7.6,SNR=2.0							
KURBB	**Kurchatov Arra**	**18.50**	**345**	P		**P**	**20 05 33.7**	**-0.6**
	comp=N,0.1nm,0.3s,baz=163,slow=10,SNR=7.6							
	comp=N,0.9nm,0.2s							
CMAR	**Chiang Mai Arr**	**18.64**	**137**	P		**P**	**20 05 35.7**	**-0.5**
	comp=N,0.1nm,0.3s,baz=314,slow=11,SNR=13							
CMAR				LR		LR	20 13 39.1	
	comp=N,40nm,18.6s,baz=310,slow=40							
	comp=N,1.8nm,0.8s							
ZALV	**Zalesovo Beam**	**21.06**	**359**	P		**P**	**20 05 60.0**	**-2.3**
	comp=N,0.5nm,0.4s,baz=182,slow=8.7,SNR=7.3							
	comp=N,0.5nm,0.4s							
SONM	**Songino Array**	**21.60**	**40**	P		**P**	**20 06 06.5**	**-1.8**
	comp=N,0.2nm,0.5s,baz=240,slow=10,SNR=3.8							
	comp=N,0.2nm,0.5s							
BVAR	**Borovoye Array**	**22.95**	**336**	P		**P**	**20 06 22.6**	**+0.1**
	comp=N,0.8nm,0.8s,baz=128,slow=9.3,SNR=2.7							
	comp=N,0.8nm,0.8s							
GNI	**Garni**	**33.50**	**294**	LR		LR	20 24 47.3	
	comp=N,69nm,19.7s,baz=320,slow=42							
MJAR	**Matsushiro Arr**	**42.85**	**70**	LR		LR	20 26 09.7	
	comp=N,54nm,18.2s,baz=357,slow=35							
JCJ	**Chichijima**	**48.75**	**81**	LR		LR	20 32 06.6	
	comp=N,38nm,18.0s,baz=315,slow=38							
NOA	**NORSAR Array B**	**54.44**	**325**	P		**P**	**20 10 46.8**	**+1.3**
	comp=N,0.5nm,0.6s,baz=71,slow=9.4,SNR=1.4							
	comp=N,0.5nm,0.6s							
WRA	**Warramunga Arr**	**70.12**	**131**	P		**P**	**20 12 30.3**	**-0.7**
	comp=N,0.5nm,0.6s,baz=319,slow=6.4,SNR=8.0							
	comp=N,0.5nm,0.6s							
ASAR	**Alice Springs**	**72.62**	**134**	P		**P**	**20 12 46.3**	**+0.2**
	comp=N,0.6nm,0.8s,baz=317,slow=6.5,SNR=7.3							
	comp=N,0.6nm,0.8s							
YKA	**Yellowknife Ar**	**83.55**	**9**	P		**P**	**20 13 47.1**	**+1.0**
	comp=N,0.3nm,0.7s,baz=339,slow=5.8,SNR=4.6							
	comp=N,0.3nm,0.7s							

*IDC **17** 20:24:21.9±1.5,1.°01N×125.°39E, h0km, mb3.6/5, mbtmp3.6/5, MS3.4/2, Error ellipse: s-maj=183.7km s-min=19.5km az=64.0*
*DJA **17** 20:24:45.0±0.9,2.°N±6.°×12.°8E±.°, h212km±7km, M3.0/8, MLv3.0/8*
ISC 17 20:24:40.1±1.5,**2.°5N**±0.°2×**129.°0E**±0.°3,**h200**km,**n8**, σ0.°**91**/5,**mb3.5**/5,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.39**	**224**	P		**Pn**	**20 25 22.9**	**+0.1**
WRA	**Warramunga Arr**	**22.93**	**167**	P		**P**	**20 29 25.9**	**-1.1**
	1.4nm,0.7s,baz=336,slow=11,SNR=27							
	1.4nm,0.7s							
ASAR	**Alice Springs**	**26.46**	**170**	P		P	20 29 55.2	-3.7
	0.4nm,0.6s,baz=348,slow=8.9,SNR=7.3							
	0.4nm,0.6s							
KSRS	**Korea Array**	**34.78**	**358**	LR		LR	20 48 31.4	
	comp=Z,12nm,18.4s,baz=155,slow=40							
STKA	**Stephens Creek**	**36.23**	**162**	P		**P**	**20 31 24.8**	**+0.7**
	1.0nm,0.3s,baz=338,slow=7.8,SNR=5.7							
	1.0nm,0.3s							
MKAR	**Makanchi Array**	**59.85**	**325**	P		**P**	**20 34 24.7**	**0.0**
	0.2nm,0.3s,baz=119,slow=8.2,SNR=6.7							
	0.2nm,0.3s							

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**63.99**	**327**	P		**P**	**20 34 52.0**	**-0.1**
	0.4nm,0.5s,baz=119,slow=6.0,SNR=4.8							
	0.4nm,0.5s							
OBN	**Obninsk**	**89.36**	**325**	LR		LR	21 19 28.8	
	comp=Z,69nm,18.7s,baz=224,slow=37							

TRN 17 21:20:42.4, 10.°04N×62.°01W, h85km, MD3.5, Near South-west of Trinidad., Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TPP	**Pointe-a-Pierr**	**0.61**	**63**	*e*P		Pn	21 20 59.2	+1.5
TPP				*e*S		Sn	21 21 11.8	+2.8
DMDM	**Guralp CMG5TDE**	**0.79**	**34**	*e*P		Pn	21 20 59.0	-0.5
DMDM				*e*S		Sn	21 21 11.8	-0.4
TRN	**Trinidad (W)**	**0.85**	**44**	*e*P		Pn	21 21 00.2	+0.1
TRN				*e*S		Sn	21 21 13.0	-0.3
GRGR	**Grenville**	**2.11**	**9**	*e*P		Pn	21 21 15.8	-0.2
GRGR				*e*S		Sn	21 21 41.5	0.0
GRW	**Mount Saint Ca**	**2.14**	**9**	*e*P		Pn	21 21 16.9	+0.5
GRW				*e*S		Sn	21 21 42.6	+0.3
GRSS	**Sisters**	**2.28**	**10**	*e*P		Pn	21 21 17.6	-0.6
GRSS				*e*S		Sn	21 21 44.2	-1.3

*VAO **17** 21:26:54.8±0.3,14.°59S×56.°23W, h0km, mbR2.7, Presumed earthquake*
*OSUNB **17** 21:26:55.6±0.5,14.°59S×56.°23W, h0km, mR2.2/2, Error ellipse: s-maj=4.1km s-min=3.1km az=0.0*
ISC 17 21:26:55.6±1.8,**14.°61S**±0.°04×**56.°21W**±0.°05,**h4**km±14km, **n10**,σ0.°**63**/19,**Brazil**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MAS01	**UHE Manso**	**0.47**	**126**	P		**Pg**	**21 27 05.0**	**+0.3**
MAS01				S		**Sg**	**21 27 10.9**	**0.0**
SALV	**Santo Antonio**	**1.38**	**159**	P		**Pn**	**21 27 21.1**	**-0.6**
SALV				S		**Sn**	**21 27 41.1**	**+0.8**
SALV	**Santo Antonio**	**1.38**	**159**	*e*P		**Pn**	**21 27 20.7**	**-0.9**
SALV				*e*S		**Sb**	**21 27 39.2**	**-0.8**
PTLB	**Pontes e Lacer**	**2.95**	**253**	P		**Pn**	**21 27 42.9**	**-0.2**
PTLB				S		**Sn**	**21 28 19.7**	**+0.7**
PTLB	**Pontes e Lacer**	**2.95**	**253**	*e*P		**Pn**	**21 27 42.7**	**-0.4**
PTLB				*e*S		**Sn**	**21 28 19.1**	**+0.2**
PDRB	**Porto dos Gac**	**3.02**	**350**	P		**Pn**	**21 27 44.8**	**+0.7**
PDRB	**Porto dos Gac**	**3.02**	**350**	*e*P		**Pn**	**21 27 43.6**	**-0.5**
PDRB				*e*S		**Sn**	**21 28 20.8**	**0.0**
PP1B	**Ponte de Pedra**	**3.24**	**157**	*e*P		**Pn**	**21 27 47.2**	**0.0**
PP1B				*e*S		**Sn**	**21 28 27.3**	**+1.0**
CLDB	**Colider**	**3.73**	**6**	*e*P		**Pn**	**21 27 53.2**	**-0.6**
CLDB				*e*S		**Sn**	**21 28

SPBC	**San Pablo de B**	**0.53**	**317**	P	Pn	22 34 45.6	-0.6
SPBC				S	Sn	22 35 01.8	-1.0
SPBC	**San Pablo de B**	**0.53**	**317**	P	Pn	22 34 45.6	-0.6
SPBC				S	Sn	22 35 02.3	-0.5
CHIC	**Chingaza**	**0.63**	**182**	P	Pn	22 34 46.7	-0.5
CHIC				S	Sn	22 35 03.4	-1.1
CVER	**Cruz Verde, Cu**	**0.82**	**206**	P	Pn	22 34 48.7	+0.2
CVER				S	Sn	22 35 07.4	+0.6
RUSC	**La Rusia**	**0.89**	**45**	P	Pn	22 34 48.7	-0.3
RUSC				S	Sn	22 35 07.4	-0.3
VILC	**Villavicencio,**	**1.14**	**179**	P	Pn	22 34 49.9	-0.9
VILC				S	Sn	22 35 10.5	-0.4
PTBC	**PUERTO BERRIO,**	**1.47**	**330**	P	Pn	22 34 52.9	-1.0
PTBC				S	Sn	22 35 14.6	-1.8
BRJC	**Barrancabermej**	**1.70**	**359**	P	Pn	22 34 56.3	-0.1
BRJC	**Barrancabermej**	**1.70**	**359**	P	Pn	22 34 56.2	-0.2
BRJC				S	Sn	22 35 20.5	-0.3
PTGC	**Puerto Gaitan,**	**1.89**	**124**	P	Pn	22 34 57.5	-1.0
PTGC				S	Sn	22 35 24.0	-0.5
PRAC	**Prado**	**1.93**	**217**	P	Pn	22 34 58.2	-0.8
PRAC				S	Sn	22 35 24.6	-0.9
ORTC	**Ortega, Tolima**	**2.04**	**229**	P	Pn	22 34 59.7	-0.5
ORTC				S	Sn	22 35 26.3	-1.3
URMC	**La Uribe, Meta**	**2.11**	**198**	P	Pn	22 35 00.8	-0.3
URMC				S	Sn	22 35 29.0	-0.2

SOME **17** *22:45:29.6, 42°.35N×77°.93E, h10km*
KRNET **17** *22:45:29.7±0.1, 42°.35N×77°.92E, h18km, mb2.6*
ISC 17 22:45:30.2±1.1**, 42°.33N**±0°.04×**77°.87E**±0°.03**, h14**km±11km**, n15**, σ1°55/30**, 6C-2D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**0.55**	**248**	⇑*iP*	**Pg**	**22 45 41.4**	**+0.3**
KDJ				⇑*iS*	**Sb**	**22 45 49.2**	**-0.3**
TARG	**Taragay, Kyrgy**	**0.61**	**184**	⇓*iP*	**Pg**	**22 45 41.9**	**-0.3**
TARG				⇓*iS*	**Sg**	**22 45 50.5**	**+0.2**
SATY	**Saty**	**0.83**	**29**	*eP*	**Pg**	**22 45 44.4**	**-1.9**
	2.6nm,0.1s						
SATY				*eS*	**Sg**	**22 45 55.2**	**-2.0**
	6.8nm,0.1s						
TNSS	**Tian-Shan**	**0.98**	**316**	*eP*	**Pb**	**22 45 48.1**	**-1.0**
	0.5nm,0.1s						
TNSS				*eS*	**Sg**	**22 46 01.7**	**-0.3**
	3.5nm,0.2s						
KOTS	**Kotyrbulak**	**1.06**	**329**	*eP*	**Pb**	**22 45 49.6**	**-0.8**
KOTS				*eS*	**Sb**	**22 46 04.1**	**0.0**
KOTS	**Kotyrbulak**	**1.06**	**329**	*eP*	**Pb**	**22 45 49.6**	**-0.8**
	3.6nm,0.1s						
KOTS				*eS*	**Sb**	**22 46 04.1**	**0.0**
	11nm,0.2s						
IZV	**Izvestkoviy**	**1.16**	**308**	*eP*	**Pb**	**22 45 51.6**	**-0.6**
	1.7nm,0.1s						
IZV				*eS*	**Sb**	**22 46 07.8**	**+0.7**
	9.9nm,0.1s						
UZB	**Uzynbulak**	**1.18**	**46**	*eP*	**Pn**	**22 45 50.5**	**-1.9**
	2.6nm,0.2s						
UZB				*eS*	**Sb**	**22 46 05.6**	**-2.0**
	3.8nm,0.1s						
ULHL	**Ulahol**	**1.21**	**266**	⇑*iP*	**Pn**	**22 45 52.5**	**-0.4**
ULHL				⇑*iS*	**Sb**	**22 46 09.0**	**+0.5**
KPKS	**Kokpek**	**1.28**	**28**	*eP*	**Pn**	**22 45 52.9**	**-0.9**
	0.3nm,0.1s						
KPKS				*eS*	**Sb**	**22 46 09.7**	**-0.8**
	1.9nm,0.2s						
MTBS	**Maitube**	**1.32**	**307**	*eP*	**Pn**	**22 45 54.5**	**+0.2**
	0.6nm,0.1s						
MTBS				*eS*	**Sn**	**22 46 12.6**	**+0.8**
	5.2nm,0.2s						
BOOM	**Boomskoye usch**	**1.44**	**277**	⇑*iP*	**Pn**	**22 45 56.2**	**+0.2**
BOOM				⇑*iS*	**Sg**	**22 46 16.3**	**-0.2**
SHLS	**Shalkode**	**1.44**	**55**	*eP*	**Pg**	**22 46 00.0**	**+2.2**
	0.8nm,0.1s						
SHLS				*eS*	**Sg**	**22 46 22.2**	**+5.7**
	6.7nm,0.3s						
KTBS	**Karatobe**	**1.63**	**328**	*eP*	**Pb**	**22 45 59.9**	**-0.2**
	0.4nm,0.1s						
KTBS				*eS*	**Sb**	**22 46 21.7**	**+1.2**
	1.4nm,0.2s						
ARXS	**Arharly**	**1.88**	**359**	*eP*	**Pn**	**22 46 03.5**	**+1.5**
	0.9nm,0.2s						
ARXS				*eS*	**Sb**	**22 46 27.8**	**+0.1**
	12nm,0.3s						

ISK **17** *22:52:59.9, 38°.37N×39°.06E, h7km±1km, ML2.5/5*
AFAD **17** *22:53:01.3, 38°.38N×39°.01E, h7km±3km, ML1.4*
ISC 17 22:53:00.7±1.1**, 38°.36N**±0°.04×**39°.08E**±0°.03**, h4**km±9km**, n9, σ0°57/17, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDYL	**Doganyol-Malat**	**0.06**	**211**	Pg	**Pg**	**22 53 01.9**	**-0.2**
MDYL				Sg	**Sg**	**22 53 03.3**	**+0.2**
ESGZ	**Sivrice-Elazig**	**0.07**	**352**	Pg	**Pg**	**22 53 02.2**	**-0.2**
ESGZ				Sg	**Sg**	**22 53 03.3**	**-0.3**
ELZG	**Elazig**	**0.15**	**332**	P	**Pg**	**22 53 03.8**	**0.0**
ELZG				IAML		22 53 06.0	
	comp=N,376nm,0.1s						
ELZG				IAML		22 53 06.0	
	comp=E,584nm,0.2s						
ELZG				S	**Sg**	**22 53 06.4**	**+0.5**
ESIJ	**Sivrice-Elazig**	**0.20**	**65**	Pg	**Pg**	**22 53 04.6**	**-0.1**
ESIJ				Sg	**Sg**	**22 53 08.3**	**+0.8**
MDNT	**Maden**	**0.48**	**86**	P	**Pb**	**22 53 11.7**	**0.0**
MDNT				IAML		22 53 19.0	
	comp=N,13nm,0.5s						
MDNT				IAML		22 53 19.0	
	comp=E,14nm,0.3s						
MDNT				S	**Sb**	**22 53 19.1**	**0.0**
MAYA	**Malatya/Merkez**	**0.51**	**266**	P	**Pg**	**22 53 10.1**	**-0.4**
MAYA				S	**Sg**	**22 53 18.3**	**+1.1**
MAYA				IAML		22 53 19.0	
	comp=N,85nm,0.1s						
MAYA				IAML		22 53 19.0	
	comp=E,65nm,0.2s						
MCKZ	**Bingol**	**0.76**	**354**	P	**Pb**	**22 53 16.4**	**-0.2**
MCKZ				S	**Sg**	**22 53 25.5**	**+0.3**
MCKZ				IAML		22 53 27.0	
	comp=N,8.0nm,0.6s						
MCKZ				IAML		22 53 29.0	
	comp=E,4.8nm,0.4s						
ARPR	**Arapgir-MALATY**	**0.93**	**322**	Pg	**Pg**	**22 53 17.8**	**-0.8**
ARPR				Sg	**Sg**	**22 53 31.5**	**+0.8**
DYBB	**Diyarbakir**	**0.93**	**116**	Pg	**Pg**	**22 53 18.1**	**-0.5**

SDD **17** *22:55:10.8±0.8, 18°.50N×71°.42W, h264km±11km, MD3.2, ML2.6, MW2.7, Presumed earthquake*
OSPL 17 22:55:52.1±0.5**, 18°.65N×71°.57W, h11**km±8km**, ML1.3, 5C, Presumed earthquake, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LONE3	**El Aguacate, B**	**0.12**	**113**	*i* P	Pg	22 55 54.9	-0.3
LONE3				*eS*	Sg	22 55 57.1	-0.3
LONE3				IAML		22 55 58.3	
	comp=Z,108nm,0.1s						
JIDR	**Jimani**	**0.31**	**239**	⇑*eS*	Sb	22 56 07.6	+2.9
JIDR				IAML		22 56 08.5	
	comp=N,47nm,0.7s						
LODU1	**El Espartillar**	**0.31**	**163**	*i* P	Pg	22 55 57.7	-0.7
LODU1				*eS*	Sg	22 56 02.4	-0.2
LODU1				IAML		22 56 02.8	
	comp=Z,40nm,1.4s						
SDDR	**Presa de Saban**	**0.42**	**39**	⇑*eP*	Pg	22 55 43.8	-17
SDDR				⇑*eS*	Sb	22 56 08.0	-0.2
SDDR				IAML		22 56 17.0	
	comp=N,12nm,1.6s						
SDDR	**Presa de Saban**	**0.42**	**39**	*i* P	Pg	22 56 00.2	-0.3
SDDR				*eS*	Sg	22 56 05.6	-0.6
SDDR				IAML		22 56 08.0	
	comp=Z,14nm,2.6s						
REDR	**Restauracion**	**0.54**	**18**	⇑*eS*	Sb	22 56 10.8	-0.6
PODR	**Polo**	**0.56**	**150**	⇑*eS*	Sg	22 56 08.4	-2.0
PODR				IAML		22 56 11.8	
	comp=N,69nm,0.7s						
PODR	**Polo**	**0.56**	**150**	*i* P	Pg	22 56 01.0	-2.0
PODR				*eS*	Sg	22 56 08.5	-1.9

SOME **17** *23:05:39.4, 39°.73N×77°.28E, h5km*

NNC **17** *23:05:41.8±4.9, 41°.13N×79°.56E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=54.6km s-min=35.9km az=24.0*
KRNET **17** *23:05:46.5±0.1, 39°.87N×77°.26E, h20km, mb3.5*
ISC 17 23:05:43.6±2.5**, 39°.9N**±0°.1×**77°.32E**±0°.04**, h10**km**, n46, σ1°51/66, 12C-4D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNKS	**Jany-Kuch**	**1.75**	**313**	⇓*iP*	**Pg**	**23 06 17.9**	**+0.6**
JNKS				⇓*iS*	**Sg**	**23 06 40.8**	**+0.8**
NRN	**Naryn**	**1.86**	**328**	⇓*iP*	**Pg**	**23 06 20.2**	**+0.9**
NRN				⇓*iS*	**Sg**	**23 06 44.7**	**+1.2**
TARG	**Taragay, Kyrgy**	**1.90**	**11**	⇑*iP*	**Pg**	**23 06 21.2**	**+1.1**
TARG				⇑*iS*	**Sg**	**23 06 46.6**	**+1.9**
KDJ	**Kajisay**	**2.27**	**357**	⇑*iP*	**Pg**	**23 06 26.0**	**-1.1**
KDJ				⇑*iS*	**Sg**	**23 06 54.9**	**-1.6**
ULHL	**Ulahol**	**2.52**	**341**	P	**Pg**	**23 06 31.9**	**0.0**
	SNR=22						
ULHL	**Ulahol**	**2.52**	**341**	⇑*iP*	**Pb**	**23 06 29.5**	**+0.5**
ULHL				⇑*iS*	**Sb**	**23 07 00.9**	**+0.8**
BOOM	**Boomskoye usch**	**2.82**	**339**	⇑*iP*	**Pb**	**23 06 33.6**	**-0.6**
BOOM				⇑*iS*	**Sb**	**23 07 08.2**	**-0.7**
UCH	**Uchtor**	**3.17**	**319**	P	**Pb**	**23 06 41.2**	**+0.8**
	SNR=14						
TNSS	**Tian-Shan**	**3.18**	**355**	Pg	**Pg**	**23 06 44.2**	**-0.4**
	2.8nm,0.4s						
TNSS	**Tian-Shan**	**3.18**	**355**	*eP*	**Pb**	**23 06 41.2**	**+0.8**
	2.8nm,0.4s						
TNSS				*eS*	**Sg**	**23 07 25.9**	**0.0**
	17nm,0.9s						
IZV	**Izvestkoviy**	**3.21**	**351**	Pg	**Pg**	**23 06 44.3**	**-0.8**
	2.2nm,0.5s						
IZV	**Izvestkoviy**	**3.21**	**351**	*eP*	**Pb**	**23 06 41.3**	**+0.5**
	2.2nm,0.5s						
IZV				*eS*	**Sg**	**23 07 26.0**	**-0.9**
	49nm,0.8s						
SATY	**Saty**	**3.30**	**14**	Pg	**Pg**	**23 06 45.1**	**-1.6**
	3.2nm,0.5s						
SATY				Lg	Lg	23 07 27.2	
	5.6nm,0.2s						
MDOK	**Medeo**	**3.30**	**357**	Pg	**Pg**	**23 06 46.2**	**-0.7**
	8.3nm,0.6s						
MDOK				Lg	Lg	23 07 29.0	
	71nm,0.6s						
KBK	**Karagaybulak**	**3.31**	**328**	P	**Pb**	**23 06 42.9**	**+0.4**
	SNR=21						
TKM2	**Tokmak 2**	**3.32**	**338**	P	**Pb**	**23 06 42.9**	**+0.3**
	SNR=20						
MTBS	**Maitube**	**3.33**	**349**	Pg	**Pg**	**23 06 47.3**	**-0.1**
	0.6nm,0.1s						
MTBS	**Maitube**	**3.33**	**349**	*eP*	**Pb**	**23 06 44.4**	**+1.6**
	0.6nm,0.1s						
MTBS				*eS*	**Sg**	**23 07 30.9**	**+0.3**
	18nm,0.4s						
KST	**Kastek**	**3.34**	**343**	Pg	**Pg**	**23 06 46.5**	**-1.0**
	6.0nm,0.5s						
KST				Lg	Lg	23 07 29.5	
	17nm,0.4s						
KST	**Kastek**	**3.34**	**343**	*eP*	**Pb**	**23 06 44.0**	**+1.0**
	6.0nm,0.5s						
KST				*eS*	**Sg**	**23 07 30.6**	**-0.1**
	17nm,0.4s						
KOTS	**Kotyrbulak**	**3.37**	**357**	Pg	**Pg**	**23 06 47.5**	**-0.7**
	6.8nm,0.4s						
KOTS	**Kotyrbulak**	**3.37**	**357**	*eP*	**Pb**	**23 06 44.6**	**+1.1**
	6.8nm,0.4s						
KOTS				*eS*	**Sg**	**23 07 31.4**	**-0.4**
	107nm,0.6s						
AAK	**Ala-Archa**	**3.50**	**323**	P	**Pb**	**23 06 45.5**	**-0.1**
	SNR=17						
AAK	**Ala-Archa**	**3.50**	**323**	⇑Pn	**Pb**	**23 06 45.4**	**-0.1**
	3.3nm,0.5s						
AAK				⇑Sn	**Sg**	**23 07 35.2**	**-0.6**
	11nm,0.6s						
UZB	**Uzynbulak**	**3.52**	**21**	Pg	**Pg**	**23 06 49.7**	**-1.4**
	1.8nm,0.1s						
UZB	**Uzynbulak**	**3.52**	**21**	*eP*	**Pb**	**23 06 46.3**	**+0.2**
	1.8nm,0.1s						
UZB				*eS*	**Sg**	**23 07 35.1**	**-1.6**
	9.8nm,0.8s						
DGS	**Degeres**	**3.57**	**342**	Pg	**Pg**	**23 06 50.8**	**-1.2**
	6.4nm,0.5s						
DGS	**Degeres**	**3.57**	**342**	*eP*	**Pb**	**23 06 47.6**	**+0.7**
	6.4nm,0.5s						
DGS				*eS*	**Sg**	**23 07 36.8**	**-1.4**
	21nm,0.6s						
SHLS	**Shalkode**	**3.66**	**25**	Pg	**Pg**	**23 06 54.8**	**+1.0**
	5.4nm,0.3s						
SHLS	**Shalkode**	**3.66**	**25**	*eP*	**Pb**	**23 06 51.8**	**-2.0**
	5.4nm,0.3s						
SHLS				*eS*	**Sg**	**23 07 43.6**	**+2.3**
	24nm,0.6s						
KURS	**Kuram**	**3.68**	**10**	Pg	**Pg**	**23 06 52.5**	**-1.6**
KURS				Lg	Lg	23 07 39.7	
	5.1nm,0.7s						
CHMS	**Chumysh**	**3.68**	**329**	P	**Pb**	**23 06 47.9**	**-0.9**
	SNR=5.2						
KPKS	**Kokpek**	**3.74**	**15**	Pg	**Pg**	**23 06 53.6**	**-1.7**
	4.8nm,0.5s						
KPKS				Lg	Lg	23 07 41.7	
	6.5nm,0.5s						
KPKS	**Kokpek**	**3.74**	**15**	*eP*	**Pb**	**23 06 51.4**	**+1.6**
	4.8nm,0.5s						
KPKS				*eS*	**Sg**	**23 07 43.2**	**-0.6**
	6.5nm,0.5s						
EKS2	**Erkin-Say**	**3.87**	**317**	P	**Pb**	**23 06 50.9**	**-1.1**
	SNR=37						
KTBS	**Karatobe**	**3.88**	**353**	Pg	**Pg**	**23 06 56.7**	**-1.1**
	3.2nm,0.4s						
KTBS	**Karatobe**	**3.88**	**353**	*eP*	**Pb**	**23 06 53.1**	**+1.0**
	3.2nm,0.4s						
KTBS				*eS*	**Sg**	**23 07 46.7**	**-1.3**
	8.3nm,0.9s						
USP	**Ospenovka**	**4.00**	**329**	P	**Pg**	**23 06 59.1**	**-1.2**
	SNR=5.2						
KRBS	**Karabastau**	**4.02**	**343**	Pg	**Pg**	**23 06 58.8**	**-1.8**
	3.3nm,0.4s						
KRBS				Lg	Lg	23 07 51.0	
	17nm,0.7s						
KRBS	**Karabastau**	**4.02**	**343**	*eP*	**Pg**	**23 06 57.1**	**-3.5**
	3.3nm,0.4s						
KRBS				*eS*	**Sg**	**23 07 52.6**	**-0.1**
	17nm,0.7s						
SGDS	**Sogindy**	**4.11**	**332**	Pg	**Pg**	**23 07 01.0**	**-1.4**
	1.9nm,0.3s						
SGDS				Lg	Lg	23 07 53.0	
	9.4nm,0.7s						
BLB	**Baldybastay**	**4.32**	**11**	Pg	**Pg**	**23 07 04.5**	**-1.8**
	0.2nm,0.1s						
BLB				Lg	Lg	23 08 00.3	
	17nm,0.4s						
ARXS	**Arharly**	**4.36**	**5**	Pg	**Pg**	**23 07 05.1**	**-2.0**
	2.3nm,0.4s						
ARXS				Lg	Lg	23 08 01.1	
	18nm,0.5s						
ARXS	**Arharly**	**4.36**	**5**	*eP*	**Pg**	**23 07 03.3**	**-3.9**
	2.3nm,0.4s						
ARXS				*eS*	**Sg**	**23 08 03.8**	**+0.1**
	18nm,0.5s						
KNOS	**Konyrlen**	**4.70**	**17**	Pg	**Pg**	**23 07 11.6**	**-2.0**
	0.8nm,0.3s						
KNOS				Lg	Lg	23 08 12.6	
	8.7nm,0.7s						
KK31	**Karatay Array**	**6.05**	**305**	⇑P	**Pb**	**23 07 25.9**	**-3.2**
	1.1nm,0.6s,baz=106,slow=15,SNR=11						
KK31				⇑S	**Sb**	**23 08 46.9**	**+5.4**
	baz=102,slow=27						

WEL 17 23:22:51.3±1.2**, 36°.5**±15°×**17°.8E**±1°**, h202**km±22km**, M3.8/8, ML3.5/7, MLv3.8/8, Error ellipse: s-maj=23.8km s-min=10.6km az=39.4, confirmed, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**2.02**	**178**	P	Pn	23 23 30.4	+0.3
MXZ				S	S	23 24 00.7	+0.6
HAZ	**Te Kaha**	**2.25**	**189**	P	Pn	23 23 32.6	+0.1
HAZ				S	S	23 24 05.4	+1.2
WMGZ	**Waiomatatini S**	**2.28**	**176**	P	Pn	23 23 33.4	+0.5
GRZ	**Great Barrier**	**2.37**	**252**	P	Pn	23 23 33.7	-0.1
RUGZ	**Raukumara Rang**	**2.46**	**190**	P	Pn	23 23 34.5	-0.5
PUZ	**Puketiti**	**2.53**	**180**	P	Pn	23 23 35.5	-0.1
PUZ				S	S	23 24 10.2	+0.3
TWGZ	**Tauwhareparae**	**2.64**	**184**	P	Pn	23 23 37.4	+0.5
OPRZ	**Ohinepanea**	**2.67**	**210**	P	Pn	23 23 39.1	+1.9
MWZ	**Matawai**	**2.85**	**191**	P	Pn	23 23 39.4	+0.1
MWZ				S	S	23 24 17.9	+1.5
URZ	**Urewera**	**2.86**	**198**	P	Pn	23 23 39.2	-0.2
URZ				S	S	23 24 16.7	+0.2
TKGZ	**Te Karaka**	**2.91**	**186**	P	Pn	23 23 39.5	-0.4
TKGZ				S	S	23 24 18.5	+0.9
MKAZ	**Moumakai**	**2.94**	**237**	P	Pn	23 23 41.1	+0.8
CNGZ	**Carnagh Statio**	**2.94**	**180**	P	Pn	23 23 40.2	-0.1
RIGZ	**Rimuhau**	**3.19**	**187**	P	Pn	23 23 42.5	-0.7
WCZ	**Waipu Caves**	**3.19**	**262**	P	Pn	23 23 43.0	-0.2
RTZ	**Ruatahuna**	**3.23**	**198**	P	Pn	23 23 43.3	-0.5
MTHZ	**Maungataniwha**	**3.49**	**198**	P	Pn	23 23 46.5	-0.4
RAHZ	**Arahi**	**3.50**	**195**	P	Pn	23 23 45.3	-1.6
KNZ	**Kokohu**	**3.51**	**187**	P	Pn	23 23 46.0	-1.1
MHGZ	**Mahia Peninsul**	**3.62**	**184**	P	Pn	23 23 47.4	-1.1
WHHZ	**Waihua**	**3.62**	**192**	P	Pn	23 23 47.7	-0.8
NMHZ	**Naumai**	**3.73**	**197**	P	Pn	23 23 49.6	-0.3
OUZ	**Omahuta**	**3.81**	**273**	P	Pn	23 23 50.1	-0.6
ARHZ	**Aropaoanui**	**3.85**	**194**	P	Pn	23 23 50.3	-0.9
BKZ	**Black Stump Fm**	**3.88**	**200**	P	Pn	23 23 50.4	-1.3
MCHZ	**McNeill Hill**	**4.09**	**197**	P	Pn	23 23 53.1	-1.1
NTVZ	**North Tongarir**	**4.10**	**209**	P	Pn	23 23 54.7	+0.2
OTVZ	**Oturere**	**4.16**	**209**	P	Pn	23 23 54.7	-0.5
SNVZ	**South Ngauruho**	**4.19**	**209**	P	Pn	23 23 55.0	-0.6
MOVZ	**Moawhango**	**4.34**	**206**	P	Pn	23 23 55.6	-1.8
KRHZ	**Kereru**	**4.36**	**199**	P	Pn	23 23 55.2	-2.4
KAHZ	**Kahuranaki**	**4.38**	**194**	P	Pn	23 23 56.2	-1.7
PKVZ	**Pokaka**	**4.40**	**211**	P	Pn	23 23 57.5	-0.6
PWZ	**Pawanui**	**4.62**	**193**	P	Pn	23 23 58.5	-2.3
PXZ	**Pawanui**	**4.62**	**193**	P	Pn	23 23 58.2	-2.5
PNHZ	**Pukenui**	**4.66**	**200**	P	Pn	23 23 59.0	-2.4
TSZ	**Takapari Road**	**4.86**	**201**	P	Pn	23 24 01.6	-2.3
PRHZ	**Porangahau**	**4.89**	**195**	P	Pn	23 24 01.7	-2.5
DVHZ	**Dannevirke**	**5.03**	**198**	P	Pn	23 24 02.8	-3.2
PRWZ	**Pori Road**	**5.32**	**199**	P	Pn	23 24 06.9	-2.9
BFZ	**Birch Farm**	**5.37**	**196**	P	Pn	23 24 07.3	-3.1
TIWZ	**Tintock**	**5.55**	**199**	P	Pn	23 24 09.3	-3.4

NDI **17** *23:45:11.6±3.3, 34°.67N×69°.32E, h10km, ML4.0, MW3.6, Presumed earthquake*
NNC **17** *23:45:17.9±4.2, 34°.80N×69°.31E, h0km, mb4.2, mpv4.1, Error ellipse: s-maj=44.5km s-min=29.2km az=57.0*
IDC **17** *23:45:22.4±5.5, 34°.69N×70°.10E, h68km±47km, mb3.4/11, mbtmp3.7/16, ML3.5/5, MS3.2/3, Error ellipse: s-maj=30.5km s-min=16.7km az=22.0*
ISC 17 23:45:19.5±0.9**, 34°.73N**±0°.08×**69°.72E**±0°.08**, h24**km**, n38, σ2°05/24, mb3.6/10, 2C-1D, Southeastern Afghanistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMU	**Jammu**	**4.68**	**113**	*eP*	**Pn**	**23 46 28.4**	**-0.3**
JMU				*eS*	**Sn**	**23 47 22.1**	**-0.2**
JMU				IAML		23 47 50.8	
	comp=E,261nm,0.6s						
JMU				IAML		23 47 53.3	
	comp=N,219nm,0.8s						
THN	**Thein Dam**	**5.53**	**113**	*eP*	Pn	23 46 37.5	-2.9
THN				*eS*	**Sn**	**23 47 41.4**	**-1.9**
THN				IAML		23 47 51.1	
	comp=E,94nm,0.2s						
THN				IAML		23 47 56.9	
	comp=N,73nm,0.6s						
TSSA	**Tissa**	**5.68**	**108**	*eP*	Pn	23 46 40.5	-2.1
TSSA				*eS*	Sn	23 47 44.1	-3.0
TSSA				IAML		23 47 48.2	
	comp=N,312nm,0.2s						
TSSA				IAML		23 47 48.6	
	comp=E,321nm,0.2s						
TLWR	**Talawar**	**5.91**	**116**	*eS*	Sn	23 47 48.8	-3.7
DHRM	**DHARAMSHALA**	**6.03**	**112**	*eP*	Pn	23 46 44.7	-2.7
DHRM				*eS*	Sn	23 47 52.9	-2.8
DHRM				IAML		23 48 29.7	
	comp=E,203nm,0.5s						
DHRM				IAML		23 48 33.8	
	comp=N,205nm,0.7s						
ALCI	**Alchi Leh**	**6.19**	**93**	*eP*	Pn	23 46 48.9	-0.8
ALCI				*eS*	Sn	23 47 57.9	-2.0
BHK	**Bhakra**	**6.51**	**119**	IAML		23 48 11.2	
	comp=E,246nm,0.3s						
BHK				IAML		23 48 11.2	
	comp=N,219nm,0.3s						
BHK				*eS*	**Sn**	**23 48 11.6**	**+4.4**
SMLA	**Simla**	**7.22**	**118**	*eP*	Pn	23 46 59.9	-3.6
SMLA				*eS*	Sn	23 48 18.9	-5.7
SMLA				IAML		23 48 21.3	
	comp=E,87nm,0.4s						
SMLA				IAML		23 48 22.7	
	comp=N,95nm,0.4s						
KLP	**Kalpa**	**7.83**	**112**	*eP*	Pn	23 47 10.7	-1.6
KLP				*eS*	Sn	23 48 35.0	-5.3
KLP				IAML		23 48 38.7	
	comp=E,66nm,0.5s						
KLP				IAML		23 48 46.7	
	comp=N,48nm,0.3s						
KK31	**Karatay Array**	**8.39**	**4**	P	**Pn**	**23 47 21.2**	**+1.7**
	comp=N,8.0nm,0.6s,baz=188,slow=13,SNR=84						
KK31				⇑S	**Sn**	**23 48 56.2**	**+2.8**
	comp=N,11nm,0.6s,baz=188,slow=24						
AAK	**Ala-Archa**	**8.74**	**24**	P	**Pn**	**23 47 25.9**	**+1.5**
	comp=N,0.7nm,0.3s,baz=216,slow=7.2,SNR=16						
AAK				S	**Sn**	**23 49 02.1**	**-0.1**
	comp=N,11nm,0.7s,baz=351,slow=18,SNR=6.7						
	comp=N,1.8nm,0.3s						
AAK	**Ala-Archa**	**8.74**	**24**	⇓P	**Pn**	**23 47 26.2**	**+1.7**
	comp=N,3.6nm,0.6s,baz=188,slow=13						
KUDL	**Kundal**	**8.74**	**137**	*eP*	Pn	23 47 21.7	-2.7
KUDL				*eS*	Sn	23 48 53.4	-8.9
AYAN	**Aya Nagar**	**8.87**	**133**	*eP*	Pn	23 47 19.8	-6.3
AYAN				*eS*	Sn	23 48 57.0	-8.3
AYAN				IAML		23 48 59.5	
	comp=N,163nm,0.6s						
AYAN				IAML		23 49 00.0	
	comp=E,157nm,0.3s						
JOSI	**Joshimath**

SONM	**Songino Array**	**30.22**	**53**	P	P		23 51 25.4	-2.8
	comp=Z,0.3nm,0.6s,baz=262,slow=10.0,SNR=4.3							
	comp=Z,0.3nm,0.6s							
CMAR	**Chiang Mai Arr**	**30.60**	**114**	LR	LR		00 06 00.9	
	comp=Z,14nm,19.4s,baz=305,slow=41							
FINES	**FINESS Array B**	**38.40**	**328**	P	**P**		**23 52 39.6**	**+1.0**
	comp=Z,3.9nm,1.0s,baz=108,slow=8.6,SNR=4.5							
	comp=Z,3.9nm,1.0s							
ARCES	**ARCESS Array B**	**42.40**	**339**	P	**P**		**23 53 12.7**	**+1.1**
	comp=Z,1.5nm,0.6s,baz=89,slow=6.4,SNR=3.8							
	comp=Z,1.5nm,0.6s							
HFS	**Hagfors**	**43.84**	**323**	P	**P**		**23 53 22.2**	**-1.1**
	comp=Z,1.3nm,0.6s,baz=82,slow=12,SNR=5.1							
	comp=Z,1.3nm,0.6s							
NOA	**NORSAR Array B**	**45.19**	**324**	P	**P**		**23 53 33.7**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=98,slow=7.9,SNR=1.6							
	comp=Z,0.4nm,0.5s							
TORD	**Torodi Ar. Bea**	**64.63**	**269**	P	**P**		**23 55 55.0**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=45,slow=3.3,SNR=6.6							
	comp=Z,0.4nm,0.5s							
SIJI	**Sorong**	**67.43**	**108**	LR	LR		00 27 49.8	
	comp=Z,72nm,21.6s,baz=172,slow=38							
WRA	**Warramunga Arr**	**81.96**	**121**	P	P		23 57 33.0	-4.5
	comp=Z,0.3nm,0.7s,baz=310,slow=5.8,SNR=2.6							
	comp=Z,0.3nm,0.7s							
YKA	**Yellowknife Ar**	**83.06**	**2**	P	**P**		**23 57 39.6**	**-3.0**
	comp=Z,0.2nm,0.5s,baz=351,slow=6.6,SNR=4.7							
	comp=Z,0.2nm,0.5s							
ASAR	**Alice Springs**	**84.12**	**124**	P	P		23 57 44.5	-4.1
	comp=Z,0.3nm,0.6s,baz=315,slow=5.2,SNR=2.7							
	comp=Z,0.3nm,0.6s							

SKHL ***18*** *00:22:19.0±0.5, 45.°60N×153.°70E, h43km±2km, mb4.3/3*
IDC ***18*** *00:22:34.6±29.0, 46.°77N×152.°34E, h71km±89km, mb3.5/7, mbtmp3.8/8, ML2.1/1, Error ellipse: s-maj=471.6km s-min=50.8km az=155.0*
ISC 18 00:22:22.1±2.3, 45.°6N±0.°3×153.°4E±0.°2, h35km, n19, σ0s88/14, mb4.0/7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KUR	**Kuril'sk**	**3.93**	**267**	*eP*		**Pn**	**00 23 19.7**	**-0.1**
KUR				AMB		AMB	00 23 23.1	
	20nm,0.5s							
KUR				*eS*		**Sn**	**00 24 05.6**	**+0.9**
KUR				A		A	00 24 08.4	
	70nm,0.4s							
KUR				A		A	00 24 08.4	
	70nm,0.4s							
SHO	**Shikotan**	**5.00**	**252**	*eP*		Pn	00 23 46.3	+12
SHO				AMB		AMB	00 23 47.6	
	20nm,0.3s							
SHO				*eS*		Sn	00 24 41.3	+10
SHO				A		A	00 24 45.0	
	30nm,0.3s							
SHO				A		A	00 24 45.0	
	30nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**5.60**	**257**	*eP*		**Pn**	**00 23 43.7**	**+1.0**
NMR	**Nemuro--Hokkai**	**5.93**	**251**	*eP*		**Pn**	**00 23 48.3**	**+1.0**
NMR				*eS*		**Sn**	**00 24 54.0**	**0.0**
AKK	**Akkeshi**	**6.67**	**251**	*eP*		**Pn**	**00 23 57.5**	**+0.1**
PETK	**Petropavlovsk-**	**8.04**	**19**	P		**Pn**	**00 24 17.5**	**+1.2**
	0.2nm,0.3s,baz=213,slow=10,SNR=2.5							
	2.8nm,0.8s							
H11N2	**WAKE ISLAND Hy**	**28.07**	**152**	T		T	01 00 01.3	
	baz=341,slow=74							
H11N1	**WAKE ISLAND Hy**	**28.09**	**152**	T		T	01 00 04.9	
	baz=341							
H11N3	**WAKE ISLAND Hy**	**28.09**	**152**	T		T	01 00 04.9	
	baz=341,slow=74							
H11S1	**WAKE ISLAND Hy**	**29.15**	**153**	T		T	01 01 32.7	
	baz=339,slow=74							
H11S3	**WAKE ISLAND Hy**	**29.16**	**153**	T		T	01 01 23.7	
	baz=339,slow=74							
H11S2	**WAKE ISLAND Hy**	**29.17**	**153**	T		T	01 01 20.5	
	baz=339							
MKAR	**Makanchi Array**	**47.69**	**298**	P		**P**	**00 30 54.3**	**-0.6**
	0.2nm,0.4s,baz=65,slow=8.2,SNR=4.6							
	0.2nm,0.4s							
KURBB	**Kurchatov Array**	**48.30**	**305**	P		**P**	**00 30 58.2**	**-1.4**
	0.5nm,0.3s,baz=64,slow=8.4,SNR=1.3							
	0.5nm,0.3s							
BVAR	**Borovoye Array**	**51.78**	**310**	P		**P**	**00 31 24.5**	**-1.5**
	0.3nm,0.4s,baz=53,slow=9.8,SNR=4.3							
	0.3nm,0.4s							
FINES	**FINESS Array B**	**65.20**	**335**	P		**P**	**00 32 59.1**	**-0.2**
	1.5nm,0.7s,baz=36,slow=6.1,SNR=1.0							
	1.5nm,0.7s							
NOA	**NORSAR Array B**	**69.42**	**341**	P		**P**	**00 33 26.1**	**0.0**
	1.0nm,0.9s,baz=28,slow=6.1,SNR=1.9							
	1.0nm,0.9s							
HFS	**Hagfors**	**69.64**	**340**	P		**P**	**00 33 27.2**	**-0.1**
	2.8nm,1.0s,baz=38,slow=7.3,SNR=4.7							
	2.8nm,1.0s							
AKASG	**Malin Array Be**	**72.65**	**327**	P		**P**	**00 33 45.8**	**+0.1**
	0.7nm,0.4s,baz=37,slow=6.3,SNR=5.3							
	0.7nm,0.4s							

IDC ***18*** *00:34:34.0±2.6, 9.°33S×112.°40E, h0km, mb3.3/4, mbtmp3.4/5, ML3.0/1, Error ellipse: s-maj=115.6km s-min=23.0km az=50.0*
DJA ***18*** *00:34:39.8±0.4, 9.°5±4.°4×11.°2E±.°, h10km, M3.9/22, mb4.1/1, MLv3.8/22*
ISC 18 00:34:33.9±1.1, 9.°66S±0.°10×112.°09E±0.°09, h10km, n20, σ1s03/20, mb3.5/4, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PCJI	**Pacitan**	**1.71**	**328**	P		**Pg**	**00 35 08.3**	**+1.5**
SNJI	**Sawahan-Nganju**	**1.89**	**350**	P		**Pb**	**00 35 09.5**	**+0.8**
SJI	**Sawahan**	**1.94**	**350**	P		**Pb**	**00 35 09.5**	**+0.1**
UGM	**Wanagama**	**2.33**	**318**	P		**Pg**	**00 35 18.3**	**-0.3**
JAGI	**Jajag, Banyuwa**	**2.35**	**60**	P		**Pn**	**00 35 10.8**	**-1.9**
NGJI	**Ngawi**	**2.36**	**345**	P		**Pg**	**00 35 18.8**	**-0.4**
BLJI	**Banyuglugur**	**2.41**	**38**	P		**Pn**	**00 35 13.1**	**-0.4**
BYJI	**Banyuwangi**	**2.66**	**58**	P		**Pn**	**00 35 17.2**	**+0.3**
ABJI	**Asem Bagus**	**2.81**	**49**	P		**Pn**	**00 35 19.7**	**+0.7**
RTBI	**Rangdo, Negare**	**3.06**	**67**	P		**Pn**	**00 35 22.6**	**+0.2**
KMMI	**Kalianget**	**3.19**	**36**	P		**Pn**	**00 35 22.8**	**-1.4**
SRBI	**Singaraja**	**3.46**	**63**	P		**Pn**	**00 35 27.6**	**-0.3**
KPJI	**Karang Pucung**	**3.89**	**306**	P		**Pb**	**00 35 42.3**	**-0.3**
TWSI	**Taliwang, Sumb**	**4.82**	**79**	P		**Pn**	**00 35 45.5**	**-1.1**
PLAI	**Plampang**	**5.67**	**82**	P		**Pn**	**00 35 59.6**	**+1.2**
FITZ	**Fitzroy Crossi**	**15.59**	**124**	Pn		**Pn**	**00 38 12.4**	**-1.6**
	baz=324,slow=8.7,SNR=2.2							
FITZ				Sn		Sn	00 40 55.0	-12
	baz=140,slow=19,SNR=2.4							
	2.2nm,1.1s							
WRA	**Warramunga Arr**	**23.79**	**118**	P		**P**	**00 39 47.3**	**+0.3**
	0.3nm,0.5s,baz=292,slow=11,SNR=8.2							
	0.3nm,0.5s							
ASAR	**Alice Springs**	**25.06**	**126**	P		**P**	**00 40 00.6**	**+1.8**
	0.4nm,0.4s,baz=308,slow=9.1,SNR=5.4							
	0.4nm,0.4s							
SONM	**Songino Array**	**57.46**	**355**	P		**P**	**00 44 23.3**	**+0.2**
	0.2nm,0.3s,baz=174,slow=5.7,SNR=1.6							
	0.2nm,0.3s							
MKAR	**Makanchi Array**	**62.17**	**337**	P		**P**	**00 44 55.4**	**-0.2**
	0.2nm,0.5s,baz=148,slow=7.6,SNR=4.7							
	0.2nm,0.5s							

UPP ***18*** *00:35:06.2±0.0, 67.°85N×20.°21E, h0km, ML2.4, Suspected explosion*
HEL ***18*** *00:35:06.0±0.2, 67.°81N×20.°15E, h0km, ML1.7, Suspected explosion*
IDC ***18*** *00:35:07.7±1.2, 67.°87N×20.°61E, h0km, mbtmp3.0/4, ML1.9/4, Error ellipse: s-maj=18.8km s-min=7.6km az=120.0*
ISC 18 00:35:06.2±0.8, 67.°85N±0.°02×20.°22E±0.°02, h0km, n35, σ1s00/55, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KUA	**Kurravaara**	**0.11**	**23**	P		**Pg**	**00 35 08.7**	**+0.3**
KUA				S		**Sg**	**00 35 10.6**	**+0.7**
RATU	**Laukkuluspa**	**0.24**	**264**	P		**Pg**	**00 35 10.9**	**+0.1**
RATU				S		**Sg**	**00 35 14.1**	**+0.2**
KOVU	**Salmi**	**0.38**	**357**	P		**Pg**	**00 35 13.6**	**+0.2**
KOVU				S		**Sg**	**00 35 18.7**	**+0.5**
NIKU	**Nikkaluokta**	**0.45**	**273**	P		**Pg**	**00 35 14.8**	**0.0**
NIKU				S		**Sg**	**00 35 21.1**	**+0.5**
LANU	**Lannavaara**	**0.70**	**73**	P		**Pg**	**00 35 19.6**	**0.0**
LANU				S		**Sg**	**00 35 29.0**	**+0.4**
LANU	**Lannavaara**	**0.70**	**73**	PB		**Pg**	**00 35 19.7**	**+0.1**
LANU				SG		**Sg**	**00 35 29.0**	**+0.4**
DUNU	**Dundret**	**0.74**	**169**	P		**Pg**	**00 35 20.0**	**-0.4**
DUNU				S		**Sg**	**00 35 30.3**	**+0.3**
MASU	**Masugnsbyn**	**0.79**	**119**	P		**Pg**	**00 35 21.2**	**0.0**
SALU	**Saltoluokta**	**0.81**	**235**	P		**Pg**	**00 35 21.3**	**-0.4**
KIF	**Kilpisjarvi**	**1.18**	**10**	*eP*		**Pg**	**00 35 28.6**	**-0.2**
KIF	**Kilpisjarvi**	**1.18**	**10**	PG		**Pg**	**00 35 28.8**	**0.0**
KIF				smax		smax	00 35 44.1	
	comp=Z,14nm,0.2s							
KIF				SG		**Sg**	**00 35 44.5**	**+0.4**
HEF	**Hetta**	**1.41**	**65**	*eP*		**Pn**	**00 35 31.8**	**-1.3**
HEF	**Hetta**	**1.41**	**65**	PN		**Pn**	**00 35 32.3**	**-0.7**
	baz=249							
HEF				smax		smax	00 35 49.5	
	comp=Z,5.6nm,0.2s							
HEF				SG		**Sg**	**00 35 50.8**	**-0.5**
ERTU	**Ertsjaerv**	**1.51**	**149**	P		**Pn**	**00 35 33.9**	**-0.6**
ERTU	**Ertsjaerv**	**1.51**	**149**	PN		**Pn**	**00 35 33.9**	**-0.6**
ERTU				SN		**Sg**	**00 35 54.9**	**+0.2**
KLF	**Kolari**	**1.56**	**112**	PN		**Pn**	**00 35 34.9**	**-0.3**
KLF				smax		smax	00 35 53.2	
	comp=Z,4.0nm,0.2s							
KLF				SN		**Sg**	**00 35 57.6**	**+1.2**
KTK1	**Kautokeino**	**1.61**	**42**	PG		**Pn**	**00 35 36.0**	**+0.1**
KTK1				SN		**Sn**	**00 35 57.7**	**+0.3**
HARU	**Harads**	**1.72**	**170**	P		**Pn**	**00 35 37.6**	**+0.3**
TRO	**Tromso**	**1.85**	**346**	PG		**Pn**	**00 35 39.9**	**+0.7**
TRO				SG		**Sb**	**00 36 04.4**	**-0.2**
TOF	**Tornio**	**2.40**	**136**	PG		**Pn**	**00 35 48.2**	**+1.5**
TOF				smax		smax	00 36 16.7	
	comp=Z,2.6nm,0.2s							
TOF				SG		**Sb**	**00 36 20.5**	**+0.2**
ARA0	**ARCESS Array S**	**2.57**	**46**	PB		**Pn**	**00 35 50.0**	**+1.0**
ARA0				SG		**Sb**	**00 36 24.0**	**-1.2**
ARCES	**ARCESS Array B**	**2.57**	**46**	Pn		**Pn**	**00 35 50.0**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=228,slow=15,SNR=11							
ARCES				Lg		Lg	00 36 23.9	
	comp=Z,1.8nm,0.3s,baz=227,slow=24,SNR=2.9							
	comp=Z,1.0nm,0.3s							
RNF	**Rovaniemi**	**2.58**	**116**	PG		**Pn**	**00 35 50.9**	**+1.8**
RNF				SG		**Sb**	**00 36 25.0**	**-0.4**
RAJF	**Raja-Jooseppi**	**3.09**	**75**	PN		**Pn**	**00 35 56.6**	**+0.4**
RAJF				SG		**Sb**	**00 36 40.0**	**-0.2**
KEV	**Kevo**	**3.12**	**49**	PB		**Pb**	**00 36 00.3**	**-2.1**
KEV				SB		**Sn**	**00 36 35.9**	**+1.4**
RANF	**Ranua**	**3.17**	**122**	PB		**Pn**	**00 35 58.6**	**+1.3**
BURU	**Burvik**	**3.31**	**171**	PB		**Pn**	**00 36 01.3**	**+2.1**
VRF	**Varrio**	**3.57**	**87**	PG		**Pb**	**00 36 10.5**	**+0.4**
OLKF	**Oulanka, Finla**	**3.91**	**109**	PN		**Pn**	**00 36 08.5**	**+1.1**
MSF	**Maaselka**	**3.99**	**115**	PN		**Pn**	**00 36 10.1**	**+1.6**
	baz=306							
UMAU	**Umeaa**	**3.99**	**177**	PB		**Pn**	**00 36 11.3**	**+2.8**
KU6	**Riekki**	**4.22**	**111**	PN		**Pn**	**00 36 12.8**	**+1.1**
	baz=295							
FINES	**FINESS Array B**	**6.90**	**156**	Pn		**Pn**	**00 36 49.7**	**+1.2**
	baz=345,slow=10,SNR=1.1							
FINES				Sn		**Sn**	**00 38 06.6**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=350,slow=20,SNR=1.4							
FINES				Lg		Lg	00 38 44.7	
	comp=Z,0.3nm,0.3s,baz=334,slow=26,SNR=6.0							
	comp=Z,2.2nm,1.0s							
NOA	**NORSAR Array B**	**7.86**	**214**	Pn		**Pn**	**00 37 02.3**	**+0.7**
	baz=21,slow=17,SNR=1.0							
NOA				Lg		Lg	00 39 19.8	
	baz=38,slow=24,SNR=1.5							
	comp=Z,0.2nm,0.5s							
HFS	**Hagfors**	**8.25**	**203**	Pn		**Pn**	**00 37 07.7**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=27,slow=12,SNR=1.7							
HFS				Sn		**Sn**	**00 38 38.2**	**-2.6**
	comp=Z,0.2nm,0.3s,baz=24,slow=29,SNR=1.7							
	comp=Z,3.5nm,1.0s							

IDC ***18*** *00:39:03.3±9.9, 25.°30S×179.°81E, h424km±113km, mb3.4/6, mbtmp4.2/7, Error ellipse: s-maj=97.4km s-min=25.7km az=0.0*
ISC 18 00:39:08.7±0.9, 25.°7S±0.°1×179.°8E±0.°1, h493km, n10, σ0s87/13, mb3.8/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
URZ	**Urewera**	**12.75**	**190**	P		**P**	**00 41 54.0**	**-1.1**
	7.2nm,0.7s,baz=254,slow=2.8,SNR=6.6							
URZ				S		**S**	**00 44 13.1**	**+0.8**
	11nm,0.8s,baz=251,slow=20,SNR=1.4							
STKA	**Stephens Creek**	**33.91**	**251**	P		**P**	**00 45 10.4**	**+0.5**
	2.0nm,0.6s,baz=104,slow=13,SNR=7.9							
	2.0nm,0.6s							
ASAR	**Alice Springs**	**41.57**	**263**	P		**P**	**00 46 13.0**	**+0.1**
	3.2nm,0.3s,baz=92,slow=7.6,SNR=68							
ASAR				S		**S**	**00 51 53.6**	**+0.7**
	0.6nm,0.6s,baz=94,slow=16,SNR=4.1							
	3.2nm,0.3s							
WRA	**Warramunga Arr**	**42.11**	**268**	P		**P**	**00 46 16.8**	**-0.4**
	3.7nm,0.4s,baz=103,slow=7.8,SNR=72							
WRA				S		**S**	**00 52 00.0**	**-0.7**
	0.5nm,0.9s,baz=97,slow=15,SNR=4.6							
	3.7nm,0.4s							
FITZ	**Fitzroy Crossi**	**50.51**	**267**	P		**P**	**00 47 21.2**	**+0.1**
	2.1nm,0.5s,baz=99,slow=6.2,SNR=16							
	2.1nm,0.5s							
NVAR	**Mina Array Bea**	**86.16**	**44**	P		**P**	**00 50 57.0**	**-0.4**
	0.3nm,0.6s,baz=239,slow=9.3,SNR=2.6							
	0.3nm,0.6s							
TXAR	**Lajitas Array**	**91.54**	**58**	P		**P**	**00 51 23.7**	**+1.1**
	0.3nm,0.7s,baz=238,slow=3.9,SNR=3.9							
	0.3nm,0.7s							
HFS	**Hagfors**	**144.23**	**348**	PKP		**PKPab**	**00 57 46.4**	**-0.8**
	3.6nm,0.8s,baz=42,slow=2.3,SNR=5.8							
BRTR	**Keskin Array B**	**148.44**	**305**	PKPbc		**PKiKP**	**00 58 02.0**	**+1.2**
	0.9nm,1.0s,baz=60,slow=4.9,SNR=2.6							
EKA	**Eskdalemuir Ar**	**150.29**	**3**	PKPbc		**PKPbc**	**00 58 02.3**	**-1.0**
	0.9nm,0.7s,baz=347,slow=2.9,SNR=1.2							

SDD ***18*** *00:42:32.5±2.2, 19.°09N×67.°13W, h18km±76km, MD3.8, ML3.4, MW3.6, Presumed earthquake*
NEIC ***18*** *00:42:34.0±1.5, 18.°95N±0.°03×67.°05W±0.°03, h23km±11km, ML3.6/45, Md3.7/4(RSPR), Error ellipse: s-maj=5.8km s-min=1.4km az=215.0*
OSPL ***18*** *00:42:34.3±2.3, 19.°10N×67.°06W, h28km±35km, ML3.4, Presumed earthquake*
ISC 18 00:42:30.4±1.4, 19.°14N±0.°05×67.°06W±0.°03, h16km±9km, n53, σ1s74/81, 24C, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.67**	**184**			**Pb**	**00 42 44.3**	**+0.6**
AGPR				Sg		**Sg**	**00 42 51.3**	**-1.1**
AGPR				IAML			00 42 53.2	
	4μm,0.4s							
AGPR				IAML			00 42 53.6	
	3μm,0.5s							
AGPR	**Aguadilla, PR**	**0.67**	**184**	⇑*eP*g		**Pb**	**00 42 44.3**	**+0.6**
AGPR				⇑*eS*g		**Sb**	**00 42 52.5**	**-0.2**
AGPR				IAML			00 42 54.0	
	comp=N,2μm,0.2s							
EMPR	**Esperanza - Ma**	**0.83**	**142**			**Pn**	**00 42 48.1**	**+0.7**
EMPR						**Sn**	**00 42 59.9**	**+0.6**
AOPR	**Arecibo Observ**	**0.84**	**160**			**Pg**	**00 42 47.2**	**+0.5**
AOPR				IAML			00 43 08.4	
	comp=N,2μm,0.4s							
AOPR	**Arecibo Observ**	**0.84**	**160**	⇑*eP*g		**Pn**	**00 42 47.5**	**-0.1**
AOPR				⇑*eS*g		**Sg**	**00 42 57.5**	**-0.3**
AOPR				IAML			00 43 08.3	
	comp=N,2μm,0.3s							
IDE	**Isla Desecheo**	**0.84**	**208**			**Pn**	**00 42 46.5**	**-0.2**
IDE						**Sb**	**00 42 56.0**	**-1.8**
PRSN	**Puerto Rico Se**	**0.92**	**185**			**Pb**	**00 42 47.9**	**-0.1**
PRSN				Sg		**Sb**	**00 42 58.0**	**-1.9**
PRSN	**Puerto Rico Se**	**0.92**	**185**	⇑*eP*g		**Pb**	**00 42 48.1**	**+0.1**
PRSN				⇑*eS*g		**Sg**	**00 42 59.6**	**-0.7**
PRSN				IAML			00 43 05.8	
	comp=N,4μm,0.2s							
UUPR	**Utuado, UPR, P**	**0.94**	**160**			**Pg**	**00 42 48.7**	**+0.1**
UUPR				Sg		**Sb**	**00 42 57.5**	**-3.0**
LSP	**Las Mesas**	**0.96**	**181**			**Pb**	**00 42 48.9**	**+0.3**
LSP						**Sg**	**00 43 01.4**	**-0.1**
ECPR	**Experimental S**	**1.05**	**141**			**Pn**	**00 42 50.9**	**+0.4**
ECPR				IAML			00 43 14.6	
	comp=N,3μm,0.2s							
ECPR				IAML			00 43 14.7	
	comp=N,2μm,0.2s							

CRPR	**Cabo Rojo, PR**	**1.13**	**182**	Pn		**Pb**	**00 42 50.8**	**-0.7**
CRPR	**Cabo Rojo, PR**	**1.13**	**182**			**Sb**	**00 43 04.3**	**-1.6**
CRPR	**Cabo Rojo, PR**	**1.13**	**182**	*i* P		**Pb**	**00 42 51.4**	**-0.1**
CRPR				*eS*		**Sb**	**00 43 05.1**	**-0.8**
CRPR				IAML			00 43 06.2	
	comp=Z,932nm,0.6s							
CELP	**Cerrillos**	**1.15**	**157**	Pn		**Pb**	**00 42 52.2**	**+0.2**
CELP				Sn		**Sb**	**00 43 06.2**	**-0.4**
CELP				IAML			00 43 16.2	
	comp=Z,1μm,0.3s							
CELP	**Cerrillos**	**1.15**	**157**	⇑*eP*g		**Pn**	**00 42 52.4**	**+0.5**
CELP				⇑*eS*g		**Sg**	**00 43 07.4**	**-0.3**
CELP				IAML			00 43 13.4	
	comp=N,338nm,0.3s							
MLPR	**Magueyes Islan**	**1.16**	**179**	Pn		**Pb**	**00 42 51.8**	**-0.3**
MLPR				Sn		**Sb**	**00 43 06.0**	**-0.9**
MLPR				IAML			00 43 06.5	
	comp=N,1μm,0.4s							
MLPR	**Magueyes Islan**	**1.16**	**179**	⇑*eP*g		**Pb**	**00 42 51.9**	**-0.2**
MLPR				⇑*eS*g		**Sb**	**00 43 06.1**	**-0.8**
MLPR				IAML			00 43 06.4	
	comp=N,472nm,0.3s							
GBPR	**Guanica, Bosqu**	**1.17**	**172**			**Pb**	**00 42 52.4**	**+0.2**
GBPR						**Sn**	**00 43 06.8**	**-0.9**
OBIP	**Obispado Ponce**	**1.17**	**158**			**Sn**	**00 43 07.5**	**-0.3**
OBIP	**Obispado Ponce**	**1.17**	**158**	Pn		**Pn**	**00 42 52.2**	**+0.1**
OBIP	**Obispado Ponce**	**1.17**	**158**	*i* P		**Pb**	**00 42 52.6**	**+0.4**
OBIP				*eS*		**Sn**	**00 43 07.3**	**-0.5**
OBIP				IAML			00 43 10.2	
	comp=Z,533nm,0.2s							
SJG	**San Juan**	**1.34**	**140**	Pn		**Pn**	**00 42 55.3**	**+0.2**
SJG				Sn		**Sn**	**00 43 10.3**	**-1.5**
SJG				IAML			00 43 21.0	
	comp=Z,789nm,0.3s							
SJG	**San Juan**	**1.34**	**140**	⇑*eP*g		**Pb**	**00 42 56.0**	**+0.9**
SJG				⇑*eS*g		**Sb**	**00 43 12.6**	**+0.6**
SJG	**San Juan**	**1.34**	**140**	*i* P		**Pb**	**00 42 56.4**	**+0.9**
SJG				IAML			00 43 20.4	
	comp=Z,328nm,0.1s							
PDPR	**Patillas Dam,**	**1.49**	**138**	Pn		**Pn**	**00 42 57.4**	**+0.9**
HUMP	**Col San Antoni**	**1.52**	**131**	Pn		**Pn**	**00 42 57.7**	**+0.8**
HUMP				IAML			00 43 23.0	
	comp=Z,702nm,0.2s							
HUMP	**Col San Antoni**	**1.52**	**131**			**Sb**	**00 43 17.5**	**+0.4**
HIDR	**Higuey Centro**	**1.66**	**251**	⇑*eP*g		**Pn**	**00 42 58.5**	**-0.3**
HIDR				⇑*eS*g		**Sn**	**00 43 20.2**	**+0.3**
HIDR				IAML			00 43 32.8	
	comp=N,778nm,0.2s							
CUPR	**Culebra, Puert**	**1.88**	**116**	Pn		**Pn**	**00 43 03.4**	**+1.5**
SMDR	**Samana, DR**	**2.02**	**275**			**Pn**	**00 43 04.6**	**+0.8**
SMDR						**Sb**	**00 43 32.5**	**+0.9**
SMDR	**Samana, DR**	**2.02**	**275**	⇑*eP*g		**Pn**	**00 43 04.6**	**+0.8**
SMDR				IAML			00 43 41.5	
	comp=N,311nm,0.7s							
DR12	**Loma Pena Alta**	**2.22**	**261**	Pn		**Pn**	**00 43 08.4**	**+1.7**
HATOM	**Hato Mayor del**	**2.22**	**261**	⇑*eP*g		**Pn**	**00 43 08.3**	**+1.7**
HATOM				⇑*eS*g		**Sb**	**00 43 37.2**	**-0.4**
HATOM				IAML			00 43 42.5	
	comp=N,197nm,0.3s							
NADR	**Nagua**	**2.65**	**275**	⇑*eP*g		**Pb**	**00 43 18.2**	**+0.7**
NADR				IAML			00 44 03.3	
	comp=N,1μm,0.5s							
SDD	**Santo Domingo**	**2.79**	**256**	Pn		**Pn**	**00 43 17.3**	**+3.0**
SDD	**Santo Domingo**	**2.79**	**256**	⇑*eP*g		**Pb**	**00 43 20.3**	**+0.5**
SDD				*eS*g		**Sn**	**00 43 51.3**	**+3.7**
SDD				IAML			00 43 59.4	
	comp=N,159nm,0.4s							
SFDR	**San Fco. de Ma**	**3.01**	**273**	⇑*eP*g		**Pb**	**00 43 23.5**	**-0.2**
SFDR				IAML			00 44 11.6	
	comp=N,702nm,0.3s							
BANI	**BANI**	**3.21**	**257**	Pn		**Pn**	**00 43 24.6**	**+4.2**
BANI	**BANI**	**3.21**	**257**	⇑*eP*g		**Pb**	**00 43 26.6**	**-0.5**
BANI				⇑*eS*g		**Sb**	**00 44 06.5**	**+0.4**
BANI				IAML			00 44 18.8	
	comp=N,402nm,0.2s							
ABDR	**Alto Bandera**	**3.39**	**265**	⇑*eP*g		**Pb**	**00 43 29.5**	**-0.9**
ABDR				⇑*eS*g		**Sb**	**00 44 11.7**	**+0.2**
ABDR				IAML			00 44 22.9	
	comp=N,0.2nm,0.6s							
SC01	**Santiago de lo**	**3.48**	**275**	Pn		**Pn**	**00 43 28.5**	**+4.6**
SMRT	**St. Maarten**	**3.93**	**105**	Pn		**Pn**	**00 43 32.2**	**+2.1**
SMRT				IAML

ALCI	**Alchi Leh**	**3.56**	**98**	*eP*		**Pn**	**01 10 09.5**	**+1.9**
ALCI				*eS*		**Sn**	**01 10 50.4**	**+1.4**
DHRM	**DHARAMSHALA**	**3.77**	**131**	*eP*		**Pn**	**01 10 11.5**	**+1.1**
DHRM				*eS*		**Sn**	**01 10 55.4**	**+1.2**
DHRM				IAML			01 10 57.2	
	comp=N,218nm,0.3s							
DHRM				IAML			01 10 58.3	
	comp=E,168nm,0.4s							
BHK	**Bhakra**	**4.44**	**138**	*eP*		Pb	01 10 26.5	-4.4
BHK				*eS*		**Sn**	**01 11 14.7**	**+4.3**
SMLA	**Simla**	**5.08**	**134**	*eP*		**Pn**	**01 10 29.4**	**+1.2**
SMLA				*eS*		**Sn**	**01 11 24.3**	**-1.9**
SMLA				IAML			01 11 28.8	
	comp=N,297nm,0.2s							
SMLA				IAML			01 11 28.8	
	comp=E,156nm,0.1s							
KLP	**Kalpa**	**5.50**	**124**	*eP*		**Pn**	**01 10 36.0**	**+1.6**
KLP				*eS*		**Sn**	**01 11 35.0**	**-2.1**
KLP				IAML			01 11 36.9	
	comp=E,54nm,0.3s							
KLP				IAML			01 11 41.9	
	comp=N,43nm,0.4s							
KUDL	**Kundal**	**7.27**	**154**	*eS*		**Sn**	**01 12 17.1**	**-3.0**
AAK	**Ala-Archa**	**7.95**	**8**	P		**Pn**	**01 11 09.9**	**+2.1**
AAK	comp=N,0.4nm,0.3s,baz=205,slow=5.4,SNR=5.7			S		**Sn**	**01 12 34.9**	**-2.0**
	comp=N,1.1nm,0.4s,baz=223,slow=12,SNR=1.9							
AAK	comp=N,0.7nm,0.4s **Ala-Archa**	**7.95**	**8**	⇑P		**Pn**	**01 11 12.5**	**+4.8**
AAK	comp=N,0.9nm,0.8s			⇑S		**Sn**	**01 12 34.8**	**-2.2**
	comp=N,2.3nm,1.0s							
KK31	**Karatay Array**	**8.53**	**348**	⇑P		**Pn**	**01 11 16.8**	**+1.2**
KK31	comp=N,1.2nm,0.3s,baz=163,slow=12,SNR=22			⇑S		**Sn**	**01 12 51.3**	**+0.2**
	comp=N,5.8nm,0.7s,baz=170,slow=24,SNR=9.8							
MKAR	**Makanchi Array**	**13.93**	**28**	P		**Pn**	**01 12 30.0**	**+0.5**
	comp=N,0.1nm,0.3s,baz=207,slow=12,SNR=5.0 comp=N,0.2nm,0.5s							
KURBB	**Kurchatov Arra**	**16.36**	**13**	P		**Pn**	**01 13 02.5**	**+1.0**
	baz=200,slow=12,SNR=5.1 comp=N,0.3nm,0.5s							
BVAR	**Borovoye Array**	**18.34**	**355**	P		**P**	**01 13 26.6**	**+0.6**
	comp=N,0.1nm,0.3s,baz=163,slow=10,SNR=4.2 comp=N,0.7nm,0.4s							
ZALV	**Zalesovo Beam**	**20.92**	**20**	P		**P**	**01 13 52.4**	**-1.8**
	comp=N,1.4nm,0.4s,baz=214,slow=12,SNR=7.1 comp=N,1.4nm,0.4s							
BELG	**Belogornoye**	**25.22**	**322**	P		**P**	**01 14 37.3**	**0.0**
	comp=N,5.6nm,0.5s,baz=230,slow=23,SNR=5.2 comp=N,5.6nm,0.5s							
SONM	**Songino Array**	**28.09**	**52**	P		**P**	**01 15 02.3**	**-1.1**
	comp=N,0.3nm,0.5s,baz=270,slow=8.6,SNR=2.4 comp=N,0.3nm,0.5s							
FINES	**FINESS Array B**	**39.79**	**327**	P		**P**	**01 16 44.9**	**+0.6**
	comp=N,2.4nm,1.0s,baz=111,slow=9.3,SNR=1.1 comp=N,2.4nm,1.0s							
ARCES	**ARCESS Array B**	**43.34**	**338**	P		**P**	**01 17 14.1**	**+0.8**
	comp=N,4.9nm,1.0s,baz=113,slow=8.0,SNR=2.0 comp=N,4.9nm,1.0s							
HFS	**Hagfors**	**45.39**	**323**	P		**P**	**01 17 31.6**	**+1.7**
HFS	comp=N,1.5nm,0.7s,baz=99,slow=8.9,SNR=1.0			PcP		**PcP**	**01 19 07.4**	**-1.4**
	comp=N,1.9nm,0.7s,baz=116,slow=3.4,SNR=1.8 comp=N,1.5nm,0.7s							
TORD	**Torodi Ar. Bea**	**67.28**	**271**	P		**P**	**01 20 07.0**	**+0.4**
	comp=N,0.6nm,0.6s,baz=40,slow=3.4,SNR=5.8 comp=N,0.6nm,0.6s							
WRA	**Warramunga Arr**	**79.74**	**123**	P		**P**	**01 21 18.2**	**-1.5**
	comp=N,0.3nm,0.8s,baz=332,slow=11,SNR=7.0 comp=N,0.3nm,0.8s							
YKA	**Yellowknife Ar**	**82.88**	**4**	P		**P**	**01 21 33.9**	**-1.9**
	comp=N,0.1nm,0.5s,baz=0.9,slow=5.8,SNR=3.9 comp=N,0.1nm,0.5s							

*JSN **18** 01:16:26.7±1.2, 19.˚54N×78.˚62W, h29km±999km, MW4.2, Presumed earthquake*
*SSNC **18** 01:16:27.0±1.9, 19.˚32N×78.˚82W, h26km±34km, MD3.2, ML2.7, Presumed earthquake*
ISC 18 01:16:24.5±1.7, 19.˚32N±0.˚06×78.˚81W±0.˚04, h29km±17km, n13, σ2s18/23, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBCY	**The Bluff, Cay**	**0.99**	**295**	*eP*	**Pn**	**01 16 43.1**	**+0.7**
CBCY				*eS*	**Sn**	**01 16 53.2**	**-2.2**
CBCY				IAML		01 16 56.3	
	comp=E,202nm,0.2s						
CBCY				IAML		01 16 56.4	
	comp=N,247nm,0.2s						
LCCY	**Blossom Villag**	**1.25**	**286**	*eP*	**Pn**	**01 16 47.6**	**+1.6**
LCCY				*eS*	**Sn**	**01 17 01.6**	**-0.3**
LCCY				IAML		01 17 03.4	
	comp=N,641nm,0.2s						
LCCY				IAML		01 17 03.5	
	comp=E,485nm,0.2s						
MTDJ	**Mount Denham**	**1.62**	**132**	*i* P	**Pn**	**01 16 53.0**	**+1.8**
MTDJ	**Mount Denham**	**1.62**	**132**	*eP*	**Pn**	**01 16 53.0**	**+1.8**
MTDJ				*eS*	**Sn**	**01 17 10.3**	**-0.9**
MTDJ				*eSg*	**Sb**	**01 17 12.2**	**-1.7**
LMGC	**Las Mercedes**	**1.86**	**66**	*eP*	**Pn**	**01 16 55.6**	**+1.3**
LMGC				*eS*	**Sn**	**01 17 15.5**	**-1.3**
LMGC				IAML		01 17 17.7	
	comp=N,63nm,0.1s						
LMGC				IAML		01 17 18.2	
	comp=E,46nm,0.1s						
CCCC	**Cccc**	**2.12**	**27**	*eP*	**Pb**	**01 17 02.2**	**0.0**
CCCC				IAML		01 17 42.5	
	comp=N,16nm,0.6s						
CCCC				IAML		01 17 42.6	
	comp=E,15nm,0.8s						
CHIV	**Chivirico**	**2.35**	**73**	*eP*	**Pn**	**01 17 02.2**	**+1.1**
CHIV				*eS*	**Sn**	**01 17 27.0**	**-2.0**
CHIV				IAML		01 17 30.5	
	comp=E,17nm,0.2s						
CHIV				IAML		01 17 30.6	
	comp=N,24nm,0.2s						
YAR	**Yar**	**2.53**	**65**	*eP*	**Pn**	**01 17 06.0**	**+2.4**
MARVS	**Santiago de Cu**	**2.83**	**76**	*eP*	**Pn**	**01 17 08.5**	**+0.9**
MARVS				*eS*	**Sn**	**01 17 38.5**	**-2.3**
MARVS				IAML		01 17 41.4	
	comp=N,23nm,0.2s						
MARVS				IAML		01 17 42.8	
	comp=E,12nm,0.3s						
HLGC	**Holguin**	**3.02**	**58**	*eP*	**Pn**	**01 17 14.2**	**+3.8**
HLGC				*eS*	**Sn**	**01 17 41.0**	**-4.6**
PINC	**Pinares de May**	**3.07**	**67**	*eP*	**Pn**	**01 17 13.5**	**+2.5**
PINC				*eS*	**Sn**	**01 17 47.7**	**+0.9**
GTBY	**Guantanamo Bay**	**3.54**	**79**	*eP*	**Pn**	**01 17 19.0**	**+1.5**
GTBY				*eS*	**Sn**	**01 17 57.1**	**-1.2**
QMBU	**Quimbuelo**	**3.87**	**76**	*eP*	**Pn**	**01 17 24.2**	**+2.2**

IDC 18 01:23:12.1±7.5, 21.˚54S×179.˚74W, h302km±57km, mb3.1/4, mbtmp3.7/5, Error ellipse: s-maj=122.9km s-min=28.6km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.32**	**331**	P	Pn	01 24 21.8	-0.3
	8.7nm,0.7s,baz=168,slow=15,SNR=4.0						
ASAR	**Alice Springs**	**42.71**	**258**	P	P	01 30 39.1	-1.3
	0.3nm,0.3s,baz=97,slow=7.9,SNR=5.1 0.3nm,0.3s						
WRA	**Warramunga Arr**	**42.86**	**264**	P	P	01 30 42.3	+0.8
	0.6nm,0.7s,baz=96,slow=8.5,SNR=14 0.6nm,0.7s						
CMAR	**Chiang Mai Arr**	**88.94**	**290**	P	P	01 35 33.0	-0.2
	1.0nm,0.3s,baz=115,slow=4.0,SNR=6.3 1.0nm,0.3s						
TXAR	**Lajitas Array**	**88.98**	**58**	P	P	01 35 33.1	-0.2
	0.1nm,0.3s,baz=248,slow=4.4,SNR=2.0 0.1nm,0.3s						
ARCES	**ARCESS Array B**	**129.63**	**349**	PKP	PKPdf	01 41 43.8	-0.8
	2.9nm,1.0s,baz=31,slow=3.0,SNR=1.7						

*ISK **18** 01:54:25.5, 40.˚20N×42.˚69E, h5km, ML2.7/9*
*AFAD **18** 01:54:26.2, 40.˚17N×42.˚66E, h7km±2km, ML2.5*
ISC 18 01:54:26.7±1.1, 40.˚17N±0.˚02×42.˚66E±0.˚02, h3km±11km, n20, σ1s14/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOZK	**Kars-Merkez-Bo**	**0.48**	**30**	P	**Pg**	**01 54 35.5**	**-0.6**
BOZK				S	**Sg**	**01 54 42.9**	**+0.6**
BOZK				IAML		01 54 44.0	
	comp=N,370nm,0.4s						
BOZK				IAML		01 54 44.0	
	comp=E,304nm,0.2s						
KARS	**Kars**	**0.56**	**35**	Pg	**Pg**	**01 54 36.7**	**-0.7**
KARS				Sg	**Sg**	**01 54 45.3**	**+0.7**
KOTA	**Agri, Merkez-K**	**0.56**	**131**	P	**Pg**	**01 54 37.5**	**+0.1**
AGRB	**Hanur-Agry**	**0.65**	**157**	Pg	**Pg**	**01 54 39.1**	**0.0**
AGRB				Sg	**Sb**	**01 54 49.8**	**-0.5**
GOLE	**Ardahan-G¶le**	**0.67**	**356**	P	**Pg**	**01 54 39.0**	**-0.5**
GOLE				S	**Sb**	**01 54 50.0**	**-0.9**
GOLE				IAML		01 54 51.0	
	comp=N,595nm,0.5s						
GOLE				IAML		01 54 52.0	
	comp=E,332nm,0.4s						
DORK	**Agr/Tutak/Do**	**0.79**	**173**	P	**Pg**	**01 54 41.6**	**-0.2**
DORK				S	**Sg**	**01 54 52.6**	**+0.6**
DORK				IAML		01 54 55.0	
	comp=N,264nm,0.6s						
DORK				IAML		01 54 56.0	
	comp=E,243nm,0.5s						
ERZM	**Erzurum**	**1.03**	**255**	P	**Pg**	**01 54 46.4**	**-0.1**
ERZM				S	**Sg**	**01 55 00.5**	**+0.6**
MLAZ	**Malazgirt-MUS**	**1.03**	**185**	Pg	**Pb**	**01 54 47.1**	**-0.2**
MLAZ				Sg	**Sn**	**01 55 02.7**	**-0.6**
EJDE	**Erzurum, Palan**	**1.10**	**253**	P	**Pg**	**01 54 47.3**	**-0.5**
EJDE				S	**Sn**	**01 55 05.1**	**-0.1**
EJDE				IAML		01 55 11.0	
	comp=E,436nm,0.9s						
EJDE				IAML		01 55 13.0	
	comp=N,361nm,0.8s						
EDAM	**Erzurum-Paland**	**1.10**	**256**	Pn	**Pb**	**01 54 48.4**	**-0.2**
IGDI	**IGDIR**	**1.13**	**105**	P	**Pb**	**01 54 47.7**	**-1.2**
IGDI				S	**Sn**	**01 55 09.3**	**+3.8**
IGDI				IAML		01 55 14.0	
	comp=N,62nm,0.7s						
IGDI				IAML		01 55 15.0	
	comp=E,62nm,0.7s						
EPOS	**Posof**	**1.33**	**2**	P	**Pn**	**01 54 51.8**	**-0.6**
EPOS				S	**Sg**	**01 55 12.4**	**+2.8**
EPOS				IAML		01 55 17.0	
	comp=N,214nm,1.2s						
EPOS				IAML		01 55 17.0	
	comp=E,138nm,1.1s						
KRIK	**Erzurum-spir**	**1.34**	**278**	P	**Pn**	**01 54 51.8**	**-0.8**
KRIK				S	**Sg**	**01 55 12.4**	**+2.6**
KRIK				IAML		01 55 15.0	
	comp=N,64nm,0.4s						
KRIK				IAML		01 55 18.0	
	comp=E,76nm,0.6s						
GNI	**Garni**	**1.59**	**90**	Pn	**Pn**	**01 54 55.8**	**-0.2**
GNI				Sn	**Sg**	**01 55 17.8**	**-0.1**
VANB	**Van**	**1.67**	**160**	Pn	**Pg**	**01 54 58.5**	**-0.3**
GURO	**Guroymak-BITLI**	**1.69**	**197**	Pn	**Pb**	**01 54 57.7**	**-0.9**
GURO				Sn	**Sg**	**01 55 21.2**	**+0.2**
YEDI	**Yedisu-Bingol**	**1.79**	**247**	Pn	**Pb**	**01 54 59.3**	**-1.0**
AKDM	**Akdamar-Van**	**1.86**	**172**	Pn	**Pn**	**01 54 59.9**	**+0.3**
BAYT	**Aydintepe-Bayb**	**1.94**	**277**	Pn	**Pn**	**01 55 01.3**	**+0.5**
TBLG	**Delisi**	**2.21**	**45**	Pn	**Pn**	**01 55 04.3**	**-0.1**

*SSNC **18** 01:57:08.4±1.5, 19.˚23N×79.˚64W, h25km±15km, MD2.9, ML2.4, Presumed earthquake*
*JSN **18** 01:57:09.9±0.5, 19.˚57N×79.˚24W, h19km±332km, MW4.4, Presumed earthquake*
ISC 18 01:57:06.7±1.7, 19.˚22N±0.˚09×79.˚67W±0.˚07, h35km, n10, σ2s11/14, 1D, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBCY	**The Bluff, Cay**	**0.53**	**351**	*eP*	**Pn**	**01 57 18.1**	**+0.3**
CBCY				*eS*	**Sn**	**01 57 24.5**	**-0.9**
CBCY				IAML		01 57 25.1	
	comp=E,383nm,0.3s						
CBCY				IAML		01 57 25.3	
	comp=N,476nm,0.3s						
LCCY	**Blossom Villag**	**0.59**	**319**	*eP*	**Pn**	**01 57 19.4**	**+0.7**
LCCY				*eS*	**Sn**	**01 57 26.0**	**-1.1**
LCCY				IAML		01 57 28.0	
	comp=N,453nm,0.1s						
LCCY				IAML		01 57 28.0	
	comp=E,339nm,0.2s						
MTDJ	**Mount Denham**	**2.25**	**116**	*eP*	**Pn**	**01 57 42.7**	**+1.1**
MTDJ				*eS*	**Sn**	**01 58 06.4**	**-1.8**
LMGC	**Las Mercedes**	**2.65**	**71**	*eP*	**Pn**	**01 57 48.6**	**+1.7**
LMGC				*eS*	**Sn**	**01 58 16.2**	**-1.6**
LMGC				*eSg*		01 58 18.2	
LMGC				IAML		01 58 19.8	
	comp=N,18nm,0.1s						
LMGC				IAML		01 58 20.0	
	comp=E,14nm,0.1s						
CCCC	**Cccc**	**2.66**	**42**	*eP*	Pn	01 57 53.0	+5.9
CCCC				*eS*	Sn	01 58 26.8	+8.7
CCCC				IAML		01 58 30.1	
	comp=N,3.5nm,0.5s						
CCCC				IAML		01 58 30.6	
	comp=E,3.5nm,0.6s						
STH	**Stony Hill**	**2.94**	**112**	⇓*iP*	**Pn**	**01 57 52.3**	**+1.3**
CHIV	**Chivirico**	**3.16**	**76**	*eP*	**Pn**	**01 57 54.8**	**+0.8**
CHIV				*eS*	**Sn**	**01 58 28.1**	**-2.4**
YAR	**Yar**	**3.32**	**69**	*eS*	**Sn**	**01 58 32.6**	**-1.8**
MARVS	**Santiago de Cu**	**3.64**	**77**	*eS*	**Sn**	**01 58 39.4**	**-2.9**
HLGC	**Holguin**	**3.78**	**63**	*eP*	**Pn**	**01 58 06.6**	**+4.1**

*OSPL **18** 02:18:17.5±0.3, 17.˚83N×66.˚79W, h2km±999km, ML2.0, Presumed earthquake*
*NEIC **18** 02:18:17.2±0.8, 17.˚88N±0.˚03×66.˚787W±0.˚006, h10km±1km, ML2.5/35, Md2.6/5(RSPR), Error ellipse: s-maj=4.7km s-min=2.7km az=357.0*
*SDD **18** 02:18:18.9±1.8, 17.˚93N×66.˚79W, h0km±10km, MD2.5, ML2.2, MW2.5, Presumed earthquake*
ISC 18 02:18:17.5±1.1, 17.˚90N±0.˚05×66.˚79W±0.˚02, h14km±6km, n27, σ0s56/49, 9C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.11**	**310**		**Pg**	**02 18 20.4**	**-0.4**
GBPR					**Sg**	**02 18 22.5**	**-0.5**
OBIP	**Obispado Ponce**	**0.22**	**51**		**Pg**	**02 18 22.2**	**-0.2**
OBIP					**Sg**	**02 18 26.1**	**+0.4**
OBIP	**Obispado Ponce**	**0.22**	**51**	*i* P	**Pg**	**02 18 22.3**	**-0.1**
OBIP				*eS*	**Sg**	**02 18 26.2**	**+0.4**
OBIP				IAML		02 18 26.6	
	comp=Z,235nm,0.3s						
MLPR	**Magueyes Islan**	**0.25**	**286**		**Pg**	**02 18 22.5**	**-0.4**
MLPR				Sg	**Sg**	**02 18 26.7**	**+0.1**
MLPR				IAML		02 18 28.5	
	comp=Z,382nm,0.4s						
MLPR	**Magueyes Islan**	**0.25**	**286**	⇓*iP*	**Pg**	**02 18 22.4**	**-0.5**
MLPR				⇓*eSg*	**Sg**	**02 18 26.8**	**+0.3**
MLPR				IAML		02 18 27.4	
	comp=N,132nm,0.4s						
CELP	**Cerrillos**	**0.26**	**49**		**Pg**	**02 18 23.1**	**-0.1**
CELP				IAML		02 18 27.6	
	comp=N,502nm,0.5s						
CELP				IAML		02 18 28.0	
	comp=N,359nm,0.2s						
CELP	**Cerrillos**	**0.26**	**49**	⇓*iP*	**Pg**	**02 18 23.0**	**-0.1**
CELP				IAML		02 18 27.5	
	comp=N,160nm,0.7s						
CELP				⇑*eSg*	**Sg**	**02 18 27.5**	**+0.6**
CRPR	**Cabo Rojo, PR**	**0.32**	**289**	Pg	**Pg**	**02 18 23.7**	**-0.4**
CRPR				Sg	**Sg**	**02 18 28.5**	**-0.2**
CRPR				IAML		02 18 29.4	
	comp=N,268nm,0.5s						
CRPR				IAML		02 18 31.0	
	comp=N,299nm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.32**	**289**	*i* P	**Pg**	**02 18 23.8**	**-0.4**
CRPR				*eS*	**Sg**	**02 18 28.4**	**-0.2**
CRPR				IAML		02 18 29.3	
	comp=Z,256nm,0.7s						
UUPR	**Utuado, UPR, P**	**0.36**	**10**		**Pg**	**02 18 24.3**	**-0.5**
UUPR				Sg	**Sg**	**02 18 29.7**	**0.0**
LSP	**Las Mesas**	**0.39**	**314**		**Pg**	**02 18 25.1**	**-0.3**
LSP					**Sg**	**02 18 31.2**	**+0.3**
AOPR	**Arecibo Observ**	**0.44**	**4**		**Pg**	**02 18 25.9**	**-0.5**
AOPR				Sg	**Sg**	**02 18 32.0**	**-0.4**
AOPR				IAML		02 18 33.3	
	comp=Z,670nm,0.2s						
AOPR	**Arecibo Observ**	**0.44**	**4**	⇑*iP*	**Pg**	**02 18 25.9**	**-0.5**
AOPR				⇑*eSg*	**Sg**	**02 18 32.3**	**-0.1**
AOPR				IAML		02 18 33.2	
	comp=N,570nm,0.2s						
PRSN	**Puerto Rico Se**	**0.46**	**313**		**Pg**	**02 18 26.0**	**-0.7**
PRSN				Sg	**Sg**	**02 18 33.1**	**+0.2**
PRSN				IAML		02 18 36.6	
	comp=N,667nm,0.3s						
PRSN	**Puerto Rico Se**	**0.46**	**313**	⇑*iP*	**Pg**	**02 18 26.1**	**-0.6**
PRSN				⇑*eSg*	**Sg**	**02 18 32.7**	**-0.3**
PRSN				IAML		02 18 34.3	
	comp=N,538nm,0.2s						
ECPR	**Experimental S**	**0.58**	**44**		**Pg**	**02 18 28.4**	**-0.5**
ECPR				Sg	**Sg**	**02 18 36.4**	**-0.3**
ECPR				IAML		02 18 37.0	
	comp=N,614nm,0.3s						
ECPR				IAML		02 18 38.6	
	comp=N,614nm,0.2s						
EMPR	**Esperanza - Ma**	**0.62**	**23**		**Pg**	**02 18 29.7**	**0.0**
EMPR					**Sg**	**02 18 38.7**	**+0.7**
AGPR	**Aguadilla, PR**	**0.64**	**331**		**Pg**	**02 18 29.2**	**-0.9**
AGPR				Sg	**Sg**	**02 18 38.0**	**-0.6**
AGPR				IAML		02 18 43.2	
	comp=N,169nm,0.7s						
AGPR				IAML		02 18 43.8	
	comp=N,128nm,0.5s						
AGPR	**Aguadilla, PR**	**0.64**	**331**	⇑*iP*	**Pg**	**02 18 29.2**	**-0.9**
AGPR				⇑*eSg*	**Sg**	**02 18 38.4**	**-0.2**
AGPR				IAML		02 18 43.7	
	comp=N,94nm,0.4s						
SJG	**San Juan**	**0.64**	**71**		**Pg**	**02 18 29.5**	**-0.5**
SJG					**Sg**	**02 18 38.8**	**+0.2**
SJG	**San Juan**	**0.64**	**71**	*i* P	**Pg**	**02 18 29.6**	**-0.5**
SJG				IAML		02 18 44.5	
	comp=Z,57nm,0.3s						
PDPR	**Patillas Dam,**	**0.74**	**81**		**Pg**	**02 18 31.2**	**-0.7**
IDE	**Isla Desecheo**	**0.81**	**307**		**Pg**	**02 18 32.5**	**-0.8**
IDE					**Sg**	**02 18 43.8**	**-0.2**
HUMP	**Col San Antoni**	**0.93**	**75**		**Pg**	**02 18 34.3**	**-1.1**
HUMP				Sg	**Sg**	**02 18 47.1**	**-0.4**
CUPR	**Culebra, Puert**	**1.49**	**74**	Pn	**Pn**	**02 18 43.6**	**-0.3**
DR12	**Loma Pena Alta**	**2.62**	**290**	Pn	**Pn**	**02 18 59.3**	**-0.2**
HATOM	**Hato Mayor del**	**2.62**	**290**	⇑*iP*	**Pn**	**02 19 01.3**	**+1.8**
HATOM				⇑*iS*	**Sn**	**02 19 32.0**	**+0.8**
HATOM				IAML		02 20 23.4	
	comp=N,17nm,2.5s						

*IDC **18** 02:22:09.6±1.3, 15.˚46S×177.˚84W, h425km±14km, mb3.3/9, mbtmp4.1/11, Error ellipse: s-maj=30.4km s-min=14.3km az=150.0*
ISC 18 02:22:11.6±0.8, 15.˚5S±0.˚2×178.˚0W±0.˚2, h450km, n14, σ0s79/14, mb3.5/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.38**	**238**	P	**P**	**02 23 29.1**	**-1.2**
	51nm,0.7s,baz=85,slow=12,SNR=22						
MSVF				S	**S**	**02 24 33.5**	**-0.8**
	1.8nm,0.4s,baz=241,slow=22,SNR=0.9						
AFI	**Afiamalu**	**6.25**	**77**	P	P	02 23 42.2	-6.5
	12nm,0.4s,baz=267,slow=20,SNR=2.5						
STKA	**Stephens Creek**	**40.16**	**239**	P	**P**	**02 29 08.3**	**+0.9**
	1.2nm,0.7s,baz=173,slow=9.2,SNR=2.0 1.2nm,0.7s						
WRA	**Warramunga Arr**	**45.47**	**257**	P	**P**	**02 29 50.0**	**+0.6**
	0.4nm,0.4s,baz=90,slow=8.5,SNR=7.3 0.4nm,0.4s						
ASAR	**Alice Springs**	**45.84**	**252**	P	**P**	**02 29 53.3**	**+1.1**
	5.8nm,0.3s,baz=86,slow=8.5,SNR=69 5.8nm,0.3s						
QSPA	**South Pole Qui**	**74.59**	**180**	P	**P**	**02 33 03.6**	**+0.2**
	1.5nm,0.7s,baz=277,slow=1.1,SNR=8.0 1.5nm,0.7s						
NVAR	**Mina Array Bea**	**77.42**	**44**	P	**P**	**02 33 19.9**	**+0.2**
	0.5nm,0.7s,baz=225,slow=9.0,SNR=4.2 0.5nm,0.7s						
ILAR	**Eielson Array**	**83.42**	**13**	P	**P**	**02 33 49.9**	**-0.3**
	1.0nm,0.7s,baz=224,slow=5.1,SNR=14 1.0nm,0.7s						
TXAR	**Lajitas Array**	**84.39**	**58**	P	**P**	**02 33 55.9**	**0.0**
	0.4nm,0.8s,baz=204,slow=2.7,SNR=4.7 0.4nm,0.8s						
PDAR	**Pinedale Array**	**85.33**	**43**	P	**P**	**02 34 00.3**	**-0.1**
	0.3nm,0.5s,baz=216,slow=4.0,SNR=5.1 0.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**88.39**	**290**	P	**P**	**02 34 15.1**	**-0.1**
	1.7nm,0.3s,baz=109,slow=6.7,SNR=1.3 1.7nm,0.3s						
BRTR	**Keskin Array B**	**143.26**	**317**	PKP	**PKPdf**	**02 40 53.0**	**-1.2**
	1.9nm,0.9s,baz=79,slow=3.1,SNR=9.1						
MMAI	**Mount Meron Ar**	**145.04**	**306**	PKPbc	**PKPab**	**02 40 59.5**	**+0.9**
	4.4nm,0.8s,baz=64,slow=3.4,SNR=1.2						
GERES	**GERESS Array B**	**145.33**	**346**	PKPbc	**PKPab**	**02 40 58.9**	**-0.2**
	0.5nm,0.6s,baz=28,slow=6.1,SNR=3.0						

IDC 18 02:25:59.9±7.2, 6.˚94S×127.˚75E, h403km±74km, mb3.1/1, mbtmp4.1/5, Error ellipse: s-maj=99.2km s-min=77.4km az=173.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.19**	**231**	P	P	02 27 25.2	+1.4
	37nm,0.4s,baz=92,slow=5.1,SNR=2.0						
BATI				S	S	02 28 31.7	-0.7
	58nm,0.4s,baz=316,slow=23,SNR=13						
FITZ	**Fitzroy Crossi**	**11.28**	**190**	P	P	02 28 33.5	+1.9
	1.1nm,0.4s,baz=29,slow=9.1,SNR=9.3						
WRA	**Warramunga Arr**	**14.42**	**154**	P	P	02 29 05.4	-0.7
	1.6nm,0.3s,baz=333,slow=11,SNR=39						
ASAR	**Alice Springs**	**17.66**	**161**	P	P	02 29 41.0	+0.3
	3.7nm,0.7s,baz=346,slow=12,SNR=43						
STKA	**Stephens Creek**	**27.98**	**154**	P	P	02 31 15.0	-0.7
	0.9nm,0.5s,baz=316,slow=8.9,SNR=4.7 0.9nm,0.5s						

*IDC **18** 02:36:40.2±4.8, 28.˚60N×142.˚51E, h0km, mb3.5/5, mbtmp3.5/6, ML2.7/1, MS2.7/1, Error ellipse: s-maj=192.6km s-min=23.1km az=74.0*
ISC 18 02:36:43.6±4.9, 28.˚6N±0.˚4×14.˚3E±, h25km, n7, σ0s61/6, mb3.6/5, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**8.73**	**336**	Pn	**

MLPR				⇓*e*Sg	**Sg**	02 51 42.7	-0.5	
MLPR				IAML		02 51 42.9		
	comp=N,3μm,0.4s							
CRPR	**Cabo Rojo, PR**	**0.24**	**272**	Pg	**Pg**	**02 51 40.8**	**-0.3**	
CRPR				Sg	**Sg**	**02 51 44.1**	**-0.7**	
CRPR				IAML		02 51 44.4		
	comp=N,12μm,0.2s							
CRPR	**Cabo Rojo, PR**	**0.24**	**272**	*i* P	**Pg**	**02 51 40.8**	**-0.3**	
CRPR				*e*S	**Sg**	**02 51 44.1**	**-0.7**	
CRPR				IAML		02 51 44.3		
	comp=Z,15μm,0.2s							
OBIP	**Obispado Ponce**	**0.25**	**80**		**Pb**	**02 51 42.1**	**+0.4**	
OBIP					**Sb**	**02 51 46.5**	**+0.7**	
OBIP	**Obispado Ponce**	**0.25**	**80**	*i* P	**Pb**	**02 51 42.2**	**+0.4**	
OBIP				*e*S	**Sb**	**02 51 46.5**	**+0.7**	
OBIP				IAML		02 51 46.7		
	comp=Z,2μm,0.4s							
LSP	**Las Mesas**	**0.28**	**310**		**Pg**	**02 51 42.0**	**+0.2**	
CELP	**Cerrillos**	**0.28**	**74**		**Pb**	**02 51 42.7**	**+0.4**	
CELP				Sg	**Sb**	**02 51 47.4**	**+0.6**	
CELP				IAML		02 51 47.7		
	comp=Z,4μm,0.3s							
CELP				IAML		02 51 47.9		
	comp=Z,4μm,0.4s							
CELP	**Cerrillos**	**0.28**	**74**	⇓*e*Pg	**Pb**	**02 51 42.7**	**+0.4**	
CELP				⇑*e*Sg	**Sb**	**02 51 47.7**	**+1.0**	
CELP				IAML		02 51 47.8		
	comp=N,1μm,0.2s							
UUPR	**Utuado, UPR, P**	**0.29**	**28**		**Pb**	**02 51 42.7**	**+0.2**	
PRSN	**Puerto Rico Se**	**0.35**	**309**		**Pg**	**02 51 43.0**	**0.0**	
PRSN	**Puerto Rico Se**	**0.35**	**309**	⇑*e*Pg	**Pg**	**02 51 43.0**	**0.0**	
PRSN				⇑*e*Sg	**Sg**	**02 51 48.5**	**+0.5**	
PRSN				IAML		02 51 49.7		
	comp=N,5μm,0.2s							
AOPR	**Arecibo Observ**	**0.36**	**16**		**Pb**	**02 51 43.8**	**+0.1**	
AOPR				IAML		02 51 50.8		
	comp=N,3μm,0.3s							
AOPR	**Arecibo Observ**	**0.36**	**16**	⇑*e*Pg	**Pb**	**02 51 43.8**	**+0.1**	
AOPR				⇓*e*Sg	**Sb**	**02 51 49.3**	**+0.1**	
AOPR				IAML		02 51 50.7		
	comp=N,2μm,0.5s							
AGPR	**Aguadilla, PR**	**0.52**	**333**		**Pg**	**02 51 46.2**	**0.0**	
AGPR	**Aguadilla, PR**	**0.52**	**333**	⇑*e*Pg	**Pg**	**02 51 46.2**	**0.0**	
AGPR				⇓*e*Sg	**Sn**	**02 51 56.9**	**-0.1**	
AGPR				IAML		02 51 59.7		
	comp=N,356nm,0.2s							
ECPR	**Experimental S**	**0.57**	**56**		**Pb**	**02 51 47.3**	**0.0**	
ECPR				IAML		02 51 56.4		
	comp=N,3μm,0.3s							
ECPR				IAML		02 51 56.6		
	comp=N,3μm,0.2s							
EMPR	**Esperanza - Ma**	**0.57**	**33**		**Pn**	**02 51 48.2**	**-0.9**	
EMPR					**Sn**	**02 51 56.8**	**-1.3**	
SJG	**San Juan**	**0.69**	**80**		**Pg**	**02 51 49.0**	**-0.1**	
SJG	**San Juan**	**0.69**	**80**	⇓*e*Pg	**Pg**	**02 51 49.1**	**-0.1**	
SJG				⇑*e*Sg	**Sn**	**02 51 59.6**	**-1.4**	
SJG	**San Juan**	**0.69**	**80**	*i* P	**Pg**	**02 51 49.1**	**-0.1**	
SJG				*e*S	**Sg**	**02 51 58.7**	**+0.4**	
SJG				IAML		02 52 00.5		
	comp=Z,402nm,0.3s							
IDE	**Isla Desecheo**	**0.70**	**304**		**Pb**	**02 51 49.1**	**-0.4**	
IDE					**Sb**	**02 51 58.6**	**-0.2**	
PDPR	**Patillas Dam,**	**0.80**	**88**		**Pg**	**02 51 51.1**	**-0.2**	
HUMP	**Col San Antoni**	**0.97**	**81**		**Sg**	**02 52 07.0**	**-0.3**	
HUMP	**Col San Antoni**	**0.97**	**81**	Pg	**Pb**	**02 51 53.6**	**-0.5**	
HUMP				IAML		02 52 11.3		
	comp=Z,1μm,0.3s							
HUMP				IAML		02 52 11.5		
	comp=Z,923nm,0.2s							
CUPR	**Culebra, Puert**	**1.53**	**78**		**Pb**	**02 52 02.7**	**-1.0**	
DR12	**Loma Pena Alta**	**2.52**	**289**		**Pn**	**02 52 16.1**	**+0.1**	
HATOM	**Hato Mayor del**	**2.52**	**289**	⇓*e*Pg	**Pn**	**02 52 17.8**	**+1.8**	
HATOM				IAML		02 53 02.5		
	comp=N,38nm,0.5s							
BANI	**BANI**	**3.35**	**277**	Pn	**Pn**	**02 52 27.2**	**-0.2**	
SABA	**Saba**	**3.47**	**96**	Pn	**Pn**	**02 52 29.6**	**+0.6**	
SABA				IAML		02 53 05.7		
	comp=N,106nm,1.6s							
SABA				IAML		02 53 30.3		
	comp=E,184nm,0.8s							
SC01	**Santiago de lo**	**3.93**	**292**	Pn	**Pn**	**02 52 36.6**	**+1.3**	
SDDR	**Presa de Saban**	**4.31**	**284**	Pn	**Pn**	**02 52 42.3**	**+1.6**	

IDC ***18*** *02:58:06.9±1.9, 17.˚19S×177.˚17W, h416km±20km, mb3.5/4, mbtmp4.3/7, Error ellipse: s-maj=81.1km s-min=19.3km az=147.0*

ISC 18 02:58:04.8±1.6**, 17.˚6S**±0.˚5×**176.˚9W**±0.˚3**, h400**km**, n7,** σ2≲**18/8, mb3.8**/4**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.86**	**267**	P	**Pn**	**02 59 27.3**	**+1.8**
	14nm,0.5s,baz=170,slow=21,SNR=4.8						
AFI	**Afiamalu**	**6.08**	**54**	P	**Pn**	**02 59 40.7**	**+2.2**
	29nm,0.3s,baz=190,slow=2.6,SNR=6.4						
AFI				S	**S**	**03 00 52.2**	**-2.6**
	8.1nm,0.3s,baz=252,slow=15,SNR=1.2						
DZM	**Mont Dzumac**	**16.34**	**251**	P	**P**	**03 01 30.0**	**-1.9**
	6.4nm,0.8s,baz=46,slow=20,SNR=1.7						
STKA	**Stephens Creek**	**40.10**	**241**	P	**P**	**03 05 04.5**	**+0.8**
	5.7nm,0.5s,baz=86,slow=10,SNR=19						
	5.7nm,0.5s						
WRA	**Warramunga Arr**	**46.15**	**259**	P	**P**	**03 05 49.9**	**-1.8**
	2.1nm,0.9s,baz=96,slow=6.9,SNR=14						
	2.1nm,0.9s						
ASAR	**Alice Springs**	**46.31**	**254**	P	**P**	**03 05 51.9**	**-1.0**
	22nm,0.6s,baz=88,slow=8.1,SNR=212						
	22nm,0.6s						
ILAR	**Eielson Array**	**85.22**	**12**	P	**P**	**03 09 56.8**	**-0.2**
	0.1nm,0.4s,baz=224,slow=5.3,SNR=6.7						
	0.1nm,0.4s						

MOS ***18*** *03:13:24.1±0.8, 3.˚08N×128.˚05E, h73km, mb6.0/86, Error ellipse: s-maj=7.4km s-min=4.2km az=112.6*

BJI ***18*** *03:13:26.7, 2.˚82N×128.˚42E, h121km, mB5.5/37, mb5.9/83*

IDC ***18*** *03:13:27.9±1.6, 3.˚04N×128.˚05E, h93km±14km, mb5.2/34, mbtmp5.6/40, MS4.5/5, Error ellipse: s-maj=13.1km s-min=7.4km az=78.0*

MAN ***18*** *03:13:28.0, 2.˚83N×127.˚62E, h168km, MS5.4*

GFZ ***18*** *03:13:29.5, 3.˚07N×128.˚03E, h99km, MW5.3, Moment Tensor Solution. s91 Moment tensor: Mrr=0.12; Mθθ=0.50; Mϕϕ=-0.38; Mrθ=0.20; Mrϕ=-0.59; Mθϕ=-0.85; Fault plane solution: NP1:ϕs=340.00000°, δ=85.00000°, λ=-49.00000°. NP2:ϕs=75.00000°, δ=40.00000°, λ=-173.00000°. Principal axes: T 1.1100, Plg29.0000°, Azm38.0000°; N 0.0700, Plg39.0000°, Azm156.0000°; P -1.1800, Plg36.0000°, Azm284.0000°;*

NEIC ***18*** *03:13:29.7±1.5, 3.˚02N±0.˚05×128.˚04E±0.˚05, h102km±4km, mb5.7/297, Mww5.4/7 Error ellipse: s-maj=7.8km s-min=6.9km az=94.0*

DJA ***18*** *03:13:29.9±0.2, 3.˚N±2.˚×12.˚8E±.˚, h106km±2km, M5.5/158, mb5.8/158, mB6.0/144, MLv5.9/31, Mw(mB)5.6/144, MwMwp5.1/46, Mwp5.3/46*

NEIC ***18*** *03:13:29.3, 2.˚61N×127.˚89E, h130km, Moment Tensor Solution. Duration: 2≲6 Moment tensor: Scale 10¹⁷Nm; Mrr=0.95; Mθθ=0.18; Mϕϕ 1.13; Mrθ=0.41; Mϕθ=0.35; Mϕr=1.14; Fault plane solution: M₀1.64000×10¹⁷ NP1: ϕs=218.94000°, δ=28.34000°, λ=-44.09000°. NP2: ϕs=349.39000°, δ=70.71000°, λ=-111.18000°. Principal axes: T 1.6509, Plg23.0000°, Azm95.0000°; N -0.0141, Plg20.0000°, Azm357.0000°; P -1.6368, Plg59.0000°, Azm230.0000°;*

NEIC ***18*** *03:13:29.3, 3.˚01N×128.˚09E, h130km*

GCMT ***18*** *03:13:30.7±0.2, 3.˚23N±0.˚02×127.˚90E±0.˚02, h104km±2km, MW5.5/115, Moment Tensor Solution. s66,c90; s115,c175; Duration: 1≲3 Moment tensor: Scale 10¹⁷ Nm; Mrr=0.78±.06; Mθθ=0.61±.06; Mϕϕ=-1.39±.06; Mrθ=0.69±.04; Mrϕ=-0.28±.06; Mθϕ=-1.33±.04; Best double couple: M₀1.93800×10¹⁷ NP1:ϕs=43.00000°, δ=31.00000°, λ=152.00000°. NP2:ϕs=157.00000°, δ=76.00000°, λ=62.00000°. Principal axes: T 1.8540, Plg51.0000°, Azm35.0000°; N 0.1700, Plg27.0000°, Azm165.0000°; P -2.0220, Plg26.0000°, Azm269.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 03:13:29.3±0.3**, 3.˚01N**±0.˚03×**127.˚97E**±0.˚03**, h106**km±2km**,**

h106km:pP-P,n1212,σ1≲25/1219,mb5.7/331,97C-23D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAMI	**Galela, Maluku**	**1.18**	**189**	P	**Pn**	**03 13 52.4**	**+0.2**
TNTI	**Ternate**	**2.31**	**195**	P	**Pn**	**03 14 08.2**	**+2.1**
TNTI	**Ternate**	**2.31**	**195**		**Pn**	**03 14 06.4**	**+0.3**
TNTI				Sn	**Sn**	**03 14 35.9**	**+1.6**
TNTI	**Ternate**	**2.31**	**195**	P	**Pn**	**03 14 07.6**	**+1.5**
SGSI	**Sangihe**	**2.53**	**285**	P	**Pn**	**03 14 08.5**	**-0.5**
MNI	**Manado**	**3.50**	**244**	P	**Pn**	**03 14 22.0**	**+0.1**
DDMP	**Don Marcelino,**	**3.81**	**324**	*i* P	**Pn**	**03 14 25.5**	**-0.5**
DDMP				*e*S	**Sn**	**03 15 07.8**	**-2.2**
GSPH	**General Santos**	**4.29**	**315**	*i* P	**Pn**	**03 14 31.7**	**-0.9**
GSPH				*i* S	**Sn**	**03 15 17.3**	**-4.5**
DAV	**Davao City (W)**	**4.68**	**329**	P	**Pn**	**03 14 37.7**	**-0.1**
	1μm,0.4s,baz=70,slow=1.9,SNR=19						
DAV				S	**Sn**	**03 15 28.7**	**-2.4**
	2μm,0.7s,baz=123,slow=20,SNR=4.5						
DAV	**Davao City (W)**	**4.68**	**329**	P	**Pn**	**03 14 38.9**	**+1.1**
DAV	**Davao City (W)**	**4.68**	**329**		**Pn**	**03 14 38.8**	**+0.9**
DAV				Sn	**Sn**	**03 15 33.2**	**+2.1**
DAV	**Davao City (W)**	**4.68**	**329**	P	**Pn**	**03 14 39.3**	**+1.5**
DAV				S	**Sn**	**03 15 34.5**	**+3.4**
DAV	**Davao City (W)**	**4.68**	**329**	P	**Pn**	**03 14 39.2**	**+1.4**
DMPH	**Davao City--Mi**	**4.73**	**329**	*e*P	**Pn**	**03 14 37.6**	**-0.9**
DMPH				*i* S	**Sn**	**03 15 36.3**	**+4.0**
KCP	**Kidapawan**	**4.90**	**324**	*e*P	**Pn**	**03 14 41.2**	**+0.4**
KCP				*i* S	**Sn**	**03 15 39.6**	**+3.2**
CDOP	**Cateel, Davao**	**4.98**	**342**	*i* P	**Pn**	**03 14 40.4**	**-1.4**
CDOP				*i* S	**Sn**	**03 15 35.3**	**-3.0**
SWI	**Sorong**	**5.06**	**139**	P	**Pn**	**03 14 43.6**	**+0.6**
	6.9nm8μm21μm2μm,1.2s						
SIJI	**Sorong**	**5.07**	**139**	P	**Pn**	**03 14 42.9**	**-0.2**
	354nm,0.3s,baz=330,slow=9.4,SNR=283						
SIJI				S	**Sn**	**03 15 39.8**	**-0.7**
	779nm,0.4s,baz=50,slow=21,SNR=26						
SIJI				LR	LR	03 16 55.6	
	comp=Z,2μm,18.6s,baz=309,slow=41						
SIJI	**Sorong**	**5.07**	**139**	P	**Pn**	**03 14 43.6**	**+0.5**
	5.6nm6μm35μm1μm,1.2s						
BIPH	**Bislig**	**5.38**	**343**	*e*P	**Pn**	**03 14 48.6**	**+1.3**
BIPH				*e*S	**Sn**	**03 15 44.6**	**-3.5**
SANI	**Sanana**	**5.41**	**202**	P	**Pn**	**03 14 47.0**	**-0.6**
SANI	**Sanana**	**5.41**	**202**	P	**Pn**	**03 14 46.5**	**-1.1**
	3.9nm9μm30μm810nm,0.8s						
GTOI	**Gorontalo**	**5.49**	**245**	P	**Pn**	**03 14 49.9**	**+1.1**
BUKP	**Musuan**	**5.64**	**329**	*i* P	**Pn**	**03 14 51.2**	**+0.4**
BUKP				*i* S	Sn	03 15 43.4	-11
TSSP	**Tandag City**	**6.25**	**344**	*e*P	**Pn**	**03 14 58.3**	**-0.7**
TSSP				*e*S	Sn	03 15 55.3	-14
NLAI	**Namlea**	**6.27**	**188**	P	**Pn**	**03 15 00.3**	**+0.9**
KRAI	**Karang Ratu**	**6.30**	**176**	P	**Pn**	**03 15 02.8**	**+3.0**
CGP	**Cagayan de Oro**	**6.31**	**329**	*i* P	**Pn**	**03 15 01.9**	**+1.9**
CGP				*i* S	**Sn**	**03 16 14.8**	**+4.1**
MSAI	**Masohi**	**6.39**	**171**	P	**Pn**	**03 15 04.1**	**+3.1**
	1.8nm574nm,0.7s						
MRSI	**Marisa**	**6.53**	**247**	P	**Pn**	**03 15 04.3**	**+1.4**
LUWI	**Luwuk**	**6.58**	**232**	P	**Pn**	**03 15 04.2**	**+0.7**
LUWI	**Luwuk**	**6.58**	**232**	S	**Sn**	**03 16 18.8**	**+1.7**
LUWI	**Luwuk**	**6.58**	**232**		**Pn**	**03 15 03.8**	**+0.3**
LUWI	**Luwuk**	**6.58**	**232**	P	**Pn**	**03 15 03.6**	**+0.1**
	7μm17μm818nm,1.1s						
AAI	**Ambon**	**6.66**	**178**	P	**Pn**	**03 15 07.4**	**+2.8**
	1.4nm386nm,0.7s						
ZCP	**Zamboanga City**	**7.05**	**304**	*e*P	**Pn**	**03 15 08.7**	**-1.2**
ZCP				*e*S	**Sn**	**03 16 21.9**	**-6.7**
SCPH	**Surigao**	**7.16**	**340**	*i* P	**Pn**	**03 15 12.8**	**+1.4**
SCPH				*i* S	**Sn**	**03 16 26.5**	**-4.9**
MWPI	**Manokwari, Pap**	**7.22**	**123**	P	**Pn**	**03 15 15.6**	**+3.3**
	4.2nm12μm1μm,0.9s						
FAKI	**Fak Fak**	**7.28**	**144**	P	**Pn**	**03 15 14.0**	**+0.9**
FAKI	**Fak Fak**	**7.28**	**144**		**Pn**	**03 15 13.5**	**+0.4**
FAKI	**Fak Fak**	**7.28**	**144**	P	**Pn**	**03 15 13.9**	**+0.9**
	1.6nm532nm,1.0s						
APSI	**Ampana**	**7.43**	**238**	P	**Pn**	**03 15 15.4**	**+0.4**
	17μm2μm,1.1s						
TOLI2	**Tolitoli**	**7.43**	**255**	P	**Pn**	**03 15 14.9**	**-0.2**
TOLI2	**Tolitoli**	**7.43**	**255**		**Pn**	**03 15 14.9**	**-0.2**
BNDI	**Bandanaira**	**7.73**	**166**	P	**Pn**	**03 15 20.9**	**+1.7**
BNDI	**Bandanaira**	**7.73**	**166**	P	**Pn**	**03 15 23.3**	**+4.1**
	2.6nm4μm525nm,1.3s						
TBP	**Tagbilaran**	**7.79**	**329**	*e*P	**Pn**	**03 15 19.5**	**-0.5**
SNPH	**Sibulan**	**7.86**	**323**	*e*P	**Pn**	**03 15 21.2**	**+0.2**
SNPH				*e*S	Sn	03 16 21.0	-27
LLP	**Lapu-Lapu**	**8.28**	**331**	*e*P	**Pn**	**03 15 26.9**	**+0.3**
LLP				*i* S	**Sn**	**03 16 58.2**	**-0.3**
MPSI	**Mapaga**	**8.50**	**252**	P	**Pn**	**03 15 29.8**	**+0.2**
	10μm6μm543nm,1.0s						
PLP	**Palo**	**8.63**	**340**	*e*P	**Pn**	**03 15 31.4**	**0.0**
KMPI	**Kaimana, Papua**	**8.76**	**139**	P	**Pn**	**03 15 36.2**	**+3.0**
	379nm,1.3s						
PCI	**Palu**	**9.02**	**245**	P	**Pn**	**03 15 37.0**	**+0.3**
BAKI	**Biak**	**9.14**	**117**	P	Pn	03 15 43.2	+4.8
	5μm22μm1μm,1.7s						
KKSI	**Kolaka, Sulawe**	**9.53**	**222**	P	**Pn**	**03 15 43.5**	**-0.1**
	6μm441nm,0.8s						
SRPI	**Serui, Papua**	**9.58**	**120**	P	Pn	03 15 49.5	+5.1
	8μm496nm,1.0s						
MYLDM	**Lahad Datu**	**9.69**	**283**	P	**Pn**	**03 15 48.3**	**+2.5**
MYLDM	**Lahad Datu**	**9.69**	**283**		**Pn**	**03 15 47.4**	**+1.6**
MYLDM	**Lahad Datu**	**9.69**	**283**	P	**Pn**	**03 15 47.7**	**+1.9**
JAP	**San Jose, Anti**	**9.74**	**322**	*e*P	**Pn**	**03 15 48.3**	**+1.9**
RCP	**Roxas**	**9.95**	**329**	*i* P	**Pn**	**03 15 49.7**	**+0.4**
BBSI	**Bau Bau**	**10.02**	**213**	P	**Pn**	**03 15 51.1**	**+0.8**
	5μm402nm,1.0s						
TTSI	**Tana Toraja**	**10.13**	**234**	P	**Pn**	**03 15 50.8**	**-1.0**
	12μm942nm,1.0s						
IBAJ	**Ibajay, Aklan**	**10.47**	**327**	*e*P	**Pn**	**03 15 56.8**	**+0.5**
MMSI	**Mamuju**	**10.68**	**238**	P	**Pn**	**03 15 59.0**	**-0.3**
	4μm359nm,1.1s						
SPSI	**Sidrap Palu**	**10.73**	**230**	P	**Pn**	**03 15 58.7**	**-1.3**
	5μm534nm,0.8s						
PMSI	**Majene**	**11.13**	**235**	P	**Pn**	**03 16 06.4**	**+1.1**
	4μm5μm409nm,1.3s						
PPR	**Puerto Princes**	**11.38**	**307**	*i* P	**Pn**	**03 16 08.0**	**-0.6**
SAUI	**Saumlaki**	**11.41**	**163**	P	**Pn**	**03 16 10.1**	**+0.9**
SAUI	**Saumlaki**	**11.41**	**163**	Pn	**Pn**	**03 16 08.7**	**-0.5**
KAPI	**Kappang**	**11.45**	**226**	P	**Pn**	**03 16 08.3**	**-1.3**
	68nm,0.4s,baz=38,slow=8.5,SNR=63						
KAPI				S	**Sn**	**03 18 08.7**	**-6.8**
	200nm,0.4s,baz=225,slow=23,SNR=12						
KAPI	**Kappang**	**11.45**	**226**	P	**Pn**	**03 16 10.8**	**+1.2**
KAPI	**Kappang**	**11.45**	**226**		**Pn**	**03 16 08.5**	**-1.1**
KAPI	**Kappang**	**11.45**	**226**	P	**Pn**	**03 16 08.5**	**-1.1**
KAPI	**Kappang**	**11.45**	**226**	P	**Pn**	**03 16 08.8**	**-0.8**
KAPI				S	**Sn**	**03 18 13.8**	**-1.7**
KAPI	**Kappang**	**11.45**	**226**	P	**Pn**	**03 16 08.9**	**-0.7**
BSSI	**Bau Bau, Buton**	**11.77**	**219**	P	**Pn**	**03 16 13.4**	**-0.5**
	4μm336nm,0.6s						
MKS	**Makassar**	**11.79**	**226**	P	**Pn**	**03 16 14.4**	**+0.3**
	4μm435nm,1.1s						
BKB	**Balikpapan**	**11.86**	**249**	P	**Pn**	**03 16 15.6**	**+0.5**
BKB	**Balikpapan**	**11.86**	**249**		**Pn**	**03 16 14.1**	**-0.9**
BKB	**Balikpapan**	**11.86**	**249**	P	**Pn**	**03 16 15.9**	**+0.8**
KKM	**Kota Kinabalu**	**12.10**	**285**	P	**Pn**	**03 16 19.0**	**+0.6**
KKM	**Kota Kinabalu**	**12.10**	**285**		**Pn**	**03 16 17.3**	**-1.0**
KKM	**Kota Kinabalu**	**12.10**	**285**	P	**Pn**	**03 16 18.1**	**-0.3**
	6μm8μm569nm,1.2s						
MMRI	**Maumere**	**12.91**	**206**	P	**Pn**	**03 16 29.4**	**+0.5**
MMRI	**Maumere**	**12.91**	**206**		**Pn**	**03 16 27.8**	**-1.1**
MMRI	**Maumere**	**12.91**	**206**	P	**P**	**03 16 34.4**	**-1.0**
	4μm294nm,0.9s						
TGY	**Tagaytay City**	**13.03**	**328**	P	**Pn**	**03 16 31.1**	**+0.6**
	135nm,0.3s,baz=176,slow=1.2,SNR=21						
TGY				LR	LR	03 21 26.4	
	comp=Z,1μm,20.9s,baz=164,slow=37						
SOEI	**Soe**	**13.21**	**196**	P	**Pn**	**03 16 34.6**	**+1.6**
SOEI	**Soe**	**13.21**	**196**		**Pn**	**03 16 32.3**	**-0.7**
SOEI	**Soe**	**13.21**	**196**	P	**Pn**	**03 16 35.9**	**+2.9**
	4μm199nm,0.9s						
EDFI	**Ende, Flores**	**13.26**	**208**	P	**Pn**	**03 16 33.4**	**-0.2**
	417nm,0.6s						
GENI	**Genyem**	**13.40**	**114**	P	**P**	**03 16 38.6**	**-2.4**
	16μm1μm,1.4s						
MTKI	**Muara Teweh, K**	**13.65**	**253**	P	**Pn**	**03 16 39.4**	**+0.8**
	1μm,1.3s						
BATI	**Baumata**	**13.81**	**198**	P	**Pn**	**03 16 40.7**	**0.0**
	53nm,0.3s,baz=67,slow=3.4,SNR=18						
BATI	**Baumata**	**13.81**	**198**	P	**P**	**03 16 44.0**	**-1.6**
	5μm229nm,0.4s						
JAY	**Jayapura**	**13.86**	**113**	P	**P**	**03 16 45.7**	**-0.4**
	baz=280,slow=12						
JAY				S	**Sn**	**03 19 15.8**	**+1.6**
	7.8nm,0.4s,baz=307,slow=13,SNR=1.3						
JAY	**Jayapura**	**13.86**	**113**	P	**P**	**03 16 45.5**	**-0.6**
LBFI	**Labuhan Bajo,**	**13.97**	**215**	P	**Pn**	**03 16 43.6**	**+0.8**
BBKI	**Banjar Baru**	**14.62**	**244**	P	**Pn**	**03 16 51.0**	**0.0**
WSI	**Waingapu**	**14.74**	**211**	P	**Pn**	**03 16 53.2**	**+0.7**
DBNI	**Kabupaten Domp**	**14.95**	**220**	P	**Pn**	**03 16 56.8**	**+1.5**
BASI	**Baing, Sumba**	**15.07**	**209**	P	**P**	**03 16 58.9**	**-0.5**
	5μm462nm,1.0s						
WBSI	**Waikabubak, Su**	**15.20**	**214**	P	**Pn**	**03 16 59.0**	**+0.5**
	3μm4μm406nm,1.1s						
PLAI	**Plampang**	**15.54**	**221**	P	**P**	**03 17 04.7**	**-0.1**
PLAI	**Plampang**	**15.54**	**221**	P	**P**	**03 17 04.3**	**-0.5**
	3μm7μm501nm,1.0s						
DRS	**Darwin Rock St**	**15.62**	**169**	P	**Pn**	**03 17 04.3**	**+0.7**
SBUM	**Sibu**	**15.74**	**268**	P	**P**	**03 17 06.2**	**-0.8**
SBUM	**Sibu**	**15.74**	**268**	P	**Pn**	**03 17 05.1**	**-0.1**
SBUM	**Sibu**	**15.74**	**268**	P	**Pn**	**03 17 05.5**	**+0.3**
MTN	**Manton Dam**	**16.06**	**169**	P	**Pn**	**03 17 08.8**	**-0.3**
	comp=Z,109nm,0.6s						
MTN	**Manton Dam**	**16.06**	**169**		**Pn**	**03 17 08.4**	**-0.8**
TWSI	**Taliwang, Sumb**	**16.08**	**223**	P	**P**	**03 17 10.6**	**-0.1**
	comp=Z,3μmcomp=Z,6μmcomp=Z,529nm,1.2s						
SZP	**Santa**	**16.22**	**333**	P	**Pn**	**03 17 11.5**	**+0.4**
KDU	**Kakadu**	**16.23**	**164**	P	**Pn**	**03 17 10.7**	**-0.5**
	comp=Z,57nm,0.9s						
KLNI	**Mataram**	**16.41**	**226**	P	**P**	**03 17 15.0**	**+0.6**
	comp=Z,9μmcomp=Z,719nm,0.7s						
SIPP	**Brgy, Tapao**	**16.55**	**334**	*e*P	**Pn**	**03 17 15.0**	**-0.1**
KHKI	**Kahang-Kahang**	**16.73**	**227**	P	**P**	**03 17 20.0**	**+2.2**
	comp=Z,4μmcomp=Z,9μmcomp=Z,1μm,1.1s						
SRBI	**Singaraja**	**16.84**	**229**	P	**P**	**03 17 20.1**	**+1.0**
	comp=Z,5μmcomp=Z,7μmcomp=Z,711nm,1.0s						
KMMI	**Kalianget**	**17.18**	**234**	P	**Pn**	**03 17 24.1**	**+1.1**
	comp=Z,5μmcomp=Z,14μmcomp=Z,1μm,1.5s						
DNP	**Denpasar**	**17.23**	**228**	P	**Pn**	**03 17 26.5**	**+3.0**
	comp=Z,2μm,1.2s						
RTBI	**Rangdo, Negare**	**17.28**	**229**	P	**Pn**	**03 17 25.8**	**+1.6**
	comp=Z,5μmcomp=Z,8μmcomp=Z,511nm,0.8s						
IGBI	**Denpasar**	**17.37**	**227**	P	**Pn**	**03 17 27.3**	**+2.1**
	comp=Z,13μmcomp=Z,433nm,0.6s						
ABJI	**Asem Bagus**	**17.41**	**232**	P	**Pn**	**03 17 27.5**	**+1.8**
	comp=Z,8μmcomp=Z,422nm,1.2s						
BYJI	**Banyuwangi**	**17.57**	**231**	P	**Pn**	**03 17 30.2**	**+2.5**
KSM	**Kuching**	**17.72**	**265**	P	**Pn**	**03 17 30.9**	**+1.5**
BLJI	**Banyuglugur**	**17.89**	**233**	P	**Pn**	**03 17 32.8**	**+1.4**
JAGI	**Jajag, Banyuwa**	**17.89**	**230**	P	**Pn**	**03 17 32.5**	**+1.0**
JAGI	**Jajag, Banyuwa**	**17.89**	**230**	P	**Pn**	**03 17 31.3**	**-0.2**
JAGI				IAmb	IAmb	03 17 34.0	
	comp=Z,610nm,1.1s						
JAGI	**Jajag, Banyuwa**	**17.89**	**230**	P	**Pn**	**03 17 32.0**	**+0.5**
	comp=Z,10μmcomp=Z,447nm,0.9s						
KNRA	**Kununurra**	**18.59**	**178**	P	**Pn**	**03 17 39.8**	**0.0**
	comp=Z,109nm,0.6s,comp=Z,0.0nm						
KNRA	**Kununurra**	**18.59**	**178**	P	**P**	**03 17 38.0**	**-0.2**
TBJI	**Tambak Boyo**	**18.83**	**239**	P	**P**	**03 17 41.5**	**+0.6**
	comp=Z,3μmcomp=Z,9μmcomp=Z,920nm,1.1s						
SJI	**Sawahan**	**19.37**	**236**	P	**P**	**03 17 47.7**	**+0.7**
	comp=Z,1μm,1.1s						
SNJI	**Sawahan-Nganju**	**19.41**	**236**	P	**P**	**03 17 48.4**	**+1.0**
	comp=Z,3μmcomp=Z,5μmcomp=Z,540nm,1.1s						
NGJI	**Ngawi**	**19.44**	**238**	P	**Pn**	**03 17 48.8**	**-1.0**
	comp=Z,11μmcomp=Z,1nm,1.1s						
GUMO	**Guam**	**19.73**	**57**	P	**P**	**03 17 48.

comp=Z,424nm,0.9s
QIZ Qiongzhong 23.83 313 P **P** **03 18 33.5 +0.7**
QIZ sP **sP** **03 19 09.5 +2.4**
QIZ S **S** **03 22 43.9 +2.8**
QIZ pmax pmax
comp=Z,110nm,1.1s
QIZ pmax pmax
comp=Z,450nm,4.3s
QIZ L L
comp=Z,1μm,15.8s
QIZ L L
comp=Z,1μm,8.9s
QIZ L L
comp=Z,760nm,15.1s
MYKOM Kota Tinggi 24.13 268 P **P** **03 18 36.5 +0.9**
MYKOM Kota Tinggi 24.13 268 P **P** **03 18 35.0 -0.6**
MYKOM IAmb IAmb 03 18 39.6
comp=Z,380nm,1.3s
MYKOM Kota Tinggi 24.13 268 P **P** **03 18 36.3 +0.7**
BLSI Bandar Lampung 24.18 250 P **P** **03 18 37.5 +1.5**
comp=Z,6μmcomp=Z,472nm,0.7s
CGJI Cibinong 24.21 247 P **P** **03 18 36.0 -0.3**
KLSI 24.45 252 P **P** **03 18 39.0 +0.5**
GZH2 Guangzhou 24.75 327 P **P** **03 18 41.9 +0.8**
GZH2 pP **pP** **03 19 03.9 +0.4**
GZH2 S **S** **03 22 57.8 +2.0**
GZH2 pmax pmax
comp=Z,790nm,1.0s
JMBI JAMBI 24.76 260 P **P** **03 18 45.2 +3.9**
MDSI Maura Dua 24.91 253 P **P** **03 18 42.8 +0.1**
comp=Z,4μmcomp=Z,459nm,1.1s
KASI Kota Agung 24.93 250 P **P** **03 18 43.0 +0.1**
comp=Z,2μmcomp=Z,5μmcomp=Z,639nm,1.0s
LWLI Liwa 25.19 252 P **P** **03 18 45.8 +0.5**
comp=Z,675nm,0.9s
MBWA Marble Bar 25.34 198 P **P** **03 18 46.8 +0.3**
comp=Z,109nm,1.0s
MBWA Marble Bar 25.34 198 P **P** **03 18 46.3 -0.2**
MBWA Marble Bar 25.34 198 P **P** **03 18 46.3 -0.2**
PSAC1 Pilbara Seismi 25.67 198 P **P** **03 18 49.3 -0.2**
comp=Z,129nm,1.1s
PSAC2 Pilbara Seismi 25.67 198 P **P** **03 18 49.5 0.0**
comp=Z,129nm,1.1s
PSA00 Pilbara Seismi 25.70 198 P **P** **03 18 49.9 +0.2**
comp=Z,133nm,1.1s
PSA00 Pilbara Seismi 25.70 198 P **P** **03 18 49.7 0.0**
PSA00 Pilbara Seismi 25.70 198 P **P** **03 18 49.8 +0.1**
PSA00 IAmb IAmb 03 18 52.6
comp=Z,267nm,1.4s
PSA00 Pilbara Seismi 25.70 198 P **P** **03 18 49.9 +0.2**
PSA00 IAmb IAmb 03 18 52.6
comp=Z,261nm,1.4s
PSAB3 Pilbara Seismi 25.71 198 P **P** **03 18 51.0 +1.2**
comp=Z,130nm,1.1s
XMI Christmas Isla 25.90 239 P **P** **03 18 52.2 +0.5**
MNAI Manna 26.05 254 P **P** **03 18 54.6 +1.6**
MNAI Manna 26.05 254 IAmb IAmb 03 18 55.0
comp=Z,476nm,1.1s
MNAI Manna 26.05 254 P **P** **03 18 53.4 +0.4**
comp=Z,4μmcomp=Z,379nm,0.9s
QIS Mount Isa 26.06 155 P **P** **03 18 53.0 0.0**
comp=Z,134nm,1.1s,comp=Z,0.0nm
QIS Mount Isa 26.06 155 P **P** **03 18 52.7 -0.3**
MASI Maura Aman, Be 26.44 257 P **P** **03 18 57.7 +1.1**
UBSI University, Be 26.55 255 P **P** **03 18 57.5 0.0**
ASAR Alice Springs 27.14 168 P **P** **03 19 02.0 -0.7**
comp=Z,6.5nm,0.4s,baz=346,slow=7.1,SNR=81
ASAR P3KPbc 03 51 35.5
comp=Z,0.6nm,0.7s,baz=144,slow=4.9,SNR=6.2
comp=Z,6.5nm,0.4s
ASAR Alice Springs 27.14 168 P **P** **03 19 01.9 -0.8**
KULM Kulim 27.34 276 P **P** **03 19 05.0 +0.4**
KULM Kulim 27.34 276 IAmb IAmb 03 19 06.2
comp=Z,186nm,1.1s
KULM Kulim 27.34 276 P **P** **03 19 04.8 +0.2**
comp=Z,2μmcomp=Z,169nm,1.2s
JCJ Chichijima 27.54 28 P **P** **03 19 05.2 -1.0**
JCJ Chichijima 27.54 28 P **P** **03 19 04.5 -1.8**
PDSI Padang 27.77 262 P **P** **03 19 08.3 -0.2**
WRKA Warakurna 27.88 179 P **P** **03 19 09.4 0.0**
comp=Z,18nm,1.0s
JSU Suzuyama 28.44 4 P **P** **03 19 14.2 0.0**
CNSH ChangSha 28.85 332 P **P** **03 19 19.1 +1.3**
CNSH S **S** **03 24 02.3 +2.0**
CNSH pmax pmax
comp=Z,48nm,1.0s
CNSH L L
comp=Z,1μm,21.6s
CNSH L L
comp=Z,790nm,14.5s
CNSH L L
comp=Z,1μm,20.4s
PSI Prapat 29.01 270 P **P** **03 19 20.2 +0.6**
PSI Prapat 29.01 270 P **P** **03 19 18.5 -1.1**
PSI Prapat 29.01 270 P **P** **03 19 18.5 -1.1**
comp=Z,3μmcomp=Z,253nm,1.3s
RPSI Rantau Prapat 29.01 270 IAmb IAmb 03 19 21.2
comp=Z,285nm,1.1s
SISI Saibi 29.19 262 P **P** **03 19 19.5 -1.6**
comp=Z,2μmcomp=Z,206nm,0.7s
NJ2 Nanjing 30.13 344 ⇑P **P** **03 19 29.8 +0.7**
NJ2 pmax pmax
comp=Z,200nm,1.2s
KCSI Kotacane, Aceh 30.16 272 P **P** **03 19 28.7 -0.9**
comp=Z,2μmcomp=Z,245nm,1.4s
WHN Wuhan 30.26 336 ⇑*i*P **P** **03 19 32.1 +1.8**
WHN PcP **PcP** **03 22 28.6 0.0**
WHN S **S** **03 24 25.1 +2.7**
WHN pmax pmax
comp=Z,2μm,1.3s
GSI Gunungsitoli 30.42 267 P **P** **03 19 32.1 +0.1**
GSI Gunungsitoli 30.42 267 P **P** **03 19 30.5 -1.5**
comp=Z,3μmcomp=Z,314nm,1.1s
TPTI 30.75 271 P **P** **03 19 32.5 -2.3**
comp=Z,1μmcomp=Z,128nm,0.8s
MEEK Meekatharra 30.83 196 P **P** **03 19 34.4 -1.0**
comp=Z,19nm,0.9s
MEEK Meekatharra 30.83 196 P **P** **03 19 34.9 -0.5**
LHMI Lhok Sumawe 31.02 275 P **P** **03 19 38.1 +0.9**
JMN Monobe 31.05 10 P **P** **03 19 37.3 0.0**
JMN Monobe 31.05 10 IAmb IAmb 03 19 39.4
comp=Z,176nm,1.1s
JTU Tsushima 31.38 2 P **P** **03 19 40.0 -0.1**
MLSI Meulaboh, Aceh 31.53 273 P **P** **03 19 40.7 -1.0**
comp=Z,4μmcomp=Z,370nm,1.0s
ENH Enshi 32.27 329 IAmb IAmb 03 19 50.3
comp=Z,220nm,0.9s
ENH Enshi 32.27 329 P **P** **03 19 49.0 +1.0**
ENH PcP **PcP** **03 22 35.4 +1.4**
CM31 Chiang Mai Arr 32.30 300 P **P** **03 19 49.0 +0.5**
CM31 Chiang Mai Arr 32.30 300 P **P** **03 19 50.0 +1.6**
SNR=19
CMAR Chiang Mai Arr 32.30 300 P **P** **03 19 49.2 +0.8**
comp=Z,31nm,0.8s,baz=117,slow=7.2,SNR=137
CMAR PcP **PcP** **03 22 36.5 +2.2**
comp=Z,15nm,0.9s,baz=149,slow=1.5,SNR=9.3
comp=Z,31nm,0.8s
CMAR Chiang Mai Arr 32.30 300 P **P** **03 19 48.9 +0.4**
CMAR **PcP** **03 22 34.9 +0.6**
CMAR Chiang Mai Arr 32.30 300*ce*P **P** **03 19 49.5 +1.1**
CMAR pmax pmax
comp=Z,32nm,0.7s
CHTO Chiang Mai 32.45 301 P **P** **03 19 50.4 +0.7**
CHTO Chiang Mai 32.45 301 P **P** **03 19 50.5 +0.7**
CHTO IAmb IAmb 03 19 52.0
comp=Z,82nm,0.8s
CHTO Chiang Mai 32.45 301 P **P** **03 19 50.5 +0.7**
CHTO pmax pmax
comp=Z,82nm,0.8s
CHTO Chiang Mai 32.45 301 P **P** **03 19 50.0 +0.2**
comp=Z,1μmcomp=Z,133nm,1.3s
BSI Banda Aceh 32.67 275 P **P** **03 19 50.3 -1.5**
comp=Z,2μmcomp=Z,194nm,1.4s
JSG Sagara 32.91 16 P **P** **03 19 53.4 0.0**
TJN Taejon 33.21 359 P **P** **03 19 56.2 +0.2**
TJN Taejon 33.21 359 P **P** **03 19 55.3 -0.7**
INU Inuyama 33.25 14 P **P** **03 19 56.5 0.0**
INU Inuyama 33.25 14 IAmb IAmb 03 19 57.9
comp=Z,239nm,1.3s
INU Inuyama 33.25 14 P **P** **03 19 55.7 -0.8**
INU pP **pP** **03 20 18.3 -1.7**
INU x x 03 20 20.4
JGF Kuroka 33.57 14 P **P** **03 19 59.3 0.0**
FORT Forrest 33.60 180 P **P** **03 20 00.2 +0.6**
comp=Z,54nm,0.6s,comp=Z,0.0nm

MORW Morawa 33.89 199 P **P** **03 20 01.4 -0.6**
comp=Z,28nm,0.6s
MORW Morawa 33.89 199 P **P** **03 20 01.8 -0.3**
HNR Honiara 34.17 112 LR LR 03 32 37.0
comp=Z,42nm,20.4s,baz=7.5,slow=34
KSAR Wonju Array Be 34.27 360 P **P** **03 20 04.6 -0.6**
KSAR Wonju Array Be 34.27 360 P **P** **03 20 04.6 -0.6**
KSRS Korea Array 34.28 360 P **P** **03 20 04.8 -0.5**
comp=Z,103nm,0.9s,baz=178,slow=10,SNR=97
KSRS PcP **PcP** **03 22 40.4 +1.0**
comp=Z,6.6nm,0.9s,baz=176,slow=2.9,SNR=4.9
comp=Z,103nm,0.9s
PZH PanZhiHua 34.32 315 P **P** **03 20 07.1 +1.1**
PZH pmax pmax
comp=Z,60nm,1.0s
KS19 Wonju Array Si 34.32 360 IAmb IAmb 03 20 07.4
comp=Z,112nm,0.8s
INCN Inchon 34.33 358 P **P** **03 20 05.7 -0.1**
INCN Inchon 34.33 358 P **P** **03 20 06.0 +0.2**
INCN Inchon 34.33 358 P **P** **03 20 06.0 +0.2**
INCN pmax pmax
comp=Z,56nm,0.8s
COCO West Island 34.43 243 P **P** **03 20 07.7 +0.8**
COCO West Island 34.43 243 P **P** **03 20 07.5 +0.6**
COCO West Island 34.43 243 P **P** **03 20 07.5 +0.6**
COCO pmax pmax
comp=Z,366nm,1.0s
COCO West Island 34.43 243 P **P** **03 20 06.9 0.0**
COCO West Island 34.43 243 P **P** **03 20 06.8 -0.1**
COCO pP **pP** **03 20 29.4 -0.6**
COCO x x 03 20 31.2
COCO sP **sP** **03 20 41.3 -0.6**
COCO x x 03 20 43.0
COCO PcP **PcP** **03 22 42.0 +1.7**
TIA Tai'an 34.52 344 P **P** **03 20 07.4 -0.1**
TIA pmax pmax
comp=Z,97nm,0.8s
LYN LuoYang 34.54 337⇑*i*P **P** **03 20 08.8 +1.2**
LYN pP pP 03 20 32.4 +1.6
LYN PcP **PcP** **03 22 41.3 +1.0**
LYN S **S** **03 25 26.6 -2.2**
LYN pmax pmax
comp=Z,190nm,0.9s
LYN pmax pmax
comp=Z,500nm,3.7s
LYN L L
comp=Z,2μm,13.3s
LYN L L
comp=Z,1μm,11.8s
LYN L L
comp=Z,2μm,18.2s
KMBL Kambalda 34.68 189 P **P** **03 20 08.3 -0.5**
comp=Z,37nm,0.9s
MAJO Matsushiro 34.68 15 P **P** **03 20 07.7 -1.1**
MAJO Matsushiro 34.68 15 P **P** **03 20 07.5 -1.4**
MAJO IAmb IAmb 03 20 09.4
comp=Z,372nm,1.9s
MAJO Matsushiro 34.68 15*d*i P **P** **03 20 07.7 -1.1**
MAJO pmax pmax
comp=Z,188nm,1.9s
MJAR Matsushiro Arr 34.68 15 P **P** **03 20 06.4 -2.5**
comp=Z,25nm,0.6s,baz=183,slow=9.4,SNR=49
MJAR PcP **PcP** **03 22 41.4 +0.7**
comp=Z,7.0nm,0.7s,baz=181,slow=3.6,SNR=4.7
comp=Z,25nm,0.6s
MJAR Matsushiro Arr 34.68 15 P **P** **03 20 07.2 -1.6**
MJAR **PcP** **03 22 40.9 +0.2**
MJAR Matsushiro Arr 34.68 15 P **P** **03 20 07.2 -1.6**
MJAR 03 22 40.9
MJAR pmax pmax
comp=Z,62nm,1.1s
BLDU Ballidu 35.12 197 P **P** **03 20 12.4 -0.3**
comp=Z,41nm,1.2s
BLDU Ballidu 35.12 197 P **P** **03 20 12.4 -0.3**
XAN Xi'an 35.62 332 ⇑P **P** **03 20 17.8 +0.8**
XAN pmax pmax
comp=Z,2μm,1.1s
KLBR Kellerberrin 35.76 195 P **P** **03 20 17.4 -0.8**
comp=Z,111nm,0.6s
KLBR Kellerberrin 35.76 195 P **P** **03 20 18.0 -0.1**
PBA Port Blair 35.94 286 IAmb IAmb 03 20 31.5
comp=Z,154nm,1.2s
CD2 Chengdu 35.95 323 P **P** **03 20 20.8 +0.9**
CD2 pmax pmax
comp=Z,160nm,0.8s
CD2 pmax pmax
comp=Z,290nm,5.3s
DL2 Dalian 36.19 352 P **P** **03 20 21.6 -0.1**
DL2 PcP **PcP** **03 22 44.8 -0.2**
DL2 S **S** **03 25 54.6 +0.6**
DL2 pmax pmax
comp=Z,190nm,0.9s
DL2 pmax pmax
comp=Z,420nm,5.1s
DL2 L L
comp=Z,2μm,15.0s
DL2 L L
comp=Z,1μm,11.3s
DL2 L L
comp=Z,1μm,15.5s
HNS HongShan 36.33 342 ⇑P **P** **03 20 23.3 +0.4**
HNS PcP **PcP** **03 22 47.3 +1.8**
HNS pmax pmax
comp=Z,310nm,1.1s
MUN Mundaring 36.55 197 P **P** **03 20 24.5 -0.4**
comp=Z,44nm,0.8s
MUN Mundaring 36.55 197 P **P** **03 20 24.9 0.0**
STKA Stephens Creek 37.03 161 P **P** **03 20 28.7 -0.3**
comp=Z,135nm,0.9s,baz=350,slow=7.2,SNR=9.3
comp=Z,135nm,0.9s
STKA Stephens Creek 37.03 161*de*P **P** **03 20 29.3 +0.3**
NWAO Narrogin (SRO) 37.16 195 P **P** **03 20 29.5 -0.6**
comp=Z,55nm,0.9s
NWAO Narrogin (SRO) 37.16 195 P **P** **03 20 30.1 +0.1**
NWAO Narrogin (SRO) 37.16 195 P **P** **03 20 30.2 +0.2**
NWAO Narrogin (SRO) 37.16 195 P **P** **03 20 30.2 +0.2**
NWAO pmax pmax
comp=Z,40nm,0.9s
NWAO Narrogin (SRO) 37.16 195 P **P** **03 20 29.9 -0.2**
NWAO pP **pP** **03 20 52.7 -1.1**
NWAO x x 03 20 58.9
PTPS Port Pirie 37.22 166 P **P** **03 20 30.5 0.0**
TIY Taiyuan 37.36 340 P **P** **03 20 32.5 +0.7**
TIY S **S** **03 26 13.1 +1.1**
TIY pmax pmax
comp=Z,91nm,1.0s
TIY pmax pmax
comp=Z,400nm,5.1s
BJI2 Beijing 38.36 345 P **P** **03 20 40.1 +0.1**
BJI2 sP **sP** **03 21 18.3 +2.5**
BJI2 PcP **PcP** **03 22 53.0 +1.3**
BJI2 S **S** **03 26 29.3 +2.4**
BJI2 pmax pmax
comp=Z,130nm,1.1s
BJI2 pmax pmax
comp=Z,270nm,3.5s
BJI2 L L
comp=Z,420nm,14.1s
BJI2 L L
comp=Z,470nm,18.8s
BJI2 L L
comp=Z,420nm,20.2s
BJT Baijiatuau 38.36 345 P **P** **03 20 40.2 +0.2**
BJT pP **pP** **03 21 03.5 -0.3**
BJT sP **sP** **03 21 15.6 -0.3**
BJT PcP **PcP** **03 22 53.1 +1.4**
MORE Moreh 38.74 306 IAmb IAmb 03 20 44.8
comp=Z,103nm,1.3s
SNY Shenyang 38.84 355 ⇑P **P** **03 20 43.9 -0.1**
SNY pmax pmax
comp=Z,100nm,0.9s
SAIH SAIHA 39.05 303*eP* **P** **03 20 47.1 +0.8**
SAIH IAmb IAmb 03 20 48.4
comp=Z,117nm,0.7s
IMP Imphal 39.30 307*eP* **P** **03 20 47.1 -1.2**
IMP IAmb IAmb 03 25 39.4
comp=Z,108nm,1.1s
JTM Tenmabayashi 39.42 16 P **P** **03 20 48.9 0.0**
PSTR Posyet 39.55 3*d*i P **P** **03 20 50.4 +0.5**
MOKO MOKOCHONG 39.58 309*eP* **P** **03 20 51.3 +0.7**
MOKO IAmb IAmb 03 21 03.8
comp=Z,83nm,1.0s
KOHI KOHIMA 39.60 308*eP* **P** **03 20 50.8 0.0**
KOHI IAmb IAmb 03 20 52.5
comp=Z,102nm,0.9s

LZDM Lanzhou Array 39.73 329 P **P** **03 20 53.4 +1.5**
comp=Z,291nm,0.9s,baz=160,slow=10,SNR=169
LZDM PcP **PcP** **03 22 58.2 +1.6**
comp=Z,16nm,0.8s,baz=144,slow=5.2,SNR=3.2
comp=Z,291nm,0.9s
LZH Lanzhou 39.75 329 P **P** **03 20 54.0 +2.1**
LZH pP pwP 03 21 22.6 +3.9
LZH sP sP 03 21 31.3 +4.2
LZH PP **PP** **03 22 25.6 +0.3**
LZH S **S** **03 26 48.4 +0.2**
LZH SS **SS** **03 29 45.4 -2.8**
LZH pmax pmax
comp=Z,1μm,1.8s
LZH pmax pmax
comp=Z,2μm,4.2s
LZH L L
comp=Z,1μm,16.8s
LZH L L
comp=Z,760nm,16.5s
LZH L L
comp=Z,1μm,17.5s
PASG PASIGHAT 39.87 312*eP* **P** **03 20 53.6 +0.8**
PASG IAmb IAmb 03 20 55.2
comp=Z,106nm,1.4s
JORH JORHAT 39.99 309*eP* **P** **03 20 54.7 +0.9**
VLA Vladivostok 40.09 4*d*i P **P** **03 20 55.0 +0.7**
VLA pmax pmax
comp=Z,258nm,1.3s
SILR SILCHAR 40.20 306*eP* **P** **03 20 56.9 +1.3**
HHC Hu-ho-hao-te 40.47 341⇑*i*P **P** **03 20 58.6 +0.9**
HHC pP pP 03 21 21.1 -0.4
HHC S **S** **03 26 57.8 -0.9**
HHC pmax pmax
comp=Z,120nm,1.1s
HHC pmax pmax
comp=Z,310nm,5.2s
HHC L L
comp=Z,600nm,21.8s
HHC L L
comp=Z,420nm,17.1s
HHC L L
comp=Z,370nm,16.1s
ITAN ITANAGAR 40.60 310*eP* **P** **03 21 00.2 +1.3**
BELO BELONIA 40.66 303*eP* **P** **03 21 01.1 +1.7**
CN2 Changchun 40.68 357⇑P **P** **03 20 58.3 -0.9**
CN2 *ep*P pP 03 21 22.3 -1.0
CN2 *es* **S** **03 27 01.8 +0.4**
CN2 pmax pmax
comp=Z,300nm,6.0s
ZIRO ZIRO 40.70 310*eP* **P** **03 21 01.0 +1.1**
H11S3 WAKE ISLAND Hy 40.90 65 T T 04 04 36.2
baz=253,slow=75,SNR=12
H11S2 WAKE ISLAND Hy 40.91 65 T T 04 04 39.5
baz=253,slow=75,SNR=13
H11S1 WAKE ISLAND Hy 40.91 65 T T 04 04 38.9
baz=253,slow=75,SNR=11
BTO2 Baotou 40.96 339*eP* **P** **03 21 01.5 -0.3**
BTO2 pP **pP** **03 21 25.0 -0.5**
BTO2 PP **PP** **03 22 39.6 +1.3**
BTO2 S **S** **03 27 06.1 +0.1**
BTO2 pmax pmax
comp=Z,79nm,1.0s
BTO2 pmax pmax
comp=Z,420nm,4.7s
BTO2 L L
comp=Z,1μm,13.1s
BTO2 L L
comp=Z,1μm,8.9s
BTO2 L L
comp=Z,870nm,10.8s
TEZP TEZPUR 41.06 308*eP* **P** **03 21 02.5 -0.2**
AGT Agartala 41.09 304*eP* **P** **03 21 04.5 +1.5**
JEM Erimo 41.15 17 P **P** **03 21 03.3 +0.2**
USRK Ussuriysk Ar. 41.17 4 P **P** **03 21 02.9 -0.4**
comp=Z,112nm,0.8s,baz=189,slow=7.7,SNR=116
comp=Z,112nm,0.8s
SHL Shillong 41.30 306 P **P** **03 21 05.1 +0.3**
SHL Shillong 41.30 306 P **P** **03 21 05.8 +1.0**
SNR=82
SHL Shillong 41.30 306*eP* **P** **03 21 05.6 +0.8**
SHL IAmb IAmb 03 21 06.7
comp=Z,115nm,0.5s
H11N1 WAKE ISLAND Hy 41.45 63 T T 04 05 09.4
baz=250,slow=75,SNR=22
MDJ Mudanjiang 41.46 2 IAmb IAmb 03 21 09.0
comp=Z,193nm,1.0s
MDJ Mudanjiang 41.46 2 P **P** **03 21 05.5 -0.1**
MDJ pmax pmax
comp=Z,200nm,1.1s
MDJ pmax pmax
comp=Z,940nm,4.3s
H11N2 WAKE ISLAND Hy 41.46 63 T T 04 05 10.2
baz=250,slow=75,SNR=12
H11N3 WAKE ISLAND Hy 41.47 63 T T 04 05 10.8
baz=250,slow=75,SNR=28
GUWA GUWAHATI 41.74 307*eP* **P** **03 21 08.0 -0.2**
XLT XiLinHaoTe 42.06 347*eP* **P** **03 21 10.3 -0.3**
XLT PP **PP** **03 22 50.5 +0.4**
XLT PcP **PcP** **03 23 04.6 +1.0**
XLT S **S** **03 27 21.3 -0.7**
XLT pmax pmax
comp=Z,110nm,1.1s
XLT pmax pmax
comp=Z,210nm,4.5s
TAWA Tawang 42.26 309*eP* **P** **03 21 14.3 +1.5**
TEY Ternei 42.54 9*eP* **P** **03 21 14.4 +0.1**
TEY pmax pmax
comp=Z,90nm,1.1s
BNX BinXian 42.56 359⇓P **P** **03 21 13.8 -0.7**
BNX pP **pP** **03 21 36.8 -1.7**
BNX S **S** **03 27 28.9 -0.2**
BNX pmax pmax
comp=Z,83nm,1.0s
BNX pmax pmax
comp=Z,320nm,7.0s
ASAJ Asahikawa 42.93 15 P **P** **03 21 16.8 -0.8**
comp=Z,61nm,0.7s,baz=233,slow=13,SNR=45
comp=Z,61nm,0.7s
JKA Kamikawa-asahi 42.93 15 IAmb IAmb 03 21 20.1
comp=Z,67nm,0.8s
DHUB DHUBRI 43.02 306*eP* **P** **03 21 18.7 +0.1**
GTA2 Gaotai 44.43 328⇑P **P** **03 21 31.3 +1.4**
GTA2 PcP **PcP** **03 23 13.5 +1.7**
GTA2 S **S** **03 27 55.8 -1.2**
GTA2 pmax pmax
comp=Z,500nm,0.9s
GTA2 pmax pmax
comp=Z,850nm,7.3s
GTA2 L L
comp=Z,1μm,18.7s
GTA2 L L
comp=Z,1μm,16.2s
GTA2 L L
comp=Z,580nm,17.8s
SHBG Sahibganj 44.64 303*eP* **P** **03 21 33.3 +1.7**
SHBG IAmb IAmb 03 21 34.6
comp=Z,105nm,0.8s
GTK Tadong 44.71 307*eP* **P** **03 21 32.9 +0.6**
GOMU GeErMu 45.02 321 P **P** **03 21 36.8 +2.0**
GOMU S **S** **03 28 07.6 +1.6**
GOMU pmax pmax
comp=Z,77nm,1.4s
YSS Yuzhno-Sakhali 45.62 14 P **P** **03 21 38.8 -0.1**
YSS Yuzhno-Sakhali 45.62 14 P **P** **03 21 38.8 -0.1**
YSS Yuzhno-Sakhali 45.62 14*ae*P **P** **03 21 38.5 -0.4**
YSS pmax pmax
comp=Z,70nm,0.8s
YSS pmax pmax
comp=Z,200nm,6.2s
YSS Yuzhno-Sakhali 45.62 14 P **P** **03 21 38.2 -0.6**
KNTI KHUNTI 45.86 300⇑*eP* **P** **03 21 42.3 +1.0**
VIS Vishakhapatnam 46.13 292*eP* **P** **03 21 44.7 +1.3**
KLR Kul'dur 46.16 3 P **P** **03 21 42.7 -0.5**
comp=Z,44nm,0.6s,baz=204,slow=6.0,SNR=148
comp=Z,44nm,0.6s
KLR Kul'dur 46.16 3*c*i P **P** **03 21 42.6 -0.5**
KLR pmax pmax
comp=Z,97nm,1.1s
RAGD RAYAGADA 46.38 294*eP* **P** **03 21 46.8 +1.4**
RAGD IAmb IAmb 03 21 48.3
comp=Z,59nm,0.8s
EVN Everest 46.41 307 P **P** **03 21 46.7 +0.4**
EVN IAmb IAmb 03 21 49.0
comp=Z,316nm,1.4s
GAYA Gaya 46.50 302*eP* **P** **03 21 47.4 +1.2**

HIA	**Hailar**	**46.62**	**353**		IAmb		IAmb	03 21 47.9	
	comp=Z,98nm,1.2s								
HIA	**Hailar**	**46.62**	**353**	*c*	*i*P		**P**	**03 21 46.6**	**-0.2**
HIA					pmax		pmax		
	comp=Z,98nm,1.2s								
HEH	**HeiHe**	**47.07**	**360**		*e*P		**P**	**03 21 49.4**	**-0.9**
HEH					PcP		**PcP**	**03 23 21.0**	**+0.4**
HEH					S		**S**	**03 28 29.8**	**-4.4**
HEH					pmax		pmax		
	comp=Z,130nm,1.1s								
PALK	**Pallekele**	**47.25**	**277**		P		**P**	**03 21 52.5**	**+0.2**
PALK					IAmb		IAmb	03 21 54.3	
	comp=Z,222nm,1.6s								
PALK	**Pallekele**	**47.25**	**277**	*i*	P		**P**	**03 21 52.2**	**-0.1**
	SNR=12								
PALK	**Pallekele**	**47.25**	**277**	*d*	*i*P		**P**	**03 21 52.6**	**+0.3**
PALK					pmax		pmax		
	comp=Z,177nm,1.5s								
PALK	**Pallekele**	**47.25**	**277**		P		**P**	**03 21 52.5**	**+0.2**
UGL	**Uglegorsk**	**47.45**	**13**		*e*P		**P**	**03 21 53.2**	**0.0**
UGL					pmax		pmax		
	comp=Z,350nm,1.0s								
GRNR	**Gornyy**	**48.12**	**7**⇑		*i*P		**P**	**03 21 58.4**	**0.0**
GRNR					pmax		pmax		
	comp=N,40nm,0.9s								
GRNR					pmax		pmax		
	comp=Z,90nm,0.8s								
ULN	**Ulaanbaatar**	**48.19**	**341**		P		**P**	**03 21 59.5**	**+0.4**
ULN					IAmb		IAmb	03 22 00.9	
	comp=Z,194nm,1.0s								
ULN	**Ulaanbaatar**	**48.19**	**341**	*c*	*i*P		**P**	**03 21 59.5**	**+0.4**
ULN					pmax		pmax		
	comp=Z,237nm,1.1s								
ULN	**Ulaanbaatar**	**48.19**	**341**		P		**P**	**03 22 00.1**	**+1.0**
MDRS	**Chennai**	**48.22**	**285**		*e*P		**P**	**03 22 00.3**	**+0.6**
BLSP	**Bilaspur**	**48.30**	**297**		*e*P		**P**	**03 22 01.2**	**+0.9**
BLSP					IAmb		IAmb	03 22 02.9	
	comp=Z,120nm,1.3s								
SONM	**Songino Array**	**48.38**	**341**		P		**P**	**03 22 00.9**	**+0.3**
	comp=Z,84nm,1.1s,baz=154,slow=7.7,SNR=229								
SONM					PP		**PP**	**03 23 53.8**	**-0.4**
	comp=Z,22nm,1.1s,baz=166,slow=7.5,SNR=5.8								
	comp=Z,84nm,1.1s								
SONM	**Songino Array**	**48.38**	**341**		P		**P**	**03 22 00.8**	**+0.3**
SONM					IAmb		IAmb	03 22 02.2	
	comp=Z,180nm,1.3s								
SONM	**Songino Array**	**48.38**	**341**		P		**P**	**03 22 00.8**	**+0.3**
SONM					pmax		pmax		
	comp=Z,180nm,1.3s								
VJD	**Vijayawada**	**48.39**	**289**⇑		*e*P		P	03 22 08.2	+7.2
VJD					IAmb		IAmb	03 22 10.2	
	comp=Z,131nm,0.8s								
TYV	**Tymovskoe**	**49.26**	**12**		*e*P		**P**	**03 22 07.4**	**+0.3**
TYV					pmax		pmax		
	comp=Z,42nm,1.1s								
TYV					pmax		pmax		
	comp=Z,500nm,4.1s								
ALBI	**Allahabad**	**49.59**	**301**		*e*P		**P**	**03 22 10.8**	**+0.7**
SALM	**Salem**	**50.08**	**283**		*e*P		**P**	**03 22 14.8**	**+0.9**
SALM					IAmb		IAmb	03 22 16.4	
	comp=Z,141nm,1.2s								
CIT	**Chita**	**50.30**	**348**		*e*P		**P**	**03 22 15.0**	**-0.1**
CIT					*e*			03 22 30.6	
CIT					*e*			03 22 37.6	
CIT					*e*			03 23 33.4	
CIT					*e*			03 24 14.4	
CIT					*e*			03 25 13.0	
CIT					pmax		pmax		
	comp=Z,304nm,2.2s								
HYB	**Hyderabad**	**50.52**	**290**		*e*P		**P**	**03 22 17.8**	**+0.6**
HYB					IVmB_BB			03 22 18.7	
	comp=Z,2μm,1.3s								
HYB					*es*P		**sP**	**03 22 54.1**	**+0.9**
HYB					*e*PcP		**PcP**	**03 23 34.2**	**+0.3**
HYB					*e*S		**S**	**03 29 25.5**	**+1.7**
ZEA	**Zeya**	**50.57**	**359**		*e*P		**P**	**03 22 15.9**	**-1.0**
ZEA					*e*			03 23 35.8	
ZEA					pmax		pmax		
	comp=N,20nm,1.3s								
ZEA					pmax		pmax		
	comp=Z,40nm,1.2s								
KOD	**Kodaikanal**	**50.63**	**281**		*e*P		**P**	**03 22 18.3**	**-0.1**
KOD					IAmb		IAmb	03 22 21.5	
	comp=Z,116nm,0.9s								
NGP	**Nagpur**	**50.86**	**295**		*e*P		**P**	**03 22 20.3**	**+0.6**
NGP					IAmb		IAmb	03 22 22.3	
	comp=Z,42nm,0.9s								
ZAK	**Zakamensk**	**51.61**	**340**		*e*P		**P**	**03 22 24.3**	**-0.6**
ZAK					*e*			03 23 37.8	
ZAK					pmax		pmax		
	comp=Z,67nm,1.6s								
JHNI	**Jhansi**	**52.39**	**300**		*e*P		**P**	**03 22 30.9**	**-0.1**
LGTI	**Lohaghat**	**52.42**	**305**		*e*P		**P**	**03 22 30.9**	**-0.5**
LGTI					IAmb		IAmb	03 22 36.2	
	comp=Z,24nm,0.7s								
TLY	**Talaya**	**52.60**	**341**		P		**P**	**03 22 32.7**	**+0.6**
TLY					IAmb		IAmb	03 22 34.8	
	comp=Z,171nm,1.6s								
TLY	**Talaya**	**52.60**	**341**	*c*	*i*P		**P**	**03 22 32.7**	**+0.6**
TLY					pmax		pmax		
	comp=Z,111nm,1.5s								
TLY	**Talaya**	**52.60**	**341**		P		**P**	**03 22 33.2**	**+1.1**
AKL	**Akola**	**52.61**	**294**		*e*P		**P**	**03 22 33.7**	**+1.0**
AKL					IAmb		IAmb	03 22 35.0	
	comp=Z,118nm,0.8s								
BHPL	**Bhopal**	**52.83**	**297**		*e*P		**P**	**03 22 35.0**	**+0.6**
BHPL					IAmb		IAmb	03 22 36.4	
	comp=Z,93nm,0.8s								
IRK	**Irkutsk**	**52.88**	**342**		*e*P		**P**	**03 22 34.1**	**-0.1**
IRK					*e*			03 30 09.7	
IRK					pmax		pmax		
	comp=Z,197nm,2.3s								
NRDN	**NARMADA NAGAR**	**52.93**	**296**		*e*P		**P**	**03 22 39.7**	**+4.6**
NRDN					IAmb		IAmb	03 22 41.1	
	comp=Z,105nm,0.7s								
SKR	**Severo-Kuril's**	**53.10**	**22**		*e*P		P	03 22 50.4	+15
SKR					*e*			03 24 34.0	
SKR					pmax		pmax		
	comp=Z,500nm,4.1s								
SKR					MLR		MLR		
	comp=Z,1μm,15.0s								
JOSI	**Joshimath**	**53.26**	**306**		*e*P		**P**	**03 22 38.7**	**+1.1**
GUNA	**GUNA**	**53.28**	**299**		*e*P		**P**	**03 22 38.5**	**+0.9**
GUNA					IAmb		IAmb	03 22 39.4	
	comp=Z,126nm,0.8s								
MNGI	**Mangalore**	**53.40**	**284**		*e*P		**P**	**03 22 39.2**	**+0.6**
MOY	**Mondy**	**53.48**	**339**		*e*P		**P**	**03 22 39.4**	**+0.7**
MOY					pmax		pmax		
	comp=Z,300nm,1.8s								
MSVF	**Nonsavu**	**53.49**	**115**		P		**P**	**03 22 39.6**	**+0.3**
	comp=Z,13nm,0.5s,baz=239,slow=6.5,SNR=3.7								
	comp=Z,13nm,0.5s								
MSVF	**Nonsavu**	**53.49**	**115**		P		**P**	**03 22 37.3**	**-2.0**
MSVF	**Nonsavu**	**53.49**	**115**		P		**P**	**03 22 37.3**	**-2.0**
MSVF					pmax		pmax		
	comp=Z,45nm,1.0s								
KNGR	**Kungurtug, Tuv**	**53.93**	**336**	*d*	*i*P		**P**	**03 22 43.5**	**+1.5**
KNGR					pmax		pmax		
	comp=Z,248nm,1.2s								
WMQ	**Urumqi**	**54.02**	**325**		⇑P		**P**	**03 22 44.1**	**+1.3**
WMQ					S		**S**	**03 30 09.8**	**-1.0**
WMQ					sS		sS	03 30 57.6	+2.3
WMQ					pmax		pmax		
	comp=Z,140nm,1.3s								
WMQ					pmax		pmax		
	comp=Z,450nm,4.5s								
WMQ					L		L		
	comp=Z,830nm,15.9s								
WMQ					L		L		
	comp=Z,720nm,20.9s								
WMQ					L		L		
	comp=Z,400nm,24.2s								
DDI	**Dehra Dun**	**54.39**	**306**		*e*P		**P**	**03 22 47.2**	**+1.5**
HNLY	**HANLEY**	**54.55**	**309**		*e*P		**P**	**03 22 48.8**	**+1.4**
HNLY					IAmb		IAmb	03 22 55.2	
	comp=Z,30nm,0.7s								
NDI	**New Delhi**	**54.55**	**303**		*e*P		**P**	**03 22 46.8**	**0.0**
AYAN	**Aya Nagar**	**54.56**	**303**		*e*P		**P**	**03 22 46.9**	**0.0**
NPLP	**NPLP New Delhi**	**54.57**	**303**		*e*P		**P**	**03 22 47.1**	**+0.2**
NPLP					IAmb		IAmb	03 22 48.4	
	comp=Z,100nm,0.7s								
KAD	**Karad**	**54.62**	**289**		*e*P		**P**	**03 22 47.5**	**0.0**
DGTI	**Dogotuki**	**54.62**	**112**		P		**P**	**03 22 48.5**	**+1.0**
KLP	**Kalpa**	**54.66**	**307**⇓		*e*P		**P**	**03 22 48.9**	**+1.0**
KLP					IAmb		IAmb	03 23 01.9	
	comp=Z,130nm,1.0s								
HMDM	**Hanimaadhoo**	**54.69**	**276**		P		**P**	**03 22 48.1**	**0.0**
HMDM	**Hanimaadhoo**	**54.69**	**276**		P		**P**	**03 22 47.5**	**-0.6**
KUDL	**Kundal**	**54.99**	**302**		*e*P		**P**	**03 22 50.1**	**+0.2**
KUDL					IAmb		IAmb	03 22 53.2	
	comp=Z,116nm,0.7s								
KAAM	**Kaadhehdhoo**	**55.00**	**269**		P		**P**	**03 22 49.4**	**-0.9**
KAAM	**Kaadhehdhoo**	**55.00**	**269**		P		**P**	**03 22 50.4**	**+0.1**
POO	**Poona**	**55.13**	**290**		*e*P		**P**	**03 22 51.1**	**-0.1**
POO					IAmb		IAmb	03 22 52.5	
	comp=Z,116nm,0.9s								
KKR	**Kurukshetra**	**55.28**	**305**		*e*P		**P**	**03 22 52.0**	**0.0**
SMLA	**Simla**	**55.39**	**306**		*e*P		**P**	**03 22 54.2**	**+1.5**
SMLA					IAmb		IAmb	03 23 01.3	
	comp=Z,118nm,0.8s								
PEA0B	**Petropavlovsk-**	**55.63**	**21**		IAmb		IAmb	03 22 55.5	
	comp=Z,126nm,1.0s								
PEA0B	**Petropavlovsk-**	**55.63**	**21**	*c*	*i*P		**P**	**03 22 54.1**	**0.0**
PETK	**Petropavlovsk-**	**55.63**	**21**		P		**P**	**03 22 54.1**	**0.0**
	comp=Z,82nm,0.9s,baz=199,slow=4.3,SNR=55								
PETK					PKPPKP		P'P'df	03 52 46.8	-8.9
	comp=Z,5.4nm,0.9s,baz=41,slow=2.9,SNR=3.8								
	comp=Z,82nm,0.9s								
PETK	**Petropavlovsk-**	**55.63**	**21**		P		**P**	**03 22 54.3**	**+0.2**
BOD	**Bodaibo**	**55.76**	**351**⇓		*i*P		**P**	**03 22 54.3**	**-0.6**
BOD					pmax		pmax		
	comp=Z,160nm,1.6s								
PET	**Petropavlovsk**	**55.92**	**22**	*c*	*i*P		**P**	**03 22 55.6**	**-0.5**
PET					pmax		pmax		
	comp=Z,135nm,1.4s								
AJM	**Ajmer**	**56.10**	**300**		*e*P		**P**	**03 22 58.3**	**+0.3**
AJM					IAmb		IAmb	03 22 59.5	
	comp=Z,74nm,1.0s								
BHK	**Bhakra**	**56.11**	**306**		*e*P		**P**	**03 22 59.4**	**+1.5**
BHK					IAmb		IAmb	03 23 01.2	
	comp=Z,116nm,0.9s								
H08S2	**Diego Garcia H**	**56.35**	**259**		P		**P**	**03 23 00.6**	**+1.0**
	baz=51,slow=10.0,SNR=4.1								
DGAR	**Diego Garcia**	**56.36**	**259**		P		**P**	**03 23 00.7**	**+0.7**
H08S3	**Diego Garcia H**	**56.36**	**259**		P		**P**	**03 23 01.1**	**+1.5**
	baz=51,slow=10.0,SNR=12								
H08S1	**Diego Garcia H**	**56.37**	**259**		P		**P**	**03 23 01.2**	**+1.4**
	baz=51,slow=10.0,SNR=3.7								
UDPR	**Udaipur**	**56.45**	**298**		*e*P		**P**	**03 23 01.6**	**+1.1**
DHRM	**DHARAMSHALA**	**56.46**	**307**		*e*P		**P**	**03 23 01.6**	**+0.9**
DHRM					IAmb		IAmb	03 23 03.3	
	comp=Z,122nm,1.2s								
ALCI	**Alchi Leh**	**56.47**	**310**		*e*P		**P**	**03 23 01.8**	**+0.9**
ALCI					IAmb		IAmb	03 23 03.4	
	comp=Z,77nm,0.7s								
TLWR	**Talawar**	**56.64**	**307**		*e*P		**P**	**03 23 03.0**	**+1.2**
TSSA	**Tissa**	**56.78**	**308**		*e*P		**P**	**03 23 03.7**	**+0.8**
THN	**Thein Dam**	**56.96**	**307**		*e*P		**P**	**03 23 05.0**	**+1.1**
THN					IAmb		IAmb	03 23 07.7	
	comp=Z,114nm,0.8s								
ZSN	**Zaisan**	**57.78**	**327**		*e*P		**P**	**03 23 10.2**	**+0.8**
ZSN					pmax		pmax		
	comp=Z,54nm,1.3s								
ZSN	**Zaisan**	**57.78**	**327**		*e*P		**P**	**03 23 10.3**	**+0.8**
	comp=Z,54nm,1.3s								
JMU	**Jammu**	**57.81**	**307**⇑		*e*P		**P**	**03 23 11.6**	**+1.7**
DGZ	**Jazzator, Alta**	**57.83**	**330**	*c*	*i*P		**P**	**03 23 10.7**	**+0.8**
DGZ					pmax		pmax		
	comp=Z,151nm,1.0s								
WUS	**Wushi**	**57.92**	**318**		IAmb		IAmb	03 23 13.2	
	comp=Z,92nm,0.8s								
WUS	**Wushi**	**57.92**	**318**		P		**P**	**03 23 12.2**	**+1.5**
SHLS	**Shalkode**	**58.69**	**320**	*c*	*i*P		**P**	**03 23 15.1**	**-0.9**
SHLS					pmax		pmax		
	comp=Z,63nm,0.9s								
SHLS	**Shalkode**	**58.69**	**320**⇑		*i*P		**P**	**03 23 15.2**	**-0.8**
	comp=Z,63nm,0.9s								
MK31	**Makanchi Array**	**58.85**	**325**		P		**P**	**03 23 17.9**	**+1.0**
MK31	**Makanchi Array**	**58.85**	**325**		P		**P**	**03 23 17.9**	**+1.0**
MK31					pmax		pmax		
	comp=Z,179nm,0.9s								
MKAR	**Makanchi Array**	**58.85**	**325**		P		**P**	**03 23 17.9**	**+1.0**
	comp=Z,166nm,0.7s,baz=120,slow=8.6,SNR=1066								
MKAR					PKKP		PKKPdf	03 44 23.9	-9.1
	comp=Z,3.3nm,1.1s,baz=285,slow=3.1,SNR=5.9								
MKAR					PKPPKP		P'P'df	03 52 42.2	-9.4
	comp=Z,0.7nm,0.9s,baz=40,slow=2.5,SNR=4.9								
MKAR					PKP2bc		**P'P'bc**	**03 52 59.4**	**-3.0**
	comp=Z,1.0nm,0.9s,baz=310,slow=3.1,SNR=4.4								
	comp=Z,166nm,0.7s								
MKAR	**Makanchi Array**	**58.85**	**325**		P		**P**	**03 23 17.4**	**+0.5**
YAK	**Yakutsk**	**58.89**	**1**		P		**P**	**03 23 16.5**	**-0.3**
	comp=Z,372nm,0.7s,baz=175,slow=1.7,SNR=81								
	comp=Z,372nm,0.7s								
YAK	**Yakutsk**	**58.89**	**1**		P		**P**	**03 23 16.6**	**-0.2**
YAK	**Yakutsk**	**58.89**	**1**	*c*	*i*P		**P**	**03 23 16.5**	**-0.3**
YAK					*e**PP		**pP**	**03 23 42.1**	**0.0**
YAK					*e*			03 23 58.3	
YAK					*e*S		**S**	**03 31 15.8**	**+1.5**
YAK					*e*			03 32 54.0	
YAK					*e*SS		**SS**	**03 35 07.7**	**-1.8**
YAK					*e*SSS		SSS	03 37 43.5	
YAK					pmax		pmax		
	comp=Z,442nm,0.9s								
YAK					pmax		pmax		
	comp=E,28nm,1.0s								
YAK					pmax		pmax		
	comp=N,132nm,1.1s								
YAK					smax		smax		
	comp=N,159nm,3.5s								
YAK					smax		smax		
	comp=E,23nm,1.4s								
YAK	**Yakutsk**	**58.89**	**1**		P		**P**	**03 23 16.6**	**-0.3**
YAK					PcP		**PcP**	**03 24 05.4**	**+0.4**
UZB	**Uzynbulak**	**58.97**	**320**	*c*	*i*P		**P**	**03 23 18.9**	**+1.0**
UZB					*e*S		**S**	**03 31 17.7**	**+1.5**
UZB					pmax		pmax		
	comp=Z,71nm,0.9s								
UZB	**Uzynbulak**	**58.97**	**320**⇑		*i*P		**P**	**03 23 18.9**	**+1.0**
	comp=Z,71nm,0.9s								
UZB					*e*S		**S**	**03 31 17.8**	**+1.5**
MAKZ	**Makanchi**	**59.04**	**325**		P		**P**	**03 23 19.0**	**+0.8**
MAKZ	**Makanchi**	**59.04**	**325**		P		**P**	**03 23 19.0**	**+0.8**
MAKZ					pmax		pmax		
	comp=Z,294nm,0.9s								
PRZ	**Przheval'sk**	**59.06**	**319**		P		**P**	**03 23 19.1**	**+0.5**
PRZ	**Przheval'sk**	**59.06**	**319**		P		**P**	**03 23 19.1**	**+0.5**
PRZ					pmax		pmax		
	comp=Z,294nm,0.7s								
MA2	**Magadan**	**59.10**	**13**		P		**P**	**03 23 19.0**	**+0.6**
MA2	**Magadan**	**59.10**	**13**		P		**P**	**03 23 19.0**	**+0.6**
MA2					pmax		pmax		
	comp=Z,132nm,1.0s								
MA2	**Magadan**	**59.10**	**13**		P		**P**	**03 23 18.5**	**+0.1**
MA2					sP		**sP**	**03 23 54.2**	**-1.3**
MA2					PcP		**PcP**	**03 24 07.0**	**+1.1**
TARG	**Taragay, Kyrgy**	**59.11**	**318**		P		**P**	**03 23 20.2**	**+0.9**
TARG					IAmb		IAmb	03 23 32.2	
	comp=Z,84nm,0.8s								
TARG	**Taragay, Kyrgy**	**59.11**	**318**		P		**P**	**03 23 20.2**	**+0.9**
TARG					pmax		pmax		
	comp=Z,84nm,0.8s								
KPKS	**Kokpek**	**59.33**	**320**		*e*P		**P**	**03 23 21.2**	**+0.8**
KPKS	**Kokpek**	**59.33**	**320**		*e*P		**P**	**03 23 21.3**	**+0.8**
NIL	**Nilore**	**59.34**	**308**		P		**P**	**03 23 21.5**	**+0.9**
NIL					IAmb		IAmb	03 23 23.4	
	comp=Z,119nm,1.1s								
NIL	**Nilore**	**59.34**	**308**		P		**P**	**03 23 21.5**	**+0.9**
NIL					pmax		pmax		
	comp=Z,119nm,1.1s								
NIL	**Nilore**	**59.34**	**308**		P		**P**	**03 23 21.7**	**+1.1**
KSH2	**Kashi**	**59.56**	**314**		P		**P**	**03 23 23.5**	**+1.3**
KSH2					pP		pwP	03 23 49.9	-0.8
KSH2					S		**S**	**03 31 27.6**	**+3.5**
KSH2					pmax		pmax		
	comp=Z,130nm,1.2s								
BHUJ	**Bhuj**	**59.81**	**295**		*e*P		**P**	**03 23 25.5**	**+1.6**
NRN	**Naryn**	**60.20**	**317**		IAmb		IAmb	03 23 28.8	
	comp=Z,69nm,0.8s								
TDK	**Taldyqorghan**	**60.24**	**322**		*e*P		**P**	**03 23 27.5**	**+1.0**
TDK					pmax		pmax		
	comp=Z,47nm,0.8s								
TDK	**Taldyqorghan**	**60.24**	**322**		*e*P		**P**	**03 23 27.6**	**+1.0**
	comp=Z,47nm,0.8s								
MDOK	**Medeo**	**60.25**	**319**		*e*P		**P**	**03 23 27.9**	**+1.1**
MDOK					*e*S		**S**	**03 31 34.3**	**+1.5**
MDOK	**Medeo**	**60.25**	**319**		*e*P		**P**	**03 23 27.9**	**+1.1**
MDOK					*e*S		**S**	**03 31 34.4**	**+1.5**
TNSS	**Tian-Shan**	**60.26**	**319**		*e*P		**P**	**03 23 27.8**	**+0.7**
TNSS	**Tian-Shan**	**60.26**	**319**		*e*P		**P**	**03 23 27.9**	**+0.7**
AAA	**Alma-Ata**	**60.36**	**319**		*e*P		**P**	**03 23 28.4**	**+1.0**
AAA	**Alma-Ata**	**60.36**	**319**		*e*P		**P**	**03 23 28.5**	**+1.0**
ULHL	**Ulahol**	**60.38**	**318**		P		**P**	**03 23 29.1**	**+1.4**
	SNR=40								
LBZ	**Lake Benmore**	**60.40**	**146**		P		**P**	**03 23 28.0**	**+0.4**
LBZ					IAmb		IAmb	03 23 29.0	
	comp=Z,91nm,1.2s								
BOOM	**Boomskoye usch**	**60.69**	**318**		IAmb		IAmb	03 23 32.1	
	comp=Z,78nm,0.9s								
TKM2	**Tokmak 2**	**61.10**	**318**		P		**P**	**03 23 33.8**	**+1.2**
	SNR=170								
KHZ	**Kahutara**	**61.14**	**143**		P		**P**	**03 23 32.4**	**-0.2**
BKZ	**Black Stump Fm**	**61.23**	**138**		P		**P**	**03 23 33.2**	**-0.1**
BKZ	**Black Stump FM**	**61.23**	**138**		P		**P**	**03 23 33.4**	**+0.1**
BKZ					IAmb		IAmb	03 23 49.2	
	comp=Z,74nm,1.0s								
RTZ	**Ruatahuna**	**61.27**	**138**		P		**P**	**03 23 33.2**	**-0.4**
KBK	**Karagaybulak**	**61.42**	**318**		P		**P**	**03 23 36.2**	**+1.5**
	SNR=30								
UCH	**Uchtor**	**61.54**	**317**		P		**P**	**03 23 37.6**	**+1.7**
	SNR=157								
CHMS	**Chumysh**	**61.70**	**318**		P		**P**	**03 23 37.3**	**+0.9**
	SNR=26								
AAK	**Ala-Archa**	**61.72**	**318**		P		**P**	**03 23 38.1**	**+1.3**
	SNR=40								
AAK	**Ala-Archa**	**61.72**	**318**		P		**P**	**03 23 37.5**	**+0.7**
AAK	**Ala-Archa**	**61.72**	**318**	*i*	P		**P**	**03 23 37.6**	**+0.9**
	SNR=45								
AAK	**Ala-Archa**	**61.72**	**318**	*c*	*e*P		**P**	**03 23 38.0**	**+1.3**
AAK					pmax		pmax		
	comp=Z,99nm,1.7s								
AAK	**Ala-Archa**	**61.72**	**318**		P		**P**	**03 23 37.1**	**+0.4**
ZAA0	**Zalesovo Array**	**61.79**	**333**		IAmb		IAmb	03 23 37.5	
	comp=Z,115nm,1.0s								
ZALV	**Zalesovo Beam**	**61.79**	**333**		P		**P**	**03 23 36.1**	**-0.6**
	comp=Z,81nm,0.9s,baz=111,slow=6.5,SNR=180								
ZALV					PKP2bc		**P'P'bc**	**03 52 52.8**	**-2.0**
	comp=Z,3.6nm,0.9s,baz=277,slow=2.4,SNR=5.6								
	comp=Z,81nm,0.9s								
ZALV	**Zalesovo Beam**	**61.79**	**333**		P		**P**	**03 23 36.2**	**-0.5**
USP	**Osepenka**	**61.98**	**318**		P		**P**	**03 23 39.3**	**+1.0**
	SNR=139								
AFI	**Afiamalu**	**62.05**	**107**		P		**P**	**03 23 38.5**	**-0.7**
	comp=Z,46nm,0.9s,baz=270,slow=20,SNR=5.9								
	comp=Z,46nm,0.9s								
EKS2	**Erkin-Say**	**62.21**	**317**		P		**P**	**03 23 41.5**	**+1.5**
	SNR=148								
ARSB	**Arslanbob**	**62.23**	**316**		IAmb		IAmb	03 23 42.4	
	comp=Z,101nm,0.8s								
SEY	**Seymchan**	**62.46**	**12**		P		**P**	**03 23 41.7**	**+0.7**
	comp=Z,114nm,1.1s,baz=217,slow=5.9,SNR=209								
	comp=Z,114nm,1.1s								
SEY	**Seymchan**	**62.46**	**12**	*c*	*i*P		**P**	**03 23 41.8**	**+0.8**
SEY					pmax		pmax		
	comp=Z,176nm,1.3s								
KBL	**Kabul**	**62.94**	**307**		P		**P**	**03 23 45.5**	**+0.4**
KBL	**Kabul**	**62.94**	**307**		P		**P**	**03 23 45.5**	**+0.4**
KBL					pmax		pmax		
	comp=Z,60nm,1.0s								
KBL	**Kabul**	**62.94**	**307**		P		**P**	**03 23 45.0**	**-0.1**
	SNR=31								
KBL					S		**S**	**03 32 06.8**	**-0.5**
KURBB	**Kurchatov Arra**	**63.01**	**327**		P		**P**	**03 23 45.2**	**+0.3**
	comp=Z,195nm,0.8s,baz=124,slow=5.9,SNR=903								
KURBB					PP		**PP**	**03 26 06.3**	**+1.6**
	comp=Z,7.2nm,1.0s,baz=130,slow=7.8,SNR=4.2								
KURBB					PKKP		PKKPdf	03 44 18.0	-10
	comp=Z,2.3nm,1.0s,baz=287,slow=4.0,SNR=5.2								
KURBB					PKPPKP		**P'P'df**	**03 52 44.1**	**-0.7**
	comp=Z,0.7nm,0.9s,baz=298,slow=3.2,SNR=4.6								
	comp=Z,195nm,0.8s								
KURK	**Kurchatov**	**63.01**	**327**		P		**P**	**03 23 45.5**	**+0.6**
KURK	**Kurchatov**	**63.01**	**327**		P		**P**	**03 23 45.5**	**+0.6**
KURK					pmax		pmax		
	comp=Z,249nm,0.9s								
KURK	**Kurchatov**	**63.01**	**327**		P		**P**	**03 23 45.4**	**+0.4**
KURK					S		**S**	**03 32 08.1**	**+1.1**
BTLS	**Baital**	**63.02**	**320**		*e*P		**P**	**03 23 46.1**	**+1.0**
BTLS	**Baital**	**63.02**	**320**		*e*P		**P**	**03 23 46.2**	**+1.0**
BTK	**Batken**	**63.31**	**314**		IAmb		IAmb	03 23 49.4	
	comp=Z,100nm,1.0s								
DZA	**Taraz**	**63.96**	**317**		*e*P		**P**	**03 23 52.3**	**+0.9**
DZA					pmax		pmax		
	comp=Z,58nm,0.8s								
DZA	**Taraz**	**63.96**	**317**		*e*P		**P**

MSFE Esma-Masafi 72.29 296 *i* P P 03 24 45.6 +1.7
SNR=13
MASF Masafi 72.29 296 P P 03 24 46.3 +2.4
SNR=5.5
SHAO Shalim 72.29 288 *i* P P 03 24 44.2 +0.2
SNR=6.0
SHAO Shalim 72.29 288 P P 03 24 45.1 +1.2
SPIA Saint Paul Isl 72.48 30 P P 03 24 44.6 +0.3
SPIA Saint Paul Isl 72.48 30 P P 03 24 44.8 +0.6
baz=247
ALNE Al Ain 72.55 294 *i* P P 03 24 45.9 +0.6
SNR=23
ALNE Al Ain 72.55 294 P P 03 24 46.9 +1.5
SNR=28
NAZ Nazwa, Dubai 72.70 295 *i* P P 03 24 46.9 +0.7
SNR=6.3
NAZ Nazwa, Dubai 72.70 295 P P 03 24 49.0 +2.7
SNR=5.3
FAQ Al Faqa, Dubai 72.75 295 *i* P P 03 24 47.1 +0.6
SNR=5.4
MSEY Mahe Island 72.83 264 P P 03 24 47.8 +0.5
MSEY Mahe Island 72.83 264 *i* P P 03 24 47.5 +0.2
SNR=7.4
MSEY Mahe Island 72.83 264 P P 03 24 47.8 +0.5
MSEY pmax pmax
comp=Z,64nm,1.1s
MSEY Mahe Island 72.83 264 P P 03 24 50.8 +3.5
DMTO DMTO 72.92 288 P P 03 24 49.0 +1.4
ASUD Al Ashush, Dub 72.98 295 *i* P P 03 24 49.2 +1.4
SNR=5.3
ASUD Al Ashush, Dub 72.98 295 P P 03 24 49.0 +1.1
ASUD S S 03 34 06.4 -0.2
AJN Ajban 73.28 295 P P 03 24 50.9 +1.3
SNR=5.3
AJN S S 03 34 09.4 -0.7
UNV Unalaska Valle 73.31 34 P P 03 24 49.3 +0.1
baz=252,SNR=6.4
AB31 Akbulak array 73.49 321 *e*P P 03 24 50.3 -0.1
ABKAR Akbulak array 73.49 321 P P 03 24 50.4 +0.1
DOK Doka 73.73 288 P P 03 24 54.0 +1.5
SNR=15
KIP Kipapa 74.03 69⇑ *i* P P 03 24 54.7 +0.6
KIP pmax pmax
comp=Z,615nm,1.8s
WHFO Wadi Hawf 74.05 288 P P 03 24 54.7 +0.3
SNR=12
ABTO Aybut 74.48 287 P P 03 24 57.4 +0.5
SNR=7.2
GAMB Gambell 74.55 24 P P 03 24 56.7 +0.5
GAMB IAmb IAmb 03 24 58.1
comp=Z,149nm,0.9s
GAMB Gambell 74.55 24 P P 03 24 57.0 +0.8
baz=244,SNR=19
MZR Muzera 74.56 293 *i* P P 03 24 58.2 +1.1
SNR=14
MZR Muzera 74.56 293 P P 03 24 58.5 +1.3
SNR=11
SVE Sverdlovsk 75.22 328 *de* P P 03 25 00.2 0.0
SVE pmax pmax
comp=Z,143nm,1.1s
JRN Qarnain Island 75.25 295 P P 03 25 01.4 +0.4
FALS False Pass 75.33 34 P P 03 25 01.1 +0.2
FALS False Pass 75.33 34 P P 03 25 01.0 0.0
baz=254,SNR=12
M11K Mekoryuk 75.62 28 IAmb IAmb 03 25 17.2
comp=Z,175nm,1.2s
M11K Mekoryuk 75.62 28 P P 03 25 03.3 +0.9
baz=250
ARTI Arti 76.28 328 P P 03 25 05.9 -0.4
ARTI IAmb IAmb 03 25 06.6
comp=Z,90nm,1.1s
ARTI Arti 76.28 328 *c i* P P 03 25 05.7 -0.6
ARTI 03 25 18.1
ARTI *PP *pwP 03 25 36.1 +0.3
ARTI S S 03 34 43.8 +1.5
ARTI SS SS 03 39 35.0 -3.4
ARTI pmax pmax
comp=Z,92nm,1.1s
PUH Pauahi 76.57 71 P P 03 25 08.0 -0.9
TRNA Turayna 76.72 295 P P 03 25 10.0 +0.5
TNA Tin City 76.77 23 P P 03 25 09.3 +0.5
baz=247,SNR=16
K13K Kusilvak Mount 76.84 27 IAmb IAmb 03 25 11.7
comp=Z,208nm,0.9s
K13K Kusilvak Mount 76.84 27 P P 03 25 10.5 +1.1
baz=251
M13K Dall Lake 76.97 28 IAmb IAmb 03 25 12.5
comp=Z,192nm,0.8s
M13K Dall Lake 76.97 28 P P 03 25 11.2 +1.2
baz=253,SNR=36
SHMA Al-Shehemyia 77.00 296 P P 03 25 11.9 +0.9
SMRA Abu-Samra 77.07 295 P P 03 25 11.8 +0.3
SDPT Sand Point 77.09 34 P P 03 25 10.9 +0.1
SDPT Sand Point 77.09 34 P P 03 25 11.0 +0.1
baz=256,SNR=10
F14K Arctic Creek 77.35 23 P P 03 25 13.4 +1.2
baz=249,SNR=64
ANM Nome 77.41 24 IAmb IAmb 03 25 14.5
comp=Z,98nm,1.2s
ANM Nome 77.41 24 P P 03 25 13.5 +1.0
baz=250,SNR=58
CNBA Chernabura Isl 77.47 34 IAmb IAmb 03 25 41.9
comp=Z,344nm,1.5s
CHNA Chernabura Isl 77.47 34 P P 03 25 13.0 0.0
CHNA Chernabura Isl 77.47 34 P P 03 25 13.3 +0.3
baz=257
L14K Kuka Creek 77.55 28 P P 03 25 14.4 +1.1
baz=253
J14K Nanvaranak Lak 77.58 26 IAmb IAmb 03 25 15.7
comp=Z,119nm,1.1s
J14K Nanvaranak Lak 77.58 26 P P 03 25 14.5 +1.0
baz=252
N14K Kuskokwak Cree 77.63 29 P P 03 25 14.5 +0.8
baz=254
O14K Tigyukauivet M 77.65 30 IAmb IAmb 03 25 16.4
comp=Z,177nm,1.0s
O14K Tigyukauivet M 77.65 30 P P 03 25 15.0 +1.1
baz=255
M14K Bethel 77.72 28 P P 03 25 15.4 +1.2
baz=254,SNR=110
F15K North Star Dit 78.09 23 IAmb IAmb 03 25 18.4
comp=Z,120nm,1.2s
F15K North Star Dit 78.09 23 P P 03 25 17.2 +1.0
baz=250
G15K Niukluk 78.09 24 P P 03 25 16.7 +0.5
baz=251
L15K Ungalak Mounta 78.20 27 P P 03 25 17.5 +0.6
baz=254
M15K Kasigluk River 78.31 28 P P 03 25 18.1 +0.6
baz=255
K15K Wolf Creek Mou 78.35 27 IAmb IAmb 03 25 20.2
comp=Z,222nm,0.9s
K15K Wolf Creek Mou 78.35 27 P P 03 25 19.2 +1.5
baz=254,SNR=118
O15K Ungalikthiuk R 78.35 30 IAmb IAmb 03 25 19.6
comp=Z,90nm,0.8s
O15K Ungalikthiuk R 78.35 30 P P 03 25 18.6 +0.8
baz=256,SNR=27
CHGN Chignik 78.44 33 IAmb IAmb 03 25 19.3
comp=Z,136nm,0.9s
CHGN Chignik 78.44 33 P P 03 25 18.1 -0.2
baz=258
N15K Kwethluk River 78.46 29 IAmb IAmb 03 25 20.6
comp=Z,169nm,1.0s
N15K Kwethluk River 78.46 29 P P 03 25 19.3 +0.9
baz=256
C16K Lisburne Hills 78.72 20 IAmb IAmb 03 25 21.5
comp=Z,187nm,1.1s
C16K Lisburne Hills 78.72 20 P P 03 25 20.3 +0.7
baz=249
G16K Koyuk River 78.89 24 P P 03 25 21.6 +0.9
baz=252,SNR=60
J16K Anvik River 79.03 26 IAmb IAmb 03 25 24.1
comp=Z,199nm,0.9s
J16K Anvik River 79.03 26 P P 03 25 23.0 +1.5
baz=255,SNR=99
L16K Owhat River 79.13 28 P P 03 25 23.1 +1.0
baz=256,SNR=145
I17K Unalakleet 79.15 25 P P 03 25 23.6 +1.6
baz=254,SNR=32
N16K Nishlik Lake 79.17 29 P P 03 25 23.7 +1.3
baz=257
M16K Timber Creek 79.21 28 IAmb IAmb 03 25 24.7
comp=Z,227nm,1.1s
M16K Timber Creek 79.21 28 P P 03 25 23.4 +1.0
baz=256
P16K Nushagak River 79.24 30 P P 03 25 23.6 +0.9
baz=258
O16K Kokwok River B 79.31 30 IAmb IAmb 03 25 25.1
comp=Z,146nm,0.9s
D17K Noatak River 79.33 21 P P 03 25 24.5 +1.5
baz=251
RDOG Red Dog Mine 79.50 21 IAmb IAmb 03 25 26.1
comp=Z,200nm,1.1s
RDOG Red Dog Mine 79.50 21 P P 03 25 25.0 +1.1
baz=252,SNR=141
C17K DeLong Mountai 79.54 20 P P 03 25 25.1 +0.9
baz=251,SNR=63
G17K Kiwalik Mounta 79.61 24 P P 03 25 25.8 +1.2
baz=254
F17K Baldwin Pennin 79.63 23 IAmb IAmb 03 25 26.9
comp=Z,98nm,0.9s
F17K Baldwin Pennin 79.63 23 P P 03 25 25.8 +1.2
baz=253
LKRN Lenkeran, Azer 79.69 309 P P 03 25 26.6 +1.1
J17K VABM Dome 79.72 26 IAmb IAmb 03 25 27.8
comp=Z,172nm,0.9s
J17K VABM Dome 79.72 26 P P 03 25 26.7 +1.5
baz=256
H17K Granite Mounta 79.75 24 IAmb IAmb 03 25 27.8
comp=Z,98nm,0.9s
H17K Granite Mounta 79.75 24 P P 03 25 26.8 +1.4
baz=255
L17K Donlin 79.77 27 P P 03 25 27.1 +1.6
baz=257
R17L Mt. Peulik Vol 79.81 32 P P 03 25 26.0 +0.2
baz=259
O17K Koliganek Bris 79.84 30 P P 03 25 26.5 +0.6
baz=258
Q16K King Salmon 79.85 31 P P 03 25 26.9 +1.0
baz=259,SNR=16
K17K Iditarod 79.91 27 P P 03 25 27.7 +1.5
baz=257
N17K Nushagak Hills 79.95 29 IAmb IAmb 03 25 29.2
comp=Z,142nm,1.1s
N17K Nushagak Hills 79.95 29 P P 03 25 27.9 +1.4
baz=258
M17K Holitna River 80.01 28 IAmb IAmb 03 25 29.6
comp=Z,165nm,1.1s
M17K Holitna River 80.01 28 P P 03 25 28.6 +1.7
baz=258,SNR=32
P17K Kvichak River 80.06 30 P P 03 25 27.5 +0.5
baz=259
E18K Tukpahlearik C 80.16 22 P P 03 25 28.8 +1.4
baz=254,SNR=342
C18K Utukok River 80.29 21 IAmb IAmb 03 25 30.2
comp=Z,104nm,0.8s
C18K Utukok River 80.29 21 P P 03 25 29.1 +0.8
baz=253,SNR=92
F18K Selawik 80.29 23 P P 03 25 29.2 +1.0
baz=255
H18K Honhosa River 80.44 24 IAmb IAmb 03 25 31.1
comp=Z,266nm,1.6s
H18K Honhosa River 80.44 24 P P 03 25 29.9 +0.8
baz=256
G18K Tagagawik 80.51 24 IAmb IAmb 03 25 31.3
comp=Z,99nm,1.1s
G18K Tagagawik 80.51 24 P P 03 25 30.1 +0.7
baz=256
L18K Granite Mounta 80.53 27 IAmb IAmb 03 25 32.1
comp=Z,88nm,0.8s
L18K Granite Mounta 80.53 27 P P 03 25 31.0 +1.4
baz=258
N18K Kilae Creek 80.61 29 IAmb IAmb 03 25 32.5
comp=Z,166nm,1.3s
N18K Kilae Creek 80.61 29 P P 03 25 30.8 +0.7
baz=259
Q18K Katmai Hardscr 80.69 31 P P 03 25 31.3 +0.7
baz=260,SNR=26
AKT Akhty 80.70 311 *e* P P 03 25 31.4 +0.3
AKT *e**PP pP 03 25 56.6 -1.0
AKT *eS S 03 35 32.8 +2.5
AKT pmax pmax
comp=Z,84nm,0.9s
P18K Big Mountain, 80.70 30 P P 03 25 30.5 -0.1
baz=260
J18K Innoko River 80.77 26 IAmb IAmb 03 25 32.9
comp=Z,134nm,1.1s
J18K Innoko River 80.77 26 P P 03 25 31.8 +0.9
baz=258
A19K Wainwright 80.79 19 P P 03 25 32.3 +1.6
baz=253
M18K Stony River 80.79 28 P P 03 25 32.1 +1.2
baz=259
O18K Koktuh Hills 80.79 30 P P 03 25 31.9 +0.8
baz=260
SII Sitkinak Islan 80.80 33 P P 03 25 32.4 +1.2
baz=261
GCSA Galena City Sc 80.97 25 P P 03 25 32.9 +1.0
baz=258
MAK Makhachkala 80.97 313 *e* P P 03 25 31.5 -0.8
MAK *e**PP pP 03 25 59.0 +0.2
MAK *eS S 03 35 32.0 -0.8
MAK *e**SS sS 03 36 17.7 -0.8
MAK pmax pmax
comp=Z,141nm,1.2s
C19K Lookout Ridge 80.98 20 P P 03 25 33.5 +1.6
baz=254
F19K Shaleruckik Mo 81.07 23 P P 03 25 33.1 +0.8
baz=257
SEKA Sheki 81.08 311 P P 03 25 33.9 +0.8
MNGR Mingechevir, A 81.14 311 P P 03 25 34.9 +1.7
G19K Purcell Mounta 81.19 23 P P 03 25 34.2 +1.2
baz=257
O19K Port Alsworth 81.29 30 P P 03 25 35.1 +1.4
baz=261
N19K Bonanza Creek 81.31 29 P P 03 25 35.2 +1.3
baz=260
H19K Roundabout Mou 81.31 24 IAmb IAmb 03 25 36.2
comp=Z,192nm,0.8s
H19K Roundabout Mou 81.31 24 P P 03 25 35.0 +1.4
baz=258
D19K Kuna River 81.34 21 P P 03 25 35.0 +1.2
baz=256
J19K Poorman 81.35 26 IAmb IAmb 03 25 36.3
comp=Z,197nm,0.9s
J19K Poorman 81.35 26 P P 03 25 35.1 +1.2
baz=259
L19K White Mountain 81.37 28 IAmb IAmb 03 25 36.5
comp=Z,136nm,1.1s
L19K White Mountain 81.37 28 P P 03 25 35.4 +1.4
baz=260
OHAK Old Harbor 81.38 33 P P 03 25 35.0 +0.8
baz=262
E19K Redstone River 81.42 22 P P 03 25 35.6 +1.3
baz=257
KIRV Kirov 81.47 329 *c i* P P 03 25 34.4 -0.2
GANJ Ganja 81.71 310 P P 03 25 37.0 +0.7
BELG Belogornoye 81.73 322 *c i* P P 03 25 35.5 -0.6
BELG pmax pmax
comp=Z,51nm,1.0s
KDAK Kodiak Island 81.83 32 P P 03 25 37.3 +0.8
KDAK IAmb IAmb 03 25 38.3
comp=Z,154nm,0.8s
KDAK Kodiak Island 81.83 32 *d i* P P 03 25 36.3 -0.2
KDAK pmax pmax
comp=Z,205nm,0.8s
KDAK Kodiak Island 81.83 32 P P 03 25 37.4 +0.9
baz=263
KDAK Kodiak Island 81.83 32 P P 03 25 37.2 +0.6
KDAK PcP PcP 03 25 41.5 -0.4
KDAK x x 03 26 16.8
RAYN Ar Rayn 81.90 293 P P 03 25 38.1 +0.4
RAYN IAmb IAmb 03 25 42.6
comp=Z,70nm,0.8s
RAYN Ar Rayn 81.90 293 *i* P P 03 25 38.1 +0.4
SNR=106
RAYN Ar Rayn 81.90 293 P P 03 25 38.1 +0.4
RAYN pmax pmax
comp=Z,70nm,0.8s
RAYN Ar Rayn 81.90 293 P P 03 25 38.3 +0.5
RAYN Ar Rayn 81.90 293 P P 03 25 38.1 +0.4
RAYN PcP PcP 03 25 41.3 -1.8
F20K Avaraart Lake 81.91 23 IAmb IAmb 03 25 39.3
comp=Z,130nm,0.9s
F20K Avaraart Lake 81.91 23 P P 03 25 38.0 +1.2
baz=258
K20K Telida 81.92 26 IAmb IAmb 03 25 39.6
comp=Z,120nm,1.0s
K20K Telida 81.92 26 P P 03 25 38.4 +1.4
baz=260
D20K Etivluk River 81.93 21 IAmb IAmb 03 25 39.2
comp=Z,164nm,0.8s
D20K Etivluk River 81.93 21 P P 03 25 38.1 +1.2
baz=257
H20K Anotleneega Mo 81.95 24 P P 03 25 38.4 +1.4
baz=259
E20K Nigu River 81.98 21 P P 03 25 38.6 +1.4
baz=258
I20K Naaghedeneel 81.99 25 P P 03 25 38.9 +1.7
baz=260
J20K Nowinta River 82.03 26 IAmb IAmb 03 25 40.0
comp=Z,165nm,0.9s
J20K Nowinta River 82.03 26 P P 03 25 38.8 +1.4
baz=260
B20K Meade River 82.03 20 IAmb IAmb 03 25 39.7
comp=Z,158nm,0.9s
B20K Meade River 82.03 20 P P 03 25 38.7 +1.4
baz=257
Q20K Shuyak Island 82.04 31 P P 03 25 38.8 +1.2
baz=263
SYI Shuyak Island 82.04 31 IAmb IAmb 03 25 39.5
comp=Z,147nm,0.9s
M20K Styx River 82.12 28 IAmb IAmb 03 25 41.5
comp=Z,104nm,0.8s
M20K Styx River 82.12 28 P P 03 25 39.4 +1.3
baz=262
OPO Ambohidratompo 82.23 251 P P 03 25 40.2 +0.6
comp=Z,22nm,0.9s,baz=83,slow=3.1,SNR=21
comp=Z,22nm,0.9s
ABPO Ambohimpanom 82.24 250 P P 03 25 39.8 +0.1
ABPO Ambohimpanom 82.24 250 P P 03 25 39.8 +0.1
ABPO pmax pmax
comp=Z,17nm,0.9s
ABPO Ambohimpanom 82.24 250 P P 03 25 39.7 +0.1
ABPO pP pP 03 26 06.9 +0.9
ABPO sP sP 03 26 16.8 -0.1
NAX Nakhchivan 82.27 309 P P 03 25 40.2 +0.8
N20K Mount Spurr 82.46 29 P P 03 25 40.2 +0.3
baz=262
SPCR Spurr Chakacha 82.46 29 P P 03 25 40.1 +0.2
baz=262
IMAR Indian Mountai 82.49 24 P P 03 25 40.9 +1.0
A21K Barrow 82.50 18 P P 03 25 40.9 +1.1
baz=257
HOM Homer 82.55 30 P P 03 25 41.2 +0.9
baz=263
VNDA Vanda 82.56 173 P P 03 25 39.9 0.0
comp=Z,19nm,0.8s,baz=313,slow=8.0,SNR=1.8
comp=Z,19nm,0.8s
VNDA Vanda 82.56 173 P P 03 25 40.1 +0.1
VNDA Vanda 82.56 173 P P 03 25 40.1 +0.1
VNDA pmax pmax
comp=Z,30nm,1.0s
C21K Knifeblade Rid 82.67 21 P P 03 25 42.1 +1.4
baz=259
G21K Allakaket 82.68 23 IAmb IAmb 03 25 43.2
comp=Z,205nm,1.0s
G21K Allakaket 82.68 23 P P 03 25 42.3 +1.5
baz=261
PPLA Purkeypile 82.70 27 P P 03 25 41.7 +0.6
baz=262,SNR=51
CHUM Lake Minchumin 82.78 26 P P 03 25 42.6 +1.3
baz=262
F21K Alatna River 82.80 23 IAmb IAmb 03 26 04.0
comp=Z,99nm,1.2s
F21K Alatna River 82.80 23 P P 03 25 42.5 +1.0
baz=260
B21K Ikpikpuk River 82.81 20 P P 03 25 43.0 +1.6
baz=259
H21K Melozitna Rive 82.83 24 P P 03 25 42.9 +1.3
baz=261
E21K Killik River 82.83 21 IAmb IAmb 03 25 43.9
comp=Z,210nm,1.1s
E21K Killik River 82.83 21 P P 03 25 42.8 +1.3
baz=260
SKT Skwentna 82.88 28 IAmb IAmb 03 25 42.9
comp=Z,131nm,0.9s
SKT Skwentna 82.88 28 P P 03 25 41.7 -0.3
baz=263
GNI Garni 82.89 310 P P 03 25 43.5 +0.8
GNI Garni 82.89 310 P P 03 25 44.2 +1.5
GNI Garni 82.89 310 *c i* P P 03 25 43.7 +1.0
GNI pmax pmax
comp=Z,70nm,1.0s
GNI Garni 82.89 310 P P 03 25 44.1 +1.4
CAPN Captain Cook N 82.92 29 P P 03 25 43.2 +1.1
baz=263
VOI Vohitsoka 82.94 248 P P 03 25 43.5 +0.2
VOI Vohitsoka 82.94 248 P P 03 25 43.8 +0.6
TBLG Delisi 82.95 312 P P 03 25 43.7 +0.9
A22K Sinclair Lake 82.96 19 P P 03 25 43.3 +1.1
baz=259
BRSE Bradley Lake S 83.01 30 P P 03 25 43.0 +0.4
baz=264
I21K Tanana 83.10 25 P P 03 25 44.4 +1.4
baz=262
B22K Teshekpuk Lake 83.35 20 P P 03 25 45.2 +1.1
baz=260
BPAW Bear Paw Mtn. 83.39 26 IAmb IAmb 03 25 46.4
comp=Z,156nm,1.0s
BPAW Bear Paw Mtn. 83.39 26 P P 03 25 45.1 +0.6
baz=263
TRLG Trialeti 83.42 311 P P 03 25 46.2 +0.8
H22K Ishtalitna Cre 83.44 24 P P 03 25 46.3 +1.5
baz=263
MAW Mawson 83.52 200 P P 03 25 46.5 +1.5
comp=Z,33nm,0.8s,baz=58,slow=6.0,SNR=13
comp=Z,33nm,0.8s
MAW Mawson 83.52 200 P P 03 25 46.3 +1.3
MAW Mawson 83.52 200 P P 03 25 46.3 +1.3
MAW pmax pmax
comp=Z,61nm,1.1s
CUT Chulitna 83.52 28 P P 03 25 46.2 +1.0
baz=264
E22K Anaktuvuk Pass 83.57 22 P P 03 25 46.6 +1.2
baz=262
O22K Cooper Landing 83.59 30 P P 03 25 45.5 -0.1
baz=265
MLY Manley 83.60 25 IAmb IAmb 03 25 47.6
comp=Z,155nm,0.9s
MLY Manley 83.60 25 P P 03 25 46.4 +0.8
baz=263
TRF Thorofare Moun 83.62 27 P P 03 25 46.2 +0.3
baz=264
RC01 Rabbit Creek A 83.64 29 P P 03 25 46.0 +0.2
baz=265
SEW Seward 83.69 30 P P 03 25 46.4 +0.3
baz=265
NCK Nalchik 83.86 313⇓ *i* P P 03 25 48.0 +0.6
NCK pmax pmax
comp=Z,18nm,0.6s
PMR Palmer 83.98 29 P P 03 25 47.5 0.0
baz=265
COLD Coldfoot 84.07 23 P P 03 25 49.1 +1.2
baz=264
G23K Bananza Creek 84.08 23 P P 03 25 49.7 +1.6
baz=264
D23K Nanushuk River 84.09 21 P P 03 25 49.6 +1.6
baz=263
KARS Kars 84.17 310 IAmb IAmb 03 25 51.7
comp=Z,109nm,0.7s
I23K Minto, Yukon-K 84.19 25 P P 03 25 49.6 +1.1
baz=265
C23K Itkillik River 84.22 20 P P 03 25 49.9 +1.3
baz=263
MCK McKinley 84.25 26 P P 03 25 49.1 +0.1
baz=265
NEA2 Nenana 84.27 25 IAmb IAmb 03 25 51.5
comp=Z,123nm,1.0s
NEA2 Nenana 84.27 25 P P 03 25 49.7 +0.7
baz=265
KNK Knik Glacier 84.29 29 P P 03 25 49.7 +0.6
baz=266
GOF Gofitskoye 84.30 315 *ce* P P 03 25 49.8 +0.3
WAT1 Susitna Watana 84.35 27 P P 03 25 49.6 +0.1
baz=266
KBZ Khabaz 84.37 313 P P 03 25 50.0 +0.1
comp=Z,26nm,1.0s,baz=87,slow=2.3,SNR=48
comp=Z,26nm,1.0s
KBZ Khabaz 84.37 313 *c i* P P 03 25 49.7 -0.2
KBZ pmax pmax
comp=Z,45nm,1.0s
SML Sawmill 84.38 28 P P 03 25 50.1 +0.4
baz=266
E23K Chandalar 84.38 22 P P 03 25 50.8 +1.2
baz=264
TOLK Toolik Lake Re 84.46 21 P P 03 25 51.1 +1.2
baz=264
NEUR Neytrino 84.50 313 *ce* P P 03 25 50.9 0.0
NEUR pmax pmax

comp=Z,42nm,1.5s
KIV Kislovodsk 84.53 314 ⇓P P 03 25 51.1 +0.2
KIV Kislovodsk 84.53 314 P P 03 25 51.4 +0.6
KIV Kislovodsk 84.53 314 *i* P P 03 25 51.2 +0.2
SNR=5.2
KIV Kislovodsk 84.53 314 *e*P P 03 25 51.0 +0.2
KIV *e* 03 36 04.0
KIV pmax pmax
comp=Z,30nm,1.1s
SHA1 Shidzhatmaz 84.54 313*c* *i*P P 03 25 50.9 -0.2
ATD Arta Tunnel 84.63 281 P P 03 25 53.4 +1.5
M23K Glacier View 84.66 28 P P 03 25 51.5 +0.5
baz=266
WRH Wood River Hil 84.68 26 IAmb IAmb 03 25 52.6
comp=Z,153nm,1.2s
WAT6 Susitna Watana 84.70 28 P P 03 25 51.8 +0.3
baz=266,SNR=209
P23K Montague Islan 84.71 30 P P 03 25 52.2 +0.9
baz=267
D24K Happy Valley 84.78 21 P P 03 25 52.8 +1.3
baz=265
E24K Your Creek 84.80 22 IAmb IAmb 03 25 54.7
comp=Z,60nm,0.9s
E24K Your Creek 84.80 22 P P 03 25 52.8 +1.1
baz=265
COLA College 84.81 25 P P 03 25 51.9 +0.3
COLA College 84.81 25*c* *i*P P 03 25 50.6 -1.0
COLA pmax pmax
comp=Z,287nm,2.3s
COLA College 84.81 25 P P 03 25 52.4 +0.7
baz=266
CCB Clear Creek Bu 84.81 25 IAmb IAmb 03 25 53.0
comp=Z,138nm,1.2s
SCM Sheep Creek Mo 84.85 28 P P 03 25 52.5 +0.4
baz=267
H24K Noodor Dome 84.87 24 IAmb IAmb 03 25 54.3
comp=Z,127nm,1.2s
H24K Noodor Dome 84.87 24 P P 03 25 53.1 +1.1
baz=266
C24K Franklin Bluff 84.87 20 IAmb IAmb 03 25 54.1
comp=Z,176nm,0.9s
C24K Franklin Bluff 84.87 20 P P 03 25 53.0 +1.1
baz=265
DHY Denali Highway 84.90 27 IAmb IAmb 03 25 55.8
comp=Z,89nm,1.1s
GLI Glacier Island 84.91 29 P P 03 25 53.0 +0.7
baz=267
F24K Squaw Lake 84.99 23 IAmb IAmb 03 25 55.9
comp=Z,128nm,1.0s
F24K Squaw Lake 84.99 23 P P 03 25 53.8 +1.3
baz=266
POKR Poker Plat Res 85.00 25 P P 03 25 53.7 +1.0
baz=266
G24K Hadweenzic Riv 85.09 23 IAmb IAmb 03 25 55.6
comp=Z,100nm,0.9s
G24K Hadweenzic Riv 85.09 23 P P 03 25 54.1 +1.0
baz=266
HDA Harding Lake 85.17 26 P P 03 25 54.4 +0.9
baz=267
ILAR Eielson Array 85.22 25 P P 03 25 52.0 -1.7
comp=Z,21nm,0.9s,baz=261,slow=3.0,SNR=146
comp=Z,21nm,0.9s
ILAR Eielson Array 85.22 25 P P 03 25 52.8 -0.9
ILAR Eielson Array 85.22 25 P P 03 25 52.8 -0.9
Q23K Middleton Isla 85.22 31 P P 03 25 55.0 +1.2
baz=268
VRH Novokhopyorsk 85.32 321 *e*P P 03 25 53.7 -0.8
VRH pmax pmax
comp=Z,200nm,0.8s
M24K Tolsona, Glenn 85.41 28 P P 03 25 55.8 +0.9
baz=268
KLU Klutina 85.51 29 P P 03 25 56.1 +0.8
baz=268
EYAK Cordova Ski Ar 85.56 30 P P 03 25 56.2 +0.7
baz=268
G25K Bearman Lake 85.64 23 P P 03 25 56.7 +1.0
baz=267
K24K Donnelly Dome 85.66 26 IAmb IAmb 03 26 02.0
comp=Z,167nm,1.3s
K24K Donnelly Dome 85.66 26 P P 03 25 56.1 +0.1
baz=268
D25K Kavik River 85.66 21 P P 03 25 56.5 +0.6
baz=267
PAX Paxson 85.77 27 IAmb IAmb 03 25 59.1
comp=Z,140nm,1.1s
PAX Paxson 85.77 27 P P 03 25 56.5 -0.1
baz=268
PRP Porcupine Dome 85.82 25 P P 03 25 56.8 -0.1
baz=268
F25K Christian Rive 85.85 23 IAmb IAmb 03 26 00.4
comp=Z,47nm,0.8s
F25K Christian Rive 85.85 23 P P 03 25 58.0 +1.1
baz=268
J25K Salcha River, 85.86 26 IAmb IAmb 03 26 05.3
comp=Z,178nm,1.6s
J25K Salcha River, 85.86 26 P P 03 25 57.6 +0.6
baz=268
HARP HAARP 85.89 28 P P 03 25 57.8 +0.6
baz=269
E25K Arctic Village 85.90 22 IAmb IAmb 03 26 00.5
comp=Z,180nm,1.4s
E25K Arctic Village 85.90 22 P P 03 25 58.1 +1.0
baz=268
LABN Labinsk 85.94 314 *e*P P 03 25 57.3 -0.5
LABN *e**PP pP 03 26 25.2 +0.7
LABN *e*S SKSac 03 36 11.9 -2.1
LABN pmax pmax
comp=Z,97nm,0.9s
FYU Fort Yukon 85.98 24 IAmb IAmb 03 26 00.9
comp=Z,52nm,0.9s
RIDG Independent Ri 86.07 26 P P 03 25 58.1 +0.1
baz=269
ERBR Yeremizino-Bor 86.11 315 *e*P P 03 25 57.7 -0.8
ERBR *e**PP pP 03 26 25.6 +0.3
ERBR *e*S SKSac 03 36 14.4 -0.6
ERBR pmax pmax
comp=Z,173nm,1.1s
BMRM Bremner River 86.13 29 P P 03 25 59.0 +0.6
baz=269
N25K Chitina, Valde 86.14 29 P P 03 25 59.2 +0.7
baz=269
C26K Camden Bay 86.20 20 P P 03 25 59.7 +1.2
baz=268
KAIM Kayak Island 86.21 30 P P 03 25 59.9 +1.1
baz=269
BMAR Burnt Mountain 86.25 23 P P 03 25 59.9 +1.0
DOT Dot Lake 86.42 27 IAmb IAmb 03 26 04.0
comp=Z,126nm,1.4s
F26K Sheenjek River 86.43 22 P P 03 26 00.6 +0.9
baz=269
VSLR Vesyoloye 86.45 313*c* *i*P P 03 25 59.7 -0.6
VSLR pmax pmax
comp=Z,178nm,0.9s
SCRK Sand Creek 86.45 26 IAmb IAmb 03 26 05.7
comp=Z,267nm,1.9s
SCRK Sand Creek 86.45 26 P P 03 26 00.0 0.0
baz=270,SNR=33
G26K Porcupine Rive 86.56 23 P P 03 26 01.0 +0.7
baz=270
C27K Jago River 86.61 21 IAmb IAmb 03 26 03.3
comp=Z,75nm,1.0s
C27K Jago River 86.61 21 P P 03 26 01.0 +0.5
baz=269
KLMR Klimovskoe 86.63 331 *e*P P 03 25 59.5 -1.3
KLMR *e**PP pwP 03 26 30.0 -1.2
KLMR pmax pmax
comp=Z,122nm,1.1s
SOC Sochi 86.68 313 *e*P P 03 26 00.8 -0.6
SOC *e* 03 29 32.5
SOC *e*S SKSac 03 36 15.6 -3.0
SOC *e*SS SS 03 42 08.8 -4.7
SOC pmax pmax
comp=Z,23nm,0.7s
BGLC Bering Glacier 86.78 30 P P 03 26 02.4 +0.9
baz=270
I26K Coal Creek Min 86.81 25 IAmb IAmb 03 26 11.5
comp=Z,160nm,1.8s
I26K Coal Creek Min 86.81 25 P P 03 26 01.5 -0.1
baz=270
VORD Divnogorie 86.85 321 *e*P P 03 26 00.8 -1.2
VORD pmax pmax
comp=Z,90nm,0.8s
CRQE Cirque 86.87 29 P P 03 26 02.4 +0.3
baz=270
VORR Voronezh 86.89 321 *e*P P 03 26 02.1 -0.1
VORR pmax pmax
comp=Z,87nm,0.4s

MCARA McCarthy VSAT 86.90 29 P P 03 26 02.5 +0.4
baz=270
M26K Nabesna, AK 86.90 28 P P 03 26 02.6 +0.5
baz=270
VSR Storozhevoye 86.92 321 *e*P P 03 26 01.2 -1.2
VSR pmax pmax
comp=Z,90nm,0.8s
LPSR Galich'ya Gora 87.05 322 *e*P P 03 26 02.2 -0.7
LPSR pmax pmax
comp=Z,120nm,0.8s
ADZR Andozero 87.18 334 *e*P P 03 26 01.1 -2.2
ADZR pmax pmax
comp=Z,50nm,1.1s
E27K Coleen River 87.39 22 P P 03 26 04.9 +0.5
baz=272
G27K Doyon Strip 87.40 23 P P 03 26 05.0 +0.6
baz=272
M27K Edge Creek, AK 87.42 28 P P 03 26 05.2 +0.4
baz=272,SNR=24
L27K Beaver Creek, 87.43 27 P P 03 26 05.2 +0.5
baz=272
BCAR Beaver Creek A 87.45 27 P P 03 26 03.3 -1.4
MESA MESA 87.45 30 P P 03 26 05.3 +0.3
baz=272
I27K Kandik River 87.45 25 IAmb IAmb 03 26 06.9
comp=Z,89nm,1.0s
I27K Kandik River 87.45 25 P P 03 26 05.3 +0.5
baz=272
H27K Steamboat Moun 87.47 24 P P 03 26 05.4 +0.6
baz=272
D27M Malcolm River 87.58 21 P P 03 26 05.9 +0.6
baz=272
CTG Chitna Glacier 87.72 29 P P 03 26 06.1 -0.1
baz=272
MOS Moscow 87.73 326 *e*P P 03 26 04.8 -1.3
MOS *e* 03 29 32.7
MOS *e*S S 03 36 32.7 -6.8
MOS pmax pmax
comp=Z,136nm,1.1s
BVCY Beaver Creek 87.89 28 P P 03 26 07.1 +0.2
baz=272
F28M Old Crow 88.06 23 P P 03 26 07.7 +0.2
baz=273
YUK3 Moose Creek 88.11 28 P P 03 26 07.9 -0.3
baz=273
E28M Babbage River 88.13 22 IAmb IAmb 03 26 09.9
comp=Z,56nm,1.1s
E28M Babbage River 88.13 22 P P 03 26 08.4 +0.5
baz=273
I28M Miner Creek 88.16 25 IAmb IAmb 03 26 09.7
comp=Z,59nm,0.8s
I28M Miner Creek 88.16 25 P P 03 26 08.8 +0.6
baz=273
ANN Anapa 88.28 315 *e*P P 03 26 07.7 -1.3
ANN *e**PP pP 03 26 36.5 +0.8
ANN *e*S SKSac 03 36 26.4 -1.9
ANN pmax pmax
comp=Z,84nm,0.8s
O28M Mount Upton 88.29 29 P P 03 26 09.3 +0.2
baz=273
OBN Obninsk 88.36 325 ⇑P P 03 26 08.3 -0.9
OBN Obninsk 88.36 325 P P 03 26 08.6 -0.6
OBN Obninsk 88.36 325*d* *i*P P 03 26 08.4 -0.7
OBN *i* *PP pP 03 26 34.4 -1.6
OBN *e* 03 29 36.8
OBN *e*PPP PPP 03 31 33.2
OBN pmax pmax
comp=Z,213nm,1.7s
OBN Obninsk 88.36 325 P P 03 26 08.2 -0.9
comp=Z,137nm,1.2s
OBN Obninsk 88.36 325 P P 03 26 08.2 -0.9
OBN pP pP 03 26 35.2 -0.8
OBN sP sP 03 26 46.2 -0.7
D28M Stokes Point 88.37 21 P P 03 26 09.1 +0.2
baz=274
DAWY Dawson 88.47 26 P P 03 26 09.7 +0.1
baz=274,SNR=54
YUK8 Steele Glacier 88.47 29 P P 03 26 09.8 -0.2
baz=273
LVZ Lovozero 88.49 338*ce* P P 03 26 08.5 -1.1
LVZ pmax pmax
comp=Z,129nm,2.0s
H29M Whitestone 88.75 24 P P 03 26 10.8 0.0
baz=274
E29M Blow River 88.75 22 P P 03 26 10.7 0.0
baz=275
G29M Pine Creek 88.83 23 IAmb IAmb 03 26 12.4
comp=Z,63nm,1.0s
G29M Pine Creek 88.83 23 P P 03 26 11.7 +0.5
baz=275
I29M Ogilvie Camp, 88.84 25 IAmb IAmb 03 26 12.9
comp=Z,72nm,1.1s
I29M Ogilvie Camp, 88.84 25 P P 03 26 11.5 +0.2
baz=275
J29N Klondike Camp 88.95 26 IAmb IAmb 03 26 14.8
comp=Z,47nm,1.1s
J29N Klondike Camp 88.95 26 P P 03 26 12.5 +0.6
baz=275,SNR=28
APA Apatity 88.99 338⇓ *e*P P 03 26 10.0 -1.8
APA *e**PP pP 03 26 39.4 +0.7
APA *e* 03 29 42.4
APA pmax pmax
comp=Z,28nm,1.2s
M29M Somme Creek 89.01 28 P P 03 26 12.9 +0.6
baz=274
YUK4 Talbot Arm 89.01 29 P P 03 26 13.1 +0.8
baz=274
L29M L29M 89.11 27 P P 03 26 13.3 +0.8
baz=275
O29M Mount Kennedy 89.12 30 P P 03 26 13.4 +0.6
baz=274
YUK6 Outpost Mounta 89.18 29 P P 03 26 13.9 +0.7
baz=275
K29M Barlow Dome 89.31 26 P P 03 26 14.1 +0.5
baz=275,SNR=53
EPYK Eagle Plains 89.40 24 IAmb IAmb 03 26 15.3
comp=Z,58nm,1.1s
EPYK Eagle Plains 89.40 24 P P 03 26 13.6 -0.3
baz=276
G30M tAoh Zraii Nji 89.53 23 P P 03 26 14.0 -0.5
baz=276
HYT Haines Junctio 89.60 29 P P 03 26 15.1 0.0
baz=275
F30M Barrier River 89.62 22 IAmb IAmb 03 26 15.9
comp=Z,44nm,1.0s
F30M Barrier River 89.62 22 P P 03 26 14.9 +0.1
baz=277
I30M Mount Dempster 89.66 25 P P 03 26 15.1 -0.2
baz=276
N30M Aishikik Lake 89.74 29 P P 03 26 16.0 +0.4
baz=276
J30M Hart River 89.75 25 P P 03 26 15.9 +0.2
baz=276
M30M Minto, Yukon 89.77 27 P P 03 26 16.0 +0.3
baz=276
P30M Million Dollar 89.94 30 P P 03 26 17.2 +0.7
baz=276
KIBK Kibwezi 90.05 268 P P 03 26 18.9 +0.8
SNR=5.3
MAYO Mayo, Yukon 90.06 26 IAmb IAmb 03 26 19.1
comp=Z,105nm,0.9s
MAYO Mayo, Yukon 90.06 26 P P 03 26 17.3 +0.4
baz=277
O30N Mendenhall 90.30 29 P P 03 26 18.7 +0.5
baz=277
N31M Braeburn, Yuko 90.36 28 P P 03 26 18.1 -0.4
baz=277
INK Inuik 90.37 22 IAmb IAmb 03 26 18.9
comp=Z,47nm,1.1s
INK Inuvik 90.37 22 P P 03 26 17.9 -0.4
baz=279
F31M Tsiigehtchic 90.42 22 IAmb IAmb 03 26 19.1
comp=Z,52nm,1.1s
F31M Tsiigehtchic 90.42 22 P P 03 26 17.8 -0.7
baz=279
H31M Peel River 90.43 24 P P 03 26 18.1 -0.6
baz=278
MMAI Mount Meron Ar 90.53 303 P P 03 26 20.3 +0.4
comp=Z,31nm,1.0s,baz=138,slow=8.9,SNR=8.7
comp=Z,31nm,1.0s
S31K Pelican 90.55 32 P P 03 26 19.3 0.0
baz=276
SIM Simferopol' 90.63 315 *e*P P 03 26 19.0 -1.0
SIM pmax pmax
comp=Z,55nm,0.9s
R31K City Hall, Gus 90.76 32 P P 03 26 20.7 +0.5
baz=277

SKAG Skagway 90.84 30 P P 03 26 21.0 +0.4
baz=277
WHY Whitehorse 90.90 29 P P 03 26 21.1 0.0
baz=278
M31M Drury Creek, Y 90.92 28 P P 03 26 21.4 +0.4
baz=278
SIT Sitka 91.14 33 P P 03 26 23.0 +0.9
baz=277
PUL Pulkovo 91.27 330⇓ *e*P P 03 26 20.9 -1.7
PUL pmax pmax
comp=Z,69nm,0.6s
R32K Eaglecrest 91.41 32 P P 03 26 24.3 +0.9
baz=278
SPB2 Spitsbergen Ar 91.42 349 IAmb IAmb 03 26 23.1
comp=Z,49nm,1.1s
SPITS Spitsbergen Ar 91.42 349 P P 03 26 21.6 -1.5
comp=Z,29nm,1.0s,baz=96,slow=12,SNR=11
SPITS LR LR 04 11 51.5
comp=Z,205nm,21.9s,baz=38,slow=38
comp=Z,29nm,1.0s
SPITS Spitsbergen Ar 91.42 349 P P 03 26 22.4 -0.6
SPITS pmax pmax
comp=Z,63nm,1.2s
BR104 Keskin Array S 91.43 310 P P 03 26 23.2 -0.8
comp=Z,70nmcomp=Z,9.7nm,0.8s
BR131 Keskin Array S 91.43 310*d* *i*P P 03 26 23.2 -0.9
BR131 Keskin Array S 91.43 310 P P 03 26 23.4 -0.6
BRTR Keskin Array B 91.43 310 P P 03 26 22.8 -1.3
comp=Z,6.1nm,0.8s,baz=106,slow=4.5,SNR=34
BRTR PP PP 03 30 00.8 -2.2
comp=Z,1.9nm,0.8s,baz=106,slow=7.0,SNR=4.3
comp=Z,6.1nm,0.8s
BRTR Keskin Array B 91.43 310 P P 03 26 23.1 -0.9
BRTR Keskin Array B 91.43 310 P P 03 26 23.1 -0.9
BR106 Keskin Array S 91.45 310 P P 03 26 23.3 -0.8
comp=Z,59nmcomp=Z,8.3nm,0.9s
S32K Killisnoo 91.49 32 P P 03 26 24.1 +0.4
baz=278
ARCES ARCESS Array B 91.54 340 P P 03 26 22.5 -1.3
comp=Z,34nm,0.9s,baz=81,slow=6.5,SNR=29
comp=Z,34nm,0.9s
ARCES ARCESS Array B 91.54 340 P P 03 26 22.9 -0.8
ARCES IAmb IAmb 03 26 23.9
comp=Z,49nm,1.1s
ARCES ARCESS Array B 91.54 340 P P 03 26 23.0 -0.8
ARCES pmax pmax
comp=Z,49nm,1.1s
P32M Atlin 91.63 30 P P 03 26 24.8 +0.4
baz=279
N32M Quiet Lake 91.70 29 P P 03 26 25.1 +0.4
baz=279
P33M Teslin, Yukon 91.98 30 P P 03 26 26.4 +0.3
baz=279
CSS Mathiatis 92.10 305 IAmb IAmb 03 26 28.1
comp=Z,47nm,0.9s
A36M Sachs Harbour 92.30 17 IAmb IAmb 03 26 51.4
comp=Z,28nm,1.0s
A36M Sachs Harbour 92.30 17 P P 03 26 27.1 -0.1
baz=287
T33K Petersburg 92.47 33 P P 03 26 29.0 +0.8
baz=279
Q32M Nakina River 92.47 31 P P 03 26 28.9 +0.4
baz=280
U33K Whale Pass 92.48 34 P P 03 26 29.2 +0.9
baz=279
CRAG Craig 92.59 34 P P 03 26 29.5 +0.7
baz=279
WRAK Wrangell Islan 92.86 33 P P 03 26 30.6 +0.6
baz=280
QSPA South Pole Qui 92.92 180 PKKP 03 43 39.0
comp=Z,2.8nm,1.0s,baz=214,slow=4.1,SNR=3.7
FINES FINESS Array B 93.05 332 P P 03 26 29.6 -1.1
comp=Z,4.5nm,0.6s,baz=60,slow=3.6,SNR=19
FINES PP PP 03 30 09.7 -5.2
comp=Z,7.0nm,1.0s,baz=148,slow=13,SNR=3.1
comp=Z,4.5nm,0.6s
FINES FINESS Array B 93.05 332 P P 03 26 30.1 -0.7
FINES FINESS Array B 93.05 332 P P 03 26 30.1 -0.7
R33M Jennings River 93.05 30 P P 03 26 31.7 +0.7
baz=281
MDUB Mudurnu 93.22 311 IAmb IAmb 03 26 35.3
comp=Z,27nm,1.0s
AKASG Malin Array Be 93.23 321 P P 03 26 30.4 -1.5
comp=Z,16nm,0.9s,baz=73,slow=4.0,SNR=47
AKASG PP PP 03 30 14.2 -2.5
comp=Z,0.5nm,0.4s,baz=64,slow=7.1,SNR=1.7
comp=Z,16nm,0.9s
AKASG Malin Array Be 93.23 321 P P 03 26 32.1 +0.3
AKBB Malin Array Si 93.23 321 IAmb IAmb 03 26 31.5
comp=Z,27nm,1.0s
AKBB Malin Array Si 93.23 321*d* *i*P P 03 26 30.6 -1.3
AKBB pmax pmax
comp=Z,33nm,1.0s
KIEV Kiev 93.24 321 ⇑P P 03 26 30.3 -1.6
KIEV Kiev 93.24 321 P P 03 26 31.4 -0.5
KIEV IAmb IAmb 03 26 31.5
comp=Z,25nm,1.0s
KIEV Kiev 93.24 321 *i* P P 03 26 30.5 -1.5
SNR=9.1
KIEV Kiev 93.24 321 P P 03 26 31.5 -0.5
KIEV pmax pmax
comp=Z,25nm,1.0s
S34M Telegraph Cree 93.25 32 P P 03 26 32.7 +0.9
baz=281
VSU Vasula 93.32 329*de* P P 03 26 30.0 -2.1
VSU pmax pmax
comp=Z,43nm,0.9s
PURM Purcari 93.40 317 ⇓P P 03 26 31.8 -1.0
MNK Minsk 93.42 325 *i* P P 03 26 32.2 -0.5
comp=E,23nm,1.0s
MNK *i* P P 03 26 32.2 -0.5
comp=N,32nm,1.0s
MNK *i* P P 03 26 32.2 -0.5
comp=Z,39nm,0.8s,baz=80
MNK *i* PP PP 03 30 18.2 +0.2
MNK *i* PPP PPP 03 32 18.0
MNK *i* S SKSac 03 36 56.0 -1.3
MNK *i* sS ScS 03 37 48.1 +15
MNK *i* SS SS 03 43 53.1 +2.9
MNK *i* LRM MLR 04 09 05.8
comp=Z,273nm,19.0s
MNK *i* LRM MLR 04 10 18.9
comp=E,338nm,22.5s
MNK Minsk 93.42 325 *i* P P 03 26 32.2 -0.5
MNK *i* 03 30 18.2
MNK *i* PPP PPP 03 32 17.9
MNK *i* S SKSac 03 36 56.0 -1.3
MNK *i* SS SS 03 43 53.0 +2.9
MNK pmax pmax
comp=E,23nm,1.0s
MNK pmax pmax
comp=N,32nm,1.0s
MNK pmax pmax
comp=Z,39nm,0.8s
MNK MLR MLR
comp=Z,273nm,19.0s
MNK MLR MLR
comp=E,338nm,22.0s
V35K Ketchikan 93.46 34 P P 03 26 33.1 +0.3
baz=280
C36M Paulatuk 93.47 20 IAmb IAmb 03 26 33.4
comp=Z,74nm,1.1s
C36M Paulatuk 93.47 20 P P 03 26 32.4 -0.2
baz=288
DLBC Dease Lake 93.72 31 P P 03 26 34.9 +0.8
baz=282
T35M Bob Quinn 93.89 32 P P 03 26 35.7 +0.8
baz=282
TGTN Hyland Airport 93.90 28 P P 03 26 36.0 +1.1
baz=284
NOR Nord 93.91 355 *i* P P 03 26 33.7 -0.7
NOR IAmb IAmb 03 26 35.2
comp=Z,20nm,1.3s
WTLY Watson Lake, Y 93.97 29 P P 03 26 36.2 +1.0
baz=283
NACGM Naroch 93.97 325 *e*P P 03 26 35.1 -0.1
comp=Z,30nm,0.9s,baz=79
ISP Isparta 94.05 308*ce* P P 03 26 36.6 +0.5
ISP pmax pmax
comp=Z,17nm,1.3s
SORM Soroca 94.19 319 ⇑P P 03 26 34.5 -1.8
SORM Soroca 94.19 319 ⇑P P 03 26 34.5 -1.8
U35K Hyder 94.23 34 P P 03 26 36.1 -0.3
baz=282
TLCR 94.33 316 ⇑P P 03 26 35.4 -1.7
TLCR 94.33 316 ⇑P P 03 26 35.4 -1.7
JURR Jurilovca 94.35 315 ⇑P P 03 26 35.1 -2.1

TPGR	Topolog	94.66	315	⇑P		P	03	26	36.1 -2.5
TIRR	Tirgusor	94.72	315	⇑P		P	03	26	38.1 -0.8
TIRR	Tirgusor	94.72	315	IAmb		IAmb	03	26	39.1
	comp=Z,19nm,0.8s								
TIRR	Tirgusor	94.72	315	⇑P		P	03	26	38.1 -0.8
TIRR	Tirgusor	94.72	315	P		P	03	26	38.0 -0.8
	comp=Z,25nm,0.9s								
VLDR	Vladesti	94.74	316	⇑P		P	03	26	38.8 -0.1
CFR	Carcaliu	94.81	316	⇑P		P	03	26	38.2 -1.0
CFR	Carcaliu	94.81	316	⇑P		P	03	26	38.2 -1.0
SCTR	Scanteiesti	94.82	316	⇑P		P	03	26	39.6 +0.2
RNPP9	Sopachiv	95.18	322	P		P	03	26	39.8 -1.0
ICOR	Ion Corvin	95.21	315	⇑P		P	03	26	41.4 +0.2
RNPP8	Varash	95.21	322	P		P	03	26	40.0 -1.0
PABE	Paberze	95.43	326	IAmb		IAmb	03	26	49.8
	comp=Z,91nm,1.7s								
WRGLY	Wrigley	95.59	26	IAmb		IAmb	03	26	43.7
	comp=Z,43nm,1.0s								
WRGLY	Wrigley	95.59	26	P		P	03	26	42.9 +0.5
	baz=288								
TESR	Tescani	95.61	317	⇑P		P	03	26	42.1 -0.8
TESR	Tescani	95.61	317	P		P	03	26	42.3 -0.6
	comp=Z,39nm,1.2s								
VRI	Vrincioaia	95.67	316	⇑P		P	03	26	42.5 -0.7
VRI	Vrincioaia	95.67	316	⇑P		P	03	26	42.5 -0.7
PLOR	Plostina	95.72	316	⇑P		P	03	26	43.0 -0.5
PLOR	Plostina	95.72	316	⇑P		P	03	26	43.0 -0.5
ONER	Baraj Valea Uz	95.81	317	⇑P		P	03	26	43.2 -0.6
BALB	Balikesir	95.85	310	IAmb		IAmb	03	26	44.6
	comp=Z,24nm,1.0s								
COVR	Voineasa-Covas	96.03	317	⇑P		P	03	26	43.9 -1.0
NEHR	Nehoiu	96.04	316	⇓P		P	03	27	05.3 +20
TURR	Turia	96.12	317	⇑P		P	03	26	44.5 -0.8
LOZB	Loznitsa	96.20	314	⇑P		P	03	26	44.5 -1.2
KOTAN	Kotaneelee Air	96.26	29	P		P	03	26	46.1 +0.5
	baz=287								
MLR	Muntele Rosu	96.27	316	⇓P		P	03	26	45.4 -0.8
MLR	Muntele Rosu	96.27	316	IAmb		IAmb	03	26	46.6
	comp=Z,22nm,0.9s								
MLR	Muntele Rosu	96.27	316	⇓P		P	03	26	45.4 -0.8
MLR	Muntele Rosu	96.27	316	P		P	03	26	45.6 -0.5
	comp=Z,33nm,0.9s								
BURAR	Bucovina Array	96.36	318	⇑P		P	03	26	46.5 +0.1
BURAR	Bucovina Array	96.36	318	P		P	03	26	46.3 -0.2
BURAR				IAmb		IAmb	03	26	47.4
	comp=Z,14nm,0.8s								
BURAR	Bucovina Array	96.36	318	⇑P		P	03	26	46.5 +0.1
DOPR	Dopca	96.56	317	⇑P		P	03	26	46.3 -1.0
ELND	Elena	96.79	314	⇑P		P	03	26	47.4 -1.0
VOIR		96.90	316	⇑P		P	03	26	47.3 -1.6
VOIR		96.90	316	⇑P		P	03	26	47.3 -1.6
EZN	Ezine	97.00	311	P		P	03	26	48.6 -0.8
HUMR	Humele	97.13	315	⇑P		P	03	26	48.5 -1.3
ARR	Arges	97.20	316	⇑P		P	03	26	49.6 -0.7
LOT	Lotru	97.78	316	⇑P		P	03	26	52.3 -0.7
MARR	Marisel-Cluj	97.96	318	⇑P		P	03	26	52.9 -0.8
DAG	Danmarks Havn	98.12	353	*i* P		P	03	26	52.4 -1.2
DAG				IAmb		IAmb	03	26	53.2
	comp=Z,33nm,1.2s								
DRGR		98.20	318	⇑P		P	03	26	54.0 -0.7
DRGR		98.20	318	⇑P		P	03	26	54.0 -0.7
DEV	Deva	98.28	317	⇑P		P	03	26	54.4 -0.6
DEV	Deva	98.28	317	⇑P		P	03	26	54.4 -0.6
RES	Resolute Bay	98.29	11	LR		LR	04	13	32.6
	comp=Z,532nm,19.9s,baz=315,slow=37								
RES	Resolute Bay	98.29	11	IAmb		IAmb	03	26	55.5
	comp=Z,30nm,1.0s								
GZR	Gura Zlata	98.48	317	⇑P		P	03	26	55.1 -0.9
GZR	Gura Zlata	98.48	317	⇑P		P	03	26	55.1 -0.9
STHS	Stebnicka Huta	98.52	321	*e*PDIFF		Pdif	03	26	56.5 +0.4
STHS	Stebnicka Huta	98.52	321	*e*PDIFF		Pdif	03	26	56.5 +0.4
HERR	Herculane	98.84	316	⇓P		P	03	26	57.0 -0.5
HFS	Hagfors	99.22	332	P		Pdif	03	26	57.9 -1.0
	comp=Z,21nm,1.0s,baz=68,slow=9.7,SNR=12								
HFS				PP		PP	03	31	03.3 +0.8
	comp=Z,5.8nm,0.8s,baz=54,slow=7.5,SNR=4.3								
	comp=Z,21nm,1.0s								
MDVR	Moldovita	99.35	316	⇑P		Pdif	03	26	59.1 -0.7
NEEM	North Greenlan	99.64	360	*i* P		Pdif	03	27	00.6 -0.3
NEEM				IAmb		IAmb	03	27	01.4
	comp=Z,11nm,0.9s								
LANS	Liptovska Anna	99.71	321	*i* P		Pdif	03	27	02.2 +0.8
LANS	Liptovska Anna	99.71	321	*e*PDIFF		Pdif	03	27	02.2 +0.8
NB2	NORSAR Subarra	99.97	334	P		Pdif	03	27	00.4 -1.9
	comp=Z,34nm,1.2s,baz=66,slow=4.6								
NOA	NORSAR Array B	99.97	334	P		Pdif	03	27	00.3 -2.0
	comp=Z,10nm,0.9s,baz=66,slow=4.6,SNR=15								
NOA				PP		PP	03	31	07.4 -0.8
	comp=Z,5.5nm,1.0s,baz=66,slow=7.2,SNR=6.1								
	comp=Z,10nm,0.9s								
TULEG	Thule	99.98	4	*i* P		Pdif	03	27	01.5 -0.4
TULEG				IAmb		IAmb	03	27	02.2
	comp=Z,11nm,1.2s								
LSZ	Lusaka	100.22	255	P		Pdif	03	27	04.5 0.0
	comp=Z,1.4nm,0.5s,baz=119,slow=5.8,SNR=5.5								
LSZ				PP		PP	03	31	08.1 -3.6
	comp=Z,15nm,1.1s,baz=96,slow=8.2,SNR=9.4								
LSZ	Lusaka	100.22	255			Pdif	03	27	04.8 +0.4
LSZ	Lusaka	100.22	255	*i* P		Pdif	03	27	04.8 +0.4
DBG	Daneborg	100.41	352	*i* P		Pdif	03	27	03.3 -0.6
DBG				IAmb		IAmb	03	27	09.2
	comp=Z,15nm,1.0s								
BSD	Bornholm Skovb	100.48	327	*i* P		Pdif	03	27	03.8 -0.8
BSD				IAmb		IAmb	03	27	04.5
	comp=Z,20nm,0.9s								
HAMD	Hammershus, De	100.51	328	*i* P		Pdif	03	27	03.8 -0.9
HAMD				IAmb		IAmb	03	27	04.3
	comp=Z,32nm,1.0s								
STEB	Steborice	100.54	322	*e*PP		PP	03	31	16.6 +3.8
MORC	Moravsky Berou	100.73	322	⇑P		Pdif	03	27	06.0 +0.1
MORC	Moravsky Berou	100.73	322	⇑P		Pdif	03	27	06.0 +0.1
MORC	Moravsky Berou	100.73	322	*e*PDIFF		Pdif	03	27	05.6 -0.3
MORC				*e*PP		PP	03	31	16.8 +2.5
SRO	Srobarova	100.83	320	*i* P		Pdif	03	27	06.2 -0.1
SRO	Srobarova	100.83	320	*e*PDIFF		Pdif	03	27	06.2 -0.1
JAVC	Velka Javorina	100.93	321	*e*PDIFF		Pdif	03	27	07.2 +0.4
JAVC				*e*PP		PP	03	31	20.0 +4.1
KRLC	Kraliky	101.11	322	*e*PP		PP	03	31	19.2 +2.1
NVL	N'lazarevskaya	101.25	198	*e*P		Pdif	03	26	57.6 -10
NVL				*i*			03	31	28.4
NVL				pmax		pmax			
	comp=Z,33nm,0.9s								
DPC	Dobruska-Polom	101.30	323	*e*PP		PP	03	31	20.0 +1.4
MODS	Modra-Piesok	101.33	320	*e*PP		PKiKP	03	31	22.6 -10
VRAC	Vranov	101.47	322	⇑P		Pdif	03	27	09.4 +0.2
VRAC	Vranov	101.47	322	⇑P		Pdif	03	27	09.4 +0.2
VRAC	Vranov	101.47	322	*e*PDIFF		Pdif	03	27	09.3 +0.2
VRAC				*e*PP		PP	03	31	20.6 +0.8
KRUC	Moravsky	101.67	321	*e*PDIFF		Pdif	03	27	10.1 +0.1
KRUC				*e*PP		PP	03	31	24.4 +3.1
RONA	Rosalia, Austr	102.16	320	*e*PP		PP	03	31	29.0 +3.9
	comp=Z,15nm,1.1s								
CONA	Conrad Observa	102.37	320	*e*PP		PP	03	31	26.4 -0.3
	comp=Z,11nm,1.3s								
ARSA	Arzberg	102.80	320	*e*PKiKP		PKiKP	03	31	34.0 -1.3
	comp=Z,4.1nm,1.0s								
CLL	Collm	102.94	324	*e*P		Pdif	03	27	15.0 -0.6
CLL				*e*			03	31	32.0
CLL	Collm	102.94	324	*e*Pdif		Pdif	03	27	15.0 -0.6
CLL				*e*PP		PP	03	31	32.0 +1.2
CKRC	Cesky Krumlov	103.05	322	*e*PP		PP	03	31	32.5 +0.8
SOKA	Soboth	103.31	319	*e*PKiKP		PKiKP	03	31	39.4 +3.2
	comp=Z,8.7nm,1.6s								
KHC	Kasperske Hory	103.39	322	*e*PP		PP	03	31	35.3 +1.1
MOA	Molln	103.41	321	*e*PP		PP	03	31	34.4 0.0
	comp=Z,8.7nm,1.2s								
GERES	GERESS Array B	103.41	322	Pdiff		Pdif	03	27	17.3 -0.6
	comp=Z,2.2nm,0.9s,baz=81,slow=4.2,SNR=13								
GERES				PP		PP	03	31	29.4 -5.0
	comp=Z,1.4nm,0.9s,baz=90,slow=4.0,SNR=4.1								
OBKA	Obir	103.68	319	*e*PKiKP		PKiKP	03	31	37.2 +0.3
	comp=Z,5.5nm,1.0s								
BIOA	Bad Ischl, Aus	103.86	321	*i* PKiKP		PKiKP	03	31	33.6 -3.6
	comp=Z,5.7nm,1.2s								
MYKA	Terra Mystica	104.22	320	*e*PP		PP	03	31	43.3 +2.7
	comp=Z,5.8nm,1.1s								
KBA	Koelnbreinsper	104.26	320	*i* PKiKP		PKiKP	03	31	36.0 -2.1
	comp=Z,7.0nm,1.2s								
LESA	Schwarzleotal	104.56	321	*e*PP		PKiKP	03	31	41.8 +3.3
	comp=Z,7.6nm,1.0s								
ABTA	Abfaltersbach	104.91	320	*i* PKiKP		PKiKP	03	31	39.1 0.0
	comp=Z,3.7nm,1.0s								
WTTA	Wattenberg	105.28	321	*e*PP		PP	03	31	50.5 +2.0
	comp=Z,17nm,0.8s								
WATA	Walderalm	105.29	321	*e*PP		PP	03	31	49.7 +1.2
	comp=Z,18nm,1.9s								
SQTA	Sankt Quirin	105.56	321	*e*PP		PP	03	31	50.8 +0.3
	comp=Z,19nm,0.9s								
MOTA	Moosalm	105.58	321	*e*PP		PP	03	31	52.4 +1.8
	comp=Z,25nm,1.0s								
RETA	Reutte	105.74	321	*i* PP		PP	03	31	55.5 +3.7
	comp=Z,16nm,1.0s								
FETA	Feichten	105.94	321	*e*PKiKP		PKiKP	03	31	42.8 +1.6
	comp=Z,21nm,1.4s								
NVAR	Mina Array Bea	106.45	49	PKKPbc		PKKPbc	03	43	04.1 +0.3
	comp=Z,1.3nm,1.0s,baz=53,slow=6.9,SNR=4.2								
ELK	Elko	107.94	45	PKKPbc		PKKPbc	03	42	58.5 -0.8
	comp=Z,1.1nm,0.7s,baz=254,slow=3.0,SNR=5.2								
PDAR	Pinedale Array	111.07	42	PKKPbc		PKKPbc	03	42	46.8 -2.6
	comp=Z,1.3nm,0.8s,baz=117,slow=5.2,SNR=7.5								
PDAR				PKKPab		PKKPab	03	42	58.0 -1.1
	comp=Z,0.9nm,0.8s,baz=120,slow=6.5,SNR=4.7								
ULM	Lac du Bonnet	114.98	29	PKP		PKiKP	03	31	56.4 -1.5
	comp=Z,2.6nm,0.7s,baz=323,slow=4.6,SNR=3.5								
ULM				PKKPab		PKKPab	03	42	40.5 -0.9
	comp=Z,4.4nm,1.1s,baz=28,slow=2.0,SNR=4.1								
ANMO	Albuquerque	116.58	48	PKP		PKiKP	03	32	02.7 +1.0
	comp=Z,1.8nm,0.7s,baz=45,slow=2.9,SNR=5.0								
EDA	Edea	117.49	276			PKPdf	03	32	03.5 -0.3
KUQ	Kuujjuuaa	117.67	10			PKPdf	03	32	02.7 -0.1
ESDC	Sonseca Array	118.81	319	PKP		PKPdf	03	32	05.7 0.0
	comp=Z,1.8nm,0.9s,baz=31,slow=3.3,SNR=7.1								
MVO	Moncorvo	119.93	322	*e*PKPdf		PKiKP	03	32	09.3 +1.4
PGAV	Gavieira, Arco	120.21	323	*e*PKPdf		PKiKP	03	32	09.3 +0.9
POLO	Lamas de Olo	120.27	323	*e*PKPdf		PKiKP	03	32	09.8 +1.1
PVRL	Vila Real	120.28	322	*e*PKPdf		PKiKP	03	32	09.6 +1.0
MTE	Manteigas	120.69	322			PKPdf	03	32	09.2 -0.1
MTE	Manteigas	120.69	322	*e*PKPdf		PKiKP	03	32	10.5 +1.1
PCBR	Castelo Branco	120.97	321	*e*PKPdf		PKiKP	03	32	10.8 +0.9
TXAR	Lajitas Array	121.05	53	PKP		PKiKP	03	32	11.3 +0.8
	comp=Z,2.8nm,0.7s,baz=318,slow=1.7,SNR=15								
TXAR				PKKPbc		PKKPbc	03	42	14.0 0.0
	comp=Z,1.1nm,0.9s,baz=142,slow=5.2,SNR=8.6								
TXAR	Lajitas Array	121.05	53			PKPdf	03	32	10.3 0.0
TXAR	Lajitas Array	121.05	53	PKIKP		PKPdf	03	32	10.3 0.0
SCHQ	Schefferville	121.06	10	PKP		PKiKP	03	32	10.3 +0.7
	comp=Z,3.7nm,0.7s,baz=9.7,slow=1.4,SNR=7.9								
PMRV	Marv??o	121.16	321	*e*PKPdf		PKiKP	03	32	11.4 +1.1
PCAS	Casmilo, Conde	121.49	322	*e*PKPdf		PKiKP	03	32	11.9 +1.0
PSARD	Sardoal	121.54	321	*e*PKPdf		PKiKP	03	32	12.1 +1.0
PESTR	Estremoz	121.60	320	*e*PKPdf		PKiKP	03	32	12.2 +1.1
PBAR	Barrancos	121.64	319	*e*PKPdf		PKiKP	03	32	12.0 +0.7
PMTG	Montargil	121.89	321	*e*PKPdf		PKiKP	03	32	11.9 +0.2
PARRA	Arraiolos	121.92	320	*e*PKPdf		PKiKP	03	32	12.4 +0.6
PSBE	So Bento	121.99	321	*e*PKPdf		PKiKP	03	32	12.2 +0.3
PBEJ	Beja	122.26	319	*e*PKPdf		PKiKP	03	32	12.9 +0.4
MOE	Montemor	122.29	320	*e*PKPdf		PKiKP	03	32	13.0 +0.5
MESJ	Messejana	122.59	319	*e*PKPdf		PKPdf	03	32	13.1 +0.1
PCVE	Castro Verde	122.59	319	*e*PKPdf		PKiKP	03	32	14.5 +1.4
MDT	Midelt	122.74	313	PKP		PKPdf	03	32	12.7 -0.9
	comp=Z,2.1nm,0.4s,baz=40,slow=5.0,SNR=6.1								
MD01	Midelt array s	122.83	313			PKiKP	03	32	14.0 0.0
MORF	Marmelete	123.18	319	*e*PKPdf		PKiKP	03	32	15.8 +1.4
TORD	Torodi Ar. Bea	124.32	288	PKP		PKPdf	03	32	16.9 +0.1
	comp=Z,28nm,0.8s,baz=139,slow=0.2,SNR=122								
TORD	Torodi Ar. Bea	124.32	288			PKPdf	03	32	16.6 -0.2
CCM	Cathedral Cave	125.36	38			PKiKP	03	32	18.5 -0.2
CCM	Cathedral Cave	125.36	38	PKIKP		PKiKP	03	32	18.5 -0.2
HKT	Hockley	126.84	49	PKIKP		PKPdf	03	32	20.0 -1.2
WVT	Waverly	128.69	37			PKPdf	03	32	24.6 -0.1
WVT	Waverly	128.69	37	PKIKP		PKPdf	03	32	24.6 -0.1
LRAL	Lakeview Retre	131.23	40			PKPdf	03	32	29.1 -0.5
DBIC	Dimbokro	131.94	282	PKP		PKPdf	03	32	31.6 +0.2
	comp=Z,19nm,0.9s,baz=124,slow=4.6,SNR=14								
M65A	Busby, Falmout	132.51	19	P		PKiKP	03	32	31.6 -0.1
	baz=334								
PLCA	Paso Flores	138.90	158	PKhKP		PKPpre	03	32	36.2
	comp=Z,3.7nm,0.9s,baz=249,slow=7.8,SNR=3.5								
PLCA				PKP		PKPdf	03	32	42.7 -1.1
	comp=Z,11nm,1.0s,baz=177,slow=5.1,SNR=7.1								
HERN	Volcan Telica	142.11	65			PKPdf	03	32	49.0 -1.2
GO05	Hualane	143.19	152			PKPdf	03	32	50.2 -1.3
TRQA	Tornquist	143.95	167			PKPbc	03	32	51.6 +0.7
TRQA	Tornquist	143.95	167	PKIKP		PKPbc	03	32	51.6 +0.7
JTS	Las Juntas de	144.65	68			PKPbc	03	32	53.9 +0.2
JTS	Las Juntas de	144.65	68	PKIKP		PKPbc	03	32	53.9 +0.2
LCO	Las Campanas	148.63	147			PKPbc	03	33	04.2 -0.8
LCO	Las Campanas	148.63	147	PKP2		PKPbc	03	33	04.3 -0.8
OTAV	Otavalo	153.39	83	PKIKP		PKPdf	03	33	12.5 +3.2
SJG	San Juan	154.81	33			PKPbc	03	33	18.2 -1.0
SJG	San Juan	154.81	33	PKIKP		PKPbc	03	33	18.2 -1.0
CPUP	Villa Florida	156.26	168	PKPab		PKPab	03	33	40.5 0.0
	comp=Z,11nm,0.8s,baz=208,slow=5.8,SNR=7.9								
ROSC	El Rosal	156.40	71	PKPab		PKPab	03	33	43.5 +1.4
	comp=Z,51nm,0.8s,baz=90,slow=1.0,SNR=16								
LPAZ	La Paz	159.39	131	PKP		PKPdf	03	33	18.5 +1.3
	comp=Z,6.1nm,1.0s,baz=9.2,slow=6.0,SNR=4.3								
LPAZ				PKPab		sPKPdf	03	33	57.3 +1.7
	comp=Z,5.4nm,0.8s,baz=211,slow=7.7,SNR=4.5								
BDFB	Brasilia	166.84	197	PKP		PKPdf	03	33	22.2 -1.5
	comp=Z,12nm,1.1s,baz=86,slow=5.6,SNR=4.6								
MDP	Montagnes des	171.92	4	PKP		PKPdf	03	33	25.4 -1.3
	comp=Z,18nm,1.0s,baz=16,slow=4.8,SNR=3.6								

IPGP ***18*** *03:13:45.0, 13.˙10S×167.˙07E, h184km, Mw6.1, Fault plane solution: NP1:ϕs181.00000°, δ43.00000°, λ119.00000°. NP2:ϕs324.00000°, δ53.00000°, λ65.00000°.*

IDC ***18*** *03:13:45.5±0.3, 13.˙17S×167.˙07E, h182km±2km, mb5.3/29, mbtmp5.7/31, MS5.0/27, Error ellipse: s-maj=7.8km s-min=7.5km az=130.0*

MOS ***18*** *03:13:45.9±0.8, 13.˙07S×166.˙85E, h191km, mb5.9/45, Error ellipse: s-maj=8.1km s-min=5.9km az=127.5*

NEIC ***18*** *03:13:45.7±1.6, 13.˙14S±0.˙07×167.˙03E±0.˙08, h176km±1km, mb6.1/348, Mwb6.1/79, Mww6.1/51, Error ellipse: s-maj=13.9km s-min=12.0km az=75.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr1.31; Mθθ0.14; Mϕϕ-1.45; Mrθ-0.59; Mθϕ0.11; Mrϕ0.10; Fault plane solution: M₀1.51000×10¹⁸ NP1:ϕs196.69000°, δ46.17000°, λ121.91000°. NP2:ϕs334.73000°, δ52.24000°, λ61.16000°. Principal axes: T 1.5597, Plg67.0000°, Azm183.0000°; N -0.0938, Plg22.0000°, Azm353.0000°; P -1.4659, Plg3.0000°, Azm85.0000°;*

NEIC ***18*** *03:13:45.1, 13.˙10S×167.˙07E, h190km*

NEIC ***18*** *03:13:45.1, 13.˙10S×167.˙07E, h171km*

NEIC ***18*** *03:13:45.1, 13.˙10S×166.˙87E, h190km, Moment Tensor Solution. Duration: 52 Moment tensor: Scale 10¹⁸Nm; Mrr1.26; Mθθ-0.09; Mϕϕ-1.17; Mrθ-0.68; Mθϕ0.55; Mrϕ-0.17; Fault plane solution: M₀1.51000×10¹⁸ NP1: ϕs180.21000°, δ48.04000°, λ125.27000°. NP2: ϕs313.60000°, δ52.62000°, λ57.29000°. Principal axes: T 1.5914, Plg64.0000°, Azm161.0000°; N -0.1853, Plg25.0000°, Azm335.0000°; P -1.4060, Plg2.0000°, Azm66.0000°;*

NOU ***18*** *03:13:46.9, 13.˙13S×166.˙98E, h188km, ML5.9/153, Vanuatu Islands*

BJI ***18*** *03:13:46.0, 12.˙77S×166.˙93E, h187km, mB6.0/59, mb5.6/95*

PTWC ***18*** *03:13:46, 13.˙10S×167.˙00E, h145km, Mwp5.8/5*

GCMT ***18*** *03:13:47.7±0.1, 13.˙16S×166.˙87E, h187km, MW6.1/171, Moment Tensor Solution. s163,c382; s171,c617; Duration: 2≈7 Moment tensor: Scale 10¹⁸Nm; Mrr1.36±.01; Mθθ0.06±.01; Mϕϕ-1.42±.01; Mrθ-0.74±.01; Mθϕ0.62±.01; Mrϕ-0.07±.01; Best double couple: M₀1.69400×10¹⁸ NP1:ϕs184.00000°, δ47.00000°, λ127.00000°. NP2:ϕs316.00000°, δ54.00000°, λ57.00000°. Principal axes: T 1.7270, Plg63.0000°, Azm166.0000°; N -0.0670, Plg26.0000°, Azm337.0000°; P -1.6600, Plg4.0000°, Azm68.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

GFZ ***18*** *03:13:47.4, 13.˙13S×167.˙00E, h181km, MW6.1, Moment Tensor Solution. s15 Moment tensor: Mrr1.31; Mθθ-0.07; Mϕϕ-1.24; Mrθ-0.57; Mθϕ0.64; Mrϕ-0.06; Fault plane solution: NP1:ϕs176.00000°, δ45.00000°, λ121.00000°. NP2:ϕs315.00000°, δ52.00000°, λ61.00000°. Principal axes: T 1.5400, Plg67.0000°, Azm163.0000°; N 0.0000, Plg22.0000°, Azm333.0000°; P -1.5400, Plg3.0000°, Azm65.0000°;*

ISC 18 03:13:45.2±0.2, 13.˙15S±0.˙03×167.˙07E±0.˙03, h185km±1km,

h186km:pP-P,n1607,σ1936/1761,mb6.0/356,151C-97D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	2.29	177	P	P	Pn	03 14 28.3	+2.5
SANVU	Saraoutou	2.29	177	P	P	Sn	03 14 59.4	+1.8
SANVU	Saraoutou	2.29	177	Pn	Pn	Pn	03 14 25.5	-0.3
SANVU					Sn	Sn	03 14 56.2	-1.3
SANVU	Saraoutou	2.29	177	P	P	Pn	03 14 26.0	+0.1
SANVU	Saraoutou	2.29	177	⇑P	P	Pn	03 14 25.9	+0.1
DVP	Devils Point	4.68	167	P	P	Pn	03 14 58.1	+3.0
DVP	Devils Point	4.68	167	S	S	Sn	03 15 52.7	+2.6
DVP	Devils Point	4.68	167	P	P	Pn	03 14 58.6	+3.5
RTV	Rentapao	4.80	164	P	P	Pn	03 14 59.8	+3.1
HURO	Huro Makira	5.72	297	P	P	Pn	03 15 08.4	-0.2
HURO	Huro Makira	5.72	297	S	S	Sn	03 16 14.3	0.0
HURO	Huro Makira	5.72	297	P	P	Pn	03 15 08.7	+0.1
NGOA	Tingoa Renbel	7.03	282	P	P	Pn	03 15 26.1	+0.3
NGOA	Tingoa Renbel	7.03	282	P	P	Pn	03 15 26.2	+0.4
HNR	Honiara	7.90	297	P	P	Pn	03 15 37.2	0.0
	182nm,1.0s,baz=215,slow=9.1,SNR=66							
HNR				S	S	Sn	03 17 12.6	+6.5
	55nm,0.8s,baz=43,slow=18,SNR=0.9							
HNR				LR	LR		03 18 29.2	
	comp=Z,693nm,19.8s,baz=216,slow=36							
HNR	Honiara	7.90	297			Pn	03 15 37.7	+0.5
HNR	Honiara	7.90	297	P	P	Pn	03 15 36.3	-1.0
HNR				S	S	Sn	03 17 03.8	-2.3
HNR	Honiara	7.90	297	P	P	Pn	03 15 37.2	0.0
HNR	Honiara	7.90	297	⇓P	P	Pn	03 15 37.3	0.0
SAVO	Savo Central	8.15	298	P	P	Pn	03 15 40.9	+0.3
SAVO	Savo Central	8.15	298	P	P	Pn	03 15 40.6	0.0
MARNC	Mare, Loyalty	8.34	174	P	P	Pn	03 15 44.2	+1.3
MARNC	Mare, Loyalty	8.34	174			Pn	03 15 43.2	+0.2
MARNC	Mare, Loyalty	8.34	174	⇑P	P	Pn	03 15 43.8	+0.8
TATA	Tatamba Isabel	8.56	303	P	P	Pn	03 15 46.0	0.0
YATNC	Mamie plateau,	8.86	181	P	P	Pn	03 15 51.1	+1.3
YATNC	Mamie plateau,	8.86	181	S	S	Sn	03 17 31.9	+2.9
DZM

MXZ Matakaoa Point 26.30 160 P **P** **03 19 04.6 +0.9**
MXZ IAmb IAmb 03 19 06.6
comp=Z,350nm,0.6s

MXZ Matakaoa Point 26.30 160 P **P** **03 19 05.2 +1.5**
HAZ Te Kaha 26.30 161 P **P** **03 19 05.9 +2.2**
URZ Urewera 26.56 162 LR LR 03 28 19.5
comp=Z,2µm,18.4s,baz=46,slow=33

URZ Urewera 26.56 162 P **P** **03 19 06.2 +0.3**
URZ Urewera 26.56 162 P **P** **03 19 07.1 +1.2**
URZ Urewera 26.56 162 ⇑P **P** **03 19 06.3 +0.3**
MWZ Matawai 26.75 162 P **P** **03 19 08.8 +1.0**
VRZ Vera Road 26.75 167 P **P** **03 19 09.5 +1.8**
KHEZ Kahui Hut 26.76 168 P **P** **03 19 10.1 +2.3**
RTZ Ruatahuna 26.85 163 **P** **03 19 09.0 +0.4**
RTZ IAmb IAmb 03 19 10.9
comp=Z,450nm,1.0s

RTZ Ruatahuna 26.85 163 P **P** **03 19 09.3 +0.6**
CMSA Cobar Meteorol 26.85 224 P **P** **03 19 08.7 0.0**
comp=Z,236nm,1.3s,comp=Z,0.0nm

CMSA Cobar Meteorol 26.85 224 P **P** **03 19 08.8 +0.1**
NGZ Ngauruhoe 27.00 165 P **P** **03 19 11.9 +1.8**
YNG Young 27.03 216 P **P** **03 19 10.9 +0.7**
comp=Z,395nm,1.0s

BKZ Black Stump Fm 27.22 164 P **P** **03 19 12.4 +0.5**
BKZ Black Stump Fm 27.22 164 **P** **03 19 12.5 +0.5**
BKZ IAmb IAmb 03 19 16.2
comp=Z,504nm,1.0s

BKZ Black Stump Fm 27.22 164 P **P** **03 19 13.2 +1.2**
CNB Canberra Magne 27.25 213 P **P** **03 19 13.5 +1.2**
comp=Z,757nm,1.0s,comp=Z,0.0nm

CNB Canberra Magne 27.25 213 P **P** **03 19 13.0 +0.7**
QIS Mount Isa 27.27 251 P **P** **03 19 14.5 +1.9**
comp=Z,145nm,1.0s,comp=Z,0.0nm

WAZ Wanganui 27.41 167 P **P** **03 19 16.9 +3.3**
AUMHS Melrose High S 27.43 215 P **P** **03 19 14.7 +0.8**
AUMTS Mt Stromlo 27.45 213 P **P** **03 19 14.7 +0.7**
CAN Canberra 27.45 213 P **P** **03 19 14.7 +0.7**
comp=Z,410nm,1.2s,comp=Z,0.0nm

CAN Canberra 27.45 213 P **P** **03 19 14.8 +0.7**
CAN Canberra 27.45 213 **P** **03 19 15.1 +1.0**
CAN pmax pmax
comp=Z,324nm,1.0s

CAN Canberra 27.45 213 ⇑P **P** **03 19 14.8 +0.7**
TSZ Takapari Road 27.93 165 P **P** **03 19 18.1 0.0**
QRZ Quartz Range 27.98 171 P **P** **03 19 21.0 +2.4**
QRZ Quartz Range 27.98 171 P **P** **03 19 20.5 +1.9**
QRZ Quartz Range 27.98 171 P **P** **03 19 20.9 +2.2**
PXZ Pawanui 28.13 164 P **P** **03 19 20.4 +0.4**
JAY Jayapura 28.14 290 pP pP 03 20 01.5 +4.8
comp=Z,65nm,0.9s,baz=108,slow=5.4,SNR=4.4

TKNZ Takaka Hill 28.25 171 P **P** **03 19 22.5 +1.5**
MRZ Mangatainoka R 28.41 166 **P** **03 19 22.6 +0.2**
MRZ Mangatainoka R 28.41 166 P **P** **03 19 22.3 -0.1**
NNZ Nelson 28.50 170 **P** **03 19 25.0 +1.8**
NNZ IAmb IAmb 03 19 28.4
comp=Z,404nm,1.1s

NNZ Nelson 28.50 170 P **P** **03 19 24.2 +1.0**
INKA Innaminka 28.53 235 **P** **03 19 24.9 +1.3**
BFZ Birch Farm 28.59 165 P **P** **03 19 23.9 -0.1**
BFZ Birch Farm 28.59 165 P **P** **03 19 23.3 -0.7**
MILA Mila 28.70 211 P **P** **03 19 26.0 +0.9**
comp=Z,210nm,1.1s

MILA Mila 28.70 211 P **P** **03 19 25.9 +0.7**
MILA Mila 28.70 211 ⇑P **P** **03 19 25.8 +0.7**
DSZ Denniston Nort 28.79 173 P **P** **03 19 27.7 +1.9**
SNZO South Karori 28.84 168 P **P** **03 19 26.5 +0.3**
SNZO South Karori 28.84 168 P **P** **03 19 26.8 +0.6**
SNZO South Karori 28.84 168 ⇑P **P** **03 19 26.4 +0.3**
THZ Tophouse 28.96 171 P **P** **03 19 28.6 +1.2**
KHZ Kahutara 29.70 170 P **P** **03 19 33.8 +0.1**
KHZ Kahutara 29.70 170 P **P** **03 19 34.3 +0.5**
KHZ Kahutara 29.70 170 ⇑P **P** **03 19 33.8 +0.1**
INZ Inchbonnie 29.71 173 P **P** **03 19 34.9 +1.0**
LTZ Lake Taylor 29.87 172 P **P** **03 19 36.4 +1.1**
STKA Stephens Creek 29.89 227 P **P** **03 19 35.8 +0.2**
comp=Z,2µm,1.1s,comp=Z,0.0nm

STKA Stephens Creek 29.89 227 P **P** **03 19 36.6 +1.0**
comp=Z,291nm,0.5s,baz=52,slow=8.6,SNR=843

STKA pP **pP** **03 20 14.0 +1.2**
comp=Z,48nm,0.8s,baz=82,slow=14,SNR=1.5

STKA PcP **PcP** **03 22 34.6 +0.6**
comp=Z,72nm,0.9s,baz=8.1,slow=5.9,SNR=3.2

STKA ScP **ScP** **03 25 59.2 +0.5**
comp=Z,14nm,0.7s,baz=47,slow=2.6,SNR=4.5

STKA PKiKP **PKiKP** **03 30 05.2 -1.1**
comp=Z,2.3nm,0.5s,baz=56,slow=10.0,SNR=3.2
comp=Z,291nm,0.5s

STKA Stephens Creek 29.89 227 P **P** **03 19 36.2 +0.6**
STKA Stephens Creek 29.89 227 **P** **03 19 36.2 +0.6**
STKA **PcP** **03 22 34.6 +0.6**
STKA **ScP** **03 25 60.0 +1.3**
WVZ Waitaha Valley 29.99 175 P **P** **03 19 36.9 +0.6**
GVZ Greta Valley S 30.16 171 IAmb IAmb 03 19 40.2
comp=Z,464nm,0.9s

GVZ Greta Valley S 30.16 171 P **P** **03 19 39.7 +1.8**
FOZ Fox Glacier 30.37 176 IAmb IAmb 03 19 45.5
comp=Z,318nm,0.8s

FOZ Fox Glacier 30.37 176 P **P** **03 19 40.9 +1.2**
OXZ Oxford 30.37 173 P **P** **03 19 41.1 +1.4**
AUSSC Sale College, 30.56 212 P **P** **03 19 43.0 +1.6**
RPZ Rata Peaks 30.65 174 P **P** **03 19 43.3 +1.1**
RPZ Rata Peaks 30.65 174 P **P** **03 19 42.6 +0.4**
MNZS Menzies Bay Ba 30.80 172 P **P** **03 19 43.9 +0.4**
MQZ McQueen's Vall 30.83 172 P **P** **03 19 44.0 +0.4**
JCZ Jackson Bay 30.85 178 P **P** **03 19 45.8 +1.7**
JCZ Jackson Bay 30.85 178 P **P** **03 19 45.7 +1.7**
TOO Toolangi 31.02 215 P **P** **03 19 45.9 +0.4**
comp=Z,197nm,1.1s,comp=Z,0.0nm

TOO Toolangi 31.02 215 **P** **03 19 46.6 +1.1**
TOO Toolangi 31.02 215 P **P** **03 19 46.6 +1.1**
TOO pmax pmax
comp=Z,160nm,1.0s

TOO Toolangi 31.02 215 ⇑P **P** **03 19 46.3 +0.8**
LBZ Lake Benmore 31.24 176 IAmb IAmb 03 19 51.8
comp=Z,777nm,1.9s

MSZ Milford Sound 31.43 179 P **P** **03 19 50.4 +1.5**
MLBS Spotswood, Mel 31.53 215 P **P** **03 19 51.2 +1.3**
WKZ Wanaka 31.61 177 IAmb IAmb 03 19 54.1
comp=Z,472nm,1.2s

BRAT Ballarat 31.88 216 P **P** **03 19 54.8 +1.8**
ODZ Otahua Downs 31.93 175 P **P** **03 19 53.5 +0.1**
ODZ Otahua Downs 31.93 175 IAmb IAmb 03 19 56.8
comp=Z,703nm,1.9s

EAZ Earnscleugh 32.03 177 P **P** **03 19 55.4 +1.2**
WRAB Tennant Creek 32.04 253 P **P** **03 19 55.5 +0.8**
WRAB Tennant Creek 32.04 253*c i* P **P** **03 19 54.5 -0.2**
WRAB pmax pmax
comp=Z,308nm,1.1s

WRAB Tennant Creek 32.04 253 P **P** **03 19 54.2 -0.4**
WRAB pP **pP** **03 20 31.9 -0.5**
WRAB PcP **PcP** **03 22 41.4 +1.5**
WRA Warramunga Arr 32.05 253 P **P** **03 19 54.5 -0.2**
comp=Z,156nm,1.0s,baz=84,slow=9.0,SNR=33

WRA pP **pP** **03 20 32.0 -0.4**
comp=Z,56nm,1.0s,baz=85,slow=9.1,SNR=3.2

WRA S S 03 24 42.4 -11
comp=Z,3.0nm,0.9s,baz=80,slow=12,SNR=1.1

WRA ScP **ScP** **03 26 07.0 +0.8**
comp=Z,20nm,0.9s,baz=84,slow=3.7,SNR=6.9

WRA PKiKP **PKiKP** **03 30 07.0 -1.1**
comp=Z,3.4nm,0.6s,baz=16,slow=0.4,SNR=11

WRA LR LR 03 32 48.8
comp=Z,6µm,20.9s,baz=109,slow=36
comp=Z,156nm,1.0s

WRA Warramunga Arr 32.05 253 P **P** **03 19 54.1 -0.7**
WRA **ScP** **03 26 07.8 +1.6**
WRA Warramunga Arr 32.05 253 P **P** **03 19 54.1 -0.7**
MLZ Mavora Lakes 32.12 179 P **P** **03 19 57.2 +2.1**
GEXS Deakin Univers 32.13 215 P **P** **03 19 56.4 +1.2**
DCZ Deep Cove 32.21 180 P **P** **03 19 56.4 +0.7**
GLAD Gladstone 32.36 208 P **P** **03 19 58.3 +1.2**
ARPS Mount Arapiles 32.62 219 P **P** **03 19 59.7 +0.2**
comp=Z,213nm,1.3s,comp=Z,0.0nm

HTT Hallett 32.62 227 P **P** **03 19 59.8 +0.1**
comp=Z,296nm,1.0s,comp=Z,0.0nm

HTT Hallett 32.62 227 P **P** **03 20 00.2 +0.5**
HTT Hallett 32.62 227 ⇑P **P** **03 20 00.1 +0.4**
BAKI Biak 32.88 289 P **P** **03 20 03.3 +1.3**
comp=Z,5µmcomp=Z,290nm,1.8s

ASAR Alice Springs 33.08 247 P **P** **03 20 03.5 -0.3**
comp=Z,202nm,0.7s,baz=74,slow=9.8,SNR=129

ASAR pP **pP** **03 20 42.5 +1.0**
comp=Z,45nm,0.7s,baz=74,slow=9.8,SNR=7.6

ASAR PcP **PcP** **03 22 42.3 -0.5**
comp=Z,30nm,1.0s,baz=108,slow=1.9,SNR=4.1

ASAR S **S** **03 25 04.3 -4.8**
comp=Z,18nm,1.1s,baz=77,slow=18,SNR=2.8

ASAR ScP **ScP** **03 26 11.6 +1.9**
comp=Z,18nm,1.0s,baz=100,slow=3.2,SNR=6.5

ASAR PKiKP **PKiKP** **03 30 07.0 -1.7**
comp=Z,2.2nm,0.7s,baz=110,slow=1.3,SNR=5.7

ASAR LR LR 03 33 03.3
comp=Z,8µm,19.7s,baz=64,slow=35
comp=Z,202nm,0.7s

ASAR Alice Springs 33.08 247 P **P** **03 20 03.2 -0.5**
ASAR **PcP** **03 22 42.8 0.0**
ASAR **ScP** **03 26 11.5 +1.8**
CORO Coronation Par 33.12 208 P **P** **03 20 05.4 +1.6**
PTPS Port Pirie 33.16 228 P **P** **03 20 05.1 +0.9**
AUMBR Murray Bridge 33.29 224 P **P** **03 20 06.2 +0.9**
SYZ Scrubby Hill 33.33 177 P **P** **03 20 06.8 +1.4**
AUBRN Burnie High Sc 33.40 210 P **P** **03 20 08.0 +1.8**
GHSS Government Hou 33.64 225 P **P** **03 20 09.4 +1.0**
KDU Kakadu 33.71 267 P **P** **03 20 09.1 -0.1**
comp=Z,107nm,1.3s

MOO Moorlands 33.89 207 P **P** **03 20 11.1 +0.7**
comp=Z,759nm,1.1s

MOO Moorlands 33.89 207 P **P** **03 20 12.0 +1.6**
MGBR Mount Gambier 34.00 219 **P** **03 20 13.1 +1.7**
MGBR IAmb IAmb 03 20 15.1
comp=Z,508nm,1.0s

TAU Tasmania Unive 34.21 206 P **P** **03 20 14.7 +1.5**
TAU Tasmania Unive 34.21 206 **P** **03 20 14.3 +1.2**
TAU IAmb IAmb 03 20 16.2
comp=Z,745nm,1.2s

TAU Tasmania Unive 34.21 206 P **P** **03 20 14.3 +1.2**
TAU pmax pmax
comp=Z,745nm,1.3s

TAU Tasmania Unive 34.21 206 ⇑P **P** **03 20 14.3 +1.2**
TAU Tasmania Unive 34.21 206 P **P** **03 20 14.4 +1.2**
TAU pP **pP** **03 20 52.6 +1.8**
TAU PcP **PcP** **03 22 46.1 +0.6**
AUTAR Taroona High S 34.22 206 P **P** **03 20 15.3 +2.1**
BBOO Buckleboo 34.41 230 P **P** **03 20 14.9 -0.2**
comp=Z,681nm,1.7s,comp=Z,0.0nm

BBOO Buckleboo 34.41 230 P **P** **03 20 15.6 +0.5**
BBOO Buckleboo 34.41 230 **P** **03 20 15.1 0.0**
GUMO Guam 34.49 320 LR LR 03 36 34.0
comp=Z,1µm,18.1s,baz=152,slow=40

MTN Manton Dam 35.00 266 P **P** **03 20 20.7 +0.4**
comp=Z,258nm,1.7s,comp=Z,0.0nm

FAKI Fak Fak 35.89 283 P **P** **03 20 28.9 +1.0**
FAKI Fak Fak 35.89 283 **P** **03 20 27.5 -0.5**
FAKI IAmb IAmb 03 20 30.6
comp=Z,558nm,1.6s

FAKI Fak Fak 35.89 283 P **P** **03 20 29.9 +2.0**
KNRA Kununurra 37.15 261 P **P** **03 20 38.3 -0.2**
comp=Z,692nm,1.3s

SIJI Sorong 37.50 286 P **P** **03 20 42.1 +0.6**
comp=Z,222nm,1.2s,baz=94,slow=7.1,SNR=21

SIJI pP **pP** **03 21 21.1 +1.8**
comp=Z,88nm,1.0s,baz=75,slow=6.6,SNR=3.5

SIJI LR LR 03 36 38.8
comp=Z,3µm,20.2s,baz=138,slow=37
comp=Z,222nm,1.2s

SIJI Sorong 37.50 286 P **P** **03 20 43.2 +1.7**
comp=Z,4µmcomp=Z,229nm,1.4s

SWI Sorong 37.51 286 P **P** **03 20 43.4 +1.8**
comp=Z,5µmcomp=Z,266nm,1.3s

BNDI Bandanaira 37.66 280 P **P** **03 20 43.8 +0.9**
BNDI Bandanaira 37.66 280 P **P** **03 20 44.2 +1.3**
comp=Z,2µm,1.6s

BNDI Bandanaira 37.66 280 ⇑P **P** **03 20 43.0 +0.1**
WRKA Warakurna 38.37 246 P **P** **03 20 48.3 -0.4**
comp=Z,364nm,1.4s,comp=Z,0.0nm

KRAI Kang Ratu 39.44 281 P **P** **03 20 59.6 +1.9**
comp=Z,6µmcomp=Z,249nm,1.4s

FORT Forrest 39.95 238 P **P** **03 21 01.6 -0.1**
comp=Z,1µm,0.9s,comp=Z,0.0nm

FITZ Fitzroy Crossi 40.14 257 P **P** **03 21 03.4 0.0**
comp=Z,217nm,1.2s,baz=84,slow=9.5,SNR=28

FITZ pP **pP** **03 21 43.0 +0.8**
comp=Z,46nm,0.8s,baz=68,slow=5.4,SNR=2.7

FITZ S **S** **03 26 51.7 -4.4**
comp=Z,16nm,0.9s,baz=254,slow=20,SNR=2.5
comp=Z,217nm,1.2s

NLAI Namlea 40.70 280 P **P** **03 21 09.7 +1.6**
comp=Z,12µmcomp=Z,911nm,1.4s

PPT Papeete 41.97 102 pP pP 03 22 00.7 +3.1
comp=Z,82nm,1.0s,baz=128,slow=1.0,SNR=2.6

SOEI Soe 42.05 270 P **P** **03 21 18.5 -0.7**
SOEI S **S** **03 27 23.4 -1.3**
SANI Sanana 42.11 282 P **P** **03 21 18.2 -1.4**
SANI S **S** **03 27 24.4 -0.9**
SANI Sanana 42.11 282 P **P** **03 21 20.7 +1.2**
SANI Sanana 42.11 282 P **P** **03 21 21.4 +1.9**
comp=Z,4µmcomp=Z,307nm,1.1s

BATI Baumata 42.57 269 P **P** **03 21 25.1 +1.8**
comp=Z,398nm,0.8s,baz=147,slow=1.4,SNR=20
comp=Z,398nm,0.8s

BATI Baumata 42.57 269 P **P** **03 21 25.5 +2.2**
comp=Z,9µmcomp=Z,637nm,1.2s

MMRI Maumere 44.20 271 P **P** **03 21 36.7 +0.4**
MMRI Maumere 44.20 271 **P** **03 21 36.0 -0.4**
MMRI IAmb IAmb 03 21 38.7
comp=Z,986nm,1.3s

MMRI Maumere 44.20 271 P **P** **03 21 37.5 +1.2**
comp=Z,11µmcomp=Z,725nm,1.4s

EDFI Ende, Flores 44.72 271 P **P** **03 21 41.4 +0.9**
comp=Z,6µmcomp=Z,409nm,1.4s

KMBL Kambalda 45.22 239 P **P** **03 21 43.4 -0.7**
comp=Z,293nm,0.8s

LUWI Luwuk 45.48 282 P **P** **03 21 46.0 -0.4**
LUWI S **S** **03 28 13.5 -0.7**
LUWI Luwuk 45.48 282 P **P** **03 21 46.3 -0.1**
LUWI IAmb IAmb 03 21 49.5
comp=Z,1µm,1.5s

PSAC2 Pilbara Seismi 45.65 253 P **P** **03 21 48.1 +0.4**
comp=Z,604nm,1.1s

BIPH Bislig 45.65 295 *e*P **P** **03 21 47.2 -0.5**
PSA00 Pilbara Seismi 45.70 253 P **P** **03 21 48.7 +0.7**
KKSI Kolaka, Sulawe 45.71 277 P **P** **03 21 50.1 +1.9**
comp=Z,5µmcomp=Z,342nm,1.3s

MBWA Marble Bar 45.79 253 P **P** **03 21 49.0 +0.3**
comp=Z,792nm,1.0s,comp=Z,0.0nm

MBWA Marble Bar 45.79 253 P **P** **03 21 49.6 +0.9**
MBWA Marble Bar 45.79 253 ⇑P **P** **03 21 49.3 +0.6**
DAV Davao City (W) 45.84 294 LR LR 03 39 32.3
comp=Z,1µm,21.6s,baz=94,slow=34

BSSI Bau Bau, Buton 46.38 274 P **P** **03 21 54.8 +1.3**
comp=Z,5µmcomp=Z,388nm,1.3s

LBFI Labuhan Bajo, 46.52 271 P **P** **03 21 55.4 +0.9**
JCJ Chichijima 46.73 329 P **P** **03 21 55.8 -0.2**
WBSI Waikabubak, Su 46.81 269 P **P** **03 21 58.2 +1.3**
comp=Z,8µmcomp=Z,765nm,1.0s

SCPH Surigao 47.15 297 *i* P **P** **03 22 00.0 +0.6**
SCPH *i* S **pwP** **03 22 47.2 +0.5**
SCPH Surigao 47.15 297 *e*P **S** **03 28 37.4 -0.6**
MEEK Meekatharra 47.23 246 P **P** **03 22 00.1 +0.1**
comp=Z,2µm,0.9s,comp=Z,0.0nm

MEEK Meekatharra 47.23 246 P **P** **03 22 00.4 +0.5**
CGP Cagayan de Oro 47.24 295 *e*P **P** **03 22 01.9 +1.8**
CGP *e*S **pwP** **03 22 43.0 -4.1**
KAPI Kappang 47.35 275 P **P** **03 22 01.5 +0.6**
comp=Z,187nm,0.8s,baz=134,slow=2.9,SNR=30

KAPI pP **pwP** **03 22 43.8 -2.2**
comp=Z,133nm,1.0s,baz=230,slow=1.2,SNR=4.5

KAPI S **S** **03 28 37.1 -3.7**
comp=Z,4.3nm,0.3s,baz=3.4,slow=19,SNR=8.3
comp=Z,187nm,0.8s

KAPI Kappang 47.35 275 P **P** **03 22 02.0 +1.1**
KAPI Kappang 47.35 275 P **P** **03 22 00.4 -0.5**
KAPI Kappang 47.35 275 P **P** **03 22 00.4 -0.5**
KAPI pmax pmax
comp=Z,351nm,1.1s

KAPI Kappang 47.35 275 P **P** **03 22 02.5 +1.6**
comp=Z,203nm,0.9s

KAPI Kappang 47.35 275 ⇑P **P** **03 22 01.8 +0.8**
KAPI Kappang 47.35 275 P **P** **03 22 01.8 +0.8**
KAPI pP **pP** **03 22 41.8 +1.4**
KAPI x x 03 22 44.3
KAPI PcP **PcP** **03 23 28.4 -0.4**
SPSI Sidrap Palu 47.58 277 P **P** **03 22 03.4 +0.7**
comp=Z,202nm,1.0s

DBNI Kabupaten Domp 48.05 270 P **P** **03 22 06.3 -0.1**
PLP Palo 48.25 298 *e*P **P** **03 22 07.4 -0.4**

PCI Palu 48.32 281 P **P** **03 22 11.5 +3.1**
comp=Z,13µmcomp=Z,960nm,1.2s

PMSI Majene 48.52 277 P **P** **03 22 12.5 +2.5**
comp=Z,9µmcomp=Z,602nm,1.3s

PLAI Plampang 48.52 270 P **P** **03 22 10.0 +0.1**
PLAI Plampang 48.52 270 P **P** **03 22 10.2 +0.3**
AUKUL Kulin High Sch 48.60 238 P **P** **03 22 10.2 -0.1**
MPSI Mapaga 48.63 282 P **P** **03 22 11.0 +0.2**
comp=Z,6µmcomp=Z,390nm,0.9s

KLBR Kellerberrin 48.72 239 P **P** **03 22 10.7 -0.6**
comp=Z,1µm,0.9s

KLBR Kellerberrin 48.72 239 P **P** **03 22 10.9 -0.3**
LLP Lapu-Lapu 48.72 297 *e*P **P** **03 22 10.7 -0.7**
LLP *e*S **S** **03 29 00.4 +0.3**
MMSI Mamuju 48.73 278 P **P** **03 22 13.3 +1.8**
comp=Z,157nm,0.9s

SNPH Sibulan 48.92 295 *e*P **P** **03 22 15.1 +2.1**
AUALB St Joseph's Co 49.31 235 P **P** **03 22 16.3 +0.7**
NWAO Narrogin (SRO) 49.40 238 P **P** **03 22 16.3 -0.2**
comp=Z,693nm,1.1s,comp=Z,0.0nm

NWAO Narrogin (SRO) 49.40 238 LR LR 03 43 10.6
comp=Z,4µm,19.2s,baz=70,slow=36

NWAO Narrogin (SRO) 49.40 238 P **P** **03 22 16.3 -0.2**
NWAO Narrogin (SRO) 49.40 238 P **P** **03 22 16.2 -0.2**
NWAO IAmb IAmb 03 22 18.3
comp=Z,642nm,1.0s

NWAO Narrogin (SRO) 49.40 238 P **P** **03 22 16.2 -0.2**
NWAO pmax pmax
comp=Z,642nm,1.0s

TWSI Taliwang, Sumb 49.40 270 P **P** **03 22 17.4 +0.7**
comp=Z,14µmcomp=Z,917nm,1.3s

BLDU Balldu 49.43 241 P **P** **03 22 17.1 +0.4**
MORW Morawa 49.79 243 P **P** **03 22 19.6 +0.2**
MORW Morawa 49.79 243 P **P** **03 22 19.2 -0.1**
MORW IAmb IAmb 03 22 21.6
comp=Z,583nm,0.9s

MORW Morawa 49.79 243 ⇑P **P** **03 22 19.5 +0.2**
RKGY Rocky Gully 49.96 236 P **P** **03 22 21.3 +0.7**
comp=Z,982nm,1.0s,comp=Z,0.0nm

MUN Mundaring 50.08 239 P **P** **03 22 22.2 +0.7**
RCP Roxas 50.36 297 *i* P **P** **03 22 25.5 +1.6**
MTKN Mount Kenneth 50.44 239 P **P** **03 22 24.1 -0.1**
AUHAR St Anne's Scho 50.54 238 P **P** **03 22 26.3 +1.3**
KHKI Kahang-Kahang 50.71 270 P **P** **03 22 27.3 +0.8**
comp=Z,5µmcomp=Z,517nm,0.9s

GIRL Giralia 50.93 251 IAmb IAmb 03 22 32.3
comp=Z,748nm,1.4s

DNP Denpasar 51.04 269 P **P** **03 22 29.9 +0.9**
BKB Balikpapan 51.04 279 IAmb IAmb 03 22 33.3
comp=Z,385nm,1.0s

IGBI Denpasar 51.08 269 P **P** **03 22 29.7 +0.4**
RTBI Rangdo, Negare 51.34 270 P **P** **03 22 31.8 +0.6**
comp=Z,8µmcomp=Z,694nm,0.9s

MYLDM Lahad Datu 51.56 288 P **P** **03 22 33.6 +0.8**
MYLDM Lahad Datu 51.56 288 P **P** **03 22 33.0 +0.2**
MYLDM IAmb IAmb 03 22 37.4
comp=Z,535nm,1.4s

MYLDM Lahad Datu 51.56 288 ⇑P **P** **03 22 35.6 +2.8**
GQP Guinayangan 51.73 300 *i* P **P** **03 22 34.6 +0.6**
GQP *e*S **pwP** **03 23 15.4 -6.0**
JAGI Jajag, Banyuwa 52.11 269 P **P** **03 22 36.3 -0.6**
JAGI Jajag, Banyuwa 52.11 269 P **P** **03 22 36.1 -0.8**
JAGI IAmb IAmb 03 22 37.9
comp=Z,619nm,1.2s

JAGI Jajag, Banyuwa 52.11 269 P **P** **03 22 36.6 -0.3**
comp=Z,25µmcomp=Z,7µmcomp=Z,505nm,1.3s

JAGI Jajag, Banyuwa 52.11 269 ⇑P **P** **03 22 36.2 -0.7**
ABJI Asem Bagus 52.15 270 P **P** **03 22 38.7 +1.5**
comp=Z,9µmcomp=Z,729nm,1.3s

BBKI Banjar Baru 52.47 276 P **P** **03 22 41.0 +1.4**
comp=Z,11µmcomp=Z,620nm,1.5s

KMMI Kalianget 52.55 271 P **P** **03 22 42.2 +2.1**
comp=Z,5µmcomp=Z,324nm,1.3s

BLJI Banyuglugur 52.78 270 P **P** **03 22 42.2 +0.4**
comp=Z,7µmcomp=Z,466nm,0.9s

TGY Tagaytay City 53.11 299 P **P** **03 22 44.8 +0.6**
comp=Z,178nm,0.4s,baz=158,slow=2.9,SNR=14
comp=Z,178nm,0.4s

PPR Puerto Princes 53.12 293 *e*P **P** **03 22 45.6 +1.4**
KKM Kota Kinabalu 53.99 288 P **P** **03 22 51.0 +0.3**
KKM Kota Kinabalu 53.99 288 P **P** **03 22 50.6 -0.1**
KKM Kota Kinabalu 53.99 288 P **P** **03 22 51.1 +0.3**
comp=Z,9µmcomp=Z,625nm,1.4s

KKM Kota Kinabalu 53.99 288 ⇓P **P** **03 22 51.1 +0.3**
SNJI Sawahan-Nganju 54.56 270 P **P** **03 22 56.8 +1.8**
comp=Z,13µmcomp=Z,950nm,1.1s

SJI Sawahan 54.56 270 P **P** **03 22 56.2 +1.3**
comp=Z,1µm,2.1s

JOW Kunigami 54.76 317 P **P** **03 22 57.3 +1.3**
JOW Kunigami 54.76 317 ⇑P **P** **03 22 57.0 +1.1**
NGJI Ngawi 54.93 270 P **P** **03 22 58.2 +0.8**
comp=Z,17µmcomp=Z,821nm,1.1s

PCJI Pacitan 55.06 269 P **P** **03 22 59.0 +0.7**
SIPP Brgy, Tapao 55.39 303 *e*P **P** **03 22 59.3 -1.3**
UGM Wanagama 55.74 269 P **P** **03 23 03.7 +0.4**
UGM Wanagama 55.74 269 IAmb IAmb 03 23 05.4
comp=Z,361nm,0.8s

UGM Wanagama 55.74 269 P **P** **03 23 03.9 +0.6**
comp=Z,6µmcomp=Z,521nm,1.0s

YOGI Yogyakarta 55.98 269 P **P** **03 23 05.9 +1.0**
SMRI Semarang 55.98 270 P **P** **03 23 06.0 +1.1**
SMRI Semarang 55.98 270 P **P** **03 23 06.2 +1.2**
comp=Z,21µmcomp=Z,750nm,0.9s

SMRI Semarang 55.98 270 ⇑P **P** **03 23 06.0 +1.1**
INU Inuyama 56.01 330 P **P** **03 23 05.7 +1.1**
INU Inuyama 56.01 330 P **P** **03 23 05.3 +0.6**
INU pP **pP** **03 23 46.3 0.0**
JGF Kuroka 56.05 331 P **P** **03 23 05.6 +0.6**
JGF Kuroka 56.05 331 P **P** **03 23 05.0 0.0**
JGF Kuroka 56.05 331 ⇓P **P** **03 23 05.4 +0.4**
JMN Monobe 56.33 327 P **P** **03 23 08.4 +1.4**
JMN Monobe 56.33 327 P **P** **03 23 07.7 +0.7**
JMN IAmb IAmb 03 23 10.6
comp=Z,294nm,1.1s

JMN Monobe 56.33 327 ⇑P **P** **03 23 08.1 +1.1**
MJAR Matsushiro Arr 56.42 332 P **P** **03 23 07.1 -0.5**
comp=Z,35nm,0.9s,baz=165,slow=8.3,SNR=21

MJAR pP **pP** **03 23 45.0 -4.4**
comp=Z,24nm,1.0s,baz=162,slow=8.2,SNR=5.1

MJAR PKPPKP **P'P'df** **03 53 00.7 +0.5**
comp=Z,3.0nm,1.0s,baz=333,slow=3.0,SNR=4.6
comp=Z,35nm,0.9s

MJAR Matsushiro Arr 56.42 332 P **P** **03 23 07.5 -0.1**
MJAR Matsushiro Arr 56.42 332 P **P** **03 23 07.5 -0.1**
MJAR pmax pmax
comp=Z,58nm,1.0s

MAJO Matsushiro 56.42 332 P **P** **03 23 07.9 +0.3**
MAJO Matsushiro 56.42 332 P **P** **03 23 07.7 +0.1**
MAJO Matsushiro 56.42 332 P **P** **03 23 07.7 +0.1**
MAJO pmax pmax
comp=Z,88nm,0.9s

MAJO Matsushiro 56.42 332 ⇑P **P** **03 23 07.7 +0.1**
MJB9 Matsu-Tunnel 56.43 332 P **P** **03 23 08.5 +0.8**
SBUM Sibu 56.58 282 P **P** **03 23 10.3 +1.1**
SBUM Sibu 56.58 282 P **P** **03 23 09.1 -0.1**
SBUM Sibu 56.58 282 P **P** **03 23 10.7 +1.6**
SBUM Sibu 56.58 282 ⇑P **P** **03 23 10.2 +1.0**
JSU Suzuyama 56.61 322 P **P** **03 23 09.9 +0.9**
JSU Suzuyama 56.61 322 IAmb IAmb 03 23 12.4
comp=Z,308nm,1.3s

YOJ Yonaguni jima 56.98 311 P **P** **03 23 12.9 +1.2**
YOJ Yonaguni jima 56.98 311 IAmb IAmb 03 24 00.1
comp=Z,281nm,1.2s

CTJI Waduk Cacaban 57.22 270 P **P** **03 23 14.7 +1.1**
comp=Z,8µmcomp=Z,644nm,1.1s

KPJI Karang Pucung 57.40 270 P **P** **03 23 16.2 +1.3**
TWGBT Beinan 57.50 308 P **P** **03 23 15.9 +0.5**
YULB Yu-li 57.65 309 P **P** **03 23 17.7 +1.2**
NACB Ninganchiao 57.87 310 P **P** **03 23 18.4 +0.4**
TPUB Ta-pu 58.11 308 P **P** **03 23 19.5 -0.2**
TPUB Ta-pu 58.11 308 IAmb IAmb 03 24 05.2
comp=Z,372nm,1.1s

SSLB Suanglung 58.13 309 P **P** **03 23 20.0 +0.2**
YHNB Yeheng 58.32 310 IAmb IAmb 03 23 23.3
comp=Z,224nm,0.8s

TATO Taipei 58.41 310 P **P** **03 23 22.3 +0.6**
TATO Taipei 58.41 310 P **P** **03 23 21.8 +0.2**
TATO IAmb IAmb 03 23 24.2
comp=Z,304nm,1.2s

BBJI Bungbulang 58.62 269 P **P** **03 23 23.1 -0.4**
BBJI Bungbulang 58.62 269 IAmb IAmb 03 23 24.7
comp=Z,271nm,1.0s

BBJI Bungbulang 58.62 269 P **P** **03 23 23.2 -0.3**
comp=Z,4µmcomp=Z,3µmcomp=Z,295nm,0.9s

TPI	**Tanjungpandan**	**59.61**	**275**	P	**P**	**03 23 31.6**	**+1.4**	
	comp=Z,4µmcomp=Z,246nm,1.1s							
DBJI	**Dramaga**	**59.67**	**270**	P	**P**	**03 23 31.8**	**+1.1**	
	comp=Z,17µmcomp=Z,799nm,1.6s							
XMI	**Christmas Isla**	**60.02**	**265**	P	**P**	**03 23 34.1**	**+1.1**	
XMI	**Christmas Isla**	**60.02**	**265**	⇑P	**P**	**03 23 34.0**	**+1.1**	
SBJI	**Serang**	**60.36**	**270**	P	**P**	**03 23 36.6**	**+1.3**	
	comp=Z,682nm,2.0s							
KNMB	**Chin-men Tao**	**60.46**	**308**	P	**P**	**03 23 36.2**	**+0.5**	
QZH2	**Quanzhou**	**60.56**	**309**	⇑*i*P	**P**	**03 23 36.9**	**+0.5**	
QZH2				pP	**pP**	**03 24 16.3**	**-1.6**	
QZH2				S	**S**	**03 31 35.5**	**-2.3**	
QZH2				sS	**sS**	**03 32 47.8**	**-2.8**	
QZH2				pmax	pmax			
	comp=Z,240nm,1.7s							
QZH2				pmax	pmax			
	comp=Z,2µm,2.7s							
QZH2				L	L			
	comp=Z,1µm,16.8s							
QZH2				L	L			
	comp=Z,1µm,13.4s							
QZH2				L	L			
	comp=Z,2µm,22.0s							
CGJI	**Cibinong**	**60.69**	**270**	P	**P**	**03 23 36.8**	**-0.8**	
JKA	**Kamikawa-asahi**	**61.20**	**340**	P	**P**	**03 23 41.0**	**+0.7**	
ASAJ	**Asahikawa**	**61.20**	**340**	P	**P**	**03 23 42.5**	**+2.2**	
	comp=Z,23nm,0.8s,baz=214,slow=8.8,SNR=6.1							
ASAJ				pP	**pP**	**03 24 22.1**	**-0.5**	
	comp=Z,42nm,0.9s,baz=207,slow=9.3,SNR=4.4							
	comp=Z,23nm,0.8s							
ASAJ	**Asahikawa**	**61.20**	**340**	P	**P**	**03 23 41.0**	**+0.7**	
ASAJ				pmax	pmax			
	comp=Z,225nm,1.5s							
PPBI	**Pangkal Pinang**	**61.22**	**275**	P	**P**	**03 23 43.2**	**+2.1**	
TJN	**Taejon**	**61.88**	**324**	P	**P**	**03 23 45.7**	**+0.7**	
TJN	**Taejon**	**61.88**	**324**	P	**P**	**03 23 45.3**	**+0.3**	
TJN	**Taejon**	**61.88**	**324**	P	**P**	**03 23 45.3**	**+0.3**	
TJN				pmax	pmax			
	comp=Z,516nm,1.1s							
KLSI		**62.02**	**272**	P	**P**	**03 23 46.8**	**+0.3**	
KASI	**Kota Agung**	**62.08**	**271**	P	**P**	**03 23 46.1**	**-0.7**	
	comp=Z,6µmcomp=Z,717nm,1.0s							
SSE	**Sheshan**	**62.25**	**316**	P	**P**	**03 23 49.5**	**+1.9**	
SSE				S	**S**	**03 32 02.4**	**+3.5**	
SSE				pmax	pmax			
	comp=Z,71nm,0.8s							
SSE				pmax	pmax			
	comp=Z,390nm,3.8s							
SSE				L	L			
	comp=Z,360nm,18.2s							
SSE				L	L			
	comp=Z,2µm,18.2s							
SSE	**Sheshan**	**62.25**	**316**	P	**P**	**03 23 47.3**	**-0.4**	
SSE				PcP	**PcP**	**03 24 25.8**	**0.0**	
SSE				pP	**pP**	**03 24 29.0**	**-0.6**	
KSRS	**Korea Array**	**62.33**	**325**	P	**P**	**03 23 48.9**	**+0.8**	
	comp=Z,36nm,0.9s,baz=140,slow=6.8,SNR=31							
KSRS				pP	**pP**	**03 24 29.4**	**-1.1**	
	comp=Z,9.9nm,0.8s,baz=133,slow=6.3,SNR=1.9							
KSRS				PKP2bc	**P'P'bc**	**03 52 57.0**	**-2.2**	
	comp=Z,5.1nm,1.1s,baz=319,slow=3.5,SNR=7.7							
	comp=Z,36nm,0.9s							
KSAR	**Wonju Array Be**	**62.34**	**325**	P	**P**	**03 23 48.0**	**-0.1**	
KSAR	**Wonju Array Be**	**62.34**	**325**	P	**P**	**03 23 48.0**	**-0.1**	
MDSI	**Maura Dua**	**62.60**	**272**	P	**P**	**03 23 49.6**	**-0.7**	
	comp=Z,6µmcomp=Z,294nm,1.9s							
LWLI	**Liwa**	**62.61**	**271**	P	**P**	**03 23 50.6**	**+0.1**	
	comp=Z,597nm,1.0s							
HKC	**Hong Kong Obse**	**62.68**	**304**	⇑P	**P**	**03 23 52.0**	**+1.4**	
HKPS	**Hong Kong Po S**	**62.69**	**304**	P	**P**	**03 23 52.0**	**+1.3**	
HKPS	**Hong Kong Po S**	**62.69**	**304**	P	**P**	**03 23 51.0**	**+0.3**	
HKPS				IAmb	IAmb	03 23 53.9		
	comp=Z,240nm,1.1s							
INCN	**Inchon**	**63.07**	**325**	P	**P**	**03 23 54.2**	**+1.2**	
INCN	**Inchon**	**63.07**	**325**	P	**P**	**03 23 53.3**	**+0.3**	
INCN				IAmb	IAmb	03 23 56.5		
	comp=Z,291nm,1.4s							
INCN	**Inchon**	**63.07**	**325**	P	**P**	**03 23 53.3**	**+0.3**	
INCN				pmax	pmax			
	comp=Z,291nm,1.4s							
DSRI	**Dabo**	**63.14**	**276**	P	**P**	**03 23 55.0**	**+1.1**	
	comp=Z,320nm,1.0s							
TPRI	**Tanjung Pinang**	**63.54**	**278**	P	**P**	**03 23 58.3**	**+1.8**	
YSS	**Yuzhno-Sakhali**	**63.68**	**342**	P	**P**	**03 23 58.4**	**+1.7**	
YSS	**Yuzhno-Sakhali**	**63.68**	**342**	P	**P**	**03 23 57.1**	**+0.5**	
YSS	**Yuzhno-Sakhali**	**63.68**	**342**	*b*iP	**P**	**03 23 58.2**	**+1.5**	
YSS				*e*		03 24 33.1		
YSS				*e**PP	**pP**	**03 24 39.3**	**0.0**	
YSS				*e**SP	**sP**	**03 24 58.7**	**-0.4**	
YSS				*e*S	**S**	**03 32 15.3**	**-0.7**	
YSS				*e**SS	**sS**	**03 33 28.4**	**-0.9**	
YSS				pmax	pmax			
	comp=N,1µm,3.5s							
YSS				pmax	pmax			
	comp=Z,2µm,3.5s							
YSS				pmax	pmax			
	comp=Z,90nm,1.3s							
YSS				smax	smax			
	comp=N,700nm,5.8s							
YSS				smax	smax			
	comp=E,800nm,5.7s							
YSS				MLR	MLR			
	comp=Z,1µm,18.0s							
YSS				MLR	MLR			
	comp=N,600nm,16.0s							
YSS				MLR	MLR			
	comp=E,500nm,16.0s							
GZH2	**Guangzhou**	**63.75**	**305**	P	**P**	**03 23 58.0**	**+0.3**	
GZH2				pP	**pP**	**03 24 42.0**	**+2.5**	
GZH2				sP	**sP**	**03 24 59.4**	**+0.4**	
GZH2				S	**S**	**03 32 19.6**	**+1.8**	
GZH2				pmax	pmax			
	comp=E,170nm,1.6s							
GZH2				pmax	pmax			
	comp=E,2µm,3.7s							
JMBI	**JAMBI**	**63.77**	**275**	P	**P**	**03 24 01.3**	**+3.3**	
MNAI	**Manna**	**63.82**	**272**	P	**P**	**03 23 59.0**	**+0.6**	
MNAI	**Manna**	**63.82**	**272**	P	**P**	**03 23 59.8**	**+1.4**	
	comp=E,12µmcomp=E,621nm,1.9s							
EGSI	**Enggano, Bengk**	**64.27**	**270**	P	**P**	**03 24 03.2**	**+1.9**	
	comp=E,7µmcomp=E,7µmcomp=E,376nm,1.3s							
KSI	**Kapahiang**	**64.33**	**272**	P	**P**	**03 24 01.8**	**+0.1**	
	comp=E,300nm,0.7s							
NJ2	**Nanjing**	**64.42**	**315**	⇑*i*P	**P**	**03 24 02.8**	**+1.0**	
NJ2				pP	**pP**	**03 24 44.1**	**-0.4**	
NJ2				S	**S**	**03 32 25.4**	**-0.3**	
NJ2				sS	**sS**	**03 33 41.1**	**+2.7**	
NJ2				pmax	pmax			
	comp=E,460nm,1.1s							
MYKOM	**Kota Tinggi**	**64.42**	**278**	P	**P**	**03 24 03.3**	**+1.0**	
MYKOM	**Kota Tinggi**	**64.42**	**278**	P	**P**	**03 24 02.4**	**+0.1**	
MYKOM				IAmb	IAmb	03 24 05.0		
	comp=Z,238nm,1.1s							
MYKOM	**Kota Tinggi**	**64.42**	**278**	P	**P**	**03 24 03.7**	**+1.4**	
MYKOM	**Kota Tinggi**	**64.42**	**278**	⇑P	**P**	**03 24 03.2**	**+0.9**	
VNDA	**Vanda**	**64.43**	**181**	P	**P**	**03 24 01.9**	**+0.7**	
	comp=Z,37nm,0.5s,baz=356,slow=7.4,SNR=170							
VNDA				PKPPKP	**P'P'df**	**03 52 45.0**	**-3.3**	
	comp=Z,0.8nm,0.8s,baz=169,slow=5.2,SNR=1.4							
	comp=Z,37nm,0.5s							
VNDA	**Vanda**	**64.43**	**181**	P	**P**	**03 24 01.7**	**+0.5**	
VNDA	**Vanda**	**64.43**	**181**	P	**P**	**03 24 01.7**	**+0.5**	
VNDA				pmax	pmax			
	comp=Z,1µm,2.0s							
VNDA	**Vanda**	**64.43**	**181**	P	**P**	**03 24 02.3**	**+1.1**	
VNDA				PcP	**PcP**	**03 24 35.3**	**+1.4**	
VLA	**Vladivostok**	**64.59**	**332**	*d*iP	**P**	**03 24 04.2**	**+1.5**	
UBSI	**University, Be**	**64.62**	**272**	P	**P**	**03 24 04.2**	**+0.7**	
	comp=Z,11µmcomp=Z,655nm,1.6s							
SBA	**Scott Base**	**64.71**	**180**	P	**P**	**03 24 04.4**	**+1.4**	
SBA				IAmb	IAmb	03 24 09.6		
	comp=Z,471nm,1.2s							
SBA	**Scott Base**	**64.71**	**180**	P	**P**	**03 24 04.4**	**+1.4**	
SBA				pmax	pmax			
	comp=Z,471nm,1.3s							
PSTR	**Posyet**	**64.73**	**331**	*c*iP	**P**	**03 24 04.9**	**+1.3**	
MASI	**Maura Aman, Be**	**64.78**	**273**	P	**P**	**03 24 05.0**	**+0.3**	
	comp=Z,6µmcomp=Z,561nm,1.0s							
QIZ	**Qiongzhong**	**64.81**	**298**	P	**P**	**03 24 06.9**	**+2.3**	
QIZ				pP	**pP**	**03 24 47.1**	**+0.5**	
QIZ				sP	**sP**	**03 25 06.3**	**+0.2**	
QIZ				S	**S**	**03 32 32.5**	**+1.5**	
QIZ				sS	**sS**	**03 33 46.4**	**+2.2**	
QIZ				pmax	pmax			
	comp=Z,130nm,1.0s							
QIZ				pmax	pmax			
	comp=Z,1µm,4.3s							
CASY	**Casey**	**64.91**	**202**	P	**P**	**03 24 04.4**	**-0.1**	
CASY				IAmb	IAmb	03 24 06.6		
	comp=Z,409nm,1.4s							
CASY	**Casey**	**64.91**	**202**	⇑P	**P**	**03 24 04.4**	**-0.1**	
USRK	**Ussuriysk Ar.**	**65.40**	**333**	P	**P**	**03 24 09.2**	**+1.4**	
	comp=Z,53nm,0.8s,baz=140,slow=5.8,SNR=25							
USRK				pP	**pP**	**03 24 49.4**	**-1.4**	
	comp=Z,53nm,1.0s,baz=144,slow=5.5,SNR=5.7							
USRK				PKPPKP	**P'P'df**	**03 52 47.9**	**+2.1**	
	comp=Z,2.1nm,0.7s,baz=27,slow=1.6,SNR=4.4							
	comp=Z,53nm,0.8s							
KRJI	**Kerinci**	**65.78**	**274**	P	**P**	**03 24 13.7**	**+2.6**	
	comp=Z,9µmcomp=Z,526nm,0.9s							
UGL	**Uglegorsk**	**65.78**	**342**	*c*iP	**P**	**03 24 10.8**	**+0.6**	
UGL				*e*S	**S**	**03 32 44.2**	**+2.6**	
UGL				pmax	pmax			
	comp=Z,2µm,3.3s							
UGL				pmax	pmax			
	comp=Z,120nm,0.9s							
UGL				smax	smax			
	comp=E,2µm,7.1s							
UGL				smax	smax			
	comp=N,3µm,8.2s							
SHEM	**Shemya Is, Ala**	**65.89**	**5**	P	**P**	**03 24 11.9**	**+1.1**	
	comp=N,86nm,0.8s,baz=63,slow=3.9,SNR=4.5							
SHEM				pP	**pwP**	**03 24 57.7**	**+1.5**	
	comp=N,320nm,1.1s,baz=42,slow=19,SNR=4.2							
	comp=N,86nm,0.8s							
ADK	**Adak**	**66.28**	**11**	P	**P**	**03 24 14.8**	**+1.5**	
PET	**Petropavlovsk**	**66.30**	**354**	*e*P	**P**	**03 24 15.0**	**+1.6**	
PET				*e**PP	**pwP**	**03 24 57.9**	**-1.0**	
PET				*e*		03 26 48.9		
PET				*e*S	**S**	**03 32 50.5**	**+2.8**	
PET				pmax	pmax			
	comp=Z,101nm,1.2s							
PET				pmax	pmax			
	comp=Z,900nm,9.7s							
PET				pmax	pmax			
	comp=Z,400nm,11.6s							
PEA0B	**Petropavlovsk-**	**66.48**	**354**	*c*iP	**P**	**03 24 16.1**	**+1.5**	
PETK	**Petropavlovsk-**	**66.48**	**354**	P	**P**	**03 24 16.1**	**+1.5**	
	comp=Z,48nm,0.8s,baz=138,slow=4.6,SNR=15							
PETK				pP	**pwP**	**03 24 59.8**	**-0.3**	
	comp=Z,103nm,1.1s,baz=122,slow=5.4,SNR=5.2							
	comp=Z,48nm,0.8s							
PETK	**Petropavlovsk-**	**66.48**	**354**	P	**P**	**03 24 15.6**	**+1.0**	
CNSH	**ChangSha**	**66.57**	**309**	P	**P**	**03 24 16.3**	**+0.6**	
CNSH				S	**S**	**03 32 51.5**	**-0.5**	
CNSH				pmax	pmax			
	comp=Z,37nm,1.3s							
CNSH				L	L			
	comp=Z,1µm,14.1s							
CNSH				L	L			
	comp=Z,780nm,15.1s							
CNSH				L	L			
	comp=Z,1µm,20.8s							
WHN	**Wuhan**	**66.75**	**312**	⇑*i*P	**P**	**03 24 16.5**	**-0.3**	
WHN				pP	**pP**	**03 24 58.8**	**-0.5**	
WHN				S	**S**	**03 32 48.1**	**-5.9**	
WHN				ScS	**SKSac**	**03 33 50.3**	**-5.6**	
WHN				sS	**sS**	**03 34 04.4**	**-2.2**	
WHN				pmax	pmax			
	comp=Z,2µm,2.0s							
BKNI	**Bangkinang**	**66.77**	**276**	P	**P**	**03 24 17.5**	**+0.2**	
BKNI	**Bangkinang**	**66.77**	**276**	P	**P**	**03 24 18.4**	**+1.1**	
BKNI	**Bangkinang**	**66.77**	**276**	P	**P**	**03 24 19.2**	**+1.9**	
	comp=Z,12µmcomp=Z,1µm,1.1s							
MDJ	**Mudanjiang**	**66.80**	**332**	P	**P**	**03 24 18.0**	**+1.1**	
MDJ				pP	pP	03 24 58.8	-1.1	
MDJ				S	**S**	**03 32 50.8**	**-3.4**	
MDJ				ScS	**SKSac**	**03 33 53.3**	**-2.4**	
MDJ				pmax	pmax			
	comp=Z,170nm,1.9s							
DL2	**Dalian**	**66.93**	**323**	P	**P**	**03 24 18.8**	**+1.1**	
DL2				pP	**pP**	**03 24 59.8**	**-1.0**	
DL2				sP	**sP**	**03 25 19.5**	**-1.1**	
DL2				S	**S**	**03 32 56.8**	**+0.9**	
DL2				sS	**sS**	**03 34 11.8**	**+2.1**	
DL2				pmax	pmax			
	comp=Z,250nm,0.9s							
DL2				pmax	pmax			
	comp=Z,2µm,5.0s							
PDSI	**Padang**	**67.03**	**275**	P	**P**	**03 24 17.8**	**-1.2**	
	comp=Z,17µmcomp=Z,189nm,1.0s							
PPSI	**Pulau Pagai**	**67.04**	**273**	P	**P**	**03 24 20.4**	**+1.4**	
GULI	**GuiLin**	**67.16**	**305**	P	**P**	**03 24 22.3**	**+2.7**	
GULI				pP	**pwP**	**03 25 05.8**	**-0.4**	
GULI				sP	**sP**	**03 25 24.4**	**+2.6**	
GULI				S	**S**	**03 33 00.3**	**+1.0**	
GULI				pmax	pmax			
	comp=Z,240nm,1.0s							
GULI				L	L			
	comp=Z,910nm,21.1s							
GULI				L	L			
	comp=Z,700nm,17.1s							
GULI				L	L			
	comp=Z,1µm,23.9s							
PPI	**Padang Panjang**	**67.20**	**275**	P	**P**	**03 24 20.6**	**+0.6**	
	comp=Z,4µmcomp=Z,285nm,0.9s							
TYV	**Tymovskoe**	**67.22**	**343**	*e*P	**P**	**03 24 20.7**	**+1.4**	
TYV				*e*S	**S**	**03 33 00.6**	**+1.8**	
TYV				pmax	pmax			
	comp=Z,61nm,1.6s							
TYV				pmax	pmax			
	comp=Z,1µm,3.4s							
TYV				smax	smax			
	comp=N,1µm,7.7s							
TYV				smax	smax			
	comp=E,1µm,7.7s							
SNY	**Shenyang**	**67.79**	**326**	⇑P	**P**	**03 24 23.8**	**+0.7**	
SNY				pP	**pP**	**03 25 03.6**	**-2.6**	
SNY				S	**S**	**03 33 05.8**	**-0.2**	
SNY				pmax	pmax			
	comp=E,50nm,0.8s							
SNY				L	L			
	comp=E,1µm,15.6s							
SNY				L	L			
	comp=E,400nm,17.1s							
SNY				L	L			
	comp=E,730nm,16.3s							
TIA	**Tai'an**	**68.03**	**318**	P	**P**	**03 24 24.6**	**-0.2**	
TIA				PcP	**PcP**	**03 24 51.8**	**+2.2**	
TIA				pP	**pP**	**03 25 04.4**	**-3.3**	
TIA				S	**S**	**03 33 06.5**	**-2.7**	
TIA				pmax	pmax			
	comp=E,150nm,1.0s							
TIA				L	L			
	comp=E,820nm,13.7s							
TIA				L	L			
	comp=E,220nm,13.1s							
TIA				L	L			
	comp=E,1µm,17.2s							
CN2	**Changchun**	**68.20**	**329**	⇑P	**P**	**03 24 26.0**	**+0.4**	
CN2				*e*pP	pwP	03 25 11.0	0.0	
CN2				*e*S	**S**	**03 33 10.5**	**-0.4**	
CN2				pmax	pmax			
	comp=E,100nm,0.8s							
CN2				pmax	pmax			
	comp=E,2µm,6.0s							
MNSI	**Mandailing Nat**	**68.30**	**276**	P	**P**	**03 24 26.4**	**-0.5**	
	comp=E,6µmcomp=E,446nm,0.9s							
COCO	**West Island**	**68.31**	**262**	P	**P**	**03 24 28.4**	**+1.5**	
COCO	**West Island**	**68.31**	**262**	P	**P**	**03 24 27.0**	**+0.1**	
COCO	**West Island**	**68.31**	**262**	P	**P**	**03 24 27.0**	**+0.1**	
COCO				pmax	pmax			
	comp=Z,1µm,1.6s							
COCO	**West Island**	**68.31**	**262**	P	**P**	**03 24 29.7**	**+2.8**	
	comp=Z,4µmcomp=Z,6µmcomp=Z,304nm,1.6s							
COCO	**West Island**	**68.31**	**262**	P	**P**	**03 24 28.5**	**+1.5**	
COCO				PcP	**PcP**	**03 24 53.0**	**+1.7**	
COCO				pP	**pP**	**03 25 10.9**	**+2.1**	
COCO				sP	**sP**	**03 25 30.6**	**+2.6**	
KULM	**Kulim**	**68.44**	**281**	P	**P**	**03 24 28.3**	**+0.5**	
KULM	**Kulim**	**68.44**	**281**	P	**P**	**03 24 28.2**	**+0.5**	
KULM	**Kulim**	**68.44**	**281**	⇑P	**P**	**03 24 27.9**	**+0.1**	
BNX	**BinXian**	**68.67**	**331**	⇑P	**P**	**03 24 28.8**	**+0.3**	
BNX				PcP	**PcP**	**03 24 50.5**	**-1.5**	
BNX				pP	**pP**	**03 25 11.6**	**-0.2**	
BNX				S	**S**	**03 33 17.4**	**+1.1**	
BNX				sS	**sS**	**03 34 31.6**	**-0.1**	
BNX				pmax	pmax			
	comp=Z,150nm,1.8s							
BNX				pmax	pmax			
	comp=Z,2µm,4.1s							
GRNR	**Gornyy**	**69.05**	**340**	⇑*i*P	**P**	**03 24 32.6**	**+1.8**	
GRNR				pmax	pmax			
	comp=Z,100nm,1.3s							
GRNR				MLR	MLR			
	comp=E,280nm,16.0s							
PBSI	**Pulau Batu**	**69.35**	**275**	P	**P**	**03 24 35.6**	**+2.2**	
	comp=E,6µmcomp=E,13µmcomp=E,805nm,1.4s							
RPSI	**Rantau Prapat**	**69.41**	**278**	IAmb	IAmb	03 24 35.4		
	comp=Z,266nm,0.9s							
PSI	**Prapat**	**69.44**	**278**	P	**P**	**03 24 33.4**	**-0.7**	
PSI	**Prapat**	**69.44**	**278**	P	**P**	**03 24 33.4**	**-0.7**	
	comp=Z,5µmcomp=Z,4µmcomp=Z,369nm,1.0s							
KLR	**Kul'dur**	**69.49**	**336**	P	**P**	**03 24 34.7**	**+1.3**	
	comp=Z,39nm,1.1s,baz=149,slow=5.8,SNR=18							
KLR				pP	**pP**	**03 25 16.9**	**0.0**	
	comp=Z,30nm,0.9s,baz=133,slow=2.9,SNR=5.4							
	comp=Z,39nm,1.1s							
TSI	**Tuntungan**	**69.96**	**279**	P	**P**	**03 24 37.5**	**+0.4**	
	comp=Z,6µmcomp=Z,15µmcomp=Z,461nm,0.9s							
ENH	**Enshi**	**70.22**	**309**	IAmb	IAmb	03 24 41.0		
	comp=Z,349nm,1.1s							
LYN	**LuoYang**	**70.23**	**314**	⇑*i*P	**P**	**03 24 38.9**	**+0.6**	
LYN				pP	pP	03 25 21.0	-0.6	
LYN				S	**S**	**03 33 29.0**	**-6.1**	
LYN				pmax	pmax			
	comp=Z,310nm,1.1s							
LYN				pmax	pmax			
	comp=Z,2µm,6.4s							
HNS	**HongShan**	**70.30**	**318**	⇑P	**P**	**03 24 39.3**	**+0.6**	
HNS				pP	**pP**	**03 25 21.8**	**-0.4**	
HNS				S	**S**	**03 33 35.3**	**-0.4**	
HNS				pmax	pmax			
	comp=Z,190nm,1.7s							
HNS				L	L			
	comp=Z,1µm,17.7s							
HNS				L	L			
	comp=Z,1µm,22.6s							
HNS				L	L			
	comp=Z,1µm,18.8s							
GSI	**Gunungsitoli**	**70.36**	**276**	P	**P**	**03 24 40.1**	**+0.5**	
GSI	**Gunungsitoli**	**70.36**	**276**	P	**P**	**03 24 40.1**	**+0.5**	
	comp=Z,6µmcomp=Z,7µmcomp=Z,595nm,1.0s							
GSI	**Gunungsitoli**	**70.36**	**276**	⇑P	**P**	**03 24 39.8**	**+0.2**	
UNV	**Unalaska Valle**	**70.44**	**16**	P	**P**	**03 24 39.9**	**+0.8**	
UNV	**Unalaska Valle**	**70.44**	**16**	P	**P**	**03 24 38.7**	**-0.4**	
	baz=207							
GYA	**Guiyang**	**70.66**	**304**	⇑P	**P**	**03 24 42.0**	**+0.7**	
GYA				S	**S**	**03 33 40.9**	**+0.3**	
GYA				pmax	pmax			
	comp=Z,69nm,0.8s							
KCSI	**Kotacane, Aceh**	**70.73**	**278**	P	**P**	**03 24 40.9**	**-0.9**	
	comp=Z,188nm,1.0s							
LVA	**Lava Point**	**70.85**	**16**	P	**P**	**03 24 41.5**	**-0.1**	
LVA				IAmb	IAmb	03 24 52.4		
	comp=Z,279nm,0.7s							
AKUT	**Akutan**	**70.90**	**17**	⇓P	**P**	**03 24 42.2**	**+0.4**	
BJI2	**Beijing**	**70.91**	**321**	P	**P**	**03 24 43.4**	**+1.1**	
BJI2				S	**S**	**03 33 40.9**	**-1.8**	
BJI2				pmax	pmax			
	comp=Z,52nm,1.5s							
BJI2				pmax	pmax			
	comp=Z,840nm,4.0s							
BJI2				L	L			
	comp=Z,510nm,21.8s							
BJI2				L	L			
	comp=Z,340nm,16.8s							
BJI2				L	L			
	comp=Z,440nm,16.8s							
TPTI		**71.24**	**278**	P	**P**	**03 24 45.3**	**+0.5**	
TIY	**Taiyuan**	**71.97**	**317**	P	**P**	**03 24 50.1**	**+1.3**	
TIY				pP	**pP**	**03 25 32.3**	**-0.2**	
TIY				S	**S**	**03 33 54.1**	**-1.1**	
TIY				pmax	pmax			
	comp=Z,170nm,1.0s							
TIY				pmax	pmax			
	comp=Z,2µm,4.7s							
LHMI	**Lhok Sumawe**	**71.97**	**280**	P	**P**	**03 24 50.7**	**+1.5**	
LHMI	**Lhok Sumawe**	**71.97**	**280**	IAmb	IAmb	03 24 51.7		
	comp=Z,352nm,1.2s							
LHMI	**Lhok Sumawe**	**71.97**	**280**	P	**P**	**03 24 51.1**	**+1.9**	
	comp=Z,5µmcomp=Z,5µmcomp=Z,266nm,1.0s							
HEH	**HeiHe**	**72.05**	**334**	*e*P	**P**	**03 24 49.8**	**+0.9**	
HEH				pP	**pP**	**03 25 32.3**	**-0.4**	
HEH				S	**S**	**03 33 55.8**	**+0.4**	
HEH				pmax	pmax			
	comp=Z,92nm,1.9s							
HEH				pmax	pmax			
	comp=Z,2µm,7.6s							
FALS	**False Pass**	**72.20**	**17**	P	**P**	**03 24 48.9**	**-0.7**	
	baz=210							
MLSI	**Meulaboh, Aceh**	**72.24**	**279**	P	**P**	**03 24 50.8**	**-0.1**	
	comp=Z,9µmcomp=Z,773nm,1.2s							
XAN	**Xi'an**	**72.48**	**312**	⇑P	**P**	**03 24 52.0**	**+0.1**	
XAN				S	**S**	**03 33 59.5**	**-1.6**	
XAN				SS	**SS**	**03 38 46.0**	**+1.8**	
XAN				pmax	pmax			
	comp=Z,260nm,1.0s							
XAN				pmax	pmax			
	comp=Z,3µm,6.0s							
XAN				L	L			
	comp=Z,1µm,21.4s							
XAN				L	L			
	comp=Z,1µm,17.1s							
XAN				L	L			
	comp=Z,2µm,16.5s							
SPIA	**Saint Paul Isl**	**72.55**	**13**	P	**P**	**03 24 51.8**	**+0.1**	
	baz=203							
XLT	**XiLinHaoTe**	**73.32**	**324**	*e*P	**P**	**03 24 57.4**	**+0.8**	
XLT				pP	pP	03 25 39.9	-0.6	
XLT				sP	sP	03 25 58.3	-1.8	
XLT				S	**S**	**03 34 09.9**	**-0.3**	
XLT				ScS	**SKSac**	**03 34 44.8**	**-0.4**	
XLT				sS	sS	03 35 28.3	+2.5	
XLT				pmax	pmax			
	comp=Z,160nm,1.9s							
XLT				pmax	pmax			
	comp=Z,2µm,2.9s							
XLT				L	L			
	comp=Z,97nm,23.0s							
XLT				L	L			
	comp=Z,460nm,21.7s							
XLT				L	L			
	comp=Z,980nm,23.4s							
KMI2	**Kunming**	**73.32**	**301**	⇑P	**P**	**03 24 58.4**	**+1.2**	
KMI2				pP	pP	03 25 41.5	+1.1	
KMI2				S	**SKiKP**	**03 34 10.3**	**+0.6**	
KMI2				pmax	pmax			
	comp=Z,250nm,1.5s							
KMI2				pmax	pmax			
	comp=Z,2µm,3.7s							
KMI2				L	L			
	comp=Z,1µm,24.7s							
KMI2				L	L			
	comp=Z,650n

HHC	**Hu-ho-hao-te**	**74.26**	**319**	⇑*i*P		**P**		**03 25 03.5**	**+1.3**
HHC				pP		pP		03 25 45.9	-0.3
HHC				sP		sP		03 26 04.9	-0.8
HHC				S		**S**		**03 34 21.6**	**+0.7**
HHC				sS		sS		03 35 35.5	-0.2
HHC				pmax		pmax			
	comp=Z,120nm,1.8s								
HHC				pmax		pmax			
	comp=Z,970nm,4.6s								
HHC				L		L			
	comp=Z,840nm,21.8s								
HHC				L		L			
	comp=Z,530nm,21.8s								
HHC				L		L			
	comp=Z,940nm,20.8s								
PZH	**PanZhiHua**	**74.69**	**302**	P		**P**		**03 25 05.1**	**+0.1**
PZH				pP		**pwP**		**03 25 52.3**	**-1.3**
PZH				S		**S**		**03 34 25.3**	**-0.9**
PZH				pmax		pmax			
	comp=Z,120nm,1.5s								
PZH				pmax		pmax			
	comp=Z,1µm,6.1s								
ZEA	**Zeya**	**74.77**	**337**	*e*P		**P**		**03 25 06.4**	**+1.7**
ZEA				*e**PP		**pP**		**03 25 49.4**	**+0.7**
ZEA				*e*S		**S**		**03 34 29.5**	**+3.7**
ZEA				pmax		pmax			
	comp=E,200nm,3.4s								
ZEA				pmax		pmax			
	comp=N,300nm,4.7s								
ZEA				pmax		pmax			
	comp=Z,900nm,5.4s								
ZEA				pmax		pmax			
	comp=N,20nm,1.4s								
ZEA				pmax		pmax			
	comp=Z,60nm,2.0s								
ZEA				smax		smax			
	comp=N,600nm,7.3s								
ZEA				smax		smax			
	comp=E,2µm,6.1s								
CD2	**Chengdu**	**74.90**	**307**	P		**P**		**03 25 06.6**	**+0.6**
CD2				pP		pP		03 25 49.6	-0.3
CD2				sP		sP		03 26 08.3	-1.1
CD2				S		**S**		**03 34 28.5**	**+0.3**
CD2				pmax		pmax			
	comp=E,210nm,1.4s								
CD2				pmax		pmax			
	comp=E,2µm,4.9s								
CD2				L		L			
	comp=E,2µm,19.6s								
CD2				L		L			
	comp=E,1µm,13.3s								
CD2				L		L			
	comp=E,1µm,16.1s								
CHGN	**Chignik**	**74.95**	**19**	P		**P**		**03 25 06.3**	**+0.7**
CHGN	**Chignik**	**74.95**	**19**	P		**P**		**03 25 05.3**	**-0.3**
	baz=215								
BTO2	**Baotou**	**75.28**	**319**	*e*P		**P**		**03 25 08.9**	**+0.8**
BTO2				pP		**pP**		**03 25 51.9**	**-0.2**
BTO2				PP		**PP**		**03 27 59.5**	**-0.1**
BTO2				S		**S**		**03 34 31.4**	**-0.8**
BTO2				pmax		pmax			
	comp=E,260nm,2.2s								
BTO2				pmax		pmax			
	comp=E,4µm,4.3s								
BTO2				L		L			
	comp=E,920nm,18.4s								
BTO2				L		L			
	comp=E,880nm,12.7s								
BTO2				L		L			
	comp=E,2µm,18.4s								
CMBY	**CAMPBELL BAY**	**75.34**	**281**	*e*P		**P**		**03 25 08.6**	**-0.3**
R16K	**Pilot Point**	**76.25**	**19**	P		**P**		**03 25 13.5**	**+0.6**
	baz=215								
M11K	**Mekoryuk**	**76.35**	**13**	P		**P**		**03 25 14.3**	**+0.8**
	baz=207								
SII	**Sitkinak Islan**	**76.56**	**21**	IAmb		IAmb		03 25 33.4	
	comp=Z,273nm,0.8s								
SII	**Sitkinak Islan**	**76.56**	**21**	P		**P**		**03 25 14.7**	**-0.2**
	baz=219								
R17L	**Mt. Peulik Vol**	**76.69**	**19**	P		**P**		**03 25 16.0**	**+0.4**
	baz=217								
SEY	**Seymchan**	**76.70**	**353**	P		**P**		**03 25 16.3**	**+0.8**
	comp=Z,95nm,0.7s,baz=156,slow=6.1,SNR=25								
SEY				pP		**pP**		**03 26 00.8**	**+1.2**
	comp=Z,48nm,0.9s,baz=149,slow=6.2,SNR=3.1								
	comp=Z,95nm,0.7s								
SEY	**Seymchan**	**76.70**	**353**	⇑*i*P		**P**		**03 25 16.2**	**+0.8**
SEY				pmax		pmax			
	comp=Z,210nm,1.3s								
TNCH	**TengChong**	**76.81**	**300**	⇑*i*P		**P**		**03 25 18.0**	**+0.8**
TNCH				pP		pP		03 26 02.0	+1.3
TNCH				sP		sP		03 26 21.5	+1.6
TNCH				S		**S**		**03 34 52.8**	**+3.1**
TNCH				pmax		pmax			
	comp=Z,170nm,1.3s								
TNCH				pmax		pmax			
	comp=Z,2µm,2.7s								
TNCH				L		L			
	comp=Z,1µm,19.8s								
QSPA	**South Pole Qui**	**76.87**	**180**	P		**P**		**03 25 17.9**	**+1.2**
	comp=Z,790nm,1.1s,baz=351,slow=0.6,SNR=504								
QSPA				PKKPbc		**PKKPbc**		**03 44 23.1**	**-4.4**
	comp=Z,2.7nm,0.7s,baz=296,slow=0.9,SNR=13								
QSPA				PKPPKP		P'P'df		03 52 19.3	-7.9
	comp=Z,1.9nm,1.0s,baz=117,slow=2.3,SNR=3.0								
QSPA	**South Pole Qui**	**76.87**	**180**	P		**P**		**03 25 17.1**	**+0.4**
QSPA	**South Pole Qui**	**76.87**	**180**	⇑P		**P**		**03 25 17.2**	**+0.5**
N14K	**Kuskokwak Cree**	**77.05**	**16**	P		**P**		**03 25 18.0**	**+0.6**
	baz=211								
M13K	**Dall Lake**	**77.05**	**15**	P		**P**		**03 25 18.2**	**+0.8**
	baz=210								
LZH	**Lanzhou**	**77.12**	**312**	⇑P		**P**		**03 25 20.1**	**+1.5**
LZH				pP		pP		03 26 03.0	+0.1
LZH				sP		sP		03 26 22.8	+0.4
LZH				S		**S**		**03 34 54.1**	**+1.5**
LZH				SS		**SS**		**03 39 52.3**	**-2.3**
LZH				pmax		pmax			
	comp=Z,230nm,1.6s								
LZH				pmax		pmax			
	comp=Z,2µm,4.3s								
LZH				L		L			
	comp=Z,680nm,18.7s								
LZH				L		L			
	comp=Z,770nm,16.5s								
LZH				L		L			
	comp=Z,1µm,16.8s								
LZDM	**Lanzhou Array**	**77.17**	**312**	P		**P**		**03 25 20.7**	**+1.6**
	comp=Z,65nm,1.0s,baz=141,slow=5.7,SNR=16								
LZDM				pP		**pP**		**03 26 03.4**	**0.0**
	comp=Z,64nm,1.0s,baz=132,slow=8.2,SNR=6.5								
LZDM				LR		LR		03 57 39.4	
	comp=Z,561nm,21.4s,baz=80,slow=34								
	comp=Z,65nm,1.0s								
P16K	**Nushagak River**	**77.32**	**18**	P		**P**		**03 25 19.1**	**+0.1**
	baz=215								
OHAK	**Old Harbor**	**77.39**	**21**	P		**P**		**03 25 19.9**	**+0.5**
OHAK	**Old Harbor**	**77.39**	**21**	P		**P**		**03 25 19.9**	**+0.5**
OHAK				IAmb		IAmb		03 26 12.4	
	comp=Z,574nm,1.3s								
OHAK	**Old Harbor**	**77.39**	**21**	P		**P**		**03 25 19.8**	**+0.5**
	baz=220								
Q16K	**King Salmon**	**77.44**	**18**	P		**P**		**03 25 20.0**	**+0.4**
	baz=216								
N15K	**Kwethluk River**	**77.68**	**16**	P		**P**		**03 25 21.8**	**+0.8**
	baz=213,SNR=45								
M14K	**Bethel**	**77.69**	**15**	P		**P**		**03 25 21.6**	**+0.7**
	baz=211								
PBA	**Port Blair**	**77.73**	**285**	*e*P		**P**		**03 25 21.0**	**-1.2**
O16K	**Kokwok River B**	**77.76**	**17**	P		**P**		**03 25 21.4**	**0.0**
	baz=215,SNR=60								
P17K	**Kvichak River**	**77.92**	**18**	P		**P**		**03 25 22.2**	**-0.1**
	baz=216								
Q18K	**Katmai Hardscr**	**77.93**	**19**	P		**P**		**03 25 22.3**	**-0.3**
	baz=218								
M15K	**Kasigluk River**	**77.96**	**16**	P		**P**		**03 25 23.1**	**+0.6**
	baz=212								
L14K	**Kuka Creek**	**78.02**	**14**	P		**P**		**03 25 23.0**	**+0.2**
	baz=210								
KDAK	**Kodiak Island**	**78.06**	**21**	LR		LR		03 54 04.2	
	comp=Z,2µm,21.4s,baz=213,slow=31								
KDAK	**Kodiak Island**	**78.06**	**21**	P		**P**		**03 25 24.0**	**+0.9**
KDAK	**Kodiak Island**	**78.06**	**21**	P		**P**		**03 25 24.0**	**+0.9**
KDAK				pmax		pmax			
	comp=Z,154nm,0.8s								
KDAK	**Kodiak Island**	**78.06**	**21**	P		**P**		**03 25 23.6**	**+0.4**
	baz=220								
KDAK	**Kodiak Island**	**78.06**	**21**	⇑P		**P**		**03 25 24.0**	**+0.9**
K13K	**Kusilvak Mount**	**78.08**	**13**	P		**P**		**03 25 24.4**	**+1.3**
	baz=208								
O17K	**Koliganek Bris**	**78.20**	**18**	P		**P**		**03 25 23.5**	**-0.3**
	baz=216								
GAMB	**Gambell**	**78.41**	**9**	P		**P**		**03 25 25.5**	**+0.7**
	baz=201								
P18K	**Big Mountain,**	**78.45**	**19**	IAmb		IAmb		03 26 14.9	
	comp=Z,594nm,1.1s								
P18K	**Big Mountain,**	**78.45**	**19**	P		**P**		**03 25 25.3**	**0.0**
	baz=217								
RPN	**Rapa Nui**	**78.50**	**115**	LR		LR		03 54 02.4	
	comp=Z,372nm,18.7s,baz=267,slow=31								
Q19K	**Cape Douglas,**	**78.59**	**20**	P		**P**		**03 25 26.3**	**+0.2**
	baz=219								
L15K	**Ungalak Mounta**	**78.60**	**15**	P		**P**		**03 25 26.5**	**+0.6**
	baz=211								
M16K	**Timber Creek**	**78.70**	**16**	P		**P**		**03 25 27.7**	**+1.1**
	baz=214								
Q20K	**Shuyak Island**	**78.76**	**20**	P		**P**		**03 25 27.8**	**+0.9**
	baz=220								
O18K	**Koktuh Hills**	**78.83**	**18**	P		**P**		**03 25 27.3**	**0.0**
	baz=217								
J14K	**Nanvaranak Lak**	**79.04**	**13**	P		**P**		**03 25 29.6**	**+1.3**
	baz=209								
K15K	**Wolf Creek Mou**	**79.12**	**14**	P		**P**		**03 25 30.2**	**+1.4**
	baz=211								
L16K	**Owhat River**	**79.14**	**16**	P		**P**		**03 25 30.2**	**+1.3**
	baz=213								
P19K	**Oil Pt**	**79.29**	**19**	IAmb		IAmb		03 26 19.3	
	comp=Z,317nm,1.1s								
P19K	**Oil Pt**	**79.29**	**19**	P		**P**		**03 25 30.3**	**+0.5**
	baz=219								
O19K	**Port Alsworth**	**79.37**	**18**	P		**P**		**03 25 30.6**	**+0.4**
	baz=218								
M17K	**Holitna River**	**79.43**	**17**	P		**P**		**03 25 32.0**	**+1.5**
	baz=215								
ILSW	**Iliamna Southw**	**79.58**	**19**	IAmb		IAmb		03 26 21.2	
	comp=Z,478nm,1.2s								
CIT	**Chita**	**79.62**	**330**	*e*P		**P**		**03 25 32.8**	**+1.0**
CIT				*e*				03 26 15.8	
CIT				*e*				03 26 39.8	
CIT				*e*S		**S**		**03 35 18.0**	**-0.3**
CIT				pmax		pmax			
	comp=Z,664nm,2.1s								
L17K	**Donlin**	**79.80**	**16**	P		**P**		**03 25 34.2**	**+1.7**
	baz=214								
HOM	**Homer**	**79.81**	**20**	P		**P**		**03 25 33.7**	**+1.1**
	baz=221								
CNPM	**China Poot**	**79.85**	**20**	IAmb		IAmb		03 26 23.5	
	comp=Z,688nm,1.2s								
M18K	**Stony River**	**79.96**	**17**	P		**P**		**03 25 34.8**	**+1.5**
	baz=217								
RED	**Redoubt Volcan**	**80.03**	**19**	IAmb		IAmb		03 26 23.6	
	comp=Z,524nm,1.5s								
BRLK	**Bradley Lake**	**80.15**	**20**	IAmb		IAmb		03 26 24.8	
	comp=Z,400nm,1.0s								
BRSE	**Bradley Lake S**	**80.18**	**20**	P		**P**		**03 25 35.2**	**+0.6**
	baz=222								
J16K	**Anvik River**	**80.19**	**14**	P		**P**		**03 25 36.1**	**+1.5**
	baz=212								
ANM	**Nome**	**80.27**	**12**	P		**P**		**03 25 36.5**	**+1.6**
	baz=207								
K17K	**Iditarod**	**80.28**	**15**	P		**P**		**03 25 36.4**	**+1.3**
	baz=214								
L18K	**Granite Mounta**	**80.31**	**16**	P		**P**		**03 25 36.3**	**+1.1**
	baz=216								
YAK	**Yakutsk**	**80.47**	**343**	P		**P**		**03 25 37.0**	**+0.9**
	comp=Z,124nm,0.8s,baz=122,slow=0.9,SNR=12								
	comp=Z,124nm,0.8s								
YAK	**Yakutsk**	**80.47**	**343**	P		**P**		**03 25 36.2**	**+0.2**
YAK				IAmb		IAmb		03 25 39.2	
	comp=Z,603nm,1.6s								
YAK	**Yakutsk**	**80.47**	**343**	*e*P		**P**		**03 25 36.2**	**+0.2**
YAK				*e**PP		**pwP**		**03 26 27.0**	**+4.0**
YAK				*e*				03 28 37.9	
YAK				*e*S		**S**		**03 35 24.4**	**-2.2**
YAK				*e*				03 35 31.6	
YAK				*e**SS		**sS**		**03 36 40.0**	**-4.9**
YAK				*e*SS		**SS**		**03 40 43.2**	**-0.1**
YAK				pmax		pmax			
	comp=Z,132nm,0.9s								
YAK				pmax		pmax			
	comp=N,42nm,1.2s								
YAK				pmax		pmax			
	comp=E,36nm,1.4s								
YAK				pmax		pmax			
	comp=Z,353nm,4.2s								
YAK				pmax		pmax			
	comp=N,194nm,4.8s								
YAK				pmax		pmax			
	comp=E,87nm,2.7s								
YAK				smax		smax			
	comp=N,434nm,4.8s								
YAK				smax		smax			
	comp=E,355nm,3.3s								
YAK	**Yakutsk**	**80.47**	**343**	P		**P**		**03 25 36.5**	**+0.4**
YAK				pP		**pP**		**03 26 20.3**	**-0.4**
PASG	**PASIGHAT**	**80.56**	**302**	*e*P		**P**		**03 25 38.3**	**+1.0**
PASG				IAmb		IAmb		03 25 41.3	
	comp=Z,475nm,1.4s								
IMP	**Imphal**	**80.64**	**298**	*e*P		**P**		**03 25 37.6**	**-0.3**
IMP				IAmb		IAmb		03 25 40.5	
	comp=Z,381nm,1.2s								
MOKO	**MOKOCHONG**	**80.65**	**300**	*e*P		**P**		**03 25 38.5**	**+0.4**
MOKO				IAmb		IAmb		03 25 45.5	
	comp=Z,352nm,1.1s								
J17K	**VABM Dome**	**80.66**	**15**	P		**P**		**03 25 38.1**	**+1.1**
	baz=213								
I17K	**Unalakleet**	**80.68**	**14**	P		**P**		**03 25 38.9**	**+1.8**
	baz=212								
TNA	**Tin City**	**80.69**	**10**	P		**P**		**03 25 38.2**	**+1.0**
	baz=205								
SAIH	**SAIHA**	**80.73**	**296**	*e*P		**P**		**03 25 38.6**	**+0.1**
SAIH				IAmb		IAmb		03 25 42.1	
	comp=Z,339nm,1.0s								
ULN	**Ulaanbaatar**	**80.75**	**324**	P		**P**		**03 25 38.8**	**+0.6**
ULN	**Ulaanbaatar**	**80.75**	**324**	*c i*P		**P**		**03 25 38.9**	**+0.8**
ULN				pmax		pmax			
	comp=Z,221nm,1.3s								
ULN	**Ulaanbaatar**	**80.75**	**324**	P		**P**		**03 25 39.3**	**+1.2**
	comp=Z,13µmcomp=Z,676nm,1.4s								
ULN	**Ulaanbaatar**	**80.75**	**324**	⇑P		**P**		**03 25 38.3**	**+0.2**
L19K	**White Mountain**	**80.79**	**17**	P		**P**		**03 25 39.0**	**+1.2**
	baz=218								
KOHI	**KOHIMA**	**80.80**	**299**	*e*P		**P**		**03 25 38.2**	**-0.6**
KOHI				IAmb		IAmb		03 25 41.5	
	comp=Z,439nm,1.4s								
N20K	**Mount Spurr**	**80.81**	**19**	P		**P**		**03 25 37.9**	**-0.1**
	baz=220								
SPCR	**Spurr Chakacha**	**80.81**	**19**	P		**P**		**03 25 38.1**	**+0.1**
	baz=220								
CAPN	**Captain Cook N**	**80.82**	**19**	P		**P**		**03 25 39.2**	**+1.3**
	baz=221								
SEW	**Seward**	**80.88**	**20**	P		**P**		**03 25 38.9**	**+0.6**
	baz=223								
F14K	**Arctic Creek**	**80.90**	**11**	P		**P**		**03 25 39.7**	**+1.4**
	baz=206								
G15K	**Niukluk**	**80.92**	**12**	P		**P**		**03 25 39.3**	**+1.0**
	baz=208								
SLKM	**Skilak Lake**	**80.92**	**20**	IAmb		IAmb		03 26 28.4	
	comp=Z,496nm,1.2s								
BILL	**Bilibino**	**80.97**	**360**	*c i*P		**P**		**03 25 39.0**	**+0.4**
BILL				pmax		pmax			
	comp=Z,182nm,1.1s								
JORH	**JORHAT**	**81.01**	**300**	*e*P		**P**		**03 25 40.7**	**+0.9**
O22K	**Cooper Landing**	**81.07**	**20**	P		**P**		**03 25 40.1**	**+0.8**
	baz=222								
SONM	**Songino Array**	**81.12**	**324**	P		**P**		**03 25 40.3**	**+0.3**
	comp=Z,41nm,0.9s,baz=142,slow=5.6,SNR=25								
SONM				pP		**pP**		**03 26 24.6**	**-0.1**
	comp=Z,20nm,0.9s,baz=135,slow=4.5,SNR=4.3								
SONM				PKKPbc		**PKKPbc**		**03 44 15.6**	**-2.1**
	comp=Z,3.1nm,1.0s,baz=245,slow=1.6,SNR=7.8								
SONM				PKPPKP		P'P'df		03 52 10.4	-8.6
	comp=Z,1.3nm,1.1s,baz=228,slow=1.8,SNR=4.5								
SONM				LR		LR		04 00 05.0	
	comp=Z,698nm,21.8s,baz=120,slow=34								
	comp=Z,41nm,0.9s								
SONM	**Songino Array**	**81.12**	**324**	P		**P**		**03 25 41.0**	**+1.0**
SONM	**Songino Array**	**81.12**	**324**	P		**P**		**03 25 41.0**	**+1.0**
SONM				pmax		pmax			
	comp=Z,183nm,1.3s								
J18K	**Innoko River**	**81.31**	**16**	P		**P**		**03 25 41.6**	**+1.0**
	baz=216								
F15K	**North Star Dit**	**81.43**	**11**	P		**P**		**03 25 42.0**	**+0.9**
	baz=208								
Q23K	**Middleton Isla**	**81.49**	**22**	P		**P**		**03 25 42.9**	**+1.4**
	baz=226								
GTA2	**Gaotai**	**81.51**	**314**	⇑P		**P**		**03 25 43.3**	**+1.0**
GTA2				pP		pP		03 26 26.4	-0.6
GTA2				PP		**PP**		**03 28 51.4**	**0.0**
GTA2				S		**S**		**03 35 36.3**	**-2.3**
GTA2				SS		**SS**		**03 40 56.0**	**-4.1**
GTA2				pmax		pmax			
	comp=Z,180nm,1.7s								
GTA2				pmax		pmax			
	comp=Z,2µm,10.8s								
GTA2				L		L			
	comp=Z,700nm,16.5s								
GTA2				L		L			
	comp=Z,470nm,20.6s								
GTA2				L		L			
	comp=Z,780nm,22.2s								
P23K	**Montague Islan**	**81.52**	**21**	IAmb		IAmb		03 25 53.7	
	comp=Z,333nm,0.9s								
P23K	**Montague Islan**	**81.52**	**21**	P		**P**		**03 25 42.2**	**+0.6**
	baz=225								
RC01	**Rabbit Creek A**	**81.52**	**20**	IAmb		IAmb		03 26 32.3	
	comp=Z,619nm,1.2s								
RC01	**Rabbit Creek A**	**81.52**	**20**	P		**P**		**03 25 42.2**	**+0.5**
	baz=222								
ITAN	**ITANAGAR**	**81.59**	**300**	*e*P		**P**		**03 25 44.0**	**+1.1**
ITAN				IAmb		IAmb		03 25 54.7	
	comp=Z,410nm,1.1s								
SILR	**SILCHAR**	**81.61**	**298**	*e*P		**P**		**03 25 44.8**	**+1.9**
ZIRO	**ZIRO**	**81.61**	**301**	*e*P		**P**		**03 25 44.0**	**+0.8**
G16K	**Koyuk River**	**81.61**	**12**	P		**P**		**03 25 43.4**	**+1.4**
	baz=210								
H17K	**Granite Mounta**	**81.76**	**14**	P		**P**		**03 25 44.0**	**+1.1**
	baz=212								
M22K	**Willow**	**81.89**	**19**	P		**P**		**03 25 44.1**	**+0.6**
	baz=222								
K20K	**Telida**	**81.94**	**17**	P		**P**		**03 25 44.8**	**+1.0**
	baz=218								
J19K	**Poorman**	**82.03**	**16**	P		**P**		**03 25 45.5**	**+1.3**
	baz=217								
G17K	**Kiwalik Mounta**	**82.07**	**13**	P		**P**		**03 25 45.5**	**+1.1**
	baz=212,SNR=102								
PMR	**Palmer**	**82.09**	**20**	P		**P**		**03 25 45.1**	**+0.6**
PMR	**Palmer**	**82.09**	**20**	IAmb		IAmb		03 26 34.5	
	comp=Z,433nm,1.2s								
PMR	**Palmer**	**82.09**	**20**	P		**P**		**03 25 45.4**	**+0.8**
	baz=223								
HIN	**Hinchinbrook I**	**82.12**	**21**	IAmb		IAmb		03 26 35.5	
	comp=Z,493nm,1.1s								
PPLA	**Purkeypile**	**82.12**	**18**	P		**P**		**03 25 45.4**	**+0.4**
	baz=220								
KNK	**Knik Glacier**	**82.18**	**20**	IAmb		IAmb		03 25 50.9	
	comp=Z,350nm,0.8s								
KNK	**Knik Glacier**	**82.18**	**20**	P		**P**		**03 25 45.8**	**+0.7**
	baz=224								
TEZP	**TEZPUR**	**82.20**	**300**	*e*P		**P**		**03 25 46.3**	**+0.3**
TEZP				⇓*ex*		x		03 25 47.9	
TEZP				IAmb		IAmb		03 25 47.9	
	comp=Z,413nm,1.1s								
GLI	**Glacier Island**	**82.25**	**21**	IAmb		IAmb		03 25 53.9	
	comp=Z,244nm,0.8s								
GLI	**Glacier Island**	**82.25**	**21**	P		**P**		**03 25 46.1**	**+0.6**
	baz=225								
GHO	**Glory Hole Cre**	**82.28**	**19**	IAmb		IAmb		03 26 38.4	
	comp=Z,544nm,1.4s								
H18K	**Honhosa River**	**82.30**	**14**	P		**P**		**03 25 46.6**	**+0.9**
	baz=214,SNR=51								
BELO	**BELONIA**	**82.31**	**296**	*e*P		**P**		**03 25 48.3**	**+1.7**
GCSA	**Galena City Sc**	**82.32**	**15**	P		**P**		**03 25 46.9**	**+1.2**
	baz=215,SNR=78								
EYAK	**Cordova Ski Ar**	**82.49**	**21**	P		**P**		**03 25 47.6**	**+0.9**
EYAK	**Cordova Ski Ar**	**82.49**	**21**	IAmb		IAmb		03 26 37.6	
	comp=Z,365nm,1.2s								
EYAK	**Cordova Ski Ar**	**82.49**	**21**	P		**P**		**03 25 47.5**	**+0.9**
	baz=226								
SML	**Sawmill**	**82.50**	**20**	IAmb		IAmb		03 25 51.2	
	comp=Z,435nm,0.9s								
SML	**Sawmill**	**82.50**	**20**	P		**P**		**03 25 47.7**	**+0.9**
	baz=224								
KAIM	**Kayak Island**	**82.55**	**22**	P		**P**		**03 25 48.1**	**+1.1**
	baz=227								
J20K	**Nowinta River**	**82.57**	**16**	P		**P**		**03 25 48.1**	**+1.0**
	baz=218								
SHL	**Shillong**	**82.65**	**298**	IAmb		IAmb		03 25 51.7	
	comp=Z,750nm,1.7s								
SHL	**Shillong**	**82.65**	**298**	*e*P		**P**		**03 25 47.1**	**-1.5**
AGT	**Agartala**	**82.68**	**297**	*e*P		**P**		**03 25 50.1**	**+1.6**
M23K	**Glacier View**	**82.69**	**20**	P		**P**		**03 25 48.7**	**+0.9**
	baz=224								
F17K	**Baldwin Pennin**	**82.75**	**12**	P		**P**		**03 25 49.1**	**+1.2**
	baz=211,SNR=80								
RAGM	**Ragged Mountai**	**82.77**	**22**	IAmb		IAmb		03 26 39.3	
	comp=Z,555nm,1.2s								
CHUM	**Lake Minchumin**	**82.84**	**17**	P		**P**		**03 25 48.9**	**+0.4**
	baz=220								
G18K	**Tagagawik**	**82.85**	**13**	P		**P**		**03 25 49.5**	**+1.1**
	baz=214								
SCM	**Sheep Creek Mo**	**82.85**	**20**	IAmb		IAmb		03 25 54.4	
	comp=Z,348nm,0.8s								
SCM	**Sheep Creek Mo**	**82.85**	**20**	P		**P**		**03 25 49.3**	**+0.6**
	baz=224								
DIV	**Divide**	**82.89**	**21**	IAmb		IAmb		03 26 39.1	
	comp=Z,617nm,1.2s								
I20K	**Naaghedeneel**	**82.97**	**16**	P		**P**		**03 25 50.8**	**+1.8**
	baz=218,SNR=59								
BOD	**Bodaibo**	**82.97**	**334**	*e*P		**P**		**03 25 49.5**	**+0.3**
BOD				pmax		pmax			
	comp=Z,218nm,1.9s								
GUWA	**GUWAHATI**	**83.01**	**299**	*e*P		**P**		**03 25 49.7**	**-0.4**
GUWA				IAmb		IAmb		03 25 53.5	
	comp=Z,331nm,1.7s								
H19K	**Roundabout Mou**	**83.06**	**14**	P		**P**		**03 25 50.7**	**+1.2**
	baz=216								
KLU	**Klutina**	**83.09**	**21**	IAmb		IAmb		03 26 40.9	
	comp=Z,457nm,1.2s								
KLU	**Klutina**	**83.09**	**21**	P		**P**		**03 25 50.9**	**+1.0**
	baz=226								
BGLC	**Bering Glacier**	**83.10**	**23**	P		**P**		**03 25 51.2**	**+1.4**
	baz=228								
TRF	**Thorofare Moun**	**83.10**	**18**	P		**P**		**03 25 50.1**	**+0.1**
	baz=222								
BMRM	**Bremner River**	**83.19**	**22**	P		**P**		**03 25 50.

RDOG **Red Dog Mine** 83.83 11 P P 03 25 54.8 +1.4
baz=209
F19K **Shaleruckik Mo** 83.83 13 P P 03 25 54.5 +1.1
baz=214
GOMU **GeErMu** 83.84 309 P P 03 25 55.4 +0.7
GOMU S SKSac 03 36 02.8 +2.2
GOMU pmax pmax
comp=Z,51nm,1.7s
PKD **Bear Valley Ra** 83.86 51 IAmb IAmb 03 26 46.3
comp=Z,522nm,1.3s
I21K **Tanana** 83.94 16 P P 03 25 55.2 +1.2
baz=220
HARP **HAARP** 83.98 20 P P 03 25 55.0 +0.7
baz=226
MCARA **McCarthy VSAT** 84.04 22 IAmb IAmb 03 26 45.5
comp=Z,602nm,1.2s
MCARA **McCarthy VSAT** 84.04 22 P P 03 25 55.3 +0.7
baz=228
GRNC **Granite Creek** 84.08 23 IAmb IAmb 03 26 52.0
comp=Z,548nm,1.3s
H21K **Melozitna Rive** 84.09 16 P P 03 25 56.2 +1.4
baz=219
C17K **DeLong Mountai** 84.15 11 P P 03 25 55.7 +0.6
baz=209
ZAK **Zakamensk** 84.16 325 eP P 03 25 54.8 -0.8
ZAK e 03 26 39.0
ZAK e 03 36 01.9
ZAK pmax pmax
comp=Z,301nm,2.0s
MLY **Manley** 84.17 17 P P 03 25 55.3 +0.1
baz=221
M02C **Callahan** 84.21 45 IAmb IAmb 03 26 47.8
comp=Z,348nm,1.1s
PINM **Pinnacle** 84.24 24 P P 03 25 56.0 +0.2
baz=231,SNR=15
NEA2 **Nenana** 84.31 17 P P 03 25 56.1 +0.1
baz=223
CTG **Chitna Glacier** 84.38 23 P P 03 25 56.8 +0.3
baz=230
DHUB **DHUBRI** 84.41 298 eP P 03 25 57.5 +0.3
DHUB IAmb IAmb 03 25 59.2
comp=Z,493nm,1.2s
LOGN **Logan Glacier** 84.42 23 IAmb IAmb 03 26 47.7
comp=Z,540nm,1.2s
YBH **Yreka Blue Hor** 84.44 45 IAmb IAmb 03 26 49.3
comp=Z,461nm,1.1s
E19K **Redstone River** 84.47 13 P P 03 25 58.1 +1.4
baz=215
ORV **Oroville** 84.47 47 IAmb IAmb 03 26 48.8
comp=Z,305nm,1.1s
F20K **Avaraart Lake** 84.47 14 P P 03 25 57.9 +1.3
baz=216,SNR=179
SIT **Sitka** 84.50 28 P P 03 25 57.2 +0.2
baz=236
IRK **Irkutsk** 84.52 327 eP P 03 25 56.9 -0.3
IRK e 03 36 07.7
IRK pmax pmax
comp=Z,360nm,2.2s
LSA **Lhasa** 84.56 302 P P 03 25 56.8 -1.8
LSA pmax pmax
comp=Z,96nm,1.2s
LSA L L
comp=Z,540nm,12.1s
LSA L L
comp=Z,2µm,13.2s
LSA L L
comp=Z,1µm,15.7s
TLY **Talaya** 84.58 326 LR LR 04 02 36.8
comp=Z,464nm,21.1s,baz=119,slow=35
TLY **Talaya** 84.58 326 P P 03 25 58.0 +0.4
TLY **Talaya** 84.58 326c iP P 03 25 57.6 0.0
TLY pmax pmax
comp=Z,283nm,2.0s
TLY **Talaya** 84.58 326 P P 03 25 57.9 +0.4
TLY pP pP 03 26 41.5 -1.2
G21K **Allakaket** 84.58 15 P P 03 25 58.3 +1.0
baz=218,SNR=218
S31K **Pelican** 84.62 27 IAmb IAmb 03 26 48.7
comp=Z,351nm,1.0s
S31K **Pelican** 84.62 27 P P 03 25 58.1 +0.6
baz=235
AFDM **Forest Hills D** 84.62 48 IAmb IAmb 03 26 49.7
comp=Z,376nm,1.1s
I23K **Minto, Yukon-K** 84.64 17 P P 03 25 58.1 +0.6
baz=222
H22K **Ishtalitna Cre** 84.65 16 P P 03 25 59.0 +1.4
baz=220
CRAG **Craig** 84.66 30 P P 03 25 58.9 +1.1
baz=238
C18K **Utukok River** 84.66 11 P P 03 25 58.4 +0.8
baz=211
O28M **Mount Upton** 84.69 23 IAmb IAmb 03 26 48.6
comp=Z,452nm,1.1s
O28M **Mount Upton** 84.69 23 P P 03 25 59.0 +0.7
baz=231,SNR=28
M26K **Nabesna, AK** 84.72 21 IAmb IAmb 03 26 49.2
comp=Z,647nm,1.4s
M26K **Nabesna, AK** 84.72 21 P P 03 25 58.7 +0.6
baz=228
K24K **Donnelly Dome** 84.75 19 P P 03 25 58.4 +0.2
baz=226
HDA **Harding Lake** 84.82 18 P P 03 25 58.8 +0.4
baz=225
MENT **Mentasta** 84.83 20 P P 03 26 00.0 +1.4
MENT **Mentasta** 84.83 20 IAmb IAmb 03 26 47.4
comp=Z,696nm,1.7s
CAL **Calcutta** 84.85 294⇑ eP P 03 26 00.8 +1.3
COLA **College** 84.88 18c iP P 03 25 58.1 -0.6
COLA pmax pmax
comp=Z,279nm,2.2s
COLA **College** 84.88 18 P P 03 25 58.8 +0.1
baz=224
VES **Vestal, Richgr** 84.93 52 IAmb IAmb 03 26 51.1
comp=Z,750nm,1.6s
U33K **Whale Pass** 85.00 29 IAmb IAmb 03 26 50.7
comp=Z,329nm,1.1s
U33K **Whale Pass** 85.00 29 P P 03 26 00.3 +0.8
baz=238
L26K **Log Cabin Wild** 85.02 20 IAmb IAmb 03 26 48.2
comp=Z,448nm,1.5s
L26K **Log Cabin Wild** 85.02 20 P P 03 26 00.0 +0.5
baz=228
O29M **Mount Kennedy** 85.03 24 P P 03 25 59.8 0.0
baz=233
S32K **Killisnoo** 85.07 27 P P 03 25 60.0 +0.2
baz=236
M27K **Edge Creek, AK** 85.09 21 IAmb IAmb 03 26 51.4
comp=Z,454nm,1.3s
M27K **Edge Creek, AK** 85.09 21 P P 03 26 00.4 +0.4
baz=230
R31K **City Hall, Gus** 85.09 26 P P 03 26 00.1 +0.2
baz=235
ILAR **Eielson Array** 85.09 18 P P 03 26 00.9 +1.1
comp=Z,28nm,0.6s,baz=240,slow=5.7,SNR=85
ILAR pP pP 03 26 45.9 +1.0
comp=Z,279nm,1.1s,baz=230,slow=6.0,SNR=42
ILAR S SKSac 03 36 07.2 +0.6
comp=Z,1.8nm,0.9s,baz=225,slow=6.0,SNR=8.6
ILAR PKKP PKKPdf 03 44 02.2 +1.1
comp=Z,5.0nm,0.6s,baz=335,slow=1.4,SNR=20
ILAR PKPPKP P'P'df 03 51 59.9 -11
comp=Z,0.6nm,0.9s,baz=342,slow=1.9,SNR=4.1
ILAR LR LR 04 02 09.2
comp=Z,739nm,18.8s,baz=216,slow=34
comp=Z,28nm,0.6s
D19K **Kuna River** 85.14 12 P P 03 26 00.6 +0.6
baz=214,SNR=200
F21K **Alatna River** 85.14 14 P P 03 26 00.6 +0.5
baz=218,SNR=72
YUK8 **Steele Glacier** 85.18 23 P P 03 26 01.2 +0.5
baz=232,SNR=26
POKR **Poker Plat Res** 85.18 18 P P 03 26 00.2 -0.1
baz=224
YUK3 **Moose Creek** 85.23 22 P P 03 26 00.9 +0.1
baz=231
V35K **Ketchikan** 85.31 30 P P 03 26 01.9 +0.8
baz=239,SNR=25
E20K **Nigu River** 85.35 13 P P 03 26 02.5 +1.4
baz=216
C19K **Lookout Ridge** 85.36 11 P P 03 26 02.3 +1.2
baz=212,SNR=218
BEKR **Beckworth** 85.40 47 IAmb IAmb 03 26 53.2
comp=Z,291nm,1.1s
J25K **Salcha River,** 85.45 19 P P 03 26 01.9 +0.2
baz=226
SCRK **Sand Creek** 85.45 19 P P 03 26 02.4 +0.6
baz=227
I04A **Tendick Farm,** 85.45 43 IAmb IAmb 03 26 52.9
comp=Z,287nm,1.1s
T33K **Petersburg** 85.46 29 P P 03 26 01.7 -0.1
baz=238
BVCY **Beaver Creek** 85.49 22 P P 03 26 02.3 +0.4
baz=230
YUK6 **Outpost Mounta** 85.50 24 P P 03 26 02.7 +0.5
baz=233,SNR=30
WRAK **Wrangell Islan** 85.53 29 IAmb IAmb 03 26 50.7
comp=Z,480nm,1.6s
WRAK **Wrangell Islan** 85.53 29 P P 03 26 02.3 +0.2
baz=238,SNR=8.4
R32K **Eaglecrest** 85.55 27 IAmb IAmb 03 26 53.4
comp=Z,128nm,1.1s
R32K **Eaglecrest** 85.55 27 P P 03 26 02.7 +0.5
baz=236,SNR=6.8
L27K **Beaver Creek,** 85.56 21 P P 03 26 02.9 +0.6
baz=230
BESE **Bessie Mountai** 85.57 26 IAmb IAmb 03 26 54.4
comp=Z,455nm,1.2s
H24K **Noodor Dome** 85.57 17 P P 03 26 01.7 -0.6
baz=224
P30M **Million Dollar** 85.57 25 P P 03 26 02.6 +0.2
baz=234,SNR=10
G23K **Bananza Creek** 85.62 16 P P 03 26 03.8 +1.3
baz=222,SNR=314
D20K **Etuk River** 85.63 13 P P 03 26 03.8 +1.4
baz=215
YUK4 **Talbot Arm** 85.64 23 P P 03 26 03.7 +0.9
baz=233,SNR=6.4
JPG **JALPAIGURI** 85.66 298 eP P 03 26 04.2 +0.7
DPP **Dos Picos Cty** 85.66 55 IAmb IAmb 03 26 55.4
comp=Z,488nm,1.3s
PNTR **Pine Nut** 85.67 48 IAmb IAmb 03 26 55.5
comp=Z,376nm,1.1s
HYT **Haines Junctio** 85.77 24 P P 03 26 03.5 +0.1
baz=234,SNR=10
SKAG **Skagway** 85.86 26 P P 03 26 05.6 +1.9
SKAG **Skagway** 85.86 26 IAmb IAmb 03 26 55.2
comp=Z,284nm,1.2s
SKAG **Skagway** 85.86 26 P P 03 26 04.4 +0.7
baz=236,SNR=41
LRMC **Laurel Mtn Rad** 85.88 52 IAmb IAmb 03 26 56.0
comp=Z,309nm,1.2s
H04A **Detroit Lake** 85.94 42 IAmb IAmb 03 26 55.2
comp=Z,350nm,1.2s
WIFE **Three Sisters-** 85.95 43 IAmb IAmb 03 26 56.0
comp=Z,459nm,1.2s
G04A **Mulino** 85.96 42 IAmb IAmb 03 26 56.8
comp=Z,320nm,1.0s
COLD **Coldfoot** 85.97 15 P P 03 26 05.4 +1.3
baz=222,SNR=262
GTK **Tadong** 85.98 299 eP P 03 26 06.1 +0.9
GTK IAmb IAmb 03 26 07.7
comp=Z,520nm,1.3s
E21K **Killik River** 85.99 13 P P 03 26 05.3 +1.0
baz=218,SNR=12
A19K **Wainwright** 86.02 10 P P 03 26 05.3 +1.1
baz=211
PRP **Porcupine Dome** 86.03 18 P P 03 26 04.4 -0.3
baz=226
MOY **Mondy** 86.03 325 eP P 03 26 04.6 -0.3
MOY pmax pmax
comp=Z,273nm,3.0s
PAHR **Pah Rah Range** 86.05 48 IAmb IAmb 03 26 57.1
comp=Z,431nm,1.1s
CLC **China Lake** 86.06 52 IAmb IAmb 03 26 56.7
comp=Z,328nm,1.1s
ESJX **Sierra Juarez** 86.15 56 IAmb IAmb 03 26 58.7
comp=Z,711nm,1.9s
CBB **Campbell River** 86.16 37 IAmb IAmb 03 26 56.7
comp=Z,344nm,1.1s
BORC **Borrego Spring** 86.17 55 IAmb IAmb 03 26 57.2
comp=Z,287nm,1.0s
LHV **Little Huntoon** 86.19 49 IAmb IAmb 03 26 58.0
comp=Z,339nm,1.1s
SHBG **Sahibganj** 86.22 297⇑ eP P 03 26 06.2 0.0
PFO **Pinyon Flats O** 86.24 54 PKKPbc PKKPbc 03 44 02.7 -2.0
comp=Z,1.0nm,0.5s,baz=268,slow=1.5,SNR=4.2
PFO LR LR 04 02 04.5
comp=Z,1µm,18.0s,baz=249,slow=34
PFO **Pinyon Flats O** 86.24 54‖ eP P 03 26 07.1 +0.7
E22K **Anaktuvuk Pass** 86.26 14 P P 03 26 06.4 +0.9
baz=220
DSP **Deo Springs** 86.29 50 IAmb IAmb 03 26 58.5
comp=Z,474nm,1.1s
O30N **Mendenhall** 86.30 24 P P 03 26 06.0 +0.1
baz=235
G24K **Hadweenzic Riv** 86.31 17 P P 03 26 06.9 +1.1
baz=224
N30M **Aishikik Lake** 86.31 23 P P 03 26 05.9 0.0
baz=234
PMD **Palm Desert** 86.32 54 IAmb IAmb 03 26 57.8
comp=Z,243nm,1.1s
YUH **Yuha Desert** 86.37 55 IAmb IAmb 03 26 58.4
comp=Z,292nm,1.1s
I05D **Terrebonne, OR** 86.37 43 IAmb IAmb 03 26 57.8
comp=Z,467nm,1.2s
CLRS **Cowichan Lake** 86.38 38 IAmb IAmb 03 26 57.6
comp=Z,432nm,1.2s
M29M **Somme Creek** 86.38 22 P P 03 26 06.7 +0.4
baz=233,SNR=16
C21K **Knifeblade Rid** 86.38 13 P P 03 26 07.5 +1.4
baz=217,SNR=66
U35K **Hyder** 86.39 30 P P 03 26 06.8 +0.5
baz=240
NVAR **Mina Array Bea** 86.40 49 P P 03 26 07.4 +0.2
comp=Z,2.4nm,0.7s,baz=232,slow=8.0,SNR=16
NVAR pP pwP 03 26 54.1 -0.7
comp=Z,167nm,1.0s,baz=233,slow=7.2,SNR=33
NVAR PKKPbc PKKPbc 03 44 03.6 -1.2
comp=Z,1.8nm,0.8s,baz=73,slow=2.8,SNR=6.2
NVAR PKPPKP P'P'df 03 52 01.3 -9.0
comp=Z,1.6nm,1.0s,baz=156,slow=4.4,SNR=4.6
NVAR LR LR 03 59 49.0
comp=Z,2µm,19.5s,baz=260,slow=32
NVAR **Mina Array Bea** 86.40 49 P P 03 26 07.9 +0.8
B04A **Port Angeles** 86.45 39 IAmb IAmb 03 26 58.3
comp=Z,362nm,1.2s
BWNR **Bhubaneshwar** 86.48 292 eP P 03 26 07.3 -0.3
B20K **Meade River** 86.59 12 P P 03 26 08.3 +1.3
baz=215,SNR=148
I26K **Coal Creek Min** 86.61 19 P P 03 26 07.9 +0.7
baz=228
P32M **Atlin** 86.62 26 P P 03 26 08.1 +0.6
baz=237,SNR=22
GRAC **Grapevine Rang** 86.62 51 IAmb IAmb 03 27 00.1
comp=Z,420nm,1.1s
GNW **Green Mountain** 86.67 40 IAmb IAmb 03 26 59.1
comp=Z,376nm,1.2s
QSM **Queen of Sheba** 86.67 52 IAmb IAmb 03 27 00.0
comp=Z,326nm,1.2s
WHY **Whitehorse** 86.72 25 IAmb IAmb 03 26 56.5
comp=Z,499nm,1.9s
WHY **Whitehorse** 86.72 25 P P 03 26 08.0 -0.1
baz=236,SNR=7.6
G25K **Bearman Lake** 86.74 17 P P 03 26 08.1 +0.3
baz=225
E23K **Chandalar** 86.74 15 P P 03 26 09.2 +1.2
baz=222,SNR=281
F24K **Squaw Lake** 86.79 16 P P 03 26 09.6 +1.5
baz=224
B21K **Ikpikpuk River** 86.79 13 P P 03 26 09.4 +1.4
baz=217
T35M **Bob Quinn** 86.81 29 IAmb IAmb 03 26 59.2
comp=Z,55nm,1.0s
T35M **Bob Quinn** 86.81 29 P P 03 26 09.2 +0.7
baz=240,SNR=7.5
N31M **Braeburn, Yuko** 86.83 24 P P 03 26 08.4 -0.1
baz=235
S34M **Telegraph Cree** 86.87 28 IAmb IAmb 03 27 00.1
comp=Z,183nm,0.9s
S34M **Telegraph Cree** 86.87 28 P P 03 26 08.7 0.0
baz=239,SNR=7.2
GWY **Greenwater Val** 86.89 52 IAmb IAmb 03 27 00.6
comp=Z,263nm,1.2s
L29M **L29M** 86.91 22 P P 03 26 08.5 -0.3
baz=233,SNR=99
Q32M **Nakina River** 86.91 27 P P 03 26 08.7 -0.4
baz=238
E24K **Your Creek** 87.04 15 P P 03 26 10.2 +0.9
baz=223,SNR=124
M30M **Minto, Yukon** 87.08 23 P P 03 26 09.7 +0.1
baz=234
WCT **Wildcat Mounta** 87.12 51 IAmb IAmb 03 27 02.5
comp=Z,329nm,1.2s
D23K **Nanushuk River** 87.16 14 P P 03 26 11.3 +1.4
baz=221
G06A **Carlson Farm,** 87.17 42 IAmb IAmb 03 27 01.3
comp=Z,338nm,1.4s
TOLK **Toolik Lake Re** 87.19 15 P P 03 26 10.9 +0.8
baz=222,SNR=149
I27K **Kandik River** 87.29 19 P P 03 26 11.6 +1.0
baz=230
P33M **Teslin, Yukon** 87.33 26 P P 03 26 11.0 0.0
baz=238,SNR=7.4
JMUI **Jamui** 87.36 296 eP P 03 26 10.4 -1.4
F25K **Christian Rive** 87.45 16 P P 03 26 12.5 +1.2
baz=226,SNR=88
IRM **Iron Mountain** 87.45 54 IAmb IAmb 03 27 04.5
comp=Z,444nm,1.3s
TPNV **Topopah Spring** 87.45 51 IAmb IAmb 03 27 03.5
comp=Z,279nm,1.2s
WVOR **Wild Horse Val** 87.52 46 IAmb IAmb 03 27 04.5
comp=Z,481nm,1.4s
WVOR **Wild Horse Val** 87.52 46 ⇑P P 03 26 12.7 +0.4
G26K **Porcupine Rive** 87.53 17 P P 03 26 12.6 +0.9
baz=228
MTPC **Mountain Pass** 87.53 53 IAmb IAmb 03 27 04.7
comp=Z,376nm,1.2s
KNGR **Kungurtug, Tuv** 87.56 323d iP P 03 26 13.1 +0.8
KNGR pmax pmax
comp=Z,89nm,1.5s
K29M **Barlow Dome** 87.57 21 P P 03 26 11.9 -0.2
baz=233
B22K **Teshekpuk Lake** 87.61 12 P P 03 26 13.0 +1.1
baz=218,SNR=45
DLBC **Dease Lake** 87.64 28 PKKPbc PKKPbc 03 43 59.8 -2.8
comp=Z,3.8nm,0.9s,baz=87,slow=2.6,SNR=7.1
DLBC PKPPKP P'P'df 03 51 59.5 -6.8
comp=Z,3.3nm,1.0s,baz=68,slow=5.4,SNR=5.7
DLBC LR LR 03 57 57.1
comp=Z,531nm,21.9s,baz=232,slow=30
DLBC **Dease Lake** 87.64 28 P P 03 26 12.9 +0.5
baz=240,SNR=5.4
KNTI **KHUNTI** 87.69 294⇑ eP P 03 26 13.4 -0.1
R33M **Jennings River** 87.71 27 IAmb IAmb 03 27 02.6
comp=Z,233nm,1.2s
R33M **Jennings River** 87.71 27 P P 03 26 12.7 -0.1
baz=239
H27K **Steamboat Moun** 87.73 18 P P 03 26 13.4 +0.8
baz=230
I28M **Miner Creek** 87.73 20 P P 03 26 12.8 0.0
baz=231
N32M **Quiet Lake** 87.73 25 P P 03 26 12.8 0.0
baz=237
D24K **Happy Valley** 87.75 14 P P 03 26 13.9 +1.3
baz=223
A21K **Barrow** 87.77 11 P P 03 26 13.7 +1.1
baz=215,SNR=14
M31M **Drury Creek, Y** 87.78 24 P P 03 26 12.4 -0.6
baz=236
A22K **Sinclair Lake** 87.83 12 P P 03 26 14.1 +1.2
baz=217
C23K **Itkillik River** 87.84 14 P P 03 26 14.4 +1.3
baz=221,SNR=203
E25K **Arctic Village** 87.84 16 P P 03 26 14.6 +1.4
baz=226
F07A **Phinny Hill Vi** 87.88 42 IAmb IAmb 03 27 05.5
comp=Z,295nm,1.1s
MXC **Moxie City** 87.89 41 IAmb IAmb 03 27 04.9
comp=Z,249nm,1.2s
LTY **Liberty** 87.90 40 IAmb IAmb 03 27 04.7
comp=Z,332nm,1.3s
F26K **Sheenjek River** 87.93 17 P P 03 26 14.7 +1.1
baz=227,SNR=38
J08A **Circle Bar Ran** 87.95 45 IAmb IAmb 03 27 05.5
comp=Z,403nm,1.2s
MAYO **Mayo, Yukon** 88.01 22 P P 03 26 14.5 +0.5
baz=235
G27K **Doyon Strip** 88.06 18 P P 03 26 14.8 +0.6
baz=230
VIS **Vishakhapatnam** 88.11 289 eP P 03 26 15.8 +0.3
PALK **Pallekele** 88.12 278 LR LR 04 08 47.8
comp=Z,452nm,19.3s,baz=111,slow=38
PALK **Pallekele** 88.12 278 P P 03 26 16.2 +0.5
PALK **Pallekele** 88.12 278 P P 03 26 16.2 +0.5
PALK pmax pmax
comp=Z,154nm,1.3s
PALK **Pallekele** 88.12 278 P P 03 26 17.8 +2.1
PALK **Pallekele** 88.12 278 P P 03 26 16.7 +1.0
PALK pP pP 03 27 01.2 0.0
113A **Mohawk Valley,** 88.14 56 IAmb IAmb 03 27 07.1
comp=Z,216nm,1.2s
SHPR **Sheep Range** 88.15 52 IAmb IAmb 03 27 07.9
comp=Z,295nm,1.4s
V12A **Nelson** 88.15 53 IAmb IAmb 03 27 06.9
comp=Z,241nm,1.2s
E07A **Sunnyside** 88.16 41 IAmb IAmb 03 27 06.4
comp=Z,367nm,1.2s
C24K **Franklin Bluff** 88.19 14 P P 03 26 15.8 +1.1
baz=223
GAYA **Gaya** 88.20 296 eP P 03 26 14.0 -1.7
I29M **Ogilvie Camp,** 88.21 20 P P 03 26 14.9 -0.1
baz=233
G08A **Pilot Rock** 88.30 43 IAmb IAmb 03 27 07.7
comp=Z,325nm,1.1s
BELA **Belgrano 2** 88.30 176 IAmb IAmb 03 26 17.4
comp=Z,331nm,1.0s
HAWA **Hanford** 88.31 42 IAmb IAmb 03 27 07.1
comp=Z,324nm,1.1s
HAWA **Hanford** 88.31 42 ⇑P P 03 26 16.3 +0.5
RAGD **RAYAGADA** 88.37 290⇑ eP P 03 26 16.1 -0.6
TIXI **Tiksi** 88.39 349 P P 03 26 15.7 +0.1
TIXI **Tiksi** 88.39 349 iP P 03 26 15.5 -0.1
TIXI pmax pmax
comp=Z,96nm,1.4s
LLLB **Lillooet** 88.44 37 IAmb IAmb 03 27 09.3
comp=Z,236nm,1.3s
D25K **Kavik River** 88.47 15 P P 03 26 16.7 +0.6
baz=225
MALK **Mahakanadarawa** 88.53 279 P P 03 26 18.0 +0.4
YPT **Yellepit** 88.56 42 IAmb IAmb 03 27 09.0
comp=Z,361nm,1.5s
EPH **Ephrata** 88.62 41 IAmb IAmb 03 27 09.0
comp=Z,405nm,1.3s
STMR **SITAMARHI** 88.67 298⇑ eP P 03 26 16.6 -1.4
LPIG **La Paz** 88.71 65 LR LR 03 56 14.1
comp=Z,567nm,20.6s,baz=247,slow=29
JHSG **JHARSUGUGA** 88.72 293⇑ eP P 03 26 17.4 -0.9
H29M **Whitestone** 88.72 19 P P 03 26 17.4 +0.2
baz=232
I30M **Mount Dempster** 88.78 21 P P 03 26 17.7 0.0
baz=234
D08A **Wollman Farm,** 88.94 41 IAmb IAmb 03 27 10.0
comp=Z,318nm,1.3s
E27K **Coleen River** 88.98 17 P P 03 26 19.3 +0.7
baz=230
WTLY **Watson Lake, Y** 89.02 27 P P 03 26 18.7 -0.1
baz=241,SNR=16
F28M **Old Crow** 89.12 18 P P 03 26 19.1 0.0
baz=231
B08A **Colville Reser** 89.14 40 IAmb IAmb 03 27 11.2
comp=Z,382nm,1.4s
G29M **Pine Creek** 89.25 19 P P 03 26 20.1 +0.3
baz=233
BMO **Blue Mountains** 89.25 44 IAmb IAmb 03 27 12.2
comp=Z,422nm,1.4s
BMO **Blue Mountains** 89.25 44 ⇑P P 03 26 20.5 +0.1
C26K **Camden Bay** 89.26 15 P P 03 26 20.8 +1.1
baz=226,SNR=11
EPYK **Eagle Plains** 89.34 20 P P 03 26 20.1 -0.2
baz=234
C27K **Jago River** 89.36 15 P P 03 26 21.8 +1.5
baz=228,SNR=84
ELK **Elko** 89.38 48 IAmb IAmb 03 27 12.7
comp=Z,240nm,1.1s
ELK **Elko** 89.38 48 P P 03 26 21.6 +0.3
ELK **Elko** 89.38 48 ⇑P P 03 26 21.6 +0.3
C09A **Chrisman Ranch** 89.61 41 IAmb IAmb 03 27 13.6
comp=Z,286nm,1.4s
PSUT **Pine Spring** 89.74 50 IAmb IAmb 03 27 14.4
comp=Z,193nm,1.1s
LCMT **Little Creek M** 89.77 52 IAmb IAmb 03 27 14.7
comp=Z,254nm,1.2s
MFID **Camas Ranch** 89.79 45 IAmb IAmb 03 27 14.3
comp=Z,294nm,1.1s
H31M **Peel River** 89.81 21 P P 03 26 22.5 +0.1
baz=236
CCUT **Cedar City** 89.83 51 IAmb IAmb 03 27 15.4
comp=Z,337nm,1.3s
E28M **Babbage River** 89.84 17 P P 03 26 23.1 +0.6
baz=231
D27M **Malcolm River** 89.84 16 P P 03 26 23.3 +0.7
baz=230
G30M **tAoh Zraii Nji** 89.86 19 P P 03 26 22.2 -0.4

baz=234
MDRS Chennai 89.89 283 eP P 03 26 24.0 +0.1
TGTN Hyland Airport 89.92 26 P P 03 26 22.7 -0.3
baz=242,SNR=24
SYO Syowa Base 90.15 197⇓iP P 03 26 23.8 -0.2
E29M Blow River 90.18 18 P P 03 26 23.8 -0.2
baz=233
PLID Pearl Lake 90.20 44 IAmb IAmb 03 27 15.7
comp=Z,318nm,1.1s
BLSP Bilaspur 90.23 293 eP P 03 26 24.1 -1.3
VAR Varanasi 90.28 296⇓eP P 03 26 25.4 -0.1
VJD Vijayawada 90.32 287⇓eP P 03 26 23.7 -2.1
F30M Barrier River 90.36 19 P P 03 26 24.5 -0.5
baz=235
TUC Tucson 90.43 57 P P 03 26 26.9 +0.8
TUC IAmb IAmb 03 27 18.4
comp=Z,239nm,1.2s
TUC Tucson 90.43 57 P P 03 26 27.0 +0.8
TUC pmax pmax
comp=Z,239nm,1.2s
X16A Lo Mia Camp, P 90.46 55 IAmb IAmb 03 27 19.1
comp=Z,145nm,1.0s
NEW Newport 90.49 40 IAmb IAmb 03 27 16.9
comp=Z,245nm,1.1s
D28M Stokes Point 90.51 17 P P 03 26 25.9 +0.4
baz=232
HLID Hailey 90.82 45 IAmb IAmb 03 27 19.4
comp=Z,207nm,1.1s
HLID Hailey 90.82 45 ⇑P P 03 26 28.6 +0.8
F31M Tsiigehtchic 90.92 19 P P 03 26 27.1 -0.4
baz=237
DUG Dugway, Tooele 90.99 49 IAmb IAmb 03 27 20.9
comp=Z,343nm,1.5s
BGU Big Grassy Mou 91.04 48 IAmb IAmb 03 27 20.2
comp=Z,168nm,1.1s
KOTAN Kotaneelee Air 91.15 28 P P 03 26 28.5 -0.2
baz=245,SNR=13
ALBI Allahabad 91.33 296 eP P 03 26 29.0 -1.4
INK Inuvik 91.46 19 P P 03 26 29.7 -0.2
baz=237
WMQ Urumqi 91.48 315 ⇑P P 03 26 31.0 +0.2
WMQ pP pP 03 27 19.3 +2.9
WMQ PP PP 03 30 11.3 -0.2
WMQ SKS SKSac 03 36 45.4 -0.3
WMQ pmax pmax
comp=Z,52nm,2.3s
WMQ pmax pmax
comp=Z,1μm,3.6s
WMQ L L
comp=Z,660nm,16.3s
WMQ L L
comp=Z,690nm,22.7s
WMQ L L
comp=Z,550nm,24.0s
SALM Salem 91.56 282⇑eP P 03 26 30.9 -0.8
X18A Snowflake 91.68 55 IAmb IAmb 03 27 24.0
comp=Z,148nm,1.1s
ELIB Princess Elisa 91.72 191 dP P 03 26 30.9 -0.6
comp=Z,82nm,1.0s
ELIB dbP pP 03 27 15.3 -1.7
ELIB dsP sP 03 27 34.4 -1.8
KOD Kodaikanal 91.90 280⇑eP P 03 26 33.9 +0.3
HMU Henry Mountain 91.93 52 IAmb IAmb 03 27 27.0
comp=Z,388nm,1.8s
BRCI Bahraich 92.04 298⇑eP P 03 26 31.2 -2.4
HYB Hyderabad 92.47 287 eP P 03 26 36.1 +0.3
HYB epP pP 03 27 21.1 0.0
HYB esP sP 03 27 39.5 -0.7
HYB ePP PP 03 30 19.3 -0.5
HYB ⇓eS SKSac 03 36 52.4 +0.2
BSUT Blindstream Ca 92.59 49 IAmb IAmb 03 27 29.4
comp=Z,176nm,1.3s
BNDA BANDA 92.67 295 eP P 03 26 33.4 -3.2
WRGLY Wrigley 92.69 25 P P 03 26 35.4 -0.3
baz=246
NGP Nagpur 92.85 291 eP P 03 26 36.9 -0.6
121A Cookes Peak, D 92.95 57 IAmb IAmb 03 27 27.1
comp=Z,186nm,1.6s
BOZ Bozeman (W) 93.30 44 IAmb IAmb 03 27 31.3
comp=Z,252nm,1.4s
PMSA Palmer Station 93.31 160 P P 03 26 40.7 +2.0
PMSA Palmer Station 93.31 160 eP P 03 26 39.5 +0.7
PMSA Palmer Station 93.31 160 ⇑P P 03 26 40.5 +1.8
DGZ Jazzator, Alta 93.33 320c iP P 03 26 39.0 -0.3
DGZ pmax pmax
comp=Z,89nm,1.4s
PV10 Paradox Valley 93.34 52 IAmb IAmb 03 27 34.5
comp=Z,178nm,1.3s
PV23 Carpenter Ridg 93.38 51 IAmb IAmb 03 27 31.2
comp=Z,164nm,1.0s
PV20 West Nyswonger 93.39 52 IAmb IAmb 03 27 32.9
comp=Z,174nm,1.2s
PV18 Skein Mesa, Pa 93.41 52 IAmb IAmb 03 27 32.9
comp=Z,125nm,1.1s
YMR Madison River 93.51 45 IAmb IAmb 03 27 34.7
comp=Z,152nm,1.4s
PTH Pithoragarh 93.70 299 eP P 03 26 39.9 -1.6
FRKB FARRUKHABAD 93.76 297 eP P 03 26 39.1 -2.5
LGTI Lohaghat 93.76 299⇓eP P 03 26 40.7 -1.0
PDAR Pinedale Array 94.02 47 P P 03 26 43.4 +0.7
comp=Z,0.6nm,0.5s,baz=227,slow=2.2,SNR=9.8
PDAR pP pP 03 27 29.0 +1.1
comp=Z,7.9nm,0.9s,baz=246,slow=2.6,SNR=32
PDAR PKKP PKKPdf 03 43 43.4 -1.5
comp=Z,2.4nm,0.7s,baz=96,slow=4.7,SNR=8.8
PDAR PKPPKP P'P'df 03 51 50.2 -5.7
comp=Z,0.7nm,0.9s,baz=93,slow=4.1,SNR=4.0
PDAR LR LR 04 05 57.0
comp=Z,506nm,19.1s,baz=260,slow=33
PDAR Pinedale Array 94.02 47 P P 03 26 43.4 +0.7
PDAR pP pP 03 27 25.5 -0.4
JHNI Jhansi 94.18 295⇑eP P 03 26 40.9 -2.6
EDM Edmonton 94.28 36 IAmb IAmb 03 27 32.0
comp=Z,298nm,1.8s
ZSN Zaisan 94.38 318 eP P 03 26 44.1 +0.2
ZSN pmax pmax
comp=Z,66nm,1.4s
ZSN Zaisan 94.38 318 eP P 03 26 44.2 +0.2
comp=Z,66nm,1.4s
TROLL Troll, Antarti 94.41 185 P P 03 26 43.9 +0.1
JOSI Joshimath 94.46 300 eP P 03 26 44.0 -1.0
ANMO Albuquerque 94.57 55 PKKPbc PKKPbc 03 43 43.3 -0.6
comp=Z,3.5nm,0.9s,baz=110,slow=4.1,SNR=9.2
ANMO PKKPab PKKPab 03 44 19.4
comp=Z,1.6nm,0.6s,baz=143,slow=7.7,SNR=6.0
ANMO LR LR 04 07 15.3
comp=Z,1μm,18.0s,baz=264,slow=34
ANMO Albuquerque 94.57 55⇑eP P 03 26 46.5 +1.1
ANMO Albuquerque 94.57 55 ⇑P P 03 26 48.4 +3.1
AKL Akola 94.60 290 eP P 03 26 44.8 -0.8
BHPL Bhopal 94.77 293 eP P 03 26 46.1 -0.1
NRDN NARMADA NAGAR 94.89 292⇑eP P 03 26 48.6 +1.8
MNGI Mangalore 94.97 282 eP P 03 26 47.9 +0.6
C36M Paulatuk 94.97 19 P P 03 26 45.9 -0.2
baz=246
SNAA Sanae 95.11 183 ⇑P P 03 26 46.8 -0.2
comp=Z,1μm,1.0s
SNAA Sanae 95.11 183 P P 03 26 46.5 -0.5
comp=Z,74nm,1.1s,baz=188,slow=5.3,SNR=23
SNAA pP pwP 03 27 33.8 -1.0
comp=Z,46nm,1.2s,baz=193,slow=5.6,SNR=2.8
comp=Z,74nm,1.1s
SNAA Sanae 95.11 183 P P 03 26 46.7 -0.2
SNAA IAmb IAmb 03 26 49.4
comp=Z,118nm,1.2s
SNAA pP pP 03 27 32.0 -0.6
SNAA Sanae 95.11 183 P P 03 26 46.7 -0.2
SNAA *PP pP 03 27 32.0 -0.6
SNAA pmax pmax
comp=Z,118nm,1.2s
GUNA GUNA 95.14 294 eP P 03 26 47.1 -0.9
HNLY HANLEY 95.42 302 eP P 03 26 49.1 -0.6
DDI Dehra Dun 95.68 300 eP P 03 26 50.0 -0.3
TXAR Lajitas Array 95.70 61 P P 03 26 51.2 +0.7
comp=Z,0.4nm,0.7s,baz=238,slow=5.8,SNR=6.0
TXAR pP pP 03 27 36.6 +0.8
comp=Z,8.2nm,0.9s,baz=235,slow=4.4,SNR=17
TXAR PKiKP PKiKP 03 31 27.9 -1.4
comp=Z,7.3nm,1.2s,baz=255,slow=5.6,SNR=4.4
TXAR PKKPbc PKKPbc 03 43 40.3 -0.2
comp=Z,1.6nm,0.8s,baz=98,slow=4.3,SNR=12
TXAR PKKPab PKKPab 03 44 11.5
comp=Z,1.4nm,0.9s,baz=101,slow=5.3,SNR=5.3
TXAR LR LR 04 04 44.1
comp=Z,956nm,19.1s,baz=264,slow=32
TXAR Lajitas Array 95.70 61 P P 03 26 51.0 +0.5
TXAR pP pP 03 27 34.0 -1.8
TXAR Lajitas Array 95.70 61 P P 03 26 51.0 +0.5
TXAR *PP pP 03 27 34.0 -1.8
A36M Sachs Harbour 95.73 17 P P 03 26 49.3 -0.2
baz=245
VNA3 Neumayer Olymp 95.78 181 ⇑P P 03 26 49.5 -0.5
comp=Z,54nm,0.8s
MK31 Makanchi Array 95.93 317c iP P 03 26 50.7 -0.3
MKAR Makanchi Array 95.93 317 P P 03 26 51.2 +0.2
comp=Z,20nm,0.8s,baz=91,slow=6.2,SNR=8.5
MKAR pP pP 03 27 35.1 -1.6
comp=Z,25nm,0.9s,baz=104,slow=4.6,SNR=7.0
MKAR PKiKP PKiKP 03 31 28.3 -0.8
comp=Z,3.9nm,0.8s,baz=124,slow=0.6,SNR=13
MKAR PKKPbc PKKPbc 03 43 38.2 -2.4
comp=Z,5.1nm,0.9s,baz=276,slow=3.3,SNR=18
MKAR PKPPKP 03 51 50.1
comp=Z,1.8nm,1.1s,baz=249,slow=1.0,SNR=6.2
comp=Z,20nm,0.8s
MKAR Makanchi Array 95.93 317 P P 03 26 50.7 -0.4
MKAR pP pP 03 27 34.9 -1.9
MKAR Makanchi Array 95.93 317 iP P 03 26 51.5 +0.5
MKAR pmax pmax
comp=Z,20nm,0.8s
ZAA0 Zalesovo Array 96.01 324 IAmb IAmb 03 26 53.0
comp=Z,106nm,1.4s
ZALV Zalesovo Beam 96.01 324 P P 03 26 50.0 -1.1
comp=Z,26nm,0.9s,baz=108,slow=4.3,SNR=9.8
ZALV pP pP 03 27 34.1 -2.8
comp=Z,19nm,0.9s,baz=108,slow=4.8,SNR=5.2
ZALV PKiKP PKiKP 03 31 30.8 +1.9
comp=Z,2.8nm,0.9s,baz=128,slow=2.9,SNR=3.9
ZALV PKKP PKKPbc 03 43 39.1 -1.6
comp=Z,2.2nm,0.5s,baz=269,slow=3.0,SNR=6.1
ZALV LR LR 04 09 34.0
comp=Z,202nm,20.1s,baz=111,slow=35
comp=Z,26nm,0.9s
ZALV Zalesovo Beam 96.01 324 P P 03 26 50.1 -1.1
ZALV pP pP 03 27 34.6 -2.3
ZALV Zalesovo Beam 96.01 324 iP P 03 26 50.7 -0.5
ZALV pmax pmax
comp=Z,26nm,0.9s
VNA2 Neumayer--Watz 96.04 182 ⇑P P 03 26 51.2 +0.1
comp=Z,35nm,0.5s,baz=168,slow=4.3
NDI New Delhi 96.07 298 eP P 03 26 49.5 -2.6
NPLP NPLP New Delhi 96.10 298 eP P 03 26 50.4 -1.8
AYAN Aya Nagar 96.10 298⇑eP P 03 26 49.1 -3.1
MAKZ Makanchi 96.14 317 ⇑P P 03 26 51.8 -0.2
YKA Yellowknife Ar 96.24 27 P P 03 26 51.4 -0.6
comp=Z,4.7nm,0.9s,baz=264,slow=5.0,SNR=48
YKA pP pP 03 27 37.8 +0.2
comp=Z,48nm,0.9s,baz=264,slow=5.1,SNR=27
YKA PKiKP PKiKP 03 31 29.4 +0.4
comp=Z,15nm,1.2s,baz=258,slow=7.9,SNR=8.3
YKA PKKPbc PKKPbc 03 43 34.8 -5.5
comp=Z,3.3nm,1.0s,baz=50,slow=2.4,SNR=11
YKA PKPPKP P'P'df 03 51 43.4 -6.6
comp=Z,0.7nm,1.0s,baz=50,slow=1.6,SNR=4.2
YKA LR LR 04 02 34.5
comp=Z,532nm,21.8s,baz=230,slow=30
comp=Z,4.7nm,0.9s
YKA Yellowknife Ar 96.24 27 P P 03 26 51.3 -0.7
YKA pP pP 03 27 36.3 -1.3
YKA Yellowknife Ar 96.24 27 P P 03 26 51.4 -0.6
YKA Yellowknife Ar 96.24 27 P P 03 26 51.3 -0.7
YKA *PP pP 03 27 36.3 -1.3
YKAW3 Yellowknife Wh 96.26 27 IAmb IAmb 03 27 41.5
comp=Z,91nm,1.0s
YKAW1 Yellowknife Wh 96.29 27 IAmb IAmb 03 27 41.6
comp=Z,80nm,0.9s
VNA1 Neumayer--Stat 96.34 182 ⇑P P 03 26 53.0 +0.6
comp=Z,76nm,1.2s
GOA Goa 96.50 284 eP P 03 26 53.1 -1.1
KAD Karad 96.53 286⇑eP P 03 26 53.9 -0.5
JHJR Jhajjar 96.55 298 eP P 03 26 52.0 -2.2
KUDL Kundal 96.59 297⇓eP P 03 26 54.1 -0.3
SMLA Simla 96.59 300 eP P 03 26 53.5 -0.8
KKR Kurukshetra 96.66 299⇓eP P 03 26 51.1 -3.6
RTK Rohtak 96.83 298 eP P 03 26 54.2 -1.3
POO Poona 97.08 287 eP P 03 26 55.5 -1.4
SHLS Shalkode 97.14 313 eP P 03 26 55.3 -1.4
SHLS pmax pmax
comp=Z,48nm,1.6s
SHLS Shalkode 97.14 313 eP P 03 26 55.4 -1.3
comp=Z,48nm,1.6s
UZB Uzynbulak 97.45 312 eP P 03 26 58.0 -0.2
UZB pmax pmax
comp=Z,59nm,1.8s
UZB Uzynbulak 97.45 312 eP P 03 26 58.0 -0.2
comp=Z,59nm,1.8s
KPKS Kokpek 97.75 313 eP P 03 26 59.3 -0.1
KPKS Kokpek 97.75 313 eP P 03 26 59.4 -0.1
TLWR Talawar 97.77 301⇑eP P 03 26 57.8 -1.9
TSSA Tissa 97.77 302 eP P 03 26 58.2 -1.7
SATY Saty 97.88 312 eP P 03 26 59.8 -0.3
SATY pmax pmax
comp=Z,51nm,2.1s
SATY Saty 97.88 312 eP P 03 26 59.9 -0.2
comp=Z,51nm,2.1s
AJM Ajmer 97.89 295⇑eP P 03 26 58.2 -2.2
TDK Taldyqorghan 98.23 314 eP Pdif 03 27 01.5 0.0
TDK pmax pmax
comp=Z,117nm,1.7s
TDK Taldyqorghan 98.23 314 eP Pdif 03 27 01.5 0.0
comp=Z,116nm,1.7s
UDPR Udaipur 98.36 293⇑eP P 03 27 01.4 -1.2
MDOK Medeo 98.88 312 eP P 03 27 04.4 -0.2
MDOK Medeo 98.88 312 eP P 03 27 04.4 -0.2
TNSS Tian-Shan 98.93 312 eP P 03 27 04.6 -0.5
TNSS Tian-Shan 98.93 312 eP P 03 27 04.6 -0.5
AAA Alma-Ata 98.98 312 eP P 03 27 04.7 -0.2
AAA Alma-Ata 98.98 312 eP P 03 27 04.8 -0.2
KURK Kurchatov 99.07 320 P Pdif 03 27 04.1 -0.9
KURK IAmb IAmb 03 27 07.2
comp=Z,104nm,2.0s
KURK Kurchatov 99.07 320 P Pdif 03 27 04.1 -0.9
KURK pmax pmax
comp=Z,104nm,2.0s
KURBB Kurchatov Arra 99.11 320 P Pdif 03 27 05.0 -0.2
comp=Z,1.4nm,0.5s,baz=110,slow=5.0,SNR=5.1
KURBB PP PP 03 30 59.5 -11
comp=Z,2.6nm,1.1s,baz=105,slow=7.0,SNR=4.2
KURBB PKiKP PKiKP 03 31 34.1 -0.4
comp=Z,1.2nm,0.5s,baz=102,slow=1.8,SNR=6.5
KURBB PKKPbc PKKPbc 03 43 29.8 -2.1
comp=Z,5.6nm,1.0s,baz=278,slow=3.4,SNR=14
KURBB PKPPKP 03 51 44.6
comp=Z,0.5nm,0.6s,baz=281,slow=2.7,SNR=6.2
KURBB LR LR 04 10 05.3
comp=Z,502nm,21.9s,baz=132,slow=34
comp=Z,1.4nm,0.5s
KSH2 Kashi 99.32 308 P Pdif 03 27 08.0 +1.4
KSH2 SKS SKSac 03 37 28.4 +0.8
KSH2 pmax pmax
comp=Z,11nm,0.7s
KUU Kurty 99.50 313 eP Pdif 03 27 07.1 0.0
KUU pmax pmax
comp=Z,54nm,2.2s
KUU Kurty 99.50 313 eP Pdif 03 27 07.2 0.0
comp=Z,54nm,2.2s
AAK Ala-Archa 100.65 311 PKKPbc PKKPbc 03 43 25.8 -1.6
comp=Z,2.2nm,0.6s,baz=199,slow=5.0,SNR=7.0
SGDS Sogindy 100.67 312 eP Pdif 03 27 12.3 -0.1
BTLS Baital 101.29 314 eP Pdif 03 27 15.0 0.0
BTLS Baital 101.29 314 eP Pdif 03 27 15.0 0.0
DZA Taraz 102.99 311 eP Pdif 03 27 22.5 -0.2
DZA Taraz 102.99 311 eP Pdif 03 27 22.6 -0.2
IUG luzhnay 103.88 311 iP Pdif 03 27 26.6 -0.1
IUG luzhnay 103.88 311 ePdif Pdif 03 27 26.7 -0.1
BRLS Borolday 104.10 311 iP Pdif 03 27 27.9 +0.3
BRLS Borolday 104.10 311 ePdif Pdif 03 27 27.9 +0.3
CHM Chimkent 104.21 311 iP Pdif 03 27 28.0 -0.1
CHM Chimkent 104.21 311 ePdif Pdif 03 27 28.0 -0.1
BVAR Borovoye Array 104.39 322 PKiKP PKiKP 03 31 43.8 -0.2
comp=Z,2.6nm,0.5s,baz=132,slow=1.5,SNR=7.1
BVAR PKKPbc PKKPbc 03 43 16.7 +0.1
comp=Z,1.4nm,0.6s,baz=222,slow=2.0,SNR=4.3
PLCA Paso Flores 104.45 138 PKiKP PKiKP 03 31 44.6 -0.2
comp=Z,1.4nm,1.0s,baz=256,slow=4.2,SNR=2.9
ULM Lac du Bonnet 104.49 41 PKiKP PKiKP 03 31 43.9 -0.4
comp=Z,1.3nm,0.3s,baz=295,slow=2.4,SNR=4.8
ULM PKKPbc PKKPbc 03 43 13.4 -2.8
comp=Z,2.6nm,0.5s,baz=87,slow=4.0,SNR=7.7
TULEG Thule 110.35 12 iP PKiKP 03 31 54.5 0.0
ARTI Arti 111.19 326 iP PKiKP PKiKP 03 31 55.7 -0.9
ARTI 03 32 39.5
ARTI 03 38 50.5
ARTI SS SS 03 47 56.6 -0.2
NEEM North Greenlan 112.84 8 iP PKiKP 03 31 59.8 +0.1
TKL Tuckaleechee C 113.05 57 PKKPab PKKPab 03 42 55.7 +0.3
comp=Z,7.0nm,1.0s,baz=127,slow=5.0,SNR=7.0
KBS Kingsbay 113.12 355 e PKiKP 03 32 01.1 +1.3
KBS eSKSac SKSac 03 38 29.0 +2.3
KBS ePS PKKPbc 03 42 28.3 -21
KBS Kingsbay 113.12 355d iPKIKP PKiKP 03 32 00.9 +1.2
KBS pmax pmax
comp=Z,36nm,2.5s
SPA0 Spitsbergen Ar 113.35 354 e PKiKP 03 32 00.3 0.0
SPA0 eSKSac SKSac 03 38 30.0 +2.4
SPA0 eSP SP 03 42 12.3 +3.1
SPITS Spitsbergen Ar 113.35 354 PKiKP PKiKP 03 32 00.1 -0.1
comp=Z,32nm,0.9s,baz=128,slow=5.4,SNR=20
SPITS SKP SKPdf 03 35 18.6 +0.4
comp=Z,6.2nm,0.7s,baz=94,slow=7.6,SNR=6.1
SPITS PKKPbc PKKPbc 03 42 45.8 -3.0
comp=Z,2.4nm,0.5s,baz=164,slow=6.5,SNR=13
KULLO Kullorsuaq 113.85 12 iP PKiKP 03 32 02.2 +1.0
UPNV Upernavik 115.29 13 iP PKiKP 03 32 03.7 -0.3
KIRV Kirov 115.43 329⇑iPKIKP PKiKP 03 32 04.4 -0.2
PB08 IPOC Station P 115.56 120 PKP PKiKP 03 32 07.6 +1.0
BLA Blacksburg 115.72 55 PKPdf 03 32 05.8 -0.1
BLA Blacksburg 115.72 55 PKIKP PKPdf 03 32 05.8 -0.1
SADO Sadowa 116.01 46 PKKPab PKKPab 03 42 40.7 -1.3
comp=Z,11nm,0.9s,baz=46,slow=1.9,SNR=4.6
BJO1 Bjornoya 116.10 351 ePKPdf PKPdf 03 32 05.4 -0.2
BJO1 eSP SP 03 42 38.8 +4.4
DAG Danmarks Havn 116.31 1 iP PKPdf 03 32 05.1 -0.8
NUUG Nuugaatsiaq 116.81 13 iP PKPdf 03 32 06.8 -0.2
LVZ Lovozero 117.25 342⇑iPKIKP PKPdf 03 32 07.6 -0.4
VADS Vadso 117.32 345 ePKPdf PKiKP 03 32 08.2 +0.2
VADS eSP SP 03 42 48.7 +3.2
SAATT Saattut 117.69 14 iP PKiKP 03 32 08.7 0.0
APA Apatity 117.83 342 iPKIKP PKPdf 03 32 08.4 -0.6
LPAZ La Paz 118.09 117 PKP PKPdf 03 32 11.8 0.0
comp=Z,7.7nm,1.1s,baz=258,slow=1.6,SNR=14
LPAZ pPKP pPKPdf 03 32 59.4 -0.2
comp=Z,4.7nm,1.0s,baz=13,slow=1.7,SNR=3.2
LPAZ PKKPbc PKKPbc 03 42 29.3 -2.1
comp=Z,3.6nm,0.8s,baz=60,slow=4.9,SNR=9.0
LPAZ La Paz 118.09 117 PKPdf PKPdf 03 32 11.7 -0.2
KEV Kevo 118.16 345 PKiKP PKiKP 03 32 09.9 +0.3
KEV Kevo 118.16 345 PKIKP PKiKP 03 32 09.9 +0.3
BELG Belogornoye 118.17 323c iPKIKP PKPdf 03 32 10.0 -0.1
ARA0 ARCESS Array S 118.68 346 ePKPdf PKPdf 03 32 10.6 0.0
ARA0 eSP SP 03 43 00.7 +2.8
ARCES ARCESS Array B 118.68 346 PKhKP PKPpre 03 32 02.4
comp=Z,3.7nm,1.0s,baz=27,slow=1.9,SNR=3.8
ARCES PKP PKPdf 03 32 10.6 -0.1
comp=Z,26nm,0.3s,baz=84,slow=2.3,SNR=262
ARCES pPKP pPKPdf 03 32 58.4 0.0
comp=Z,14nm,0.7s,baz=31,slow=0.7,SNR=3.9
ARCES SKP SKPdf 03 35 29.4 +0.7
comp=Z,7.9nm,0.7s,baz=48,slow=1.8,SNR=5.1
ARCES PKKPbc PKKPab 03 42 25.6 -4.1
comp=Z,7.4nm,0.5s,baz=212,slow=1.7,SNR=36
SUMG Summit 118.71 9 PKP PKPdf 03 32 10.8 -0.4
SUMG Summit 118.71 9 PKiKP PKiKP 03 32 11.8 +0.6
SUMG Summit 118.71 9 PKIKP PKiKP 03 32 11.8 +0.6
SUMG Summit 118.71 9 iP PKiKP 03 32 11.8 +0.6
DBG Daneborg 118.72 2 iP PKPdf 03 32 10.2 -0.4
KLMR Klimovskoe 119.19 334 ePKIKP PKPdf 03 32 11.3 -0.5
KLMR e 03 32 58.7
KLMR pmax pmax
comp=Z,75nm,1.5s
KTK1 Kautokeino 119.62 346 ePKPdf PKPdf 03 32 12.0 -0.4
JETT Jettan, Norway 119.84 347 ePKPdf PKPdf 03 32 12.3 -0.6
TRO Tromso 120.09 348 ePKPdf PKPdf 03 32 12.8 -0.5
MAK Makhachkala 120.42 312 iP Pdif 03 28 41.1 +1.0
MAK i 03 32 15.0
MAK e 03 32 02.1
MAK e 03 33 42.9
MAK ePPP PPP 03 36 15.6
MAK e 03 38 54.4
MAK ePS PS 03 43 36.8 -0.3
MAK eSS SS 03 49 59.6 +1.6
MAK eSSS SSS 03 54 25.5
MAK pmax pmax
comp=Z,274nm,1.4s
AKT Akhty 120.52 311 iPKIKP PKPdf 03 32 15.0 -0.1
AKT e 03 33 43.7
AKT pmax pmax
comp=Z,75nm,1.5s
SFJD Kangerlussuaq 120.72 16 PKiKP 03 32 15.1 +0.4
SFJD Kangerlussuaq 120.72 16 PKIKP PKiKP 03 32 15.1 +0.4
SFJD Kangerlussuaq 120.72 16 iP PKPdf 03 32 14.2 +0.4
POGA Pongola 120.88 227 P PKPdf 03 32 16.1 -0.1
SCHQ Schefferville 121.09 33 PKP PKiKP 03 32 16.0 +0.1
comp=Z,4.2nm,0.4s,baz=357,slow=2.5,SNR=13
SCHQ PKKPab PKKPab 03 42 18.9 -0.6
comp=Z,11nm,0.8s,baz=92,slow=4.6,SNR=13
CPUP Villa Florida 121.66 132 PKP PKPdf 03 32 17.0 -0.7
comp=Z,16nm,0.9s,baz=251,slow=2.3,SNR=27
CPUP PKKPbc PKKPab 03 42 19.1 -0.6
comp=Z,1.7nm,0.8s,baz=315,slow=3.0,SNR=3.4
CPUP Villa Florida 121.66 132 PKPdf 03 32 17.5 -0.2
CPUP Villa Florida 121.66 132 PKIKP PKPdf 03 32 17.5 -0.2
VRH Novokhopyorsk 122.02 323 ePKIKP PKPdf 03 32 17.1 -0.4
VRH e 03 33 06.3
VRH pmax pmax
comp=Z,60nm,0.7s
STEI Steigen 122.26 348 ePKPdf PKPdf 03 32 17.6 +0.1
D62A Allapoint, All 122.42 42 PKPdf 03 32 17.7 -0.7
SCO Scoresbysund 122.43 4 PKiKP 03 32 18.7 +0.7
SCO Scoresbysund 122.43 4 PKIKP PKiKP 03 32 18.7 +0.7
SCO Scoresbysund 122.43 4 iP PKiKP 03 32 18.7 +0.7
LOF Lofoten 122.43 349 ePKPdf PKiKP 03 32 19.0 +1.0
LOF eSP SP 03 43 34.5 +3.4
MOS Moscow 122.44 329 ePKIKP PKPdf 03 32 17.3 -0.9
MOS pmax pmax
comp=Z,57nm,1.0s
FAUS Fauske 122.71 347 ePKPdf PKPdf 03 32 18.0 -0.4
GNI Garni 122.99 309 PKPdf 03 32 19.7 -0.3
GNI Garni 122.99 309c iPKIKP PKiKP 03 32 20.6 +0.4
GNI Garni 122.99 309 PKP PKiKP 03 32 20.8 +0.6
GOF Gofitskoye 123.08 315ce PKIKP PKiKP 03 32 20.0 0.0
NCK Nalchik 123.09 314⇓iPKIKP PKiKP 03 32 20.7 +0.5
LPSR Galich'ya Gora 123.10 325 ePKIKP PKiKP 03 32 20.0 +0.2
LPSR pmax pmax
comp=Z,130nm,1.1s
OBN Obninsk 123.26 328 PKiKP 03 32 21.0 +1.0
OBN Obninsk 123.26 328ce PKIKP PKPdf 03 32 19.9 +0.1
OBN i 03 33 05.7
OBN e 03 34 06.2
OBN ePPP PPP 03 36 43.7
OBN pmax pmax
comp=Z,130nm,1.6s
OBN Obninsk 123.26 328 PKP PKPdf 03 32 19.8 0.0
SDV Santo Domingo 123.30 88 PKPdf 03 32 20.7 -0.7
VORR Voronezh 123.31 324 ePKIKP PKPdf 03 32 19.7 -0.3
VORR e 03 33 05.1
VORR pmax pmax
comp=Z,100nm,0.6s
VSR Storozhevoye 123.51 323 ePKIKP PKPdf 03 32 20.1 -0.3
VSR e 03 33 06.3
VSR pmax pmax
comp=Z,100nm,1.4s
KBZ Khabaz 123.53 314 PKP PKiKP 03 32 21.1 +0.2
comp=Z,11nm,0.9s,baz=182,slow=3.2,SNR=12
KBZ pPKP pPKPdf 03 33 09.9 +1.4
comp=Z,11nm,1.1s,baz=246,slow=2.8,SNR=2.7
VORD Divnogorie 123.53 323 ePKIKP PKPdf 03 32 19.9 -0.5
VORD pmax pmax
comp=Z,40nm,1.0s
KIV Kislovodsk 123.61 314 ⇑P PKiKP 03 32 21.5 +0.2
KIV Kislovodsk 123.61 314 PKIKP 03 32 21.3 0.0
KIV Kislovodsk 123.61 314 iPKIKP PKPdf 03 32 20.9 -0.1
KIV e 03 34 03.9
KIV eSS SS 03 50 37.1 -1.6
KIV pmax pmax
comp=Z,27nm,1.1s
KIV Kislovodsk 123.61 314 PKP PKiKP 03 32 21.2 0.0
PUL Pulkovo 123.64 335⇓iPKIKP PKiKP 03 32 22.0 +1.4
VAGH Vaagaholmen 123.69 348 ePKPdf PKPdf 03 32 20.4 +0.1
SHA1 Shidzhatmaz 123.69 314c iPKIKP PKPdf 03 32 21.3 0.0
NEUR Neytrino 123.78 313c iPKIKP PKiKP 03 32 21.8 +0.1
RAYN Ar Rayn 123.90 290 PKiKP 03 32 22.6 +0.3
RAYN Ar Rayn 123.90 290 PKIKP PKiKP 03 32 22.7 +0.3
MOR8 Moi Rana 123.92 347 ePKPdf PKPdf 03 32 20.1 -0.7

KONS Konsvik 123.92 348 *e*PKPdf **PKiKP 03 32 20.9 -0.1**
STOK Stokkvaagen 124.08 348 *e*PKPdf **PKPdf 03 32 21.1 +0.1**
MURT Porto Murtinho 124.15 128 *e*P **PKiKP 03 32 22.9 0.0**
FINES FINESS Array B 124.19 339 PKhKP PKPpre 03 32 15.1
comp=Z,2.9nm,0.8s,baz=67,slow=4.4,SNR=3.5
FINES PKP **PKPdf 03 32 21.4 0.0**
comp=Z,45nm,0.9s,baz=53,slow=2.6,SNR=44
FINES PKP PKPdf 03 33 09.9 +0.7
comp=Z,49nm,1.0s,baz=45,slow=5.7,SNR=7.0
FINES SKP 03 35 26.7
comp=Z,3.6nm,0.6s,baz=60,slow=5.5,SNR=3.4
FINES PKKPbc **PKKPab 03 42 06.9 +1.0**
comp=Z,1.8nm,0.5s,baz=254,slow=2.5,SNR=14
LEIR Leirfjorden 124.25 348 *e*PKPdf **PKPdf 03 32 21.4 0.0**
SUR Sutherland 124.39 215 PKiKP 03 32 23.7 +0.4
BOSA Boshof 124.43 221 PKP **PKiKP 03 32 23.7 +0.2**
comp=Z,33nm,0.9s,baz=114,slow=1.8,SNR=29
BOSA PKP **PKPdf 03 33 10.4 -0.6**
comp=Z,7.0nm,0.7s,baz=142,slow=5.8,SNR=2.3
BOSA Boshof 124.43 221 P **PKiKP 03 32 23.7 +0.2**
ITAB Concordia 124.70 137 PKPdf 03 32 23.5 0.0
ITAB Concordia 124.70 137 *e*P **PKPdf 03 32 23.3 -0.2**
ANGG Ammassalik, Gr 124.96 12 *i* P **PKPdf 03 32 21.6 -1.1**
AMBA Amambai (Brazi 125.40 131 *e*P **PKPdf 03 32 24.5 -0.5**
BDQN Bodoquena, MS 125.49 127 *e*P **PKPdf 03 32 25.1 -0.1**
VSLR Vesyoloye 125.60 314 *ce*PKIKP **PKPdf 03 32 24.4 -0.3**
SOC Sochi 125.78 315 *i* PKIKP **PKPdf 03 32 24.3 -0.7**
SOC *e* 03 34 19.8
SOC *e*SS SS 03 51 18.9 +13
SOC pmax pmax
comp=Z,24nm,1.1s
NSS Namsos 125.86 347 *e*PKPdf **PKPdf 03 32 24.4 -0.1**
VSU Vasula 125.90 336 *ce*PKIKP **PKPdf 03 32 23.8 -1.0**
TEFE Tefe 126.08 104 *e*P **PKPdf 03 32 25.3 -1.2**
PTLR Pontes e Lacer 126.18 128 *e*P **PKPdf 03 32 24.9 -1.7**
AQDB Aquidauana 126.29 128 PKPdf 03 32 25.9 -0.8
PTGB Pitanga 126.39 135 *e*P **PKPdf 03 32 26.5 -0.4**
VILB Vilhena 126.45 117 PKPdf 03 32 27.2 +0.1
VILB Vilhena 126.45 117 *e*P **PKiKP 03 32 27.5 -0.2**
NRS Narsarsuaq 126.59 19 PKiKP 03 32 26.8 +0.3
NRS Narsarsuaq 126.59 19 PKIKP **PKiKP 03 32 26.8 +0.3**
NRS Narsarsuaq 126.59 19 *i* P **PKPdf 03 32 25.7 -0.3**
LBTB Lobatse 126.61 225 PKP **PKiKP 03 32 27.6 -0.2**
comp=Z,22nm,0.9s,baz=120,slow=5.0,SNR=17
LBTB PKP **pPKPdf 03 33 13.5 -1.7**
comp=Z,6.9nm,0.7s,baz=169,slow=1.5,SNR=2.3
LBTB Lobatse 126.61 225 P **PKiKP 03 32 27.6 -0.2**
MAJ01 Sao Joao Batis 126.62 139 *e*P **PKPdf 03 32 27.0 -0.2**
MAKGR Makgori 126.62 223 *i* P **PKPdf 03 32 26.9 -0.4**
KIBK Kibwezi 127.13 257 PKP **PKPdf 03 32 28.6 0.0**
KIBK Kibwezi 127.13 257 PKPdf 03 32 28.5 -0.1
TRCB Terra Rica 127.20 132 *e*P **PKPdf 03 32 27.5 -1.0**
LPHEP Lephephe 127.49 227 *i* P **PKPdf 03 32 28.9 -0.1**
BROLN Tlhalogang 127.82 230 *i* P **PKPdf 03 32 28.9 -0.8**
BROLN Tlhalogang 127.82 230 P **PKPdf 03 32 29.7 0.0**
MNK Minsk 127.85 331 *i* PKP **PKPdf 03 32 28.8 +0.2**
comp=E,23nm,1.0s
MNK *i* PKP **PKPdf 03 32 28.8 +0.2**
comp=N,37nm,1.4s
MNK *i* PKP **PKPdf 03 32 28.8 +0.2**
comp=Z,50nm,0.9s,baz=54
MNK *i* pPKP **pPKPdf 03 33 19.5 +3.1**
MNK *i* PP **PP 03 34 31.6 -1.3**
MNK *i* PPP PPP 03 37 16.5
MNK *i* SKS **SKSdf 03 39 23.0 +0.3**
MNK *i* SKKS **SKKSdf 03 49 33.0 -3.8**
MNK *i* SS **SS 03 51 32.4 +2.2**
MNK *i* LRM MLR 04 28 24.1
comp=Z,608nm,19.8s
MNK *i* LRM MLR 04 28 30.5
MNK Minsk 127.85 331 *i* PKIKP **PKPdf 03 32 28.8 +0.2**
MNK *i* 03 33 19.4
MNK *i* 03 34 31.5
MNK *i* PPP PPP 03 37 16.4
MNK *i* 03 39 22.9
MNK *i* SS SS 03 51 32.3 +2.1
MNK pmax pmax
comp=Z,50nm,0.9s
MNK pmax pmax
comp=E,23nm,1.0s
MNK pmax pmax
comp=N,37nm,1.4s
MNK MLR MLR
comp=Z,608nm,20.0s
LDASE Londrina, Braz 127.90 134 *e*P **PKPdf 03 32 29.1 -0.7**
KMBO Kilima Mbogo 128.26 258 PKP **PKiKP 03 32 31.9 +0.3**
comp=Z,7.4nm,0.6s,baz=137,slow=2.8,SNR=4.7
KDWAN Kaudwane 128.32 226 *i* P **PKPdf 03 32 29.9 -0.7**
KDWAN Kaudwane 128.32 226 P **PKiKP 03 32 31.5 +0.2**
MOL Molde 128.53 348 *e*PKPdf **PKiKP 03 32 30.6 +0.3**
PP1B Ponte de Pedra 128.54 125 *e*P **PKPdf 03 32 30.4 -0.7**
SJG San Juan 128.65 77 PKiKP 03 32 32.1 +0.2
SJG San Juan 128.65 77 PKIKP **PKiKP 03 32 32.1 +0.2**
KHWEE KHWEE 128.68 228 *i* P **PKPdf 03 32 31.2 -0.2**
DOMB Dombas 128.68 347 *e*PKPdf **PKiKP 03 32 30.9 +0.2**
SALV Santo Antonio 128.80 123 *e*P **PKPdf 03 32 31.2 -0.4**
SOOWA Sowa 128.97 230 *i* P **PKPdf 03 32 32.2 +0.3**
SOOWA Sowa 128.97 230 P **PKiKP 03 32 32.9 +0.3**
NB2 NORSAR Subarra 129.06 345 PKPdf **PKPdf 03 32 30.2 -0.6**
comp=Z,32nm,0.8s,baz=31,slow=1.9
NB2 pPKP **pPKPdf 03 33 19.1 +0.6**
comp=Z,51nm,1.4s,baz=31,slow=1.9
NB2 SKP SKPbc 03 35 37.0 +2.6
comp=Z,7.2nm,0.9s,baz=38,slow=4.6
NB2 NORSAR Subarra 129.06 345 PKPdf **PKPdf 03 32 30.2 -0.6**
NB2 NORSAR Subarra 129.06 345 PKKP 03 42 35.3
comp=Z,1.4nm,0.6s,baz=202,slow=1.9
NOA NORSAR Array B 129.06 345 PKP **PKiKP 03 32 31.3 -0.2**
comp=Z,13nm,0.6s,baz=30,slow=2.0,SNR=43
NOA pPKP **pPKPdf 03 33 19.0 +0.6**
comp=Z,20nm,1.0s,baz=32,slow=2.0,SNR=8.5
NOA SKPbc SKPbc 03 35 37.2 +2.7
comp=Z,30nm,1.1s,baz=26,slow=4.0,SNR=16
NOA PKKP **PKKPdf 03 42 33.3 -5.7**
comp=Z,0.3nm,0.5s,baz=218,slow=2.1,SNR=6.2
SIM Simferopol' 129.09 318 *e*PKIKP **PKiKP 03 32 32.2 +0.2**
SIM pmax pmax
comp=Z,30nm,1.3s
HFS Hagfors 129.16 343 PKP **PKPdf 03 32 31.1 +0.1**
comp=Z,50nm,1.0s,baz=106,slow=4.8,SNR=30
HFS pPKP **pPKPdf 03 33 18.4 -0.4**
comp=Z,22nm,1.0s,baz=52,slow=2.4,SNR=4.6
HFS SKPbc SKPbc 03 35 37.0 +2.2
comp=Z,24nm,0.9s,baz=35,slow=3.6,SNR=9.9
HFS PKKPbc PKKPbc 03 41 43.4
comp=Z,1.3nm,0.5s,baz=197,slow=3.1,SNR=5.8
HFS PKKP **PKKPdf 03 42 32.9 -5.8**
comp=Z,3.0nm,0.8s,baz=197,slow=4.5,SNR=5.9
NC602 NORSAR Array S 129.24 345 *e*PKPdf **PKPdf 03 32 31.3 +0.2**
AKASG Malin Array Be 129.32 327 PKP **PKPdf 03 32 30.9 -0.6**
comp=Z,4.8nm,0.5s,baz=58,slow=2.0,SNR=42
AKASG pPKP **pPKPdf 03 33 19.4 +0.1**
comp=Z,12nm,1.0s,baz=56,slow=2.2,SNR=3.1
AKASG SKPab SKPbc 03 35 37.4 +1.7
comp=Z,3.5nm,0.7s,baz=52,slow=4.3,SNR=5.9
AKBB Malin Array Si 129.32 327 *c i*PKIKP **PKPdf 03 32 31.3 -0.2**
AKBB Malin Array Si 129.32 327 PKP **PKPdf 03 32 31.3 -0.2**
KIEV Kiev 129.33 327 ⇑P **PKiKP 03 32 32.1 -0.2**
KIEV Kiev 129.33 327 PKiKP 03 32 32.0 -0.3
KIEV Kiev 129.33 327 ⇑PKIKP **PKiKP 03 32 32.1 -0.2**
KIEV Kiev 129.33 327 PKP **PKPdf 03 32 31.5 0.0**
AK09 Malin Array Si 129.33 326 PKPdf 03 32 31.6 0.0
AK02 Malin Array Si 129.35 326 PKP **PKPdf 03 32 31.7 +0.1**
PET01 Itanhaem-SP 129.90 138 *e*P **PKPdf 03 32 33.4 -0.1**
MI28 Mi28,Pidlybu 130.02 327 PKP **PKPdf 03 32 32.8 -0.1**
SKAR Skarslia 130.06 347 *e*PKPdf **PKiKP 03 32 34.0 +0.4**
PDRB Porto dos Gac 130.07 118 *e*P **PKPdf 03 32 33.1 -1.0**
OSL Oslo 130.13 345 *e*PKPdf **PKiKP 03 32 34.3 +0.7**
LKGWB Lokgwabe 130.15 222 P **PKiKP 03 32 35.5 +0.6**
SPB Sao Paulo 130.28 137 *e*P **PKPdf 03 32 33.5 -0.8**
SUW Suwalki 130.31 333 *e*PKP **PKiKP 03 32 34.1 0.0**
KGCAE Kacgae 130.35 224 *i* P **PKPdf 03 32 34.5 0.0**
KGCAE Kacgae 130.35 224 P **PKiKP 03 32 35.2 -0.2**
LSZ Lusaka 130.47 237 PKP **PKPdf 03 32 34.9 -0.1**
comp=Z,9.1nm,0.6s,baz=91,slow=0.7,SNR=17
LSZ Lusaka 130.47 237 P **PKiKP 03 32 35.7 -0.1**
LUBAR Lubar, Ukraine 130.53 326 PKP **PKPdf 03 32 33.4 -0.5**
BAL3X Bal3x, Balta 130.54 323 PKP **PKiKP 03 32 35.5 +0.7**
RNPP9 Sopachiv 130.66 329 PKP **PKiKP 03 32 35.2 +0.3**
KONO Kongsberg 130.67 345 PKiKP 03 32 35.0 +0.3
KONO Kongsberg 130.67 345 *e*PKPdf **PKiKP 03 32 34.6 -0.1**
KONO Kongsberg 130.67 345 PKIKP **PKiKP 03 32 35.0 +0.3**
RNPP8 Varash 130.72 329 PKP **PKPdf 03 32 34.1 -0.1**

RNPP5 Staryi Chortor 130.77 329 PKP **PKiKP 03 32 34.9 -0.3**
ITRB Iturama 130.77 131 *e*P **PKPdf 03 32 32.6 -2.7**
STRU Stroemstad 130.78 344 *i* P **PKPdf 03 32 34.4 +0.4**
VAO Valinhos 131.00 137 *e*P **PKPdf 03 32 35.1 -0.6**
RCLB Rio Claro- Sao 131.01 136 *e*P **PKPdf 03 32 34.4 -1.4**
PURM Purcari 131.07 322 ⇑P **PKPdf 03 32 35.3 +0.3**
SORM Soroca 131.16 324 ⇓P **PKPdf 03 32 34.8 -0.3**
SORM Soroca 131.16 324 ⇓PKIKP **PKPdf 03 32 34.8 -0.3**
CLDB Colider 131.22 117 *e*P **PKPdf 03 32 35.4 -0.9**
BB19B Bebedouro 131.23 134 *e*P **PKPdf 03 32 35.8 -0.4**
BR131 Keskin Array S 131.33 312 *c i*PKIKP **PKPdf 03 32 35.2 -0.7**
BRTR Keskin Array B 131.33 312 PKP **PKPdf 03 32 35.3 -0.7**
comp=Z,4.9nm,0.6s,baz=137,slow=4.5,SNR=22
BRTR pPKP **pPKPdf 03 33 25.0 +1.2**
comp=Z,5.0nm,1.0s,baz=164,slow=2.3,SNR=2.7
BRTR SKPbc **SKPbc 03 35 40.5 -3.2**
comp=Z,11nm,0.8s,baz=106,slow=4.0,SNR=5.7
BRTR PKKP **PKKPdf 03 42 32.6 -1.9**
comp=Z,1.5nm,1.0s,baz=343,slow=1.7,SNR=3.5
BRTR Keskin Array B 131.33 312 PKPdf 03 32 36.1 +0.2
KSANE Kasane 131.43 232 *i* P **PKiKP 03 32 37.2 -0.5**
KSANE Kasane 131.43 232 P **PKiKP 03 32 37.6 0.0**
BORU Boraas 131.50 342 *i* P **PKiKP 03 32 36.1 -0.4**
TJOU Tjoern 131.51 343 *i* P **PKiKP 03 32 36.2 -0.2**
BLEU Blekinge 131.58 339 *i* P **PKPdf 03 32 35.5 -0.1**
KOOLE Kule 131.60 222 *i* P **PKPdf 03 32 35.7 -1.2**
KOOLE Kule 131.60 222 P **PKPdf 03 32 37.4 +0.4**
PARB Paraibuna 131.64 138 *e*P **PKPdf 03 32 36.1 -0.8**
BOAV Boa Vista 131.74 99 PKPdf 03 32 37.3 +0.1
BOAV Boa Vista 131.74 99 *e*P **PKPdf 03 32 36.5 -0.7**
MMAI Mount Meron Ar 131.81 303 PKP **PKiKP 03 32 37.9 -0.1**
comp=Z,4.7nm,0.5s,baz=53,slow=9.6,SNR=8.0
ONAU Onsala 131.96 342 *i* P **PKPdf 03 32 36.7 +0.4**
KMPD K-Podol'skiy 131.99 325 PKP **PKPdf 03 32 36.6 -0.1**
ARAG Araguaiana, MT 132.03 126 *e*P **PKPdf 03 32 36.5 -1.2**
FABU Falkenberg 132.04 341 *i* P **PKiKP 03 32 37.8 +0.2**
DEL Delary 132.11 340 *i* P **PKPdf 03 32 36.9 +0.3**
HOMB Homborsund 132.15 345 *i* P **PKiKP 03 32 37.4 -0.3**
VASR Vaslui 132.26 323 ⇓P **PKiKP 03 32 38.6 +0.3**
TLCR 132.36 320 ⇓P **PKiKP 03 32 38.3 -0.3**
TLCR 132.36 320 ⇑PKIKP **PKiKP 03 32 38.3 +0.3**
SNART Snartemo 132.41 346 *i* P **PKiKP 03 32 38.8 +0.5**
R9F13 Warsaw-Wawer 132.42 332 *e*PKP **PKiKP 03 32 38.6 +0.1**
R9F13 *e* 03 35 50.4
VLDR Vladesti 132.49 322 ⇑P **PKiKP 03 32 39.0 +0.2**
JURR Jurilovca 132.52 320 ⇑P **PKiKP 03 32 38.5 -0.4**
VARL Varlezi 132.60 322 ⇑P **PKPdf 03 32 35.3 -2.6**
SCTR Scanteiesti 132.62 321 ⇓P **PKiKP 03 32 39.0 -0.1**
BJUU Bjuv 132.71 340 *i* P **PKPdf 03 32 38.2 +0.4**
TPGR Topolog 132.76 320 ⇓P **PKiKP 03 32 40.1 +0.6**
NEGRR Negrea 132.76 321 ⇓P **PKiKP 03 32 40.3 +0.9**
CFR Carcaliu 132.78 321 ⇓P **PKPdf 03 32 38.0 -0.2**
CFR Carcaliu 132.78 321 ⇓PKIKP **PKPdf 03 32 38.0 -0.2**
GHRR 132.78 322 ⇑P **PKiKP 03 32 40.9 +1.5**
PRAR RASCA 132.78 324 ⇓P **PKiKP 03 32 39.6 +0.2**
SCHL Schela 132.81 321 ⇓P **PKiKP 03 32 40.4 +0.9**
SCHLR Schela 132.83 321 ⇑P **PKiKP 03 32 40.5 +1.0**
BSD Bornholm Skovb 132.83 339 *i* P **PKiKP 03 32 38.0 -0.3**
EIL Elat 133.83 298 PKP **PKiKP 03 32 40.0 -0.1**
comp=Z,28nm,0.8s,baz=321,slow=4.7,SNR=12
EIL pPKP **pPKPdf 03 33 26.8 +0.1**
comp=Z,14nm,0.9s,baz=327,slow=14,SNR=2.1
BEL Belsk 132.84 332 *e*PKP **PKiKP 03 32 39.7 +0.3**
KSV Kosov 132.90 326 PKP **PKPdf 03 32 38.4 0.0**
LUNU Lund 132.93 340 *i* P **PKiKP 03 32 39.4 0.0**
TIRR Tirgusor 132.96 320 ⇓P **PKiKP 03 32 39.3 -0.5**
TIRR Tirgusor 132.96 320 ⇓PKIKP **PKiKP 03 32 39.3 -0.5**
TIRR Tirgusor 132.96 320 PKP **PKPdf 03 32 38.4 -0.2**
STNU Starunia 132.97 327 PKP **PKPdf 03 32 38.5 -0.1**
TESR Tescani 133.00 323 ⇑P **PKPdf 03 32 37.5 -1.2**
TESR Tescani 133.00 323 PKP **PKiKP 03 32 39.4 -0.5**
PANC Panciu 133.04 322 ⇑P **PKiKP 03 32 40.4 +0.5**
MFTR Murfatlar 133.09 319 ⇓P **PKiKP 03 32 39.9 -0.2**
ODBI Odobesti 133.15 322 ⇑P **PKPdf 03 32 39.5 +0.6**
MANR Mangalia 133.15 319 ⇑P **PKiKP 03 32 41.3 +1.1**
BURAR Bucovina Array 133.22 325 ⇑P **PKiKP 03 32 40.8 +0.4**
BURAR Bucovina Array 133.22 325 PKiKP 03 32 40.7 +0.3
BURAR Bucovina Array 133.22 325 ⇑PKIKP **PKiKP 03 32 40.8 +0.4**
ONER Baraj Valea Uz 133.24 323 ⇑P **PKiKP 03 32 41.3 +0.9**
VRI Vrincioaia 133.29 322 ⇑P **PKPdf 03 32 39.0 -0.3**
VRI Vrincioaia 133.29 322 ⇑PKIKP **PKPdf 03 32 39.0 -0.3**
NPGB Novo Progresso 133.33 113 *e*P **PKPdf 03 32 40.1 -0.1**
PLOR Plostina 133.34 322 ⇓P **PKPdf 03 32 39.8 +0.5**
PLOR Plostina 133.34 322 ⇓PKIKP **PKPdf 03 32 39.9 +0.5**
KWP Kalwaria Pacla 133.35 329 *e*PKP **PKiKP 03 32 40.9 +0.4**
KWP Kalwaria Pacla 133.35 329 PKP **PKPdf 03 32 39.6 +0.4**
GKP Gorka Klasztor 133.36 335 *e*PKP **PKiKP 03 32 41.3 +1.0**
IPMB Ipameri, GO 133.43 131 *e*P **PKPdf 03 32 40.1 -0.3**
ICOR Ion Corvin 133.51 320 ⇓P **PKiKP 03 32 41.7 +0.8**
COVR Voineasa-Covas 133.51 322 ⇑P **PKiKP 03 32 40.7 -0.8**
TURR Turia 133.61 323 ⇓P **PKPdf 03 32 39.2 -0.7**
MEZ Mezhgor'ye 133.62 327 PKP **PKPdf 03 32 40.2 +0.4**
SILT Sile 133.62 315 ⇑P **PKiKP 03 32 41.5 +0.2**
NEHR Nehoiu 133.78 322 ⇑P **PKiKP 03 32 40.9 -0.6**
BOSR Bodos 133.81 323 ⇓P **PKiKP 03 32 41.0 -0.5**
BSCB Bom Sucesso 133.85 137 *e*P **PKPdf 03 32 40.3 -0.8**
MLR Muntele Rosu 133.96 322 ⇓P **PKPdf 03 32 41.1 +0.5**
MLR Muntele Rosu 133.96 322 ⇓PKIKP **PKPdf 03 32 41.1 +0.5**
DOPR Dopca 134.03 323 ⇑P **PKiKP 03 32 42.0 0.0**
ITTB Itaituba 134.07 109 *e*P **PKPdf 03 32 40.5 -1.1**
UZHM Uzhgorod 134.19 328 PKP **PKPdf 03 32 41.0 +0.2**
STHS Stebnicka Huta 134.23 329 *e*PKIKP **PKiKP 03 32 41.9 -0.4**
STHS Stebnicka Huta 134.23 329 *e*PKP **PKiKP 03 32 41.9 -0.4**
OJC Ojcow 134.40 331 *e*PKP **PKPdf 03 32 41.2 0.0**
SNDB Serra Nova Dou 134.49 122 *e*P **PKPdf 03 32 40.5 -1.9**
VOIR 134.52 323 ⇑P **PKiKP 03 32 43.3 +0.2**
MDB Medias 134.52 324 ⇓P **PKiKP 03 32 44.0 +1.0**
MDB Medias 134.52 324 ⇓PKIKP **PKiKP 03 32 44.0 +1.0**
RAZG Razgrad 134.59 320 ⇑P **PKiKP 03 32 43.8 +0.6**
DUB01 Friburgo-RJ 134.62 140 *e*P **PKPdf 03 32 41.3 -1.2**
LOZB Loznitsa 134.64 319 ⇑P **PKiKP 03 32 42.6 -0.7**
CJR Cluj-Napoca 134.64 325 ⇓P **PKiKP 03 32 43.1 -0.2**
CJR Cluj-Napoca 134.64 325 ⇓PKIKP **PKiKP 03 32 43.1 -0.2**
NIE Niedzica 134.69 330 *e*PKP **PKiKP 03 32 43.1 -0.2**
MESR Meseseni 134.74 326 ⇑P **PKiKP 03 32 43.3 -0.1**
ARR Arges 134.80 323 ⇓P **PKiKP 03 32 43.6 0.0**
MARR Marisel-Cluj 134.93 325 ⇓P **PKPdf 03 32 37.3 -5.1**
BDFB Brasilia 135.03 128 PKhKP PKPpre 03 32 32.2
comp=Z,3.0nm,0.5s,baz=47,slow=0.7,SNR=6.3
BDFB SKPbc **SKPbc 03 35 56.2 -0.6**
comp=Z,5.2nm,0.7s,baz=262,slow=1.7,SNR=3.6
HUMR Humele 135.04 322 ⇑P **PKPdf 03 32 43.0 +0.5**
DRGR 135.09 325 ⇑P **PKPdf 03 32 35.8 -6.8**
DRGR 135.09 325 ⇑PKIKP **PKPdf 03 32 35.8 -6.8**
LTVH Ltavrtes, Hu 135.17 327 ⇓P **PKiKP 03 32 44.4 +0.2**
LOT Lotru 135.26 323 ⇓P **PKPdf 03 32 40.2 -2.9**
LANS Liptovska Anna 135.28 330 *e*PKIKP **PKiKP 03 32 44.8 +0.3**
LANS *e* 03 33 34.3
LANS Liptovska Anna 135.28 330 *e*PKP **PKiKP 03 32 44.8 +0.3**
LANS *e* 03 33 34.3
LANS *e* 03 36 00.3
ELND Elena 135.31 319 ⇓P **PKiKP 03 32 44.1 -0.6**
BSEG Bad Segeberg 135.36 341 *e*PKPbc 03 35 58.7
baz=35,slow=2.8
DEV Deva 135.51 324 ⇓P **PKPdf 03 32 44.2 +0.8**
DEV Deva 135.51 324 ⇓PKIKP **PKPdf 03 32 44.2 +0.8**
STEB Steborice 135.54 332 *e*PKPDF **PKPdf 03 32 42.8 -0.5**
STEB *e*SKP **SKPbc 03 35 58.0 +0.7**
KSP Ksiaz 135.54 334 *e*PKP **PKiKP 03 32 44.2 -0.7**
MORC Moravsky Berou 135.76 332 ⇑P **PKiKP 03 32 43.9 +0.1**
MORC Moravsky Berou 135.76 332 ⇑PKIKP **PKPdf 03 32 43.9 +0.1**
MORC Moravsky Berou 135.76 332 *e*PKP **PKPdf 03 32 43.7 -0.1**
MORC *e* 03 36 02.1
OSTC Ostas 135.79 334 *e*PKIKP **PKiKP 03 32 44.8 -0.6**
OSTC Ostas 135.79 334 *e*PKPDF **PKiKP 03 32 44.8 -0.6**
GORT1 Trebel 135.81 339 *e*PKPbc 03 36 00.3
baz=35,slow=2.8
CHVC Chvalec 135.83 334 *e*PKIKP **PKPdf 03 32 44.2 +0.3**
CHVC *e* 03 33 35.3
CHVC Chvalec 135.83 334 *e*PKPDF **PKPdf 03 32 44.2 +0.3**
CHVC *e*PKP **pPKPdf 03 33 35.3 +3.7**
CHVC *e*SKP **SKPbc 03 36 00.8 +2.6**
GZR Gura Zlata 135.87 324 ⇑P **PKiKP 03 32 44.9 +0.7**
GZR Gura Zlata 135.87 324 ⇑PKIKP **PKPdf 03 32 44.9 +0.7**
PLVB Plven 135.87 320 ⇓P **PKiKP 03 32 45.0 -0.8**
PSZ Piszkesteto 135.88 328 ⇓P **PKiKP 03 32 44.8 +0.7**
PSZ Piszkesteto 135.88 328 ⇓PKIKP **PKPdf 03 32 44.8 +0.7**
KRLC Kraliky 135.89 333 *e*PKIKP **PKPdf 03 32 43.7 -0.3**
KRLC Kraliky 135.89 333 *e*PKPDF **PKPdf 03 32 43.7 -0.3**
KRLC *ex* x 03 36 00.3

DPC Dobruska-Polom 135.89 333 *e*PKIKP **PKPdf 03 32 42.8 -1.2**
DPC Dobruska-Polom 135.89 333 *e*PKPDF **PKPdf 03 32 42.8 -1.2**
DPC *e*SKP **SKPbc 03 36 00.7 +2.3**
MAUC Maruska 135.91 331 *e*PKPDF **PKPdf 03 32 44.6 +0.5**
SRE Strehaia 136.03 323 ⇑P **PKiKP 03 32 45.3 -0.8**
SRE Strehaia 136.03 323 ⇑PKIKP **PKiKP 03 32 45.3 -0.8**
JAVC Velka Javorina 136.34 331 *e*PKP **PKiKP 03 32 46.0 -0.7**
JAVC *e* 03 36 03.3
HERR Herculane 136.37 323 ⇓P **PKPdf 03 32 45.2 +0.2**
FLTG Flechtingen 136.37 339 *e*PKPbc 03 36 01.7
baz=35,slow=2.8
BZS Buzias 136.40 325 ⇑P **PKPdf 03 32 45.0 0.0**
BZS Buzias 136.40 325 ⇑PKIKP **PKPdf 03 32 45.0 0.0**
DIAM Diamantina, MG 136.46 135 *e*P **PKPdf 03 32 45.1 -1.1**
BRG Berggiesshubel 136.50 335 *e*PKPbc 03 36 02.3
baz=35,slow=2.8
PVCC Panska Ves 136.51 335 *e*PKIKP **PKiKP 03 32 46.0 -0.9**
PVCC Panska Ves 136.51 335 *e*PKPDF **PKiKP 03 32 46.0 -0.9**
VRAC Vranov 136.52 332 ⇓P **PKiKP 03 32 46.4 -0.6**
VRAC Vranov 136.52 332 ⇓PKIKP **PKiKP 03 32 46.4 -0.6**
VRAC Vranov 136.52 332 *e*PKP **PKPdf 03 32 45.2 0.0**
VRAC *e* 03 36 02.7
CLL Collm 136.54 336 *i* PKIKP **PKPdf 03 32 45.6 +0.5**
CLL *e* 03 33 37.0
CLL pmax pmax
comp=Z,49nm,1.1s
CLL Collm 136.54 336 *i* PKPdf **PKPdf 03 32 45.6 +0.5**
comp=Z,49nm,1.1s
CLL *ep*PKPdf **pPKPdf 03 33 37.0 +4.1**
CLL *e*PP **PP 03 35 28.0 -0.2**
CLL *ex* x 03 35 46.0
CLL *i* SKPdf **SKPdf 03 36 02.2 -0.5**
comp=Z,388nm,2.8s
CLL *e*PKSbc **PKSbc 03 36 16.0 -2.9**
CLL *e*PKSdf **PKSdf 03 36 21.0 -0.1**
CLL *es*PP 03 36 37.0
CLL *ep*PKSbc 03 37 10.0
CLL *es*SKPbc 03 37 30.0
CLL *e*SKSac **SKSac 03 39 42.0 +0.5**
CLL *ex* x 03 41 04.0
CLL *e*SKKSac **SKKSac 03 42 06.0 +1.1**
CLL *ex* x 03 44 48.0
CLL *e*PS **PS 03 45 48.0 -8.2**
CLL *e*PPS PPS 03 47 24.0
CLL *ex* x 03 48 29.0
CLL *e*SS **SS 03 53 24.0 +8.8**
CLL *es*SS 03 54 48.0
CLL *e*SSS SSS 03 58 30.0
CLL *e*SSSS 04 01 48.0
CLL Collm 136.54 336 *e*PKPbc 03 36 02.5
baz=35,slow=2.8
ALF01 Guarapari-ES 136.73 140 *e*P **PKPdf 03 32 45.7 -0.7**
SRO Srobarova 136.75 329 *e*PKIKP **PKiKP 03 32 47.1 -0.3**
SRO Srobarova 136.75 329 *e*PKP **PKiKP 03 32 47.1 -0.3**
SRO *e* 03 36 03.8
KRUC Moravsky 136.79 332 *e*PKP **PKPdf 03 32 45.6 -0.1**
KRUC *e* 03 36 03.3
MDVR Moldovita 136.84 324 ⇓P **PKPdf 03 32 46.5 +0.5**
MODS Modra-Piesok 136.87 331 *e*PKIKP **PKPdf 03 32 46.5 +0.6**
MODS *e* 03 33 36.9
MODS *e* 03 35 31.4
MODS Modra-Piesok 136.87 331 *e*PKP **PKPdf 03 32 46.5 +0.6**
MODS *e* 03 33 36.9
MODS *e*PP **PP 03 35 31.4 +0.9**
MODS *e* 03 36 03.9
MODS *e* 03 37 30.8
HSKC Hora Svate Kat 136.91 336 *e*PKPDF **PKPdf 03 32 45.9 0.0**
PRU Pruhonice 136.93 334 *e*PKIKP **PKPdf 03 32 46.1 +0.2**
PRU Pruhonice 136.93 334 *e*PKPDF **PKPdf 03 32 46.1 +0.2**
CLZ Clausthal 137.08 339 *e*PKPbc **SKPbc 03 36 04.3 +2.4**
baz=35,slow=2.8
EKA Eskdalemuir Ar 137.23 352 PKhKP PKPpre 03 32 34.8
comp=Z,1.0nm,0.4s,baz=360,slow=2.4,SNR=6.8
EKA PKP **PKPdf 03 32 46.1 -0.2**
comp=Z,3.1nm,0.5s,baz=9.0,slow=1.7,SNR=11
EKA pPKP pPKPdf 03 33 35.1 +1.1
comp=Z,15nm,1.1s,baz=13,slow=2.4,SNR=3.7
EKA SKP **SKPbc 03 36 03.6 +1.5**
comp=Z,32nm,0.9s,baz=1.7,slow=2.8,SNR=16
EKA PKKP **PKKPdf 03 42 18.7 -4.3**
comp=Z,0.9nm,0.4s,baz=212,slow=2.4,SNR=10.0
TANN Tannenbergstha 137.45 336 *e*PKPbc **SKPbc 03 36 05.2 +2.2**
baz=35,slow=2.8
GTTG Gottingen 137.47 339 *e*PKPbc **SKPbc 03 36 05.5 +2.5**
baz=35,slow=2.8
ZVC Zvikov 137.49 334 *e*PKPDF **PKPdf 03 32 47.1 +0.1**
ZVC *e*SKP **SKPbc 03 36 05.6 +2.5**
PLN Plauen 137.52 336 *e*PKPbc **SKPbc 03 36 05.2 +2.0**
baz=35,slow=2.8
MOX Moxa 137.60 337 *e*PKPbc **SKPbc 03 36 05.3 +1.9**
baz=35,slow=2.8
WINA Alland / Wiene 137.62 331 *e*PKP **PKPdf 03 32 48.1 +0.9**
comp=Z,32nm,1.0s,SNR=16
WINA *e*SKP **SKPbc 03 36 06.6 +3.0**
comp=Z,9.8nm,0.9s,SNR=4.7
MORH Mrgy, Hungar 137.64 327 ⇓P **PKPdf 03 32 48.0 +0.8**
MORH Mrgy, Hungar 137.64 327 *e*P **PKPdf 03 32 44.7 -2.6**
FRGS Fruska Gora 137.68 325 *e*P **PKPdf 03 32 47.2 -0.3**
RONA Rosalia, Austr 137.81 331 *e*PKP **PKPdf 03 32 48.1 +0.5**
comp=Z,9.6nm,1.1s,SNR=12
RONA *e*SKP **SKPbc 03 36 06.9 +2.8**
comp=Z,15nm,1.0s,SNR=6.2
SJMB Sao Joao De Ma 137.84 138 *e*P **PKPdf 03 32 47.6 -0.9**
CONA Conrad Observa 137.85 331 *e*PKP **PKPdf 03 32 48.2 +0.4**
comp=Z,5.4nm,0.7s,SNR=10
CONA *e*SKP **SKiKP 03 36 06.8 -1.7**
comp=Z,12nm,0.9s,SNR=11
CONA Conrad Observa 137.85 331 S **SKiKP 03 36 06.8 -1.7**
comp=Z,12nm,0.9s,SNR=11
RIB01 Linhares ES 137.90 139 *e*P **PKPdf 03 32 48.0 -0.6**
CKRC Cesky Krumlov 137.91 333 *e*PKIKP **PKPdf 03 32 48.4 +0.6**
CKRC Cesky Krumlov 137.91 333 *e*PKPDF **PKPdf 03 32 48.4 +0.6**
CKRC *e*SKP **SKPbc 03 36 06.6 +2.2**
MANZ Manzenberg 137.93 336 *e*PKPbc **SKPbc 03 36 06.6 +2.2**
baz=35,slow=2.8
KHC Kasperske Hory 137.99 334 *e*PKIKP **PKPdf 03 32 48.0 +0.1**
KHC *e* 03 33 40.8
KHC Kasperske Hory 137.99 334 *e*PKPDF **PKPdf 03 32 48.0 +0.1**
KHC *ep*PKP **pPKPdf 03 33 40.8 +5.1**
KHC *e*SKP **SKPbc 03 36 06.8 +2.2**
**UBBA Unterbreizbach

BLY	**Banja Luka**	**139.38**	**327**	*e*P	**PKPdf**	**03 32 50.4**	**-0.1**
SDBA	**SAO DESIDERIO**	**139.38**	**127**	*e*P	**PKPdf**	**03 32 51.2**	**-0.3**
IDI	**Anoyia**	**139.42**	**310**	PKhKP	PKPpre	03 32 43.2	
	comp=Z,3.6nm,0.4s,baz=22,slow=4.8,SNR=6.7						
OBKA	**Obir**	**139.49**	**331**	*e*PKP	**PKPdf**	**03 32 50.7**	**-0.1**
	comp=Z,17nm,1.4s						
BEBN	**Eben Emael**	**139.51**	**342**	*d*PKPdf	**PKPdf**	**03 32 51.5**	**+0.9**
BEBN				*d*SKP	**SKPbc**	**03 36 11.6**	**+2.9**
BTNL	**Ternell**	**139.56**	**341**	*d*PKPdf	**PKPdf**	**03 32 50.6**	**-0.2**
BTNL				*d*SKP	**SKPdf**	**03 36 10.8**	**+2.7**
MEM	**Membach**	**139.58**	**341**	*d*PKPdf	**PKPdf**	**03 32 49.3**	**-1.4**
MEM				*d*pPKP	**pPKPdf**	**03 33 41.2**	**+2.7**
MEM				*d*SKP	**SKPdf**	**03 36 10.9**	**+2.8**
KLINJ	**Klinje**	**139.61**	**324**	*e*P	**PKPdf**	**03 32 49.5**	**-1.7**
KBA	**Koelnbreinsper**	**139.64**	**332**	*e*PKP	**PKPdf**	**03 32 49.6**	**-1.6**
	comp=Z,34nm,1.3s						
KBA				*e*SKP	**SKiKP**	**03 36 11.0**	**-1.3**
	comp=Z,15nm,1.0s,SNR=5.8						
KBA	**Koelnbreinsper**	**139.64**	**332**	S	**SKiKP**	**03 36 11.0**	**-1.3**
	comp=Z,15nm,1.0s,SNR=5.8						
PDG	**Podgorica**	**139.67**	**322**	⇓P	**PKPdf**	**03 32 51.7**	**+0.6**
PDG	**Podgorica**	**139.67**	**322**	*e*P	**PKPdf**	**03 32 48.6**	**-2.5**
LESA	**Schwarzleotal**	**139.68**	**333**	PKP	**PKPdf**	**03 32 50.6**	**-0.5**
	comp=Z,4.2nm,0.5s						
LESA				*e*SKP	**SKiKP**	**03 36 11.2**	**-1.0**
	comp=Z,21nm,0.8s,SNR=7.0						
LESA	**Schwarzleotal**	**139.68**	**333**	S	**SKiKP**	**03 36 11.2**	**-1.0**
	comp=Z,21nm,0.8s,SNR=7.0						
BSTI	**Sart Tilman**	**139.74**	**342**	*d*PKPdf	**PKPdf**	**03 32 51.0**	**0.0**
BSTI				*d*pPKP	**pPKPdf**	**03 33 41.7**	**+2.9**
BSTI				*d*PP	**PP**	**03 35 51.4**	**+3.5**
BSTI				*d*SKP	**SKPdf**	**03 36 11.2**	**+2.9**
BHOU	**Houvegnez**	**139.80**	**341**	*d*PKPdf	**PKPdf**	**03 32 52.0**	**+0.9**
BHOU				*d*SKP	**SKPbc**	**03 36 11.9**	**+2.3**
BRY	**Bratogost**	**139.80**	**324**	*e*P	**PKPdf**	**03 32 49.7**	**-1.9**
MYKA	**Terra Mystica**	**139.83**	**331**	PKP	**PKPdf**	**03 32 50.1**	**-1.3**
	comp=Z,12nm,1.5s						
DRME	**Dracevica, Mon**	**139.85**	**322**	*e*P	**PKPdf**	**03 32 48.2**	**-3.3**
UCC	**Uccle**	**139.90**	**343**	*d*PKPdf	**PKPdf**	**03 32 51.7**	**+0.4**
UCC				*d*pPKP	**pPKPdf**	**03 33 39.0**	**0.0**
UCC				*d*SKP	**SKPbc**	**03 36 11.7**	**+1.9**
TREB	**Trebinje**	**140.02**	**323**	*e*P	**PKPdf**	**03 32 49.4**	**-2.4**
MDP	**Montagnes des**	**140.03**	**98**	PKP	**PKPdf**	**03 32 51.8**	**-0.9**
	comp=Z,6.4nm,0.6s,baz=257,slow=5.1,SNR=11						
MDP				SKPbc	**SKPbc**	**03 36 10.8**	**-0.6**
	comp=Z,2.8nm,0.4s,baz=246,slow=3.4,SNR=4.5						
STU	**Stuttgart**	**140.04**	**337**	*e*PKPbc	**SKPbc**	**03 36 12.5**	**+2.3**
	baz=35,slow=2.8						
BGES	**Gesves**	**140.06**	**342**	*d*PKPdf	**PKPdf**	**03 32 52.5**	**+0.9**
BGES				*d*SKP	**SKPbc**	**03 36 13.2**	**+3.0**
HCY	**Herceg Novi**	**140.11**	**323**	*e*P	**PKPdf**	**03 32 50.5**	**-1.5**
RCHB	**Rochefort**	**140.22**	**342**	*d*PKPdf	**PKPdf**	**03 32 52.0**	**+0.1**
RCHB				*d*PP	**PP**	**03 35 52.4**	**+1.7**
RCHB				*d*SKP	**SKPbc**	**03 36 12.5**	**+1.9**
BMRD	**Maredsous**	**140.22**	**342**	*d*PKPdf	**PKPdf**	**03 32 52.7**	**+0.8**
BMRD				*d*SKP	**SKPdf**	**03 36 12.2**	**+3.0**
WATA	**Walderalm**	**140.22**	**334**	*i* PKP	**PKPdf**	**03 32 51.3**	**-0.9**
	comp=Z,18nm,0.8s,SNR=5.4						
WATA				*e*SKP	**SKPbc**	**03 36 12.2**	**+1.2**
	comp=Z,18nm,0.8s,SNR=6.6						
WATA	**Walderalm**	**140.22**	**334**	S	**SKPbc**	**03 36 12.2**	**+1.2**
	comp=Z,18nm,0.8s,SNR=6.6						
WTTA	**Wattenberg**	**140.25**	**334**	PKP	**PKPdf**	**03 32 51.7**	**-0.6**
	comp=Z,72nm,1.5s,SNR=10						
WTTA				*e*SKP	**SKPbc**	**03 36 13.2**	**+2.1**
	comp=Z,21nm,0.8s,SNR=11						
ABTA	**Abfaltersbach**	**140.26**	**332**	PKP	**PKPdf**	**03 32 51.5**	**-0.8**
	comp=Z,9.8nm,0.7s,SNR=7.6						
ABTA				*i* SKP	**SKPdf**	**03 36 12.2**	**+2.7**
	comp=Z,21nm,0.8s,SNR=5.4						
GUA01	**Guaratinga, BA**	**140.28**	**137**	*e*P	**PKPdf**	**03 32 53.6**	**+0.6**
WLF	**Walferdange**	**140.35**	**341**	PKP	**PKPdf**	**03 32 50.9**	**-1.2**
WLF	**Walferdange**	**140.35**	**341**	*d*PKPdf	**PKPdf**	**03 32 45.5**	**-6.7**
WLF				*d*pPKP	**pPKPdf**	**03 33 33.1**	**-6.8**
WLF				*d*SKP	**SKPdf**	**03 36 12.3**	**+2.8**
MOTA	**Moosalm**	**140.42**	**334**	PKP	**PKPdf**	**03 32 50.2**	**-2.4**
	comp=Z,9.2nm,0.8s						
MOTA				*e*SKP	**SKiKP**	**03 36 13.3**	**-0.6**
	comp=Z,24nm,0.8s,SNR=18						
MOTA	**Moosalm**	**140.42**	**334**	S	**SKiKP**	**03 36 13.3**	**-0.6**
	comp=Z,24nm,0.8s,SNR=18						
RETA	**Reutte**	**140.45**	**335**	*e*SKP	**SKPbc**	**03 36 13.6**	**+2.1**
	comp=Z,12nm,0.8s						
DOU	**Dourbes**	**140.46**	**342**	*d*PKPdf	**PKPdf**	**03 32 52.8**	**+0.5**
DOU				*d*pPKP	**pPKPdf**	**03 33 42.1**	**+2.0**
DOU				*d*PP	**PP**	**03 35 49.6**	**-2.6**
DOU				*d*SKP	**SKPbc**	**03 36 13.1**	**+1.8**
SQTA	**Sankt Quirin**	**140.47**	**334**	PKP	**PKPdf**	**03 32 50.8**	**-1.8**
	comp=Z,5.1nm,0.6s						
SQTA				*e*SKP	**SKiKP**	**03 36 13.7**	**-0.3**
	comp=Z,31nm,0.8s,SNR=10						
SQTA	**Sankt Quirin**	**140.47**	**334**	*e*S	**SKiKP**	**03 36 13.7**	**-0.3**
	comp=Z,31nm,0.8s,SNR=10						
UBR	**Ueberruh**	**140.57**	**335**	*e*PKPbc	**SKPbc**	**03 36 13.4**	**+1.7**
	baz=35,slow=2.8						
FETA	**Feichten**	**140.83**	**334**	PKP	**PKPdf**	**03 32 52.2**	**-1.1**
	comp=Z,19nm,1.0s,SNR=5.9						
FETA				*e*SKP	**SKiKP**	**03 36 14.6**	**-0.1**
	comp=Z,21nm,0.8s,SNR=12						
FETA	**Feichten**	**140.83**	**334**	S	**SKiKP**	**03 36 14.6**	**-0.1**
	comp=Z,21nm,0.8s,SNR=12						
DAVA	**Damuels**	**140.97**	**335**	PKP	**PKPdf**	**03 32 51.5**	**-2.1**
	comp=Z,18nm,0.6s						
CMC01	**Camacan, BA**	**141.34**	**136**	*e*P	**PKPdf**	**03 32 54.6**	**-0.4**
MATE	**Matera**	**142.27**	**322**	⇓P	**PKPdf**	**03 32 55.2**	**-0.7**
AQU	**L'Aquila**	**143.02**	**327**	PKP	PKPbc	03 32 53.8	-0.8
AQU	**L'Aquila**	**143.02**	**327**	*e*P	PKPab	03 32 53.3	+0.4
TIP	**Timpagrande**	**143.12**	**320**	⇓P	PKPbc	03 32 55.9	+0.9
VLC	**Villacollemand**	**143.20**	**332**	PKP	PKPab	03 32 53.6	+0.1
CEL	**Celeste**	**144.22**	**320**		**PKPab**	**03 32 57.7**	**0.0**
SSB	**Saint Sauveur**	**144.70**	**338**		**PKPdf**	**03 33 00.4**	**+0.3**
SSB	**Saint Sauveur**	**144.70**	**338**	PKIKP	**PKPdf**	**03 33 00.4**	**+0.3**
VAE	**Valguarnera**	**145.62**	**320**	PKPbc	**PKPab**	**03 33 04.3**	**+1.2**
	comp=Z,22nm,0.9s,baz=313,slow=5.3,SNR=9.5						
VAE				pPKPbc	pPKPab	03 33 49.4	-0.2
	comp=Z,39nm,0.9s,baz=18,slow=18,SNR=1.8						
NBPS	**Pedro II - PI**	**146.75**	**120**	*e*P	**PKPdf**	**03 33 03.8**	**-0.8**
NBMA	**Muriti-CE**	**147.23**	**127**	*e*P	**PKPdf**	**03 33 04.9**	**-0.3**
EJON	**La Jonquera**	**147.74**	**338**	PKP	**PKPdf**	**03 33 04.7**	**-0.6**
NBMO	**Morrinhos-CE**	**148.51**	**119**	*e*P	**PKPdf**	**03 33 05.5**	**-1.8**
MAHO	**Mahon**	**149.35**	**333**	PKP	**PKPdf**	**03 33 07.1**	**-0.8**
NBPA	**Parau_RN**	**149.51**	**127**	*e*P	**PKPdf**	**03 33 06.5**	**-2.4**
KEST	**Kesra**	**149.86**	**322**	PKP	**PKPdf**	**03 33 10.2**	**+1.2**
	comp=Z,33nm,0.9s,baz=282,slow=2.4,SNR=9.6						
KEST				PKPbc	**PKiKP**	**03 33 15.2**	**+0.3**
	comp=Z,134nm,1.1s,baz=7.9,slow=1.9,SNR=27						
KEST				pPKPbc	**pPKPbc**	**03 34 00.4**	**-1.1**
	comp=Z,29nm,0.7s,baz=144,slow=4.1,SNR=2.2						
KEST	**Kesra**	**149.86**	**322**		**PKPbc**	**03 33 14.3**	**+0.3**
ETOS	**Mallorca**	**150.07**	**335**	PKP	**PKPdf**	**03 33 06.7**	**-2.4**
SHEL	**Horse Pasture**	**150.22**	**194**	PKPbc	**PKiKP**	**03 33 16.7**	**+0.6**
SHEL	**Horse Pasture**	**150.22**	**194**	PKIKP	**PKiKP**	**03 33 16.7**	**+0.6**
CMAH	**Djebel Manchou**	**150.34**	**326**	P	**PKPdf**	**03 33 09.7**	**0.0**
RCBR	**Riachuelo**	**150.40**	**128**	PKP	**PKPdf**	**03 33 11.4**	**+1.0**
	comp=Z,14nm,0.9s,baz=152,slow=3.3,SNR=15						
RCBR				PKPbc	**PKiKP**	**03 33 16.6**	**+0.1**
	comp=Z,35nm,1.1s,baz=222,slow=7.0,SNR=18						
RCBR				pPKPbc	**pPKPbc**	**03 34 01.6**	**-1.7**
	comp=Z,15nm,1.0s,baz=93,slow=2.9,SNR=3.7						
RCBR	**Riachuelo**	**150.40**	**128**	*e*P	**PKPdf**	**03 33 10.1**	**-0.3**
NBPV	**Pedro Velho**	**150.49**	**130**	*e*P	**PKPdf**	**03 33 11.1**	**+0.6**
CAEH	**'Ain El Ouahch**	**150.54**	**326**	P	**PKPdf**	**03 33 11.3**	**+1.4**
ABSA	**Djebel Ababsia**	**150.56**	**325**	P	**PKPdf**	**03 33 11.7**	**+1.6**
ECAL	**Calabor**	**150.81**	**350**	PKP	**PKPdf**	**03 33 08.7**	**-1.6**
CKFL	**Kef-Lekhel**	**150.89**	**326**	P	**PKPdf**	**03 33 12.3**	**+1.7**
PBRG	**Braganca**	**150.94**	**350**	*e*PKPbc	**PKiKP**	**03 33 16.8**	**-0.1**
PBRG				*e*PKPab	**PKPab**	**03 33 24.5**	**+0.3**
PBRG				*e*tx	tx	03 34 05.2	
PGAV	**Gavieira, Arco**	**151.00**	**353**	*e*PKPdf	**PKPdf**	**03 33 10.2**	**-0.4**
PGAV				*e*PKPbc	**PKiKP**	**03 33 16.9**	**-0.1**
PGAV				*e*tx	tx	03 34 03.8	
CASM	**Ain Smara**	**151.12**	**326**	P	**PKiKP**	**03 33 17.2**	**-0.2**
PCAB	**Cabril**	**151.23**	**352**	*e*PKPdf	**PKPdf**	**03 33 11.0**	**+0.1**
PCAB				*e*PKPbc	**PKiKP**	**03 33 17.6**	**+0.2**
PCAB				*e*PKPab	**PKPab**	**03 33 27.9**	**+2.6**
DFRA	**Djebel Bou Aff**	**151.23**	**327**	P	**PKPdf**	**03 33 13.5**	**+2.4**
EIBI	**Ibiza**	**151.29**	**336**	PKP	**PKPdf**	**03 33 09.4**	**-1.6**
CTEI	**Djebel Teioual**	**151.31**	**326**	P	**PKiKP**	**03 33 18.2**	**+0.3**
POLO	**Lamas de Olo**	**151.53**	**352**	*e*PKPbc	**PKiKP**	**03 33 18.5**	**+0.3**
POLO				*e*tx	tx	03 34 07.3	
PVRL	**Vila Real**	**151.61**	**352**	*e*PKPdf	**PKPdf**	**03 33 10.4**	**-1.0**
PVRL				*e*PKPbc	**PKiKP**	**03 33 18.9**	**+0.6**
PVRL				*e*tx	tx	03 34 08.0	
MVO	**Moncorvo**	**151.62**	**351**	*e*PKPdf	**PKPdf**	**03 33 12.2**	**+0.7**
MVO				*e*PKPbc	**PKiKP**	**03 33 18.7**	**+0.4**
MVO				*e*tx	tx	03 34 08.4	
ECHE	**Chera**	**151.62**	**340**	PKP	**PKPdf**	**03 33 10.4**	**-1.1**
UCM	**Universidad Co**	**151.64**	**344**	PKP	**PKPdf**	**03 33 12.1**	**+0.6**
PVIS	**Viseu**	**152.19**	**352**	*e*PKPdf	**PKPdf**	**03 33 12.1**	**-0.3**
PVIS				*e*PKPbc	**PKiKP**	**03 33 19.6**	**+0.1**
PVIS				*e*PKPab	**PKPab**	**03 33 29.4**	**-0.1**
PVIS				*e*tx	tx	03 34 09.0	
ESDC	**Sonseca Array**	**152.42**	**345**	PKP	**PKPdf**	**03 33 13.3**	**+0.6**
	comp=Z,8.3nm,1.0s,baz=7.0,slow=2.5,SNR=20						
ESDC				PKPbc	**PKiKP**	**03 33 20.1**	**+0.2**
	comp=Z,43nm,0.9s,baz=8.3,slow=2.0,SNR=56						
ESDC				PKPab	**PKPab**	**03 33 30.3**	**-0.2**
	comp=Z,6.2nm,0.8s,baz=13,slow=5.0,SNR=5.5						
ESDC				pPKPbc	**pPKPbc**	**03 34 09.0**	**+1.6**
	comp=Z,39nm,0.9s,baz=357,slow=1.9,SNR=9.8						
MTE	**Manteigas**	**152.44**	**351**	*e*PKPdf	**PKPdf**	**03 33 12.5**	**-0.2**
MTE				*e*PKPbc	**PKiKP**	**03 33 20.6**	**+0.5**
MTE				*e*PKPab	**PKPab**	**03 33 30.5**	**-0.1**
MTE				*e*tx	tx	03 34 10.2	
PAB	**San Pablo**	**152.64**	**345**		**PKPdf**	**03 33 13.3**	**+0.2**
PAB	**San Pablo**	**152.64**	**345**	PKIKP	**PKPdf**	**03 33 13.3**	**+0.2**
PCAS	**Casmilo, Conde**	**152.92**	**353**	*e*PKPdf	**PKPdf**	**03 33 13.8**	**+0.5**
PCAS				*e*PKPbc	**PKiKP**	**03 33 21.3**	**+0.3**
PCAS				*e*PKPab	**PKPab**	**03 33 34.0**	**+1.5**
PCAS				*e*tx	tx	03 34 09.3	
PCBR	**Castelo Branco**	**152.98**	**351**	*e*PKPdf	**PKPdf**	**03 33 13.3**	**-0.2**
PCBR				*e*PKPbc	**PKiKP**	**03 33 21.2**	**+0.1**
PCBR				*e*PKPab	**PKPab**	**03 33 34.4**	**+1.6**
PCBR				*e*tx	tx	03 34 08.2	
PSARD	**Sardoal**	**153.32**	**352**	*e*PKPdf	**PKPdf**	**03 33 14.3**	**+0.3**
PSARD				*e*PKPbc	**PKiKP**	**03 33 22.1**	**+0.3**
PSARD				*e*PKPab	**PKPab**	**03 33 36.1**	**+1.9**
PSARD				*e*tx	tx	03 34 10.7	
PMRV	**Marv??o**	**153.37**	**350**	*e*PKPdf	**PKPdf**	**03 33 13.6**	**-0.4**
PMRV				*e*PKPbc	**PKiKP**	**03 33 22.6**	**+0.7**
PMRV				*e*PKPab	**PKPab**	**03 33 36.2**	**+1.8**
PMRV				*e*tx	tx	03 34 12.4	
PSBE	**So Bento**	**153.49**	**353**	*e*PKPbc	**PKiKP**	**03 33 22.7**	**+0.6**
PSBE				*e*tx	tx	03 34 11.3	
PMTG	**Montargil**	**153.85**	**352**	*e*PKPbc	**PKiKP**	**03 33 23.2**	**+0.3**
PMTG				*e*PKPab	**PKPab**	**03 33 37.5**	**+1.0**
PMTG				*e*tx	tx	03 34 14.0	
PESTR	**Estremoz**	**153.95**	**350**	*e*PKPbc	**PKiKP**	**03 33 23.6**	**+0.5**
PARRA	**Arraiolos**	**154.07**	**351**	*e*PKPbc	**PKiKP**	**03 33 23.7**	**+0.4**
PARRA				*e*tx	tx	03 34 13.2	
PMAFR	**Mafra**	**154.09**	**353**	*e*PKPbc	**PKiKP**	**03 33 25.0**	**+1.6**
PMAFR				*e*PKPab	**PKPab**	**03 33 39.9**	**+2.4**
PMAFR				*e*tx	tx	03 34 14.2	
EVO	**Evora**	**154.34**	**351**	PKP	**PKPdf**	**03 33 13.5**	**-1.9**
EVO	**Evora**	**154.34**	**351**	*e*PKPbc	**PKiKP**	**03 33 24.6**	**+0.7**
EVO				*e*PKPab	**PKPab**	**03 33 39.7**	**+1.1**
MOE	**Montemor**	**154.40**	**352**	*e*PKPbc	**PKiKP**	**03 33 24.3**	**+0.3**
MOE				*e*PKPab	**PKPab**	**03 33 39.1**	**+0.3**
PBAR	**Barrancos**	**154.53**	**349**	*e*PKPdf	**PKPdf**	**03 33 15.9**	**+0.2**
PBAR				*e*PKPbc	**PKiKP**	**03 33 25.2**	**+1.0**
PBAR				*e*PKPab	**PKPab**	**03 33 40.6**	**+1.3**
PBEJ	**Beja**	**154.82**	**351**	*e*PKPdf	**PKPdf**	**03 33 16.7**	**+0.6**
PBEJ				*e*PKPab	**PKPab**	**03 33 42.1**	**+1.5**
PBEJ				*e*tx	tx	03 34 14.7	
MESJ	**Messejana**	**155.05**	**351**	*e*PKPdf	**PKPdf**	**03 33 16.9**	**+0.4**
MESJ				*e*PKPab	**PKPab**	**03 33 42.7**	**+1.1**
MESJ	**Messejana**	**155.05**	**351**	*e*PKPdf	**PKPdf**	**03 33 17.1**	**+0.6**
MESJ				*e*PKPbc	PKPab	03 33 26.7	-15
MESJ				*e*PKPab	**PKPab**	**03 33 42.4**	**+0.8**
MESJ				*e*tx	tx	03 34 17.5	
PCVE	**Castro Verde**	**155.23**	**351**	*e*PKPdf	**PKPdf**	**03 33 17.0**	**+0.3**
PCVE				*e*PKPbc	PKPab	03 33 26.6	-16
EDA	**Edea**	**155.36**	**250**		**PKPdf**	**03 33 16.5**	**-1.1**
MORF	**Marmelete**	**155.64**	**352**	*e*PKPdf	**PKPdf**	**03 33 17.8**	**+0.4**
MORF				*e*PKPab	**PKPab**	**03 33 45.4**	**+1.2**
MORF	**Marmelete**	**155.64**	**352**	*e*PKPdf	**PKPdf**	**03 33 17.4**	**+0.1**
MORF				*e*PKPab	**PKPab**	**03 33 45.9**	**+1.7**
CNIL	**Conil**	**156.07**	**346**	PKP	**PKPdf**	**03 33 17.0**	**-0.9**
IFR	**Ifrane**	**158.51**	**342**	PKP	**PKPdf**	**03 33 21.4**	**+0.1**
MD01	**Midelt array s**	**159.00**	**340**		**PKPdf**	**03 33 21.6**	**-0.2**
MD01					**PKPab**	**03 33 59.9**	**+0.9**
MDT	**Midelt**	**159.00**	**340**	PKP	**PKPdf**	**03 33 22.4**	**+0.7**
	comp=Z,6.5nm,0.9s,baz=131,slow=0.4,SNR=11						
MDT				PKPab	**PKPab**	**03 34 00.1**	**+1.1**
	comp=Z,15nm,0.9s,baz=46,slow=5.7,SNR=9.9						
AVE	**Averroes**	**159.32**	**347**	PKP	**PKPdf**	**03 33 19.5**	**-2.5**
TAM	**Tamanrasset**	**160.01**	**301**		**PKPdf**	**03 33 22.6**	**-0.6**
TAM	**Tamanrasset**	**160.01**	**301**	PKIKP	**PKPdf**	**03 33 22.6**	**-0.6**
TIO	**Tiouine**	**161.55**	**344**	PKP	**PKPdf**	**03 33 22.9**	**-1.8**
ACRG	**Accra**	**165.40**	**240**		**PKPdf**	**03 33 28.3**	**-0.2**
TORD	**Torodi Ar. Bea**	**165.75**	**272**	PKP	**PKPdf**	**03 33 28.3**	**-0.4**
	comp=Z,43nm,1.1s,baz=244,slow=1.0,SNR=27						
TORD				pPKP	**pPKPdf**	**03 34 16.9**	**0.0**
	comp=Z,17nm,1.0s,baz=48,slow=0.8,SNR=2.7						
TORD				PKPab	**PKPab**	**03 34 29.9**	**+0.8**
	comp=Z,52nm,0.9s,baz=110,slow=2.1,SNR=20						
DBIC	**Dimbokro**	**169.77**	**232**	PKP	**PKPdf**	**03 33 30.7**	**-0.9**
	comp=Z,36nm,1.0s,baz=152,slow=1.8,SNR=13						
DBIC				pPKP	**pPKPdf**	**03 34 19.0**	**-0.7**
	comp=Z,18nm,1.0s,baz=145,slow=8.1,SNR=3.3						
DBIC				PKPab	**PKPab**	**03 34 47.0**	**+0.2**
	comp=Z,25nm,0.9s,baz=140,slow=4.5,SNR=7.5						
DBIC	**Dimbokro**	**169.77**	**232**		**PKPdf**	**03 33 31.2**	**-0.4**

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*AFAD **18** 03:24:46.1, 39°.02N×27°.82E, h7km±1km, ML1.6*

ISK 18 03:24:45.6, 39°.01N×27°.87E, h10km, ML2.2/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GORD	**Gordes-Manisa**	**0.26**	**112**	Pg	Pg	03 24 51.3	+0.4
GORD				Sg	Sg	03 24 55.5	+1.0
SOMA	**Soma-Manisa**	**0.30**	**300**	Pg	Pg	03 24 51.9	+0.3
GOMA	**Golmarmara-Man**	**0.30**	**173**	Pg	Pg	03 24 51.9	+0.3
STEP	**BALIKESIR_Sava**	**0.39**	**343**	P	Pg	03 24 53.2	-0.1
STEP				S	Sb	03 24 59.6	-1.1
ZEDA	**zmir-Bergama**	**0.62**	**267**	P	Pg	03 24 58.0	+0.4
ZEDA				S	Sg	03 25 06.3	+0.6
ZEDA				IAML		03 25 11.0	
	comp=E,56nm,0.3s						
ZEDA				IAML		03 25 12.0	
	comp=N,40nm,0.2s						
BALB	**Balikesir**	**0.63**	**1**	Pg	Pb	03 24 58.7	0.0
BALB				Sg	Sb	03 25 07.9	+0.3
BKES	**Balkesir-Mer**	**0.73**	**4**	P	Pg	03 24 59.8	+0.1
BKES				S	Sb	03 25 10.1	-0.2
BKES				IAML		03 25 12.0	
	comp=N,33nm,0.4s						
BKES				IAML		03 25 17.0	
	comp=E,34nm,0.2s						
ODEM	**Odemis-Izmir**	**0.75**	**167**	Pg	Pb	03 25 00.5	-0.2
DKL	**Dikili**	**0.75**	**275**	Pg	Pb	03 25 00.6	-0.1
BUHA	**Balikesir, Bur**	**0.79**	**309**	P	Pg	03 25 00.8	0.0
BUHA				S	Sb	03 25 11.8	-0.3
BUHA				IAML		03 25 12.0	
	comp=E,43nm,0.2s						
BUHA				IAML		03 25 13.0	
	comp=N,44nm,0.4s						
KULA	**Kula-Manisa**	**0.79**	**128**	Pg	Pg	03 25 00.8	-0.1
DST	**Dursunbey**	**0.83**	**44**	Pg	Pb	03 25 02.3	+0.1
BLKS	**Balkesir-Sus**	**0.87**	**5**	P	Pg	03 25 02.3	-0.1
BLKS				S	Sb	03 25 14.1	-0.4
BLKS				IAML		03 25 15.0	
	comp=E,20nm,0.5s						
BLKS				IAML		03 25 17.0	
	comp=N,15nm,0.3s						
SIMA	**Simav-Kutahya**	**0.87**	**85**	Pg	Pb	03 25 02.9	0.0
BLCB	**Balcova**	**0.90**	**226**	Pg	Pb	03 25 03.3	+0.1
FOCM	**Foa**	**0.93**	**252**	Pg	Pb	03 25 04.0	+0.2
SUSR	**Susurluk-Balik**	**0.97**	**10**	Pg	Pb	03 25 04.4	-0.1
GONE	**Gonen-Balikesi**	**1.05**	**352**	Pg	Pn	03 25 06.1	-0.2
YENI	**Yenice-Canakka**	**1.05**	**333**	Pg	Pb	03 25 05.9	+0.1
SHAP	**Saphane-Kutahy**	**1.06**	**89**	Pg	Pb	03 25 06.2	+0.2
AYDB	**Zeytinkoy-Aydi**	**1.06**	**179**	Pg	Pn	03 25 06.4	-0.2
NAZL	**Nazilli-Aydin**	**1.09**	**162**	Pn	Pn	03 25 06.9	0.0
CANM	**Can-anakkale**	**1.19**	**328**	Pn	Pg	03 25 08.7	+0.3
EDC	**Edincik**	**1.34**	**360**	Pn	Pb	03 25 10.8	0.0
EZNE	**Ezine-Canakkal**	**1.38**	**303**	Pn	Pb	03 25 11.3	-0.2
EZN	**Ezine**	**1.45**	**305**	Pn	Pb	03 25 12.5	-0.1
KRBG	**Karabiga-Canak**	**1.45**	**343**	Pn	Pb	03 25 12.5	-0.2

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*VIE **18** 03:25:02.7±0.4, 46°.27N×13°.78E, h11km±3km, mb0.7/1, ml0.6/1, Error ellipse: s-maj=1.3km s-min=1.0km az=106.0*

4 km SE of Camporosso

LJU 18 03:25:03.1, 46°.27N×13°.77E, h6km, ML0.4, 1C-3D, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CADS	**Cadrg**	**0.04**	**206**	⇓*i*Pg	Pg	03 25 04.4	0.0
CADS				*i* Sg	Sg	03 25 05.3	-0.1
CADS				IAML		03 25 05.4	
	comp=Z,25nm,0.1s						
DRE	**Drenchia**	**0.13**	**222**	⇓*e*Pg	Pg	03 25 05.6	-0.1
DRE				*e*Sg	Sg	03 25 07.7	+0.2
GORS	**Gorjuse**	**0.17**	**73**	⇓*i*Pg	Pg	03 25 06.5	0.0
GORS				*i* Sg	Sg	03 25 09.6	+0.8
GORS				IAML		03 25 10.2	
	comp=Z,3.8nm,0.1s						
ROBS	**Robic**	**0.18**	**263**	*i* Pg	Pg	03 25 06.7	0.0
ROBS				*i* Sg	Sg	03 25 09.9	+0.8
ROBS				IAML		03 25 10.4	
	comp=Z,2.6nm,0.1s						
VOJS	**Vojsko**	**0.25**	**161**	*i* Pg	Pg	03 25 07.9	-0.1
VOJS				*i* Sg	Sg	03 25 12.2	+0.8
VOJS				IAML		03 25 12.7	
	comp=Z,1.0nm,0.1s						
LSR	**Lussari**	**0.27**	**322**	⇑*e*Pg	Pg	03 25 08.2	-0.1
LSR				*e*Sg	Sg	03 25 12.5	+0.6
MYKA	**Terra Mystica**	**0.37**	**347**	*e*Pg	Pg	03 25 10.6	+0.2
MYKA				*e*Sg	Sg	03 25 15.7	+0.5
	comp=Z,0.4nm,0.1s						

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*DJA **18** 03:27:49.9±0.4, 3°N±4°×12°8E±°, h10km, M5.0/22, mB5.6/6, mb5.2/12, MLv4.9/22, Mw(mB)5.1/6*

*MAN **18** 03:27:49.0, 2°.78N×127°.74E, h76km, MS4.4*

*IDC **18** 03:27:52.6±2.6, 3°.05N×128°.24E, h118km±26km, mb3.9/14, mbtmp4.3/15, Error ellipse: s-maj=33.4km s-min=11.5km az=75.0*

*NEIC **18** 03:27:53.1±0.8, 3°.03N±0°.09×127°.99E±0°.09, h108km±9km, mb4.6/46, Error ellipse: s-maj=15.3km s-min=11.4km az=222.0*

ISC 18 03:27:51.6±0.4, 3°.05N±0°.04×128°.07E±0°.07, h100km, n336, σ0s.86/341, mb4.6/46, 2D, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**1.24**	**193**	P	**Pn**	**03 28 13.4**	**-1.4**
TNTI	**Ternate**	**2.37**	**197**		**Pn**	**03 28 29.7**	**+0.6**
TNTI				Sn	**Sn**	**03 28 59.7**	**+2.0**
TNTI	**Ternate**	**2.37**	**197**	P	**Pn**	**03 28 30.3**	**+1.2**
SGSI	**Sangihe**	**2.62**	**284**	P	**Pn**	**03 28 30.5**	**-1.7**
MNI	**Manado**	**3.60**	**244**	P	**Pn**	**03 28 44.4**	**-1.1**
DDMP	**Don Marcelino,**	**3.84**	**322**	*e*P	**Pn**	**03 28 47.6**	**-1.0**
DDMP				*e*S	**Sn**	**03 29 33.8**	**+1.0**
GSPH	**General Santos**	**4.33**	**314**	*i* P	**Pn**	**03 28 54.0**	**-1.4**
GSPH				*i* S	**Sn**	**03 29 43.1**	**-1.9**
DMPH	**Davao City--Mi**	**4.75**	**328**	*e*P	Pn	03 29 09.6	+8.6
DMPH				*i* S	**Sn**	**03 29 54.5**	**-0.3**
KCP	**Kidapawan**	**4.93**	**323**	*e*P	**Pn**	**03 29 03.7**	**+0.3**
KCP				*i* S	**Sn**	**03 30 02.0**	**+2.7**
SWI	**Sorong**	**5.03**	**141**	P	**Pn**	**03 29 05.8**	**+1.1**
	0.6nm138nm,0.9s						
SIJI	**Sorong**	**5.04**	**141**	P	**Pn**	**03 29 06.5**	**+1.6**
	48nm,0.3s,baz=99,slow=24,SNR=36						
SIJI				S	**Sn**	**03 30 00.6**	**-1.3**
	44nm,0.5s,baz=79,slow=21,SNR=13						
SIJI	**Sorong**	**5.04**	**141**	P	**Pn**	**03 29 05.6**	**+0.7**
	0.6nm7μm111nm,0.7s						
BIPH	**Bislig**	**5.38**	**342**	*e*P	**Pn**	**03 29 09.0**	**-0.4**
BIPH				*e*S	**Sn**	**03 30 06.2**	**-3.8**
SANI	**Sanana**	**5.48**	**202**	P	**Pn**	**03 29 09.3**	**-1.6**
GTOI	**Gorontalo**	**5.60**	**245**	P	**Pn**	**03 29 12.2**	**-0.3**
CGP	**Cagayan de Oro**	**6.33**	**328**	*e*P	**Pn**	**03 29 23.6**	**+1.1**
CGP				*e*S	**Sn**	**03 30 40.0**	**+6.6**
MRSI	**Marisa**	**6.64**	**247**	P	**Pn**	**03 29 26.8**	**+0.2**
LUWI	**Luwuk**	**6.68**	**233**	Pn	**Pn**	**03 29 27.5**	**+0.3**
LUWI	**Luwuk**	**6.68**	**233**	P	**Pn**	**03 29 27.5**	**+0.3**
ZCP	**Zamboanga City**	**7.11**	**303**	*e*P	**Pn**	**03 29 31.9**	**-1.1**
ZCP				*e*S	Sn	03 30 38.6	-14
MWPI	**Manokwari, Pap**	**7.16**	**123**	P	**Pn**	**03 29 37.4**	**+3.7**
	1.1nm252nm,0.7s						
FAKI	**Fak Fak**	**7.25**	**145**		**Pn**	**03 29 36.0**	**+1.0**
FAKI	**Fak Fak**	**7.25**	**145**	P	**Pn**	**03 29 36.3**	**+1.3**
	0.2nm74nm,0.9s						
TOLI2	**Tolitoli**	**7.54**	**255**		**Pn**	**03 29 37.0**	**-1.8**
MYLDM	**Lahad Datu**	**9.78**	**283**		**Pn**	**03 30 10.3**	**+0.9**
KKM	**Kota Kinabalu**	**12.19**	**285**	Pn	**Pn**	**03 30 41.2**	**-0.8**
KNRA	**Kununurra**	**18.62**	**178**	P	**P**	**03 32 01.2**	**-0.2**
WB0	**Warramunga Arr**	**23.51**	**165**	P	**P**	**03 32 51.9**	**-0.9**
WRA	**Warramunga Arr**	**23.67**	**165**	P	**P**	**03 32 52.6**	**-1.6**
	4.1nm,0.7s,baz=344,slow=10.0,SNR=12						
	4.1nm,0.7s						
WRA	**Warramunga Arr**	**23.67**	**165**	P	**P**	**03 32 52.3**	**-1.9**
WR8	**Warramunga Arr**	**23.72**	**165**	P	**P**	**03 32 53.7**	**-0.9**
ASAR	**Alice Springs**	**27.16**	**168**	P	**P**	**03 33 24.6**	**-1.1**
	0.4nm,0.4s,baz=354,slow=8.6,SNR=6.5						
ASAR				PcP	**PcP**	**03 36 43.4**	**-0.6**
	0.7nm,0.4s,baz=353,slow=2.0,SNR=5.9						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**27.16**	**168**	P	**P**	**03 33 25.9**	**+0.1**
ASAR					**PcP**	**03 36 43.7**	**-0.4**
NJ2	**Nanjing**	**30.12**	**344**	*e*P	**P**	**03 33 54.1**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
WHN	**Wuhan**	**30.27**	**336**	P	**P**	**03 33 54.8**	**+1.6**
WHN				pmax	pmax		
	comp=Z,30nm,0.9s						
KSRS	**Korea Array**	**34.24**	**360**	P	**P**	**03 34 27.1**	**-0.8**
	comp=Z,2.2nm,0.5s,baz=177,slow=10,SNR=7.8						
	comp=Z,2.2nm,0.5s						
PZH	**PanZhiHua**	**34.36**	**315**	P	**P**	**03 34 32.0**	**+2.7**
MJAR	**Matsushiro Arr**	**34.61**	**14**	P	**P**	**03 34 28.8**	**-2.4**
	comp=Z,0.9nm,0.4s,baz=193,slow=9.1,SNR=2.5						
	comp=Z,0.9nm,0.4s						
MJAR	**Matsushiro Arr**	**34.61**	**14**	P	**P**	**03 34 30.5**	**-0.6**
XAN	**Xi'an**	**35.63**	**332**	⇓P	**P**	**03 34 40.1**	**+0.2**
XAN				pmax	pmax		
	comp=Z,40nm,0.9s						
HNS	**HongShan**	**36.32**	**342**	⇓P	**P**	**03 34 45.9**	**+0.2**
HNS				pmax	pmax		
	comp=Z,11nm,0.9s						
STKA	**Stephens Creek**	**37.04**	**161**	P	**P**	**03 34 50.4**	**-1.5**
	comp=Z,3.4nm,0.5s,baz=331,slow=8.8,SNR=10						
	comp=Z,3.4nm,0.5s						
STKA	**Stephens Creek**	**37.04**	**161**	P	**P**	**03 34 51.3**	**-0.6**
LZDM	**Lanzhou Array**	**39.74**	**328**	P	**P**	**03 35 15.8**	**+0.8**
	comp=Z,3.7nm,0.5s,baz=161,slow=9.4,SNR=5.1						
	comp=Z,3.7nm,0.5s						
LZH	**Lanzhou**	**39.77**	**329**	*e*P	**P**	**03 35 15.1**	**+0.2**
LZH				pP	pwP	03 35 39.8	-0.3
LZH				sP	sP	03 35 51.1	+2.5
LZH				pmax	pmax		
	comp=Z,37nm,1.7s						
LZH				LR	LR		
	comp=N,410nm,18.2s						
LZH				LR	LR		
	comp=E,570nm,13.7s						
LZH				LR	LR		
	comp=Z,670nm,19.9s						
HHC	**Hu-ho-hao-te**	**40.47**	**341**	*e*P	**P**	**03 35 23.5**	**+2.9**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,500nm,8.3s						
H11S3	**WAKE ISLAND Hy**	**40.79**	**65**	T	T	04 18 49.0	
	baz=253,slow=74,SNR=4.4						
H11S2	**WAKE ISLAND Hy**	**40.80**	**65**	T	T	04 18 50.1	
	baz=253,slow=74,SNR=3.1						
H11S1	**WAKE ISLAND Hy**	**40.80**	**65**	T	T	04 18 52.4	
	baz=253						
USRK	**Ussuriysk Ar.**	**41.12**	**4**	P	**P**	**03 35 25.8**	**+0.1**
	comp=Z,4.2nm,0.6s,baz=182,slow=7.7,SNR=5.9						
	comp=Z,4.2nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**41.35**	**63**	T	T	04 19 33.7	
	baz=250,slow=75,SNR=4.9						
H11N2	**WAKE ISLAND Hy**	**41.36**	**63**	T	T	04 19 32.6	
	baz=250						
H11N3	**WAKE ISLAND Hy**	**41.37**	**63**	T	T	04 19 32.8	
	baz=250,slow=75,SNR=5.1						
KLR	**Kul'dur**	**46.12**	**3**	P	**P**	**03 36 04.9**	**-0.8**
	comp=Z,2.2nm,0.5s,baz=202,slow=9.4,SNR=8.6						
	comp=Z,2.2nm,0.5s						
SONM	**Songino Array**	**48.37**	**341**	P	**P**	**03 36 23.3**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=154,slow=9.0,SNR=5.9						
	comp=Z,1.5nm,0.7s						

SONM	Songino Array	48.37	341	P		P	03 36 23.5	+0.1
WMQ	Urumqi	54.05	325	eP		P	03 37 07.8	+1.9
WMQ				PcP		PcP	03 38 09.4	-0.3
WMQ				ScP		ScP	03 41 57.8	-1.0
WMQ				pmax		pmax		
	comp=Z,12nm,0.7s							
WMQ				LR		LR		
	comp=N,780nm,22.5s							
WMQ				LR		LR		
	comp=E,590nm,18.1s							
WMQ				LR		LR		
	comp=Z,440nm,24.0s							
MKAR	Makanchi Array	58.87	325	P		P	03 37 40.0	0.0
	comp=Z,4.7nm,0.6s,baz=113,slow=8.2,SNR=37							
	comp=Z,4.7nm,0.6s							
MKAR	Makanchi Array	58.87	325			P	03 37 39.7	-0.3
KSH2	Kashi	59.61	314	P		P	03 37 45.1	-0.3
KSH2				pmax		pmax		
	comp=Z,6.0nm,1.5s							
KDJ	Kajisay	59.74	318			P	03 37 46.4	+0.1
ZALV	Zalesovo Beam	61.80	333	P		P	03 37 57.9	-1.8
	comp=Z,1.2nm,0.6s,baz=144,slow=6.6,SNR=4.3							
	comp=Z,1.2nm,0.6s							
ZALV	Zalesovo Beam	61.80	333	P		P	03 37 59.3	-0.4
KURBB	Kurchatov Arra	63.03	327	P		P	03 38 07.5	-0.5
	comp=Z,3.6nm,0.5s,baz=127,slow=6.2,SNR=31							
	comp=Z,3.6nm,0.5s							
KURK	Kurchatov	63.03	327			P	03 38 07.5	-0.5
KURK				IAmb		IAmb	03 38 08.3	
	comp=Z,10nm,1.1s							
KK31	Karatay Array	64.64	317	P		P	03 38 17.5	-1.3
BVAR	Borovoye Array	68.61	327	P		P	03 38 42.7	-1.1
	comp=Z,2.3nm,0.5s,baz=90,slow=4.0,SNR=6.6							
	comp=Z,2.3nm,0.5s							
SPIA	Saint Paul Isl	72.40	30	P		P	03 39 07.1	+0.4
	baz=247							
UNV	Unalaska Valle	73.22	34	P		P	03 39 11.7	+0.1
	baz=252							
GAMB	Gambell	74.47	24	P		P	03 39 19.1	+0.4
	baz=244							
FALS	False Pass	75.25	34	P		P	03 39 23.0	-0.4
	baz=254							
M11K	Mekoryuk	75.53	28	P		P	03 39 24.8	-0.1
	baz=250							
K13K	Kusilvak Mount	76.76	27	P		P	03 39 32.0	+0.1
	baz=251							
M13K	Dall Lake	76.89	28	P		P	03 39 32.8	+0.2
	baz=253							
SDPT	Sand Point	77.01	34	P		P	03 39 33.3	0.0
	baz=256							
F14K	Arctic Creek	77.28	23	P		P	03 39 34.8	+0.1
	baz=249							
ANM	Nome	77.33	24	P		P	03 39 35.4	+0.4
	baz=250							
CHNA	Chernabura Isl	77.38	34	P		P	03 39 35.6	+0.2
	baz=257							
L14K	Kuka Creek	77.47	28	P		P	03 39 36.6	+0.7
L14K	Kuka Creek	77.47	28	P		P	03 39 35.9	+0.1
	baz=253							
J14K	Nanvaranak Lak	77.50	26	P		P	03 39 36.1	+0.1
	baz=252							
N14K	Kuskokwak Cree	77.54	29	P		P	03 39 36.2	0.0
	baz=254							
O14K	Tigyukauivet M	77.57	30	P		P	03 39 37.0	+0.6
	baz=255							
M14K	Bethel	77.64	28	P		P	03 39 37.5	+0.8
M14K	Bethel	77.64	28	P		P	03 39 37.2	+0.4
	baz=254							
F15K	North Star Dit	78.01	23	P		P	03 39 39.1	+0.3
	baz=250							
G15K	Niukluk	78.02	24	P		P	03 39 39.1	+0.3
	baz=251							
L15K	Ungalak Mounta	78.12	27	P		P	03 39 39.7	+0.2
	baz=254							
M15K	Kasigluk River	78.23	28	P		P	03 39 40.2	+0.1
	baz=255							
K15K	Wolf Creek Mou	78.27	27	P		P	03 39 40.5	+0.3
	baz=254							
O15K	Ungalikthiuk R	78.27	30	P		P	03 39 40.4	+0.1
	baz=256							
CHGN	Chignik	78.35	33	P		P	03 39 41.0	+0.2
	baz=258							
N15K	Kwethluk River	78.38	29	P		P	03 39 41.1	+0.2
	baz=256							
C16K	Lisburne Hills	78.65	20	P		P	03 39 42.6	+0.4
	baz=249							
G16K	Koyuk River	78.82	24	P		P	03 39 43.6	+0.4
	baz=253							
J16K	Anvik River	78.95	26	P		P	03 39 44.5	+0.6
	baz=255							
L16K	Owhat River	79.05	28	P		P	03 39 45.0	+0.4
L16K				IAmb		IAmb	03 39 46.1	
	comp=Z,9.3nm,1.1s							
L16K	Owhat River	79.05	28	P		P	03 39 45.1	+0.5
	baz=256							
I17K	Unalakleet	79.07	25	P		P	03 39 45.2	+0.6
	baz=254							
N16K	Nishlik Lake	79.09	29	P		P	03 39 44.9	+0.1
	baz=257							
M16K	Timber Creek	79.13	28	P		P	03 39 45.2	+0.2
	baz=256							
O16K	Kokwok River B	79.22	30	P		P	03 39 45.7	+0.2
	baz=258							
D17K	Noatak River	79.25	21	P		P	03 39 46.2	+0.6
	baz=252,SNR=6.6							
RDOG	Red Dog Mine	79.43	21			P	03 39 47.0	+0.5
RDOG				IAmb		IAmb	03 39 47.5	
	comp=Z,4.8nm,0.5s							
RDOG	Red Dog Mine	79.43	21	P		P	03 39 46.9	+0.4
	baz=252							
C17K	DeLong Mountai	79.47	20	P		P	03 39 47.5	+0.7
	baz=251							
G17K	Kiwalik Mounta	79.53	24	P		P	03 39 47.4	+0.3
	baz=254							
F17K	Baldwin Pennin	79.56	23	P		P	03 39 47.8	+0.6
	baz=253							
J17K	VABM Dome	79.64	26	P		P	03 39 48.1	+0.4
	baz=256							
H17K	Granite Mounta	79.68	24	P		P	03 39 48.2	+0.3
	baz=255							
L17K	Donlin	79.69	27	P		P	03 39 48.8	+0.7
	baz=257							
R17L	Mt. Peulik Vol	79.72	32	P		P	03 39 48.9	+0.6
	baz=259							
O17K	Koliganek Bris	79.76	30	P		P	03 39 49.4	+0.9
	baz=258							
Q16K	King Salmon	79.76	31	P		P	03 39 49.2	+0.7
	baz=259							
K17K	Iditarod	79.83	27	P		P	03 39 49.6	+0.8
	baz=257							
N17K	Nushagak Hills	79.87	29	P		P	03 39 49.9	+0.9
	baz=258							
M17K	Holitna River	79.93	28	P		P	03 39 50.5	+1.1
	baz=258							
E18K	Tukpahlearik C	80.08	22	P		P	03 39 51.0	+0.9
E18K	Tukpahlearik C	80.08	22	P		P	03 39 51.0	+0.9
	baz=254							
F18K	Selawik	80.22	23	P		P	03 39 51.3	+0.6
	baz=255							
C18K	Utukok River	80.22	21	P		P	03 39 51.5	+0.6
	baz=253							
H18K	Honhosa River	80.37	24	P		P	03 39 52.1	+0.5
	baz=256							
G18K	Tagagawik	80.43	24	P		P	03 39 52.9	+0.9
	baz=256							
L18K	Granite Mounta	80.45	27	P		P	03 39 52.5	+0.4
	baz=258							
N18K	Kilae Creek	80.53	29	P		P	03 39 52.9	+0.3
	baz=259							
Q18K	Katmai Hardscr	80.61	31	P		P	03 39 53.8	+0.6
	baz=260							
P18K	Big Mountain,	80.62	30	P		P	03 39 53.8	+0.7
	baz=260							
J18K	Innoko River	80.69	26	P		P	03 39 54.2	+0.8
	baz=258							
M18K	Stony River	80.71	28	P		P	03 39 54.1	+0.6
	baz=259							
O18K	Koktuh Hills	80.71	30	P		P	03 39 54.1	+0.5
	baz=260							
SII	Sitkinak Islan	80.71	33	P		P	03 39 54.0	+0.3
	baz=261							
A19K	Wainwright	80.72	19	P		P	03 39 54.2	+0.8
	baz=253							
GCSA	Galena City Sc	80.89	25	P		P	03 39 55.4	+1.0
	baz=258							
C19K	Lookout Ridge	80.91	20	P		P	03 39 55.7	+1.2
C19K				IAmb		IAmb	03 39 56.4	
	comp=Z,7.3nm,0.7s							
C19K	Lookout Ridge	80.91	20	P		P	03 39 55.2	+0.7
	baz=255,SNR=9.2							
F19K	Shaleruckik Mo	81.00	23	P		P	03 39 56.0	+1.1
	baz=257							
G19K	Purcell Mounta	81.11	23			P	03 39 56.4	+0.8
G19K				IAmb		IAmb	03 39 57.1	
	comp=Z,7.1nm,0.8s							
G19K	Purcell Mounta	81.11	23	P		P	03 39 55.9	+0.3
	baz=257,SNR=9.0							
O19K	Port Alsworth	81.21	30	P		P	03 39 56.8	+0.6
	baz=261							
N19K	Bonanza Creek	81.23	29	P		P	03 39 57.0	+0.6
	baz=260							
H19K	Roundabout Mou	81.23	24	P		P	03 39 57.3	+1.1
H19K				IAmb		IAmb	03 39 58.0	
	comp=Z,6.3nm,0.7s							
H19K	Roundabout Mou	81.23	24	P		P	03 39 57.0	+0.8
	baz=258							
D19K	Kuna River	81.27	21	P		P	03 39 57.2	+0.8
D19K				IAmb		IAmb	03 39 57.8	
	comp=Z,8.2nm,0.7s							
D19K	Kuna River	81.27	21	P		P	03 39 57.2	+0.8
	baz=256							
J19K	Poorman	81.28	26	P		P	03 39 57.2	+0.7
J19K				IAmb		IAmb	03 39 58.5	
	comp=Z,8.7nm,1.0s							
J19K	Poorman	81.28	26	P		P	03 39 57.5	+1.0
	baz=259							
L19K	White Mountain	81.29	28	P		P	03 39 57.2	+0.6
	baz=260							
OHAK	Old Harbor	81.29	33	P		P	03 39 57.0	+0.4
	baz=262							
E19K	Redstone River	81.35	22	P		P	03 39 57.6	+0.8
E19K				IAmb		IAmb	03 39 59.0	
	comp=Z,10nm,0.8s							
E19K	Redstone River	81.35	22	P		P	03 39 57.7	+0.9
	baz=257							
Q19K	Cape Douglas,	81.35	31	P		P	03 39 57.6	+0.5
	baz=262							
KDAK	Kodiak Island	81.75	32	P		P	03 39 59.6	+0.6
	baz=263							
F20K	Avaraart Lake	81.83	23	P		P	03 40 00.1	+0.8
F20K	Avaraart Lake	81.83	23	P		P	03 39 59.8	+0.4
	baz=258							
K20K	Telida	81.84	26	P		P	03 40 00.5	+0.9
	baz=260							
D20K	Etivluk River	81.86	21	P		P	03 40 00.2	+0.8
D20K				IAmb		IAmb	03 40 01.0	
	comp=Z,6.2nm,0.7s							
D20K	Etivluk River	81.86	21	P		P	03 40 00.3	+0.8
	baz=257							
H20K	Anotleneega Mo	81.87	24	P		P	03 40 00.4	+0.8
	baz=260							
E20K	Nigu River	81.91	21	P		P	03 40 00.2	+0.3
	baz=258							
I20K	Naaghedeneel	81.91	25	P		P	03 40 00.2	+0.4
	baz=260							
J20K	Nowinta River	81.95	26	P		P	03 40 00.8	+0.8
J20K				IAmb		IAmb	03 40 01.8	
	comp=Z,6.3nm,0.8s							
J20K	Nowinta River	81.95	26	P		P	03 40 00.8	+0.8
	baz=260,SNR=6.6							
Q20K	Shuyak Island	81.95	31	P		P	03 40 00.3	+0.2
	baz=263							
B20K	Meade River	81.96	20			P	03 40 00.8	+0.9
B20K	Meade River	81.96	20	P		P	03 40 00.6	+0.7
	baz=257							
M20K	Styx River	82.04	28	P		P	03 40 01.5	+0.8
M20K	Styx River	82.04	28	P		P	03 40 00.8	+0.1
	baz=262							
SPCR	Spurr Chakacha	82.38	29	P		P	03 40 02.5	0.0
	baz=262							
N20K	Mount Spurr	82.38	29	P		P	03 40 02.3	-0.1
	baz=262							
A21K	Barrow	82.44	18	P		P	03 40 03.2	+0.8
	baz=257							
C21K	Knifeblade Rid	82.59	21	P		P	03 40 04.1	+0.8
	baz=259							
G21K	Allakaket	82.60	23	P		P	03 40 04.3	+0.9
G21K				IAmb		IAmb	03 40 05.1	
	comp=Z,6.0nm,0.9s							
G21K	Allakaket	82.60	23	P		P	03 40 03.8	+0.4
	baz=261							
PPLA	Purkeypile	82.62	27	P		P	03 40 04.1	+0.3
	baz=262							
CHUM	Lake Minchumin	82.70	26	P		P	03 40 04.6	+0.7
	baz=262,SNR=5.1							
F21K	Alatna River	82.73	23	P		P	03 40 04.8	+0.7
	baz=261							
B21K	Ikpikpuk River	82.74	20	P		P	03 40 04.8	+0.7
B21K				IAmb		IAmb	03 40 06.3	
	comp=Z,7.5nm,0.9s							
B21K	Ikpikpuk River	82.74	20	P		P	03 40 04.8	+0.7
	baz=259							
H21K	Melozitna Rive	82.75	24	P		P	03 40 05.0	+0.8
H21K				IAmb		IAmb	03 40 05.9	
	comp=Z,6.3nm,0.9s							
H21K	Melozitna Rive	82.75	24	P		P	03 40 04.4	+0.3
	baz=261,SNR=6.4							
SKT	Skwentna	82.80	28	P		P	03 40 05.0	+0.5
	baz=263							
CAPN	Captain Cook N	82.84	29	P		P	03 40 05.3	+0.6
	baz=264							
A22K	Sinclair Lake	82.89	19	P		P	03 40 05.4	+0.7
	baz=259							
BRSE	Bradley Lake S	82.93	30	P		P	03 40 05.8	+0.6
	baz=264							
I21K	Tanana	83.02	25	P		P	03 40 06.2	+0.6
	baz=262							
L22K	Petersville	83.22	27	P		P	03 40 06.4	-0.4
B22K	Teshekpuk Lake	83.28	20	P		P	03 40 07.5	+0.7
	baz=260							
BPAW	Bear Paw Mtn.	83.31	26	P		P	03 40 07.8	+0.6
	baz=263							
H22K	Ishtalitna Cre	83.36	24	P		P	03 40 08.3	+0.9
H22K				IAmb		IAmb	03 40 09.2	
	comp=Z,8.6nm,1.2s							
H22K	Ishtalitna Cre	83.36	24	P		P	03 40 07.6	+0.3
	baz=263,SNR=5.6							
CUT	Chulitna	83.44	28	P		P	03 40 08.3	+0.6
	baz=264							
M22K	Willow	83.44	28	P		P	03 40 08.1	+0.4
	baz=264							
E22K	Anaktuvuk Pass	83.50	22	P		P	03 40 08.9	+0.8
E22K				IAmb		IAmb	03 40 09.8	
	comp=Z,8.5nm,1.0s							
E22K	Anaktuvuk Pass	83.50	22	P		P	03 40 08.8	+0.7
	baz=262							
MLY	Manley	83.52	25			P	03 40 08.7	+0.5
MLY				IAmb		IAmb	03 40 09.5	
	comp=Z,5.7nm,0.8s							
MLY	Manley	83.52	25	P		P	03 40 08.6	+0.4
	baz=263,SNR=6.6							
TRF	Thorofare Moun	83.54	27	P		P	03 40 08.7	+0.2
	baz=264							
RC01	Rabbit Creek A	83.56	29	P		P	03 40 08.9	+0.4
	baz=265							
SEW	Seward	83.61	30	P		P	03 40 09.0	+0.3
	baz=265							
PMR	Palmer	83.90	28	P		P	03 40 10.5	+0.4
	baz=265							
COLD	Coldfoot	83.99	23			P	03 40 11.4	+0.8
COLD	Coldfoot	83.99	23	P		P	03 40 11.2	+0.7
	baz=264,SNR=7.5							
G23K	Bananza Creek	84.00	23	P		P	03 40 11.1	+0.5
G23K	Bananza Creek	84.00	23	P		P	03 40 11.4	+0.8
	baz=264							
D23K	Nanushuk River	84.02	21	P		P	03 40 11.8	+1.2
D23K				IAmb		IAmb	03 40 12.8	
	comp=Z,8.1nm,1.0s							
D23K	Nanushuk River	84.02	21	P		P	03 40 11.4	+0.8
	baz=263							
I23K	Minto, Yukon-K	84.12	25	P		P	03 40 12.0	+0.8
I23K				IAmb		IAmb	03 40 12.5	
	comp=Z,5.1nm,0.8s							
I23K	Minto, Yukon-K	84.12	25	P		P	03 40 11.8	+0.7
	baz=265,SNR=5.9							
C23K	Itkillik River	84.15	20	P		P	03 40 11.9	+0.7
C23K	Itkillik River	84.15	20	P		P	03 40 12.1	+0.8
	baz=263							
MCK	McKinley	84.17	26	P		P	03 40 11.7	+0.2
	baz=265							
RND	Reindeer	84.18	27	P		P	03 40 11.3	-0.3
RND				IAmb		IAmb	03 40 11.8	
	comp=Z,5.5nm,0.6s							
NEA2	Nenana	84.19	25	P		P	03 40 11.7	+0.2
	baz=265							
KNK	Knik Glacier	84.20	29	P		P	03 40 11.9	+0.2
	baz=266							
WAT1	Susitna Watana	84.27	27	P		P	03 40 12.2	+0.2
	baz=266							
SML	Sawmill	84.29	28	P		P	03 40 12.7	+0.5
SML	Sawmill	84.29	28	P		P	03 40 12.3	0.0
	baz=266							
E23K	Chandalar	84.31	22	P		P	03 40 13.0	+0.8
E23K				IAmb		IAmb	03 40 14.2	
	comp=Z,6.7nm,0.8s							
E23K	Chandalar	84.31	22	P		P	03 40 12.5	+0.2
	baz=264							
TOLK	Toolik Lake Re	84.38	21	P		P	03 40 13.2	+0.6
	baz=264							
M23K	Glacier View	84.58	28	P		P	03 40 13.6	0.0
	baz=266,SNR=6.1							
WAT6	Susitna Watana	84.62	28	P		P	03 40 14.3	+0.3
	baz=266,SNR=6.7							
P23K	Montague Islan	84.63	30	P		P	03 40 14.1	+0.2
	baz=267							
D24K	Happy Valley	84.70	21	P		P	03 40 15.1	+1.0
D24K				IAmb		IAmb	03 40 15.9	
	comp=Z,7.1nm,0.8s							
D24K	Happy Valley	84.70	21	P		P	03 40 14.6	+0.5
	baz=265							
E24K	Your Creek	84.73	22	P		P	03 40 15.0	+0.7
	baz=265							
COLA	College	84.73	25	P		P	03 40 14.7	+0.4
	baz=266							
SCM	Sheep Creek Mo	84.77	28	P		P	03 40 14.9	+0.2
	baz=267							
H24K	Noodor Dome	84.79	24	P		P	03 40 15.0	+0.3
	baz=266							
C24K	Franklin Bluff	84.80	20	P		P	03 40 15.0	+0.5
	baz=265							
DHY	Denali Highway	84.82	27	P		P	03 40 15.1	+0.1
	baz=267							
GLI	Glacier Island	84.83	29	P		P	03 40 15.3	+0.4
	baz=267							
F24K	Squaw Lake	84.91	23	P		P	03 40 16.1	+0.8
F24K	Squaw Lake	84.91	23	P		P	03 40 15.8	+0.6
	baz=266							
POKR	Poker Plat Res	84.92	25	P		P	03 40 15.4	+0.1
	baz=266							
G24K	Hadweenzic Riv	85.01	23	P		P	03 40 15.9	+0.2
	baz=266							
GURO	Guroymak-BITLI	85.01	308			P	03 40 15.7	-0.7
GURO				IAmb		IAmb	03 40 18.2	
	comp=Z,8.5nm,1.0s							
HDA	Harding Lake	85.09	26	P		P	03 40 16.1	0.0
	baz=267							
Q23K	Middleton Isla	85.14	31	P		P	03 40 16.5	+0.1
	baz=268							
ILAR	Eielson Array	85.14	25	P		P	03 40 14.2	-2.1
	comp=Z,0.6nm,0.6s,baz=248,slow=5.5,SNR=9.6							
	comp=Z,0.6nm,0.6s							
ILAR	Eielson Array	85.14	25	P		P	03 40 17.7	+1.4
M24K	Tolsona, Glenn	85.33	28	P		P	03 40 17.6	+0.1
	baz=268							
KLU	Klutina	85.42	29	P		P	03 40 18.2	+0.3
	baz=268							
EYAK	Cordova Ski Ar	85.48	30	P		P	03 40 18.4	+0.3
	baz=268							
DIV	Divide	85.48	29	P		P	03 40 18.7	+0.5
G25K	Bearman Lake	85.56	23	P		P	03 40 18.8	+0.4
	baz=267							
K24K	Donnelly Dome	85.58	26	P		P	03 40 18.6	0.0
	baz=268							
D25K	Kavik River	85.59	21	P		P	03 40 19.0	+0.5
	baz=267							
PAX	Paxson	85.69	27	P		P	03 40 19.7	+0.5
	baz=268							
PRP	Porcupine Dome	85.75	25	P		P	03 40 19.4	-0.1
	baz=268							
F25K	Christian Rive	85.78	23	P		P	03 40 20.0	+0.4
	baz=268							
J25K	Salcha River,	85.78	26	P		P	03 40 19.9	+0.2
	baz=268							
HARP	HAARP	85.81	28	P		P	03 40 20.1	+0.3
	baz=269							
E25K	Arctic Village	85.83	22	P		P	03 40 20.5	+0.8
	baz=268							
RIDG	Independent Ri	85.99	26	P		P	03 40 20.8	+0.1
	baz=269							
BMRM	Bremner River	86.05	29	P		P	03 40 20.9	-0.1
	baz=269							
N25K	Chitina, Valde	86.06	29	P		P	03 40 21.0	-0.1
	baz=269							
C26K	Camden Bay	86.12	20	P		P	03 40 21.6	+0.5
	baz=268							
KAIM	Kayak Island	86.13	30	P		P	03 40 21.6	+0.3
	baz=269							
F26K	Sheenjek River	86.35	22	P		P	03 40 22.7	+0.4
	baz=269							
SCRK	Sand Creek	86.37	26	P		P	03 40 23.2	+0.6
	baz=270							
G26K	Porcupine Rive	86.48	23	P		P	03 40 23.4	+0.5
	baz=270							
C27K	Jago River	86.54	21	P		P	03 40 24.0	+0.8
	baz=270							
L26K	Log Cabin Wild	86.66	27	P		P	03 40 24.2	+0.3
	baz=270							
I26K	Coal Creek Min	86.73	25	P		P	03 40 24.7	+0.5
	baz=270							
CRQE	Cirque	86.79	29	P		P	03 40 24.9	+0.2
	baz=270							
MCARA	McCarthy VSAT	86.82	29	P		P	03 40 24.9	+0.2
	baz=271							
M26K	Nabesna, AK	86.82	28	P		P	03 40 24.8	+0.1
	baz=270							
E27K	Coleen River	87.31	22	P		P	03 40 27.5	+0.5
	baz=272							
G27K	Doyon Strip	87.33	23	P		P	03 40 27.5	+0.5
	baz=272							
M27K	Edge Creek, AK	87.34	28	P		P	03 40 27.7	+0.3
	baz=272							
L27K	Beaver Creek,	87.35	27	P		P	03 40 27.5	+0.2
	baz=272							
MESA	MESA	87.36	30	P		P	03 40 27.6	0.0
	baz=272							
I27K	Kandik River	87.37	25	P		P	03 40 27.5	+0.1
I27K				IAmb		IAmb	03 40 29.9	
	comp=Z,7.1nm,1.3s							
I27K	Kandik River	87.37	25	P		P	03 40 27.4	+0.1
	baz=272							
H27K	Steamboat Moun	87.39	24	P		P	03 40 27.6	+0.2
	baz=272							
D27M	Malcolm River	87.51	21	P		P	03 40 28.1	+0.1
	baz=272							
CTG	Chitna Glacier	87.64	29	P		P	03 40 28.6	-0.2
	baz=272							
F28M	Old Crow	87.99	23	P		P	03 40 30.2	0.0
	baz=273							
YUK3	Moose Creek	88.03	28	P		P	03 40 30.5	-0.2
	baz=273							
E28M	Babbage River	88.06	22	P		P	03 40 30.6	+0.1
	baz=273							
I28M	Miner Creek	88.08	25	P		P	03 40 31.0	+0.2
	baz=273							
O28M	Mount Upton	88.21	29	P		P	03 40 31.7	0.0
	baz=273							
PINM	Pinnacle	88.22	30	P		P	03 40 31.8	+0.3
	baz=273							
D28M	Stokes Point	88.30	21	P		P	03 40 31.5	0.0
	baz=274							
YUK8	Steele Glacier	88.39	29	P		P	03 40 32.4	-0.1
	baz=273							
DAWY	Dawson	88.39	26	P		P	03 40 32.2	0.0
	baz=274							
H29M	Whitestone	88.67	24	P		P	03 40 33.6	+0.2
	baz=275							
E29M	Blow River	88.67	22	P		P	03 40 33.8	+0.4
	baz=275							
G29M	Pine Creek	88.75	23	P		P	03 40 34.2	+0.4
	baz=275							
J29N	Klondike Camp	88.88	26	P		P	03 40 34.4	-0.1
	baz=275							
YUK4	Talbot Arm	88.92	29	P		P	03 40 35.2	+0.2
	baz=274							
M29M	Somme Creek	88.93	28	P		P	03 40 35.0	+0.1
	baz=274							
L29M	L29M	89.03	27	P		P	03 40 35.3	+0.1
	baz=275							
O29M	Mount Kennedy	89.04	30	P		P	03 40 35.0	-0.4
	baz=

	baz=275							
EPYK	**Eagle Plains**	**89.32**	**24**	P	**P**	**03 40 36.3**	**-0.2**
	baz=276							
G30M	**tAoh Zraii Nji**	**89.45**	**23**	P	**P**	**03 40 37.5**	**+0.4**
	baz=276							
HYT	**Haines Junctio**	**89.52**	**29**	P	**P**	**03 40 37.7**	**0.0**
	baz=275							
I30M	**Mount Dempster**	**89.58**	**25**	P	**P**	**03 40 37.7**	**-0.2**
	baz=276							
N30M	**Aishikik Lake**	**89.66**	**29**	P	**P**	**03 40 38.1**	**-0.1**
	baz=276							
J30M	**Hart River**	**89.68**	**25**	P	**P**	**03 40 38.3**	**0.0**
	baz=276							
M30M	**Minto, Yukon**	**89.69**	**27**	P	**P**	**03 40 38.4**	**+0.1**
	baz=276							
P30M	**Million Dollar**	**89.86**	**30**	P	**P**	**03 40 39.5**	**+0.3**
	baz=276							
O30N	**Mendenhall**	**90.22**	**29**	P	**P**	**03 40 41.3**	**+0.5**
	baz=277							
N31M	**Braeburn, Yuko**	**90.28**	**28**	P	**P**	**03 40 40.9**	**-0.2**
	baz=277							
INK	**Inuvik**	**90.30**	**22**	P	**P**	**03 40 41.3**	**+0.3**
	baz=279							
F31M	**Tsiigehtchic**	**90.35**	**22**	P	**P**	**03 40 41.3**	**+0.1**
	baz=279							
H31M	**Peel River**	**90.35**	**24**	P	**P**	**03 40 41.6**	**+0.3**
	baz=278							
S31K	**Pelican**	**90.46**	**32**	P	**P**	**03 40 42.4**	**+0.5**
	baz=276							
SKAG	**Skagway**	**90.75**	**30**	P	**P**	**03 40 43.7**	**+0.5**
	baz=277							
WHY	**Whitehorse**	**90.82**	**29**	P	**P**	**03 40 43.8**	**+0.1**
	baz=278							
M31M	**Drury Creek, Y**	**90.84**	**28**	P	**P**	**03 40 43.8**	**+0.1**
	baz=278							
SIT	**Sitka**	**91.06**	**33**	P	**P**	**03 40 44.8**	**+0.2**
	baz=277							
R32K	**Eaglecrest**	**91.33**	**32**	P	**P**	**03 40 45.9**	**-0.1**
	baz=278							
S32K	**Killisnoo**	**91.41**	**32**	P	**P**	**03 40 46.5**	**+0.2**
	baz=278							
P32M	**Atlin**	**91.55**	**30**	P	**P**	**03 40 47.5**	**+0.5**
	baz=279							
N32M	**Quiet Lake**	**91.62**	**29**	P	**P**	**03 40 47.3**	**0.0**
	baz=279							
P33M	**Teslin, Yukon**	**91.90**	**30**	P	**P**	**03 40 48.6**	**0.0**
	baz=280							
Q32M	**Nakina River**	**92.38**	**31**	P	**P**	**03 40 50.0**	**-1.1**
	baz=280							
U33K	**Whale Pass**	**92.40**	**34**	P	**P**	**03 40 50.7**	**-0.2**
	baz=279							
CRAG	**Craig**	**92.50**	**34**	P	**P**	**03 40 51.3**	**-0.1**
	baz=279							
WRAK	**Wrangell Islan**	**92.77**	**33**	P	**P**	**03 40 52.9**	**+0.3**
	baz=280							
R33M	**Jennings River**	**92.96**	**30**	P	**P**	**03 40 53.8**	**+0.2**
	baz=281							
S34M	**Telegraph Cree**	**93.16**	**32**	P	**P**	**03 40 54.7**	**+0.3**
	baz=281							
V35K	**Ketchikan**	**93.37**	**34**	P	**P**	**03 40 55.2**	**-0.2**
	baz=280							
C36M	**Paulatuk**	**93.39**	**20**	P	**P**	**03 40 55.1**	**-0.1**
	baz=288							
DLBC	**Dease Lake**	**93.63**	**31**	P	**P**	**03 40 56.2**	**-0.5**
	baz=282							
T35M	**Bob Quinn**	**93.81**	**33**	P	**P**	**03 40 57.2**	**-0.3**
	baz=282							
TGTN	**Hyland Airport**	**93.82**	**28**	P	**P**	**03 40 57.5**	**+0.1**
	baz=284							
WTLY	**Watson Lake, Y**	**93.89**	**29**	P	**P**	**03 40 57.8**	**0.0**
	baz=283							
KOTAN	**Kotaneelee Air**	**96.18**	**29**	P	**P**	**03 41 08.2**	**0.0**
	baz=287							
TXAR	**Lajitas Array**	**120.94**	**53**	PKP	**PKiKP**	**03 46 33.3**	**0.0**
	comp=Z,0.5nm,1.0s,baz=325,slow=6.4,SNR=1.2							
TXAR	**Lajitas Array**	**120.94**	**53**		**PKPdf**	**03 46 32.7**	**-0.5**
TORD	**Torodi Ar. Bea**	**124.40**	**288**	PKP	**PKPdf**	**03 46 39.4**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=135,slow=1.1,SNR=19							

*TIF **18** 03:42:19.6, 43.44N×45.15E, h4km±1km*
*NORS **18** 03:42:21.3, 43.36N×45.24E, h10km, MPVA4.1*
*MOS **18** 03:42:21.6, 43.37N×45.24E, h21km, MPVA4.1*
*DRS **18** 03:42:23.3, 43.23N×45.14E, h18km*
ISC 18 03:42:22.1±1.0, 43.35N±0.02×45.22E±0.01, h15km±8km, n103, σ1°24/189, 3C-3D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMGR	**Komgaron**	**0.39**	**222**	*e*Pg	**Pb**	**03 42 31.1**	**+0.3**
KMGR				*e*S	**Sn**	**03 42 38.8**	**-1.8**
GROC	**Groznyy**	**0.45**	**110**	*e*Pg	**Pn**	**03 42 32.3**	**-1.7**
GROC				*e*Sg	**Sn**	**03 42 39.4**	**-2.4**
GROC	**Groznyy**	**0.45**	**110**	*e*Pg	**Pn**	**03 42 32.3**	**-1.7**
GROC				*e*S	**Sn**	**03 42 39.6**	**-2.1**
GROC				pmax	pmax		
	comp=Z,62nm,0.4s						
BTKR	**Batakoyurt**	**0.50**	**272**	*e*Pg	**Pn**	**03 42 33.0**	**-1.7**
BTKR				*e*Sg	**Sn**	**03 42 42.0**	**-1.0**
BTKR	**Batakoyurt**	**0.50**	**272**	*e*PG	**Pn**	**03 42 33.3**	**-1.4**
BTKR				*e*S	**Sn**	**03 42 42.6**	**-0.5**
VLKR	**Vladikavkaz**	**0.50**	**233**	*e*Pg	**Pb**	**03 42 33.1**	**+0.4**
VLKR				*e*Sg	**Sn**	**03 42 42.0**	**-1.3**
VLKR	**Vladikavkaz**	**0.50**	**233**	*e*PG	**Pn**	**03 42 33.7**	**-1.1**
VLKR				*e*S	**Sn**	**03 42 42.3**	**-0.9**
TRKR	**Terskaya**	**0.51**	**316**	*e*Pg	**Pb**	**03 42 32.7**	**-0.1**
TRKR				*e*Sg	**Sn**	**03 42 41.2**	**-2.2**
TRKR	**Terskaya**	**0.51**	**316**	*e*PG	**Pb**	**03 42 32.7**	**-0.1**
TRKR				*e*S	**Sn**	**03 42 41.7**	**-1.8**
ARNR	**Ardon**	**0.71**	**256**	*e*Pg	**Pn**	**03 42 37.0**	**-0.6**
ARNR				*e*Sg	**Sn**	**03 42 48.7**	**+0.4**
ARNR	**Ardon**	**0.71**	**256**	*e*PG	**Pn**	**03 42 37.2**	**-0.4**
ARNR				*e*S	**Sn**	**03 42 48.9**	**+0.7**
DVE	**Vedeno**	**0.77**	**121**	*e*Pg	**Pn**	**03 42 37.3**	**-1.2**
DVE				*e*Sg	**Sn**	**03 42 48.7**	**-1.2**
DVE	**Vedeno**	**0.77**	**121**	*e*PG	**Pn**	**03 42 37.6**	**-0.9**
DVE				*e*S	**Sn**	**03 42 48.6**	**-1.2**
DVE				pmax	pmax		
	comp=Z,57nm,0.3s						
PRTR	**Priterechnaya**	**0.79**	**301**	*e*Pg	**Pn**	**03 42 37.7**	**-1.0**
PRTR				*e*Sg	**Sn**	**03 42 50.2**	**-0.1**
PRTR	**Priterechnaya**	**0.79**	**301**	*e*PG	**Pn**	**03 42 38.0**	**-0.7**
PRTR				*e*S	**Sn**	**03 42 51.2**	**+0.9**
STDR	**Stavd-Durt**	**0.85**	**271**	*i* Pg	**Pn**	**03 42 39.3**	**-0.2**
STDR				*e*Sg	**Sn**	**03 42 52.7**	**+1.1**
STDR	**Stavd-Durt**	**0.85**	**271**	⇓*i*PG	**Pn**	**03 42 39.6**	**+0.1**
STDR				*e*S	**Sn**	**03 42 53.9**	**+2.2**
LACR	**Lac**	**0.86**	**233**	*e*Pg	**Pg**	**03 42 38.7**	**-0.1**
LACR				*e*Sg	**Sn**	**03 42 53.5**	**+1.4**
LACR	**Lac**	**0.86**	**233**	*e*PG	**Pg**	**03 42 38.9**	**+0.1**
LACR				*e*S	**Sn**	**03 42 53.5**	**+1.4**
KORR	**Kora**	**0.89**	**253**	*e*Pg	**Pn**	**03 42 39.9**	**-0.2**
KORR				*e*Sg	**Sn**	**03 42 53.5**	**+0.8**
KORR	**Kora**	**0.89**	**253**	*e*PG	**Pn**	**03 42 40.7**	**+0.6**
KORR				*e*S	**Sn**	**03 42 54.3**	**+1.6**
BTLR	**Botlikh**	**1.01**	**133**	*e*Pg	**Pg**	**03 42 41.4**	**-0.1**
BTLR				*e*Sg	**Sn**	**03 42 55.8**	**+0.1**
BTLR	**Botlikh**	**1.01**	**133**	*e*PG	**Pg**	**03 42 42.1**	**+0.5**
BTLR				*e*S	**Sn**	**03 42 57.0**	**+1.3**
LSNR	**Lesken**	**1.02**	**266**	*i* Pg	**Pg**	**03 42 42.0**	**+0.1**
LSNR				*e*Sg	**Sn**	**03 42 57.3**	**+1.2**
LSNR	**Lesken**	**1.02**	**266**	⇓*i*PG	**Pg**	**03 42 42.4**	**+0.5**
LSNR				*e*S	**Sn**	**03 42 57.8**	**+1.7**
GUDG	**Gudauri**	**1.04**	**212**	P	**Pg**	**03 42 42.0**	**-0.2**
GUDG				S	**Sg**	**03 42 56.9**	**+0.9**
GUDG	**Gudauri**	**1.04**	**212**	*e*Pg	**Pg**	**03 42 42.1**	**-0.2**
GUDG				*e*Sg	**Sg**	**03 42 57.6**	**+1.7**
GUDG	**Gudauri**	**1.04**	**212**	⇓*i*PG	**Pg**	**03 42 42.3**	**0.0**
GUDG				*e*S	**Sg**	**03 42 57.6**	**+1.7**
CHRG	**Chargali**	**1.05**	**192**	P	**Pg**	**03 42 42.3**	**0.0**
CHRG				S	**Sg**	**03 42 58.0**	**+2.0**
DLMR	**Dylym**	**1.07**	**105**	*e*PG	**Pg**	**03 42 43.5**	**+0.8**
DLMR				*e*S	**Sg**	**03 42 59.1**	**+2.5**
DLMR				pmax	pmax		
	comp=Z,142nm,0.2s						
NCK	**Nalchik**	**1.19**	**277**	*e*Pg	**Pb**	**03 42 43.8**	**-0.6**
NCK				*e*Sg	**Sg**	**03 43 00.7**	**0.0**
NCK	**Nalchik**	**1.19**	**277**	*e*PG	**Pg**	**03 42 44.7**	**-0.4**
NCK				*e*S	**Sg**	**03 43 02.4**	**+1.7**
DBC	**Dubki**	**1.22**	**105**	*e*Pg	**Pg**	**03 42 45.1**	**-0.5**
DBC				*e*Sg	**Sg**	**03 43 02.2**	**+0.6**
DBC	**Dubki**	**1.22**	**105**	*e*PG	**Pg**	**03 42 45.6**	**-0.1**
DBC				*e*S	**Sg**	**03 43 03.2**	**+1.6**
DBC				pmax	pmax		
	comp=Z,49nm,0.2s						
DIGR	**Digorskoe uzhe**	**1.28**	**250**	*e*Pg	**Pn**	**03 42 45.0**	**-0.7**
DIGR				*e*Sg	**Sg**	**03 43 03.0**	**-0.6**
DIGR	**Digorskoe uzhe**	**1.28**	**250**	*e*PG	**Pb**	**03 42 45.5**	**-0.6**
DIGR				*e*S	**Sg**	**03 43 03.4**	**-0.2**
UNCR	**Uncukul**	**1.32**	**118**	*e*Pg	**Pg**	**03 42 46.9**	**-0.6**
UNCR				*e*Sg	**Sg**	**03 43 05.8**	**+1.1**
UNCR	**Uncukul**	**1.32**	**118**	*e*PG	**Pg**	**03 42 47.1**	**-0.4**
UNCR				*e*S	**Sg**	**03 43 05.7**	**+1.1**
UNCR				pmax	pmax		
	comp=Z,97nm,0.3s						
KRNR	**Karanay**	**1.34**	**113**	*e*Pg	**Pg**	**03 42 47.4**	**-0.5**
KRNR				*e*Sg	**Sg**	**03 43 06.0**	**+0.6**
KRNR	**Karanay**	**1.34**	**113**	*e*PG	**Pg**	**03 42 47.7**	**-0.2**
KRNR				*e*S	**Sg**	**03 43 06.3**	**+0.9**
KRNR				pmax	pmax		
	comp=Z,45nm,0.6s						
HNZR	**Khunzah**	**1.35**	**125**	*e*PG	**Pg**	**03 42 48.0**	**-0.2**
HNZR				*e*S	**Sg**	**03 43 06.9**	**+1.1**
XNZR	**Khunzakh**	**1.36**	**126**	*e*Pg	**Pg**	**03 42 47.7**	**-0.6**
XNZR				*e*Sg	**Sg**	**03 43 06.5**	**+0.5**
KBTC	**Kuba-Taba**	**1.40**	**290**	*e*Pg	**Pb**	**03 42 47.5**	**-0.5**
KBTC				*e*Sg	**Sg**	**03 43 06.9**	**-0.3**
KBTC	**Kuba-Taba**	**1.40**	**290**	*e*PG	**Pg**	**03 42 48.0**	**-1.0**
KBTC				*e*S	**Sg**	**03 43 07.9**	**+0.7**
BUJR	**Buynaksk**	**1.48**	**110**	*e*Pg	**Pg**	**03 42 50.4**	**-0.1**
BUJR				*e*Sg	**Sg**	**03 43 11.7**	**+1.9**
BUJR	**Buynaksk**	**1.48**	**110**	*e*PG	**Pg**	**03 42 50.4**	**-0.1**
BUJR				*e*S	**Sg**	**03 43 11.6**	**+1.9**
BUJR				pmax	pmax		
	comp=Z,115nm,0.4s						
TLTR	**Tlyarata**	**1.50**	**146**	*e*Pg	**Pb**	**03 42 49.5**	**-0.3**
TLTR				*e*Sg	**Sg**	**03 43 09.9**	**-0.6**
TLTR	**Tlyarata**	**1.50**	**146**	*e*PG	**Pb**	**03 42 49.4**	**-0.3**
TLTR				*e*S	**Sg**	**03 43 09.8**	**-0.6**
TLTR				pmax	pmax		
	comp=Z,27nm,0.3s						
ARKR	**Arakani**	**1.50**	**119**	*e*Pg	**Pb**	**03 42 49.6**	**-0.1**
ARKR				*e*Sg	**Sg**	**03 43 10.5**	**0.0**
ARKR	**Arakani**	**1.50**	**119**	*e*PG	**Pg**	**03 42 50.2**	**-0.8**
ARKR				*e*S	**Sg**	**03 43 11.3**	**+0.8**
ARKR				pmax	pmax		
	comp=Z,33nm,0.3s						
GNBR	**Gunib**	**1.60**	**126**	*e*Pg	**Pg**	**03 42 51.9**	**-1.0**
GNBR				*e*Sg	**Sg**	**03 43 14.2**	**+0.5**
GNBR	**Gunib**	**1.60**	**126**	*e*PN	**Pg**	**03 42 51.9**	**-1.0**
GNBR				*e*S	**Sg**	**03 43 13.8**	**+0.1**
GNBR				pmax	pmax		
	comp=Z,36nm,0.3s						
SEAG	**Tbilisi Sea**	**1.62**	**191**	PN	**Pg**	**03 42 52.7**	**-0.5**
TBLG	**Delisi**	**1.66**	**193**	P	**Pb**	**03 42 52.7**	**+0.3**
TBLG				S	**Sg**	**03 43 16.6**	**+1.0**
TBLG	**Delisi**	**1.66**	**193**	*e*PN	**Pb**	**03 42 52.6**	**+0.2**
LGD	**Lagodekhi**	**1.69**	**153**	P	**Pb**	**03 42 53.3**	**+0.3**
LGD				S	**Sg**	**03 43 18.1**	**+1.5**
LGD	**Lagodekhi**	**1.69**	**153**	PN	**Pb**	**03 42 53.3**	**+0.3**
LGD				S	**Sg**	**03 43 18.1**	**+1.5**
BTNK	**Botanikuri**	**1.70**	**191**	PN	**Pb**	**03 42 52.0**	**-1.1**
BTNK				S	**Sg**	**03 43 17.1**	**+0.3**
PYA1	**Pyatigorsk**	**1.70**	**295**	*e*Pg	**Pn**	**03 42 51.0**	**-0.3**
PYA1				*e*Sg	**Sb**	**03 43 12.8**	**-1.4**
ALIG	**Mtskhetisjvari**	**1.70**	**223**	P	**Pb**	**03 42 52.1**	**-1.1**
ALIG				S	**Sg**	**03 43 16.5**	**-0.4**
ALIG	**Mtskhetisjvari**	**1.70**	**223**	PN	**Pb**	**03 42 52.1**	**-1.1**
ALIG				S	**Sg**	**03 43 16.5**	**-0.4**
MAK	**Makhachkala**	**1.71**	**102**	*e*Pg	**Pb**	**03 42 51.5**	**-1.8**
MAK				*e*Sg	**Sb**	**03 43 13.0**	**-1.7**
MAK	**Makhachkala**	**1.71**	**102**	⇓*i*PN	**Pg**	**03 42 54.2**	**-0.8**
MAK				*e*S	**Sg**	**03 43 17.9**	**+0.6**
MAK				pmax	pmax		
	comp=Z,104nm,0.4s						
MAK				smax	smax		
	comp=E,511nm,0.4s						
MAK				smax	smax		
	comp=E,454nm,0.4s						
KBZ	**Khabaz**	**1.73**	**283**	*e*Pg	**Pn**	**03 42 51.4**	**-0.2**
KBZ				*e*Sg	**Sb**	**03 43 14.4**	**-0.8**
KBZ	**Khabaz**	**1.73**	**283**	*i* PN	**Pn**	**03 42 51.5**	**-0.2**
NEUR	**Neytrino**	**1.84**	**268**	*e*Pg	**Pn**	**03 42 53.0**	**-0.4**
NEUR				*e*Sg	**Sn**	**03 43 15.8**	**-0.7**
NEUR	**Neytrino**	**1.84**	**268**	*e*PN	**Pn**	**03 42 53.8**	**+0.4**
KMKR	**Kumukh**	**1.84**	**131**	*e*Pg	**Pb**	**03 42 55.4**	**-0.3**
KMKR				*e*Sg	**Sg**	**03 43 19.9**	**-1.5**
KMKR	**Kumukh**	**1.84**	**131**	*e*PN	**Pb**	**03 42 55.3**	**-0.3**
KMKR				pmax	pmax		
	comp=Z,45nm,0.2s						
DGRG	**David-gareji**	**1.90**	**177**	P	**Pb**	**03 42 56.8**	**+0.2**
DGRG				S	**Sg**	**03 43 27.2**	**+3.8**
DGRG	**David-gareji**	**1.90**	**177**	PN	**Pb**	**03 42 56.8**	**+0.2**
DGRG				S	**Sg**	**03 43 27.2**	**+3.8**
SHA1	**Shidzhatmaz**	**1.91**	**283**	*e*Pg	**Pn**	**03 42 53.7**	**-0.6**
SHA1				*e*Sg	**Sb**	**03 43 19.5**	**-0.9**
SHA1	**Shidzhatmaz**	**1.91**	**283**	*e*PN	**Pb**	**03 42 55.7**	**-1.0**
SHA1				*e*S	**Sb**	**03 43 21.2**	**+0.8**
TKB	**Tkibuli**	**1.92**	**239**	PN	**Pb**	**03 42 55.5**	**-1.3**
KIV	**Kislovodsk**	**1.94**	**289**	*e*Pg	**Pn**	**03 42 54.0**	**-0.6**
KIV				*e*Sg	**Sb**	**03 43 19.1**	**-2.1**
TRLG	**Trialeti**	**1.99**	**205**	P	**Pb**	**03 42 57.0**	**-1.2**
TRLG				S	**Sg**	**03 43 26.0**	**-0.3**
TRLG	**Trialeti**	**1.99**	**205**	PN	**Pb**	**03 42 57.0**	**-1.2**
SGKR	**Sergokala**	**2.00**	**116**	*e*Pg	**Pb**	**03 42 57.4**	**-0.8**
SGKR				*e*Sg	**Sb**	**03 43 22.2**	**-0.7**
SGKR	**Sergokala**	**2.00**	**116**	*e*PN	**Pb**	**03 42 57.3**	**-0.8**
SGKR				pmax	pmax		
	comp=Z,37nm,0.5s						
DDFL	**Dedoflistskaro**	**2.02**	**161**	P	**Pb**	**03 42 58.8**	**+0.3**
DDFL	**Dedoflistskaro**	**2.02**	**161**	PN	**Pb**	**03 42 58.8**	**+0.3**
KZRT	**Kazreti**	**2.06**	**198**	P	**Pn**	**03 42 54.1**	**-2.0**
KZRT				S	**Sn**	**03 43 22.6**	**+0.9**
KZRT	**Kazreti**	**2.06**	**198**	PN	**Pn**	**03 42 54.2**	**-2.0**
URKR	**Urkarakh**	**2.13**	**123**	*e*Pg	**Pb**	**03 42 59.3**	**-1.3**
URKR				*e*Sg	**Sb**	**03 43 24.7**	**-2.2**
URKR	**Urkarakh**	**2.13**	**123**	*e*PN	**Pb**	**03 42 59.2**	**-1.3**
URKR				*e*S	**Sb**	**03 43 27.6**	**+0.7**
URKR				pmax	pmax		
	comp=Z,35nm,0.3s						
ALER	**Alexandrovskoy**	**2.18**	**311**	*e*Pg	**Pn**	**03 42 57.5**	**-0.4**
ALER				*e*Sg	**Sb**	**03 43 25.5**	**-2.6**
VSHL	**Vashlovani**	**2.29**	**157**	P	**Pb**	**03 43 02.8**	**-0.5**
GOF	**Gofitskoye**	**2.32**	**318**	*e*Pn	**Pn**	**03 43 00.6**	**+0.9**
GOF				*e*Sn	**Sb**	**03 43 30.4**	**-1.6**
GOF	**Gofitskoye**	**2.32**	**318**	*ce*PN	**Pn**	**03 43 00.6**	**+0.9**
GOF				*e*S	**Sb**	**03 43 29.9**	**-2.1**
AKH	**Akhalkalaki**	**2.33**	**214**	P	**Pb**	**03 43 01.6**	**-2.2**
AKH				S	**Sg**	**03 43 35.0**	**-1.9**
AKH	**Akhalkalaki**	**2.33**	**214**	PN	**Pb**	**03 43 01.6**	**-2.2**
AKH				S	**Sg**	**03 43 35.0**	**-1.9**
BGD	**Bogdanovka**	**2.41**	**211**	P	**Pb**	**03 43 02.9**	**-2.4**
BGD				S	**Sg**	**03 43 37.2**	**-2.3**
BGD	**Bogdanovka**	**2.41**	**211**	PN	**Pb**	**03 43 02.9**	**-2.4**
BGD				S	**Sg**	**03 43 37.3**	**-2.3**
AKT	**Akhty**	**2.64**	**134**	*e*Pn	**Pb**	**03 43 07.2**	**-1.9**
AKT				*e*Sn	**Sn**	**03 43 37.5**	**+1.6**
AKT	**Akhty**	**2.64**	**134**	*e*PN	**Pb**	**03 43 07.0**	**-2.1**
AKT				*e*		03 43 12.5	
AKT				*e*S	**Sb**	**03 43 41.0**	**-0.3**
AKT				*e*		03 43 47.1	
AKT				*e*		03 43 52.7	
AKT				pmax	pmax		
	comp=Z,18nm,0.5s						
AKT				smax	smax		
	comp=E,60nm,0.5s						
AKT				smax	smax		
	comp=E,61nm,0.4s						
AKT				smax	smax		
	comp=N,60nm,0.4s						
GRYR	**Gornoye**	**3.09**	**286**	*e*Pn	**Pn**	**03 43 12.7**	**+2.4**
GRYR				*e*Sn	**Sn**	**03 43 49.1**	**+2.0**
GNI	**Garni**	**3.22**	**187**	*e*Pn	**Pb**	**03 43 18.4**	**-0.7**
GNI				*e*Sn	**Sb**	**03 43 58.1**	**-0.1**
BRTR	**Keskin Array B**	**9.41**	**251**	*i* P	**Pn**	**03 44 35.7**	**-1.6**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
OBN	**Obninsk**	**13.04**	**337**	⇑*e*P	**Pn**	**03 45 27.0**	**+0.3**
OBN				*e*S	**Sn**	**03 47 53.1**	**+1.7**
ARTI	**Arti**	**15.52**	**28**	*i* P	**Pn**	**03 46 00.5**	**+0.2**
BORK	**Borovoye**	**19.24**	**51**	*i* P	**Pn**	**03 46 45.8**	**-0.9**
BORK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURK	**Kurchatov**	**23.77**	**60**	*i* P	**P**	**03 47 36.1**	**+2.3**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**51.32**	**101**	*i* P	**P**	**03 51 27.2**	**+1.3**

*GCG **18** 03:48:55.8±1.5, 14.42N×93.09W, h56km±98km, MD4.0, Presumed earthquake*
*MEX **18** 03:48:56.4±0.7, 14.46N×93.32W, h16km±999km, MD4.2*
ISC 18 03:48:52.7±2.2, 14.3N±0.1×93.25W±0.09, h51km, n11, σ2s55/17, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**1.14**	**56**	*e*P	**Pn**	**03 49 13.0**	**+0.7**
THIG				*e*S	**Sn**	**03 49 25.7**	**-1.2**
SMCA	**Catarina**	**1.27**	**63**	*i* P	**Pn**	**03 49 14.9**	**+0.8**
PCIG		**1.42**	**1**	*e*P	**Pn**	**03 49 14.7**	**-1.4**
PCIG				*e*S	**Sn**	**03 49 29.6**	**-4.0**
STG2	**El Palmar, Qui**	**1.82**	**85**	*i* P	Pn	03 49 20.0	-1.7
STG2				*e*S	**Sn**	**03 49 40.2**	**-3.6**
STG5	**El Palmar, Qui**	**1.84**	**86**	*i* P	Pn	03 49 20.1	-1.9
STG5				*i* S	**Sn**	**03 49 40.3**	**-3.9**
STG8	**El Palmar, Qui**	**1.84**	**84**	*i* P	Pn	03 49 20.2	-2.0
STG8				*e*S	**Sn**	**03 49 40.2**	**-4.3**
CCIG	**Comitan**	**2.26**	**28**	*e*P	**Pn**	**03 49 30.5**	**+2.7**
CCIG				*e*S	**Sn**	**03 49 56.6**	**+2.0**
TGIG		**2.49**	**3**	*e*P	**Pn**	**03 49 31.9**	**+1.1**
TGIG				*e*S	**Sn**	**03 50 00.9**	**+0.8**
APG	**El Apazote**	**2.79**	**75**	*i* P	**Pn**	**03 49 37.4**	**+2.3**
CMIG	**Matias Romero**	**3.21**	**331**	*e*P	**Pn**	**03 49 41.0**	**+0.3**
CMIG				*e*S	**Sn**	**03 50 18.0**	**+0.2**
NUBE	**Las Nubes**	**3.38**	**96**	*i* P	**Pn**	**03 49 45.4**	**+2.2**
NUBE				*e*S	**Sn**	**03 50 22.9**	**+0.7**

*NOU **18** 03:53:41.7, 20.28S×176.62W, h484km, mb4.8/17, Fiji Islands Region*
*NEIC **18** 03:53:53.2±1.5, 20.4S±0.1×177.8W±0.1, h524km±6km, mb4.5/151, Error ellipse: s-maj=16.8km s-min=15.5km az=172.0*
*IDC **18** 03:53:54.7±1.1, 20.47S×177.91W, h537km±11km, mb3.9/18, mbtmp4.8/21, Error ellipse: s-maj=12.2km s-min=9.8km az=147.0*
ISC 18 03:53:53.9±0.3, 20.45S±0.07×177.83W±0.06, h534km, n565, σ0s75/480, mb4.6/127, 28C-23D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.74**	**304**	P	**P**	**03 55 20.9**	**+0.1**
	114nm,0.3s,baz=159,slow=23,SNR=69						
MSVF	**Nonsavu**	**4.74**	**304**		**P**	**03 55 20.2**	**-0.5**
FUTU	**Fugatoga**	**6.12**	**357**		**P**	**03 55 31.3**	**-1.7**
NIUE	**Niue**	**7.57**	**81**	P	**P**	**03 55 45.8**	**-1.1**
AFI	**Afiamalu**	**8.71**	**43**	P	**P**	**03 55 54.1**	**-4.5**
	17nm,0.3s,baz=51,slow=14,SNR=6.3						
AFI				S	S	03 57 30.9	-10
	115nm,0.7s,baz=23,slow=22,SNR=13						
DZM	**Mont Dzumac**	**14.75**	**261**	P	**P**	**03 57 00.2**	**-1.0**
	30nm,0.7s,baz=82,slow=16,SNR=14						
SANVU	**Saraoutou**	**15.08**	**287**	P	**P**	**03 57 04.8**	**+0.2**
SANVU	**Saraoutou**	**15.08**	**287**	P	**P**	**03 57 04.2**	**-0.4**
GRZ	**Great Barrier**	**16.80**	**199**	P	**P**	**03 57 22.9**	**+1.6**
WCZ	**Waipu Caves**	**16.89**	**202**	P	**P**	**03 57 24.1**	**+2.0**
WMGZ	**Waiomatatini S**	**17.61**	**190**	P	**P**	**03 57 30.2**	**+1.3**
HAZ	**Te Kaha**	**17.66**	**192**	P	**P**	**03 57 28.4**	**-0.9**
HAZ				S	S	04 00 46.8	+22
MKAZ	**Moumakai**	**17.68**	**199**	P	**P**	**03 57 29.9**	**+0.4**
RUGZ	**Raukumara Rang**	**17.88**	**192**	P	**P**	**03 57 30.1**	**-1.4**
RUGZ				S	S	04 00 49.1	+20
TWGZ	**Tauwhareparae**	**18.03**	**191**	P	**P**	**03 57 33.3**	**+0.5**
TWGZ				S	S	04 00 51.4	+20
TOZ	**Tahuroa Road**	**18.16**	**197**		**P**	**03 57 34.3**	**+0.4**
TOZ	**Tahuroa Road**	**18.16**	**197**	P	**P**	**03 57 34.6**	**+0.7**
MWZ	**Matawai**	**18.27**	**192**	P	**P**	**03 57 33.8**	**-1.0**
MWZ				S	S	04 00 57.8	+23
URZ	**Urewera**	**18.28**	**193**	P	**P**	**03 57 33.8**	**-1.1**
	26nm,0.5s,baz=241,slow=2.8,SNR=26						

VNDA Vanda 57.97 185 P P 04 02 55.9 +1.2
comp=Z,1.5nm,0.7s,baz=345,slow=7.3,SNR=9.7
comp=Z,1.5nm,0.7s
VNDA Vanda 57.97 185 P P 04 02 55.6 +0.8
MBWA Marble Bar 58.02 257 P 04 02 55.7 -0.4
MBWA IAmb IAmb 04 02 56.3
comp=Z,21nm,0.8s
EDFI Ende, Flores 59.38 272 P P 04 03 05.0 -0.5
comp=Z,43nm,1.0s
LUWI Luwuk 61.08 281 P P 04 03 14.9 -1.7
LUWI Luwuk 61.08 281 P P 04 03 17.9 +1.3
comp=Z,71nm,1.2s
LBFI Labuhan Bajo, 61.16 271 P P 04 03 16.4 -0.7
GTOI Gorontalo 61.52 282 P P 04 03 21.0 +1.6
comp=Z,41nm,0.8s
DBNI Kabupaten Domp 62.63 271 P P 04 03 25.8 -0.9
comp=Z,57nm,0.8s
SPSI Sidrap Palu 62.78 276 P P 04 03 27.3 -0.4
PLAI Plampang 63.03 270 P P 04 03 28.9 -0.3
comp=Z,68nm,1.0s
TOLI2 Tolitoli 63.75 282 P P 04 03 33.0 -0.9
TOLI2 IAmb IAmb 04 03 34.6
comp=Z,20nm,0.9s
PCI Palu 63.84 279 P P 04 03 36.8 +2.3
comp=Z,114nm,0.8s
TWSI Taliwang, Sumb 63.90 270 P P 04 03 34.7 -0.1
comp=Z,47nm,1.0s
MPSI Mapaga 64.26 281 P P 04 03 37.0 -0.1
comp=Z,31nm,0.9s
TARAI Tarakan 67.57 283 P P 04 03 57.9 +0.2
SNJI Sawahan-Nganju 69.00 269 P P 04 04 07.9 +1.2
comp=Z,29nm,1.3s
PCJI Pacitan 69.42 269 P P 04 04 09.3 +0.4
QSPA South Pole Qui 69.61 180 P P 04 04 10.5 +1.2
comp=Z,9.1nm,0.7s,baz=347,slow=0.3,SNR=55
comp=Z,9.1nm,0.7s
QSPA South Pole Qui 69.61 180 P 04 04 09.9 +0.6
QSPA IAmb IAmb 04 04 11.0
comp=Z,9.6nm,0.7s
MJAR Matsushiro Arr 70.26 324 P P 04 04 13.5 0.0
comp=Z,11nm,0.6s,baz=158,slow=6.0,SNR=33
comp=Z,11nm,0.6s
MJAR Matsushiro Arr 70.26 324 P 04 04 13.2 -0.3
MJAR IAmb IAmb 04 04 14.1
comp=Z,9.5nm,0.7s
MAJO Matsushiro 70.27 324 P 04 04 12.7 -0.8
MJB9 Matsu-Tunnel 70.27 324 P P 04 04 13.4 -0.1
MJB9 IAmb IAmb 04 04 15.3
comp=Z,17nm,0.7s
JSU Suzuyama 71.60 315 P P 04 04 22.0 +0.6
BBJI Bungbulang 72.96 268 P P 04 04 29.3 -0.5
BBJI IAmb IAmb 04 04 29.7
comp=Z,10nm,0.7s
SSLB Suanglung 74.08 303 P 04 04 35.6 -0.3
TPUB Ta-pu 74.08 303 P P 04 04 35.2 -0.7
UNV Unalaska Valle 74.63 7 P P 04 04 38.9 +0.7
baz=191
YSS Yuzhno-Sakhali 75.92 333 P 04 04 46.3 +0.7
FALS False Pass 76.01 9 P P 04 04 45.6 -0.3
baz=194
PETK Petropavlovsk- 76.27 345 P P 04 04 47.6 +0.2
comp=Z,18nm,0.8s,baz=119,slow=8.3,SNR=16
comp=Z,18nm,0.8s
KASI Kota Agung 76.55 269 P P 04 04 49.6 -0.3
comp=Z,40nm,1.0s
CHNA Chernabura Isl 76.59 11 P P 04 04 49.4 +0.3
baz=198
SDPT Sand Point 76.94 10 P P 04 04 51.4 +0.4
baz=197
KSRS Korea Array 76.95 318 P P 04 04 52.6 +1.2
comp=Z,5.8nm,0.8s,baz=130,slow=6.2,SNR=15
comp=Z,5.8nm,0.8s
KSAR Wonju Array Be 76.97 318 P 04 04 52.6 +1.0
MDSI Maura Dua 77.20 270 P P 04 04 52.4 -1.0
comp=Z,800nmcomp=Z,30nm,1.0s
CHGN Chignik 78.20 11 P P 04 04 58.3 +0.5
baz=198
USRK Usuriysk Ar. 79.01 326 P P 04 05 04.0 +1.6
comp=Z,20nm,0.8s,baz=142,slow=2.8,SNR=26
comp=Z,20nm,0.8s
SII Sitkinak Islan 79.26 13 P P 04 05 03.6 +0.1
baz=202
ORV Oroville 79.54 41 P P 04 05 06.2 +0.8
BELA Belgrano 2 79.58 173 P 04 05 04.9 -0.1
R17L Mt. Peulik Vol 79.83 12 P P 04 05 06.5 +0.1
baz=200
CLC China Lake 79.86 46 P P 04 05 08.3 +1.1
NJ2 Nanjing 79.97 310 ⇑P P 04 05 09.1 +1.3
NJ2 pmax pmax
comp=Z,15nm,0.5s
OHAK Old Harbor 80.07 13 P P 04 05 07.9 +0.2
baz=203
YBH Yreka Blue Hor 80.16 39 P P 04 05 10.6 +2.0
comp=Z,0.3nm,0.7s,baz=269,slow=2.3,SNR=9.4
MDJ Mudanjiang 80.57 325 IAmb IAmb 04 05 12.9
comp=Z,22nm,0.8s
MDJ Mudanjiang 80.57 325 P P 04 05 12.1 +1.5
MDJ pmax pmax
comp=Z,35nm,0.9s
O14K Tigyukauivet M 80.58 9 P P 04 05 10.0 -0.2
baz=196
LHV Little Huntoon 80.65 43 P P 04 05 10.8 -0.4
O15K Ungalikthiuk R 80.71 9 P P 04 05 10.6 -0.4
baz=197
KDAK Kodiak Island 80.73 13 P P 04 05 10.7 -0.4
baz=204
Q16K King Salmon 80.76 11 P P 04 05 11.0 -0.2
baz=200
NVAR Mina Array Bea 80.88 43 P P 04 05 13.9 +1.2
comp=Z,2.3nm,0.8s,baz=227,slow=9.0,SNR=16
comp=Z,2.3nm,0.8s
NVAR Mina Array Bea 80.88 43 P P 04 05 12.7 0.0
Q18K Katmai Hardscr 81.04 12 P P 04 05 12.9 0.0
baz=202
M11K Mekoryuk 81.10 6 P P 04 05 13.2 +0.2
baz=191
N14K Kuskokwak Cree 81.17 8 P P 04 05 13.7 +0.5
baz=195
P17K Kvichak River 81.29 11 P P 04 05 14.1 +0.2
baz=200
O16K Kokwok River B 81.38 10 P P 04 05 14.7 +0.3
baz=199
M13K Dall Lake 81.43 7 P P 04 05 15.4 +0.8
baz=194
Q20K Shuyak Island 81.53 13 P P 04 05 15.2 -0.1
baz=204
Q19K Cape Douglas, 81.57 12 P P 04 05 15.6 +0.1
baz=203
N15K Kwethluk River 81.62 9 IAmb IAmb 04 05 18.4
comp=Z,25nm,1.3s
N15K Kwethluk River 81.62 9 P P 04 05 15.7 0.0
baz=197
P18K Big Mountain, 81.69 11 P P 04 05 15.5 -0.6
baz=201
O17K Koliganek Bris 81.72 10 P P 04 05 16.0 -0.1
baz=200
M14K Bethel 81.93 8 IAmb IAmb 04 05 19.1
comp=Z,16nm,0.9s
M14K Bethel 81.93 8 P P 04 05 17.6 +0.4
baz=195
J05D Fort Rock, OR 81.97 38 IAmb IAmb 04 05 20.6
comp=Z,18nm,0.9s
M15K Kasigluk River 82.05 8 P P 04 05 18.0 +0.2
baz=196
N16K Nishlik Lake 82.11 9 P P 04 05 18.2 0.0
baz=198
O18K Koktuh Hills 82.13 11 IAmb IAmb 04 05 18.8
comp=Z,16nm,0.9s
O18K Koktuh Hills 82.13 11 P P 04 05 18.5 +0.2
baz=201
P19K Oil Pt 82.32 12 P P 04 05 19.3 +0.1
baz=203
N17K Nushagak Hills 82.41 10 P P 04 05 20.0 +0.4
baz=199
L14K Kuka Creek 82.42 7 IAmb IAmb 04 05 21.5
comp=Z,19nm,1.0s
L14K Kuka Creek 82.42 7 P P 04 05 19.7 +0.1
baz=194
PINE Pine Mountain 82.45 38 IAmb IAmb 04 05 22.7
comp=Z,9.3nm,0.8s
BNX BinXian 82.48 325 ⇓P P 04 05 20.3 0.0
BNX pmax pmax
comp=Z,25nm,0.8s
WHN Wuhan 82.54 306 P P 04 05 22.3 +1.3
WHN pmax pmax
comp=Z,32nm,1.0s
M16K Timber Creek 82.61 9 IAmb IAmb 04 05 23.1
comp=Z,28nm,1.1s
M16K Timber Creek 82.61 9 P P 04 05 20.7 0.0
baz=198
O19K Port Alsworth 82.61 12 P P 04 05 20.3 -0.3
baz=202
ILSW Iliamna Southw 82.64 12 IAmb IAmb 04 05 21.9
comp=Z,18nm,0.9s
HOM Homer 82.65 13 P P 04 05 21.0 +0.1
baz=205
K13K Kusilvak Mount 82.78 6 P P 04 05 21.8 +0.4
baz=192
N18K Kilae Creek 82.78 11 P P 04 05 21.6 +0.1
baz=201
L15K Ungalak Mounta 82.89 8 P P 04 05 22.0 -0.1
baz=195
BRSE Bradley Lake S 82.92 13 P P 04 05 22.0 -0.3
baz=205
N19K Bonanza Creek 83.15 11 P P 04 05 23.5 0.0
baz=202
L16K Owhat River 83.19 9 IAmb IAmb 04 05 25.5
comp=Z,14nm,1.1s
L16K Owhat River 83.19 9 P P 04 05 23.3 -0.2
baz=197
M17K Holitna River 83.20 10 IAmb IAmb 04 05 25.9
comp=Z,12nm,0.9s
M17K Holitna River 83.20 10 P P 04 05 24.3 +0.7
baz=199
TIA Tai'an 83.36 312 P P 04 05 25.6 +0.6
TIA pmax pmax
comp=Z,13nm,0.9s
K15K Wolf Creek Mou 83.48 8 P P 04 05 25.4 +0.5
baz=195
SEW Seward 83.53 14 P P 04 05 25.8 +0.6
baz=207
M18K Stony River 83.55 10 P P 04 05 25.5 +0.1
baz=201
Q23K Middleton Isla 83.67 16 P P 04 05 26.1 +0.1
baz=209
J14K Nanvaranak Lak 83.69 7 P P 04 05 26.0 +0.1
baz=193
CAPN Captain Cook N 83.76 13 P P 04 05 26.3 -0.1
baz=205
L17K Donlin 83.77 9 P P 04 05 26.4 0.0
baz=198
P23K Montague Islan 83.91 15 P P 04 05 26.9 -0.3
baz=208
KULM Kulim 83.92 278 P P 04 05 27.2 -1.1
N20K Mount Spurr 83.94 12 P P 04 05 26.7 -0.7
baz=204
SPCR Spurr Chakacha 83.94 12 P P 04 05 26.6 -0.8
baz=204
SPU Mount Spurr 83.96 12 IAmb IAmb 04 05 32.4
comp=Z,14nm,1.4s
GAMB Gambell 84.09 3 P P 04 05 27.7 -0.2
baz=186
L18K Granite Mounta 84.09 10 P P 04 05 28.2 +0.2
baz=200
ELK Elko 84.14 43 P P 04 05 30.2 +1.1
comp=Z,0.5nm,0.4s,baz=330,slow=1.3,SNR=4.5
comp=Z,0.5nm,0.4s
K17K Iditarod 84.32 9 P P 04 05 29.4 +0.3
baz=198
RC01 Rabbit Creek A 84.36 13 P P 04 05 29.6 +0.3
baz=206
L19K White Mountain 84.36 11 P P 04 05 29.8 +0.4
baz=202
M20K Styx River 84.39 11 P P 04 05 29.6 -0.1
baz=203
G08A Pilot Rock 84.48 37 IAmb IAmb 04 05 32.6
comp=Z,13nm,1.3s
J16K Anvik River 84.55 8 P P 04 05 30.6 +0.3
baz=196
KAIM Kayak Island 84.60 16 P P 04 05 30.6 0.0
baz=211
RPSI Rantau Prapat 84.61 275 P 04 05 31.2 -0.5
RPSI IAmb IAmb 04 05 32.9
comp=Z,10.0nm,0.8s
CRAG Craig 84.61 24 P P 04 05 31.0 +0.3
baz=221
PSI Prapat 84.64 275 P P 04 05 32.1 +0.1
GLI Glacier Island 84.76 15 P P 04 05 31.1 -0.2
baz=209
SKT Skwentna 84.79 12 P P 04 05 31.2 -0.3
baz=205
EYAK Cordova Ski Ar 84.80 15 P P 04 05 31.7 +0.2
baz=210
HAWA Hanford 84.82 36 P 04 05 31.5 -0.5
HAWA IAmb IAmb 04 05 34.7
comp=Z,15nm,1.5s
J17K VABM Dome 84.86 8 P P 04 05 31.6 -0.1
baz=198
M22K Willow 84.87 13 P P 04 05 31.6 -0.2
baz=206
KNK Knik Glacier 84.92 14 P P 04 05 32.0 -0.1
baz=207
PMR Palmer 84.94 13 P P 04 05 31.8 -0.4
baz=207
SIT Sitka 85.02 22 P P 04 05 31.9 -0.7
baz=219
V35K Ketchikan 85.08 24 P P 04 05 31.8 -1.2
baz=223
U33K Whale Pass 85.10 23 P P 04 05 32.2 -0.9
baz=221
I17K Unalakleet 85.12 8 P P 04 05 32.3 -0.7
baz=196
J18K Innoko River 85.27 9 IAmb IAmb 04 05 35.2
comp=Z,8.3nm,1.1s
J18K Innoko River 85.27 9 P P 04 05 33.5 -0.2
baz=200
ANM Nome 85.29 5 P P 04 05 33.8 -0.1
baz=192
SML Sawmill 85.30 14 P P 04 05 32.9 -1.1
baz=208
HEH HeiHe 85.35 328 *e*P P 04 05 34.9 +0.5
HEH pmax pmax
comp=Z,11nm,1.3s
S31K Pelican 85.42 21 P P 04 05 33.7 -0.8
baz=219
M23K Glacier View 85.42 14 P P 04 05 33.7 -0.8
baz=208
CUT Chulitna 85.43 12 P P 04 05 32.3 -2.2
baz=206
BMRM Bremner River 85.45 16 P P 04 05 34.0 -0.8
baz=211
MESA MESA 85.48 17 P P 04 05 34.8 -0.3
baz=213
PPLA Purkeypile 85.50 11 P P 04 05 34.6 -0.5
baz=204
SCM Sheep Creek Mo 85.55 14 IAmb IAmb 04 05 36.2
comp=Z,12nm,0.8s
SCM Sheep Creek Mo 85.55 14 P P 04 05 34.3 -0.9
baz=208
KLU Klutina 85.58 15 P P 04 05 34.7 -0.7
baz=210
K20K Telida 85.59 10 IAmb IAmb 04 05 36.4
comp=Z,16nm,1.2s
K20K Telida 85.59 10 P P 04 05 35.1 -0.2
baz=202
S32K Kilisnoo 85.60 22 P P 04 05 35.7 +0.3
baz=220
WRAK Wrangell Islan 85.61 23 P P 04 05 35.3 -0.2
baz=222
HNS HongShan 85.63 312 ⇓P P 04 05 37.1 +1.0
HNS pmax pmax
comp=Z,18nm,0.9s
CRQE Cirque 85.65 16 P P 04 05 35.6 -0.2
baz=212
G15K Niukluk 85.83 6 P P 04 05 36.4 0.0
baz=193
LYN LuoYang 85.85 309 P P 04 05 38.9 +1.7
LYN pmax pmax
comp=Z,46nm,0.8s
F10A Beach Ranch, E 85.87 38 IAmb IAmb 04 05 38.7
comp=Z,11nm,0.9s
PINM Pinnacle 85.89 18 P P 04 05 36.6 -0.3
baz=215
J19K Poorman 85.93 10 P P 04 05 36.9 0.0
baz=201
BJI2 Beijing 85.96 315 P P 04 05 38.3 +0.7
BJI2 pmax pmax
comp=Z,5.0nm,0.8s
BJT Baijiatuan 85.96 315 IAmb IAmb 04 05 39.3
comp=Z,8.0nm,0.8s
N25K Chitina, Valde 86.00 15 P P 04 05 37.1 -0.3
baz=211
M24K Tolsona, Glenn 86.06 14 P P 04 05 37.5 -0.1
baz=210
COYC Coyhaique 86.08 137 P P 04 05 38.2 0.0
COYC IAmb IAmb 04 05 41.0
comp=Z,11nm,0.8s
TNA Tin City 86.08 4 P P 04 05 37.6 +0.1
baz=189
F14K Arctic Creek 86.11 5 P P 04 05 37.5 -0.2
baz=191
WAT6 Susitna Watana 86.12 13 P P 04 05 37.7 -0.4
baz=208
U35K Hyder 86.13 25 P P 04 05 37.7 -0.3
baz=224
WAT1 Susitna Watana 86.17 13 P P 04 05 37.6 -0.5
baz=207
MCARA McCarthy VSAT 86.20 16 P P 04 05 38.1 -0.2
baz=212
H17K Granite Mounta 86.23 8 P P 04 05 37.9 -0.5
baz=197
R32K Eaglecrest 86.24 21 P P 04 05 38.4 -0.1
baz=220
LOGN Logan Glacier 86.28 17 IAmb IAmb 04 05 40.9
comp=Z,6.9nm,1.1s
BARN Barnard Glacie 86.29 17 IAmb IAmb 04 05 40.4
comp=Z,8.5nm,1.0s
CTG Chitna Glacier 86.30 17 P P 04 05 38.5 -0.4
baz=214
J20K Nowinta River 86.34 10 P P 04 05 38.7 -0.1
baz=202
KTH Kantishna Hill 86.34 12 IAmb IAmb 04 05 38.9
comp=Z,8.6nm,1.0s
TRF Thorofare Moun 86.37 12 IAmb IAmb 04 05 39.5
comp=Z,12nm,0.8s
TRF Thorofare Moun 86.37 12 P P 04 05 38.6 -0.6
baz=206,SNR=9.5
CHUM Lake Minchumin 86.39 11 P P 04 05 38.7 -0.3
baz=204
G16K Koyuk River 86.39 6 P P 04 05 39.2 +0.2
baz=194
GCSA Galena City Sc 86.45 9 P P 04 05 39.1 -0.2
baz=200
O28M Mount Upton 86.46 17 P P 04 05 39.5 -0.3
baz=215
F15K North Star Dit 86.48 5 P P 04 05 39.5 0.0
baz=192
O29M Mount Kennedy 86.54 18 P P 04 05 40.1 +0.1
baz=216
HARP HAARP 86.55 15 P P 04 05 39.6 -0.3
baz=210
H18K Honhosa River 86.63 8 P P 04 05 40.0 -0.2
baz=198
DHY Denali Highway 86.64 13 P P 04 05 40.3 -0.1
baz=208
ELIB Princess Elisa 86.71 186 *d*P P 04 05 40.8 0.0
comp=Z,6.1nm,0.8s
T35M Bob Quinn 86.81 24 P P 04 05 40.9 -0.3
baz=224
I20K Naaghedeneel 86.86 10 P P 04 05 41.2 -0.1
baz=202
SKAG Skagway 86.88 20 P P 04 05 41.0 -0.4
baz=219
P30M Million Dollar 86.89 19 P P 04 05 40.9 -0.7
baz=218
MCK McKinley 86.89 12 P 04 05 41.7 +0.2
MCK IAmb IAmb 04 05 42.6
comp=Z,13nm,0.9s
MCK McKinley 86.89 12 P P 04 05 40.3 -1.2
baz=207,SNR=8.0
TXAR Lajitas Array 86.90 57 P P 04 05 44.1 +1.6
comp=Z,1.4nm,0.8s,baz=214,slow=6.8,SNR=17
comp=Z,1.4nm,0.8s
TXAR Lajitas Array 86.90 57 P P 04 05 41.4 -1.1
PAX Paxson 86.97 14 P P 04 05 41.3 -0.6
baz=210
YUK8 Steele Glacier 87.00 17 P P 04 05 41.9 -0.4
baz=215
M26K Nabesna, AK 87.07 15 IAmb IAmb 04 05 43.9
comp=Z,5.9nm,1.0s
M26K Nabesna, AK 87.07 15 P P 04 05 42.5 +0.1
baz=212
YUK6 Outpost Mounta 87.12 18 P P 04 05 42.6 -0.3
baz=217
S34M Telegraph Cree 87.16 23 P P 04 05 43.2 +0.4
baz=223
YUK3 Moose Creek 87.21 17 P P 04 05 43.4 +0.1
baz=215,SNR=15
ANMO Albuquerque 87.25 51 P P 04 05 43.4 -0.7
H19K Roundabout Mou 87.25 9 IAmb IAmb 04 05 44.5
comp=Z,6.8nm,0.9s
H19K Roundabout Mou 87.25 9 P P 04 05 43.3 +0.3
baz=200
HYT Haines Junctio 87.28 19 P P 04 05 44.0 +0.5
baz=217
G18K Tagagawik 87.31 8 P P 04 05 43.3 0.0
baz=198
M27K Edge Creek, AK 87.32 16 IAmb IAmb 04 05 45.5
comp=Z,12nm,1.2s
M27K Edge Creek, AK 87.32 16 P P 04 05 43.7 0.0
baz=213,SNR=7.2
YUK4 Talbot Arm 87.36 18 P P 04 05 43.5 -0.5
baz=216
H20K Anotleneega Mo 87.45 9 P P 04 05 44.4 +0.3
baz=201
TPB01 Permian Basin 87.50 56 IAmb IAmb 04 05 46.8
comp=Z,2.9nm,0.8s
P32M Atlin 87.51 21 P P 04 05 44.7 +0.1
baz=221
L26K Log Cabin Wild 87.52 15 P P 04 05 44.6 +0.1
baz=212
F17K Baldwin Pennin 87.53 7 P P 04 05 44.4 0.0
baz=196
Q32M Nakina River 87.53 22 P P 04 05 44.7 -0.1
baz=222
K24K Donnelly Dome 87.62 14 P P 04 05 44.7 -0.2
baz=210
BVCY Beaver Creek 87.63 16 P P 04 05 44.0 -1.0
baz=214,SNR=6.3
I21K Tanana 87.63 11 IAmb IAmb 04 05 46.2
comp=Z,9.4nm,1.0s
I21K Tanana 87.63 11 P P 04 05 44.8 -0.1
baz=204,SNR=8.2
NEA2 Nenana 87.64 12 IAmb IAmb 04 05 46.1
comp=Z,5.0nm,0.9s
NEA2 Nenana 87.64 12 P P 04 05 44.5 -0.4
baz=207,SNR=5.2
O30N Mendenhall 87.67 19 P P 04 05 44.9 -0.3
baz=219
MLY Manley 87.72 11 P P 04 05 44.7 -0.7
baz=205,SNR=7.1
G19K Purcell Mounta 87.75 8 IAmb IAmb 04 05 46.6
comp=Z,5.7nm,0.9s
G19K Purcell Mounta 87.75 8 P P 04 05 45.4 0.0
baz=199
RIDG Independent Ri 87.78 14 IAmb IAmb 04 05 46.9
comp=Z,18nm,1.4s
RIDG Independent Ri 87.78 14 P P 04 05 45.2 -0.5
baz=211
F18K Selawik 87.86 7 P P 04 05 45.5 -0.4
baz=197
DOT Dot Lake 87.88 14 IAmb IAmb 04 05 47.3
comp=Z,9.2nm,1.2s
HDA Harding Lake 87.90 13 IAmb IAmb 04 05 46.7
comp=Z,6.7nm,0.7s
HDA Harding Lake 87.90 13 P P 04 05 46.2 0.0
baz=209,SNR=9.2
N30M Aishikik Lake 87.91 18 P P 04 05 45.5 -0.9
baz=218
L27K Beaver Creek, 87.92 16 P P 04 05 46.1 -0.3
baz=213
H21K Melozitna Rive 87.93 10 IAmb IAmb 04 05 48.5
comp=Z,4.8nm,1.0s
H21K Melozitna Rive 87.93 10 P P 04 05 46.7 +0.3
baz=203,SNR=6.2
CCB Clear Creek Bu 87.94 12 IAmb IAmb 04 05 46.6
comp=Z,8.6nm,0.9s
BCAR Beaver Creek A 87.94 16 P 04 05 47.1 +0.6
DLBC Dease Lake 87.95 23 P P 04 05 46.4 -0.2
baz=224
WHY Whitehorse 87.95 20 P P 04 05 46.4 -0.3
baz=220
XLT XiLinHaoTe 88.01 319 *e*P P 04 05 47.8 +0.5
XLT pmax pmax
comp=Z,13nm,0.8s
I23K Minto, Yukon-K 88.08 12 IAmb IAmb 04 05 47.4
comp=Z,5.6nm,1.0s
I23K Minto, Yukon-K 88.08 12 P P 04 05 47.2 +0.2
baz=206
IMAR Indian Mountai 88.08 10 P P 04 05 47.1 +0.1
COLA College 88.13 12 P P 04 05 47.0 -0.2
SCRK Sand Creek 88.18 14 P P 04 05 47.6 0.0
baz=211

XAN	Xi'an	88.23	307	⇑P		P	04 05 49.9	+1.4
XAN				pP		PcP	04 05 54.3	+4.6
XAN				pmax		pmax		
	comp=Z,48nm,0.9s							
IL31		88.23	13	IAmb		IAmb	04 05 48.2	
	comp=Z,11nm,1.2s							
ILAR	Eielson Array	88.23	13	P		P	04 05 47.4	-0.4
	comp=Z,3.4nm,0.9s,baz=221,slow=4.8,SNR=23							
	comp=Z,3.4nm,0.9s							
P33M	Teslin, Yukon	88.28	21	P		P	04 05 48.4	+0.3
	baz=222							
M29M	Somme Creek	88.30	17	IAmb		IAmb	04 05 49.8	
	comp=Z,5.7nm,0.8s							
M29M	Somme Creek	88.30	17	P		P	04 05 48.6	+0.3
	baz=216							
R33M	Jennings River	88.31	22	P		P	04 05 48.2	-0.1
	baz=223							
F19K	Shaleruckik Mo	88.31	8	IAmb		IAmb	04 05 48.9	
	comp=Z,5.9nm,0.8s							
F19K	Shaleruckik Mo	88.31	8	P		P	04 05 47.8	-0.2
	baz=199							
N31M	Braeburn, Yuko	88.32	19	P		P	04 05 48.2	-0.1
	baz=219							
H22K	Ishtalitna Cre	88.39	11	IAmb		IAmb	04 05 49.5	
	comp=Z,9.0nm,0.9s							
H22K	Ishtalitna Cre	88.39	11	P		P	04 05 48.5	0.0
	baz=205							
J25K	Salcha River,	88.42	13	IAmb		IAmb	04 05 49.0	
	comp=Z,4.5nm,0.9s							
J25K	Salcha River,	88.42	13	P		P	04 05 48.7	+0.1
	baz=210							
POKR	Poker Plat Res	88.43	12	P		P	04 05 48.4	-0.2
	baz=208							
E18K	Tukpahlearik C	88.54	7	IAmb		IAmb	04 05 50.4	
	comp=Z,5.7nm,1.0s							
E18K	Tukpahlearik C	88.54	7	P		P	04 05 48.8	-0.3
	baz=196							
D17K	Noatak River	88.57	6	P		P	04 05 49.4	+0.2
	baz=194							
G21K	Allakaket	88.61	10	IAmb		IAmb	04 05 50.6	
	comp=Z,8.1nm,0.9s							
G21K	Allakaket	88.61	10	P		P	04 05 49.8	+0.3
	baz=203,SNR=9.4							
F20K	Avaraart Lake	88.79	8	IAmb		IAmb	04 05 51.4	
	comp=Z,6.2nm,0.9s							
F20K	Avaraart Lake	88.79	8	P		P	04 05 50.1	-0.1
	baz=201,SNR=10							
PDAR	Pinedale Array	88.82	43	P		P	04 05 51.2	-0.1
	comp=Z,2.1nm,0.8s,baz=212,slow=2.9,SNR=16							
	comp=Z,2.1nm,0.8s							
PDAR	Pinedale Array	88.82	43	P		P	04 05 51.8	+0.5
YHL	Hebgen Lake	88.84	41	IAmb		IAmb	04 05 54.1	
	comp=Z,6.2nm,1.0s							
VNA1	Neumayer--Stat	88.85	177	⇓P		P	04 05 56.6	+5.9
	comp=Z,1.7nm,0.1s							
M30M	Minto, Yukon	88.88	18	P		P	04 05 50.9	0.0
	baz=218,SNR=10.0							
N32M	Quiet Lake	88.90	20	P		P	04 05 51.0	0.0
	baz=221							
RDOG	Red Dog Mine	88.93	6	P		P	04 05 51.3	+0.4
	baz=194							
L29M	L29M	88.93	17	P		P	04 05 51.3	+0.3
	baz=217							
C16K	Lisburne Hills	88.94	5	IAmb		IAmb	04 05 52.6	
	comp=Z,8.2nm,1.1s							
C16K	Lisburne Hills	88.94	5	P		P	04 05 51.2	+0.3
	baz=192							
E19K	Redstone River	88.97	8	IAmb		IAmb	04 05 52.3	
	comp=Z,10nm,0.8s							
E19K	Redstone River	88.97	8	P		P	04 05 51.2	+0.1
	baz=199,SNR=13							
H24K	Noodor Dome	88.98	12	P		P	04 05 51.7	+0.4
	baz=208							
PRP	Porcupine Dome	89.17	13	IAmb		IAmb	04 05 53.7	
	comp=Z,4.5nm,1.0s							
PRP	Porcupine Dome	89.17	13	P		P	04 05 52.4	+0.2
	baz=210,SNR=5.4							
PLCA	Paso Flores	89.19	133	P		P	04 05 53.4	+0.4
	comp=Z,1.7nm,0.8s,baz=247,slow=5.7,SNR=4.3							
	comp=Z,1.7nm,0.8s							
F21K	Alatna River	89.27	9	P		P	04 05 53.0	+0.5
	baz=203							
M31M	Drury Creek, Y	89.29	19	P		P	04 05 52.8	0.0
	baz=220							
C17K	DeLong Mountai	89.32	5	P		P	04 05 52.6	-0.1
	baz=194							
G23K	Bananza Creek	89.37	11	P		P	04 05 53.3	+0.3
	baz=206							
DAWY	Dawson	89.37	16			P	04 05 53.7	+0.6
DAWY				IAmb		IAmb	04 05 54.5	
	comp=Z,6.6nm,0.9s							
DAWY	Dawson	89.37	16	P		P	04 05 53.1	0.0
	baz=216,SNR=6.5							
HHC	Hu-ho-hao-te	89.43	314	*e*P		P	04 05 54.3	+0.3
HHC				pmax		pmax		
	comp=Z,7.0nm,0.8s							
HHC				pmax		pmax		
	comp=Z,110nm,5.2s							
KMI2	Kunming	89.47	297	P		P	04 05 56.5	+1.8
KMI2				pmax		pmax		
	comp=Z,19nm,0.9s							
I26K	Coal Creek Min	89.50	14	IAmb		IAmb	04 05 55.0	
	comp=Z,7.4nm,1.1s							
I26K	Coal Creek Min	89.50	14	P		P	04 05 53.6	0.0
	baz=212							
WTLY	Watson Lake, Y	89.59	22	P		P	04 05 54.6	+0.4
	baz=225							
C18K	Utukok River	89.67	6	P		P	04 05 54.8	+0.4
	baz=196							
K29M	Barlow Dome	89.68	17	IAmb		IAmb	04 05 56.4	
	comp=Z,9.3nm,1.0s							
K29M	Barlow Dome	89.68	17	P		P	04 05 54.7	0.0
	baz=217							
COLD	Coldfoot	89.80	10	IAmb		IAmb	04 05 57.1	
	comp=Z,7.0nm,1.0s							
COLD	Coldfoot	89.80	10	P		P	04 05 55.6	+0.6
	baz=206,SNR=7.9							
G24K	Hadweenzic Riv	89.82	12	P		P	04 05 55.5	+0.5
	baz=208							
D19K	Kuna River	89.85	7	IAmb		IAmb	04 05 56.3	
	comp=Z,8.8nm,1.0s							
D19K	Kuna River	89.85	7	P		P	04 05 55.6	+0.3
	baz=198							
E20K	Nigu River	89.86	8	P		P	04 05 55.3	0.0
	baz=200,SNR=12							
MAYO	Mayo, Yukon	89.94	17	P		P	04 05 55.8	+0.2
	baz=219							
J29N	Klondike Camp	89.99	16	IAmb		IAmb	04 05 57.8	
	comp=Z,6.0nm,0.7s							
J29N	Klondike Camp	89.99	16	P		P	04 05 56.5	+0.6
	baz=217							
I27K	Kandik River	90.10	14	IAmb		IAmb	04 05 57.6	
	comp=Z,7.3nm,1.4s							
I27K	Kandik River	90.10	14	P		P	04 05 56.3	-0.2
	baz=214							
G25K	Bearman Lake	90.14	12	P		P	04 05 55.9	-0.6
	baz=210							
D20K	Etivluk River	90.24	8	IAmb		IAmb	04 05 58.3	
	comp=Z,6.8nm,0.9s							
D20K	Etivluk River	90.24	8	P		P	04 05 57.4	+0.4
	baz=200,SNR=7.6							
CMAR	Chiang Mai Arr	90.25	290	P		P	04 06 00.1	+1.9
	comp=Z,12nm,1.0s,baz=122,slow=3.1,SNR=44							
	comp=Z,12nm,1.0s							
CMAR	Chiang Mai Arr	90.25	290			P	04 05 58.7	+0.6
C19K	Lookout Ridge	90.27	6	P		P	04 05 57.9	+0.8
	baz=197							
E22K	Anaktuvuk Pass	90.37	9	IAmb		IAmb	04 05 58.9	
	comp=Z,6.0nm,0.9s							
E22K	Anaktuvuk Pass	90.37	9	P		P	04 05 58.0	+0.4
	baz=204							
I28M	Miner Creek	90.37	15	IAmb		IAmb	04 05 58.7	
	comp=Z,4.4nm,0.9s							
I28M	Miner Creek	90.37	15	P		P	04 05 58.2	+0.4
	baz=215							
CHTO	Chiang Mai	90.37	290			P	04 05 57.6	-1.2
F24K	Squaw Lake	90.47	11	P		P	04 05 59.0	+0.9
	baz=208							
J30M	Hart River	90.58	17	P		P	04 05 59.4	+0.6
	baz=218							
H27K	Steamboat Moun	90.65	14	IAmb		IAmb	04 06 01.0	
	comp=Z,5.1nm,1.1s							
H27K	Steamboat Moun	90.65	14	P		P	04 05 59.7	+0.7
	baz=214							
E23K	Chandalar	90.65	10	IAmb		IAmb	04 06 00.4	
	comp=Z,4.3nm,1.1s							
E23K	Chandalar	90.65	10	P		P	04 05 59.7	+0.7
	baz=206							

I29M	Ogilvie Camp,	90.70	15	P		P	04 05 59.6	+0.4
	baz=217							
G26K	Porcupine Rive	90.77	13	IAmb		IAmb	04 06 01.8	
	comp=Z,11nm,1.1s							
G26K	Porcupine Rive	90.77	13	P		P	04 05 60.0	+0.6
	baz=212							
TGTN	Hyland Airport	90.77	21	P		P	04 05 59.4	-0.2
	baz=226							
PZH	PanZhiHua	90.82	298	P		P	04 06 02.8	+2.0
E24K	Your Creek	90.86	11	P		P	04 06 00.3	+0.4
	baz=207							
C21K	Knifeblade Rid	90.89	8	P		P	04 06 00.1	+0.1
	baz=202							
CD2	Chengdu	90.89	303	P		P	04 06 01.8	+0.9
F25K	Christian Rive	90.95	12	P		P	04 06 00.5	+0.1
	baz=210							
I30M	Mount Dempster	91.08	16	IAmb		IAmb	04 06 02.2	
	comp=Z,5.1nm,0.9s							
I30M	Mount Dempster	91.08	16	P		P	04 06 01.2	+0.1
	baz=218							
G27K	Doyon Strip	91.10	14	P		P	04 06 01.6	+0.6
	baz=214							
TOLK	Toolik Lake Re	91.18	10	P		P	04 06 02.3	+1.0
	baz=206							
A19K	Wainwright	91.19	6	P		P	04 06 02.0	+0.8
	baz=196							
D23K	Nanushuk River	91.30	9	P		P	04 06 02.9	+1.1
	baz=205,SNR=5.4							
F26K	Sheenjek River	91.33	12	P		P	04 06 03.1	+1.1
	baz=211							
KOTAN	Kotaneelee Air	91.34	24	P		P	04 06 02.9	+0.7
	baz=229							
B21K	Ikpikpuk River	91.35	8	P		P	04 06 02.6	+0.6
	baz=202							
H29M	Whitestone	91.37	15	P		P	04 06 02.9	+0.6
	baz=216							
B20K	Meade River	91.40	7	IAmb		IAmb	04 06 02.6	
	comp=Z,10nm,1.4s							
B20K	Meade River	91.40	7	P		P	04 06 02.6	+0.4
	baz=199							
E25K	Arctic Village	91.42	12	P		P	04 06 02.9	+0.4
	baz=210							
D24K	Happy Valley	91.77	10	P		P	04 06 04.9	+0.9
	baz=207							
EPYK	Eagle Plains	91.90	15	P		P	04 06 05.6	+0.9
	baz=218							
G29M	Pine Creek	92.01	15	P		P	04 06 05.8	+0.6
	baz=217							
H31M	Peel River	92.07	16	P		P	04 06 06.5	+1.0
	baz=220							
C23K	Itkillik River	92.10	9	P		P	04 06 06.3	+0.8
	baz=205							
F28M	Old Crow	92.16	14	P		P	04 06 06.6	+0.7
	baz=215							
B22K	Teshekpuk Lake	92.17	8	P		P	04 06 06.3	+0.5
	baz=203							
E27K	Coleen River	92.27	13	P		P	04 06 06.9	+0.6
	baz=214							
C24K	Franklin Bluff	92.29	10	P		P	04 06 06.7	+0.3
	baz=207							
D25K	Kavik River	92.33	11	P		P	04 06 07.3	+0.7
	baz=209							
G30M	tAoh Zrail Nji	92.50	15	IAmb		IAmb	04 06 08.4	
	comp=Z,7.4nm,1.0s							
G30M	tAoh Zrail Nji	92.50	15	P		P	04 06 07.7	+0.2
	baz=218							
A22K	Sinclair Lake	92.59	7	P		P	04 06 08.0	+0.2
	baz=201							
A21K	Barrow	92.71	7	P		P	04 06 08.6	+0.4
	baz=200							
LZDM	Lanzhou Array	92.92	307	P		P	04 06 11.8	+1.3
	comp=Z,0.9nm,0.3s,baz=108,slow=8.0,SNR=3.8							
	comp=Z,0.9nm,0.3s							
E28M	Babbage River	93.05	13	IAmb		IAmb	04 06 11.2	
	comp=Z,4.9nm,1.2s							
E28M	Babbage River	93.05	13	P		P	04 06 10.1	+0.2
	baz=216							
C27K	Jago River	93.07	11	P		P	04 06 10.8	+0.8
	baz=212							
C26K	Camden Bay	93.10	11	P		P	04 06 10.8	+0.8
	baz=211							
F30M	Barrier River	93.10	15	P		P	04 06 10.4	+0.2
	baz=219							
E29M	Blow River	93.23	14	P		P	04 06 11.0	+0.2
	baz=217							
D27M	Malcolm River	93.27	12	P		P	04 06 10.8	-0.2
	baz=214							
F31M	Tsiigehtchic	93.47	16	P		P	04 06 11.3	-0.5
	baz=221							
D28M	Stokes Point	93.80	13	P		P	04 06 13.2	-0.1
	baz=216							
INK	Inuvik	94.19	15	P		P	04 06 15.0	0.0
	baz=221							
C36M	Paulatuk	97.36	17	P		Pdif	04 06 28.7	-0.6
	baz=230							
A36M	Sachs Harbour	98.79	14	P		Pdif	04 06 35.1	-0.5
	baz=229							
ZALV	Zalesovo Beam	110.55	321	PKiKP		**PKiKP**	04 11 24.8	**-0.7**
	comp=Z,1.5nm,0.9s,baz=20,slow=4.6,SNR=4.3							
MKAR	Makanchi Array	111.28	313	PKiKP		**PKiKP**	04 11 26.1	**-1.0**
	comp=Z,0.5nm,0.6s,baz=78,slow=1.8,SNR=6.4							
KURK	Kurchatov	114.06	317			PKPdf	04 11 31.4	-0.8
KURBB	Kurchatov Arra	114.12	317	PKP		PKPdf	04 11 31.4	-0.9
	comp=Z,0.4nm,0.3s,baz=93,slow=2.0,SNR=6.2							
BVAR	Borovoye Array	119.14	320	PKP		**PKPdf**	04 11 41.2	**-0.7**
	comp=Z,1.4nm,0.4s,baz=180,slow=0.3,SNR=7.4							
ARTI	Arti	125.36	325	PKP		**PKPdf**	04 11 52.5	**-1.3**
	comp=Z,5.9nm,0.8s,baz=134,slow=3.5,SNR=5.4							
ARTI	Arti	125.36	325			**PKPdf**	04 11 53.2	**-0.6**
AKTO	Aktyubinsk	127.14	318	PKP		**PKPdf**	04 11 57.3	**-0.1**
	comp=Z,0.6nm,0.5s,baz=31,slow=2.1,SNR=4.0							
ARCES	ARCESS Array B	128.90	350	PKP		**PKPdf**	04 12 00.1	**-0.1**
	comp=Z,2.4nm,0.7s,baz=321,slow=1.6,SNR=5.5							
ARCES	ARCESS Array B	128.90	350			**PKPdf**	04 11 59.9	**-0.3**
BELG	Belogornoye	132.66	324	PKP		**PKPdf**	04 12 07.1	**-0.6**
	comp=Z,7.6nm,0.9s,baz=142,slow=4.1,SNR=4.3							
BELG				SKPbc		**SKPbc**	04 14 45.5	**+0.4**
	comp=Z,13nm,0.9s,baz=138,slow=2.2,SNR=7.1							
FINES	FINESS Array B	135.77	344	PKP		**PKPdf**	04 12 11.2	**-2.0**
	comp=Z,2.5nm,0.8s,baz=90,slow=5.7,SNR=6.4							
FINES				SKP		**SKPbc**	04 14 56.6	**+1.8**
	comp=Z,2.7nm,0.8s,baz=50,slow=2.2,SNR=6.1							
FINES	FINESS Array B	135.77	344			**PKPdf**	04 12 11.5	**-1.8**
NB2	NORSAR Subarra	138.95	353	PKP			04 15 06.5	
	comp=Z,0.7nm,0.6s,baz=9.8,slow=2.9							
NOA	NORSAR Array B	138.95	353	SKP		**SKPdf**	04 15 03.9	**+0.4**
	comp=Z,1.8nm,0.9s,baz=12,slow=2.8,SNR=4.5							
HFS	Hagfors	139.52	351	PKhKP		PKPpre	04 12 11.5	
	comp=Z,1.0nm,0.4s,baz=53,slow=2.1,SNR=11							
AK03	Malin Array Si	143.03	331	PKP		PKPab	04 12 23.4	-0.8
AKASG	Malin Array Be	143.05	331	PKhKP		PKPpre	04 12 23.7	
	comp=Z,11nm,0.6s,baz=44,slow=4.4,SNR=73							
AKASG	Malin Array Be	143.05	331			PKPpre	04 12 23.5	
AKBB	Malin Array Si	143.05	331	PKP		PKPab	04 12 23.4	-0.9
AK04	Malin Array Si	143.06	331	PKP		PKPab	04 12 23.2	-1.2
AK01	Malin Array Si	143.06	331	PKP		PKPab	04 12 23.4	-1.0
KIEV	Kiev	143.06	331	⇑P		PKPab	04 12 23.6	-0.7
KIEV	Kiev	143.06	331			PKPab	04 12 23.6	-0.7
KIEV	Kiev	143.06	331	PKP		PKPab	04 12 23.5	-0.9
AK22	Malin Array Si	143.07	331	PKP		PKPab	04 12 23.7	-0.7
AK21	Malin Array Si	143.08	331	PKP		PKPab	04 12 23.1	-1.3
AK08	Malin Array Si	143.08	331	PKP		PKPab	04 12 23.1	-1.3
AK09	Malin Array Si	143.08	331	PKP		PKPab	04 12 23.6	-0.8
AK02	Malin Array Si	143.09	331	PKP		PKPab	04 12 23.7	-0.8
AK11	Malin Array Si	143.09	331	PKP		PKPab	04 12 23.6	-0.9
LODK	Lodwar	143.50	247			PKPab	04 12 27.2	-0.1
MI28	MI28,Pidlybu	143.57	333	PKP		PKPab	04 12 24.8	-1.5
ARPR	Arapgir-MALATY	143.83	309			PKPbc	04 12 26.5	-1.4
RNPP9	Sopachiv	143.95	335	PKP		PKPbc	04 12 27.1	-0.5
RNPP8	Varash	144.02	335	PKP		PKPbc	04 12 27.4	-0.4
RNPP5	Staryi Chortor	144.09	334	PKP		PKPbc	04 12 27.5	-0.5
LUBAR	Lubar, Ukraine	144.26	331	PKP		PKPbc	04 12 26.3	-2.3
EKA	Eskdalemuir Ar	144.94	5	PKP		**PKPdf**	**04 12 30.0**	**+0.1**
	comp=Z,3.1nm,0.7s,baz=334,slow=3.1,SNR=6.6							
SORM	Soroca	145.25	329	⇑P		**PKPdf**	**04 12 31.0**	**+0.3**
BEL	Belsk	145.47	340	*e*PKP		**PKPab**	**04 12 33.2**	**-0.3**
PURM	Purcari	145.54	325	⇓P		**PKPbc**	**04 12 32.8**	**+0.2**
VASR	Vaslui	146.54	327	⇓P		**PKPbc**	**04 12 35.9**	**+0.5**
KWP	Kalwaria Pacla	146.60	336	*e*PKP		**PKPbc**	**04 12 36.3**	**+0.8**
BR131	Keskin Array S	146.92	312			**PKPdf**	**04 12 34.6**	**+0.6**
BRTR	Keskin Array B	146.92	312	PKPbc		**PKPbc**	**04 12 36.8**	**-0.1**
	comp=Z,3.6nm,0.8s,baz=136,slow=5.4,SNR=20							
BRTR	Keskin Array B	146.92	312	PKPdf		**PKPdf**	**04 12 33.8**	**-0.2**
VLDR	Vladesti	146.93	326	⇓P		**PKPbc**	**04 12 37.0**	**+0.6**
SCTR	Scanteiesti	147.09	326	⇓P		**PKPbc**	**04 12 37.5**	**+0.6**
BURAR	Bucovina Array	147.10	331	⇑P		**PKPbc**	**04 12 37.7**	**+0.7**

BURAR	Bucovina Array	147.10	331	PKPdf		**PKPdf**	**04 12 34.0**	**+0.1**
GHRR		147.13	327	⇑P		**PKPbc**	**04 12 38.2**	**+1.2**
OJC	Ojcow	147.17	339	*e*PKP		**PKPbc**	**04 12 37.3**	**+0.3**
OJC	Ojcow	147.17	339			**PKPbc**	**04 12 37.0**	**0.0**
CFR	Carcaliu	147.33	325	⇑P		**PKPbc**	**04 12 37.6**	**+0.1**
STHS	Stebnicka Huta	147.33	337	*e*PKP		**PKPab**	**04 12 41.7**	**+0.6**
TPGR	Topolog	147.39	324	⇓P		**PKPbc**	**04 12 38.1**	**+0.3**
ONER	Baraj Valea Uz	147.46	328	⇓P		**PKPbc**	**04 12 38.8**	**+0.9**
VRI	Vrincioaia	147.61	327	⇑P		**PKPbc**	**04 12 38.3**	**0.0**
PLOR	Plostina	147.66	327	⇓P		**PKPbc**	**04 12 38.1**	**-0.3**
NIE	Niedzica	147.68	338	*e*PKP		**PKPbc**	**04 12 39.3**	**+1.0**
KSP	Ksiaz	147.69	343	*e*PKP		**PKPbc**	**04 12 39.0**	**+0.7**
TURR	Turia	147.84	328	⇓P		**PKiKP**	**04 12 40.1**	**-0.3**
MMAI	Mount Meron Ar	147.93	300	PKPbc		**PKPbc**	**04 12 40.2**	**+0.6**
	comp=Z,2.7nm,0.5s,baz=66,slow=8.1,SNR=6.8							
OSTC	Ostas	147.97	343	⇑*e*PKP		**PKPbc**	**04 12 39.4**	**+0.3**
CHVC	Chvalec	147.99	343	⇑*e*PKP		**PKPbc**	**04 12 39.5**	**+0.4**
CLL	Collm	148.05	347	*e*PKPdf		**PKPdf**	**04 12 36.0**	**+0.7**
CLL				⇓*i*PKPbc		**PKPbc**	**04 12 39.4**	**+0.2**
	comp=Z,21nm,0.9s							
CLL				⇑*i*PKPab		**PKPab**	**04 12 43.9**	**0.0**
	comp=Z,11nm,0.9s							
STEB	Steborice	148.07	341	⇑*e*PKP		**PKPbc**	**04 12 39.3**	**0.0**
DPC	Dobruska-Polom	148.13	343	⇑*e*PKP		**PKPbc**	**04 12 39.5**	**0.0**
NEHR	Nehoiu	148.13	327	⇑P		**PKPbc**	**04 12 40.5**	**+0.8**
LANS	Liptovska Anna	148.19	338	*e*PKP		**PKiKP**	**04 12 41.0**	**0.0**
LANS				*e*			04 12 46.7	
DOPR	Dopca	148.21	329	⇑P		**PKPbc**	**04 12 40.6**	**+0.8**
KRLC	Kraliky	148.24	342	⇑*e*PKP		**PKPbc**	**04 12 40.0**	**+0.2**
MLR	Muntele Rosu	148.27	327	PKPbc		**PKPbc**	**04 12 39.3**	**-0.8**
	comp=Z,4.7nm,0.9s,baz=336,slow=1.3,SNR=6.3							
MLR	Muntele Rosu	148.27	327	⇑P		**PKPbc**	**04 12 40.0**	**-0.1**
MORC	Moravsky Berou	148.28	341	⇓P		**PKPdf**	**04 12 37.1**	**+1.4**
MORC	Moravsky Berou	148.28	341	*e*PKP		**PKPbc**	**04 12 39.9**	**0.0**
PVCC	Panska Ves	148.42	345	⇑*e*PKP		**PKPbc**	**04 12 40.5**	**+0.3**
HSKC	Hora Svate Kat	148.62	346	⇑*e*PKP		**PKPbc**	**04 12 40.7**	**0.0**
MARR	Marisel-Cluj	148.75	332	⇓P		**PKPbc**	**04 12 41.3**	**+0.1**
VOIR		148.75	328	⇓P		**PKPbc**	**04 12 40.5**	**-0.7**
DRGR		148.84	332	⇓P		**PKPbc**	**04 12 40.6**	**-0.8**
PRU	Pruhonice	148.93	344	⇑*e*PKP		**PKPbc**	**04 12 41.2**	**-0.2**
VRAC	Vranov	148.98	342	*e*PKP		**PKPbc**	**04 12 41.4**	**-0.2**
ARR	Arges	149.01	328	⇓P		**PKiKP**	**04 12 42.8**	**0.0**
JAVC	Velka Javorina	149.05	340	*e*PKP		**PKiKP**	**04 12 43.1**	**+0.3**
PSZ	Piszkesteto	149.08	337	⇑P		**PKPbc**	**04 12 41.9**	**0.0**
KRUC	Moravsky	149.26	342	*e*PKP		**PKPbc**	**04 12 42.2**	**-0.1**
ZVC	Zvikov	149.52	344	⇑*e*PKP		**PKPbc**	**04 12 43.4**	**+0.5**
MODS	Modra-Piesok	149.60	340	*e*PKP		**PKiKP**	**04 12 44.1**	**+0.2**
MODS				*e*			04 12 52.3	
MEM	Membach	149.75	355	*d*PKiKP		**PKiKP**	**04 12 44.7**	**+0.6**
GZR	Gura Zlata	149.88	330	⇑P		**PKPbc**	**04 12 43.9**	**-0.1**
KHC	Kasperske Hory	149.96	345	⇑*e*PKP		**PKPbc**	**04 12 44.2**	**+0.2**
ELND	Elena	150.04	324	⇓P		**PKPbc**	**04 12 44.1**	**-0.2**
CKRC	Cesky Krumlov	150.06	344	⇑*e*PKP		**PKPbc**	**04 12 44.5**	**+0.3**
BMRD	Maredsous	150.14	357	*d*PKP		**PKPbc**	**04 12 43.6**	**-0.7**
GERES	GERESS Array B	150.20	345	PKPbc		**PKPbc**	**04 12 44.8**	**+0.2**
	comp=Z,2.2nm,0.8s,baz=117,slow=0.3,SNR=14							
WINA	Alland / Wiene	150.21	341	*e*PKP		**PKiKP**	**04 12 45.2**	**+0.1**
	comp=Z,4.1nm,0.8s							
BZS	Buzias	150.23	332	⇑P		**PKPbc**	**04 12 44.8**	**+0.1**
HERR	Herculane	150.43	330	⇑P		**PKPbc**	**04 12 44.8**	**-0.3**
CONA	Conrad Observa	150.44	341	*e*PKP		**PKPbc**	**04 12 45.4**	**+0.3**
	comp=Z,6.0nm,1.0s							
RONA	Rosalia, Austr	150.50	340	*e*PKP		**PKPbc**	**04 12 45.2**	**-0.1**
	comp=Z,2.9nm,0.5s							
WLF	Walferdange	150.68	355	*d*PKiKP		**PKiKP**	**04 12 46.6**	**+0.6**
WLF				*d*PKP		**PKPab**	**04 12 55.1**	**+0.2**
MORH	Mrgy, Hungar	150.97	336	⇑P		**PKPbc**	**04 12 45.1**	**-1.3**
BIOA	Bad Ischl, Aus	151.28	344	*e*PKP		**PKPab**	**04 12 58.0**	**+0.5**
	comp=Z,1.5nm,0.5s							
LESA	Schwarzleotal	151.77	345	*e*PKP		**PKPab**	**04 13 00.1**	**

CRPR	**Cabo Rojo, PR**	**1.65**	**109**			**Pn**	**05 09 04.7**	**+0.7**
CRPR						**Sn**	**05 09 27.3**	**+0.7**
CRPR	**Cabo Rojo, PR**	**1.65**	**109**	*i*	P	**Pn**	**05 09 04.5**	**+0.5**
CRPR					*e*S	**Sn**	**05 09 25.7**	**-1.0**
CRPR					IAML		05 09 34.6	
	comp=Z,297nm,0.7s							
MLPR	**Magueyes Islan**	**1.72**	**110**			**Pn**	**05 09 05.2**	**+0.3**
GBPR	**Guanica, Bosqu**	**1.86**	**108**			**Pn**	**05 09 08.4**	**+1.8**
GBPR						**Sn**	**05 09 31.7**	**+0.5**
AOPR	**Arecibo Observ**	**1.90**	**96**			**Pn**	**05 09 07.7**	**+0.7**
AOPR	**Arecibo Observ**	**1.90**	**96**	⇑ *i*	P	**Pn**	**05 09 07.6**	**+0.7**
AOPR				⇑	*e*S	**Sn**	**05 09 32.1**	**0.0**
AOPR					IAML		05 09 43.3	
	comp=N,2μm,0.3s							
UUPR	**Utuado, UPR, P**	**1.95**	**99**			**Pn**	**05 09 08.4**	**+0.9**
SC01	**Santiago de lo**	**2.07**	**295**			**Pn**	**05 09 10.8**	**+1.8**
SC01					IAML		05 09 44.5	
	comp=E,663nm,0.6s							
SC01					IAML		05 09 48.6	
	comp=N,653nm,0.4s							
SC01	**Santiago de lo**	**2.07**	**295**	*i*	P	**Pn**	**05 09 10.9**	**+1.9**
OBIP	**Obispado Ponce**	**2.10**	**104**			**Pn**	**05 09 10.4**	**+1.0**
OBIP						**Sn**	**05 09 36.9**	**+0.7**
OBIP	**Obispado Ponce**	**2.10**	**104**	*i*	P	**Pn**	**05 09 10.4**	**+1.0**
OBIP					*e*S	**Sn**	**05 09 35.8**	**-0.5**
OBIP					IAML		05 09 44.7	
	comp=Z,150nm,0.5s							
EMPR	**Esperanza - Ma**	**2.10**	**92**			**Pn**	**05 09 10.7**	**+1.3**
EMPR						**Sn**	**05 09 37.0**	**+0.5**
CELP	**Cerrillos**	**2.11**	**103**			**Pn**	**05 09 10.6**	**+1.0**
CELP					IAML		05 09 42.7	
	comp=Z,464nm,0.3s							
CELP					IAML		05 09 43.6	
	comp=Z,659nm,0.3s							
CELP	**Cerrillos**	**2.11**	**103**	⇑ *i*	P	**Pn**	**05 09 10.4**	**+0.8**
CELP				⇓	*e*Sg	**Sn**	**05 09 38.0**	**+1.3**
CELP					IAML		05 09 42.3	
	comp=N,216nm,0.6s							
ECPR	**Experimental S**	**2.27**	**96**			**Pn**	**05 09 12.0**	**+0.4**
PODR	**Polo**	**2.44**	**261**	*i*	P	**Pn**	**05 09 15.0**	**+1.1**
PODR					*e*S	**Sn**	**05 09 42.6**	**-1.6**
SDDR	**Presa de Saban**	**2.45**	**280**			**Pn**	**05 09 16.0**	**+2.2**
SDDR					IAML		05 09 55.5	
	comp=N,357nm,0.7s							
SDDR	**Presa de Saban**	**2.45**	**280**		P	**Pn**	**05 09 16.3**	**+2.5**
SDDR					S	**Sn**	**05 09 48.7**	**+4.5**
SDDR	**Presa de Saban**	**2.45**	**280**	*e*	P	**Pn**	**05 09 16.9**	**+3.1**
SDDR					*e*S	**Sn**	**05 09 50.3**	**+6.1**
SDDR	**Presa de Saban**	**2.45**	**280**	*i*	P	**Pn**	**05 09 16.6**	**+2.8**
SDDR					IAML		05 09 56.4	
	comp=Z,137nm,0.4s							
SDDR	**Presa de Saban**	**2.45**	**280**	*e*	P	**Pn**	**05 09 15.9**	**+2.1**
SDDR					*e*S	**Sn**	**05 09 46.3**	**+2.1**
SJG	**San Juan**	**2.50**	**100**			**Pn**	**05 09 15.3**	**+0.9**
SJG					IAML		05 09 49.8	
	comp=Z,569nm,0.3s							
SJG					IAML		05 09 49.9	
	comp=Z,524nm,0.3s							
SJG	**San Juan**	**2.50**	**100**		P	**Pn**	**05 09 13.7**	**-0.8**
SJG					S	**Sn**	**05 09 45.3**	**-0.1**
SJG	**San Juan**	**2.50**	**100**	*e*	P	**Pn**	**05 09 15.2**	**+0.8**
SJG					*e*S	**Sn**	**05 09 46.7**	**+1.3**
SJG	**San Juan**	**2.50**	**100**	*i*	P	**Pn**	**05 09 15.7**	**+1.2**
SJG					*e*S	**Sn**	**05 09 45.3**	**-0.1**
SJG					IAML		05 09 50.5	
	comp=Z,168nm,0.8s							
LONE3	**El Aguacate, B**	**2.58**	**271**	*i*	P	**Pn**	**05 09 17.2**	**+1.7**
LODU1	**El Espartillar**	**2.60**	**266**	*i*	P	**Pn**	**05 09 17.6**	**+1.9**
LODU1					IAML		05 09 50.8	
	comp=Z,495nm,1.5s							
LOVI	**El Cajuil, Ovi**	**2.61**	**254**	*i*	P	**Pn**	**05 09 16.5**	**+0.7**
LOVI					*e*S	**Sn**	**05 09 45.8**	**-1.9**
LOVI					IAML		05 09 49.1	
	comp=Z,971nm,0.2s							
PDPR	**Patillas Dam,**	**2.64**	**101**			**Pn**	**05 09 17.2**	**+1.0**
PDPR					IAML		05 09 52.2	
	comp=Z,327nm,0.6s							
PDPR					IAML		05 09 53.2	
	comp=Z,321nm,0.4s							
LOPP1	**Punta Rusia, P**	**2.65**	**299**	*i*	P	**Pn**	**05 09 17.0**	**+0.7**
LOPP1					IAML		05 10 04.7	
	comp=Z,234nm,0.3s							
HUMP	**Col San Antoni**	**2.78**	**98**			**Pn**	**05 09 19.4**	**+1.4**
HUMP						**Sn**	**05 09 50.5**	**-1.2**
HUMP	**Col San Antoni**	**2.78**	**98**		IAML		05 09 58.4	
	comp=Z,422nm,0.3s							
HUMP					IAML		05 09 58.4	
	comp=Z,434nm,0.3s							
LOBH	**Bahia de las A**	**2.84**	**256**	*i*	P	**Pn**	**05 09 19.9**	**+1.2**
LOBH					*e*S	**Sn**	**05 09 52.1**	**-0.9**
LOBH					IAML		05 09 55.0	
	comp=Z,266nm,0.4s							
CUPR	**Culebra, Puert**	**3.30**	**94**		Pn	**Pn**	**05 09 24.4**	**-0.3**
GRTK	**Grand Turk**	**3.70**	**323**		P	**Pn**	**05 09 29.8**	**-0.2**
GRTK					S	**Sn**	**05 10 11.3**	**-1.9**
GRTK	**Grand Turk**	**3.70**	**323**	*i*	P	**Pn**	**05 09 30.2**	**+0.2**
GRTK					*e*S	**Sn**	**05 10 11.5**	**-1.7**
GRTK					IAML		05 10 23.4	
	comp=Z,86nm,1.3s							
GRTK	**Grand Turk**	**3.70**	**323**	*e*	P	**Pn**	**05 09 30.2**	**+0.2**
GRTK					*e*S	**Sn**	**05 10 08.5**	**-4.7**
SABA	**Saba**	**5.32**	**99**	Pn		**Pn**	**05 09 54.1**	**+2.4**
MASC	**Masc**	**5.42**	**288**	*e*	P	**Pn**	**05 09 51.2**	**-1.8**
MASC					*e*S	**Sn**	**05 10 49.1**	**-5.3**
SKI	**Saint Kitts**	**5.84**	**101**	*e*	P	**Pn**	**05 10 00.6**	**+1.9**
SKI					*e*S	**Sn**	**05 11 06.1**	**+1.5**
QMBU	**Quimbuelo**	**5.96**	**287**	*e*	P	**Pn**	**05 09 58.0**	**-2.2**
QMBU					*e*S	Sn	05 10 58.5	-8.8
GTBY	**Guantanamo Bay**	**6.17**	**284**		P	**Pn**	**05 10 01.9**	**-1.1**
	comp=Z,43nm,1.3s							
GTBY					S	**Sn**	**05 11 09.6**	**-2.7**
	comp=Z,43nm,1.3s							
GTBY	**Guantanamo Bay**	**6.17**	**284**	*e*	S	**Sn**	**05 11 08.5**	**-3.8**
NMDO	**Nuevo Mundo**	**6.21**	**290**		Pn	**Pn**	**05 10 03.9**	**+0.3**
NMDO	**Nuevo Mundo**	**6.21**	**290**	*e*	S	**Sn**	**05 11 07.8**	**-5.6**
ANWB	**Willy Bob**	**6.68**	**97**		P	**Pn**	**05 10 08.2**	**-1.7**
	comp=Z,39nm,0.8s							
ANWB					S	**Sn**	**05 11 17.6**	**-7.1**
	comp=Z,39nm,0.8s							
ANWB	**Willy Bob**	**6.68**	**97**	*e*	P	**Pn**	**05 10 08.9**	**-1.0**
ANWB					*e*S	**Sn**	**05 11 19.0**	**-5.7**
DHSZ	**Broadband at M**	**7.04**	**108**	*e*	P	**Pn**	**05 10 17.5**	**+2.7**
CBE	**Ff, Capester**	**7.25**	**109**	Pn		**Pn**	**05 10 19.6**	**+1.9**
TBG	**Guadaloupe-3**	**7.30**	**111**	*e*	P	**Pn**	**05 10 19.5**	**+1.2**
URIC	**Uribia, Colomb**	**7.50**	**205**		P	**Pn**	**05 10 19.4**	**-1.7**
	comp=Z,13nm,0.9s							
URIC					S	**Sn**	**05 11 39.0**	**-5.7**
	comp=Z,13nm,0.9s							
DSDZ	**La Diserade, G**	**7.66**	**106**	*e*	P	**Pn**	**05 10 26.5**	**+3.3**
DSDZ					*e*S	**Sn**	**05 11 46.9**	**-1.6**
DSLB	**Salisbury**	**7.66**	**113**	*e*	P	**Pn**	**05 10 24.4**	**+1.2**
DSLB					*e*S	**Sn**	**05 11 43.8**	**-4.8**
LMGC	**Las Mercedes**	**7.94**	**282**	*e*	P	**Pn**	**05 10 24.8**	**-2.2**
BIM	**Bigot**	**8.38**	**118**	Pn		**Pn**	**05 10 34.0**	**+1.0**
BIM	**Bigot**	**8.38**	**118**	*e*	P	**Pn**	**05 10 34.2**	**+1.2**
BIM					*e*S	**Sn**	**05 12 02.8**	**-3.3**
SMRC	**Santa Marta, M**	**9.06**	**217**		P	**Pn**	**05 10 41.9**	**-0.2**
	comp=Z,31nm,1.6s							
SMRC					S	Sn	05 12 10.8	-12
	comp=Z,31nm,1.6s							
SDV	**Santo Domingo**	**9.79**	**191**			**Pn**	**05 10 54.9**	**+2.9**
SDV	**Santo Domingo**	**9.79**	**191**		P	**Pn**	**05 10 54.7**	**+2.7**
	comp=Z,5.4nm,0.7s							
BBGH	**Gun Hill**	**10.35**	**120**		P	**Pn**	**05 11 02.8**	**+3.5**
	comp=Z,288nm,1.7s							
SJCC	**San Jacinto, C**	**10.63**	**217**		P	**Pn**	**05 11 03.8**	**+0.6**
	comp=Z,14nm,1.4s							
SJCC					S	Sn	05 12 48.6	-12
	comp=Z,14nm,1.4s							
OCAC	**Ocana**	**11.18**	**204**		P	**Pn**	**05 11 10.6**	**0.0**
	comp=Z,7.3nm,0.7s							
OCAC					S	**Sn**	**05 13 08.1**	**-5.9**
	comp=Z,7.3nm,0.7s							
PAMC	**Pamplona, Colo**	**11.80**	**200**		P	**Pn**	**05 11 21.9**	**+2.8**
PAMC					S	**Sn**	**05 13 27.3**	**-2.1**
UREC	**San Jos de Ur**	**12.61**	**212**		P	**Pn**	**05 11 31.1**	**+1.9**
BOAV	**Boa Vista**	**17.97**	**152**		P	**Pn**	**05 12 38.0**	**+1.9**

IDC 18 05:24:38.5±1.3, 13°30N×50°91E, h0km, mb3.7/4, mbtmp3.6/5, ML2.9/1, MS2.1/1, Error ellipse: s-maj=59.2km s-min=25.3km az=169.0, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATD	**Arta Tunnel**	**8.07**	**258**	Pn	Pn	05 26 36.5	-0.5
ATD	0.2nm,0.3s,baz=260,slow=23,SNR=5.0			LR	LR	05 29 00.0	
	comp=Z,12nm,19.5s,baz=32,slow=32 0.6nm,0.4s						
MKAR	**Makanchi Array**	**42.52**	**32**	P	P	05 32 35.1	-0.6
	0.3nm,0.5s,baz=217,slow=9.9,SNR=3.9 0.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**46.38**	**77**	P	P	05 33 07.2	+0.2
	0.7nm,0.3s,baz=270,slow=8.8,SNR=6.8 0.7nm,0.3s						
TORD	**Torodi Ar. Bea**	**47.84**	**276**	P	P	05 33 18.6	+0.1
	0.6nm,0.7s,baz=100,slow=5.9,SNR=3.8 0.6nm,0.7s						
KLR	**Kul'dur**	**74.09**	**42**	LR	LR	06 10 35.5	
	comp=Z,240nm,21.8s,baz=168,slow=37						
WRA	**Warramunga Arr**	**88.44**	**111**	P	P	05 37 33.2	-0.1
	0.5nm,0.7s,baz=280,slow=4.9,SNR=5.3 0.5nm,0.7s						

*IDC **18** 05:31:31.6±0.4, 11°.02S×164°.40E, h0km, mb5.2/26, mbtmp5.2/28, ML3.7/2, MS4.5/57, Error ellipse: s-maj=16.2km s-min=12.1km az=89.0*

*BJI **18** 05:31:32.6, 10°.68S×164°.37E, h10km, mB5.5/43, mb5.3/78, Ms5.1/51, Ms7 4.9/55*

*MOS **18** 05:31:32.2±0.8, 10°.93S×164°.29E, h12km, mb5.6/38, MS4.7/7, Error ellipse: s-maj=8.9km s-min=6.5km az=126.1*

*NEIC **18** 05:31:33.9±2.2, 11°.05S±0°.08×164°.46E±0°.08, h10km±1km, mb5.4/488, Ms_20 5.0/176, Mww5.5/36, Error ellipse: s-maj=15.9km s-min=10.4km az=50.0*

*GFZ **18** 05:31:33.8, 10°.99S×164°.33E, h10km, MW5.4, Moment Tensor Solution. s54 Moment tensor: Mrr=1.58; Mθθ0.62; Mφφ0.96; Mrθ0.16; Mrφ0.57; Mθφ-0.22; Fault plane solution: NP1:φs224.00000°, δ44.00000°, λ-78.00000°. NP2:φs28.00000°, δ47.00000°, λ-101.00000°. Principal axes: T 1.3900, Plg1.0000°, Azm126.0000°; N 0.2300, Plg8.0000°, Azm36.0000°; P -1.6200, Plg81.0000°, Azm227.0000°;*

*NOU **18** 05:31:34.7, 10°.97S×164°.35E, h15km, mb5.3/88, Santa Cruz Islands Region*

*NEIC **18** 05:31:34, 11°.05S×164°.44E, h18km*

*NEIC **18** 05:31:34, 11°.05S×164°.34E, h18km, Moment Tensor Solution. Duration: 2s6 Moment tensor: Scale 10^17^Nm; Mrr-2.17; Mθθ0.95; Mφφ1.22; Mrθ-0.17; Mθφ0.73; Mrφ0.06; Fault plane solution: Mo2.03000×10^17^ NP1: φs216.04000°, δ44.27000°, λ-95.57000°. NP2:φs43.79000°, δ45.99000°, λ-84.60000°. Principal axes: T 1.8294, Plg1.0000°, Azm130.0000°; N 0.3486, Plg4.0000°, Azm220.0000°; P -2.1780, Plg86.0000°, Azm27.0000°;*

*GCMT **18** 05:31:36.9±0.1, 11°.13S±0°.01×164°.29E±0°.01, h13km, MW5.4/158, Moment Tensor Solution. s123,c203; s158,c313; Duration: 1s3 Moment tensor: Scale 10^17^ Nm; Mrr-1.71±.03; Mθθ0.55±.02; Mφφ1.16±.02; Mrθ-0.51±.05; Mθφ0.89±.01; Mrφ0.28±.05; Best double couple: Mo1.84500×10^17^ NP1:φs199.00000°, δ47.00000°, λ-115.00000°. NP2:φs52.00000°, δ49.00000°, λ-66.00000°. Principal axes: T 1.7940, Plg1.0000°, Azm126.0000°; N 0.0970, Plg18.0000°, Azm216.0000°; P -1.8970, Plg72.0000°, Azm32.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 05:31:33.7±0.5, 11°.01S±0°.04×164°.40E±0°.04, h14km±2km, h14km:pP-P, n966, σ1s26/714, mb5.4/323, MS4.9/163, 5C-26D, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HURO	**Huro Makira**	**2.51**	**282**	P	**Pn**	**05 32 13.3**	**-0.8**
HURO	**Huro Makira**	**2.51**	**282**	S	**Sn**	**05 32 43.4**	**-1.2**
NGOA	**Tingoa Renbel**	**4.29**	**262**	P	**Pn**	**05 32 36.9**	**-1.7**
HNR	**Honiara**	**4.66**	**289**	Pn	**Pn**	**05 32 44.4**	**+0.7**
HNR	26nm,0.3s,baz=232,slow=3.4,SNR=98			Sn	**Sn**	**05 33 37.4**	**-0.1**
	10nm,0.3s,baz=233,slow=1.9,SNR=5.3						
HNR	**Honiara**	**4.66**	**289**	P	**Pn**	**05 32 44.1**	**+0.5**
HNR	**Honiara**	**4.66**	**289**	S	**Sn**	**05 33 37.9**	**+0.4**
HNR	**Honiara**	**4.66**	**289**	Pn	**Pn**	**05 32 44.6**	**+1.0**
SAVO	**Savo Central**	**4.88**	**292**	P	**Pn**	**05 32 47.4**	**+0.7**
SAVO	**Savo Central**	**4.88**	**292**	S	**Sn**	**05 33 43.4**	**+0.3**
SANVU	**Saraoutou**	**5.19**	**149**	P	**Pn**	**05 32 50.2**	**-0.8**
SANVU	**Saraoutou**	**5.19**	**149**		**Pn**	**05 32 50.1**	**-0.9**
TATA	**Tatamba Isabel**	**5.23**	**299**	P	**Pn**	**05 32 51.9**	**+0.4**
TATA	**Tatamba Isabel**	**5.23**	**299**	S	**Sn**	**05 33 50.8**	**-0.8**
DVP	**Devils Point**	**7.62**	**152**	P	**Pn**	**05 33 25.8**	**+1.4**
MARNC	**Mare, Loyalty**	**10.98**	**162**	P	**Pn**	**05 34 11.5**	**+1.0**
MARNC	**Mare, Loyalty**	**10.98**	**162**		**Pn**	**05 34 08.9**	**-1.6**
DZM	**Mont Dzumac**	**11.18**	**170**	Pn	**Pn**	**05 34 13.4**	**+0.2**
DZM	61nm,0.4s,baz=322,slow=11,SNR=104			Sn	**Sn**	**05 36 11.3**	**-6.8**
	3.4nm,0.3s,baz=346,slow=22,SNR=4.3						
YATNC	**Mamie plateau,**	**11.25**	**168**	P	**Pn**	**05 34 14.0**	**-0.1**
ONTNC	**Ouen Toro**	**11.41**	**170**	P	**Pn**	**05 34 19.0**	**+2.7**
ONTNC	**Ouen Toro**	**11.41**	**170**		**Pn**	**05 34 17.1**	**+0.8**
OUENC	**Ouen Island, N**	**11.59**	**169**	P	**Pn**	**05 34 21.5**	**+2.8**
KRVT	**Keravat (AS076**	**13.95**	**298**	LR	LR	05 40 31.0	
	comp=Z,1μm,21.5s,baz=25,slow=39						
MSVF	**Nonsavu**	**14.81**	**118**	LR	LR	05 39 16.5	
	comp=Z,4μm,21.0s,baz=286,slow=31						
MSVF	**Nonsavu**	**14.81**	**118**	P	**Pn**	**05 35 05.5**	**+2.5**
DGTI	**Dogotuki**	**15.80**	**111**	P	**Pn**	**05 35 18.1**	**+2.1**
PMG	**Port Moresby**	**17.05**	**274**	P	**Pn**	**05 35 32.4**	**+0.6**
	2.1nm,0.3s,baz=14,slow=14,SNR=3.2						
PMG				LR	LR	05 41 50.9	
	comp=Z,9μm,19.2s,baz=115,slow=36 5.1nm,0.3s						
PMG	**Port Moresby**	**17.05**	**274**	P	**Pn**	**05 35 32.5**	**+0.7**
PMG	**Port Moresby**	**17.05**	**274**	P	**P**	**05 35 32.8**	**-0.8**
PMG	**Port Moresby**	**17.05**	**274**	P	**P**	**05 35 33.1**	**-0.5**
PMG	**Port Moresby**	**17.05**	**274**	P	**P**	**05 35 33.1**	**-0.5**
PMG				pmax	pmax		
	comp=Z,48nm,1.3s						
PMG	**Port Moresby**	**17.05**	**274**	P	**P**	**05 35 39.2**	**+5.6**
LKBA	**Tubou, Lakemba**	**17.75**	**116**	P	**P**	**05 35 42.8**	**+1.5**
AUNRC	**North Rockhamp**	**18.04**	**225**	P	**P**	**05 35 45.7**	**+1.2**
AUAYR	**Ayr State High**	**18.46**	**240**	P	**Pn**	**05 35 50.5**	**+1.2**
EIDS	**Eidsvold**	**19.06**	**220**	P	**Pn**	**05 35 58.5**	**+1.9**
	comp=Z,73nm,1.6s						
EIDS	**Eidsvold**	**19.06**	**220**	P	**Pn**	**05 35 57.3**	**+0.8**
EIDS	**Eidsvold**	**19.06**	**220**		**Pn**	**05 35 57.9**	**+1.3**
AUBSH	**Beerwah State**	**19.11**	**213**	P	**Pn**	**05 35 58.3**	**+1.2**
MANU	**Manus Island**	**19.11**	**297**		**P**	**05 35 56.8**	**+0.5**
MANU				IAmb	IAmb	05 36 05.9	
	comp=Z,161nm,1.0s						
CTAO	**Charters Tower**	**19.66**	**240**	P	**Pn**	**05 36 03.7**	**-0.1**
CTAO	**Charters Tower**	**19.66**	**240**		**Pn**	**05 36 04.4**	**+0.6**
CTAO	**Charters Tower**	**19.66**	**240**	P	**Pn**	**05 36 04.4**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,105nm,0.9s						
GC1S	**Gold Coast 1 S**	**19.89**	**209**	P	**Pn**	**05 36 07.7**	**+1.3**
TW1H	**Toowoomba 1 Ha**	**20.18**	**214**	P	Pn	05 36 10.7	+0.8
MTSU	**Mount Surprise**	**20.68**	**248**	P	**P**	**05 36 14.7**	**+1.2**
	comp=Z,77nm,0.8s						
MTSU	**Mount Surprise**	**20.68**	**248**	P	**P**	**05 36 14.6**	**+1.1**
COEN	**Coen**	**20.93**	**260**	P	**P**	**05 36 17.3**	**+1.1**
	comp=Z,105nm,0.9s						
COEN	**Coen**	**20.93**	**260**	P	**P**	**05 36 17.1**	**+0.9**
COEN	**Coen**	**20.93**	**260**		**P**	**05 36 17.1**	**+0.9**
RMQ	**Roma**	**21.33**	**222**	P	**P**	**05 36 20.9**	**+0.5**
	comp=Z,52nm,1.4s						
ARMA	**Armidale**	**22.67**	**210**	P	**P**	**05 36 35.9**	**+1.0**
ARMA	**Armidale**	**22.67**	**210**	P	**P**	**05 36 34.4**	**-0.6**
AFI	**Afiamalu**	**23.44**	**100**	LR	LR	05 43 51.0	
	comp=Z,2μm,19.0s,baz=274,slow=32						
AULRC	**Lightning Ridg**	**23.89**	**218**	P	**P**	**05 36 46.7**	**-0.4**
QLP	**Quilpie**	**24.53**	**228**	P	**P**	**05 36 54.6**	**+1.6**
	comp=Z,301nm,1.7s						
QLP	**Quilpie**	**24.53**	**228**	P	**P**	**05 36 53.1**	**+0.1**
JAY	**Jayapura**	**24.98**	**288**	LR	LR	05 47 33.0	
	comp=Z,575nm,18.8s,baz=16,slow=38						
AUDCS	**Dubbo College**	**25.65**	**212**	P	**P**	**05 37 04.6**	**+1.5**
QIS	**Mount Isa**	**25.65**	**245**	P	**P**	**05 37 03.2**	**0.0**
	comp=Z,43nm,0.9s						
QIS	**Mount Isa**	**25.65**	**245**	P	**P**	**05 37 02.7**	**-0.5**

RIV	**Riverview**	**25.75**	**206**		P	**P**	**05 37 06.2**	**+2.2**
CMSA	**Cobar Meteorol**	**26.77**	**217**		P	**P**	**05 37 13.5**	**+0.1**
	comp=Z,74nm,1.0s							
CMSA	**Cobar Meteorol**	**26.77**	**217**		P	**P**	**05 37 13.4**	**+0.1**
YNG	**Young**	**27.41**	**210**		P	**P**	**05 37 17.5**	**-1.5**
	comp=Z,22nm,1.5s							
INKA	**Innaminka**	**27.75**	**230**		P	**P**	**05 37 22.9**	**+0.8**
INKA					IAmb	IAmb	05 37 29.1	
	comp=Z,76nm,1.2s							
CNB	**Canberra Magne**	**27.80**	**207**		P	**P**	**05 37 23.8**	**+1.3**
CAN	**Canberra**	**27.96**	**208**		P	**P**	**05 37 25.3**	**+1.4**
CAN	**Canberra**	**27.96**	**208**		P	**P**	**05 37 25.4**	**+1.4**
CAN	**Canberra**	**27.96**	**208**		P	**P**	**05 37 25.4**	**+1.4**
CAN					pmax	pmax		
	comp=Z,54nm,1.7s							
CAN					MLR	MLR		
	comp=Z,1μm,18.0s							
AUSMG	**Snowy Mountain**	**29.05**	**207**		P	**P**	**05 37 34.2**	**+0.5**
H11S2	**WAKE ISLAND Hy**	**29.40**	**4**		T	T	06 08 50.1	
	baz=184,slow=76,SNR=72							
H11S3	**WAKE ISLAND Hy**	**29.40**	**4**		T	T	06 08 50.4	
	baz=184,slow=76,SNR=85							
H11S1	**WAKE ISLAND Hy**	**29.41**	**4**		T	T	06 08 46.9	
	baz=184,slow=76,SNR=35							
URZ	**Urewera**	**29.43**	**159**		LR	LR	05 46 40.8	
	comp=Z,1μm,19.1s,baz=354,slow=31							
STKA	**Stephens Creek**	**29.58**	**222**		P	**P**	**05 37 39.2**	**+0.9**
	comp=Z,275nm,1.3s							
STKA	**Stephens Creek**	**29.58**	**222**		P	**P**	**05 37 38.9**	**+0.6**
	comp=Z,31nm,0.8s,baz=24,slow=8.6,SNR=38							
STKA					LR	LR	05 48 08.2	
	comp=Z,1μm,19.8s,baz=40,slow=34 comp=Z,31nm,0.8s							
STKA	**Stephens Creek**	**29.58**	**222**		P	**P**	**05 37 38.6**	**+0.3**
STKA	**Stephens Creek**	**29.58**	**222**		P	**P**	**05 37 39.1**	**+0.8**
STKA	**Stephens Creek**	**29.58**	**222**		P	**P**	**05 37 39.1**	**+0.8**
STKA					pmax	pmax		
	comp=Z,281nm,1.1s							
WR8	**Warramunga Arr**	**30.11**	**249**		P	**P**	**05 37 42.2**	**-1.0**
WR8					IAmb	IAmb	05 37 46.1	
	comp=Z,33nm,0.8s							
WB0	**Warramunga Arr**	**30.17**	**250**		P	**P**	**05 37 42.7**	**-1.1**
WB0					IAmb	IAmb	05 37 46.6	
	comp=Z,49nm,0.8s							
WRAB	**Tennant Creek**	**30.25**	**249**		P	**P**	**05 37 43.5**	**-0.9**
WRAB	**Tennant Creek**	**30.25**	**249**	*c i*	P	**P**	**05 37 43.1**	**-1.3**
WRAB					pmax	pmax		
	comp=Z,34nm,0.8s							
WB2	**Warramunga Arr**	**30.25**	**249**		P	**P**	**05 37 43.4**	**-1.1**
WB1	**Warramunga Ar.**	**30.26**	**249**		P	**P**	**05 37 43.5**	**-1.0**
WRA	**Warramunga Arr**	**30.26**	**249**		P	**P**	**05 37 43.6**	**-0.9**
	comp=Z,34nm,0.9s,baz=80,slow=9.1,SNR=135							
WRA					PcP	**PcP**	**05 40 45.0**	**-0.2**
	comp=Z,5.5nm,0.8s,baz=80,slow=2.5,SNR=8.1							
WRA					S	**S**	**05 42 40.2**	**-3.9**
	comp=Z,12nm,1.1s,baz=80,slow=15,SNR=8.8 comp=Z,34nm,0.9s							
WRA	**Warramunga Arr**	**30.26**	**249**		P	**P**	**05 37 42.8**	**-1.7**
WRA	**Warramunga Arr**	**30.26**	**249**		P	**P**	**05 37 42.8**	**-1.7**
H11N1	**WAKE ISLAND Hy**	**30.62**	**5**		T	T	06 10 25.5	
	baz=184,slow=76,SNR=50							
H11N3	**WAKE ISLAND Hy**	**30.63**	**5**		T	T	06 10 15.6	
	baz=184,slow=76,SNR=56							
H11N2	**WAKE ISLAND Hy**	**30.64**	**5**		T	T	06 10 21.3	
	baz=184,slow=76,SNR=41							
GUMO	**Guam**	**31.19**	**321**		LR	LR	05 49 37.2	
	comp=Z,2μm,21.8s,baz=140,slow=35							
GUMO	**Guam**	**31.19**	**321**		IAMs_20	IAMs_20	05 48 40.8	
	comp=Z,4μm,22.0s							
KDU	**Kakadu**	**31.28**	**264**		P	**P**	**05 37 53.3**	**-0.3**
	comp=Z,17nm,0.6s							
TOO	**Toolangi**	**31.44**	**210**		P	**P**	**05 37 57.3**	**+2.6**
	comp=Z,10nm,1.3s							
THZ	**Tophouse**	**31.53**	**168**		IAMs_20	IAMs_20	05 51 03.0	
	comp=Z,3μm,18.0s							
AS31	**Alice Springs**	**31.63**	**243**		P	**P**	**05 37 55.6**	**-1.1**
ASAR	**Alice Springs**	**31.64**	**243**		P	**P**	**05 37 55.1**	**-1.5**
	comp=Z,12nm,0.7s,baz=66,slow=10.0,SNR=104							
ASAR					PcP	**PcP**	**05 40 47.5**	**-1.3**
	comp=Z,5.8nm,0.8s,baz=91,slow=2.8,SNR=7.9							
ASAR					LR	LR	05 50 03.0	
	comp=Z,848nm,20.9s,baz=68,slow=35							
ASAR					P

PLAI Plampang 45.95 268 P **P** **05 39 57.4 +0.7**
comp=Z,914nmcomp=Z,43nm,1.1s
KLBR Kellerberrin 47.62 237 P **P** **05 40 09.0 -0.5**
BLDU Ballidu 48.25 239 P **P** **05 40 14.2 -0.3**
NWAO Narrogin (SRO) 48.39 236 LR LR 06 01 42.9
comp=Z,1μm,18.4s,baz=84,slow=37
NWAO Narrogin (SRO) 48.39 236 P **P** **05 40 16.7 +1.2**
NWAO Narrogin (SRO) 48.39 236 P **P** **05 40 15.6 +0.1**
NWAO Narrogin (SRO) 48.39 236 IAMs_20 IAMs_20 05 58 26.7
comp=Z,2μm,19.0s
NWAO Narrogin (SRO) 48.39 236 P **P** **05 40 15.6 +0.1**
NWAO pmax pmax
comp=Z,92nm,1.2s
MORW Morawa 48.49 241 P **P** **05 40 16.1 -0.2**
MORW Morawa 48.49 241 P **P** **05 40 16.4 +0.1**
MORW IAmb IAmb 05 40 17.0
comp=Z,62nm,1.1s
MUN Mundaring 48.99 237 P **P** **05 40 20.2 +0.1**
DAH Dandelion 49.58 53 P **P** **05 40 25.6 +0.4**
JHJ Hachijo jima 2 49.77 333 LR LR 06 00 03.4
comp=Z,443nm,21.5s,baz=114,slow=34
TGY Tagaytay City 49.80 299 LR LR 05 59 15.1
comp=Z,702nm,21.6s,baz=142,slow=33
HLK Haleakala 49.93 51 P **P** **05 40 27.9 +0.3**
KKM Kota Kinabalu 50.86 287 P **P** **05 40 35.0 +0.3**
JOW Kunigami 51.43 318 LR LR 05 59 28.9
comp=Z,472nm,22.0s,baz=126,slow=33
SNJI Sawahan-Nganju 51.98 269 P **P** **05 40 44.5 +1.3**
comp=Z,40nm,1.2s
INU Inuyama 52.88 332 P **P** **05 40 50.0 +0.7**
INU Inuyama 52.88 332 IAmb IAmb 05 40 51.0
comp=Z,83nm,1.3s
JGF Kuroka 52.94 332 P **P** **05 40 50.3 +0.6**
JMN Monobe 53.13 328 P **P** **05 40 52.2 +1.1**
JSU Suzuyama 53.34 324 P **P** **05 40 53.1 +0.4**
JSU Suzuyama 53.34 324 P **P** **05 40 53.2 +0.4**
JSU IAmb IAmb 05 40 54.3
comp=Z,65nm,0.8s
MJAR Matsushiro Arr 53.34 334 P **P** **05 40 52.6 -0.1**
comp=Z,27nm,1.0s,baz=164,slow=8.0,SNR=38
MJAR LR LR 06 02 18.9
comp=Z,610nm,21.6s,baz=160,slow=35
comp=Z,27nm,1.0s
MJAR Matsushiro Arr 53.34 334 P **P** **05 40 53.1 +0.4**
MJAR IAmb IAmb 05 40 53.9
comp=Z,33nm,1.1s
MJAR Matsushiro Arr 53.34 334 P **P** **05 40 53.1 +0.4**
MJAR pmax pmax
comp=Z,33nm,1.1s
MAJO Matsushiro 53.34 334 P **P** **05 40 52.7 +0.1**
MAJO Matsushiro 53.34 334 P **P** **05 40 52.8 +0.1**
MAJO IAmb IAmb 05 40 53.5
comp=Z,55nm,1.1s
MAJO Matsushiro 53.34 334 IAMs_20 IAMs_20 06 01 54.8
comp=Z,1μm,20.0s
MAJO Matsushiro 53.34 334 P **P** **05 40 52.8 +0.1**
MAJO pmax pmax
comp=Z,55nm,1.1s
MJB9 Matsu-Tunnel 53.34 334 P **P** **05 40 53.9 +1.2**
MJB9 IAmb IAmb 05 40 54.5
comp=Z,51nm,1.1s
YULB Yu-li 54.28 309 P **P** **05 40 59.5 -0.3**
YULB Yu-li 54.28 309 IAmb IAmb 05 41 01.8
comp=Z,43nm,0.7s
JNU Nakatsue 54.29 325 P **P** **05 41 00.3 +0.7**
comp=Z,78nm,0.8s,baz=90,slow=2.3,SNR=43
JNU LR LR 06 00 45.8
comp=Z,332nm,21.8s,baz=126,slow=32
comp=Z,78nm,0.8s
NACB Ninganchiao 54.50 310 P **P** **05 41 01.7 +0.4**
NACB Ninganchiao 54.50 310 IAmb IAmb 05 41 06.7
comp=Z,67nm,1.3s
TPUB Ta-pu 54.74 309 P **P** **05 41 02.4 -0.7**
TPUB Ta-pu 54.74 309 IAMs_20 IAMs_20 06 01 41.6
comp=Z,1μm,21.0s
SSLB Suanglung 54.77 310 P **P** **05 41 03.2 -0.1**
SSLB Suanglung 54.77 310 P **P** **05 41 02.8 -0.5**
SSLB IAMs_20 IAMs_20 06 01 32.2
comp=Z,1μm,20.0s
YHNB Yeheng 54.95 311 P **P** **05 41 05.0 +0.3**
YHNB Yeheng 54.95 311 P **P** **05 41 05.0 +0.3**
YHNB IAmb IAmb 05 41 09.5
comp=Z,65nm,1.0s
QZH2 Quanzhou 57.19 309 P **P** **05 41 20.8 +0.2**
QZH2 S **S** **05 49 17.3 +1.2**
QZH2 pmax pmax
comp=Z,60nm,1.1s
QZH2 L L
comp=Z,560nm,18.9s
QZH2 L L
comp=Z,620nm,17.5s
JKA Kamikawa-asahi 58.33 342 P **P** **05 41 28.5 +0.3**
JKA IAmb IAmb 05 41 30.6
comp=Z,60nm,0.9s
ASAJ Asahikawa 58.33 342 P **P** **05 41 30.4 +2.1**
comp=Z,58nm,0.9s,baz=232,slow=12,SNR=26
comp=Z,58nm,0.9s
ASAJ Asahikawa 58.33 342 P **P** **05 41 28.5 +0.2**
ASAJ pmax pmax
comp=Z,60nm,0.9s
TJN Taejon 58.63 325 P **P** **05 41 31.5 +1.0**
TJN Taejon 58.63 325 P **P** **05 41 31.0 +0.5**
SSE Sheshan 58.91 317 P **P** **05 41 32.8 +0.2**
SSE S **S** **05 49 40.9 +2.5**
SSE pmax pmax
comp=Z,35nm,0.8s
SSE pmax pmax
comp=Z,120nm,6.2s
SSE L L
comp=Z,140nm,18.6s
SSE L L
comp=Z,230nm,17.9s
KSRS Korea Array 59.11 327 P **P** **05 41 34.0 +0.2**
comp=Z,20nm,0.9s,baz=138,slow=7.2,SNR=61
KSRS LR LR 06 05 14.6
comp=Z,452nm,19.7s,baz=140,slow=34
comp=Z,20nm,0.9s
KSAR Wonju Array Be 59.12 327 P **P** **05 41 34.3 +0.4**
KSAR Wonju Array Be 59.12 327 P **P** **05 41 34.3 +0.4**
KS19 Wonju Array Si 59.17 327 IAmb IAmb 05 41 35.5
comp=Z,29nm,0.9s
HKPS Hong Kong Po S 59.34 304 IAMs_20 IAMs_20 06 03 01.4
comp=Z,1μm,22.0s
INCN Inchon 59.84 326 P **P** **05 41 39.8 +0.9**
INCN Inchon 59.84 326 P **P** **05 41 39.5 +0.6**
INCN Inchon 59.84 326 P **P** **05 41 39.5 +0.6**
INCN pmax pmax
comp=Z,72nm,1.0s
YSS Yuzhno-Sakhali 60.86 343 P **P** **05 41 46.9 +1.3**
YSS Yuzhno-Sakhali 60.86 343 P **P** **05 41 46.2 +0.6**
YSS IAmb IAmb 05 41 47.9
comp=Z,47nm,1.0s
YSS Yuzhno-Sakhali 60.86 343 ⇓*i*P **P** **05 41 46.7 +1.1**
YSS *e*S **S** **05 50 02.8 0.0**
YSS *e*SS **SS** **05 54 04.7 +2.3**
YSS pmax pmax
comp=Z,40nm,0.9s
YSS pmax pmax
comp=Z,300nm,5.9s
YSS MLR MLR
comp=Z,400nm,16.0s
YSS MLR MLR
comp=N,400nm,18.0s
NJ2 Nanjing 61.07 316 ⇓P **P** **05 41 47.9 +0.5**
NJ2 pP **sP** **05 41 52.3 +1.4**
NJ2 pmax pmax
comp=N,92nm,0.9s
TEY Ternei 61.18 338 *e*P **P** **05 41 47.3 -0.5**
QIZ Qiongzhong 61.50 299 P **P** **05 41 50.8 +0.2**
QIZ S **S** **05 50 13.8 +1.7**
QIZ pmax pmax
comp=N,360nm,5.3s
QIZ L L
comp=N,310nm,18.6s
QIZ L L
comp=N,450nm,20.6s
QIZ L L
comp=N,760nm,19.6s
VLA Vladivostok 61.51 333 *d*/P **P** **05 41 52.0 +1.9**
VLA pmax pmax
comp=Z,91nm,1.2s
PSTR Posyet 61.62 332 *c*/P **P** **05 41 52.2 +1.3**
USRK Ussuriysk Ar. 62.33 334 P **P** **05 41 56.4 +0.8**
comp=Z,65nm,1.1s,baz=142,slow=6.5,SNR=55
comp=Z,65nm,1.1s
CNSH ChangSha 63.20 309 P **P** **05 42 02.6 +0.8**
CNSH S **S** **05 50 34.8 +1.6**
CNSH pmax pmax
comp=Z,31nm,0.8s
CNSH L L
comp=Z,420nm,18.6s
CNSH L L
comp=Z,470nm,22.8s
CNSH L L
comp=Z,350nm,33.8s
WHN Wuhan 63.38 312 P **P** **05 42 02.6 -0.3**
WHN pmax pmax
comp=Z,62nm,0.9s
DL2 Dalian 63.66 324 P **P** **05 42 04.8 +0.2**
DL2 S **S** **05 50 40.3 +1.8**
DL2 pmax pmax
comp=Z,60nm,1.0s
DL2 pmax pmax
comp=Z,400nm,5.4s
DL2 L L
comp=Z,910nm,20.8s
DL2 L L
comp=Z,580nm,22.0s
DL2 L L
comp=Z,1μm,23.7s
MDJ Mudanjiang 63.71 333 IAmb IAmb 05 42 06.9
comp=Z,54nm,1.0s
MDJ Mudanjiang 63.71 333 P **P** **05 42 05.5 +0.7**
MDJ S **S** **05 50 43.3 +4.4**
MDJ pmax pmax
comp=Z,64nm,1.0s
MDJ pmax pmax
comp=Z,640nm,5.1s
MDJ L L
comp=Z,860nm,24.2s
SHEM Shemya Is, Ala 64.02 7 LR LR 06 04 43.6
comp=Z,358nm,22.0s,baz=116,slow=31
PEA0B Petropavlovsk- 64.11 356 ⇓*i*P **P** **05 42 08.3 +1.0**
PETK Petropavlovsk- 64.11 356 P **P** **05 42 08.2 +0.9**
comp=Z,37nm,0.9s,baz=155,slow=7.6,SNR=18
PETK LR LR 06 04 38.0
comp=Z,396nm,19.6s,baz=176,slow=31
comp=Z,37nm,0.9s
PETK Petropavlovsk- 64.11 356 P **P** **05 42 08.0 +0.7**
TYV Tymovskoe 64.45 345 *e*P **P** **05 42 10.4 +0.9**
TYV pmax pmax
comp=Z,16nm,0.9s
TYV pmax pmax
comp=Z,400nm,4.6s
TIA Tai'an 64.71 319 P **P** **05 42 11.1 -0.5**
TIA S **S** **05 50 50.8 -0.9**
TIA pmax pmax
comp=Z,29nm,0.9s
TIA pmax pmax
comp=Z,170nm,4.8s
TIA L L
comp=Z,510nm,14.8s
TIA L L
comp=Z,510nm,14.8s
TIA L L
comp=Z,1μm,21.0s
CN2 Changchun 65.04 330 ⇓P **P** **05 42 13.8 +0.3**
CN2 *e*sP pwP 05 42 20.0 -4.2
CN2 *e*S **S** **05 50 54.9 -0.5**
CN2 pmax pmax
comp=Z,30nm,0.8s
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 L L
comp=Z,300nm,15.0s
CN2 L L
comp=Z,200nm,15.0s
CN2 L L
comp=Z,300nm,16.0s
MNSI Mandailing Nat 65.48 276 P **P** **05 42 18.0 +1.0**
comp=Z,4μmcomp=Z,21nm,0.5s
BNX BinXian 65.56 332 ⇓P **P** **05 42 16.8 -0.1**
BNX S **S** **05 51 01.0 -0.7**
BNX pmax pmax
comp=Z,51nm,1.3s
BNX pmax pmax
comp=Z,240nm,8.3s
BNX L L
comp=Z,600nm,15.3s
BNX L L
comp=Z,500nm,21.0s
BNX L L
comp=Z,550nm,20.1s
GRNR Gornyy 66.17 341 ⇓*i*P **P** **05 42 21.9 +1.2**
GRNR pmax pmax
comp=Z,30nm,1.1s
KLR Kul'dur 66.50 337 P **P** **05 42 24.1 +1.2**
comp=Z,30nm,1.0s,baz=131,slow=8.7,SNR=57
comp=Z,30nm,1.0s
KLR Kul'dur 66.50 337 *d*/P **P** **05 42 23.7 +0.8**
KLR pmax pmax
comp=Z,52nm,1.1s
VNDA Vanda 66.52 181 P **P** **05 42 23.8 +1.1**
comp=Z,16nm,1.0s,baz=351,slow=7.3,SNR=14
VNDA LR LR 06 08 03.4
comp=Z,363nm,18.8s,baz=7.0,slow=33
comp=Z,16nm,1.0s
VNDA Vanda 66.52 181 P **P** **05 42 23.7 +1.1**
VNDA IAmb IAmb 05 42 24.9
comp=Z,48nm,1.4s
VNDA Vanda 66.52 181 P **P** **05 42 23.7 +1.1**
VNDA pmax pmax
comp=Z,48nm,1.5s
RPSI Rantau Prapat 66.53 278 P **P** **05 42 22.2 -1.6**
PSI Prapat 66.56 278 P **P** **05 42 22.3 -1.8**
PSI pmax pmax
comp=Z,9.0nm,0.9s
PSI Prapat 66.56 278 P **P** **05 42 23.3 -0.8**
comp=Z,10nm,1.0s
LYN LuoYang 66.88 315 P **P** **05 42 25.8 +0.2**
LYN pmax pmax
comp=Z,47nm,0.8s
LYN pmax pmax
comp=Z,440nm,5.6s
LYN L L
comp=Z,550nm,18.8s
LYN L L
comp=Z,590nm,24.7s
LYN L L
comp=Z,1μm,22.7s
HNS HongShan 66.98 319 ⇓P **P** **05 42 26.4 +0.3**
HNS S **S** **05 51 20.3 +1.1**
HNS pmax pmax
comp=Z,55nm,1.1s
HNS pmax pmax
comp=Z,350nm,6.3s
HNS L L
comp=Z,400nm,17.5s
HNS L L
comp=Z,480nm,20.6s
HNS L L
comp=Z,720nm,18.6s
BJI2 Beijing 67.62 322 P **P** **05 42 30.1 -0.1**
BJI2 pP **sP** **05 42 35.0 +1.3**
BJI2 S **S** **05 51 27.5 +0.6**
BJI2 pmax pmax
comp=Z,10.0nm,1.1s
BJI2 pmax pmax
comp=Z,130nm,4.7s
BJI2 L L
comp=Z,340nm,24.3s
BJI2 L L
comp=Z,280nm,24.1s
BJI2 L L
comp=Z,640nm,24.4s
BJT Baijiatuau 67.62 322 IAmb IAmb 05 42 31.6
comp=Z,24nm,1.2s
HEH HeiHe 69.02 336 *e*P **P** **05 42 38.9 +0.2**
HEH pP **sP** **05 42 43.5 +1.2**
HEH S **S** **05 51 44.4 +1.2**
HEH pmax pmax
comp=Z,30nm,1.0s
HEH L L
comp=Z,660nm,16.1s
HEH L L
comp=Z,500nm,16.7s
HEH L L
comp=Z,610nm,14.7s
XAN Xi'an 69.12 313 ⇓P **P** **05 42 39.5 -0.3**
XAN pP sP 05 42 43.9 +0.6
XAN pmax pmax
comp=Z,59nm,0.9s
UNV Unalaska Valle 69.17 18 IAmb IAmb 05 42 40.7
comp=Z,47nm,0.9s
UNV Unalaska Valle 69.17 18 P **P** **05 42 39.6 +0.1**
baz=211
KMI2 Kunming 69.98 302 P **P** **05 42 45.9 +0.4**
KMI2 S **S** **05 51 57.5 +1.5**
KMI2 pmax pmax
comp=Z,38nm,1.0s
KMI2 pmax pmax
comp=Z,210nm,6.1s
KMI2 L L
comp=Z,190nm,19.3s
KMI2 L L
comp=Z,460nm,24.1s
KMI2 L L
comp=Z,800nm,21.9s
XLT XiLinHaoTe 70.07 325 *e*P **P** **05 42 46.4 +0.9**
XLT pP sP 05 42 49.5 +0.5
XLT PP **PP** **05 45 24.8 +4.0**
XLT S **S** **05 51 54.1 -1.9**
XLT sS sS 05 52 02.6 +2.1
XLT pmax pmax
comp=Z,92nm,1.0s
XLT pmax pmax
comp=Z,240nm,6.5s
XLT L L
comp=Z,53nm,20.0s
XLT L L
comp=Z,280nm,19.1s
XLT L L
comp=Z,600nm,25.5s
CMAR Chiang Mai Arr 70.89 294 P **P** **05 42 51.5 +0.7**
comp=Z,4.5nm,0.7s,baz=120,slow=4.4,SNR=26
CMAR LR LR 06 13 50.7
comp=Z,154nm,20.0s,baz=100,slow=36
comp=Z,4.5nm,0.7s
CMAR Chiang Mai Arr 70.89 294 P **P** **05 42 50.9 0.0**
HHC Hu-ho-hao-te 70.95 320 ⇓*i*P **P** **05 42 52.3 +1.3**
HHC pP sP 05 42 56.3 +1.8
HHC pmax pmax
comp=Z,30nm,0.9s
HHC pmax pmax
comp=Z,120nm,3.9s
HHC L L
comp=Z,570nm,22.7s
HHC L L
comp=Z,210nm,22.7s
HHC L L
comp=Z,560nm,21.7s
FALS False Pass 70.99 19 P **P** **05 42 51.3 +0.6**
FALS False Pass 70.99 19 P **P** **05 42 50.8 +0.1**
baz=214
CHTO Chiang Mai 71.00 294 P **P** **05 42 51.7 +0.1**
CHTO Chiang Mai 71.00 294 P **P** **05 42 51.7 +0.1**
CHTO IAmb IAmb 05 42 56.2
comp=Z,58nm,1.8s
CHTO Chiang Mai 71.00 294 P **P** **05 42 51.7 +0.1**
CHTO pmax pmax
comp=Z,58nm,1.8s
CHTO MLR MLR
comp=Z,300nm,19.0s
CHTO Chiang Mai 71.00 294 P **P** **05 42 51.8 +0.1**
comp=Z,13nm,1.4s
SPIA Saint Paul Isl 71.08 14 P **P** **05 42 51.2 0.0**
baz=206
MA2 Magadan 71.20 353 P **P** **05 42 51.2 -0.7**
MA2 IAmb IAmb 05 42 52.7
comp=Z,30nm,0.9s
MA2 Magadan 71.20 353 P **P** **05 42 51.2 -0.7**
MA2 pmax pmax
comp=Z,30nm,0.9s
PZH PanZhiHua 71.34 303 P **P** **05 42 53.3 -0.3**
PZH S **S** **05 52 10.9 -0.7**
PZH SS **SS** **05 56 46.6 +0.2**
PZH pmax pmax
comp=Z,20nm,0.9s
PZH pmax pmax
comp=Z,230nm,6.6s
PZH L L
comp=Z,210nm,19.8s
PZH L L
comp=Z,380nm,18.8s
PZH L L
comp=Z,460nm,19.4s
CD2 Chengdu 71.53 308 P **P** **05 42 55.0 +0.4**
CD2 pmax pmax
comp=Z,80nm,0.8s
HIA Hailar 71.69 331 IAmb IAmb 05 42 56.8
comp=Z,54nm,1.0s
HIA Hailar 71.69 331 *d*/P **P** **05 42 55.6 +0.5**
HIA pmax pmax
comp=Z,65nm,1.0s
ZEA Zeya 71.80 338 *e*P **P** **05 42 56.9 +1.3**
ZEA *e* 05 52 22.9
ZEA pmax pmax
comp=N,20nm,1.1s
ZEA pmax pmax
comp=Z,50nm,1.2s
BTO2 Baotou 71.96 319 *e*P **P** **05 42 58.4 +1.3**
BTO2 sP **pwP** **05 43 05.8 -2.1**
BTO2 PP **PP** **05 45 34.1 -3.1**
BTO2 S **S** **05 52 21.6 +3.4**
BTO2 pmax pmax
comp=Z,51nm,1.0s
BTO2 pmax pmax
comp=Z,690nm,4.5s
BTO2 L L
comp=Z,920nm,10.0s
BTO2 L L
comp=Z,980nm,13.8s
BTO2 L L
comp=Z,2μm,21.6s
CHNA Chernabura Isl 72.25 21 P **P** **05 42 58.3 0.0**
baz=217
SDPT Sand Point 72.36 20 P **P** **05 42 58.6 -0.3**
baz=216
LZH Lanzhou 73.76 313 *e*P **P** **05 43 09.1 +1.2**
LZH sP pwP 05 43 15.6 -3.2
LZH S **SKiKP** **05 52 39.1 +1.6**
LZH SS **SS** **05 57 16.3 -6.8**
LZH pmax pmax
comp=Z,53nm,1.3s
LZH L L
comp=Z,380nm,16.8s
LZH L L
comp=Z,460nm,17.1s
LZH L L
comp=Z,620nm,17.5s
LZDM Lanzhou Array 73.81 313 P **P** **05 43 09.8 +1.4**
comp=Z,12nm,0.6s,baz=151,slow=6.4,SNR=18
LZDM LR LR 06 13 20.1
comp=Z,400nm,21.8s,baz=205,slow=34
comp=Z,12nm,0.6s
CHGN Chignik 73.83 21 P **P** **05 43 07.6 0.0**
baz=218
SEY Seymchan 74.30 354 P **P** **05 43 11.1 +0.8**
comp=Z,32nm,0.9s,baz=155,slow=6.2,SNR=82
SEY LR LR 06 13 13.0
comp=Z,244nm,19.5s,baz=155,slow=34
comp=Z,32nm,0.9s
SEY Seymchan 74.30 354 ⇓*i*P **P** **05 43 10.6 +0.4**
SEY pmax pmax
comp=Z,62nm,1.1s
M11K Mekoryuk 74.92 15 IAMs_20 IAMs_20 06 16 34.8
comp=Z,1μm,21.0s
M11K Mekoryuk 74.92 15 P **P** **05 43 15.6 +1.8**
baz=210,SNR=7.5
R16K Pilot Point 75.11 20 P **P** **05 43 15.5 +0.5**
baz=219
O14K Tigyukauivet M 75.30 17 IAmb IAmb 05 43 18.1
comp=Z,43nm,0.9s
O14K Tigyukauivet M 75.30 17 P **P** **05 43 16.9 +0.8**
baz=215
SII Sitkinak Islan 75.54 22 P **P** **05 43 18.1 +0.5**
baz=222
R17L Mt. Peulik Vol 75.57 21 P **P** **05 43 18.6 +0.8**
baz=220
O15K Ungalikthiuk R 75.67 18 IAmb IAmb 05 43 19.6
comp=Z,26nm,1.1s
O15K Ungalikthiuk R 75.67 18 P **P** **05 43 18.6 +0.4**
baz=216
M13K Dall Lake 75.68 16 P **P** **05 43 19.7 +1.5**
baz=213,SNR=22
N14K Kuskokwak Cree 75.73 17 P **P** **05 43 19.4 +0.9**
baz=214,SNR=14
P16K Nushagak River 76.12 19 P **P** **05 43 21.2 +0.4**
baz=218,SNR=5.5
Q16K King Salmon 76.28 20 P **P** **05 43 22.0 +0.3**

baz=219,SNR=12
M14K **Bethel** 76.34 16 P P 05 43 23.2 +1.2
baz=214,SNR=42
OHAK **Old Harbor** 76.36 22 P P 05 43 23.0 +0.8
OHAK **Old Harbor** 76.36 22 IAmb IAmb 05 43 24.1
comp=Z,46nm,1.0s
OHAK **Old Harbor** 76.36 22 P P 05 43 22.8 +0.6
baz=223
ACHA **Angle Creek He** 76.37 21 IAmb IAmb 05 43 25.1
comp=Z,53nm,1.1s
N15K **Kwethluk River** 76.39 17 P P 05 43 23.8 +1.4
baz=216,SNR=24
CIT **Chita** 76.47 330 *e*P P 05 43 23.4 +0.4
CIT *e* 05 43 35.4
CIT pmax pmax
comp=Z,173nm,1.3s
O16K **Kokwok River B** 76.53 19 IAmb IAmb 05 43 28.0
comp=Z,28nm,1.1s
O16K **Kokwok River B** 76.53 19 P P 05 43 22.9 -0.2
baz=218,SNR=9.5
K13K **Kusilvak Mount** 76.63 14 P P 05 43 24.9 +1.2
baz=211,SNR=37
L14K **Kuka Creek** 76.64 16 P P 05 43 25.0 +1.4
baz=213
M15K **Kasigluk River** 76.65 17 P P 05 43 24.9 +1.1
baz=215
P17K **Kvichak River** 76.75 20 IAmb IAmb 05 44 05.4
comp=Z,54nm,1.0s
P17K **Kvichak River** 76.75 20 P P 05 43 24.4 +0.1
baz=220,SNR=5.9
GAMB **Gambell** 76.77 11 P P 05 43 25.5 +1.1
baz=204,SNR=8.4
Q18K **Katmai Hardscr** 76.81 20 P P 05 43 24.9 0.0
baz=221,SNR=31
MORE **Moreh** 76.84 298 IAMs_20 IAMs_20 06 15 49.0
comp=Z,251nm,20.0s
O17K **Koliganek Bris** 76.99 19 P P 05 43 25.9 +0.2
baz=219
N16K **Nishlik Lake** 77.03 18 P P 05 43 27.6 +1.7
baz=217
KDAK **Kodiak Island** 77.03 22 LR LR 06 17 20.2
comp=Z,190nm,18.2s,baz=221,slow=36
KDAK **Kodiak Island** 77.03 22 P P 05 43 26.4 +0.4
baz=223
L15K **Ungalak Mounta** 77.23 16 P P 05 43 27.8 +0.8
baz=214
P18K **Big Mountain,** 77.30 20 P P 05 43 27.5 0.0
baz=221,SNR=51
M16K **Timber Creek** 77.41 17 P P 05 43 29.6 +1.5
baz=217
Q19K **Cape Douglas,** 77.50 21 P P 05 43 29.0 +0.4
baz=222,SNR=13
ULN **Ulaanbaatar** 77.50 324 P P 05 43 30.0 +0.9
ULN **Ulaanbaatar** 77.50 324 P P 05 43 30.0 +0.9
ULN pmax pmax
comp=Z,64nm,0.9s
ULN **Ulaanbaatar** 77.50 324 P P 05 43 29.6 +0.5
N17K **Nushagak Hills** 77.55 18 P P 05 43 30.2 +1.4
baz=219
J14K **Nanvaranak Lak** 77.60 14 P P 05 43 30.6 +1.6
baz=212
O18K **Koktuh Hills** 77.66 20 P P 05 43 29.5 0.0
baz=221,SNR=10
YAK **Yakutsk** 77.69 344 P P 05 43 29.5 -0.1
comp=Z,100nm,0.8s,baz=105,slow=1.3,SNR=25
comp=Z,100nm,0.8s
YAK **Yakutsk** 77.69 344 P P 05 43 29.8 +0.3
YAK **Yakutsk** 77.69 344 *d*iP P 05 43 29.8 +0.3
YAK *e* 05 43 32.5
YAK *e* 05 46 26.5
YAK *e*S **S** **05 53 22.8 +1.8**
YAK *e**SS ScS 05 54 01.1 +13
YAK pmax pmax
comp=Z,118nm,0.9s
YAK pmax pmax
comp=N,26nm,1.1s
YAK pmax pmax
comp=E,12nm,1.4s
YAK pmax pmax
comp=Z,130nm,3.6s
YAK pmax pmax
comp=N,79nm,3.7s
YAK pmax pmax
comp=E,115nm,3.8s
YAK smax smax
comp=E,162nm,4.5s
YAK smax smax
comp=N,71nm,3.0s
Q20K **Shuyak Island** 77.70 22 P P 05 43 30.2 +0.4
baz=223
K15K **Wolf Creek Mou** 77.73 16 P P 05 43 31.5 +1.7
baz=214,SNR=76
L16K **Owhat River** 77.82 17 P P 05 43 31.6 +1.3
baz=216,SNR=43
SONM **Songino Array** 77.86 324 P P 05 43 31.5 +0.4
comp=N,26nm,0.8s,baz=145,slow=7.0,SNR=103
SONM LR LR 06 15 29.7
comp=N,503nm,21.9s,baz=118,slow=34
comp=N,26nm,0.8s
SONM **Songino Array** 77.86 324 P P 05 43 31.5 +0.4
SONM IAmb IAmb 05 43 32.9
comp=Z,40nm,0.9s
N18K **Kilae Creek** 78.07 19 P P 05 43 32.7 +0.8
baz=220
GTA2 **Gaotai** 78.15 314 P P 05 43 33.9 +1.0
GTA2 pP sP 05 43 37.3 +0.9
GTA2 S **S** **05 53 31.3 +4.0**
GTA2 SS **SS** **05 58 28.0 -1.5**
GTA2 pmax pmax
comp=Z,61nm,1.0s
GTA2 pmax pmax
comp=Z,430nm,7.0s
GTA2 L L
comp=Z,460nm,20.0s
GTA2 L L
comp=Z,340nm,21.6s
GTA2 L L
comp=Z,520nm,22.8s
M17K **Holitna River** 78.16 18 P P 05 43 33.9 +1.7
baz=218
P19K **Oil Pt** 78.17 20 P P 05 43 32.8 +0.4
baz=222,SNR=8.0
O19K **Port Alsworth** 78.21 20 P P 05 43 32.7 +0.2
baz=221,SNR=13
L17K **Donlin** 78.49 17 P P 05 43 35.9 +1.8
baz=217
N19K **Bonanza Creek** 78.62 19 IAmb IAmb 05 43 36.4
comp=Z,37nm,1.0s
N19K **Bonanza Creek** 78.62 19 P P 05 43 35.3 +0.3
baz=221,SNR=15
BRDH **Bariadhala** 78.69 296 LR LR 06 16 16.1
comp=Z,265nm,21.8s,baz=139,slow=34
M18K **Stony River** 78.72 18 P P 05 43 37.3 +2.0
baz=220
HOM **Homer** 78.73 21 P P 05 43 36.4 +1.0
baz=224,SNR=9.4
ANM **Nome** 78.74 13 IAmb IAmb 05 43 38.0
comp=Z,50nm,1.1s
ANM **Nome** 78.74 13 P P 05 43 36.8 +1.4
baz=210,SNR=29
J16K **Anvik River** 78.79 15 P P 05 43 37.7 +2.0
baz=215,SNR=47
BILL **Bilibino** 78.85 1 P P 05 43 36.7 +0.7
BILL **Bilibino** 78.85 1 *d*iP P 05 43 36.1 +0.2
BILL pmax pmax
comp=Z,157nm,1.0s
RED **Redoubt Volcan** 78.89 20 IAmb IAmb 05 43 37.4
comp=Z,55nm,0.9s
K17K **Iditarod** 78.95 17 P P 05 43 38.3 +1.7
baz=217
QSPA **South Pole Qui** 79.00 180 P P 05 43 37.9 +0.9
comp=Z,19nm,0.9s,baz=7.7,slow=1.0,SNR=48
QSPA LR LR 06 15 53.9
comp=Z,228nm,18.8s,baz=28,slow=34
comp=Z,19nm,0.9s
QSPA **South Pole Qui** 79.00 180 P P 05 43 37.3 +0.3
QSPA IAmb IAmb 05 43 39.2
comp=Z,148nm,1.9s
L18K **Granite Mounta** 79.02 17 P P 05 43 39.0 +2.0
baz=219
BRLK **Bradley Lake** 79.08 21 IAmb IAmb 05 43 39.2
comp=Z,68nm,1.0s
TNA **Tin City** 79.09 11 IAmb IAmb 05 43 39.4
comp=Z,43nm,1.0s
TNA **Tin City** 79.09 11 P P 05 43 38.2 +1.0
baz=208,SNR=12
BRSE **Bradley Lake S** 79.11 21 P P 05 43 38.7 +1.1
baz=225,SNR=6.0

I17K **Unalakleet** 79.27 15 P P 05 43 40.1 +1.9
baz=215,SNR=8.2
J17K **VABM Dome** 79.29 16 P P 05 43 40.3 +1.9
baz=216
F14K **Arctic Creek** 79.33 12 P P 05 43 39.8 +1.2
baz=209
SHL **Shillong** 79.34 299 P P 05 43 38.7 -1.1
SHL IAmb IAmb 05 43 40.7
comp=Z,48nm,1.5s
SHL **Shillong** 79.34 299 P P 05 43 38.7 -1.1
SHL pmax pmax
comp=Z,48nm,1.5s
G15K **Niukluk** 79.40 13 P P 05 43 40.3 +1.3
baz=212,SNR=26
M19K **Big River Lodg** 79.48 18 P P 05 43 41.1 +1.7
baz=221
L19K **White Mountain** 79.55 18 P P 05 43 41.2 +1.3
baz=221,SNR=56
N20K **Mount Spurr** 79.66 20 P P 05 43 40.6 0.0
baz=223,SNR=7.6
SPCR **Spurr Chakacha** 79.66 20 P P 05 43 40.4 -0.1
baz=223,SNR=5.2
CAPN **Captain Cook N** 79.70 20 P P 05 43 42.1 +1.5
baz=224,SNR=18
SEW **Seward** 79.83 22 IAmb IAmb 05 43 46.3
comp=Z,52nm,1.2s
SEW **Seward** 79.83 22 P P 05 43 42.2 +0.9
baz=225
SLKM **Skilak Lake** 79.84 21 IAmb IAmb 05 43 43.2
comp=Z,57nm,0.9s
M20K **Styx River** 79.86 19 IAmb IAmb 05 43 44.3
comp=Z,33nm,0.8s
M20K **Styx River** 79.86 19 P P 05 43 42.2 +0.6
baz=222
F15K **North Star Dit** 79.88 12 IAmb IAmb 05 43 44.0
comp=Z,49nm,1.2s
F15K **North Star Dit** 79.88 12 P P 05 43 42.7 +1.1
baz=211,SNR=15
BOD **Bodaibo** 79.94 335 *e*P P 05 43 41.1 -0.9
BOD pmax pmax
comp=Z,34nm,1.8s
J18K **Innoko River** 79.99 17 IAmb IAmb 05 43 44.6
comp=Z,71nm,0.9s
J18K **Innoko River** 79.99 17 P P 05 43 43.3 +1.0
baz=219,SNR=60
O22K **Cooper Landing** 80.00 21 P P 05 43 43.1 +0.9
baz=226,SNR=11
G16K **Koyuk River** 80.12 13 IAmb IAmb 05 43 45.5
comp=Z,72nm,0.9s
G16K **Koyuk River** 80.12 13 P P 05 43 44.2 +1.4
baz=213,SNR=76
H17K **Granite Mounta** 80.32 15 IAmb IAmb 05 43 46.6
comp=Z,63nm,0.9s
H17K **Granite Mounta** 80.32 15 P P 05 43 45.4 +1.4
baz=216
RC01 **Rabbit Creek A** 80.42 21 P P 05 43 45.1 +0.6
RC01 IAmb IAmb 05 43 46.4
comp=Z,44nm,1.1s
RC01 **Rabbit Creek A** 80.42 21 P P 05 43 45.0 +0.5
baz=226,SNR=8.2
SKT **Skwentna** 80.45 19 P P 05 43 44.0 -0.8
baz=224,SNR=7.3
GOMU **GeErMu** 80.48 310 P P 05 43 46.5 +0.6
GOMU S **S** **05 53 52.3 -0.3**
GOMU SS **SS** **05 59 07.3 +2.3**
GOMU pmax pmax
comp=Z,12nm,0.8s
GOMU L L
comp=Z,210nm,20.2s
GOMU L L
comp=Z,390nm,21.8s
GOMU L L
comp=Z,580nm,21.4s
P23K **Montague Islan** 80.51 22 P P 05 43 45.9 +0.8
baz=228
Q23K **Middleton Isla** 80.53 23 P P 05 43 46.3 +1.1
baz=229
G17K **Kiwalik Mounta** 80.61 14 P P 05 43 47.0 +1.4
baz=215,SNR=40
K20K **Telida** 80.67 18 IAmb IAmb 05 43 48.6
comp=Z,73nm,1.1s
K20K **Telida** 80.67 18 P P 05 43 47.2 +1.3
baz=221,SNR=36
J19K **Poorman** 80.71 17 IAmb IAmb 05 43 48.9
comp=Z,79nm,1.0s
J19K **Poorman** 80.71 17 P P 05 43 47.5 +1.4
baz=220
M22K **Willow** 80.75 20 P P 05 43 46.7 +0.4
baz=225
H18K **Honhosa River** 80.89 15 IAmb IAmb 05 43 48.9
comp=Z,56nm,1.3s
H18K **Honhosa River** 80.89 15 P P 05 43 47.8 +0.7
baz=217,SNR=23
PPLA **Purkeypile** 80.90 19 IAmb IAmb 05 43 51.2
comp=Z,70nm,1.2s
PPLA **Purkeypile** 80.90 19 P P 05 43 48.5 +1.1
baz=223,SNR=7.9
ZAK **Zakamensk** 80.92 325 *e*P P 05 43 47.2 -0.4
ZAK pmax pmax
comp=Z,39nm,1.2s
GCSA **Galena City Sc** 80.95 16 P P 05 43 48.5 +1.1
baz=218,SNR=30
PMR **Palmer** 80.98 21 P P 05 43 48.3 +0.8
PMR **Palmer** 80.98 21 P P 05 43 48.0 +0.5
PMR IAmb IAmb 05 43 52.1
comp=Z,104nm,1.6s
PMR **Palmer** 80.98 21 P P 05 43 48.0 +0.5
PMR pmax pmax
comp=Z,104nm,1.6s
PMR **Palmer** 80.98 21 P P 05 43 47.9 +0.4
baz=226,SNR=14
KNK **Knik Glacier** 81.09 21 IAmb IAmb 05 43 53.5
comp=Z,30nm,1.0s
KNK **Knik Glacier** 81.09 21 P P 05 43 49.2 +1.0
baz=227,SNR=7.0
L22K **Petersville** 81.09 19 IAmb IAmb 05 43 49.0
comp=Z,28nm,1.1s
CUT **Chulitna** 81.17 20 IAmb IAmb 05 43 50.2
comp=Z,84nm,1.1s
CUT **Chulitna** 81.17 20 P P 05 43 48.7 +0.2
baz=225,SNR=5.4
GHO **Glory Hole Cre** 81.17 20 IAmb IAmb 05 43 53.2
comp=Z,31nm,1.0s
GLI **Glacier Island** 81.21 22 IAmb IAmb 05 43 50.6
comp=Z,45nm,1.0s
GLI **Glacier Island** 81.21 22 P P 05 43 49.1 +0.2
baz=228,SNR=5.8
F17K **Baldwin Pennin** 81.25 13 P P 05 43 50.2 +1.3
baz=214,SNR=52
J20K **Nowinta River** 81.27 17 IAmb IAmb 05 43 51.7
comp=Z,46nm,1.0s
J20K **Nowinta River** 81.27 17 P P 05 43 50.5 +1.4
baz=221
IRK **Irkutsk** 81.31 327 *e*P P 05 43 48.9 -0.7
IRK pmax pmax
comp=Z,46nm,1.4s
TLY **Talaya** 81.36 327 LR LR 06 18 28.3
comp=Z,185nm,20.4s,baz=118,slow=35
TLY **Talaya** 81.36 327 P P 05 43 49.6 -0.3
TLY IAmb IAmb 05 43 51.0
comp=Z,25nm,0.9s
TLY **Talaya** 81.36 327 *d*iP P 05 43 50.0 +0.1
TLY pmax pmax
comp=Z,33nm,0.9s
SML **Sawmill** 81.40 21 IAmb IAmb 05 43 51.9
comp=Z,60nm,1.3s
SML **Sawmill** 81.40 21 P P 05 43 50.7 +0.8
baz=227,SNR=7.8
G18K **Tagagawik** 81.41 14 IAmb IAmb 05 43 52.0
comp=Z,77nm,1.1s
G18K **Tagagawik** 81.41 14 P P 05 43 50.8 +1.0
baz=217
EYAK **Cordova Ski Ar** 81.49 22 P P 05 43 51.5 +1.2
EYAK **Cordova Ski Ar** 81.49 22 IAmb IAmb 05 43 52.3
comp=Z,34nm,0.9s
EYAK **Cordova Ski Ar** 81.49 22 P P 05 43 51.1 +0.8
baz=229,SNR=6.3
CHUM **Lake Minchumin** 81.59 18 P P 05 43 51.2 +0.5
baz=223,SNR=15
KAIM **Kayak Island** 81.60 23 P P 05 43 52.3 +1.4
baz=231,SNR=6.8
M23K **Glacier View** 81.60 21 P P 05 43 51.5 +0.6
baz=227
I20K **Naaghedeneel** 81.65 17 P P 05 43 52.9 +1.9
baz=221
H19K **Roundabout Mou** 81.68 15 P P 05 43 52.7 +1.5
baz=219
F18K **Selawik** 81.75 14 P P 05 43 52.5 +1.0

baz=216,SNR=58
SCM **Sheep Creek Mo** 81.77 21 IAmb IAmb 05 43 54.0
comp=Z,38nm,1.0s
SCM **Sheep Creek Mo** 81.77 21 P P 05 43 52.8 +0.9
baz=228,SNR=8.7
KTH **Kantishna Hill** 81.78 19 IAmb IAmb 05 43 52.7
comp=Z,32nm,1.0s
RPN **Rapa Nui** 81.78 116 LR LR 06 15 02.6
comp=Z,174nm,18.6s,baz=280,slow=32
RAGM **Ragged Mountai** 81.79 23 IAmb IAmb 05 43 54.8
comp=Z,30nm,1.0s
DIV **Divide** 81.86 22 IAmb IAmb 05 43 54.9
comp=Z,49nm,0.8s
TRF **Thorofare Moun** 81.90 19 IAmb IAmb 05 43 55.4
comp=Z,37nm,1.1s
TRF **Thorofare Moun** 81.90 19 P P 05 43 52.5 -0.2
baz=225,SNR=14
D17K **Noatak River** 81.91 12 P P 05 43 53.7 +1.3
baz=212,SNR=54
C16K **Lisburne Hills** 81.97 11 IAmb IAmb 05 43 54.6
comp=Z,30nm,1.1s
C16K **Lisburne Hills** 81.97 11 P P 05 43 53.4 +0.8
baz=210,SNR=11
G19K **Purcell Mounta** 82.00 15 P P 05 43 54.4 +1.5
baz=218,SNR=113
WAT1 **Susitna Watana** 82.03 20 P P 05 43 53.7 +0.5
baz=226
KLU **Klutina** 82.05 22 IAmb IAmb 05 43 55.5
comp=Z,36nm,1.0s
KLU **Klutina** 82.05 22 P P 05 43 54.2 +0.9
baz=229,SNR=23
H20K **Anotleneega Mo** 82.07 16 P P 05 43 54.8 +1.5
baz=220
WAT6 **Susitna Watana** 82.14 20 P P 05 43 54.6 +0.7
baz=227,SNR=12
BPAW **Bear Paw Mtn.** 82.15 18 P P 05 43 53.7 0.0
BPAW **Bear Paw Mtn.** 82.15 18 P P 05 43 53.5 -0.3
baz=224,SNR=8.5
BMRM **Bremner River** 82.19 22 IAmb IAmb 05 43 56.2
comp=Z,43nm,1.0s
BMRM **Bremner River** 82.19 22 P P 05 43 54.9 +0.8
baz=230,SNR=15
E18K **Tukpahlearik C** 82.20 13 P P 05 43 55.4 +1.4
baz=215,SNR=58
RDOG **Red Dog Mine** 82.25 12 P P 05 43 55.6 +1.5
baz=212,SNR=29
M24K **Tolsona, Glenn** 82.36 21 P P 05 43 56.4 +1.4
baz=229,SNR=18
F19K **Shaleruckik Mo** 82.38 14 P P 05 43 56.1 +1.2
baz=217
MCK **McKinley** 82.53 19 P P 05 43 55.9 +0.1
baz=226,SNR=31
C17K **DeLong Mountai** 82.56 12 P P 05 43 56.8 +1.0
baz=212
DHY **Denali Highway** 82.59 20 IAmb IAmb 05 43 59.4
comp=Z,24nm,0.9s
DHY **Denali Highway** 82.59 20 P P 05 43 57.0 +0.7
baz=228,SNR=16
N25K **Chitina, Valde** 82.60 22 P P 05 43 57.4 +1.1
baz=230,SNR=31
CRQE **Cirque** 82.63 23 P P 05 43 57.5 +1.0
baz=232,SNR=30
I21K **Tanana** 82.64 17 P P 05 43 57.3 +1.1
baz=223,SNR=59
MESA **MESA** 82.73 24 P P 05 43 58.2 +1.2
baz=233,SNR=20
IMAR **Indian Mountai** 82.75 16 P P 05 43 57.5 +0.7
H21K **Melozitna Rive** 82.76 16 IAmb IAmb 05 43 59.5
comp=Z,61nm,1.2s
H21K **Melozitna Rive** 82.76 16 P P 05 43 58.3 +1.4
baz=222,SNR=51
VRDI **Verde Repeater** 82.79 23 IAmb IAmb 05 43 59.5
comp=Z,40nm,0.8s
MOY **Mondy** 82.80 326 *e*P P 05 43 57.6 +0.1
MOY pmax pmax
comp=Z,35nm,2.5s
MLY **Manley** 82.90 18 IAmb IAmb 05 43 59.4
comp=Z,34nm,1.0s
MLY **Manley** 82.90 18 P P 05 43 58.2 +0.5
baz=224,SNR=38
HARP **HAARP** 82.91 21 P P 05 43 58.8 +1.0
baz=230,SNR=13
E19K **Redstone River** 83.00 14 P P 05 43 59.7 +1.6
baz=218
F20K **Avaraart Lake** 83.05 15 P P 05 43 59.7 +1.4
baz=219,SNR=109
MCARA **McCarthy VSAT** 83.05 23 IAmb IAmb 05 44 01.3
comp=Z,44nm,0.9s
MCARA **McCarthy VSAT** 83.05 23 P P 05 43 59.4 +0.9
baz=232,SNR=26
NEA2 **Nenana** 83.09 18 IAmb IAmb 05 43 59.7
comp=Z,53nm,1.2s
NEA2 **Nenana** 83.09 18 P P 05 43 58.4 -0.2
baz=226,SNR=28
C18K **Utukok River** 83.10 12 P P 05 43 59.5 +0.9
baz=214,SNR=40
GRNC **Granite Creek** 83.14 24 IAmb IAmb 05 44 01.5
comp=Z,44nm,0.9s
PAX **Paxson** 83.17 21 P P 05 43 59.5 +0.3
baz=229,SNR=9.8
G21K **Allakaket** 83.21 16 P P 05 44 00.5 +1.3
baz=221
WRH **Wood River Hil** 83.31 19 IAmb IAmb 05 44 00.9
comp=Z,44nm,1.0s
H22K **Ishtalitna Cre** 83.34 17 P P 05 44 01.2 +1.3
baz=224,SNR=56
PINM **Pinnacle** 83.36 25 P P 05 44 01.1 +0.9
baz=234,SNR=27
I23K **Minto, Yukon-K** 83.39 18 P P 05 44 00.3 +0.2
baz=226,SNR=12
CTG **Chitna Glacier** 83.44 23 P P 05 44 01.7 +1.0
baz=233,SNR=49
LOGN **Logan Glacier** 83.49 24 IAmb IAmb 05 44 03.9
comp=Z,47nm,1.0s
KCPM **Cahto Peak** 83.50 48 P P 05 44 02.2 +0.8
KCPM IAmb IAmb 05 44 03.4
comp=Z,24nm,0.8s
CCB **Clear Creek Bu** 83.52 19 IAmb IAmb 05 44 01.8
comp=Z,25nm,0.8s
KMRM **Mail Ridge** 83.59 47 P P 05 44 03.0 +1.1
KMRM IAmb IAmb 05 44 04.2
comp=Z,41nm,1.0s
K24K **Donnelly Dome** 83.62 20 P P 05 44 02.3 +0.9
baz=229,SNR=34
D19K **Kuna River** 83.63 13 P P 05 44 02.5 +1.1
baz=217
HOPS **Hopland Field** 83.63 48 P P 05 44 02.6 +0.6
HOPS IAmb IAmb 05 44 03.4
comp=Z,26nm,0.9s
HOPS IAMs_20 IAMs_20 06 18 42.3
comp=Z,603nm,20.0s
HDA **Harding Lake** 83.64 19 IAMs_20 IAMs_20 06 20 40.4
comp=Z,489nm,18.0s
HDA **Harding Lake** 83.64 19 P P 05 44 01.9 +0.4
baz=228,SNR=134
COLA **College** 83.67 19 P P 05 44 01.4 -0.1
COLA **College** 83.67 19 P P 05 44 01.5 0.0
COLA **College** 83.67 19 *d*iP P 05 44 01.2 -0.3
COLA pmax pmax
comp=Z,83nm,0.9s
COLA **College** 83.67 19 P P 05 44 01.6 +0.1
baz=227
M26K **Nabesna, AK** 83.69 22 P P 05 44 02.8 +0.9
baz=232,SNR=59
JRSC **Jasper Ridge** 83.73 50 IAmb IAmb 05 44 04.8
comp=Z,44nm,1.2s
F21K **Alatna River** 83.75 15 P P 05 44 02.8 +0.8
baz=221,SNR=81
MENT **Mentasta** 83.77 21 P P 05 44 03.6 +1.4
GDXM **Geysers** 83.78 49 IAmb IAmb 05 44 05.0
comp=Z,17nm,0.9s
O28M **Mount Upton** 83.78 24 P P 05 44 03.6 +1.0
baz=234,SNR=52
C19K **Lookout Ridge** 83.81 12 P P 05 44 03.7 +1.4
baz=215
SIT **Sitka** 83.85 29 P P 05 44 03.3 +0.7
baz=239
FORD **Fort Ord Natur** 83.85 51 IAMs_20 IAMs_20 06 20 46.1
comp=Z,824nm,21.0s
E20K **Nigu River** 83.88 14 P P 05 44 04.3 +1.6
baz=219
RIDG **Independent Ri** 83.89 20 P P 05 44 03.5 +0.7
baz=230,SNR=42
IL31 **83.90 19** P P **05 44 03.3 +0.6**
IL31 IAmb IAmb 05 44 05.1
comp=Z,47nm,0.9s
ILAR **Eielson Array** 83.90 19 P P 05 44 02.4 -0.4
comp=Z,37nm,0.9s,baz=226,slow=5.0,SNR=102

ILAR PP **PP** **05 47 12.4 -4.0**
comp=Z,4,4nm,1.2s,baz=245,slow=10,SNR=5.8
ILAR LR LR 06 20 20.3
comp=Z,156nm,18.2s,baz=258,slow=35
comp=Z,37nm,0.9s
ILAR Eielson Array 83.90 19 P **P** **05 44 03.2 +0.4**
ILAR Eielson Array 83.90 19 P **P** **05 44 03.2 +0.4**
S31K Pelican 83.90 27 IAmb IAmb 05 44 06.2
comp=Z,42nm,1.2s
S31K IAMs_20 IAMs_20 06 18 23.7
comp=Z,590nm,19.0s
S31K Pelican 83.90 27 P **P** **05 44 03.9 +1.0**
baz=238
L26K Log Cabin Wild 83.96 21 P **P** **05 44 04.3 +1.2**
baz=231,SNR=41
POKR Poker Plat Res 83.96 18 P **P** **05 44 03.0 -0.1**
baz=227
HULI Fort Hunter Li 84.06 52 IAmb IAmb 05 44 06.7
comp=Z,47nm,1.0s
MNRC McLaughlin Min 84.06 49 IAmb IAmb 05 44 06.4
comp=Z,22nm,0.9s
M27K Edge Creek, AK 84.08 22 P **P** **05 44 05.1 +1.2**
baz=233
KHBM Hayfork Bally 84.09 47 IAmb IAmb 05 44 07.7
comp=Z,21nm,1.2s
KHBM IAMs_20 IAMs_20 06 15 14.2
comp=Z,685nm,22.0s
SAO San Andreas Ge 84.13 51 IAmb IAmb 05 44 06.4
comp=Z,18nm,1.0s
D20K Etivluk River 84.14 13 P **P** **05 44 05.4 +1.5**
baz=218
MHC Mount Hamilton 84.16 50 IAmb IAmb 05 44 06.9
comp=Z,30nm,1.1s
MHC IAMs_20 IAMs_20 06 19 14.3
comp=Z,712nm,18.0s
O29M Mount Kennedy 84.17 25 P **P** **05 44 05.0 +0.6**
baz=236,SNR=7.5
O02D Mt. Diablo Mer 84.24 47 IAmb IAmb 05 44 07.5
comp=Z,28nm,0.8s
O02D IAMs_20 IAMs_20 06 16 01.2
comp=Z,649nm,19.0s
YUK8 Steele Glacier 84.25 24 P **P** **05 44 06.1 +1.1**
baz=235,SNR=44
MAW Mawson 84.26 202 P **P** **05 44 05.7 +1.1**
comp=Z,33nm,1.1s,baz=90,slow=6.2,SNR=12
MAW LR LR 06 14 57.9
comp=Z,309nm,19.7s,baz=96,slow=31
comp=Z,33nm,1.1s
MAW Mawson 84.26 202 IAmb IAmb 05 44 07.0
comp=Z,19nm,1.4s
YUK3 Moose Creek 84.27 23 P **P** **05 44 05.9 +0.9**
baz=234,SNR=52
J25K Salcha River, 84.28 19 P **P** **05 44 05.8 +1.0**
baz=229
KNGR Kungurtug, Tuv 84.29 324*de*P **P** **05 44 05.3 +0.1**
KNGR pmax pmax
comp=Z,61nm,1.1s
G23K Bananza Creek 84.31 17 IAmb IAmb 05 44 07.4
comp=Z,38nm,0.9s
G23K Bananza Creek 84.31 17 P **P** **05 44 06.0 +1.1**
baz=225,SNR=51
H24K Noodor Dome 84.32 18 P **P** **05 44 06.1 +1.2**
baz=227
SCRK Sand Creek 84.33 20 P **P** **05 44 06.2 +1.0**
baz=231,SNR=78
EVN Everest 84.36 300 IAmb IAmb 05 44 11.7
comp=Z,33nm,1.2s
S32K Killisnoo 84.41 28 IAMs_20 IAMs_20 06 23 05.1
comp=Z,538nm,18.0s
S32K Killisnoo 84.41 28 P **P** **05 44 06.2 +0.8**
baz=240
A19K Wainwright 84.42 11 P **P** **05 44 06.6 +1.3**
baz=214
U33K Whale Pass 84.43 30 IAmb IAmb 05 44 07.4
comp=Z,20nm,0.8s
U33K Whale Pass 84.43 30 P **P** **05 44 06.4 +0.8**
baz=241
PMPB Monarch Peak 84.45 52 IAmb IAmb 05 44 08.6
comp=Z,27nm,1.1s
K02D Willamette Mer 84.47 45 IAmb IAmb 05 44 08.6
comp=Z,26nm,1.0s
BVCY Beaver Creek 84.49 22 P **P** **05 44 07.1 +1.2**
baz=234,SNR=41
L27K Beaver Creek, 84.52 22 IAmb IAmb 05 44 08.7
comp=Z,46nm,1.0s
L27K Beaver Creek, 84.52 22 P **P** **05 44 07.5 +1.4**
baz=233
BCAR Beaver Creek A 84.54 22 P **P** **05 44 06.9 +0.8**
E21K Killik River 84.55 14 P **P** **05 44 07.3 +1.2**
baz=221
N02D Trinity Center 84.56 47 IAmb IAmb 05 44 09.1
comp=Z,22nm,0.8s
PKD Bear Valley Ra 84.57 52 IAmb IAmb 05 44 09.4
comp=Z,20nm,0.8s
YUK6 Outpost Mounta 84.61 24 P **P** **05 44 07.5 +0.7**
baz=236,SNR=9.6
COLD Coldfoot 84.62 16 IAmb IAmb 05 44 10.6
comp=Z,32nm,1.0s
COLD Coldfoot 84.62 16 P **P** **05 44 08.1 +1.7**
baz=224,SNR=36
SUTB Sutter Butte 84.66 49 IAmb IAmb 05 44 08.4
comp=Z,32nm,0.9s
YUK4 Talbot Arm 84.73 24 P **P** **05 44 09.0 +1.6**
baz=236,SNR=28
P30M Million Dollar 84.74 25 P **P** **05 44 08.1 +0.9**
baz=237
V35K Ketchikan 84.81 31 IAmb IAmb 05 44 09.9
comp=Z,26nm,0.9s
V35K Ketchikan 84.81 31 P **P** **05 44 08.2 +0.7**
baz=242,SNR=5.0
YBH Yreka Blue Hor 84.81 46 LR LR 06 13 52.1
comp=Z,17nm,21.0s,baz=266,slow=30
YBH Yreka Blue Hor 84.81 46 IAmb IAmb 05 44 10.1
comp=Z,25nm,0.9s
PRP Porcupine Dome 84.83 19 P **P** **05 44 07.0 -0.6**
baz=229,SNR=8.6
R32K Eaglecrest 84.84 28 IAMs_20 IAMs_20 06 19 10.6
comp=Z,553nm,20.0s
R32K Eaglecrest 84.84 28 P **P** **05 44 08.4 +0.7**
baz=240
BESE Bessie Mountai 84.85 27 IAmb IAmb 05 44 11.1
comp=Z,42nm,1.3s
BESE IAMs_20 IAMs_20 06 18 41.7
comp=Z,536nm,18.0s
E22K Anaktuvuk Pass 84.86 15 IAmb IAmb 05 44 10.2
comp=Z,29nm,1.0s
E22K Anaktuvuk Pass 84.86 15 P **P** **05 44 08.9 +1.3**
baz=223
HYT Haines Junctio 84.90 25 P **P** **05 44 09.2 +1.1**
baz=237,SNR=11
C21K Knifeblade Rid 84.90 14 P **P** **05 44 09.6 +1.8**
baz=220,SNR=104
JIS Juneau Island 84.91 28 P **P** **05 44 09.3 +1.3**
WRAK Wrangell Islan 84.96 30 IAmb IAmb 05 44 09.9
comp=Z,19nm,0.8s
WRAK Wrangell Islan 84.96 30 P **P** **05 44 08.9 +0.6**
baz=242
O03E Paynes Creek 84.99 48 IAmb IAmb 05 44 10.5
comp=Z,39nm,0.9s
G24K Hadweenzic Riv 85.03 17 P **P** **05 44 09.5 +1.1**
baz=227,SNR=62
B20K Meade River 85.04 12 IAmb IAmb 05 44 10.7
comp=Z,33nm,0.9s
B20K Meade River 85.04 12 P **P** **05 44 09.7 +1.3**
baz=218
SKAG Skagway 85.09 26 P **P** **05 44 10.5 +1.6**
SKAG Skagway 85.09 26 P **P** **05 44 09.9 +1.1**
baz=239,SNR=5.3
AFDM Forest Hills D 85.17 49 IAmb IAmb 05 44 11.4
comp=Z,25nm,0.9s
PALK Pallekele 85.24 278 LR LR 06 26 15.6
comp=Z,122nm,18.3s,baz=106,slow=38
PALK Pallekele 85.24 278 P **P** **05 44 11.0 +0.3**
PALK IAmb IAmb 05 44 11.9
comp=Z,19nm,0.9s
PALK Pallekele 85.24 278 P **P** **05 44 11.0 +0.3**
PALK pmax pmax
comp=Z,19nm,0.9s
PALK MLR MLR
comp=Z,200nm,20.0s
L04D Klamath Falls 85.26 46 IAmb IAmb 05 44 29.3
comp=Z,72nm,1.5s
BBB Bella Bella 85.30 35 LR LR 06 19 52.0
comp=Z,215nm,18.1s,baz=246,slow=34
B21K Ikpikpuk River 85.30 13 P **P** **05 44 11.4 +1.7**
baz=220
CMB Columbia Colle 85.33 50 IAMs_20 IAMs_20 06 19 07.1
comp=Z,636nm,19.0s

E23K Chandalar 85.38 16 P **P** **05 44 11.7 +1.5**
baz=225,SNR=42
HATC Hat Creek Radi 85.40 47 IAmb IAmb 05 44 13.3
comp=Z,38nm,0.9s
N30M Aishikik Lake 85.42 24 P **P** **05 44 11.4 +0.8**
baz=237
M29M Somme Creek 85.42 23 P **P** **05 44 11.6 +1.0**
baz=236,SNR=10
I26K Coal Creek Min 85.45 20 P **P** **05 44 11.9 +1.3**
baz=231,SNR=80
O30N Mendenhall 85.45 25 P **P** **05 44 11.2 +0.4**
baz=238,SNR=13
F24K Squaw Lake 85.47 17 P **P** **05 44 12.3 +1.6**
baz=227
G25K Bearman Lake 85.48 18 P **P** **05 44 12.0 +1.3**
baz=228
FYU Fort Yukon 85.61 18 IAmb IAmb 05 44 13.9
comp=Z,48nm,1.3s
VES Vestal, Richgr 85.67 52 IAmb IAmb 05 44 13.5
comp=Z,16nm,0.8s
VES IAMs_20 IAMs_20 06 17 00.4
comp=Z,584nm,18.0s
E24K Your Creek 85.69 16 IAmb IAmb 05 44 14.5
comp=Z,33nm,1.2s
E24K Your Creek 85.69 16 P **P** **05 44 13.2 +1.3**
baz=226,SNR=24
I04A Tendick Farm, 85.71 44 IAmb IAmb 05 44 36.0
comp=Z,54nm,1.6s
J04A Umpqua Nationa 85.73 45 IAmb IAmb 05 44 14.5
comp=Z,42nm,0.8s
D23K Nanushuk River 85.75 15 P **P** **05 44 13.9 +1.9**
baz=224
K04D Chiloquin, OR 85.78 45 IAmb IAmb 05 44 14.6
comp=Z,23nm,0.8s
TOLK Toolik Lake Re 85.80 15 P **P** **05 44 13.9 +1.6**
baz=225,SNR=24
TIXI Tiksi 85.80 349 LR LR 06 25 53.2
comp=Z,244nm,18.0s,baz=180,slow=38
TIXI Tiksi 85.80 349 P **P** **05 44 11.7 -0.4**
TIXI IAmb IAmb 05 44 13.3
comp=Z,59nm,1.1s
TIXI IAMs_20 IAMs_20 06 28 11.3
comp=Z,445nm,18.0s
TIXI Tiksi 85.80 349⇓*i*P **P** **05 44 11.9 -0.3**
TIXI pmax pmax
comp=Z,56nm,1.1s
P32M Atlin 85.87 27 IAMs_20 IAMs_20 06 18 40.6
comp=Z,534nm,20.0s
P32M Atlin 85.87 27 P **P** **05 44 13.6 +0.8**
baz=240,SNR=7.3
WHY Whitehorse 85.90 26 P **P** **05 44 13.9 +0.8**
baz=239,SNR=8.5
PASC Pasadena Art C 85.91 54 IAMs_20 IAMs_20 06 18 51.7
comp=Z,545nm,19.0s
L29M L29M 85.92 23 IAmb IAmb 05 44 16.4
comp=Z,44nm,1.1s
L29M L29M 85.92 23 P **P** **05 44 13.9 +0.8**
baz=236,SNR=43
N31M Braeburn, Yuko 85.96 25 IAmb IAmb 05 44 27.9
comp=Z,24nm,0.9s
N31M Braeburn, Yuko 85.96 25 P **P** **05 44 14.0 +0.7**
baz=238,SNR=17
DAWY Dawson 86.00 21 IAmb IAmb 05 44 16.7
comp=Z,48nm,1.1s
DAWY Dawson 86.00 21 P **P** **05 44 14.6 +1.2**
baz=235,SNR=54
MWC Mount Wilson 86.03 54 IAmb IAmb 05 44 16.0
comp=Z,67nm,1.6s
MWC IAMs_20 IAMs_20 06 23 57.7
comp=Z,602nm,19.0s
CBB Campbell River 86.03 37 P **P** **05 44 14.7 +0.8**
CBB IAmb IAmb 05 44 15.7
comp=Z,20nm,1.0s
TPO Tropico Hills 86.07 54 IAmb IAmb 05 44 16.4
comp=Z,29nm,1.0s
B22K Teshekpuk Lake 86.11 13 P **P** **05 44 15.0 +1.2**
baz=221,SNR=8.8
G04A Mulino 86.14 43 IAmb IAmb 05 44 19.3
comp=Z,43nm,0.9s
M30M Minto, Yukon 86.14 23 P **P** **05 44 14.8 +0.6**
baz=237,SNR=22
I27K Kandik River 86.14 20 P **P** **05 44 15.3 +1.2**
baz=225,SNR=61
F25K Christian Rive 86.16 17 IAmb IAmb 05 44 17.4
comp=Z,58nm,1.1s
F25K Christian Rive 86.16 17 P **P** **05 44 15.9 +1.8**
baz=229,SNR=63
A21K Barrow 86.20 12 P **P** **05 44 15.2 +1.1**
baz=218
WIFE Three Sisters- 86.20 44 IAmb IAmb 05 44 16.8
comp=Z,24nm,0.8s
Q32M Nakina River 86.21 28 IAMs_20 IAMs_20 06 27 58.6
comp=Z,512nm,18.0s
Q32M Nakina River 86.21 28 P **P** **05 44 15.7 +1.0**
baz=242
S34M Telegraph Cree 86.25 29 IAMs_20 IAMs_20 06 21 45.7
comp=Z,436nm,18.0s
S34M Telegraph Cree 86.25 29 P **P** **05 44 15.4 +0.7**
baz=242,SNR=5.3
T35M Bob Quinn 86.25 30 P **P** **05 44 15.4 +0.7**
baz=243
A22K Sinclair Lake 86.28 12 P **P** **05 44 15.8 +1.2**
baz=220
G26K Porcupine Rive 86.29 18 P **P** **05 44 16.5 +1.8**
baz=231,SNR=171
CLRS Cowichan Lake 86.34 39 IAmb IAmb 05 44 17.1
comp=Z,22nm,0.9s
J05D Fort Rock, OR 86.35 45 IAmb IAmb 05 44 17.7
comp=Z,31nm,0.8s
D24K Happy Valley 86.35 15 P **P** **05 44 16.8 +1.8**
baz=226
BMAR Burnt Mountain 86.36 17 P **P** **05 44 17.3 +2.1**
C23K Itkillik River 86.39 14 P **P** **05 44 16.8 +1.7**
baz=224,SNR=55
K05A Summer Lake 86.41 45 IAmb IAmb 05 44 18.1
comp=Z,27nm,0.9s
CPE Camp Elliot 86.43 56 IAmb IAmb 05 44 18.1
comp=Z,51nm,1.8s
B04A Port Angeles 86.45 40 IAmb IAmb 05 44 18.0
comp=Z,21nm,0.9s
E25K Arctic Village 86.53 17 P **P** **05 44 17.8 +1.8**
baz=229
H27K Steamboat Moun 86.55 19 P **P** **05 44 17.5 +1.4**
baz=233,SNR=81
K29M Barlow Dome 86.56 22 IAmb IAmb 05 44 19.6
comp=Z,26nm,1.1s
K29M Barlow Dome 86.56 22 P **P** **05 44 16.9 +0.6**
baz=236,SNR=27
P33M Teslin, Yukon 86.57 26 IAMs_20 IAMs_20 06 22 04.1
comp=Z,556nm,19.0s
P33M Teslin, Yukon 86.57 26 P **P** **05 44 16.7 +0.3**
baz=241,SNR=5.9
PAHR Pah Rah Range 86.57 49 IAmb IAmb 05 44 18.6
comp=Z,18nm,1.0s
DPP Dos Picos Cty 86.59 56 IAmb IAmb 05 44 18.8
comp=Z,50nm,1.6s
I28M Miner Creek 86.61 20 IAmb IAmb 05 44 18.8
comp=Z,23nm,0.9s
I28M Miner Creek 86.61 20 P **P** **05 44 17.2 +0.8**
baz=234,SNR=25
I05D Terrebonne, OR 86.62 44 IAmb IAmb 05 44 18.2
comp=Z,21nm,1.0s
J29N Klondike Camp 86.64 21 P **P** **05 44 17.9 +1.3**
baz=236,SNR=39
F26K Sheenjek River 86.66 17 IAmb IAmb 05 44 19.9
comp=Z,46nm,1.2s
F26K Sheenjek River 86.66 17 P **P** **05 44 18.3 +1.8**
baz=230,SNR=36
TIN Tinemaha, Big 86.68 51 IAmb IAmb 05 44 19.4
comp=Z,24nm,0.8s
TIN IAMs_20 IAMs_20 06 17 34.9
comp=Z,754nm,20.0s
PGC Sidney 86.70 39 IAmb IAmb 05 44 19.3
comp=Z,19nm,0.9s
GNW Green Mountain 86.71 40 IAmb IAmb 05 44 19.0
comp=Z,18nm,0.9s
PINE Pine Mountain 86.71 44 P **P** **05 44 18.5 +0.9**
PINE IAmb IAmb 05 44 19.5
comp=Z,21nm,0.8s
C24K Franklin Bluff 86.78 15 P **P** **05 44 18.7 +1.7**
baz=226
LHV Little Huntoon 86.81 50 IAmb IAmb 05 44 20.1
comp=Z,19nm,0.9s
CLC China Lake 86.83 53 IAmb IAmb 05 44 19.4
comp=Z,16nm,0.9s
G27K Doyon Strip 86.86 19 IAmb IAmb 05 44 20.6
comp=Z,52nm,1.1s
G27K Doyon Strip 86.86 19 P **P** **05 44 19.3 +1.7**
baz=233,SNR=62
M31M Drury Creek, Y 86.90 24 P **P** **05 44 17.5 -0.3**
baz=239,SNR=9.3
N32M Quiet Lake 86.91 26 IAmb IAmb 05 44 22.3
comp=Z,22nm,1.1s
N32M Quiet Lake 86.91 26 P **P** **05 44 17.5 -0.5**
baz=241
CCCA Chr Cany lake 86.93 53 IAmb IAmb 05 44 20.7
comp=Z,32nm,1.0s
DSP Deep Springs 86.97 51 IAmb IAmb 05 44 20.8
comp=Z,21nm,0.9s
DNR Dunn Ranch,Anz 86.99 55 IAmb IAmb 05 44 20.8
comp=Z,16nm,0.8s
R33M Jennings River 87.00 28 IAMs_20 IAMs_20 06 19 59.7
comp=Z,588nm,19.0s
R33M Jennings River 87.00 28 P **P** **05 44 18.5 0.0**
baz=243
DLBC Dease Lake 87.00 29 LR LR 06 19 35.8
comp=Z,238nm,18.2s,baz=268,slow=33
DLBC Dease Lake 87.00 29 P **P** **05 44 18.0 -0.5**
baz=243
NVAR Mina Array Bea 87.01 50 P **P** **05 44 19.5 +0.3**
comp=Z,16nm,0.9s,baz=234,slow=7.3,SNR=76
NVAR LR LR 06 20 16.5
comp=Z,401nm,18.0s,baz=268,slow=34
comp=Z,16nm,0.9s
MAYO Mayo, Yukon 87.03 23 IAmb IAmb 05 44 30.9
comp=Z,40nm,0.9s
MAYO Mayo, Yukon 87.03 23 P **P** **05 44 19.1 +0.7**
baz=238,SNR=6.8
D25K Kavik River 87.11 16 P **P** **05 44 19.8 +1.0**
baz=228,SNR=50
D05A Enumclaw 87.12 41 IAmb IAmb 05 44 33.7
comp=Z,39nm,1.1s
I29M Ogilvie Camp, 87.12 21 P **P** **05 44 19.7 +0.8**
baz=236,SNR=59
PFO Pinyon Flats O 87.14 55 LR LR 06 17 22.9
comp=Z,351nm,18.8s,baz=237,slow=32
PFO Pinyon Flats O 87.14 55 P **P** **05 44 20.1 +0.3**
PFO Pinyon Flats O 87.14 55 P **P** **05 44 20.1 +0.3**
PFO pmax pmax
comp=Z,11nm,0.9s
GRAC Grapevine Rang 87.33 52 IAmb IAmb 05 44 22.6
comp=Z,18nm,0.9s
YUH Yuha Desert 87.33 56 IAmb IAmb 05 44 22.6
comp=Z,31nm,1.4s
J30M Hart River 87.39 22 P **P** **05 44 20.4 +0.1**
baz=238,SNR=12
FURC Furnace Creek, 87.57 52 IAmb IAmb 05 44 23.5
comp=Z,22nm,1.0s
H29M Whitestone 87.59 20 IAmb IAmb 05 44 23.6
comp=Z,22nm,1.1s
H29M Whitestone 87.59 20 P **P** **05 44 21.8 +0.8**
baz=236
E27K Coleen River 87.72 18 P **P** **05 44 23.3 +1.6**
baz=233
I30M Mount Dempster 87.72 21 IAmb IAmb 05 44 24.9
comp=Z,36nm,1.0s
I30M Mount Dempster 87.72 21 P **P** **05 44 22.4 +0.5**
baz=238,SNR=47
I07A Izee 87.79 44 IAmb IAmb 05 44 24.5
comp=Z,32nm,1.3s
SHOC Shoshone, Toco 87.88 53 IAMs_20 IAMs_20 06 14 47.9
comp=Z,582nm,20.0s
C26K Camden Bay 87.89 16 P **P** **05 44 24.4 +2.0**
baz=229,SNR=20
F28M Old Crow 87.90 18 IAmb IAmb 05 44 25.5
comp=Z,36nm,1.2s
F28M Old Crow 87.90 18 P **P** **05 44 24.1 +1.5**
baz=234,SNR=32
WVOR Wild Horse Val 87.91 46 IAmb IAmb 05 44 25.3
comp=Z,24nm,1.1s
WVOR IAMs_20 IAMs_20 06 22 22.4
comp=Z,414nm,18.0s
BC3 Big Chuckawall 87.96 55 IAmb IAmb 05 44 25.3
comp=Z,14nm,0.9s
C27K Jago River 88.02 16 P **P** **05 44 24.7 +1.7**
baz=231,SNR=67
F07A Phinny Hill Vi 88.06 43 IAmb IAmb 05 44 26.5
comp=Z,30nm,1.2s
G29M Pine Creek 88.09 19 P **P** **05 44 24.7 +1.2**
baz=236
WMQ Urumqi 88.14 315 *e*P **P** **05 44 23.9 -0.4**
WMQ pmax pmax
comp=Z,13nm,1.3s
WMQ L L
comp=Z,500nm,15.7s
WMQ L L
comp=Z,630nm,22.7s
WMQ L L
comp=Z,560nm,24.1s
EPYK Eagle Plains 88.23 20 IAmb IAmb 05 44 26.9
comp=Z,38nm,0.9s
EPYK Eagle Plains 88.23 20 P **P** **05 44 24.6 +0.4**
baz=237,SNR=35
DANC Danby, Needles 88.27 54 IAmb IAmb 05 44 27.1
comp=Z,25nm,0.8s
J08A Circle Bar Ran 88.29 45 IAmb IAmb 05 44 27.8
comp=Z,30nm,1.0s
E07A Sunnyside 88.31 42 IAmb IAmb 05 44 26.8
comp=Z,17nm,0.9s
WTLY Watson Lake, Y 88.31 27 P **P** **05 44 24.1 -0.6**
baz=244,SNR=6.0
GLA Glamis 88.32 56 IAmb IAmb 05 44 27.9
comp=Z,34nm,0.9s
IRM Iron Mountain 88.34 55 IAmb IAmb 05 44 27.6
comp=Z,35nm,1.1s
G08A Pilot Rock 88.52 43 IAmb IAmb 05 44 28.8
comp=Z,25nm,1.0s
D27M Malcolm River 88.55 17 P **P** **05 44 27.1 +1.5**
baz=233
WAH2 Wahluke Slope 88.56 42 IAmb IAmb 05 44 27.8
comp=Z,14nm,1.0s
E28M Babbage River 88.59 18 P **P** **05 44 26.9 +1.2**
baz=234,SNR=61
EPH Ephrata 88.72 41 IAmb IAmb 05 44 29.4
comp=Z,20nm,1.3s
G30M tAoh Zraii Nji 88.72 20 IAmb IAmb 05 44 29.6
comp=Z,33nm,1.1s
G30M tAoh Zraii Nji 88.72 20 P **P** **05 44 27.3 +0.8**
baz=238,SNR=29
BLYC Blythe 88.74 55 IAmb IAmb 05 44 29.4
comp=Z,27nm,0.9s
S11A Rachel 88.74 51 IAmb IAmb 05 44 29.1
comp=Z,15nm,0.9s
H31M Peel River 88.75 21 P **P** **05 44 26.8 +0.1**
baz=239,SNR=9.0
E29M Blow River 88.96 18 IAmb IAmb 05 44 30.1
comp=Z,15nm,0.9s
E29M Blow River 88.96 18 P **P** **05 44 28.5 +1.0**
baz=236
113A Mohawk Valley, 89.12 57 IAmb IAmb 05 44 31.3
comp=Z,16nm,1.0s
TGTN Hyland Airport 89.15 26 P **P** **05 44 29.6 +1.0**
baz=245
B08A Colville Reser 89.19 40 P **P** **05 44 29.1 0.0**
F30M Barrier River 89.20 19 IAmb IAmb 05 44 32.0
comp=Z,31nm,1.0s
F30M Barrier River 89.20 19 P **P** **05 44 30.0 +1.4**
baz=238
D28M Stokes Point 89.24 17 P **P** **05 44 30.2 +1.5**
baz=235
HYB Hyderabad 89.34 288 *e*P **P** **05 44 30.8 +0.3**
BMO Blue Mountains 89.52 44 IAMs_20 IAMs_20 06 23 52.9
comp=Z,483nm,20.0s
214A Organ Pipe Nat 89.72 57 IAmb IAmb 05 44 34.6
comp=Z,27nm,1.2s
F31M Tsiigehtchic 89.79 20 IAmb IAmb 05 44 34.7
comp=Z,26nm,1.2s
F31M Tsiigehtchic 89.79 20 P **P** **05 44 30.7 -0.7**
baz=240,SNR=20
ELK Elko 89.91 49 LR LR 06 22 50.0
comp=Z,177nm,18.1s,baz=261,slow=34
DGZ Jazzator, Alta 90.03 321*de*P **P** **05 44 32.6 -0.6**
DGZ pmax pmax
comp=Z,19nm,0.9s
MFID Camas Ranch 90.16 46 IAmb IAmb 05 44 35.8
comp=Z,17nm,0.8s
LPIG La Paz 90.19 66 LR LR 06 19 13.1
comp=Z,190nm,18.1s,baz=258,slow=32
INK Inuvik 90.29 19 LR LR 06 23 16.9
comp=Z,175nm,18.2s,baz=232,slow=34
INK Inuvik 90.29 19 P **P** **05 44 34.0 +0.3**
baz=240,SNR=21
PSUT Pine Spring 90.41 51 IAmb IAmb 05 44 37.1
comp=Z,15nm,0.9s
SLBS Sierra La Lagu 90.43 66 P **P** **05 44 35.3 -0.2**
SLBS IAmb IAmb 05 44 37.9

	comp=Z,53nm,1.4s							
PLID	**Pearl Lake**	**90.48**	**44**	IAmb	IAmb	05 44 36.7		
	comp=Z,14nm,0.9s							
PLID				IAMs_20	IAMs_20	06 27 08.2		
	comp=Z,491nm,18.0s							
KOTAN	**Kotaneelee Air**	**90.50**	**28**	P	**P**	**05 44 35.9**	**+1.0**	
	baz=249							
LCMT	**Little Creek M**	**90.52**	**53**	IAmb	IAmb	05 44 37.8		
	comp=Z,20nm,1.0s							
CCUT	**Cedar City**	**90.56**	**52**	IAmb	IAmb	05 44 38.3		
	comp=Z,21nm,0.9s							
NEW	**Newport**	**90.58**	**41**	LR	LR	06 22 32.2		
	comp=Z,216nm,18.1s,baz=262,slow=34							
NEW	**Newport**	**90.58**	**41**	P	**P**	**05 44 35.7**	**+0.1**	
BELA	**Belgrano 2**	**90.62**	**176**	P	**P**	**05 44 35.2**	**-0.1**	
SZCU	**Shurtz Canyon**	**90.78**	**52**	IAmb	IAmb	05 44 39.2		
	comp=Z,18nm,1.0s							
KNB	**Kanab**	**90.85**	**53**	IAmb	IAmb	05 44 39.7		
	comp=Z,27nm,1.2s							
ZSN	**Zaisan**	**91.05**	**318**	*e*P	**P**	**05 44 37.7**	**-0.1**	
ZSN				pmax	pmax			
	comp=Z,23nm,2.1s							
ZSN	**Zaisan**	**91.05**	**318**	*e*P	**P**	**05 44 37.7**	**-0.1**	
	comp=Z,23nm,2.1s							
U15A	**North Rim**	**91.14**	**53**	IAmb	IAmb	05 44 41.1		
	comp=Z,23nm,1.0s							
HLID	**Hailey**	**91.20**	**46**	IAmb	IAmb	05 44 41.0		
	comp=Z,17nm,0.9s							
PKCU	**Pink Cliffs**	**91.35**	**52**	IAmb	IAmb	05 44 42.8		
	comp=Z,36nm,1.1s							
TUC	**Tucson**	**91.47**	**58**	P	**P**	**05 44 40.9**	**+0.7**	
TUC	**Tucson**	**91.47**	**58**	P	**P**	**05 44 40.9**	**+0.7**	
TUC				pmax	pmax			
	comp=Z,6.0nm,0.9s							
TCRU	**Three Creeks R**	**91.50**	**51**	P	**P**	**05 44 41.2**	**+0.8**	
TCRU				IAmb	IAmb	05 44 43.5		
	comp=Z,22nm,1.0s							
MTPU	**Mount Pierson**	**91.58**	**52**	IAmb	IAmb	05 44 43.7		
	comp=Z,20nm,1.0s							
BGU	**Big Grassy Mou**	**91.58**	**49**	IAmb	IAmb	05 44 42.4		
	comp=Z,14nm,0.9s							
WUAZ	**Wupatki**	**91.67**	**54**	IAmb	IAmb	05 44 43.4		
	comp=Z,12nm,1.0s							
WRGLY	**Wrigley**	**91.88**	**26**	P	**P**	**05 44 41.0**	**-0.2**	
	baz=249							
HVU	**Hansel Valley**	**91.96**	**48**	IAmb	IAmb	05 44 44.4		
	comp=Z,32nm,0.9s							
MPU	**Maple Canyon**	**92.42**	**50**	IAmb	IAmb	05 44 46.6		
	comp=Z,16nm,1.4s							
CTU	**Camp Tracy**	**92.48**	**49**	IAmb	IAmb	05 44 46.5		
	comp=Z,13nm,0.9s							
Q16A	**Castle Valley**	**92.54**	**51**	IAmb	IAmb	05 44 47.7		
	comp=Z,26nm,1.6s							
319A	**Douglas**	**92.54**	**59**	IAmb	IAmb	05 44 47.3		
	comp=Z,9.1nm,0.8s							
MK31	**Makanchi Array**	**92.59**	**317**	*de*P	**P**	**05 44 44.9**	**-0.1**	
MKAR	**Makanchi Array**	**92.59**	**317**	P	**P**	**05 44 44.8**	**-0.2**	
	comp=Z,13nm,0.8s,baz=99,slow=6.4,SNR=83							
MKAR				PP	PP	05 48 23.8	-2.9	
	comp=Z,1.2nm,1.0s,baz=106,slow=11,SNR=3.6							
MKAR				PKKP	**PKKPdf**	**06 01 56.8**	**-0.8**	
	comp=Z,1.4nm,0.7s,baz=309,slow=2.0,SNR=15							
MKAR				LR	LR	06 28 01.0		
	comp=Z,146nm,19.9s,baz=95,slow=37							
	comp=Z,13nm,0.8s							
MKAR	**Makanchi Array**	**92.59**	**317**	P	**P**	**05 44 44.4**	**-0.5**	
HMU	**Henry Mountain**	**92.67**	**52**	IAmb	IAmb	05 44 51.7		
	comp=Z,25nm,1.8s							
ZAA0	**Zalesovo Array**	**92.75**	**324**	IAmb	IAmb	05 44 45.5		
	comp=Z,25nm,1.1s							
ZALV	**Zalesovo Beam**	**92.75**	**324**	P	**P**	**05 44 44.0**	**-1.4**	
	comp=Z,14nm,0.9s,baz=108,slow=4.8,SNR=42							
ZALV				LR	LR	06 25 28.5		
	comp=Z,202nm,20.6s,baz=114,slow=35							
	comp=Z,14nm,0.9s							
ZALV	**Zalesovo Beam**	**92.75**	**324**	P	**P**	**05 44 44.2**	**-1.3**	
ZALV	**Zalesovo Beam**	**92.75**	**324**	P	**P**	**05 44 44.2**	**-1.3**	
HWUT	**Hardware Ranch**	**92.81**	**48**	IAmb	IAmb	05 44 47.6		
	comp=Z,9.7nm,0.8s							
TCUT	**Toone Canyon**	**92.82**	**49**	IAmb	IAmb	05 44 48.8		
	comp=Z,13nm,0.8s							
DLMT	**Dillon**	**92.88**	**44**	IAMs_20	IAMs_20	06 30 52.7		
	comp=Z,438nm,19.0s							
DUN6	**Lazy B Ranch**	**92.93**	**58**	IAmb	IAmb	05 44 49.1		
	comp=Z,24nm,0.8s							
BSUT	**Blindstream Ca**	**93.18**	**49**	IAmb	IAmb	05 44 50.0		
	comp=Z,12nm,0.9s							
WUS	**Wushi**	**93.57**	**311**	IAmb	IAmb	05 44 51.0		
	comp=Z,13nm,0.9s							
BOZ	**Bozeman (W)**	**93.59**	**44**	IAmb	IAmb	05 44 51.7		
	comp=Z,14nm,1.0s							
YHL	**Hebgen Lake**	**93.75**	**45**	IAmb	IAmb	05 44 53.1		
	comp=Z,16nm,1.2s							
SHLS	**Shalkode**	**93.78**	**313**	*e*P	**P**	**05 44 48.7**	**-1.9**	
SHLS				pmax	pmax			
	comp=Z,19nm,1.3s							
SHLS	**Shalkode**	**93.78**	**313**	*e*P	**P**	**05 44 48.8**	**-1.9**	
	comp=Z,19nm,1.3s							
C36M	**Paulatuk**	**93.84**	**20**	P	**P**	**05 44 49.7**	**-0.4**	
C36M				IAmb	IAmb	05 44 51.9		
	comp=Z,26nm,1.3s							
C36M	**Paulatuk**	**93.84**	**20**	P	**P**	**05 44 50.0**	**-0.1**	
	baz=249							
YMR	**Madison River**	**93.86**	**45**	IAmb	IAmb	05 44 53.6		
	comp=Z,44nm,2.0s							
PV10	**Paradox Valley**	**94.07**	**52**	IAmb	IAmb	05 44 54.8		
	comp=Z,17nm,0.9s							
UZB	**Uzynbulak**	**94.09**	**313**	*e*P	**P**	**05 44 51.7**	**-0.4**	
UZB	**Uzynbulak**	**94.09**	**313**	*e*P	**P**	**05 44 51.8**	**-0.4**	
PV19	**Morning Glory**	**94.10**	**52**	IAmb	IAmb	05 44 55.0		
	comp=Z,16nm,0.8s							
PV23	**Carpenter Ridg**	**94.11**	**52**	IAmb	IAmb	05 44 55.2		
	comp=Z,26nm,0.8s							
PV20	**West Nyswonger**	**94.12**	**52**	IAmb	IAmb	05 44 55.0		
	comp=Z,13nm,0.8s							
EDM	**Edmonton**	**94.12**	**37**	IAmb	IAmb	05 44 52.9		
	comp=Z,13nm,0.8s							
PV18	**Skein Mesa, Pa**	**94.15**	**52**	IAmb	IAmb	05 44 55.1		
	comp=Z,12nm,0.9s							
PV04	**Paradox Valley**	**94.18**	**52**	IAmb	IAmb	05 44 55.5		
	comp=Z,11nm,0.9s							
PV11	**David Mesa, Pa**	**94.18**	**52**	IAmb	IAmb	05 45 54.3		
	comp=Z,27nm,1.8s							
PV12	**Saucer Basin,**	**94.24**	**52**	IAmb	IAmb	05 46 44.5		
	comp=Z,26nm,0.9s							
YMP	**Mirror Lake Pl**	**94.44**	**45**	IAmb	IAmb	05 45 12.3		
	comp=Z,23nm,1.8s							
A36M	**Sachs Harbour**	**94.45**	**17**	P	**P**	**05 44 53.0**	**+0.2**	
	baz=248							
PDAR	**Pinedale Array**	**94.50**	**47**	P	**P**	**05 44 53.8**	**-0.4**	
	comp=Z,5.3nm,0.9s,baz=223,slow=1.8,SNR=32							
PDAR				LR	LR	06 21 12.1		
	comp=Z,95nm,19.4s,baz=258,slow=32							
	comp=Z,5.3nm,0.9s							
SATY	**Saty**	**94.52**	**313**	*e*P	**P**	**05 44 53.5**	**-0.5**	
SATY				pmax	pmax			
	comp=Z,22nm,2.2s							
SATY	**Saty**	**94.52**	**313**	*e*P	**P**	**05 44 53.5**	**-0.5**	
	comp=Z,22nm,2.2s							
TDK	**Taldyqorghan**	**94.88**	**315**	*e*P	**P**	**05 44 55.3**	**-0.2**	
TDK				pmax	pmax			
	comp=Z,9.0nm,0.5s							
TDK	**Taldyqorghan**	**94.88**	**315**	*e*P	**P**	**05 44 55.4**	**-0.2**	
	comp=Z,9.0nm,0.5s							
EPT	**El Paso**	**94.94**	**59**	IAMs_20	IAMs_20	06 29 52.0		
	comp=Z,469nm,18.0s							
RLMT	**Red Lodge**	**95.13**	**45**	IAMs_20	IAMs_20	06 31 29.5		
	comp=Z,519nm,19.0s							
EGMT	**Eagleton**	**95.33**	**42**	IAmb	IAmb	05 44 59.0		
	comp=Z,14nm,0.9s							
ANMO	**Albuquerque**	**95.51**	**56**	LR	LR	06 23 02.9		
	comp=Z,332nm,18.6s,baz=270,slow=32							
ANMO	**Albuquerque**	**95.51**	**56**	*de*P	**P**	**05 44 59.1**	**+0.2**	
ANMO				pmax	pmax			
	comp=Z,5.0nm,0.9s							
MDOK	**Medeo**	**95.52**	**313**	*e*P	**P**	**05 44 58.3**	**-0.3**	
MDOK	**Medeo**	**95.52**	**313**	*e*P	**P**	**05 44 58.3**	**-0.3**	
YKA	**Yellowknife Ar**	**95.55**	**27**	P	**P**	**05 44 57.0**	**-1.1**	
	comp=Z,5.2nm,0.8s,baz=264,slow=5.1,SNR=90							
YKA				PP	PP	05 48 39.0	-10	
	comp=Z,1.9nm,1.1s,baz=264,slow=7.8,SNR=6.8							
YKA				PKKPbc	**PKKPbc**	**06 01 48.0**	**-4.1**	
	comp=Z,0.1nm,0.4s,baz=20,slow=2.2,SNR=4.6							
YKA				LR	LR	06 25 57.8		
	comp=Z,230nm,18.1s,baz=270,slow=34							
	comp=Z,5.2nm,0.8s							
TNSS	**Tian-Shan**	**95.57**	**313**	*e*P	**P**	**05 44 58.4**	**-0.8**	
TNSS	**Tian-Shan**	**95.57**	**313**	*e*P	**P**	**05 44 58.4**	**-0.8**	
AAA	**Alma-Ata**	**95.62**	**313**	*e*P	**P**	**05 44 58.6**	**-0.4**	
AAA	**Alma-Ata**	**95.62**	**313**	*e*P	**P**	**05 44 58.7**	**-0.4**	
KURK	**Kurchatov**	**95.77**	**320**	P	**P**	**05 44 58.4**	**-1.0**	
KURK				IAmb	IAmb	05 44 59.3		
	comp=Z,13nm,1.2s							
KURK	**Kurchatov**	**95.77**	**320**	IAMs_20	IAMs_20	06 26 42.2		
	comp=Z,507nm,21.0s							
KURK	**Kurchatov**	**95.77**	**320**	P	**P**	**05 44 58.4**	**-1.0**	
KURK				pmax	pmax			
	comp=Z,13nm,1.3s							
KURK				MLR	MLR			
	comp=Z,500nm,21.0s							
KURBB	**Kurchatov Arra**	**95.81**	**320**	P	**P**	**05 44 58.7**	**-0.8**	
	comp=Z,3.0nm,0.8s,baz=96,slow=4.3,SNR=22							
KURBB				PP	PP	05 48 41.4	-10	
	comp=Z,0.6nm,0.6s,baz=98,slow=8.4,SNR=4.8							
KURBB				PKKPbc	**PKKPbc**	**06 01 47.5**	**-3.4**	
	comp=Z,0.7nm,0.6s,baz=282,slow=2.9,SNR=9.2							
KURBB				LR	LR	06 27 15.7		
	comp=Z,253nm,21.7s,baz=146,slow=35							
	comp=Z,3.0nm,0.8s							
KSH2	**Kashi**	**95.95**	**309**	P	**P**	**05 45 00.6**	**-0.1**	
PMSA	**Palmer Station**	**96.18**	**161**	LR	LR	06 21 48.3		
	comp=Z,115nm,20.8s,baz=118,slow=31							
NVL	**N'lazarevskaya**	**96.31**	**189**	*e*P	**P**	**05 45 02.7**	**+1.2**	
NVL				*e*		05 48 56.7		
NVL				*e*PPP	PPP	05 50 59.7		
NVL				*e*S	**SKSac**	**05 55 39.3**	**+1.8**	
NVL				*e*SS	**SS**	**06 02 57.1**	**+5.1**	
NVL				*e*SSS	SSS	06 06 41.4		
NVL				pmax	pmax			
	comp=Z,10.0nm,0.9s							
NVL				MLR	MLR			
	comp=Z,532nm,17.0s							
ISCO	**Idaho Springs**	**96.94**	**51**	IAMs_20	IAMs_20	06 23 54.4		
	comp=Z,615nm,20.0s							
TX31	**Lajitas Ar. Si**	**96.97**	**62**	IAmb	IAmb	05 47 23.4		
	comp=Z,14nm,2.0s							
TXAR	**Lajitas Array**	**96.97**	**62**	P	**P**	**05 45 05.8**	**+0.3**	
	comp=Z,0.7nm,0.7s,baz=233,slow=5.4,SNR=7.5							
TXAR				PP	PP	05 48 57.5	-3.8	
	comp=Z,0.3nm,0.9s,baz=212,slow=4.4,SNR=4.3							
TXAR				PKKPbc	**PKKPbc**	**06 01 47.2**	**+0.1**	
	comp=Z,0.2nm,0.5s,baz=95,slow=3.8,SNR=4.5							
TXAR				LR	LR	06 20 06.9		
	comp=Z,314nm,21.7s,baz=234,slow=30							
	comp=Z,0.7nm,0.7s							
SNAA	**Sanae**	**97.07**	**184**	LR	LR	06 26 34.3		
	comp=Z,381nm,19.1s,baz=183,slow=34							
Q24A	**Divide**	**97.17**	**52**	IAMs_20	IAMs_20	06 24 20.5		
	comp=Z,585nm,20.0s							
AAK	**Ala-Archa**	**97.29**	**312**	LR	LR	06 30 22.7		
	comp=Z,193nm,20.2s,baz=82,slow=36							
AAK	**Ala-Archa**	**97.29**	**312**	*e*P	**P**	**05 45 06.0**	**-0.7**	
LAO	**LASA Array**	**97.48**	**44**	IAmb	IAmb	05 45 09.5		
	comp=Z,12nm,1.1s							
T25A	**Trinidad**	**97.49**	**54**	IAMs_20	IAMs_20	06 33 05.2		
	comp=Z,416nm,18.0s							
AMTX	**Amarillo**	**99.39**	**56**	IAmb	IAmb	05 45 18.6		
	comp=Z,4.9nm,0.7s							
JCT	**Junction City**	**100.45**	**61**	IAMs_20	IAMs_20	06 30 22.9		
	comp=Z,526nm,20.0s							
IUG	**luzhnay**	**100.51**	**311**	*e*P	**Pdif**	**05 45 20.4**	**-0.7**	
IUG	**luzhnay**	**100.51**	**311**	*e*P	**Pdif**	**05 45 20.4**	**-0.7**	
BRLS	**Borolday**	**100.73**	**312**	*e*P	**Pdif**	**05 45 21.8**	**-0.1**	
BRLS	**Borolday**	**100.73**	**312**	*e*P	**Pdif**	**05 45 21.8**	**-0.1**	
ABTX	**Abilene, Hawle**	**100.82**	**59**	IAMs_20	IAMs_20	06 35 24.7		
	comp=Z,557nm,18.0s							
CHM	**Chimkent**	**100.84**	**311**	*e*P	**Pdif**	**05 45 21.9**	**-0.5**	
CHM	**Chimkent**	**100.84**	**311**	*e*P	**Pdif**	**05 45 21.9**	**-0.5**	
BVAR	**Borovoye Array**	**101.11**	**322**	P	**Pdif**	**05 45 22.4**	**-0.9**	
	comp=Z,5.2nm,0.9s,baz=97,slow=4.8,SNR=22							
BVAR				PP	PP	**05 49 27.4**	**-4.7**	
	comp=Z,1.2nm,0.9s,baz=85,slow=9.0,SNR=2.3							
BORK	**Borovoye**	**101.15**	**322**	*ce*P	**Pdif**	**05 45 22.9**	**-0.6**	
BORK				pmax	pmax			
	comp=Z,23nm,2.5s							
SUSD	**Miller**	**102.34**	**47**	IAMs_20	IAMs_20	06 24 36.3		
	comp=Z,408nm,18.0s							
BGNE	**Belgrade**	**102.75**	**50**	IAMs_20	IAMs_20	06 27 27.3		
	comp=Z,370nm,18.0s							
Z35A	**Perchaven, San**	**102.89**	**58**	IAMs_20	IAMs_20	06 34 54.4		
	comp=Z,450nm,19.0s							
OK048	**Pawnee Station**	**103.37**	**55**	IAMs_20	IAMs_20	06 33 16.1		
	comp=Z,442nm,19.0s							
OK052	**Battle Ridge R**	**103.46**	**55**	IAMs_20	IAMs_20	06 35 41.4		
	comp=Z,374nm,19.0s							
HKT	**Hockley**	**103.81**	**62**	IAMs_20	IAMs_20	06 35 19.0		
	comp=Z,552nm,18.0s							
ECSD	**EROS Data Cent**	**103.99**	**48**	IAMs_20	IAMs_20	06 36 47.1		
	comp=Z,432nm,18.0s							
L34A	**Svendsen Farm,**	**104.11**	**49**	IAMs_20	IAMs_20	06 36 28.1		
	comp=Z,373nm,19.0s							
F33A	**5 Mile Ranch,**	**104.28**	**45**	IAMs_20	IAMs_20	06 34 13.4		
	comp=Z,392nm,20.0s							
ULM	**Lac du Bonnet**	**104.59**	**41**	PP	**PKiKP**	**05 49 52.3**	**-2.4**	
	comp=Z,1.1nm,0.7s,baz=191,slow=5.2,SNR=4.3							
NATX	**Nacogdoches**	**104.95**	**60**	IAMs_20	IAMs_20	06 32 16.2		
	comp=Z,579nm,20.0s							
441A	**DeRidder**	**106.15**	**61**	IAMs_20	IAMs_20	06 27 08.9		
	comp=Z,532nm,19.0s							
S39A	**Bolivar**	**106.33**	**54**	IAMs_20	IAMs_20	06 31 26.2		
	comp=Z,440nm,19.0s							
N38A	**Joes South For**	**106.44**	**51**	IAMs_20	IAMs_20	06 29 55.1		
	comp=Z,570nm,19.0s							
SPMN	**Marine on St.**	**106.73**	**46**	IAMs_20	IAMs_20	06 34 22.4		
	comp=Z,525nm,18.0s							
MSEY	**Mahe Island**	**107.58**	**262**	IAMs_20	IAMs_20	06 29 49.2		
	comp=Z,383nm,21.0s							
143A	**Socs Landing,**	**107.76**	**59**	IAMs_20	IAMs_20	06 38 47.4		
	comp=Z,493nm,18.0s							
PLCA	**Paso Flores**	**107.77**	**139**	PKKP		06 01 22.4		
	comp=Z,1.4nm,0.8s,baz=27,slow=5.7,SNR=4.1							
L40A	**Anamosa**	**107.95**	**49**	IAMs_20	IAMs_20	06 28 11.8		
	comp=Z,533nm,20.0s							
N41A	**Harden Midland**	**108.25**	**51**	IAMs_20	IAMs_20	06 26 10.9		
	comp=Z,573nm,22.0s							
G40A	**Rib Lake**	**108.57**	**46**	IAMs_20	IAMs_20	06 34 26.9		
	comp=Z,415nm,18.0s							
AKTO	**Aktyubinsk**	**108.84**	**320**	PKKPab	PKKPab	06 01 23.3	+0.2	
	comp=Z,0.7nm,0.3s,baz=207,slow=2.3,SNR=4.5							
HDIL	**Hopedale**	**109.44**	**51**	IAMs_20	IAMs_20	06 39 49.5		
	comp=Z,505nm,18.0s							
S44A	**Carbondale**	**109.55**	**54**	IAMs_20	IAMs_20	06 33 32.6		
	comp=Z,459nm,19.0s							
146A	**Union**	**109.73**	**59**	IAMs_20	IAMs_20	06 30 22.8		
	comp=Z,464nm,19.0s							
F42A	**Maple Grove Fa**	**109.98**	**45**	IAMs_20	IAMs_20	06 41 09.4		
	comp=Z,470nm,19.0s							
SFIN	**Lafayette**	**111.13**	**51**	IAMs_20	IAMs_20	06 30 54.0		
	comp=Z,509nm,20.0s							
LRAL	**Lakeview Retre**	**111.47**	**59**	IAMs_20	IAMs_20	06 34 31.6		
	comp=Z,450nm,20.0s							
JTS	**Las Juntas de**	**111.98**	**83**	IAMs_20	IAMs_20	06 24 57.6		
	comp=Z,465nm,20.0s							
P48A	**Milroy**	**112.47**	**52**	IAMs_20	IAMs_20	06 35 53.7		
	comp=Z,474nm,19.0s							
O49A	**Covington**	**113.25**	**51**	IAMs_20	IAMs_20	06 34 32.2		
	comp=Z,486nm,19.0s							
N49A	**Columbus Grove**	**113.29**	**50**	IAMs_20	IAMs_20	06 33 54.3		
	comp=Z,463nm,20.0s							
152A	**Waverly Hall**	**113.39**	**59**	IAMs_20	IAMs_20	06 37 55.6		
	comp=Z,443nm,19.0s							
R50A	**Paris**	**113.41**	**53**	IAMs_20	IAMs_20	06 32 25.7		
	comp=Z,419nm,19.0s							
M50A	**Fremont**	**114.10**	**50**	IAMs_20	IAMs_20	06 34 31.6		
	comp=Z,530nm,20.0s							
ACSO	**Alum Creek Sta**	**114.27**	**51**	IAMs_20	IAMs_20	06 37 56.5		
	comp=Z,441nm,19.0s							
V53A	**Saluda**	**114.82**	**56**	IAMs_20	IAMs_20	06 41 19.1		
	comp=Z,295nm,19.0s							
BELG	**Belogornoye**	**114.89**	**323**	*i*PKIKP	**PKiKP**	**05 50 12.9**	**-1.1**	
ARCES	**ARCESS Array B**	**115.96**	**345**	PKP	**PKiKP**	**05 50 15.2**	**-0.5**	
	comp=Z,3.6nm,0.8s,baz=93,slow=2.7,SNR=5.6							
R55A	**Marlinton**	**116.71**	**53**	IAMs_20	IAMs_20	06 33 17.9		
	comp=Z,481nm,19.0s							
Y57A	**Sumter**	**116.93**	**57**	IAMs_20	IAMs_20	06 35 37.2		
	comp=Z,386nm,21.0s							
S57A	**Dark Hollow, R**	**117.69**	**53**	IAMs_20	IAMs_20	06 46 27.9		
	comp=Z,401nm,18.0s							
SSPA	**Standing Stone**	**118.07**	**50**	IAMs_20	IAMs_20	06 40 03.7		
	comp=Z,436nm,19.0s							
KIV	**Kislovodsk**	**120.26**	**315**	*i* PKIKP	**PKPdf**	**05 50 25.5**	**+0.7**	
KIV				pmax	pmax			
	comp=Z,3.0nm,1.0s							
KIV				MLR	MLR			
	comp=Z,323nm,22.0s							
SHA1	**Shidzhatmaz**	**120.34**	**314**	*i*PKIKP	**PKiKP**	**05 50 26.7**	**+1.5**	
FINES	**FINESS Array B**	**121.25**	**338**	PKP	**PKPdf**	**05 50 25.5**	**-0.5**	
	comp=Z,3.5nm,0.8s,baz=103,slow=8.6,SNR=5.4							
LPAZ	**La Paz**	**121.38**	**117**	PKP	**PKPdf**	**05 50 28.9**	**+0.6**	
	comp=Z,3.5nm,0.7s,baz=258,slow=2.8,SNR=18							
GURO	**Guroymak-BITLI**	**122.00**	**309**		**PKPdf**	**05 50 29.0**	**+0.7**	
BCX	**Boston College**	**122.61**	**47**	IAMs_20	IAMs_20	06 43 09.5		
	comp=Z,406nm,20.0s							
BOSA	**Boshof**	**124.23**	**224**	PKP	**PKPdf**	**05 50 32.7**	**-0.3**	
	comp=Z,3.3nm,0.8s,baz=172,slow=1.5,SNR=6.4							
CPUP	**Villa Florida**	**125.02**	**133**	PKP	**PKPdf**	**05 50 34.5**	**+0.2**	
	comp=Z,6.9nm,0.8s,baz=258,slow=1.5,SNR=20							
CPUP	**Villa Florida**	**125.02**	**133**		**PKPdf**	**05 50 34.4**	**0.0**	
SDV	**Santo Domingo**	**125.81**	**87**		**PKPdf**	**05 50 36.1**	**-0.3**	
AKASG	**Malin Array Be**	**126.10**	**326**	PKP	**PKPdf**	**05 50 35.1**	**-0.5**	
	comp=Z,2.3nm,0.8s,baz=68,slow=1.9,SNR=9.0							
AKASG				PP	**PP**	**05 52 23.6**	**-5.6**	
	comp=Z,1.5nm,0.8s,baz=55,slow=5.7,SNR=4.7							
AKASG	**Malin Array Be**	**126.10**	**326**		**PKPdf**	**05 50 34.8**	**-0.8**	
AK01	**Malin Array Si**	**126.11**	**326**	PKP	**PKPdf**	**05 50 35.4**	**-0.2**	
NB2	**NORSAR Subarra**	**126.31**	**344**	PKPdf	**PKPdf**	**05 50 34.8**	**-1.0**	
	comp=Z,1.2nm,0.8s,baz=31,slow=1.9							
NOA	**NORSAR Array B**	**126.31**	**344**	PKP	**PKPdf**	**05 50 35.3**	**-0.5**	
	comp=Z,1.7nm,0.8s,baz=35,slow=2.0,SNR=5.1							
BRTR	**Keskin Array B**	**127.96**	**312**	PKP	**PKPdf**	**05 50 38.9**	**-0.8**	
	comp=Z,0.9nm,0.8s,baz=191,slow=6.0,SNR=5.4							
BRTR				PP	**PP**	**05 52 36.0**	**-6.4**	
	comp=Z,1.8nm,1.0s,baz=79,slow=6.4,SNR=4.8							
BRTR	**Keskin Array B**	**127.96**	**312**		**PKPdf**	**05 50 39.0**	**-0.8**	
BRTR	**Keskin Array B**	**127.96**	**312**	PKIKP	**PKPdf**	**05 50 39.0**	**-0.8**	
PTLB	**Pontes e Lacer**	**129.51**	**121**		**PKPdf**	**05 50 43.0**	**-0.1**	
VILB	**Vilhena**	**129.74**	**117**		**PKPdf**	**05 50 43.4**	**-0.3**	
KGCAE	**Kacgae**	**129.97**	**228**		**PKPdf**	**05 50 43.6**	**-0.5**	
HUMP	**Col San Antoni**	**130.97**	**76**		**PKPdf**	**05 50 44.9**	**-0.9**	
STHS	**Stebnicka Huta**	**131.06**	**329**	*e*PKIKP	**PKiKP**	**05 50 47.7**	**+1.6**	
STHS	**Stebnicka Huta**	**131.06**	**329**	*e*PKP	**PKiKP**	**05 50 47.7**	**+1.6**	
MORC	**Moravsky Berou**	**132.64**	**331**	*e*PKP	**PKPdf**	**05 50 48.5**	**+0.3**	
SMRT	**St. Maarten**	**133.61**	**76**	IAMs_20	IAMs_20	06 41 30.7		
	comp=Z,259nm,21.0s							
KRUC	**Moravsky**	**133.68**	**331**	*e*PKP	**PKPdf**	**05 50 50.2**	**+0.1**	
MODS	**Modra-Piesok**	**133.72**	**330**	*e*PKIKP	**PKiKP**	**05 50 52.6**	**+1.1**	
MODS	**Modra-Piesok**	**133.72**	**330**	*e*PKP	**PKiKP**	**05 50 52.6**	**+1.1**	
WINA	**Alland / Wiene**	**134.49**	**330**	*e*PKP	**PKPdf**	**05 50 52.7**	**+1.0**	
	comp=Z,5.2nm,1.0s							
BOAV	**Boa Vista**	**134.62**	**98**		**PKPdf**	**05 50 52.3**	**-0.6**	
RONA	**Rosalia, Austr**	**134.66**	**330**	*e*PKP	**PKPdf**	**05 50 52.0**	**-0.1**	
	comp=Z,6.5nm,1.3s							
CONA	**Conrad Observa**	**134.72**	**330**	*e*PKP	**PKPdf**	**05 50 50.9**	**-1.3**	
	comp=Z,3.6nm,1.3s							
GERES	**GERESS Array B**	**135.07**	**333**	PKP	**PKPdf**	**05 50 51.0**	**-1.9**	
	comp=Z,1.3nm,0.9s,baz=67,slow=1.7,SNR=6.4							
GERES	**GERESS Array B**	**135.07**	**333**	PKIKP	**PKPdf**	**05 50 51.0**	**-1.9**	
LESA	**Schwarzleotal**	**136.59**	**332**	*e*PKP	**PKPdf**	**05 50 56.2**	**+0.5**	
	comp=Z,1.9nm,0.6s							
MYKA	**Terra Mystica**	**136.71**	**331**	*e*PKP	**PKPdf**	**05 50 55.1**	**-0.8**	
	comp=Z,1.2nm,0.5s							
WATA	**Walderalm**	**137.15**	**333**	*e*PKP	**PKPdf**	**05 50 57.0**	**+0.2**	
	comp=Z,3.2nm,0.6s							
ABTA	**Abfaltersbach**	**137.16**	**332**	*e*PKP	**PKPdf**	**05 50 55.7**	**-1.1**

PB14					IAML		05 50 37.3	
	comp=Z,136nm,0.2s							
AHML	**Horco Molle**	**3.03**	**147**	*e*P		Pn	05 49 40.7	-11
AHML				*e*S		S	05 50 17.8	-13
PB09	**IPOC Station P**	**3.09**	**321**	*e*P		**Pn**	**05 49 54.1**	**+1.2**
PB09				*i* S		**S**	**05 50 31.9**	**-0.3**
PB09				IAML			05 50 34.6	
	comp=N,120nm,0.5s							
PB09	**IPOC Station P**	**3.09**	**321**	*e*P		**Pn**	**05 49 54.0**	**+1.0**
PB09				*e*S		**S**	**05 50 33.3**	**+1.0**
PB09				IAML			05 50 35.7	
	comp=Z,88nm,0.3s							
PB05	**IPOC Station P**	**3.11**	**295⇑**	*e*P		**Pn**	**05 49 54.0**	**+0.8**
PB05				IAML			05 50 35.7	
	comp=N,180nm,0.3s							
PB05	**IPOC Station P**	**3.11**	**295**	*e*P		**Pn**	**05 49 54.0**	**+0.8**
PB05				IAML			05 50 32.5	
	comp=Z,92nm,0.5s							
PB05				*e*S		**S**	**05 50 32.6**	**0.0**
AC02	**Maricunga**	**3.15**	**214**	*e*P		**Pn**	**05 49 55.1**	**+1.2**
AC02				*e*S		**S**	**05 50 35.9**	**+1.8**
PB10	**IPOC Station P**	**3.19**	**282**	*e*P		**Pn**	**05 49 54.9**	**+1.0**
PB10	**IPOC Station P**	**3.19**	**282**	*e*P		**Pn**	**05 49 54.8**	**+0.9**
PB10				*e*S		**S**	**05 50 32.7**	**-1.4**
PB10				IAML			05 50 35.8	
	comp=Z,142nm,0.3s							
PB03	**IPOC Station P**	**3.23**	**312⇑**	*e*P		**Pn**	**05 49 55.4**	**+0.9**
PB03	**IPOC Station P**	**3.23**	**312**	*e*P		**Pn**	**05 49 55.3**	**+0.8**
PB03				*e*S		**S**	**05 50 33.9**	**-1.3**
PB03				IAML			05 50 39.3	
	comp=Z,231nm,0.2s							
PB07	**IPOC Station P**	**3.54**	**314⇑**	*e*P		**Pn**	**05 49 59.1**	**+0.8**
PB07	**IPOC Station P**	**3.54**	**314**	*e*P		**Pn**	**05 49 59.1**	**+0.8**
PB07				*e*S		**S**	**05 50 40.9**	**-1.0**
PB07				IAML			05 50 41.7	
	comp=Z,210nm,0.4s							
AC01	**Pan de Azucar**	**3.66**	**238**	*e*P		**Pn**	**05 50 00.0**	**+0.5**
AC01				*e*S		**S**	**05 50 43.4**	**-0.8**
AC01				IAML			05 50 44.2	
	comp=Z,83nm,0.1s							
PB01	**IPOC Station P**	**3.83**	**325**	*e*P		**Pn**	**05 50 02.1**	**+0.4**
PB01				*i* S		**S**	**05 50 47.1**	**-1.2**
PB01	**IPOC Station P**	**3.83**	**325**	*e*P		**Pn**	**05 50 02.2**	**+0.4**
PB01				*e*S		**S**	**05 50 48.4**	**+0.1**
PB01				IAML			05 50 50.4	
	comp=Z,57nm,0.2s							
TINO	**Tinogasta**	**3.84**	**185**	*e*P		**Pn**	**05 50 05.0**	**+3.1**
TINO				*e*S		S	05 50 29.5	-19
PB02	**IPOC Station P**	**3.84**	**318**	*e*P		**Pn**	**05 50 02.3**	**+0.4**
PB02				*i* S		**S**	**05 50 46.6**	**-2.0**
PB02	**IPOC Station P**	**3.84**	**318**	*e*P		**Pn**	**05 50 02.4**	**+0.4**
PB02				*e*S		**S**	**05 50 47.8**	**-0.8**
PB02				IAML			05 50 52.6	
	comp=Z,184nm,0.3s							
GO03	**Copiapo**	**4.35**	**219**	*e*P		**Pn**	**05 50 08.4**	**+0.3**
GO03				*i* S		**S**	**05 50 58.5**	**-1.4**
GO03	**Copiapo**	**4.35**	**219**	*e*P		**Pn**	**05 50 08.8**	**+0.7**
GO03				*e*S		**S**	**05 50 59.1**	**-0.8**
GO03				IAML			05 51 02.4	
	comp=Z,64nm,0.2s							
PATCX	**Punta Patache**	**4.38**	**320**	*e*P		**Pn**	**05 50 09.0**	**+0.4**
PATCX				*i* S		**S**	**05 50 56.3**	**-4.3**
PATCX	**Punta Patache**	**4.38**	**320**	*e*P		**Pn**	**05 50 08.7**	**+0.1**
PATCX				IAML			05 51 06.3	
	comp=Z,38nm,0.2s							
PB08	**IPOC Station P**	**4.47**	**335**	*e*P		**Pn**	**05 50 10.6**	**+0.6**
PB08				*e*S		**S**	**05 51 03.2**	**0.0**
PB08				IAML			05 51 04.7	
	comp=Z,24nm,0.3s							
TA01	**Diego Aracena**	**4.59**	**322**	*e*P		**Pn**	**05 50 11.3**	**+0.1**
TA02	**Huaiquique**	**4.81**	**324**	*e*P		**Pn**	**05 50 14.4**	**+0.5**
TA02				IAML			05 51 13.6	
	comp=Z,77nm,0.1s							
GO01	**Chusmiza**	**4.92**	**337**	*e*P		**Pn**	**05 50 16.3**	**+0.5**
GO01				IAML			05 51 16.5	
	comp=Z,24nm,0.3s							
PB11	**IPOC Station P**	**5.01**	**332**	*e*P		**Pn**	**05 50 16.2**	**-0.6**
PB11				*e*S		**S**	**05 51 13.8**	**-1.6**
PB11				IAML			05 51 14.9	
	comp=Z,36nm,0.5s							
ACLC	**CERRO LA CRUZ**	**5.18**	**178**	*e*P		**Pn**	**05 50 20.4**	**+1.7**
ACLC				*e*S		**S**	**05 51 21.3**	**+2.1**
AC04	**Llanos de Chal**	**5.30**	**221**	*e*P		**Pn**	**05 50 19.9**	**-0.2**
AC04				*e*S		**S**	**05 51 19.4**	**-2.2**
AC04				IAML			05 51 22.6	
	comp=Z,22nm,0.9s							

*ASRS **18** 05:59:52.0±1.2,54°.09N×86°.46E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 18 05:59:53.6±2.8,54°.17N×86°.55E, h0km, mbtmp3.1/2, ML2.8/2, Error ellipse: s-maj=23.6km s-min=14.1km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.04**	**259**	I		I	06 06 50.0	
	baz=80,slow=336,SNR=1.8							
ZALV	**Zalesovo Beam**	**1.04**	**258**	Pg		Pg	06 00 12.0	-1.6
	1.0nm,0.3s,baz=77,slow=17,SNR=11							
ZALV				Lg		Lg	06 00 28.8	
	1.8nm,0.3s,baz=73,slow=26,SNR=12							
KURBB	**Kurchatov Arra**	**6.06**	**237**	Pn		Pn	06 01 25.2	+0.9
	0.1nm,0.3s,baz=54,slow=14,SNR=9.9							
	1.4nm,0.5s							
MKAR	**Makanchi Array**	**7.87**	**202**	Pn		Pn	06 01 50.3	+1.1
	0.2nm,0.3s,baz=18,slow=10,SNR=7.2							
	0.3nm,0.3s							

*IDC **18** 06:03:07.8±2.6,34°.69N×27°.55E, h0km, mb3.7/3, mbtmp3.6/4, ML3.5/1, MS4.3/2, Error ellipse: s-maj=64.0km s-min=28.8km az=9.0*
*ISK **18** 06:03:08.7,34°.66N×27°.53E, h5km, ML2.9/12*
*AFAD **18** 06:03:12.8,34°.89N×27°.86E, h1km±2km, ML2.7*
ISC 18 06:03:08.0±2.9,34°.45N±0°.08×27°.63E±0°.06, h13km±19km, n28, σ1s65/37, mb3.5/3, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ZKR	**Zakros**	**1.34**	**300**	Pn		**Pn**	**06 03 32.2**	**-0.2**
ZKR				Sn		**Sg**	**06 03 49.5**	**-1.6**
ARG	**Arkhangelos**	**1.81**	**13**	Pn		**Pn**	**06 03 39.7**	**+0.8**
DAT	**Datca**	**2.27**	**359**	Pn		**Pn**	**06 03 46.0**	**+0.6**
IZZE	**Mula-Seydike**	**2.37**	**33**	P		**Pn**	**06 03 47.8**	**+1.2**
IZZE				S		**Sn**	**06 04 13.3**	**-2.3**
IZZE				IAML			06 04 14.0	
	comp=E,114nm,0.5s							
IZZE				IAML			06 04 17.0	
	comp=N,84nm,0.4s							
TURN	**Turunc**	**2.37**	**12**	P		**Pn**	**06 03 48.4**	**+1.8**
TURN				S		**Sn**	**06 04 14.3**	**-1.3**
TURN				IAML			06 04 21.0	
	comp=E,44nm,0.4s							
AKAS	**Kas**	**2.40**	**42**	P		**Pn**	**06 03 48.8**	**+1.6**
AKAS				S		**Sn**	**06 04 15.4**	**-1.2**
AKAS				IAML			06 04 16.0	
	comp=E,94nm,0.6s							
AKAS				IAML			06 04 19.0	
	comp=N,100nm,0.5s							
SABU	**Mula-Dalaman**	**2.61**	**24**	P		**Pn**	**06 03 51.1**	**+1.2**
SABU				S		**Sn**	**06 04 19.6**	**-1.9**
SABU				IAML			06 04 30.0	
	comp=E,35nm,1.4s							
BODT	**Bodrum**	**2.62**	**354**	Pn		**Pn**	**06 03 50.9**	**+0.9**
YER	**Yerkesik**	**2.73**	**11**	Pn		**Pn**	**06 03 52.8**	**+1.2**
CAME	**Cameli-Denizli**	**2.83**	**28**	Pn		**Pn**	**06 03 54.9**	**+1.8**
KNIK	**Mula-Seydike**	**2.87**	**33**	P		**Pn**	**06 03 54.6**	**+1.0**
KNIK				S		**Sn**	**06 04 26.8**	**-1.2**
AKUM	**Antalya-Kumluc**	**2.90**	**49**	P		**Pn**	**06 03 53.8**	**-0.1**
AKUM				S		**Sn**	**06 04 25.9**	**-2.7**
AKUM				IAML			06 04 43.0	
	comp=E,35nm,1.3s							
AKUM				IAML			06 05 16.0	
	comp=N,41nm,2.6s							
GVD	**Gavdhos**	**2.94**	**279**	Pn		**Pn**	**06 03 57.1**	**+2.6**
ELL	**Elmali**	**2.95**	**38**	Pn		**Pn**	**06 03 57.0**	**+2.3**
CAEL	**Denizli, Camel**	**3.00**	**27**	P		**Pn**	**06 03 56.7**	**+1.3**
CAEL				S		**Sn**	**06 04 29.8**	**-1.5**
CAEL				IAML			06 04 31.0	
	comp=N,63nm,1.5s							
CAEL				IAML			06 04 38.0	
	comp=E,64nm,0.8s							

DNZT	**Denizli-Tavas-**	**3.04**	**22**	P		**Pn**	**06 03 57.4**	**+1.4**
DNZT				S		**Sn**	**06 04 30.7**	**-1.6**
IMMV	**Iera Moni Meta**	**3.16**	**290**	Pn		**Pn**	**06 03 59.4**	**+1.9**
APMY	**Acipayam-Deniz**	**3.31**	**24**	Pn		**Pn**	**06 04 01.4**	**+1.8**
KORT	**Korkueli**	**3.37**	**40**	P		**Pn**	**06 04 00.7**	**+0.2**
KORT				S		**Sn**	**06 04 39.7**	**-0.8**
KORT				IAML			06 04 43.0	
	comp=N,32nm,0.7s							
KORT				IAML			06 04 44.0	
	comp=E,40nm,0.6s							
AYDB	**Zeytinkoy-Aydi**	**3.49**	**3**	Pn		**Pn**	**06 04 03.6**	**+1.4**
ODEM	**Odemis-Izmir**	**3.83**	**5**	Pn		**Pn**	**06 04 08.3**	**+1.5**
MMAI	**Mount Meron Ar**	**6.63**	**100**	Pn		**Pn**	**06 04 46.8**	**+1.5**
	0.9nm,0.3s,baz=264,slow=11,SNR=1.6							
MMAI				Sn		**Sn**	**06 05 58.5**	**-2.3**
	0.6nm,0.3s,baz=274,slow=20,SNR=1.8							
	0.5nm,0.3s							
BRTR	**Keskin Array B**	**7.12**	**41**	Sn		**Sn**	**06 06 10.6**	**-2.4**
	0.2nm,0.3s,baz=210,slow=26,SNR=4.2							
ESDC	**Sonseca Array**	**25.66**	**291**	P		**P**	**06 08 38.2**	**+0.6**
	0.9nm,0.7s,baz=88,slow=9.4,SNR=5.3							
	0.9nm,0.7s							
FINES	**FINESS Array B**	**27.03**	**358**	P		**P**	**06 08 48.5**	**-1.1**
	4.9nm,1.1s,baz=162,slow=10,SNR=4.9							
	4.9nm,1.1s							
BVAR	**Borovoye Array**	**35.38**	**45**	LR		LR	06 28 44.1	
	comp=Z,430nm,20.7s,baz=89,slow=44							
MKAR	**Makanchi Array**	**42.48**	**56**	P		**P**	**06 11 04.8**	**+2.0**
	0.3nm,0.7s,baz=275,slow=6.7,SNR=3.7							
	0.3nm,0.7s							
LBTB	**Lobatse**	**59.17**	**182**	LR		LR	06 42 00.9	
	comp=Z,223nm,18.7s,baz=121,slow=39							

TRN 18 06:31:38.7, 17°.49N×61°.11W, h17km, MD3.8, South-east of Barbuda., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ANWB	**Willy Bob**	**0.67**	**286**	*e*P		Pn	06 31 54.4	+1.0
ANWB				*e*S		Sn	06 32 04.6	+1.1
DSDZ	**La Diserade, G**	**1.17**	**178**	*e*P		Pg	06 32 01.3	0.0
DSDZ				*e*S		Sg	06 32 17.9	+1.2
DHSZ	**Broadband at M**	**1.36**	**208**	*e*P		Pg	06 32 05.1	+0.1
DHSZ				*e*S		Sg	06 32 23.2	+0.4
MMLZ	**Guadeloupe Bro**	**1.53**	**201**	*e*P		Pg	06 32 07.7	-0.6
MMLZ				*e*S		Sg	06 32 27.5	-0.7
SKI	**Saint Kitts**	**1.57**	**265**	*e*P		Pg	06 32 08.4	-0.5
SKI				*e*S		Sg	06 32 29.1	-0.2
TBG	**Guadaloupe-3**	**1.71**	**198**	*e*P		Pn	06 32 08.4	+0.8
TBG				*e*S		Sg	06 32 32.8	-0.9
SEUS	**St. Eustatius**	**1.79**	**270**	*e*P		Pn	06 32 09.9	+1.1
SEUS				*e*S		Sb	06 32 33.5	+0.3
DWS	**Wesley**	**1.92**	**186**	*e*P		Pb	06 32 13.0	-0.2
DWS				*e*S		Sb	06 32 37.2	+0.4
SMRT	**St. Maarten**	**1.96**	**287**	*e*P		Pn	06 32 12.3	+1.1
SMRT				*e*S		Sb	06 32 38.3	+0.2
SABA	**Saba**	**2.04**	**274**	*e*P		Pb	06 32 14.8	-0.6
SABA				*e*S		Sb	06 32 40.1	-0.4
DSLB	**Salisbury**	**2.06**	**188**	*e*P		Pb	06 32 15.2	-0.5
DSLB				*e*S		Sb	06 32 41.4	+0.4
BIM	**Bigot**	**2.95**	**179**	*e*P		Pn	06 32 27.1	+2.3
BIM				*e*S		Sn	06 33 01.1	+1.2
SLBI	**Saint Lucia, B**	**3.45**	**178**	*e*P		Pn	06 32 33.5	+2.0
SLBI				*e*S		Sn	06 33 14.1	+2.1

IDC 18 06:51:30.2±1.2, 13°.29N×145°.56E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=28.0km s-min=21.1km az=68.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**0.74**	**294**	Pn		Pn	06 51 48.4	+0.5
	348nm,0.3s,baz=132,slow=1.3,SNR=20							
GUMO				Sn		Sb	06 51 55.5	-1.1
	1um,0.3s,baz=336,slow=20,SNR=40							
H11S3	**WAKE ISLAND Hy 20.96**	**73**		T		T	07 19 00.3	
	baz=259,slow=75,SNR=16							
H11S1	**WAKE ISLAND Hy 20.97**	**73**		T		T	07 19 00.7	
	baz=259,slow=75,SNR=12							
H11S2	**WAKE ISLAND Hy 20.97**	**73**		T		T	07 19 00.6	
	baz=259,slow=75,SNR=13							
H11N1	**WAKE ISLAND Hy 21.41**	**70**		T		T	07 19 33.1	
	baz=256,slow=75,SNR=18							
H11N2	**WAKE ISLAND Hy 21.42**	**70**		T		T	07 19 33.5	
	baz=256,slow=75,SNR=9.2							
H11N3	**WAKE ISLAND Hy 21.43**	**70**		T		T	07 19 31.7	
	baz=256,slow=75,SNR=17							
WRA	**Warramunga Arr**	**34.83**	**199**	P		P	06 58 22.9	-0.2
	1.0nm,0.7s,baz=21,slow=9.5,SNR=16							
	1.0nm,0.7s							
ASAR	**Alice Springs**	**38.46**	**197**	P		P	06 58 54.2	+0.1
	0.5nm,0.6s,baz=25,slow=11,SNR=9.5							
	0.5nm,0.6s							
MKAR	**Makanchi Array**	**62.17**	**316**	P		P	07 01 51.7	-1.8
	0.3nm,0.7s,baz=95,slow=6.5,SNR=2.8							
	0.3nm,0.7s							
ILAR	**Eielson Array**	**68.55**	**25**	P		P	07 02 35.0	+0.6
	0.4nm,0.9s,baz=245,slow=5.6,SNR=5.0							
	0.4nm,0.9s							

WEL 18 07:11:15.0±1.2, 34°S±10°×17°9E±2°3, h300km, M3.9/5, mB4.3/7, ML4.0/6, MLv3.9/5, Mw(mB)3.4/3, Error ellipse: s-maj=30.4km s-min=11.5km az=104.9, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**4.28**	**190**	P		Pn	07 12 24.4	+0.1
HAZ	**Te Kaha**	**4.34**	**197**	P		Pn	07 12 24.8	-0.1
HAZ				S		S	07 13 21.4	+0.5
PUZ	**Puketiti**	**4.55**	**191**	P		Pn	07 12 27.5	+0.1
PUZ				S		S	07 13 25.0	-0.4
RUGZ	**Raukumara Rang**	**4.56**	**197**	P		Pn	07 12 27.1	-0.5
TWGZ	**Tauwhareparae**	**4.70**	**193**	P		Pn	07 12 29.7	+0.6
TWGZ				S		S	07 13 30.5	+2.0
MWZ	**Matawai**	**4.95**	**197**	P		Pn	07 12 32.0	+0.1
CNGZ	**Carnagh Statio**	**4.96**	**190**	P		Pn	07 12 32.8	+0.8
URZ	**Urewera**	**4.99**	**201**	P		Pn	07 12 31.7	-0.7
URZ				S		S	07 13 34.0	-0.5
KBAZ	**Karaka Road Bo**	**5.04**	**225**	P		Pn	07 12 33.9	+1.0
RIGZ	**Rimuhau**	**5.26**	**194**	P		Pn	07 12 35.5	0.0
MUGZ	**Murupara**	**5.30**	**202**	P		Pn	07 12 35.9	0.0
MUGZ				S		S	07 13 41.5	+0.5
RAHZ	**Arahi**	**5.61**	**198**	P		Pn	07 12 39.1	-0.5
MTHZ	**Maungataniwha**	**5.62**	**200**	P		Pn	07 12 39.7	-0.1
MTHZ				S		S	07 13 48.4	+0.4
BKZ	**Black Stump Fm**	**6.01**	**202**	P		Pn	07 12 43.8	-0.6
KWHZ	**Kaweka Forest**	**6.27**	**201**	P		Pn	07 12 46.8	-0.9
SNVZ	**South Ngauruho**	**6.33**	**207**	P		Pn	07 12 45.6	-2.7
KRHZ	**Kereru**	**6.49**	**201**	P		Pn	07 12 48.4	-1.8
KAHZ	**Kahuranaki**	**6.50**	**197**	P		Pn	07 12 49.3	-0.9
MTVZ	**Mangateitei**	**6.56**	**207**	P		Pn	07 12 50.9	-0.2
PNHZ	**Pukenui**	**6.79**	**201**	P		Pn	07 12 52.2	-1.6
BFZ	**Birch Farm**	**7.49**	**198**	P		Pn	07 13 00.4	-1.8
TIWZ	**Tintock**	**7.68**	**200**	P		Pn	07 13 03.3	-1.3
CAW	**Cannon Point**	**8.23**	**203**	P		Pn	07 13 08.3	-3.0

*IPEC **18** 07:28:46.4±0.2, 50°.22N×19°.03E, h1km, ML2.6/6, Error ellipse: s-maj=1.8km s-min=0.8km az=1.0*
*VIE **18** 07:28:46.7±0.3, 50°.20N×19°.04E, h0km, mb2.3/3, ml2.4/3, Error ellipse: s-maj=2.6km s-min=1.8km az=168.0 6 km SE of Katowice Suspected Mining induced.*
*PRU **18** 07:28:47.0, 50°.25N×18°.99E, h0km*
ISC 18 07:28:46.7±0.9, 50°.20N±0°.04×19°.00E±0°.02, h0km, n26, σ0s70/46, Poland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OJC	**Ojcow**	**0.51**	**87**	*e*Pg		**Pg**	**07 28 56.2**	**-0.3**
OJC				*e*Sg		**Sg**	**07 29 03.2**	**+0.1**
OKC	**Ostrava-Krasne**	**0.66**	**237**	*e*PG		**Pg**	**07 28 59.9**	**+0.6**
OKC				*e*SG		**Sg**	**07 29 07.2**	**-0.6**
	comp=Z,78nm,0.9s							
STEB	**Steborice**	**0.83**	**252**	*e*PG		**Pg**	**07 29 02.9**	**+0.2**
STEB				*e*SG		**Sb**	**07 29 14.9**	**-0.9**
	comp=Z,142nm,0.7s							
MORC	**Moravsky Berou**	**1.03**	**246**	*e*Pg		**Pg**	**07 29 06.6**	**+0.2**
	baz=64							
MORC				*e*Sg		**Sg**	**07 29 19.8**	**0.0**
	102nm,0.5s,baz=64							

ANAC	**Anensky vrch**	**1.05**	**264**	*e*Pg		**Pg**	**07 29 07.2**	**+0.4**
	baz=81							
ANAC				*e*Sg		**Sg**	**07 29 20.0**	**-0.4**
	136nm,0.5s,baz=81							
LANS	**Liptovska Anna**	**1.09**	**164**	*e*PG		**Pg**	**07 29 08.0**	**+0.4**
LANS				*e*SG		**Sb**	**07 29 23.2**	**-0.1**
LANS				*e*LG		Lg	07 29 28.3	
MAUC	**Maruska**	**1.13**	**223**	*e*PG		**Pb**	**07 29 09.2**	**+0.1**
NIE	**Niedzica**	**1.15**	**132**	*e*Pg		**Pg**	**07 29 08.6**	**-0.1**
NIE				*e*Sg		**Sn**	**07 29 26.7**	**+0.2**
LOSC	**Losov**	**1.20**	**242**	*e*Pg		**Pg**	**07 29 10.0**	**+0.3**
	baz=60							
LOSC				*e*Sg		**Sg**	**07 29 25.1**	**-0.1**
	72nm,0.4s,baz=60							
KRLC	**Kraliky**	**1.43**	**266**	*e*PG		**Pn**	**07 29 13.3**	**-0.7**
KRLC				*e*SG		**Sg**	**07 29 32.5**	**-0.2**
	comp=Z,54nm,0.5s							
JAVC	**Velka Javorina**	**1.60**	**213**	*e*Pn		**Pn**	**07 29 16.2**	**0.0**
	baz=32							
JAVC	**Velka Javorina**	**1.60**	**213**	*e*PN		**Pn**	**07 29 16.3**	**0.0**
STHS	**Stebnicka Huta**	**1.65**	**117**	*e*PG		**Pn**	**07 29 16.8**	**-0.1**
STHS				*e*SG		**Sg**	**07 29 41.9**	**+2.2**
STHS				*e*LG		Lg	07 29 45.8	
DPC	**Dobruska-Polom**	**1.73**	**276**	*e*PG		**Pn**	**07 29 17.7**	**-0.3**
DPC				*e*SG		**Sb**	**07 29 41.5**	**0.0**
	comp=Z,50nm,0.8s							
VRAC	**Vranov**	**1.80**	**241**	*e*Pn		**Pn**	**07 29 18.9**	**-0.1**
	baz=59							
VRAC				*e*Sg		**Sb**	**07 29 43.9**	**+0.3**
	27nm,0.6s,baz=59							
OSTC	**Ostas**	**1.82**	**282**	*e*SG		**Sg**	**07 29 45.0**	**-0.1**
KSP	**Ksiaz**	**1.84**	**291**	*e*Pg		**Pg**	**07 29 22.2**	**+0.2**
KSP				*e*Sg		**Sg**	**07 29 47.1**	**+1.2**
CHVC	**Chvalec**	**1.93**	**283**	*e*PG		**Pn**	**07 29 20.6**	**+0.1**
KECS	**Kecovo**	**1.97**	**150**	*e*PN		**Pn**	**07 29 20.5**	**-0.9**
KECS				*e*SN		**Sn**	**07 29 46.6**	**-0.2**
KECS				*e*LG		Lg	07 29 57.0	
KRUC	**Moravsky**	**2.04**	**237**	*e*Pn		**Pn**	**07 29 22.3**	**0.0**
	baz=55							
KRUC				*e*Sg		**Sb**	**07 29 51.1**	**+0.6**
	29nm,0.9s,baz=55							
MODS	**Modra-Piesok**	**2.15**	**212**	*e*PN		**Pb**	**07 29 25.5**	**-0.9**
MODS				*e*SG		**Sg**	**07 29 56.4**	**+0.8**
PRU	**Pruhonice**	**2.88**	**267**	*e*SG		**Sb**	**07 30 16.3**	**+1.7**
	comp=Z,127nm,2.9s							
CONA	**Conrad Observa**	**3.07**	**223**	*i* Pn		**Pn**	**07 29 36.0**	**-0.5**
RONA	**Rosalia, Austr**	**3.07**	**216**	*i* Pn		**Pn**	**07 29 37.4**	**+0.9**
	1.2nm,0.4s							
RONA				*e*Sn		**Sn**	**07 30 14.1**	**+0.2**
	4.6nm,0.6s							
KHC	**Kasperske Hory**	**3.68**	**255**	*e*PN		**Pn**	**07 29 45.0**	**+0.1**
KHC				*e*PG		**Pb**	**07 29 51.2**	**-1.4**
KHC				*e*SG		**Sg**	**07 30 43.8**	**-1.1**
	comp=Z,12nm,0.5s							
CLL	**Collm**	**3.97**	**289**	*e*Pg		**Pg**	**07 30 04.0**	**+1.3**
CLL				*e*Sg		**Sg**	**07 30 54.0**	**0.0**

*SNET **18** 07:29:29.0±1.2, 14°.73N×87°.38W, h13km±12km, ML3.7, Presumed earthquake*
*CATAC **18** 07:29:29.6±0.2, 15°.N±2°×87°.4W±1°.0, h1km, M3.8/29, MLv3.8/29, Error ellipse: s-maj=3.8km s-min=2.0km az=14.2, confirmed*
*GCG **18** 07:29:31.2±2.9, 14°.78N×87°.59W, h0km±21km, MD3.9, Presumed earthquake*
ISC 18 07:29:26.8±1.2, 14°.81N±0°.04×87°.35W±0°.02, h12km±11km, n68, σ1s15/99, Honduras

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TGUH	**Tegucigalpa,Un**	**0.75**	**174**	P		**Pb**	**07 29 41.8**	**-0.1**
TGUH				S		**Sg**	**07 29 50.7**	**-0.6**
MARCA	**Marcala la Paz**	**0.92**	**226**	*i* P		**Pb**	**07 29 44.5**	**-0.4**
SARH	**Santa Rosa de**	**1.36**	**269**	*i* P		**Pg**	**07 29 53.1**	**0.0**
OCON	**Estacion meteo**	**1.45**	**144**	P		**Pg**	**07 29 54.7**	**+0.1**
IZABA	**Izabal, Puerto**	**1.50**	**308**	P		**Pg**	**07 29 56.6**	**+1.0**
IZABA				S		**Sg**	**07 30 16.8**	**+1.6**
IZBA	**Izabal, Puerto**	**1.50**	**308**	*e*P		**Pg**	**07 29 56.7**	**+1.0**
CNRM	**Centro Naciona**	**1.55**	**211**	P		**Pb**	**07 29 54.9**	**-0.5**
CNRM				S		**Sb**	**07 30 14.7**	**-0.3**
LCND	**La Caada**	**1.58**	**199**	P		**Pb**	**07 29 55.8**	**-0.2**
LCND	**La Caada**	**1.58**	**199**	*e*P		**Pb**	**07 29 55.9**	**-0.2**
LCND				*e*S		**Sb**	**07 30 15.2**	**-0.8**
P5NO	**Presa 5 de nov**	**1.59**	**239**	P		**Pb**	**07 29 55.9**	**-0.3**
P5NO	**Presa 5 de nov**	**1.59**	**239**	*e*P		**Pb**	**07 29 55.8**	**-0.4**
P5NO				*e*S		**Sb**	**07 30 15.3**	**-0.9**
CNCH	**Conchagua**	**1.59**	**197**

SIUN	Universidad Ur	2.73 113	P	Pb	07 30 13.5	-2.0
SIUN			S	Sb	07 30 49.1	+0.1
FAME	Alcaldia de Sa	2.75 250	P	Pb	07 30 15.7	-0.4
FAME			S	Sb	07 30 48.3	-1.5
BOAB	BOACO BROADBAN	2.86 145	P	Pb	07 30 17.1	-0.8
BOAB			S	Sb	07 30 51.6	-1.3
APG	El Apazote	3.02 274	*i* P	Pn	07 30 16.3	+1.6
PETF	Flores	3.20 311	*i* S	Sb	07 30 59.5	-3.2

IDC ***18*** *07:42:11.2±0.6, 32.°90N×39.°78W, h0km, mb4.0/16, mbtmp4.0/16, MS4.2/75, Error ellipse: s-maj=19.5km s-min=15.7km az=156.0*

NEIC ***18*** *07:42:13.8±2.2, 32.°9N±0.°1×39.°7W±0.°1, h10km±1km, mb4.7/46, Error ellipse: s-maj=21.7km s-min=17.4km az=120.0*

GCMT ***18*** *07:42:14.8±0.2, 32.°94N±0.°02×39.°74W±0.°01, h12km, MW5.0/118, Moment Tensor Solution. s31,c36; s118,c179; Duration: 0 Moment tensor: Scale 1016Nm; Mrr=3.25±.07; Mθθ 0.45±.08; Mϕϕ 2.80±.06; Mrθ 1.51±.37; Mθϕ 0.88±.07; Mϕr -0.58±.24; Best double couple: M≈3.49400×1016 NP1:φ≈219.00000°, δ48.00000°, λ-60.00000°. NP2:φ≈358.00000°, δ50.00000°, λ-119.00000°. Principal axes: T 3.0930, Plg1.0000°, Azm108.0000°; N 0.8030, Plg22.0000°, Azm18.0000°; P -3.8950, Plg68.0000°, Azm200.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 07:42:12.6±0.5, 32.°83N±0.°08×39.°69W±0.°09, h8km, n128, σ0.°92/51, mb4.6/37, MS4.3/79, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRLN	**Deer Lake**	**21.12**	**326**	P	**P**	**07 46 58.1**	**+0.4**
DRLN				IAmb	IAmb	07 47 04.6	
	comp=Z,51nm,1.3s						
SJG	**San Juan**	**27.93**	**245**	LR	LR	07 57 01.7	
	comp=Z,133nm,22.0s,baz=69,slow=32						
SCHQ	**Schefferville**	**29.12**	**327**	LR	LR	07 58 43.3	
	comp=Z,634nm,21.5s,baz=127,slow=34						
MDT	**Midelt**	**29.40**	**80**	LR	LR	07 57 15.7	
	comp=Z,805nm,21.2s,baz=292,slow=31						
ESDC	**Sonseca Array**	**29.47**	**66**	LR	LR	07 58 21.7	
	comp=Z,234nm,18.1s,baz=288,slow=33						
MDP	**Montagnes des**	**30.12**	**206**	LR	LR	07 57 44.0	
	comp=Z,251nm,19.8s,baz=358,slow=31						
KUQ	**Kuujjuuaa**	**31.87**	**331**	P	**P**	**07 48 39.4**	**+1.4**
KUQ				IAmb	IAmb	07 48 52.1	
	comp=Z,14nm,1.4s						
SADO	**Sadowa**	**32.67**	**303**	LR	LR	08 00 37.5	
	comp=Z,421nm,19.6s,baz=99,slow=34						
BORG	**Borgarnes**	**33.88**	**14**	LR	LR	07 58 30.5	
	comp=Z,561nm,20.1s,baz=235,slow=29						
EKA	**Eskdalemuir Ar**	**33.96**	**38**	LR	LR	07 59 07.9	
	comp=Z,420nm,18.4s,baz=210,slow=30						
SFJD	**Kangerlussuaq**	**34.81**	**352**	LR	LR	08 00 08.6	
	comp=Z,115nm,18.3s,baz=172,slow=31						
FRB	**Frobisher Bay**	**35.78**	**338**	LR	LR	08 01 22.4	
	comp=Z,249nm,21.2s,baz=144,slow=32						
TKL	**Tuckaleechee C**	**36.33**	**287**	LR	LR	08 01 24.2	
	comp=Z,1μm,21.3s,baz=80,slow=32						
SDV	**Santo Domingo**	**37.22**	**237**	LR	LR	08 02 20.3	
	comp=Z,164nm,20.7s,baz=50,slow=32						
SDV	**Santo Domingo**	**37.22**	**237**		**P**	**07 49 26.0**	**+1.1**
SDV				IAmb	IAmb	07 49 27.6	
	comp=Z,15nm,1.0s						
RCBR	**Riachuelo**	**38.61**	**174**	LR	LR	08 01 36.0	
	comp=Z,93nm,21.9s,baz=10.0,slow=30						
DAVOX	**Davos/Dischmat**	**39.89**	**55**	LR	LR	08 03 18.7	
	comp=Z,314nm,20.1s,baz=270,slow=32						
KEST	**Kesra**	**40.29**	**72**	LR	LR	08 04 05.8	
	comp=Z,218nm,19.1s,baz=312,slow=33						
MACA	**Manacapuru-AM**	**40.95**	**213**		**P**	**07 49 56.3**	**+0.4**
MACA				IAmb	IAmb	07 49 58.0	
	comp=Z,10nm,0.9s						
DBIC	**Dimbokro**	**41.52**	**121**	LR	LR	08 05 11.8	
	comp=Z,388nm,19.4s,baz=336,slow=33						
TORD	**Torodi Ar. Bea**	**42.50**	**108**	P	**P**	**07 50 09.1**	**+0.4**
TORD				LR	LR	08 05 36.2	
	comp=Z,3.9nm,0.9s,baz=276,slow=4.6,SNR=13						
	comp=Z,629nm,21.9s,baz=322,slow=33						
	comp=Z,3.9nm,0.9s						
GERES	**GERESS Array B**	**42.54**	**52**	LR	LR	08 05 11.8	
	comp=Z,123nm,18.3s,baz=268,slow=32						
ROSC	**El Rosal**	**42.65**	**237**	LR	LR	08 06 08.1	
	comp=Z,434nm,21.3s,baz=36,slow=34						
NOA	**NORSAR Array B**	**43.13**	**34**	LR	LR	08 04 35.1	
	comp=Z,208nm,20.8s,baz=250,slow=31						
VAE	**Valguarnera**	**43.97**	**68**	LR	LR	08 06 53.5	
	comp=Z,342nm,18.4s,baz=250,slow=34						
HFS	**Hagfors**	**44.07**	**35**	LR	LR	08 05 05.7	
	comp=Z,421nm,19.1s,baz=297,slow=31						
FCC	**Fort Churchill**	**44.28**	**323**		**P**	**07 50 23.5**	**+1.0**
FCC				IAmb	IAmb	07 50 28.9	
	comp=Z,13nm,1.3s						
ULM	**Lac du Bonnet**	**44.40**	**310**	LR	LR	08 07 18.5	
	comp=Z,484nm,21.8s,baz=65,slow=34						
VRAC	**Vranov**	**44.45**	**51**	LR	LR	08 05 41.7	
	comp=Z,136nm,20.5s,baz=266,slow=32						
POIN	**Pond Inlet**	**44.55**	**345**	P	**P**	**07 50 26.2**	**+1.7**
TEIG	**Tepich**	**44.89**	**266**	LR	LR	08 06 58.5	
	comp=Z,2μm,21.6s,baz=321,slow=33						
TEIG	**Tepich**	**44.89**	**266**	P	**P**	**07 50 27.2**	**-0.7**
H10N2	**ASCENSION HYDR**	**47.02**	**145**	T	T	08 40 58.7	
	baz=330,slow=75,SNR=250						
H10N3	**ASCENSION HYDR**	**47.02**	**145**	T	T	08 40 59.0	
	baz=330,slow=75,SNR=233						
H10N1	**ASCENSION HYDR**	**47.03**	**145**	T	T	08 41 00.1	
	baz=330,slow=75,SNR=304						
JTS	**Las Juntas de**	**47.24**	**252**	LR	LR	08 07 50.3	
	comp=Z,290nm,21.7s,baz=53,slow=33						
H10S3	**ASCENSION HYDR**	**47.91**	**146**	T	T	08 42 05.3	
	baz=250,slow=74,SNR=67						
H10S2	**ASCENSION HYDR**	**47.92**	**146**	T	T	08 42 04.5	
	baz=330,slow=74,SNR=69						
OTAV	**Otavalo**	**48.80**	**236**		**P**	**07 50 59.4**	**+0.3**
BDFB	**Brasilia**	**48.85**	**191**	P	**P**	**07 50 59.1**	**+0.2**
BDFB	comp=Z,5.2nm,0.8s,baz=4.1,slow=4.8,SNR=9.7			LR	LR	08 08 13.4	
	comp=Z,136nm,20.5s,baz=105,slow=32						
	comp=Z,5.2nm,0.8s						
BDFB	**Brasilia**	**48.85**	**191**		**P**	**07 51 00.0**	**+1.1**
BDFB				IAmb	IAmb	07 51 00.5	
	comp=Z,6.4nm,0.9s						
APG	**El Apazote**	**49.21**	**261**	LR	LR	08 09 22.0	
	comp=Z,20nm,21.1s,baz=72,slow=33						
RES	**Resolute Bay**	**49.62**	**343**	LR	LR	08 11 36.3	
	comp=Z,127nm,18.3s,baz=32,slow=36						
FINES	**FINESS Array B**	**50.26**	**35**	P	**P**	**07 51 08.1**	**-1.0**
	comp=Z,2.5nm,0.8s,baz=225,slow=4.9,SNR=5.7						
FINES				LR	LR	08 08 55.9	
	comp=Z,365nm,18.1s,baz=244,slow=32						
	comp=Z,2.5nm,0.8s						
ARCES	**ARCESS Array B**	**51.00**	**24**	LR	LR	08 08 02.1	
	comp=Z,121nm,19.6s,baz=242,slow=30						
CZSB	**Cruzeiro do Su**	**51.13**	**224**	P	**P**	**07 51 14.4**	**-1.8**
SGCY	**Sterling City**	**51.23**	**287**		**P**	**07 51 17.1**	**+0.1**
SGCY				IAmb	IAmb	07 51 23.2	
	comp=Z,9.8nm,1.2s						
MNK	**Minsk**	**51.27**	**44**	*i* P	**P**	**07 51 16.4**	**-0.4**
	comp=E,20nm,0.8s						
MNK				*i* P	**P**	**07 51 16.4**	**-0.4**
	comp=N,18nm,0.9s						
MNK				*i* P	**P**	**07 51 16.4**	**-0.4**
	comp=Z,16nm,0.7s,baz=274						
MNK				*i* PP	**PP**	**07 53 13.6**	**+0.1**
MNK				*i* PPP	PPP	07 54 10.4	
MNK				*i* S	**S**	**07 58 35.2**	**-0.4**
MNK				*i* SS	**SS**	**08 02 11.1**	**+0.4**
MNK				*i* SSS	SSS	08 03 43.6	
MNK				*i* LR	LR	08 13 01.8	
MNK				*i* LRM	MLR	08 14 56.6	
	comp=N,342nm,18.1s						
MNK				*i* LRM	MLR	08 15 06.5	
	comp=Z,282nm,17.5s						
MNK				*i* LRM	MLR	08 15 07.2	
	comp=E,403nm,20.0s						
SPITS	**Spitsbergen Ar**	**51.32**	**13**	LR	LR	08 07 38.5	
	comp=E,106nm,19.1s,baz=204,slow=30						
OZNA	**Ozona**	**51.55**	**285**		**P**	**07 51 18.8**	**-0.5**
CMIG	**Matias Romero**	**51.89**	**266**	LR	LR	08 10 23.5	
	comp=E,234nm,21.8s,baz=54,slow=33						
AKASG	**Malin Array Be**	**52.48**	**48**	P	**P**	**07 51 25.4**	**-0.4**
	comp=E,2.2nm,0.6s,baz=277,slow=6.7,SNR=16						
AKASG				LR	LR	08 11 48.2	
	comp=E,300nm,18.0s,baz=290,slow=34						
	comp=E,2.2nm,0.6s						
AKASG	**Malin Array Be**	**52.48**	**48**	IAmb	IAmb	07 51 33.1	
	comp=Z,3.9nm,1.1s						
SIV	**San Ignacio**	**52.68**	**206**	LR	LR	08 12 38.9	
	comp=Z,95nm,19.4s,baz=70,slow=35						
MNHN	**Monahans**	**52.73**	**287**	P	**P**	**07 51 26.4**	**-1.7**
EGMT	**Eagleton**	**53.66**	**308**	IAmb	IAmb	07 51 45.4	
	comp=Z,9.9nm,1.1s						
GDL2	**Guadalupe Moun**	**53.74**	**288**		**P**	**07 51 36.7**	**+1.1**
TXAR	**Lajitas Array**	**54.16**	**285**	P	**P**	**07 51 38.1**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=92,slow=7.4,SNR=10						
TXAR				LR	LR	08 13 12.8	
	comp=Z,537nm,20.0s,baz=52,slow=34						
	comp=Z,0.8nm,0.8s						
LVZ	**Lovozero**	**54.16**	**27**	P	**P**	**07 51 35.9**	**-2.2**
ATAH	**Atahualpa**	**54.17**	**230**	LR	LR	08 15 16.3	
	comp=Z,79nm,19.0s,baz=29,slow=37						
YNE	**Yellowstone No**	**54.45**	**305**	IAmb	IAmb	07 51 52.0	
	comp=Z,6.6nm,1.0s						
ANMO	**Albuquerque**	**54.52**	**292**	LR	LR	08 12 42.4	
	comp=Z,547nm,21.1s,baz=69,slow=34						
ANMO	**Albuquerque**	**54.52**	**292**	P	**P**	**07 51 42.3**	**+1.0**
YKA	**Yellowknife Ar**	**54.58**	**327**	P	**P**	**07 51 39.9**	**-1.2**
	comp=Z,0.4nm,0.9s,baz=84,slow=6.4,SNR=5.1						
YKA				PcP	**PcP**	**07 52 43.0**	**-1.1**
	comp=Z,0.4nm,0.9s,baz=83,slow=4.0,SNR=4.9						
YKA				LR	LR	08 13 43.3	
	comp=Z,430nm,21.4s,baz=96,slow=35						
	comp=Z,0.4nm,0.9s						
BW06	**Boulder Array**	**54.66**	**302**	IAmb	IAmb	07 51 52.5	
	comp=Z,9.1nm,1.2s						
PD31	**Pinedale Array**	**54.66**	**302**		**P**	**07 51 41.2**	**-1.1**
PD31				IAmb	IAmb	07 51 52.5	
	comp=Z,9.2nm,1.2s						
PDAR	**Pinedale Array**	**54.66**	**302**	P	**P**	**07 51 41.4**	**-0.9**
	comp=Z,1.7nm,0.9s,baz=80,slow=9.2,SNR=12						
PDAR				LR	LR	08 14 14.0	
	comp=Z,180nm,18.9s,baz=84,slow=35						
	comp=Z,1.7nm,0.9s						
PDAR	**Pinedale Array**	**54.66**	**302**		**P**	**07 51 41.3**	**-1.1**
FLWY	**Flagg Ranch**	**55.15**	**304**	IAmb	IAmb	07 51 52.2	
	comp=Z,12nm,1.4s						
RDMU	**Red Mountain**	**55.24**	**299**	IAmb	IAmb	07 51 52.7	
	comp=Z,13nm,1.5s						
LPAZ	**La Paz**	**55.91**	**214**	P	**P**	**07 51 52.1**	**+0.2**
	comp=Z,3.1nm,0.9s,baz=3.9,slow=8.5,SNR=9.9						
LPAZ				LR	LR	08 14 10.2	
	comp=Z,231nm,20.2s,baz=31,slow=34						
	comp=Z,3.1nm,0.9s						
LPAZ	**La Paz**	**55.91**	**214**		**P**	**07 51 52.0**	**+0.2**
OBN	**Obninsk**	**56.18**	**42**	LR	LR	08 14 25.9	
	comp=Z,343nm,19.0s,baz=252,slow=34						
TRCB	**Terra Rica**	**56.68**	**194**	P	**P**	**07 51 56.8**	**+0.2**
TRCB				IAmb	IAmb	07 52 08.8	
	comp=Z,8.8nm,0.8s						
DUG	**Dugway, Tooele**	**57.72**	**300**	IAmb	IAmb	07 52 11.1	
	comp=Z,7.4nm,1.4s						
BRTR	**Keskin Array B**	**58.01**	**61**	P	**P**	**07 52 06.5**	**+0.4**
	comp=Z,2.1nm,0.9s,baz=284,slow=5.0,SNR=6.9						
BRTR				LR	LR	08 16 35.6	
	comp=Z,62nm,18.7s,baz=291,slow=36						
	comp=Z,2.1nm,0.9s						
NEW	**Newport**	**58.41**	**310**	P	**P**	**07 52 08.2**	**-0.6**
	comp=Z,2.5nm,0.9s,baz=78,slow=10,SNR=4.9						
NEW				LR	LR	08 15 47.0	
	comp=Z,501nm,22.0s,baz=67,slow=35						
	comp=Z,2.5nm,0.9s						
NEW	**Newport**	**58.41**	**310**	P	**P**	**07 52 08.1**	**-0.6**
NEW				IAmb	IAmb	07 52 15.1	
	comp=Z,12nm,1.4s						
PLID	**Pearl Lake**	**58.53**	**306**	IAmb	IAmb	07 52 16.9	
	comp=Z,8.1nm,1.4s						
CCUT	**Cedar City**	**58.97**	**297**	IAmb	IAmb	07 52 26.7	
	comp=Z,5.3nm,1.3s						
J08A	**Circle Bar Ran**	**60.75**	**305**	P	**P**	**07 52 24.2**	**-0.8**
WVOR	**Wild Horse Val**	**61.17**	**304**	IAmb	IAmb	07 52 38.9	
	comp=Z,10nm,1.4s						
CPUP	**Villa Florida**	**61.18**	**198**	LR	LR	08 16 12.9	
	comp=Z,47nm,20.6s,baz=33,slow=33						
INK	**Inuvik**	**61.32**	**335**	LR	LR	08 16 41.4	
	comp=Z,336nm,21.6s,baz=59,slow=34						
INK	**Inuvik**	**61.32**	**335**		**P**	**07 52 28.9**	**+0.6**
MMAI	**Mount Meron Ar**	**61.67**	**67**	LR	LR	08 18 13.6	
	comp=Z,50nm,20.5s,baz=274,slow=35						
LPIG	**La Paz**	**61.68**	**282**	LR	LR	08 18 56.8	
	comp=Z,184nm,18.9s,baz=33,slow=36						
KIRV	**Kirov**	**62.19**	**36**	LR	LR	08 18 07.3	
	comp=Z,260nm,18.1s,baz=296,slow=35						
NVAR	**Mina Array Bea**	**62.32**	**300**	P	**P**	**07 52 35.0**	**-0.8**
	comp=Z,0.7nm,0.9s,baz=53,slow=9.0,SNR=3.8						
NVAR				LR	LR	08 18 44.5	
	comp=Z,594nm,19.7s,baz=78,slow=35						
	comp=Z,0.7nm,0.9s						
F30M	**Barrier River**	**62.34**	**335**		**P**	**07 52 36.1**	**+0.9**
EIL	**Elat**	**62.62**	**71**	LR	LR	08 21 00.3	
	comp=Z,49nm,18.3s,baz=248,slow=37						
PFO	**Pinyon Flats O**	**62.74**	**294**	LR	LR	08 18 37.0	
	comp=Z,394nm,19.7s,baz=56,slow=35						
DLBC	**Dease Lake**	**62.85**	**324**	LR	LR	08 19 27.8	
	comp=Z,776nm,20.1s,baz=62,slow=36						
BELG	**Belogornoye**	**63.22**	**43**	LR	LR	08 18 11.1	
	comp=Z,440nm,19.9s,baz=281,slow=34						
KBZ	**Khabaz**	**63.23**	**54**	P	**P**	**07 52 43.1**	**+1.7**
	comp=Z,1.6nm,0.8s,baz=294,slow=8.2,SNR=3.5						
KBZ				LR	LR	08 21 27.7	
	comp=Z,76nm,18.6s,baz=328,slow=37						
	comp=Z,1.6nm,0.8s						
D27M	**Malcolm River**	**63.55**	**337**	P	**P**	**07 52 44.0**	**+0.7**
D27M				IAmb	IAmb	07 52 51.4	
	comp=Z,7.5nm,1.1s						
BBB	**Bella Bella**	**63.93**	**317**	LR	LR	08 20 49.0	
	comp=Z,293nm,19.1s,baz=69,slow=36						
YBH	**Yreka Blue Hor**	**64.25**	**304**	LR	LR	08 20 05.6	
	comp=Z,10nm,21.7s,baz=82,slow=36						
C27K	**Jago River**	**64.28**	**338**	IAmb	IAmb	07 52 58.6	
	comp=Z,6.0nm,1.2s						
E25K	**Arctic Village**	**65.55**	**337**	IAmb	IAmb	07 53 04.5	
	comp=Z,5.8nm,1.2s						
GNI	**Garni**	**65.85**	**57**	LR	LR	08 21 08.6	
	comp=Z,59nm,20.3s,baz=303,slow=36						
C23K	**Itkillik River**	**66.31**	**339**	IAmb	IAmb	07 53 17.0	
	comp=Z,7.4nm,1.1s						
E24K	**Your Creek**	**66.53**	**337**	IAmb	IAmb	07 53 19.2	
	comp=Z,7.6nm,1.3s						
ARTI	**Arti**	**67.50**	**37**	LR	LR	08 21 57.8	
	comp=Z,304nm,18.4s,baz=314,slow=35						
ILAR	**Eielson Array**	**67.61**	**334**	LR	LR	08 22 27.4	
	comp=Z,178nm,18.4s,baz=62,slow=36						
CO01	**Juntas del Tor**	**68.79**	**208**		**P**	**07 53 18.4**	**+0.8**
AKTO	**Aktyubinsk**	**69.96**	**42**	LR	LR	08 22 49.0	
	comp=Z,324nm,19.6s,baz=264,slow=35						
KDAK	**Kodiak Island**	**73.73**	**329**	LR	LR	08 27 24.5	
	comp=Z,242nm,18.0s,baz=66,slow=37						
MBAR	**Mbarara**	**73.95**	**101**	LR	LR	08 25 28.9	
	comp=Z,273nm,19.8s,baz=282,slow=35						
BVAR	**Bovoye Array**	**75.20**	**36**	P	**P**	**07 53 54.7**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=306,slow=5.1,SNR=5.7						
BVAR				LR	LR	08 24 05.4	
	comp=Z,176nm,20.6s,baz=300,slow=33						
	comp=Z,0.8nm,0.7s						
TSUM	**Tsumeb**	**75.30**	**125**	LR	LR	08 21 34.5	
	comp=Z,172nm,21.3s,baz=333,slow=31						
FURI	**Furi**	**75.48**	**89**	LR	LR	08 27 46.7	
	comp=Z,192nm,18.4s,baz=268,slow=36						
ATD	**Arta Tunnel**	**77.62**	**84**	LR	LR	08 28 32.2	
	comp=Z,11nm,18.2s,baz=334,slow=36						
PLCA	**Paso Flores**	**78.55**	**203**	P	**P**	**07 54 13.9**	**-0.6**
	comp=Z,2.1nm,1.0s,baz=21,slow=8.6,SNR=4.3						
PLCA				LR	LR	08 28 22.7	
	comp=Z,80nm,19.4s,baz=350,slow=35						
	comp=Z,2.1nm,1.0s						
KMBO	**Kilima Mbogo**	**79.65**	**98**	LR	LR	08 29 35.0	
	comp=Z,217nm,19.1s,baz=297,slow=36						
LSZ	**Lusaka**	**80.52**	**115**	LR	LR	08 28 26.3	
	comp=Z,154nm,20.3s,baz=313,slow=34						
KURK	**Kurchatov**	**80.64**	**35**	P	**P**	**07 54 25.3**	**-0.5**
KURK	**Kurchatov**	**80.64**	**35**	IAmb	IAmb	07 54 28.1	
	comp=Z,2.8nm,1.1s						
KURBB	**Kurchatov Arra**	**80.66**	**35**	P	**P**	**07 54 25.3**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=309,slow=6.0,SNR=7.5						
	comp=Z,1.1nm,0.8s						
UOSS	**Minazif**	**81.50**	**66**		**P**	**07 54 30.9**	**-0.1**
AAK	**Ala-Archa**	**83.70**	**43**	LR	LR	08 32 05.4	
	comp=Z,198nm,18.9s,baz=309,slow=36						
LBTB	**Lobatse**	**84.69**	**124**	LR	LR	08 26 36.7	
	comp=Z,197nm,20.2s,baz=320,slow=31						
MKAR	**Makanchi Array**	**85.08**	**36**	P	**P**	**07 54 49.5**	**+0.5**
	comp=Z,0.7nm,0.9s,baz=317,slow=5.1,SNR=5.2						
MKAR				LR	LR	08 32 25.7	
	comp=Z,286nm,18.2s,baz=298,slow=35						
	comp=Z,0.7nm,0.9s						
SUR	**Sutherland**	**86.38**	**132**	LR	LR	08 26 53.0	
	comp=Z,78nm,20.3s,baz=337,slow=31						
BOSA	**Boshof**	**86.77**	**127**	LR	LR	08 28 28.5	
	comp=Z,160nm,20.6s,baz=14,slow=32						
TLY	**Talaya**	**89.90**	**22**	LR	LR	08 34 42.8	
	comp=Z,56nm,19.8s,baz=339,slow=35						
PETK	**Petropavlovsk-**	**93.09**	**350**	LR	LR	08 35 44.7	
	comp=Z,60nm,21.6s,baz=40,slow=35						
SONM	**Songino Array**	**94.13**	**22**	LR	LR	08 35 57.4	
	comp=Z,46nm,22.0s,baz=344,slow=34						

AFAD ***18*** *07:44:50.3, 37.°06N×30.°52E, h7km±2km, ML1.6*

ISK 18 07:44:49.9, 37.°20N×30.°66E, h4km, ML1.9/9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BCK	**Bucak**	**0.26**	**348**	Pg	Pg	07 44 55.6	+0.6
BCK				Sg	Sg	07 45 00.2	+1.7
ANTB	**Antalya**	**0.30**	**181**	Pg	Pg	07 44 56.7	+1.0
KORT	**Korkueli**	**0.32**	**231**	Pg	Pg	07 44 56.0	-0.1
KORT				Sg	Sg	07 45 01.9	+1.6
ISP	**Isparta**	**0.63**	**350**	Pg	Pb	07 45 02.9	-0.6
BRDR	**BURDUR-Merkez**	**0.68**	**316**	S	Sb	07 45 15.5	+1.2
ELL	**Elmali**	**0.75**	**233**	Pg	Pb	07 45 05.1	-0.6
BAGO	**Egridir - ISPA**	**0.79**	**8**	P	Pn	07 45 08.2	+0.2
BAGO				S	Sn	07 45 22.0	+1.7
BAGO				IAML		07 45 24.0	
	comp=E,26nm,0.7s						
BAGO				IAML		07 45 28.0	
	comp=N,22nm,1.5s						
BASM	**Basmaki-Afyon**	**0.86**	**326**	Pg	Pb	07 45 07.2	-0.3
GOLH	**Golhisar**	**0.88**	**272**	P	Pg	07 45 07.5	-1.0
GOLH				S	Sn	07 45 22.0	-0.4
GOLH				IAML		07 45 24.0	
	comp=E,22nm,0.5s						
GOLH				IAML		07 45 34.0	
	comp=N,38nm,1.3s						
GOLH	**Golhisar**	**0.88**	**272**	P	Pg	07 45 05.7	-1.0
GOLH				S	Sn	07 45 21.2	-1.2
GOLH				IAML		07 45 34.0	
	comp=N,38nm,1.3s						
GOLH				IAML		07 45 39.0	
	comp=E,31nm,2.6s						
SEDI	**Konya, Seydise**	**0.91**	**74**	P	Pg	07 45 06.5	-0.8
SEDI				S	Sn	07 45 26.1	+2.8
KNIK	**Mula-Seydike**	**0.94**	**248**	P	Pg	07 45 05.7	-2.2
KNIK				IAML		07 45 17.0	
	comp=E,23nm,1.4s						
KNIK				S	Sn	07 45 22.9	-1.1
KNIK				IAML		07 45 27.0	
	comp=N,23nm,0.9s						
KNIK	**Mula-Seydike**	**0.94**	**248**	P	Pg	07 45 06.5	-1.4
KNIK				S	Sn	07 45 23.7	-0.3
KNIK				IAML		07 45 27.0	
	comp=N,23nm,0.9s						
SEYD	**Seydisehir-KON**	**0.96**	**78**	Pg	Pb	07 45 09.1	-0.1
APMY	**Acipayam-Deniz**	**1.11**	**284**	Pn	Pn	07 45 12.2	-0.2
AKAS	**Kas**	**1.29**	**221**	Pn	Pn	07 45 15.3	+0.5
TAVA	**DENIZLI_Tavas**	**1.42**	**281**	P	Pn	07 45 15.5	-1.0
TAVA				S	Sn	07 45 35.9	+0.2
TAVA				IAML		07 45 39.0	
	comp=E,19nm,2.0s						

JMA ***18*** *07:54:10.6±0.1, 37.°8N±0.°2×141.°7E±0.°5, h55km, MV3.8/38, SE OFF MIYAGI PREF*

IDC ***18*** *07:54:10.3±3.8, 37.°80N×141.°83E, h59km±36km, mb3.3/6, mbtmp3.6/8, ML2.9/2, Error ellipse: s-maj=39.4km s-min=21.1km az=103.0*

ISC 18 07:54:09.1±1.4, 37.°79N±0.°04×141.°87E±0.°09, h47km±14km, n28, σ1.°01/36, mb3.5/6, 20D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**0.61**	**328**	⇓P	**Pn**	**07 54 22.3**	**+0.7**
JIKH				⇓S	**Sn**	**07 54 30.7**	**+0.2**
JIO	**Ouri**	**0.78**	**328**	⇓P	**Pn**	**07 54 24.3**	**+0.5**
JIO				⇓S	**Sn**	**07 54 33.9**	**-0.6**
JMST	**Minamisoumatoc**	**0.79**	**265**	⇓*i*P	**Pn**	**07 54 24.1**	**+0.2**
JMST				⇓S	**Sn**	**07 54 33.8**	**-0.7**
JMM	**Marumori**	**0.86**	**275**	⇓*i*P	**Pn**	**07 54 24.9**	**0.0**
JMM				⇓S	**Sn**	**07 54 35.4**	**-1.0**
JFK	**Kawauchi**	**0.90**	**242**	*i* P	**Pn**	**07 54 25.9**	**+0.5**
JFK				S	**Sn**	**07 54 37.0**	**-0.4**
JOU	**Okura**	**1.11**	**301**	⇓*i*P	**Pn**	**07 54 28.2**	**-0.1**
JOU				⇓S	**Sn**	**07 54 41.6**	**-0.9**
JOTO	**OTAMA OYAMA**	**1.24**	**260**	*i* P	**Pn**	**07 54 30.7**	**+0.5**
JOTO				S

KURK ⇑Sn **Sb** **08 00 39.4 -0.9**
6.1nm,0.3s
SEM **Semipalatinsk** **2.37 44** *e*P **Pg** **08 00 22.4 +1.8**
9.1nm,0.3s
SEM *e*S **Sg** **08 00 53.8 +2.6**
20nm,0.3s
MAKZ **Makanchi** **3.46 122** ⇓Pg **Pn** **08 00 29.5 -0.9**
2.3nm,0.8s
MAKZ ⇓Lg Lg 08 01 16.1
5.1nm,0.7s
MK31 **Makanchi Array** **3.65 120** Pg **Pn** **08 00 30.1 -2.9**
0.7nm,0.5s,baz=306,slow=10,SNR=29
MK31 Lg Lg 08 01 20.7
2.8nm,0.4s,baz=301,slow=25,SNR=17
ARXS **Arharly** **4.51 179** *e*P **Pb** **08 00 55.6 +0.3**
2.5nm,0.2s
ARXS *e*S **Sb** **08 01 50.4 +0.1**
22nm,0.6s
DJR **Jarkent** **4.62 161** *e*P **Pb** **08 00 57.8 +0.5**
1.7nm,0.3s
DJR *e*S **Sb** **08 01 54.1 +0.6**
5.4nm,0.6s
ZSN **Zaisan** **4.97 102** *e*P **Pb** **08 01 02.4 -0.7**
3.2nm,0.2s
ZSN *e*S **Sb** **08 02 02.7 -0.6**
4.4nm,0.3s

IDC ***18*** *08:26:34.0±2.7, 16°.39S×174°.15W, h78km±24km, mb4.0/14, mbtmp4.4/17, MS3.5/8, Error ellipse: s-maj=20.2km s-min=12.6km az=135.0*

NEIC ***18*** *08:26:33.5±1.6, 16°.44S±0°.05×174°.08W±0°.09, h68km±5km, mb4.8/115, Error ellipse: s-maj=13.2km s-min=6.7km az=81.0*

NOU ***18*** *08:26:41.0, 17°.03S×173°.79W, h97km, mb4.8/17, Tonga Islands*

ANF ***18*** *08:27:11.7±0.3, 14°.59S×173°.88W, h356km±2km, Mb4.5/64, Error ellipse: s-maj=9.2km s-min=5.3km az=88.0*

ISC 18 08:26:37.0±0.4, 16°.51S±0°.06×173°.90W±0°.06, h111km, n386, σ0.91/341, mb4.7/70, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.30**	**39**	P	**Pn**	**08 27 23.9**	**-3.2**
	293nm,0.3s,baz=188,slow=0.8,SNR=159						
AFI				S	Sn	08 27 57.6	-8.2
	1μm,0.3s,baz=37,slow=21,SNR=21						
NIUE	**Niue**	**4.57**	**125**	P	**Pn**	**08 27 43.2**	**-0.8**
NIUE	**Niue**	**4.57**	**125**	S	**Sn**	**08 28 31.5**	**-4.7**
NIUE	**Niue**	**4.57**	**125**		**Pn**	**08 27 43.3**	**-0.8**
NIUE	**Niue**	**4.57**	**125**	P	**Pn**	**08 27 43.3**	**-0.8**
NIUE				S	**Sn**	**08 28 31.8**	**-4.4**
TAVE	**Taveuni**	**5.76**	**267**	P	Pn	08 28 05.2	+5.0
MSVF	**Nonsavu**	**7.79**	**260**	P	Pn	08 28 31.6	+3.8
	31nm,0.8s,baz=97,slow=11,SNR=12						
RAR	**Rarotonga**	**14.17**	**111**	P	**Pn**	**08 29 54.7**	**+2.0**
	19nm,0.6s,baz=258,slow=11,SNR=6.2						
RAR				S	Sn	08 32 22.1	-6.9
	9.9nm,0.4s,baz=68,slow=11,SNR=2.5						
RAR				LR	LR	08 34 39.2	
	comp=Z,94nm,18.3s,baz=310,slow=34						
RAR	**Rarotonga**	**14.17**	**111**	P	**Pn**	**08 29 53.4**	**+0.7**
MARNC	**Mare, Loyalty**	**17.78**	**251**	P	**Pn**	**08 30 41.4**	**+3.8**
MARNC	**Mare, Loyalty**	**17.78**	**251**		**P**	**08 30 32.5**	**-4.3**
DZM	**Mont Dzumac**	**19.35**	**250**	P	**P**	**08 30 51.8**	**-2.3**
	7.0nm,0.8s,baz=140,slow=18,SNR=2.1						
OUZ	**Omahuta**	**21.73**	**209**	P	**P**	**08 31 20.3**	**+0.9**
OUZ	**Omahuta**	**21.73**	**209**	S	**S**	**08 35 12.4**	**-0.8**
OUZ	**Omahuta**	**21.73**	**209**	P	**P**	**08 31 18.4**	**-0.9**
WCZ	**Waipu Caves**	**22.00**	**206**	P	**P**	**08 31 22.7**	**+0.5**
HAZ	**Te Kaha**	**22.40**	**198**	P	**P**	**08 31 27.3**	**+1.0**
HAZ				S	**S**	**08 35 23.9**	**-0.7**
PUZ	**Puketiti**	**22.56**	**196**	P	**P**	**08 31 29.9**	**+1.9**
RUGZ	**Raukumara Rang**	**22.62**	**198**	P	**P**	**08 31 30.1**	**+1.3**
RUGZ				S	**S**	**08 35 28.0**	**-0.5**
MKAZ	**Moumakai**	**22.68**	**203**	P	**P**	**08 31 30.5**	**+1.3**
TWGZ	**Tauwhareparae**	**22.74**	**197**	P	**P**	**08 31 31.0**	**+1.2**
TWGZ				S	**S**	**08 35 31.2**	**+1.1**
CNGZ	**Carnagh Statio**	**22.96**	**196**	P	**P**	**08 31 33.0**	**+1.1**
MWZ	**Matawai**	**23.01**	**197**	P	**P**	**08 31 33.3**	**+0.9**
MWZ				S	**S**	**08 35 35.0**	**+0.5**
URZ	**Urewera**	**23.07**	**198**	P	**P**	**08 31 33.5**	**+0.6**
URZ	**Urewera**	**23.07**	**198**	S	**S**	**08 35 34.9**	**-0.3**
URZ	**Urewera**	**23.07**	**198**	P	**P**	**08 31 32.1**	**-0.8**
URZ				S	**S**	**08 35 35.4**	**+0.2**
RAGZ	**Rawiri**	**23.19**	**198**	P	**P**	**08 31 34.8**	**+0.6**
PPT	**Papeete**	**23.28**	**96**	LR	LR	08 39 34.9	
	comp=Z,61nm,19.4s,baz=38,slow=33						
PPT2	**Papeete2**	**23.28**	**96**	*e*LR	LR	08 36 48.5	
	416nm,31.0s						
PPT2				*e*LR	LR	08 36 57.8	
	267nm,31.8s						
MUGZ	**Murupara**	**23.37**	**199**	P	**P**	**08 31 38.2**	**+2.4**
RTZ	**Ruatahuna**	**23.43**	**198**	P	**P**	**08 31 37.0**	**+0.6**
RTZ	**Ruatahuna**	**23.43**	**198**	P	**P**	**08 31 38.5**	**+2.1**
RAHZ	**Arahi**	**23.68**	**198**	P	**P**	**08 31 39.6**	**+1.0**
MTHZ	**Maungataniwha**	**23.69**	**198**	P	**P**	**08 31 41.9**	**+3.2**
NMHZ	**Naumai**	**23.93**	**198**	P	**P**	**08 31 41.7**	**+0.8**
TBI	**Tubuai**	**23.95**	**110**	*e*LR	LR	08 37 12.1	
	2μm,33.8s						
HIZ	**Hauiti**	**24.04**	**202**	P	**P**	**08 31 43.1**	**+1.3**
HIZ	**Hauiti**	**24.04**	**202**	P	**P**	**08 31 43.0**	**+1.3**
BKZ	**Black Stump Fm**	**24.09**	**199**	P	**P**	**08 31 43.3**	**+1.0**
BKZ	**Black Stump Fm**	**24.09**	**199**	P	**P**	**08 31 41.6**	**-0.6**
BKZ				IAmb	IAmb	08 31 43.4	
	comp=Z,82nm,1.9s						
BKZ	**Black Stump Fm**	**24.09**	**199**	P	**P**	**08 31 41.8**	**-0.4**
TMVZ	**Te Maari**	**24.29**	**200**	P	**P**	**08 31 44.0**	**-0.2**
ETVZ	**East Tongariro**	**24.31**	**200**	P	**P**	**08 31 43.9**	**-0.5**
KWHZ	**Kaweka Forest**	**24.34**	**198**	P	**P**	**08 31 44.4**	**-0.2**
KRHZ	**Kereru**	**24.56**	**198**	P	**P**	**08 31 48.0**	**+1.4**
PNHZ	**Pukenui**	**24.86**	**198**	P	**P**	**08 31 49.5**	**+0.2**
ANWZ	**Angora Road**	**25.29**	**197**	P	**P**	**08 31 53.9**	**+0.8**
BFZ	**Birch Farm**	**25.56**	**198**	P	**P**	**08 31 56.5**	**+1.0**
BFZ	**Birch Farm**	**25.56**	**198**	P	**P**	**08 31 55.0**	**-0.5**
BFZ				IAmb	IAmb	08 32 24.2	
	comp=Z,78nm,1.4s						
BFZ	**Birch Farm**	**25.56**	**198**	P	**P**	**08 31 55.6**	**+0.1**
MRZ	**Mangatainoka R**	**25.74**	**199**	P	**P**	**08 31 56.4**	**-0.8**
HNR	**Honiara**	**26.41**	**282**	LR	LR	08 40 57.3	
	comp=Z,7.0nm,20.2s,baz=198,slow=33						
SNZO	**South Karori**	**26.60**	**199**	P	**P**	**08 32 06.4**	**+1.5**
QRZ	**Quartz Range**	**26.93**	**203**	P	**P**	**08 32 09.3**	**+1.4**
QRZ	**Quartz Range**	**26.93**	**203**	P	**P**	**08 32 08.7**	**+0.9**
KHZ	**Kahutara**	**27.97**	**200**	P	**P**	**08 32 18.4**	**+1.3**
GVZ	**Greta Valley S**	**28.63**	**200**	P	**P**	**08 32 22.9**	**-0.2**
OXZ	**Oxford**	**29.29**	**201**	P	**P**	**08 32 28.5**	**-0.4**
OXZ				IAmb	IAmb	08 32 59.4	
	comp=Z,44nm,1.4s						
JCZ	**Jackson Bay**	**31.14**	**204**	P	**P**	**08 32 46.7**	**+1.4**
WHZ	**Wether Hill Ro**	**32.99**	**204**	P	**P**	**08 33 01.8**	**+0.4**
EIDS	**Eidsvold**	**33.79**	**249**	P	**P**	**08 33 07.1**	**-1.4**
ARMA	**Armidale**	**34.37**	**240**	P	**P**	**08 33 13.4**	**-0.3**
ARMA				IAmb	IAmb	08 33 41.8	
	comp=Z,36nm,1.6s						
CAN	**Canberra**	**37.98**	**233**	P	**P**	**08 33 43.0**	**-1.3**
CMSA	**Cobar Meteorol**	**39.58**	**240**	P	**P**	**08 34 01.7**	**+4.1**
TOO	**Toolangi**	**41.40**	**231**	P	**P**	**08 34 11.5**	**-1.0**
COEN	**Coen**	**41.44**	**267**	P	**P**	**08 34 11.5**	**-1.7**
COEN				IAmb	IAmb	08 35 45.3	
	comp=Z,14nm,1.1s						
STKA	**Stephens Creek**	**43.07**	**241**	P	**P**	**08 34 25.3**	**-0.9**
	comp=Z,4.3nm,0.5s,baz=77,slow=9.4,SNR=31						
	comp=Z,4.3nm,0.5s						
STKA	**Stephens Creek**	**43.07**	**241**		**P**	**08 34 25.5**	**-0.6**
BBOO	**Buckleboo**	**47.84**	**241**		**P**	**08 35 02.6**	**-1.2**
BBOO				IAmb	IAmb	08 35 34.8	
	comp=Z,12nm,0.9s						
WR8	**Warramunga Arr**	**48.98**	**258**	P	**P**	**08 35 11.7**	**-1.0**
WR8				IAmb	IAmb	08 36 14.3	
	comp=Z,12nm,1.4s						
WB0	**Warramunga Arr**	**49.09**	**258**	P	**P**	**08 35 12.2**	**-1.4**
WB0				IAmb	IAmb	08 35 25.4	
	comp=Z,12nm,1.6s						
WRAB	**Tennant Creek**	**49.12**	**258**	P	**P**	**08 35 13.2**	**-0.6**
WRA	**Warramunga Arr**	**49.13**	**258**	P	**P**	**08 35 12.1**	**-1.8**
	comp=Z,1.1nm,0.4s,baz=92,slow=7.4,SNR=49						
	comp=Z,1.1nm,0.4s						
AS31	**Alice Springs**	**49.31**	**253**		**P**	**08 35 14.0**	**-1.3**
ASAR	**Alice Springs**	**49.31**	**253**	P	**P**	**08 35 13.6**	**-1.7**
	comp=Z,7.0nm,0.6s,baz=92,slow=7.3,SNR=93						
	comp=Z,7.0nm,0.6s						
ASAR	**Alice Springs**	**49.31**	**253**		**P**	**08 35 13.3**	**-2.0**
FORT	**Forrest**	**54.49**	**244**	P	**P**	**08 35 52.2**	**-1.3**
FORT				IAmb	IAmb	08 36 52.0	
	comp=Z,19nm,1.2s						
KNRA	**Kununurra**	**54.93**	**262**	P	**P**	**08 35 55.8**	**-1.0**
KNRA				IAmb	IAmb	08 36 49.4	
	comp=Z,12nm,1.3s						
DRV	**Dumont d'Urvil**	**58.40**	**200**	P	**P**	**08 36 19.1**	**-1.4**
DRV				x	x	08 36 36.5	
RPN	**Rapa Nui**	**60.32**	**112**	LR	LR	08 54 18.7	
	comp=Z,13nm,21.1s,baz=332,slow=28						
SOEI	**Soe**	**60.40**	**268**	P	**P**	**08 36 36.3**	**+1.0**
VNDA	**Vanda**	**62.23**	**186**	P	**P**	**08 36 48.6**	**+2.1**
	comp=Z,7.3nm,1.1s,baz=11,slow=7.0,SNR=6.5						
	comp=Z,7.3nm,1.1s						
VNDA	**Vanda**	**62.23**	**186**		**P**	**08 36 46.5**	**0.0**
VNDA				IAmb	IAmb	08 36 49.7	
	comp=Z,16nm,1.2s						
PSA00	**Pilbara Seismi**	**62.43**	**254**	P	**P**	**08 36 47.1**	**-1.7**
MBWA	**Marble Bar**	**62.59**	**254**	P	**P**	**08 36 49.2**	**-0.7**
GIRL	**Giralia**	**67.42**	**252**	P	**P**	**08 37 21.5**	**+0.4**
UNV	**Unalaska Valle**	**70.35**	**5**	P	**P**	**08 37 38.2**	**-0.2**
UNV	**Unalaska Valle**	**70.35**	**5**	P	**P**	**08 37 37.6**	**-0.9**
	baz=188						
JMN	**Monobe**	**70.50**	**316**	P	**P**		
JMN				IAmb	IAmb	08 39 17.1	
	comp=Z,27nm,1.2s						
FALS	**False Pass**	**71.64**	**6**	P	**P**	**08 37 45.7**	**-0.5**
	baz=191						
CHNA	**Chernabura Isl**	**72.09**	**9**	P	**P**	**08 37 48.2**	**-0.7**
	baz=195						
SDPT	**Sand Point**	**72.47**	**8**	P	**P**	**08 37 51.0**	**-0.2**
	baz=194						
KMRM	**Mail Ridge**	**73.23**	**38**	P	**P**	**08 37 57.9**	**+1.7**
SPIA	**Saint Paul Isl**	**73.47**	**2**	P	**P**	**08 37 56.7**	**-0.3**
	baz=184						
PETK	**Petropavlovsk-**	**73.53**	**343**	P	**P**	**08 37 57.4**	**-0.2**
	comp=Z,3.9nm,0.8s,baz=102,slow=8.2,SNR=9.3						
	comp=Z,3.9nm,0.8s						
QSPA	**South Pole Qui**	**73.54**	**180**	P	**P**	**08 37 59.0**	**+1.2**
	comp=Z,16nm,1.1s,baz=29,slow=2.6,SNR=13						
QSPA				LR	LR	09 06 22.1	
	comp=Z,25nm,20.5s,baz=188,slow=32						
	comp=Z,16nm,1.1s						
QSPA	**South Pole Qui**	**73.54**	**180**	P	**P**	**08 37 58.9**	**+1.2**
QSPA				IAmb	IAmb	08 38 00.3	
	comp=Z,26nm,1.2s						
QSPA	**South Pole Qui**	**73.54**	**180**	P	**P**	**08 37 58.9**	**+1.2**
CHGN	**Chignik**	**73.69**	**9**	P	**P**	**08 37 58.1**	**-0.3**
	baz=196						
O02D	**Mt. Diablo Mer**	**73.74**	**38**	P	**P**	**08 38 01.0**	**+1.8**
O02D				IAmb	IAmb	08 39 45.2	
	comp=Z,34nm,1.7s						
KHBM	**Hayfork Bally**	**73.79**	**38**	P	**P**	**08 38 01.0**	**+1.4**
N02D	**Trinity Center**	**74.29**	**38**	P	**P**	**08 38 04.4**	**+2.0**
N02D				IAmb	IAmb	08 38 24.2	
	comp=Z,25nm,1.6s						
M02C	**Callahan**	**74.47**	**37**	P	**P**	**08 38 04.4**	**+1.0**
M02C				IAmb	IAmb	08 39 22.8	
	comp=Z,37nm,1.8s						
L02F	**Cave Junction**	**74.52**	**36**	P	**P**	**08 38 05.1**	**+1.5**
YBH	**Yreka Blue Hor**	**74.77**	**37**	P	**P**	**08 38 06.6**	**+1.5**
	comp=Z,0.3nm,0.4s,baz=191,slow=6.7,SNR=38						
	comp=Z,0.3nm,0.4s						
YBH	**Yreka Blue Hor**	**74.77**	**37**		**P**	**08 38 07.0**	**+1.9**
YBH				IAmb	IAmb	08 39 19.1	
	comp=Z,44nm,2.0s						
R17L	**Mt. Peulik Vol**	**75.29**	**10**	P	**P**	**08 38 07.4**	**-0.2**
	baz=198						
NVAR	**Mina Array Bea**	**75.47**	**42**	P	**P**	**08 38 10.3**	**+0.9**
	comp=Z,1.2nm,0.9s,baz=227,slow=8.5,SNR=7.9						
	comp=Z,1.2nm,0.9s						
Q17K	**Contact Creek**	**75.97**	**10**	P	**P**	**08 38 11.4**	**-0.2**
	baz=198						
J04A	**Umpqua Nationa**	**76.07**	**36**		**P**	**08 38 13.2**	**+0.5**
KDAK	**Kodiak Island**	**76.10**	**12**	P	**P**	**08 38 12.7**	**+0.6**
	comp=Z,12nm,1.0s,baz=178,slow=2.4,SNR=5.1						
KDAK				LR	LR	09 07 05.1	
	comp=Z,56nm,18.8s,baz=87,slow=32						
	comp=Z,12nm,1.0s						
Q16K	**King Salmon**	**76.24**	**9**	P	**P**	**08 38 12.7**	**-0.3**
	baz=197						
O15K	**Ungalikthiuk R**	**76.29**	**7**	P	**P**	**08 38 13.1**	**-0.1**
	baz=194						
P16K	**Nushagak River**	**76.39**	**8**	P	**P**	**08 38 13.8**	**0.0**
	baz=196						
Q18K	**Katmai Hardscr**	**76.48**	**10**	P	**P**	**08 38 14.3**	**-0.2**
	baz=199						
P17K	**Kvichak River**	**76.77**	**9**	P	**P**	**08 38 16.0**	**+0.1**
	baz=198						
Q20K	**Shuyak Island**	**76.91**	**11**	P	**P**	**08 38 17.1**	**+0.4**
	baz=202						
O16K	**Kokwok River B**	**76.92**	**8**	P	**P**	**08 38 17.0**	**+0.2**
	baz=196						
Q19K	**Cape Douglas,**	**76.98**	**11**	P	**P**	**08 38 17.6**	**+0.4**
	baz=200						
M13K	**Dall Lake**	**77.12**	**5**	P	**P**	**08 38 17.9**	**0.0**
	baz=190						
P18K	**Big Mountain,**	**77.15**	**10**	P	**P**	**08 38 18.1**	**0.0**
	baz=199						
N15K	**Kwethluk River**	**77.22**	**7**	P	**P**	**08 38 18.5**	**0.0**
	baz=194						
O17K	**Koliganek Bris**	**77.23**	**9**	P	**P**	**08 38 18.7**	**+0.2**
	baz=197						
M14K	**Bethel**	**77.59**	**6**	P	**P**	**08 38 20.8**	**+0.3**
	baz=192						
O18K	**Koktuh Hills**	**77.59**	**10**	P	**P**	**08 38 20.7**	**+0.1**
	baz=199						
M15K	**Kasigluk River**	**77.67**	**7**	P	**P**	**08 38 21.1**	**+0.2**
	baz=193						
N16K	**Nishlik Lake**	**77.68**	**8**	P	**P**	**08 38 21.4**	**+0.3**
	baz=195						
P19K	**Oil Pt**	**77.73**	**11**	P	**P**	**08 38 21.3**	**-0.1**
	baz=201						
N17K	**Nushagak Hills**	**77.94**	**8**	P	**P**	**08 38 21.6**	**-0.9**
	baz=197						
O19K	**Port Alsworth**	**78.06**	**10**	P	**P**	**08 38 22.5**	**-0.6**
	baz=200						
L14K	**Kuka Creek**	**78.10**	**6**	P	**P**	**08 38 22.9**	**-0.4**
	baz=191						
M16K	**Timber Creek**	**78.19**	**7**	P	**P**	**08 38 23.4**	**-0.4**
	baz=195						
N18K	**Kilae Creek**	**78.28**	**9**	P	**P**	**08 38 23.9**	**-0.5**
	baz=198						
BRSE	**Bradley Lake S**	**78.28**	**12**	P	**P**	**08 38 23.6**	**-0.7**
	baz=203						
K13K	**Kusiwak Mount**	**78.52**	**4**	P	**P**	**08 38 25.1**	**-0.6**
	baz=189						
L15K	**Ungalak Mounta**	**78.55**	**6**	P	**P**	**08 38 25.2**	**-0.6**
	baz=192						
N19K	**Bonanza Creek**	**78.62**	**10**	P	**P**	**08 38 25.3**	**-1.1**
	baz=199						
M17K	**Holitna River**	**78.75**	**8**	P	**P**	**08 38 26.4**	**-0.5**
	baz=196						
L16K	**Owhat River**	**78.80**	**7**	IAmb	IAmb	08 38 28.8	
	comp=Z,20nm,1.5s						
L16K	**Owhat River**	**78.80**	**7**	P	**P**	**08 38 27.0**	**-0.2**
	baz=194						
M18K	**Stony River**	**79.06**	**9**	P	**P**	**08 38 27.9**	**-0.8**
	baz=198						
K15K	**Wolf Creek Mou**	**79.15**	**6**	P	**P**	**08 38 28.7**	**-0.4**
	baz=192						
CAPN	**Captain Cook N**	**79.15**	**11**	P	**P**	**08 38 28.5**	**-0.6**
	baz=202						
O22K	**Cooper Landing**	**79.16**	**12**	P	**P**	**08 38 28.4**	**-0.7**
	baz=204						
P23K	**Montague Islan**	**79.20**	**13**	P	**P**	**08 38 29.0**	**-0.4**
	baz=206						
L17K	**Donlin**	**79.35**	**7**	P	**P**	**08 38 29.1**	**-1.0**
	baz=195						
N20K	**Mount Spurr**	**79.36**	**10**	P	**P**	**08 38 29.8**	**-0.6**
	baz=201						
SPCR	**Spurr Chakacha**	**79.36**	**10**	P	**P**	**08 38 30.3**	**0.0**
	baz=201						
J14K	**Nanvaranak Lak**	**79.42**	**5**	P	**P**	**08 38 29.7**	**-0.8**
	baz=190						
CRAG	**Craig**	**79.54**	**22**	P	**P**	**08 38 31.8**	**+0.5**
	baz=220						
L18K	**Granite Mounta**	**79.64**	**8**	IAmb	IAmb	08 38 34.1	
	comp=Z,41nm,1.9s						
L18K	**Granite Mounta**	**79.64**	**8**	P	**P**	**08 38 31.7**	**-0.1**
	baz=197						
M19K	**Big River Lodg**	**79.67**	**9**	P	**P**	**08 38 31.9**	**-0.1**
	baz=199						
RC01	**Rabbit Creek A**	**79.72**	**12**	P	**P**	**08 38 32.1**	**-0.1**
	baz=204						
KAIM	**Kayak Island**	**79.83**	**15**	P	**P**	**08 38 32.8**	**0.0**
	baz=209						
M20K	**Styx River**	**79.85**	**10**	P	**P**	**08 38 32.8**	**-0.2**
	baz=200						
L19K	**White Mountain**	**79.86**	**9**	P	**P**	**08 38 32.7**	**-0.3**
	baz=199						
K17K	**Iditarod**	**79.91**	**7**	P	**P**	**08 38 32.8**	**-0.4**
	baz=195						
V35K	**Ketchikan**	**79.99**	**23**	P	**P**	**08 38 34.1**	**+0.3**
	baz=222						
SIT	**Sitka**	**80.02**	**20**	P	**P**	**08 38 34.2**	**+0.4**
	baz=218						
U33K	**Whale Pass**	**80.04**	**22**	P	**P**	**08 38 34.4**	**+0.4**
	baz=220						
GAMB	**Gambell**	**80.04**	**1**	P	**P**	**08 38 33.4**	**-0.4**
	baz=182						
GLI	**Glacier Island**	**80.07**	**13**	P	**P**	**08 38 33.6**	**-0.4**
	baz=206						
EYAK	**Cordova Ski Ar**	**80.07**	**14**	P	**P**	**08 38 33.8**	**-0.3**
	baz=208						
J16K	**Anvik River**	**80.21**	**6**	P	**P**	**08 38 34.8**	**0.0**
	baz=193						
SKT	**Skwentna**	**80.21**	**11**	P	**P**	**08 38 34.7**	**-0.2**
	baz=202						
M22K	**Willow**	**80.26**	**11**	P	**P**	**08 38 35.4**	**+0.3**
	baz=203						
KNK	**Knik Glacier**	**80.27**	**12**	P	**P**	**08 38 35.6**	**+0.4**
	baz=205						
PMR	**Palmer**	**80.30**	**12**	P	**P**	**08 38 35.4**	**+0.2**
	baz=204						
S31K	**Pelican**	**80.45**	**19**	P	**P**	**08 38 36.4**	**+0.2**
	baz=217						
J17K	**VABM Dome**	**80.48**	**7**	P	**P**	**08 38 36.2**	**-0.1**
	baz=195						
F10A	**Beach Ranch, E**	**80.49**	**36**	IAmb	IAmb	08 38 41.5	
	comp=Z,20nm,1.8s						
WRAK	**Wrangell Islan**	**80.55**	**22**	P	**P**	**08 38 36.9**	**+0.1**
	baz=221						
S32K	**Killisnoo**	**80.60**	**20**	P	**P**	**08 38 37.5**	**+0.6**
	baz=219						
SML	**Sawmill**	**80.65**	**12**	P	**P**	**08 38 37.3**	**+0.1**
	baz=205						
BMRM	**Bremner River**	**80.70**	**14**	P	**P**	**08 38 37.9**	**+0.4**
	baz=209						
M23K	**Glacier View**	**80.76**	**12**	P	**P**	**08 38 38.3**	**+0.5**
	baz=206						
CUT	**Chulitna**	**80.83**	**11**	P	**P**	**08 38 38.3**	**+0.2**
	baz=203						
J18K	**Innoko River**	**80.83**	**8**	IAmb	IAmb	08 38 40.2	
	comp=Z,22nm,1.4s						
J18K	**Innoko River**	**80.83**	**8**	P	**P**	**08 38 38.6**	**+0.5**
	baz=197						
L22K	**Petersville**	**80.85**	**11**	IAmb	IAmb	08 38 38.8	
	comp=Z,17nm,1.4s						
KLU	**Klutina**	**80.87**	**13**	P	**P**	**08 38 39.0**	**+0.5**
	baz=208						
CRQE	**Cirque**	**80.87**	**15**	P	**P**	**08 38 38.9**	**+0.3**
	baz=210						
SCM	**Sheep Creek Mo**	**80.88**	**12**	P	**P**	**08 38 38.9**	**+0.4**
	baz=206						
PPLA	**Purkeypile**	**80.96**	**10**	P	**P**	**08 38 38.5**	**-0.4**
	baz=201						
PINM	**Pinnacle**	**81.04**	**16**	P	**P**	**08 38 39.1**	**-0.3**
	baz=213						
ANM	**Nome**	**81.08**	**4**	P	**P**	**08 38 39.2**	**-0.3**
	baz=188						
K20K	**Telida**	**81.10**	**9**	IAmb	IAmb	08 38 41.2	
	comp=Z,18nm,1.5s						
K20K	**Telida**	**81.10**	**9**	P	**P**	**08 38 39.1**	**-0.5**
	baz=200						
R32K	**Eaglecrest**	**81.26**	**20**	P	**P**	**08 38 40.9**	**+0.4**
	baz=219						
N25K	**Chitina, Valde**	**81.27**	**14**	P	**P**	**08 38 40.5**	**-0.1**
	baz=209						
GLB	**Gilahina Butte**	**81.31**	**14**	IAmb	IAmb	08 38 42.8	
	comp=Z,27nm,1.7s						
M24K	**Tolsona, Glenn**	**81.37**	**13**	P	**P**	**08 38 41.0**	**-0.1**
	baz=207						
MCARA	**McCarthy VSAT**	**81.44**	**14**	P	**P**	**08 38 41.5**	**+0.1**
	baz=210						
WAT6	**Susitna Watana**	**81.47**	**12**	P	**P**	**08 38 41.5**	**-0.2**
	baz=206						
J19K	**Poorman**	**81.48**	**8**	P	**P**	**08 38 41.4**	**-0.2**
	baz=198						
CTG	**Chitna Glacier**	**81.50**	**15**	P	**P**	**08 38 41.6**	**-0.3**
	baz=212						
WAT1	**Susitna Watana**	**81.54**	**11**	P	**P**	**08 38 42.0**	**0.0**
	baz=205						
G15K	**Niukluk**	**81.60**	**4**	P	**P**	**08 38 42.2**	**+0.1**
	baz=190						
O28M	**Mount Upton**	**81.63**	**16**	P	**P**	**08 38 42.8**	**0.0**
	baz=213						
TXAR	**Lajitas Array**	**81.63**	**56**	P	**P**	**08 38 44.5**	**+1.3**
	comp=Z,0.5nm,0.8s,baz=216,slow=8.4,SNR=6.9						
	comp=Z,0.5nm,0.8s						
O29M	**Mount Kennedy**	**81.67**	**17**	P	**P**	**08 38 42.8**	**0.0**
	baz=215						
T35M	**Bob Quinn**	**81.74**	**22**	P	**P**	**08 38 43.4**	**+0.3**
	baz=223						
TRF	**Thorofare Moun**	**81.80**	**10**	IAmb	IAmb	08 38 45.4	
	comp=Z,21nm,1.4s						
TRF	**Thorofare Moun**	**81.80**	**10**	P	**P**	**08 38 42.7**	**-0.7**
	baz=203						
HARP	**HAARP**	**81.84**	**13**	P	**P**	**08 38 43.3**	**-0.3**
	baz=208						
CHUM	**Lake Minchumin**	**81.86**	**9**	P	**P**	**08 38 43.4**	**-0.1**
	baz=201						
J20K	**Nowinta River**	**81.86**	**9**	IAmb	IAmb	08 38 45.2	
	comp=Z,15nm,1.2s						
J20K	**Nowinta River**	**81.86**	**9**	P	**P**	**08 38 43.5**	**-0.1**
	baz=199						
H17K	**Granite Mounta**	**81.89**	**6**	P	**P**	**08 38 43.7**	**0.0**
	baz=194						
F14K	**Arctic Creek**	**81.93**	**3**	P	**P**	**08 38 43.8**

baz=212
DLBC **Dease Lake** 82.90 22 P P 08 38 49.2 0.0
baz=223
G18K **Tagagawik** 82.96 6 P P 08 38 49.0 -0.2
baz=195
K24K **Donnelly Dome** 82.97 12 P P 08 38 49.1 -0.3
baz=208
H20K **Anotleneega Mo** 83.01 8 P P 08 38 49.4 -0.1
baz=199
WHY **Whitehorse** 83.03 18 P P 08 38 49.7 -0.2
baz=218
N30M **Aishikik Lake** 83.04 17 P P 08 38 49.7 -0.2
baz=216
NEA2 **Nenana** 83.06 11 P P 08 38 49.4 -0.3
baz=204
RIDG **Independent Ri** 83.10 13 P P 08 38 50.7 +0.6
baz=208
I21K **Tanana** 83.13 9 P P 08 38 50.2 +0.1
baz=201
L27K **Beaver Creek,** 83.18 14 P P 08 38 50.5 0.0
baz=211
MLY **Manley** 83.19 10 P P 08 38 50.8 +0.4
baz=203
DOT **Dot Lake** 83.19 13 IAmb IAmb 08 38 52.3
comp=Z,13nm,1.4s
F17K **Baldwin Pennin** 83.25 5 P P 08 38 51.1 +0.5
baz=192
HDA **Harding Lake** 83.28 11 IAmb IAmb 08 38 52.1
comp=Z,8.3nm,0.6s
HDA **Harding Lake** 83.28 11 P P 08 38 50.9 -0.1
baz=206,SNR=12
R33M **Jennings River** 83.30 21 P P 08 38 51.6 +0.3
baz=222
P33M **Teslin, Yukon** 83.32 19 P P 08 38 52.1 +0.8
baz=220
G19K **Purcell Mounta** 83.37 7 IAmb IAmb 08 38 53.2
comp=Z,13nm,1.3s
G19K **Purcell Mounta** 83.37 7 P P 08 38 51.3 0.0
baz=196
PDAR **Pinedale Array** 83.41 42 P P 08 38 53.4 +1.0
comp=Z,0.9nm,0.5s,baz=194,slow=2.9,SNR=21
comp=Z,0.9nm,0.5s
N31M **Braeburn, Yuko** 83.43 17 P P 08 38 52.1 +0.3
baz=217
H21K **Melozitna Rive** 83.45 9 IAmb IAmb 08 38 53.7
comp=Z,13nm,1.4s
H21K **Melozitna Rive** 83.45 9 P P 08 38 51.7 -0.1
baz=201,SNR=5.4
M29M **Somme Creek** 83.48 16 P P 08 38 52.5 +0.4
baz=214
SCRK **Sand Creek** 83.49 13 P P 08 38 52.0 -0.2
baz=209,SNR=5.3
I23K **Minto, Yukon-K** 83.52 10 IAmb IAmb 08 38 53.1
comp=Z,16nm,1.4s
I23K **Minto, Yukon-K** 83.52 10 P P 08 38 52.1 +0.1
baz=204,SNR=5.2
COLA **College** 83.53 11 P P 08 38 52.5 +0.3
COLA **College** 83.53 11 P P 08 38 52.1 -0.1
baz=205
COLA **College** 83.53 11 P P 08 38 52.2 0.0
F18K **Selawik** 83.54 6 P P 08 38 52.7 +0.6
baz=194
IL31 83.62 11 IAmb IAmb 08 38 54.3
comp=Z,13nm,1.3s
ILAR **Eielson Array** 83.62 11 P P 08 38 52.5 -0.1
comp=Z,2.7nm,0.4s,baz=216,slow=5.3,SNR=91
comp=Z,2.7nm,0.4s
ILAR **Eielson Array** 83.62 11 P 08 38 52.7 +0.1
IMAR **Indian Mountai** 83.63 8 P P 08 38 53.2 +0.5
J25K **Salcha River,** 83.77 12 IAmb IAmb 08 38 54.9
comp=Z,6.8nm,0.6s
J25K **Salcha River,** 83.77 12 P P 08 38 53.8 +0.3
baz=208,SNR=10
POKR **Poker Plat Res** 83.83 11 P P 08 38 53.9 +0.2
baz=206
H22K **Ishtalitna Cre** 83.89 9 P P 08 38 54.2 +0.2
baz=202
F19K **Shaleruckik Mo** 83.96 6 IAmb IAmb 08 38 55.9
comp=Z,14nm,1.4s
F19K **Shaleruckik Mo** 83.96 6 P P 08 38 54.8 +0.5
baz=196
M30M **Minto, Yukon** 84.04 16 P P 08 38 55.4 +0.6
baz=216
L29M **L29M** 84.12 15 P P 08 38 56.3 +1.0
baz=215
G21K **Allakaket** 84.17 8 IAmb IAmb 08 38 57.3
comp=Z,15nm,1.4s
G21K **Allakaket** 84.17 8 P P 08 38 55.8 +0.4
baz=200,SNR=5.5
E18K **Tukpahlearik C** 84.26 5 IAmb IAmb 08 38 57.7
comp=Z,18nm,1.4s
E18K **Tukpahlearik C** 84.26 5 P P 08 38 55.9 +0.1
baz=193,SNR=8.1
D17K **Noatak River** 84.34 4 P P 08 38 56.3 +0.1
baz=190
F20K **Avaraart Lake** 84.39 7 IAmb IAmb 08 38 58.4
comp=Z,10nm,1.4s
F20K **Avaraart Lake** 84.39 7 P P 08 38 56.8 +0.4
baz=198,SNR=7.0
PRP **Porcupine Dome** 84.55 11 IAmb IAmb 08 38 59.0
comp=Z,16nm,1.3s
PRP **Porcupine Dome** 84.55 11 P P 08 38 57.7 +0.1
baz=208,SNR=7.3
WTLY **Watson Lake, Y** 84.57 21 P P 08 38 58.0 +0.4
baz=224
DAWY **Dawson** 84.61 14 P P 08 38 57.8 +0.1
baz=214
E19K **Redstone River** 84.62 6 IAmb IAmb 08 38 59.6
comp=Z,13nm,1.4s
E19K **Redstone River** 84.62 6 P P 08 38 57.9 +0.2
baz=196
RDOG **Red Dog Mine** 84.70 4 P P 08 38 58.4 +0.4
baz=191
C16K **Lisburne Hills** 84.77 3 P P 08 38 58.5 +0.2
baz=188
I26K **Coal Creek Min** 84.83 12 IAmb IAmb 08 39 01.4
comp=Z,15nm,1.7s
I26K **Coal Creek Min** 84.83 12 P P 08 38 59.2 +0.4
baz=210
F21K **Alatna River** 84.84 8 P P 08 38 59.0 +0.2
baz=200
G23K **Bananza Creek** 84.86 9 P P 08 38 59.2 +0.3
baz=203
K29M **Barlow Dome** 84.89 15 P P 08 38 59.4 +0.2
baz=215
C17K **DeLong Mountai** 85.10 4 P P 08 38 59.9 -0.1
baz=190
MAYO **Mayo, Yukon** 85.11 16 P P 08 39 00.8 +0.6
baz=217
J29N **Klondike Camp** 85.22 15 IAmb IAmb 08 39 03.7
comp=Z,11nm,1.4s
J29N **Klondike Camp** 85.22 15 P P 08 39 01.4 +0.6
baz=215
G24K **Hadweenzic Riv** 85.26 10 P P 08 39 01.4 +0.5
baz=206
COLD **Coldfoot** 85.31 9 IAmb IAmb 08 39 03.3
comp=Z,8.2nm,1.1s
COLD **Coldfoot** 85.31 9 P P 08 39 01.2 +0.1
baz=203,SNR=6.1
I27K **Kandik River** 85.41 13 P P 08 39 02.1 +0.4
baz=211
C18K **Utukok River** 85.42 5 P P 08 39 01.7 0.0
baz=192
E20K **Nigu River** 85.50 7 P P 08 39 02.4 +0.3
baz=197,SNR=9.7
G25K **Bearman Lake** 85.56 11 P P 08 39 02.5 +0.2
baz=207
I28M **Miner Creek** 85.65 14 P P 08 39 03.5 +0.6
baz=213
J30M **Hart River** 85.79 15 P P 08 39 04.2 +0.6
baz=216
D20K **Etivluk River** 85.90 6 IAmb IAmb 08 39 06.5
comp=Z,14nm,1.4s
D20K **Etivluk River** 85.90 6 P P 08 39 04.2 +0.2
baz=197
E22K **Anaktuvuk Pass** 85.92 8 IAmb IAmb 08 39 11.1
comp=Z,11nm,1.5s
E22K **Anaktuvuk Pass** 85.92 8 P P 08 39 04.4 +0.2
baz=201
F24K **Squaw Lake** 85.94 10 P P 08 39 04.5 +0.2
baz=205
I29M **Ogilvie Camp,** 85.95 14 P P 08 39 04.9 +0.6
baz=214
H27K **Steamboat Moun** 85.97 13 IAmb IAmb 08 39 07.0
comp=Z,9.4nm,1.4s
H27K **Steamboat Moun** 85.97 13 P P 08 39 05.1 +0.6
baz=211
C19K **Lookout Ridge** 85.99 5 IAmb IAmb 08 39 06.5
comp=Z,23nm,1.6s
C19K **Lookout Ridge** 85.99 5 P P 08 39 04.6 +0.1
baz=194
ABTX **Abilene, Hawle** 86.10 54 IAmb IAmb 08 39 42.9
comp=Z,25nm,1.9s
G26K **Porcupine Rive** 86.15 11 IAmb IAmb 08 39 08.0
comp=Z,19nm,1.4s
G26K **Porcupine Rive** 86.15 11 P P 08 39 05.8 +0.6
baz=209
E23K **Chandalar** 86.16 9 P P 08 39 05.6 +0.2
baz=204
KOTAN **Kotaneelee Air** 86.27 23 P P 08 39 07.1 +1.1
baz=228
I30M **Mount Dempster** 86.30 15 P P 08 39 06.3 +0.1
baz=216
E24K **Your Creek** 86.35 9 IAmb IAmb 08 39 50.2
comp=Z,11nm,1.7s
E24K **Your Creek** 86.35 9 P P 08 39 06.6 +0.4
baz=205
F25K **Christian Rive** 86.38 10 P P 08 39 06.4 -0.1
baz=207
BMAR **Burnt Mountain** 86.42 11 P P 08 39 08.0 +1.3
G27K **Doyon Strip** 86.44 12 P P 08 39 07.0 +0.2
baz=211
C21K **Knifeblade Rid** 86.52 7 P P 08 39 06.9 -0.1
baz=198
MAW **Mawson** 86.59 199 LR LR 09 15 08.2
comp=Z,40nm,19.9s,baz=100,slow=34
MAW **Mawson** 86.59 199 P P 08 39 08.4 +0.9
H29M **Whitestone** 86.65 14 IAmb IAmb 08 39 09.4
comp=Z,16nm,1.4s
H29M **Whitestone** 86.65 14 P P 08 39 07.8 0.0
baz=214
EDM **Edmonton** 86.68 32 IAmb IAmb 08 39 09.4
comp=Z,4.8nm,0.5s
TOLK **Toolik Lake Re** 86.71 9 P P 08 39 08.0 0.0
baz=204
F26K **Sheenjek River** 86.74 11 IAmb IAmb 08 42 26.2
comp=Z,13nm,1.9s
F26K **Sheenjek River** 86.74 11 P P 08 39 08.2 0.0
baz=209
D23K **Nanushuk River** 86.85 8 P P 08 39 08.9 +0.3
baz=202
E25K **Arctic Village** 86.87 10 P P 08 39 08.7 -0.1
baz=207
A19K **Wainwright** 86.95 4 P P 08 39 08.8 -0.2
baz=192
B21K **Ikpikpuk River** 86.98 7 P P 08 39 09.2 0.0
baz=199
B20K **Meade River** 87.09 6 P P 08 39 09.8 +0.1
baz=196
EPYK **Eagle Plains** 87.16 14 P P 08 39 10.7 +0.4
baz=216
D24K **Happy Valley** 87.29 9 P P 08 39 10.9 +0.1
baz=204
G29M **Pine Creek** 87.30 13 P P 08 39 10.9 0.0
baz=215
F28M **Old Crow** 87.50 12 IAmb IAmb 08 39 47.4
comp=Z,16nm,1.9s
F28M **Old Crow** 87.50 12 P P 08 39 12.0 +0.2
baz=213
C23K **Itkillik River** 87.67 8 P P 08 39 12.4 -0.1
baz=202
G30M **tAoh Zraii Nji** 87.77 14 IAmb IAmb 08 39 14.7
comp=Z,11nm,1.4s
G30M **tAoh Zraii Nji** 87.77 14 P P 08 39 13.1 0.0
baz=216
B22K **Teshekpuk Lake** 87.80 7 P P 08 39 13.1 0.0
baz=200
D25K **Kavik River** 87.81 9 P P 08 39 13.2 -0.1
baz=207
C24K **Franklin Bluff** 87.83 9 P P 08 39 13.3 0.0
A22K **Sinclair Lake** 88.26 6 P P 08 39 15.2 -0.1
baz=198
E28M **Babbage River** 88.40 12 P P 08 39 16.3 +0.2
baz=213
A21K **Barrow** 88.41 5 P P 08 39 15.6 -0.3
baz=197
C27K **Jago River** 88.52 10 P P 08 39 16.3 -0.3
baz=209
E29M **Blow River** 88.56 13 P P 08 39 16.8 0.0
baz=215
WRGLY **Wrigley** 88.58 20 P P 08 39 17.6 +0.6
baz=228
C26K **Camden Bay** 88.58 10 P P 08 39 16.8 0.0
baz=208
D27M **Malcolm River** 88.67 11 P P 08 39 17.6 +0.2
baz=212
F31M **Tsiigehtchic** 88.72 14 IAmb IAmb 08 39 19.0
comp=Z,12nm,1.2s
F31M **Tsiigehtchic** 88.72 14 P P 08 39 17.6 +0.1
baz=219
PLCA **Paso Flores** 89.13 132 P P 08 39 21.9 +1.6
comp=Z,1.5nm,0.8s,baz=242,slow=6.0,SNR=5.5
comp=Z,1.5nm,0.8s
INK **Inuvik** 89.45 14 P P 08 39 20.7 -0.2
baz=219
YKA **Yellowknife Ar** 91.30 24 P P 08 39 30.2 +0.5
comp=Z,0.2nm,0.4s,baz=240,slow=5.1,SNR=6.5
comp=Z,0.2nm,0.4s
C36M **Paulatuk** 92.55 16 P P 08 39 34.7 -0.5
baz=228
A36M **Sachs Harbour** 94.08 14 P P 08 39 42.8 +0.5
baz=227
TIXI **Tiksi** 95.93 344 LR LR 09 24 42.3
comp=Z,26nm,18.3s,baz=289,slow=36
TLY **Talaya** 98.19 321 LR LR 09 19 51.2
comp=Z,39nm,20.3s,baz=358,slow=33
MKAR **Makanchi Array** 111.25 314 PKiKP **PKiKP** 08 44 57.0 -0.9
comp=Z,0.3nm,0.4s,baz=168,slow=0.5,SNR=6.8
KURBB **Kurchatov Arra** 113.71 318 PKiKP **PKiKP** 08 45 01.7 -0.7
comp=Z,0.2nm,0.4s,baz=93,slow=1.8,SNR=4.8
ARCES **ARCESS Array B** 125.63 352 PKP **PKiKP** 08 45 26.3 +1.1
comp=Z,1.3nm,0.6s,baz=329,slow=1.1,SNR=4.3
BRTR **Keskin Array B** 146.69 320 PKPbc **PKPdf** 08 46 05.4 +0.8
comp=Z,1.0nm,0.7s,baz=56,slow=1.8,SNR=7.2
GERES **GERESS Array B** 147.16 351 PKPbc **PKPbc** 08 46 08.0 +0.6
comp=Z,0.8nm,0.5s,baz=72,slow=4.3,SNR=5.7
DAVOX **Davos/Dischmat** 149.65 355 PKPbc **PKPbc** 08 46 14.4 +0.4
comp=Z,2.2nm,0.6s,baz=339,slow=5.5,SNR=6.0
TORD **Torodi Ar. Bea** 174.59 128 PKP **PKPdf** 08 46 33.9 -0.7
comp=Z,0.7nm,1.0s,baz=270,slow=1.4,SNR=3.6
TORD PKPab **PKPab** 08 48 09.3 +0.8
comp=Z,1.1nm,0.8s,baz=252,slow=4.6,SNR=6.4

*IDC **18** 08:43:42.2±0.9,27.°10N×103.°13E,h0km,mb3.9/10, mbtmp4.0/11,ML4.3/1,MS3.6/10,Error ellipse: s-maj=32.8km s-min=16.4km az=58.0*
*NEIC **18** 08:43:45.0±1.3,27.°16N±0.°06×103.°27E±0.°09,h10km±1km, mb4.3/15,Error ellipse: s-maj=16.6km s-min=3.8km az=124.0*

ISC 18 08:43:44.6±0.7,27.°18N±0.°09×103.°2E±0.°1,h10km,n38, σ1§06/30,mb4.1/17,MS3.5/10,Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ENH	**Enshi**	6.32	59		**Pn**	08 45 20.0	+2.1
LZDM	**Lanzhou Array**	8.76	3	Pn	**Pn**	08 45 53.3	+1.7
	baz=157,slow=8.0						
	4.1nm,0.5s						
CMAR	**Chiang Mai Arr**	9.52	205	Pn	**Pn**	08 46 03.7	+1.9
	0.2nm,0.3s,baz=15,slow=12,SNR=8.2						
CMAR				Pg		08 46 39.5	
	0.2nm,0.3s,baz=28,slow=15,SNR=11						
CMAR				Lg	Lg	08 48 38.9	
	0.3nm,0.3s,baz=8.1,slow=26,SNR=1.3						
SONM	**Songino Array**	20.77	6	P	**P**	08 48 26.1	+0.4
	1.6nm,0.5s,baz=191,slow=11,SNR=14						
SONM				LR	LR	08 57 38.4	
	comp=Z,81nm,19.7s,baz=360,slow=40						
	1.6nm,0.5s						
SONM	**Songino Array**	20.77	6		**P**	08 48 26.4	+0.6
ULN	**Ulaanbaatar**	20.87	7		**P**	08 48 27.3	+0.4
KSRS	**Korea Array**	23.21	58	P	**P**	08 48 50.9	-0.8
	2.2nm,0.7s,baz=246,slow=10,SNR=8.0						
KSRS				LR	LR	08 59 07.1	
	comp=Z,92nm,19.9s,baz=15,slow=40						
	2.2nm,0.7s						
JNU	**Nakatsue**	24.62	69	LR	LR	08 59 23.8	
	comp=Z,113nm,21.0s,baz=240,slow=38						
TARG	**Taragay, Kyrgy**	25.36	311		**P**	08 49 12.3	0.0
TARG				IAmb	IAmb	08 49 15.7	
	comp=Z,9.0nm,1.0s						
MKAR	**Makanchi Array**	25.59	325	P	**P**	08 49 13.0	-0.9
	comp=Z,4.3nm,1.0s,baz=122,slow=7.4,SNR=21						
MKAR				LR	LR	09 00 22.0	
	comp=Z,173nm,21.0s,baz=140,slow=39						
	comp=Z,4.3nm,1.0s						
MKAR	**Makanchi Array**	25.59	325		**P**	08 49 12.6	-1.3
MAKZ	**Makanchi**	25.76	325		**P**	08 49 15.7	+0.3
MAKZ				IAmb	IAmb	08 49 21.4	
	comp=Z,4.4nm,1.0s						
KDJ	**Kajisay**	25.95	312	P	**P**	08 49 17.9	+0.5
KDJ				IAmb	IAmb	08 49 21.7	
	comp=Z,8.8nm,1.1s						
NRN	**Naryn**	26.45	310		**P**	08 49 22.4	+0.2
NRN				IAmb	IAmb	08 49 23.9	
	comp=Z,4.2nm,1.1s						
NIL	**Nilore**	26.56	291	P	**P**	08 49 23.2	+0.4
BOOM	**Boomskoye usch**	26.94	312		**P**	08 49 26.8	+0.5
BOOM				IAmb	IAmb	08 49 31.6	
	comp=Z,8.7nm,1.1s						
AAK	**Ala-Archa**	27.97	311	LR	LR	09 00 40.6	
	comp=Z,108nm,20.0s,baz=298,slow=36						
ZALV	**Zalesovo Beam**	29.98	338	LR		09 02 31.3	
	comp=Z,181nm,18.4s,baz=50,slow=38						
ZALV	**Zalesovo Beam**	29.98	338	P	**P**	08 49 52.4	-0.7
KURBB	**Kurchatov Arra**	30.02	328	P	**P**	08 49 52.1	-1.3
	comp=Z,3.1nm,0.7s,baz=136,slow=9.5,SNR=36						
KURBB				LR	LR	09 02 19.3	
	comp=Z,105nm,19.2s,baz=169,slow=37						
	comp=Z,3.1nm,0.7s						
KURK	**Kurchatov**	30.04	328		**P**	08 49 52.3	-1.2
KURK				IAmb	IAmb	08 49 54.7	
	comp=Z,5.2nm,0.8s						
KKAR	**Karatay Array**	30.86	310	P	**P**	08 50 01.2	+0.2
BVAR	**Borovoye Array**	35.48	326	P	**P**	08 50 42.1	+1.0
	comp=Z,0.5nm,0.5s,baz=146,slow=8.7,SNR=2.3						
BVAR				LR	LR	09 06 04.9	
	comp=Z,144nm,18.3s,baz=107,slow=38						
	comp=Z,0.5nm,0.5s						
AB31	**Akbulak array**	39.80	315	IAmb	IAmb	08 51 19.1	
	comp=Z,3.4nm,0.9s						
ABKAR	**Akbulak array**	39.80	315	P	**P**	08 51 18.1	+0.4
WB0	**Warrmunga Arr**	55.60	144	P	**P**	08 53 19.0	-1.7
WRAB	**Tennant Creek**	55.72	144	P	**P**	08 53 20.4	-1.1
WRA	**Warramunga Arr**	55.72	144	P	**P**	08 53 20.5	-1.0
	comp=Z,2.1nm,0.9s,baz=331,slow=7.9,SNR=10.0						
	comp=Z,2.1nm,0.9s						
WRA	**Warramunga Arr**	55.72	144	IAmb	IAmb	08 53 26.0	
	comp=Z,0.2nm,1.0s						
WR8	**Warramunga Arr**	55.81	144	P	**P**	08 53 21.1	-1.1
WR8				IAmb	IAmb	08 53 24.3	
	comp=Z,4.7nm,1.0s						
ASAR	**Alice Springs**	58.60	147	P	**P**	08 53 41.1	-0.8
	comp=Z,0.8nm,0.5s,baz=331,slow=6.9,SNR=14						
	comp=Z,0.8nm,0.5s						
AKASG	**Malin Array Be**	59.53	315	P	**P**	08 53 46.9	-1.1
	comp=Z,0.4nm,0.4s,baz=73,slow=6.7,SNR=4.1						
	comp=Z,0.4nm,0.4s						
AKASG	**Malin Array Be**	59.53	315	IAmb	IAmb	08 53 47.8	
	comp=Z,1.6nm,1.0s						
FINES	**FINESS Array B**	60.41	327	P	**P**	08 53 53.4	-0.4
	comp=Z,5.4nm,1.1s,baz=72,slow=6.2,SNR=4.7						
	comp=Z,5.4nm,1.1s						
ILAR	**Eielson Array**	73.71	25	LR	LR	09 30 30.8	
	comp=Z,43nm,18.0s,baz=88,slow=38						
KDAK	**Kodiak Island**	74.55	33	LR	LR	09 32 02.2	
	comp=Z,50nm,20.5s,baz=64,slow=39						
YKA	**Yellowknife Ar**	85.67	17	P	**P**	08 56 22.7	-0.5
	comp=Z,0.3nm,0.7s,baz=325,slow=5.1,SNR=6.1						
	comp=Z,0.3nm,0.7s						
TXAR	**Lajitas Array**	118.19	27	PKP	**PKPdf**	09 02 31.4	-1.2
	comp=Z,0.2nm,0.7s,baz=325,slow=1.7,SNR=1.8						

*NEIC **18** 08:45:48.6±1.8,7.°52S±0.°10×107.°68E±0.°09,h117km±5km, mb4.2/11,Error ellipse: s-maj=16.4km s-min=9.7km az=222.0*
*IDC **18** 08:45:48.7±0.8,6.°87S×108.°16E,h121km±15km,mb3.4/6, mbtmp3.9/6,Error ellipse: s-maj=65.2km s-min=15.4km az=51.0*
*DJA **18** 08:45:49.2±0.4,8.°5S±6.°×10.°8E±.°,h94km±5km,M3.9/39, mB5.9/1,MLv3.9/39,Mw(mB)5.5/1*

ISC 18 08:45:48.1±0.8,7.°47S±0.°09×107.°78E±0.°06,h118km±7km, n43,σ1§34/43,mb4.1/12,Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBJI	**Bungbulang**	0.13	274	Pn	**Pn**	08 46 04.0	-0.5
BBJI	**Bungbulang**	0.13	274	P	**Pn**	08 46 03.5	-1.0
LEM	**Lembang**	0.66	346	P	**Pn**	08 46 08.0	+0.8
	787nm,0.3s,baz=116,slow=7.1,SNR=126						
LEM				S	**Sn**	08 46 22.6	+1.0
	1μm,0.5s,baz=32,slow=18,SNR=6.4						
LEM	**Lembang**	0.66	346	P	**Pn**	08 46 07.8	+0.6
CMJI	**Cimerak**	0.73	115	P	**Pn**	08 46 06.8	-0.7
KPJI	**Karang Pucung**	1.15	83	P	**Pn**	08 46 11.6	+0.1
SKJI	**Sukabumi**	1.30	291	P	**Pn**	08 46 14.0	+0.8
DBJI	**Dramaga**	1.37	312	P	**Pn**	08 46 15.2	+1.2
SCJI	**Gunung Srandil**	1.39	99	P	**Pn**	08 46 13.9	-0.3
CTJI	**Waduk Cacaban**	1.47	72	P	**Pn**	08 46 16.4	+1.3
SBJI	**Serang**	2.12	309	P	**Pn**	08 46 24.1	+1.1
CGJI	**Cibinong**	2.24	292	P	**Pn**	08 46 25.5	+1.0
YOGI	**Yogyakarta**	2.52	98	P	**Pn**	08 46 28.2	+0.1
SMRI	**Semarang**	2.67	81		**Pn**	08 46 31.0	+0.8
SMRI	**Semarang**	2.67	81	P	**Pn**	08 46 31.1	+1.0
UGM	**Wanagama**	2.75	99		**Pn**	08 46 31.4	+0.2
UGM	**Wanagama**	2.75	99	P	**Pn**	08 46 31.1	-0.1
PCJI	**Pacitan**	3.44	102	P	**Pn**	08 46 40.6	+0.4
KASI	**Kota Agung**	3.79	300	P	**Pn**	08 46 46.0	+1.1
SNJI	**Sawahan-Nganju**	3.96	95	P	**Pn**	08 46 48.7	+1.5
SJI	**Sawahan**	3.96	94	P	**Pn**	08 46 47.9	+0.7
KLSI		4.10	312	P	**Pn**	08 46 50.8	+1.7
MNAI	**Manna**	5.71	303	Pn	**Pn**	08 47 09.8	-0.8
EGSI	**Enggano, Bengk**	5.86	291	P	**Pn**	08 47 13.0	+0.3
JAGI	**Jajag, Banyuwa**	6.39	99		**Pn**	08 47 21.6	+1.7
GIRL	**Giralia**	16.31	158		**P**	08 49 31.0	-0.2
FITZ	**Fitzroy Crossi**	20.35	123	P	**P**	08 50 15.7	+0.4
	1.6nm,0.7s,baz=306,slow=7.0,SNR=5.8						
	1.6nm,0.7s						
KNRA	**Kununurra**	22.10	114	P	**P**	08 50 34.8	+0.8
KNRA				IAmb	IAmb	08 50 43.8	
	comp=Z,12nm,1.3s						
MTN	**Manton Dam**	23.59	105	P	**P**	08 50 48.2	-0.3
MTN				IAmb	IAmb	08 51 05.6	
	comp=Z,17nm,1.5s						
WB0	**Warramunga Arr**	28.55	118	P	**P**	08 51 33.8	+0.8
WB0				IAmb	IAmb	08 51 36.4	
	comp=Z,6.3nm,1.4s						
WRA	**Warramunga Arr**	28.57	118	P	**P**	08 51 33.4	+0.2
	comp=Z,0.3nm,0.4s,baz=305,slow=9.1,SNR=12						
	comp=Z,0.3nm,0.4s						
WR8	**Warramunga Arr**	28.71	118	P	**P**	08 51 35.4	+0.9
WR8				IAmb	IAmb	08 51 38.0	
	comp=Z,4.6nm,1.0s						
ASAR	**Alice Springs**	29.79	126	P	**P**	08 51 44.6	+0.6
	comp=Z,0.7nm,0.5s,baz=302,slow=8.6,SNR=9.8						
	comp=Z,0.7nm,0.5s						
STKA	**Stephens Creek**	39.75	132	P	**P**	08 53 10.8	+1.4
	comp=Z,5.5nm,0.5s,baz=313,slow=8.2,SNR=38						
	comp=Z,5.5nm,0.5s						
STKA	**Stephens Creek**	39.75	132	P	**P**	08 53 10.9	+1.4
MKAR	**Makanchi Array**	58.59	340	P	**P**	08 55 30.0	-2.6
	comp=Z,0.7nm,0.5s,baz=150,slow=8.1,SNR=9.0						
	comp=Z,0.7nm,0.5s						
KURBB	**Kurchatov Arra**	63.16	340	P	**P**	08 56 00.0	-3.3
	comp=Z,0.2nm,0.5s,baz=155,slow=6.5,SNR=2.3						
	comp=Z,0.2nm,0.5s						
KURK	**Kurchatov**	63.21	340	P	**P**	08 56 00.0	-3.6
KURK	**Kurchatov**	63.21	340	IAmb	IAmb	08 56 06.8	
	comp=Z,3.8nm,1.4s						
AB31	**Akbulak array**	70.21	329	P	**P**	08 56 46.9	-1.3
ABKAR	**Akbulak array**	70.21	329	P	**P**	08 56 46.1	-2.1
VNDA	**Vanda**	75.36	170	P	**P**	08 57 20.0	+1.8
VNDA				IAmb	IAmb	08 57 56.3	
	comp=Z,5.9nm,1.4s						
QSPA	**South Pole Qui**	82.52	180	P	**P**	08 57 58.4	+0.8
QSPA				IAmb	IAmb	08 58 18.9	
	comp=Z,6.8nm,1.4s						

IDC 18 09:00:15.6±10.0,9.°01S×150.°79E,h0km,mb3.3/2, mbtmp3.4/4,ML2.7/2,MS3.2/1,Error ellipse: s-maj=150.7km s-min=43.3km az=26.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	3.61	263	Pn	Pn	09 01 14.2	+1.4
	6.6nm,0.3s,baz=90,slow=8.1,SNR=9.3						

PMG				Sn	Sn	09 01 55.3	-0.8		
	12nm,0.3s,baz=286,slow=23,SNR=7.2								
	15nm,0.4s								
JAY	**Jayapura**	**11.92**	**302**	LR	LR	09 07 12.6			
	comp=Z,103nm,19.4s,baz=348,slow=35								
WRA	**Warramunga Arr**	**19.26**	**234**	P	P	09 04 41.9	0.0		
	0.1nm,0.3s,baz=57,slow=11,SNR=3.4								
	0.4nm,0.5s								
ASAR	**Alice Springs**	**21.76**	**226**	P	P	09 05 09.8	+0.8		
	0.6nm,0.7s,baz=58,slow=9.4,SNR=12								
	0.6nm,0.7s								
STKA	**Stephens Creek**	**24.31**	**199**	P	P	09 05 33.9	-1.1		
	1.3nm,0.8s,baz=30,slow=8.1,SNR=3.8								
	1.3nm,0.8s								

*ASRS **18** 09:10:05.0±1.0, 53°.63N×87°.93E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 18 09:10:06.3±3.3, 53°.65N×88°.08E, h0km, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=28.8km s-min=19.1km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.96**	**280**	I	I	09 22 10.0	
	baz=97,slow=335,SNR=1.2						
ZALV	**Zalesovo Beam**	**1.96**	**280**	Pn	Pn	09 10 39.3	-1.4
	0.8nm,0.3s,baz=99,slow=16,SNR=14						
ZALV				Lg	Lg	09 11 08.7	
	1.3nm,0.3s,baz=101,slow=24,SNR=11						
KURBB	**Kurchatov Arra**	**6.61**	**247**	Pn	Pn	09 11 45.6	+1.0
	baz=62,slow=14,SNR=3.6						
KURBB				Lg	Lg	09 13 36.3	
	baz=63,slow=31,SNR=5.7						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**7.80**	**211**	Pn	Pn	09 12 02.1	+1.2
	0.1nm,0.3s,baz=29,slow=15,SNR=2.7						
MKAR				Lg	Lg	09 14 13.5	
	baz=21,slow=33,SNR=2.8						
	0.1nm,0.3s						

IDC 18 09:15:14.0±4.2, 53°.69N×90°.89E, h0km, mbtmp2.6/2, ML2.4/2, Error ellipse: s-maj=39.4km s-min=27.6km az=46.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.61**	**277**	I	I	09 39 48.7	
	baz=91,slow=339,SNR=1.3						
ZALV	**Zalesovo Beam**	**3.61**	**277**	Pg	Pb	09 16 19.4	+0.7
	0.4nm,0.3s,baz=95,slow=18,SNR=4.1						
ZALV				Lg	Lg	09 17 09.5	
	0.5nm,0.3s,baz=92,slow=25,SNR=8.3						
KURBB	**Kurchatov Arra**	**8.20**	**253**	Pn	Pn	09 17 13.8	-0.4
	baz=64,slow=15,SNR=5.7						
KURBB				Lg	Lg	09 19 34.5	
	baz=62,slow=30						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**8.83**	**222**	Pn	Pn	09 17 24.0	+1.2
	0.1nm,0.3s,baz=42,slow=9.7,SNR=1.7						
MKAR				Lg	Lg	09 19 52.2	
	baz=34,slow=24,SNR=3.4						
	0.1nm,0.4s						

*ISK **18** 09:20:05.7, 38°.29N×44°.46E, h16km, ML2.6/5*
*AZER **18** 09:20:07.0, 38°.44N×44°.44E, h5km, ml2.6*
*AFAD **18** 09:20:06.6, 38°.58N×44°.46E, h6km±3km, ML2.5*
ISC 18 09:20:07.5±1.1, 38°.40N±0°.04×44°.34E±0°.02, h11km±10km, n22, σ1§56/37, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.38**	**314**	P	**Pg**	**09 20 14.0**	**-1.2**
OZAP				S	**Sg**	**09 20 20.4**	**+0.1**
OZAP				IAML		09 20 27.0	
	comp=N,1μm,1.3s						
OZAP				IAML		09 20 27.0	
	comp=E,712nm,0.4s						
TVAN	**Van**	**0.75**	**280**	P	**Pg**	**09 20 21.3**	**-0.7**
TVAN				S	**Sg**	**09 20 32.4**	**+0.5**
TVAN				IAML		09 20 41.0	
	comp=N,158nm,0.4s						
TVAN				IAML		09 20 46.0	
	comp=E,212nm,0.4s						
VANB	**Van**	**0.78**	**285**	Pg	**Pg**	**09 20 22.7**	**+0.2**
VANB				Sg	**Sn**	**09 20 34.9**	**-1.4**
YOVA	**Hakkari_Yksek**	**0.81**	**183**	P	**Pn**	**09 20 25.7**	**+0.5**
YOVA				S	**Sn**	**09 20 40.8**	**+3.5**
YOVA				IAML		09 20 47.0	
	comp=E,94nm,0.6s						
YOVA				IAML		09 20 49.0	
	comp=N,116nm,0.6s						
VMUR	**Van-Muradiye**	**0.84**	**315**	P	**Pb**	**09 20 22.6**	**-1.8**
VMUR				S	**Sg**	**09 20 37.2**	**+2.3**
VMUR				IAML		09 20 40.0	
	comp=E,104nm,0.2s						
VMUR				IAML		09 20 45.0	
	comp=N,120nm,0.5s						
HAKT	**HAKKARI**	**0.98**	**211**	P	Pn	09 20 29.4	+1.9
HAKT				S	Sn	09 20 46.2	+4.8
GEVA	**Gevas**	**1.01**	**266**	P	**Pn**	**09 20 26.1**	**-1.8**
GEVA				S	**Sn**	**09 20 43.6**	**+1.4**
AKDM	**Akdamar-Van**	**1.07**	**267**	Pn	**Pg**	**09 20 27.7**	**-0.5**
AKDM				Sn	**Sn**	**09 20 43.9**	**+0.1**
NAX	**Nakhchivan**	**1.19**	**49**	P	**Pg**	**09 20 29.9**	**-0.5**
NAX				S	**Sg**	**09 20 47.6**	**+1.8**
SBZ	**Shahbuz**	**1.37**	**43**	P	**Pb**	**09 20 32.9**	**-0.5**
SBZ				S	**Sg**	**09 20 52.4**	**+0.6**
HYR	**Heyderabad**	**1.38**	**17**	P	**Pg**	**09 20 34.0**	**0.0**
HYR				S	**Sg**	**09 20 55.8**	**+3.9**
ORD	**Ordubad**	**1.40**	**67**	P	**Pg**	**09 20 33.5**	**-0.8**
ORD				S	**Sg**	**09 20 53.8**	**+1.3**
IGDI	**IGDIR**	**1.48**	**352**	P	**Pb**	**09 20 35.6**	**+0.4**
IGDI				S	**Sg**	**09 20 57.6**	**+2.3**
DORK	**Agr/Tutak/Do**	**1.57**	**309**	P	**Pn**	**09 20 35.1**	**-0.5**
DORK				S	**Sb**	**09 20 57.2**	**+0.5**
DORK				IAML		09 21 00.0	
	comp=E,59nm,0.8s						
DORK				IAML		09 21 00.0	
	comp=N,69nm,0.7s						
AGRB	**Hanur-Agry**	**1.58**	**319**	Pn	**Pn**	**09 20 35.5**	**-0.2**
MLAZ	**Malazgirt-MUS**	**1.59**	**298**	Pn	**Pn**	**09 20 35.6**	**-0.2**
GNI	**Garni**	**1.78**	**10**	Pn	**Pn**	**09 20 38.0**	**-0.4**
GURO	**Guroymak-BITLI**	**1.82**	**276**	Pn	**Pn**	**09 20 38.7**	**-0.3**
SRTM	**Siirt_Merkez**	**1.95**	**259**	P	**Pg**	**09 20 44.3**	**-0.7**
SRTM				S	**Sg**	**09 21 13.2**	**+3.0**
GDB	**GEDABAY**	**2.56**	**25**	P	**Pb**	**09 20 53.2**	**-0.4**
QZX	**Qazax, Azerbai**	**2.77**	**16**	P	**Pb**	**09 20 55.6**	**-1.5**
QZX				S	**Sb**	**09 21 31.3**	**+0.2**
YRD	**Yardimli**	**3.10**	**79**	P	**Pb**	**09 20 59.9**	**-2.8**
YRD				S	**Sb**	**09 21 39.6**	**-1.0**

IDC 18 09:40:10.1±2.1, 12°.83S×167°.58E, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=57.0km s-min=39.8km az=180.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**30.47**	**227**	P	P	09 46 25.9	+1.1
	1.4nm,0.3s,baz=32,slow=8.9,SNR=5.0						
	1.4nm,0.3s						
WRA	**Warramunga Arr**	**32.62**	**253**	P	P	09 46 43.6	-0.3
	0.2nm,0.5s,baz=86,slow=9.2,SNR=6.0						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**33.66**	**247**	P	P	09 46 52.5	-0.6
	0.7nm,0.6s,baz=74,slow=9.3,SNR=24						
	0.7nm,0.6s						
QSPA	**South Pole Qui**	**77.18**	**180**	P	P	09 52 05.7	0.0
	1.6nm,0.5s,baz=51,slow=18,SNR=17						
	1.6nm,0.5s						
ARCES	**ARCESS Array B**	**118.50**	**346**	PKP	PKPdf	09 58 59.3	-0.1
	3.9nm,0.9s,baz=29,slow=2.8,SNR=3.9						

*ASRS **18** 09:41:17.0±1.2, 53°.63N×87°.92E, h0km, M2.4(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 18 09:41:19.3±3.5, 53°.60N×88°.04E, h0km, mbtmp2.7/2, ML2.6/2, Error ellipse: s-maj=34.2km s-min=19.2km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.94**	**282**	I	I	09 53 20.0	
	baz=98,slow=343,SNR=1.6						
ZALV	**Zalesovo Beam**	**1.94**	**282**	Pn	Pn	09 41 53.9	+0.3
	0.7nm,0.3s,baz=98,slow=16,SNR=5.8						
ZALV				Lg	Lg	09 42 21.6	
	2.8nm,0.3s,baz=103,slow=26,SNR=6.0						
KURBB	**Kurchatov Arra**	**6.57**	**247**	Pn	Pn	09 42 56.7	-0.4
	0.1nm,0.3s,baz=65,slow=14,SNR=5.3						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.74**	**211**	Pn	Pn	09 43 15.0	+1.8
	0.1nm,0.3s,baz=28,slow=14,SNR=4.9						
	0.1nm,0.3s						

*GCG **18** 09:48:40.1±0.4, 15°.22N×92°.62W, h73km±86km, MD4.0, ML3.1, Presumed earthquake*
*MEX **18** 09:48:40.1±1.2, 14°.83N×92°.74W, h86km±13km, MD3.7*
ISC 18 09:48:35.6±2.5, 14°.7N±0°.1×92°.7W±0°.1, h105km±15km, n11, σ2§16/20, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.47**	**65**	*e*P	**Pn**	**09 48 53.3**	**+1.6**
THIG				*e*S	**Sn**	**09 49 03.5**	**-0.3**
PATR	**El Naranjo**	**0.61**	**48**	*e*P	**Pn**	**09 48 53.8**	**+0.8**
PATR				*e*S	**Sn**	**09 49 04.2**	**-1.9**
CHUJ	**Union Juarez**	**0.70**	**56**	*e*P	**Pn**	**09 48 54.6**	**+0.9**
CHUJ				*e*S	**Sn**	**09 49 06.3**	**-1.0**
PAVE	**Pavencul**	**0.71**	**47**	*e*P	**Pn**	**09 48 54.8**	**+1.0**
PAVE				*e*S	**Sn**	**09 49 06.4**	**-1.0**
RTAL	**Retalhuleu**	**1.00**	**100**	*e*S	**Sn**	**09 49 16.0**	**+4.0**
PCIG		**1.11**	**334**	*e*P	**Pn**	**09 48 58.2**	**+0.7**
PCIG				*e*S	**Sn**	**09 49 11.8**	**-2.3**
STG2	**El Palmar, Qui**	**1.32**	**102**	*i* P	**Pn**	**09 49 00.2**	**+0.1**
STG2				*i* S	**Sn**	**09 49 15.9**	**-2.7**
STG2				IAML		09 49 17.9	
	comp=E,517nm,0.2s						
STG8	**El Palmar, Qui**	**1.34**	**101**	*i* P	**Pn**	**09 49 00.7**	**+0.3**
STG8				*i* S	**Sn**	**09 49 17.1**	**-2.1**
STG8				IAML		09 49 18.5	
	comp=E,200nm,0.2s						
STG5	**El Palmar, Qui**	**1.35**	**103**	*i* P	**Pn**	**09 49 01.0**	**+0.6**
STG5				*i* S	**Sn**	**09 49 17.0**	**-2.2**
CCIG	**Comitan**	**1.66**	**19**	*e*S	**Sn**	**09 49 26.4**	**+0.4**
TGIG		**2.10**	**349**	*e*P	**Pn**	**09 49 12.7**	**+3.0**
TGIG				*e*S	**Sn**	**09 49 31.8**	**-4.0**

*ASRS **18** 09:50:06.0±1.3, 54°.15N×87°.21E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 18 09:50:07.0±3.5, 54°.16N×87°.31E, h0km, mbtmp2.6/2, ML2.3/2, Error ellipse: s-maj=31.5km s-min=19.9km az=51.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.49**	**263**	I	I	09 59 40.0	
	0.1nm,0.5s,baz=80,slow=337,SNR=3.8						
ZALV	**Zalesovo Beam**	**1.49**	**263**	Pg	Pn	09 50 33.9	-1.0
	2.0nm,0.3s,baz=83,slow=13,SNR=17						
ZALV				Lg	Lg	09 50 53.8	
	2.8nm,0.3s,baz=80,slow=22,SNR=8.3						
KURBB	**Kurchatov Arra**	**6.44**	**240**	Pn	Pn	09 51 44.1	+1.2
	0.1nm,0.3s,baz=56,slow=14,SNR=4.2						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**8.04**	**205**	Pn	Pn	09 52 05.6	+0.7
	baz=27,slow=14,SNR=1.4						
	0.1nm,0.3s						

*IDC **18** 10:09:12.2±0.7, 54°.63N×161°.65E, h0km, mb4.0/18, mbtmp4.0/20, ML3.4/2, MS3.1/4, Error ellipse: s-maj=19.3km s-min=14.0km az=134.0*
*KRSC **18** 10:09:15.8±1.0, 54°.37N×161°.84E, h40km±11km, Ml4.5, Felt [III-IV] at kordon Kronoki.*
*MOS **18** 10:09:17.5±0.8, 54°.44N×161°.82E, h50km, mb4.1/7, Error ellipse: s-maj=7.5km s-min=4.1km az=79.1*
ISC 18 10:09:16.8±1.0, 54°.41N±0°.03×161°.85E±0°.03, h32km±6km, n132, σ1§62/188, mb4.1/26, 1D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.16**	**334**	PN	**Pb**	**10 09 23.6**	**+0.7**
MKZ	**Mys Kozlova**	**0.16**	**334**	*e*P	**Pb**	**10 09 23.7**	**+0.7**
TUMD	**Tumrok D**	**1.15**	**314**	PN	**Pn**	**10 09 36.6**	**-0.1**
TUMD				S	**Sn**	**10 09 51.4**	**0.0**
TUMD	**Tumrok D**	**1.15**	**314**	*e*P	**Pn**	**10 09 36.6**	**-0.1**
TUMD				*e*S	**Sn**	**10 09 51.5**	**0.0**
KII	**Karymskiy**	**1.46**	**256**	PN	**Pn**	**10 09 41.3**	**+0.4**
KII				S	**Sn**	**10 09 58.8**	**-0.2**
KII	**Karymskiy**	**1.46**	**256**	*e*P	**Pn**	**10 09 41.4**	**+0.4**
KII				*e*S	**Sn**	**10 09 58.9**	**-0.2**
KMNR	**Kamenistaya**	**1.63**	**326**	PN	**Pn**	**10 09 44.9**	**+1.5**
KMNR				S	**Sb**	**10 10 06.0**	**-0.6**
KMNR	**Kamenistaya**	**1.63**	**326**	*e*P	**Pn**	**10 09 44.9**	**+1.5**
KMNR				*e*S	**Sb**	**10 10 06.0**	**-0.6**
BZGR	**Bezymyannyi-Gr**	**1.67**	**337**	PN	**Pn**	**10 09 45.0**	**+1.2**
BZGR				S	**Sb**	**10 10 06.8**	**-0.8**
BZGR	**Bezymyannyi-Gr**	**1.67**	**337**	*e*P	**Pn**	**10 09 45.0**	**+1.2**
BZGR				*e*S	**Sb**	**10 10 06.8**	**-0.8**
BZP	**Bezymyannyi-Pe**	**1.68**	**334**	PN	**Pn**	**10 09 44.9**	**+0.9**
BZP	**Bezymyannyi-Pe**	**1.68**	**334**	*e*P	**Pn**	**10 09 45.0**	**+0.9**
SPN	**Mys Shipunski**	**1.71**	**220**	PN	**Pn**	**10 09 43.5**	**-0.8**
SPN				S	**Sn**	**10 10 02.4**	**-2.5**
SPN	**Mys Shipunski**	**1.71**	**220**	*e*P	**Pn**	**10 09 43.6**	**-0.8**
SPN				*e*S	**Sn**	**10 10 02.5**	**-2.5**
ZLN	**Zelenaya**	**1.71**	**340**	PN	**Pn**	**10 09 45.7**	**+1.2**
ZLN	**Zelenaya**	**1.71**	**340**	*e*P	**Pn**	**10 09 45.8**	**+1.2**
BZWR	**Bezymyannyi-We**	**1.74**	**334**	PN	**Pn**	**10 09 46.2**	**+1.4**
BZWR	**Bezymyannyi-We**	**1.74**	**334**	*e*P	**Pn**	**10 09 46.2**	**+1.4**
KIRR	**Kirishev**	**1.77**	**331**	PN	**Pn**	**10 09 46.6**	**+1.4**
KIRR	**Kirishev**	**1.77**	**331**	*e*P	**Pn**	**10 09 46.7**	**+1.4**
KPT	**Kopyto**	**1.81**	**330**	PN	**Pn**	**10 09 47.1**	**+1.3**
KPT	**Kopyto**	**1.81**	**330**	*e*P	**Pn**	**10 09 47.2**	**+1.3**
KBTR	**Krutoberegovo**	**1.88**	**17**	PN	**Pn**	**10 09 48.6**	**+1.9**
KBTR				S	**Sb**	**10 10 12.9**	**-0.7**
KBTR	**Krutoberegovo**	**1.88**	**17**	*e*P	**Pn**	**10 09 48.6**	**+1.9**
KBTR				*e*S	**Sb**	**10 10 12.9**	**-0.7**
KBG	**Krutoberegovo**	**1.91**	**14**	PN	**Pn**	**10 09 49.0**	**+2.0**
KBG				S	**Sb**	**10 10 13.9**	**-0.4**
KBG	**Krutoberegovo**	**1.91**	**14**	*e*P	**Pn**	**10 09 49.0**	**+2.0**
KBG				*e*S	**Sb**	**10 10 13.9**	**-0.4**
NLC	**Nalytchevo**	**1.94**	**231**	PN	**Pn**	**10 09 47.7**	**+0.3**
NLC				S	**Sn**	**10 10 10.1**	**-0.5**
NLC	**Nalytchevo**	**1.94**	**231**	*e*P	**Pn**	**10 09 47.7**	**+0.3**
NLC				*e*S	**Sn**	**10 10 10.1**	**-0.5**
KOZ	**Kozyrevsk**	**2.00**	**326**	PN	**Pn**	**10 09 49.8**	**+1.5**
KOZ				S	**Sb**	**10 10 14.7**	**-2.3**
KOZ	**Kozyrevsk**	**2.00**	**326**	*e*P	**Pn**	**10 09 49.9**	**+1.5**
KOZ				*e*S	**Sb**	**10 10 14.7**	**-2.3**
KLY	**Klyuchi**	**2.02**	**341**	PN	**Pn**	**10 09 49.5**	**+0.9**
KLY				S	**Sn**	**10 10 13.3**	**+0.6**
KLY	**Klyuchi**	**2.02**	**341**	*e*P	**Pn**	**10 09 49.5**	**+0.9**
KLY				*e*S	**Sn**	**10 10 13.3**	**+0.6**
SDLR	**Sedlovina**	**2.09**	**238**	PN	**Pn**	**10 09 51.1**	**+1.4**
SDLR				S	**Sn**	**10 10 15.4**	**+0.7**
SDLR	**Sedlovina**	**2.09**	**238**	*e*P	**Pn**	**10 09 51.2**	**+1.4**
SDLR				*e*S	**Sn**	**10 10 15.4**	**+0.7**
SMAR	**Somma**	**2.14**	**239**	PN	**Pn**	**10 09 51.6**	**+1.1**
SMAR				S	**Sn**	**10 10 15.6**	**-0.4**
SMAR	**Somma**	**2.14**	**239**	*e*P	**Pn**	**10 09 51.6**	**+1.1**
SMAR				*e*S	**Sn**	**10 10 15.7**	**-0.4**
KRER	**Koryakskii**	**2.15**	**240**	PN	**Pn**	**10 09 52.2**	**+1.7**
KRER				S	**Sn**	**10 10 17.6**	**+1.5**
KRER	**Koryakskii**	**2.15**	**240**	*e*P	**Pn**	**10 09 52.3**	**+1.7**
KRER				*e*S	**Sn**	**10 10 17.7**	**+1.5**
UGLR	**Uglovaya**	**2.16**	**237**	PN	**Pn**	**10 09 52.2**	**+1.6**
UGLR				S	**Sn**	**10 10 16.9**	**+0.6**
UGLR	**Uglovaya**	**2.16**	**237**	*e*P	**Pn**	**10 09 52.3**	**+1.6**
UGLR				*e*S	**Sn**	**10 10 17.0**	**+0.6**
KRX	**Arik**	**2.17**	**242**	PN	**Pn**	**10 09 52.1**	**+1.4**
KRX				S	**Sn**	**10 10 16.4**	**-0.2**
KRX	**Arik**	**2.17**	**242**	*e*P	**Pn**	**10 09 52.2**	**+1.4**
KRX				*e*S	**Sn**	**10 10 16.4**	**-0.2**
AVH	**Avacha**	**2.17**	**239**	PN	**Pn**	**10 09 52.6**	**+1.8**
AVH				S	**Sn**	**10 10 17.8**	**+1.2**
AVH	**Avacha**	**2.17**	**239**	*e*P	**Pn**	**10 09 52.6**	**+1.8**
AVH				*e*S	**Sn**	**10 10 17.9**	**+1.2**
SMKR	**Semkarok**	**2.18**	**354**	PN	**Pn**	**10 09 52.6**	**+1.7**
SMKR				S	**Sn**	**10 10 19.2**	**+2.3**
SMKR	**Semkarok**	**2.18**	**354**	*e*P	**Pn**	**10 09 52.7**	**+1.7**
SMKR				*e*S	**Sn**	**10 10 19.2**	**+2.3**
KOK	**Koryaka**	**2.21**	**241**	PN	**Pn**	**10 09 52.9**	**+1.6**
KOK				S	**Sn**	**10 10 18.3**	**+0.8**
KOK	**Koryaka**	**2.21**	**241**	*e*P	**Pn**	**10 09 52.9**	**+1.6**
KOK				*e*S	**Sn**	**10 10 18.3**	**+0.8**
SRDR	**Sredinnyy**	**2.26**	**328**	PN	**Pn**	**10 09 53.1**	**+1.2**
SRDR				S	**Sn**	**10 10 20.4**	**+1.7**
SRDR	**Sredinnyy**	**2.26**	**328**	*e*P	**Pn**	**10 09 53.2**	**+1.2**
SRDR				*e*S	**Sn**	**10 10 20.5**	**+1.7**
DALK	**Dalny**	**2.30**	**234**	PN	**Pn**	**10 09 53.5**	**+1.1**
DALK				S	**Sn**	**10 10 19.9**	**+0.3**
DALK	**Dalny**	**2.30**	**234**	*e*P	**Pn**	**10 09 53.5**	**+1.1**
DALK				*e*S	**Sn**	**10 10 20.0**	**+0.3**
INSR	**Institute**	**2.35**	**236**	PN	**Pn**	**10 09 54.2**	**+1.1**
INSR				S	**Sn**	**10 10 21.0**	**+0.1**
INSR	**Institute**	**2.35**	**236**	*e*P	**Pn**	**10 09 54.3**	**+1.1**
INSR				*e*S	**Sn**	**10 10 21.0**	**+0.1**
PET	**Petropavlovsk**	**2.36**	**235**	*d* PN	**Pn**	**10 09 55.0**	**+1.8**
PET				*i* S	**Sn**	**10 10 21.6**	**+0.7**
PET	**Petropavlovsk**	**2.36**	**235**	*e*P	**Pn**	**10 09 54.5**	**+1.3**
PET				*e*S	**Sn**	**10 10 20.2**	**-0.7**
ESO	**Esso**	**2.36**	**311**	PN	**Pn**	**10 09 54.2**	**+1.0**
ESO	**Esso**	**2.36**	**311**	*e*P	**Pn**	**10 09 54.3**	**+1.0**
GNL	**Ganaly**	**2.41**	**254**	PN	**Pn**	**10 09 55.6**	**+1.5**
GNL				S	**Sn**	**10 10 23.6**	**+1.0**
GNL	**Ganaly**	**2.41**	**254**	*e*P	**Pn**	**10 09 55.6**	**+1.5**
GNL				*e*S	**Sn**	**10 10 23.7**	**+1.0**
BKI	**Bering**	**2.51**	**70**	PN	**Pn**	**10 09 56.5**	**+1.2**
BKI				S	**Sn**	**10 10 24.4**	**-0.4**
BKI	**Bering**	**2.51**	**70**	*e*P	**Pn**	**10 09 56.5**	**+1.2**
BKI				*e*S	**Sn**	**10 10 24.5**	**-0.4**
KRMR	**Karymshinskiy**	**2.73**	**236**	PN	**Pn**	**10 10 00.3**	**+2.0**
KRMR				S	**Sn**	**10 10 31.3**	**+1.3**
KRMR	**Karymshinskiy**	**2.73**	**236**	*e*P	**Pn**	**10 10 00.3**	**+2.0**
KRMR				*e*S	**Sn**	**10 10 31.3**	**+1.3**
PEA0B	**Petropavlovsk-**	**2.79**	**244**	PN	**Pn**	**10 10 00.7**	**+1.5**
PEA0B				S	**Sn**	**10 10 33.5**	**+1.8**
PETK	**Petropavlovsk-**	**2.79**	**244**	Pn	**Pn**	**10 09 59.5**	**+0.3**
	14nm,0.3s,baz=66,slow=18,SNR=64						
PETK				Sn	**Sn**	**10 10 34.6**	**+2.9**
	18nm,0.3s,baz=7.0,slow=25,SNR=4.6						
PETK				LR	LR	10 11 19.0	
	comp=Z,142nm,21.9s,baz=62,slow=45						
	17nm,0.4s						
RUS	**Russkaya**	**2.81**	**227**	PN	**Pn**	**10 10 00.8**	**+1.3**
RUS				S	**Sn**	**10 10 33.2**	**+1.0**
RUS	**Russkaya**	**2.81**	**227**	*e*P	**Pn**	**10 10 00.8**	**+1.3**
RUS				*e*S	**Sn**	**10 10 33.3**	**+1.0**
MTVR	**Mutnovka**	**2.92**	**230**	PN	**Pn**	**10 10 02.4**	**+1.3**
MTVR				S	**Sn**	**10 10 35.1**	**-0.1**
MTVR	**Mutnovka**	**2.92**	**230**	*e*P	**Pn**	**10 10 02.4**	**+1.3**
MTVR				*e*S	**Sn**	**10 10 35.1**	**-0.1**
GRL	**Gorelyy**	**2.93**	**232**	PN	**Pn**	**10 10 04.0**	**+2.8**
GRL				S	**Sn**	**10 10 36.8**	**+1.6**
GRL	**Gorelyy**	**2.93**	**232**	*e*P	**Pn**	**10 10 04.0**	**+2.8**
GRL				*e*S	**Sn**	**10 10 36.8**	**+1.6**
ASAK	**Asacha**	**3.12**	**231**	PN	**Pn**	**10 10 06.3**	**+2.6**
ASAK				S	**Sn**	**10 10 42.9**	**+3.0**
ASAK	**Asacha**	**3.12**	**231**	*e*P	**Pn**	**10 10 06.4**	**+2.6**
ASAK				*e*S	**Sn**	**10 10 42.9**	**+3.0**
APC	**Apacha**	**3.17**	**244**	PN	**Pn**	**10 10 06.5**	**+2.2**
APC				S	**Sn**	**10 10 43.9**	**+3.1**
APC	**Apacha**	**3.17**	**244**	*e*P	**Pn**	**10 10 06.6**	**+2.2**
APC				*e*S	**Sn**	**10 10 44.0**	**+3.1**
KDTR	**Khodutka, Kamc**	**3.46**	**223**	PN	**Pn**	**10 10 10.2**	**+1.8**
KDTR				S	**Sn**	**10 10 48.1**	**-0.1**
KDTR	**Khodutka, Kamc**	**3.46**	**223**	*e*P	**Pn**	**10 10 10.2**	**+1.8**
KDTR				*e*S	**Sn**	**10 10 48.2**	**-0.1**
MIPR	**Malaya Ipel'ka**	**3.73**	**237**	PN	**Pn**	**10 10 15.5**	**+3.5**
MIPR	**Malaya Ipel'ka**	**3.73**	**237**	*e*P	**Pn**	**10 10 15.6**	**+3.5**
TIGL	**Tigil**	**3.80**	**333**	PN	**Pn**	**10 10 16.0**	**+3.0**
TIGL	**Tigil**	**3.80**	**333**	*e*P	**Pn**	**10 10 16.1**	**+3.0**
PAU	**Pauzhetka**	**4.24**	**228**	PN	**Pn**	**10 10 22.9**	**+3.8**
PAU	**Pauzhetka**	**4.24**	**228**	*e*P	**Pn**	**10 10 23.0**	**+3.8**
SKR	**Severo-Kuril's**	**5.12**	**225**	*e*PN	Pn	10 10 36.5	+5.4
SKR				*e*S	**Sn**	**10 11 35.3**	**+6.3**
SKR				smax	smax		
	comp=E,41nm,0.4s						
SKR				smax	smax		
	comp=N,136nm,0.7s						
SKR				MLR	MLR		
	comp=Z,2μm,14.0s						
SEY	**Seymchan**	**9.85**	**334**	*i* PN	**Pn**	**10 11 38.7**	**+2.7**
SEY				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BILL	**Bilibino**	**13.83**	**7**	*i* P	**Pn**	**10 12 34.4**	**+4.1**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YSS	**Yuzhno-Sakhali**	**14.19**	**246**	*i* P	**Pn**	**10 12 34.4**	**-0.9**
YSS				pmax	pmax

FINES	FINESS Array B	59.31	337	*e*P		P		10 19 14.1	-0.8
CMAR	Chiang Mai Arr	59.47	259	P		P		10 19 17.6	+1.0
	comp=Z,1.0nm,0.3s,baz=30,slow=6.9,SNR=5.2								
	comp=Z,1.0nm,0.3s								
NB2	NORSAR Subarra	62.56	344	P		P		10 19 36.0	-1.0
	comp=Z,0.5nm,0.5s,baz=23,slow=6.5								
NOA	NORSAR Array B	62.56	344	P		P		10 19 35.7	-1.2
	comp=Z,1.8nm,0.8s,baz=20,slow=6.6,SNR=4.6								
	comp=Z,1.8nm,0.8s								
HFS	Hagfors	63.00	343	P		P		10 19 38.8	-1.1
	comp=Z,1.8nm,0.5s,baz=57,slow=5.5,SNR=6.3								
	comp=Z,1.8nm,0.5s								
TXAR	Lajitas Array	69.17	69	P		P		10 20 21.9	+1.8
	comp=Z,0.9nm,0.6s,baz=293,slow=5.3,SNR=19								
	comp=Z,0.9nm,0.6s								
KBZ	Khabaz	69.28	317	P		P		10 20 20.0	-0.4
	comp=Z,1.9nm,0.8s,baz=104,slow=5.3,SNR=5.2								
	comp=Z,1.9nm,0.8s								
KBZ	Khabaz	69.28	317	*i* P		P		10 20 20.3	-0.1
KBZ					pmax		pmax		
	comp=Z,2.0nm,0.9s								
EKA	Eskdalemuir Ar	69.92	351	P		P		10 20 23.9	-0.3
	comp=Z,1.4nm,0.6s,baz=23,slow=6.3,SNR=4.7								
	comp=Z,1.4nm,0.6s								
GERES	GERESS Array B	73.67	339	P		P		10 20 46.5	-0.5
	comp=Z,0.4nm,0.5s,baz=46,slow=3.9,SNR=3.7								
	comp=Z,0.4nm,0.5s								
KBA	Koelnbreinsper	75.42	338	*i* P		P		10 20 57.7	+0.5
	comp=Z,1.2nm,0.4s								
OBKA	Obir	75.70	337	*i* P		P		10 20 59.0	+0.3
	comp=Z,1.5nm,0.5s								
FETA	Feichten	76.02	340	*e*P		P		10 21 01.2	+0.6
	comp=Z,0.6nm,0.4s								
WRA	Warramunga Arr	77.72	206	P		P		10 21 10.9	+0.7
	comp=Z,1.4nm,0.6s,baz=20,slow=5.5,SNR=14								
	comp=Z,1.4nm,0.6s								
WRA	Warramunga Arr	77.72	206	*i* P		P		10 21 10.8	+0.7
WRA					pmax		pmax		
	comp=Z,2.0nm,0.7s								
ASAR	Alice Springs	81.40	206	P		P		10 21 31.3	+1.2
	comp=Z,1.6nm,0.8s,baz=15,slow=5.6,SNR=19								
	comp=Z,1.6nm,0.8s								
QSPA	South Pole Qui	144.16	180	PKP		PKPab		10 28 45.7	+0.2
	comp=Z,2.4nm,0.7s,baz=326,slow=0.9,SNR=14								

NNC ***18*** *10:15:32.9±1.2,41.7°63N×73.3°32E, h24km±5km, mb3.6, mpv2.9, Error ellipse: s-maj=10.7km s-min=5.7km az=173.0*

KRNET ***18*** *10:15:33.9±0.1,41.7°78N×73.3°39E, h23km, mb2.0*

SOME ***18*** *10:15:33.1,41.80N×73.35E, h0km*

ISC 18 10:15:32.6±1.6, 41.75N±0.05×73.33E±0.05, h13km±12km, n16, σ0.75/26, 10C-2D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARLS	Aral	0.75	81	⇑*i*P	Pb	10 15 47.5	0.0
ARLS				⇑*i*S	Sb	10 15 57.6	-0.1
SALK	Salom-Alik	0.94	157	⇑*i*P	Pn	10 15 51.8	+0.3
SALK				⇑*i*S	Sn	10 16 04.9	0.0
MNAS	Manas	0.96	321	⇑*i*P	Pn	10 15 51.8	-0.1
MNAS				⇑*i*S	Sn	10 16 05.1	-0.4
MRKS	Merke	1.00	356	P	Pn	10 15 52.4	0.0
	3.0nm,0.2s						
MRKS				S	Sn	10 16 07.5	+1.0
	3.8nm,0.3s						
MRKS	Merke	1.00	356	*e*P	Pn	10 15 52.4	0.0
	3.0nm,0.2s						
MRKS				*e*S	Sn	10 16 06.1	-0.3
	3.8nm,0.3s						
UCH	Uchtor	1.00	61	⇑*i*P	Pg	10 15 51.7	-0.3
UCH				⇑*i*S	Sg	10 16 04.8	-0.4
AAK	Ala-Archa	1.24	44	⇓P	Pg	10 15 56.3	-0.2
	1.0nm,0.6s						
AAK				⇑S	Sg	10 16 13.3	+0.7
	1.1nm,0.6s						
SGDS	Sogindy	1.96	29	Pg	Pg	10 16 10.8	+0.7
	2.9nm,0.4s						
SGDS				Lg	Lg	10 16 38.8	
	2.4nm,0.4s						
KST	Kastek	2.34	55	Pg	Pg	10 16 17.6	+0.1
	3.4nm,0.3s						
KST				Lg	Lg	10 16 50.6	
	16nm,0.6s						
KST	Kastek	2.34	55	*e*P	Pg	10 16 17.6	+0.1
	3.4nm,0.3s						
KST				*e*S	Sg	10 16 49.5	+1.7
	16nm,0.6s						
DGS	Degeres	2.34	50	Pg	Pg	10 16 16.9	-0.5
	7.1nm,0.5s						
DGS				Lg	Lg	10 16 50.0	
	6.8nm,0.6s						
DGS	Degeres	2.34	50	*e*P	Pg	10 16 16.9	-0.5
	7.1nm,0.5s						
DGS				*e*S	Sg	10 16 48.7	+0.8
	6.8nm,0.6s						
KK31	Karatay Array	2.49	304	⇑Pg	Pg	10 16 20.2	-0.1
	1.2nm,0.2s,baz=131,slow=17						
KK31				⇓Lg	Lg	10 16 55.2	
	1.3nm,0.5s,baz=125,slow=30						
KRBS	Karabastau	2.60	41	Pg	Pg	10 16 21.0	-1.5
	3.9nm,0.2s						
KRBS				Lg	Lg	10 16 57.0	
	1.1nm,0.4s						
KRBS	Karabastau	2.60	41	*e*P	Pg	10 16 21.0	-1.5
	3.9nm,0.2s						
KRBS				*e*S	Sg	10 16 56.0	-0.2
	1.1nm,0.4s						
MDOK	Medeo	3.09	62	Pg	Pg	10 16 30.9	-1.0
	5.5nm,0.3s						
MDOK				Lg	Lg	10 17 13.8	
	10nm,0.7s						

IDC ***18*** *10:21:47.2±1.6,54.7°74N×161.7°54E, h0km, mb3.4/3, mbtmp3.4/4, ML2.4/1, Error ellipse: s-maj=54.0km s-min=23.8km az=146.0*

KRSC ***18*** *10:21:49.3±0.9,54.7°38N×161.7°83E, h36km±9km, Ml4.0*

ISC 18 10:21:50.8±1.2, 54.42N±0.03×161.84E±0.04, h30km±9km, n46, σ1.9/20/68, mb3.2/3, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	Mys Kozlova	0.15	335	*e*P	Pn	10 21 57.2	+0.1
MKZ				*e*S	Sb	10 22 00.6	+0.1
TUMD	Tumrok D	1.15	314	*e*P	Pn	10 22 10.0	-0.8
TUMD				*e*S	Sn	10 22 24.4	-1.1
KII	Karymskiy	1.46	256	*e*P	Pn	10 22 14.8	-0.3
KII				*e*S	Sn	10 22 32.4	-0.8
KMNR	Kamenistaya	1.62	326	*e*P	Pn	10 22 18.0	+0.5
KMNR				*e*S	Sn	10 22 37.4	0.0
BZGR	Bezymyannyi-Gr	1.66	337	*e*P	Pn	10 22 18.7	+0.8
SPN	Mys Shipunski	1.71	220	*e*P	Pn	10 22 17.2	-1.3
SPN				*e*S	Sn	10 22 35.8	-3.5
KPT	Kopyto	1.81	330	*e*P	Pn	10 22 21.0	+1.0
KBTR	Krutoberegovo	1.88	17	*e*P	Pn	10 22 22.1	+1.3
KBTR				*e*S	Sb	10 22 46.1	-1.4
KBG	Krutoberegovo	1.91	15	*e*P	Pn	10 22 22.8	+1.6
KBG				*e*S	Sb	10 22 46.9	-1.3
NLC	Nalytchevo	1.94	231	*e*P	Pn	10 22 22.3	+0.6
KRSR	Krestovskiy	1.94	339	*e*S	Sn	10 22 47.3	+2.0
KOZ	Kozyrevsk	1.99	326	*e*P	Pn	10 22 23.5	+1.1
KOZ				*e*S	Sn	10 22 46.9	+0.6
KLY	Klyuchi	2.02	341	*e*P	Pn	10 22 23.0	+0.3
KLY				*e*S	Sn	10 22 46.8	-0.1
SDLR	Sedlovina	2.09	238	*e*P	Pn	10 22 24.3	+0.4
SDLR				*e*S	Sn	10 22 48.4	-0.6
SMAR	Somma	2.14	238	*e*P	Pn	10 22 25.5	+0.8
SMAR				*e*S	Sn	10 22 49.4	-0.9
KRER	Koryakskii	2.14	240	*e*P	Pn	10 22 25.8	+1.0
KRER				*e*S	Sn	10 22 50.9	+0.5
UGLR	Uglovaya	2.16	237	*e*P	Pn	10 22 25.4	+0.6
UGLR				*e*S	Sn	10 22 51.0	+0.4
KRX	Arik	2.17	242	*e*P	Pn	10 22 25.8	+0.8
KRX				*e*S	Sn	10 22 51.8	+0.9
AVH	Avacha	2.17	239	*e*P	Pn	10 22 25.7	+0.7
AVH				*e*S	Sn	10 22 51.6	+0.8
SMKR	Semkarok	2.18	355	*e*P	Pn	10 22 26.0	+1.0
SMKR				*e*S	Sb	10 22 53.6	-2.6
BDR	Baidarnaya	2.18	351	*e*S	Sn	10 22 53.7	+2.5
KOK	Koryaka	2.21	241	*e*P	Pn	10 22 26.2	+0.7
KOK				*e*S	Sn	10 22 52.0	+0.1
SRDR	Sredinnyy	2.25	328	*e*P	Pn	10 22 26.7	+0.6
DALK	Dalny	2.30	234	*e*P	Pn	10 22 26.5	-0.1
DALK				*e*S	Sn	10 22 53.5	-0.4
ESO	Esso	2.35	311	*e*P	Pn	10 22 27.5	+0.2
INSR	Institute	2.35	236	*e*S	Sn	10 22 55.4	+0.3
PET	Petropavlovsk	2.35	235	*e*P	Pn	10 22 28.4	+1.0
PET				*e*S	Sn	10 22 54.6	-0.6
GNL	Ganaly	2.41	254	*e*P	Pn	10 22 29.4	+1.1
GNL				*e*S	Sn	10 22 58.3	+1.5
BKI	Bering	2.52	70	*e*P	Pn	10 22 30.1	+0.5
BKI				*e*S	Sn	10 22 58.6	-0.7
KRMR	Karymshinskiy	2.72	236	*e*P	Pn	10 22 33.9	+1.5
KRMR				*e*S	Sn	10 23 05.3	+1.0
PETK	Petropavlovsk-	2.79	244	Pn	Pn	10 22 33.5	+0.2
	2.7nm,0.3s,baz=60,slow=17,SNR=25						
PETK				Sn	Sn	10 23 08.4	+2.5
	7.1nm,0.3s,baz=74,slow=31,SNR=9.2						
	3.4nm,0.3s						
RUS	Russkaya	2.81	226	*e*P	Pn	10 22 35.4	+1.7
RUS				*e*S	Sn	10 23 07.1	+0.5
MTVR	Mutnovka	2.92	230	*e*P	Pn	10 22 36.8	+1.4
MTVR				*e*S	Sn	10 23 10.1	+0.6
GRL	Gorelyy	2.93	232	*e*P	Pn	10 22 36.8	+1.5
GRL				*e*S	Sn	10 23 10.5	+1.0
ASAK	Asacha	3.12	231	*e*P	Pn	10 22 39.7	+1.7
ASAK				*e*S	Sn	10 23 15.4	+1.2
APC	Apacha	3.16	244	*e*P	Pn	10 22 40.4	+1.9
KDTR	Khodutka, Kamc	3.46	222	*e*P	Pn	10 22 44.1	+1.5
KDTR				*e*S	Sn	10 23 22.6	+0.1
ILAR	Eielson Array	27.15	47	P	P	10 27 31.7	+0.7
	0.3nm,0.8s,baz=276,slow=8.4,SNR=2.2						
	0.3nm,0.8s						
H11N2	WAKE ISLAND Hy	34.84	172	T	T	11 05 46.8	
	baz=354,slow=76,SNR=475						
H11N3	WAKE ISLAND Hy	34.86	172	T	T	11 05 47.9	
	baz=354,slow=76,SNR=390						
H11N1	WAKE ISLAND Hy	34.86	172	T	T	11 05 48.9	
	baz=354,slow=76,SNR=413						
H11S1	WAKE ISLAND Hy	36.04	172	T	T	11 07 11.3	
	baz=352,slow=76,SNR=23						
H11S3	WAKE ISLAND Hy	36.05	172	T	T	11 07 15.7	
	baz=352,slow=76,SNR=14						
H11S2	WAKE ISLAND Hy	36.06	172	T	T	11 07 17.2	
	baz=352,slow=76,SNR=15						
FINES	FINESS Array B	59.31	337	P	P	10 31 47.4	-1.8
	1.2nm,0.5s,baz=25,slow=6.3,SNR=8.0						
	1.2nm,0.5s						
TXAR	Lajitas Array	69.17	69	P	P	10 32 55.2	+0.7
	0.1nm,0.5s,baz=317,slow=6.2,SNR=1.8						
	0.1nm,0.5s						

IDC ***18*** *10:26:18.2±2.1,7.67S×129.66E, h0km, mb4.0/1, mbtmp3.9/5, ML3.6/4, MS3.2/2, Error ellipse: s-maj=37.6km s-min=26.6km az=89.0*

ISC 18 10:26:23.2±1.1, 7.62S±0.08×129.46E±0.10, h79km, n8, σ1.58/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	6.28	245	Pn	Pn	10 27 55.1	+1.8
	28nm,0.3s,baz=116,slow=0.3,SNR=13						
BATI				Sn	Sn	10 29 02.1	-1.6
	8.7nm,0.3s,baz=32,slow=22,SNR=5.9						
SIJI	Sorong	6.94	15	Pn	Pn	10 28 01.3	-1.1
	0.6nm,0.3s,baz=217,slow=20,SNR=7.8						
SIJI				Sn	Sn	10 29 10.5	-9.4
	2.0nm,0.3s,baz=220,slow=22,SNR=7.7						
	2.1nm,0.3s						
FITZ	Fitzroy Crossi	11.06	199	Pn	Pn	10 28 59.4	+0.8
	0.4nm,0.3s,baz=13,slow=12,SNR=20						
FITZ				Sn	Sn	10 30 57.9	-2.6
	1.4nm,0.3s,baz=88,slow=16,SNR=12						
	0.8nm,0.3s						
WRA	Warramunga Arr	13.13	159	Pn	Pn	10 29 26.1	-0.5
	0.3nm,0.3s,baz=341,slow=12,SNR=35						
WRA				Sn	Sn	10 31 51.0	+0.1
	0.8nm,0.3s,baz=332,slow=23,SNR=8.2						
	0.4nm,0.4s						
ASAR	Alice Springs	16.52	166	Pn	P	10 30 12.0	+0.6
	1.2nm,0.3s,baz=343,slow=10,SNR=148						
ASAR				Sn	Sn	10 33 12.6	-0.4
	0.2nm,0.3s,baz=345,slow=25,SNR=5.1						
	4.7nm,0.5s						
LEM	Lembang	21.69	271	LR	LR	10 41 07.3	
	comp=Z,30nm,18.5s,baz=188,slow=41						
STKA	Stephens Creek	26.65	157	P	P	10 31 56.1	+1.4
	0.9nm,0.4s,baz=312,slow=12,SNR=3.5						
	0.9nm,0.4s						
FURI	Furi	91.93	279	LR	LR	11 20 51.7	
	comp=Z,20nm,18.1s,baz=88,slow=36						

CATAC ***18*** *10:30:07.3±0.3, 11°N±2°×8°6W±°, h156km±2km, M3.2/24, MLv3.2/24, Error ellipse: s-maj=5.9km s-min=2.5km az=57.7, confirmed*

UCR ***18*** *10:30:11.0±3.0, 11.02N×86.60W, h33km±25km, MW3.6, Presumed earthquake*

ISC 18 10:30:07.1±1.5, 11.45N±0.04×85.85W±0.06, h164km±8km, n87, σ0.77/117, 29C-7D, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAPN	AI SSO del Vol	0.19	66	⇑P	Pn	10 30 29.4	+0.4
JAPN	AI SSO del Vol	0.19	66	⇑*i*P	Pn	10 30 29.6	+0.5
MORN	AI O del Volca	0.22	64	P	Pn	10 30 29.1	0.0
OMEN	AI SSO del Vol	0.23	75	P	Pn	10 30 28.9	-0.2
CONN	Concepcion	0.25	63	⇑P	Pn	10 30 29.2	0.0
NADN	Granada	0.35	329	P	Pn	10 30 29.3	-0.1
NADN				S	Sn	10 30 47.3	+0.8
NADN	Granada	0.35	329	⇑*e*P	Pn	10 30 29.3	-0.1
CARN	Rivas	0.41	129	⇑P	Pn	10 30 29.8	+0.1
CARN				S	Sn	10 30 47.8	+0.9
CARN	Rivas	0.41	129	⇑*i*P	Pn	10 30 29.8	+0.1
CARN				*e*S	Sn	10 30 47.3	+0.4
LCRUZ	La Cruz	0.43	149	*e*P	Pn	10 30 29.6	-0.2
MAS3	AI N del Volca	0.65	331	P	Pn	10 30 30.7	-0.1
MAS3				S	Sn	10 30 49.9	+0.8
PEJA	Penjamo Buenos	0.76	136	⇓*e*P	Pn	10 30 32.0	+0.5
BUAI	Buenos Aires	0.76	138	⇑*e*P	Pn	10 30 32.0	+0.5
BUAI				*e*S	Sn	10 30 50.5	+0.2
LAPC	Finca la Perla	0.79	149	⇑*e*P	Pn	10 30 31.7	0.0
MGAN	Managua	0.79	331	P	Pn	10 30 31.5	-0.2
MGAN				S	Sn	10 30 51.1	+0.5
MGAN	Managua	0.79	331	⇑*i*P	Pn	10 30 31.8	+0.1
VORI	VORI	0.80	142	*e*P	Pn	10 30 33.0	+1.0
TISN	Laguna Tiscapa	0.80	329	⇑P	Pn	10 30 31.8	+0.1
VRLE	La Escondida,	0.81	144	⇑*e*P	Pn	10 30 32.2	+0.2
GPS1	Guardaparques	0.83	144	⇑*e*P	Pn	10 30 32.4	+0.3
GPS3	Bodega del ICE	0.84	145	⇓*i*P	Pn	10 30 34.5	+2.4
ACON	Acoyapa	0.84	52	P	Pn	10 30 32.0	0.0
ACON				S	Sn	10 30 50.3	-0.8
GPS2	Hotel Rincn d	0.85	145	⇑*e*P	Pn	10 30 32.3	+0.1
ELI1	Hacienda Flor	0.85	160	P	Pn	10 30 32.4	+0.3
ELI1				S	Sn	10 30 51.9	+0.6
ELI1	Hacienda Flor	0.85	160	⇑*e*P	Pn	10 30 32.5	+0.4
ELI1				*e*S	Sn	10 30 51.4	+0.1
ALIBA	Liberia Airpor	0.90	161	*e*P	Pn	10 30 33.0	+0.5
ERIA	Liberia	0.91	153	⇑*i*P	Pn	10 30 32.8	+0.3
CLARA	Aguas Claras	0.94	135	⇑*i*P	Pn	10 30 33.1	+0.3
CLARA				*e*S	Sn	10 30 52.5	0.0
MESS	Mesas	0.95	137	⇑*i*P	Pn	10 30 33.1	+0.2
APQ3	Volcan Apoyequ	0.96	328	P	Pn	10 30 33.3	+0.4
APQ3				S	Sn	10 30 52.7	-0.1
VMAR	Armenia, Volca	0.96	131	⇑*e*P	Pn	10 30 33.1	+0.2
VMAR				*e*S	Sn	10 30 52.5	-0.3
HORNC	Hornillas	0.99	138	⇑*i*P	Pn	10 30 33.5	+0.3
COLC	Colonia	1.01	141	*e*P	Pn	10 30 33.6	+0.3
BOAB	BOACO BROADBAN	1.01	10	⇑P	Pn	10 30 33.3	0.0
BOAB				S	Sn	10 30 52.6	-0.9
COPN	Copaltepe	1.03	315	P	Pn	10 30 33.1	-0.3
COPN	Copaltepe	1.03	315	*e*P	Pn	10 30 32.4	-1.0
CUI	Cuipilapa	1.04	139	⇑*i*P	Pn	10 30 34.0	+0.4
CUI				*e*S	Sn	10 30 53.9	+0.1
DELF	Filadelfia	1.04	164	*e*P	Pn	10 30 33.8	+0.3
BAGA	Bagaces	1.08	148	⇑*i*P	Pn	10 30 34.2	+0.3
BAGA				*e*S	Sn	10 30 53.8	-0.7
ELVJ	El Viejo (Barb	1.12	152	*e*P	Pn	10 30 34.4	+0.2
TENO	El Achiote	1.13	131	*e*P	Pn	10 30 34.7	+0.3
MOM2	El Cardon	1.16	328	S	Sn	10 30 55.7	0.0
TIMP	Tierras Morena	1.19	136	⇑*i*P	Pn	10 30 35.1	+0.3
TIMP				*e*S	Sn	10 30 55.4	-0.8
PLVR	Palo Verde	1.20	156	*e*P	Pn	10 30 35.2	+0.1
QUEB	Quebradon, Cot	1.25	131	*e*P	Pn	10 30 35.0	-0.4
TILA	Tilaran	1.30	138	*e*P	Pn	10 30 34.3	-1.6
TILA				*e*S	Sn	10 30 55.7	-2.4
JUD3	Juan Diaz 3	1.31	166	⇓*e*P	Pn	10 30 36.2	+0.2
CNGN	Cerro Negro	1.33	322	S	Sn	10 30 58.4	-0.1
NICO	Nicoya	1.36	163	⇓*i*P	Pn	10 30 36.7	+0.2
TABAC	Tabacon	1.42	131	*e*P	Pn	10 30 37.9	+0.8
JTS	Las Juntas de	1.45	142	⇑P	Pn	10 30 37.2	-0.1
JTS				S	Sn	10 30 59.8	-0.7
JTS	Las Juntas de	1.45	142	*e*P	Pn	10 30 37.0	-0.3
JUNT	Juntas	1.45	143	*e*P	Pn	10 30 37.3	0.0
MATN	Matagalpa	1.47	357	P	Pn	10 30 36.9	-0.7
MATN				S	Sn	10 31 00.3	-0.8
CEDE	Laguna Cedeo	1.48	130	*e*P	Pn	10 30 38.3	+0.7
CMARA	Lajas Hojancha	1.48	163	P	Pn	10 30 37.8	+0.2
CMARA				S	Sn	10 30 59.8	-1.4
CMARA	Lajas Hojancha	1.48	163	⇓*e*P	Pn	10 30 37.8	+0.2
ARE1	Arenal 1	1.48	131	⇑*i*P	Pn	10 30 38.3	+0.7
ARE1				*e*S	Sn	10 31 01.3	+0.2
VARE2	V. Arenal	1.48	131	⇑*e*P	Pn	10 30 38.4	+0.7
VARE2				*e*S	Sn	10 31 01.0	-0.2
HERN	Volcan Telica	1.50	320	P	Pn	10 30 38.1	+0.3
HERN				S	Sn	10 31 01.4	-0.1
VACR	Volcan Arenal	1.51	130	⇑*i*P	Pn	10 30 38.5	+0.6
VACR				*e*S	Sn	10 31 01.8	+0.3
FORC	Fortuna	1.52	130	*e*P	Pn	10 30 38.5	+0.6
COVE	Coope Vega, Sa	1.60	117	P	Pn	10 30 38.2	-0.5
INDI	Punta indio, G	1.61	168	S	Sn	10 31 02.8	-0.5
LIMN	Finca el Limon	1.68	343	⇓P	Pn	10 30 39.9	+0.2
LIMN				S	Sn	10 31 04.8	-0.1
CRIN	San Cristobal	1.71	317	S	Sn	10 31 04.8	-0.5
JCR1	Jicaral	1.75	155	*e*P	Pn	10 30 40.8	+0.5
QUEU	Ciudad Quesada	1.79	129	⇑P	Pn	10 30 41.2	+0.4
ARZA	Esparza	1.86	141	*e*P	Pn	10 30 42.7	+1.2
ARZA				*e*S	Sn	10 31 07.2	-0.9
RCON	San Juan de Ri	2.04	352	P	Pn	10 30 44.2	+0.5
RCPN	Sur Rio San Ju	2.08	353	S	Sn	10 31 11.6	-1.1
RCVN	Varillal2	2.15	351	⇑P	Pn	10 30 45.5	+0.5
RCVN				S	Sn	10 31 14.4	+0.2
SANTA	Santa Ana	2.23	132	*e*P	Pn	10 30 53.4	+7.6
OCON	Estacion meteo	2.25	344	P	Pn	10 30 46.6	+0.6
CSGN	Cosiguina Volc	2.26	312	S	Sn	10 31 15.2	-1.1
ACOS	Acosta	2.33	135	*e*P	Pn	10 30 47.9	+0.8
LCR2	La Lucha 2	2.48	133	S	Sn	10 31 20.7	-0.6
SIUN	Universidad Ur	2.49	25	P	Pn	10 30 48.6	-0.2
SIUN				S	Sn	10 31 20.7	-0.4
ABRB	Las Abras (San	2.54	124	*e*P	Pn	10 30 53.4	+3.7
RESJ	San Isidro (Tu	2.59	123	*e*P	Pn	10 30 51.8	+1.7
PIEC	Cerro El Cedra	2.60	134	*e*P	Pn	10 30 51.3	+0.9
YUSH	Yuscaran	2.67	339	⇓P	Pn	10 30 52.0	+0.9
YUSH				S	Sn	10 31 25.6	+0.4
BUS1	Rivas	2.80	132	*e*P	Pn	10 30 54.1	+1.1
SAJE	San Jernim	3.11	132	*e*P	Pn	10 30 56.9	+0.3
OCHAL	Ojochal	3.19	137	P	Pn	10 30 57.9	+0.5
OCHAL				S	Sn	10 31 35.5	-1.0
EDPE	Pejibaye, P	3.20	135	*e*P	Pn	10 30 58.9	+1.4
DRK0	Durika	3.36	130	P	Pn	10 30 58.2	-1.6
DRK0				S	Sn	10 31 39.1	-1.6

DNK ***18*** *10:31:45.3±4.3, 61.9°97N×20.5°35W, h15km, ML3.0, Presumed earthquake*

REY ***18*** *10:32:05.6, 63.84N×22.73W, h6km*

IDC ***18*** *10:32:06.3±0.8, 64.01N×22.75W, h0km, mb3.7/12, mbtmp3.8/17, ML3.4/5, MS3.8/36, Error ellipse: s-maj=17.7km s-min=9.5km az=151.0*

NEIC ***18*** *10:32:07.8±1.9, 64.05N±0.07×22.8W±0.2, h10km±2km, mb4.2/6, Error ellipse: s-maj=16.6km s-min=7.1km az=133.0*

ISC 18 10:32:06.3±0.7, 63.87N±0.03×22.59W±0.02, h8km±4km, n93, σ1.88/88, mb3.9/15, MS3.8/32, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGRV	Grindav??k	0.06	101	P	Pg	10 32 08.4	+0.3
IGRV				S	Sg	10 32 10.4	+1.0
IRNE	Reykjanes	0.07	226	P	Pg	10 32 06.9	-1.4
IRNE				S	Sg	10 32 07.8	-2.0
INYL	Nylenda	0.13	327	P	Pg	10 32 08.6	-0.5
INYL				S	Sg	10 32 10.8	-0.3
IVOG	Vogar	0.13	40	P	Pg	10 32 09.6	+0.4
IVOG				S	Sg	10 32 12.7	+1.5
IKRI	Krysuvik	0.23	87	P	Pg	10 32 11.2	+0.3
IKRI				S	Sg	10 32 15.5	+1.5
IKAS	Kald??rsel	0.36	64	P	Pg	10 32 13.5	+0.2
IKAS				S	Sb	10 32 19.7	-1.0
IVOS	Vogsosar	0.39	92	P	Pg	10 32 14.0	0.0
IVOS				S	Sg	10 32 20.6	+1.5
ISAN	Sandskeio	0.49	67	P	Pg	10 32 15.6	-0.1
ISAN				S	Sg	10 32 23.4	+1.3

ARCES				LR	LR	10 42 20.1		
	comp=Z,247nm,18.5s,baz=244,slow=32 comp=Z,5.5nm,1.0s							
FRB	**Frobisher Bay**	**19.95**	**290**	P	**P**	**10 36 37.2**	**-1.1**	
	comp=Z,0.1nm,0.3s,baz=68,slow=10,SNR=5.6							
FRB				LR	LR	10 43 43.6		
	comp=Z,229nm,20.2s,baz=82,slow=35 comp=Z,5.0nm,1.0s							
POIN	**Pond Inlet**	**21.44**	**318**	P	**P**	**10 36 54.1**	**-0.2**	
POIN				IAmb	IAmb	10 37 04.9		
	comp=Z,12nm,1.4s							
FINES	**FINESS Array B**	**22.05**	**74**	P	**P**	**10 37 03.2**	**+2.2**	
	comp=Z,2.8nm,0.7s,baz=311,slow=7.3,SNR=4.5							
FINES				LR	LR	10 44 12.4		
	comp=Z,198nm,19.6s,baz=271,slow=33 comp=Z,2.8nm,0.7s							
FINES	**FINESS Array B**	**22.05**	**74**	P	**P**	**10 37 02.2**	**+1.3**	
FIA1	**FINESS Array S**	**22.05**	**74**	P	**P**	**10 37 02.2**	**+1.3**	
KUQ	**Kuujjuuaa**	**22.54**	**277**	P	**P**	**10 37 07.1**	**+0.9**	
KUQ				IAmb	IAmb	10 37 19.5		
	comp=Z,17nm,1.3s							
ILON	**Igloolik, Nuna**	**23.27**	**310**		**P**	**10 37 14.1**	**+0.3**	
ILON				IAmb	IAmb	10 37 22.0		
	comp=Z,8.0nm,1.1s							
SCHQ	**Schefferville**	**23.82**	**269**	P	**P**	**10 37 18.9**	**-0.5**	
	comp=Z,4.4nm,0.7s,baz=52,slow=5.6,SNR=17							
SCHQ				LR	LR	10 45 04.9		
	comp=Z,50nm,20.2s,baz=37,slow=33 comp=Z,4.4nm,0.7s							
SCHQ	**Schefferville**	**23.82**	**269**	P	**P**	**10 37 18.9**	**-0.5**	
SCHQ				IAmb	IAmb	10 37 20.9		
	comp=Z,4.8nm,0.7s							
GERES	**GERESS Array B**	**24.64**	**110**	LR	LR	10 48 48.6		
	comp=Z,243nm,19.2s,baz=335,slow=40							
DAVOX	**Davos/Dischmat**	**24.76**	**118**	LR	LR	10 46 21.4		
	comp=Z,178nm,20.1s,baz=255,slow=34							
VRAC	**Vranov**	**25.50**	**106**	LR	LR	10 47 15.5		
	comp=Z,150nm,19.5s,baz=342,slow=36							
ESDC	**Sonseca Array**	**26.62**	**147**	P	**P**	**10 37 47.5**	**+2.5**	
	comp=Z,1.9nm,1.1s,baz=336,slow=9.9,SNR=2.6 comp=Z,1.9nm,1.1s							
AKASG	**Malin Array Be**	**29.99**	**91**	LR	LR	10 48 39.7		
	comp=Z,164nm,20.8s,baz=292,slow=33							
SADO	**Sadowa**	**36.57**	**266**	LR	LR	10 51 19.8		
	comp=Z,118nm,19.3s,baz=340,slow=30							
YKA	**Yellowknife Ar**	**38.11**	**311**	P	**P**	**10 39 25.5**	**+0.4**	
	comp=Z,0.7nm,0.8s,baz=44,slow=9.1,SNR=12							
YKA				LR	LR	10 54 55.9		
	comp=Z,154nm,18.6s,baz=315,slow=36 comp=Z,0.7nm,0.8s							
ARTI	**Arti**	**38.39**	**62**	LR	LR	10 54 56.1		
	comp=Z,101nm,18.6s,baz=28,slow=36							
ULM	**Lac du Bonnet**	**39.72**	**286**	LR	LR	10 55 15.9		
	comp=Z,113nm,18.5s,baz=21,slow=35							
KBZ	**Khabaz**	**41.34**	**87**	LR	LR	10 56 09.1		
	comp=Z,139nm,19.6s,baz=335,slow=35							
AKTO	**Aktyubinsk**	**42.65**	**69**	LR	LR	10 57 20.0		
	comp=Z,262nm,18.2s,baz=222,slow=36							
GNI	**Garni**	**45.03**	**88**	LR	LR	10 58 26.8		
	comp=Z,74nm,18.9s,baz=332,slow=35							
ILAR	**Eielson Array**	**45.32**	**330**	P	**P**	**10 40 24.1**	**0.0**	
	comp=Z,0.4nm,0.6s,baz=25,slow=7.5,SNR=4.3 comp=Z,0.4nm,0.6s							
BVAR	**Borovoye Array**	**45.52**	**58**	P	**P**	**10 40 28.2**	**+2.4**	
	comp=Z,1.1nm,0.8s,baz=305,slow=5.2,SNR=4.4 comp=Z,1.1nm,0.8s							
TKL	**Tuckaleechee C**	**46.04**	**262**	LR	LR	10 58 43.0		
	comp=Z,121nm,19.1s,baz=42,slow=35							
DLBC	**Dease Lake**	**46.15**	**316**	P	**P**	**10 40 31.5**	**+0.7**	
	comp=Z,1.5nm,0.9s,baz=8.0,slow=12,SNR=4.1							
DLBC				LR	LR	10 58 49.3		
	comp=Z,65nm,18.4s,baz=21,slow=35 comp=Z,1.5nm,0.9s							
MMAI	**Mount Meron Ar**	**46.89**	**103**	LR	LR	11 02 36.9		
	comp=Z,35nm,18.6s,baz=290,slow=39							
EIL	**Elat**	**49.58**	**105**	LR	LR	11 06 08.0		
	comp=Z,37nm,19.7s,baz=56,slow=41							
NEW	**Newport**	**49.93**	**300**	LR	LR	11 00 39.5		
	comp=Z,100nm,19.3s,baz=56,slow=34							
KURK	**Kurchatov**	**50.40**	**54**	P	**P**	**10 41 04.3**	**+0.8**	
KURBB	**Kurchatov Arra**	**50.45**	**54**	P	**P**	**10 41 05.4**	**+1.5**	
	comp=Z,0.5nm,0.8s,baz=327,slow=7.2,SNR=5.0 comp=Z,0.5nm,0.8s							
BBB	**Bella Bella**	**50.69**	**310**	LR	LR	11 02 47.3		
	comp=Z,106nm,18.1s,baz=60,slow=36							
PDAR	**Pinedale Array**	**51.40**	**290**	P	**P**	**10 41 11.8**	**+0.3**	
	comp=Z,2.2nm,1.1s,baz=60,slow=7.0,SNR=8.6							
PDAR				LR	LR	11 03 00.7		
	comp=Z,62nm,18.4s,baz=31,slow=36 comp=Z,2.2nm,1.1s							
MKAR	**Makanchi Array**	**55.02**	**54**	P	**P**	**10 41 37.2**	**-0.6**	
	comp=Z,0.7nm,0.8s,baz=307,slow=4.4,SNR=6.2 comp=Z,0.7nm,0.8s							
MKAR	**Makanchi Array**	**55.02**	**54**	P	**P**	**10 41 37.1**	**-0.7**	
ELK	**Elko**	**55.43**	**293**	LR	LR	11 05 12.3		
	comp=Z,187nm,18.2s,baz=40,slow=36							
AAK	**Ala-Archa**	**55.61**	**63**	LR	LR	11 04 07.1		
	comp=Z,83nm,18.2s,baz=337,slow=34							
ANMO	**Albuquerque**	**56.63**	**282**	LR	LR	11 05 36.0		
	comp=Z,84nm,20.2s,baz=38,slow=36							
YBH	**Yreka Blue Hor**	**57.57**	**299**	LR	LR	11 05 33.8		
	comp=Z,4.8nm,20.0s,baz=28,slow=35							
NVAR	**Mina Array Bea**	**58.65**	**294**	P	**P**	**10 42 04.3**	**+0.4**	
	comp=Z,1.4nm,0.9s,baz=50,slow=6.8,SNR=8.0							
NVAR				LR	LR	11 07 14.9		
	comp=Z,125nm,19.3s,baz=30,slow=36 comp=Z,1.4nm,0.9s							
TXAR	**Lajitas Array**	**60.20**	**276**	P	**P**	**10 42 15.8**	**+1.2**	
	comp=Z,0.4nm,0.9s,baz=41,slow=4.7,SNR=3.8							
TXAR				LR	LR	11 07 30.6		
	comp=Z,114nm,18.6s,baz=42,slow=35 comp=Z,0.4nm,0.9s							
PFO	**Pinyon Flats O**	**62.03**	**289**	LR	LR	11 09 39.2		
	comp=Z,136nm,18.1s,baz=42,slow=36							
CMIG	**Matias Romero**	**67.00**	**262**	LR	LR	11 14 16.5		
	comp=Z,48nm,18.0s,baz=39,slow=38							
LPIG	**La Paz**	**67.66**	**279**	LR	LR	11 11 29.0		
	comp=Z,85nm,18.3s,baz=21,slow=35							
MBAR	**Mbarara**	**75.22**	**124**	LR	LR	11 17 46.6		
	comp=Z,14nm,18.5s,baz=259,slow=36							
LBTB	**Lobatse**	**96.27**	**137**	LR	LR	11 30 12.2		
	comp=Z,37nm,18.9s,baz=356,slow=36							
BOSA	**Boshof**	**99.55**	**139**	LR	LR	11 30 34.1		
	comp=Z,34nm,20.0s,baz=29,slow=35							
QSPA	**South Pole Qui**	**152.79**	**180**	PKPbc	**PKiKP**	**10 52 05.2**	**+1.0**	
	comp=Z,2.0nm,1.0s,baz=274,slow=1.7,SNR=3.5							

*HEL **18** 10:44:08.5±0.3, 67.64N×20.84E, h0km, ML1.4, Suspected explosion*
*UPP **18** 10:44:09.1±0.0, 67.64N×21.02E, h0km, ML2.8, Suspected explosion*
*DNK **18** 10:44:09.6±1.5, 67.63N×21.01E, h0km, ML2.8(UPP), Explosion*

ISC 18 10:44:08.0±0.8, 67.64N±0.02×21.19E±0.02, h0km, n33, σ0.71/54, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MASU	**Masugnsbyn**	**0.36**	**121**	P	**Pb**	**10 44 17.1**	**-0.2**
MASU				S	**Sb**	**10 44 22.9**	**-0.6**
MASU	**Masugnsbyn**	**0.36**	**121**	P	**Pb**	**10 44 17.1**	**-0.2**
MASU				S	**Sb**	**10 44 22.9**	**-0.6**
KUA	**Kurravaara**	**0.45**	**314**	P	**Pg**	**10 44 17.1**	**+0.4**
	baz=138						
KUA				S	**Sg**	**10 44 22.9**	**+0.4**
KUA	**Kurravaara**	**0.45**	**314**	P	**Pg**	**10 44 17.1**	**+0.4**
	baz=138						
KUA				S	**Sg**	**10 44 22.9**	**+0.4**
LANU	**Lannavaara**	**0.51**	**36**	P	**Pb**	**10 44 19.5**	**-0.3**
LANU				S	**Sb**	**10 44 27.3**	**-0.5**
LANU	**Lannavaara**	**0.51**	**36**	PG	**Pb**	**10 44 19.6**	**-0.3**
LANU				SG	**Sb**	**10 44 27.2**	**-0.6**
LANU	**Lannavaara**	**0.51**	**36**	P	**Pb**	**10 44 19.5**	**-0.3**
LANU				S	**Sb**	**10 44 27.3**	**-0.5**
DUNU	**Dundret**	**0.58**	**205**	P	**Pg**	**10 44 19.5**	**+0.5**
DUNU				S	**Sg**	**10 44 26.9**	**+0.4**
DUNU	**Dundret**	**0.58**	**205**	P	**Pg**	**10 44 19.5**	**+0.5**
DUNU				S	**Sg**	**10 44 26.9**	**+0.4**
RATU	**Laukkuluspa**	**0.64**	**287**	P	**Pg**	**10 44 20.0**	**-0.2**
RATU	**Laukkuluspa**	**0.64**	**287**	P	**Pg**	**10 44 20.0**	**-0.2**
KOVU	**Salmi**	**0.70**	**327**	P	**Pg**	**10 44 21.9**	**+0.4**
	baz=164						
KOVU				S	**Sg**	**10 44 30.9**	**+0.4**
KOVU	**Salmi**	**0.70**	**327**	P	**Pg**	**10 44 21.9**	**+0.4**
	baz=164						
KOVU				S	**Sg**	**10 44 30.9**	**+0.4**
NIKU	**Nikkaluokta**	**0.85**	**286**	P	**Pg**	**10 44 23.9**	**-0.5**
NIKU				S	**Sg**	**10 44 35.0**	**-0.4**
NIKU	**Nikkaluokta**	**0.85**	**286**	P	**Pg**	**10 44 23.9**	**-0.5**
NIKU				S	**Sg**	**10 44 35.0**	**-0.4**
SALU	**Saltoluokta**	**1.07**	**257**	P	**Pg**	**10 44 27.7**	**-0.8**
SALU	**Saltoluokta**	**1.07**	**257**	P	**Pg**	**10 44 27.7**	**-0.8**
KLF	**Kolari**	**1.15**	**110**	PG	**Pn**	**10 44 31.6**	**+0.3**
KLF				smax	smax	10 44 46.9	
	comp=Z,1.4nm,0.2s						
KLF				SB	**Sn**	**10 44 48.9**	**+1.2**
ERTU	**Ertsjaerv**	**1.16**	**160**	P	**Pg**	**10 44 30.7**	**+0.5**
ERTU	**Ertsjaerv**	**1.16**	**160**	P	**Pg**	**10 44 30.7**	**+0.5**
HEF	**Hetta**	**1.21**	**49**	*e*P	**Pb**	**10 44 31.7**	**0.0**
HEF	**Hetta**	**1.21**	**49**	PG	**Pn**	**10 44 32.0**	**-0.1**
	baz=234						
HEF				smax	smax	10 44 48.2	
	comp=Z,2.2nm,0.2s						
HEF				SB	**Sn**	**10 44 48.8**	**-0.4**
KIF	**Kilpisjarvi**	**1.38**	**354**	*e*P	**Pn**	**10 44 34.6**	**+0.1**
KIF	**Kilpisjarvi**	**1.38**	**354**	PN	**Pb**	**10 44 35.0**	**+0.4**
KIF				smax	smax	10 44 51.0	
	comp=Z,6.5nm,0.2s						
KIF				SN	**Sn**	**10 44 53.3**	**0.0**
HARU	**Harads**	**1.49**	**183**	P	**Pn**	**10 44 36.1**	**+0.2**
HARU	**Harads**	**1.49**	**183**	P	**Pn**	**10 44 36.1**	**+0.2**
KTK1	**Kautokeino**	**1.57**	**28**	PN	**Pg**	**10 44 39.2**	**+1.1**
KTK1				SN	**Sg**	**10 45 00.9**	**+2.5**
TOF	**Tornio**	**2.00**	**140**	PG	**Pb**	**10 44 45.8**	**+0.7**
TOF				smax	smax	10 45 10.4	
	comp=Z,1.7nm,0.2s						
TOF				SG	**Sg**	**10 45 12.4**	**+0.3**
RNF	**Rovaniemi**	**2.15**	**117**	PG	**Pg**	**10 44 48.6**	**-0.6**
RNF				SG	**Sg**	**10 45 17.5**	**+0.4**
ARA0	**ARCESS Array S**	**2.47**	**38**	PB	**Pb**	**10 44 52.6**	**-0.7**
ARA0				SB	**Sb**	**10 45 25.0**	**+0.7**
RAJF	**Raja-Jooseppi**	**2.80**	**69**	SB	**Sg**	**10 45 35.8**	**-2.1**
KEV	**Kevo**	**3.00**	**42**	PB	**Pb**	**10 45 01.6**	**-0.7**
KEV				SN	**Sn**	**10 45 33.2**	**-0.2**
VRF	**Varrio**	**3.21**	**84**	SG	**Sg**	**10 45 49.4**	**-1.6**

*IDC **18** 11:21:36.5±1.3, 17.80S×178.63W, h556km±15km, mb3.3/6, mbtmp4.2/9, Error ellipse: s-maj=26.1km s-min=17.0km az=156.0*
*NOU **18** 11:21:36.0, 17.35S×178.39W, h588km, mb4.0/16, Fiji Islands Region*
*NEIC **18** 11:21:38.0±0.8, 17.64S±0.06×178.6W±0.1, h578km±10km, mb4.2/31, Error ellipse: s-maj=20.2km s-min=6.2km az=105.0*

ISC 18 11:21:37.7±0.7, 17.5S±0.1×178.54W±0.10, h600km, n66, σ1.32/65, mb4.1/23, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAVE	**Taveuni**	**1.53**	**301**	P	**P**	**11 22 48.0**	**-2.3**
TAVE	**Taveuni**	**1.53**	**301**	S	**S**	**11 23 46.4**	**-2.9**
DGTI	**Dogotuki**	**2.04**	**306**	P	**P**	**11 22 49.5**	**-2.7**
DGTI	**Dogotuki**	**2.04**	**306**	S	**S**	**11 23 49.4**	**-3.3**
FUTU	**Fugatoga**	**3.20**	**7**	P	**P**	**11 22 56.7**	**-1.4**
MSVF	**Nonsavu**	**3.26**	**265**	P	**P**	**11 22 55.1**	**-3.4**
	137nm,0.8s,baz=109,slow=5.3,SNR=61						
MSVF	**Nonsavu**	**3.26**	**265**	P	**P**	**11 22 56.7**	**-1.8**
MSVF	**Nonsavu**	**3.26**	**265**		**P**	**11 22 57.1**	**-1.4**
AFI	**Afiamalu**	**7.42**	**62**	P	**P**	**11 23 29.2**	**-2.6**
	24nm,0.5s,baz=132,slow=5.0,SNR=9.4						
NIUE	**Niue**	**8.33**	**102**	P	**P**	**11 23 40.4**	**+0.3**
FUNA	**Funafuti**	**9.19**	**346**	P	**P**	**11 23 48.9**	**+0.3**
SANVU	**Saraoutou**	**13.83**	**276**	P	**P**	**11 24 35.5**	**+0.5**
OUENC	**Ouen Island, N**	**14.59**	**248**	P	**P**	**11 24 40.2**	**-1.9**
DZM	**Mont Dzumac**	**14.85**	**250**	P	**P**	**11 24 41.7**	**-2.9**
	5.3nm,0.6s,baz=161,slow=21,SNR=7.4						
OUZ	**Omahuta**	**18.99**	**200**	P	**P**	**11 25 23.0**	**+0.9**
URZ	**Urewera**	**21.03**	**190**	P	**P**	**11 25 37.1**	**-3.3**
	12nm,1.1s,baz=336,slow=7.6,SNR=1.9 12nm,1.1s						
URZ	**Urewera**	**21.03**	**190**	P	**P**	**11 25 40.9**	**+0.4**
QRZ	**Quartz Range**	**24.49**	**197**	P	**P**	**11 26 11.6**	**+0.4**
JCZ	**Jackson Bay**	**28.57**	**199**	P	**P**	**11 26 47.1**	**+0.1**
EIDS	**Eidsvold**	**29.30**	**249**	P	**P**	**11 26 52.9**	**-0.5**
EIDS				IAmb	IAmb	11 26 57.1	
	comp=Z,8.2nm,1.1s						
ARMA	**Armidale**	**30.04**	**239**	P	**P**	**11 27 00.1**	**+0.2**
ARMA	**Armidale**	**30.04**	**239**	P	**P**	**11 27 00.3**	**+0.4**
ARMA				IAmb	IAmb	11 27 02.4	
	comp=Z,3.7nm,0.9s						
WHZ	**Wether Hill Ro**	**30.46**	**199**	P	**P**	**11 27 02.9**	**-0.3**
CTA	**Charters Tower**	**33.40**	**260**	P	**P**	**11 27 28.6**	**+0.2**
CTAO	**Charters Tower**	**33.40**	**260**	P	**P**	**11 27 28.3**	**-0.1**
CTAO				IAmb	IAmb	11 27 33.5	
	comp=Z,8.6nm,1.1s						
CNB	**Canberra Magne**	**33.58**	**232**	P	**P**	**11 27 30.2**	**+0.4**
CAN	**Canberra**	**33.86**	**232**	P	**P**	**11 27 32.4**	**+0.3**
CAN				IAmb	IAmb	11 27 45.4	
	comp=Z,12nm,1.1s						
PMG	**Port Moresby**	**34.27**	**279**	P	**P**	**11 27 36.2**	**+0.4**
CMSA	**Cobar Meteorol**	**35.25**	**240**	P	**P**	**11 27 44.0**	**+0.4**
MTSU	**Mount Surprise**	**35.33**	**263**	P	**P**	**11 27 44.0**	**-0.6**
QLP	**Quilpie**	**35.57**	**249**	P	**P**	**11 27 46.5**	**+0.2**
COEN	**Coen**	**36.98**	**270**	P	**P**	**11 27 58.9**	**+0.8**
TOO	**Toolangi**	**37.33**	**230**	P	**P**	**11 28 05.5**	**-0.2**
TAU	**Tasmania Unive**	**38.46**	**222**	P	**P**	**11 28 09.6**	**-0.1**
STKA	**Stephens Creek**	**38.72**	**241**	P	**P**	**11 28 11.9**	**-0.1**
	comp=Z,4.8nm,0.5s,baz=95,slow=11,SNR=14 comp=Z,4.8nm,0.5s						
STKA	**Stephens Creek**	**38.72**	**241**		**P**	**11 28 12.5**	**+0.6**
INKA	**Innaminka**	**38.79**	**247**	P	**P**	**11 28 12.3**	**-0.2**
INKA				IAmb	IAmb	11 28 14.2	
	comp=Z,2.4nm,0.7s						
BBOO	**Buckleboo**	**43.50**	**241**		**P**	**11 28 49.8**	**+0.2**
WR0	**Warramunga Arr**	**44.40**	**259**	P	**P**	**11 28 56.3**	**-0.4**
WR8	**Warramunga Arr**	**44.44**	**259**	P	**P**	**11 28 56.6**	**-0.4**
WB0	**Warramunga Arr**	**44.55**	**259**	P	**P**	**11 28 57.5**	**-0.4**
WB0				IAmb	IAmb	11 28 58.2	
	comp=Z,6.4nm,0.9s						
WB2	**Warramunga Arr**	**44.58**	**259**	P	**P**	**11 28 57.8**	**-0.3**
WB2				IAmb	IAmb	11 28 58.5	
	comp=Z,8.0nm,0.7s						
WRAB	**Tennant Creek**	**44.58**	**259**	P	**P**	**11 28 58.0**	**-0.1**
WRAB				IAmb	IAmb	11 28 58.1	
	comp=Z,4.0nm,0.8s						
WRA	**Warramunga Arr**	**44.59**	**259**	P	**P**	**11 28 57.6**	**-0.6**
	comp=Z,3.0nm,0.6s,baz=92,slow=6.8,SNR=145 comp=Z,3.0nm,0.6s						
WRA	**Warramunga Arr**	**44.59**	**259**		**P**	**11 28 58.1**	**-0.1**
AS31	**Alice Springs**	**44.78**	**254**		**P**	**11 28 60.0**	**+0.3**
AS31				IAmb	IAmb	11 29 00.4	
	comp=Z,9.4nm,0.7s						
ASAR	**Alice Springs**	**44.79**	**254**	P	**P**	**11 28 59.9**	**+0.2**
	comp=Z,25nm,0.4s,baz=90,slow=7.6,SNR=894						
ASAR	**Alice Springs**	**44.79**	**254**		**P**	**11 29 00.0**	**+0.3**
MTN	**Manton Dam**	**48.69**	**268**	P	**P**	**11 29 29.4**	**+0.3**
MTN				IAmb	IAmb	11 29 30.3	
	comp=Z,3.9nm,0.8s						
FORT	**Forrest**	**50.07**	**244**	P	**P**	**11 29 39.0**	**0.0**
FAKI	**Fak Fak**	**50.38**	**281**	P	**P**	**11 29 42.3**	**+0.8**
FAKI				IAmb	IAmb	11 30 02.4	
	comp=Z,7.4nm,1.0s						
KNRA	**Kununurra**	**50.41**	**264**	P	**P**	**11 29 42.2**	**+0.6**
KNRA				IAmb	IAmb	11 29 42.6	
	comp=Z,5.4nm,0.7s						
SOEI	**Soe**	**55.95**	**270**	P	**P**	**11 30 21.9**	**+0.9**
SOEI				IAmb	IAmb	11 30 23.6	
	comp=Z,11nm,0.7s						
PSA00	**Pilbara Seismi**	**57.90**	**255**	P	**P**	**11 30 34.5**	**+0.5**
PSA00	**Pilbara Seismi**	**57.90**	**255**	P	**P**	**11 30 34.5**	**+0.5**
PSA00				IAmb	IAmb	11 30 34.9	
	comp=Z,6.1nm,0.7s						
MBWA	**Marble Bar**	**58.06**	**256**	P	**P**	**11 30 35.4**	**+0.3**
NWAO	**Narrogin (SRO)**	**59.30**	**242**	P	**P**	**11 30 43.2**	**0.0**
NWAO				IAmb	IAmb	11 30 49.9	
	comp=Z,16nm,1.1s						
MORW	**Morawa**	**60.53**	**246**	P	**P**	**11 30 51.9**	**+0.4**
MORW				IAmb	IAmb	11 31 01.2	
	comp=Z,8.2nm,1.1s						
VNDA	**Vanda**	**60.84**	**185**	P	**P**	**11 30 53.2**	**+0.7**
JAGI	**Jajag, Banyuwa**	**65.93**	**268**	P	**P**	**11 31 26.1**	**0.0**
QSPA	**South Pole Qui**	**72.55**	**180**	P	**P**	**11 32 06.4**	**+1.6**
	comp=Z,1.5nm,1.0s,baz=283,slow=0.7,SNR=6.2 comp=Z,1.5nm,1.0s						
QSPA	**South Pole Qui**	**72.55**	**180**	P	**P**	**11 32 06.7**	**+1.9**
TXAR	**Lajitas Array**	**85.88**	**58**	P	P	11 33 20.1	+4.5
	comp=Z,0.3nm,0.7s,baz=225,slow=6.0,SNR=5.8 comp=Z,0.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**88.63**	**290**	P	**P**	**11 33 31.8**	**+3.2**
	comp=Z,0.6nm,0.5s,baz=131,slow=3.7,SNR=4.6 comp=Z,0.6nm,0.5s						
BRTR	**Keskin Array B**	**144.41**	**315**	PKP	**PKiKP**	**11 40 09.5**	**-1.4**
	comp=Z,0.7nm,0.6s,baz=125,slow=3.6,SNR=3.6						
GERES	**GERESS Array B**	**147.19**	**345**	PKPbc	**PKPab**	**11 40 17.4**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=356,slow=3.2,SNR=2.9						

IDC 18 11:24:12.1±12.0, 14.42S×65.99E, h0km, mb3.5/2, mbtmp3.5/2, MS3.2/6, Error ellipse: s-maj=980.9km s-min=52.7km az=34.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**9.26**	**44**	T	T	11 35 40.1	
	baz=224,slow=76,SNR=99						
H08S2	**Diego Garcia H**	**9.28**	**44**	T	T	11 35 41.2	
	baz=224,slow=76,SNR=55						
H08S3	**Diego Garcia H**	**9.28**	**44**	T	T	11 35 41.7	
	baz=224,slow=76,SNR=147						
PALK	**Pallekele**	**26.03**	**35**	LR	LR	11 37 35.7	
	comp=Z,77nm,18.1s,baz=281,slow=31						
H04N2	**CROZET ISLANDS**	**33.82**	**198**	T	T	12 06 53.9	
	baz=27,slow=75,SNR=19						
H04N1	**CROZET ISLANDS**	**33.83**	**198**	T	T	12 06 59.9	
	baz=27,slow=75,SNR=21						
H04N3	**CROZET ISLANDS**	**33.84**	**198**	T	T	12 07 00.5	
	baz=27,slow=75,SNR=24						
MBAR	**Mbarara**	**37.46**	**288**	LR	LR	11 44 01.1	
	comp=Z,48nm,18.3s,baz=89,slow=32						
LBTB	**Lobatse**	**39.32**	**248**	LR	LR	11 45 30.6	
	comp=Z,51nm,19.1s,baz=29,slow=32						
LEM	**Lembang**	**41.55**	**84**	LR	LR	11 46 56.0	
	comp=Z,29nm,18.7s,baz=9.5,slow=33						
CMAR	**Chiang Mai Arr**	**46.06**	**46**	LR	LR	11 49 08.2	
	comp=Z,16nm,21.3s,baz=355,slow=32						
KAPI	**Kappang**	**53.70**	**86**	LR	LR	11 54 35.4	
	comp=Z,18nm,19.0s,baz=290,slow=34						
ASAR	**Alice Springs**	**64.36**	**110**	P	P	11 34 50.0	-0.2
	0.5nm,0.9s,baz=269,slow=5.5,SNR=4.9 0.5nm,0.9s						
WRA	**Warramunga Arr**	**65.15**	**106**	P	P	11 34 55.7	+0.2
	0.4nm,0.8s,baz=272,slow=6.3,SNR=5.4 0.4nm,0.8s						
PDAR	**Pinedale Array**	**151.49**	**353**	PKPbc	PKPbc	11 44 08.4	-0.2
	0.4nm,0.5s,baz=72,slow=2.4,SNR=5.2						

IDC 18 12:20:32.2±534.0, 30.93N×76.22W, h0km, Error ellipse: s-maj=297.6km s-min=161.2km az=34.0, Off east coast of United States

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I51GB	**BERMUDA INFRAS**	**9.93**	**79**	I	I	13 21 30.8	
	baz=262,slow=277						
I10CA	**LAC DU BONNET**	**24.30**	**328**	I	I	14 48 10.0	
	baz=135,slow=330,SNR=0.4						

IDC 18 12:22:24.4±333.0, 53.73N×100.92E, h0km, Error ellipse: s-maj=133.1km s-min=119.6km az=14.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I34MN	**SONGINO INFRAS**	**6.88**	**147**	I	I	13 03 10.0	
	0.1nm,0.7s,baz=331,slow=327,SNR=1.9						
I46RU	**ZALESOVO INFRA**	**9.52**	**278**	I	I	13 16 20.0	
	baz=84,slow=341,SNR=1.1						
I31KZ	**AKTYUBINSK INF**	**26.27**	**280**	I	I	15 05 10.0	
	baz=64,slow=336,SNR=2.1						

*IDC **18** 12:22:48.3±3.4, 6.41S×154.77E, h0km, mb3.6/5, mbtmp3.6/6, ML1.8/1, Error ellipse: s-maj=103.3km s-min=29.5km az=117.0*

ISC 18 12:22:53.5±3.2, 6.55S±0.4×154.8E±0.5, h35km, n6, σ0.83/6, mb3.7/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**8.08**	**249**	Pn	**Pn**	**12 24 48.3**	**-0.1**
	0.6nm,0.3s,baz=67,slow=16,SNR=1.9						
PMG				Sn	Sn	12 26 05.2	-13
	0.9nm,0.3s,baz=95,slow=18,SNR=1.6 4.9nm,0.6s						
WRA	**Warramunga Arr**	**23.93**	**234**	P	**P**	**12 28 04.2**	**-0.3**
	0.5nm,1.0s,baz=58,slow=9.4,SNR=4.9 0.5nm,1.0s						
ASAR	**Alice Springs**	**26.34**	**227**	P	**P**	**12 28 26.7**	**+0.2**
	0.2nm,0.4s,baz=59,slow=9.2,SNR=10.0 0.2nm,0.4s						
MKAR	**Makanchi Array**	**82.89**	**319**	P	**P**	**12 35 15

YULB	**Yu-li**	**1.59 252**	P	**Pn**	**12 30 46.5**	**0.0**
YULB	**Yu-li**	**1.59 252**	S	**Sn**	**12 31 06.2**	**-0.6**
YULB	**Yu-li**	**1.59 252**	P	**Pn**	**12 30 46.5**	**0.0**
YULB			*i* S	**Sn**	**12 31 06.4**	**-0.4**
FUSS	**Fushou**	**1.59 283**	*e*P	**Pn**	**12 30 47.1**	**+0.3**
TWF1	**Yuli**	**1.60 251**	*e*P	**Pn**	**12 30 46.3**	**-0.4**
TWF1			*e*S	**Sn**	**12 31 06.4**	**-0.7**
OWD	**Renai**	**1.62 273**	*e*P	**Pn**	**12 30 47.3**	**+0.3**
YHNB	**Yeheng**	**1.63 299**	P	**Pg**	**12 30 49.7**	**-0.4**
YHNB	**Yeheng**	**1.63 299**	S	**Sg**	**12 31 11.4**	**+0.1**
YHNB	**Yeheng**	**1.63 299**	*e*P	**Pb**	**12 30 48.4**	**-0.2**
YHNB			*e*S	**Sb**	**12 31 09.2**	**+0.2**
NSK	**Sanguang**	**1.65 299**	*e*P	**Pb**	**12 30 48.8**	**-0.1**
VWDT	**VWDT**	**1.66 266**	*e*P	**Pn**	**12 30 47.5**	**+0.1**
FULB	**Fuli**	**1.67 246**	*e*P	**Pn**	**12 30 47.0**	**-0.5**
FULB			*e*S	**Sn**	**12 31 06.9**	**-1.7**
WUSB	**Renai**	**1.68 274**	*e*P	**Pn**	**12 30 48.1**	**+0.4**
TATO	**Taipei**	**1.71 309**	P	**Pg**	**12 30 51.3**	**-0.4**
TATO	**Taipei**	**1.71 309**	S	**Sg**	**12 31 12.5**	**-1.5**
EHD	**Haiduan**	**1.76 245**	*e*P	**Pn**	**12 30 48.5**	**-0.3**
EHD			*e*S	**Sn**	**12 31 09.2**	**-1.7**
ZUZH	**Zhuzihu**	**1.80 315**	*e*P	**Pn**	**12 30 49.6**	**+0.3**
NFF	**Wufeng Townshi**	**1.82 294**	*e*P	**Pb**	**12 30 51.9**	**0.0**
SSLB	**Suanglung**	**1.83 267**	P	**Pb**	**12 30 51.5**	**-0.5**
SSLB	**Suanglung**	**1.83 267**	S	**Sb**	**12 31 14.6**	**-0.1**
SSLB	**Suanglung**	**1.83 267**	*e*P	**Pb**	**12 30 51.4**	**-0.5**
WCS	**Beigang Elemen**	**1.87 275**	*e*P	**Pb**	**12 30 52.8**	**+0.2**
WHP	**Taichung City**	**1.87 282**	*e*P	**Pb**	**12 30 53.2**	**+0.5**
WHP			*e*S	**Sb**	**12 31 16.6**	**+0.6**
SMLT	**Sun Moon Lake**	**1.87 270**	*e*P	**Pb**	**12 30 52.7**	**-0.1**
ELDTW	**Lidau**	**1.90 249**	P	**Pn**	**12 30 50.5**	**-0.4**
ELDTW			*e*S	**Sn**	**12 31 13.1**	**-1.5**
TYC	**Yuchr**	**1.91 271**	*e*P	**Pb**	**12 30 54.1**	**+0.7**
LIOB	**Emei**	**1.92 293**	*e*P	**Pb**	**12 30 53.3**	**-0.1**
NSTT	**Nanjuang**	**1.92 293**	*e*P	**Pb**	**12 30 53.3**	**-0.2**
WHYT	**Xinyi Township**	**1.93 265**	*e*P	**Pn**	**12 30 52.1**	**+1.0**
ALS	**Alishan**	**2.00 259**	*e*P	**Pn**	**12 30 53.9**	**+1.5**
TWQ1	**Liyutan**	**2.04 283**	*e*P	**Pb**	**12 30 56.6**	**+1.1**
CHN5	**Tsauling**	**2.10 262**	*e*P	**Pn**	**12 30 55.3**	**+1.8**
STYH	**Taoyuan**	**2.12 251**	*e*P	**Pn**	**12 30 54.4**	**+0.7**
STYH			*e*S	**Sn**	**12 31 19.8**	**+0.1**
WCKO	**Fanlu**	**2.19 259**	*e*P	**Pb**	**12 30 58.4**	**+0.2**
TPUB	**Ta-pu**	**2.21 255**	P	**Pn**	**12 30 56.9**	**+2.0**
TPUB	**Ta-pu**	**2.21 255**	S	**Sn**	**12 31 23.9**	**+2.0**
TPUB	**Ta-pu**	**2.21 255**	*e*P	**Pn**	**12 30 57.2**	**+2.3**
TPUB			*e*S	**Sn**	**12 31 24.2**	**+2.2**
CHN4	**Tsaushan**	**2.22 256**	*e*P	**Pb**	**12 30 57.8**	**-0.9**
CHN4			*e*S	**Sb**	**12 31 25.4**	**-0.6**
WTP	**Ta-pu**	**2.23 254**	*e*P	**Pn**	**12 30 57.5**	**+2.2**
LAY	**Lan-yu**	**2.25 215**	*e*P	**Pn**	**12 30 54.9**	**-0.6**
LAY			*e*S	**Sn**	**12 31 19.9**	**-3.1**
SGST	**Jiashian**	**2.31 250**	*e*P	**Pn**	**12 30 57.8**	**+1.3**
CHN1	**Nanshi**	**2.33 253**	*e*P	**Pn**	**12 30 58.5**	**+1.9**
CHN1			*e*S	**Sn**	**12 31 27.9**	**+2.9**
TWK	**Hsinying**	**2.34 255**	*e*P	**Pn**	**12 30 58.1**	**+1.4**
TWK			*e*S	**Sn**	**12 31 28.2**	**+2.9**
SSD	**Sandimen**	**2.41 242**	*e*P	**Pn**	**12 30 58.1**	**+0.4**
EAST	**Anshuo**	**2.45 233**	*e*P	**Pn**	**12 30 58.1**	**-0.2**
MASBT	**Mashibuluo**	**2.48 240**	*e*P	**Pn**	**12 31 00.9**	**+2.3**
SLIU	**Shizi**	**2.59 230**	*e*P	**Pn**	**12 31 00.2**	**+0.1**
SLIU			S	**Sn**	**12 31 30.2**	**-1.1**
SCZT	**Fangliau**	**2.62 235**	*e*P	**Pn**	**12 31 02.4**	**+1.7**
WDGT	**Dungji**	**3.08 259**	*e*P	**Pn**	**12 31 08.1**	**+1.1**
PHUB	**P'eng-hu**	**3.12 264**	*e*P	**Pn**	**12 31 08.4**	**+1.0**
VWUC	**VWUC**	**3.37 290**	*e*P	**Pn**	**12 31 11.6**	**+0.7**
PTMZ	**Houxiangcun**	**3.67 289**	*e*P	**Pn**	**12 31 14.7**	**-0.3**

IDC ***18*** *12:50:17.1±0.9, 17°.52S×167°.37E, h0km, mb4.2/10, mbtmp4.2/12, ML3.8/2, MS3.5/10, Error ellipse: s-maj=25.5km s-min=20.2km az=131.0*

NEIC ***18*** *12:50:19.1±1.2, 17°.47S±0°.06×167°.4E±0°.1, h10km±1km, mb4.4/15, Error ellipse: s-maj=22.7km s-min=9.3km az=81.0*

NOU ***18*** *12:50:21.5, 17°.51S×167°.58E, h49km, MLv4.5/18, Vanuatu Islands*

ISC 18 12:50:20.2±0.5, 17°.58S±0°.05×167°.42E±0°.05, h19km, n53, σ1§17/49, mb4.3/16, MS3.4/8, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**0.75**	**102**	P	**Pg**	**12 50 35.2**	**+0.3**
DVP	**Devils Point**	**0.75**	**102**	S	**Sn**	**12 50 46.3**	**-0.2**
RTV	**Rentapao**	**0.98**	**103**	P	**Pn**	**12 50 38.9**	**-0.1**
RTV	**Rentapao**	**0.98**	**103**	S	**Sb**	**12 50 49.1**	**-2.1**
SANVU	**Saraoutou**	**2.13**	**354**	P	**Pn**	**12 50 52.6**	**-2.1**
SANVU	**Saraoutou**	**2.13**	**354**	S	**Sn**	**12 51 19.9**	**-0.7**
SANVU	**Saraoutou**	**2.13**	**354**		**Pn**	**12 50 52.8**	**-1.9**
MARNC	**Mare, Loyalty**	**3.93**	**172**	P	**Pn**	**12 51 20.1**	**+0.6**
MARNC	**Mare, Loyalty**	**3.93**	**172**	Pn	**Pn**	**12 51 19.8**	**+0.3**
YATNC	**Mamie plateau,**	**4.49**	**186**	P	**Pn**	**12 51 20.7**	**+0.5**
DZM	**Mont Dzumac**	**4.56**	**191**	Pn	**Pn**	**12 51 28.0**	**-0.4**
	12nm,0.3s,baz=322,slow=9.0,SNR=80						
DZM				Sn	**Sn**	**12 52 18.0**	**-3.0**
	12nm,0.3s,baz=122,slow=21,SNR=8.7						
DZM				LR	LR	12 53 06.4	
	comp=Z,238nm,19.2s,baz=172,slow=37 35nm,0.3s						
ONTNC	**Ouen Toro**	**4.79**	**191**	P	**Pn**	**12 51 31.9**	**+0.5**
ONTNC	**Ouen Toro**	**4.79**	**191**		**Pn**	**12 51 31.7**	**+0.3**
OUENC	**Ouen Island, N**	**4.85**	**186**	P	**Pn**	**12 51 32.2**	**+1.1**
OUENC	**Ouen Island, N**	**4.85**	**186**		**Pn**	**12 51 32.3**	**+0.1**
NGOA	**Tingoa Renbel**	**9.30**	**309**	P	**Pn**	**12 52 34.1**	**+0.8**
MSVF	**Nonsavu**	**10.14**	**92**	LR	LR	12 56 01.8	
	comp=Z,366nm,18.8s,baz=257,slow=34						
HNR	**Honiara**	**10.87**	**317**	Pn	**Pn**	**12 52 52.9**	**-2.0**
	0.3nm,0.3s,baz=94,slow=3.2,SNR=6.9						
HNR				LR	LR	12 56 30.4	
	comp=Z,4.6nm,18.0s,baz=332,slow=35 3.2nm,0.6s						
HNR	**Honiara**	**10.87**	**317**		**Pn**	**12 52 54.7**	**-0.2**
SAVO	**Savo Central**	**11.17**	**318**	P	**Pn**	**12 52 59.6**	**+0.6**
TATA	**Tatamba Isabel**	**11.76**	**320**	P	**Pn**	**12 53 07.6**	**+0.5**
EIDS	**Eidsvold**	**17.06**	**240**	P	**Pn**	**12 54 17.2**	**-0.5**
ARMA	**Armidale**	**19.25**	**225**	P	**P**	**12 54 43.5**	**-0.1**
CTA	**Charters Tower**	**20.19**	**260**	P	**P**	**12 54 54.4**	**+0.5**
	5.5nm,0.8s,baz=31,slow=5.8,SNR=3.5						
CTA				LR	LR	13 01 37.9	
	comp=Z,130nm,19.9s,baz=64,slow=34 5.5nm,0.8s						
AFI	**Afiamalu**	**20.35**	**83**	LR	LR	13 00 33.9	
	comp=Z,56nm,19.9s,baz=272,slow=30						
CAN	**Canberra**	**24.10**	**219**	P	**P**	**12 55 35.1**	**+0.4**
CAN				IAmb	IAmb	12 55 37.5	
	comp=Z,15nm,1.0s						
STKA	**Stephens Creek**	**27.35**	**234**	P	**P**	**12 56 04.4**	**+0.3**
	comp=Z,13nm,0.9s,baz=63,slow=7.9,SNR=20						
STKA				LR	LR	13 05 55.3	
	comp=Z,69nm,18.6s,baz=26,slow=34 comp=Z,13nm,0.9s						
STKA	**Stephens Creek**	**27.35**	**234**		**P**	**12 56 04.1**	**0.0**
JAY	**Jayapura**	**30.19**	**297**	LR	LR	13 08 40.4	
	comp=Z,104nm,18.3s,baz=83,slow=37						
RAR	**Rarotonga**	**31.13**	**102**	LR	LR	13 06 18.4	
	comp=Z,79nm,20.6s,baz=340,slow=31						
WR8	**Warramunga Arr**	**31.23**	**260**	P	**P**	**12 56 38.1**	**-0.7**
WR8				IAmb	IAmb	12 56 46.2	
	comp=Z,4.3nm,1.1s						
WB0	**Warramunga Arr**	**31.34**	**261**	P	**P**	**12 56 39.0**	**-0.7**
WB0				IAmb	IAmb	12 56 49.0	
	comp=Z,4.0nm,0.8s						
WRA	**Warramunga Arr**	**31.38**	**260**	P	**P**	**12 56 38.5**	**-1.7**
	comp=Z,2.0nm,1.0s,baz=91,slow=8.8,SNR=8.8 comp=Z,2.0nm,1.0s						
WRA	**Warramunga Arr**	**31.38**	**260**	P	**P**	**12 56 36.6**	**-3.6**
AS31	**Alice Springs**	**31.89**	**253**	P	**P**	**12 56 44.1**	**-0.6**
ASAR	**Alice Springs**	**31.90**	**253**	P	**P**	**12 56 43.7**	**-1.0**
	comp=Z,2.8nm,0.8s,baz=81,slow=8.2,SNR=27						
ASAR				LR	LR	13 08 50.9	
	comp=Z,157nm,20.3s,baz=101,slow=35 comp=Z,2.8nm,0.8s						
ASAR	**Alice Springs**	**31.90**	**253**	P	**P**	**12 56 43.9**	**-0.8**
BBOO	**Buckleboo**	**32.03**	**236**	P	**P**	**12 56 45.8**	**+0.1**
KNRA	**Kununurra**	**37.05**	**267**	P	**P**	**12 57 28.6**	**-0.6**
KNRA				IAmb	IAmb	12 57 49.7	
	comp=Z,5.1nm,1.0s						
SIJI	**Sorong**	**39.23**	**291**	LR	LR	13 16 05.8	
	comp=Z,76nm,18.5s,baz=86,slow=40						
FITZ	**Fitzroy Crossi**	**39.71**	**263**	P	**P**	**12 57 51.9**	**+0.2**
	comp=Z,5.0nm,0.9s,baz=111,slow=10.0,SNR=8.7						
FITZ				LR	LR	13 13 56.4	
	comp=Z,71nm,18.1s,baz=46,slow=36						
	comp=Z,5.0nm,0.9s						
PEA0B	**Petropavlovsk-**	**70.89**	**354**	P	**P**	**13 01 35.7**	**0.0**
PETK	**Petropavlovsk-**	**70.89**	**354**	P	**P**	**13 01 36.4**	**+0.6**
	comp=Z,7.4nm,1.0s,baz=141,slow=9.3,SNR=3.0 comp=Z,7.4nm,1.0s						
PETK	**Petropavlovsk-**	**70.89**	**354**	P	**P**	**13 01 36.1**	**+0.4**
QSPA	**South Pole Qui**	**72.47**	**180**	P	**P**	**13 01 45.9**	**+0.5**
	comp=Z,4.9nm,0.8s,baz=51,slow=1.0,SNR=14 comp=Z,4.9nm,0.8s						
QSPA	**South Pole Qui**	**72.47**	**180**	P	**P**	**13 01 46.7**	**+1.3**
CMAR	**Chiang Mai Arr**	**76.25**	**295**	P	**P**	**13 02 08.0**	**0.0**
	comp=Z,0.3nm,0.3s,baz=113,slow=3.2,SNR=5.0 comp=Z,0.3nm,0.3s						
J14K	**Nanvaranak Lak**	**83.25**	**13**	P	**P**	**13 02 45.8**	**+0.9**
J14K				IAmb	IAmb	13 03 04.3	
	comp=Z,5.0nm,1.1s						
BELA	**Belgrano 2**	**83.89**	**175**		**P**	**13 02 49.0**	**+0.7**
BELA				IAmb	IAmb	13 02 60.0	
	comp=Z,5.6nm,1.0s						
F17K	**Baldwin Pennin**	**86.98**	**12**	P	**P**	**13 03 05.5**	**+1.9**
G18K	**Tagagawik**	**87.05**	**13**	P	**P**	**13 03 05.8**	**+1.7**
G18K				IAmb	IAmb	13 03 05.9	
	comp=Z,2.5nm,1.1s						
NVAR	**Mina Array Bea**	**89.01**	**49**	P	**P**	**13 03 15.1**	**+0.8**
	comp=Z,1.2nm,0.9s,baz=218,slow=9.1,SNR=8.4 comp=Z,1.2nm,0.9s						
ILAR	**Eielson Array**	**89.17**	**18**	P	**P**	**13 03 12.4**	**-1.7**
	comp=Z,0.3nm,0.5s,baz=221,slow=8.0,SNR=6.0 comp=Z,0.3nm,0.5s						

AFAD ***18*** *12:52:52.8, 35°.09N×26°.73E, h7km±4km, ML3.7*

IDC ***18*** *12:52:54.6±1.0, 34°.90N×27°.06E, h0km, mb3.8/10, mbtmp3.7/17, ML3.5/7, MS3.1/1, Error ellipse: s-maj=22.6km s-min=13.5km az=173.0*

ISK ***18*** *12:52:55.5, 35°.16N×26°.95E, h5km, ML3.6/18*

ISC 18 12:52:55.9±0.7, 34°.93N±0°.06×26°.95E±0°.04, h10km, n54, σ1§01/64, mb3.8/9, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.63**	**287**	Pg	**Pb**	**12 53 07.8**	**-1.2**
ZKR				Sg	**Sb**	**12 53 18.0**	**+0.1**
ARG	**Arkhangelos**	**1.60**	**36**	Pn	**Pn**	**12 53 23.5**	**-0.8**
IDI	**Anoyia**	**1.73**	**283**	Pn	**Pg**	**12 53 28.8**	**-0.2**
	12nm,0.3s,baz=102,slow=14,SNR=43						
IDI				Sn	**Sg**	**12 53 53.0**	**+1.6**
	24nm,0.3s,baz=262,slow=23,SNR=4.7						
IDI				LR	LR	12 54 28.7	
	comp=Z,475nm,18.7s,baz=84,slow=52						
DAT	**Datca**	**1.87**	**16**	Pn	**Pn**	**12 53 26.9**	**-1.1**
TURN	**Turunc**	**2.12**	**29**	Pn	**Pn**	**12 53 30.7**	**-0.7**
TURN	**Turunc**	**2.12**	**29**	P	**Pn**	**12 53 30.2**	**-1.2**
TURN				S	**Sn**	**12 53 58.2**	**+0.4**
BODT	**Bodrum**	**2.15**	**8**	Pn	**Pn**	**12 53 30.5**	**-1.3**
GVD	**Gavdhos**	**2.36**	**269**	Pn	**Pb**	**12 53 37.3**	**-1.1**
IZZE	**Mula-Seydike**	**2.39**	**50**	P	**Pn**	**12 53 34.7**	**-0.3**
IZZE				S	**Sb**	**12 54 07.9**	**-0.6**
FETY	**Fethiye**	**2.43**	**45**	Pn	**Pn**	**12 53 35.7**	**0.0**
YER	**Yerkesik**	**2.45**	**26**	Pn	**Pn**	**12 53 35.2**	**-0.8**
MLSB	**Milas**	**2.46**	**16**	Pn	**Pn**	**12 53 34.9**	**-1.1**
IMMV	**Iera Moni Meta**	**2.49**	**283**	Pn	**Pb**	**12 53 38.3**	**-2.4**
SABU	**Mula-Dalaman**	**2.50**	**40**	P	**Pn**	**12 53 37.0**	**+0.3**
SABU				S	**Sg**	**12 54 16.9**	**+0.6**
AKAS	**Kas**	**2.52**	**58**	Pn	**Pn**	**12 53 37.3**	**+0.2**
CAME	**Cameli-Denizli**	**2.77**	**43**	Pn	**Pn**	**12 53 40.4**	**-0.1**
GCAM	**G?zelcaml?**	**2.78**	**5**	Pn	**Pn**	**12 53 39.6**	**-0.8**
KNIK	**Mula-Seydike**	**2.86**	**47**	P	**Pn**	**12 53 42.4**	**+0.7**
TAVA	**DENIZLI_Tavas**	**2.99**	**32**	P	**Pn**	**12 53 43.1**	**-0.3**
TAVA				S	**Sn**	**12 54 21.7**	**+2.4**
ELL	**Elmali**	**3.01**	**52**	Pn	**Pn**	**12 53 44.2**	**+0.4**
ESEN	**Aydn-Nazilli**	**3.08**	**21**	P	**Pn**	**12 53 43.4**	**-1.1**
AYDB	**Zeytinkoy-Aydi**	**3.11**	**14**	Pn	**Pn**	**12 53 44.6**	**-0.5**
GOLH	**Golhisar**	**3.13**	**42**	P	**Pn**	**12 53 46.0**	**+0.7**
APMY	**Acipayam-Deniz**	**3.17**	**36**	Pn	**Pn**	**12 53 45.7**	**-0.2**
DNIZ	**Denizli-Tavas-**	**3.18**	**31**	P	**Pn**	**12 53 45.3**	**-0.7**
DNIZ				S	**Sb**	**12 54 30.4**	**-0.9**
DNIZ				IAML		12 54 36.0	
	comp=N,225nm,0.6s						
DNIZ				IAML		12 54 51.0	
	comp=E,173nm,0.5s						
NAZL	**Nazilli-Aydin**	**3.22**	**19**	Pn	**Pn**	**12 53 46.0**	**-0.5**
IZMR	**zmir-demi**	**3.30**	**14**	P	**Pn**	**12 53 46.6**	**-1.0**
URLA	**Izmir**	**3.44**	**355**	Pn	**Pn**	**12 53 48.6**	**-0.9**
SULT	**Buldan**	**3.45**	**25**	P	**Pn**	**12 53 49.8**	**+0.1**
KORT	**Korkueli**	**3.45**	**52**	Pn	**Pn**	**12 53 50.4**	**+0.7**
ODEM	**Odemis-Izmir**	**3.46**	**15**	Pn	**Pn**	**12 53 49.1**	**-0.8**
KIRA	**zmir-Kiraz**	**3.46**	**19**	P	**Pn**	**12 53 49.5**	**-0.4**
INCE	**Denizli-Bozkur**	**3.49**	**37**	S	**Sn**	**12 54 32.7**	**+0.9**
CHOS	**Chios island**	**3.53**	**348**	Pn	**Pn**	**12 53 49.4**	**-1.4**
ANTB	**Antalya**	**3.59**	**56**	Pn	**Pn**	**12 53 52.8**	**+1.2**
KULA	**Kula-Manisa**	**3.83**	**20**	Pn	**Pn**	**12 53 54.9**	**-0.1**
GORD	**Gordes-Manisa**	**4.09**	**14**	Pn	**Pn**	**12 53 58.4**	**-0.2**
BRTR	**Keskin Array B**	**7.16**	**46**	Pn	**Pn**	**12 54 40.2**	**-0.6**
	0.2nm,0.3s,baz=214,slow=14,SNR=7.0						
BRTR				Sn	**Sn**	**12 56 01.9**	**-0.3**
	0.1nm,0.3s,baz=241,slow=24,SNR=2.3						
BRTR				LR	LR	12 58 11.3	
	comp=Z,128nm,19.1s,baz=276,slow=44 2.2nm,1.0s						
MMAI	**Mount Meron Ar**	**7.28**	**103**	Pn	**Pn**	**12 54 41.3**	**-1.0**
	1.0nm,0.3s,baz=275,slow=17,SNR=1.6						
MMAI				Sn	**Sn**	**12 56 06.4**	**+1.4**
	3.1nm,0.3s,baz=277,slow=26,SNR=5.4 5.5nm,0.8s						
EIL	**Elat**	**8.56**	**126**	Pn	**Pn**	**12 54 59.2**	**-0.7**
	0.7nm,0.3s,baz=1.6,slow=5.7,SNR=4.3						
EIL				Sn	**Sn**	**12 56 34.4**	**-2.2**
	1.8nm,0.3s,baz=210,slow=1.6,SNR=6.4 2.5nm,0.7s						
MLR	**Muntele Rosu**	**10.58**	**356**	Pn	**Pn**	**12 55 28.4**	**+0.8**
	0.3nm,0.3s,baz=170,slow=7.1,SNR=4.2 3.3nm,0.6s						
KBZ	**Khabaz**	**15.13**	**50**	Pn	**P**	**12 56 34.6**	**-0.2**
	0.1nm,0.3s,baz=233,slow=12,SNR=4.4 3.1nm,1.1s						
AKASG	**Malin Array Be**	**15.85**	**5**	Pn	**Pn**	**12 56 39.4**	**+0.5**
	0.7nm,0.3s,baz=198,slow=11,SNR=4.0 0.2nm,0.2s						
GERES	**GERESS Array B**	**17.01**	**329**	P	**P**	**12 56 54.6**	**-1.2**
	baz=202,slow=14,SNR=4.8 0.7nm,0.6s						
ESDC	**Sonseca Array**	**24.98**	**290**	P	**P**	**12 58 19.2**	**-0.4**
	0.8nm,0.6s,baz=87,slow=9.2,SNR=6.8 0.8nm,0.6s						
EKA	**Eskdalemuir Ar**	**29.09**	**324**	P	**P**	**12 58 58.6**	**+2.3**
	2.2nm,0.8s,baz=141,slow=8.0,SNR=2.8 2.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**31.49**	**233**	P	**P**	**12 59 18.6**	**+0.6**
	0.8nm,0.7s,baz=30,slow=7.4,SNR=4.8 0.8nm,0.7s						
KURBB	**Kurchatov Arra**	**40.13**	**51**	P	**P**	**13 00 31.6**	**0.0**
	0.6nm,0.7s,baz=278,slow=8.6,SNR=7.1 0.6nm,0.7s						
MKAR	**Makanchi Array**	**42.68**	**56**	P	**P**	**13 00 53.0**	**+0.3**
	1.3nm,0.5s,baz=274,slow=7.7,SNR=22 1.3nm,0.5s						
ZALV	**Zalesovo Beam**	**44.11**	**46**	P	**P**	**13 01 03.3**	**-0.8**
	0.7nm,0.5s,baz=271,slow=8.7,SNR=3.9 0.7nm,0.5s						
SONM	**Songino Array**	**58.49**	**51**	P	**P**	**13 02 52.5**	**+0.2**
	0.7nm,0.6s,baz=242,slow=3.2,SNR=4.9 0.7nm,0.6s						
SCHQ	**Schefferville**	**64.31**	**320**	P	**P**	**13 03 33.8**	**+2.4**
	2.9nm,1.0s,baz=56,slow=3.6,SNR=2.2 2.9nm,1.0s						
YKA	**Yellowknife Ar**	**78.11**	**343**	P	**P**	**13 04 54.2**	**-0.5**
	0.2nm,0.6s,baz=29,slow=5.6,SNR=4.4 0.2nm,0.6s						
ILAR	**Eielson Array**	**80.51**	**357**	P	**P**	**13 05 06.6**	**-1.2**
	0.2nm,0.6s,baz=20,slow=3.0,SNR=2.0 0.2nm,0.6s						

IDC 18 12:59:03.2±2.5, 1°.94N×127°.77E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=182.3km s-min=27.7km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.68**	**164**	P	P	13 04 04.8	-1.6
	2.2nm,0.5s,baz=343,slow=10,SNR=17 2.2nm,0.5s						
ASAR	**Alice Springs**	**26.14**	**167**	P	P	13 04 40.2	+1.0
	0.7nm,0.5s,baz=347,slow=7.5,SNR=21 0.7nm,0.5s						
MKAR	**Makanchi Array**	**59.62**	**325**	P	P	13 09 09.2	+0.1
	0.1nm,0.3s,baz=116,slow=9.9,SNR=1.9 0.1nm,0.3s						

OMAN 18 13:08:03.2±0.1, 24°.74N×49°.90E, h5km, ml3.6/3, Error ellipse: s-maj=2.2km s-min=1.8km az=13.0, Eastern Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMRA	**Abu-Samra**	**0.84**	**90**	P	Pg	13 08 19.2	-0.1
SMRA				S	Sg	13 08 30.6	+0.5
TRNA	**Turayna**	**1.19**	**90**	P	Pg	13 08 25.4	-0.6
	SNR=13						
TRNA				S	Sb	13 08 42.3	+0.3
SHMA	**Al-Shehemyia**	**1.47**	**41**	P	Pb	13 08 30.8	-0.2
	SNR=7.4						
SHMA				S	Sg	13 08 52.6	+2.2
SLWR	**Sila**	**1.76**	**112**	S	Sg	13 08 59.1	-0.7
JRN	**Qarnain Island**	**2.68**	**85**	P	Pn	13 08 46.8	-0.3
MZR	**Muzera**	**3.70**	**117**	P	Pn	13 09 01.2	+0.1
MZR				S	Sn	13 09 48.5	+3.3
ASHO	**Ashiyiah**	**5.60**	**89**	P	Pn	13 09 26.1	-1.1

BJI ***18*** *13:09:29.7, 40°.84N×112°.26W, h6km, mB6.1/38, mb5.6/65, Ms5.7/61, Ms7 5.3/58*

IDC ***18*** *13:09:30.5±0.3, 40°.75N×111°.98W, h0km, mb5.5/39, mbtmp5.5/49, ML4.6/9, MS5.0/84, Error ellipse: s-maj=6.6km s-min=4.6km az=157.0*

NEIC ***18*** *13:09:31.5, 40°.74N×112°.08W, h16km*

UUSS ***18*** *13:09:31.5±1.2, 40°.75N±0°.02×112°.08W±0°.02, h12km±3km, Error ellipse: s-maj=2.5km s-min=1.7km az=192.0*

IPGP ***18*** *13:09:31.0, 40°.75N×112°.08W, h8km, Mw5.6, Fault plane solution: NP1:φs159.00000°, δ37.00000°, λ-79.00000°. NP2:φs326.00000°, δ54.00000°, λ-98.00000°.*

NEIC ***18*** *13:09:31.5, 40°.74N×112°.08W, h16km, Moment Tensor Solution. Duration: 3s5 Moment tensor: Scale 10^17Nm; Mrr-3.42; Mθθ0.39; Mφφ3.03; Mrθ0.11; Mθφ-1.25; Mrφ2.54; Fault plane solution: M0 4.30000×10^17 NP1: φs325.08000°, δ29.47000°, λ-113.83000°. NP2: φs171.98000°, δ63.25000°, λ-77.14000°. Principal axes: T 4.2500, Plg17.0000°, Azm252.0000°; N 0.1056, Plg11.0000°, Azm346.0000°; P -4.3557, Plg69.0000°, Azm108.0000°;*

MOS ***18*** *13:09:31.7±0.8, 40°.73N×112°.05W, h15km, mb6.0/85, MS5.5/44 Error ellipse: s-maj=6.1km s-min=3.7km az=93.6*

NEIC ***18*** *13:09:31.4±1.2, 40°.75N±0°.02×112°.12W±0°.02, h9km±3km, mb5.8/154, ML5.7/134, Ms_20 5.2/387, Mwr5.6/144, Mww5.7/130, Mwr5.7(UUSS), Error ellipse: s-maj=2.6km s-min=1.8km az=181.0, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr-2.44; Mθθ0.15; Mφφ2.30; Mrθ1.04; Mθφ-0.74; Mφr-0.51; Fault plane solution: M0 2.74000×10^17 NP1: φs178.50000°, δ38.35000°, λ-63.38000°. NP2: φs325.92000°, δ56.31000°, λ-109.52000°. Principal axes: T 2.6593, Plg9.0000°, Azm70.0000°; N 0.1586, Plg16.0000°, Azm337.0000°; P -2.8179, Plg71.0000°, Azm189.0000°;*

NEIC ***18*** *13:09:31.4, 40°.73N×112°.10W, h10km*

GFZ ***18*** *13:09:33.5, 40°.82N×111°.92W, h10km, MW5.5, Moment Tensor Solution. s38 Moment tensor: Mrr-2.23; Mθθ0.11; Mrθ2.12; Mrφ-0.05; Mθφ-0.68; Mφr0.20; Fault plane solution: NP1: φs163.00000°, δ47.00000°, λ-89.00000°. NP2: φs342.00000°, δ42.00000°, λ-90.00000°.*

GCMT ***18*** *13:09:34.4±0.1, 40°.80N±0°.01×111°.99W±0°.01, h12km, MW5.6/169, Moment Tensor Solution. s136, c244; s169, c369; Duration: 1s6 Moment tensor: Scale 10^17 Nm; Mrr-3.06±.03; Mθθ0.20±.03; Mφφ2.86±.03; Mrθ0.86±.08; Mθφ-1.26±.02; Mφr-0.57±.08; Best double couple: M0 3.38000×10^17 NP1: φs170.00000°, δ39.00000°, λ-72.00000°. NP2: φs327.00000°, δ53.00000°, λ-104.00000°. Principal axes: T 3.4730, Plg7.0000°, Azm67.0000°; N -0.1880, Plg11.0000°, Azm336.0000°; P -3.2860, Plg77.0000°, Azm191.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

PTWC ***18*** *13:09:37, 40°.70N×112°.00W, h53km,

comp=N,150µm,0.5s
HVU IAML 13 10 12.5
comp=E,185µm,0.8s
HVU Hansel Valley 1.18 333 P Pb 13 09 52.7 -1.9
ELU Electric Lake 1.27 149 Pg 13 09 56.5 +0.1
MLI Malad Range 1.30 358 Pn 13 09 55.0 -1.5
EMUT Emma Park 1.32 133 Pg 13 09 57.2 -0.1
FLU Fool Peak 1.35 184 Pn 13 09 56.5 -0.8
BMUT Black Mountain 1.38 27 Pn 13 09 56.5 -1.2
BEI Bear River Ran 1.40 9 Pn 13 09 57.2 -0.7
FSU Fish Springs 1.43 226 Pn 13 09 57.3 -1.0
NPI North Pocatell 1.46 347 Pn 13 09 57.4 -1.3
SNO Snow College 1.47 164 Pb 13 09 59.8 +0.1
ARGU Argyle Ridge 1.47 127 Pg 13 09 59.9 -0.3
DCM Dugout Coal Mi 1.53 132 Pb 13 10 00.6 -0.2
DBD Des Bee Dove 1.60 152 Pn 13 10 01.0 +0.3
P17A Butcher Ranch, 1.61 141 Pn 13 10 00.6 -0.2
P17A IAML 13 10 27.2
comp=N,60µm,1.2s
P17A IAML 13 10 27.4
comp=E,55µm,1.1s
L17A Cokeville 1.63 33 Pn 13 10 00.5 -0.6
BCE Book Cliffs Ea 1.69 131 Pb 13 10 03.0 -0.4
WCU Willow Creek 1.76 181 Pn 13 10 02.7 -0.3
P18A Preston Nutter 1.77 128 Pb 13 10 04.1 -0.8
P18A IAML 13 10 32.0
comp=E,50µm,1.4s
P18A IAML 13 10 45.2
comp=N,46µm,1.1s
RDMU Red Mountain 1.90 94 Pn 13 10 05.7 +0.8
RDMU IAML 13 10 34.9
comp=N,43µm,1.6s
Q16A Castle Valley 1.94 159 Pn 13 10 05.2 -0.1
SRU San Rafael Swe 2.00 143 Pn 13 10 06.7 +0.5
SRU IAML 13 10 39.7
comp=N,37µm,0.7s
SRU IAML 13 10 47.7
comp=E,59µm,0.9s
SRU San Rafael Swe 2.00 143 P Pn 13 10 06.7 +0.5
OWUT Old Woman Plat 2.01 166 Pn 13 10 07.0 +0.6
TCRU Three Creeks R 2.14 188 Pn 13 10 08.1 0.0
TCRU IAML 13 10 48.2
comp=N,62µm,0.9s
TCRU IAML 13 10 57.0
comp=E,54µm,1.4s
AHID Auburn Hatcher 2.16 19 Pn 13 10 07.8 -0.5
IMU Iron Mountain 2.26 202 Pn 13 10 09.9 +0.2
NMUT North Mineral 2.29 196 Pn 13 10 10.3 +0.1
WLD Wild Horse Can 2.35 196 Pn 13 10 11.2 +0.2
ELK Elko 2.42 271 Pn Pn 13 10 10.6 -1.3
comp=E,111nm,0.3s,baz=87,slow=9.2,SNR=266
ELK Pg Pb 13 10 16.9 +1.1
comp=E,1µm,0.3s,baz=77,slow=15,SNR=114
ELK Lg Lg 13 10 47.4
comp=E,2µm,0.3s,baz=209,slow=17,SNR=14
ELK LR LR 13 11 09.1
comp=E,73µm,18.5s,baz=320,slow=40
comp=E,1µm,0.3s
ELK Elko 2.42 271 Pn 13 10 10.9 -1.0
PSUT Pine Spring 2.59 213 Pn 13 10 14.2 -0.2
PSUT IAML 13 10 58.5
comp=E,57µm,1.1s
PSUT IAML 13 11 00.1
comp=N,41µm,1.0s
MTPU Mount Pierson 2.69 182 Pn 13 10 15.5 -0.3
DWU Dry Willow Pea 2.72 196 Pn 13 10 16.9 +0.8
BW06 Boulder Array 2.77 42 Pn 13 10 16.5 -0.2
PD31 Pinedale Array 2.77 42 Pn 13 10 16.1 -0.6
PDAR Pinedale Array 2.77 42 Pn Pn 13 10 16.5 -0.2
comp=N,43nm,0.3s,baz=227,slow=12,SNR=860
PDAR Pg Pb 13 10 20.8 -0.9
comp=N,2µm,0.3s,baz=230,slow=14,SNR=502
PDAR Lg Lg 13 10 56.4
comp=N,505nm,0.3s,baz=222,slow=17,SNR=4.0
comp=N,437nm,0.4s
SNOW Snow King Moun 2.90 19 Pn 13 10 18.5 -0.1
COMI Craters of Moo 2.96 338 Pn 13 10 19.3 -0.1
HMU Henry Mountain 2.97 159 Pn 13 10 20.1 +0.6
HMU IAML 13 11 07.6
comp=N,26µm,0.8s
HMU IAML 13 11 41.6
comp=E,41µm,1.1s
BTU Barney Top 2.97 177 Pn 13 10 20.8 +1.1
O20A White River Ci 2.98 100 Pn 13 10 20.8 +1.2
FXWY Fox Creek 3.01 14 Pn 13 10 20.4 +0.4
FXWY IAML 13 11 11.5
comp=E,23µm,1.4s
FXWY IAML 13 11 20.2
comp=E,15µm,1.1s
LOHW Long Hollow 3.08 20 Pn 13 10 20.9 -0.1
LOHW IAML 13 11 10.6
comp=E,25µm,1.2s
LOHW IAML 13 11 13.1
comp=E,21µm,1.4s
ARUT Antelope Range 3.13 200 Pn 13 10 22.7 +1.1
ARUT Antelope Range 3.13 200 P Pn 13 10 22.7 +1.1
MOOW Moose Ponds 3.17 18 Pn 13 10 22.5 +0.3
PV21 Cone Mtn., Par 3.22 131 Pn 13 10 23.7 +0.8
SZCU Shurtz Canyon 3.23 195 Pn 13 10 23.1 0.0
SZCU IAML 13 11 19.6
comp=E,14µm,0.5s
R19A Curley Farm, L 3.26 137 Pn 13 10 24.4 +0.9
PV23 Carpenter Ridg 3.27 133 Pn 13 10 24.3 +0.6
PKCU Pink Cliffs 3.29 183 Pn 13 10 25.0 +1.0
PKCU IAML 13 11 38.2
comp=N,24µm,3.3s
PKCU IAML 13 12 16.8
comp=E,21µm,2.6s
PV14 Lion Creek, Pa 3.33 134 Pn 13 10 24.9 +0.5
HLID Hailey 3.33 329 Pn 13 10 24.3 -0.1
MCID Moose Creek 3.52 10 Pn 13 10 28.1 +1.0
YPP Pitchstone Pla 3.66 14 Pn 13 10 29.9 +0.9
YPP IAML 13 11 32.3
comp=N,12µm,1.7s
YPP IAML 13 11 38.5
comp=E,15µm,2.0s
HAYD Hayden 3.66 92 Pn 13 10 30.2 +1.2
YMS Mount Sheridan 3.71 17 Pn 13 10 31.0 +1.2
KNB Kanab 3.75 189 Pn 13 10 31.7 +1.4
KNB IAML 13 11 44.4
comp=N,9µm,1.7s
KNB IAML 13 12 25.2
comp=E,8µm,2.1s
KNB Kanab 3.75 189 P Pn 13 10 31.7 +1.4
H17A Grant Village 3.82 16 Pn 13 10 32.2 +0.9
H17A IAML 13 11 37.1
comp=E,10µm,1.9s
H17A IAML 13 11 41.6
comp=N,8µm,1.6s
ICU Indian Springs 3.86 203 Pn 13 10 33.0 +1.3
YLT Little Thumb C 3.86 16 Pn 13 10 33.7 +1.9
YTP The Promontory 3.89 19 Pn 13 10 32.8 +0.7
YPWB West Boundary 3.94 10 Pn 13 10 34.8 +2.0
YPLA Lake Butte 4.00 19 Pn 13 10 34.6 +0.8
TPMT Tepee Creek 4.01 4 Pn 13 10 34.7 +0.9
YML Mary Lake 4.01 15 Pn 13 10 36.7 +2.8
YMR Madison River 4.02 11 Pn 13 10 35.1 +1.2
YMR IAML 13 11 55.5
comp=N,16µm,1.3s
YMR IAML 13 12 04.3
comp=E,15µm,1.1s
YPM Purple Mountai 4.02 12 Pn 13 10 36.1 +2.1
YPDC Denny Creek 4.02 8 Pn 13 10 36.5 +2.5
LKWY Lake 4.02 17 Pn 13 10 36.5 +2.5
YHB Horse Butte 4.07 9 Pn 13 10 36.5 +1.9
YHB IAML 13 11 48.8
comp=N,8µm,1.2s
YMC Maple Creek 4.10 11 Pn 13 10 36.8 +1.7
YNR Norris Junctio 4.11 14 Pn 13 10 36.4 +1.2
YNM Yellowstone No 4.12 14 Pn 13 10 36.8 +1.5
QLMT Earthquake Lak 4.12 6 Pn 13 10 35.6 +0.2
MCMT McKenzie Canyo 4.14 352 Pn 13 10 34.6 -0.9
YUF Upper Falls 4.14 15 Pn 13 10 37.8 +2.1
YHH Holmes Hill 4.15 12 Pn 13 10 37.0 +1.1
YHL Hebgen Lake 4.17 9 Pn 13 10 37.2 +1.1
YHL IAML 13 11 53.7
comp=E,9µm,1.5s
YHL IAML 13 12 19.0
comp=N,9µm,2.9s
S11A Rachel 4.21 224 Pn 13 10 37.2 +0.7
YMP Mirror Lake Pl 4.25 19 Pn 13 10 38.1 +1.0
YMP IAML 13 11 53.1
comp=N,12µm,3.4s
YMP IAML 13 11 54.2
comp=E,8µm,2.2s
U15A North Rim 4.30 182 Pn 13 10 39.4 +1.6
U15A IAML 13 12 10.6
comp=N,6µm,1.9s
U15A IAML 13 12 41.0
comp=E,7µm,2.2s
YMV Mammoth Vault 4.36 13 Pn 13 10 41.1 +2.5
MVCO Mesa Verde 4.48 141 Pn 13 10 40.4 +0.1
YNE Yellowstone No 4.53 19 Pn 13 10 42.2 +1.2
YNE IAML 13 12 14.4
comp=E,5µm,2.2s
K22A Casper 4.57 63 Pn 13 10 42.4 +0.9
DLMT Dillon 4.65 355 Pn 13 10 44.8 +2.3
DLMT IAML 13 12 21.9
comp=E,8µm,2.2s
DLMT IAML 13 12 22.9
comp=E,9µm,1.5s
RLMT Red Lodge 4.84 24 Pn 13 10 46.5 +1.3
RLMT IAML 13 12 09.5
comp=E,4µm,2.4s
RLMT IAML 13 12 23.7
comp=E,4µm,2.3s
SHPR Sheep Range 4.87 211 Pn 13 10 46.6 +1.0
SHPR IAML 13 12 17.8
comp=E,5µm,1.4s
SHPR IAML 13 12 21.0
comp=N,4µm,2.1s
BOZ Bozeman (W) 4.88 4 Pn 13 10 47.4 +1.8
BOZ Bozeman (W) 4.88 4 P Pn 13 10 47.4 +1.8
BOZ Bozeman (W) 4.88 4 P Pn 13 10 50.2 +4.6
KVN Kaiserville 4.94 252 Pn 13 10 47.3 +0.7
KVN IAML 13 12 13.3
comp=N,4µm,1.2s
KVN IAML 13 12 15.1
comp=E,3µm,1.1s
KVN Kaiserville 4.94 252 P Pn 13 10 47.3 +0.7
TPNV Topopah Spring 4.99 222 Pn 13 10 48.4 +1.1
TPNV Topopah Spring 4.99 222 P Pn 13 10 48.4 +1.1
TPNV Topopah Spring 4.99 222 P Pn 13 10 49.5 +2.2
S22A 4UR Ranch, Cre 5.04 125 Pn 13 10 49.2 +1.2
S22A IAML 13 12 16.6
comp=N,3µm,1.4s
S22A IAML 13 12 18.8
comp=E,6µm,1.2s
WVOR Wild Horse Val 5.22 291 Pn 13 10 51.2 +0.9
WVOR IAML 13 12 35.1
comp=E,8µm,2.5s
WVOR Wild Horse Val 5.22 291 P Pn 13 10 51.2 +0.9
PLID Pearl Lake 5.23 328 Pn 13 10 51.2 +0.7
PLID IAML 13 12 35.6
comp=E,3µm,1.4s
NV11 Mina Array Sit 5.24 246 Pn 13 10 51.7 +1.1
NV11 IAML 13 12 30.4
comp=N,8µm,1.2s
NV11 IAML 13 12 39.0
comp=E,6µm,2.0s
GMN Gold Mountain 5.30 231 Pn 13 10 53.3 +1.7
GMN IAML 13 12 26.7
comp=N,4µm,0.6s
GMN IAML 13 12 34.8
comp=E,2µm,0.7s
WCT Wildcat Mounta 5.31 224 Pn 13 10 53.2 +1.6
NVAR Mina Array Bea 5.34 247 Pn Pn 13 10 52.7 +0.6
comp=E,56nm,0.3s,baz=64,slow=13,SNR=275
NVAR Lg Lg 13 12 20.8
comp=E,690nm,0.3s,baz=16,slow=33,SNR=9.7
comp=E,118nm,0.5s
NVAR Mina Array Bea 5.34 247 Pn 13 10 53.2 +1.1
J08A Circle Bar Ran 5.45 301 Pn 13 10 54.8 +1.3
V12A Nelson 5.46 205 Pn 13 10 55.1 +1.6
BMO Blue Mountains 5.64 319 Pn 13 10 56.8 +0.6
BMO Blue Mountains 5.64 319 P Pn 13 10 56.8 +0.6
FURC Furnace Creek, 5.68 223 Pn 13 10 58.3 +1.8
FURC Furnace Creek, 5.68 223 P Pn 13 10 59.5 +3.0
PAHR Pah Rah Range 5.70 262 Pn 13 10 57.6 +0.7
W18A Petrified Fore 5.90 161 Pn 13 10 59.9 +0.2
TIN Tinemaha, Big 6.05 235 P Pn 13 11 06.7 +4.9
MLAC Mammoth, Mammo 6.11 242 P Pn 13 11 05.7 +3.1
CWC Cottonwood Cre 6.37 230 P Pn 13 11 09.8 +3.6
X18A Snowflake 6.41 164 Pn 13 11 06.6 -0.2
KCC Kaiser Creek 6.59 241 P Pn 13 11 12.3 +3.1
DANC Danby, Needles 6.63 204 Pn 13 11 10.9 +1.3
RSSD Black Hills 6.84 58 Pn 13 11 12.0 -0.6
RSSD Black Hills 6.84 58 P Pn 13 11 12.0 -0.6
CMB Columbia Colle 6.99 250 Pn 13 11 15.5 +1.0
CMB Columbia Colle 6.99 250 P Pn 13 11 15.5 +1.0
CMB Columbia Colle 6.99 250 P Pn 13 11 16.6 +2.0
WBSM Bird Springs 7.06 225 P Pn 13 11 18.8 +3.1
AFDM Forest Hills D 7.08 258 Pn 13 11 17.1 +1.2
ISA Isabella, Lake 7.15 227 P Pn 13 11 20.4 +3.6
ANMO Albuquerque 7.28 141 Pn Pn 13 11 19.0 +0.3
comp=E,5.2nm,0.3s,baz=318,slow=13,SNR=84
ANMO Pg Pb 13 11 42.0 +3.4
comp=E,8.6nm,0.3s,baz=295,slow=17,SNR=8.2
ANMO Lg Lg 13 13 19.2
comp=E,39nm,0.3s,baz=256,slow=19,SNR=7.0
ANMO LR LR 13 14 11.5
comp=E,7µm,20.5s,baz=329,slow=39
comp=E,46nm,0.6s
ANMO Albuquerque 7.28 141 Pn 13 11 17.7 -1.0
ANMO Albuquerque 7.28 141 Pn 13 11 18.4 -0.3
ANMO Albuquerque 7.28 141 P Pn 13 11 19.0 +0.3
LAO LASA Array 7.30 33 Pn 13 11 17.9 -1.0
ORV Oroville 7.33 264 Pn 13 11 19.1 -0.1
ORV Oroville 7.33 264 P Pn 13 11 19.1 -0.1
ORV Oroville 7.33 264 P Pn 13 11 22.2 +3.0
O03E Paynes Creek 7.44 270 Pn 13 11 21.8 +1.0
OGNE Ogallala 7.61 85 Pn 13 11 24.0 +0.9
LENM Lemitar 7.70 147 Pn 13 11 23.5 -1.0
L04D Klamath Falls 7.83 284 Pn 13 11 27.2 +0.9
PFO Pinyon Flats O 7.92 208 Pn Pn 13 11 29.9 +2.5
comp=E,3.4nm,0.3s,baz=39,slow=9.4,SNR=87
PFO Lg Lg 13 13 43.1
comp=E,12nm,0.3s,baz=242,slow=22,SNR=6.6
comp=E,85nm,1.0s
PFO Pinyon Flats O 7.92 208 Pn 13 11 29.5 +2.0
PFO Pinyon Flats O 7.92 208 P Pn 13 11 29.5 +2.0
CHFC Chilao Flat St 7.95 218 P Pn 13 11 32.0 +4.1
CRNM Carthage 7.98 146 Pn 13 11 27.9 -0.4
N02D Trinity Center 8.07 275 Pn 13 11 30.5 +1.0
YBH Yreka Blue Hor 8.09 281 Pn Pn 13 11 31.3 +1.6
comp=E,0.1nm,0.3s,baz=86,slow=5.7,SNR=102
YBH Lg Lg 13 13 47.3
comp=E,0.1nm,0.3s,baz=200,slow=23,SNR=1.3
YBH LR LR 13 15 14.9
comp=E,1µm,20.3s,baz=90,slow=42
M02C Callahan 8.18 278 Pn 13 11 31.4 +0.5
NEW Newport 8.35 336 Pn Pn 13 11 35.8 +2.5
comp=E,1.6nm,0.3s,baz=151,slow=13,SNR=132
NEW Lg Lg 13 13 51.9
comp=E,21nm,0.3s,baz=25,slow=17,SNR=5.8
NEW LR LR 13 15 16.4
comp=E,14µm,21.4s,baz=159,slow=41
comp=E,116nm,0.9s
NEW Newport 8.35 336 Pn 13 11 34.9 +1.6
NEW Newport 8.35 336 P Pn 13 11 34.9 +1.6
MCCM Marconi Confer 8.76 256 P Pn 13 11 42.8 +4.0
CBKS Cedar Bluff 9.68 97 P Pn 13 11 52.4 +0.9
E28A Huff 10.09 51 Pn 13 11 55.5 -1.6
SUSD Miller 10.35 65 Pn 13 11 59.1 -1.5
MNTX Cornudas Mount 10.50 147 Pn 13 12 04.6 +1.9
BGNE Belgrade 10.53 82 Pn 13 12 03.8 +0.7
R32A Long Quarter, 10.56 98 Pn 13 12 03.9 +0.3
MDND Maddock 11.41 47 Pn 13 12 13.0 -2.0
KAN08 Anthony NE Sta 11.51 103 Pn 13 12 16.1 -0.4
KAN01 Argonia South 11.70 103 Pn 13 12 18.6 -0.4
CROK Carrier 11.79 106 Pn 13 12 20.2 -0.2
ECSD EROS Data Cent 11.84 70 Pn 13 12 19.2 -1.8
APMT Aspermont 12.06 124 Pn 13 12 25.2 +1.2
WMOK Wichita Mounta 12.09 115 Pn 13 12 24.7 +0.2
WMOK Wichita Mounta 12.09 115 P Pn 13 12 24.7 +0.2
N35A Tabor 12.45 84 Pn 13 12 27.9 -1.4
EDM Edmonton 12.53 356 Pn 13 12 31.1 +0.7
EDM Edmonton 12.53 356 P Pn 13 12 31.1 +0.7
OK051 E0350 and S346 12.53 105 Pn 13 12 32.3 +0.5
OKCSW OKLAHOMA CITY 12.69 110 Pn 13 12 34.2 +1.9
ABTX Abilene, Hawle 12.83 125 Pn 13 12 35.9 +1.3
WTFS Witchita Falls 12.86 118 Pn 13 12 36.2 +1.2
QUOK Quay 12.86 106 Pn 13 12 35.4 +0.4
OK052 Battle Ridge R 12.87 107 Pn 13 12 34.5 -0.6
OZNA Ozona 13.20 134 Pn 13 12 41.5 +1.8
W35A Tecumseh 13.21 110 Pn 13 12 40.4 +0.7
TXAR Lajitas Array 13.28 146 Pn Pn 13 12 42.7 +1.9
comp=E,2.8nm,0.3s,baz=333,slow=10,SNR=325
TXAR Lg Lg 13 16 28.9
comp=E,1.1nm,0.3s,baz=332,slow=26,SNR=5.3
TXAR LR LR 13 18 37.2
comp=E,3µm,20.9s,baz=326,slow=41
comp=E,65nm,0.9s
TXAR Lajitas Array 13.28 146 Pn 13 12 43.1 +2.3
TXAR Lajitas Array 13.28 146 P Pn 13 12 43.1 +2.3
PLPT Palo Pinto 13.55 121 Pn 13 12 46.0 +1.6
Z35A Perchaven, San 13.93 117 Pn 13 12 50.4 +0.8
RLO Rose Lookout 14.11 103 Pn 13 12 51.6 -0.3
BRDY Brady 14.15 128 Pn 13 12 52.9 +0.3
P38A Dawn 14.21 88 Pn 13 12 52.7 -0.7
SCIA State Center 14.21 79 Pn 13 12 52.8 -0.6
N38A Joes South For 14.27 84 Pn 13 12 53.4 -0.9
FW13 Cleburne 14.42 121 Pn 13 12 56.9 +0.7
ULM Lac du Bonnet 14.79 45 Pn Pn 13 12 55.2 -6.0
comp=E,9.7nm,0.3s,baz=224,slow=12,SNR=61
ULM Lg Lg 13 17 08.3
comp=E,5.7nm,0.3s,baz=144,slow=20,SNR=4.5
comp=E,90nm,0.7s
SPMN Marine on St. 14.79 66 Pn 13 12 58.1 -3.2
S39A Bolivar 14.84 96 Pn 13 12 60.0 -2.0
HHAR Hobbs 14.86 102 Pn 13 13 00.6 -1.7
BBB Bella Bella 15.88 322 Pn Pn 13 13 17.5 +1.9
comp=E,1.0nm,0.3s,baz=139,slow=11,SNR=11
BBB LR LR 13 19 11.2
comp=E,5µm,18.4s,baz=135,slow=36
comp=E,214nm,1.1s
LPIG La Paz 16.65 174 Pn P 13 13 26.7 -1.3
comp=E,74nm,1.0s,baz=155,slow=2.9,SNR=16
LPIG LR LR 13 19 45.7
comp=E,7µm,20.2s,baz=358,slow=37
UALR University of 16.68 105 P Pn 13 13 24.6 -1.3
HKT Hockley 17.03 124*d* iP Pn 13 13 30.0 -0.3
HKT pmax pmax
comp=Z,212nm,1.3s
HKT MLR MLR
comp=Z,33µm,11.0s
Z41A Richland Creek 17.08 110 P Pn 13 13 29.9 -1.1
Z41A IAmb IAmb 13 13 38.8
comp=Z,797nm,1.2s
HBAR Harrisburg 17.60 100 P Pn 13 13 36.3 -1.1
Q44A Meyer Farm, Va 17.79 88 P Pn 13 13 38.6 -1.2
Q44A IAmb IAmb 13 13 43.7
comp=Z,630nm,1.1s
MET Memphis--Engin 18.31 101 P Pn 13 13 44.7 -1.5
MET IAmb IAmb 13 13 50.2
comp=Z,900nm,1.4s
OLIL Olney 18.53 88 P P 13 13 46.9 -1.8
T45A Paducah 18.59 94 P P 13 13 47.2 -2.2
T45A IAmb IAmb 13 13 58.6
comp=Z,381nm,0.8s
P46A Rosedale 19.01 85 P P 13 13 52.5 -1.5
P46A IAmb IAmb 13 13 59.5
comp=Z,678nm,1.4s
Y45A Yeager Farm, C 19.15 104 P P 13 13 55.3 -0.2
U35K Hyder 19.24 328 P Pn 13 13 59.2 +1.9
baz=135,SNR=11
V35K Ketchikan 19.50 325 P Pn 13 14 02.3 +1.8
baz=130,SNR=61
V35K S S 13 17 47.0 +7.5
baz=130
WVT Waverly 19.51 96 P P 13 13 59.3 -0.1
WVT Waverly 19.51 96 P P 13 13 59.3 -0.1
WVT pmax pmax
comp=Z,263nm,1.1s
T47A Sharon Grove 19.77 93 P P 13 14 02.4 +0.1
WCI Wyandotte Cave 20.02 89 P P 13 14 04.7 -0.4
WCI Wyandotte Cave 20.02 89 P P 13 14 04.7 -0.4
WCI pmax pmax
comp=Z,155nm,1.0s
WCI MLR MLR
comp=Z,24µm,18.0s
T35M Bob Quinn 20.09 330 P Pn 13 14 08.2 +0.8
baz=136,SNR=76
T35M S Sn 13 18 01.0 +7.8
baz=136
CRAG Craig 20.26 324 P Pn 13 14 11.2 +1.8
CRAG Craig 20.26 324 P Pn 13 14 09.6 +0.2
baz=128,SNR=15
CRAG S Sn 13 18 04.6 +7.2
baz=128
J47A Sunmer 20.37 74 P P 13 14 07.7 -1.1
J47A IAmb IAmb 13 14 15.9
comp=Z,301nm,0.9s
P48A Milroy 20.39 85 P P 13 14 08.3 -0.8
P48A IAmb IAmb 13 14 13.8
comp=Z,1µm,1.5s
V48A Smith Brothers 20.41 96 P P 13 14 09.7 +0.4
O48B Farmland 20.44 82 IAMs_20 IAMs_20 13 21 56.2
comp=Z,11µm,21.0s
346A Big Creek Wild 20.46 110 P Pn 13 14 10.8 -1.2
346A IAmb IAmb 13 14 22.6
comp=Z,545nm,1.2s
GLMI Grayling 20.51 69 P P 13 14 09.7 -0.7
GLMI IAmb IAmb 13 14 15.6
comp=Z,393nm,0.9s
545A Edgard 20.52 115 IAMs_20 IAMs_20 13 19 14.3
comp=Z,9µm,18.0s
WRAK Wrangell Islan 20.53 327 P Pn 13 14 13.0 +0.4
baz=131,SNR=76
WRAK S Sn 13 18 08.8 +4.9
baz=131
CLTN Cedars of Leba 20.66 95 P P 13 14 12.0 0.0
U33K Whale Pass 20.66 325 P Pn 13 14 13.0 -1.1
baz=129,SNR=32
U33K S Sn 13 18 12.4 +5.3
baz=129
X48A Hartselle 20.75 100 P P 13 14 13.8 +0.8
KOTAN Kotaneelee Air 20.81 343 P P 13 14 13.7 +0.3
baz=154,SNR=330
KOTAN S Sn 13 18 11.5 +1.0
baz=154
E46A Sault Ste Mari 20.83 65 P P 13 14 13.2 -0.6
E46A IAmb IAmb 13 14 18.2
comp=Z,474nm,0.9s
E46A IAMs_20 IAMs_20 13 22 01.3
comp=Z,7µm,20.0s
R49A Shelbyville 20.86 88 P P 13 14 14.0 -0.1
R49A IAmb IAmb 13 14 22.3
comp=Z,365nm,1.1s
T33K Petersburg 21.04 327 P P 13 14 18.0 +2.0
baz=131,SNR=20
Q49A Covington 21.07 82 P P 13 14 15.9 -0.6
O49A IAmb IAmb 13 14 20.7
comp=Z,696nm,1.1s
DLBC Dease Lake 21.09 333 P P 13 14 17.5 +1.0
comp=Z,83nm,1.0s,baz=151,slow=4.0,SNR=56
DLBC Lg Lg 13 20 43.8
comp=Z,0.1nm,0.3s,baz=12,slow=9.5,SNR=6.5
DLBC LR LR 13 22 06.1
comp=Z,4µm,18.9s,baz=125,slow=36
comp=Z,83nm,1.0s
DLBC Dease Lake 21.09 333 P P 13 14 18.6 +2.1
baz=139,SNR=95
DLBC S Sn 13 18 21.7 +4.3
baz=139
S34M Telegraph Cree 21.09 331 P P 13 14 18.9 +2.5
baz=136,SNR=252
S34M S Sn 13 18 21.7 +4.4
baz=136
SWET Sewanee 21.28 97 P P 13 14 18.7 -0.1
SWET IAmb IAmb 13 14 23.9
comp=Z,409nm,1.3s
AAM Ann Arbor 21.29 76 IAMs_20 IAMs_20 13 22 04.5
comp=Z,7µm,20.0s
FCC Fort Churchill 21.34 26 P P 13 14 18.1 -1.0
FCC IAmb IAmb 13 14 25.4
comp=Z,767nm,1.9s
FCC Fort Churchill 21.34 26 P P 13 14 18.1 -1.0
FCC pmax pmax
comp=Z,767nm,1.9s
LRAL Lakeview Retre 21.42 103 P P 13 14 20.8 +0.5
LRAL IAmb IAmb 13 14 28.7
comp=Z,702nm,1.1s
T50A Nancy 21.48 91 P P 13 14 20.9 0.0
T50A IAmb IAmb 13 14 25.1
comp=Z,690nm,1.4s
Y49A Blount Mountai 21.48 100 P P 13 14 21.6 +0.7
Y49A IAmb IAmb 13 14 26.4
comp=Z,764nm,1.2s
R50A Paris 21.50 87 P P 13 14 21.2 +0.1
R50A IAMs_20 IAMs_20 13 22 12.8
comp=Z,10µm,22.0s
W50A Signal Mountai 21.76 96 IAMs_20 IAMs_20 13 22 33.6

comp=Z,8µm,20.0s
FPAL Fort Paine 21.79 98 P **P** **13 14 24.5 +0.2**
I49A Point Hope 21.80 72 P **P** **13 14 24.3 +0.1**
I49A IAmb IAmb 13 14 31.5
comp=Z,427nm,1.0s
YKAW1 Yellowknife Wh 21.83 357 P **P** **13 14 23.7 -0.7**
YKAW1 IAmb IAmb 13 14 31.0
comp=Z,576nm,1.1s
M50A Fremont 21.85 79 P **P** **13 14 25.2 +0.4**
M50A IAMs_20 IAMs_20 13 22 20.7
comp=Z,8µm,20.0s
YKA Yellowknife Ar 21.85 357 P **P** **13 14 23.9 -0.6**
comp=Z,212nm,1.1s,baz=183,slow=9.2,SNR=399
YKA PcP **PcP** **13 18 24.3 +0.4**
comp=Z,18nm,1.0s,baz=164,slow=1.6,SNR=5.3
YKA Lg Lg 13 21 06.4
comp=Z,0.1nm,0.3s,baz=161,slow=25,SNR=4.6
YKA LR LR 13 23 44.6
comp=Z,4µm,19.1s,baz=173,slow=39
comp=Z,212nm,1.1s
YKA Yellowknife Ar 21.85 357 P **P** **13 14 23.4 -1.1**
YKAW3 Yellowknife Wh 21.92 357 P **P** **13 14 24.8 -0.5**
YKAW3 IAmb IAmb 13 14 31.9
comp=Z,680nm,1.3s
K50A Casco 22.01 75 P **P** **13 14 25.8 -0.7**
K50A IAmb IAmb 13 14 29.7
comp=Z,549nm,1.2s
WTLY Watson Lake, Y 22.02 337 P **P** **13 14 26.6 +0.1**
WTLY IAmb IAmb 13 14 31.4
comp=Z,442nm,1.1s
WTLY Watson Lake, Y 22.02 337 P **P** **13 14 27.2 +0.7**
baz=144,SNR=262
WTLY S Sn 13 18 37.7 -2.0
baz=144
ACSO Alum Creek Sta 22.09 82 IAMs_20 IAMs_20 13 22 57.0
comp=Z,8µm,21.0s
R33M Jennings River 22.13 334 P **P** **13 14 29.0 +1.2**
R33M IAmb IAmb 13 14 36.2
comp=Z,463nm,1.4s
R33M Jennings River 22.13 334 P **P** **13 14 29.6 +1.8**
baz=139,SNR=116
R33M S Sn 13 18 38.0 -4.6
baz=139
S32K Killisnoo 22.14 327 P **P** **13 14 29.8 +2.1**
baz=130,SNR=75
S32K S Sn 13 18 39.4 -3.2
baz=130
P51A Williamsport 22.18 84 P **P** **13 14 28.1 -0.2**
SIT Sitka 22.20 325 P **P** **13 14 31.2 +2.8**
SIT Sitka 22.20 325 P **P** **13 14 30.1 +1.8**
baz=128,SNR=38
SIT S Sn 13 18 40.9 -3.2
baz=128
Q32M Nakina River 22.26 332 IAMs_20 IAMs_20 13 22 37.6
comp=Z,7µm,21.0s
Q32M Nakina River 22.26 332 P **P** **13 14 31.4 +2.1**
baz=136,SNR=85
Q32M S Sn 13 18 42.8 -3.0
baz=136
N51A Ashland 22.42 80 IAMs_20 IAMs_20 13 22 49.9
comp=Z,10µm,18.0s
JIS Juneau Island 22.59 329 P **P** **13 14 34.8 +2.3**
TZTN Tazewell 22.61 91 IAMs_20 IAMs_20 13 22 48.2
comp=Z,8µm,21.0s
R32K Eaglecrest 22.64 328 P **P** **13 14 35.2 +2.1**
baz=131,SNR=44
R32K S **S** **13 18 47.7 +6.7**
baz=131
TKL Tuckaleechee C 22.75 94 LR LR 13 24 02.3
comp=Z,11µm,18.5s,baz=291,slow=38
W52A Murphy 22.84 95 IAMs_20 IAMs_20 13 23 08.4
comp=Z,9µm,19.0s
BESE Bessie Mountai 22.98 329 P **P** **13 14 38.0 +1.3**
S31K Pelican 23.14 326 P **P** **13 14 38.2 -0.1**
S31K IAmb IAmb 13 14 44.8
comp=Z,359nm,1.3s
S31K Pelican 23.14 326 P **P** **13 14 40.3 +2.0**
baz=128,SNR=37
S31K S Sn 13 19 02.8 -3.8
baz=128
R31K City Hall, Gus 23.22 328 P **P** **13 14 41.2 +2.1**
baz=129,SNR=26
P32M Atlin 23.23 332 P **P** **13 14 40.1 +0.8**
P32M IAmb IAmb 13 14 47.6
comp=Z,363nm,1.4s
P32M Atlin 23.23 332 P **P** **13 14 40.7 +1.4**
baz=135,SNR=114
P32M S Sn 13 19 03.7 -5.0
baz=135
Y52A Lilburn 23.24 98 IAMs_20 IAMs_20 13 23 20.0
comp=Z,10µm,18.0s
P33M Teslin, Yukon 23.37 334 P **P** **13 14 41.5 +0.8**
baz=137,SNR=51
P33M S Sn 13 19 05.6 -6.4
baz=137
V53A Saluda 23.48 93 IAMs_20 IAMs_20 13 22 39.1
comp=Z,8µm,20.0s
WRGLY Wrigley 23.53 347 P **P** **13 14 42.3 +0.2**
baz=158,SNR=90
SKAG Skagway 23.74 330 P **P** **13 14 45.6 +1.3**
SKAG Skagway 23.74 330 P **P** **13 14 45.3 +1.1**
baz=132,SNR=41
GOGA Godfrey 23.89 99 IAMs_20 IAMs_20 13 23 17.0
comp=Z,7µm,22.0s
U54A Nelsons Funny 23.93 90 P **P** **13 14 46.4 -0.1**
U54A IAmb IAmb 13 14 60.0
comp=Z,302nm,1.3s
U54A IAMs_20 IAMs_20 13 23 41.2
comp=Z,8µm,18.0s
Q54A Coxs Mills 23.98 84 P **P** **13 14 46.2 -0.5**
WHY Whitehorse 24.40 332 P **P** **13 14 50.6 0.0**
WHY Whitehorse 24.40 332 P **P** **13 14 51.4 +0.8**
baz=134,SNR=64
154A Montrose 24.52 100 IAMs_20 IAMs_20 13 23 55.7
comp=Z,8µm,18.0s
V55A Taylorsville 24.62 91 IAMs_20 IAMs_20 13 24 16.4
comp=Z,8µm,19.0s
R55A Marlinton 24.70 85 P **P** **13 14 53.2 -0.2**
P30M Million Dollar 24.80 330 P **P** **13 14 55.5 +1.4**
baz=130,SNR=68
O30N Mendenhall 24.91 332 P **P** **13 14 55.6 +0.5**
O30N Mendenhall 24.91 332 P **P** **13 14 56.2 +1.1**
baz=133,SNR=69
U56A King 25.09 90 IAMs_20 IAMs_20 13 24 41.6
comp=Z,9µm,21.0s
N31M Braeburn, Yuko 25.30 333 P **P** **13 14 58.4 -0.1**
N31M Braeburn, Yuko 25.30 333 P **P** **13 14 59.5 +1.0**
baz=134,SNR=111
M31M Drury Creek, Y 25.35 335 P **P** **13 15 00.1 +1.0**
baz=138,SNR=100
HYT Haines Junctio 25.46 331 P **P** **13 14 60.0 -0.2**
HYT IAmb IAmb 13 15 11.3
comp=Z,208nm,1.3s
HYT Haines Junctio 25.46 331 P **P** **13 15 01.7 +1.5**
baz=131,SNR=66
O29M Mount Kennedy 25.54 329 P **P** **13 15 02.1 +1.2**
baz=128,SNR=61
S57A Dark Hollow, R 25.73 86 IAMs_20 IAMs_20 13 24 59.5
comp=Z,10µm,21.0s
N30M Aishikik Lake 25.73 332 P **P** **13 15 04.0 +1.4**
baz=132
L56A Greenwood 25.80 75 IAMs_20 IAMs_20 13 24 58.4
comp=Z,7µm,18.0s
YUK6 Outpost Mounta 25.86 330 P **P** **13 15 05.1 +1.2**
baz=130,SNR=22
P57A Homestead Farm 25.98 82 IAMs_20 IAMs_20 13 22 45.2
comp=Z,7µm,19.0s
PINM Pinnacle 26.09 327 P **P** **13 15 06.9 +1.1**
baz=125,SNR=23
PCA Pinnacle 26.09 327 IAMs_20 IAMs_20 13 24 41.8
comp=Z,4µm,19.0s
YUK4 Talbot Arm 26.23 331 P **P** **13 15 08.4 +1.3**
baz=130,SNR=86
456A Hilliard 26.24 103 IAMs_20 IAMs_20 13 24 48.4
comp=Z,8µm,18.0s
V58A Windy Hill, Pi 26.24 90 IAMs_20 IAMs_20 13 22 55.2
comp=Z,4µm,21.0s
M30M Minto, Yukon 26.40 334 P **P** **13 15 08.9 +0.3**
M30M IAMs_20 IAMs_20 13 24 34.0
comp=Z,6µm,18.0s
M30M Minto, Yukon 26.40 334 P **P** **13 15 09.3 +0.7**
baz=134,SNR=36
O28M Mount Upton 26.46 329 IAMs_20 IAMs_20 13 25 17.0
comp=Z,7µm,20.0s
O28M Mount Upton 26.46 329 P **P** **13 15 10.8 +1.4**
baz=126,SNR=26
NHSC New Hope 26.50 96 IAMs_20 IAMs_20 13 25 06.1
comp=Z,9µm,20.0s
Y58A Scranton 26.55 94 IAMs_20 IAMs_20 13 23 04.4
comp=Z,5µm,19.0s
RGRS Roger Stewart 26.57 97 P **P** **13 15 09.4 -0.9**
RGRS IAmb IAmb 13 15 17.9
comp=Z,519nm,1.4s
YUK8 Steele Glacier 26.61 330 P **P** **13 15 12.5 +1.8**
baz=133,SNR=87
N58A Sunbury 26.66 78 IAMs_20 IAMs_20 13 25 22.9
comp=Z,8µm,18.0s
LOGN Logan Glacier 26.82 328 P **P** **13 15 12.9 +0.4**
LOGN IAmb IAmb 13 15 19.9
comp=Z,383nm,1.3s
LOGN IAMs_20 IAMs_20 13 26 16.0
comp=Z,5µm,18.0s
MESA MESA 26.84 327 IAMs_20 IAMs_20 13 24 53.6
comp=Z,7µm,18.0s
MESA MESA 26.84 327 P **P** **13 15 14.7 +2.0**
baz=123,SNR=42
MAYO Mayo, Yukon 26.85 336 P **P** **13 15 14.1 +1.6**
baz=137
M29M Somme Creek 26.88 333 IAMs_20 IAMs_20 13 26 07.9
comp=Z,5µm,18.0s
M29M Somme Creek 26.88 333 P **P** **13 15 14.6 +1.6**
baz=132,SNR=45
BINY Binghamton 26.95 75 IAMs_20 IAMs_20 13 25 45.7
comp=Z,8µm,18.0s
W59A Clinton 26.98 91 IAMs_20 IAMs_20 13 25 35.8
comp=Z,5µm,18.0s
CTGM Chitina Glacie 27.03 328 IAMs_20 IAMs_20 13 26 22.7
comp=Z,5µm,18.0s
CTG Chitna Glacier 27.03 328 P **P** **13 15 16.4 +2.0**
baz=125,SNR=135
GRNC Granite Creek 27.07 328 IAMs_20 IAMs_20 13 25 13.6
comp=Z,6µm,19.0s
MVL Millersville 27.11 80 P **P** **13 15 14.4 -0.6**
YUK3 Moose Creek 27.17 330 P **P** **13 15 17.1 +1.3**
baz=128,SNR=43
BARN Barnard Glacie 27.21 328 IAMs_20 IAMs_20 13 26 29.6
comp=Z,4µm,19.0s
L29M L29M 27.21 334 P **P** **13 15 17.2 +1.3**
baz=133,SNR=65
BGLC Bering Glacier 27.37 326 P **P** **13 15 19.3 +2.1**
baz=121
TGL Tana Glacier 27.52 327 IAMs_20 IAMs_20 13 25 27.6
comp=Z,5µm,19.0s
K29M Barlow Dome 27.53 336 P **P** **13 15 19.3 +0.5**
K29M IAmb IAmb 13 15 25.3
comp=Z,145nm,1.1s
K29M Barlow Dome 27.53 336 P **P** **13 15 20.3 +1.5**
baz=135,SNR=141
SUCK Suckling Hills 27.56 325 IAMs_20 IAMs_20 13 27 15.8
comp=Z,4µm,21.0s
Y60A Bolivia 27.60 93 IAMs_20 IAMs_20 13 25 56.4
comp=Z,10µm,22.0s
CRQE Cirque 27.63 327 P **P** **13 15 21.5 +1.8**
baz=122,SNR=57
L59A Walton 27.64 75 IAMs_20 IAMs_20 13 25 04.0
comp=Z,5µm,20.0s
CRQM Cirque 27.65 327 IAMs_20 IAMs_20 13 25 22.5
comp=Z,5µm,20.0s
LONY Lake Ozonia 27.66 69 P **P** **13 15 20.0 -0.1**
LONY IAMs_20 IAMs_20 13 26 00.4
comp=Z,7µm,19.0s
WUPA West Chester U 27.68 80 P **P** **13 15 20.5 +0.3**
BERG Berg Lake 27.69 326 IAMs_20 IAMs_20 13 25 06.5
comp=Z,4µm,19.0s
J30M Hart River 27.70 338 P **P** **13 15 22.0 +1.6**
baz=138,SNR=127
BVCY Beaver Creek 27.71 331 P **P** **13 15 21.7 +1.3**
baz=128,SNR=18
KAIM Kayak Island 27.77 325 IAMs_20 IAMs_20 13 26 23.5
comp=Z,5µm,18.0s
KAIM Kayak Island 27.77 325 P **P** **13 15 23.1 +2.2**
baz=119
J59A Piesco 27.85 72 P **P** **13 15 21.7 -0.1**
J59A IAmb IAmb 13 16 02.5
comp=Z,185nm,1.3s
J59A IAMs_20 IAMs_20 13 25 54.4
comp=Z,7µm,20.0s
MCARA McCarthy VSAT 27.94 328 P **P** **13 15 24.7 +2.3**
baz=124,SNR=68
VRDI Verde Repeater 28.03 328 IAMs_20 IAMs_20 13 26 57.2
comp=Z,4µm,18.0s
M27K Edge Creek, AK 28.06 330 IAMs_20 IAMs_20 13 27 48.9
comp=Z,3µm,20.0s
M27K Edge Creek, AK 28.06 330 P **P** **13 15 25.4 +1.8**
baz=127,SNR=129
RAGM Ragged Mountai 28.11 325 IAMs_20 IAMs_20 13 25 50.2
comp=Z,5µm,18.0s
H31M Peel River 28.11 341 IAMs_20 IAMs_20 13 25 34.2
comp=Z,5µm,20.0s
H31M Peel River 28.11 341 P **P** **13 15 24.6 +0.7**
baz=142,SNR=27
V61A Roper 28.17 89 IAMs_20 IAMs_20 13 26 14.2
comp=Z,6µm,20.0s
J29N Klondike Camp 28.18 336 P **P** **13 15 25.4 +0.9**
baz=135,SNR=23
I30M Mount Dempster 28.20 338 P **P** **13 15 26.0 +1.2**
baz=139,SNR=104
MNTQ Montreal, Queb 28.27 67 P **P** **13 15 25.5 0.0**
MNTQ IAmb IAmb 13 16 18.4
comp=Z,173nm,1.2s
DAWY Dawson 28.28 335 P **P** **13 15 25.5 0.0**
DAWY IAmb IAmb 13 15 31.9
comp=Z,158nm,1.2s
DAWY Dawson 28.28 335 P **P** **13 15 26.3 +0.8**
baz=133,SNR=104
P61A Hammonton 28.35 80 IAMs_20 IAMs_20 13 25 23.8
comp=Z,4µm,18.0s
BMRM Bremner River 28.37 326 IAMs_20 IAMs_20 13 26 51.1
comp=Z,3µm,18.0s
BMRM Bremner River 28.37 326 P **P** **13 15 28.1 +1.8**
baz=121,SNR=36
Q23K Middleton Isla 28.41 323 P **P** **13 15 26.8 +0.3**
baz=116
L27K Beaver Creek, 28.47 332 IAMs_20 IAMs_20 13 28 06.9
comp=Z,6µm,18.0s
L27K Beaver Creek, 28.47 332 P **P** **13 15 28.4 +1.4**
baz=128,SNR=81
M26K Nabesna, AK 28.51 330 P **P** **13 15 29.1 +1.6**
baz=125
TRY Troy 28.56 73 IAMs_20 IAMs_20 13 23 33.3
comp=Z,4µm,19.0s
EYAK Cordova Ski Ar 28.65 325 P **P** **13 15 30.6 +1.9**
EYAK Cordova Ski Ar 28.65 325 IAMs_20 IAMs_20 13 26 08.6
comp=Z,6µm,20.0s
EYAK Cordova Ski Ar 28.65 325 P **P** **13 15 30.4 +1.7**
baz=118,SNR=24
N25K Chitina, Valde 28.70 328 P **P** **13 15 31.6 +2.4**
baz=122,SNR=120
PAL Palisades 28.70 77 IAMs_20 IAMs_20 13 26 23.1
comp=Z,7µm,21.0s
TEIG Tepich 28.78 128 P **P** **13 15 28.9 -1.3**
comp=Z,22µmcomp=Z,109nm,1.1s
I29M Ogilvie Camp, 28.86 337 P **P** **13 15 31.1 +0.6**
baz=136,SNR=46
KSCT Kent School, K 28.87 75 P **P** **13 15 30.6 -0.2**
KSCT IAmb IAmb 13 16 26.8
comp=Z,174nm,1.4s
HIN Hinchinbrook I 28.91 324 IAMs_20 IAMs_20 13 26 30.4
comp=Z,4µm,21.0s
L26K Log Cabin Wild 29.00 331 IAMs_20 IAMs_20 13 25 47.8
comp=Z,4µm,20.0s
L26K Log Cabin Wild 29.00 331 P **P** **13 15 33.1 +1.3**
baz=126,SNR=163
MENT Mentasta 29.09 330 P **P** **13 15 34.2 +1.6**
P23K Montague Islan 29.14 323 P **P** **13 15 34.3 +1.3**
baz=116
EPYK Eagle Plains 29.16 340 IAMs_20 IAMs_20 13 29 10.0
comp=Z,5µm,18.0s
EPYK Eagle Plains 29.16 340 P **P** **13 15 34.1 +0.9**
baz=140,SNR=83
KLU Klutina 29.19 327 P **P** **13 15 34.2 +0.6**
baz=120,SNR=27
F31M Tsiigehtchic 29.29 343 P **P** **13 15 34.8 +0.5**
baz=145,SNR=94
HARP HAARP 29.34 329 P **P** **13 15 36.8 +2.0**
baz=122,SNR=56
C36M Paulatuk 29.38 351 IAMs_20 IAMs_20 13 27 16.6
comp=Z,6µm,18.0s
C36M Paulatuk 29.38 351 P **P** **13 15 34.9 -0.1**
baz=161,SNR=40
GLI Glacier Island 29.39 325 P **P** **13 15 36.7 +1.4**
baz=117,SNR=31
I28M Miner Creek 29.40 337 P **P** **13 15 35.9 +0.5**
baz=134,SNR=73
HNH Hanover 29.41 71 IAMs_20 IAMs_20 13 26 38.7
comp=Z,7µm,22.0s
H29M Whitestone 29.50 339 P **P** **13 15 36.8 +0.6**
baz=137
G30M tAoh Zraii Nji 29.51 341 P **P** **13 15 36.1 -0.2**
G30M tAoh Zraii Nji 29.51 341 P **P** **13 15 36.5 +0.2**
baz=141
M24K Tolsona, Glenn 29.60 328 IAMs_20 IAMs_20 13 28 09.6
comp=Z,5µm,18.0s
M24K Tolsona, Glenn 29.60 328 P **P** **13 15 38.7 +1.6**
baz=120,SNR=75
PAX Paxson 29.77 330 IAMs_20 IAMs_20 13 26 12.2
comp=Z,4µm,18.0s
PAX Paxson 29.77 330 P **P** **13 15 40.2 +1.5**
baz=123,SNR=61
SCRK Sand Creek 29.79 332 P **P** **13 15 40.5 +1.6**
baz=126,SNR=74
F30M Barrier River 29.90 342 P **P** **13 15 40.7 +1.0**
baz=142,SNR=68
G29M Pine Creek 29.92 340 P **P** **13 15 40.7 +0.8**
baz=138
SCM Sheep Creek Mo 29.94 327 P **P** **13 15 42.2 +2.0**
baz=118,SNR=55
INK Inuvik 29.96 344 LR LR 13 30 08.3
comp=Z,1µm,20.0s,baz=144,slow=41
INK Inuvik 29.96 344 P **P** **13 15 40.6 +0.4**
baz=146,SNR=134
RIDG Independent Ri 29.96 331 P **P** **13 15 41.3 +0.9**
RIDG IAmb IAmb 13 15 47.1
comp=Z,118nm,1.1s
RIDG Independent Ri 29.96 331 P **P** **13 15 42.5 +2.1**
baz=125,SNR=61
M63A Gales Ferry 29.99 75 IAMs_20 IAMs_20 13 27 27.2
comp=Z,5µm,18.0s
I27K Kandik River 30.02 336 P **P** **13 15 41.5 +0.7**
baz=132,SNR=33
I62A Tamworth 30.07 70 IAMs_20 IAMs_20 13 27 25.1
comp=Z,6µm,19.0s
M23K Glacier View 30.09 326 P **P** **13 15 43.2 +1.8**
baz=118,SNR=55
SEW Seward 30.12 323 P **P** **13 15 43.0 +1.4**
baz=113,SNR=6.0
HRV Adam Dziewonsk 30.13 73 IAMs_20 IAMs_20 13 27 02.8
comp=Z,5µm,19.0s
KNK Knik Glacier 30.22 325 IAMs_20 IAMs_20 13 26 50.1
comp=Z,3µm,19.0s
KNK Knik Glacier 30.22 325 P **P** **13 15 44.6 +1.9**
baz=116,SNR=68
I26K Coal Creek Min 30.32 335 P **P** **13 15 43.7 +0.2**
I26K Coal Creek Min 30.32 335 P **P** **13 15 44.2 +0.8**
baz=129
WES Weston 30.33 73 IAMs_20 IAMs_20 13 27 22.0
comp=Z,5µm,21.0s
K24K Donnelly Dome 30.34 331 IAMs_20 IAMs_20 13 27 20.3
comp=Z,7µm,20.0s
K24K Donnelly Dome 30.34 331 P **P** **13 15 45.8 +2.1**
baz=123,SNR=60
SML Sawmill 30.35 326 P **P** **13 15 45.5 +1.7**
baz=117,SNR=35
O22K Cooper Landing 30.39 323 P **P** **13 15 44.9 +0.8**
baz=113,SNR=7.6
H27K Steamboat Moun 30.41 337 IAMs_20 IAMs_20 13 27 21.4
comp=Z,5µm,18.0s
H27K Steamboat Moun 30.41 337 P **P** **13 15 44.9 +0.6**
baz=132,SNR=40
WAT6 Susitna Watana 30.47 328 P **P** **13 15 46.7 +1.7**
baz=119,SNR=139
DHY Denali Highway 30.57 329 IAMs_20 IAMs_20 13 28 49.2
comp=Z,6µm,18.0s
DHY Denali Highway 30.57 329 P **P** **13 15 47.4 +1.6**
baz=120,SNR=60
BRSE Bradley Lake S 30.58 322 P **P** **13 15 48.3 +2.4**
baz=111,SNR=8.2
PMR Palmer 30.59 325 P **P** **13 15 47.7 +1.9**
PMR Palmer 30.59 325 P **P** **13 15 47.7 +1.9**
baz=116,SNR=29
RC01 Rabbit Creek A 30.64 324 P **P** **13 15 48.3 +2.0**
baz=114,SNR=29
J25K Salcha River, 30.65 332 P **P** **13 15 47.4 +0.9**
J25K Salcha River, 30.65 332 P **P** **13 15 48.2 +1.7**
baz=125,SNR=74
L64A Middleborough 30.77 74 IAMs_20 IAMs_20 13 26 49.6
comp=Z,7µm,19.0s
G27K Doyon Strip 30.85 338 IAMs_20 IAMs_20 13 30 10.8
comp=Z,8µm,20.0s
G27K Doyon Strip 30.85 338 P **P** **13 15 49.0 +0.9**
baz=133,SNR=35
KDAK Kodiak Island 30.87 317 LR LR 13 27 16.9
comp=Z,2µm,18.2s,baz=103,slow=34
KDAK Kodiak Island 30.87 317 *d* P **P** **13 15 49.3 +0.9**
KDAK pmax pmax
comp=Z,108nm,1.1s
KDAK MLR MLR
comp=Z,2µm,12.0s
KDAK Kodiak Island 30.87 317 P **P** **13 15 50.0 +1.6**
baz=106
WAT1 Susitna Watana 30.92 328 P **P** **13 15 50.7 +1.9**
baz=118
F28M Old Crow 30.92 340 P **P** **13 15 49.8 +1.1**
baz=136,SNR=98
HOM Homer 30.98 321 P **P** **13 15 50.3 +1.0**
baz=110
M65A Busby, Falmout 30.99 75 P **P** **13 15 50.1 +0.5**
baz=283
E29M Blow River 31.01 342 P **P** **13 15 50.6 +1.2**
baz=140
Q20K Shuyak Island 31.01 319 P **P** **13 15 50.2 +0.6**
baz=107
E62A Clayton Lake 31.03 65 IAMs_20 IAMs_20 13 27 36.4
comp=Z,7µm,20.0s
M22K Willow 31.09 325 IAMs_20 IAMs_20 13 27 36.3
comp=Z,3µm,18.0s
M22K Willow 31.09 325 P **P** **13 15 51.6 +1.4**
baz=115
OHAK Old Harbor 31.09 316 P **P** **13 15 52.9 +2.6**
OHAK Old Harbor 31.09 316 P **P** **13 15 50.2 -0.1**
baz=104
HDA Harding Lake 31.11 331 IAMs_20 IAMs_20 13 28 37.4
comp=Z,4µm,19.0s
HDA Harding Lake 31.11 331 P **P** **13 15 52.2 +1.8**
baz=123,SNR=138
CAPN Captain Cook N 31.15 323 P **P** **13 15 51.9 +1.1**
baz=112
PRP Porcupine Dome 31.23 334 P **P** **13 15 52.1 +0.5**
PRP Porcupine Dome 31.23 334 P **P** **13 15 53.1 +1.4**
baz=126,SNR=36
ILAR Eielson Array 31.28 332 P **P** **13 15 53.3 +1.4**
comp=Z,20nm,0.9s,baz=130,slow=6.6,SNR=148
ILAR PcP **PcP** **13 18 46.2 +0.4**
comp=Z,21nm,1.0s,baz=169,slow=2.5,SNR=7.9
ILAR LR LR 13 29 54.0
comp=Z,6µm,18.7s,baz=122,slow=39
ILAR P3KPbc 13 47 29.9
comp=Z,0.4nm,0.8s,baz=293,slow=4.6,SNR=4.7
comp=Z,20nm,0.9s
ILAR Eielson Array 31.28 332 P **P** **13 15 52.4 +0.5**
RND Reindeer 31.31 329 IAMs_20 IAMs_20 13 27 50.0
comp=Z,5µm,18.0s
D62A Allapoint, All 31.32 64 IAMs_20 IAMs_20 13 27 12.0
comp=Z,4µm,20.0s
SII Sitkinak Islan 31.42 315 P **P** **13 15 54.0 +0.7**
baz=102
CUT Chulitna 31.43 326 IAMs_20 IAMs_20 13 29 27.0
comp=Z,4µm,18.0s
CUT Chulitna 31.43 326 P **P** **13 15 55.1 +1.8**
baz=116,SNR=95
MCK McKinley 31.50 329 IAMs_20 IAMs_20 13 29 19.0
comp=Z,6µm,19.0s
MCK McKinley 31.50 329 P **P** **13 15 55.9 +2.0**
baz=119,SNR=193
E28M Babbage River 31.57 341 P **P** **13 15 55.6 +1.2**
baz=138
G26K Porcupine Rive 31.57 337 IAMs_20 IAMs_20 13 27 28.0
comp=Z,5µm,19.0s
G26K Porcupine Rive 31.57 337 P **P** **13 15 55.5 +1.1**
baz=130
POKR Poker Plat Res 31.67 332 P **P** **13 15 57.4 +2.1**
baz=123
COLA College 31.68 332 P **P** **13 15 56.7 +1.3**
COLA College 31.68 332 IAMs_20 IAMs_20 13 28 52.8
comp=Z,5µm,18.0s
COLA College 31.68 332 *d* P **P** **13 15 56.7 +1.3**
COLA pmax pmax
comp=Z,260nm,1.0s
COLA MLR MLR
comp=Z,10µm,12.0s
COLA College 31.68 332 P **P** **13 15 57.1 +1.7**
baz=122
L22K Petersville 31.69 326 IAMs_20 IAMs_20 13 28 31.0

comp=Z,2µm,18.0s
Q19K Cape Douglas, 31.73 319 P P 13 15 57.1 +1.1
baz=106
P19K Oil Pt 31.74 321 P P 13 15 58.1 +2.0
baz=108,SNR=7.3
APG El Apazote 31.78 138 LR LR 13 31 45.9
comp=Z,128nm,18.4s,baz=190,slow=42
E27K Coleen River 31.79 340 P P 13 15 57.8 +1.4
baz=135
N20K Mount Spurr 31.79 324 P P 13 15 58.1 +1.5
baz=112
SKT Skwentna 31.79 325 IAMs_20 IAMs_20 13 27 58.6
comp=Z,4µm,19.0s
SKT Skwentna 31.79 325 P P 13 15 57.9 +1.5
baz=114,SNR=40
SPCR Spurr Chakacha 31.79 324 P P 13 15 58.2 +1.7
baz=112,SNR=21
TRF Thorofare Moun 31.91 328 IAMs_20 IAMs_20 13 27 14.6
comp=Z,3µm,22.0s
TRF Thorofare Moun 31.91 328 P P 13 15 59.2 +1.6
baz=117,SNR=64
D28M Stokes Point 31.92 342 P P 13 15 58.8 +1.3
baz=140
NEA2 Nenana 31.99 331 IAMs_20 IAMs_20 13 28 21.7
comp=Z,4µm,18.0s
NEA2 Nenana 31.99 331 P P 13 15 59.4 +1.3
baz=120,SNR=33
A36M Sachs Harbour 32.01 352 P P 13 15 58.1 -0.2
A36M IAmb IAmb 13 16 00.8
comp=Z,164nm,1.0s
A36M Sachs Harbour 32.01 352 P P 13 15 59.0 +0.8
baz=161,SNR=102
F26K Sheenjek River 32.16 338 IAMs_20 IAMs_20 13 27 58.6
comp=Z,4µm,18.0s
F26K Sheenjek River 32.16 338 P P 13 16 01.2 +1.5
baz=131,SNR=61
G25K Bearman Lake 32.17 335 P P 13 16 01.4 +1.7
baz=127,SNR=55
KTH Kantishna Hill 32.20 328 IAMs_20 IAMs_20 13 27 32.5
comp=Z,4µm,18.0s
H24K Noodor Dome 32.22 333 P P 13 16 02.2 +2.0
baz=124,SNR=205
Q18K Katmai Hardscr 32.34 318 P P 13 16 03.3 +1.9
baz=105,SNR=18
I23K Minto, Yukon-K 32.38 331 P P 13 16 03.2 +1.7
baz=121,SNR=48
D27M Malcolm River 32.39 341 P P 13 16 03.5 +1.8
baz=137
O19K Port Alsworth 32.43 321 P P 13 16 04.0 +2.0
baz=108,SNR=21
PPLA Purkeypile 32.44 327 IAMs_20 IAMs_20 13 29 44.8
comp=Z,5µm,18.0s
PPLA Purkeypile 32.44 327 P P 13 16 03.9 +1.6
baz=114,SNR=161
M20K Styx River 32.45 325 IAMs_20 IAMs_20 13 28 44.4
comp=Z,3µm,19.0s
M20K Styx River 32.45 325 P P 13 16 03.7 +1.4
baz=112
BPAW Bear Paw Mtn. 32.48 329 P P 13 16 04.1 +1.6
baz=117,SNR=105
F25K Christian River 32.54 337 P P 13 16 04.7 +1.7
baz=129,SNR=73
G24K Hadweenzic Riv 32.57 335 P P 13 16 05.3 +2.0
baz=125,SNR=118
P18K Big Mountain, 32.64 320 P P 13 16 03.5 -0.5
P18K IAmb IAmb 13 16 09.8
comp=Z,150nm,1.3s
P18K Big Mountain, 32.64 320 P P 13 16 05.6 +1.6
baz=106,SNR=22
Q17K Contact Creek 32.70 317 P P 13 16 06.2 +1.6
baz=103
N19K Bonanza Creek 32.70 322 P P 13 16 06.3 +1.7
baz=108,SNR=42
O18K Koktuh Hills 32.76 320 P P 13 16 06.3 +1.3
baz=106
R17L Mt. Peulik Vol 32.81 316 P P 13 16 07.5 +2.0
baz=102,SNR=16
MLY Manley 32.82 331 IAMs_20 IAMs_20 13 30 37.8
comp=Z,6µm,21.0s
MLY Manley 32.82 331 P P 13 16 07.4 +1.8
baz=119,SNR=116
E25K Arctic Village 32.85 338 IAMs_20 IAMs_20 13 29 15.8
comp=Z,3µm,21.0s
E25K Arctic Village 32.85 338 P P 13 16 07.7 +2.0
baz=129
SCHQ Schefferville 32.88 49 P P 13 16 05.9 -0.2
comp=Z,43nm,0.8s,baz=270,slow=9.0,SNR=51
SCHQ LR LR 13 31 07.0
comp=Z,2µm,18.9s,baz=262,slow=40
comp=Z,43nm,0.8s
SCHQ Schefferville 32.88 49 P P 13 16 05.1 -1.0
CHUM Lake Minchumin 32.91 328 P P 13 16 07.6 +1.4
baz=115,SNR=133
M19K Big River Lodg 33.02 324 IAMs_20 IAMs_20 13 29 01.3
comp=Z,3µm,19.0s
M19K Big River Lodg 33.02 324 P P 13 16 09.3 +2.1
baz=110
F24K Squaw Lake 33.18 336 IAMs_20 IAMs_20 13 31 03.5
comp=Z,6µm,19.0s
F24K Squaw Lake 33.18 336 P P 13 16 10.6 +2.0
baz=126
Q16K King Salmon 33.18 318 P P 13 16 10.6 +2.0
baz=103,SNR=20
P17K Kvichak River 33.19 319 P P 13 16 10.8 +2.1
baz=104,SNR=15
N18K Kilae Creek 33.32 322 P P 13 16 11.7 +1.9
baz=107
L19K White Mountain 33.32 325 IAMs_20 IAMs_20 13 31 03.0
comp=Z,4µm,18.0s
L19K White Mountain 33.32 325 P P 13 16 12.1 +2.2
baz=110,SNR=125
C27K Jago River 33.35 340 P P 13 16 11.7 +1.7
baz=134
I21K Tanana 33.36 330 P P 13 16 12.2 +2.1
baz=118,SNR=166
K20K Telida 33.41 327 IAMs_20 IAMs_20 13 29 25.7
comp=Z,4µm,19.0s
K20K Telida 33.41 327 P P 13 16 12.2 +1.6
baz=113,SNR=46
G23K Bananza Creek 33.42 334 IAMs_20 IAMs_20 13 29 07.0
comp=Z,3µm,18.0s
G23K Bananza Creek 33.42 334 P P 13 16 12.6 +1.8
baz=122,SNR=81
R16K Pilot Point 33.44 316 P P 13 16 12.4 +1.5
baz=100
H22K Ishtalitna Cre 33.48 332 P P 13 16 13.2 +2.0
baz=119,SNR=111
M18K Stony River 33.53 323 P P 13 16 13.0 +1.3
baz=108
O17K Koliganek Bris 33.66 320 P P 13 16 15.2 +2.4
baz=104,SNR=27
E24K Your Creek 33.69 336 P P 13 16 14.8 +1.7
baz=126
CHGN Chignik 33.69 313 P P 13 16 14.8 +1.7
baz=98,SNR=8.9
COLD Coldfoot 33.76 334 P P 13 16 15.8 +2.2
baz=122,SNR=101
J20K Nowinta River 33.76 328 IAMs_20 IAMs_20 13 31 00.7
comp=Z,4µm,21.0s
J20K Nowinta River 33.76 328 P P 13 16 15.2 +1.5
baz=114,SNR=185
D25K Kavik River 33.84 339 IAMs_20 IAMs_20 13 29 45.2
comp=Z,5µm,22.0s
D25K Kavik River 33.84 339 P P 13 16 16.1 +1.7
baz=130
C26K Camden Bay 33.85 340 P P 13 16 16.5 +2.2
baz=132,SNR=126
H21K Melozitna Rive 33.88 331 IAMs_20 IAMs_20 13 31 18.2
comp=Z,5µm,20.0s
H21K Melozitna Rive 33.88 331 P P 13 16 16.5 +1.8
baz=117,SNR=205
N17K Nushagak Hills 33.89 321 P P 13 16 17.1 +2.3
baz=105
P16K Nushagak River 33.94 318 IAMs_20 IAMs_20 13 29 32.4
comp=Z,2µm,18.0s
P16K Nushagak River 33.94 318 P P 13 16 17.3 +2.1
baz=102,SNR=8.5
E23K Chandalar 34.03 336 IAMs_20 IAMs_20 13 32 17.0
comp=Z,4µm,18.0s
E23K Chandalar 34.03 336 P P 13 16 18.3 +2.3
baz=124,SNR=88
G22K Bettles 34.04 333 P P 13 16 17.7 +1.8
baz=120
O16K Kokwok River B 34.11 319 P P 13 16 18.5 +1.8
baz=103,SNR=99
L18K Granite Mounta 34.14 324 IAMs_20 IAMs_20 13 31 17.1
comp=Z,4µm,19.0s
L18K Granite Mounta 34.14 324 P P 13 16 19.2 +2.2
baz=108,SNR=142
I20K Naaghedeneel 34.15 329 IAMs_20 IAMs_20 13 31 03.1
comp=Z,5µm,20.0s
I20K Naaghedeneel 34.15 329 P P 13 16 18.9 +2.0
baz=114,SNR=94
FRB Frobisher Bay 34.18 33 LR LR 13 29 23.0
comp=Z,3µm,20.4s,baz=250,slow=35
CHNA Chernabura Isl 34.20 311 P P 13 16 19.4 +1.8
CHNA Chernabura Isl 34.20 311 P P 13 16 18.9 +1.3
baz=94,SNR=10
M17K Holitna River 34.24 323 P P 13 16 19.5 +1.6
baz=106
TGUH Tegucigalpa,Un 34.27 134 P P 13 16 20.9 +2.3
comp=Z,3µmcomp=Z,187nm,1.4s
J19K Poorman 34.29 327 P P 13 16 19.9 +1.7
baz=112,SNR=301
TOLK Toolik Lake Re 34.35 337 P P 13 16 20.3 +1.6
baz=125,SNR=83
D24K Happy Valley 34.43 338 P P 13 16 21.1 +1.8
baz=126
G21K Allakaket 34.53 332 P P 13 16 21.9 +1.6
baz=118,SNR=174
J18K Innoko River 34.56 326 IAMs_20 IAMs_20 13 32 06.0
comp=Z,4µm,19.0s
J18K Innoko River 34.56 326 P P 13 16 22.3 +1.7
baz=110,SNR=266
H20K Anotleneega Mo 34.59 330 P P 13 16 22.8 +2.0
baz=114,SNR=317
N16K Nishlik Lake 34.64 321 P P 13 16 23.5 +2.2
baz=103,SNR=68
C24K Franklin Bluff 34.73 339 P P 13 16 23.5 +1.6
baz=127
SDPT Sand Point 34.75 311 P P 13 16 24.1 +1.8
SDPT Sand Point 34.75 311 P P 13 16 23.6 +1.3
baz=94
E22K Anaktuvuk Pass 34.76 335 IAMs_20 IAMs_20 13 32 44.0
comp=Z,5µm,19.0s
E22K Anaktuvuk Pass 34.76 335 P P 13 16 24.3 +2.0
baz=122,SNR=181
E22K S S 13 21 53.9 +1.4
baz=122
L17K Donlin 34.84 324 P P 13 16 24.8 +1.8
baz=106
L17K S S 13 21 54.1 +0.4
baz=106
F21K Alatna River 34.86 333 IAMs_20 IAMs_20 13 32 39.9
comp=Z,4µm,18.0s
F21K Alatna River 34.86 333 P P 13 16 25.3 +2.1
baz=118,SNR=63
F21K S S 13 21 56.4 +2.5
baz=118
M16K Timber Creek 34.86 322 P P 13 16 25.5 +2.3
baz=104,SNR=54
M16K S S 13 21 56.8 +2.8
baz=104
D23K Nanushuk River 34.87 337 P P 13 16 25.1 +1.9
baz=124,SNR=61
D23K S S 13 21 56.9 +2.9
baz=124
O15K Ungalikthiuk R 34.89 318 P P 13 16 23.4 -0.1
O15K Ungalikthiuk R 34.89 318 P P 13 16 24.2 +0.8
baz=100
O15K S S 13 21 56.6 +2.1
baz=100
RES Resolute Bay 34.96 8 LR LR 13 30 57.3
comp=Z,7µm,22.0s,baz=204,slow=37
K17K Iditarod 35.01 325 IAMs_20 IAMs_20 13 32 51.9
comp=Z,3µm,18.0s
K17K Iditarod 35.01 325 P P 13 16 26.3 +1.8
baz=107,SNR=126
K17K S S 13 21 58.5 +2.2
baz=107
GCSA Galena City Sc 35.08 328 P P 13 16 27.1 +2.1
baz=111,SNR=242
GCSA S S 13 21 59.5 +2.3
baz=111
H19K Roundabout Mou 35.20 330 IAMs_20 IAMs_20 13 31 58.0
comp=Z,5µm,19.0s
H19K Roundabout Mou 35.20 330 P P 13 16 27.9 +1.8
baz=113
H19K S S 13 22 01.0 +1.9
baz=113
N15K Owethluk River 35.22 320 P P 13 16 28.4 +2.1
baz=102,SNR=56
N15K S S 13 22 02.8 +3.3
baz=102
L16K Owhat River 35.27 323 IAMs_20 IAMs_20 13 30 19.5
comp=Z,2µm,18.0s
L16K Owhat River 35.27 323 P P 13 16 28.7 +2.0
baz=104,SNR=87
L16K S S 13 22 02.4 +2.2
baz=104
C23K Itkillik River 35.34 338 P P 13 16 28.6 +1.4
baz=125,SNR=52
C23K S S 13 22 03.5 +2.3
baz=125
CRIN San Cristobal 35.51 135 P P 13 16 28.1 -1.2
comp=Z,295nm,1.6s
J17K VABM Dome 35.55 325 IAMs_20 IAMs_20 13 29 55.1
comp=Z,2µm,19.0s
J17K VABM Dome 35.55 325 P P 13 16 30.3 +1.3
baz=107
J17K S S 13 22 06.1 +1.6
baz=107
F20K Avaraart Lake 35.56 332 P P 13 16 30.6 +1.5
baz=116
F20K S S 13 22 08.0 +3.3
baz=116
M15K Kasigluk River 35.61 321 P P 13 16 31.5 +1.8
baz=102,SNR=72
E21K Killik River 35.61 335 P P 13 16 30.9 +1.3
baz=119
E21K S S 13 22 11.0 +5.5
baz=119
O14K Tigyukauivet M 35.63 318 P P 13 16 30.7 +0.8
baz=99,SNR=22
O14K S S 13 22 06.8 +0.9
baz=99
G19K Purcell Mounta 35.68 330 P P 13 16 31.5 +1.3
baz=113,SNR=50
G19K S S 13 22 09.0 +2.4
baz=113
H18K Honhosa River 35.81 329 IAMs_20 IAMs_20 13 30 53.1
comp=Z,2µm,18.0s
H18K Honhosa River 35.81 329 P P 13 16 33.1 +1.7
baz=110,SNR=90
H18K S S 13 22 12.7 +4.0
baz=110
CNGN Cerro Negro 35.86 134 P P 13 16 32.0 -0.3
comp=Z,27µmcomp=Z,2µm,1.4s
N14K Kuskokwak Cree 35.96 319 P P 13 16 33.8 +1.2
baz=100
J16K Anvik River 36.18 325 P P 13 16 35.9 +1.5
baz=105
J16K S S 13 22 15.3 +1.1
baz=105
G18K Tagagawik 36.19 330 P P 13 16 35.2 +0.7
G18K IAmb IAmb 13 16 41.6
comp=Z,225nm,1.1s
G18K IAMs_20 IAMs_20 13 32 29.7
comp=Z,5µm,19.0s
G18K Tagagawik 36.19 330 P P 13 16 35.9 +1.3
baz=111,SNR=151
G18K S S 13 22 18.0 +3.7
baz=111
L15K Ungalak Mounta 36.19 322 P P 13 16 35.9 +1.3
baz=102,SNR=58
F19K Shaleruckik Mo 36.21 331 IAMs_20 IAMs_20 13 32 46.5
comp=Z,5µm,20.0s
F19K Shaleruckik Mo 36.21 331 P P 13 16 36.0 +1.3
baz=113,SNR=98
F19K S S 13 22 19.0 +4.5
baz=113
C21K Knifeblade Rid 36.22 336 P P 13 16 36.6 +1.8
baz=119,SNR=110
C21K S S 13 22 19.2 +4.4
baz=119
M14K Bethel 36.23 321 P P 13 16 36.6 +1.6
baz=100,SNR=146
E20K Nigu River 36.25 334 P P 13 16 37.1 +1.9
baz=116,SNR=119
E20K S S 13 22 18.6 +3.2
baz=116
E19K Redstone River 36.27 332 IAMs_20 IAMs_20 13 31 38.0
comp=Z,4µm,18.0s
E19K Redstone River 36.27 332 P P 13 16 37.1 +1.9
baz=114,SNR=150
E19K S S 13 22 20.4 +4.9
baz=114
K15K Wolf Creek Mou 36.35 323 IAMs_20 IAMs_20 13 33 16.3
comp=Z,2µm,18.0s
K15K Wolf Creek Mou 36.35 323 P P 13 16 37.6 +1.7
baz=103,SNR=36
K15K S S 13 22 20.6 +3.8
baz=103
H17K Granite Mounta 36.36 328 IAMs_20 IAMs_20 13 33 21.7
comp=Z,3µm,18.0s
H17K Granite Mounta 36.36 328 P P 13 16 37.4 +1.4
baz=108,SNR=135
I17K Unalakleet 36.38 326 IAMs_20 IAMs_20 13 32 39.8
comp=Z,4µm,20.0s
I17K Unalakleet 36.38 326 P P 13 16 37.9 +1.8
baz=106,SNR=26
B21K Ikpikpuk River 36.40 336 P P 13 16 37.5 +1.3
baz=120
B21K S S 13 22 21.5 +4.1
baz=120
MGAN Managua 36.40 134 P P 13 16 38.6 +1.8
comp=Z,7µmcomp=Z,231nm,0.9s
FALS False Pass 36.42 310 P P 13 16 36.6 0.0
baz=91
B22K Teshekpuk Lake 36.42 338 IAMs_20 IAMs_20 13 29 59.2
comp=Z,2µm,18.0s
B22K Teshekpuk Lake 36.42 338 P P 13 16 37.6 +1.2
baz=122
B22K S S 13 22 20.9 +3.1
baz=122
BOAB BOACO BROADBAN 36.47 133 IAMs_20 IAMs_20 13 33 09.0
comp=Z,4µm,20.0s
D20K Etivluk River 36.60 335 IAMs_20 IAMs_20 13 34 00.8
comp=Z,4µm,18.0s
D20K Etivluk River 36.60 335 P P 13 16 40.1 +2.1
baz=117,SNR=77
D20K S S 13 22 24.5 +3.9
baz=117
L14K Kuka Creek 36.69 321 P P 13 16 39.9 +1.1
baz=100
F18K Selawik 36.81 331 P P 13 16 41.5 +1.7
baz=111,SNR=195
F18K S S 13 22 27.6 +3.8
baz=111
G17K Kiwalik Mounta 36.83 329 P P 13 16 41.5 +1.5
baz=108,SNR=82
G17K S S 13 22 27.7 +3.6
baz=108
M13K Dall Lake 36.86 320 P P 13 16 41.0 +0.7
baz=99
D19K Kuna River 37.00 334 IAMs_20 IAMs_20 13 33 19.5
comp=Z,5µm,20.0s
D19K Kuna River 37.00 334 P P 13 16 43.0 +1.5
baz=115,SNR=217
D19K S S 13 22 31.7 +5.0
baz=115
MTDJ Mount Denham 37.14 117 IAMs_20 IAMs_20 13 32 08.5
comp=Z,2µm,20.0s
MTDJ Mount Denham 37.14 117 P P 13 16 44.9 +1.6
comp=Z,5µmcomp=Z,308nm,1.9s
A22K Sinclair Lake 37.21 338 P P 13 16 44.9 +1.7
baz=121
A22K S S 13 22 32.3 +2.5
baz=121
B20K Meade River 37.36 336 IAMs_20 IAMs_20 13 34 31.0
comp=Z,4µm,18.0s
B20K Meade River 37.36 336 P P 13 16 46.4 +1.9
baz=118
B20K S S 13 22 35.2 +3.2
baz=118
J14K Nanvaranak Lak 37.36 324 IAMs_20 IAMs_20 13 33 16.1
comp=Z,3µm,19.0s
J14K Nanvaranak Lak 37.36 324 P P 13 16 46.4 +1.9
baz=102,SNR=34
J14K S S 13 22 36.0 +3.8
baz=102
F17K Baldwin Pennin 37.36 330 P P 13 16 46.3 +1.8
baz=109,SNR=98
F17K S S 13 22 36.5 +4.3
baz=109
E18K Tukpahlearik C 37.45 332 IAMs_20 IAMs_20 13 30 37.5
comp=Z,2µm,21.0s
E18K Tukpahlearik C 37.45 332 P P 13 16 47.0 +1.7
baz=110,SNR=161
E18K S S 13 22 38.5 +5.0
baz=110
G16K Koyuk River 37.48 328 IAMs_20 IAMs_20 13 31 21.3
comp=Z,2µm,19.0s
G16K Koyuk River 37.48 328 P P 13 16 47.2 +1.7
baz=106
G16K S S 13 22 36.2 +2.2
baz=106
GTBY Guantanamo Bay 37.66 112 IAMs_20 IAMs_20 13 31 55.2
comp=Z,3µm,18.0s
GTBY Guantanamo Bay 37.66 112 P P 13 16 48.2 +0.6
comp=Z,104nm,1.2s
K13K Kusilvak Mount 37.72 322 IAMs_20 IAMs_20 13 34 33.3
comp=Z,2µm,19.0s
K13K Kusilvak Mount 37.72 322 P P 13 16 48.9 +1.3
baz=99,SNR=64
C19K Lookout Ridge 37.74 334 IAMs_20 IAMs_20 13 32 50.0
comp=Z,4µm,20.0s
C19K Lookout Ridge 37.74 334 P P 13 16 49.7 +1.9
baz=114,SNR=140
C19K S S 13 22 41.4 +3.4
baz=114
A21K Barrow 37.84 338 P P 13 16 50.0 +1.6
baz=120,SNR=45
A21K S S 13 22 42.2 +3.0
baz=120
G15K Niukluk 38.06 327 P P 13 16 52.6 +2.1
baz=104,SNR=257
G15K S S 13 22 47.9 +5.1
baz=104
C18K Utukok River 38.10 333 P P 13 16 52.0 +1.2
baz=111
C18K S S 13 22 45.3 +1.8
baz=111
UNV Unalaska Valle 38.24 309 P P 13 16 53.3 +1.3
baz=87,SNR=12
M11K Mekoryuk 38.26 319 P P 13 16 53.8 +1.7
baz=96
D17K Noatak River 38.44 331 P P 13 16 54.7 +1.1
baz=108,SNR=81
D17K S S 13 22 53.3 +4.7
baz=108
F15K North Star Dit 38.49 328 IAMs_20 IAMs_20 13 34 27.8
comp=Z,4µm,18.0s
F15K North Star Dit 38.49 328 P P 13 16 56.1 +2.1
baz=104,SNR=101
F15K S S 13 22 54.5 +5.2
baz=104
RDOG Red Dog Mine 38.49 332 IAMs_20 IAMs_20 13 35 11.6
comp=Z,4µm,19.0s
RDOG Red Dog Mine 38.49 332 P P 13 16 55.5 +1.4
baz=109,SNR=36
RDOG S S 13 22 49.4 +0.1
baz=109
ANM Nome 38.53 326 IAMs_20 IAMs_20 13 33 49.6
comp=Z,3µm,18.0s
ANM Nome 38.53 326 P P 13 16 56.3 +1.9
baz=102,SNR=92
ANM S S 13 22 53.5 +3.6
baz=102
BBSR BB Station 38.56 87 IAMs_20 IAMs_20 13 32 42.4
comp=Z,4µm,19.0s
JTS Las Juntas de 38.64 134 LR LR 13 36 26.0
comp=Z,1µm,18.4s,baz=350,slow=42
JTS Las Juntas de 38.64 134 *i* P P 13 16 54.3 -1.5
JTS pmax pmax
comp=Z,13nm,0.9s
JTS MLR MLR
comp=Z,1µm,18.0s
JTS Las Juntas de 38.64 134 P P 13 16 54.8 -1.0
comp=Z,26nm,0.9s
A19K Wainwright 38.66 336 P P 13 16 57.2 +1.8
baz=113,SNR=68
A19K S S 13 22 54.6 +3.0
baz=113
C17K DeLong Mountai 38.73 333 P P 13 16 57.6 +1.5
baz=109,SNR=38
C17K S S 13 22 54.8 +1.9
baz=109
DRLN Deer Lake 38.76 58 P P 13 16 56.2 -0.3
DRLN IAmb IAmb 13 16 60.0
comp=Z,489nm,2.0s
F14K Arctic Creek 39.11 328 P P 13 17 01.2 +1.9
baz=102,SNR=87
F14K S S 13 22 58.4 -0.3

baz=102
C16K Lisburne Hills 39.43 332 P P 13 17 03.0 +1.2
baz=106,SNR=54
C16K S S **13 23 04.5 +1.1**
baz=106
GRTK Grand Turk 39.50 106 IAMs_20 IAMs_20 13 33 37.8
comp=Z,3µm,19.0s
GRTK Grand Turk 39.50 106 P P 13 17 03.7 +0.7
comp=Z,6µmcomp=Z,294nm,1.1s
TNA Tin City 39.78 327 P P 13 17 06.3 +1.5
baz=101,SNR=34
TNA S S **13 23 11.2 +2.6**
baz=101
TULEG Thule 40.39 14 *i* P P **13 17 10.2 +0.4**
TULEG IAmb IAmb 13 17 15.1
comp=Z,187nm,1.9s
SDDR Presa de Saban 41.00 110 P P 13 17 15.7 +0.2
comp=Z,2µmcomp=Z,112nm,1.8s
GAMB Gambell 41.15 324 IAMs_20 IAMs_20 13 36 50.1
comp=Z,2µm,18.0s
GAMB Gambell 41.15 324 P P 13 17 18.2 +2.0
baz=95,SNR=7.1
GAMB S S **13 23 31.5 +2.3**
baz=95
NUUK Nuuk 41.49 35 *i* P P **13 17 20.3 +1.4**
NUUK IAmb IAmb 13 17 23.4
comp=Z,286nm,1.5s
GDH Godhavn 41.52 27 *i* P P **13 17 20.1 +0.9**
GDH IAmb IAmb 13 17 21.1
comp=Z,110nm,0.9s
UPNV Upernavik 41.64 22 *i* P P **13 17 20.9 +0.7**
UPNV IAmb IAmb 13 17 21.8
comp=Z,58nm,0.8s
NIAQ Niaqornat 41.83 25 *i* P P **13 17 22.4 +0.8**
NIAQ IAmb IAmb 13 17 31.4
comp=Z,150nm,1.4s
KULLO Kullorsuaq 41.98 19 *i* P P **13 17 23.5 +0.6**
KULLO IAmb IAmb 13 17 28.2
comp=Z,246nm,1.6s
NUUG Nuugaatsiaq 42.16 24 *i* P P **13 17 25.8 +1.5**
NUUG IAmb IAmb 13 17 32.0
comp=Z,216nm,1.6s
SAQQ Saqqaq 42.22 26 *i* P P **13 17 25.3 +0.5**
SAQQ IAmb IAmb 13 17 31.5
comp=Z,114nm,1.1s
SFJD Kangerlussuaq 42.23 31 LR LR 13 35 11.3
comp=Z,3µm,19.2s,baz=260,slow=36
SFJD Kangerlussuaq 42.23 31 *i* P P **13 17 25.6 +0.6**
SFJD IAmb IAmb 13 17 30.5
comp=Z,467nm,1.4s
ILULI Ilulissat 42.37 28 *i* P P **13 17 26.9 +0.8**
ILULI IAmb IAmb 13 17 27.2
comp=Z,77nm,1.0s
POHA Pohakuloa 42.45 254 P P 13 17 31.0 +3.4
BCIP Isla Barro Col 42.47 129 P P 13 17 27.1 -0.4
comp=Z,3µmcomp=Z,109nm,1.5s
SAATT Saattut 42.49 25 *i* P P **13 17 28.1 +1.1**
SAATT IAmb IAmb 13 17 33.3
comp=Z,53nm,0.8s
IVI Ivigtut 43.06 40 *i* P P **13 17 33.1 +1.4**
IVI IAmb IAmb 13 17 36.0
comp=Z,252nm,1.5s
KIP Kipapa 43.26 258 P P 13 17 36.3 +2.5
KIP Kipapa 43.26 258 P P 13 17 36.4 +2.6
KIP Kipapa 43.26 258 *ce* P P **13 17 33.9 +0.1**
KIP pmax pmax
comp=Z,234nm,1.2s
KIP MLR MLR
comp=Z,2µm,5.0s
NEEM North Greenlan 44.37 16 *i* P P **13 17 42.7 +0.2**
NEEM IAmb IAmb 13 17 43.9
comp=Z,78nm,1.1s
NRS Narsarsuaq 44.39 40 *i* P P **13 17 43.0 +0.5**
NRS IAmb IAmb 13 17 48.0
comp=Z,84nm,1.3s
ADK Adak 44.61 307 P P 13 17 44.7 +0.4
KIWB Kanaga Island 44.90 307 P P 13 17 46.5 -0.2
SJG San Juan 45.27 106 LR LR 13 37 30.0
comp=Z,2µm,20.1s,baz=298,slow=37
SJG San Juan 45.27 106 IAMs_20 IAMs_20 13 39 49.7
comp=Z,2µm,20.0s
APAC Apartado, Choc 45.43 126 P P 13 17 52.9 +1.6
comp=Z,3µmcomp=Z,99nm,1.5s
URIC Uribia, Colomb 45.52 118 P P 13 17 54.3 +2.3
comp=Z,2µmcomp=Z,65nm,1.4s
UREC San Jos de Ur 46.19 125 P P 13 17 57.4 +0.1
comp=Z,1µmcomp=Z,29nm,1.9s
SUMG Summit 46.81 23 *i* P P **13 18 02.0 0.0**
SUMG IAmb IAmb 13 18 07.3
comp=Z,172nm,1.1s
OCAC Ocana 47.22 122 P P 13 18 06.3 +0.8
comp=Z,1µmcomp=Z,54nm,1.3s
CBOC Ciudad Bolivar 47.37 127 P P 13 18 07.3 +0.5
comp=Z,2µmcomp=Z,89nm,1.3s
HELC Santa Helena 47.41 126 P P 13 18 07.7 +0.4
comp=Z,1µmcomp=Z,43nm,1.7s
ANGG Ammassalik, Gr 47.47 33 *i* P P **13 18 06.2 -0.5**
ANGG IAmb IAmb 13 18 11.3
comp=Z,79nm,0.9s
SMRT St. Maarten 47.57 103 IAMs_20 IAMs_20 13 37 28.8
comp=Z,3µm,21.0s
PTBC PUERTO BERRIO, 47.80 125 P P 13 18 09.9 0.0
comp=Z,2µmcomp=Z,76nm,2.0s
PLMC San Jos del P 47.97 128 P P 13 18 11.4 +0.1
comp=Z,1µmcomp=Z,28nm,1.1s
GUY2C Guyana, Caldas 48.27 127 P P 13 18 14.8 +0.7
comp=Z,1µmcomp=Z,48nm,1.5s
PAMC Pamplona, Colo 48.29 123 P P 13 18 16.4 +2.1
comp=Z,295nmcomp=Z,38nm,0.9s
GR1C Gorgona, Isla 48.41 132 P P 13 18 15.8 +1.2
SDV Santo Domingo 48.49 119 LR LR 13 42 13.5
comp=Z,910nm,18.2s,baz=334,slow=40
SDV Santo Domingo 48.49 119 P P 13 18 15.9 +0.5
comp=Z,2µmcomp=Z,2µmcomp=Z,75nm,1.8s
SDV Santo Domingo 48.49 119 *eP* P **13 18 15.7 +0.3**
YOTC Yotoco, Valle 48.67 129 P P 13 18 16.8 +0.1
comp=Z,1µmcomp=Z,42nm,1.2s
SPBC San Pablo de B 48.73 125 P P 13 18 17.6 +0.5
comp=Z,1µmcomp=Z,28nm,1.8s
ANIL Santa Ana 48.83 128 P P 13 18 21.0 +2.9
JAMC Jamundi, Valle 49.09 130 P P 13 18 21.0 +0.9
comp=Z,2µmcomp=Z,76nm,1.2s
RUSC La Rusia 49.16 124 P P 13 18 20.7 -0.2
comp=Z,2µmcomp=Z,2µmcomp=Z,117nm,1.2s
ROSC El Rosal 49.21 126 P P 13 18 21.5 +0.3
comp=Z,13nm,0.6s,baz=3.5,slow=8.9,SNR=17
ROSC LR LR 13 41 10.8
comp=Z,1µm,21.9s,baz=338,slow=39
comp=Z,13nm,0.6s
ROSC El Rosal 49.21 126 P P 13 18 23.9 +2.7
comp=Z,2µmcomp=Z,69nm,1.3s
ORTC Ortega, Tolima 49.38 128 P P 13 18 23.1 +1.0
comp=Z,62nm,1.3s
POPC Popayan, Colom 49.64 131 P P 13 18 24.6 +0.3
comp=Z,1µmcomp=Z,37nm,1.2s
GDHS Morne Mazeau, 49.66 104 P P 13 18 23.0 -1.3
CHIC Chingaza 49.73 126 P P 13 18 26.4 +1.2
comp=Z,2µmcomp=Z,59nm,1.9s
BBAC Balboa, Cauca 49.73 132 P P 13 18 26.6 +1.6
comp=Z,2µmcomp=Z,34nm,1.4s
PRAC Prado 49.75 128 P P 13 18 26.8 +1.9
comp=Z,2µmcomp=Z,30nm,2.9s
SHEM Shemya Is, Ala 49.87 310 LR LR 13 37 50.2
comp=Z,521nm,19.5s,baz=108,slow=34
CBE Ff, Capester 49.91 104 P P 13 18 25.4 -0.8
BILL Bilibino 49.93 331 IAMs_20 IAMs_20 13 41 30.4
comp=Z,2µm,20.0s
BILL Bilibino 49.93 331 *de* P P **13 18 26.2 +0.6**
BILL pmax pmax
comp=Z,144nm,1.1s
BILL MLR MLR
comp=Z,3µm,13.0s
PAC1 Pacto, Paraso 50.33 135 P P 13 18 30.3 +0.9
comp=Z,2µmcomp=Z,58nm,0.5s
OTAV Otavalo 50.54 134 IAMs_20 IAMs_20 13 40 37.9
comp=Z,1µm,18.0s
OTAV Otavalo 50.54 134 P P 13 18 32.1 +0.7
comp=Z,1µmcomp=Z,48nm,1.2s
OTAV Otavalo 50.54 134 *eP* P **13 18 32.3 +1.0**
GARC Garzon, Huila 50.61 130 P P 13 18 32.2 +0.5
comp=Z,1µmcomp=Z,66nm,1.1s
NOR Nord 50.77 11 *i* P P **13 18 31.4 -0.4**
NOR IAmb IAmb 13 18 36.1
comp=Z,20nm,1.1s
PPLP Puerto Lpez 50.82 138 P P 13 18 34.2 +1.2
comp=Z,71nm,1.4s
BONI La Bonita 50.87 133 P P 13 18 34.7 +1.1
comp=Z,2µmcomp=Z,41nm,1.6s
FLOC Florencia 51.01 130 P P 13 18 35.3 +0.9
comp=Z,1µmcomp=Z,1µmcomp=Z,49nm,1.3s
DAG Danmarks Havn 51.53 17 *i* P P **13 18 36.9 -0.6**
DAG IAmb IAmb 13 18 43.5
comp=Z,60nm,1.2s
MACC Macarena, Meta 51.62 128 P P 13 18 39.5 +0.5
comp=Z,121nm,1.0s
DBG Daneborg 51.77 20 *i* P P **13 18 39.8 +0.4**
DBG IAmb IAmb 13 18 44.3
comp=Z,26nm,1.1s
SCO Scoresbysund 52.29 25 *i* P P **13 18 43.7 +0.4**
SCO IAmb IAmb 13 18 44.7
comp=Z,91nm,1.0s
GRGR Grenville 52.45 108 P P 13 18 47.3 +2.1
comp=Z,3µmcomp=Z,278nm,1.3s
MCRA Macar, Loja 53.65 139 P P 13 18 54.1 0.0
comp=Z,1µmcomp=Z,67nm,1.2s
BORG Borgarnes 54.34 32 LR LR 13 40 28.7
comp=Z,3µm,18.2s,baz=292,slow=34
TAOE Nuku Hiva Isla 55.73 214 *eP* P 13 19 04.0 -5.1
comp=Z,304nm,24.9s
TAOE *ePP* PP 13 21 01.2 -12
comp=Z,128nm,27.7s
TAOE *eS* **S** **13 26 55.8 -0.1**
comp=Z,546nm,32.4s
TAOE *eSS* **SS** **13 30 35.4 -6.3**
comp=Z,1µm,26.5s
TAOE *eLR* LR 13 35 13.9
comp=Z,3µm,30.1s
JMIC Jan Mayen 56.24 23 LR LR 13 43 18.7
comp=Z,3µm,18.5s,baz=274,slow=36
KBS Kingsbay 56.25 11 *eP* P **13 19 12.6 +0.6**
KBS IAmb IAmb 13 19 13.9
comp=Z,32nm,1.0s
KBS *eS* **S** **13 27 03.7 +2.3**
KBS *eScS* **ScS** **13 28 60.0 -0.9**
KBS IAMs_20 IAMs_20 13 43 35.5
comp=Z,7µm,16.9s
KBS Kingsbay 56.25 11 *ce* P P **13 19 13.3 +1.3**
KBS pmax pmax
comp=Z,30nm,1.0s
KBS MLR MLR
KBS Kingsbay 56.25 11 *i* P P **13 19 12.9 +0.8**
ATAH Atahualpa 56.81 139 LR LR 13 44 26.4
comp=Z,931nm,18.4s,baz=338,slow=37
SEY Seymchan 57.02 327 LR LR 13 45 56.8
comp=Z,2µm,18.3s,baz=73,slow=38
SEY Seymchan 57.02 327 *ce* P P **13 19 18.7 +1.0**
SEY pmax pmax
comp=Z,119nm,1.3s
SEY MLR MLR
comp=Z,1µm,12.0s
SPA0 Spitsbergen Ar 57.41 11 *eP* P **13 19 20.1 -0.3**
SPA0 IAmb IAmb 13 19 25.6
comp=Z,40nm,1.0s
SPA0 *eS* **S** **13 27 16.9 +0.1**
SPA0 *eScS* **ScS** **13 29 10.0 +0.6**
SPA0 IAMs_20 IAMs_20 13 44 20.0
comp=Z,8µm,16.5s
SPITS Spitsbergen Ar 57.41 11 P P 13 19 20.0 -0.3
comp=Z,26nm,0.9s,baz=292,slow=2.2,SNR=17
SPITS LR LR 13 44 18.8
comp=Z,5µm,18.4s,baz=310,slow=36
comp=Z,26nm,0.9s
SPB2 Spitsbergen Ar 57.42 11 P P 13 19 19.6 -0.7
HSPB Hornsund (broa 58.12 12 *eP* P **13 19 26.3 +1.1**
PET Petropavlovsk 58.42 315 P P 13 19 29.6 +1.9
PET Petropavlovsk 58.42 315 P P 13 19 27.9 +0.3
PET Petropavlovsk 58.42 315 *eP* P **13 19 28.0 +0.3**
PET *e* 13 21 37.2
PET *eS* **S** **13 27 29.0 -1.5**
PET *eSS* **SS** **13 31 19.6 -2.5**
PET pmax pmax
comp=Z,220nm,1.1s
PET pmax pmax
comp=Z,2µm,3.7s
PET pmax pmax
comp=Z,600nm,6.2s
PET pmax pmax
comp=Z,200nm,10.1s
PET MLR MLR
comp=Z,900nm,16.0s
PET MLR MLR
comp=Z,1µm,14.0s
PEA0B Petropavlovsk- 58.89 315 P P 13 19 31.2 +0.2
PEA0B Petropavlovsk- 58.89 315 P P 13 19 31.2 +0.2
PEA0B pmax pmax
comp=Z,558nm,1.2s
PETK Petropavlovsk- 58.89 315 P P 13 19 31.9 +0.9
comp=Z,209nm,1.0s,baz=74,slow=11,SNR=109
PETK LR LR 13 44 21.8
comp=Z,547nm,20.3s,baz=67,slow=36
comp=Z,209nm,1.0s
PETK Petropavlovsk- 58.89 315 P P 13 19 31.3 +0.3
MA2 Magadan 59.26 324 IAMs_20 IAMs_20 13 47 50.9
comp=Z,1µm,18.0s
HOPEN Hopen 59.92 11 *eP* P **13 19 37.3 -0.4**
HOPEN IAmb IAmb 13 19 39.8
comp=Z,33nm,1.2s
HOPEN *eS* **S** **13 27 49.6 +0.2**
HOPEN IAMs_20 IAMs_20 13 45 54.1
comp=Z,6µm,15.3s
TIXI Tiksi 60.03 341 LR LR 13 50 32.0
comp=Z,1µm,18.0s,baz=48,slow=41
TIXI Tiksi 60.03 341 IAMs_20 IAMs_20 13 50 21.2
comp=Z,1µm,18.0s
TIXI Tiksi 60.03 341 ⇑*P* P **13 19 37.5 -1.0**
BOAV Boa Vista 60.05 115 *P* P **13 19 38.6 -0.8**
BOAV Boa Vista 60.05 115 *eP* P **13 19 39.2 -0.3**
CZSB Cruzeiro do Su 60.30 134 *dP* P **13 19 43.0 +1.9**
CZSB Cruzeiro do Su 60.30 134 *eP* P **13 19 41.2 +0.1**
SKR Severo-Kuril's 60.91 313 *dP* P **13 19 45.8 +0.9**
TEFE Tefe 61.73 123 *eP* P **13 19 50.6 -0.3**
NNA Nana 61.75 140 P P 13 19 50.1 -0.9
NNA IAmb IAmb 13 19 57.1
comp=Z,95nm,1.2s
NNA Nana 61.75 140 IAMs_20 IAMs_20 13 46 31.1
comp=Z,866nm,19.0s
NNA Nana 61.75 140 P P 13 19 50.1 -0.9
NNA pmax pmax
comp=Z,95nm,1.2s
NNA MLR MLR
comp=Z,900nm,19.0s
ROSA Rosais 62.04 62 *eP* P **13 19 52.9 +0.1**
ROSA IAmb IAmb 13 19 57.2
comp=Z,265nm,1.2s
PMAN Manadas 62.18 62 *eP* P **13 19 54.5 +0.8**
PMAN IAmb IAmb 13 19 59.0
comp=Z,344nm,1.1s
MDP Montagnes des 63.73 107 LR LR 13 48 37.9
comp=Z,1µm,20.9s,baz=320,slow=37
MACA Manacapuru-AM 64.02 120 *eP* P **13 20 05.7 -0.4**
LOF Lofoten 64.09 20 *eP* P **13 20 03.9 -1.9**
TRO Tromso 64.26 17 *eP* P **13 20 06.4 -0.5**
TRO IAMs_20 IAMs_20 13 46 43.3
comp=Z,2µm,14.1s
CMLA Cha da Macela 64.36 61 *eP* P **13 20 08.7 +0.6**
CMLA IAmb IAmb 13 20 11.2
comp=Z,228nm,1.3s
HAMF Hammerfest 64.45 15 *eP* P **13 20 07.8 -0.4**
HAMF *eS* **S** **13 28 45.7 -0.9**
HAMF IAMs_20 IAMs_20 13 49 02.7
comp=Z,4µm,20.0s
KPL Plockton 64.55 35 *eP* P **13 20 08.9 -0.1**
KPL IAmb IAmb 13 20 10.1
comp=Z,49nm,0.8s
BART Pico Bartolome 64.59 61 *eP* P **13 20 10.2 +0.4**
BART IAmb IAmb 13 20 15.0
comp=Z,108nm,1.2s
JETT Jettan, Norway 64.64 17 *eP* P **13 20 09.4 -0.2**
JETT IAMs_20 IAMs_20 13 50 33.2
comp=Z,3µm,15.8s
PMOR Pomariorio Ree 64.65 219 *eP* P **13 20 08.9 -1.2**
comp=Z,107nm,1.2s
STEI Steigen 64.68 19 *eP* P **13 20 09.4 -0.3**
STEI IAmb IAmb 13 20 12.6
comp=Z,146nm,1.3s
STEI IAMs_20 IAMs_20 13 49 36.3
comp=Z,7µm,5.7s
IDGL Inch Island, C 65.04 38 P P 13 20 12.5 +0.2
FAUS Fauske 65.10 20 *eP* P **13 20 12.0 -0.5**
FAUS IAmb IAmb 13 20 15.3
comp=Z,55nm,0.9s
FAUS IAMs_20 IAMs_20 13 48 11.5
comp=Z,8µm,5.5s
STOK Stokkvaagen 65.27 21 *eP* P **13 20 13.5 -0.1**
LAWE Loch Awe, Argy 65.31 36 *eP* P **13 20 13.8 -0.2**
LAWE IAmb IAmb 13 20 14.8
comp=Z,50nm,0.9s
MCD Coleburn Disti 65.44 34 *eP* P **13 20 14.9 +0.1**
MCD IAmb IAmb 13 20 16.1
comp=Z,81nm,0.8s
LEIR Leirfjorden 65.46 21 *eP* P **13 20 15.0 +0.2**
VAL Valentia 65.54 42 *P* P **13 20 16.5 +1.0**
CLGH Cloghs, Cushen 65.69 37 *eP* P **13 20 16.3 -0.2**
CLGH IAmb IAmb 13 20 17.4
comp=Z,18nm,0.7s
KTK1 Kautokeino 65.69 16 *eP* P **13 20 16.1 -0.2**
KTK1 IAmb IAmb 13 20 21.1
comp=Z,222nm,1.6s
KTK1 *eS* **S** **13 29 03.1 +1.2**
KTK1 IAMs_20 IAMs_20 13 48 52.9
comp=Z,3µm,22.6s
ARA0 ARCESS Array S 65.72 15 *eP* P **13 20 16.3 -0.2**
ARA0 IAmb IAmb 13 20 20.1
comp=Z,88nm,1.1s
ARA0 *eS* **S** **13 29 02.9 +0.5**
ARA0 IAMs_20 IAMs_20 13 49 42.2
comp=Z,5µm,21.6s
ARCES ARCESS Array B 65.72 15 P P 13 20 15.9 -0.7
comp=Z,37nm,0.8s,baz=326,slow=5.9,SNR=24
ARCES PKPPKP **P'P'df 13 48 57.3 -5.4**
comp=Z,3.5nm,0.9s,baz=41,slow=3.9,SNR=4.6
ARCES LR LR 13 49 58.9
comp=Z,4µm,18.3s,baz=324,slow=37
comp=Z,37nm,0.8s
ARCES ARCESS Array B 65.72 15 P P 13 20 15.8 -0.7
ARCES IAmb IAmb 13 20 20.4
comp=Z,77nm,1.1s
ARCES ARCESS Array B 65.72 15 P P 13 20 15.8 -0.7
ARCES pmax pmax
comp=Z,77nm,1.2s
INVG Invergeldie, C 65.80 35 *eP* P **13 20 17.1 -0.1**
INVG IAmb IAmb 13 20 17.9
comp=Z,21nm,0.8s
EAB Aberfoyle 65.82 36 *eP* P **13 20 17.3 0.0**
EAB IAmb IAmb 13 20 18.4
comp=Z,81nm,0.8s
VADS Vadso 65.95 14 *eP* P **13 20 17.9 0.0**
VADS IAmb IAmb 13 20 18.9
comp=Z,125nm,0.9s
VADS *eS* **S** **13 29 04.6 -0.4**
VADS IAMs_20 IAMs_20 13 46 28.7
comp=Z,4µm,21.4s
PGBU Glenifferbraes 65.99 36 *eP* P **13 20 18.3 -0.1**
PGBU IAmb IAmb 13 20 19.4
comp=Z,175nm,0.9s
DRUM Mains of Drumt 66.18 34 *eP* P **13 20 19.4 -0.2**
DRUM IAmb IAmb 13 20 20.5
comp=Z,50nm,0.9s
YAK Yakutsk 66.20 333 LR LR 13 53 55.6
comp=Z,1µm,18.1s,baz=55,slow=40
YAK Yakutsk 66.20 333 IAMs_20 IAMs_20 13 51 56.1
comp=Z,1µm,18.0s
YAK Yakutsk 66.20 333 *d* P P **13 20 19.8 +0.2**
YAK *e**PP **pP** **13 20 22.9 0.0**
YAK *e* 13 22 47.4
YAK *ePPP* PPP 13 24 21.5
YAK *eS* **S** **13 29 10.0 +1.8**
YAK *e**SS sS 13 29 25.0 +11
YAK *eSS* **SS** **13 33 30.7 +7.6**
YAK pmax pmax
comp=Z,135nm,1.1s
YAK pmax pmax
comp=Z,101nm,2.3s
YAK pmax pmax
comp=E,75nm,2.3s
YAK pmax pmax
comp=N,63nm,2.2s
YAK smax smax
comp=N,516nm,6.9s
YAK smax smax
comp=E,245nm,4.8s
YAK MLR MLR
comp=Z,1µm,15.0s
YAK MLR MLR
comp=N,753nm,15.0s
YAK MLR MLR
comp=E,734nm,14.0s
ILTH Belurgan, Co L 66.22 38 P P 13 20 19.4 -0.5
GAL1 Galloway 66.46 37 *eP* P **13 20 21.1 -0.3**
GAL1 IAmb IAmb 13 20 22.4
comp=Z,36nm,1.0s
EDI Edinburgh 66.49 36 *eP* P **13 20 21.6 0.0**
EDI IAmb IAmb 13 20 22.8
comp=Z,68nm,0.9s
NEWG New Galloway 66.53 37 *eP* P **13 20 21.7 -0.1**
NEWG IAmb IAmb 13 20 22.8
comp=Z,36nm,0.9s
DSB Dublin 66.67 39 P P 13 20 22.5 -0.3
DSB Dublin 66.67 39 P P 13 20 22.1 -0.7
ESK Eskdalemuir 66.86 36 *eP* P **13 20 23.6 -0.4**
ESK IAmb IAmb 13 20 24.9
comp=Z,39nm,0.8s
EKA Eskdalemuir Ar 66.87 36 P P 13 20 23.8 -0.3
comp=Z,37nm,0.8s,baz=306,slow=5.9,SNR=46
EKA LR LR 13 48 12.0
comp=Z,3µm,18.2s,baz=318,slow=35
EKA PKPPKP **P'P'df 13 48 55.0 -5.1**
comp=Z,5.1nm,1.0s,baz=145,slow=3.1,SNR=4.3
comp=Z,37nm,0.8s
EKA Eskdalemuir Ar 66.87 36 P P 13 20 23.3 -0.8
EKA pmax pmax
comp=Z,71nm,1.1s
WIM Isle of Man 66.92 38 *eP* P **13 20 24.1 -0.3**
IWEX Carrickbyrne, 67.00 40 P P 13 20 24.4 -0.5
IWEX Carrickbyrne, 67.00 40 *eP* P **13 20 24.5 -0.5**
IWEX IAmb IAmb 13 20 25.2
comp=Z,19nm,0.7s
BER Bergen 67.02 29 *eP* P **13 20 24.8 -0.1**
BER *e* 13 29 34.4
BER IAMs_20 IAMs_20 13 50 18.6
comp=Z,4µm,7.1s
KESW Keswick, Cumbr 67.36 37 *eP* P **13 20 26.9 -0.3**
TIAR Tiarei 67.55 219 *eP* P **13 20 29.0 +0.3**
comp=Z,99nm,1.0s
RPN Rapa Nui 67.56 177 LR LR 13 44 22.1
comp=Z,755nm,19.4s,baz=355,slow=31
WME Myndd Eilian 67.56 38 *eP* P **13 20 28.4 -0.1**
WLF1 Llynfaes 67.58 38 *eP* P **13 20 28.4 -0.2**
PPT Papeete 67.67 219 P P 13 20 30.5 +1.1
comp=Z,64nm,1.1s,baz=105,slow=22,SNR=5.4
PPT LR LR 13 45 00.9
comp=Z,903nm,18.0s,baz=32,slow=32
comp=Z,64nm,1.1s
PPTF Pamatai, Papee 67.68 219 P P 13 20 32.0 +2.4
PPT2 Papeete2 67.68 219 *eP* P **13 20 30.0 +0.3**
comp=Z,72nm,1.2s
PPT2 *ePP* **PP** **13 23 02.1 +2.9**
comp=Z,68nm,22.0s
PPT2 *eS* **S** **13 29 28.6 +1.3**
comp=Z,469nm,27.8s
PPT2 *eSS* **SS** **13 33 46.9 -1.9**
comp=Z,1µm,30.2s
PPT2 *eLQ* LQ 13 37 23.7
comp=Z,1µm,27.5s
PPT2 *eLR* LR 13 40 43.5
comp=Z,4µm,30.2s
PPT2 *eLR* LR 13 40 52.9
comp=Z,2µm,33.0s
TVO Taravao 67.69 219 *eP* P **13 20 30.0 +0.3**
comp=Z,29nm,1.1s
EDMD Edmundbyers 67.72 36 *eP* P **13 20 29.5 0.0**
EDMD IAmb IAmb 13 20 30.3
comp=Z,30nm,0.8s
PAE Paea 67.75 219 *eP* P **13 20 30.5 +0.5**
comp=Z,26nm,1.1s
TYV Tymovskoe 67.92 319 *eP* P **13 20 31.4 +0.6**
TYV *eS* **S** **13 29 28.7 -0.7**
TYV pmax pmax
comp=Z,800nm,5.0s
TYV pmax pmax
comp=Z,113nm,1.1s
TYV smax smax
comp=N,300nm,6.1s
TYV smax smax
comp=E,400nm,6.1s
TYV MLR MLR
comp=Z,1µm,15.0s
ITTB Itaituba 68.22 117 *eP* P **13 20 32.8 -0.4**

HPK Haverah Park 68.44 37 *e*P **P 13 20 34.2 +0.3**
HPK IAmb IAmb 13 20 35.4
comp=Z,65nm,0.9s
GDLE Glaisdale, N Y 68.50 36 *e*P **P 13 20 34.5 +0.2**
GDLE IAmb IAmb 13 20 35.3
comp=Z,29nm,0.8s
KUR Kuril'sk 68.53 312 *e*P **P 13 20 35.2 +0.5**
KUR pmax pmax
comp=Z,280nm,1.1s
NB2 NORSAR Subarra 68.60 26 P **P 13 20 35.4 +0.5**
comp=Z,14nm,0.8s,baz=313,slow=6.5
NB2 NORSAR Subarra 68.60 26 P **P 13 20 35.4 +0.5**
NOA NORSAR Array B 68.60 26 P **P 13 20 34.9 -0.1**
comp=Z,28nm,0.9s,baz=312,slow=6.5,SNR=45
NOA LR LR 13 50 17.2
comp=Z,941nm,18.4s,baz=325,slow=36
comp=Z,28nm,0.9s
NAO01 NORSAR Array S 68.63 26 P **P 13 20 35.2 +0.1**
NAO01 IAmb IAmb 13 20 41.1
comp=Z,137nm,1.4s
LBWR Ladybower, Pea 68.75 37 *e*P **P 13 20 36.2 +0.3**
LBWR IAmb IAmb 13 20 37.5
comp=Z,78nm,0.9s
HLM1 Long Mynd 68.78 38 *e*P **P 13 20 35.9 -0.3**
HLM1 IAmb IAmb 13 20 36.8
comp=Z,13nm,0.8s
LVZ Lovozero 68.82 13*de*P **P 13 20 36.0 -0.2**
LVZ pmax pmax
comp=Z,111nm,0.9s
LVZ MLR MLR
comp=Z,2μm,13.0s
APA Apatity 68.90 13⇓*e*P **P 13 20 35.8 -0.8**
APA *e* 13 21 02.8
APA *e* 13 23 06.1
APA pmax pmax
comp=Z,35nm,1.0s
NC602 NORSAR Array S 68.93 26 P **P 13 20 37.0 +0.1**
NC602 NORSAR Array S 68.93 26 *e*P **P 13 20 37.0 +0.1**
MCH1 Michaelchurch 69.06 39 *e*P **P 13 20 37.6 -0.2**
MCH1 IAmb IAmb 13 20 38.4
comp=Z,13nm,0.8s
KONO Kongsberg 69.06 28 *e*P **P 13 20 37.7 -0.1**
KONO Kongsberg 69.06 28 ⇓P **P 13 20 37.1 -0.7**
NRIK Noril'sk 69.29 353 P **P 13 20 38.6 -0.4**
comp=Z,45nm,0.9s,baz=38,slow=4.5,SNR=68
NRIK PKPPKP P'P'df 13 48 47.4 -9.2
comp=Z,6.1nm,1.0s,baz=189,slow=3.1,SNR=16
NRIK LR LR 13 52 10.5
comp=Z,1μm,19.2s,baz=28,slow=37
comp=Z,45nm,0.9s
UGL Uglegorsk 69.33 317 *e*P **P 13 20 39.1 -0.5**
UGL *e*S **S 13 29 47.9 +1.8**
UGL pmax pmax
comp=Z,1μm,6.3s
UGL pmax pmax
comp=Z,100nm,1.2s
CWF Charnwood Fore 69.37 37 *e*P **P 13 20 40.0 +0.2**
CWF IAmb IAmb 13 20 40.7
comp=Z,18nm,0.6s
LPAZ La Paz 69.85 135 P **P 13 20 43.0 -0.8**
comp=Z,26nm,0.8s,baz=339,slow=6.3,SNR=90
LPAZ PKPPKP **P'P'df 13 48 48.5 +4.1**
comp=Z,8.4nm,1.2s,baz=90,slow=0.7,SNR=9.1
LPAZ LR LR 13 53 49.2
comp=Z,898nm,19.4s,baz=326,slow=38
comp=Z,26nm,0.8s
LPAZ La Paz 69.85 135 P **P 13 20 42.6 -1.3**
LPAZ La Paz 69.85 135 P **P 13 20 42.6 -1.3**
LPAZ pmax pmax
comp=Z,26nm,0.8s
LPAZ La Paz 69.85 135 *e*P **P 13 20 42.8 -1.1**
HFS Hagfors 70.09 26 P **P 13 20 43.7 -0.5**
comp=Z,65nm,0.9s,baz=320,slow=3.9,SNR=37
HFS LR LR 13 50 18.0
comp=Z,1μm,18.4s,baz=314,slow=35
comp=Z,65nm,0.9s
YSS Yuzhno-Sakhali 70.30 315 P **P 13 20 46.1 +0.5**
YSS Yuzhno-Sakhali 70.30 315 P **P 13 20 45.9 +0.4**
YSS IAMs_20 IAMs_20 13 55 15.1
comp=Z,1μm,18.0s
YSS Yuzhno-Sakhali 70.30 315 *e*P **P 13 20 46.1 +0.5**
YSS *e*XP **sP 13 20 53.0 +2.9**
YSS *e*S **S 13 29 55.3 -2.3**
YSS pmax pmax
comp=Z,30nm,1.0s
YUK Yuzh-Kuril'sk 70.39 312*d*⇓*i*P **P 13 20 46.2 0.0**
NPGB Novo Progresso 70.43 118 *e*P **P 13 20 46.0 -0.8**
PB16 IPOC Station P 70.82 137 P **P 13 20 48.9 -0.8**
ELMS Elmsett, Ipswi 70.86 37 *e*P **P 13 20 48.9 0.0**
ELMS IAmb IAmb 13 20 49.8
comp=Z,57nm,0.8s
GRNR Gornyy 71.03 321⇓*i*P **P 13 20 50.1 +0.1**
GRNR pmax pmax
comp=Z,40nm,1.2s
MUD Monsted U'grnd 71.23 30 *i* P **P 13 20 51.5 +0.4**
MUD IAmb IAmb 13 20 56.3
comp=Z,227nm,1.2s
VILB Vilhena 71.77 126 *e*P **P 13 20 55.0 +0.1**
JKA Kamikawa-asahi 72.18 313 P **P 13 20 56.9 -0.1**
ASAJ Asahikawa 72.18 313 P **P 13 20 58.4 +1.4**
comp=Z,207nm,1.1s,baz=331,slow=3.5,SNR=46
ASAJ LR LR 13 52 50.8
comp=Z,321nm,20.1s,baz=68,slow=36
comp=Z,207nm,1.1s
ASAJ Asahikawa 72.18 313 P **P 13 20 56.9 -0.1**
ASAJ pmax pmax
comp=Z,309nm,1.1s
HMBC Humberstone 72.25 139 P **P 13 20 57.4 -0.4**
HMBC IAmb IAmb 13 20 59.1
comp=Z,66nm,1.0s
PB08 IPOC Station P 72.51 138 P **P 13 20 58.8 -0.9**
TBI Tubuai 72.62 216 *e*P **P 13 20 59.4 -0.3**
comp=Z,1μm,27.5s
TBI *e*PP **PP 13 23 36.9 -4.7**
comp=Z,552nm,39.2s
TBI *e*S **S 13 30 26.0 +1.3**
comp=Z,2μm,31.5s
TBI *e*SS **SS 13 35 08.9 +4.3**
comp=Z,4μm,31.8s
TBI *e*LQ LQ 13 39 52.2
comp=Z,7μm,32.8s
TBI *e*LR LR 13 43 11.4
comp=Z,10μm,33.0s
TBI *e*LR LR 13 43 12.9
comp=Z,2μm,31.0s
FINES FINESS Array B 72.66 20 P **P 13 20 59.2 -0.4**
comp=Z,53nm,0.9s,baz=354,slow=5.7,SNR=53
FINES LR LR 13 51 55.7
comp=Z,2μm,19.5s,baz=324,slow=35
comp=Z,53nm,0.9s
FINES FINESS Array B 72.66 20 P **P 13 20 59.0 -0.6**
PGAV Gavieira, Arco 72.67 49 *e*P **P 13 20 60.0 -0.2**
PGAV *e*pP **pP 13 21 03.4 -0.1**
PGAV *i* IAmb IAmb 13 21 05.8
comp=Z,97nm,1.6s
PGAV *e*S **S 13 30 28.0 +2.6**
PGAV *e*LR LR 13 48 40.9
PGAV *i* IAMs_20 IAMs_20 13 54 54.4
comp=Z,1μm,16.0s
PMOZ Porto Moniz, M 72.76 61 *e*P **P 13 21 01.1 +0.2**
PMOZ *e*LR LR 13 46 39.9
PMOZ *i* IAMs_20 IAMs_20 13 51 55.0
comp=Z,2μm,20.0s
PDRB Porto dos Gac 72.93 123 *e*P **P 13 21 01.4 -0.5**
PCAB Cabril 72.97 49 *e*P **P 13 21 01.9 +0.1**
PCAB *e*pP **pP 13 21 05.4 +0.2**
PCAB *i* IAmb IAmb 13 21 07.7
comp=Z,178nm,1.5s
CLDB Colider 72.98 121 *e*P **P 13 21 01.8 -0.4**
ZEA Zeya 73.00 328 *e*P **P 13 21 01.9 +0.2**
ZEA *e*S **S 13 30 28.7 +0.1**
ZEA *e* 13 31 10.7
ZEA pmax pmax
comp=Z,100nm,1.0s
ZEA pmax pmax
comp=E,200nm,4.5s
ZEA pmax pmax
comp=Z,500nm,4.3s
ZEA smax smax
comp=E,200nm,11.2s
ZEA smax smax
comp=N,400nm,12.1s
ZEA MLR MLR
comp=E,300nm,18.0s
ZEA MLR MLR
comp=N,300nm,12.0s
ZEA MLR MLR
comp=Z,500nm,14.0s
ADZR Andozero 73.07 13 *e*P **P 13 21 01.0 -0.9**
ADZR pmax pmax
comp=Z,106nm,0.8s
PB01 IPOC Station P 73.10 139 P **P 13 21 02.7 -0.1**
PB01 IAmb IAmb 13 21 04.5
comp=Z,75nm,0.9s
PMPS Porto Santo 73.19 61 *e*pP pP 13 21 07.0 +0.4
JEM Erimo 73.20 311 P **P 13 21 04.2 +1.0**
UCC Uccle 73.28 36 *d*P **P 13 21 03.5 +0.1**
POLO Lamas de Olo 73.32 50 *e*P **P 13 21 03.9 -0.1**
POLO *e*pP **pP 13 21 07.2 -0.2**
POLO *i* IAmb IAmb 13 21 09.9
comp=Z,101nm,1.6s
PVRL Vila Real 73.43 50 *e*P **P 13 21 04.7 +0.1**
PVRL *e*pP **pP 13 21 08.3 +0.3**
PVRL *i* IAmb IAmb 13 21 10.4
comp=Z,203nm,1.7s
BSEG Bad Segeberg 73.53 31 *e*P **P 13 21 05.3 +0.4**
comp=Z,103nm,1.0s,baz=320,slow=5.7
SIV San Ignacio 73.61 129 LR LR 13 56 30.3
comp=Z,405nm,19.8s,baz=339,slow=38
PBRG Braganca 73.65 49 *e*P **P 13 21 05.9 0.0**
PBRG *e*pP **pP 13 21 09.4 +0.1**
PBRG *i* IAmb IAmb 13 21 11.8
comp=Z,164nm,1.7s
IBBN Ibbenburen 73.68 34 *e*P **P 13 21 06.2 +0.5**
comp=Z,180nm,0.9s,baz=320,slow=5.7
PVIS Viseu 73.68 50 *e*P **P 13 21 05.5 -0.6**
PVIS *e*pP **pP 13 21 09.3 -0.2**
PCAS Casmilo, Conde 73.75 51 *e*P **P 13 21 06.3 -0.2**
PCAS *e*pP **pP 13 21 09.9 +0.1**
PCAS *i* IAmb IAmb 13 21 12.5
comp=Z,241nm,1.7s
BMRD Maredsous 73.81 37 *d*P **P 13 21 06.9 +0.3**
comp=Z,44nm,1.3s
BEBN Eben Emael 73.87 36 *d*P **P 13 21 07.2 +0.3**
DOU Dourbes 73.88 37 *d*P **P 13 21 04.8 -2.2**
comp=Z,40nm,1.3s
MVO Moncorvo 73.90 49 *e*P **P 13 21 07.4 0.0**
MVO *e*pP **pP 13 21 10.7 -0.1**
MVO *i* IAmb IAmb 13 21 13.4
comp=Z,268nm,1.7s
MVO *e*S **S 13 30 41.2 +1.8**
MVO *e*LR LR 13 49 19.7
MVO *i* IAMs_20 IAMs_20 13 53 41.5
comp=Z,1μm,16.0s
BGES Gesves 73.90 36 *d*P **P 13 21 07.5 +0.4**
comp=Z,44nm,1.2s
PSBE So Bento 73.92 52 *e*P **P 13 21 07.7 +0.2**
PSBE *e*pP **pP 13 21 11.3 +0.4**
PSBE *i* IAmb IAmb 13 21 13.4
comp=Z,241nm,1.8s
BCLA Clavier 73.97 36 *d*P **P 13 21 08.1 +0.6**
comp=Z,51nm,1.1s
BSTI Sart Tilman 73.97 36 *d*P **P 13 21 08.3 +0.8**
PMAFR Mafra 73.98 52 *e*P **P 13 21 08.1 +0.3**
PMAFR *e*pP **pP 13 21 11.5 +0.3**
PMAFR *i* IAmb IAmb 13 21 13.5
comp=Z,334nm,1.7s
RETH Rethem/Aller, 74.03 33 *e*P **P 13 21 08.4 +0.6**
comp=Z,216nm,1.2s,baz=320,slow=5.7
MTE Manteigas 74.09 50 IAMs_20 IAMs_20 13 50 38.5
comp=Z,2μm,21.0s
MTE Manteigas 74.09 50 *e*P **P 13 21 08.3 -0.2**
MTE *e*pP **pP 13 21 11.8 0.0**
MTE *i* IAmb IAmb 13 21 14.3
comp=Z,180nm,1.8s
MTE *e*S **S 13 30 43.1 +1.5**
MTE *e*LR LR 13 49 05.9
MTE *i* IAMs_20 IAMs_20 13 51 02.7
comp=Z,1μm,20.0s
BUG Bochum--Univer 74.10 35 *e*P **P 13 21 08.7 +0.4**
comp=Z,157nm,1.1s,baz=320,slow=5.7
RCHB Rochefort 74.12 36 *d*P **P 13 21 08.1 -0.3**
comp=Z,48nm,1.3s
RCHB *d*PP **PP 13 23 52.0 -1.2**
MEM Membach 74.15 36 *d*P **P 13 21 09.0 +0.4**
comp=Z,93nm,1.2s
HAMD Hammershus, De 74.20 28 *i* P **P 13 21 09.2 +0.4**
HAMD IAmb IAmb 13 21 14.0
comp=Z,84nm,1.1s
BTNL Ternell 74.22 36 *d*P **P 13 21 09.7 +0.7**
comp=Z,53nm,1.3s
PSARD Sardoal 74.24 51 *e*P **P 13 21 09.4 +0.1**
PSARD *e*pP **pP 13 21 12.5 -0.2**
PSARD *i* IAmb IAmb 13 21 15.0
comp=Z,225nm,1.6s
PB05 IPOC Station P 74.27 140 P **P 13 21 09.3 -0.4**
KLR Kul'dur 74.28 322 P **P 13 21 09.7 +0.3**
comp=Z,60nm,1.1s,baz=44,slow=5.1,SNR=63
comp=Z,60nm,1.1s
KLR Kul'dur 74.28 322*ce*P **P 13 21 09.6 +0.3**
KLR pmax pmax
comp=Z,140nm,1.3s
KLR MLR MLR
comp=Z,571nm,12.0s
BHOU Houvegnez 74.33 36 *d*P **P 13 21 10.7 +1.0**
comp=Z,40nm,1.3s
PTLB Pontes e Lacer 74.35 127 P **P 13 21 09.6 -0.5**
PTLB IAmb IAmb 13 21 16.6
comp=Z,114nm,1.3s
PTLB Pontes e Lacer 74.35 127 *e*P **P 13 21 09.9 -0.2**
BSD Bornholm Skovb 74.37 28 *i* P **P 13 21 10.3 +0.5**
BSD IAmb IAmb 13 21 10.8
comp=Z,40nm,0.9s
PCBR Castelo Branco 74.49 51 *e*P **P 13 21 10.5 -0.2**
PCBR *e*pP **pP 13 21 14.1 -0.1**
PCBR *i* IAmb IAmb 13 21 16.2
comp=Z,145nm,1.7s
BOD Bodaibo 74.52 336⇑*i*P **P 13 21 09.6 -1.0**
BOD pmax pmax
comp=Z,325nm,1.6s
PMTG Montargil 74.54 52 *e*P **P 13 21 10.8 -0.3**
PMTG *e*pP **pP 13 21 14.2 -0.3**
PMTG *i* IAmb IAmb 13 21 16.6
comp=Z,181nm,1.8s
KASTN Kahler Asten 74.77 34 *e*P **P 13 21 12.2 0.0**
comp=Z,61nm,1.1s,baz=320,slow=5.7
TEY Ternei 74.79 317⇑*e*P **P 13 21 13.0 +0.6**
TEY pmax pmax
comp=N,30nm,1.1s
TEY pmax pmax
comp=E,20nm,1.1s
TEY pmax pmax
comp=Z,110nm,1.1s
PMRV Marv??o 74.81 51 *e*P **P 13 21 12.4 -0.3**
PMRV *e*pP **pP 13 21 16.1 +0.1**
PMRV *i* IAmb IAmb 13 21 18.3
comp=Z,193nm,1.7s
PMRV *e*LR LR 13 49 54.4
PMRV *i* IAMs_20 IAMs_20 13 51 25.1
comp=Z,1μm,20.0s
PARRA Arraiolos 74.82 52 *e*P **P 13 21 12.2 -0.5**
PARRA *e*pP **pP 13 21 15.9 -0.1**
PARRA *i* IAmb IAmb 13 21 18.2
comp=Z,164nm,1.7s
MOE Montemor 74.82 52 *e*P **P 13 21 12.6 -0.1**
MOE *e*pP **pP 13 21 16.1 0.0**
MOE *i* IAmb IAmb 13 21 18.4
comp=Z,147nm,1.8s
WLF Walferdange 74.89 36 P **P 13 21 13.5 +0.6**
WLF Walferdange 74.89 36 P **P 13 21 13.5 +0.6**
WLF pmax pmax
comp=Z,352nm,1.7s
WLF Walferdange 74.89 36 *d*P **P 13 21 13.8 +0.9**
comp=Z,55nm,1.4s
WLF Walferdange 74.89 36 *e*P **P 13 21 13.6 +0.6**
comp=Z,111nm,1.0s,baz=320,slow=5.7
EVO Evora 75.02 52 *e*P **P 13 21 13.8 -0.1**
EVO *e*pP **pP 13 21 16.8 -0.4**
EVO *i* IAmb IAmb 13 21 18.8
comp=Z,135nm,1.7s
ASSE Asse, Remlinge 75.02 32 *e*P **P 13 21 13.9 +0.4**
comp=Z,301nm,1.7s,baz=320,slow=5.7
PESTR Estremoz 75.05 51 P **P 13 21 13.2 -0.8**
PESTR IAmb IAmb 13 21 17.8
comp=Z,154nm,1.6s
PESTR Estremoz 75.05 51 *e*P **P 13 21 14.1 0.0**
PESTR *e*pP **pP 13 21 17.1 -0.3**
PESTR *i* IAmb IAmb 13 21 18.7
comp=Z,125nm,1.6s
FLTG Flechtingen 75.10 32 *e*P **P 13 21 14.0 0.0**
comp=Z,113nm,1.2s,baz=320,slow=5.7
CLZ Clausthal 75.11 33 *e*P **P 13 21 14.9 +0.7**
comp=Z,141nm,1.0s,baz=320,slow=5.7
PUL Pulkovo 75.16 19 *i* P **P 13 21 15.5 +1.2**
PUL pmax pmax
comp=Z,33nm,0.6s
PUL MLR MLR
comp=Z,1μm,7.0s
GTTG Gottingen 75.17 33 *e*P **P 13 21 14.9 +0.5**
comp=Z,176nm,1.8s,baz=320,slow=5.7
JTM Tenmabayashi 75.20 311 P **P 13 21 15.1 +0.3**
PTEO Sao Teotonio 75.22 53 *e*P **P 13 21 14.9 -0.1**
PTEO *e*pP **pP 13 21 18.4 0.0**
PTEO *i* IAmb IAmb 13 21 20.9
comp=Z,206nm,1.8s
MESJ Messejana 75.34 53 *e*P **P 13 21 15.4 -0.3**
MESJ IAmb IAmb 13 21 20.4
comp=Z,501nm,2.3s
MESJ *e*S **S 13 30 55.9 +0.5**
MESJ Messejana 75.34 53 P **P 13 21 15.3 -0.4**
MESJ IAmb IAmb 13 21 19.6
comp=Z,94nm,1.3s
MESJ Messejana 75.34 53 *e*P **P 13 21 15.8 +0.1**
MESJ *e*pP **pP 13 21 19.0 -0.1**
MESJ *i* IAmb IAmb 13 21 21.4
comp=Z,120nm,1.6s
MESJ Messejana 75.34 53 *e*P **P 13 21 15.4 -0.3**
MESJ *e*S **S 13 30 55.9 +0.5**
VSU Vasula 75.38 21*ce*P **P 13 21 15.5 0.0**
VSU pmax pmax
comp=Z,114nm,1.7s
VSU MLR MLR
comp=Z,3μm,18.0s
MORF Marmelete 75.42 53 *e*P **P 13 21 15.8 -0.4**
MORF IAmb IAmb 13 21 20.0
comp=Z,788nm,2.1s
MORF Marmelete 75.42 53 *e*P **P 13 21 16.5 +0.2**
MORF *i* IAmb IAmb 13 21 22.1
comp=Z,285nm,1.8s
MORF Marmelete 75.42 53 *e*P **P 13 21 15.8 -0.4**
PBEJ Beja 75.43 52 *e*P **P 13 21 16.2 0.0**
PBEJ *e*pP **pP 13 21 19.2 -0.4**
PBEJ *i* IAmb IAmb 13 21 22.8
comp=Z,90nm,1.6s
HEH HeiHe 75.49 325 *e*P **P 13 21 15.6 -0.7**
HEH pP **pP 13 21 19.4 -0.3**
HEH PP **PP 13 24 05.3 +0.5**
HEH S **S 13 30 55.3 -1.3**
HEH pmax pmax
comp=Z,140nm,1.3s
HEH pmax pmax
comp=Z,1μm,5.5s
HEH L L
comp=Z,500nm,13.0s
HEH L L
comp=Z,1μm,16.9s
HEH L L
comp=Z,1μm,15.4s
TNS Taunus Mts 75.50 35 *e*P **P 13 21 16.9 +0.4**
comp=Z,95nm,1.2s,baz=320,slow=5.7
PCVE Castro Verde 75.58 53 *e*P **P 13 21 17.4 +0.3**
PCVE *e*pP **pP 13 21 20.2 -0.3**
PCVE *i* IAmb IAmb 13 21 22.1
comp=Z,145nm,1.7s
UBBA Unterbreizbach 75.72 34 *e*P **P 13 21 17.7 +0.1**
comp=Z,119nm,1.4s,baz=320,slow=5.7
PBAR Barrancos 75.83 52 *e*P **P 13 21 18.2 -0.3**
PBAR *e*pP **pP 13 21 21.9 0.0**
PBAR *i* IAmb IAmb 13 21 23.4
comp=Z,91nm,1.6s
PBDV Barranco-do-Ve 75.90 53 *e*P **P 13 21 18.5 -0.5**
PBDV *e*pP **pP 13 21 22.3 -0.1**
PBDV *i* IAmb IAmb 13 21 25.1
comp=Z,196nm,1.8s
RAR Rarotonga 75.92 225 LR LR 13 47 28.3
comp=Z,874nm,21.0s,baz=356,slow=30
PVAQ Vaqueiros 75.92 53 P **P 13 21 18.6 -0.4**
PVAQ Vaqueiros 75.92 53 *e*P **P 13 21 19.3 +0.2**
PVAQ *e*pP **pP 13 21 22.4 -0.1**
PVAQ *i* IAmb IAmb 13 21 24.9
comp=Z,127nm,1.7s
PVAQ *e*S **S 13 31 05.1 +3.2**
PVAQ *e*LR LR 13 48 27.2
PVAQ *i* IAMs_20 IAMs_20 14 05 11.5
comp=Z,854nm,18.0s
KLMR Klimovskoe 76.14 14 *e*P **P 13 21 19.6 -0.2**
KLMR *e* 13 21 32.4
KLMR pmax pmax
comp=Z,444nm,1.3s
ECH Echery 76.40 37 P **P 13 21 21.2 -0.4**
ECH Echery 76.40 37 P **P 13 21 21.2 -0.4**
ECH pmax pmax
comp=Z,76nm,1.4s
PAB San Pablo 76.50 49 P **P 13 21 21.8 -0.6**
PAB IAmb IAmb 13 21 26.7
comp=Z,169nm,1.8s
PAB San Pablo 76.50 49 P **P 13 21 21.8 -0.6**
PAB pmax pmax
comp=Z,169nm,1.8s
MOX Moxa 76.53 33 *e*P **P 13 21 22.7 +0.4**
comp=Z,212nm,1.5s,baz=320,slow=5.7
MOX *e*pP **pP 13 21 26.5 +0.8**
MOX *e*L L 13 54 14.2
comp=Z,2μm,20.9s
CLL Collm 76.59 32⇓*i*P **P 13 21 22.9 +0.3**
CLL *i* 13 21 26.5
CLL *e*S **S 13 31 11.0 +2.3**
CLL pmax pmax
comp=Z,94nm,1.1s
CLL MLR MLR
comp=Z,2μm,18.4s
CLL Collm 76.59 32⇓*i*P **P 13 21 22.9 +0.3**
comp=Z,94nm,1.1s
CLL *i* x x 13 21 26.5
comp=Z,108nm,1.1s
CLL *e*S **S 13 31 11.0 +2.3**
CLL *e*PPS PPS 13 31 52.0
CLL *e*SS **SS 13 36 00.0 -2.6**
CLL *e*SSS SSS 13 39 24.0
CLL *ex* x 13 40 18.0
CLL *e*PKPPKP**df** P'P'df 13 48 34.0 -9.0
CLL AMS AMS 13 54 00.0
comp=N,2μm,18.6s
CLL AMS AMS 13 54 00.0
comp=E,3μm,18.4s
CLL AMS AMS 13 54 00.0
comp=Z,2μm,18.4s
CLL Collm 76.59 32 *e*P **P 13 21 22.8 +0.2**
comp=Z,82nm,1.0s,baz=320,slow=5.7
ESDC Sonseca Array 76.64 49 P **P 13 21 22.8 -0.4**
comp=Z,16nm,0.8s,baz=306,slow=5.7,SNR=53
ESDC LR LR 13 52 28.3
comp=Z,1μm,18.1s,baz=313,slow=34
comp=Z,16nm,0.8s
GKP Gorka Klasztor 76.67 29 *e*P **P 13 21 24.8 +1.8**
SNDB Serra Nova Dou 76.75 119 *e*P **P 13 21 23.9 0.0**
SALV Santo Antonio 76.82 125 *e*P **P 13 21 24.1 -0.1**
BFO Black Forest 76.85 36 *e*P **P 13 21 23.9 -0.2**
comp=Z,79nm,1.3s,baz=320,slow=5.7
BFO *e*pP **pP 13 21 28.0 +0.4**
PLN Plauen 76.88 33 *e*P **P 13 21 24.6 +0.3**
comp=Z,27nm,1.1s,baz=320,slow=5.7
STU Stuttgart 76.91 35 P **P 13 21 24.4 0.0**
STU IAmb IAmb 13 21 30.3
comp=Z,109nm,1.3s
STU IAMs_20 IAMs_20 13 53 30.1
comp=Z,2μm,20.0s
STU Stuttgart 76.91 35 P **P 13 21 24.5 0.0**
STU pmax pmax
comp=Z,109nm,1.3s
SMTB Santa Maria do 77.05 114 *e*P **P 13 21 25.9 +0.2**
TANN Tannenbergstha 77.06 33 *e*P **P 13 21 25.8 +0.4**
comp=Z,91nm,1.2s,baz=320,slow=5.7
GRF Grafenberg Arr 77.09 34 *e*P **P 13 21 26.1 +0.6**
comp=Z,188nm,1.3s,baz=320,slow=5.7
GRF *e*L L 13 53 57.8
comp=Z,4μm,20.4s
PABE Paberze 77.09 24 P **P 13 21 25.6 +0.3**
NKC Novy Kostel 77.19 33 AMS AMS 13 57 00.0
comp=Z,5μm,17.3s
MANZ Manzenberg 77.24 33 *e*P **P 13 21 26.6 +0.3**
comp=Z,26nm,1.3s,baz=320,slow=5.7
BRG Berggiesshubel 77.30 32 *e*P **P 13 21 26.9 +0.3**
comp=Z,124nm,1.5s,baz=320,slow=5.7
HSKC Hora Svate Kat 77.30 32 *e*P **P 13 21 27.7 +1.0**
HSKC AMS AMS 13 58 20.0

comp=Z,4µm,13.2s
ROTZ Rotzenmuhle 77.45 33 *e*P **P 13 21 27.9 +0.4**
comp=Z,35nm,1.4s,baz=320,slow=5.7
ROTZ *e*pP **sP 13 21 31.8 -0.3**
AFI Afiamalu 77.47 239 LR LR 13 47 55.0
comp=Z,953nm,21.6s,baz=42,slow=30
USRK Ussuriysk Ar. 77.74 319 P **P 13 21 29.8 +0.6**
comp=Z,117nm,1.0s,baz=41,slow=4.7,SNR=99
comp=Z,117nm,1.0s
PVCC Panska Ves 77.82 32 *e*P **P 13 21 30.8 +1.3**
PVCC MLR MLR
comp=Z,2µm,12.8s
PVCC Panska Ves 77.82 32 *e*P **P 13 21 30.8 +1.3**
PVCC AMS AMS 14 00 10.0
comp=Z,2µm,12.8s
AC06 Mina Casimiro 78.02 143 P **P 13 21 31.2 +0.4**
SUW Suwalki 78.10 25 *e*P **P 13 21 31.3 +0.3**
SUW Suwalki 78.10 25 P **P 13 21 31.0 0.0**
SUW Suwalki 78.10 25 P **P 13 21 31.0 0.0**
UBR Ueberruh 78.13 36 *e*P **P 13 21 32.1 +0.7**
comp=Z,136nm,1.2s,baz=320,slow=5.7
WET Wettzell 78.21 33 *e*P **P 13 21 31.8 +0.1**
comp=Z,84nm,1.3s,baz=320,slow=5.7
PRU Pruhonice 78.23 32 *e*P **P 13 21 32.5 +0.7**
PRU MLR MLR
comp=Z,4µm,12.4s
PRU Pruhonice 78.23 32 *e*P **P 13 21 32.5 +0.7**
PRU AMS AMS 13 58 50.0
comp=Z,4µm,12.4s
KSP Ksiaz 78.25 31 *e*P **P 13 21 33.0 +1.2**
FUR Furstenfeldbru 78.27 35 *e*P **P 13 21 33.1 +0.9**
baz=320,slow=5.7
GO03 Copiapo 78.28 143 P **P 13 21 32.8 +0.5**
DAVA Damuels 78.32 36 *e*pP **P 13 21 33.2 +0.6**
comp=Z,31nm,1.1s,SNR=11
NBPS Pedro II - PI 78.34 106 *e*P **P 13 21 33.2 +0.2**
CHVC Chvalec 78.36 31 AMS AMS 13 58 20.0
comp=Z,3µm,14.3s
UPC Upice 78.41 31 *e*P **P 13 21 34.1 +1.3**
UPC MLR MLR
comp=Z,3µm,15.1s
UPC Upice 78.41 31 *e*P **P 13 21 34.1 +1.3**
UPC AMS AMS 13 58 30.0
comp=Z,3µm,15.1s
OSTC Ostas 78.44 31 *e*P **P 13 21 33.8 +0.8**
OSTC MLR MLR
comp=Z,4µm,15.1s
OSTC MLR MLR
comp=E,3µm,14.2s
OSTC Ostas 78.44 31 *e*P **P 13 21 33.8 +0.8**
OSTC AMS AMS 13 58 30.0
comp=E,4µm,15.1s
BNI Bardonecchia 78.49 39 P **P 13 21 34.4 +0.9**
BNI IAmb IAmb 13 21 41.8
comp=Z,147nm,1.5s
BNI Bardonecchia 78.49 39 P **P 13 21 34.4 +0.9**
BNI pmax pmax
comp=Z,147nm,1.5s
KHC Kasperske Hory 78.51 33*ce*P **P 13 21 34.0 +0.6**
KHC pmax pmax
comp=Z,41nm,1.1s
KHC MLR MLR
comp=Z,4µm,15.0s
KHC Kasperske Hory 78.51 33 *e*P **P 13 21 34.2 +0.8**
KHC *e*pP **sP 13 21 38.2 +0.2**
KHC AMS AMS 13 57 10.0
comp=Z,6µm,17.7s
ZVC Zvikov 78.52 32 *e*P **P 13 21 34.4 +1.0**
ZVC AMS AMS 13 58 10.0
comp=Z,4µm,16.2s
VLA Vladivostok 78.56 318 *i* P **P 13 21 34.2 +0.5**
VLA pmax pmax
comp=Z,139nm,1.1s
VLA MLR MLR
comp=Z,950nm,22.0s
RETA Reutte 78.56 36 *i* pP **P 13 21 34.5 +0.7**
comp=Z,169nm,1.8s,SNR=13
PP1B Ponte de Pedra 78.61 125 *e*P **P 13 21 34.6 +0.3**
MDJ Mudanjiang 78.62 320 P **P 13 21 34.0 -0.1**
MDJ Mudanjiang 78.62 320 P **P 13 21 33.6 -0.5**
MDJ IAmb IAmb 13 21 38.7
comp=Z,56nm,0.9s
MDJ IAMs_20 IAMs_20 14 00 04.3
comp=Z,751nm,18.0s
NBMO Morrinhos-CE 78.64 104 *e*P **P 13 21 34.6 0.0**
DPC Dobruska-Polom 78.65 31 *e*P **P 13 21 35.2 +1.0**
DPC MLR MLR
comp=Z,2µm,16.1s
DPC Dobruska-Polom 78.65 31 *e*P **P 13 21 35.2 +1.0**
DPC AMS AMS 13 58 40.0
comp=Z,2µm,16.1s
TUE Stuetta 78.69 37 P **P 13 21 34.7 0.0**
TUE IAmb IAmb 13 21 43.3
comp=Z,113nm,1.4s
DAVOX Davos/Dischmat 78.70 36 LR LR 13 56 46.2
comp=Z,2µm,18.7s,baz=302,slow=36
GEC2 GERESS Array S 78.78 33 *e*P **P 13 21 35.1 +0.1**
comp=Z,89nm,1.2s,baz=320,slow=5.7
GEC2 *e*pP **pP 13 21 39.1 +0.7**
GERES GERESS Array B 78.78 33 P **P 13 21 34.7 -0.3**
comp=Z,27nm,1.0s,baz=319,slow=3.9,SNR=86
GERES LR LR 13 56 26.5
comp=Z,3µm,18.8s,baz=322,slow=36
comp=Z,27nm,1.0s
MOTA Moosalm 78.82 35 *i* pP **P 13 21 36.2 +0.8**
comp=Z,181nm,1.3s,SNR=43
BNX BinXian 78.84 322 ⇓P **P 13 21 35.3 +0.1**
BNX S **S 13 31 35.3 +2.1**
BNX pmax pmax
comp=Z,130nm,1.2s
BNX pmax pmax
comp=Z,1µm,5.5s
BNX L L
comp=Z,660nm,17.3s
BNX L L
comp=Z,1µm,17.7s
BNX L L
comp=Z,1µm,16.1s
FETA Feichten 78.90 36 *e*pP **P 13 21 36.8 +1.0**
comp=Z,54nm,1.5s,SNR=26
R9F13 Warsaw-Wawer 78.91 27 *e*P **P 13 21 36.6 +1.1**
R9F13 *e*S S 13 31 09.4 -24
SQTA Sankt Quirin 78.97 35 *e*pP **P 13 21 37.2 +1.1**
comp=Z,142nm,1.3s,SNR=25
WATA Walderalm 79.04 35 *e*pP **P 13 21 37.3 +0.8**
comp=Z,176nm,1.4s,SNR=22
KRLC Kraliky 79.05 31 *e*P **P 13 21 37.9 +1.5**
KRLC MLR MLR
comp=Z,3µm,16.8s
KRLC Kraliky 79.05 31 *e*P **P 13 21 37.9 +1.5**
KRLC AMS AMS 13 58 50.0
comp=Z,3µm,16.8s
CKRC Cesky Krumlov 79.05 33 *e*P **P 13 21 37.1 +0.7**
CKRC MLR MLR
comp=Z,4µm,16.0s
CKRC Cesky Krumlov 79.05 33 *e*P **P 13 21 37.1 +0.7**
CKRC AMS AMS 13 57 40.0
comp=Z,4µm,16.0s
BEL Belsk 79.10 28 *e*P **P 13 21 37.6 +1.0**
WTTA Wattenberg 79.12 35 *i* pP **P 13 21 37.9 +0.9**
comp=Z,175nm,1.6s,SNR=31
MNK Minsk 79.12 22 *i* P **P 13 21 37.0 +0.4**
comp=E,55nm,1.1s
MNK *i* P **P 13 21 37.0 +0.4**
comp=N,49nm,1.1s
MNK *i* P **P 13 21 37.0 +0.4**
comp=Z,64nm,0.9s,baz=330
MNK *i* PP **PP 13 24 36.8 +1.7**
MNK *i* PPP PPP 13 26 23.0
MNK *i* S **S 13 31 38.3 +2.3**
MNK *i* SS **SS 13 36 44.9 +4.4**
MNK *i* SSS SSS 13 40 10.2
MNK *i* LQ LQ 13 50 53.9
MNK *i* LRM MLR 13 57 38.1
comp=Z,1µm,16.3s
MNK *i* LRM MLR 13 57 41.2
comp=N,1µm,19.1s
MNK *i* LRM MLR 13 57 48.2
comp=E,1µm,19.5s
MNK Minsk 79.12 22 *e*P **P 13 21 37.0 +0.4**
ARAG Araguaiana, MT 79.14 122 *e*P **P 13 21 36.9 -0.3**
SACV Santiago Islan 79.24 80 IAMs_20 IAMs_20 13 53 47.9
comp=Z,2µm,21.0s
RJOB Jochberg 79.26 34 *e*P **P 13 21 38.0 +0.4**
comp=Z,78nm,1.3s,baz=320,slow=5.7
HIA Hailar 79.44 328 P **P 13 21 38.1 -0.4**
HIA Hailar 79.44 328 IAMs_20 IAMs_20 13 59 54.4
comp=Z,1µm,20.0s
LESA Schwarzleotal 79.45 35 *i* pP **P 13 21 39.2 +0.5**
comp=Z,48nm,1.2s,SNR=28
PSTR Posyet 79.45 318*d i*P **P 13 21 39.2 +0.6**
CIT Chita 79.48 333 *e*P **P 13 21 40.6 +1.9**
CIT *e* 13 21 53.6
CIT pmax pmax
comp=Z,224nm,1.6s
STEB Steborice 79.54 30 *e*P **P 13 21 39.5 +0.5**
STEB *e*pP **pP 13 21 43.3 +0.9**
MORC Moravsky Berou 79.58 31 ⇑P **P 13 21 39.3 0.0**
MORC Moravsky Berou 79.58 31 P **P 13 21 40.3 +1.0**
MORC Moravsky Berou 79.58 31 *e*P **P 13 21 39.3 0.0**
VRAC Vranov 79.59 31 LR LR 13 56 44.7
comp=Z,1µm,18.5s,baz=321,slow=36
VRAC Vranov 79.59 31 ⇑P **P 13 21 38.7 -0.6**
VRAC Vranov 79.59 31 P **P 13 21 40.5 +1.2**
VRAC Vranov 79.59 31 *e*P **P 13 21 39.6 +0.3**
BDQN Bodoquena, MS 79.64 128 *e*P **P 13 21 39.3 -0.5**
BIOA Bad Ischl, Aus 79.65 34 *e*pP **P 13 21 40.2 +0.5**
comp=Z,147nm,1.5s,SNR=36
KRUC Moravsky 79.70 32 *e*P **P 13 21 40.0 +0.1**
MJAR Matsushiro Arr 79.70 310 P **P 13 21 40.5 +0.3**
comp=Z,70nm,1.1s,baz=30,slow=5.0,SNR=90
MJAR LR LR 13 56 36.3
comp=Z,125nm,20.4s,baz=36,slow=35
comp=Z,70nm,1.1s
MJAR Matsushiro Arr 79.70 310 P **P 13 21 40.3 +0.1**
MJAR IAmb IAmb 13 21 42.0
comp=Z,181nm,1.4s
MJAR Matsushiro Arr 79.70 310 P **P 13 21 40.3 +0.1**
MJAR pmax pmax
comp=Z,181nm,1.4s
MAJO Matsushiro 79.71 310 P **P 13 21 40.4 +0.2**
MAJO Matsushiro 79.71 310 ⇑P **P 13 21 40.6 +0.4**
CART Cartagena 79.75 49 IAMs_20 IAMs_20 13 52 47.4
comp=Z,1µm,20.0s
OKC Ostrava-Krasne 79.77 30 *e*P **P 13 21 41.1 +0.9**
OKC MLR MLR
comp=Z,2µm,15.0s
OKC Ostrava-Krasne 79.77 30 *e*P **P 13 21 41.1 +0.9**
OKC AMS AMS 13 59 30.0
comp=Z,2µm,15.0s
MOA Molln 79.79 33 *e*pP **P 13 21 40.8 +0.4**
SNR=28
KIRV Kirov 79.85 10 LR LR 13 59 24.7
comp=Z,2µm,18.6s,baz=340,slow=38
KIRV Kirov 79.85 10*ce*P **P 13 21 40.9 +0.4**
ABTA Abfaltersbach 79.90 35 *i* pP **P 13 21 41.6 +0.5**
comp=Z,54nm,1.0s,SNR=38
KBA Koelnbreinsper 80.00 34 *e*pP **P 13 21 42.4 +0.5**
comp=Z,176nm,1.4s,SNR=58
MAUC Maruska 80.02 31 *e*P **P 13 21 43.4 +1.7**
MAUC *e*pP **sP 13 21 46.6 +0.3**
CTI Castel Tesino 80.06 36 P **P 13 21 42.4 +0.4**
CTI Castel Tesino 80.06 36 P **P 13 21 42.4 +0.4**
CTI pmax pmax
comp=Z,90nm,1.2s
MURT Porto Murtinho 80.07 130 *e*P **P 13 21 41.6 -0.5**
OJC Ojcow 80.08 29 *e*P **P 13 21 42.7 +0.8**
GO04 Tololo Observa 80.23 145 IAMs_20 IAMs_20 13 46 55.8
comp=Z,652nm,21.0s
WINA Alland / Wiene 80.34 32 *e*pP **P 13 21 44.5 +1.1**
comp=Z,61nm,1.0s,SNR=31
JAVC Velka Javorina 80.37 31 *e*P **P 13 21 44.9 +1.3**
CO01 Juntas del Tor 80.38 144 P **P 13 21 44.1 +0.1**
CONA Conrad Observa 80.39 33 *e*pP **P 13 21 44.6 +0.8**
comp=Z,38nm,0.9s,SNR=25
MYKA Terra Mystica 80.48 35 *i* pP **P 13 21 44.3 0.0**
comp=Z,44nm,1.2s,SNR=18
MOS Moscow 80.50 17 *e*P **P 13 21 43.3 -0.8**
MOS pmax pmax
comp=Z,340nm,1.6s
MOS MLR MLR
comp=N,2µm,18.0s
MOS MLR MLR
comp=Z,2µm,18.0s
SMOL Smolenice 80.55 31 *e*P **P 13 21 45.9 +1.4**
SMOL pmax pmax
comp=Z,34nm,1.1s
TEOL Teolo 80.59 36 P **P 13 21 45.0 +0.2**
TEOL IAmb IAmb 13 21 47.0
comp=Z,112nm,1.0s
PRED Cave del Predi 80.59 35 P **P 13 21 44.5 -0.4**
MODS Modra-Piesok 80.61 32 *e*P **P 13 21 46.1 +1.3**
MODS pmax pmax
comp=Z,165nm,1.1s
MODS Modra-Piesok 80.61 32 *e*P **P 13 21 46.1 +1.3**
MD01 Midelt array s 80.74 54 P **P 13 21 45.7 -0.3**
MD31 MD31 80.74 54 P **P 13 21 45.2 -0.7**
RONA Rosalia, Austr 80.75 32 *e*pP **P 13 21 46.6 +1.0**
comp=Z,54nm,1.0s,SNR=23
C2SB Chapadao do Su 80.76 124 *e*P **P 13 21 47.3 +1.4**
ARSA Arzberg 80.79 33 P **P 13 21 46.2 +0.3**
ARSA Arzberg 80.79 33 *e*pP **P 13 21 46.3 +0.5**
comp=Z,50nm,0.9s,SNR=20
LANS Liptovska Anna 80.83 30 *e*P **P 13 21 47.6 +1.6**
LANS pmax pmax
comp=Z,26nm,1.2s
LANS Liptovska Anna 80.83 30 *e*P **P 13 21 47.6 +1.6**
CADS Cadrg 80.84 35 *i* P **P 13 21 45.8 -0.3**
OBN Obninsk 80.84 18 LR LR 13 59 12.1
comp=Z,3µm,18.6s,baz=348,slow=37
OBN Obninsk 80.84 18 ⇓P **P 13 21 45.9 0.0**
OBN Obninsk 80.84 18 P **P 13 21 45.6 -0.3**
OBN Obninsk 80.84 18*d i*P **P 13 21 46.3 +0.4**
OBN *e* 13 24 52.1
OBN *e*PPP PPP 13 26 43.1
OBN pmax pmax
comp=Z,209nm,1.1s
OBN MLR MLR
comp=Z,3µm,17.0s
JGF Kuroka 80.85 309 P **P 13 21 46.4 0.0**
MDT Midelt 80.87 54 LR LR 13 54 28.0
comp=Z,1µm,21.4s,baz=334,slow=33
NIE Niedzica 80.92 29 *e*P **P 13 21 48.0 +1.5**
OBKA Obir 80.97 34 *i* pP **P 13 21 46.9 0.0**
comp=Z,152nm,1.2s
JSG Sagara 81.00 308 P **P 13 21 48.3 +1.2**
SOKA Soboth 81.04 34 *e*pP **P 13 21 47.3 +0.1**
comp=Z,126nm,1.1s,SNR=58
VOJS Vojsko 81.05 35 *i* P **P 13 21 47.0 -0.4**
JHJ Hachijo jima 2 81.10 306 LR LR 14 02 33.0
comp=Z,124nm,18.1s,baz=60,slow=39
CN2 Changchun 81.22 322 ⇓P **P 13 21 47.8 -0.3**
CN2 *e*sP PcP 13 21 54.0 -0.4
CN2 *e*S **S 13 31 54.5 -3.9**
CN2 pmax pmax
comp=Z,50nm,1.0s
CN2 pmax pmax
comp=Z,600nm,6.0s
CN2 L L
comp=Z,400nm,15.0s
CN2 L L
comp=Z,300nm,15.0s
CN2 L L
comp=Z,300nm,16.0s
INU Inuyama 81.23 309 P **P 13 21 48.6 +0.3**
STHS Stebnicka Huta 81.27 29 *e*P **P 13 21 48.6 +0.3**
STHS pmax pmax
comp=Z,52nm,0.9s
STHS Stebnicka Huta 81.27 29 *e*P **P 13 21 48.6 +0.3**
LJU Ljubljana 81.32 34 *i* P **P 13 21 48.6 -0.1**
SDBA SAO DESIDERIO 81.41 114 *e*P **P 13 21 49.6 +0.1**
GROS Grobnik 81.41 34 *i* P **P 13 21 48.4 -0.9**
SRO Srobarova 81.47 31 *e*P **P 13 21 50.7 +1.3**
SRO pmax pmax
comp=Z,80nm,1.5s
SRO Srobarova 81.47 31 *e*P **P 13 21 50.7 +1.3**
SRO Srobarova 81.47 31 *e*P **P 13 21 50.7 +1.3**
BDFB Brasilia 81.59 119 P **P 13 21 50.3 -0.2**
comp=Z,52nm,1.1s,baz=316,slow=5.8,SNR=42
BDFB LR LR 14 00 26.1
comp=Z,865nm,21.6s,baz=317,slow=38
comp=Z,52nm,1.1s
BDFB Brasilia 81.59 119 P **P 13 21 50.9 +0.4**
BDFB IAmb IAmb 13 21 52.8
comp=Z,140nm,1.3s
BDFB Brasilia 81.59 119 P **P 13 21 50.9 +0.4**
BDFB pmax pmax
comp=Z,140nm,1.3s
KWP Kalwaria Pacla 81.61 28 *e*P **P 13 21 50.9 +0.8**
KECS Kecovo 81.76 30 *e*P **P 13 21 51.3 +0.4**
KECS pmax pmax
comp=Z,33nm,1.2s
KECS Kecovo 81.76 30 *e*P **P 13 21 51.3 +0.4**
PSZ Piszkesteto 82.00 30 ⇑P **P 13 21 52.6 +0.3**
PSZ Piszkesteto 82.00 30 ⇑P **P 13 21 52.6 +0.3**
IRK Irkutsk 82.17 338 *e*P **P 13 21 51.1 -2.0**
IRK pmax pmax
comp=Z,281nm,1.6s
CASP Castiglione de 82.19 39 P **P 13 21 52.8 -0.5**
CASP IAmb IAmb 13 21 59.7
comp=Z,85nm,1.3s
NBMA Muriti-CE 82.31 107 *e*P **P 13 21 54.6 +0.3**
NBPA Parau_RN 82.43 104 *e*P **P 13 21 55.2 +0.3**
VA03 San Esteban 82.56 146 P **P 13 21 55.1 -0.2**
AMBA Amambai (Brazi 82.58 129 *e*P **P 13 21 55.4 -0.1**
SVE Sverdlovsk 82.61 4 *e*P **P 13 21 55.3 +0.1**
SVE *e*S **S 13 32 17.6 +5.3**
SVE pmax pmax
comp=Z,128nm,1.5s
SVE MLR MLR
comp=Z,2µm,19.0s
AKASG Malin Array Be 82.84 24 P **P 13 21 56.1 -0.4**
comp=Z,14nm,0.8s,baz=324,slow=4.6,SNR=54
AKASG PKKPbc **PKKPbc 13 40 18.3 -0.6**
comp=Z,0.8nm,0.5s,baz=111,slow=1.7,SNR=8.0
AKASG PKPPKP **P'P'df 13 48 25.0 -6.7**
comp=Z,0.2nm,0.2s,baz=135,slow=1.3,SNR=9.5
AKASG LR LR 13 58 11.6
comp=Z,2µm,21.1s,baz=328,slow=35
comp=Z,14nm,0.8s
AKASG Malin Array Be 82.84 24 P **P 13 21 55.6 -0.9**
AKASG IAmb IAmb 13 22 00.8
comp=Z,90nm,1.6s
AKASG Malin Array Be 82.84 24 P **P 13 21 55.6 -0.9**
AKASG pmax pmax
comp=Z,90nm,1.6s
AKBB Malin Array Si 82.84 24 P **P 13 21 56.3 -0.2**
AKBB Malin Array Si 82.84 24*ce*P **P 13 21 56.6 +0.1**
AKBB pmax pmax
comp=Z,52nm,1.1s
AKBB MLR MLR
comp=Z,4µm,22.0s
KIEV Kiev 82.85 24 ⇓P **P 13 21 56.3 -0.2**
KIEV Kiev 82.85 24 ⇓P **P 13 21 56.3 -0.2**
TLY Talaya 82.85 339 LR LR 14 01 23.2
comp=Z,527nm,19.4s,baz=20,slow=38
TLY Talaya 82.85 339*de*P **P 13 21 57.3 +0.7**
TLY pmax pmax
comp=Z,101nm,1.0s
MORH Mrgy, Hungar 82.90 32 ⇑P **P 13 21 57.2 +0.3**
ARTI Arti 82.91 5 LR LR 14 01 24.4
comp=Z,2µm,20.9s,baz=340,slow=38
ARTI Arti 82.91 5 P **P 13 21 56.2 -0.6**
ARTI Arti 82.91 5*de*P **P 13 21 57.0 +0.2**
ARTI pmax pmax
comp=Z,135nm,1.2s
ARTI MLR MLR
comp=Z,2µm,20.0s
ITRB Iturama 83.02 123 *e*P **P 13 21 58.1 +0.3**
MT05 Renca 83.03 146 IAMs_20 IAMs_20 13 55 40.7
comp=Z,972nm,22.0s
CESX Cesi 83.14 38 P **P 13 21 57.9 -0.4**
CESX IAmb IAmb 13 22 02.3
comp=Z,57nm,1.2s
IPMB Ipameri, GO 83.15 121 *e*P **P 13 21 58.6 +0.1**
RCBR Riachuelo 83.38 103 LR LR 14 02 46.9
comp=Z,110nm,18.6s,baz=314,slow=38
RCBR Riachuelo 83.38 103 IAMs_20 IAMs_20 13 53 53.7
comp=Z,1µm,21.0s
RCBR Riachuelo 83.38 103 *e*P **P 13 21 58.2 -1.7**
BLY Banja Luka 83.49 34 ⇓P **P 13 21 58.9 -1.1**
MOY Mondy 83.58 340 *e*P **P 13 22 00.8 +0.3**
MOY pmax pmax
comp=Z,150nm,2.3s
BO04 La Punta 83.59 146 P **P 13 22 00.1 -0.3**
BO04 IAmb IAmb 13 22 01.6
comp=Z,90nm,1.6s
SNY Shenyang 83.61 322 ⇓P **P 13 22 01.3 +0.6**
SNY PP **PP 13 25 11.4 -1.1**
SNY S **S 13 32 27.3 +4.4**
SNY pmax pmax
comp=Z,210nm,1.3s
SNY L L
comp=Z,500nm,16.3s
SNY L L
comp=Z,800nm,18.7s
SNY L L
comp=Z,530nm,19.4s
JCJ Chichijima 83.66 300 P **P 13 22 00.8 -0.4**
comp=Z,174nm,1.1s,baz=333,slow=6.8,SNR=4.5
JCJ LR LR 13 53 00.2
comp=Z,448nm,21.3s,baz=48,slow=31
comp=Z,174nm,1.1s
JCJ Chichijima 83.66 300 P **P 13 22 01.3 +0.1**
JANB Januaria 83.67 116 *e*P **P 13 22 01.3 0.0**
LPSR Galich'ya Gora 83.70 17 *e*P **P 13 22 00.9 0.0**
LPSR pmax pmax
comp=Z,199nm,1.1s
BO01 Tunca 83.74 147 P **P 13 22 01.0 -0.1**
CPUP Villa Florida 83.86 133 P **P 13 22 01.5 -0.5**
comp=Z,30nm,0.9s,baz=331,slow=6.2,SNR=65
CPUP LR LR 14 02 17.6
comp=Z,283nm,21.4s,baz=338,slow=38
comp=Z,30nm,0.9s
CPUP Villa Florida 83.86 133 P **P 13 22 01.8 -0.1**
CPUP IAmb IAmb 13 22 03.4
comp=Z,45nm,1.0s
CPUP Villa Florida 83.86 133 P **P 13 22 01.8 -0.1**
CPUP pmax pmax
comp=Z,45nm,1.0s
TRCB Terra Rica 83.90 127 P **P 13 22 02.1 -0.2**
TRCB Terra Rica 83.90 127 *e*P **P 13 22 02.2 -0.1**
VSL Villasalto 83.97 42 IAMs_20 IAMs_20 13 57 56.4
comp=Z,952nm,20.0s
DRGR 84.00 29 ⇓P **P 13 22 02.9 +0.2**
DRGR 84.00 29 ⇓P **P 13 22 02.9 +0.2**
ZAK Zakamensk 84.12 338 *e*P **P 13 22 02.6 -0.7**
ZAK pmax pmax
comp=Z,83nm,1.6s
BUR08 Bucovina Ar. S 84.18 27 P **P 13 22 03.3 -0.3**
JMN Monobe 84.20 310 P **P 13 22 05.1 +1.2**
JMN Monobe 84.20 310 P **P 13 22 04.0 +0.1**
BURAR Bucovina Array 84.21 27 ⇑P **P 13 22 04.2 +0.4**
BURAR Bucovina Array 84.21 27 P **P 13 22 04.0 +0.3**
BURAR IAmb IAmb 13 22 10.4
comp=Z,46nm,0.9s
BURAR Bucovina Array 84.21 27 P **P 13 22 04.9 +1.1**
NBPV Pedro Velho 84.22 103 *e*P **P 13 22 04.2 0.0**
MARR Marisel-Cluj 84.25 29 ⇓P **P 13 22 04.1 +0.1**
BZS Buzias 84.57 31 ⇑P **P 13 22 05.4 -0.1**
BZS Buzias 84.57 31 ⇑P **P 13 22 05.4 -0.1**
ZAA0 Zalesovo Array 84.58 350 P **P 13 22 04.4 -1.0**
ZAA0 IAmb IAmb 13 22 09.5
comp=Z,96nm,1.1s
ZALV Zalesovo Beam 84.58 350 P **P 13 22 04.8 -0.6**
comp=Z,37nm,0.9s,baz=20,slow=4.7,SNR=141
ZALV LR LR 14 06 08.6
comp=Z,750nm,18.2s,baz=352,slow=40
comp=Z,37nm,0.9s
ZALV Zalesovo Beam 84.58 350 P **P 13 22 04.2 -1.2**
VORR Voronezh 84.63 17 *e*P **P 13 22 06.5 +0.8**
VORR pmax pmax
comp=Z,118nm,0.7s
PMNB Patos De Minas 84.71 120 *e*P **P 13 22 06.7 +0.1**
KSRS Korea Array 84.78 316 P **P 13 22 07.6 +0.9**
comp=Z,53nm,1.0s,baz=52,slow=4.9,SNR=93
comp=Z,53nm,1.0s
KSAR Wonju Array Be 84.81 316 P **P 13 22 06.9 +0.1**
KSAR Wonju Array Be 84.81 316 P **P 13 22 06.9 +0.1**
SORM Soroca 84.82 25 ⇑P **P 13 22 06.6 -0.1**
SORM Soroca 84.82 25 ⇑P **P 13 22 06.6 -0.1**
DEV Deva 84.84 30 ⇑P **P 13 22 07.8 +0.9**
DEV Deva 84.84 30 ⇑P **P 13 22 07.8 +0.9**
DGTI Dogotuki 84.86 244 P **P 13 22 08.4 +1.2**
TAVE Taveuni 84.90 243 P **P 13 22 09.8 +2.4**
VSR Storozhevoye 85.05 18 *e*P **P 13 22 07.5 -0.3**
VSR pmax pmax
comp=Z,150nm,1.2s
GZR Gura Zlata 85.20 30 ⇑P **P 13 22 09.0 +0.2**
GZR Gura Zlata 85.20 30 ⇑P **P 13 22 09.0 +0.2**
ULN Ulaanbaatar 85.21 335 P **P 13 22 08.8 -0.1**
ULN IAmb IAmb 13 22 10.8
comp=Z,155nm,1.8s
ULN Ulaanbaatar 85.21 335 P **P 13 22 08.8 -0.1**
ULN pmax pmax
comp=Z,155nm,1.8s

ULN MLR MLR
comp=Z,2µm,18.0s
ULN Ulaanbaatar 85.21 335 P **P** **13 22 08.4 -0.5**
comp=Z,164nm,1.6s
XLT XiLinHaoTe 85.27 327 *e*P **P** **13 22 09.3 +0.1**
XLT pP pP 13 22 12.8 +0.2
XLT PP **PP** **13 25 28.0 +2.0**
XLT S **S** **13 32 36.5 -3.1**
XLT pmax pmax
comp=Z,71nm,1.3s
XLT L L
comp=Z,2µm,18.3s
XLT L L
comp=Z,730nm,20.8s
MDVR Moldovita 85.30 31 ⇑P **P** **13 22 09.6 +0.3**
KNGR Kungurtug, Tuv 85.42 342 *i* P **P** **13 22 10.6 +0.7**
KNGR pmax pmax
comp=Z,67nm,1.1s
INCN Inchon 85.43 317 P **P** **13 22 10.6 +0.6**
SONM Songino Array 85.45 335 P **P** **13 22 10.6 +0.6**
comp=Z,26nm,0.8s,baz=29,slow=4.3,SNR=131
SONM PKKPbc **PKKPbc** **13 40 12.3 -0.8**
comp=Z,0.4nm,0.5s,baz=228,slow=1.8,SNR=4.6
SONM PKPPKP P'P'df 13 48 16.4 -11
comp=Z,0.5nm,0.8s,baz=224,slow=4.1,SNR=3.9
SONM LR LR 14 04 29.7
comp=Z,1µm,18.1s,baz=26,slow=39
comp=Z,26nm,0.8s
SONM Songino Array 85.45 335 P **P** **13 22 09.6 -0.4**
SONM IAmb IAmb 13 22 15.3
comp=Z,47nm,0.9s
SONM Songino Array 85.45 335 P **P** **13 22 09.6 -0.4**
SONM pmax pmax
comp=Z,47nm,0.9s
UPM Unac-Piva 85.47 34 ⇓*i* P **P** **13 22 09.7 -0.6**
HERR Herculane 85.49 31 ⇑P **P** **13 22 10.1 -0.1**
LOT Lotru 85.53 29 ⇓P **P** **13 22 09.9 -0.6**
BRY Bratogost 85.56 34 ⇓*i* P **P** **13 22 10.1 -0.6**
BELG Belogornoye 85.59 12 LR LR 14 01 03.0
comp=Z,2µm,19.1s,baz=312,slow=36
BELG Belogornoye 85.59 12*d i* P **P** **13 22 10.5 +0.1**
BELG pmax pmax
comp=Z,45nm,1.0s
VRH Novokhopyorsk 85.62 16 *e*P **P** **13 22 10.6 0.0**
VRH pmax pmax
comp=Z,130nm,1.0s
TESR Tescani 85.66 27 ⇑P **P** **13 22 09.9 -1.0**
DOPR Dopca 85.68 28 ⇓P **P** **13 22 11.0 -0.1**
BOSR Bodos 85.69 28 ⇑P **P** **13 22 11.0 -0.1**
OZUR 85.71 28 ⇑P **P** **13 22 11.1 -0.2**
ONER Baraj Valea Uz 85.72 27 ⇓P **P** **13 22 11.4 +0.1**
TURR Turia 85.83 28 ⇑P **P** **13 22 11.4 -0.5**
NKME Niksic 85.84 34 ⇓*i* P **P** **13 22 11.1 -0.9**
TJN Taejon 85.88 316 P **P** **13 22 12.9 +0.7**
TJN Taejon 85.88 316 P **P** **13 22 12.6 +0.4**
TJN Taejon 85.88 316 P **P** **13 22 12.6 +0.4**
TJN pmax pmax
comp=Z,337nm,1.2s
ARR Arges 85.92 29 ⇓P **P** **13 22 12.4 +0.1**
VASR Vaslui 85.94 26 ⇓P **P** **13 22 12.7 +0.4**
CEME Cevo 86.01 34 ⇓*i* P **P** **13 22 12.3 -0.5**
KOME Kolasin 86.01 33 ⇓*i* P **P** **13 22 12.3 -0.6**
VOIR 86.01 29 ⇓P **P** **13 22 12.7 -0.1**
VOIR 86.01 29 ⇓P **P** **13 22 12.7 -0.1**
COVR Voineasa-Covas 86.08 28 ⇑P **P** **13 22 13.9 +0.8**
IVA Berane 86.15 33 ⇓*i* P **P** **13 22 12.4 -1.2**
JTU Tsushima 86.16 313 P **P** **13 22 14.2 +0.6**
PLOR Plostina 86.23 28 ⇓P **P** **13 22 14.5 +0.7**
PLOR Plostina 86.23 28 ⇓P **P** **13 22 14.5 +0.7**
VRI Vrincioaia 86.25 27 ⇑P **P** **13 22 13.8 -0.1**
VRI Vrincioaia 86.25 27 ⇑P **P** **13 22 13.8 -0.1**
PDG Podgorica 86.25 34 ⇑P **P** **13 22 13.9 -0.1**
PDG Podgorica 86.25 34 ⇓*i* P **P** **13 22 13.8 -0.1**
MLR Muntele Rosu 86.29 28 LR LR 14 02 43.2
comp=Z,3µm,18.1s,baz=324,slow=37
MLR Muntele Rosu 86.29 28 ⇓P **P** **13 22 14.0 -0.3**
MLR Muntele Rosu 86.29 28 P **P** **13 22 13.8 -0.5**
MLR IAmb IAmb 13 22 21.9
comp=Z,113nm,1.7s
MLR Muntele Rosu 86.29 28 ⇓P **P** **13 22 14.0 -0.3**
JNU Nakatsue 86.37 312 P **P** **13 22 14.8 0.0**
comp=Z,33nm,1.0s,baz=52,slow=5.6,SNR=14
JNU LR LR 14 02 57.8
comp=Z,220nm,18.4s,baz=44,slow=37
comp=Z,33nm,1.0s
DRME Dracevica, Mon 86.42 34 ⇓*i* P **P** **13 22 14.4 -0.4**
BORK Borovoye 86.58 359 P **P** **13 22 15.4 0.0**
BORK Borovoye 86.58 359 IAMs_20 IAMs_20 14 04 25.5
comp=Z,1µm,20.0s
BORK Borovoye 86.58 359*d i* P **P** **13 22 15.6 +0.3**
BORK pmax pmax
comp=Z,99nm,0.9s
BORK MLR MLR
comp=Z,2µm,24.0s
BVAR Borovoye Array 86.60 359 P **P** **13 22 15.8 +0.3**
comp=Z,53nm,0.7s,baz=348,slow=3.6,SNR=225
BVAR PKKPbc **PKKPbc** **13 40 09.3 -1.1**
comp=Z,4.3nm,1.0s,baz=188,slow=4.2,SNR=9.8
BVAR PKPPKP P'P'df 13 48 15.7 -9.2
comp=Z,1.7nm,1.0s,baz=174,slow=4.5,SNR=5.6
BVAR LR LR 14 04 36.9
comp=Z,875nm,18.9s,baz=342,slow=38
comp=Z,53nm,0.7s
ULC Ulcinj 86.62 34 ⇓*i* P **P** **13 22 15.2 -0.6**
CUC Castrocucco 86.70 37 IAMs_20 IAMs_20 14 00 03.2
comp=Z,1µm,20.0s
KEST Kesra 86.81 44 P **P** **13 22 16.5 -0.4**
comp=Z,24nm,0.9s,baz=344,slow=3.2,SNR=13
KEST LR LR 14 00 33.9
comp=Z,622nm,18.2s,baz=357,slow=35
comp=Z,24nm,0.9s
KEST Kesra 86.81 44 P **P** **13 22 17.1 +0.2**
KEST IAmb IAmb 13 22 22.6
comp=Z,114nm,1.3s
DL2 Dalian 86.82 321 P **P** **13 22 17.3 +0.5**
DL2 S **S** **13 32 59.3 +4.5**
DL2 pmax pmax
comp=Z,140nm,1.1s
DL2 pmax pmax
comp=Z,590nm,5.1s
DL2 L L
comp=Z,810nm,22.8s
DL2 L L
comp=Z,1µm,22.7s
DL2 L L
comp=Z,940nm,25.7s
SCTR Scanteiesti 86.85 27 ⇑P **P** **13 22 16.8 0.0**
MSVF Nonsavu 87.00 244 LR LR 13 54 05.9
comp=Z,1µm,19.3s,baz=36,slow=31
CFR Carcaliu 87.33 27 ⇑P **P** **13 22 19.3 +0.2**
CFR Carcaliu 87.33 27 ⇑P **P** **13 22 19.3 +0.2**
ITAB Concordia 87.53 130 P **P** **13 22 19.9 -0.3**
VAO Valinhos 87.57 123 P **P** **13 22 20.6 0.0**
VAO IAmb IAmb 13 22 27.5
comp=Z,66nm,1.2s
SPB Sao Paulo 87.70 124 IAMs_20 IAMs_20 14 03 55.8
comp=Z,984nm,19.0s
SPB Sao Paulo 87.70 124 *e*P **P** **13 22 21.4 +0.3**
TPGR Topolog 87.71 27 ⇑P **P** **13 22 20.9 -0.1**
TIP Timpagrande 87.78 37 ⇑P P 13 21 54.7 -27
JSU Suzuyama 87.80 311 P **P** **13 22 21.7 0.0**
JSU Suzuyama 87.80 311 P **P** **13 22 21.4 -0.3**
VAE Valguarnera 88.03 40 LR LR 14 00 07.3
comp=Z,1µm,19.7s,baz=310,slow=34
TIRR Tirgusor 88.06 27 ⇑P **P** **13 22 21.9 -0.7**
TIRR Tirgusor 88.06 27 IAMs_20 IAMs_20 14 01 34.6
comp=Z,1µm,20.0s
TIRR Tirgusor 88.06 27 ⇑P **P** **13 22 21.9 -0.7**
GO06 Curarrehue 88.08 150 IAMs_20 IAMs_20 13 58 01.6
comp=Z,1µm,19.0s
DGZ Jazzator, Alta 88.33 347*d i* P **P** **13 22 24.7 +0.6**
DGZ pmax pmax
comp=Z,93nm,1.1s
DGZ MLR MLR
comp=Z,1µm,17.0s
BJI2 Beijing 88.42 325 P **P** **13 22 24.1 -0.4**
BJI2 sP **pP** **13 22 27.9 0.0**
BJI2 PP **PP** **13 25 47.5 -3.9**
BJI2 S **S** **13 33 11.1 +1.0**
BJI2 SS **SS** **13 39 01.5 +3.0**
BJI2 pmax pmax
comp=Z,15nm,1.4s
BJI2 L L
comp=Z,370nm,15.6s
BJI2 L L
comp=Z,450nm,15.4s
BJI2 L L
comp=Z,310nm,18.0s
BJT Baijiatuan 88.42 325 P **P** **13 22 24.5 0.0**
BJT Baijiatuan 88.42 325 P **P** **13 22 24.2 -0.3**
BJT IAmb IAmb 13 22 29.1
comp=Z,101nm,1.7s
BJT Baijiatuan 88.42 325 IAMs_20 IAMs_20 13 59 07.4
comp=Z,515nm,21.0s
BJT Baijiatuan 88.42 325 P **P** **13 22 24.2 -0.3**
BJT pmax pmax
comp=Z,101nm,1.7s
LR05 Currie 88.44 150 P **P** **13 22 24.2 0.0**
KURK Kurchatov 88.45 353 P **P** **13 22 23.8 -0.7**
KURK Kurchatov 88.45 353 IAMs_20 IAMs_20 14 09 37.2
comp=Z,1µm,19.0s
KURK Kurchatov 88.45 353*de*P **P** **13 22 24.3 -0.1**
KURK pmax pmax
comp=Z,167nm,1.2s
KURBB Kurchatov Arra 88.55 353 P **P** **13 22 25.0 +0.1**
comp=Z,80nm,1.0s,baz=6.9,slow=4.6,SNR=220
KURBB PP **PP** **13 25 52.6 +0.6**
comp=Z,1.8nm,0.2s,baz=25,slow=7.2,SNR=4.0
KURBB PKPPKP **P'P'df** **13 48 13.9 -7.2**
comp=Z,0.7nm,0.3s,baz=208,slow=1.8,SNR=4.1
KURBB LR LR 14 06 54.4
comp=Z,648nm,19.3s,baz=340,slow=39
comp=Z,80nm,1.0s
AKTO Aktyubinsk 88.80 6 LR LR 14 05 22.8
comp=Z,2µm,20.2s,baz=12,slow=38
WDD Wied Dalam 89.38 41 IAMs_20 IAMs_20 14 00 58.5
comp=Z,1µm,19.0s
PLCA Paso Flores 89.43 150 P **P** **13 22 29.2 +0.3**
comp=Z,28nm,1.2s,baz=333,slow=4.6,SNR=24
PLCA LR LR 13 58 31.7
comp=Z,720nm,18.3s,baz=350,slow=33
comp=Z,28nm,1.2s
SIM Simferopol' 89.47 23 *e*P **P** **13 22 28.8 -0.5**
SIM pmax pmax
comp=Z,47nm,1.3s
BRZS Berezniki 89.57 357 *e*P **P** **13 22 30.0 +0.3**
BRZS *e*S **SKSac** **13 32 59.9 -0.3**
BRZS Berezniki 89.57 357 *e*P **P** **13 22 30.1 +0.3**
BRZS *e*S **SKSac** **13 32 60.0 -0.3**
HHC Hu-ho-hao-te 89.65 328 ⇓*i* P **P** **13 22 30.1 -0.3**
HHC pP pP 13 22 34.0 +0.2
HHC PP **PP** **13 25 59.8 -1.5**
HHC S **S** **13 33 18.3 -3.6**
HHC sS ScS 13 33 24.0 -2.4
HHC pmax pmax
comp=Z,29nm,1.3s
HHC pmax pmax
comp=Z,210nm,4.7s
HHC L L
comp=Z,1µm,18.0s
HHC L L
comp=Z,1µm,16.1s
HHC L L
comp=Z,710nm,19.9s
RDO Rodhopi 89.87 31 P **P** **13 22 31.0 -0.2**
RDO IAmb IAmb 13 22 35.6
comp=Z,54nm,1.3s
AB31 Akbulak array 90.12 5 P **P** **13 22 32.7 +0.5**
AB31 IAmb IAmb 13 22 37.5
comp=Z,132nm,1.4s
AB31 Akbulak array 90.12 5 *i* P **P** **13 22 32.5 +0.3**
AB31 pmax pmax
comp=Z,129nm,1.5s
ABKAR Akbulak array 90.12 5 P **P** **13 22 32.6 +0.4**
BTO2 Baotou 90.40 329 *e*P **P** **13 22 33.6 -0.3**
BTO2 PP **PP** **13 26 08.4 +1.2**
BTO2 S **S** **13 33 29.4 +0.5**
BTO2 pmax pmax
comp=Z,41nm,0.9s
BTO2 pmax pmax
comp=Z,1µm,5.2s
BTO2 L L
comp=Z,2µm,17.0s
BTO2 L L
comp=Z,3µm,14.7s
BTO2 L L
comp=Z,1µm,14.3s
ERBR Yeremizino-Bor 90.50 19 *e*P **P** **13 22 34.0 -0.1**
ERBR pmax pmax
comp=Z,72nm,1.0s
ANN Anapa 90.56 21 *e*P **P** **13 22 34.2 -0.1**
ANN pmax pmax
comp=Z,95nm,1.3s
GUMO Guam 90.88 289 LR LR 13 57 31.1
comp=Z,210nm,19.3s,baz=62,slow=32
ZSN Zaisan 90.92 349 *e*P **P** **13 22 36.2 +0.1**
ZSN pmax pmax
comp=Z,37nm,1.3s
ZSN Zaisan 90.92 349 *e*P **P** **13 22 36.2 +0.1**
comp=Z,37nm,1.3s
TIA Tai'an 91.11 322 P **P** **13 22 37.5 +0.3**
TIA PP **PP** **13 26 15.9 +3.0**
TIA S **S** **13 33 38.0 +2.7**
TIA pmax pmax
comp=Z,56nm,1.0s
TIA pmax pmax
comp=Z,620nm,4.1s
TIA L L
comp=Z,480nm,14.4s
TIA L L
comp=Z,1µm,15.8s
TIA L L
comp=Z,660nm,15.5s
HNS HongShan 91.23 325 ⇓P **P** **13 22 38.5 +0.9**
HNS S **S** **13 33 39.0 +2.8**
HNS SS **SS** **13 39 39.8 +0.6**
HNS pmax pmax
comp=Z,160nm,1.3s
HNS L L
comp=Z,630nm,16.3s
HNS L L
comp=Z,970nm,14.9s
HNS L L
comp=Z,1µm,18.6s
JMZ Minamidaito 2 91.51 306 P **P** **13 22 39.9 +0.8**
JMZ Minamidaito 2 91.51 306 P **P** **13 22 39.2 0.0**
GOF Gofitskoye 91.72 17*ce*P **P** **13 22 40.8 +1.0**
AY01 Puyuhuapi 91.87 153 P **P** **13 22 40.1 0.0**
AY01 IAmb IAmb 13 22 41.3
comp=Z,63nm,1.8s
MK31 Makanchi Array 91.92 350 *i* P **P** **13 22 39.9 -0.8**
MK31 pmax pmax
comp=Z,58nm,1.0s
MKAR Makanchi Array 91.92 350 P **P** **13 22 40.2 -0.5**
comp=Z,28nm,0.9s,baz=5.0,slow=4.1,SNR=162
MKAR PKKPbc **PKKPbc** **13 39 56.4 -0.8**
comp=Z,1.5nm,0.9s,baz=199,slow=2.6,SNR=8.7
MKAR PKPPKP **P'P'df** **13 48 07.1 -7.6**
comp=Z,2.3nm,1.2s,baz=132,slow=1.8,SNR=6.7
MKAR LR LR 14 09 12.1
comp=Z,890nm,18.4s,baz=350,slow=39
comp=Z,28nm,0.9s
MKAR Makanchi Array 91.92 350 P **P** **13 22 39.3 -1.4**
TIY Taiyuan 91.95 326 P **P** **13 22 39.4 -1.7**
TIY PP **PP** **13 26 23.3 +3.8**
TIY S **S** **13 33 41.3 -1.7**
TIY pmax pmax
comp=Z,540nm,5.4s
TIY L L
comp=Z,1µm,16.8s
TIY L L
comp=Z,1µm,15.9s
TIY L L
comp=Z,840nm,12.5s
MAKZ Makanchi 91.95 350 P **P** **13 22 40.1 -0.8**
MAKZ IAMs_20 IAMs_20 14 06 25.7
comp=Z,896nm,20.0s
MAKZ Makanchi 91.95 350 P **P** **13 22 40.1 -0.8**
MAKZ pmax pmax
comp=Z,191nm,1.7s
MAKZ MLR MLR
comp=Z,900nm,20.0s
SOC Sochi 92.30 20 *e*P **P** **13 22 42.9 +0.4**
SOC *e* 13 26 23.4
SOC *e*PPP PPP 13 28 23.0
SOC *e*S **SKSac** **13 33 14.4 -1.6**
SOC pmax pmax
comp=Z,49nm,1.2s
SOC MLR MLR
comp=Z,2µm,16.0s
JOW Kunigami 92.54 309 P **P** **13 22 44.0 +0.2**
comp=Z,107nm,1.1s,baz=105,slow=3.1,SNR=6.0
JOW LR LR 13 59 15.9
comp=Z,164nm,21.7s,baz=202,slow=32
comp=Z,107nm,1.1s
JOW Kunigami 92.54 309 P **P** **13 22 45.5 +1.6**
JOW Kunigami 92.54 309 P **P** **13 22 44.1 +0.2**
KIV Kislovodsk 92.68 18 *e*P **P** **13 22 45.0 +0.6**
KIV *e* 13 26 26.2
KIV *e* 13 33 18.2
KIV pmax pmax
comp=Z,33nm,1.0s
KIV pmax pmax
comp=Z,145nm,3.8s
KIV MLR MLR
comp=Z,1µm,20.0s
SHA1 Shidzhatmaz 92.88 18*ce*P **P** **13 22 44.2 -1.3**
KBZ Khabaz 92.95 18 P **P** **13 22 45.6 +0.2**
comp=Z,32nm,1.0s,baz=268,slow=3.0,SNR=34
KBZ PKKPbc **PKKPbc** **13 39 54.5 0.0**
comp=Z,4.7nm,1.0s,baz=220,slow=2.6,SNR=7.0
KBZ LR LR 14 06 50.0
comp=Z,1µm,18.4s,baz=332,slow=37
comp=Z,32nm,1.0s
KBZ Khabaz 92.95 18*ce*P **P** **13 22 46.3 +0.9**
KBZ pmax pmax
comp=Z,41nm,1.0s
KBZ MLR MLR
comp=Z,1µm,13.0s
SSE Sheshan 93.21 316 P **P** **13 22 45.9 -1.0**
SSE S **S** **13 33 53.5 -0.7**
SSE pmax pmax
comp=Z,19nm,1.3s
SSE pmax pmax
comp=Z,260nm,5.5s
SSE L L
comp=Z,200nm,17.7s
SSE L L
comp=Z,330nm,17.4s
NCK Nalchik 93.33 17 *i* P **P** **13 22 47.9 +0.6**
NCK pmax pmax
comp=Z,25nm,1.3s
NEUR Neytrino 93.34 18 *i* P **P** **13 22 48.0 +0.4**
NEUR pmax pmax
comp=Z,26nm,1.4s
NJ2 Nanjing 93.65 319 *e*P **P** **13 22 48.8 -0.1**
NJ2 pP **sP** **13 22 53.3 -0.2**
NJ2 pmax pmax
comp=Z,43nm,0.6s
WMQ Urumqi 93.97 346 *e*P **P** **13 22 51.1 +0.8**
WMQ PP **PP** **13 26 35.6 +0.5**
WMQ pmax pmax
comp=Z,22nm,1.3s
WMQ L L
comp=Z,810nm,17.7s
WMQ L L
comp=Z,1µm,17.7s
WMQ L L
comp=Z,570nm,21.7s
TATA Tatamba Isabel 94.00 262 P **P** **13 22 51.7 +1.0**
BR131 Keskin Array S 94.04 26 *i* P **P** **13 22 51.2 +0.4**
BRTR Keskin Array B 94.04 26 P **P** **13 22 50.0 -0.7**
comp=Z,1.8nm,0.9s,baz=305,slow=2.6,SNR=5.7
BRTR PP **PP** **13 26 30.3 -5.6**
comp=Z,1.1nm,0.8s,baz=352,slow=7.5,SNR=3.7
BRTR PKKPbc **PKKPbc** **13 39 51.1 -0.7**
comp=Z,3.1nm,0.9s,baz=156,slow=6.6,SNR=11
BRTR LR LR 14 07 34.4
comp=Z,792nm,18.4s,baz=326,slow=37
BRTR Keskin Array B 94.04 26 P **P** **13 22 48.5 -2.3**
TDK Taldyqorghan 94.14 353 *e*P **P** **13 22 51.0 +0.1**
TDK Taldyqorghan 94.14 353 *e*P **P** **13 22 51.1 +0.1**
TDK LR LR 14 06 55.7
comp=Z,869nm,16.5s
TAM Tamanrasset 94.27 55 P **P** **13 22 51.3 -0.8**
TAM Tamanrasset 94.27 55 P **P** **13 22 51.3 -0.8**
TAM MLR MLR
comp=Z,2µm,20.0s
BTLS Baital 94.44 356 *e*P **P** **13 22 52.5 +0.2**
BTLS Baital 94.44 356 *e*P **P** **13 22 52.5 +0.2**
SAVO Savo Central 94.48 262 P **P** **13 22 54.0 +1.1**
HNR Honiara 94.56 262 P **P** **13 22 53.8 +0.5**
comp=Z,1.2nm,0.9s,baz=297,slow=3.1,SNR=5.5
HNR LR LR 14 00 40.6
comp=Z,16nm,19.6s,baz=148,slow=32
LYN LuoYang 94.60 325 P **P** **13 22 53.8 +0.5**
LYN PP **PP** **13 26 41.0 +0.7**
LYN S **S** **13 34 07.1 +0.8**
LYN pmax pmax
comp=Z,38nm,0.7s
LYN pmax pmax
comp=Z,680nm,5.3s
LYN L L
comp=Z,860nm,17.5s
LYN L L
comp=Z,1µm,15.1s
LYN L L
comp=Z,1µm,17.3s
MAK Makhachkala 94.67 15*c i* P P 13 22 46.4 -7.0
MAK *e* 13 26 40.1
MAK *e*SS SS 13 40 24.4 -3.5
MAK *e*SSS SSS 13 44 09.8
MAK pmax pmax
comp=Z,160nm,1.4s
MAK MLR MLR
comp=Z,1µm,16.0s
GTA2 Gaotai 95.05 336 *e*P **P** **13 22 55.4 0.0**
GTA2 pP pP 13 22 59.4 +0.6
GTA2 pmax pmax
comp=Z,11nm,1.2s
GTA2 pmax pmax
comp=Z,340nm,6.7s
GTA2 L L
comp=Z,740nm,23.8s
GTA2 L L
comp=Z,1µm,23.2s
GTA2 L L
comp=Z,1µm,20.6s
KPKS Kokpek 95.63 352 *e*P **P** **13 22 57.9 0.0**
KPKS Kokpek 95.63 352 *e*P **P** **13 22 58.0 0.0**
SHLS Shalkode 95.85 352 *e*P **P** **13 22 58.7 -0.3**
SHLS pmax pmax
comp=Z,32nm,1.1s
SHLS Shalkode 95.85 352 *e*P **P** **13 22 58.7 -0.3**
comp=Z,32nm,1.1s
UZB Uzynbulak 95.91 352 *e*P **P** **13 22 59.2 -0.1**
UZB Uzynbulak 95.91 352 *e*P **P** **13 22 59.2 -0.1**
SGDS Sogindy 95.98 355 *e*P **P** **13 22 59.6 +0.1**
AAA Alma-Ata 96.05 353 *e*P **P** **13 22 59.7 -0.1**
AAA pmax pmax
comp=Z,47nm,1.1s
AAA Alma-Ata 96.05 353 *e*P **P** **13 22 59.8 -0.1**
comp=Z,47nm,1.1s
AAA LR LR 14 07 51.7
SATY Saty 96.06 352 *e*P **P** **13 22 59.8 -0.1**
SATY pmax pmax
comp=Z,39nm,1.7s
SATY Saty 96.06 352 *e*P **P** **13 22 59.9 0.0**
comp=Z,39nm,1.7s
ARPR Arapgir-MALATY 96.08 23 IAMs_20 IAMs_20 14 10 30.8
comp=Z,986nm,19.0s
MDOK Medeo 96.08 353 *e*P **P** **13 23 00.0 -0.1**
MDOK Medeo 96.08 353 *e*P **P** **13 23 00.0 -0.1**
MDOK LR LR 14 08 08.2
USP Ospenovka 96.18 355 P **P** **13 23 01.1 +0.7**
SNR=45
TNSS Tian-Shan 96.22 353 *e*P **P** **13 23 00.5 -0.5**
TNSS Tian-Shan 96.22 353 *e*P **P** **13 23 00.5 -0.5**
CHMS Chumysh 96.43 355 P **P** **13 23 02.4 +0.9**
SNR=10
TKM2 Tokmak 2 96.44 354 P **P** **13 23 02.2 +0.4**
SNR=38
KKAR Karatay Array 96.52 358 P **P** **13 23 00.4 -1.4**
KKAR Karatay Array 96.52 358 P **P** **13 23 00.4 -1.4**
XAN Xi'an 96.56 327 ⇓P **P** **13 23 02.0 -0.3**
XAN pP pP 13 23 05.9 +0.2
XAN PP **PP** **13 26 52.8 -2.7**
XAN S **S** **13 34 19.8 -3.7**
XAN SS **SS** **13 40 57.8 +2.3**
XAN pmax pmax
comp=Z,36nm,1.0s
XAN pmax pmax
comp=Z,540nm,5.3s
XAN L L
comp=Z,2µm,20.6s
XAN L L

comp=Z,2µm,15.8s
XAN L L
comp=Z,2µm,16.0s
BRLS Borolday 96.61 359 *e*P **P 13 23 03.4 +1.1**
BRLS Borolday 96.61 359 *e*P **P 13 23 03.5 +1.1**
DZA Taraz 96.70 357 *e*P **P 13 23 02.7 0.0**
DZA Taraz 96.70 357 *e*P **P 13 23 02.7 0.0**
LZH Lanzhou 96.75 331 *e*P **P 13 23 04.4 +1.2**
LZH pP sP 13 23 08.1 +0.2
LZH S S 13 34 15.5 -10
LZH pmax pmax
comp=Z,28nm,1.5s
LZH L L
comp=Z,960nm,17.5s
LZH L L
comp=Z,2µm,16.2s
LZH L L
comp=Z,1µm,18.1s
KBK Karagaybulak 96.75 355 P **P 13 23 04.4 +1.2**
SNR=13
GNI Garni 96.77 18 LR LR 14 07 37.7
comp=Z,1µm,19.1s,baz=342,slow=36
AAK Ala-Archa 96.80 355 LR LR 14 12 23.3
comp=Z,885nm,18.1s,baz=356,slow=39
AAK Ala-Archa 96.80 355 P **P 13 23 04.0 +0.6**
SNR=19
AAK Ala-Archa 96.80 355 P **P 13 23 03.0 -0.4**
AAK IAmb IAmb 13 23 05.4
comp=Z,33nm,1.3s
AAK Ala-Archa 96.80 355 IAMs_20 IAMs_20 14 09 03.0
comp=Z,1µm,21.0s
AAK Ala-Archa 96.80 355*c**e*P **P 13 23 04.0 +0.6**
AAK pmax pmax
comp=Z,18nm,1.1s
EKS2 Erkin-Say 96.82 356 P **P 13 23 04.6 +1.2**
SNR=22
LZDM Lanzhou Array 96.92 331 LR LR 14 08 54.2
comp=Z,1µm,21.4s,baz=355,slow=37
ULHL Ulahol 97.06 354 P Pdif 13 23 05.0 +0.3
SNR=9.3
WHN Wuhan 97.09 321 P **P 13 23 04.5 -0.1**
WHN PP **PP 13 27 02.0 +2.4**
WHN SKS **SKSac 13 33 43.5 +1.4**
WHN S **S 13 34 23.9 -4.1**
WHN pmax pmax
comp=Z,28nm,1.0s
WHN L L
comp=Z,1µm,14.6s
WHN L L
comp=Z,1µm,14.3s
WHN L L
comp=Z,2µm,13.9s
UCH Uchtor 97.21 355 P Pdif 13 23 05.9 +0.2
SNR=5.9
KRVT Keravat (AS076 97.27 271 LR LR 14 02 55.1
comp=Z,66nm,18.3s,baz=357,slow=33
CHM Chimkent 97.32 359 *e*P **P 13 23 05.4 -0.1**
CHM Chimkent 97.32 359 *e*P **P 13 23 05.4 -0.1**
CHM LR LR 14 08 44.4
comp=Z,856nm,16.9s
TARG Taragay, Kyrgy 97.44 353 P **P 13 23 05.8 -0.7**
TARG IAmb IAmb 13 23 18.7
comp=Z,55nm,1.6s
TARG Taragay, Kyrgy 97.44 353 P **P 13 23 05.8 -0.7**
TARG pmax pmax
comp=Z,55nm,1.6s
IUG Iuzhnay 97.48 358 *e*P **P 13 23 06.2 -0.2**
IUG pmax pmax
comp=Z,29nm,0.8s
IUG Iuzhnay 97.48 358 *e*P **P 13 23 06.2 -0.2**
comp=Z,29nm,0.8s
NRN Naryn 97.89 354 P **P 13 23 08.2 -0.3**
NRN IAmb IAmb 13 23 14.0
comp=Z,34nm,1.3s
NRN Naryn 97.89 354 P **P 13 23 08.2 -0.3**
NRN pmax pmax
comp=Z,34nm,1.3s
DZM Mont Dzumac 97.97 248 P Pdif 13 23 08.9 +0.2
comp=Z,14nm,1.1s,baz=286,slow=21,SNR=3.3
DZM LR LR 14 02 22.6
comp=Z,624nm,18.8s,slow=32
comp=Z,14nm,1.1s
YHNB Yeheng 98.17 312 IAMs_20 IAMs_20 14 16 19.3
comp=Z,475nm,20.0s
CSS Mathiatis 98.22 28 IAMs_20 IAMs_20 14 11 21.6
comp=Z,783nm,18.0s
DBIC Dimbokro 98.53 74 P **P 13 23 09.3 -2.0**
comp=Z,13nm,0.9s,baz=314,slow=4.2,SNR=10
DBIC LR LR 14 04 12.3
comp=Z,3µm,21.8s,baz=328,slow=33
comp=Z,13nm,0.9s
DBIC Dimbokro 98.53 74 P **P 13 23 10.2 -1.2**
DBIC IAmb IAmb 13 23 11.5
comp=Z,17nm,0.9s
DBIC Dimbokro 98.53 74 P **P 13 23 10.2 -1.2**
DBIC pmax pmax
comp=Z,17nm,1.0s
TORD Torodi Ar. Bea 98.70 64 P **P 13 23 09.8 -2.3**
comp=Z,6.9nm,1.0s,baz=293,slow=5.0,SNR=14
TORD PP **PP 13 27 11.8 -1.0**
comp=Z,5.0nm,1.1s,baz=297,slow=7.8,SNR=6.6
TORD PKKPbc **PKKPdf 13 39 40.7 -0.6**
comp=Z,3.4nm,1.0s,baz=183,slow=3.1,SNR=10
TORD LR LR 14 07 22.1
comp=Z,1µm,19.5s,baz=318,slow=35
comp=Z,6.9nm,1.0s
TORD Torodi Ar. Bea 98.70 64 P **P 13 23 09.9 -2.3**
ENH Enshi 99.56 324 P **Pdif 13 23 15.7 -0.1**
ENH Enshi 99.56 324 IAMs_20 IAMs_20 14 15 28.0
comp=Z,736nm,19.0s
GOMU GeErMu 99.56 338 P **Pdif 13 23 14.3 -1.8**
GOMU PP **PP 13 27 14.8 -3.9**
GOMU pmax pmax
comp=Z,6.0nm,1.2s
GOMU L L
comp=Z,1µm,16.5s
GOMU L L
comp=Z,530nm,18.6s
GOMU L L
comp=Z,1µm,16.3s
TPUB Ta-pu 99.66 312 IAMs_20 IAMs_20 14 02 42.0
comp=Z,448nm,19.0s
CNSH ChangSha 99.73 321 P **Pdif 13 23 15.1 -1.4**
CNSH pmax pmax
comp=Z,10.0nm,1.6s
CNSH L L
comp=Z,440nm,12.7s
CNSH L L
comp=Z,520nm,17.0s
CNSH L L
comp=Z,780nm,16.3s
KSH2 Kashi 100.20 354 P **Pdif 13 23 18.3 -0.3**
KSH2 pmax pmax
comp=Z,8.0nm,1.3s
KSH2 L L
comp=Z,1µm,18.2s
KSH2 L L
comp=Z,920nm,15.5s
KSH2 L L
comp=Z,1µm,17.9s
CHGR Chuyangaron 100.98 359 *i* P **Pdif 13 23 22.3 +0.2**
CHGR pmax pmax
comp=Z,19nm,1.0s
HKPS Hong Kong Po S 104.02 316 IAMs_20 IAMs_20 14 17 12.9
comp=Z,872nm,18.0s
PMG Port Moresby 104.23 270 IAMs_20 IAMs_20 14 04 00.0
comp=Z,685nm,20.0s
PZH PanZhiHua 106.10 329 SS SS 13 43 10.3 +2.1
PZH AMB AMB
comp=Z,210nm,8.0s
PZH LR LR
comp=N,440nm,18.0s
PZH LR LR
comp=E,970nm,18.8s
PZH LR LR
comp=Z,700nm,16.3s
LSA Lhasa 106.69 339 IAMs_20 IAMs_20 14 19 12.4
comp=Z,424nm,20.0s
QIZ Qiongzhong 108.93 318 IAMs_20 IAMs_20 14 22 55.0
comp=Z,720nm,18.0s
QIZ Qiongzhong 108.93 318 Pdif **Pdif 13 23 54.5 -3.1**
QIZ PP **PP 13 28 27.4 -1.1**
QIZ S **Sdif 13 36 03.1 -4.4**
QIZ SS **SS 13 43 44.4 -2.4**
QIZ L L
comp=Z,320nm,15.9s
QIZ L L
comp=Z,590nm,13.7s
QIZ L L
comp=Z,710nm,15.2s
SHL Shillong 110.39 337 *e*P **PKiKP 13 28 03.9 -1.2**
IMP Imphal 110.44 335 *e*P **PKiKP 13 28 03.3 -1.7**
DHUB DHUBRI 110.50 339 *e*P **PKiKP 13 28 04.4 -0.7**
SILR SILCHAR 110.84 336 *e*P **PKiKP 13 28 04.6 -1.1**
MORE Moreh 110.87 334 IAMs_20 IAMs_20 14 20 52.4
comp=Z,618nm,18.0s
KUDL Kundal 111.02 352 *e*P **PKiKP 13 28 05.3 -0.6**
FAKI Fak Fak 111.22 285 IAMs_20 IAMs_20 14 09 02.4
comp=Z,620nm,20.0s
LKN LUCKNOW 111.78 348 *e*P **PKiKP 13 28 06.8 -0.6**
AGT Agartala 112.16 337 *e*P **PKiKP 13 28 06.7 -1.5**
BELO BELONIA 112.70 337 *e*P **PKiKP 13 28 07.8 -1.4**
RAYN Ar Rayn 112.75 22 IAMs_20 IAMs_20 14 17 56.2
comp=Z,653nm,20.0s
SAIH SAIHA 112.93 335 *e*P **PKiKP 13 28 08.5 -1.4**
UOSS Minazif 113.76 12 IAMs_20 IAMs_20 14 20 09.2
comp=Z,814nm,22.0s
CHTO Chiang Mai 114.12 328 P PKPdf 13 28 12.6 +0.5
CHTO Chiang Mai 114.12 328 IAMs_20 IAMs_20 14 27 31.7
comp=Z,482nm,18.0s
CMAR Chiang Mai Arr 114.44 328 PKP **PKiKP 13 28 11.9 -0.8**
comp=Z,4.0nm,1.0s,baz=332,slow=2.0,SNR=15
CMAR PKKPbc **PKKPbc 13 38 50.1 -0.3**
comp=Z,0.3nm,0.3s,baz=232,slow=3.5,SNR=5.6
AULRC Lightning Ridg 115.62 252 P **PKiKP 13 28 15.7 +1.2**
BHPL Bhopal 115.75 350 *e*P **PKiKP 13 28 14.0 -1.2**
NRDN NARMADA NAGAR 116.30 350 *e*P **PKiKP 13 28 15.0 -1.2**
BHUJ Bhuj 116.33 358 *e*P **PKiKP 13 28 15.2 -1.1**
QLP Quilpie 116.78 257 P **PKiKP 13 28 17.1 +0.2**
QIS Mount Isa 116.80 265 P **PKiKP 13 28 17.0 -0.1**
CNB Canberra Magne 117.82 246 P **PKiKP 13 28 20.4 +1.7**
CMSA Cobar Meteorol 118.42 252 P **PKiKP 13 28 20.3 +0.4**
DRS Darwin Rock St 118.46 278 P **PKiKP 13 28 21.2 +0.8**
AUDHS Darwin High Sc 118.52 278 P **PKPdf 13 28 20.4 -0.1**
RAGD RAYAGADA 118.61 343 *e*P **PKPdf 13 28 20.1 -0.6**
TTSI Tana Toraja 120.18 295 PKP **PKPdf 13 28 22.9 -0.9**
WRAB Tennant Creek 120.42 269 P **PKPdf 13 28 23.7 -0.4**
WRAB Tennant Creek 120.42 269 P **PKiKP 13 28 24.2 0.0**
WRA Warramunga Arr 120.44 269 PKP **PKPdf 13 28 23.7 -0.4**
comp=Z,43nm,0.9s,baz=63,slow=1.8,SNR=197
WRA PKKPbc **PKKPab 13 38 31.3 +0.1**
comp=Z,4.6nm,1.2s,baz=230,slow=2.9,SNR=7.8
SBUM Sibu 121.06 305 P **PKiKP 13 28 27.0 +1.3**
SBUM Sibu 121.06 305 P **PKiKP 13 28 25.7 0.0**
HYB Hyderabad 121.32 348 *e*PKiKP **PKPdf 13 28 24.8 -1.2**
STKA Stephens Creek 121.57 253 PKP **PKPdf 13 28 25.6 -0.4**
comp=Z,39nm,0.8s,baz=41,slow=2.5,SNR=76
STKA PKKPbc **PKKPab 13 38 26.6 +1.3**
comp=Z,3.5nm,0.9s,baz=217,slow=3.8,SNR=5.3
STKA Stephens Creek 121.57 253 P **PKPdf 13 28 25.5 -0.4**
STKA Stephens Creek 121.57 253 P **PKPdf 13 28 25.9 0.0**
KAPI Kappang 121.63 293 PKP **PKPdf 13 28 26.0 -0.6**
comp=Z,13nm,0.3s,baz=169,slow=6.1,SNR=5.6
KAPI Kappang 121.63 293 PKIKP **PKPdf 13 28 26.0 -0.6**
SOEI Soe 121.65 285 P **PKiKP 13 28 28.3 +1.4**
SOEI Soe 121.65 285 P **PKiKP 13 28 28.1 +1.2**
MMRI Maumere 122.38 288 P **PKiKP 13 28 30.1 +1.9**
MMRI Maumere 122.38 288 P **PKPdf 13 28 26.8 -1.2**
BATI Baumata 122.39 286 PKP **PKPdf 13 28 27.7 -0.4**
comp=Z,33nm,0.8s,baz=198,slow=7.4,SNR=6.8
BRAT Ballarat 122.73 246 P **PKiKP 13 28 29.1 +1.0**
GEXS Deakin Univers 122.79 246 P **PKiKP 13 28 29.6 +1.3**
GEXS Deakin Univers 122.79 246 P **PKiKP 13 28 29.4 +1.1**
AUMTC Mt Clear Colle 122.79 246 P **PKiKP 13 28 29.0 +0.7**
AUMTC Mt Clear Colle 122.79 246 P **PKiKP 13 28 28.8 +0.5**
ASAR Alice Springs 122.91 266 PKP **PKPdf 13 28 28.1 -0.8**
comp=Z,32nm,0.9s,baz=73,slow=2.4,SNR=143
ASAR PP **PP 13 30 06.8 -1.0**
comp=Z,2.7nm,1.0s,baz=58,slow=6.0,SNR=4.5
ASAR PKKPbc **PKKPab 13 38 20.1 -0.2**
comp=Z,2.8nm,0.9s,baz=231,slow=3.7,SNR=16
ASAR SKKPbc SKKPbc 13 42 09.8 +0.9
comp=Z,1.8nm,1.0s,baz=238,slow=2.9,SNR=4.2
AUALC St Philip's Co 122.93 266 P **PKPdf 13 28 28.5 -0.4**
AUALC St Philip's Co 122.93 266 P **PKiKP 13 28 29.2 +0.1**
PBA Port Blair 123.05 331 *e*P **PKPdf 13 28 28.4 -1.0**
ATD Arta Tunnel 123.06 30 IAMs_20 IAMs_20 14 24 53.6
comp=Z,347nm,20.0s
FURI Furi 123.73 36 IAMs_20 IAMs_20 14 25 25.0
comp=Z,674nm,19.0s
GOA Goa 123.80 353 *e*P **PKPdf 13 28 29.4 -1.3**
AUHPC Hawkesdale P12 124.12 247 P **PKiKP 13 28 32.1 +1.2**
AUHPC Hawkesdale P12 124.12 247 P **PKiKP 13 28 32.0 +1.2**
HTT Hallett 124.30 253 P **PKPdf 13 28 30.9 -0.3**
HTT Hallett 124.30 253 P **PKPdf 13 28 31.3 +0.1**
AUMBR Murray Bridge 124.86 251 P **PKPdf 13 28 32.0 -0.1**
AUMBR Murray Bridge 124.86 251 P **PKPdf 13 28 32.1 -0.1**
AUMAR Marden Senior 125.21 252 P **PKiKP 13 28 33.1 -0.1**
AUMAR Marden Senior 125.21 252 P **PKiKP 13 28 33.5 +0.3**
GHSS Government Hou 125.25 252 P **PKiKP 13 28 33.4 +0.2**
KULM Kulim 125.25 319 P **PKiKP 13 28 34.0 0.0**
KULM Kulim 125.25 319 P **PKPdf 13 28 33.5 -0.1**
KULM Kulim 125.25 319 IAMs_20 IAMs_20 14 32 02.5
comp=Z,452nm,19.0s
MDRS Madanai 125.27 345 *e*P **PKPdf 13 28 29.9 -3.7**
PLAI Plampang 125.70 292 P **PKPdf 13 28 33.4 -1.0**
PLAI Plampang 125.70 292 P **PKPdf 13 28 33.6 -0.8**
FITZ Fitzroy Crossi 125.94 277 PKP **PKPdf 13 28 34.0 -0.7**
comp=Z,41nm,0.9s,baz=44,slow=1.7,SNR=56
BBOO Buckleboo 126.09 255 P **PKPdf 13 28 34.5 -0.1**
BBOO Buckleboo 126.09 255 P **PKiKP 13 28 35.1 +0.1**
MYKOM Kota Tinggi 126.52 313 P **PKiKP 13 28 37.1 +0.6**
MYKOM Kota Tinggi 126.52 313 P **PKiKP 13 28 37.0 +0.6**
CMBY CAMPBELL BAY 126.82 327 *e*P **PKPdf 13 28 35.4 -1.2**
LODK Lodwar 126.92 42 IAMs_20 IAMs_20 14 27 16.3
comp=Z,558nm,19.0s
JAGI Jajag, Banyuwa 127.98 295 P **PKiKP 13 28 39.3 0.0**
JAGI Jajag, Banyuwa 127.98 295 P **PKPdf 13 28 38.4 -0.4**
PSI Prapat 128.26 319 P **PKPdf 13 28 39.3 -0.2**
PSI Prapat 128.26 319 P **PKPdf 13 28 39.7 +0.2**
KOD Kodaikanal 128.54 348 *e*P **PKPdf 13 28 38.0 -2.2**
VNDA Vanda 128.54 196 PKP **PKiKP 13 28 39.3 +0.7**
comp=Z,37nm,0.9s,baz=323,slow=3.0,SNR=49
TRD Trivandrum 130.31 348 *e*P **PKPdf 13 28 41.4 -1.8**
QSPA South Pole Qui 130.56 180 PKP **PKPdf 13 28 41.7 -0.4**
comp=Z,28nm,1.0s,baz=52,slow=0.3,SNR=35
PALK Pallekele 130.81 343 IAMs_20 IAMs_20 14 33 11.1
comp=Z,524nm,19.0s
LEM Lembang 131.11 303 PKP **PKPdf 13 28 44.7 -0.3**
comp=Z,12nm,0.6s,baz=359,slow=5.8,SNR=5.2
BBJI Bungbulang 131.57 302 P **PKiKP 13 28 46.7 0.0**
BBJI Bungbulang 131.57 302 P **PKPdf 13 28 45.5 -0.2**
VNA3 Neumayer Olymp 131.90 155 ⇑PKPdf **PKPdf 13 28 44.5 0.0**
comp=Z,21nm,0.9s
MBWA Marble Bar 132.22 278 P **PKiKP 13 28 47.5 -0.1**
MBWA Marble Bar 132.22 278 P **PKiKP 13 28 47.8 +0.2**
PSA00 Pilbara Seismi 132.38 277 P **PKPdf 13 28 47.2 +0.3**
PSA00 Pilbara Seismi 132.38 277 P **PKiKP 13 28 47.9 -0.1**
VNA2 Neumayer--Watz 132.62 154 ⇓PKPdf **PKPdf 13 28 46.0 +0.1**
comp=Z,14nm,1.2s,baz=273,slow=4.9
KIBK Kibwezi 133.21 43 IAMs_20 IAMs_20 14 27 35.4
comp=Z,572nm,20.0s
MEEK Meekatharra 136.13 272 P **PKPdf 13 28 54.6 +0.8**
MEEK Meekatharra 136.13 272 P **PKPdf 13 28 54.2 +0.4**
LSZ Lusaka 137.23 65 PKP **PKPdf 13 28 56.1 -0.1**
comp=Z,5.9nm,0.9s,baz=4.7,slow=0.6,SNR=5.9
NVL N'lazarevskaya 138.91 155 *e*PKIKP **PKPdf 13 28 55.2 -2.3**
NVL *e* 13 31 47.6
NVL *e*PPP PPP 13 34 49.5
NVL *e* 13 36 05.9
NVL SS SS 13 50 05.3 -0.4
NVL *e*SSS SSS 13 55 15.4
NVL pmax pmax
comp=Z,33nm,1.1s
MORW Morawa 139.33 271 P **PKPdf 13 28 59.4 -0.2**
MORW Morawa 139.33 271 P **PKPdf 13 28 59.9 +0.3**
LBTB Lobatse 141.53 79 PKhKP PKPpre 13 28 56.8
comp=Z,18nm,1.0s,baz=281,slow=4.4,SNR=17
ELIB Princess Elisa 141.84 159 *d*PKPdf **PKPdf 13 28 56.1 -6.9**
BOSA Boshof 143.21 84 PKhKP PKPpre 13 29 02.6
comp=Z,40nm,1.0s,baz=290,slow=3.2,SNR=25
MAW Mawson 152.93 176 PKP **PKPdf 13 29 21.0 -0.2**
comp=Z,20nm,1.1s,baz=194,slow=0.7,SNR=7.8
MAW PKPbc **PKiKP 13 29 28.8 +0.2**
comp=Z,52nm,1.3s,baz=250,slow=6.1,SNR=4.7

*UUSS **18** 13:10:59.4±0.6,40.°722N±0.°009×112.°11W±0.°01, h9km±2km, Error ellipse: s-maj=1.4km s-min=1.2km az=117.0*

NEIC 18 13:10:59.2±0.7,**40.°721N**±0.°008×**112.°106W**±0.°007, **h10**km±1km,**ML4.3**/16,**Md4.2**/4(UUSS),**Error ellipse: s-maj=2.5km s-min=1.5km az=146.0,Utah**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NOQ	**North Oquirrh**	**0.07**	**189**		Pg	13 11 01.9	+0.3
NOQ					Sg	13 11 03.7	+0.4
SAIU	**Southern Antel**	**0.14**	**337**		Pg	13 11 03.0	+0.3
SAIU	**Southern Antel**	**0.14**	**337**		Sg	13 11 05.2	+0.2
CAPU	**Utah State Cap**	**0.17**	**71**		Pg	13 11 03.4	+0.3
EOCU	**Emergency Oper**	**0.17**	**71**		Pg	13 11 03.5	+0.4
HRU	**Hogsback Ridge**	**0.18**	**69**		Pg	13 11 03.4	+0.2
RBU	**Red Butte Cany**	**0.23**	**75**		Pg	13 11 04.1	0.0
MHD	**Mile High Driv**	**0.24**	**105**		Pg	13 11 04.3	0.0
CTU	**Camp Tracy**	**0.27**	**96**		Pg	13 11 04.9	+0.1
WTU	**Western Traver**	**0.29**	**156**		Pg	13 11 05.7	+0.6
NAIU	**Northern Antel**	**0.31**	**343**		Pg	13 11 05.7	+0.2
SNUT	**Stansbury Nort**	**0.35**	**298**		Pg	13 11 06.8	+0.6
AAU	**Alta**	**0.38**	**110**		Pg	13 11 07.0	+0.2
TCVU	**Timpanogos Cav**	**0.41**	**132**		Pg	13 11 07.5	+0.1
N16A	**Rees Ranch, Co**	**0.53**	**72**		Pb	13 11 10.3	-0.5
SPUT	**South Promonto**	**0.64**	**336**		Pb	13 11 12.3	-0.3
SPUT	**South Promonto**	**0.64**	**336**	IAML		13 11 15.4	
	comp=E,10µm,1.2s						
SPUT				IAML		13 11 21.7	
	comp=N,10µm,1.0s						
TCUT	**Toone Canyon**	**0.66**	**53**	Pg	Pb	13 11 12.9	-0.1
BGU	**Big Grassy Mou**	**0.73**	**287**	Pg	Pg	13 11 13.7	+0.3
BGU				IAML		13 11 16.6	
	comp=N,9µm,1.2s						
BGU				IAML		13 11 18.3	
	comp=E,12µm,1.1s						
DUG	**Dugway, Tooele**	**0.75**	**226**	Pg	Pb	13 11 14.2	-0.3
DUG				IAML		13 11 22.2	
	comp=E,11µm,1.1s						
DUG				IAML		13 11 22.7	
	comp=E,15µm,1.1s						
MPU	**Maple Canyon**	**0.79**	**153**	Pg	Pg	13 11 14.5	0.0
HWUT	**Hardware Ranch**	**0.97**	**25**	Pn	Pn	13 11 18.8	-0.4
HWUT				IAML		13 11 24.5	
	comp=E,10µm,1.2s						
HWUT				IAML		13 11 31.1	
	comp=E,11µm,1.1s						
HVU	**Hansel Valley**	**1.17**	**335**	Pg	Pn	13 11 22.3	+0.4

*UUSS **18** 13:11:12.1±0.3,40.°75N±0.°08×112.°08W±0.°04, h10km±6km, Error ellipse: s-maj=11.5km s-min=4.7km az=182.0*

NEIC 18 13:11:12.3±0.5,**40.76N**±0.°08×**112.07W**±0.°03,**h9**km±6km, **Md3.7**/4(UUSS),**Error ellipse: s-maj=12.2km s-min=3.7km az=178.0,Utah**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NOQ	**North Oquirrh**	**0.11**	**198**		Pg	13 11 15.1	0.0
NOQ					Sg	13 11 17.0	-0.1
SAIU	**Southern Antel**	**0.12**	**319**		Pg	13 11 15.6	+0.3
SAIU	**Southern Antel**	**0.12**	**319**		Sg	13 11 17.8	+0.4
HRU	**Hogsback Ridge**	**0.15**	**80**		Pg	13 11 15.8	+0.2
HRU					Sg	13 11 18.1	+0.1
RBU	**Red Butte Cany**	**0.20**	**84**		Pg	13 11 16.4	-0.2
MHD	**Mile High Driv**	**0.23**	**116**		Pg	13 11 17.0	-0.1
CTU	**Camp Tracy**	**0.26**	**105**		Pg	13 11 17.5	0.0
NAIU	**Northern Antel**	**0.28**	**335**		Pg	13 11 18.3	+0.3
NAIU					Sg	13 11 22.5	+0.6
TCUT	**Toone Canyon**	**0.62**	**54**	Pg	Pg	13 11 22.8	-1.6
DUG	**Dugway, Tooele**	**0.80**	**225**	Pg	Pg	13 11 26.1	-1.7
HWUT	**Hardware Ranch**	**0.93**	**24**	Pg	Pg	13 11 30.1	-0.1
ISA	**Isabella, Lake**	**7.16**	**227**		Pg	13 13 24.6	-4.8

*UUSS **18** 13:11:38.9±0.6,40.°77N±0.°06×112.°10W±0.°02, h7km±2km, Error ellipse: s-maj=8.4km s-min=1.4km az=172.0*

NEIC 18 13:11:39.5±0.9,**40.°738N**±0.°008×**112.°06W**±0.°01, **h4**km±2km,**ML3.6**/10,**Md3.0**/3(UUSS),**Error ellipse: s-maj=1.4km s-min=1.0km az=213.0,Utah**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NOQ	**North Oquirrh**	**0.10**	**209**		Pg	13 11 41.8	+0.2
NOQ					Sg	13 11 43.8	+0.8
RPF	**Rose Park Fire**	**0.11**	**70**		Pg	13 11 42.2	+0.4
EOCU	**Emergency Oper**	**0.13**	**73**		Pg	13 11 42.5	+0.3
HRU	**Hogsback Ridge**	**0.14**	**70**		Pg	13 11 42.5	+0.1
SAIU	**Southern Antel**	**0.15**	**321**		Pg	13 11 41.7	-0.8
RBU	**Red Butte Cany**	**0.19**	**77**		Pg	13 11 43.5	+0.1
CTU	**Camp Tracy**	**0.24**	**101**	Pg	Pg	13 11 44.3	+0.1
CTU				Sg	Sg	13 11 47.3	0.0
CTU				IAML		13 11 47.9	
	comp=N,6µm,0.9s						
WTU	**Western Traver**	**0.29**	**164**		Pg	13 11 45.8	+0.5
NAIU	**Northern Antel**	**0.31**	**335**		Pg	13 11 44.4	-1.1
SPUT	**South Promonto**	**0.64**	**333**	Pg	Pg	13 11 50.4	-1.5
SPUT				IAML		13 11 56.4	
	comp=N,3µm,0.9s						
SPUT				IAML		13 12 10.6	
	comp=E,4µm,1.0s						
BGU	**Big Grassy Mou**	**0.76**	**285**	Pg	Pg	13 11 53.6	-0.5
BGU				IAML		13 11 58.3	
	comp=E,3µm,1.2s						
BGU				Sg	Sg	13 12 03.8	-0.3
BGU				IAML		13 12 10.1	
	comp=N,2µm,1.1s						
DUG	**Dugway, Tooele**	**0.79**	**227**	Pg	Pg	13 11 54.9	+0.2
DUG				Sg	Sg	13 12 05.9	+0.9
DUG				IAML		13 12 15.8	
	comp=N,3µm,0.8s						
MPU	**Maple Canyon**	**0.79**	**156**	Pg	Pg	13 11 54.8	0.0

*UUSS **18** 13:14:06.0±0.4,40.°748N±0.°010×112.°08W±0.°01, h9km±4km, Error ellipse: s-maj=1.6km s-min=1.3km az=59.0*

NEIC 18 13:14:05.8±0.5,**40.°75N**±0.°01×**112.°07W**±0.°02,**h9**km±4km, **ML2.8**/11,**Md2.8**/3(UUSS),**Error ellipse: s-maj=1.8km s-min=1.5km az=118.0,Utah**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NOQ	**North Oquirrh**	**0.11**	**200**		Pg	13 14 08.8	+0.2
NOQ					Sg	13 14 10.9	+0.3
SAIU	**Southern Antel**	**0.13**	**321**		Pg	13 14 09.2	+0.3
SAIU	**Southern Antel**	**0.13**	**321**		Sg	13 14 11.4	+0.3
HRU	**Hogsback Ridge**	**0.15**	**77**		Pg	13 14 09.7	+0.5
RBU	**Red Butte Cany**	**0.20**	**82**		Pg	13 14 10.5	+0.4
MHD	**Mile High Driv**	**0.23**	**114**		Pg	13 14 11.0	+0.5
MHD					Sg	13 14 14.1	+0.4
CTU	**Camp Tracy**	**0.25**	**104**		Pg	13 14 11.0	0.0
NAIU	**Northern Antel**	**0.29**	**336**		Pg	13 14 12.1	+0.4
WTU	**Western Traver**	**0.31**	**163**		Pg	13 14 12.5	+0.4
AAU	**Alta**	**0.37**	**116**		Pg	13 14 13.6	+0.4
WBC	**Weber Canyon**	**0.41**	**18**		Pg	13 14 14.3	+0.4
TCUT	**Toone Canyon**	**0.62**	**54**	Pg	Pb	13 14 18.6	-0.4
SPUT	**South Promonto**	**0.62**	**333**	Pg	Pg	13 14 18.4	+0.4
SPUT				IAML		13 14 26.6	
	comp=N,863nm,1.1s						
BGU	**Big Grassy Mou**	**0.75**	**284**	Pg	Pb	13 14 20.8	-0.3
BGU				IAML		13 14 42.7	
	comp=E,617nm,1.1s						
BGU				IAML		13 14 46.7	
	comp=N,212nm,0.3s						
DUG	**Dugway, Tooele**	**0.79**	**226**	Pg	Pb	13 14 21.7	-0.2
DUG				IAML		13 14 29.1	
	comp=N,420nm,1.1s						
MPU	**Maple Canyon**	**0.81**	**155**	Pg	Pg	13 14 21.6	+0.2
MPU				IAML		13 14 39.3	
	comp=E,384nm,1.2s						
MPU				IAML		13 14 49.2	
	comp=N,182nm,0.8s						
HWUT	**Hardware Ranch**	**0.94**	**24**	Pg	Pb	13 14 24.4	+0.1
BSUT	**Blindstream Ca**	**1.02**	**102**	Pn	Pn	13 14 26.7	0.0
HVU	**Hansel Valley**	**1.15**	**333**	Pn	Pb	13 14 28.1	0.0

*UUSS **18** 13:14:21.5±0.8,40.°755N±0.°007×112.°06W±0.°01, h8km±1km, Error ellipse: s-maj=1.2km s-min=1.0km az=59.0*

NEIC 18 13:14:21.1±1.0,**40.°770N**±0.°010×**112.°06W**±0.°01, **h10**km±3km,**ML3.0**/18,**Md3.7**/5(UUSS),**Error ellipse: s-maj=1.7km s-min=1.1km az=222.0,Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOQ	**North Oquirrh**	**0.13**	**202**		Pg	13 14 24.4	+0.2
NOQ					Sg	13 14 26.5	+0.1
SAIU	**Southern Antel**	**0.13**	**312**		Pg	13 14 24.7	+0.5
SAIU	**Southern Antel**	**0.13**	**312**		Sg	13 14 26.7	+0.4
HRU	**Hogsback Ridge**	**0.13**	**83**		Pg	13 14 24.9	+0.7
RBU	**Red Butte Cany**	**0.19**	**87**		Pg	13 14 25.8	+0.6
RBU	**Red Butte Cany**	**0.19**	**87**		Sg	13 14 28.7	+0.7
MHD	**Mile High Driv**	**0.22**	**119**		Pg	13 14 26.3	+0.5
CTU	**Camp Tracy**	**0.24**	**108**		Pg	13 14 26.5	+0.3
CTU				IAML		13 14 30.2	
	comp=E,2μm,0.3s						
CTU	**Camp Tracy**	**0.24**	**108**		Sg	13 14 30.0	+0.4
NAIU	**Northern Antel**	**0.28**	**332**		Pg	13 14 27.4	+0.6
NAIU					Sg	13 14 31.3	+0.7
FPU	**Francis Peak**	**0.30**	**33**		Pg	13 14 28.1	+0.7
WTU	**Western Traver**	**0.33**	**166**		Pg	13 14 28.3	+0.7
SNUT	**Stansbury Nort**	**0.36**	**289**		Pb	13 14 29.1	-0.7
AAU	**Alta**	**0.36**	**119**		Pg	13 14 28.9	+0.4
WBC	**Weber Canyon**	**0.39**	**18**		Pb	13 14 29.8	-0.5
TCVU	**Timpanogos Cav**	**0.42**	**141**		Pg	13 14 29.7	+0.3
N16A	**Rees Ranch, Co**	**0.48**	**76**		Pb	13 14 31.7	-0.2
TCUT	**Toone Canyon**	**0.60**	**54**	Pg	Pg	13 14 32.6	-0.3
SPUT	**South Promonto**	**0.61**	**331**	Pg	Pg	13 14 32.5	-0.6
BGU	**Big Grassy Mou**	**0.76**	**282**	Pg	Pg	13 14 36.0	+0.3
DUG	**Dugway, Tooele**	**0.81**	**225**	Pg	Pg	13 14 37.1	+0.3
DUG				IAML		13 14 54.6	
	comp=E,338nm,0.8s						
DUG				IAML		13 14 56.6	
	comp=E,454nm,0.8s						
MPU	**Maple Canyon**	**0.82**	**157**	Pg	Pg	13 14 37.1	+0.1
MPU				IAML		13 14 51.0	
	comp=N,540nm,1.1s						
MPU				IAML		13 15 00.6	
	comp=E,380nm,1.2s						
HWUT	**Hardware Ranch**	**0.92**	**24**	Pg	Pb	13 14 39.2	-0.1
HWUT				IAML		13 14 57.9	
	comp=E,611nm,1.1s						
BSUT	**Blindstream Ca**	**1.01**	**103**		Pg	13 14 40.8	+0.1
BSUT				IAML		13 15 01.2	
	comp=E,340nm,0.9s						
HVU	**Hansel Valley**	**1.15**	**332**	Pn	Pg	13 14 42.9	-0.2
HVU				IAML		13 14 54.9	
	comp=N,436nm,1.1s						
HVU				IAML		13 15 16.6	
	comp=E,432nm,0.9s						
P17A	**Butcher Ranch,**	**1.64**	**142**	Pn	Pn	13 14 50.5	+0.2
P18A	**Preston Nutter**	**1.80**	**129**	Pn	Pn	13 14 52.6	+0.1
RDMU	**Red Mountain**	**1.90**	**95**	Pn	Pb	13 14 55.6	-0.5
Q16A	**Castle Valley**	**1.97**	**160**	Pn	Pn	13 14 55.1	+0.3
SRU	**San Rafael Swe**	**2.03**	**144**	Pn	Pn	13 14 56.5	+0.8
ELK	**Elko**	**2.42**	**270**	Pn	Pn	13 15 01.7	+0.7
BW06	**Boulder Array**	**2.73**	**42**	Pn	Pn	13 15 05.4	0.0

*UUSS **18** 13:15:11.5±1.2, 40.76°N±0.02°×112.06°W±0.02, h9km±4km, Error ellipse: s-maj=2.5km s-min=2.2km az=222.0*

NEIC 18 13:15:11.1±1.6, 40.73°N±0.02°×112.08°W±0.02, h10km±3km, ML3.5/25, MLS3.7/6(UUSS), Error ellipse: s-maj=2.6km s-min=2.2km az=218.0, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOQ	**North Oquirrh**	**0.08**	**199**		Pg	13 15 14.5	+0.9
NOQ					Sg	13 15 16.6	+1.2
SAIU	**Southern Antel**	**0.14**	**329**		Pg	13 15 14.8	+0.4
HRU	**Hogsback Ridge**	**0.16**	**70**		Pg	13 15 14.8	+0.1
HRU					Sg	13 15 17.1	-0.1
RBU	**Red Butte Cany**	**0.21**	**77**		Pg	13 15 15.7	+0.1
MHD	**Mile High Driv**	**0.23**	**108**		Pg	13 15 16.1	+0.3
CTU	**Camp Tracy**	**0.26**	**99**		Pg	13 15 16.6	+0.2
WTU	**Western Traver**	**0.29**	**160**		Pb	13 15 18.3	-0.3
NAIU	**Northern Antel**	**0.30**	**339**		Pg	13 15 17.5	+0.2
FPU	**Francis Peak**	**0.35**	**32**		Pg	13 15 18.1	0.0
SNUT	**Stansbury Nort**	**0.36**	**296**		Pb	13 15 19.0	-0.7
AAU	**Alta**	**0.37**	**112**		Pg	13 15 18.8	+0.3
TCVU	**Timpanogos Cav**	**0.41**	**135**		Pg	13 15 19.7	+0.5
WBC	**Weber Canyon**	**0.43**	**19**		Pg	13 15 19.4	-0.2
N16A	**Rees Ranch, Co**	**0.52**	**72**		Pg	13 15 21.6	+0.4
KLJ	**Keetly**	**0.53**	**101**		Pg	13 15 21.7	+0.3
HEB	**Heber**	**0.61**	**112**		Pb	13 15 23.7	-0.4
SPUT	**South Promonto**	**0.64**	**335**	Pg	Pg	13 15 23.6	+0.1
SPUT				IAML		13 15 32.6	
	comp=E,2μm,0.4s						
SPUT				IAML		13 15 33.2	
	comp=N,3μm,0.2s						
TCUT	**Toone Canyon**	**0.64**	**53**	Pg	Pg	13 15 23.3	-0.2
HTU	**Hoyt Peak**	**0.66**	**95**		Pg	13 15 24.3	+0.3
WMUT	**West Mountain**	**0.68**	**164**		Pb	13 15 25.3	+0.1
BGU	**Big Grassy Mou**	**0.74**	**285**	Pg	Pb	13 15 26.0	-0.3
BGU				IAML		13 15 38.6	
	comp=N,2μm,0.3s						
DUG	**Dugway, Tooele**	**0.77**	**226**	Pg	Pb	13 15 27.3	+0.5
DUG				IAML		13 15 40.6	
	comp=N,2μm,0.8s						
DUG				IAML		13 15 41.2	
	comp=N,2μm,0.7s						
BCUT	**Brigham City**	**0.78**	**6**		Pg	13 15 26.2	0.0
MPU	**Maple Canyon**	**0.79**	**154**	Pg	Pb	13 15 27.2	0.0
MPU				IAML		13 15 41.6	
	comp=E,2μm,0.8s						
MPU				IAML		13 15 41.9	
	comp=N,1μm,0.5s						
LHUT	**Little Humpy P**	**0.84**	**79**		Pb	13 15 28.0	-0.1
HWUT	**Hardware Ranch**	**0.96**	**24**	Pg	Pg	13 15 29.0	-0.6
HWUT				IAML		13 15 44.6	
	comp=N,2μm,0.5s						
HWUT				IAML		13 15 45.1	
	comp=N,2μm,0.5s						
BSUT	**Blindstream Ca**	**1.02**	**101**	Pg	Pg	13 15 30.9	+0.1
BSUT				IAML		13 15 48.2	
	comp=N,2μm,0.7s						
RSUT	**Red Spur Mount**	**1.04**	**29**		Pg	13 15 30.6	-0.5
HVU	**Hansel Valley**	**1.17**	**334**	Pg	Pb	13 15 33.2	-0.4
HVU	**Hansel Valley**	**1.17**	**334**		Sb	13 15 49.3	+0.4
MLI	**Malad Range**	**1.29**	**359**		Pn	13 15 35.1	-0.4
P17A	**Butcher Ranch,**	**1.62**	**140**	Pn	Pn	13 15 40.4	+0.4
P17A				IAML		13 15 58.7	
	comp=E,396nm,1.3s						
P17A				IAML		13 16 06.4	
	comp=N,474nm,0.9s						
L17A	**Cokeville**	**1.64**	**33**		Pb	13 15 41.6	0.0
P18A	**Preston Nutter**	**1.79**	**127**	Pn	Pb	13 15 43.7	-0.5
RDMU	**Red Mountain**	**1.92**	**94**	Pn	Pn	13 15 44.1	0.0
SRU	**San Rafael Swe**	**2.02**	**143**	Pn	Pn	13 15 45.9	+0.5
SRU				IAML		13 16 20.0	
	comp=N,569nm,1.2s						
ELK	**Elko**	**2.40**	**271**	Pn	Pn	13 15 52.0	+1.2
BW06	**Boulder Array**	**2.78**	**42**	Pn	Pn	13 15 56.8	+0.9
PDAR	**Pinedale Array**	**2.78**	**42**	Pn	Pn	13 15 55.9	0.0
FXWY	**Fox Creek**	**3.01**	**15**	Pn	Pn	13 15 59.6	+0.5
LOHW	**Long Hollow**	**3.08**	**20**	Pn	Pn	13 16 00.2	+0.1
MOOW	**Moose Ponds**	**3.17**	**18**	Pn	Pn	13 16 01.6	+0.2
SZCU	**Shurtz Canyon**	**3.23**	**194**	Pn	Pn	13 16 03.0	+0.9
PV21	**Cone Mtn., Par**	**3.23**	**131**	Pn	Pn	13 16 03.0	+0.8
PKCU	**Pink Cliffs**	**3.29**	**183**	Pn	Pn	13 16 03.1	+0.1
HLID	**Hailey**	**3.32**	**329**	Pn	Pn	13 16 04.0	+0.7
CCUT	**Cedar City**	**3.33**	**198**	Pn	Pn	13 16 03.3	-0.2
PV14	**Lion Creek, Pa**	**3.34**	**134**	Pn	Pn	13 16 02.4	-1.2
PV04	**Paradox Valley**	**3.39**	**133**	Pn	Pn	13 16 04.4	+0.1
PV11	**David Mesa, Pa**	**3.47**	**133**	Pn	Pn	13 16 06.1	+0.6
PV07	**Paradox Valley**	**3.51**	**130**	Pn	Pn	13 16 06.1	+0.1
YPP	**Pitchstone Pla**	**3.66**	**15**	Pn	Pn	13 16 08.8	+0.7
PV15	**Paradox Valley**	**3.67**	**129**	Pn	Pn	13 16 07.6	-0.6
H17A	**Grant Village**	**3.83**	**16**	Pn	Pn	13 16 11.2	+0.9
YFT	**Old Faithful**	**3.83**	**14**	Pn	Pn	13 16 12.4	+2.0
YMR	**Madison River**	**4.02**	**11**	Pn	Pn	13 16 14.5	+1.5
KVN	**Kaiserville**	**4.92**	**252**	Pn	Pn	13 16 26.3	+0.9
LHV	**Little Huntoon**	**5.55**	**246**	Pn	Pn	13 16 36.4	+2.6

*MAN **18** 13:20:13.0, 15.94°N×120.15°E, h8km, MS3.9*
MAN INTENSITY IV - LABRADOR DASOL INFANTA & AGUILAR PANGASINAN; ALAMINOS CITY; DAGUPAN CITY; . INTENSITY III - BUGALLON PANGASINAN; CANDELARIA ZAMBALES . INTENSITY II - BURGOS LAOAC & CALASIAO PANGASINAN.
*IDC **18** 13:20:18.2±2.4, 15.86°N×120.39°E, h73km±25km, mb3.6/8, mbtmp3.9/8, MS3.9/2, Error ellipse: s-maj=50.8km s-min=16.3km az=59.0*

ISC 18 13:20:14.3±0.7, 15.98°N±0.06°×120.31°E±0.10, h32km, n16, σ1s91/17, mb3.9/7, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.55**	**317**	*i* P	**Pb**	**13 20 24.1**	**-1.5**
BOLP				*i* S	**Sb**	**13 20 33.5**	**0.0**
PCPS	**Palayan City**	**1.50**	**151**	*e*P	Pn	13 20 31.4	-7.6
PCPS				*e*S	Sn	13 20 45.5	-12
SIPP	**Brgy, Tapao**	**1.94**	**4**	*e*P	**Pn**	**13 20 43.4**	**-1.7**
SIPP				*e*S	**Sb**	**13 21 17.2**	**+4.3**
TGY	**Tagaytay City**	**1.96**	**162**	P	**Pb**	**13 20 47.5**	**-1.8**
	399nm,0.4s,baz=278,slow=2.0,SNR=18						
TGY				S	**Sn**	**13 21 10.4**	**+1.6**
	2μm,0.7s,baz=165,slow=22,SNR=9.8						
TGY				LR	LR	13 21 59.4	
	comp=Z,400nm,19.2s,baz=311,slow=55						
TGY	**Tagaytay City**	**1.96**	**162**	*e*P	**Pb**	**13 20 49.6**	**+0.3**
TGY				*e*S	**Sb**	**13 21 16.1**	**+2.7**
GQP	**Guinayangan**	**2.92**	**135**	*i* P	**Pb**	**13 21 03.4**	**-2.2**
DAV	**Davao City (W)**	**10.25**	**149**	LR	LR	13 27 57.8	
	comp=Z,125nm,20.2s,baz=356,slow=46						
CMAR	**Chiang Mai Arr**	**20.55**	**280**	P	**P**	**13 24 52.2**	**+1.8**
	1.2nm,0.4s,baz=92,slow=9.0,SNR=12						
	1.2nm,0.4s						
WRA	**Warramunga Arr**	**38.27**	**158**	P	**P**	**13 27 29.6**	**-2.1**
	0.3nm,0.7s,baz=327,slow=10,SNR=12						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**41.58**	**161**	P	**P**	**13 27 58.6**	**-0.7**
	0.3nm,0.5s,baz=341,slow=8.8,SNR=4.8						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**43.99**	**322**	P	**P**	**13 28 19.1**	**+0.4**
	1.5nm,0.8s,baz=116,slow=9.5,SNR=3.5						
	1.5nm,0.8s						
ZALV	**Zalesovo Beam**	**46.88**	**332**	P	**P**	**13 28 41.8**	**+0.4**
	0.9nm,0.7s,baz=126,slow=4.1,SNR=2.1						
	0.9nm,0.7s						
KURBB	**Kurchatov Arra**	**48.10**	**325**	P	**P**	**13 28 51.2**	**+0.3**
	3.2nm,0.7s,baz=121,slow=8.2,SNR=8.2						
	3.2nm,0.7s						
NRIK	**Noril'sk**	**57.12**	**347**	P	**P**	**13 29 57.9**	**+0.5**
	4.1nm,0.8s,baz=131,slow=7.1,SNR=6.3						
	4.1nm,0.8s						
FINES	**FINESS Array B**	**78.12**	**331**	P	**P**	**13 32 10.2**	**+0.2**
	2.3nm,0.7s,baz=59,slow=5.6,SNR=9.9						
	2.3nm,0.7s						
EIL	**Elat**	**78.32**	**298**	LR	LR	14 11 51.8	
	comp=Z,352nm,21.6s,baz=324,slow=39						

ROM 18 13:20:25.7±0.1, 43.315°N±0.008°×13.22°E±0.01, h0km, ML1.1/8, Error ellipse: s-maj=1.0km s-min=0.9km az=257.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CING	**Cingoli**	**0.07**	**341**	P	Pg	13 20 27.1	+0.1
TRE1	**Treia**	**0.07**	**93**	P	Pg	13 20 27.9	+0.9
EL6	**Elcito**	**0.09**	**279**	P	Pg	13 20 28.3	+0.8
EL6				AML	AML		
	comp=E,420μm,0.9s						
EL6				AML	AML		
	comp=N,354μm,0.4s						
EL6				AML	AML		
	comp=E,420μm,1.1s						
SNTG	**Esanatoglia**	**0.21**	**254**	P	Pg	13 20 30.8	+0.9
CSP1	**Cessapalombo**	**0.22**	**184**	P	Pg	13 20 30.9	+0.8
CSP1				AML	AML		
	comp=E,92μm,0.6s						
CSP1				AML	AML		
	comp=N,128μm,1.6s						
CSP1				AML	AML		
	comp=N,124μm,1.6s						
CSP1				AML	AML		
	comp=E,92μm,0.6s						
CSP1				AML	AML		
	comp=N,124μm,0.4s						
GUMA	**Gualdo di Mace**	**0.26**	**162**	P	Pg	13 20 31.5	+0.7
MML1	**Montelago di S**	**0.27**	**223**	P	Pg	13 20 31.9	+0.9
ARVD	**Arcevia**	**0.28**	**312**	P	Pg	13 20 31.4	+0.4
ARVD				AML	AML		
	comp=E,35μm,1.1s						
ARVD				AML	AML		
	comp=N,37μm,1.2s						
ARVD				AML	AML		
	comp=N,37μm,1.2s						
ARVD				AML	AML		
	comp=E,35μm,0.9s						
ARVD				AML	AML		
	comp=N,37μm,0.8s						
FDMO	**Fiordimonte**	**0.29**	**200**	P	Pg	13 20 32.2	+0.8
FDMO				AML	AML		
	comp=E,50μm,0.3s						
FDMO				AML	AML		
	comp=N,37μm,0.1s						
AOI	**Ancona**	**0.36**	**49**	P	Pg	13 20 33.4	+0.7
CESI	**CESI - Serrava**	**0.39**	**217**	P	Pg	13 20 33.9	+0.8
MMO1	**Montemonaco**	**0.42**	**170**	P	Pg	13 20 34.5	+0.7
MURB	**Monte Urbino**	**0.51**	**264**	AML	AML		
	comp=N,78μm,1.1s						
MURB				AML	AML		
	comp=E,74μm,0.2s						
MURB				AML	AML		
	comp=E,74μm,0.2s						

*NEIC **18** 13:22:01.9±0.9, 40.75°N±0.02°×112.06°W±0.02, h9km±7km, ML3.7/110, ML3.7/16(UUSS), Error ellipse: s-maj=2.4km s-min=1.8km az=155.0*
*UUSS **18** 13:22:02.1±0.8, 40.755°N±0.006°×112.05°W±0.01, h9km±6km, Error ellipse: s-maj=1.7km s-min=0.4km az=59.0*
*IDC **18** 13:22:03.0±1.7, 41.04°N×112.11°W, h0km, mbtmp4.2/2, ML2.8/2, Error ellipse: s-maj=60.9km s-min=10.1km az=143.0*

ISC 18 13:22:02.1±0.8, 40.76°N±0.02°×112.05°W±0.02, h11km±5km, n96, σ0s92/101, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPU	**Utah State Cap**	**0.12**	**81**		**Pg**	**13 22 05.3**	**+0.2**
EOCU	**Emergency Oper**	**0.12**	**82**		**Pg**	**13 22 05.3**	**+0.1**
EOCU					**Sg**	**13 22 07.6**	**+0.2**
NOQ	**North Oquirrh**	**0.12**	**208**		**Pg**	**13 22 05.1**	**-0.1**
NOQ					**Sg**	**13 22 07.2**	**-0.3**
HRU	**Hogsback Ridge**	**0.12**	**78**		**Pg**	**13 22 05.3**	**+0.1**
HRU					**Sg**	**13 22 07.4**	**-0.2**
SAIU	**Southern Antel**	**0.14**	**313**		**Pg**	**13 22 05.6**	**+0.1**
SAIU					**Sg**	**13 22 07.7**	**-0.2**
RBU	**Red Butte Cany**	**0.18**	**83**		**Pg**	**13 22 06.1**	**0.0**
MHD	**Mile High Driv**	**0.21**	**118**		**Pg**	**13 22 06.6**	**0.0**
MHD	**Mile High Driv**	**0.21**	**118**		**Sg**	**13 22 09.8**	**+0.1**
CTU	**Camp Tracy**	**0.23**	**106**		**Pg**	**13 22 06.8**	**-0.2**
CTU				IAML		13 22 10.8	
	comp=N,9μm,0.7s						
GMU	**Granite Mounta**	**0.28**	**130**		**Pg**	**13 22 07.8**	**-0.1**
NAIU	**Northern Antel**	**0.29**	**332**		**Pg**	**13 22 08.3**	**+0.2**
FPU	**Francis Peak**	**0.31**	**31**		**Pg**	**13 22 08.8**	**+0.3**
WTU	**Western Traver**	**0.31**	**167**		**Pg**	**13 22 08.7**	**+0.3**
WTU					**Sg**	**13 22 13.5**	**+0.9**
CWU	**Camp Williams**	**0.32**	**188**		**Pg**	**13 22 08.6**	**+0.1**
AAU	**Alta**	**0.35**	**118**		**Pg**	**13 22 09.2**	**0.0**
SNUT	**Stansbury Nort**	**0.37**	**290**		**Pg**	**13 22 09.8**	**+0.3**
WBC	**Weber Canyon**	**0.40**	**16**		**Pg**	**13 22 10.1**	**+0.1**
TCVU	**Timpanogos Cav**	**0.41**	**140**		**Pg**	**13 22 10.1**	**0.0**
RCJ	**Ross Creek**	**0.47**	**102**		**Pg**	**13 22 11.4**	**+0.1**
N16A	**Rees Ranch, Co**	**0.48**	**74**		**Pg**	**13 22 12.1**	**+0.6**
KLJ	**Keetly**	**0.50**	**105**		**Pg**	**13 22 12.1**	**+0.1**
HLJ	**Hailstone**	**0.51**	**107**		**Pg**	**13 22 12.2**	**+0.1**
LDJ	**Lady**	**0.52**	**110**		**Pg**	**13 22 12.5**	**+0.3**
DCU	**Deer Creek Res**	**0.53**	**131**		**Pg**	**13 22 12.5**	**+0.1**
HEB	**Heber**	**0.60**	**115**		**Pg**	**13 22 14.1**	**+0.4**
TCUT	**Toone Canyon**	**0.60**	**53**		**Pg**	**13 22 14.3**	**+0.5**
TCUT	**Toone Canyon**	**0.60**	**53**	Pg	**Pg**	**13 22 13.8**	**0.0**
TCUT				IAML		13 22 23.8	
	comp=E,11μm,0.6s						
TCUT				IAML		13 22 28.6	
	comp=N,15μm,0.7s						
SPUT	**South Promonto**	**0.63**	**331**		**Pg**	**13 22 14.3**	**0.0**
SPUT				IAML		13 22 24.9	
	comp=N,3μm,0.2s						
HTU	**Hoyt Peak**	**0.63**	**97**		**Pg**	**13 22 14.7**	**+0.3**
EPU	**East Promontor**	**0.69**	**337**		**Pg**	**13 22 15.6**	**+0.2**
DAU	**Daniels Canyon**	**0.69**	**120**		**Pg**	**13 22 16.1**	**+0.6**
WMUT	**West Mountain**	**0.70**	**167**		**Pg**	**13 22 15.8**	**+0.2**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCUT	**Brigham City**	**0.75**	**4**		**Pg**	**13 22 16.9**	**+0.2**
BGU	**Big Grassy Mou**	**0.76**	**283**		**Pg**	**13 22 16.6**	**-0.2**
BGU				IAML		13 22 30.0	
	comp=E,2μm,0.6s						
NLU	**North Lily Min**	**0.80**	**182**		**Pg**	**13 22 17.4**	**-0.2**
MPU	**Maple Canyon**	**0.81**	**157**		**Pg**	**13 22 17.6**	**-0.1**
MPU				IAML		13 22 32.2	
	comp=E,2μm,0.6s						
MPU				IAML		13 22 32.7	
	comp=N,1μm,0.5s						
LHUT	**Little Humpy P**	**0.81**	**80**		**Pb**	**13 22 18.3**	**-0.1**
MCU	**Monte Cristo P**	**0.81**	**30**		**Pg**	**13 22 17.8**	**0.0**
DUG	**Dugway, Tooele**	**0.81**	**226**		**Pg**	**13 22 17.5**	**-0.2**
DUG				IAML		13 22 31.4	
	comp=N,2μm,1.0s						
DUG				IAML		13 22 31.6	
	comp=N,2μm,0.7s						
LTU	**Little Mountai**	**0.84**	**350**		**Pg**	**13 22 18.6**	**+0.2**
WVUT	**Wellsville**	**0.85**	**4**		**Pg**	**13 22 18.6**	**+0.1**
HWUT	**Hardware Ranch**	**0.92**	**23**		**Pg**	**13 22 19.6**	**-0.3**
HWUT				IAML		13 22 34.6	
	comp=N,2μm,0.4s						
HWUT				IAML		13 22 35.1	
	comp=N,2μm,0.3s						
RSUT	**Red Spur Mount**	**1.00**	**28**		**Pg**	**13 22 20.8**	**-0.6**
BSUT	**Blindstream Ca**	**1.00**	**102**	Pg	**Pg**	**13 22 20.9**	**-0.5**
HDU	**Hyde Park**	**1.06**	**11**		**Pg**	**13 22 22.3**	**-0.3**
HVU	**Hansel Valley**	**1.16**	**332**		**Pg**	**13 22 23.4**	**-0.9**
HVU				IAML		13 22 41.8	
	comp=N,3μm,0.3s						
HVU				IAML		13 22 43.1	
	comp=E,2μm,0.6s						
MLI	**Malad Range**	**1.27**	**357**		**Pn**	**13 22 25.8**	**-0.2**
BMUT	**Black Mountain**	**1.34**	**27**		**Pg**	**13 22 28.0**	**+0.1**
BEI	**Bear River Ran**	**1.37**	**8**		**Pb**	**13 22 28.0**	**+0.1**
NPI	**North Pocatell**	**1.43**	**346**		**Pn**	**13 22 28.1**	**-0.1**
L17A	**Cokeville**	**1.60**	**33**		**Pb**	**13 22 32.2**	**+0.4**
P17A	**Butcher Ranch,**	**1.63**	**142**		**Pn**	**13 22 31.4**	**+0.5**
P17A				IAML		13 22 56.1	
	comp=E,511nm,0.8s						
P17A				IAML		13 22 56.9	
	comp=N,612nm,0.7s						
P18A	**Preston Nutter**	**1.78**	**129**	Pn	**Pb**	**13 22 34.8**	**-0.2**
P18A				IAML		13 22 59.2	
	comp=E,588nm,0.5s						
P18A				IAML		13 23 00.6	
	comp=N,613nm,0.7s						
RDMU	**Red Mountain**	**1.89**	**95**		**Pb**	**13 22 36.2**	**-0.6**
RDMU				IAML		13 23 03.6	
	comp=E,331nm,0.7s						
Q16A	**Castle Valley**	**1.96**	**160**	Pn	**Pn**	**13 22 35.4**	**-0.1**
SRU	**San Rafael Swe**	**2.02**	**144**	Pn	**Pn**	**13 22 37.1**	**+0.8**
SRU				IAML		13 23 08.8	
	comp=N,760nm,0.7s						
SRU				IAML		13 23 09.1	
	comp=E,546nm,0.9s						
AHID	**Auburn Hatcher**	**2.13**	**19**		**Pn**	**13 22 39.4**	**+1.6**
TCRU	**Three Creeks R**	**2.17**	**188**		**Pn**	**13 22 39.1**	**+0.7**
TCRU				IAML		13 23 17.0	
	comp=E,477nm,1.0s						
TCRU				IAML		13 23 18.4	
	comp=N,524nm,1.1s						
ELK	**Elko**	**2.42**	**271**		**Pn**	**13 22 43.1**	**+1.2**
PSUT	**Pine Spring**	**2.62**	**213**		**Pn**	**13 22 45.4**	**+0.8**
PSUT				IAML		13 23 27.3	
	comp=N,304nm,0.7s						
PSUT				IAML		13 23 29.2	
	comp=E,391nm,0.9s						
MTPU	**Mount Pierson**	**2.72**	**182**		**Pn**	**13 22 45.5**	**-0.5**
BW06	**Boulder Array**	**2.74**	**42**	Pn	**Pn**	**13 22 46.1**	**-0.1**
BW06				IAML		13 23 28.5	
	comp=E,539nm,0.6s						
BW06				IAML		13 23 33.6	
	comp=E,489nm,0.6s						
PD31	**Pinedale Array**	**2.74**	**42**		**Pn**	**13 22 45.7**	**-0.4**
PDAR	**Pinedale Array**	**2.74**	**42**	Pg	**Pb**	**13 22 50.5**	**-0.7**
	comp=E,33nm,0.3s,baz=220,slow=13,SNR=35						
PDAR				Lg	Lg	13 23 25.2	
	comp=E,126nm,0.3s,baz=224,slow=26,SNR=22						
PDAR	**Pinedale Array**	**2.74**	**42**		**Pn**	**13 22 47.2**	**+1.0**
SNOW	**Snow King Moun**	**2.87**	**19**		**Pn**	**13 22 48.6**	**+0.7**
SNOW				IAML		13 23 34.7	
	comp=E,425nm,0.5s						
SNOW				IAML		13 23 37.1	
	comp=E,418nm,0.9s						
O20A	**White River Ci**	**2.97**	**101**	Pn	**Pn**	**13 22 50.5**	**+1.1**
O20A				IAML		13 23 55.2	
	comp=E,382nm,0.7s						
FXWY	**Fox Creek**	**2.98**	**14**		**Pn**	**13 22 51.0**	**+1.6**
HMU	**Henry Mountain**	**2.99**	**160**		**Pn**	**13 22 51.1**	**+1.4**
HMU				IAML		13 23 40.6	
	comp=N,363nm,0.7s						
HMU				IAML		13 23 46.7	
	comp=E,324nm,0.6s						
LOHW	**Long Hollow**	**3.05**	**20**		**Pn**	**13 22 52.1**	**+1.7**
LOHW				IAML		13 23 40.3	
	comp=E,216nm,0.6s						
LOHW				IAML		13 23 40.5	
	comp=E,342nm,0.9s						
MOOW	**Moose Ponds**	**3.14**	**17**	Pn	**Pn**	**13 22 52.8**	**+1.1**
PV21	**Cone Mtn., Par**	**3.23**	**132**		**Pn**	**13 22 53.6**	**+0.6**
SZCU	**Shurtz Canyon**	**3.26**	**195**		**Pn**	**13 22 54.5**	**+1.1**
SZCU				IAML		13 23 55.1	
	comp=E,101nm,0.5s						
PV23	**Carpenter Ridg**	**3.29**	**134**		**Pn**	**

NVAR	**Mina Array Bea**	**5.36**	**246**	Pn	**Pn**	**13 23 26.1**	**+3.8**
	comp=E,0.6nm,0.3s,baz=64,slow=13,SNR=3.8						
	comp=E,3.2nm,0.6s						
ULM	**Lac du Bonnet**	**14.76**	**45**	Pn	**Pn**	**13 25 29.0**	**-1.6**
	comp=E,0.5nm,0.3s,baz=233,slow=15,SNR=1.1						
	comp=E,21nm,1.1s						

*IDC **18** 13:23:14.3±7.0,31°.22S×179°.57W,h513^{km}±91^{km},mb3.3/4, mbtmp4.2/5,Error ellipse: s-maj=122.5km s-min=35.0km az=5.0*

ISC 18 13:23:09.1±1.9,30°.8S±0°.1×179°.0W±0°.2,h500^{km},n28, σ1^{s}27/39,mb3.8/4,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**7.36**	**196**	P	**P**	**13 24 59.3**	**+0.6**
WMGZ				S	**S**	**13 26 27.4**	**-1.3**
HAZ	**Te Kaha**	**7.47**	**200**	P	**P**	**13 24 58.1**	**-1.7**
HAZ				S	**S**	**13 26 30.5**	**-0.3**
PKGZ	**Pakihiroa**	**7.49**	**198**	P	**P**	**13 24 59.4**	**-0.6**
PKGZ				S	**S**	**13 26 29.4**	**-1.7**
WCZ	**Waipu Caves**	**7.60**	**225**	P	**P**	**13 25 00.8**	**-0.4**
PUZ	**Puketiti**	**7.64**	**197**	P	**P**	**13 25 01.1**	**-0.5**
PUZ				S	**S**	**13 26 32.4**	**-1.5**
OUZ	**Omahuta**	**7.65**	**233**	P	**P**	**13 25 00.9**	**-0.8**
RUGZ	**Raukumara Rang**	**7.69**	**200**	P	**P**	**13 25 00.6**	**-1.7**
RUGZ				S	**S**	**13 26 34.6**	**-0.6**
TWGZ	**Tauwhareparae**	**7.81**	**198**	P	**P**	**13 25 04.2**	**+0.9**
TWGZ				S	**S**	**13 26 39.3**	**+2.1**
CNGZ	**Carnagh Statio**	**8.04**	**196**	P	**P**	**13 25 06.3**	**+0.7**
MWZ	**Matawai**	**8.08**	**200**	P	**P**	**13 25 04.5**	**-1.7**
MWZ				S	**S**	**13 26 43.1**	**+0.7**
TKGZ	**Te Karaka**	**8.09**	**198**	P	**P**	**13 25 03.6**	**-2.6**
TKGZ				S	**S**	**13 26 43.2**	**+0.8**
URZ	**Urewera**	**8.14**	**202**	P	**P**	**13 25 04.7**	**-2.0**
	3.2nm,0.3s,baz=260,slow=2.8,SNR=42						
URZ	**Urewera**	**8.14**	**202**	P	**P**	**13 25 04.6**	**-2.0**
URZ				S	**S**	**13 26 44.2**	**+0.8**
RIGZ	**Rimuhau**	**8.36**	**198**	P	**P**	**13 25 09.9**	**+0.9**
RIGZ				S	**S**	**13 26 49.1**	**+1.4**
MUGZ	**Murupara**	**8.45**	**203**	P	**P**	**13 25 09.8**	**-0.2**
MUGZ				S	**S**	**13 26 50.0**	**+0.6**
MHGZ	**Mahia Peninsul**	**8.75**	**196**	P	**P**	**13 25 13.6**	**+0.6**
RAHZ	**Arahi**	**8.75**	**201**	P	**P**	**13 25 13.0**	**-0.1**
MTHZ	**Maungataniwha**	**8.77**	**202**	P	**P**	**13 25 13.3**	**-0.1**
TLZ	**Tolley Road**	**8.79**	**209**	P	**P**	**13 25 17.0**	**+3.4**
MRHZ	**Matea Rd**	**8.89**	**204**	P	**P**	**13 25 14.7**	**0.0**
NMHZ	**Naumai**	**9.00**	**201**	P	**P**	**13 25 16.6**	**+0.8**
MOO	**Moorlands**	**29.36**	**237**	P	**P**	**13 28 30.2**	**-0.5**
MOO	**Moorlands**	**29.36**	**237**	P	**P**	**13 28 29.8**	**-0.9**
CTA	**Charters Tower**	**33.02**	**280**	P	**P**	**13 29 02.2**	**-0.2**
	6.4nm,1.1s,baz=80,slow=11,SNR=1.4						
	6.4nm,1.1s						
ASAR	**Alice Springs**	**42.24**	**268**	P	**P**	**13 30 18.4**	**+0.3**
	1.0nm,0.5s,baz=107,slow=7.5,SNR=12						
	1.0nm,0.5s						
WRA	**Warramunga Arr**	**43.27**	**273**	P	**P**	**13 30 26.8**	**+0.8**
	2.8nm,0.4s,baz=110,slow=7.8,SNR=38						
	2.8nm,0.4s						
FITZ	**Fitzroy Crossi**	**51.51**	**271**	P	**P**	**13 31 28.6**	**+0.5**
	1.9nm,0.9s,baz=128,slow=6.0,SNR=1.3						
	1.9nm,0.9s						
FINES	**FINESS Array B**	**145.19**	**339**	PKPbc	**PKiKP**	**13 41 53.0**	**+0.4**
	2.4nm,0.4s,baz=53,slow=4.3,SNR=20						

*IDC **18** 13:23:19.1±1.0,40°.81N×112°.11W,h0^{km},mbtmp4.3/3, ML3.3/3,Error ellipse: s-maj=24.0km s-min=7.8km az=140.0*

*NEIC **18** 13:23:19.8±1.2,40°.75N±0°.01×112°.10W±0°.01,h9^{km}±7^{km}, ML3.6/80,ML3.7/13(UUSS),Error ellipse: s-maj=2.1km s-min=1.4km az=207.0*

*UUSS **18** 13:23:19.9±1.2,40°.752N±0°.010×112°.09W±0°.01, h11^{km}±4km,Error ellipse: s-maj=2.0km s-min=0.7km az=46.0*

ISC 18 13:23:20.0±0.8,40°.77N±0°.02×112°.10W±0°.02,h11^{km}±5km, n82,σ0^{s}76/83,Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAIU	**Southern Antel**	**0.11**	**327**		**Pg**	**13 23 23.2**	**+0.2**
SAIU	**Southern Antel**	**0.11**	**327**		**Sg**	**13 23 25.1**	**0.0**
NOQ	**North Oquirrh**	**0.11**	**186**		**Pg**	**13 23 22.9**	**-0.2**
NOQ					**Sg**	**13 23 24.9**	**-0.4**
CAPU	**Utah State Cap**	**0.16**	**86**		**Pg**	**13 23 23.9**	**+0.1**
EOCU	**Emergency Oper**	**0.16**	**86**		**Pg**	**13 23 23.9**	**+0.1**
HRU	**Hogsback Ridge**	**0.17**	**83**		**Pg**	**13 23 23.9**	**0.0**
RBU	**Red Butte Cany**	**0.23**	**86**		**Pg**	**13 23 24.8**	**-0.1**
RBU	**Red Butte Cany**	**0.23**	**86**		**Sg**	**13 23 27.9**	**-0.2**
MHD	**Mile High Driv**	**0.25**	**114**		**Pg**	**13 23 25.1**	**-0.2**
MHD	**Mile High Driv**	**0.25**	**114**		**Sg**	**13 23 28.4**	**-0.5**
NAIU	**Northern Antel**	**0.27**	**339**		**Pg**	**13 23 25.9**	**+0.3**
CTU	**Camp Tracy**	**0.28**	**105**		**Pg**	**13 23 25.4**	**-0.4**
CTU				IAML		13 23 31.1	
	comp=E,7μm,0.4s						
CWU	**Camp Williams**	**0.32**	**180**		**Pg**	**13 23 26.7**	**+0.1**
GMU	**Granite Mounta**	**0.32**	**126**		**Pg**	**13 23 26.2**	**-0.3**
FPU	**Francis Peak**	**0.33**	**38**		**Pg**	**13 23 26.9**	**+0.1**
SNUT	**Stansbury Nort**	**0.33**	**291**		**Sg**	**13 23 32.0**	**+0.8**
SNUT	**Stansbury Nort**	**0.33**	**291**		**Pg**	**13 23 27.0**	**+0.3**
WTU	**Western Traver**	**0.33**	**160**		**Pg**	**13 23 26.9**	**+0.2**
WTU					**Sg**	**13 23 31.5**	**+0.3**
AAU	**Alta**	**0.40**	**116**		**Pg**	**13 23 27.6**	**-0.3**
WBC	**Weber Canyon**	**0.40**	**22**		**Pg**	**13 23 28.1**	**0.0**
TCVU	**Timpanogos Cav**	**0.44**	**137**		**Pg**	**13 23 28.5**	**-0.3**
RCJ	**Ross Creek**	**0.52**	**102**		**Pg**	**13 23 30.0**	**-0.2**
N16A	**Rees Ranch, Co**	**0.52**	**76**		**Pg**	**13 23 30.5**	**+0.3**
KLJ	**Keetly**	**0.55**	**104**		**Pg**	**13 23 30.6**	**-0.2**
HLJ	**Hailstone**	**0.56**	**106**		**Pg**	**13 23 30.7**	**-0.2**
LDJ	**Lady**	**0.56**	**109**		**Pg**	**13 23 31.0**	**0.0**
DCU	**Deer Creek Res**	**0.56**	**129**		**Pg**	**13 23 30.8**	**-0.2**
SPUT	**South Promonto**	**0.60**	**334**	Pg	**Pg**	**13 23 31.8**	**0.0**
SPUT				IAML		13 23 42.6	
	comp=N,4μm,0.2s						
SPUT				IAML		13 23 42.9	
	comp=E,2μm,0.2s						
TCUT	**Toone Canyon**	**0.63**	**56**	Pg	**Pg**	**13 23 32.3**	**-0.1**
HEB	**Heber**	**0.64**	**114**		**Pg**	**13 23 32.5**	**0.0**
EPU	**East Promontor**	**0.67**	**340**		**Pg**	**13 23 33.2**	**+0.2**
HTU	**Hoyt Peak**	**0.68**	**97**		**Pg**	**13 23 33.3**	**0.0**
WMUT	**West Mountain**	**0.72**	**163**		**Pg**	**13 23 33.9**	**-0.1**
BGU	**Big Grassy Mou**	**0.72**	**283**	Pg	**Pg**	**13 23 34.1**	**0.0**
BGU				IAML		13 23 46.2	
	comp=E,4μm,0.4s						
DAU	**Daniels Canyon**	**0.74**	**118**		**Pg**	**13 23 34.6**	**+0.2**
BCUT	**Brigham City**	**0.75**	**7**		**Pg**	**13 23 34.8**	**+0.2**
DUG	**Dugway, Tooele**	**0.79**	**224**		**Pg**	**13 23 35.1**	**-0.1**
DUG	**Dugway, Tooele**	**0.79**	**224**	IAML		13 23 48.0	
	comp=E,3μm,0.8s						
DUG				IAML		13 23 50.1	
	comp=E,1μm,0.6s						
NLU	**North Lily Min**	**0.81**	**178**		**Pg**	**13 23 35.4**	**-0.3**
MCU	**Monte Cristo P**	**0.83**	**33**		**Pg**	**13 23 36.0**	**0.0**
MPU	**Maple Canyon**	**0.83**	**154**		**Pg**	**13 23 35.9**	**-0.2**
LTU	**Little Mountai**	**0.83**	**353**		**Pg**	**13 23 36.3**	**+0.1**
LHUT	**Little Humpy P**	**0.85**	**81**		**Pb**	**13 23 36.8**	**-0.2**
WVUT	**Wellsville**	**0.85**	**7**		**Pg**	**13 23 36.7**	**+0.2**
HWUT	**Hardware Ranch**	**0.93**	**26**		**Pg**	**13 23 37.7**	**-0.3**
HWUT				IAML		13 23 52.0	
	comp=E,2μm,0.2s						
HWUT				IAML		13 23 54.4	
	comp=E,2μm,0.3s						
RSUT	**Red Spur Mount**	**1.01**	**31**		**Pg**	**13 23 39.2**	**-0.4**
BSUT	**Blindstream Ca**	**1.05**	**102**	Pg	**Pg**	**13 23 39.9**	**-0.4**
BSUT				IAML		13 23 56.9	
	comp=N,2μm,0.8s						
HDU	**Hyde Park**	**1.07**	**14**		**Pg**	**13 23 40.6**	**-0.1**
HVU	**Hansel Valley**	**1.13**	**334**		**Pb**	**13 23 41.0**	**-0.7**
HVU				IAML		13 24 00.4	
	comp=N,2μm,0.3s						
HVU				IAML		13 24 01.1	
	comp=E,2μm,0.4s						
FSU	**Fish Springs**	**1.43**	**224**		**Pg**	**13 23 47.7**	**+0.1**
P17A	**Butcher Ranch,**	**1.66**	**141**		**Pn**	**13 23 48.8**	**-0.5**
P17A				IAML		13 24 15.1	
	comp=N,658nm,0.7s						
P18A	**Preston Nutter**	**1.82**	**128**		**Pn**	**13 23 51.6**	**0.0**
P18A				IAML		13 24 17.4	
	comp=E,597nm,0.7s						
P18A				IAML		13 24 17.8	
	comp=N,543nm,0.4s						
RDMU	**Red Mountain**	**1.94**	**95**	Pn	**Pn**	**13 23 53.9**	**+0.7**
RDMU				IAML		13 24 30.4	
	comp=N,337nm,0.8s						
Q16A	**Castle Valley**	**1.98**	**158**	Pn	**Pn**	**13 23 53.5**	**-0.2**
SRU	**San Rafael Swe**	**2.05**	**143**	Pn	**Pn**	**13 23 54.5**	**-0.2**
SRU				IAML		13 24 28.8	
	comp=N,489nm,0.5s						
SRU				IAML		13 24 31.4	
	comp=E,472nm,0.6s						
AHID	**Auburn Hatcher**	**2.13**	**20**	Pn	**Pn**	**13 23 55.8**	**0.0**
TCRU	**Three Creeks R**	**2.17**	**187**	Pn	**Pn**	**13 23 55.7**	**-0.7**
TCRU				IAML		13 24 34.5	
	comp=E,418nm,1.0s						
TCRU				IAML		13 24 40.3	
	comp=N,405nm,1.0s						
IMU	**Iron Mountain**	**2.28**	**201**		**Pb**	**13 24 02.0**	**+0.6**
ELK	**Elko**	**2.38**	**271**	Pn	**Pn**	**13 23 58.4**	**-0.9**
ELK				IAML		13 24 40.0	
	comp=N,200nm,0.4s						
PSUT	**Pine Spring**	**2.61**	**212**	Pn	**Pn**	**13 24 01.6**	**-0.7**
PSUT				IAML		13 24 47.2	
	comp=N,480nm,0.8s						
PSUT				IAML		13 24 49.5	
	comp=E,337nm,1.0s						
MTPU	**Mount Pierson**	**2.72**	**181**	Pn	**Pn**	**13 24 03.5**	**-0.5**
BW06	**Boulder Array**	**2.76**	**43**		**Pn**	**13 24 04.0**	**-0.5**
PDAR	**Pinedale Array**	**2.76**	**43**	Pg	**Pb**	**13 24 09.2**	**-0.4**
	comp=E,45nm,0.3s,baz=218,slow=14,SNR=7.1						
PDAR				Lg	Lg	13 24 46.0	
	comp=E,190nm,0.3s,baz=222,slow=28,SNR=14						
SNOW	**Snow King Moun**	**2.88**	**20**	Pn	**Pn**	**13 24 06.2**	**+0.1**
FXWY	**Fox Creek**	**2.98**	**15**	Pn	**Pn**	**13 24 07.2**	**-0.3**
O20A	**White River Ci**	**3.01**	**101**	Pn	**Pn**	**13 24 08.0**	**+0.1**
MOOW	**Moose Ponds**	**3.15**	**18**	Pn	**Pn**	**13 24 10.6**	**+0.8**
HLID	**Hailey**	**3.28**	**329**	Pn	**Pn**	**13 24 09.7**	**-1.8**
PKCU	**Pink Cliffs**	**3.32**	**183**	Pn	**Pn**	**13 24 09.9**	**-2.4**
PV23	**Carpenter Ridg**	**3.32**	**133**	Pn	**Pn**	**13 24 11.5**	**-0.7**
PV22	**Blue Mesa, Par**	**3.39**	**130**	Pn	**Pn**	**13 24 11.0**	**-2.2**
FLWY	**Flagg Ranch**	**3.47**	**17**	Pn	**Pn**	**13 24 14.6**	**+0.3**
FLWY				IAML		13 25 24.5	
	comp=E,105nm,1.2s						
PV17	**East Wray Mesa**	**3.48**	**135**	Pn	**Pn**	**13 24 14.1**	**-0.2**
PV17				IAML		13 25 13.5	
	comp=N,222nm,0.6s						
PV17				IAML		13 25 22.1	
	comp=E,211nm,1.2s						
KVN	**Kaiserville**	**4.92**	**252**	Pn	**Pn**	**13 24 32.7**	**-1.4**
ISCO	**Idaho Springs**	**5.06**	**99**	Pn	**Pn**	**13 24 36.2**	**+0.1**
ISCO				IAML		13 26 11.4	
	comp=E,33nm,1.5s						
ISCO				IAML		13 26 12.0	
	comp=E,25nm,1.1s						
NV11	**Mina Array Sit**	**5.22**	**245**	Pn	**Pn**	**13 24 37.4**	**-0.9**
NV11				IAML		13 26 10.5	
	comp=N,43nm,1.4s						
NV11				IAML		13 26 17.3	
	comp=E,30nm,1.1s						
NVAR	**Mina Array Bea**	**5.33**	**246**	Pn	**Pn**	**13 24 40.6**	**+0.8**
	comp=E,3.4nm,0.3s,baz=56,slow=14,SNR=5.5						
NVAR				Lg	Lg	13 26 08.4	
	comp=E,9.4nm,0.3s,baz=53,slow=30,SNR=4.5						
	comp=E,5.4nm,0.5s						
J08A	**Circle Bar Ran**	**5.40**	**301**		**Pn**	**13 24 38.9**	**-1.8**
PAHR	**Pah Rah Range**	**5.67**	**262**		**Pn**	**13 24 45.0**	**+0.6**
TXAR	**Lajitas Array**	**13.33**	**146**	Pn	**Pn**	**13 26 32.8**	**+3.5**
	comp=E,0.1nm,0.3s,baz=332,slow=13,SNR=2.0						
	comp=E,5.5nm,1.1s						
ULM	**Lac du Bonnet**	**14.78**	**45**	Pn	**Pn**	**13 26 47.1**	**-1.9**
	comp=E,0.8nm,0.3s,baz=219,slow=13,SNR=2.5						
	comp=E,36nm,1.2s						
WRA	**Warramunga Arr**	**120.41**	**269**	PKP	**PKPdf**	**13 42 11.4**	**-0.4**
	comp=E,0.2nm,0.4s,baz=56,slow=2.0,SNR=7.8						

*HEL **18** 13:30:41.3±0.2,67°.44N×23°.39E,h0^{km},ML1.3,Explosion*
*IDC **18** 13:30:42.3±1.6,67°.42N×23°.63E,h0^{km},mbtmp2.8/2, ML2.1/2,Error ellipse: s-maj=37.6km s-min=10.2km az=93.0*
*BER **18** 13:30:42.8±2.1,67°.41N×23°.00E,h0^{km},ML1.4,Suspected explosion*

ISC 18 13:30:39.9±0.8,67°.43N±0°.02×23°.40E±0°.03,h0^{km},n25, σ1^{s}23/41,Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLF	**Kolari**	**0.30**	**132**	PG	**Pg**	**13 30 46.3**	**+0.8**
	baz=313						
KLF				SG	**Sb**	**13 30 52.8**	**-0.6**
LANU	**Lannavaara**	**0.82**	**320**	PG	**Pg**	**13 30 55.4**	**-0.1**
LANU				SG	**Sg**	**13 31 02.2**	**-3.8**
HEF	**Hetta**	**0.98**	**6**	*eP*	**Pb**	**13 30 59.9**	**+0.1**
HEF				*eS*	**Sn**	**13 31 14.5**	**-1.1**
HEF	**Hetta**	**0.98**	**6**	PB	**Pb**	**13 30 59.3**	**-0.4**
	baz=187						
HEF				smax	smax	13 31 11.1	
	comp=Z,3.8nm,0.2s						
HEF				SB	**Sb**	**13 31 13.9**	**+0.6**
ERTU	**Ertsjaerv**	**1.00**	**209**	PG	**Pg**	**13 30 59.2**	**+0.1**
ERTU				SB	**Sb**	**13 31 13.6**	**-0.2**
RNF	**Rovaniemi**	**1.32**	**128**	PG	**Pn**	**13 31 05.5**	**0.0**
	baz=309						
RNF				SN	**Sn**	**13 31 24.4**	**+0.7**
TOF	**Tornio**	**1.41**	**165**	PN	**Pb**	**13 31 08.2**	**+1.2**
TOF				smax	smax	13 31 24.1	
	comp=Z,1.1nm,0.2s						
KTK1	**Kautokeino**	**1.59**	**358**	*eP*	**Pn**	**13 31 09.2**	**0.0**
KTK1				*eS*	**Sg**	**13 31 31.2**	**+0.5**
KTK1				IAML		13 31 34.4	
	comp=Z,9.2nm,0.5s						
KTK1	**Kautokeino**	**1.59**	**358**	PN	**Pg**	**13 31 10.8**	**+0.5**
KTK1				SN	**Sg**	**13 31 32.5**	**+1.7**
KIF	**Kilpisjarvi**	**1.85**	**330**	*eP*	**Pb**	**13 31 14.4**	**-0.1**
KIF	**Kilpisjarvi**	**1.85**	**330**	PG	**Pg**	**13 31 14.9**	**-0.4**
	baz=147						
KIF				smax	smax	13 31 37.3	
	comp=Z,2.0nm,0.2s						
KIF				SG	**Sg**	**13 31 40.7**	**+1.4**
RANF	**Ranua**	**1.96**	**135**	PG	**Pb**	**13 31 16.4**	**0.0**
RANF				SG	**Sg**	**13 31 42.6**	**-0.1**
RAJF	**Raja-Jooseppi**	**2.13**	**58**	PG	**Pb**	**13 31 19.3**	**+0.1**
ARA0	**ARCESS Array S**	**2.25**	**19**	*eP*	**Pb**	**13 31 20.9**	**-0.4**
ARA0				*eS*	**Sb**	**13 31 49.5**	**-0.2**
ARA0				IAML		13 31 53.8	
	comp=Z,3.3nm,0.7s						
ARA0	**ARCESS Array S**	**2.25**	**19**	PG	**Pb**	**13 31 21.0**	**-0.3**
ARA0				SG	**Sb**	**13 31 50.0**	**+0.4**
ARCES	**ARCESS Array B**	**2.25**	**19**	Pn	**Pb**	**13 31 20.9**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=197,slow=15,SNR=15						
ARCES				Sn	**Sb**	**13 31 49.2**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=201,slow=24,SNR=10						
	comp=Z,2.7nm,0.6s						
VRF	**Varrio**	**2.40**	**80**	PG	**Pb**	**13 31 24.5**	**+0.6**
VRF				smax	smax	13 31 52.3	
	comp=Z,1.6nm,0.2s						
VRF				SG	**Sg**	**13 31 55.8**	**-1.0**
I37NO	**I37NO**	**2.43**	**315**	I	I	13 45 50.0	
	baz=128,slow=327,SNR=3.9						
OLKF	**Oulanka, Finla**	**2.62**	**113**	smax	smax	13 31 58.8	
	comp=Z,1.2nm,0.2s						
OLKF				SG	**Sg**	**13 32 03.7**	**-0.2**
KEV	**Kevo**	**2.68**	**28**	PB	**Pb**	**13 31 27.2**	**-1.5**
KEV				SG	**Sb**	**13 32 03.6**	**+1.6**
MSF	**Maaselka**	**2.71**	**122**	SG	**Sg**	**13 32 05.6**	**-1.4**
KU6	**Riekki**	**2.94**	**116**	PB	**Pb**	**13 31 31.0**	**-2.1**
KU6				smax	smax	13 32 07.8	
	comp=Z,0.5nm,0.2s						
KU6				SG	**Sg**	**13 32 12.4**	**-1.8**
BURU	**Burvik**	**2.98**	**197**	SB	**Sb**	**13 32 09.3**	**-1.4**
KU1	**Kurvinen**	**3.10**	**124**	PB	**Pb**	**13 31 33.2**	**-2.6**
FINES	**FINESS Array B**	**6.12**	**168**	Pn	**Pn**	**13 32 14.3**	**+2.8**
	comp=Z,0.2nm,0.3s,baz=354,slow=13,SNR=4.0						
FINES				Sn	**Sn**	**13 33 22.3**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=350,slow=23,SNR=1.6						
	comp=Z,1.9nm,0.8s						

*NEIC **18** 13:32:29.8±1.2,40°.748N±0°.004×112°.05W±0°.02, h7^{km}±2^{km},ML3.9/100,ML3.9/9(UUSS),Mwr3.9/11(SLM), Error ellipse: s-maj=2.0km s-min=0.4km az=78.0*

*UUSS **18** 13:32:29.9±1.2,40°.76N±0°.02×112°.05W±0°.02,h10^{km}±4km, Error ellipse: s-maj=2.5km s-min=1.9km az=219.0*

*NEIC **18** 13:32:29,40°.75N×112°.06W,h13^{km},Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-7.99; $M_{\theta\theta}$0.00; $M_{\phi\phi}$7.99; $M_{r\theta}$3.26; $M_{r\phi}$-3.26; $M_{\theta\phi}$0.00; Fault plane solution: $M_0$9.23000×10^{14} NP1:ϕ_s321.00000°, δ52.00000°,λ-117.00000°. NP2:ϕ_s180.00000°, δ45.00000°,λ-60.00000°. Principal axes: T 9.2247, Plg4.0000°, Azm69.0000°; N 0.0000, Plg21.0000°, Azm338.0000°; P -9.2247, Plg69.0000°, Azm169.0000°;*

*IDC **18** 13:32:30.1±0.6,40°.82N×111.99W,h0^{km},mb3.8/5, mbtmp3.8/11,ML3.3/5 Error ellipse: s-maj=12.3km s-min=5.5km az=149.0*

ISC 18 13:32:30.2±1.0,40°.76N±0°.02×112°.06W±0°.02,h5^{km}±7^{km}, n123,σ0^{s}92/120,mb4.0/5,Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOQ	**North Oquirrh**	**0.12**	**204**		**Pg**	**13 32 32.9**	**+0.1**
NOQ					**Sg**	**13 32 35.0**	**+0.5**
CAPU	**Utah State Cap**	**0.13**	**83**		**Pg**	**13 32 33.4**	**+0.5**
EOCU	**Emergency Oper**	**0.13**	**84**		**Pg**	**13 32 33.3**	**+0.4**
HRU	**Hogsback Ridge**	**0.13**	**80**		**Pg**	**13 32 33.2**	**+0.3**
RBU	**Red Butte Cany**	**0.19**	**85**		**Pg**	**13 32 34.1**	**0.0**
MHD	**Mile High Driv**	**0.22**	**118**		**Pg**	**13 32 34.5**	**0.0**
CTU	**Camp Tracy**	**0.24**	**107**		**Pg**	**13 32 34.9**	**-0.1**
CTU					**Sg**	**13 32 38.1**	**-0.1**
CTU	**Camp Tracy**	**0.24**	**107**	IAML		13 32 38.4	
	comp=E,9μm,0.5s						
CTU				IAML		13 32 38.5	
	comp=N,10μm,0.6s						
NAIU	**Northern Antel**	**0.28**	**333**		**Pg**	**13 32 36.1**	**+0.3**
GMU	**Granite Mounta**	**0.29**	**130**		**Pg**	**13 32 35.8**	**-0.2**
FPU	**Francis Peak**	**0.31**	**32**		**Pg**	**13 32 36.6**	**+0.2**
CWU	**Camp Williams**	**0.32**	**186**		**Pg**	**13 32 36.4**	**-0.1**
WTU	**Western Traver**	**0.32**	**166**		**Pg**	**13 32 36.6**	**+0.1**
AAU	**Alta**	**0.36**	**118**		**Pg**	**13 32 37.2**	**-0.2**
SNUT	**Stansbury Nort**	**0.36**	**290**		**Pg**	**13 32 37.4**	**+0.1**
WBC	**Weber Canyon**	**0.39**	**17**		**Pg**	**13 32 37.9**	**0.0**
TCVU	**Timpanogos Cav**	**0.42**	**140**		**Pg**	**13 32 38.0**	**-0.4**
RCJ	**Ross Creek**	**0.48**	**102**		**Pg**	**13 32 39.4**	**-0.1**
N16A	**Rees Ranch, Co**	**0.49**	**75**		**Pg**	**13 32 40.0**	**+0.4**
KLJ	**Keetly**	**0.51**	**105**		**Pg**	**13 32 39.8**	**-0.4**
HLJ	**Hailstone**	**0.52**	**107**		**Pg**	**13 32 40.2**	**-0.1**
LDJ	**Lady**	**0.53**	**110**		**Pg**	**13 32 40.4**	**0.0**
DCU	**Deer Creek Res**	**0.53**	**131**		**Pg**	**13 32 40.3**	**-0.2**
TCUT	**Toone Canyon**	**0.60**	**54**		**Pg**	**13 32 42.2**	**+0.3**
TCUT	**Toone Canyon**	**0.60**	**54**	Pg	**Pg**	**13 32 41.8**	**-0.1**
TCUT				IAML		13 32 57.4	
	comp=E,13μm,0.6s						
TCUT				IAML		13 32 57.4	
	comp=N,23μm,0.5s						
HEB	**Heber**	**0.61**	**115**		**Pg**	**13 32 42.0**	**+0.1**
SPUT	**South Promonto**	**0.62**	**331**		**Pg**	**13 32 42.5**	**+0.4**
SPUT				IAML		13 32 56.2	
	comp=N,4μm,0.4s						
HTU	**Hoyt Peak**	**0.64**	**98**		**Pg**	**13 32 42.7**	**+0.1**
EPU	**East Promontor**	**0.68**	**337**		**Pg**	**13 32 43.5**	**+0.2**
DAU	**Daniels Canyon**	**0.70**	**120**		**Pb**	**13 32 44.0**	**-1.2**
WMUT	**West Mountain**	**0.71**	**166**		**Pg**	**13 32 43.7**	**-0.2**
BCUT	**Brigham City**	**0.75**	**4**		**Pb**	**13 32 45.1**	**-0.8**
BGU	**Big Grassy Mou**	**0.76**	**283**		**Pg**	**13 32 44.8**	**0.0**
BGU					**Sg**	**13 32 55.0**	**+0.4**
BGU	**Big Grassy Mou**	**0.76**	**283**	IAML		13 32 57.3	
	comp=N,4μm,0.5s						
BGU				IAML		13 32 58.1	
	comp=E,6μm,0.6s						
NLU	**North Lily Min**	**0.81**	**181**		**Pg**	**13 32 45.4**	**-0.3**
NLU	**North Lily Min**	**0.81**	**181**	IAML		13 33 00.2	
	comp=E,3μm,0.7s						
DUG	**Dugway, Tooele**	**0.81**	**226**		**Pb**	**13 32 45.9**	**-1.0**
DUG				IAML		13 32 59.0	
	comp=E,4μm,0.6s						
DUG				IAML		13 33 00.5	
	comp=E,4μm,0.5s						
MCU	**Monte Cristo P**	**0.81**	**31**		**Pg**	**13 32 45.7**	**-0.2**
LHUT	**Little Humpy P**	**0.81**	**81**		**Pb**	**13 32 46.2**	**-1.0**
MPU	**Maple Canyon**	**0.81**	**156**	Pg	**Pg**	**13 32 45.6**	**-0.2**
MPU				IAML		13 32 59.9	
	comp=N,5μm,0.3s						
MPU				IAML		13 33 00.0	
	comp=E,5μm,0.6s						
LTU	**Little Mountai**	**0.84**	**350**		**Pg**	**13 32 46.5**	**+0.1**
WVUT	**Wellsville**	**0.85**	**5**		**Pg**	**13 32 46.5**	**0.0**
HWUT	**Hardware Ranch**	**0.92**	**24**	Pg

PV14	**Lion Creek, Pa**	**3.35**	**135**	Pn	**Pn**	**13 33 23.4**	**-0.1**
PV14				IAML		13 34 19.2	
	comp=E,387nm,0.8s						
PV14				IAML		13 34 23.4	
	comp=N,442nm,0.8s						
PV04	**Paradox Valley**	**3.40**	**133**		**Pn**	**13 33 23.8**	**-0.3**
PV04				IAML		13 34 30.8	
	comp=E,381nm,0.8s						
PV19	**Morning Glory**	**3.41**	**135**		**Pn**	**13 33 22.6**	**-1.8**
PV16	**Nyswonger Mesa**	**3.45**	**134**		**Pn**	**13 33 23.9**	**-0.9**
FLWY	**Flagg Ranch**	**3.46**	**16**		**Pn**	**13 33 26.0**	**+0.9**
FLWY				IAML		13 34 23.8	
	comp=E,300nm,1.1s						
PV11	**David Mesa, Pa**	**3.48**	**134**		**Pn**	**13 33 24.8**	**-0.5**
PV12	**Saucer Basin,**	**3.51**	**133**		**Pn**	**13 33 25.1**	**-0.5**
PV05	**Paradox Valley**	**3.53**	**139**		**Pn**	**13 33 24.7**	**-1.3**
PV05				IAML		13 34 24.2	
	comp=N,440nm,0.6s						
PV13	**Radium Mtn., P**	**3.61**	**135**	Pn	**Pn**	**13 33 25.9**	**-1.2**
PV13				IAML		13 34 33.7	
	comp=E,360nm,1.1s						
PV13				IAML		13 34 38.8	
	comp=N,316nm,0.8s						
PV02	**Paradox Valley**	**3.62**	**134**		**Pn**	**13 33 27.1**	**-0.1**
YPP	**Pitchstone Pla**	**3.62**	**14**		**Pn**	**13 33 27.3**	**-0.1**
YPP				IAML		13 34 32.9	
	comp=E,161nm,0.8s						
YPP				IAML		13 34 34.1	
	comp=N,139nm,0.9s						
PV15	**Paradox Valley**	**3.67**	**130**		**Pn**	**13 33 27.3**	**-0.7**
PV01	**Paradox Valley**	**3.77**	**133**		**Pn**	**13 33 28.7**	**-0.5**
PV01				IAML		13 34 32.3	
	comp=N,165nm,0.6s						
PV01				IAML		13 34 35.3	
	comp=E,215nm,0.7s						
KNB	**Kanab**	**3.79**	**189**		**Pn**	**13 33 28.9**	**-0.7**
LCMT	**Little Creek M**	**3.86**	**194**		**Pn**	**13 33 30.6**	**+0.1**
LCMT				IAML		13 34 37.4	
	comp=E,136nm,0.4s						
YMR	**Madison River**	**3.98**	**11**		**Pn**	**13 33 31.8**	**-0.4**
YMR				IAML		13 34 52.6	
	comp=N,195nm,1.0s						
YMR				IAML		13 35 00.1	
	comp=E,191nm,0.9s						
YHB	**Horse Butte**	**4.04**	**9**		**Pn**	**13 33 31.6**	**-1.4**
YHB				IAML		13 34 44.8	
	comp=E,112nm,0.9s						
YHB				IAML		13 34 45.7	
	comp=N,94nm,1.0s						
QLMT	**Earthquake Lak**	**4.09**	**6**		**Pn**	**13 33 33.1**	**-0.6**
MCMT	**McKenzie Canyo**	**4.10**	**352**		**Pn**	**13 33 33.0**	**-0.9**
YHH	**Holmes Hill**	**4.12**	**12**		**Pn**	**13 33 34.9**	**+0.7**
U15A	**North Rim**	**4.33**	**183**		**Pn**	**13 33 35.3**	**-1.8**
U15A				IAML		13 35 15.1	
	comp=E,98nm,1.3s						
YNE	**Yellowstone No**	**4.50**	**19**		**Pn**	**13 33 39.5**	**+0.2**
YNE				IAML		13 34 59.4	
	comp=E,78nm,0.4s						
DLMT	**Dillon**	**4.61**	**355**	Pn	**Pn**	**13 33 40.2**	**-0.6**
DLMT				IAML		13 35 02.3	
	comp=E,74nm,1.5s						
DLMT				IAML		13 35 23.6	
	comp=E,72nm,1.8s						
RLMT	**Red Lodge**	**4.81**	**24**		**Pn**	**13 33 43.2**	**-0.4**
RLMT				IAML		13 35 02.2	
	comp=E,63nm,0.5s						
RLMT				IAML		13 35 06.3	
	comp=E,54nm,1.1s						
ISCO	**Idaho Springs**	**5.02**	**99**	Pn	**Pn**	**13 33 47.8**	**+1.2**
ISCO				IAML		13 35 16.3	
	comp=E,47nm,1.9s						
NVAR	**Mina Array Bea**	**5.36**	**246**	Pn	**Pn**	**13 33 53.6**	**+2.5**
	comp=E,2.1nm,0.3s,baz=58,slow=14,SNR=4.5						
NVAR				Lg	Lg	13 35 17.6	
	comp=E,6.1nm,0.3s,baz=60,slow=25,SNR=2.7						
	comp=E,7.9nm,0.7s						
NVAR	**Mina Array Bea**	**5.36**	**246**	Pn	**Pn**	**13 33 51.8**	**+0.6**
ANMO	**Albuquerque**	**7.30**	**141**	Pg	Pg	13 34 44.6	-5.5
	comp=E,0.6nm,0.3s,baz=322,slow=16,SNR=8.4						
ANMO				Lg	Lg	13 36 14.8	
	comp=E,0.6nm,0.3s,baz=250,slow=20,SNR=3.9						
PFO	**Pinyon Flats O**	**7.96**	**208**	Pn	**Pn**	**13 34 30.8**	**+4.1**
	comp=E,0.2nm,0.3s,baz=90,slow=14,SNR=4.0						
PFO				Lg	Lg	13 36 40.0	
	comp=E,0.2nm,0.3s,baz=216,slow=22,SNR=2.5						
	comp=E,3.9nm,1.1s						
NEW	**Newport**	**8.32**	**336**	Lg	Lg	13 36 49.8	
	comp=E,0.7nm,0.3s,baz=64,slow=19,SNR=4.3						
TXAR	**Lajitas Array**	**13.30**	**146**	Pn	**Pn**	**13 35 42.0**	**+2.1**
	comp=E,0.1nm,0.3s,baz=331,slow=11,SNR=4.4						
	comp=E,1.0nm,0.8s						
ULM	**Lac du Bonnet**	**14.76**	**45**	Pn	**Pn**	**13 35 57.9**	**-1.7**
	comp=E,0.4nm,0.3s,baz=226,slow=13,SNR=1.6						
	comp=E,4.3nm,0.9s						
YKA	**Yellowknife Ar**	**21.82**	**357**	P	**P**	**13 37 21.7**	**-1.4**
	comp=E,0.9nm,0.8s,baz=185,slow=9.2,SNR=5.5						
	comp=E,0.9nm,0.8s						
ILAR	**Eielson Array**	**31.25**	**332**	P	**P**	**13 38 51.7**	**+1.1**
	comp=E,0.2nm,0.7s,baz=121,slow=6.8,SNR=2.1						
	comp=E,0.2nm,0.7s						
BVAR	**Borovoye Array**	**86.56**	**359**	P	**P**	**13 45 14.3**	**+0.1**
	comp=E,0.6nm,0.6s,baz=35,slow=3.5,SNR=2.7						
	comp=E,0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**88.52**	**353**	P	**P**	**13 45 24.1**	**+0.4**
	comp=E,0.5nm,0.3s,baz=35,slow=3.4,SNR=1.4						
	comp=E,0.5nm,0.3s						
PLCA	**Paso Flores**	**89.46**	**150**	P	**P**	**13 45 30.3**	**+2.2**
	comp=E,1.2nm,0.9s,baz=70,slow=4.2,SNR=3.0						
	comp=E,1.2nm,0.9s						
WRA	**Warramunga Arr**	**120.44**	**269**	PKP	**PKPdf**	**13 51 22.2**	**-0.9**
	comp=E,0.5nm,0.6s,baz=53,slow=1.7,SNR=6.6						
ASAR	**Alice Springs**	**122.91**	**266**	PKP	**PKPdf**	**13 51 26.1**	**-1.7**
	comp=E,0.2nm,0.6s,baz=85,slow=2.5,SNR=5.0						

*IDC **18** 13:36:37.1±1.0,40.82N×111.99W,h0km,mbtmp3.2/3, ML3.4/3,Error ellipse: s-maj=16.1km s-min=6.0km az=153.0*

*NEIC **18** 13:36:37.8±1.1,40.74N±0.02×112.08W±0.02,h11km±5km, ML3.6/135,ML3.5/18(UUSS),Error ellipse: s-maj=2.4km s-min=2.3km az=218.0*

*UUSS **18** 13:36:38.1±1.1,40.75N±0.02×112.07W±0.02,h10km±5km, Error ellipse: s-maj=2.3km s-min=2.2km az=170.0*

ISC 18 13:36:38.4±0.8, 40.76N±0.02×112.08W±0.02, h10km±6km, n121, σ0.92/122, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOQ	**North Oquirrh**	**0.11**	**198**		**Pg**	**13 36 41.0**	**-0.3**
NOQ					**Sg**	**13 36 42.9**	**-0.4**
SAIU	**Southern Antel**	**0.13**	**321**		**Pg**	**13 36 41.5**	**0.0**
SAIU	**Southern Antel**	**0.13**	**321**		**Sg**	**13 36 43.6**	**-0.1**
CAPU	**Utah State Cap**	**0.14**	**81**		**Pg**	**13 36 41.7**	**0.0**
CAPU					**Sg**	**13 36 44.3**	**+0.2**
HRU	**Hogsback Ridge**	**0.15**	**78**		**Pg**	**13 36 41.7**	**-0.2**
RBU	**Red Butte Cany**	**0.20**	**83**		**Pg**	**13 36 42.5**	**-0.2**
RBU	**Red Butte Cany**	**0.20**	**83**		**Sg**	**13 36 45.6**	**-0.1**
MHD	**Mile High Driv**	**0.23**	**114**		**Pg**	**13 36 42.9**	**-0.3**
CTU	**Camp Tracy**	**0.26**	**104**		**Pg**	**13 36 43.4**	**-0.3**
CTU				IAML		13 36 46.9	
	comp=N,5μm,0.5s						
NAIU	**Northern Antel**	**0.28**	**336**		**Pg**	**13 36 44.4**	**+0.2**
GMU	**Granite Mounta**	**0.30**	**127**		**Pg**	**13 36 44.0**	**-0.4**
CWU	**Camp Williams**	**0.31**	**184**		**Pg**	**13 36 44.6**	**-0.1**
WTU	**Western Traver**	**0.32**	**163**		**Pg**	**13 36 44.8**	**0.0**
FPU	**Francis Peak**	**0.33**	**34**		**Pg**	**13 36 45.1**	**+0.1**
SNUT	**Stansbury Nort**	**0.35**	**292**		**Pg**	**13 36 45.6**	**+0.2**
AAU	**Alta**	**0.37**	**116**		**Pg**	**13 36 45.5**	**-0.3**
WBC	**Weber Canyon**	**0.41**	**19**		**Pg**	**13 36 46.5**	**0.0**
TCVU	**Timpanogos Cav**	**0.42**	**138**		**Pg**	**13 36 46.4**	**-0.3**
RCJ	**Ross Creek**	**0.49**	**101**		**Pg**	**13 36 47.9**	**-0.2**
N16A	**Rees Ranch, Co**	**0.50**	**75**		**Pb**	**13 36 48.4**	**-1.0**
KLJ	**Keetly**	**0.53**	**104**		**Pg**	**13 36 48.4**	**-0.2**
HLJ	**Hailstone**	**0.53**	**106**		**Pg**	**13 36 48.6**	**-0.2**
LDJ	**Lady**	**0.54**	**109**		**Pb**	**13 36 48.8**	**-1.2**
DCU	**Deer Creek Res**	**0.54**	**129**		**Pg**	**13 36 48.7**	**-0.2**
HEB	**Heber**	**0.62**	**114**		**Pb**	**13 36 50.4**	**-1.0**
SPUT	**South Promonto**	**0.62**	**333**		**Pg**	**13 36 50.2**	**-0.3**
TCUT	**Toone Canyon**	**0.62**	**54**		**Pb**	**13 36 50.6**	**-0.9**
TCUT	**Toone Canyon**	**0.62**	**54**		**Pg**	**13 36 50.4**	**-0.1**
TCUT				IAML		13 37 05.8	
	comp=N,10μm,0.4s						
TCUT				IAML		13 37 06.4	
	comp=E,8μm,0.5s						
HTU	**Hoyt Peak**	**0.66**	**97**		**Pb**	**13 36 51.1**	**-1.0**
EPU	**East Promontor**	**0.68**	**338**		**Pb**	**13 36 51.7**	**-0.8**
WMUT	**West Mountain**	**0.70**	**165**		**Pg**	**13 36 51.5**	**-0.5**
DAU	**Daniels Canyon**	**0.71**	**119**		**Pb**	**13 36 52.3**	**-0.7**
BGU	**Big Grassy Mou**	**0.74**	**283**	Pg	**Pg**	**13 36 52.4**	**-0.4**
BGU				IAML		13 37 05.1	
	comp=N,2μm,0.4s						
BGU				IAML		13 37 05.9	
	comp=E,3μm,0.5s						
BCUT	**Brigham City**	**0.76**	**5**		**Pb**	**13 36 53.3**	**-0.5**
DUG	**Dugway, Tooele**	**0.79**	**225**		**Pg**	**13 36 53.4**	**-0.3**
DUG				IAML		13 37 06.9	
	comp=E,2μm,0.7s						
DUG				IAML		13 37 09.9	
	comp=E,2μm,0.6s						
NLU	**North Lily Min**	**0.80**	**180**		**Pg**	**13 36 53.0**	**-0.9**
NLU				IAML		13 37 07.9	
	comp=N,1μm,0.4s						
MPU	**Maple Canyon**	**0.81**	**155**		**Pg**	**13 36 53.5**	**-0.6**
MPU				IAML		13 37 08.1	
	comp=N,2μm,0.5s						
MPU				IAML		13 37 09.9	
	comp=E,1μm,0.4s						
MCU	**Monte Cristo P**	**0.83**	**31**		**Pg**	**13 36 54.1**	**-0.2**
WVUT	**Wellsville**	**0.86**	**6**		**Pb**	**13 36 54.9**	**-0.7**
HWUT	**Hardware Ranch**	**0.93**	**24**	Pg	**Pg**	**13 36 55.3**	**-1.1**
HWUT				IAML		13 37 11.8	
	comp=E,2μm,0.4s						
HWUT				IAML		13 37 12.1	
	comp=E,1μm,0.4s						
BSUT	**Blindstream Ca**	**1.02**	**102**		**Pg**	**13 36 56.8**	**-1.3**
BSUT				IAML		13 37 15.1	
	comp=N,2μm,0.7s						
HDU	**Hyde Park**	**1.07**	**12**		**Pg**	**13 36 58.6**	**-0.4**
HVU	**Hansel Valley**	**1.15**	**333**		**Pb**	**13 36 59.1**	**-1.4**
HVU				IAML		13 37 19.3	
	comp=N,890nm,0.4s						
HVU				IAML		13 37 21.2	
	comp=E,1μm,0.5s						
MLI	**Malad Range**	**1.27**	**358**		**Pn**	**13 37 02.0**	**-0.4**
EMUT	**Emma Park**	**1.35**	**134**		**Pg**	**13 37 03.6**	**-0.6**
BMUT	**Black Mountain**	**1.36**	**28**		**Pg**	**13 37 04.9**	**+0.4**
BEI	**Bear River Ran**	**1.38**	**9**		**Pb**	**13 37 04.1**	**-0.3**
FLU	**Fool Peak**	**1.38**	**183**		**Pn**	**13 37 02.9**	**-0.9**
FSU	**Fish Springs**	**1.44**	**225**		**Pb**	**13 37 05.0**	**-0.4**
ARGU	**Argyle Ridge**	**1.50**	**128**		**Pg**	**13 37 06.2**	**-1.0**
SNO	**Snow College**	**1.50**	**164**		**Pb**	**13 37 05.7**	**-0.8**
DCM	**Dugout Coal Mi**	**1.56**	**132**		**Pb**	**13 37 07.2**	**-0.3**
P17A	**Butcher Ranch,**	**1.64**	**141**		**Pn**	**13 37 07.1**	**-0.3**
P17A				IAML		13 37 32.6	
	comp=N,399nm,0.7s						
ROA	**Roan Cliffs**	**1.71**	**129**		**Pb**	**13 37 09.5**	**-0.6**
BCE	**Book Cliffs Ea**	**1.71**	**131**		**Pb**	**13 37 09.4**	**-0.7**
WCU	**Willow Creek**	**1.79**	**180**		**Pn**	**13 37 09.3**	**-0.3**
P18A	**Preston Nutter**	**1.80**	**128**		**Pn**	**13 37 09.7**	**-0.1**
P18A				IAML		13 37 35.4	
	comp=E,360nm,0.4s						
P18A				IAML		13 37 35.5	
	comp=N,286nm,0.3s						
RDMU	**Red Mountain**	**1.92**	**95**		**Pn**	**13 37 10.6**	**-0.7**
Q16A	**Castle Valley**	**1.96**	**159**		**Pn**	**13 37 10.9**	**-1.0**
SRU	**San Rafael Swe**	**2.03**	**144**		**Pn**	**13 37 12.0**	**-0.8**
SRU				IAML		13 37 44.5	
	comp=N,405nm,0.6s						
SRU				IAML		13 37 45.2	
	comp=E,389nm,0.5s						
AHID	**Auburn Hatcher**	**2.14**	**20**	Pn	**Pn**	**13 37 14.1**	**-0.2**
TCRU	**Three Creeks R**	**2.16**	**188**		**Pn**	**13 37 14.6**	**-0.1**
TCRU				IAML		13 37 52.0	
	comp=N,281nm,0.8s						
TCRU				IAML		13 37 52.3	
	comp=E,369nm,1.0s						
IMU	**Iron Mountain**	**2.28**	**202**		**Pb**	**13 37 19.3**	**-0.4**
NMUT	**North Mineral**	**2.31**	**195**		**Pb**	**13 37 19.6**	**-0.7**
WLD	**Wild Horse Can**	**2.37**	**195**		**Pg**	**13 37 22.9**	**-1.0**
ELK	**Elko**	**2.40**	**271**	Pn	**Pb**	**13 37 20.4**	**-1.4**
	comp=E,10nm,0.3s,baz=91,slow=10,SNR=10						
ELK				Lg	Lg	13 37 54.4	
	comp=E,33nm,0.3s,baz=314,slow=16,SNR=8.4						
	comp=E,23nm,0.3s						
ELK	**Elko**	**2.40**	**271**		**Pn**	**13 37 18.6**	**+0.6**
PSUT	**Pine Spring**	**2.61**	**212**	Pn	**Pn**	**13 37 21.2**	**+0.4**
PSUT				IAML		13 38 01.2	
	comp=N,308nm,0.6s						
PSUT				IAML		13 38 04.8	
	comp=E,343nm,0.7s						
MTPU	**Mount Pierson**	**2.71**	**182**		**Pn**	**13 37 23.0**	**+0.6**
BW06	**Boulder Array**	**2.75**	**42**		**Pn**	**13 37 23.6**	**+0.7**
BW06				IAML		13 38 05.7	
	comp=E,342nm,0.4s						
BW06				IAML		13 38 06.4	
	comp=E,264nm,0.5s						
PD31	**Pinedale Array**	**2.75**	**42**		**Pn**	**13 37 23.3**	**+0.5**
PDAR	**Pinedale Array**	**2.75**	**42**	Pg	**Pb**	**13 37 26.5**	**-1.3**
	comp=E,52nm,0.3s,baz=220,slow=14,SNR=39						
PDAR				Lg	Lg	13 38 01.5	
	comp=E,128nm,0.3s,baz=220,slow=29,SNR=24						
PDAR	**Pinedale Array**	**2.75**	**42**		**Pn**	**13 37 24.3**	**+1.5**
SNOW	**Snow King Moun**	**2.88**	**20**		**Pn**	**13 37 24.1**	**-0.4**
SNOW				IAML		13 38 11.2	
	comp=E,287nm,0.5s						
SNOW				IAML		13 38 20.5	
	comp=E,268nm,1.1s						
FXWY	**Fox Creek**	**2.98**	**15**		**Pn**	**13 37 27.2**	**+1.2**
O20A	**White River Ci**	**2.99**	**101**		**Pn**	**13 37 26.2**	**+0.2**
O20A				IAML		13 38 18.3	
	comp=E,245nm,0.5s						
O20A				IAML		13 38 23.0	
	comp=E,319nm,0.6s						
HMU	**Henry Mountain**	**3.00**	**159**		**Pn**	**13 37 26.3**	**+0.1**
HMU				IAML		13 38 16.6	
	comp=N,202nm,0.7s						
HMU				IAML		13 38 21.9	
	comp=E,186nm,0.6s						
LOHW	**Long Hollow**	**3.06**	**20**	Pn	**Pn**	**13 37 28.1**	**+1.1**
LOHW				IAML		13 38 16.8	
	comp=E,139nm,0.5s						
LOHW				IAML		13 38 17.0	
	comp=E,185nm,0.7s						
MOOW	**Moose Ponds**	**3.15**	**18**		**Pn**	**13 37 28.4**	**+0.2**
PV21	**Cone Mtn., Par**	**3.25**	**131**		**Pn**	**13 37 29.9**	**+0.3**
SZCU	**Shurtz Canyon**	**3.25**	**194**		**Pn**	**13 37 30.1**	**+0.5**
SZCU				IAML		13 38 25.4	
	comp=N,75nm,0.4s						
SZCU				IAML		13 38 29.6	
	comp=E,96nm,0.6s						
HLID	**Hailey**	**3.30**	**329**		**Pn**	**13 37 31.4**	**+1.1**
PV23	**Carpenter Ridg**	**3.30**	**133**	Pn	**Pn**	**13 37 30.2**	**-0.2**
PKCU	**Pink Cliffs**	**3.31**	**183**		**Pn**	**13 37 31.6**	**+1.1**
PKCU				IAML		13 38 33.9	
	comp=E,85nm,0.6s						
PKCU				IAML		13 38 49.2	
	comp=N,67nm,1.3s						
PV10	**Paradox Valley**	**3.34**	**134**	Pn	**Pn**	**13 37 32.0**	**+1.1**
PV14	**Lion Creek, Pa**	**3.35**	**134**		**Pn**	**13 37 30.9**	**-0.1**
PV14				IAML		13 38 27.2	
	comp=E,206nm,0.6s						
CCUT	**Cedar City**	**3.35**	**198**		**Pn**	**13 37 32.0**	**+1.0**
CCUT				IAML		13 38 30.0	
	comp=E,83nm,0.9s						
CCUT				IAML		13 38 33.5	
	comp=N,70nm,0.6s						
PV22	**Blue Mesa, Par**	**3.37**	**130**	Pn	**Pn**	**13 37 32.1**	**+0.8**
PV04	**Paradox Valley**	**3.40**	**133**	Pn	**Pn**	**13 37 32.2**	**+0.6**
PV20	**West Nyswonger**	**3.40**	**134**		**Pn**	**13 37 32.4**	**+0.7**
PV19	**Morning Glory**	**3.42**	**135**		**Pn**	**13 37 32.3**	**+0.4**
PV17	**East Wray Mesa**	**3.45**	**135**		**Pn**	**13 37 32.7**	**+0.3**
PV17				IAML		13 38 31.1	
	comp=E,127nm,0.7s						
PV17				IAML		13 38 37.5	
	comp=N,109nm,1.0s						
PV16	**Nyswonger Mesa**	**3.45**	**134**		**Pn**	**13 37 33.3**	**+0.9**
FLWY	**Flagg Ranch**	**3.48**	**17**		**Pn**	**13 37 31.9**	**-0.9**
FLWY				IAML		13 38 32.7	
	comp=N,63nm,1.5s						
PV11	**David Mesa, Pa**	**3.49**	**134**		**Pn**	**13 37 32.8**	**-0.1**
PV18	**Skein Mesa, Pa**	**3.50**	**135**		**Pn**	**13 37 33.4**	**+0.3**
PV18				IAML		13 38 27.1	
	comp=E,200nm,0.8s						
PV18				IAML		13 38 32.5	
	comp=N,210nm,0.9s						
PV12	**Saucer Basin,**	**3.51**	**133**		**Pn**	**13 37 33.8**	**+0.6**
PV07	**Paradox Valley**	**3.52**	**130**		**Pn**	**13 37 33.6**	**+0.3**
PV07				IAML		13 38 34.9	
	comp=N,184nm,1.1s						
PV05	**Paradox Valley**	**3.53**	**138**		**Pn**	**13 37 34.2**	**+0.8**
PV05				IAML		13 38 43.5	
	comp=N,184nm,0.6s						
PV03	**Paradox Valley**	**3.53**	**134**		**Pn**	**13 37 34.2**	**+0.8**
PV03				IAML		13 38 32.2	
	comp=N,124nm,0.5s						
PV03				IAML		13 38 33.1	
	comp=E,159nm,0.7s						
PV13	**Radium Mtn., P**	**3.62**	**135**	Pn	**Pn**	**13 37 34.7**	**0.0**
PV13				IAML		13 38 35.1	
	comp=E,167nm,0.9s						
PV13				IAML		13 38 37.2	
	comp=N,138nm,0.7s						
PV02	**Paradox Valley**	**3.63**	**134**		**Pn**	**13 37 35.4**	**+0.6**
YPP	**Pitchstone Pla**	**3.64**	**15**		**Pn**	**13 37 37.3**	**+2.3**
HAYD	**Hayden**	**3.67**	**92**		**Pn**	**13 37 35.8**	**+0.4**
HAYD				IAML		13 38 47.0	
	comp=E,130nm,0.7s						
PV15	**Paradox Valley**	**3.68**	**130**		**Pn**	**13 37 36.0**	**+0.4**
PV01	**Paradox Valley**	**3.77**	**133**		**Pn**	**13 37 36.2**	**-0.6**
PV01				IAML		13 38 46.0	
	comp=E,92nm,0.8s						
PV01				IAML		13 38 51.3	
	comp=N,90nm,0.8s						
KNB	**Kanab**	**3.78**	**189**	Pn	**Pn**	**13 37 35.4**	**-1.4**
H17A	**Grant Village**	**3.80**	**16**		**Pn**	**13 37 35.5**	**-1.8**
YFT	**Old Faithful**	**3.81**	**14**		**Pn**	**13 37 36.7**	**-0.6**
LCMT	**Little Creek M**	**3.85**	**194**		**Pn**	**13 37 37.2**	**-0.5**
LCMT				IAML		13 38 43.6	
	comp=E,61nm,0.5s						
LCMT				IAML		13 38 45.0	
	comp=N,46nm,0.6s						
MFID	**Camas Ranch**	**3.85**	**315**		**Pn**	**13 37 37.6**	**-0.3**
MFID				IAML		13 38 45.1	
	comp=N,60nm,0.5s						
MFID				IAML		13 38 50.0	
	comp=N,47nm,0.5s						
YMR	**Madison River**	**4.00**	**11**	Pn	**Pn**	**13 37 37.9**	**-2.0**
YMR				IAML		13 38 50.7	
	comp=N,61nm,1.0s						
YMR				IAML		13 39 10.2	
	comp=E,59nm,0.9s						
QLMT	**Earthquake Lak**	**4.10**	**6**	Pn	**Pn**	**13 37 38.5**	**-2.8**
MCMT	**McKenzie Canyo**	**4.11**	**352**		**Pn**	**13 37 38.2**	**-3.3**
S11A	**Rachel**	**4.22**	**224**		**Pn**	**13 37 41.8**	**-1.1**
KVN	**Kaiserville**	**4.94**	**252**		**Pn**	**13 37 52.5**	**-0.2**
KVN				IAML		13 39 19.3	
	comp=E,22nm,0.7s						
S22A	**4UR Ranch, Cre**	**5.06**	**125**		**Pn**	**13 37 52.2**	**-2.4**
S22A				IAML		13 39 22.1	
	comp=E,27nm,3.5s						
NVAR	**Mina Array Bea**	**5.34**	**246**	Pn	**Pn**	**13 37 58.1**	**-0.2**
	comp=E,0.7nm,0.3s,baz=56,slow=14,SNR=3.5						
NVAR				Lg	Lg	13 39 26.9	
	comp=E,6.8nm,0.3s,baz=62,slow=34,SNR=7.2						
	comp=E,1.2nm,0.4s						
ANMO	**Albuquerque**	**7.31**	**141**	Lg	Lg	13 40 22.9	
	comp=E,0.3nm,0.3s,baz=193,slow=5.6,SNR=3.9						
TXAR	**Lajitas Array**	**13.31**	**146**	Pn	**Pn**	**13 39 51.1**	**+3.7**
	baz=337,slow=12,SNR=2.0						
	comp=E,0.3nm,0.6s						
WRA	**Warramunga Arr**	**120.43**	**269**	PKP	**PKPdf**	**13 55 29.8**	**-0.6**
	comp=E,0.3nm,0.6s,baz=43,slow=1.8,SNR=4.9						

*JMA **18** 13:39:08.7±0.1,24.6N±0.9×122.5E±0.3,h29km±2km, MV1.9/10,NW OFF ISHIGAKIJIMA IS*

*TAP **18** 13:39:08.1,24.64N×122.39E,h13km±1km,ML2.7,C*

ISC 18 13:39:07.2±1.1, 24.64N±0.02×122.46E±0.02, h7km±10km, n60, σ0.47/101, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.30**	**224**	*i* P	**Pb**	**13 39 14.6**	**-0.3**
EOS2				*i* S	**Sb**	**13 39 19.7**	**+0.3**
EOS3	**EOS3**	**0.37**	**201**	*i* P	**Pb**	**13 39 16.2**	**+0.1**
EOS3				S	**Sb**	**13 39 22.2**	**+0.1**
JYNG	**Yonagunijimaku**	**0.48**	**113**	P	**Pb**	**13 39 18.4**	**+0.4**
JYNG				*e*S	**Sb**	**13 39 25.3**	**+0.1**
EGS		**0.53**	**293**	P	**Pg**	**13 39 17.6**	**+0.2**
EGS				*e*S	**Sg**	**13 39 25.0**	**+0.8**
YOJ	**Yonaguni jima**	**0.53**	**109**	P	**Pb**	**13 39 19.3**	**+0.4**
YOJ				S	**Sb**	**13 39 26.7**	**0.0**
YOJ	**Yonaguni jima**	**0.53**	**109**	*e*P	**Pb**	**13 39 19.3**	**+0.4**
YOJ				*e*S	**Sb**	**13 39 26.7**	**0.0**
EOS4	**EOS4**	**0.53**	**194**	*e*P	**Pb**	**13 39 19.1**	**+0.5**
EOS4				S	**Sb**	**13 39 27.4**	**+1.0**
TWC	**Suao**	**0.56**	**267**	*i* P	**Pg**	**13 39 17.6**	**-0.3**
TWC				S	**Sb**	**13 39 26.6**	**-0.9**
ESAO	**Su ao**	**0.57**	**264**	*e*P	**Pb**	**13 39 19.2**	**-0.2**
ESAO				*e*S	**Sb**	**13 39 27.0**	**-0.4**
TWB1	**Santiao Chiao**	**0.57**	**311**	P	**Pg**	**13 39 18.6**	**+0.5**
TWB1				S	**Sg**	**13 39 24.9**	**-0.6**
EWUT	**Wuta**	**0.65**	**253**	*e*P	**Pg**	**13 39 19.7**	**0.0**
EWUT				S	**Sg**	**13 39 28.3**	**+0.1**
TIPB	**Shuangxi**	**0.67**	**300**	P	**Pg**	**13 39 20.4**	**+0.3**
**

JKRS	Kuro-shima	1.47	105	eP	Pn	13 39 34.0	-0.1
JKRS				eS	Sn	13 39 52.8	-0.8
VWDT	VWDT	1.49	234	eP	Pb	13 39 35.4	+0.1
JIJ	Ishigaki jima	1.56	100	eP	Pn	13 39 34.8	-0.5
TWQ1	Liyutan	1.57	260	eP	Pg	13 39 38.6	+1.4
SMLT	Sun Moon Lake	1.61	243	eP	Pb	13 39 37.6	+0.2
SSLB	Suanglung	1.62	239	P	Pb	13 39 37.7	+0.3
SSLB	Suanglung	1.62	239	eP	Pb	13 39 37.3	-0.1
YULB	Yu-li	1.64	221	eP	Pn	13 39 35.8	-0.6
ALS	Alishan	1.89	234	eP	Pb	13 39 41.7	-0.5
CHN5	Tsauling	1.93	238	eP	Pb	13 39 42.8	0.0
TPUB	Ta-pu	2.14	232	P	Pb	13 39 47.3	+0.9

IDC ***18*** *13:48:01.3±1.0, 40˚.84N×112˚.06W, h0km, mbtmp2.9/3, ML3.1/3, Error ellipse: s-maj=17.1km s-min=6.4km az=152.0*

NEIC ***18*** *13:48:01.4±1.0, 40˚.71N±0˚.02×112˚.090W±0˚.006, h8km±6km, ML3.0/94, ML3.1/15(UUSS), Error ellipse: s-maj=2.4km s-min=0.7km az=175.0*

UUSS ***18*** *13:48:01.2±1.0, 40˚.722N±0˚.010×112˚.09W±0˚.02, h11km±6km, Error ellipse: s-maj=2.4km s-min=1.3km az=79.0*

ISC 18 13:48:02.0±0.9, 40˚.72N±0˚.02×112˚.09W±0˚.02, h7km±7km, n87, σ0°98/89, Utah

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NOQ	**North Oquirrh**	**0.07**	**199**		**Pg**	**13 48 04.0**	**0.0**
NOQ					**Sg**	**13 48 05.7**	**+0.2**
SAIU	**Southern Antel**	**0.15**	**333**		**Pg**	**13 48 04.9**	**-0.3**
SAIU					**Sg**	**13 48 07.2**	**-0.3**
CAPU	**Utah State Cap**	**0.16**	**69**		**Pg**	**13 48 05.3**	**-0.1**
EOCU	**Emergency Oper**	**0.16**	**69**		**Pg**	**13 48 05.3**	**-0.1**
HRU	**Hogsback Ridge**	**0.17**	**67**		**Pg**	**13 48 05.3**	**-0.2**
RBU	**Red Butte Cany**	**0.22**	**74**		**Pg**	**13 48 06.1**	**-0.4**
RBU					**Sg**	**13 48 09.4**	**-0.1**
MHD	**Mile High Driv**	**0.23**	**105**		**Pg**	**13 48 06.3**	**-0.3**
CTU	**Camp Tracy**	**0.26**	**96**		**Pg**	**13 48 06.9**	**-0.3**
CTU				IAML		13 48 10.6	
	comp=N,3μm,0.3s						
CTU				IAML		13 48 11.8	
	comp=E,4μm,0.2s						
CWU	**Camp Williams**	**0.27**	**182**		**Pg**	**13 48 07.6**	**+0.2**
WTU	**Western Traver**	**0.28**	**159**		**Pb**	**13 48 07.9**	**-1.6**
GMU	**Granite Mounta**	**0.29**	**120**		**Pg**	**13 48 07.3**	**-0.4**
AAU	**Alta**	**0.37**	**110**		**Pg**	**13 48 08.8**	**-0.5**
TCVU	**Timpanogos Cav**	**0.40**	**133**		**Pg**	**13 48 09.5**	**-0.4**
WBC	**Weber Canyon**	**0.44**	**19**		**Pg**	**13 48 09.9**	**-0.8**
RCJ	**Ross Creek**	**0.50**	**97**		**Pg**	**13 48 11.2**	**-0.4**
N16A	**Rees Ranch, Co**	**0.52**	**71**		**Pg**	**13 48 11.9**	**-0.2**
DCU	**Deer Creek Res**	**0.53**	**125**		**Pg**	**13 48 11.9**	**-0.3**
KLJ	**Keetly**	**0.53**	**99**		**Pg**	**13 48 11.8**	**-0.4**
HLJ	**Hailstone**	**0.54**	**102**		**Pg**	**13 48 12.0**	**-0.4**
LDJ	**Lady**	**0.54**	**105**		**Pg**	**13 48 12.2**	**-0.2**
HEB	**Heber**	**0.61**	**111**		**Pg**	**13 48 13.8**	**-0.1**
SPUT	**South Promonto**	**0.65**	**335**		**Pg**	**13 48 14.0**	**-0.5**
SPUT				IAML		13 48 23.9	
	comp=N,541nm,0.5s						
SPUT				IAML		13 48 24.1	
	comp=E,469nm,0.5s						
TCUT	**Toone Canyon**	**0.65**	**52**	Pg	**Pg**	**13 48 14.2**	**-0.4**
HTU	**Hoyt Peak**	**0.66**	**94**		**Pg**	**13 48 14.5**	**-0.3**
DAU	**Daniels Canyon**	**0.70**	**116**		**Pb**	**13 48 15.5**	**-1.2**
EPU	**East Promontor**	**0.71**	**340**		**Pg**	**13 48 15.3**	**-0.5**
BGU	**Big Grassy Mou**	**0.74**	**286**	Pg	**Pb**	**13 48 16.2**	**-1.1**
BGU				IAML		13 48 27.5	
	comp=N,661nm,0.5s						
BGU				IAML		13 48 28.2	
	comp=E,688nm,0.6s						
DUG	**Dugway, Tooele**	**0.76**	**227**		**Pb**	**13 48 16.4**	**-1.2**
DUG				IAML		13 48 29.2	
	comp=E,898nm,0.6s						
DUG				IAML		13 48 31.4	
	comp=E,550nm,0.6s						
NLU	**North Lily Min**	**0.76**	**179**		**Pg**	**13 48 16.1**	**-0.6**
NLU				IAML		13 48 29.6	
	comp=E,409nm,0.8s						
NLU				IAML		13 48 29.7	
	comp=N,664nm,0.5s						
MPU	**Maple Canyon**	**0.79**	**154**		**Pg**	**13 48 16.7**	**-0.4**
MPU				IAML		13 48 30.8	
	comp=N,407nm,0.3s						
MPU				IAML		13 48 30.8	
	comp=E,544nm,0.4s						
MCU	**Monte Cristo P**	**0.86**	**31**		**Pg**	**13 48 17.9**	**-0.7**
HWUT	**Hardware Ranch**	**0.97**	**24**		**Pg**	**13 48 19.5**	**-1.1**
HWUT				IAML		13 48 33.8	
	comp=E,485nm,0.8s						
HWUT				IAML		13 48 35.6	
	comp=E,521nm,0.3s						
BSUT	**Blindstream Ca**	**1.03**	**100**		**Pg**	**13 48 20.7**	**-1.0**
BSUT				IAML		13 48 40.4	
	comp=N,551nm,0.6s						
RSUT	**Red Spur Mount**	**1.05**	**29**		**Pg**	**13 48 21.1**	**-1.1**
HVU	**Hansel Valley**	**1.18**	**334**		**Pg**	**13 48 23.2**	**-1.4**
HVU				IAML		13 48 45.7	
	comp=N,502nm,0.5s						
HVU				IAML		13 48 45.8	
	comp=E,427nm,0.5s						
ELU	**Electric Lake**	**1.27**	**148**		**Pg**	**13 48 25.8**	**-0.6**
MLI	**Malad Range**	**1.31**	**359**		**Pg**	**13 48 26.4**	**-0.6**
EMUT	**Emma Park**	**1.33**	**132**		**Pb**	**13 48 26.6**	**-0.8**
FLU	**Fool Peak**	**1.34**	**183**		**Pn**	**13 48 25.8**	**-1.5**
BMUT	**Black Mountain**	**1.40**	**27**		**Pb**	**13 48 27.7**	**-0.8**
FSU	**Fish Springs**	**1.41**	**225**		**Pn**	**13 48 27.6**	**-0.6**
SNO	**Snow College**	**1.47**	**163**		**Pg**	**13 48 29.6**	**-0.5**
ARGU	**Argyle Ridge**	**1.48**	**127**		**Pb**	**13 48 29.3**	**-0.7**
P17A	**Butcher Ranch,**	**1.62**	**140**		**Pn**	**13 48 30.3**	**-0.8**
P17A				IAML		13 48 55.9	
	comp=N,213nm,0.7s						
P17A				IAML		13 48 56.4	
	comp=E,155nm,0.6s						
L17A	**Cokeville**	**1.65**	**33**		**Pb**	**13 48 32.2**	**-0.7**
ROA	**Roan Cliffs**	**1.69**	**128**		**Pb**	**13 48 32.4**	**-1.2**
BCE	**Book Cliffs Ea**	**1.70**	**130**		**Pb**	**13 48 32.3**	**-1.3**
P18A	**Preston Nutter**	**1.79**	**127**		**Pb**	**13 48 33.9**	**-1.2**
P18A				IAML		13 48 58.4	
	comp=E,192nm,0.5s						
P18A				IAML		13 48 59.0	
	comp=N,219nm,0.5s						
RDMU	**Red Mountain**	**1.92**	**94**		**Pn**	**13 48 35.6**	**+0.3**
RDMU				IAML		13 49 05.1	
	comp=N,98nm,0.4s						
RDMU				IAML		13 49 11.2	
	comp=E,84nm,1.0s						
Q16A	**Castle Valley**	**1.93**	**158**		**Pn**	**13 48 34.8**	**-0.6**
SRU	**San Rafael Swe**	**2.01**	**143**		**Pn**	**13 48 36.5**	**0.0**
SRU				IAML		13 49 06.1	
	comp=E,130nm,0.8s						
SRU				IAML		13 49 07.7	
	comp=N,121nm,0.6s						
IMU	**Iron Mountain**	**2.24**	**202**		**Pb**	**13 48 42.5**	**-0.4**
ELK	**Elko**	**2.39**	**272**	Pn	**Pb**	**13 48 43.3**	**-2.2**
	comp=N,7.0nm,0.3s,baz=88,slow=13,SNR=19						
ELK				Lg	Lg	13 49 16.2	
	comp=N,3.3nm,0.3s,baz=127,slow=11,SNR=3.8						
	comp=N,15nm,0.3s						
ELK	**Elko**	**2.39**	**272**		**Pn**	**13 48 42.8**	**+1.0**
PSUT	**Pine Spring**	**2.57**	**213**		**Pn**	**13 48 44.1**	**-0.1**
PSUT				IAML		13 49 27.0	
	comp=E,133nm,0.9s						
PSUT				IAML		13 49 30.7	
	comp=N,106nm,0.7s						
BW06	**Boulder Array**	**2.79**	**42**		**Pn**	**13 48 47.8**	**+0.6**
BW06				IAML		13 49 35.0	
	comp=N,98nm,0.5s						
PD31	**Pinedale Array**	**2.79**	**42**		**Pn**	**13 48 48.5**	**+1.3**
PDAR	**Pinedale Array**	**2.79**	**42**	Pg	**Pb**	**13 48 50.6**	**-1.6**
	comp=N,14nm,0.3s,baz=219,slow=14,SNR=32						
PDAR				Lg	Lg	13 49 26.9	
	comp=N,28nm,0.3s,baz=219,slow=28,SNR=4.8						
SNOW	**Snow King Moun**	**2.92**	**19**		**Pn**	**13 48 49.8**	**+0.8**
SNOW				IAML		13 49 41.3	
	comp=N,75nm,0.6s						
SNOW				IAML		13 49 42.2	
	comp=N,71nm,1.1s						
HMU	**Henry Mountain**	**2.97**	**159**		**Pn**	**13 48 50.0**	**+0.3**
HMU				IAML		13 49 38.1	
	comp=E,100nm,0.5s						
HMU				IAML		13 49 45.4	
	comp=N,76nm,0.7s						
O20A	**White River Ci**	**3.00**	**100**		**Pn**	**13 48 51.1**	**+1.1**
FXWY	**Fox Creek**	**3.02**	**15**		**Pn**	**13 48 50.4**	**0.0**
LOHW	**Long Hollow**	**3.09**	**20**		**Pn**	**13 48 51.8**	**+0.4**
LOHW				IAML		13 49 40.3	
	comp=N,49nm,1.1s						
LOHW				IAML		13 49 40.7	
	comp=N,34nm,0.4s						
MOOW	**Moose Ponds**	**3.19**	**18**		**Pn**	**13 48 52.5**	**-0.2**
FLWY	**Flagg Ranch**	**3.52**	**17**		**Pn**	**13 48 57.2**	**0.0**
FLWY				IAML		13 50 06.5	
	comp=N,22nm,1.4s						
PV13	**Radium Mtn., P**	**3.60**	**134**		**Pn**	**13 48 58.4**	**0.0**
PV02	**Paradox Valley**	**3.61**	**133**		**Pn**	**13 48 58.6**	**+0.1**
PV15	**Paradox Valley**	**3.66**	**129**		**Pn**	**13 48 59.7**	**+0.4**
YPP	**Pitchstone Pla**	**3.67**	**15**		**Pn**	**13 49 00.5**	**+1.1**
PV01	**Paradox Valley**	**3.75**	**132**		**Pn**	**13 49 00.5**	**0.0**
PV01				IAML		13 50 06.0	
	comp=N,46nm,1.0s						
PV01				IAML		13 50 08.4	
	comp=E,44nm,0.8s						
YHB	**Horse Butte**	**4.08**	**9**		**Pn**	**13 49 05.9**	**+0.9**
YHB				IAML		13 50 48.3	
	comp=E,11nm,1.2s						
MCMT	**McKenzie Canyo**	**4.14**	**352**		**Pn**	**13 49 06.2**	**+0.3**
YHL	**Hebgen Lake**	**4.18**	**9**		**Pn**	**13 49 08.1**	**+1.6**
S11A	**Rachel**	**4.18**	**224**		**Pn**	**13 49 08.0**	**+1.6**
U15A	**North Rim**	**4.29**	**182**		**Pn**	**13 49 08.9**	**+1.0**
U15A				IAML		13 50 29.7	
	comp=E,13nm,1.3s						
MVCO	**Mesa Verde**	**4.48**	**140**		**Pn**	**13 49 09.4**	**-1.2**
YNE	**Yellowstone No**	**4.55**	**19**		**Pn**	**13 49 12.1**	**+0.7**
K22A	**Casper**	**4.59**	**63**		**Pn**	**13 49 11.9**	**-0.1**
SHPR	**Sheep Range**	**4.85**	**211**		**Pn**	**13 49 17.0**	**+1.6**
SHPR				IAML		13 50 40.2	
	comp=E,9.4nm,0.9s						
SHPR				IAML		13 50 42.6	
	comp=N,6.6nm,1.2s						
RLMT	**Red Lodge**	**4.86**	**24**	Pn	**Pn**	**13 49 18.1**	**+2.4**
RLMT				IAML		13 50 47.3	
	comp=N,6.7nm,1.2s						
KVN	**Kaiserville**	**4.92**	**252**		**Pn**	**13 49 16.0**	**-0.4**
KVN				IAML		13 50 15.2	
	comp=E,6.1nm,0.3s						
TPNV	**Topopah Spring**	**4.97**	**222**		**Pn**	**13 49 19.2**	**+2.0**
TPNV				IAML		13 50 48.0	
	comp=E,19nm,0.8s						
S22A	**4UR Ranch, Cre**	**5.05**	**124**	Pn	**Pn**	**13 49 17.6**	**-0.7**
S22A				IAML		13 50 43.7	
	comp=E,11nm,1.0s						
PLID	**Pearl Lake**	**5.22**	**328**	Pn	**Pn**	**13 49 22.3**	**+1.6**
NVAR	**Mina Array Bea**	**5.32**	**247**	Pn	**Pn**	**13 49 23.4**	**+1.4**
	comp=E,0.4nm,0.3s,baz=60,slow=12,SNR=6.5						
NVAR				Lg	Lg	13 50 49.2	
	comp=E,1.4nm,0.3s,baz=66,slow=31,SNR=5.5						
	comp=E,0.4nm,0.3s						
ANMO	**Albuquerque**	**7.28**	**141**	Lg	Lg	13 51 47.3	
	comp=E,0.1nm,0.3s,baz=240,slow=14,SNR=3.9						
TXAR	**Lajitas Array**	**13.28**	**146**	Pn	**Pn**	**13 51 14.7**	**+3.6**
	baz=330,slow=17,SNR=2.2						
	comp=E,0.2nm,0.7s						

IDC ***18*** *14:02:11.5±0.5, 40˚.77N×111˚.99W, h0km, mb4.1/20, mbtmp4.1/28, ML3.6/7, MS3.8/11, Error ellipse: s-maj=9.1km s-min=5.1km az=151.0*

NEIC ***18*** *14:02:12.4±1.2, 40˚.75N±0˚.04×112˚.10W±0˚.05, h12km±2km, mb4.4/35, ML4.5/106, Mwr4.6/133, Mww4.6/78, Mwr4.6/17(UUSS), Mwr4.5/42(SLM), Error ellipse: s-maj=6.4km s-min=5.6km az=134.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=8.08; $M_{\theta\theta}$0.88; $M_{\phi\phi}$7.20; $M_{r\theta}$2.57; $M_{r\phi}$-2.38; $M_{\theta r}$-2.23; Fault plane solution: $M_0$8.73000×10^{15} NP1:ϕ_s330.53000°, δ56.02000°, λ-102.32000°. NP2:ϕ_s171.88000°, δ35.90000°, λ-72.43000°. Principal axes: T 8.5278, Plg10.0000°, Azm69.0000°; N 0.3941, Plg10.0000°, Azm337.0000°; P -8.9220, Plg75.0000°, Azm204.0000°;*

UUSS ***18*** *14:02:12.8±1.4, 40˚.76N±0˚.04×112˚.07W±0˚.05, h9km±5km Error ellipse: s-maj=6.4km s-min=5.5km az=140.0*

NEIC ***18*** *14:02:13.1, 40˚.67N×111˚.95W, h12km, Moment Tensor Solution. Duration: 1§1 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.91; $M_{\theta\theta}$0.11; $M_{\phi\phi}$0.80; $M_{r\theta}$-0.42; $M_{r\phi}$-0.28; $M_{\theta r}$0.37; Fault plane solution: $M_0$1.06000×10^{16} NP1: ϕ_s353.15000°, δ32.13000°, λ-66.89000°. NP2: ϕ_s146.40000°, δ60.71000°, λ-103.85000°. Principal axes: T 1.0224, Plg15.0000°, Azm246.0000°; N 0.0747, Plg12.0000°, Azm153.0000°; P -1.0971, Plg71.0000°, Azm25.0000°;*

NEIC ***18*** *14:02:13, 40˚.77N×112˚.08W, h11km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-5.63; $M_{\theta\theta}$0.00; $M_{\phi\phi}$5.63; $M_{r\theta}$2.29; $M_{r\phi}$-1.60; $M_{\theta r}$-2.05; Fault plane solution: $M_0$6.61000×10^{15} NP1:ϕ_s330.00000°, δ59.00000°, λ-106.00000°. NP2:ϕ_s180.00000°, δ35.00000°, λ-65.00000°. Principal axes: T 6.6098, Plg12.0000°, Azm72.0000°; N 0.0020, Plg14.0000°, Azm339.0000°; P -6.6119, Plg71.0000°, Azm202.0000°;*

NEIC ***18*** *14:02:13.1, 40˚.77N×112˚.08W, h12km*

NEIC ***18*** *14:02:13, 40˚.78N×112˚.08W, h9km*

GCMT ***18*** *14:02:13.4±0.4, 40˚.67N±0˚.04×111˚.98W±0˚.04, h22km±1km, MW4.8/73, Moment Tensor Solution. s20,c20; s73,c104; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.28±.20; $M_{\theta\theta}$0.57±.11; $M_{\phi\phi}$1.71±.12; $M_{r\theta}$-0.22±.21; $M_{\phi\phi}$-0.52±.06; $M_{\theta r}$-0.62±.17; Best double couple: $M_0$2.18800×10^{16} NP1:ϕ_s151.00000°, δ39.00000°, λ-103.00000°. NP2: ϕ_s348.00000°, δ52.00000°, λ-79.00000°. Principal axes: T 1.9730, Plg7.0000°, Azm71.0000°; N 0.4320, Plg8.0000°, Azm162.0000°; P -2.4020, Plg79.0000°, Azm302.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 14:02:13.0±0.8, 40˚.77N±0˚.03×112˚.05W±0˚.03, h11km±5km, n163, σ1§06/157, mb4.3/33, MS3.9/8, Utah

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOCU	**Emergency Oper**	**0.12**	**86**		**Pg**	**14 02 16.3**	**+0.1**
NOQ	**North Oquirrh**	**0.13**	**204**		**Pg**	**14 02 15.9**	**-0.3**
NOQ					**Sg**	**14 02 18.5**	**-0.1**
HRU	**Hogsback Ridge**	**0.13**	**82**		**Pg**	**14 02 16.2**	**-0.1**
SAIU	**Southern Antel**	**0.13**	**312**		**Pg**	**14 02 16.0**	**-0.3**
RBU	**Red Butte Cany**	**0.19**	**86**		**Pg**	**14 02 17.1**	**0.0**
RBU	**Red Butte Cany**	**0.19**	**86**		**Sg**	**14 02 20.3**	**+0.2**
MHD	**Mile High Driv**	**0.22**	**119**		**Pg**	**14 02 17.7**	**0.0**
CTU	**Camp Tracy**	**0.24**	**108**		**Pg**	**14 02 18.0**	**-0.1**
CTU				IAML		14 02 22.6	
	comp=N,45μm,0.7s						
NAIU	**Northern Antel**	**0.28**	**332**		**Pg**	**14 02 18.7**	**-0.1**
FPU	**Francis Peak**	**0.31**	**32**		**Pg**	**14 02 19.3**	**0.0**
TCUT	**Toone Canyon**	**0.60**	**54**		**Pb**	**14 02 25.0**	**-0.7**
TCUT				Sg	**Sb**	**14 02 33.7**	**-0.5**
SPUT	**South Promonto**	**0.62**	**331**	Pg	**Pg**	**14 02 24.8**	**-0.3**
SPUT				IAML		14 02 33.5	
	comp=E,18μm,0.8s						
SPUT				IAML		14 02 36.5	
	comp=N,37μm,0.5s						
BGU	**Big Grassy Mou**	**0.76**	**282**	Pg	**Pg**	**14 02 27.4**	**-0.2**
BGU				IAML		14 02 39.8	
	comp=N,15μm,0.6s						
BGU				IAML		14 02 40.4	
	comp=E,35μm,0.7s						
DUG	**Dugway, Tooele**	**0.81**	**226**	Pg	**Pg**	**14 02 28.1**	**-0.7**
DUG				IAML		14 02 42.3	
	comp=E,19μm,1.2s						
DUG				IAML		14 02 44.5	
	comp=E,14μm,0.9s						
MPU	**Maple Canyon**	**0.82**	**157**		**Pb**	**14 02 28.6**	**-0.7**
MPU				IAML		14 02 44.2	
	comp=E,11μm,0.5s						
HWUT	**Hardware Ranch**	**0.92**	**24**	Pg	**Pg**	**14 02 30.3**	**-0.4**
HWUT				IAML		14 02 45.5	
	comp=E,24μm,0.5s						
HWUT				IAML		14 02 46.5	
	comp=E,27μm,0.5s						
RSUT	**Red Spur Mount**	**0.99**	**29**		**Pb**	**14 02 32.2**	**-0.2**
BSUT	**Blindstream Ca**	**1.01**	**103**	Pg	**Pb**	**14 02 32.2**	**-0.5**
HVU	**Hansel Valley**	**1.15**	**332**	Pg	**Pg**	**14 02 34.1**	**-0.9**
MLI	**Malad Range**	**1.26**	**358**		**Pn**	**14 02 36.3**	**-0.4**
BMUT	**Black Mountain**	**1.34**	**27**		**Pn**	**14 02 37.7**	**-0.1**
BEI	**Bear River Ran**	**1.36**	**8**		**Pn**	**14 02 38.2**	**+0.1**
P17A	**Butcher Ranch,**	**1.64**	**142**		**Pn**	**14 02 41.8**	**-0.1**
P17A				IAML		14 03 08.5	
	comp=E,4μm,1.1s						
P18A	**Preston Nutter**	**1.79**	**129**	Pn	**Pb**	**14 02 45.4**	**-0.5**
P18A				IAML		14 03 12.7	
	comp=N,2μm,1.3s						
RDMU	**Red Mountain**	**1.90**	**95**		**Pb**	**14 02 46.5**	**-1.2**
Q16A	**Castle Valley**	**1.97**	**160**		**Pn**	**14 02 46.7**	**+0.3**
SRU	**San Rafael Swe**	**2.03**	**144**	Pn	**Pn**	**14 02 47.8**	**+0.5**
SRU				IAML		14 03 19.6	
	comp=E,3μm,0.9s						
SRU				IAML		14 03 20.3	
	comp=N,3μm,0.9s						
AHID	**Auburn Hatcher**	**2.12**	**19**		**Pn**	**14 02 49.9**	**+1.3**
TCRU	**Three Creeks R**	**2.18**	**188**		**Pn**	**14 02 49.4**	**+0.1**
TCRU				IAML		14 03 27.4	
	comp=E,4μm,1.1s						
TCRU				IAML		14 03 30.0	
	comp=N,3μm,1.1s						
ELK	**Elko**	**2.42**	**270**	Pn	**Pn**	**14 02 54.2**	**+1.5**
	comp=N,42nm,0.3s,baz=90,slow=12,SNR=69						
ELK				Lg	Lg	14 03 29.0	
	comp=N,257nm,0.3s,baz=191,slow=23,SNR=12						
ELK				LR	LR	14 03 37.3	
	comp=N,1μm,18.4s,baz=335,slow=35						
	comp=N,308nm,0.6s						
ELK	**Elko**	**2.42**	**270**	Pn	**Pn**	**14 02 52.0**	**-0.7**
PSUT	**Pine Spring**	**2.63**	**213**	Pn	**Pn**	**14 02 56.3**	**+0.8**
PSUT				IAML		14 03 41.9	
	comp=N,2μm,1.2s						
PSUT				IAML		14 03 44.2	
	comp=E,2μm,1.2s						
MTPU	**Mount Pierson**	**2.73**	**182**		**Pn**	**14 02 58.2**	**+1.2**
BW06	**Boulder Array**	**2.73**	**42**		**Pn**	**14 02 58.4**	**+1.4**
PD31	**Pinedale Array**	**2.73**	**42**		**Pn**	**14 02 58.5**	**+1.5**
PDAR	**Pinedale Array**	**2.73**	**42**	Pn	**Pn**	**14 02 56.9**	**-0.1**
	comp=E,15nm,0.2s,baz=244,slow=13,SNR=388						
PDAR				Pg	**Pb**	**14 03 01.9**	**-0.1**
	comp=E,181nm,0.3s,baz=232,slow=15,SNR=215						
PDAR				LR	LR	14 03 35.3	
	comp=E,306nm,19.3s,baz=200,slow=31						
PDAR				Lg	Lg	14 03 37.7	
	comp=E,110nm,0.3s,baz=219,slow=19,SNR=4.9						
PDAR	**Pinedale Array**	**2.73**	**42**		**Pn**	**14 02 58.4**	**+1.5**
SNOW	**Snow King Moun**	**2.86**	**19**		**Pn**	**14 02 59.9**	**+1.1**
FXWY	**Fox Creek**	**2.97**	**15**		**Pn**	**14 03 01.6**	**+1.4**
FXWY				IAML		14 03 51.9	
	comp=E,2μm,1.2s						
FXWY				IAML		14 04 00.5	
	comp=E,1μm,1.0s						
HMU	**Henry Mountain**	**3.00**	**160**		**Pn**	**14 03 01.8**	**+1.1**
HMU				IAML		14 03 54.6	
	comp=N,2μm,1.1s						
HMU				IAML		14 04 03.6	
	comp=E,2μm,0.9s						
LOHW	**Long Hollow**	**3.04**	**20**		**Pn**	**14 03 02.4**	**+1.2**
LOHW				IAML		14 03 51.2	
	comp=E,2μm,0.5s						
LOHW				IAML		14 03 51.4	
	comp=E,2μm,0.8s						
MOOW	**Moose Ponds**	**3.13**	**18**		**Pn**	**14 03 03.7**	**+1.2**
SZCU	**Shurtz Canyon**	**3.27**	**195**		**Pn**	**14 03 05.7**	**+1.4**
PKCU	**Pink Cliffs**	**3.33**	**184**		**Pn**	**14 03 04.9**	**-0.3**
PKCU				IAML		14 04 18.0	
	comp=E,984nm,2.7s						
PKCU				IAML		14 04 19.6	
	comp=N,1μm,3.3s						
CCUT	**Cedar City**	**3.37**	**198**		**Pn**	**14 03 05.0**	**-0.7**
CCUT				IAML		14 04 09.0	
	comp=E,852nm,1.3s						
YPP	**Pitchstone Pla**	**3.62**	**14**		**Pn**	**14 03 10.8**	**+1.6**
YPP				IAML		14 04 13.5	
	comp=N,732nm,1.4s						
YPP				IAML		14 04 20.8	
	comp=E,834nm,1.3s						
PV02	**Paradox Valley**	**3.62**	**134**		**Pn**	**14 03 10.3**	**+1.1**
HAYD	**Hayden**	**3.66**	**92**		**Pn**	**14 03 11.7**	**+2.0**
KNB	**Kanab**	**3.79**	**189**		**Pn**	**14 03 11.4**	**-0.1**
KNB				IAML		14 04 31.6	
	comp=N,465nm,1.9s						
KNB				IAML		14 04 50.8	
	comp=E,430nm,2.0s						
YMR	**Madison River**	**3.98**	**11**		**Pn**	**14 03 15.8**	**+1.7**
YMR				IAML		14 04 35.8	
	comp=N,1μm,1.1s						
YMR				IAML		14 04 44.7	
	comp=E,1μm,1.1s						
YHB	**Horse Butte**	**4.03**	**9**		**Pn**	**14 03 17.2**	**+2.4**
YHB				IAML		14 04 26.6	
	comp=E,464nm,1.0s						
YHB				IAML		14 04 29.8	
	comp=N,585nm,1.3s						
YNR	**Norris Junctio**	**4.07**	**14**		**Pn**	**14 03 17.8**	**+2.4**
YNR				IAML		14 04 27.3	
	comp=N,341nm,1.5s						
YNM	**Yellowstone No**	**4.08**	**14**	Pn	**Pn**	**14 03 15.8**	**+0.4**
QLMT	**Earthquake Lak**	**4.09**	**6**		**Pn**	**14 03 16.4**	**+0.9**
MCMT	**McKenzie Canyo**	**4.10**	**352**		**Pn**	**14 03 16.5**	**+0.7**
YHH	**Holmes Hill**	**4.11**	**12**		**Pn**	**14 03 17.7**	**+1.7**
YHL	**Hebgen Lake**	**4.13**	**9**		**Pn**	**14 03 18.2**	**+1.9**
YHL				IAML		14 04 33.4	
	comp=E,638nm,1.1s						
YHL				IAML		14 04 41.7	
	comp=N,568nm,1.1s						
YMP	**Mirror Lake Pl**	**4.21**	**19**		**Pn**	**14 03 19.6**	**+2.3**
YMP				IAML		14 04 33.3	
	comp=N,592nm,2.5s						
YMP				IAML		14 04 52.8	
	comp=E,393nm,1.8s						
U15A	**North Rim**	**4.34**	**183**		**Pn**	**14

baz=106,slow=5.2,SNR=15
YBH LR LR 14 06 56.2
comp=E,36nm,18.5s,baz=90,slow=35
NEW Newport 8.32 336 Pn **Pn 14 04 15.7 +2.2**
comp=E,0.2nm,0.3s,baz=152,slow=14,SNR=7.9
NEW Lg Lg 14 06 31.4
comp=E,3.9nm,0.3s,baz=70,slow=18,SNR=7.4
comp=E,7.7nm,1.1s
B08A Colville Reser 9.19 328 Pn 14 04 25.6 +0.1
SUSD Miller 10.33 65 Pn 14 04 40.5 -0.5
ECSD EROS Data Cent 11.82 70 Pn 14 05 01.4 0.0
N35A Tabor 12.44 84 Pn 14 05 08.3 -1.5
F33A 5 Mile Ranch, 12.54 61 Pn 14 05 11.0 -0.3
TXAR Lajitas Array 13.31 146 Pn **Pn 14 05 25.4 +3.5**
comp=E,0.2nm,0.3s,baz=332,slow=11,SNR=52
TXAR Lg Lg 14 09 10.5
comp=E,0.1nm,0.3s,baz=317,slow=26,SNR=5.0
comp=E,6.5nm,0.9s
AGMN Agassiz Nation 13.77 51 Pn 14 05 27.3 -0.6
JCT Junction City 14.29 132 Pn 14 05 34.3 -1.0
ULM Lac du Bonnet 14.75 45 Pn **Pn 14 05 39.8 -1.6**
comp=E,1.3nm,0.3s,baz=224,slow=13,SNR=13
ULM Lg Lg 14 09 47.5
comp=E,0.4nm,0.3s,baz=144,slow=16,SNR=6.8
ULM LR LR 14 12 35.4
comp=E,119nm,21.2s,baz=230,slow=42
comp=E,7.7nm,0.5s
ULM Lac du Bonnet 14.75 45 Pn 14 05 40.7 -0.7
S39A Bolivar 14.84 96 Pn 14 05 42.4 -0.3
P40A Paris 15.35 88 Pn 14 05 49.0 -0.4
P40A IAmb IAmb 14 06 22.9
comp=E,21nm,1.1s
FFC Flin Flon 15.50 22 Pn 14 05 50.2 -1.1
Z38A Mt. Pleasant 15.54 113 Pn 14 05 50.8 -1.2
EPLO Experimental L 15.65 49 Pn 14 05 52.0 -1.3
EPLO IAmb IAmb 14 06 01.0
comp=E,24nm,0.8s
L40A Anamosa 15.68 78 Pn 14 05 53.2 -0.6
L40A IAmb IAmb 14 06 17.5
comp=E,19nm,0.8s
E38A The Farm, Brul 15.92 62 Pn **Pn 14 05 56.2 -0.6**
E38A IAmb IAmb 14 06 04.7
comp=E,22nm,0.9s
CCM Cathedral Cave 16.31 93 Pn 14 06 00.9 -0.9
EYMN Ely 16.33 57 Pn **Pn 14 06 00.6 -1.5**
FCAR Ozark Folk Cen 16.37 101 Pn **Pn 14 06 01.8 -0.8**
X40A Basin Creek Fa 16.45 106 Pn 14 06 03.4 -0.3
WLAR White Oak Lake 16.64 109 Pn **Pn 14 06 06.1 0.0**
WLAR IAmb IAmb 14 06 16.6
comp=E,45nm,1.0s
LPIG La Paz 16.68 174 LR LR 14 12 28.4
comp=E,388nm,19.0s,baz=3.5,slow=37
T42A Van Buren 16.73 96 Pn **Pn 14 06 06.6 -0.6**
FVM French Village 16.95 92 Pn **Pn 14 06 09.9 0.0**
FVM IAmb IAmb 14 06 20.9
comp=E,32nm,0.9s
P48A Milroy 20.38 85 P P 14 06 48.7 -0.9
P48A IAmb IAmb 14 06 57.4
comp=E,19nm,0.9s
E46A Sault Ste Mari 20.81 65 P P 14 06 53.7 -0.5
DLBC Dease Lake 21.06 333 P P 14 06 57.5 +0.6
comp=E,3.3nm,1.1s,baz=107,slow=9.3,SNR=7.6
comp=E,3.3nm,1.1s
FCC Fort Churchill 21.30 26 P P 14 06 59.4 +0.1
FCC IAmb IAmb 14 07 15.4
comp=E,19nm,1.3s
YKAW1 Yellowknife Wh 21.80 357 P P 14 07 03.7 -0.9
YKAW1 IAmb IAmb 14 07 08.7
comp=E,12nm,0.9s
YKA Yellowknife Ar 21.81 357 P P 14 07 05.4 +0.6
comp=E,2.6nm,0.8s,baz=182,slow=9.0,SNR=55
comp=E,2.6nm,0.8s
YKA Yellowknife Ar 21.81 357 P P 14 07 04.2 -0.6
YKAW3 Yellowknife Wh 21.88 357 P P 14 07 05.3 -0.2
YKAW3 IAmb IAmb 14 07 11.2
comp=E,11nm,0.9s
WTLY Watson Lake, Y 21.99 337 P P 14 07 06.3 -0.5
WTLY IAmb IAmb 14 07 14.9
comp=E,16nm,1.2s
CPCT Cooper Cave 22.26 95 P P 14 07 10.0 +0.1
CPCT IAmb IAmb 14 07 21.5
comp=E,14nm,1.1s
TKL Tuckaleechee C 22.75 94 LR LR 14 15 13.9
comp=E,384nm,18.6s,baz=71,slow=34
BESE Bessie Mountai 22.95 329 P P 14 07 15.6 -1.4
P32M Atlin 23.20 332 P P 14 07 19.2 -0.4
WRGLY Wrigley 23.49 347 P P 14 07 22.3 -0.1
WRGLY IAmb IAmb 14 07 34.3
comp=E,18nm,1.0s
WHY Whitehorse 24.37 332 P P 14 07 31.9 +1.0
WHY IAmb IAmb 14 07 36.9
comp=E,11nm,1.2s
SADO Sadowa 24.39 70 LR LR 14 16 57.2
comp=E,319nm,19.8s,baz=306,slow=36
JSC Jenkinsville 25.18 95 P P 14 07 37.5 -0.8
BLKN Baker Lake 25.37 16 P P 14 07 39.6 -0.1
BLKN IAmb IAmb 14 07 47.3
comp=E,19nm,1.5s
VLDQ Val d'Or 25.61 62 P P 14 07 40.6 -1.5
K29M Barlow Dome 27.50 336 P P 14 07 58.6 -0.5
K29M IAmb IAmb 14 08 02.8
comp=E,7.9nm,1.3s
TRQ Mont Tremblant 27.56 66 P P 14 08 00.0 +0.2
J30M Hart River 27.67 338 P P 14 08 01.1 +0.4
ILAR Eielson Array 31.25 332 P P 14 08 32.5 +0.3
comp=E,2.6nm,0.8s,baz=136,slow=6.1,SNR=9.2
comp=E,2.6nm,0.8s
CCB Clear Creek Bu 31.52 331 P P 14 08 36.1 +1.5
SCHQ Schefferville 32.85 49 P P 14 08 45.9 -0.6
comp=E,5.2nm,1.0s,baz=268,slow=11,SNR=3.6
comp=E,5.2nm,1.0s
FRB Frobisher Bay 34.15 33 LR LR 14 22 29.1
comp=E,215nm,20.8s,baz=114,slow=36
G18K Tagagawik 36.16 330 P 14 09 15.6 +0.7
G18K IAmb IAmb 14 09 20.7
comp=E,9.2nm,1.3s
E18K Tukpahlearik C 37.42 332 P P 14 09 24.2 -1.4
E18K IAmb IAmb 14 09 34.2
comp=E,6.8nm,1.1s
SJG San Juan 45.28 106 LR LR 14 30 55.0
comp=E,109nm,19.0s,baz=1.5,slow=38
BORG Borgarnes 54.30 32 LR LR 14 35 02.2
comp=E,345nm,19.1s,baz=42,slow=36
SEY Seymchan 56.99 327 P P 14 11 59.5 +1.4
comp=E,0.8nm,0.5s,baz=97,slow=8.2,SNR=7.1
comp=E,0.8nm,0.5s
TIXI Tiksi 60.00 341 P 14 12 19.3 +0.4
MDP Montagnes des 63.74 107 LR LR 14 41 14.9
comp=E,60nm,20.6s,baz=352,slow=37
ARCES ARCESS Array B 65.68 15 LR LR 14 41 58.4
comp=E,184nm,19.7s,baz=240,slow=36
EKA Eskdalemuir Ar 66.84 36 P P 14 13 04.0 -0.5
comp=E,0.9nm,0.5s,baz=303,slow=7.8,SNR=4.5
comp=E,0.9nm,0.5s
NRIK Noril'sk 69.25 353 P P 14 13 18.9 -0.5
comp=E,1.3nm,0.6s,baz=40,slow=8.0,SNR=3.8
comp=E,1.3nm,0.6s
HFS Hagfors 70.06 26 P P 14 13 24.5 0.0
comp=E,6.9nm,1.0s,baz=226,slow=5.8,SNR=3.0
comp=E,6.9nm,1.0s
FINES FINESS Array B 72.62 20 P P 14 13 40.0 0.0
comp=E,4.8nm,1.1s,baz=302,slow=4.3,SNR=3.7
comp=E,4.8nm,1.1s
HEH HeiHe 75.46 325 *eP* **P 14 13 56.9 +0.2**
HEH pmax pmax
comp=E,4.0nm,1.0s
CLL Collm 76.55 32 *eP* **P 14 14 04.0 +1.0**
CLL *i* x x 14 14 07.7
ESDC Sonseca Array 76.61 49 P P 14 14 05.0 +1.4
comp=E,0.7nm,0.8s,baz=286,slow=5.8,SNR=3.0
comp=E,0.7nm,0.8s
USRK Ussuriysk Ar. 77.71 319 P P 14 14 11.1 +1.5
comp=E,5.5nm,0.7s,baz=35,slow=7.7,SNR=4.3
comp=E,5.5nm,0.7s
GERES GERESS Array B 78.75 33 P P 14 14 14.9 -0.5
comp=E,0.9nm,0.9s,baz=335,slow=5.9,SNR=5.1
comp=E,0.9nm,0.9s
MJAR Matsushiro Arr 79.69 310 P P 14 14 19.7 -1.0
comp=E,2.0nm,0.9s,baz=32,slow=7.4,SNR=4.4
comp=E,2.0nm,0.9s
AKASG Malin Array Be 82.81 24 P P 14 14 37.5 +0.6
comp=E,0.6nm,0.6s,baz=304,slow=5.6,SNR=5.6
comp=E,0.6nm,0.6s
ZALV Zalesovo Beam 84.55 350 P P 14 14 44.7 -1.1
comp=E,2.0nm,0.6s,baz=357,slow=5.9,SNR=5.7
comp=E,2.0nm,0.6s
SONM Songino Array 85.42 335 P P 14 14 50.8 +0.3
comp=E,0.9nm,0.8s,baz=54,slow=2.6,SNR=6.5
comp=E,0.9nm,0.8s
BVAR Borovoye Array 86.56 359 P P 14 14 57.0 +1.2
comp=E,2.1nm,0.8s,baz=6.8,slow=3.7,SNR=8.8
comp=E,2.1nm,0.8s
KURBB Kurchatov Arra 88.52 353 P P 14 15 06.2 +0.9
comp=E,2.9nm,1.0s,baz=3.3,slow=4.3,SNR=15
comp=E,2.9nm,1.0s
HHC Hu-ho-hao-te 89.62 328 *eP* **P 14 15 08.9 -1.9**
HHC pmax pmax
comp=E,15nm,0.6s
HHC pmax pmax
comp=E,120nm,4.8s
MKAR Makanchi Array 91.89 350 P P 14 15 21.5 +0.3
comp=E,0.9nm,0.8s,baz=352,slow=3.7,SNR=8.1
comp=E,0.9nm,0.8s
KBZ Khabaz 92.91 18 P P 14 15 25.5 -0.3
comp=E,2.1nm,1.0s,baz=12,slow=11,SNR=3.0
comp=E,2.1nm,1.0s
DZM Mont Dzumac 97.98 248 LR LR 14 53 54.7
comp=E,631nm,20.2s,baz=146,slow=32
KSH2 Kashi 100.16 354 P Pdif 14 15 56.3 -2.7
KSH2 pmax pmax
comp=E,3.0nm,1.7s
PZH PanZhiHua 106.08 329 PKP **PKiKP 14 20 37.3 -0.2**
WRA Warramunga Arr 120.44 269 PKP **PKiKP 14 21 05.2 +0.3**
comp=E,1.5nm,0.8s,baz=55,slow=2.0,SNR=16
ASAR Alice Springs 122.91 266 PKP **PKPdf 14 21 09.5 +0.1**
comp=E,1.1nm,0.9s,baz=70,slow=2.5,SNR=9.3

*NOU **18** 14:02:51.0, 17°.51S×167°.42E, h25km, MLv4.4/15, Vanuatu Islands*
*IDC **18** 14:02:52.5±13.0, 17°.79S×166°.88E, h0km, mb3.9/4, mbtmp4.0/5, Error ellipse: s-maj=226.7km s-min=36.0km az=67.0*
*NEIC **18** 14:02:52.0±0.8, 17°.69S±0°.09×167°.2E±0°.2, h10km±1km, mb4.5/11, Error ellipse: s-maj=24.5km s-min=15.2km az=80.0*
ISC 18 14:02:50.4±0.6, 17°.58S±0°.05×167°.32E±0°.05, h10km, n30, σ1s31/31, mb4.3/10, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**0.84**	**100**	P	**Pg**	**14 03 06.3**	**-0.3**
DVP	**Devils Point**	**0.84**	**100**	S	**Sg**	**14 03 17.3**	**-0.2**
RTV	**Rentapao**	**1.07**	**102**	P	**Pg**	**14 03 09.9**	**-1.2**
RTV	**Rentapao**	**1.07**	**102**	S	**Sg**	**14 03 23.9**	**-1.2**
SANVU	**Saraoutou**	**2.12**	**357**	P	**Pn**	**14 03 23.6**	**-2.4**
MARNC	**Mare, Loyalty**	**3.94**	**170**	P	**Pn**	**14 03 50.9**	**-0.1**
MARNC	**Mare, Loyalty**	**3.94**	**170**	Pn	**Pn**	**14 03 51.4**	**+0.4**
YATNC	**Mamie plateau,**	**4.47**	**185**	P	**Pn**	**14 03 56.9**	**-1.5**
DZM	**Mont Dzumac**	**4.54**	**190**	Pn	**Pn**	**14 03 59.1**	**-0.3**
DZM	33nm,0.3s,baz=326,slow=11			Sn	**Sn**	**14 04 49.9**	**-2.5**
	18nm,0.3s,baz=88,slow=19,SNR=9.7						
ONTNC	**Ouen Toro**	**4.77**	**190**	P	**Pn**	**14 04 02.5**	**0.0**
ONTNC	**Ouen Toro**	**4.77**	**190**	Pn	**Pn**	**14 04 02.5**	**0.0**
OUENC	**Ouen Island, N**	**4.83**	**185**	P	**Pn**	**14 04 03.6**	**+0.3**
OUENC	**Ouen Island, N**	**4.83**	**185**	Pn	**Pn**	**14 04 02.5**	**-0.8**
NGOA	**Tingoa Renbel**	**9.23**	**309**	P	**Pn**	**14 05 03.8**	**+0.1**
CTAO	**Charters Tower**	**20.09**	**260**	P	**P**	**14 07 24.0**	**-0.4**
CTAO				IAmb	IAmb	14 07 29.0	
	comp=E,24nm,1.2s						
BKZ	**Black Stump Fm**	**22.94**	**161**	P	**P**	**14 07 55.5**	**+0.6**
BKZ				IAmb	IAmb	14 08 31.0	
	comp=E,28nm,1.3s						
STKA	**Stephens Creek**	**27.27**	**234**	P	**P**	**14 08 35.4**	**+0.2**
	comp=E,3.7nm,0.8s,baz=69,slow=8.9,SNR=8.1						
	comp=E,3.7nm,0.8s						
WB0	**Warramunga Arr**	**31.25**	**261**	P	**P**	**14 09 09.4**	**-1.2**
WB0				IAmb	IAmb	14 09 40.4	
	comp=E,4.9nm,1.1s						
WRA	**Warramunga Arr**	**31.29**	**260**	P	**P**	**14 09 09.8**	**-1.2**
	comp=E,0.5nm,0.9s,baz=93,slow=8.5,SNR=4.9						
	comp=E,0.5nm,0.9s						
WRA	**Warramunga Arr**	**31.29**	**260**	P	**P**	**14 09 09.4**	**-1.6**
AS31	**Alice Springs**	**31.80**	**253**	P	**P**	**14 09 14.4**	**-1.2**
ASAR	**Alice Springs**	**31.81**	**253**	P	**P**	**14 09 14.8**	**-0.7**
	comp=E,0.9nm,0.5s,baz=80,slow=8.4,SNR=45						
	comp=E,0.9nm,0.5s						
ASAR	**Alice Springs**	**31.81**	**253**	P	**P**	**14 09 14.3**	**-1.2**
KNRA	**Kununurra**	**36.95**	**267**	P	**P**	**14 09 59.3**	**-0.8**
KNRA				IAmb	IAmb	14 09 59.8	
	comp=E,6.5nm,1.2s						
FITZ	**Fitzroy Crossi**	**39.62**	**263**	P	**P**	**14 10 22.7**	**+0.1**
	comp=E,2.4nm,0.9s,baz=89,slow=7.3,SNR=3.7						
	comp=E,2.4nm,0.9s						
SSLB	**Suanglung**	**61.15**	**311**	P	**P**	**14 13 05.8**	**+0.3**
SSLB				IAmb	IAmb	14 13 22.1	
	comp=E,4.5nm,0.8s						
ADK	**Adak**	**70.56**	**10**	P	**P**	**14 14 08.8**	**+3.4**
QSPA	**South Pole Qui**	**72.46**	**180**	P	**P**	**14 14 16.6**	**-0.5**
QSPA				IAmb	IAmb	14 14 20.0	
	comp=E,7.7nm,1.3s						
K15K	**Wolf Creek Mou**	**83.33**	**14**	P	**P**	**14 15 19.8**	**+2.6**
J16K	**Anvik River**	**84.40**	**14**	P	**P**	**14 15 23.9**	**+1.2**
J16K				IAmb	IAmb	14 15 28.6	
	comp=E,7.9nm,1.4s						

*UCR **18** 14:10:25.1±1.2, 10°.45N×86°.28W, h11km±26km, MW4.2, Presumed earthquake*
*CATAC **18** 14:10:25.8±0.7, 10°.N±5°.×8°.6W±°., h26km, M3.6/11, MLv3.6/11, Error ellipse: s-maj=10.1km s-min=7.7km az=12.4, confirmed*
ISC 18 14:10:22.4±1.9, 10°.32N±0°.06×86°.33W±0°.06, h10km±10km, n46, σ1s12/72, 6C-5D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DELF	**Filadelfia**	**0.78**	**81**	*eP*	**Pn**	**14 10 39.2**	**-0.3**
DELF				*eS*	**Sn**	**14 10 50.2**	**-1.0**
ALIBA	**Liberia Airpor**	**0.82**	**71**	*iP*	**Pn**	**14 10 40.2**	**+0.1**
ALIBA				*eS*	**Sn**	**14 10 51.0**	**-1.2**
ELI1	**Hacienda Flor**	**0.83**	**67**	P	**Pn**	**14 10 40.5**	**+0.3**
ELI1				S	**Sn**	**14 10 53.0**	**+0.4**
ELI1	**Hacienda Flor**	**0.83**	**67**	*iP*	**Pn**	**14 10 40.6**	**+0.3**
ELI1				*eS*	**Sn**	**14 10 52.4**	**-0.1**
ERIA	**Liberia**	**0.93**	**71**	*eP*	**Pn**	**14 10 42.3**	**+0.6**
LAPC	**Finca la Perla**	**0.99**	**63**	*eP*	**Pb**	**14 10 41.9**	**+0.2**
LAPC				*eS*	**Sb**	**14 10 54.6**	**-0.2**
ELVJ	**El Viejo (Barb**	**1.00**	**83**	*eP*	**Pg**	**14 10 40.7**	**-1.0**
ELVJ				*eS*	**Sg**	**14 10 52.2**	**-2.5**
LCRUZ	**La Cruz**	**1.02**	**43**	*eP*	**Pb**	**14 10 42.6**	**+0.3**
LCRUZ				*eS*	**Sb**	**14 10 55.8**	**+0.1**
GPS3	**Bodega del ICE**	**1.04**	**66**	*eP*	**Pn**	**14 10 43.2**	**-0.1**
GPS3				*eS*	**Sb**	**14 10 56.4**	**0.0**
GPS2	**Hotel Rincn d**	**1.05**	**66**	*eP*	**Pn**	**14 10 43.3**	**0.0**
GPS2				*eS*	**Sb**	**14 10 56.2**	**-0.5**
VRLE	**La Escondida,**	**1.06**	**64**	*eP*	**Pb**	**14 10 43.0**	**+0.1**
VRLE				*eS*	**Sg**	**14 10 56.0**	**-0.6**
GPS1	**Guardaparques**	**1.06**	**65**	*iP*	**Pn**	**14 10 43.5**	**-0.1**
GPS1				*eS*	**Sb**	**14 10 56.8**	**-0.3**
BAGA	**Bagaces**	**1.07**	**79**	*eP*	**Pn**	**14 10 43.9**	**+0.4**
BAGA				*eS*	**Sb**	**14 10 57.6**	**+0.4**
VORI	**VORI**	**1.09**	**63**	*eP*	**Pb**	**14 10 43.7**	**+0.2**
VORI				*eS*	**Sb**	**14 10 57.4**	**-0.4**
BUAI	**Buenos Aires**	**1.13**	**61**	*eP*	**Pn**	**14 10 44.6**	**+0.3**
BUAI				*eS*	**Sb**	**14 10 59.2**	**+0.4**
PEJA	**Penjamo Buenos**	**1.15**	**60**	*eP*	**Pn**	**14 10 44.9**	**+0.2**
COLC	**Colonia**	**1.16**	**73**	*eP*	**Pb**	**14 10 44.9**	**+0.2**
COLC				*eS*	**Sn**	**14 11 00.6**	**-0.2**
CARN	**Rivas**	**1.17**	**43**	P	**Pn**	**14 10 45.3**	**+0.3**
CARN				S	**Sn**	**14 11 00.7**	**-0.2**
MESS	**Mesas**	**1.19**	**70**	*iP*	**Pb**	**14 10 45.3**	**+0.1**
MESS				*eS*	**Sg**	**14 10 59.4**	**-1.5**
CUI	**Cuipilapa**	**1.20**	**74**	*eP*	**Pn**	**14 10 45.5**	**+0.2**
CUI				*eS*	**Sn**	**14 11 01.2**	**-0.5**
HORNC	**Hornillas**	**1.20**	**71**	*eP*	**Pb**	**14 10 45.5**	**+0.1**
HORNC				*eS*	**Sb**	**14 11 00.6**	**-0.3**
CLARA	**Aguas Claras**	**1.23**	**68**	*eP*	**Pg**	**14 10 45.6**	**-0.4**
CLARA				*eS*	**Sn**	**14 11 04.4**	**+2.0**
JCR1	**Jicaral**	**1.29**	**111**	*eP*	**Pg**	**14 10 47.9**	**+0.7**
VMAR	**Armenia, Volca**	**1.29**	**68**	*eP*	**Pb**	**14 10 46.9**	**-0.1**
VMAR				*eS*	**Sn**	**14 11 04.2**	**+0.1**
TIMP	**Tierras Morena**	**1.32**	**79**	*eP*	**Pg**	**14 10 48.0**	**+0.2**
TIMP				*eS*	**Sn**	**14 11 04.8**	**+0.1**
TILA	**Tilaran**	**1.35**	**84**	*eP*	**Pn**	**14 10 46.5**	**-0.9**
JUNT	**Juntas**	**1.35**	**92**	*eP*	**Pn**	**14 10 43.5**	**-3.9**
JAPN	**Al SSO del Vol**	**1.36**	**28**	P	**Pb**	**14 10 48.1**	**+0.1**
JTS	**Las Juntas de**	**1.36**	**91**	P	**Pn**	**14 10 47.8**	**+0.3**
OMEN	**Al SSO del Vol**	**1.37**	**30**	P	**Pg**	**14 10 48.5**	**-0.3**
TENO	**El Achiote**	**1.39**	**74**	*eP*	**Pn**	**14 10 47.6**	**-0.3**
TENO				*eS*	**Sb**	**14 11 05.8**	**-0.5**
MORN	**Al O del Volca**	**1.39**	**29**	P	**Pn**	**14 10 48.4**	**+0.4**
CONN	**Concepcion**	**1.42**	**29**	P	**Pn**	**14 10 48.6**	**+0.4**
QUEB	**Quebradon, Cot**	**1.44**	**78**	*eP*	**Pb**	**14 10 49.6**	**+0.1**
NADN	**Granada**	**1.45**	**12**	P	**Pn**	**14 10 49.2**	**+0.5**
NADN				S	**Sb**	**14 11 06.7**	**-1.4**
VARE2	**V. Arenal**	**1.59**	**85**	*eP*	**Pb**	**14 10 52.4**	**+0.4**
CEDE	**Laguna Cedeo**	**1.61**	**84**	*eP*	**Pg**	**14 10 53.4**	**0.0**
VACR	**Volcan Arenal**	**1.64**	**85**	*eP*	**Pg**	**14 10 53.5**	**-0.3**
VACR				*eS*	**Sg**	**14 11 21.5**	**+6.5**
COPN	**Copaltepe**	**1.86**	**352**	P	**Pn**	**14 10 55.4**	**+0.9**
ACON	**Acoyapa**	**1.99**	**35**	P	**Pn**	**14 10 56.4**	**+0.2**
ACON				S	**Sn**	**14 11 21.2**	**0.0**
CNGA	**Al SSO del Vol**	**2.19**	**351**	P	**Pb**	**14 11 01.6**	**-0.5**
PIEC	**Cerro El Cedra**	**2.44**	**106**	*eP*	**Pb**	**14 11 06.4**	**-0.2**
CVTR	**Volcan Turrial**	**2.55**	**97**	*eP*	**Pb**	**14 11 09.7**	**+1.2**
CVTV	**Tajo**	**2.56**	**97**	*eP*	**Pb**	**14 11 09.2**	**+0.5**
ABRB	**Las Abras (San**	**2.59**	**97**	*eP*	**Pb**	**14 11 08.0**	**-1.2**
BUS1	**Rivas**	**2.66**	**106**	*eP*	**Pb**	**14 11 11.0**	**+0.5**

*IDC **18** 14:46:59.7±3.5, 4°.4S×143°.99E, h92km±39km, mb3.5/3, mbtmp3.8/6, Error ellipse: s-maj=74.8km s-min=19.5km az=43.0*
ISC 18 14:46:59.3±2.7, 4°.3S±0°.3×144°.1E±0°.3, h110km, n6, σ1s37/7, mb3.6/3, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**3.78**	**297**	P	**Pn**	**14 47 55.2**	**-0.7**
	4.7nm,0.5s,baz=118,slow=23,SNR=1.1						
PMG	**Port Moresby**	**5.96**	**149**	P	**Pn**	**14 48 26.3**	**+1.1**
	5.0nm,0.5s,baz=332,slow=18,SNR=2.1						
PMG				S	**Sn**	**14 49 30.0**	**-2.2**
	4.2nm,0.3s,baz=304,slow=23,SNR=1.3						
WRA	**Warramunga Arr**	**18.25**	**211**	P	**P**	**14 51 05.0**	**+0.6**
	5.3nm,0.9s,baz=34,slow=11,SNR=54						
ASAR	**Alice Springs**	**21.65**	**206**	P	**P**	**14 51 41.2**	**+0.1**
	2.4nm,0.7s,baz=32,slow=9.8,SNR=29						
	2.4nm,0.7s						
FITZ	**Fitzroy Crossi**	**22.68**	**231**	P	**P**	**14 51 51.6**	**-0.2**
	1.0nm,0.3s,baz=62,slow=7.9,SNR=19						
	1.0nm,0.3s						
STKA	**Stephens Creek**	**27.57**	**185**	P	**P**	**14 52 37.0**	**+0.9**
	1.0nm,0.6s,baz=355,slow=9.7,SNR=3.9						
	1.0nm,0.6s						

*IDC **18** 14:57:41.2±0.9, 40°.79N×111°.96W, h0km, mb2.7/1, mbtmp3.3/6, ML2.7/3, Error ellipse: s-maj=14.9km s-min=5.5km az=152.0*
*NEIC **18** 14:57:41.2±1.1, 40°.74N±0°.01×112°.06W±0°.02, h6km±4km, ML3.5/82, Mwr3.6/10, ML3.6/14(UUSS), Mwr3.6/23(SLM), Error ellipse: s-maj=2.1km s-min=1.7km az=220.0, Moment Tensor Solution. Moment tensor: Scale 10^14^Nm; Mrr=2.67; Mθθ=0.50; Mφφ=2.17; Mrθ=1.21; Mθφ=-1.37; Mφr=-0.85; Fault plane solution: M0=3.18000×10^14^ NP1: φs=318.55000°, δs=58.94000°, λs=-103.49000°. NP2: φs=163.49000°, δs=33.60000°, λs=-68.83000°. Principal axes: T 3.2541, Plg13.0000°, Azm58.0000°; N -0.1433, Plg12.0000°, Azm326.0000°; P -3.1107, Plg73.0000°, Azm195.0000°;*
*UUSS **18** 14:57:41.4±1.0, 40°.76N±0°.01×112°.05W±0°.02, h8km±6km Error ellipse: s-maj=2.2km s-min=1.7km az=53.0*
*NEIC **18** 14:57:41.2, 40°.76N×112°.06W, h11km*
*NEIC **18** 14:57:41, 40°.75N×112°.04W, h11km, Moment Tensor Solution. Moment tensor: Scale 10^14^Nm; Mrr=2.34; Mθθ=0.18; Mφφ=2.52; Mrθ=1.15; Mθφ=0.94; Mφr=0.10; Fault plane solution: M0=2.85000×10^14^ NP1:φs=320.00000°, δs=55.00000°, λs=-120.00000°. NP2:φs=185.00000°, δs=45.00000°, λs=-55.00000°. Principal axes: T 2.8533, Plg5.0000°, Azm71.0000°; N -0.0009, Plg24.0000°, Azm339.0000°; P -2.8523, Plg66.0000°, Azm172.0000°;*
ISC 18 14:57:41.7±0.9, 40.76N±0°.02×112.05W±0°.02, h8km±7km, n89, σ0s79/91, Utah

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NOQ	**North Oquirrh**	**0.12**	**207**		**Pg**	**14 57 44.4**	**-0.1**
NOQ					**Sg**	**14 57 46.6**	**+0.1**
HRU	**Hogsback Ridge**	**0.13**	**77**		**Pg**	**14 57 44.5**	**-0.2**
SAIU	**Southern Antel**	**0.14**	**314**		**Pg**	**14 57 44.8**	**-0.1**
RBU	**Red Butte Cany**	**0.18**	**83**		**Pg**	**14 57 45.5**	**-0.2**
CTU	**Camp Tracy**	**0.24**	**106**		**Pg**	**14 57 46.2**	**-0.3**
CTU				IAML		14 57 50.2	
	comp=N,6μm,0.6s						
GMU	**Granite Mounta**	**0.28**	**130**		**Pg**	**14 57 47.2**	**-0.2**
NAIU	**Northern Antel**	**0.29**	**332**		**Pg**	**14 57 47.6**	**0.0**
NAIU	**Northern Antel**	**0.29**	**332**		**Sg**	**14 57 51.7**	**+0.1**
FPU	**Francis Peak**	**0.31**	**31**		**Pg**	**14 57 48.0**	**-0.1**
CWU	**Camp Williams**	**0.31**	**187**		**Pg**	**14 57 47.9**	**-0.1**
AAU	**Alta**	**0.35**	**118**		**Pg**	**14 57 48.6**	**-0.2**
SNUT	**Stansbury Nort**	**0.37**	**290**		**Pg**	**14 57 49.2**	**+0.1**
WBC	**Weber Canyon**	**0.40**	**16**		**Pg**	**14 57 49.3**	**-0.3**
TCVU	**Timpanogos Cav**	**0.41**	**140**		**Pg**	**14 57 49.5**	**-0.3**
TCVU					**Sg**	**14 57 55.1**	**0.0**
RCJ	**Ross Creek**	**0.47**	**102**		**Pg**	**14 57 50.8**	**-0.2**
N16A	**Rees Ranch, Co**	**0.48**	**74**		**Pg**	**14 57 51.3**	**+0.2**
KLJ	**Keetly**	**0.51**	**104**		**Pg**	**14 57 51.4**	**-0.2**
HLJ	**Hailstone**	**0.52**	**106**		**Pg**	**14 57 51.6**	**-0.2**
LDJ	**Lady**	**0.52**	**110**		**Pg**	**14 57 51.9**	**+0.1**
DCU	**Deer Creek Res**	**0.53**	**131**		**Pg**	**14 57 51.8**	**-0.1**
HEB	**Heber**	**0.60**	**115**		**Pb**	**14 57 53.5**	**-1.1**
TCUT	**Toone Canyon**	**0.60**	**53**		**Pg**	**14 57 53.5**	**0.0**
TCUT	**Toone Canyon**	**0.60**	**53**	Pg	**Pb**	**14 57 53.7**	**-1.0**
TCUT				IAML		14 58 09.0	
	comp=E,4μm,0.5s						
TCUT				IAML		14 58 09.0	
	comp=N,6μm,0.6s						
SPUT	**South Promonto**	**0.63**	**331**		**Pg**	**14 57 54.0**	**+0.1**
HTU	**Hoyt Peak**	**0.64**	**97**		**Pg**	**14 57 54.0**	**0.0**
EPU	**East Promontor**	**0.69**	**337**		**Pg**	**14 57 54.9**	**-0.2**
DAU	**Daniels Canyon**	**0.69**	**119**		**Pb**	**14 57 55.4**	**-0.8**
BGU	**Big Grassy Mou**	**0.76**	**283**		**Pb**	**14 57 56.5**	**-0.8**
BGU				IAML		14 58 09.0	
	comp=N,1μm,0.5s						
BGU				IAML		14 58 09.8	
	comp=E,2μm,0.6s						
NLU	**North Lily Min**	**0.80**	**181**		**Pg**	**14 57 57.0**	**-0.2**
NLU				IAML		14 58 11.4	
	comp=N,1μm,0.6s						
NLU				IAML		14 58 12.1	
	comp=E,2μm,0.5s						
MPU	**Maple Canyon**	**0.81**	**157**		**Pb**	**14 57 57.2**	**-0.9**
MPU				IAML		14 58 11.6	
	comp=E,2μm,0

P17A					IAML			14 58 35.5	
	comp=E,355nm,0.8s								
P17A					IAML			14 58 36.2	
	comp=N,417nm,0.7s								
ROA	**Roan Cliffs**	**1.69**	**130**			**Pb**		**14 58 12.8**	**-0.5**
BCE	**Book Cliffs Ea**	**1.70**	**132**			**Pb**		**14 58 12.7**	**-0.7**
P18A	**Preston Nutter**	**1.78**	**129**			**Pb**		**14 58 13.7**	**-1.1**
P18A					IAML			14 58 38.9	
	comp=E,468nm,0.6s								
P18A					IAML			14 58 40.0	
	comp=N,449nm,0.7s								
Q16A	**Castle Valley**	**1.96**	**160**			**Pn**		**14 58 15.1**	**-0.3**
SRU	**San Rafael Swe**	**2.02**	**144**			**Pn**		**14 58 16.1**	**-0.1**
SRU					IAML			14 58 48.2	
	comp=N,450nm,0.7s								
SRU					IAML			14 58 56.7	
	comp=E,360nm,0.8s								
OWUT	**Old Woman Plat**	**2.03**	**166**			**Pn**		**14 58 16.9**	**+0.4**
AHID	**Auburn Hatcher**	**2.13**	**19**			**Pn**		**14 58 18.7**	**+1.0**
AHID					IAML			14 58 53.7	
	comp=E,480nm,0.5s								
TCRU	**Three Creeks R**	**2.17**	**188**			**Pn**		**14 58 17.7**	**-0.6**
TCRU					IAML			14 58 54.2	
	comp=N,441nm,1.0s								
TCRU					IAML			14 59 00.3	
	comp=E,433nm,0.8s								
NMUT	**North Mineral**	**2.32**	**196**			**Pb**		**14 58 23.1**	**-0.8**
ELK	**Elko**	**2.42**	**271**	Pn		**Pb**		**14 58 24.5**	**-1.2**
	comp=E,6.4nm,0.3s,baz=93,slow=13,SNR=42								
ELK					Lg	Lg		14 58 59.1	
	comp=E,20nm,0.3s,baz=187,slow=23,SNR=11								
	comp=E,22nm,0.3s								
ELK	**Elko**	**2.42**	**271**			**Pn**		**14 58 21.4**	**-0.5**
PSUT	**Pine Spring**	**2.62**	**213**			**Pn**		**14 58 24.7**	**+0.2**
PSUT					IAML			14 59 06.7	
	comp=N,314nm,0.6s								
PSUT					IAML			14 59 08.7	
	comp=E,363nm,0.9s								
MTPU	**Mount Pierson**	**2.71**	**182**			**Pn**		**14 58 26.6**	**+0.6**
BW06	**Boulder Array**	**2.74**	**42**			**Pn**		**14 58 27.1**	**+1.0**
BW06					IAML			14 59 08.0	
	comp=E,142nm,0.8s								
BW06					IAML			14 59 08.8	
	comp=E,202nm,0.5s								
PD31	**Pinedale Array**	**2.74**	**42**			**Pn**		**14 58 27.1**	**+1.0**
PDAR	**Pinedale Array**	**2.74**	**42**	Pn		**Pn**		**14 58 26.9**	**+0.7**
	comp=E,39nm,0.5s,baz=220,slow=12,SNR=183								
PDAR					Pg	**Pb**		**14 58 29.7**	**-1.4**
	comp=E,12nm,0.3s,baz=234,slow=14,SNR=233								
PDAR					Lg	Lg		14 59 07.0	
	comp=E,44nm,0.3s,baz=202,slow=24,SNR=22								
PDAR	**Pinedale Array**	**2.74**	**42**			**Pn**		**14 58 27.1**	**+1.0**
SNOW	**Snow King Moun**	**2.87**	**19**			**Pn**		**14 58 28.8**	**+0.8**
SNOW					IAML			14 59 23.7	
	comp=E,166nm,1.2s								
SNOW					IAML			14 59 24.3	
	comp=E,245nm,1.1s								
O20A	**White River Ci**	**2.97**	**101**			**Pn**		**14 58 29.8**	**+0.5**
O20A					IAML			14 59 21.0	
	comp=E,255nm,0.5s								
HMU	**Henry Mountain**	**2.99**	**160**			**Pn**		**14 58 30.5**	**+0.9**
HMU					IAML			14 59 19.6	
	comp=N,275nm,0.8s								
HMU					IAML			14 59 26.6	
	comp=E,238nm,0.5s								
LOHW	**Long Hollow**	**3.05**	**20**			**Pn**		**14 58 31.5**	**+1.1**
LOHW					IAML			14 59 19.6	
	comp=E,129nm,0.8s								
MOOW	**Moose Ponds**	**3.14**	**18**			**Pn**		**14 58 32.6**	**+0.9**
PV21	**Cone Mtn., Par**	**3.23**	**132**			**Pn**		**14 58 32.6**	**-0.3**
SZCU	**Shurtz Canyon**	**3.26**	**195**			**Pn**		**14 58 33.8**	**+0.5**
SZCU					IAML			14 59 29.1	
	comp=N,101nm,0.4s								
SZCU					IAML			14 59 32.3	
	comp=E,127nm,0.4s								
PV23	**Carpenter Ridg**	**3.29**	**133**			**Pn**		**14 58 34.0**	**+0.2**
HLID	**Hailey**	**3.31**	**329**			**Pn**		**14 58 35.1**	**+1.2**
PKCU	**Pink Cliffs**	**3.31**	**184**			**Pn**		**14 58 34.7**	**+0.6**
PKCU					IAML			14 59 36.8	
	comp=E,111nm,0.4s								
PKCU					IAML			14 59 53.1	
	comp=N,89nm,1.6s								
PV14	**Lion Creek, Pa**	**3.34**	**135**			**Pn**		**14 58 34.5**	**+0.1**
PV22	**Blue Mesa, Par**	**3.36**	**130**			**Pn**		**14 58 35.0**	**+0.4**
CCUT	**Cedar City**	**3.36**	**198**			**Pn**		**14 58 35.3**	**+0.6**
CCUT					IAML			14 59 36.6	
	comp=E,120nm,0.6s								
CCUT					IAML			14 59 37.2	
	comp=N,79nm,0.6s								
PV19	**Morning Glory**	**3.41**	**135**			**Pn**		**14 58 35.8**	**+0.5**
YPP	**Pitchstone Pla**	**3.63**	**14**			**Pn**		**14 58 39.1**	**+0.6**
NVAR	**Mina Array Bea**	**5.36**	**246**	Pn		**Pn**		**14 59 03.4**	**+1.2**
	comp=N,0.6nm,0.3s,baz=50,slow=14,SNR=8.9								
NVAR					Lg	Lg		15 00 30.8	
	comp=N,6.4nm,0.3s,baz=66,slow=34,SNR=12								
	comp=N,1.1nm,0.5s								
ANMO	**Albuquerque**	**7.29**	**141**	Pg		Pb		14 59 53.1	+4.4
	comp=N,0.3nm,0.3s,baz=321,slow=15,SNR=4.2								
ANMO					Lg	Lg		15 01 24.6	
	comp=N,0.4nm,0.3s,baz=243,slow=11,SNR=6.2								
TXAR	**Lajitas Array**	**13.30**	**146**	Pn		**Pn**		**15 00 54.6**	**+3.8**
	comp=N,0.7nm,0.7s,baz=336,slow=14,SNR=2.9								
ULM	**Lac du Bonnet**	**14.76**	**45**	Pn		**Pn**		**15 01 08.3**	**-2.2**
	comp=N,0.2nm,0.3s,baz=234,slow=12,SNR=2.9								
ULM					Lg	Lg		15 05 18.9	
	comp=N,0.1nm,0.3s,baz=330,slow=22,SNR=3.4								
	comp=N,0.6nm,0.3s								
YKA	**Yellowknife Ar**	**21.82**	**357**	P		**P**		**15 02 33.6**	**-0.4**
	comp=N,0.2nm,0.5s,baz=187,slow=8.5,SNR=5.2								
	comp=N,0.2nm,0.5s								

*IDC **18** 14:57:52.0±1.8,6°.49S×130°.12E, h0km, mb3.5/2, mbtmp3.5/5, ML3.9/4, Error ellipse: s-maj=52.0km s-min=25.1km az=85.0*

ISC 18 14:58:03.8±1.4, 7°.2S±0°.1×129°.8E±0°.1, h100km, n6, σ2s52/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.76**	**243**	Pn	**Pn**	**14 59 42.5**	**+2.0**
	18nm,0.3s,baz=35,slow=1.1,SNR=14						
BATI				Sn	**Sn**	**15 00 54.2**	**-1.9**
	3.3nm,0.3s,baz=103,slow=17,SNR=1.4						
FITZ	**Fitzroy Crossi**	**11.61**	**200**	Pn	**Pn**	**15 00 47.4**	**+1.1**
	0.2nm,0.3s,baz=15,slow=9.2,SNR=23						
	0.8nm,0.3s						
WRA	**Warramunga Arr**	**13.47**	**161**	Pn	**Pn**	**15 01 11.3**	**+0.4**
	0.6nm,0.3s,baz=344,slow=14,SNR=20						
WRA				Sn	**Sn**	**15 03 37.1**	**-2.1**
	0.7nm,0.3s,baz=210,slow=32,SNR=7.0						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**16.90**	**167**	P	**P**	**15 01 58.2**	**+3.5**
	0.3nm,0.3s,baz=348,slow=14,SNR=11						
ASAR				S	**Sn**	**15 04 59.3**	**-2.8**
	0.4nm,0.4s,baz=325,slow=16,SNR=5.5						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**68.22**	**327**	P	**P**	**15 08 52.5**	**-1.2**
	0.3nm,0.3s,baz=116,slow=8.1,SNR=6.9						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**72.52**	**329**	P	**P**	**15 09 18.0**	**-1.8**
	0.2nm,0.5s,baz=122,slow=5.0,SNR=4.3						
	0.2nm,0.5s						

*AFAD **18** 15:12:23.9, 36°.92N×27°.62E, h7km±3km, ML2.7*
*ISK **18** 15:12:24.1, 36°.93N×27°.62E, h6km, ML2.8/18*

ISC 18 15:12:24.3±1.0, 36°.94N±0°.03×27°.62E±0°.03, h9km±11km, n27, σ0s56/35, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.19**	**313**	P	**Pg**	**15 12 28.2**	**-0.1**
DAT	**Datca**	**0.21**	**189**	Pg	**Pg**	**15 12 28.5**	**-0.2**
BODT	**Bodrum**	**0.28**	**297**	Pg	**Pg**	**15 12 30.4**	**+0.5**
BODT				Sg	**Sb**	**15 12 35.1**	**-1.2**
YAZI	**Mula-Dat§a-**	**0.29**	**208**	P	**Pg**	**15 12 29.7**	**-0.4**
YKAV	**Yalikavak-Bodr**	**0.33**	**305**	Pg	**Pg**	**15 12 31.2**	**+0.3**
MLSB	**Milas**	**0.38**	**19**	Pg	**Pg**	**15 12 32.1**	**+0.2**
MLSB				Sg	**Sb**	**15 12 38.2**	**-1.1**
TURN	**Turunc**	**0.53**	**107**	Pg	**Pg**	**15 12 34.6**	**+0.1**
TURN				Sg	**Sb**	**15 12 42.9**	**-0.5**
TURN	**Turunc**	**0.53**	**107**	P	**Pg**	**15 12 34.6**	**+0.1**
TURN				S	**Sg**	**15 12 41.6**	**+0.1**
TURN				IAML		15 12 44.0	
	comp=N,489nm,0.2s						
TURN				IAML		15 12 44.0	
	comp=E,514nm,0.2s						
YER	**Yerkesik**	**0.57**	**69**	Pg	**Pg**	**15 12 35.3**	**-0.1**
MULA	**Mugla, Merkez-**	**0.65**	**60**	P	**Pg**	**15 12 36.9**	**0.0**
MULA				S	**Sg**	**15 12 45.2**	**-0.1**
GCAM	**G?zelcaml?**	**0.82**	**338**	Pg	**Pg**	**15 12 40.3**	**+0.1**
ARG	**Arkhangelos**	**0.83**	**150**	Pg	**Pb**	**15 12 40.5**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**1.03**	**12**	Pg	**Pg**	**15 12 44.1**	**-0.1**
SABU	**Mula-Dalaman**	**1.09**	**95**	P	**Pg**	**15 12 44.9**	**-0.3**
SABU				S	**Sb**	**15 13 00.0**	**+0.4**
NAZL	**Nazilli-Aydin**	**1.16**	**27**	Pn	**Pg**	**15 12 46.2**	**-0.4**
TAVA	**DENIZLI_Tavas**	**1.16**	**62**	P	**Pb**	**15 12 46.6**	**0.0**
DNZT	**Denizli-Tavas-**	**1.18**	**73**	P	**Pg**	**15 12 46.5**	**-0.4**
DNZT				S	**Sg**	**15 13 01.2**	**-1.0**
CAME	**Cameli-Denizli**	**1.35**	**89**	Pn	**Pg**	**15 12 49.8**	**-0.4**
IZZE	**Mula-Seydike**	**1.39**	**111**	P	**Pg**	**15 12 51.2**	**+0.3**
IZZE				S	**Sg**	**15 13 10.0**	**+1.2**
IZZE				IAML		15 13 14.0	
	comp=E,165nm,0.6s						
IZZE				IAML		15 13 16.0	
	comp=N,204nm,0.5s						
ODEM	**Odemis-Izmir**	**1.39**	**15**	Pn	**Pb**	**15 12 50.4**	**-0.1**
APMY	**Acipayam-Deniz**	**1.45**	**68**	Pn	**Pb**	**15 12 51.4**	**-0.1**
BLCB	**Balcova**	**1.52**	**343**	Pn	**Pb**	**15 12 52.3**	**-0.3**
URLA	**Izmir**	**1.64**	**331**	Pn	**Pb**	**15 12 54.2**	**-0.5**
AKAS	**Kas**	**1.75**	**113**	Pn	**Pb**	**15 12 56.1**	**-0.5**
KULA	**Kula-Manisa**	**1.78**	**27**	Pn	**Pn**	**15 12 56.1**	**+0.8**
CHOS	**Chios island**	**1.91**	**320**	Pn	**Pn**	**15 12 57.8**	**-0.7**
GORD	**Gordes-Manisa**	**2.02**	**12**	Pn	**Pn**	**15 12 59.6**	**+1.0**

*IDC **18** 15:22:14.3±0.9, 12°.27N×43°.78W, h0km, mb3.9/8, mbtmp4.0/9, ML4.2/1, MS3.6/8, Error ellipse: s-maj=26.5km s-min=21.0km az=155.0*

ISC 18 15:22:15.7±0.8, 12°.2N±0°.2×43°.8W±0°.1, h10km, n24, σ0s64/9, mb3.9/7, MS3.6/8, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDP	**Montagnes des**	**11.24**	**232**	Pn	**Pn**	**15 24 55.6**	**-1.0**
	1.5nm,0.3s,baz=41,slow=12,SNR=17						
MDP				Sn	Sn	15 26 49.9	-13
	0.8nm,0.3s,baz=33,slow=8.2,SNR=1.2						
	10nm,0.5s						
H05S1	**Guadeloupe/Mar**	**16.72**	**279**	T	T	15 43 07.9	
	SNR=56						
H05N1	**Guadeloupe/Mar**	**17.21**	**286**	T	T	15 43 47.7	
	SNR=12						
SJG	**San Juan**	**22.34**	**288**	LR	LR	15 34 30.5	
	comp=Z,86nm,21.7s,baz=83,slow=33						
H10N3	**ASCENSION HYDR**	**35.30**	**123**	T	T	16 06 30.1	
	baz=303,slow=75,SNR=127						
H10N2	**ASCENSION HYDR**	**35.30**	**123**	T	T	16 06 30.4	
	baz=303,slow=75,SNR=41						
H10N1	**ASCENSION HYDR**	**35.31**	**123**	T	T	16 06 31.6	
	baz=303,slow=75,SNR=147						
H10S3	**ASCENSION HYDR**	**35.80**	**125**	T	T	16 07 05.5	
	baz=299,slow=74,SNR=46						
H10S2	**ASCENSION HYDR**	**35.81**	**125**	T	T	16 07 06.9	
	baz=281,slow=74,SNR=52						
LPAZ	**La Paz**	**37.17**	**221**	P	**P**	**15 29 28.5**	**+0.6**
	3.6nm,1.1s,baz=6.6,slow=2.7,SNR=5.0						
	3.6nm,1.1s						
DBIC	**Dimbokro**	**38.78**	**95**	P	**P**	**15 29 40.6**	**-0.3**
	4.0nm,0.9s,baz=264,slow=9.2,SNR=3.2						
DBIC				LR	LR	15 43 13.5	
	comp=Z,38nm,18.4s,baz=318,slow=32						
	4.0nm,0.9s						
ATAH	**Atahualpa**	**39.41**	**243**	LR	LR	15 45 35.0	
	comp=Z,61nm,21.9s,baz=115,slow=36						
JTS	**Las Juntas de**	**40.38**	**272**	LR	LR	15 49 07.1	
	comp=Z,67nm,20.4s,baz=42,slow=40						
TORD	**Torodi Ar. Bea**	**44.35**	**84**	P	**P**	**15 30 26.2**	**-0.4**
	1.1nm,0.8s,baz=272,slow=8.8,SNR=5.4						
	1.1nm,0.8s						
ULM	**Lac du Bonnet**	**56.84**	**323**	P	**P**	**15 32 00.1**	**-0.3**
	2.4nm,0.8s,baz=127,slow=5.1,SNR=4.3						
	2.4nm,0.8s						
H09W1	**TRISTAN DA CUN**	**57.29**	**150**	T	T	16 33 54.4	
	SNR=21						
TXAR	**Lajitas Array**	**57.92**	**297**	P	**P**	**15 32 08.7**	**+0.1**
	0.6nm,0.8s,baz=121,slow=6.6,SNR=4.3						
	0.6nm,0.8s						
PLCA	**Paso Flores**	**58.22**	**204**	P	**P**	**15 32 11.2**	**+0.8**
	1.0nm,1.0s,baz=22,slow=5.4,SNR=4.0						
	1.0nm,1.0s						
TSUM	**Tsumeb**	**68.06**	**117**	LR	LR	15 56 47.7	
	comp=Z,54nm,18.0s,baz=328,slow=30						
AKASG	**Malin Array Be**	**69.89**	**40**	P	**P**	**15 33 27.0**	**+0.2**
	0.3nm,0.3s,baz=282,slow=4.4,SNR=4.1						
	0.3nm,0.3s						
YKA	**Yellowknife Ar**	**70.39**	**332**	P	**P**	**15 33 29.9**	**+0.2**
	0.6nm,1.0s,baz=111,slow=5.9,SNR=4.9						
	0.6nm,1.0s						
LSZ	**Lusaka**	**76.31**	**109**	LR	LR	16 00 26.1	
	comp=Z,56nm,19.4s,baz=298,slow=30						
LBTB	**Lobatse**	**77.08**	**119**	LR	LR	16 01 54.7	
	comp=Z,39nm,20.9s,baz=256,slow=31						
BOSA	**Boshof**	**78.05**	**123**	LR	LR	16 01 10.8	
	comp=Z,78nm,18.6s,baz=290,slow=30						

*IDC **18** 15:24:32.4±1.9, 40°.43S×176°.29E, h0km, mb3.8/2, mbtmp3.8/4, ML3.3/2, MS3.5/2, Error ellipse: s-maj=47.2km s-min=28.7km az=132.0*
*NOU **18** 15:24:35.7, 40°.57S×176°.53E, h40km, MLv4.1/16, North Island, New Zealand*
*WEL **18** 15:24:37.1±0.3, 40°.S±2°.×17°.6E±°, h22km±2km, M3.9/88, ML4.0/19, MLv3.9/88, Error ellipse: s-maj=3.0km s-min=2.5km az=133.4, confirmed*

ISC 18 15:24:37.0±0.8, 40°.46S±0°.02×176°.26E±0°.03, h32km±5km, n159, σ1s06/173, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBFS	**Weber Fire Sta**	**0.07**	**32**	P	**Pb**	**15 24 42.2**	**-0.2**
WBFS				S	**Sb**	**15 24 46.0**	**-0.1**
ANWZ	**Angora Road**	**0.16**	**90**	P	**Pn**	**15 24 43.6**	**+0.4**
ANWZ				S	**Sb**	**15 24 48.5**	**+1.3**
DVHZ	**Dannevirke**	**0.18**	**335**	P	**Pb**	**15 24 42.4**	**-0.9**
DVHZ				S	**Sb**	**15 24 46.0**	**-1.5**
BFZ	**Birch Farm**	**0.22**	**183**	P	**Pn**	**15 24 44.2**	**+0.1**
BFZ	**Birch Farm**	**0.22**	**183**	P	**Pn**	**15 24 44.8**	**+0.7**
PRWZ	**Pori Road**	**0.24**	**247**	P	**Pn**	**15 24 44.8**	**+0.5**
PRWZ				S	**Sb**	**15 24 50.5**	**+1.8**
DVHS	**Dannevirke Hig**	**0.29**	**334**	P	**Pb**	**15 24 43.9**	**-0.6**
DVHS				S	**Sb**	**15 24 49.0**	**-0.5**
TRMS	**Tiraumea**	**0.30**	**224**	P	**Pn**	**15 24 45.7**	**+0.6**
TRMS				S	**Sn**	**15 24 52.2**	**+1.8**
PGFS	**Porangahau Fir**	**0.31**	**60**	P	**Pb**	**15 24 45.2**	**+0.4**
PGFS				S	**Sb**	**15 24 51.2**	**+1.2**
WDPS	**Woodville Poli**	**0.32**	**292**	P	**Pb**	**15 24 44.9**	**0.0**
WDPS				S	**Sn**	**15 24 50.6**	**-0.4**
PRHZ	**Porangahau**	**0.34**	**56**	P	**Pb**	**15 24 45.6**	**+0.4**
POWZ	**Post Office Ro**	**0.38**	**280**	P	**Pn**	**15 24 46.1**	**-0.2**
POWZ				S	**Sn**	**15 24 52.8**	**+0.2**
WPHZ	**Waipukurau**	**0.42**	**19**	P	**Pb**	**15 24 46.1**	**-0.2**
WPHZ				S	**Sb**	**15 24 53.0**	**+0.4**
TIWZ	**Tintock**	**0.43**	**222**	P	**Pn**	**15 24 47.9**	**+0.9**
TIWZ				S	**Sn**	**15 24 56.0**	**+2.3**
CPWZ	**Castlepoint**	**0.45**	**186**	P	**Pn**	**15 24 49.1**	**+1.8**
TSZ	**Takapari Road**	**0.46**	**330**	P	**Pb**	**15 24 46.4**	**-0.6**
TSZ				S	**Sb**	**15 24 53.2**	**-0.6**
PNHZ	**Pukenui**	**0.55**	**355**	P	**Pb**	**15 24 47.7**	**-0.6**
PNHZ				S	**Sb**	**15 24 56.0**	**0.0**
MRZ	**Mangatainoka R**	**0.56**	**249**	P	**Pn**	**15 24 49.1**	**+0.4**
MRZ				S	**Sn**	**15 24 58.0**	**+1.1**
PXZ	**Pawanui**	**0.63**	**47**	P	**Pb**	**15 24 49.8**	**+0.3**
TMWZ	**Te Maipa**	**0.71**	**204**	P	**Pn**	**15 24 51.8**	**+1.0**
HOWZ	**Holdsworth Sta**	**0.72**	**232**	P	**Pn**	**15 24 51.9**	**+1.0**
OHWZ	**Ohakea**	**0.77**	**289**	P	**Pn**	**15 24 52.8**	**+1.3**
KAHZ	**Kahuranaki**	**0.81**	**36**	P	**Pb**	**15 24 52.5**	**-0.2**
KRHZ	**Kereru**	**0.82**	**6**	P	**Pb**	**15 24 52.2**	**-0.6**
OGWZ	**Otaki Gorge**	**0.91**	**246**	P	**Pn**	**15 24 54.3**	**+0.9**
MTW	**Mount Morrison**	**0.91**	**219**	P	**Pn**	**15 24 54.1**	**+0.6**
CKHZ	**Cape Kidnapper**	**1.02**	**38**	P	**Pn**	**15 24 54.8**	**-0.2**
TRWZ	**Traveller**	**1.03**	**205**	P	**Pn**	**15 24 55.0**	**-0.3**
KWHZ	**Kaweka Forest**	**1.04**	**7**	P	**Pn**	**15 24 55.6**	**+0.2**
MCHZ	**McNeill Hill**	**1.07**	**18**	P	**Pn**	**15 24 56.1**	**+0.4**
KIW	**Kapiti Island**	**1.10**	**248**	P	**Pb**	**15 24 57.2**	**-0.3**
CAW	**Cannon Point**	**1.11**	**234**	P	**Pb**	**15 24 57.0**	**-0.7**
PAWZ	**Paruwai Farm**	**1.12**	**214**	P	**Pb**	**15 24 57.1**	**-0.7**
MOVZ	**Moawhango**	**1.12**	**339**	P	**Pn**	**15 24 57.2**	**+0.7**
WAZ	**Wanganui**	**1.21**	**305**	P	**Pb**	**15 24 59.4**	**+0.1**
MSWZ	**Moikau Station**	**1.23**	**218**	P	**Pn**	**15 24 58.1**	**+0.2**
MTVZ	**Mangateitei**	**1.23**	**330**	P	**Pb**	**15 24 59.4**	**-0.4**
WNVZ	**Wahianoa**	**1.24**	**335**	P	**Pn**	**15 24 59.3**	**+1.1**
TUVZ	**Tukino**	**1.28**	**338**	P	**Pn**	**15 24 60.0**	**+1.2**
TRVZ	**Turoa**	**1.28**	**334**	P	**Pn**	**15 25 00.2**	**+1.3**
WHVZ	**Whangaehu Hut**	**1.28**	**336**	P	**Pn**	**15 25 00.1**	**+1.2**
BKZ	**Black Stump Fm**	**1.30**	**8**	P	**Pn**	**15 24 58.8**	**-0.2**
BKZ	**Black Stump Fm**	**1.30**	**8**	S	**Sn**	**15 25 15.4**	**+0.1**
BKZ	**Black Stump Fm**	**1.30**	**8**	P	**Pn**	**15 24 59.1**	**+0.1**
MAVZ	**Matarangi**	**1.31**	**335**	P	**Pb**	**15 25 00.8**	**-0.4**
ARHZ	**Aropaoanui**	**1.32**	**26**	P	**Pn**	**15 24 59.7**	**+0.6**
FWVZ	**Far West T-bar**	**1.32**	**335**	P	**Pn**	**15 25 00.7**	**+1.3**
PLWZ	**Palliser**	**1.35**	**214**	P	**Pn**	**15 24 59.7**	**+0.1**
SNVZ	**South Ngauruho**	**1.36**	**339**	P	**Pb**	**15 25 01.4**	**-0.5**
PKVZ	**Pokaka**	**1.36**	**329**	P	**Pn**	**15 25 01.2**	**+1.4**
OTVZ	**Oturere**	**1.37**	**340**	P	**Pn**	**15 25 01.5**	**+1.4**
COVZ	**Chateau Observ**	**1.38**	**336**	P	**Pn**	**15 25 01.2**	**+1.2**
NGZ	**Ngauruhoe**	**1.38**	**338**	P	**Pn**	**15 25 01.2**	**+1.1**
ETVZ	**East Tongariro**	**1.39**	**342**	P	**Pn**	**15 25 01.3**	**+1.1**
WEL	**Wellington**	**1.40**	**234**	P	**Pn**	**15 25 00.9**	**+0.7**
TMVZ	**Te Maari**	**1.41**	**342**	P	**Pn**	**15 25 01.4**	**+0.9**
BHW	**Baring Head**	**1.42**	**228**	P	**Pn**	**15 25 00.7**	**+0.2**
NMHZ	**Naumai**	**1.42**	**17**	P	**Pn**	**15 25 01.1**	**+0.4**
NTVZ	**North Tongarir**	**1.43**	**341**	P	**Pn**	**15 25 02.4**	**+1.6**
WTVZ	**West Tongariro**	**1.44**	**339**	P	**Pn**	**15 25 02.1**	**+1.2**
KRVZ	**Karewarewa**	**1.45**	**340**	P	**Pb**	**15 25 02.8**	**-0.6**
SNZO	**South Karori**	**1.46**	**234**	P	**Pn**	**15 25 01.3**	**+0.3**
SNZO	**South Karori**	**1.46**	**234**	S	**Sb**	**15 25 19.9**	**-1.7**
TWVZ	**Taurewa**	**1.53**	**335**	P	**Pn**	**15 25 03.6**	**+1.5**
KATZ	**Kakaramea**	**1.55**	**343**	P	**Pb**	**15 25 04.6**	**-0.5**
WHHZ	**Waihua**	**1.57**	**29**	P	**Pn**	**15 25 02.6**	**0.0**
MRHZ	**Matea Rd**	**1.63**	**4**	P	**Pn**	**15 25 03.8**	**+0.3**
MTHZ	**Maungataniwha**	**1.67**	**16**	P	**Pn**	**15 25 03.8**	**-0.1**
RAHZ	**Arahi**	**1.67**	**23**	P	**Pn**	**15 25 03.9**	**0.0**
TCW	**Tory Channel**	**1.68**	**243**	P	**Pn**	**15 25 04.6**	**+0.5**
LREZ	**Lake Rotokare**	**1.74**	**304**	P	**Pb**	**15 25 07.6**	**-0.7**
VRZ	**Vera Road**	**1.77**	**319**	P	**Pn**	**15 25 06.7**	**+1.4**
WATZ	**Wairara**	**1.80**	**347**	P	**Pn**	**15 25 06.2**	**+0.5**
KNZ	**Kokohu**	**1.80**	**38**	P	**Pn**	**15 25 04.9**	**-0.9**
WHTZ	**Whakaora**	**1.81**	**352**	P	**Pn**	**15 25 07.2**	**+1.3**
DUWZ	**D'Urville Isla**	**1.81**	**258**	P	**Pn**	**15 25 07.6**	**+1.6**
MHGZ	**Mahia Peninsul**	**1.82**	**45**	P	**Pn**	**15 25 05.2**	**-0.8**
ALRZ	**Allen Road**	**1.90**	**2**	P	**Pn**	**15 25 07.1**	**0.0**
RTZ	**Ruatahuna**	**1.92**	**17**	P	**Pn**	**15 25 07.3**	**-0.3**
WPRZ	**Whakapapataran**	**1.94**	**358**	P	**Pn**	**15 25 07.7**	**0.0**
PRRZ	**Plateau Road**	**1.96**	**3**	P	**Pn**	**15 25 07.8**	**-0.2**
PREZ	**Palmer Road**	**1.97**	**304**	P	**Pn**	**15 25 10.9**	**-1.3**
KUTZ	**Kaahu Road**	**2.00**	**350**	P	**Pn**	**15 25 08.9**	**+0.4**
TUWZ	**Tuamarina**	**2.01**	**240**	P	**Pn**	**15 25 08.9**	**+0.3**
CMWZ	**Cape Campbell**	**2.01**	**230**	P	**Pn**	**15 25 09.2**	**+0.5**
MUGZ	**Murupara**	**2.02**	**11**	P	**Pn**	**15 25 08.4**	**-0.4**
DREZ	**Durham Road**	**2.03**	**308**	P	**Pb**	**15 25 13.1**	**-0.2**
MHEZ	**Mangahewa**	**2.04**	**312**	P	**Pb**	15 25 17.8	+4.5
HRRZ	**Handcock Road**	**2.07**	**0**	P	**Pn**	**15 25 09.7**	**+0.2**
KHEZ	**Kahui Hut**	**2.08**	**303**	P	**Pb**	**15 25 12.7**	**-1.5**
KHEZ	**Kahui Hut**	**2.08**	**303**	P	**Pb**	**15 25 12.5**	**-1.7**
RIGZ	**Rimuhau**	**2.10**	**34**	P	**Pn**	**15 25 09.4**	**-0.5**
NMEZ	**Namu Road**	**2.11**	**299**	P	**Pb**	**15 25

comp=Z,12nm,1.1s
ARMA Armidale 29.51 240 P **P** 15 34 50.9 +0.3
ARMA IAmb IAmb 15 34 59.2
comp=Z,6.5nm,1.1s
CTAO Charters Tower 33.09 261 P **P** 15 35 20.9 -0.1
PMG Port Moresby 34.20 280 P **P** 15 35 30.5 +0.1
COEN Coen 36.80 271 P **P** 15 35 51.9 +0.2
COEN IAmb IAmb 15 35 52.4
comp=Z,5.1nm,0.7s
STKA Stephens Creek 38.20 241 P **P** 15 36 03.7 +0.8
comp=Z,1.4nm,0.6s,baz=45,slow=7.1,SNR=3.9
comp=Z,1.4nm,0.6s
INKA Innaminka 38.34 248 P **P** 15 36 05.3 +1.2
BBOO Buckleboo 42.98 241 P **P** 15 36 41.1 +0.3
BBOO IAmb IAmb 15 37 02.2
comp=Z,8.2nm,1.1s
WR8 Warramunga Arr 44.12 260 P **P** 15 36 48.7 -1.1
WB0 Warramunga Arr 44.23 260 P **P** 15 36 49.5 -1.2
WB0 IAmb IAmb 15 36 50.6
comp=Z,5.2nm,0.9s
WRA Warramunga Arr 44.27 260 P **P** 15 36 50.1 -0.8
comp=Z,1.3nm,0.5s,baz=96,slow=7.0,SNR=59
comp=Z,1.3nm,0.5s
WRA Warramunga Arr 44.27 260 P **P** 15 36 49.9 -1.1
AS31 Alice Springs 44.40 255 P **P** 15 36 51.6 -0.3
AS31 IAmb IAmb 15 36 52.9
comp=Z,2.9nm,0.5s
ASAR Alice Springs 44.40 255 P **P** 15 36 52.0 0.0
comp=Z,6.9nm,0.6s,baz=92,slow=7.9,SNR=205
ASAR PcP **PcP** 15 38 21.2 -1.2
comp=Z,0.4nm,1.0s,baz=91,slow=4.0,SNR=2.0
comp=Z,6.9nm,0.6s
ASAR Alice Springs 44.40 255 P **P** 15 36 51.4 -0.6
FORT Forrest 49.59 245 P **P** 15 37 30.0 -0.6
FORT IAmb IAmb 15 37 31.0
comp=Z,9.0nm,1.0s
KNRA Kununurra 50.15 265 P **P** 15 37 33.8 -1.1
KNRA IAmb IAmb 15 37 43.2
comp=Z,4.5nm,1.1s
QSPA South Pole Qui 71.83 180 P P 15 40 06.3 +10
O16K Kokwok River B 79.36 11 P **P** 15 40 38.2 +1.1
P18K Big Mountain, 79.70 12 P **P** 15 40 42.2 +3.2
P18K IAmb IAmb 15 40 44.9
comp=Z,9.9nm,0.8s
BUR08 Bucovina Ar. S 144.73 332 **PKPdf** 15 48 01.4 -1.0
BRTR Keskin Array B 144.78 314 PKP **PKPdf** 15 48 02.7 -0.1
comp=Z,0.4nm,0.5s,baz=99,slow=4.7,SNR=2.0

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*BJI **18** 15:31:31.6,66˚.10N×157˚.22W,h11km,mB5.1/9,mb4.4/33, Ms5.1/21,Ms7 4.7/21*
*MOS **18** 15:31:32.9±1.0,66˚.31N×157˚.17W,h10km,mb4.7/42, MS4.3/5,Error ellipse: s-maj=14.2km s-min=6.4km az=102.0*
*NEIC **18** 15:31:33,66˚.32N×157˚.21W,h12km,Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.08; $M_{\theta\theta}$0.21; $M_{\phi\phi}$-0.13; $M_{r\theta}$0.07; $M_{r\phi}$-1.18; $M_{\theta\phi}$0.44; Fault plane solution: $M_0$1.27000×10^{16} NP1:ϕs175.00000°, δ85.00000°,λ-20.00000°. NP2:ϕs267.00000°,δ70.00000°, λ-175.00000°. Principal axes: T 1.2729, Plg10.0000°, Azm223.0000°; N 0.0000, Plg69.0000°, Azm341.0000°; P -1.2729, Plg18.0000°, Azm129.0000°;*
*NEIC **18** 15:31:33.8,66˚.32N×157˚.21W,h12km*
*NEIC **18** 15:31:33.9,66˚.31N×157˚.19W,h10km*
*GCMT **18** 15:31:33.9±0.3,66˚.31N±0˚.02×157˚.31W±0˚.04,h15km±1km, MW4.8/95,Moment Tensor Solution. s20,c21; s95,c142; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.17±.14; $M_{\theta\theta}$0.94±.11; $M_{\phi\phi}$0.22±.10; $M_{r\theta}$0.20±.17; $M_{\theta\phi}$-2.19±.07; $M_{r\phi}$0.54±.20; Best double couple: $M_0$2.40000×10^{16} NP1:ϕs270.00000°,δ65.00000°,λ-157.00000°. NP2: ϕs170.00000°,δ69.00000°,λ-27.00000°. Principal axes: T 2.8120, Plg3.0000°, Azm221.0000°; N -0.8270, Plg56.0000°, Azm315.0000°; P -1.9890, Plg33.0000°, Azm129.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*AEIC **18** 15:31:33.2±1.6,66˚.29N±0˚.02×157˚.25W±0˚.04,h9km±3km Error ellipse: s-maj=2.7km s-min=2.3km az=61.0*
*NEIC **18** 15:31:33.8,66˚.42N×157˚.21W,h12km,Moment Tensor Solution. Duration: 1s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.86; $M_{\theta\theta}$0.85; $M_{\phi\phi}$0.01; $M_{r\theta}$0.29; $M_{\theta\phi}$-1.54; $M_{r\phi}$0.09; Fault plane solution: $M_0$1.79000×10^{16} NP1: ϕs169.08000°,δ67.04000°,λ-19.40000°. NP2: ϕs266.91000°,δ72.19000°,λ-155.81000°. Principal axes: T 2.0394, Plg3.0000°, Azm37.0000°; N -0.7325, Plg60.0000°, Azm301.0000°; P -1.3070, Plg29.0000°, Azm129.0000°;*
*NEIC **18** 15:31:33.9±1.5,66˚.31N±0˚.02×157˚.20W±0˚.04,h10km, mb4.8/54,ML5.1/124,Mwr4.7/89,Mww4.8/76,ML5.0(AEIC), Mwr4.7/25(SLM) Error ellipse: s-maj=3.1km s-min=2.8km az=246.0,Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.67; $M_{\theta\theta}$0.73; $M_{\phi\phi}$-0.06; $M_{r\theta}$0.09; $M_{\theta\phi}$-1.21; $M_{r\phi}$0.58; Fault plane solution: $M_0$1.52000×10^{16} NP1:ϕs163.63000°,δ69.40000°,λ-34.01000°. NP2: ϕs266.99000°,δ58.43000°,λ-155.61000°. Principal axes: T 1.6426, Plg7.0000°, Azm217.0000°; N -0.2912, Plg51.0000°, Azm316.0000°; P -1.3514, Plg38.0000°, Azm122.0000°;*
*IDC **18** 15:31:34.3±0.4,66˚.47N×157˚.38W,h0km,mb4.3/30, mbtmp4.3/34,ML4.5/5,MS4.0/57 Error ellipse: s-maj=13.1km s-min=8.1km az=24.0*
*NERS **18** 15:31:36.8,66˚.26N×157˚.35W,h33km*
ISC 18 15:31:34.1±0.6,66˚.33N±0˚.01×157˚.15W±0˚.02,h6km±3km, n696,σ1ϕ29/731,mb4.6/105,MS4.0/66,15C-3D,Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
G19K	**Purcell Mounta**	**0.19**	**172**	Pg		**Pg**	**15 31 36.9**	**-1.0**
G19K				Sg		**Sg**	**15 31 39.4**	**-1.0**
G19K	**Purcell Mounta**	**0.19**	**172**	P		**Pg**	**15 31 36.9**	**-1.0**
	baz=335,SNR=1000							
G19K				S		**Sg**	**15 31 40.0**	**-0.3**
	baz=335							
F19K	**Shaleruckik Mo**	**0.57**	**334**	Pg		**Pg**	**15 31 44.0**	**-1.1**
F19K				Sg		**Sg**	**15 31 52.1**	**-0.3**
F19K	**Shaleruckik Mo**	**0.57**	**334**	P		**Pg**	**15 31 43.8**	**-1.2**
	baz=159,SNR=1000							
F19K				S		**Sg**	**15 31 51.3**	**-1.1**
	baz=159							
G18K	**Tagagawik**	**0.75**	**235**	Pg		**Pg**	**15 31 46.9**	**-1.6**
G18K				Sg		**Sg**	**15 31 57.4**	**-0.8**
G18K	**Tagagawik**	**0.75**	**235**	P		**Pg**	**15 31 47.1**	**-1.4**
	baz=55							
G18K				S		**Sg**	**15 31 57.7**	**-0.5**
	baz=55							
H19K	**Roundabout Mou**	**0.85**	**160**			**Pg**	**15 31 48.9**	**-1.6**
H19K						**Sg**	**15 32 01.3**	**-0.2**
H19K	**Roundabout Mou**	**0.85**	**160**	IAML			15 32 05.8	
	comp=N,71μm,0.3s							
H19K				IAML			15 32 06.4	
	comp=E,80μm,0.4s							
H19K	**Roundabout Mou**	**0.85**	**160**	P		**Pg**	**15 31 49.4**	**-1.1**
	baz=337							
F20K	**Avaraart Lake**	**0.92**	**37**	Pg		**Pg**	**15 31 50.8**	**-1.0**
F20K				Sg		**Sg**	**15 32 04.4**	**+0.6**
F20K				IAML			15 32 08.6	
	comp=E,84μm,0.6s							
F20K				IAML			15 32 08.6	
	comp=N,61μm,0.5s							
F20K	**Avaraart Lake**	**0.92**	**37**	P		**Pg**	**15 31 50.6**	**-1.2**
	baz=219							
F18K	**Selawik**	**1.04**	**286**			**Pg**	**15 31 52.2**	**-1.9**
F18K						**Pb**	**15 31 53.8**	**-0.7**
F18K						**Sg**	**15 32 07.2**	**-0.3**
F18K						**Sb**	**15 32 08.6**	**+0.3**
F18K	**Selawik**	**1.04**	**286**	P		**Pg**	**15 31 52.2**	**-1.9**
	baz=107,SNR=1000							
E19K	**Redstone River**	**1.14**	**358**			**Pg**	**15 31 55.0**	**-0.9**
E19K				Sg		**Sg**	**15 32 10.4**	**-0.3**
E19K				IAML			15 32 14.0	
	comp=E,30μm,0.8s							
E19K	**Redstone River**	**1.14**	**358**	P		**Pg**	**15 31 54.5**	**-1.4**
	baz=180,SNR=1000							
E19K				S		**Sg**	**15 32 10.5**	**-0.2**
	baz=180							
H20K	**Anotleneega Mo**	**1.25**	**131**			**Pn**	**15 31 56.5**	**-1.7**
H20K						**Pb**	**15 31 57.0**	**-1.2**
H20K						**Sg**	**15 32 14.4**	**+0.1**
H20K						**Sb**	**15 32 14.7**	**+0.3**
H20K	**Anotleneega Mo**	**1.25**	**131**	P		**Pn**	**15 31 56.8**	**-1.3**
	baz=310,SNR=1000							
H20K				S		**Sb**	**15 32 14.8**	**+0.3**
	baz=310							
H18K	**Honhosa River**	**1.28**	**204**	Pn		**Pn**	**15 31 56.2**	**-2.3**
H18K	**Honhosa River**	**1.28**	**204**			**Sg**	**15 32 13.4**	**-1.8**
H18K						**Sb**	**15 32 13.8**	**-1.5**
H18K	**Honhosa River**	**1.28**	**204**	P		**Pn**	**15 31 56.1**	**-2.4**
	baz=21,SNR=1000							
H18K				S		**Sg**	**15 32 13.5**	**-1.7**
	baz=21							
IM03		**1.43**	**102**			**Sn**	**15 32 18.9**	**-0.5**
IMAR	**Indian Mountai**	**1.43**	**102**			**Pn**	**15 31 59.4**	**-1.1**
G21K	**Allakaket**	**1.48**	**81**	Pn		**Pn**	**15 32 00.3**	**-1.0**
G21K	**Allakaket**	**1.48**	**81**			**Sn**	**15 32 21.1**	**+0.3**
G21K	**Allakaket**	**1.48**	**81**	P		**Pn**	**15 32 00.0**	**-1.2**
	baz=263							
G21K				S		**Sn**	**15 32 21.1**	**+0.3**
	baz=263							
GCSA	**Galena City Sc**	**1.59**	**176**			**Pn**	**15 32 01.4**	**-1.3**
GCSA						**Sn**	**15 32 22.7**	**-0.9**
GCSA						**Sb**	**15 32 23.4**	**-0.7**
GCSA	**Galena City Sc**	**1.59**	**176**	P		**Pn**	**15 32 01.4**	**-1.3**
	baz=354,SNR=1000							
GCSA				S		**Sn**	**15 32 23.1**	**-0.4**
	baz=354							
F17K	**Baldwin Pennin**	**1.66**	**276**	Pn		**Pn**	**15 32 01.9**	**-1.7**
F17K				IAML			15 32 32.4	
	comp=E,17μm,1.0s							
F17K	**Baldwin Pennin**	**1.66**	**276**			**Sn**	**15 32 23.4**	**-1.7**
F17K	**Baldwin Pennin**	**1.66**	**276**	P		**Pn**	**15 32 01.9**	**-1.7**
	baz=94,SNR=1000							
F17K				S		**Sn**	**15 32 23.4**	**-1.7**
	baz=94							
G17K	**Kiwalik Mounta**	**1.66**	**242**			**Pn**	**15 32 01.7**	**-2.0**
G17K						**Sn**	**15 32 24.1**	**-1.1**
G17K	**Kiwalik Mounta**	**1.66**	**242**	P		**Pn**	**15 32 01.6**	**-2.0**
	baz=59,SNR=1000							
G17K				S		**Sn**	**15 32 23.9**	**-1.3**
	baz=59							
F21K	**Alatna River**	**1.71**	**57**	Pn		**Pn**	**15 32 03.9**	**-0.5**
F21K				IAML			15 32 31.9	
	comp=E,19μm,0.7s							
F21K				IAML			15 32 33.8	
	comp=N,15μm,0.5s							
F21K	**Alatna River**	**1.71**	**57**			**Sb**	**15 32 28.6**	**+0.9**
F21K	**Alatna River**	**1.71**	**57**	P		**Pn**	**15 32 03.3**	**-1.1**
	baz=240,SNR=1000							
F21K				Sb		**Sg**	**15 32 29.7**	**+0.7**
	baz=240							
E18K	**Tukpahlearik C**	**1.75**	**310**	Pn		**Pn**	**15 32 03.7**	**-1.2**
E18K	**Tukpahlearik C**	**1.75**	**310**			**Sn**	**15 32 27.4**	**-0.1**
E18K	**Tukpahlearik C**	**1.75**	**310**	P		**Pn**	**15 32 04.3**	**-0.6**
	baz=129,SNR=1000							
E18K				S		**Sn**	**15 32 27.7**	**+0.2**
	baz=129							
H17K	**Granite Mounta**	**1.81**	**221**	Pn		**Pn**	**15 32 04.0**	**-1.7**
H17K				IAML			15 32 30.6	
	comp=E,18μm,0.5s							
H17K	**Granite Mounta**	**1.81**	**221**			**Sn**	**15 32 27.6**	**-1.2**
H17K	**Granite Mounta**	**1.81**	**221**	P		**Pn**	**15 32 03.8**	**-1.9**
	baz=38,SNR=1000							
H17K				S		**Sn**	**15 32 28.0**	**-0.9**
	baz=38							
I20K	**Naaghedeneel**	**1.90**	**143**			**Pn**	**15 32 06.7**	**-0.2**
I20K	**Naaghedeneel**	**1.90**	**143**			**Sn**	**15 32 31.1**	**0.0**
I20K	**Naaghedeneel**	**1.90**	**143**	P		**Pn**	**15 32 06.9**	**0.0**
	baz=324,SNR=1000							
H21K	**Melozitna Rive**	**1.90**	**109**			**Pn**	**15 32 06.0**	**-1.0**
H21K				IAML			15 32 36.2	
	comp=N,15μm,1.1s							
H21K	**Melozitna Rive**	**1.90**	**109**			**Sb**	**15 32 32.7**	**-0.4**
H21K	**Melozitna Rive**	**1.90**	**109**	P		**Pn**	**15 32 06.2**	**-0.8**
	baz=291,SNR=1000							
H21K				S		**Sb**	**15 32 33.3**	**+0.2**
	baz=291							
E20K	**Nigu River**	**1.98**	**10**			**Pn**	**15 32 08.5**	**+0.4**
E20K						**Sb**	**15 32 35.4**	**+0.1**
E20K	**Nigu River**	**1.98**	**10**	P		**Pn**	**15 32 08.6**	**+0.5**
	baz=192							
E20K				S		**Sb**	**15 32 34.4**	**-0.9**
	baz=192							
D19K	**Kuna River**	**2.21**	**351**			**Pn**	**15 32 11.6**	**+0.3**
D19K						**Pb**	**15 32 11.7**	**-2.7**
D19K						**Sb**	**15 32 40.7**	**-1.3**
D19K	**Kuna River**	**2.21**	**351**	IAML			15 32 46.7	
	comp=E,10μm,0.8s							
D19K				IAML			15 32 48.6	
	comp=N,9μm,1.0s							
D19K	**Kuna River**	**2.21**	**351**	P		**Pn**	**15 32 11.5**	**+0.2**
	baz=171							
D19K				Sb		**Sb**	**15 32 42.5**	**+0.5**
	baz=171							
G16K	**Koyuk River**	**2.33**	**249**	Pn		**Pn**	**15 32 10.7**	**-2.3**
G16K				IAML			15 32 48.9	
	comp=E,10μm,0.6s							
G16K				IAML			15 32 49.1	
	comp=N,11μm,0.9s							
G16K	**Koyuk River**	**2.33**	**249**			**Sn**	**15 32 40.7**	**-1.2**
G16K	**Koyuk River**	**2.33**	**249**	P		**Pn**	**15 32 10.5**	**-2.4**
	baz=64,SNR=1000							
G16K				Sb		**Sb**	**15 32 44.9**	**-0.6**
	baz=64							
H22K	**Ishtalitna Cre**	**2.39**	**98**			**Pn**	**15 32 13.0**	**-0.7**
H22K				IAML			15 32 52.2	
	comp=E,8μm,0.7s							
H22K	**Ishtalitna Cre**	**2.39**	**98**			**Sn**	**15 32 44.6**	**+1.2**
H22K	**Ishtalitna Cre**	**2.39**	**98**	P		**Pn**	**15 32 13.2**	**-0.6**
	baz=282,SNR=880							
H22K				Sb		**Sb**	**15 32 48.8**	**+1.6**
	baz=282							
D20K	**Etivluk River**	**2.41**	**5**	Pn		**Pn**	**15 32 14.2**	**+0.3**
D20K				IAML			15 32 56.0	
	comp=E,7μm,1.1s							
D20K	**Etivluk River**	**2.41**	**5**			**Sb**	**15 32 46.3**	**-1.4**
D20K	**Etivluk River**	**2.41**	**5**	P		**Pn**	**15 32 14.3**	**+0.3**
	baz=186							
D20K				Sb		**Sb**	**15 32 48.6**	**+0.9**
	baz=186							
I21K	**Tanana**	**2.42**	**116**			**Pn**	**15 32 13.3**	**-0.8**
I21K	**Tanana**	**2.42**	**116**			**Sn**	**15 32 45.4**	**+1.3**
I21K	**Tanana**	**2.42**	**116**	P		**Pn**	**15 32 13.4**	**-0.8**
	baz=300,SNR=902							
I21K				Sb		**Sb**	**15 32 50.3**	**+2.1**
	baz=300							
J19K	**Poorman**	**2.43**	**164**			**Pn**	**15 32 13.3**	**-1.0**
J19K				IAML			15 32 50.3	
	comp=E,10μm,1.0s							
J19K				IAML			15 32 50.7	
	comp=N,9μm,0.5s							
J19K	**Poorman**	**2.43**	**164**			**Sn**	**15 32 44.4**	**+0.2**
J19K	**Poorman**	**2.43**	**164**	P		**Pn**	**15 32 13.3**	**-1.0**
	baz=344,SNR=706							
J19K				Sb		**Sb**	**15 32 49.0**	**+0.7**
	baz=344							
E21K	**Killik River**	**2.46**	**29**			**Pn**	**15 32 14.5**	**-0.2**
E21K						**Pb**	**15 32 14.9**	**-3.7**
E21K						**Sb**	**15 32 47.4**	**-1.6**
E21K	**Killik River**	**2.46**	**29**	P		**Pn**	**15 32 14.1**	**-0.5**
	baz=212							
J20K	**Nowinta River**	**2.50**	**148**			**Pn**	**15 32 14.4**	**-0.9**
J20K				IAML			15 32 58.4	
	comp=E,8μm,1.1s							
J20K	**Nowinta River**	**2.50**	**148**			**Sn**	**15 32 46.4**	**+0.4**
J20K	**Nowinta River**	**2.50**	**148**	P		**Pn**	**15 32 14.6**	**-0.7**
	baz=330,SNR=519							
J20K				Sb		**Sb**	**15 32 52.0**	**+1.7**
	baz=330							
D17K	**Noatak River**	**2.71**	**303**			**Pn**	**15 32 16.9**	**-1.1**
D17K						Pb	15 32 17.4	-5.4
D17K	**Noatak River**	**2.71**	**303**	P		**Pn**	**15 32 17.2**	**-0.9**
	baz=119,SNR=1000							
D17K				S		**Sn**	**15 32 51.3**	**+0.3**
	baz=119							
H16K	**Elim**	**2.72**	**234**			**Pn**	**15 32 15.6**	**-2.6**
H16K	**Elim**	**2.72**	**234**	P		**Pn**	**15 32 15.8**	**-2.4**
	baz=49							
H16K				Sb		**Sb**	**15 32 57.0**	**+0.5**
	baz=49							
E22K	**Anaktuvuk Pass**	**2.76**	**46**			**Pn**	**15 32 18.9**	**0.0**
E22K	**Anaktuvuk Pass**	**2.76**	**46**	P		**Pn**	**15 32 19.4**	**+0.6**
	baz=231,SNR=1000							
C18K	**Utukok River**	**2.80**	**328**			**Pn**	**15 32 18.7**	**-0.7**
C18K	**Utukok River**	**2.80**	**328**	P		**Pn**	**15 32 18.7**	**-0.7**
	baz=146,SNR=154							
RDOG	**Red Dog Mine**	**2.83**	**310**			**Pn**	**15 32 19.3**	**-0.6**
RDOG	**Red Dog Mine**	**2.83**	**310**	P		**Pn**	**15 32 19.8**	**0.0**
	baz=126,SNR=407							
I17K	**Unalakleet**	**2.87**	**213**			**Pn**	**15 32 19.3**	**-1.0**
I17K	**Unalakleet**	**2.87**	**213**	P		**Pn**	**15 32 19.2**	**-1.1**
	baz=30,SNR=1000							
I17K				Sb		**Sb**	**15 33 01.2**	**+0.2**
	baz=30							
J18K	**Innoko River**	**2.88**	**176**	Pn		**Pn**	**15 32 19.1**	**-1.4**
J18K	**Innoko River**	**2.88**	**176**	P		**Pn**	**15 32 19.1**	**-1.4**
	baz=356,SNR=167							
G23K	**Bananza Creek**	**2.88**	**79**	Pn		**Pn**	**15 32 19.3**	**-1.2**
G23K				IAML			15 33 08.1	
	comp=E,5μm,0.8s							
G23K	**Bananza Creek**	**2.88**	**79**	P		**Pn**	**15 32 19.0**	**-1.5**
	baz=265,SNR=491							
G23K				Sb		**Sb**	**15 33 03.7**	**+2.4**
	baz=265							
COLD	**Coldfoot**	**2.90**	**69**			**Pn**	**15 32 19.6**	**-1.2**
COLD				IAML			15 33 13.2	
	comp=N,8μm,1.0s							
COLD	**Coldfoot**	**2.90**	**69**	P		**Pn**	**15 32 19.4**	**-1.3**
	baz=255,SNR=260							
C19K	**Lookout Ridge**	**2.94**	**343**	Pn		**Pn**	**15 32 21.2**	**-0.2**
C19K	**Lookout Ridge**	**2.94**	**343**	P		**Pn**	**15 32 21.5**	**+0.1**
	baz=161							
MLY	**Manley**	**2.96**	**113**			**Pn**	**15 32 20.4**	**-1.2**
MLY				IAML			15 33 12.6	
	comp=E,5μm,1.0s							
MLY				IAML			15 33 12.9	
	comp=N,6μm,1.1s							
MLY	**Manley**	**2.96**	**113**	P		**Pn**	**15 32 20.3**	**-1.2**
	baz=298,SNR=281							
MLY				S		**Sn**	**15 32 58.1**	**+0.8**
	baz=298							
C21K	**Knifeblade Rid**	**2.98**	**17**			**Pn**	**15 32 21.6**	**-0.3**
C21K	**Knifeblade Rid**	**2.98**	**17**	P		**Pn**	**15 32 21.8**	**-0.1**
	baz=199,SNR=176							
J17K	**VABM Dome**	**3.06**	**196**	Pn		**Pn**	**15 32 21.8**	**-1.1**
J17K				IAML			15 33 16.6	
	comp=N,6μm,1.2s							
J17K				IAML			15 33 18.8	
	comp=E,7μm,1.1s							
J17K	**VABM Dome**	**3.06**	**196**	P		**Pn**	**15 32 21.9**	**-0.9**
	baz=14							
J17K				S		**Sn**	**15 32 59.1**	**-0.5**
	baz=14							
F15K	**North Star Dit**	**3.12**	**262**	Pn		**Pn**	**15 32 22.2**	**-1.6**
F15K				IAML			15 33 14.5	
	comp=E,4μm,0.7s							
F15K				IAML			15 33 20.0	
	comp=N,4μm,0.8s							
F15K	**North Star Dit**	**3.12**	**262**	P		**Pn**	**15 32 22.0**	**-1.8**
	baz=76,SNR=75							
F15K				Sb		**Sb**	**15 33 09.9**	**+1.7**
	baz=76							
G15K	**Niukluk**	**3.15**	**248**			**Pn**	**15 32 21.5**	**-2.6**
G15K	**Niukluk**	**3.15**	**248**	P		**Pn**	**15 32 21.6**	**-2.6**
	baz=62,SNR=511							
C17K	**DeLong Mountai**	**3.17**	**316**			**Pn**	**15 32 23.7**	**-0.8**
C17K	**DeLong Mountai**	**3.17**	**316**	P		**Pn**	**15 32 22.2**	**-2.3**
	baz=131,SNR=92							
CHUM	**Lake Minchumin**	**3.19**	**138**			**Pn**	**15 32 24.4**	**-0.4**
CHUM	**Lake Minchumin**	**3.19**	**138**	P		**Pn**	**15 32 24.7**	**-0.1**
	baz=321,SNR=504							
K20K	**Telida**	**3.26**	**155**			**Pn**	**15 32 25.1**	**-0.6**
K20K	**Telida**	**3.26**	**155**	P		**Pn**	**15 32 25.2**	**-0.4**
	baz=337							
J16K	**Anvik River**	**3.39**	**207**			**Pn**	**15 32 26.4**	**-1.1**
J16K				IAML			15 33 24.4	
	comp=E,5μm,0.7s							
J16K				IAML			15 33 24.6	
	comp=N,5μm,1.1s							
J16K	**Anvik River**	**3.39**	**207**	P		**Pn**	**15 32 26.0**	**-1.5**
	baz=24,SNR=533							
E23K	**Chandalar**	**3.41**	**56**	P		**Pn**	**15 32 27.4**	**-0.4**
	baz=243,SNR=305							
BPAW	**Bear Paw Mtn.**	**3.43**	**128**			**Pn**	**15 32 27.2**	**-0.8**
BPAW				IAML			15 33 31.9	
	comp=N,3μm,0.9s							
BPAW	**Bear Paw Mtn.**	**3.43**	**128**	P		**Pn**	**15 32 27.3**	**-0.6**
	baz=313,SNR=464							
BPAW				S		**Sn**	**15 33 08.7**	**-0.2**
	baz=313							
I23K	**Minto, Yukon-K**	**3.43**	**107**			**Pn**	**15 32 27.2**	**-0.8**
I23K	**Minto, Yukon-K**	**3.43**	**107**	P		**Pn**	**15 32 27.0**	**-1.0**
	baz=293,SNR=316							
I23K				Sb		**Sb**	**15 33 20.5**	**+3.6**
	baz=293							
B21K	**Ikpikpuk River**	**3.45**	**15**	P		**Pn**	**15 32 27.3**	**-0.9**
	baz=198							
D23K	**Nanushuk River**	**3.62**	**40**			**Pn**	**15 32 30.1**	**-0.6**
D23K				IAML			15 33 35.5	
	comp=N,4μm,1.1s							
D23K				IAML			15 33 36.0	
	comp=E,3μm,1.1s							
D23K	**Nanushuk River**	**3.62**	**40**	P		**Pn**	**15 32 31.1**	**+0.5**
	baz=226,SNR=188							
D23K				S		**Sn**	**15 33 14.3**	**+0.6**
	baz=226							
K17K	**Iditarod**	**3.66**	**188**	Pn		**Pn**	**15 32 29.5**	**-1.7**
K17K				IAML			15 33 33.6	
	comp=N,3μm,1.0s							
K17K				IAML			15 33 46.5	
	comp=E,5μm,1.1s							
K17K	**Iditarod**	**3.66**	**188**	P		**Pn**	**15 32 29.5**	**-1.7**
	baz=6.7,SNR=164							
K17K				S		**Sn**	**15 33 13.8**	**-0.7**
	baz=6.7							
B20K	**Meade River**	**3.70**	**360**	P		**Pn**	**15 32 31.5**	**-0.2**
	baz=181							
B20K				S		**Sn**	**15 33 16.8**	**+1.3**
	baz=181							
TOLK	**Toolik Lake Re**	**3.73**	**48**			**Pn**	**15 32 32.2**	**+0.1**
TOLK	**Toolik Lake Re**	**3.73**	**48**	P		**Pn**	**15 32 33.2**	**+1.1**
	baz=235,SNR=188							
C16K	**Lisburne Hills**	**3.73**	**305**	P		**Pn**	**15 32 31.9**	**-0.2**
	baz=119,SNR=139							
NEA2	**Nenana**	**3.79**	**114**	Pn		**Pn**	**15 32 32.0**	**-1.1**
NEA2				IAML			15 33 38.0	
	comp=N,4μm,1.0s							
NEA2	**Nenana**	**3.79**	**114**	P		**Pn**	**15 32 32.3**	**-0.7**
	baz=300,SNR=390							
E24K	**Your Creek**	**3.80**	**59**			**Pn**	**15 32 32.2**	**-1.0**
E24K	**Your Creek**	**3.80**	**59**	IAML			15 33 46.9	
	comp=N,3μm,1.2s							
E24K				IAML			15 33 49.6	
	comp=E,2μm,1.1s							
E24K	**Your Creek**	**3.80**	**59**	P		**Pn**	**15 32 32.9**	**-0.2**
	baz=246							
H24K	**Noodor Dome**	**3.81**	**93**			**Pn**	**15 32 32.3**	**-1.0**
H24K	**Noodor Dome**	**3.81**	**93**	P		**Pn**	**15 32 32.4**	**-1.

baz=330
TRF **Thorofare Moun** 4.11 131 Pn 15 32 37.2 -0.3
TRF IAML 15 33 48.9
comp=E,3µm,1.1s
TRF **Thorofare Moun** 4.11 131 P Pn 15 32 37.5 0.0
baz=317,SNR=348
COLA **College** 4.12 106 P Pn 15 32 37.6 +0.1
COLA **College** 4.12 106 Pn 15 32 36.1 -1.4
COLA **College** 4.12 106 *i* P Pn 15 32 36.4 -1.1
COLA **College** 4.12 106 P Pn 15 32 37.3 -0.2
baz=294
L18K **Granite Mounta** 4.13 177 Pn Pn 15 32 36.7 -0.9
L18K IAML 15 33 45.1
comp=N,2µm,0.7s
L18K **Granite Mounta** 4.13 177 P Pn 15 32 36.4 -1.3
baz=357,SNR=68
L18K S Sn 15 33 25.1 -1.0
baz=357
A19K **Wainwright** 4.16 341 Pn 15 32 37.5 -0.5
A19K **Wainwright** 4.16 341 P Pn 15 32 37.5 -0.5
baz=158,SNR=145
A19K S Sn 15 33 27.4 +0.7
baz=158
POKR **Poker Plat Res** 4.19 102 P Pn 15 32 37.5 -1.0
baz=291
POKR S Sn 15 33 26.9 -0.8
baz=291
WRH **Wood River Hil** 4.22 112 Pn 15 32 37.5 -1.4
WRH IAML 15 33 48.6
comp=E,2µm,0.7s
WRH IAML 15 33 53.3
comp=N,2µm,0.7s
L17K **Donlin** 4.24 187 Pn 15 32 37.6 -1.5
L17K **Donlin** 4.24 187 P Pn 15 32 37.9 -1.2
baz=5.8,SNR=83
L17K S Sn 15 33 27.6 -1.2
baz=5.8
CCB **Clear Creek Bu** 4.24 109 Pn 15 32 38.0 -1.2
CCB IAML 15 33 47.5
comp=N,2µm,0.7s
CCB IAML 15 33 51.6
comp=E,2µm,0.9s
D24K **Happy Valley** 4.25 44 P Pn 15 32 38.9 -0.4
baz=232
B22K **Teshekpuk Lake** 4.26 17 Pn 15 32 38.3 -1.1
B22K IAML 15 34 00.6
comp=N,2µm,1.1s
B22K IAML 15 34 00.8
comp=E,2µm,0.9s
B22K **Teshekpuk Lake** 4.26 17 P Pn 15 32 38.3 -1.1
baz=201,SNR=441
L19K **White Mountain** 4.28 165 P Pn 15 32 39.2 -0.5
baz=347,SNR=417
L19K S Sn 15 33 29.9 0.0
baz=347
C23K **Itkillik River** 4.29 32 Pn Pn 15 32 39.8 0.0
C23K IAML 15 33 57.4
comp=E,1µm,1.1s
C23K IAML 15 34 14.0
comp=N,2µm,1.0s
C23K **Itkillik River** 4.29 32 P Pn 15 32 39.4 -0.4
baz=218,SNR=134
MCK **McKinley** 4.35 123 P Pn 15 32 39.9 -0.7
baz=310,SNR=193
MCK S Sn 15 33 30.9 -0.7
baz=310
G25K **Bearman Lake** 4.44 79 Pn 15 32 40.6 -1.3
G25K **Bearman Lake** 4.44 79 P Pn 15 32 41.1 -0.8
baz=269,SNR=53
K15K **Wolf Creek Mou** 4.47 207 Pn 15 32 41.2 -1.1
K15K **Wolf Creek Mou** 4.47 207 IAML 15 33 58.9
comp=N,2µm,0.8s
K15K IAML 15 34 05.3
comp=E,2µm,0.8s
K15K **Wolf Creek Mou** 4.47 207 P Pn 15 32 41.4 -1.0
baz=23
TNA **Tin City** 4.48 265 Pn Pn 15 32 40.9 -1.4
TNA IAML 15 34 01.0
comp=N,3µm,0.8s
TNA IAML 15 34 06.7
comp=E,2µm,1.0s
TNA **Tin City** 4.48 265 P Pn 15 32 40.6 -1.8
baz=76,SNR=25
J14K **Nanvaranak Lak** 4.53 221 Pn 15 32 40.9 -2.2
J14K **Nanvaranak Lak** 4.53 221 IAML 15 34 22.5
comp=N,2µm,1.1s
J14K **Nanvaranak Lak** 4.53 221 P Pn 15 32 41.5 -1.6
baz=35
IL31 4.54 105 Pn 15 32 42.4 -0.8
ILAR **Eielson Array** 4.54 105 Pn Pn 15 32 43.2 0.0
comp=N,95nm,0.3s,baz=289,slow=13,SNR=4748
ILAR Sn Sn 15 33 34.5 -1.9
comp=N,86nm,0.3s,baz=294,slow=23,SNR=9.5
ILAR Lg Lg 15 33 55.4
comp=N,48nm,0.3s,baz=288,slow=22,SNR=6.8
ILAR **Eielson Array** 4.54 105 Pn 15 32 42.4 -0.9
M19K **Big River Lodg** 4.60 163 P Pn 15 32 44.3 +0.2
baz=345
M19K S Sn 15 33 37.4 -0.4
baz=345
C24K **Franklin Bluff** 4.66 39 P Pn 15 32 44.8 0.0
baz=227
HDA **Harding Lake** 4.68 110 P Pn 15 32 44.1 -1.2
baz=298,SNR=196
F25K **Christian Rive** 4.70 69 P Pn 15 32 45.8 +0.3
baz=259,SNR=94
L16K **Owhat River** 4.75 193 P Pn 15 32 44.5 -1.5
baz=11,SNR=68
L16K S Sn 15 33 39.4 -1.9
baz=11
A22K **Sinclair Lake** 4.77 9 Pn 15 32 45.4 -0.9
A22K **Sinclair Lake** 4.77 9 P Pn 15 32 45.3 -1.0
baz=191
FYU **Fort Yukon** 4.79 82 Pn 15 32 45.8 -0.8
M20K **Styx River** 4.80 157 Pn 15 32 46.6 -0.2
M20K **Styx River** 4.80 157 IAML 15 34 11.0
comp=E,1µm,0.9s
M20K **Styx River** 4.80 157 P Pn 15 32 47.3 +0.4
baz=340
M20K S Sn 15 33 41.6 -1.1
baz=340
PRP **Porcupine Dome** 4.83 94 P Pn 15 32 46.5 -0.9
baz=284,SNR=122
E25K **Arctic Village** 4.85 63 P Pn 15 32 46.4 -1.1
baz=253
M18K **Stony River** 4.89 173 Pn 15 32 46.8 -1.3
M18K **Stony River** 4.89 173 P Pn 15 32 47.5 -0.5
baz=353,SNR=220
M18K S Sn 15 33 42.2 -2.7
baz=353
CUT **Chulitna** 4.94 140 P Pn 15 32 49.6 +0.8
baz=325,SNR=135
M17K **Holitna River** 4.95 182 Pn 15 32 47.8 -1.0
M17K **Holitna River** 4.95 182 P Pn 15 32 48.1 -0.7
baz=0.9
M17K S Sn 15 33 44.9 -1.4
baz=0.9
SKT **Skwentna** 5.01 148 P Pn 15 32 49.9 +0.3
baz=332,SNR=469
WAT7 **Susitna Watana** 5.01 131 Pn 15 32 49.9 +0.1
A21K **Barrow** 5.02 2 Pn 15 32 48.9 -0.9
A21K **Barrow** 5.02 2 P Pn 15 32 49.0 -0.9
baz=183,SNR=19
A21K S Sn 15 33 46.0 -2.1
baz=183
L15K **Ungalak Mounta** 5.04 204 Pn 15 32 49.1 -1.0
L15K **Ungalak Mounta** 5.04 204 P Pn 15 32 49.0 -1.0
baz=20,SNR=54
D25K **Kavik River** 5.07 49 Pn 15 32 50.0 -0.5
D25K **Kavik River** 5.07 49 IAML 15 34 27.7
comp=N,1µm,1.1s
D25K IAML 15 34 35.1
comp=E,977nm,1.0s
D25K **Kavik River** 5.07 49 P Pn 15 32 50.2 -0.3
baz=239
BMAR **Burnt Mountain** 5.08 72 Pn 15 32 49.5 -1.1
BM01 **Burnt Mountain** 5.10 71 Pn 15 32 49.8 -1.2
WAT1 **Susitna Watana** 5.10 129 Pn 15 32 50.7 -0.3
WAT1 **Susitna Watana** 5.10 129 P Pn 15 32 51.1 +0.1
baz=317
J25K **Salcha River,** 5.20 104 Pn 15 32 51.6 -0.8
J25K **Salcha River,** 5.20 104 IAML 15 34 29.5
comp=E,1µm,1.0s
J25K **Salcha River,** 5.20 104 P Pn 15 32 51.4 -1.0
baz=294,SNR=167
F26K **Sheenjek River** 5.28 69 P Pn 15 32 52.4 -1.0
baz=261,SNR=40

DHY **Denali Highway** 5.31 123 Pn Pn 15 32 53.4 -0.6
DHY **Denali Highway** 5.31 123 P Pn 15 32 52.5 -1.5
baz=312,SNR=267
SPNN **North Nagishla** 5.35 156 Pn 15 32 54.5 -0.1
G26K **Porcupine Rive** 5.36 77 Pn 15 32 53.5 -0.9
G26K **Porcupine Rive** 5.36 77 P Pn 15 32 52.5 -2.0
baz=269,SNR=58
M16K **Timber Creek** 5.38 189 P Pn 15 32 53.4 -1.5
baz=7.4,SNR=26
K24K **Donnelly Dome** 5.44 112 Pn 15 32 54.8 -0.8
K24K **Donnelly Dome** 5.44 112 P Pn 15 32 54.4 -1.1
baz=302,SNR=111
K13K **Kusilvak Mount** 5.50 220 Pn 15 32 54.5 -1.9
K13K **Kusilvak Mount** 5.50 220 P Pn 15 32 54.9 -1.5
baz=33,SNR=26
M22K **Willow** 5.53 143 P Pn 15 32 55.9 -1.0
baz=329
SPCG **Spurr Capps Gl** 5.54 153 Pn 15 32 56.8 -0.3
WAT6 **Susitna Watana** 5.54 128 Pn 15 32 56.6 -0.5
WAT6 **Susitna Watana** 5.54 128 P Pn 15 32 56.9 -0.3
baz=316,SNR=190
L14K **Kuka Creek** 5.57 209 Pn 15 32 56.2 -1.1
L14K **Kuka Creek** 5.57 209 P Pn 15 32 56.2 -1.1
baz=23,SNR=34
CKL **Chakachamna La** 5.57 155 Pn 15 32 57.9 +0.4
N20K **Mount Spurr** 5.59 155 P Pn 15 32 57.8 0.0
baz=339
SPCR **Spurr Chakacha** 5.59 155 Pn 15 32 58.3 +0.5
SPCR **Spurr Chakacha** 5.59 155 P Pn 15 32 58.3 +0.5
baz=339,SNR=47
N19K **Bonanza Creek** 5.66 167 P Pn 15 32 58.1 -0.6
baz=348,SNR=42
N18K **Kilae Creek** 5.70 174 P Pn 15 32 58.6 -0.5
baz=354
C26K **Camden Bay** 5.82 46 P Pn 15 33 00.8 0.0
baz=238,SNR=650
RIDG **Independent Ri** 5.82 111 Pn 15 32 59.9 -1.0
RIDG **Independent Ri** 5.82 111 P Pn 15 32 59.7 -1.2
baz=302,SNR=56
GHO **Glory Hole Cre** 5.82 138 Pn 15 33 01.1 +0.2
N17K **Nushagak Hills** 5.82 180 Pn 15 33 00.1 -0.8
N17K **Nushagak Hills** 5.82 180 P Pn 15 32 59.9 -1.0
baz=360,SNR=74
I26K **Coal Creek Min** 5.84 94 P Pn 15 32 59.9 -1.2
baz=286,SNR=100
M15K **Kasigluk River** 5.87 197 Pn 15 33 00.1 -1.4
M15K **Kasigluk River** 5.87 197 P Pn 15 33 00.3 -1.2
baz=14,SNR=59
PMR **Palmer** 5.92 140 P Pn 15 33 02.9 +0.8
PMR **Palmer** 5.92 140 Pn 15 33 01.8 -0.3
PMR **Palmer** 5.92 140 P Pn 15 33 01.8 -0.3
PMR **Palmer** 5.92 140 P Pn 15 33 02.6 +0.5
baz=326,SNR=74
N16K **Nishlik Lake** 5.92 188 Pn 15 33 00.8 -1.5
N16K **Nishlik Lake** 5.92 188 P Pn 15 33 00.9 -1.3
baz=6.0,SNR=66
SML **Sawmill** 5.96 135 P Pn 15 33 02.8 0.0
baz=323,SNR=122
M14K **Bethel** 5.99 203 Pn 15 33 01.9 -1.2
M14K **Bethel** 5.99 203 P Pn 15 33 02.8 -0.4
baz=19,SNR=21
SCRK **Sand Creek** 6.03 107 Pn 15 33 02.4 -1.4
SCRK **Sand Creek** 6.03 107 P Pn 15 33 02.7 -1.1
baz=298,SNR=45
C27K **Jago River** 6.04 51 Pn 15 33 04.2 +0.4
C27K **Jago River** 6.04 51 P Pn 15 33 03.8 +0.1
baz=243,SNR=166
PAX **Paxson** 6.04 118 P Pn 15 33 03.9 0.0
baz=309,SNR=90
DFR **Drift River** 6.09 159 Pn 15 33 04.0 -0.6
M23K **Glacier View** 6.14 133 P Pn 15 33 05.3 0.0
baz=321,SNR=121
RDT **Redoubt** 6.15 158 Pn 15 33 05.0 -0.4
DOT **Dot Lake** 6.17 110 Pn Pn 15 33 04.4 -1.2
CAPN **Captain Cook N** 6.19 152 P Pn 15 33 07.5 +1.7
baz=336,SNR=36
G27K **Doyon Strip** 6.20 78 P Pn 15 33 06.1 0.0
baz=272
RC01 **Rabbit Creek A** 6.20 144 Pn 15 33 05.9 -0.1
RC01 **Rabbit Creek A** 6.20 144 P Pn 15 33 06.5 +0.4
baz=331,SNR=21
RDSO **Redoubt South** 6.22 159 Pn 15 33 05.6 -0.9
SCM **Sheep Creek Mo** 6.23 132 P Pn 15 33 06.6 0.0
baz=320,SNR=62
KNK **Knik Glacier** 6.25 138 P Pn 15 33 07.4 +0.7
baz=325,SNR=128
RED **Redoubt Volcan** 6.25 160 Pn 15 33 06.1 -0.6
O19K **Port Alsworth** 6.29 167 Pn Pn 15 33 06.3 -0.8
O19K **Port Alsworth** 6.29 167 P Pn 15 33 06.6 -0.6
baz=349,SNR=43
H27K **Steamboat Moun** 6.31 84 Pn Pn 15 33 07.5 0.0
H27K **Steamboat Moun** 6.31 84 P Pn 15 33 07.6 0.0
baz=278,SNR=34
E27K **Coleen River** 6.31 66 P Pn 15 33 07.4 -0.1
baz=260,SNR=28
N15K **Kwhluk River** 6.32 193 Pn 15 33 06.2 -1.5
N15K **Kwethluk River** 6.32 193 P Pn 15 33 05.9 -1.8
baz=10
M24K **Tolsona, Glenn** 6.39 126 P Pn 15 33 09.5 +0.9
baz=316,SNR=86
I27K **Kandik River** 6.39 89 P Pn 15 33 07.6 -1.0
baz=283,SNR=32
HARP **HAARP** 6.52 122 P Pn 15 33 11.9 +1.4
baz=312,SNR=61
M13K **Dall Lake** 6.55 208 Pn 15 33 10.4 -0.4
O18K **Koktuh Hills** 6.56 171 Pn Pn 15 33 09.6 -1.3
O18K **Koktuh Hills** 6.56 171 P Pn 15 33 09.7 -1.3
baz=353,SNR=21
O17K **Koliganek Bris** 6.58 180 Pn 15 33 09.5 -1.7
O17K **Koliganek Bris** 6.58 180 P Pn 15 33 10.2 -1.0
baz=359,SNR=45
SLKM **Skilak Lake** 6.61 149 Pn 15 33 12.0 +0.2
ILSW **Iliamna Southw** 6.62 162 Pn 15 33 11.5 -0.4
ILS **Iliamna Low So** 6.65 162 Pn 15 33 12.1 -0.3
GAMB **Gambell** 6.66 254 Pn Pn 15 33 11.3 -1.0
MENT **Mentasta** 6.69 114 P Pn 15 33 12.5 -0.3
MENT **Mentasta** 6.69 114 Pn Pn 15 33 12.3 -0.5
O22K **Cooper Landing** 6.74 147 P Pn 15 33 13.4 -0.1
baz=333,SNR=30
N14K **Kuskokwak Cree** 6.75 200 Pn 15 33 12.4 -1.1
N14K **Kuskokwak Cree** 6.75 200 P Pn 15 33 13.4 -0.1
baz=16
O16K **Kokwok River B** 6.77 184 Pn Pn 15 33 12.6 -1.2
O16K **Kokwok River B** 6.77 184 P Pn 15 33 12.8 -1.1
baz=2.9,SNR=42
L26K **Log Cabin Wild** 6.78 113 Pn 15 33 13.4 -0.6
L26K **Log Cabin Wild** 6.78 113 P Pn 15 33 13.8 -0.2
baz=305,SNR=58
D27M **Malcolm River** 6.79 57 P Pn 15 33 14.7 +0.6
baz=252
F28M **Old Crow** 6.90 71 P Pn 15 33 15.4 -0.2
baz=267,SNR=39
KLU **Klutina** 6.92 129 P Pn 15 33 16.2 +0.2
baz=319,SNR=74
P19K **Oil Pt** 6.93 163 P Pn 15 33 15.3 -0.8
baz=346,SNR=9.7
P18K **Big Mountain,** 7.02 172 P Pn 15 33 16.6 -0.7
baz=353,SNR=18
GLI **Glacier Island** 7.06 136 Pn 15 33 18.4 +0.6
GLI **Glacier Island** 7.06 136 P Pn 15 33 18.7 +0.9
baz=325,SNR=53
I28M **Miner Creek** 7.11 89 Pn Pn 15 33 18.0 -0.5
I28M **Miner Creek** 7.11 89 P Pn 15 33 17.5 -1.0
baz=285,SNR=43
E28M **Babbage River** 7.14 63 Pn 15 33 17.8 -1.0
E28M **Babbage River** 7.14 63 P Pn 15 33 18.5 -0.4
baz=260,SNR=91
SEW **Seward** 7.14 147 Pn 15 33 19.8 +0.8
SEW **Seward** 7.14 147 P Pn 15 33 19.6 +0.7
baz=334,SNR=13
HOM **Homer** 7.14 157 P Pn 15 33 18.4 -0.6
baz=342
P17K **Kvichak River** 7.17 177 Pn 15 33 18.1 -1.1
P17K **Kvichak River** 7.17 177 P Pn 15 33 18.6 -0.7
baz=357,SNR=23
AGU **Augustine-Summ** 7.20 165 Pn 15 33 19.1 -0.6
M11K **Mekoryuk** 7.21 218 P Pn 15 33 19.2 -0.6
baz=30
BRSE **Bradley Lake S** 7.22 153 Pn 15 33 20.9 +0.9
BRSE **Bradley Lake S** 7.22 153 P Pn 15 33 20.7 +0.7
baz=339,SNR=8.1
N25K **Chitina, Valde** 7.27 125 Pn 15 33 20.9 +0.2
N25K **Chitina, Valde** 7.27 125 P Pn 15 33 21.1 +0.3
baz=316,SNR=61
O15K **Ungalikthiuk R** 7.28 191 Pn Pn 15 33 19.4 -1.5

O15K **Ungalikthiuk R** 7.28 191 P Pn 15 33 19.6 -1.3
baz=8.3,SNR=6.9
M26K **Nabesna, AK** 7.29 116 P Pn 15 33 20.2 -0.8
baz=308
L27K **Beaver Creek,** 7.33 109 Pn 15 33 20.1 -1.5
L27K **Beaver Creek,** 7.33 109 P Pn 15 33 19.9 -1.7
baz=303,SNR=106
P16K **Nushagak River** 7.33 183 P Pn 15 33 20.6 -0.9
baz=2.4,SNR=18
CNPM **China Poot** 7.34 156 Pn 15 33 22.0 +0.3
O14K **Tigyukauivet M** 7.34 197 P Pn 15 33 21.1 -0.6
baz=13
BCAR **Beaver Creek A** 7.35 109 Pn 15 33 20.4 -1.4
H29M **Whitestone** 7.57 82 P Pn 15 33 24.9 0.0
baz=279
D28M **Stokes Point** 7.58 58 P Pn 15 33 23.9 -0.9
baz=255,SNR=14
Q19K **Cape Douglas,** 7.60 166 P Pn 15 33 24.7 -0.6
baz=349
G29M **Pine Creek** 7.63 77 P Pn 15 33 24.7 -0.9
baz=274
Q16K **King Salmon** 7.68 178 Pn 15 33 25.5 -0.8
Q16K **King Salmon** 7.68 178 P Pn 15 33 25.5 -0.8
baz=358,SNR=7.1
E29M **Blow River** 7.70 66 Pn 15 33 25.8 -0.8
E29M **Blow River** 7.70 66 P Pn 15 33 25.9 -0.6
baz=263,SNR=94
EYAK **Cordova Ski Ar** 7.72 133 P Pn 15 33 28.2 +1.4
EYAK **Cordova Ski Ar** 7.72 133 Pn 15 33 26.6 -0.3
EYAK **Cordova Ski Ar** 7.72 133 P Pn 15 33 27.6 +0.8
baz=323,SNR=13
M27K **Edge Creek, AK** 7.72 114 Pn Pn 15 33 26.5 -0.6
M27K **Edge Creek, AK** 7.72 114 P Pn 15 33 26.7 -0.3
baz=307,SNR=63
P23K **Montague Islan** 7.72 141 P Pn 15 33 27.3 +0.4
baz=329,SNR=8.7
BMRM **Bremner River** 7.74 128 Pn Pn 15 33 27.4 +0.2
BMRM **Bremner River** 7.74 128 P Pn 15 33 27.2 0.0
baz=319,SNR=32
KAHC **Katmai Hardscr** 7.77 172 Pn 15 33 26.6 -1.1
Q18K **Katmai Hardscr** 7.77 172 P Pn 15 33 26.3 -1.4
baz=353
I29M **Ogilvie Camp,** 7.79 88 Pn Pn 15 33 27.6 -0.2
DAWY **Dawson** 7.80 99 Pn Pn 15 33 27.1 -0.8
DAWY **Dawson** 7.80 99 P Pn 15 33 27.3 -0.6
baz=294,SNR=64
KARR **Katmai Rainbow** 7.94 171 Pn 15 33 29.1 -0.8
MCARA **McCarthy VSAT** 7.96 122 Pn 15 33 31.5 +1.4
MCARA **McCarthy VSAT** 7.96 122 P Pn 15 33 30.7 +0.5
baz=314,SNR=21
GOAT **Goat Mountain** 8.00 130 Pn 15 33 31.7 +0.9
KAWH **Katmai** 8.05 171 Pn 15 33 30.4 -1.0
Q20K **Shuyak Island** 8.05 162 P Pn 15 33 32.5 +1.1
baz=346,SNR=7.3
SYI **Shuyak Island** 8.05 162 Pn 15 33 30.6 -0.8
BVCY **Beaver Creek** 8.07 111 Pn 15 33 30.5 -1.2
BVCY **Beaver Creek** 8.07 111 P Pn 15 33 31.0 -0.7
baz=306,SNR=65
CNTC **Contact Creek** 8.11 175 Pn 15 33 31.2 -1.2
Q17K **Contact Creek** 8.11 175 P Pn 15 33 31.2 -1.2
baz=356
J29N **Klondike Camp** 8.12 95 Pn Pn 15 33 32.0 -0.4
J29N **Klondike Camp** 8.12 95 P Pn 15 33 31.9 -0.5
baz=292
KABU **Katmai Buttres** 8.13 173 Pn 15 33 31.9 -0.8
EPYK **Eagle Plains** 8.21 80 P Pn 15 33 32.4 -1.2
baz=279
PTPK **Patty Peak** 8.29 122 Pn 15 33 34.6 -0.2
G30M **tAoh Zraii Nji** 8.33 76 Pn Pn 15 33 33.9 -1.3
G30M **tAoh Zraii Nji** 8.33 76 P Pn 15 33 34.4 -0.8
baz=275,SNR=55
CRQM **Cirque** 8.37 125 Pn 15 33 36.0 0.0
CRQE **Cirque** 8.39 125 P Pn 15 33 36.1 -0.1
baz=317,SNR=36
F30M **Barrier River** 8.46 72 P Pn 15 33 38.2 +1.2
baz=271,SNR=25
YUK2 **White River** 8.46 115 Pn 15 33 36.4 -0.7
KIAG **Kiagna River** 8.51 123 Pn 15 33 37.8 -0.1
I30M **Mount Dempster** 8.60 88 Pn Pn 15 33 38.1 -1.0
I30M **Mount Dempster** 8.60 88 P Pn 15 33 38.2 -0.9
baz=286,SNR=107
YUK3 **Moose Creek** 8.61 114 Pn 15 33 38.0 -1.2
YUK3 **Moose Creek** 8.61 114 P Pn 15 33 38.5 -0.8
baz=309,SNR=34
K29M **Barlow Dome** 8.64 98 Pn 15 33 38.6 -1.0
K29M **Barlow Dome** 8.64 98 P Pn 15 33 38.9 -0.7
baz=295,SNR=23
PLK4 **Peulik 4** 8.73 177 Pn 15 33 39.9 -0.9
R17L **Mt. Peulik Vol** 8.73 177 P Pn 15 33 40.2 -0.7
baz=358
L29M **L29M** 8.74 103 Pn 15 33 40.1 -0.8
L29M **L29M** 8.74 103 P Pn 15 33 40.6 -0.3
baz=300,SNR=41
J30M **Hart River** 8.83 92 Pn 15 33 41.7 -0.5
J30M **Hart River** 8.83 92 P Pn 15 33 41.5 -0.7
baz=291,SNR=45
CTG **Chitna Glacier** 8.84 120 P Pn 15 33 42.7 +0.5
baz=314,SNR=15
KDAK **Kodiak Island** 8.84 164 Pn Pn 15 33 42.4 +0.3
comp=E,9.2nm,0.3s,baz=10,slow=8.1,SNR=57
KDAK Lg Lg 15 36 10.8
comp=E,0.2nm,0.3s,baz=202,slow=19,SNR=1.2
KDAK LR LR 15 36 43.3
comp=E,1µm,19.2s,baz=16,slow=34
comp=E,70nm,0.6s
KDAK **Kodiak Island** 8.84 164 Pn Pn 15 33 42.5 +0.4
KDAK **Kodiak Island** 8.84 164 P Pn 15 33 42.5 +0.4
KDAK **Kodiak Island** 8.84 164 P Pn 15 33 42.8 +0.7
baz=348
CTGM **Chitina Glacie** 8.84 120 Pn 15 33 42.1 -0.2
M29M **Somme Creek** 8.96 107 Pn Pn 15 33 43.3 -0.8
LOGN **Logan Glacier** 9.05 120 Pn 15 33 45.2 0.0
YUK8 **Steele Glacier** 9.18 115 Pn 15 33 46.2 -0.9
YUK8 **Steele Glacier** 9.18 115 P Pn 15 33 47.6 +0.5
baz=311,SNR=55
F31M **Tsiigehtchic** 9.25 72 Pn Pn 15 33 47.0 -0.9
F31M **Tsiigehtchic** 9.25 72 P Pn 15 33 47.4 -0.4
baz=295,SNR=17
H31M **Peel River** 9.27 83 Pn Pn 15 33 46.8 -1.3
H31M **Peel River** 9.27 83 P Pn 15 33 47.7 -0.4
baz=283
RKAV **Rock Avalanche** 9.31 123 Pn 15 33 48.5 -0.3
INK **Inuvik** 9.31 67 Pn Pn 15 33 48.6 0.0
comp=E,1.9nm,0.3s,baz=288,slow=15,SNR=25
INK Sn Sn 15 35 27.3 -6.2
comp=E,2.1nm,0.3s,baz=202,slow=32,SNR=3.0
INK Lg Lg 15 36 25.6
comp=E,1.2nm,0.3s,baz=202,slow=12,SNR=5.1
INK LR LR 15 37 03.9
comp=E,1µm,18.1s,baz=256,slow=35
comp=E,14nm,0.7s
INK **Inuvik** 9.31 67 Pn Pn 15 33 48.3 -0.4
INK **Inuvik** 9.31 67 P Pn 15 33 48.8 +0.2
baz=269,SNR=26
OHAK **Old Harbor** 9.32 167 P Pn 15 33 50.2 +1.5
OHAK **Old Harbor** 9.32 167 Pn 15 33 48.6 -0.1
OHAK **Old Harbor** 9.32 167 P Pn 15 33 48.3 -0.4
baz=350
O28M **Mount Upton** 9.37 118 P Pn 15 33 51.9 +2.1
baz=313,SNR=45
M30M **Minto, Yukon** 9.54 104 Pn Pn 15 33 50.7 -1.1
M30M **Minto, Yukon** 9.54 104 P Pn 15 33 51.5 -0.3
baz=302,SNR=20
YUK4 **Talbot Arm** 9.55 113 P Pn 15 33 51.7 -0.5
baz=309,SNR=23
PINM **Pinnacle** 9.83 121 P Pn 15 33 56.3 +0.4
baz=316
YUK6 **Outpost Mounta** 9.92 114 P Pn 15 33 56.9 -0.3
baz=311
N30M **Aishikik Lake** 10.07 110 Pn Pn 15 33 57.8 -1.3
N30M **Aishikik Lake** 10.07 110 P Pn 15 33 58.9 -0.2
baz=307,SNR=41
O29M **Mount Kennedy** 10.28 117 P Pn 15 34 01.8 -0.2
baz=314
HYT **Haines Junctio** 10.31 113 P Pn 15 34 02.2 -0.4
baz=310,SNR=13
N31M **Braeburn, Yuko** 10.55 107 Pn Pn 15 34 04.7 -1.0
N31M **Braeburn, Yuko** 10.55 107 P Pn 15 34 05.0 -0.7
baz=306
ANDR **Anadyr'** 10.61 273 *e*P Pn 15 34 07.4 +1.1
ANDR Pgmax 15 34 13.8
comp=E,180nm,1.0s
ANDR *e*Sg 15 37 05.4
ANDR Sgmax 15 37 26.9
comp=E,450nm,1.3s
M31M **Drury Creek, Y** 10.69 102 Pn 15 34 07.2 -0.4

M31M Drury Creek, Y 10.69 102 P Pn 15 34 07.9 +0.4
baz=302,SNR=19
O30N Mendenhall 10.88 111 Pn 15 34 09.3 -0.8
O30N Mendenhall 10.88 111 P Pn 15 34 10.0 -0.2
baz=310,SNR=20
P30M Million Dollar 10.99 115 P Pn 15 34 12.6 +1.0
baz=313
SDPT Sand Point 11.13 190 P Pn 15 34 13.5 0.0
SDPT Sand Point 11.13 190 P Pn 15 34 13.8 +0.3
baz=6.8
WHY Whitehorse 11.41 109 Pn Pn 15 34 16.7 -0.7
WHY Whitehorse 11.41 109 P Pn 15 34 17.3 -0.1
baz=309,SNR=7.2
CHNA Chernabura Isl 11.60 187 P Pn 15 34 20.8 +0.9
CHNA Chernabura Isl 11.60 187 P Pn 15 34 19.5 -0.4
baz=4.7
SKAG Skagway 12.04 115 Pn Pn 15 34 26.5 +0.5
SKAG Skagway 12.04 115 P Pn 15 34 26.0 +0.1
baz=314
P33M Teslin, Yukon 12.48 108 P Pn 15 34 31.0 -1.1
baz=310,SNR=10
A36M Sachs Harbour 12.55 49 Pn Pn 15 34 30.1 -2.7
A36M Sachs Harbour 12.55 49 P Pn 15 34 30.7 -2.2
baz=259,SNR=103
P32M Atlin 12.55 111 P Pn 15 34 32.4 -0.7
baz=312
C36M Paulatuk 12.74 61 Pn 15 34 34.0 -1.5
C36M Paulatuk 12.74 61 P Pn 15 34 34.3 -1.1
baz=272
S31K Pelican 12.81 121 P Pn 15 34 36.3 -0.2
baz=319
R32K Eaglecrest 13.19 117 P Pn 15 34 41.7 +0.1
baz=317
Q32M Nakina River 13.53 111 P Pn 15 34 45.3 -1.1
baz=313,SNR=7.8
R33M Jennings River 13.73 108 Pn Pn 15 34 49.1 0.0
R33M Jennings River 13.73 108 P Pn 15 34 47.6 -1.5
baz=311
S32K Killisnoo 13.77 119 P Pn 15 34 49.1 -0.4
baz=319
SIT Sitka 13.82 122 P Pn 15 34 51.3 +1.0
SIT Sitka 13.82 122 P Pn 15 34 49.1 -1.1
baz=321
WTLY Watson Lake, Y 14.11 103 Pn Pn 15 34 54.5 +0.2
WTLY Watson Lake, Y 14.11 103 P Pn 15 34 52.6 -1.7
baz=308
BILL Bilibino 14.15 294 Pn 15 34 52.5 -2.3
BILL Bilibino 14.15 294 *i* P Pn 15 34 54.3 -0.5
BILL pmax pmax
comp=Z,12nm,0.9s
BILL Bilibino 14.15 294 *e*P Pn 15 34 54.4 -0.4
WRGLY Wrigley 14.58 87 P Pn 15 34 58.6 -2.0
baz=297,SNR=11
S34M Telegraph Cree 14.69 113 Pn Pn 15 35 01.1 -1.0
S34M Telegraph Cree 14.69 113 P Pn 15 35 01.5 -0.6
baz=316,SNR=7.1
DLBC Dease Lake 14.74 109 Pn Pn 15 35 04.9 +2.1
comp=Z,1.4nm,0.3s,baz=326,slow=6.7,SNR=24
DLBC Lg Lg 15 39 19.2
comp=Z,0.5nm,0.3s,baz=2.5,slow=24,SNR=7.6
DLBC LR LR 15 41 28.2
comp=Z,350nm,20.1s,baz=298,slow=40
comp=Z,9.6nm,0.7s
DLBC Dease Lake 14.74 109 P Pn 15 35 01.5 -1.3
baz=314,SNR=21
U33K Whale Pass 15.32 120 P Pn 15 35 09.9 -0.7
baz=321
WRAK Wrangell Islan 15.36 118 P Pn 15 35 09.9 -1.2
baz=320,SNR=7.7
T35M Bob Quinn 15.70 114 P Pn 15 35 14.9 -0.6
baz=317,SNR=6.2
KOTAN Kotaneelee Air 15.99 97 P Pn 15 35 17.8 -1.5
baz=307,SNR=13
V35K Ketchikan 16.47 120 P Pn 15 35 23.8 -1.7
baz=322
U35K Hyder 16.58 116 P Pn 15 35 24.8 -2.0
baz=320
DIB Dawson Inlet, 17.91 125 P Pn 15 35 42.8 -0.7
DIB IAmb IAmb 15 35 48.1
comp=Z,51nm,1.2s
YKA Yellowknife Ar 18.49 82 P Pn 15 35 50.7 +0.3
comp=Z,0.8nm,0.3s,baz=300,slow=9.5,SNR=31
YKA Sn Sn 15 39 07.2 -10
comp=Z,0.2nm,0.3s,baz=306,slow=23,SNR=2.9
YKA Lg Lg 15 41 17.9
baz=293,slow=27
comp=Z,4.5nm,0.8s
YKA Yellowknife Ar 18.49 82 P P 15 35 49.7 -0.7
YKAW1 Yellowknife Wh 18.54 82 P 15 35 50.4 -0.6
SHEM Shemya Is, Ala 19.69 240 LR LR 15 43 49.0
comp=Z,485nm,18.5s,baz=4.5,slow=37
BBB Bella Bella 20.24 120 P Pn 15 36 10.9 -0.6
comp=Z,26nm,1.1s,baz=310,slow=12,SNR=5.9
BBB LR LR 15 44 18.5
comp=Z,342nm,19.5s,baz=326,slow=38
comp=Z,26nm,1.1s
BBB Bella Bella 20.24 120 IAmb IAmb 15 36 15.4
comp=Z,96nm,1.6s
RES Resolute Bay 21.27 40 P P 15 36 19.5 -1.0
comp=Z,1.9nm,0.7s,baz=320,slow=8.6,SNR=11
RES S S 15 40 08.2 -8.4
comp=Z,3.6nm,0.6s,baz=165,slow=19,SNR=3.0
RES LR LR 15 46 13.0
comp=Z,409nm,22.0s,baz=217,slow=41
comp=Z,1.9nm,0.7s
RES Resolute Bay 21.27 40 P P 15 36 19.8 -0.7
RES Resolute Bay 21.27 40 P P 15 36 19.8 -0.7
RES pmax pmax
comp=Z,9.0nm,0.7s
SEY Seymchan 21.39 285 P P 15 36 22.4 +0.4
comp=Z,9.6nm,0.6s,baz=80,slow=8.3,SNR=44
SEY Lg Lg 15 42 54.4
comp=Z,0.2nm,0.3s,baz=289,slow=22,SNR=2.0
SEY LR LR 15 44 27.8
comp=Z,370nm,19.5s,baz=60,slow=36
comp=Z,9.6nm,0.6s
SEY Seymchan 21.39 285 *ce*P P 15 36 23.6 +1.6
SEY pmax pmax
comp=Z,47nm,1.7s
SEY Seymchan 21.39 285 *e*P P 15 36 23.6 +1.6
TIXI Tiksi 25.44 315 LR LR 15 48 51.8
comp=Z,247nm,18.2s,baz=63,slow=41
TIXI Tiksi 25.44 315 P P 15 37 00.8 -1.2
TIXI IAmb IAmb 15 37 06.4
comp=Z,14nm,1.1s
TIXI Tiksi 25.44 315 *ce*P P 15 37 02.5 +0.5
TIXI pmax pmax
comp=Z,23nm,1.7s
TIXI Tiksi 25.44 315 *e*P P 15 37 02.5 +0.5
PETK Petropavlovsk- 25.63 261 P P 15 37 03.8 -0.2
comp=Z,4.1nm,0.8s,baz=70,slow=11,SNR=5.0
PETK LR LR 15 47 06.2
comp=Z,268nm,18.1s,baz=36,slow=36
comp=Z,4.1nm,0.8s
PETK Petropavlovsk- 25.63 261 P P 15 37 03.1 -0.9
TULEG Thule 26.86 31 P P 15 37 13.8 -1.0
TULEG IAmb IAmb 15 37 29.9
comp=Z,15nm,1.2s
TULEG Thule 26.86 31 *i* P P 15 37 18.2 +3.4
TULEG IAmb IAmb 15 37 18.8
comp=Z,23nm,1.4s
ILON Igloolik, Nuna 26.91 49 P P 15 37 14.6 -0.7
NEW Newport 27.47 111 LR LR 15 49 43.0
comp=Z,322nm,18.1s,baz=338,slow=39
FFC Flin Flon 28.48 87 P P 15 37 29.3 -0.3
FFC Flin Flon 28.48 87 P P 15 37 29.3 -0.3
FFC pmax pmax
comp=Z,7.0nm,1.1s
FCC Fort Churchill 28.82 75 P P 15 37 32.6 +0.1
FCC IAmb IAmb 15 37 37.6
comp=Z,12nm,0.8s
FCC Fort Churchill 28.82 75 P P 15 37 32.6 +0.1
FCC pmax pmax
comp=Z,13nm,0.8s
NEEM North Greenlan 29.75 25 *i* P P 15 37 41.9 +0.9
NEEM IAmb IAmb 15 37 43.2
comp=Z,5.2nm,0.7s
YAK Yakutsk 30.47 297 P P 15 37 46.3 -0.7
comp=Z,8.1nm,0.7s,baz=45,slow=16,SNR=6.9
YAK LR LR 15 49 52.5
comp=Z,114nm,18.9s,baz=38,slow=36
comp=Z,8.1nm,0.7s
YAK Yakutsk 30.47 297 P P 15 37 45.8 -1.2
YAK Yakutsk 30.47 297 *e*P P 15 37 47.1 +0.1
YAK *e**PP **sP** 15 37 50.6 +0.6
YAK *e* 15 38 47.0
YAK *e* 15 40 47.5
YAK *e*S **S** 15 42 49.8 +1.8
YAK *e**SS **sS** 15 42 55.2 +3.7
YAK *e* 15 48 26.9
YAK pmax pmax
comp=Z,8.0nm,0.9s
YAK pmax pmax
comp=Z,120nm,4.0s
YAK pmax pmax
comp=N,49nm,5.8s
YAK pmax pmax
comp=E,44nm,4.0s
YAK smax smax
comp=N,47nm,3.5s
YAK smax smax
comp=E,113nm,4.0s
YAK MLR MLR
comp=Z,663nm,14.0s
YAK MLR MLR
comp=E,433nm,14.0s
YAK MLR MLR
comp=N,488nm,16.0s
YAK Yakutsk 30.47 297 *e*P P 15 37 47.8 +0.8
YBH Yreka Blue Hor 31.14 125 LR LR 15 49 14.7
comp=N,11nm,19.6s,baz=339,slow=34
MCMT McKenzie Canyo 31.96 110 P P 15 38 00.7 0.0
TYV Tymovskoe 33.40 273 *e*P P 15 38 12.9 +0.1
TYV pmax pmax
comp=Z,100nm,4.9s
TYV pmax pmax
comp=Z,7.0nm,0.6s
ULM Lac du Bonnet 34.31 87 P P 15 38 21.4 +0.6
comp=Z,9.2nm,0.7s,baz=320,slow=8.5,SNR=16
comp=Z,9.2nm,0.7s
ULM Lac du Bonnet 34.31 87 P P 15 38 21.4 +0.6
ULM IAmb IAmb 15 38 25.7
comp=Z,10nm,0.9s
FRB Frobisher Bay 34.54 52 LR LR 15 54 02.0
comp=Z,298nm,20.5s,baz=302,slow=39
DAG Danmarks Havn 34.85 15 *i* P P 15 38 24.9 -0.3
DAG IAmb IAmb 15 38 31.6
comp=Z,4.2nm,0.8s
PD31 Pinedale Array 34.97 108 P P 15 38 25.9 -0.9
PDAR Pinedale Array 34.97 108 P P 15 38 28.4 +1.5
comp=Z,2.2nm,1.0s,baz=335,slow=6.6,SNR=9.3
PDAR LR LR 15 53 45.1
comp=Z,267nm,19.8s,baz=334,slow=38
comp=Z,2.2nm,1.0s
PDAR Pinedale Array 34.97 108 P P 15 38 26.3 -0.5
KVN Kaiserville 35.09 121 P P 15 38 29.5 +1.5
KVN Kaiserville 35.09 121 P P 15 38 29.5 +1.5
KVN pmax pmax
comp=Z,5.0nm,1.2s
SUMG Summit 35.52 27 *i* P P 15 38 33.0 +1.5
SUMG IAmb IAmb 15 38 33.9
comp=Z,38nm,1.5s
NVAR Mina Array Bea 35.58 122 P P 15 38 34.4 +2.2
comp=Z,4.0nm,0.8s,baz=313,slow=7.3,SNR=24
NVAR LR LR 15 53 31.2
comp=Z,233nm,18.7s,baz=349,slow=37
comp=Z,4.0nm,0.8s
NVAR Mina Array Bea 35.58 122 P P 15 38 33.1 +0.9
EPLO Experimental L 35.62 86 P P 15 38 33.3 +1.1
EPLO IAmb IAmb 15 38 39.1
comp=Z,22nm,1.5s
AGMN Agassiz Nation 35.85 89 P P 15 38 34.4 +0.3
AGMN IAmb IAmb 15 38 39.1
comp=Z,13nm,0.8s
GRNR Gornyy 35.97 278⇑ *i* P P 15 38 35.1 -0.1
GRNR pmax pmax
comp=Z,5.0nm,0.8s
GRNR MLR MLR
comp=N,190nm,16.0s
GRNR MLR MLR
comp=E,180nm,16.0s
GRNR MLR MLR
comp=Z,270nm,17.0s
RSSD Black Hills 35.98 101 P P 15 38 35.2 -0.3
RSSD Black Hills 35.98 101 P P 15 38 35.2 -0.3
RSSD pmax pmax
comp=Z,5.0nm,1.0s
YSS Yuzhno-Sakhali 36.45 268 *e*P P 15 38 42.9 +3.7
YSS *e*S **S** 15 44 26.5 +5.6
YSS pmax pmax
comp=Z,10.0nm,1.0s
YSS MLR MLR
comp=N,200nm,15.0s
YSS MLR MLR
comp=Z,600nm,15.0s
YSS MLR MLR
comp=E,600nm,16.0s
DBG Daneborg 36.87 18 *i* P P 15 38 43.3 +0.8
DBG IAmb IAmb 15 38 44.8
comp=Z,41nm,1.9s
PSUT Pine Spring 37.05 117 P P 15 38 43.9 -0.8
SFJD Kangerlussuaq 37.24 39 LR LR 15 55 33.8
comp=Z,261nm,21.9s,baz=336,slow=39
ZEA Zeya 37.29 288 *e*P P 15 38 46.5 +0.2
ZEA pmax pmax
comp=Z,10.0nm,0.9s
ZEA MLR MLR
comp=E,200nm,11.0s
ZEA MLR MLR
comp=N,200nm,12.0s
ZEA MLR MLR
comp=Z,400nm,12.0s
NRIK Noril'sk 37.43 328 P P 15 38 46.2 -1.1
comp=Z,3.6nm,0.6s,baz=40,slow=8.6,SNR=8.2
NRIK LR LR 15 55 47.8
comp=Z,290nm,19.2s,baz=66,slow=39
comp=Z,3.6nm,0.6s
NRIK Noril'sk 37.43 328 P P 15 38 46.7 -0.7
NRIK Noril'sk 37.43 328 P P 15 38 46.7 -0.7
NRIK pmax pmax
comp=Z,5.0nm,0.7s
TPNV Topopah Spring 37.62 121 P P 15 38 50.3 +0.8
TPNV Topopah Spring 37.62 121 P P 15 38 50.3 +0.8
TPNV pmax pmax
comp=Z,6.0nm,1.0s
EYMN Ely 37.90 86 P P 15 38 51.5 -0.1
EYMN IAmb IAmb 15 38 58.8
comp=Z,26nm,0.9s
ASAJ Asahikawa 38.84 266 LR LR 15 55 55.5
comp=Z,326nm,18.3s,baz=44,slow=38
GSC Goldstone, Bar 38.92 123 P P 15 39 00.8 +0.5
GSC Goldstone, Bar 38.92 123 P P 15 39 00.8 +0.5
GSC pmax pmax
comp=Z,9.0nm,1.1s
KLR Kul'dur 39.05 280 P P 15 39 00.5 -0.6
comp=Z,3.1nm,0.7s,baz=53,slow=8.8,SNR=14
KLR LR LR 15 56 05.9
comp=Z,259nm,18.8s,baz=46,slow=38
comp=Z,3.1nm,0.7s
KLR Kul'dur 39.05 280 *ce*P P 15 39 00.6 -0.6
KLR pmax pmax
comp=Z,5.0nm,1.0s
HEH HeiHe 39.95 285 *e*P P 15 39 08.3 -0.3
HEH pmax pmax
comp=Z,4.0nm,0.8s
HEH L L
comp=Z,1μm,16.1s
HEH L L
comp=Z,2μm,15.4s
HEH L L
comp=Z,1μm,11.0s
ANGG Ammassalik, Gr 41.44 33 *i* P P 15 39 21.5 +0.7
ANGG IAmb IAmb 15 39 22.4
comp=Z,12nm,0.8s
SCHQ Schefferville 41.85 60 P P 15 39 26.0 +1.7
comp=Z,9.8nm,0.9s,baz=303,slow=6.2,SNR=7.0
SCHQ LR LR 15 57 49.7
comp=Z,206nm,20.4s,baz=352,slow=38
comp=Z,9.8nm,0.9s
R32A Long Quarter, 42.93 101 P P 15 39 33.1 -0.2
R32A IAmb IAmb 15 39 35.2
comp=Z,14nm,0.9s
ANMO Albuquerque 42.96 111 LR LR 15 57 37.1
comp=Z,163nm,18.1s,baz=352,slow=36
ANMO Albuquerque 42.96 111 *i* P P 15 39 34.7 +0.9
ANMO pmax pmax
comp=Z,2.0nm,1.3s
KSU1 Kansas State U 43.18 98 P P 15 39 35.3 0.0
KSU1 IAmb IAmb 15 39 36.6
comp=Z,13nm,0.7s
BNX BinXian 43.60 281 ⇑P P 15 39 38.1 -0.5
BNX pmax pmax
comp=Z,5.0nm,0.8s
P40A Paris 44.65 93 P P 15 39 47.2 +0.1
P40A IAmb IAmb 15 39 52.1
comp=Z,11nm,0.8s
BORG Borgarnes 45.40 25 LR LR 15 58 52.0
comp=Z,201nm,21.5s,baz=350,slow=36
SADO Sadowa 45.42 78 LR LR 15 58 40.0
comp=Z,240nm,20.0s,baz=356,slow=36
TRQ Mont Tremblant 46.01 73 P P 15 39 57.4 -0.4
TRQ IAmb IAmb 15 40 04.1
comp=Z,20nm,1.1s
WMOK Wichita Mounta 46.11 103 P P 15 39 58.8 +0.1
WMOK Wichita Mounta 46.11 103 P P 15 39 58.8 +0.1
WMOK pmax pmax
comp=Z,4.0nm,0.9s
CCM Cathedral Cave 46.23 94 P P 15 39 59.3 -0.3
CCM IAmb IAmb 15 40 00.7
comp=Z,7.9nm,0.9s
CCM Cathedral Cave 46.23 94 P P 15 39 59.3 -0.3
CCM pmax pmax
comp=Z,8.0nm,1.0s
DELO Deloro Mine 46.23 77 P P 15 39 59.9 +0.3
MGMO Mountain Grove 46.60 95 P P 15 40 01.7 -0.8
MGMO IAmb IAmb 15 41 34.5
comp=Z,11nm,0.9s
N49A Columbus Grove 46.64 85 P P 15 40 02.7 -0.1
IRK Irkutsk 46.81 303 *e*P P 15 40 03.8 -0.2
IRK pmax pmax
comp=Z,33nm,3.0s
O48B Farmland 46.81 87 P P 15 40 04.1 -0.1
MJAR Matsushiro Arr 47.03 264 P P 15 40 06.5 +0.6
comp=Z,2.1nm,0.8s,baz=8.7,slow=8.0,SNR=6.2
MJAR LR LR 16 00 58.8
comp=Z,186nm,18.6s,baz=24,slow=38
comp=Z,2.1nm,0.8s
TLY Talaya 47.49 304 LR LR 16 03 11.5
comp=Z,279nm,19.0s,baz=21,slow=40
J57A Williamstown 47.80 76 P P 15 40 11.1 -0.7
L56A Greenwood 48.26 79 P P 15 40 14.9 -0.6
MIAR Mount Ida 48.34 98 P P 15 40 16.2 +0.2
MIAR Mount Ida 48.34 98 P P 15 40 16.2 +0.2
MIAR pmax pmax
comp=Z,20nm,1.2s
MOY Mondy 48.39 305 *e*P P 15 40 19.1 +2.7
MOY pmax pmax
comp=Z,20nm,2.4s
TXAR Lajitas Array 49.03 112 P P 15 40 23.1 +1.5
comp=Z,2.9nm,0.8s,baz=335,slow=5.7,SNR=19
TXAR LR LR 16 01 33.9
comp=Z,260nm,18.3s,baz=332,slow=37
comp=Z,2.9nm,0.8s
TXAR Lajitas Array 49.03 112 P P 15 40 21.1 -0.5
SSPA Standing Stone 49.40 80 P P 15 40 22.6 -1.6
SSPA IAmb IAmb 15 40 28.5
comp=Z,23nm,1.2s
ULN Ulaanbaatar 49.54 298 P P 15 40 24.2 -1.1
ULN Ulaanbaatar 49.54 298 *ce*P P 15 40 26.2 +0.9
ULN pmax pmax
comp=Z,4.0nm,0.7s
SONM Songino Array 49.80 299 P P 15 40 27.7 +0.4
comp=Z,3.1nm,0.7s,baz=34,slow=6.2,SNR=17
SONM LR LR 16 03 20.4
comp=Z,353nm,18.1s,baz=26,slow=38
comp=Z,3.1nm,0.7s
SONM Songino Array 49.80 299 P P 15 40 27.0 -0.3
SONM IAmb IAmb 15 40 31.4
comp=Z,25nm,1.9s
SONM Songino Array 49.80 299 P P 15 40 27.0 -0.3
SONM pmax pmax
comp=Z,25nm,1.9s
GGN Saint George 49.87 68 P P 15 40 26.7 -0.9
KSRS Korea Array 50.39 274 P P 15 40 32.2 +0.5
comp=Z,1.7nm,0.7s,baz=24,slow=6.4,SNR=6.8
KSRS LR LR 16 02 22.6
comp=Z,148nm,18.1s,baz=75,slow=37
comp=Z,1.7nm,0.7s
KNGR Kungurtug, Tuv 50.43 307 *i* P P 15 40 33.2 +1.2
KNGR pmax pmax
comp=Z,6.0nm,1.4s
ZAA0 Zalesovo Array 51.26 318 P P 15 40 37.0 -1.0
ZAA0 IAmb IAmb 15 40 40.6
comp=Z,7.2nm,0.9s
ZALV Zalesovo Beam 51.26 318 P P 15 40 37.6 -0.4
comp=Z,4.9nm,0.8s,baz=35,slow=7.6,SNR=15
ZALV LR LR 16 04 18.2
comp=Z,166nm,20.1s,baz=2.5,slow=38
comp=Z,4.9nm,0.8s
ZALV Zalesovo Beam 51.26 318 P P 15 40 36.8 -1.3
TKL Tuckaleechee C 51.32 88 LR LR 16 04 14.9
comp=Z,72nm,18.9s,baz=338,slow=38
LPIG La Paz 51.40 121 LR LR 16 03 45.5
comp=Z,113nm,18.6s,baz=333,slow=38
HKT Hockley 51.49 103 *i* P P 15 40 41.1 +1.1
HKT pmax pmax
comp=Z,6.0nm,0.9s
FINES FINESS Array B 52.51 358 P P 15 40 47.4 +0.2
comp=Z,2.3nm,0.9s,baz=28,slow=8.6,SNR=5.5
comp=Z,2.3nm,0.9s
FINES FINESS Array B 52.51 358 P P 15 40 46.9 -0.3
KLMR Klimovskoe 52.53 350 *e*P P 15 40 49.2 +1.8
KLMR pmax pmax
comp=Z,6.0nm,1.0s
NC405 NORSAR Array S 52.60 7 P P 15 40 46.5 -1.4
NOA NORSAR Array B 52.65 7 P P 15 40 49.3 +0.9
comp=Z,1.0nm,0.7s,baz=352,slow=7.2,SNR=2.5
comp=Z,1.0nm,0.7s
JNU Nakatsue 52.96 269 LR LR 16 02 21.8
comp=Z,146nm,21.4s,baz=29,slow=35
HFS Hagfors 53.67 6 P P 15 40 57.8 +2.0
comp=Z,14nm,1.2s,baz=356,slow=4.3,SNR=4.0
comp=Z,14nm,1.2s
JCJ Chichijima 53.78 254 LR LR 16 03 13.0
comp=Z,26nm,21.3s,baz=14,slow=35
KIRV Kirov 53.83 343 LR LR 16 06 39.8
comp=Z,150nm,18.2s,baz=1.4,slow=39
HHC Hu-ho-hao-te 53.90 290 *e*P P 15 40 57.1 -0.8
HHC pmax pmax
comp=Z,5.0nm,0.7s
HHC pmax pmax
comp=Z,81nm,4.9s
HHC L L
comp=Z,460nm,19.9s
HHC L L
comp=Z,740nm,17.0s
HHC L L
comp=Z,130nm,18.5s
DGZ Jazzator, Alta 54.32 314 *i* P P 15 41 01.7 +0.8
DGZ pmax pmax
comp=Z,4.0nm,1.0s
ARTI Arti 54.72 337 LR LR 16 06 45.6
comp=Z,174nm,18.0s,baz=14,slow=39
ARTI Arti 54.72 337 P P 15 41 02.5 -1.1
ARTI IAmb IAmb 15 41 12.4
comp=Z,13nm,0.9s
ARTI Arti 54.72 337 *c i* P P 15 41 04.2 +0.7
ARTI 15 43 03.4
ARTI S S 15 48 45.1 +1.4
ARTI SS SS 15 52 30.3 +4.7
ARTI pmax pmax
comp=Z,34nm,2.6s
BORK Borovoye 55.63 327 P P 15 41 09.6 -0.6
BORK IAmb IAmb 15 41 14.7
comp=Z,4.3nm,0.7s
BORK Borovoye 55.63 327 *ce*P P 15 41 10.4 +0.3
BORK pmax pmax
comp=Z,5.0nm,0.9s
BVAR Borovoye Array 55.64 327 P P 15 41 10.3 +0.1
comp=Z,5.1nm,0.7s,baz=36,slow=7.7,SNR=14
BVAR LR LR 16 08 04.1
comp=Z,214nm,20.8s,baz=25,slow=40
comp=Z,5.1nm,0.7s
HNS HongShan 55.69 285 ⇑P P 15 41 13.8 +3.1
HNS pmax pmax
comp=Z,6.0nm,1.1s
HNS L L
comp=Z,430nm,13.7s
HNS L L
comp=Z,320nm,12.9s
HNS L L
comp=Z,470nm,12.6s
KURK Kurchatov 55.82 321 P P 15 41 10.7 -0.8
KURK IAmb IAmb 15 41 14.3
comp=Z,8.4nm,0.9s
KURK Kurchatov 55.82 321 *ce*P P 15 41 11.0 -0.5
KURK pmax pmax
comp=Z,23nm,1.7s
KURBB Kurchatov Arra 55.93 321 P P 15 41 12.1 -0.2
comp=Z,3.6nm,0.8s,baz=26,slow=6.9,SNR=16
comp=Z,3.6nm,0.8s

EKA Eskdalemuir Ar 57.08 17 P **P** **15 41 20.7 +0.2**
comp=Z,7.8nm,0.7s,baz=336,slow=5.0,SNR=20
EKA LR LR 16 04 35.3
comp=Z,162nm,21.3s,baz=1.0,slow=35
comp=Z,7.8nm,0.7s
MK31 Makanchi Array 58.42 316 *ce*P **P** **15 41 29.9 -0.1**
MKAR Makanchi Array 58.42 316 P **P** **15 41 29.4 -0.7**
comp=Z,3.1nm,0.8s,baz=39,slow=5.5,SNR=20
MKAR LR LR 16 08 30.4
comp=Z,178nm,18.0s,baz=9.0,slow=38
comp=Z,3.1nm,0.8s
MKAR Makanchi Array 58.42 316 P **P** **15 41 28.7 -1.3**
OBN Obninsk 58.44 351⇑ *e*P **P** **15 41 29.8 -0.1**
OBN *e* 15 43 40.5
OBN *e*PPP PPP 15 44 59.7
OBN *e*S S 15 49 42.6 +10
OBN pmax pmax
comp=Z,4.0nm,0.7s
OBN MLR MLR
comp=Z,164nm,12.0s
MAKZ Makanchi 58.49 316 P **P** **15 41 29.4 -1.2**
MAKZ IAmb IAmb 15 41 33.0
comp=Z,10nm,1.3s
MAKZ Makanchi 58.49 316 P **P** **15 41 29.4 -1.2**
MAKZ pmax pmax
comp=Z,11nm,1.3s
NJ2 Nanjing 58.73 279 *e*P **P** **15 41 31.5 -0.8**
LYN LuoYang 59.05 286 *e*P **P** **15 41 36.9 +2.4**
LYN pmax pmax
comp=Z,10.0nm,0.8s
LYN L L
comp=Z,650nm,13.5s
LYN L L
comp=Z,340nm,14.4s
LYN L L
comp=Z,440nm,16.3s
GTA2 Gaotai 59.43 299 *e*P **P** **15 41 40.3 +3.1**
GTA2 pP sP 15 41 44.3 +4.0
GTA2 pmax pmax
comp=Z,9.0nm,0.8s
GTA2 L L
comp=Z,500nm,14.6s
GTA2 L L
comp=Z,630nm,14.3s
GTA2 L L
comp=Z,590nm,13.7s
WMQ Urumqi 59.54 311 *e*P **P** **15 41 40.8 +2.9**
WMQ PP **PP** **15 43 53.9 +5.2**
WMQ pmax pmax
comp=Z,8.0nm,0.9s
WMQ L L
comp=Z,240nm,15.7s
BELG Belogornoye 60.11 343 *i*P **P** **15 41 43.3 +1.7**
BELG pmax pmax
comp=Z,2.0nm,0.9s
AB31 Akbulak array 61.31 333 P **P** **15 41 49.3 -0.5**
AB31 IAmb IAmb 15 41 52.9
comp=Z,11nm,1.2s
ABKAR Akbulak array 61.31 333 P **P** **15 41 49.2 -0.6**
CLL Collm 62.45 7 *e*P **P** **15 41 58.0 +0.6**
CLL *i* 15 42 01.3
CLL Collm 62.45 7 *e*P **P** **15 41 58.0 +0.6**
CLL *i* x x 15 42 01.3
comp=Z,13nm,1.3s
MEM Membach 62.69 12 *d*P **P** **15 41 59.6 +0.6**
BTNL Ternell 62.72 12 *d*P **P** **15 42 00.3 +1.1**
DOU Dourbes 63.07 13 *d*P **P** **15 42 05.1 +3.5**
AKASG Malin Array Be 63.20 355 P **P** **15 42 03.0 +0.6**
comp=Z,2.7nm,0.7s,baz=5.4,slow=6.5,SNR=5.4
AKASG LR LR 16 11 13.5
comp=Z,104nm,18.4s,baz=355,slow=38
comp=Z,2.7nm,0.7s
AKASG Malin Array Be 63.20 355 P **P** **15 42 03.0 +0.6**
AKBB Malin Array Si 63.20 355 *ce*P **P** **15 42 03.4 +1.0**
AKBB pmax pmax
comp=Z,7.0nm,1.0s
DPC Dobruska-Polom 63.55 5 P **P** **15 42 03.8 -1.0**
DPC pmax pmax
comp=Z,8.0nm,1.1s
GOMU GeErMu 64.10 301 P **P** **15 42 08.1 -0.9**
GOMU pmax pmax
comp=Z,6.0nm,0.9s
GOMU L L
comp=Z,310nm,13.4s
GOMU L L
comp=Z,440nm,16.9s
KDJ Kajisay 64.13 318 P **P** **15 42 07.9 -1.0**
KDJ IAmb IAmb 15 42 13.4
comp=Z,3.6nm,0.8s
KDJ Kajisay 64.13 318 P **P** **15 42 07.9 -1.0**
KDJ pmax pmax
comp=Z,4.0nm,0.8s
MORC Moravsky Berou 64.16 4 *e*P **P** **15 42 09.6 +0.8**
AAK Ala-Archa 64.37 320 LR LR 16 13 57.4
comp=Z,263nm,18.9s,baz=24,slow=40
AAK Ala-Archa 64.37 320 P **P** **15 42 09.9 -0.6**
AAK IAmb IAmb 15 42 18.1
comp=Z,6.1nm,0.9s
AAK Ala-Archa 64.37 320 *ce*P **P** **15 42 10.8 +0.3**
AAK pmax pmax
comp=Z,12nm,1.7s
STHS Stebnicka Huta 64.58 1 *e*P **P** **15 42 10.0 -1.6**
STHS Stebnicka Huta 64.58 1 *e*P **P** **15 42 10.0 -1.6**
VRAC Vranov 64.60 5 *e*P **P** **15 42 12.4 +0.7**
KHC Kasperske Hory 64.66 7 *i*P **P** **15 42 13.7 +1.6**
KHC pmax pmax
comp=Z,5.0nm,1.1s
LANS Liptovska Anna 64.83 2 *e*P **P** **15 42 12.4 -0.8**
LANS Liptovska Anna 64.83 2 *e*P **P** **15 42 12.4 -0.8**
KRUC Moravsky 64.84 5 *e*P **P** **15 42 14.1 +0.9**
KKAR Karatay Array 64.93 323 P **P** **15 42 13.4 -0.5**
KKAR Karatay Array 64.93 323 P **P** **15 42 13.5 -0.5**
GERES GERESS Array B 64.95 7 P **P** **15 42 14.6 +0.6**
comp=Z,0.6nm,0.6s,baz=28,slow=6.0,SNR=8.5
comp=Z,0.6nm,0.6s
GUMO Guam 65.05 245 LR LR 16 08 35.5
comp=Z,69nm,20.9s,baz=48,slow=34
JAVC Velka Javorina 65.08 4 *e*P **P** **15 42 14.3 -0.6**
MODS Modra-Piesok 65.55 4 *e*P **P** **15 42 20.3 +2.4**
MODS Modra-Piesok 65.55 4 *e*P **P** **15 42 20.3 +2.4**
CONA Conrad Observa 65.95 5 *ep*P **P** **15 42 21.9 +1.3**
comp=Z,8.9nm,1.1s
MOTA Moosalm 66.30 9 pP **P** **15 42 23.9 +0.9**
comp=Z,6.2nm,0.9s
LESA Schwarzleotal 66.31 8 *ep*P **P** **15 42 24.6 +1.7**
comp=Z,11nm,1.0s
WTTA Wattenberg 66.42 8 *ep*P **P** **15 42 23.9 +0.2**
comp=Z,15nm,1.4s
SQTA Sankt Quirin 66.43 9 *ep*P **P** **15 42 25.2 +1.5**
comp=Z,17nm,1.6s
FETA Feichten 66.60 9 *ep*P **P** **15 42 26.3 +1.4**
comp=Z,12nm,1.4s
KBA Koelnbreinsper 66.69 7 *ep*P **P** **15 42 27.5 +2.1**
comp=Z,19nm,1.6s
FUORN Ofenpass-Fuorn 66.97 9 P **P** **15 42 26.3 -1.1**
FUORN IAmb IAmb 15 42 32.8
comp=Z,7.2nm,1.1s
ABTA Abfaltersbach 66.98 8 *ep*P **P** **15 42 29.9 +2.7**
comp=Z,4.2nm,0.7s
MYKA Terra Mystica 67.16 7 *ep*P **P** **15 42 29.3 +1.1**
comp=Z,12nm,1.6s
OBKA Obir 67.32 6 *ep*P **P** **15 42 30.9 +1.6**
comp=Z,21nm,0.8s
KSH2 Kashi 67.36 318 P **P** **15 42 29.6 -0.2**
KSH2 pP sP 15 42 34.1 +1.3
KSH2 pmax pmax
comp=Z,4.0nm,1.4s
MLR Muntele Rosu 68.49 358 LR LR 16 13 24.1
comp=Z,123nm,19.1s,baz=354,slow=37
KIV Kislovodsk 68.99 345 *e*P **P** **15 42 40.9 +1.0**
KIV pmax pmax
comp=Z,9.0nm,1.1s
KBZ Khabaz 69.20 345 P **P** **15 42 42.3 +1.3**
comp=Z,2.3nm,0.8s,baz=309,slow=4.9,SNR=5.4
KBZ LR LR 16 14 25.4
comp=Z,98nm,18.1s,baz=2.0,slow=37
comp=Z,2.3nm,0.8s
KBZ Khabaz 69.20 345 *i*P **P** **15 42 44.1 +3.1**
KBZ pmax pmax
comp=Z,4.0nm,1.0s
SHA1 Shidzhatmaz 69.21 345 *i*P **P** **15 42 43.0 +1.6**
CHGR Chuyangaron 69.47 323 P **P** **15 42 42.0 -0.8**
CHGR Chuyangaron 69.47 323 *i*P **P** **15 42 43.0 +0.1**
CHGR pmax pmax
comp=Z,18nm,1.0s
NEUR Neytrino 69.68 345 *i*P **P** **15 42 45.6 +1.4**
NEUR pmax pmax
comp=Z,2.0nm,1.2s
PZH PanZhiHua 70.34 291 P **P** **15 42 49.8 +1.3**
MVO Moncorvo 70.39 24 *e*P P 15 42 53.7 +5.1
MVO *i* IAmb IAmb 15 43 13.6
comp=Z,20nm,1.5s
MTE Manteigas 71.06 24 *e*P **P** **15 42 51.5 -1.1**
MTE *i* IAmb IAmb 15 42 59.8
comp=Z,35nm,1.3s
LSA Lhasa 71.27 301 P **P** **15 42 54.3 -0.2**
LSA pmax pmax
comp=Z,6.0nm,1.2s
ESDC Sonseca Array 72.33 21 P **P** **15 43 00.9 +0.7**
comp=Z,2.5nm,0.8s,baz=349,slow=5.9,SNR=21
ESDC LR LR 16 16 53.2
comp=Z,72nm,18.8s,baz=337,slow=38
comp=Z,2.5nm,0.8s
NIL Nilore 73.15 318 P **P** **15 43 04.2 -0.9**
NIL IAmb IAmb 15 43 08.5
comp=Z,13nm,1.1s
NIL Nilore 73.15 318 P **P** **15 43 04.2 -0.9**
NIL pmax pmax
comp=Z,13nm,1.2s
PVAQ Vaqueiros 73.95 25 *e*P **P** **15 43 07.1 -2.7**
PVAQ *i* IAmb IAmb 15 43 13.7
comp=Z,52nm,2.2s
QIZ Qiongzhong 73.95 281 P **P** **15 43 07.6 -2.4**
QIZ S **S** **15 52 42.3 0.0**
QIZ SS **SS** **15 57 24.1 -1.9**
QIZ pmax pmax
comp=Z,240nm,6.1s
QIZ L L
comp=Z,270nm,17.2s
QIZ L L
comp=Z,500nm,16.7s
QIZ L L
comp=Z,260nm,20.6s
BR131 Keskin Array S 73.95 351 *i*P **P** **15 43 11.4 +1.5**
BRTR Keskin Array B 73.95 351 P **P** **15 43 10.7 +0.8**
comp=Z,1.2nm,0.8s,baz=31,slow=2.2,SNR=4.8
BRTR LR LR 16 21 27.0
comp=Z,52nm,18.0s,baz=354,slow=41
comp=Z,1.2nm,0.8s
BRTR Keskin Array B 73.95 351 P **P** **15 43 08.4 -1.5**
SJG San Juan 73.98 82 LR LR 16 18 39.6
comp=Z,80nm,19.0s,baz=9.5,slow=38
TAOE Nuku Hiva Isla 76.01 163 *e*LR LR 16 06 52.7
comp=Z,89nm,24.7s
FUL Funchal 76.75 34 *e*P **P** **15 43 25.1 -0.7**
CM31 Chiang Mai Arr 78.71 290 P **P** **15 43 35.7 -1.3**
CMAR Chiang Mai Arr 78.71 290 P **P** **15 43 37.2 +0.2**
comp=Z,1.4nm,0.6s,baz=11,slow=5.7,SNR=9.2
comp=Z,1.4nm,0.6s
MDT Midelt 78.95 23 LR LR 16 23 03.2
comp=Z,46nm,18.1s,baz=46,slow=39
KRVT Keravat (AS076 79.27 232 LR LR 16 10 48.5
comp=Z,15nm,21.8s,baz=332,slow=30
MMAI Mount Meron Ar 80.50 349 LR LR 16 24 27.1
comp=Z,28nm,20.2s,baz=21,slow=40
JAY Jayapura 81.45 243 LR LR 16 14 45.7
comp=Z,73nm,20.2s,baz=330,slow=32
SIJI Sorong 83.47 253 LR LR 16 15 36.8
comp=Z,57nm,21.6s,baz=68,slow=32
PPT2 Papeete2 83.86 173 *e*LR LR 16 10 29.4
comp=Z,89nm,22.8s
PMG Port Moresby 85.64 235 *ce*P **P** **15 44 14.3 +1.1**
PMG pmax pmax
comp=Z,17nm,1.3s
MSVF Nonsavu 85.85 204 LR LR 16 17 45.6
comp=Z,193nm,19.7s,baz=19,slow=32
TBI Tubuai 89.58 173 *e*LR LR 16 13 04.6
comp=Z,407nm,29.5s
MDP Montagnes des 91.14 75 LR LR 16 25 28.5
comp=Z,50nm,20.7s,baz=316,slow=36
ATAH Atahualpa 91.99 103 LR LR 16 31 24.7
comp=Z,47nm,18.2s,baz=345,slow=39
DZM Mont Dzumac 92.31 213 LR LR 16 20 55.3
comp=Z,109nm,19.7s,baz=1.0,slow=32
PALK Palekele 95.63 302 LR LR 16 32 15.5
comp=Z,86nm,20.9s,baz=9.5,slow=38
CTA Charters Tower 95.94 232 LR LR 16 25 41.9
comp=Z,61nm,19.5s,baz=25,slow=34
LEM Lembang 98.31 272 LR LR 16 33 07.6
comp=Z,33nm,19.2s,baz=280,slow=38
WRA Warramunga Arr 99.85 243 P **Pdif** **15 45 19.0 0.0**
comp=Z,0.5nm,0.7s,baz=28,slow=5.6,SNR=7.3
comp=Z,0.5nm,0.7s
ASAR Alice Springs 103.42 242 Pdiff **Pdif** **15 45 35.6 +0.7**
comp=Z,0.1nm,0.7s,baz=27,slow=6.4,SNR=1.1
LPAZ La Paz 104.38 98 PKiKP **PKiKP** **15 49 59.5 +3.1**
comp=Z,1.1nm,0.8s,baz=292,slow=3.5,SNR=3.5
QSPA South Pole Qui 156.15 180 PKPbc PKPdf 15 51 37.5 +10
comp=Z,1.8nm,0.8s,baz=251,slow=2.7,SNR=4.2
QSPA PKPab **PKPab** **15 51 56.4 +0.9**
comp=Z,1.9nm,0.9s,baz=107,slow=1.5,SNR=6.8
BELA Belgrano 2 160.06 148 PKPdf **PKPdf** **15 51 32.6 +0.6**

*NEIC **18** 15:37:42.7±1.4, 66°.30N±0°.02×157°.19W±0°.04, h10km±1km, ML3.6/120, ML3.5(AEIC), Error ellipse: s-maj=3.1km s-min=2.8km az=63.0*
*AEIC **18** 15:37:42.7±1.0, 66°.31N±0°.02×157°.20W±0°.04, h8km±4km, Error ellipse: s-maj=2.5km s-min=2.3km az=111.0*
*IDC **18** 15:37:44.9±1.5, 66°.40N×157°.38W, h0km, mb3.4/6, mbtmp3.6/8, ML3.7/2, Error ellipse: s-maj=52.7km s-min=16.8km az=17.0*
ISC 18 15:37:42.5±1.1, 66°.30N±0°.02×157°.20W±0°.02, h1km±9km, n121, o0°95/128, mb3.5/6, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
G19K	**Purcell Mounta**	**0.17**	**165**	Pg	**Pg**	**15 37 46.4**	**+0.7**
G19K				Sg	**Sg**	**15 37 48.5**	**+0.7**
F19K	**Shaleruckik Mo**	**0.58**	**337**		**Pg**	**15 37 53.8**	**+0.2**
F19K					**Sg**	**15 38 01.6**	**+0.5**
G18K	**Tagagawik**	**0.72**	**236**	Pg	**Pg**	**15 37 56.5**	**+0.2**
G18K				Sg	**Sg**	**15 38 05.6**	**-0.1**
H19K	**Roundabout Mou**	**0.84**	**158**	Pg	**Pg**	**15 37 58.4**	**-0.1**
H19K				Sg	**Sg**	**15 38 09.6**	**+0.3**
H19K				IAML		15 38 14.3	
	comp=N,3µm,0.4s						
F20K	**Avaraart Lake**	**0.95**	**37**	Pg	**Pg**	**15 38 00.7**	**0.0**
F20K				Sg	**Sg**	**15 38 13.3**	**+0.3**
F18K	**Selawik**	**1.03**	**288**		**Pg**	**15 38 02.4**	**+0.2**
F18K					**Pb**	**15 38 02.5**	**-0.5**
F18K					**Sb**	**15 38 16.4**	**-0.6**
F18K					**Sn**	**15 38 17.1**	**-1.9**
E19K	**Redstone River**	**1.16**	**359**		**Pb**	**15 38 04.8**	**-0.5**
E19K				Sg	**Sb**	**15 38 19.4**	**-1.5**
E19K				IAML		15 38 20.5	
	comp=E,1µm,0.4s						
E19K				IAML		15 38 23.2	
	comp=N,1µm,0.5s						
H20K	**Anotleneega Mo**	**1.25**	**130**		**Pn**	**15 38 06.2**	**-0.9**
H20K					**Sg**	**15 38 22.7**	**+0.1**
H20K					**Sn**	**15 38 23.8**	**-0.7**
H18K	**Honhosa River**	**1.25**	**203**	Pn	**Pn**	**15 38 05.5**	**-1.5**
H18K				Sg	**Sb**	**15 38 21.2**	**-2.2**
IMAR	**Indian Mountai**	**1.44**	**101**	Pn	**Pn**	**15 38 08.6**	**-1.0**
G21K	**Allakaket**	**1.50**	**80**	Pn	**Pn**	**15 38 09.7**	**-0.8**
G21K				Sn	**Sn**	**15 38 29.2**	**-1.4**
GCSA	**Galena City Sc**	**1.57**	**175**		**Pn**	**15 38 10.7**	**-0.7**
GCSA					**Sb**	**15 38 31.4**	**-1.0**
GCSA					**Sg**	**15 38 32.3**	**-0.5**
G17K	**Kiwalik Mounta**	**1.63**	**242**		**Pn**	**15 38 11.1**	**-1.2**
G17K					**Pb**	**15 38 11.2**	**-2.1**
G17K					**Sb**	**15 38 34.1**	**-0.2**
F17K	**Baldwin Pennin**	**1.64**	**277**	Pn	**Pb**	**15 38 12.8**	**-0.7**
F17K					**Sn**	**15 38 32.1**	**-1.9**
F17K				IAML		15 38 40.2	
	comp=N,703nm,0.8s						
F21K	**Alatna River**	**1.74**	**56**	Pn	**Pb**	**15 38 14.0**	**-1.1**
F21K				Sn	**Sn**	**15 38 35.7**	**-0.8**
E18K	**Tukpahlearik C**	**1.75**	**311**	Pn	**Pb**	**15 38 14.4**	**-1.0**
H17K	**Granite Mounta**	**1.77**	**221**	Pn	**Pn**	**15 38 13.3**	**-1.0**
H17K				IAML		15 38 40.0	
	comp=E,661nm,0.8s						
H17K				IAML		15 38 45.2	
	comp=N,593nm,0.6s						
I20K	**Naaghedeneel**	**1.89**	**142**	Pn	**Pn**	**15 38 15.9**	**+0.1**
H21K	**Melozitna Rive**	**1.91**	**108**	Pn	**Pn**	**15 38 15.5**	**-0.6**
H21K				IAML		15 38 45.6	
	comp=N,477nm,0.5s						
E20K	**Nigu River**	**2.00**	**11**		**Pn**	**15 38 16.4**	**-1.0**
E20K					**Pb**	**15 38 17.6**	**-2.1**
D19K	**Kuna River**	**2.23**	**351**	Pn	**Pb**	**15 38 21.9**	**-1.7**
D19K				IAML		15 38 55.5	
	comp=E,420nm,0.7s						
D19K				IAML		15 38 55.8	
	comp=N,292nm,0.6s						
G16K	**Koyuk River**	**2.31**	**249**	Pn	**Pn**	**15 38 19.9**	**-1.6**
G16K				IAML		15 38 57.5	
	comp=E,388nm,0.6s						
G16K				IAML		15 38 57.8	
	comp=N,361nm,0.4s						
H22K	**Ishtalitna Cre**	**2.41**	**97**	Pn	**Pn**	**15 38 22.6**	**-0.3**
H22K				IAML		15 39 01.0	
	comp=E,347nm,0.8s						
J19K	**Poorman**	**2.41**	**163**	Pn	**Pn**	**15 38 22.6**	**-0.4**
J19K				IAML		15 39 00.5	
	comp=E,291nm,0.5s						
J19K				IAML		15 39 07.3	
	comp=N,319nm,0.7s						
I21K	**Tanana**	**2.43**	**115**	Pn	**Pn**	**15 38 22.6**	**-0.7**
I21K				IAML		15 39 01.5	
	comp=E,426nm,0.6s						
I21K				IAML		15 39 01.6	
	comp=N,359nm,0.8s						
D20K	**Etivluk River**	**2.43**	**5**	Pn	**Pn**	**15 38 23.5**	**+0.2**
D20K				IAML		15 39 02.4	
	comp=E,236nm,0.6s						
D20K				IAML		15 39 05.9	
	comp=N,302nm,0.7s						
E21K	**Killik River**	**2.48**	**29**	Pn	**Pn**	**15 38 24.0**	**0.0**
E21K				IAML		15 39 03.6	
	comp=E,267nm,0.7s						
E21K				IAML		15 39 08.6	
	comp=N,263nm,0.8s						
H16K	**Elim**	**2.69**	**234**		**Pn**	**15 38 24.9**	**-1.8**
D17K	**Noatak River**	**2.70**	**304**		**Pn**	**15 38 27.0**	**0.0**
D17K					**Pn**	**15 38 27.2**	**+0.2**
E22K	**Anaktuvuk Pass**	**2.79**	**46**	Pn	**Pn**	**15 38 29.1**	**+0.9**
E22K				IAML		15 39 14.4	
	comp=E,191nm,0.9s						
E22K				IAML		15 39 15.9	
	comp=N,175nm,0.7s						
C18K	**Utukok River**	**2.81**	**329**	Pn	**Pn**	**15 38 28.8**	**+0.2**
RDOG	**Red Dog Mine**	**2.84**	**311**	Pn	**Pn**	**15 38 29.7**	**+0.8**
I17K	**Unalakleet**	**2.84**	**213**	Pn	**Pn**	**15 38 28.4**	**-0.4**
I17K				IAML		15 39 19.9	
	comp=E,320nm,0.6s						
J18K	**Innoko River**	**2.86**	**176**	Pn	**Pn**	**15 38 28.5**	**-0.6**
G23K	**Bananza Creek**	**2.90**	**79**	Pn	**Pn**	**15 38 29.2**	**-0.5**
COLD	**Coldfoot**	**2.92**	**68**		**Pn**	**15 38 29.2**	**-0.8**
COLD	**Coldfoot**	**2.92**	**68**	IAML		15 39 20.1	
	comp=E,235nm,0.4s						
MLY	**Manley**	**2.96**	**113**		**Pn**	**15 38 30.5**	**-0.1**
MLY	**Manley**	**2.96**	**113**	IAML		15 39 22.3	
	comp=N,187nm,1.1s						
C21K	**Kniefblade Rid**	**3.01**	**17**		**Pn**	**15 38 31.4**	**+0.2**
C21K					**Pn**	**15 38 31.8**	**+0.6**
J17K	**VABM Dome**	**3.03**	**196**	Pn	**Pn**	**15 38 31.1**	**-0.3**
J17K				IAML		15 39 26.0	
	comp=E,186nm,0.7s						
F15K	**North Star Dit**	**3.10**	**262**		**Pn**	**15 38 31.5**	**-1.0**
F15K	**North Star Dit**	**3.10**	**262**	IAML		15 39 23.4	
	comp=N,151nm,1.3s						
F15K				IAML		15 39 24.8	
	comp=E,165nm,0.8s						
G15K	**Niukluk**	**3.12**	**248**		**Pn**	**15 38 31.3**	**-1.5**
CHUM	**Lake Minchumin**	**3.19**	**137**		**Pn**	**15 38 33.5**	**-0.2**
J16K	**Anvik River**	**3.36**	**207**		**Pn**	**15 38 35.8**	**-0.3**
J16K	**Anvik River**	**3.36**	**207**	IAML		15 39 35.5	
	comp=E,181nm,0.8s						
J16K				IAML		15 39 37.8	
	comp=N,184nm,0.8s						
BPAW	**Bear Paw Mtn.**	**3.42**	**127**		**Pn**	**15 38 36.9**	**0.0**
BPAW	**Bear Paw Mtn.**	**3.42**	**127**	IAML		15 39 39.1	
	comp=N,103nm,1.3s						
BPAW				IAML		15 39 39.3	
	comp=E,104nm,0.7s						
E23K	**Chandalar**	**3.44**	**56**	Pn	**Pn**	**15 38 36.6**	**-0.6**
K17K	**Iditarod**	**3.63**	**188**	Pn	**Pn**	**15 38 38.8**	**-1.0**
K17K				IAML		15 39 53.4	
	comp=N,105nm,1.3s						
K17K				IAML		15 39 55.0	
	comp=E,94nm,1.0s						
B20K	**Meade River**	**3.72**	**0**		**Pn**	**15 38 41.3**	**+0.3**
B20K	**Meade River**	**3.72**	**0**	IAML		15 39 48.0	
	comp=N,86nm,1.3s						
B20K				IAML		15 39 49.4	
	comp=E,142nm,1.2s						
NEA2	**Nenana**	**3.80**	**113**		**Pn**	**15 38 41.9**	**-0.2**
NEA2	**Nenana**	**3.80**	**113**	IAML		15 39 46.7	
	comp=N,124nm,0.8s						
NEA2				IAML		15 39 46.8	
	comp=E,116nm,0.9s						
H24K	**Noodor Dome**	**3.83**	**93**	Pn	**Pn**	**15 38 42.7**	**+0.2**
KTH	**Kantishna Hill**	**3.84**	**133**		**Pn**	**15 38 42.8**	**+0.1**
KTH	**Kantishna Hill**	**3.84**	**133**	IAML		15 39 52.1	
	comp=N,76nm,1.1s						
MDM	**Murphy Dome**	**3.95**	**106**		**Pn**	**15 38 44.2**	**0.0**
MDM					**Pn**	**15 38 44.5**	**+0.3**
PPLA	**Purkeypile**	**4.04**	**145**		**Pn**	**15 38 46.0**	**+0.5**
PPLA	**Purkeypile**	**4.04**	**145**	IAML		15 39 58.6	
	comp=N,82nm,1.3s						
PPLA				IAML		15 40 08.2	
	comp=E,69nm,1.4s						
TRF	**Thorofare Moun**	**4.11**	**131**		**Pn**	**15 38 46.7**	**+0.3**
TRF	**Thorofare Moun**	**4.11**	**131**	IAML		15 39 57.6	
	comp=N,92nm,1.5s						
TRF				IAML		15 40 02.9	
	comp=E,89nm,0.9s						
COLA	**College**	**4.13**	**106**		**Pn**	**15 38 45.7**	**-0.9**
L17K	**Donlin**	**4.21**	**187**		**Pn**	**15 38 47.2**	**-0.5**
WRH	**Wood River Hil**	**4.23**	**112**		**Pn**	**15 38 47.2**	**-0.7**
WRH	**Wood River Hil**	**4.23**	**112**	IAML		15 39 58.3	
	comp=E,62nm,1.4s						
WRH				IAML		15 40 04.7	
	comp=N,54nm,1.0s						
CCB	**Clear Creek Bu**	**4.25**	**109**	Pn	**Pn**	**15 38 47.4**	**-0.9**
CCB				IAML		15 39 59.1	
	comp=E,76nm,0.9s						
CCB				IAML		15 39 59.8	
	comp=N,57nm,0.4s						
C23K	**Itkillik River**	**4.32**	**32**		**Pn**	**15 38 49.1**	**-0.1**
C23K	**Itkillik River**	**4.32**	**32**	IAML		15 40 07.5	
	comp=E,97nm,0.9s						
C23K				IAML		15 40 16.0	
	comp=N,95nm,0.5s						
MCK	**McKinley**	**4.35**	**123**	Pn	**Pn**	**15 38 48.9**	**-0.7**
TNA	**Tin City**	**4.46**	**265**	Pn	**Pn**	**15 38 50.2**	**-0.8**
TNA				IAML		15 40 15.4	
	comp=E,62nm,1.5s						
G25K	**Bearman Lake**	**4.46**	**79**		**Pn**	**15 38 50.7**	**-0.4**
J14K	**Nanvaranak Lak**	**4.50**	**221**	Pn	**Pn**	**15 38 50.7**	**-0.9**
J14K				IAML		15 40 16.5	
	comp=N,68nm,0.8s						
IL31		**4.55**	**105**	Pn	**Pn**	**15 38 51.6**	**-0.7**
ILAR	**Eielson Array**	**4.55**	**105**	Pn	**Pn**	**15 38 52.2**	**-0.2**
	comp=N,6.9nm,0.3s,baz=291,slow=14,SNR=11						
ILAR				Lg	Lg	15 40 06.2	
	comp=N,9.5nm,0.3s,baz=307,slow=30,SNR=8.5						
	comp=N,30nm,0.6s						
ILAR	**Eielson Array**	**4.55**	**105**	Pn	**Pn**	**15 38 51.5**	**-0.9**
M19K	**Big River Lodg**	**4.58**	**163**		**Pn**	**15 38 53.1**	**+0.2**
M19K	**Big River Lodg**	**4.58**	**163**	IAML		15 40 17.5	
	comp=E,57nm,1.4s						
L22K	**Petersville**	**4.70**	**141**	Pn	**Pn**	**15 38 55.2**	**+0.7**
L16K	**Owhat River**	**4.72**	**193**		**Pn**	**15 38 53.7**	**-1.0**
L16K	**Owhat River**	**4.72**	**193**	IAML		15 40 16.8	
	comp=N,42nm,1.5s						
M20K	**Styx River**	**4.78**	**156**		**Pn**	**15 38 56.4**	**+0.8**
A22K	**Sinclair Lake**	**4.79**	**9**		**Pn**	**15 38 55.2**	**-0.4**
PRP	**Porcupine Dome**	**4.85**	**94**	Pn	**Pn**	**15 38 56.0**	**-0.5**
PRP				IAML		15 40 22.1	
	comp=E,64nm,0.8s						
M18K	**Stony River**	**4.87**	**172**		**Pn**	**15 38 56.6**	**-0.1**
M18K					**Pn**	**15 38 57.3**	**+0.6**
E25K	**Arctic Village**	**4.87**	**63**		**Pn**	**15 38 56.3**	**-0.5**
E25K	**Arctic Village**	**4.87**	**63**	IAML		15 40 24.7	
	comp=N,67nm,1.0s						
M17K	**Holitna River**	**4.92**	**181**		**Pn**	**15 38 57.5**	**0.0**
M17K	**Holitna River**	**4.92**	**181**	IAML		15 40 23.1	
	comp=E,63nm,1.0s						
M17K				IAML		15 40 29.7	
	comp=N,57nm,0.9s						
SKT	**Skwentna**	**5.00**	**148**	Pn	**Pn**	**15 38 59.4**	**+0.9**
SKT				IAML		15 40 42.9	

	comp=E,38nm,1.1s						
L15K	**Ungalak Mounta**	**5.01**	**204**		**Pn**	**15 38 58.4**	**-0.3**
A21K	**Barrow**	**5.05**	**2**		**Pn**	**15 38 58.5**	**-0.7**
WAT1	**Susitna Watana**	**5.10**	**129**		**Pn**	**15 39 00.5**	**+0.5**
J25K	**Salcha River,**	**5.21**	**104**		**Pn**	**15 39 00.7**	**-0.8**
J25K	**Salcha River,**	**5.21**	**104**	IAML		15 40 36.3	
	comp=E,42nm,0.9s						
DHY	**Denali Highway**	**5.31**	**123**		**Pn**	**15 39 03.4**	**+0.5**
M16K	**Timber Creek**	**5.36**	**189**		**Pn**	**15 39 02.7**	**-0.8**
M16K	**Timber Creek**	**5.36**	**189**	IAML		15 40 37.5	
	comp=E,25nm,0.8s						
STLK	**Strandline Lak**	**5.37**	**151**	Pn	**Pn**	**15 39 04.2**	**+0.6**
N17K	**Nushagak Hills**	**5.80**	**180**	Pn	**Pn**	**15 39 09.9**	**+0.4**
C27K	**Jago River**	**6.07**	**51**	Pn	**Pn**	**15 39 12.9**	**-0.2**
RED	**Redoubt Volcan**	**6.23**	**159**	Pn	**Pn**	**15 39 15.6**	**+0.1**
N15K	**Kwethluk River**	**6.29**	**193**	Pn	**Pn**	**15 39 15.4**	**-0.9**
M24K	**Tolsona, Glenn**	**6.39**	**126**	Pn	**Pn**	**15 39 18.2**	**+0.6**
O16K	**Kokwok River B**	**6.75**	**184**	Pn	**Pn**	**15 39 21.7**	**-0.7**
GLI	**Glacier Island**	**7.06**	**136**	Pn	**Pn**	**15 39 27.6**	**+0.9**
E28M	**Babbage River**	**7.16**	**63**	Pn	**Pn**	**15 39 27.7**	**-0.4**
P16K	**Nushagak River**	**7.31**	**183**	Pn	**Pn**	**15 39 29.6**	**-0.6**
GLB	**Gilahina Butte**	**7.65**	**123**	Pn	**Pn**	**15 39 36.0**	**+1.0**
DAWY	**Dawson**	**7.81**	**98**	Pn	**Pn**	**15 39 36.8**	**-0.3**
G30M	**tAoh Zrail Nji**	**8.35**	**76**	Pn	**Pn**	**15 39 43.5**	**-0.9**
I30M	**Mount Dempster**	**8.62**	**88**	Pn	**Pn**	**15 39 47.8**	**-0.5**
M29M	**Somme Creek**	**8.97**	**107**	Pn	**Pn**	**15 39 52.5**	**-0.7**
INK	**Inuvik**	**9.34**	**67**	Pn	**Pn**	**15 39 59.9**	**+2.0**
	comp=E,0.2nm,0.3s,baz=263,slow=16,SNR=1.4						
INK				Sn	**Sn**	**15 41 40.1**	**-3.3**
	comp=E,0.2nm,0.3s,baz=288,slow=12,SNR=1.3						
	comp=E,9.8nm,1.0s						
SEY	**Seymchan**	**21.38**	**285**	P	**P**	**15 42 33.9**	**+3.0**
	comp=E,1.7nm,0.7s,baz=72,slow=9.6,SNR=2.9						
	comp=E,1.7nm,0.7s						
SONM	**Songino Array**	**49.80**	**299**	P	**P**	**15 46 37.9**	**+1.5**
	comp=E,0.3nm,0.5s,baz=37,slow=5.6,SNR=1.8						
	comp=E,0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**51.27**	**318**	P	**P**	**15 46 48.6**	**+1.4**
	comp=E,0.7nm,0.5s,baz=45,slow=8.4,SNR=2.4						
	comp=E,0.7nm,0.5s						
BVAR	**Borovoye Array**	**55.65**	**327**	P	**P**	**15 47 21.3**	**+1.9**
	comp=E,0.3nm,0.5s,baz=358,slow=4.8,SNR=2.4						
	comp=E,0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**55.94**	**321**	P	**P**	**15 47 23.0**	**+1.5**
	comp=E,0.3nm,0.7s,baz=19,slow=6.7,SNR=2.2						
	comp=E,0.3nm,0.7s						
MKAR	**Makanchi Array**	**58.43**	**316**	P	**P**	**15 47 40.3**	**+1.1**
	comp=E,0.2nm,0.6s,baz=20,slow=4.6,SNR=1.9						
	comp=E,0.2nm,0.6s						

*SOME **18** 15:47:00.9,39°.82N×76°.07E,h20km*
*NNC **18** 15:47:03.6±1.6,39°.99N×76°.08E,h0km,mb3.8,mpv3.4,*
Error ellipse: s-maj=11.3km s-min=7.6km az=172.0
*KRNET **18** 15:47:06.3±0.1,40°.08N×76°.03E,h15km,mb3.4*
ISC 18 15:47:06.5±1.7,40°.14N±0°.06×75°.99E±0°.03,h1km±13km,
n47,σ1§36/68,18C-4D,Kyrgyzstan-Xinjiang border
region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JNKS	**Jany-Kuch**	**0.96**	**343**	⇑*i*	P		**Pb**	**15 47 25.9**	**-0.1**
JNKS				⇑*i*	S		**Sn**	**15 47 40.2**	**-1.4**
NRN	**Naryn**	**1.30**	**0**	⇑*i*	P		**Pb**	**15 47 31.9**	**+0.1**
NRN				⇑*i*	S		**Sn**	**15 47 50.7**	**+0.6**
SALK	**Salom-Alik**	**1.81**	**295**	⇑*i*	P		**Pb**	**15 47 41.0**	**+0.5**
SALK				⇑*e*	S		**Sg**	**15 48 06.8**	**+2.1**
SFK	**Sufi-Kurgan**	**1.91**	**267**	⇑*i*	P		**Pb**	**15 47 42.5**	**+0.3**
SFK				⇑*i*	S		**Sg**	**15 48 08.9**	**+1.0**
ULHL	**Ulahol**	**2.12**	**5**	P			**Pg**	**15 47 46.8**	**-0.2**
	SNR=24								
ULHL	**Ulahol**	**2.12**	**5**	⇑*i*	P		**Pb**	**15 47 45.8**	**+0.1**
ULHL				⇑*e*	S		**Sg**	**15 48 14.7**	**+0.2**
ARLS	**Aral**	**2.14**	**324**	⇑*i*	P		**Pb**	**15 47 46.1**	**+0.1**
ARLS				⇑*i*	S		**Sg**	**15 48 15.2**	**+0.1**
KDJ	**Kajisay**	**2.19**	**24**	⇑*i*	P		**Pb**	**15 47 46.8**	**-0.1**
KDJ				⇑*i*	S		**Sg**	**15 48 16.2**	**-0.5**
BOOM	**Boomskoye usch**	**2.35**	**359**	⇑*e*	P		**Pb**	**15 47 49.3**	**-0.4**
BOOM				⇑*i*	S		**Sb**	**15 48 20.4**	**+1.1**
UCH	**Uchtor**	**2.37**	**332**	P			**Pg**	**15 47 52.1**	**+0.3**
	SNR=23								
KBK	**Karagaybulak**	**2.64**	**343**	P			**Pg**	**15 47 56.3**	**-0.7**
	SNR=75								
AAK	**Ala-Archa**	**2.74**	**336**	P			**Pg**	**15 47 58.1**	**-0.9**
	SNR=36								
AAK	**Ala-Archa**	**2.74**	**336**	⇓Pg			**Pg**	**15 47 58.1**	**-0.9**
	14nm,0.7s								
AAK				⇓Lg			Lg	15 48 36.8	
	13nm,0.5s								
TKM2	**Tokmak 2**	**2.80**	**354**	P			**Pb**	**15 47 58.0**	**+0.6**
	SNR=32								
KST	**Kastek**	**2.91**	**360**	Pg			**Pb**	**15 47 58.7**	**-0.4**
	8.2nm,0.7s								
KST				Lg			Lg	15 48 42.1	
	32nm,0.6s								
KST	**Kastek**	**2.91**	**360**	*e*P			**Pb**	**15 47 59.4**	**+0.3**
	8.2nm,0.7s								
KST				*e*S			**Sg**	**15 48 42.1**	**+2.3**
	32nm,0.6s								
IZV	**Izvestkoviy**	**2.94**	**9**	Pg			**Pb**	**15 47 57.2**	**-2.4**
	10nm,0.5s								
IZV				Lg			Lg	15 48 39.2	
	21nm,0.3s								
IZV	**Izvestkoviy**	**2.94**	**9**	*e*P			**Pb**	**15 47 57.7**	**-2.0**
	9.6nm,0.4s								
IZV				*e*S			**Sg**	**15 48 39.2**	**-1.6**
	21nm,0.3s								
TNSS	**Tian-Shan**	**2.99**	**14**	Pg			**Pb**	**15 48 00.2**	**-0.5**
	3.3nm,0.6s								
TNSS				Lg			Lg	15 48 43.4	
	11nm,0.6s								
TNSS	**Tian-Shan**	**2.99**	**14**	*e*P			**Pb**	**15 48 00.2**	**-0.5**
	3.3nm,0.6s								
TNSS				*e*S			**Sg**	**15 48 43.4**	**+1.0**
	11nm,0.6s								
CHMS	**Chumysh**	**3.01**	**342**	P			**Pb**	**15 48 00.7**	**-0.1**
	SNR=8.4								
MTBS	**Maitube**	**3.01**	**6**	Pg			**Pb**	**15 48 01.1**	**+0.2**
	5.1nm,0.3s								
MTBS				Lg			Lg	15 48 45.1	
	26nm,0.4s								
MTBS	**Maitube**	**3.01**	**6**	*e*P			**Pb**	**15 48 01.2**	**+0.3**
	5.1nm,0.3s								
MTBS				*e*S			**Sg**	**15 48 45.1**	**+2.0**
	26nm,0.4s								
EKS2	**Erkin-Say**	**3.02**	**327**	P			**Pb**	**15 48 00.9**	**-0.2**
	SNR=14								
DGS	**Degeres**	**3.11**	**357**	Pg			**Pb**	**15 48 01.7**	**-0.9**
	9.4nm,0.6s								
DGS				Lg			Lg	15 48 46.9	
	25nm,0.6s								
DGS	**Degeres**	**3.11**	**357**	*e*P			**Pb**	**15 48 02.2**	**-0.4**
	9.4nm,0.6s								
DGS				*e*S			**Sg**	**15 48 46.9**	**+0.5**
	25nm,0.6s								
MDOK	**Medeo**	**3.13**	**14**	Pg			**Pb**	**15 48 02.3**	**-0.6**
	10.0nm,0.6s								
MDOK				Lg			Lg	15 48 47.3	
	52nm,0.6s								
KOTS	**Kotyrbulak**	**3.21**	**15**	Pg			**Pb**	**15 48 04.1**	**-0.2**
	7.1nm,0.3s								
KOTS				Lg			Lg	15 48 50.7	
	40nm,0.7s								
KOTS	**Kotyrbulak**	**3.21**	**15**	*e*P			**Pb**	**15 48 04.4**	**+0.1**
	7.1nm,0.3s								
KOTS				*e*S			**Sg**	**15 48 50.7**	**+1.2**
	40nm,0.7s								
USP	**Ospenovka**	**3.32**	**341**	P			**Pb**	**15 48 04.7**	**-1.5**
	SNR=20								
MRKS	**Merke**	**3.33**	**322**	Pg			**Pb**	**15 48 06.6**	**+0.2**
	5.6nm,0.3s								
MRKS				Lg			Lg	15 48 54.7	
	54nm,0.5s								
MRKS	**Merke**	**3.33**	**322**	*e*P			**Pb**	**15 48 06.8**	**+0.4**
	5.6nm,0.3s								
MRKS				*e*S			**Sg**	**15 48 54.7**	**+1.1**
	54nm,0.5s								
SATY	**Saty**	**3.44**	**31**	Pg			**Pb**	**15 48 07.6**	**-0.6**
	14nm,0.6s								
SATY				Lg			Lg	15 48 56.3	
	25nm,0.7s								
KRBS	**Karabastau**	**3.57**	**356**	Pg			**Pb**	**15 48 10.3**	**-0.1**
	6.6nm,0.5s								
KRBS				Lg			Lg	15 49 01.0	
	2.9nm,0.6s								
KRBS	**Karabastau**	**3.57**	**356**	*e*P			**Pb**	**15 48 10.4**	**+0.1**
	6.6nm,0.5s								
KRBS				*e*S			**Sg**	**15 49 01.0**	**0.0**
	2.9nm,0.6s								
KTBS	**Karatobe**	**3.61**	**8**	*e*P			**Pb**	**15 48 11.9**	**+0.8**
	4.7nm,0.3s								
KTBS				*e*S			**Sg**	**15 49 03.1**	**+0.7**
	0.8nm,0.4s								
KURS	**Kuram**	**3.73**	**25**	Pg			**Pb**	**15 48 12.9**	**-0.2**
	2.3nm,0.4s								
KURS				Lg			Lg	15 49 05.7	
	14nm,0.8s								
KUU	**Kurty**	**3.76**	**4**	*e*P			**Pg**	**15 48 17.0**	**-1.5**
	4.2nm,0.5s								
KUU				*e*S			**Sg**	**15 49 11.9**	**+4.5**
	29nm,0.7s								
UZB	**Uzynbulak**	**3.77**	**36**	Pg			**Pb**	**15 48 14.4**	**+0.5**
	4.2nm,0.3s								
UZB				Lg			Lg	15 49 07.8	
	12nm,0.6s								
UZB	**Uzynbulak**	**3.77**	**36**	*e*P			**Pb**	**15 48 14.4**	**+0.5**
	4.2nm,0.3s								
UZB				*e*S			**Sg**	**15 49 07.8**	**+0.2**
	12nm,0.6s								
KPKS	**Kokpek**	**3.89**	**30**	Pg			**Pb**	**15 48 15.7**	**-0.2**
	0.2nm,0.1s								
KPKS				Lg			Lg	15 49 10.4	
	40nm,0.6s								
KPKS	**Kokpek**	**3.89**	**30**	*e*P			**Pb**	**15 48 15.9**	**0.0**
	0.2nm,0.1s								
KPKS				*e*S			**Sg**	**15 49 10.4**	**-1.1**
	40nm,0.6s								
SHLS	**Shalkode**	**3.99**	**40**	Pg			**Pg**	**15 48 21.9**	**-1.0**
	10nm,0.3s								
SHLS				Lg			Lg	15 49 20.6	
	14nm,0.6s								
SHLS	**Shalkode**	**3.99**	**40**	*e*P			**Pg**	**15 48 21.9**	**-1.0**
	10nm,0.3s								
SHLS				*e*S			**Sg**	**15 49 20.6**	**+6.1**
	14nm,0.6s								
PDGK	**Podgornoye**	**4.13**	**38**	⇓Pg			**Pg**	**15 48 23.6**	**-2.0**
	2.7nm,0.5s								
PDGK				⇑Lg			Lg	15 49 16.9	
	12nm,0.6s								
KNOS	**Konyrlen**	**4.84**	**28**	Pg			**Pb**	**15 48 31.8**	**-0.2**
	1.4nm,0.6s								
KNOS				Lg			Lg	15 49 38.2	
	2.8nm,0.7s								
KK31	**Karatay Array**	**5.06**	**308**	⇑Pg			**Pg**	**15 48 40.8**	**-2.7**
	0.8nm,0.3s,baz=132,slow=18,SNR=12								
KK31				⇓Lg			Lg	15 49 47.3	
	2.1nm,0.4s,baz=128,slow=29,SNR=7.1								

*AEIC **18** 15:49:57.3±1.7,66°.29N±0°.02×157°.24W±0°.04,h9km±1km,*
Error ellipse: s-maj=2.4km s-min=2.1km az=194.0
NEIC 18 15:49:57.3±1.4,66°.31N±0°.02×157°.22W±0°.04,h11km±3km,
ML3.0/106,ML2.8(AEIC),Error ellipse: s-maj=2.4km
s-min=2.1km az=186.0,Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
G19K	**Purcell Mounta**	**0.18**	**163**	Pg			Pg	15 50 00.8	-0.4
G19K				Sg			Sg	15 50 03.0	-0.8
F19K	**Shaleruckik Mo**	**0.57**	**337**	Pg			Pg	15 50 08.4	0.0
F19K				Sg			Sb	15 50 16.9	-0.5
G18K	**Tagagawik**	**0.72**	**235**	Pg			Pg	15 50 10.8	-0.3
G18K				Sg			Sg	15 50 20.5	-0.1
H19K	**Roundabout Mou**	**0.85**	**158**				Pg	15 50 12.9	-0.7
H19K							Sb	15 50 20.6	+0.2
F20K	**Avaraart Lake**	**0.95**	**38**	Pg			Pg	15 50 15.1	-0.4
F20K				Sg			Sg	15 50 27.7	-0.1
F20K				IAML				15 50 31.8	
	comp=N,270nm,0.4s								
F18K	**Selawik**	**1.02**	**288**				Pg	15 50 16.8	-0.1
F18K							Sn	15 50 31.5	-0.3
E19K	**Redstone River**	**1.15**	**360**				Pb	15 50 19.2	0.0
E19K				Sg			Sb	15 50 33.6	-0.5
H18K	**Honhosa River**	**1.26**	**203**				Pn	15 50 20.0	-0.8
H18K				Sg			Sb	15 50 36.2	-1.0
H20K	**Anotleneega Mo**	**1.26**	**130**				Pn	15 50 20.3	-0.7
H20K							Sn	15 50 37.9	0.0
IMAR	**Indian Mountai**	**1.45**	**102**	Pn			Pn	15 50 22.6	-0.8
G21K	**Allakaket**	**1.51**	**81**	Pn			Pn	15 50 24.2	0.0
G21K				IAML				15 50 46.8	
	comp=E,119nm,0.3s								
G21K				IAML				15 50 47.4	
	comp=N,132nm,0.5s								
G21K	**Allakaket**	**1.51**	**81**				Sb	15 50 44.8	+0.5
GCSA	**Galena City Sc**	**1.58**	**175**				Pn	15 50 24.9	-0.3
GCSA							Sb	15 50 46.5	+0.1
G17K	**Kiwalik Mounta**	**1.63**	**242**				Pn	15 50 25.5	-0.4
G17K							Sb	15 50 48.2	+0.3
F17K	**Baldwin Pennin**	**1.63**	**276**	Pn			Pn	15 50 26.2	+0.3
F17K	**Baldwin Pennin**	**1.63**	**276**				Sb	15 50 48.0	+0.1
F21K	**Alatna River**	**1.74**	**57**	Pn			Pn	15 50 28.2	+0.7
F21K	**Alatna River**	**1.74**	**57**				Sb	15 50 52.0	+0.9
E18K	**Tukpahlearik C**	**1.74**	**311**	Pn			Pb	15 50 28.4	-0.8
H17K	**Granite Mounta**	**1.78**	**220**	Pn			Pb	15 50 27.2	-0.8
H17K	**Granite Mounta**	**1.78**	**220**				Sb	15 50 51.7	-0.4
I20K	**Naaghedeneel**	**1.90**	**142**	Pn			Pn	15 50 29.9	+0.2
I20K				IAML				15 51 26.3	
	comp=E,130nm,0.8s								
I20K				IAML				15 51 32.7	
	comp=N,168nm,0.5s								
H21K	**Melozitna Rive**	**1.92**	**108**	Pn			Pn	15 50 29.7	-0.2
H21K				IAML				15 51 23.8	
	comp=E,103nm,0.5s								
H21K	**Melozitna Rive**	**1.92**	**108**				Sb	15 50 56.0	-0.3
E20K	**Nigu River**	**2.00**	**11**				Pn	15 50 32.1	+1.1
D19K	**Kuna River**	**2.22**	**351**	Pn			Pb	15 50 36.6	-0.9
D19K				IAML				15 52 00.5	
	comp=N,103nm,0.8s								
G16K	**Koyuk River**	**2.31**	**249**	Pn			Pn	15 50 34.1	-1.1
H22K	**Ishtalitna Cre**	**2.42**	**97**	Pn			Pn	15 50 37.1	+0.4
J19K	**Poorman**	**2.42**	**163**	Pn			Pn	15 50 36.8	-0.1
J19K				IAML				15 52 04.5	
	comp=N,112nm,0.4s								
D20K	**Etivluk River**	**2.42**	**5**	Pn			Pn	15 50 38.1	+1.2
I21K	**Tanana**	**2.44**	**115**	Pn			Pn	15 50 37.1	0.0
J20K	**Nowinta River**	**2.50**	**148**	Pn			Pn	15 50 38.8	+0.8
J20K				IAML				15 52 09.2	
	comp=N,77nm,0.7s								
J20K				IAML				15 52 11.7	
	comp=E,96nm,0.6s								
H16K	**Elim**	**2.69**	**234**				Pn	15 50 39.2	-1.2
D17K	**Noatak River**	**2.69**	**304**				Pn	15 50 41.0	+0.5
E22K	**Anaktuvuk Pass**	**2.79**	**47**	Pn			Pn	15 50 43.7	+1.8
E22K				IAML				15 52 20.1	
	comp=E,46nm,0.5s								
E22K				IAML				15 52 25.5	
	comp=N,45nm,0.9s								
C18K	**Utukok River**	**2.80**	**329**	Pn			Pn	15 50 43.5	+1.4
RDOG	**Red Dog Mine**	**2.83**	**311**	Pn			Pn	15 50 43.9	+1.5
I17K	**Unalakleet**	**2.85**	**213**	Pn			Pn	15 50 43.2	+0.6
J18K	**Innoko River**	**2.87**	**175**	Pn			Pn	15 50 43.4	+0.4
J18K				IAML				15 52 20.8	
	comp=E,35nm,0.8s								
J18K				IAML				15 52 28.9	
	comp=N,43nm,0.6s								
G23K	**Bananza Creek**	**2.91**	**79**	Pn			Pn	15 50 43.5	0.0
COLD	**Coldfoot**	**2.93**	**69**	Pn			Pn	15 50 43.7	-0.1
COLD				IAML				15 52 30.7	
	comp=E,55nm,1.1s								
MLY	**Manley**	**2.97**	**113**	Pn			Pn	15 50 45.5	+1.1
MLY				IAML				15 52 23.0	
	comp=N,34nm,0.5s								
MLY				IAML				15 52 26.1	
	comp=E,29nm,1.1s								
J17K	**VABM Dome**	**3.03**	**196**	Pn			Pn	15 50 45.2	0.0
J17K				IAML				15 52 20.6	
	comp=N,49nm,0.4s								
J17K				IAML				15 52 27.7	
	comp=E,63nm,0.8s								
F15K	**North Star Dit**	**3.10**	**262**	Pn			Pn	15 50 47.4	+1.3
F15K				IAML				15 52 28.8	
	comp=E,45nm,0.7s								
F15K				IAML				15 52 29.0	
	comp=N,63nm,0.7s								
K20K	**Telida**	**3.26**	**154**	Pn			Pn	15 50 49.0	+0.7
K20K				IAML				15 52 34.8	
	comp=E,31nm,0.5s								
K20K				IAML				15 52 38.3	
	comp=N,46nm,0.7s								
J16K	**Anvik River**	**3.37**	**207**	Pn			Pn	15 50 50.3	+0.5
BPAW	**Bear Paw Mtn.**	**3.44**	**127**	Pn			Pn	15 50 51.8	+1.0
BPAW				IAML				15 52 49.3	
	comp=E,23nm,0.9s								
E23K	**Chandalar**	**3.44**	**56**	Pn			Pn	15 50 53.1	+2.2
I23K	**Minto, Yukon-K**	**3.45**	**106**	Pn			Pn	15 50 51.5	+0.6
B21K	**Ikpikpuk River**	**3.47**	**15**	Pn			Pn	15 50 53.1	+2.0
B21K				IAML				15 52 43.6	
	comp=E,49nm,0.7s								
B21K				IAML				15 52 47.0	
	comp=N,49nm,1.1s								
K17K	**Iditarod**	**3.64**	**188**	Pn			Pn	15 50 53.8	+0.2
K17K				IAML				15 52 46.2	
	comp=E,26nm,0.8s								
D23K	**Nanushuk River**	**3.65**	**40**	Pn			Pn	15 50 55.1	+1.4
D23K				IAML				15 52 47.2	
	comp=N,44nm,0.8s								
D23K				IAML				15 52 49.6	
	comp=E,47nm,1.1s								
B20K	**Meade River**	**3.71**	**0**	Pn			Pn	15 50 55.8	+1.3
B20K				IAML				15 52 49.6	
	comp=N,28nm,0.7s								
C16K	**Lisburne Hills**	**3.72**	**306**	Pn			Pn	15 50 56.0	+1.4
H24K	**Noodor Dome**	**3.83**	**93**	Pn			Pn	15 50 57.7	+1.4
H24K				IAML				15 52 51.0	
	comp=E,38nm,1.1s								
KTH	**Kantishna Hill**	**3.85**	**133**	Pn			Pn	15 50 57.5	+1.0
F24K	**Squaw Lake**	**3.87**	**68**	Pn			Pn	15 50 58.2	+1.5
PPLA	**Purkeypile**	**4.05**	**145**	Pn			Pn	15 51 01.2	+1.9
TRF	**Thorofare Moun**	**4.12**	**131**	Pn			Pn	15 51 01.3	+1.0
COLA	**College**	**4.15**	**106**	Pn			Pn	15 51 00.3	-0.1
WRH	**Wood River Hil**	**4.24**	**112**	Pn			Pn	15 51 02.7	+0.9
WRH				IAML				15 53 02.3	
	comp=E,15nm,1.2s								
WRH				IAML				15 53 02.5	
	comp=N,16nm,0.5s								
CCB	**Clear Creek Bu**	**4.26**	**109**				Pn	15 51 02.3	+0.3
L19K	**White Mountain**	**4.27**	**165**	Pn			Pn	15 51 03.2	+0.9
L19K				IAML				15 53 02.5	
	comp=N,20nm,1.1s								
L19K				IAML				15 53 12.1	
	comp=E,22nm,0.9s								
MCK	**McKinley**	**4.36**	**123**	Pn			Pn	15 51 04.1	+0.6
MCK				IAML				15 53 10.0	
	comp=E,9.3nm,0.8s								
MCK				IAML				15 53 10.1	
	comp=N,12nm,1.0s								
IL31		**4.56**	**105**	Pn			Pn	15 51 06.4	+0.2
M18K	**Stony River**	**4.88**	**172**				Pn	15 51 11.6	+1.0
SKT	**Skwentna**	**5.01**	**148**				Pn	15 51 14.1	+1.7
J25K	**Salcha River,**	**5.22**	**104**	Pn			Pn	15 51 15.3	0.0
J25K				IAML				15 53 41.2	
	comp=E,12nm,0.8s								
N18K	**Kilae Creek**	**5.69**	**173**	Pn			Pn	15 51 22.3	+0.7
O18K	**Koktuh Hills**	**6.55**	**171**	Pn			Pn	15 51 34.4	+1.0
D27M	**Malcolm River**	**6.82**	**57**	Pn			Pn	15 51 39.7	+2.5

*DNK **18** 15:50:51.7±3.1,82°.53N×6°.45W,h21km±30km,ML2.1,*
Presumed earthquake
*BER **18** 15:50:52.5±3.7,82°.70N×7°.10W,h29km±39km,Mw3.7,*
ML2.9(NAO),Confirmed Earthquake
*KOLA **18** 15:50:56.0,83°.13N×2°.09E,h0km,ML1.2,Arctic*
Ocean,Gakkel ridge
ISC 18 15:50:45.7±1.8,82°.7N±0°.2×6°.44W±0°.05,h10km,n26,
σ3§13/37,North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NOR	**Nord**	**1.81**	**236**	Pb			**Pn**	**15 51 19.7**	**+2.9**
NOR				Sb			**Sn**	**15 51 38.8**	**-0.9**
NOR	**Nord**	**1.81**	**236**	*i* P			**Pn**	**15 51 19.0**	**+2.2**
NOR				*i* S			**Sn**	**15 51 39.4**	**-0.3**
NOR				IAML				15 51 41.0	
	comp=Z,44nm,0.4s								
NOR	**Nord**	**1.81**	**236**	*i* P			**Pn**	**15 51 19.0**	**+2.2**
NOR				*i* S			**Sn**	**15 51 39.4**	**-0.3**
NOR				IAML				15 51 41.0	
	comp=Z,44nm,0.4s								
KBS	**Kingsbay**	**4.79**	**133**	Pn			**Pn**	**15 52 01.2**	**+3.4**
KBS				Sn			Sn	15 52 49.7	-3.5
KBS	**Kingsbay**	**4.79**	**133**	*e*P			**Pn**	**15 52 01.2**	**+3.4**
KBS				*e*S			**Sn**	**15 52 50.4**	**-2.8**
KBS				IAML				15 52 58.1	
	comp=Z,2.0nm,0.4s								
KBS	**Kingsbay**	**4.79**	**133**	*i* P			**Pn**	**15 52 00.5**	**+2.7**
KBS				*i* S			Sn	15 52 49.9	-3.3
KBS	**Kingsbay**	**4.79**	**133**	P			**Pn**	**15 52 00.9**	**+3.1**
KBS				S			Sn	15 52 49.4	-3.8
BRBB	**Barentsburg B**	**5.74**	**133**	Pn			**Pn**	**15 52 14.6**	**+3.8**
BRBB				Sn			**Sn**	**15 53 13.4**	**-3.2**
BRBB	**Barentsburg B**	**5.74**	**133**	*e*P			**Pn**	**15 52 14.5**	**+3.7**
BRBB				*e*S			Sn	15 53 13.2	-3.4
BRBB	**Barentsburg B**	**5.74**	**133**	P			**Pn**	**15 52

BNDI	Bandanaira	3.41	13	S	Sn	16 10 20.9	-1.6	
BNDI	Bandanaira	3.41	13	P	Pn	16 09 41.8	-1.1	
AAI	Ambon	4.26	347	P	Pn	16 09 53.5	-1.0	
KRAI	Karang Ratu	4.58	351	P	Pn	16 09 58.8	0.0	
AUDHS	Darwin High Sc	4.83	160	P	Pn	16 10 03.1	+0.9	
AUDHS	Darwin High Sc	4.83	160	S	Sn	16 10 56.8	-0.2	
DRS	Darwin Rock St	4.85	159	P	Pn	16 10 02.6	+0.2	
DRS	Darwin Rock St	4.85	159	S	Sn	16 10 56.7	-0.7	
NLAI	Namlea	5.03	336	P	Pn	16 10 05.0	+0.1	
	1μm95nm, 0.6s							
SOEI	Soe	5.18	248	P	Pn	16 10 06.7	-0.3	
SOEI	Soe	5.18	248	S	Sn	16 11 06.9	+1.3	
SOEI	Soe	5.18	248	Pn	Pn	16 10 05.9	-1.1	
SOEI	Soe	5.18	248	P	Pn	16 10 06.7	-0.3	
	1.9nm2μm105nm, 0.5s							
SOEI				S	Sn	16 11 06.4	+0.8	
	1.9nm2μm105nm, 0.5s							
MTN	Manton Dam	5.31	159	Pn	Pn	16 10 07.9	-0.8	
FAKI	Fak Fak	5.80	32	Pn	Pn	16 10 12.3	-3.1	
FAKI	Fak Fak	5.80	32	P	Pn	16 10 13.7	-1.7	
	1.0nm2μm74nm, 0.5s							
BATI	Baumata	5.90	246	P	Pn	16 10 16.9	+0.3	
	168nm, 0.3s, baz=106, slow=1.1, SNR=33							
BATI				S	Sn	16 11 19.8	-3.2	
	127nm, 0.4s, baz=336, slow=20, SNR=7.7							
BATI	Baumata	5.90	246	P	Pn	16 10 15.8	-0.8	
KMPI	Kaimana, Papua	6.16	48	P	Pn	16 10 18.1	-2.1	
	172nm, 0.5s							
SANI	Sanana	6.58	331	P	Pn	16 10 27.1	+1.1	
SANI	Sanana	6.58	331	S	Sn	16 11 40.0	+0.4	
SANI	Sanana	6.58	331	P	Pn	16 10 28.0	+2.0	
	0.2nm52nm, 0.8s							
MMRI	Maumere	6.88	263	P	Pn	16 10 29.7	-0.4	
MMRI	Maumere	6.88	263	S	Sn	16 11 46.9	-0.1	
MMRI	Maumere	6.88	263	Pn	Pn	16 10 28.6	-1.4	
MMRI	Maumere	6.88	263	P	Pn	16 10 29.3	-0.8	
	0.3nm1μm51nm, 0.5s							
SIJI	Sorong	7.27	17	P	Pn	16 10 32.9	-2.4	
	7.3nm, 0.3s, baz=204, slow=17, SNR=38							
SIJI				S	Sn	16 11 50.9	-5.4	
	62nm, 0.2s, baz=77, slow=23, SNR=11							
SIJI	Sorong	7.27	17	P	Pn	16 10 37.1	+1.8	
SWI	Sorong	7.27	17	P	Pn	16 10 33.1	-2.2	
	0.5nm1μm19nm, 0.5s							
EDFI	Ende, Flores	7.43	263	P	Pn	16 10 37.6	0.0	
	0.1nm32nm, 0.6s							
KDI	Kendari	7.57	301	P	Pn	16 10 39.6	+0.2	
KNRA	Kununurra	7.77	183	Pn	Pn	16 10 40.0	-2.0	
RKPI	Ransiki, Papua	8.06	39	P	Pn	16 10 44.1	-2.0	
	3μm128nm, 0.6s							
KKSI	Kolaka, Sulawe	8.31	296	P	Pn	16 10 50.4	+0.9	
	12nm, 0.5s							
MWPI	Manokwari, Pap	8.44	35	P	Pn	16 10 50.7	-0.5	
	62nm, 0.8s							
WSI	Waingapu	8.93	258	P	Pn	16 10 56.7	-1.2	
LBFI	Labuhan Bajo,	9.19	266	P	Pn	16 11 01.4	0.0	
LUWI	Luwuk	9.29	317	P	Pn	16 11 03.5	+0.6	
	1μm38nm, 0.9s							
BAKI	Biak	9.59	47	P	Pn	16 11 06.4	-0.5	
	89nm, 0.6s							
KAPI	Kappang	9.76	286	P	Pn	16 11 09.0	-0.2	
	4.0nm, 0.4s, baz=130, slow=12, SNR=4.0							
KAPI				LR	LR	16 14 57.6		
	comp=Z,30nm,18.6s,baz=96,slow=38							
WBSI	Waikabubak, Su	9.81	259	P	Pn	16 11 09.5	-0.4	
	1μm92nm, 0.6s							
FITZ	Fitzroy Crossi	10.73	198	P	Pn	16 11 19.4	-2.9	
	7.4nm, 0.4s, baz=35, slow=11, SNR=73							
FITZ				S	Sn	16 13 09.1	-11	
	25nm, 0.3s, baz=79, slow=15, SNR=12							
PLAI	Plampang	11.30	264	P	Pn	16 11 28.4	-1.6	
PLAI	Plampang	11.30	264	S	Sn	16 13 33.2	-1.2	
GENI	Genyem	12.15	65	P	Pn	16 11 41.7	+0.2	
JAY	Jayapura	12.67	66	P	Pn	16 11 47.4	-1.1	
	6.9nm, 0.4s, baz=209, slow=13, SNR=9.0							
WB0	Warramunga Arr	12.87	157	Pn	Pn	16 11 46.8	-4.2	
WRAB	Tennant Creek	13.01	158	Pn	Pn	16 11 48.2	-4.6	
WRA	Warramunga Arr	13.01	158	P	Pn	16 11 48.5	-4.4	
	4.7nm, 0.3s, baz=340, slow=12, SNR=139							
WRA				S	Sn	16 14 04.2	-12	
	40nm, 1.1s, baz=331, slow=23, SNR=11							
WRA	Warramunga Arr	13.01	158	Pn	Pn	16 11 46.8	-6.1	
WR8	Warramunga Arr	13.09	157	Pn	Pn	16 11 49.4	-4.4	
JAGI	Jajag, Banyuwa	14.86	267	Pn	Pn	16 12 14.1	-2.7	
COEN	Coen	15.04	115	P	P	16 12 21.9	-0.1	
COEN	Coen	15.04	115	Pn	Pn	16 12 15.7	-3.3	
MBWA	Marble Bar	16.04	214	Pn	Pn	16 12 28.5	-3.1	
QIS	Mount Isa	16.17	142	P	P	16 12 35.9	+1.4	
PSA00	Pilbara Seismi	16.32	212	Pn	Pn	16 12 32.8	-2.1	
PSA00				IAmb	IAmb	16 12 35.6		
	comp=Z,18nm,0.6s							
AS31	Alice Springs	16.36	164	Pn	Pn	16 12 33.6	-1.9	
ASAR	Alice Springs	16.36	164	P	Pn	16 12 34.2	-1.3	
	comp=Z,3.6nm,0.4s,baz=338,slow=9.8,SNR=72							
ASAR				S	Sn	16 15 26.9	-10	
	comp=Z,12nm,0.8s,baz=347,slow=26,SNR=8.5							
ASAR				ScP	ScP	16 20 51.1	+2.7	
	comp=Z,1.3nm,0.6s,baz=343,slow=1.3,SNR=4.4							
ASAR	Alice Springs	16.36	164	Pn	Pn	16 12 35.9	+0.4	
AUALC	St Philip's Co	16.37	164	P	P	16 12 38.3	+1.5	
PMG	Port Moresby	17.87	96	P	Pn	16 12 55.7	+1.7	
	comp=Z,22nm,0.8s,baz=287,slow=11,SNR=17							
PMG				S	Sn	16 15 58.6	-15	
	comp=Z,11nm,0.9s,baz=212,slow=5.4,SNR=2.2							
PMG	Port Moresby	17.87	96	P	Pn	16 12 56.5	+2.5	
PMG	Port Moresby	17.87	96	P	Pn	16 12 56.4	+2.5	
PMG	Port Moresby	17.87	96		Pn	16 12 55.7	+1.7	
PMG				IAmb	IAmb	16 12 56.7		
	comp=Z,25nm,0.8s							
MTSU	Mount Surprise	17.94	126	P	Pn	16 12 55.2	+0.4	
KKM	Kota Kinabalu	18.91	317	P	Pn	16 13 06.5	0.0	
KKM				IAmb	IAmb	16 13 25.4		
	comp=Z,37nm,1.2s							
SBUM	Sibu	19.76	301	P	Pn	16 13 15.7	-0.6	
SBUM	Sibu	19.76	301	P	Pn	16 13 16.2	-0.1	
CTA	Charters Tower	20.54	128	P	Pn	16 13 25.8	+0.3	
	comp=Z,14nm,0.8s,baz=302,slow=12,SNR=9.4							
	comp=Z,14nm,0.8s							
CTAO	Charters Tower	20.54	128	P	Pn	16 13 25.2	-0.2	
CTAO				IAmb	IAmb	16 13 30.0		
	comp=Z,14nm,0.8s							
LEM	Lembang	21.38	271	LR	LR	16 23 10.6		
	comp=Z,61nm,18.8s,baz=328,slow=40							
INKA	Innaminka	22.61	152	P	P	16 13 46.5	+2.3	
FORT	Forrest	22.82	182	P	P	16 13 47.9	+1.6	
FORT				IAmb	IAmb	16 14 02.5		
	comp=Z,16nm,1.2s							
QLP	Quilpie	23.49	144	P	P	16 13 56.3	+3.7	
BBOO	Buckleboo	25.63	166	P	P	16 14 13.9	+1.9	
BBOO				IAmb	IAmb	16 14 52.3		
	comp=Z,23nm,1.4s							
STKA	Stephens Creek	26.55	156	P	P	16 14 22.9	+2.7	
	comp=Z,5.2nm,0.8s,baz=329,slow=9.8,SNR=11							
	comp=Z,5.2nm,0.8s							
STKA	Stephens Creek	26.55	156	P	P	16 14 23.0	+2.7	
STKA	Stephens Creek	26.55	156	P	P	16 14 22.4	+2.1	
STKA				IAmb	IAmb	16 14 23.4		
	comp=Z,20nm,0.8s							
CMSA	Cobar Meteorol	28.15	149	P	P	16 14 37.8	+3.2	
CAN	Canberra	32.83	149	P	P	16 15 19.4	+3.5	
CAN				IAmb	IAmb	16 15 20.4		
	comp=Z,9.1nm,0.7s							
TOO	Toolangi	33.07	156	P	P	16 15 21.8	+3.9	
CMAR	Chiang Mai Arr	39.66	312	P	P	16 16 14.2	+0.1	
	comp=Z,0.7nm,0.4s,baz=135,slow=6.9,SNR=6.5							
	comp=Z,0.7nm,0.4s							
NJ2	Nanjing	40.90	347	eP	P	16 16 25.1	+1.0	
NJ2				pmax	pmax			
	comp=Z,22nm,0.6s							
PZH	PanZhiHua	43.30	323	P	P	16 16 43.8	-0.1	
PZH				pmax	pmax			
	comp=Z,10.0nm,0.8s							
KSRS	Korea Array	45.10	359	P	P	16 16 57.0	-0.9	
	comp=Z,1.2nm,0.6s,baz=177,slow=9.3,SNR=6.4							
	comp=Z,1.2nm,0.6s							
BJI2	Beijing	49.14	347	P	P	16 17 36.1	+6.8	
BJI2				pmax	pmax			
	comp=Z,4.0nm,1.9s							
USRK	Ussuriysk Ar.	51.89	3	P	P	16 17 49.0	-0.9	
	comp=Z,3.2nm,0.7s,baz=191,slow=6.6,SNR=9.1							
	comp=Z,3.2nm,0.7s							
EVN	Everest	54.24	313	P	P	16 18 07.7	-0.6	
HEH	HeiHe	57.90	359	eP	P	16 18 29.9	-3.2	
HEH				pmax	pmax			
	comp=Z,5.0nm,1.0s							
ULN	Ulaanbaatar	58.83	343	P	P	16 18 39.8	0.0	
ULN				IAmb	IAmb	16 18 52.4		
	comp=Z,4.1nm,1.3s							
SONM	Songino Array	59.00	342	P	P	16 18 41.4	+0.4	
	comp=Z,0.9nm,0.6s,baz=161,slow=6.1,SNR=6.6							
	comp=Z,0.9nm,0.6s							
SONM	Songino Array	59.00	342	P	P	16 18 40.7	-0.3	
PETK	Petropavlovsk-	65.41	18	P	P	16 19 23.8	+0.3	
	comp=Z,1.1nm,0.6s,baz=178,slow=4.5,SNR=5.6							
	comp=Z,1.1nm,0.6s							
KSH2	Kashi	68.17	318	P	P	16 19 41.8	+0.2	
KSH2				pmax	pmax			
	comp=Z,4.0nm,0.7s							
MKAR	Makanchi Array	68.49	327	P	P	16 19 43.6	+0.3	
	comp=Z,2.5nm,0.4s,baz=115,slow=8.2,SNR=65							
	comp=Z,2.5nm,0.4s							
MKAR	Makanchi Array	68.49	327	P	P	16 19 43.3	+0.1	
MAKZ	Makanchi	68.67	327	P	P	16 19 45.0	+0.7	
MAKZ				IAmb	IAmb	16 19 46.5		
	comp=Z,2.2nm,0.5s							
KDJ	Kajisay	68.71	321	P	P	16 19 45.3	+0.4	
BOOM	Boomskoye usch	69.68	321	P	P	16 19 51.5	+0.6	
BOOM				IAmb	IAmb	16 19 52.5		
	comp=Z,3.1nm,0.7s							
YAK	Yakutsk	69.69	0	P	P	16 19 49.4	-0.9	
AAK	Ala-Archa	70.66	320	P	P	16 19 57.6	+0.8	
AAK				IAmb	IAmb	16 19 58.6		
	comp=Z,3.2nm,0.7s							
GAR	Garm	71.68	315	P	P	16 20 02.6	-0.5	
ZAA0	Zalesovo Array	71.99	334	P	P	16 20 04.4	+0.1	
ZAA0				IAmb	IAmb	16 20 05.5		
	comp=Z,3.1nm,0.7s							
ZALV	Zalesovo Beam	71.99	334	P	P	16 20 04.8	+0.4	
	comp=Z,2.9nm,0.6s,baz=125,slow=5.0,SNR=15							
	comp=Z,2.9nm,0.6s							
ZALV	Zalesovo Beam	71.99	334	P	P	16 20 03.8	-0.6	
KURBB	Kurchatov Arra	72.81	329	P	P	16 20 09.4	0.0	
	comp=Z,5.4nm,0.5s,baz=126,slow=5.0,SNR=58							
	comp=Z,5.4nm,0.5s							
KURK	Kurchatov	72.82	329	P	P	16 20 09.5	+0.1	
KURK				IAmb	IAmb	16 20 11.1		
	comp=Z,6.6nm,0.6s							
KK31	Karatay Array	73.44	319	P	P	16 20 13.4	+0.2	
KK31				IAmb	IAmb	16 20 14.6		
	comp=Z,3.4nm,1.1s							
KKAR	Karatay Array	73.44	319	P	P	16 20 13.5	+0.2	
BVAR	Borovoye Array	78.35	328	P	P	16 20 40.7	-0.2	
	comp=Z,0.7nm,0.4s,baz=134,slow=4.3,SNR=7.8							
	comp=Z,0.7nm,0.4s							
BORK	Borovoye	78.40	328	P	P	16 20 40.3	-0.8	
TIXI	Tiksi	79.35	360	P	P	16 20 45.7	-0.2	
TIXI				IAmb	IAmb	16 20 46.6		
	comp=Z,3.7nm,0.8s							
VOI	Vohitsoka	80.05	249	P	P	16 20 53.3	+2.2	
NRIK	Noril'sk	82.19	346	P	P	16 21 00.4	-0.8	
	comp=Z,1.2nm,0.5s,baz=161,slow=3.7,SNR=4.8							
	comp=Z,1.2nm,0.5s							
NRIK	Noril'sk	82.19	346	IAmb	IAmb	16 21 02.1		
	comp=Z,3.6nm,1.1s							
AB31	Akbulak array	82.67	322	P	P	16 21 03.4	-0.7	
ABKAR	Akbulak array	82.67	322	P	P	16 21 03.9	-0.2	
SDPT	Sand Point	85.50	33	P	P	16 21 18.9	+0.6	
M14K	Bethel	86.75	27	P	P	16 21 25.4	+1.1	
M16K	Timber Creek	88.21	28	P	P	16 21 33.6	+2.2	
C19K	Lookout Ridge	90.73	20	P	P	16 21 44.0	+0.9	
C19K				IAmb	IAmb	16 21 51.4		
	comp=Z,4.3nm,1.3s							
B20K	Meade River	91.83	19	P	P	16 21 47.3	-0.7	
B22K	Teshekpuk Lake	93.15	19	P	P	16 21 54.8	+0.7	
ILAR	Eielson Array	94.49	25	P	P	16 21 59.8	-0.6	
	comp=Z,0.3nm,0.7s,baz=265,slow=4.9,SNR=3.1							
	comp=Z,0.3nm,0.7s							
BMAR	Burnt Mountain	95.77	23	P	P	16 22 07.3	+1.0	
BCAR	Beaver Creek A	96.53	27	P	P	16 22 10.9	+1.1	
GERES	GERESS Array B	112.54	320	PKiKP	PKiKP	16 27 17.8	+1.3	
	comp=Z,0.4nm,0.5s,baz=1.7,slow=3.1,SNR=2.7							
ILON	Igloolik, Nuna	115.35	12	PKiKP	PKiKP	16 27 20.6	-0.5	
EKA	Eskdalemuir Ar	119.52	331	PKP	PKiKP	16 27 31.2	+1.6	
	comp=Z,0.5nm,0.5s,baz=169,slow=1.9,SNR=2.0							
RSSD	Black Hills	121.46	43		PKiKP	16 27 35.0	+0.9	
TXAR	Lajitas Array	126.09	59	PKP	PKiKP	16 27 46.0	+2.5	
	comp=Z,0.2nm,0.3s,baz=223,slow=4.0,SNR=5.7							
TORD	Torodi Ar. Bea	128.15	281	PKP	PKiKP	16 27 49.1	+1.3	
	comp=Z,1.2nm,0.7s,baz=144,slow=1.9,SNR=6.0							
PLCA	Paso Flores	128.34	161	PKP	PKiKP	16 27 50.2	+2.5	
	comp=Z,0.6nm,0.5s,baz=207,slow=2.3,SNR=4.2							
PLCA	Paso Flores	128.34	161	PKPdf	PKiKP	16 27 50.9	+3.1	
S39A	Bolivar	131.49	46	PKPdf	PKiKP	16 27 55.3	+1.3	
AC02	Maricunga	141.21	153	PKPdf	PKPdf	16 28 11.7	-0.3	
CPUP	Villa Florida	145.43	170	PKPbc	PKiKP	16 28 21.7	-1.1	
	comp=Z,1.1nm,0.4s,baz=208,slow=3.3,SNR=4.6							
CAMR	Camarioca	147.04	59	PKPdf	PKPdf	16 28 20.0	-1.6	
LPAZ	La Paz	150.53	145	PKPbc	PKPbc	16 28 33.6	0.0	
	comp=Z,1.4nm,0.7s,baz=312,slow=2.9,SNR=3.4							

*MEX **18** 16:14:25.2±0.8, 15°.31N×92°.86W, h16km±7km, MD3.7*
*GCG **18** 16:14:26.1±0.7, 14°.83N×92°.90W, h30km±7km, MD3.8,*
Presumed earthquake

ISC 18 16:14:19.3±1.8, 15°.26N±0°.07×92°.85W±0°.06, h8km±12km, n13, σ2°39/20, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
PCIG		0.57	321	eP	Pn	16 14 33.7	0.0
PCIG				i S	Sb	16 14 40.3	+0.5
PATR	El Naranjo	0.61	103	eP	Pn	16 14 35.6	+1.1
PATR				i S	Sn	16 14 43.7	-1.0
PAVE	Pavencul	0.65	96	eP	Pn	16 14 36.1	+1.0
PAVE				i S	Sn	16 14 44.3	-1.4
CHUJ	Union Juarez	0.73	103	eP	Pn	16 14 37.7	+1.5
CHUJ				i S	Sn	16 14 47.6	-0.1
SMCA	Catarina	0.85	118	eS	Sn	16 14 52.7	+2.5
CCIG	Comitan	1.23	34	i P	Pn	16 14 43.6	+0.7
CCIG				i S	Sg	16 14 57.5	-1.3
SOKI	Kika Raxquin	1.46	107	eS	Sn	16 15 11.4	+5.5
TGIG		1.53	350	eP	Pg	16 14 48.8	0.0
TGIG				i S	Sn	16 15 06.5	-0.7
STG2	El Palmar, Qui	1.64	120	eS	Sn	16 15 05.3	-4.7
STG8	El Palmar, Qui	1.66	119	eP	Pn	16 14 48.5	-0.4
STG8				eS	Sn	16 15 05.8	-4.7
APG	El Apazote	2.32	96	eP	Pg	16 15 03.9	+0.1
CMIG	Matias Romero	2.67	313	eP	Pg	16 15 11.3	+0.7
NEUV	Arroyo Zacate	3.74	311	eP	Pb	16 15 25.6	-0.1

IDC 18 16:24:25.0±3.7, 32°.88N×85°.18E, h0km, mb3.1/2, mbtmp3.2/5, ML2.7/2, MS4.0/1, Error ellipse: s-maj=87.7km s-min=28.7km az=64.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
MKAR	Makanchi Array	14.07	352	Pn	Pn	16 27 46.1	+0.5
	0.1nm,0.3s,baz=168,slow=16,SNR=3.8						
	0.3nm,0.7s						
KURBB	Kurchatov Arra	18.40	346	P	Pn	16 28 41.0	-0.4
	baz=162,slow=11,SNR=6.6						
	0.7nm,0.8s						
CMAR	Chiang Mai Arr	18.95	136	P	P	16 28 47.9	+0.2
	0.6nm,0.7s,baz=320,slow=11,SNR=7.6						
ZALV	Zalesovo Beam	21.06	359	P	P	16 29 10.2	-0.3
	0.6nm,0.7s,baz=170,slow=12,SNR=3.8						
	0.6nm,0.7s						
SONM	Songino Array	21.91	41	P	P	16 29 19.8	-0.1
	0.7nm,0.8s,baz=225,slow=9.8,SNR=2.7						
	0.7nm,0.8s						
KVAR	Kislovodsk Arr	34.73	301	LR	LR	16 48 25.0	
	comp=Z,199nm,18.3s,slow=42						

*JMA **18** 16:32:40.9±0.1, 42°.1N±0°.2×141°.7E±0°.3, h34km±1km, MD4.0/39, MV3.9/39, S OFF TOMAKOMAI*
JMA Felt II J1 at S OFF TOMAKOMAI .
*NIED **18** 16:32:40.9, 42°.11N×141°.65E, h34km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^14Nm; Mrr5.88; Mθθ-4.25; Mφφ-1.63; Mrθ1.79; Mθφ2.28; Mφr1.83; Fault plane solution: M06.19000×10^14 NP1: φs318.00000°, δ45.00000°, λ118.00000°. NP2: φs101.00000°, δ51.00000°, λ65.00000°.*
*NEIC **18** 16:32:42.9±2.3, 42°.07N±0°.07×141°.9E±0°.1, h54km±8km, mb4.3/24 Error ellipse: s-maj=16.2km s-min=6.8km az=116.0*
*MOS **18** 16:32:42.6±1.1, 42°.11N×141°.69E, h69km, mb4.3/4, Error ellipse: s-maj=11.6km s-min=7.0km az=69.8*
*SKHL **18** 16:32:43.3±0.2, 42°.10N×141°.90E, h76km±4km, mb4.8/3*
*IDC **18** 16:32:44.7±1.5, 42°.15N×141°.85E, h69km±13km, mb3.5/15, mbtmp3.8/20, MS2.9/2, Error ellipse: s-maj=17.3km s-min=11.2km az=114.0*

ISC 18 16:32:40.4±0.9, 42°.12N±0°.03×141°.68E±0°.03, h32km±3km, n112, σ1°.83/122, mb4.1/29, 16D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
JKB	Kayabe	0.53	244	⇓P	Pn	16 32 51.4	-0.3
JKB				⇓S	Sb	16 32 59.0	-0.1
JIAM	Iburiatsuma	0.53	20	⇓P	Pn	16 32 51.8	0.0
JIAM				A	A	16 32 51.8	
	comp=N,13nm,1.4s,comp=E,12nm,0.4s						
JIAM				⇓S	Sb	16 33 00.5	+1.5
JNB	Noboribetsu	0.59	307	P	Pn	16 32 52.2	-0.4
JNB				S	Sn	16 33 00.5	-0.5
JSHD	Hidakashinhida	0.65	63	⇓P	Pb	16 32 54.3	+0.8
JSHD				A	A	16 32 54.3	
	comp=N,9.0nm,5.8s,comp=E,9.0nm,2.5s						
JEW	Eniwo	0.74	347	⇓P	Pn	16 32 55.2	+0.5
JEW				A	A	16 32 55.2	
	comp=N,7.0nm,0.7s,comp=E,14nm,0.8s						
JEW				⇓S	Sb	16 33 05.8	+1.1
JNBK	Urakawa-nobuka	0.82	78	P	Pn	16 32 55.6	-0.1
JNBK				A	A	16 32 55.6	
	comp=N,4.0nm,0.6s,comp=E,6.0nm,0.4s						
JBT2	Biratori 2	0.83	37	⇓P	Pb	16 32 57.1	+0.7
JBT2				A	A	16 32 57.1	
	comp=N,5.0nm,1.0s,comp=E,4.0nm,1.2s						
JBT2				⇓eS	Sb	16 33 09.8	+2.5
JOT	Ohata	0.88	213	⇓P	Pn	16 32 56.2	-0.3
JOT				A	A	16 32 56.2	
	comp=N,4.0nm,0.4s,comp=E,4.0nm,0.4s						
JOT				⇓eS	Sn	16 33 08.1	0.0
JAHD	Aomorihigashid	0.89	197	A	A	16 32 56.9	
	comp=N,27nm,0.4s,comp=E,32nm,0.4s						
JYM2	Yakumo 2	0.97	270	⇓P	Pb	16 32 58.5	-0.3
JEM	Erimo	1.11	95	iP	Pn	16 33 00.2	+0.5
JSR	Shiriuchi	1.11	238	⇓P	Pb	16 33 00.8	-0.3
JSR				⇓S	Sb	16 33 15.9	+0.8
JARK	Aomorirokkasho	1.14	192	A	A	16 33 00.6	
	comp=N,12nm,0.5s,comp=E,8.0nm,1.3s						
JISS	Ishikarishitsu	1.17	351	P	Pb	16 33 01.9	-0.1
JISS				A	A	16 33 01.9	
	comp=N,9.0nm,1.2s,comp=E,9.0nm,0.7s						
JFR	Furan	1.24	33	iP	Pn	16 33 02.6	+1.1
JSH	Shimam	1.32	294	P	Pb	16 33 04.0	-0.6
JCH	Churui	1.34	68	⇓P	Pn	16 33 03.8	+0.8
JCH				⇓eS	Sn	16 33 20.8	+1.1
JHST	Hiyamasetana	1.37	283	P	Pn	16 33 04.3	+1.1
JOMM	Oshimamatsumae	1.38	245	P	Pb	16 33 04.7	-0.9
JTM	Tenmabayashi	1.41	199	Pn	Pn	16 33 04.4	+0.6
JTM				Sn	Sb	16 33 22.9	-0.8
JTM	Tenmabayashi	1.41	199	P	Pn	16 33 04.6	+0.7
JTM				eS	Sn	16 33 22.1	+0.9
JAB	Ashibetsu	1.44	16	A	A	16 33 05.6	
	comp=N,5.0nm,1.3s,comp=E,6.0nm,0.8s						
JHR	Hokuryu	1.62	1	A	A	16 33 08.2	
	comp=N,6.0nm,1.4s,comp=E,5.0nm,1.0s						
JKEN	Kujiedanarisaw	1.91	179	A	A	16 33 12.1	
	comp=N,12nm,0.7s,comp=E,10.0nm,1.6s						
ASAJ	Asahikawa	2.11	18	P	Pb	16 33 16.4	-1.5
	comp=E,54nm,0.3s,baz=217,slow=17,SNR=325						
ASAJ				S	Sb	16 33 42.1	-1.6
	comp=E,162nm,0.5s,baz=292,slow=32,SNR=21						
JKA	Kamikawa-asahi	2.11	18	Pn	Pn	16 33 15.2	+1.7
JKA	Kamikawa-asahi	2.11	18	eP	Pb	16 33 16.5	-1.4
AKK	Akkeshi	2.50	68	eP	Pn	16 33 19.8	+0.9
NMR	Nemuro--Hokkai	3.23	66	ePN	Pn	16 33 29.5	+0.6
NMR	Nemuro--Hokkai	3.23	66	eP	Pn	16 33 29.8	+0.9
GLVR	Golovnino	3.25	59	ePN	Pn	16 33 32.3	+3.1
GLVR				eS	Sn	16 34 08.6	+1.9
GLVR				pmax	pmax		
	comp=Z,165nm,0.5s						
GLVR				pmax	pmax		
	comp=E,48nm,0.3s						
GLVR				pmax	pmax		
	comp=N,45nm,0.1s						
GLVR				smax	smax		
	comp=N,516nm,0.3s						
GLVR				smax	smax		
	comp=E,232nm,0.2s						
GLVR	Golovnino	3.25	59	eP	Pn	16 33 32.3	+3.1
GLVR			

KSRS	**Korea Array**	**11.56**	**251**	P		Pn		16 35 30.4	+7.2
	comp=E,0.6nm,0.5s,baz=64,slow=14,SNR=5.1								
KSRS				LR		LR		16 39 29.5	
	comp=E,55nm,18.5s,baz=40,slow=34								
PETK	**Petropavlovsk-**	**15.37**	**39**	P		**Pn**		**16 36 15.7**	**+0.9**
	comp=E,2.1nm,0.7s,baz=226,slow=8.2,SNR=8.1								
PETK	**Petropavlovsk-**	**15.37**	**39**	Pn		**Pn**		**16 36 14.6**	**-0.2**
PETK	**Petropavlovsk-**	**15.37**	**39**	P		**Pn**		**16 36 14.6**	**-0.2**
YAK	**Yakutsk**	**21.19**	**344**	P		**P**		**16 37 24.7**	**+1.8**
YAK				IAmb		IAmb		16 37 48.0	
	comp=Z,4.9nm,0.7s								
SEY	**Seymchan**	**21.78**	**13**	P		**P**		**16 37 27.9**	**-1.3**
	comp=Z,0.9nm,0.5s,baz=217,slow=6.8,SNR=5.2								
	comp=Z,0.9nm,0.5s								
YOJ	**Yonaguni jima**	**23.44**	**227**	P		**P**		**16 37 45.4**	**-1.4**
YOJ	**Yonaguni jima**	**23.44**	**227**	P		**P**		**16 37 45.4**	**-1.4**
SONM	**Songino Array**	**25.45**	**295**	P		**P**		**16 38 06.2**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=90,slow=7.5,SNR=3.2								
	comp=Z,0.6nm,0.6s								
SONM	**Songino Array**	**25.45**	**295**	P		**P**		**16 38 06.4**	**+1.0**
SONM	**Songino Array**	**25.45**	**295**	P		**P**		**16 38 06.4**	**+1.0**
SONM				pmax		pmax			
	comp=Z,1.0nm,1.0s								
TWGBT	**Beinan**	**25.81**	**228**	P		**P**		**16 38 11.5**	**+2.8**
H11N2	**WAKE ISLAND Hy**	**30.88**	**129**	T		T		17 11 23.9	
	baz=322,slow=75,SNR=78								
H11N1	**WAKE ISLAND Hy**	**30.89**	**129**	T		T		17 11 27.9	
	baz=322,slow=75,SNR=204								
H11N3	**WAKE ISLAND Hy**	**30.89**	**129**	T		T		17 11 26.3	
	baz=322,slow=75,SNR=75								
H11S1	**WAKE ISLAND Hy**	**31.73**	**130**	T		T		17 12 26.3	
	baz=324,slow=76,SNR=240								
H11S3	**WAKE ISLAND Hy**	**31.73**	**130**	T		T		17 12 32.3	
	baz=324,slow=76,SNR=170								
H11S2	**WAKE ISLAND Hy**	**31.75**	**130**	T		T		17 12 28.8	
	baz=324,slow=76,SNR=166								
C16K	**Lisburne Hills**	**38.10**	**29**	P		**P**		**16 39 54.4**	**-1.4**
ZAA0	**Zalesovo Array**	**38.79**	**308**	P		**P**		**16 40 02.3**	**+0.5**
ZALV	**Zalesovo Beam**	**38.79**	**309**	P		**P**		**16 40 02.2**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=98,slow=8.4,SNR=4.8								
ZALV				PcP		**PcP**		**16 42 13.2**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=94,slow=4.0,SNR=2.4								
	comp=Z,0.7nm,0.4s								
C18K	**Utukok River**	**39.68**	**29**	P		**P**		**16 40 08.8**	**-0.3**
C18K				IAmb		IAmb		16 40 09.3	
	comp=Z,5.4nm,1.2s								
E19K	**Redstone River**	**40.96**	**31**	P		**P**		**16 40 20.6**	**+0.9**
MKAR	**Makanchi Array**	**41.77**	**297**	P		**P**		**16 40 27.5**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=86,slow=9.8,SNR=10								
MKAR				PcP		**PcP**		**16 42 22.6**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=62,slow=5.0,SNR=1.8								
	comp=Z,0.5nm,0.6s								
B22K	**Teshekpuk Lake**	**42.65**	**27**	P		**P**		**16 40 32.9**	**-0.4**
KURK	**Kurchatov**	**43.10**	**304**	P		**P**		**16 40 37.9**	**+0.6**
KURK	**Kurchatov**	**43.10**	**304**	P		**P**		**16 40 37.9**	**+0.6**
KURK				pmax		pmax			
	comp=Z,2.0nm,0.6s								
KURK	**Kurchatov**	**43.10**	**304**	*e*P		**P**		**16 40 37.9**	**+0.6**
KURBB	**Kurchatov Arra**	**43.18**	**304**	P		**P**		**16 40 38.7**	**+0.8**
	comp=Z,1.7nm,0.5s,baz=77,slow=8.9,SNR=19								
KURBB				PcP		**PcP**		**16 42 27.0**	**0.0**
	comp=Z,0.3nm,0.5s,baz=67,slow=3.1,SNR=5.0								
	comp=Z,1.7nm,0.5s								
D24K	**Happy Valley**	**44.18**	**29**	P		**P**		**16 40 45.5**	**-0.2**
D24K				IAmb		IAmb		16 40 46.7	
	comp=Z,4.8nm,1.1s								
COLA	**College**	**44.73**	**35**	P		**P**		**16 40 50.6**	**+0.4**
COLA	**College**	**44.73**	**35**	P		**P**		**16 40 50.6**	**+0.4**
D25K	**Kavik River**	**45.05**	**29**	P		**P**		**16 40 52.6**	**-0.1**
D25K				IAmb		IAmb		16 40 54.9	
	comp=Z,3.8nm,1.2s								
ILAR	**Eielson Array**	**45.15**	**35**	P		**P**		**16 40 53.7**	**+0.1**
	comp=Z,0.9nm,0.9s,baz=270,slow=5.7,SNR=7.5								
ILAR				PcP		**PcP**		**16 42 32.8**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=292,slow=2.8,SNR=2.1								
	comp=Z,0.9nm,0.9s								
C27K	**Jago River**	**45.97**	**28**	P		**P**		**16 41 00.7**	**+0.7**
C27K				IAmb		IAmb		16 41 01.9	
	comp=Z,3.5nm,1.1s								
EVN	**Everest**	**46.34**	**271**	P		**P**		**16 41 05.5**	**+1.4**
EVN				IAmb		IAmb		16 41 06.4	
	comp=Z,2.7nm,0.6s								
KDJ	**Kajisay**	**46.77**	**293**	P		**P**		**16 41 08.2**	**+1.3**
KDJ				IAmb		IAmb		16 41 47.0	
	comp=Z,4.3nm,1.5s								
KDJ	**Kajisay**	**46.77**	**293**	P		**P**		**16 41 08.2**	**+1.3**
KDJ				pmax		pmax			
	comp=Z,4.0nm,1.5s								
BVAR	**Borovoye Array**	**47.41**	**309**	P		**P**		**16 41 12.8**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=77,slow=9.0,SNR=11								
BVAR				PcP		**PcP**		**16 42 42.4**	**+0.8**
	comp=Z,0.3nm,0.4s,baz=74,slow=5.1,SNR=2.7								
	comp=Z,0.7nm,0.3s								
E28M	**Babbage River**	**47.57**	**29**	P		**P**		**16 41 12.7**	**+0.2**
E28M				IAmb		IAmb		16 41 14.5	
	comp=Z,4.6nm,1.4s								
K29M	**Barlow Dome**	**49.33**	**35**	P		**P**		**16 41 27.5**	**+1.3**
K29M				IAmb		IAmb		16 41 53.1	
	comp=Z,5.3nm,1.4s								
H31M	**Peel River**	**50.14**	**32**	P		**P**		**16 41 33.6**	**+1.4**
H31M				IAmb		IAmb		16 41 34.4	
	comp=Z,3.3nm,0.8s								
AB31	**Akbulak array**	**54.91**	**308**	P		**P**		**16 42 07.8**	**0.0**
ABKAR	**Akbulak array**	**54.91**	**308**	P		**P**		**16 42 07.8**	**0.0**
RES	**Resolute Bay**	**57.64**	**15**	P		**P**		**16 42 26.7**	**-0.1**
RES	**Resolute Bay**	**57.64**	**15**	P		**P**		**16 42 26.7**	**-0.1**
RES				pmax		pmax			
	comp=Z,5.0nm,1.1s								
YKA	**Yellowknife Ar**	**59.34**	**32**	P		**P**		**16 42 37.8**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=306,slow=8.1,SNR=4.5								
	comp=Z,0.2nm,0.4s								
WB0	**Warramunga Arr**	**61.94**	**188**	P		**P**		**16 42 57.1**	**+0.1**
WR8	**Warramunga Arr**	**62.12**	**188**	P		**P**		**16 42 58.1**	**-0.1**
WR8				IAmb		IAmb		16 43 05.2	
	comp=Z,3.8nm,1.0s								
WRA	**Warramunga Arr**	**62.12**	**188**	P		**P**		**16 42 58.3**	**0.0**
	comp=Z,0.7nm,0.6s,baz=4.7,slow=7.0,SNR=22								
	comp=Z,0.7nm,0.6s								
ILON	**Igloolik, Nuna**	**64.30**	**16**	P		**P**		**16 43 10.8**	**-1.4**
ILON				IAmb		IAmb		16 43 19.8	
	comp=Z,3.8nm,1.3s								
FINES	**FINESS Array B**	**64.43**	**331**	P		**P**		**16 43 13.7**	**+0.6**
	comp=Z,2.1nm,0.5s,baz=42,slow=8.1,SNR=28								
	comp=Z,2.1nm,0.5s								
FINES	**FINESS Array B**	**64.43**	**331**	P		**P**		**16 43 12.8**	**-0.4**
ASAR	**Alice Springs**	**65.85**	**188**	P		**P**		**16 43 23.1**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=5.6,slow=6.8,SNR=7.9								
	comp=Z,0.2nm,0.5s								
ASAR	**Alice Springs**	**65.85**	**188**	P		**P**		**16 43 23.0**	**+0.3**
NC405	**NORSAR Array S**	**69.38**	**337**	P		**P**		**16 43 44.7**	**+0.1**
HFS	**Hagfors**	**69.55**	**335**	P		**P**		**16 43 46.2**	**+0.5**
	comp=Z,2.5nm,0.3s,baz=32,slow=5.4,SNR=29								
	comp=Z,2.5nm,0.3s								
NB2	**NORSAR Subarra**	**69.59**	**337**	P		**P**		**16 43 46.5**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=35,slow=6.5								
NOA	**NORSAR Array B**	**69.59**	**337**	P		**P**		**16 43 46.3**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=51,slow=5.7,SNR=4.5								
	comp=Z,0.6nm,0.5s								
AKASG	**Malin Array Be**	**70.43**	**321**	P		**P**		**16 43 51.2**	**0.0**
	comp=Z,0.9nm,0.6s,baz=43,slow=6.2,SNR=7.1								
	comp=Z,0.9nm,0.6s								
BURAR	**Bucovina Array**	**74.47**	**321**	P		**P**		**16 44 14.9**	**-0.5**
TXAR	**Lajitas Array**	**86.87**	**53**	P		**P**		**16 45 21.1**	**-1.0**
	comp=Z,0.3nm,0.5s,baz=305,slow=4.4,SNR=3.5								
	comp=Z,0.3nm,0.5s								
TXAR	**Lajitas Array**	**86.87**	**53**	P		**P**		**16 45 21.8**	**-0.3**
TXAR	**Lajitas Array**	**86.87**	**53**	P		**P**		**16 45 21.8**	**-0.3**

*OSPL **18** 16:43:09.0±0.4, 17.88N×66.81W, h12km±4km, ML2.6, Presumed earthquake*
*NEIC **18** 16:43:09.5±1.8, 18.00N±0.03×66.805W±0.009, h10km±1km, ML2.9/33, Md2.7/5(RSPR), Error ellipse: s-maj=4.4km s-min=2.2km az=178.0*
*SDD **18** 16:43:10.3±1.4, 18.01N×66.81W, h3km±5km, MD2.5, ML2.7, MW2.7, Presumed earthquake*

ISC 18 16:43:08.9±0.9, 18.00N±0.04×66.81W±0.02, h18km±2km, n29, σ0s45/53, 1C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.07**	**250**		**Pg**	**16 43 12.5**	**+0.2**
GBPR					**Sg**	**16 43 14.9**	**+0.3**
OBIP	**Obispado Ponce**	**0.20**	**77**	Pg	**Pg**	**16 43 14.0**	**+0.2**
OBIP				Sg	**Sg**	**16 43 17.4**	**+0.3**
OBIP	**Obispado Ponce**	**0.20**	**77**	*i* P	**Pg**	**16 43 14.0**	**+0.2**
OBIP				*e*S	**Sg**	**16 43 17.5**	**+0.3**
OBIP				IAML		16 43 17.6	
	comp=Z,997nm,0.2s						
MLPR	**Magueyes Islan**	**0.23**	**262**	Pg	**Pb**	**16 43 14.0**	**-0.3**
MLPR				Sg	**Sb**	**16 43 17.6**	**-0.1**
MLPR				IAML		16 43 18.3	
	comp=Z,2μm,0.2s						
MLPR	**Magueyes Islan**	**0.23**	**262**	*i* P	**Pb**	**16 43 14.2**	**0.0**
MLPR				*i* S	**Sb**	**16 43 17.8**	**0.0**
MLPR				IAML		16 43 18.6	
	comp=N,422nm,0.2s						
CELP	**Cerrillos**	**0.23**	**71**	Pg	**Pb**	**16 43 14.4**	**0.0**
CELP				Sg	**Sg**	**16 43 18.4**	**+0.4**
CELP				IAML		16 43 18.7	
	comp=N,2μm,0.2s						
CELP				IAML		16 43 18.8	
	comp=N,2μm,0.5s						
CELP	**Cerrillos**	**0.23**	**71**	*i* P	**Pg**	**16 43 14.6**	**+0.3**
CELP				*i* S	**Sg**	**16 43 18.3**	**+0.4**
CELP				IAML		16 43 18.6	
	comp=N,579nm,0.2s						
UUPR	**Utuado, UPR, P**	**0.27**	**18**	Pg	**Pb**	**16 43 14.8**	**-0.3**
CRPR	**Cabo Rojo, PR**	**0.29**	**271**	Pg	**Pg**	**16 43 14.8**	**-0.4**
CRPR				Sg	**Sb**	**16 43 19.1**	**-0.7**
CRPR				IAML		16 43 19.6	
	comp=N,1μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.29**	**271**	*i* P	**Pg**	**16 43 15.0**	**-0.2**
CRPR				*e*S	**Sb**	**16 43 19.2**	**-0.6**
CRPR				IAML		16 43 19.6	
	comp=Z,1μm,0.1s						
LSP	**Las Mesas**	**0.32**	**304**		**Pg**	**16 43 15.9**	**+0.1**
LSP					**Sg**	**16 43 20.8**	**+0.4**
AOPR	**Arecibo Observ**	**0.35**	**9**	Pg	**Pg**	**16 43 16.2**	**-0.1**
AOPR				Sg	**Sg**	**16 43 21.2**	**-0.2**
AOPR	**Arecibo Observ**	**0.35**	**9**	*i* P	**Pg**	**16 43 16.3**	**0.0**
AOPR				*i* S	**Sg**	**16 43 21.3**	**0.0**
AOPR				IAML		16 43 22.9	
	comp=N,4μm,0.2s						
PRSN	**Puerto Rico Se**	**0.39**	**304**		**Pg**	**16 43 16.6**	**-0.3**
PRSN					**Sg**	**16 43 22.2**	**-0.1**
PRSN	**Puerto Rico Se**	**0.39**	**304**	*i* P	**Pg**	**16 43 16.9**	**-0.1**
PRSN				*i* S	**Sg**	**16 43 22.3**	**-0.1**
PRSN				IAML		16 43 25.0	
	comp=N,5μm,0.2s						
ECPR	**Experimental S**	**0.53**	**53**	Pg	**Pb**	**16 43 18.9**	**-0.7**
ECPR				Sg	**Sb**	**16 43 26.8**	**-0.1**
ECPR				IAML		16 43 28.0	
	comp=N,657nm,0.2s						
ECPR				IAML		16 43 28.5	
	comp=N,535nm,0.3s						
EMPR	**Esperanza - Ma**	**0.54**	**29**		**Pb**	**16 43 20.0**	**+0.2**
EMPR					**Sb**	**16 43 27.6**	**+0.3**
AGPR	**Aguadilla, PR**	**0.55**	**328**	Pg	**Pb**	**16 43 19.2**	**-0.7**
AGPR	**Aguadilla, PR**	**0.55**	**328**	*i* P	**Pb**	**16 43 19.5**	**-0.4**
AGPR				*i* S	**Sb**	**16 43 27.0**	**-0.4**
AGPR				IAML		16 43 31.7	
	comp=N,260nm,0.3s						
SJG	**San Juan**	**0.64**	**80**	Pg	**Pb**	**16 43 20.6**	**-0.8**
SJG				Sg	**Sb**	**16 43 29.5**	**-0.4**
SJG				IAML		16 43 31.1	
	comp=N,424nm,0.3s						
SJG				IAML		16 43 31.6	
	comp=N,400nm,0.2s						
SJG	**San Juan**	**0.64**	**80**	*i* P	**Pb**	**16 43 20.9**	**-0.5**
SJG				*i* S	**Sb**	**16 43 29.9**	**0.0**
SJG	**San Juan**	**0.64**	**80**	*i* P	**Pb**	**16 43 20.8**	**-0.6**
SJG				*e*S	**Sb**	**16 43 29.9**	**0.0**
SJG				IAML		16 43 30.7	
	comp=Z,230nm,0.3s						
IDE	**Isla Desecheo**	**0.74**	**301**		**Pb**	**16 43 22.7**	**-0.6**
IDE					**Sb**	**16 43 32.6**	**-0.4**
PDPR	**Patillas Dam,**	**0.75**	**88**	Pg	**Pb**	**16 43 22.5**	**-0.9**
PDPR				Sg	**Sb**	**16 43 33.0**	**-0.2**
HUMP	**Col San Antoni**	**0.92**	**81**		**Pb**	**16 43 25.1**	**-1.2**
CUPR	**Culebra, Puert**	**1.48**	**78**	Pn	**Pn**	**16 43 34.7**	**+0.1**
HIDR	**Higuey Centro**	**1.91**	**288**	*i* P	**Pb**	**16 43 43.0**	**-0.1**
HIDR				*i* S	**Sn**	**16 44 04.8**	**+0.8**
HIDR				IAML		16 44 48.1	
	comp=N,78nm,0.1s						
HATOM	**Hato Mayor del**	**2.57**	**288**	*i* P	**Pn**	**16 43 50.6**	**+1.1**
HATOM				*i* S	**Sn**	**16 44 20.6**	**+0.2**
HATOM				IAML		16 44 48.6	
	comp=N,17nm,2.0s						
BANI	**BANI**	**3.40**	**277**	*i* P	**Pn**	**16 44 01.6**	**+0.5**
BANI				IAML		16 45 44.2	
	comp=N,42nm,1.6s						

*NOU **18** 16:55:57.9, 36.06S×178.41W, h107km, MLv5.6/11, East of North Island, N.Z.*
*BJI **18** 16:56:14.7, 36.67S×179.74E, h6km, mB5.8/3, mb5.3/13*
*MOS **18** 16:56:18.7±1.2, 36.49S×179.00E, h18km, mb5.0/15, Error ellipse: s-maj=16.0km s-min=10.8km az=124.1*
*WEL **18** 16:56:23.0±0.9, 36°S±4'×17°9E±', h33km, M5.1/103, ML4.8/25, MLv5.1/103, Error ellipse: s-maj=8.7km s-min=5.2km az=75.9, confirmed*
*NEIC **18** 16:56:24.1±1.7, 36.59S±0.07×179.0E±0.1, h47km±4km, mb5.1/41, Error ellipse: s-maj=15.4km s-min=9.6km az=77.0*
*IDC **18** 16:56:26.1±1.7, 36.49S×178.99E, h70km±14km, mb4.4/17, mbtmp4.7/20, MS4.0/14, Error ellipse: s-maj=14.8km s-min=13.2km az=44.0*

ISC 18 16:56:23.3±0.6, 36.54S±0.04×179.15E±0.05, h47km±4km, n420, σ1s88/402, mb5.1/59, MS4.0/12, 6C-3D, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.23**	**213**	P	**Pn**	**16 56 42.9**	**-1.1**
MXZ	**Matakaoa Point**	**1.23**	**213**		**Pn**	**16 56 42.8**	**-1.1**
MXZ	**Matakaoa Point**	**1.23**	**213**	P	**Pn**	**16 56 42.9**	**-1.1**
MXZ				S	**Sn**	**16 56 59.2**	**-0.2**
TDHS	**Te Araroa Dist**	**1.26**	**209**	P	**Pn**	**16 56 47.9**	**+3.5**
WMGZ	**Waiomatatini S**	**1.41**	**204**	P	**Pn**	**16 56 47.5**	**+1.0**
WMGZ				S	**Sn**	**16 57 08.8**	**+4.9**
PKGZ	**Pakihiroa**	**1.58**	**212**	P	**Pn**	**16 56 49.1**	**+0.2**
PKGZ				S	**Sn**	**16 57 13.7**	**+5.6**
HAZ	**Te Kaha**	**1.64**	**221**	P	**Pn**	**16 56 48.4**	**-1.1**
HAZ				S	**Sn**	**16 57 12.8**	**+3.4**
PUZ	**Puketiti**	**1.69**	**205**	P	**Pn**	**16 56 50.8**	**+0.4**
PUZ				S	**Sn**	**16 57 15.8**	**+5.0**
RUGZ	**Raukumara Rang**	**1.85**	**219**	P	**Pn**	**16 56 52.8**	**+0.2**
WIZ	**White Island**	**1.85**	**237**	P	**Pn**	**16 56 51.6**	**-0.9**
WIZ				S	**Sn**	**16 57 13.2**	**-1.5**
WSRZ	**White Island S**	**1.86**	**237**	P	**Pn**	**16 56 52.4**	**-0.2**
WSRZ				S	**Sn**	**16 57 11.6**	**-3.3**
TWGZ	**Tauwhareparae**	**1.88**	**209**	P	**Pn**	**16 56 54.0**	**+0.9**
CNGZ	**Carnagh Station**	**2.08**	**201**	P	**Pn**	**16 56 56.5**	**+0.8**
CNGZ				S	**Sn**	**16 57 22.7**	**+2.2**
TKGZ	**Te Karaka**	**2.16**	**208**	P	**Pn**	**16 56 57.1**	**+0.2**
WHRZ	**Whale Island**	**2.18**	**232**	P	**Pn**	**16 56 59.1**	**+2.1**
MWZ	**Matawai**	**2.21**	**215**	P	**Pn**	**16 56 58.0**	**+0.5**
URZ	**Urewera**	**2.37**	**223**	P	**Pn**	**16 57 00.6**	**+1.0**
	1μm,0.6s,baz=262,slow=2.5,SNR=983						
URZ				S	**Sn**	**16 57 26.5**	**-0.9**
	948nm,0.3s,baz=352,slow=5.8,SNR=7.0						
URZ				LR	LR	16 58 16.3	
	comp=Z,2μm,18.5s,baz=12,slow=48						
URZ	**Urewera**	**2.37**	**223**	P	**Pn**	**16 57 00.1**	**+0.5**
URZ	**Urewera**	**2.37**	**223**	P	**Pn**	**16 56 59.9**	**+0.3**
URZ				S	**Sn**	**16 57 28.7**	**+1.3**
RAGZ	**Rawiri**	**2.39**	**215**	P	**Pn**	**16 57 00.7**	**+0.7**
RIGZ	**Rimuhau**	**2.43**	**206**	P	**Pn**	**16 57 00.6**	**+0.1**
MYRZ	**Mayor Island**	**2.44**	**251**	P	**Pn**	**16 57 00.4**	**-0.3**
MYRZ				S	**Sn**	**16 57 29.0**	**-0.3**
MARZ	**Manawahe**	**2.45**	**233**	P	**Pn**	**16 57 01.1**	**+0.4**
OPRZ	**Ohinepanea**	**2.45**	**237**	P	**Pn**	**16 57 01.5**	**+0.8**
EDRZ	**Edgecumbe**	**2.48**	**230**	P	**Pn**	**16 57 02.6**	**+1.4**
PRGZ	**Paritu Road**	**2.59**	**202**	P	**Pn**	**16 57 02.0**	**-0.6**
TGRZ	**Tauranga**	**2.60**	**242**	P	**Pn**	**16 57 03.0**	**+0.2**
LIRZ	**Lichensteins R**	**2.65**	**236**	P	**Pn**	**16 57 05.1**	**+1.6**
MKRZ	**Makatiti**	**2.67**	**232**	P	**Pn**	**16 57 06.4**	**+2.6**
RTZ	**Ruatahuna**	**2.70**	**219**		**Pn**	**16 57 03.3**	**-0.9**
RTZ	**Ruatahuna**	**2.70**	**219**	P	**Pn**	**16 57 04.4**	**+0.1**
TARZ	**Mount Tarawera**	**2.70**	**230**	P	**Pn**	**16 57 06.0**	**+1.7**
MUGZ	**Murupara**	**2.71**	**224**	P	**Pn**	**16 57 04.7**	**+0.4**
OMRZ	**Omania**	**2.71**	**234**	P	**Pn**	**16 57 05.6**	**+1.2**
KNZ	**Kokohu**	**2.74**	**205**	P	**Pn**	**16 57 03.8**	**-0.9**
KARZ	**Kaharoa**	**2.75**	**236**	P	**Pn**	**16 57 05.2**	**+0.4**
RRRZ	**Republican Roa**	**2.76**	**229**	P	**Pn**	**16 57 06.1**	**+1.0**
MHGZ	**Mahia Peninsul**	**2.79**	**200**	P	**Pn**	**16 57 04.9**	**-0.6**
HLRZ	**Highlands Stat**	**2.81**	**232**	P	**Pn**	**16 57 07.0**	**+1.3**
NGRZ	**Ngongotaha**	**2.83**	**236**	P	**Pn**	**16 57 07.2**	**+1.2**
UTU	**Utuhina**	**2.87**	**234**	P	**Pn**	**16 57 08.8**	**+2.3**
KMRZ	**Kaimai**	**2.88**	**242**	P	**Pn**	**16 57 06.3**	**-0.3**
RAHZ	**Arahi**	**2.88**	**214**	P	**Pn**	**16 57 07.0**	**+0.2**
HSRZ	**Hossack Road**	**2.91**	**232**	P	**Pn**	**16 57 08.7**	**+1.6**
HRRZ	**Handcock Road**	**2.94**	**230**	P	**Pn**	**16 57 08.8**	**+1.4**
PRRZ	**Plateau Road**	**2.94**	**227**	P	**Pn**	**16 57 07.9**	**+0.5**
MTHZ	**Maungataniwha**	**2.95**	**218**	P	**Pn**	**16 57 07.6**	**0.0**
MTHZ					S	**Sn**	**16 57 42.8**	**+0.9**
WHHZ	**Waihua**	**2.96**	**210**	P	**Pn**	**16 57 07.5**	**-0.2**
WHHZ					S	**Sn**	**16 57 42.5**	**+0.6**
GRZ	**Great Barrier**	**2.99**	**274**	P	**Pn**	**16 57 08.7**	**+0.5**
ALRZ	**Allen Road**	**3.01**	**227**	P	**Pn**	**16 57 09.1**	**+0.7**
WPRZ	**Whakapapataran**	**3.09**	**229**	P	**Pn**	**16 57 10.6**	**+1.0**
TOZ	**Tahuroa Road**	**3.15**	**247**			**Pn**	**16 57 10.1**	**-0.2**
TOZ	**Tahuroa Road**	**3.15**	**247**	P	**Pn**	**16 57 10.3**	**0.0**
MRHZ	**Matea Rd**	**3.15**	**223**	P	**Pn**	**16 57 10.3**	**-0.2**
NMHZ	**Naumai**	**3.16**	**215**	P	**Pn**	**16 57 10.5**	**0.0**
ARHZ	**Aropaoanui**	**3.21**	**211**	P	**Pn**	**16 57 10.9**	**-0.3**
ARHZ					S	**Sn**	**16 57 48.8**	**+0.6**
WIAZ	**Waiheke Island**	**3.24**	**264**	P	**Pn**	**16 57 12.1**	**+0.5**
MKAZ	**Moumakai**	**3.25**	**259**	P	**Pn**	**16 57 12.0**	**+0.4**
MKAZ					S	**Sn**	**16 57 48.7**	**-0.4**
KUTZ	**Kaahu Road**	**3.29**	**233**	P	**Pn**	**16 57 13.5**	**+1.3**
WHTZ	**Whakaora**	**3.31**	**229**	P	**Pn**	**16 57 13.9**	**+1.3**
BKZ	**Black Stump Fm**	**3.36**	**218**	P	**Pn**	**16 57 12.8**	**-0.6**
BKZ	**Black Stump Fm**	**3.36**	**218**			**Pn**	**16 57 12.3**	**-1.0**
BKZ	**Black Stump Fm**	**3.36**	**218**	P	**Pn**	**16 57 12.7**	**-0.6**
TLZ	**Tolley Road**	**3.38**	**237**	P	**Pn**	**16 57 14.1**	**+0.5**
ETAZ	**East Tamaki Re**	**3.41**	**262**	P	**Pn**	**16 57 14.9**	**+0.9**
MBAZ	**Mutatupu North**	**3.42**	**265**	P	**Pn**	**16 57 14.9**	**+0.8**
KBAZ	**Karaka Road Bo**	**3.46**	**259**	P	**Pn**	**16 57 16.2**	**+1.6**
WATZ	**Wairara**	**3.47**	**230**	P	**Pn**	**16 57 15.5**	**+0.7**
ABAZ	**Army Bay**	**3.47**	**268**	P	**Pn**	**16 57 15.8**	**+1.0**
MCHZ	**McNeill Hill**	**3.49**	**213**	P	**Pn**	**16 57 14.5**	**-0.5**
CKHZ	**Cape Kidnapper**	**3.52**	**207**	P	**Pn**	**16 57 14.1**	**-1.3**
HBAZ	**Herne Bay Bore**	**3.56**	**264**	P	**Pn**	**16 57 17.6**	**+1.6**
KWHZ	**Kaweka Forest**	**3.60**	**216**	P	**Pn**	**16 57 16.0**	**-0.6**
AWAZ	**Awhitu Peninsu**	**3.65**	**260**	P	**Pn**	**16 57 18.4**	**+1.2**
KATZ	**Kakaramea**	**3.66**	**227**	P	**Pn**	**16 57 19.0**	**+1.5**
RVAZ	**Riverhead Bore**	**3.68**	**265**	P	**Pn**	**16 57 19.0**	**+1.4**
WTAZ	**Waiatarua**	**3.69**	**262**	P	**Pn**	**16 57 19.3**	**+1.4**
KAHZ	**Kahuranaki**	**3.71**	**208**	P	**Pn**	**16 57 16.5**	**-1.7**
TMVZ	**Te Maari**	**3.75**	**226**	P	**Pn**	**16 57 18.5**	**-0.2**
NTVZ	**North Tongarir**	**3.76**	**226**	P	**Pn**	**16 57 18.9**	**+0.1**
ETVZ	**East Tongariro**	**3.76**	**225**	P	**Pn**	**16 57 18.7**	**-0.2**
KRVZ	**Karewarewa**	**3.77**	**226**	P	**Pn**	**16 57 21.5**	**+2.5**
KRHZ	**Kereru**	**3.80**	**214**	P	**Pn**	**16 57 17.8**	**-1.5**
OTVZ	**Oturere**	**3.81**	**225**	P	**Pn**	**16 57 20.0**	**+0.5**
WTVZ	**West Tongariro**	**3.82**	**226**	P	**Pn**	**16 57 19.9**	**+0.3**
SNVZ	**South Ngauruho**	**3.83**	**225**	P	**

MSZ	Milford Sound	11.77 223	P	Pn	16 59 07.3	-1.1	
MLZ	Mavora Lakes	12.13 220	P	Pn	16 59 11.1	-2.2	
SYZ	Scrubby Hill	12.48 214	P	Pn	16 59 15.0	-3.1	
WHZ	Wether Hill Ro	12.58 219	P	Pn	16 59 18.7	-0.7	
DCZ	Deep Cove	12.70 222	Pn	Pn	16 59 17.1	-3.9	
DZM	Mont Dzumac	18.15 319	P	Pn	17 00 32.6	+0.7	
	15nm,0.9s,baz=156,slow=12						
DZM			LR	LR	17 06 15.3		
	comp=Z,1μm,20.3s,baz=178,slow=33						
MSVF	Nonsavu	18.75 357	P	Pn	17 00 39.0	-0.3	
	9.9nm,0.5s,baz=193,slow=18,SNR=11						
MSVF			LR	LR	17 06 35.5		
	comp=Z,582nm,20.8s,baz=187,slow=33						
MSVF	Nonsavu	18.75 357	P	P	17 00 37.5	-1.0	
MSVF			IAmb	IAmb	17 00 53.1		
	comp=Z,180nm,1.9s						
MSVF	Nonsavu	18.75 357	P	Pn	17 00 39.0	-0.3	
SANVU	Saraoutou	23.54 330		P	17 01 29.4	0.0	
SANVU			IAmb	IAmb	17 01 34.8		
	comp=Z,74nm,0.7s						
ARMA	Armidale	23.70 277	P	P	17 01 30.9	0.0	
RAR	Rarotonga	23.88 56	LR	LR	17 09 33.3		
	comp=Z,161nm,19.9s,baz=228,slow=33						
CAN	Canberra	24.40 264	P	P	17 01 37.8	+0.5	
CAN	Canberra	24.40 264	P	P	17 01 37.8	+0.5	
CAN			pmax	pmax			
	comp=Z,33nm,1.2s						
TOO	Toolangi	26.80 258	P	P	17 01 59.2	+0.2	
TOO	Toolangi	26.80 258	P	P	17 01 59.2	+0.2	
TOO			pmax	pmax			
	comp=Z,17nm,1.4s						
STKA	Stephens Creek	31.27 267	P	P	17 02 38.3	-0.4	
	comp=Z,6.2nm,0.8s,baz=96,slow=12,SNR=12						
STKA			LR	LR	17 13 36.3		
	comp=Z,276nm,21.5s,baz=63,slow=33						
	comp=Z,6.2nm,0.8s						
STKA	Stephens Creek	31.27 267	P	P	17 02 38.6	-0.1	
STKA	Stephens Creek	31.27 267	P	P	17 02 38.6	-0.1	
STKA			pmax	pmax			
	comp=Z,105nm,1.3s						
HNR	Honiara	32.12 322	LR	LR	17 13 27.9		
	comp=Z,13nm,20.8s,baz=218,slow=32						
HNR	Honiara	32.12 322	P	P	17 02 45.8	-0.4	
HNR	Honiara	32.12 322	P	P	17 02 45.8	-0.4	
HNR			pmax	pmax			
	comp=Z,113nm,1.3s						
HNR	Honiara	32.12 322	P	P	17 02 45.8	-0.4	
CTA	Charters Tower	33.07 291	LR	LR	17 14 22.2		
	comp=Z,224nm,21.8s,baz=126,slow=33						
CTAO	Charters Tower	33.07 291	P	P	17 02 54.8	+0.3	
CTAO			IAmb	IAmb	17 02 59.3		
	comp=Z,21nm,1.0s						
CTAO	Charters Tower	33.07 291	P	P	17 02 54.8	+0.3	
CTAO			pmax	pmax			
	comp=Z,21nm,1.0s						
PPT	Papeete	33.44 64	LR	LR	17 14 46.4		
	comp=Z,76nm,20.4s,baz=222,slow=33						
INKA	Innaminka	33.50 274	P	P	17 02 58.2	0.0	
BBOO	Buckleboo	35.41 263	P	P	17 03 14.0	-0.8	
COEN	Coen	39.21 296	P	P	17 03 46.8	-0.2	
COEN			IAmb	IAmb	17 03 51.5		
	comp=Z,50nm,1.0s						
PMG	Port Moresby	39.62 305	LR	LR	17 18 26.6		
	comp=Z,464nm,21.4s,baz=148,slow=33						
PMG	Port Moresby	39.62 305	P	P	17 03 50.4	0.0	
PMG			IAmb	IAmb	17 03 55.3		
	comp=Z,34nm,1.0s						
PMG	Port Moresby	39.62 305	P	P	17 03 50.4	0.0	
PMG			pmax	pmax			
	comp=Z,34nm,1.0s						
PMG	Port Moresby	39.62 305	P	P	17 03 55.1	+4.7	
	comp=Z,36nm,1.0s						
PMG	Port Moresby	39.62 305	P	P	17 03 54.0	+3.5	
RABL	Rabaul	40.64 316		P	17 03 59.0	+0.1	
AS31	Alice Springs	40.84 275	IAmb	IAmb	17 04 16.4		
	comp=Z,16nm,0.7s						
ASAR	Alice Springs	40.84 275	P	P	17 03 59.8	-0.8	
	comp=Z,23nm,0.7s,baz=118,slow=7.8,SNR=214						
ASAR			ScP	ScP	17 09 40.5	-6.0	
	comp=Z,0.8nm,0.6s,baz=107,slow=4.0,SNR=6.7						
ASAR			S	S	17 10 06.0	-2.6	
	comp=Z,0.6nm,0.6s,baz=124,slow=14,SNR=5.3						
ASAR			LR	LR	17 20 59.1		
	comp=Z,292nm,19.1s,baz=120,slow=36						
	comp=Z,23nm,0.7s						
ASAR	Alice Springs	40.84 275		P	17 03 59.4	-1.2	
VNDA	Vanda	41.77 186	P	P	17 04 07.5	0.0	
	comp=Z,1.4nm,0.9s,baz=30,slow=8.1,SNR=2.7						
VNDA			LR	LR	17 18 28.5		
	comp=Z,136nm,18.5s,baz=7.0,slow=32						
	comp=Z,1.4nm,0.9s						
VNDA	Vanda	41.77 186	P	P	17 04 07.2	-0.3	
VNDA	Vanda	41.77 186	P	P	17 04 07.2	-0.3	
VNDA			pmax	pmax			
	comp=Z,8.0nm,1.3s						
WRAB	Tennant Creek	42.39 280	P	P	17 04 11.6	-1.7	
WRAB	Tennant Creek	42.39 280	*i* P	P	17 04 12.0	-1.2	
WRAB			pmax	pmax			
	comp=Z,16nm,0.9s						
WRAB	Tennant Creek	42.39 280	P	P	17 04 12.1	-1.2	
WRAB			PcP	PcP	17 06 09.8	+3.9	
WRA	Warramunga Arr	42.39 280	P	P	17 04 12.2	-1.1	
	comp=Z,8.8nm,0.5s,baz=120,slow=7.7,SNR=115						
WRA			ScP	ScP	17 09 48.9	-3.8	
	comp=Z,0.8nm,0.8s,baz=120,slow=3.2,SNR=3.7						
WRA			S	S	17 10 30.5	-1.1	
	comp=Z,1.1nm,1.0s,baz=125,slow=14,SNR=4.0						
	comp=Z,8.8nm,0.5s						
WB0	Warramunga Arr	42.45 281	P	P	17 04 11.8	-2.0	
WB0			IAmb	IAmb	17 04 17.3		
	comp=Z,20nm,0.9s						
FORT	Forrest	42.51 262	IAmb	IAmb	17 04 18.5		
	comp=Z,29nm,1.1s						
CCD	Concordia, Ant	46.41 197	P	P	17 04 47.1	+2.0	
CCD			pP	sP	17 05 01.3	-1.1	
CCD			sP	pwP	17 05 08.4	+8.1	
CASY	Casey	48.63 210	P	P	17 04 60.0	-2.0	
CASY	Casey	48.63 210	P	P	17 05 01.0	-1.0	
CASY			pP	pwP	17 05 16.9	-0.5	
CASY			PcP	PcP	17 06 25.4	-1.3	
JAY	Jayapura	49.00 305	LR	LR	17 24 30.3		
	comp=Z,183nm,20.4s,baz=69,slow=34						
KNRA	Kununurra	49.17 281		P	17 05 05.3	-1.4	
KNRA			IAmb	IAmb	17 05 10.1		
	comp=Z,10nm,0.7s						
FITZ	Fitzroy Crossi	50.31 276	LR	LR	17 27 08.2		
	comp=Z,357nm,18.0s,baz=120,slow=37						
MORW	Morawa	52.74 259	P	P	17 05 31.6	-1.9	
MORW			IAmb	IAmb	17 05 47.8		
	comp=Z,21nm,1.1s						
PSA00	Pilbara Seismi	53.17 269		P	17 05 34.5	-2.2	
PSA00			IAmb	IAmb	17 05 39.1		
	comp=Z,43nm,1.9s						
MBWA	Marble Bar	53.47 269		P	17 05 37.3	-1.7	
MBWA			IAmb	IAmb	17 05 42.5		
	comp=Z,21nm,1.1s						
MBWA	Marble Bar	53.47 269	P	P	17 05 36.2	-2.7	
MBWA			pP	pP	17 05 51.8	+0.6	
MBWA			PcP	PcP	17 06 43.4	-2.1	
QSPA	South Pole Qui	53.59 180	P	P	17 05 41.3	+2.0	
	comp=Z,9.7nm,0.7s,baz=205,slow=5.8,SNR=68						
QSPA			LR	LR	17 24 32.8		
	comp=Z,211nm,21.3s,baz=50,slow=31						
	comp=Z,9.7nm,0.7s						
QSPA	South Pole Qui	53.59 180	P	P	17 05 41.5	+2.2	
QSPA			IAmb	IAmb	17 05 56.4		
	comp=Z,14nm,0.8s						
BNDI	Bandanaira	55.21 293	P	P	17 05 54.4	+2.8	
	comp=Z,33nm,0.9s						
SOEI	Soe	56.19 284	P	P	17 06 03.4	+4.6	
	comp=Z,22nm,0.9s						
SIJI	Sorong	56.70 297	P	P	17 06 05.7	+3.4	
	comp=Z,20nm,1.1s						
SWI	Sorong	56.71 297	P	P	17 06 05.8	+3.5	
	comp=Z,28nm,0.8s						
KRAI	Karang Ratu	57.13 293	P	P	17 06 08.1	+2.8	
	comp=Z,1μmcomp=Z,9.8nm,0.8s						
MMRI	Maumere	58.45 284	P	P	17 06 17.7	+3.1	
	comp=Z,38nm,1.1s						
SANI	Sanana	59.76 292	P	P	17 06 23.4	-0.2	
	comp=Z,29nm,0.9s						
RPN	Rapa Nui	60.24 103	LR	LR	17 26 08.3		
	comp=Z,114nm,18.4s,baz=275,slow=30						
HMH	Humu'ula Sheep	60.77 28	P	P	17 06 32.3	+1.6	
DBNI	Kabupaten Domp	61.62 281	P	P	17 06 38.8	+2.4	
	comp=Z,13nm,0.9s						
BELA	Belgrano 2	64.04 172	P	P	17 06 52.2	+0.7	
BELA			IAmb	IAmb	17 07 08.3		
	comp=Z,21nm,0.9s						
MAW	Mawson	65.74 202	P	P	17 07 04.1	+1.5	
	comp=Z,2.3nm,0.5s,baz=136,slow=11,SNR=2.3						
	comp=Z,2.3nm,0.5s						
SNJI	Sawahan-Nganju	67.26 277	P	P	17 07 15.6	+2.2	
	comp=Z,38nm,0.8s						
PCJI	Pacitan	67.48 277	P	P	17 07 15.6	+1.0	
UGM	Wanagama	68.17 276	P	P	17 07 18.1	-0.9	
BBJI	Bungbulang	70.73 275	P	P	17 07 32.7	-2.1	
BBJI			IAmb	IAmb	17 07 50.0		
	comp=Z,19nm,0.9s						
TROLL	Troll, Antarti	71.73 181	P	P	17 07 41.1	+1.0	
SNAA	Sanae	72.08 179	P	P	17 07 42.5	+0.4	
	comp=Z,4.6nm,0.6s,baz=218,slow=9.1,SNR=3.7						
	comp=Z,4.6nm,0.6s						
SNAA	Sanae	72.08 179	P	P	17 07 42.4	+0.2	
SNAA			IAmb	IAmb	17 08 04.3		
	comp=Z,44nm,1.7s						
SNAA	Sanae	72.08 179	P	P	17 07 42.4	+0.2	
SNAA			pmax	pmax			
	comp=Z,44nm,1.7s						
VNA3	Neumayer Olymp	72.34 177	⇓P	P	17 07 44.3	+0.7	
	comp=Z,15nm,0.8s						
VNA2	Neumayer--Watz	72.74 178	⇓P	P	17 07 47.0	+1.1	
	comp=Z,10nm,0.6s,baz=171,slow=6.5						
VNA1	Neumayer--Stat	72.98 177	P	P	17 07 48.5	+1.1	
	comp=Z,1.9nm,0.4s						
KLSI		74.70 276	P	P	17 07 58.7	+0.3	
MDSI	Maura Dua	75.27 275	P	P	17 08 04.6	+3.0	
	comp=Z,34nm,0.8s						
H03S2	Juan Fernandez	79.05 124	T	T	18 35 09.0		
	baz=231,slow=74,SNR=5.6						
H03S1	Juan Fernandez	79.06 124	T	T	18 35 06.1		
	baz=231,slow=74,SNR=5.5						
H03S3	Juan Fernandez	79.07 124	T	T	18 35 10.2		
	baz=231,slow=74,SNR=4.9						
H03N3	Juan Fernandez	79.28 124	T	T	18 35 31.6		
	baz=230						
H03N2	Juan Fernandez	79.28 124	T	T	18 35 29.6		
	baz=230,slow=74						
H03N1	Juan Fernandez	79.29 124	T	T	18 35 21.2		
	baz=230,slow=74						
PLCA	Paso Flores	80.04 134	P	P	17 08 29.4	+1.4	
	comp=Z,2.7nm,0.9s,baz=240,slow=5.7,SNR=6.7						
	comp=Z,2.7nm,0.9s						
PLCA	Paso Flores	80.04 134	P	P	17 08 29.4	+1.4	
PLCA			IAmb	IAmb	17 08 45.7		
	comp=Z,36nm,2.0s						
PLCA	Paso Flores	80.04 134	P	P	17 08 29.4	+1.4	
PLCA			pP	sP	17 08 44.2	-1.8	
SSLB	Suanglung	81.31 308	P	P	17 08 33.0	-1.7	
MJAR	Matsushiro Arr	82.03 328	P	P	17 08 37.7	-0.6	
	comp=Z,4.8nm,0.9s,baz=158,slow=5.5,SNR=11						
	comp=Z,4.8nm,0.9s						
MJAR	Matsushiro Arr	82.03 328	P	P	17 08 37.2	-1.0	
MJAR	Matsushiro Arr	82.03 328	P	P	17 08 37.2	-1.0	
MJAR			pmax	pmax			
	comp=Z,4.0nm,1.0s						
MAJO	Matsushiro	82.03 328	P	P	17 08 38.9	+0.6	
MAJO			IAmb	IAmb	17 10 53.4		
	comp=Z,41nm,1.9s						
MAJO	Matsushiro	82.03 328	*i* P	P	17 08 37.6	-0.7	
MAJO			pmax	pmax			
	comp=Z,7.0nm,1.0s						
MJB9	Matsu-Tunnel	82.04 328	IAmb	IAmb	17 10 54.4		
	comp=Z,37nm,1.9s						
JNU	Nakatsue	82.67 321	P	P	17 08 40.9	-0.8	
	comp=Z,9.1nm,1.0s,baz=113,slow=9.3,SNR=3.8						
	comp=Z,9.1nm,1.0s						
BO02	Sierra Bellavi	83.73 129	P	P	17 08 48.6	+1.2	
BO02			IAmb	IAmb	17 09 34.6		
	comp=Z,50nm,1.7s						
JTM	Tenmabayashi	84.51 332	P	P	17 08 51.0	+0.1	
JTM			IAmb	IAmb	17 09 16.8		
	comp=Z,41nm,1.3s						
JKA	Kamikawa-asahi	86.86 335	P	P	17 09 03.4	+1.0	
ASAJ	Asahikawa	86.86 335	P	P	17 09 02.7	+0.3	
	comp=Z,8.5nm,0.9s,baz=336,slow=6.9,SNR=7.4						
	comp=Z,8.5nm,0.9s						
ASAJ	Asahikawa	86.86 335	P	P	17 09 03.4	+1.0	
ASAJ			pmax	pmax			
	comp=Z,58nm,1.6s						
KSRS	Korea Array	87.56 322	P	P	17 09 06.0	0.0	
	comp=Z,9.2nm,0.8s,baz=142,slow=5.2,SNR=17						
	comp=Z,9.2nm,0.8s						
KSAR	Wonju Array Be	87.58 322	P	P	17 09 06.3	+0.3	
KSAR	Wonju Array Be	87.58 322	P	P	17 09 06.3	+0.3	
NJ2	Nanjing	88.52 312	*e*P	P	17 09 11.4	+0.7	
NJ2			pmax	pmax			
	comp=Z,19nm,0.6s						
YSS	Yuzhno-Sakhali	89.29 336	*i* P	P	17 09 14.0	+0.1	
YSS			pmax	pmax			
	comp=Z,10.0nm,1.0s						
VLA	Vladivostok	90.20 327	*i* P	P	17 09 18.7	+0.4	
VLA			pmax	pmax			
	comp=Z,32nm,1.2s						
USRK	Ussuriysk Ar.	91.03 328	P	P	17 09 22.5	+0.4	
	comp=Z,7.6nm,0.8s,baz=184,slow=3.1,SNR=7.3						
	comp=Z,7.6nm,0.8s						
PEA0B	Petropavlovsk-	91.20 347	P	P	17 09 22.3	-0.4	
PEA0B	Petropavlovsk-	91.20 347	P	P	17 09 22.3	-0.4	
PETK	Petropavlovsk-	91.20 347	P	P	17 09 23.0	+0.3	
	comp=Z,9.3nm,0.8s,baz=112,slow=6.8,SNR=12						
	comp=Z,9.3nm,0.8s						
PETK	Petropavlovsk-	91.20 347	P	P	17 09 23.0	+0.3	
CMAR	Chiang Mai Arr	93.24 290	P	P	17 09 33.2	+0.2	
	comp=Z,5.5nm,0.9s,baz=149,slow=3.4,SNR=30						
CMAR			PP	PP	17 13 18.2	+0.8	
	comp=Z,0.3nm,0.4s,baz=132,slow=7.9,SNR=5.0						
	comp=Z,5.5nm,0.9s						
CMAR	Chiang Mai Arr	93.24 290		P	17 09 32.4	-0.6	
CHTO	Chiang Mai	93.45 291	P	P	17 09 34.7	+0.7	
CN2	Changchun	93.64 324	*e*P	P	17 09 36.3	+2.1	
CN2			pmax	pmax			
	comp=Z,10.0nm,0.8s						
LYN	LuoYang	94.10 311	*e*P	P	17 09 41.4	+4.8	
LYN			sP	pP	17 09 48.3	-1.4	
LYN			pmax	pmax			
	comp=Z,16nm,0.5s						
NVAR	Mina Array Bea	94.32 44	P	P	17 09 39.7	+1.9	
	comp=Z,0.4nm,0.4s,baz=224,slow=6.2,SNR=4.0						
	comp=Z,0.4nm,0.4s						
HNS	HongShan	94.69 314	⇓P	P	17 09 45.8	+6.6	
HNS			pmax	pmax			
	comp=Z,8.0nm,1.0s						
KLR	Kul'dur	95.18 331	P	P	17 09 40.8	-0.3	
	comp=Z,0.6nm,0.5s,baz=188,slow=7.1,SNR=3.9						
	comp=Z,0.6nm,0.5s						
KLR	Kul'dur	95.18 331	*i* P	P	17 09 40.9	-0.2	
KLR			pmax	pmax			
	comp=Z,2.0nm,1.0s						
PZH	PanZhiHua	96.07 298	P	P	17 09 47.4	+1.5	
N15K	Kwethluk River	97.86 10	P	Pdif	17 09 53.9	+0.8	
HHC	Hu-ho-hao-te	98.81 315	*e*P	Pdif	17 09 59.4	+1.4	
HHC			pmax	pmax			
	comp=Z,2.0nm,0.7s						
HHC			pmax	pmax			
	comp=Z,67nm,4.4s						
BTO2	Baotou	99.72 314	*e*P	Pdif	17 10 03.6	+1.6	
BTO2			pmax	pmax			
	comp=Z,8.0nm,0.6s						
YKA	Yellowknife Ar	111.98 27	PKiKP	PKiKP	17 14 53.9	+1.6	
	comp=Z,0.2nm,0.5s,baz=265,slow=2.2,SNR=4.7						
YKA			PP	PP	17 15 35.5	-1.5	
	comp=Z,0.2nm,0.4s,baz=240,slow=7.6,SNR=4.1						
WMQ	Urumqi	115.07 307	*e*PKP	PKPdf	17 14 55.6	-3.3	
DGZ	Jazzator, Alta	117.80 313	*i* PKIKP	PKPdf	17 15 02.7	-1.4	
DGZ			pmax	pmax			
	comp=Z,1.0nm,0.9s						
MK31	Makanchi Array	119.78 308	*c i* PKIKP	PKPdf	17 15 06.9	-0.9	
MKAR	Makanchi Array	119.78 308	PKP	PKPdf	17 15 05.7	-2.1	
	comp=Z,2.0nm,0.8s,baz=129,slow=0.4,SNR=16						
MAKZ	Makanchi	119.99 308		PKPdf	17 15 05.9	-2.3	
MAKZ	Makanchi	119.99 308	PKIKP	PKPdf	17 15 05.9	-2.3	
ZALV	Zalesovo Beam	120.93 317	PKP	PKPdf	17 15 07.8	-2.0	
	comp=Z,0.4nm,0.3s,baz=253,slow=1.5,SNR=3.5						
ZALV	Zalesovo Beam	120.93 317	PKPdf	PKPdf	17 15 07.9	-1.8	
ZALV	Zalesovo Beam	120.93 317	PKIKP	PKPdf	17 15 07.9	-1.8	
KSH2	Kashi	121.31 298	PKP	PKiKP	17 15 12.3	+1.0	
AAK	Ala-Archa	123.39 301	PKPdf	PKPdf	17 15 15.0	-0.1	
AAK	Ala-Archa	123.39 301	*c i* PKIKP	PKPdf	17 15 14.7	-0.4	
AAK			pmax	pmax			
	comp=Z,2.0nm,1.0s						
KURK	Kurchatov	123.44 311	PKPdf	PKPdf	17 15 12.6	-2.0	
KURK	Kurchatov	123.44 311	*c i* PKIKP	PKPdf	17 15 13.4	-1.2	
KURK			pmax	pmax			
	comp=Z,4.0nm,0.7s						
KURBB	Kurchatov Arra	123.47 311	PKP	PKPdf	17 15 12.7	-2.0	
	comp=Z,4.0nm,0.8s,baz=114,slow=1.8,SNR=19						
RES	Resolute Bay	123.80 19	PKPdf	PKPdf	17 15 15.1	+0.4	
RES	Resolute Bay	123.80 19	PKIKP	PKPdf	17 15 15.1	+0.4	
NRIK	Noril'sk	124.20 335	PKP	PKPdf	17 15 15.3	-0.2	
	comp=Z,1.0nm,0.4s,baz=188,slow=2.5,SNR=4.3						
GAR	Garm	125.03 296	PKPdf	PKPdf	17 15 17.9	-0.4	
CHGR	Chuyangaron	125.75 295	*i* PKIKP	PKPdf	17 15 18.1	-1.5	
CHGR			pmax	pmax			
	comp=Z,4.0nm,0.9s						
BVAR	Borovoye Array	128.96 313	PKP	PKPdf	17 15 23.8	-1.3	
	comp=Z,2.3nm,0.7s,baz=101,slow=3.0,SNR=12						
BORK	Borovoye	129.01 313	*c i* PKIKP	PKPdf	17 15 25.1	-0.1	
BORK			pmax	pmax			
	comp=Z,3.0nm,0.7s						
ARTI	Arti	136.20 316	PKP	PKPdf	17 15 38.8	+0.1	
	comp=Z,1.7nm,0.3s,baz=207,slow=2.3,SNR=4.3						
ARTI	Arti	136.20 316	*i* PKIKP	PKPdf	17 15 39.4	+0.7	
ARTI					17 18 20.8		
AKTO	Aktyubinsk	136.22 308	PKP	PKPdf	17 15 37.9	-1.0	
	comp=Z,2.3nm,0.6s,baz=104,slow=2.5,SNR=6.8						
SPITS	Spitsbergen Ar	137.61 355	PKP	PKPdf	17 15 39.7	-1.1	
	comp=Z,2.9nm,0.7s,baz=76,slow=4.4,SNR=6.8						
BELG	Belogornoye	142.71 311	PKhKP	PKPpre	17 15 46.6		
	comp=Z,5.3nm,0.6s,baz=63,slow=6.8,SNR=2.6						
BELG	Belogornoye	142.71 311	*i* PKIKP	PKPdf	17 15 51.0	+0.4	
ARA0	ARCESS Array S	143.97 345	*e*PKPdf	PKPab	17 15 50.6	+0.8	
ARCES	ARCESS Array B	143.97 345	PKP	PKPab	17 15 50.2	+0.4	
	comp=Z,2.3nm,0.5s,baz=44,slow=3.2,SNR=20						
ARCES	ARCESS Array B	143.97 345	PKPdf	PKPab	17 15 50.1	+0.3	
KLMR	Klimovskoe	144.81 327	*e*PKIKP	PKPab	17 15 52.1	-1.0	
KLMR			pmax	pmax			
	comp=Z,11nm,0.9s						
KTK1	Kautokeino	144.87 345	*e*PKPdf	PKPab	17 15 52.4	-0.8	
TRO	Tromso	145.14 348	*e*PKPbc	PKPbc	17 15 52.6	-1.4	
NCK	Nalchik	145.58 296	*i* PKP2	PKPdf	17 15 54.4	-1.6	
KBZ	Khabaz	146.10 296	PKPbc	PKPdf	17 15 57.1	+0.4	
	comp=Z,4.8nm,0.9s,baz=165,slow=1.5,SNR=6.1						
NEUR	Neytrino	146.22 295	*i* PKIKP	PKPdf	17 15 57.1	-0.2	
KIV	Kislovodsk	146.27 296	*e*PKP2	PKPbc	17 15 59.5	+1.0	
KIV			pmax	pmax			
	comp=Z,7.0nm,1.0s						
SHA1	Shidzhatmaz	146.28 296	*c i* PKP2	PKPbc	17 15 59.1	+0.4	
VRH	Novokhopyorsk	146.50 310	*e*PKP2	PKPdf	17 15 57.5	+0.3	
VRH			pmax	pmax			
	comp=Z,30nm,0.8s						
STEI	Steigen	147.27 349	*e*PKPbc	PKPdf	17 15 59.0	+1.0	
LOF	Lofoten	147.33 350	*e*PKPbc	PKPdf	17 15 59.1	+1.0	
MOS	Moscow	147.72 319	*e*PKP2	PKPdf	17 16 00.7	+1.6	
MOS			pmax	pmax			
	comp=Z,34nm,0.8s						
FAUS	Fauske	147.76 348	*e*PKPbc	PKPdf	17 16 00.2	+1.3	
LPSR	Galich'ya Gora	147.91 313	*e*PKP2	PKPbc	17 16 01.9	-0.7	
LPSR			pmax	pmax			
	comp=Z,20nm,0.7s						
VORR	Voronezh	147.96 311	*e*PKP2	PKPbc	17 16 02.4	-0.4	
VORR			pmax	pmax			
	comp=Z,82nm,0.6s						
VORD	Divnogorie	148.05 310	*e*PKIKP	PKPdf	17 16 01.4	+1.6	
VORD			pmax	pmax			
	comp=Z,20nm,0.7s						
VSR	Storozhevoye	148.08 310	*e*PKP2	PKPbc	17 16 02.2	-0.9	
VSR			pmax	pmax			
	comp=Z,20nm,0.7s						
OBN	Obninsk	148.50 318	*c i* PKP2	PKPbc	17 16 03.8	-0.3	
OBN			*e*		17 19 35.6		
OBN			*e*SS	SS	17 39 30.2	+51	
OBN			pmax	pmax			
	comp=Z,16nm,1.1s						
VAGH	Vaagaholmen	148.68 349	*e*PKPbc	PKPdf	17 16 02.4	+2.1	
KONS	Konsvik	148.91 349	*e*PKPbc	PKPdf	17 16 03.2	+2.4	
MOR8	Moi Rana	149.01 348	*e*PKPbc	PKPdf	17 16 03.3	+2.3	
STOK	Stokkvaagen	149.09 349	*e*PKPbc	PKPbc	17 16 04.3	-0.9	
LEIR	Leirfjorden	149.28 349	*e*PKPbc	PKPbc	17 16 04.6	-1.1	
FIA1	FINESS Array S	149.86 334	PKPdf	PKPdf	17 16 05.1	+2.7	
FINES	FINESS Array B	149.87 334	PKPbc	PKPbc	17 16 06.0	-1.3	
	comp=Z,12nm,0.6s,baz=30,slow=4.2,SNR=47						
FINES	FINESS Array B	149.87 334	PKHKP	PKPpre	17 16 06.0		
DBIC	Dimbokro	150.05 172	PKPbc	PKiKP	17 16 10.4	+0.3	
	comp=Z,5.9nm,0.8s,baz=170,slow=2.4,SNR=3.6						
MMAI	Mount Meron Ar	150.12 274	PKPbc	PKiKP	17 16 10.4	+0.6	
	comp=Z,1.2nm,0.4s,baz=82,slow=6.8,SNR=8.9						
NSS	Namsos	150.93 349	*e*PKPbc	PKPbc	17 16 08.3	-1.4	
BRTR	Keskin Array B	152.78 287	PKPbc	PKPbc	17 16 13.2	-1.8	
	comp=Z,7.2nm,0.9s,baz=137,slow=4.2,SNR=18						
DOMB	Dombas	153.72 349	*e*PKPbc	PKPbc	17 16 15.0	-1.2	
AKN	Aaknes	153.87 352	*e*PKPbc	PKPbc	17 16 15.5	-0.9	
AKASG	Malin Array Be	154.24 313	PKPbc	PKPbc	17 16 15.9	-1.7	
	comp=Z,4.4nm,0.7s,baz=63,slow=2.3,SNR=17						
KIEV	Kiev	154.25 313		PKPbc	17 16 17.0	-0.6	
KIEV	Kiev	154.25 313	PKIKP	PKPbc	17 16 17.0	-0.6	
NB2	NORSAR Subarra	154.31 346	PKP	PKPbc	17 16 17.5	0.0	
	comp=Z,

1.9nm,0.5s
RCBR Riachuelo 12.50 240 eP Pn 17 05 44.2 +0.2
H10N3 ASCENSION HYDR 13.34 128 T T 17 19 28.1
baz=306,slow=75,SNR=406
H10N2 ASCENSION HYDR 13.34 128 T T 17 19 29.7
baz=306,slow=75,SNR=186
H10N1 ASCENSION HYDR 13.36 128 T T 17 19 27.1
baz=306,slow=75,SNR=493
NBPA Parau_RN 13.53 243 eP Pn 17 05 58.7 +0.8
NBMO Morrinhos-CE 15.45 256 eP Pn 17 06 24.7 +0.7
NBMA Muriti-CE 15.73 240 eP Pn 17 06 28.3 +0.7
NBPS Pedro II - PI 17.08 254 eP Pn 17 06 45.6 +0.7
DBIC Dimbokro 21.06 72 P **P 17 07 30.2 -0.1**
7.7nm,0.8s,baz=276,slow=12,SNR=6.4
DBIC LR LR 17 13 50.2
comp=Z,278nm,21.4s,baz=315,slow=32
7.7nm,0.8s
DBIC Dimbokro 21.06 72 P **P 17 07 30.8 +0.5**
CMC01 Camacan, BA 21.24 222 eP P 17 07 32.3 +0.2
GUA01 Guaratinga, BA 22.32 220 eP P 17 07 43.5 -0.2
ABR01 Abrolhos, BA 22.69 216 eP P 17 07 47.3 -0.3
SDBA SAO DESIDERIO 23.48 236 eP P 17 07 55.1 -0.8
SMTB Santa Maria do 24.29 247 eP P 17 08 03.6 0.0
JANB Januaria 24.50 230 eP P 17 08 04.6 -0.9
RIB01 Linhares ES 24.74 217 eP P 17 08 07.8 +0.2
SJMB Sao Joao De Ma 24.77 219 eP P 17 08 08.2 +0.3
PRPB Parauapebas 25.59 255 eP P 17 08 16.3 +0.9
ALF01 Guarapari-ES 25.95 215 eP P 17 08 18.7 +0.2
DIAM Diamantina, MG 26.12 224 eP P 17 08 20.9 +0.6
BDFB Brasilia 27.75 234 LR LR 17 18 32.9
comp=Z,391nm,19.8s,baz=57,slow=34
MDP Montagnes des 27.95 280 LR LR 17 17 14.4
comp=Z,160nm,21.7s,baz=101,slow=31
IPMB Ipameri, GO 29.23 230 eP P 17 08 47.9 -0.2
TORD Torodi Ar. Bea 29.34 63 P **P 17 08 49.0 0.0**
1.7nm,0.7s,baz=246,slow=9.3,SNR=7.7
TORD LR LR 17 18 53.9
comp=Z,397nm,21.5s,baz=298,slow=33
1.7nm,0.7s
BOAV Boa Vista 35.53 273 P 17 09 41.8 -1.5
AQDB Aquidauana 36.50 234 P 17 09 51.2 -0.3
TAM Tamanrasset 37.10 51 P **P 17 09 56.2 -0.6**
PTLB Pontes e Lacer 37.20 243 P 17 09 56.0 -1.5
PTLB Pontes e Lacer 37.20 243 eP P 17 09 57.9 +0.3
MDT Midelt 37.52 29 LR LR 17 24 13.7
comp=Z,170nm,19.7s,baz=228,slow=34
ITAB Concordia 37.89 221 eP P 17 10 02.6 -0.6
MURT Porto Murtinho 38.63 233 eP P 17 10 09.2 -0.4
BBSD Serra de San D 39.17 242 eP P 17 10 13.9 -0.2
CPUP Villa Florida 40.95 227 LR LR 17 26 07.7
comp=Z,75nm,20.3s,baz=52,slow=34
PAB San Pablo 43.27 23 P **P 17 10 47.5 -0.2**
PAB IAmb IAmb 17 11 45.9
comp=Z,20nm,1.6s
ESDC Sonseca Array 43.54 24 P **P 17 10 51.2 +1.4**
comp=Z,3.3nm,0.9s,baz=220,slow=9.6,SNR=11
ESDC LR LR 17 26 29.5
comp=Z,90nm,18.4s,baz=320,slow=33
comp=Z,3.3nm,0.9s
SJG San Juan 44.04 296 LR LR 17 24 43.5
comp=Z,49nm,21.8s,baz=91,slow=30
LPAZ La Paz 45.64 247 P **P 17 11 07.9 +0.3**
comp=Z,4.5nm,0.8s,baz=67,slow=4.9,SNR=14
LPAZ LR LR 17 29 52.1
comp=Z,372nm,18.9s,baz=66,slow=36
comp=Z,4.5nm,0.8s
LPAZ La Paz 45.64 247 P 17 11 06.8 -0.7
LPAZ La Paz 45.64 247 eP P 17 11 07.4 -0.2
TSUM Tsumeb 46.13 117 LR LR 17 26 46.7
comp=Z,113nm,18.6s,baz=297,slow=31
TSUM Tsumeb 46.13 117 P **P 17 11 11.1 +0.2**
SDV Santo Domingo 46.17 282 LR LR 17 31 14.2
comp=Z,52nm,19.9s,baz=82,slow=37
KEST Kesra 47.48 39 LR LR 17 32 08.7
comp=Z,348nm,19.4s,baz=239,slow=37
ROSC El Rosal 49.41 276 LR LR 17 30 56.3
comp=Z,167nm,19.6s,baz=89,slow=34
VAE Valguarnera 51.77 40 LR LR 17 35 42.5
comp=Z,294nm,18.2s,baz=130,slow=38
BNI Bardonecchia 52.54 28 P **P 17 11 57.5 -2.0**
BNI IAmb IAmb 17 12 09.0
comp=Z,18nm,1.6s
CUC Castrocucco 54.13 38 P **P 17 12 11.3 +0.1**
CUC IAmb IAmb 17 12 14.9
comp=Z,13nm,1.6s
ZCCA Zocca 54.16 31 P 17 12 11.4 +0.1
ZCCA IAmb IAmb 17 12 14.4
comp=Z,12nm,0.8s
LSZ Lusaka 54.84 109 LR LR 17 32 56.3
comp=Z,85nm,19.5s,baz=296,slow=33
DAVOX Davos/Dischmat 55.32 29 LR LR 17 33 24.5
comp=Z,88nm,18.1s,baz=256,slow=33
CTI Castel Tesino 55.68 30 P **P 17 12 22.9 +0.6**
CTI IAmb IAmb 17 12 23.5
comp=Z,6.1nm,0.8s
DAVA Damuels 55.69 28 eP P 17 12 22.7 +0.2
comp=Z,7.6nm,1.2s
MBAR Mbarara 55.78 91 LR LR 17 33 11.2
comp=Z,105nm,18.8s,baz=276,slow=33
FETA Feichten 55.90 29 eP P 17 12 24.0 0.0
comp=Z,6.5nm,0.9s
BOSA Boshof 56.07 125 P **P 17 12 23.8 -1.8**
comp=Z,2.9nm,0.8s,baz=332,slow=7.8,SNR=6.8
comp=Z,2.9nm,0.8s
SQTA Sankt Quirin 56.28 29 eP P 17 12 26.7 +0.1
comp=Z,7.7nm,1.0s
MOTA Moosalm 56.31 29 eP P 17 12 26.7 -0.2
comp=Z,4.0nm,0.9s
WTTA Wattenberg 56.51 29 eP P 17 12 28.3 0.0
comp=Z,10nm,1.4s
ABTA Abfaltersbach 56.59 30 eP P 17 12 29.9 +1.0
comp=Z,9.3nm,1.3s
MYKA Terra Mystica 57.08 31 eP P 17 12 33.7 +1.4
comp=Z,5.5nm,1.0s
LESA Schwarzleotal 57.14 30 eP P 17 12 32.9 +0.2
comp=Z,4.3nm,0.7s
OBKA Obir 57.47 31 P **P 17 12 36.8 +1.7**
comp=Z,3.8nm,0.9s
BIOA Bad Ischl, Aus 57.80 30 eP P 17 12 37.2 0.0
comp=Z,3.2nm,0.8s
SOKA Soboth 57.84 32 eP P 17 12 38.9 +1.3
comp=Z,5.6nm,0.8s
PLCA Paso Flores 58.16 220 P **P 17 12 39.9 -0.1**
comp=Z,2.8nm,1.2s,baz=0.0,slow=5.1,SNR=2.3
PLCA LR LR 17 36 59.8
comp=Z,77nm,19.2s,baz=258,slow=35
comp=Z,2.8nm,1.2s
PLCA Paso Flores 58.16 220 eP P 17 12 40.4 +0.4
MOA Molln 58.22 30 eP P 17 12 40.0 -0.2
comp=Z,3.8nm,0.9s
GERES GERESS Array B 58.61 29 P **P 17 12 42.9 -0.1**
comp=Z,1.2nm,0.8s,baz=212,slow=3.5,SNR=1.4
GERES LR LR 17 37 05.7
comp=Z,75nm,18.1s,baz=303,slow=35
comp=Z,1.2nm,0.8s
KHC Kasperske Hory 58.74 29 P **P 17 12 43.7 -0.2**
KHC IAmb IAmb 17 13 02.4
comp=Z,19nm,1.9s
KHC Kasperske Hory 58.74 29 eP P 17 12 44.3 +0.4
RONA Rosalia, Austr 59.16 31 eP P 17 12 47.7 +0.9
comp=Z,5.7nm,1.1s
PSZ Piszkesteto 61.20 33 P 17 13 01.3 +0.5
LANS Liptovska Anna 61.71 32 eP P 17 13 06.1 +1.9
CNGN Cerro Negro 62.28 284 P **P 17 13 09.1 +0.4**
OJC Ojcow 62.53 31 P P 17 13 07.3 -2.3
MLR Muntele Rosu 63.37 38 P 17 13 15.1 -0.4
BR131 Keskin Array S 66.06 46 P 17 13 32.2 -1.1
BR131 IAmb IAmb 17 13 34.6
comp=Z,7.6nm,1.0s
BRTR Keskin Array B 66.06 46 P **P 17 13 33.8 +0.6**
comp=Z,3.2nm,0.8s,baz=234,slow=5.8,SNR=13
comp=Z,3.2nm,0.8s
BRTR Keskin Array B 66.06 46 P P 17 13 33.6 +0.3
NOA NORSAR Array B 66.48 18 P **P 17 13 36.0 +0.6**
comp=Z,1.4nm,0.9s,baz=231,slow=9.1,SNR=2.1
comp=Z,1.4nm,0.9s
HFS Hagfors 66.61 20 P **P 17 13 36.3 +0.1**
comp=Z,2.4nm,0.9s,baz=216,slow=7.1,SNR=1.3
comp=Z,2.4nm,0.9s
P48A Milroy 67.22 313 P P 17 13 41.1 +0.7
P48A IAmb IAmb 17 13 43.7
comp=Z,12nm,1.0s
BNN Bunyan 67.38 48 P **P 17 13 41.4 -0.3**
BNN IAmb IAmb 17 13 42.9
comp=Z,12nm,1.2s
KIEV Kiev 67.83 34 P 17 13 43.5 -0.5
KIEV IAmb IAmb 17 13 44.8
comp=Z,12nm,1.0s
AKASG Malin Array Be 67.84 34 P **P 17 13 44.1 +0.1**
comp=Z,4.9nm,0.8s,baz=242,slow=6.4,SNR=20
comp=Z,4.9nm,0.8s
AKASG Malin Array Be 67.84 34 P **P 17 13 42.9 -1.2**
AKASG IAmb IAmb 17 13 44.6
comp=Z,7.3nm,1.1s
AKBB Malin Array Si 67.84 34 P 17 13 43.3 -0.8
AKBB IAmb IAmb 17 13 44.9
comp=Z,12nm,0.9s
GURO Guroymak-BITLI 71.93 49 P **P 17 14 09.4 -0.4**
GURO IAmb IAmb 17 16 00.3
comp=Z,16nm,1.0s
RAYN Ar Rayn 72.01 65 P **P 17 14 10.3 -0.1**
FINES FINESS Array B 72.05 23 P **P 17 14 10.6 +0.9**
comp=Z,2.6nm,0.6s,baz=254,slow=5.5,SNR=9.1
comp=Z,2.6nm,0.6s
SUMG Summit 72.53 356 P **P 17 14 13.3 +0.3**
SUMG IAmb IAmb 17 16 04.4
comp=Z,11nm,1.1s
KIV Kislovodsk 73.80 44 P **P 17 14 20.9 +0.3**
KIV IAmb IAmb 17 16 36.6
comp=Z,12nm,0.9s
KBZ Khabaz 73.89 44 P **P 17 14 21.7 +0.7**
comp=Z,4.2nm,0.9s,baz=233,slow=3.6,SNR=6.8
comp=Z,4.2nm,0.9s
I37A Lemond, Waseca 74.27 316 P **P 17 14 22.8 -0.5**
I37A IAmb IAmb 17 14 23.4
comp=Z,38nm,1.6s
BELA Belgrano 2 78.40 182 P **P 17 14 46.4 +0.3**
BELA IAmb IAmb 17 14 58.2
comp=Z,7.5nm,1.1s
BELG Belogornoye 79.13 37 P **P 17 14 50.0 -0.5**
comp=Z,7.5nm,0.8s,baz=191,slow=3.3,SNR=4.0
comp=Z,7.5nm,0.8s
TXAR Lajitas Array 79.88 300 P **P 17 14 54.9 -0.4**
comp=Z,0.2nm,0.7s,baz=150,slow=5.2,SNR=3.8
comp=Z,0.2nm,0.7s
VHRN Van Horn 81.14 301 P **P 17 15 03.0 +0.9**
AKTO Aktyubinsk 85.23 40 P **P 17 15 23.5 +0.8**
comp=Z,3.6nm,1.1s,baz=270,slow=3.3,SNR=3.7
comp=Z,3.6nm,1.1s
ARTI Arti 85.99 34 P **P 17 15 26.9 +0.6**
comp=Z,2.3nm,0.6s,baz=227,slow=5.3,SNR=3.8
comp=Z,2.3nm,0.6s
ARTI Arti 85.99 34 IAmb IAmb 17 15 42.3
comp=Z,6.7nm,0.8s
YNE Yellowstone No 86.13 315 P **P 17 15 26.8 -0.8**
YNE IAmb IAmb 17 18 18.7
comp=Z,7.3nm,0.9s
AB31 Akbulak array 86.39 41 IAmb IAmb 17 15 31.1
comp=Z,5.8nm,1.3s
YKA Yellowknife Ar 89.42 332 P **P 17 15 42.2 -0.4**
comp=Z,0.3nm,0.6s,baz=93,slow=4.9,SNR=4.7
comp=Z,0.3nm,0.6s
QSPA South Pole Qui 90.50 180 P **P 17 15 47.4 -0.3**
comp=Z,4.2nm,1.0s,baz=207,slow=3.2,SNR=6.0
comp=Z,4.2nm,1.0s
QSPA South Pole Qui 90.50 180 P **P 17 15 49.1 +1.4**
CMAR Chiang Mai Arr 121.88 68 PKP **PKPdf 17 21 41.7 +0.4**
comp=Z,0.2nm,0.3s,baz=297,slow=2.1,SNR=2.0
PZH PanZhiHua 122.22 58 PKP **PKPdf 17 21 42.3 +0.4**
HHC Hu-ho-hao-te 123.11 38 eP PKPdf 17 21 39.3 -3.9
NJ2 Nanjing 133.00 43 eP PKPdf 17 22 01.6 -0.5
NJ2 pmax pmax
comp=Z,24nm,0.6s
TOLI2 Tolitoli 145.78 87 PKPdf **PKPdf 17 22 25.6 -0.2**
STKA Stephens Creek 146.26 159 PKPbc **PKPdf 17 22 27.0 +0.8**
comp=Z,2.1nm,0.8s,baz=154,slow=5.4,SNR=3.5
ASAR Alice Springs 149.16 140 PKPbc **PKPdf 17 22 35.1 +3.9**
comp=Z,2.6nm,0.8s,baz=216,slow=2.4,SNR=17
ASAR Alice Springs 149.16 140 PKPdf **PKPdf 17 22 32.5 +1.2**
ASAR **PKPdf 17 22 35.1 +3.9**
AS31 Alice Springs 149.16 140 PKPbc **PKPdf 17 22 34.8 +3.5**
WRA Warramunga Arr 152.00 135 PKPbc **PKPbc 17 22 41.7 -0.6**
comp=Z,1.2nm,0.8s,baz=228,slow=3.2,SNR=8.0

*UUSS **18** 17:16:49.6±0.7, 40°.751N±0°.009×112°.042W±0°.009, h8km±3km, Error ellipse: s-maj=1.4km s-min=1.0km az=197.0*

NEIC 18 17:16:49.5±0.6, 40°.744N±0°.009×112°.049W±0°.009, h8km±3km, ML3.2/162, ML3.1/12(UUSS), Error ellipse: s-maj=1.4km s-min=0.9km az=205.0, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOQ	**North Oquirrh**	**0.11**	**211**		Pg	17 16 52.6	+0.5
NOQ					Sg	17 16 54.7	+0.7
CAPU	**Utah State Cap**	**0.12**	**74**		Pg	17 16 52.8	+0.4
CAPU					Sg	17 16 55.1	+0.7
EOCU	**Emergency Oper**	**0.13**	**75**		Pg	17 16 52.9	+0.5
EOCU					Sg	17 16 55.0	+0.5
HRU	**Hogsback Ridge**	**0.13**	**71**		Pg	17 16 52.8	+0.3
SAIU	**Southern Antel**	**0.15**	**318**		Pg	17 16 53.0	+0.2
RBU	**Red Butte Cany**	**0.19**	**79**		Pg	17 16 53.6	+0.1
RBU	**Red Butte Cany**	**0.19**	**79**		Sg	17 16 56.3	+0.1
MHD	**Mile High Driv**	**0.21**	**114**		Pg	17 16 54.0	+0.3
MHD	**Mile High Driv**	**0.21**	**114**		Sg	17 16 54.4	-2.2
CTU	**Camp Tracy**	**0.23**	**103**	Pg	Pg	17 16 54.4	+0.1
GMU	**Granite Mounta**	**0.28**	**128**		Pg	17 16 55.3	+0.3
NAIU	**Northern Antel**	**0.30**	**334**		Pg	17 16 55.8	+0.2
NAIU	**Northern Antel**	**0.30**	**334**		Pg	17 16 55.8	+0.2
NAIU					Sg	17 16 59.6	-0.1
FPU	**Francis Peak**	**0.33**	**30**		Pg	17 16 56.2	+0.1
AAU	**Alta**	**0.35**	**116**		Pg	17 16 56.7	+0.2
SNUT	**Stansbury Nort**	**0.38**	**292**		Pg	17 16 57.4	+0.4
TCVU	**Timpanogos Cav**	**0.40**	**139**		Pg	17 16 57.7	+0.3
WBC	**Weber Canyon**	**0.41**	**16**		Pg	17 16 57.6	0.0
N16A	**Rees Ranch, Co**	**0.49**	**73**		Pg	17 16 59.5	+0.5
HEB	**Heber**	**0.59**	**114**		Pg	17 17 01.6	+0.6
TCUT	**Toone Canyon**	**0.61**	**52**		Pg	17 17 01.6	+0.2
TCUT	**Toone Canyon**	**0.61**	**52**		Pg	17 17 01.8	+0.4
HTU	**Hoyt Peak**	**0.63**	**96**		Pg	17 17 02.2	+0.4
SPUT	**South Promonto**	**0.64**	**332**		Pg	17 17 01.7	-0.2
SPUT				Sg	Sg	17 17 09.9	-0.4
SPUT				IAML		17 17 11.7	
	comp=E,816nm,0.3s						
SPUT				IAML		17 17 11.7	
	comp=N,2μm,0.2s						
DAU	**Daniels Canyon**	**0.69**	**118**		Pb	17 17 03.5	-0.4
EPU	**East Promontor**	**0.70**	**337**		Pg	17 17 03.1	0.0
BGU	**Big Grassy Mou**	**0.77**	**284**		Pg	17 17 04.5	+0.3
BGU				Sg	Sg	17 17 14.4	+0.1
BGU				IAML		17 17 17.3	
	comp=N,657nm,0.4s						
BGU				IAML		17 17 17.9	
	comp=E,2μm,0.6s						
NLU	**North Lily Min**	**0.79**	**181**		Pb	17 17 05.2	-0.4
MPU	**Maple Canyon**	**0.79**	**156**		Pb	17 17 05.4	-0.2
MPU				IAML		17 17 20.0	
	comp=N,624nm,0.5s						
DUG	**Dugway, Tooele**	**0.80**	**227**		Pg	17 17 04.9	0.0
DUG				IAML		17 17 19.0	
	comp=N,872nm,0.8s						
DUG				IAML		17 17 22.2	
	comp=N,722nm,0.6s						
LHUT	**Little Humpy P**	**0.81**	**79**		Pb	17 17 05.8	-0.3
LTU	**Little Mountai**	**0.86**	**350**		Pg	17 17 06.1	0.0
WVUT	**Wellsville**	**0.87**	**4**		Pg	17 17 06.2	-0.1
HWUT	**Hardware Ranch**	**0.94**	**23**		Pg	17 17 07.0	-0.6
HWUT				IAML		17 17 22.3	
	comp=N,1μm,0.5s						
HWUT				IAML		17 17 22.6	
	comp=N,1μm,0.4s						
BSUT	**Blindstream Ca**	**1.00**	**102**		Pg	17 17 08.8	0.0
BSUT				IAML		17 17 26.2	
	comp=N,1μm,0.7s						
HVU	**Hansel Valley**	**1.17**	**332**		Pg	17 17 11.3	-0.7
HVU				IAML		17 17 29.4	
	comp=N,1μm,0.4s						
P17A	**Butcher Ranch,**	**1.62**	**141**		Pn	17 17 18.9	+0.4
P18A	**Preston Nutter**	**1.77**	**128**		Pb	17 17 22.2	-0.3
RDMU	**Red Mountain**	**1.89**	**94**		Pb	17 17 23.4	-1.1
Q16A	**Castle Valley**	**1.94**	**159**		Pn	17 17 23.3	+0.3
SRU	**San Rafael Swe**	**2.01**	**144**		Pn	17 17 24.7	+0.8
SRU				IAML		17 17 55.9	
	comp=N,248nm,0.8s						
SRU				IAML		17 18 16.1	
	comp=E,208nm,0.9s						
AHID	**Auburn Hatcher**	**2.14**	**19**		Pn	17 17 26.8	+1.1
TCRU	**Three Creeks R**	**2.15**	**188**		Pn	17 17 22.1	-3.9
TCRU				IAML		17 18 04.5	
	comp=E,150nm,1.0s						
TCRU				IAML		17 18 27.2	
	comp=N,145nm,1.0s						
ELK	**Elko**	**2.42**	**271**		Pn	17 17 30.5	+0.9
PSUT	**Pine Spring**	**2.61**	**213**		Pn	17 17 32.1	-0.1
PSUT				IAML		17 18 38.7	
	comp=E,131nm,1.0s						
PSUT				IAML		17 18 42.6	
	comp=N,118nm,0.8s						
MTPU	**Mount Pierson**	**2.70**	**182**		Pn	17 17 33.0	-0.6
BW06	**Boulder Array**	**2.75**	**42**		Pn	17 17 35.9	+1.8
BW06				IAML		17 18 15.7	
	comp=N,178nm,0.5s						
BW06				IAML		17 18 15.8	
	comp=N,174nm,0.5s						
SNOW	**Snow King Moun**	**2.88**	**19**	IAML		17 18 23.1	
	comp=N,150nm,0.5s						
SNOW				IAML		17 18 26.6	
	comp=N,150nm,0.5s						
O20A	**White River Ci**	**2.97**	**101**	IAML		17 18 36.5	
	comp=N,149nm,1.3s						
O20A				IAML		17 18 42.7	
	comp=N,122nm,0.8s						
HMU	**Henry Mountain**	**2.98**	**160**	IAML		17 18 50.3	
	comp=E,168nm,0.6s						
HMU				IAML		17 18 51.8	
	comp=N,109nm,0.7s						
LOHW	**Long Hollow**	**3.06**	**20**	IAML		17 18 27.3	
	comp=N,83nm,0.8s						
LOHW				IAML		17 18 31.6	
	comp=N,118nm,0.6s						
SZCU	**Shurtz Canyon**	**3.25**	**195**	IAML		17 18 42.7	
	comp=E,45nm,0.5s						
PKCU	**Pink Cliffs**	**3.30**	**184**	IAML		17 18 42.2	
	comp=E,41nm,0.9s						
PKCU				IAML		17 19 02.6	
	comp=N,42nm,1.2s						
PV22	**Blue Mesa, Par**	**3.35**	**130**	IAML		17 18 56.7	
	comp=N,118nm,0.8s						
CCUT	**Cedar City**	**3.35**	**198**	IAML		17 18 44.8	
	comp=E,41nm,0.6s						
PV18	**Skein Mesa, Pa**	**3.48**	**135**	IAML		17 18 42.0	
	comp=E,111nm,0.7s						
FLWY	**Flagg Ranch**	**3.48**	**16**	IAML		17 19 04.7	
	comp=E,57nm,1.3s						
PV07	**Paradox Valley**	**3.49**	**130**	IAML		17 18 47.0	
	comp=N,93nm,1.1s						
PV03	**Paradox Valley**	**3.51**	**134**	IAML		17 19 07.7	
	comp=N,102nm,1.1s						
PV03				IAML		17 19 07.7	
	comp=E,86nm,1.1s						
PV13	**Radium Mtn., P**	**3.59**	**135**	IAML		17 18 47.8	
	comp=N,78nm,0.6s						
YPP	**Pitchstone Pla**	**3.64**	**14**	IAML		17 18 52.1	
	comp=E,26nm,0.7s						
HAYD	**Hayden**	**3.65**	**92**	IAML		17 18 51.4	
	comp=E,89nm,0.8s						
HAYD				IAML		17 18 53.3	
	comp=N,95nm,0.9s						
PV01	**Paradox Valley**	**3.75**	**133**	IAML		17 19 09.7	
	comp=N,54nm,0.8s						
PV01				IAML		17 19 17.9	
	comp=E,47nm,1.0s						
H17A	**Grant Village**	**3.81**	**16**	IAML		17 18 52.2	
	comp=N,23nm,0.6s						
YFT	**Old Faithful**	**3.81**	**13**	IAML		17 18 26.2	
	comp=E,31nm,0.1s						
YFT				IAML		17 18 33.4	
	comp=N,28nm,1.0s						
LCMT	**Little Creek M**	**3.84**	**194**	IAML		17 19 15.0	
	comp=E,21nm,0.9s						
MFID	**Camas Ranch**	**3.88**	**315**	IAML		17 18 53.5	
	comp=E,46nm,0.7s						
MFID				IAML		17 18 55.8	
	comp=E,54nm,0.4s						
YHB	**Horse Butte**	**4.05**	**9**	IAML		17 19 04.9	
	comp=N,18nm,0.8s						
YHB				IAML		17 20 07.6	
	comp=E,22nm,0.1s						
YHL	**Hebgen Lake**	**4.15**	**9**	IAML		17 19 03.0	
	comp=E,19nm,0.8s						
YMP	**Mirror Lake Pl**	**4.23**	**19**	IAML		17 19 31.7	
	comp=E,19nm,1.2s						
YMP				IAML		17 19 48.2	
	comp=N,18nm,2.3s						
U15A	**North Rim**	**4.31**	**183**	IAML		17 19 34.8	
	comp=E,21nm,1.4s						
U15A				IAML		17 19 49.0	
	comp=N,14nm,1.4s						
YNE	**Yellowstone No**	**4.52**	**19**	IAML		17 19 16.2	
	comp=E,12nm,0.7s						
DLMT	**Dillon**	**4.63**	**355**	IAML		17 19 41.0	
	comp=E,13nm,2.4s						
DLMT				IAML		17 19 54.4	
	comp=E,14nm,1.4s						
RLMT	**Red Lodge**	**4.83**	**24**	IAML		17 19 20.1	
	comp=E,17nm,0.7s						
RLMT				IAML		17 19 20.2	
	comp=E,15nm,0.4s						
KVN	**Kaiserville**	**4.95**	**252**	IAML		17 19 31.8	
	comp=E,11nm,0.8s						
KVN				IAML		17 19 59.3	
	comp=N,9.5nm,0.8s						
ISCO	**Idaho Springs**	**5.01**	**99**	IAML		17 19 47.7	
	comp=N,9.1nm,2.3s						
S22A	**4UR Ranch, Cre**	**5.04**	**125**	IAML		17 20 01.2	
	comp=E,11nm,1.2s						
WVOR	**Wild Horse Val**	**5.22**	**291**	IAML		17 20 02.0	
	comp=E,11nm,1.0s						
WVOR				IAML		17 20 09.8	
	comp=E,12nm,2.0s						
NV11	**Mina Array Sit**	**5.25**	**246**	IAML		17 19 44.4	
	comp=N,20nm,0.8s						
NV11				IAML		17 19 57.8	
	comp=E,14nm,0.8s						
BEKR	**Beckworth**	**6.41**	**265**	Pn	Pn	17 18 25.1	+0.7
RSSD	**Black Hills**	**6.82**	**58**	Pn	Pn	17 18 27.9	-2.1
K05A	**Summer Lake**	**6.91**	**290**	Pn	Pn	17 18 30.4	-0.8

*RSNC **18** 17:19:22.3±0.0, 7°N±1°×7°3W±°, h147km±2km, M3.1, mb3.4, ML2.8, MLv3.5*
*FUNV **18** 17:19:23.8, 7°.09N×73°.17W, h15km, MW3.5, Presumed earthquake*

ISC 18 17:19:21.2±1.3, 6°.84N±0°.03×73°.07W±0°.04, h148km±7km, n38, σ1°58/73, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**205**	P	**Pn**	**17 19 42.2**	**+0.4**
BARC				S	**Sn**	**17 19 57.5**	**0.0**
PAMC	**Pamplona, Colo**	**0.62**	**36**	P	**Pn**	**17 19 45.2**	**+1.5**
PAMC				S	**Sn**	**17 20 01.9**	**+1.2**
BRJC	**Barrancabermej**	**0.68**	**281**	P	**Pn**	**17 19 44.0**	**+0.5**
BRJC				S	**Sn**	**17 20 00.8**	**+0.4**
RUSC	**La Rusia**	**0.94**	**181**	P	**Pn**	**17 19 46.1**	**+0.1**
RUSC				S	**Sn**	**17 20 04.6**	**-0.2**
RUSC	**La Rusia**	**0.94**	**181**	eP	**Pn**	**17 19 45.1**	**-0.9**
RUSC				eS	**Sn**	**17 20 01.2**	**-3.6**
OCAC	**Ocana**	**1.41**	**350**	P	**Pn**	**17 19 50.7**	**+0.7**
OCAC				S	**Sn**	**17 20 12.1**	**+0.2**
PTBC	**PUERTO BERRIO,**	**1.41**	**258**	P	**Pn**	**17 19 48.8**	**-1.0**
PTBC				S	**Sn**	**17 20 10.8**	**-0.8**
SPBC	**San Pablo de B**	**1.55**	**220**	P	**Pn**	**17 19 51.2**	**-0.1**
SPBC				S	**Sn**	**17 20 13.2**	**-1.1**
NORC	**Norcasia**	**2.19**	**235**	P	**Pn**	**17 19 58.3**	**-0.4**
NORC				S	**Sn**	**17 20 26.6**	**-0.8**
CHIC	**Chingaza**	**2.29**	**197**	P	**Pn**	**17 20 00.4**	**+0.2**
CHIC				S	**Sn**	**17 20 29.8**	**-0.4**
ROSC	**El Rosal**	**2.34**	**212**	P	**Pn**	**17 20 02.1**	**+1.3**
ROSC				S	**Sn**	**17 20 33.3**	**+2.1**
CVER	**Cruz Verde, Cu**	**2.51**	**204**	P	**Pn**	**17 20 03.9**	**+1.0**
CVER				S	**Sn**	**17 20 35.4**	**+0.4**
HELC	**Santa Helena**	**2.53**	**255**	P	**Pn**	**17 20 03.3**	**+0.3**
HELC				S	**Sn**	**17 20 34.5**	**-0.6**
HELC	**Santa Helena**	**2.53**	**255**	eP	**Pn**	**17 20 03.6**	**+0.6**
HELC				eS	**Sn**	**17 20 33.4**	**-1.7**
UREC	**San Jos de Ur**	**2.61**	**290**	P	**Pn**	**17 20 02.8**	**-0.8**
UREC				S	**Sn**	**17 20 35.0**	**-1.3**
VILC	**Villavicencio,**	**2.78**	**193**	P	**Pn**	**17 20 06.0**	**0.0**
VILC				S	**Sn**	**17 20 39.7**	**-0.8**
PTGC	**Puerto Gaitan,**	**2.78**	**160**	P	**Pn**	**17 20 05.7**	**-0.2**
PTGC				S	**Sn**	**17 20 38.5**	**-1.9**
GUY2C	**Guyana, Caldas**	**2.79**	**235**	P	**Pn**	**17 20 07.0**	**+0.6**
GUY2C				S	**Sn**	**17 20 42.3**	**+1.1**
RECRC	**Villamaria, Ca**	**2.94**	**231**	P	**Pn**	**17 20 11.5**	**+3.1**

RECRC				S	Sn	17 20 49.2	+4.5
CBOC	**Ciudad Bolivar**	**3.08**	**252**	P	Pn	17 20 10.4	+0.6
CBOC				S	Sn	17 20 47.4	+0.1
DBBC	**Dabeiba**	**3.12**	**273**	P	Pn	17 20 10.5	+0.3
DBBC				S	Sn	17 20 47.3	-0.8
SDV	**Santo Domingo**	**3.15**	**50**	P	Pn	17 20 12.2	+1.5
SDV				S	Sn	17 20 49.6	+0.6
SDV	**Santo Domingo**	**3.15**	**50**	*e*P	Pn	17 20 11.4	+0.7
SDV				*e*S	Sn	17 20 46.2	-2.8
ARGC	**Ariguani, Magd**	**3.22**	**339**	P	Pn	17 20 13.4	+2.1
ARGC				S	Sn	17 20 54.2	+4.0
ANIL	**Santa Ana**	**3.29**	**225**	P	Pn	17 20 13.8	+1.2
ANIL				S	Sn	17 20 54.2	+1.9
PRAC	**Prado**	**3.59**	**210**	P	Pn	17 20 16.1	-0.2
PRAC				S	Sn	17 20 57.9	-1.1
ORTC	**Ortega, Tolima**	**3.63**	**217**	P	Pn	17 20 16.7	0.0
ORTC				S	Sn	17 21 00.0	+0.2
APAC	**Apartado, Choc**	**3.64**	**287**	P	Pn	17 20 16.9	+0.1
APAC				S	Sn	17 20 59.8	0.0
SJCC	**San Jacinto, C**	**3.69**	**326**	P	Pn	17 20 16.8	-0.6
SJCC				S	Sn	17 20 58.9	-2.2
SJCC	**San Jacinto, C**	**3.69**	**326**	*e*P	Pn	17 20 15.8	-1.7
SJCC				*e*S	Sn	17 20 54.3	-6.8
PLMC	**San Jos del P**	**3.73**	**239**	P	Pn	17 20 18.5	+0.4
PLMC				S	Sn	17 21 03.0	+0.9
URMC	**La Uribe, Meta**	**3.80**	**200**	P	Pn	17 20 19.4	+0.4
URMC				S	Sn	17 21 02.8	-1.0
YOTC	**Yotoco, Valle**	**4.32**	**229**	P	Pn	17 20 25.6	-0.3
YOTC				S	Sn	17 21 16.2	+0.1
SMRC	**Santa Marta, M**	**4.45**	**345**	P	Pn	17 20 28.7	+1.4
MACC	**Macarena, Meta**	**4.73**	**189**	P	Pn	17 20 29.7	-1.4
URIC	**Uribia, Colomb** 0.0nm13nm,1.6s	**4.95**	**12**	P	Pn	17 20 33.6	-0.3
URIC				S	Sn	17 21 30.4	-0.3
	0.0nm13nm,1.6s						
JAMC	**Jamundi, Valle** 0.0nm4.6nm,0.8s	**5.09**	**225**	P	Pn	17 20 35.3	-0.7
POPC	**Popayan, Colom** 3.7nm,1.1s	**5.58**	**220**	P	Pn	17 20 43.7	+1.0
POPC				S	Sn	17 21 46.5	+0.3
	3.7nm,1.1s						

SNET ***18*** *17:24:10.6±1.7, 13°.74N×90°.94W, h29km, ML3.7, Presumed earthquake*

CATAC ***18*** *17:24:11.1±0.5, 14°.N±3°×93°.1W±°, h33km±8km, M3.8/25, MLv3.8/25, Error ellipse: s-maj=7.4km s-min=2.2km az=30.7, confirmed*

GCG ***18*** *17:24:11.1±1.4, 14°.01N×90°.82W, h87km±8km, MD4.2, ML4.3, Presumed earthquake*

ISC 18 17:24:12.3±1.5, 13°.95N±0°.07×90.75W±0°.04, h91km±9km, n50, σ1.9 35/78, 1C-1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
FG8	**Yepocapa, Chim**	**0.36**	**31**	*i*	P	**Pn**	**17 24 25.9**	**-0.4**
FG8				*i*	S	**Sn**	**17 24 36.5**	**-0.3**
FG16	**Alotenango, Sa**	**0.40**	**36**	*e*	P	**Pn**	**17 24 26.1**	**-0.6**
FG16				*e*	S	**Sn**	**17 24 37.9**	**+0.5**
FG16				IAML			17 24 40.3	
	comp=E,40μm,0.2s							
PCG5	**San Vicente Pa**	**0.45**	**54**	*i*	P	**Pn**	**17 24 25.6**	**-1.4**
ESSJ	**San Jos, E**	**0.46**	**148**	*i*	P	**Pn**	**17 24 24.2**	**-2.7**
FAME	**Alcaldia de Sa**	**0.72**	**98**	P		**Pn**	**17 24 28.1**	**-1.0**
FAME				S		**Sn**	**17 24 40.3**	**-1.5**
STG5	**El Palmar, Qui**	**0.73**	**308**	*i*	P	**Pn**	**17 24 31.1**	**+1.8**
STG5				*i*	S	**Sn**	**17 24 44.9**	**+2.9**
STG8	**El Palmar, Qui**	**0.76**	**311**	⇓*i*	P	**Pn**	**17 24 31.7**	**+1.9**
STG8				*i*	S	**Sn**	**17 24 47.1**	**+4.2**
STG8				IAML			17 24 49.4	
	comp=E,7μm,0.2s							
STG2	**El Palmar, Qui**	**0.77**	**309**	*e*P		**Pn**	**17 24 31.9**	**+2.1**
STG2				*e*S		**Sn**	**17 24 48.1**	**+5.3**
STG2				IAML			17 24 53.2	
	comp=E,16μm,0.3s							
SLOZ	**Alcaldia de Sa**	**0.94**	**85**	P		**Pn**	**17 24 30.8**	**-0.7**
SLOZ				S		**Sn**	**17 24 45.9**	**0.0**
NUBE	**Las Nubes**	**0.95**	**93**	P		**Pn**	**17 24 30.8**	**-0.9**
NUBE	**Las Nubes**	**0.95**	**93**	*i*	P	**Pn**	**17 24 31.0**	**-0.7**
NUBE				*i*	S	**Sn**	**17 24 45.9**	**-0.2**
NUBE	**Las Nubes**	**0.95**	**93**	*i*	P	**Pn**	**17 24 30.9**	**-0.7**
NUBE				*e*	S	**Sn**	**17 24 46.0**	**-0.1**
SOKI	**Kika Raxquin**	**1.07**	**324**	*e*P		**Pn**	**17 24 31.9**	**-1.5**
SOKI				*i*	S	**Sn**	**17 24 47.3**	**-1.8**
SOKI				IAML			17 24 51.8	
	comp=E,2μm,0.3s							
RTAL	**Retalhuleu**	**1.08**	**302**	P		**Pn**	**17 24 30.4**	**-2.5**
RTAL				S		**Sn**	**17 24 47.5**	**-1.0**
APG	**El Apazote**	**1.08**	**15**	⇑*i*	P	**Pn**	**17 24 32.6**	**-0.8**
APG				*e*S		**Sn**	**17 24 49.0**	**-0.1**
SBLS	**San Blas**	**1.10**	**96**	*e*P		**Pn**	**17 24 33.1**	**-0.4**
SBLS				*e*S		**Sn**	**17 24 51.3**	**+1.9**
CEVE	**Cerro Verde**	**1.10**	**96**	P		**Pn**	**17 24 32.5**	**-1.0**
CEVE				S		**Sn**	**17 24 49.1**	**-0.3**
SNJE	**San Jose**	**1.12**	**94**	*e*P		**Pn**	**17 24 33.2**	**-0.4**
UNIC	**Universidad Ca**	**1.17**	**88**	P		**Pn**	**17 24 33.2**	**-0.9**
UNIC				S		**Sn**	**17 24 51.4**	**+0.8**
JAYA	**Jayaque - finc**	**1.30**	**103**	P		**Pn**	**17 24 35.1**	**-0.8**
JAYA				S		**Sn**	**17 24 53.2**	**-0.3**
JAYA	**Jayaque - finc**	**1.30**	**103**	*e*P		**Pn**	**17 24 35.2**	**-0.6**
JAYA				IAML			17 25 00.1	
	comp=E,2μm,0.2s							
JAYA	**Jayaque - finc**	**1.30**	**103**	*e*P		**Pn**	**17 24 35.0**	**-0.8**
PMON	**Piamonte**	**1.42**	**100**	P		**Pn**	**17 24 36.8**	**-0.4**
PMON				S		**Sn**	**17 24 56.3**	**+0.3**
PMON	**Piamonte**	**1.42**	**100**	*e*P		**Pn**	**17 24 36.9**	**-0.4**
MTO3	**Montecristo**	**1.42**	**72**	P		**Pn**	**17 24 36.5**	**-0.9**
MTO3	**Montecristo**	**1.42**	**72**	*i*	P	**Pn**	**17 24 36.6**	**-0.7**
MTO3	**Montecristo**	**1.42**	**72**	*i*	P	**Pn**	**17 24 36.6**	**-0.7**
BOQS	**Boqueron**	**1.45**	**98**	*e*P		**Pn**	**17 24 37.3**	**-0.4**
LALI	**Alcalda de L**	**1.47**	**108**	P		**Pn**	**17 24 36.5**	**-1.2**
LALI				S		**Sn**	**17 24 56.3**	**-0.6**
LALI	**Alcalda de L**	**1.47**	**108**	*e*P		**Pn**	**17 24 37.5**	**-0.2**
UEES	**Universidad Ev**	**1.49**	**99**	P		**Pn**	**17 24 38.1**	**0.0**
UEES				S		**Sn**	**17 24 58.1**	**+0.5**
ESQI	**Esquipulas**	**1.50**	**66**	S		**Sn**	**17 24 59.1**	**+1.3**
HUEH	**Huehuetenango**	**1.54**	**332**	P		**Pn**	**17 24 37.6**	**-1.3**
HUEH				S		**Sn**	**17 24 59.2**	**+0.2**
IGN	**Direccin Gen**	**1.56**	**99**	P		**Pn**	**17 24 38.7**	**-0.2**
IGN				S		**Sn**	**17 24 59.7**	**+0.6**
SMCA	**Catarina**	**1.56**	**305**	*i*	P	**Pn**	**17 24 37.1**	**-1.9**
SMCA				*i*	S	**Sn**	**17 24 56.7**	**-2.5**
PANCS	**Alcalda de**	**1.57**	**102**	P		**Pn**	**17 24 38.3**	**-0.8**
PANCS				S		**Sn**	**17 24 59.8**	**+0.5**
LFU	**La Fuente**	**1.60**	**97**	*e*P		**Pn**	**17 24 39.1**	**-0.4**
PAVA	**Las Pavas**	**1.78**	**97**	P		**Pn**	**17 24 41.9**	**0.0**
PAVA				S		**Sn**	**17 25 05.2**	**+1.0**
COEG	**Centro de Oper**	**1.85**	**100**	P		**Pn**	**17 24 42.6**	**-0.1**
COEG				S		**Sn**	**17 25 06.6**	**+0.8**
COEG	**Centro de Oper**	**1.85**	**100**	*e*P		**Pn**	**17 24 42.6**	**-0.1**
P5NO	**Presa 5 de nov**	**1.94**	**89**	P		**Pn**	**17 24 42.8**	**-1.0**
TECO	**Alcaldia de Te**	**1.96**	**102**	P		**Pn**	**17 24 43.8**	**-0.3**
TECO				S		**Sn**	**17 25 09.3**	**+1.0**
SCLA	**Alcaldia de Sa**	**1.98**	**97**	P		**Pn**	**17 24 44.4**	**0.0**
PQSS	**Presa 15 de Se**	**2.15**	**98**	P		**Pn**	**17 24 46.5**	**-0.2**
PQSS				S		**Sn**	**17 25 14.5**	**+1.7**
PACA	**Pacayal**	**2.41**	**101**	P		**Pn**	**17 24 50.2**	**+0.1**
PACA				S		**Sn**	**17 25 20.9**	**+1.8**
LCND	**La Caada**	**2.86**	**103**	P		**Pn**	**17 24 56.6**	**+0.6**
CNCH	**Conchagua**	**2.92**	**103**	P		**Pn**	**17 24 56.5**	**-0.4**
CSGN	**Cosiguina Volc**	**3.26**	**107**	S		**Sn**	**17 25 41.0**	**+1.7**
YUSH	**Yuscaran**	**3.80**	**90**	P		**Pn**	**17 25 08.3**	**-0.5**
PKGN	**Cerro Pekin**	**3.89**	**109**	P		**Pn**	**17 25 09.8**	**-0.1**

IDC ***18*** *17:33:33.4±1.5, 37°.71N×145°.10E, h0km, mb3.3/4, mbtmp3.6/8, ML3.4/4, Error ellipse: s-maj=32.3km s-min=24.1km az=96.0*

JMA ***18*** *17:33:38.6±0.2, 37°.9N±0°.8×14°.5E±°, h54km, MV3.8/27, FAR E OFF NORTH HONSHU*

ISC 18 17:33:37.3±1.2, 37°.87N±0°.07×144°.81E±0°.08, h26km, n23, σ2.9 16/30, mb3.4/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.68**	**281**	P		**Pn**	**17 34 18.1**	**-0.6**
JIKH				S		**Sn**	**17 34 47.4**	**-2.8**
OFUJ	**Ofunato**	**2.75**	**297**	P		**Pn**	**17 34 19.4**	**-0.2**
OFUJ				S		**Sn**	**17 34 50.2**	**-1.8**
JKMT	**Kesennumamotoy**	**2.79**	**291**	P		**Pn**	**17 34 19.8**	**-0.4**
JIO	**Ouri**	**2.79**	**283**	P		**Pn**	**17 34 19.8**	**-0.4**
JIO				S		**Sn**	**17 34 50.8**	**-2.3**
JMK	**Ichinoseki**	**3.02**	**292**	P		**Pn**	**17 34 23.6**	**+0.1**
JOM	**Ohasama**	**3.19**	**301**	P		**Pn**	**17 34 26.0**	**+0.3**
JOTO	**OTAMA OYAMA**	**3.56**	**266**	P		**Pn**	**17 34 31.1**	**+0.2**
JOTO				*e*S		**Sn**	**17 35 09.8**	**-2.4**
JANG	**Nango**	**3.58**	**315**	P		**Pn**	**17 34 31.2**	**+0.1**
JANG				*e*S		**Sn**	**17 35 11.2**	**-1.5**
JOT	**Ohata**	**4.56**	**322**	P		**Pn**	**17 34 45.5**	**+1.0**
JCH	**Churui**	**4.87**	**347**	P		**Pn**	**17 34 48.8**	**-0.1**
JCH				S		**Sn**	**17 35 41.0**	**-3.4**
JRY	**Ryogami san**	**5.08**	**250**	P		**Pn**	**17 34 50.7**	**-1.0**
JRY				S		**Sn**	**17 35 44.3**	**-5.3**
MJAR	**Matsushiro Arr** 0.2nm,0.3s,baz=89,slow=16,SNR=13	**5.43**	**258**	Pn		**Pn**	**17 34 57.6**	**+1.0**
MJAR				Sn		**Sn**	**17 35 56.4**	**-1.9**
	baz=116,slow=41,SNR=1.8 1.6nm,0.3s							
NEM2	**Nemuro 2**	**5.54**	**7**	P		**Pn**	**17 34 56.4**	**-1.6**
NEM2				*e*S		**Sn**	**17 35 55.5**	**-5.3**
JHJ	**Hachijo jima 2** 3.7nm,0.3s,baz=57,slow=17,SNR=1.3	**6.26**	**222**	Pn		**Pn**	**17 35 08.1**	**+0.1**
JHJ				Sn		Sn	17 36 07.6	-11
	3.6nm,0.3s,baz=238,slow=18,SNR=2.6 44nm,0.6s							
ASAJ	**Asahikawa** 1.6nm,0.3s,baz=191,slow=15,SNR=39	**6.46**	**346**	Pn		**Pn**	**17 35 12.2**	**+1.5**
ASAJ				Sn		**Sn**	**17 36 22.0**	**-1.7**
	0.9nm,0.3s,baz=46,slow=33,SNR=5.9 3.4nm,0.3s							
USRK	**Ussuriysk Ar.** 0.2nm,0.3s,baz=109,slow=13,SNR=4.2 3.8nm,0.6s	**11.56**	**307**	Pn		**Pn**	**17 36 23.1**	**+2.6**
H11N2	**WAKE ISLAND Hy** baz=318	**26.37**	**127**	T		T	18 06 15.9	
H11N1	**WAKE ISLAND Hy** baz=318	**26.38**	**127**	T		T	18 06 30.3	
H11N3	**WAKE ISLAND Hy** baz=318	**26.39**	**127**	T		T	18 06 24.8	
SONM	**Songino Array** 0.2nm,0.6s,baz=90,slow=9.4,SNR=1.5 0.2nm,0.6s	**29.60**	**302**	P		**P**	**17 39 42.9**	**+2.7**
ILAR	**Eielson Array** 0.2nm,0.7s,baz=269,slow=8.4,SNR=1.8 0.2nm,0.7s	**47.34**	**33**	P		**P**	**17 42 08.8**	**+0.3**
KURBB	**Kurchatov Arra** 0.2nm,0.3s,baz=81,slow=8.3,SNR=1.5 0.2nm,0.3s	**47.62**	**308**	P		**P**	**17 42 13.0**	**+2.1**
WRA	**Warramunga Arr** 0.3nm,0.5s,baz=9.9,slow=6.8,SNR=7.2 0.3nm,0.5s	**58.34**	**192**	P		**P**	**17 43 29.1**	**-1.0**

BJI ***18*** *17:45:33.4, 11°.25S×115°.10E, h10km, mB6.4/75, mb5.9/95, Ms6.3/99, Ms7 6.1/95*

PTWC ***18*** *17:45:35, 11°.40S×115°.10E, h10km, Mwp6.4/8*

GFZ ***18*** *17:45:35.4, 11°.34S×115°.09E, h13km, MW6.2, Moment Tensor Solution. s40 Moment tensor: Mrr=2.40; Mθθ2.53; Mϕϕ-0.14; Mrθ0.48; Mϕθ-0.28; Mϕr-0.50; Fault plane solution: NP1:ϕs85.00000°, δ40.00000°, λ-106.00000°. NP2:ϕs286.00000°, δ51.00000°, λ-76.00000°. Principal axes: T 2.6200, Plg6.0000°, Azm6.0000°; N -0.0800, Plg10.0000°, Azm97.0000°; P -2.5400, Plg77.0000°, Azm247.0000°;*

MOS ***18*** *17:45:37.9±1.0, 10°.88S×115°.26E, h20km, mb6.6/75, MS6.0/53 Error ellipse: s-maj=7.2km s-min=4.2km az=115.7*

IPGP ***18*** *17:45:37.0, 11°.11S×115°.06E, h10km, Mw6.4, Fault plane solution: NP1:ϕs285.00000°, δ42.00000°, λ-72.00000°. NP2:ϕs81.00000°, δ50.00000°, λ-106.00000°.*

NEIC ***18*** *17:45:38.3, 11°.32S×115°.21E, h20km, Moment Tensor Solution. Duration: 68s Moment tensor: Scale 10¹⁸Nm; Mrr-2.29; Mθθ2.40; Mϕϕ-0.10; Mrθ-1.55; Mϕθ-0.14; Mϕr0.14; Fault plane solution: M₀2.82000×10¹⁸ NP1: ϕs271.91000°, δ28.26000°, λ-92.11000°. NP2:ϕs94.30000°, δ61.76000°, λ-88.86000°. Principal axes: T 2.8716, Plg17.0000°, Azm183.0000°; N -0.1111, Plg1.0000°, Azm274.0000°; P -2.7605, Plg73.0000°, Azm7.0000°;*

DJA ***18*** *17:45:38.3±0.4, 11°.5S±1°.1°.5E±°, h11km±3km, M6.3/241, mB6.7/231, mb6.4/241, MLv6.7/45, Mww6.3/86, Mw(mB)6.5/231, MwMwp6.1/213, Mwp6.1/213*

NEIC ***18*** *17:45:38.3, 11°.12S×115°.11E, h20km*

NEIC ***18*** *17:45:39.3±2.4, 11°.05S±0°.07×115°.14E±0°.06, h21km±3km, mb6.3/239, Ms_20 6.0/613, Mwb6.1/118, Mww6.2/65, Error ellipse: s-maj=10.2km s-min=8.4km az=214.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr-1.32; Mθθ1.71; Mϕϕ-0.39; Mrθ0.08; Mϕθ-0.24; Mϕr-0.54; Fault plane solution: M₀1.66000×10¹⁸ NP1:ϕs73.51000°, δ47.51000°, λ-124.49000°. NP2:ϕs298.99000°, δ52.57000°, λ-58.28000°. Principal axes: T 1.7455, Plg3.0000°, Azm7.0000°; N -0.1777, Plg25.0000°, Azm98.0000°; P -1.5678, Plg65.0000°, Azm271.0000°;*

ISC-PP ***18*** *17:45:39, 11°.05S×115°.14E, h15km, Mwppsm6.6, Moment Tensor Solution. s49 Moment tensor: Scale 10¹⁸Nm; Mrr-0.62±.08; Mθθ0.56±.14; Mϕϕ0.09±.18; Mrθ0.35±.10; Mϕθ-0.05±.12; Mϕr-0.16±.23; Fault plane solution: M₀9.23000×10¹⁸ NP1:ϕs282.70000°, δ59.90000°, λ265.70000°. NP2:ϕs111.20000°, δ30.30000°, λ-82.70000°.*

NEIC ***18*** *17:45:40.2, 11°.03S×115°.16E, h27km*

IDC ***18*** *17:45:42.0±1.5, 10°.90S×115°.24E, h35km±11km, mb6.0/31, mbtmp6.2/35, ML5.7/4, MS5.9/65, Error ellipse: s-maj=11.7km s-min=8.2km az=78.0*

GCMT ***18*** *17:45:43.3±0.0, 11°.23S×115°.10E, h12km, MW6.2/159, Moment Tensor Solution. s150, c352; s159, c689; Duration: 3s3 Moment tensor: Scale 10¹⁸Nm; Mrr-2.65±.01; Mθθ3.26±.01; Mϕϕ-0.60±.01; Mrθ0.16±.03; Mϕθ-0.23±.01; Mϕr-0.21±.03; Best double couple: M₀2.97600×10¹⁸ NP1:ϕs88.00000°, δ44.00000°, λ-98.00000°. NP2:ϕs279.00000°, δ47.00000°, λ-83.00000°. Principal axes: T 3.2780, Plg2.0000°, Azm3.0000°; N -0.5990, Plg5.0000°, Azm94.0000°; P -2.6740, Plg84.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 18 17:45:39.4±0.4, 11°.07S±0°.02×115°.17E±0°.03, h24km±2km, h24km:pP-P, n2046, σ1.9 74/2001, mb6.3/310, MS6.0/458, 93C-122D, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
IGBI	**Denpasar**	**2.23**	**359**	P	P	**Pn**	**17 46 14.5**	**-0.4**
IGBI				S	S	**Sn**	**17 46 41.8**	**0.0**
DNP	**Denpasar**	**2.37**	**1**	P	P	**Pn**	**17 46 17.4**	**+0.5**
DNP	**Denpasar**	**2.37**	**1**	P	P	**Pn**	**17 46 17.2**	**+0.3**
RTBI	**Rangdo, Negare**	**2.60**	**355**	P	P	**Pn**	**17 46 19.7**	**-0.3**
RTBI				S	S	**Sn**	**17 46 53.2**	**+2.3**
KHKI	**Kahang-Kahang**	**2.72**	**9**	P	P	**Pn**	**17 46 23.0**	**+1.4**
KHKI				S	S	**Sb**	**17 46 58.1**	**-2.2**
JAGI	**Jajag, Banyuwa**	**2.77**	**339**	P	P	**Pn**	**17 46 22.2**	**-0.1**
JAGI	**Jajag, Banyuwa**	**2.77**	**339**	S	S	**Sn**	**17 46 54.4**	**-0.6**
JAGI	**Jajag, Banyuwa**	**2.77**	**339**		P	**Pn**	**17 46 22.1**	**-0.1**
JAGI					S	**Sn**	**17 46 53.6**	**-1.4**
JAGI	**Jajag, Banyuwa**	**2.77**	**339**		P	**Pn**	**17 46 21.8**	**-0.5**
JAGI	**Jajag, Banyuwa**	**2.77**	**339**		P	**Pn**	**17 46 21.8**	**-0.5**
JAGI					S	**Sn**	**17 46 54.9**	**-0.1**
JAGI	**Jajag, Banyuwa**	**2.77**	**339**	⇑	P	**Pn**	**17 46 21.6**	**-0.7**
ABJI	**Asem Bagus**	**3.38**	**344**		P	**Pn**	**17 46 31.9**	**+1.2**
ABJI					S	**Sb**	**17 47 15.3**	**-4.0**
PLAI	**Plampang**	**3.40**	**49**		P	**Pn**	**17 46 31.7**	**+0.8**
PLAI	**Plampang**	**3.40**	**49**		P	**Pn**	**17 46 30.6**	**-0.3**
BLJI	**Banyuglugur**	**3.65**	**335**		P	**Pn**	**17 46 35.2**	**+0.8**
BLJI					S	**Sn**	**17 47 17.8**	**+1.1**
DBNI	**Kabupaten Domp**	**4.01**	**51**		P	**Pn**	**17 46 40.8**	**+1.4**
KMMI	**Kalianget**	**4.16**	**343**		P	**Pn**	**17 46 42.6**	**+1.1**
WBSI	**Waikabubak, Su**	**4.39**	**72**		P	**Pn**	**17 46 43.7**	**-0.9**
SNJI	**Sawahan-Nganju**	**4.69**	**314**		P	**Pn**	**17 46 50.4**	**+1.5**
SJI	**Sawahan**	**4.72**	**314**		P	**Pn**	**17 46 50.1**	**+0.9**
PCJI	**Pacitan**	**4.86**	**306**		P	**Pn**	**17 46 49.9**	**-1.2**
NGJI	**Ngawi** 11μm,1.0s	**5.19**	**315**		P	**Pn**	**17 46 57.9**	**+2.3**
WSI	**Waingapu** 79nm135μm107μm5μm,0.5s	**5.23**	**75**		P	**Pn**	**17 46 58.0**	**+1.8**
LBFI	**Labuhan Bajo,**	**5.31**	**61**		P	**Pn**	**17 46 57.5**	**+0.2**
UGM	**Wanagama**	**5.55**	**304**		P	**Pn**	**17 47 00.9**	**+0.2**
UGM	**Wanagama**	**5.55**	**304**		S	**Sn**	**17 48 02.4**	**-1.4**
UGM	**Wanagama**	**5.55**	**304**			**Pn**	**17 47 00.6**	**-0.1**
UGM					Sn	**Sn**	**17 47 57.2**	**-6.6**
UGM	**Wanagama**	**5.55**	**304**		P	**Pn**	**17 47 00.7**	**0.0**
UGM	**Wanagama**	**5.55**	**304**		P	**Pn**	**17 47 00.5**	**-0.1**
YOGI	**Yogyakarta**	**5.79**	**303**		P	**Pn**	**17 47 04.5**	**+0.6**
SMRI	**Semarang**	**6.14**	**310**		P	**Pn**	**17 47 07.9**	**-0.9**
SMRI	**Semarang**	**6.14**	**310**		S	**Sn**	**17 48 16.9**	**-1.5**
SMRI	**Semarang**	**6.14**	**310**			**Pn**	**17 47 08.9**	**+0.2**
SMRI	**Semarang** 37nm74μm5μm,0.9s	**6.14**	**310**		P	**Pn**	**17 47 09.1**	**+0.3**
SMRI	**Semarang**	**6.14**	**310**	⇑	P	**Pn**	**17 47 09.5**	**+0.7**
EDFI	**Ende, Flores** 10nm108μm28μm2μm,0.5s	**6.82**	**71**		P	**Pn**	**17 47 18.9**	**+0.7**
CTJI	**Waduk Cacaban** 29nm87μm5μm,0.9s	**7.16**	**304**		P	**Pn**	**17 47 22.9**	**+0.2**
BSSI	**Bau Bau, Buton** 15nm172μm37μm3μm,0.7s	**7.18**	**48**		P	**Pn**	**17 47 24.0**	**+1.0**
KPJI	**Karang Pucung**	**7.19**	**301**		P	**Pn**	**17 47 24.3**	**+1.2**
MKS	**Makassar** 11nm38μm2μm,1.0s	**7.20**	**37**		P	**Pn**	**17 47 24.5**	**+1.2**
MMRI	**Maumere**	**7.37**	**71**		P	**Pn**	**17 47 27.1**	**+1.5**
MMRI	**Maumere**	**7.37**	**71**		S	**Sn**	**17 48 51.0**	**+2.5**
MMRI	**Maumere**	**7.37**	**71**			**Pn**	**17 47 26.2**	**+0.6**
MMRI	**Maumere**	**7.37**	**71**		P	**Pn**	**17 47 26.1**	**+0.5**
MMRI	**Maumere** 19nm93μm39μm3μm,0.6s	**7.37**	**71**		P	**Pn**	**17 47 27.1**	**+1.5**
MMRI	**Maumere**	**7.37**	**71**	⇑	P	**Pn**	**17 47 25.9**	**+0.3**
KAPI	**Kappang** 110nm,0.3s,baz=212,slow=12,SNR=80	**7.53**	**37**		Pn	**Pn**	**17 47 28.7**	**+0.9**
KAPI					Sn	**Sn**	**17 48 49.6**	**-2.9**
	123nm,0.3s,baz=56,slow=22,SNR=13							
KAPI					LR	LR	17 51 04.1	
	comp=Z,88μm,20.7s,baz=204,slow=44 983nm,0.6s							
KAPI	**Kappang**	**7.53**	**37**		P	**Pn**	**17 47 29.5**	**+1.7**
KAPI	**Kappang**	**7.53**	**37**		S	**Sn**	**17 48 52.3**	**-0.2**
KAPI	**Kappang**	**7.53**	**37**			**Pn**	**17 47 29.1**	**+1.3**
KAPI	**Kappang**	**7.53**	**37**		P	**Pn**	**17 47 28.3**	**+0.6**
KAPI					P	**Pn**	**17 47 28.3**	**+0.6**
KAPI					S	**Sn**	**17 48 51.6**	**-0.9**
KAPI					S	**Sn**	**17 48 51.6**	**-0.9**
KAPI	**Kappang**	**7.53**	**37**		P	**Pn**	**17 47 29.5**	**+1.7**
KAPI	**Kappang** 162μm886nm,0.8s	**7.53**	**37**		P	**Pn**	**17 47 29.1**	**+1.3**
KAPI	**Kappang**	**7.53**	**37**	⇑	P	**Pn**	**17 47 29.4**	**+1.6**
BBKI	**Banjar Baru** 12nm53μm2μm,1.2s	**7.56**	**357**		P	**Pn**	**17 47 31.6**	**+3.4**
BBJI	**Bungbulang**	**8.24**	**295**		P	**Pn**	**17 47 36.5**	**-1.1**
BBJI	**Bungbulang**	**8.24**	**295**		S	**Sn**	**17 49 06.1**	**-4.0**
BBJI	**Bungbulang**	**8.24**	**295**			**Pn**	**17 47 36.2**	**-1.4**
BBJI					Sn	**Sn**	**17 49 02.6**	**-7.5**
BBJI	**Bungbulang** 58μm27μm4μm,1.0s	**8.24**	**295**		P	**Pn**	**17 47 35.9**	**-1.7**
PMSI	**Majene** 47μm5μm,0.8s	**8.38**	**27**		P	**Pn**	**17 47 41.6**	**+2.1**
BATI	**Baumata** 139nm,0.3s,baz=280,slow=12,SNR=72	**8.39**	**85**		Pn	**Pn**	**17 47 40.0**	**+0.3**
BATI					Sn	**Sn**	**17 49 09.7**	**-4.0**
	348nm,0.3s,baz=24,slow=23,SNR=11 365nm,0.3s							
BATI	**Baumata** 59μm16μm1μm,0.5s	**8.39**	**85**		P	**Pn**	**17 47 39.4**	**-0.2**
SPSI	**Sidrap Palu** 24μm2μm,1.1s	**8.40**	**33**		P	**Pn**	**17 47 41.5**	**+1.8**
LEM	**Lembang** 65nm,0.3s,baz=108,slow=8.4,SNR=107	**8.57**	**299**		Pn	**Pn**	**17 47 43.0**	**+0.8**
LEM					Sn	**Sn**	**17 49 15.7**	**-2.6**
	114nm,0.3s,baz=356,slow=15,SNR=4.3							
LEM					LR	LR	17 51 45.7	
	comp=Z,118μm,19.1s,baz=120,slow=42 4μm,1.0s							
LEM	**Lembang**	**8.57**	**299**		P	**Pn**	**17 47 41.0**	**-1.2**
LEM	**Lembang** 137μm53μm5μm,1.0s	**8.57**	**299**		P	**Pn**	**17 47 42.0**	**-0.2**
SOEI	**Soe**	**9.04**	**83**		S	**Sn**	**17 49 33.3**	**+3.4**
SOEI	**Soe**	**9.04**	**83**			**Pn**	**17 47 47.4**	**-1.2**
SOEI	**Soe**	**9.04**	**83**		P	**Pn**	**17 47 47.5**	**-1.2**
SOEI	**Soe** 68μm21μm2μm,0.7s	**9.04**	**83**		P	**Pn**	**17 47 49.3**	**+0.6**
SOEI	**Soe**	**9.04**	**83**	⇓	P	**Pn**	**17 47 48.0**	**-0.7**
MMSI	**Mamuju** 18μm822nm,1.0s	**9.11**	**24**		P	**Pn**	**17 47 50.5**	**+1.0**
TTSI	**Tana Toraja**

SANI Sanana 13.98 51 P Pn 17 48 58.5 +2.4
SANI Sanana 13.98 51 P Pn 17 48 58.6 +2.4
comp=Z,53µmcomp=Z,14µmcomp=Z,902nm,1.0s
SANI Sanana 13.98 51 ⇑P Pn 17 48 56.8 +0.6
KNRA Kununurra 13.99 111 P Pn 17 48 53.0 -3.3
comp=Z,480nm,1.4s,comp=Z,0.0nm
KNRA Kununurra 13.99 111 Pn 17 48 53.0 -3.3
GTOI Gorontalo 14.00 34 P P 17 49 00.4 -3.7
comp=Z,31µmcomp=Z,2µm,0.9s
NLAI Namlea 14.15 58 P P 17 49 02.7 -3.2
comp=Z,57µmcomp=Z,17µmcomp=Z,987nm,1.1s
KSI Kapahiang 14.48 300 P Pn 17 49 00.3 -2.8
UBSI University, Be 14.70 299 P Pn 17 49 04.5 -1.5
comp=Z,54µmcomp=Z,45µmcomp=Z,2µm,0.8s
JMBI JAMBI 14.79 309 P Pn 17 49 09.0 +1.8
comp=Z,63µmcomp=Z,25µmcomp=Z,2µm,1.2s
AAI Ambon 14.84 61 P Pn 17 49 10.0 +2.1
comp=Z,45µmcomp=Z,21µmcomp=Z,2µm,1.3s
DSRI Dabo 14.88 314 P Pn 17 49 09.0 +0.6
MASI Maura Aman, Be 15.05 301 P Pn 17 49 08.1 -2.6
KRAI Karang Ratu 15.20 61 P Pn 17 49 14.4 +1.7
DRS Darwin Rock St 15.46 97 P Pn 17 49 16.0 -0.1
MNI Manado 15.71 38 P P 17 49 23.1 -0.1
comp=Z,92µmcomp=Z,43µmcomp=Z,3µm,1.1s
MTN Manton Dam 15.72 98 P Pn 17 49 18.2 -1.2
comp=Z,793nm,1.4s,comp=Z,0.0nm
MTN Manton Dam 15.72 98 Pn Pn 17 49 17.3 -2.1
MTN Manton Dam 15.72 98 P Pn 17 49 18.0 -1.4
MEEK Meekatharra 15.83 169 P Pn 17 49 15.0 -5.8
comp=Z,4µm,0.9s,comp=Z,0.0nm
TPRI Tanjung Pinang 15.93 318 P Pn 17 49 23.1 +0.9
BNDI Bandanaira 15.97 67 P Pn 17 49 23.1 +0.4
BNDI Bandanaira 15.97 67 P Pn 17 49 22.1 -0.6
comp=Z,34µmcomp=Z,66µmcomp=Z,4µm,1.0s
BNDI Bandanaira 15.97 67 ⇑P Pn 17 49 21.7 -1.0
SAUI Saumlaki 16.20 81 P P 17 49 27.6 -1.0
SAUI Saumlaki 16.20 81 Pn Pn 17 49 24.4 -1.2
SAUI IAmb IAmb 17 49 30.1
comp=Z,2µm,0.8s
SAUI Saumlaki 16.20 81 P Pn 17 49 27.0 +1.4
SAUI Saumlaki 16.20 81 P P 17 49 27.9 -0.7
comp=Z,30µmcomp=Z,35µmcomp=Z,3µm,1.0s
SAUI Saumlaki 16.20 81 ⇑P Pn 17 49 25.0 -0.6
KRJI Kerinci 16.27 302 P Pn 17 49 23.5 -3.1
MYLDM Lahad Datu 16.48 12 P Pn 17 49 30.0 +0.9
MYLDM Lahad Datu 16.48 12 P P 17 49 30.9 -0.8
MYLDM Lahad Datu 16.48 12 P P 17 49 33.6 +1.9
comp=Z,48µmcomp=Z,1µm,1.1s
MYLDM Lahad Datu 16.48 12 ⇑P P 17 49 32.1 +0.4
TNTI Ternate 16.89 47 P P 17 49 35.6 -0.7
TNTI Ternate 16.89 47 Pn Pn 17 49 34.4 0.0
TNTI Ternate 16.89 47 P P 17 49 35.4 -0.9
TNTI Ternate 16.89 47 ⇑P Pn 17 49 34.6 +0.2
KDU Kakadu 17.01 97 P Pn 17 49 35.5 -0.4
comp=Z,201nm,1.3s,comp=Z,0.0nm
MYKOM Kota Tinggi 17.03 318 P Pn 17 49 36.6 +0.5
MYKOM Kota Tinggi 17.03 318 Pn Pn 17 49 33.7 -2.4
MYKOM Kota Tinggi 17.03 318 P Pn 17 49 35.5 -0.6
comp=Z,50µmcomp=Z,15µmcomp=Z,1µm,1.0s
MYKOM Kota Tinggi 17.03 318 ⇑P Pn 17 49 34.6 -1.5
KKM Kota Kinabalu 17.03 4 P P 17 49 38.7 +0.8
KKM Kota Kinabalu 17.03 4 Pn 17 49 35.1 -1.1
KKM Kota Kinabalu 17.03 4 P Pn 17 49 36.7 +0.5
comp=Z,92µmcomp=Z,17µmcomp=Z,761nm,1.0s
KKM Kota Kinabalu 17.03 4 ⇑P Pn 17 49 35.2 -1.1
PPSI Pulau Pagai 17.15 298 P Pn 17 49 35.1 -2.6
PDSI Padang 17.75 304 P Pn 17 49 40.9 -4.3
comp=Z,30µmcomp=Z,17µmcomp=Z,1µm,0.9s
SGSI Sangihe 17.92 36 P P 17 49 53.4 +5.8
comp=Z,76µmcomp=Z,37µmcomp=Z,2µm,0.9s
MORW Morawa 17.93 178 P Pn 17 49 41.1 -6.1
comp=Z,1µm,1.1s,comp=Z,0.0nm
MORW Morawa 17.93 178 Pn 17 49 41.2 -6.1
MORW IAmb IAmb 17 49 48.1
comp=Z,5µm,1.9s
COCO West Island 18.00 265 P Pn 17 49 48.0 -0.1
COCO West Island 18.00 265 Pn 17 49 44.8 -3.3
COCO IAmb IAmb 17 49 51.4
comp=Z,3µm,1.4s
COCO West Island 18.00 265 P Pn 17 49 44.8 -3.3
COCO pmax pmax
comp=Z,3µm,1.4s
COCO West Island 18.00 265 P P 17 49 48.4 -0.1
COCO P P 17 49 48.4 -0.1
COCO P P 17 49 48.4 -0.1
COCO S Sn 17 53 08.1 -0.3
COCO S Sn 17 53 08.1 -0.3
COCO S Sn 17 53 08.1 -0.3
COCO West Island 18.00 265 P P 17 49 48.4 -0.1
comp=Z,36µmcomp=Z,20µmcomp=Z,1µm,1.4s
COCO West Island 18.00 265 ⇓P Pn 17 49 47.0 -1.1
BKNI Bangkinang 18.04 308 P P 17 49 49.7 +0.7
BKNI Bangkinang 18.04 308 IAmb IAmb 17 49 53.3
comp=Z,6µm,1.3s
BKNI Bangkinang 18.04 308 P Pn 17 49 48.6 -0.1
comp=Z,46µmcomp=Z,44µmcomp=Z,3µm,1.3s
BKNI Bangkinang 18.04 308 ⇓P Pn 17 49 46.2 -2.5
PPI Padang Panjang 18.07 305 P Pn 17 49 45.6 -3.5
comp=Z,38µmcomp=Z,16µmcomp=Z,2µm,1.1s
WRKA Warakurna 18.65 140 P P 17 49 52.7 -3.1
comp=Z,623nm,0.9s,comp=Z,0.0nm
FAKI Fak Fak 18.77 66 P P 17 49 55.6 -1.5
FAKI Fak Fak 18.77 66 P 17 49 54.9 -2.2
FAKI IAmb IAmb 17 50 02.6
comp=Z,1µm,0.9s
FAKI Fak Fak 18.77 66 P P 17 49 55.5 -1.5
comp=Z,24µmcomp=Z,23µmcomp=Z,1µm,0.9s
FAKI Fak Fak 18.77 66 ⇓P P 17 49 55.1 -2.0
SWI Sorong 18.92 59 P P 17 49 57.9 -0.8
comp=Z,39µmcomp=Z,30µmcomp=Z,3µm,1.1s
SIJI Sorong 18.93 59 P P 17 49 58.1 -0.6
comp=Z,28nm,0.3s,baz=226,slow=6.7,SNR=123
SIJI S Sn 17 53 23.3 -7.6
comp=Z,185nm,0.9s,baz=91,slow=23,SNR=7.0
comp=Z,630nm,0.8s
SIJI Sorong 18.93 59 P P 17 49 58.0 -0.8
comp=Z,32µmcomp=Z,24µmcomp=Z,2µm,1.2s
ZCP Zamboanga City 19.15 21 ep Pn 17 50 04.1 +1.9
MNSI Mandailing Nat 19.47 306 P P 17 50 02.8 -1.9
BLDU Ballidu 19.50 176 P P 17 50 03.0 -2.0
BLDU Ballidu 19.50 176 P P 17 50 03.1 -1.9
GSPH General Santos 19.62 30 i P Pn 17 50 12.1 +4.1
KMPI Kaimana, Papua 19.79 70 P P 17 50 08.9 +0.7
comp=Z,18µmcomp=Z,18µmcomp=Z,1µm,0.9s
DDMP Don Marcelino, 20.02 32 eP P 17 50 11.4 +0.6
DDMP eS S 17 53 51.6 -3.3
PBSI Pulau Batu 20.04 302 P P 17 50 10.8 -0.1
comp=Z,41µmcomp=Z,24µmcomp=Z,1µm,0.9s
I07AU WARRAMUNGA INT 20.44 118 P Pn 17 50 17.2 -0.4
baz=286,slow=12,SNR=1.2
WRA Warramunga Arr 20.45 118 P P 17 50 16.2 +0.8
comp=Z,223nm,0.8s,baz=294,slow=10,SNR=512
WRA S S 17 53 56.8 -6.7
comp=Z,90nm,0.6s,baz=296,slow=27,SNR=6.5
WRA LR LR 17 57 56.3
comp=Z,42µm,21.7s,baz=290,slow=36
WRA P3KPbc 18 24 21.5
comp=Z,5.5nm,1.3s,baz=121,slow=4.2,SNR=7.2
comp=Z,223nm,0.8s
WRAB Tennant Creek 20.46 118 P P 17 50 16.1 +0.6
WRAB Tennant Creek 20.46 118 P P 17 50 14.8 -0.7
WRAB IAmb IAmb 17 50 24.0
comp=Z,2µm,1.2s
WRAB Tennant Creek 20.46 118 IAMs_20 IAMs_20 17 57 55.7
comp=Z,46µm,20.0s
WRAB Tennant Creek 20.46 118 P P 17 50 14.8 -0.7
WRAB pmax pmax
comp=Z,2µm,1.2s
WRAB MLR MLR
comp=Z,46µm,20.0s
WB1 Warramunga Ar. 20.46 118 P Pn 17 50 17.1 -0.7
KLBR Kellerberrin 20.57 174 P P 17 50 17.6 +1.1
WR8 Warramunga Arr 20.60 118 P 17 50 16.1 -0.9
WR8 IAmb IAmb 17 50 25.5
comp=Z,2µm,1.2s
MTKN Mount Kenneth 20.77 179 P Pn 17 50 21.0 -0.2
DAV Davao City (W) 20.78 30 P P 17 50 17.7 -1.3
comp=Z,318nm,0.8s,baz=117,slow=1.5,SNR=22
DAV LR LR 17 59 32.4
comp=Z,31µm,19.3s,baz=191,slow=40
DAV Davao City (W) 20.78 30 P Pn 17 50 20.3 -1.2
DAV IAmb IAmb 17 50 35.7
comp=Z,1µm,1.3s
DAV Davao City (W) 20.78 30 IAMs_20 IAMs_20 17 59 12.8
comp=Z,40µm,19.0s
DAV Davao City (W) 20.78 30 P Pn 17 50 22.1 +0.6
comp=Z,35µmcomp=Z,1µm,0.9s
MUN Mundaring 20.83 178 P P 17 50 20.1 +0.7
PPR Puerto Princes 21.01 10 i P P 17 50 21.8 +0.4
RKPI Ransiki, Papua 21.12 65 P P 17 50 23.4 +0.7
comp=Z,41µmcomp=Z,28µmcomp=Z,2µm,0.7s
BUKP Musuan 21.24 28 eP P 17 50 24.6 +0.7
PSI Prapat 21.24 310 P P 17 50 22.6 -1.5
MWPI Manokwari, Pap 21.27 63 P P 17 50 26.4 +2.1
comp=Z,57µmcomp=Z,69µmcomp=Z,4µm,0.9s
GSI Gunungsitoli 21.38 304 P P 17 50 24.3 -1.2
GSI Gunungsitoli 21.38 304 P P 17 50 21.8 -3.7
GSI IAmb IAmb 17 50 42.9
comp=Z,496nm,0.6s
GSI IAMs_20 IAMs_20 17 59 37.5
comp=Z,92µm,21.0s
GSI Gunungsitoli 21.38 304 P P 17 50 23.6 -1.9
comp=Z,38µmcomp=Z,13µmcomp=Z,728nm,0.7s
GSI Gunungsitoli 21.38 304 ⇑P P 17 50 22.8 -2.7
KULM Kulim 21.75 318 P P 17 50 29.2 -0.2
KULM Kulim 21.75 318 P 17 50 27.8 -1.6
KULM IAmb IAmb 17 50 43.9
comp=Z,890nm,0.9s
KULM Kulim 21.75 318 P P 17 50 29.1 -0.3
comp=Z,48µmcomp=Z,15µmcomp=Z,1µm,1.0s
KULM Kulim 21.75 318 ⇓P P 17 50 28.6 -0.7
ASAR Alice Springs 21.80 128 P P 17 50 30.4 +0.5
comp=Z,196nm,0.8s,baz=303,slow=9.3,SNR=595
ASAR S S 17 54 24.3 -5.7
comp=Z,614nm,1.0s,baz=306,slow=24,SNR=16
ASAR LR LR 17 59 13.3
comp=Z,32µm,21.4s,baz=298,slow=37
ASAR P3KPbc 18 24 15.1
comp=Z,0.7nm,0.6s,baz=122,slow=3.4,SNR=8.1
comp=Z,196nm,0.8s
ASAR Alice Springs 21.80 128 P P 17 50 30.1 +0.2
SNPH Sibulan 21.80 22 eP P 17 50 32.3 +2.2
CDOP Cateel, Davao 21.83 31 i P P 17 50 30.1 -0.1
NWAO Narrogin (SRO) 21.84 175 P P 17 50 33.0 +2.8
comp=Z,790nm,0.4s,baz=355,slow=12,SNR=40
NWAO S S 17 54 20.5 -10
comp=Z,234nm,0.5s,baz=199,slow=1.9,SNR=3.1
comp=Z,790nm,0.4s
NWAO Narrogin (SRO) 21.84 175 P P 17 50 30.0 -0.2
NWAO Narrogin (SRO) 21.84 175 P 17 50 28.4 -1.8
NWAO Narrogin (SRO) 21.84 175 P P 17 50 28.4 -1.8
NWAO pmax pmax
comp=Z,3µm,1.1s
NWAO Narrogin (SRO) 21.84 175 P P 17 50 36.3 +6.1
NWAO P P 17 50 36.3 +6.1
NWAO P P 17 50 36.3 +6.1
NWAO S Sn 17 54 43.5 +2.7
NWAO S Sn 17 54 43.5 +2.7
NWAO S Sn 17 54 43.5 +2.7
TSI Tuntungan 21.97 310 P P 17 50 31.6 -0.1
BIPH Bislig 22.13 31 eP P 17 50 33.6 +0.2
BIPH Bislig 22.13 31 eS S 17 54 42.0 +5.7
TBP Tagbilaran 22.36 23 eP P 17 50 36.2 +0.3
KCSI Kotacane, Aceh 22.58 309 P P 17 50 36.4 -1.9
comp=Z,27µmcomp=Z,17µmcomp=Z,2µm,1.1s
JAP San Jose, Anti 22.69 17 eP P 17 50 42.1 +2.7
TSSP Tandag City 22.79 29 eP P 17 50 42.2 +1.7
SRPI Serui, Papua 22.82 68 P P 17 50 40.7 -0.2
comp=Z,32µmcomp=Z,19µmcomp=Z,1µm,0.8s
TPTI 22.87 307 P P 17 50 38.8 -2.6
comp=Z,35µmcomp=Z,28µmcomp=Z,2µm,1.3s
LLP Lapu-Lapu 22.97 23 eP P 17 50 41.4 -1.0
LLP eS S 17 54 49.7 -1.8
FORT Forrest 22.98 151 P 17 50 41.5 -0.9
FORT IAmb IAmb 17 51 01.7
comp=Z,1µm,0.8s
BAKI Biak 22.99 66 P P 17 50 44.7 +2.1
comp=Z,32µmcomp=Z,21µmcomp=Z,2µm,1.1s
RCP Roxas 23.70 19 eP P 17 50 50.9 +1.2
IBAJ Ibajay, Aklan 23.77 17 eP P 17 50 52.0 -0.1
MLSI Meulaboh, Aceh 24.10 308 P P 17 50 52.5 -1.0
comp=Z,34µmcomp=Z,39µmcomp=Z,4µm,1.2s
PLP Palo 24.14 24 eP P 17 50 52.6 -1.2
LHMI Lhok Sumawe 24.31 311 P P 17 50 55.5 +0.1
LHMI Lhok Sumawe 24.31 311 P 17 50 54.1 -1.3
LHMI Lhok Sumawe 24.31 311 P P 17 50 55.7 +0.3
comp=Z,67µmcomp=Z,4µm,1.2s
LHMI Lhok Sumawe 24.31 311 ⇓P P 17 50 54.3 -1.1
WAMI Wamena 24.39 75 P P 17 50 59.9 +3.8
comp=Z,31µmcomp=Z,16µmcomp=Z,811nm,0.7s
MMPI Merauke 24.98 86 P P 17 51 03.7 +2.2
comp=Z,27µmcomp=Z,15µmcomp=Z,1µm,0.7s
QIS Mount Isa 25.30 115 P P 17 51 05.7 +1.3
AUQP San Andres 25.35 17 eP P 17 51 08.7 +4.0
TGY Tagaytay City 25.65 13 LR LR 18 03 03.2
comp=Z,18µm,20.3s,baz=194,slow=41
BSI Banda Aceh 25.73 309 P P 17 51 07.3 -1.0
comp=Z,37µmcomp=Z,17µmcomp=Z,986nm,0.9s
GQP Guinayangan 25.84 16 eP P 17 51 09.0 -0.1
GENI Genyem 26.18 73 P P 17 51 14.1 +1.7
GENI Genyem 26.18 73 P P 17 51 14.3 +1.9
comp=Z,26µmcomp=Z,15µmcomp=Z,1µm,1.2s
GENI Genyem 26.18 73 ⇑P P 17 51 13.6 +1.1
JAY Jayapura 26.72 73 LR LR 18 05 19.1
comp=Z,13µm,18.4s,baz=270,slow=44
JAY Jayapura 26.72 73 P P 17 51 18.8 +1.5
comp=Z,20µmcomp=Z,266nm,0.9s
COEN Coen 27.48 99 P P 17 51 25.9 +1.8
COEN Coen 27.48 99 P P 17 51 23.9 -0.3
COEN IAmb IAmb 17 51 56.2
comp=Z,806nm,1.6s
COEN Coen 27.48 99 ⇓P P 17 51 25.5 +1.3
BOLP Bolinao 27.67 10 i P P 17 51 08.9 -17
CMBY CAMPBELL BAY 27.74 309 eP P 17 51 29.5 +3.1
CMBY IAmb IAmb 17 51 40.4
comp=Z,346nm,0.8s
CMBY IAMs_20 IAMs_20 18 04 35.4
comp=Z,49µm,18.7s
UBPT Khong Chiam 27.88 340 P P 17 51 28.1 +0.5
UBPT Khong Chiam 27.88 340 ⇓P P 17 51 27.7 +0.1
SZP Santa 28.91 10 ⇓P P 17 51 36.5 -0.2
BBOO Buckleboo 28.93 142 P P 17 51 37.6 +0.7
BBOO Buckleboo 28.93 142 IAmb IAmb 17 51 53.5
comp=Z,372nm,0.8s
MTSU Mount Surprise 29.04 107 P P 17 51 39.6 +1.6
INKA Innaminka 29.18 128 P P 17 51 39.9 +0.9
SIPP Brgy, Tapao 29.27 10 eP P 17 51 36.6 -3.3
SIPP eS S 17 56 29.5 -2.2
QIZ Qiongzhong 30.36 350 P P 17 51 50.3 +0.7
QIZ Qiongzhong 30.36 350 IAmb IAmb 17 51 53.7
comp=Z,564nm,1.6s
QIZ Qiongzhong 30.36 350 P P 17 51 51.0 +1.4
QIZ pP pP 17 51 54.8 -0.4
QIZ S S 17 56 50.4 +1.5
QIZ sS sS 17 57 01.8 +2.8
QIZ pmax pmax
comp=Z,300nm,1.3s
QIZ pmax pmax
comp=Z,4µm,4.7s
QIZ L L
comp=Z,15µm,17.2s
QIZ L L
comp=Z,12µm,15.5s
QIZ L L
comp=Z,24µm,19.8s
HTT Hallett 31.14 139 P P 17 51 57.7 +1.3
HTT Hallett 31.14 139 ⇑P P 17 51 57.5 +1.1
CTA Charters Tower 31.21 111 LR LR 18 06 11.0
comp=Z,34µm,20.3s,baz=278,slow=39
CTA Charters Tower 31.21 111 P P 17 51 58.8 +1.6
CTAO Charters Tower 31.21 111 P P 17 51 58.9 +1.7
CTAO Charters Tower 31.21 111 P P 17 51 57.4 +0.2
CTAO Charters Tower 31.21 111 IAMs_20 IAMs_20 18 05 58.7
comp=Z,48µm,18.0s
CTAO Charters Tower 31.21 111 P P 17 51 57.4 +0.2
CTAO pmax pmax
comp=Z,208nm,1.0s
CTAO MLR MLR
comp=Z,48µm,18.0s
CTAO Charters Tower 31.21 111 ⇑P P 17 51 58.9 +1.7
QLP Quilpie 31.43 123 P P 17 52 00.5 +1.4
QLP Quilpie 31.43 123 ⇑P P 17 52 00.5 +1.4
PMG Port Moresby 31.51 90 P P 17 52 01.8 +1.9
PMG Port Moresby 31.51 90 d P P 17 52 00.2 +0.3
PMG MLR MLR
comp=Z,22µm,13.0s
PMG Port Moresby 31.51 90 P P 17 52 02.9 +3.0
PMG Port Moresby 31.51 90 ⇑P P 17 52 04.4 +4.5
PBA Port Blair 31.72 315 IAmb IAmb 17 52 19.0
comp=Z,443nm,0.8s
PBA Port Blair 31.72 315 P P 17 52 01.9 +0.3
SNR=13
PBA Port Blair 31.72 315 ⇓P P 17 51 59.2 -2.4
PBA Port Blair 31.72 315 eP P 17 52 03.1 +1.5
PBA IAMs_20 IAMs_20 18 09 21.0
comp=Z,70µm,17.3s
STKA Stephens Creek 31.99 134 P P 17 52 05.2 +1.2
comp=Z,436nm,0.9s,baz=307,slow=9.3,SNR=224
STKA LR LR 18 05 29.4
comp=Z,36µm,21.4s,baz=298,slow=37
comp=Z,436nm,0.9s
STKA Stephens Creek 31.99 134 P P 17 52 05.0 +1.1
DGPR DIGLIPUR 32.67 317 IAmb IAmb 17 51 58.4
comp=Z,510nm,0.9s
DGPR IAMs_20 IAMs_20 18 09 36.7
comp=Z,52µm,20.9s
HKPS Hong Kong Po S 33.15 358 P P 17 52 14.4 +0.3
HKC Hong Kong Obse 33.17 358 ⇑P P 17 52 16.0 +1.7
MANU Manus Island 33.18 77 P P 17 52 15.5 +0.9
MANU IAmb IAmb 17 52 19.9
comp=Z,292nm,0.9s
CM31 Chiang Mai Arr 33.42 331 P P 17 52 17.8 +1.2
SNR=442
CM31 P P 17 52 17.8 +1.2
SNR=442
CM31 P P 17 52 17.8 +1.2
SNR=442
CM31 S S 17 57 35.5 -1.2
CM31 S S 17 57 35.5 -1.2
CM31 S S 17 57 35.5 -1.2
CMAR Chiang Mai Arr 33.42 331 P P 17 52 17.5 +1.0
comp=Z,580nm,1.1s,baz=162,slow=7.4,SNR=422
CMAR PcP PcP 17 54 57.9 +0.1
comp=Z,98nm,0.9s,baz=184,slow=2.7,SNR=10
CMAR S S 17 57 32.8 -3.9
comp=Z,10nm,1.1s,baz=154,slow=14,SNR=3.1
CMAR LR LR 18 08 44.5
comp=Z,37µm,18.3s,baz=135,slow=42
comp=Z,580nm,1.1s
CMAR Chiang Mai Arr 33.42 331 P P 17 52 16.8 +0.2
CHTO Chiang Mai 33.73 332 P P 17 52 19.8 +0.6
CHTO Chiang Mai 33.73 332 P P 17 52 19.0 -0.2
CHTO IAmb IAmb 17 52 23.5
comp=Z,630nm,1.3s
CHTO Chiang Mai 33.73 332 P P 17 52 19.0 -0.2
CHTO pmax pmax
comp=Z,630nm,1.3s
CHTO MLR MLR
comp=Z,45µm,19.0s
CHTO Chiang Mai 33.73 332 P P 17 52 20.2 +1.0
CHTO P P 17 52 20.2 +1.0
CHTO S S 17 57 39.8 -1.6
CHTO S S 17 57 39.8 -1.6
CHTO Chiang Mai 33.73 332 P P 17 52 19.4 +0.2
comp=Z,20µmcomp=Z,7µmcomp=Z,388nm,1.3s
CHTO Chiang Mai 33.73 332 ⇓P P 17 52 19.7 +0.6
TWGBT Beinan 34.17 10 P P 17 52 24.1 +1.2
GZH2 Guangzhou 34.54 358 P P 17 52 27.8 +1.7
GZH2 S S 17 57 55.3 +1.6
GZH2 pmax pmax
comp=Z,490nm,1.3s
GZH2 L L
comp=Z,17µm,14.6s
GZH2 L L
comp=Z,12µm,15.3s
GZH2 L L
comp=Z,27µm,14.3s
TPUB Ta-pu 34.57 9 P P 17 52 28.2 +1.8
TPUB Ta-pu 34.57 9 IAMs_20 IAMs_20 18 08 13.6
comp=Z,23µm,22.0s
YULB Yu-li 34.77 10 P P 17 52 29.2 +1.1
CMSA Cobar Meteorol 34.78 131 P P 17 52 29.8 +1.5
SSLB Suanglung 35.10 9 P P 17 52 31.5 +0.5
SSLB Suanglung 35.10 9 P P 17 52 29.6 -1.5
NACB Ninganchiao 35.58 10 P P 17 52 34.9 -0.2
NACB Ninganchiao 35.58 10 IAmb IAmb 17 52 45.0
comp=Z,200nm,0.7s
QZH2 Quanzhou 35.95 5 ⇑i P P 17 52 37.9 -0.4
QZH2 S S 17 58 12.8 -2.6
QZH2 pmax pmax
comp=Z,100nm,1.5s
QZH2 pmax pmax
comp=Z,4µm,6.9s
QZH2 L L
comp=Z,15µm,22.7s
QZH2 L L
comp=Z,4µm,13.7s
QZH2 L L
comp=Z,29µm,30.9s
YHNB Yeheng 36.03 10 P P 17 52 39.6 +0.5
YHNB Yeheng 36.03 10 IAmb IAmb 17 52 51.7
comp=Z,278nm,0.9s
YHNB IAMs_20 IAMs_20 18 09 24.2
comp=Z,17µm,21.0s
YOJ Yonaguni jima 36.13 12 IAmb IAmb 17 52 53.9
comp=Z,677nm,1.1s
YOJ Yonaguni jima 36.13 12 P P 17 52 39.8 0.0
YOJ Yonaguni jima 36.13 12 ⇑P P 17 52 39.8 0.0
TATO Taipei 36.35 10 P P 17 52 41.4 -0.3
TATO Taipei 36.35 10 P P 17 52 39.9 -1.8
TATO IAmb IAmb 17 52 55.2
comp=Z,488nm,0.9s
GULI GuiLin 36.44 353 P P 17 52 45.0 +2.5
GULI S S 17 58 25.4 +2.4
GULI pmax pmax
comp=Z,220nm,1.4s
GULI L L
comp=Z,12µm,20.1s
GULI L L
comp=Z,17µm,17.3s
GULI L L
comp=Z,28µm,14.8s
EIDS Eidsvold 36.82 118 P P 17 52 47.2 +1.4
EIDS Eidsvold 36.82 118 ⇓P P 17 52 48.8 +3.0
RABL Rabaul 37.27 82 ⇑P P 17 52 52.9 +3.1
TOO Toolangi 37.90 139 P P 17 52 57.4 +2.5
TOO Toolangi 37.90 139 ⇑P P 17 52 57.4 +2.5
KMI2 Kunming 37.98 342 ⇓P P 17 52 57.6 +1.8
KMI2 pP sP 17 53 04.0 0.0
KMI2 sP pwP 17 53 06.3 -1.5
KMI2 S S 17 58 48.1 +1.2
KMI2 pmax pmax
comp=Z,450nm,1.3s
KMI2 pmax pmax
comp=Z,8µm,5.9s
KMI2 L L
comp=Z,20µm,15.7s
KMI2 L L
comp=Z,29µm,15.7s
KMI2 L L
comp=Z,38µm,26.6s
GYA Guiyang 38.20 348 ⇓P P 17 52 58.3 +0.7
GYA S S 17 58 48.8 -1.3
GYA pmax pmax
comp=Z,62nm,1.0s
GYA L L
comp=Z,10µm,20.3s
GYA L L
comp=Z,23µm,18.8s
GUMO Guam 38.31 51 LR LR 18 07 46.7
comp=Z,6µm,21.1s,baz=231,slow=35
GUMO Guam 38.31 51 P P 17 52 59.9 +1.4
GUMO Guam 38.31 51 P P 17 52 57.4 -1.1
GUMO IAmb IAmb 17 53 14.0
comp=Z,344nm,0.6s
GUMO Guam 38.31 51 P P 17 52 57.4 -1.1
GUMO pmax pmax
comp=Z,344nm,0.6s
GUMO Guam 38.31 51 ⇑P P 17 52 58.4 -0.1
HALK Hakmana 38.33 295 ⇓P P 17 52 59.2 +0.5
PALK Pallekele 38.84 296 LR LR 18 09 09.0
comp=Z,17µm,19.9s,baz=108,slow=36
PALK Pallekele 38.84 296 P P 17 53 02.0 -1.1
PALK IAmb IAmb 17 53 06.6
comp=Z,827nm,1.4s
PALK Pallekele 38.84 296 IAMs_20 IAMs_20 18 11 02.9
comp=Z,17µm,20.0s
PALK Pallekele 38.84 296 i P P 17 53 02.8 -0.2
SNR=41
PALK Pallekele 38.84 296 P P 17 53 02.0 -1.1
PALK pmax pmax
comp=Z,827nm,1.5s
PALK MLR MLR
comp=Z,17µm,20.0s

PALK	**Pallekele**	**38.84**	**296**	P	**P**	**17 53 03.8**	**+0.7**
PALK				S	**S**	**17 58 57.6**	**-2.3**
PALK	**Pallekele**	**38.84**	**296**	P	**P**	**17 53 03.6**	**+0.5**
ARMA	**Armidale**	**38.91**	**125**	P	**P**	**17 53 06.3**	**+2.7**
ARMA	**Armidale**	**38.91**	**125**	⇑P	**P**	**17 53 06.3**	**+2.7**
CAN	**Canberra**	**39.05**	**134**	P	**P**	**17 53 06.7**	**+2.1**
CAN	**Canberra**	**39.05**	**134**	IAMs_20	IAMs_20	18 08 36.4	
	comp=Z,33µm,19.0s						
CAN	**Canberra**	**39.05**	**134**	P	**P**	**17 53 07.1**	**+2.5**
CAN	**Canberra**	**39.05**	**134**	⇑P	**P**	**17 53 07.0**	**+2.5**
CNSH	**ChangSha**	**39.08**	**357**	P	**P**	**17 53 04.8**	**+0.1**
CNSH				S	**S**	**17 59 02.3**	**-0.6**
CNSH				pmax	pmax		
	comp=Z,410nm,1.1s						
CNSH				L	L		
	comp=Z,11µm,20.9s						
CNSH				L	L		
	comp=Z,11µm,18.2s						
CNSH				L	L		
	comp=Z,21µm,22.6s						
CNB	**Canberra Magne**	**39.30**	**133**	P	**P**	**17 53 09.5**	**+2.8**
TNCH	**TengChong**	**39.38**	**336**	⇓P	**P**	**17 53 08.6**	**+1.1**
TNCH				PP	**PnPn**	**17 54 43.8**	**+2.7**
TNCH				S	**S**	**17 59 09.9**	**+1.9**
TNCH				pmax	pmax		
	comp=Z,1µm,1.4s						
TNCH				pmax	pmax		
	comp=Z,10µm,4.8s						
TNCH				L	L		
	comp=Z,25µm,16.8s						
TNCH				L	L		
	comp=Z,21µm,16.3s						
TNCH				L	L		
	comp=Z,52µm,16.0s						
MALK	**Mahakanadarawa**	**39.51**	**298**	P	**P**	**17 53 09.2**	**+0.6**
PZH	**PanZhiHua**	**39.56**	**341**	P	**P**	**17 53 09.6**	**+0.7**
PZH				PP	**PnPn**	**17 54 48.3**	**+5.1**
PZH				S	**S**	**17 59 14.8**	**+4.3**
PZH				pmax	pmax		
	comp=Z,340nm,1.2s						
PZH				pmax	pmax		
	comp=Z,6µm,9.2s						
PZH				L	L		
	comp=Z,19µm,21.4s						
PZH				L	L		
	comp=Z,28µm,19.4s						
PZH				L	L		
	comp=Z,25µm,20.6s						
JOW	**Kunigami**	**39.76**	**18**	LR	LR	18 11 09.3	
	comp=Z,11µm,19.9s,baz=197,slow=39						
JOW	**Kunigami**	**39.76**	**18**	P	**P**	**17 53 11.3**	**+0.8**
JOW	**Kunigami**	**39.76**	**18**	⇓P	**P**	**17 53 09.7**	**-0.8**
SAIH	**SAIHA**	**39.81**	**327**	*e*P	**P**	**17 53 11.6**	**+0.5**
SAIH				IAmb	IAmb	17 53 15.3	
	comp=Z,289nm,1.2s						
JMZ	**Minamidaito 2**	**39.85**	**23**	P	**P**	**17 53 12.6**	**+1.4**
JMZ	**Minamidaito 2**	**39.85**	**23**	P	**P**	**17 53 10.8**	**-0.5**
JMZ				IAmb	IAmb	17 53 54.5	
	comp=Z,2µm,1.5s						
JMZ	**Minamidaito 2**	**39.85**	**23**	⇑P	**P**	**17 53 11.8**	**+0.6**
RIV	**Riverview**	**39.93**	**130**	P	**P**	**17 53 13.6**	**+1.8**
RIV	**Riverview**	**39.93**	**130**	⇑P	**P**	**17 53 15.9**	**+4.0**
IMP	**Imphal**	**41.25**	**330**	*e*P	**P**	**17 53 22.4**	**-0.6**
IMP				IAmb	IAmb	17 53 26.5	
	comp=Z,280nm,0.8s						
BELO	**BELONIA**	**41.26**	**326**	*e*P	**P**	**17 53 23.8**	**+0.9**
BELO				IAmb	IAmb	17 53 38.9	
	comp=Z,232nm,0.5s						
WHN	**Wuhan**	**41.38**	**359**	P	**P**	**17 53 21.9**	**-1.8**
WHN				S	**S**	**17 59 34.9**	**-2.3**
WHN				pmax	pmax		
	comp=Z,560nm,1.1s						
WHN				pmax	pmax		
	comp=Z,10µm,5.3s						
WHN				L	L		
	comp=Z,37µm,14.8s						
WHN				L	L		
	comp=Z,20µm,11.9s						
WHN				L	L		
	comp=Z,50µm,14.9s						
ENH	**Enshi**	**41.46**	**353**	P	**P**	**17 53 24.2**	**-0.3**
ENH	**Enshi**	**41.46**	**353**	IAmb	IAmb	17 53 38.6	
ENH	comp=Z,792nm,1.2s			IAMs_20	IAMs_20	18 12 08.8	
	comp=Z,20µm,20.0s						
GLAD	**Gladstone**	**41.49**	**142**	P	**P**	**17 53 25.4**	**+0.7**
AGT	**Agartala**	**41.88**	**326**	*e*P	**P**	**17 53 28.8**	**+0.8**
AGT				IAmb	IAmb	17 53 47.5	
	comp=Z,123nm,0.7s						
MOO	**Moorlands**	**41.90**	**144**	P	**P**	**17 53 29.0**	**+1.0**
KOHI	**KOHIMA**	**41.92**	**331**	*e*P	**P**	**17 53 27.8**	**-0.7**
KOHI				IAmb	IAmb	17 53 31.8	
	comp=Z,295nm,1.1s						
MDRS	**Chennai**	**42.15**	**304**	*e*P	**P**	**17 53 30.0**	**-0.3**
MDRS				IAmb	IAmb	17 53 34.2	
	comp=Z,294nm,1.2s						
MDRS				IAMs_20	IAMs_20	18 11 28.8	
	comp=Z,19µm,19.0s						
H08S2	**Diego Garcia H**	**42.22**	**271**	P	**P**	**17 53 32.7**	**+2.0**
	baz=58,slow=8.9,SNR=92						
H08S2				T	T	18 38 37.9	
	baz=96,slow=75,SNR=9.8						
H08S3	**Diego Garcia H**	**42.23**	**271**	P	**P**	**17 53 32.6**	**+1.8**
	baz=58,slow=8.9,SNR=77						
H08S3				T	T	18 38 43.6	
	baz=96,slow=75,SNR=7.0						
H08S1	**Diego Carcia H**	**42.24**	**271**	P	**P**	**17 53 32.8**	**+1.9**
	baz=58,slow=8.9,SNR=91						
H08S1				T	T	18 38 45.8	
	baz=96,slow=75,SNR=12						
MOKO	**MOKOCHONG**	**42.24**	**332**	*e*P	**P**	**17 53 30.8**	**-0.3**
MOKO				IAmb	IAmb	17 53 49.9	
	comp=Z,394nm,0.7s						
TAU	**Tasmania Unive**	**42.27**	**144**	P	**P**	**17 53 33.1**	**+2.1**
TAU	**Tasmania Unive**	**42.27**	**144**	P	**P**	**17 53 29.7**	**-1.3**
TAU	**Tasmania Unive**	**42.27**	**144**	P	**P**	**17 53 29.7**	**-1.3**
TAU				pmax	pmax		
	comp=Z,234nm,1.2s						
TAU				MLR	MLR		
	comp=Z,40µm,21.0s						
TAU	**Tasmania Unive**	**42.27**	**144**	⇑P	**P**	**17 53 33.5**	**+2.5**
DGAR	**Diego Garcia**	**42.29**	**271**	P	**P**	**17 53 31.9**	**+0.4**
DGAR	**Diego Garcia**	**42.29**	**271**	*de*P	**P**	**17 53 33.2**	**+1.6**
DGAR				pmax	pmax		
	comp=Z,2µm,1.3s						
DGAR				MLR	MLR		
	comp=Z,32µm,19.0s						
DGAR	**Diego Garcia**	**42.29**	**271**	P	**P**	**17 53 32.3**	**+0.7**
DGAR				P	**P**	**17 53 32.3**	**+0.7**
DGAR	**Diego Garcia**	**42.29**	**271**	⇓P	**P**	**17 53 33.4**	**+1.8**
SSE	**Sheshan**	**42.31**	**8**	P	**P**	**17 53 33.5**	**+2.1**
SSE				S	**S**	**17 59 56.6**	**+5.5**
SSE				pmax	pmax		
	comp=Z,65nm,1.3s						
SSE				pmax	pmax		
	comp=Z,2µm,9.2s						
SSE				L	L		
	comp=Z,5µm,21.3s						
SSE				L	L		
	comp=Z,3µm,21.6s						
BWNR	**Bhubaneshwar**	**42.46**	**317**	*e*P	**P**	**17 53 32.8**	**+0.1**
VIS	**Vishakhapatnam**	**42.51**	**312**	*e*P	**P**	**17 53 32.4**	**-0.9**
VIS				IAmb	IAmb	17 53 40.8	
	comp=Z,384nm,1.4s						
VIS				IAMs_20	IAMs_20	18 14 30.6	
	comp=Z,14µm,22.1s						
TRD	**Trivandrum**	**42.70**	**296**	*e*P	**P**	**17 53 35.6**	**+0.7**
TRD				IAmb	IAmb	17 53 39.7	
	comp=Z,313nm,1.2s						
TRD				IAMs_20	IAMs_20	18 11 46.5	
	comp=Z,13µm,17.5s						
JORH	**JORHAT**	**42.73**	**332**	*e*P	**P**	**17 53 34.4**	**-0.4**
JORH				IAmb	IAmb	17 53 51.9	
	comp=Z,201nm,1.1s						
SHL	**Shillong**	**42.90**	**328**	P	**P**	**17 53 36.0**	**-0.5**
SHL	**Shillong**	**42.90**	**328**	P	**P**	**17 53 36.0**	**-0.5**
SHL				pmax	pmax		
	comp=Z,2µm,1.5s						
SHL	**Shillong**	**42.90**	**328**	P	**P**	**17 53 37.0**	**+0.5**
	SNR=450						
SHL	**Shillong**	**42.90**	**328**	*e*P	**P**	**17 53 36.4**	**-0.1**
SHL				IAmb	IAmb	17 53 51.3	
	comp=Z,588nm,1.0s						
SHL				IAMs_20	IAMs_20	18 12 35.6	
	comp=Z,19µm,23.4s						
NJ2	**Nanjing**	**43.02**	**5**	⇑P	**P**	**17 53 38.4**	**+1.3**
NJ2				S	**S**	**18 00 02.6**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,310nm,1.4s						
NJ2				pmax	pmax		
	comp=Z,14µm,6.5s						
NJ2				L	L		
	comp=Z,28µm,21.5s						
NJ2				L	L		
	comp=Z,20µm,19.9s						
NJ2				L	L		
	comp=Z,48µm,22.2s						
KOD	**Kodaikanal**	**43.05**	**298**	*e*P	**P**	**17 53 38.1**	**+0.1**
KOD				IAmb	IAmb	17 53 42.6	
	comp=Z,489nm,1.6s						
KOD				IAMs_20	IAMs_20	18 09 09.3	
	comp=Z,14µm,20.5s						
SALM	**Salem**	**43.15**	**300**	*e*P	**P**	**17 53 38.5**	**0.0**
SALM				IAmb	IAmb	17 53 42.7	
	comp=Z,477nm,1.3s						
SALM				IAMs_20	IAMs_20	18 13 59.8	
	comp=Z,16µm,21.1s						
CD2	**Chengdu**	**43.15**	**346**	P	**P**	**17 53 38.3**	**0.0**
CD2				pP	pP	17 53 44.4	+0.3
CD2				sP	sP	17 53 47.3	+0.8
CD2				S	**S**	**17 59 58.6**	**-4.9**
CD2				sS	sS	18 00 18.3	+4.8
CD2				pmax	pmax		
	comp=Z,960nm,0.6s						
CD2				pmax	pmax		
	comp=Z,8µm,7.3s						
CD2				L	L		
	comp=Z,23µm,20.6s						
CD2				L	L		
	comp=Z,41µm,15.3s						
CD2				L	L		
	comp=Z,24µm,15.5s						
TEZP	**TEZPUR**	**43.31**	**330**	*e*P	**P**	**17 53 38.9**	**-0.7**
TEZP				IAmb	IAmb	17 53 55.6	
	comp=Z,282nm,0.8s						
ITAN	**ITANAGAR**	**43.31**	**332**	*e*P	**P**	**17 53 39.4**	**-0.2**
ITAN				IAmb	IAmb	17 53 54.5	
	comp=Z,418nm,0.9s						
PASG	**PASIGHAT**	**43.38**	**334**	*e*P	**P**	**17 53 39.5**	**-0.7**
RAGD	**RAYAGADA**	**43.41**	**314**	*e*P	**P**	**17 53 40.4**	**-0.2**
RAGD				IAmb	IAmb	17 53 44.8	
	comp=Z,582nm,1.4s						
RAGD				IAMs_20	IAMs_20	18 12 45.0	
	comp=Z,22µm,19.4s						
KAAM	**Kaadhehdhoo**	**43.46**	**283**	P	**P**	**17 53 40.4**	**-0.7**
KAAM				IAMs_20	IAMs_20	18 11 18.4	
	comp=Z,21µm,20.0s						
KAAM	**Kaadhehdhoo**	**43.46**	**283**	P	**P**	**17 53 41.9**	**+0.8**
	SNR=25						
KAAM	**Kaadhehdhoo**	**43.46**	**283**	P	**P**	**17 53 43.0**	**+1.9**
	comp=Z,1µm,1.5s						
KAAM	**Kaadhehdhoo**	**43.46**	**283**	⇓P	**P**	**17 53 42.8**	**+1.7**
ZIRO	**ZIRO**	**43.58**	**332**	*e*P	**P**	**17 53 41.6**	**-0.4**
ZIRO				IAmb	IAmb	17 53 59.2	
	comp=Z,845nm,1.4s						
VJD	**Vijayawada**	**43.79**	**308**	IAMs_20	IAMs_20	18 12 41.1	
	comp=Z,9µm,20.8s						
SAVO	**Savo Central**	**43.96**	**92**	P	**P**	**17 53 46.9**	**+1.8**
NGOA	**Tingoa Renbel**	**43.99**	**95**	P	**P**	**17 53 47.0**	**+1.7**
TATA	**Tatamba Isabel**	**44.04**	**91**	P	**P**	**17 53 46.3**	**+0.6**
HNR	**Honiara**	**44.06**	**92**	LR	LR	18 13 07.0	
	comp=Z,878nm,20.0s,baz=348,slow=37						
HNR	**Honiara**	**44.06**	**92**	P	**P**	**17 53 46.0**	**+0.1**
HNR				IAmb	IAmb	17 53 56.7	
	comp=Z,648nm,1.1s						
HNR	**Honiara**	**44.06**	**92**	IAMs_20	IAMs_20	18 12 55.0	
	comp=Z,16µm,20.0s						
HNR	**Honiara**	**44.06**	**92**	P	**P**	**17 53 46.0**	**+0.1**
HNR				pmax	pmax		
	comp=Z,648nm,1.1s						
HNR				MLR	MLR		
	comp=Z,16µm,20.0s						
HNR	**Honiara**	**44.06**	**92**	⇓P	**P**	**17 53 46.2**	**+0.3**
DHUB	**DHUBRI**	**44.26**	**327**	*e*P	**P**	**17 53 47.3**	**+0.1**
DHUB				IAmb	IAmb	17 53 51.5	
	comp=Z,515nm,0.8s						
TAWA	**Tawang**	**44.58**	**330**	*e*P	**P**	**17 53 50.2**	**0.0**
JSU	**Suzuyama**	**44.79**	**19**	P	**P**	**17 53 52.4**	**+1.0**
JSU	**Suzuyama**	**44.79**	**19**	P	**P**	**17 53 49.5**	**-2.0**
JSU				IAmb	IAmb	17 53 53.1	
	comp=Z,487nm,1.5s						
JSU	**Suzuyama**	**44.79**	**19**	⇑P	**P**	**17 53 50.0**	**-1.4**
JHSG	**JHARSUGUGA**	**44.88**	**317**	*e*P	**P**	**17 53 53.5**	**+1.2**
XAN	**Xi'an**	**45.25**	**353**	⇓P	**P**	**17 53 54.3**	**-0.7**
XAN				pP	sP	17 54 02.3	-1.0
XAN				S	**S**	**18 00 31.3**	**-2.7**
XAN				pmax	pmax		
	comp=Z,520nm,1.1s						
XAN				pmax	pmax		
	comp=Z,9µm,7.6s						
XAN				L	L		
	comp=Z,30µm,19.2s						
XAN				L	L		
	comp=Z,22µm,18.2s						
XAN				L	L		
	comp=Z,48µm,20.6s						
HMDM	**Hanimaadhoo**	**45.39**	**291**	P	**P**	**17 53 57.5**	**+1.0**
	SNR=7.4						
HMDM	**Hanimaadhoo**	**45.39**	**291**	P	**P**	**17 53 59.4**	**+2.9**
	comp=Z,17µmcomp=Z,1µm,1.4s						
LYN	**LuoYang**	**45.44**	**357**	⇓P	**P**	**17 53 55.8**	**-0.7**
LYN				PcP	**PP**	**17 55 39.9**	**-3.3**
LYN				PP	**PP**	**17 55 41.6**	**-1.6**
LYN				S	**S**	**18 00 32.3**	**-4.3**
LYN				SS	**ScS**	**18 03 54.3**	**+2.5**
LYN				pmax	pmax		
	comp=Z,240nm,0.9s						
LYN				pmax	pmax		
	comp=Z,8µm,6.3s						
LYN				L	L		
	comp=Z,25µm,16.2s						
LYN				L	L		
	comp=Z,14µm,16.8s						
LYN				L	L		
	comp=Z,27µm,17.3s						
HYB	**Hyderabad**	**45.93**	**308**	*e*P	**P**	**17 54 00.3**	**-0.4**
HYB				*es*P	**sP**	**17 54 09.4**	**+1.0**
GTK	**Tadong**	**46.05**	**326**	*e*P	**P**	**17 54 02.0**	**+0.4**
GTK				IAmb	IAmb	17 54 06.2	
	comp=Z,592nm,0.7s						
GAYA	**Gaya**	**46.09**	**321**	*e*P	**P**	**17 54 01.6**	**-0.2**
JCJ	**Chichijima**	**46.11**	**34**	LR	LR	18 12 46.2	
	comp=Z,4µm,21.8s,baz=222,slow=35						
JCJ	**Chichijima**	**46.11**	**34**	P	**P**	**17 54 02.6**	**+0.7**
JCJ	**Chichijima**	**46.11**	**34**	IAmb	IAmb	17 54 03.5	
	comp=Z,499nm,0.9s						
BLSP	**Bilaspur**	**46.19**	**316**	*e*P	**P**	**17 54 02.3**	**-0.4**
BLSP				IAmb	IAmb	17 54 06.4	
	comp=Z,540nm,1.2s						
JNU	**Nakatsue**	**46.42**	**18**	LR	LR	18 14 12.9	
	comp=Z,6µm,21.9s,baz=178,slow=37						
PATS	**Pohnpei**	**46.47**	**69**	P	**P**	**17 54 06.2**	**+1.1**
PATS				IAmb	IAmb	17 54 35.4	
	comp=Z,406nm,1.2s						
MNGI	**Mangalore**	**46.55**	**300**	*e*P	**P**	**17 54 05.7**	**+0.1**
MNGI				IAmb	IAmb	17 54 09.4	
	comp=Z,215nm,1.1s						
LSA	**Lhasa**	**46.68**	**331**	IAMs_20	IAMs_20	18 16 43.6	
	comp=Z,17µm,22.0s						
LSA	**Lhasa**	**46.68**	**331**	P	**P**	**17 54 07.8**	**+0.9**
LSA	**Lhasa**	**46.68**	**331**	P	**P**	**17 54 04.8**	**-2.1**
LSA				S	**S**	**18 00 51.5**	**-4.0**
LSA				pmax	pmax		
	comp=Z,790nm,1.4s						
LSA				L	L		
	comp=Z,11µm,23.0s						
LSA				L	L		
	comp=Z,12µm,21.9s						
LSA				L	L		
	comp=Z,16µm,21.4s						
TIA	**Tai'an**	**47.06**	**2**	P	**P**	**17 54 07.9**	**-1.3**
TIA				PcP	**PcP**	**17 55 42.6**	**+1.5**
TIA				S	**S**	**18 00 58.6**	**-1.2**
TIA				pmax	pmax		
	comp=Z,110nm,0.8s						
TIA				pmax	pmax		
	comp=Z,4µm,6.9s						
TIA				L	L		
	comp=Z,11µm,22.7s						
TIA				L	L		
	comp=Z,5µm,21.3s						
TIA				L	L		
	comp=Z,21µm,20.6s						
EVN	**Everest**	**47.53**	**325**	P	**P**	**17 54 13.1**	**-0.6**
EVN	**Everest**	**47.53**	**325**	⇓P	**P**	**17 54 13.9**	**+0.2**
NGP	**Nagpur**	**47.81**	**312**	*e*P	**P**	**17 54 14.6**	**-0.7**
NGP				IAmb	IAmb	17 54 18.8	
	comp=Z,541nm,1.0s						
NGP				IAMs_20	IAMs_20	18 14 10.8	
	comp=Z,9µm,21.5s						
JMN	**Monobe**	**47.97**	**21**	P	**P**	**17 54 15.7**	**-0.7**
JMN	**Monobe**	**47.97**	**21**	IAmb	IAmb	17 54 30.2	
	comp=Z,350nm,0.9s						
JMN	**Monobe**	**47.97**	**21**	⇓P	**P**	**17 54 15.3**	**-1.1**
JMN	**Monobe**	**47.97**	**21**	P	**P**	**17 54 15.4**	**-1.0**
LZDM	**Lanzhou Array**	**48.01**	**347**	P	**P**	**17 54 16.7**	**-0.3**
	comp=Z,154nm,0.8s,baz=193,slow=13,SNR=34						
LZDM				LR	LR	18 16 31.7	
	comp=Z,11µm,21.4s,baz=165,slow=39 comp=Z,154nm,0.8s						
LATR	**Latur**	**48.08**	**307**	*e*P	**P**	**17 54 16.8**	**-0.7**
LATR				IAMs_20	IAMs_20	18 13 59.5	
	comp=Z,10µm,20.7s						
LZH	**Lanzhou**	**48.10**	**348**	P	**P**	**17 54 17.9**	**+0.4**
LZH				sP	sP	17 54 24.9	-0.9
LZH				S	**S**	**18 01 14.3**	**-0.7**
LZH				pmax	pmax		
	comp=Z,410nm,1.5s						
LZH				pmax	pmax		
	comp=Z,4µm,4.4s						
LZH				L	L		
	comp=Z,18µm,15.9s						
LZH				L	L		
	comp=Z,19µm,16.2s						
LZH				L	L		
	comp=Z,30µm,16.5s						
HNS	**HongShan**	**48.21**	**360**	⇑P	**P**	**17 54 16.5**	**-1.6**
HNS				sP	**pwP**	**17 54 30.6**	**+0.6**
HNS				S	**S**	**18 01 11.4**	**-4.7**
HNS				pmax	pmax		
	comp=Z,130nm,1.1s						
HNS				pmax	pmax		
	comp=Z,5µm,8.9s						
HNS				L	L		
	comp=Z,16µm,18.1s						
HNS				L	L		
	comp=Z,20µm,18.3s						
HNS				L	L		
	comp=Z,16µm,16.1s						
TJN	**Taejon**	**48.57**	**13**	P	**P**	**17 54 22.5**	**+1.6**
TIY	**Taiyuan**	**48.59**	**357**	*e*P	**P**	**17 54 21.6**	**+0.5**
TIY				S	**S**	**18 01 19.4**	**-2.3**
TIY				pmax	pmax		
	comp=Z,140nm,0.7s						
TIY				pmax	pmax		
	comp=Z,4µm,6.5s						
TIY				L	L		
	comp=Z,8µm,21.3s						
TIY				L	L		
	comp=Z,9µm,22.7s						
TIY				L	L		
	comp=Z,11µm,21.3s						
ALBI	**Allahabad**	**48.62**	**318**	*e*P	**P**	**17 54 21.3**	**-0.2**
ALBI				IAmb	IAmb	17 54 25.1	
	comp=Z,684nm,1.4s						
GOA	**Goa**	**48.71**	**302**	*e*P	**P**	**17 54 22.1**	**-0.3**
GOA				IAmb	IAmb	17 54 26.3	
	comp=Z,620nm,0.9s						
GOA				IAMs_20	IAMs_20	18 12 44.1	
	comp=Z,12µm,22.8s						
AKL	**Akola**	**49.03**	**310**	*e*P	**P**	**17 54 24.0**	**-0.8**
AKL				IAmb	IAmb	17 54 28.3	
	comp=Z,716nm,1.6s						
JAD	**Aida**	**49.17**	**21**	*e*P	**P**	**17 54 24.5**	**-1.1**
KAD	**Karad**	**49.35**	**304**	*e*P	**P**	**17 54 26.8**	**-0.4**
KAD				IAMs_20	IAMs_20	18 13 07.2	
	comp=Z,13µm,21.4s						
INCN	**Inchon**	**49.48**	**12**	P	**P**	**17 54 27.7**	**-0.2**
INCN	**Inchon**	**49.48**	**12**	P	**P**	**17 54 27.7**	**-0.2**
INCN				pmax	pmax		
	comp=Z,179nm,1.6s						
INCN	**Inchon**	**49.48**	**12**	P	**P**	**17 54 27.2**	**-0.7**
INCN				S	**S**	**18 01 34.7**	**+0.7**
KSAR	**Wonju Array Be**	**49.70**	**13**	P	**P**	**17 54 28.6**	**-1.0**
KSAR	**Wonju Array Be**	**49.70**	**13**	P	**P**	**17 54 28.6**	**-1.0**
KSRS	**Korea Array**	**49.73**	**13**	P	**P**	**17 54 28.9**	**-0.8**
	comp=Z,133nm,1.0s,baz=194,slow=7.4,SNR=82						
KSRS				S	**S**	**18 01 34.9**	**-2.5**
	comp=Z,2.5nm,1.0s,baz=195,slow=14,SNR=4.2						
KSRS				LR	LR	18 20 41.6	
	comp=Z,5µm,18.2s,baz=205,slow=42						
KSRS				PKPPKP	**P'P'df**	**18 25 21.5**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=326,slow=0.5,SNR=5.1 comp=Z,133nm,1.0s						
JHJ	**Hachijo jima 2**	**49.81**	**27**	LR	LR	18 15 39.4	
	comp=Z,5µm,21.5s,baz=228,slow=36						
HJU	**Haeju**	**49.84**	**11**	P	**P**	**17 54 31.0**	**+0.4**
HJU				S	**S**	**18 01 33.6**	**-5.4**
HJU				AmB			
	comp=Z,2µm,1.5s						
HJU				AMS	AMS		
	comp=Z,8µm,13.3s						
DL2	**Dalian**	**50.08**	**7**	P	**P**	**17 54 31.0**	**-1.4**
DL2				S	**S**	**18 01 36.8**	**-5.5**
DL2				pmax	pmax		
	comp=Z,300nm,1.4s						
DL2				pmax	pmax		
	comp=Z,4µm,6.6s						
DL2				L	L		
	comp=Z,6µm,17.5s						
DL2				L	L		
	comp=Z,9µm,17.3s						
DL2				L	L		
	comp=Z,16µm,23.1s						
NRDN	**NARMADA NAGAR**	**50.14**	**312**	*e*P	**P**	**17 54 34.0**	**+0.8**
NRDN				IAmb	IAmb	17 54 37.8	
	comp=Z,439nm,1.1s						
NRDN				IAMs_20	IAMs_20	18 14 01.6	
	comp=Z,14µm,20.2s						
DZM	**Mont Dzumac**	**50.14**	**109**	LR	LR	18 16 11.6	
	comp=Z,21µm,21.8s,baz=277,slow=36						
POO	**Poona**	**50.27**	**305**	*e*P	**P**	**17 54 33.8**	**-0.4**
POO				IAmb	IAmb	17 54 38.0	
	comp=Z,1µm,1.4s						
POO				IAMs_20	IAMs_20	18 13 35.9	
	comp=Z,18µm,23.1s						
BHPL	**Bhopal**	**50.27**	**313**	*e*P	**P**	**17 54 33.5**	**-0.7**
BHPL				IAmb	IAmb	17 54 37.2	
	comp=Z,798nm,1.2s						
JSG	**Sagara**	**50.46**	**25**	IAmb	IAmb	17 55 59.0	
	comp=Z,207nm,0.9s						
OUENC	**Ouen Island, N**	**50.53**	**110**	P	**P**	**17 54 37.6**	**+1.4**
YATNC	**Mamie plateau,**	**50.55**	**109**	P	**P**	**17 54 37.9**	**+1.5**
INU	**Inuyama**	**50.58**	**23**	P	**P**	**17 54 35.4**	**-0.9**
INU	**Inuyama**	**50.58**	**23**	⇓P	**P**	**17 54 34.6**	**-1.7**
SANVU	**Saraoutou**	**50.74**	**101**	P	**P**	**17 54 39.6**	**+1.8**
SANVU	**Saraoutou**	**50.74**	**101**	P	**P**	**17 54 39.1**	**+1.2**
SANVU				IAmb	IAmb	17 54 43.8	
	comp=Z,648nm,0.9s						
SANVU				IAMs_20	IAMs_20	18 15 25.7	
	comp=Z,13µm,20.0s						
SANVU	**Saraoutou**	**50.74**	**101**	⇓P	**P**	**17 54 38.7**	**+0.9**
GOMU	**GeErMu**	**50.78**	**339**	P	**P**	**17 54 38.5**	**+0.3**
GOMU				PP	**PP**	**17 56 35.6**	**+0.9**
GOMU				S	**S**	**18 01 56.1**	**+3.1**
GOMU				pmax	pmax		
	comp=Z,150nm,1.4s						
GOMU				L	L		
	comp=Z,12µm,17.1s						
GOMU				L	L		
	comp=Z,12µm,21.5s						
GOMU				L	L		
	comp=Z,17µm,15.9s						
PYAG	**Pyongyang**	**50.83**	**11**	S	**S**	**18 01 48.0**	**-4.7**
BJI2	**Beijing**	**50.83**	**1**	P	**P**	**17 54 37.1**	**-1.0**
BJI2				S	**S**	**18 01 48.0**	**-4.8**
BJI2				pmax	pmax		
	comp=Z,66nm,1.3s						
BJI2				pmax	pmax		
	comp=Z,2µm,6.5s			

BJT	**Baijiatuau**	**50.83**	**1**	IAmb	IAmb	17 54 58.8					
	comp=Z,399nm,1.4s										
JHNI	**Jhansi**	**50.85**	**316**	*e*P	**P**	**17 54 36.9**	**-1.7**				
JHNI				IAmb	IAmb	17 54 41.1					
	comp=Z,1µm,1.1s										
JGF	**Kuroka**	**50.93**	**23**	P	**P**	**17 54 37.4**	**-1.6**				
JGF	**Kuroka**	**50.93**	**23**	⇓P	**P**	**17 54 37.0**	**-2.0**				
JGF	**Kuroka**	**50.93**	**23**	*e*P	**P**	**17 54 37.4**	**-1.6**				
GUNA	**GUNA**	**51.22**	**314**	*e*P	**P**	**17 54 40.3**	**-1.1**				
BOM	**Bombay**	**51.29**	**305**	*e*P	**P**	**17 54 41.7**	**-0.2**				
JGN	**Niukaw**	**51.46**	**23**	P	**P**	**17 54 41.1**	**-1.9**				
FRKB	**FARRUKHABAD**	**51.51**	**319**	*e*P	**P**	**17 54 43.0**	**-0.4**				
MARNC	**Mare, Loyalty**	**51.58**	**109**	P	**P**	**17 54 45.7**	**+1.6**				
MARNC	**Mare, Loyalty**	**51.58**	**109**	⇑P	P	17 54 49.5	+5.4				
SUJ	**Sinuiju**	**51.64**	**9**	P	**P**	**17 54 45.4**	**+1.3**				
HHC	**Hu-ho-hao-te**	**51.76**	**357**	⇓*i*P	**P**	**17 54 44.5**	**-0.7**				
HHC				sP	sP	17 54 55.3	+1.8				
HHC				S	**S**	**18 02 00.5**	**-5.3**				
HHC				pmax	pmax						
	comp=Z,140nm,1.3s										
HHC				pmax	pmax						
	comp=Z,2µm,7.6s										
HHC				L	L						
	comp=Z,9µm,23.7s										
HHC				L	L						
	comp=Z,9µm,22.7s										
HHC				L	L						
	comp=Z,12µm,24.6s										
BTO2	**Baotou**	**51.78**	**355**	*e*P	**P**	**17 54 44.8**	**-0.5**				
BTO2				sP	**sP**	**17 54 53.5**	**-0.1**				
BTO2				S	**S**	**18 02 07.8**	**+1.7**				
BTO2				pmax	pmax						
	comp=Z,240nm,0.8s										
BTO2				pmax	pmax						
	comp=Z,12µm,6.5s										
BTO2				L	L						
	comp=Z,11µm,17.8s										
BTO2				L	L						
	comp=Z,23µm,17.7s										
BTO2				L	L						
	comp=Z,28µm,20.0s										
JRY	**Ryogami san**	**51.91**	**24**	P	**P**	**17 54 44.2**	**-2.1**				
HHU	**Hamhung**	**52.01**	**12**	P	**P**	**17 54 47.2**	**+0.3**				
HHU				S	**S**	**18 02 03.3**	**-5.7**				
HHU				AmB							
	comp=Z,3µm,4.4s										
HHU				AMS	AMS						
	comp=Z,7µm,18.7s										
MAJO	**Matsushiro**	**52.09**	**24**	P	**P**	**17 54 45.7**	**-1.9**				
MAJO	**Matsushiro**	**52.09**	**24**	P	**P**	**17 54 44.9**	**-2.7**				
MAJO				IAmb	IAmb	17 54 48.9					
	comp=Z,244nm,0.8s										
MAJO	**Matsushiro**	**52.09**	**24**	*d i*P	**P**	**17 54 45.5**	**-2.1**				
MAJO				pmax	pmax						
	comp=Z,210nm,0.9s										
MAJO				MLR	MLR						
	comp=Z,8µm,19.0s										
MAJO	**Matsushiro**	**52.09**	**24**	⇑P	**P**	**17 54 45.5**	**-2.1**				
MAT	**Matsushiro**	**52.09**	**24**	P	**P**	**17 54 45.5**	**-2.1**				
MJAR	**Matsushiro Arr**	**52.09**	**24**	P	**P**	**17 54 45.5**	**-2.1**				
	comp=Z,245nm,0.9s,baz=196,slow=7.0,SNR=159										
MJAR				PcP	**PcP**	**17 56 01.4**	**+1.9**				
	comp=Z,60nm,0.8s,baz=190,slow=4.2,SNR=4.1										
MJAR				S	**S**	**18 02 10.2**	**-0.1**				
	comp=Z,5.4nm,1.0s,baz=317,slow=11,SNR=6.0										
MJAR				LR	LR	18 18 17.6					
	comp=Z,9µm,20.2s,baz=212,slow=38										
	comp=Z,245nm,0.9s										
MJAR	**Matsushiro Arr**	**52.09**	**24**	P	**P**	**17 54 45.4**	**-2.1**				
MJAR				IAmb	IAmb	17 54 48.9					
	comp=Z,299nm,0.9s										
MJB9	**Matsu-Tunnel**	**52.09**	**24**	IAmb	IAmb	17 54 49.9					
	comp=Z,231nm,0.8s										
GTA2	**Gaotai**	**52.30**	**345**	⇓P	**P**	**17 54 49.9**	**+0.7**				
GTA2				pP	pP	17 54 52.6	-2.6				
GTA2				S	**S**	**18 02 09.4**	**-3.9**				
GTA2				pmax	pmax						
	comp=Z,39nm,1.3s										
GTA2				pmax	pmax						
	comp=Z,8µm,6.7s										
GTA2				L	L						
	comp=Z,15µm,21.3s										
GTA2				L	L						
	comp=Z,21µm,20.0s										
GTA2				L	L						
	comp=Z,23µm,22.2s										
LGTI	**Lohaghat**	**52.57**	**321**	*e*P	**P**	**17 54 50.2**	**-1.3**				
LGTI				IAmb	IAmb	17 54 54.1					
	comp=Z,531nm,1.1s										
LGTI				IAMs_20	IAMs_20	18 12 47.7					
	comp=Z,7µm,22.2s										
PTH	**Pithoragarh**	**52.63**	**321**	*e*P	**P**	**17 54 50.5**	**-1.4**				
PTH				IAmb	IAmb	17 54 54.7					
	comp=Z,1µm,1.4s										
PTH				IAMs_20	IAMs_20	18 14 17.4					
	comp=Z,7µm,23.8s										
TKRD	**Thakurdwara**	**53.17**	**320**	*e*P	**P**	**17 54 54.9**	**-0.8**				
SNY	**Shenyang**	**53.20**	**8**	⇓P	**P**	**17 54 53.1**	**-2.5**				
SNY				S	**S**	**18 02 18.9**	**-6.3**				
SNY				pmax	pmax						
	comp=Z,130nm,1.1s										
SNY				L	L						
	comp=Z,6µm,21.8s										
SNY				L	L						
	comp=Z,2µm,21.1s										
SNY				L	L						
	comp=Z,12µm,20.6s										
PAF	**Port-aux-Franc**	**53.24**	**215**	IAMs_20	IAMs_20	18 16 41.9					
	comp=Z,20µm,18.0s										
BHV	**Bhavnagar**	**53.35**	**308**	*e*P	**P**	**17 54 57.1**	**-0.1**				
BHV				IAmb	IAmb	17 55 01.5					
	comp=Z,1µm,1.4s										
BISR	**Bishrakh**	**53.69**	**318**	*e*P	**P**	**17 54 58.1**	**-1.5**				
BISR				IAmb	IAmb	17 55 01.0					
	comp=Z,1µm,1.1s										
JOSI	**Joshimath**	**53.70**	**321**	*e*P	**P**	**17 54 58.6**	**-1.2**				
SONA	**Sohna**	**53.72**	**318**	*e*P	**P**	**17 54 57.9**	**-2.0**				
SONA				IAmb	IAmb	17 55 01.9					
	comp=Z,1µm,1.2s										
SONA				IAMs_20	IAMs_20	18 13 37.5					
	comp=Z,8µm,21.0s										
UDPR	**Udaipur**	**53.78**	**312**	*e*P	**P**	**17 54 58.9**	**-1.4**				
UDPR				IAmb	IAmb	17 55 03.4					
	comp=Z,1µm,1.1s										
UDPR				IAMs_20	IAMs_20	18 13 39.8					
	comp=Z,12µm,23.1s										
JMIU	**JAMIA UNIVERSI**	**53.79**	**318**	*e*P	**P**	**17 54 58.4**	**-1.9**				
AYAN	**Aya Nagar**	**53.84**	**318**	*e*P	**P**	**17 54 58.7**	**-2.0**				
AYAN				IAmb	IAmb	17 55 02.2					
	comp=Z,876nm,1.0s										
LDR	**Lodi Road**	**53.84**	**318**	*e*P	**P**	**17 54 59.4**	**-1.3**				
NPLP	**NPLP New Delhi**	**53.91**	**318**	*e*P	**P**	**17 54 59.5**	**-1.6**				
NPLP				IAmb	IAmb	17 55 15.3					
	comp=Z,358nm,0.7s										
NDI	**New Delhi**	**53.91**	**318**	*e*P	**P**	**17 54 59.3**	**-1.9**				
NDI				IAmb	IAmb	17 55 03.0					
	comp=Z,933nm,1.2s										
KUDL	**Kundal**	**54.04**	**317**	*e*P	**P**	**17 55 00.3**	**-1.8**				
KUDL				IAmb	IAmb	17 55 04.3					
	comp=Z,952nm,1.2s										
NRLA	**Narela**	**54.06**	**318**	*e*P	**P**	**17 55 00.5**	**-1.8**				
AJM	**Ajmer**	**54.23**	**314**	*e*P	**P**	**17 55 02.4**	**-1.2**				
AJM				IAmb	IAmb	17 55 06.3					
	comp=Z,554nm,1.0s										
JMM	**Marumori**	**54.27**	**25**	*e*P	**P**	**17 55 02.4**	**-1.2**				
JYA	**Atsumi**	**54.46**	**24**	P	**P**	**17 55 04.1**	**-0.9**				
DDI	**Dehra Dun**	**54.48**	**320**	*e*P	**P**	**17 55 03.9**	**-1.4**				
DDI				IAmb	IAmb	17 55 08.1					
	comp=Z,593nm,1.1s										
XLT	**XiLinHaoTe**	**54.71**	**1**	*e*P	**P**	**17 55 05.8**	**-1.0**				
XLT				sP	sP	17 55 14.0	-1.2				
XLT				PcP	**PcP**	**17 56 03.1**	**-6.2**				
XLT				PP	**PP**	**17 57 12.0**	**+2.3**				
XLT				PcS	**PcS**	**18 00 06.3**	**-2.7**				
XLT				S	**S**	**18 02 41.6**	**-4.2**				
XLT				ScS	**ScS**	**18 04 50.5**	**-4.2**				
XLT				pmax	pmax						
	comp=Z,130nm,1.2s										
XLT				L	L						
	comp=Z,11µm,17.9s										
XLT				L	L						
	comp=Z,16µm,31.5s										
KLP	**Kalpa**	**55.19**	**321**	*e*P	**P**	**17 55 10.1**	**-0.8**				
KLP				IAmb	IAmb	17 55 17.5					
	comp=Z,623nm,1.1s										
KLP				IAMs_20	IAMs_20	18 14 34.4					
	comp=Z,8µm,21.3s										
CASY	**Casey**	**55.23**	**182**	P	**P**	**17 55 10.2**	**0.0**				
CASY	**Casey**	**55.23**	**182**	IAMs_20	IAMs_20	18 14 13.6					
	comp=Z,16µm,22.0s										
CASY	**Casey**	**55.23**	**182**	⇓P	**P**	**17 55 11.8**	**+1.6**				
PSTR	**Posyet**	**55.34**	**14**	*d i*P	**P**	**17 55 11.6**	**+0.4**				
CN2	**Changchun**	**55.40**	**9**	⇑P	**P**	**17 55 11.3**	**-0.4**				
CN2				*e*sP	pP	17 55 18.0	+0.3				
CN2				*e*S	**S**	**18 02 54.9**	**0.0**				
CN2				pmax	pmax						
	comp=Z,70nm,1.2s										
CN2				pmax	pmax						
	comp=Z,2µm,6.0s										
CN2				L	L						
	comp=Z,2µm,13.0s										
CN2				L	L						
	comp=Z,3µm,13.0s										
CN2				L	L						
	comp=Z,3µm,13.0s										
SMLA	**Simla**	**55.58**	**320**	*e*P	**P**	**17 55 12.1**	**-1.1**				
SMLA				IAmb	IAmb	17 55 30.1					
	comp=Z,1µm,1.2s										
PYZ	**Puysegur Point**	**55.83**	**139**	IAMs_20	IAMs_20	18 18 34.2					
	comp=Z,12µm,20.0s										
JOM	**Ohasama**	**55.84**	**24**	P	**P**	**17 55 13.6**	**-1.3**				
DCZ	**Deep Cove**	**55.88**	**138**	IAMs_20	IAMs_20	18 17 17.7					
	comp=Z,15µm,21.0s										
VLA	**Vladivostok**	**56.05**	**15**	*d i*P	**P**	**17 55 16.8**	**+0.5**				
VLA				pmax	pmax						
	comp=Z,144nm,1.3s										
VLA				MLR	MLR						
	comp=Z,4µm,15.0s										
BHUJ	**Bhuj**	**56.10**	**308**	*e*P	**P**	**17 55 18.2**	**+1.1**				
BHUJ				IAmb	IAmb	17 55 21.6					
	comp=Z,1µm,1.4s										
MSZ	**Milford Sound**	**56.12**	**137**	P	**P**	**17 55 20.5**	**+3.6**				
BKNR	**BIKANER**	**56.16**	**315**	*e*P	**P**	**17 55 16.1**	**-1.3**				
BKNR				IAmb	IAmb	17 55 20.4					
	comp=Z,1µm,1.3s										
BHK	**Bhakra**	**56.26**	**320**	*e*P	**P**	**17 55 17.1**	**-1.1**				
BHK				⇓*ex*	x	17 55 21.3					
BHK				IAmb	IAmb	17 55 21.3					
	comp=Z,1µm,1.1s										
MLZ	**Mavora Lakes**	**56.48**	**138**	P	**P**	**17 55 22.4**	**+2.8**				
JCZ	**Jackson Bay**	**56.50**	**136**	P	**P**	**17 55 20.8**	**+1.0**				
JCZ	**Jackson Bay**	**56.50**	**136**	P	**P**	**17 55 22.8**	**+2.9**				
WHZ	**Wether Hill Ro**	**56.55**	**138**	IAMs_20	IAMs_20	18 20 20.4					
	comp=Z,15µm,20.0s										
WHZ	**Wether Hill Ro**	**56.55**	**138**	P	**P**	**17 55 22.2**	**+2.1**				
JTM	**Tenmabayashi**	**56.88**	**23**	P	**P**	**17 55 21.2**	**-1.1**				
JTM	**Tenmabayashi**	**56.88**	**23**	⇓P	**P**	**17 55 21.0**	**-1.3**				
JTM	**Tenmabayashi**	**56.88**	**23**	P	**P**	**17 55 21.1**	**-1.1**				
DHRM	**DHARAMSHALA**	**56.88**	**321**	*e*P	**P**	**17 55 21.8**	**-1.0**				
DHRM				IAmb	IAmb	17 55 25.8					
	comp=Z,949nm,1.3s										
DHRM				IAMs_20	IAMs_20	18 13 40.3					
	comp=Z,5µm,19.5s										
WKZ	**Wanaka**	**56.90**	**137**	P	**P**	**17 55 24.7**	**+2.1**				
TLWR	**Talawar**	**56.90**	**320**	*e*P	**P**	**17 55 21.8**	**-1.0**				
APZ	**The Paps**	**56.91**	**139**	P	**P**	**17 55 25.2**	**+2.6**				
SRGN	**SRI GANGA NAGA**	**56.92**	**317**	*e*P	**P**	**17 55 20.9**	**-2.0**				
SRGN				IAMs_20	IAMs_20	18 13 45.2					
	comp=Z,4µm,21.2s										
MDJ	**Mudanjiang**	**56.94**	**12**	P	**P**	**17 55 23.5**	**+0.8**				
MDJ	**Mudanjiang**	**56.94**	**12**	IAmb	IAmb	17 55 36.9					
	comp=Z,404nm,1.1s										
MDJ	**Mudanjiang**	**56.94**	**12**	P	**P**	**17 55 22.0**	**-0.7**				
MDJ				S	**S**	**18 03 09.3**	**-6.0**				
MDJ				pmax	pmax						
	comp=Z,53nm,0.8s										
MDJ				pmax	pmax						
	comp=Z,3µm,4.6s										
MDJ				L	L						
	comp=Z,5µm,19.7s										
MDJ				L	L						
	comp=Z,6µm,21.5s										
FOZ	**Fox Glacier**	**57.04**	**135**	P	**P**	**17 55 23.4**	**-0.1**				
FOZ	**Fox Glacier**	**57.04**	**135**	P	**P**	**17 55 25.3**	**+1.7**				
USRK	**Ussuriysk Ar.**	**57.09**	**14**	P	**P**	**17 55 22.6**	**-1.1**				
	comp=Z,71nm,0.6s,baz=197,slow=5.9,SNR=57										
	comp=Z,71nm,0.6s										
EAZ	**Earnscleugh**	**57.23**	**137**	P	**P**	**17 55 26.3**	**+1.5**				
THN	**Thein Dam**	**57.35**	**320**	*e*P	**P**	**17 55 25.4**	**-0.5**				
TSSA	**Tissa**	**57.38**	**321**	*e*P	**P**	**17 55 25.1**	**-1.2**				
TSSA				IAmb	IAmb	17 55 30.2					
	comp=Z,685nm,1.3s										
TSSA				IAMs_20	IAMs_20	18 11 25.1					
	comp=Z,4µm,19.5s										
LBZ	**Lake Benmore**	**57.55**	**136**	P	**P**	**17 55 28.7**	**+1.5**				
WVZ	**Waitaha Valley**	**57.55**	**134**	P	**P**	**17 55 29.3**	**+2.1**				
BNX	**BinXian**	**57.61**	**10**	⇓P	**P**	**17 55 27.4**	**+0.1**				
BNX				pP	**pP**	**17 55 32.3**	**-1.1**				
BNX				S	**S**	**18 03 18.8**	**-5.2**				
BNX				pmax	pmax						
	comp=Z,110nm,1.7s										
BNX				pmax	pmax						
	comp=Z,5µm,7.3s										
BNX				L	L						
	comp=Z,5µm,18.7s										
BNX				L	L						
	comp=Z,5µm,19.4s										
BNX				L	L						
	comp=Z,10µm,24.1s										
TUZ	**Tuapeka**	**57.68**	**138**	P	P	17 55 33.1	+5.1				
ALCI	**Alchi Leh**	**57.70**	**323**	*e*P	**P**	**17 55 27.8**	**-0.9**				
ALCI				IAmb	IAmb	17 55 31.9					
	comp=Z,1µm,1.4s										
RPZ	**Rata Peaks**	**57.96**	**135**	P	**P**	**17 55 31.2**	**+1.2**				
	comp=Z,116nm,0.9s,baz=191,slow=0.9,SNR=14										
RPZ				LR	LR	18 21 11.0					
	comp=Z,24µm,19.0s,baz=100,slow=37										
	comp=Z,116nm,0.9s										
RPZ	**Rata Peaks**	**57.96**	**135**	P	**P**	**17 55 31.3**	**+1.2**				
RPZ	**Rata Peaks**	**57.96**	**135**	P	**P**	**17 55 31.1**	**+1.2**				
RPZ	**Rata Peaks**	**57.96**	**135**	P	**P**	**17 55 32.6**	**+2.6**				
INZ	**Inchbonnie**	**57.96**	**134**	P	**P**	**17 55 31.5**	**+1.5**				
DSZ	**Denniston Nort**	**57.96**	**132**	P	**P**	**17 55 32.0**	**+1.9**				
OUZ	**Omahuta**	**57.97**	**125**	IAMs_20	IAMs_20	18 25 14.0					
	comp=Z,16µm,20.0s										
ODZ	**Otahua Downs**	**58.07**	**137**	P	**P**	**17 55 34.4**	**+3.7**				
ODZ	**Otahua Downs**	**58.07**	**137**	⇓P	**P**	**17 55 35.2**	**+4.5**				
ARCZ	**Arundel**	**58.11**	**135**	P	**P**	**17 55 33.0**	**+1.9**				
TMZ	**Timaru**	**58.12**	**136**	P	**P**	**17 55 33.1**	**+1.9**				
JMU	**Jammu**	**58.16**	**320**	*e*P	**P**	**17 55 31.3**	**-0.2**				
JMU				IAmb	IAmb	17 55 35.1					
	comp=Z,1µm,1.4s										
QRZ	**Quartz Range**	**58.26**	**131**	P	**P**	**17 55 33.6**	**+1.4**				
QRZ	**Quartz Range**	**58.26**	**131**	P	**P**	**17 55 35.0**	**+2.8**				
OXZ	**Oxford**	**58.54**	**134**	P	**P**	**17 55 32.4**	**-1.7**				
OXZ				IAmb	IAmb	17 55 55.0					
	comp=Z,671nm,1.8s										
OXZ	**Oxford**	**58.54**	**134**	P	**P**	**17 55 38.0**	**+3.9**				
WACZ	**Wakanui South**	**58.57**	**135**	P	**P**	**17 55 37.5**	**+3.3**				
JEM	**Erimo**	**58.75**	**24**	P	**P**	**17 55 36.6**	**+1.2**				
THZ	**Tophouse**	**58.76**	**132**	IAmb	IAmb	17 55 53.5					
	comp=Z,210nm,1.0s										
THZ	**Tophouse**	**58.76**	**132**	P	**P**	**17 55 37.4**	**+1.7**				
SRNI	**Srinagar**	**59.02**	**321**	*e*P	**P**	**17 55 37.3**	**-0.4**				
TEY	**Ternei**	**59.11**	**18**	⇓*e*P	**P**	**17 55 36.7**	**-1.1**				
TEY				*e*		18 03 37.2					
TEY				pmax	pmax						
	comp=N,200nm,6.7s										
TEY				pmax	pmax						
	comp=Z,400nm,6.6s										
ULN	**Ulaanbaatar**	**59.11**	**354**	P	**P**	**17 55 37.1**	**-0.9**				
ULN				IAmb	IAmb	17 55 52.4					
	comp=Z,296nm,1.1s										
ULN	**Ulaanbaatar**	**59.11**	**354**	IAMs_20	IAMs_20	18 23 22.6					
	comp=Z,12µm,20.0s										
ULN	**Ulaanbaatar**	**59.11**	**354**	P	**P**	**17 55 37.1**	**-0.9**				
ULN				pmax	pmax						
	comp=Z,296nm,1.1s										
ULN				MLR	MLR						
	comp=Z,12µm,20.0s										
ULN	**Ulaanbaatar**	**59.11**	**354**	P	**P**	**17 55 38.2**	**+0.2**				
ULN				P	**P**	**17 55 38.2**	**+0.2**				
ULN				S	**S**	**18 03 44.6**	**+0.6**				
ULN				S	**S**	**18 03 44.6**	**+0.6**				
ULN	**Ulaanbaatar**	**59.11**	**354**	P	**P**	**17 55 37.4**	**-0.6**				
	comp=Z,1µm,1.1s										
ULN	**Ulaanbaatar**	**59.11**	**354**	⇓P	**P**	**17 55 37.8**	**-0.3**				
SONM	**Songino Array**	**59.16**	**353**	P	**P**	**17 55 38.1**	**-0.2**				
	comp=Z,164nm,0.8s,baz=172,slow=7.1,SNR=208										
SONM				LR	LR	18 22 53.7					
	comp=Z,20µm,21.5s,baz=174,slow=38										
	comp=Z,164nm,0.8s										
SONM	**Songino Array**	**59.16**	**353**	P	**P**	**17 55 37.3**	**-1.0**				
SONM				IAmb	IAmb	17 55 41.6					
	comp=Z,506nm,1.3s										
SONM	**Songino Array**	**59.16**	**353**	P	**P**	**17 55 37.3**	**-1.0**				
SONM				pmax	pmax						
	comp=Z,506nm,1.3s										
KHZ	**Kahutara**	**59.38**	**133**	P	**P**	**17 55 41.4**	**+1.5**				
MSEY	**Mahe Island**	**59.39**	**271**	P	**P**	**17 55 40.5**	**0.0**				
MSEY	**Mahe Island**	**59.39**	**271**	*i* P	**P**	**17 55 41.8**	**+1.2**				
	SNR=25										
MSEY	**Mahe Island**	**59.39**	**271**	P	**P**	**17 55 40.5**	**0.0**				
MSEY				pmax	pmax						
	comp=Z,903nm,1.5s										
MSEY				MLR	MLR						
	comp=Z,22µm,18.0s										
MSEY	**Mahe Island**	**59.39**	**271**	P	**P**	**17 55 41.8**	**+1.2**				
MSEY				S	**S**	**18 03 50.5**	**+1.9**				
H11N1	**WAKE ISLAND Hy**	**59.40**	**59**	P	**P**	**17 55 40.1**	**0.0**				
	baz=236,slow=11,SNR=4.3										
H11N2	**WAKE ISLAND Hy**	**59.42**	**59**	P	**P**	**17 55 40.2**	**0.0**				
	baz=236,slow=11,SNR=3.3										
H11N3	**WAKE ISLAND Hy**	**59.42**	**59**	P	**P**	**17 55 41.4**	**+1.1**				
	baz=236,slow=11,SNR=6.6										
HIZ	**Hauiti**	**59.54**	**128**	IAMs_20	IAMs_20	18 20 54.2					
	comp=Z,14µm,18.0s										
VRZ	**Vera Road**	**59.58**	**129**	P	P	17 55 47.1	+5.8				
NIL	**Nilore**	**59.73**	**320**	IAMs_20	IAMs_20	18 26 04.1					
	comp=Z,13µm,19.0s										
TOZ	**Tahuroa Road**	**59.90**	**127**	IAMs_20	IAMs_20	18 18 42.9					
	comp=Z,18µm,21.0s										
SNZO	**South Karori**	**59.98**	**131**	P	**P**	**17 55 44.8**	**+0.8**				
WMQ	**Urumqi**	**60.08**	**337**	⇓P	**P**	**17 55 45.3**	**+0.6**				
WMQ				pP	sP	17 55 52.4	+0.1				
WMQ				sP	pwP	17 55 58.5	+1.8				
WMQ				S	**S**	**18 03 54.8**	**-1.6**				
WMQ				ScS	**ScS**	**18 05 33.8**	**-0.1**				
WMQ				pmax	pmax						
	comp=Z,110nm,0.9s										
WMQ				pmax	pmax						
	comp=Z,1µm,3.6s										
WMQ				L	L						
	comp=Z,12µm,18.1s										
WMQ				L	L						
	comp=Z,9µm,23.3s										
WMQ				L	L						
	comp=Z,13µm,24.0s										
BHW	**Baring Head**	**60.12**	**131**	IAMs_20	IAMs_20	18 19 33.4					
	comp=Z,12µm,21.0s										
HIA	**Hailar**	**60.20**	**3**	IAMs_20	IAMs_20	18 23 15.6					
	comp=Z,8µm,19.0s										
ASAJ	**Asahikawa**	**60.31**	**22**	LR	LR	18 23 41.7					
	comp=Z,6µm,20.1s,baz=222,slow=38										
ASAJ	**Asahikawa**	**60.31**	**22**	P	**P**	**17 55 45.8**	**-0.4**				
ASAJ				pmax	pmax						
	comp=Z,202nm,0.8s										
JKA	**Kamikawa-asahi**	**60.31**	**22**	P	**P**	**17 55 45.8**	**-0.4**				
JKA				IAmb	IAmb	17 55 48.8					
	comp=Z,202nm,0.8s										
BKZ	**Black Stump Fm**	**60.91**	**129**	P	**P**	**17 55 51.4**	**+0.8**				
BKZ	**Black Stump Fm**	**60.91**	**129**	P	**P**	**17 55 50.5**	**-0.1**				
BKZ	**Black Stump Fm**	**60.91**	**129**	P	**P**	**17 55 51.4**	**+0.8**				
MSVF	**Nonsavu**	**61.04**	**104**	LR	LR	18 22 10.3					
	comp=Z,10µm,19.9s,baz=261,slow=36										
MSVF	**Nonsavu**	**61.04**	**104**	P	**P**	**17 55 53.5**	**+1.7**				
RTZ	**Ruatahuna**	**61.20**	**128**	IAmb	IAmb	17 56 43.9					
	comp=Z,235nm,1.0s										
RTZ				IAMs_20	IAMs_20	18 22 38.6					
	comp=Z,15µm,20.0s										
URZ	**Urewera**	**61.24**	**128**	P	**P**	**17 55 53.8**	**+1.1**				
	comp=Z,42nm,0.9s,baz=348,slow=2.1,SNR=8.4										
URZ				LR	LR	18 21 37.3					
	comp=Z,15µm,21.8s,baz=280,slow=35							

FUNA	**Funafuti**	**63.04**	**94**	P	**P**	**17 56 04.0**	**-1.2**
FUNA				IAmb	IAmb	17 56 14.4	
	comp=Z,184nm,1.0s						
SHLS	**Shalkode**	**63.04**	**331**	*d* iP	**P**	**17 56 04.4**	**-0.4**
SHLS				*e*S	**S**	**18 04 34.8**	**+0.6**
SHLS				pmax	pmax		
	comp=Z,264nm,1.0s						
SHLS	**Shalkode**	**63.04**	**331** ⇓	*i*P	**P**	**17 56 04.4**	**-0.4**
	comp=Z,264nm,1.0s						
SHLS				*e*S	**S**	**18 04 34.8**	**+0.6**
UZB	**Uzynbulak**	**63.24**	**331**	*d* iP	**P**	**17 56 06.9**	**+0.8**
UZB				*e*S	**S**	**18 04 39.5**	**+2.8**
UZB				pmax	pmax		
	comp=Z,305nm,1.2s						
UZB	**Uzynbulak**	**63.24**	**331** ⇓	*i*P	**P**	**17 56 07.0**	**+0.8**
	comp=Z,305nm,1.2s						
UZB				*e*S	**S**	**18 04 39.6**	**+2.8**
TLY	**Talaya**	**63.28**	**352**	LR	LR	18 25 40.5	
	comp=Z,12μm,21.7s,baz=160,slow=38						
TLY	**Talaya**	**63.28**	**352**	P	**P**	**17 56 06.0**	**0.0**
TLY				IAmb	IAmb	17 56 09.9	
	comp=Z,227nm,1.2s						
TLY	**Talaya**	**63.28**	**352**	*de*P	**P**	**17 56 06.1**	**0.0**
TLY				pmax	pmax		
	comp=Z,218nm,1.2s						
TLY				MLR	MLR		
	comp=Z,11μm,20.0s						
TLY	**Talaya**	**63.28**	**352**	P	**P**	**17 56 07.7**	**+1.7**
TLY				P	**P**	**17 56 07.7**	**+1.7**
TLY				S	**S**	**18 04 37.7**	**+1.1**
TLY				S	**S**	**18 04 37.7**	**+1.1**
KNGR	**Kungurtug, Tuv**	**63.31**	**348**	*d* iP	**P**	**17 56 06.6**	**+0.2**
KNGR				pmax	pmax		
	comp=Z,59nm,1.1s						
KNGR				MLR	MLR		
	comp=Z,5μm,17.0s						
KUR	**Kuril'sk**	**63.33**	**25**	*c* iP	**P**	**17 56 07.3**	**+0.8**
SATY	**Saty**	**63.47**	**331**	*c* iP	**P**	**17 56 08.4**	**+0.8**
SATY				*e*S	**S**	**18 04 42.5**	**+3.0**
SATY				pmax	pmax		
	comp=Z,491nm,1.3s						
SATY	**Saty**	**63.47**	**331** ⇑	*i*P	**P**	**17 56 08.5**	**+0.8**
	comp=Z,491nm,1.3s						
SATY				*e*S	**S**	**18 04 42.5**	**+3.0**
KPKS	**Kokpek**	**63.65**	**331**	*e*P	**P**	**17 56 09.6**	**+0.8**
KPKS	**Kokpek**	**63.65**	**331**	*e*P	**P**	**17 56 09.6**	**+0.8**
MOY	**Mondy**	**63.67**	**350**	*e*P	**P**	**17 56 08.9**	**+0.2**
MOY				pmax	pmax		
	comp=Z,585nm,1.8s						
H04N2	**CROZET ISLANDS**	**63.71**	**224**	P	**P**	**17 56 12.1**	**+3.3**
	baz=82,slow=5.7,SNR=52						
H04N2				T	T	19 05 44.2	
	baz=71,slow=76						
CRZF	**Crozet Islands**	**63.72**	**224**	P	**P**	**17 56 06.3**	**-2.9**
CRZF				IAmb	IAmb	17 56 25.9	
	comp=Z,202nm,0.8s						
CRZF	**Crozet Islands**	**63.72**	**224** ⇑	P	**P**	**17 56 10.1**	**+0.9**
H04N1	**CROZET ISLANDS**	**63.72**	**224**	P	**P**	**17 56 12.0**	**+3.1**
	baz=82,slow=5.7,SNR=42						
H04N1				T	T	19 05 43.6	
	baz=71,slow=76						
H04N3	**CROZET ISLANDS**	**63.73**	**224**	P	**P**	**17 56 11.9**	**+2.9**
	baz=82,slow=5.7,SNR=22						
H04N3				T	T	19 05 51.8	
	baz=71,slow=76						
IRK	**Irkutsk**	**63.75**	**353** ⇑	*i*P	**P**	**17 56 07.4**	**-1.7**
IRK				*e*S	**S**	**18 04 37.3**	**-5.1**
IRK				pmax	pmax		
	comp=Z,530nm,1.4s						
JLN	**Jalan Bani Buh**	**63.86**	**301**	P	**P**	**17 56 10.3**	**-0.1**
	SNR=117						
JLN				P	**P**	**17 56 10.3**	**-0.1**
	SNR=117						
JLN				S	**S**	**18 04 45.6**	**+0.8**
JLN				S	**S**	**18 04 45.6**	**+0.8**
NGCH	**Negor - Chabah**	**63.87**	**305**	P	**P**	**17 56 11.6**	**+1.2**
	SNR=54						
NGCH				S	**S**	**18 04 45.0**	**+0.1**
ULHL	**Ulahol**	**63.94**	**329**	P	**P**	**17 56 11.7**	**+0.8**
	SNR=16						
TNSS	**Tian-Shan**	**64.17**	**330**	*e*P	**P**	**17 56 13.1**	**+0.5**
TNSS	**Tian-Shan**	**64.17**	**330**	*e*P	**P**	**17 56 13.1**	**+0.5**
ZSN	**Zaisan**	**64.21**	**338**	*e*P	**P**	**17 56 13.0**	**+0.8**
ZSN				pmax	pmax		
	comp=Z,264nm,1.4s						
ZSN	**Zaisan**	**64.21**	**338**	*e*P	**P**	**17 56 13.0**	**+0.8**
	comp=Z,264nm,1.4s						
MDOK	**Medeo**	**64.21**	**330**	*e*P	**P**	**17 56 13.3**	**+0.8**
MDOK				*e*S	**S**	**18 04 51.7**	**+2.9**
MDOK	**Medeo**	**64.21**	**330**	*e*P	**P**	**17 56 13.3**	**+0.8**
MDOK				*e*S	**S**	**18 04 51.7**	**+2.9**
MDOK				LR	LR	18 26 37.6	
GRNR	**Gornyy**	**64.30**	**15** ⇓	*i*P	**P**	**17 56 12.3**	**-0.5**
GRNR				MLR	MLR		
	comp=N,3μm,18.0s						
GRNR				MLR	MLR		
	comp=E,2μm,18.0s						
GRNR				MLR	MLR		
	comp=Z,54nm,18.0s						
AAA	**Alma-Ata**	**64.31**	**330**	*e*P	**P**	**17 56 13.9**	**+0.8**
AAA				pmax	pmax		
	comp=Z,277nm,0.9s						
AAA				MLR	MLR		
	comp=Z,10μm,16.0s						
AAA	**Alma-Ata**	**64.31**	**330**	*e*P	**P**	**17 56 13.9**	**+0.8**
	comp=Z,277nm,0.9s						
AAA				LR	LR	18 26 43.3	
	comp=Z,10μm,16.4s						
UGL	**Uglegorsk**	**64.41**	**19**	*e*P	**P**	**17 56 13.0**	**-0.4**
UGL				*e*		17 58 30.0	
UGL				*e*S	**S**	**18 04 46.8**	**-3.7**
UGL				pmax	pmax		
	comp=Z,120nm,1.7s						
UGL				pmax	pmax		
	comp=Z,6μm,5.3s						
UGL				smax	smax		
	comp=E,6μm,6.9s						
UGL				smax	smax		
	comp=N,7μm,9.8s						
UGL				MLR	MLR		
	comp=Z,4μm,16.0s						
WBK	**Wadi Bani Khal**	**64.42**	**302**	P	**P**	**17 56 14.4**	**+0.2**
	SNR=56						
WBK				P	**P**	**17 56 14.4**	**+0.2**
	SNR=56						
WBK				P	**P**	**17 56 14.4**	**+0.2**
	SNR=56						
WBK				S	**S**	**18 04 53.3**	**+1.4**
WBK				S	**S**	**18 04 53.3**	**+1.4**
WBK				S	**S**	**18 04 53.3**	**+1.4**
DQM	**DQM**	**64.54**	**298**	P	**P**	**17 56 15.3**	**+0.3**
	SNR=57						
DQM				P	**P**	**17 56 15.3**	**+0.3**
	SNR=57						
DQM				S	**S**	**18 04 55.6**	**+2.2**
DQM				S	**S**	**18 04 55.6**	**+2.2**
MHTO	**MHTO**	**64.60**	**300**	P	**P**	**17 56 15.1**	**-0.2**
	SNR=129						
MHTO				P	**P**	**17 56 15.1**	**-0.2**
	SNR=129						
MHTO				S	**S**	**18 04 54.3**	**+0.4**
MHTO				S	**S**	**18 04 54.3**	**+0.4**
ARXS	**Arharly**	**64.62**	**331**	*e*P	**P**	**17 56 15.0**	**-0.1**
MK31	**Makanchi Array**	**64.67**	**336**	*de*P	**P**	**17 56 15.4**	**+0.1**
MKAR	**Makanchi Array**	**64.67**	**336**	P	**P**	**17 56 15.2**	**-0.1**
	comp=Z,665nm,1.0s,baz=148,slow=6.8,SNR=1588						
MKAR				PKPPKP	**P'P'df**	**18 25 01.3**	**+1.8**
	comp=Z,1.6nm,0.9s,baz=325,slow=1.5,SNR=3.9						
MKAR				LR	LR	18 27 59.6	
	comp=Z,9μm,18.3s,baz=138,slow=39						
	comp=Z,665nm,1.0s						
MKAR	**Makanchi Array**	**64.67**	**336**	P	**P**	**17 56 15.3**	**0.0**
MKAR	**Makanchi Array**	**64.67**	**336**	P	**P**	**17 56 15.3**	**0.0**
TKM2	**Tokmak 2**	**64.76**	**329**	P	**P**	**17 56 16.4**	**+0.2**
	SNR=1908						
MAKZ	**Makanchi**	**64.81**	**335**	P	**P**	**17 56 15.9**	**-0.3**
MAKZ				IAMs_20	IAMs_20	18 27 35.9	
	comp=Z,14μm,21.0s						
MAKZ	**Makanchi**	**64.81**	**335**	P	**P**	**17 56 15.9**	**-0.3**
MAKZ				pmax	pmax		
	comp=Z,1μm,1.3s						
MAKZ				MLR	MLR		
	comp=Z,14μm,21.0s						
UCH	**Uchtor**	**64.82**	**328**	P	**P**	**17 56 17.7**	**+0.8**
	SNR=645						
KBK	**Karagaybulak**	**64.90**	**328**	P	**P**	**17 56 17.9**	**+0.8**
	SNR=1732						
TDK	**Taldyqorghan**	**64.94**	**332**	*d* iP	**P**	**17 56 17.9**	**+0.8**
TDK				*e*S	**S**	**18 05 00.5**	**+3.1**
TDK				MLR	MLR		
	comp=Z,8μm,20.0s						
TDK	**Taldyqorghan**	**64.94**	**332** ⇓	*i*P	**P**	**17 56 18.0**	**+0.8**
TDK				*e*S	**S**	**18 05 00.6**	**+3.1**
TDK				LR	LR	18 27 09.6	
	comp=Z,8μm,19.8s						
FUTU	**Fugatoga**	**64.97**	**101**	IAMs_20	IAMs_20	18 26 12.8	
	comp=Z,9μm,19.0s						
WSAR	**Wadi Sarin**	**64.97**	**302**	LR	LR	18 23 26.5	
	comp=Z,64nm,19.7s,baz=130,slow=35						
WSAR	**Wadi Sarin**	**64.97**	**302**	P	**P**	**17 56 18.2**	**+0.5**
	SNR=114						
WSAR				S	**S**	**18 04 59.3**	**+0.6**
JMDO	**Jabal Madar**	**65.05**	**301**	P	**P**	**17 56 18.3**	**0.0**
	SNR=101						
JMDO				P	**P**	**17 56 18.3**	**0.0**
	SNR=101						
JMDO				P	**P**	**17 56 18.3**	**0.0**
	SNR=101						
JMDO				S	**S**	**18 04 59.7**	**+0.1**
JMDO				S	**S**	**18 04 59.7**	**+0.1**
JMDO				S	**S**	**18 04 59.7**	**+0.1**
AAK	**Ala-Archa**	**65.12**	**328**	P	**P**	**17 56 19.4**	**+0.8**
	comp=Z,992nm,1.0s,baz=145,slow=5.3,SNR=1149						
AAK				S	**S**	**18 05 01.3**	**+1.3**
	comp=Z,5.6nm,1.0s,baz=313,slow=13,SNR=3.6						
AAK				LR	LR	18 30 58.0	
	comp=Z,10μm,18.9s,baz=144,slow=42						
	comp=Z,992nm,1.0s						
AAK	**Ala-Archa**	**65.12**	**328**	P	**P**	**17 56 19.2**	**+0.7**
	SNR=1411						
AAK	**Ala-Archa**	**65.12**	**328**	P	**P**	**17 56 19.0**	**+0.4**
AAK	**Ala-Archa**	**65.12**	**328**	*i* P	**P**	**17 56 19.3**	**+0.8**
	SNR=2106						
AAK	**Ala-Archa**	**65.12**	**328**	*ce*P	**P**	**17 56 19.3**	**+0.8**
AAK				pmax	pmax		
	comp=Z,2μm,1.3s						
DGZ	**Jazzator, Alta**	**65.22**	**341**	*d* iP	**P**	**17 56 19.3**	**+0.3**
DGZ				pmax	pmax		
	comp=Z,1μm,1.2s						
DGZ				MLR	MLR		
	comp=Z,22μm,21.0s						
CHMS	**Chumysh**	**65.25**	**328**	P	**P**	**17 56 19.5**	**+0.3**
	SNR=265						
ZEA	**Zeya**	**65.36**	**8**	*e*P	**P**	**17 56 19.2**	**-0.4**
ZEA				*e*S	**S**	**18 05 03.7**	**+1.5**
ZEA				pmax	pmax		
	comp=E,200nm,3.7s						
ZEA				pmax	pmax		
	comp=N,1μm,6.0s						
ZEA				pmax	pmax		
	comp=Z,3μm,5.8s						
ZEA				smax	smax		
	comp=E,700nm,8.1s						
ZEA				smax	smax		
	comp=N,2μm,9.0s						
ZEA				MLR	MLR		
	comp=N,2μm,17.0s						
ZEA				MLR	MLR		
	comp=Z,4μm,16.0s						
SMDO	**Samad**	**65.38**	**302**	P	**P**	**17 56 20.8**	**+0.3**
	SNR=98						
SMDO				P	**P**	**17 56 20.8**	**+0.3**
	SNR=98						
SMDO				P	**P**	**17 56 20.8**	**+0.3**
	SNR=98						
SHAA	**Shahritus**	**65.43**	**320**	IAmb	IAmb	17 56 22.3	
	comp=Z,3μm,1.3s						
CHGR	**Chuyangaron**	**65.47**	**322**	*d* iP	**P**	**17 56 19.5**	**-1.3**
CHGR				pmax	pmax		
	comp=Z,2μm,1.2s						
SHAO	**Shalim**	**65.49**	**296**	*i* P	**P**	**17 56 21.3**	**+0.1**
	SNR=13						
SHAO	**Shalim**	**65.49**	**296**	P	**P**	**17 56 22.1**	**+0.9**
	SNR=9.4						
SHAO				P	**P**	**17 56 22.1**	**+0.9**
	SNR=9.4						
SHAO				P	**P**	**17 56 22.1**	**+0.9**
	SNR=9.4						
SHAO				S	**S**	**18 05 05.7**	**+0.5**
SHAO				S	**S**	**18 05 05.7**	**+0.5**
SHAO				S	**S**	**18 05 05.7**	**+0.5**
BIDO	**Bidbid**	**65.51**	**302**	P	**P**	**17 56 21.6**	**+0.3**
	SNR=171						
BIDO				P	**P**	**17 56 21.6**	**+0.3**
	SNR=171						
BIDO				S	**S**	**18 05 05.9**	**+0.7**
BIDO				S	**S**	**18 05 05.9**	**+0.7**
EKS2	**Erkin-Say**	**65.52**	**328**	P	**P**	**17 56 21.8**	**+0.8**
	SNR=2049						
USP	**Ospenovka**	**65.57**	**328**	P	**P**	**17 56 21.4**	**+0.2**
	SNR=1227						
SGDS	**Sogindy**	**65.63**	**329**	*e*P	**P**	**17 56 22.1**	**+0.4**
	comp=Z,159nm,0.9s						
FOMA	**Nahampoana Res**	**65.73**	**248**	IAmb	IAmb	17 56 27.9	
FOMA	comp=Z,722nm,1.7s			IAMs_20	IAMs_20	18 23 16.5	
	comp=Z,13μm,18.0s						
ABPO	**Ambohimpanom**	**65.76**	**254**	P	**P**	**17 56 22.9**	**-0.3**
ABPO				IAmb	IAmb	17 56 28.2	
	comp=Z,289nm,1.1s						
ABPO	**Ambohimpanom**	**65.76**	**254**	IAMs_20	IAMs_20	18 24 32.0	
	comp=Z,11μm,18.0s						
ABPO	**Ambohimpanom**	**65.76**	**254**	P	**P**	**17 56 22.9**	**-0.3**
ABPO				pmax	pmax		
	comp=Z,289nm,1.1s						
ABPO				MLR	MLR		
	comp=Z,11μm,18.0s						
ABPO	**Ambohimpanom**	**65.76**	**254**	P	**P**	**17 56 24.1**	**+0.9**
BSY	**Bisya**	**65.97**	**301**	P	**P**	**17 56 24.5**	**+0.3**
	SNR=69						
BSY				P	**P**	**17 56 24.5**	**+0.3**
	SNR=69						
BSY				P	**P**	**17 56 24.5**	**+0.3**
	SNR=69						
DMTO	**DMTO**	**65.98**	**295**	P	**P**	**17 56 24.8**	**+0.4**
	SNR=11						
DMTO				P	**P**	**17 56 24.8**	**+0.4**
	SNR=11						
DMTO				S	**S**	**18 05 09.6**	**-1.5**
DMTO				S	**S**	**18 05 09.6**	**-1.5**
VOI	**Vohitsoka**	**66.00**	**251**	P	**P**	**17 56 24.8**	**+0.2**
VOI				IAmb	IAmb	17 56 29.8	
	comp=Z,823nm,1.6s						
VOI				IAMs_20	IAMs_20	18 21 09.9	
	comp=Z,12μm,20.0s						
VOI	**Vohitsoka**	**66.00**	**251**	P	**P**	**17 56 25.8**	**+1.1**
	SNR=22						
VOI	**Vohitsoka**	**66.00**	**251**	P	**P**	**17 56 25.5**	**+0.8**
MAW	**Mawson**	**66.03**	**199**	P	**P**	**17 56 25.5**	**+1.7**
	comp=Z,182nm,1.1s,baz=53,slow=9.6,SNR=31						
MAW				LR	LR	18 22 13.9	
	comp=Z,6μm,18.1s,baz=51,slow=33						
	comp=Z,182nm,1.1s						
MAW	**Mawson**	**66.03**	**199**	P	**P**	**17 56 24.5**	**+0.7**
MAW	**Mawson**	**66.03**	**199**	P	**P**	**17 56 24.5**	**+0.7**
MAW				pmax	pmax		
	comp=Z,113nm,1.4s						
TYV	**Tymovskoe**	**66.15**	**19**	*e*P	**P**	**17 56 26.3**	**+1.6**
TYV				*e*S	**S**	**18 05 14.8**	**+2.9**
TYV				pmax	pmax		
	comp=Z,59nm,1.6s						
TYV				pmax	pmax		
	comp=Z,5μm,5.1s						
TYV				smax	smax		
	comp=E,11nm,1.6s						
TYV				smax	smax		
	comp=N,5μm,7.5s						
TYV				smax	smax		
	comp=E,5μm,7.5s						
HOQ	**Hoqain**	**66.22**	**302**	P	**P**	**17 56 26.2**	**+0.4**
	SNR=127						
HOQ				P	**P**	**17 56 26.2**	**+0.4**
	SNR=127						
HOQ				P	**P**	**17 56 26.2**	**+0.4**
	SNR=127						
HOQ				S	**S**	**18 05 13.6**	**-0.2**
HOQ				S	**S**	**18 05 13.6**	**-0.2**
HOQ				S	**S**	**18 05 13.6**	**-0.2**
RBK	**Rabkut**	**66.57**	**295**	P	**P**	**17 56 28.8**	**+0.6**
	SNR=31						
RBK				P	**P**	**17 56 28.8**	**+0.6**
	SNR=31						
RBK				P	**P**	**17 56 28.8**	**+0.6**
	SNR=31						
JASK	**Jask - Hormozg**	**66.73**	**304**	P	**P**	**17 56 30.3**	**+1.3**
	SNR=143						
JASK				S	**S**	**18 05 20.9**	**+0.9**
ARQ	**Araqi**	**66.78**	**301**	P	**P**	**17 56 29.3**	**-0.1**
	SNR=75						
ARQ				P	**P**	**17 56 29.3**	**-0.1**
	SNR=75						
DZA	**Taraz**	**66.98**	**326**	*e*P	**P**	**17 56 30.6**	**+0.3**
DZA				pmax	pmax		
	comp=Z,305nm,0.9s						
DZA	**Taraz**	**66.98**	**326**	*e*P	**P**	**17 56 30.7**	**+0.3**
	comp=Z,305nm,0.9s						
DOK	**Doka**	**67.03**	**296**	P	**P**	**17 56 31.0**	**-0.1**
	SNR=36						
DOK				P	**P**	**17 56 31.0**	**-0.1**
	SNR=36						
DOK				P	**P**	**17 56 31.0**	**-0.1**
	SNR=36						
DOK				S	**S**	**18 05 23.3**	**-0.5**
DOK				S	**S**	**18 05 23.3**	**-0.5**
DOK				S	**S**	**18 05 23.3**	**-0.5**
BTLS	**Baital**	**67.06**	**330**	*e*P	**P**	**17 56 31.1**	**+0.4**
BTLS	**Baital**	**67.06**	**330**	*e*P	**P**	**17 56 31.1**	**+0.4**
SOHO	**SOHO**	**67.09**	**302**	*i* P	**P**	**17 56 31.0**	**-0.4**
	SNR=97						
SOHO	**SOHO**	**67.09**	**302**	P	**P**	**17 56 31.2**	**-0.1**
SOHO				P	**P**	**17 56 31.2**	**-0.1**
SOHO				P	**P**	**17 56 31.2**	**-0.1**
WHFO	**Wadi Hawf**	**67.10**	**295**	P	**P**	**17 56 31.2**	**-0.4**
	SNR=59						
WHFO				P	**P**	**17 56 31.2**	**-0.4**
	SNR=59						
WHFO				P	**P**	**17 56 31.2**	**-0.4**
	SNR=59						
WHFO				S	**S**	**18 05 24.7**	**-0.1**
WHFO				S	**S**	**18 05 24.7**	**-0.1**
WHFO				S	**S**	**18 05 24.7**	**-0.1**
IUG	**Iuzhnay**	**67.20**	**325**	*d* iP	**P**	**17 56 32.6**	**+0.8**
IUG	**Iuzhnay**	**67.20**	**325** ⇓	*i*P	**P**	**17 56 32.6**	**+0.8**
ABTO	**Aybut**	**67.33**	**294**	P	**P**	**17 56 33.3**	**+0.2**
	SNR=104						
ABTO				P	**P**	**17 56 33.3**	**+0.2**
	SNR=104						
ABTO				P	**P**	**17 56 33.3**	**+0.2**
	SNR=104						
ABTO				S	**S**	**18 05 26.9**	**-0.6**
ABTO				S	**S**	**18 05 26.9**	**-0.6**
ABTO				S	**S**	**18 05 26.9**	**-0.6**
HRA	**Herat**	**67.53**	**314**	P	**P**	**17 56 32.4**	**-1.8**
CHM	**Chimkent**	**67.56**	**325**	*e*P	**P**	**17 56 34.8**	**+0.9**
CHM				pmax	pmax		
	comp=Z,297nm,1.1s						
CHM	**Chimkent**	**67.56**	**325**	*e*P	**P**	**17 56 34.8**	**+0.9**
	comp=Z,297nm,1.1s						
CHM				LR	LR	18 28 43.5	
	comp=Z,4μm,19.7s						
KK31	**Karatay Array**	**67.57**	**326**	IAmb	IAmb	17 56 53.0	
	comp=Z,340nm,1.1s						
KK31	**Karatay Array**	**67.57**	**326**	*i* P	**P**	**17 56 33.5**	**-0.5**
KK31				pmax	pmax		
	comp=Z,183nm,0.8s						
KKAR	**Karatay Array**	**67.57**	**326**	P	**P**	**17 56 33.5**	**-0.5**
KKAR	**Karatay Array**	**67.57**	**326**	P	**P**	**17 56 33.5**	**-0.5**
NKL	**Nikolayevsk**	**67.58**	**16**	*e*P	**P**	**17 56 34.3**	**+0.5**
NKL				*e*S	**S**	**18 05 24.9**	**-4.1**
NKL				smax	smax		
	comp=E,856nm,6.5s						
NKL				smax	smax		
	comp=N,1μm,6.7s						
NKL				MLR	MLR		
	comp=E,5μm,19.0s						
NKL				MLR	MLR		
	comp=N,10μm,17.0s						
NKL				MLR	MLR		
	comp=Z,17μm,16.0s						
UOSS	**Minazif**	**67.70**	**303**	P	**P**	**17 56 34.5**	**-0.8**
UOSS	**Minazif**	**67.70**	**303**	*i* P	**P**	**17 56 34.7**	**-0.5**
	SNR=68						
UOSS	**Minazif**	**67.70**	**303**	P	**P**	**17 56 35.6**	**+0.4**
UOSS				P	**P**	**17 56 35.6**	**+0.4**
UOSS				S	**S**	**18 05 31.0**	**-0.7**
UOSS				S	**S**	**18 05 31.0**	**-0.7**
HATD	**Hatta, Dubai**	**67.71**	**303**	*i* P	**P**	**17 56 35.1**	**-0.1**
	SNR=200						
HATD	**Hatta, Dubai**	**67.71**	**303**	P	**P**	**17 56 35.6**	**+0.3**
	SNR=140						
HATD				P	**P**	**17 56 35.6**	**+0.3**
	SNR=140						
HATD				P	**P**	**17 56 35.6**	**+0.3**
	SNR=140						
HATD				S	**S**	**18 05 31.1**	**-0.8**
HATD				S	**S**	**18 05 31.1**	**-0.8**
HATD				S	**S**	**18 05 31.1**	**-0.8**
ALNE	**Al Ain**	**67.71**	**302**	*i* P	**P**	**17 56 35.0**	**-0.3**
	SNR=79						
ALNE	**Al Ain**	**67.71**	**302**	P	**P**	**17 56 35.4**	**+0.1**
	SNR=150						
ALNE				P	**P**	**17 56 35.4**	**+0.1**
	SNR=150						
ASHO	**Ashiyiah**	**67.72**	**302**	*i* P	**P**	**17 56 34.9**	**-0.4**
	SNR=190						
ASHO	**Ashiyiah**	**67.72**	**302**	P	**P**	**17 56 35.6**	**+0.2**
	SNR=148						
ASHO				P	**P**	**17 56 35.6**	**+0.2**
	SNR=148						
ASHO				S	**S**	**18 05 31.4**	**-0.5**
ASHO				S	**S**	**18 05 31.4**	**-0.5**
MDH	**Madha**	**67.77**	**303**	*i* P	**P**	**17 56 34.5**	**-1.1**
	SNR=30						
MDH	**Madha**	**67.77**	**303**	P	**P**	**17 56 34.8**	**-0.9**
	SNR=38						
MDH				P	**P**	**17 56 34.8**	**-0.9**
	SNR=38						
MDH				P	**P**	**17 56 34.8**	**-0.9**
	SNR=38						
MDH				S	**S**	**18 05 31.4**	**-1.1**
MDH				S	**S**	**18 05 31.4**	**-1.1**
MDH				S	**S**	**18 05 31.4**	**-1.1**
BRLS	**Boroldaу**	**67.89**	**326**	*e*P	**P**	**17 56 35.9**	**-0.1**
BRLS	**Boroldaу**	**67.89**	**326**	*e*P	**P**	**17 56 36.0**	**-0.1**
MSFE	**Esma-Masafi**	**67.91**	**303**	*i* P	**P**	**17 56 36.3**	**-0.3**
	SNR=69						
MASF	**Masafi**	**67.92**	**303**	P	**P**	**17 56 36.9**	**+0.3**
	SNR=76						
MASF				P	**P**	**17 56 36.9**	**+0.3**
	SNR=76						
MASF				P	**P**	**17 56 36.9**	**+0.3**
	SNR=76						
MASF				S	**S**	**18 05 34.7**	**+0.4**
MASF				S	**S**	**18 05 34.7**	**+0.4**
MASF				S	**S**	**18 05 34.7**	**+0.4**
BANOM	**Banah**	**68.03**	**304**	*i* P	**P**	**17 56 36.8**	**-0.5**
	SNR=50						
BANOM	**Banah**	**68.03**	**304**	P	**P**	**17 56 36.9**	**-0.5**
BANOM				P	**P**	**17 56 36.9**	**-0.5**
BANOM				P	**P**	**17 56 36.9**	**-0.5**
BANOM				S	**S**	**18 05 35.5**	**-0.2**
BANOM				S	**S**	**18 05 35.5**	**-0.2**
BANOM				S	**S**	**18 05 35.5**	**-0.2**
FAQ	**Al Faqa, Dubai**	**68.13**	**302**	*i* P	**P**	**17 56 37.7**	**-0.1**
	SNR=199						
FAQ	**Al Faqa, Dubai**	**68.13**	**302**	P	**P**	**17 56 38.0**	**+0.2**
	SNR=156						
FAQ				P	**P**	**17 56 38.0**	**+0.2**
	SNR=156						
FAQ				P	**P**	**17 56 38.0**	**+0.2**
	SNR=156						
FAQ				S	**S**	**18 05 35.9**	**-0.8**
FAQ				S	**S**	**18 05 35.9**	**-0.8**
FAQ				S	**S**	**18 05 35.9**	**-0.8**
NAZ	**Nazwa, Dubai**	**68.17**	**303**	*i* P	**P**	**17 56 38.0**	**-0.1**
	SNR=58						
NAZ	**Nazwa, Dubai**	**68.17**	**303**	P	**P**	**17 56 38.3**	**+0.1**
	SNR=69						
NAZ				P	**P**	**17 56 38.3**	**+0.1**
	SNR=69						
NAZ				S	**S**	**18 05 37.9**	**+0.6**
NAZ				S	**S**	**18 05 37.9**	**+0.6**
SHME	**Shamm**	**68.22**	**304**	*i* P	**P**	**17 56 38.5**	**+0.1**
	SNR=102						
SHME	**Shamm**	**68.22**	**304**

SHME P P 17 56 38.8 +0.4
SNR=96
SHME S S 18 05 37.4 -0.4
SHME S S 18 05 37.4 -0.4
SHME S S 18 05 37.4 -0.4
ASUD Al Ashush, Dub 68.30 302 *i* P P 17 56 39.1 +0.2
SNR=68
ASUD Al Ashush, Dub 68.30 302 P P 17 56 39.3 +0.4
SNR=64
ASUD P P 17 56 39.3 +0.4
SNR=64
ASUD P P 17 56 39.3 +0.4
SNR=64
ASUD S S 18 05 40.3 +1.5
ASUD S S 18 05 40.3 +1.5
ASUD S S 18 05 40.3 +1.5
UMQ Umm Al-Quwin 68.39 303 *i* P P 17 56 40.1 +0.6
SNR=14
UMQ Umm Al-Quwin 68.39 303 P P 17 56 40.2 +0.7
SNR=17
UMQ P P 17 56 40.2 +0.7
SNR=17
UMQ S S 18 05 40.8 +1.0
UMQ S S 18 05 40.8 +1.0
AJN Ajban 68.56 302 P P 17 56 40.0 -0.5
BOD Bodaibo 68.64 359⇑ *i* P P 17 56 40.1 -0.3
BOD pmax pmax
comp=Z,897nm,1.6s
MZR Muzera 69.22 300 *i* P P 17 56 44.7 -0.1
SNR=64
MZR Muzera 69.22 300 P P 17 56 45.1 +0.3
SNR=54
MZR P P 17 56 45.1 +0.3
SNR=54
MZR P P 17 56 45.1 +0.3
SNR=54
MZR S S 18 05 49.1 -0.7
MZR S S 18 05 49.1 -0.7
MZR S S 18 05 49.1 -0.7
KURBB Kurchatov Arra 69.22 336 P P 17 56 44.4 +0.2
comp=Z,464nm,0.8s,baz=151,slow=5.1,SNR=1222
KURBB S S 18 05 46.9 -1.9
comp=Z,1.9nm,0.5s,baz=140,slow=14,SNR=4.3
KURBB PKP2bc **P'P'ab** 18 24 52.4 +0.4
comp=Z,3.7nm,1.0s,baz=312,slow=3.4,SNR=11
KURBB LR LR 18 30 51.1
comp=Z,10μm,18.9s,baz=141,slow=39
comp=Z,464nm,0.8s
KURK Kurchatov 69.26 336 P P 17 56 43.8 -0.5
KURK Kurchatov 69.26 336 IAms_20 IAms_20 18 30 40.7
comp=Z,12μm,21.0s
KURK Kurchatov 69.26 336 P P 17 56 43.8 -0.5
KURK pmax pmax
comp=Z,700nm,0.8s
KURK MLR MLR
comp=Z,12μm,21.0s
KURK Kurchatov 69.26 336 P P 17 56 45.0 +0.6
KURK P P 17 56 45.0 +0.6
KURK S S 18 05 50.8 +1.6
KURK S S 18 05 50.8 +1.6
ZALV Zalesovo Beam 69.70 341 P P 17 56 46.5 -0.5
comp=Z,552nm,0.6s,baz=145,slow=4.6,SNR=961
ZALV S S 18 05 51.5 -2.8
comp=Z,15nm,1.1s,baz=148,slow=14,SNR=7.3
ZALV PKP2ab **P'P'ab** 18 24 52.1 +2.2
comp=Z,10nm,1.0s,baz=316,slow=4.1,SNR=22
ZALV LR LR 18 30 44.7
comp=Z,7μm,18.7s,baz=162,slow=39
comp=Z,552nm,0.6s
ZALV Zalesovo Beam 69.70 341 P P 17 56 45.8 -1.2
JRN Qarnain Island 70.49 301 P P 17 56 52.4 -0.1
SNR=17
JRN P P 17 56 52.4 -0.1
SNR=17
JRN S S 18 06 04.1 -0.5
JRN S S 18 06 04.1 -0.5
VNDA Vanda 70.57 170 P P 17 56 53.9 +1.8
comp=Z,101nm,1.0s,baz=301,slow=6.7,SNR=46
VNDA LR LR 18 24 59.1
comp=Z,22μm,21.3s,baz=326,slow=33
comp=Z,101nm,1.0s
VNDA Vanda 70.57 170 P P 17 56 52.1 0.0
VNDA IAmb IAmb 17 57 10.1
comp=Z,342nm,1.0s
VNDA Vanda 70.57 170 P P 17 56 52.1 0.0
VNDA pmax pmax
comp=Z,342nm,1.0s
SKR Severo-Kuril's 71.06 26 *eP* P 17 56 55.5 +0.1
SKR *e* 17 59 35.6
SKR pmax pmax
comp=Z,3μm,7.9s
SKR MLR MLR
comp=Z,3μm,17.0s
AFI Afiamalu 71.13 101 LR LR 18 25 35.5
comp=Z,3μm,21.0s,baz=255,slow=34
BRZS Berezniki 71.24 333 *eP* P 17 56 57.2 +0.7
BRZS Berezniki 71.24 333 *eP* P 17 56 57.3 +0.7
SBA Scott Base 71.61 170 P P 17 56 58.9 +0.6
SBA IAmb IAmb 17 57 16.6
comp=Z,784nm,1.6s
SBA Scott Base 71.61 170 P P 17 56 58.9 +0.6
SBA pmax pmax
comp=Z,784nm,1.6s
SBA MLR MLR
comp=Z,15μm,20.0s
TRNA Turayna 71.79 301 P P 17 57 00.5 +0.2
SNR=22
TRNA S S 18 06 18.4 -1.3
SMRA Abu-Samra 72.12 301 P P 17 57 02.6 +0.2
SNR=42
SHMA Al-Shehemyia 72.41 302 P P 17 57 04.5 +0.4
SNR=21
SAKB Bahrain 72.82 302 P P 17 57 06.8 +0.3
SAKB S S 18 06 30.6 -0.8
PEA0B Petropavlovsk- 73.50 25*d* *i*P P 17 57 10.4 +0.4
PETK Petropavlovsk- 73.50 25 P P 17 57 10.4 +0.5
comp=Z,170nm,0.9s,baz=189,slow=3.8,SNR=33
PETK LR LR 18 28 04.8
comp=Z,3μm,21.9s,baz=217,slow=35
comp=Z,170nm,0.9s
PETK Petropavlovsk- 73.50 25 P P 17 57 10.3 +0.3
YAK Yakutsk 73.75 7 LR LR 18 33 35.4
comp=Z,3μm,18.1s,baz=211,slow=39
YAK Yakutsk 73.75 7 P P 17 57 09.9 -1.3
YAK IAmb IAmb 17 57 15.1
comp=Z,521nm,1.1s
YAK Yakutsk 73.75 7 IAMs_20 IAMs_20 18 33 36.1
comp=Z,6μm,20.0s
YAK Yakutsk 73.75 7*d* *i*P P 17 57 10.5 -0.7
YAK *e**PP **pP** 17 57 17.0 -0.4
YAK *e* 17 59 51.8
YAK *e*S **SKiKP** 18 06 39.0 -0.4
YAK pmax pmax
comp=Z,373nm,1.1s
YAK pmax pmax
comp=N,267nm,1.5s
YAK pmax pmax
comp=E,107nm,1.5s
YAK pmax pmax
comp=Z,955nm,5.3s
YAK pmax pmax
comp=N,488nm,5.0s
YAK pmax pmax
comp=E,463nm,7.3s
YAK smax smax
comp=E,1μm,4.1s
YAK smax smax
comp=N,2μm,5.1s
YAK MLR MLR
comp=Z,5μm,21.0s
YAK MLR MLR
comp=N,4μm,19.0s
YAK MLR MLR
comp=E,5μm,19.0s
PET Petropavlovsk 73.84 26 P P 17 57 11.5 -0.4
PET IAmb IAmb 17 57 15.9
comp=Z,455nm,1.3s
PET Petropavlovsk 73.84 26 *eP* P 17 57 11.8 -0.1
PET *e*S S 18 06 42.7 +0.7
PET *e*PS **PnS** 18 07 21.5 +4.6
PET *e*SS **SS** 18 11 27.5 +0.9
PET pmax pmax
comp=Z,288nm,1.3s
PET pmax pmax
comp=Z,3μm,7.7s
PET pmax pmax
comp=Z,5μm,5.2s
PET Petropavlovsk 73.84 26 P P 17 57 11.8 -0.1
comp=Z,6μmcomp=Z,299nm,1.4s
BVAR Borovoye Array 74.40 334 P P 17 57 15.5 +0.3
comp=Z,176nm,0.8s,baz=142,slow=7.5,SNR=291
BVAR LR LR 18 33 44.2
comp=Z,12μm,22.0s,baz=134,slow=39
comp=Z,176nm,0.8s
BORK Borovoye 74.45 334 P P 17 57 15.2 -0.3
BORK IAmb IAmb 17 57 31.4
comp=Z,289nm,0.8s
BORK Borovoye 74.45 334 IAMs_20 IAMs_20 18 33 34.9
comp=Z,10μm,21.0s
BORK Borovoye 74.45 334*de*P P 17 57 15.6 +0.1
BORK pmax pmax
comp=Z,549nm,1.1s
BORK MLR MLR
comp=Z,18μm,23.0s
ATD Arta Tunnel 75.27 285 P P 17 57 22.4 +1.3
comp=Z,9.3nm,1.2s,baz=122,slow=2.6,SNR=28
ATD LR LR 18 29 35.4
comp=Z,57nm,18.0s,baz=89,slow=35
ATD Arta Tunnel 75.27 285 IAmb IAmb 17 57 26.2
comp=Z,682nm,1.6s
ATD IAMs_20 IAMs_20 18 33 19.5
comp=Z,5μm,18.0s
ATD Arta Tunnel 75.27 285 P P 17 57 21.8 +0.7
SNR=20
RAYN Ar Rayn 76.27 298 P P 17 57 25.9 -0.8
RAYN IAmb IAmb 17 57 30.4
comp=Z,404nm,1.1s
RAYN Ar Rayn 76.27 298 *i* P P 17 57 26.8 +0.1
SNR=416
RAYN Ar Rayn 76.27 298 P P 17 57 25.9 -0.8
RAYN pmax pmax
comp=Z,404nm,1.1s
RAYN MLR MLR
comp=Z,14μm,20.0s
RAYN Ar Rayn 76.27 298 P P 17 57 27.0 +0.4
KBD Kabd 76.33 304 P P 17 57 27.0 +0.1
KIBK Kibwezi 76.92 270 P P 17 57 32.3 +1.6
KIBK Kibwezi 76.92 270 IAmb IAmb 17 57 35.5
comp=Z,544nm,1.4s
KIBK Kibwezi 76.92 270 P P 17 57 32.5 +1.9
SNR=116
AB31 Akbulak array 77.13 326 *i* P P 17 57 30.9 0.0
AB31 pmax pmax
comp=Z,977nm,1.5s
ABKAR Akbulak array 77.13 326 P P 17 57 30.6 -0.3
KMBO Kilima Mbogo 77.93 271 LR LR 18 28 43.0
comp=Z,15μm,18.6s,baz=112,slow=33
KMBO Kilima Mbogo 77.93 271*d* *i*P P 17 57 37.9 +1.4
FURI Furi 78.62 281 LR LR 18 29 44.0
comp=Z,15μm,19.0s,baz=100,slow=34
AKTO Aktyubinsk 78.82 327 P P 17 57 40.7 +0.4
comp=Z,175nm,0.9s,baz=121,slow=4.3,SNR=160
AKTO LR LR 18 37 29.9
comp=Z,9μm,21.5s,baz=124,slow=40
comp=Z,175nm,0.9s
QSPA South Pole Qui 78.94 180 P P 17 57 41.7 +0.7
comp=Z,225nm,1.1s,baz=307,slow=1.9,SNR=54
QSPA PKKPbc **PKKPbc** 18 16 34.3 -2.7
comp=Z,6.6nm,0.6s,baz=158,slow=0.8,SNR=15
comp=Z,225nm,1.1s
QSPA South Pole Qui 78.94 180 P P 17 57 41.8 +0.9
QSPA IAmb IAmb 17 57 58.1
comp=Z,731nm,1.2s
SEY Seymchan 79.16 16 LR LR 18 34 54.5
comp=Z,3μm,20.2s,baz=230,slow=37
SEY Seymchan 79.16 16*de*P P 17 57 42.2 +0.3
SEY pmax pmax
comp=Z,652nm,1.3s
SEY MLR MLR
comp=Z,6μm,25.0s
POGA Pongola 79.25 244 P P 17 57 45.0 +1.7
ELIB Princess Elisa 80.13 198 *d*P P 17 57 48.9 +1.6
comp=Z,342nm,1.1s
LODK Lodwar 80.67 275 IAmb IAmb 17 57 56.2
comp=Z,215nm,1.1s
LODK IAMs_20 IAMs_20 18 32 03.4
comp=Z,11μm,20.0s
LODK Lodwar 80.67 275 P P 17 57 53.2 +1.9
SNR=97
AKT Akhty 80.96 315 *eP* P 17 57 52.9 +0.7
AKT *e* 17 57 57.2
AKT *e* 18 00 58.5
AKT pmax pmax
comp=Z,1μm,1.5s
AKT pmax pmax
comp=N,22nm,0.6s
AKT pmax pmax
comp=Z,606nm,1.2s
AKT MLR MLR
comp=Z,6μm,24.0s
SMY Shemya 80.98 32 IAmb IAmb 17 57 56.1
comp=Z,541nm,0.9s
SHEM Shmya Is, Ala 80.98 32 LR LR 18 32 10.6
comp=Z,1μm,20.8s,baz=248,slow=34
SHEM Shemya Is, Ala 80.98 32 IAmb IAmb 17 57 56.0
comp=Z,417nm,0.9s
SVE Sverdlovsk 81.15 333*ce*P P 17 57 53.2 +0.5
SVE *e*S S 18 07 59.7 -1.4
SVE pmax pmax
comp=Z,713nm,1.6s
SVE pmax pmax
comp=Z,3μm,9.5s
SVE MLR MLR
comp=N,9μm,22.0s
SVE MLR MLR
comp=E,7μm,20.0s
SVE MLR MLR
comp=Z,14μm,21.0s
RAR Rarotonga 81.52 110 LR LR 18 31 51.0
comp=Z,6μm,21.8s,baz=255,slow=34
MAK Makhachkala 81.70 317*d* *i*P P 17 57 50.3 -5.6
MAK *e*S S 18 07 59.1 -8.2
MAK *e*SS SS 18 13 26.4 +0.9
MAK pmax pmax
comp=Z,448nm,1.2s
ARTI Arti 81.92 332 LR LR 18 38 49.6
comp=Z,9μm,21.9s,baz=128,slow=39
ARTI Arti 81.92 332 P P 17 57 56.8 0.0
ARTI IAmb IAmb 17 57 59.9
comp=Z,383nm,0.7s
ARTI IAMs_20 IAMs_20 18 38 27.5
comp=Z,8μm,22.0s
ARTI Arti 81.92 332*d* *i*P P 17 57 56.9 0.0
ARTI 18 01 01.2
ARTI S S 18 08 08.7 -0.4
ARTI SS SS 18 13 22.7 -5.5
ARTI SSS SSS 18 16 45.0
ARTI pmax pmax
comp=Z,507nm,0.9s
ARTI MLR MLR
comp=Z,14μm,22.0s
NRIK Noril'sk 82.51 350 P P 17 57 59.8 +0.2
comp=Z,601nm,1.3s,baz=146,slow=4.9,SNR=64
NRIK S S 18 08 12.7 -1.9
comp=Z,3.4nm,0.9s,baz=42,slow=24,SNR=8.1
NRIK PKKPbc **PKKPbc** 18 16 29.8 +0.7
comp=Z,1.0nm,0.4s,baz=293,slow=2.7,SNR=3.8
comp=Z,601nm,1.3s
GRHM Grahamstown, E 83.03 238 IAmb IAmb 17 58 21.3
comp=Z,301nm,0.8s
TIXI Tiksi 83.04 4 LR LR 18 39 37.5
comp=Z,5μm,19.0s,baz=216,slow=39
TIXI Tiksi 83.04 4 P P 17 58 00.9 -1.4
TIXI IAmb IAmb 17 58 05.1
comp=Z,422nm,0.8s
TIXI Tiksi 83.04 4 IAMs_20 IAMs_20 18 39 24.1
comp=Z,5μm,20.0s
TIXI Tiksi 83.04 4*ce*P P 17 58 01.4 -0.9
TIXI pmax pmax
comp=Z,422nm,0.9s
TIXI MLR MLR
comp=Z,7μm,23.0s
TBLG Delisi 83.13 315 P P 17 58 05.2 +1.7
TRLG Trialeti 83.51 314 P P 17 58 07.3 +1.6
GUDG Gudauri 83.58 315 P P 17 58 07.9 +1.8
NVL N'lazarevskaya 83.98 199 *eP* P 17 58 06.9 -0.4
NVL *e* 18 01 20.3
NVL pmax pmax
comp=Z,250nm,1.1s
BROLN Tlhalogang 84.10 250 *i* P P 17 58 09.8 +0.7
BROLN Tlhalogang 84.10 250 P P 17 58 10.0 +0.9
LSZ Lusaka 84.27 256 LR LR 18 30 59.6
comp=Z,9μm,21.0s,baz=107,slow=32
LSZ Lusaka 84.27 256 P P 17 58 10.0 -0.1
LSZ IAmb IAmb 17 58 15.1
comp=Z,528nm,1.4s
LSZ Lusaka 84.27 256 IAMs_20 IAMs_20 18 30 46.6
comp=Z,11μm,21.0s
LSZ Lusaka 84.27 256 P P 17 58 10.0 -0.1
LSZ Lusaka 84.27 256 P P 17 58 09.8 -0.3
LSZ P P 17 58 09.8 -0.3
LSZ S **SKSac** 18 08 31.7 -1.3
LSZ S **SKSac** 18 08 31.7 -1.3
LSZ Lusaka 84.27 256 P P 17 58 11.2 +1.1
MBAR Mbarara 84.42 270 LR LR 18 32 25.9
comp=Z,7μm,18.9s,baz=92,slow=33
MBAR Mbarara 84.42 270 P P 17 58 12.3 +1.3
MBAR Mbarara 84.42 270 P P 17 58 12.3 +1.3
MBAR pmax pmax
comp=Z,2μm,2.0s
MBAR MLR MLR
comp=Z,11μm,18.0s
MBAR Mbarara 84.42 270 P P 17 58 10.0 -1.0
MBAR P P 17 58 10.0 -1.0
MBAR S **SKSac** 18 08 33.6 -0.5
MBAR S **SKSac** 18 08 33.6 -0.5
MBAR Mbarara 84.42 270 P P 17 58 12.7 +1.7
NCK Nalchik 84.55 316 *i* P P 17 58 10.2 -0.5
NCK pmax pmax
comp=Z,260nm,1.2s
BOSA Boshof 84.71 242 P P 17 58 13.1 +0.9
comp=Z,387nm,1.1s,baz=105,slow=4.4,SNR=123
BOSA PKKPbc **PKKPbc** 18 16 22.6 +0.8
comp=Z,5.2nm,0.9s,baz=241,slow=2.7,SNR=5.0
BOSA LR LR 18 33 10.9
comp=Z,11μm,18.1s,baz=100,slow=34
comp=Z,387nm,1.1s
BOSA Boshof 84.71 242 P P 17 58 12.1 0.0
BOSA IAmb IAmb 17 58 29.5
comp=Z,361nm,0.9s
BOSA Boshof 84.71 242 P P 17 58 12.1 0.0
BOSA pmax pmax
comp=Z,361nm,0.9s
BOSA Boshof 84.71 242 P P 17 58 13.1 +0.9
LBTB Lobatse 85.02 246 LR LR 18 29 52.0
comp=Z,8μm,20.4s,baz=96,slow=31
LBTB Lobatse 85.02 246 IAmb IAmb 17 58 18.6
comp=Z,584nm,1.4s
LBTB Lobatse 85.02 246 P P 17 58 14.9 +1.2
LPHEP Lephephe 85.06 247 *i* P P 17 58 14.7 +0.8
LPHEP Lephephe 85.06 247 IAmb IAmb 17 58 19.1
comp=Z,478nm,1.3s
LPHEP Lephephe 85.06 247 P P 17 58 15.3 +1.3
NEUR Neytrino 85.08 316*d* *i*P P 17 58 12.8 -0.8
NEUR pmax pmax
comp=Z,160nm,1.2s
KBZ Khabaz 85.11 316 P P 17 58 14.8 +1.3
comp=Z,261nm,1.1s,baz=104,slow=3.6,SNR=105
KBZ PKKPbc **PKKPbc** 18 16 22.6 +0.7
comp=Z,4.6nm,0.8s,baz=263,slow=4.1,SNR=10.0
KBZ PKPPKP 18 24 25.9
comp=Z,2.4nm,0.9s,baz=96,slow=2.1,SNR=4.6
comp=Z,261nm,1.1s
KBZ Khabaz 85.11 316*de*P P 17 58 14.5 +1.0
KBZ pmax pmax
comp=Z,399nm,1.3s
SOOWA Sowa 85.22 250 *i* P P 17 58 15.4 +0.6
SHA1 Shidzhatmaz 85.27 316*ce*P P 17 58 15.6 +1.0
KVAR Kislovodsk Arr 85.32 316 LR LR 18 40 32.5
comp=Z,2μm,21.7s,baz=168,slow=39
KIV Kislovodsk 85.33 316⇑ P P 17 58 15.6 +0.9
KIV Kislovodsk 85.33 316 P P 17 58 15.6 +0.9
KIV IAmb IAmb 17 58 18.8
comp=Z,338nm,1.1s
KIV IAMs_20 IAMs_20 18 42 25.8
comp=Z,6μm,22.0s
KIV Kislovodsk 85.33 316 *i* P P 17 58 15.5 +0.8
SNR=57
KIV Kislovodsk 85.33 316 *e*P P 17 58 15.3 +0.6
KIV *e* 18 01 33.3
KIV *e* 18 08 39.5
KIV *e*SSS SSS 18 17 52.9
KIV pmax pmax
comp=Z,176nm,1.0s
KIV pmax pmax
comp=Z,1μm,4.8s
KIV Kislovodsk 85.33 316 P P 17 58 14.1 -0.6
KIV P P 17 58 14.1 -0.6
KIV S **SKSac** 18 08 38.6 +0.1
KIV S **SKSac** 18 08 38.6 +0.1
KIV Kislovodsk 85.33 316 P P 17 58 15.4 +0.7
comp=Z,6μmcomp=Z,234nm,1.4s
BELG Belogornoye 85.47 325 LR LR 18 41 58.1
comp=Z,4μm,20.1s,baz=114,slow=40
BELG Belogornoye 85.47 325*d* *i*P P 17 58 15.3 +0.3
BELG pmax pmax
comp=Z,229nm,1.2s
GOF Gofitskoye 85.47 317*d* *i*P P 17 58 16.6 +1.3
GOF *e*S S 18 08 46.5 +1.2
ADK Adak 85.59 35 P P 17 58 16.5 +0.8
ADK Adak 85.59 35 IAMs_20 IAMs_20 18 30 58.5
comp=Z,5μm,21.0s
ADK Adak 85.59 35 P P 17 58 16.5 +0.8
ADK pmax pmax
comp=Z,1μm,1.6s
ADK MLR MLR
comp=Z,5μm,21.0s
MAKGR Makgori 85.59 245 *i* P P 17 58 17.1 +0.5
KHWEE KHWEE 85.69 249 *i* P P 17 58 17.7 +0.6
KHWEE KHWEE 85.69 249 P P 17 58 16.3 -0.7
KHWEE IAmb IAmb 17 58 21.1
comp=Z,400nm,1.3s
KHWEE KHWEE 85.69 249 P P 17 58 18.1 +1.0
ASF Jabal al Asfar 86.09 304 P P 17 58 21.1 +2.3
comp=Z,238nm,1.1s,baz=106,slow=3.3,SNR=42
ASF LR LR 18 39 38.6
comp=Z,6μm,19.4s,baz=86,slow=38
comp=Z,238nm,1.1s
KDWAN Kaudwane 86.15 247 *i* P P 17 58 20.3 +1.0
KDWAN Kaudwane 86.15 247 P P 17 58 20.9 +1.6
TROLL Troll, Antarti 86.34 197 P P 17 58 20.8 +1.4
TROLL S S 18 08 58.4 +5.0
KSANE Kasane 86.69 253 *i* P P 17 58 23.3 +1.2
KSANE Kasane 86.69 253 P P 17 58 23.2 +1.2
BILL Bilibino 86.84 17 P P 17 58 21.2 -0.3
BILL IAMs_20 IAMs_20 18 38 36.6
comp=Z,5μm,21.0s
BILL Bilibino 86.84 17*ce*P P 17 58 21.5 0.0
BILL pmax pmax
comp=Z,82nm,1.0s
BILL MLR MLR
comp=Z,4μm,20.0s
LABN Labinsk 86.89 316 *eP* P 17 58 22.2 -0.1
LABN *e**PP **PcP** 17 58 26.0 +1.5
LABN *e*S **SKSac** 18 08 49.2 +1.3
LABN pmax pmax
comp=Z,628nm,1.1s
ARPR Arapgir-MALATY 86.89 311 IAMs_20 IAMs_20 18 43 00.7
comp=Z,6μm,20.0s
GHAJ Ghor Haditha 86.96 303 IAMs_20 IAMs_20 18 42 49.5
comp=Z,6μm,18.0s
EIL Elat 87.06 301 P P 17 58 24.9 +1.4
comp=Z,573nm,1.3s,baz=121,slow=3.4,SNR=40
EIL LR LR 18 38 34.4
comp=Z,8μm,20.2s,baz=95,slow=36
comp=Z,573nm,1.3s
KIRV Kirov 87.21 331 LR LR 18 42 58.5
comp=Z,6μm,19.1s,baz=120,slow=39
KIRV Kirov 87.21 331*de*P P 17 58 23.6 +0.1
SOC Sochi 87.24 315*d* *i*P P 17 58 24.1 +0.1
SOC *e* 18 01 48.8
SOC *e*S **SKSac** 18 08 50.2 +0.1
SOC *e*SS **SS** 18 14 52.2 +4.9
SOC pmax pmax
comp=Z,389nm,1.0s
ERBR Yeremizino-Bor 87.39 317 *eP* P 17 58 25.2 +0.5
ERBR *e**PP **PcP** 17 58 27.9 +1.2
ERBR *e*S **SKSac** 18 08 52.0 +1.0
ERBR pmax pmax
comp=Z,624nm,1.2s
HWQ Hawqa 87.42 305 *eP* P 17 58 27.0 +1.8
MMAI Mount Meron Ar 87.53 304 P P 17 58 27.9 +2.1
comp=Z,426nm,1.2s,baz=64,slow=5.7,SNR=38
MMAI LR LR 18 42 16.4
comp=Z,6μm,18.1s,baz=92,slow=39
comp=Z,426nm,1.2s
BHL Bhannes 87.56 305 *eP* P 17 58 27.8 +1.9

SUR	Sutherland	87.79	238		LR	LR	18 32 05.3												
	comp=Z,7μm,20.4s,baz=106,slow=32																		
SUR	Sutherland	87.79	238		P	P	17 58 29.0	+1.7											
SUR					IAmb	IAmb	17 58 45.2												
	comp=Z,111nm,0.9s																		
XMAS	Kiritimati	87.82	88		P	P	17 58 23.9	-3.6											
SNAA	Sanae	87.99	196	⇓	P	P	17 58 28.8	+1.6											
	comp=Z,3μm,0.7s																		
SNAA					⇑S	S	18 09 11.2	+2.0											
SNAA					⇑PKKPbc	PKKPbc	18 16 13.6	-1.8											
	comp=Z,251nm,0.6s																		
SNAA	Sanae	87.99	196		P	P	17 58 28.9	+1.6											
	comp=Z,220nm,1.1s,baz=116,slow=4.0,SNR=33																		
SNAA					PKKPbc	PKKPbc	18 16 13.5	-1.9											
	comp=Z,12nm,0.8s,baz=316,slow=2.1,SNR=10																		
SNAA					LR	LR	18 32 14.6												
	comp=Z,15μm,21.8s,baz=104,slow=32																		
	comp=Z,220nm,1.1s																		
SNAA	Sanae	87.99	196		P	P	17 58 28.6	+1.3											
SNAA	Sanae	87.99	196		P	P	17 58 28.6	+1.3											
SNAA					pmax	pmax													
	comp=Z,402nm,1.1s																		
SNAA					MLR	MLR													
	comp=Z,17μm,18.0s																		
VRH	Novokhopyorsk	88.41	323	*e*	P	P	17 58 29.5	+0.1											
VRH				*e*			18 09 01.9												
VRH					pmax	pmax													
	comp=Z,1μm,0.8s																		
VRH					MLR	MLR													
	comp=Z,9μm,25.0s																		
KGCAE	Kacgae	88.46	247	*i*	P	P	17 58 31.8	+1.2											
KGCAE	Kacgae	88.46	247		P	P	17 58 32.0	+1.4											
LKGWB	Lokgwabe	89.10	246		P	P	17 58 32.9	-0.6											
ANN	Anapa	89.17	316	*e*	P	P	17 58 33.2	+0.1											
ANN				*e*			18 02 02.1												
ANN				*e*	S	SKSac	18 09 02.4	+0.8											
ANN					pmax	pmax													
	comp=Z,533nm,1.6s																		
ANN					pmax	pmax													
	comp=Z,2μm,10.9s																		
VNA2	Neumayer--Warj	89.63	196	⇓	P	P	17 58 36.7	+1.8											
	comp=Z,154nm,1.0s,baz=97,slow=4.7																		
VNA2				⇓	SKSac	SKSac	18 09 08.1	+4.4											
	comp=N,0.2nm,0.1s																		
VNA2				⇑	S	S	18 09 26.0	+1.4											
	comp=N,1.2nm,0.1s																		
VNA2				⇓	PKKPbc	PKKPbc	18 16 09.6	-1.6											
	comp=Z,13nm,0.7s																		
GRTLG	Ghanzi	89.66	248	*i*	P	P	17 58 37.5	+1.3											
GRTLG	Ghanzi	89.66	248		IAmb	IAmb	17 58 41.5												
	comp=Z,412nm,1.4s																		
GRTLG	Ghanzi	89.66	248		P	P	17 58 37.7	+1.5											
CSS	Mathiatis	89.68	306		IAmb	IAmb	17 58 40.7												
	comp=Z,494nm,1.5s																		
CSS					IAMs_20	IAMs_20	18 42 14.5												
	comp=Z,9μm,19.0s																		
CSS	Mathiatis	89.68	306		P	P	17 58 36.8	+1.0											
	comp=Z,5μmcomp=Z,248nm,1.6s																		
VORD	Divnogorie	89.79	322	⇓	*i* P	P	17 58 35.8	-0.1											
VORD					pmax	pmax													
	comp=Z,440nm,1.0s																		
VSR	Storozhevoye	89.94	322	*i*	P	P	17 58 36.7	+0.1											
VSR				*e*			18 02 04.8												
VSR				*e*	S	S	18 09 22.9	-4.9											
VSR					pmax	pmax													
	comp=Z,1μm,1.6s																		
VSR					MLR	MLR													
	comp=Z,6μm,24.0s																		
VNA1	Neumayer--Stat	90.03	196	⇓	P	P	17 58 39.0	+2.3											
	comp=Z,160nm,1.0s																		
VORR	Voronezh	90.05	323	*e*	P	P	17 58 37.7	+0.6											
VORR					pmax	pmax													
	comp=Z,852nm,1.6s																		
VNA3	Neumayer Olymp	90.06	195	⇓	P	P	17 58 38.2	+1.3											
	comp=Z,128nm,0.9s																		
VNA3				⇑	SKSac	SKSac	18 09 08.9	+2.7											
VNA3				⇓	S	S	18 09 29.3	+0.9											
	comp=N,4μm,6.1s																		
KIRS	Kirsehir-Merke	90.22	310	⇓	P	P	17 58 38.8	+0.5											
KOOLE	Kule	90.25	247	*i*	P	P	17 58 40.2	+1.3											
KOOLE	Kule	90.25	247		P	P	17 58 40.5	+1.6											
LPSR	Galich'ya Gora	90.50	324	*e*	P	P	17 58 39.5	+0.3											
LPSR					pmax	pmax													
	comp=Z,352nm,0.8s																		
TBI	Tubuai	90.53	114	*e*	PP	PP	18 02 09.6	-5.3											
	comp=Z,1μm,24.2s																		
TBI				*e*	S	S	18 09 31.8	-2.7											
	comp=Z,12μm,25.5s																		
TBI				*e*	SS	SS	18 15 30.3	-5.3											
	comp=Z,13μm,29.2s																		
TBI				*e*	LQ	LQ	18 23 23.9												
	comp=Z,54μm,32.5s																		
TBI				*e*	LR	LR	18 27 37.7												
	comp=Z,14μm,23.2s																		
TBI				*e*	LR	LR	18 27 39.3												
	comp=Z,52μm,23.8s																		
BR104	Keskin Array S	90.56	310		P	P	17 58 40.5	+0.5											
	comp=Z,1μmcomp=Z,74nm,1.1s																		
BR131	Keskin Array S	90.57	310		IAmb	IAmb	17 58 44.1												
	comp=Z,228nm,1.2s																		
BR131	Keskin Array S	90.57	310	*i*	P	P	17 58 39.1	-1.0											
BR131	Keskin Array S	90.57	310		P	P	17 58 39.0	-1.0											
	SNR=51																		
BR131					P	P	17 58 39.0	-1.0											
	SNR=51																		
BRTR	Keskin Array B	90.57	310		P	P	17 58 40.3	+0.3											
	comp=Z,84nm,1.0s,baz=129,slow=4.5,SNR=124																		
BRTR					PP	PP	18 02 09.3	-5.9											
	comp=Z,38nm,1.2s,baz=131,slow=6.2,SNR=4.5																		
BRTR					PKKPbc	PKKPbc	18 16 07.1	-1.4											
	comp=Z,2.4nm,0.8s,baz=258,slow=1.1,SNR=7.9																		
BRTR					LR	LR	18 41 51.0												
	comp=Z,4μm,21.6s,baz=100,slow=37																		
	comp=Z,84nm,1.0s																		
BRTR	Keskin Array B	90.57	310		P	P	17 58 39.5	-0.5											
BR105	Keskin Array S	90.58	310		P	P	17 58 40.6	+0.5											
	comp=Z,1μmcomp=Z,141nm,1.2s																		
BR106	Keskin Array S	90.59	310		P	P	17 58 40.6	+0.5											
	comp=Z,1μmcomp=Z,124nm,1.2s																		
ILGA	Ilgaz	90.83	312		IAmb	IAmb	17 59 05.9												
	comp=Z,342nm,1.9s																		
BZK	Bozkurt	90.84	313	⇑	P	P	17 58 42.2	+1.2											
BZK	Bozkurt	90.84	313		P	P	17 58 41.8	+0.8											
	comp=Z,5μmcomp=Z,207nm,1.2s																		
KHAM	Kharkiv	91.37	321		P	P	17 58 45.5	+2.1											
SIM	Simferopol'	91.48	315	*e*	P	P	17 58 44.2	+0.2											
SIM				*e*			18 02 21.3												
SIM					pmax	pmax													
	comp=Z,357nm,1.3s																		
PAE	Paea	91.61	108	*e*	P	P	17 58 50.7	+5.5											
	comp=Z,48nm,1.3s																		
PAE					eLR	LR	18 28 03.2												
	comp=Z,2μm,21.8s																		
PPT2	Papeete2	91.63	108	*e*	P	P	17 58 51.3	+5.9											
	comp=Z,94nm,1.4s																		
PPT2				*e*	PP	PP	18 02 25.7	+1.8											
	comp=Z,364nm,24.8s																		
PPT2				*e*	S	S	18 09 46.6	+1.7											
	comp=Z,2μm,24.2s																		
PPT2				*e*	SS	SS	18 15 55.2	+3.3											
	comp=Z,3μm,29.2s																		
PPT2				*e*	LQ	LQ	18 24 08.3												
	comp=Z,14μm,29.8s																		
PPT2				*e*	LR	LR	18 28 07.6												
	comp=Z,11μm,26.5s																		
PPT2				*e*	LR	LR	18 28 12.5												
	comp=Z,15μm,26.2s																		
PPT	Papeete	91.63	108		LR	LR	18 36 20.9												
	comp=Z,5μm,21.7s,baz=254,slow=33																		
TIAR	Tiarei	91.85	108	*e*	P	P	17 58 51.3	+5.0											
	comp=Z,137nm,1.2s																		
TIAR				*e*	LR	LR	18 28 10.8												
	comp=Z,10μm,26.0s																		
TVO	Taravao	91.89	108	*e*	P	P	17 58 51.0	+4.4											
	comp=Z,24nm,1.0s																		
TVO				*e*	LR	LR	18 28 18.0												
	comp=Z,2μm,22.2s																		
UNV	Unalaska Valle	92.06	35		IAMs_20	IAMs_20	18 38 26.8												
	comp=Z,5μm,22.0s																		
UNV	Unalaska Valle	92.06	35		P	P	17 58 46.7	+0.3											
	baz=254																		
MOS	Moscow	92.15	326	*e*	P	P	17 58 46.0	-0.8											
MOS				*e*			18 02 25.9												
MOS				*e*	S	S	18 09 46.8	-1.0											
MOS				*e*	PS	PS	18 10 55.6	-5.6											
MOS					pmax	pmax													
	comp=Z,265nm,1.4s																		
MOS					pmax	pmax													
	comp=N,100nm,1.3s																		
MOS					pmax	pmax													
	comp=E,90nm,1.3s																		
MOS					smax	smax													
	comp=N,5μm,5.0s																		
PLTM	Poltava	92.34	320		P	P	17 58 25.0	-23											
ISP	Isparta	92.52	308		IAMs_20	IAMs_20	18 42 38.1												
	comp=Z,6μm,20.0s																		
GAMB	Gambell	92.54	25		IAmb	IAmb	17 58 53.3												
	comp=Z,252nm,1.1s																		
GAMB	Gambell	92.54	25		P	P	17 58 49.8	+1.4											
	baz=250,SNR=19																		
OBN	Obninsk	92.56	326		LR	LR	18 46 15.4												
	comp=Z,5μm,18.5s,baz=99,slow=39																		
OBN	Obninsk	92.56	326	⇑	P	P	17 58 48.9	+0.3											
OBN	Obninsk	92.56	326		P	P	17 58 46.9	-1.8											
OBN					IAMs_20	IAMs_20	18 48 37.3												
	comp=Z,9μm,20.0s																		
OBN	Obninsk	92.56	326	*de*	P	P	17 58 48.9	+0.3											
OBN				*e*			18 02 27.2												
OBN				*i*	S	S	18 09 47.2	-4.2											
OBN					pmax	pmax													
	comp=Z,522nm,1.6s																		
OBN					MLR	MLR													
	comp=Z,10μm,24.0s																		
OBN	Obninsk	92.56	326		P	P	17 58 48.7	+0.1											
	comp=Z,5μmcomp=Z,268nm,1.2s																		
MDUB	Mudurnu	92.56	311		IAmb	IAmb	17 58 52.4												
	comp=Z,195nm,1.2s																		
KLMR	Klimovskoe	92.71	332	*e*	P	P	17 58 48.1	-1.1											
KLMR					S	SKSac	18 09 21.1	-0.1											
KLMR					SS	SS	18 16 07.8	+2.2											
KLMR					pmax	pmax													
	comp=Z,766nm,1.4s																		
KLMR					MLR	MLR													
	comp=Z,5μm,18.0s																		
BORA	Eskisehir	93.00	310		IAmb	IAmb	17 58 55.1												
	comp=Z,204nm,1.4s																		
TSUM	Tsumeb	93.45	250		LR	LR	18 37 50.1												
	comp=Z,10μm,18.4s,baz=100,slow=33																		
TSUM	Tsumeb	93.45	250		P	P	17 58 51.5	-2.3											
TSUM	Tsumeb	93.45	250		P	P	17 58 55.2	+1.4											
PMOR	Pomariorio Ree	93.75	106	*e*	P	P	17 58 59.4	+4.3											
	comp=Z,111nm,1.4s																		
PMOR				*e*	LR	LR	18 29 10.1												
	comp=Z,18μm,25.1s																		
M11K	Mekoryuk	93.98	29		P	P	17 58 55.5	+0.4											
	baz=255																		
FALS	False Pass	94.06	35		IAMs_20	IAMs_20	18 39 29.7												
	comp=Z,4μm,22.0s																		
FALS	False Pass	94.06	35		P	P	17 58 57.0	+1.4											
	baz=257																		
ADZR	Andozero	94.17	334	*e*	P	P	17 58 54.6	-1.3											
ADZR					S	SKSac	18 09 29.8	+0.7											
ADZR					pmax	pmax													
	comp=Z,323nm,1.2s																		
MANT	Manisa	94.17	308		IAmb	IAmb	17 59 00.4												
	comp=Z,158nm,1.4s																		
TNA	Tin City	94.64	24		P	P	17 58 59.1	+1.1											
	baz=254,SNR=5.5																		
PURM	Purcari	94.73	316	⇑	P	P	17 58 59.5	+0.6											
PURM	Purcari	94.73	316		P	P	17 58 58.4	-0.4											
	comp=Z,4μmcomp=Z,370nm,1.4s																		
BAND	Balkesir-Ban	94.86	310	⇓	P	P	17 59 00.6	+1.0											
BALB	Balikesir	94.90	309		IAmb	IAmb	17 59 03.1												
	comp=Z,178nm,1.3s																		
JURR	Jurilovca	95.09	314	⇑	P	P	17 59 01.0	+0.4											
K13K	Kusilvak Mount	95.09	28		IAmb	IAmb	17 59 04.9												
	comp=Z,195nm,1.2s																		
K13K	Kusilvak Mount	95.09	28		P	P	17 59 01.0	+0.8											
	baz=256,SNR=32																		
TLCR		95.20	315	⇓	P	P	17 59 01.9	+0.8											
TLCR		95.20	315		P	P	17 59 01.9	+0.8											
F14K	Arctic Creek	95.26	24		P	P	17 59 01.9	+1.1											
	baz=255																		
TIRR	Tirgusor	95.36	314	⇓	P	P	17 59 01.9	+0.1											
TIRR	Tirgusor	95.36	314		IAmb	IAmb	17 59 05.5												
	comp=Z,127nm,1.1s																		
TIRR					IAMs_20	IAMs_20	18 49 53.6												
	comp=Z,3μm,20.0s																		
TIRR	Tirgusor	95.36	314		P	P	17 59 01.8	+0.1											
TIRR	Tirgusor	95.36	314		P	P	17 59 01.7	-0.1											
	comp=Z,2μmcomp=Z,128nm,1.4s																		
M13K	Dall Lake	95.36	30		P	P	17 59 02.4	+1.0											
	baz=257																		
PSN	Preselentsi	95.41	313		P	P	17 59 04.4	+2.3											
ANM	Nome	95.42	25		P	P	17 59 02.5	+0.9											
	baz=256,SNR=26																		
TPGR	Topolog	95.42	314	⇑	P	P	17 59 02.6	+0.4											
CFR	Carcaliu	95.68	315	⇓	P	P	17 59 03.4	+0.2											
CFR	Carcaliu	95.68	315		P	P	17 59 03.4	+0.2											
ICOR	Ion Corvin	95.73	314	⇓	P	P	17 59 04.3	+0.8											
J14K	Nanvaranak Lak	95.78	27		IAmb	IAmb	17 59 07.3												
	comp=Z,113nm,1.2s																		
J14K	Nanvaranak Lak	95.78	27		P	P	17 59 04.1	+0.8											
	baz=257																		
SDPT	Sand Point	95.82	35		P	P	17 59 03.9	+0.3											
	baz=259,SNR=29																		
VLDR	Vladesti	95.83	315	⇑	P	P	17 59 04.7	+0.8											
PRD	Provadia	95.85	313		P	P	17 59 05.9	+1.8											
SCTR	Scanteiesti	95.86	315	⇑	P	P	17 59 04.1	0.0											
AK09	Malin Array Si	95.86	320		P	P	17 59 03.4	-0.5											
L14K	Kuka Creek	95.88	29		IAmb	IAmb	17 59 07.6												
	comp=Z,162nm,1.8s																		
L14K	Kuka Creek	95.88	29		P	P	17 59 05.1	+1.3											
	baz=258,SNR=8.1																		
AK10	Malin Array Si	95.88	320		P	P	17 59 03.4	-0.6											
AK08	Malin Array Si	95.88	320		P	P	17 59 03.5	-0.5											
AK07	Malin Array Si	95.90	320		P	P	17 59 03.5	-0.6											
AK06	Malin Array Si	95.91	320		P	P	17 59 03.6	-0.6											
AK05	Malin Array Si	95.91	320		P	P	17 59 03.6	-0.6											
AKASG	Malin Array Be	95.92	320		P	P	17 59 03.6	-0.6											
	comp=Z,73nm,1.0s,baz=84,slow=4.4,SNR=100																		
AKASG					PP	PP	18 02 46.6	-10											
	comp=Z,16nm,1.1s,baz=97,slow=6.4,SNR=5.8																		
AKASG					PKiKP	PKiKP	18 03 42.6	-0.6											
	comp=Z,2.8nm,0.7s,baz=86,slow=3.6,SNR=4.7																		
AKASG					LR	LR	18 49 22.5												
	comp=Z,4μm,19.7s,baz=86,slow=40																		
	comp=Z,73nm,1.0s																		
AKBB	Malin Array Si	95.92	320		IAmb	IAmb	17 59 07.2												
	comp=Z,134nm,0.9s																		
AKBB	Malin Array Si	95.92	320	*ce*	P	P	17 59 03.6	-0.6											
AKBB					pmax	pmax													
	comp=Z,144nm,1.0s																		
AKBB	Malin Array Si	95.92	320		P	P	17 59 03.6	-0.6											
AK02	Malin Array Si	95.92	320		P	P	17 59 03.6	-0.6											
AK01	Malin Array Si	95.92	320		P	P	17 59 03.6	-0.6											
AK03	Malin Array Si	95.92	320		P	P	17 59 03.6	-0.6											
KIEV	Kiev	95.92	320		P	P	17 59 01.7	-2.5											
KIEV					IAmb	IAmb	17 59 07.2												
	comp=Z,120nm,0.9s																		
KIEV	Kiev	95.92	320		IAMs_20	IAMs_20	18 48 52.2												
	comp=Z,6μm,20.0s																		
KIEV	Kiev	95.92	320	*i*	P	P	17 59 03.7	-0.5											
	SNR=55																		
KIEV	Kiev	95.92	320		P	P	17 59 01.7	-2.5											
KIEV					pmax	pmax													
	comp=Z,120nm,1.0s																		
KIEV					MLR	MLR													
	comp=Z,6μm,20.0s																		
KIEV	Kiev	95.92	320		P	P	17 59 03.6	-0.6											
	comp=Z,644nm,1.2s																		
AK11	Malin Array Si	95.95	320		P	P	17 59 03.7	-0.6											
AK12	Malin Array Si	95.95	320		P	P	17 59 03.7	-0.6											
AK04	Malin Array Si	95.95	320		P	P	17 59 03.8	-0.6											
NEF	NEVSHA	95.96	313		P	P	17 59 06.2	+1.6											
AK14	Malin Array Si	95.98	320		P	P	17 59 03.9	-0.6											
AK15	Malin Array Si	95.98	320		P	P	17 59 03.9	-0.6											
AK16	Malin Array Si	95.98	320		P	P	17 59 03.9	-0.6											
AK23	Malin Array Si	95.99	320		P	P	17 59 03.9	-0.6											
F15K	North Star Dit	95.99	24		IAmb	IAmb	17 59 09.1												
	comp=Z,185nm,1.4s																		
F15K	North Star Dit	95.99	24		P	P	17 59 05.2	+1.0											
	baz=257,SNR=49																		
IZVR	Izvoarele	95.99	315	⇓	P	P	17 59 05.7	+1.0											
VARL	Varlezi	96.00	315	⇓	P	P	17 59 05.5	+0.8											
AK13	Malin Array Si	96.00	320		P	P	17 59 04.0	-0.6											
AK17	Malin Array Si	96.02	320		P	P	17 59 04.1	-0.5											
AK18	Malin Array Si	96.02	320		P	P	17 59 04.1	-0.5											
AK22	Malin Array Si	96.02	320		P	P	17 59 04.1	-0.6											
SORM	Soroca	96.03	318	⇑	P	P	17 59 04.8	0.0											
SORM	Soroca	96.03	318		P	P	17 59 04.7	0.0											
SORM	Soroca	96.03	318		P	P	17 59 04.1	-0.7											
	comp=Z,127nm,1.4s																		
AK21	Malin Array Si	96.04	320		P	P	17 59 04.2	-0.6											
AK19	Malin Array Si	96.05	320		P	P	17 59 04.2	-0.6											
AK20	Malin Array Si	96.06	320		P	P	17 59 04.2	-0.6											
N14K	Kuskokwak Cree	96.07	30		P	P	17 59 05.0	+0.4											
	baz=259																		
G15K	Niukluk	96.08	25		P	P	17 59 04.6	0.0											
	baz=257,SNR=12																		
M14K	Bethel	96.10	29		IAmb	IAmb	17 59 08.4												
	comp=Z,79nm,1.1s																		
M14K	Bethel	96.10	29		P	P

	baz=261									
N16K	**Nishlik Lake**	**97.60**	**30**	P	Pdif	17 59 12.7	+1.0			
	baz=261									
PLD	**Plovdiv**	**97.64**	**311**	P	**P**	**17 59 11.9**	**-0.3**			
DOPR	**Dopca**	**97.70**	**315**	⇑P	Pdif	17 59 12.9	+0.4			
P16K	**Nushagak River**	**97.77**	**31**	IAmb	IAmb	17 59 16.7				
	comp=Z,255nm,1.6s									
P16K	**Nushagak River**	**97.77**	**31**	P	Pdif	17 59 13.3	+0.9			
	baz=262,SNR=8.0									
R16K	**Pilot Point**	**97.78**	**33**	P	Pdif	17 59 13.1	+0.6			
	baz=262									
H17K	**Granite Mounta**	**97.79**	**25**	IAmb	IAmb	17 59 17.2				
	comp=Z,103nm,1.0s									
H17K	**Granite Mounta**	**97.79**	**25**	P	Pdif	17 59 13.2	+0.8			
	baz=261,SNR=64									
HUMR	**Humele**	**97.79**	**314**	⇑P	Pdif	17 59 13.0	+0.1			
O16K	**Kokwok River B**	**97.80**	**31**	IAmb	IAmb	17 59 16.9				
	comp=Z,277nm,1.9s									
O16K	**Kokwok River B**	**97.80**	**31**	P	Pdif	17 59 13.3	+0.8			
	baz=262									
VOIR		**97.87**	**315**	⇑P	Pdif	17 59 13.7	+0.4			
VOIR		**97.87**	**315**	P	Pdif	17 59 13.7	+0.4			
VOIR		**97.87**	**315**	P	Pdif	17 59 14.3	+1.0			
	comp=Z,934nmcomp=Z,21nm,1.4s									
PLVB	**Pleven**	**97.90**	**313**	⇑P	Pdif	17 59 14.3	+0.9			
J17K	**VABM Dome**	**97.91**	**27**	IAmb	IAmb	17 59 17.0				
	comp=Z,56nm,1.0s									
J17K	**VABM Dome**	**97.91**	**27**	P	Pdif	17 59 13.5	+0.6			
	baz=261									
E18K	**Tukpahlearik C**	**97.92**	**23**	IAmb	IAmb	17 59 17.8				
	comp=Z,78nm,1.1s									
E18K	**Tukpahlearik C**	**97.92**	**23**	P	Pdif	17 59 13.8	+0.9			
	baz=260,SNR=67									
NACGM	**Naroch**	**98.03**	**324**	⇑*i* P	Pdif	17 59 14.2	+0.6			
	comp=Z,119nm,0.9s,baz=98									
BURAR	**Bucovina Array**	**98.04**	**317**	⇓P	Pdif	17 59 14.4	+0.3			
BURAR	**Bucovina Array**	**98.04**	**317**	P	Pdif	17 59 14.1	0.0			
BURAR	**Bucovina Array**	**98.04**	**317**	P	Pdif	17 59 14.4	+0.3			
L17K	**Donlin**	**98.07**	**28**	P	Pdif	17 59 14.3	+0.6			
	baz=262									
RNPP5	**Staryi Chortor**	**98.08**	**321**	P	**P**	**17 59 13.2**	**-0.8**			
RNPP9	**Sopachiv**	**98.10**	**321**	P	**P**	**17 59 13.4**	**-0.7**			
RNPP8	**Varash**	**98.11**	**321**	P	**P**	**17 59 13.9**	**-0.2**			
ARR	**Arges**	**98.15**	**315**	⇓P	Pdif	17 59 15.1	+0.5			
K17K	**Iditarod**	**98.15**	**28**	IAmb	IAmb	17 59 18.1				
	comp=Z,90nm,1.1s									
K17K	**Iditarod**	**98.15**	**28**	P	Pdif	17 59 14.5	+0.5			
	baz=262									
F18K	**Selawik**	**98.16**	**24**	P	Pdif	17 59 14.6	+0.7			
	baz=261,SNR=14									
A19K	**Wainwright**	**98.22**	**20**	Pdiff	Pdif	17 59 14.9	+0.7			
	baz=260									
KSV	**Kosov**	**98.23**	**318**	P	**P**	**17 59 13.3**	**-1.5**			
MMB	**Musomishta**	**98.30**	**311**	P	Pdif	17 59 15.8	+0.5			
O17K	**Koliganek Bris**	**98.33**	**31**	Pdiff	Pdif	17 59 15.5	+0.7			
	baz=262									
M17K	**Holitna River**	**98.38**	**29**	Pdiff	Pdif	17 59 15.9	+0.8			
	baz=262									
N17K	**Nushagak Hills**	**98.38**	**30**	Pdiff	Pdif	17 59 16.0	+0.9			
	baz=262									
Q16K	**King Salmon**	**98.41**	**32**	Pdiff	Pdif	17 59 16.1	+0.9			
	baz=263									
R17L	**Mt. Peulik Vol**	**98.43**	**33**	Pdiff	Pdif	17 59 16.2	+0.8			
	baz=263									
PLK4	**Peulik 4**	**98.43**	**33**	IAmb	IAmb	17 59 18.9				
	comp=Z,66nm,1.0s									
G18K	**Tagagawik**	**98.45**	**24**	Pdiff	Pdif	17 59 16.1	+0.7			
	baz=262									
H18K	**Honhosa River**	**98.47**	**25**	IAmb	IAmb	17 59 19.9				
	comp=Z,65nm,1.1s									
H18K	**Honhosa River**	**98.47**	**25**	Pdiff	Pdif	17 59 16.0	+0.6			
	baz=262									
VSU	**Vasula**	**98.52**	**328**	*ce* P	**P**	**17 59 15.1**	**-0.6**			
VSU				pmax	pmax					
	comp=Z,188nm,1.3s									
MPEP	**Malo Peshtene**	**98.53**	**312**	P	Pdif	17 59 16.4	+0.2			
C19K	**Lookout Ridge**	**98.56**	**21**	IAmb	IAmb	17 59 21.1				
	comp=Z,114nm,1.1s									
C19K	**Lookout Ridge**	**98.56**	**21**	Pdiff	Pdif	17 59 16.8	+1.0			
	baz=262									
P17K	**Kvichak River**	**98.59**	**31**	IAmb	IAmb	17 59 37.0				
	comp=Z,45nm,0.8s									
P17K	**Kvichak River**	**98.59**	**31**	Pdiff	Pdif	17 59 16.6	+0.5			
	baz=263									
CHIR	**Chirikof Islan**	**98.61**	**35**	IAMs_20	IAMs_20	18 39 01.8				
	comp=Z,4µm,21.0s									
CHIR	**Chirikof Islan**	**98.61**	**35**	Pdiff	Pdif	17 59 16.8	+0.6			
	baz=263									
STNU	**Starunia**	**98.65**	**318**	P	**P**	**17 59 16.0**	**-0.6**			
Q17K	**Contact Creek**	**98.76**	**32**	Pdiff	Pdif	17 59 17.5	+0.4			
	baz=263									
LOT	**Lotru**	**98.76**	**315**	⇑P	Pdif	17 59 17.6	+0.2			
VALD	**Valchedram**	**98.79**	**313**	P	Pdif	17 59 18.1	+0.8			
KKB	**Krupnik**	**98.79**	**311**	P	**P**	**17 59 16.0**	**-1.4**			
BLSH	**Balsha**	**98.81**	**312**	P	Pdif	17 59 17.8	+0.3			
VTS	**Vitosha**	**98.81**	**312**	P	**P**	**17 59 17.6**	**-0.1**			
L18K	**Granite Mounta**	**98.83**	**28**	Pdiff	Pdif	17 59 17.8	+0.6			
	baz=263									
VADS	**Vadso**	**98.90**	**340**	*e*P	Pdif	17 59 17.4	+0.2			
F19K	**Shaleruckik Mo**	**98.93**	**24**	Pdiff	Pdif	17 59 18.2	+0.7			
	baz=263									
J18K	**Innoko River**	**98.97**	**27**	IAmb	IAmb	17 59 21.3				
	comp=Z,54nm,0.9s									
J18K	**Innoko River**	**98.97**	**27**	Pdiff	Pdif	17 59 18.2	+0.5			
	baz=263									
D19K	**Kuna River**	**99.00**	**22**	Pdiff	**Pdif**	**17 59 18.5**	**+0.7**			
	baz=263									
CJR	**Cluj-Napoca**	**99.03**	**316**	⇑P	**Pdif**	**17 59 19.3**	**+0.8**			
CJR	**Cluj-Napoca**	**99.03**	**316**	P	**Pdif**	**17 59 19.2**	**+0.8**			
N18K	**Kilae Creek**	**99.04**	**30**	IAmb	IAmb	17 59 22.7				
	comp=Z,86nm,1.4s									
N18K	**Kilae Creek**	**99.04**	**30**	Pdiff	**Pdif**	**17 59 18.9**	**+0.8**			
	baz=264									
GCSA	**Galena City Sc**	**99.04**	**26**	Pdiff	**Pdif**	**17 59 18.8**	**+0.8**			
	baz=263									
LVV	**L'vov**	**99.09**	**319**	P	**Pdif**	**17 59 18.2**	**-0.3**			
MORS	**Morshin**	**99.10**	**318**	P	**Pdif**	**17 59 18.9**	**+0.3**			
G19K	**Purcell Mounta**	**99.12**	**24**	IAmb	IAmb	17 59 36.2				
	comp=Z,61nm,0.7s									
G19K	**Purcell Mounta**	**99.12**	**24**	Pdiff	**Pdif**	**17 59 19.2**	**+0.9**			
	baz=264									
ITM	**Ithomi**	**99.16**	**306**	IAmb	IAmb	17 59 21.9				
	comp=Z,94nm,1.5s									
M18K	**Stony River**	**99.16**	**29**	Pdiff	**Pdif**	**17 59 19.4**	**+0.9**			
	baz=264									
FINES	**FINESS Array B**	**99.19**	**331**	P	**Pdif**	**17 59 18.8**	**+0.1**			
	baz=268,SNR=52									
FINES				PKiKP	**PKiKP**	**18 03 50.0**	**+1.3**			
	comp=Z,78nm,0.9s,baz=94,slow=5.7,SNR=5.6									
FINES				PKKPbc	**PKKPbc**	**18 15 44.4**	**-1.6**			
	comp=Z,12nm,0.8s,baz=131,slow=4.0,SNR=5.0									
FINES				LR	LR	18 49 20.8				
	comp=Z,2.2nm,0.7s,baz=90,slow=1.9,SNR=5.0									
	comp=Z,5µm,19.6s,baz=104,slow=38									
	comp=Z,78nm,0.9s									
FINES	**FINESS Array B**	**99.19**	**331**	P	**Pdif**	**17 59 18.6**	**-0.1**			
BMR	**Baia Mare**	**99.20**	**317**	⇑P	**Pdif**	**17 59 20.0**	**+0.9**			
BMR	**Baia Mare**	**99.20**	**317**	P	**Pdif**	**17 59 20.0**	**+0.9**			
E19K	**Redstone River**	**99.21**	**23**	IAmb	IAmb	17 59 51.4				
	comp=Z,89nm,1.1s									
E19K	**Redstone River**	**99.21**	**23**	Pdiff	**Pdif**	**17 59 19.7**	**+1.0**			
	baz=264									
P18K	**Big Mountain,**	**99.23**	**31**	Pdiff	**Pdif**	**17 59 18.5**	**-0.5**			
	baz=264									
Q18K	**Katmai Hardscr**	**99.26**	**32**	Pdiff	**Pdif**	**17 59 19.3**	**+0.1**			
	baz=264									
MEZ	**Mezhgor'ye**	**99.28**	**318**	P	**Pdif**	**17 59 18.8**	**-0.7**			
O18K	**Koktuh Hills**	**99.28**	**31**	Pdiff	**Pdif**	**17 59 19.5**	**+0.3**			
	baz=264									
H19K	**Roundabout Mou**	**99.31**	**25**	Pdiff	**Pdif**	**17 59 19.7**	**+0.6**			
	baz=264									
MARR	**Marisel-Cluj**	**99.35**	**316**	⇓P	**Pdif**	**17 59 20.1**	**+0.2**			
DEV	**Deva**	**99.42**	**315**	⇓P	**Pdif**	**17 59 20.7**	**+0.6**			
DEV	**Deva**	**99.42**	**315**	P	**Pdif**	**17 59 20.7**	**+0.6**			
GZR	**Gura Zlata**	**99.45**	**314**	⇑P	**Pdif**	**17 59 20.8**	**+0.4**			
GZR	**Gura Zlata**	**99.45**	**314**	P	**Pdif**	**17 59 20.8**	**+0.4**			
SHIU	**Shidnytsya**	**99.46**	**318**	P	**Pdif**	**17 59 20.4**	**+0.2**			
SII	**Sitkinak Islan**	**99.49**	**34**	IAMs_20	IAMs_20	18 39 45.1				
	comp=Z,3µm,21.0s									
SII	**Sitkinak Islan**	**99.49**	**34**	Pdiff	**Pdif**	**17 59 20.5**	**+0.3**			
	baz=264									
J19K	**Poorman**	**99.51**	**27**	Pdiff	**Pdif**	**17 59 20.3**	**+0.2**			
	baz=264									
B20K	**Meade River**	**99.52**	**20**	IAmb	IAmb	17 59 25.1				
	comp=Z,94nm,1.1s									
B20K	**Meade River**	**99.52**	**20**	Pdiff	**Pdif**	**17 59 20.9**	**+0.9**			
	baz=264									
D20K	**Etivluk River**	**99.58**	**22**	IAmb	IAmb	17 59 24.4				
	comp=Z,149nm,1.4s									
D20K	**Etivluk River**	**99.58**	**22**	Pdiff	**Pdif**	**17 59 21.2**	**+0.9**			
	baz=264									
BRIU	**Brid**	**99.59**	**317**	P	**Pdif**	**17 59 20.4**	**-0.4**			
HERR	**Herculane**	**99.65**	**314**	⇑P	**Pdif**	**17 59 21.3**	**+0.2**			
L19K	**White Mountain**	**99.68**	**28**	Pdiff	**Pdif**	**17 59 21.6**	**+0.7**			
	baz=265									
E20K	**Nigu River**	**99.69**	**22**	Pdiff	**Pdif**	**17 59 21.7**	**+0.8**			
	baz=265									
PABE	**Paberze**	**99.70**	**325**	IAMs_20	IAMs_20	18 51 30.3				
	comp=Z,4µm,19.0s									
N19K	**Bonanza Creek**	**99.74**	**30**	Pdiff	**Pdif**	**17 59 21.8**	**+0.5**			
	baz=265									
F20K	**Avaraart Lake**	**99.75**	**23**	Pdiff	**Pdif**	**17 59 22.0**	**+0.9**			
	baz=265									
O19K	**Port Alsworth**	**99.76**	**30**	Pdiff	**Pdif**	**17 59 22.1**	**+0.8**			
	baz=265									
A21K	**Barrow**	**99.83**	**19**	Pdiff	**Pdif**	**17 59 21.9**	**+0.6**			
	baz=265									
BERU	**Beregovo**	**99.83**	**317**	P	**Pdif**	**17 59 21.6**	**-0.3**			
M19K	**Big River Lodg**	**99.88**	**29**	Pdiff	**Pdif**	**17 59 22.7**	**+0.9**			
	baz=265									
KWP	**Kalwaria Pacla**	**99.92**	**319**	*e*P	**Pdif**	**17 59 25.4**	**+3.1**			
KWP	**Kalwaria Pacla**	**99.92**	**319**	P	**Pdif**	**17 59 22.3**	**0.0**			
H20K	**Anotleneega Mo**	**99.96**	**25**	Pdiff	**Pdif**	**17 59 22.8**	**+0.7**			
	baz=265									
Q19K	**Cape Douglas,**	**100.00**	**32**	Pdiff	**Pdif**	**17 59 23.0**	**+0.6**			
	baz=265									
SUW	**Suwalki**	**100.02**	**323**	*e*P	**Pdif**	**17 59 23.0**	**+0.5**			
SUW	**Suwalki**	**100.02**	**323**	IAMs_20	IAMs_20	18 50 03.6				
	comp=Z,5µm,19.0s									
OHAK	**Old Harbor**	**100.04**	**34**	P	**Pdif**	**17 59 23.4**	**+0.8**			
OHAK	**Old Harbor**	**100.04**	**34**	Pdiff	**Pdif**	**17 59 22.7**	**+0.1**			
	baz=265									
I20K	**Naaghedeneel**	**100.07**	**26**	Pdiff	**Pdif**	**17 59 23.3**	**+0.8**			
	baz=266									
MDVR	**Moldovita**	**100.14**	**314**	⇑P	**Pdif**	**17 59 23.9**	**+0.4**			
K20K	**Telida**	**100.14**	**27**	Pdiff	**Pdif**	**17 59 23.3**	**+0.4**			
	baz=266									
ARA0	**ARCESS Array S**	**100.17**	**339**	*e*P	**Pdif**	**17 59 22.8**	**-0.2**			
ARA0				*e*SKSac	**SKSac**	**18 09 59.3**	**-0.7**			
ARCES	**ARCESS Array B**	**100.17**	**339**	P	**Pdif**	**17 59 22.8**	**-0.1**			
	comp=Z,63nm,0.8s,baz=82,slow=3.5,SNR=38									
ARCES				PP	**PP**	**18 03 22.9**	**-5.9**			
	comp=Z,32nm,1.1s,baz=78,slow=8.4,SNR=4.7									
ARCES				PKiKP	**PKiKP**	**18 03 51.7**	**+1.4**			
	comp=Z,19nm,1.0s,baz=150,slow=2.0,SNR=3.9									
ARCES	**ARCESS Array B**	**100.17**	**339**		**Pdif**	**17 59 22.4**	**-0.5**			
J20K	**Nowinta River**	**100.17**	**26**	Pdiff	**Pdif**	**17 59 23.8**	**+0.8**			
	baz=266									
P19K	**Oil Pt**	**100.26**	**31**	Pdiff	**Pdif**	**17 59 23.3**	**-0.3**			
	baz=266									
C21K	**Knifeblade Rid**	**100.27**	**21**	Pdiff	**Pdif**	**17 59 23.9**	**+0.5**			
	baz=266									
BZS	**Buzias**	**100.29**	**315**	⇑P	**Pdif**	**17 59 24.3**	**+0.3**			
BZS	**Buzias**	**100.29**	**315**	P	**Pdif**	**17 59 24.2**	**+0.3**			
A22K	**Sinclair Lake**	**100.33**	**19**	Pdiff	**Pdif**	**17 59 24.4**	**+0.9**			
	baz=266									
B21K	**Ikpikpuk River**	**100.36**	**21**	Pdiff	**Pdif**	**17 59 24.6**	**+0.8**			
	baz=266									
OHR	**Ohrid**	**100.45**	**310**	*i* P	**Pdif**	**17 59 24.9**	**0.0**			
KDAK	**Kodiak Island**	**100.47**	**33**	IAMs_20	IAMs_20	18 38 43.9				
	comp=Z,4µm,22.0s									
KDAK	**Kodiak Island**	**100.47**	**33**	Pdiff	**Pdif**	**17 59 24.5**	**+0.1**			
	baz=266									
M20K	**Styx River**	**100.47**	**29**	Pdiff	**Pdif**	**17 59 24.8**	**+0.2**			
	baz=266									
E21K	**Kilik River**	**100.52**	**22**	Pdiff	**Pdif**	**17 59 24.4**	**-0.2**			
	baz=267									
G21K	**Allakaket**	**100.59**	**24**	Pdiff	**Pdif**	**17 59 25.6**	**+0.7**			
	baz=267									
Q20K	**Shuyak Island**	**100.62**	**32**	Pdiff	**Pdif**	**17 59 25.4**	**+0.3**			
	baz=266									
F21K	**Alatna River**	**100.64**	**23**	Pdiff	**Pdif**	**17 59 25.1**	**0.0**			
	baz=267									
HOPEN	**Hopen**	**100.72**	**346**	*e*P	**Pdif**	**17 59 24.7**	**-0.5**			
HOPEN				IVmB_BB		17 59 31.4				
	comp=Z,1µm,3.9s									
HOPEN				*e*PP	**PP**	**18 03 30.6**	**-2.2**			
HOPEN				*e*SKSac	**SKSac**	**18 10 04.3**	**+1.9**			
HOPEN				*e*SS	**SS**	**18 18 04.3**	**+6.3**			
HOPEN				IVMs_BB	IVMs_BB	18 35 54.2				
	comp=Z,1µm,19.3s									
B22K	**Teshekpuk Lake**	**100.81**	**20**	Pdiff	**Pdif**	**17 59 26.6**	**+0.8**			
	baz=268									
H21K	**Melozitna Rive**	**100.83**	**25**	Pdiff	**Pdif**	**17 59 26.0**	**0.0**			
	baz=267									
HAMF	**Hammerfest**	**100.85**	**340**	*e*P	**Pdif**	**17 59 27.9**	**+1.9**			
HAMF				IVmB		17 59 28.4				
	comp=Z,2µm,1.7s									
HAMF				*e*SKSac	**SKSac**	**18 10 02.7**	**-0.4**			
HAMF				*e*PS	PS	18 12 37.9	+2.3			
HAMF				IVMs_BB	IVMs_BB	18 34 36.8				
	comp=Z,3µm,4.0s									
STHS	**Stebnicka Huta**	**100.86**	**318**	*e*PDIFF	**Pdif**	**17 59 26.7**	**+0.2**			
STHS				*e*PP	**PP**	**18 03 33.1**	**-1.4**			
N20K	**Mount Spurr**	**100.87**	**30**	Pdiff	**Pdif**	**17 59 26.3**	**0.0**			
	baz=267									
SPCR	**Spurr Chakacha**	**100.87**	**30**	Pdiff	**Pdif**	**17 59 26.3**	**0.0**			
	baz=267									
KTK1	**Kautokeino**	**100.94**	**338**	*e*P	**Pdif**	**17 59 26.8**	**+0.4**			
KTK1				IVmB_BB		17 59 36.9				
	comp=Z,2µm,4.0s									
KTK1				*e*SKSac	**SKSac**	**18 10 06.1**	**+2.3**			
KTK1				*e*PS	PS	18 12 37.8	+1.1			
KTK1				*e*SS	**SS**	**18 18 07.7**	**+6.2**			
CHUM	**Lake Minchumin**	**100.96**	**27**	Pdiff	**Pdif**	**17 59 27.0**	**+0.5**			
	baz=267									
PPLA	**Purkeypile**	**100.97**	**28**	Pdiff	**Pdif**	**17 59 26.6**	**-0.2**			
	baz=267									
HOM	**Homer**	**101.07**	**31**	Pdiff	**Pdif**	**17 59 27.1**	**0.0**			
	baz=267									
I21K	**Tanana**	**101.15**	**25**	Pdiff	**Pdif**	**17 59 28.0**	**+0.6**			
	baz=268									
SKT	**Skwentna**	**101.23**	**29**	Pdiff	**Pdif**	**17 59 27.9**	**+0.1**			
	baz=268									
BEL	**Belsk**	**101.31**	**321**	*e*P	**Pdif**	**17 59 30.4**	**+2.0**			
E22K	**Anaktuvuk Pass**	**101.31**	**22**	Pdiff	**Pdif**	**17 59 28.9**	**+0.8**			
	baz=269									
CAPN	**Captain Cook N**	**101.36**	**30**	Pdiff	**Pdif**	**17 59 28.8**	**+0.5**			
	baz=268									
H22K	**Ishalitna Cre**	**101.43**	**25**	Pdiff	**Pdif**	**17 59 29.2**	**+0.6**			
	baz=269									
NIE	**Niedzica**	**101.47**	**318**	*e*P	**Pdif**	**17 59 30.6**	**+1.4**			
BRSE	**Bradley Lake S**	**101.53**	**31**	Pdiff	**Pdif**	**17 59 29.5**	**+0.3**			
	baz=268									
BPAW	**Bear Paw Mtn.**	**101.55**	**27**	Pdiff	**Pdif**	**17 59 29.9**	**+0.7**			
	baz=269									
PSZ	**Piszkesteto**	**101.64**	**317**	⇑P	**Pdif**	**17 59 29.8**	**-0.3**			
PSZ	**Piszkesteto**	**101.64**	**317**	IAMs_20	IAMs_20	18 54 14.9				
	comp=Z,4µm,21.0s									
PSZ	**Piszkesteto**	**101.64**	**317**	P	**Pdif**	**17 59 29.7**	**-0.3**			
MLY	**Manley**	**101.68**	**26**	Pdiff	**Pdif**	**17 59 30.2**	**+0.4**			
	baz=269									
PDG	**Podgorica**	**101.72**	**311**	⇑P	**Pdif**	**17 59 30.7**	**+0.3**			
PDG	**Podgorica**	**101.72**	**311**	IAMs_20	IAMs_20	18 54 34.9				
	comp=Z,4µm,20.0s									
D23K	**Nanushuk River**	**101.74**	**22**	Pdiff	**Pdif**	**17 59 30.9**	**+1.0**			
	baz=270									
C23K	**Itkillik River**	**101.77**	**21**	Pdiff	**Pdif**	**17 59 31.0**	**+1.0**			
	baz=270									
CUT	**Chulitna**	**101.83**	**28**	Pdiff	**Pdif**	**17 59 30.8**	**+0.4**			
	baz=269									
OJC	**Ojcow**	**101.84**	**319**	*e*P	**Pdif**	**17 59 31.8**	**+1.0**			
TRF	**Thorofare Moun**	**101.84**	**27**	Pdiff	**Pdif**	**17 59 31.6**	**+0.9**			
	baz=269									
M22K	**Willow**	**101.89**	**29**	Pdiff	**Pdif**	**17 59 31.0**	**+0.4**			
	baz=269									
COLD	**Coldfoot**	**101.92**	**23**	Pdiff	**Pdif**	**17 59 31.6**	**+0.8**			
	baz=270									
JETT	**Jettan, Norway**	**101.96**	**339**	*e*P	**Pdif**	**17 59 31.6**	**+0.7**			
JETT				IVmB_BB		18 00 15.7				
	comp=Z,3µm,4.0s									
JETT				*e*SP	SP	18 12 46.2	+2.5			
G23K	**Bananza Creek**	**101.99**	**24**	Pdiff	**Pdif**	**17 59 31.9**	**+0.8**			
	baz=270									
LANS	**Liptovska Anna**	**102.00**	**318**	*i* P	**Pdif**	**17 59 33.2**	**+1.6**			
LANS				*e*		18 03 44.5				
LANS	**Liptovska Anna**	**102.00**	**318**	*e*PDIFF	**Pdif**	**17 59 33.2**	**+1.6**			
LANS				*e*		18 03 03.5				
LANS				*e*PP	**PP**	**18 03 44.5**	**+1.3**			
O22K	**Cooper Landing**	**102.06**	**30**	Pdiff	**Pdif**	**17 59 31.4**	**0.0**			
	baz=269									
RC01	**Rabbit Creek A**	**102.06**	**30**	Pdiff	**Pdif**	**17 59 31.3**	**-0.2**			
	baz=269									
E23K	**Chandalar**	**102.14**	**23**	Pdiff	**Pdif**	**17 59 32.2**	**+0.4**			
	baz=271									
TOLK	**Toolik Lake Re**	**102.14**	**22**	Pdiff	**Pdif**	**17 59 32.2**	**+0.4**			
	baz=271									
SEW	**Seward**	**102.19**	**31**	Pdiff	**Pdif**	**17 59 32.2**	**+0.2**			
	baz=269									
BJO1	**Bjornoya**	**102.24**	**344**	*e*P	**Pdif**	**17 59 33.2**	**+1.2**			
BJO1				IVmB		17 59 34.5				
	comp=Z,516nm,2.4s									
BJO1				*e*PP	**PP**	**18 03 43.9**	**-0.4**			
BJO1				IVMs_BB	IVMs_BB	18 24 48.6				
	comp=Z,995nm,3.5s									
I23K	**Minto, Yukon-K**	**102.26**	**25**	Pdiff	**Pdif**	**17 59 32.9**	**+0.6**			
	baz=270									
PMR	**Palmer**	**102.36**	**29**	Pdiff	**Pdif**	**17 59 33.6**	**+0.8**			
	baz=270									
NEA2	**Nenana**	**102.39**	**26**	Pdiff	**Pdif**	**17 59 33.3**	**+0.4**			
	baz=270									
MORH	**Mrgy, Hungar**	**102.40**	**315**	⇓P	**Pdif**	**17 59 33.5**	**+0.1**			
D24K	**Happy Valley**	**102.41**	**21**	Pdiff	**Pdif**	**17 59 34.1**	**+1.2**			
	baz=272									
C24K	**Franklin Bluff**	**102.43**	**21**	Pdiff	**Pdif**	**17 59 33.8**	**+0.9**			
	baz=272									
MCK	**McKinley**	**102.45**	**27**	Pdiff	**Pdif**	**17 59 33.3**	**0.0**			
	baz=270									
TRO	**Tromso**	**102.47**	**339**	*e*P	**Pdif**	**17 59 33.3**	**+0.2**			
TRO				IVmB		17 59 35.3				
	comp=Z,2µm,1.7s									
TRO				*e*PP	**PP**	**18 03 47.5**	**+1.4**			
TRO				*e*SKSac	**SKSac**	**18 10 13.8**	**+2.8**			
TRO				*e*SP	**SP**	**18 12 52.5**	**+3.4**			
TRO				*e*SS	**SS**	**18 18 25.6**	**+3.0**			
TRO				IVMs_BB	IVMs_BB	18 29 48.0				
	comp=Z,4µm,4.8s									
TAOE	**Nuku Hiva Isla**	**102.52**	**102**	*e*P	**Pdif**	**17 59 38.1**	**+3.4**			
	comp=Z,352nm,24.1s									
TAOE				*e*PP	**PP**	**18 03 43.5**	**-4.4**			
	comp=Z,386nm,24.5s									
TAOE				*e*S	**Sdif**	**18 11 18.4**	**-0.2**			
	comp=Z,1µm,24.5s									
TAOE				*e*SS	**SS**	**18 18 27.7**	**+1.8**			
	comp=Z,1µm,30.4s									
TAOE				*e*LQ	LQ	18 28 32.6				
	comp=Z,10µm,31.8s									
TAOE				*e*LR	LR	18 33 08.0				
	comp=Z,5µm,23.0s									
E24K	**Your Creek**	**102.56**	**22**	IAMs_20	IAMs_20	18 55 23.3				
	comp=Z,3µm,21.0s									
E24K	**Your Creek**	**102.56**	**22**	Pdiff	**Pdif**	**17 59 33.6**	**-0.1**			
	baz=272									
SPA0	**Spitsbergen Ar**	**102.57**	**348**	*e*P	**Pdif**	**17 59 34.8**	**+1.3**			
SPA0				IVmB_BB		17 59 36.1				
	comp=Z,3µm,1.2s									
SPA0				*e*PP	**PP**	**18 03 46.5**	**-0.1**			
SPA0				*e*SKSac	**SKSac**	**18 10 13.2**	**+2.0**			
SPA0				*e*SP	**SP**	**18 12 52.4**	**+2.5**			
SPA0				*e

KLU	**Klutina**	103.90	29	Pdiff	**Pdif**	**17 59 40.6**	**+0.8**
	baz=272						
STEI	**Steigen**	103.92	337	*e*P	**Pdif**	**17 59 39.1**	**-0.5**
STEI				*e*PP	**PKiKP**	**18 04 01.1**	**+4.0**
STEI				*e*SKSac	**SKSac**	**18 10 19.5**	**+1.8**
FAUS	**Fauske**	103.95	337	*e*P	**Pdif**	**17 59 38.8**	**-0.9**
FAUS				*e*SKSac	**SKSac**	**18 10 19.9**	**+2.0**
J25K	**Salcha River,**	103.98	26	Pdiff	**Pdif**	**17 59 40.8**	**+0.7**
	baz=274						
KRUC	**Moravsky**	104.01	318	*e*PDIFF	**Pdif**	**17 59 41.1**	**+0.6**
KRUC				*e*PP	**PKiKP**	**18 03 57.9**	**+0.1**
EYAK	**Cordova Ski Ar**	104.02	30	Pdiff	**Pdif**	**17 59 41.0**	**+0.8**
	baz=272						
PAX	**Paxson**	104.04	28	Pdiff	**Pdif**	**17 59 41.0**	**+0.6**
	baz=273						
RONA	**Rosalia, Austr**	104.06	317	*e*pPdiff	**Pdif**	**17 59 43.3**	**+2.5**
	comp=Z,10nm,1.4s						
RONA				*e*PKiKP	**PKiKP**	**18 03 57.4**	**-0.6**
	comp=Z,2µm,5.8s						
DPC	**Dobruska-Polom**	104.07	319	*i* P	**Pdif**	**17 59 42.0**	**+1.2**
DPC				*e*		18 03 56.3	
DPC				MLR	MLR		
	comp=Z,5µm,19.0s						
DPC	**Dobruska-Polom**	104.07	319	*e*PDIFF	**Pdif**	**17 59 42.0**	**+1.2**
DPC				*e*PP	**PKiKP**	**18 03 56.3**	**-1.6**
DPC				AMS	AMS	18 56 30.0	
	comp=Z,5µm,19.0s						
KSP	**Ksiaz**	104.09	320	*e*P	**Pdif**	**17 59 44.2**	**+3.4**
OSTC	**Ostas**	104.14	319	AMS	AMS	18 48 00.0	
	comp=Z,6µm,24.3s						
C27K	**Jago River**	104.18	21	IAMs_20	IAMs_20	18 54 05.9	
	comp=Z,3µm,20.0s						
C27K	**Jago River**	104.18	21	Pdiff	**Pdif**	**17 59 41.6**	**+0.9**
	baz=277						
HARP	**HAARP**	104.22	28	Pdiff	**Pdif**	**17 59 41.6**	**+0.5**
	baz=273						
WINA	**Alland / Wiene**	104.22	317	*i* PP	**PP**	**18 04 00.1**	**+0.4**
	SNR=6.8						
F26K	**Sheenjek River**	104.22	23	Pdiff	**Pdif**	**17 59 41.6**	**+0.6**
	baz=276						
CHVC	**Chvalec**	104.25	320	AMS	AMS	18 53 10.0	
	comp=Z,4µm,20.4s						
RIDG	**Independent Ri**	104.27	27	Pdiff	**Pdif**	**17 59 41.9**	**+0.5**
	baz=274						
UPC	**Upice**	104.27	319	*e*SKS		18 10 35.5	
UPC				AMS	AMS	18 48 10.0	
	comp=Z,6µm,23.3s						
CONA	**Conrad Observa**	104.36	317	*e*pPdiff	**Pdif**	**17 59 44.4**	**+2.3**
	comp=Z,6.8nm,1.3s						
CONA				*e*PP	**PP**	**18 04 00.8**	**-0.1**
	comp=Z,1µm,3.6s						
MOR8	**Moi Rana**	104.39	336	*e*P	**Pdif**	**17 59 40.6**	**-1.1**
MOR8				IVMs_BB	IVMs_BB	18 28 08.3	
	comp=Z,6µm,5.4s						
G26K	**Porcupine Rive**	104.44	24	Pdiff	**Pdif**	**17 59 42.6**	**+0.7**
	baz=276						
N25K	**Chitina, Valde**	104.53	29	Pdiff	**Pdif**	**17 59 42.9**	**+0.3**
	baz=274						
LOF	**Lofoten**	104.53	338	*e*P	**Pdif**	**17 59 42.6**	**+0.3**
LOF				*e*PP	**PP**	**18 04 02.4**	**+0.9**
BMRM	**Bremner River**	104.56	30	Pdiff	**Pdif**	**17 59 43.3**	**+0.6**
	baz=274						
ARSA	**Arzberg**	104.58	316	*e*pPdiff	**Pdif**	**17 59 45.2**	**+2.1**
	comp=Z,15nm,1.1s						
ARSA				PKiKP	**PKiKP**	**18 03 59.1**	**+0.1**
	comp=Z,1µm,3.7s,SNR=8.9						
CRES	**Cresnjevec Ost**	104.61	315	*e*Pdiff	**Pdif**	**17 59 45.9**	**+2.7**
CRES				*e*		18 04 01.4	
TREC	**Trest**	104.61	318	*e*PKP	**PKiKP**	**18 04 00.3**	**+1.4**
TREC				*e*SKS		18 10 35.0	
TREC				AMS	AMS	18 51 00.0	
	comp=Z,5µm,21.8s						
SCRK	**Sand Creek**	104.63	27	Pdiff	**Pdif**	**17 59 43.6**	**+0.5**
	baz=275						
KAIM	**Kayak Island**	104.72	31	Pdiff	**Pdif**	**17 59 43.3**	**0.0**
	baz=273						
I26K	**Coal Creek Min**	104.86	25	Pdiff	**Pdif**	**17 59 44.6**	**+0.7**
	baz=276						
SOKA	**Soboth**	104.91	315	*e*pPdiff	**Pdif**	**17 59 47.0**	**+2.3**
	comp=Z,16nm,1.3s						
SOKA				PP	**PP**	**18 04 04.0**	**-1.1**
	comp=Z,3µm,6.5s						
LEIR	**Leirfjorden**	104.93	336	*e*P	**Pdif**	**17 59 45.0**	**+0.9**
LEIR				*e*SKSac	**SKSac**	**18 10 26.6**	**+4.2**
L26K	**Log Cabin Wild**	105.00	28	Pdiff	**Pdif**	**17 59 45.9**	**+1.4**
	baz=275						
E27K	**Coleen River**	105.12	22	Pdiff	**Pdif**	**17 59 46.1**	**+1.1**
	baz=278						
D27M	**Malcolm River**	105.19	21	Pdiff	**Pdif**	**17 59 45.9**	**+0.5**
	baz=279						
PVCC	**Panska Ves**	105.19	319	AMS	AMS	18 52 30.0	
	comp=Z,6µm,22.9s						
M26K	**Nabesna, AK**	105.22	28	Pdiff	**Pdif**	**17 59 46.3**	**+0.7**
	baz=275						
PRU	**Pruhonice**	105.22	319	AMS	AMS	18 57 10.0	
	comp=Z,6µm,19.3s						
HFS	**Hagfors**	105.24	329	Pdiff	**Pdif**	**17 59 46.3**	**+0.6**
	comp=Z,20nm,0.8s,baz=90,slow=1.5,SNR=12						
HFS				PP	**PP**	**18 04 03.9**	**-3.1**
	comp=Z,13nm,0.8s,baz=75,slow=6.3,SNR=4.0						
OBKA	**Obir**	105.24	315	*e*Pdiff	**Pdif**	**17 59 46.8**	**+0.7**
	comp=Z,11nm,1.3s						
LJU	**Ljubljana**	105.25	315	*i* Pdiff	**Pdif**	**17 59 46.5**	**+0.4**
LJU				*e*		18 04 07.6	
LJU				*e*		18 04 26.0	
BGLC	**Bering Glacier**	105.27	31	Pdiff	**Pdif**	**17 59 46.5**	**+0.7**
	baz=274						
G27K	**Doyon Strip**	105.29	24	Pdiff	**Pdif**	**17 59 46.8**	**+1.0**
	baz=278						
MCARA	**McCarthy VSAT**	105.30	29	Pdiff	**Pdif**	**17 59 47.4**	**+1.5**
	baz=275						
CRQE	**Cirque**	105.32	30	Pdiff	**Pdif**	**17 59 47.4**	**+1.2**
	baz=275						
CKRC	**Cesky Krumlov**	105.39	318	*e*PKP	**PKiKP**	**18 04 02.1**	**+1.7**
CKRC				AMS	AMS	18 48 20.0	
	comp=Z,6µm,25.5s						
H27K	**Steamboat Moun**	105.42	24	Pdiff	**Pdif**	**17 59 49.0**	**+2.5**
	baz=278						
MOA	**Molln**	105.43	317	*e*pPdiff	**Pdif**	**17 59 49.4**	**+2.6**
	comp=Z,7.5nm,1.5s						
MOA				*i* PP	**PP**	**18 04 06.7**	**-2.1**
	comp=Z,156nm,1.4s,SNR=18						
ZVC	**Zvikov**	105.46	318	*e*PDIFF	**Pdif**	**17 59 49.6**	**+2.7**
ZVC				*e*PKP	**PKiKP**	**18 04 00.8**	**+0.4**
ZVC				*e*SKS	**SKSac**	**18 10 35.0**	**+9.4**
ZVC				AMS	AMS	18 51 40.0	
	comp=Z,4µm,20.6s						
I27K	**Kandik River**	105.47	25	Pdiff	**Pdif**	**17 59 49.1**	**+2.4**
	baz=278						
RICC	**Richard**	105.49	319	AMS	AMS	18 52 50.0	
	comp=Z,4µm,19.4s						
L27K	**Beaver Creek,**	105.69	27	Pdiff	**Pdif**	**17 59 49.1**	**+1.4**
	baz=277						
M27K	**Edge Creek, AK**	105.74	28	Pdiff	**Pdif**	**17 59 48.8**	**+0.8**
	baz=276						
GERES	**GERESS Array B**	105.79	318	Pdiff	**Pdif**	**17 59 49.0**	**+0.5**
	comp=Z,7.0nm,1.1s,baz=108,slow=4.3,SNR=24						
GERES				PKiKP	**PKiKP**	**18 04 01.9**	**+0.7**
	comp=Z,9.4nm,0.9s,baz=101,slow=2.7,SNR=6.1						
GERES				PKKPbc	**PKKPbc**	**18 15 25.5**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=172,slow=0.9,SNR=5.2						
E28M	**Babbage River**	105.81	22	Pdiff	**Pdif**	**17 59 49.7**	**+1.6**
	baz=280						
BIOA	**Bad Ischl, Aus**	105.85	317	*e*Pdiff	**Pdif**	**17 59 48.6**	**-0.1**
	comp=Z,8.1nm,1.6s						
BIOA				*e*PP	**PP**	**18 04 11.0**	**-0.9**
	comp=Z,54nm,1.4s						
F28M	**Old Crow**	105.86	23	Pdiff	**Pdif**	**17 59 49.4**	**+1.1**
	baz=280						
KHC	**Kasperske Hory**	105.86	318	IAMs_20	IAMs_20	18 55 15.6	
	comp=Z,4µm,20.0s						
KHC	**Kasperske Hory**	105.86	318	*i* P	**Pdif**	**17 59 48.8**	**0.0**
KHC				*e*		18 10 27.9	
KHC				MLR	MLR		
	comp=Z,7µm,24.7s						
KHC	**Kasperske Hory**	105.86	318	*e*PDIFF	**Pdif**	**17 59 48.8**	**0.0**
KHC				*ex*	x	18 02 24.5	
KHC				*ex*	x	18 02 50.5	
KHC				*e*PKP	**PKiKP**	**18 04 02.8**	**+1.5**
KHC				*e*SKS	**SKSac**	**18 10 27.9**	**+0.4**
KHC				AMS	AMS	18 48 40.0	
	comp=Z,7µm,24.7s						
MYKA	**Terra Mystica**	105.87	315	*e*pPdiff	**Pdif**	**17 59 51.3**	**+2.4**
	comp=Z,16nm,2.5s						
HSKC	**Hora Svate Kat**	105.92	320	*e*PKP	**PKiKP**	**18 04 04.8**	**+3.5**
HSKC				AMS	AMS	18 56 10.0	
	comp=Z,5µm,21.2s						
MESA	**MESA**	105.93	30	Pdiff	**Pdif**	**17 59 49.9**	**+0.9**
	baz=276						
D28M	**Stokes Point**	105.95	21	Pdiff	**Pdif**	**17 59 49.2**	**+0.6**
	baz=281						
AQU	**L'Aquila**	106.05	311	P	**Pdif**	**17 59 52.8**	**+3.1**
KBA	**Koelnbreinsper**	106.06	316	*e*Pdiff	**Pdif**	**17 59 50.6**	**+0.8**
	comp=Z,6.6nm,1.1s						
CTG	**Chitna Glacier**	106.15	30	Pdiff	**Pdif**	**17 59 50.0**	**+0.1**
	baz=276						
CLL	**Collm**	106.16	320	IAMs_20	IAMs_20	18 55 39.4	
	comp=Z,4µm,18.0s						
CLL	**Collm**	106.16	320	*i* P	**Pdif**	**17 59 50.1**	**+0.2**
CLL				pmax	pmax		
	comp=Z,37nm,1.6s						
CLL	**Collm**	106.16	320	*i* Pdif	**Pdif**	**17 59 50.1**	**+0.2**
	comp=Z,37nm,1.6s						
CLL				*e*pPdif	**sPdif**	**18 00 05.0**	**+7.1**
CLL				*es*Pdif	pPdif	18 00 17.0	+21
CLL				*ex*	x	18 02 56.0	
CLL				*ex*	x	18 03 31.0	
CLL				*i* PKiKP	**PKiKP**	**18 04 01.2**	**-0.5**
	comp=Z,41nm,1.5s						
CLL				*i* PP	**PP**	**18 04 11.9**	**-2.1**
	comp=Z,108nm,1.7s						
CLL				*i* x	x	18 04 28.2	
CLL				*e*PPP	PPP	18 06 31.0	
CLL				*ex*	x	18 09 03.0	
CLL				*e*SKSac	**SKSac**	**18 10 30.0**	**+1.4**
CLL				*ex*	x	18 10 59.0	
CLL				*e*Sdif	SKKSac	18 11 47.0	+30
CLL				*e*PS	**PS**	**18 13 30.0**	**-2.2**
CLL				*e*pPS		18 13 57.0	
CLL				*e*PPS	PPS	18 14 27.0	
CLL				*e*pPPS		18 14 58.0	
CLL				*i* PKKP	**PKKPbc**	**18 15 27.8**	**+2.7**
CLL				*i* x	x	18 15 31.4	
CLL				*e*SS	**SKKPbc**	**18 19 00.0**	**-7.7**
CLL				*ex*	x	18 21 42.0	
CLL				*ex*	x	18 25 18.0	
CLL				*e*SSSS		18 26 36.0	
CLL				*ex*	x	18 29 30.0	
I28M	**Miner Creek**	106.18	25	Pdiff	**Pdif**	**17 59 51.1**	**+1.3**
	baz=279						
BVCY	**Beaver Creek**	106.20	28	Pdiff	**Pdif**	**17 59 50.8**	**+0.8**
	baz=277						
NC602	**NORSAR Array S**	106.25	330	*e*SKSac	**SKSac**	**18 10 30.2**	**+1.6**
NC602				*e*SP	**SP**	**18 13 31.0**	**+2.0**
COP	**Copenhagen**	106.25	325	*i* P	**Pdif**	**17 59 54.1**	**+3.9**
COP				IAmb	IAmb	17 59 54.8	
	comp=Z,63nm,0.9s						
NB2	**NORSAR Subarra**	106.37	331	P	**Pdif**	**17 59 50.5**	**-0.2**
	comp=Z,96nm,1.7s,baz=79,slow=4.4						
NB2				PKP	**PKiKP**	**18 03 58.9**	**-2.9**
	comp=Z,124nm,1.7s,baz=74,slow=4.0						
NB2				PKKP	**PKKPbc**	**18 15 23.7**	**-1.1**
	comp=Z,38nm,0.7s,baz=272,slow=5.6						
NB2	**NORSAR Subarra**	106.37	331	P	**Pdif**	**17 59 50.5**	**-0.2**
NOA	**NORSAR Array B**	106.37	331	Pdiff	**Pdif**	**17 59 51.0**	**+0.2**
	comp=Z,10nm,1.0s,baz=79,slow=4.5,SNR=7.9						
NOA				PP	**PP**	**18 04 08.7**	**-6.6**
	comp=Z,5.6nm,0.7s,baz=73,slow=8.7,SNR=5.9						
NOA				PKKPbc	**PKKPbc**	**18 15 24.6**	**-0.2**
	comp=Z,2.5nm,1.0s,baz=60,slow=2.6,SNR=4.0						
E29M	**Blow River**	106.44	22	Pdiff	**Pdif**	**17 59 51.2**	**+0.4**
	baz=282						
YUK3	**Moose Creek**	106.47	29	Pdiff	**Pdif**	**17 59 52.1**	**+0.7**
	baz=278						
LESA	**Schwarzleotal**	106.51	316	*e*Pdiff	**Pdif**	**17 59 52.7**	**+0.9**
	comp=Z,9.6nm,1.2s						
NOR	**Nord**	106.56	353	*i* P	**Pdif**	**17 59 50.8**	**-0.3**
NOR				IAmb	IAmb	17 59 52.4	
	comp=Z,59nm,2.0s						
NKC	**Novy Kostel**	106.56	319	AMS	AMS	18 53 20.0	
	comp=Z,5µm,22.8s						
DAWY	**Dawson**	106.63	26	Pdiff	**Pdif**	**17 59 53.1**	**+1.3**
	baz=279						
ABTA	**Abfaltersbach**	106.64	316	*e*Pdiff	**Pdif**	**17 59 53.4**	**+1.1**
	comp=Z,11nm,1.4s						
ABTA				*e*PKiKP	**PKiKP**	**18 04 03.6**	**+0.8**
	comp=Z,30nm,1.0s						
H29M	**Whitestone**	106.69	24	Pdiff	**Pdif**	**17 59 53.5**	**+1.5**
	baz=281						
G29M	**Pine Creek**	106.69	23	Pdiff	**Pdif**	**17 59 53.2**	**+1.2**
	baz=281						
O28M	**Mount Upton**	106.73	30	Pdiff	**Pdif**	**17 59 53.3**	**+0.6**
	baz=277						
PINM	**Pinnacle**	106.79	30	Pdiff	**Pdif**	**17 59 53.8**	**+1.1**
	baz=277						
I29M	**Ogilvie Camp,**	106.87	25	Pdiff	**Pdif**	**17 59 53.7**	**+0.8**
	baz=280						
YUK8	**Steele Glacier**	106.87	29	Pdiff	**Pdif**	**17 59 54.3**	**+1.1**
	baz=278						
J29N	**Klondike Camp**	107.07	26	IAMs_20	IAMs_20	18 51 50.7	
	comp=Z,3µm,21.0s						
J29N	**Klondike Camp**	107.07	26	Pdiff	**Pdif**	**17 59 55.0**	**+1.2**
	baz=280						
WTTA	**Wattenberg**	107.22	316	*e*Pdiff	**Pdif**	**17 59 55.1**	**+0.1**
	comp=Z,18nm,1.3s,SNR=5.1						
WTTA				*e*PKiKP	**PKiKP**	**18 04 05.0**	**+1.0**
	comp=Z,57nm,0.9s						
WTTA				*e*PP	**PP**	**18 04 20.2**	**-2.0**
	comp=Z,128nm,1.6s						
WATA	**Walderalm**	107.26	316	*e*Pdiff	**Pdif**	**17 59 55.3**	**+0.2**
	comp=Z,18nm,1.2s						
WATA				*e*pPKiKP	**pPKiKP**	**18 04 07.5**	**-2.6**
	comp=Z,39nm,1.1s						
M29M	**Somme Creek**	107.31	28	Pdiff	**Pdif**	**17 59 56.3**	**+1.3**
	baz=280						
EPYK	**Eagle Plains**	107.31	24	Pdiff	**Pdif**	**17 59 55.7**	**+0.9**
	baz=282						
KONO	**Kongsberg**	107.34	329	*e*		18 13 26.4	
L29M	**L29M**	107.34	27	Pdiff	**Pdif**	**17 59 55.9**	**+0.9**
	baz=280						
G30M	**tAoh Zraii Nji**	107.37	23	Pdiff	**Pdif**	**17 59 56.4**	**+1.3**
	baz=283						
GRA1	**Grafenberg Arr**	107.38	319	IAMs_20	IAMs_20	18 58 52.7	
	comp=Z,3µm,20.0s						
GRFO	**Grafenberg**	107.38	319	IAMs_20	IAMs_20	18 57 37.7	
	comp=Z,4µm,22.0s						
F30M	**Barrier River**	107.39	22	Pdiff	**Pdif**	**17 59 56.4**	**+1.3**
	baz=284						
YUK4	**Talbot Arm**	107.39	29	Pdiff	**Pdif**	**17 59 56.5**	**+1.0**
	baz=279						
K29M	**Barlow Dome**	107.48	26	Pdiff	**Pdif**	**17 59 56.6**	**+0.8**
	baz=281						
SQTA	**Sankt Quirin**	107.52	316	*e*Pdiff	**Pdif**	**17 59 56.4**	**+0.1**
	comp=Z,12nm,1.2s						
SQTA				*e*pPKiKP	**pPKiKP**	**18 04 08.4**	**-2.2**
	comp=Z,42nm,1.4s						
SQTA				*e*PP	**PP**	**18 04 21.7**	**-2.6**
	comp=Z,122nm,1.4s						
MOTA	**Moosalm**	107.58	316	*e*Pdiff	**Pdif**	**17 59 56.8**	**+0.2**
	comp=Z,20nm,1.4s,SNR=5.9						
MOTA				*i* PP	**PP**	**18 04 21.7**	**-3.1**
	SNR=5.5						
O29M	**Mount Kennedy**	107.59	30	Pdiff	**Pdif**	**17 59 57.3**	**+1.0**
	baz=279						
YUK6	**Outpost Mounta**	107.59	29	Pdiff	**Pdif**	**17 59 57.5**	**+1.1**
	baz=279						
I30M	**Mount Dempster**	107.69	25	Pdiff	**Pdif**	**17 59 57.7**	**+1.1**
	baz=282						
RETA	**Reutte**	107.81	316	*e*Pdiff	**Pdif**	**17 59 58.7**	**+1.3**
	comp=Z,15nm,1.2s						
RETA				*i* PP	**PP**	**18 04 22.8**	**-3.5**
	comp=Z,88nm,1.5s,SNR=5.6						
J30M	**Hart River**	107.85	25	Pdiff	**Pdif**	**17 59 58.4**	**+1.0**
	baz=282						
FETA	**Feichten**	107.85	316	*e*pPdiff	**Pdif**	**17 59 59.2**	**+1.4**
	comp=Z,14nm,1.3s						
FETA				*e*pPKiKP	**PKiKP**	**18 04 09.0**	**+3.8**
	comp=Z,26nm,1.0s						
FETA				*e*PP	**PP**	**18 04 24.7**	**-2.1**
	comp=Z,84nm,1.3s						
HYT	**Haines Junctio**	108.03	29	Pdiff	**Pdif**	**17 59 59.5**	**+1.3**
	baz=280						
INK	**Inuvik**	108.04	21	Pdiff	**Pdif**	**17 59 59.1**	**+1.2**
	baz=286						
M30M	**Minto, Yukon**	108.04	28	Pdiff	**Pdif**	**17 59 59.9**	**+1.7**
	baz=281						
N30M	**Aishikik Lake**	108.11	29	Pdiff	**Pdif**	**18 00 00.1**	**+1.6**
	baz=280						
F31M	**Tsiigehtchic**	108.19	22	Pdiff	**Pdif**	**18 00 00.5**	**+1.9**
	baz=285						
FUORN	**Ofenpass-Fuorn**	108.19	315	IAMs_20	IAMs_20	18 58 56.3	
	comp=Z,5µm,22.0s						
MAYO	**Mayo, Yukon**	108.24	26	Pdiff	**Pdif**	**18 00 01.0**	**+2.0**
	baz=282						
H31M	**Peel River**	108.38	24	Pdiff	**Pdif**	**18 00 00.9**	**+1.3**
	baz=284						
P30M	**Million Dollar**	108.41	30	Pdiff	**Pdif**	**18 00 01.6**	**+1.7**
	baz=280						
DAVA	**Damuels**	108.42	316	*e*Pdiff	**Pdif**	**18 00 00.8**	**+0.5**
	comp=Z,24nm,1.3s,SNR=7.4						
DAVA				*e*pPKiKP	**PKiKP**	**18 04 10.0**	**+3.8**
	comp=Z,51nm,1.0s						
O30N	**Mendenhall**	108.72	29	Pdiff	**Pdif**	**18 00 01.6**	**+0.4**
	baz=281						
N31M	**Braeburn, Yuko**	108.73	29	Pdiff	**Pdif**	**18 00 02.4**	**+1.2**
	baz=282						
STU	**Stuttgart**	108.77	318	IAMs_20	IAMs_20	18 57 27.4	
	comp=Z,4µm,19.0s						
TUE	**Stuetta**	108.83	315	IAMs_20	IAMs_20	18 59 45.3	
	comp=Z,4µm,19.0s						
S31K	**Pelican**	109.16	32	Pdiff	**Pdif**	**18 00 03.5**	**+0.4**
	baz=280						
KEST	**Kesra**	109.19	304	PKKP		18 15 33.4	
	comp=Z,6.9nm,0.7s,baz=348,slow=3.4,SNR=7.4						
M31M	**Drury Creek, Y**	109.22	28	IAMs_20	IAMs_20	18 49 56.6	
	comp=Z,3µm,22.0s						
M31M	**Drury Creek, Y**	109.22	28	Pdiff	**Pdif**	**18 00 04.0**	**+0.7**
	baz=283						
WHY	**Whitehorse**	109.32	29	Pdiff	**Pdif**	**18 00 04.2**	**+0.3**
	baz=282						
R31K	**City Hall, Gus**	109.34	32	Pdiff	**Pdif**	**18 00 05.4**	**+1.5**
	baz=281						
SKAG	**Skagway**	109.35	31	Pdiff	**Pdif**	**18 00 05.7**	**+1.8**
	baz=281						
BFO	**Black Forest**	109.38	317	IAMs_20	IAMs_20	18 59 06.6	
	comp=Z,4µm,20.0s						
A36M	**Sachs Harbour**	109.39	17	IAMs_20	IAMs_20	18 56 56.5	
	comp=Z,3µm,21.0s						
A36M	**Sachs Harbour**	109.39	17	Pdiff	**Pdif**	**18 00 05.4**	**+1.6**
	baz=295						
SIT	**Sitka**	109.80	33	Pdiff	**Pdif**	**18 00 06.9**	**+1.0**
	baz=280						
R32K	**Eaglecrest**	110.00	32	Pdiff	**Pdif**	**18 00 07.8**	**+1.0**
	baz=282						
DAG	**Danmarks Havn**	110.01	350	*i* P	**Pdif**	**18 00 06.0**	**-0.6**
DAG				IAmb	IAmb	18 00 08.7	
	comp=Z,21nm,1.2s						
P32M	**Atlin**	110.12	30	Pdiff	**Pdif**	**18 00 08.3**	**+0.9**
	baz=283						
S32K	**Killisnoo**	110.12	33	Pdiff	**Pdif**	**18 00 08.1**	**+0.7**
	baz=281						
ECH	**Echery**	110.17	317	IAMs_20	IAMs_20	18 57 27.5	
	comp=Z,4µm,19.0s						
SENIN	**Lac Senin/Sane**	110.25	315	IAMs_20	IAMs_20	18 57 47.9	
	comp=Z,4µm,22.0s						
P33M	**Teslin, Yukon**	110.42	30	Pdiff	**Pdif**	**18 00 10.1**	**+1.3**
	baz=284						
MMPY	**Sheldon Lake,**	110.52	27	Pdiff	**Pdif**	**18 00 09.5**	**+0.3**
	baz=286						
BTNL	**Ternell**	110.55	320	*d*PKiKP	**PKiKP**	**18 04 06.6**	**-3.3**
MEM	**Membach**	110.63	320	*d*PKiKP	**PKiKP**	**18 04 12.0**	**+2.0**
WLF	**Walferdange**	110.66	319	IAMs_20	IAMs_20	18 59 38.4	
	comp=Z,3µm,21.0s						
WLF	**Walferdange**	110.66	319	*d*PKiKP	**PKiKP**	**18 04 09.9**	**-0.2**
WLF				*d*PP	**PP**	**18 04 46.4**	**-0.4**
BHOU	**Houvegnez**	110.66	320	*d*PKiKP	**PKiKP**	**18 04 12.1**	**+2.0**
BEBN	**Eben Emael**	110.81	320	*d*PP	**PP**	**18 04 47.5**	**-0.3**
C36M	**Paulatuk**	110.88	19	Pdiff	**Pdif**	**18 00 11.6**	**+1.1**
	baz=296						
BSTI	**Sart Tilman**	110.91	320	*d*PKiKP	**PKiKP**	**18 04 14.2**	**+3.6**
BSTI				*d*PP	**PP**	**18 04 49.4**	**+0.8**
Q32M	**Nakina River**	110.99	31	Pdiff	**Pdif**	**18 00 11.6**	**+0.1**
	baz=284						
T33K	**Petersburg**	111.13	33	Pdiff	**Pdif**	**18 00 12.5**	**+0.6**
	baz=282						
U33K	**Whale Pass**	111.18	34	Pdiff	**Pdif**	**18 00 13.9**	**+1.8**
	baz=282						
RCHB	**Rochefort**	111.19	320	*d*PKiKP	**PKiKP**	**18 04 14.8**	**+3.7**
BGES	**Gesves**	111.24	320	*d*PKiKP	**PKiKP**	**18 04 14.9**	**+3.7**
BGES				*d*PP	**PP**	**18 04 51.3**	**+0.3**
CRAG	**Craig**	111.31	35	Pdiff	**Pdif**	**18 00 13.9**	**+1.1**
	baz=282						
BMRD	**Maredsous**	111.46	320	*d*PKiKP	**PKiKP**	**18 04 12.9**	**+1.3**
BMRD				*d*PP	**PP**	**18 04 51.9**	**-0.7**
R33M	**Jennings River**	111.53	30	IAMs_20	IAMs_20	19 00 43.2	
	comp=Z,3µm,21.0s						
R33M	**Jennings River**	111.53	30	Pdiff	**Pdif**	**18 00 14.9**	**+1.1**
	baz=285						
WRAK	**Wrangell Islan**	111.54	34	Pdiff	**Pdif**	**18 00 15.4**	**+1.7**
	baz=283						
DOU	**Dourbes**	111.60	320	*d*PKiKP	**PKiKP**	**18 04 12.6**	**+0.7**
DOU				*d*PP	**PP**	**18 04 53.7**	**+0.1**
UCC	**Uccle**	111.64	320	*d*PKiKP	**PKiKP**	**18 04 12.9**	**+1.0**
S34M	**Telegraph Cree**	111.83	32	Pdiff	**Pdif**	**18 00 16.1**	**+1.1**
	baz=284						
DBG	**Daneborg**	111.94	348	*i* P	**Pdif**	**

CART Cartagena 117.37 307 IAMs_20 IAMs_20 19 01 15.7
comp=Z,4µm,21.0s
IDGL Inch Island, C 117.44 327 PKP PKiKP 18 04 23.8 +0.8
IDGL Inch Island, C 117.44 327 ePKP PKiKP 18 04 23.5 +0.6
DSB Dublin 117.46 325 PKP PKiKP 18 04 24.1 +1.0
YKA Yellowknife Ar 117.59 24 PKP PKiKP 18 04 23.7 +0.7
comp=Z,39nm,0.7s,baz=312,slow=2.7,SNR=90
YKA PKKPbc PKKPbc 18 14 46.1 -1.2
comp=Z,3.6nm,1.0s,baz=110,slow=3.6,SNR=9.4
YKA SKKPbc SKKPbc 18 18 31.4 -2.8
comp=Z,2.4nm,1.0s,baz=134,slow=2.0,SNR=5.4
YKA Yellowknife Ar 117.59 24 PKiKP 18 04 23.3 +0.3
CCA1 Carnmenellis 117.73 321 eP PKiKP 18 04 24.8 +1.1
IWEX Carrickbyrne, 117.97 324 PKP PKiKP 18 04 25.2 +1.1
UPNV Upernavik 118.10 357 iP PKiKP 18 04 25.3 +1.6
IGLA Glengowla, Co 119.08 326 PKP PKiKP 18 04 27.0 +0.8
IGLA Glengowla, Co 119.08 326 eP PKiKP 18 04 26.8 +0.7
NUUG Nuugaatsiaq 119.15 356 iP PKiKP 18 04 26.9 +1.0
ESDC Sonseca Array 119.35 309 PKP PKiKP 18 04 28.4 +1.2
comp=Z,24nm,1.0s,baz=20,slow=2.8,SNR=39
ESDC PP PP 18 05 44.7 -3.8
comp=Z,29nm,1.2s,baz=71,slow=7.5,SNR=6.8
ESDC PKKPbc PKKPab 18 14 41.1 -0.1
comp=Z,4.3nm,0.9s,baz=271,slow=3.5,SNR=11
PAB San Pablo 119.66 309 IAMs_20 IAMs_20 19 03 43.2
comp=Z,5µm,21.0s
SAATT Saattut 119.73 355 iP PKiKP 18 04 27.5 +0.5
NIAQ Niaqornat 119.92 356 iP PKiKP 18 04 28.8 +1.5
KBO Bosley Butte 119.93 48 IAMs_20 IAMs_20 18 48 42.5
comp=Z,2µm,21.0s
COR Corvallis 120.01 45 IAMs_20 IAMs_20 18 48 58.4
comp=Z,3µm,22.0s
EADA Adamuz 120.08 308 PKP PKiKP 18 04 30.2 +1.5
VAL Valentia 120.13 324 PKP PKiKP 18 04 30.3 +2.0
VAL Valentia 120.13 324 PKP PKiKP 18 04 29.8 +1.5
KMPM Mount Pierce 120.39 50 IAMs_20 IAMs_20 18 59 52.0
comp=Z,2µm,20.0s
SAQQ Saqqaq 120.54 355 iP PKiKP 18 04 29.9 +1.4
KHMM Horse Mountain 120.58 49 IAMs_20 IAMs_20 18 58 25.0
comp=Z,2µm,20.0s
DBIC Dimbokro 120.66 271 PKP PKiKP 18 04 31.3 +0.9
comp=Z,68nm,1.0s,baz=116,slow=2.9,SNR=24
DBIC PP PP 18 05 57.2 -1.0
comp=Z,40nm,1.2s,baz=129,slow=9.2,SNR=4.0
DBIC PKKPbc PKKPab 18 14 36.6 +0.2
comp=Z,15nm,0.9s,baz=282,slow=4.1,SNR=9.4
ECAB El Cabril 120.75 308 PKP PKiKP 18 04 31.9 +1.9
ECAL Calabor 120.94 312 PKP PKiKP 18 04 32.2 +1.8
KCPM Cahto Peak 120.94 50 IAMs_20 IAMs_20 19 04 21.7
comp=Z,3µm,21.0s
PBRG Braganca 120.97 312 ePKP PKiKP 18 04 31.5 +1.2
PBRG ePP PP 18 05 59.5 0.0
KHBM Hayfork Bally 121.01 49 IAMs_20 IAMs_20 18 54 51.3
comp=Z,3µm,21.0s
YBH Yreka Blue Hor 121.14 48 PKP PKiKP 18 04 31.6 +0.8
comp=Z,1.2nm,0.9s,baz=224,slow=0.2,SNR=25
IFR Ifrane 121.23 302 PKP PKiKP 18 04 33.5 +2.2
ILULI Ilulissat 121.24 354 IAMs_20 IAMs_20 19 04 03.1
comp=Z,5µm,20.0s
ESPR Espera 121.31 306 PKP PKiKP 18 04 33.7 +2.6
MVO Moncorvo 121.33 312 ePKP PKiKP 18 04 33.0 +1.8
MVO ePP PP 18 06 03.5 +1.5
MVO eSS SS 18 22 39.0 +3.9
MVO eLR LR 18 58 18.2
MVO iIAMs_20 IAMs_20 19 06 56.0
comp=Z,3µm,20.0s
O02D Mt. Diablo Mer 121.44 50 IAMs_20 IAMs_20 19 02 42.7
comp=Z,3µm,19.0s
HOPS Hopland Field 121.47 51 IAMs_20 IAMs_20 19 00 29.8
comp=Z,2µm,20.0s
CNIL Conil 121.56 306 PKP PKiKP 18 04 34.9 +3.3
EMIN Mina Concepcio 121.79 308 PKP PKiKP 18 04 34.0 +2.0
MCCM Marconi Confer 121.79 52 IAMs_20 IAMs_20 18 55 57.3
comp=Z,2µm,21.0s
PVRL Vila Real 121.81 312 ePKP PKiKP 18 04 33.5 +1.5
POLO Lamas de Olo 121.84 312 ePKP PKiKP 18 04 33.5 +1.3
POLO ePP PP 18 06 04.7 -0.8
MTE Manteigas 121.89 311 PKPdf 18 04 31.9 -0.1
MTE IAMs_20 IAMs_20 19 06 26.9
comp=Z,4µm,20.0s
MTE Manteigas 121.89 311 ePKP PKiKP 18 04 34.0 +1.7
MTE ePP PP 18 06 05.5 -0.3
MTE eSS SS 18 22 47.3 +5.0
MTE eLR LR 18 58 34.5
MTE iIAMs_20 IAMs_20 19 07 00.6
comp=Z,3µm,18.0s
PCAB Cabril 121.93 312 ePKP PKiKP 18 04 33.8 +1.6
PCAB ePP PP 18 06 09.6 +3.6
PCBR Castelo Branco 121.97 310 ePKP PKiKP 18 04 33.6 +1.3
MNRC McLaughlin Min 121.98 51 IAMs_20 IAMs_20 19 02 23.1
comp=Z,3µm,19.0s
PBAR Barrancos 121.99 308 PKP PKiKP 18 04 34.4 +2.0
PBAR Barrancos 121.99 308 ePKP PKiKP 18 04 33.8 +1.4
PBAR ePP PP 18 06 07.2 +0.6
PMRV Marv??o 122.00 310 ePKP PKiKP 18 04 33.3 +0.9
PMRV ePP PP 18 06 05.7 -0.8
PMRV eSS SS 18 22 55.8 +12
PMRV eLR LR 19 02 43.2
PMRV iIAMs_20 IAMs_20 19 06 25.9
comp=Z,4µm,18.0s
PGAV Gavieira, Arco 122.04 313 ePKP PKiKP 18 04 33.6 +1.1
PGAV ePP PP 18 06 05.9 -0.9
PGAV eSS SS 18 22 47.8 +3.7
PGAV eLR LR 18 57 44.2
PGAV iIAMs_20 IAMs_20 19 05 26.9
comp=Z,4µm,22.0s
PVIS Viseu 122.08 311 ePKP PKiKP 18 04 33.8 +1.3
PVIS ePP PP 18 06 06.1 -1.0
CVS Carmenet Viney 122.08 52 IAMs_20 IAMs_20 18 59 44.8
comp=Z,2µm,20.0s
PESTR Estremoz 122.27 309 PKP PKiKP 18 04 33.1 +0.1
PESTR Estremoz 122.27 309 ePKP PKiKP 18 04 33.8 +0.9
ANGG Ammassalik, Gr 122.41 347 iP PKiKP 18 04 33.0 +0.6
JRSC Jasper Ridge 122.44 53 IAMs_20 IAMs_20 19 01 16.5
comp=Z,2µm,19.0s
EGRO El Granado 122.46 308 PKP PKiKP 18 04 35.7 +2.4
PSARD Sardoal 122.54 310 ePKP PKiKP 18 04 34.8 +1.3
PARRA Arraiolos 122.62 309 ePKP PKiKP 18 04 34.9 +1.3
PBEJ Beja 122.66 308 ePKP PKiKP 18 04 35.4 +1.6
EVO Evora 122.66 309 PKP PKiKP 18 04 36.0 +2.3
EVO Evora 122.66 309 ePKP PKiKP 18 04 35.0 +1.3
EVO ePP PP 18 06 09.4 -1.7
PVAQ Vaqueiros 122.67 307 ePKP PKiKP 18 04 35.2 +1.4
PVAQ ePP PP 18 06 11.8 +0.6
PCAS Casmilo, Conde 122.68 311 ePKP PKiKP 18 04 34.8 +1.1
PMTG Montargil 122.71 309 ePKP PKiKP 18 04 34.6 +0.8
PBDV Barranco-do-Ve 122.87 307 PKP PKiKP 18 04 36.7 +2.4
PBDV Barranco-do-Ve 122.87 307 ePKP PKiKP 18 04 35.9 +1.6
PCVE Castro Verde 122.88 308 PKP PKiKP 18 04 36.5 +2.4
PCVE Castro Verde 122.88 308 ePKP PKiKP 18 04 35.7 +1.5
NEW Newport 122.89 39 PKP PKiKP 18 04 34.2 +0.3
comp=Z,37nm,0.8s,baz=294,slow=2.1,SNR=22
NEW Newport 122.89 39 IAMs_20 IAMs_20 19 09 16.1
comp=Z,2µm,21.0s
MHC Mount Hamilton 122.92 53 IAMs_20 IAMs_20 19 01 51.1
comp=Z,3µm,20.0s
MOE Montemor 122.92 309 ePKP PKiKP 18 04 35.6 +1.4
FORD Fort Ord Natur 122.94 53 IAMs_20 IAMs_20 18 47 34.8
comp=Z,2µm,22.0s
MESJ Messejana 122.97 308 ePKPdf PKPdf 18 04 34.0 -0.1
MESJ ePP PP 18 06 12.6 -0.6
MESJ IAMs_20 IAMs_20 19 11 34.0
comp=Z,3µm,16.6s
MESJ Messejana 122.97 308 ePKP PKiKP 18 04 35.9 +1.5
MESJ Messejana 122.97 308 ePKIKP PKPdf 18 04 34.0 -0.1
MESJ e 18 06 12.6
SAO San Andreas Ge 123.19 53 IAMs_20 IAMs_20 18 55 33.3
comp=Z,2µm,19.0s
SFJD Kangerlussuaq 123.32 353 PKiKP PKiKP 18 04 34.4 +0.3
SFJD Kangerlussuaq 123.32 353 PKiKP PKiKP 18 04 34.4 +0.3
SFJD MLR MLR
comp=Z,6µm,20.0s
SFJD Kangerlussuaq 123.32 353 iP PKiKP 18 04 34.5 +0.3
TIO Tiouine 123.36 300 PKP PKiKP 18 04 37.2 +1.7
MORF Marmelete 123.42 307 ePKPdf PKPdf 18 04 34.8 -0.3
MORF ePP PP 18 06 16.1 -0.2
MORF IAMs_20 IAMs_20 19 11 42.1
comp=Z,5µm,16.3s
MORF Marmelete 123.42 307 ePKP PKiKP 18 04 36.6 +1.3
MORF Marmelete 123.42 307 ePKIKP PKPdf 18 04 34.8 -0.3
MORF e 18 06 16.1
PTEO Sao Teotonio 123.42 308 ePKP PKiKP 18 04 36.8 +1.6
LIS Lisbon 123.49 309 ePP PP 18 06 16.4 -0.2
LIS IAMs_20 IAMs_20 19 00 06.9
comp=E,6µm,23.0s
HULI Fort Hunter Li 123.50 54 IAMs_20 IAMs_20 19 01 25.7
comp=Z,3µm,20.0s
PMAFR Mafra 123.53 310 PKP PKiKP 18 04 37.0 +1.6
PMAFR Mafra 123.53 310 ePKP PKiKP 18 04 37.0 +1.6
PMAFR ePP PP 18 06 21.6 +4.7
PFVI Vila Bisbo 123.59 307 ePKP PKiKP 18 04 37.4 +1.8
WVOR Wild Horse Val 123.87 46 IAMs_20 IAMs_20 19 09 33.7
comp=Z,3µm,21.0s
PKD Bear Valley Ra 124.07 54 IAMs_20 IAMs_20 19 08 31.7
comp=Z,2µm,19.0s
PLID Pearl Lake 124.79 42 IAMs_20 IAMs_20 18 54 02.7
comp=Z,2µm,20.0s
NVAR Mina Array Bea 125.23 51 PKP PKiKP 18 04 40.1 +1.0
comp=Z,12nm,0.7s,baz=214,slow=3.9,SNR=4.8
NVAR SKKPbc SKKPbc 18 18 08.2 -0.2
comp=Z,9.2nm,1.2s,baz=112,slow=4.4,SNR=4.6
NVAR Mina Array Bea 125.23 51 PKiKP 18 04 40.4 +1.2
MSO Missoula 125.44 40 IAMs_20 IAMs_20 19 10 29.5
comp=Z,2µm,22.0s
LL07 Hotel Espejo d 125.78 172 IAMs_20 IAMs_20 19 05 47.2
comp=Z,4µm,18.0s
OSI Osito Audit: C 125.80 55 IAMs_20 IAMs_20 18 54 22.6
comp=Z,4µm,22.0s
CWC Cottonwood Cre 125.90 53 IAMs_20 IAMs_20 19 01 58.5
comp=Z,2µm,20.0s
NUUK Nuuk 126.17 353 iP PKiKP 18 04 40.6 +0.8
PASC Pasadena Art C 126.33 56 IAMs_20 IAMs_20 18 56 07.7
comp=Z,3µm,22.0s
MWC Mount Wilson 126.42 56 IAMs_20 IAMs_20 18 58 47.1
comp=Z,3µm,20.0s
LRMC Laurel Mtn Rad 126.44 54 IAMs_20 IAMs_20 19 04 51.9
comp=Z,2µm,21.0s
ELK Elko 126.82 47 PKP PKiKP 18 04 44.0 +1.8
comp=Z,37nm,0.9s,baz=320,slow=2.1,SNR=41
ELK PP PP 18 06 37.7 -1.4
comp=Z,32nm,1.2s,baz=290,slow=4.3,SNR=7.4
ELK Elko 126.82 47 IAMs_20 IAMs_20 19 07 20.3
comp=Z,2µm,21.0s
FURC Furnace Creek, 126.84 53 IAMs_20 IAMs_20 19 04 15.1
comp=Z,2µm,19.0s
TPNV Topopah Spring 127.19 52 IAMs_20 IAMs_20 19 08 08.7
comp=Z,2µm,21.0s
CPE Camp Elliot 127.47 57 IAMs_20 IAMs_20 18 57 25.6
comp=Z,3µm,21.0s
FFC Flin Flon 127.53 26 PKiKP 18 04 43.1 +0.2
FFC Flin Flon 127.53 26 IAMs_20 IAMs_20 19 12 38.9
comp=Z,2µm,19.0s
FFC Flin Flon 127.53 26 PKIKP PKiKP 18 04 43.1 +0.2
FFC MLR MLR
comp=Z,2µm,19.0s
PFO Pinyon Flats O 127.85 56 PKP PKiKP 18 04 44.5 +0.1
comp=Z,27nm,0.9s,baz=11,slow=0.8,SNR=14
BAR Barrett 127.88 57 IAMs_20 IAMs_20 18 54 06.2
comp=Z,3µm,21.0s
NRS Narsarsuaq 128.00 348 iP PKiKP 18 04 44.4 +0.7
PLCA Paso Flores 128.19 174 PKP PKiKP 18 04 45.1 +0.3
comp=Z,24nm,1.1s,baz=232,slow=2.0,SNR=18
PLCA Paso Flores 128.19 174 PKPdf 18 04 43.6 -0.7
PLCA Paso Flores 128.19 174 ePP PKPdf 18 04 43.0 -1.2
DANC Danby, Needles 128.47 54 IAMs_20 IAMs_20 18 57 40.8
comp=Z,3µm,21.0s
IVI Ivigtut 128.48 350 iP PKiKP 18 04 46.8 +2.2
BC3 Big Chuckawall 128.66 56 IAMs_20 IAMs_20 19 13 40.7
comp=Z,2µm,20.0s
FLWY Flagg Ranch 128.67 41 IAMs_20 IAMs_20 18 56 48.5
comp=Z,2µm,22.0s
LR04 Corral 128.69 172 IAMs_20 IAMs_20 19 04 40.1
comp=Z,4µm,20.0s
DUG Dugway, Tooele 128.75 47 IAMs_20 IAMs_20 19 06 22.2
comp=Z,2µm,20.0s
IRM Iron Mountain 128.78 55 IAMs_20 IAMs_20 18 56 14.0
comp=Z,3µm,21.0s
AHID Auburn Hatcher 128.96 43 IAMs_20 IAMs_20 19 13 19.3
comp=Z,2µm,20.0s
GO06 Curarrehue 129.23 173 IAMs_20 IAMs_20 18 58 54.4
comp=Z,5µm,19.0s
GLA Glanis 129.31 56 IAMs_20 IAMs_20 19 04 04.0
comp=Z,3µm,19.0s
BW06 Boulder Array 129.98 43 IAMs_20 IAMs_20 19 03 13.5
comp=Z,2µm,22.0s
PDAR Pinedale Array 129.99 43 PKhKP PKPpre 18 04 38.3
comp=Z,0.8nm,0.7s,baz=104,slow=0.4,SNR=5.1
PDAR PKP PKiKP 18 04 48.4 -0.2
comp=Z,14nm,1.0s,baz=207,slow=0.7,SNR=32
PDAR PP PP 18 06 58.5 -1.1
comp=Z,5.8nm,0.8s,baz=284,slow=2.8,SNR=5.1
PDAR Pinedale Array 129.99 43 PKPdf 18 04 47.4 -0.4
LAO LASA Array 130.19 37 IAMs_20 IAMs_20 19 13 19.2
comp=Z,2µm,20.0s
PMOZ Porto Moniz, M 131.29 304 ePKP PKPdf 18 04 49.1 -1.3
PMOZ ePP PP 18 07 10.8 +2.3
PMOZ eLR LR 19 01 41.1
PMOZ iIAMs_20 IAMs_20 19 19 07.9
comp=Z,3µm,18.0s
O20A White River Ci 132.00 45 IAMs_20 IAMs_20 19 08 46.2
comp=Z,2µm,19.0s
HAYD Hayden 132.51 44 IAMs_20 IAMs_20 19 15 55.4
comp=Z,2µm,22.0s
TUC Tucson 132.79 56 IAMs_20 IAMs_20 19 07 02.3
comp=Z,2µm,20.0s
RSSD Black Hills 132.85 38 IAMs_20 IAMs_20 19 11 36.9
comp=Z,2µm,20.0s
MVCO Mesa Verde 132.98 49 IAMs_20 IAMs_20 19 15 42.7
comp=Z,3µm,19.0s
ULM Lac du Bonnet 133.32 27 PKhKP PKPpre 18 04 43.9
comp=Z,3.2nm,0.8s,baz=260,slow=3.2,SNR=5.9
ULM PKP PKiKP 18 04 54.4 -0.3
comp=Z,47nm,0.7s,baz=302,slow=2.6,SNR=34
GO05 Hualane 133.69 172 IAMs_20 IAMs_20 19 06 30.3
comp=Z,4µm,19.0s
ISCO Idaho Springs 133.96 44 IAMs_20 IAMs_20 19 16 31.0
comp=Z,3µm,18.0s
S22A 4UR Ranch, Cre 133.99 48 IAMs_20 IAMs_20 19 15 23.7
comp=Z,3µm,22.0s
BO02 Sierra Bellavi 134.05 173 IAMs_20 IAMs_20 19 00 41.8
comp=Z,5µm,21.0s
AGMN Agassiz Nation 134.72 29 IAMs_20 IAMs_20 19 15 47.2
comp=Z,3µm,20.0s
MT01 Popeta 134.90 172 IAMs_20 IAMs_20 19 01 12.6
comp=Z,4µm,19.0s
SDCO Great Sand Dun 134.95 47 IAMs_20 IAMs_20 19 16 47.4
comp=Z,3µm,20.0s
ANMO Albuquerque 135.36 51 PKhKP PKPpre 18 04 48.8
comp=Z,3.5nm,0.8s,baz=291,slow=2.8,SNR=9.6
ANMO PKP PKiKP 18 04 59.6 0.0
comp=Z,31nm,0.9s,baz=220,slow=3.2,SNR=16
ANMO Albuquerque 135.36 51 PKPpre 18 04 47.9
ANMO Albuquerque 135.36 51 PKHKP PKPpre 18 04 47.9
SUSD Miller 135.65 35 IAMs_20 IAMs_20 19 15 00.7
comp=Z,2µm,20.0s
OGNE Ogallala 135.79 41 IAMs_20 IAMs_20 19 14 20.9
comp=Z,3µm,21.0s
CMLA Cha da Macela 135.91 314 ePP PP 18 07 39.3 +1.8
PSMN Pico Del Norte, 135.92 313 ePP PP 18 07 44.8 +7.3
T25A Trinidad 135.99 47 IAMs_20 IAMs_20 19 17 06.0
comp=Z,3µm,18.0s
PDA Ponta Delgada 136.02 314 ePP PP 18 07 43.3 +5.3
PLTB Pedras Altas 136.08 194 eP PKPdf 18 04 57.7 -1.6
F33A 5 Mile Ranch, 136.19 32 IAMs_20 IAMs_20 19 05 06.6
comp=Z,2µm,22.0s
SCHQ Schefferville 136.31 2 PKhKP PKPpre 18 04 49.4
comp=Z,5.1nm,0.7s,baz=22,slow=3.5,SNR=5.6
SCHQ PKP PKiKP 18 05 00.6 -0.1
comp=Z,38nm,0.7s,baz=33,slow=4.1,SNR=17
SCHQ PP PP 18 07 38.1 -0.6
comp=Z,41nm,1.1s,baz=9.0,slow=7.6,SNR=6.8
K30B Basset 136.33 38 IAMs_20 IAMs_20 19 18 23.0
comp=Z,3µm,19.0s
EPT El Paso 136.42 55 IAMs_20 IAMs_20 19 05 38.3
comp=Z,2µm,20.0s
EYMN Ely 136.97 26 IAMs_20 IAMs_20 19 13 55.4
comp=Z,3µm,22.0s
PGRA Graciosa 137.01 317 ePP PP 18 07 47.4 +3.2
CPSB Cacapava Do Su 137.34 195 eP PKPdf 18 05 00.8 -0.9
ROSA Rosais 137.34 317 ePP PP 18 07 52.4 +6.2
MNTX Cornudas Mount 137.35 55 IAMs_20 IAMs_20 19 05 47.8
comp=Z,2µm,21.0s
ECSD EROS Data Cent 137.41 34 IAMs_20 IAMs_20 19 13 31.1
comp=Z,2µm,22.0s
CFA Coronel Fontan 137.45 176 PKhKP PKPpre 18 04 51.8
comp=Z,4.1nm,0.9s,baz=224,slow=4.5,SNR=9.8
CFA PKP PKiKP 18 05 03.9 +0.1
comp=Z,5.5nm,0.6s,baz=205,slow=2.3,SNR=6.3
PSAL Palomas, Salto 137.52 189 eP PKiKP 18 05 03.1 -0.7
PICO Pico 137.57 316 ePP PP 18 07 51.4 +3.6
HOR Horta 137.70 317 ePP PP 18 07 51.9 +3.5
CALA Caldeira 137.72 317 ePP PP 18 07 50.9 +2.2
E38A The Farm, Brul 137.96 28 IAMs_20 IAMs_20 19 07 15.7
comp=Z,3µm,20.0s
BGNE Belgrade 137.96 38 IAMs_20 IAMs_20 19 18 50.0
comp=Z,3µm,20.0s
SPMN Marine on St. 138.38 30 IAMs_20 IAMs_20 19 19 51.3
comp=Z,2µm,20.0s
CBKS Cedar Bluff 138.41 42 IAMs_20 IAMs_20 19 20 11.6
comp=Z,4µm,19.0s
MSTX Muleshoe 138.54 51 IAMs_20 IAMs_20 19 07 17.9
comp=Z,3µm,20.0s
GO04 Tololo Observa 138.60 172 IAMs_20 IAMs_20 19 01 59.4
comp=Z,3µm,21.0s
L34A Svendsen Farm, 138.67 36 IAMs_20 IAMs_20 19 15 15.6
comp=Z,2µm,22.0s
CO05 La Serena 138.79 172 IAMs_20 IAMs_20 19 02 21.5
comp=Z,5µm,22.0s
I37A Lemont, Waseca 138.94 32 IAMs_20 IAMs_20 19 20 18.3
comp=Z,3µm,21.0s
AMTX Amarillo 138.97 49 IAMs_20 IAMs_20 19 05 01.0
comp=Z,3µm,22.0s
R32A Long Quarter, 139.30 42 IAMs_20 IAMs_20 19 20 53.0
comp=Z,3µm,20.0s
TXAR Lajitas Array 139.52 58 PKhKP PKPpre 18 04 58.2
comp=Z,17nm,0.8s,baz=254,slow=3.0,SNR=38
TXAR PP PP 18 08 02.4 +1.9
comp=Z,6.5nm,0.8s,baz=305,slow=5.0,SNR=4.4
G40A Rib Lake 139.59 28 IAMs_20 IAMs_20 19 18 42.9
comp=Z,3µm,22.0s
SACV Santiago Islan 139.69 280 PKPdf 18 05 02.3 -4.0
F42A Maple Grove Fa 140.12 26 IAMs_20 IAMs_20 19 18 53.6
comp=Z,4µm,22.0s
CAM01 Campos-RJ 140.18 215 eP PKPdf 18 05 05.7 -1.3
KSU1 Kansas State U 140.27 40 IAMs_20 IAMs_20 19 20 09.5
comp=Z,3µm,21.0s
OK038 West end E0370 140.31 45 IAMs_20 IAMs_20 19 05 54.0
comp=Z,2µm,20.0s
DUB01 Friburgo-RJ 140.37 214 eP PKPdf 18 05 06.1 -1.3
I40A Norwalk 140.42 30 IAMs_20 IAMs_20 19 16 19.2
comp=Z,3µm,20.0s
SCIA State Center 140.49 34 IAMs_20 IAMs_20 19 12 28.6
comp=Z,4µm,22.0s
ALF01 Guarapari-ES 140.59 217 eP PKPdf 18 05 06.3 -1.5
PET01 Itanhaem-SP 140.90 206 eP PKPdf 18 05 07.2 -1.1
PARB Paraibuna 140.98 209 eP PKPdf 18 05 07.9 -0.6
E46A Sault Ste Mari 141.12 22 IAMs_20 IAMs_20 19 17 43.7
comp=Z,4µm,22.0s
WMOK Wichita Mounta 141.15 47 IAMs_20 IAMs_20 19 13 22.6
comp=Z,2µm,20.0s
I42A Draeger Farm, 141.23 28 IAMs_20 IAMs_20 19 22 00.4
comp=Z,3µm,21.0s
N38A Joes South For 141.23 35 IAMs_20 IAMs_20 19 20 21.3
comp=Z,3µm,21.0s
H43A Windswept, Lux 141.29 27 IAMs_20 IAMs_20 19 20 34.9
comp=Z,4µm,20.0s
JFWS Jewell Farm 141.33 30 IAMs_20 IAMs_20 19 20 05.2
comp=Z,3µm,20.0s
RIB01 Linhares ES 141.38 219 eP PKPdf 18 05 07.9 -1.3
L40A Anamosa 141.45 32 IAMs_20 IAMs_20 19 22 14.7
comp=Z,2µm,22.0s
ABTX Abilene, Hawle 141.48 51 IAMs_20 IAMs_20 19 19 19.8
comp=Z,3µm,20.0s
OK029 Liberty Lake 141.55 45 IAMs_20 IAMs_20 19 17 00.9
comp=Z,3µm,21.0s
OK048 Pawnee Station 141.57 44 IAMs_20 IAMs_20 19 21 16.3
comp=Z,2µm,21.0s
SPB Sao Paulo 141.58 206 eP PKPdf 18 05 07.7 -1.8
T35A Sooner Cattle 141.59 43 IAMs_20 IAMs_20 19 20 48.6
comp=Z,3µm,19.0s
ICQ Pointe Anglais 141.61 3 PKPdf 18 05 06.2 -2.5
P38A Dawn 141.83 37 IAMs_20 IAMs_20 19 04 45.2
comp=Z,3µm,22.0s
VAO Valinhos 141.89 207 eP PKPdf 18 05 08.7 -1.6
OK052 Battle Ridge R 141.90 44 IAMs_20 IAMs_20 19 20 17.9
comp=Z,3µm,19.0s
CPUP Villa Florida 142.12 191 PKhKP PKPpre 18 05 05.9
comp=Z,13nm,0.8s,baz=161,slow=3.5,SNR=11
CPUP Villa Florida 142.12 191 PKPdf 18 05 04.8 -5.6
CPUP Villa Florida 142.12 191 PKHKP PKPpre 18 05 04.8
JCT Junction City 142.25 54 IAMs_20 IAMs_20 19 05 33.5
comp=Z,4µm,21.0s
L42A Oliver, Polo 142.29 31 IAMs_20 IAMs_20 19 17 19.7
comp=Z,2µm,20.0s
I45A Fountain 142.30 25 IAMs_20 IAMs_20 19 20 42.5
comp=Z,3µm,21.0s
GLMI Grayling 142.31 23 IAMs_20 IAMs_20 19 23 00.4
comp=Z,3µm,20.0s
PTGB Pitanga 142.32 199 eP PKPdf 18 05 09.1 -1.9
SJMB Sao Joao De Ma 142.33 218 eP PKPdf 18 05 10.4 -0.6
K43A Burlington 142.41 29 IAMs_20 IAMs_20 19 13 31.8
comp=Z,3µm,20.0s
BSCB Bom Sucesso 142.53 212 eP PKPdf 18 05 10.6 -0.8
N41A Harden Midland 142.60 33 IAMs_20 IAMs_20 19 22 09.4
comp=Z,3µm,21.0s
TUL3 Leonard 142.63 43 IAMs_20 IAMs_20 19 14 49.2
comp=Z,3µm,21.0s
RCLB Rio Claro- Sao 142.65 207 eP PKPdf 18 05 10.4 -1.2
FRTB Fartura 142.68 204 eP PKPdf 18 05 09.9 -1.7
P40A Paris 142.75 36 IAMs_20 IAMs_20 19 07 22.6
comp=Z,3µm,18.0s
Z35A Perchaven, San 142.94 48 IAMs_20 IAMs_20 19 18 28.1
comp=Z,3µm,21.0s
L44A Lake County Fo 143.02 29 IAMs_20 IAMs_20 19 23 16.8
comp=Z,3µm,20.0s
GUA01 Guaratinga, BA 143.02 222 eP PKPdf 18 05 12.0 -0.2
S39A Bolivar 143.18 39 IAMs_20 IAMs_20 19 16 42.3
comp=Z,3µm,22.0s
LDASE Londrina, Braz 143.22 201 eP PKPdf 18 05 12.2 -0.3
U38A Graveteb 143.26 42 IAMs_20 IAMs_20 19 10 06.8
comp=Z,3µm,21.0s
WHTX Lake Whitney, 143.42 50 IAMs_20 IAMs_20 19 10 08.1
comp=Z,2µm,21.0s
R40A Maddies Statio 143.44 37 IAMs_20 IAMs_20 19 22 09.0
comp=Z,4µm,19.0s
HDIL Hopedale 143.54 32 IAMs_20 IAMs_20 19 17 25.1
comp=Z,2µm,21.0s
J47A Sunmer 143.54 25 IAMs_20 IAMs_20 19 16 54.3
comp=Z,3µm,21.0s
M44A Midewin, Midew 143.56 30 IAMs_20 IAMs_20 19 21 56.2
comp=Z,3µm,21.0s
CMC01 Camacan, BA 143.70 224 eP PKPdf 18 05 13.1 -0.3
I49A Point Hope 143.74 22 IAMs_20 IAMs_20 19 21 20.1
comp=Z,4µm,19.0s
P43A Skaggs, Pawnee 144.08 33 IAMs_20 IAMs_20 19 24 11.5
comp=Z,3µm,22.0s
PB14 IPOC Station P 144.11 171 PKP PKPdf 18 05 13.6 -0.8
DIAM Diamantina, MG 144.12 216 eP PKPdf 18 05 13.8 -0.5
CCM Cathedral Cave 144.20 37 IAMs_20 IAMs_20 19 20 35.1
comp=Z,4µm,21.0s
BB19B Bebedouro 144.28 207 eP PKPdf 18 05 14.0 -0.4
TRCB Terra Rica 144.29 200 eP PKPbc 18 05 12.7 +0.1
E62A Clayton Lake 144.34 6 IAMs_20 IAMs_20 19 14 44.8
comp=Z,4µm,21.0s
735A Kenedy 144.48 55 IAMs_20 IAMs_20 19 13 37.7
comp=Z,3µm,20.0s
Z38A Mt. Pleasant 144.62 47 IAMs_20 IAMs_20 19 23 05.3
comp=Z,3µm,19.0s
SFIN Lafayette 144.79 30 IAMs_20 IAMs_20 19 23 19.8
comp=Z,3µm,19.0s
AAM Ann Arbor 144.80 25 IAMs_20 IAMs_20 19 24 36.5
comp=Z,4µm,21.0s
K50A Casco 144.81 23 IAMs_20 IAMs_20 19 24 28.6
comp=Z,4µm,22.0s
AMBA Amambai (Brazi 144.87 196 eP PKPdf 18 05 15.0 -0.4
Q44A Meyer Farm, Va 144.88 34 IAMs_20 IAMs_20 19 18 25.7
comp=Z,4µm,22.0s
MIAR Mount Ida 144.89 44 IAMs_20 IAMs_20 19 19 57.3
comp=Z,3µm,22.0s
T42A Van Buren 144.97 38 IAMs_20 IAMs_20 19 21 13.5
comp=Z,3µm,21.0s
N47A Urbana 145.07 28 IAMs_20 IAMs_20 19 24 19.0
comp=Z,3µm,20.0s
PB10 IPOC Station P 145.18 171 IAMs_20 IAMs_20 19 05 14.8
comp=Z,4µm,22.0s
F64A Sherman 145.19 4 IAMs_20 IAMs_20 19 19 43.3
comp=Z,3µm,19.0s
LONY Lake Ozonia 145.53 12 IAMs_20 IAMs_20 19 20 36.6
comp=Z,3µm,20.0s
HKT Hockley 145.59 52 IAMs_20 IAMs_20 19 07 58.4
comp=Z,3µm,20.0s
S44A Carbondale 145.60 35 IAMs_20 IAMs_20 19 16 08.0
comp=Z,3µm,21.0s
G62A West of Eustis 145.62 7 IAMs_20 IAMs_20 19 18 24.7
comp=Z,4µm,22.0s
NATX Nacogdoches 145.62 49 IAMs_20 IAMs_20 19 16 44.1
comp=Z,3µm,21.0s

M50A	**Fremont**	**145.80**	**25**	IAMs_20	IAMs_20	19 24 55.0		
	comp=Z,3µm,19.0s							
NBPV	**Pedro Velho**	**145.85**	**241**	*eP*	**PKPbc**	**18 05 17.9**	**+0.1**	
PB05	**IPOC Station P**	**145.88**	**171**	IAMs_20	IAMs_20	19 06 49.4		
	comp=Z,4µm,22.0s							
UNM	**Universidad Na**	**145.90**	**72**	IAMs_20	IAMs_20	19 22 22.8		
	comp=Z,3µm,22.0s							
G65A	**Princeton**	**145.91**	**3**	IAMs_20	IAMs_20	19 16 05.1		
	comp=Z,4µm,22.0s							
J55A	**Hilton**	**145.99**	**17**	IAMs_20	IAMs_20	19 24 13.3		
	comp=Z,4µm,20.0s							
AF01	**San Pedro de A**	**146.03**	**174**	IAMs_20	IAMs_20	19 10 19.2		
	comp=Z,4µm,21.0s							
PB06	**IPOC Station P**	**146.12**	**172**	IAMs_20	IAMs_20	19 07 23.5		
	comp=Z,3µm,21.0s							
ITRB	**Iturama**	**146.26**	**205**	*eP*	**PKPdf**	**18 05 18.3**	**+0.4**	
P48A	**Milroy**	**146.31**	**29**	IAMs_20	IAMs_20	19 16 57.1		
	comp=Z,3µm,21.0s							
J57A	**Williamstown**	**146.35**	**15**	IAMs_20	IAMs_20	19 14 15.5		
	comp=Z,4µm,22.0s							
M52A	**Chesterland**	**146.35**	**23**	IAMs_20	IAMs_20	19 21 46.3		
	comp=Z,2µm,21.0s							
WVL	**Waterville**	**146.36**	**6**	IAMs_20	IAMs_20	19 21 21.3		
	comp=Z,3µm,20.0s							
LBNH	**Lisbon**	**146.38**	**9**	IAMs_20	IAMs_20	19 16 39.0		
	comp=Z,3µm,22.0s							
EMMW	**East Machias**	**146.40**	**3**	IAMs_20	IAMs_20	19 18 14.3		
	comp=Z,4µm,22.0s							
T45A	**Paducah**	**146.42**	**36**	IAMs_20	IAMs_20	19 22 03.7		
	comp=Z,3µm,19.0s							
N51A	**Ashland**	**146.48**	**24**	IAMs_20	IAMs_20	19 15 59.0		
	comp=Z,3µm,21.0s							
J59A	**Piesco**	**146.65**	**13**	IAMs_20	IAMs_20	19 24 36.3		
	comp=Z,4µm,21.0s							
RCBR	**Riachuelo**	**146.67**	**241**	PKPbc	**PKPab**	**18 05 21.7**	**+0.3**	
	comp=Z,55nm,0.9s,baz=130,slow=5.9,SNR=65							
RCBR	**Riachuelo**	**146.67**	**241**	*eP*	**PKPdf**	**18 05 18.9**	**+0.1**	
MURT	**Porto Murtinho**	**146.72**	**192**	*eP*	**PKPdf**	**18 05 18.3**	**-0.3**	
PB03	**IPOC Station P**	**146.74**	**172**	IAMs_20	IAMs_20	19 16 37.0		
	comp=Z,4µm,19.0s							
I63A	**Otisfield**	**146.76**	**8**	IAMs_20	IAMs_20	19 22 55.0		
	comp=Z,3µm,20.0s							
IPMB	**Ipameri, GO**	**146.80**	**210**	*eP*	**PKPdf**	**18 05 18.8**	**-0.1**	
ACSO	**Alum Creek Sta**	**146.80**	**26**	IAMs_20	IAMs_20	19 23 07.9		
	comp=Z,3µm,20.0s							
WCI	**Wyandotte Cave**	**146.82**	**32**		**PKPdf**	**18 05 18.5**	**+0.3**	
WCI				IAMs_20	IAMs_20	19 17 56.9		
	comp=Z,4µm,22.0s							
WCI	**Wyandotte Cave**	**146.82**	**32**	PKP2	**PKPdf**	**18 05 18.5**	**+0.3**	
WCI				MLR	MLR			
	comp=Z,4µm,22.0s							
I62A	**Tamworth**	**146.83**	**9**	IAMs_20	IAMs_20	19 19 07.8		
	comp=Z,4µm,22.0s							
HNH	**Hanover**	**146.84**	**10**	IAMs_20	IAMs_20	19 16 56.3		
	comp=Z,4µm,22.0s							
K57A	**Scipio Center**	**146.85**	**16**	IAMs_20	IAMs_20	19 22 16.8		
	comp=Z,3µm,19.0s							
JANB	**Januaria**	**147.03**	**218**	*eP*	**PKPdf**	**18 05 18.7**	**-0.6**	
PB07	**IPOC Station P**	**147.04**	**171**	IAMs_20	IAMs_20	19 10 12.9		
	comp=Z,3µm,20.0s							
J61A	**Chester**	**147.15**	**10**	IAMs_20	IAMs_20	19 23 33.3		
	comp=Z,4µm,21.0s							
N53A	**Lisbon**	**147.18**	**23**	IAMs_20	IAMs_20	19 19 17.3		
	comp=Z,3µm,22.0s							
AQDB	**Aquidauana**	**147.40**	**196**	*eP*	**PKPdf**	**18 05 19.3**	**-0.4**	
PB02	**IPOC Station P**	**147.43**	**171**	IAMs_20	IAMs_20	19 09 12.5		
	comp=Z,3µm,20.0s							
BINY	**Binghamton**	**147.49**	**16**	IAMs_20	IAMs_20	19 24 39.7		
	comp=Z,3µm,20.0s							
TRY	**Troy**	**147.53**	**12**	IAMs_20	IAMs_20	19 25 01.5		
	comp=Z,4µm,21.0s							
Q51A	**Peebles**	**147.63**	**28**	IAMs_20	IAMs_20	19 22 52.8		
	comp=Z,4µm,21.0s							
OXF	**Oxford**	**147.64**	**40**	IAMs_20	IAMs_20	19 26 03.6		
	comp=Z,3µm,21.0s							
BDQN	**Bodoquena, MS**	**147.69**	**194**	*eP*	**PKPdf**	**18 05 20.0**	**-0.2**	
NBPA	**Parau_RN**	**147.75**	**240**	*eP*	**PKPdf**	**18 05 20.1**	**-0.3**	
PB01	**IPOC Station P**	**147.76**	**172**	IAMs_20	IAMs_20	19 10 51.2		
	comp=Z,3µm,21.0s							
K62A	**Royalston**	**147.86**	**10**	IAMs_20	IAMs_20	19 20 58.3		
	comp=Z,3µm,21.0s							
PATCX	**Punta Patache**	**147.88**	**171**	IAMs_20	IAMs_20	19 11 15.4		
	comp=Z,3µm,19.0s							
M57A	**Sunshine Farm,**	**147.97**	**18**	IAMs_20	IAMs_20	19 25 28.6		
	comp=Z,4µm,22.0s							
Y45A	**Yeager Farm, C**	**147.97**	**41**	IAMs_20	IAMs_20	19 17 21.4		
	comp=Z,3µm,20.0s							
C2SB	**Chapadao do Su**	**148.08**	**202**	*eP*	**PKPdf**	**18 05 20.4**	**-0.4**	
TA01	**Diego Aracena**	**148.13**	**170**	IAMs_20	IAMs_20	19 11 13.9		
	comp=Z,3µm,21.0s							
HRV	**Adam Dziewonsk**	**148.13**	**9**		**PKPbc**	**18 05 22.8**	**-0.7**	
HRV				IAMs_20	IAMs_20	19 24 17.3		
	comp=Z,4µm,21.0s							
HRV	**Adam Dziewonsk**	**148.13**	**9**	PKP2	**PKPbc**	**18 05 22.8**	**-0.7**	
HRV				MLR	MLR			
	comp=Z,4µm,21.0s							
Q52A	**Bidwell**	**148.16**	**26**	IAMs_20	IAMs_20	19 24 14.7		
	comp=Z,3µm,20.0s							
NBMA	**Muriti-CE**	**148.25**	**236**	*eP*	**PKPdf**	**18 05 20.9**	**-0.4**	
WES	**Weston**	**148.29**	**9**	IAMs_20	IAMs_20	19 18 16.5		
	comp=Z,4µm,22.0s							
VBMS	**Vicksburg**	**148.32**	**44**	IAMs_20	IAMs_20	19 11 27.2		
	comp=Z,4µm,22.0s							
BCX	**Boston College**	**148.36**	**9**	IAMs_20	IAMs_20	19 16 02.4		
	comp=Z,4µm,21.0s							
SSPA	**Standing Stone**	**148.37**	**19**		**PKPdf**	**18 05 21.5**	**+0.8**	
U49A	**Red Boiling Sp**	**148.38**	**33**	IAMs_20	IAMs_20	19 25 31.2		
	comp=Z,3µm,21.0s							
HMBC	**Humberstone**	**148.46**	**171**	IAMs_20	IAMs_20	19 04 34.6		
	comp=Z,3µm,22.0s							
MCWV	**Mont Chateau**	**148.56**	**23**	IAMs_20	IAMs_20	19 27 18.7		
	comp=Z,3µm,19.0s							
BDFB	**Brasilia**	**148.67**	**212**	PKPbc	**PKPbc**	**18 05 25.8**	**0.0**	
	comp=Z,90nm,1.1s,baz=132,slow=0.6,SNR=16							
BDFB	**Brasilia**	**148.67**	**212**		**PKPbc**	**18 05 23.9**	**-1.8**	
PB08	**IPOC Station P**	**148.70**	**172**	PKP	**PKPbc**	**18 05 25.0**	**-1.1**	
L64A	**Middleborough**	**148.80**	**9**	IAMs_20	IAMs_20	19 26 25.0		
	comp=Z,3µm,20.0s							
PB11	**IPOC Station P**	**149.00**	**171**	IAMs_20	IAMs_20	19 22 09.0		
	comp=Z,2µm,18.0s							
146A	**Union**	**149.06**	**42**	IAMs_20	IAMs_20	19 16 32.3		
	comp=Z,3µm,22.0s							
WSPT	**Westport, CT**	**149.09**	**13**	IAMs_20	IAMs_20	19 18 31.0		
	comp=Z,4µm,22.0s							
M63A	**Gales Ferry**	**149.12**	**11**	IAMs_20	IAMs_20	19 24 04.6		
	comp=Z,4µm,22.0s							
X48A	**Hartselle**	**149.13**	**38**	IAMs_20	IAMs_20	19 18 27.8		
	comp=Z,3µm,21.0s							
GO01	**Chusmiza**	**149.16**	**172**		**PKPbc**	**18 05 25.6**	**-1.8**	
GO01				IAMs_20	IAMs_20	19 09 47.1		
	comp=Z,4µm,21.0s							
M65A	**Busby, Falmout**	**149.19**	**9**	IAMs_20	IAMs_20	19 24 16.4		
	comp=Z,4µm,22.0s							
Z47A	**Carrollton**	**149.34**	**40**	IAMs_20	IAMs_20	19 26 29.6		
	comp=Z,3µm,20.0s							
Q56A	**Snyder Ridge,**	**149.34**	**22**	IAMs_20	IAMs_20	19 26 32.5		
	comp=Z,3µm,22.0s							
P57A	**Homestead Farm**	**149.37**	**20**	IAMs_20	IAMs_20	19 27 27.9		
	comp=Z,3µm,20.0s							
SDBA	**SAO DESIDERIO**	**149.42**	**221**	*eP*	**PKPdf**	**18 05 22.9**	**-0.3**	
346A	**Big Creek Wild**	**149.53**	**45**	IAMs_20	IAMs_20	19 26 29.3		
	comp=Z,3µm,22.0s							
S54A	**Dingess, Beckl**	**149.55**	**26**	IAMs_20	IAMs_20	19 27 06.3		
	comp=Z,3µm,19.0s							
W50A	**Signal Mountai**	**149.60**	**34**	IAMs_20	IAMs_20	19 27 03.8		
	comp=Z,3µm,20.0s							
R55A	**Marlinton**	**149.64**	**24**	IAMs_20	IAMs_20	19 23 07.5		
	comp=Z,4µm,22.0s							
PP1B	**Ponte de Pedra**	**149.87**	**199**	*eP*	**PKPdf**	**18 05 23.3**	**-0.5**	
PB12	**IPOC Station P**	**150.01**	**170**	IAMs_20	IAMs_20	19 08 54.9		
	comp=Z,3µm,21.0s							
LRAL	**Lakeview Retre**	**150.12**	**40**	IAMs_20	IAMs_20	19 27 29.5		
	comp=Z,3µm,21.0s							
X51A	**Calhoun**	**150.32**	**35**	IAMs_20	IAMs_20	19 27 29.2		
	comp=Z,4µm,22.0s							
U54A	**Nelsons Funny**	**150.37**	**28**	IAMs_20	IAMs_20	19 28 39.8		
	comp=Z,3µm,20.0s							
PB16	**IPOC Station P**	**150.42**	**171**	IAMs_20	IAMs_20	19 18 24.7		
	comp=Z,3µm,19.0s							
ARAG	**Araguaiana, MT**	**150.44**	**206**	*eP*	**PKPdf**	**18 05 23.8**	**-0.9**	
V53A	**Saluda**	**150.57**	**31**	IAMs_20	IAMs_20	19 26 41.3		
	comp=Z,3µm,21.0s							
R58B	**Mineral**	**150.77**	**21**	IAMs_20	IAMs_20	19 20 50.6		
	comp=Z,4µm,22.0s							
PB18	**Visviri**	**151.16**	**171**	IAMs_20	IAMs_20	19 11 22.2		
	comp=Z,3µm,20.0s							
Y52A	**Lilburn**	**151.28**	**35**	IAMs_20	IAMs_20	19 24 23.7		
	comp=Z,4µm,22.0s							
NBMO	**Morrinhos-CE**	**151.50**	**241**	*eP*	**PKPdf**	**18 05 26.0**	**-0.4**	
BBSD	**Serra de San D**	**151.62**	**189**	*eP*	**PKPdf**	**18 05 26.2**	**-0.3**	
KMSC	**Kings Mountain**	**151.72**	**29**	IAMs_20	IAMs_20	19 25 49.6		
	comp=Z,3µm,22.0s							
SALV	**Santo Antonio**	**151.72**	**199**	*eP*	**PKPdf**	**18 05 26.6**	**-0.1**	
152A	**Waverly Hall**	**151.77**	**37**	IAMs_20	IAMs_20	19 27 05.8		
	comp=Z,4µm,20.0s							
S61A	**Accomac**	**151.77**	**18**	IAMs_20	IAMs_20	19 25 30.6		
	comp=Z,4µm,21.0s							
GOGA	**Godfrey**	**151.95**	**35**	IAMs_20	IAMs_20	19 21 16.3		
	comp=Z,3µm,22.0s							
NBPS	**Pedro II - PI**	**152.12**	**238**	*eP*	**PKPdf**	**18 05 27.4**	**0.0**	
352A	**Blakely**	**152.47**	**39**	IAMs_20	IAMs_20	19 28 50.6		
	comp=Z,4µm,21.0s							
LPAZ	**La Paz**	**152.63**	**173**	PKP	**PKPdf**	**18 05 30.4**	**+1.6**	
	comp=Z,35nm,1.1s,baz=62,slow=0.6,SNR=35							
LPAZ				PKPbc	**PKiKP**	**18 05 36.4**	**+0.4**	
	comp=Z,89nm,0.9s,baz=178,slow=2.5,SNR=31							
LPAZ	**La Paz**	**152.63**	**173**	*eP*	**PKPdf**	**18 05 27.3**	**-1.5**	
PTLB	**Pontes e Lacer**	**153.06**	**192**	*eP*	**PKPdf**	**18 05 28.3**	**-0.3**	
TIGA	**Tifton**	**153.31**	**38**	IAMs_20	IAMs_20	19 30 31.8		
	comp=Z,3µm,20.0s							
SNDB	**Serra Nova Dou**	**153.45**	**211**	*eP*	**PKPdf**	**18 05 28.7**	**-0.6**	
SMTB	**Santa Maria do**	**153.81**	**222**	*eP*	**PKPdf**	**18 05 29.7**	**-0.1**	
Y60A	**Bolivia**	**154.09**	**26**	IAMs_20	IAMs_20	19 31 07.0		
	comp=Z,3µm,22.0s							
NNA	**Nana**	**154.18**	**152**		**PKPdf**	**18 05 30.6**	**+0.2**	
NNA	**Nana**	**154.18**	**152**	PKiKP	**PKPdf**	**18 05 30.6**	**+0.2**	
NNA				MLR	MLR			
	comp=Z,5µm,20.0s							
656A	**Willston**	**155.41**	**40**	IAMs_20	IAMs_20	19 30 50.6		
	comp=Z,3µm,21.0s							
TEIG	**Tepich**	**155.68**	**65**	IAMs_20	IAMs_20	19 31 32.8		
	comp=Z,4µm,22.0s							
VILB	**Vilhena**	**155.70**	**191**	*eP*	**PKPdf**	**18 05 31.4**	**-1.1**	
PDRB	**Porto dos Gac**	**156.08**	**200**	*eP*	**PKPdf**	**18 05 30.6**	**-2.3**	
CLDB	**Colider**	**156.43**	**203**	*eP*	**PKPdf**	**18 05 31.4**	**-2.0**	
TGUH	**Tegucigalpa,Un**	**157.90**	**80**	IAMs_20	IAMs_20	19 32 09.2		
	comp=Z,3µm,20.0s							
NPGB	**Novo Progresso**	**159.69**	**208**	*eP*	**PKPdf**	**18 05 36.8**	**-0.6**	
CZSB	**Cruzeiro do Su**	**159.75**	**157**	*eP*	**PKPdf**	**18 05 36.7**	**-0.8**	
ITTB	**Itaituba**	**162.20**	**211**	*eP*	**PKPdf**	**18 05 39.6**	**-0.5**	
OTAV	**Otavalo**	**162.71**	**128**	*eP*	**PKPdf**	**18 05 38.4**	**-2.8**	
TEFE	**Tefe**	**165.52**	**181**	*eP*	**PKPdf**	**18 05 42.5**	**-0.6**	
MDP	**Montagnes des**	**166.56**	**245**	PKP	**PKPdf**	**18 05 44.8**	**+0.9**	
	comp=Z,50nm,1.0s,baz=99,slow=6.1,SNR=7.3							
ROSC	**El Rosal**	**168.75**	**123**	PKP	**PKPdf**	**18 05 47.3**	**+1.3**	
	comp=Z,10.0nm,0.5s,baz=67,slow=5.0,SNR=22							
BOAV	**Boa Vista**	**170.38**	**207**	*eP*	**PKPdf**	**18 05 46.4**	**-0.1**	
ANWB	**Willy Bob**	**172.81**	**336**	*eP*	**PKPdf**	**18 05 48.0**	**+0.5**	
ANWB				x	**PP**	**18 11 01.4**	**-2.1**	
SMRT	**St. Maarten**	**172.85**	**346**	*eP*	**PKPdf**	**18 05 48.8**	**+1.2**	
SMRT				x	**PP**	**18 11 03.7**	**+0.2**	
SABA	**Saba**	**173.31**	**347**	*eP*	**PKPdf**	**18 05 50.6**	**+2.9**	
SABA				x	**PP**	**18 11 09.2**	**+3.5**	
SEUS	**St. Eustatius**	**173.37**	**345**	*eP*	**PKPdf**	**18 05 49.2**	**+1.4**	
DSDZ	**La Diserade, G**	**173.63**	**325**	*eP*	**PKPdf**	**18 05 49.5**	**+1.7**	
SDV	**Santo Domingo**	**173.89**	**110**	*eP*	**PKPdf**	**18 05 47.7**	**-0.6**	
DHSZ	**Broadband at M**	**174.03**	**330**	*eP*	**PKPdf**	**18 05 44.5**	**-3.5**	
DHSZ				x	**PKPab**	**18 07 17.1**	**-1.6**	
CBE	**Ff, Capester**	**174.12**	**328**		**PKPab**	**18 07 19.7**	**+0.4**	
MMLZ	**Guadeloupe Bro**	**174.18**	**329**	*eP*	**PKPdf**	**18 05 48.1**	**+0.1**	
MMLZ				x	**PKPab**	**18 07 19.6**	**+0.1**	
TBG	**Guadaloupe-3**	**174.32**	**327**	*eP*	**PKPdf**	**18 05 48.4**	**+0.4**	
DWS	**Wesley**	**174.37**	**323**	*eP*	**PKPdf**	**18 05 50.0**	**+1.9**	
DWS				x	**PKPab**	**18 07 26.8**	**+6.4**	
DLPL	**La Plaine**	**174.51**	**321**	*eP*	**PKPdf**	**18 05 49.6**	**+1.4**	
DSLB	**Salisbury**	**174.53**	**323**	*eP*	**PKPdf**	**18 05 48.1**	**-0.1**	
ILAM	**Ilet Lapin Mar**	**174.67**	**314**	*eP*	**PKPdf**	**18 05 44.7**	**-3.5**	
SVN	**Savane Anatole**	**174.82**	**317**	*eP*	**PKPdf**	**18 05 46.3**	**-2.0**	
SVN				x	**PKPab**	**18 07 23.1**	**+0.5**	
BIM	**Bigot**	**174.98**	**313**	*eP*	**PKPdf**	**18 05 49.7**	**+1.3**	
BIM				x	**PKPab**	**18 07 19.2**	**-4.0**	
SLBI	**Saint Lucia, B**	**175.22**	**308**	*eP*	**PKPdf**	**18 05 47.0**	**-1.4**	
SLBI				x	**PKPab**	**18 07 26.6**	**+2.2**	
MCLT	**Moule a Chique**	**175.38**	**305**	*eP*	**PKPdf**	**18 05 49.7**	**+1.2**	
MCLT				x	**PKPab**	**18 07 21.4**	**-3.7**	
SVB	**Belmont**	**175.87**	**302**	*eP*	**PKPdf**	**18 05 50.7**	**+2.1**	
SVB				x	PP	18 11 34.0	+14	
TRN	**Trinidad (W)**	**176.61**	**263**	*eP*	**PKPdf**	**18 05 50.7**	**+2.0**	
GRSS	**Sisters**	**176.62**	**292**	*eP*	**PKPdf**	**18 05 48.7**	**-0.1**	
GRGR	**Grenville**	**176.71**	**289**	*eP*	**PKPdf**	**18 05 46.6**	**-2.1**	
GRGR				x	**PP**	**18 11 25.4**	**+1.1**	

*AZER **18** 17:46:02.3, 38.45N×46.85E, h5km, ml2.7*
*TEH **18** 17:46:03.9, 38.42N×46.86E, h10km±47km, ML2.8,*
Presumed earthquake
ISC 18 17:46:03.5±1.2, 38.30N±0.03×46.82E±0.02, h4km±10km, n32, σ0.90/55, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHRS	**Heris**	**0.18**	**85**	Pg	**Pg**	**17 46 08.2**	**+1.2**
ITBZ	**Tabriz**	**0.53**	**263**	Pg	**Pb**	**17 46 14.9**	**-0.5**
ISRB	**Sarab**	**0.82**	**125**	Pg	**Pb**	**17 46 20.2**	**-0.3**
ORD	**Ordubad**	**0.90**	**314**	P	**Pg**	**17 46 20.1**	**-0.5**
ORD				S	**Sg**	**17 46 32.8**	**+0.4**
IAZR	**Azarshahr**	**0.91**	**227**	Pg	**Pn**	**17 46 23.7**	**+0.4**
ISHB	**Shabestar**	**0.94**	**269**	Pg	**Pb**	**17 46 22.5**	**0.0**
ISHB				Sg	**Sn**	**17 46 37.4**	**-0.4**
GRMI	**Germi**	**0.98**	**59**	Pg	**Pg**	**17 46 21.2**	**-1.1**
IHSH	**Hashtrud**	**1.06**	**160**	Pg	**Pn**	**17 46 25.0**	**-0.4**
QRD	**Qoradiz**	**1.22**	**19**	P	**Pn**	**17 46 25.5**	**-1.9**
QRD				S	**Sb**	**17 46 41.9**	**-1.4**
LRK	**Lerik**	**1.24**	**74**	P	**Pn**	**17 46 26.4**	**-1.3**
LRK				S	**Sb**	**17 46 43.8**	**-0.2**
YRD	**Yardimli**	**1.27**	**61**	P	**Pn**	**17 46 26.8**	**-1.4**
YRD				S	**Sb**	**17 46 43.7**	**-1.2**
NAX	**Nakhchivan**	**1.35**	**310**	P	**Pn**	**17 46 28.6**	**-0.6**
NAX				S	**Sg**	**17 46 47.5**	**+0.6**
SBZ	**Shahbuz**	**1.47**	**318**	P	**Pn**	**17 46 30.4**	**-0.5**
SBZ				S	**Sb**	**17 46 50.4**	**-0.2**
BLQ	**Beylaqan**	**1.53**	**22**	P	**Pn**	**17 46 31.3**	**-0.3**
BLQ				S	**Sn**	**17 46 51.5**	**-0.4**
GLBA	**Clilabad**	**1.55**	**52**	P	**Pb**	**17 46 32.3**	**-0.4**
GLBA				S	**Sg**	**17 46 53.9**	**+0.7**
ASTR	**Astara**	**1.57**	**80**	P	**Pb**	**17 46 33.0**	**-0.1**
ASTR				S	**Sg**	**17 46 54.4**	**+0.5**
LKRN	**Lenkeran, Azer**	**1.59**	**75**	P	**Pb**	**17 46 32.7**	**-0.7**
LKRN				S	**Sg**	**17 46 55.1**	**+0.6**
GAS1	**Astara - Iran**	**1.59**	**86**	Pg	**Pb**	**17 46 33.3**	**-0.2**
AGDM	**Agdam**	**1.82**	**7**	P	**Pn**	**17 46 36.0**	**+0.4**
AGDM				S	**Sb**	**17 46 59.8**	**-0.6**
MAKU	**Maku**	**1.97**	**303**	Pn	**Pb**	**17 46 39.2**	**-0.8**
BRDA	**Brd**	**1.98**	**8**	P	**Pn**	**17 46 37.2**	**-0.5**
BRDA				S	**Sb**	**17 47 05.5**	**+0.6**
HYR	**Heyderabad**	**2.08**	**313**	P	**Pb**	**17 46 41.1**	**-0.8**
HYR				S	**Sb**	**17 47 08.8**	**+0.6**
ZRD	**Zardab**	**2.08**	**19**	P	**Pb**	**17 46 41.7**	**-0.1**
ZRD				S	**Sg**	**17 47 10.0**	**-0.4**
ZNJK	**Zanjan**	**2.21**	**137**	Pn	**Pb**	**17 46 43.5**	**-0.5**
GANJ	**Ganja**	**2.37**	**351**	P	**Pn**	**17 46 44.6**	**+1.5**
GANJ				S	**Sn**	**17 47 13.2**	**+0.5**
GDB	**GEDABAY**	**2.55**	**342**	P	**Pn**	**17 46 46.3**	**+0.5**
GDB				S	**Sb**	**17 47 19.9**	**-1.8**
QBL	**Gabala**	**2.75**	**16**	P	**Pn**	**17 46 49.1**	**+0.7**
QBL				S	**Sn**	**17 47 23.1**	**+0.9**
GBS	**Qobustan**	**2.77**	**36**	P	**Pn**	**17 46 49.2**	**+0.5**
GBS				S	**Sn**	**17 47 23.9**	**+1.3**
PQL	**Pirkuli**	**2.84**	**28**	P	**Pn**	**17 46 50.7**	**+1.0**
PQL				S	**Sn**	**17 47 26.1**	**+1.8**
QZX	**Qazax, Azerbai**	**2.97**	**338**	P	**Pn**	**17 46 51.9**	**+0.5**
QZX				S	**Sn**	**17 47 29.6**	**+2.1**
XNQ	**Khinaliq**	**3.04**	**19**	P	**Pn**	**17 46 52.7**	**+0.2**
XNQ				S	**Sn**	**17 47 30.5**	**+1.0**
SIZA	**Siyzn**	**3.20**	**29**	P	**Pn**	**17 46 55.1**	**+0.5**
SIZA				S	**Sn**	**17 47 34.5**	**+1.2**

JMA 18 17:52:22.0±0.1, 38.2N±0.4×141.9E±0.8, h45km, MV0.9/20, E OFF MIYAGI PREF, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.38**	**289**	P	Pn	17 52 31.4	-0.1
JIKH				*eS*	Sn	17 52 38.1	-0.1
JIO	**Ouri**	**0.52**	**301**	P	Pn	17 52 33.2	-0.1
JIO				*eS*	Sn	17 52 41.2	0.0
OFUJ	**Ofunato**	**0.91**	**348**	*eP*	Pn	17 52 38.4	0.0
OFUJ				*eS*	Sn	17 52 50.4	-0.1
JMK	**Ichinoseki**	**0.94**	**325**	*eS*	Sn	17 52 51.4	+0.3

*FUNV **18** 17:56:38.8, 7.34N×72.01W, h31km, MW3.2, Presumed earthquake*
*RSNC **18** 17:56:44.9±0.0, 7.1N±1.1×7.3W±.1, h150km±2km, M3.1, mB4.8, mb3.5, ML2.8, MLv3.5, Mw(mB)4.0*
ISC 18 17:56:43.6±1.3, 6.85N±0.03×73.09W±0.04, h154km±7km, n37, σ1.29/71, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**200**	P	**Pn**	**17 57 05.2**	**+0.4**
BARC				S	**Sn**	**17 57 20.2**	**-0.8**
PAMC	**Pamplona, Colo**	**0.63**	**38**	P	**Pn**	**17 57 07.9**	**+1.2**
PAMC				S	**Sn**	**17 57 25.0**	**+0.8**
BRJC	**Barrancabermej**	**0.66**	**281**	P	**Pn**	**17 57 06.9**	**+0.6**
BRJC				S	**Sn**	**17 57 24.1**	**+0.6**
RUSC	**La Rusia**	**0.95**	**179**	P	**Pn**	**17 57 09.1**	**+0.2**
RUSC				S	**Sn**	**17 57 27.7**	**-0.5**
RUSC	**La Rusia**	**0.95**	**179**	*eP*	**Pn**	**17 57 07.8**	**-1.2**
RUSC				*eS*	**Sn**	**17 57 27.7**	**-0.5**
PTBC	**PUERTO BERRIO,**	**1.39**	**257**	P	**Pn**	**17 57 11.7**	**-0.7**
PTBC				S	**Sn**	**17 57 33.1**	**-1.2**
OCAC	**Ocana**	**1.40**	**351**	P	**Pn**	**17 57 13.4**	**+0.7**
OCAC				S	**Sn**	**17 57 35.1**	**+0.1**
SPBC	**San Pablo de B**	**1.53**	**219**	P	**Pn**	**17 57 14.0**	**+0.1**
SPBC				S	**Sn**	**17 57 36.2**	**-1.0**
NORC	**Norcasia**	**2.18**	**234**	P	**Pn**	**17 57 21.6**	**+0.5**
NORC				S	**Sn**	**17 57 49.3**	**-0.7**
CHIC	**Chingaza**	**2.29**	**196**	P	**Pn**	**17 57 23.1**	**+0.2**
CHIC				S	**Sn**	**17 57 53.0**	**0.0**
ROSC	**El Rosal**	**2.34**	**212**	P	**Pn**	**17 57 24.8**	**+1.4**
ROSC				S	**Sn**	**17 57 55.8**	**+1.9**
CVER	**Cruz Verde, Cu**	**2.51**	**203**	P	**Pn**	**17 57 26.6**	**+1.1**
CVER				S	**Sn**	**17 57 58.0**	**+0.2**
HELC	**Santa Helena**	**2.51**	**255**	P	**Pn**	**17 57 25.6**	**+0.2**
HELC				S	**Sn**	**17 57 58.5**	**+1.0**
UREC	**San Jos de Ur**	**2.58**	**291**	P	**Pn**	**17 57 25.3**	**-0.7**
UREC				S	**Sn**	**17 57 56.3**	**-2.4**
GUY2C	**Guyana, Caldas**	**2.77**	**235**	P	**Pn**	**17 57 29.5**	**+0.7**
GUY2C				S	**Sn**	**17 58 04.5**	**+0.9**
VILC	**Villavicencio,**	**2.78**	**192**	P	**Pn**	**17 57

ZUZH	**Zhuzihu**	**1.08**	**308**	P		**Pn**	**18 02 30.7**	**-1.2**
ZUZH				*e*S		**Sn**	**18 02 45.9**	**-0.4**
SHUL	**Shoufeng**	**1.09**	**231**	*e*S		**Sn**	**18 02 45.9**	**-0.4**
ANP	**Anpu**	**1.12**	**309**	*e*P		**Pn**	**18 02 32.5**	**0.0**
ANP				*e*S		**Sn**	**18 02 46.4**	**-0.7**
TWY	**Chenhua**	**1.12**	**315**	*e*P		**Pn**	**18 02 32.7**	**+0.3**
TWS1	**Kuangyinshan**	**1.14**	**302**	P		**Pn**	**18 02 33.0**	**+0.3**
IRIF	**Iriomote-Funau**	**1.15**	**97**	P		**Pn**	**18 02 32.7**	**0.0**
IRIF				S		**Sn**	**18 02 47.7**	**0.0**
PCYT	**Pengchaiyu**	**1.20**	**342**	P		**Pn**	**18 02 33.9**	**+0.5**
PCYT				*e*S		**Sn**	**18 02 49.0**	**+0.2**
TWT	**Tachien**	**1.21**	**259**	*e*S		**Sn**	**18 02 49.6**	**+0.1**
KSHI	**Guanxi Townshi**	**1.22**	**284**	*e*P		**Pn**	**18 02 34.8**	**+1.1**
NFF	**Wufeng Townshi**	**1.25**	**277**	P		**Pn**	**18 02 34.9**	**+0.8**
NFF				S		**Sn**	**18 02 50.6**	**+0.4**
WARBT	**Fenglin Townsh**	**1.26**	**233**	*e*P		**Pn**	**18 02 33.6**	**-0.6**
OWD	**Renai**	**1.31**	**246**	*e*S		**Sn**	**18 02 50.4**	**-1.3**
WUSB	**Renai**	**1.34**	**249**	P		**Pn**	**18 02 35.8**	**+0.4**
LIOB	**Emei**	**1.34**	**277**	*e*P		**Pn**	**18 02 36.4**	**+1.0**
LIOB				S		**Sn**	**18 02 52.8**	**+0.4**
NSTT	**Nanjuang**	**1.36**	**276**	*e*P		**Pn**	**18 02 35.7**	**+0.2**
NSTT				S		**Sn**	**18 02 53.1**	**+0.5**
HGSD	**Ruisui**	**1.39**	**225**	P		**Pn**	**18 02 35.1**	**-0.8**
HGSD				S		**Sn**	**18 02 51.0**	**-2.3**
JKRS	**Kuro-shima**	**1.41**	**100**	*e*P		**Pn**	**18 02 36.8**	**+0.6**
JKRS				*e*S		**Sn**	**18 02 54.4**	**+0.4**
WHP	**Taichung City**	**1.42**	**262**	P		**Pn**	**18 02 37.7**	**+1.3**
WHP				*e*S		**Sn**	**18 02 54.8**	**+0.6**
VWDT	**VWDT**	**1.43**	**239**	*e*P		**Pn**	**18 02 36.9**	**+0.5**
VWDT				*e*S		**Sn**	**18 02 53.5**	**-0.7**
EHYH	**Wanrong**	**1.44**	**227**	*e*P		**Pn**	**18 02 36.3**	**-0.3**
EHYH				*e*S		**Sn**	**18 02 53.0**	**-1.5**
EHY	**Hungye**	**1.44**	**228**	*e*P		**Pn**	**18 02 36.7**	**+0.1**
EHY				*e*S		**Sn**	**18 02 52.0**	**-2.6**
WCS	**Beigang Elemen**	**1.50**	**254**	P		**Pn**	**18 02 39.0**	**+1.7**
WCS				*e*S		**Sn**	**18 02 58.0**	**+2.1**
JJJ	**Ishigaki jima**	**1.52**	**94**	*e*P		**Pn**	**18 02 37.8**	**+0.2**
JJJ				*e*S		**Sn**	**18 02 56.1**	**-0.3**
YULB	**Yu-li**	**1.54**	**225**	P		**Pn**	**18 02 36.9**	**-1.1**
YULB				S		**Sn**	**18 02 54.9**	**-2.1**
SSLB	**Suanglung**	**1.56**	**244**	*e*P		**Pn**	**18 02 40.2**	**+1.9**
SSLB				*e*S		**Sn**	**18 02 57.9**	**+0.3**
SMLT	**Sun Moon Lake**	**1.57**	**248**	P		**Pn**	**18 02 40.1**	**+1.7**
SMLT				*e*S		**Sn**	**18 02 57.7**	**-0.1**
TWF1	**Yuli**	**1.57**	**224**	*e*P		**Pn**	**18 02 37.4**	**-1.0**
CHKH	**Chenggong**	**1.63**	**218**	*e*P		**Pn**	**18 02 38.6**	**-0.5**
JISG	**Ishigakijimahi**	**1.67**	**86**	*e*P		**Pn**	**18 02 39.9**	**+0.2**
FULB	**Fuli**	**1.68**	**221**	*e*P		**Pn**	**18 02 39.1**	**-0.8**
FULB				*e*S		**Sn**	**18 02 59.0**	**-1.5**
TCU	**Taichung**	**1.68**	**259**	*e*S		**Sn**	**18 03 01.7**	**+1.3**
WHYT	**Xinyi Township**	**1.69**	**242**	*e*P		**Pn**	**18 02 41.1**	**+1.2**
WHYT				*e*S		**Sn**	**18 03 02.1**	**+1.5**
CHKT	**Chengkung**	**1.72**	**217**	*e*P		**Pn**	**18 02 38.1**	**-2.3**
CHKT				*e*S		**Sn**	**18 02 56.7**	**-4.6**
WJS	**Zhushan**	**1.73**	**248**	P		**Pn**	**18 02 40.9**	**+0.3**
WJS				S		**Sn**	**18 03 04.2**	**+2.5**
WNT	**Mingjian**	**1.75**	**250**	*e*S		**Sn**	**18 03 04.0**	**+1.9**
EHD	**Haiduan**	**1.77**	**222**	P		**Pn**	**18 02 40.0**	**-1.2**
EHD				S		**Sn**	**18 02 59.8**	**-2.9**
ALS	**Alishan**	**1.82**	**238**	P		**Pn**	**18 02 43.0**	**+1.0**
ALS				*e*S		**Sn**	**18 03 03.7**	**-0.4**
ELDTW	**Lidau**	**1.86**	**226**	P		**Pn**	**18 02 42.1**	**-0.3**
ELDTW				S		**Sn**	**18 03 03.3**	**-1.7**
CHN5	**Tsauling**	**1.87**	**242**	*e*S		**Sn**	**18 03 06.5**	**+1.3**
WDLH	**Douliu**	**1.95**	**246**	*e*S		**Sn**	**18 03 09.1**	**+2.3**
WCKO	**Fanlu**	**2.01**	**239**	*e*P		**Pn**	**18 02 45.9**	**+1.5**
WCKO				*e*S		**Sn**	**18 03 10.4**	**+2.0**
STYH	**Taoyuan**	**2.04**	**230**	P		**Pn**	**18 02 45.4**	**+0.7**
STYH				S		**Sn**	**18 03 09.2**	**+0.1**
TPUB	**Ta-pu**	**2.07**	**236**	*e*P		**Pn**	**18 02 46.8**	**+1.7**
TPUB				*e*S		**Sn**	**18 03 11.7**	**+1.9**
TWGBT	**Beinan**	**2.10**	**218**	*e*S		**Sn**	**18 03 08.2**	**-2.5**
WTP	**Ta-pu**	**2.11**	**235**	*e*S		**Sn**	**18 03 12.8**	**+1.9**
TWK	**Hsinying**	**2.19**	**237**	*e*S		**Sn**	**18 03 14.6**	**+1.6**
CHN1	**Nanshi**	**2.21**	**234**	*e*S		**Sn**	**18 03 15.7**	**+2.4**
SGST	**Jiashian**	**2.23**	**232**	*e*P		**Pn**	**18 02 48.2**	**+0.8**
SGST				*e*S		**Sn**	**18 03 15.8**	**+2.0**
SSD	**Sandimen**	**2.43**	**225**	*e*P		**Pn**	**18 02 51.7**	**+1.7**
SSD				*e*S		**Sn**	**18 03 20.9**	**+2.3**
MASBT	**Mashibuluo**	**2.52**	**223**	*e*P		**Pn**	**18 02 53.3**	**+2.0**
MASBT				*e*S		**Sn**	**18 03 22.1**	**+1.1**
VWUC	**VWUC**	**2.80**	**281**	*e*P		**Pn**	**18 02 54.8**	**-0.3**
VWUC				*e*S		**Sn**	**18 03 24.7**	**-3.1**
PNG	**Penghu**	**2.83**	**252**	*e*S		**Sn**	**18 03 25.8**	**-2.6**
MATB	**Ma-tsu**	**2.83**	**306**	*e*P		**Pn**	**18 02 56.1**	**+0.6**
MATB				*e*S		**Sn**	**18 03 27.0**	**-1.4**
PHUB	**P'eng-hu**	**2.83**	**251**	*e*S		**Sn**	**18 03 27.1**	**-1.4**
PTMZ	**Houxiangcun**	**3.11**	**281**	*e*S		**Sn**	**18 03 32.4**	**-2.8**

NEIC ***18*** *18:16:44.7±1.5, 13°.49N±0°.05×89°.48W±0°.04, h117km±6km, mb4.1/30, Error ellipse: s-maj=7.4km s-min=5.4km az=175.0*

CATAC ***18*** *18:16:45.8±0.3, 13°.N±4°.×9°.0W±°., h96km±2km, M3.9/31, MLv3.9/31, Error ellipse: s-maj=8.4km s-min=2.5km az=24.6, confirmed*

IDC ***18*** *18:16:45.6±1.3, 13°.67N×89°.40W, h124km±8km, mb3.5/6, mbtmp3.9/9, Error ellipse: s-maj=34.4km s-min=10.1km az=42.0*

GCG ***18*** *18:16:46.8±1.2, 13°.62N×89°.52W, h100km±8km, MD4.1, ML4.4, Presumed earthquake*

SNET ***18*** *18:16:53.1±8.1, 13°.46N×89°.56W, h29km, ML3.8, Presumed earthquake*

ISC 18 18:16:44.2±0.7, 13°.52N±0°.05×89°.50W±0°.04, h116km±4km, n112, σ1§43/152, mb4.1/18, 2C-5D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JAYA	**Jayaque - finc**	**0.14**	**22**	P		**Pn**	**Pn**	**18 17 00.8**	**+0.3**
JAYA				S		**Sn**	**Sn**	**18 17 12.6**	**-0.1**
JAYA	**Jayaque - finc**	**0.14**	**22**	⇓*i* P		**Pn**	**Pn**	**18 17 00.6**	**+0.1**
JAYA				*i* S		**Sn**	**Sn**	**18 17 11.7**	**-1.0**
JAYA				IAML				18 17 14.9	
	comp=N,27μm,0.3s								
LALI	**Alcalda de L**	**0.18**	**100**	P		**Pn**	**Pn**	**18 17 01.0**	**+0.7**
LALI				S		**Sn**	**Sn**	**18 17 13.1**	**+0.7**
LALI	**Alcalda de L**	**0.18**	**100**	⇓*i* P		**Pn**	**Pn**	**18 17 01.0**	**+0.7**
LALI				*i* S		**Sn**	**Sn**	**18 17 12.3**	**-0.1**
LALI				IAML				18 17 13.4	
	comp=E,3μm,0.4s								
PMON	**Piamonte**	**0.27**	**44**	P		**Pn**	**Pn**	**18 17 01.5**	**+0.7**
PMON				S		**Sn**	**Sn**	**18 17 13.6**	**+0.4**
CEDA	**San Andres**	**0.30**	**21**	P		**Pn**	**Pn**	**18 17 01.5**	**+0.7**
CEDA	**San Andres**	**0.30**	**21**	*i* P		**Pn**	**Pn**	**18 16 59.7**	**-1.1**
CEDA				⇑*e*S		**Sn**	**Sn**	**18 17 13.1**	**-0.2**
BOQS	**Boqueron**	**0.30**	**46**	*e*P		**Pn**	**Pn**	**18 17 01.5**	**+0.5**
UEES	**Universidad Ev**	**0.32**	**53**	P		**Pn**	**Pn**	**18 17 01.7**	**+0.8**
UEES				S		**Sn**	**Sn**	**18 17 15.3**	**+1.8**
CEVE	**Cerro Verde**	**0.33**	**339**	P		**Pn**	**Pn**	**18 17 01.8**	**+0.6**
CEVE				S		**Sn**	**Sn**	**18 17 14.2**	**+0.3**
CEVE	**Cerro Verde**	**0.33**	**339**	*e*P		**Pn**	**Pn**	**18 17 01.7**	**+0.6**
CEVE				*i* P				18 17 01.9	
CEVE				*e*S		**Sn**	**Sn**	**18 17 15.9**	**+2.0**
SEMO	**Seminario San**	**0.33**	**56**	P		**Pn**	**Pn**	**18 17 01.5**	**+0.6**
SEMO				S		**Sn**	**Sn**	**18 17 14.5**	**+1.0**
PANCS	**Alcalda de**	**0.33**	**74**	P		**Pn**	**Pn**	**18 17 01.4**	**+0.5**
PANCS				S		**Sn**	**Sn**	**18 17 13.6**	**+0.2**
UTEC	**Universidad Te**	**0.34**	**59**	P		**Pn**	**Pn**	**18 17 01.7**	**+0.6**
UTEC				S		**Sn**	**Sn**	**18 17 14.9**	**+1.3**
IGN	**Direccin Gen**	**0.38**	**59**	P		**Pn**	**Pn**	**18 17 02.0**	**+0.8**
IGN				S		**Sn**	**Sn**	**18 17 15.7**	**+1.8**
UNIC	**Universidad Ca**	**0.46**	**355**	P		**Pn**	**Pn**	**18 17 02.1**	**+0.5**
UNIC				S		**Sn**	**Sn**	**18 17 15.2**	**+0.5**
NUBE	**Las Nubes**	**0.46**	**325**	P		**Pn**	**Pn**	**18 17 02.3**	**+0.6**
NUBE				S		**Sn**	**Sn**	**18 17 15.0**	**+0.1**
NUBE	**Las Nubes**	**0.46**	**325**	*i* P		**Pn**	**Pn**	**18 17 02.1**	**+0.3**
LOAL	**Lomas de Alarc**	**0.55**	**330**	P		**Pn**	**Pn**	**18 17 02.9**	**+0.7**
LOAL				S		**Sn**	**Sn**	**18 17 16.2**	**+0.6**
SLOZ	**Alcaldia de Sa**	**0.57**	**332**	P		**Pn**	**Pn**	**18 17 02.8**	**+0.5**
SLOZ				S		**Sn**	**Sn**	**18 17 16.6**	**+0.7**
PAVA	**Las Pavas**	**0.58**	**71**	P		**Pn**	**Pn**	**18 17 03.3**	**+0.8**
PAVA				S		**Sn**	**Sn**	**18 17 17.4**	**+1.3**
FAME	**Alcaldia de Sa**	**0.59**	**303**	P		**Pn**	**Pn**	**18 17 02.9**	**+0.6**
FAME				S		**Sn**	**Sn**	**18 17 15.8**	**-0.3**
COEG	**Centro de Oper**	**0.61**	**81**	P		**Pn**	**Pn**	**18 17 03.2**	**+0.7**
COEG				S		**Sn**	**Sn**	**18 17 17.2**	**+0.7**
COEG	**Centro de Oper**	**0.61**	**81**	*e*P		**Pn**	**Pn**	**18 17 03.3**	**+0.7**
COEG				*e*S		**Sn**	**Sn**	**18 17 16.8**	**+0.4**

TECO	**Alcaldia de Te**	**0.70**	**89**	P		**Pn**	**18 17 04.1**	**+0.8**
TECO				S		**Sn**	**18 17 18.4**	**+0.8**
SCLA	**Alcaldia de Sa**	**0.78**	**77**	P		**Pn**	**18 17 04.8**	**+0.9**
LLGN	**La Laguna**	**0.84**	**40**	P		**Pn**	**18 17 05.0**	**+0.5**
P5NO	**Presa 5 de nov**	**0.86**	**57**	P		**Pn**	**18 17 05.1**	**+0.5**
MTO3	**Montecristo**	**0.88**	**9**			**Pn**	**18 17 05.7**	**+0.6**
MTO3				Sn		**Sn**	**18 17 20.9**	**+0.1**
MTO3	**Montecristo**	**0.88**	**9**	P		**Pn**	**18 17 05.7**	**+0.6**
MTO3				S		**Sn**	**18 17 20.8**	**0.0**
MTO3	**Montecristo**	**0.88**	**9**	⇓*i* P		**Pn**	**18 17 05.7**	**+0.6**
ESSJ	**San Jos, E**	**0.97**	**273**	*i* P		Pn	18 17 11.4	+5.8
ESQI	**Esquipulas**	**1.04**	**9**			**Pn**	**18 17 07.5**	**+0.9**
ESQI	**Esquipulas**	**1.04**	**9**	P		**Pn**	**18 17 07.6**	**+1.1**
ESQI				S		**Sn**	**18 17 24.9**	**+1.5**
ZAFR2	**Estanzuela, Za**	**1.06**	**8**	⇓*i* P		Pn	18 17 11.8	+5.3
PCG5	**San Vicente Pa**	**1.09**	**309**	*i* P		**Pn**	**18 17 11.6**	**+4.5**
PCG5				IAML			18 17 36.3	
	comp=N,4μm,0.3s							
PACA	**Pacayal**	**1.15**	**92**	P		**Pn**	**18 17 08.8**	**+1.1**
RANC	**El Ranchito**	**1.19**	**94**	P		**Pn**	**18 17 09.4**	**+1.4**
RANC				S		**Sn**	**18 17 26.7**	**+0.7**
FG16	**Alotenango, Sa**	**1.23**	**308**	*e*P		Pn	18 17 14.4	+5.8
BLLM	**Bellamira**	**1.23**	**93**	⇑*i* P		**Pn**	**18 17 09.5**	**+1.1**
FG8	**Yepocapa, Chim**	**1.26**	**306**	*i* P		Pn	18 17 14.7	+5.9
FG8				*i* S		**Sn**	**18 17 35.6**	**+8.1**
CNRM	**Centro Naciona**	**1.30**	**92**	P		**Pn**	**18 17 10.1**	**+1.0**
CNRM				S		**Sn**	**18 17 29.1**	**+1.2**
SARH	**Santa Rosa de**	**1.44**	**30**	P		**Pn**	**18 17 12.2**	**+1.4**
SARH	**Santa Rosa de**	**1.44**	**30**	*i* P		**Pn**	**18 17 12.2**	**+1.4**
MARCA	**Marcala la Paz**	**1.56**	**66**	P		**Pn**	**18 17 13.4**	**+1.2**
MARCA				S		**Sn**	**18 17 35.1**	**+1.5**
MARCA	**Marcala la Paz**	**1.56**	**66**	*i* P		**Pn**	**18 17 13.3**	**+1.0**
LCND	**La Caada**	**1.58**	**97**	P		**Pn**	**18 17 13.8**	**+1.4**
LCND				S		**Sn**	**18 17 35.5**	**+1.6**
CNCH	**Conchagua**	**1.64**	**98**	P		**Pn**	**18 17 14.5**	**+1.2**
CNCH				S		**Sn**	**18 17 37.2**	**+1.9**
APG	**El Apazote**	**1.74**	**328**	P		**Pn**	**18 17 15.7**	**+1.1**
	comp=N,4.5nm,0.4s,baz=127,slow=11,SNR=43							
APG				S		**Sn**	**18 17 38.9**	**+1.2**
	comp=N,4.4nm,0.3s,baz=66,slow=22,SNR=11							
APG	**El Apazote**	**1.74**	**328**	⇓*i* P		**Pn**	**18 17 15.9**	**+1.3**
CSGN	**Cosiguina Volc**	**1.97**	**106**	P		**Pn**	**18 17 18.7**	**+1.5**
CSGN				S		**Sn**	**18 17 43.7**	**+1.3**
STG8	**El Palmar, Qui**	**2.02**	**297**	*e*P		Pn	18 17 24.3	+6.3
STG8				*e*S		Sn	18 17 53.1	+9.4
TGUH	**Tegucigalpa,Un**	**2.23**	**76**			**Pn**	**18 17 21.8**	**+1.2**
TGUH	**Tegucigalpa,Un**	**2.23**	**76**	P		**Pn**	**18 17 21.8**	**+1.2**
SOKI	**Kika Raxquin**	**2.25**	**305**	*e*S		**Sn**	**18 17 52.8**	**+3.5**
RTAL	**Retalhuleu**	**2.35**	**295**	Pn		**Pn**	**18 17 22.4**	**+0.5**
RTAL						**Sn**	**18 17 46.1**	**-4.8**
RTAL	**Retalhuleu**	**2.35**	**295**	S		**Sn**	**18 17 51.5**	**+0.6**
CRIN	**San Cristobal**	**2.53**	**109**	Pn		**Pn**	**18 17 24.1**	**-0.1**
CRIN						**Sn**	**18 17 54.5**	**-0.6**
CRIN	**San Cristobal**	**2.53**	**109**	P		**Pn**	**18 17 27.1**	**+2.8**
CRIN				S		**Sn**	**18 17 57.4**	**+2.4**
PKGN	**Cerro Pekin**	**2.60**	**109**	P		**Pn**	**18 17 27.2**	**+2.0**
PKGN				S		**Sn**	**18 17 58.4**	**+1.7**
YUSH	**Yuscaran**	**2.62**	**80**	P		**Pn**	**18 17 27.0**	**+1.4**
HERN	**Volcan Telica**	**2.76**	**109**	Pn		**Pn**	**18 17 28.4**	**+1.1**
HERN	**Volcan Telica**	**2.76**	**109**	P		**Pn**	**18 17 29.8**	**+2.5**
HERN				S		**Sn**	**18 18 02.1**	**+1.7**
POLN	**Al Sur del Vol**	**2.76**	**108**	P		**Pn**	**18 17 28.8**	**+1.4**
POLN				S		**Sn**	**18 18 02.4**	**+1.9**
CNGN	**Cerro Negro**	**2.92**	**110**	Pn		**Pn**	**18 17 30.7**	**+1.3**
CNGN						**Sn**	**18 18 03.6**	**-0.6**
CNGN	**Cerro Negro**	**2.92**	**110**	S		**Sn**	**18 18 05.5**	**+1.3**
PETF	**Flores**	**3.39**	**354**	Pn		**Pn**	**18 17 36.2**	**+0.6**
PETF						**Sn**	**18 18 16.0**	**+0.6**
MGAN	**Managua**	**3.46**	**113**	Pn		**Pn**	**18 17 35.1**	**-1.4**
MGAN						**Sn**	**18 18 15.4**	**-1.4**
BOAB	**BOACO BROADBAN**	**3.89**	**105**			**Pn**	**18 17 40.3**	**-2.0**
JTS	**Las Juntas de**	**5.49**	**125**	P		**Pn**	**18 18 05.8**	**+2.0**
	comp=N,6.2nm,0.4s,baz=307,slow=18,SNR=3.7							
JTS				S		**Sn**	**18 19 07.5**	**+1.7**
	comp=N,13nm,0.4s,baz=261,slow=17,SNR=4.1							
JTS	**Las Juntas de**	**5.49**	**125**			**Pn**	**18 18 03.9**	**+0.1**
JTS						**Sn**	**18 19 05.1**	**-0.7**
CMIG	**Matias Romero**	**6.29**	**305**	P		**Pn**	**18 18 16.3**	**+1.7**
	comp=N,1.5nm,0.3s,baz=126,slow=10,SNR=7.8							
CMIG				S		**Sn**	**18 19 24.4**	**-0.6**
	comp=N,4.8nm,0.3s,baz=161,slow=23,SNR=11							
TEIG	**Tepich**	**6.77**	**10**	Pn		**Pn**	**18 18 22.3**	**+1.2**
833A	**Chaparral WMA,**	**17.37**	**330**	Pn		**Pn**	**18 20 41.0**	**+1.6**
833A				IAmb		IAmb	18 20 43.2	
	comp=Z,5.7nm,0.7s							
BANI	**BANI**	**19.03**	**73**	P		**P**	**18 20 56.8**	**-0.7**
SDV	**Santo Domingo**	**19.07**	**102**	P		**P**	**18 20 57.4**	**-0.6**
	comp=Z,3.1nm,0.6s,baz=340,slow=6.5,SNR=4.5							
SDV	**Santo Domingo**	**19.07**	**102**	P		**P**	**18 20 57.8**	**-0.2**
SDV				IAmb		IAmb	18 21 02.9	
	comp=Z,3.6nm,0.7s							
LRAL	**Lakeview Retre**	**19.56**	**6**	P		**P**	**18 21 03.6**	**+0.7**
BRDY	**Brady**	**19.72**	**335**	P		**Pn**	**18 21 05.9**	**-1.4**
BRDY				IAmb		IAmb	18 21 07.0	
	comp=Z,10nm,0.8s							
Y49A	**Blount Mountai**	**20.44**	**7**	P		**P**	**18 21 12.9**	**+0.4**
TXAR	**Lajitas Array**	**20.49**	**322**	P		**P**	**18 21 13.1**	**-0.1**
	comp=Z,1.6nm,0.5s,baz=144,slow=11,SNR=17							
	comp=Z,1.6nm,0.5s							
TXAR	**Lajitas Array**	**20.49**	**322**	P		**P**	**18 21 10.8**	**-2.3**
TX31	**Lajitas Ar. Si**	**20.50**	**322**	P		**P**	**18 21 10.0**	**-3.2**
ABTX	**Abilene, Hawle**	**21.15**	**336**	P		**P**	**18 21 20.0**	**-0.2**
ABTX				IAmb		IAmb	18 21 27.8	
	comp=Z,6.4nm,0.8s							
MIAR	**Mount Ida**	**21.25**	**351**	P		**P**	**18 21 20.6**	**-0.6**
POST	**Post**	**22.32**	**333**	P		**P**	**18 21 33.7**	**+1.2**
POST				IAmb		IAmb	18 21 34.9	
	comp=Z,8.1nm,1.0s							
BIRD	**Birdtown, Kers**	**22.57**	**20**	P		**P**	**18 21 35.8**	**+1.0**
BIRD				IAmb		IAmb	18 21 37.5	
	comp=Z,8.4nm,0.9s							
DKNS	**Dickens**	**22.59**	**335**			**P**	**18 21 35.9**	**+0.8**
DKNS				IAmb		IAmb	18 21 37.1	
	comp=Z,4.5nm,0.6s							
TKL	**Tuckaleechee C**	**22.64**	**12**	P		**P**	**18 21 33.5**	**-2.1**
	comp=Z,1.7nm,0.5s,baz=160,slow=11,SNR=2.1							
	comp=Z,1.7nm,0.5s							
TKL	**Tuckaleechee C**	**22.64**	**12**	P		**P**	**18 21 34.0**	**-1.6**
TKL				IAmb		IAmb	18 21 46.4	
	comp=Z,14nm,1.5s							
WMOK	**Wichita Mounta**	**22.73**	**340**	P		**P**	**18 21 36.9**	**+0.4**
W57A	**Gilead**	**23.19**	**20**	P		**P**	**18 21 41.0**	**+0.2**
W57A				IAmb		IAmb	18 21 42.8	
	comp=Z,11nm,1.1s							
T47A	**Sharon Grove**	**23.47**	**5**	P		**P**	**18 21 43.9**	**+0.5**
T47A				IAmb		IAmb	18 21 45.4	
	comp=Z,13nm,1.2s							
SMWD	**Samnorwood**	**23.58**	**338**	P		**P**	**18 21 43.5**	**-1.0**
SMWD				IAmb		IAmb	18 21 45.8	
	comp=Z,7.9nm,0.7s							
U54A	**Nelsons Funny**	**23.92**	**15**	P		**P**	**18 21 49.4**	**+1.9**
S44A	**Carbondale**	**24.07**	**0**	P		**P**	**18 21 49.6**	**+0.8**
S44A				IAmb		IAmb	18 21 50.6	
	comp=Z,5.5nm,0.7s							
SIUC	**Southern Illin**	**24.10**	**1**	P		**P**	**18 21 48.7**	**-0.3**
SIUC				IAmb		IAmb	18 21 50.7	
	comp=Z,7.7nm,0.8s							
U56A	**King**	**24.16**	**18**	P		**P**	**18 21 49.8**	**+0.2**
U56A				IAmb		IAmb	18 21 51.2	
	comp=Z,8.4nm,1.0s							
S39A	**Bolivar**	**24.31**	**353**			**P**	**18 21 49.3**	**-1.7**
S39A				IAmb		IAmb	18 21 53.7	
	comp=Z,3.9nm,0.6s							
CCM	**Cathedral Cave**	**24.48**	**357**	P		**P**	**18 21 53.3**	**+0.8**
CCM				IAmb		IAmb	18 21 55.2	
	comp=Z,6.6nm,0.8s							
PDAR	**Pinedale Array**	**33.90**	**333**	P		**P**	**18 23 15.6**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=144,slow=9.2,SNR=2.8							
	comp=Z,0.3nm,0.5s							
SCHQ	**Schefferville**	**44.87**	**18**	P		**P**	**18 24 46.0**	**-0.9**
	comp=Z,2.9nm,0.7s,baz=213,slow=6.2,SNR=7.7							
	comp=Z,2.9nm,0.7s							
SCHQ	**Schefferville**	**44.87**	**18**	P		**P**	**18 24 45.9**	**-0.9**
FCC	**Fort Churchill**	**45.29**	**357**	P		**P**	**18 24 49.5**	**-0.6**
YKA	**Yellowknife Ar**	**52.07**	**346**	P		**P**	**18 25 42.0**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=153,slow=7.1,SNR=9.0							
	comp=Z,0.4nm,0.3s							
YKAW3	**Yellowknife Wh**	**52.13**	**346**	P		**P**	**18 25 42.5**	**+0.2**
YKAW3				IAmb		IAmb	18 25 43.8	
	comp=Z,3.9nm,1.3s							
FRB	**Frobisher Bay**	**52.26**	**12**	P		**P**	**18 25 42.2**	**-1.0**
	comp=Z,1.8nm,0.3s,baz=204,slow=8.4,SNR=4.3							
	comp=Z,1.8nm,0.3s							

ILON	**Igloolik, Nuna**	**56.02**	**3**	P		**P**	**18 26 10.8**	**+0.3**
RES	**Resolute Bay**	**61.23**	**358**	P		**P**	**18 26 45.9**	**-0.5**
F30M	**Barrier River**	**61.83**	**342**	P		**P**	**18 26 51.1**	**+0.5**
WRA	**Warramunga Arr**	**137.62**	**255**	PKP		**PKiKP**	**18 35 57.4**	**-0.1**
	comp=Z,0.9nm,1.0s,baz=88,slow=2.8,SNR=5.1							
CMAR	**Chiang Mai Arr**	**147.15**	**345**	PKPbc		**PKPbc**	**18 36 14.7**	**0.0**
	comp=Z,0.2nm,0.3s,baz=25,slow=3.5,SNR=1.7							

IDC ***18*** *18:19:20.3±1.5, 18°.74S×73°.02W, h0km, mb4.1/5, mbtmp4.0/9, ML3.7/4, MS4.7/1, Error ellipse: s-maj=42.4km s-min=21.8km az=30.0*

NEIC ***18*** *18:19:29.0±1.6, 17°.91S±0°.02×72°.64W±0°.09, h10km±1km, mb4.4/2, Error ellipse: s-maj=15.4km s-min=3.6km az=261.0*

ISC 18 18:19:30.1±0.6, 17°.89S±0°.08×72°.63W±0°.10, h35km, n53, σ1§70/44, mb4.2/6, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AP01	**Chacalluta**	**2.22**	**103**	Pn		**Pn**	**Pn**	**18 20 05.4**	**+1.0**
PB12	**IPOC Station P**	**2.30**	**109**			**Pn**	**Pn**	**18 20 06.0**	**+0.5**
PB16	**IPOC Station P**	**3.00**	**99**			**Pn**	**Pn**	**18 20 16.8**	**+1.1**
PB18	**Visviri**	**3.01**	**85**			**Pn**	**Pn**	**18 20 13.6**	**-2.2**
PB11	**IPOC Station P**	**3.37**	**124**			**Pn**	**Pn**	**18 20 21.8**	**+1.4**
HMBC	**Humberstone**	**3.51**	**133**			**Pn**	**Pn**	**18 20 23.4**	**+1.1**
TA01	**Diego Aracena**	**3.52**	**139**			**Pn**	**Pn**	**18 20 24.1**	**+1.8**
GO01	**Chusmiza**	**3.70**	**119**			**Pn**	**Pn**	**18 20 27.1**	**+1.9**
PATCX	**Punta Patache**	**3.73**	**142**			**Pn**	**Pn**	**18 20 26.9**	**+1.6**
PB08	**IPOC Station P**	**3.97**	**125**			**Pn**	**Pn**	**18 20 30.4**	**+1.6**
PB02	**IPOC Station P**

	3.6nm,0.2s							
MDOK				Lg	Lg	18 21 25.5		
	62nm,0.2s							
TARG	**Taragay, Kyrgy**	**2.09**	**228**	⇓*i*P	**Pb**	**18 20 59.2**	**-0.2**	
TARG				⇓*i*S	**Sb**	**18 21 26.3**	**+0.3**	
KNDC	**Almaty**	**2.14**	**273**	⇑Pg	**Pb**	**18 20 59.3**	**-0.7**	
	16nm,0.5s							
KNDC				⇑Lg	Lg	18 21 28.8		
	98nm,0.5s							
TDK	**Taldyqorghan**	**2.15**	**331**	Pg	**Pb**	**18 20 59.3**	**-0.8**	
	20nm,0.5s							
TDK				Lg	Lg	18 21 26.6		
	195nm,0.5s							
TDK	**Taldyqorghan**	**2.15**	**331**	*e*P	**Pb**	**18 20 59.8**	**-0.2**	
	16nm,0.3s							
TDK				*e*S	**Sb**	**18 21 26.9**	**-0.2**	
	185nm,0.3s							
TNSS	**Tian-Shan**	**2.16**	**268**	Pg	**Pb**	**18 21 00.6**	**0.0**	
	2.3nm,0.2s							
TNSS				Lg	Lg	18 21 28.9		
	15nm,0.4s							
TNSS	**Tian-Shan**	**2.16**	**268**	*e*P	**Pb**	**18 21 00.5**	**0.0**	
	2.3nm,0.2s							
TNSS				*e*S	**Sb**	**18 21 28.2**	**+0.3**	
	14nm,0.5s							
KAPS	**Kapalarasan**	**2.18**	**350**	Pg	**Pb**	**18 21 00.6**	**0.0**	
	9.5nm,0.1s							
KAPS				Lg	Lg	18 21 28.7		
	222nm,0.2s							
AAA	**Alma-Ata**	**2.18**	**273**	*e*P	**Pb**	**18 21 01.6**	**+1.0**	
	9.4nm,0.1s							
AAA				*e*S	**Sg**	**18 21 30.0**	**-0.4**	
	9.6nm,0.2s							
KDJ	**Kajisay**	**2.24**	**244**	⇑*e*P	**Pb**	**18 21 01.1**	**-0.7**	
KDJ				⇑*i*S	**Sb**	**18 21 30.4**	**+0.3**	
IZV	**Izvestkoviy**	**2.41**	**269**	*e*P	**Pn**	**18 21 02.9**	**+1.9**	
	5.3nm,0.2s							
IZV				*e*S	**Sn**	**18 21 32.0**	**+0.9**	
	63nm,0.4s							
KTBS	**Karatobe**	**2.41**	**285**	*e*P	**Pb**	**18 21 04.8**	**+0.3**	
	4.4nm,0.2s							
KTBS				*e*S	**Sb**	**18 21 35.4**	**+0.8**	
	0.6nm,0.4s							
MTBS	**Maitube**	**2.54**	**271**	Pg	**Pb**	**18 21 06.7**	**0.0**	
	1.0nm,0.1s							
MTBS				Lg	Lg	18 21 39.4		
	38nm,0.4s							
MTBS	**Maitube**	**2.54**	**271**	*e*P	**Pb**	**18 21 07.3**	**+0.6**	
	3.9nm,0.2s							
MTBS				*e*S	**Sb**	**18 21 39.7**	**+1.3**	
	40nm,0.4s							
KUU	**Kurty**	**2.69**	**287**	Pg	**Pb**	**18 21 10.7**	**+1.3**	
	0.3nm,0.1s							
KUU				Lg	Lg	18 21 46.9		
	32nm,0.4s							
KUU	**Kurty**	**2.69**	**287**	*e*P	**Pg**	**18 21 11.5**	**-0.5**	
	0.2nm,0.1s							
KUU				*e*S	**Sg**	**18 21 46.9**	**+0.1**	
	32nm,0.4s							
ULHL	**Ulahol**	**2.84**	**253**	*e*P	**Pb**	**18 21 09.9**	**-2.0**	
ULHL				*i* S	**Sb**	**18 21 45.4**	**-1.8**	
KST	**Kastek**	**2.88**	**269**	Pg	**Pb**	**18 21 13.9**	**+1.3**	
	2.3nm,0.2s							
KST				Lg	Lg	18 21 51.8		
	35nm,0.6s							
KST	**Kastek**	**2.88**	**269**	*e*P	**Pb**	**18 21 13.4**	**+0.8**	
	9.4nm,0.5s							
KST				*e*S	**Sb**	**18 21 50.2**	**+1.9**	
	23nm,0.4s							
BOOM	**Boomskoye usch**	**2.98**	**259**	⇑*e*P	**Pb**	**18 21 12.2**	**-2.1**	
BOOM				⇑*i*S	**Sb**	**18 21 48.9**	**-2.4**	
DGS	**Degeres**	**3.02**	**273**	*e*P	**Pb**	**18 21 15.3**	**+0.4**	
	2.1nm,0.2s							
DGS				*e*S	**Sb**	**18 21 53.4**	**+1.2**	
	34nm,0.4s							
KRBS	**Karabastau**	**3.12**	**282**	*e*P	**Pb**	**18 21 17.0**	**+0.3**	
	1.1nm,0.3s							
KRBS				*e*S	**Sb**	**18 21 56.4**	**+1.2**	
	4.0nm,0.3s							
TKM2	**Tokmak 2**	**3.16**	**267**	⇑*e*P	**Pb**	**18 21 15.2**	**-2.2**	
TKM2				⇑*i*S	**Sb**	**18 21 54.0**	**-2.4**	
MAKZ	**Makanchi**	**3.95**	**21**	⇓Pn	**Pn**	**18 21 23.6**	**+1.5**	
	2.2nm,0.3s							
MAKZ				⇑Sn	**Sn**	**18 22 09.3**	**+0.2**	
	1.4nm,0.5s							
MAKZ				⇑Lg	Lg	18 22 23.3		
	4.2nm,0.5s							
AAK	**Ala-Archa**	**4.00**	**265**	⇑Pg	**Pg**	**18 21 38.1**	**+1.1**	
	2.4nm,0.8s							
AAK				⇑Lg	Lg	18 22 24.3		
	4.8nm,0.7s							
MK31	**Makanchi Array**	**4.03**	**24**	Pn	**Pn**	**18 21 24.1**	**+0.9**	
	0.3nm,0.2s,baz=209,slow=14,SNR=93							
MK31				⇑Sn	**Sn**	**18 22 10.5**	**-0.5**	
	1.0nm,0.3s							
MK31				⇑Lg	Lg	18 22 26.3		
	7.4nm,0.6s,baz=206,slow=27,SNR=13							
KK31	**Karatay Array**	**6.87**	**273**	⇑Lg	Lg	18 23 58.2		
	1.1nm,0.4s,baz=84,slow=32,SNR=2.6							
KURBB	**Kurchatov Arra**	**7.54**	**353**	⇑Pn	**Pn**	**18 22 12.1**	**+0.7**	
	0.7nm,0.8s							
KURBB				⇑Lg	Lg	18 24 21.6		
	7.3nm,0.6s							
KURK	**Kurchatov**	**7.62**	**354**	⇓Pn	**Pn**	**18 22 11.5**	**-1.0**	
	0.2nm,0.8s							
KURK				⇑Lg	Lg	18 24 23.5		
	4.0nm,0.9s							

TAP 18 18:40:35.6,24°46N×121°85E,h13km,ML2.4,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EWUT	**Wuta**	**0.07**	**260**	*e*S	Sg	18 40 39.7	-0.4
ENA	**Nanau**	**0.11**	**254**	*i* P	Pg	18 40 39.0	+0.4
ENA				*i* S	Sg	18 40 40.8	0.0
ESAO	**Su ao**	**0.12**	**356**	*i* P	Pg	18 40 39.0	+0.1
ESAO				*i* S	Sg	18 40 41.0	-0.1
TWC	**Suao**	**0.15**	**358**	*i* P	Pg	18 40 39.5	+0.3
TWC				*e*S	Sg	18 40 41.9	0.0
EAHA	**Aohua**	**0.17**	**219**	*e*P	Pg	18 40 39.5	0.0
EAHA				*e*S	Sg	18 40 42.0	-0.2
NDS	**Dongshan**	**0.21**	**324**	P	Pg	18 40 40.8	+0.5
NDS				S	Sg	18 40 43.8	+0.2
LATG	**Datong**	**0.31**	**285**	*i* P	Pg	18 40 42.4	+0.3
LATG				*i* S	Sg	18 40 46.8	+0.5
TWE	**Neicheng**	**0.31**	**327**	*i* P	Pg	18 40 42.5	+0.5
TWE				*i* S	Sg	18 40 46.9	+0.5
ENTT	**Nioudou**	**0.32**	**305**	*i* P	Pg	18 40 42.7	+0.5
ENTT				S	Sg	18 40 47.0	+0.5
NDT	**Datong Townshi**	**0.34**	**295**	P	Pb	18 40 43.2	-0.5
NDT				S	Sg	18 40 47.8	+0.6
EOS2	**EOS2**	**0.35**	**96**	*e*P	Pb	18 40 43.3	-0.3
ETL	**Fush Village**	**0.36**	**215**	*e*P	Pg	18 40 43.1	+0.1
ETL				*e*S	Sg	18 40 48.1	+0.2
NACB	**Ninganchiao**	**0.37**	**220**	*e*P	Pg	18 40 42.9	-0.1
NACB				*i* S	Sg	18 40 48.1	+0.1
FUSB	**Fushanzhiwuyua**	**0.39**	**321**	*i* P	Pb	18 40 44.2	-0.3
FUSB				S	Sb	18 40 49.8	-0.6
EGS		**0.39**	**10**	*e*P	Pg	18 40 43.7	+0.2
ETLH	**Xiulin Townshi**	**0.42**	**234**	*e*P	Pg	18 40 44.4	+0.3
ETLH				*e*S	Sb	18 40 50.6	-0.7
NNSB	**Datong**	**0.43**	**266**	P	Pg	18 40 44.5	+0.2
NNSB				*e*S	Sg	18 40 50.6	+0.6
NNS	**Nan Shan**	**0.44**	**268**	*i* P	Pg	18 40 44.6	+0.2
NNS				*e*S	Sg	18 40 50.6	+0.3
TWD	**Chiawan**	**0.44**	**212**	P	Pg	18 40 44.4	-0.1
TWD				*e*S	Sg	18 40 50.5	+0.2
NWLT	**Wulai**	**0.45**	**315**	*i* P	Pb	18 40 45.4	-0.1
NWLT				S	Sg	18 40 51.3	+0.7
EOS3	**EOS3**	**0.46**	**112**	*e*P	Pb	18 40 45.3	-0.1
YHNB	**Yeheng**	**0.48**	**296**	*i* P	Pb	18 40 46.0	-0.2
YHNB				*i* S	Sg	18 40 51.9	+0.2
NSK	**Sanguang**	**0.50**	**296**	*i* P	Pb	18 40 46.0	-0.3
NSK				*i* S	Sg	18 40 52.6	+0.4
TIPB	**Shuangxi**	**0.51**	**357**	*e*P	Pb	18 40 46.4	-0.2
TIPB				*e*S	Sb	18 40 53.6	-0.4
EOS4	**EOS4**	**0.54**	**128**	*e*P	Pb	18 40 46.6	-0.1
EOS4				*e*S	Sb	18 40 55.0	+0.7
ETM	**Tongmen**	**0.59**	**214**	*e*P	Pg	18 40 47.0	-0.2
ETM				*e*S	Sg	18 40 55.3	+0.3
LXIB	**Xiulin Townshi**	**0.59**	**223**	*e*P	Pg	18 40 47.4	+0.1
LXIB				*e*S	Sb	18 40 55.8	-0.6
FUSS	**Fushou**	**0.59**	**250**	P	Pg	18 40 47.5	+0.2
FUSS				S	Sg	18 40 55.5	+0.3
TATO	**Taipei**	**0.61**	**327**	P	Pb	18 40 48.4	+0.1
TATO				S	Sb	18 40 56.5	-0.3
WHF	**Hehuan Shan**	**0.62**	**240**	*e*P	Pg	18 40 47.9	0.0
WHF				*e*S	Sg	18 40 56.3	+0.1
SXI1	**Grass Mountain**	**0.63**	**2**	*e*P	Pb	18 40 48.9	+0.2
SXI1				*e*S	Sb	18 40 57.8	+0.3
TWT	**Tachien**	**0.65**	**252**	*e*P	Pb	18 40 49.9	+0.8
TWT				*e*S	Sb	18 40 59.3	+1.2
NFF	**Wufeng Townshi**	**0.69**	**285**	*e*P	Pb	18 40 49.7	0.0
NFF				*e*S	Sg	18 40 58.7	+0.4
KSHI	**Guanxi Townshi**	**0.69**	**297**	*e*P	Pn	18 40 50.6	-0.6
KSHI				*e*S	Sb	18 41 00.1	+1.0
SHUL	**Shoufeng**	**0.72**	**202**	*e*P	Pn	18 40 51.1	-0.5
SHUL				*e*S	Sn	18 41 01.4	-1.0
YM01	**YM01**	**0.73**	**339**	P	Pb	18 40 51.0	+0.6
YM01				*e*S	Sb	18 41 00.7	+0.3
ESL	**Shilin**	**0.75**	**211**	*e*P	Pg	18 40 49.9	-0.3
ESL				*e*S	Sg	18 40 59.7	-0.3
ZUZH	**Zhuzihu**	**0.76**	**338**	*e*P	Pn	18 40 51.5	-0.6
ZUZH				*e*S	Sb	18 41 01.8	+0.8
YM08	**YM08**	**0.77**	**342**	*e*P	Pn	18 40 51.6	-0.6
YM08				*e*S	Sn	18 41 02.8	-0.9
ANP	**Anpu**	**0.79**	**337**	*e*P	Pn	18 40 52.5	-0.1
LIOB	**Emei**	**0.79**	**284**	*e*P	Pn	18 40 52.1	-0.4
LIOB				*e*S	Sb	18 41 02.2	+0.4
NSTT	**Nanjuang**	**0.80**	**283**	P	Pn	18 40 52.2	-0.5
NSTT				S	Sb	18 41 02.5	+0.4
OWD	**Renai**	**0.80**	**231**	*e*P	Pg	18 40 51.1	0.0
OWD				*e*S	Sg	18 41 01.6	0.0
WUSB	**Renai**	**0.82**	**236**	P	Pg	18 40 51.6	+0.1
WUSB				*e*S	Sb	18 41 02.6	-0.2
TWY	**Chenhua**	**0.85**	**344**	*e*P	Pn	18 40 53.4	0.0
TWY				*e*S	Sn	18 41 04.7	-0.9
WHP	**Taichung City**	**0.85**	**258**	*i* P	Pb	18 40 52.8	+0.5
WHP				S	Sb	18 41 03.8	+0.1
WARBT	**Fenglin Townsh**	**0.85**	**210**	*e*P	Pg	18 40 51.7	-0.4
WARBT				*e*S	Sg	18 41 02.8	-0.5
DPDB	**Guoxing**	**0.95**	**244**	*e*P	Pn	18 40 54.5	-0.2
VWDT	**VWDT**	**0.96**	**223**	*e*P	Pg	18 40 54.3	+0.2
VWDT				*e*S	Sb	18 41 06.8	+0.1
HGSD	**Ruisui**	**1.04**	**202**	*e*P	Pn	18 40 56.0	0.0
HGSD				*e*S	Sn	18 41 11.4	+1.1
SMLT	**Sun Moon Lake**	**1.04**	**237**	P	Pn	18 40 56.3	+0.2
SMLT				S	Sg	18 41 09.6	+0.2
SSLB	**Suanglung**	**1.06**	**231**	*i* P	Pb	18 40 55.9	0.0
SSLB				*i* S	Sb	18 41 09.2	-0.5
EHY	**Hungye**	**1.06**	**207**	*e*P	Pb	18 40 55.6	-0.4
EHY				*e*S	Sg	18 41 10.1	0.0
TYC	**Yuchr**	**1.06**	**239**	P	Pb	18 40 56.0	+0.1
TYC				*e*S	Sg	18 41 10.1	+0.1
YULB	**Yu-li**	**1.18**	**206**	*e*P	Pn	18 40 57.6	-0.2
YULB				*e*S	Sg	18 41 13.6	-0.1

JMA 18 18:41:31.2±0.4,24°N±2°×122°E±°,h30km,MV1.6/9,NW OFF ISHIGAKIJIMA IS,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.34**	**10**	*e*P	Pb	18 41 38.9	-0.2
JYNG				*e*S	Sb	18 41 44.2	-0.4
YOJ	**Yonaguni jima**	**0.36**	**19**	*e*P	Pb	18 41 39.5	0.0
IRIF	**Iriomote-Funau**	**0.80**	**74**	*e*P	Pn	18 41 45.6	-0.8
JKRS	**Kuro-shima**	**1.04**	**83**	*e*P	Pb	18 41 50.4	-0.2
JIJ	**Ishigaki jima**	**1.18**	**78**	*e*P	Pn	18 41 52.2	+0.6
JISG	**Ishigakijimahi**	**1.38**	**70**	P	Pn	18 41 54.5	0.0

*AEIC **18** 18:45:54.7±1.4,66°28N±0°03×157°17W±0°07,h13km±6km, Error ellipse: s-maj=4.6km s-min=3.9km az=175.0*

NEIC 18 18:45:54.6±1.2,66°32N±0°02×157°25W±0°07,h11km±7km, ML3.2/38,ML2.9(AEIC),Error ellipse: s-maj=4.9km s-min=2.3km az=129.0,Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
G19K	**Purcell Mounta**	**0.18**	**160**		Pg	18 45 58.2	-0.4
G19K					Sg	18 46 00.9	-0.4
G19K	**Purcell Mounta**	**0.18**	**160**	IAML		18 46 01.2	
	comp=N,264nm,0.2s						
G19K				IAML		18 46 01.3	
	comp=E,258nm,0.2s						
F19K	**Shaleruckik Mo**	**0.56**	**338**		Pg	18 46 05.5	+0.1
F19K					Sb	18 46 14.2	-0.2
G18K	**Tagagawik**	**0.71**	**234**		Pg	18 46 08.2	-0.1
G18K					Sb	18 46 18.3	-0.5
H19K	**Roundabout Mou**	**0.86**	**157**		Pg	18 46 10.5	-0.5
H19K					Sg	18 46 21.8	-0.4
H19K	**Roundabout Mou**	**0.86**	**157**	IAML		18 46 41.6	
	comp=E,684nm,0.3s						
F20K	**Avaraart Lake**	**0.95**	**39**		Pg	18 46 12.7	-0.1
F18K	**Selawik**	**1.01**	**288**		Pg	18 46 13.9	0.0
F18K					Sn	18 46 28.3	-0.5
E19K	**Redstone River**	**1.15**	**0**		Pb	18 46 16.4	0.0
E19K					Sg	18 46 31.4	-0.1
H18K	**Honhosa River**	**1.26**	**202**		Pn	18 46 17.7	-0.4
H20K	**Anotleneega Mo**	**1.27**	**129**		Pn	18 46 17.4	-1.0
IMAR	**Indian Mountai**	**1.46**	**102**	Pn	Pn	18 46 20.7	-0.2
G21K	**Allakaket**	**1.52**	**81**		Pn	18 46 21.7	0.0
G21K	**Allakaket**	**1.52**	**81**	IAML		18 46 59.6	
	comp=E,409nm,0.8s						
F17K	**Baldwin Pennin**	**1.62**	**276**		Pn	18 46 23.6	+0.6
G17K	**Kiwalik Mounta**	**1.62**	**241**		Pn	18 46 22.9	-0.2
F21K	**Alatna River**	**1.75**	**57**		Pn	18 46 25.3	+0.4
H17K	**Granite Mounta**	**1.77**	**220**		Pn	18 46 25.5	+0.4
E20K	**Nigu River**	**1.99**	**11**		Pn	18 46 28.6	+0.3
F24K	**Squaw Lake**	**3.88**	**68**		Pg	18 47 08.1	-0.7
F24K				IAML		18 48 14.4	
	comp=N,43nm,0.7s						
F24K				IAML		18 48 15.3	
	comp=E,48nm,0.6s						
D24K	**Happy Valley**	**4.29**	**45**	IAML		18 48 38.3	
	comp=E,33nm,0.8s						
D24K				IAML		18 48 44.7	
	comp=N,32nm,1.2s						
C24K	**Franklin Bluff**	**4.69**	**39**		Pb	18 47 16.8	+0.1
C24K				IAML		18 48 49.3	
	comp=N,15nm,1.0s						
C24K				IAML		18 49 16.6	
	comp=E,19nm,1.1s						
HDA	**Harding Lake**	**4.71**	**109**		Pn	18 47 03.9	-1.7
M20K	**Styx River**	**4.80**	**156**		Pg	18 47 23.6	-2.9
E25K	**Arctic Village**	**4.89**	**63**		Pb	18 47 23.9	+3.9
E25K				IAML		18 48 55.0	
	comp=N,18nm,1.0s						
E25K				IAML		18 49 02.0	
	comp=E,12nm,0.8s						
D25K	**Kavik River**	**5.10**	**49**		Pb	18 47 26.8	+3.0
D25K				IAML		18 49 04.0	
	comp=N,14nm,1.1s						
D25K				IAML		18 49 04.9	
	comp=E,9.9nm,1.1s						
J25K	**Salcha River,**	**5.24**	**104**		Pb	18 47 28.9	+2.8
J25K				IAML		18 48 28.7	
	comp=E,12nm,0.9s						
J25K				IAML		18 48 59.0	
	comp=N,12nm,0.7s						
I26K	**Coal Creek Min**	**5.88**	**93**		Pb	18 47 36.7	-0.3
PMR	**Palmer**	**5.93**	**139**		Pn	18 47 20.8	-1.4

*IDC **18** 18:52:41.3±1.6,1°14N×126°00E,h0km,mb3.6/4, mbtmp3.5/5,ML3.3/1,Error ellipse: s-maj=126.6km s-min=20.2km az=68.0*

*DJA **18** 18:52:44.0±0.2,1°N±4°×12°6E±°,h10km,M3.6/13, MLv3.6/13*

ISC 18 18:52:46.9±1.1,12°2N±0°1×126°19E±0°06,h44km,n9, o0965/11,mb3.6/4,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.25**	**109**	P	**Pn**	**18 53 07.5**	**-0.4**
TNTI				S	**Sn**	**18 53 23.9**	**+0.3**
MNI	**Manado**	**1.37**	**281**	P	**Pn**	**18 53 08.8**	**-0.8**
MNI				S	**Sn**	**18 53 26.1**	**-0.4**
SANI	**Sanana**	**3.22**	**184**	P	**Pn**	**18 53 34.6**	**-0.4**
GTOI	**Gorontalo**	**3.22**	**260**	P	**Pn**	**18 53 35.6**	**+0.6**
FITZ	**Fitzroy Crossi**	**19.17**	**182**	P	**P**	**18 57 06.5**	**-0.4**
	0.1nm,0.3s,baz=8.5,slow=13,SNR=1.0						
FITZ				S	S	19 00 29.3	-13
	1.1nm,1.0s,baz=10.0,slow=17,SNR=1.5 0.2nm,0.3s						
WRA	**Warramunga Arr**	**22.47**	**160**	P	**P**	**18 57 41.9**	**-0.6**
	1.0nm,0.4s,baz=337,slow=11,SNR=29 1.0nm,0.4s						
ASAR	**Alice Springs**	**25.82**	**164**	P	**P**	**18 58 15.0**	**+0.8**
	0.7nm,0.8s,baz=346,slow=11,SNR=19 0.7nm,0.8s						
MKAR	**Makanchi Array**	**59.34**	**326**	P	**P**	**19 02 44.5**	**-0.1**
	0.2nm,0.4s,baz=118,slow=6.8,SNR=7.5 0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.59**	**328**	P	**P**	**19 03 13.9**	**+0.8**
	0.3nm,0.2s,baz=126,slow=6.5,SNR=1.8 0.3nm,0.2s						

*UUSS **18** 19:07:30.2±0.6,40°76N±0°01×112°07W±0°01,h9km±3km, Error ellipse: s-maj=1.7km s-min=1.3km az=134.0*

*NEIC **18** 19:07:30.1±0.8,40°77N±0°01×112°08W±0°02,h10km±3km, ML3.4/173,ML3.4/23(UUSS), Error ellipse: s-maj=2.2km s-min=1.4km az=139.0*

*IDC **18** 19:07:30.5±0.8,40°86N×112°00W,h0km,mbtmp3.2/5, ML3.8/4,Error ellipse: s-maj=13.9km s-min=5.5km az=153.0*

ISC 18 19:07:30.9±0.9,40°76N±0°02×112°09W±0°02,h7km±7km, n90,σ1905/63,Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOQ	**North Oquirrh**	**0.11**	**193**		**Pg**	**19 07 33.2**	**-0.2**
NOQ					**Sg**	**19 07 35.5**	**+0.3**
SAIU	**Southern Antel**	**0.12**	**324**		**Pg**	**19 07 33.5**	**0.0**
RPF	**Rose Park Fire**	**0.13**	**83**		**Pg**	**19 07 33.9**	**+0.1**
CAPU	**Utah State Cap**	**0.15**	**83**		**Pg**	**19 07 33.8**	**-0.3**
EOCU	**Emergency Oper**	**0.15**	**84**		**Pg**	**19 07 33.9**	**-0.3**
EOCU					**Sg**	**19 07 36.2**	**-0.2**
HRU	**Hogsback Ridge**	**0.16**	**80**		**Pg**	**19 07 33.8**	**-0.4**
RBU	**Red Butte Cany**	**0.21**	**84**		**Pg**	**19 07 34.6**	**-0.6**
RBU	**Red Butte Cany**	**0.21**	**84**		**Sg**	**19 07 37.6**	**-0.6**
MHD	**Mile High Driv**	**0.24**	**114**		**Pg**	**19 07 35.4**	**-0.3**
CTU	**Camp Tracy**	**0.27**	**105**		**Pg**	**19 07 35.4**	**-0.8**
CTU				IAML		19 07 39.2	
	comp=N,6μm,0.7s						
CTU				IAML		19 07 40.0	
	comp=E,6μm,0.2s						
NAIU	**Northern Antel**	**0.28**	**338**		**Pg**	**19 07 36.2**	**-0.2**
GMU	**Granite Mounta**	**0.31**	**127**		**Pg**	**19 07 36.4**	**-0.7**
CWU	**Camp Williams**	**0.31**	**182**		**Pg**	**19 07 37.0**	**-0.2**
WTU	**Western Traver**	**0.32**	**161**		**Pg**	**19 07 37.2**	**0.0**
FPU	**Francis Peak**	**0.33**	**36**		**Pg**	**19 07 37.0**	**-0.5**
SNUT	**Stansbury Nort**	**0.34**	**292**		**Pg**	**19 07 37.8**	**+0.1**
AAU	**Alta**	**0.38**	**116**		**Pg**	**19 07 37.8**	**-0.7**
WBC	**Weber Canyon**	**0.41**	**20**		**Pg**	**19 07 38.4**	**-0.4**
TCVU	**Timpanogos Cav**	**0.43**	**137**		**Pg**	**19 07 38.7**	**-0.6**
RCJ	**Ross Creek**	**0.50**	**101**		**Pg**	**19 07 39.9**	**-0.7**
N16A	**Rees Ranch, Co**	**0.51**	**75**		**Pg**	**19 07 40.5**	**-0.3**
DCU	**Deer Creek Res**	**0.55**	**129**		**Pg**	**19 07 41.0**	**-0.5**
SPUT	**South Promonto**	**0.61**	**334**		**Pg**	**19 07 42.4**	**-0.3**
TCUT	**Toone Canyon**	**0.63**	**55**		**Pg**	**19 07 42.4**	**-0.7**
TCUT				IAML		19 07 58.1	
	comp=E,5μm,0.4s						
TCUT	**Toone Canyon**	**0.63**	**55**		**Pg**	**19 07 42.7**	**-0.4**
HTU	**Hoyt Peak**	**0.67**	**97**		**Pg**	**19 07 43.2**	**-0.6**
EPU	**East Promontor**	**0.68**	**339**		**Pg**	**19 07 43.6**	**-0.3**
WMUT	**West Mountain**	**0.71**	**164**		**Pg**	**19 07 44.2**	**-0.4**
DAU	**Daniels Canyon**	**0.72**	**118**		**Pb**	**19 07 44.6**	**-1.4**
BGU	**Big Grassy Mou**	**0.73**	**283**		**Pg**	**19 07 44.9**	**-0.1**
BGU				IAML		19 07 59.0	
	comp=E,1μm,0.5s						
DUG	**Dugway, Tooele**	**0.79**	**225**		**Pg**	**19 07 45.8**	**-0.2**
DUG				IAML		19 07 59.6	
	comp=E,1μm,1.0s						
DUG				IAML		19 08 00.6	
	comp=E,1μm,0.9s						
NLU	**North Lily Min**	**0.80**	**179**		**Pg**	**19 07 46.0**	**-0.4**
NLU	**North Lily Min**	**0.80**	**179**	IAML		19 08 00.6	
	comp=N,934nm,0.6s						
NLU				IAML		19 08 01.2	
	comp=E,898nm,0.5s						
MPU	**Maple Canyon**	**0.82**	**155**		**Pg**	**19 07 46.1**	**-0.5**
MPU				IAML		19 08 01.2	
	comp=N,2μm,0.6s						
MPU				IAML		19 08 02.1	
	comp=E,1μm,0.3s						
MCU	**Monte Cristo P**	**0.83**	**32**		**Pg**	**19 07 46.1**	**-0.7**
LTU	**Little Mountai**	**0.84**	**352**		**Pg**	**19 07 46.6**	**-0.4**
WVUT	**Wellsville**	**0.85**	**7**		**Pg**	**19 07 46.9**	**-0.4**
HWUT	**Hardware Ranch**	**0.93**	**25**		**Pg**	**19 07 47.6**	**-1.2**
HWUT				IAML		19 08 03.8	
	comp=E,966nm,0.4s						
HWUT				IAML		19 08 04.0	
	comp=E,1μm,0.4s						
BSUT	**Blindstream Ca**	**1.03**	**102**		**Pg**	**19 07 49.8**	**-1.0**
BSUT				IAML		19 08 07.4	
	comp=N,2μm,1.2s						
HVU	**Hansel Valley**	**1.14**	**333**		**Pg**	**19 07 51.7**	**-1.1**
HVU				IAML		19 08 11.1	
	comp=E,1μm,0.3s						
HVU				IAML		19 08 11.9	
	comp=N,1μm,0.3s						
TMUT	**Trail Mountain**	**1.61**	**155**		**Pn**	**19 07 59.1**	**-0.9**
TMUT				IAML		19 08 24.3	
	comp=N,499nm,0.9s						
TMUT				IAML		19 08 25.3	
	comp=E,758nm,0.6s						
P17A	**Butcher Ranch,**	**1.65**	**141**		**Pn**	**19 07 59.4**	**-1.0**
P

LOHW					IAML			19 09 17.8	
	comp=N,78nm,1.6s								
MOOW	**Moose Ponds**	**3.15**	**18**			**Pn**		**19 08 21.2**	**+0.1**
SZCU	**Shurtz Canyon**	**3.25**	**194**		IAML			19 09 21.0	
	comp=E,79nm,0.5s								
PKCU	**Pink Cliffs**	**3.32**	**183**		IAML			19 09 27.3	
	comp=E,85nm,0.6s								
PKCU					IAML			19 09 38.8	
	comp=N,92nm,2.5s								
CCUT	**Cedar City**	**3.35**	**198**		IAML			19 09 26.0	
	comp=E,72nm,1.1s								
FLWY	**Flagg Ranch**	**3.48**	**17**		IAML			19 09 37.0	
	comp=E,77nm,1.7s								
PV03	**Paradox Valley**	**3.54**	**134**		IAML			19 09 25.4	
	comp=N,133nm,0.7s								
PV03					IAML			19 09 28.3	
	comp=E,156nm,1.2s								
PV13	**Radium Mtn., P**	**3.63**	**135**		IAML			19 09 34.3	
	comp=N,176nm,1.2s								
YPP	**Pitchstone Pla**	**3.63**	**15**		IAML			19 09 34.8	
	comp=E,46nm,1.6s								
PV01	**Paradox Valley**	**3.78**	**133**		IAML			19 09 31.7	
	comp=E,120nm,1.1s								
PV01					IAML			19 09 39.6	
	comp=N,98nm,0.8s								
YFT	**Old Faithful**	**3.80**	**14**		IAML			19 09 07.7	
	comp=E,35nm,1.1s								
YFT					IAML			19 09 36.5	
	comp=N,45nm,1.6s								
MFID	**Camas Ranch**	**3.84**	**315**		IAML			19 09 34.5	
	comp=N,40nm,0.5s								
MFID					IAML			19 09 35.9	
	comp=N,38nm,0.6s								
LCMT	**Little Creek M**	**3.85**	**194**		IAML			19 09 37.7	
	comp=N,38nm,0.7s								
LCMT					IAML			19 09 38.5	
	comp=E,45nm,0.7s								
YMR	**Madison River**	**3.99**	**12**		IAML			19 09 43.6	
	comp=N,50nm,1.1s								
YMR					IAML			19 09 58.0	
	comp=E,36nm,1.1s								
YHL	**Hebgen Lake**	**4.14**	**9**		IAML			19 09 59.5	
	comp=N,27nm,1.5s								
YMP	**Mirror Lake Pl**	**4.22**	**19**		IAML			19 09 51.2	
	comp=N,36nm,3.0s								
YMP					IAML			19 10 03.9	
	comp=E,27nm,2.6s								
U15A	**North Rim**	**4.33**	**182**		IAML			19 09 57.7	
	comp=E,30nm,1.7s								
U15A					IAML			19 10 01.6	
	comp=N,27nm,1.0s								
DLMT	**Dillon**	**4.62**	**356**		IAML			19 10 24.3	
	comp=N,21nm,2.4s								
DLMT					IAML			19 10 28.3	
	comp=N,20nm,2.2s								
RLMT	**Red Lodge**	**4.83**	**24**		IAML			19 10 01.5	
	comp=N,17nm,0.4s								
RLMT					IAML			19 10 09.1	
	comp=N,16nm,1.2s								
SHPR	**Sheep Range**	**4.88**	**210**		IAML			19 10 11.2	
	comp=E,22nm,1.2s								
SHPR					IAML			19 10 12.5	
	comp=N,17nm,0.9s								
ISCO	**Idaho Springs**	**5.04**	**99**		IAML			19 10 14.4	
	comp=N,17nm,1.0s								
ISCO					IAML			19 10 28.0	
	comp=N,24nm,2.1s								
S22A	**4UR Ranch, Cre**	**5.07**	**125**		IAML			19 10 16.6	
	comp=E,26nm,1.1s								
S22A					IAML			19 10 22.2	
	comp=N,14nm,1.0s								
WVOR	**Wild Horse Val**	**5.19**	**291**		IAML			19 10 23.3	
	comp=N,13nm,2.2s								
NV11	**Mina Array Sit**	**5.23**	**246**		IAML			19 10 27.1	
	comp=N,17nm,1.4s								
NV11					IAML			19 10 32.1	
	comp=E,16nm,1.1s								
WUAZ	**Wupatki**	**5.26**	**174**		IAML			19 10 26.7	
	comp=E,50nm,1.2s								
WUAZ					IAML			19 10 27.0	
	comp=E,40nm,0.8s								
GMN	**Gold Mountain**	**5.30**	**231**		IAML			19 10 28.0	
	comp=E,12nm,0.4s								
NVAR	**Mina Array Bea**	**5.33**	**246**		Pn		**Pn**	**19 08 54.0**	**+2.9**
	comp=E,0.5nm,0.3s,baz=58,slow=15,SNR=6.1								
NVAR					Pg		**Pg**	**19 09 08.6**	**-4.5**
	comp=E,2.0nm,0.3s,baz=57,slow=16,SNR=7.7								
NVAR					Lg		Lg	19 10 17.4	
	comp=E,0.9nm,0.3s,baz=62,slow=28,SNR=3.3								
	comp=E,0.7nm,0.4s								
ANMO	**Albuquerque**	**7.32**	**141**		Pn		**Pn**	**19 09 20.3**	**+2.0**
	comp=E,0.2nm,0.3s,baz=330,slow=15,SNR=1.8								
ANMO					Pg		Pb	19 09 42.8	+4.6
	comp=E,0.1nm,0.3s,baz=330,slow=11,SNR=3.7								
ANMO					Lg		Lg	19 11 15.7	
	comp=E,0.4nm,0.3s,baz=249,slow=18,SNR=6.3								
	comp=E,0.3nm,0.4s								
PFO	**Pinyon Flats O**	**7.94**	**207**		Lg		Lg	19 11 42.6	
	comp=E,0.2nm,0.3s,baz=68,slow=19,SNR=1.9								
NEW	**Newport**	**8.32**	**336**		Lg		Lg	19 11 50.6	
	comp=E,0.4nm,0.3s,baz=66,slow=23,SNR=4.4								
TXAR	**Lajitas Array**	**13.31**	**146**		Pn		**Pn**	**19 10 43.6**	**+3.3**
	comp=E,0.3nm,0.5s,baz=332,slow=13,SNR=3.9								

*UUSS **18** 19:12:23.6±1.0, 40.75N±0.02×112.06W±0.02, h11km±3km, Error ellipse: s-maj=2.5km s-min=2.3km az=129.0*
*IDC **18** 19:12:23.1±0.4, 40.74N×111.96W, h0km, mb4.1/24, mbtmp4.1/31, ML3.8/7, MS4.8/2, Error ellipse: s-maj=8.9km s-min=5.2km az=150.0*
*NEIC **18** 19:12:23.6±1.0, 40.748N±0.010×112.06W±0.02, h10km±3km, mb4.5/66, ML4.6/164, Mwr4.6/25, Mwr4.6/12(UUSS), Error ellipse: s-maj=2.4km s-min=1.3km az=76.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; Mrr-7.34; Mθθ1.90; Mφφ5.44; Mrθ3.09; Mrφ-3.01; Mθφ-3.58; Fault plane solution: Mo8.66000×10^{15} NP1:φs324.37000°, δ61.56000°, λ-95.49000°. NP2:φs155.77000°, δ28.92000°, λ-79.99000°. Principal axes: T 8.5331, Plg16.0000°, Azm58.0000°; N 0.2535, Plg5.0000°, Azm327.0000°; P -8.7866, Plg73.0000°, Azm221.0000°;*
*NEIC **18** 19:12:23.5, 40.75N×112.06W, h11km*
ISC 18 19:12:24.1±0.8, 40.75N±0.02×112.06W±0.02, h9km±5km, n190, σ1§13/138, mb4.5/45, Utah

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NOQ	**North Oquirrh**	**0.11**	**205**			**Pg**	**19 12 26.7**	**-0.1**
NOQ						**Sg**	**19 12 28.8**	**-0.1**
HRU	**Hogsback Ridge**	**0.14**	**76**			**Pg**	**19 12 27.1**	**-0.1**
HRU						**Sg**	**19 12 29.6**	**0.0**
SAIU	**Southern Antel**	**0.14**	**318**			**Pg**	**19 12 27.3**	**0.0**
SAIU						**Sg**	**19 12 29.4**	**-0.1**
RBU	**Red Butte Cany**	**0.19**	**81**			**Pg**	**19 12 28.0**	**-0.2**
MHD	**Mile High Driv**	**0.22**	**115**			**Pg**	**19 12 28.4**	**-0.2**
CTU	**Camp Tracy**	**0.24**	**104**			**Pg**	**19 12 28.8**	**-0.3**
CTU					IAML		19 12 32.5	
	comp=N,116μm,0.5s							
CTU					IAML		19 12 33.3	
	comp=E,68μm,0.2s							
GMU	**Granite Mounta**	**0.29**	**128**			**Pg**	**19 12 29.6**	**-0.3**
NAIU	**Northern Antel**	**0.29**	**334**			**Pg**	**19 12 29.9**	**-0.1**
WTU	**Western Traver**	**0.31**	**165**			**Pg**	**19 12 30.4**	**+0.2**
FPU	**Francis Peak**	**0.32**	**31**			**Pg**	**19 12 30.4**	**-0.2**
AAU	**Alta**	**0.36**	**116**			**Pg**	**19 12 31.1**	**-0.2**
WBC	**Weber Canyon**	**0.41**	**17**			**Pg**	**19 12 31.8**	**-0.3**
TCVU	**Timpanogos Cav**	**0.41**	**139**			**Pg**	**19 12 31.9**	**-0.3**
RCJ	**Ross Creek**	**0.48**	**101**			**Pg**	**19 12 32.2**	**-0.3**
N16A	**Rees Ranch, Co**	**0.49**	**74**			**Pg**	**19 12 33.9**	**+0.2**
HEB	**Heber**	**0.60**	**114**			**Pg**	**19 12 35.9**	**+0.1**
TCUT	**Toone Canyon**	**0.61**	**53**			**Pg**	**19 12 36.0**	**0.0**
TCUT	**Toone Canyon**	**0.61**	**53**			**Pg**	**19 12 36.0**	**0.0**
SPUT	**South Promonto**	**0.63**	**332**			**Pg**	**19 12 36.1**	**-0.2**
HTU	**Hoyt Peak**	**0.64**	**97**			**Sg**	**19 12 45.5**	**+0.5**
HTU	**Hoyt Peak**	**0.64**	**97**			**Pg**	**19 12 36.4**	**-0.2**
EPU	**East Promontor**	**0.69**	**338**			**Pg**	**19 12 37.3**	**-0.2**
WMUT	**West Mountain**	**0.70**	**166**			**Pg**	**19 12 37.5**	**-0.1**
DAU	**Daniels Canyon**	**0.70**	**119**			**Pg**	**19 12 37.9**	**+0.2**
BGU	**Big Grassy Mou**	**0.76**	**284**			**Pg**	**19 12 38.2**	**-0.5**
BGU					IAML		19 12 51.8	
	comp=E,15μm,0.5s							
NLU	**North Lily Min**	**0.80**	**181**			**Pg**	**19 12 39.2**	**-0.2**
DUG	**Dugway, Tooele**	**0.80**	**226**			**Pg**	**19 12 38.8**	**-0.7**
DUG					IAML		19 12 52.9	
	comp=E,14μm,1.1s							
DUG					IAML		19 12 54.6	
	comp=E,14μm,1.1s							
MPU	**Maple Canyon**	**0.80**	**156**			**Pg**	**19 12 39.4**	**-0.2**
MPU					IAML		19 12 53.7	
	comp=N,26μm,0.5s							
MPU					IAML		19 12 53.9	
	comp=E,15μm,0.5s							
LHUT	**Little Humpy P**	**0.82**	**80**			**Pg**	**19 12 40.1**	**+0.2**
MCU	**Monte Cristo P**	**0.82**	**30**			**Pg**	**19 12 39.5**	**-0.5**
LTU	**Little Mountai**	**0.85**	**350**			**Pg**	**19 12 40.3**	**-0.2**
WVUT	**Wellsville**	**0.86**	**5**			**Pg**	**19 12 40.3**	**-0.4**
HWUT	**Hardware Ranch**	**0.93**	**23**			**Pg**	**19 12 41.4**	**-0.7**
HWUT	**Hardware Ranch**	**0.93**	**23**		IAML		19 13 00.3	
	comp=E,19μm,0.9s							
HWUT					IAML		19 13 01.7	
	comp=E,16μm,0.8s							
BSUT	**Blindstream Ca**	**1.01**	**102**			**Pg**	**19 12 43.1**	**-0.5**
BSUT	**Blindstream Ca**	**1.01**	**102**		IAML		19 13 00.6	
	comp=N,26μm,1.2s							
HVU	**Hansel Valley**	**1.16**	**332**			**Pg**	**19 12 45.3**	**-1.1**
HVU					IAML		19 13 08.8	
	comp=N,12μm,0.7s							
HVU					IAML		19 13 09.1	
	comp=E,11μm,0.6s							
SNO	**Snow College**	**1.49**	**164**			**Pn**	**19 12 51.4**	**+0.1**
TMUT	**Trail Mountain**	**1.59**	**156**		IAML		19 13 19.2	
	comp=E,7μm,0.6s							
TMUT					IAML		19 13 26.7	
	comp=N,6μm,0.7s							
P17A	**Butcher Ranch,**	**1.63**	**141**			**Pn**	**19 12 52.9**	**-0.2**
P17A					IAML		19 13 18.3	
	comp=N,6μm,0.7s							
P18A	**Preston Nutter**	**1.79**	**128**			**Pb**	**19 12 56.2**	**-1.0**
P18A					IAML		19 13 20.9	
	comp=E,4μm,0.5s							
P18A					IAML		19 13 22.9	
	comp=N,4μm,1.0s							
RDMU	**Red Mountain**	**1.90**	**95**			**Pn**	**19 12 57.9**	**+1.0**
RDMU					IAML		19 13 25.6	
	comp=E,3μm,0.8s							
RDMU					IAML		19 13 28.4	
	comp=N,3μm,0.9s							
Q16A	**Castle Valley**	**1.96**	**159**			**Pn**	**19 12 57.4**	**-0.2**
SRU	**San Rafael Swe**	**2.02**	**144**			**Pn**	**19 12 58.7**	**+0.2**
SRU					IAML		19 13 29.8	
	comp=N,4μm,0.7s							
SRU					IAML		19 13 38.8	
	comp=E,5μm,0.8s							
OWUT	**Old Woman Plat**	**2.03**	**166**			**Pn**	**19 12 59.0**	**+0.3**
AHID	**Auburn Hatcher**	**2.14**	**19**			**Pn**	**19 13 00.8**	**+0.7**
TCRU	**Three Creeks R**	**2.16**	**188**			**Pn**	**19 13 00.2**	**-0.3**
TCRU					IAML		19 13 38.1	
	comp=E,5μm,1.1s							
TCRU					IAML		19 13 39.6	
	comp=N,3μm,0.8s							
IMU	**Iron Mountain**	**2.28**	**202**			**Pn**	**19 13 02.0**	**0.0**
NMUT	**North Mineral**	**2.31**	**196**			**Pn**	**19 13 02.4**	**-0.2**
WLD	**Wild Horse Can**	**2.37**	**195**			**Pn**	**19 13 03.2**	**-0.1**
ELK	**Elko**	**2.42**	**271**	Pn		**Pn**	**19 13 05.6**	**+1.6**
	comp=N,63nm,0.3s,baz=83,slow=9.7,SNR=61							
ELK					Lg	Lg	19 13 41.0	
	comp=N,125nm,0.3s,baz=59,slow=11,SNR=4.5							
	comp=N,135nm,0.3s							
ELK	**Elko**	**2.42**	**271**			**Pn**	**19 13 02.9**	**-1.1**
PSUT	**Pine Spring**	**2.61**	**213**			**Pn**	**19 13 06.3**	**-0.4**
PSUT					IAML		19 13 50.8	
	comp=E,3μm,0.8s							
PSUT					IAML		19 13 52.7	
	comp=N,2μm,0.8s							
MTPU	**Mount Pierson**	**2.71**	**182**			**Pn**	**19 13 07.9**	**-0.3**
PDAR	**Pinedale Array**	**2.75**	**42**	Pn		**Pn**	**19 13 09.4**	**+0.8**
	comp=N,86nm,0.3s,baz=234,slow=13,SNR=345							
PDAR					Pg		**Pb**	**19 13 12.7**	**-0.9**
	comp=N,301nm,0.3s,baz=228,slow=15,SNR=446							
PDAR					Lg	Lg	19 13 48.2	
	comp=N,825nm,0.3s,baz=225,slow=29,SNR=23							
PDAR	**Pinedale Array**	**2.75**	**42**			**Pn**	**19 13 07.3**	**-1.3**
SNOW	**Snow King Moun**	**2.88**	**19**			**Pn**	**19 13 11.1**	**+0.7**
SNOW					IAML		19 13 59.2	
	comp=N,4μm,0.9s							
SNOW					IAML		19 14 06.2	
	comp=N,4μm,1.1s							
O20A	**White River Ci**	**2.98**	**101**	Pn		**Pn**	**19 13 13.0**	**+1.3**
O20A					IAML		19 14 11.1	
	comp=N,4μm,1.1s							
FXWY	**Fox Creek**	**2.98**	**15**			**Pn**	**19 13 12.6**	**+0.8**
FXWY					IAML		19 14 03.2	
	comp=N,2μm,1.2s							
HMU	**Henry Mountain**	**2.99**	**160**		IAML		19 14 07.9	
	comp=E,3μm,0.7s							
HMU					IAML		19 14 36.9	
	comp=N,3μm,1.0s							
LOHW	**Long Hollow**	**3.06**	**20**			**Pn**	**19 13 13.5**	**+0.7**
LOHW					IAML		19 14 01.4	
	comp=N,1μm,0.9s							
LOHW					IAML		19 14 02.1	
	comp=N,3μm,0.8s							
MOOW	**Moose Ponds**	**3.15**	**18**			**Pn**	**19 13 14.6**	**+0.6**
SZCU	**Shurtz Canyon**	**3.25**	**195**		IAML		19 14 16.6	
	comp=E,1μm,0.4s							
HLID	**Hailey**	**3.31**	**329**			**Pn**	**19 13 16.6**	**+0.3**
PKCU	**Pink Cliffs**	**3.31**	**183**		IAML		19 14 32.1	
	comp=N,1μm,2.4s							
PKCU					IAML		19 15 09.7	
	comp=E,1μm,2.0s							
PV14	**Lion Creek, Pa**	**3.34**	**134**		IAML		19 14 13.6	
	comp=E,3μm,0.7s							
CCUT	**Cedar City**	**3.35**	**198**			**Pn**	**19 13 17.1**	**+0.2**
PV22	**Blue Mesa, Par**	**3.36**	**130**			**Pn**	**19 13 17.4**	**+0.5**
PV17	**East Wray Mesa**	**3.44**	**135**		IAML		19 14 20.8	
	comp=E,2μm,0.9s							
PV17					IAML		19 14 28.6	
	comp=N,2μm,1.1s							
FLWY	**Flagg Ranch**	**3.48**	**16**		IAML		19 14 31.3	
	comp=N,2μm,1.4s							
PV18	**Skein Mesa, Pa**	**3.49**	**135**			**Pn**	**19 13 19.1**	**+0.4**
PV07	**Paradox Valley**	**3.50**	**130**			**Pn**	**19 13 17.5**	**-1.4**
PV07					IAML		19 14 15.0	
	comp=N,3μm,0.8s							
PV03	**Paradox Valley**	**3.52**	**134**		IAML		19 14 21.4	
	comp=E,2μm,0.9s							
PV03					IAML		19 14 27.7	
	comp=N,2μm,1.0s							
PV13	**Radium Mtn., P**	**3.60**	**135**		IAML		19 14 26.6	
	comp=N,2μm,1.0s							
YPP	**Pitchstone Pla**	**3.64**	**14**		IAML		19 14 24.7	
	comp=N,661nm,1.5s							
YPP					IAML		19 14 32.2	
	comp=E,718nm,1.4s							
H17A	**Grant Village**	**3.80**	**16**		IAML		19 14 33.2	
	comp=N,555nm,1.4s							
YFT	**Old Faithful**	**3.81**	**13**		IAML		19 14 29.9	
	comp=N,777nm,1.6s							
YFT					IAML		19 14 32.2	
	comp=E,642nm,1.8s							
MOMT	**Monida**	**3.85**	**356**			**Pn**	**19 13 26.9**	**+3.2**
LCMT	**Little Creek M**	**3.85**	**194**		IAML		19 14 31.1	
	comp=E,724nm,0.7s							
ICU	**Indian Springs**	**3.88**	**203**			**Pn**	**19 13 26.1**	**+2.0**
YMR	**Madison River**	**4.00**	**11**			**Pn**	**19 13 24.8**	**-0.9**
YMR					IAML		19 14 47.1	
	comp=N,1μm,1.0s							
YMR					IAML		19 14 51.5	
	comp=E,1μm,1.2s							
YHB	**Horse Butte**	**4.05**	**9**			**Pn**	**19 13 25.7**	**-0.7**
YHB					IAML		19 14 38.9	
	comp=E,456nm,0.9s							
YHB					IAML		19 14 46.9	
	comp=N,514nm,1.2s							
YNR	**Norris Junctio**	**4.09**	**14**			**Pn**	**19 13 25.0**	**-2.0**
YNR					IAML		19 13 54.7	
	comp=N,528nm,1.2s							
YHL	**Hebgen Lake**	**4.15**	**9**		IAML		19 14 53.0	
	comp=N,560nm,1.5s							
YHL					IAML		19 15 01.3	
	comp=E,491nm,1.3s							
YMP	**Mirror Lake Pl**	**4.22**	**19**		IAML		19 14 44.5	
	comp=N,599nm,2.7s							
YMP					IAML		19 15 06.2	
	comp=E,531nm,1.6s							
U15A	**North Rim**	**4.32**	**182**		IAML		19 14 51.6	
	comp=E,618nm,1.2s							
YNE	**Yellowstone No**	**4.51**	**19**		IAML		19 15 00.7	
	comp=E,364nm,1.0s							
K22A	**Casper**	**4.56**	**64**		IAML		19 14 52.0	
	comp=E,1μm,0.6s							
RLMT	**Red Lodge**	**4.82**	**24**		IAML		19 14 57.2	
	comp=E,291nm,1.1s							
RLMT					IAML		19 15 02.5	
	comp=E,270nm,1.1s							
SHPR	**Sheep Range**	**4.89**	**211**		IAML		19 15 04.4	
	comp=E,354nm,1.2s							
TPNV	**Topopah Spring**	**5.01**	**222**		IAML		19 15 08.0	
	comp=E,748nm,0.8s							
TPNV					IAML		19 15 11.3	
	comp=E,483nm,0.9s							
ISCO	**Idaho Springs**	**5.02**	**99**			**Pn**	**19 13 38.5**	**-1.4**
ISCO					IAML		19 15 10.5	
	comp=E,286nm,1.2s							
ISCO					IAML		19 15 22.4	
	comp=E,408nm,2.2s							
S22A	**4UR Ranch, Cre**	**5.05**	**125**			**Pn**	**19 13 41.4**	**+1.2**
S22A					IAML		19 15 09.7	
	comp=E,309nm,1.2s							
WUAZ	**Wupatki**	**5.25**	**174**		IAML		19 15 19.1	
	comp=E,445nm,1.2s							
NVAR	**Mina Array Bea**	**5.35**	**246**	Pn		**Pn**	**19 13 45.2**	**+0.9**
	comp=E,7.3nm,0.3s,baz=64,slow=12,SNR=38							
NVAR					Lg	Lg	19 15 09.9	
	comp=E,12nm,0.3s,baz=79,slow=23,SNR=3.5							
	comp=E,9.2nm,0.4s							
SDCO	**Great Sand Dun**	**5.91**	**118**			**Pn**	**19 13 52.9**	**+0.9**
T25A	**Trinidad**	**6.97**	**119**			**Pn**	**19 14 09.1**	**+2.6**
ANMO	**Albuquerque**	**7.29**	**141**	Pn		**Pn**	**19 14 10.6**	**-0.4**
	comp=E,0.7nm,0.3s,baz=325,slow=12,SNR=12							
ANMO					Pg	Pb	19 14 35.9	+4.9
	comp=E,2.0nm,0.3s,baz=317,slow=14,SNR=10							
ANMO					Lg	Lg	19 16 09.6	
	comp=E,4.4nm,0.3s,baz=295,slow=17,SNR=5.2							
	comp=E,5.0nm,0.6s							
PFO	**Pinyon Flats O**	**7.94**	**208**	Pn		**Pn**	**19 14 21.8**	**+1.9**
	comp=E,0.3nm,0.3s,baz=52,slow=8.1,SNR=6.5							
PFO					Lg	Lg	19 16 31.7	
	comp=E,1.1nm,0.3s,baz=312,slow=23,SNR=7.4							
	comp=E,6.0nm,0.7s							
YBH	**Yreka Blue Hor**	**8.09**	**280**	Pn		**Pn**	**19 14 24.9**	**+3.1**
	baz=110,slow=7.2,SNR=13							
YBH					Lg	Lg	19 16 37.6	
	baz=17,slow=21,SNR=1.2							
NEW	**Newport**	**8.34**	**336**	Pn		**Pn**	**19 14 28.5**	**+3.4**
	comp=E,0.3nm,0.3s,baz=163,slow=16,SNR=8.1							
NEW					Lg	Lg	19 16 42.0	
	comp=E,1.2nm,0.3s,baz=55,slow=16,SNR=7.1							
	comp=E,7.8nm,0.9s							
RTBA	**Rita Blanca**	**8.47**	**118**			**Pn**	**19 14 24.8**	**-2.2**
TXAR	**Lajitas Array**	**13.30**	**146**	Pn		**Pn**	**19 15 36.6**	**+3.5**
	comp=E,0.4nm,0.3s,baz=331,slow=12,SNR=30							
TXAR					Lg	Lg	19 19 22.1	
	comp=E,0.1nm,0.3s,baz=336,slow=34,SNR=2.7							
	comp=E,3.9nm,0.6s							
ULM	**Lac du Bonnet**	**14.77**	**45**	Pn		**Pn**	**19 15 49.4**	**-3.6**
	comp=E,3.1nm,0.3s,baz=223,slow=12,SNR=21							
ULM					Lg	Lg	19 20 02.5	
	comp=E,0.4nm,0.3s,baz=157,slow=17,SNR=4.1							
	comp=E,12nm,0.4s							
P40A	**Paris**	**15.36**	**88**	IAmb		IAmb	19 16 09.4	
	comp=Z,36nm,1.4s							
R40A	**Maddies Statio**	**15.47**	**93**	P		**P**	**19 16 06.0**	**-0.9**
R40A				IAmb		IAmb	19 16 31.4	
	comp=Z,14nm,0.7s							
FFC	**Flin Flon**	**15.51**	**22**			**Pn**	**19 16 02.5**	**-0.4**
L40A	**Anamosa**	**15.69**	**78**	Pn		**Pn**	**19 16 04.7**	**-0.5**
L40A				IAmb		IAmb	19 16 27.2	
	comp=Z,30nm,1.1s							
CCM	**Cathedral Cave**	**16.31**	**93**			**Pn**	**19 16 12.4**	**-0.9**
EYMN	**Ely**	**16.34**	**57**			**Pn**	**19 16 11.5**	**-2.1**
G40A	**Rib Lake**	**16.60**	**67**	Pn		**Pn**	**19 16 16.3**	**-0.6**
FVM	**French Village**	**16.95**	**92**	IAmb		IAmb	19 16 27.9	
	comp=Z,29nm,1.2s							
P43A	**Skaggs, Pawnee**	**17.25**	**86**	IAmb		IAmb	19 16 33.2	
	comp=Z,29nm,0.7s							
HDIL	**Hopedale**	**17.27**	**83**	IAmb		IAmb	19 16 42.4	
	comp=Z,31nm,0.8s							
Q44A	**Meyer Farm, Va**	**17.79**	**88**	Pn		**Pn**	**19 16 30.8**	**-1.0**
Q44A				IAmb		IAmb	19 16 55.8	
	comp=Z,34nm,1.1s							
S44A	**Carbondale**	**17.92**	**92**	IAmb		IAmb	19 16 37.7	
	comp=Z,30nm,1.1s							
WVT	**Waverly**	**19.51**	**96**			**P**	**19 16 51.8**	**+0.3**
T47A	**Sharon Grove**	**19.77**	**93**	IAmb		IAmb	19 17 03.7	
	comp=Z,16nm,0.9s							
P48A	**Milroy**	**20.39**	**85**			**P**	**19 17 00.9**	**-0.2**
P48A				IAmb		IAmb	19 17 06.0	
	comp=Z,49nm,1.4s							
X48A	**Hartselle**	**20.76**	**100**	IAmb		IAmb	19 17 13.6	
	comp=Z,32nm,1.4s							
E46A	**Sault Ste Mari**	**20.82**	**65**	P		**P**	**19 17 05.3**	**-0.5**
E46A				IAmb		IAmb	19 17 10.4	
	comp=Z,43nm,1.2s							
DLBC	**Dease Lake**	**21.07**	**333**	P		**P**	**19 17 10.2**	**+1.9**
	comp=Z,3.5nm,0.9s,baz=114,slow=8.3,SNR=6.5							
DLBC					Lg	Lg	19 23 34.4	
	comp=Z,0.1nm,0.3s,baz=139,slow=20,SNR=1.5							
	comp=Z,3.5nm,0.9s							
O49A	**Covington**	**21.07**	**82**	IAmb		IAmb	19 17 14.9	
	comp=Z,28nm,0.9s							
FCC	**Fort Churchill**	**21.32**	**26**	P		**P**	**19 17 09.9**	**-1.0**
LRAL	**Lakeview Retre**	**21.43**	**103**			**P**	**19 17 12.1**	**-0.2**
LRAL				IAmb		IAmb	19 17 20.1	
	comp=Z,36nm,1.1s							
Y49A	**Blount Mountai**	**21.48**	**100**			**P**	**19 17 12.9**	**-0.1**
Y49A				IAmb		IAmb	19 17 17.2	
	comp=Z,56nm,1.5s							
**Y

	comp=Z,13nm,1.1s								
EKA	**Eskdalemuir Ar**	**66.86**	**36**	P		**P**	**19 23 15.2**	**-0.8**	
	comp=Z,2.7nm,0.9s,baz=288,slow=6.8,SNR=4.2								
	comp=Z,2.7nm,0.9s								
NOA	**NORSAR Array B**	**68.58**	**26**	P		**P**	**19 23 26.9**	**0.0**	
	comp=Z,1.1nm,0.8s,baz=314,slow=6.4,SNR=3.3								
	comp=Z,1.1nm,0.8s								
NRIK	**Noril'sk**	**69.27**	**353**	P		**P**	**19 23 32.3**	**+1.3**	
	comp=Z,0.9nm,0.4s,baz=16,slow=6.7,SNR=4.2								
	comp=Z,0.9nm,0.4s								
NRIK	**Noril'sk**	**69.27**	**353**	IAmb		IAmb	19 23 35.3		
	comp=Z,6.6nm,1.4s								
LPAZ	**La Paz**	**69.87**	**135**	P		**P**	**19 23 35.5**	**-0.5**	
	comp=Z,0.6nm,0.4s,baz=20,slow=5.6,SNR=5.4								
	comp=Z,0.6nm,0.4s								
LPAZ	**La Paz**	**69.87**	**135**	IAmb		IAmb	19 23 42.2		
	comp=Z,2.4nm,1.0s								
HFS	**Hagfors**	**70.08**	**26**	P		**P**	**19 23 37.6**	**+1.5**	
	comp=Z,5.4nm,1.1s,baz=33,slow=8.8,SNR=2.0								
	comp=Z,5.4nm,1.1s								
FINES	**FINESS Array B**	**72.64**	**20**	P		**P**	**19 23 52.7**	**+1.2**	
	comp=Z,1.6nm,0.7s,baz=318,slow=8.2,SNR=5.8								
	comp=Z,1.6nm,0.7s								
SIV	**San Ignacio**	**73.62**	**129**	P		**P**	**19 23 59.4**	**+1.4**	
	comp=Z,2.3nm,0.9s,baz=311,slow=6.7,SNR=4.6								
	comp=Z,2.3nm,0.9s								
ESDC	**Sonseca Array**	**76.62**	**49**	P		**P**	**19 24 15.6**	**+0.4**	
	comp=Z,0.7nm,0.7s,baz=310,slow=5.3,SNR=4.7								
	comp=Z,0.7nm,0.7s								
USRK	**Ussuriysk Ar.**	**77.72**	**319**	P		**P**	**19 24 21.9**	**+0.7**	
	comp=Z,5.5nm,1.0s,baz=31,slow=7.9,SNR=4.3								
	comp=Z,5.5nm,1.0s								
GERES	**GERESS Array B**	**78.76**	**33**	P		**P**	**19 24 28.2**	**+1.2**	
	comp=Z,1.0nm,1.0s,baz=305,slow=4.7,SNR=4.9								
	comp=Z,1.0nm,1.0s								
MJAR	**Matsushiro Arr**	**79.69**	**310**	P		**P**	**19 24 32.6**	**+0.4**	
	comp=Z,3.2nm,1.0s,baz=48,slow=7.5,SNR=6.3								
	comp=Z,3.2nm,1.0s								
MJAR	**Matsushiro Arr**	**79.69**	**310**	IAmb		IAmb	19 24 36.6		
	comp=Z,4.3nm,1.2s								
AKASG	**Malin Array Be**	**82.82**	**24**	P		**P**	**19 24 48.6**	**+0.1**	
AKASG	comp=Z,0.1nm,0.3s,baz=323,slow=4.6,SNR=4.7			LR		LR	20 01 47.9		
	comp=Z,341nm,19.7s,baz=277,slow=36								
	comp=Z,0.1nm,0.3s								
AKASG	**Malin Array Be**	**82.82**	**24**	IAmb		IAmb	19 24 51.4		
	comp=Z,4.1nm,1.4s								
ZALV	**Zalesovo Beam**	**84.56**	**350**	P		**P**	**19 24 56.2**	**-1.1**	
	comp=Z,1.4nm,0.9s,baz=4.3,slow=5.8,SNR=4.8								
	comp=Z,1.4nm,0.9s								
SONM	**Songino Array**	**85.43**	**335**	P		**P**	**19 25 02.1**	**+0.1**	
	comp=Z,0.8nm,0.8s,baz=8.0,slow=3.7,SNR=5.0								
	comp=Z,0.8nm,0.8s								
SONM	**Songino Array**	**85.43**	**335**	IAmb		IAmb	19 25 06.6		
	comp=Z,2.4nm,1.1s								
BVAR	**Borovoye Array**	**86.57**	**359**	P		**P**	**19 25 08.1**	**+0.7**	
	comp=Z,1.3nm,0.7s,baz=349,slow=4.5,SNR=6.3								
	comp=Z,1.3nm,0.7s								
KURK	**Kurchatov**	**88.43**	**353**			**P**	**19 25 14.2**	**-2.1**	
KURBB	**Kurchatov Arra**	**88.53**	**353**	P		**P**	**19 25 16.6**	**-0.3**	
	comp=Z,3.2nm,1.1s,baz=3.3,slow=4.5,SNR=11								
	comp=Z,3.2nm,1.1s								
HHC	**Hu-ho-hao-te**	**89.63**	**328**	*e*P		**P**	**19 25 20.3**	**-2.0**	
HHC				pmax		pmax			
	comp=Z,5.0nm,0.6s								
HHC				pmax		pmax			
	comp=Z,220nm,4.9s								
MKAR	**Makanchi Array**	**91.90**	**350**	P		**P**	**19 25 32.7**	**0.0**	
	comp=Z,1.5nm,1.1s,baz=358,slow=3.6,SNR=6.7								
	comp=Z,1.5nm,1.1s								
MAKZ	**Makanchi**	**91.93**	**350**			**P**	**19 25 30.7**	**-2.1**	
MAKZ				IAmb		IAmb	19 25 36.4		
	comp=Z,3.4nm,1.1s								
NJ2	**Nanjing**	**93.63**	**319**	*e*P		**P**	**19 25 38.8**	**-2.1**	
NJ2				pmax		pmax			
	comp=Z,22nm,0.6s								
WMQ	**Urumqi**	**93.95**	**346**	*e*P		**P**	**19 25 41.3**	**-0.9**	
WMQ				sP		sP	19 25 50.1	+3.1	
WMQ				pmax		pmax			
	comp=Z,13nm,0.7s								
TORD	**Torodi Ar. Bea**	**98.69**	**64**	P		Pdif	19 26 05.6	+1.4	
	comp=Z,0.7nm,0.8s,baz=240,slow=12,SNR=3.2								
	comp=Z,0.7nm,0.8s								
TORD	**Torodi Ar. Bea**	**98.69**	**64**	IAmb		IAmb	19 26 11.2		
	comp=Z,3.7nm,0.9s								
PZH	**PanZhiHua**	**106.09**	**329**	PKP		**PKiKP**	**19 30 47.3**	**-1.7**	
WRA	**Warramunga Arr**	**120.44**	**269**	PKP		**PKPdf**	**19 31 15.9**	**-0.3**	
	comp=Z,1.4nm,0.8s,baz=55,slow=1.9,SNR=19								
ASAR	**Alice Springs**	**122.91**	**266**	PKP		**PKPdf**	**19 31 20.2**	**-0.7**	
	comp=Z,1.8nm,1.1s,baz=82,slow=2.5,SNR=9.1								
VNDA	**Vanda**	**128.57**	**196**	PKP		**PKPdf**	**19 31 30.3**	**+0.2**	
	comp=Z,1.4nm,0.9s,baz=45,slow=4.3,SNR=3.6								

*IDC **18** 19:13:51.2±1.4, 1°.21S×120°.55E, h0km, mb3.2/4, mbtmp3.2/5, ML3.4/1, Error ellipse: s-maj=58.2km s-min=21.5km az=71.0*
*DJA **18** 19:13:52.7±0.1, 1°.5±1°.2×12°.0E±°, h10km, M3.5/30, MLv3.5/30*
ISC 18 19:13:54.4±0.8, 1°.26S±0°.04×120°.48E±0°.04, h23km, n19, σ1s05/24, mb3.2/4, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCI	**Palu**	**0.74**	**299**	P	**Pb**	**19 14 06.7**	**-1.9**
PCI				S	**Sb**	**19 14 18.9**	**+0.6**
APSI	**Ampana**	**1.22**	**73**	P	**Pn**	**19 14 15.2**	**-0.8**
APSI				S	**Sb**	**19 14 33.2**	**+1.2**
MPSI	**Mapaga**	**1.70**	**340**	P	**Pn**	**19 14 21.5**	**-1.1**
MPSI				S	**Sb**	**19 14 47.4**	**+1.6**
TTSI	**Tana Toraja**	**1.89**	**201**	P	**Pn**	**19 14 24.7**	**-0.6**
MMSI	**Mamuju**	**2.12**	**228**	P	**Pn**	**19 14 28.5**	**+0.1**
MRSI	**Marisa**	**2.26**	**40**	P	**Pn**	**19 14 30.6**	**+0.2**
LUWI	**Luwuk**	**2.30**	**85**	P	**Pn**	**19 14 30.4**	**-0.5**
LUWI				S	**Sb**	**19 15 02.0**	**-1.1**
PMSI	**Majene**	**2.72**	**215**	P	**Pn**	**19 14 36.3**	**-0.4**
SPSI	**Sidrap Palu**	**2.78**	**195**	P	**Pn**	**19 14 37.2**	**-0.3**
KKSI	**Kolaka, Sulawe**	**3.11**	**158**	P	**Pn**	**19 14 40.9**	**-1.2**
GTOI	**Gorontalo**	**3.15**	**53**	P	**Pn**	**19 14 44.0**	**+1.3**
KDI	**Kendari**	**3.42**	**141**	P	**Pn**	**19 14 45.8**	**-0.5**
KAPI	**Kappang**	**3.80**	**191**	Pn	**Pn**	**19 14 52.2**	**+0.7**
	2.7nm,0.3s,baz=78,slow=2.9,SNR=7.9						
KAPI				Sn	**Sn**	**19 15 37.4**	**+1.9**
	1.8nm,0.3s,baz=66,slow=20,SNR=2.0						
	5.5nm,0.4s						
KAPI	**Kappang**	**3.80**	**191**	P	**Pn**	**19 14 51.7**	**+0.2**
MKS	**Makassar**	**4.06**	**194**	P	**Pn**	**19 14 55.1**	**0.0**
WRA	**Warramunga Arr**	**22.98**	**145**	P	**P**	**19 18 56.7**	**-0.9**
	0.7nm,1.1s,baz=322,slow=11,SNR=2.5						
	0.7nm,1.1s						
ASAR	**Alice Springs**	**25.79**	**151**	P	**P**	**19 19 25.4**	**+1.5**
	0.3nm,0.8s,baz=331,slow=10,SNR=4.1						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	**58.40**	**330**	P	**P**	**19 23 48.5**	**+0.3**
	0.2nm,0.7s,baz=128,slow=7.9,SNR=2.6						
	0.2nm,0.7s						
KURBB	**Kurchatov Arra**	**62.83**	**331**	P	**P**	**19 24 18.3**	**+0.1**
	0.2nm,0.5s,baz=132,slow=6.8,SNR=1.9						
	0.2nm,0.5s						

*CATAC **18** 19:17:59.1±0.4, 12°.1±1°.8×8°.8W±°, h20km±2km, M3.7/36, MLv3.7/36, Error ellipse: s-maj=3.4km s-min=1.7km az=29.8, confirmed*
*SNET **18** 19:18:02.0±1.1, 12°.23N×87°.75W, h24km, ML3.4, Presumed earthquake*
ISC 18 19:17:58.9±1.5, 12°.06N±0°.04×87°.80W±0°.03, h17km±9km, n57, σ1s04/93, 13D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.94**	**15**	P	**Pg**	**19 18 16.9**	**-0.4**
CSGN				S	**Sn**	**19 18 30.6**	**+0.1**
CRIN	**San Cristobal**	**0.97**	**49**	P	**Pn**	**19 18 17.8**	**-0.1**
CRIN				S	**Sn**	**19 18 32.5**	**+1.2**
ALEN	**Leon**	**0.99**	**67**	S	**Sn**	**19 18 31.3**	**-0.4**
PKGN	**Cerro Pekin**	**1.01**	**53**	P	**Pb**	**19 18 17.7**	**-0.2**
PKGN				S	**Sn**	**19 18 33.0**	**+0.9**
QUEN	**Al S del Volca**	**1.07**	**60**	P	**Pb**	**19 18 18.6**	**-0.4**
QUEN				S	**Sn**	**19 18 33.8**	**+0.2**
HOYN	**Al Sur del Vol**	**1.09**	**61**	P	**Pb**	**19 18 18.7**	**-0.7**
HOYN				S	**Sg**	**19 18 34.0**	**-0.5**
HERN	**Volcan Telica**	**1.09**	**60**	P	**Pb**	**19 18 18.7**	**-0.8**
HERN				S	**Sg**	**19 18 34.1**	**-0.5**
POLN	**Al Sur del Vol**	**1.13**	**59**	P	**Pb**	**19 18 19.0**	**-1.0**
POLN				S	**Sb**	**19 18 33.3**	**-1.2**
CNGA	**Al SSO del Vol**	**1.16**	**68**	P	**Pb**	**19 18 20.3**	**-0.3**
CNGN	**Cerro Negro**	**1.16**	**68**	P	**Pn**	**19 18 20.6**	**+0.1**
CNGN				S	**Sg**	**19 18 39.0**	**+2.3**
MACN	**El Madrono**	**1.17**	**70**	P	**Pn**	**19 18 20.1**	**-0.5**
MACN				S	**Sg**	**19 18 39.2**	**+2.1**
COPN	**Copaltepe**	**1.19**	**84**	P	**Pn**	**19 18 20.4**	**-0.4**
CNCH	**Conchagua**	**1.21**	**359**	P	**Pn**	**19 18 21.0**	**-0.1**
CNCH				S	**Sg**	**19 18 37.6**	**-0.6**
LCND	**La Caada**	**1.24**	**356**	*i* P	**Pb**	**19 18 22.1**	**+0.2**
MOM2	**El Cardon**	**1.34**	**74**	P	**Pn**	**19 18 22.4**	**-0.5**
MOM2				S	**Sb**	**19 18 40.9**	**+0.4**
SAPS	**Ciudad Sandino**	**1.37**	**85**	P	**Pn**	**19 18 22.9**	**-0.4**
SAPS				S	**Sb**	**19 18 41.6**	**+0.2**
APQ3	**Volcan Apoyequ**	**1.42**	**81**	P	**Pn**	**19 18 23.5**	**-0.4**
APQ3				S	**Sb**	**19 18 42.7**	**0.0**
APYN	**Apoyeque**	**1.43**	**83**	P	**Pn**	**19 18 24.1**	**0.0**
RANC	**El Ranchito**	**1.44**	**341**	P	**Pn**	**19 18 23.4**	**-1.0**
RANC				S	**Sb**	**19 18 43.3**	**-0.3**
APQ2	**Apoyeque**	**1.45**	**85**	S	**Sn**	**19 18 43.2**	**+0.2**
ABCN	**Banco Central**	**1.46**	**88**	S	**Sn**	**19 18 43.8**	**+0.5**
AESN	**El Sauce Leon**	**1.48**	**56**	S	**Sb**	**19 18 44.5**	**-0.1**
PACA	**Pacayal**	**1.49**	**340**	P	**Pn**	**19 18 24.8**	**-0.2**
PACA				S	**Sb**	**19 18 44.6**	**-0.2**
PACA	**Pacayal**	**1.49**	**340**	*i* P	**Pn**	**19 18 25.0**	**0.0**
PACA				*e*P	**Pb**	**19 18 25.2**	**-1.0**
ALLN	**Telcor Managua**	**1.50**	**86**	S	**Sn**	**19 18 44.8**	**+0.6**
TISN	**Laguna Tiscapa**	**1.50**	**87**	P	**Pn**	**19 18 25.4**	**+0.3**
MGAN	**Managua**	**1.52**	**87**	S	**Sn**	**19 18 44.9**	**+0.1**
TECA	**Tecapa**	**1.58**	**334**	*e*P	**Pb**	**19 18 27.1**	**-0.7**
MAS3	**Al N del Volca**	**1.59**	**91**	P	**Pn**	**19 18 26.3**	**0.0**
MAS3				S	**Sn**	**19 18 46.9**	**+0.3**
LIMN	**Finca el Limon**	**1.72**	**55**	P	**Pn**	**19 18 27.8**	**-0.5**
LIMN				S	**Sb**	**19 18 51.0**	**-0.5**
TECO	**Alcaldia de Te**	**1.75**	**327**	P	**Pn**	**19 18 28.5**	**0.0**
TECO				S	**Sn**	**19 18 50.5**	**+0.1**
NADN	**Granada**	**1.76**	**100**	P	**Pn**	**19 18 28.3**	**-0.4**
NADN				S	**Sn**	**19 18 50.3**	**-0.4**
SCLA	**Alcaldia de Sa**	**1.86**	**331**	S	**Sn**	**19 18 53.8**	**+0.6**
COEG	**Centro de Oper**	**1.87**	**326**	P	**Pn**	**19 18 31.0**	**+0.7**
COEG				S	**Sn**	**19 18 53.3**	**-0.2**
PAVA	**Las Pavas**	**1.98**	**326**	P	**Pn**	**19 18 31.8**	**0.0**
PAVA				S	**Sn**	**19 18 57.6**	**+1.4**
OCON	**Estacion meteo**	**2.02**	**40**	P	**Pn**	**19 18 32.5**	**+0.2**
OCON				S	**Sn**	**19 18 58.3**	**+1.0**
MATN	**Matagalpa**	**2.03**	**65**	P	**Pn**	**19 18 31.2**	**-1.2**
MATN				S	**Sn**	**19 18 58.2**	**+0.8**
TGUH	**Tegucigalpa,Un**	**2.05**	**15**	P	**Pn**	**19 18 32.9**	**+0.1**
TGUH				S	**Sn**	**19 18 58.7**	**+0.7**
MARCA	**Marcala la Paz**	**2.10**	**354**	P	**Pn**	**19 18 34.0**	**+0.6**
MARCA				S	**Sn**	**19 19 00.3**	**+1.2**
YUSH	**Yuscaran**	**2.10**	**26**	P	**Pn**	**19 18 33.6**	**+0.2**
YUSH				S	**Sn**	**19 18 59.9**	**+0.7**
BOAB	**BOACO BROADBAN**	**2.12**	**79**	P	**Pn**	**19 18 33.6**	**0.0**
BOAB				S	**Sn**	**19 19 00.5**	**+0.8**
P5NO	**Presa 5 de nov**	**2.13**	**334**	S	**Sn**	**19 19 00.6**	**+0.8**
MORN	**Al O del Volca**	**2.17**	**103**	P	**Pn**	**19 18 34.0**	**-0.4**
RCVN	**Varillal2**	**2.18**	**46**	P	**Pn**	**19 18 35.1**	**+0.5**
RCVN				S	**Sn**	**19 19 02.2**	**+1.0**
PMON	**Piamonte**	**2.20**	**318**	S	**Sn**	**19 19 02.7**	**+0.9**
RCPN	**Sur Rio San Ju**	**2.21**	**49**	P	**Pn**	**19 18 35.4**	**+0.4**
RCPN				S	**Sn**	**19 19 03.1**	**+1.1**
JAYA	**Jayaque - finc**	**2.25**	**315**	P	**Pn**	**19 18 35.3**	**-0.3**
JAYA				S	**Sn**	**19 19 03.6**	**+0.5**
INTHN	**La Esperanza I**	**2.26**	**353**	P	**Pn**	**19 18 36.3**	**+0.6**
LLGN	**La Laguna**	**2.37**	**332**	S	**Sn**	**19 19 00.2**	**-5.5**
CEVE	**Cerro Verde**	**2.50**	**315**	P	**Pn**	**19 18 40.7**	**+1.7**
CEVE				S	**Sn**	**19 19 10.5**	**+1.3**
ACON	**Acoyapa**	**2.57**	**92**	P	**Pn**	**19 18 39.8**	**-0.1**
ACON				S	**Sn**	**19 19 11.6**	**+0.8**
ELI1	**Hacienda Flor**	**2.62**	**122**	P	**Pn**	**19 18 41.8**	**+1.3**
NUBE	**Las Nubes**	**2.66**	**314**	P	**Pn**	**19 18 42.2**	**+1.1**
NUBE				S	**Sn**	**19 19 13.0**	**0.0**
MTO3	**Montecristo**	**2.77**	**327**	P	**Pn**	**19 18 43.7**	**+0.9**
JTS	**Las Juntas de**	**3.31**	**122**	P	**Pn**	**19 18 50.3**	**+0.3**
JTS				S	**Sn**	**19 19 29.2**	**+0.3**
DRK0	**Durika**	**5.27**	**121**	P	**Pn**	**19 19 17.2**	**+0.1**
DRK0				S	**Sn**	**19 20 13.7**	**-3.9**
PIRO	**Carate, Puerto**	**5.71**	**129**	P	**Pn**	**19 19 24.8**	**+1.8**

*IDC **18** 19:24:21.9±1.6, 30°.63S×64°.17W, h0km, mb3.1/1, mbtmp3.5/4, ML3.7/3, Error ellipse: s-maj=46.4km s-min=28.5km az=145.0*
*SJA **18** 19:24:22.5±0.7, 29°.95S×64°.35W, h26km±10km, ML3.7, MW3.9*
ISC 18 19:24:23.7±1.8, 30°.04S±0°.04×64°.24W±0°.06, h10km±12km, n24, σ2s02/34, Cordoba Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TCA	**Tanti**	**1.33**	**193**	*e*P	**Pg**	**19 24 48.1**	**-1.2**
TCA				*e*S	**Sg**	**19 25 08.5**	**+2.0**
TCA				IAML		19 25 17.5	
	comp=Z,657nm,0.4s						
ACHE	**Chepes**	**2.37**	**241**	*e*P	**Pn**	**19 25 01.6**	**-1.1**
ACHE				*e*S	**Sn**	**19 25 34.4**	**+2.4**
ACLC	**CERRO LA CRUZ**	**2.43**	**284**	*e*P	**Pn**	**19 25 01.8**	**-1.9**
ACLC				*e*S	**Sn**	**19 25 36.6**	**+2.9**
AANI	**Anillaco**	**2.65**	**297**	*e*P	**Pn**	**19 25 04.4**	**-2.2**
AANI				*e*S	**Sn**	**19 25 35.6**	**-3.3**
AANI				IAML		19 25 52.7	
	comp=Z,841nm,0.9s						
MRA	**San Martin**	**2.69**	**208**	*e*P	**Pn**	**19 25 07.3**	**+0.2**
MRA				*e*S	**Sn**	**19 25 38.9**	**-0.9**
MRA				IAML		19 25 52.6	
	comp=Z,272nm,0.4s						
AVFE	**Valle Fertil**	**2.84**	**257**	*e*P	**Pn**	**19 25 08.0**	**-1.2**
AVFE				*e*S	**Sn**	**19 25 42.0**	**-1.7**
ACAN	**Cantantal**	**3.37**	**228**	*e*P	**Pn**	**19 25 16.6**	**+0.2**
ACAN				IAML		19 26 14.4	
	comp=Z,665nm,0.4s						
TINO	**Tinogasta**	**3.51**	**303**	*e*P	**Pn**	**19 25 18.3**	**-0.2**
TINO				*e*S	**Sb**	**19 25 59.6**	**+0.7**
VCA	**Vinchina**	**3.69**	**290**	*e*P	**Pn**	**19 25 20.6**	**-0.4**
VCA				*e*S	**Sn**	**19 26 02.5**	**-2.2**
VCA				IAML		19 26 05.0	
	comp=Z,139nm,0.8s						
FSA	**Cafayete**	**4.20**	**338**	*e*P	**Pn**	**19 25 28.7**	**+0.7**
FSA				*e*S	**Sb**	**19 26 30.1**	**+1.4**
ACCO	**Cerro Coronel**	**4.21**	**261**	*e*P	**Pn**	**19 25 27.8**	**-0.4**
ACDV	**Cuesta del Vie**	**4.23**	**267**	*e*S	**Sn**	**19 26 21.9**	**+4.0**
ACDV				IAML		19 26 43.8	
	comp=Z,72nm,0.3s						
AROD	**Rodeo**	**4.53**	**267**	*e*P	**Pn**	**19 25 32.7**	**0.0**
ASAL	**Salagasta**	**4.68**	**236**	*e*P	**Pn**	**19 25 30.1**	**-4.5**
ASAL				*e*P	**Pb**	**19 25 35.0**	**-11**
ASAL				*e*S	**Sb**	**19 26 44.1**	**+1.6**
RTLS	**Leoncito**	**4.68**	**247**	*e*P	**Pn**	**19 25 32.1**	**-2.7**
ARCO	**CERRO ARCO**	**4.88**	**234**	*e*P	**Pn**	**19 25 38.3**	**+0.9**
AUSP	**Uspallata**	**4.92**	**242**	*e*P	**Pn**	**19 25 38.4**	**+0.4**
AUSP				*e*S	**Sb**	**19 26 50.1**	**+0.6**
CPUP	**Villa Florida**	**7.13**	**60**	Pn	**Pn**	**19 26 09.0**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=235,slow=17,SNR=7.2						
CPUP				Lg	Lg	19 28 17.6	
	comp=Z,2.4nm,0.3s,baz=140,slow=19,SNR=4.4						
	comp=Z,0.6nm,0.3s						
PLCA	**Paso Flores**	**11.84**	**204**	Lg	Lg	19 30 31.9	
	comp=Z,0.1nm,0.3s,baz=360,slow=19,SNR=3.4						
LPAZ	**La Paz**	**14.14**	**345**	Pn	**P**	**19 27 51.8**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=209,slow=2.4,SNR=2.7						
	comp=Z,0.9nm,0.5s						
SIV	**San Ignacio**	**14.28**	**12**	Pn	**P**	**19 27 53.9**	**+0.5**
	baz=189,slow=13,SNR=9.3						
	comp=Z,2.4nm,0.7s						
TXAR	**Lajitas Array**	**69.99**	**324**	P	**P**	**19 35 38.5**	**+2.8**
	comp=Z,0.1nm,0.5s,baz=149,slow=4.8,SNR=1.5						
	comp=Z,0.1nm,0.5s						
WRA	**Warramunga Arr**	**127.19**	**202**	PKP	**PKPdf**	**19 43 27.2**	**-1.8**
	comp=Z,0.4nm,0.7s,baz=155,slow=1.8,SNR=7.3						
MKAR	**Makanchi Array**	**149.19**	**48**	PKPbc	**PKPab**	**19 44 13.8**	**-3.0**
	comp=Z,0.1nm,0.4s,baz=311,slow=1.5,SNR=1.7						

*MEX **18** 19:49:16.2±1.1, 15°.28N×92°.14W, h169km±8km, MD4.3*
*GCG **18** 19:49:16.7±1.5, 15°.31N×91°.95W, h154km±19km, MD4.2, Presumed earthquake*
ISC 18 19:49:13.0±1.8, 15°.17N±0°.08×92°.15W±0°.06, h175km±11km, n19, σ2s25/35, 1D, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAVE	**Pavencul**	**0.04**	**311**	*e*P	**Pn**	**19 49 37.5**	**+1.1**
PAVE				*e*S	**Sn**	**19 49 53.8**	**-0.6**
CHUJ	**Union Juarez**	**0.08**	**154**	*e*P	**Pn**	**19 49 37.6**	**+1.0**
CHUJ				*e*S	**Sn**	**19 49 55.2**	**+0.7**
PATR	**El Naranjo**	**0.10**	**239**	*e*P	**Pn**	**19 49 37.1**	**+0.6**
PATR				*i* S	**Sn**	**19 49 53.4**	**-1.0**
THIG		**0.28**	**204**	*i* P	**Pn**	**19 49 38.2**	**+1.7**
THIG				*e*S	**Sn**	**19 49 55.8**	**+1.2**
HUEH	**Huehuetenango**	**0.64**	**76**	*i* S	**Sn**	**19 49 55.5**	**-2.0**
RTAL	**Retalhuleu**	**0.77**	**146**	*e*P	**Pn**	**19 49 40.5**	**+1.8**
RTAL				*e*S	**Sn**	**19 49 59.6**	**+1.1**
SOKI	**Kika Raxquin**	**0.80**	**116**	*e*P	**Pn**	**19 49 41.2**	**+1.9**
QUIS	**Sacapulas**	**1.02**	**83**	*i* P	**Pn**	**19 49 41.5**	**+0.9**
QUIS				*i* S	**Sn**	**19 49 59.9**	**-1.9**
STG2	**El Palmar, Qui**	**1.04**	**134**	*e*P	**Pn**	**19 49 40.4**	**-0.3**
STG8	**El Palmar, Qui**	**1.05**	**133**	*e*P	**Pn**	**19 49 40.2**	**-0.7**
STG8				*e*S	**Sn**	**19 50 01.9**	**-0.4**
STG5	**El Palmar, Qui**	**1.08**	**134**	*e*P	**Pn**	**19 49 40.0**	**-1.0**
STG5				*e*S	**Sn**	**19 49 57.8**	**-4.7**
CCIG	**Comitan**	**1.11**	**0**	*e*P	**Pn**	**19 49 42.4**	**+1.1**
CCIG				*e*S	**Sn**	**19 50 01.6**	**-1.6**
APG	**El Apazote**	**1.63**	**95**	*i* P	**Pn**	**19 49 47.5**	**+1.3**
APG				*e*S	**Sn**	**19 50 11.3**	**-0.3**
CMIG	**Matias Romero**	**3.25**	**306**	*e*P	**Pn**	**19 50 06.0**	**+1.4**
CMIG				*i* S	**Sn**	**19 50 42.5**	**-2.3**
HUIG	**Huatulco**	**3.87**	**279**	*i* P	**Pn**	**19 50 13.4**	**+1.1**
HUIG				*i* S	**Sn**	**19 50 54.3**	**-4.3**
NEUV	**Arroyo Zacate**	**4.33**	**306**	*e*P	**Pn**	**19 50 19.7**	**+1.5**
NEUV				*e*S	**Sn**	**19 51 06.8**	**-2.4**
YOIG	**Yosondua**	**5.46**	**289**	*e*P	**Pn**	**19 50 36.8**	**+3.6**
YOIG				*e*S	**Sn**	**19 51 33.3**	**-2.7**
TOIG	**Toxpalan**	**5.54**	**302**	*e*P	**Pn**	**19 50 37.5**	**+3.4**
TOIG				*i* S	**Sn**	**19 51 33.5**	**-4.3**
TXIG	**Tlaxiaco**	**5.79**	**292**	*e*P	**Pn**	**19 50 41.0**	**+3.5**
TXIG				*i* S	**Sn**	**19 51 41.6**	**-2.2**

*IDC **18** 20:02:53.8±3.6, 6°.48N×59°.87E, h0km, mb3.6/7, mbtmp3.6/7, Error ellipse: s-maj=100.6km s-min=29.5km az=75.0*
ISC 18 20:02:58.3±3.7, 6°.5N±0°.3×60°.0E±0°.6, h23km, n10, σ0s96/7, mb3.6/7, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**39.72**	**69**	P	**P**	**20 10 29.6**	**+0.2**
	0.4nm,0.3s,baz=257,slow=5.9,SNR=4.1						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**44.45**	**22**	P	**P**	**20 11 06.2**	**-1.5**
	0.1nm,0.4s,baz=198,slow=4.2,SNR=6.9						
	0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**46.59**	**16**	P	**P**	**20 11 24.0**	**-0.4**
	0.5nm,0.8s,baz=214,slow=8.0,SNR=5.6						
	0.5nm,0.8s						
ZALV	**Zalesovo Beam**	**51.37**	**19**	P	**P**	**20 12 01.9**	**+0.9**
	0.8nm,0.8s,baz=210,slow=7.5,SNR=1.9						
	0.8nm,0.8s						
H04N1	**CROZET ISLANDS**	**52.97**	**187**	T	T	21 09 20.2	
	baz=11,slow=75,SNR=206						
H04N2	**CROZET ISLANDS**	**52.97**	**187**	T	T	21 09 34.9	
	baz=11,slow=75,SNR=199						
H04N3	**CROZET ISLANDS**	**52.99**	**187**	T	T	21 09 21.3	
	baz=11,slow=75,SNR=201						
SONM	**Songino Array

PARRA				*e*Sn	**Sn**	**20 22 16.2**	**-0.9**
PARRA				*i* IAML		20 22 16.8	
PARRA				*i* IAML		20 22 19.8	
PARRA				*i* IAML		20 22 20.9	
PMTG	**Montargil**	**4.99**	**335**	*e*Pn	**Pn**	**20 21 27.6**	**+0.2**
PMTG				*e*Sn	**Sn**	**20 22 23.7**	**-0.5**
PMTG				*i* IAML		20 22 24.3	
PMRV	**Marv??o**	**5.07**	**343**	*e*Pn	**Pn**	**20 21 29.9**	**+1.3**
PMRV				*e*Sn	**Sn**	**20 22 25.2**	**-1.2**
PSARD	**Sardoal**	**5.45**	**338**	*e*Pn	**Pn**	**20 21 34.3**	**+0.6**
PSARD				*e*Sn	**Sn**	**20 22 34.2**	**-1.4**
PSARD				*i* IAML		20 22 34.7	
PSARD				*i* IAML		20 22 37.1	

IDC ***18*** *20:58:29.9±0.6, 5°.87N×125°.61E, h199km±3km, mb3.7/22, mbtmp4.3/25, Error ellipse: s-maj=17.5km s-min=9.6km az=74.0*
NEIC ***18*** *20:58:29.1±1.9, 5°.97N±0°.05×125°.7E±0°.1, h187km±5km, mb4.3/37, Error ellipse: s-maj=16.0km s-min=6.4km az=79.0*
MAN ***18*** *20:58:30.0, 5°.81N×125°.73E, h180km, MS3.8*
DJA ***18*** *20:58:31.8±0.3, 6°N±2°×12°6E±°, h173km±3km, M4.5/19, mb4.6/19, mB4.9/6, MLv4.7/11, Mw(mB)4.2/6*
ISC 18 20:58:29.7±0.6, 5°.82N±0°.04×125°.76E±0°.05, h201km±5km, n95, σ1§65/113, mb4.2/41, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.29**	**350**	*i* P	**Pn**	**20 58 55.8**	**-0.6**
DDMP				*e*S	**S**	**20 59 15.2**	**-2.1**
DAV	**Davao City (W)**	**1.26**	**352**	P	**Pn**	**20 59 01.8**	**+0.3**
	199nm,0.2s,baz=241,slow=3.6,SNR=14						
DAV				S	**S**	**20 59 25.2**	**-0.8**
	996nm,0.6s,baz=73,slow=21,SNR=21						
DAV	**Davao City (W)**	**1.26**	**352**		**Pn**	**20 58 57.8**	**-3.7**
DAV	**Davao City (W)**	**1.26**	**352**	P	**Pn**	**20 59 02.1**	**+0.6**
DAV				S	**S**	**20 59 24.3**	**-1.7**
DMPH	**Davao City--Mi**	**1.28**	**349**	*e*P	**Pn**	**20 59 02.7**	**+1.0**
DMPH				*i* S	**S**	**20 59 26.9**	**+0.5**
KCP	**Kidapawan**	**1.36**	**331**	*i* P	**Pn**	**20 59 02.6**	**+0.2**
KCP				*i* S	**S**	**20 59 26.2**	**-1.3**
CDOP	**Cateel, Davao**	**2.07**	**19**	*i* P	**Pn**	**20 59 09.3**	**+0.3**
CDOP				*i* S	**S**	**20 59 38.7**	**-0.4**
SGSI	**Sangihe**	**2.13**	**186**	P	**Pn**	**20 59 09.7**	**0.0**
SGSI				S	**S**	**20 59 39.3**	**-1.0**
BUKP	**Musuan**	**2.16**	**341**	*i* P	**Pn**	**20 59 10.9**	**+0.8**
BUKP				*i* S	**S**	**20 59 42.1**	**+1.0**
BIPH	**Bislig**	**2.43**	**14**	*e*P	**Pn**	**20 59 13.1**	**+0.2**
BIPH				*e*S	**S**	**20 59 48.6**	**+2.6**
CGP	**Cagayan de Oro**	**2.83**	**338**	*i* P	**Pn**	**20 59 17.7**	**+0.3**
CGP				*i* S	**S**	**20 59 54.1**	**0.0**
TSSP	**Tandag City**	**3.24**	**8**	*e*P	**Pn**	**20 59 29.2**	**+0.5**
ZCP	**Zamboanga City**	**3.83**	**287**	*e*P	**Pn**	**20 59 29.3**	**-0.1**
ZCP				*e*S	**S**	**21 00 16.4**	**+0.8**
SCPH	**Surigao**	**3.95**	**356**	*e*P	**Pn**	**20 59 33.2**	**+2.3**
SCPH				*e*S	**S**	**21 00 17.2**	**-1.3**
TNTI	**Ternate**	**5.26**	**162**	Pn	**Pn**	**20 59 48.3**	**+0.8**
TNTI				Sn	**S**	**21 00 43.8**	**-4.8**
TNTI	**Ternate**	**5.26**	**162**	P	**Pn**	**20 59 47.5**	**0.0**
	0.9nm1μm46nm,0.8s						
TNTI				S	**S**	**21 00 45.7**	**-2.9**
	0.9nm1μm46nm,0.8s						
TOLI2	**Tolitoli**	**6.82**	**227**		**Pn**	**21 00 07.2**	**-0.5**
MYLDM	**Lahad Datu**	**7.25**	**265**		**Pn**	**21 00 15.8**	**+2.5**
MYLDM	**Lahad Datu**	**7.25**	**265**	P	**Pn**	**21 00 16.8**	**+3.5**
	0.2nm59nm,1.3s						
SIJI	**Sorong**	**8.62**	**140**	P	**Pn**	**21 00 32.7**	**+1.6**
	4.0nm,0.4s,baz=220,slow=22,SNR=6.9						
SIJI				S	**S**	**21 02 04.2**	**-3.9**
	11nm,0.3s,baz=83,slow=23,SNR=4.8						
AAI	**Ambon**	**9.75**	**166**	P	**Pn**	**21 00 48.0**	**+2.3**
	35nm,0.4s						
TTSI	**Tana Toraja**	**10.62**	**214**	P	**P**	**21 01 01.1**	**-2.8**
	52nm,0.9s						
SBUM	**Sibu**	**13.91**	**257**		**P**	**21 01 42.1**	**+1.5**
SBUM	**Sibu**	**13.91**	**257**	P	**P**	**21 01 43.6**	**+3.0**
BATI	**Baumata**	**16.05**	**187**	P	**Pn**	**21 02 06.1**	**+1.3**
	12nm,0.3s,baz=338,slow=4.8,SNR=3.8						
GENI	**Genyem**	**16.64**	**120**	P	**Pn**	**21 02 14.7**	**+2.9**
JAY	**Jayapura**	**17.07**	**119**	P	**Pn**	**21 02 17.8**	**+0.9**
	35nm,0.9s,baz=244,slow=1.4,SNR=4.9						
TWG	**Pinlang**	**17.50**	**345**	P	**P**	**21 02 17.8**	**-2.3**
TWG				IAmb	IAmb	21 02 42.0	
	comp=Z,26nm,1.4s						
TPUB	**Ta-pu**	**18.07**	**345**	Pn	**P**	**21 02 25.8**	**-0.6**
TPUB				IAmb	IAmb	21 02 27.7	
	comp=Z,10nm,0.7s						
SSLB	**Suanglung**	**18.46**	**346**	Pn	**P**	**21 02 30.6**	**+0.1**
KNRA	**Kununurra**	**21.56**	**172**	P	**P**	**21 03 04.7**	**+1.1**
KNRA				IAmb	IAmb	21 03 06.2	
	comp=Z,9.8nm,1.1s						
LEM	**Lembang**	**22.04**	**236**	P	**P**	**21 03 09.6**	**+1.1**
	comp=Z,19nm,0.6s,baz=27,slow=13,SNR=4.6						
	comp=Z,19nm,0.6s						
MYKOM	**Kota Tinggi**	**22.22**	**260**	P	**P**	**21 03 08.7**	**-1.4**
MYKOM				IAmb	IAmb	21 03 12.5	
	comp=Z,15nm,1.0s						
BBJI	**Bungbulang**	**22.37**	**234**	P	**P**	**21 03 11.2**	**-0.4**
BBJI				IAmb	IAmb	21 03 13.1	
	comp=Z,6.0nm,0.7s						
PMG	**Port Moresby**	**26.14**	**125**	P	**P**	**21 03 50.3**	**+4.7**
WR0	**Warramunga Arr**	**27.03**	**162**	P	**P**	**21 03 47.2**	**-6.2**
WR0				IAmb	IAmb	21 04 20.1	
	comp=Z,5.2nm,0.8s						
PSA00	**Pilbara Seismi**	**27.83**	**192**	P	**P**	**21 04 00.9**	**+0.4**
PSA00				IAmb	IAmb	21 04 36.1	
	comp=Z,11nm,1.1s						
GSI	**Gunungsitoli**	**28.48**	**262**	P	**P**	**21 04 04.8**	**-1.7**
ENH	**Enshi**	**28.75**	**330**		**P**	**21 04 08.6**	**-0.1**
ENH				IAmb	IAmb	21 04 09.7	
	comp=Z,5.8nm,1.0s						
CMAR	**Chiang Mai Arr**	**29.02**	**298**	P	**P**	**21 04 10.7**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=113,slow=9.3,SNR=10						
	comp=Z,0.9nm,0.6s						
ASAR	**Alice Springs**	**30.36**	**165**	P	**P**	**21 04 23.6**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=346,slow=7.0,SNR=6.0						
ASAR				PcP	**PcP**	**21 07 18.2**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=340,slow=3.2,SNR=3.2						
	comp=Z,0.5nm,0.5s						
PZH	**PanZhiHua**	**30.79**	**315**	P	**P**	**21 04 24.9**	**-1.9**
KSRS	**Korea Array**	**31.55**	**3**	P	**P**	**21 04 34.4**	**+1.2**
	comp=Z,1.6nm,0.7s,baz=183,slow=10,SNR=4.6						
	comp=Z,1.6nm,0.7s						
MJAR	**Matsushiro Arr**	**32.64**	**19**	P	**P**	**21 04 42.5**	**-0.2**
	comp=Z,1.3nm,0.7s,baz=185,slow=9.8,SNR=4.7						
	comp=Z,1.3nm,0.7s						
BJT	**Baijiatuan**	**35.13**	**347**		**P**	**21 05 04.7**	**+0.6**
BJT				IAmb	IAmb	21 05 05.2	
	comp=Z,4.7nm,0.7s						
LZH	**Lanzhou**	**36.23**	**329**	*e*P	**P**	**21 05 14.5**	**+0.8**
LZH				pmax	pmax		
	comp=Z,19nm,1.6s						
HHC	**Hu-ho-hao-te**	**37.13**	**342**	*e*P	**P**	**21 05 22.4**	**+1.2**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,190nm,6.1s						
SHL	**Shillong**	**37.88**	**305**		**P**	**21 05 27.4**	**-0.4**
NWAO	**Narrogin (SRO)**	**39.37**	**191**	P	**P**	**21 05 40.2**	**+0.4**
BBOO	**Buckleboo**	**39.64**	**166**	P	**P**	**21 05 43.3**	**+1.3**
BBOO				IAmb	IAmb	21 06 23.9	
	comp=Z,18nm,1.4s						
STKA	**Stephens Creek**	**40.41**	**159**	P	**P**	**21 05 49.5**	**+1.1**
	comp=Z,0.8nm,0.4s,baz=352,slow=7.1,SNR=4.4						
	comp=Z,0.8nm,0.4s						
STKA	**Stephens Creek**	**40.41**	**159**	P	**P**	**21 05 49.9**	**+1.5**
GTA2	**Gaotai**	**40.91**	**329**	*e*P	**P**	**21 05 53.0**	**+0.4**
GTA2				pP	pP	21 06 28.3	-7.1
GTA2				PcP	**PcP**	**21 07 50.1**	**+1.0**
GTA2				pmax	pmax		
	comp=Z,7.0nm,1.0s						
EVN	**Everest**	**42.99**	**305**		**P**	**21 06 11.0**	**+0.8**
EVN				IAmb	IAmb	21 06 11.6	
	comp=Z,8.7nm,0.6s						
SONM	**Songino Array**	**45.03**	**342**	P	**P**	**21 06 26.0**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=163,slow=8.0,SNR=8.7						
SONM				PcP	**PcP**	**21 08 03.0**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=156,slow=3.9,SNR=11						
	comp=Z,1.1nm,0.8s						
SONM	**Songino Array**	**45.03**	**342**	IAmb	IAmb	21 06 27.7	
	comp=Z,1.4nm,0.9s						
WMQ	**Urumqi**	**50.47**	**325**	*e*P	**P**	**21 07 07.9**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MK31	**Makanchi Array**	**55.30**	**325**	P	**P**	**21 07 42.2**	**-0.3**
MKAR	**Makanchi Array**	**55.30**	**325**	P	**P**	**21 07 42.2**	**-0.2**
	comp=Z,3.8nm,0.6s,baz=122,slow=8.3,SNR=54						
MKAR				PcP	**PcP**	**21 08 39.6**	**-1.0**
	comp=Z,1.3nm,0.7s,baz=123,slow=4.3,SNR=7.5						
MKAR				ScP	**ScP**	**21 12 19.2**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=102,slow=5.1,SNR=2.9						
	comp=Z,3.8nm,0.6s						
MKAR	**Makanchi Array**	**55.30**	**325**	P	**P**	**21 07 41.7**	**-0.8**
MAKZ	**Makanchi**	**55.49**	**325**		**P**	**21 07 43.0**	**-0.8**
MAKZ				IAmb	IAmb	21 07 45.2	
	comp=Z,4.4nm,0.8s						
PRZ	**Przheval'sk**	**55.51**	**319**	P	**P**	**21 07 43.3**	**-0.9**
KSH2	**Kashi**	**56.04**	**314**	P	**P**	**21 07 48.3**	**+0.3**
KSH2				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KDJ	**Kajisay**	**56.16**	**318**	P	**P**	**21 07 48.7**	**-0.2**
KDJ				IAmb	IAmb	21 07 50.6	
	comp=Z,5.5nm,0.9s						
YAK	**Yakutsk**	**56.17**	**2**	P	**P**	**21 07 49.2**	**+0.9**
	comp=Z,17nm,0.8s,baz=268,slow=1.3,SNR=8.8						
	comp=Z,17nm,0.8s						
YAK	**Yakutsk**	**56.17**	**2**	P	**P**	**21 07 47.3**	**-0.9**
NRN	**Naryn**	**56.66**	**317**	P	**P**	**21 07 50.9**	**-1.7**
BOOM	**Boomskoye usch**	**57.14**	**318**	P	**P**	**21 07 56.1**	**+0.4**
AAK	**Ala-Archa**	**58.18**	**317**	P	**P**	**21 08 01.9**	**-1.0**
ZALV	**Zalesovo Beam**	**58.30**	**333**	P	**P**	**21 08 01.9**	**-1.4**
	comp=Z,1.3nm,0.7s,baz=123,slow=5.5,SNR=5.9						
	comp=Z,1.3nm,0.7s						
ZALV	**Zalesovo Beam**	**58.30**	**333**	P	**P**	**21 08 00.8**	**-2.6**
KURBB	**Kurchatov Arra**	**59.47**	**327**	P	**P**	**21 08 10.8**	**-0.6**
	comp=Z,4.9nm,0.6s,baz=123,slow=6.7,SNR=47						
	comp=Z,4.9nm,0.6s						
KURK	**Kurchatov**	**59.47**	**327**		**P**	**21 08 10.6**	**-0.9**
BTK	**Batken**	**59.79**	**313**	P	**P**	**21 08 13.7**	**-0.3**
BTK				IAmb	IAmb	21 08 15.0	
	comp=Z,7.2nm,1.2s						
GAR	**Garm**	**59.81**	**312**	P	**P**	**21 08 13.2**	**-1.0**
SEY	**Seymchan**	**60.24**	**14**	P	**P**	**21 08 18.0**	**+1.5**
	comp=Z,0.4nm,0.4s,baz=220,slow=9.3,SNR=4.4						
	comp=Z,0.4nm,0.4s						
KK31	**Karatay Array**	**61.06**	**317**	P	**P**	**21 08 21.9**	**-0.5**
KK31				IAmb	IAmb	21 08 23.6	
	comp=Z,5.0nm,0.9s						
KKAR	**Karatay Array**	**61.06**	**317**	P	**P**	**21 08 21.2**	**-1.2**
BVAR	**Borovoye Array**	**65.06**	**327**	P	**P**	**21 08 48.0**	**-0.5**
	comp=Z,2.9nm,0.7s,baz=132,slow=8.7,SNR=20						
	comp=Z,2.9nm,0.7s						
TIXI	**Tiksi**	**65.79**	**1**	P	**P**	**21 08 53.3**	**+0.6**
	comp=Z,5.0nm,0.3s,baz=225,slow=2.4,SNR=11						
	comp=Z,5.0nm,0.3s						
TIXI	**Tiksi**	**65.79**	**1**	P	**P**	**21 08 53.2**	**+0.4**
TIXI				IAmb	IAmb	21 08 53.9	
	comp=Z,4.5nm,0.8s						
NRIK	**Noril'sk**	**68.19**	**346**	P	**P**	**21 09 08.0**	**0.0**
	comp=Z,3.2nm,0.5s,baz=123,slow=6.2,SNR=8.8						
	comp=Z,3.2nm,0.5s						
NRIK	**Noril'sk**	**68.19**	**346**	IAmb	IAmb	21 09 08.9	
	comp=Z,4.1nm,0.7s						
AB31	**Akbulak array**	**69.94**	**320**	P	**P**	**21 09 17.6**	**-1.5**
AB31				IAmb	IAmb	21 09 20.2	
	comp=Z,3.3nm,0.7s						
ABKAR	**Akbulak array**	**69.94**	**320**	P	**P**	**21 09 17.7**	**-1.4**
ARTI	**Arti**	**72.75**	**327**	P	**P**	**21 09 34.1**	**-1.8**
ARTI				IAmb	IAmb	21 09 36.2	
	comp=Z,5.8nm,0.6s						
ILAR	**Eielson Array**	**83.65**	**26**	P	**P**	**21 10 35.8**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=237,slow=5.7,SNR=9.8						
	comp=Z,0.8nm,0.7s						
VNDA	**Vanda**	**85.60**	**173**	P	**P**	**21 10 46.7**	**+1.8**
	comp=Z,0.8nm,0.9s,baz=346,slow=8.3,SNR=1.5						
	comp=Z,0.8nm,0.9s						
BRTR	**Keskin Array B**	**87.96**	**310**	P	**P**	**21 10 55.6**	**-1.7**
	comp=Z,0.8nm,0.8s,baz=116,slow=9.8,SNR=2.7						
	comp=Z,0.8nm,0.8s						
ARCES	**ARCESS Array B**	**88.17**	**340**	P	**P**	**21 10 56.2**	**-1.3**
	comp=Z,3.8nm,0.9s,baz=58,slow=5.4,SNR=4.9						
	comp=Z,3.8nm,0.9s						
SPITS	**Spitsbergen Ar**	**88.26**	**349**	P	**P**	**21 10 57.2**	**-0.5**
	comp=Z,2.2nm,0.7s,baz=121,slow=5.6,SNR=4.2						
	comp=Z,2.2nm,0.7s						
FINES	**FINESS Array B**	**89.55**	**332**	P	**P**	**21 11 02.9**	**-1.2**
	comp=Z,1.4nm,0.6s,baz=64,slow=3.2,SNR=5.2						
	comp=Z,1.4nm,0.6s						
YKA	**Yellowknife Ar**	**98.00**	**24**	P	Pdif	21 11 43.6	+0.8
	comp=Z,0.2nm,0.7s,baz=299,slow=5.0,SNR=4.9						
YKA				PKKPbc	**PKKPbc**	**21 28 13.9**	**-4.2**
	comp=Z,0.1nm,0.5s,baz=115,slow=1.7,SNR=3.9						
	comp=Z,0.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**121.34**	**289**	PKP	**PKPdf**	**21 16 59.5**	**-0.5**
	comp=Z,8.8nm,0.7s,baz=82,slow=0.7,SNR=12						
CFA	**Coronel Fontan**	**151.19**	**155**	PKPbc	**PKiKP**	**21 18 00.3**	**0.0**
	comp=Z,0.6nm,0.6s,baz=270,slow=6.1,SNR=4.7						

SOF ***18*** *21:06:13.9, 42°.34N±0°.01×22°.79E±0°.01, h11km±2km, MD2.5/6*
BEO ***18*** *21:06:14.9±0.3, 42°.35N×22°.80E, h5km±1km, ML2.1/18*
SKO ***18*** *21:06:15.3, 42°.31N×22°.83E, h25km, ML2.3*
ISC 18 21:06:14.8±1.0, 42°.35N±0°.02×22°.82E±0°.02, h8km±9km, n30, σ0§59/59, 2C, Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOSS	**Bosilegrad**	**0.29**	**300**	*e*Pg	**Pg**	**21 06 20.7**	**+0.1**
BOSS				*e*Sg	**Sg**	**21 06 24.9**	**+0.4**
VTS	**Vitosha**	**0.41**	**49**	*i*Pg	**Pg**	**21 06 22.5**	**-0.4**
VTS				Sg	**Sg**	**21 06 28.0**	**-0.2**
VTS	**Vitosha**	**0.41**	**49**	*e*Pg	**Pg**	**21 06 22.4**	**-0.4**
VTS				*e*Sg	**Sg**	**21 06 28.1**	**-0.2**
PLNA	**Plana**	**0.47**	**74**	Pg	**Pg**	**21 06 24.1**	**+0.2**
PLNA				Sg	**Sg**	**21 06 30.6**	**+0.5**
TRAN	**Tran**	**0.50**	**346**	Pg	**Pg**	**21 06 24.2**	**-0.3**
TRAN				Sg	**Sg**	**21 06 31.5**	**+0.4**
SOF	**Sofia**	**0.52**	**51**	Pg	**Pg**	**21 06 25.3**	**+0.3**
SOF				S	**Sg**	**21 06 32.5**	**+0.7**
KKB	**Krupnik**	**0.56**	**155**	*i*Pg	**Pg**	**21 06 25.4**	**-0.2**
KKB				Sg	**Sg**	**21 06 33.2**	**+0.3**
BLSH	**Balsha**	**0.61**	**34**	Pg	**Pg**	**21 06 26.7**	**+0.1**
BLSH				Sg	**Sg**	**21 06 35.3**	**+0.6**
BARS	**Barje**	**0.88**	**303**	*e*Pg	**Pg**	**21 06 31.1**	**-0.6**
BARS				*e*Sg	**Sg**	**21 06 42.1**	**-0.9**
ZAPS	**Zavoj**	**0.93**	**352**	*e*Pg	**Pg**	**21 06 32.2**	**-0.6**
ZAPS				*e*Sg	**Sg**	**21 06 45.0**	**+0.1**
VAY	**Valandovo**	**1.04**	**190**	*i*Pg	**Pn**	**21 06 35.7**	**-0.1**
VAY				*i*Sg	**Sg**	**21 06 48.5**	**+0.1**
VAY				*e*Lg	Lg	21 06 48.8	
	comp=E,58nm,0.7s						
VAY				*e*Lg	Lg	21 06 51.0	
	comp=N,59nm,0.5s						
MMB	**Musomishta**	**1.06**	**139**	Pg	**Pg**	**21 06 34.6**	**-0.6**
MMB				Sg	**Sg**	**21 06 48.9**	**-0.1**
SKO	**Skopje**	**1.09**	**250**	*i*Pg	**Pb**	**21 06 36.0**	**+0.1**
SKO				*i*Sg	**Sb**	**21 06 50.5**	**+0.1**
MPEP	**Malo Peshtene**	**1.21**	**34**	Pg	**Pb**	**21 06 37.7**	**-0.4**
MPEP				Sg	**Sb**	**21 06 54.1**	**+0.2**
BLKB	**Belogradchik**	**1.28**	**355**	*e*Pg	**Pn**	**21 06 38.4**	**-0.6**
BLKB				*e*Sg	**Sb**	**21 06 55.4**	**-0.4**
SRS	**Serrai**	**1.36**	**155**	*e*Pg	**Pn**	**21 06 39.6**	**-0.5**
SRS				*e*Sg	**Sb**	**21 06 58.3**	**+0.2**
VALD	**Valchedram**	**1.41**	**18**	Pg	**Pg**	**21 06 42.2**	**+0.2**
PLD	**Plovdiv**	**1.45**	**97**	*e*Pg	**Pn**	**21 06 40.9**	**-0.4**
PLD				*e*Sg	**Sn**	**21 06 59.8**	**-0.7**
SELS	**Selova**	**1.52**	**305**	*e*Pg	**Pn**	**21 06 41.6**	**-0.8**
SELS				*e*Sg	**Sn**	**21 07 02.3**	**-0.1**
ZAGS	**Zajecar**	**1.52**	**344**	*e*Pg	**Pn**	**21 06 42.6**	**+0.2**
ZAGS				*e*Sg	**Sn**	**21 07 02.6**	**+0.2**
RZN	**Rozhen**	**1.57**	**114**	P	**Pn**	**21 06 43.8**	**+0.6**
RZN				Sg	**Sg**	**21 07 06.2**	**+0.8**
BORS2	**Bor- Borsko je**	**1.84**	**342**	*e*Pn	**Pn**	**21 06 46.3**	**-0.4**
BORS2				*e*Sn	**Sn**	**21 07 10.7**	**+0.6**
GOCS	**Kraljevo Serbi**	**1.87**	**311**	*e*Pn	**Pn**	**21 06 46.7**	**-0.6**
GOCS				*e*Sn	**Sn**	**21 07 11.0**	**-0.2**
GRUS	**Gruza**	**2.18**	**316**	*e*Pn	**Pn**	**21 06 51.1**	**-0.3**
GRUS				*e*Sn	**Sn**	**21 07 19.2**	**+0.7**
KUBS	**Kucevo**	**2.22**	**338**	*e*Pn	**Pn**	**21 06 50.0**	**-2.0**
KUBS				*e*Sn	**Sn**	**21 07 20.4**	**+0.7**
SJES	**Sjenica**	**2.28**	**294**	*e*Pn	**Pn**	**21 06 53.6**	**+0.7**
SJES				*e*Sn	**Sn**	**21 07 20.9**	**-0.4**
IVAS	**Ivanjica**	**2.31**	**303**	*e*Pn	**Pn**	**21 06 53.6**	**+0.4**
IVAS				*e*Sn	**Sn**	**21 07 22.2**	**+0.3**
TRUS	**Trudelj**	**2.57**	**318**	*e*Pn	**Pn**	**21 06 58.2**	**+1.4**
TRUS				*e*Sn	**Sn**	**21 07 29.1**	**+0.9**
DIVS	**Divibare**	**2.71**	**311**	*e*Pn	**Pn**	**21 06 59.5**	**+0.8**
DIVS				*e*Sn	**Sn**	**21 07 32.5**	**+0.8**
BBLS	**Lazi&#263i**	**2.92**	**302**	*e*Pn	**Pn**	**21 07 02.6**	**+0.9**
BBLS				*e*Sn	**Sn**	**21 07 37.0**	**0.0**

ISK ***18*** *21:06:55.5, 38°.87N×25°.48E, h7km, ML2.5/21*
ATH ***18*** *21:06:56.2, 38°.84N×25°.57E, h14km±5km, ML2.5/4, Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*
AFAD ***18*** *21:06:57.9, 38°.98N×25°.56E, h7km±4km, ML2.4*
THE ***18*** *21:06:57.3, 39°N±2°×26°E±°, h13km±2km, M2.4/10, MLh2.4/10*
ISC 18 21:06:56.7±1.1, 38°.89N±0°.03×25°.52E±0°.03, h13km±9km, n51, σ0§97/70, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIGR	**SIGRI**	**0.41**	**39**	P	**Pg**	**21 07 05.0**	**+0.1**
SIGR				S	**Sg**	**21 07 10.7**	**+0.2**
SIGR	**SIGRI**	**0.41**	**39**	Pg	**Pg**	**21 07 04.8**	**0.0**
SIGR				Sg	**Sb**	**21 07 11.5**	**-0.5**
SIGR	**SIGRI**	**0.41**	**39**	P	**Pg**	**21 07 04.9**	**0.0**
SIGR				S	**Sg**	**21 07 10.8**	**+0.4**
PRK	**Paraskevi**	**0.68**	**58**	P	**Pg**	**21 07 09.7**	**-0.2**
PRK				S	**Sg**	**21 07 19.0**	**0.0**
PRK	**Paraskevi**	**0.68**	**58**	P	**Pg**	**21 07 09.5**	**-0.5**
PRK				S	**Sg**	**21 07 18.4**	**-0.6**
GPNR	**Gulpinar-Canak**	**0.74**	**40**	Pg	**Pg**	**21 07 10.9**	**-0.1**
GPNR				Sg	**Sb**	**21 07 22.1**	**+0.7**
KOCA	**Canakkale, Ayv**	**0.78**	**38**	P	**Pg**	**21 07 11.3**	**-0.4**
KOCA				S	**Sb**	**21 07 22.8**	**+0.3**
KOCA				IAML		21 07 27.0	
	comp=E,172nm,0.4s						
FOCM	**Foa**	**0.96**	**100**	Pg	**Pg**	**21 07 15.0**	**-0.2**
URLA	**Izmir**	**0.99**	**122**	Pg	**Pb**	**21 07 15.2**	**-0.5**
AYVA	**Ayvalik**	**1.00**	**65**	P	**Pb**	**21 07 15.9**	**+0.1**
AYVA				S	**Sb**	**21 07 29.2**	**+0.2**
AYVA				IAML		21 07 31.0	
	comp=E,166nm,0.5s						
BOZC	**Bozcaada**	**1.04**	**23**	P	Pb	21 07 08.7	-7.8
BOZC				S	**Sb**	**21 07 23.3**	**-6.6**
BOZC				IAML		21 07 26.0	
	comp=N,112nm,0.6s						
LIA	**Limnos Island**	**1.04**	**345**	P	**Pb**	**21 07 16.7**	**+0.1**
LIA				S	**Sn**	**21 07 31.9**	**+0.5**
LIA	**Limnos Island**	**1.04**	**345**	P	**Pb**	**21 07 16.4**	**-0.1**
LIA				S	**Sg**	**21 07 31.3**	**+1.0**
EZNE	**Ezine-Canakkal**	**1.08**	**37**	Pn	**Pb**	**21 07 17.6**	**+0.3**
DKL	**Dikili**	**1.09**	**80**	Pn	**Pb**	**21 07 17.4**	**0.0**
EZN	**Ezine**	**1.12**	**33**	P	**Pb**	**21 07 17.3**	**-0.6**
EZN				S	**Sn**	**21 07 33.3**	**-0.1**
EZN	**Ezine**	**1.12**	**33**	Pn	**Pb**	**21 07 18.1**	**+0.2**
KYMI	**Kymi, Euboea I**	**1.14**	**257**	P	**Pn**	**21 07 18.3**	**0.0**
KYMI	**Kymi, Euboea I**	**1.14**	**257**	P	**Pn**	**21 07 18.2**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**1.16**	**43**	P	**Pb**	**21 07 18.4**	**-0.3**
BAYC				S	**Sb**	**21 07 33.2**	**-0.5**
KARY	**Karystos**	**1.21**	**225**	P	**Pn**	**21 07 18.8**	**-0.5**
KARY				S	**Sb**	**21 07 36.1**	**+1.2**
KARY	**Karystos**	**1.21**	**225**	P	**Pn**	**21 07 18.7**	**-0.5**
KARY				S	**Sb**	**21 07 33.8**	**-1.1**
ECEA	**Canakkale, Ece**	**1.26**	**23**	P	**Pn**	**21 07 19.9**	**-0.1**
ECEA				S	**Sb**	**21 07 36.2**	**-0.1**
ECEA				IAML		21 07 40.0	
	comp=N,188nm,0.4s						
ECEA				IAML		21 07 41.0	
	comp=E,186nm,0.3s						
BLCB	**Balcova**	**1.29**	**112**	P	**Pn**	**21 07 20.0**	**-0.5**
BLCB

IDC 18 21:20:36.2±4.0, 11°54N×57°46E, h0km, mb3.5/5, mbtmp3.5/5, MS3.7/2, Error ellipse: s-maj=102.3km s-min=39.7km az=78.0, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRDH	**Bariadhala**	**34.42**	**67**	LR	LR	21 41 23.4	
	comp=Z,113nm,18.1s,baz=157,slow=36						
CMAR	**Chiang Mai Arr**	**40.59**	**75**	P	P	21 28 17.9	-0.2
	0.8nm,0.7s,baz=276,slow=7.3,SNR=6.3						
	0.8nm,0.7s						
MKAR	**Makanchi Array**	**40.93**	**26**	P	P	21 28 20.7	+0.3
	0.2nm,0.5s,baz=213,slow=8.6,SNR=2.5						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**47.56**	**22**	P	P	21 29 12.9	-0.5
	0.6nm,0.4s,baz=215,slow=8.3,SNR=4.5						
	0.6nm,0.4s						
FITZ	**Fitzroy Crossi**	**73.44**	**113**	LR	LR	21 56 39.1	
	comp=Z,48nm,20.3s,baz=206,slow=30						
WRA	**Warramunga Arr**	**81.85**	**112**	P	P	21 32 58.2	+0.2
	0.3nm,0.7s,baz=286,slow=5.4,SNR=1.9						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**82.46**	**116**	P	P	21 33 01.1	-0.1
	0.3nm,0.7s,baz=284,slow=5.6,SNR=2.5						
	0.3nm,0.7s						

*UUSS **18** 21:22:58.5±1.1, 40.74N±0.01×112.05W±0.02, h9km±2km, Error ellipse: s-maj=1.9km s-min=1.8km az=208.0*
*NEIC **18** 21:22:58.6±1.0, 40.75N±0.01×112.06W±0.02, h5km±1km, ML2.8/96, ML2.8/10(UUSS), Error ellipse: s-maj=2.1km s-min=1.5km az=89.0*
*IDC **18** 21:22:59.3±1.0, 40.91N×112.06W, h0km, mbtmp2.7/3, ML3.0/3, Error ellipse: s-maj=16.0km s-min=5.8km az=154.0*

ISC 18 21:22:58.7±0.8, 40°75N±0°02×112°05W±0°02, h10km±6km, n64, σ1§34/77, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOQ	**North Oquirrh**	**0.11**	**208**		**Pg**	**21 23 01.5**	**0.0**
NOQ					**Sg**	**21 23 03.4**	**-0.2**
HRU	**Hogsback Ridge**	**0.13**	**74**		**Pg**	**21 23 01.9**	**+0.1**
SAIU	**Southern Antel**	**0.14**	**317**		**Sg**	**21 23 04.4**	**+0.1**
SAIU	**Southern Antel**	**0.14**	**317**		**Pg**	**21 23 02.1**	**+0.1**
RBU	**Red Butte Cany**	**0.19**	**80**		**Pg**	**21 23 02.8**	**0.0**
MHD	**Mile High Driv**	**0.21**	**115**		**Pg**	**21 23 03.1**	**0.0**
CTU	**Camp Tracy**	**0.24**	**104**		**Pg**	**21 23 03.5**	**-0.1**
CTU				Sg	**Sg**	**21 23 06.6**	**-0.3**
CTU				IAML		21 23 07.5	
	comp=N,1μm,0.3s						
CTU				IAML		21 23 07.8	
	comp=E,1μm,0.2s						
GMU	**Granite Mounta**	**0.28**	**128**		**Pg**	**21 23 04.3**	**-0.1**
NAIU	**Northern Antel**	**0.30**	**333**		**Pg**	**21 23 05.0**	**+0.2**
WTU	**Western Traver**	**0.30**	**166**		**Pg**	**21 23 05.3**	**+0.5**
CWU	**Camp Williams**	**0.31**	**187**		**Pg**	**21 23 05.0**	**+0.1**
FPU	**Francis Peak**	**0.32**	**30**		**Pg**	**21 23 05.5**	**+0.2**
AAU	**Alta**	**0.35**	**116**		**Pg**	**21 23 05.8**	**0.0**
SNUT	**Stansbury Nort**	**0.37**	**292**		**Pg**	**21 23 06.3**	**+0.2**
TCVU	**Timpanogos Cav**	**0.40**	**139**		**Pg**	**21 23 06.6**	**0.0**
TCUT	**Toone Canyon**	**0.61**	**53**		**Pg**	**21 23 10.8**	**+0.2**
TCUT				Sg	**Sb**	**21 23 20.0**	**-0.4**
SPUT	**South Promonto**	**0.63**	**332**		**Pg**	**21 23 11.1**	**+0.1**
SPUT				Sg	**Sg**	**21 23 19.6**	**+0.3**
BGU	**Big Grassy Mou**	**0.76**	**284**		**Pg**	**21 23 13.4**	**0.0**
BGU				Sg	**Sg**	**21 23 23.6**	**+0.2**
BGU				IAML		21 23 25.9	
	comp=N,422nm,0.3s						
NLU	**North Lily Min**	**0.79**	**181**		**Pg**	**21 23 13.9**	**-0.1**
NLU					**Sb**	**21 23 26.4**	**+0.8**
MPU	**Maple Canyon**	**0.80**	**156**		**Pg**	**21 23 14.4**	**+0.3**
MPU				Sg	**Sb**	**21 23 25.8**	**+0.1**
MPU				IAML		21 23 28.5	
	comp=N,338nm,0.5s						
MPU				IAML		21 23 28.7	
	comp=E,239nm,0.6s						
DUG	**Dugway, Tooele**	**0.80**	**227**		**Pb**	**21 23 14.5**	**-0.3**
DUG				Sg	**Sg**	**21 23 25.1**	**+0.5**
DUG				IAML		21 23 29.1	
	comp=E,389nm,0.5s						
DUG				IAML		21 23 30.6	
	comp=E,320nm,0.5s						
HWUT	**Hardware Ranch**	**0.93**	**23**		**Pg**	**21 23 16.2**	**-0.4**
HWUT				Sg	**Sg**	**21 23 28.6**	**-0.1**
HWUT				IAML		21 23 30.8	
	comp=E,229nm,0.3s						
HWUT				IAML		21 23 31.9	
	comp=E,168nm,0.5s						
BSUT	**Blindstream Ca**	**1.00**	**102**		**Pg**	**21 23 17.8**	**-0.2**
BSUT				Sg	**Sg**	**21 23 31.1**	**0.0**
BSUT				IAML		21 23 35.3	
	comp=N,260nm,0.9s						
HVU	**Hansel Valley**	**1.16**	**332**		**Pg**	**21 23 20.4**	**-0.7**
HVU				Sg	**Sb**	**21 23 36.4**	**+0.1**
HVU				IAML		21 23 39.9	
	comp=E,207nm,0.5s						
HVU				IAML		21 23 42.7	
	comp=N,230nm,0.8s						
BEI	**Bear River Ran**	**1.38**	**8**		**Pn**	**21 23 24.5**	**+0.3**
FSU	**Fish Springs**	**1.45**	**225**		**Pn**	**21 23 25.6**	**+0.5**
P17A	**Butcher Ranch,**	**1.62**	**141**		**Pn**	**21 23 27.8**	**+0.2**
P17A					**Sn**	**21 23 49.2**	**+0.6**
P18A	**Preston Nutter**	**1.78**	**128**		**Pb**	**21 23 31.5**	**-0.1**
P18A					**Sn**	**21 23 54.0**	**+1.4**
P18A				IAML		21 23 55.9	
	comp=E,91nm,0.5s						
P18A				IAML		21 23 56.7	
	comp=N,57nm,0.5s						
RDMU	**Red Mountain**	**1.90**	**95**		**Pb**	**21 23 33.0**	**-0.5**
Q16A	**Castle Valley**	**1.95**	**159**		**Pn**	**21 23 32.2**	**+0.1**
SRU	**San Rafael Swe**	**2.02**	**144**		**Pn**	**21 23 34.0**	**+1.1**
SRU				IAML		21 24 04.7	
	comp=N,50nm,0.6s						
SRU				IAML		21 24 05.3	
	comp=E,52nm,0.7s						
AHID	**Auburn Hatcher**	**2.14**	**19**		**Pn**	**21 23 36.0**	**+1.4**
TCRU	**Three Creeks R**	**2.16**	**188**		**Pb**	**21 23 37.2**	**-0.8**
TCRU				IAML		21 24 13.1	
	comp=E,48nm,1.0s						
TCRU				IAML		21 24 14.2	
	comp=N,42nm,0.8s						
ELK	**Elko**	**2.42**	**271**	Pn	**Pb**	**21 23 41.6**	**-0.9**
	comp=N,1.8nm,0.3s,baz=83,slow=10,SNR=24						
ELK				Lg	Lg	21 24 14.7	
	comp=N,6.0nm,0.3s,baz=189,slow=19,SNR=12						
	comp=N,6.2nm,0.3s						
ELK	**Elko**	**2.42**	**271**		**Pn**	**21 23 39.8**	**+1.3**
ELK				IAML		21 24 17.2	
	comp=N,29nm,0.3s						
PSUT	**Pine Spring**	**2.61**	**213**		**Pn**	**21 23 41.7**	**+0.6**
PSUT				IAML		21 24 25.4	
	comp=E,40nm,0.8s						
PSUT				IAML		21 24 27.7	
	comp=N,41nm,0.7s						
MTPU	**Mount Pierson**	**2.71**	**182**		**Pn**	**21 23 44.7**	**+2.1**
BW06	**Boulder Array**	**2.75**	**42**		**Pn**	**21 23 45.2**	**+2.2**
BW06				IAML		21 24 26.0	
	comp=N,57nm,0.4s						
BW06				IAML		21 24 26.6	
	comp=N,43nm,0.4s						
PD31	**Pinedale Array**	**2.75**	**42**		**Pn**	**21 23 44.2**	**+1.2**
PDAR	**Pinedale Array**	**2.75**	**42**	Pg	**Pb**	**21 23 47.3**	**-0.7**
	comp=N,8.0nm,0.3s,baz=228,slow=15,SNR=139						
PDAR				Lg	Lg	21 24 23.7	
	comp=N,18nm,0.3s,baz=236,slow=28,SNR=24						
PDAR	**Pinedale Array**	**2.75**	**42**		**Pn**	**21 23 45.1**	**+2.1**
SNOW	**Snow King Moun**	**2.88**	**19**		**Pn**	**21 23 47.6**	**+2.7**
SNOW				IAML		21 24 31.6	
	comp=N,38nm,0.5s						
SNOW				IAML		21 24 32.0	
	comp=N,44nm,0.4s						
O20A	**White River Ci**	**2.97**	**101**		**Pn**	**21 23 49.2**	**+3.1**
O20A				IAML		21 24 38.4	
	comp=N,44nm,0.5s						
FXWY	**Fox Creek**	**2.98**	**14**		**Pn**	**21 23 47.7**	**+1.4**
HMU	**Henry Mountain**	**2.99**	**160**		**Pn**	**21 23 47.7**	**+1.4**
HMU				IAML		21 24 40.6	
	comp=N,30nm,0.5s						
HMU				IAML		21 24 43.8	
	comp=E,27nm,0.7s						
LOHW	**Long Hollow**	**3.06**	**20**		**Pn**	**21 23 48.8**	**+1.5**
LOHW				IAML		21 24 37.4	
	comp=E,27nm,0.8s						
LOHW				IAML		21 24 39.1	
	comp=E,20nm,0.4s						
MOOW	**Moose Ponds**	**3.15**	**18**		**Pn**	**21 23 49.3**	**+0.8**
SZCU	**Shurtz Canyon**	**3.25**	**195**		**Pn**	**21 23 51.7**	**+1.8**
SZCU				IAML		21 24 52.9	
	comp=E,15nm,0.4s						
PV23	**Carpenter Ridg**	**3.28**	**133**		**Pn**	**21 23 53.1**	**+2.7**
HLID	**Hailey**	**3.31**	**329**		**Pn**	**21 23 52.6**	**+1.9**
PV14	**Lion Creek, Pa**	**3.33**	**134**		**Pn**	**21 23 53.4**	**+2.3**
PV14				IAML		21 24 45.3	
	comp=E,34nm,0.7s						
PV20	**West Nyswonger**	**3.39**	**134**		**Pn**	**21 23 54.4**	**+2.6**
PV11	**David Mesa, Pa**	**3.47**	**134**		**Pn**	**21 23 54.7**	**+1.8**
FLWY	**Flagg Ranch**	**3.48**	**16**		**Pn**	**21 23 53.9**	**+0.8**
FLWY				IAML		21 24 46.0	
	comp=E,13nm,3.5s						
PV18	**Skein Mesa, Pa**	**3.49**	**135**		**Pn**	**21 23 55.0**	**+1.9**
PV07	**Paradox Valley**	**3.50**	**130**		**Pn**	**21 23 55.9**	**+2.6**
PV03	**Paradox Valley**	**3.52**	**134**		**Pn**	**21 23 53.0**	**-0.5**
PV03				IAML		21 24 52.2	
	comp=N,23nm,0.4s						
PV03				IAML		21 24 57.0	
	comp=E,26nm,0.6s						
PV13	**Radium Mtn., P**	**3.60**	**135**		**Pn**	**21 23 56.1**	**+1.4**
PV13				IAML		21 24 57.0	
	comp=N,26nm,0.6s						
YPP	**Pitchstone Pla**	**3.64**	**14**		**Pn**	**21 23 57.7**	**+2.4**
YPP				IAML		21 25 01.8	
	comp=E,9.7nm,1.1s						
HAYD	**Hayden**	**3.65**	**92**		**Pn**	**21 23 57.7**	**+2.2**
PV01	**Paradox Valley**	**3.75**	**133**		**Pn**	**21 23 58.2**	**+1.3**
PV01				IAML		21 25 01.6	
	comp=N,17nm,0.6s						
PV01				IAML		21 25 06.2	
	comp=E,16nm,0.8s						
YHL	**Hebgen Lake**	**4.15**	**9**		**Pn**	**21 24 04.5**	**+2.2**
YHL				IAML		21 25 12.2	
	comp=E,9.6nm,4.5s						
YHL				IAML		21 25 57.4	
	comp=N,6.9nm,2.8s						
NVAR	**Mina Array Bea**	**5.36**	**246**	Pn	**Pn**	**21 24 21.8**	**+3.0**
	comp=N,0.3nm,0.3s,baz=60,slow=14,SNR=3.0						
NVAR				Lg	Lg	21 25 47.0	
	comp=N,1.5nm,0.3s,baz=58,slow=38,SNR=9.7						
	comp=N,0.3nm,0.4s						
TXAR	**Lajitas Array**	**13.29**	**146**	Pn	**P**	**21 26 13.9**	**-3.4**
	baz=329,slow=18,SNR=3.6						
TXAR				Lg	Lg	21 30 01.6	
	baz=337,slow=32,SNR=1.6						
	comp=N,0.1nm,0.3s						

*FUNV **18** 21:40:50.0, 10.92N×61.57W, h115km, MW4.0, Presumed earthquake*
*TRN **18** 21:40:50.6, 10.83N×62.01W, h86km, MD3.6, North of the Paria peninsula.*

ISC 18 21:40:49.9±2.7, 10°85N±0°09×62°0W±0°2, h94km±16km, n18, σ1§27/36, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMDM	**Guralp CMG5TDE**	**0.46**	**109**	*eP*	**Pn**	**21 41 05.2**	**+0.4**
DMDM				*eS*	**Sn**	**21 41 15.8**	**0.0**
PSMG	**Mucurapo Girls**	**0.48**	**111**	*eP*	**Pn**	**21 41 06.0**	**+1.0**
PSMG				*eS*	**Sn**	**21 41 16.0**	**-0.1**
TRN	**Trinidad (W)**	**0.61**	**109**	*eP*	**Pn**	**21 41 06.3**	**+0.3**
TRN				*eS*	**Sn**	**21 41 17.6**	**-0.3**
TRN	**Trinidad (W)**	**0.61**	**109**	*eP*	**Pn**	**21 41 06.9**	**+0.9**
TRN				*eS*	**Sn**	**21 41 17.8**	**-0.2**
TPP	**Pointe-a-Pierr**	**0.75**	**135**	*eP*	**Pn**	**21 41 07.0**	**-0.3**
TPP				*eS*	**Sn**	**21 41 18.5**	**-1.7**
GRFF	**Grenada Fort F**	**1.22**	**12**	*eP*	**Pn**	**21 41 12.3**	**-0.2**
GRFF				*eS*	**Sn**	**21 41 28.9**	**-0.6**
GRGR	**Grenville**	**1.32**	**14**	*eP*	**Pn**	**21 41 13.7**	**0.0**
GRGR				*eS*	**Sn**	**21 41 30.4**	**-1.2**
GRGR	**Grenville**	**1.32**	**14**	*eP*	**Pn**	**21 41 13.9**	**+0.2**
GRGR				*eS*	**Sn**	**21 41 31.4**	**-0.2**
GRW	**Mount Saint Ca**	**1.34**	**14**	*eP*	**Pn**	**21 41 15.2**	**+1.1**
GRW				*eS*	**Sn**	**21 41 32.8**	**+0.6**
GRSS	**Sisters**	**1.49**	**14**	*eP*	**Pn**	**21 41 16.5**	**+0.7**
GRSS				*eS*	**Sn**	**21 41 35.5**	**+0.2**
SVB	**Belmont**	**2.52**	**17**	*eP*	**Pn**	**21 41 26.5**	**-2.6**
SVB				*eS*	**Sn**	**21 41 54.9**	**-4.3**
SVB	**Belmont**	**2.52**	**17**	*eP*	**Pn**	**21 41 30.5**	**+1.4**
SVB				*eS*	**Sn**	**21 41 58.8**	**-0.4**
MCLT	**Moule a Chique**	**3.02**	**20**	*eP*	**Pn**	**21 41 37.4**	**+1.5**
MCLT				*eS*	**Sn**	**21 42 11.4**	**+0.1**
SLAC	**Saint Lucia, A**	**3.21**	**19**	*eP*	**Pn**	**21 41 39.4**	**+0.9**
SLAC				*eS*	**Sn**	**21 42 15.9**	**0.0**
SLBI	**Saint Lucia, B**	**3.31**	**17**	*eP*	**Pn**	**21 41 41.3**	**+1.6**
SLBI				*eS*	**Sn**	**21 42 16.8**	**-1.3**
BIM	**Bigot**	**3.75**	**14**	*eP*	**Pn**	**21 41 47.1**	**+1.3**
BIM				*eS*	**Sn**	**21 42 28.8**	**-0.3**
DSLB	**Salisbury**	**4.60**	**7**	*eP*	**Pn**	**21 41 58.1**	**+1.0**
DSLB				*eS*	**Sn**	**21 42 48.4**	**-1.0**
MMLZ	**Guadeloupe Bro**	**5.17**	**3**	*eP*	**Pn**	**21 42 06.3**	**+1.3**
MMLZ				*eS*	**Sn**	**21 43 02.0**	**-1.4**

*IDC **18** 22:08:17.0±0.5, 40.44N×124.32W, h0km, mb4.3/27, mbtmp4.3/31, ML4.9/5, MS4.3/77, Error ellipse: s-maj=9.7km s-min=7.2km az=38.0*
*BJI **18** 22:08:17.0, 40.30N×124.40W, h24km, mB5.2/5, mb4.6/14, Ms5.2/5, Ms7 4.8/4*
*MOS **18** 22:08:18.3±1.1, 40.38N×124.29W, h17km, mb4.9/32, MS4.7/4, Error ellipse: s-maj=7.1km s-min=6.2km az=92.1*
*PMR **18** 22:08:19.0, 40.33N×124.54W, h13km*
*NEIC **18** 22:08:19.1, 40.33N×124.49W, h26km, Moment Tensor Solution. Duration: 2§1 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.01; $M_{\theta\theta}$-8.30; $M_{\phi\phi}$8.31; $M_{r\theta}$-0.33; $M_{\theta\phi}$-1.99; $M_{r\phi}$2.77; Fault plane solution: $M_0$8.98000×10^{16} NP1:ϕ_s39.47000°, δ78.37000°, λ11.86000°. NP2:ϕ_s307.04000°, δ78.39000°, λ168.12000°. Principal axes: T 9.3691, Plg17.0000°, Azm263.0000°; N -0.8366, Plg73.0000°, Azm83.0000°; P -8.5325, Plg0.0000°, Azm353.0000°;*
*NEIC **18** 22:08:19.9, 40.32N×124.44W, h25km*
*NEIC **18** 22:08:19.1, 40.33N×124.49W, h26km*
*NEIC **18** 22:08:20.6±2.1, 40.36N±0.03×124.39W±0.06, h25km±3km, mb4.9/76, ML5.0/94, Mwr5.1/67, Mww5.2/70, Mwr5.2/5(NCEDC), Error ellipse: s-maj=6.2km s-min=4.5km az=78.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.40; $M_{\theta\theta}$-5.40; $M_{\phi\phi}$4.99; $M_{r\theta}$0.54; $M_{\theta\phi}$-0.51; $M_{r\phi}$2.14; Fault plane solution: $M_0$5.68000×10^{16} NP1:ϕ_s43.92000°, δ79.90000°, λ20.18000°. NP2:ϕ_s310.23000°, δ70.15000°, λ169.25000°. Principal axes: T 5.8439, Plg21.0000°, Azm268.0000°; N -0.3490, Plg68.0000°, Azm69.0000°; P -5.4950, Plg7.0000°, Azm176.0000°;*
*NCEDC **18** 22:08:20.9±1.9, 40.35N±0.04×124.46W±0.07, h29km±4km Error ellipse: s-maj=7.4km s-min=5.3km az=80.0*
*GFZ **18** 22:08:22.0, 40.58N×124.14W, h25km, MW5.2, Moment Tensor Solution. s28 Moment tensor: M_{rr}0.10; $M_{\theta\theta}$-7.06; $M_{\phi\phi}$6.95; $M_{r\theta}$0.07; $M_{\theta\phi}$-1.47; $M_{r\phi}$-1.53; Fault plane solution: NP1:ϕ_s128.00000°, δ81.00000°, λ172.00000°. NP2:ϕ_s219.00000°, δ82.00000°, λ8.00000°.*
*GCMT **18** 22:08:23.6±0.2, 40.40N±0.01×124.47W±0.01, h34km±1km, MW5.3/140, Moment Tensor Solution. s75,c101; s140,c229; Duration: 1§1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.17±.03; $M_{\theta\theta}$-1.12±.02; $M_{\phi\phi}$0.95±.02; $M_{r\theta}$-0.10±.03; $M_{\theta\phi}$-0.29±.02; $M_{r\phi}$0.20±.03; Best double couple: $M_0$1.10500×10^{17} NP1:ϕ_s38.00000°, δ78.00000°, λ8.00000°. NP2:ϕ_s306.00000°, δ83.00000°, λ168.00000°. Principal axes: T 1.0460, Plg14.0000°, Azm262.0000°; N 0.1160, Plg76.0000°, Azm95.0000°; P -1.1640, Plg3.0000°, Azm353.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 22:08:21.2±0.4, 40°33N±0°03×124°33W±0°04, h28km±2km, n619, σ1§14/578, mb4.7/83, MS4.4/77, 3C-3D, Near coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETL	**Petrolia**	**0.04**	**196**		**Pb**	**22 08 26.2**	**+0.3**
PETL					**Sb**	**22 08 30.2**	**+1.1**
KCTM	**Capetown**	**0.15**	**357**		**Pn**	**22 08 27.1**	**-0.6**
KMPM	**Mount Pierce**	**0.18**	**61**		**Pn**	**22 08 27.7**	**-0.5**
KMPM					**Sb**	**22 08 32.7**	**+1.6**
KSMM	**Slide Mountain**	**0.18**	**141**		**Pn**	**22 08 27.7**	**-0.5**
FER	**Ferndale**	**0.25**	**11**		**Pb**	**22 08 28.2**	**+0.4**
BRIC	**Briceland Vine**	**0.40**	**123**		**Pn**	**22 08 30.8**	**-0.2**
BRIC	**Briceland Vine**	**0.40**	**123**	IAML		22 08 40.6	
	comp=N,219μm,0.7s						
KCRM	**Chalk Rock**	**0.40**	**76**		**Pn**	**22 08 30.7**	**-0.5**
KMRM	**Mail Ridge**	**0.48**	**103**		**Pn**	**22 08 32.4**	**+0.1**
KMRM					**Sn**	**22 08 41.2**	**+1.3**
JCC	**Jacoby Creek,**	**0.54**	**25**		**Pb**	**22 08 31.3**	**-0.8**
JCC					**Sb**	**22 08 38.6**	**-0.9**
JCC				IAML		22 08 40.6	
	comp=N,139μm,1.0s						
JCC				IAML		22 08 40.9	
	comp=E,113μm,1.2s						
DMOR	**Dinsmores, CA**	**0.61**	**51**		**Pb**	**22 08 33.4**	**0.0**
KHMM	**Horse Mountain**	**0.71**	**40**		**Pb**	**22 08 34.5**	**-0.6**
KHMM				Sn	**Sb**	**22 08 44.6**	**0.0**
KPPM	**Pickett Peak**	**0.74**	**88**		**Pb**	**22 08 35.7**	**+0.1**
KIPM	**Iron Peak**	**0.83**	**128**		**Pb**	**22 08 36.8**	**-0.4**
RVIT	**Round Valley I**	**0.84**	**120**		**Pb**	**22 08 37.0**	**-0.3**
KRPM	**Rodgers**	**0.86**	**16**		**Pn**	**22 08 35.9**	**-1.6**
KRPM				IAML		22 08 47.7	
	comp=E,110μm,0.5s						
KRPM				IAML		22 08 48.2	
	comp=N,101μm,0.7s						
KCPM	**Cahto Peak**	**0.86**	**138**		**Pb**	**22 08 36.8**	**-0.8**
KHBM	**Hayfork Bally**	**0.91**	**68**		**Pn**	**22 08 37.6**	**-0.7**
KHBM				IAML		22 08 51.0	
	comp=E,29μm,0.8s						
KHBM				IAML		22 08 52.9	
	comp=N,39μm,0.7s						
KBNM	**Bluenose Ridge**	**0.97**	**116**		**Pn**	**22 08 39.1**	**+0.1**
KFPM	**Farley Peak**	**0.98**	**135**		**Pn**	**22 08 38.5**	**-0.6**
GTC	**Three Chop Rid**	**1.10**	**147**		**Pn**	**22 08 39.9**	**-0.9**
WEAV	**Weaverville**	**1.10**	**67**		**Pn**	**22 08 40.1**	**-0.7**
MNDO	**Woodland Fire**	**1.11**	**156**		**Pn**	**22 08 39.8**	**-1.0**
KOMM	**Orleans Mounta**	**1.16**	**35**		**Pn**	**22 08 40.6**	**-1.0**
KRKM	**Rackout Spring**	**1.17**	**131**		**Pn**	**22 08 41.3**	**-0.5**
O02D	**Mt. Diablo Mer**	**1.19**	**97**		**Pn**	**22 08 41.8**	**-0.2**
O02D				IAML		22 09 15.9	
	comp=N,15μm,1.1s						
GNAM	**Navarro Ridge**	**1.25**	**154**		**Pn**	**22 08 41.6**	**-1.2**
GROM	**Round Mountain**	**1.33**	**107**		**Pn**	**22 08 44.2**	**+0.1**
GWRM	**Wonder Ranch**	**1.37**	**144**		**Pn**	**22 08 43.6**	**-0.9**
GVV	**Valley View**	**1.38**	**113**		**Pn**	**22 08 44.7**	**0.0**
N02D	**Trinity Center**	**1.39**	**62**		**Pn**	**22 08 44.3**	**-0.5**
GHOM	**Hamilton Openi**	**1.42**	**154**		**Pn**	**22 08 44.0**	**-1.2**
LBKM	**Bonanza King**	**1.47**	**59**		**Pn**	**22 08 45.4**	**-0.5**
BONV	**Boonville, CA**	**1.54**	**150**		**Pn**	**22 08 45.6**	**-1.1**
M02C	**Callahan**	**1.54**	**46**		**Pn**	**22 08 46.2**	**-0.7**
M02C				IAML		22 09 07.1	
	comp=N,22μm,0.7s						
M02C				IAML		22 09 07.2	
	comp=E,25μm,0.8s						
SIGP	**Signal Peak, C**	**1.55**	**7**		**Pn**	**22 08 45.1**	**-1.9**
GSNM	**Snow Mountain**	**1.64**	**147**		**Pn**	**22 08 47.4**	**-0.9**
HOPS	**Hopland Field**	**1.65**	**144**		**Pn**	**22 08 47.4**	**-0.8**
GCK	**Clark Valley**	**1.65**	**118**		**Pn**	**22 08 49.2**	**+0.9**
GHGM	**Hogback Ridge**	**1.67**	**136**		**Pn**	**22 08 47.8**	**-0.8**
LTCM	**Tuscan Springs**	**1.69**	**93**		**Pn**	**22 08 48.8**	**-0.1**
LSHM	**Sage Hen Hill**	**1.80**	**74**		**Pn**	**22 08 50.4**	**0.0**
GPMM	**Pine Mountain**	**1.82**	**144**		**Pn**	**22 08 50.1**	**-0.6**
LCCM	**College of the**	**1.82**	**53**		**Pn**	**22 08 50.4**	**+0.1**
GCVM	**Cloverdale**	**1.86**	**146**		**Pn**	**22 08 50.9**	**-0.3**
YBH	**Yreka Blue Hor**	**1.86**	**41**	Pn	**Pn**	**22 08 50.6**	**-0.6**
	comp=E,27nm,0.3s,baz=270,slow=5.4,SNR=3127						
YBH				Sn	**Sn**	**22 09 13.4**	**-0.5**
	comp=E,208nm,0.3s,baz=168,slow=20,SNR=12						
YBH	**Yreka Blue Hor**	**1.86**	**41**		**Pn**	**22 08 50.6**	**-0.6**
YBH				IAML		22 09 16.5	
	comp=N,20μm,0.6s						
L02F	**Cave Junction**	**1.88**	**17**		**Pn**	**22 08 50.0**	**-1.5**
L02F				IAML		22 09 17.7	
	comp=N,28μm,0.8s						
KBO	**Bosley Butte**	**1.88**	**2**		**Pn**	**22 08 49.3**	**-2.3**
GRTM	**Round Top Moun**	**1.89**	**137**		**Pn**	**22 08 50.7**	**-0.9**
LGBM	**Gray Butte**	**1.91**	**57**		**Pn**	**22 08 52.5**	**+0.4**
M03C	**McCloud**	**1.92**	**60**		**Pn**	**22 08 52.4**	**+0.2**
GSGM	**Seigler Mounta**	**1.92**	**139**		**Pn**	**22 08 51.8**	**-0.2**
GDXM	**Geysers**	**1.93**	**142**		**Pn**	**22 08 51.6**	**-0.6**
O03E	**Paynes Creek**	**1.93**	**90**		**Pn**	**22 08 51.7**	**-0.6**
O03E				IAML		22 09 40.2	
	comp=E,6μm,0.8s						
GGPM	**Geyser Peak**	**1.94**	**143**		**Pn**	**22 08 51.4**	**-0.9**
LDBM	**Digger Butte**	**1.94**	**86**		**Pn**	**22 08 51.8**	**-0.6**
GBGM	**Boggs Mountain**	**1.98**	**139**		**Pn**	**22 08 52.5**	**-0.3**
LMPM	**Military Pass**	**2.01**	**54**		**Pn**	**22 08 54.2**	**+0.8**
MNRC	**McLaughlin Min**	**2.05**	**134**		**Pn**	**22 08 53.5**	**-0.4**
LHRM	**Herd Peak**	**2.06**	**50**		**Pn**	**22 08 54.4**	**+0.3**
B040	**Montague**	**2.08**	**43**		**Pn**	**22 08 54.5**	**+0.3**
NMTM	**Middletown**	**2.10**	**136**		**Pn**	**22 08 54.7**	**+0.1**
LBFM	**Black Fox Moun**	**2.11**	**60**		**Pn**	**22 08 55.2**	**+0.4**
LMEM	**Manzanita Entr**	**2.12**	**83**		**Pn**	**22 08 54.6**	**-0.2**
LAS	**Mount Lassen**	**2.16**	**85**		**Pn**	**22 08 55.1**	**-0.4**
NWRM	**Wright Ranch**	**2.18**	**149**		**Pn**	**22 08 54.2**	**-1.3**
OSUM	**Sutter Buttes**	**2.18**	**118**	

comp=E,6µm,0.4s
J01E IAML 22 09 37.2
comp=N,5µm,0.6s
AFDM Forest Hills D 2.94 117 Pn 22 09 05.7 -0.3
K04D Chiloquin, OR 3.00 39 Pn 22 09 07.2 +0.3
BEKR Beckworth 3.08 97 Pn 22 09 08.4 +0.4
BEKR IAML 22 09 48.4
comp=E,3µm,0.8s
BEKR IAML 22 09 48.7
comp=N,3µm,0.8s
JRSC Jasper Ridge 3.35 150 Pn 22 09 10.3 -1.3
JRSC IAML 22 09 57.5
comp=E,2µm,0.8s
J04A Umpqua Nationa 3.35 29 Pn 22 09 11.9 +0.1
I03D Drain, OR 3.44 12 Pn 22 09 11.8 -1.1
I03D IAML 22 10 02.8
comp=N,2µm,1.0s
I03D IAML 22 10 30.2
comp=E,2µm,1.5s
K05A Summer Lake 3.52 46 Pn 22 09 14.4 +0.2
K05A IAML 22 10 23.8
comp=N,3µm,1.9s
K05A IAML 22 10 34.3
comp=E,3µm,1.9s
FORD Fort Ord Natur 4.15 150 Pn 22 09 21.6 -1.0
FORD IAML 22 10 12.0
comp=N,2µm,0.8s
FORD IAML 22 10 22.3
comp=E,2µm,0.8s
COR Corvallis 4.32 10 Pn 22 09 25.0 0.0
COR IAML 22 10 18.2
comp=E,1µm,0.9s
COR IAML 22 10 50.5
comp=E,1µm,2.0s
COR Corvallis 4.32 10 P Pn 22 09 25.0 0.0
WVOR Wild Horse Val 4.77 62 Pn 22 09 30.1 -1.2
WVOR IAML 22 11 05.7
comp=E,651nm,3.5s
WVOR Wild Horse Val 4.77 62 P Pn 22 09 30.1 -1.2
MDPB Devils Postpil 4.90 122 Pn 22 09 35.1 +1.9
KVN Kaiserville 4.97 103 Pn 22 09 34.5 +0.4
KVN Kaiserville 4.97 103 P Pn 22 09 34.5 +0.4
NVAR Mina Array Bea 5.04 110 Pn Pn 22 09 35.9 +0.9
comp=E,34nm,0.3s,baz=292,slow=14,SNR=276
NVAR Lg Lg 22 10 58.5
baz=289,slow=26
comp=E,60nm,0.5s
G04A Mulino 5.06 15 Pn 22 09 36.1 +1.0
PKD Bear Valley Ra 5.30 145 Pn 22 09 37.6 -0.9
BMO Blue Mountains 6.87 47 Pn 22 10 01.2 +1.1
BMO Blue Mountains 6.87 47 P Pn 22 10 01.2 +1.1
ELK Elko 6.94 84 Pn Pn 22 10 01.6 +0.4
comp=E,2.9nm,0.3s,baz=281,slow=11,SNR=53
ELK Sn Sn 22 11 19.1 -0.2
comp=E,1.1nm,0.3s,baz=12,slow=20,SNR=1.4
ELK Lg Lg 22 11 57.0
comp=E,1.6nm,0.3s,baz=79,slow=6.9,SNR=2.2
comp=E,43nm,0.7s
ELK Elko 6.94 84 Pn 22 10 00.7 -0.4
HAWA Hanford 6.99 28 Pn 22 10 02.1 +0.4
NLWA Neilton Lookou 7.07 3 Pn 22 10 02.7 0.0
HLID Hailey 8.06 63 Pn 22 10 16.9 +0.4
PGC Sidney 8.34 4 Pn 22 10 20.2 +0.1
DUG Dugway, Tooele 8.81 87 P Pn 22 10 28.8 +2.1
PFO Pinyon Flats O 9.19 134 Pn Pn 22 10 33.7 +1.7
comp=E,14nm,0.3s,baz=316,slow=9.9,SNR=132
PFO Sn Sn 22 12 16.3 +1.7
comp=E,0.6nm,0.3s,baz=190,slow=12,SNR=1.1
PFO Lg Lg 22 13 10.1
comp=E,0.2nm,0.3s,baz=350,slow=19,SNR=1.5
PFO LR LR 22 14 36.3
comp=E,4µm,18.2s,baz=316,slow=41
PFO Pinyon Flats O 9.19 134 Pn 22 10 33.4 +1.4
NEW Newport 9.46 31 Pn Pn 22 10 35.8 +0.2
comp=E,2.2nm,0.3s,baz=204,slow=11,SNR=18
NEW Lg Lg 22 13 12.6
baz=315,slow=20
NEW LR LR 22 14 35.4
comp=E,2µm,19.3s,baz=219,slow=40
comp=E,6.3nm,0.4s
AHID Auburn Hatcher 10.21 72 Pn 22 10 46.6 +0.7
LLLB Lillooet 10.42 9 Pn 22 10 48.4 -0.3
BW06 Boulder Array 11.33 73 Pn 22 11 03.2 +1.8
PDAR Pinedale Array 11.33 73 Pn Pn 22 11 03.5 +2.2
comp=E,1.4nm,0.3s,baz=231,slow=7.9,SNR=55
PDAR LR LR 22 16 05.5
comp=E,605nm,21.5s,baz=249,slow=42
comp=E,3.0nm,0.9s
PDAR Pinedale Array 11.33 73 Pn 22 11 02.9 +1.5
BBB Bella Bella 12.14 349 Pn Pn 22 11 14.5 +2.4
comp=E,1.8nm,0.3s,baz=175,slow=11,SNR=23
BBB LR LR 22 15 06.8
comp=E,818nm,19.6s,baz=171,slow=34
EGMT Eagleton 12.97 49 Pn 22 11 23.6 0.0
HAYD Hayden 13.01 84 Pn Pn 22 11 25.8 +1.5
ISCO Idaho Springs 14.35 86 Pn Pn 22 11 41.8 -0.8
ISCO Idaho Springs 14.35 86 P Pn 22 11 41.8 -0.8
SDCO Great Sand Dun 14.86 94 Pn 22 11 50.6 +1.0
ANMO Albuquerque 15.14 105 Pn Pn 22 11 55.2 +2.0
comp=E,0.2nm,0.3s,baz=300,slow=12,SNR=27
ANMO LR LR 22 18 42.4
comp=E,2µm,18.7s,baz=292,slow=41
ANMO Albuquerque 15.14 105 Pn 22 11 53.8 +0.6
ANMO Albuquerque 15.14 105 *i* P Pn 22 11 54.5 +1.3
Y22A Socorro 15.24 109 Pn 22 11 54.5 0.0
V35K Ketchikan 15.77 345 P Pn 22 12 01.6 +0.5
baz=160
T25A Trinidad 15.86 95 Pn 22 12 03.5 +0.8
T25A IAmb IAmb 22 12 07.6
comp=Z,71nm,0.9s
U35K Hyder 16.04 348 P Pn 22 12 05.5 +1.0
baz=165
CRAG Craig 16.23 342 Pn 22 12 06.6 -0.4
CRAG Craig 16.23 342 P Pn 22 12 08.2 +1.2
baz=156,SNR=7.6
U33K Whale Pass 16.82 343 P Pn 22 12 14.2 -0.2
U33K IAmb IAmb 22 12 19.3
comp=Z,126nm,1.5s
U33K Whale Pass 16.82 343 P Pn 22 12 15.2 +0.8
baz=157,SNR=6.9
OGNE Ogallala 16.93 81 Pn 22 12 14.6 -1.4
WRAK Wrangell Islan 16.94 345 Pn 22 12 15.0 -0.9
WRAK IAmb IAmb 22 12 21.7
comp=Z,233nm,1.7s
WRAK Wrangell Islan 16.94 345 P Pn 22 12 16.5 +0.6
baz=159,SNR=12
T35M Bob Quinn 17.11 349 P Pn 22 12 18.0 -0.1
T35M Bob Quinn 17.11 349 P Pn 22 12 18.1 0.0
baz=165,SNR=16
T33K Petersburg 17.43 344 P Pn 22 12 22.5 +0.5
baz=158,SNR=6.2
MNTX Cornudas Mount 17.56 113 P Pn 22 12 24.2 +0.4
S34M Telegraph Cree 18.14 348 P P 22 12 33.0 +2.1
baz=164,SNR=19
SIT Sitka 18.20 341 P P 22 12 32.3 +0.7
baz=153
VHRN Van Horn 18.36 115 P P 22 12 32.7 -1.0
S32K Kilisnoo 18.39 342 P Pn 22 12 34.9 +1.0
baz=155
DLBC Dease Lake 18.49 351 P Pn 22 12 36.4 +1.3
comp=Z,9.2nm,0.6s,baz=161,slow=10,SNR=26
DLBC LR LR 22 18 46.4
comp=Z,754nm,20.3s,baz=140,slow=34
DLBC Dease Lake 18.49 351 P Pn 22 12 36.0 +0.9
baz=167,SNR=19
K30B Basset 18.64 75 P P 22 12 35.2 -1.5
K30B IAmb IAmb 22 12 39.3
comp=Z,112nm,1.0s
AMTX Amarillo 18.73 100 P P 22 12 37.8 +0.1
CBKS Cedar Bluff 19.00 87 P P 22 12 39.1 -1.6
CBKS Cedar Bluff 19.00 87 P P 22 12 39.1 -1.6
CBKS pmax pmax
comp=Z,139nm,0.9s
R32K Eaglecrest 19.11 343 P Pn 22 12 42.9 +0.4
baz=156,SNR=6.6
S31K Pelican 19.24 341 P P 22 12 42.9 -0.1
baz=152
Q32M Nakina River 19.32 348 P P 22 12 43.9 -0.2
Q32M Nakina River 19.32 348 P Pn 22 12 45.1 -0.1
baz=162,SNR=22
BESE Bessie Mountai 19.46 343 P P 22 12 45.5 0.0
BESE IAmb IAmb 22 12 51.1
comp=Z,200nm,1.6s
R31K City Hall, Gus 19.52 342 P P 22 12 45.7 -0.3
baz=154
ALPN Alpine 19.54 114 P P 22 12 47.0 +0.4

R33M Jennings River 19.54 350 P Pn 22 12 47.2 -0.6
baz=165,SNR=34
KOTAN Kotaneelee Air 19.82 0 P P 22 12 49.9 +0.5
baz=181,SNR=56
WTLY Watson Lake, Y 20.00 353 P P 22 12 51.4 0.0
baz=170,SNR=16
LPIG La Paz 20.02 140 LR LR 22 20 48.9
comp=Z,2µm,18.0s,baz=332,slow=37
TXAR Lajitas Array 20.15 117 P Pn 22 12 55.0 -0.3
comp=Z,17nm,0.9s,baz=301,slow=7.4,SNR=64
TXAR S S **22 16 34.8 -3.4**
comp=Z,0.2nm,0.5s,baz=322,slow=15,SNR=1.6
TXAR LR LR 22 20 57.8
comp=Z,670nm,18.3s,baz=297,slow=38
comp=Z,17nm,0.9s
TXAR Lajitas Array 20.15 117 P P 22 12 53.9 +0.6
TXAR Lajitas Array 20.15 117 P Pn 22 12 55.0 -0.2
P32M Atlin 20.17 346 P P 22 12 52.0 -1.2
P32M IAmb IAmb 22 13 07.0
comp=Z,106nm,1.9s
P32M Atlin 20.17 346 P P 22 12 52.7 -0.4
baz=159,SNR=7.5
SKAG Skagway 20.37 344 P P 22 12 55.5 +0.2
baz=156,SNR=8.2
P33M Teslin, Yukon 20.60 348 P P 22 12 57.9 0.0
baz=162,SNR=15
FFC Flin Flon 20.73 39 P P 22 12 58.2 -1.0
FFC IAmb IAmb 22 13 13.2
comp=Z,90nm,1.2s
FFC Flin Flon 20.73 39 P P 22 12 58.2 -1.0
FFC pmax pmax
comp=Z,90nm,1.3s
ECSD EROS Data Cent 20.82 71 P P 22 12 56.8 -3.6
ECSD IAmb IAmb 22 13 02.4
comp=Z,39nm,0.8s
P30M Million Dollar 21.33 342 P P 22 13 05.3 -0.4
baz=153
TGTN Hyland Airport 21.36 355 P P 22 13 06.1 +0.1
baz=172,SNR=20
WHY Whitehorse 21.38 346 P P 22 13 06.3 0.0
WHY Whitehorse 21.38 346 P P 22 13 06.4 0.0
baz=158,SNR=6.3
O30N Mendenhall 21.72 344 P P 22 13 09.6 -0.3
baz=156,SNR=15
AGMN Agassiz Nation 21.78 59 P P 22 13 08.6 -2.0
O29M Mount Kennedy 21.87 341 P P 22 13 11.5 -0.2
baz=150,SNR=9.2
HYT Haines Junctio 22.08 343 P P 22 13 13.3 -0.5
HYT IAmb IAmb 22 13 27.3
comp=Z,52nm,1.2s
HYT Haines Junctio 22.08 343 P P 22 13 12.9 -0.9
baz=153,SNR=7.1
PINM Pinnacle 22.14 339 P P 22 13 13.0 -1.4
baz=147
ULM Lac du Bonnet 22.21 54 P P 22 13 13.2 -2.1
comp=Z,25nm,0.6s,baz=258,slow=9.3,SNR=28
ULM S S **22 17 12.7 -5.5**
comp=Z,3.0nm,0.8s,baz=143,slow=5.1,SNR=2.2
ULM LR LR 22 21 45.6
comp=Z,617nm,20.3s,baz=254,slow=36
comp=Z,25nm,0.6s
ULM Lac du Bonnet 22.21 54 P P 22 13 13.2 -2.1
ULM IAmb IAmb 22 13 17.9
comp=Z,26nm,0.7s
ULM Lac du Bonnet 22.21 54 *i* P P 22 13 13.7 -1.6
N31M Braeburn, Yuko 22.31 345 P P 22 13 15.5 -0.8
baz=157,SNR=8.9
YUK6 Ouost Mounta 22.38 342 P P 22 13 16.0 -1.2
baz=151
N30M Aishikik Lake 22.55 344 P P 22 13 17.8 -1.1
baz=154
O28M Mount Upton 22.69 340 P P 22 13 18.8 -1.8
baz=148
MESA MESA 22.70 337 P P 22 13 19.1 -1.5
baz=144
MMPY Sheldon Lake, 22.71 352 P P 22 13 19.6 -0.9
baz=167,SNR=14
M31M Drury Creek, Y 22.73 348 P P 22 13 20.0 -0.7
baz=160,SNR=9.8
YUK4 Talbot Arm 22.80 342 P P 22 13 21.5 -0.1
baz=152
YKA Yellowknife Ar 22.96 12 P P 22 13 22.8 -0.2
comp=Z,6.7nm,0.6s,baz=205,slow=11,SNR=99
comp=Z,6.7nm,0.6s
YKA Yellowknife Ar 22.96 12 P P 22 13 21.9 -1.1
YUK8 Stewart Glacier 23.02 341 P P 22 13 22.4 -1.6
baz=149
YKAW3 Yellowknife Wh 23.02 12 P P 22 13 22.8 -0.8
HNDO Hondo 23.11 110 P P 22 13 23.7 -1.2
CTG Chitna Glacier 23.17 339 P P 22 13 23.5 -1.8
baz=146
EPLO Experimental L 23.43 56 P P 22 13 25.1 -2.8
EPLO IAmb IAmb 22 13 28.8
comp=Z,43nm,0.7s
SCIA State Center 23.43 76 P P 22 13 27.0 -0.9
SCIA IAmb IAmb 22 13 34.5
comp=Z,57nm,0.9s
CRQE Cirque 23.50 337 P P 22 13 27.2 -1.4
baz=142
M30M Minto, Yukon 23.51 345 P P 22 13 27.7 -0.9
baz=156,SNR=6.8
Q23K Middleton Isla 23.61 331 P P 22 13 27.9 -1.6
baz=135
YUK3 Moose Creek 23.61 341 P P 22 13 28.9 -0.8
baz=148,SNR=9.7
M29M Somme Creek 23.73 344 P P 22 13 30.2 -0.6
baz=153,SNR=9.0
MCARA McCarthy VSAT 23.99 338 P P 22 13 32.3 -0.7
baz=143
BMRM Bremner River 24.14 336 P P 22 13 33.2 -1.3
baz=140
EYAK Cordova Ski Ar 24.20 334 P P 22 13 33.7 -1.3
baz=138
L29M L29M 24.25 345 P P 22 13 35.0 -0.6
baz=154,SNR=8.4
BVCY Beaver Creek 24.26 341 P P 22 13 34.5 -1.1
baz=148
P23K Montague Islan 24.39 332 P P 22 13 35.4 -1.4
baz=134
M27K Edge Creek, AK 24.47 340 P P 22 13 36.1 -1.5
baz=147
EYMN Ely 24.62 61 P P 22 13 37.4 -1.7
EYMN IAmb IAmb 22 13 49.3
comp=Z,64nm,1.6s
N25K Chitina, Valde 24.63 337 P P 22 13 37.6 -1.4
baz=141
P40A Paris 24.70 81 P P 22 13 37.8 -2.0
P40A IAmb IAmb 22 13 42.1
comp=Z,30nm,0.7s
M26K Nabesna, AK 24.80 339 P P 22 13 39.3 -1.3
baz=145
K29M Barlow Dome 24.80 346 P P 22 13 40.2 -0.4
baz=156,SNR=13
GLI Glacier Island 24.90 333 P P 22 13 40.6 -0.7
baz=136
KLU Klutina 24.95 335 P P 22 13 40.8 -1.2
baz=139
BCAR Beaver Creek A 25.04 341 P P 22 13 42.9 +0.2
L27K Beaver Creek, 25.05 341 P P 22 13 41.5 -1.2
baz=148
MGMO Mountain Grove 25.13 87 P P 22 13 42.5 -1.2
MGMO IAmb IAmb 22 13 44.9
comp=Z,21nm,0.8s
KDAK Kodiak Island 25.17 323 LR LR 22 21 12.6
comp=Z,2µm,20.5s,baz=128,slow=31
KDAK Kodiak Island 25.17 323 P P 22 13 42.4 -1.3
baz=122
OHAK Old Harbor 25.21 322 P P 22 13 42.5 -1.6
baz=120
SEW Seward 25.22 330 P P 22 13 42.3 -1.9
baz=131
J30M Hart River 25.27 348 P P 22 13 44.0 -0.9
baz=158
SII Sitkinak Islan 25.32 320 P P 22 13 43.2 -2.1
baz=118
DAWY Dawson 25.37 345 P P 22 13 45.6 0.0
DAWY IAmb IAmb 22 14 01.9
comp=Z,54nm,1.3s
DAWY Dawson 25.37 345 P P 22 13 44.6 -1.0
baz=153,SNR=10
HKT Hockley 25.40 105 *i* P P 22 13 48.1 +2.0
HKT pmax pmax
comp=Z,29nm,1.1s
M24K Tolsona, Glenn 25.50 336 P P 22 13 45.1 -1.7
baz=139
BRSE Bradley Lake S 25.50 328 P P 22 13 45.1 -1.7
baz=128

Q20K Shuyak Island 25.53 325 P P 22 13 44.5 -2.6
baz=124
O22K Cooper Landing 25.57 331 P P 22 13 44.8 -2.6
baz=131
CCM Cathedral Cave 25.66 84 P P 22 13 47.4 -1.1
CCM Cathedral Cave 25.66 84 P P 22 13 47.4 -1.1
CCM pmax pmax
comp=Z,14nm,0.7s
SCM Sheep Creek Mo 25.66 335 P P 22 13 47.6 -0.7
SCM IAmb IAmb 22 14 18.9
comp=Z,38nm,1.1s
SCM Sheep Creek Mo 25.66 335 P P 22 13 47.7 -0.7
SCM pmax pmax
comp=Z,38nm,1.1s
SCM Sheep Creek Mo 25.66 335 P P 22 13 46.2 -2.2
baz=137
CHIR Chirikof Islan 25.73 318 P P 22 13 46.1 -2.8
baz=114
KNK Knik Glacier 25.74 333 P P 22 13 46.9 -2.1
baz=134
M23K Glacier View 25.76 334 P P 22 13 46.7 -2.6
baz=136
HOM Homer 25.81 328 P P 22 13 46.8 -2.8
baz=127
I30M Mount Dempster 25.88 348 P P 22 13 47.9 -2.5
baz=159
PAX Paxson 25.95 338 P P 22 13 48.9 -2.1
baz=141
RC01 Rabbit Creek A 25.98 332 P P 22 13 48.9 -2.3
baz=132
SML Sawmill 25.98 334 P P 22 13 48.8 -2.4
baz=135
PMR Palmer 26.10 333 P P 22 13 49.9 -2.3
baz=134
H31M Peel River 26.15 351 P P 22 13 51.7 -1.1
baz=163
Q19K Cape Douglas, 26.25 325 P P 22 13 52.0 -1.6
baz=122
I29M Ogilvie Camp, 26.33 347 P P 22 13 54.6 +0.3
baz=156,SNR=16
WAT6 Susitna Watana 26.34 336 P P 22 13 53.3 -1.3
baz=137
SCRK Sand Creek 26.35 340 P P 22 13 53.6 -1.0
SCRK IAmb IAmb 22 14 11.1
comp=Z,40nm,1.3s
SCRK Sand Creek 26.35 340 P P 22 13 54.7 +0.1
baz=145
RIDG Independent Ri 26.38 339 P P 22 13 54.4 -0.4
baz=143
M22K Willow 26.56 332 P P 22 13 55.1 -1.2
baz=132
HDIL Hopedale 26.56 78 P P 22 13 55.2 -1.4
HDIL IAmb IAmb 22 14 14.0
comp=Z,26nm,0.8s
FCC Fort Churchill 26.57 36 P P 22 13 56.9 +0.4
FCC IAmb IAmb 22 14 13.0
comp=Z,51nm,1.3s
FCC Fort Churchill 26.57 36 P P 22 13 56.9 +0.4
FCC pmax pmax
comp=Z,51nm,1.3s
DHY Denali Highway 26.59 337 P P 22 13 55.1 -1.8
baz=138
I28M Miner Creek 26.71 346 P P 22 13 56.5 -1.3
baz=153,SNR=6.4
Q18K Katmai Hardscr 26.71 324 P P 22 13 56.5 -1.5
baz=120
WAT1 Susitna Watana 26.78 335 P P 22 13 56.1 -2.3
baz=136
R17L Mt. Peulik Vol 26.87 321 P P 22 13 57.0 -2.2
baz=116
Q17K Contact Creek 26.93 322 P P 22 13 57.8 -2.1
baz=118
N20K Mount Spurr 26.97 330 P P 22 13 58.7 -1.5
baz=128
SPCR Spurr Chakacha 26.97 330 P P 22 13 58.2 -2.0
baz=128
H29M Whitestone 27.12 348 P P 22 14 00.7 -0.8
baz=156,SNR=22
I27K Kandik River 27.18 344 P P 22 14 01.4 -0.6
baz=150
SKT Skwentna 27.21 332 P P 22 14 01.1 -1.2
baz=130
J25K Salcha River, 27.22 340 P P 22 14 01.5 -0.9
baz=144,SNR=8.9
I26K Coal Creek Min 27.25 343 P P 22 14 02.4 -0.2
baz=148
O18K Koktuh Hills 27.42 326 P P 22 14 03.2 -0.9
baz=122
R16K Pilot Point 27.43 320 P P 22 14 03.0 -1.3
baz=115
G30M tAoh Zraii Nji 27.51 350 P P 22 14 03.9 -1.1
baz=160
MCK McKinley 27.55 336 P P 22 14 04.7 -0.6
baz=137
P17K Kvichak River 27.63 324 P P 22 14 05.2 -0.8
baz=119
N19K Bonanza Creek 27.64 328 P P 22 14 05.4 -0.8
baz=124
F31M Tsiigehtchic 27.66 352 P P 22 14 05.7 -0.5
baz=165,SNR=9.0
H27K Steamboat Moun 27.71 345 P P 22 14 06.1 -0.6
baz=151
G29M Pine Creek 27.71 348 P P 22 14 05.9 -0.8
baz=157
M20K Styx River 27.74 331 P P 22 14 06.0 -1.1
baz=128
ILAR Eielson Array 27.75 339 P P 22 14 08.0 +0.9
comp=Z,1.7nm,0.7s,baz=153,slow=8.4,SNR=30
comp=Z,1.7nm,0.7s
ILAR Eielson Array 27.75 339 P P 22 14 06.5 -0.5
ILAR Eielson Array 27.75 339 P P 22 14 08.0 +0.9
TRF Thorofare Moun 27.78 335 P P 22 14 05.9 -1.6
baz=134
PRP Porcupine Dome 27.99 341 P P 22 14 07.6 -1.7
baz=144
PPLA Purkeypile 28.04 333 P P 22 14 08.4 -1.4
baz=131
F30M Barrier River 28.05 351 P P 22 14 09.2 -0.6
baz=162
COLA College 28.09 339 *i* P P 22 14 10.1 +0.1
COLA pmax pmax
comp=Z,4.0nm,0.9s
N18K Kilae Creek 28.14 327 P P 22 14 09.1 -1.6
baz=122
SDPT Sand Point 28.15 314 P P 22 14 09.0 -1.7
baz=107
POKR Poker Plat Res 28.16 339 P P 22 14 09.6 -1.2
baz=141
NEA2 Nenana 28.22 338 P P 22 14 10.6 -0.7
baz=138
G27K Doyon Strip 28.24 346 P P 22 14 11.2 -0.2
baz=152
BPAW Bear Paw Mtn. 28.45 336 P P 22 14 13.3 -0.1
baz=134
INK Inuvik 28.48 353 LR LR 22 25 33.7
comp=Z,594nm,18.3s,baz=188,slow=36
INK Inuvik 28.48 353 P P 22 14 12.6 -0.8
INK Inuvik 28.48 353 P P 22 14 12.6 -0.8
INK pmax pmax
comp=Z,22nm,1.4s
INK Inuvik 28.48 353 P P 22 14 13.6 +0.1
baz=166,SNR=7.9
M18K Stony River 28.55 328 P P 22 14 13.4 -0.8
baz=124
L19K White Mountain 28.57 330 P P 22 14 13.7 -0.7
baz=126
N17K Nushagak Hills 28.61 326 P P 22 14 14.2 -0.6
baz=120
F28M Old Crow 28.64 348 P P 22 14 15.4 +0.4
baz=155,SNR=12
I23K Minto, Yukon-K 28.72 338 P P 22 14 16.0 +0.4
baz=138
CHUM Lake Minchumin 28.73 334 P P 22 14 16.0 +0.2
baz=132
G26K Porcupine Rive 28.79 344 P P 22 14 16.5 +0.3
baz=148
H24K Noodor Dome 28.84 340 P P 22 14 16.8 0.0
baz=141
WVT Waverly 28.84 87 P P 22 14 15.3 -1.8
WVT Waverly 28.84 87 P P 22 14 15.3 -1.8
WVT pmax pmax
comp=Z,22nm,1.6s
K20K Telida 28.99 333 P P 22 14 18.2 +0.1
baz=129
MLY Manley 29.04 337 P P 22 14 19.0 +0.4
baz=136
E29M Blow River 29.06 350 P P 22 14 19.2 +0.5
baz=159

C36M Paulatuk 29.08 0 P P **22 14 19.5 +0.7**
baz=181
G25K Bearman Lake 29.14 342 P P **22 14 20.2 +0.8**
baz=145
M17K Holitna River 29.16 327 P P **22 14 19.2 -0.4**
baz=121
N16K Nishlik Lake 29.27 325 P P **22 14 20.8 +0.1**
baz=118
H23K Yukon River 29.28 339 P P **22 14 21.2 +0.6**
baz=139
L18K Granite Mounta 29.30 329 P P **22 14 21.1 +0.2**
baz=124
BMAR Burnt Mountain 29.36 344 P P **22 14 21.4 0.0**
WCI Wyandotte Cave 29.37 82 P P **22 14 20.8 -0.9**
WCI LR IAmb IAmb 22 14 23.5
comp=Z,14nm,0.8s
WCI Wyandotte Cave 29.37 82 P P **22 14 20.8 -0.9**
WCI pmax pmax
comp=Z,14nm,0.9s
G24K Hadweenzic Riv 29.42 341 P P **22 14 22.4 +0.6**
baz=143
E27K Coleen River 29.45 347 P P **22 14 23.3 +1.2**
baz=153
E28M Babbage River 29.50 349 P P **22 14 23.0 +0.4**
baz=156
F26K Sheenjek River 29.50 345 P P **22 14 23.7 +1.1**
baz=149,SNR=15
I21K Tanana 29.51 337 P P **22 14 23.2 +0.4**
baz=134,SNR=7.3
J20K Nowinta River 29.54 334 P P **22 14 22.8 -0.1**
baz=130
M16K Timber Creek 29.61 326 P P **22 14 23.6 0.0**
baz=119
FALS False Pass 29.65 313 P P **22 14 24.1 +0.1**
baz=103
F25K Christian Rive 29.72 344 P P **22 14 25.5 +0.9**
baz=146
H22K Ishtalitna Cre 29.84 338 P P **22 14 26.3 +0.7**
baz=136,SNR=6.2
O14K Tigyukauivet M 29.89 322 P P **22 14 26.2 +0.1**
baz=113
L17K Donlin 29.89 328 P P **22 14 25.9 -0.2**
baz=121
J19K Poorman 29.93 333 P P **22 14 26.3 -0.2**
baz=128
J18K Innoko River 30.01 331 P P **22 14 27.2 0.0**
baz=125
I20K Naaghedeneel 30.05 335 P P **22 14 28.0 +0.6**
baz=130
G23K Bananza Creek 30.07 340 P P **22 14 28.2 +0.5**
baz=139,SNR=6.6
H21K Melozitna Rive 30.09 337 P P **22 14 28.4 +0.5**
baz=134,SNR=5.3
E25K Arctic Village 30.15 344 P P **22 14 28.2 -0.1**
E25K IAmb IAmb 22 14 45.4
comp=Z,28nm,1.6s
E25K Arctic Village 30.15 344 P P **22 14 28.1 -0.3**
baz=147,SNR=8.3
L16K Owhat River 30.16 327 P P **22 14 29.6 +1.1**
baz=119,SNR=7.6
F24K Squaw Lake 30.17 342 P P **22 14 28.7 +0.2**
baz=143
K17K Iditarod 30.20 329 P P **22 14 28.4 -0.4**
baz=122
M15K Kasigluk River 30.22 325 P P **22 14 28.4 -0.5**
baz=116
D27M Malcolm River 30.30 348 P P **22 14 30.4 +0.7**
baz=155
N14K Kuskokwak Cree 30.35 323 P P **22 14 30.1 0.0**
baz=114
COLD Coldfoot 30.51 340 P P **22 14 31.4 -0.1**
COLD IAmb IAmb 22 15 26.3
comp=Z,25nm,1.8s
COLD Coldfoot 30.51 340 P P **22 14 32.1 +0.6**
baz=139
IMAR Indian Mountai 30.60 337 P P **22 14 31.6 -0.7**
H20K Anotleneega Mo 30.63 335 P P **22 14 32.6 0.0**
baz=131
E24K Your Creek 30.75 343 P P **22 14 34.4 +0.7**
baz=143
M14K Bethel 30.81 324 P P **22 14 34.0 -0.2**
baz=115
GCSA Galena City Sc 30.82 333 P P **22 14 34.9 +0.6**
baz=127
J17K VABM Dome 30.86 330 P P **22 14 34.9 +0.3**
baz=122
G21K Allakaket 30.89 338 P P **22 14 35.2 +0.3**
baz=134
L15K Ungalak Mounta 31.00 326 P P **22 14 35.9 +0.1**
baz=117
E23K Chandalar 31.00 342 P P **22 14 36.3 +0.3**
baz=141
C27K Jago River 31.09 347 P P **22 14 37.4 +0.8**
baz=151
H19K Roundabout Mou 31.16 335 P P **22 14 37.7 +0.5**
baz=128
F22K John River 31.23 340 P P **22 14 38.3 +0.4**
baz=137
UNV Unalaska Valle 31.24 310 P P **22 14 37.8 -0.3**
baz=98
K15K Wolf Creek Mou 31.30 327 P P **22 14 38.3 -0.2**
baz=117
M13K Dall Lake 31.31 323 P P **22 14 38.9 +0.3**
baz=112
D25K Kavik River 31.32 345 P P **22 14 39.6 +0.9**
baz=147,SNR=9.5
ACSO Alum Creek Sta 31.34 77 P P **22 14 38.6 -0.5**
L14K Kuka Creek 31.37 325 P P **22 14 39.2 0.0**
baz=115
F21K Alatna River 31.38 339 P P **22 14 39.0 -0.2**
baz=135
J16K Anvik River 31.39 329 P P **22 14 38.9 -0.4**
baz=120
TOLK Toolik Lake Re 31.44 343 P P **22 14 40.4 +0.6**
baz=142,SNR=10
C26K Camden Bay 31.55 347 P P **22 14 41.2 +0.6**
baz=149
H18K Honhosa River 31.57 333 P P **22 14 40.9 0.0**
baz=126
E22K Anaktuvuk Pass 31.60 341 P P **22 14 41.6 +0.4**
baz=138
D24K Happy Valley 31.68 344 P P **22 14 42.7 +0.9**
baz=143
A36M Sachs Harbour 31.74 359 P P **22 14 42.2 0.0**
A36M IAmb IAmb 22 15 42.9
comp=Z,21nm,1.3s
A36M Sachs Harbour 31.74 359 P P **22 14 43.1 +0.9**
baz=179
F20K Avaraart Lake 31.91 337 P P **22 14 44.1 +0.3**
baz=131
D23K Nanushuk River 31.95 342 P P **22 14 44.7 +0.5**
baz=140
TKL Tuckaleechee C 32.10 85 P P **22 14 45.2 -0.6**
comp=Z,10nm,0.8s,baz=275,slow=4.3,SNR=17
TKL LR LR 22 29 34.1
comp=Z,419nm,18.6s,baz=269,slow=40
comp=Z,10nm,0.8s
G18K Tagagawik 32.11 334 P P **22 14 45.5 -0.1**
baz=126
C24K Franklin Bluff 32.11 344 P P **22 14 45.2 -0.4**
baz=144
E21K Killik River 32.37 340 P P **22 14 47.7 -0.2**
baz=135
F19K Shaleruckim Mo 32.39 336 P P **22 14 47.9 -0.1**
baz=128
G17K Kiwalik Mounta 32.57 333 P P **22 14 50.1 +0.5**
baz=123
C23K Itkillik River 32.61 343 P P **22 14 50.1 +0.2**
baz=141
E19K Redstone River 32.62 337 P P **22 14 50.7 +0.6**
baz=130
H16K Elim 32.69 331 P P **22 14 50.6 -0.1**
baz=120
E20K Nigu River 32.84 339 P P **22 14 52.3 +0.2**
baz=132
F18K Selawik 32.85 335 P P **22 14 52.2 +0.2**
baz=126
C21K Knifeblade Rid 33.09 341 P P **22 14 54.6 +0.4**
baz=135
G16K Koyuk River 33.12 332 P P **22 14 54.2 -0.2**
baz=121
GOGA Godfrey 33.18 89 P P **22 14 55.0 -0.4**
GOGA Godfrey 33.18 89 P P **22 14 55.0 -0.4**
GOGA pmax pmax
comp=Z,9.0nm,0.8s
SADO Sadowa 33.25 67 P P **22 14 55.0 -0.9**
comp=Z,4.6nm,0.5s,baz=306,slow=7.3,SNR=5.6
SADO LR LR 22 28 49.8
comp=Z,562nm,18.6s,baz=306,slow=37
comp=Z,4.6nm,0.5s
D20K Etivluk River 33.27 339 P P **22 14 55.9 +0.2**
baz=132
F17K Baldwin Pennin 33.29 334 P P **22 14 56.2 +0.4**
baz=124
B21K Ikpikpuk River 33.38 341 P P **22 14 57.0 +0.4**
baz=136
D19K Kuna River 33.54 338 P P **22 14 57.7 -0.4**
baz=130
G15K Niukluk 33.54 331 P P **22 14 58.2 +0.1**
baz=118
B22K Teshekpuk Lake 33.62 343 P P **22 14 59.1 +0.4**
baz=138
E18K Tukpahlearik C 33.63 336 P P **22 14 58.8 -0.1**
baz=126
ANM Nome 33.86 329 P P **22 15 00.6 -0.3**
baz=116
F15K North Star Dit 34.10 331 P P **22 15 03.0 0.0**
baz=118
B20K Meade River 34.28 341 P P **22 15 04.7 +0.2**
baz=133
C19K Lookout Ridge 34.34 338 P P **22 15 05.3 +0.2**
baz=129
CMIG Matias Romero 34.41 124 P P **22 15 07.9 +1.8**
comp=Z,8.1nm,0.8s,baz=329,slow=7.3,SNR=16
CMIG LR LR 22 29 36.9
comp=Z,672nm,21.4s,baz=282,slow=37
comp=Z,8.1nm,0.8s
C18K Utukok River 34.53 337 P P **22 15 06.8 0.0**
baz=126
D17K Noatak River 34.58 335 P P **22 15 07.1 +0.1**
baz=123
RDOG Red Dog Mine 34.71 336 P P **22 15 08.8 +0.5**
baz=123
SSPA Standing Stone 35.00 74 P P **22 15 10.5 -0.6**
SSPA Standing Stone 35.00 74 P P **22 15 10.2 -0.9**
C17K DeLong Mountai 35.03 336 P P **22 15 11.1 +0.1**
baz=124
A19K Wainwright 35.43 339 P P **22 15 15.0 +0.6**
baz=128
C16K Lisburne Hills 35.60 335 P P **22 15 16.1 +0.2**
baz=121
WBO Williamsburg 35.93 66 P P **22 15 18.4 -0.5**
BINY Binghamton 36.00 71 P P **22 15 19.1 -0.6**
ILON Igloolik, Nuna 36.62 24 P P **22 15 24.3 -0.3**
ILON IAmb IAmb 22 15 36.2
comp=Z,17nm,1.0s
TEIG Tepich 36.68 112 P P **22 15 25.3 -0.3**
TEIG Tepich 36.68 112 P P **22 15 27.4 +1.8**
TEIG pP **sP** **22 15 35.7 -1.8**
RES Resolute Bay 37.02 13 LR LR 22 32 30.3
comp=Z,427nm,18.2s,baz=255,slow=39
RES Resolute Bay 37.02 13 P P **22 15 27.2 -0.7**
RES IAmb IAmb 22 15 39.9
comp=Z,12nm,0.8s
RES Resolute Bay 37.02 13 P P **22 15 27.2 -0.7**
RES pmax pmax
comp=Z,12nm,0.9s
FRNY Flat Rock 37.13 66 P P **22 15 28.6 -0.7**
FRNY IAmb IAmb 22 15 31.8
comp=Z,16nm,1.0s
LDAQ Lac Daran 38.19 60 P P **22 15 37.9 -0.4**
LDAQ IAmb IAmb 22 15 40.5
comp=Z,21nm,0.9s
LBNH Lisbon 38.42 66 P P **22 15 40.0 -0.1**
LBNH Lisbon 38.42 66 P P **22 15 40.0 -0.1**
LBNH pmax pmax
comp=Z,35nm,0.9s
APG El Apazote 38.80 121 P P **22 15 44.3 +0.4**
comp=Z,1.0nm,1.0s,baz=129,slow=8.5,SNR=5.1
APG LR LR 22 33 24.6
comp=Z,55nm,18.9s,baz=214,slow=39
comp=Z,1.0nm,1.0s
FRB Frobisher Bay 39.77 35 LR LR 22 33 34.7
comp=Z,383nm,20.1s,baz=264,slow=38
PKME Peaks-Kenny Pk 40.02 64 P P **22 15 53.3 -0.2**
SCHQ Schefferville 40.23 49 P P **22 15 53.7 -1.4**
comp=Z,12nm,0.8s,baz=263,slow=9.6,SNR=18
SCHQ LR LR 22 32 04.8
comp=Z,542nm,21.1s,baz=276,slow=36
comp=Z,12nm,0.8s
SHEM Shemya Is, Ala 42.86 308 LR LR 22 32 21.8
comp=Z,306nm,19.0s,baz=126,slow=34
BILL Bilibino 45.70 331 *i* P P **22 16 40.1 +1.0**
BILL pmax pmax
comp=Z,4.0nm,1.0s
JTS Las Juntas de 45.89 120 *i* P P **22 16 42.2 +0.8**
JTS pmax pmax
comp=Z,9.0nm,0.9s
NEEM North Greenlan 47.37 17 *i* P P **22 16 52.4 -0.1**
NEEM IAmb IAmb 22 16 54.7
comp=Z,17nm,1.3s
SFJD Kangerlussuaq 47.38 31 LR LR 22 37 33.9
comp=Z,496nm,18.2s,baz=276,slow=37
SUMG Summit 50.85 23 *i* P P **22 17 19.3 -0.1**
SUMG IAmb IAmb 22 17 20.3
comp=Z,14nm,1.1s
SEY Seymchan 52.11 325 LR LR 22 38 39.3
comp=Z,485nm,18.2s,baz=84,slow=35
SEY Seymchan 52.11 325 *i* P P **22 17 29.1 +0.7**
SEY pmax pmax
comp=Z,5.0nm,1.1s
PEA0B Petropavlovsk- 52.38 312 P P **22 17 29.6 -1.0**
PEA0B Petropavlovsk- 52.38 312 P P **22 17 29.6 -1.0**
PEA0B pmax pmax
comp=Z,47nm,1.2s
PETK Petropavlovsk- 52.38 312 P P **22 17 31.5 +0.9**
comp=Z,4.6nm,0.6s,baz=80,slow=11,SNR=9.2
comp=Z,4.6nm,0.6s
PETK Petropavlovsk- 52.38 312 P P **22 17 29.7 -0.9**
MA2 Magadan 53.88 321 P P **22 17 41.2 -0.2**
MA2 IAmb IAmb 22 17 55.2
comp=Z,15nm,1.3s
MA2 Magadan 53.88 321 P P **22 17 41.3 -0.2**
MA2 pmax pmax
comp=Z,15nm,1.3s
SJG San Juan 54.37 96 LR LR 22 44 04.7
comp=Z,335nm,21.8s,baz=274,slow=40
SJG San Juan 54.37 96 P P **22 17 48.6 +3.0**
DAG Danmarks Havn 54.56 16 *i* P P **22 17 45.4 -0.8**
DAG IAmb IAmb 22 17 48.1
comp=Z,6.7nm,1.0s
DBG Daneborg 55.28 19 *i* P P **22 17 51.4 0.0**
DBG IAmb IAmb 22 17 52.4
comp=Z,10.0nm,1.4s
SDV Santo Domingo 56.89 108 LR LR 22 46 25.5
comp=Z,203nm,19.0s,baz=312,slow=40
ROSC El Rosal 57.07 115 LR LR 22 46 17.8
comp=Z,101nm,19.6s,baz=313,slow=40
TIXI Tiksi 57.22 339 LR LR 22 43 54.2
comp=Z,188nm,19.6s,baz=59,slow=37
TIXI Tiksi 57.22 339 *i* P P **22 18 07.1 +1.9**
TIXI pmax pmax
comp=Z,5.0nm,1.1s
OTAV Otavalo 57.66 122 P P **22 18 09.6 -0.1**
OTAV IAmb IAmb 22 18 22.6
comp=Z,24nm,1.3s
OTAV Otavalo 57.66 122 P P **22 18 09.6 -0.1**
OTAV pmax pmax
comp=Z,24nm,1.3s
OTAV Otavalo 57.66 122 P P 22 18 15.2 +5.5
OTAV pP sP 22 18 23.7 +1.9
OTAV PcP **PcP** **22 19 01.4 -1.2**
SPITS Spitsbergen Ar 59.41 9 P P **22 18 19.8 -0.8**
comp=Z,2.8nm,0.7s,baz=14,slow=6.5,SNR=2.0
comp=Z,2.8nm,0.7s
BORG Borgarnes 59.43 29 LR LR 22 44 40.4
comp=Z,449nm,18.4s,baz=292,slow=37
H11N3 WAKE ISLAND Hy 61.51 272 T T 23 25 18.6
baz=53,slow=75,SNR=224
H11N2 WAKE ISLAND Hy 61.51 272 T T 23 25 16.9
baz=53,slow=75,SNR=610
H11N1 WAKE ISLAND Hy 61.52 272 T T 23 25 15.2
baz=53,slow=75,SNR=602
YAK Yakutsk 62.02 329 LR LR 22 44 22.8
comp=Z,204nm,20.1s,baz=55,slow=35
YAK Yakutsk 62.02 329 *i* P P **22 18 39.8 +1.4**
YAK pmax pmax
comp=Z,12nm,0.9s
PPT Papeete 62.21 207 LR LR 22 39 51.8
comp=Z,143nm,20.7s,baz=355,slow=30
ATAH Atahualpa 63.38 127 LR LR 22 44 32.2
comp=Z,157nm,18.9s,baz=323,slow=34
NNA Nana 68.13 129 LR LR 22 47 09.2
comp=Z,164nm,21.3s,baz=320,slow=34
NRIK Noril'sk 68.14 348 P P **22 19 17.5 -0.6**
comp=Z,2.3nm,0.9s,baz=28,slow=4.7,SNR=3.9
NRIK LR LR 22 48 22.6
comp=Z,125nm,22.0s,baz=40,slow=35
comp=Z,2.3nm,0.9s
NRIK Noril'sk 68.14 348 P P **22 19 17.5 -0.6**
NRIK IAmb IAmb 22 19 35.5
comp=Z,8.4nm,1.0s
NRIK Noril'sk 68.14 348 *i* P P **22 19 18.3 +0.2**
NRIK pmax pmax
comp=Z,7.0nm,1.1s
ARCES ARCESS Array B 68.22 11 LR LR 22 50 23.8
comp=Z,319nm,18.6s,baz=332,slow=37
KLR Kul'dur 68.52 317 LR LR 22 47 23.1
comp=Z,139nm,21.5s,baz=59,slow=34
KLR Kul'dur 68.52 317 *i* P P **22 19 21.1 +0.3**
KLR pmax pmax
comp=Z,5.0nm,1.4s
BOAV Boa Vista 68.66 106 P P **22 19 22.4 +0.2**
BOAV IAmb IAmb 22 19 27.7
comp=Z,12nm,0.9s
RAR Rarotonga 69.56 215 LR LR 22 43 50.7
comp=Z,294nm,21.3s,baz=356,slow=31
AFI Afiamalu 69.64 230 LR LR 22 43 20.0
comp=Z,321nm,20.7s,baz=32,slow=30
HEH HeiHe 70.09 320 *e*P P **22 19 29.4 -1.1**
HEH pmax pmax
comp=Z,4.0nm,0.8s
USRK Ussuriysk Ar. 71.47 313 P P **22 19 39.2 +0.2**
comp=Z,2.1nm,0.7s,baz=57,slow=10,SNR=2.8
comp=Z,2.1nm,0.7s
EKA Eskdalemuir Ar 72.36 31 LR LR 22 49 38.5
comp=Z,266nm,18.4s,baz=311,slow=34
NC204 NORSAR Array S 72.37 21 P P **22 19 43.2 -0.9**
MJAR Matsushiro Arr 72.41 303 P P **22 19 43.0 -1.8**
comp=Z,1.6nm,0.5s,baz=61,slow=5.4,SNR=5.8
MJAR LR LR 22 45 52.8
comp=Z,110nm,21.6s,baz=74,slow=31
comp=Z,1.6nm,0.5s
MJAR Matsushiro Arr 72.41 303 P P **22 19 43.8 -1.0**
MJAR Matsushiro Arr 72.41 303 P P **22 19 43.8 -1.0**
MJAR pmax pmax
comp=Z,6.0nm,1.3s
NB2 NORSAR Subarra 72.69 21 P P **22 19 45.6 -0.5**
comp=Z,35nm,1.7s,baz=325,slow=5.9
NB2 NORSAR Subarra 72.69 21 P P **22 19 45.6 -0.5**
NOA NORSAR Array B 72.69 21 P P **22 19 46.3 +0.2**
comp=Z,1.5nm,0.9s,baz=325,slow=6.3,SNR=2.8
NOA LR LR 22 52 01.2
comp=Z,296nm,19.2s,baz=355,slow=36
comp=Z,1.5nm,0.9s
MDP Montagnes des 72.77 98 LR LR 22 57 34.5
comp=Z,81nm,18.4s,baz=311,slow=41
JHJ Hachijo jima 2 73.46 299 LR LR 22 43 39.2
comp=Z,116nm,21.3s,baz=54,slow=29
HFS Hagfors 74.12 20 P P **22 19 54.2 -0.3**
comp=Z,2.0nm,0.6s,baz=317,slow=10,SNR=2.1
HFS LR LR 22 53 07.6
comp=Z,508nm,19.2s,baz=320,slow=36
comp=Z,2.0nm,0.6s
CN2 Changchun 75.33 315 *e*P P **22 20 01.3 -0.4**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
JCJ Chichijima 75.49 293 LR LR 22 46 41.4
comp=Z,188nm,20.2s,baz=104,slow=30
FINES FINESS Array B 75.76 14 P P **22 20 03.5 -0.3**
comp=Z,1.9nm,0.7s,baz=325,slow=2.3,SNR=5.3
FINES LR LR 22 54 07.2
comp=Z,266nm,19.5s,baz=342,slow=36
comp=Z,1.9nm,0.7s
FINES FINESS Array B 75.76 14 P P **22 20 03.9 0.0**
FINES FINESS Array B 75.76 14 P P **22 20 03.9 0.0**
LPAZ La Paz 76.78 125 P P **22 20 09.9 -1.0**
comp=Z,1.4nm,0.7s,baz=336,slow=5.5,SNR=7.9
LPAZ LR LR 22 53 18.3
comp=Z,182nm,21.8s,baz=325,slow=35
comp=Z,1.4nm,0.7s
LPAZ La Paz 76.78 125 P P **22 20 09.7 -1.3**
LPAZ La Paz 76.78 125 P P **22 20 09.7 -1.3**
LPAZ pmax pmax
comp=Z,5.0nm,0.8s
PB16 IPOC Station P 77.48 127 P P **22 20 13.2 -1.6**
KSRS Korea Array 78.18 309 P P **22 20 17.3 -0.6**
comp=Z,1.1nm,0.5s,baz=45,slow=5.3,SNR=2.4
comp=Z,1.1nm,0.5s
KLMR Klimovskoe 78.31 8 *e*P P **22 20 18.6 +0.4**
KLMR pmax pmax
comp=Z,25nm,1.6s
MSVF Nonsavu 78.76 235 LR LR 22 46 32.4
comp=Z,405nm,19.9s,baz=28,slow=29
JNU Nakatsue 79.23 304 LR LR 22 49 59.3
comp=Z,61nm,20.8s,baz=53,slow=32
TLY Talaya 79.29 332 LR LR 22 54 48.8
comp=Z,202nm,20.3s,baz=31,slow=35
VILB Vilhena 79.53 117 P P **22 20 24.6 -1.0**
ULN Ulaanbaatar 81.06 328 *c*eP P **22 20 33.3 -0.3**
ULN pmax pmax
comp=Z,6.0nm,2.5s
ULN Ulaanbaatar 81.06 328 P P **22 20 32.5 -1.1**
ULN pP **pP** **22 20 41.8 -0.9**
ULN x x 22 20 42.8
ULN sP **sP** **22 20 45.3 -0.7**
SIV San Ignacio 81.12 120 LR LR 22 58 20.0
comp=Z,118nm,19.8s,baz=332,slow=37
KIRV Kirov 81.31 3 LR LR 23 00 49.9
comp=Z,82nm,18.3s,baz=345,slow=39
SONM Songino Array 81.36 328 P P **22 20 35.9 +0.8**
comp=Z,0.7nm,0.7s,baz=70,slow=3.0,SNR=7.0
SONM LR LR 22 56 13.1
comp=Z,304nm,21.2s,baz=40,slow=35
comp=Z,0.7nm,0.7s
SONM Songino Array 81.36 328 P P **22 20 34.6 -0.6**
SONM Songino Array 81.36 328 P P **22 20 34.6 -0.6**
SONM pmax pmax
comp=Z,10.0nm,1.6s
CLL Collm 81.43 25 *e*P P **22 20 36.0 +0.7**
CLL MLR MLR 22 56 00.0
comp=Z,300nm,20.4s
CLL Collm 81.43 25 *e*P P **22 20 36.0 +0.7**
CLL *i* x x 22 20 45.7
comp=Z,11nm,1.3s
CLL AMS AMS 22 56 00.0
comp=Z,300nm,20.4s
GUMO Guam 81.95 281 LR LR 22 56 10.1
comp=Z,93nm,18.1s,baz=90,slow=35
PTLB Pontes e Lacer 82.03 118 P P **22 20 38.8 -0.1**
PTLB IAmb IAmb 22 20 53.4
comp=Z,12nm,1.1s
PVCC Panska Ves 82.61 25 *e*pP pP 22 20 54.7 +4.1
ZAA0 Zalesovo Array 82.80 343 P P **22 20 42.4 -0.1**
ZAA0 IAmb IAmb 22 21 08.7
comp=Z,15nm,1.5s
ZALV Zalesovo Beam 82.80 343 P P **22 20 41.5 -0.9**
comp=Z,0.8nm,0.5s,baz=356,slow=6.2,SNR=5.2
ZALV LR LR 23 00 11.0
comp=Z,179nm,18.3s,baz=24,slow=38
comp=Z,0.8nm,0.5s
ZALV Zalesovo Beam 82.80 343 P P **22 20 42.0 -0.4**
ZALV Zalesovo Beam 82.80 343 P P **22 20 42.0 -0.4**
OSTC Ostas 83.11 24 *e*pP pP 22 20 55.1 +1.9
DPC Dobruska-Polom 83.32 24 *e*pP pP 22 20 55.6 +1.3
ZVC Zvikov 83.42 26 *e*pP pP 22 20 57.7 +2.9
KHC Kasperske Hory 83.48 26 *i* P P **22 20 47.6 +1.5**
KHC pmax pmax
comp=Z,2.0nm,1.1s
KHC Kasperske Hory 83.48 26 *e*pP pP 22 20 59.0 +3.8
PAB San Pablo 83.49 42 P P **22 20 46.7 +0.3**
PAB pP **pP** **22 20 56.1 +0.6**
PAB sP **sP** **22 20 59.3 +0.5**
OBN Obninsk 83.53 11 LR LR 22 58 20.1
comp=Z,286nm,20.9s,baz=348,slow=36
OBN Obninsk 83.53 11 *j e*P P **22 20 48.3 +2.2**
OBN *e* 22 23 59.5
OBN *e*PPP PPP 22 25 50.3
OBN pmax pmax
comp=Z,4.0nm,0.8s
OBN MLR MLR
comp=Z,251nm,17.0s
ESDC Sonseca Array 83.59 42 P P **22 20 47.1 +0.2**
comp=Z,1.3nm,0.9s,baz=318,slow=2.0,SNR=4.4
ESDC LR LR 22 56 05.6
comp=Z,398nm,18.4s,baz=314,slow=34
comp=Z,1.3nm,0.9s
ARTI Arti 83.62 358 LR LR 23 03 35.9
comp=Z,124nm,18.0s,baz=351,slow=40
ARTI Arti 83.62 358 *d* P P **22 20 50.0 +3.4**
ARTI 22 23 55.6
ARTI S S **22 31 12.0 +5.2**

ARTI SS **SS** **22 36 37.0 +5.2**
GERES **GERESS Array B** **83.77 26** P **P** **22 20 47.1 -0.6**
comp=Z,0.1nm,0.3s,baz=352,slow=5.1,SNR=1.5
GERES LR LR 22 59 30.1
comp=Z,251nm,18.4s,baz=322,slow=37
comp=Z,0.1nm,0.3s
RETA **Reutte** **83.88 29** *e*PcP **PcP** **22 20 50.9 -1.4**
comp=Z,3.4nm,1.1s
MOTA **Moosalm** **84.13 29** *e*PcP **PcP** **22 20 51.9 -1.5**
comp=Z,9.2nm,1.6s
STEB **Steborice** **84.14 24** *e*pP pP 22 21 00.1 +1.6
DAVOX **Davos/Dischmat** **84.15 30** LR LR 23 01 23.9
comp=Z,340nm,19.3s,baz=316,slow=38
MORC **Moravsky Berou** **84.20 24** *e*P **P** **22 20 48.5 -1.3**
VRAC **Vranov** **84.32 24** LR LR 22 58 47.1
comp=Z,227nm,21.3s,baz=325,slow=36
VRAC **Vranov** **84.32 24** *e*P **P** **22 20 50.4 +0.1**
WTTA **Wattenberg** **84.39 28** *e*PcP **PcP** **22 20 53.1 -1.6**
comp=Z,8.8nm,1.4s
FUORN **Ofenpass-Fuorn** **84.42 30** P **P** **22 20 51.5 +0.2**
KRUC **Moravsky** **84.47 25** *e*P **P** **22 20 51.7 +0.6**
HHC **Hu-ho-hao-te** **84.56 321** *e*P **P** **22 20 51.8 -0.1**
HHC pmax pmax
comp=Z,5.0nm,0.6s
HHC pmax pmax
comp=Z,99nm,4.2s
JOW **Kunigami** **85.11 301** LR LR 22 53 34.2
comp=Z,62nm,18.9s,baz=103,slow=32
KBA **Koelnbreinsper** **85.16 28** *e*PcP **PcP** **22 20 57.3 -0.7**
comp=Z,7.0nm,1.5s
LANS **Liptovska Anna** **85.34 23** *e*P **P** **22 20 59.5 +4.0**
LANS *e* 22 21 10.1
LANS **Liptovska Anna** **85.34 23** *e*P **P** **22 20 59.5 +4.0**
LANS *e* 22 21 10.1
MODS **Modra-Piesok** **85.36 25** *e*P **P** **22 20 59.6 +4.0**
MODS *e* 22 21 07.0
MODS **Modra-Piesok** **85.36 25** *e*P **P** **22 20 59.6 +4.0**
MODS *e* 22 21 07.0
BTO2 **Baotou** **85.45 322** *e*P **P** **22 20 55.8 -0.5**
BTO2 S **S** **22 31 25.9 +0.1**
BTO2 pmax pmax
comp=Z,9.0nm,0.5s
BTO2 pmax pmax
comp=Z,260nm,5.5s
BTO2 L L
comp=Z,330nm,9.8s
BTO2 L L
comp=Z,290nm,9.4s
BTO2 L L
comp=Z,290nm,10.8s
RONA **Rosalia, Austr** **85.63 25** *e*PcP **PcP** **22 20 59.1 -0.8**
comp=Z,5.0nm,1.6s
ARSA **Arzberg** **85.77 26** *e*PcP **PcP** **22 21 00.1 -0.4**
comp=Z,3.4nm,1.1s
DGZ **Jazzator, Alta** **86.09 340** *i* P **P** **22 21 00.0 +0.6**
DGZ pmax pmax
comp=Z,3.0nm,1.0s
BORK **Borovoye** **86.14 351** P **P** **22 20 59.6 +0.2**
BORK lAmb lAmb 22 21 15.0
comp=Z,5.9nm,0.8s
BORK **Borovoye** **86.14 351** P **P** **22 20 59.6 +0.2**
BORK pmax pmax
comp=Z,6.0nm,0.9s
BVAR **Borovoye Array** **86.15 351** P **P** **22 20 59.3 -0.1**
comp=Z,0.7nm,0.7s,baz=28,slow=6.5,SNR=4.2
BVAR LR LR 23 04 49.2
comp=Z,102nm,18.2s,baz=7.7,slow=39
comp=Z,0.7nm,0.7s
LPSR **Galich'ya Gora** **86.31 10** *e*P **pP** **22 21 10.5 +1.2**
LPSR pmax pmax
comp=Z,33nm,1.5s
AKASG **Malin Array Be** **86.43 16** P **P** **22 21 01.2 +0.4**
comp=Z,0.7nm,0.6s,baz=330,slow=4.8,SNR=7.3
AKASG LR LR 23 00 48.1
comp=Z,234nm,19.0s,baz=338,slow=36
comp=Z,0.7nm,0.6s
AKASG **Malin Array Be** **86.43 16** P **P** **22 21 00.7 -0.1**
AKASG **Malin Array Be** **86.43 16** P **P** **22 21 00.7 -0.1**
AKASG pmax pmax
comp=Z,6.0nm,1.3s
KURK **Kurchatov** **87.13 346** P **P** **22 21 03.2 -1.0**
KURK lAmb lAmb 22 21 16.6
comp=Z,5.0nm,0.8s
KURK **Kurchatov** **87.13 346** *ce*P **P** **22 21 04.4 +0.2**
KURK pmax pmax
comp=Z,11nm,2.5s
KURBB **Kurchatov Arra** **87.23 346** P **P** **22 21 04.5 -0.3**
comp=Z,3.1nm,0.2s,baz=16,slow=4.6,SNR=6.4
KURBB LR LR 23 04 47.9
comp=Z,118nm,19.0s,baz=165,slow=39
comp=Z,3.1nm,0.2s
VORR **Voronezh** **87.26 10** *e*P **pP** **22 21 15.1 +1.2**
VORR pmax pmax
comp=Z,1.0nm,0.4s
NJ2 **Nanjing** **87.27 311** *e*P **P** **22 21 04.3 -1.0**
BELG **Belogornoye** **87.39 5** LR LR 23 05 02.3
comp=Z,94nm,18.4s,baz=336,slow=39
VRH **Novokhopyorsk** **88.03 9** *e*P **P** **22 21 11.6 +3.1**
VRH pmax pmax
comp=Z,34nm,2.4s
MDT **Midelt** **88.36 47** LR LR 22 59 22.4
comp=Z,124nm,18.0s,baz=328,slow=35
AKTO **Aktyubinsk** **89.59 359** LR LR 23 06 54.4
comp=Z,158nm,18.4s,baz=344,slow=39
BDFB **Brasilia** **89.91 111** LR LR 23 06 18.1
comp=Z,159nm,19.4s,baz=356,slow=39
MK31 **Makanchi Array** **90.07 342** *ce*P **P** **22 21 18.7 +0.4**
MKAR **Makanchi Array** **90.07 342** P **P** **22 21 17.8 -0.5**
comp=Z,0.5nm,0.7s,baz=25,slow=4.6,SNR=4.3
MKAR LR LR 23 05 11.2
comp=Z,180nm,18.2s,baz=8.5,slow=38
comp=Z,0.5nm,0.7s
MKAR **Makanchi Array** **90.07 342** P **P** **22 21 17.5 -0.8**
MAKZ **Makanchi** **90.13 342** P **P** **22 21 17.8 -0.7**
MAKZ lAmb lAmb 22 21 30.8
comp=Z,7.1nm,1.1s
MAKZ **Makanchi** **90.13 342** P **P** **22 21 17.8 -0.7**
MAKZ pmax pmax
comp=Z,7.0nm,1.2s
MLR **Muntele Rosu** **90.50 20** LR LR 23 04 29.6
comp=Z,702nm,18.1s,baz=328,slow=37
ABKAR **Akbulak array** **90.72 357** P **P** **22 21 20.9 -0.3**
CPUP **Villa Florida** **90.94 124** LR LR 23 03 19.2
comp=Z,50nm,21.9s,baz=335,slow=36
WMQ **Urumqi** **91.39 337** *e*P **P** **22 21 25.1 +0.5**
WMQ L L
comp=Z,120nm,18.9s
RCBR **Riachuelo** **92.53 95** LR LR 23 06 45.6
comp=Z,26nm,21.9s,baz=276,slow=38
KEST **Kesra** **93.14 36** LR LR 23 02 57.1
comp=Z,170nm,19.8s,baz=4.7,slow=35
VAE **Valguarnera** **93.82 32** LR LR 23 05 14.6
comp=Z,321nm,18.1s,baz=335,slow=36
PLCA **Paso Flores** **94.34 142** LR LR 22 59 12.6
comp=Z,114nm,18.2s,baz=356,slow=32
URZ **Urewera** **94.80 222** LR LR 22 56 55.8
comp=Z,144nm,20.4s,baz=42,slow=31
PMG **Port Moresby** **94.88 262** LR LR 22 57 24.8
comp=Z,194nm,20.9s,baz=82,slow=31
KIV **Kislovodsk** **95.28 9** *e*P **P** **22 21 45.2 +2.7**
KIV pmax pmax
comp=Z,5.0nm,1.1s
KIV MLR MLR
comp=Z,197nm,20.0s
JAY **Jayapura** **95.41 271** LR LR 22 57 01.8
comp=Z,102nm,19.1s,baz=342,slow=31
SHA1 **Shidzhatmaz** **95.49 9** *i* P **P** **22 21 43.0 -0.6**
AAK **Ala-Archa** **95.67 346** LR LR 23 11 06.1
comp=Z,74nm,18.1s,baz=358,slow=39
AAK **Ala-Archa** **95.67 346** *i* P **P** **22 21 46.0 +1.6**
AAK pmax pmax
comp=Z,2.0nm,1.2s
CHGR **Chuyangaron** **100.43 349** *i* P **Pdif** **22 22 06.9 +1.2**
CHGR pmax pmax
comp=Z,2.0nm,0.9s
PZH **PanZhiHua** **100.90 319** P **Pdif** **22 22 06.6 -1.5**
QIZ **Qiongzhong** **102.38 308** P **Pdif** **22 22 16.3 +1.7**
QIZ PP **PP** **22 26 24.3 -2.4**
QIZ S **Sdif** **22 33 54.8 -2.1**
QIZ SS **SS** **22 41 02.1 -0.2**
QIZ L L
comp=Z,170nm,11.8s
QIZ L L
comp=Z,180nm,12.3s
QSPA **South Pole Qui** **130.14 180** PKP **PKPdf** **22 27 27.5 +0.2**
comp=Z,2.5nm,0.9s,baz=182,slow=0.9,SNR=4.9

NVL **N'lazarevskaya** **142.28 158** *e*PKIKP **PKPdf** **22 27 50.3 +0.7**
NVL *e* 22 30 57.9
NVL *e*PPP PPP 22 34 05.6
NVL *e* 22 34 59.0
NVL *e*SS SS 22 49 32.5 +3.3
NVL *e*SSS SSS 22 54 51.4
NVL pmax pmax
comp=Z,28nm,1.7s
NVL MLR MLR
comp=Z,450nm,19.0s
ELIB **Princess Elisa** **144.48 163** *d*PKPdf **PKPdf** **22 27 53.8 +0.1**
BOSA **Boshof** **152.47 74** PKPbc **PKiKP** **22 28 15.4 +0.2**
comp=Z,1.9nm,1.0s,baz=306,slow=11,SNR=1.4

*GRAL **18** 22:36:50.8±0.3, 32.07°N×30.65°E, h124km±145km, MD3.9*
*GII **18** 22:36:51.5±0.0, 31.743°N±0.002×31.547°E±0.001, h0km, Mws3.1, confirmed*
*NIC **18** 22:36:53.5, 31.71°N×31.37°E, h35km±29km, Ml3.1/14*
ISC 18 22:36:51.6±1.9, 31.72°N±0.05×31.41°E±0.09, h10km, n41, σ0.52/74, Egypt

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OSC2	**CSNet OBS 4**	**1.53**	**28**	P	**Pn**		**22 37 18.5**	**-0.5**
OSC2				S	**Sn**		**22 37 38.7**	**-0.3**
OSC2				AML	AML		22 37 44.9	
	0.2nm,0.2s							
OSC2				AML	AML		22 37 48.8	
	0.2nm,0.4s							
OSC1	**CSNet OBS 1**	**1.78**	**356**	P	**Pn**		**22 37 21.7**	**-0.7**
OSC1				AML	AML		22 37 43.9	
	0.2nm,0.2s							
OSC1				AML	AML		22 37 44.4	
	0.2nm,0.1s							
KZIT	**Kziot**	**2.68**	**107**	P	**Pn**		**22 37 35.6**	**+0.7**
KZIT				S	**Sn**		**22 38 07.4**	**0.0**
KZIT				AML	AML		22 38 08.1	
	0.6nm,0.3s							
KZIT				AML	AML		22 38 08.9	
	0.6nm,0.3s							
KZIT	**Kziot**	**2.68**	**107**	P	**Pn**		**22 37 35.1**	**+0.2**
KZIT				S	**Sn**		**22 38 07.4**	**0.0**
AMAZ	**Amatzia**	**3.00**	**93**	P	**Pn**		**22 37 39.5**	**+0.3**
AMAZ				S	**Sn**		**22 38 15.6**	**+0.4**
AMAZ				AML	AML		22 38 16.7	
	1.2nm,0.3s							
AMAZ				AML	AML		22 38 20.2	
	1.6nm,0.3s							
AMAZ	**Amatzia**	**3.00**	**93**	P	**Pn**		**22 37 39.1**	**-0.1**
AMAZ				S	**Sn**		**22 38 15.0**	**-0.2**
SLTI	**Sal'it**	**3.13**	**80**	P	**Pn**		**22 37 40.9**	**-0.2**
SLTI				S	**Sn**		**22 38 18.0**	**-0.5**
OFRI	**`Ofer**	**3.16**	**73**	P	**Pn**		**22 37 40.7**	**-0.8**
OFRI				S	**Sn**		**22 38 17.8**	**-1.5**
YTIR	**Yattir**	**3.18**	**95**	P	**Pn**		**22 37 41.8**	**0.0**
YTIR				S	**Sn**		**22 38 19.8**	**-0.1**
APOL	**The Sanctuary**	**3.18**	**22**	P	**Pn**		**22 37 42.6**	**+0.8**
APOL				S	**Sn**		**22 38 20.0**	**+0.2**
APOL				AML	AML		22 38 27.5	
	0.2nm,0.4s							
APOL				AML	AML		22 38 27.9	
	0.2nm,0.2s							
NATA	**Nata**	**3.20**	**17**	P	**Pn**		**22 37 42.7**	**+0.7**
NATA				S	**Sn**		**22 38 20.8**	**+0.6**
NATA				AML	AML		22 38 22.4	
	0.3nm,0.3s							
NATA				AML	AML		22 38 25.5	
	0.3nm,0.2s							
KRMI	**Paran Flat**	**3.27**	**118**	P	**Pn**		**22 37 42.4**	**-0.6**
KRMI				S	**Sn**		**22 38 21.6**	**-0.2**
BLGI	**Bet Lehem HaGe**	**3.36**	**72**	P	**Pn**		**22 37 43.4**	**-0.7**
BLGI				S	**Sn**		**22 38 23.7**	**-0.4**
PRNI	**Paran**	**3.37**	**113**	P	**Pn**		**22 37 44.5**	**+0.1**
PRNI				S	**Sn**		**22 38 24.6**	**+0.1**
AKMS	**Akamas**	**3.38**	**13**	P	**Pn**		**22 37 44.1**	**-0.4**
AKMS				AML	AML		22 38 25.6	
	0.3nm,0.3s							
AKMS				AML	AML		22 38 27.9	
	0.2nm,0.5s							
DSI	**Dead Sea**	**3.39**	**92**	P	**Pn**		**22 37 44.6**	**0.0**
DSI				S	**Sn**		**22 38 24.7**	**-0.1**
MSBI	**Mazada**	**3.40**	**96**	P	**Pn**		**22 37 44.5**	**-0.1**
MSBI				S	**Sn**		**22 38 24.6**	**-0.3**
ASGA	**Asgata**	**3.42**	**26**	P	**Pn**		**22 37 45.6**	**+0.6**
ASGA				S	**Sn**		**22 38 26.1**	**+0.4**
ASGA				AML	AML		22 38 28.7	
	0.2nm,0.3s							
ASGA				AML	AML		22 38 29.2	
	0.3nm,0.3s							
ZFRI	**Zfri**	**3.43**	**109**	P	**Pn**		**22 37 44.8**	**-0.3**
ZFRI				S	**Sn**		**22 38 25.8**	**-0.1**
TROD	**Troodos**	**3.44**	**20**	P	**Pn**		**22 37 46.1**	**+0.6**
TROD				S	**Sn**		**22 38 26.3**	**-0.1**
TROD				AML	AML		22 38 30.4	
	0.1nm,0.4s							
TROD				AML	AML		22 38 31.2	
	0.1nm,0.4s							
MMLI	**Mount Malkishu**	**3.48**	**77**	P	**Pn**		**22 37 46.0**	**+0.1**
MMLI				S	**Sn**		**22 38 27.4**	**+0.2**
MMLI				AML	AML		22 38 28.0	
	0.4nm,0.2s							
MMLI				AML	AML		22 38 30.4	
	0.4nm,0.2s							
MMLI	**Mount Malkishu**	**3.48**	**77**	P	**Pn**		**22 37 45.7**	**-0.1**
MMLI				S	**Sn**		**22 38 26.8**	**-0.3**
HMDT	**Nahal Hemdat**	**3.54**	**80**	P	**Pn**		**22 37 46.4**	**-0.3**
HMDT				S	**Sn**		**22 38 28.2**	**-0.3**
HRFI	**Mount Harif**	**3.54**	**117**	P	**Pn**		**22 37 46.9**	**+0.1**
HRFI				S	**Sn**		**22 38 28.9**	**+0.2**
XYLS	**Xyliatos**	**3.56**	**22**	P	**Pn**		**22 37 47.3**	**+0.3**
XYLS				S	**Sn**		**22 38 28.6**	**-0.5**
XYLS				AML	AML		22 38 30.3	
	0.2nm,0.2s							
XYLS				AML	AML		22 38 32.6	
	0.2nm,0.2s							
ALFC	**Alefka**	**3.57**	**16**	P	**Pn**		**22 37 47.0**	**-0.1**
ALFC				S	**Sn**		**22 38 28.6**	**-0.7**
ALFC				AML	AML		22 38 32.3	
	0.3nm,0.2s							
ALFC				AML	AML		22 38 32.6	
	0.2nm,0.2s							
CSS	**Mathiatis**	**3.61**	**26**	P	**Pn**		**22 37 48.2**	**+0.5**
CSS				S	**Sn**		**22 38 30.3**	**-0.1**
CSS				AML	AML		22 38 34.9	
	0.1nm,0.6s							
CSS				AML	AML		22 38 36.9	
	0.1nm,0.6s							
MMC7	**Mount Meron ar**	**3.61**	**68**	P	**Pn**		**22 37 47.5**	**-0.2**
MMA0B	**Mount Meron ar**	**3.62**	**68**	P	**Pn**		**22 37 47.6**	**-0.2**
MMA0B				S	**Sn**		**22 38 30.0**	**-0.6**
EIL	**Elat**	**3.67**	**123**	P	**Pn**		**22 37 48.6**	**+0.1**
EIL				S	**Sn**		**22 38 32.3**	**+0.4**
MVOU	**Mavrovouni**	**3.77**	**29**	P	**Pn**		**22 37 50.6**	**+0.7**
MVOU				S	**Sn**		**22 38 35.2**	**+0.8**
MVOU				AML	AML		22 38 37.7	
MVOU				AML	AML		22 38 44.8	
	0.1nm,0.4s							
GEM	**Giv'at Ha'Em**	**3.89**	**66**	P	**Pn**		**22 37 51.5**	**0.0**
GEM				S	**Sn**		**22 38 37.1**	**-0.1**
KSHT	**Keshet**	**3.93**	**70**	P	**Pn**		**22 37 51.9**	**-0.2**
KSHT				S	**Sn**		**22 38 38.1**	**-0.2**
NATI	**Neve Ativ**	**3.96**	**66**	P	**Pn**		**22 37 52.5**	**0.0**
NATI				S	**Sn**		**22 38 39.3**	**+0.2**
DQRL	**Deir Qamar**	**4.03**	**59**	*e*P	**Pn**		**22 37 54.2**	**+0.8**
QRWL	**Qaraoun**	**4.04**	**62**	*e*P	**Pn**		**22 37 54.9**	**+1.3**
RCY	**Rachaya**	**4.13**	**63**	*e*P	**Pn**		**22 37 56.1**	**+1.1**
RCY				*e*S	**Sn**		**22 38 44.6**	**+1.2**
BHL	**Bhannes**	**4.18**	**58**	*e*P	**Pn**		**22 37 56.1**	**+0.5**
BHL				*e*S	**Sn**		**22 38 44.4**	**-0.3**
ZAHL	**Zahle**	**4.33**	**59**	*e*P	**Pn**		**22 37 58.3**	**+0.6**
HWQ	**Hawqa**	**4.58**	**55**	*e*P	**Pn**		**22 38 00.9**	**-0.3**
BEIL	**Beino**	**4.89**	**54**	*e*P	**Pn**		**22 38 04.6**	**-0.7**

IDC 18 22:40:56.6±2.0, 6.56°S×129.19°E, h0km, mb3.5/1, mbtmp3.5/4, ML3.6/3, Error ellipse: s-maj=81.5km s-min=27.6km az=75.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.98**	**196**	Pn	Pn		22 43 50.0	+1.1
	0.3nm,0.3s,baz=13,slow=10,SNR=5.9							
FITZ				Sn	Sn		22 45 53.8	-9.5
	0.5nm,0.3s,baz=131,slow=23,SNR=6.8							
	1.3nm,0.7s							
WRA	**Warramunga Arr**	**14.21**	**160**	Pn	Pn		22 44 18.8	-0.6
	0.2nm,0.3s,baz=338,slow=13,SNR=12							
WRA				Sn	Sn		22 46 43.1	-15
	0.3nm,0.3s,baz=332,slow=23,SNR=6.7							
	0.4nm,0.7s							
ASAR	**Alice Springs**	**17.61**	**166**	P	Pn		22 45 03.1	-0.5
	0.3nm,0.3s,baz=340,slow=9.5,SNR=22							
	1.2nm,0.5s							
MKAR	**Makanchi Array**	**67.42**	**327**	P	P		22 51 54.0	0.0
	0.3nm,0.5s,baz=124,slow=8.2,SNR=7.0							
	0.3nm,0.5s							

IDC 18 22:48:34.7±2.3, 33.42°S×178.02°W, h0km, mb4.1/2, mbtmp4.1/3, ML3.9/1, MS3.5/1, Error ellipse: s-maj=67.0km s-min=32.6km az=131.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.24**	**218**	Pn	Pn		22 50 08.4	+0.4
	3.0nm,0.3s,baz=299,slow=2.1,SNR=18							
URZ				Sn	Sn		22 51 19.6	-0.5
	3.7nm,0.3s,baz=251,slow=0.4,SNR=8.7							
	7.4nm,0.3s							
ASAR	**Alice Springs**	**43.01**	**270**	P	P		22 56 36.2	0.0
	2.2nm,0.6s,baz=108,slow=7.6,SNR=24							
	2.2nm,0.6s							
WRA	**Warramunga Arr**	**44.27**	**275**	P	P		22 56 46.2	-0.1
	0.7nm,0.3s,baz=116,slow=8.0,SNR=5.8							
	0.7nm,0.3s							
JAY	**Jayapura**	**49.32**	**300**	LR	LR		23 16 58.4	
	comp=Z,48nm,18.8s,baz=348,slow=34							
FINES	**FINESS Array B**	**147.95**	**338**	PKPbc	PKPdf		23 08 19.6	+1.5
	1.2nm,0.6s,baz=48,slow=2.1,SNR=8.0							
HFS	**Hagfors**	**152.18**	**347**	PKPbc	PKiKP		23 08 32.2	+0.4
	2.4nm,0.8s,baz=328,slow=5.1,SNR=2.2							

*NEIC **18** 22:51:41.9±1.7, 10.89°S±0.09×115.15°E±0.09, h10km±1km, mb4.4/16, Error ellipse: s-maj=18.4km s-min=12.1km az=223.0*
*DJA **18** 22:51:48.1±1.0, 11°S±6"×11°E±", h16km±12km, M4.7/25, mB5.4/6, mb4.7/6, MLv4.6/25, Mw(mB)4.9/6*
*IDC **18** 22:51:50.8±5.5, 10.64°S×115.34°E, h69km±47km, mb3.8/9, mbtmp4.1/11, ML4.3/2, Error ellipse: s-maj=45.9km s-min=18.7km az=60.0*
ISC 18 22:51:44.5±0.5, 11.01°S±0.06×115.14°E±0.06, h35km, n79, σ2.9/10/78, mb4.3/14, South of Bali

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
IGBI	**Denpasar**	**2.18**	**0**	P	**Pn**		**22 52 18.9**	**+0.6**
IGBI				S	**Sn**		**22 52 43.8**	**-0.2**
DNP	**Denpasar**	**2.32**	**2**	P	**Pn**		**22 52 21.5**	**+1.3**
RTBI	**Rangdo, Negare**	**2.54**	**356**	P	**Pn**		**22 52 24.0**	**+0.7**
RTBI				S	**Sn**		**22 52 53.4**	**+0.3**
KHKI	**Kahang-Kahang**	**2.67**	**10**	P	**Pn**		**22 52 27.0**	**+1.9**
JAGI	**Jajag, Banyuwa**	**2.70**	**339**	P	**Pn**		**22 52 25.9**	**+0.4**
JAGI	**Jajag, Banyuwa**	**2.70**	**339**				**22 52 25.7**	**+0.2**
JAGI				Sn	**Sn**		**22 52 55.7**	**-1.3**
JAGI	**Jajag, Banyuwa**	**2.70**	**339**	P	**Pn**		**22 52 25.4**	**-0.1**
JAGI				S	**Sn**		**22 52 56.5**	**-0.5**
ABJI	**Asem Bagus**	**3.31**	**344**	P	**Pn**		**22 52 35.0**	**+1.1**
PLAI	**Plampang**	**3.39**	**50**	P	**Pn**		**22 52 36.2**	**+1.2**
PLAI	**Plampang**	**3.39**	**50**	P	**Pn**		**22 52 35.4**	**+0.4**
BLJI	**Banyuglugur**	**3.58**	**335**	P	**Pn**		**22 52 39.2**	**+1.6**
BLJI				S	**Sn**		**22 53 18.4**	**-0.3**
DBNI	**Kabupaten Domp**	**4.00**	**52**	P	**Pn**		**22 52 45.5**	**+2.1**
WBSI	**Waikabubak, Su**	**4.40**	**72**	P	**Pn**		**22 52 52.9**	**+3.9**
SNJI	**Sawahan-Nganju**	**4.62**	**314**	P	**Pn**		**22 52 54.3**	**+2.2**
SJI	**Sawahan**	**4.65**	**314**	P	**Pn**		**22 52 53.7**	**+1.3**
PCJI	**Pacitan**	**4.80**	**305**	P	**Pn**		**22 52 58.4**	**+4.0**
LBFI	**Labuhan Bajo,**	**5.32**	**62**	P	**Pn**		**22 53 04.1**	**+2.6**
UGM	**Wanagama**	**5.49**	**304**	P	**Pn**		**22 53 03.8**	**-0.1**
UGM	**Wanagama**	**5.49**	**304**		**Pn**		**22 53 03.9**	**-0.1**
UGM	**Wanagama**	**5.49**	**304**	P	**Pn**		**22 53 06.7**	**+2.8**
	0.6nm2µm56nm,0.4s							
EDFI	**Ende, Flores**	**6.84**	**71**	P	**Pn**		**22 53 27.2**	**+4.7**
	0.1nm660nm15nm,0.5s							
KPJI	**Karang Pucung**	**7.13**	**300**	P	Pn		22 53 42.3	+16
KAPI	**Kappang**	**7.51**	**38**	P	**Pn**		**22 53 33.9**	**+2.3**
	3.9nm,0.3s,baz=224,slow=14,SNR=5.1							
KAPI				S	**Sn**		**22 54 51.8**	**-3.8**
	8.7nm,0.4s,baz=46,slow=23,SNR=7.3							
	10nm,0.2s							
KAPI	**Kappang**	**7.51**	**38**	P	**Pn**		**22 53 35.1**	**+3.5**
KAPI	**Kappang**	**7.51**	**38**	Sn	**Sn**		**22 54 53.9**	**-1.7**
KAPI	**Kappang**	**7.51**	**38**	P	**Pn**		**22 53 33.8**	**+2.2**
BBJI	**Bungbulang**	**8.19**	**295**	P	**Pn**		**22 53 39.8**	**-1.2**
BBJI	**Bungbulang**	**8.19**	**295**	Pn	**Pn**		**22 53 39.7**	**-1.3**
BATI	**Baumata**	**8.42**	**85**	P	**Pn**		**22 53 46.0**	**+1.8**
	4.7nm,0.3s,baz=293,slow=15,SNR=2.4							
BATI				S	**Sn**		**22 55 16.3**	**-1.8**
	12nm,0.5s,baz=0.0,slow=20,SNR=1.2							
	13nm,0.4s							
XMI	**Christmas Isla**	**9.30**	**273**	P	**Pn**		**22 53 53.4**	**-2.8**
MBWA	**Marble Bar**	**11.02**	**157**	P	Pn		22 54 14.3	-5.4
MBWA	**Marble Bar**	**11.02**	**157**		Pn		22 54 14.0	-5.7
PSA00	**Pilbara Seismi**	**11.44**	**157**	P	Pn		22 54 20.5	-5.0
PSA00	**Pilbara Seismi**	**11.44**	**157**		Pn		22 54 19.7	-5.8
FITZ	**Fitzroy Crossi**	**12.37**	**126**	P	Pn		22 54 34.9	-3.4
	1.7nm,0.4s,baz=307,slow=8.9,SNR=11							
FITZ				S	Sn		22 56 42.0	-13
	5.0nm,0.5s,baz=106,slow=14,SNR=6.0							
KNRA	**Kununurra**	**14.05**	**111**	Pn	**Pn**		**22 55 00.9**	**-0.3**
MTN	**Manton Dam**	**15.76**	**98**	Pn	**Pn**		**22 55 23.0**	**-1.0**
MEEK	**Meekatharra**	**15.89**	**169**	P	**Pn**		**22 55 21.7**	**-4.0**
MORW	**Morawa**	**17.99**	**177**	P	**Pn**		**22 55 47.6**	**-4.3**
FAKI	**Fak Fak**	**18.78**	**66**	P	**P**		**22 55 57.7**	**-3.3**
FAKI				lAmb	lAmb		22 56 17.5	
	comp=Z,19nm,1.0s							
BLDU	**Ballidu**	**19.57**	**176**	P	**P**		**22 56 09.6**	**+0.1**
WB0	**Warramunga Arr**	**20.49**	**117**		**P**		**22 56 19.8**	**+0.1**
WRA	**Warramunga Arr**	**20.51**	**118**	P	**P**		**22 56 22.4**	**+2.5**
	comp=Z,1.4nm,0.8s,baz=295,slow=9.7,SNR=9.6							
WRA				S	S		22 59 55.8	-12
	comp=Z,0.5nm,0.7s,baz=287,slow=23,SNR=4.8							
	comp=Z,1.4nm,0.8s							
KLBR	**Kellerberrin**	**20.63**	**174**	P	Pn		22 56 24.0	+0.6
MUN	**Mundaring**	**20.89**	**177**	P	Pn		22 56 28.3	+1.8
AS31	**Alice Springs**	**21.86**	**128**	P	**P**		**22 56 35.2**	**+0.7**
ASAR	**Alice Springs**	**21.86**	**128**	S	**S**		**23 00 28.7**	**-5.6**
	comp=Z,1.6nm,0.9s,baz=303,slow=24,SNR=7.1							
ASAR	**Alice Springs**	**21.86**	**128**	P	**P**		**22 56 34.5**	**+0.1**
NWAO	**Narrogin (SRO)**	**21.90**	**175**	P	**P**		**22 56 40.9**	**+6.2**
NWAO	**Narrogin (SRO)**	**21.90**	**175**	P	**P**		**22 56 35.1**	**+0.4**
FORT	**Forrest**	**23.04**	**151**	P	**P**		**22 56 46.7**	**-0.1**
FORT				lAmb	lAmb		22 57 23.7	
	comp=Z,5.7nm,0.8s							
STKA	**Stephens Creek**	**32.06**	**134**	P	**P**		**22 58 12.8**	**+4.6**
	comp=Z,2.7nm,1.0s,baz=290,slow=11,SNR=3.0							
	comp=Z,2.7nm,1.0s							
CMAR	**Chiang Mai Arr**	**33.35**	**331**	P	**P**		**22 58 20.4**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=160,slow=8.3,SNR=6.0							
	comp=Z,0.6nm,0.5s							
CMAR	**Chiang Mai Arr**	**33.35**	**331**	P	**P**		**22 58 17.2**	**-2.4**
SONM	**Songino Array**	**59.09**	**353**	P	**P**		**23 01 41.2**	**-0.3**
	comp=Z,0.4nm,0.5s,ba

EKS2	Erkin-Say	65.45	328	P		P	23 02 26.3	+2.2
	SNR=6.6							
USP	Ospenovka	65.50	328	P		P	23 02 25.7	+1.3
	SNR=5.7							
KKAR	Karatay Array	67.50	326	P		P	23 02 37.3	+0.2
KURBB	Kurchatov Arra	69.16	336	P		P	23 02 48.4	+1.1
	comp=Z,1.8nm,0.6s,baz=150,slow=5.4,SNR=17							
	comp=Z,1.8nm,0.6s							
KURK	Kurchatov	69.19	336			P	23 02 47.6	+0.1
KURK					IAmb	IAmb	23 02 49.5	
	comp=Z,2.9nm,0.7s							
ZAA0	Zalesovo Array	69.64	341	P		P	23 02 49.9	-0.2
ZAA0					IAmb	IAmb	23 02 51.4	
	comp=Z,2.4nm,0.7s							
ZALV	Zalesovo Beam	69.64	341	P		P	23 02 50.7	+0.5
	comp=Z,2.5nm,0.6s,baz=157,slow=4.6,SNR=15							
	comp=Z,2.5nm,0.6s							
ZALV	Zalesovo Beam	69.64	341	P		P	23 02 50.1	0.0
BVAR	Borovoye Array	74.33	334	P		P	23 03 18.9	+0.5
	comp=Z,0.7nm,0.6s,baz=142,slow=7.3,SNR=6.8							
	comp=Z,0.7nm,0.6s							
AB31	Akbulak array	77.06	326	P		P	23 03 34.8	+0.8
ABKAR	Akbulak array	77.06	326	P		P	23 03 35.0	+1.0
TIXI	Tiksi	82.98	4	P		P	23 04 04.7	-0.9
	comp=Z,1.8nm,0.2s,baz=135,slow=7.1,SNR=5.1							
	comp=Z,1.8nm,0.2s							
TKL	Tuckaleechee C	150.06	32	PKPbc		PKiKP	23 11 33.8	+0.9
	comp=Z,3.9nm,0.6s,baz=135,slow=1.4,SNR=9.8							

NOU ***18*** *23:01:44.7, 10°.35S×161°.75E, h31km, MLv4.9/11, Solomon Islands*

NEIC ***18*** *23:01:45.6±1.6, 10°.27S±0°.08×161°.84E±0°.08, h65km±7km, mb4.6/42, Error ellipse: s-maj=12.9km s-min=9.0km az=224.0*

IDC ***18*** *23:01:46.4±2.5, 10°.29S×161°.74E, h75km±20km, mb4.0/14, mbtmp4.3/15, MS3.6/13, Error ellipse: s-maj=21.1km s-min=15.1km az=79.0*

ISC 18 23:01:42.2±0.5, 10°.24S±0°.05×161°.86E±0°.06, h35km, n85, σ1§65/81, mb4.6/34, MS3.8/11, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HURO	Huro Makira	0.23	169	P		Pn	23 01 51.8	+2.4
HURO	Huro Makira	0.23	169	S		Sn	23 01 58.1	+3.8
HNR	Honiara	2.05	293	P		Pn	23 02 16.3	+2.2
	15nm,0.5s,baz=316,slow=2.9,SNR=13							
HNR				S		Sn	23 02 42.6	+4.0
	76nm,0.7s,baz=330,slow=20,SNR=5.6							
HNR				LR		LR	23 03 22.6	
	comp=Z,45nm,19.4s,baz=286,slow=49							
HNR	Honiara	2.05	293	P		Pn	23 02 16.7	+2.5
HNR	Honiara	2.05	293			Pn	23 02 17.1	+2.9
HNR				Sn		Sn	23 02 42.6	+4.0
NGOA	Tingoa Renbel	2.20	233	P		Pn	23 02 17.3	+1.1
NGOA	Tingoa Renbel	2.20	233	S		Sn	23 02 41.8	-0.4
SAVO	Savo Central	2.29	298	P		Pn	23 02 20.8	+3.3
TATA	Tatamba Isabel	2.74	312	P		Pn	23 02 26.1	+2.4
TATA	Tatamba Isabel	2.74	312	S		Sn	23 02 58.9	+3.3
SANVU	Saraoutou	7.35	135	P		Pn	23 03 29.8	+2.7
SANVU	Saraoutou	7.35	135			Pn	23 03 29.5	+2.4
DZM	Mont Dzumac	12.56	160	P		Pn	23 04 41.4	+2.7
	5.3nm,0.7s,baz=350,slow=21,SNR=8.2							
DZM				S		Sn	23 06 56.5	-0.9
	9.2nm,0.8s,baz=345,slow=20,SNR=2.5							
DZM				LR		LR	23 08 54.1	
	comp=Z,313nm,18.1s,baz=38,slow=34							
PATS	Pohnpei	17.33	348	Pn		Pn	23 05 41.6	+0.1
CTA	Charters Tower	17.95	235	P		P	23 05 52.2	+2.7
	10nm,0.9s,baz=60,slow=13,SNR=4.0							
CTA				LR		LR	23 10 56.2	
	comp=Z,142nm,20.2s,baz=48,slow=31							
CTAO	Charters Tower	17.95	235	Pn		P	23 05 52.3	+2.7
EIDS	Eidsvold	18.20	213			P	23 05 53.2	+1.0
COEN	Coen	18.64	257	Pn		Pn	23 05 59.8	+2.2
COEN				IAmb		IAmb	23 06 04.6	
	comp=Z,60nm,1.5s							
ARMA	Armidale	22.23	204	P		P	23 06 36.9	+0.8
AFI	Afiamalu	26.03	101	LR		LR	23 15 19.5	
	comp=Z,130nm,18.5s,baz=328,slow=31							
WB0	Warramunga Arr	28.13	247	P		P	23 07 30.1	-1.2
WB0				IAmb		IAmb	23 07 44.3	
	comp=Z,20nm,1.4s							
WRA	Warramunga Arr	28.23	247	P		P	23 07 30.5	-1.6
	comp=Z,2.2nm,0.5s,baz=76,slow=9.3,SNR=42							
WRA				S		S	23 12 05.9	-10
	comp=Z,0.6nm,1.0s,baz=81,slow=14,SNR=2.0							
	comp=Z,2.2nm,0.5s							
WRA	Warramunga Arr	28.23	247	P		P	23 07 29.5	-2.6
STKA	Stephens Creek	28.55	218	P		P	23 07 36.0	+1.1
	comp=Z,0.9nm,0.4s,baz=52,slow=16,SNR=3.7							
STKA				LR		LR	23 18 41.4	
	comp=Z,248nm,19.7s,baz=23,slow=36							
	comp=Z,0.9nm,0.4s							
STKA	Stephens Creek	28.55	218	P		P	23 07 35.0	+0.2
AS31	Alice Springs	29.81	240	P		P	23 07 44.5	-1.7
ASAR	Alice Springs	29.81	240	P		P	23 07 44.9	-1.4
	comp=Z,1.4nm,0.7s,baz=63,slow=10,SNR=15							
ASAR				LR		LR	23 19 38.4	
	comp=Z,238nm,18.9s,baz=54,slow=36							
	comp=Z,1.4nm,0.7s							
ASAR	Alice Springs	29.81	240	P		P	23 07 44.5	-1.7
TOO	Toolangi	30.95	206	P		P	23 07 56.5	+0.4
BKZ	Black Stump Fm	31.63	158	P		P	23 08 02.3	+0.2
KNRA	Kununurra	32.68	257	P		P	23 08 10.3	-1.1
KNRA				IAmb		IAmb	23 08 25.9	
	comp=Z,11nm,0.8s							
BBOO	Buckleboo	32.70	223	P		P	23 08 11.2	-0.3
BBOO				IAmb		IAmb	23 08 13.6	
	comp=Z,8.3nm,0.8s							
FORT	Forrest	37.45	232	P		P	23 08 52.1	-0.4
FORT				IAmb		IAmb	23 09 13.1	
	comp=Z,8.5nm,1.1s							
PSA00	Pilbara Seismi	41.82	249	P		P	23 09 27.8	-1.1
MBWA	Marble Bar	41.86	250	P		P	23 09 27.9	-1.4
MBWA				IAmb		IAmb	23 09 34.7	
	comp=Z,18nm,1.4s							
MORW	Morawa	46.69	240	P		P	23 10 07.0	-0.9
MORW				IAmb		IAmb	23 10 13.6	
	comp=Z,11nm,1.1s							
JAGI	Jajag, Banyuwa	47.07	268	P		P	23 10 08.2	-2.9
PPT	Papeete	47.60	104	LR		LR	23 29 47.1	
	comp=Z,42nm,18.1s,baz=68,slow=35							
UGM	Wanagama	50.70	268	P		P	23 10 36.7	-2.3
JMN	Monobe	51.18	330	P		P	23 10 41.8	-0.5
MJAR	Matsushiro Arr	51.58	336	P		P	23 10 43.5	-1.6
	comp=Z,1.1nm,0.5s,baz=159,slow=8.9,SNR=4.9							
	comp=Z,1.1nm,0.5s							
NACB	Ninganchiao	52.11	312	P		P	23 10 48.5	-0.8
JNU	Nakatsue	52.26	327	LR		LR	23 30 15.5	
	comp=Z,23nm,21.6s,baz=52,slow=33							
SSLB	Suanglung	52.36	311	P		P	23 10 50.0	-1.2
JKA	Kamikawa-asahi	56.85	344	P		P	23 11 23.6	+0.2
KSRS	Korea Array	57.12	328	P		P	23 11 25.3	0.0
	comp=Z,1.7nm,0.7s,baz=152,slow=5.7,SNR=4.2							
	comp=Z,1.7nm,0.7s							
USRK	Ussuriysk Ar.	60.58	336	P		P	23 11 49.2	0.0
	comp=Z,4.3nm,0.7s,baz=144,slow=5.4,SNR=3.4							
	comp=Z,4.3nm,0.7s							
CMAR	Chiang Mai Arr	68.30	295	P		P	23 12 39.0	-1.3
	comp=Z,1.0nm,0.4s,baz=123,slow=4.7,SNR=9.0							
CMAR				LR		LR	23 43 38.8	
	comp=Z,10.0nm,18.3s,baz=195,slow=37							
	comp=Z,1.0nm,0.4s							
CMAR	Chiang Mai Arr	68.30	295	P		P	23 12 38.3	-2.0
LZDM	Lanzhou Array	71.45	313	P		P	23 12 59.2	-0.6
	comp=Z,2.0nm,0.3s,baz=134,slow=6.4,SNR=6.4							
	comp=Z,2.0nm,0.3s							
ULN	Ulaanbaatar	75.44	325	P		P	23 13 22.2	-0.6
ULN				IAmb		IAmb	23 13 24.0	
	comp=Z,10.0nm,1.1s							
SONM	Songino Array	75.79	325	P		P	23 13 24.7	-0.1
	comp=Z,5.9nm,0.9s,baz=146,slow=6.6,SNR=30							
	comp=Z,5.9nm,0.9s							
SONM	Songino Array	75.79	325	P		P	23 13 24.0	-0.8
SONM				IAmb		IAmb	23 13 25.7	
	comp=Z,7.2nm,1.0s							
M14K	Bethel	76.33	17	P		P	23 13 27.2	-0.1
M14K				IAmb		IAmb	23 13 56.1	
	comp=Z,15nm,1.2s							
ACHA	Angle Creek He	76.56	22	P		P	23 13 28.9	0.0
ACHA				IAmb		IAmb	23 13 43.2	
	comp=Z,15nm,1.4s							
L14K	Kuka Creek	76.60	17	P		P	23 13 28.9	+0.1
L14K				IAmb		IAmb	23 13 30.8	
	comp=Z,15nm,1.2s							
M16K	Timber Creek	77.45	18	P		P	23 13 34.3	+0.6
M16K				IAmb		IAmb	23 13 42.7	
	comp=Z,12nm,1.2s							
K15K	Wolf Creek Mou	77.69	17	P		P	23 13 35.4	+0.4
K15K				IAmb		IAmb	23 13 40.7	
	comp=Z,10nm,1.1s							
L18K	Granite Mounta	79.07	18			P	23 13 43.1	+0.5
L18K				IAmb		IAmb	23 13 45.1	
	comp=Z,5.8nm,0.8s							
QSPA	South Pole Qui	79.76	180	P		P	23 13 46.1	-0.6
	comp=Z,2.3nm,0.8s,baz=146,slow=1.0,SNR=9.0							
	comp=Z,2.3nm,0.8s							
QSPA	South Pole Qui	79.76	180	P		P	23 13 45.6	-1.0
SCM	Sheep Creek Mo	81.97	22	P		P	23 13 58.7	+0.4
IMAR	Indian Mountai	82.72	17	P		P	23 14 02.2	+0.2
MLY	Manley	82.94	18	P		P	23 14 03.0	-0.3
MLY				IAmb		IAmb	23 14 04.1	
	comp=Z,7.8nm,1.3s							
WRH	Wood River Hil	83.41	20	P		P	23 14 05.1	-0.5
WRH				IAmb		IAmb	23 14 31.1	
	comp=Z,6.3nm,1.3s							
IL31		84.00	20	P		P	23 14 07.7	-0.9
ILAR	Eielson Array	84.00	20	P		P	23 14 08.0	-0.7
	comp=Z,2.2nm,0.9s,baz=244,slow=5.1,SNR=18							
	comp=Z,2.2nm,0.9s							
ILAR	Eielson Array	84.00	20	P		P	23 14 07.9	-0.7
DOT	Dot Lake	84.28	21	P		P	23 14 09.9	-0.2
DOT				IAmb		IAmb	23 14 19.8	
	comp=Z,8.2nm,1.1s							
SCRK	Sand Creek	84.50	21	P		P	23 14 11.6	+0.2
TIXI	Tiksi	84.61	350	LR		LR	23 50 42.6	
	comp=Z,21nm,21.6s,baz=192,slow=35							
O02D	Mt. Diablo Mer	85.57	48	P		P	23 14 18.2	+0.9
O02D				IAmb		IAmb	23 14 20.5	
	comp=Z,8.0nm,1.2s							
BMAR	Burnt Mountain	86.40	18	P		P	23 14 21.6	+0.9
LHV	Little Huntoon	88.25	51	P		P	23 14 29.8	-0.3
LHV				IAmb		IAmb	23 14 32.3	
	comp=Z,5.4nm,1.1s							
DSP	Deep Springs	88.45	52			P	23 14 32.2	+1.1
DSP				IAmb		IAmb	23 14 33.6	
	comp=Z,2.1nm,0.8s							
NVAR	Mina Array Bea	88.45	51	P		P	23 14 32.9	+1.5
	comp=Z,1.8nm,0.7s,baz=234,slow=7.2,SNR=14							
NVAR				LR		LR	23 49 19.3	
	comp=Z,34nm,18.6s,baz=262,slow=32							
	comp=Z,1.8nm,0.7s							
NVAR	Mina Array Bea	88.45	51			P	23 14 32.2	+0.8
PFO	Pinyon Flats O	88.77	56	LR		LR	23 50 29.9	
	comp=Z,35nm,18.3s,baz=280,slow=33							
MKAR	Makanchi Array	90.33	317	P		P	23 14 38.6	-1.3
	comp=Z,1.8nm,0.7s,baz=87,slow=6.6,SNR=7.1							
	comp=Z,1.8nm,0.7s							
MKAR	Makanchi Array	90.33	317	P		P	23 14 38.4	-1.5
MAKZ	Makanchi	90.55	317	P		P	23 14 39.5	-1.3
MAKZ				IAmb		IAmb	23 14 58.0	
	comp=Z,2.9nm,1.2s							
NRIK	Noril'sk	94.05	340	LR		LR	23 58 27.9	
	comp=Z,37nm,18.9s,baz=358,slow=36							
YKA	Yellowknife Ar	96.03	28	P		P	23 15 04.5	-1.1
	comp=Z,0.4nm,0.6s,baz=266,slow=5.2,SNR=9.3							
	comp=Z,0.4nm,0.6s							
ANMO	Albuquerque	97.15	56	LR		LR	23 52 08.1	
	comp=Z,32nm,19.1s,baz=10,slow=31							
ESDC	Sonseca Array	148.08	339	PKPbc		PKPbc	23 21 24.9	+0.3
	comp=Z,0.5nm,0.7s,baz=15,slow=2.3,SNR=2.7							

AFAD ***18*** *23:07:19.7, 38°.53N×44°.61E, h6km±4km, ML4.1*

MOS ***18*** *23:07:20.8±1.5, 38°.23N×44°.59E, h12km, mb4.6/30, Error ellipse: s-maj=5.4km s-min=3.9km az=88.5*

NSSP ***18*** *23:07:20.1, 38°.43N×44°.62E, h10km, Ms4.2*

AZER ***18*** *23:07:20.0, 38°.50N×44°.52E, h10km, ml4.5*

THR ***18*** *23:07:21.0±0.0, 38°.58N×44°.40E, h10km±14km, ML4.2, Presumed earthquake*

TEH ***18*** *23:07:21.3, 38°.51N×44°.50E, h6km±32km, ML4.3, Presumed earthquake*

NEIC ***18*** *23:07:22.2±2.4, 38°.54N±0°.06×44°.30E±0°.06, h10km±1km, mb4.4/57, Error ellipse: s-maj=10.3km s-min=7.4km az=171.0*

ISK ***18*** *23:07:22.2, 38°.46N×44°.35E, h5km, ML4.4/7*

IDC ***18*** *23:07:24.1±3.4, 38°.25N×44°.48E, h33km±25km, mb3.9/25, mbtmp4.1/33, ML4.1/5, MS3.6/13, Error ellipse: s-maj=18.9km s-min=10.1km az=166.0*

MCSM ***18*** *23:07:24.0±1.4, 39°N±6°×4°5E±1°3, h10km, mb4.0, MLv4.0*

DSN ***18*** *23:07:25.8±1.1, 38°.15N×44°.52E, h15km, mb4.6/14, Error ellipse: s-maj=26.4km s-min=9.0km az=71.0*

ISC 18 23:07:21.0±1.1, 38°.45N±0°.02×44°.48E±0°.02, h0km±7km, n394, σ1§76/431, mb4.4/67, MS3.6/8, 22C-15D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OZAP	Van, Ozalp-Mer	0.43	299	P		Pg	23 07 29.4	0.0
OZAP				S		Sb	23 07 37.6	-1.2
OZAP				IAML			23 07 47.0	
	comp=N,1μm,1.1s							
OZAP				IAML			23 07 47.0	
	comp=E,2μm,1.4s							
OZAP	Van, Ozalp-Mer	0.43	299	Pg		Pg	23 07 29.3	0.0
TVAN	Van	0.84	276	P		Pg	23 07 37.2	-0.1
TVAN				IAML			23 08 05.0	
	comp=E,1μm,0.9s							
TVAN				IAML			23 08 08.0	
	comp=N,8μm,0.8s							
TVAN	Van	0.84	276	Pg		Pg	23 07 37.1	-0.1
VANB	Van	0.86	280	Pg		Pg	23 07 37.9	+0.3
VANB				Sg		Sg	23 07 49.1	+0.3
VANB	Van	0.86	280	Pg		Pg	23 07 38.0	+0.3
YOVA	Hakkari_Yksek	0.87	190	P		Pb	23 07 39.2	+0.1
YOVA				S		Sn	23 07 53.1	-1.1
YOVA				IAML			23 07 56.0	
	comp=E,6μm,1.0s							
YOVA				IAML			23 08 00.0	
	comp=N,5μm,0.5s							
VMUR	Van-Muradiye	0.89	308	P		Pg	23 07 38.3	+0.2
VMUR				S		Sb	23 07 52.3	+0.4
VMUR	Van-Muradiye	0.89	308	Pg		Pg	23 07 38.2	+0.2
MAKU	Maku	0.92	10	Pg		Pg	23 07 37.0	-1.6
ERCV	ERCIS-VAN	1.06	303	Pg		Pg	23 07 41.0	+0.3
ERCV	ERCIS-VAN	1.06	303	P		Pg	23 07 41.0	-0.2
ERCV	ERCIS-VAN	1.06	303	Pg		Pg	23 07 41.2	-0.1
NAX	Nakhchivan	1.07	47	PG		Pg	23 07 40.9	-0.8
NAX	Nakhchivan	1.07	47	Pg		Pg	23 07 40.9	-0.8
NAX	Nakhchivan	1.07	47	P		Pg	23 07 40.9	-0.8
NAX				S		Sg	23 07 56.5	+0.9
HAKT	HAKKARI	1.08	215	P		Pb	23 07 42.8	+0.1
HAKT				S		Sn	23 07 59.9	+0.6
HAKT	HAKKARI	1.08	215	Pg		Pb	23 07 42.7	+0.1
HAKT	HAKKARI	1.08	215	P		Pg	23 07 42.3	+0.6
HAKT				S		Sn	23 08 00.3	+1.0
GEVA	Gevas	1.12	263	Pg		Pg	23 07 41.2	-1.3
GEVA				Sn		Sg	23 07 56.4	-0.7
GEVA	Gevas	1.12	263	P		Pg	23 07 41.3	-1.3
GEVA				S		Sb	23 07 58.5	-0.1
GEVA				IAML			23 08 07.0	
	comp=N,4μm,0.8s							
GEVA				IAML			23 08 09.0	
	comp=E,3μm,0.5s							
AKDM	Akdamar-Van	1.18	265	Pn		Pg	23 07 42.1	-1.6
DYDN	Diyadin	1.25	331	P		Pg	23 07 43.2	-1.8
DYDN				S		Sg	23 08 00.8	-0.4
DYDN				IAML			23 08 07.0	
	comp=E,3μm,0.9s							
DYDN				IAML			23 08 14.0	
	comp=N,3μm,0.8s							
SBZ	Shahbuz	1.27	41	Pg		Pg	23 07 44.0	-1.3
SBZ	Shahbuz	1.27	41	P		Pg	23 07 44.1	-1.3
SBZ				S		Sb	23 08 03.0	+0.4
ORD	Ordubad	1.28	68	Pg		Pg	23 07 44.6	-1.0
ORD	Ordubad	1.28	68	P		Pg	23 07 44.6	-1.0
ORD				S		Sg	23 08 01.8	-0.4
HYR	Heyderabad	1.30	13	P		Pg	23 07 44.5	-1.4
HYR				S		Sb	23 08 03.7	0.0
IAZR	Azarshahr	1.42	123	Pg		Pn	23 07 47.9	-0.4
ADCV	BITLIS_Adilcev	1.42	285	P		Pb	23 07 48.5	+0.1
ADCV				S		Sn	23 08 09.5	+1.9
ADCV				IAML			23 08 12.0	
	comp=E,2μm,1.0s							
ADCV				IAML			23 08 15.0	
	comp=N,2μm,1.4s							
VAYK	Vayk	1.45	30	*i* P		Pn	23 07 47.0	-1.5
VAYK				*i* S		Sb	23 08 07.0	-0.9
IGDI	IGDIR	1.45	348	P		Pn	23 07 48.1	-0.5
IGDI	IGDIR	1.45	348	Pg		Pn	23 07 48.0	-0.5
IGDI	IGDIR	1.45	348	P		Pn	23 07 47.2	-1.4
IGDI				S		Sn	23 08 09.7	+1.4
ALVK	Alvank	1.55	71	*eP*		Pn	23 07 48.9	-0.9
ALVK				*eS*		Sn	23 08 08.3	-2.3
PERV	Siirt/Pervari-	1.60	252	P		Pg	23 07 52.0	+0.2
PERV				S		Sg	23 08 16.3	+3.7
DORK	Agr/Tutak/Do	1.62	306	P		Pn	23 07 50.7	-0.3
DORK				IAML			23 08 23.0	
	comp=E,2μm,0.8s							
DORK				IAML			23 08 28.0	
	comp=N,2μm,0.9s							
MLAZ	Malazgirt-MUS	1.66	295	Pn		Pn	23 07 51.2	-0.3
VNNZ	Vanand	1.73	343	*eP*		Pb	23 07 53.8	+0.2
VNNZ				*eS*		Sg	23 08 16.9	+0.4
EGVZ	Egvard	1.79	64	*eP*		Pn	23 07 53.2	-0.1
EGVZ				*eS*		Sn	23 08 16.7	-0.1
ARUZ	Aruch	1.85	351	*eP*		Pb	23 07 55.4	-0.5
ARUZ				*eS*		Sg	23 08 22.4	+1.8
BLIS	Bitlis-Merkez	1.85	270	P		Pn	23 07 54.7	+0.5
BLIS				IAML			23 08 31.0	
	comp=N,1μm,0.7s							
KAPZ	Kaputan	1.88	5	*eP*		Pn	23 07 54.4	-0.1
KAPZ				*eS*		Sb	23 08 20.8	+0.5
GURO	Guroymak-BITLI	1.92	274	Pn		Pn	23 07 54.4	-0.7
GURO	Guroymak-BITLI	1.92	274	Pn		Pn	23 07 55.9	+0.8
GURO				Sn		Sb	23 08 20.6	-0.9
AMBZ	Amberd	1.94	355	*eP*		Pb	23 07 56.8	-0.7
AMBZ				*eS*		Sg	23 08 25.2	+1.7
MAHB	Mahabad	1.94	149	Pn		Pb	23 07 57.9	+0.5
AYRK	Ayrk	1.95	31	*eP*		Pn	23 07 56.4	+0.8
AYRK				*eS*		Sb	23 08 23.0	+0.5
IHRS	Heris	2.02	93	Pn		Pn	23 07 57.5	+0.9
SRSL	SARDASHT	2.36	161	*ePn*		Pb	23 08 04.4	-0.1
SRSL				IAML			23 08 55.7	
	comp=Z,1μm,1.0s							
KARS	Kars	2.43	334			Pn	23 08 01.4	-0.6
KARS	Kars	2.43	334	Pn		Pb	23 08 03.9	-1.7
KARS	Kars	2.43	334	PN		Pn	23 08 01.5	-0.6
QRD	Qoradiz	2.44	65	P		Pn	23 08 02.4	+0.4
QRD				S		Sn	23 08 33.1	+0.6
GDB	GEDABAY	2.47	23	P		Pn	23 08 02.7	-0.1
GDB				S		Sn	23 08 35.0	+1.3
IHSH	Hashtrud	2.48	117	Pn		Pn	23 08 04.7	+1.7
LSVT	Lusahovit	2.52	12	*eP*		Pb	23 08 08.3	+1.0
LSVT				*eS*		Sb	23 08 40.3	+1.4
ISRB	Sarab	2.59	103	Pn		Pn	23 08 06.1	+1.7
SVAN	Silvan-Diyarba	2.60	264	Pn		Pn	23 08 05.6	+1.3
SVAN	Silvan-Diyarba	2.60	264	Pn		Pn	23 08 05.7	+1.4
GANJ	Ganja	2.62	32	PN		Pn	23 08 03.0	-1.6
GANJ	Ganja	2.62	32	P		Pn	23 08 05.2	+0.7
GANJ				S		Sn	23 08 38.2	+1.2
AGDM	Agdam	2.63	50	P		Pn	23 08 05.6	+0.9
AGDM				S		Sn	23 08 38.2	+0.9
QZX	Qazax, Azerbai	2.69	15	P		Pn	23 08 06.5	+0.8
QZX				S		Sn	23 08 40.1	+1.2
GRMI	Germi	2.70	81	*ePn*		Pn	23 08 07.2	+1.4
GRMI				IAML			23 08 55.6	
	comp=Z,610nm,1.0s							
GRMI	Germi	2.70	81	Pn		Pn	23 08 07.0	+1.2
BLQ	Beylaqan	2.71	61	P		Pn	23 08 06.8	+0.9
BLQ				S		Sn	23 08 41.5	+2.1
BRDA	Brd	2.77	48	P		Pn	23 08 07.8	+1.2
BRDA				S		Sn	23 08 42.5	+1.8
KARO	Karliova-Bingo	2.81	289	Pn		Pn	23 08 08.7	+1.4
EDAM	Erzurum-Paland	2.88	301	Pn		Pn	23 08 09.7	+1.4
YRD	Yardimli	2.98	80	P		Pn	23 08 11.3	+1.5
YRD				S		Sn	23 08 47.2	+0.9
LRK	Lerik	3.04	85	P		Pn	23 08 12.1	+1.6
LRK				S		Sn	23 08 50.3	+2.8
MNGR	Mingechevir, A	3.07	40	PN		Pn	23 08 09.5	-1.3
MNGR	Mingechevir, A	3.07	40	P		Pn	23 08 12.0	+1.3
MNGR				S		Sn	23 08 51.3	+3.2
ZRD	Zardab	3.08	53	P		Pn	23 08 12.0	+1.1
ZRD				S		Sn	23 08 51.2	+2.7
GLBA	Clilabad	3.16	74	P		Pn	23 08 13.6	+1.6
GLBA				S		Sn	23 08 52.8	+2.4
TBLG	Delisi	3.28	3	Pn		Pn	23 08 16.8	+3.1
SAAT	Saatly	3.38	64	P		Pn	23 08 16.3	+1.4
SAAT				S		Sn	23 08 58.6	+2.9
LKRN	Lenkeran, Azer	3.38	84	PN		Pn	23 08 14.7	-0.3
LKRN	Lenkeran, Azer	3.38	84	P		Pn	23 08 16.8	+1.8
LKRN				S		Sn	23 08 57.7	+1.9
ASTR	Astara	3.39	87	P		Pn	23 08 17.1	+2.0
ASTR				S		Sn	23 08 58.3	+2.4
DYBB	Diyarbakir	3.45	263	Pn		Pn	23 08 17.8	+1.7
KDMR	Kurdemir	3.46	55	P		Pn	23 08 18.2	+2.2

CHTH Charan 5.88 114 *e*Pn Pn 23 08 52.7 +3.0
CHTH IAML 23 10 16.7
comp=Z,25nm,1.0s
GAZ Gaziantep 5.89 260 Pn Pn 23 08 47.3 -2.3
SOC Sochi 6.26 326 *e*P Pn 23 09 00.7 +6.1
SOC *e*S **Sn** **23 10 13.9 +7.1**
SOC pmax pmax
comp=Z,24nm,0.9s
SOC MLR MLR
comp=Z,462nm,14.0s
KHMZ Khomeyn 6.46 135 *e*Pn Pn 23 09 02.3 +4.7
KHMZ IAML 23 11 26.4
comp=Z,36nm,1.0s
GTMR Gotvand 7.06 146 *e*Pn Pn 23 09 09.2 +3.5
GTMR IAML 23 11 17.7
comp=Z,34nm,1.0s
BR104 Keskin Array S 8.52 282 Pn Pn 23 09 27.9 +2.2
comp=Z,5.0nm,1.1s
BR131 Keskin Array S 8.52 282 *i* P Pn 23 09 29.4 +3.6
BRTR Keskin Array B 8.52 282 Pn Pn 23 09 28.1 +2.3
comp=Z,1.6nm,1.0s,baz=74,slow=11,SNR=5.3
BRTR Keskin Array B 8.52 282 Pn Pn
BR105 Keskin Array S 8.54 282 Pn Pn 23 09 28.1 +2.1
comp=Z,6.3nm,0.9s
BR106 Keskin Array S 8.54 282 Pn Pn 23 09 28.1 +2.1
comp=Z,5.5nm,0.9s
ASF Jabal al Asfar 8.81 227 Pn Pn 23 09 30.6 +1.0
comp=Z,0.4nm,0.3s,baz=294,slow=21,SNR=7.5
ASF Lg Lg 23 11 55.8
comp=Z,0.2nm,0.3s,baz=232,slow=18,SNR=1.9
ASF LR LR 23 12 17.3
comp=Z,153nm,21.9s,baz=30,slow=34
MMAI Mount Meron Ar 9.15 236 Pn Pn 23 09 35.1 +0.7
comp=Z,0.8nm,0.3s,baz=54,slow=15,SNR=4.6
MMAI Lg Lg 23 12 06.0
comp=Z,0.3nm,0.3s,baz=20,slow=17,SNR=1.9
MMAI LR LR 23 13 24.3
comp=Z,524nm,20.2s,baz=47,slow=40
MRVT Maraveh tapeh 9.20 91 *e*Pn Pn 23 09 35.7 +0.8
CSS Mathiatis 9.60 252 Pn Pn 23 09 43.3 +2.8
comp=Z,23nm,1.8s
GHAJ Ghor Haditha 10.21 228 Pn Pn 23 09 49.4 +0.6
SBZV Sabzevar 10.65 97 *e*Pn Pn 23 09 57.7 +2.7
TABS Tabas 11.30 111 *e*Pn Pn 23 10 07.8 +4.0
EIL Elat 11.79 225 Pn Pn 23 10 12.0 +1.6
comp=Z,0.3nm,0.3s,baz=8.1,slow=7.1,SNR=1.7
EIL Lg Lg 23 13 30.6
comp=Z,0.1nm,0.3s,baz=16,slow=19,SNR=2.5
EIL LR LR 23 14 55.6
comp=Z,215nm,20.3s,baz=43,slow=39
VRH Novokhopyorsk 12.90 352 *e*P Pn 23 10 28.6 +3.2
VRH pmax pmax
comp=Z,8.0nm,1.0s
NE56 Odesa 12.94 314 Pn Pn 23 10 27.5 +1.5
VORD Divnogorie 13.04 345 *e*P Pn 23 10 30.3 +2.9
VORD pmax pmax
comp=Z,10.0nm,1.0s
PLTM Poltava 13.23 331 Pn Pn 23 10 31.1 +1.1
VSR Storozhevoye 13.30 345 *e*P Pn 23 10 33.2 +2.2
VSR pmax pmax
comp=Z,5.0nm,0.6s
PURM Purcari 13.45 312 Pn Pn 23 10 34.6 +1.6
VORR Voronezh 13.73 346 *e*P P 23 10 45.6 -0.1
VORR pmax pmax
comp=Z,15nm,0.4s
BELG Belogornoye 14.12 8 Pn Pn 23 10 42.6 +0.5
comp=Z,0.4nm,0.3s,baz=62,slow=5.6,SNR=3.8
comp=Z,20nm,0.9s
BELG Belogornoye 14.12 8 *i* P P 23 10 48.3 -1.6
BELG pmax pmax
comp=Z,4.0nm,0.9s
LPSR Galich'ya Gora 14.67 347 *e*P Pn 23 10 52.5 +2.9
LPSR pmax pmax
comp=Z,40nm,0.8s
SMRA Abu-Samra 14.69 157 P Pn 23 10 52.2 +2.1
TRNA Turayna 14.82 155 P P 23 10 56.1 -1.9
HRA Herat 14.87 100 Pn Pn 23 10 50.2 -2.5
RAYN Ar Rayn 14.91 176 Pn Pn 23 10 48.8 -4.3
RAYN IAmb IAmb 23 10 50.9
comp=Z,10nm,0.8s
RAYN Ar Rayn 14.91 176 *i* P Pn 23 10 49.7 -3.3
SNR=14
RAYN Ar Rayn 14.91 176 ⇓P Pn 23 10 49.1 -4.0
RAYN Ar Rayn 14.91 176 P Pn 23 10 53.9 +0.8
RAYN S Sn 23 13 42.2 +3.3
VRI Vrincioaia 15.09 305 ⇓P P 23 11 03.0 +2.2
VRI Vrincioaia 15.09 305 ⇓P P 23 11 03.0 +2.2
PLOR Plostina 15.13 305 ⇓P P 23 11 03.1 +1.8
PLOR Plostina 15.13 305 ⇓P P 23 11 03.1 +1.8
AKTO Aktyubinsk 15.37 34 Pn Pn 23 10 58.5 -0.5
comp=Z,0.4nm,0.3s,baz=234,slow=10,SNR=6.9
comp=Z,5.4nm,0.9s
TESR Tescani 15.40 307 ⇓P P 23 11 06.8 +2.5
MLR Muntele Rosu 15.46 303 Pn Pn 23 11 01.7 +1.4
comp=Z,0.1nm,0.3s,baz=42,slow=8.3,SNR=5.2
MLR LR LR 23 17 20.7
comp=Z,176nm,18.6s,baz=344,slow=38
comp=Z,1.9nm,0.9s
MLR Muntele Rosu 15.46 303 ⇑P P 23 11 07.8 +2.7
MLR Muntele Rosu 15.46 303 Pn Pn 23 10 59.4 -1.0
MLR IAmb IAmb 23 11 13.1
comp=Z,27nm,1.5s
ONER Baraj Valea Uz 15.49 306 ⇑P P 23 11 08.0 +2.7
AB31 Akbulak array 15.50 41 Pn Pn 23 10 59.5 -1.2
ABKAR Akbulak array 15.50 41 Pn Pn 23 10 59.5 -1.2
TURR Turia 15.62 305 ⇓P P 23 11 09.2 +2.5
GIRR Girov 15.69 309 ⇑P P 23 11 09.3 +1.9
SHME Shamm 15.80 138 P P 23 11 09.2 +0.3
BANOM Banah 15.99 138 P Pn 23 11 09.0 +1.7
BANOM Banah 15.99 138 P P 23 11 11.1 +0.1
IDI Anoyia 15.99 265 Pn P 23 11 09.8 -1.2
comp=Z,0.1nm,0.3s,baz=135,slow=4.3,SNR=1.8
IDI Anoyia 15.99 265 Pn 23 11 06.2 -1.1
DOPR Dopca 15.99 304 ⇓P P 23 11 13.7 +2.9
VOIR 16.03 302 ⇓P P 23 11 14.2 +2.8
VOIR 16.03 302 ⇓P P 23 11 14.2 +2.8
GHWR Ruwais 16.12 151 P P 23 11 13.1 +0.8
ARR Arges 16.29 301 ⇓P P 23 11 15.9 +1.7
AKASG Malin Array Be 16.33 323 Pn Pn 23 11 10.7 -0.8
comp=Z,0.3nm,0.3s,baz=133,slow=12,SNR=12
AKASG LR LR 23 18 26.6
comp=Z,169nm,18.3s,baz=234,slow=40
comp=Z,4.6nm,0.9s
AKASG Malin Array Be 16.33 323 23 11 10.4 -1.1
AKBB Malin Array Si 16.33 323 Pn Pn 23 11 10.2 -1.4
AKBB Malin Array Si 16.33 323 *ce*P P 23 11 15.9 +1.3
KIEV Kiev 16.34 323 Pn 23 11 09.3 -2.3
KIEV Kiev 16.34 323 P Pn 23 11 09.3 -2.3
KIEV pmax pmax
comp=Z,28nm,1.5s
MSFE Esma-Masafi 16.37 139 P Pn 23 11 11.5 -0.7
NAZ Nazwa, Dubai 16.43 142 P Pn 23 11 14.1 +1.1
NAZ Nazwa, Dubai 16.43 142 P P 23 11 16.6 +0.8
SNR=6.2
NAZ S S 23 14 27.9 -0.6
MDH Madha 16.49 139 *i* P Pn 23 11 13.4 -0.4
SNR=6.0
MDH Madha 16.49 139 P P 23 11 17.2 +0.6
ASUD Al Ashush, Dub 16.58 143 P Pn 23 11 14.5 -0.3
ASUD Al Ashush, Dub 16.58 143 P P 23 11 17.7 +0.2
ASUD P P 23 11 17.7 +0.2
ASUD S S 23 14 32.2 +0.6
UOSS Minazif 16.74 140 P Pn 23 11 18.3 -1.0
UOSS IAmb IAmb 23 11 21.5
comp=Z,24nm,0.9s
UOSS Minazif 16.74 140 *i* P Pn 23 11 16.5 -0.4
SNR=8.8
UOSS Minazif 16.74 140 P P 23 11 20.4 +1.2
BURAR Bucovina Array 16.76 309 ⇓P P 23 11 21.9 +2.4
BURAR Bucovina Array 16.76 309 Pn 23 11 17.0 -0.1
BURAR Bucovina Array 16.76 309 ⇓P P 23 11 21.9 +2.4
BUR08 Bucovina Ar. S 16.78 309 Pn 23 11 18.0 +0.6
HATD Hatta, Dubai 16.80 141 *i* P Pn 23 11 17.8 +0.1
SNR=10.0
HATD Hatta, Dubai 16.80 141 P P 23 11 21.4 +1.4
SNR=9.0
ASHO Ashiyiah 16.88 141 *i* P Pn 23 11 18.7 -0.1
SNR=17
ASHO Ashiyiah 16.88 141 P P 23 11 22.1 +1.2
SNR=9.8
LOT Lotru 16.89 301 ⇑P P 23 11 22.7 +1.7
MZR Muzera 17.22 151 P Pn 23 11 22.9 0.0
MZR Muzera 17.22 151 P P 23 11 26.1 +1.5
SNR=5.6
ALNE Al Ain 17.26 143 *i* P Pn 23 11 23.4 -0.1
SNR=15
ALNE Al Ain 17.26 143 P P 23 11 25.7 +0.6
SNR=5.8
OBN Obninsk 17.51 345 P Pn 23 11 26.6 +0.3
comp=Z,2.9nm,0.3s,baz=156,slow=22,SNR=4.1
comp=Z,12nm,0.5s
OBN Obninsk 17.51 345 Pn 23 11 24.8 -1.5
OBN Obninsk 17.51 345 *ce*P P 23 11 27.6 +0.1
OBN pmax pmax
comp=Z,21nm,1.3s
OBN MLR MLR
comp=Z,79nm,9.0s
GZR Gura Zlata 17.55 300 ⇑P P 23 11 30.1 +1.9
GZR Gura Zlata 17.55 300 ⇑P P 23 11 30.1 +1.9
SOHO SOHO 17.58 141 *i* P Pn 23 11 26.9 -0.5
SNR=7.0
SOHO SOHO 17.58 141 P P 23 11 30.6 +2.0
MARR Marisel-Cluj 17.71 304 ⇓P P 23 11 32.3 +2.2
MOS Moscow 17.90 347 *e*P P 23 11 32.7 +0.9
MDVR Moldovita 18.13 298 ⇓P P 23 11 36.0 +1.5
UMZA Um Al Zommool 18.16 147 P P 23 11 37.0 +2.0
BZS Buzias 18.39 300 ⇑P P 23 11 38.3 +0.9
BZS Buzias 18.39 300 ⇑P P 23 11 38.3 +0.9
HOQ Hoqain 18.43 140 P P 23 11 40.3 +2.3
HOQ P P 23 11 40.3 +2.3
SHAA Shahritus 18.65 85 Pn 23 11 40.7 +0.1
SHAA IAmb IAmb 23 12 08.7
comp=Z,34nm,1.2s
BIDO Bidbid 18.90 138 P Pn 23 11 46.0 +2.4
BSY Bisya 19.07 142 P Pn 23 11 49.0 +3.3
SNR=13
SMDO Samad 19.24 139 P Pn 23 11 49.5 +1.7
SNR=14
SMDO P Pn 23 11 49.5 +1.7
SNR=14
CHGR Chuyangaron 19.30 82 P P 23 11 47.8 +0.4
CHGR IAmb IAmb 23 11 53.2
comp=Z,15nm,0.8s
CHGR Chuyangaron 19.30 82 *i* P Pn 23 11 48.7 +0.3
CHGR pmax pmax
comp=Z,15nm,0.9s
MNK Minsk 19.62 330 *i* P Pn 23 11 55.0 +2.9
MNK *i* S Sn 23 15 38.8 +6.0
MNK pmax pmax
comp=N,18nm,1.0s
MNK pmax pmax
comp=E,11nm,1.0s
MNK pmax pmax
comp=Z,13nm,0.9s
MNK MLR MLR
comp=N,350nm,19.0s
MNK MLR MLR
comp=E,420nm,24.0s
MNK MLR MLR
comp=Z,99nm,12.0s
JMDO Jabal Madar 19.84 140 P Pn 23 11 56.0 +1.1
SNR=9.7
WBK Wadi Bani Khal 20.09 138 P Pn 23 11 58.6 +0.8
KBL Kabul 20.11 94 P Pn 23 11 58.3 0.0
KBL Kabul 20.11 94 P Pn 23 11 58.3 -0.1
KBL pmax pmax
comp=Z,5.0nm,0.9s
GAR Garm 20.15 80 P Pn 23 11 58.4 -0.2
ARTI Arti 20.19 23 P P 23 11 56.2 -0.9
comp=Z,4.6nm,0.5s,baz=212,slow=9.6,SNR=14
ARTI LR LR 23 21 50.6
comp=Z,126nm,21.3s,baz=247,slow=42
comp=Z,4.6nm,0.5s
ARTI Arti 20.19 23 P P 23 11 55.2 -1.8
ARTI IAmb IAmb 23 12 06.2
comp=Z,11nm,0.7s
ARTI Arti 20.19 23 *c i* P Pn 23 11 58.8 -0.1
ARTI 23 12 13.9
ARTI S Sn 23 15 45.8 -0.7
ARTI pmax pmax
comp=Z,31nm,1.9s
PSZ Piszkesteto 20.20 306 P P 23 11 56.2 -0.9
PSZ Piszkesteto 20.20 306 P P 23 11 56.3 -0.9
PSZ pmax pmax
comp=Z,10.0nm,1.1s
KK31 Karatay Array 20.22 68 P P 23 11 56.8 -0.7
KK31 IAmb IAmb 23 12 07.2
comp=Z,26nm,0.8s
KK31 Karatay Array 20.22 68 P P 23 11 56.8 -0.7
KK31 pmax pmax
comp=Z,26nm,0.8s
KKAR Karatay Array 20.22 68 P P 23 11 57.5 +0.1
KKAR Karatay Array 20.22 68 P P 23 11 57.6 +0.1
KIRV Kirov 20.40 7 P P 23 11 59.3 +0.1
comp=Z,17nm,0.8s,baz=81,slow=3.3,SNR=3.9
comp=Z,17nm,0.8s
KIRV Kirov 20.40 7 *ce*P Pn 23 12 02.1 +0.8
BTK Batken 20.44 77 P P 23 11 59.3 -0.7
BTK IAmb IAmb 23 12 07.9
comp=Z,15nm,1.0s
BTK Batken 20.44 77 P P 23 11 59.3 -0.7
BTK pmax pmax
comp=Z,15nm,1.0s
MORH Mrgy, Hungar 20.55 300 ⇑P Pn 23 12 02.3 -0.9
JLN Jalan Bani Buh 20.70 137 P Pn 23 12 05.4 +0.4
SNR=13
JLN P Pn 23 12 05.4 +0.4
SNR=13
LANS Liptovska Anna 20.89 309 *e*P Pn 23 12 08.6 +1.5
LANS Liptovska Anna 20.89 309 *e*P Pn 23 12 08.6 +1.5
MHTO MHTO 20.94 142 P Pn 23 12 07.9 +0.1
SNR=8.5
DRK Karamyk 21.25 79 P P 23 12 08.5 -0.4
DRK IAmb IAmb 23 12 15.4
comp=Z,22nm,0.8s
DRK Karamyk 21.25 79 P P 23 12 08.5 -0.4
DRK pmax pmax
comp=Z,23nm,0.8s
SVE Sverdlovsk 21.27 25 *e*P P 23 12 11.8 +3.1
SVE pmax pmax
comp=Z,24nm,1.3s
SUW Suwalki 21.30 324 P P 23 12 08.3 -0.7
SUW Suwalki 21.30 324 P P 23 12 08.3 -0.7
DOK Doka 21.48 154 P P 23 12 11.7 +0.6
DQM DQM 21.65 145 P P 23 12 13.8 +0.8
JAVC Velka Javorina 21.90 307 *e*P P 23 12 17.3 +1.7
SMOL Smolenice 21.95 306 *e*P P 23 12 24.2 +8.2
MODS Modra-Piesok 22.00 306 *e*P P 23 12 24.9 +8.2
MODS Modra-Piesok 22.00 306 *e*P P 23 12 24.9 +8.2
WHFO Wadi Hawf 22.01 156 P P 23 12 17.3 +0.3
ARSB Arslanbob 22.02 73 P P 23 12 17.5 +0.4
ARSB Arslanbob 22.02 73 P P 23 12 17.5 +0.4
ARSB pmax pmax
comp=Z,32nm,0.9s
MORC Moravsky Berou 22.28 309 *e*P P 23 12 21.6 +1.9
ABTO Aybut 22.39 157 P P 23 12 22.0 +0.9
SNR=8.6
RONA Rosalia, Austr 22.46 303 *e*P P 23 12 23.1 +1.5
comp=Z,6.2nm,1.2s
RBK Rabkut 22.54 155 P P 23 12 23.5 +0.9
DMTO DMTO 22.60 153 P P 23 12 23.5 +0.4
EKS2 Erkin-Say 22.60 70 P P 23 12 24.6 +1.4
SNR=26
KLMR Klimovskoe 22.64 354 *e*P P 23 12 26.6 +3.3
KLMR pmax pmax
comp=Z,26nm,1.4s
VRAC Vranov 22.71 308 P P 23 12 25.1 +0.8
comp=Z,2.1nm,0.8s,baz=128,slow=10,SNR=3.7
comp=Z,2.1nm,0.8s
VRAC Vranov 22.71 308 *e*P P 23 12 25.9 +1.7
KRUC Moravsky 22.76 307 *e*P P 23 12 25.9 +1.2
CONA Conrad Observa 22.80 304 *ep*P P 23 12 30.0 +4.7
comp=Z,5.1nm,1.1s
BORK Borovoye 23.03 42 P P 23 12 27.5 0.0
BORK IAmb IAmb 23 12 43.9
comp=Z,8.8nm,0.8s
BORK Borovoye 23.03 42 *ce*P P 23 12 29.3 +1.8
BORK pmax pmax
comp=Z,7.0nm,1.0s
BVAR Borovoye Array 23.05 42 P P 23 12 27.8 0.0
comp=Z,6.5nm,0.8s,baz=238,slow=8.5,SNR=16
comp=Z,6.5nm,0.8s
VSU Vasula 23.09 336 *i* P P 23 12 31.7 +3.7
VSU pmax pmax
comp=Z,26nm,1.0s
AAK Ala-Archa 23.13 70 LR LR 23 22 57.2
comp=Z,164nm,21.6s,baz=299,slow=40
AAK Ala-Archa 23.13 70 P P 23 12 31.7 +2.8
SNR=10.0
AAK Ala-Archa 23.13 70 P P 23 12 28.5 -0.3
AAK IAmb IAmb 23 12 39.6
comp=Z,11nm,0.9s
AAK Ala-Archa 23.13 70 P P 23 12 29.7 +0.9
AAK Ala-Archa 23.13 70 P P 23 12 28.5 -0.3
AAK pmax pmax
comp=Z,11nm,0.9s
AAK Ala-Archa 23.13 70 P P 23 12 30.3 +1.5
USP Ospenovka 23.14 68 P P 23 12 33.7 +4.8
SNR=5.9
DPC Dobrusa-Polom 23.22 310 *e*P P 23 12 33.4 +3.9
DPC Dobruska-Polom 23.22 310 *e*P P 23 12 33.4 +3.9
FRU1 Bishkek 23.23 70 P P 23 12 28.8 -1.0
FRU1 IAmb IAmb 23 12 33.4
comp=Z,23nm,1.0s
FRU1 Bishkek 23.23 70 P P 23 12 28.8 -1.0
FRU1 pmax pmax
comp=Z,23nm,1.0s
CHMS Chumysh 23.32 69 P P 23 12 31.8 +1.1
SNR=14
CHVC Chvalec 23.46 310 *e*P P 23 12 33.6 +1.6
CHVC Chvalec 23.46 310 *e*P P 23 12 33.6 +1.6
KBK Karagaybulak 23.46 70 P P 23 12 33.8 +1.6
SNR=34
NIL Nilore 23.70 93 P P 23 12 34.3 -0.2
NIL IAmb IAmb 23 12 45.2
comp=Z,8.3nm,0.8s
NIL Nilore 23.70 93 P P 23 12 34.3 -0.2
NIL pmax pmax
comp=Z,8.0nm,0.9s
TKM2 Tokmak 2 23.94 69 P P 23 12 38.7 +1.7
SNR=32
CKRC Cesky Krumlov 24.02 305 *e*P P 23 12 41.1 +3.7
CKRC Cesky Krumlov 24.02 305 *e*P P 23 12 41.1 +3.7
KSH2 Kashi 24.19 79 P P 23 12 41.3 +2.1
KSH2 pP 23 12 46.8
KSH2 pmax pmax
comp=Z,6.0nm,0.9s
BOOM Boomskoye usch 24.20 70 P P 23 12 39.1 -0.2
BOOM IAmb IAmb 23 12 42.6
comp=Z,8.8nm,0.7s
BOOM Boomskoye usch 24.20 70 P P 23 12 39.1 -0.2
BOOM pmax pmax
comp=Z,9.0nm,0.7s
ZVC Zvikov 24.25 307 *e*P P 23 12 40.8 +1.2
NRN Naryn 24.28 73 P P 23 12 39.5 -0.8
NRN IAmb IAmb 23 12 47.2
comp=Z,12nm,0.8s
NRN Naryn 24.28 73 P P 23 12 39.5 -0.8
NRN pmax pmax
comp=Z,12nm,0.8s
KBA Koelnbreinsper 24.30 301 *e*P P 23 12 42.0 +1.8
comp=Z,10nm,0.9s
GEC2 GERESS Array S 24.42 305 P P 23 12 41.0 -0.2
GERES GERESS Array B 24.42 305 P P 23 12 40.6 -0.6
comp=Z,1.3nm,0.8s,baz=108,slow=8.6,SNR=9.9
comp=Z,1.3nm,0.8s
ULHL Ulahol 24.43 71 P P 23 12 43.8 +2.3
SNR=25
KHC Kasperske Hory 24.56 306 P P 23 12 42.5 +0.1
KHC Kasperske Hory 24.56 306 *ce*P P 23 12 45.2 +2.8
KHC pmax pmax
comp=Z,2.0nm,1.0s
KHC Kasperske Hory 24.56 306 *e*P P 23 12 40.5 -1.9
KHC *ex* x 23 12 45.1
LESA Schwarzleotal 24.80 301 *ep*P P 23 12 48.6 +4.0
comp=Z,3.8nm,0.7s
ABTA Abfaltersbach 24.81 300 *ep*P P 23 12 49.9 +5.1
comp=Z,8.3nm,0.9s
KDJ Kajisay 25.13 71 P P 23 12 47.6 -0.2
KDJ Kajisay 25.13 71 P P 23 12 47.6 -0.2
KDJ pmax pmax
comp=Z,19nm,0.8s
TEOL Teolo 25.25 296 P P 23 12 48.7 +0.1
WTTA Wattenberg 25.48 301 *ep*P P 23 12 55.2 +4.4
comp=Z,9.2nm,1.0s
CLL Collm 25.52 310 *e*P P 23 12 54.0 +3.0
CLL Collm 25.52 310 *e*Px Px 23 12 54.0
CLL *ex* x 23 13 33.0
TARG Taragay, Kyrgy 25.62 72 P 23 12 51.8 -0.7
TARG IAmb IAmb 23 13 01.3
comp=Z,7.2nm,0.8s
TARG Taragay, Kyrgy 25.62 72 P P 23 12 51.8 -0.7
TARG pmax pmax
comp=Z,7.0nm,0.8s
FIA1 FINESS Array S 25.70 340 P P 23 12 51.8 -0.7
FINES FINESS Array B 25.70 340 P P 23 12 52.1 -0.4
comp=Z,3.4nm,0.7s,baz=134,slow=11,SNR=8.0
comp=Z,3.4nm,0.7s
FINES FINESS Array B 25.70 340 P P 23 12 51.1 -1.4
MOTA Moosalm 25.85 301 *e*P P 23 12 57.6 +3.4
comp=Z,4.8nm,0.9s
PRZ Przheval'sk 26.02 70 P P 23 12 54.9 -0.9
PRZ IAmb IAmb 23 13 01.0
comp=Z,8.4nm,0.7s
PRZ Przheval'sk 26.02 70 P P 23 12 54.9 -0.9
PRZ pmax pmax
comp=Z,8.0nm,0.7s
FUORN Flenpass-Fuorn 26.34 299 P P 23 12 57.8 -0.9
DAVOX Davos/Dischmat 26.61 299 P P 23 13 00.8 -0.4
comp=Z,1.6nm,0.6s,baz=111,slow=9.7,SNR=7.8
comp=Z,1.6nm,0.6s
WUS Wushi 26.72 73 P 23 13 01.7 -0.4
WUS IAmb IAmb 23 13 08.5
comp=Z,5.8nm,0.8s
KURBB Kurchatov Arra 26.91 52 P P 23 13 03.2 -0.3
comp=Z,4.6nm,0.6s,baz=263,slow=9.1,SNR=39
comp=Z,4.6nm,0.6s
KURK Kurchatov 26.98 52 P 23 13 03.9 -0.3
KURK IAmb IAmb 23 13 08.9
comp=Z,7.3nm,0.8s
KURK Kurchatov 26.98 52 *ce*P P 23 13 05.1 +0.9
KURK pmax pmax
comp=Z,7.0nm,0.9s
KURK Kurchatov 26.98 52 P P 23 13 04.0 -0.3
KEST Kesra 28.05 275 P P 23 13 14.2 +0.1
comp=Z,3.3nm,0.9s,baz=337,slow=12,SNR=3.8
comp=Z,3.3nm,0.9s
MAKZ Makanchi 28.61 61 P 23 13 18.7 -0.2
MAKZ IAmb IAmb 23 13 21.1
comp=Z,6.8nm,1.1s
MAKZ Makanchi 28.61 61 P P 23 13 18.7 -0.2
MAKZ pmax pmax
comp=Z,7.0nm,1.2s
MK31 Makanchi Array 28.82 61 *ce*P P 23 13 21.9 +1.1
MKAR Makanchi Array 28.82 61 P P 23 13 21.5 +0.7
comp=Z,4.5nm,0.7s,baz=265,slow=6.8,SNR=39
comp=Z,4.5nm,0.7s
MKAR Makanchi Array 28.82 61 P 23 13 20.5 -0.3
HFS Hagfors 29.10 328 P P 23 13 22.4 -0.7
comp=Z,2.3nm,0.7s,baz=123,slow=10,SNR=4.6
comp=Z,2.3nm,0.7s
ZAA0 Zalesovo Array 31.43 47 P 23 13 43.5 -0.3
ZALV Zalesovo Beam 31.43 47 P P 23 13 43.2 -0.5
comp=Z,1.6nm,0.4s,baz=257,slow=10.0,SNR=9.3
ZALV LR LR 23 27 41.6
comp=Z,76nm,19.1s,baz=286,slow=39
comp=Z,1.6nm,0.4s
ZALV Zalesovo Beam 31.43 47 P 23 13 42.9 -0.9
DGZ Jazzator, Alta 32.42 56 *i* P P 23 13 54.6 +1.9
DGZ pmax pmax
comp=Z,7.0nm,0.9s
WMQ Urumqi 32.71 67 *e*P P 23 13 57.3 +2.2
WMQ sP 23 14 04.8
WMQ PcP **PcP** 23 16 41.3 +0.5
WMQ pmax pmax
comp=Z,11nm,0.7s
EKA Eskdalemuir Ar 35.85 314 P P 23 14 21.3 -0.8
comp=Z,3.4nm,0.7s,baz=108,slow=7.9,SNR=9.9
comp=Z,3.4nm,0.7s
EVN Everest 36.66 94 P 23 14 30.3 +0.2
EVN IAmb IAmb 23 14 36.3
comp=Z,15nm,1.3s
TAM Tamanrasset 36.68 256 P 23 14 26.7 -3.1
TAM IAmb IAmb 23 14 58.0
comp=Z,6.3nm,0.5s
TAM Tamanrasset 36.68 256 P P 23 14 26.7 -3.1
TAM pmax pmax
comp=Z,6.0nm,0.5s
ESDC Sonseca Array 37.27 288 P P 23 14 33.2 -1.3
comp=Z,1.8nm,0.8s,baz=64,slow=8.0,SNR=10
comp=Z,1.8nm,0.8s
NRIK Noril'sk 38.51 23 P P 23 14 43.8 -0.7
comp=Z,5.5nm,1.0s,baz=195,slow=1.6,SNR=7.9
NRIK LR LR 23 35 06.9
comp=Z,74nm,18.4s,baz=231,slow=43
comp=Z,5.5nm,1.0s

*DJA **18** 23:54:49.8±0.1,7°S±2'×10°9E±°,h247km±1km,M4.8/73, mb4.9/73,mB5.3/42,MLv4.9/71,Mw(mB)4.8/42, MwMwp5.9/2,Mwp6.0/2*

ISC 18 23:54:49.3±0.5,6°80S±0'04'×109°40E±0'04,h250km±4km, n277,σ1821/309,mb4.5/75,2C,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTJI	**Waduk Cacaban**	**0.30**	**226**	P	**Pn**	**23 55 21.7**	**0.0**
KPJI	**Karang Pucung**	**0.71**	**221**	P	**Pn**	**23 55 22.7**	**-0.2**
SMRI	**Semarang**	**1.06**	**104**	P	**Pn**	**23 55 25.2**	**+0.5**
SMRI	**Semarang**	**1.06**	**104**		**Pn**	**23 55 25.2**	**+0.5**
SMRI				Sn	**S**	**23 55 53.0**	**+0.6**
SMRI	**Semarang**	**1.06**	**104**	P	**Pn**	**23 55 25.3**	**+0.5**
SMRI				S	**S**	**23 55 53.6**	**+1.2**
YOGI	**Yogyakarta**	**1.35**	**139**	P	**Pn**	**23 55 25.7**	**-0.8**
YOGI				S	**S**	**23 55 54.1**	**-1.7**
UGM	**Wanagama**	**1.57**	**135**	P	**Pn**	**23 55 27.1**	**-1.1**
UGM	**Wanagama**	**1.57**	**135**	P	**S**	**23 55 58.0**	**-0.8**
UGM	**Wanagama**	**1.57**	**135**		**Pn**	**23 55 27.2**	**-1.0**
UGM				Sn	**S**	**23 55 56.1**	**-2.7**
UGM	**Wanagama**	**1.57**	**135**	P	**Pn**	**23 55 27.4**	**-0.8**
UGM				S	**S**	**23 55 58.2**	**-0.6**
LEM	**Lembang**	**1.77**	**269**	P	**Pn**	**23 55 31.2**	**+1.3**
	1μm,0.7s,baz=51,slow=9.2,SNR=213						
LEM				S	**S**	**23 56 03.5**	**+1.6**
	351nm,0.7s,baz=190,slow=20,SNR=3.6						
LEM	**Lembang**	**1.77**	**269**	P	**Pn**	**23 55 30.9**	**+0.9**
BBJI	**Bungbulang**	**1.86**	**249**	P	**Pn**	**23 55 30.3**	**-0.3**
BBJI	**Bungbulang**	**1.86**	**249**	S	**S**	**23 56 01.3**	**-1.8**
BBJI	**Bungbulang**	**1.86**	**249**		**Pn**	**23 55 30.4**	**-0.1**
BBJI				Sn	**S**	**23 56 00.4**	**-2.6**
BBJI	**Bungbulang**	**1.86**	**249**	P	**Pn**	**23 55 30.6**	**0.0**
NGJI	**Ngawi**	**2.12**	**106**	P	**Pn**	**23 55 34.2**	**+1.3**
PCJI	**Pacitan**	**2.24**	**128**	P	**Pn**	**23 55 32.5**	**-1.5**
SJI	**Sawahan**	**2.53**	**112**	P	**Pn**	**23 55 35.9**	**-1.0**
SNJI	**Sawahan-Nganju**	**2.54**	**113**	P	**Pn**	**23 55 37.0**	**-0.1**
DBJI	**Dramaga**	**2.64**	**275**	P	**Pn**	**23 55 39.2**	**+1.1**
SBJI	**Serang**	**3.32**	**282**	P	**Pn**	**23 55 46.5**	**+1.2**
CGJI	**Cibinong**	**3.69**	**273**	P	**Pn**	**23 55 49.6**	**+0.1**
BLJI	**Banyuglugur**	**4.27**	**103**	P	**Pn**	**23 55 56.0**	**-0.3**
BLSI	**Bandar Lampung**	**4.37**	**289**	P	**Pn**	**23 55 59.2**	**+1.7**
TPI	**Tanjungpandan**	**4.38**	**336**	P	**Pn**	**23 56 00.0**	**+2.4**
ABJI	**Asem Bagus**	**4.90**	**102**	P	**Pn**	**23 56 04.3**	**+0.4**
JAGI	**Jajag, Banyuwa**	**5.00**	**110**	P	**Pn**	**23 56 03.1**	**-2.0**
JAGI	**Jajag, Banyuwa**	**5.00**	**110**		**Pn**	**23 56 02.5**	**-2.6**
JAGI	**Jajag, Banyuwa**	**5.00**	**110**	P	**Pn**	**23 56 02.8**	**-2.3**
KASI	**Kota Agung**	**5.04**	**284**	P	**Pn**	**23 56 08.0**	**+2.4**
	1.4nm5μm423nm,0.8s						
KLSI		**5.10**	**294**	P	**Pn**	**23 56 08.1**	**+1.8**
XMI	**Christmas Isla**	**5.16**	**225**	P	**Pn**	**23 56 05.4**	**-1.7**
LWLI	**Liwa**	**5.60**	**288**	P	**Pn**	**23 56 15.7**	**+3.1**
	2.8nm18μm603nm,0.9s						
MDSI	**Maura Dua**	**5.68**	**294**	P	**Pn**	**23 56 15.2**	**+1.7**
	0.4nm79nm,0.6s						
RTBI	**Rangdo, Negare**	**5.74**	**107**	P	**Pn**	**23 56 13.7**	**-0.6**
	2.8nm5μm260nm,0.5s						
SRBI	**Singaraja**	**5.91**	**103**	P	**Pn**	**23 56 16.0**	**-0.3**
	1.6nm3μm211nm,0.8s						
PMBI	**Palembang**	**6.00**	**310**	Pn	**Pn**	**23 56 20.0**	**+2.4**
IGBI	**Denpasar**	**6.04**	**110**	P	**Pn**	**23 56 17.1**	**-0.8**
	5μm284nm,0.7s						
DNP	**Denpasar**	**6.05**	**108**	P	**Pn**	**23 56 19.0**	**+0.8**
	442nm,0.7s						
KHKI	**Kahang-Kahang**	**6.35**	**105**	P	**Pn**	**23 56 22.1**	**+0.3**
	1.1nm166nm,0.6s						
BBKI	**Banjar Baru**	**6.35**	**59**	P	**Pn**	**23 56 23.0**	**+1.1**
	1.3nm239nm,0.9s						
MNAI	**Manna**	**6.86**	**290**	P	**Pn**	**23 56 29.4**	**+1.1**
MNAI	**Manna**	**6.86**	**290**		**Pn**	**23 56 29.4**	**+1.1**
MNAI	**Manna**	**6.86**	**290**	P	**Pn**	**23 56 29.2**	**+0.9**
KSI	**Kapahiang**	**7.46**	**294**	P	**Pn**	**23 56 38.2**	**+2.2**
TWSI	**Taliwang, Sumb**	**7.66**	**105**	P	**Pn**	**23 56 35.7**	**-2.7**
	1.0nm2μm78nm,0.4s						
MASI	**Maura Aman, Be**	**8.00**	**297**	P	**Pn**	**23 56 45.6**	**+2.8**
	0.9nm2μm235nm,0.7s						
PLAI	**Plampang**	**8.54**	**104**	P	**Pn**	**23 56 47.0**	**-2.5**
PLAI	**Plampang**	**8.54**	**104**	P	**Pn**	**23 56 47.1**	**-2.5**
DBNI	**Kabupaten Domp**	**8.99**	**101**	P	**Pn**	**23 56 53.6**	**-1.7**
	0.3nm1μm66nm,0.5s						
KRJI	**Kerinci**	**9.19**	**300**	P	**Pn**	**23 56 59.4**	**+1.5**
SBUM	**Sibu**	**9.61**	**17**	P	**Pn**	**23 57 04.2**	**+1.1**
SBUM	**Sibu**	**9.61**	**17**		**Pn**	**23 57 03.6**	**+0.6**
SBUM	**Sibu**	**9.61**	**17**	P	**P**	**23 57 06.8**	**-2.7**
	23nm,0.7s						
PMSI	**Majene**	**10.03**	**71**	P	**Pn**	**23 57 10.2**	**+1.8**
	57nm,0.8s						
MYKOM	**Kota Tinggi**	**10.17**	**327**	P	**P**	**23 57 14.7**	**-1.0**
PPSI	**Pulau Pagai**	**10.18**	**293**	P	**Pn**	**23 57 10.2**	**-0.1**
MMSI	**Mamuju**	**10.32**	**67**	P	**Pn**	**23 57 14.0**	**+2.0**
	807nm53nm,0.9s						
KAPI	**Kappang**	**10.45**	**81**	P	**Pn**	**23 57 14.6**	**+0.9**
	5.1nm,0.5s,baz=263,slow=12,SNR=4.7						
KAPI	**Kappang**	**10.45**	**81**	P	**Pn**	**23 57 14.5**	**+0.9**
KAPI	**Kappang**	**10.45**	**81**	Pn	**Pn**	**23 57 13.2**	**-0.5**
KAPI	**Kappang**	**10.45**	**81**	P	**Pn**	**23 57 14.4**	**+0.7**
LBFI	**Labuhan Bajo,**	**10.53**	**100**	P	**Pn**	**23 57 13.8**	**-0.9**
PDSI	**Padang**	**10.66**	**303**	P	**Pn**	**23 57 15.7**	**-0.7**
	2μm45nm,0.5s						
SPSI	**Sidrap Palu**	**10.70**	**75**	P	**Pn**	**23 57 17.4**	**+0.6**
PPI	**Padang Panjang**	**10.97**	**305**	P	**P**	**23 57 22.6**	**-2.0**
	32nm,0.9s						
TTSI	**Tana Toraja**	**11.03**	**71**	P	**Pn**	**23 57 22.2**	**+1.3**
	95nm,0.9s						
BSSI	**Bau Bau, Buton**	**11.04**	**87**	P	**Pn**	**23 57 20.9**	**-0.2**
	43nm,0.7s						
WSI	**Waingapu**	**11.16**	**106**	P	**Pn**	**23 57 20.0**	**-2.5**
	8μm373nm,0.8s						
PCI	**Palu**	**11.94**	**61**	P	**Pn**	**23 57 33.8**	**+1.4**
	90nm,1.0s						
EDFI	**Ende, Flores**	**12.33**	**100**	P	**Pn**	**23 57 35.2**	**-2.1**
	1μm60nm,0.6s						
MPSI	**Mapaga**	**12.65**	**56**	P	**P**	**23 57 45.3**	**+2.0**
MMRI	**Maumere**	**12.85**	**99**	P	**Pn**	**23 57 42.2**	**-1.4**
MMRI	**Maumere**	**12.85**	**99**	S	**S**	**00 00 06.6**	**0.0**
MMRI	**Maumere**	**12.85**	**99**		**Pn**	**23 57 41.1**	**-2.5**
MMRI	**Maumere**	**12.85**	**99**	P	**Pn**	**23 57 42.1**	**-1.5**
	119nm,0.5s						
COCO	**West Island**	**13.50**	**246**		**P**	**23 57 52.4**	**-0.2**
TOLI2	**Tolitoli**	**13.81**	**56**	Pn	**Pn**	**23 57 53.9**	**-1.5**
GSI	**Gunungsitoli**	**14.28**	**304**	P	**Pn**	**23 57 59.8**	**-1.3**
GSI	**Gunungsitoli**	**14.28**	**304**	Pn	**Pn**	**23 57 59.4**	**-1.7**
KKM	**Kota Kinabalu**	**14.46**	**28**	P	**P**	**23 58 05.2**	**+1.8**
KKM	**Kota Kinabalu**	**14.46**	**28**		**P**	**23 58 03.6**	**+0.2**
KKM	**Kota Kinabalu**	**14.46**	**28**	P	**P**	**23 58 06.0**	**+2.6**
	75nm,1.0s						
BATI	**Baumata**	**14.51**	**104**	P	**Pn**	**23 58 03.4**	**-0.4**
	73nm,0.3s,baz=102,slow=4.7,SNR=8.4						
BATI				S	S	00 00 34.1	-10
	47nm,0.5s,baz=258,slow=19,SNR=6.4						
BATI	**Baumata**	**14.51**	**104**	P	**Pn**	**23 58 02.1**	**-1.7**
	130nm,0.6s						
LUWI	**Luwuk**	**14.51**	**67**		**P**	**23 58 04.2**	**+0.3**
KULM	**Kulim**	**14.85**	**324**	P	**Pn**	**23 58 09.9**	**+2.0**
KULM	**Kulim**	**14.85**	**324**	P	**Pn**	**23 58 08.0**	**+0.1**
MYLDM	**Lahad Datu**	**14.97**	**38**	P	**Pn**	**23 58 09.8**	**+0.5**
MYLDM	**Lahad Datu**	**14.97**	**38**	P	**Pn**	**23 58 09.6**	**+0.3**
MYLDM	**Lahad Datu**	**14.97**	**38**	P	**Pn**	**23 58 13.9**	**+4.6**
	59nm,1.0s						
SOEI	**Soe**	**15.00**	**102**	P	**Pn**	**23 58 09.9**	**0.0**
SOEI	**Soe**	**15.00**	**102**	S	**S**	**00 00 55.2**	**-0.4**
SOEI	**Soe**	**15.00**	**102**		**P**	**23 58 08.2**	**-1.3**
SOEI	**Soe**	**15.00**	**102**	P	**Pn**	**23 58 10.4**	**+0.5**
	2μm108nm,0.5s						
SANI	**Sanana**	**17.20**	**75**	P	**P**	**23 58 34.4**	**+1.0**
	64nm,0.8s						
MBWA	**Marble Bar**	**17.43**	**146**	P	**Pn**	**23 58 37.3**	**-1.0**
MBWA	**Marble Bar**	**17.43**	**146**	S	**S**	**00 01 45.9**	**+1.8**
MBWA	**Marble Bar**	**17.43**	**146**		**P**	**23 58 36.8**	**+0.9**
MBWA				IAmb	IAmb	23 58 57.0	
	comp=Z,11nm,0.9s						
PSA00	**Pilbara Seismi**	**17.82**	**147**	P	**P**	**23 58 40.9**	**+0.7**
PSA00	**Pilbara Seismi**	**17.82**	**147**	S	**S**	**00 01 54.1**	**+2.1**
PSA00	**Pilbara Seismi**	**17.82**	**147**	P	**P**	**23 58 40.1**	**-0.1**
NLAI	**Namlea**	**17.98**	**80**	P	**P**	**23 58 42.8**	**+0.9**
	comp=Z,77μmcomp=Z,3μmcomp=Z,128nm,0.6s						
AAI	**Ambon**	**18.97**	**82**	P	**Pn**	**23 58 54.6**	**-1.9**
	comp=Z,2μmcomp=Z,157nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.41**	**127**	P	**P**	**23 58 58.5**	**+1.2**
	comp=Z,34nm,0.9s,baz=309,slow=6.5,SNR=33						
FITZ				S	**S**	**00 02 29.2**	**+5.9**
	comp=Z,6.4nm,0.6s,baz=346,slow=20,SNR=3.9						
FITZ				ScP	**ScP**	**00 06 20.2**	**+0.5**
	comp=Z,3.6nm,0.8s,baz=350,slow=6.1,SNR=2.6						
TNTI	**Ternate**	**19.44**	**68**	P	**P**	**23 58 57.6**	**0.0**
KNRA	**Kununurra**	**20.92**	**117**	P	**P**	**23 59 13.3**	**0.0**
DRS	**Darwin Rock St**	**21.92**	**106**	P	**P**	**23 59 23.4**	**+0.6**
MTN	**Manton Dam**	**22.23**	**107**	P	**P**	**23 59 25.6**	**-0.1**
SWI	**Sorong**	**22.59**	**76**	P	**P**	**23 59 29.6**	**+0.7**
	comp=Z,56nm,0.9s						
SIJI	**Sorong**	**22.59**	**76**	P	**P**	**23 59 28.8**	**-0.2**
	comp=Z,39nm,0.7s,baz=291,slow=5.4,SNR=19						
	comp=Z,39nm,0.7s						
SIJI	**Sorong**	**22.59**	**76**	P	**P**	**23 59 29.3**	**+0.3**
	comp=Z,2μmcomp=Z,50nm,0.8s						
FAKI	**Fak Fak**	**23.09**	**81**	P	**P**	**23 59 33.6**	**+0.1**
FAKI	**Fak Fak**	**23.09**	**81**	P	**P**	**23 59 32.2**	**-1.3**
CM31	**Chiang Mai Arr**	**27.13**	**338**	P	**P**	**00 00 10.4**	**+0.6**
CM31				IAmb	IAmb	00 00 12.3	
	comp=Z,14nm,1.1s						
CMAR	**Chiang Mai Arr**	**27.13**	**338**	P	**P**	**00 00 11.2**	**+1.4**
	comp=Z,6.9nm,0.7s,baz=174,slow=8.2,SNR=44						
CMAR				PcP	**PcP**	**00 03 23.9**	**+0.1**
	comp=Z,2.3nm,0.6s,baz=209,slow=2.8,SNR=9.1						
CMAR				ScP	**ScP**	**00 06 40.2**	**-0.1**
	comp=Z,1.4nm,0.3s,baz=166,slow=3.2,SNR=8.5						
	comp=Z,6.9nm,0.7s						
CMAR	**Chiang Mai Arr**	**27.13**	**338**	P	**P**	**00 00 10.4**	**+0.6**
CMAR					**PcP**	**00 03 24.5**	**+0.7**
CHTO	**Chiang Mai**	**27.46**	**338**	P	**P**	**00 00 13.3**	**+0.6**
CHTO	**Chiang Mai**	**27.46**	**338**	P	**P**	**00 00 14.2**	**+1.5**
	comp=Z,9.1nm,0.8s						
WB0	**Warramunga Arr**	**27.48**	**120**	P	**P**	**00 00 13.1**	**+0.2**
WRA	**Warramunga Arr**	**27.50**	**121**	P	**P**	**00 00 13.4**	**+0.3**
	comp=Z,5.5nm,0.8s,baz=295,slow=8.5,SNR=67						
WRA				PcP	**PcP**	**00 03 25.5**	**+0.7**
	comp=Z,5.5nm,0.7s,baz=298,slow=2.0,SNR=12						
WRA				S	**S**	**00 04 33.7**	**-1.8**
	comp=Z,2.9nm,0.9s,baz=297,slow=17,SNR=4.9						
	comp=Z,5.5nm,0.8s						
WRA	**Warramunga Arr**	**27.50**	**121**		**P**	**00 00 13.4**	**+0.3**
WRA					**PcP**	**00 03 25.0**	**+0.3**
WRAB	**Tennant Creek**	**27.51**	**121**	P	**P**	**00 00 13.8**	**+0.6**
AS31	**Alice Springs**	**28.90**	**128**	P	**P**	**00 00 26.4**	**+0.9**
AS31				IAmb	IAmb	00 00 27.6	
	comp=Z,14nm,0.6s						
ASAR	**Alice Springs**	**28.90**	**128**	P	**P**	**00 00 26.6**	**+1.1**
	comp=Z,34nm,0.7s,baz=302,slow=8.6,SNR=313						
ASAR				PcP	**PcP**	**00 03 29.2**	**+1.0**
	comp=Z,4.0nm,0.6s,baz=313,slow=1.9,SNR=14						
ASAR				S	**S**	**00 04 55.9**	**-1.5**
	comp=Z,2.0nm,0.6s,baz=300,slow=16,SNR=5.5						
ASAR				ScP	**ScP**	**00 06 46.5**	**+0.6**
	comp=Z,2.5nm,0.7s,baz=302,slow=3.0,SNR=8.1						
	comp=Z,34nm,0.7s						
FORT	**Forrest**	**29.58**	**146**	P	**P**	**00 00 32.2**	**+0.8**
FORT				IAmb	IAmb	00 00 34.9	
	comp=Z,5.8nm,0.8s						
QIS	**Mount Isa**	**32.30**	**118**	P	**P**	**00 00 56.3**	**+1.0**
SSLB	**Suanglung**	**32.43**	**20**	P	**P**	**00 00 57.2**	**+0.9**
YHNB	**Yeheng**	**33.38**	**20**	P	**P**	**00 01 05.4**	**+0.7**
YHNB	**Yeheng**	**33.38**	**20**	P	**P**	**00 01 05.1**	**+0.4**
YHNB				IAmb	IAmb	00 01 08.6	
	comp=Z,10nm,0.6s						
PZH	**PanZhiHua**	**33.93**	**348**	P	**P**	**00 01 11.4**	**+2.0**
COEN	**Coen**	**33.94**	**105**	P	**P**	**00 01 10.0**	**+0.4**
COEN	**Coen**	**33.94**	**105**	P	**P**	**00 01 09.7**	**+0.1**
BBOO	**Buckleboo**	**35.83**	**140**	P	**P**	**00 01 26.3**	**+0.9**
BBOO	**Buckleboo**	**35.83**	**140**	P	**P**	**00 01 26.0**	**+0.6**
BBOO				IAmb	IAmb	00 01 27.2	
	comp=Z,17nm,1.1s						
MTSU	**Mount Surprise**	**35.83**	**112**	P	**P**	**00 01 27.3**	**+1.6**
SHL	**Shillong**	**36.40**	**333**	P	**P**	**00 01 30.8**	**+0.2**
ENH	**Enshi**	**36.86**	**0**	P	**P**	**00 01 34.4**	**+0.2**
WHN	**Wuhan**	**37.43**	**7**	P	**P**	**00 01 40.5**	**+1.6**
PMG	**Port Moresby**	**37.46**	**97**	P	**P**	**00 01 39.1**	**-0.4**
PMG				IAmb	IAmb	00 01 41.6	
	comp=Z,42nm,1.0s						
HTT	**Hallett**	**38.08**	**138**	P	**P**	**00 01 44.8**	**+0.3**
CTA	**Charters Tower**	**38.09**	**114**	P	**P**	**00 01 45.3**	**+0.7**
	comp=Z,14nm,0.7s,baz=284,slow=10.0,SNR=10						
CTA				PcP	**PcP**	**00 03 55.2**	**+0.8**
	comp=Z,5.7nm,0.8s,baz=315,slow=2.9,SNR=2.1						
	comp=Z,14nm,0.7s						
CTAO	**Charters Tower**	**38.09**	**114**	P	**P**	**00 01 44.8**	**+0.1**
CTAO				IAmb	IAmb	00 01 46.6	
	comp=Z,22nm,1.0s						
JOW	**Kunigami**	**38.11**	**28**	P	**P**	**00 01 45.1**	**+0.5**
JOW				IAmb	IAmb	00 01 46.9	
	comp=Z,36nm,1.0s						
QLP	**Quilpie**	**38.53**	**125**	P	**P**	**00 01 49.0**	**+0.8**
STKA	**Stephens Creek**	**39.03**	**134**	P	**P**	**00 01 53.9**	**+1.6**
	comp=Z,31nm,0.5s,baz=307,slow=9.1,SNR=78						
STKA				PcP	**PcP**	**00 03 57.7**	**+0.6**
	comp=Z,8.6nm,0.7s,baz=326,slow=4.6,SNR=5.2						
STKA				S	**S**	**00 07 30.2**	**-2.3**
	comp=Z,1.6nm,0.7s,baz=164,slow=18,SNR=1.5						
	comp=Z,31nm,0.5s						
STKA	**Stephens Creek**	**39.03**	**134**	P	**P**	**00 01 53.3**	**+1.0**
STKA	**Stephens Creek**	**39.03**	**134**	P	**P**	**00 01 53.8**	**+1.5**
STKA					**PcP**	**00 03 57.6**	**+0.5**
LSA	**Lhasa**	**40.31**	**335**		**P**	**00 02 04.1**	**+0.8**
LSA				IAmb	IAmb	00 02 05.6	
	comp=Z,32nm,0.9s						
LSA	**Lhasa**	**40.31**	**335**	P	**P**	**00 02 02.0**	**-1.3**
LSA				pmax	pmax		
	comp=Z,36nm,0.7s						
XAN	**Xi'an**	**40.62**	**359**	⇑P	**P**	**00 02 06.5**	**+1.3**
XAN				pmax	pmax		
	comp=Z,30nm,1.0s						
EVN	**Everest**	**40.86**	**329**	P	**P**	**00 02 08.2**	**+0.1**
EVN				IAmb	IAmb	00 02 09.3	
	comp=Z,12nm,0.6s						
LYN	**LuoYang**	**41.23**	**4**	P	**P**	**00 02 11.0**	**+0.9**
LYN				pmax	pmax		
	comp=Z,32nm,0.7s						
CMSA	**Cobar Meteorol**	**41.87**	**131**	P	**P**	**00 02 17.1**	**+1.6**
LZDM	**Lanzhou Array**	**42.86**	**353**	P	**P**	**00 02 24.6**	**+0.9**
	comp=Z,4.1nm,0.5s,baz=191,slow=12,SNR=9.5						
	comp=Z,4.1nm,0.5s						
EIDS	**Eidsvold**	**43.86**	**120**	P	**P**	**00 02 32.8**	**+1.3**
EIDS	**Eidsvold**	**43.86**	**120**	P	**P**	**00 02 32.5**	**+1.0**
EIDS				IAmb	IAmb	00 02 33.5	
	comp=Z,10.0nm,0.6s						
HNS	**HongShan**	**44.25**	**6**	⇑P	**P**	**00 02 35.3**	**+1.1**
HNS				pmax	pmax		
	comp=Z,17nm,1.1s						
TOO	**Toolangi**	**44.84**	**138**	P	**P**	**00 02 41.3**	**+2.2**
JTU	**Tsushima**	**45.24**	**23**	P	**P**	**00 02 42.7**	**+0.6**
ARMA	**Armidale**	**46.02**	**126**	P	**P**	**00 02 49.4**	**+0.9**
CAN	**Canberra**	**46.10**	**134**	P	**P**	**00 02 50.6**	**+1.6**
CAN	**Canberra**	**46.10**	**134**	P	**P**	**00 02 49.5**	**+0.5**
JCJ	**Chichijima**	**46.29**	**42**	P	**P**	**00 02 48.5**	**-2.0**
	comp=Z,36nm,0.3s,baz=271,slow=21,SNR=14						
	comp=Z,36nm,0.3s						
JCJ	**Chichijima**	**46.29**	**42**	P	**P**	**00 02 49.7**	**-0.8**
JCJ	**Chichijima**	**46.29**	**42**	P	**P**	**00 02 48.4**	**-2.0**
DL2	**Dalian**	**46.87**	**13**	P	**P**	**00 02 55.0**	**+0.3**
DL2				pmax	pmax		
	comp=Z,42nm,0.7s						
GTA2	**Gaotai**	**46.91**	**350**	*e*P	**P**	**00 02 57.1**	**+1.9**
GTA2				pP	pP	00 03 50.8	+2.6
GTA2				pmax	pmax		
	comp=Z,13nm,1.0s						
BJT	**Baijiatuau**	**47.00**	**7**		**P**	**00 02 56.2**	**+0.5**
BJT				IAmb	IAmb	00 02 57.6	
	comp=Z,22nm,0.6s						
BJI2	**Beijing**	**47.00**	**7**	P	**P**	**00 02 56.9**	**+1.2**
BJI2				pmax	pmax		
	comp=Z,15nm,0.6s						
KSAR	**Wonju Array Be**	**47.28**	**20**	P	**P**	**00 02 59.0**	**+1.1**
KSRS	**Korea Array**	**47.30**	**20**	P	**P**	**00 02 58.4**	**+0.3**
	comp=Z,6.3nm,0.7s,baz=196,slow=9.0,SNR=14						
	comp=Z,6.3nm,0.7s						
JGF	**Kuroka**	**49.71**	**30**	P	**P**	**00 03 16.5**	**0.0**
JGF	**Kuroka**	**49.71**	**30**	P	**P**	**00 03 15.5**	**-1.0**
JGF				IAmb	IAmb	00 03 17.0	
	comp=Z,21nm,1.5s						
TATA	**Tatamba Isabel**	**49.96**	**95**	P	**P**	**00 03 18.8**	**+0.1**
HNR	**Honiara**	**50.08**	**97**	P	**P**	**00 03 19.1**	**-0.5**
MJAR	**Matsushiro Arr**	**50.87**	**30**	P	**P**	**00 03 24.0**	**-1.2**
	comp=Z,12nm,0.9s,baz=204,slow=7.6,SNR=23						
MJAR				PcP	**PcP**	**00 04 38.3**	**+0.4**
	comp=Z,3.0nm,0.6s,baz=213,slow=5.1,SNR=5.0						
	comp=Z,12nm,0.9s						
MJAR	**Matsushiro Arr**	**50.87**	**30**	P	**P**	**00 03 23.3**	**-1.8**
NIL	**Nilore**	**52.84**	**322**	P	**P**	**00 03 37.9**	**-1.8**
NIL				IAmb	IAmb	00 03 38.9	
	comp=Z,12nm,0.7s						

IDC 18 23:19:59.4±1.9,4°68S×146°06E,h0km,mb3.5/3, mbtmp3.6/4,ML4.0/1,Error ellipse: s-maj=91.2km s-min=27.2km az=114.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.82**	**167**	Sn	Sn	23 22 08.0	-1.9
	2.4nm,0.3s,baz=311,slow=20,SNR=2.1						
WRA	**Warramunga Arr**	**18.98**	**216**	P	P	23 24 22.9	+0.3
	0.5nm,0.3s,baz=28,slow=10,SNR=33						
	0.8nm,0.3s						
ASAR	**Alice Springs**	**22.22**	**211**	P	P	23 24 57.4	-0.4
	0.9nm,0.3s,baz=38,slow=7.9,SNR=13						
	0.9nm,0.3s						
MKAR	**Makanchi Array**	**75.89**	**321**	P	P	23 31 48.4	+0.5
	0.1nm,0.4s,baz=102,slow=7.9,SNR=1.8						
	0.1nm,0.4s						
ILAR	**Eielson Array**	**84.65**	**23**	P	P	23 32 34.5	-0.2
	0.4nm,0.6s,baz=251,slow=5.8,SNR=6.4						
	0.4nm,0.6s						

IDC 18 23:39:54.5±2.3,6°68S×128°74E,h0km,mb3.1/1, mbtmp3.2/3,ML3.2/2,Error ellipse: s-maj=140.7km s-min=33.2km az=67.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.26**	**158**	Pn	Pn	23 43 18.2	+0.3
	0.2nm,0.3s,baz=337,slow=12,SNR=13						
WRA				Sn	Sn	23 45 43.6	-13
	0.1nm,0.3s,baz=346,slow=20,SNR=4.7						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**17.60**	**164**	P	Pn	23 44 01.1	-0.3
	0.1nm,0.3s,baz=339,slow=10,SNR=6.3						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**67.28**	**327**	P	P	23 50 51.1	+0.1
	0.2nm,0.6s,baz=134,slow=6.2,SNR=1.9						
	0.2nm,0.6s						

*IDC **18** 23:54:49.9±0.8,6°65S×109°44E,h250km±6km,mb4.2/33, mbtmp4.8/36,Error ellipse: s-maj=10.6km s-min=6.9km az=58.0*

*NEIC **18** 23:54:49.8±2.6,6°73S±0°07'×109°47E±0°05,h242km±4km, mb4.6/80,Error ellipse: s-maj=10.7km s-min=7.5km az=193.0*

SONM Songino Array 54.46 358 P **P** **00 03 52.0 +0.7**
comp=Z,12nm,0.6s,baz=180,slow=7.4,SNR=56
SONM PcP **PcP** **00 04 51.1 -0.3**
comp=Z,3.3nm,0.6s,baz=179,slow=3.6,SNR=8.4
SONM ScP **ScP** **00 08 25.1 -0.5**
comp=Z,0.3nm,0.3s,baz=144,slow=5.4,SNR=2.6
comp=Z,12nm,0.6s
SONM Songino Array 54.46 358 P **P** **00 03 51.9 +0.6**
SONM IAmb IAmb 00 03 52.6
comp=Z,12nm,0.6s
SONM **PcP** **00 04 51.2 -0.3**
ULN Ulaanbaatar 54.47 358 P **P** **00 03 51.9 +0.6**
ULN IAmb IAmb 00 03 53.0
comp=Z,18nm,0.9s
ULN Ulaanbaatar 54.47 358 P **P** **00 03 51.9 +0.6**
USRK Ussuriysk Ar. 54.71 20 P **P** **00 03 52.9 -0.1**
comp=Z,5.9nm,0.6s,baz=195,slow=7.7,SNR=6.4
comp=Z,5.9nm,0.6s
WUS Wushi 55.21 332 **P** **00 03 56.6 -0.1**
WUS IAmb IAmb 00 03 57.7
comp=Z,12nm,1.2s
JTM Tenmabayashi 55.58 29 P **P** **00 03 59.5 +0.3**
JTM Tenmabayashi 55.58 29 P **P** **00 03 58.3 -0.9**
JTM IAmb IAmb 00 04 00.1
comp=Z,46nm,1.1s
KBL Kabul 56.06 320 P **P** **00 04 01.2 -1.8**
HIA Hailar 56.56 8 P **P** **00 04 05.6 -0.4**
HIA IAmb IAmb 00 04 07.7
comp=Z,14nm,1.4s
KDJ Kajisay 56.88 332 **P** **00 04 08.2 -0.5**
NRN Naryn 56.92 330 P **P** **00 04 07.7 -1.4**
SANVU Saraoutou 57.22 104 P **P** **00 04 11.2 0.0**
SANVU IAmb IAmb 00 04 13.6
comp=Z,22nm,0.7s
OUENC Ouen Island, N 57.38 112 P **P** **00 04 12.6 +0.3**
OUENC IAmb IAmb 00 04 48.4
comp=Z,38nm,1.1s
YATNC Mamie plateau, 57.38 112 P **P** **00 04 13.2 +0.9**
BOOM Boomskoye usch 57.75 331 **P** **00 04 14.1 -0.5**
MKAR Makanchi Array 58.54 338 P **P** **00 04 19.6 -0.2**
comp=Z,3.0nm,0.4s,baz=152,slow=7.3,SNR=67
MKAR PcP **PcP** **00 05 06.9 -0.4**
comp=Z,2.5nm,0.6s,baz=138,slow=5.3,SNR=8.4
MKAR ScP **ScP** **00 08 42.7 -0.8**
comp=Z,0.3nm,0.7s,baz=154,slow=4.5,SNR=3.2
comp=Z,3.0nm,0.4s
MKAR Makanchi Array 58.54 338 P **P** **00 04 19.7 -0.2**
MKAR **PcP** **00 05 07.5 +0.1**
MAKZ Makanchi 58.67 338 P **P** **00 04 19.8 -0.9**
ASAJ Asahikawa 58.87 27 P **P** **00 04 22.1 0.0**
comp=Z,20nm,0.7s,baz=224,slow=9.4,SNR=12
comp=Z,20nm,0.7s
JKA Kamikawa-asahi 58.87 27 P **P** **00 04 21.6 -0.5**
JKA IAmb IAmb 00 04 22.3
comp=Z,25nm,1.0s
KLR Kul'dur 59.12 17 P **P** **00 04 23.3 -0.4**
comp=Z,15nm,0.5s,baz=205,slow=5.3,SNR=82
comp=Z,15nm,0.5s
KKAR Karatay Array 60.92 328 P **P** **00 04 35.2 -0.8**
YSS Yuzhno-Sakhali 61.15 25 P **P** **00 04 37.2 -0.3**
VOI Vohitsoka 62.10 249 P **P** **00 04 45.7 +1.2**
VOI IAmb IAmb 00 05 08.1
comp=Z,13nm,1.1s
KURBB Kurchatov Arra 63.11 339 P **P** **00 04 49.8 -0.6**
comp=Z,2.2nm,0.2s,baz=149,slow=5.7,SNR=6.0
KURBB PcP **PcP** **00 05 25.2 -0.4**
comp=Z,2.5nm,0.4s,baz=146,slow=3.4,SNR=13
comp=Z,2.2nm,0.2s
KURK Kurchatov 63.15 339 P **P** **00 04 50.1 -0.5**
MLZ Mavora Lakes 63.45 138 P **P** **00 04 53.8 +0.9**
JCZ Jackson Bay 63.51 136 P **P** **00 04 54.6 +1.2**
ZAAQ Zalesovo Array 63.96 344 P **P** **00 04 55.0 -0.9**
ZALV Zalesovo Beam 63.96 344 P **P** **00 04 55.2 -0.7**
comp=Z,2.7nm,0.5s,baz=162,slow=5.0,SNR=18
ZALV PcP **PcP** **00 05 27.9 -1.2**
comp=Z,2.2nm,0.5s,baz=174,slow=3.4,SNR=6.5
comp=Z,2.7nm,0.5s
LBZ Lake Benmore 64.56 136 P **P** **00 05 00.0 -0.1**
LBZ IAmb IAmb 00 05 39.9
comp=Z,31nm,1.5s
TCW Tory Channel 66.72 132 P **P** **00 05 13.8 -0.1**
BKZ Black Stump Fm 68.01 129 P **P** **00 05 23.1 +1.0**
BVAR Borovoye Array 68.14 336 P **P** **00 05 21.8 -0.6**
comp=Z,2.3nm,0.6s,baz=149,slow=8.9,SNR=25
BVAR PcP **PcP** **00 05 46.5 0.0**
comp=Z,2.6nm,0.8s,baz=157,slow=4.5,SNR=7.4
comp=Z,2.3nm,0.6s
BORK Borovoye 68.18 336 **P** **00 05 22.2 -0.5**
RAYN Ar Rayn 69.24 298 **P** **00 05 29.1 -0.8**
RAYN IAmb IAmb 00 05 30.1
comp=Z,9.7nm,1.2s
YAK Yakutsk 70.40 10 P **P** **00 05 35.7 -0.3**
comp=Z,27nm,0.4s,baz=137,slow=0.8,SNR=10
comp=Z,27nm,0.4s
YAK Yakutsk 70.40 10 P **P** **00 05 35.3 -0.8**
AB31 Akbulak array 70.48 328 **P** **00 05 36.1 -0.8**
AB31 IAmb IAmb 00 05 37.1
comp=Z,11nm,0.7s
ABKAR Akbulak array 70.48 328 **P** **00 05 36.1 -0.8**
FURI Furi 72.19 282 P **P** **00 05 49.4 +1.2**
FURI IAmb IAmb 00 05 52.8
comp=Z,18nm,1.1s
PETK Petropavlovsk- 72.28 28 P **P** **00 05 46.8 -0.7**
comp=Z,6.3nm,0.7s,baz=181,slow=2.5,SNR=7.4
comp=Z,6.3nm,0.7s
PETK Petropavlovsk- 72.28 28 P **P** **00 05 47.1 -0.4**
LODK Lodwar 74.59 275 P **P** **00 06 03.1 +1.2**
ARTI Arti 75.54 333 P **P** **00 06 05.6 -0.7**
VNDA Vanda 75.73 170 P **P** **00 06 08.5 +1.4**
comp=Z,1.4nm,0.5s,baz=304,slow=5.5,SNR=13
comp=Z,1.4nm,0.5s
VNDA Vanda 75.73 170 P **P** **00 06 08.2 +1.1**
SEY Seymchan 76.83 19 P **P** **00 06 11.9 -1.5**
comp=Z,1.8nm,0.3s,baz=230,slow=5.6,SNR=9.0
comp=Z,1.8nm,0.3s
KARS Kars 76.86 314 P **P** **00 06 14.0 -0.3**
KARS IAmb IAmb 00 06 25.7
comp=Z,8.4nm,0.9s
NRIK Noril'sk 77.46 352 P **P** **00 06 15.6 -1.1**
comp=Z,1.3nm,0.3s,baz=154,slow=4.3,SNR=4.3
comp=Z,1.3nm,0.3s
KBZ Khabaz 78.11 317 P **P** **00 06 21.1 +0.2**
comp=Z,1.7nm,0.9s,baz=220,slow=18,SNR=4.4
comp=Z,1.7nm,0.9s
TIXI Tiksi 79.34 6 P **P** **00 06 25.4 -1.5**
comp=Z,10nm,0.7s,baz=186,slow=1.9,SNR=18
comp=Z,10nm,0.7s
TIXI Tiksi 79.34 6 P **P** **00 06 25.6 -1.4**
TIXI IAmb IAmb 00 06 26.8
comp=Z,11nm,0.7s
MMAI Mount Meron Ar 80.43 305 P **P** **00 06 34.5 +0.7**
comp=Z,2.5nm,0.5s,baz=76,slow=8.7,SNR=11
comp=Z,2.5nm,0.5s
LPHEP Lephephe 81.43 247 P **P** **00 06 39.5 +0.2**
LPHEP IAmb IAmb 00 06 40.0
comp=Z,8.4nm,1.4s
LBTB Lobatse 81.56 246 P **P** **00 06 41.6 +1.6**
LBTB IAmb IAmb 00 07 10.2
comp=Z,7.4nm,1.3s
BOSA Boshof 81.66 242 P **P** **00 06 41.8 +1.3**
comp=Z,1.2nm,0.5s,baz=146,slow=3.6,SNR=6.4
comp=Z,1.2nm,0.5s
BOSA Boshof 81.66 242 P **P** **00 06 40.3 -0.2**
BOSA IAmb IAmb 00 06 50.7
comp=Z,10nm,1.3s
QSPA South Pole Qui 83.19 180 P **P** **00 06 48.2 +0.7**
comp=Z,1.2nm,0.3s,baz=288,slow=1.9,SNR=8.2
comp=Z,1.2nm,0.3s
BRTR Keskin Array B 83.48 311 P **P** **00 06 49.0 -0.6**
comp=Z,3.1nm,0.6s,baz=136,slow=7.1,SNR=18
comp=Z,3.1nm,0.6s
BR131 Keskin Array S 83.48 311 P **P** **00 06 49.2 -0.4**
BR131 IAmb IAmb 00 07 12.4
comp=Z,13nm,1.4s
AKASG Malin Array Be 89.03 321 P **P** **00 07 14.8 -1.2**
comp=Z,2.0nm,0.5s,baz=86,slow=4.9,SNR=18
comp=Z,2.0nm,0.5s
AKBB Malin Array Si 89.03 321 P **P** **00 07 15.0 -1.0**
AKBB IAmb IAmb 00 07 15.7
comp=Z,4.4nm,0.6s
MLR Muntele Rosu 90.23 316 P **P** **00 07 22.3 +0.3**
MLR IAmb IAmb 00 08 03.2
comp=Z,9.6nm,1.4s
BURAR Bucovina Array 91.06 318 P **P** **00 07 25.3 -0.4**
BUR08 Bucovina Ar. S 91.08 318 P **P** **00 07 25.7 -0.1**
BUR08 IAmb IAmb 00 08 08.1
comp=Z,6.9nm,1.3s

FINES FINESS Array B 92.73 331 P **P** **00 07 32.1 -0.9**
comp=Z,1.6nm,0.7s,baz=108,slow=6.2,SNR=15
comp=Z,1.6nm,0.7s
ARCES ARCESS Array B 94.18 339 P **P** **00 07 37.9 -1.5**
comp=Z,2.8nm,0.8s,baz=103,slow=3.9,SNR=6.0
comp=Z,2.8nm,0.8s
ARCES ARCESS Array B 94.18 339 P **P** **00 07 38.0 -1.5**
C16K Lisburne Hills 94.51 22 P **P** **00 07 40.6 -0.4**
C16K IAmb IAmb 00 07 42.3
comp=Z,5.8nm,0.8s
M14K Bethel 95.21 30 P **P** **00 07 44.4 +0.1**
J16K Anvik River 96.02 27 P **P** **00 07 48.1 +0.2**
J16K IAmb IAmb 00 07 49.7
comp=Z,6.5nm,0.8s
SPB2 Spitsbergen Ar 97.23 348 P **P** **00 07 52.1 -1.1**
SPITS Spitsbergen Ar 97.23 348 P **P** **00 07 52.0 -1.2**
comp=Z,2.6nm,0.5s,baz=100,slow=8.5,SNR=16
comp=Z,2.6nm,0.5s
E19K Redstone River 97.53 23 P Pdif 00 07 55.3 +0.6
E19K IAmb IAmb 00 07 56.2
comp=Z,4.0nm,0.7s
TORD Torodi Ar. Bea 108.71 282 PKiKP **PKiKP** **00 12 49.6 0.0**
comp=Z,0.5nm,0.5s,baz=180,slow=1.4,SNR=6.0
YKA Yellowknife Ar 115.84 21 PKP **PKPdf** **00 13 01.2 -0.6**
comp=Z,0.9nm,0.7s,baz=319,slow=2.6,SNR=16
NVAR Mina Array Bea 126.70 46 PKP **PKiKP** **00 13 24.6 +0.3**
comp=Z,0.9nm,0.7s,baz=244,slow=3.4,SNR=6.1
ELK Elko 127.83 43 PKP **PKiKP** **00 13 27.0 +0.5**
comp=Z,1.2nm,0.6s,baz=253,slow=2.5,SNR=6.9
PDAR Pinedale Array 130.41 37 PKP **PKPdf** **00 13 31.2 +0.5**
comp=Z,0.4nm,0.5s,baz=67,slow=0.6,SNR=7.2
PDAR SKPbc **SKPbc** **00 16 29.8 -0.7**
comp=Z,0.7nm,0.8s,baz=288,slow=2.8,SNR=5.2
ULM Lac du Bonnet 131.81 22 PKP **PKiKP** **00 13 33.6 -0.3**
comp=Z,0.5nm,0.4s,baz=294,slow=2.8,SNR=4.1
ULM SKPbc **SKPbc** **00 16 34.5 -0.6**
comp=Z,6.5nm,0.9s,baz=354,slow=4.1,SNR=11
ULM Lac du Bonnet 131.81 22 **PKPdf** **00 13 33.2 +0.3**
SCHQ Schefferville 132.01 357 PKP **PKiKP** **00 13 33.9 -0.2**
comp=Z,1.8nm,0.5s,baz=352,slow=1.6,SNR=7.9
SCHQ SKPbc **SKPbc** **00 16 35.9 +0.2**
comp=Z,5.3nm,0.7s,baz=44,slow=4.3,SNR=8.2
SCHQ Schefferville 132.01 357 **PKPdf** **00 13 33.5 +0.4**
PLCA Paso Flores 132.70 180 SKPbc **SKPab** **00 16 41.6 +1.4**
comp=Z,1.2nm,0.7s,baz=122,slow=2.8,SNR=5.2
ANMO Albuquerque 136.74 45 PKP **PKPdf** **00 13 42.8 0.0**
comp=Z,1.1nm,0.8s,baz=315,slow=1.4,SNR=4.0
ANMO SKP **SKPbc** **00 16 53.5 +1.7**
comp=Z,0.8nm,0.7s,baz=317,slow=4.7,SNR=7.3
TXAR Lajitas Array 141.63 50 PKhKP PKPpre 00 13 46.6
comp=Z,0.5nm,0.5s,baz=209,slow=1.9,SNR=9.0
TXAR SKPbc **SKiKP** **00 17 06.2 -0.7**
comp=Z,1.4nm,0.8s,baz=282,slow=1.3,SNR=9.5
CFA Coronel Fontan 141.75 183 PKhKP PKPpre 00 13 48.0
comp=Z,1.2nm,0.4s,baz=33,slow=2.2,SNR=3.6
CPUP Villa Florida 144.64 201 PKP **PKPdf** **00 13 57.7 +0.7**
comp=Z,6.6nm,0.9s,baz=153,slow=2.6,SNR=16
CPUP Villa Florida 144.64 201 **PKPdf** **00 13 57.4 +0.4**
ACSO Alum Creek Sta 144.91 17 PKPbc PKPbc 00 13 56.5 -0.3
FCAR Ozark Folk Cen 144.96 31 PKPbc PKPbc 00 13 56.5 -0.6
L64A Middleborough 145.01 0 PKPbc **PKPbc** **00 13 56.4 -0.6**
MIAR Mount Ida 145.19 34 PKPbc **PKPab** **00 13 58.4 +0.2**
BDFB Brasilia 148.41 225 PKPbc **PKiKP** **00 14 08.6 -0.4**
comp=Z,5.6nm,0.6s,baz=135,slow=4.3,SNR=11
LPAZ La Paz 156.93 186 PKPab **PKPab** **00 14 47.8 0.0**
comp=Z,0.8nm,0.5s,baz=194,slow=7.9,SNR=3.6

*NEIC **19** 00:20:37.3±1.5, 7°.81S±0°.09×127°.61E±0°.05, h127km±9km, mb4.0/6, Error ellipse: s-maj=14.4km s-min=3.3km az=149.0*
*IDC **19** 00:20:38.7±1.9, 7°.80S×127°.44E, h143km±20km, mb3.5/6, mbtmp3.9/10, Error ellipse: s-maj=19.9km s-min=16.8km az=73.0*
*DJA **19** 00:20:38.6±1.0, 8°S±4°×12°8E±°, h20km±9km, M4.3/15, mb4.3/7, mB5.6/3, MLv4.2/15, Mw(mB)5.1/3*
ISC 19 00:20:38.9±0.6, 7°.98S±0°.06×127°.60E±0°.05, h150km, n33, σ1°72/38, mb3.7/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.67**	**90**	Pn	Pn		00 21 30.2	-4.6
SAUI	**Saumlaki**	**3.67**	**90**	P	**Pn**		**00 21 33.8**	**-1.0**
SAUI				S	**Sn**		**00 22 17.9**	**-0.3**
SOEI	**Soe**	**3.74**	**242**		**Pn**		**00 21 35.3**	**-0.5**
SOEI	**Soe**	**3.74**	**242**	P	**Pn**		**00 21 35.7**	**-0.1**
SOEI				S	**Sn**		**00 22 18.6**	**-1.4**
BATI	**Baumata**	**4.47**	**240**	P	**Pn**		**00 21 45.2**	**-0.1**
	521nm,0.4s,baz=121,slow=2.2,SNR=68							
BATI				S	**Sn**		**00 22 36.7**	**-0.5**
	56nm,0.4s,baz=328,slow=23,SNR=6.9							
BATI	**Baumata**	**4.47**	**240**	P	**Pn**		**00 21 45.3**	**-0.1**
BATI				S	**Sn**		**00 22 36.3**	**-0.9**
MMRI	**Maumere**	**5.34**	**263**		**Pn**		**00 21 55.3**	**-1.6**
MMRI	**Maumere**	**5.34**	**263**	P	**Pn**		**00 21 56.3**	**-0.6**
EDFI	**Ende, Flores**	**5.90**	**262**	P	**Pn**		**00 22 03.9**	**-0.4**
	0.1nm11nm,1.0s							
FAKI	**Fak Fak**	**6.83**	**43**	Pn	**Pn**		**00 22 13.3**	**-3.5**
KNRA	**Kununurra**	**7.74**	**172**		**Pn**		**00 22 29.2**	**+0.4**
SIJI	**Sorong**	**7.95**	**28**	P	**Pn**		**00 22 30.4**	**-1.3**
	17nm,0.4s,baz=339,slow=6.6,SNR=7.0							
SIJI	**Sorong**	**7.95**	**28**	P	**Pn**		**00 22 33.4**	**+1.7**
	0.1nm863nm16nm,0.4s							
FITZ	**Fitzroy Crossi**	**10.24**	**191**	P	**Pn**		**00 23 02.3**	**+0.2**
	2.8nm,0.6s,baz=12,slow=9.0,SNR=17							
FITZ				S	**Sn**		**00 24 50.1**	**-5.3**
	7.7nm,0.5s,baz=102,slow=20,SNR=9.4							
WB0	**Warramunga Arr**	**13.45**	**151**	Pn	**Pn**		**00 23 44.0**	**+0.2**
WRA	**Warramunga Arr**	**13.57**	**152**	P	**Pn**		**00 23 46.7**	**+1.2**
	0.5nm,0.4s,baz=325,slow=12,SNR=11							
WRA				S	Sn		00 26 09.9	-5.9
	1.9nm,0.6s,baz=325,slow=22,SNR=9.2							
WRA	**Warramunga Arr**	**13.57**	**152**		**Pn**		**00 23 44.5**	**-0.9**
MBWA	**Marble Bar**	**15.15**	**209**	Pn	**Pn**		**00 24 04.4**	**-0.8**
MBWA				IAmb	IAmb		00 24 17.5	
	comp=Z,7.9nm,1.1s							
AS31	**Alice Springs**	**16.73**	**160**	P	**P**		**00 24 25.1**	**+0.7**
ASAR	**Alice Springs**	**16.73**	**160**	P	**P**		**00 24 26.7**	**+2.4**
	comp=Z,2.6nm,0.5s,baz=340,slow=11,SNR=40							
ASAR				S	**S**		**00 27 29.6**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=317,slow=21,SNR=6.7							
ASAR	**Alice Springs**	**16.73**	**160**	P	**P**		**00 24 25.1**	**+0.8**
BBOO	**Buckleboo**	**25.93**	**54**	P	**P**		**00 26 00.3**	**+3.1**
STKA	**Stephens Creek**	**27.12**	**153**	P	**P**		**00 26 11.7**	**+3.8**
	comp=Z,1.4nm,0.4s,baz=329,slow=11,SNR=5.6							
	comp=Z,1.4nm,0.4s							
KSRS	**Korea Array**	**45.19**	**0**	P	**P**		**00 28 41.1**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=164,slow=3.2,SNR=1.6							
	comp=Z,0.7nm,0.4s							
MKAR	**Makanchi Array**	**67.76**	**328**	P	**P**		**00 31 19.4**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=116,slow=8.4,SNR=11							
	comp=Z,0.4nm,0.4s							
MKAR	**Makanchi Array**	**67.76**	**328**	P	**P**		**00 31 19.0**	**-1.4**
BOOM	**Boomskoye usch**	**68.80**	**322**	P	**P**		**00 31 26.9**	**-0.3**
BOOM				IAmb	IAmb		00 31 47.1	
	comp=Z,4.2nm,1.4s							
ZALV	**Zalesovo Beam**	**71.43**	**335**	P	**P**		**00 31 41.2**	**-1.4**
	comp=Z,0.5nm,0.4s,baz=134,slow=6.2,SNR=1.8							
	comp=Z,0.5nm,0.4s							
KURBB	**Kurchatov Arra**	**72.12**	**330**	P	**P**		**00 31 45.7**	**-1.1**
	comp=Z,0.7nm,0.7s,baz=132,slow=5.1,SNR=10							
	comp=Z,0.7nm,0.7s							
KURK	**Kurchatov**	**72.13**	**330**	P	**P**		**00 31 45.9**	**-1.0**
KURK				IAmb	IAmb		00 31 47.4	
	comp=Z,1.6nm,0.8s							
BVAR	**Borovoye Array**	**77.63**	**329**	P	**P**		**00 32 18.0**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=126,slow=7.3,SNR=3.5							
	comp=Z,0.4nm,0.6s							
ABKAR	**Akbulak array**	**81.80**	**322**	P	**P**		**00 32 40.7**	**-0.4**
QSPA	**South Pole Qui**	**82.01**	**180**	P	**P**		**00 32 44.8**	**+2.7**
QSPA				IAmb	IAmb		00 33 04.6	
	comp=Z,5.0nm,1.4s							

*HEL **19** 00:23:15.3±0.2, 67°.81N×20°.22E, h0km, ML1.2, Suspected explosion*
UPP 19 00:23:15.1±0.1, 67°.81N×20°.21E, h0km, ML2.6, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.15**	**19**	P	Pg		00 23 17.7	-0.3
KUA				S	Sg		00 23 19.8	-0.1
KUA	**Kurravaara**	**0.15**	**19**	P	Pg		00 23 18.1	+0.2
KUA				S	Sg		00 23 20.2	+0.3

RATU Laukkuluspa 0.24 273 P Pg 00 23 19.2 -0.3
RATU S Sg 00 23 22.4 -0.2
RATU Laukkuluspa 0.24 273 P Pg 00 23 19.7 +0.1
RATU S Sg 00 23 23.1 +0.5
KOVU Salmi 0.41 357 P Pg 00 23 22.4 -0.5
KOVU S Sg 00 23 27.8 -0.5
KOVU Salmi 0.41 357 P Pg 00 23 22.9 -0.1
KOVU S Sg 00 23 28.5 +0.2
NIKU Nikkaluokta 0.45 277 P Pg 00 23 23.1 -0.5
NIKU S Sg 00 23 29.3 -0.2
NIKU Nikkaluokta 0.45 277 P Pg 00 23 23.8 +0.2
NIKU S Sg 00 23 29.8 +0.3
DUNU Dundret 0.71 169 P Pg 00 23 28.2 -0.4
DUNU S Sg 00 23 37.8 -0.1
DUNU Dundret 0.71 169 P Pg 00 23 28.2 -0.4
DUNU S Sg 00 23 38.2 +0.4
LANU Lannavaara 0.71 70 P Pg 00 23 28.1 -0.6
LANU S Sg 00 23 37.7 -0.3
LANU Lannavaara 0.71 70 P Pg 00 23 28.8 +0.1
LANU Lannavaara 0.71 70 PG Pg 00 23 28.0 -0.7
LANU SG Sg 00 23 37.8 -0.2
MASU Masugnsbyn 0.77 117 P Pg 00 23 29.5 -0.3
MASU S Sg 00 23 40.1 +0.2
KIF Kilpisjarvi 1.22 10 eP Pn 00 23 39.8 +0.5
KIF Kilpisjarvi 1.22 10 PG Pg 00 23 38.1 -0.3
KIF smax smax 00 23 53.4
comp=Z,2.9nm,0.2s
KIF SG Sg 00 23 54.1 0.0
HEF Hetta 1.42 64 eP Pn 00 23 41.2 -1.0
HEF Hetta 1.42 64 PG Pn 00 23 40.9 -1.3
HEF smax smax 00 23 58.1
comp=Z,1.5nm,0.2s
HEF SN Sn 00 24 02.4 +0.8
ERTU Ertsjaerv 1.48 148 P Pn 00 23 41.8 -1.2
ERTU Ertsjaerv 1.48 148 P Pn 00 23 42.8 -0.2
ERTU Ertsjaerv 1.48 148 PG Pn 00 23 41.8 -1.1
ERTU SN Sg 00 24 02.3 -0.3
KLF Kolari 1.56 110 PG Pn 00 23 43.0 -0.9
KLF smax smax 00 24 01.7
comp=Z,1.2nm,0.2s
KLF SN Sn 00 24 04.0 -0.8
KTK1 Kautokeino 1.64 42 PG Pn 00 23 44.7 -0.5
KTK1 SN Sg 00 24 08.9 +1.1
HARU Harads 1.69 169 P Pn 00 23 45.5 -0.3
HARU Harads 1.69 169 P Pn 00 23 46.0 +0.3
TRO Tromso 1.89 346 SG Sb 00 24 14.3 -0.1
KALU Kalix 2.32 146 PG Pn 00 23 55.3 +0.8
TOF Tornio 2.38 135 PB Pn 00 23 56.2 +1.0
TOF smax smax 00 24 25.5
comp=Z,0.8nm,0.2s
TOF SG Sb 00 24 28.6 +0.1
RNF Rovaniemi 2.56 115 PB Pn 00 23 59.5 +1.7
RNF SG Sb 00 24 33.8 -0.1
ARA0 ARCESS Array S 2.59 46 PB Pn 00 23 59.1 +0.9
ARA0 SG Sb 00 24 33.2 -1.6
RAJF Raja-Jooseppi 3.10 74 SG Sb 00 24 48.6 -0.7
KEV Kevo 3.15 49 PN Pn 00 24 06.9 +1.1
KEV SG Sb 00 24 51.4 +0.8
BURU Burvik 3.28 171 PB Pn 00 24 08.8 +1.2
UMAU Umeaa 3.95 177 SN Sn 00 24 59.6 -4.3

*NOU **19** 00:58:25.1, 39°.74S×174°.15E, h187km, MLv3.7/13, North Island, New Zealand*
*WEL **19** 00:58:28.3±1.0, 40°.5S±5°×17°4E±°, h162km±8km, M3.4/43, ML2.4/7, MLv3.4/43, Error ellipse: s-maj=7.8km s-min=5.1km az=127.1, confirmed*
ISC 19 00:58:22.2±1.7, 39°.64S±0°.05×174°.07E±0°.05, h209km±10km, n111, σ1°65/123, North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NMEZ	**Namu Road**	**0.27**	**327**	P	**Pn**		**00 58 51.7**	**+1.9**
PREZ	**Palmer Road**	**0.31**	**13**	P	**Pn**		**00 58 51.6**	**+1.6**
KHEZ	**Kahui Hut**	**0.35**	**353**	P	**Pn**		**00 58 52.0**	**+1.9**
NBEZ	**Newall Road No**	**0.41**	**337**	P	**Pn**		**00 58 52.3**	**+2.1**
WAZ	**Wanganui**	**0.71**	**99**	P	**Pn**		**00 58 53.6**	**+2.3**
WAZ				S	**S**		**00 59 13.3**	**-0.4**
VRZ	**Vera Road**	**0.74**	**46**	P	**Pn**		**00 58 52.7**	**+1.2**
VRZ				S	**S**		**00 59 12.4**	**-1.6**
PKVZ	**Pokaka**	**1.05**	**71**	P	**Pn**		**00 58 54.8**	**+1.5**
PKVZ				S	**S**		**00 59 15.5**	**-1.8**
OHWZ	**Ohakea**	**1.11**	**121**	P	**Pn**		**00 58 55.9**	**+2.3**
OHWZ				S	**S**		**00 59 17.5**	**-0.5**
MTVZ	**Mangateitei**	**1.11**	**77**	P	**Pn**		**00 58 55.4**	**+1.6**
MTVZ				S	**S**		**00 59 16.2**	**-1.9**
DUWZ	**D'Urville Isla**	**1.16**	**186**	P	**Pn**		**00 58 55.9**	**+1.8**
TRVZ	**Turoa**	**1.19**	**74**	P	**Pn**		**00 58 56.3**	**+1.8**
TRVZ				S	**S**		**00 59 17.3**	**-2.2**
TWVZ	**Taurewa**	**1.20**	**62**	P	**Pn**		**00 58 55.8**	**+1.3**
TWVZ				S	**S**		**00 59 17.2**	**-2.1**
FWVZ	**Far West T-bar**	**1.21**	**72**	P	**Pn**		**00 58 56.2**	**+1.5**
FWVZ				S	**S**		**00 59 17.4**	**-2.3**
COVZ	**Chateau Observ**	**1.22**	**69**	P	**Pn**		**00 58 56.3**	**+1.6**
WNVZ	**Wahianoa**	**1.22**	**76**	P	**Pn**		**00 58 56.4**	**+1.7**
NGZ	**Ngauruhoe**	**1.27**	**69**	P	**Pn**		**00 58 56.7**	**+1.6**
TUVZ	**Tukino**	**1.28**	**74**	P	**Pn**		**00 58 57.0**	**+1.9**
HIZ	**Hauiti**	**1.28**	**29**	P	**Pn**		**00 58 56.5**	**+1.5**
HIZ	**Hauiti**	**1.28**	**29**	P	**Pn**		**00 58 56.4**	**+1.5**
WTVZ	**West Tongariro**	**1.29**	**66**	P	**Pn**		**00 58 56.9**	**+1.7**
SNVZ	**South Ngauruho**	**1.30**	**70**	P	**Pn**		**00 58 55.6**	**+0.3**
MOVZ	**Moawhango**	**1.32**	**80**	P	**Pn**		**00 58 56.6**	**+1.3**
ETVZ	**East Tongariro**	**1.37**	**69**	P	**Pn**		**00 58 58.5**	**+2.7**
TMVZ	**Te Maari**	**1.37**	**68**	P	**Pn**		**00 58 57.9**	**+2.1**
KIW	**Kapiti Island**	**1.38**	**153**	P	**Pn**		**00 58 57.3**	**+1.6**
OGWZ	**Otaki Gorge**	**1.44**	**145**	P	**Pn**		**00 58 58.0**	**+1.8**
POWZ	**Post Office Ro**	**1.50**	**120**	P	**Pn**		**00 58 58.3**	**+1.5**
TSZ	**Takapari Road**	**1.51**	**107**	P	**Pn**		**00 58 58.5**	**+1.6**
MRZ	**Mangatainoka R**	**1.54**	**132**	P	**Pn**		**00 58 58.6**	**+1.6**
MRZ				S	**S**		**00 59 21.8**	**-2.2**
TCW	**Tory Channel**	**1.57**	**174**	P	**Pn**		**00 58 59.5**	**+2.2**
TCW				S	**S**		**00 59 22.0**	**-2.5**
TKNZ	**Takaka Hill**	**1.63**	**211**	P	**Pn**		**00 58 59.3**	**+1.7**
TKNZ				S	**S**		**00 59 23.9**	**-1.5**
CAW	**Cannon Point**	**1.65**	**153**	P	**Pn**		**00 58 59.7**	**+1.7**
NNZ	**Nelson**	**1.66**	**198**	P	**Pn**		**00 58 59.9**	**+1.9**
NNZ				S	**S**		**00 59 24.4**	**-1.5**
PNHZ	**Pukenui**	**1.66**	**100**	P	**Pn**		**00 58 59.9**	**+1.7**
HOWZ	**Holdsworth Sta**	**1.67**	**139**	P	**Pn**		**00 58 59.7**	**+1.5**
QRZ	**Quartz Range**	**1.67**	**224**	P	**Pn**		**00 58 59.7**	**+1.5**
PRWZ	**Pori Road**	**1.72**	**123**	P	**Pn**		**00 59 00.6**	**+1.9**
WEL	**Wellington**	**1.72**	**162**	P	**Pn**		**00 59 00.5**	**+1.8**
SNZO	**South Karori**	**1.73**	**164**	P	**Pn**		**00 59 00.5**	**+1.7**
SNZO	**South Karori**	**1.73**	**164**	S	**S**		**00 59 25.2**	**-1.9**
DVHZ	**Dannevirke**	**1.74**	**113**	P	**Pn**		**00 59 00.5**	**+1.7**
KRHZ	**Kereru**	**1.77**	**91**	P	**Pn**		**00 59 01.0**	**+1.7**
TUWZ	**Tuamarina**	**1.79**	**183**	P	**Pn**		**00 59 01.4**	**+2.1**
TIWZ	**Tintock**	**1.79**	**130**	P	**Pn**		**00 59 01.2**	**+1.8**
KWHZ	**Kaweka Forest**	**1.83**	**84**	P	**Pn**		**00 59 02.1**	**+2.3**
BHW	**Baring Head**	**1.87**	**161**	P	**Pn**		**00 59 01.5**	**+1.5**
MTW	**Mount Morrison**	**1.87**	**145**	P	**Pn**	

MWZ	Matawai	2.99	65	P	Pn	00 59 13.3	+1.0
MHGZ	Mahia Peninsul	3.01	82	P	Pn	00 59 14.5	+2.1
RIGZ	Rimuhau	3.02	73	P	Pn	00 59 14.2	+1.7
TKGZ	Te Karaka	3.18	69	P	Pn	00 59 16.0	+1.6
RUGZ	Raukumara Rang	3.28	60	P	Pn	00 59 16.0	+0.3
TWGZ	Tauwhareparae	3.38	66	P	Pn	00 59 18.8	+2.0
GVZ	Greta Valley S	3.41	193	P	Pn	00 59 18.5	+1.4
LTZ	Lake Taylor	3.42	203	P	Pn	00 59 19.1	+1.8
CNGZ	Carnagh Statio	3.42	72	P	Pn	00 59 19.1	+1.8
HAZ	Te Kaha	3.46	58	P	Pn	00 59 18.1	+0.4
PUZ	Puketiti	3.62	66	P	Pn	00 59 20.7	+1.0
AMCZ	Amberley	3.69	196	P	Pn	00 59 21.8	+1.3
WMGZ	Waiomatatini S	3.85	63	P	Pn	00 59 23.3	+0.8
MXZ	Matakaoa Point	3.91	59	P	Pn	00 59 24.4	+1.1
MXZ	Matakaoa Point	3.91	59	P	Pn	00 59 24.3	+1.1
OXZ	Oxford	3.98	202	P	Pn	00 59 25.1	+1.0
MQZ	McQueen's Vall	4.20	194	P	Pn	00 59 26.8	+0.2
WVZ	Waitaha Valley	4.25	215	P	Pn	00 59 28.4	+1.1
AKCZ	Akaroa Harbour	4.32	191	P	Pn	00 59 29.1	+0.9
MHCZ	Mount Hutt	4.32	205	P	Pn	00 59 29.2	+1.0
RACZ	Rakaia	4.33	199	P	Pn	00 59 29.2	+0.9
WACZ	Wakanui South	4.61	201	P	Pn	00 59 33.4	+1.6
GCSZ	Gaunt Creek Bo	4.62	216	P	Pn	00 59 33.0	+0.9
RPZ	Rata Peaks	4.66	208	P	Pn	00 59 34.2	+1.8
RPZ	Rata Peaks	4.66	208	P	Pn	00 59 34.1	+1.8
ARCZ	Arundel	4.81	206	P	Pn	00 59 35.3	+0.8
FOZ	Fox Glacier	5.03	218	P	Pn	00 59 38.2	+1.1
TMZ	Timaru	5.26	205	P	Pn	00 59 41.5	+1.4
LBZ	Lake Benmore	5.55	210	P	Pn	00 59 44.7	+0.8
JCZ	Jackson Bay	5.93	220	P	Pn	00 59 49.7	+1.0
JCZ	Jackson Bay	5.93	220	P	Pn	00 59 49.7	+1.0
ODZ	Otahua Downs	5.96	204	P	Pn	00 59 50.7	+1.6
ODZ	Otahua Downs	5.96	204	P	Pn	00 59 50.3	+1.2
WKZ	Wanaka	6.40	214	P	Pn	00 59 55.1	+0.5
EAZ	Earnscleugh	6.60	211	P	Pn	00 59 57.2	-0.1

GUC ***19*** *00:59:56.7±0.8, 33°.39S×71°.32W, h55km±2km, ML4.1*
SJA ***19*** *00:59:56.0±1.3, 33°.41S×71°.33W, h52km±6km, ML3.8, MW3.9*
IDC ***19*** *00:59:56.8±3.7, 33°.30S×71°.52W, h60km±31km, mb3.5/2, mbtmp3.8/7, ML3.9/5, MS2.7/1, Error ellipse: s-maj=44.1km s-min=13.6km az=116.0*
NEIC ***19*** *00:59:57.1±0.6, 33°.39S±0°.03×71°.33W±0°.05, h50km±5km, mb3.9/3, ML4.1(GUC), Error ellipse: s-maj=5.6km s-min=3.4km az=71.0*

ISC 19 00:59:56.6±0.7, 33°.39S±0°.02×71°.38W±0°.03, h47km±5km, n123, σ1§20/154, 13C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MT02	**Curacav**	**0.24**	**56**	Pn	**Pn**	**01 00 05.3**	**+0.4**
MT02				Sn	**Sn**	**01 00 11.3**	**+0.5**
MT02	**Curacav**	**0.24**	**56**	*e*P	**Pn**	**01 00 05.3**	**+0.4**
MT02				*e*S	**Sn**	**01 00 11.0**	**+0.2**
MT02	**Curacav**	**0.24**	**56**	*i* P	**Pn**	**01 00 05.3**	**+0.4**
MT02				IAML		01 00 14.4	
	comp=Z,2µm,0.5s						
VA01	**Torpederas**	**0.43**	**328**	Pn	**Pn**	**01 00 08.0**	**+1.1**
VA01				Sn	**Sn**	**01 00 15.8**	**+1.7**
VA01	**Torpederas**	**0.43**	**328**	*e*P	**Pn**	**01 00 07.9**	**+1.1**
VA01				*e*S	**Sn**	**01 00 16.1**	**+1.9**
VA01				IAML		01 00 18.5	
	comp=N,13µm,0.1s						
VA01	**Torpederas**	**0.43**	**328**	*i* P	**Pn**	**01 00 07.9**	**+1.1**
VA01				IAML		01 00 19.1	
	comp=Z,3µm,0.3s						
MT01	**Popeta**	**0.48**	**168**	Pn	**Pn**	**01 00 08.0**	**+0.6**
MT01				Sn	**Sn**	**01 00 15.9**	**+0.7**
MT01	**Popeta**	**0.48**	**168**	⇓*i*P	**Pn**	**01 00 08.0**	**+0.6**
MT01				*e*S	**Sn**	**01 00 15.8**	**+0.7**
MT01				IAML		01 00 16.4	
	comp=N,20µm,0.2s						
MT01	**Popeta**	**0.48**	**168**	*i* P	**Pn**	**01 00 08.1**	**+0.6**
MT01				*i* S	**Sn**	**01 00 16.0**	**+0.8**
MT01				IAML		01 00 16.4	
	comp=Z,11µm,0.1s						
MT09	**Talagante**	**0.50**	**140**	Pn	**Pn**	**01 00 08.5**	**+0.7**
MT09				Sn	**Sn**	**01 00 16.6**	**+0.8**
MT09	**Talagante**	**0.50**	**140**	⇑*i*P	**Pn**	**01 00 08.4**	**+0.6**
MT09				*e*S	**Sn**	**01 00 16.6**	**+0.8**
MT09				IAML		01 00 18.6	
	comp=E,20µm,0.4s						
ROCH	**El Roble**	**0.52**	**36**	⇑*i*P	**Pn**	**01 00 08.5**	**+0.4**
ROCH				*e*S	**Sn**	**01 00 16.9**	**+0.5**
ROCH				IAML		01 00 17.7	
	comp=N,17µm,0.1s						
MT05	**Renca**	**0.53**	**90**	Pn	**Pn**	**01 00 08.2**	**+0.1**
MT05				Sn	**Sn**	**01 00 16.6**	**+0.2**
MT05	**Renca**	**0.53**	**90**	⇑*i*P	**Pn**	**01 00 08.3**	**+0.1**
MT05				*e*S	**Sn**	**01 00 16.8**	**+0.3**
MT05				IAML		01 00 17.9	
	comp=E,12µm,0.3s						
MT05	**Renca**	**0.53**	**90**	*i* P	**Pn**	**01 00 08.4**	**+0.2**
MT05				*e*S	**Sn**	**01 00 18.1**	**+1.7**
MT05				IAML		01 00 18.4	
	comp=Z,5µm,0.2s						
PEL	**Peldehue**	**0.63**	**67**	Pn	**Pn**	**01 00 09.5**	**+0.1**
PEL				Sn	**Sn**	**01 00 18.5**	**-0.1**
PEL	**Peldehue**	**0.63**	**67**	*e*P	**Pn**	**01 00 08.7**	**-0.7**
PEL				*e*S	**Sn**	**01 00 18.2**	**-0.3**
PEL				IAML		01 00 20.8	
	comp=E,10µm,0.3s						
PEL	**Peldehue**	**0.63**	**67**	*e*P	**Pn**	**01 00 09.4**	**0.0**
PEL				*i* S	**Sn**	**01 00 19.5**	**+0.9**
PEL				IAML		01 00 23.7	
	comp=Z,6µm,0.7s						
MT14	**Cerro Calן**	**0.70**	**90**	⇑*i*P	**Pn**	**01 00 10.4**	**+0.1**
MT14				*e*S	**Sn**	**01 00 20.2**	**0.0**
MT14				IAML		01 00 23.8	
	comp=E,12µm,0.6s						
MT10	**Hacienda Santa**	**0.71**	**80**	⇑*i*P	**Pn**	**01 00 10.7**	**+0.1**
MT10				*e*S	**Sn**	**01 00 20.9**	**+0.3**
MT10				IAML		01 00 21.8	
	comp=N,22µm,0.2s						
MT16	**CCHEN**	**0.71**	**93**	Pn	**Pn**	**01 00 10.6**	**+0.1**
MT16				Sn	**Sn**	**01 00 20.4**	**-0.2**
MT16	**CCHEN**	**0.71**	**93**	⇑*i*P	**Pn**	**01 00 10.6**	**+0.1**
MT16				*e*S	**Sn**	**01 00 20.6**	**+0.1**
MT16				IAML		01 00 21.1	
	comp=E,12µm,0.2s						
MT03	**Universidad Ad**	**0.73**	**98**	Pn	**Pn**	**01 00 10.8**	**+0.1**
MT03				Sn	**Sn**	**01 00 20.8**	**-0.2**
MT03	**Universidad Ad**	**0.73**	**98**	⇑*i*P	**Pn**	**01 00 10.8**	**+0.1**
MT03				*e*S	**Sn**	**01 00 20.9**	**0.0**
MT03				IAML		01 00 21.6	
	comp=N,25µm,0.2s						
MT03	**Universidad Ad**	**0.73**	**98**	*e*P	**Pn**	**01 00 10.8**	**+0.1**
MT03				*e*S	**Sn**	**01 00 21.1**	**+0.2**
MT03				IAML		01 00 22.1	
	comp=Z,10µm,0.3s						
MT15	**Las Vizcachas**	**0.76**	**106**	⇑*i*P	**Pn**	**01 00 11.0**	**0.0**
MT15				*e*S	**Sn**	**01 00 21.6**	**+0.2**
MT12	**Pirque**	**0.77**	**116**	⇑*i*P	**Pn**	**01 00 11.3**	**+0.2**
MT12				*e*S	**Sn**	**01 00 21.8**	**0.0**
MT12				IAML		01 00 23.0	
	comp=E,10µm,0.4s						
VA06	**Catapilco**	**0.83**	**5**	Pn	**Pn**	**01 00 12.3**	**+0.3**
VA06				Sn	**Sn**	**01 00 23.6**	**+0.4**
VA06	**Catapilco**	**0.83**	**5**	⇑*i*P	**Pn**	**01 00 12.4**	**+0.4**
VA06				*e*S	**Sn**	**01 00 23.6**	**+0.4**
VA06				IAML		01 00 28.4	
	comp=N,9µm,0.4s						
BO04	**La Punta**	**0.87**	**133**	Pn	**Pn**	**01 00 12.7**	**+0.1**
BO04				Sn	**Sn**	**01 00 24.5**	**+0.2**
BO04	**La Punta**	**0.87**	**133**	⇑*i*P	**Pn**	**01 00 12.8**	**+0.2**
BO04				*e*S	**Sn**	**01 00 24.3**	**0.0**
VA03	**San Esteban**	**0.94**	**48**	Pn	**Pn**	**01 00 13.6**	**+0.2**
VA03				Sn	**Sn**	**01 00 26.0**	**+0.2**
VA03	**San Esteban**	**0.94**	**48**	⇓*i*P	**Pn**	**01 00 13.7**	**+0.2**
VA03				*e*S	**Sn**	**01 00 26.2**	**+0.4**
VA03	**San Esteban**	**0.94**	**48**	*i* P	**Pn**	**01 00 13.8**	**+0.4**
VA03				*i* S	**Sn**	**01 00 26.2**	**+0.4**
VA03				IAML		01 00 27.8	
	comp=Z,17µm,0.2s						
MT13	**San Alfonso**	**0.97**	**111**	Pn	**Pn**	**01 00 14.2**	**+0.2**
MT13	**San Alfonso**	**0.97**	**111**	*e*P	**Pn**	**01 00 14.3**	**+0.3**
MT13				*e*S	**Sn**	**01 00 27.2**	**+0.4**
MT13	**San Alfonso**	**0.97**	**111**	*i* P	**Pn**	**01 00 14.4**	**+0.4**
MT13				*i* S	**Sn**	**01 00 27.3**	**+0.5**
MT13				IAML		01 00 29.0	
	comp=Z,6µm,0.3s						
BO01	**Tunca**	**1.02**	**166**	Pn	**Pn**	**01 00 15.0**	**+0.5**
BO01	**Tunca**	**1.02**	**166**	⇓*i*P	**Pn**	**01 00 15.1**	**+0.5**
BO01				IAML		01 00 33.6	
	comp=E,5µm,0.3s						
BO01	**Tunca**	**1.02**	**166**	*i* P	**Pn**	**01 00 15.2**	**+0.6**
BO01				*i* S	**Sn**	**01 00 28.5**	**+0.7**
BO01				IAML		01 00 32.1	
	comp=Z,2µm,0.2s						
MT04	**Ro Olivares**	**1.04**	**91**	*e*P	**Pn**	**01 00 14.8**	**-0.1**
MT04	**Ro Olivares**	**1.04**	**91**	*i* P	**Pn**	**01 00 14.9**	**-0.1**
MT04				*e*S	**Sn**	**01 00 28.6**	**+0.1**
MT04				IAML		01 00 31.2	
	comp=Z,2µm,0.1s						
LMEL	**Las Melosas**	**1.08**	**115**	⇓*i*P	**Pn**	**01 00 15.8**	**+0.4**
LMEL				IAML		01 00 31.1	
	comp=N,24µm,0.2s						
MT08	**Bocatoma Ro**	**1.14**	**93**	Pn	**Pn**	**01 00 16.2**	**-0.1**
MT08	**Bocatoma Ro**	**1.14**	**93**	*e*P	**Pn**	**01 00 16.6**	**+0.3**
MT08	**Bocatoma Ro**	**1.14**	**93**	*i* P	**Pn**	**01 00 16.6**	**+0.3**
MT08				IAML		01 00 34.0	
	comp=Z,1µm,0.2s						
BO03	**Pichilemu**	**1.20**	**204**	⇓*i*P	**Pn**	**01 00 17.4**	**+0.4**
BO03				IAML		01 00 38.6	
	comp=N,4µm,0.3s						
CO04	**Los Peladeros**	**1.39**	**14**	Pn	**Pn**	**01 00 20.1**	**+0.3**
CO04	**Los Peladeros**	**1.39**	**14**	⇑*i*P	**Pn**	**01 00 20.1**	**+0.3**
CO04				IAML		01 00 38.7	
	comp=N,4µm,0.3s						
BO02	**Sierra Bellavi**	**1.48**	**161**	Pn	**Pn**	**01 00 21.6**	**+0.8**
BO02	**Sierra Bellavi**	**1.48**	**161**	*e*P	**Pn**	**01 00 21.6**	**+0.8**
BO02				IAML		01 00 45.2	
	comp=N,5µm,0.1s						
BO02	**Sierra Bellavi**	**1.48**	**161**	*i* P	**Pn**	**01 00 21.7**	**+0.9**
BO02				*i* S	**Sn**	**01 00 42.9**	**+3.9**
BO02				IAML		01 00 45.3	
	comp=Z,4µm,0.2s						
GO05	**Hualane**	**1.68**	**196**	Pn	**Pn**	**01 00 24.1**	**+0.6**
GO05	**Hualane**	**1.68**	**196**	⇑*i*P	**Pn**	**01 00 23.8**	**+0.4**
GO05	**Hualane**	**1.68**	**196**	*i* P	**Pn**	**01 00 23.9**	**+0.4**
GO05				IAML		01 00 51.1	
	comp=Z,888nm,0.2s						
ARCO	**CERRO ARCO**	**2.12**	**76**	*i* P	**Pn**	**01 00 32.9**	**+3.1**
ARCO				IAML		01 01 05.9	
	comp=Z,370nm,0.3s						
AAGR	**Agrelo**	**2.16**	**82**	*i* P	**Pn**	**01 00 33.0**	**+2.9**
AAGR				IAML		01 01 16.3	
	comp=Z,147nm,0.5s						
CO02	**Combarbal**	**2.21**	**8**	Pn	**Pn**	**01 00 31.5**	**+0.6**
CO02	**Combarbal**	**2.21**	**8**	*e*P	**Pn**	**01 00 31.4**	**+0.5**
CO02	**Combarbal**	**2.21**	**8**	*i* P	**Pn**	**01 00 31.4**	**+0.5**
CO02				IAML		01 01 04.6	
	comp=Z,1µm,0.3s						
ASAL	**Salagasta**	**2.28**	**70**	*i* P	**Pn**	**01 00 35.1**	**+3.3**
ASAL				IAML		01 01 08.1	
	comp=Z,0.1nm,0.9s						
ML02	**Panimavida**	**2.36**	**181**	Pn	**Pn**	**01 00 33.6**	**+0.8**
ML02	**Panimavida**	**2.36**	**181**	*i* P	**Pn**	**01 00 33.6**	**+0.8**
ML02				*e*S	**Sn**	**01 01 03.6**	**+2.9**
ML02				IAML		01 01 11.7	
	comp=Z,493nm,0.2s						
RTLS	**Leoncito**	**2.37**	**48**	*i* P	**Pn**	**01 00 36.3**	**+3.0**
RTLS				IAML		01 01 11.4	
	comp=Z,1µm,0.5s						
AVIZ	**Vizcacheras**	**2.39**	**93**	*i* P	**Pn**	**01 00 36.1**	**+2.8**
CO03	**El Pedregal**	**2.61**	**13**	Pn	**Pn**	**01 00 37.5**	**+1.1**
CO03	**El Pedregal**	**2.61**	**13**	*i* P	**Pn**	**01 00 37.5**	**+1.1**
CO03				IAML		01 01 16.7	
	comp=Z,825nm,0.2s						
CO06	**Fray Jorge**	**2.72**	**355**	Pn	**Pn**	**01 00 37.9**	**+0.1**
RFA	**San Rafael**	**2.78**	**120**	*i* P	**Pn**	**01 00 40.3**	**+1.6**
RFA				IAML		01 01 31.2	
	comp=Z,69nm,0.5s						
ZON	**Zonda**	**2.93**	**52**	*i* P	**Pn**	**01 00 43.7**	**+3.0**
ZON				IAML		01 01 39.3	
	comp=Z,168nm,0.9s						
CFA	**Coronel Fontan**	**3.20**	**57**	P	**Pn**	**01 00 45.4**	**+1.0**
	comp=Z,35nm,0.3s,baz=240,slow=14,SNR=150						
CFA				S	**Sn**	**01 01 23.4**	**+2.2**
	comp=Z,59nm,0.3s,baz=63,slow=20,SNR=11						
CFA				LR	LR	01 02 16.6	
	comp=Z,125nm,21.3s,baz=183,slow=43						
	comp=Z,62nm,0.3s						
CFA	**Coronel Fontan**	**3.20**	**57**	*i* P	**Pn**	**01 00 46.3**	**+1.9**
CFA				IAML		01 02 26.1	
	comp=Z,246nm,0.8s						
RTLL	**Cerro Villicun**	**3.20**	**51**	*i* P	**Pn**	**01 00 47.2**	**+2.7**
RTLL				IAML		01 01 33.8	
	comp=Z,279nm,0.3s						
GO04	**Tololo Observa**	**3.25**	**9**	Pn	**Pn**	**01 00 46.1**	**+0.8**
GO04	**Tololo Observa**	**3.25**	**9**	*i* P	**Pn**	**01 00 45.7**	**+0.4**
GO04				IAML		01 01 35.1	
	comp=Z,1µm,0.2s						
BI02	**San Fabin de**	**3.26**	**179**	Pn	**Pn**	**01 00 46.5**	**+1.2**
BI02	**San Fabin de**	**3.26**	**179**	*i* P	**Pn**	**01 00 46.7**	**+1.4**
BI02				IAML		01 01 40.0	
	comp=Z,152nm,0.9s						
ACCO	**Cerro Coronel**	**3.42**	**36**	*i* P	**Pn**	**01 00 50.3**	**+2.6**
CO01	**Juntas del Tor**	**3.58**	**18**	Pn	**Pn**	**01 00 51.2**	**+1.4**
CO01	**Juntas del Tor**	**3.58**	**18**	*i* P	**Pn**	**01 00 51.8**	**+2.0**
CO01				IAML		01 01 43.7	
	comp=Z,163nm,0.2s						
AROD	**Rodeo**	**3.60**	**27**	*i* P	**Pn**	**01 00 53.1**	**+2.9**
BI05	**Punta Hualpn**	**3.66**	**203**	Pn	**Pn**	**01 00 49.9**	**-0.8**
BI05	**Punta Hualpn**	**3.66**	**203**	*i* P	**Pn**	**01 00 49.9**	**-0.8**
BI05				*i* S	**Sn**	**01 01 31.1**	**-1.5**
BI05				IAML		01 01 51.8	
	comp=Z,141nm,0.8s						
ACAN	**Cantantal**	**3.70**	**74**	*i* P	**Pn**	**01 00 52.5**	**+1.3**
ACAN				*i* S	**Sn**	**01 01 36.1**	**+2.5**
ACAN				IAML		01 01 43.4	
	comp=Z,556nm,1.1s						
AVFE	**Valle Fertil**	**4.30**	**52**	*i* P	**Pn**	**01 01 01.1**	**+1.5**
AVFE				IAML		01 01 57.2	
	comp=Z,91nm,0.4s						
LCO	**Las Campanas**	**4.41**	**8**	Pn	**Pn**	**01 01 01.1**	**-0.1**
LCO	**Las Campanas**	**4.41**	**8**	*i* P	**Pn**	**01 01 01.3**	**+0.1**
LCO				IAML		01 02 12.1	
	comp=Z,343nm,0.5s						
CANA	**Caviahue**	**4.49**	**177**	*i* P	**Pn**	**01 01 04.4**	**+2.2**
CANA				IAML		01 02 38.7	
	comp=Z,17nm,0.9s						
AC05	**El Transito**	**4.64**	**12**	Pn	**Pn**	**01 01 04.3**	**0.0**
AC05	**El Transito**	**4.64**	**12**	*i* P	**Pn**	**01 01 04.5**	**+0.2**
AC05				IAML		01 02 11.0	
	comp=Z,162nm,0.5s						
MRA	**San Martin**	**4.86**	**80**	*i* P	**Pn**	**01 01 08.2**	**+0.9**
MRA				IAML		01 02 31.1	
	comp=Z,42nm,0.5s						
AC04	**Llanos de Chal**	**5.18**	**3**	*i* P	**Pn**	**01 01 11.1**	**-0.5**
AC04				IAML		01 02 31.8	
	comp=Z,142nm,1.1s						
GO06	**Curarrehue**	**6.18**	**181**	Pn	**Pn**	**01 01 25.4**	**+0.1**
H03S1	**Juan Fernandez**	**6.30**	**264**	T	T	01 07 41.6	
	baz=86,slow=75,SNR=582						
H03S3	**Juan Fernandez**	**6.30**	**264**	T	T	01 07 42.9	
	baz=86,slow=75,SNR=625						
H03N1	**Juan Fernandez**	**6.30**	**268**	T	T	01 08 11.4	
	baz=90						
H03N3	**Juan Fernandez**	**6.31**	**267**	T	T	01 08 05.3	
	baz=90,slow=74						
H03S2	**Juan Fernandez**	**6.32**	**264**	T	T	01 07 43.9	
	baz=86,slow=75,SNR=462						
H03N2	**Juan Fernandez**	**6.32**	**268**	T	T	01 08 05.7	
	baz=90,slow=74						
AC02	**Maricunga**	**6.82**	**17**	Pn	**Pn**	**01 01 34.0**	**-0.6**
LR05	**Currie**	**6.84**	**184**	Pn	**Pn**	**01 01 33.6**	**-0.7**
PLCA	**Paso Flores**	**7.35**	**175**	P	**Pn**	**01 01 42.2**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=337,slow=12,SNR=26						
PLCA				S	**Sn**	**01 03 07.5**	**+4.0**
	comp=Z,2.8nm,1.0s,baz=201,slow=17,SNR=1.3						
	comp=Z,1.2nm,0.3s						
PLCA	**Paso Flores**	**7.35**	**175**	Pn	**Pn**	**01 01 42.3**	**+0.9**
TRQA	**Tornquist**	**8.94**	**124**	Pn	**Pn**	**01 02 04.2**	**+1.1**
CPUP	**Villa Florida**	**14.07**	**64**	P	**Pn**	**01 03 12.3**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=243,slow=16,SNR=5.3						
CPUP				S	**Sn**	**01 05 50.6**	**+2.8**
	comp=Z,1.0nm,0.7s,baz=180,slow=20,SNR=1.5						
	comp=Z,1.1nm,0.6s						
CPUP	**Villa Florida**	**14.07**	**64**	Pn	**Pn**	**01 03 11.3**	**-1.8**
LPAZ	**La Paz**	**17.28**	**11**	P	**P**	**01 03 55.5**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=191,slow=10,SNR=6.3						
	comp=Z,1.6nm,0.8s						
LPAZ	**La Paz**	**17.28**	**11**		**Pn**	**01 03 55.0**	**-0.2**
LPAZ				IAmb	IAmb	01 04 07.3	
	comp=Z,1.8nm,0.8s						
ITAB	**Concordia**	**17.70**	**75**		**P**	**01 03 59.5**	**-0.6**
ITAB				IAmb	IAmb	01 04 18.6	
	comp=Z,14nm,1.3s						
SIV	**San Ignacio**	**19.67**	**31**	P	**P**	**01 04 20.4**	**-1.4**
	baz=204,slow=10,SNR=11						
	comp=Z,1.6nm,0.7s						
QSPA	**South Pole Qui**	**56.84**	**180**	P	**P**	**01 09 35.9**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=131,slow=1.7,SNR=2.5						
	comp=Z,1.3nm,0.8s						
QSPA	**South Pole Qui**	**56.84**	**180**	P	**P**	**01 09 36.3**	**+0.2**
QSPA				IAmb	IAmb	01 09 49.0	
	comp=Z,4.7nm,1.4s						
TORD	**Torodi Ar. Bea**	**83.48**	**70**	P	**P**	**01 12 19.4**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=228,slow=6.6,SNR=2.9						
	comp=Z,0.5nm,0.7s						
WRA	**Warramunga Arr**	**121.56**	**209**	PKP	**PKPdf**	**01 18 44.1**	**-1.4**
	comp=Z,0.2nm,0.5s,baz=154,slow=1.7,SNR=1.7						
H11S2	**WAKE ISLAND Hyl**	**26.33**	**269**	T	T	03 37 54.8	
	baz=118,slow=75,SNR=85						
H11S1	**WAKE ISLAND Hyl**	**26.34**	**269**	T	T	03 37 54.1	
	baz=118,slow=75,SNR=96						
H11S3	**WAKE ISLAND Hyl**	**26.35**	**269**	T	T	03 37 56.4	
	baz=118,slow=75,SNR=60						
H11N3	**WAKE ISLAND Hyl**	**26.73**	**271**	T	T	03 38 26.2	
	baz=113,slow=78,SNR=4.1						
H11N1	**WAKE ISLAND Hyl**	**26.74**	**271**	T	T	03 38 26.5	
	baz=113,slow=78,SNR=5.9						
H11N2	**WAKE ISLAND Hyl**	**26.75**	**271**	T	T	03 38 23.3	
	baz=113,slow=78,SNR=9.3						
ZALV	**Zalesovo Beam**	**153.42**	**32**	PKPbc	**PKPbc**	**01 19 46.4**	**-2.7**
	comp=Z,0.2nm,0.3s,baz=309,slow=4.6,SNR=1.9						
PZH	**PanZhiHua**	**170.90**	**137**	PKP	**PKPdf**	**01 20 00.3**	**+0.3**
HHC	**Hu-ho-hao-te**	**172.20**	**343**	*e*P	**PKPdf**	**01 20 01.1**	**+0.9**

IDC ***19*** *01:07:40.5±1.2, 34°.68N×26°.79E, h0km, mb3.5/7, mbtmp3.4/10, ML2.8/3, Error ellipse: s-maj=33.9km s-min=19.1km az=164.0*
AFAD ***19*** *01:07:46.1, 34°.92N×27°.21E, h8km±5km, ML2.6*
ISK ***19*** *01:07:56.2, 35°.42N×27°.52E, h85km, ML2.5/14*

ISC 19 01:07:43.0±3.3, 34°.76N±0°.07×26°.95E±0°.07, h14km±21km, n34, σ2§38/43, mb3.4/6, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**1.75**	**33**	Pg	**Pb**	**01 08 15.6**	**+0.7**
ARG				Sg	**Sn**	**01 08 29.7**	**-5.4**
DAT	**Datca**	**2.04**	**14**	Pn	**Pb**	**01 08 20.2**	**+0.3**
DAT				Sn	**Sn**	**01 08 37.8**	**-4.6**
TURN	**Turunc**	**2.28**	**27**	Pn	**Pn**	**01 08 22.4**	**+2.2**
DALY	**Dalyan (Mula)**	**2.48**	**34**	Pn	**Pn**	**01 08 24.9**	**+1.8**
IZZE	**Mula-Seydike**	**2.50**	**47**	P	**Pb**	**01 08 26.6**	**-1.2**
IZZE				S	**Sb**	**01 08 59.8**	**+1.3**
IZZE				IAML		01 09 15.0	
	comp=N,43nm,0.5s						
IZZE				IAML		01 09 36.0	
	comp=E,26nm,0.7s						
MLSB	**Milas**	**2.62**	**15**	Pn	**Pn**	**01 08 27.8**	**+2.8**
AKAS	**Kas**	**2.62**	**55**	Pn	**Pn**	**01 08 27.4**	**+2.3**
AKAS	**Kas**	**2.62**	**55**	P	**Pn**	**01 08 27.1**	**+2.0**
AKAS				S	**Sn**	**01 08 58.7**	**+1.9**
AKAS				IAML		01 09 17.0	
	comp=N,83nm,0.8s						
AKAS				IAML		01 09 18.0	
	comp=E,100nm,1.3s						
SABU	**Mula-Dalaman**	**2.64**	**38**	P	**Pn**	**01 08 26.7**	**+1.4**
SABU				IAML		01 09 19.0	
	comp=E,44nm,1.9s						
SABU				IAML		01 09 29.0	
	comp=N,30nm,1.0s						
CAME	**Cameli-Denizli**	**2.90**	**41**	Pn	**Pn**	**01 08 30.7**	**+1.7**
KNIK	**Mula-Seydike**	**2.98**	**45**	P	**Pn**	**01 08 33.3**	**+3.2**
KNIK				IAML		01 09 19.0	
	comp=E,13nm,0.6s						
KNIK				IAML		01 09 25.0	
	comp=N,14nm,1.1s						
DNZT	**Denizli-Tavas-**	**3.03**	**33**	P	**Pn**	**01 08 32.8**	**+2.1**
DNZT				S	**Sn**	**01 09 09.1**	**+2.2**
DNZT				IAML		01 09 45.0	
	comp=N,25nm,1.4s						
DNZT				IAML		01 10 04.0	
	comp=E,18nm,2.0s						
CAEL	**Denizli, Camel**	**3.05**	**38**	P	**Pn**	**01 08 32.3**	**+1.3**
CAEL				S	**Sb**	**01 09 12.0**	**-2.

Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PX02	**IPOC Station P**	**0.14**	**305⇑**	*eP*	**Pn**	**01 51 39.3**	**0.0**
PX02				*eS*	**Sn**	**01 51 47.9**	**+0.3**
PX02				IAML		01 51 48.6	
	comp=N,14μm,0.2s						
PB12	**IPOC Station P**	**0.49**	**331**		**Pn**	**01 51 42.0**	**+0.6**
PB12				Sn	**Sn**	**01 51 50.9**	**-0.4**
PB12	**IPOC Station P**	**0.49**	**331⇑**	*eP*	**Pn**	**01 51 42.2**	**+0.8**
PB12				*eS*	**Sn**	**01 51 52.6**	**+1.3**
PB12				IAML		01 51 53.5	
	comp=N,5μm,0.4s						
PB12	**IPOC Station P**	**0.49**	**331**	*eP*	**Pn**	**01 51 42.0**	**+0.6**
PB12				*eS*	**Sn**	**01 51 52.2**	**+0.8**
PB12				IAML		01 51 53.8	
	comp=Z,3μm,0.3s						
AP01	**Chacalluta**	**0.72**	**339**		**Pn**	**01 51 44.3**	**+0.8**
AP01				Sn	**Sn**	**01 51 53.6**	**-1.4**
AP01	**Chacalluta**	**0.72**	**339⇓**	*eP*	**Pn**	**01 51 44.4**	**+0.9**
AP01				*eS*	**Sn**	**01 51 56.5**	**+1.5**
AP01				IAML		01 51 56.8	
	comp=N,5μm,0.4s						
AP01	**Chacalluta**	**0.72**	**339**	*eP*	**Pn**	**01 51 44.6**	**+1.1**
AP01				*eS*	**Sn**	**01 51 56.5**	**+1.5**
AP01				IAML		01 52 00.1	
	comp=Z,4μm,0.2s						
PB11	**IPOC Station P**	**0.81**	**151**		**Pn**	**01 51 45.4**	**+0.6**
PB11				Sn	**Sn**	**01 51 57.4**	**+0.1**
PB11	**IPOC Station P**	**0.81**	**151**	*eP*	**Pn**	**01 51 45.2**	**+0.4**
PB11				*eS*	**Sn**	**01 51 58.1**	**+0.8**
PB11				IAML		01 51 59.3	
	comp=E,12μm,1.0s						
PB11	**IPOC Station P**	**0.81**	**151**	*eP*	**Pn**	**01 51 45.1**	**+0.3**
PB11				*eS*	**Sn**	**01 51 58.8**	**+1.5**
PB11				IAML		01 51 59.4	
	comp=Z,2μm,0.2s						
PB16	**IPOC Station P**	**0.89**	**37**		**Pn**	**01 51 46.3**	**+0.2**
PB16				Sn	**Sn**	**01 51 59.3**	**-0.2**
PB16	**IPOC Station P**	**0.89**	**37⇓**	*eP*	**Pn**	**01 51 46.3**	**+0.2**
PB16				*eS*	**Sn**	**01 51 59.4**	**-0.1**
PB16				IAML		01 52 00.5	
	comp=N,4μm,0.1s						
PB16	**IPOC Station P**	**0.89**	**37**	*eP*	**Pn**	**01 51 46.3**	**+0.2**
PB16				*eS*	**Sn**	**01 51 59.2**	**-0.2**
PB16				IAML		01 52 00.8	
	comp=Z,2μm,0.4s						
GO01	**Chusmiza**	**1.04**	**127**		**Pn**	**01 51 48.4**	**+0.7**
GO01				Sn	**Sn**	**01 52 03.1**	**+0.6**
GO01	**Chusmiza**	**1.04**	**127⇓**	*eP*	**Pn**	**01 51 48.6**	**+0.9**
GO01				*eS*	**Sn**	**01 52 03.5**	**+1.0**
GO01				IAML		01 52 06.5	
	comp=N,5μm,0.3s						
GO01	**Chusmiza**	**1.04**	**127**	*eP*	**Pn**	**01 51 48.5**	**+0.7**
GO01				*eS*	**Sn**	**01 52 04.1**	**+1.6**
GO01				IAML		01 52 05.0	
	comp=Z,2μm,0.3s						
TA02	**Huaiquique**	**1.22**	**182**	*eP*	**Pn**	**01 51 50.4**	**+0.8**
TA02				*eS*	**Sn**	**01 52 06.6**	**+0.9**
TA02				IAML		01 52 11.4	
	comp=E,3μm,0.1s						
TA02	**Huaiquique**	**1.22**	**182**	*eP*	**Pn**	**01 51 50.6**	**+1.1**
TA02				*eS*	**Sn**	**01 52 08.9**	**+3.2**
TA02				IAML		01 52 10.9	
	comp=Z,1μm,0.1s						
PB08	**IPOC Station P**	**1.40**	**142**		**Pn**	**01 51 52.8**	**+0.6**
PB08	**IPOC Station P**	**1.40**	**142⇓**	*eP*	**Pn**	**01 51 53.4**	**+1.2**
PB08				*eS*	**Sn**	**01 52 11.9**	**+1.6**
PB08				IAML		01 52 13.0	
	comp=N,5μm,0.6s						
PB08	**IPOC Station P**	**1.40**	**142**	*eP*	**Pn**	**01 51 52.6**	**+0.5**
PX03	**IPOC Station P**	**1.42**	**163**	*eP*	**Pn**	**01 51 52.8**	**+0.6**
PX03				*eS*	**Sn**	**01 52 11.3**	**+0.9**
PX03				IAML		01 52 13.1	
	comp=N,2μm,0.4s						
TA01	**Diego Aracena**	**1.52**	**184**		**Pn**	**01 51 53.8**	**+0.4**
TA01	**Diego Aracena**	**1.52**	**184⇑**	*eP*	**Pn**	**01 51 54.1**	**+0.7**
TA01				*eS*	**Sn**	**01 52 14.1**	**+1.6**
TA01	**Diego Aracena**	**1.52**	**184**	*eP*	**Pn**	**01 51 54.1**	**+0.7**
TA01				*eS*	**Sn**	**01 52 12.1**	**-0.5**
PB18	**Visviri**	**1.55**	**21**		**Pn**	**01 51 56.8**	**+2.4**
PB18	**Visviri**	**1.55**	**21⇑**	*eP*	**Pn**	**01 51 57.4**	**+3.0**
PB18				*eS*	**Sn**	**01 52 19.4**	**+5.1**
PB18				IAML		01 52 27.1	
	comp=N,3μm,0.8s						
PATCX	**Punta Patache**	**1.77**	**182**		**Pn**	**01 51 57.3**	**+0.6**
PATCX	**Punta Patache**	**1.77**	**182⇑**	*eP*	**Pn**	**01 51 57.4**	**+0.6**
PATCX				*eS*	**Sn**	**01 52 19.8**	**+1.1**
PATCX	**Punta Patache**	**1.77**	**182**	*eP*	**Pn**	**01 51 57.5**	**+0.7**
PATCX				IAML		01 52 37.4	
	comp=Z,413nm,0.6s						
PB01	**IPOC Station P**	**2.06**	**165**		**Pn**	**01 52 01.3**	**+0.6**
PB01	**IPOC Station P**	**2.06**	**165⇑**	*eP*	**Pn**	**01 52 01.5**	**+0.8**
PB01				*eS*	**Sn**	**01 52 27.1**	**+1.4**
PB01				IAML		01 52 36.0	
	comp=E,562nm,0.4s						
PB01	**IPOC Station P**	**2.06**	**165**	*eP*	**Pn**	**01 52 01.5**	**+0.8**
PB01				*eS*	Sn	01 52 17.1	-8.6
PB01				IAML		01 52 34.8	
	comp=Z,403nm,0.3s						
PB02	**IPOC Station P**	**2.27**	**176**		**Pn**	**01 52 04.0**	**+0.5**
PB02	**IPOC Station P**	**2.27**	**176**	*eP*	**Pn**	**01 52 04.8**	**+1.3**
PB02				*eS*	**Sn**	**01 52 29.7**	**-1.0**
PB02				IAML		01 52 37.8	
	comp=Z,2μm,0.5s						
PB07	**IPOC Station P**	**2.67**	**176**		**Pn**	**01 52 10.0**	**+0.9**
PB07	**IPOC Station P**	**2.67**	**176**	*eP*	**Pn**	**01 52 09.8**	**+0.8**
PB07				*eS*	**Sn**	**01 52 41.8**	**+1.3**
PB07				IAML		01 52 47.9	
	comp=Z,714nm,0.7s						
PB09	**IPOC Station P**	**2.85**	**164**		**Pn**	**01 52 12.6**	**+1.2**
PB09	**IPOC Station P**	**2.85**	**164**	*eP*	**Pn**	**01 52 12.8**	**+1.5**
PB09				IAML		01 52 56.9	
	comp=E,570nm,0.1s						
PB09	**IPOC Station P**	**2.85**	**164**	*eP*	**Pn**	**01 52 12.8**	**+1.5**
PB09				*eS*	**Sn**	**01 52 43.7**	**-1.0**
PB09				IAML		01 52 52.7	
	comp=Z,404nm,0.5s						
PB03	**IPOC Station P**	**3.00**	**174**		**Pn**	**01 52 14.1**	**+0.6**
PB03	**IPOC Station P**	**3.00**	**174**	*eP*	**Pn**	**01 52 14.2**	**+0.8**
PB03				*eS*	**Sn**	**01 52 49.1**	**+0.6**
PB03				IAML		01 52 56.2	
	comp=Z,382nm,0.6s						
LPAZ	**La Paz**	**3.31**	**34**	P	**Pn**	**01 52 20.2**	**+2.2**
	comp=Z,13nm,0.3s,baz=196,slow=10,SNR=100						
LPAZ	**La Paz**	**3.31**	**34**	*eP*	**Pn**	**01 52 20.6**	**+2.6**
PB06	**IPOC Station P**	**3.67**	**173**		**Pn**	**01 52 23.1**	**+0.5**
PB06	**IPOC Station P**	**3.67**	**173**	*eP*	**Pn**	**01 52 23.0**	**+0.5**
PB06				*eS*	**Sn**	**01 53 09.8**	**+5.0**
PB06				IAML		01 53 32.3	
	comp=Z,140nm,0.6s						
PB05	**IPOC Station P**	**3.79**	**182**		**Pn**	**01 52 24.2**	**+0.1**
PB05	**IPOC Station P**	**3.79**	**182**	*eP*	**Pn**	**01 52 23.7**	**-0.4**
PB05				*eS*	Sn	01 53 20.6	+13
PB05				IAML		01 53 31.1	
	comp=Z,100nm,0.7s						
PB10	**IPOC Station P**	**4.47**	**186**	Pn	**Pn**	**01 52 33.0**	**-0.3**
PB10	**IPOC Station P**	**4.47**	**186**	*eP*	**Pn**	**01 52 32.9**	**-0.3**
PB10				IAML		01 53 57.6	
	comp=Z,39nm,1.3s						
PB14	**IPOC Station P**	**5.56**	**183**	Pn	**Pn**	**01 52 47.6**	**-0.9**
AC01	**Pan de Azucar**	**7.09**	**184**	Pn	**Pn**	**01 53 07.5**	**-1.6**
AC02	**Maricunga**	**7.80**	**174**	Pn	**Pn**	**01 53 19.2**	**-0.1**
AC06	**Mina Casimiro**	**8.28**	**182**	Pn	**Pn**	**01 53 24.7**	**-0.6**
SIV	**San Ignacio**	**9.11**	**72**	P	**Pn**	**01 53 34.5**	**-2.2**
	comp=Z,3.0nm,0.7s,baz=254,slow=10,SNR=14						
VILB	**Vilhena**	**11.26**	**59**		**Pn**	**01 54 05.3**	**-0.8**
MT02	**Curacav**	**14.19**	**184**	Pn	**Pn**	**01 54 46.0**	**+0.8**
GO05	**Hualane**	**15.99**	**186**		**P**	**01 55 10.2**	**-0.1**
GO05				IAmb	IAmb	01 55 12.2	
	comp=Z,15nm,1.1s						
MACA	**Manacapuru-AM**	**18.26**	**31**	P	**P**	**01 55 34.1**	**-1.5**
MACA				IAmb	IAmb	01 55 34.5	
	comp=Z,7.1nm,0.6s						
PLCA	**Paso Flores**	**21.62**	**181**	P	P	01 56 37.3	+25
	comp=Z,1.7nm,0.9s,baz=354,slow=10,SNR=3.5						
	comp=Z,1.7nm,0.9s						
BOAV	**Boa Vista**	**23.29**	**25**	P	**P**	**01 56 27.5**	**-1.8**
SDV	**Santo Domingo**	**27.76**	**359**	P	**P**	**01 57 09.3**	**-0.6**
SDV				IAmb	IAmb	01 57 13.1	
	comp=Z,7.0nm,1.2s						
SABA	**Saba**	**37.05**	**11**	P	**P**	**01 58 31.8**	**+1.0**
553A	**Crawfordville**	**50.86**	**344**	P	**P**	**02 00 22.2**	**+1.1**
553A				IAmb	IAmb	02 00 31.2	
	comp=Z,34nm,1.3s						
QSPA	**South Pole Qui**	**71.13**	**180**	P	P	02 02 55.1	+17
	comp=Z,0.3nm,0.3s,baz=161,slow=6.8,SNR=9.5						
	comp=Z,0.3nm,0.3s						
QSPA	**South Pole Qui**	**71.13**	**180**	P	**P**	**02 02 38.8**	**+0.6**
TORD	**Torodi Ar. Bea**	**77.59**	**71**	P	**P**	**02 03 14.2**	**-2.1**
	comp=Z,0.6nm,0.8s,baz=260,slow=4.3,SNR=4.8						
	comp=Z,0.6nm,0.8s						
YKA	**Yellowknife Ar**	**88.52**	**341**	P	**P**	**02 04 11.8**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=137,slow=4.4,SNR=5.7						
	comp=Z,0.3nm,0.4s						
SONM	**Songino Array**	**151.14**	**5**	PKPbc	**PKiKP**	**02 11 12.5**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=5.7,slow=2.9,SNR=1.8						

AEIC ***19*** *01:59:38.0±1.8, 69°.49N±0°.03×144°.48W±0°.08, h10km±4km, Error ellipse: s-maj=4.0km s-min=3.6km az=57.0*

NEIC ***19*** *01:59:39.0±1.1, 69°.59N±0°.04×144°.36W±0°.06, h7km±5km, mb3.8/6,ML3.4/126,ML3.3(AEIC), Error ellipse: s-maj=6.2km s-min=2.8km az=185.0*

IDC ***19*** *01:59:40.3±1.7, 69°.58N×144°.21W, h0km, mb3.5/2, mbtmp3.4/6,ML3.2/4, Error ellipse: s-maj=22.7km s-min=21.6km az=12.0*

ISC 19 01:59:39.4±0.6, 69°.57N±0°.03×144°.42W±0°.02, h14km, n151,σ0=98/157, mb3.8/5, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
C27K	**Jago River**	**0.26**	**77**		**Pg**	**01 59 43.9**	**-1.0**
C27K				Sg	**Sg**	**01 59 48.0**	**-0.6**
C27K				IAML		01 59 49.7	
	comp=E,7μm,0.3s						
C27K				IAML		01 59 49.8	
	comp=N,8μm,0.5s						
C26K	**Camden Bay**	**0.39**	**334**		**Pg**	**01 59 47.1**	**-0.1**
C26K					**Sb**	**01 59 54.0**	**+0.1**
C26K	**Camden Bay**	**0.39**	**334**	IAML		01 59 54.8	
	comp=E,2μm,0.5s						
C26K				IAML		01 59 55.6	
	comp=N,2μm,0.3s						
D25K	**Kavik River**	**0.73**	**251**	Pg	**Pg**	**01 59 51.0**	**-2.6**
D25K				Sg	**Sg**	**02 00 00.9**	**-2.4**
D27M	**Malcolm River**	**1.27**	**103**	Pn	**Pn**	**02 00 01.4**	**-1.4**
D27M				IAML		02 00 24.3	
	comp=N,786nm,0.3s						
D27M	**Malcolm River**	**1.27**	**103**		**Sb**	**02 00 18.9**	**-0.3**
C24K	**Franklin Bluff**	**1.50**	**278**	Pn	**Pn**	**02 00 06.2**	**+0.3**
C24K	**Franklin Bluff**	**1.50**	**278**		**Sg**	**02 00 27.5**	**-0.3**
E25K	**Arctic Village**	**1.52**	**196**		**Pn**	**02 00 05.5**	**-0.7**
E25K				IAML		02 00 32.6	
	comp=N,392nm,0.6s						
E25K	**Arctic Village**	**1.52**	**196**		**Sn**	**02 00 26.7**	**+1.1**
E25K					**Sb**	**02 00 27.0**	**+0.7**
D24K	**Happy Valley**	**1.61**	**257**		**Pn**	**02 00 07.8**	**+0.4**
D24K	**Happy Valley**	**1.61**	**257**		**Sg**	**02 00 31.2**	**-0.1**
D24K					**Sb**	**02 00 31.6**	**+2.4**
E27K	**Coleen River**	**1.73**	**142**		**Pn**	**02 00 09.8**	**+0.7**
E27K				IAML		02 00 35.0	
	comp=E,279nm,0.9s						
E27K	**Coleen River**	**1.73**	**142**		**Sb**	**02 00 33.1**	**+0.6**
F26K	**Sheenjek River**	**1.89**	**177**		**Pn**	**02 00 12.1**	**+0.8**
F26K				IAML		02 00 40.9	
	comp=N,352nm,0.6s						
F26K	**Sheenjek River**	**1.89**	**177**		**Sn**	**02 00 36.6**	**+1.8**
E28M	**Babbage River**	**2.01**	**117**		**Pn**	**02 00 13.4**	**+0.6**
E28M				IAML		02 00 46.2	
	comp=N,221nm,0.3s						
E28M	**Babbage River**	**2.01**	**117**		**Sb**	**02 00 40.6**	**+0.1**
D28M	**Stokes Point**	**2.02**	**94**		**Pn**	**02 00 14.6**	**+1.6**
F25K	**Christian Rive**	**2.04**	**193**		**Pn**	**02 00 13.9**	**+0.6**
F25K				IAML		02 00 44.7	
	comp=N,218nm,0.6s						
F25K				IAML		02 00 45.3	
	comp=E,271nm,1.0s						
E24K	**Your Creek**	**2.11**	**226**		**Pn**	**02 00 14.9**	**+0.6**
BM01	**Burnt Mountain**	**2.13**	**181**		**Pn**	**02 00 15.3**	**+0.8**
BMAR	**Burnt Mountain**	**2.15**	**182**		**Pn**	**02 00 15.5**	**+0.6**
C23K	**Itkillik River**	**2.17**	**280**	Pn	**Pn**	**02 00 15.6**	**+0.5**
C23K	**Itkillik River**	**2.17**	**280**		**Sg**	**02 00 47.0**	**-2.2**
D23K	**Nanushuk River**	**2.31**	**258**	Pn	**Pn**	**02 00 17.7**	**+0.7**
D23K				IAML		02 00 58.8	
	comp=N,189nm,0.9s						
D23K				IAML		02 00 59.6	
	comp=E,205nm,0.8s						
E23K	**Chandalar**	**2.42**	**234**		**Pn**	**02 00 18.8**	**+0.1**
E23K				IAML		02 00 59.5	
	comp=E,163nm,0.6s						
E23K				IAML		02 01 02.1	
	comp=N,149nm,0.7s						
F24K	**Squaw Lake**	**2.42**	**213**		**Pn**	**02 00 18.9**	**+0.3**
F24K				IAML		02 00 56.1	
	comp=N,129nm,0.5s						
F28M	**Old Crow**	**2.58**	**138**		**Pn**	**02 00 21.1**	**+0.4**
F28M				IAML		02 01 06.6	
	comp=N,186nm,0.5s						
F28M				IAML		02 01 08.1	
	comp=E,191nm,0.6s						
E29M	**Blow River**	**2.64**	**114**		**Pn**	**02 00 21.8**	**+0.3**
E29M				IAML		02 01 07.4	
	comp=E,188nm,0.7s						
E29M				IAML		02 01 09.5	
	comp=N,120nm,0.7s						
G26K	**Porcupine Rive**	**2.65**	**175**		**Pn**	**02 00 22.2**	**+0.6**
G25K	**Bearman Lake**	**2.89**	**193**		**Pn**	**02 00 25.7**	**+0.8**
G27K	**Doyon Strip**	**2.96**	**158**		**Pn**	**02 00 26.0**	**0.0**
FYU	**Fort Yukon**	**3.04**	**186**		**Pn**	**02 00 28.0**	**+1.1**
E22K	**Anaktuvuk Pass**	**3.04**	**245**		**Pn**	**02 00 27.3**	**+0.2**
E22K				IAML		02 01 05.2	
	comp=N,75nm,0.8s						
G24K	**Hadweenzic Riv**	**3.10**	**203**		**Pn**	**02 00 28.1**	**+0.2**
G24K				IAML		02 01 22.3	
	comp=E,91nm,0.6s						
G24K				IAML		02 01 22.4	
	comp=N,94nm,1.0s						
COLD	**Coldfoot**	**3.18**	**225**		**Pn**	**02 00 29.4**	**+0.4**
B22K	**Teshekpuk Lake**	**3.19**	**288**		**Pn**	**02 00 29.6**	**+0.5**
H27K	**Steamboat Moun**	**3.53**	**161**		**Pn**	**02 00 34.8**	**+0.9**
H27K				IAML		02 01 34.0	
	comp=E,72nm,0.7s						
G23K	**Bananza Creek**	**3.56**	**219**		**Pn**	**02 00 34.5**	**+0.3**
G23K				IAML		02 01 37.1	
	comp=E,51nm,0.9s						
B21K	**Ikpikpuk River**	**3.57**	**276**		**Pn**	**02 00 34.7**	**+0.4**
B21K				IAML		02 01 58.6	
	comp=E,95nm,1.1s						
G29M	**Pine Creek**	**3.58**	**135**		**Pn**	**02 00 35.3**	**+0.8**
C21K	**Knifeblade Rid**	**3.69**	**268**		**Pn**	**02 00 36.7**	**+0.7**
F30M	**Barrier River**	**3.73**	**118**		**Pn**	**02 00 38.1**	**+1.6**
F30M				IAML		02 01 42.9	
	comp=N,59nm,0.9s						
F30M				IAML		02 01 43.9	
	comp=E,70nm,1.1s						
A22K	**Sinclair Lake**	**3.85**	**297**		**Pn**	**02 00 38.6**	**+0.5**
H24K	**Noodor Dome**	**3.98**	**201**		**Pn**	**02 00 39.8**	**-0.1**
H24K				IAML		02 01 52.1	
	comp=N,40nm,0.8s						
G30M	**tAoh Zraii Nji**	**4.01**	**127**		**Pn**	**02 00 41.6**	**+1.3**
G30M				IAML		02 01 48.6	
	comp=N,43nm,0.7s						
G30M				IAML		02 01 59.9	
	comp=E,45nm,1.1s						
H29M	**Whitestone**	**4.07**	**143**		**Pn**	**02 00 42.3**	**+1.1**
H29M				IAML		02 01 39.2	
	comp=E,65nm,0.5s						
H29M				IAML		02 01 56.6	
	comp=N,58nm,1.0s						
PRP	**Porcupine Dome**	**4.09**	**186**		**Pn**	**02 00 42.5**	**+0.9**
PRP				IAML		02 01 55.8	
	comp=N,38nm,1.0s						
PRP				IAML		02 01 57.2	
	comp=E,34nm,0.6s						
F21K	**Alatna River**	**4.10**	**239**		**Pn**	**02 00 42.0**	**+0.5**
F21K				IAML		02 01 51.6	
	comp=E,44nm,0.8s						
F21K				IAML		02 02 00.6	
	comp=N,32nm,0.8s						
I27K	**Kandik River**	**4.13**	**164**		**Pn**	**02 00 43.0**	**+1.0**
I27K				IAML		02 01 58.0	
	comp=N,61nm,0.8s						
I27K				IAML		02 02 00.1	
	comp=E,57nm,0.7s						
INK	**Inuvik**	**4.13**	**103**	Pn	**Pn**	**02 00 42.4**	**+0.3**
	comp=E,0.7nm,0.3s,baz=293,slow=6.0,SNR=45						
INK				Sn	**Sn**	**02 01 31.1**	**+1.1**
	comp=E,2.5nm,0.3s,baz=67,slow=27,SNR=6.7						
INK				Lg	Lg	02 01 49.1	
	comp=E,1.7nm,0.3s,baz=48,slow=32,SNR=4.0						
	comp=E,2.4nm,0.3s						
INK	**Inuvik**	**4.13**	**103**		**Pn**	**02 00 42.2**	**+0.2**
H23K	**Yukon River**	**4.24**	**210**		**Pn**	**02 00 43.8**	**+0.3**
H23K				IAML		02 02 02.0	
	comp=N,37nm,1.0s						
H23K				IAML		02 02 03.9	
	comp=E,41nm,0.9s						
I26K	**Coal Creek Min**	**4.31**	**173**		**Pn**	**02 00 45.0**	**+0.5**
EPYK	**Eagle Plains**	**4.33**	**134**		**Pn**	**02 00 45.9**	**+1.2**
B20K	**Meade River**	**4.44**	**282**		**Pn**	**02 00 46.8**	**+0.6**
D20K	**Etivluk River**	**4.44**	**265**		**Pn**	**02 00 47.4**	**+1.1**
D20K				IAML		02 02 09.2	
	comp=N,30nm,0.8s						
D20K				IAML		02 02 16.0	
	comp=E,46nm,0.9s						
E20K	**Nigu River**	**4.45**	**258**		**Pn**	**02 00 47.6**	**+1.2**
F31M	**Tsiigehtchic**	**4.47**	**113**		**Pn**	**02 00 46.8**	**+0.1**
F31M				IAML		02 02 04.5	
	comp=N,31nm,0.6s						
F31M				IAML		02 02 14.2	
	comp=E,26nm,1.1s						
I28M	**Miner Creek**	**4.49**	**155**		**Pn**	**02 00 48.0**	**+1.0**
I28M				IAML		02 01 41.9	
	comp=N,33nm,0.6s						
I28M				IAML		02 01 42.4	
	comp=E,45nm,0.4s						
H22K	**Ishtalitna Cre**	**4.54**	**219**		**Pn**	**02 00 47.9**	**+0.2**
H22K				IAML		02 02 11.2	
	comp=E,33nm,1.1s						
G21K	**Allakaket**	**4.58**	**232**		**Pn**	**02 00 48.4**	**+0.1**
G21K				IAML		02 02 17.1	
	comp=E,37nm,1.0s						
G21K				IAML		02 02 17.6	
	comp=N,32nm,1.1s						
I23K	**Minto, Yukon-K**	**4.83**	**206**		**Pn**	**02 00 51.8**	**+0.1**
I23K				IAML		02 02 20.1	
	comp=E,21nm,1.2s						
I23K				IAML		02 02 21.8	
	comp=N,28nm,1.2s						
I29M	**Ogilvie Camp,**	**4.84**	**148**		**Pn**	**02 00 52.2**	**+0.5**
I29M				IAML		02 01 49.4	
	comp=N,35nm,0.3s						
I29M				IAML		02 02 10.5	
	comp=E,23nm,0.7s						
MDM	**Murphy Dome**	**4.86**	**199**		**Pn**	**02 00 52.3**	**+0.2**
F20K	**Avaraart Lake**	**4.90**	**244**		**Pn**	**02 00 53.0**	**+0.6**
F20K				IAML		02 02 26.4	
	comp=N,24nm,1.1s						
COLA	**College**	**4.90**	**197**		**Pn**	**02 00 53.1**	**+0.5**
IL31		**4.92**	**192**		**Pn**	**02 00 53.6**	**+0.8**
ILAR	**Eielson Array**	**4.92**	**192**	Pn	**Pn**	**02 00 53.2**	**+0.4**
	comp=N,0.7nm,0.3s,baz=5.8,slow=13,SNR=33						
ILAR				Sn	**Sn**	**02 01 50.0**	**+0.6**
	comp=N,1.6nm,0.3s,baz=17,slow=17,SNR=4.5						
ILAR				Lg	Lg	02 02 12.2	
	comp=N,2.4nm,0.3s,baz=14,slow=30,SNR=8.2						
	comp=N,2.1nm,0.5s						
ILAR	**Eielson Array**	**4.92**	**192**		**Pn**	**02 00 53.5**	**+0.7**
J25K	**Salcha River,**	**5.00**	**185**		**Pn**	**02 00 54.7**	**+0.7**
J25K				IAML		02 02 24.9	
	comp=E,19nm,0.9s						
IM01	**Indian Mountai**	**5.03**	**229**		**Pn**	**02 00 54.2**	**-0.2**
D19K	**Kuna River**	**5.03**	**264**		**Pn**	**02 00 55.0**	**+0.5**
IMAR	**Indian Mountai**	**5.05**	**229**		**Pn**	**02 00 55.5**	**+0.9**
H21K	**Melozitna Rive**	**5.07**	**223**		**Pn**	**02 00 55.6**	**+0.7**
H21K				IAML		02 02 25.8	
	comp=E,23nm,1.2s						
H21K				IAML		02 02 30.4	
	comp=N,17nm,1.1s						
CCB	**Clear Creek Bu**	**5.12**	**197**		**Pn**	**02 00 56.2**	**+0.6**
E19K	**Redstone River**	**5.16**	**252**		**Pn**	**02 00 56.3**	**+0.1**
E19K				IAML		02 01 55.7	
	comp=E,29nm,0.9s						
MLY	**Manley**	**5.17**	**211**		**Pn**	**02 00 56.7**	**+0.3**
HDA	**Harding Lake**	**5.28**	**192**		**Pn**	**02 00 58.7**	**+0.9**
HDA				IAML		02 02 38.0	
	comp=E,24nm,0.9s						
HDA				IAML		02 02 43.2	
	comp=N,17nm,0.9s						
I21K	**Tanana**	**5.29**	**217**		**Pn**	**02 00 57.6**	**-0.2**
I21K				IAML		02 02 33.6	
	comp=E,26nm,1.1s						
I21K				IAML		02 02 38.0	
	comp=N,24nm,0.8s						
NEA2	**Nenana**	**5.32**	**202**		**Pn**	**02 00 58.2**	**-0.1**
WRH	**Wood River Hil**	**5.32**	**197**		**Pn**	**02 00 59.0**	**+0.6**
WRH				IAML		02 02 31.4	
	comp=E,15nm,0.8s						
WRH				IAML		02 02 37.6	
	comp=N,14nm,1.1s						
I30M	**Mount Dempster**	**5.35**	**141**		**Pn**	**02 00 59.5**	**+0.6**
H31M	**Peel River**	**5.39**	**130**		**Pn**	**02 00 59.5**	**+0.3**
H31M				IAML		02 02 40.3	
	comp=N,19nm,1.2s						
C19K	**Lookout Ridge**	**5.39**	**272**		**Pn**	**02 00 59.6**	**+0.3**
SCRK	**Sand Creek**	**5.62**	**178**		**Pn**	**02 01 03.5**	**+0.9**
F19K	**Shaleruckik Mo**	**5.68**	**247**		**Pn**	**02 01 03.3**	**+0.1**
J29N	**Klondike Camp**	**5.69**	**152**		**Pn**	**02 01 05.5**	**+2.0**
H20K	**Anotleneega Mo**	**5.73**	**229**		**Pn**	**02 01 03.6**	**-0.3**
A19K	**Wainwright**	**5.78**	**284**		**Pn**	**02 01 05.1**	**+0.6**
K24K	**Donnelly Dome**	**5.82**	**186**		**Pn**	**02 01 06.4**	**+1.2**
RIDG	**Independent Ri**	**5.86**	**182**		**

comp=Z,2.8nm,0.7s
FCC Fort Churchill 23.66 92 P **P** **02 04 49.8 -0.2**
FCC IAmb IAmb 02 04 59.8
comp=Z,3.0nm,1.5s
GCMT Greycliff 29.45 126 P **P** **02 05 43.0 +0.5**
FLWY Flagg Ranch 30.73 128 P **P** **02 05 54.4 +0.5**
FLWY IAmb IAmb 02 05 54.8
comp=Z,4.2nm,1.4s
PEA0B Petropavlovsk- 30.73 268 P **P** **02 05 53.7 +0.1**
TXAR Lajitas Array 46.48 128 P **P** **02 08 08.8 +3.0**
comp=Z,0.2nm,0.6s,baz=353,slow=6.2,SNR=2.5
comp=Z,0.2nm,0.6s
TXAR Lajitas Array 46.48 128 P **P** **02 08 06.6 +0.8**
FINES FINESS Array B 49.10 6 P **P** **02 08 28.5 +2.9**
comp=Z,1.4nm,0.9s,baz=355,slow=8.5,SNR=4.5
comp=Z,1.4nm,0.9s
MKAR Makanchi Array 59.01 324 P **P** **02 09 38.8 +0.7**

*TAP **19** 02:02:39.6,24.°55N×122.°57E,h13km±1km,ML3.1,D*
*JMA **19** 02:02:40.5±0.1,24.°N±2.°×122.°6E±0.°5,h21km±1km,*
MV2.7/11,NW OFF ISHIGAKIJIMA IS
ISC 19 02:02:39.8±1.0,24.°53N±0.°03×122.°59E±0.°02,h18km±4km,
n62,σ0°44/93,2C-3D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.33**	**104**	*i* P	**Pg**	**02 02 47.1**	**+0.2**
JYNG				eS	**Sg**	**02 02 51.6**	**0.0**
EOS2	**EOS2**	**0.35**	**251**	P	**Pg**	**02 02 47.3**	**+0.3**
EOS2				S	**Sb**	**02 02 53.0**	**+0.5**
EOS3	**EOS3**	**0.35**	**226**	⇑*i*P	**Pb**	**02 02 47.4**	**-0.1**
EOS3				S	**Sb**	**02 02 53.0**	**+0.4**
YOJ	**Yonaguni jima**	**0.39**	**100**	P	**Pg**	**02 02 47.9**	**+0.1**
YOJ	**Yonaguni jima**	**0.39**	**100**	S	**Sb**	**02 02 54.2**	**+0.3**
YOJ	**Yonaguni jima**	**0.39**	**100**	⇓P	**Pg**	**02 02 48.0**	**+0.1**
YOJ				S	**Sb**	**02 02 54.0**	**+0.2**
YOJ	**Yonaguni jima**	**0.39**	**100**	P	**Pg**	**02 02 48.0**	**+0.1**
YOJ				eS	**Sg**	**02 02 53.3**	**0.0**
EOS4	**EOS4**	**0.48**	**212**	⇑*i*P	**Pb**	**02 02 49.7**	**+0.2**
EGS		**0.68**	**298**	*e*P	**Pg**	**02 02 52.7**	**-0.4**
TWB1	**Santiao Chiao**	**0.73**	**311**	*e*P	**Pb**	**02 02 53.9**	**0.0**
TWB1				eS	**Sb**	**02 03 02.4**	**-1.1**
EWUT	**Wuta**	**0.75**	**264**	*e*P	**Pb**	**02 02 53.7**	**-0.6**
EAHA	**Aohua**	**0.80**	**256**	*e*P	**Pb**	**02 02 55.1**	**-0.1**
EAHA				eS	**Sb**	**02 03 05.1**	**-0.6**
NDS	**Dongshan**	**0.80**	**278**	*e*P	**Pb**	**02 02 54.7**	**-0.5**
NDS				eS	**Sb**	**02 03 05.9**	**+0.1**
TIPB	**Shuangxi**	**0.82**	**302**	*e*P	**Pb**	**02 02 55.6**	**0.0**
TIPB				eS	**Sb**	**02 03 06.5**	**+0.1**
SXI1	**Grass Mountain**	**0.86**	**311**	*e*P	**Pb**	**02 02 56.5**	**+0.2**
SXI1				eS	**Sb**	**02 03 08.1**	**+0.7**
TWE	**Neicheng**	**0.86**	**283**	*e*P	**Pb**	**02 02 55.8**	**-0.5**
TWE				eS	**Sb**	**02 03 07.6**	**+0.1**
NWF	**Wu-fen Shan**	**0.91**	**306**	*e*P	**Pb**	**02 02 57.4**	**+0.2**
NWF				eS	**Sb**	**02 03 09.1**	**0.0**
WFSB	**Wu-fen Shan**	**0.91**	**306**	P	**Pb**	**02 02 57.4**	**+0.3**
WFSB				eS	**Sb**	**02 03 09.1**	**+0.2**
ENTT	**Nioudou**	**0.94**	**277**	*e*P	**Pb**	**02 02 57.6**	**0.0**
ENTT				eS	**Sb**	**02 03 10.1**	**+0.4**
FUSB	**Fushanzhiwuyua**	**0.94**	**284**	*e*P	**Pb**	**02 02 57.4**	**-0.3**
FUSB				eS	**Sb**	**02 03 10.7**	**+0.8**
TNOU	**National Taiwa**	**0.97**	**310**	*e*P	**Pb**	**02 02 58.0**	**0.0**
TNOU				eS	**Sb**	**02 03 09.9**	**-0.6**
LATG	**Datong**	**0.97**	**271**	*e*P	**Pb**	**02 02 58.2**	**+0.1**
LATG				eS	**Sb**	**02 03 11.1**	**+0.4**
NACB	**Ninganchiao**	**0.98**	**249**	P	**Pb**	**02 02 58.0**	**-0.2**
NACB	**Ninganchiao**	**0.98**	**249**	S	**Sg**	**02 03 17.7**	**+0.1**
NACB	**Ninganchiao**	**0.98**	**249**	⇓P	**Pb**	**02 02 58.0**	**-0.2**
NACB				eS	**Sg**	**02 03 11.4**	**-0.2**
NDT	**Datong Townshi**	**0.98**	**274**	*e*P	**Pb**	**02 02 58.4**	**0.0**
NDT				eS	**Sb**	**02 03 11.8**	**+0.8**
TWD	**Chiawan**	**1.01**	**244**	*e*P	**Pg**	**02 02 59.7**	**+0.3**
NWLT	**Wulai**	**1.02**	**284**	*e*P	**Pb**	**02 02 59.1**	**+0.2**
NWLT				eS	**Sb**	**02 03 12.0**	**-0.1**
ETLH	**Xiulin Townshi**	**1.06**	**253**	*e*P	**Pb**	**02 02 59.5**	**-0.2**
TATO	**Taipei**	**1.10**	**294**	P	**Pn**	**02 03 01.1**	**+0.8**
TATO	**Taipei**	**1.10**	**294**	S	**Sn**	**02 03 15.4**	**+0.4**
NNSB	**Datong**	**1.11**	**265**	*e*P	**Pb**	**02 03 00.4**	**-0.1**
NNSB				eS	**Sb**	**02 03 14.6**	**0.0**
YM01	**YM01**	**1.11**	**304**	*e*P	**Pn**	**02 03 00.4**	**-0.2**
NNS	**Nan Shan**	**1.11**	**266**	*e*P	**Pb**	**02 03 00.6**	**0.0**
NNS				eS	**Sb**	**02 03 14.7**	**-0.2**
YHNB	**Yeheng**	**1.11**	**277**	P	**Pb**	**02 03 00.9**	**+0.3**
YHNB	**Yeheng**	**1.11**	**277**	S	**Sn**	**02 03 16.0**	**+0.4**
YHNB	**Yeheng**	**1.11**	**277**	⇓P	**Pb**	**02 03 00.6**	**0.0**
YHNB				eS	**Sb**	**02 03 14.4**	**-0.5**
YM08	**YM08**	**1.12**	**306**	*e*P	**Pn**	**02 03 00.4**	**-0.3**
NSK	**Sanguang**	**1.13**	**278**	*e*P	**Pn**	**02 03 00.9**	**+0.1**
NSK				eS	**Sb**	**02 03 15.2**	**-0.2**
TWY	**Chenhua**	**1.17**	**310**	*e*P	**Pg**	**02 03 02.6**	**+0.2**
TWY				eS	**Sb**	**02 03 15.5**	**-0.7**
LXIB	**Xiulin Townshi**	**1.19**	**245**	*e*P	**Pb**	**02 03 02.2**	**+0.3**
PCYT	**Pengchaiyu**	**1.19**	**337**	*e*P	**Pg**	**02 03 03.4**	**+0.5**
SHUL	**Shoufeng**	**1.20**	**232**	*e*P	**Pb**	**02 03 02.4**	**+0.4**
HATJ	**Hateruma jima**	**1.20**	**113**	P	**Pn**	**02 03 01.9**	**+0.1**
HATJ				S	**Sn**	**02 03 17.9**	**+0.3**
TWS1	**Kuangyinshan**	**1.21**	**298**	*e*P	**Pg**	**02 03 04.1**	**+0.9**
FUSS	**Fushou**	**1.26**	**257**	*e*P	**Pb**	**02 03 03.8**	**+0.6**
WHF	**Hehuan Shan**	**1.27**	**253**	*e*P	**Pb**	**02 03 03.7**	**+0.2**
KSHI	**Guanxi Townshi**	**1.31**	**281**	*e*P	**Pg**	**02 03 05.2**	**+0.1**
JKRS	**Kuro-shima**	**1.32**	**102**	P	**Pn**	**02 03 03.6**	**+0.2**
JKRS				eS	**Sn**	**02 03 20.8**	**+0.1**
NFF	**Wufeng Townshi**	**1.34**	**275**	*e*P	**Pb**	**02 03 04.8**	**+0.3**
NFF				eS	**Sb**	**02 03 22.0**	**+0.5**
WARBT	**Fenglin Townsh**	**1.37**	**234**	*e*P	**Pn**	**02 03 04.0**	**0.0**
JIJ	**Ishigaki jima**	**1.42**	**96**	P	**Pn**	**02 03 04.3**	**-0.5**
JIJ				eS	**Sn**	**02 03 21.6**	**-1.4**
LIOB	**Emei**	**1.44**	**275**	*e*P	**Pg**	**02 03 07.4**	**-0.2**
WUSB	**Renai**	**1.45**	**249**	*e*P	**Pb**	**02 03 06.5**	**+0.2**
WUSB				eS	**Sg**	**02 03 26.1**	**-0.5**
VWDT	**VWDT**	**1.53**	**240**	*e*P	**Pb**	**02 03 07.4**	**-0.3**
EHY	**Hungye**	**1.54**	**229**	*e*P	**Pn**	**02 03 06.5**	**+0.1**
YULB	**Yu-li**	**1.64**	**227**	P	**Pg**	**02 03 12.0**	**+0.7**
YULB	**Yu-li**	**1.64**	**227**	*e*P	**Pn**	**02 03 07.5**	**-0.3**
YULB				eS	**Sn**	**02 03 27.1**	**-1.3**
SSLB	**Suanglung**	**1.67**	**244**	P	**Pg**	**02 03 11.4**	**-0.5**
SSLB	**Suanglung**	**1.67**	**244**	*e*P	**Pb**	**02 03 10.9**	**+0.9**
SMLT	**Sun Moon Lake**	**1.67**	**248**	*e*P	**Pg**	**02 03 12.4**	**+0.4**
FULB	**Fuli**	**1.78**	**222**	*e*P	**Pn**	**02 03 09.2**	**-0.5**

*IDC **19** 02:11:42.0±1.9,24.°16S×179.°74E,h513km±20km,mb3.3/6,*
mbtmp4.2/8,Error ellipse: s-maj=23.7km s-min=17.4km
az=148.0
*NEIC **19** 02:11:42.0±1.2,24.°3S±0.°1×179.°8E±0.°1,h503km±9km,*
mb4.4/21,Error ellipse: s-maj=19.2km s-min=18.6km
az=213.0
ISC 19 02:11:41.3±0.7,24.°26S±0.°10×179.°8E±0.°1,h500km,n37,
σ1°10/39,mb4.2/16,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.68**	**346**	P	**P**	**02 13 25.1**	**+0.5**
	3.4nm,0.5s,baz=166,slow=19,SNR=1.8						
MSVF	**Nonsavu**	**6.68**	**346**	P	**P**	**02 13 24.8**	**+0.2**
OUENC	**Ouen Island, N**	**12.00**	**276**	P	**P**	**02 14 21.1**	**+1.2**
URZ	**Urewera**	**14.14**	**189**	P	**P**	**02 14 42.7**	**+0.5**
	8.4nm,0.5s,baz=38,slow=1.4,SNR=9.0						
SANVU	**Saraoutou**	**14.69**	**304**	P	**P**	**02 14 48.9**	**+0.4**
BKZ	**Black Stump Fm**	**15.12**	**190**	P	**P**	**02 14 53.0**	**+0.4**
BKZ				IAmb	IAmb	02 14 54.7	
	comp=Z,15nm,1.1s						
QRZ	**Quartz Range**	**17.59**	**198**	P	**P**	**02 15 17.8**	**0.0**
THZ	**Tophouse**	**18.36**	**196**	P	**P**	**02 15 25.0**	**+0.1**
ARMA	**Armidale**	**25.68**	**250**	P	**P**	**02 16 32.9**	**+1.9**
ARMA				IAmb	IAmb	02 16 42.6	
	comp=Z,11nm,1.2s						
EIDS	**Eidsvold**	**26.03**	**262**	P	**P**	**02 16 35.2**	**+1.2**
CTAO	**Charters Tower**	**31.25**	**271**	P	**P**	**02 17 20.6**	**+0.9**
CTAO				IAmb	IAmb	02 17 21.2	
	comp=Z,21nm,0.9s						
STKA	**Stephens Creek**	**34.38**	**249**	P	**P**	**02 17 46.4**	**+0.3**
	comp=Z,2.8nm,0.6s,baz=93,slow=10,SNR=9.8						
	comp=Z,2.8nm,0.6s						
STKA	**Stephens Creek**	**34.38**	**249**	P	**P**	**02 17 46.1**	**+0.1**
COEN	**Coen**	**35.95**	**280**	P	**P**	**02 17 58.1**	**-1.3**
COEN				IAmb	IAmb	02 18 39.2	
	comp=Z,24nm,1.2s						
BBOO	**Buckleboo**	**39.10**	**247**	P	**P**	**02 18 24.1**	**-0.8**
BBOO				IAmb	IAmb	02 19 06.9	
	comp=Z,19nm,1.4s						
AS31	**Alice Springs**	**41.75**	**261**	P	**P**	**02 18 46.1**	**-0.4**
ASAR	**Alice Springs**	**41.75**	**261**	P	**P**	**02 18 46.3**	**-0.2**
	comp=Z,3.2nm,0.8s,baz=99,slow=8.0,SNR=24						
	comp=Z,3.2nm,0.8s						
WR8	**Warramunga Arr**	**42.01**	**267**	P	**P**	**02 18 47.8**	**-0.7**
WB0	**Warramunga Arr**	**42.15**	**267**	P	**P**	**02 18 49.0**	**-0.6**
WB0				IAmb	IAmb	02 18 49.7	
	comp=Z,8.4nm,0.6s						
WRA	**Warramunga Arr**	**42.16**	**267**	P	**P**	**02 18 48.9**	**-0.7**
	comp=Z,5.7nm,0.5s,baz=103,slow=8.3,SNR=65						
WRA				ScP	**ScP**	**02 23 34.5**	**-0.9**
	comp=Z,0.2nm,0.7s,baz=100,slow=3.5,SNR=4.8						
	comp=Z,5.7nm,0.5s						
WRA	**Warramunga Arr**	**42.16**	**267**	P	**P**	**02 18 49.1**	**-0.6**
WRA					**ScP**	**02 23 34.8**	**-0.6**
FORT	**Forrest**	**45.97**	**250**	P	**P**	**02 19 18.5**	**-0.6**
FORT				IAmb	IAmb	02 19 19.3	
	comp=Z,6.4nm,0.7s						
KNRA	**Kununurra**	**48.46**	**270**	P	**P**	**02 19 38.0**	**0.0**
KNRA				IAmb	IAmb	02 19 38.6	
	comp=Z,8.8nm,0.8s						
MORW	**Morawa**	**56.54**	**250**	P	**P**	**02 20 35.4**	**-0.5**
MORW				IAmb	IAmb	02 20 35.8	
	comp=Z,20nm,1.1s						
QSPA	**South Pole Qui**	**65.83**	**180**	P	**P**	**02 21 36.8**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=39,slow=7.2,SNR=8.7						
	comp=Z,1.2nm,0.6s						
QSPA	**South Pole Qui**	**65.83**	**180**	P	**P**	**02 21 37.1**	**+0.6**
BELA	**Belgrano 2**	**76.11**	**173**	P	**P**	**02 22 35.9**	**-0.8**
O02D	**Mt. Diablo Mer**	**83.48**	**41**	P	**P**	**02 23 16.4**	**+0.3**
O02D				IAmb	IAmb	02 23 47.9	
	comp=Z,11nm,1.4s						
M02C	**Callahan**	**84.21**	**40**	P	**P**	**02 23 20.4**	**+0.8**
M02C				IAmb	IAmb	02 24 02.3	
	comp=Z,6.4nm,1.4s						
NVAR	**Mina Array Bea**	**85.17**	**44**	P	**P**	**02 23 23.6**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=217,slow=7.3,SNR=3.8						
	comp=Z,0.4nm,0.7s						
HPIG		**88.14**	**59**	P	**P**	**02 23 41.0**	**+2.0**
TXAR	**Lajitas Array**	**90.81**	**58**	P	**P**	**02 23 51.7**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=210,slow=5.6,SNR=10						
	comp=Z,0.7nm,0.7s						
TXAR	**Lajitas Array**	**90.81**	**58**	P	**P**	**02 23 50.7**	**-0.5**
HFS	**Hagfors**	**142.85**	**348**	PKP	**PKPdf**	**02 30 13.1**	**-3.9**
	comp=Z,2.1nm,0.4s,baz=58,slow=5.4,SNR=19						
BRTR	**Keskin Array B**	**147.61**	**307**	PKPbc	**PKPbc**	**02 30 28.6**	**-0.8**
	comp=Z,1.0nm,0.8s,baz=27,slow=6.8,SNR=2.6						
BRTR	**Keskin Array B**	**147.61**	**307**		**PKPbc**	**02 30 28.9**	**-0.5**
EKA	**Eskdalemuir Ar**	**148.89**	**3**	PKPbc	**PKPdf**	**02 30 29.8**	**+2.5**
	comp=Z,0.4nm,0.4s,baz=341,slow=2.6,SNR=6.9						

*IDC **19** 02:36:18.1±2.2,32.°59N×85.°07E,h0km,mb3.4/4,*
mbtmp3.7/7,ML3.9/3,MS3.1/4,Error ellipse: s-maj=71.6km
s-min=21.6km az=73.0
ISC 19 02:36:20.0±2.1,32.°6N±0.°2×85.°0E±0.°4,h16km,n10,
σ1°34/7,mb3.5/4,MS3.0/3,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**13.03**	**323**	LR	LR	02 45 31.5	
	comp=Z,65nm,20.4s,baz=207,slow=42						
MKAR	**Makanchi Array**	**14.34**	**352**	Pn	**Pn**	**02 39 41.7**	**-0.6**
	0.1nm,0.3s,baz=168,slow=12,SNR=5.8						
	0.5nm,0.8s						
KURBB	**Kurchatov Arra**	**18.64**	**347**	P	**Pn**	**02 40 36.8**	**-0.4**
	0.3nm,0.3s,baz=157,slow=11,SNR=4.9						
	3.9nm,0.2s						
CMAR	**Chiang Mai Arr**	**18.84**	**135**	P	**P**	**02 40 37.7**	**-1.6**
	0.7nm,0.3s,baz=318,slow=12,SNR=4.9						
	1.2nm,0.3s						
ZALV	**Zalesovo Beam**	**21.34**	**360**	P	**P**	**02 41 06.6**	**+0.3**
	1.2nm,0.8s,baz=176,slow=10,SNR=4.6						
ZALV				LR	LR	02 49 15.7	
	comp=Z,41nm,21.2s,baz=355,slow=36						
	1.2nm,0.8s						
SONM	**Songino Array**	**22.21**	**41**	P	**P**	**02 41 16.4**	**+0.6**
	1.0nm,0.9s,baz=228,slow=11,SNR=7.0						
	1.0nm,0.9s						
KSRS	**Korea Array**	**35.24**	**70**	LR	LR	02 58 44.0	
	comp=Z,24nm,18.8s,baz=15,slow=38						
MMAI	**Mount Meron Ar**	**41.39**	**285**	LR	LR	03 02 13.3	
	comp=Z,35nm,19.1s,baz=240,slow=38						
WRA	**Warramunga Arr**	**70.37**	**131**	P	**P**	**02 47 33.3**	**-0.1**
	0.3nm,0.7s,baz=321,slow=6.6,SNR=4.6						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**72.84**	**134**	P	**P**	**02 47 50.1**	**+1.9**
	0.4nm,0.7s,baz=310,slow=7.2,SNR=4.3						
	0.4nm,0.7s						

IDC 19 03:01:59.2±3.4,6.°58S×127.°75E,h380km±35km,mb2.9/1,
mbtmp3.7/4,Error ellipse: s-maj=50.6km s-min=14.3km
az=65.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.42**	**228**	P	Pn	03 03 24.8	0.0
	83nm,0.4s,baz=76,slow=4.2,SNR=7.2						
BATI				S	S	03 04 33.7	-0.5
	23nm,0.3s,baz=285,slow=21,SNR=1.3						
FITZ	**Fitzroy Crossi**	**11.63**	**190**	P	Pn	03 04 36.6	+0.3
	1.0nm,0.3s,baz=30,slow=11,SNR=14						
FITZ				S	S	03 06 45.1	+0.3
	0.7nm,0.3s,baz=80,slow=23,SNR=1.6						
WRA	**Warramunga Arr**	**14.75**	**155**	P	P	03 05 09.4	-0.4
	0.6nm,0.4s,baz=335,slow=11,SNR=14						
WRA				S	S	03 07 46.4	-1.2
	0.5nm,0.7s,baz=336,slow=21,SNR=2.5						
ASAR	**Alice Springs**	**17.99**	**161**	P	P	03 05 45.3	+0.7
	1.4nm,0.8s,baz=346,slow=11,SNR=8.8						
ASAR				S	S	03 08 51.9	+0.5
	0.9nm,0.8s,baz=339,slow=18,SNR=6.7						
MKAR	**Makanchi Array**	**66.66**	**328**	P	P	03 12 10.2	-0.1
	0.3nm,0.4s,baz=111,slow=7.8,SNR=6.6						
	0.3nm,0.4s						

IDC 19 03:07:51.7±7.6,7.°28S×150.°68E,h56km±56km,mb3.9/3,
mbtmp4.1/4,ML1.8/1,Error ellipse: s-maj=78.6km
s-min=47.8km az=139.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.08**	**239**	P	Pn	03 08 51.8	+0.2
	4.6nm,0.3s,baz=61,slow=13,SNR=5.5						
PMG				S	Sn	03 09 39.1	+1.0
	45nm,0.6s,baz=97,slow=17,SNR=6.4						
	18nm,4s						
WRA	**Warramunga Arr**	**20.24**	**230**	P	P	03 12 22.1	-0.4
	5.2nm,0.6s,baz=55,slow=11,SNR=35						
	5.2nm,0.6s						
ASAR	**Alice Springs**	**22.91**	**223**	P	P	03 12 50.8	-0.3
	2.8nm,0.8s,baz=54,slow=9.4,SNR=22						
	2.8nm,0.8s						
FITZ	**Fitzroy Crossi**	**26.66**	**244**	P	P	03 13 25.2	-0.3
	2.4nm,0.3s,baz=57,slow=9.3,SNR=22						
	2.4nm,0.3s						
TORD	**Torodi Ar. Bea**	**148.95**	**283**	PKPbc	PKPbc	03 27 34.5	+0.1
	0.8nm,0.6s,baz=94,slow=2.8,SNR=10						

*IDC **19** 03:09:34.2±2.1,6.°65S×72.°71E,h0km,mb4.0/7,*
mbtmp4.0/8,ML4.2/1,MS3.5/12,Error ellipse:
s-maj=62.9km s-min=23.7km az=62.0
*NEIC **19** 03:09:36.4±1.6,6.°65S±0.°05×72.°7E±0.°1,h10km±1km,*
mb4.5/16,Error ellipse: s-maj=20.0km s-min=6.6km
az=108.0
ISC 19 03:09:36.8±0.5,6.°64S±0.°07×72.°7E±0.°1,h18km,n46,
σ0°89/34,mb4.2/14,MS3.3/11,Chagos Archipelago
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I52GB	**DIEGO GARCIA I**	**0.76**	**195**	Pn	**Pb**	**03 09 50.3**	**-1.2**
	baz=21,slow=18						
DGAR	**Diego Garcia**	**0.80**	**196**	Pg	**Pb**	**03 09 51.0**	**-1.2**
DGAR				Sg	**Sb**	**03 10 02.3**	**-0.4**
KAAM	**Kaadhehdhoo**	**7.09**	**3**	Pn	**Pn**	**03 11 18.1**	**-1.7**
PALK	**Pallekele**	**15.97**	**30**	Pn	**Pn**	**03 13 19.5**	**-1.3**
	1.0nm,0.3s,baz=247,slow=11,SNR=6.8						
PALK				Sn	Sn	03 16 04.3	-13
	1.2nm,0.3s,baz=139,slow=20,SNR=5.3						
PALK				LR	LR	03 17 51.7	
	comp=Z,138nm,21.7s,baz=212,slow=31						
	4.1nm,0.5s						
PALK	**Pallekele**	**15.97**	**30**		**Pn**	**03 13 19.2**	**-1.6**
LEM	**Lembang**	**34.69**	**92**	LR	LR	03 27 11.9	
	comp=Z,50nm,21.3s,baz=104,slow=30						
CMAR	**Chiang Mai Arr**	**35.96**	**46**	P	**P**	**03 16 38.1**	**+1.4**
	1.3nm,0.3s,baz=233,slow=9.0,SNR=1.8						
CMAR				LR	LR	03 29 24.3	
	comp=Z,29nm,21.4s,baz=200,slow=33						
	1.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**35.96**	**46**	P	**P**	**03 16 36.6**	**-0.2**
FURI	**Furi**	**37.24**	**294**	LR	LR	03 29 56.3	
	comp=Z,46nm,18.5s,baz=112,slow=33						
MBAR	**Mbarara**	**42.26**	**276**	LR	LR	03 32 29.5	
	comp=Z,33nm,19.1s,baz=136,slow=32						
H04N2	**CROZET ISLANDS**	**43.31**	**201**	T	T	04 03 56.3	
	baz=30,slow=74						
H04N1	**CROZET ISLANDS**	**43.31**	**201**	T	T	04 03 57.0	
	baz=30,slow=74						
H04N3	**CROZET ISLANDS**	**43.33**	**201**	T	P	04 03 55.8	
	baz=30						
KAPI	**Kappang**	**46.84**	**91**	LR	LR	03 37 34.1	
	comp=Z,35nm,18.9s,baz=274,slow=36						
AAK	**Ala-Archa**	**49.07**	**2**	LR	LR	03 37 29.4	
	comp=Z,68nm,21.4s,baz=226,slow=34						
BOSA	**Boshof**	**49.78**	**238**	LR	LR	03 36 35.5	
	comp=Z,30nm,18.5s,baz=170,slow=33						
MMAI	**Mount Meron Ar**	**53.00**	**320**	LR	LR	03 38 02.3	
	comp=Z,35nm,20.0s,baz=186,slow=32						
MK31	**Makanchi Array**	**53.88**	**8**	P	**P**	**03 18 58.8**	**-0.2**
MKAR	**Makanchi Array**	**53.88**	**8**	P	**P**	**03 18 58.2**	**-0.7**
	0.9nm,0.9s,baz=182,slow=7.3,SNR=5.8						
	0.9nm,0.9s						
MKAR	**Makanchi Array**	**53.88**	**8**	P	**P**	**03 18 58.6**	**-0.3**
SUR	**Sutherland**	**54.53**	**235**	P	**P**	**03 19 03.4**	**-0.9**
TSUM	**Tsumeb**	**54.92**	**251**	P	**P**	**03 19 07.4**	**+0.2**
TSUM				IAmb	IAmb	03 19 15.4	
	comp=Z,4.9nm,1.1s						
AB31	**Akbulak array**	**56.77**	**350**	P	**P**	**03 19 19.4**	**-0.2**
AB31				IAmb	IAmb	03 19 55.9	
	comp=Z,1.9nm,0.8s						
ABKAR	**Akbulak array**	**56.77**	**350**	P	**P**	**03 19 19.6**	**0.0**
TATO	**Taipei**	**56.94**	**55**	P	**P**	**03 19 20.8**	**-0.6**
KURBB	**Kurchatov Arra**	**57.26**	**4**	P	**P**	**03 19 22.4**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=200,slow=7.1,SNR=7.9						
	comp=Z,0.3nm,0.4s						
KURK	**Kurchatov**	**57.35**	**4**	P	**P**	**03 19 23.2**	**-0.6**
BVAR	**Borovoye Array**	**59.47**	**358**	LR	LR	03 44 49.6	
	comp=Z,81nm,18.5s,baz=106,slow=36						
ASAR	**Alice Springs**	**61.03**	**113**	P	**P**	**03 19 49.9**	**-0.1**
	comp=Z,1.6nm,0.8s,baz=285,slow=5.6,SNR=12						
	comp=Z,1.6nm,0.8s						
WRA	**Warramunga Arr**	**61.15**	**109**	P	**P**	**03 19 50.3**	**-0.4**
	comp=Z,3.9nm,0.8s,baz=280,slow=7.0,SNR=33						
	comp=Z,3.9nm,0.8s						
WRA	**Warramunga Arr**	**61.15**	**109**	P	**P**	**03 19 50.6**	**-0.1**
WB0	**Warramunga Arr**	**61.19**	**109**	P	**P**	**03 19 50.9**	**-0.1**
WB0				IAmb	IAmb	03 19 51.5	
	comp=Z,5.2nm,0.7s						
ZALV	**Zalesovo Beam**	**61.22**	**8**	P	**P**	**03 19 50.2**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=212,slow=7.8,SNR=4.0						
	comp=Z,0.6nm,0.3s						
ZALV	**Zalesovo Beam**	**61.22**	**8**	P	**P**	**03 19 50.4**	**-0.1**
MAW	**Mawson**	**61.24**	**184**	P	**P**	**03 19 50.6**	**+0.2**
MAW				IAmb	IAmb	03 20 07.6	
	comp=Z,2.1nm,1.2s						
WR8	**Warramunga Arr**	**61.30**	**109**	P	**P**	**03 19 52.1**	**+0.3**
SONM	**Songino Array**	**61.85**	**25**	P	**P**	**03 19 55.9**	**+0.9**
	comp=Z,1.7nm,1.0s,baz=218,slow=7.2,SNR=5.9						
	comp=Z,1.7nm,1.0s						
SONM	**Songino Array**	**61.85**	**25**	P	**P**	**03 19 56.3**	**+1.2**
SONM				IAmb	IAmb	03 20 06.0	
	comp=Z,2.4nm,1.1s						
ALN	**Alexandroupoli**	**63.76**	**322**	P	**P**	**03 20 08.9**	**+1.2**
ALN				IAmb	IAmb	03 20 09.1	
	comp=Z,1.5nm,0.5s						
TLY	**Talaya**	**63.87**	**21**	LR	LR	03 47 21.0	
	comp=Z,69nm,18.5s,baz=342,slow=36						
ARTI	**Arti**	**63.90**	**351**	LR	LR	03 47 49.6	
	comp=Z,78nm,18.3s,baz=354,slow=36						
QSPA	**South Pole Qui**	**83.38**	**180**	P	**P**	**03 22 03.7**	**+0.9**
QSPA				IAmb	IAmb	03 22 39.6	
	comp=Z,3.5nm,1.1s		

NGZ	Ngauruhoe	1.82	357	P	Pn	03 14 05.1 +1.6
OTVZ	Oturere	1.83	358	P	Pn	03 14 05.2 +1.6
ETVZ	East Tongariro	1.86	359	P	Pn	03 14 05.3 +1.3
TMVZ	Te Maari	1.88	359	P	Pn	03 14 05.5 +1.3
WTVZ	West Tongariro	1.88	356	P	Pn	03 14 05.8 +1.5
NTVZ	North Tongarir	1.90	358	P	Pn	03 14 05.9 +1.4
KRVZ	Karewarewa	1.90	358	P	Pn	03 14 06.1 +1.6
BKZ	Black Stump Fm	1.92	18	P	Pn	03 14 04.7 0.0
TWVZ	Taurewa	1.94	353	P	Pn	03 14 06.4 +1.4
ARHZ	Aropaoanui	1.98	30	P	Pn	03 14 05.7 +0.2
VRZ	Vera Road	2.01	338	P	Pn	03 14 07.8 +1.8
KATZ	Kakaramea	2.02	359	P	Pn	03 14 07.7 +1.5
PREZ	Palmer Road	2.05	323	P	Pn	03 14 09.4 +2.9
NMHZ	Naumai	2.06	24	P	Pn	03 14 07.1 +0.3
TKNZ	Takaka Hill	2.10	268	P	Pn	03 14 08.3 +1.1
NMEZ	Namu Road	2.13	317	P	Pn	03 14 10.4 +2.8
KHEZ	Kahui Hut	2.15	322	P	Pn	03 14 10.7 +2.7
DREZ	Durham Road	2.16	326	P	Pn	03 14 10.7 +2.8
KHZ	Kahutara	2.18	229	P	Pn	03 14 07.5 -0.7
MRHZ	Matea Rd	2.22	14	P	Pn	03 14 09.0 +0.1
NBEZ	Newall Road No	2.24	320	P	Pn	03 14 12.1 +2.9
THZ	Tophouse	2.27	249	P	Pn	03 14 09.5 0.0
WATZ	Wairara	2.28	360	P	Pn	03 14 10.5 +0.7
MRNZ	Matariki Terra	2.29	259	P	Pn	03 14 10.5 +0.7
MTHZ	Maungataniwha	2.30	22	P	Pn	03 14 09.8 -0.1
RAHZ	Arahi	2.32	27	P	Pn	03 14 10.2 0.0
QRZ	Quartz Range	2.44	273	P	Pn	03 14 12.7 +0.8
KNZ	Kokohu	2.47	38	P	Pn	03 14 11.0 -1.2
MHGZ	Mahia Peninsul	2.48	43	P	Pn	03 14 11.4 -1.0
HIZ	Hauiti	2.57	344	P	Pn	03 14 15.3 +1.6
MUGZ	Murupara	2.64	18	P	Pn	03 14 14.3 -0.3
PRUZ	Paritu Road	2.65	39	P	Pn	03 14 13.5 -1.2
TLZ	Tolley Road	2.67	357	P	Pn	03 14 15.6 +0.6
RIGZ	Rimuhau	2.77	35	P	Pn	03 14 15.3 -1.1
TARZ	Mount Tarawera	2.82	12	P	Pn	03 14 17.0 -0.2
GVZ	Greta Valley S	2.82	225	P	Pn	03 14 17.1 0.0
URZ	Urewera	2.93	22	P	Pn	03 14 17.5 -1.1
MWZ	Matawai	2.99	28	P	Pn	03 14 18.1 -1.4
DSZ	Denniston Nort	3.06	255	P	Pn	03 14 20.2 -0.1
LTZ	Lake Taylor	3.15	234	P	Pn	03 14 20.5 -1.1
TOZ	Tahuroa Road	3.27	357	P	Pn	03 14 23.9 +0.8
TWGZ	Tauwhareparae	3.30	32	P	Pn	03 14 22.5 -1.2
RUGZ	Raukumara Rang	3.38	27	P	Pn	03 14 23.6 -1.3
MQZ	McQueen's Vall	3.55	219	P	Pn	03 14 25.8 -1.2
AKCZ	Akaroa Harbour	3.56	215	P	Pn	03 14 26.0 -1.2
HAZ	Te Kaha	3.60	27	P	Pn	03 14 26.0 -1.8
OXZ	Oxford	3.61	229	P	Pn	03 14 26.4 -1.5
INZ	Inchbonnie	3.65	240	P	Pn	03 14 27.6 -0.8
WMGZ	Waiomatatini S	3.79	34	P	Pn	03 14 28.6 -1.8
MKAZ	Moumakai	3.91	353	P	Pn	03 14 32.9 +0.9
MXZ	Matakaoa Point	3.96	31	P	Pn	03 14 31.3 -1.4
MHCZ	Mount Hutt	4.00	229	P	Pn	03 14 32.6 -0.7
AWAZ	Awhitu Peninsu	4.02	347	P	Pn	03 14 35.3 +1.8
WTAZ	Waiatarua	4.16	347	P	Pn	03 14 37.3 +1.8
ARCZ	Arundel	4.48	227	P	Pn	03 14 39.1 -0.9
TMZ	Timaru	4.86	224	P	Pn	03 14 44.6 -0.5
FOZ	Fox Glacier	5.08	238	P	Pn	03 14 47.7 -0.3
LBZ	Lake Benmore	5.31	229	P	Pn	03 14 50.7 -0.7
ODZ	Otahua Downs	5.51	221	P	Pn	03 14 53.3 -0.6
CTZ	Chatham Island	6.29	118	P	Pn	03 15 04.0 -0.7

*SJA **19** 03:24:55.3±0.7,20.87S×67.37W,h224km±7km, ML3.8, MW3.8*
*NEIC **19** 03:24:56.7±1.4,20.92S±0.06×67.27W±0.08,h195km±7km, mb4.3/13, Error ellipse: s-maj=11.0km s-min=8.5km az=66.0*
*SCB **19** 03:24:56.9±1.2,20.94S×67.31W,h194km±9km, MB4.5, ML4.1/4, Error ellipse: s-maj=4.0km s-min=2.4km az=0.0*
*IDC **19** 03:24:58.3±1.5,20.71S×67.11W,h209km±14km, mb3.4/6, mbtmp3.9/11, Error ellipse: s-maj=18.9km s-min=13.2km az=61.0*
*VAO **19** 03:25:01.2±0.8,20.55S×66.83W,h201km±6km, mb4.0, Presumed earthquake*

ISC 19 03:24:56.8±0.6, 20.85S±0.04×67.30W±0.04, h204km±6km, n117, σ1s58/143, mb4.1/7, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MOCB	**Mochara**	**1.61**	**105**	P		**Pn**	**03 25 32.7**	**+0.4**
MOCB				S		**S**	**03 25 58.2**	**-1.2**
MOCB				IAML			03 25 59.7	
	2µm,0.6s							
PB08	**IPOC Station P**	**1.87**	**292**			**Pn**	**03 25 35.2**	**+0.5**
PB08				Sn		**S**	**03 26 04.3**	**+0.6**
PB08	**IPOC Station P**	**1.87**	**292**	*eP*		**Pn**	**03 25 35.2**	**+0.5**
PB08				*eS*		**S**	**03 26 05.0**	**+1.3**
PB08				IAML			03 26 06.9	
	comp=Z,187nm,0.2s							
PB08	**IPOC Station P**	**1.87**	**292**	P		**Pn**	**03 25 35.0**	**+0.3**
PB09	**IPOC Station P**	**2.04**	**242**			**Pn**	**03 25 36.2**	**+0.1**
PB09	**IPOC Station P**	**2.04**	**242**	*eP*		**Pn**	**03 25 36.3**	**+0.1**
PB09				IAML			03 26 08.7	
	comp=Z,172nm,0.4s							
PB09	**IPOC Station P**	**2.04**	**242**	P		**Pn**	**03 25 36.1**	**-0.1**
PB01	**IPOC Station P**	**2.05**	**264**			**Pn**	**03 25 35.7**	**-0.5**
PB01	**IPOC Station P**	**2.05**	**264**	*eP*		**Pn**	**03 25 35.7**	**-0.5**
PB01				*eS*		**S**	**03 26 06.3**	**-0.1**
PB01				IAML			03 26 07.0	
	comp=Z,360nm,0.2s							
PB01	**IPOC Station P**	**2.05**	**264**	P		**Pn**	**03 25 35.8**	**-0.4**
PB01				S		**S**	**03 26 05.2**	**-1.1**
PB01				IAML			03 26 06.8	
	comp=Z,262nm,0.3s							
YJA	**Yavi**	**2.13**	**129**	*eP*		**Pn**	**03 25 38.9**	**+1.6**
YJA				*eS*		**S**	**03 26 09.9**	**+1.5**
YJA	**Yavi**	**2.13**	**129**	P		**Pn**	**03 25 37.1**	**-0.2**
GO01	**Chusmiza**	**2.13**	**303**			**Pn**	**03 25 37.7**	**+0.2**
GO01	**Chusmiza**	**2.13**	**303**	*eP*		**Pn**	**03 25 37.9**	**+0.4**
GO01				*eS*		**S**	**03 26 14.6**	**+6.1**
GO01				IAML			03 26 18.5	
	comp=Z,142nm,0.1s							
GO01	**Chusmiza**	**2.13**	**303**	P		**Pn**	**03 25 37.9**	**+0.4**
AF01	**San Pedro de A**	**2.25**	**201**			**Pn**	**03 25 39.0**	**+0.6**
AF01	**San Pedro de A**	**2.25**	**201**	*eP*		**Pn**	**03 25 39.4**	**+1.0**
AF01				*eS*		**S**	**03 26 13.8**	**+3.3**
AF01				IAML			03 26 54.8	
	comp=Z,220nm,0.2s							
SOEO	**Opoqueri**	**2.34**	**346**	P		**Pn**	**03 25 40.8**	**+1.1**
PB11	**IPOC Station P**	**2.46**	**296**			**Pn**	**03 25 40.6**	**-0.1**
PB11	**IPOC Station P**	**2.46**	**296**	*eP*		**Pn**	**03 25 40.4**	**-0.2**
PB11				*eS*		**S**	**03 26 13.6**	**-0.7**
PB11				IAML			03 26 16.3	
	comp=Z,533nm,0.2s							
PB11	**IPOC Station P**	**2.46**	**296**	P		**Pn**	**03 25 40.7**	**+0.1**
PB11				S		**S**	**03 26 14.3**	**+0.1**
PB11				IAML			03 26 15.8	
	comp=Z,1µm,0.2s							
PB02	**IPOC Station P**	**2.47**	**259**			**Pn**	**03 25 40.1**	**-0.5**
PB02	**IPOC Station P**	**2.47**	**259**	*eP*		**Pn**	**03 25 40.2**	**-0.5**
PB02				*eS*		**S**	**03 26 12.7**	**-1.6**
PB02				IAML			03 26 14.9	
	comp=Z,741nm,0.3s							
PB02	**IPOC Station P**	**2.47**	**259**	P		**Pn**	**03 25 40.5**	**-0.1**
PB02				S		**S**	**03 26 12.4**	**-1.9**
PB02				IAML			03 26 12.7	
	comp=Z,523nm,0.3s							
AOVT	**TarijaAcel**	**2.52**	**106**	P		**Pn**	**03 25 41.1**	**-0.2**
PB07	**IPOC Station P**	**2.56**	**250**			**Pn**	**03 25 41.1**	**-0.7**
PB07	**IPOC Station P**	**2.56**	**250**	*eP*		**Pn**	**03 25 41.1**	**-0.7**
PB07				*eS*		**S**	**03 26 15.0**	**-1.3**
PB07				IAML			03 26 15.8	
	comp=Z,541nm,0.3s							
PB03	**IPOC Station P**	**2.58**	**242**			**Pn**	**03 25 40.7**	**-1.2**
PB03	**IPOC Station P**	**2.58**	**242**	*eP*		**Pn**	**03 25 41.5**	**-0.5**
PB03				IAML			03 26 19.2	
	comp=Z,242nm,0.1s							
PATCX	**Punta Patache**	**2.67**	**270**			**Pn**	**03 25 41.9**	**-0.9**
PATCX	**Punta Patache**	**2.67**	**270**	*eP*		**Pn**	**03 25 42.3**	**-0.6**
PATCX				*eS*		**S**	**03 26 17.2**	**-1.0**
PATCX				IAML			03 26 18.5	
	comp=Z,252nm,0.4s							
TA01	**Diego Aracena**	**2.71**	**275**			**Pn**	**03 25 42.4**	**-0.9**
TA01	**Diego Aracena**	**2.71**	**275**	*eP*		**Pn**	**03 25 42.4**	**-0.9**
TA01				*eS*		**S**	**03 26 17.3**	**-1.6**
TA01				IAML			03 26 17.8	
	comp=Z,180nm,0.2s							
TA02	**Huaiquique**	**2.71**	**282**	*eP*		**Pn**	**03 25 42.9**	**-0.4**
TA02				*eS*		**S**	**03 26 17.8**	**-1.2**
TA02				IAML			03 26 18.6	
	comp=Z,426nm,0.1s							
PB06	**IPOC Station P**	**2.80**	**228**			**Pn**	**03 25 43.9**	**-0.5**
PB06	**IPOC Station P**	**2.80**	**228**	*eP*		**Pn**	**03 25 44.0**	**-0.5**
PB06				IAML			03 26 22.4	
	comp=Z,251nm,0.3s							
PB06	**IPOC Station P**	**2.80**	**228**	P		**Pn**	**03 25 44.0**	**-0.5**
HJA	**Humahuaca**	**2.93**	**144**	*eP*		**Pn**	**03 25 46.8**	**+0.6**
HJA				*eS*		**S**	**03 26 24.5**	**+0.1**
HJA				IAML			03 26 24.9	
	comp=Z,140nm,0.7s							
SOET	**ToroToro**	**3.06**	**28**	P		**Pn**	**03 25 48.1**	**+0.4**
PB16	**IPOC Station P**	**3.25**	**320**			**Pn**	**03 25 51.0**	**+0.8**
PB16	**IPOC Station P**	**3.25**	**320**	*eP*		**Pn**	**03 25 51.5**	**+1.3**
PB16				*eS*		**S**	**03 26 29.6**	**-1.7**
PB16	**IPOC Station P**	**3.25**	**320**	P		**Pn**	**03 25 51.2**	**+1.0**
AOEA	**Aiguile**	**3.29**	**37**	P		**Pn**	**03 25 50.8**	**+0.3**
PB05	**IPOC Station P**	**3.35**	**233**			**Pn**	**03 25 50.1**	**-0.8**
PB05	**IPOC Station P**	**3.35**	**233**	*eP*		**Pn**	**03 25 50.1**	**-0.8**
PB05				*eS*		**S**	**03 26 31.1**	**-1.6**
PB05				IAML			03 26 34.5	
	comp=Z,147nm,0.3s							
SALTA		**3.48**	**165**	*eP*		**Pn**	**03 25 48.5**	**-4.2**
SALTA				*eP*		**Pn**	**03 25 53.8**	**+1.0**
SALTA				*eS*		**S**	**03 26 41.5**	**+5.3**
PB12	**IPOC Station P**	**3.61**	**307**			**Pn**	**03 25 52.9**	**-1.2**
PB12	**IPOC Station P**	**3.61**	**307**	*eP*		**Pn**	**03 25 52.8**	**-1.2**
PB12				*eS*		**S**	**03 26 36.4**	**-2.1**
PB12				IAML			03 26 39.0	
	comp=Z,117nm,0.2s							
PB18	**Visviri**	**3.84**	**327**			**Pn**	**03 25 59.4**	**+2.1**
SOEJ	**Jacaque**	**3.94**	**348**	P		**Pn**	**03 26 00.2**	**+1.6**
PB10	**IPOC Station P**	**4.01**	**228**			**Pn**	**03 25 57.8**	**-1.1**
PB10	**IPOC Station P**	**4.01**	**228**	*eP*		**Pn**	**03 25 57.7**	**-1.1**
PB10				*eS*		**S**	**03 26 43.7**	**-3.5**
PB10				IAML			03 26 45.6	
	comp=Z,70nm,0.3s							
BBOE	**La Paz, Chanca**	**4.07**	**351**	P		**Pn**	**03 26 01.7**	**+1.6**
SLA	**San Lorenzo**	**4.20**	**157**	*eP*		**Pn**	**03 26 01.8**	**+0.5**
SLA				*eS*		**S**	**03 26 48.5**	**-3.1**
BBOD	**La Paz, Gloria**	**4.37**	**343**	P		**Pn**	**03 26 05.4**	**+1.6**
LPAZ	**La Paz**	**4.60**	**350**	P		**Pn**	**03 26 07.9**	**+1.0**
	comp=Z,4.8nm,0.3s,baz=150,slow=5.9,SNR=75							
LPAZ				S		**S**	**03 27 00.9**	**-0.7**
	comp=Z,4.8nm,0.7s,baz=289,slow=18,SNR=6.5							
LPAZ	**La Paz**	**4.60**	**350**	*eP*		**Pn**	**03 26 08.1**	**+1.2**
LPAZ	**La Paz**	**4.60**	**350**	P		**Pn**	**03 26 08.2**	**+1.2**
PB14	**IPOC Station P**	**4.72**	**217**			**Pn**	**03 26 06.7**	**-1.4**
PB14	**IPOC Station P**	**4.72**	**217**	*eP*		**Pn**	**03 26 06.6**	**-1.4**
PB14				*eS*		**S**	**03 26 58.7**	**-5.2**
PB14				IAML			03 27 04.2	
	comp=Z,74nm,0.3s							
PB14	**IPOC Station P**	**4.72**	**217**	P		**Pn**	**03 26 06.9**	**-1.2**
FSA	**Cafayete**	**5.38**	**167**	*eP*		**Pn**	**03 26 11.9**	**-4.3**
AC01	**Pan de Azucar**	**6.08**	**209**			**Pn**	**03 26 22.7**	**-2.4**
AC02	**Maricunga**	**6.19**	**195**			**Pn**	**03 26 25.6**	**-1.3**
GO03	**Copiapo**	**7.23**	**201**			**Pn**	**03 26 37.2**	**-2.8**
BBSD	**Serra de San D**	**7.30**	**61**	*eP*		**Pn**	**03 26 38.5**	**-2.5**
SIV	**San Ignacio**	**7.64**	**52**	P		**Pn**	**03 26 43.7**	**-1.7**
	comp=Z,27nm,0.5s,baz=249,slow=9.4,SNR=203							
SIV				S		**S**	**03 28 04.9**	**-6.9**
	comp=Z,4.7nm,0.8s,baz=131,slow=23,SNR=4.1							
PTLB	**Pontes e Lacer**	**9.44**	**57**			**Pn**	**03 27 07.5**	**-1.2**
PTLB	**Pontes e Lacer**	**9.44**	**57**	*eP*		**Pn**	**03 27 07.0**	**-1.8**
VILB	**Vilhena**	**10.38**	**42**			**Pn**	**03 27 20.9**	**-0.1**
VILB	**Vilhena**	**10.38**	**42**	*eP*		**Pn**	**03 27 19.5**	**-1.5**
CPUP	**Villa Florida**	**10.65**	**123**	P		**Pn**	**03 27 25.0**	**+0.7**
	comp=Z,1.5nm,1.0s,baz=302,slow=18,SNR=2.2							
CPUP	**Villa Florida**	**10.65**	**123**			**Pn**	**03 27 23.6**	**-0.7**
AQDB	**Aquidauana**	**10.87**	**90**			**Pn**	**03 27 26.1**	**-1.1**
AMBA	**Amambai (Brazi**	**11.62**	**103**	*eP*		**Pn**	**03 27 36.9**	**+0.1**
SALV	**Santo Antonio**	**12.07**	**68**	*eP*		**Pn**	**03 27 40.3**	**-2.2**
PTGB	**Pitanga**	**14.57**	**108**	*eP*		**P**	**03 28 15.3**	**+0.5**
LDASE	**Londrina, Braz**	**15.21**	**103**	*eP*		**P**	**03 28 22.4**	**+0.6**
ITAB	**Concordia**	**15.24**	**118**			**Pn**	**03 28 20.9**	**-0.9**
ITAB				IAmb		IAmb	03 28 31.8	
	comp=Z,8.9nm,1.0s							
FRTB	**Fartura**	**16.63**	**102**	*eP*		**Pn**	**03 28 38.2**	**-0.3**
ATAH	**Atahualpa**	**17.35**	**320**	P		**Pn**	**03 28 48.5**	**+1.0**
	comp=Z,2.2nm,0.9s,baz=144,slow=18,SNR=6.7							
BB19B	**Bebedouro**	**17.54**	**94**	*eP*		**P**	**03 28 47.7**	**+0.3**
SNDB	**Serra Nova Dou**	**17.70**	**63**	*eP*		**P**	**03 28 48.5**	**-0.7**
NPGB	**Novo Progresso**	**17.94**	**42**	*eP*		**P**	**03 28 50.6**	**-1.2**
IPMB	**Ipameri, GO**	**18.23**	**84**	*eP*		**P**	**03 28 55.1**	**+0.1**
MACA	**Manacapuru-AM**	**18.73**	**21**			**P**	**03 29 00.3**	**0.0**
MACA				IAmb		IAmb	03 29 03.0	
	comp=Z,13nm,0.7s							
MACA	**Manacapuru-AM**	**18.73**	**21**	*eP*		**P**	**03 29 00.1**	**-0.2**
VAO	**Valinhos**	**18.99**	**100**	P		**P**	**03 29 02.2**	**-1.0**
BDFB	**Brasilia**	**19.03**	**77**	P		**P**	**03 29 03.9**	**+0.2**
	comp=Z,3.5nm,0.5s,baz=254,slow=10.0,SNR=12							
BDFB	**Brasilia**	**19.03**	**77**	P		**P**	**03 29 03.9**	**+0.2**
BDFB				IAmb		IAmb	03 29 04.9	
	comp=Z,16nm,1.5s							
ITTB	**Itaituba**	**19.87**	**36**	*eP*		**P**	**03 29 11.6**	**-1.1**
PLCA	**Paso Flores**	**20.01**	**187**	P		Pn	03 29 17.0	-1.5
	comp=Z,1.4nm,0.9s,baz=4.8,slow=17,SNR=3.4							
	comp=Z,1.4nm,0.9s							
BSCB	**Bom Sucesso**	**21.05**	**94**	*eP*		**P**	**03 29 24.4**	**-0.7**
COHC	**Cochancay**	**21.67**	**326**	P		**P**	**03 29 32.1**	**+0.6**
SMTB	**Santa Maria do**	**22.44**	**61**	*eP*		**P**	**03 29 38.5**	**-0.4**
JANB	**Januaria**	**22.61**	**79**	*eP*		**P**	**03 29 39.4**	**-1.1**
BOAV	**Boa Vista**	**24.04**	**77**	P		**P**	**03 29 55.0**	**+1.6**
GUA01	**Guaratinga, BA**	**26.37**	**85**	*eP*		**P**	**03 30 13.5**	**-0.9**
TXAR	**Lajitas Array**	**60.97**	**324**	P		**P**	**03 34 49.4**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=132,slow=7.6,SNR=2.4							
	comp=Z,0.2nm,0.6s							
TXAR	**Lajitas Array**	**60.97**	**324**	P		**P**	**03 34 49.5**	**+0.8**
SNAA	**Sanae**	**62.41**	**161**	P		**P**	**03 34 58.3**	**+0.7**
TRQ	**Mont Tremblant**	**67.07**	**355**	P		**P**	**03 35 28.6**	**+0.6**
TRQ				IAmb		IAmb	03 35 30.3	
	comp=Z,12nm,1.5s							
DBIC	**Dimbokro**	**67.11**	**73**	P		**P**	**03 35 28.4**	**-0.4**
E62A	**Clayton Lake**	**67.18**	**358**	P		**P**	**03 35 29.6**	**+1.1**
E62A				IAmb		IAmb	03 36 03.0	
	comp=Z,17nm,1.5s							
QSPA	**South Pole Qui**	**69.34**	**180**	P		**P**	**03 35 43.5**	**+1.4**
	comp=Z,1.2nm,0.7s,baz=211,slow=1.1,SNR=7.4							
	comp=Z,1.2nm,0.7s							
QSPA	**South Pole Qui**	**69.34**	**180**	P		**P**	**03 35 42.9**	**+0.9**
ULM	**Lac du Bonnet**	**75.16**	**341**	P		**P**	**03 36 16.7**	**+0.4**
	comp=Z,2.1nm,0.5s,baz=134,slow=8.3,SNR=4.9							
	comp=Z,2.1nm,0.5s							
ULM	**Lac du Bonnet**	**75.16**	**341**	P		**P**	**03 36 17.1**	**+0.7**
ULM				IAmb		IAmb	03 36 17.4	
	comp=Z,2.5nm,0.6s							
TORD	**Torodi Ar. Bea**	**75.72**	**70**	P		**P**	**03 36 19.8**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=243,slow=6.9,SNR=16							
	comp=Z,1.1nm,0.5s							
TORD	**Torodi Ar. Bea**	**75.72**	**70**	P		**P**	**03 36 20.6**	**+0.2**
TORD				IAmb		IAmb	03 36 57.7	
	comp=Z,2.7nm,0.8s							
YKA	**Yellowknife Ar**	**91.08**	**340**	P		**P**	**03 37 38.7**	**+1.1**
	comp=Z,0.7nm,0.8s,baz=130,slow=3.6,SNR=14							
	comp=Z,0.7nm,0.8s							
YKA	**Yellowknife Ar**	**91.08**	**340**	P		**P**	**03 37 38.9**	**+1.4**
WRA	**Warramunga Arr**	**134.26**	**209**	PKP		**PKiKP**	**03 43 52.0**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=142,slow=2.1,SNR=1.6							
MKAR	**Makanchi Array**	**144.22**	**37**	PKP		**PKPdf**	**03 44 08.0**	**-0.3**
	comp=Z,1.2nm,0.8s,baz=312,slow=3.3,SNR=9.9							
MKAR	**Makanchi Array**	**144.22**	**37**			**PKPdf**	**03 44 08.5**	**+0.2**
SONM	**Songino Array**	**152.60**	**9**	PKPbc		**PKiKP**	**03 44 29.5**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=336,slow=1.7,SNR=1.5							
SONM	**Songino Array**	**152.60**	**9**			**PKPbc**	**03 44 29.0**	**-0.1**

TAP 19 03:36:19.1,24.98N×121.57E,h140km,ML2.6,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TWA	**Mucha**	**0.02**	**96**	*eP*		Pn	03 36 38.0	-0.1
YM01	**YM01**	**0.16**	**1**	*eP*		Pn	03 36 38.3	+0.1
NWLT	**Wulai**	**0.21**	**196**	*i* P		Pn	03 36 37.8	-0.5
NWLT				S		Sn	03 36 51.4	-1.4
FUSB	**Fushanzhiwuyua**	**0.22**	**175**	*eP*		Pn	03 36 38.7	+0.3
FUSB				*i* S		Sn	03 36 51.6	-1.4
TIPB	**Shuangxi**	**0.24**	**92**	*i* P		Pn	03 36 37.9	-0.4
TIPB				*i* S		Sn	03 36 51.9	-1.0
ENTT	**Nioudou**	**0.34**	**180**	*eP*		Pn	03 36 38.8	+0.1
ENTT				S		Sn	03 36 52.2	-1.3
YHNB	**Yeheng**	**0.36**	**209**	*eP*		Pn	03 36 38.8	0.0
NSK	**Sanguang**	**0.36**	**212**	*eP*		Pn	03 36 39.0	+0.2
NDS	**Dongshan**	**0.37**	**159**	*eP*		Pn	03 36 39.4	+0.6
LATG	**Datong**	**0.45**	**185**	*eP*		Pn	03 36 39.6	+0.3
LATG				*eS*		Sn	03 36 52.0	-2.5
NFF	**Wufeng Townshi**	**0.54**	**230**	*eP*		Pn	03 36 40.3	+0.6
NNS	**Nan Shan**	**0.57**	**198**	*eP*		Pn	03 36 40.4	+0.5
NNSB	**Datong**	**0.58**	**197**	*eP*		Pn	03 36 40.2	+0.2
LIOB	**Emei**	**0.60**	**236**	*eP*		Pn	03 36 41.1	+1.1
EOS2	**EOS2**	**0.82**	**133**	*eP*		Pn	03 36 40.8	-0.6
EOS2				*eS*		Sn	03 36 56.3	-1.9
EOS3	**EOS3**	**0.97**	**135**	*eP*		Pn	03 36 42.0	-0.6
EOS3				*eS*		Sn	03 36 59.0	-1.4
SSLB	**Suanglung**	**1.31**	**205**	*eP*		Pn	03 36 47.5	+1.4
SSLB				*eS*		Sn	03 37 08.1	+1.5

TAP 19 03:36:45.2,24.59N×121.22E,h4km,ML1.3,2C,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
NFF	**Wufeng Townshi**	**0.10**	**293**	*i* P		Pg	03 36 47.9	+0.6
NFF				*i* S		Sg	03 36 49.5	+0.8
NSK	**Sanguang**	**0.15**	**58**	*i* P		Pg	03 36 48.7	+0.4
NSK				*i* S		Sg	03 36 51.2	+0.9
YHNB	**Yeheng**	**0.16**	**63**	*i* P		Pg	03 36 48.8	+0.3
YHNB				*i* S		Sg	03 36 51.3	+0.6
LIOB	**Emei**	**0.19**	**286**	*eP*		Pg	03 36 50.1	+1.1
LIOB				S		Sg	03 36 53.4	+2.0
NSTT	**Nanjuang**	**0.20**	**281**	P		Pg	03 36 50.2	+1.1
NSTT				S		Sg	03 36 53.6	+1.9
NNS	**Nan Shan**	**0.21**	**137**	*eS*		Sg	03 36 53.9	+1.8
NNSB	**Datong**	**0.22**	**137**	*eS*		Sg	03 36 53.8	+1.2
LATG	**Datong**	**0.29**	**102**	*eS*		Sg	03 36 54.8	+0.1

*IDC **19** 03:43:44.8±0.9,32.86N×85.62E,h0km,mb3.7/12, mbtmp3.7/16,ML3.5/4,MS3.4/8, Error ellipse: s-maj=30.1km s-min=16.1km az=54.0*

ISC 19 03:43:50.2±0.9,32.9N±0.1×85.7E±0.1,h35km,n22, σ0s94/17,mb3.7/11,MS3.2/6,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AAK	**Ala-Archa**	**13.10**	**321**	Pn		**Pn**	**03 46 52.8**	**-1.0**
	0.1nm,0.3s,baz=161,slow=15,SNR=1.4							
AAK				LR		LR	03 52 06.9	
	comp=Z,77nm,18.3s,baz=175,slow=38							
	0.4nm,0.3s							
MKAR	**Makanchi Array**	**14.08**	**350**	Pn		**Pn**	**03 47 05.8**	**-1.3**
	0.1nm,0.3s,baz=182,slow=12,SNR=8.5							
MKAR				LR		LR	03 53 25.7	
	comp=Z,113nm,18.1s,baz=21,slow=41							
	0.7nm,0.6s							
LZDM	**Lanzhou Array**	**15.18**	**74**	Pn		**P**	**03 47 26.9**	**0.0**
	baz=257,slow=14							
KURBB	**Kurchatov Arra**	**18.44**	**346**	P		**P**	**03 48 01.3**	**-1.2**
	baz=165,slow=10,SNR=15							
	2.9nm,0.9s							
CMAR	**Chiang Mai Arr**	**18.71**	**137**	P		**P**	**03 48 04.2**	**-1.5**
	0.5nm,0.3s,baz=317,slow=13,SNR=13	

comp=Z,71nm,21.0s,baz=26,slow=34
comp=Z,2.9nm,0.6s

STKA	**Stephens Creek**	**27.42**	**240**	P		**P**	**03 50 20.3**	**-2.4**
STKA				IAmb		IAmb	03 50 24.7	

comp=Z,23nm,0.9s

RAR	**Rarotonga**	**28.52**	**96**	LR		LR	04 00 12.3	

comp=Z,30nm,20.0s,baz=297,slow=32

RAR	**Rarotonga**	**28.52**	**96**	P		**P**	**03 50 33.3**	**+0.7**
BBOO	**Buckleboo**	**32.18**	**241**	P		**P**	**03 51 04.4**	**-0.5**
BBOO				IAmb		IAmb	03 51 05.0	

comp=Z,24nm,1.4s

WR8	**Warramunga Arr**	**32.94**	**265**	P		**P**	**03 51 11.5**	**-0.3**
WB0	**Warramunga Arr**	**33.07**	**265**	P		**P**	**03 51 13.2**	**+0.4**
WB0				IAmb		IAmb	03 51 13.8	

comp=Z,4.5nm,0.8s

WRA	**Warramunga Arr**	**33.10**	**265**	P		**P**	**03 51 12.8**	**-0.3**

comp=Z,2.7nm,0.8s,baz=103,slow=7.7,SNR=14

WRA				PcP		**PcP**	**03 53 54.8**	**-1.3**

comp=Z,0.5nm,0.7s,baz=92,slow=3.1,SNR=2.6
comp=Z,2.7nm,0.8s

WRA	**Warramunga Arr**	**33.10**	**265**			**P**	**03 51 12.8**	**-0.3**
WRA						**PcP**	**03 53 55.2**	**-1.0**
AS31	**Alice Springs**	**33.18**	**258**			**P**	**03 51 14.4**	**+0.5**
ASAR	**Alice Springs**	**33.19**	**258**	P		**P**	**03 51 13.7**	**-0.2**

comp=Z,9.3nm,0.8s,baz=88,slow=9.3,SNR=61

ASAR				PcP		**PcP**	**03 53 55.5**	**-0.8**

comp=Z,0.7nm,0.7s,baz=105,slow=3.0,SNR=4.5

ASAR				LR		LR	04 03 44.1	

comp=Z,76nm,20.1s,baz=104,slow=34
comp=Z,9.3nm,0.8s

ASAR	**Alice Springs**	**33.19**	**258**	P		**P**	**03 51 13.8**	**-0.1**
ASAR						**PcP**	**03 53 56.0**	**-0.4**
MTN	**Manton Dam**	**37.65**	**276**	P		**P**	**03 51 53.0**	**+0.7**
MTN				IAmb		IAmb	03 51 59.5	

comp=Z,9.5nm,1.2s

TBI	**Tubuai**	**37.88**	**102**	*e*LR		LR	04 02 11.6	

comp=Z,432nm,33.0s

PPT2	**Papeete2**	**38.55**	**92**	*e*LR		LR	04 02 31.7	

comp=Z,106nm,26.5s

FORT	**Forrest**	**38.59**	**246**	P		**P**	**03 52 00.3**	**+0.2**
FORT				IAmb		IAmb	03 52 43.5	

comp=Z,10nm,1.1s

PSA00	**Pilbara Seismi**	**46.31**	**260**	P		**P**	**03 53 03.5**	**+0.5**
MBWA	**Marble Bar**	**46.48**	**260**	P		**P**	**03 53 04.8**	**+0.5**
MBWA				IAmb		IAmb	03 53 05.7	

comp=Z,8.3nm,0.8s

NWAO	**Narrogin (SRO)**	**47.90**	**244**	P		**P**	**03 53 15.4**	**+0.2**
MORW	**Morawa**	**48.99**	**249**	P		**P**	**03 53 22.7**	**-1.0**
MORW				IAmb		IAmb	03 53 43.2	

comp=Z,22nm,1.4s

GIRL	**Giralia**	**51.29**	**257**	P		**P**	**03 53 41.9**	**+0.7**
TOLI2	**Tolitoli**	**52.52**	**288**	P		**P**	**03 53 50.1**	**-0.3**
TOLI2				IAmb		IAmb	03 54 12.8	

comp=Z,7.9nm,0.9s

VNDA	**Vanda**	**56.94**	**182**	P		**P**	**03 54 21.1**	**-0.5**

comp=Z,0.7nm,0.7s,baz=357,slow=6.4,SNR=2.5

VNDA				LR		LR	04 15 32.8	

comp=Z,31nm,18.2s,baz=336,slow=32
comp=Z,0.7nm,0.7s

VNDA	**Vanda**	**56.94**	**182**	P		**P**	**03 54 21.4**	**-0.1**
VNDA				IAmb		IAmb	03 54 33.3	

comp=Z,5.3nm,1.4s

SBA	**Scott Base**	**57.16**	**181**	P		**P**	**03 54 24.3**	**+1.2**
CASY	**Casey**	**58.91**	**204**	P		**P**	**03 54 35.3**	**-0.2**
CASY				IAmb		IAmb	03 55 16.8	

comp=Z,28nm,1.5s

JHJ2	**Mitsune**	**60.68**	**331**	P		**P**	**03 54 49.4**	**+1.4**
LEM	**Lembang**	**61.50**	**273**	LR		LR	04 21 13.1	

comp=Z,36nm,21.7s,baz=190,slow=36

MJAR	**Matsushiro Arr**	**64.27**	**332**	P		**P**	**03 55 12.3**	**+0.2**

comp=Z,1.8nm,0.8s,baz=161,slow=8.4,SNR=4.4
comp=Z,1.8nm,0.8s

MJAR	**Matsushiro Arr**	**64.27**	**332**	P		**P**	**03 55 12.7**	**+0.6**
QSPA	**South Pole Qui**	**69.31**	**180**	P		**P**	**03 55 43.3**	**-0.7**

comp=Z,6.6nm,0.9s,baz=356,slow=1.8,SNR=22
comp=Z,6.6nm,0.9s

QSPA	**South Pole Qui**	**69.31**	**180**	P		**P**	**03 55 43.4**	**-0.7**
QSPA				IAmb		IAmb	03 55 44.5	

comp=Z,6.9nm,0.9s

NJ2	**Nanjing**	**71.57**	**316**	*e*P		**P**	**03 56 01.0**	**+2.9**
NJ2				pmax		pmax		

comp=Z,15nm,0.6s

BNX	**BinXian**	**76.49**	**331**	⇑P		**P**	**03 56 27.8**	**+1.3**
BNX				pmax		pmax		

comp=Z,7.0nm,0.9s

CMAR	**Chiang Mai Arr**	**79.49**	**294**	P		**P**	**03 56 44.2**	**+0.4**

comp=Z,1.3nm,0.4s,baz=126,slow=3.6,SNR=8.4
comp=Z,1.3nm,0.4s

CMAR	**Chiang Mai Arr**	**79.49**	**294**	P		**P**	**03 56 42.9**	**-0.9**
BELA	**Belgrano 2**	**80.56**	**175**	P		**P**	**03 56 47.4**	**-1.2**
BELA				IAmb		IAmb	03 56 48.0	

comp=Z,7.5nm,0.9s

PZH	**PanZhiHua**	**80.86**	**303**	P		**P**	**03 56 53.4**	**+2.2**
HHC	**Hu-ho-hao-te**	**81.63**	**319**	*e*P		**P**	**03 56 56.9**	**+2.0**
HHC				pmax		pmax		

comp=Z,21nm,0.5s

HHC				pmax		pmax		

comp=Z,110nm,5.2s

ELIB	**Princess Elisa**	**84.73**	**190**	*d*P		**P**	**03 57 09.7**	**-0.8**

comp=Z,3.9nm,1.2s

TROLL	**Troll, Antarti**	**87.06**	**184**	P		**P**	**03 57 21.2**	**-0.9**
VNA3	**Neumayer Olymp**	**88.25**	**180**	⇓P		**P**	**03 57 26.0**	**-1.6**

comp=Z,5.0nm,0.6s

VNA2	**Neumayer--Watz**	**88.55**	**181**	⇓P		**P**	**03 57 28.0**	**-1.0**

comp=Z,9.9nm,0.7s,baz=190,slow=5.3

SONM	**Songino Array**	**88.67**	**323**	P		**P**	**03 57 30.5**	**+0.5**

comp=Z,1.1nm,0.7s,baz=130,slow=4.5,SNR=7.2
comp=Z,1.1nm,0.7s

SONM	**Songino Array**	**88.67**	**323**	P		**P**	**03 57 30.3**	**+0.3**
SONM				IAmb		IAmb	03 57 31.8	

comp=Z,3.5nm,1.2s

VNA1	**Neumayer--Stat**	**88.83**	**181**	⇓P		**P**	**03 57 26.3**	**-4.1**

comp=Z,9.4nm,1.0s

CCCA	**Chr Cany lake**	**88.86**	**51**	P		**P**	**03 57 32.0**	**+0.9**
NVAR	**Mina Array Bea**	**89.50**	**48**	P		**P**	**03 57 35.0**	**+0.7**

comp=Z,1.2nm,0.8s,baz=231,slow=7.5,SNR=9.5
comp=Z,1.2nm,0.8s

NVAR	**Mina Array Bea**	**89.50**	**48**	P		**P**	**03 57 34.7**	**+0.4**
LPIG	**La Paz**	**89.71**	**64**	LR		LR	04 32 24.4	

comp=Z,30nm,18.4s,baz=358,slow=32

ILAR	**Eielson Array**	**91.55**	**17**	P		**P**	**03 57 42.2**	**-0.7**

comp=Z,0.3nm,0.7s,baz=214,slow=5.0,SNR=4.5
comp=Z,0.3nm,0.7s

ILAR	**Eielson Array**	**91.55**	**17**	P		**P**	**03 57 42.5**	**-0.4**
ARTI	**Arti**	**118.80**	**324**	PKP		**PKPdf**	**04 03 23.7**	**-0.9**

comp=Z,0.9nm,0.3s,baz=57,slow=2.4,SNR=4.7

ARTI	**Arti**	**118.80**	**324**			**PKPdf**	**04 03 24.0**	**-0.6**
BOSA	**Boshof**	**120.09**	**216**	PKP		**PKPdf**	**04 03 27.1**	**-1.1**

comp=Z,1.7nm,1.0s,baz=153,slow=2.3,SNR=1.4

BOSA	**Boshof**	**120.09**	**216**			**PKPdf**	**04 03 27.4**	**-0.8**
SPITS	**Spitsbergen Ar**	**121.14**	**354**	PKP		**PKPdf**	**04 03 26.7**	**-1.9**

comp=Z,6.4nm,1.0s,baz=48,slow=2.1,SNR=1.9

ARCES	**ARCESS Array B**	**126.63**	**345**	PKP		**PKPdf**	**04 03 38.2**	**-1.1**

comp=Z,2.8nm,0.8s,baz=64,slow=2.1,SNR=6.5

FINES	**FINESS Array B**	**132.13**	**337**	PKP		**PKPdf**	**04 03 49.4**	**-0.5**

comp=Z,0.9nm,0.6s,baz=48,slow=2.1,SNR=7.0

STEB	**Steborice**	**143.35**	**329**	*e*PKP		PKPab	04 04 07.6	+0.7
MORC	**Moravsky Berou**	**143.57**	**329**	*e*PKP		PKPab	04 04 08.3	+0.5
DPC	**Dobruska-Polom**	**143.74**	**331**	*e*PKP		PKPbc	04 04 09.7	+0.5
PVCC	**Panska Ves**	**144.39**	**333**	*e*PKP		**PKPab**	**04 04 11.3**	**+0.5**
CLL	**Collm**	**144.45**	**335**	*i*PKPdf		**PKPab**	**04 04 11.0**	**0.0**

comp=Z,6.0nm,0.7s

CLL				*ex*		x	04 04 19.0	
KRUC	**Moravsky**	**144.60**	**329**	*e*PKP		**PKPab**	**04 04 12.1**	**+0.4**
EKA	**Eskdalemuir Ar**	**145.05**	**353**	PKPbc		**PKPbc**	**04 04 11.9**	**-1.2**

comp=Z,2.8nm,0.4s,baz=358,slow=2.4,SNR=34

ZVC	**Zvikov**	**145.35**	**332**	*e*PKP		**PKPbc**	**04 04 14.5**	**+0.2**
NKC	**Novy Kostel**	**145.51**	**334**	*e*PKP		**PKPdf**	**04 04 14.5**	**-0.2**
RONA	**Rosalia, Austr**	**145.58**	**328**	*e*PKP		**PKPab**	**04 04 15.8**	**+0.4**

comp=Z,1.8nm,0.5s

CONA	**Conrad Observa**	**145.64**	**328**	*e*PKP		**PKPab**	**04 04 16.0**	**+0.4**

comp=Z,2.2nm,0.4s

CKRC	**Cesky Krumlov**	**145.75**	**331**	*e*PKP		**PKPdf**	**04 04 15.5**	**+0.4**
KHC	**Kasperske Hory**	**145.85**	**332**	*e*PKP		**PKPdf**	**04 04 15.7**	**+0.4**
GERES	**GERESS Array B**	**146.01**	**331**	PKPbc		**PKPdf**	**04 04 15.8**	**+0.2**

comp=Z,3.3nm,0.6s,baz=37,slow=3.3,SNR=31

MOA	**Molln**	**146.47**	**330**	*e*PKP		**PKPbc**	**04 04 17.6**	**-0.1**

comp=Z,1.3nm,0.4s

SOKA	**Soboth**	**146.90**	**327**	*e*PKP		**PKPbc**	**04 04 18.8**	**-0.4**

comp=Z,1.4nm,0.5s

KBA	**Koelnbreinsper**	**147.45**	**329**	*i* PKP		**PKPdf**	**04 04 19.9**	**+1.6**

comp=Z,3.9nm,0.6s,SNR=4.8

LESA	**Schwarzleotal**	**147.52**	**330**	*e*PKP		**PKPbc**	**04 04 20.3**	**-0.5**

comp=Z,6.3nm,0.5s

BOJS	**Bojanci**	**147.57**	**326**	*i* PKPbc		**PKPbc**	**04 04 21.0**	**+0.1**
MYKA	**Terra Mystica**	**147.63**	**328**	*e*PKP		**PKPbc**	**04 04 20.3**	**-0.9**

comp=Z,3.2nm,0.5s

GBAS	**Gorenja Brezov**	**147.71**	**327**	*i* PKPbc		**PKPbc**	**04 04 20.7**	**-0.6**
WATA	**Walderalm**	**148.08**	**331**	*e*PKP		**PKPbc**	**04 04 22.0**	**-0.4**

comp=Z,1.8nm,0.4s

ABTA	**Abfaltersbach**	**148.09**	**330**	*e*PKP		**PKPbc**	**04 04 21.4**	**-1.0**

comp=Z,3.0nm,0.6s

WTTA	**Wattenberg**	**148.11**	**331**	*e*PKP		**PKPbc**	**04 04 22.2**	**-0.4**

comp=Z,2.0nm,0.4s

MOTA	**Moosalm**	**148.29**	**332**	*e*PKP		**PKPbc**	**04 04 22.7**	**-0.3**

comp=Z,6.6nm,0.7s

RETA	**Reutte**	**148.33**	**332**	*ep*PKP		**PKPbc**	**04 04 22.7**	**-0.4**

comp=Z,1.7nm,0.5s

SQTA	**Sankt Quirin**	**148.34**	**332**	*i* pPKP		**PKPbc**	**04 04 22.8**	**-0.3**

comp=Z,9.0nm,0.6s,SNR=7.7

FETA	**Feichten**	**148.70**	**332**	*i* pPKP		**PKPbc**	**04 04 23.9**	**-0.1**

comp=Z,4.6nm,0.6s,SNR=10

DAVA	**Damuels**	**148.86**	**333**	*ep*PKP		**PKPbc**	**04 04 24.1**	**-0.4**

comp=Z,1.8nm,0.5s

TORD	**Torodi Ar. Bea**	**166.24**	**239**	PKPab		**PKPab**	**04 05 41.9**	**-1.8**

comp=Z,0.4nm,0.8s,baz=145,slow=0.3,SNR=2.1

NDI 19 03:49:09.1±2.5, 19.93N×72.81E, h21km±16km, ML3.4, MW3.5, Presumed earthquake, Southern India

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOM	**Bombay**	**1.03**	**180**	*e*P	Pb	03 49 28.1	-0.2
BOM				*e*S	Sn	03 49 42.4	+0.3
BOM				IAML		03 49 45.0	

comp=E,517nm,0.4s

BOM				IAML		03 49 47.7	

comp=N,664nm,0.2s

POO	**Poona**	**1.71**	**145**	*e*P	Pb	03 49 38.9	-1.0
POO				*e*S	Sn	03 49 57.4	-1.5
POO				IAML		03 50 03.3	

comp=N,240nm,0.2s

POO				IAML		03 50 04.3		

comp=E,286nm,0.3s

BHV	**Bhavnagar**	**1.91**	**341**	*e*P	Pn	03 49 39.6	-0.8
BHV				*e*S	Sn	03 50 04.4	+0.5
BHV				IAML		03 50 07.4	

comp=E,216nm,0.5s

BHV				IAML		03 50 07.8		

comp=N,214nm,0.3s

KAD	**Karad**	**2.92**	**153**	*e*P	Pn	03 49 55.8	+1.4
KAD				*e*S	Sn	03 50 28.5	-0.3
KAD				IAML		03 50 42.4	

comp=N,222nm,0.3s

KAD				IAML		03 50 45.1		

comp=E,248nm,0.3s

LATR	**Latur**	**3.83**	**113**	*e*P	Pn	03 50 06.1	-0.8
LATR				*e*S	Sn	03 50 48.1	-3.3
LATR				IAML		03 51 06.5	

comp=E,126nm,0.3s

LATR				IAML		03 51 07.1		

comp=N,167nm,0.4s

AKL	**Akola**	**4.02**	**78**	*e*P	Pn	03 50 10.1	+0.6
AKL				*e*S	Sn	03 50 54.7	-1.2
AKL				IAML		03 51 12.1	

comp=N,231nm,0.4s

AKL				IAML		03 51 12.5		

comp=E,293nm,0.2s

NGP	**Nagpur**	**5.98**	**77**	*e*P	Pn	03 50 35.1	-1.2
NGP				*e*S	Sn	03 51 39.7	-4.5

ASRS 19 03:59:40.0±1.2, 54.16N×87.18E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.
IDC 19 03:59:40.1±3.0, 54.22N×87.32E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=23.8km s-min=16.8km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.50**	**261**	I	I	04 09 10.0	

0.1nm,0.7s,baz=79,slow=334,SNR=6.0

ZALV	**Zalesovo Beam**	**1.50**	**260**	Pg	Pn	04 00 07.0	-1.3

1.3nm,0.3s,baz=74,slow=16,SNR=16

ZALV				Lg	Lg	04 00 27.8		

1.3nm,0.3s,baz=81,slow=23,SNR=8.0

KURBB	**Kurchatov Arra**	**6.47**	**240**	Pn	Pn	04 01 17.0	+0.5

baz=53,slow=14,SNR=3.2

KURBB				Sn	Sn	04 02 31.0	0.0	

baz=47,slow=28,SNR=2.1

KURBB				Lg	Lg	04 03 05.0		

baz=49,slow=31,SNR=4.1
0.2nm,0.3s

MKAR	**Makanchi Array**	**8.10**	**205**	Pn	Pn	04 01 40.2	+1.4

0.1nm,0.3s,baz=26,slow=14,SNR=5.1

MKAR				Sn	Sn	04 03 10.3	-0.8	

0.1nm,0.3s,baz=20,slow=26,SNR=2.2

MKAR				Lg	Lg	04 03 56.9		

0.1nm,0.3s,baz=24,slow=26,SNR=2.1
0.1nm,0.2s

HEL 19 04:05:16.7±0.5, 67.60N×34.07E, h0km, ML1.1, Suspected explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VRF	**Varrio**	**1.71**	**277**	PG	Pn	04 05 47.1	-0.6
VRF				smax	smax	04 06 07.8	

comp=Z,1.3nm,0.2s

VRF				SG	Sn	04 06 08.4	-1.9	
OLKF	**Oulanka, Finla**	**2.24**	**237**	PG	Pb	04 05 57.3	-0.7
OLKF				smax	smax	04 06 23.0		

comp=Z,0.7nm,0.2s

OLKF				SG	Sb	04 06 26.0	-0.2	
KU6	**Riekki**	**2.29**	**228**	PG	Pb	04 05 57.4	-1.4
KU6				smax	smax	04 06 24.3		

comp=Z,0.5nm,0.2s

KU6				SG	Sb	04 06 26.9	-0.7	
RAJF	**Raja-Jooseppi**	**2.33**	**295**	PB	Pn	04 05 57.0	+0.7
RAJF				SN	Sn	04 06 25.7	+0.1	
MSF	**Maaselka**	**2.62**	**232**	PG	Pb	04 06 03.4	-1.1
MSF				SG	Sb	04 06 37.5	+0.4	
RANF	**Ranua**	**3.29**	**244**	SG	Sb	04 06 56.8	+0.4
KEV	**Kevo**	**3.37**	**313**	PN	Pn	04 06 10.5	+0.1
KEV				SN	Sn	04 06 50.1	-0.9	
ARA0	**ARCESS Array S**	**3.69**	**306**	PN	Pn	04 06 14.2	-0.7
ARA0				SN	Sn	04 06 57.7	-1.4	

KOLA 19 04:06:16.1, 67.62N×33.91E, h0km, ML1.3, Error ellipse: s-maj=5.7km s-min=1.4km az=150.0, Khibiny, mines Rasvumchorr, Central, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APA	**Apatity**	**0.20**	**257**	P	Pg	04 06 19.6	-0.3
APA0	**Apatity Array**	**0.35**	**269**	P	Pg	04 06 22.1	-0.7
APA0				S	Sg	04 06 27.2	-0.2
LVZ	**Lovozero**	**0.40**	**44**	P	Pg	04 06 23.5	-0.2
LVZ				S	Sg	04 06 28.9	0.0
TERR	**Teriberka**	**1.65**	**15**	S	Sn	04 07 06.7	-1.6

IDC 19 04:19:26.1±1.1, 33.05N×85.85E, h0km, mb3.7/10, mbtmp3.7/13, ML2.9/2, MS3.1/5, Error ellipse: s-maj=33.4km s-min=21.1km az=51.0
ISC 19 04:19:31.8±1.1, 33.2N×85.9E±0.1, h35km, n17, σ0.9/92/13, mb3.6/9, MS3.1/4, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**13.88**	**350**	Pn	**Pn**	**04 22 45.0**	**-1.0**

0.1nm,0.3s,baz=172,slow=9.6,SNR=5.9

MKAR				LR	LR	04 28 44.2		

comp=Z,45nm,21.3s,baz=205,slow=40
0.5nm,0.8s

LZDM	**Lanzhou Array**	**14.95**	**74**	Pn	**Pn**	**04 23 01.1**	**+0.3**

0.6nm,0.3s,baz=307,slow=43,SNR=1.3

KURBB	**Kurchatov Arra**	**18.26**	**345**	P	**Pn**	**04 23 41.3**	**-0.9**

baz=163,slow=10,SNR=15
1.9nm,0.7s

ZALV	**Zalesovo Beam**	**20.79**	**358**	P	**P**	**04 24 09.2**	**-0.5**

1.4nm,0.6s,baz=185,slow=10,SNR=8.7
1.4nm,0.6s

SONM	**Songino Array**	**21.32**	**41**	P	**P**	**04 24 16.8**	**+1.2**

0.7nm,0.6s,baz=224,slow=10,SNR=8.9
0.7nm,0.6s

PALK	**Pallekele**	**26.21**	**192**	LR	LR	04 35 48.5		

comp=Z,35nm,18.1s,baz=46,slow=38

MMAI	**Mount Meron Ar**	**41.94**	**284**	LR	LR	04 47 25.7		

comp=Z,44nm,20.8s,baz=52,slow=40

EIL	**Elat**	**43.25**	**280**	LR	LR	04 45 34.6		

comp=Z,11nm,20.2s,baz=68,slow=36

FINES	**FINESS Array B**	**47.13**	**325**	P	**P**	**04 27 59.7**	**-0.5**

2.9nm,1.0s,baz=156,slow=9.6,SNR=1.5
2.9nm,1.0s

NOA	**NORSAR Array B**	**54.29**	**325**	P	**P**	**04 28 54.3**	**+0.1**

1.3nm,0.8s,baz=84,slow=7.4,SNR=3.4
1.3nm,0.8s

GERES	**GERESS Array B**	**54.66**	**310**	P	**P**	**04 28 57.9**	**+0.7**

0.7nm,0.9s,baz=86,slow=3.1,SNR=4.1
0.7nm,0.9s

EKA	**Eskdalemuir Ar**	**62.94**	**320**	P	**P**	**04 29 55.8**	**+1.4**

2.8nm,1.0s,baz=94,slow=6.0,SNR=1.8
2.8nm,1.0s

WRA	**Warramunga Arr**	**70.21**	**132**	P	**P**	**04 30 40.8**	**-0.5**

0.3nm,0.6s,baz=318,slow=6.1,SNR=1.8
0.3nm,0.6s

ASAR	**Alice Springs**	**72.73**	**134**	P	**P**	**04 30 55.5**	**-1.0**

0.2nm,0.3s,baz=328,slow=7.6,SNR=2.4
0.2nm,0.3s

ILAR	**Eielson Array**	**74.07**	**21**	P	**P**	**04 31 04.3**	**+0.5**

0.4nm,0.9s,baz=296,slow=5.8,SNR=4.6
0.4nm,0.9s

SFJD	**Kangerlussuaq**	**74.83**	**344**	LR	LR	05 08 56.0		

comp=Z,26nm,19.5s,baz=153,slow=40

YKA	**Yellowknife Ar**	**83.26**	**9**	P	**P**	**04 31 53.5**	**-0.9**

0.4nm,0.8s,baz=338,slow=5.6,SNR=6.0
0.4nm,0.8s

SOF 19 04:25:36.7, 41.27N×23.29E±0.01, h12km±1km, MD2.6/5
SKO 19 04:25:37.7, 41.29N×23.30E, h0km, ML1.9
BEO 19 04:25:37.2±0.5, 41.24N×23.24E, h5km±3km, ML2.2/8
ISC 19 04:25:37.5±1.2, 41.28N±0.04×23.31E±0.03, h6km±10km, n18, σ0.9/45/32, Greece-Bulgaria border region

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

PDG	**Podgorica**	**2.17**	**130**	*e*Pn	**Pn**	**04 40 41.9**	**+1.1**
PDG				*e*Sn	**Sn**	**04 41 09.5**	**+1.4**
PDG	**Podgorica**	**2.17**	**130**	*e*Pn	**Pn**	**04 40 41.1**	**+0.3**
PDG				*i* Sn	**Sb**	**04 41 11.0**	**0.0**
PDG	**Podgorica**	**2.17**	**130**	*e*Pn	**Pn**	**04 40 42.0**	**+1.1**
PDG				*e*Sn	**Sn**	**04 41 08.2**	**+0.1**
DIVS	**Divibare**	**2.18**	**82**	*e*Pn	**Pn**	**04 40 42.2**	**+1.2**
DIVS				*e*Sn	**Sn**	**04 41 09.1**	**+0.6**
SJES	**Sjenica**	**2.24**	**104**	*e*Pn	**Pn**	**04 40 43.3**	**+1.4**
SJES				*e*Sn	**Sn**	**04 41 10.5**	**+0.5**
SJES	**Sjenica**	**2.24**	**104**	*e*Pn	**Pn**	**04 40 42.3**	**+0.4**
SJES				*e*Sn	**Sn**	**04 41 09.4**	**-0.6**
DRME	**Dracevica, Mon**	**2.30**	**135**	*e*Pn	**Pn**	**04 40 43.0**	**+0.3**
DRME				*i* Sn	**Sb**	**04 41 14.1**	**-0.7**
DRME	**Dracevica, Mon**	**2.30**	**135**	*e*Pn	**Pn**	**04 40 43.8**	**+1.1**
DRME				*e*Sn	**Sn**	**04 41 11.8**	**+0.4**
IVAS	**Ivanjica**	**2.30**	**95**	*e*Pn	**Pn**	**04 40 44.1**	**+1.4**
IVAS				*e*Sn	**Sn**	**04 41 12.8**	**+1.3**
PVY	**Plav**	**2.50**	**119**	*e*Pn	**Pn**	**04 40 46.0**	**+0.6**
PVY				*i* Sn	**Sb**	**04 41 19.4**	**-1.1**
GOCS	**Kraljevo Serbi**	**2.82**	**94**	*e*Pn	**Pn**	**04 40 49.7**	**-0.2**
GOCS				*e*Sn	**Sn**	**04 41 25.8**	**+1.3**
SELS	**Selova**	**3.06**	**100**	*e*Pn	**Pn**	**04 40 54.1**	**+1.0**
SELS				*e*Sn	**Sn**	**04 41 30.6**	**+0.4**

*OSPL **19** 05:14:41.1±3.2, 19.°61N×69.°85W, h0km±13km, ML3.2, Presumed earthquake*
*SDD **19** 05:14:41.7±2.4, 19.°59N×70.°03W, h12km±11km, MD3.6, ML3.1, MW3.4, Presumed earthquake*
ISC 19 05:14:42.0±0.8, **19.°55N**±0.°03×**70.°03W**±0.°02, **h15**km±6km, **n40**, σ1°70/67, **30C-5D**, **Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CADR	**Cabrera**	**0.15**	**35**	⇓*e*Pg		**Pg**	**05 14 46.1**	**+0.2**
CADR				*e*Sg		**Sg**	**05 14 47.5**	**-0.9**
CADR				IAML			05 14 52.1	
	comp=N,14μm,0.7s							
LONA1	**Toro Cenizo, N**	**0.23**	**136**	*i* P		Pb	05 14 54.2	+6.3
LONA1				*e*S		**Sb**	**05 14 58.6**	**+6.8**
NADR	**Nagua**	**0.25**	**139**	⇓*e*Pg		**Pg**	**05 14 47.4**	**-0.1**
NADR				⇑*e*Sg		**Sg**	**05 14 51.6**	**+0.5**
NADR				IAML			05 15 03.0	
	comp=N,6μm,0.7s							
SFDR	**San Fco. de Ma**	**0.33**	**218**	⇓*e*Pg		**Pg**	**05 14 48.7**	**-0.1**
SFDR				⇑*e*Sg		**Sg**	**05 14 54.2**	**+0.8**
SFDR				IAML			05 14 56.4	
	comp=N,3μm,0.3s							
SODR	**Sosua Marina B**	**0.56**	**292**	⇑*e*Pg		**Pg**	**05 14 50.3**	**-2.7**
SODR				IAML			05 15 11.3	
	comp=N,952nm,0.9s							
SC01	**Santiago de lo**	**0.67**	**260**	⇓*e*Pg		**Pg**	**05 14 55.4**	**+0.3**
SC01				IAML			05 15 14.4	
	comp=N,787nm,0.5s							
SC01	**Santiago de lo**	**0.67**	**260**	*i* P		**Pg**	**05 14 55.4**	**+0.3**
SC01				*e*S		**Sn**	**05 15 07.6**	**+0.4**
SMDR	**Samana, DR**	**0.83**	**108**	*e*Pg		**Pg**	**05 14 58.0**	**-0.3**
SMDR				IAML			05 15 11.9	
	comp=N,421nm,0.6s							
ABDR	**Alto Bandera**	**0.92**	**218**	⇑*e*Pg		**Pg**	**05 14 58.5**	**-1.4**
ABDR				⇑*e*Sg		**Sg**	**05 15 11.3**	**-0.8**
ABDR				IAML			05 15 31.0	
	comp=N,0.2nm,0.3s							
LUDR	**Luperon**	**0.94**	**292**	⇑*e*Pg		**Pb**	**05 15 00.3**	**+0.3**
HATOM	**Hato Mayor del**	**0.97**	**141**	⇑*e*Pg		**Pb**	**05 14 59.4**	**-1.3**
HATOM				⇑*e*Sg		**Sb**	**05 15 12.6**	**-0.7**
HATOM				IAML			05 15 18.5	
	comp=N,146nm,0.7s							
MADR	**Mao Valverde**	**1.01**	**271**	⇑*e*Pg		**Pb**	**05 15 01.3**	**0.0**
MADR				IAML			05 15 25.0	
	comp=N,2μm,0.6s							
SDD	**Santo Domingo**	**1.09**	**174**	⇑*e*Pg		**Pb**	**05 15 00.8**	**-1.8**
SDD				⇑*e*Sg		**Sb**	**05 15 16.6**	**+0.1**
SDD				IAML			05 15 17.1	
	comp=N,501nm,0.6s							
SDD	**Santo Domingo**	**1.09**	**174**	*i* P		**Pb**	**05 15 01.4**	**-1.2**
SDD				*e*S		**Sb**	**05 15 16.5**	**-0.1**
LOPP1	**Punta Rusia, P**	**1.14**	**286**	*i* P		**Pn**	**05 15 04.2**	**+0.6**
LOPP1				*e*S		**Sn**	**05 15 21.6**	**+2.6**
LOPP1				IAML			05 15 29.0	
	comp=Z,397nm,0.4s							
BANI	**BANI**	**1.19**	**195**	⇑*e*Pg		**Pn**	**05 15 03.3**	**-1.0**
BANI				⇑*e*Sg		**Sg**	**05 15 20.5**	**0.0**
BANI				IAML			05 15 23.3	
	comp=N,822nm,0.2s							
SDDR	**Presa de Saban**	**1.31**	**245**	⇓*e*Pg		**Pn**	**05 15 05.2**	**-0.8**
SDDR				⇑*e*Sg		**Sn**	**05 15 23.8**	**+0.5**
SDDR				IAML			05 15 27.4	
	comp=N,228nm,0.6s							
SDDR	**Presa de Saban**	**1.31**	**245**	*i* P		**Pn**	**05 15 05.4**	**-0.5**
SDDR				*e*S		**Sn**	**05 15 24.2**	**+0.9**
SDDR	**Presa de Saban**	**1.31**	**245**	*e*P		**Pn**	**05 15 05.2**	**-0.8**
SDDR				*e*S		**Sb**	**05 15 21.5**	**-1.7**
SDDR				IAML			05 15 25.3	
	comp=N,190nm,0.6s							
SDDR				IAML			05 15 27.4	
	comp=N,230nm,0.5s							
REDR	**Restauracion**	**1.34**	**254**	⇑*e*Pg		**Pg**	**05 15 10.1**	**+2.2**
REDR				⇑*e*Sg		**Sg**	**05 15 32.3**	**+6.9**
REDR				IAML			05 15 34.4	
	comp=N,526nm,0.2s							
HIDR	**Higuey Centro**	**1.56**	**127**	*e*Pg		**Pn**	**05 15 10.1**	**+0.8**
HIDR				⇑*e*Sg		**Sg**	**05 15 32.6**	**+0.2**
HIDR				IAML			05 15 36.4	
	comp=N,390nm,0.3s							
MCDR	**Montecristi**	**1.57**	**283**	⇑*e*Pg		**Pn**	**05 15 08.9**	**-0.5**
MCDR				⇑*e*Sg		**Sn**	**05 15 29.6**	**0.0**
MCDR				IAML			05 15 33.8	
	comp=N,304nm,0.5s							
LODA1	**ITESIL, Dajabo**	**1.58**	**270**	⇑*e*Sg		**Sb**	**05 15 30.9**	**+0.1**
LODA1				IAML			05 15 38.4	
	comp=N,2μm,3.6s							
LODA1	**ITESIL, Dajabo**	**1.58**	**270**	*i* P		**Pb**	**05 15 11.1**	**+0.1**
LODA1				*e*S		**Sg**	**05 15 32.8**	**-0.2**
LODA1				IAML			05 15 36.5	
	comp=Z,719nm,1.9s							
LONE3	**El Aguacate, B**	**1.64**	**236**	*i* P		**Pn**	**05 15 11.6**	**+1.0**
LONE3				*e*S		**Sg**	**05 15 35.5**	**+0.5**
LONE3				IAML			05 15 39.5	
	comp=Z,189nm,0.5s							
NEDR	**Neiba UASD**	**1.69**	**231**	⇑*e*Pg		**Pb**	**05 15 13.3**	**+0.5**
NEDR				⇑*e*Sg		**Sg**	**05 15 37.9**	**+1.6**
NEDR				IAML			05 15 38.8	
	comp=N,204nm,0.5s							
LODU1	**El Espartillar**	**1.81**	**229**	*i* P		**Pb**	**05 15 14.9**	**0.0**
LODU1				IAML			05 15 42.2	
	comp=Z,187nm,0.5s							
PODR	**Polo**	**1.81**	**221**	⇑*e*Pg		**Pb**	**05 15 14.6**	**-0.5**
PODR				⇑*e*Sg		**Sb**	**05 15 38.8**	**+1.1**
PODR				IAML			05 15 46.2	
	comp=N,285nm,0.3s							
PODR	**Polo**	**1.81**	**221**	*i* P		**Pb**	**05 15 14.7**	**-0.4**
PODR				*e*S		**Sg**	**05 15 41.3**	**+0.9**
JIDR	**Jimani**	**2.02**	**239**	⇑*e*Pg		**Pb**	**05 15 17.9**	**-0.6**
JIDR				⇑*e*Sg		**Sg**	**05 15 47.0**	**+0.1**
JIDR				IAML			05 15 47.6	
	comp=N,395nm,0.8s							
GRTK	**Grand Turk**	**2.21**	**332**	⇑*e*Pg		**Pn**	**05 15 19.1**	**+0.7**
GRTK				IAML			05 15 51.6	
	comp=N,119nm,1.4s							
GRTK	**Grand Turk**	**2.21**	**332**	*i* P		**Pn**	**05 15 19.0**	**+0.7**
GRTK				IAML			05 15 57.5	
	comp=Z,126nm,0.8s							
GRTK	**Grand Turk**	**2.21**	**332**	*e*P		**Pn**	**05 15 19.0**	**+0.7**
GRTK				*e*S		**Sn**	**05 15 45.8**	**+0.4**
GRTK				*e*Sg		**Sb**	**05 15 49.0**	**-0.1**
GRTK				IAML			05 15 49.5	
	comp=Z,171nm,0.4s							
GRTK				IAML			05 15 52.4	
	comp=Z,112nm,0.2s							
LOBH	**Bahia de las A**	**2.26**	**223**	*i* P		**Pb**	**05 15 22.2**	**-0.4**
LOBH				IAML			05 16 05.0	
	comp=Z,141nm,0.9s							
AGPR	**Aguadilla, PR**	**2.96**	**111**	⇑*e*Pg		**Pb**	**05 15 34.4**	**-0.2**
AGPR				IAML			05 16 19.3	
	comp=N,113nm,1.6s							
AOPR	**Arecibo Observ**	**3.32**	**110**	⇑*e*Sg		**Sg**	**05 16 25.8**	**-3.0**
AOPR				IAML			05 16 34.4	
	comp=N,82nm,0.5s							
CELP	**Cerrillos**	**3.58**	**114**	⇑*e*Pg		**Pb**	**05 15 46.7**	**+1.6**
CELP				IAML			05 16 41.5	
	comp=N,20nm,1.0s							
MASC	**Masc**	**4.00**	**280**	*e*P		**Pn**	**05 15 41.0**	**-1.9**
MASC				*e*S		**Sn**	**05 16 28.8**	**-0.8**
MASC				IAML			05 16 44.9	
	comp=N,32nm,0.6s							
MASC				IAML			05 16 45.5	
	comp=E,40nm,0.5s							
QMBU	**Quimbuelo**	**4.55**	**279**	*e*P		**Pn**	**05 15 47.1**	**-3.3**
QMBU				*e*S		**Sn**	**05 16 41.3**	**-1.8**
QMBU				IAML			05 16 53.8	
	comp=E,26nm,0.7s							
QMBU				IAML			05 16 57.1	
	comp=N,25nm,0.3s							
RCC	**Rio Carpintero**	**5.36**	**276**	*e*P		**Pn**	**05 16 00.4**	**-1.1**
RCC				*e*S		**Sn**	**05 16 59.8**	**-3.2**

*CATAC **19** 05:16:08.4±0.9, 14.°6N×89.°1W±°, h25km±8km, M3.1/11, MLv3.1/11, Error ellipse: s-maj=13.0km s-min=4.8km az=24.8, confirmed*
*SNET **19** 05:16:09.4±0.7, 13.°78N×90.°74W, h65km, ML3.1, Presumed earthquake*
*GCG **19** 05:16:09.1±1.5, 13.°83N×90.°77W, h61km±10km, MD3.7, ML3.6, MW2.5, Presumed earthquake*
ISC 19 05:16:10.3±1.7, **13.71N**±0.°08×**90.72W**±0.°05, **h61**km±12km, **n30**, σ1°41/40, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ESSJ	**San Jos, E**	**0.26**	**125**	*i* P		**Pn**	**05 16 18.9**	**-1.3**
FG8	**Yepocapa, Chim**	**0.57**	**15**	*i* P		**Pn**	**05 16 23.2**	**-0.1**
FG8				*i* S		**Sn**	**05 16 33.9**	**+1.2**
FG16	**Alotenango, Sa**	**0.60**	**20**	*i* P		**Pn**	**05 16 23.3**	**-0.4**
PCG5	**San Vicente Pa**	**0.60**	**33**	*i* P		**Pn**	**05 16 22.6**	**-1.1**
PCG5				*i* S		**Sn**	**05 16 32.3**	**-1.1**
FAME	**Alcaldia de Sa**	**0.69**	**79**	P		**Pn**	**05 16 23.7**	**-0.9**
FAME				S		**Sn**	**05 16 34.6**	**-0.5**
STG5	**El Palmar, Qui**	**0.92**	**318**	*i* P		**Pn**	**05 16 29.6**	**+2.1**
NUBE	**Las Nubes**	**0.93**	**78**	P		**Pn**	**05 16 27.1**	**-0.6**
NUBE	**Las Nubes**	**0.93**	**78**	*i* P		**Pn**	**05 16 27.0**	**-0.6**
NUBE				*i* S		**Sn**	**05 16 40.3**	**-0.1**
LOAL	**Lomas de Alarc**	**0.95**	**72**	P		**Pn**	**05 16 27.7**	**-0.2**
LOAL				S		**Sn**	**05 16 42.1**	**+1.3**
SLOZ	**Alcaldia de Sa**	**0.96**	**71**	P		**Pn**	**05 16 27.7**	**-0.2**
STG8	**El Palmar, Qui**	**0.96**	**320**	*i* P		**Pn**	**05 16 30.4**	**+2.2**
STG8				IAML			05 16 48.2	
	comp=N,1μm,0.1s							
STG2	**El Palmar, Qui**	**0.97**	**319**	*i* S		**Sn**	**05 16 45.9**	**+4.6**
CEVE	**Cerro Verde**	**1.07**	**83**	*e*P		**Pn**	**05 16 29.3**	**-0.2**
CEVE				*e*S		**Sn**	**05 16 45.4**	**+1.6**
UNIC	**Universidad Ca**	**1.17**	**76**	P		**Pn**	**05 16 30.2**	**-0.5**
JAYA	**Jayaque - finc**	**1.23**	**92**	P		**Pn**	**05 16 31.1**	**-0.5**
JAYA	**Jayaque - finc**	**1.23**	**92**	*i* P		**Pn**	**05 16 31.0**	**-0.5**
JAYA				*i* S		**Sn**	**05 16 47.3**	**-0.2**
JAYA				IAML			05 16 50.9	
	comp=N,713nm,0.2s							
JAYA	**Jayaque - finc**	**1.23**	**92**	*e*P		**Pn**	**05 16 31.1**	**-0.5**
JAYA				*e*S		**Sn**	**05 16 47.7**	**+0.2**
RTAL	**Retalhuleu**	**1.25**	**311**	P		**Pn**	**05 16 28.9**	**-2.8**
SOKI	**Kika Raxquin**	**1.29**	**329**	*i* S		**Sn**	**05 16 47.0**	**-2.2**
APG	**El Apazote**	**1.31**	**11**	*i* P		**Pn**	**05 16 31.5**	**-1.2**
PMON	**Piamonte**	**1.36**	**90**	P		**Pn**	**05 16 33.1**	**-0.2**
PMON				S		**Sn**	**05 16 51.9**	**+1.4**
MTO3	**Montecristo**	**1.48**	**62**	P		**Pn**	**05 16 34.2**	**-0.8**
MTO3	**Montecristo**	**1.48**	**62**	*i* P		**Pn**	**05 16 34.2**	**-0.8**
ESQI	**Esquipulas**	**1.58**	**57**	P		**Pn**	**05 16 35.4**	**-0.9**
ESQI	**Esquipulas**	**1.58**	**57**	*e*P		**Pn**	**05 16 35.8**	**-0.4**
SMCA	**Catarina**	**1.74**	**311**	*i* P		**Pn**	**05 16 35.7**	**-2.6**
COEG	**Centro de Oper**	**1.79**	**93**	*e*P		**Pn**	**05 16 39.5**	**+0.5**
COEG				*e*S		**Sn**	**05 17 02.2**	**+1.5**
SCLA	**Alcaldia de Sa**	**1.93**	**90**	P		**Pn**	**05 16 41.0**	**+0.1**
SARH	**Santa Rosa de**	**2.17**	**61**	P		**Pn**	**05 16 44.0**	**-0.3**
SARH	**Santa Rosa de**	**2.17**	**61**	*i* P		**Pn**	**05 16 44.0**	**-0.3**

*ISK **19** 05:29:00.7, 38.°47N×25.°78E, h12km±1km, ML2.6/4*
*AFAD **19** 05:29:03.2, 38.°44N×25.°90E, h7km±4km, ML2.1*
ISC 19 05:29:01.8±2.1, **38.°47N**±0.°06×**25.°80E**±0.°09, **h8**km±10km, **n13**, σ0°94/23, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CHOS	**Chios island**	**0.22**	**112**	Pg		**Pg**	**05 29 06.0**	**-0.2**
CHOS				Sg		**Sg**	**05 29 09.8**	**+0.6**
KARB	**zmir-Karabur**	**0.52**	**68**	P		**Pg**	**05 29 11.6**	**-0.2**
KARB				S		**Sb**	**05 29 19.2**	**-1.7**
KARB				IAML			05 29 20.0	
	comp=N,240nm,0.3s							
KRBN	**Karaburun**	**0.60**	**78**	Pg		**Pg**	**05 29 13.3**	**-0.2**
KRBN				Sg		**Sb**	**05 29 22.5**	**-0.9**
URLA	**Izmir**	**0.64**	**100**	Pg		**Pg**	**05 29 13.8**	**-0.2**
URLA				Sg		**Sb**	**05 29 23.3**	**-1.0**
URLA	**Izmir**	**0.64**	**100**	P		**Pg**	**05 29 13.9**	**-0.2**
URLA				IAML			05 29 26.0	
	comp=N,105nm,0.5s							
URLA				IAML			05 29 31.0	
	comp=E,141nm,0.4s							
SIGR	**SIGRI**	**0.74**	**3**	Pg		**Pg**	**05 29 15.4**	**-0.7**
SIGR				Sg		**Sg**	**05 29 26.5**	**+0.7**
FOCM	**Foa**	**0.77**	**71**	Pg		**Pg**	**05 29 16.4**	**-0.2**
BAGT	**Foa**	**0.85**	**77**	P		**Pb**	**05 29 18.9**	**+0.1**
BAGT				S		**Sg**	**05 29 28.6**	**-0.5**
BAGT				IAML			05 29 31.0	
	comp=E,83nm,0.9s							
BAGT				IAML			05 29 34.0	
	comp=N,109nm,1.2s							
GMLD	**Gumuldur**	**0.96**	**114**	Pg		**Pg**	**05 29 19.3**	**-1.0**
IZMD	**zmir-Dikili-**	**1.02**	**59**	P		**Pn**	**05 29 22.1**	**-0.5**
IZMD				S		**Sb**	**05 29 35.3**	**-0.2**
IZMD				IAML			05 29 37.0	
	comp=N,64nm,0.6s							
IZMD				IAML			05 29 44.0	
	comp=E,44nm,1.2s							
AYVA	**Ayvalik**	**1.09**	**39**	P		**Pg**	**05 29 22.4**	**-0.3**
AYVA				S		**Sn**	**05 29 38.4**	**-0.3**
AYVA				IAML			05 29 40.0	
	comp=N,73nm,0.5s							
AYVA				IAML			05 29 41.0	
	comp=E,36nm,0.2s							
ZEDA	**zmir-Bergama**	**1.12**	**63**	P		**Pn**	**05 29 26.0**	**+2.2**
ZEDA				S		**Sn**	**05 29 38.5**	**-0.9**
ZEDA				IAML			05 29 47.0	
	comp=E,29nm,0.4s							
ZEDA				IAML			05 29 59.0	
	comp=N,44nm,0.8s							
CAMT	**Merkez**	**1.22**	**76**	P		**Pg**	**05 29 26.0**	**+0.8**
CAMT				S		**Sn**	**05 29 43.4**	**+1.4**

IDC 19 05:55:57.6±2.3, **54.°67N**×**83.°77E**, **h0**km, **mbtmp2.6**/2, **ML2.1**/2, **1C-3D**, **Error ellipse: s-maj=18.8km s-min=11.3km az=168.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.95**	**139**	I		I	06 01 40.0	
	0.1nm,0.8s,baz=318,slow=333,SNR=19							
ZALV	**Zalesovo Beam**	**0.95**	**139**	Pg		Pg	05 56 15.1	-0.6
	1.5nm,0.3s,baz=323,slow=17,SNR=18							
ZALV				Lg		Lg	05 56 29.5	
	3.0nm,0.3s,baz=322,slow=29,SNR=9.0							
KURK	**Kurchatov**	**5.05**	**220**	⇓Pn		Pg	05 57 31.6	-2.7
	0.8nm,0.9s							
KURK				⇑Lg		Lg	05 58 42.4	
	1.0nm,0.8s							
KURBB	**Kurchatov Arra**	**5.16**	**220**	Pn		Pn	05 57 15.6	-0.3
	baz=39,slow=13,SNR=4.8							
KURBB				Lg		Lg	05 58 39.2	
	baz=42,slow=31,SNR=2.6							
	0.4nm,0.6s							
KURBB	**Kurchatov Arra**	**5.16**	**220**	⇓Pn		Pg	05 57 32.6	-3.8
	1.5nm,0.6s,baz=39,slow=16							
KURBB				⇓Lg		Lg	05 58 44.8	
	4.8nm,0.6s,baz=43,slow=30							
MKAR	**Makanchi Array**	**7.94**	**187**	Pn		Pn	05 57 55.1	+0.9
	0.1nm,0.3s,baz=2.7,slow=9.7,SNR=4.2							
MKAR				Lg		Lg	06 00 10.7	
	0.1nm,0.3s,baz=13,slow=36,SNR=2.4							
	0.2nm,0.6s							

*IDC **19** 05:56:08.5±1.6, 7.°32S×120.°17E, h558km±16km, mb2.9/6, mbtmp3.8/10, Error ellipse: s-maj=108.3km s-min=13.4km az=57.0*
ISC 19 05:56:08.2±1.1, **7.°5S**±0.°2×**120.°0E**±0.°3, **h550**km, **n10**, σ1°37/11, **mb3.3/5**, **Flores Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**2.46**	**355**	P		**P**	**05 57 22.1**	**+1.9**
	9.2nm,0.3s,baz=172,slow=5.3,SNR=4.8							
BATI	**Baumata**	**4.54**	**127**	P		**P**	**05 57 34.3**	**0.0**
	42nm,0.4s,baz=84,slow=1.3,SNR=2.7							
BATI				S		**S**	**05 58 44.2**	**-0.3**
	27nm,0.3s,baz=288,slow=19,SNR=1.9							
FITZ	**Fitzroy Crossi**	**11.91**	**153**	P		**P**	**05 58 45.5**	**-0.3**
	0.6nm,0.3s,baz=338,slow=11,SNR=5.9							
WRA	**Warramunga Arr**	**18.64**	**133**	P		**P**	**05 59 52.3**	**+0.3**
	1.3nm,0.6s,baz=311,slow=9.8,SNR=17							
ASAR	**Alice Springs**	**20.92**	**142**	P		**P**	**06 00 12.3**	**-0.4**
	0.6nm,0.5s,baz=324,slow=8.8,SNR=10.0							
	0.6nm,0.5s							
STKA	**Stephens Creek**	**31.54**	**143**	P		**P**	**06 01 47.0**	**+1.1**
	0.9nm,0.3s,baz=312,slow=11,SNR=3.7							
	0.9nm,0.3s							
MKAR	**Makanchi Array**	**63.56**	**332**	P		**P**	**06 05 45.3**	**+0.1**
	0.7nm,0.6s,baz=142,slow=7.4,SNR=11							
	0.7nm,0.6s							
ZALV	**Zalesovo Beam**	**67.98**	**338**	P		**P**	**06 06 10.1**	**-2.4**
	0.8nm,0.4s,baz=141,slow=4.3,SNR=2.1							
	0.8nm,0.4s							
KURBB	**Kurchatov Arra**	**68.05**	**333**	P		**P**	**06 06 12.2**	**-0.7**
	0.3nm,0.5s,baz=123,slow=6.8,SNR=5.0							
	0.3nm,0.5s							
BVAR	**Borovoye Array**	**73.43**	**331**	P		**P**	**06 06 42.6**	**-1.9**
	0.3nm,0.4s,baz=114,slow=7.0,SNR=2.5							
	0.3nm,0.4s							

*IDC **19** 05:58:39.7±0.8, 2.°23S×139.°97E, h0km, mb3.7/7, mbtmp3.7/8, ML4.1/2, MS3.0/2, Error ellipse: s-maj=20.9km s-min=9.0km az=23.0*
*DJA **19** 05:58:41.3±0.7, 2.°3S±5°×14.°0E±°, h10km, M3.9/6, MLv3.9/6*
ISC 19 05:58:42.5±0.8, **2.°31S**±0.°08×**140.°07E**±0.°07, **h25**km, **n17**, σ0°70/17, **mb3.7/7**, **Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.30**	**162**	P		**Pb**	**05 58 49.7**	**+0.2**
GENI				S		**Sn**	**05 58 56.1**	**-0.8**
JAY	**Jayapura**	**0.66**	**108**	LR		LR	05 58 54.3	
	comp=Z,42nm,22.0s,baz=334,slow=18							
JAY				Pg		**Pb**	**05 58 55.5**	**0.0**
	161nm,0.3s,baz=247,slow=8.5,SNR=372							
JAY				Lg		Lg	05 59 05.6	
	369nm,0.3s,baz=84,slow=18,SNR=19							
JAY	**Jayapura**	**0.66**	**108**	P		**Pb**	**05 58 55.4**	**0.0**
JAY				S		**Sn**	**05 59 06.0**	**0.0**
SMPI	**Sarmi**	**1.40**	**283**	P		**Pn**	**05 59 05.3**	**-1.1**
PMG	**Port Moresby**	**9.97**	**135**	LR		LR	06 04 57.8	
	comp=Z,60nm,20.6s,baz=181,slow=37							
BATI	**Baumata**	**18.09**	**244**	P		**P**	**06 02 53.7**	**+1.1**
	3.9nm,0.3s,baz=90,slow=3.0,SNR=3.6							
WRA	**Warramunga Arr**	**18.40**	**197**	P		**Pn**	**06 02 56.3**	**+0.2**
	0.3nm,0.3s,baz=20,slow=12,SNR=10							
	1.9nm,0.6s							
CTA	**-Charters Tower**	**18.68**	**162**	LR		LR	06 11 29.6	
	comp=Z,72nm,18.4s,baz=225,slow=41							
FITZ	**Fitzroy Crossi**	**21.14**	**221**	P		**P**	**06 03 25.3**	**-0.4**
	1.3nm,0.6s,baz=50,slow=7.9,SNR=5.3							
	1.3nm,0.6s							
ASAR	**Alice Springs**	**22.06**	**195**	P		**P**	**06 03 36.2**	**+0.6**
	1.0nm,0.5s,baz=27,slow=11,SNR=11							
	1.0nm,0.5s							
MKAR	**Makanchi Array**	**70.31**	**322**	P		**P**	**06 09 55.3**	**+1.3**
	0.5nm,0.6s,baz=109,slow=7.9,SNR=6.7							
	0.5nm,0.6s							
ZALV	**Zalesovo Beam**	**72.28**	**329**	P		**P**	**06 10 06.1**	**+0.4**
	0.5nm,0.4s,baz=128,slow=5.7,SNR=2.7							
	0.5nm,0.4s							
KURBB	**Kurchatov Arra**	**74.19**	**324**	P		**P**	**06 10 17.2**	**+0.1**
	0.4nm,0.7s,baz=111,slow=5.5,SNR=3.6							
	0.4nm,0.7s							
BVAR	**Borovoye Array**	**79.77**	**325**	P		**P**	**06 10 49.2**	**+0.8**
	0.7nm,0.6s,baz=96,slow=3.0,SNR=4.2							
	0.7nm,0.6s							
ILAR	**Eielson Array**	**84.91**	**24**	P		**P**	**06 11 14.5**	**-0.5**
	0.3nm,0.7s,baz=261,slow=4.4,SNR=6.3							
	0.3nm,0.7s							
DBIC	**Dimbokro**	**144.78**	**278**	PKP		**PKPdf**	**06 18 18.5**	**+0.2**
	3.5nm,0.7s,baz=74,slow=3.5,SNR=4.3							
LPAZ	**La Paz**	**146.56**	**125**	PKPbc		**PKiKP**	**06 18 26.1**	**-0.4**
	0.7nm,0.7s

*NOU **19** 06:38:03.9, 42°.14S×172°.93E, h43km, MLv3.9/17, South Island, New Zealand*
*WEL **19** 06:38:04.6±0.4, 42°.S±3°.×17°.3E±°, h35km±5km, M3.4/23, ML3.2/8, MLv3.4/23, Error ellipse: s-maj=5.1km s-min=3.9km az=76.7, confirmed*

ISC 19 06:38:03.9±1.2, 42.12S±0.03×172.97E±0.03, h61km±7km, n63, σ0.78/72, South Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MOLW	**Molesworth Sta**	**0.22**	**80**	P			**Pn**	**06 38 13.6**	**-0.1**
MOLW				S			**Sn**	**06 38 20.1**	**-0.6**
THZ	**Tophouse**	**0.36**	**352**	P			**Pn**	**06 38 14.0**	**-0.7**
THZ				S			**Sn**	**06 38 20.5**	**-2.0**
LOKS	**Mount Lookout**	**0.40**	**74**	P			**Pn**	**06 38 15.6**	**+0.5**
LOKS				S			**Sn**	**06 38 23.9**	**+0.6**
HSES	**Hanmer Springs**	**0.41**	**195**	P			**Pn**	**06 38 15.8**	**+0.7**
HSES				S			**Sn**	**06 38 23.9**	**+0.6**
KLDS	**Kikiwa Line De**	**0.46**	**351**	P			**Pn**	**06 38 14.9**	**-0.6**
KLDS				S			**Sn**	**06 38 22.6**	**-1.4**
KHZ	**Kahutara**	**0.51**	**125**	P			**Pn**	**06 38 16.5**	**+0.5**
KHZ	**Kahutara**	**0.51**	**125**	S			**Sn**	**06 38 25.8**	**+0.9**
KHZ	**Kahutara**	**0.51**	**125**	P			**Pn**	**06 38 16.6**	**+0.6**
KHZ				S			**Sn**	**06 38 25.6**	**+0.7**
MCASZ	**Murchison**	**0.58**	**304**	P			**Pn**	**06 38 17.1**	**+0.3**
MCASZ				S			**Sn**	**06 38 27.0**	**+0.8**
MRNZ	**Matariki Terra**	**0.74**	**347**	P			**Pn**	**06 38 18.3**	**-0.4**
MRNZ				S			**Sn**	**06 38 29.0**	**-0.6**
LTZ	**Lake Taylor**	**0.84**	**218**	P			**Pn**	**06 38 20.5**	**+0.6**
LTZ				S			**Sn**	**06 38 32.2**	**+0.5**
GVZ	**Greta Valley S**	**0.84**	**177**	P			**Pn**	**06 38 20.8**	**+0.8**
DSZ	**Dennistoun Nort**	**0.95**	**293**	P			**Pn**	**06 38 21.2**	**-0.1**
NNZ	**Nelson**	**0.96**	**19**	P			**Pn**	**06 38 21.3**	**-0.1**
TUWZ	**Tuamarina**	**1.00**	**47**	P			**Pn**	**06 38 22.7**	**+0.7**
AMCZ	**Amberley**	**1.08**	**193**	P			**Pn**	**06 38 23.5**	**+0.6**
TKNZ	**Takaka Hill**	**1.09**	**360**	P			**Pn**	**06 38 23.4**	**+0.2**
INZ	**Inchbonnie**	**1.28**	**242**	P			**Pn**	**06 38 26.1**	**+0.5**
TCW	**Tory Channel**	**1.34**	**47**	P			**Pn**	**06 38 26.5**	**+0.1**
QRZ	**Quartz Range**	**1.34**	**345**	P			**Pn**	**06 38 26.1**	**-0.3**
QRZ	**Quartz Range**	**1.34**	**345**	S			**Sn**	**06 38 42.7**	**-0.6**
QRZ	**Quartz Range**	**1.34**	**345**	P			**Pn**	**06 38 26.2**	**-0.2**
OXZ	**Oxford**	**1.38**	**209**	P			**Pn**	**06 38 26.7**	**-0.3**
DUWZ	**D'Urville Isla**	**1.50**	**29**	P			**Pn**	**06 38 29.4**	**+0.8**
SNZO	**South Karori**	**1.53**	**58**	P			**Pn**	**06 38 29.8**	**+0.8**
WEL	**Wellington**	**1.59**	**59**	P			**Pn**	**06 38 29.7**	**-0.1**
BHW	**Baring Head**	**1.59**	**64**	P			**Pn**	**06 38 29.5**	**-0.3**
MQZ	**McQueen's Vall**	**1.60**	**188**	P			**Pn**	**06 38 29.2**	**-0.7**
OKCZ	**Okains Bay**	**1.60**	**178**	P			**Pn**	**06 38 30.1**	**+0.2**
RACZ	**Rakaia**	**1.71**	**201**	P			**Pn**	**06 38 30.9**	**-0.5**
MHCZ	**Mount Hutt**	**1.75**	**216**	P			**Pn**	**06 38 31.6**	**-0.4**
AKCZ	**Akaroa Harbour**	**1.75**	**181**	P			**Pn**	**06 38 31.8**	**-0.2**
PLWZ	**Palliser**	**1.79**	**73**	P			**Pn**	**06 38 31.6**	**-0.9**
MSWZ	**Moikau Station**	**1.84**	**68**	P			**Pn**	**06 38 32.4**	**-0.9**
CAW	**Cannon Point**	**1.87**	**58**	P			**Pn**	**06 38 33.1**	**-0.5**
WVZ	**Waitaha Valley**	**1.90**	**239**	P			**Pn**	**06 38 34.4**	**+0.4**
KIW	**Kapiti Island**	**1.93**	**50**	P			**Pn**	**06 38 34.4**	**0.0**
WACZ	**Wakanui South**	**2.00**	**204**	P			**Pn**	**06 38 34.9**	**-0.4**
OGWZ	**Otaki Gorge**	**2.11**	**52**	P			**Pn**	**06 38 36.4**	**-0.4**
RPZ	**Rata Peaks**	**2.12**	**221**	P			**Pn**	**06 38 37.4**	**+0.4**
RPZ	**Rata Peaks**	**2.12**	**221**	S			**Sn**	**06 39 01.9**	**-0.4**
RPZ	**Rata Peaks**	**2.12**	**221**	P			**Pn**	**06 38 37.0**	**0.0**
MTW	**Mount Morrison**	**2.13**	**64**	P			**Pn**	**06 38 35.9**	**-1.1**
ARUZ	**Arundel**	**2.25**	**215**	P			**Pn**	**06 38 38.3**	**-0.4**
HOWZ	**Holdsworth Sta**	**2.27**	**58**	P			**Pn**	**06 38 38.7**	**-1.0**
GCSZ	**Gaunt Creek Bo**	**2.28**	**238**	P			**Pn**	**06 38 39.9**	**+0.7**
TMWZ	**Te Maipa**	**2.41**	**66**	P			**Pn**	**06 38 39.9**	**-1.1**
MRZ	**Mangatainoka R**	**2.45**	**54**	P			**Pn**	**06 38 40.5**	**-0.9**
TMZ	**Timaru**	**2.67**	**212**	P			**Pn**	**06 38 43.8**	**-0.7**
FOZ	**Fox Glacier**	**2.71**	**238**	P			**Pn**	**06 38 45.0**	**0.0**
NMEZ	**Namu Road**	**2.79**	**15**	P			**Pn**	**06 38 47.9**	**+1.7**
PREZ	**Palmer Road**	**2.92**	**18**	P			**Pn**	**06 38 49.7**	**+1.8**
KHEZ	**Kahui Hut**	**2.94**	**16**	P			**Pn**	**06 38 49.6**	**+1.4**
KHEZ	**Kahui Hut**	**2.94**	**16**	S			**Sn**	**06 39 23.6**	**+1.3**
KHEZ	**Kahui Hut**	**2.94**	**16**	P			**Pn**	**06 38 49.4**	**+1.2**
ODZ	**Otahua Downs**	**3.37**	**209**	P			**Pn**	**06 38 53.5**	**-0.5**
ODZ	**Otahua Downs**	**3.37**	**209**	S			**Sn**	**06 39 31.2**	**-1.6**
JCZ	**Jackson Bay**	**3.63**	**236**	P			**Pn**	**06 38 56.7**	**-1.0**
JCZ	**Jackson Bay**	**3.63**	**236**	S			**Sn**	**06 39 39.4**	**+0.1**
HIZ	**Hauiti**	**3.88**	**22**	P			**Pn**	**06 39 02.0**	**+0.9**
HIZ	**Hauiti**	**3.88**	**22**	S			**Sn**	**06 39 45.4**	**0.0**
BKZ	**Black Stump Fm**	**3.99**	**43**	P			**Pn**	**06 39 02.2**	**-0.3**
OUZ	**Omahuta**	**6.91**	**4**	P			**Pn**	**06 39 43.0**	**+0.5**

WEL 19 06:45:26.0±1.0, 33°S±7°×17°8W±1°7, h216km±16km, M4.2/8, mB4.5/5, ML4.2/9, MLv4.4/8, Mw(mB)3.7/4, Error ellipse: s-maj=22.6km s-min=5.5km az=107.6, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.29**	**9**	S				06 47 02.4	+0.5
MXZ	**Matakaoa Point**	**5.67**	**207**	P			Pn	06 46 49.5	+0.6
MXZ				S				06 47 55.5	+0.4
WMGZ	**Waiomatatini S**	**5.86**	**205**	P			Pn	06 46 53.4	+1.8
PKGZ	**Pakihiroa**	**6.03**	**207**	P			Pn	06 46 54.4	+0.6
PKGZ				S			S	06 48 04.5	+1.1
HAZ	**Te Kaha**	**6.05**	**209**	P			Pn	06 46 54.7	+0.7
HAZ				S			S	06 48 05.1	+1.2
PUZ	**Puketiti**	**6.14**	**205**	P			Pn	06 46 56.0	+0.7
PUZ				S			S	06 48 06.7	+0.6
RUGZ	**Raukumara Rang**	**6.27**	**209**	P			Pn	06 46 57.0	0.0
RUGZ				S			S	06 48 08.4	-0.9
TWGZ	**Tauwhareparae**	**6.33**	**206**	P			Pn	06 46 58.4	+0.6
TWGZ				S			S	06 48 12.4	+1.8
CNGZ	**Carnagh Statio**	**6.53**	**203**	P			Pn	06 47 01.4	+1.2
TKGZ	**Te Karaka**	**6.62**	**206**	P			Pn	06 47 01.0	-0.3
MWZ	**Matawai**	**6.65**	**208**	P			Pn	06 47 01.3	-0.4
MWZ				S			S	06 48 16.2	-1.7
URZ	**Urewera**	**6.76**	**211**	P			Pn	06 47 01.7	-1.4
WCZ	**Waipu Caves**	**6.84**	**238**	P			Pn	06 47 02.7	-1.6
RIGZ	**Rimuhau**	**6.88**	**205**	P			Pn	06 47 04.2	-0.6
MKAZ	**Moumakai**	**6.94**	**227**	P			Pn	06 47 05.8	+0.3
MUGZ	**Murupara**	**7.09**	**212**	P			Pn	06 47 06.0	-1.4
OUZ	**Omahuta**	**7.11**	**246**	P			Pn	06 47 10.0	+2.3
KNZ	**Kokohu**	**7.20**	**205**	P			Pn	06 47 07.8	-0.9
MTHZ	**Maungataniwha**	**7.37**	**210**	P			Pn	06 47 09.6	-1.5

DJA 19 06:45:59.1±0.6, 3°N±5°×12°8E±°, h11km±9km, M4.1/9, mB4.7/1, mb4.7/1, MLv3.8/9, Mw(mB)4.0/1, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**1.27**	**179**	P			Pn	06 46 21.8	-1.1
GAMI				S			Sg	06 46 40.2	0.0
SGSI	**Sangihe**	**2.30**	**284**	P			Pn	06 46 37.3	+0.3
GTOI	**Gorontalo**	**5.35**	**243**	P			Pn	06 47 19.1	+0.1

*DJA **19** 06:49:42.1±2.4, 16°N±17°×12°0E±°, h56km±13km, M4.7/25, mb4.6/25, mB5.4/10, Mw(mB)4.8/10*
*MAN **19** 06:49:45.0, 15°.01N×119°.88E, h26km, MS4.5*
MAN INTENSITY IV - SAN FELIPE AND CASTILLEJOS ZAMBALES; OLONGAPO CITY; . INTENSITY III - CABANGAN BOTOLAN AND CANDELARIA ZAMBALES; . INTENSITY II - IBA ZAMBALES; PORAC PAMPANGA; MORONG BATAAN; . INTENSITY I - SUBIC ZAMBALES; QUEZON CITY; SAN MATEO RIZAL.
*NEIC **19** 06:49:48.5±1.4, 14°.98N±0°.07×120°.14E±0°.07, h65km±7km, mb4.6/70, Error ellipse: s-maj=11.3km s-min=8.6km az=215.0*
*IDC **19** 06:49:50.7±0.9, 14°.87N×120°.09E, h90km±10km, mb3.8/26, mbtmp4.2/27, MS3.5/28, Error ellipse: s-maj=20.2km s-min=10.7km az=72.0*

ISC 19 06:49:49.0±0.7, 14°.99N±0°.04×120°.08E±0°.05, h73km±7km, n170, σ1°.36/160, mb4.5/66, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PCPS	**Palayan City**	**1.00**	**110**	*eP*			**Pn**	**06 50 07.4**	**-0.3**
PCPS				*eS*			**Sn**	**06 50 24.6**	**+3.0**
TGY	**Tagaytay City**	**1.21**	**137**	P			**Pn**	**06 50 11.0**	**+0.6**
	3μm,0.3s,baz=342,slow=4.6,SNR=51								
TGY				S			**Sn**	**06 50 28.2**	**+1.8**
	7μm,0.3s,baz=27,slow=15,SNR=7.3								
TGY	**Tagaytay City**	**1.21**	**137**	*eP*			**Pn**	**06 50 10.5**	**+0.1**
TGY				*eS*			**Sn**	**06 50 29.7**	**+3.3**
BOLP	**Bolinao**		**1.39**	**353**	*i* P		**Pn**	**06 50 07.9**	**-4.7**
BOLP					*i* S		**Sn**	**06 50 24.8**	**-5.6**
BOAC	**Boac**		**2.29**	**132**	*eP*		**Pn**	**06 50 25.7**	**+1.1**
BOAC					*eS*		**Sn**	**06 50 51.6**	**-0.3**
ABRA	**Dolores**		**2.71**	**13**	*eP*		**Pn**	**06 50 32.2**	**+1.9**
ABRA					*eS*		**Sn**	**06 51 03.5**	**+1.4**
SIPP	**Brgy, Tapao**		**2.94**	**7**	*eP*		**Pn**	**06 50 31.2**	**-2.2**
SIPP					*eS*		**Sn**	**06 51 10.6**	**+3.1**
RCP	**Roxas**		**4.29**	**142**	*eP*		**Pn**	**06 50 52.6**	**+0.8**
TWG	**Pinlang**		**7.84**	**7**	Pn		**Pn**	**06 51 38.5**	**-1.9**
TPUB	**Ta-pu**		**8.28**	**4**	Pn		**Pn**	**06 51 46.6**	**+0.2**
YULB	**Yu-li**		**8.43**	**8**	Pn		**Pn**	**06 51 48.2**	**-0.3**
SSLB	**Suanglung**		**8.79**	**5**	Pn		**Pn**	**06 51 53.4**	**+0.1**
HKPS	**Hong Kong Po S**		**9.18**	**323**	Pn		**Pn**	**06 51 57.7**	**-0.9**
NACB	**Ningankiao**		**9.24**	**9**	Pn		**Pn**	**06 51 59.3**	**-0.2**
DAV	**Davao City (W)**		**9.54**	**145**	LR		LR	06 56 30.1	
	comp=Z,341nm,18.4s,baz=354,slow=42								
YOJ	**Yonaguni jima**		**9.81**	**16**	Pn		**Pn**	**06 52 05.1**	**-2.3**
MYLDM	**Lahad Datu**		**9.87**	**189**	Pn		**Pn**	**06 52 09.4**	**+1.2**
MYLDM	**Lahad Datu**		**9.87**	**189**	P		**Pn**	**06 52 09.8**	**+1.6**
	26nm,1.2s								
QIZ	**Qiongzhong**		**10.58**	**294**	Pn		Pn	06 52 12.4	-5.5
QIZ	**Qiongzhong**		**10.58**	**294**	P		**Pn**	**06 52 18.1**	**+0.2**
QIZ					S		**Sn**	**06 54 14.8**	**0.0**
QIZ					LR		LR		
	comp=N,240nm,9.9s								
QIZ					LR		LR		
	comp=E,250nm,12.0s								
QIZ					LR		LR		
	comp=Z,360nm,12.8s								
JOW	**Kunigami**		**14.04**	**32**	LR		LR	06 59 00.7	
	comp=Z,90nm,18.5s,baz=132,slow=39								
MRSI	**Marisa**		**14.54**	**173**	P		**Pn**	**06 53 10.8**	**-0.3**
	comp=Z,25nm,1.1s								
MPSI	**Mapaga**		**14.56**	**181**	P		**Pn**	**06 53 13.6**	**+2.2**
SBUM	**Sibu**		**14.68**	**213**			**Pn**	**06 53 12.9**	**0.0**
SBUM	**Sibu**		**14.68**	**213**	P		**Pn**	**06 53 13.8**	**+0.9**
	comp=Z,13nm,0.9s								
LUWI	**Luwuk**		**16.15**	**170**			**Pn**	**06 53 30.5**	**-1.2**
LUWI					IAmb		IAmb	06 53 48.8	
	comp=Z,66nm,0.8s								
LUWI	**Luwuk**		**16.15**	**170**	P		**P**	**06 53 34.6**	**+1.0**
	comp=Z,5μmcomp=Z,94nm,1.1s								
BKB	**Balikpapan**		**16.45**	**191**	P		**Pn**	**06 53 33.9**	**-1.6**
NJ2	**Nanjing**		**17.02**	**356**	*eP*		**P**	**06 53 43.3**	**+0.2**
NJ2					pmax		pmax		
	comp=Z,24nm,0.6s								
SANI	**Sanana**		**17.91**	**160**	P		**P**	**06 53 50.3**	**-2.8**
	comp=Z,16nm,0.9s								
SPSI	**Sidrap Palu**		**18.84**	**181**	P		**Pn**	**06 54 05.3**	**+0.8**
BBKI	**Banjar Baru**		**19.06**	**196**	P		**P**	**06 54 05.4**	**-0.2**
SIJI	**Sorong**		**19.25**	**144**	LR		LR	07 01 17.4	
	comp=Z,191nm,18.8s,baz=252,slow=36								
KAPI	**Kappang**		**19.88**	**181**	P		**P**	**06 54 14.3**	**-0.3**
	comp=Z,12nm,0.6s,baz=359,slow=11,SNR=5.7								
KAPI	**Kappang**		**19.88**	**181**			**P**	**06 54 14.0**	**-0.5**
KAPI					IAmb		IAmb	06 54 24.7	
	comp=Z,17nm,0.8s								
KAPI	**Kappang**		**19.88**	**181**	P		**P**	**06 54 15.6**	**+1.0**
	comp=Z,14nm,0.9s								
KRAI	**Karang Ratu**		**19.97**	**155**	P		**P**	**06 54 15.0**	**-0.6**
	comp=Z,7μmcomp=Z,9.2nm,0.7s								
MKS	**Makassar**		**20.09**	**182**	P		**P**	**06 54 17.0**	**+0.2**
CM31	**Chiang Mai Arr**		**20.53**	**283**	P		**P**	**06 54 22.3**	**+0.6**
CM31					IAmb		IAmb	06 54 26.0	
	comp=Z,12nm,0.7s								
CMAR	**Chiang Mai Arr**		**20.53**	**283**	P		**P**	**06 54 23.2**	**+1.6**
	comp=Z,12nm,1.0s,baz=93,slow=8.8,SNR=54								
CMAR					LR		LR	07 02 30.6	
	comp=Z,145nm,18.4s,baz=90,slow=37								
	comp=Z,12nm,1.0s								
CMAR	**Chiang Mai Arr**		**20.53**	**283**			**P**	**06 54 22.1**	**+0.4**
JNU	**Nakatsue**		**20.54**	**27**	P		Pn	06 54 22.9	-1.6
	comp=Z,12nm,0.8s,baz=231,slow=18,SNR=4.2								
JNU					LR		LR	07 01 51.8	
	comp=Z,74nm,21.6s,baz=196,slow=35								
	comp=Z,12nm,0.8s								
CHTO	**Chiang Mai**		**20.58**	**284**	P		**P**	**06 54 22.7**	**+0.6**
PZH	**PanZhiHua**		**20.59**	**307**	P		**P**	**06 54 24.1**	**+1.7**
PZH					pmax		pmax		
	comp=Z,10.0nm,0.5s								
LYN	**LuoYang**		**20.65**	**342**	P		Pn	06 54 25.8	+0.1
LYN					S		**S**	**06 58 10.4**	**+0.9**
LYN					pmax		pmax		
	comp=Z,22nm,0.6s								
LYN					LR		LR		
	comp=N,300nm,14.8s								
LYN					LR		LR		
	comp=E,190nm,11.3s								
LYN					LR		LR		
	comp=Z,310nm,17.1s								
MYKOM	**Kota Tinggi**		**20.71**	**232**	P		**P**	**06 54 24.9**	**+1.3**
KULM	**Kulim**		**21.40**	**245**	P		**P**	**06 54 28.5**	**-2.5**
KULM					IAmb		IAmb	06 54 47.1	
	comp=Z,21nm,1.0s								
FAKI	**Fak Fak**		**21.49**	**145**	P		**P**	**06 54 30.8**	**-1.2**
CD2	**Chengdu**		**21.79**	**319**	P		**P**	**06 54 36.8**	**+1.7**
CD2					S		**S**	**06 58 34.5**	**+2.2**
CD2					pmax		pmax		
	comp=Z,50nm,1.0s								
CD2					LR		LR		
	comp=N,390nm,16.2s								
CD2					LR		LR		
	comp=E,290nm,13.3s								
CD2					LR		LR		
	comp=Z,290nm,21.3s								
HNS	**HongShan**		**22.82**	**349**	⇓P		**P**	**06 54 42.3**	**-3.6**
HNS					pmax		pmax		
	comp=Z,7.0nm,1.3s								
HNS					LR		LR		
	comp=N,230nm,12.0s								
HNS					LR		LR		
	comp=E,220nm,14.7s								
HNS					LR		LR		
	comp=Z,240nm,17.1s								
LBFI	**Labuhan Bajo,**		**23.32**	**180**	P		**P**	**06 54 51.2**	**+0.2**
DBNI	**Kabupaten Domp**		**23.41**	**184**	P		**P**	**06 54 51.8**	**0.0**
	comp=Z,29nm,0.9s								
KSRS	**Korea Array**		**23.43**	**16**	P		**P**	**06 54 51.8**	**-0.1**
	comp=Z,2.7nm,0.7s,baz=200,slow=11,SNR=5.4								
KSRS					LR		LR	07 04 51.1	
	comp=Z,39nm,18.8s,baz=200,slow=38								
	comp=Z,2.7nm,0.7s								
EDFI	**Ende, Flores**		**23.64**	**176**	P		**P**	**06 54 54.5**	**+0.5**
PLAI	**Plampang**		**23.78**	**186**	P		**P**	**06 54 55.4**	**+0.3**
TWSI	**Taliwang, Sumb**		**23.79**	**188**	P		**P**	**06 54 55.7**	**+0.5**
	comp=Z,48nm,0.9s								
JCJ	**Chichijima**		**23.84**	**56**	P		**P**	**06 54 54.7**	**-1.0**
GMJI	**Gumukmas**		**24.03**	**196**	P		**P**	**06 54 58.6**	**+1.2**
	comp=Z,50nm,1.2s								
JAGI	**Jajag, Banyuwa**		**24.04**	**195**			**P**	**06 54 56.4**	**-1.1**
JAGI					IAmb		IAmb	06 55 00.8	
	comp=Z,24nm,0.9s								
JAGI	**Jajag, Banyuwa**		**24.04**	**195**	P		**P**	**06 54 58.2**	**+0.7**
	comp=Z,25nm,1.0s								
GUMO	**Guam**		**24.06**	**90**	LR		LR	07 04 13.3	
	comp=Z,76nm,19.9s,baz=102,slow=36								
GUMO	**Guam**		**24.06**	**90**			**P**	**06 54 56.3**	**-1.4**
SNJI	**Sawahan-Nganju**		**24.08**	**201**	P		**P**	**06 54 59.5**	**+1.4**
	comp=Z,18nm,0.9s								
RPSI	**Rantau Prapat**		**24.18**	**242**	P		**P**	**06 54 58.0**	**-0.8**
KLSI			**24.78**	**219**	P		**P**	**06 55 04.9**	**+0.7**
SOEI	**Soe**		**24.93**	**170**	P		**P**	**06 55 03.4**	**-2.4**
SOEI					IAmb		IAmb	06 55 32.8	
	comp=Z,27nm,0.9s								
BJT	**Baijiatuan**		**25.17**	**353**			**P**	**06 55 07.8**	**+0.3**
LZDM	**Lanzhou Array**		**25.51**	**328**	P		**P**	**06 55 12.4**	**+1.3**
	comp=Z,0.8nm,0.3s,baz=140,slow=7.6,SNR=1.3								
LZDM					LR		LR	07 05 54.6	
	comp=Z,125nm,18.1s,baz=270,slow=38								
	comp=Z,0.8nm,0.3s								
LZH	**Lanzhou**		**25.54**	**328**	*eP*		**P**	**06 55 13.8**	**+2.6**
LZH					pP		pP	06 55 25.6	-2.0
LZH					pmax		pmax		
	comp=Z,25nm,1.5s								
GSI	**Gunungsitoli**		**26.05**	**241**	P		**P**	**06 55 14.8**	**-1.1**
GSI					IAmb		IAmb	06 55 30.9	
	comp=Z,38nm,1.2s								
HHC	**Hu-ho-hao-te**		**26.81**	**346**	*eP*		**P**	**06 55 25.8**	**+3.3**
HHC					pmax		pmax		
	comp=Z,6.0nm,0.6s								
HHC					pmax		pmax		
	comp=Z,94nm,6.4s								
HHC					LR		LR		
	comp=N,130nm,14.5s								
HHC					LR		LR		
	comp=E,110nm,14.5s								
HHC					LR		LR		
	comp=Z,150nm,14.3s								
JAY	**Jayapura**		**26.82**	**129**	LR		LR	07 05 57.7	
	comp=Z,111nm,21.2s,baz=352,slow=36								
BRDH	**Bariadhala**		**27.95**	**290**	LR		LR	07 08 12.4	
	comp=Z,132nm,19.2s,baz=152,slow=39								
USRK	**Ussuriysk Ar.**		**30.83**	**17**	P		**P**	**06 56 00.0**	**+2.0**
	comp=Z,2.4nm,0.9s,baz=208,slow=8.1,SNR=2.0								
	comp=Z,2.4nm,0.9s								
KNRA	**Kununurra**		**31.66**	**164**	P		**P**	**06 56 03.7**	**-1.9**
KNRA					IAmb		IAmb	06 56 18.4	
	comp=Z,6.1nm,1.1s								
EVN	**Everest**		**33.42**	**298**			**P**	**06 56 21.6**	**-0.2**
SONM	**Songino Array**		**34.66**	**344**	P		**P**	**06 56 33.5**	**+1.9**
	comp=Z,0.8nm,0.7s,baz=175,slow=7.8,SNR=4.4								
SONM					LR		LR	07 12 24.3	
	comp=Z,96nm,19.1s,baz=127,slow=39								
	comp=Z,0.8nm,0.7s								
SONM	**Songino Array**		**34.66**	**344**	P		**P**	**06 56 31.9**	**+0.4**
ASAJ	**Asahikawa**		**34.78**	**29**	LR		LR	07 12 20.3	
	comp=Z,46nm,18.2s,baz=348,slow=39								
KLR	**Kul'dur**		**35.46**	**13**	LR		LR	07 11 39.5	
	comp=Z,64nm,18.3s,baz=211,slow=37								
PMG	**Port Moresby**		**36.17**	**130**	LR		LR	07 14 20.5	
	comp=Z,50nm,19.9s,baz=132,slow=41								
PSA00	**Pilbara Seismi**		**36.34**	**180**	P		**P**	**06 56 45.2**	**-0.9**
PSA00	**Pilbara Seismi**		**36.34**	**180**	P		**P**	**06 56 45.6**	**-0.5**
PSA00					IAmb		IAmb	06 56 46.6	
	comp=Z,7.7nm,0.9s								
COEN	**Coen**		**36.73**	**140**	P		**P**	**06 56 48.2**	**-1.3**
KRVT	**Keravat (AS076**		**37.01**	**119**	LR		LR	07 09 55.1	
	comp=Z,17nm,21.8s,baz=307,slow=33								
WB0	**Warramunga Arr**		**37.30**	**157**			**P**	**06 56 52.4**	**-1.9**
WB0					IAmb		IAmb	06 56 55.4	
	comp=Z,9.6nm,0.8s								
WRAB	**Tennant Creek**		**37.44**	**158**	P		**P**	**06 56 54.0**	**-1.4**
WRA	**Warramunga Arr**		**37.44**	**158**	P		**P**	**06 56 53.5**	**-2.0**
	comp=Z,5.8nm,0.5s,baz=336,slow=9.4,SNR=115								
	comp=Z,5.8nm,0.5s								
WRA	**Warramunga Arr**		**37.44**	**158**	P		**P**	**06 56 53.0**	**-2.5**
WR8	**Warramunga Arr**		**37.51**	**157**			**P**	**06 56 54.5**	**-1.6**
WR8					IAmb		IAmb	06 56 56.4	
	comp=Z,18nm,1.4s								
TLY	**Talaya**		**38.90**	**344**	LR		LR	07 13 39.5	
	comp=Z,84nm,18.8s,baz=138,slow=37								
PALK	**Pallekele**		**39.34**	**263**	LR		LR	07 11 43.0	
	comp=Z,37nm,20.7s,baz=84,slow=33								
WMQ	**Urumqi**		**39.82**	**323**	*eP*		**P**	**06 57 15.6**	**+0.3**
WMQ					pP		sP	06 57 36.0	-4.5
WMQ					pmax		pmax		
	comp=Z,18nm,0.9s								
WMQ					LR		LR		
	comp=Z,110nm,24.2s								
AS31	**Alice Springs**		**40.73**	**160**			**P**	**06 57 22.1**	**-0.9**
ASAR	**Alice Springs**		**40.73**	**160**	P		**P**	**06 57 21.8**	**-1.2**
	comp=Z,4.6nm,0.7s,baz=339,slow=6.9,SNR=65								
	comp=Z,4.6nm,0.7s								
ASAR	**Alice Springs**		**40.73**	**160**	P		**P**	**06 57 21.9**	**-1.0**
CTA	**Charters Tower**		**43.33**	**143**	LR		LR	07 18 50.1	
	comp=Z,34nm,18.8s,baz=30,slow=40								
CTAO	**Charters Tower**		**43.33**	**143**	P		**P**	**06 57 44.1**	**0.0**
CTAO					IAmb		IAmb	06 58 23.3	
	comp=Z,32nm,1.4s								
MORW	**Morawa**		**43.98**	**185**	P		**P**	**06 57 48.0**	**-1.2**
MORW					IA

comp=Z,16nm,1.5s
B20K Meade River 73.54 21 P P 07 01 14.8 +1.1
L19K White Mountain 74.57 29 P P 07 01 20.9 +1.0
L19K IAmb IAmb 07 01 28.3
comp=Z,5.9nm,1.2s
BKZ Black Stump Fm 75.29 138 P P 07 01 23.8 -0.6
L22K Petersville 76.44 28 P P 07 01 31.8 +1.1
L22K IAmb IAmb 07 01 39.4
comp=Z,14nm,1.4s
D25K Kavik River 77.34 21 P P 07 01 36.4 +0.7
WRH Wood River Hil 77.39 26 P P 07 01 35.8 -0.1
ARCES ARCESS Array B 77.67 339 P P 07 01 37.8 +0.3
comp=Z,2.6nm,0.6s,baz=76,slow=7.2,SNR=9.7
comp=Z,2.6nm,0.6s
ARCES ARCESS Array B 77.67 339 P P 07 01 37.7 +0.3
ILAR Eielson Array 77.86 26 P P 07 01 39.0 +0.4
comp=Z,0.9nm,1.0s,baz=254,slow=5.8,SNR=6.1
comp=Z,0.9nm,1.0s
SPITS Spitsbergen Ar 78.21 348 P P 07 01 41.6 +1.3
comp=Z,2.9nm,0.7s,baz=89,slow=6.9,SNR=6.0
SPITS LR LR 07 38 53.6
comp=Z,67nm,20.8s,baz=20,slow=38
comp=Z,2.9nm,0.7s
FIA1 FINESS Array S 78.87 331 P P 07 01 44.0 -0.1
FINES FINESS Array B 78.87 331 P P 07 01 44.2 +0.1
comp=Z,3.2nm,0.5s,baz=55,slow=5.4,SNR=32
FINES LR LR 07 40 20.9
comp=Z,75nm,21.4s,baz=276,slow=38
comp=Z,3.2nm,0.5s
RIDG Independent Ri 78.92 27 P 07 01 45.0 +0.6
RIDG IAmb IAmb 07 01 47.5
comp=Z,10nm,1.0s
AKASG Malin Array Be 79.09 320 P P 07 01 45.1 -0.5
comp=Z,0.2nm,0.4s,baz=64,slow=7.5,SNR=4.7
comp=Z,0.2nm,0.4s
SCRK Sand Creek 79.24 27 P P 07 01 46.8 +0.5
SCRK IAmb IAmb 07 02 13.2
comp=Z,7.5nm,1.5s
I26K Coal Creek Min 79.31 25 P P 07 01 47.2 +0.7
I26K IAmb IAmb 07 01 49.8
comp=Z,5.1nm,1.0s
INK Inuvik 82.11 21 P P 07 02 01.9 +0.6
BURAR Bucovina Array 82.31 317 P P 07 02 03.9 +0.9
BURAR IAmb IAmb 07 02 04.9
comp=Z,5.3nm,0.6s
BUR08 Bucovina Ar. S 82.31 317 P 07 02 03.5 +0.5
BUR08 IAmb IAmb 07 02 08.9
comp=Z,6.0nm,1.1s
HFS Hagfors 85.06 331 P P 07 02 16.0 -0.6
comp=Z,2.6nm,0.6s,baz=132,slow=2.2,SNR=8.2
comp=Z,2.6nm,0.6s
KECS Kecovo 85.14 319 *eP* **P 07 02 17.5 +0.2**
NC405 NORSAR Array S 85.59 332 P P 07 02 19.7 +0.4
NC405 IAmb IAmb 07 02 46.5
comp=Z,12nm,1.4s
NB2 NORSAR Subarra 85.84 332 P P 07 02 20.3 -0.2
comp=Z,6.9nm,0.8s,baz=69,slow=4.8
NOA NORSAR Array B 85.84 332 P P 07 02 20.3 -0.2
comp=Z,1.8nm,0.6s,baz=68,slow=4.8,SNR=11
NOA LR LR 07 41 22.6
comp=Z,56nm,19.2s,baz=330,slow=36
comp=Z,1.8nm,0.6s
RAR Rarotonga 86.45 113 LR LR 07 34 36.1
comp=Z,74nm,21.2s,baz=311,slow=31
GERES GERESS Array B 89.26 321 P P 07 02 37.5 +0.2
comp=Z,0.3nm,0.2s,baz=134,slow=2.8,SNR=2.0
comp=Z,0.3nm,0.2s
YKA Yellowknife Ar 91.81 22 P P 07 02 49.0 +0.3
comp=Z,0.3nm,0.5s,baz=312,slow=5.1,SNR=9.1
comp=Z,0.3nm,0.5s
PLCA Paso Flores 152.73 162 PKPbc PKiKP 07 09 38.5 +0.4
comp=Z,1.0nm,0.8s,baz=190,slow=1.8,SNR=3.3
CPUP Villa Florida 168.46 192 PKPab PKPab 07 10 56.5 -0.8
comp=Z,1.3nm,0.7s,baz=190,slow=6.1,SNR=4.6
CPUP Villa Florida 168.46 192 PKPab 07 10 58.4 +1.1

AFAD ***19*** *07:13:49.0, 38.52N×44.88E, h14km±8km, ML3.8*
NSSP ***19*** *07:13:53.9, 38.55N×44.65E, h10km, Ms3.8*
IDC ***19*** *07:13:54.8±0.7, 38.54N×44.40E, h0km, mb4.0/16, mbtmp3.9/21, ML3.2/5, MS3.4/7, Error ellipse: s-maj=12.9km s-min=9.3km az=126.0*
ISK ***19*** *07:13:54.5, 38.56N×44.58E, h5km, ML3.9/13*
TEH ***19*** *07:13:54.4, 38.58N×44.53E, h6km, ML3.8, Presumed earthquake*
AZER ***19*** *07:13:54.0, 38.59N×44.49E, h10km, ml4.1*
MOS ***19*** *07:13:55.3±1.3, 38.36N×44.42E, h10km, mb4.3/17, Error ellipse: s-maj=6.9km s-min=4.9km az=85.0*
MCSM ***19*** *07:13:57.1±0.5, 38°N±5″×4°4E±°, h11km±3km, mb4.2, mB5.4, MLv4.2, Mw(mB)4.8*
NEIC ***19*** *07:13:57.6±1.5, 38.49N±0.04×44.32E±0.05, h10km±1km, mb4.2/21, Error ellipse: s-maj=9.0km s-min=3.1km az=138.0*

ISC 19 07:13:56.6±0.4, **38.54N**±0.02×**44.55E**±0.02, **h10**km, **n234, s221**/279, **mb4.2**/36, **MS3.4**/4, **16C-11D, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.46**	**286**	P	**Pg**	**07 14 02.9**	**-2.7**
OZAP				IAML		07 14 14.0	
	comp=E,1μm,1.7s						
OZAP				S	**Sb**	**07 14 14.2**	**+0.4**
OZAP				IAML		07 14 23.0	
	comp=N,8μm,1.8s						
OZAP	**Van, Ozalp-Mer**	**0.46**	**286**	Pg	**Pg**	**07 14 02.8**	**-2.7**
MAKU	**Maku**	**0.82**	**7**	Pg	**Pg**	**07 14 09.2**	**-3.3**
ISHB	**Shabestar**	**0.87**	**107**	Pg	**Pg**	**07 14 11.3**	**-2.2**
VMUR	**Van-Muradiye**	**0.89**	**301**	P	**Pg**	**07 14 10.8**	**-3.0**
VMUR				S	**Sn**	**07 14 27.5**	**-0.9**
VMUR				IAML		07 14 32.0	
	comp=N,2μm,0.9s						
VMUR				IAML		07 14 32.0	
	comp=E,1μm,0.4s						
VMUR	**Van-Muradiye**	**0.89**	**301**	Pg	**Pg**	**07 14 10.7**	**-3.0**
TVAN	**Van**	**0.90**	**270**	P	**Pg**	**07 14 10.9**	**-3.1**
TVAN				S	**Sn**	**07 14 28.8**	**+0.1**
TVAN				IAML		07 14 37.0	
	comp=N,3μm,0.8s						
TVAN				IAML		07 14 44.0	
	comp=E,4μm,1.2s						
TVAN	**Van**	**0.90**	**270**	Pg	**Pg**	**07 14 10.8**	**-3.1**
VANB	**Van**	**0.92**	**274**	Pg	**Pg**	**07 14 12.5**	**-1.7**
VANB				Sg	**Sn**	**07 14 27.2**	**-1.7**
NAX	**Nakhchivan**	**0.97**	**49**	P	**Pg**	**07 14 13.5**	**-1.8**
NAX				S	**Sn**	**07 14 28.3**	**-2.0**
SBZ	**Shahbuz**	**1.16**	**42**	P	**Pb**	**07 14 16.6**	**-2.1**
SBZ				S	**Sn**	**07 14 34.0**	**-0.9**
HAKT	**HAKKARI**	**1.19**	**215**	P	**Pb**	**07 14 17.2**	**-2.1**
HAKT	**HAKKARI**	**1.19**	**215**	Pg	**Pb**	**07 14 17.2**	**-2.1**
HAKT	**HAKKARI**	**1.19**	**215**	P	**Pb**	**07 14 17.3**	**-2.1**
HAKT				S	**Sn**	**07 14 36.8**	**+1.1**
ORD	**Ordubad**	**1.19**	**71**	P	**Pb**	**07 14 17.5**	**-1.9**
ORD				S	**Sn**	**07 14 35.1**	**-0.6**
GEVA	**Gevas**	**1.20**	**260**		**Pb**	**07 14 15.3**	**-4.1**
GEVA				Sn	**Sb**	**07 14 32.1**	**-2.9**
GEVA	**Gevas**	**1.20**	**260**	P	**Pb**	**07 14 15.5**	**-3.9**
GEVA				S	**Sn**	**07 14 37.4**	**+1.5**
GEVA				IAML		07 14 38.0	
	comp=N,2μm,0.7s						
GEVA				IAML		07 14 42.0	
	comp=E,1μm,0.5s						
HYR	**Heyderabad**	**1.20**	**11**	P	**Pn**	**07 14 17.2**	**-2.3**
HYR				S	**Sn**	**07 14 35.0**	**-0.9**
DYDN	**Diyadin**	**1.21**	**326**	P	**Pb**	**07 14 16.4**	**-3.3**
DYDN				IAML		07 14 44.0	
	comp=N,1μm,1.0s						
DYDN				IAML		07 14 50.0	
	comp=E,2μm,0.7s						
DYDN	**Diyadin**	**1.21**	**326**	Pg	**Pb**	**07 14 16.4**	**-3.3**
AKDM	**Akdamar-Van**	**1.25**	**261**	Pn	**Pn**	**07 14 17.1**	**-3.3**
AKDM	**Akdamar-Van**	**1.25**	**261**	Pg	**Pn**	**07 14 17.0**	**-3.3**
ITBZ	**Tabriz**	**1.29**	**103**	Pg	**Pn**	**07 14 18.3**	**-2.5**
VAYK	**Vayk**	**1.34**	**30**	*i* P	**Pn**	**07 14 19.4**	**-2.1**
VAYK				*i* S	**Sg**	**07 14 39.1**	**-0.6**
IGDI	**IGDIR**	**1.38**	**345**	P	**Pn**	**07 14 20.1**	**-1.8**
IGDI				S	**Sg**	**07 14 41.7**	**+0.7**
IAZR	**Azarshahr**	**1.42**	**127**	Pg	**Pb**	**07 14 21.7**	**-1.6**
ADCV	**BITLIS_Adilcev**	**1.46**	**281**	P	**Pb**	**07 14 22.1**	**-1.8**
ADCV				S	**Sg**	**07 14 43.8**	**+0.3**
ALVK	**Alvank**	**1.46**	**74**	*eP*	**Pn**	**07 14 21.1**	**-2.0**
ALVK				*eS*	**Sn**	**07 14 40.7**	**-1.6**
AGRB	**Hanur-Agry**	**1.60**	**311**	Pn	**Pb**	**07 14 24.5**	**-1.8**
GNI	**Garni**	**1.61**	**5**	Pg	**Pb**	**07 14 25.4**	**-1.2**
	27nm,0.3s,baz=199,slow=3.1,SNR=108						
GNI				Lg	Lg	07 14 48.3	
	66nm,0.3s,baz=317,slow=19,SNR=14						
GNI	**Garni**	**1.61**	**5**	Pn	**Pb**	**07 14 24.7**	**-1.9**
GNI				Sn	**Sg**	**07 14 48.8**	**+0.2**
GNI	**Garni**	**1.61**	**5**	Pn	**Pb**	**07 14 24.9**	**-1.7**
GNI				Sn	**Sg**	**07 14 47.5**	**-1.1**
GNI	**Garni**	**1.61**	**5**	*eP*	**Pb**	**07 14 25.2**	**-1.4**
GNI				*eS*	**Sb**	**07 14 45.6**	**-1.5**
GNI	**Garni**	**1.61**	**5**	PN	**Pb**	**07 14 24.7**	**-1.9**
GNI						07 14 48.8	
GNI	**Garni**	**1.61**	**5**	P	**Pg**	**07 14 26.4**	**-1.2**
DORK	**Agr/Tutak/Do**	**1.62**	**302**	P	**Pn**	**07 14 23.9**	**-1.5**
DORK				S	**Sg**	**07 14 48.3**	**-0.5**
DORK				IAML		07 14 54.0	
	comp=N,883nm,1.1s						
MLAZ	**Malazgirt-MUS**	**1.68**	**292**	Pn	**Pb**	**07 14 26.3**	**-1.3**
GRS	**Goris**	**1.69**	**55**	*i* P	**Pn**	**07 14 24.0**	**-2.3**
GRS				*i* S	**Sn**	**07 14 47.0**	**-1.0**
PERV	**Siirt/Pervari-**	**1.69**	**250**	P	**Pg**	**07 14 28.5**	**-0.5**
PERV				S	**Sg**	**07 14 51.7**	**+0.7**
EGVZ	**Egvard**	**1.70**	**66**	*eP*	**Pn**	**07 14 25.6**	**-0.8**
EGVZ				*eS*	**Sb**	**07 14 48.6**	**-0.8**
KAPZ	**Kaputan**	**1.78**	**4**	*eP*	**Pb**	**07 14 27.6**	**-1.9**
KAPZ				*eS*	**Sg**	**07 14 52.3**	**-1.7**
AYRK	**Ayrk**	**1.84**	**31**	*eP*	**Pn**	**07 14 27.4**	**-1.1**
AYRK				*eS*	**Sb**	**07 14 52.0**	**-1.7**
AMBZ	**Amberd**	**1.86**	**353**	*eP*	**Pb**	**07 14 29.7**	**-1.1**
AMBZ				*eS*	**Sg**	**07 14 56.0**	**-0.5**
BLIS	**Bitlis-Merkez**	**1.92**	**267**	P	**Pn**	**07 14 27.2**	**-2.2**
BLIS				S	**Sg**	**07 14 58.5**	**+0.3**
IHRS	**Heris**	**1.97**	**96**	Pn	**Pb**	**07 14 30.8**	**-1.9**
GURO	**Guroymak-BITLI**	**1.98**	**271**		**Pn**	**07 14 28.8**	**-1.4**
GURO	**Guroymak-BITLI**	**1.98**	**271**	Pn	**Pb**	**07 14 30.7**	**-2.0**
SIRN	**Sırnak**	**1.99**	**239**	P	**Pb**	**07 14 31.7**	**-1.2**
SIRN	**Sırnak**	**1.99**	**239**	Pn	**Pb**	**07 14 31.7**	**-1.2**
MAHB	**Mahabad**	**1.99**	**152**	Pn	**Pb**	**07 14 31.1**	**-1.9**
SRTM	**Siirt_Merkez**	**2.14**	**256**	P	**Pb**	**07 14 34.0**	**-1.6**
QRD	**Qoradiz**	**2.34**	**66**	P	**Pb**	**07 14 36.1**	**-2.8**
QRD				S	**Sb**	**07 15 07.7**	**-0.2**
GDB	**GEDABAY**	**2.37**	**23**	P	**Pb**	**07 14 36.4**	**-3.1**
GDB				S	**Sb**	**07 15 07.6**	**-1.2**
KARS	**Kars**	**2.38**	**332**		**Pn**	**07 14 36.6**	**-3.0**
KARS	**Kars**	**2.38**	**332**	Pn	**Pn**	**07 14 35.8**	**0.0**
KARS	**Kars**	**2.38**	**332**	PN	**Pb**	**07 14 36.6**	**-3.0**
LSVT	**Lusahovit**	**2.42**	**11**	*eP*	**Pb**	**07 14 36.9**	**-3.4**
LSVT				*eS*	**Sb**	**07 15 08.5**	**-1.9**
IHSH	**Hashtrud**	**2.47**	**119**	Pn	**Pb**	**07 14 38.1**	**-3.2**
VRTB	**Varto-Mus**	**2.50**	**285**	Pn	**Pb**	**07 14 38.1**	**-3.5**
GANJ	**Ganja**	**2.51**	**32**	P	**Pb**	**07 14 38.7**	**-3.0**
GANJ				S	**Sb**	**07 15 12.7**	**0.0**
AGDM	**Agdam**	**2.53**	**51**	P	**Pb**	**07 14 39.0**	**-3.0**
AGDM				S	**Sb**	**07 15 13.1**	**-0.1**
SRTK	**Saratovka**	**2.53**	**356**	*eP*	**Pb**	**07 14 40.5**	**-1.7**
SRTK				*eS*	**Sg**	**07 15 14.6**	**-3.3**
ISRB	**Sarab**	**2.56**	**105**	Pn	**Pb**	**07 14 39.2**	**-3.4**
QZX	**Qazax, Azerbai**	**2.59**	**14**	P	**Pb**	**07 14 39.8**	**-3.4**
QZX				S	**Sb**	**07 15 13.6**	**-1.6**
BLQ	**Beylaqan**	**2.62**	**62**	P	**Pb**	**07 14 40.6**	**-3.0**
BLQ				S	**Sb**	**07 15 13.9**	**-1.9**
GRMI	**Germi**	**2.63**	**83**	Pn	**Pn**	**07 14 39.8**	**+0.6**
GENK	**Senkaya-Erzuru**	**2.64**	**321**	Pn	**Pn**	**07 14 40.1**	**-0.6**
SVAN	**Silvan-Diyarba**	**2.67**	**263**	Pn	**Pb**	**07 14 40.4**	**-4.0**
MIDY	**Mardin/Midyat-**	**2.74**	**247**	P	**Pn**	**07 14 40.8**	**+0.2**
MIDY				IAML		07 15 30.0	
	comp=E,348nm,0.9s						
MIDY				IAML		07 15 39.0	
	comp=N,325nm,1.1s						
KARO	**Karliova-Bingo**	**2.84**	**287**	Pn	**Pn**	**07 14 42.9**	**+0.7**
YRD	**Yardimli**	**2.91**	**81**	P	**Pb**	**07 14 45.3**	**-3.3**
YRD				S	**Sb**	**07 15 23.2**	**-1.2**
MNGR	**Mingechevir, A**	**2.96**	**40**	P	**Pb**	**07 14 45.4**	**-4.1**
MNGR				S	**Sb**	**07 15 23.9**	**-1.9**
LRK	**Lerik**	**2.97**	**87**	P	**Pb**	**07 14 46.2**	**-3.5**
LRK				S	**Sb**	**07 15 24.9**	**-1.2**
DGRG	**David-gareji**	**2.98**	**12**	P	**Pb**	**07 14 49.9**	**+0.2**
DGRG				S	**Sg**	**07 15 29.8**	**-2.4**
DGRG	**David-gareji**	**2.98**	**12**	PN	**Pb**	**07 14 49.9**	**+0.2**
DGRG				S	**Sg**	**07 15 29.8**	**-2.4**
AKH	**Akhalkalaki**	**2.98**	**344**	P	**Pb**	**07 14 48.4**	**-1.5**
AKH				S	**Sg**	**07 15 32.9**	**+0.6**
AKH	**Akhalkalaki**	**2.98**	**344**	PN	**Pb**	**07 14 48.4**	**-1.5**
AKH				S	**Sg**	**07 15 32.9**	**+0.6**
TRLG	**Trialeti**	**3.02**	**354**	P	**Pb**	**07 14 48.1**	**-2.4**
TRLG				S	**Sg**	**07 15 32.7**	**-0.8**
TRLG	**Trialeti**	**3.02**	**354**	PN	**Pb**	**07 14 48.1**	**-2.4**
TRLG				S	**Sg**	**07 15 32.7**	**-0.8**
VSHL	**Vashlovani**	**3.04**	**27**	P	**Pb**	**07 14 46.8**	**-4.0**
VSHL				S	**Sg**	**07 15 32.8**	**-1.4**
BNGB	**Bingl**	**3.06**	**280**	Pn	**Pn**	**07 14 46.1**	**+0.9**
GLBA	**Clilabad**	**3.08**	**76**	P	**Pb**	**07 14 46.9**	**-4.5**
GLBA				S	**Sb**	**07 15 25.5**	**-1.5**
DDFL	**Dedoflistskaro**	**3.14**	**22**	P	**Pb**	**07 14 52.8**	**+0.2**
DDFL	**Dedoflistskaro**	**3.14**	**22**	PN	**Pb**	**07 14 52.8**	**+0.2**
TBLG	**Delisi**	**3.19**	**2**	Pn	**Pn**	**07 14 47.4**	**+0.6**
TBLG	**Delisi**	**3.19**	**2**	P	**Pg**	**07 14 56.0**	**-1.7**
BINT	**Bingol**	**3.20**	**277**	PN	**Pn**	**07 14 46.1**	**-0.9**
YEDI	**Yedisu-Bingol**	**3.25**	**287**	Pn	**Pn**	**07 14 48.8**	**+1.0**
SAAT	**Saatly**	**3.28**	**65**	P	**Pn**	**07 14 49.7**	**+1.6**
SAAT				S	**Sb**	**07 15 30.6**	**-4.3**
LKRN	**Lenkeran, Azer**	**3.31**	**86**	P	**Pb**	**07 14 50.9**	**-4.5**
LKRN				S	**Sb**	**07 15 34.0**	**-1.8**
ASTR	**Astara**	**3.32**	**88**	P	**Pb**	**07 14 51.2**	**-4.4**
ASTR				S	**Sb**	**07 15 33.5**	**-2.6**
SEKA	**Sheki**	**3.35**	**37**	P	**Pn**	**07 14 50.4**	**+1.2**
SEKA				S	**Sb**	**07 15 35.8**	**-1.2**
KOPT	**Kop Dagi**	**3.48**	**296**	Pn	**Pn**	**07 14 49.6**	**-1.4**
ZKTA	**Zakatala**	**3.48**	**26**	P	**Pn**	**07 14 52.6**	**+1.9**
ZKTA				S	**Sb**	**07 15 37.7**	**-2.9**
QBL	**Gabala**	**3.49**	**45**	P	**Pb**	**07 14 52.8**	**+1.9**
QBL				S	**Sb**	**07 15 38.6**	**-2.4**
LGD	**Lagodekhi**	**3.54**	**21**	P	**Pg**	**07 15 00.6**	**-3.7**
LGD	**Lagodekhi**	**3.54**	**21**	PN	**Pg**	**07 15 00.6**	**-3.7**
IML	**Ismayilli**	**3.59**	**50**	P	**Pn**	**07 14 53.3**	**+0.9**
IML				S	**Sb**	**07 15 38.9**	**-5.0**
ALIG	**Mtskhetisjvari**	**3.63**	**349**	P	**Pb**	**07 14 59.9**	**-0.9**
ALIG	**Mtskhetisjvari**	**3.63**	**349**	PN	**Pb**	**07 14 59.9**	**-0.9**
CHRG	**Chargali**	**3.80**	**4**	P	**Pb**	**07 15 03.0**	**-0.7**
XNQ	**Khinaliq**	**3.81**	**45**	P	**Pn**	**07 14 56.5**	**+1.0**
XNQ				S	**Sn**	**07 15 43.7**	**+3.1**
AKT	**Akhty**	**3.82**	**39**	*i* PN	**Pb**	**07 15 03.6**	**-0.5**
AKT				*e*		07 15 12.8	
AKT				*e*		07 15 14.5	
AKT				*eS*	**Sb**	**07 15 52.5**	**+2.1**
AKT				*e*		07 16 06.7	
AKT				pmax	pmax		
	comp=Z,54nm,0.7s						
AKT				smax	smax		
	comp=E,75nm,0.8s						
AKT				smax	smax		
	comp=E,116nm,0.7s						
AKT				smax	smax		
	comp=N,59nm,0.6s						
AKT				MLR	MLR		
	comp=Z,289nm,3.0s						
PQL	**Pirkuli**	**3.84**	**53**	P	**Pn**	**07 14 58.4**	**+2.4**
PQL				S	**Sb**	**07 15 46.0**	**-5.2**
GBS	**Qobustan**	**3.94**	**58**	P	**Pn**	**07 14 58.9**	**+1.7**
GBS				S	**Sb**	**07 15 49.1**	**-4.6**
ATGJ	**Altiaghaj**	**4.10**	**54**	P	**Pn**	**07 15 01.5**	**+2.1**
ATGJ				S	**Sn**	**07 15 50.8**	**+3.3**
QSAR	**Qusar**	**4.12**	**43**	P	**Pn**	**07 15 02.0**	**+2.4**
QSAR				S	**Sb**	**07 15 54.2**	**-4.7**
QUBA	**Quba, Azerbaij**	**4.13**	**46**	P	**Pn**	**07 15 02.1**	**+2.3**
QUBA				S	**Sb**	**07 15 54.3**	**-5.1**
SIZA	**Siyzn**	**4.20**	**52**	P	**Pn**	**07 15 03.1**	**+2.3**
SIZA				S	**Sb**	**07 15 56.4**	**-4.9**
ARPR	**Arapgir-MALATY**	**4.89**	**278**	Pn	**Pn**	**07 15 07.7**	**-2.6**
NEUR	**Neytrino**	**4.92**	**344**	*ePN*	**Pn**	**07 15 13.2**	**+2.4**
MAK	**Makhachkala**	**4.95**	**26**	*c iPN*	**Pn**	**07 15 11.2**	**+0.2**
MAK				*eS*	**Sn**	**07 16 10.4**	**+2.1**
MAK				pmax	pmax		
	comp=Z,149nm,0.9s						
MAK				MLR	MLR		
	comp=Z,124nm,9.0s						
KBZ	**Khabaz**	**5.33**	**347**	Pn	**Pn**	**07 15 18.6**	**+2.4**
	comp=Z,1.1nm,0.8s,baz=161,slow=18,SNR=1.6						
SHA1	**Shidzhatmaz**	**5.39**	**345**	*ePN*	**Pn**	**07 15 14.8**	**-2.4**
KIV	**Kislovodsk**	**5.59**	**346**	Pn	**Pn**	**07 15 21.0**	**+1.1**
KIV	**Kislovodsk**	**5.59**	**346**	*eP*	**Pn**	**07 15 20.1**	**+0.2**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GAZ	**Gaziantep**	**5.97**	**259**	Pn	**Pn**	**07 15 23.0**	**-2.1**
SOC	**Sochi**	**6.22**	**326**	*eP*	**Pn**	**07 15 28.3**	**-0.2**
SOC				*eS*	**Sn**	**07 16 37.2**	**-2.4**
SOC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SOC				MLR	MLR		
	comp=Z,139nm,14.0s						
BRTR	**Keskin Array B**	**8.57**	**281**	Pn	**Pn**	**07 16 00.4**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=106,slow=13,SNR=7.1						
BR105	**Keskin Array S**	**8.58**	**281**	P	**Pn**	**07 15 58.7**	**-2.3**
	comp=Z,4.5nm,1.0s						
ASF	**Jabal al Asfar**	**8.91**	**227**	Pn	**Pn**	**07 16 04.0**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=118,slow=14,SNR=1.3						
ASF				Lg	Lg	07 18 35.4	
	comp=Z,0.2nm,0.3s,baz=187,slow=15,SNR=2.2						
ASF				LR	LR	07 19 59.0	
	comp=Z,165nm,19.7s,baz=27,slow=41						
	comp=Z,1.0nm,0.4s						
ASF	**Jabal al Asfar**	**8.91**	**227**	P	**Pn**	**07 16 04.0**	**-1.5**
MMAI	**Mount Meron Ar**	**9.25**	**236**	LR	LR	07 20 22.3	
	comp=Z,235nm,19.6s,baz=47,slow=42						
EIL	**Elat**	**11.89**	**225**	LR	LR	07 21 52.8	
	comp=Z,185nm,18.9s,baz=63,slow=40						
BELG	**Belogornoye**	**14.02**	**8**	Pn	**Pn**	**07 17 16.4**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=241,slow=21,SNR=1.4						
	comp=Z,1.7nm,0.3s						
BELG	**Belogornoye**	**14.02**	**8**	*eP*	P	07 17 18.1	-5.0
BELG				pmax	pmax		
	comp=Z,1.0nm,1.4s						
RAYN	**Ar Rayn**	**14.99**	**177**	*iP*	**Pn**	**07 17 24.9**	**-3.7**
AKTO	**Aktyubinsk**	**15.26**	**34**	Pn	**Pn**	**07 17 29.5**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=227,slow=9.9,SNR=4.8						
	comp=Z,2.4nm,1.0s						
AB31	**Akbulak array**	**15.39**	**41**	Pn	**Pn**	**07 17 34.1**	**+0.4**
ABKAR	**Akbulak array**	**15.39**	**41**	Pn	**Pn**	**07 17 34.3**	**+0.7**
MLR	**Muntele Rosu**	**15.46**	**303**	Pn	**Pn**	**07 17 34.1**	**-0.7**
	comp=Z,1.8nm,0.5s,baz=160,slow=14,SNR=1.7						
MLR	**Muntele Rosu**	**15.46**	**303**	*i* P	**P**	**07 17 39.5**	**+0.2**
MLR	**Muntele Rosu**	**15.46**	**303**	*i* P	**P**	**07 17 39.5**	**+0.2**
ONER	**Baraj Valea Uz**	**15.48**	**306**	*i* P	**P**	**07 17 41.1**	**+1.7**
NDNU	**Novodnistrovsk**	**15.97**	**315**	P	**Pn**	**07 17 41.3**	**+0.1**
DOPR	**Dopca**	**15.99**	**304**	*i* P	**P**	**07 17 47.3**	**+2.2**
VOIR		**16.04**	**302**	*i* P	**P**	**07 17 47.8**	**+2.1**
VOIR		**16.04**	**302**	*i* P	**P**	**07 17 47.8**	**+2.1**
AK07	**Malin Array Si**	**16.20**	**323**	P	**Pn**	**07 17 43.4**	**-0.8**
AK09	**Malin Array Si**	**16.21**	**323**	P	**Pn**	**07 17 43.5**	**-0.8**
AK10	**Malin Array Si**	**16.22**	**323**	P	**Pn**	**07 17 43.5**	**-0.9**
AK06	**Malin Array Si**	**16.23**	**323**	P	**Pn**	**07 17 43.7**	**-0.9**
AK08	**Malin Array Si**	**16.24**	**323**	P	**P**	**07 17 44.7**	**-3.0**
AK05	**Malin Array Si**	**16.25**	**323**	P	**Pn**	**07 17 43.9**	**-0.9**
AK02	**Malin Array Si**	**16.28**	**323**	P	**Pn**	**07 17 44.2**	**-0.9**
AK12	**Malin Array Si**	**16.29**	**323**	P	**Pn**	**07 17 44.4**	**-0.9**
AK01	**Malin Array Si**	**16.30**	**323**	P	**Pn**	**07 17 44.5**	**-0.9**
AKASG	**Malin Array Be**	**16.30**	**323**	Pn	**Pn**	**07 17 41.7**	**-3.7**
	comp=Z,0.2nm,0.3s,baz=135,slow=11,SNR=5.2						
AKBB	**Malin Array Si**	**16.30**	**323**	P	**P**	**07 17 47.6**	**-0.8**
AKBB	**Malin Array Si**	**16.30**	**323**	P	**P**	**07 17 47.6**	**-0.8**
AKBB				pmax	pmax		
	comp=Z,9.0nm,1.2s						
AK03	**Malin Array Si**	**16.32**	**323**	P	**Pn**	**07 17 45.2**	**-0.4**
AK16	**Malin Array Si**	**16.33**	**323**	P	**Pn**	**07 17 45.4**	**-0.4**
BURAR	**Bucovina Array**	**16.75**	**309**	*i* P	**P**	**07 17 53.8**	**+0.2**
BURAR	**Bucovina Array**	**16.75**	**309**	P	**P**	**07 17 53.2**	**-0.4**
BURAR	**Bucovina Array**	**16.75**	**309**	*i* P	**P**	**07 17 53.8**	**+0.2**
MI28	**Mi28,Pidlybu**	**17.19**	**322**	P	**Pn**	**07 17 55.5**	**-0.9**
MI28				pP	**pP**	**07 17 59.7**	**-2.1**
DRGR		**18.02**	**304**	P	**P**	**07 18 09.5**	**+2.0**
MDVR	**Moldovita**	**18.14**	**297**	*i* P	**P**	**07 18 09.5**	**+0.6**
RNPP9	**Sopachiv**	**18.37**	**321**	P	**P**	**07 18 10.3**	**-1.0**
CHGR	**Chuyangaron**	**19.22**	**82**	*i eP*	**Pn**	**07 18 23.3**	**+1.5**
CHGR				pmax	pmax		
	comp=Z,34nm,3.4s						
KBL	**Kabul**	**20.06**	**94**	P	Pn	07 18 32.2	+0.3
KBL				IAmb	IAmb	07 19 09.9	
	comp=Z,5.2nm,0.4s						
KBL	**Kabul**	**20.06**	**94**	P	Pn	07 18 32.2	+0.2
KBL				pmax	pmax		
	comp=Z,5.0nm,0.4s						
GAR	**Garm**	**20.08**	**81**	P	Pn	07 18 32.2	+0.1
ARTI	**Arti**	**20

KHC					pmax	pmax			
	comp=Z,2.0nm,0.8s								
MURB	**Monte Urbino**	**24.58**	**291**		P	**P**	**07 19 16.7**	**0.0**	
KDJ	**Kajisay**	**25.04**	**71**		P	**P**	**07 19 23.4**	**+2.3**	
KDJ					IAmb	IAmb	07 19 28.6		
	comp=Z,7.7nm,0.9s								
KDJ	**Kajisay**	**25.04**	**71**		P	**P**	**07 19 23.4**	**+2.3**	
KDJ					pmax	pmax			
	comp=Z,8.0nm,0.9s								
TARG	**Taragay, Kyrgy**	**25.53**	**72**		P	**P**	**07 19 28.0**	**+2.2**	
TARG					IAmb	IAmb	07 19 32.5		
	comp=Z,4.4nm,0.9s								
TARG	**Taragay, Kyrgy**	**25.53**	**72**		P	**P**	**07 19 28.0**	**+2.2**	
TARG					pmax	pmax			
	comp=Z,4.0nm,0.9s								
FINES	**FINESS Array B**	**25.64**	**339**		P	**P**	**07 19 26.8**	**+0.8**	
	comp=Z,1.4nm,0.7s,baz=142,slow=9.6,SNR=3.9								
	comp=Z,1.4nm,0.7s								
KURBB	**Kurchatov Arra**	**26.80**	**52**		P	**P**	**07 19 38.0**	**+1.3**	
	comp=Z,2.8nm,0.8s,baz=261,slow=9.1,SNR=3.3								
	comp=Z,2.8nm,0.8s								
KURK	**Kurchatov**	**26.88**	**52**		P	**P**	**07 19 38.0**	**+0.6**	
MKAR	**Makanchi Array**	**28.72**	**61**		P	**P**	**07 19 55.2**	**+1.3**	
	comp=Z,0.9nm,0.7s,baz=272,slow=6.3,SNR=2.7								
MKAR					LR	LR	07 32 36.5		
	comp=Z,54nm,20.1s,baz=280,slow=39								
	comp=Z,0.9nm,0.7s								
ZALV	**Zalesovo Beam**	**31.33**	**47**		LR	LR	07 34 21.7		
	comp=Z,59nm,18.5s,baz=75,slow=39								
DGZ	**Jazzator, Alta**	**32.32**	**56**	⇂	*e*P	**P**	**07 20 27.0**	**+1.1**	
DGZ					pmax	pmax			
	comp=Z,2.0nm,1.0s								
WMQ	**Urumqi**	**32.62**	**67**		*e*P	P	07 20 32.9	+4.5	
WMQ					pmax	pmax			
	comp=Z,12nm,0.9s								
EKA	**Eskdalemuir Ar**	**35.83**	**314**		P	**P**	**07 20 56.0**	**-0.1**	
	comp=Z,1.5nm,0.7s,baz=108,slow=8.0,SNR=4.7								
	comp=Z,1.5nm,0.7s								
EVN	**Everest**	**36.61**	**94**		P	**P**	**07 21 04.8**	**+1.1**	
EVN					IAmb	IAmb	07 21 08.7		
	comp=Z,3.9nm,0.8s								
TAM	**Tamanrasset**	**36.76**	**256**		P	**P**	**07 21 05.2**	**+0.7**	
TAM	**Tamanrasset**	**36.76**	**256**		P	**P**	**07 21 05.2**	**+0.7**	
ESDC	**Sonseca Array**	**37.30**	**287**		P	**P**	**07 21 07.4**	**-1.5**	
	comp=Z,1.6nm,0.7s,baz=68,slow=8.1,SNR=10								
	comp=Z,1.6nm,0.7s								
NRIK	**Noril'sk**	**38.40**	**23**		P	**P**	**07 21 17.6**	**-0.2**	
	comp=Z,1.1nm,0.3s,baz=211,slow=3.7,SNR=3.7								
NRIK					LR	LR	07 40 00.1		
	comp=Z,58nm,18.0s,baz=256,slow=41								
	comp=Z,1.1nm,0.3s								
NRIK	**Noril'sk**	**38.40**	**23**	⇃	*e*P	**P**	**07 21 19.3**	**+1.6**	
NRIK					pmax	pmax			
	comp=Z,5.0nm,1.0s								
KNGR	**Kungurtug, Tuv**	**38.81**	**54**	⇑	*e*P	**P**	**07 21 24.0**	**+2.4**	
KNGR					pmax	pmax			
	comp=Z,5.0nm,1.1s								
SHL	**Shillong**	**41.72**	**94**		P	**P**	**07 21 47.7**	**+1.7**	
SHL	**Shillong**	**41.72**	**94**		P	**P**	**07 21 47.7**	**+1.7**	
SHL					pmax	pmax			
	comp=Z,5.0nm,0.4s								
ULN	**Ulaanbaatar**	**45.37**	**57**	⇑	*e*P	**P**	**07 22 16.3**	**+1.2**	
ULN					pmax	pmax			
	comp=Z,6.0nm,1.7s								
TORD	**Torodi Ar. Bea**	**45.55**	**248**		P	**P**	**07 22 15.3**	**-1.5**	
	comp=Z,0.8nm,0.9s,baz=15,slow=6.2,SNR=4.1								
	comp=Z,0.8nm,0.9s								
PZH	**PanZhiHua**	**48.99**	**86**		P	**P**	**07 22 46.8**	**+3.2**	
HHC	**Hu-ho-hao-te**	**50.46**	**65**		*e*P	**P**	**07 22 52.5**	**-2.1**	
HHC					pmax	pmax			
	comp=Z,55nm,0.8s								
HHC					pmax	pmax			
	comp=Z,160nm,4.7s								
CMAR	**Chiang Mai Arr**	**51.05**	**97**		P	**P**	**07 22 59.0**	**-0.1**	
	comp=Z,1.5nm,0.3s,baz=302,slow=7.8,SNR=10.0								
	comp=Z,1.5nm,0.3s								
TIXI	**Tiksi**	**52.18**	**24**	⇑	*e*P	**P**	**07 23 08.3**	**+1.4**	
TIXI					pmax	pmax			
	comp=Z,11nm,2.5s								
QIZ	**Qiongzhong**	**59.25**	**89**		P	**P**	**07 24 00.5**	**+2.1**	
QIZ					S	**S**	**07 32 13.4**	**+6.7**	
QIZ					LR	LR			
	comp=N,170nm,8.9s								
QIZ					LR	LR			
	comp=E,200nm,8.2s								
QIZ					LR	LR			
	comp=Z,230nm,8.9s								
KSRS	**Korea Array**	**63.40**	**62**		P	**P**	**07 24 25.1**	**-1.1**	
	comp=Z,1.6nm,0.7s,baz=294,slow=6.0,SNR=2.2								
	comp=Z,1.6nm,0.7s								
SEY	**Seymchan**	**63.77**	**29**		P	**P**	**07 24 29.1**	**+0.8**	
	comp=Z,3.4nm,0.6s,baz=294,slow=7.0,SNR=14								
	comp=Z,3.4nm,0.6s								
SEY	**Seymchan**	**63.77**	**29**	⇑	*e*P	**P**	**07 24 29.7**	**+1.4**	
SEY					pmax	pmax			
	comp=Z,6.0nm,1.0s								
BOSA	**Boshof**	**69.20**	**198**		P	**P**	**07 25 03.5**	**0.0**	
	comp=Z,2.3nm,0.8s,baz=51,slow=10,SNR=3.9								
	comp=Z,2.3nm,0.8s								
MJAR	**Matsushiro Arr**	**70.88**	**58**		LR	LR	07 58 56.0		
	comp=Z,40nm,18.3s,baz=5.0,slow=38								
YKA	**Yellowknife Ar**	**77.92**	**350**		P	**P**	**07 25 54.2**	**-0.1**	
	comp=Z,0.4nm,0.9s,baz=7.1,slow=6.5,SNR=8.7								
	comp=Z,0.4nm,0.9s								
ULM	**Lac du Bonnet**	**84.97**	**336**		P	**P**	**07 26 31.8**	**-0.1**	
	comp=Z,1.4nm,0.8s,baz=18,slow=4.5,SNR=3.4								
	comp=Z,1.4nm,0.8s								

*IDC **19** 07:24:56.4±0.9, 59°.85S×32°.63W, h0km, mb4.0/7, mbtmp3.9/7, MS3.5/14, Error ellipse: s-maj=38.0km s-min=24.0km az=63.0*
ISC 19 07:24:54.4±0.8, **60°.6S**±0°.2×**32°.5W**±0°.2, **h10**km, **n32, σ26'64/13, mb3.7/5, MS3.6/13, 2C-1D, Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**14.05**	**149**	⇃P		**Pn**	**07 28 11.3**	**-1.8**
	comp=Z,11nm,0.2s							
VNA1	**Neumayer--Stat**	**14.08**	**146**	⇑P		**Pn**	**07 28 12.4**	**-1.1**
	comp=Z,13nm,0.2s							
VNA2	**Neumayer--Watz**	**14.47**	**146**	⇑P		**Pn**	**07 28 18.1**	**-0.8**
	comp=Z,6.9nm,0.2s,baz=305,slow=15							
SNAA	**Sanae**	**16.11**	**146**	P		**Pn**	**07 28 41.6**	**+0.9**
	comp=Z,49nm,0.4s							
SNAA	**Sanae**	**16.11**	**146**	LR		LR	07 33 28.7	
	comp=Z,275nm,21.1s,baz=357,slow=31							
TROLL	**Troll, Antarti**	**17.78**	**144**	P		**P**	**07 29 02.8**	**+0.3**
QSPA	**South Pole Qui**	**29.65**	**180**	P		P	07 31 09.2	+9.5
	comp=Z,0.9nm,0.9s,baz=192,slow=3.5,SNR=6.2							
QSPA				LR		LR	07 42 25.1	
	comp=Z,154nm,20.4s,baz=204,slow=34							
	comp=Z,0.9nm,0.9s							
PLCA	**Paso Flores**	**30.60**	**293**	P		**P**	**07 31 08.0**	**-0.2**
	comp=Z,1.7nm,1.0s,baz=103,slow=14,SNR=1.2							
PLCA				LR		LR	07 42 54.4	
	comp=Z,53nm,18.1s,baz=140,slow=36							
	comp=Z,1.7nm,1.0s							
CPUP	**Villa Florida**	**38.21**	**323**	P		**P**	**07 32 12.6**	**-1.5**
	comp=Z,1.0nm,1.1s,baz=147,slow=15,SNR=3.3							
CPUP				LR		LR	07 47 44.6	
	comp=Z,43nm,19.5s,baz=153,slow=36							
	comp=Z,1.0nm,1.1s							
MAW	**Mawson**	**38.23**	**142**	LR		LR	07 47 27.3	
	comp=Z,70nm,18.2s,baz=274,slow=35							
BDFB	**Brasilia**	**46.27**	**339**	LR		LR	07 49 41.5	
	comp=Z,48nm,20.8s,baz=139,slow=33							
H04S2	**CROZET ISLANDS**	**48.28**	**114**	T		T	08 25 52.8	
	baz=222,slow=75,SNR=89							
H04S3	**CROZET ISLANDS**	**48.29**	**114**	T		T	08 25 54.1	
	baz=222,slow=75,SNR=100							
H04S1	**CROZET ISLANDS**	**48.30**	**114**	T		T	08 25 54.2	
	baz=222,slow=75,SNR=105							
SIV	**San Ignacio**	**49.08**	**323**	LR		LR	07 54 38.5	
	comp=Z,66nm,19.6s,baz=113,slow=37							
BOSA	**Boshof**	**49.78**	**77**	LR		LR	07 49 37.2	
	comp=Z,43nm,20.0s,baz=214,slow=30							
LPAZ	**La Paz**	**51.12**	**314**	P		**P**	**07 33 58.0**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=208,slow=9.5,SNR=5.2							
LPAZ				LR		LR	07 57 15.8	
	comp=Z,18nm,20.1s,baz=204,slow=38							
	comp=Z,0.6nm,0.6s							
H10S2	**ASCENSION HYDR**	**53.23**	**22**	T		T	08 31 53.2	
	baz=190,slow=74,SNR=97							
H10S3	**ASCENSION HYDR**	**53.23**	**22**	T		T	08 31 53.5	
	baz=30,slow=74,SNR=92							
H10N1	**ASCENSION HYDR**	**54.35**	**22**	T		T	08 33 04.3	
	baz=190,slow=75,SNR=56							
H10N3	**ASCENSION HYDR**	**54.35**	**22**	T		T	08 33 05.4	
	baz=190,slow=75,SNR=65							
H10N2	**ASCENSION HYDR**	**54.36**	**22**	T		T	08 33 08.4	
	baz=190,slow=75,SNR=42							
DBIC	**Dimbokro**	**70.50**	**29**	LR		LR	08 00 54.4	
	comp=Z,45nm,18.4s,baz=26,slow=31							
ROSC	**El Rosal**	**72.92**	**316**	LR		LR	08 11 28.4	
	comp=Z,29nm,19.0s,baz=129,slow=39							
SDV	**Santo Domingo**	**75.51**	**321**	LR		LR	08 09 45.2	
	comp=Z,31nm,21.9s,baz=210,slow=36							
TORD	**Torodi Ar. Bea**	**78.41**	**34**	P		**P**	**07 36 54.9**	**0.0**
	comp=Z,0.7nm,0.5s,baz=206,slow=7.9,SNR=7.2							
	comp=Z,0.7nm,0.5s							
SJG	**San Juan**	**82.99**	**328**	LR		LR	08 13 32.1	
	comp=Z,35nm,21.7s,baz=132,slow=35							
ASAR	**Alice Springs**	**95.32**	**168**	P		P	07 38 26.5	+8.0
	comp=Z,0.8nm,1.0s,baz=176,slow=4.1,SNR=3.8							
ASAR				LR		LR	08 19 48.7	
	comp=Z,37nm,19.1s,baz=277,slow=34							
	comp=Z,0.8nm,1.0s							
WRA	**Warramunga Arr**	**99.05**	**167**	P		**Pdif**	**07 38 43.2**	**+7.7**
	comp=Z,0.4nm,0.9s,baz=183,slow=5.9,SNR=1.9							
	comp=Z,0.4nm,0.9s							
YKA	**Yellowknife Ar**	**137.62**	**317**	PKP		**PKiKP**	**07 44 19.2**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=149,slow=1.7,SNR=6.8							
ZALV	**Zalesovo Beam**	**146.67**	**73**	PKPbc		**PKiKP**	**07 44 37.6**	**0.0**
	comp=Z,0.6nm,0.4s,baz=224,slow=4.1,SNR=3.6							
ILAR	**Eielson Array**	**150.82**	**307**	PKPbc		**PKiKP**	**07 44 47.1**	**+1.2**
	comp=Z,3.7nm,1.0s,baz=160,slow=2.2,SNR=27							

*IDC **19** 07:31:48.0±1.1, 27°.22N×103°.24E, h0km, mb3.4/6, mbtmp3.5/7, ML4.0/1, MS3.3/5, Error ellipse: s-maj=43.6km s-min=18.9km az=72.0*
ISC 19 07:31:49.6±1.1, **27°.3N**±0°.1×**103°.3E**±0°.3, **h10**km, **n11, σ0°52'/7, mb3.6/5, MS3.3/4, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**9.62**	**205**		Pn	**Pn**	**07 34 08.4**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=17,slow=12,SNR=4.1							
CMAR					Pg		07 34 41.0	
	comp=Z,0.8nm,0.3s,baz=4.5,slow=15,SNR=4.6							
CMAR					LR	LR	07 38 11.9	
	comp=Z,68nm,19.2s,baz=115,slow=40							
	comp=Z,0.8nm,0.3s							
SONM	**Songino Array**	**20.70**	**6**	P		**P**	**07 36 30.7**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=181,slow=12,SNR=4.6							
	comp=Z,0.2nm,0.4s							
KSRS	**Korea Array**	**23.11**	**58**	LR		LR	07 47 21.5	
	comp=Z,28nm,20.1s,baz=275,slow=40							
MKAR	**Makanchi Array**	**25.58**	**325**	P		**P**	**07 37 18.9**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=124,slow=7.2,SNR=5.0							
	comp=Z,0.4nm,0.6s							
ZALV	**Zalesovo Beam**	**29.95**	**338**	P		**P**	**07 37 57.4**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=163,slow=10,SNR=2.0							
	comp=Z,0.4nm,0.3s							
KURBB	**Kurchatov Arra**	**30.00**	**328**	P		**P**	**07 37 57.8**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=135,slow=9.9,SNR=5.4							
	comp=Z,0.3nm,0.3s							
KLR	**Kul'dur**	**31.02**	**37**	LR		LR	07 52 28.8	
	comp=Z,35nm,19.4s,baz=340,slow=40							
SIJI	**Sorong**	**38.80**	**132**	LR		LR	07 54 49.8	
	comp=Z,71nm,19.4s,baz=75,slow=36							
WRA	**Warramunga Arr**	**55.73**	**144**	P		**P**	**07 41 26.4**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=332,slow=8.1,SNR=5.6							
	comp=Z,0.4nm,0.6s							
ASAR	**Alice Springs**	**58.62**	**147**	P		**P**	**07 41 46.9**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=335,slow=6.8,SNR=1.8							
	comp=Z,0.2nm,0.4s							
GERES	**GERESS Array B**	**69.75**	**315**	LR		LR	08 16 01.6	
	comp=Z,69nm,19.4s,baz=1.5,slow=38							

*CATAC **19** 07:43:08.8±0.7, 14°N±12°×9°1W±°, h110km±7km, M3.1/12, MLv3.1/12, Error ellipse: s-maj=28.3km s-min=4.4km az=20.5, confirmed*
*SNET **19** 07:43:10.1±1.9, 13°.96N×90°.95W, h100km, ML3.2, Presumed earthquake*
*GCG **19** 07:43:10.4±0.9, 14°.23N×90°.82W, h104km±6km, MD3.7, ML3.5, Presumed earthquake*
ISC 19 07:43:09.9±2.2, **14°.14N**±0°.09×**90°.80W**±0°.05, **h121**km±15km, **n28, σ1°53'/40, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
FG8	**Yepocapa, Chim**	**0.26**	**62**	*i* P		**Pn**	**07 43 25.8**	**-1.2**
FG16	**Alotenango, Sa**	**0.31**	**64**	*i* P		**Pn**	**07 43 25.9**	**-1.4**
PCG5	**San Vicente Pa**	**0.41**	**79**	*i* P		**Pn**	**07 43 25.8**	**-1.8**
PCG5				IAML			07 43 41.9	
	comp=N,785nm,0.4s							
STG5	**El Palmar, Qui**	**0.60**	**296**	*i* P		**Pn**	**07 43 29.9**	**+1.2**
STG8	**El Palmar, Qui**	**0.62**	**300**	*i* P		**Pn**	**07 43 30.6**	**+1.6**
STG8				*i* S		**Sn**	**07 43 46.6**	**+3.2**
STG8				IAML			07 43 49.9	
	comp=E,1μm,0.1s							
STG2	**El Palmar, Qui**	**0.63**	**298**	*i* P		**Pn**	**07 43 30.7**	**+1.7**
STG2				*i* S		**Sn**	**07 43 47.7**	**+4.3**
ESSJ	**San Jos, E**	**0.64**	**153**	*i* P		**Pn**	**07 43 26.1**	**-2.8**
FAME	**Alcaldia de Sa**	**0.81**	**111**	P		**Pn**	**07 43 29.4**	**-0.9**
FAME				S		**Sn**	**07 43 45.2**	**-0.5**
SOKI	**Kika Raxquin**	**0.90**	**319**	*i* P		**Pn**	**07 43 30.7**	**-0.8**
APC	**El Apazote**	**0.92**	**20**	*i* P		**Pn**	**07 43 30.8**	**-0.7**
APG				*i* S		**Sn**	**07 43 45.6**	**-2.2**
RTAL	**Retalhuleu**	**0.95**	**294**	P		**Pn**	**07 43 30.7**	**-0.8**
RTAL				S		**Sn**	**07 43 46.0**	**-1.9**
SLOZ	**Alcaldia de Sa**	**0.99**	**96**	P		**Pn**	**07 43 31.1**	**-0.8**
LOAL	**Lomas de Alarc**	**1.00**	**98**	P		**Pn**	**07 43 31.3**	**-0.7**
NUBE	**Las Nubes**	**1.01**	**103**	P		**Pn**	**07 43 31.8**	**-0.6**
NUBE				S		**Sn**	**07 43 49.2**	**0.0**
NUBE	**Las Nubes**	**1.01**	**103**	*i* P		**Pn**	**07 43 31.9**	**-0.5**
CEVE	**Cerro Verde**	**1.18**	**105**	P		**Pn**	**07 43 33.9**	**-0.2**
CEVE	**Cerro Verde**	**1.18**	**105**	*e*P		**Pn**	**07 43 33.9**	**-0.2**
CEVE				*e*S		**Sn**	**07 43 54.8**	**+2.4**
UNIC	**Universidad Ca**	**1.22**	**97**	P		**Pn**	**07 43 33.8**	**-0.6**
UNIC				S		**Sn**	**07 43 55.1**	**+2.2**
HUEH	**Huehuetenango**	**1.36**	**330**	*e*P		**Pn**	**07 43 35.9**	**-0.1**
JAYA	**Jayaque - finc**	**1.40**	**110**	P		**Pn**	**07 43 36.3**	**-0.1**
JAYA	**Jayaque - finc**	**1.40**	**110**	*i* P		**Pn**	**07 43 36.3**	**-0.1**
JAYA				*i* S		**Sn**	**07 43 56.1**	**-0.4**
JAYA				IAML			07 44 00.7	
	comp=E,818nm,0.2s							
JAYA	**Jayaque - finc**	**1.40**	**110**	*e*P		**Pn**	**07 43 36.4**	**0.0**
JAYA				*e*S		**Sn**	**07 43 56.0**	**-0.4**
SMCA	**Catarina**	**1.43**	**300**	*i* P		**Pn**	**07 43 35.4**	**-1.2**
SMCA				*i* S		**Sn**	**07 43 55.1**	**-1.7**
ZAFR2	**Estanzuela, Za**	**1.47**	**72**	*i* P		**Pn**	**07 43 36.4**	**-0.7**
PMON	**Piamonte**	**1.50**	**106**	P		**Pn**	**07 43 37.4**	**-0.1**
PMON				S		**Sn**	**07 44 00.5**	**+2.0**
UEES	**Universidad Ev**	**1.57**	**105**	P		**Pn**	**07 43 38.4**	**+0.1**
PAVA	**Las Pavas**	**1.85**	**103**	P		**Pn**	**07 43 41.5**	**-0.3**
SARH	**Santa Rosa de**	**2.07**	**72**	*i* P		**Pn**	**07 43 45.0**	**+0.6**

*JMA **19** 08:01:40.1±0.2, 25°N±1°×122°.4E±0°.3, h2km±2km, MV2.4/10, TAIWAN REGION*
*TAP **19** 08:01:40.7, 24°.81N×122°.33E, h12km, ML2.7, C*
ISC 19 08:01:40.3±1.0, **24°.79N**±0°.03×**122°.37E**±0°.02, **h8**km±9km, **n41, σ0°61/72, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.39**	**199**	*e*P		**Pb**	**08 01 49.4**	**0.0**
EOS2				*e*S		**Sb**	**08 01 56.3**	**+0.9**
EGS		**0.40**	**278**	P		**Pb**	**08 01 48.8**	**-0.9**
TWB1	**Santiao Chiao**	**0.41**	**302**	*i* P		**Pg**	**08 01 48.5**	**+0.1**
TWB1				*i* S		**Sg**	**08 01 54.1**	**+0.2**
EOS3	**EOS3**	**0.50**	**186**	*e*P		**Pb**	**08 01 50.8**	**-0.4**
EOS3				*e*S		**Sb**	**08 01 59.5**	**+0.9**
TWC	**Suao**	**0.51**	**250**	P		**Pg**	**08 01 50.1**	**-0.1**
TIPB	**Shuangxi**	**0.53**	**290**	*e*P		**Pg**	**08 01 50.8**	**+0.2**
TIPB				*e*S		**Sg**	**08 01 58.2**	**+0.7**
SXI1	**Grass Mountain**	**0.55**	**304**	P		**Pg**	**08 01 51.4**	**+0.4**
SXI1				*e*S		**Sg**	**08 01 59.0**	**+0.9**
NWF	**Wu-fen Shan**	**0.61**	**298**	*i* P		**Pb**	**08 01 53.1**	**-0.1**
NWF				S		**Sb**	**08 02 01.2**	**-0.8**
WFSB	**Wu-fen Shan**	**0.61**	**298**	*e*P		**Pb**	**08 01 52.9**	**-0.2**
WFSB				*e*S		**Sb**	**08 02 01.0**	**-0.9**
NDS	**Dongshan**	**0.62**	**256**	*e*P		**Pg**	**08 01 52.3**	**+0.1**
NDS				*e*S		**Sb**	**08 02 01.6**	**-0.6**
JYNG	**Yonagunijimaku**	**0.62**	**123**	*e*P		**Pg**	**08 01 51.9**	**-0.4**
JYNG				*e*S		**Sg**	**08 02 00.2**	**-0.2**
EWUT	**Wuta**	**0.64**	**238**	*e*P		**Pg**	**08 01 52.6**	**-0.1**
TWE	**Neicheng**	**0.65**	**264**	*e*P		**Pg**	**08 01 52.8**	**0.0**
TWE				*e*S		**Sb**	**08 02 02.0**	**-0.9**
EOS4	**EOS4**	**0.67**	**184**	*e*P		**Pb**	**08 01 54.0**	**0.0**
EOS4				*e*S		**Sb**	**08 02 03.2**	**+0.1**
YOJ	**Yonaguni jima**	**0.67**	**119**	*e*P		**Pg**	**08 01 53.0**	**-0.2**
YOJ	**Yonaguni jima**	**0.67**	**119**	P		**Pg**	**08 01 52.8**	**-0.4**
YOJ				*e*S		**Sg**	**08 02 01.9**	**0.0**
ENA	**Nanau**	**0.68**	**238**	*e*P		**Pb**	**08 01 53.6**	**-0.7**
ENA				*e*S		**Sb**	**08 02 04.0**	**+0.1**
FUSB	**Fushanzhiwuyua**	**0.71**	**268**	P		**Pb**	**08 01 54.7**	**-0.4**
FUSB				S		**Sb**	**08 02 04.5**	**-0.5**
EAHA	**Aohua**	**0.73**	**232**	*e*S		**Sb**	**08 02 05.0**	**-0.5**
ENTT	**Nioudou**	**0.75**	**259**	*e*P		**Pg**	**08 01 54.8**	**0.0**
ENTT				*e*S		**Sb**	**08 02 05.4**	**-0.5**
NWLT	**Wulai**	**0.79**	**269**	*e*P		**Pb**	**08 01 56.0**	**-0.4**
NWLT				*e*S		**Sb**	**08 02 06.6**	**-0.6**
NDT	**Datong Townshi**	**0.80**	**257**	*e*P		**Pb**	**08 01 56.0**	**-0.6**
LATG	**Datong**	**0.81**	**252**	*e*P		**Pb**	**08 01 56.0**	**-0.7**
LATG				*e*S		**Sb**	**08 02 07.8**	**0.0**
YM01	**YM01**	**0.81**	**296**	*e*P		**Pb**	**08 01 56.4**	**-0.3**
YM01				*e*S		**Sb**	**08 02 07.2**	**-0.6**
YM08	**YM08**	**0.81**	**300**	*e*P		**Pb**	**08 01 56.5**	**-0.2**
YM08				S		**Sb**	**08 02 07.1**	**-0.8**
TWY	**Chenhua**	**0.85**	**305**	P		**Pb**	**08 01 57.4**	**0.0**
TWY				*e*S		**Sb**	**08 02 08.6**	**-0.4**
PCYT	**Pengchaiyu**	**0.88**	**342**	P		**Pg**	**08 01 57.8**	**+0.4**
YHNB	**Yeheng**	**0.91**	**263**	P		**Pb**	**08 01 57.9**	**-0.6**
NSK	**Sanguang**	**0.93**	**263**	*e*P		**Pg**	**08 01 58.1**	**-0.1**
NSK				*e*S		**Sg**	**08 02 09.9**	**-0.4**
NACB	**Ninganchiao**	**0.94**	**229**	P		**Pg**	**08 01 58.0**	**-0.3**
NACB				*e*S		**Sb**	**08 02 11.0**	**-0.3**
NNSB	**Datong**	**0.97**	**249**	*e*P		**Pg**	**08 01 58.4**	**-0.5**
NNSB				*e*S		**Sb**	**08 02 12.9**	**+0.5**
NNS	**Nan Shan**	**0.97**	**249**	*e*P		**Pb**	**08 01 59.4**	**-0.1**
NNS				*e*S		**Sb**	**08 02 12.7**	**+0.2**
FUSS	**Fushou**	**1.16**	**243**	*e*P		**Pn**	**08 02 03.1**	**+0.1**
FUSS				*e*S		**Sb**	**08 02 17.8**	**-0.2**
LXIB	**Xiulin Townshi**	**1.16**	**229**	*e*P		**Pb**	**08 02 02.4**	**-0.3**
LXIB				*e*S		**Sn**	**08 02 21.6**	**+2.6**
WHF	**Hehuan Shan**	**1.19**	**238**	*e*P		**Pg**	**08 02 02.8**	**-0.5**
WHF				*e*S		**Sn**	**08 02 19.5**	**-0.8**
TWT	**Tachien**	**1.21**	**244**	*e*P		**Pn**	**08 02 03.9**	**+0.2**
TWT				*e*S		**Sn**	**08 02 19.9**	**-0.4**
NSTT	**Nanjuang**	**1.26**	**263**	*e*P		**Pg**	**08 02 04.8**	**+0.3**
NSTT				*e*S		**Sn**	**08 02 21.5**	**+0.3**
IRIF	**Iriomote-Funau**	**1.32**	**110**	*e*P		**Pn**	**08 02 04.8**	**-0.1**
IRIF				*e*S		**Sb**	**08 02 21.2**	**-1.1**
OWD	**Renai**	**1.37**	**233**	*e*P		**Pb**	**08 02 06.0**	**-0.3**
OWD				*e*S		**Sn**	**08 02 25.9**	**+1.7**
HATJ	**Hateruma jima**	**1.50**	**119**	*e*S		**Sn**	**08 02 26.6**	**-0.4**
JISG	**Ishigakijimahi**	**1.77**	**96**	*e*P		**Pb**	**08 02 13.8**	**+0.7**

*ATH **19** 08:02:51.4, 36°.41N×23°.07E, h16km, ML2.4/2, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **19** 08:02:51.5, 36°N±3°×2°.3E±°, h11km±5km, M2.6/6, MLh2.6/6*
ISC 19 08:02:51.5±0.9, **36°.42N**±0°.03×**23°.09E**±0°.03, **h15**km±6km, **n33, σ0°45/50, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
NPS1	**Neapolis Lacon**	**0.09**	**347**	P		**Pg**	**08 02 54.9**	**+0.1**
NPS1				S		**Sg**	**08 02 57.3**	**+0

CUAYA	Sivas-Altinyay	0.97	192	P	Pg	08 04 43.2	-1.4
CUAYA				IAML		08 04 59.0	
	comp=N,7μm,0.3s						
CUAYA				IAML		08 04 59.0	
	comp=E,5μm,0.3s						
CUAYA				S	Sn	08 04 59.2	-0.1
ORDU	Ordu-Boztepe	1.00	39	P	Pg	08 04 44.8	-0.4
ORDU				S	Sn	08 05 00.8	+0.9
ORDU				IAML		08 05 01.0	
	comp=N,10μm,0.8s						
KIZO	Buyukkizoglu-L	1.07	310	Pg	Pb	08 04 45.9	-0.5
HACI	Hacifakili, Ak	1.11	243	P	Pb	08 04 45.4	-1.7
HACI				S	Sn	08 05 03.5	+0.8
HACI				IAML		08 05 04.0	
	comp=N,5μm,0.9s						
YARM	Yarimca-Ladik(	1.15	308	Pn	Pb	08 04 47.3	-0.4
YARM				Sn	Sg	08 05 03.0	+0.1
MDIV		1.20	138	P	Pn	08 04 47.7	-0.8
MDIV				S	Sn	08 05 05.8	+1.1
MDIV				IAML		08 05 08.0	
	comp=N,4μm,0.9s						
MDIV				IAML		08 05 10.0	
	comp=E,6μm,0.6s						
ALUC	Giresun/Alucra	1.35	84	P	Pn	08 04 49.9	-0.7
ALUC				S	Sb	08 05 09.1	+0.7
ALUC				IAML		08 05 21.0	
	comp=E,3μm,0.5s						
ALUC				IAML		08 05 22.0	
	comp=N,3μm,0.6s						
ILIC	ilic-Erzincan	1.42	122	Pn	Pn	08 04 52.4	+0.8
ILIC				Sn	Sg	08 05 13.0	+1.5
YOZ	Yozgat	1.43	247	Pn	Pn	08 04 51.8	+0.1
YOZ				Sn	Sg	08 05 12.6	+0.8
ARPR	Arapgir-MALATY	1.52	137	Pn	Pn	08 04 53.9	+1.0
HEKM	Malatya_Hekimh	1.52	151	P	Pn	08 04 53.9	+0.8
HEKM				IAML		08 05 24.0	
	comp=E,4μm,0.4s						
HEKM				IAML		08 05 25.0	
	comp=N,2μm,0.4s						
COAL	Corum-Alaca	1.56	272	P	Pn	08 04 53.2	-0.3
COAL				S	Sg	08 05 16.4	+0.5
SIRC	Yozgat	1.69	239	P	Pn	08 04 54.9	-0.3
SIRC				S	Sg	08 05 19.6	-0.5
GUNE	Kayseri	1.70	220	P	Pn	08 04 55.9	+0.5
GUNE				S	Sg	08 05 22.4	+2.0
GUNE				IAML		08 05 27.0	
	comp=E,3μm,0.3s						
GUNE				IAML		08 05 39.0	
	comp=N,3μm,0.7s						
AYAZ	Ayas K¶y, M	1.71	286	P	Pn	08 04 56.2	+0.6
AYAZ				S	Sg	08 05 20.8	-0.1
KELT	Kelkit	1.72	92	P	Pn	08 04 55.8	0.0
KELT				S	Sb	08 05 20.1	+1.0
YOZG	Bozok Univ. Me	1.76	256	P	Pn	08 04 56.9	+0.6
YOZG				S	Sb	08 05 21.1	+0.8
CORM	Corum	1.83	270	Pn	Pn	08 04 57.9	+0.7
GUMT	Gumushane	1.90	82	Pn	Pn	08 04 59.5	+1.3
KOZK	Kozakli-Nevseh	1.94	239	Pn	Pn	08 04 59.7	+1.0
ERZN	Erzincan	2.17	106	Pn	Pn	08 05 03.5	+1.5
SNOP	Sinop	2.26	323	Pn	Pn	08 05 04.3	+1.2
SINP	Sinop	2.29	321	Pn	Pn	08 05 04.6	+1.2
CANT	Cankiri	2.62	280	Pn	Pn	08 05 09.3	+1.2
KIRS	Kirsehir-Merke	2.62	247	⇓P	Pn	08 05 09.3	+1.1
KIRS				⇓S	Sb	08 05 46.8	+1.7
BR131	Keskin Array S	2.64	260	Pn	Pn	08 05 09.2	+0.8
BRTR	Keskin Array B	2.64	260	Pn	Pn	08 05 08.9	+0.5
	15nm,0.3s,baz=84,slow=15,SNR=326						
BRTR				Sn	Sn	08 05 41.6	+1.2
	18nm,0.3s,baz=106,slow=21,SNR=1.9						
BRTR				Lg	Lg	08 05 48.4	
	37nm,0.3s,baz=98,slow=26,SNR=8.8						
BRTR				LR	LR	08 06 01.2	
	comp=Z,61nm,20.1s,baz=77,slow=37						
	49nm,0.4s						
KAMT	Kaman	2.68	253	Pn	Pn	08 05 09.9	+1.0
KMON	Kastamonu	2.71	296	Pn	Pn	08 05 10.5	+1.2
GULA	Gulagac	2.85	230	Pn	Pn	08 05 12.6	+1.3
BZK	Bozkurt	2.87	308	⇓P	Pb	08 05 17.8	+0.9
BZK	Bozkurt	2.87	308	Pn	Pn	08 05 12.9	+1.5
SERE	Sereflikochisa	2.95	246	Pn	Pn	08 05 14.2	+1.5
ALU	Alushta	4.86	337	*e*P	Pn	08 05 36.3	-2.5
ALU				pmax	pmax	08 05 37.2	
	comp=Z,19nm,0.4s						
ALU				*e*S	Sn	08 06 33.8	-1.2
ALU				smax	smax	08 06 34.5	
	comp=N,102nm,0.4s						
ALU				smax	smax	08 06 34.5	
	comp=E,41nm,0.6s						
SUDU	Sudak	4.90	343	*e*P	Pn	08 05 39.0	-0.3
SUDU				pmax	pmax	08 05 39.3	
	comp=Z,15nm,0.2s						
SEV	Sevastopol'	4.99	331	*e*P	Pn	08 05 40.6	+0.1
SEV				pmax	pmax	08 05 41.6	
	comp=Z,4.0nm,0.2s						
SEV				*e*S	Sn	08 06 38.0	0.0
SEV				smax	smax	08 06 38.6	
	comp=N,7.0nm,0.4s						
SEV				smax	smax	08 06 38.6	
	comp=E,2.0nm,0.3s						
AKH	Akhalkalaki	5.06	74	P	Pn	08 05 48.4	+6.7
AKH				S	Sg	08 07 04.0	-4.2
BGD	Bogdanovka	5.11	76	P	Pb	08 05 51.3	-3.9
ALIG	Mtskhetisjvari	5.35	67	P	Pn	08 05 47.3	+1.8
TRLG	Trialeti	5.53	74	P	Pn	08 05 54.9	+6.8
KBZ	Khabaz	5.62	49	Pn	Pn	08 05 50.8	+1.7
	comp=E,0.9nm,0.3s,baz=171,slow=12,SNR=13						
KBZ				Sn	Sn	08 06 57.2	+3.7
	comp=E,0.3nm,0.3s,baz=247,slow=19,SNR=3.8						
KBZ				LR	LR	08 08 29.4	
	comp=E,151nm,19.6s,baz=227,slow=44						
	comp=E,3.3nm,0.6s						
KVAR	Kislovodsk Arr	5.64	47	Pn	Pn	08 05 50.7	+1.1
	comp=E,4.7nm,0.4s,baz=252,slow=19						
DNZ2	Donuzlav2	5.87	333	*e*P	Pn	08 05 54.0	+1.5
DNZ2				pmax	pmax	08 05 54.7	
	comp=Z,14nm,0.2s						
GNI	Garni	5.92	88	Pg	Pb	08 06 04.7	-4.3
	comp=Z,1.4nm,0.3s,baz=353,slow=20,SNR=1.7						
GNI				Lg	Lg	08 07 32.5	
	comp=Z,1.8nm,0.3s,baz=176,slow=23,SNR=1.3						
TARU	Tarkhankut	6.12	329	*e*P	Pn	08 05 58.2	+2.1
TARU				pmax	pmax	08 06 03.1	
	comp=Z,11nm,0.4s						
CHRG	Chargali	6.32	68	P	Pn	08 06 00.3	+1.4
MMAI	Mount Meron Ar	7.30	191	Pn	Pn	08 06 09.7	-2.7
	comp=Z,1.4nm,0.3s,baz=9.0,slow=19,SNR=1.5						
MMAI				LR	LR	08 08 48.7	
	comp=Z,38nm,20.1s,baz=29,slow=37						
	comp=Z,0.5nm,0.3s						
TIRR	Tirgusor	7.65	306	⇓P	Pn	08 06 16.2	-0.9
ASF	Jabal al Asfar	8.03	181	Pn	Pn	08 06 20.2	-2.2
	comp=Z,2.5nm,0.8s,baz=45,slow=8.6,SNR=1.7						
ASF				Pg	Pb	08 06 48.5	+3.6
	comp=Z,0.4nm,0.3s,baz=331,slow=14,SNR=3.7						
ASF				Lg	Lg	08 08 37.1	
	comp=Z,0.2nm,0.3s,baz=18,slow=20,SNR=1.4						
CFR	Carcaliu	8.21	310	⇓P	Pn	08 06 24.0	-0.6
VRI	Vrincioaia	9.41	310	⇓P	Pn	08 06 39.8	-1.4
MLR	Muntele Rosu	9.69	307	Pn	Pn	08 06 47.6	+2.5
	comp=Z,0.4nm,0.3s,baz=172,slow=9.4,SNR=4.7						
	comp=Z,1.3nm,0.3s						
ONER	Baraj Valea Uz	9.86	312	⇑P	Pn	08 06 46.9	-0.5
VOIR		10.22	305	⇑P	Pn	08 06 51.7	-0.6
EIL	Elat	10.66	190	Pn	Pn	08 06 56.2	-2.2
	comp=Z,0.2nm,0.3s,baz=327,slow=17,SNR=1.6						
	comp=Z,2.8nm,0.7s						
BURAR	Bucovina Array	11.27	315	⇑P	Pn	08 07 05.3	-1.4
AKASG	Malin Array Be	11.82	335	Pn	Pn	08 07 11.8	-2.3
	comp=Z,1.1nm,0.3s,baz=140,slow=13,SNR=4.2						
AKASG				Sn	Sn	08 09 23.9	-2.0
	comp=Z,0.2nm,0.3s,baz=150,slow=26,SNR=1.7						
AKASG				LR	LR	08 12 10.4	
	comp=Z,65nm,19.8s,baz=140,slow=39						
	comp=Z,0.4nm,0.3s						
AKTO	Aktyubinsk	17.90	48	P	Pn	08 08 33.9	-0.6
	comp=Z,0.1nm,0.3s,baz=245,slow=7.6,SNR=4.0						
	comp=Z,1.1nm,0.6s						
GERES	GERESS Array B	18.67	305	P	Pn	08 08 45.5	+1.4
	baz=97,slow=13,SNR=2.0						
	comp=Z,0.3nm,0.7s						
MOTA	Moosalm	19.96	299	*e*Pn	P	08 08 58.9	+1.0
	comp=Z,2.5nm,0.5s						
CLL	Collm	20.00	312	*e*P	P	08 08 58.0	-0.1
FETA	Feichten	20.15	298	*e*Pn	Pn	08 09 01.7	-0.2
	comp=Z,3.0nm,0.7s						
DAVOX	Davos/Dischmat	20.69	297	P	P	08 09 06.1	+0.2
	comp=Z,1.2nm,0.5s,baz=130,slow=12,SNR=3.7						
	comp=Z,1.2nm,0.5s						
DAVA	Damuels	20.77	299	*e*Pn	P	08 09 07.4	+0.7
	comp=Z,5.3nm,0.6s						
ARTI	Arti	21.39	34	P	P	08 09 15.0	+1.8
	comp=Z,1.5nm,0.3s,baz=279,slow=9.5,SNR=3.2						
	comp=Z,1.5nm,0.3s						
KEST	Kesra	22.23	267	P	P	08 09 23.9	+1.6
	comp=Z,4.1nm,0.8s,baz=358,slow=7.3,SNR=5.6						
	comp=Z,4.1nm,0.8s						
FINES	FINESS Array B	22.29	346	P	P	08 09 24.0	+1.3
	comp=Z,3.7nm,0.9s,baz=192,slow=15,SNR=4.8						
	comp=Z,3.7nm,0.9s						
HFS	Hagfors	24.67	332	P	P	08 09 45.7	-0.6
	comp=Z,1.6nm,0.8s,baz=146,slow=10,SNR=1.4						
	comp=Z,1.6nm,0.8s						
BVAR	Borovoye Array	26.00	49	P	P	08 09 59.0	+0.7
	comp=Z,0.2nm,0.3s,baz=280,slow=8.6,SNR=2.4						
BVAR				LR	LR	08 22 59.8	
	comp=Z,74nm,20.4s,baz=305,slow=43						
	comp=Z,0.2nm,0.3s						
NOA	NORSAR Array B	26.19	331	P	P	08 10 02.3	+2.2
	comp=Z,0.7nm,0.7s,baz=118,slow=15,SNR=1.8						
	comp=Z,0.7nm,0.7s						
ARCES	ARCESS Array B	30.01	352	LR	LR	08 23 27.0	
	comp=Z,117nm,20.4s,baz=320,slow=38						
KURBB	Kurchatov Arra	30.57	56	P	P	08 10 39.6	+0.4
	comp=Z,0.5nm,0.8s,baz=292,slow=9.9,SNR=2.3						
	comp=Z,0.5nm,0.8s						
ESDC	Sonseca Array	31.23	282	P	P	08 10 44.0	-1.2
	comp=Z,0.8nm,0.9s,baz=66,slow=9.6,SNR=5.4						
	comp=Z,0.8nm,0.9s						
MKAR	Makanchi Array	33.12	63	P	P	08 11 00.1	-1.6
	comp=Z,0.4nm,0.7s,baz=319,slow=5.3,SNR=5.4						
	comp=Z,0.4nm,0.7s						
ZALV	Zalesovo Beam	34.63	50	P	P	08 11 15.6	+0.9
	comp=Z,0.2nm,0.3s,baz=234,slow=8.8,SNR=1.4						
	comp=Z,0.2nm,0.3s						
TORD	Torodi Ar. Bea	41.06	239	P	P	08 12 08.4	-1.0
	comp=Z,1.8nm,0.9s,baz=36,slow=5.3,SNR=7.6						
	comp=Z,1.8nm,0.9s						
DBIC	Dimbokro	50.16	240	P	P	08 13 20.5	-0.9
	comp=Z,2.8nm,0.6s,baz=47,slow=4.9,SNR=4.5						
	comp=Z,2.8nm,0.6s						
PALK	Pallekele	50.93	118	LR	LR	08 34 38.8	
	comp=Z,36nm,18.2s,baz=41,slow=36						
LBTB	Lobatse	65.76	191	LR	LR	08 44 51.5	
	comp=Z,37nm,18.2s,baz=194,slow=37						
KSRS	Korea Array	67.68	59	LR	LR	08 49 17.7	
	comp=Z,27nm,18.7s,baz=325,slow=40						
ASAJ	Asahikawa	72.66	47	LR	LR	08 51 52.4	
	comp=Z,49nm,19.3s,baz=68,slow=39						
YKA	Yellowknife Ar	75.12	347	P	P	08 16 07.2	-0.2
	comp=Z,0.2nm,0.7s,baz=18,slow=5.9,SNR=4.9						
	comp=Z,0.2nm,0.7s						
ILAR	Eielson Array	75.31	2	P	P	08 16 08.5	+0.1
	comp=Z,0.2nm,0.7s,baz=4.3,slow=3.6,SNR=1.9						
ILAR				LR	LR	08 56 03.3	
	comp=Z,75nm,18.0s,baz=252,slow=41						
	comp=Z,0.2nm,0.7s						

IDC ***19*** *08:05:02.6±1.2, 11.°04S×118.°89E, h0km, mb3.8/3, mbtmp3.7/7, ML3.5/4, Error ellipse: s-maj=34.8km s-min=20.6km az=48.0*
DJA ***19*** *08:05:06.1±0.6, 11.°5±4.′×11.°9E±.°, h10km, M4.3/14, mB5.4/2, mb4.4/2, MLv4.2/14, Mw(mB)4.9/2*

ISC 19 08:05:05.2±0.9, 11.°39S±0.°06×118.°65E±0.°05, h26km, n24, σ2§04/30, mb4.1/3, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	1.88	23	P	Pn	08 05 36.0	+0.2
WBSI				S	Sn	08 05 57.9	-0.8
WBSI	Waikabubak, Su	1.88	23	P	Pn	08 05 36.0	+0.2
WSI	Waingapu	2.35	44	P	Pn	08 05 41.4	-0.8
WSI				S	Sn	08 06 10.4	+0.1
PLAI	Plampang	2.69	341	P	Pn	08 05 46.4	-0.4
PLAI				S	Sn	08 06 17.7	-0.9
PLAI	Plampang	2.69	341	P	Pn	08 05 46.4	-0.4
DBNI	Kabupaten Domp	2.89	353	P	Pn	08 05 50.5	+0.9
DBNI				S	Sn	08 06 23.2	-0.3
DBNI	Kabupaten Domp	2.89	353	P	Pn	08 05 50.6	+0.9
LBFI	Labuhan Bajo,	3.14	23	P	Pn	08 05 53.5	+0.5
TWSI	Taliwang, Sumb	3.16	326	P	Pn	08 05 52.9	-0.4
TWSI				S	Sn	08 06 26.0	-4.2
KLNI	Mataram	3.88	319	P	Pn	08 06 03.3	+0.1
EDFI	Ende, Flores	3.98	49	P	Pn	08 06 05.1	+0.4
KHKI	Kahang-Kahang	4.25	315	P	Pn	08 06 09.7	+1.4
IGBI	Denpasar	4.30	306	P	Pn	08 06 08.3	-0.7
RTBI	Rangdo, Negare	4.67	308	P	Pn	08 06 13.4	-0.8
SRBI	Singaraja	4.72	314	P	Pn	08 06 15.2	+0.4
BATI	Baumata	5.06	77	Pn	Pn	08 06 14.5	-5.0
	13nm,0.3s,baz=323,slow=20,SNR=2.2						
BATI				Sn	Sn	08 07 14.7	-2.5
	7.2nm,0.3s,baz=266,slow=14,SNR=1.4						
	17nm,0.3s						
JAGI	Jaag, Banyuwa	5.30	303	P	Pn	08 06 22.6	-0.2
BSSI	Bau Bau, Buton	5.52	19	P	Pn	08 06 26.7	+0.9
	0.2nm32nm,1.5s						
FITZ	Fitzroy Crossi	9.49	135	Pn	Pn	08 07 20.2	-0.1
	0.3nm,0.3s,baz=296,slow=8.2,SNR=1.8						
FITZ				Sn	Sn	08 08 59.5	-6.8
	2.6nm,0.3s,baz=317,slow=19,SNR=9.7						
	0.7nm,0.3s						
WRA	Warramunga Arr	17.32	121	P	Pn	08 09 05.3	-0.1
	0.1nm,0.3s,baz=295,slow=13,SNR=1.6						
WRA				S	Sn	08 12 05.6	-12
	0.5nm,0.5s,baz=293,slow=24,SNR=2.9						
	0.5nm,0.6s						
ASAR	Alice Springs	18.96	132	P	Pn	08 09 27.0	+1.5
	0.1nm,0.3s,baz=298,slow=9.3,SNR=8.5						
ASAR				S	Sn	08 12 44.8	-12
	0.9nm,0.6s,baz=302,slow=22,SNR=6.0						
	0.8nm,0.8s						
NWAO	Narrogin (SRO)	21.48	183	P	P	08 09 57.5	+5.6
	2.8nm,0.3s,baz=17,slow=12,SNR=2.0						
NWAO				S	S	08 13 39.6	-9.3
	3.0nm,0.4s,baz=66,slow=18,SNR=1.3						
	2.8nm,0.3s						
MKAR	Makanchi Array	66.42	334	P	P	08 15 52.4	+0.3
	0.9nm,0.6s,baz=150,slow=6.7,SNR=13						
	0.9nm,0.6s						
KURBB	Kurchatov Arra	70.95	334	P	P	08 16 20.3	0.0
	0.2nm,0.5s,baz=146,slow=6.3,SNR=2.7						
	0.2nm,0.5s						

ASRS ***19*** *08:08:15.0±0.6, 54.°40N×86.°80E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 19 08:08:16.1±3.4, 54.°44N×86.°95E, h0km, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=30.8km s-min=19.7km az=52.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.34	249	I	I	08 16 20.0	
	baz=69,slow=330,SNR=7.4						
ZALV	Zalesovo Beam	1.34	249	Pg	Pg	08 08 39.8	-2.1
	1.1nm,0.3s,baz=65,slow=17,SNR=17						
ZALV				Lg	Lg	08 08 59.1	
	1.2nm,0.3s,baz=68,slow=28,SNR=8.3						
KURBB	Kurchatov Arra	6.40	237	Pn	Pn	08 09 52.8	+1.2
	0.1nm,0.3s,baz=54,slow=14,SNR=9.9						
	1.0nm,0.5s						
MKAR	Makanchi Array	8.21	203	Pn	Pn	08 10 17.3	+0.9
	0.1nm,0.3s,baz=18,slow=13,SNR=2.8						
	0.2nm,0.5s						

IDC 19 08:09:05.9±1.9, 2.°13N×127.°71E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=158.8km s-min=23.5km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.88	164	P	P	08 14 11.7	+0.4
	1.6nm,0.4s,baz=343,slow=11,SNR=7.2						
	1.6nm,0.4s						
ASAR	Alice Springs	26.34	167	P	P	08 14 43.0	-0.8
	0.3nm,0.5s,baz=352,slow=12,SNR=2.0						
	0.3nm,0.5s						
MKAR	Makanchi Array	59.42	325	P	P	08 19 10.9	+0.5
	0.3nm,0.5s,baz=124,slow=8.5,SNR=3.9						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	63.61	327	P	P	08 19 38.4	-0.2
	0.1nm,0.4s,baz=125,slow=6.3,SNR=4.0						
	0.1nm,0.4s						

IDC 19 08:15:13.8±3.3, 2.°85S×136.°00E, h0km, mb3.1/2, mbtmp3.2/3, ML3.3/1, Error ellipse: s-maj=134.3km s-min=32.1km az=80.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.07	185	P	Pn	08 19 12.2	-1.8
	0.1nm,0.3s,baz=7.4,slow=12,SNR=5.3						
	0.4nm,0.7s						
ASAR	Alice Springs	20.79	185	P	P	08 19 57.5	+0.7
	0.8nm,0.6s,baz=8.6,slow=12,SNR=12						
	0.8nm,0.6s						
MKAR	Makanchi Array	68.27	323	P	P	08 26 16.7	0.0
	0.1nm,0.4s,baz=116,slow=6.7,SNR=1.6						
	0.1nm,0.4s						

IDC 19 08:20:26.2±6.5, 5.°95S×146.°34E, h97km±109km, mb3.5/2, mbtmp3.7/4, ML0.8/1, MS4.2/1, Error ellipse: s-maj=125.6km s-min=45.6km az=96.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.53	167	P	Pn	08 21 18.2	-0.9
	0.7nm,0.3s,baz=274,slow=16,SNR=1.4						
PMG				S	Sn	08 22 00.9	+1.0
	9.1nm,0.5s,baz=300,slow=20,SNR=1.9						
	6.2nm,0.5s						
WRA	Warramunga Arr	18.16	219	P	Pn	08 24 32.1	0.0
	0.8nm,0.5s,baz=43,slow=11,SNR=10						
ASAR	Alice Springs	21.30	213	P	P	08 25 04.4	-0.8
	0.6nm,0.3s,baz=49,slow=8.6,SNR=23						
	0.6nm,0.3s						
AFI	Afiamalu	41.95	104	LR	LR	08 45 34.1	
	comp=Z,267nm,18.0s,baz=116,slow=36						
CMAR	Chiang Mai Arr	52.65	298	P	P	08 29 31.1	+0.2
	1.1nm,0.3s,baz=122,slow=8.7,SNR=1.6						
	1.1nm,0.3s						

JMA ***19*** *08:25:21.6±0.1, 34.°1N±2.°×13.°6E±.°, h487km, MV3.0/47, SOUTHERN WAKAYAMA PREF*
IDC ***19*** *08:25:28.9±4.0, 33.°90N×136.°20E, h448km±130km, mb2.6/2, mbtmp3.4/4, Error ellipse: s-maj=280.8km s-min=44.8km az=66.0*

ISC 19 08:25:27.6±1.1, 33.°9N±0.°1×136.°1E±0.°1, h450km, n19, σ1§63/22, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKN2	Miekihoku	0.36	25	P	P	08 26 21.3	-1.1
JTNC	Tanabenakahech	0.41	257	*e*P	P	08 26 20.8	-1.8
JWY	Kouya	0.52	307	P	P	08 26 21.4	-1.4
JIE	Ise	0.70	46	P	P	08 26 22.4	-0.6
JEG	Eigenji	1.25	11	P	P	08 26 24.3	-0.3
JWT	Wachi	1.48	338	P	P	08 26 24.4	-1.1
JAO	Obara	1.66	35	P	P	08 26 26.6	+0.2
JYTA	Yamagatataniai	1.76	17	*e*P	P	08 26 26.7	-0.1
JNY	Yasuok	2.06	45	P	P	08 26 28.9	+0.4
JRY	Ryogami san	3.12	47	P	P	08 26 36.9	+1.4
MAT	Matsushiro	3.15	33	*e*P	P	08 26 36.1	+0.4
MJAR	Matsushiro Arr	3.15	33	P	P	08 26 36.6	+0.9
	5.9nm,0.8s,baz=209,slow=7.5,SNR=14						
BSO4	Boso 4	3.67	72	P	P	08 26 40.1	+0.4
JAG	Ashikaga	3.73	47	P	P	08 26 40.3	0.0
JAG				*e*S	S	08 27 37.0	-2.6
JHO	Hitachi	4.55	52	P	P	08 26 48.0	+0.4
JHO				S	S	08 27 49.4	-3.5
JFK	Kawauchi	5.20	47	P	P	08 26 54.9	+1.0
JFK				*e*S	S	08 28 00.8	-3.6
USRK	Ussuriysk Ar.	10.76	344	P	P	08 27 54.4	+1.6
	1.0nm,0.5s,baz=156,slow=11,SNR=2.6						
WRA	Warramunga Arr	53.58	182	P	P	08 34 06.3	+1.0
	0.2nm,0.3s,baz=356,slow=7.6,SNR=4.6						
	0.2nm,0.3s						
ASAR	Alice Springs	57.29	182	P	P	08 34 33.0	+1.7
	0.2nm,0.7s,baz=19,slow=9.9,SNR=2.3						
	0.2nm,0.7s						

NEIC ***19*** *08:42:03.0±1.4, 35.°103N±0.°008×97.°78W±0.°01, h5km±1km, mb_Lg3.1/116, ML3.0/30, ML3.3/66, Error ellipse: s-maj=2.4km s-min=1.5km az=278.0*
IDC ***19*** *08:42:02.6±1.0, 35.°16N×97.°91W, h0km, mbtmp3.2/4, ML3.4/3, Error ellipse: s-maj=13.5km s-min=9.4km az=145.0*
NEIC ***19*** *08:42:03.2±1.3, 35.°105N±0.°010×97.°771W±0.°004, h8km±7km, Error ellipse: s-maj=1.5km s-min=0.4km az=172.0*

ISC 19 08:42:02.8±0.9, 35.°12N±0.°02×97.°78W±0.°02, h16km±6km, n109, σ1§14/89, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
W34A	Bridge Creek,	0.12	3		Pb	08 42 06.6	-0.1
W34A					Sg	08 42 09.1	+0.3
FNO	Franklin	0.34	66		Pg	08 42 10.0	+0.2
FNO					Sg	08 42 14.1	-0.6
OKCFA	Oklahoma City	0.40	42		Pb	08 42 11.2	-0.2
OKCFA					Sb	08 42 17.2	-0.1
OKCSW	OKLAHOMA CITY	0.40	44		Pb	08 42 11.2	-0.3
OKCSW					Sb	08 42 17.4	+0.1
OKCSW				IAML		08 42 17.6	
	comp=E,2μm,0.5s						
OK004	Okla Sci Mus	0.47	32		Pb	08 42 12.7	0.0
OK004					Sb	08 42 19.8	+0.3
X34A	Smith Ranch, M	0.52	185		Pb	08 42 13.6	+0.1
X34A					Sg	08 42 19.7	-0.4
X34A				IAML		08 42 22.2	
	comp=E,2μm,0.6s						
X34A				IAML		08 42 30.4	
	comp=N,2μm,0.6s						
BCOK	Bluff Creek, N	0.55	15		Pb	08 42 14.5	+0.4
BCOK					Sb	08 42 22.2	+0.5

PLPT	**Palo Pinto**	**2.34**	**191**			**Pb**	**08 42 43.1**	**-1.5**
PLPT				IAmb_Lg			08 43 21.7	
	comp=Z,54nm,0.8s							
FW07	**Weatherford**	**2.41**	**180**			**Pb**	**08 42 44.9**	**-0.9**
FW07						**Sb**	**08 43 16.0**	**+0.8**
DRZT	**Darrouzett**	**2.44**	**304**			**Pb**	**08 42 46.4**	**+0.2**
RLO	**Rose Lookout**	**2.48**	**64**			**Pn**	**08 42 42.8**	**+0.4**
RLO						**Sb**	**08 43 17.4**	**+0.3**
APMT	**Aspermont**	**2.64**	**228**			**Pn**	**08 42 44.6**	**-0.1**
TREL	**Terrell**	**2.77**	**149**	Pn		**Pn**	**08 42 46.2**	**-0.2**
TREL				IAmb_Lg			08 43 34.5	
	comp=Z,82nm,0.9s							
ABTX	**Abilene, Hawle**	**2.93**	**212**			**Pn**	**08 42 49.9**	**+1.1**
ABTX				IAmb_Lg			08 43 43.2	
	comp=Z,46nm,0.7s							
Z38A	**Mt. Pleasant**	**2.97**	**128**			**Pn**	**08 42 49.5**	**+0.3**
Z38A				IAmb_Lg			08 43 44.4	
	comp=Z,64nm,0.9s							
DKNS	**Dickens**	**2.98**	**242**			**Pn**	**08 42 50.0**	**+0.6**
U38A	**Gravette**	**3.06**	**64**			**Pn**	**08 42 51.1**	**+0.7**
WHTX	**Lake Whitney,**	**3.13**	**175**			**Pn**	**08 42 50.9**	**-0.6**
WHTX				IAmb_Lg			08 43 48.1	
	comp=Z,59nm,1.1s							
AMTX	**Amarillo**	**3.21**	**267**			**Pn**	**08 42 53.9**	**+1.3**
AMTX				IAmb_Lg			08 43 52.6	
	comp=Z,44nm,0.7s							
SN07	**Snyder 07**	**3.28**	**233**			**Pn**	**08 42 53.5**	**0.0**
HHAR	**Hobbs**	**3.33**	**69**			**Pn**	**08 42 54.9**	**+0.7**
R32A	**Long Quarter,**	**3.38**	**348**			**Pn**	**08 42 56.0**	**+1.1**
PH02	**Texas Public H**	**3.42**	**276**	IAmb_Lg			08 43 59.8	
	comp=Z,14nm,0.8s							
MIAR	**Mount Ida**	**3.50**	**98**			**Pn**	**08 42 59.2**	**+2.6**
MIAR				IAmb_Lg			08 43 55.1	
	comp=Z,43nm,0.8s							
POST	**Post**	**3.71**	**237**			**Pn**	**08 42 60.0**	**+0.6**
BRDY	**Brady**	**3.96**	**195**			**Pn**	**08 43 03.3**	**+0.5**
CBKS	**Cedar Bluff**	**4.01**	**338**	Pn		**Pn**	**08 43 03.0**	**-0.5**
CBKS				IAmb_Lg			08 44 19.3	
	comp=Z,42nm,0.9s							
KSU1	**Kansas State U**	**4.08**	**13**			**Pn**	**08 43 06.0**	**+1.5**
KSU1	**Kansas State U**	**4.08**	**13**	IAmb_Lg			08 44 23.9	
	comp=Z,63nm,0.7s							
WLAR	**White Oak Lake**	**4.12**	**109**			**Pn**	**08 43 06.1**	**+1.2**
WLAR				IAmb_Lg			08 44 17.3	
	comp=Z,45nm,0.7s							
X40A	**Basin Creek Fa**	**4.12**	**97**			**Pn**	**08 43 06.4**	**+1.4**
RTBA	**Rita Blanca**	**4.24**	**290**			**Pn**	**08 43 08.8**	**+2.0**
NATX	**Nacogdoches**	**4.25**	**141**	Pn		**Pn**	**08 43 07.6**	**+0.9**
NATX				IAmb_Lg			08 44 26.4	
	comp=Z,58nm,1.2s							
SGCY	**Sterling City**	**4.25**	**222**			**Pn**	**08 43 07.8**	**+1.0**
SGCY				IAmb_Lg			08 44 18.4	
	comp=Z,47nm,0.7s							
MSTX	**Muleshoe**	**4.28**	**256**			**Pn**	**08 43 09.7**	**+2.4**
435B	**Jarrell**	**4.33**	**178**	Pn		**Pn**	**08 43 09.2**	**+1.3**
S39A	**Bolivar**	**4.42**	**53**			**Pn**	**08 43 10.2**	**+1.1**
S39A				IAmb_Lg			08 44 21.0	
	comp=Z,28nm,0.8s							
UALR	**University of**	**4.48**	**93**	Pn		**Pn**	**08 43 10.7**	**+0.8**
WHAR	**Wooly Hollow**	**4.50**	**86**			**Pn**	**08 43 12.3**	**+2.0**
WHAR				IAmb_Lg			08 44 36.0	
	comp=Z,48nm,0.7s							
Z41A	**Richland Creek**	**4.52**	**113**	Pn		**Pn**	**08 43 12.6**	**+2.0**
229A	**Bryant Ranch,**	**4.61**	**228**	IAmb_Lg			08 44 38.7	
	comp=Z,12nm,0.7s							
128A	**Castleberry Fa**	**4.64**	**239**	IAmb_Lg			08 44 38.0	
	comp=Z,9.7nm,1.1s							
FCAR	**Ozark Folk Cen**	**4.68**	**79**	IAmb_Lg			08 44 44.1	
	comp=Z,26nm,0.8s							
OZNA	**Ozona**	**5.04**	**215**	IAmb_Lg			08 44 50.5	
	comp=Z,32nm,0.7s							
R40A	**Maddies Statio**	**5.44**	**53**	IAmb_Lg			08 45 04.4	
	comp=Z,25nm,0.8s							
LCAR	**Lake Charles**	**5.48**	**78**	IAmb_Lg			08 45 02.0	
	comp=Z,20nm,0.8s							
KSCO	**Kaye Shedlock'**	**5.49**	**316**	IAmb_Lg			08 45 06.6	
	comp=Z,27nm,0.9s							
MNHN	**Monahans**	**5.62**	**229**	IAmb_Lg			08 45 10.4	
	comp=Z,20nm,0.8s							
P38A	**Dawn**	**5.63**	**36**	IAmb_Lg			08 45 08.5	
	comp=Z,35nm,0.9s							
TPB06	**Permian Basin**	**5.72**	**234**	IAmb_Lg			08 45 06.4	
	comp=Z,19nm,0.7s							
HNDO	**Hondo**	**5.72**	**193**	IAmb_Lg			08 45 18.0	
	comp=Z,45nm,0.8s							
T25A	**Trinidad**	**5.73**	**292**	IAmb_Lg			08 45 07.0	
	comp=Z,38nm,0.8s							
T42A	**Van Buren**	**5.74**	**69**	IAmb_Lg			08 45 06.6	
	comp=Z,22nm,0.9s							
143A	**Socs Landing,**	**5.82**	**113**	IAmb_Lg			08 45 10.7	
	comp=Z,32nm,0.8s							
EF04	**Eagle Ford 04**	**5.89**	**180**	IAmb_Lg			08 45 25.3	
	comp=Z,38nm,0.8s							
CCM	**Cathedral Cave**	**6.02**	**59**	IAmb_Lg			08 45 17.7	
	comp=Z,28nm,0.8s							
DRIO	**Del Rio**	**6.17**	**204**	IAmb_Lg			08 45 33.9	
	comp=Z,32nm,0.8s							
735A	**Kenedy**	**6.25**	**180**	IAmb_Lg			08 45 29.1	
	comp=Z,34nm,0.9s							
TPB05	**Hovey Rd**	**6.26**	**230**	IAmb_Lg			08 45 29.4	
	comp=Z,16nm,0.8s							
SAND	**Sanderson**	**6.32**	**217**	IAmb_Lg			08 45 24.0	
	comp=Z,29nm,0.7s							
P40A	**Paris**	**6.34**	**44**	IAmb_Lg			08 45 25.9	
	comp=Z,33nm,0.7s							
EF02	**Christine**	**6.36**	**186**	IAmb_Lg			08 45 24.0	
	comp=Z,40nm,0.8s							
TPB01	**Permian Basin**	**6.54**	**232**	IAmb_Lg			08 45 47.2	
	comp=Z,17nm,0.8s							
FVM	**French Village**	**6.57**	**62**	IAmb_Lg			08 45 45.1	
	comp=Z,16nm,0.7s							
OGNE	**Ogallala**	**6.71**	**331**	IAmb_Lg			08 45 46.5	
	comp=Z,21nm,0.7s							
ALPN	**Alpine**	**6.84**	**228**	IAmb_Lg			08 45 51.2	
	comp=Z,21nm,1.0s							
OXF	**Oxford**	**6.91**	**93**	IAmb_Lg			08 45 57.6	
	comp=Z,24nm,0.9s							
833A	**Chaparral WMA,**	**6.91**	**192**	IAmb_Lg			08 45 50.3	
	comp=Z,22nm,0.8s							
ANMO	**Albuquerque**	**7.12**	**271**	Pn		**Pn**	**08 43 50.4**	**+4.0**
	comp=Z,0.1nm,0.3s,baz=128,slow=9.4,SNR=1.7							
ANMO				Pg		**Pb**	**08 44 09.7**	**+3.6**
	comp=Z,0.3nm,0.3s,baz=86,slow=16,SNR=7.1							
ANMO				Lg	Lg		08 45 42.5	
	comp=Z,1.2nm,0.3s,baz=25,slow=15,SNR=7.8							
ANMO	**Albuquerque**	**7.12**	**271**	IAmb_Lg			08 45 55.9	
	comp=Z,5.5nm,0.8s							
ANMO	**Albuquerque**	**7.12**	**271**	IAmb_Lg			08 45 55.9	
	comp=Z,4.9nm,0.8s							
ANMO				IAmb_Lg			08 45 55.9	
	comp=Z,5.0nm,0.8s							
S44A	**Carbondale**	**7.34**	**67**	IAmb_Lg			08 46 00.5	
	comp=Z,25nm,0.8s							
SIUC	**Southern Illin**	**7.37**	**67**	IAmb_Lg			08 46 15.3	
	comp=Z,15nm,0.8s							
TXAR	**Lajitas Array**	**7.62**	**222**	Pn		**Pn**	**08 43 53.7**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=46,slow=11,SNR=7.1							
TXAR				Pg		**Pb**	**08 44 14.8**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=42,slow=17,SNR=5.4							
TXAR				Sn		**Sn**	**08 45 18.2**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=41,slow=16,SNR=1.4							
TXAR				Lg	Lg		08 45 55.9	
	comp=Z,1.2nm,0.3s,baz=41,slow=25,SNR=6.4							
	comp=Z,0.2nm,0.3s							
146A	**Union**	**7.67**	**106**	IAmb_Lg			08 46 05.3	
	comp=Z,16nm,0.8s							
Q44A	**Meyer Farm, Va**	**7.96**	**59**	IAmb_Lg			08 46 26.5	
	comp=Z,27nm,1.0s							
HAYD	**Hayden**	**9.23**	**309**	IAmb_Lg			08 47 13.7	
	comp=Z,18nm,1.3s							
SUSD	**Miller**	**9.36**	**355**	IAmb_Lg			08 47 04.8	
	comp=Z,19nm,0.7s							
I37A	**Lemond, Waseca**	**9.50**	**19**	IAmb_Lg			08 47 13.5	
	comp=Z,21nm,0.8s							
JFWS	**Jewell Farm**	**9.74**	**35**	IAmb_Lg			08 47 22.4	
	comp=Z,20nm,0.8s							
TKL	**Tuckaleechee C**	**11.45**	**83**	Pn		**Pn**	**08 44 46.7**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=277,slow=16,SNR=2.6							
TKL				Sn		**Sn**	**08 46 51.9**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=234,slow=16,SNR=1.6							
TKL				Lg	Lg		08 47 56.9	
	comp=Z,0.5nm,0.3s,baz=6.0,slow=22,SNR=5.8							
	comp=Z,2.4nm,1.0s							
PDAR	**Pinedale Array**	**11.92**	**313**	Pn		**Pn**	**08 44 53.3**	**+1.1**
	baz=129,slow=14,SNR=2.4							
PDAR				Lg	Lg		08 48 11.2	
	comp=Z,0.1nm,0.3s,baz=100,slow=17,SNR=1.1							
	comp=Z,0.2nm,0.5s							
ULM	**Lac du Bonnet**	**15.19**	**5**	Pn		**Pn**	**08 45 33.4**	**-3.0**
	comp=Z,0.5nm,0.5s,baz=173,slow=8.1,SNR=1.3							
ULM				Sn		Sn	08 48 12.2	-12
	comp=Z,0.2nm,0.3s,baz=131,slow=12,SNR=2.9							
ULM				Lg		Lg	08 49 50.9	
	comp=Z,0.1nm,0.3s,baz=259,slow=19,SNR=3.5							
PFO	**Pinyon Flats O**	**15.50**	**270**	Lg		Lg	08 50 08.6	
	comp=Z,0.7nm,0.3s,baz=84,slow=19,SNR=4.1							

*IDC **19** 08:57:41.3±0.9, 13°.34N×144°.35E, h0km, mb3.7/6, mbtmp3.7/6, Error ellipse: s-maj=25.4km s-min=16.2km az=136.0*
*NEIC **19** 08:57:44.0±2.1, 13°.39N±0°.09×144°.27E±0°.06, h10km±2km, mb4.1/8, Error ellipse: s-maj=17.8km s-min=5.8km az=150.0*
ISC 19 08:57:43.3±0.7, 13°.39N±0°.10×144°.28E±0°.08, h10km, n27, σ0s 89/23, mb3.9/8, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
GUMO	**Guam**	**0.60**	**71**	Pn		**Pb**	**08 57 57.0**	**+1.0**
	639nm,0.3s,baz=153,slow=2.3,SNR=124							
GUMO				Sn		**Sg**	**08 58 03.2**	**+0.3**
	2um,0.3s,baz=183,slow=18,SNR=36							
GUMO	**Guam**	**0.60**	**71**			**Pb**	**08 57 56.4**	**+0.5**
GUMO				Sg		**Sg**	**08 58 03.2**	**+0.3**
MANU	**Manus Island**	**15.64**	**168**	Pn		**Pn**	**09 01 23.6**	**-0.3**
MANU				IAmb		IAmb	09 01 47.9	
	comp=Z,11nm,1.0s							
FAKI	**Fak Fak**	**20.13**	**217**	P		**P**	**09 02 19.1**	**+1.5**
FAKI				IAmb		IAmb	09 02 49.8	
	comp=Z,11nm,1.1s							
H11S3	**WAKE ISLAND Hy**	**22.12**	**74**	T		T	09 25 08.7	
	baz=259,slow=75,SNR=20							
H11S1	**WAKE ISLAND Hy**	**22.14**	**74**	T		T	09 25 11.8	
	baz=259,slow=75,SNR=12							
H11S2	**WAKE ISLAND Hy**	**22.14**	**74**	T		T	09 25 10.2	
	baz=259,slow=75,SNR=13							
H11N1	**WAKE ISLAND Hy**	**22.55**	**71**	T		T	09 25 28.4	
	baz=257,slow=75,SNR=33							
H11N2	**WAKE ISLAND Hy**	**22.56**	**71**	T		T	09 25 41.2	
	baz=257,slow=75,SNR=12							
H11N3	**WAKE ISLAND Hy**	**22.57**	**71**	T		T	09 25 30.3	
	baz=257,slow=75,SNR=28							
MJB9	**Matsu-Tunnel**	**23.69**	**348**	P		**P**	**09 02 54.4**	**-0.9**
WR8	**Warramunga Arr**	**34.51**	**196**	P		**P**	**09 04 31.6**	**-0.3**
WR8				IAmb		IAmb	09 04 45.1	
	comp=Z,8.0nm,1.2s							
WRA	**Warramunga Arr**	**34.54**	**197**	P		**P**	**09 04 31.8**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=22,slow=9.7,SNR=10							
	comp=Z,0.6nm,0.6s							
WRA	**Warramunga Arr**	**34.54**	**197**	P		**P**	**09 04 31.2**	**-1.0**
AS31	**Alice Springs**	**38.20**	**195**	P		**P**	**09 05 03.0**	**-0.5**
ASAR	**Alice Springs**	**38.20**	**195**	P		**P**	**09 05 02.6**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=22,slow=12,SNR=15							
	comp=Z,0.4nm,0.6s							
ASAR	**Alice Springs**	**38.20**	**195**	P		**P**	**09 05 03.3**	**-0.2**
PETK	**Petropavlovsk-**	**41.03**	**12**	P		**P**	**09 05 27.2**	**+0.5**
	comp=Z,1.3nm,0.5s,baz=210,slow=7.1,SNR=4.5							
	comp=Z,1.3nm,0.5s							
PETK	**Petropavlovsk-**	**41.03**	**12**	P		**P**	**09 05 27.0**	**+0.3**
PSA00	**Pilbara Seismi**	**42.22**	**215**	P		**P**	**09 05 37.2**	**+0.4**
PSA00				IAmb		IAmb	09 06 21.2	
	comp=Z,3.7nm,1.4s							
MKAR	**Makanchi Array**	**61.23**	**316**	P		**P**	**09 07 58.2**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=88,slow=7.4,SNR=3.0							
	comp=Z,0.3nm,0.6s							
MKAR	**Makanchi Array**	**61.23**	**316**	P		**P**	**09 08 00.1**	**+1.5**
F15K	**North Star Dit**	**62.45**	**21**	P		**P**	**09 08 05.9**	**-0.5**
KURBB	**Kurchatov Arra**	**64.41**	**320**	P		**P**	**09 08 20.1**	**+0.5**
	comp=Z,0.5nm,0.4s,baz=103,slow=7.1,SNR=6.1							
	comp=Z,0.5nm,0.4s							
BMAR	**Burnt Mountain**	**70.50**	**23**	P		**P**	**09 08 58.0**	**0.0**
ABKAR	**Akbulak array**	**76.30**	**318**	P		**P**	**09 09 33.1**	**+0.7**
NVAR	**Mina Array Bea**	**87.49**	**51**	P		**P**	**09 10 29.6**	**-2.3**
	comp=Z,0.4nm,0.7s,baz=291,slow=5.1,SNR=2.6							
	comp=Z,0.4nm,0.7s							

*ASRS **19** 08:58:38.0±2.0, 53°.73N×91°.04E, h0km, M2.9(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 19 08:58:43.4±4.0, 53°.60N×90°.99E, h0km, mbtmp3.1/3, ML2.5/3, Error ellipse: s-maj=37.1km s-min=29.6km az=89.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**3.68**	**278**	I		I	09 21 40.0	
	0.2nm,1.1s,baz=90,slow=336,SNR=14							
ZALV	**Zalesovo Beam**	**3.68**	**278**	Pn		Pn	08 59 43.5	+2.0
	1.0nm,0.3s,baz=94,slow=15,SNR=11							
ZALV				Lg		Lg	09 00 34.2	
	0.9nm,0.3s,baz=95,slow=26,SNR=11							
	2.1nm,0.3s							
TLY	**Talaya**	**7.93**	**99**	Lg		Lg	09 02 47.1	
	baz=210,slow=18							
KURBB	**Kurchatov Arra**	**8.23**	**254**	Pn		Pn	09 00 43.7	-0.3
	0.1nm,0.3s,baz=64,slow=14,SNR=5.5							
KURBB				Sn		Sn	09 02 15.2	-2.4
	baz=62,slow=18,SNR=1.4							
KURBB				Lg		Lg	09 02 58.9	
	baz=70,slow=33,SNR=9.7							
	1.0nm,0.7s							
MKAR	**Makanchi Array**	**8.80**	**223**	Pn		Pn	09 00 52.3	+0.4
	0.1nm,0.3s,baz=43,slow=14,SNR=7.2							
MKAR				Sn		Sn	09 02 31.1	-0.6
	0.1nm,0.3s,baz=36,slow=20,SNR=2.4							
MKAR				Lg		Lg	09 03 17.6	
	0.1nm,0.3s,baz=56,slow=32,SNR=6.5							
	0.4nm,0.6s							
SONM	**Songino Array**	**11.33**	**114**	Lg		Lg	09 04 35.0	
	0.3nm,0.3s,baz=26,slow=10,SNR=5.6							

*IDC **19** 09:07:51.7±0.9, 52°.54N×62°.81E, h0km, mb3.4/1, mbtmp3.2/7, ML2.7/6, MS4.0/1, Error ellipse: s-maj=20.0km s-min=6.9km az=166.0*
ISC 19 09:07:52.2±0.8, 52°.61N±0°.07×62°.91E±0°.05, h10km, n11, σ2s 71/14, 1C-2D, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
AKTO	**Aktyubinsk**	**3.75**	**237**	Pn		**Pn**	**09 08 50.2**	**+0.1**
	0.2nm,0.3s,baz=56,slow=14,SNR=2.3							
AKTO				Pg		**Pb**	**09 08 57.1**	**-1.4**
	0.6nm,0.3s,baz=59,slow=14,SNR=9.7							
AKTO				Sn		**Sn**	**09 09 34.2**	**-0.1**
	0.3nm,0.3s,baz=81,slow=19,SNR=4.8							
AKTO				Lg		Lg	09 09 43.1	
	0.6nm,0.3s,baz=51,slow=16,SNR=3.7							
	0.5nm,0.3s							
AKTO	**Aktyubinsk**	**3.75**	**237**	⇑Pg		**Pn**	**09 08 54.7**	**+4.6**
	1.3nm,0.7s							
AKTO				⇓Lg		Lg	09 09 42.7	
	14nm,0.9s							
I31KZ	**AKTYUBINSK INF**	**3.76**	**236**	I		I	09 30 10.0	
	0.1nm,0.7s,baz=51,slow=334,SNR=11							
AB31	**Akbulak array**	**3.85**	**210**	Pg		**Pn**	**09 08 55.3**	**+3.9**
	0.1nm,0.2s,baz=27,slow=15,SNR=52							
AB31				⇓Lg		Lg	09 09 44.3	
	6.1nm,0.5s,baz=26,slow=26,SNR=13							
BVAR	**Borovoye Array**	**4.55**	**82**	Pn		**Pn**	**09 09 03.4**	**+2.3**
	0.2nm,0.3s,baz=272,slow=13,SNR=14							
BVAR				Sn		**Sn**	**09 09 55.1**	**+1.1**
	0.1nm,0.3s,baz=290,slow=15,SNR=4.4							
BVAR				Lg		Lg	09 10 16.0	
	0.3nm,0.3s,baz=264,slow=31,SNR=12							
	1.6nm,0.3s							
ARTI	**Arti**	**4.62**	**327**	Pn		**Pn**	**09 09 02.0**	**+0.1**
	0.4nm,0.3s,baz=122,slow=22,SNR=2.1							
ARTI				Sn		**Sn**	**09 09 58.7**	**+3.1**
	0.5nm,0.3s,baz=143,slow=20,SNR=1.6							
ARTI				Lg		Lg	09 10 15.4	
	0.5nm,0.3s,baz=143,slow=20,SNR=12							
	1.3nm,0.3s							
KURBB	**Kurchatov Arra**	**9.92**	**95**	Pn		**Pn**	**09 10 14.9**	**+0.3**
	0.1nm,0.3s,baz=291,slow=14,SNR=8.5							
KURBB				Sn		**Sn**	**09 12 03.5**	**-2.4**
	baz=271,slow=27,SNR=1.9							
KURBB				Lg		Lg	09 13 09.2	
	baz=265,slow=33,SNR=1.6							
	0.4nm,0.4s							
MKAR	**Makanchi Array**	**13.80**	**107**	Pn		**Pn**	**09 11 06.9**	**-0.9**
	0.1nm,0.3s,baz=299,slow=11,SNR=3.4							
	0.2nm,0.5s							
KBZ	**Khabaz**	**15.99**	**244**	Pn		**Pn**	**09 11 32.9**	**-4.2**
	0.1nm,0.3s,baz=79,slow=5.2,SNR=4.1							
	2.1nm,0.9s							
FINES	**FINESS Array B**	**21.63**	**309**	P		**P**	**09 12 43.5**	**+1.3**
	0.5nm,0.3s,baz=106,slow=12,SNR=11							
	0.5nm,0.3s							
KLR	**Kul'dur**	**42.03**	**66**	LR		LR	09 33 15.2	
	comp=Z,214nm,20.3s,baz=277,slow=36							

*DNK **19** 09:11:32.7±1.4, 58°.70N×9°.34E, h0km, ML1.6, ML1.0(BER), Explosion*
*NAO **19** 09:11:33.6±0.4, 58°.71N×9°.28E, ML0.8*
BER 19 09:11:34.0±1.2, 58°.69N×9°.29E, h0km, ML1.0, ML0.8(NAO), Explosion, Southern Norway

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
HOMB	**Homborsund**	**0.59**	**225**	*e*Pg		**Pg**	09 11 44.5	-0.8
HOMB				*e*Sg		Sg	09 11 52.4	-0.4
HOMB	**Homborsund**	**0.59**	**225**	*e*P		Pg	09 11 44.3	-0.9
HOMB				*e*S		Sg	09 11 52.2	-0.6
HOMB				IAML			09 11 59.4	
	comp=Z,7.4nm,0.6s							
HOMB	**Homborsund**	**0.59**	**225**	*e*P		Pg	09 11 44.3	-0.9
HOMB				*e*S		Sg	09 11 52.2	-0.6
HOMB				IAML			09 11 59.4	
	comp=Z,7.4nm,0.6s							
KON	**Kongsberg**	**0.98**	**9**	Pg		Pg	09 11 51.2	-1.6
KON				Sg		Sg	09 12 03.2	-2.2
KONO	**Kongsberg**	**0.98**	**9**	*e*P		Pg	09 11 51.3	-1.5
KONO				*e*S		Sg	09 12 03.9	-1.6
KONO				IAML			09 12 08.2	
	comp=Z,3.3nm,0.3s							
KONO	**Kongsberg**	**0.98**	**9**	*e*P		Pg	09 11 51.3	-1.5
KONO				*e*S		Sg	09 12 03.9	-1.6
KONO				IAML			09 12 08.2	
	comp=Z,3.3nm,0.3s							
STRU	**Stroemstad**	**1.04**	**70**	P		Pg	09 11 52.8	-1.1
	baz=242							
STRU				S		Sg	09 12 06.8	-0.6
SNART	**Snartemo**	**1.15**	**253**	Pg		Pg	09 11 54.6	-1.3
SNART				Sg		Sg	09 12 09.5	-1.3
SNART	**Snartemo**	**1.15**	**253**	*e*P		Pg	09 11 54.6	-1.3
SNART				*e*S		Sg	09 12 09.5	-1.3
SNART				IAML			09 12 12.7	
	comp=Z,11nm,0.1s							
SNART	**Snartemo**	**1.15**	**253**	*e*P		Pg	09 11 54.6	-1.3
SNART				*e*S		Sg	09 12 09.5	-1.3
SNART				IAML			09 12 12.7	
	comp=Z,11nm,0.1s							
TJOU	**Tjoern**	**1.39**	**117**	P		Pn	09 11 59.1	-1.6
TJOU				S		Sg	09 12 17.4	-1.3
VANU	**Vaenersborg**	**1.47**	**96**	P		Pn	09 12 00.4	-1.3
VANU				S		Sg	09 12 19.7	-1.5
BLS5	**Blasjo**	**1.64**	**298**	Pb		Pn	09 12 02.2	-1.9
BLS5				Sb		Sn	09 12 24.0	-1.9
BLS5	**Blasjo**	**1.64**	**298**	*i* P		Pn	09 12 02.3	-1.8
BLS5				*e*S		Sn	09 12 23.9	-2.0
BLS5				IAML			09 12 24.5	
	comp=Z,3.4nm,1.0s							
BLS5	**Blasjo**	**1.64**	**298**	*i* P		Pn	09 12 02.3	-1.8
BLS5				*e*S		Sn	09 12 23.9	-2.0
BLS5				IAML			09 12 24.5	
	comp=Z,3.4nm,1.0s							
FINU	**Finntorp**	**1.80**	**65**	P		Pn	09 12 04.7	-1.5
ONAU	**Onsala**	**1.90**	**132**	P		Pn	09 12 06.9	-0.7
NASU	**Vaermlandsnaes**	**2.04**	**82**	P		Pn	09 12 09.5	-0.1
NRA0	**NORESS Array S**	**2.35**	**28**	Pn		Pn	09 12 11.6	-2.2
	baz=215,slow=12							
NRA0				Sn		Sn	09 12 40.6	-2.8
	baz=214,slow=22							
NRA0	**NORESS Array S**	**2.35**	**28**	Pn		Pn	09 12 11.6	-2.2
NRA0				Sn		Sn	09 12 40.6	-2.8
NRA0	**NORESS Array S**	**2.35**	**28**	Pn		Pn	09 12 11.6	-2.2
NRA0				Sn		Sn	09 12 40.6	-2.8
HFS	**Hagfors**	**2.68**	**55**	Pn		Pn	09 12 16.5	-1.8
	baz=240,slow=16							
HFS	**Hagfors**	**2.68**	**55**	Pn		Pn	09 12 16.5	-1.8
HFS	**Hagfors**	**2.68**	**55**	Pn		Pn	09 12 16.5	-1.8

*PDG **19** 09:16:40.8±0.1, 41°.60N×19°.43E, h13km, ML2.9/11, Error ellipse: s-maj=0.2km s-min=0.2km az=0.0*
*RHSSO **19** 09:16:41.1±0.9, 41°.63N×19°.56E, h7km±3km, ML3.0/5*
ISC 19 09:16:40.4±1.8, 41°.59N±0°.08×19°.43E±0°.05, h7km±10km, n22, σ0s 82/42, 4C-2D, Albania

| Code | Station Name |

2.9nm,0.5s
BUM Brajici-Budva 0.84 332 *e*Pg **Pg 09 18 29.2 -0.6**
BUM *i* Sg **Sb 09 18 41.4 +0.5**
PDG Podgorica 0.88 352 Pg **Pg 09 18 30.0 -0.5**
PDG Sg **Sn 09 18 43.5 -0.2**
PDG Podgorica 0.88 352 ⇓*i* Pg **Pg 09 18 29.9 -0.6**
PDG *i* Sg **Sn 09 18 43.2 -0.6**
CEME Cevo 1.06 339 ⇑*i* Pg **Pb 09 18 33.2 -0.3**
CEME *i* Sg **Sn 09 18 48.8 +0.6**
VLO Vlora 1.09 177 Pg **Pg 09 18 34.7 +0.2**
VLO Sg **Sn 09 18 49.6 +0.7**
PVY Plav 1.11 21 *e*Pg **Pg 09 18 34.9 0.0**
PVY *i* Sg **Sn 09 18 51.9 +2.3**
HCY Herceg Novi 1.12 322 ⇑*i* Pg **Pb 09 18 34.5 -0.1**
HCY *i* Sg **Sn 09 18 51.1 +1.2**
OHR Ohrid 1.13 113 *i* Pn **Pb 09 18 33.8 -0.8**
NKME Niksic 1.26 344 ⇑*i* Pg **Pb 09 18 36.9 0.0**
NKME *i* Sg **Sg 09 18 55.4 +1.3**
KOME Kolasin 1.29 3 *e*Pg **Pg 09 18 38.0 -0.4**
KOME *i* Sg **Sg 09 18 57.5 +2.3**
IVA Berane 1.36 15 ⇓*i* Pg **Pg 09 18 39.2 -0.4**
IVA *i* Sg **Sg 09 19 00.1 +2.8**
KBN Korca 1.39 132 Pg **Pb 09 18 39.5 +0.3**
KBN Sg **Sg 09 19 00.1 +1.7**
BRY Bratogost 1.49 334 *e*Pg **Pb 09 18 41.2 +0.2**
BRY *i* Sg **Sg 09 19 02.8 +1.2**
SKO Skopje 1.56 74 *i* Pn **Pb 09 18 42.2 +0.2**
NEST Nestorio 1.68 132 Pn **Pb 09 18 44.3 +0.2**
NEST Sn **Sg 09 19 08.6 +1.1**
UPM Unac-Piva 1.69 347 ⇓*i* Pn **Pb 09 18 43.7 -0.4**
UPM *i* Sn **Sg 09 19 07.7 -0.1**
SRN Sarande 1.73 165 Pn **Pn 09 18 43.6 +0.6**
SRN AML AML 09 19 15.7
0.4nm,0.7s
PLE Pljevlja 1.77 359 ⇑*i* Pn **Pb 09 18 45.4 -0.3**
PLE *i* Sn **Sg 09 19 09.8 -0.7**
VAY Valandovo 2.38 95 *i* Pn **Pn 09 18 52.8 +0.9**
MLR Muntele Rosu 6.16 48 Pn **Pn 09 19 45.7 +1.8**
0.1nm,0.3s,baz=218,slow=19,SNR=1.7
3.0nm,0.6s
KRUC Moravsky 7.80 345 *e*PG 09 20 41.9
VRAC Vranov 8.00 347 *e*PG Pb 09 20 37.8 +6.1
MORC Moravsky Berou 8.32 352 *e*PG Pn 09 20 23.9 +10
FINES FINESS Array B 20.32 9 P **P 09 22 47.4 -1.2**
2.5nm,0.9s,baz=184,slow=11,SNR=1.2
2.5nm,0.9s
BVAR Borovoye Array 35.69 54 P **P 09 25 10.1 -0.8**
0.3nm,0.4s,baz=291,slow=8.9,SNR=2.2
0.3nm,0.4s
ZALV Zalesovo Beam 44.13 51 P **P 09 26 20.0 -1.0**
0.6nm,0.4s,baz=283,slow=8.4,SNR=2.2
0.6nm,0.4s
MKAR Makanchi Array 44.33 61 P **P 09 26 21.4 -1.3**
0.3nm,0.5s,baz=276,slow=7.2,SNR=4.5
0.3nm,0.5s

*IDC **19** 09:18:48.8±1.4, 41°.41N×19°.39E, h0km, mb3.5/6, mbtmp3.4/8, ML3.4/1, MS3.2/4, Error ellipse: s-maj=26.2km s-min=22.7km az=147.0*
ISC 19 09:18:50.5±1.2, 41°.4N±0°.1×19°.3E±0°.1, h10km, n14, σ2$08/8, mb3.4/4, MS3.3/3, 1C, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLR	**Muntele Rosu**	**6.33**	**47**	Pn	**Pn**	**09 20 26.1**	**+2.2**
	0.4nm,0.3s,baz=212,slow=15,SNR=2.3						
	1.5nm,0.5s						
PSZ	**Piszkesteto**	**6.56**	**3**	⇑P	Pg	09 21 02.8	+6.8
JAVC	**Velka Javorina**	**7.58**	**352**	*e*PG	**Pn**	**09 20 42.3**	**+1.3**
GERES	**GERESS Array B**	**8.47**	**334**	Pn	**Pn**	**09 20 53.6**	**+0.4**
	0.4nm,0.6s,baz=152,slow=14,SNR=1.7						
KBZ	**Khabaz**	**17.51**	**74**	LR	LR	09 31 10.8	
	comp=Z,60nm,21.9s,baz=16,slow=42						
FINES	**FINESS Array B**	**20.51**	**9**	P	Pn	09 23 28.0	-2.6
	5.6nm,1.0s,baz=189,slow=16,SNR=3.4						
	5.6nm,1.0s						
TORD	**Torodi Ar. Bea**	**32.06**	**214**	P	**P**	**09 25 18.4**	**+0.9**
	0.1nm,0.3s,baz=39,slow=5.9,SNR=3.6						
	0.1nm,0.3s						
BVAR	**Borovoye Array**	**35.85**	**53**	P	**P**	**09 25 47.6**	**-2.5**
	0.4nm,0.6s,baz=288,slow=5.9,SNR=1.5						
	0.4nm,0.6s						
FURI	**Furi**	**36.59**	**147**	LR	LR	09 42 46.0	
	comp=Z,18nm,19.4s,baz=156,slow=39						
AAK	**Ala-Archa**	**40.39**	**69**	LR	LR	09 47 31.7	
	comp=Z,44nm,19.0s,baz=292,slow=43						
KURBB	**Kurchatov Arra**	**41.14**	**56**	P	**P**	**09 26 31.9**	**-2.7**
	0.1nm,0.3s,baz=278,slow=6.5,SNR=1.0						
	0.1nm,0.3s						
ZALV	**Zalesovo Beam**	**44.30**	**50**	P	**P**	**09 27 00.6**	**+0.4**
	0.4nm,0.4s,baz=282,slow=7.2,SNR=1.3						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**44.48**	**61**	P	**P**	**09 27 01.1**	**-0.7**
	0.3nm,0.6s,baz=274,slow=7.9,SNR=2.6						
	0.3nm,0.6s						
ULM	**Lac du Bonnet**	**72.60**	**323**	LR	LR	10 03 48.7	
	comp=Z,31nm,19.5s,baz=10.0,slow=37						

*IDC **19** 09:20:02.8±0.9, 41°.43N×19°.31E, h0km, mb3.7/13, mbtmp3.7/23, ML3.3/7, MS3.3/8, Error ellipse: s-maj=16.7km s-min=13.1km az=12.0*
*MCSM **19** 09:20:05.3±0.4, 42°.N±4°×1°.9E±°, h10km±3km, mb4.4, mB4.4, MLv3.9, Mw(mB)3.6*
*RHSSO **19** 09:20:05.5±0.7, 41°.44N×19°.44E, h5km±2km, ML4.0/9*
*BEO **19** 09:20:08.8±0.6, 41°.57N×19°.39E, h22km±4km, ML3.7/7*
*PDG **19** 09:20:08.1±0.1, 41°.62N×19°.45E, h11km, MD3.9/12, ML3.8/13, Error ellipse: s-maj=0.2km s-min=0.3km az=0.0*
ISC 19 09:20:05.8±1.1, 41°.50N±0°.03×19°.45E±0°.02, h17km±7km, n116, σ1$62/146, mb3.9/9, MS3.4/3, 18C-5D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULC	**Ulcinj**	**0.48**	**342**	*e*Pg	**Pg**	**09 20 15.2**	**-0.4**
ULC				*i* Sg	**Sg**	**09 20 21.2**	**-1.0**
DRME	**Dracevica, Mon**	**0.71**	**344**	*e*Pg	**Pg**	**09 20 19.3**	**-0.5**
DRME				*i* Sg	**Sb**	**09 20 29.0**	**-0.4**
DRME	**Dracevica, Mon**	**0.71**	**344**	*e*Pg	**Pg**	**09 20 18.9**	**-0.9**
DRME				*e*Sg	**Sb**	**09 20 30.1**	**+0.7**
BUM	**Brajici-Budva**	**0.90**	**333**	*e*Pg	**Pb**	**09 20 22.9**	**-0.2**
BUM				*i* Sg	**Sb**	**09 20 35.7**	**+0.9**
PDG	**Podgorica**	**0.94**	**351**	*e*Pg	**Pb**	**09 20 23.9**	**+0.2**
PDG				*e*Sg	**Sn**	**09 20 38.5**	**+1.2**
PDG	**Podgorica**	**0.94**	**351**	*e*Pg	**Pg**	**09 20 23.3**	**-0.7**
PDG				*i* Sg	**Sb**	**09 20 36.4**	**+0.6**
PDG	**Podgorica**	**0.94**	**351**	*e*Pg	**Pg**	**09 20 23.1**	**-0.9**
PDG				*e*Sg	**Sn**	**09 20 37.1**	**-0.2**
OHR	**Ohrid**	**1.09**	**111**	*i* Pn	**Pn**	**09 20 28.5**	**+2.1**
OHR				*i* Sn	**Sn**	**09 20 46.8**	**+5.6**
CEME	**Cevo**	**1.11**	**339**	*e*Pg	**Pb**	**09 20 26.8**	**0.0**
CEME				*i* Sg	**Sn**	**09 20 42.4**	**+0.5**
PVY	**Plav**	**1.15**	**19**	*e*Pg	**Pb**	**09 20 27.1**	**-0.4**
PVY				*i* Sg	**Sn**	**09 20 43.9**	**+1.0**
HCY	**Herceg Novi**	**1.18**	**323**	*e*Pg	**Pg**	**09 20 28.3**	**-0.4**
HCY				*i* Sg	**Sn**	**09 20 45.5**	**+2.1**
HCY	**Herceg Novi**	**1.18**	**323**	⇑*i* Pg	**Pb**	**09 20 27.6**	**-0.3**
HCY				*e*Sg	**Sn**	**09 20 44.9**	**+1.5**
NKME	**Niksic**	**1.32**	**344**	⇑*i* Pg	**Pg**	**09 20 30.4**	**-0.8**
NKME				*i* Sg	**Sg**	**09 20 49.3**	**+0.9**
KOME	**Kolasin**	**1.35**	**2**	*e*Pg	**Pb**	**09 20 30.8**	**+0.1**
KOME				*i* Sg	**Sg**	**09 20 50.3**	**+0.9**
IVA	**Berane**	**1.41**	**13**	*e*Pg	**Pb**	**09 20 31.9**	**+0.2**
IVA				*i* Sg	**Sg**	**09 20 52.4**	**+1.1**
TREB	**Trebinje**	**1.46**	**326**	⇑*i* Pg	**Pb**	**09 20 32.5**	**-0.1**
TREB				*e*Sg	**Sg**	**09 20 53.1**	**0.0**
BRY	**Bratogost**	**1.55**	**334**	⇑*i* Pg	**Pg**	**09 20 34.8**	**-0.9**
BRY				*i* Sg	**Sg**	**09 20 56.7**	**+0.7**
BRY	**Bratogost**	**1.55**	**334**	*e*Pn	**Pb**	**09 20 34.4**	**+0.1**
BRY				*e*Sn	**Sg**	**09 20 55.6**	**-0.4**
SKO	**Skopje**	**1.56**	**72**	*i* Pn	**Pg**	**09 20 36.3**	**+0.5**
SKO				*i* Sn	**Sg**	**09 20 58.7**	**+2.5**
UPM	**Unac-Piva**	**1.75**	**347**	⇑*i* Pn	**Pb**	**09 20 37.4**	**-0.2**
UPM				*i* Sn	**Sg**	**09 21 01.7**	**-0.4**
UPM	**Unac-Piva**	**1.75**	**347**	*e*Pn	**Pb**	**09 20 37.6**	**0.0**
UPM				*e*Sn	**Sb**	**09 21 00.1**	**+0.8**
SJES	**Sjenica**	**1.80**	**12**	*e*Pg	**Pg**	**09 20 39.5**	**-0.9**
SJES				*e*Sg	**Sg**	**09 21 03.2**	**-0.6**
SJES	**Sjenica**	**1.80**	**12**	*e*Pn	**Pb**	**09 20 38.2**	**-0.2**
SJES				*e*Sn	**Sb**	**09 21 02.2**	**+1.4**
PLE	**Pljevlja**	**1.83**	**359**	*e*Pn	**Pb**	**09 20 38.8**	**-0.1**
PLE				*i* Sn	**Sg**	**09 21 03.2**	**-1.5**
STON	**Ston**	**1.89**	**317**	*e*Pg	**Pb**	**09 20 40.5**	**+0.7**
STON				*e*Sg	**Sg**	**09 21 05.8**	**-0.8**
RUDO	**Rudo**	**2.11**	**358**	*e*Pn	**Pb**	**09 20 42.7**	**-1.1**
RUDO				*e*Sn	**Sb**	**09 21 09.1**	**-0.6**
SELS	**Selova**	**2.12**	**35**	*e*Pn	**Pb**	**09 20 43.6**	**-0.2**
SELS				*e*Sn	**Sn**	**09 21 08.3**	**+1.8**
IVAS	**Ivanjica**	**2.14**	**14**	*e*Pn	**Pb**	**09 20 42.8**	**-1.4**
IVAS				*e*Sn	**Sn**	**09 21 09.3**	**+2.3**
BARS	**Barje**	**2.19**	**52**	*e*Pn	**Pb**	**09 20 45.6**	**+0.5**
GOCS	**Kraljevo Serbi**	**2.31**	**27**	*e*Pn	**Pb**	**09 20 45.9**	**-1.3**
GOCS				*e*Sn	**Sn**	**09 21 11.9**	**+0.5**
VAY	**Valandovo**	**2.35**	**93**	*i* Pn	**Pb**	**09 20 47.2**	**-0.6**
VAY				*i* Sn	**Sb**	**09 21 15.6**	**-1.1**
BBLS	**Lazi&#263i**	**2.36**	**359**	*e*Pn	**Pn**	**09 20 46.1**	**+2.1**
BBLS				*e*Sn	**Sb**	**09 21 15.8**	**-1.1**
BOSS	**Bosilegrad**	**2.47**	**65**	*e*Pn	**Pb**	**09 20 49.1**	**-0.7**
BOSS				*e*Sn	**Sn**	**09 21 15.5**	**+0.4**
GRUS	**Gruza**	**2.56**	**21**	*e*Pn	**Pn**	**09 20 49.1**	**+2.5**
DIVS	**Divibare**	**2.62**	**9**	*e*Pn	**Pn**	**09 20 49.3**	**+1.7**
ZAPS	**Zavoj**	**2.95**	**52**	*e*Pn	**Pb**	**09 20 55.7**	**-2.3**
ZAGS	**Zajecar**	**3.09**	**41**	*e*Pn	**Pn**	**09 20 56.8**	**+2.9**
TIP	**Timpagrande**	**3.10**	**222**	⇑P	**Pb**	**09 21 00.9**	**+0.3**
TIP	**Timpagrande**	**3.10**	**222**	P	**Pn**	**09 20 54.4**	**+0.3**
BORS2	**Bor- Borsko je**	**3.20**	**35**	*e*Pn	**Pn**	**09 20 56.6**	**+1.1**
KUBS	**Kucevo**	**3.33**	**29**	*e*Pn	**Pn**	**09 20 57.5**	**+0.2**
KUBS				*e*Sn	**Sn**	**09 21 36.3**	**-0.2**
BLY	**Banja Luka**	**3.64**	**334**	⇑P	Pn	09 20 55.5	-6.0
BLY	**Banja Luka**	**3.64**	**334**	*e*Pn	**Pn**	**09 21 02.9**	**+1.4**
BLY				*e*Sn	**Sn**	**09 21 46.5**	**+2.4**
FRGS	**Fruska Gora**	**3.66**	**4**	*e*Pn	**Pn**	**09 21 02.9**	**+1.1**
FRGS	**Fruska Gora**	**3.66**	**4**	*e*Pn	**Pn**	**09 21 03.1**	**+1.3**
FRGS				*e*Sn	**Sn**	**09 21 46.7**	**+2.1**
MDVR	**Moldovita**	**3.67**	**26**	⇑P	**Pb**	**09 21 14.3**	**-1.9**
HERR	**Herculane**	**4.01**	**32**	⇑P	**Pb**	**09 21 17.9**	**+1.8**
CEL	**Celeste**	**4.24**	**221**	P	**Pn**	**09 21 09.8**	**0.0**
BZS	**Buzias**	**4.40**	**20**	⇑P	**Pn**	**09 21 13.0**	**+1.1**
GZR	**Gura Zlata**	**4.58**	**31**	⇑P	**Pn**	09 21 19.6	+5.2
AQU	**L'Aquila**	**4.59**	**283**	P	**Pn**	**09 21 13.4**	**-1.2**
AQU	**L'Aquila**	**4.59**	**283**	*e*Pn	**Pn**	**09 21 14.9**	**+0.3**
AQU				*e*Sn	**Sn**	**09 22 07.4**	**-0.2**
MORH	**Mrgy, Hungar**	**4.75**	**353**	P	**Pn**	**09 21 16.2**	**-0.4**
MORH	**Mrgy, Hungar**	**4.75**	**353**	*e*Pn	**Pn**	**09 21 17.4**	**+0.8**
MORH				*e*Sn	**Sn**	**09 22 12.7**	**+1.5**
LOT	**Lotru**	**5.04**	**37**	⇓P	**Pn**	**09 21 22.6**	**+1.8**
BEHE	**Becsehely**	**5.33**	**340**	*e*Pn	**Pn**	**09 21 25.9**	**+1.3**
ARR	**Arges**	**5.40**	**43**	⇑P	**Pn**	**09 21 26.3**	**+0.6**
TNR	**Turnu Rosu**	**5.43**	**39**	⇓P	**Pn**	**09 21 24.6**	**-1.4**
VOIR		**5.66**	**44**	⇑P	**Pn**	**09 21 27.8**	**-1.5**
VOIR		**5.66**	**44**	P	**Pn**	**09 21 29.7**	**+0.4**
	0.1nm9.9nm,0.6s						
MARR	**Marisel-Cluj**	**5.81**	**26**	⇑P	Pn	09 21 18.4	-13
SOKA	**Soboth**	**6.07**	**330**	*e*Pn	**Pn**	**09 21 37.4**	**+2.5**
	3.0nm,0.2s						
SOKA				*e*Sn	**Sn**	**09 22 41.4**	**-2.7**
	12nm,0.8s						
OBKA	**Obir**	**6.12**	**326**	*e*Pn	**Pn**	**09 21 37.7**	**+2.1**
	2.9nm,0.2s						
OBKA				*e*Sn	**Sn**	**09 22 47.6**	**+2.2**
	25nm,0.5s						
MLR	**Muntele Rosu**	**6.18**	**48**	Pn	**Pn**	**09 21 40.8**	**+4.3**
	1.3nm,0.3s,baz=306,slow=22,SNR=5.1						
MLR				Sn	**Sn**	**09 22 43.9**	**-2.8**
	0.6nm,0.3s,baz=288,slow=20,SNR=1.0						
MLR				LR	LR	09 24 59.9	
	comp=Z,262nm,18.4s,baz=262,slow=47						
	4.8nm,0.3s						
MLR	**Muntele Rosu**	**6.18**	**48**	⇓P	Pn	09 21 31.6	-4.9
MLR	**Muntele Rosu**	**6.18**	**48**	P	**Pn**	**09 21 36.6**	**+0.1**
	0.1nm17nm,0.9s						
DOPR	**Dopca**	**6.20**	**42**	⇓P	Pn	09 21 29.0	-7.6
ISR	**Istrita**	**6.31**	**53**	⇑P	**Pn**	**09 21 34.2**	**-3.9**
ISR	**Istrita**	**6.31**	**53**	P	**Pn**	**09 21 38.5**	**+0.3**
	0.2nm43nm,1.1s						
RONA	**Rosalia, Austr**	**6.59**	**341**	*e*Pn	Pn	09 21 50.2	+8.2
	1.5nm,0.3s						
MYKA	**Terra Mystica**	**6.61**	**323**	*e*Pn	**Pn**	**09 21 45.9**	**+3.5**
	1.7nm,0.4s						
PLOR	**Plostina**	**6.79**	**48**	⇑P	Pn	09 21 32.6	-12
VRI	**Vrincioaia**	**6.84**	**48**	⇑P	Pn	09 21 32.9	-13
KECS	**Kecovo**	**7.02**	**6**	*e*PN	Pn	09 21 53.0	+5.2
KECS				*e*SN	**Sn**	**09 23 05.6**	**-1.6**
KBA	**Koelnbreinsper**	**7.09**	**324**	*e*Pn	**Pn**	**09 21 52.7**	**+3.8**
	1.9nm,0.3s						
KBA				*e*Sn	**Sn**	**09 23 09.9**	**+0.8**
	4.3nm,0.6s						
KBA				*e*Sg	**Sg**	**09 23 55.5**	**+2.3**
	6.1nm,0.7s						
CFR	**Carcaliu**	**7.32**	**57**	⇓P	Pn	09 21 40.9	-11
GHRR		**7.34**	**49**	P	**Pn**	**09 21 52.9**	**+0.6**
TPGR	**Topolog**	**7.36**	**60**	⇑P	Pn	09 21 41.6	-11
BIOA	**Bad Ischl, Aus**	**7.45**	**328**	*e*Pn	Pn	09 21 58.7	+4.9
	3.9nm,0.3s						
IDI	**Anoyia**	**7.53**	**144**	Pn	**Pn**	**09 21 55.6**	**+0.6**
	12nm,0.9s,baz=348,slow=22,SNR=1.4						
IDI				Sn	**Sn**	**09 23 17.1**	**-3.0**
	0.7nm,0.3s,baz=246,slow=14,SNR=1.6						
LESA	**Schwarzleotal**	**7.65**	**323**	*e*Pn	**Pn**	**09 21 58.2**	**+1.6**
	2.9nm,0.3s						
LESA				*e*Sn	**Sn**	**09 23 22.9**	**+0.1**
	4.1nm,0.4s						
STHS	**Stebnicka Huta**	**8.01**	**8**	*e*PN	Pn	09 22 07.2	+5.7
WTTA	**Wattenberg**	**8.03**	**318**	*e*Pn	**Pn**	**09 22 04.6**	**+2.8**
	1.7nm,0.2s						
WATA	**Walderalm**	**8.11**	**319**	*i* Pn	**Pn**	**09 22 05.4**	**+2.5**
	2.4nm,0.2s						
SQTA	**Sankt Quirin**	**8.21**	**317**	*i* Pn	**Pn**	**09 22 07.5**	**+3.1**
	1.9nm,0.3s						
FETA	**Feichten**	**8.34**	**314**	*e*Pn	Pn	09 22 11.2	+5.1
	2.6nm,0.5s						
MOTA	**Mosalm**	**8.35**	**317**	*e*Pn	**Pn**	**09 22 07.4**	**+1.2**
	1.7nm,0.3s						
MOTA				*e*Sn	**Sn**	**09 23 41.0**	**+0.8**
	17nm,0.9s						
GERES	**GERESS Array B**	**8.39**	**333**	Pn	**Pn**	**09 22 08.0**	**+1.3**
	baz=154,slow=14,SNR=2.4						
GERES				Sn	**Sn**	**09 23 34.7**	**-6.3**
	baz=166,slow=16						
	0.3nm,0.3s						
DAVOX	**Damos/Dischmat**	**8.67**	**311**	Pn	**Pn**	**09 22 10.4**	**-0.2**
	0.6nm,0.3s,baz=132,slow=17,SNR=2.9						
DAVOX				Sn	**Sn**	**09 23 47.4**	**-0.7**
	0.3nm,0.3s,baz=104,slow=18,SNR=3.8						
DAVOX				LR	LR	09 26 24.4	
	comp=Z,113nm,19.8s,baz=75,slow=44						
	1.8nm,0.5s						
TUE	**Stuetta**	**8.81**	**308**	P	**Pn**	**09 22 13.0**	**+0.4**
	26nm,1.1s						
DAVA	**Danuels**	**8.96**	**313**	*i* Pn	**Pn**	**09 22 19.2**	**+4.6**
	3.8nm,0.6s						
KEST	**Kesra**	**9.78**	**237**	LR	LR	09 27 14.3	
	comp=Z,173nm,18.2s,baz=241,slow=45						
BRTR	**Keskin Array B**	**10.93**	**95**	Pn	**Pn**	**09 22 42.9**	**+1.2**
	baz=353,slow=10,SNR=1.2						
BRTR				LR	LR	09 27 58.8	
	comp=Z,105nm,18.7s,baz=291,slow=43						
	0.2nm,0.5s						
AKASG	**Malin Array Be**	**11.42**	**33**	Pn	**Pn**	**09 22 49.3**	**+1.2**
	0.5nm,0.6s,baz=222,slow=12,SNR=1.7						
AKASG				LR	LR	09 28 41.0	
	comp=Z,137nm,20.4s,baz=217,slow=45						
KVAR	**Kislovodsk Arr**	**17.24**	**74**	P	**Pn**	**09 24 06.8**	**+0.8**
	baz=245,slow=19						
	1.4nm,0.3s						
KBZ	**Khabaz**	**17.39**	**75**	P	**P**	**09 24 09.3**	**+0.4**
	0.1nm,0.3s,baz=228,slow=14,SNR=2.6						
	1.6nm,0.8s						
ESDC	**Sonseca Array**	**17.87**	**272**	P	**Pn**	**09 24 13.3**	**-0.3**
	0.5nm,0.9s,baz=85,slow=11,SNR=2.5						
HFS	**Hagfors**	**18.99**	**351**	P	**P**	**09 24 25.9**	**-0.4**
	0.3nm,0.3s,baz=168,slow=7.6,SNR=4.6						
	1.4nm,0.6s						
NOA	**NORSAR Array B**	**20.20**	**348**	P	**P**	**09 24 37.9**	**-1.7**
	1.2nm,0.8s,baz=157,slow=10.0,SNR=2.5						
	1.2nm,0.9s						
EKA	**Eskdalemuir Ar**	**20.28**	**321**	P	**P**	**09 24 39.1**	**-1.4**
	0.5nm,0.4s,baz=116,slow=9.1,SNR=5.4						
	0.5nm,0.4s						
FINES	**FINESS Array B**	**20.37**	**9**	P	**P**	**09 24 40.6**	**-0.8**
	4.4nm,0.9s,baz=184,slow=12,SNR=7.3						
	4.4nm,0.9s						
MDT	**Midelt**	**20.99**	**253**	LR	LR	09 32 28.5	
	comp=Z,32nm,19.9s,baz=52,slow=36						
BELG	**Belogornoye**	**21.96**	**51**	P	**P**	**09 24 58.9**	**+0.3**
	23nm,0.9s,baz=180,slow=20,SNR=4.7						
	23nm,0.9s						
AKTO	**Aktyubinsk**	**27.98**	**58**	LR	LR	09 41 03.1	
	comp=Z,88nm,19.8s,baz=333,slow=45						
TORD	**Torodi Ar. Bea**	**32.22**	**214**	P	**P**	**09 26 33.3**	**+0.1**
	0.4nm,0.6s,baz=1.5,slow=9.4,SNR=3.6						
	0.4nm,0.6s						
BVAR	**Borovoye Array**	**35.71**	**53**	P	**P**	**09 27 03.0**	**-0.3**
	1.0nm,0.6s,baz=286,slow=5.5,SNR=4.9						
	1.0nm,0.6s						
KURBB	**Kurchatov Arra**	**41.00**	**56**	P	**P**	**09 27 46.8**	**-0.9**
	0.2nm,0.3s,baz=288,slow=9.7,SNR=3.2						
	0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**44.15**	**50**	P	**P**	**09 28 13.8**	**+0.4**
	2.2nm,0.5s,baz=280,slow=8.7,SNR=9.2						
	2.2nm,0.5s						
MKAR	**Makanchi Array**	**44.34**	**61**	P	**P**	**09 28 15.1**	**+0.1**
	1.1nm,0.4s,baz=281,slow=7.5,SNR=13						
	1.1nm,0.4s						
SONM	**Songino Array**	**59.02**	**52**	P	**P**	**09 30 04.4**	**-0.4**
	0.5nm,0.4s,baz=282,slow=7.4,SNR=5.8						
	0.5nm,0.4s						
LBTB	**Lobatse**	**66.42**	**174**	LR	LR	10 01 35.7	
	comp=Z,32nm,18.6s,baz=298,slow=38						
YKA	**Yellowknife Ar**	**69.99**	**339**	P	**P**	**09 31 16.1**	**0.0**
	0.2nm,0.5s,baz=24,slow=5.8,SNR=3.8						
	0.2nm,0.5s						
ILAR	**Eielson Array**	**73.52**	**354**	P	**P**	**09 31 36.8**	**-0.5**
	0.2nm,0.6s,baz=17,slow=9.4,SNR=2.2						
	0.2nm,0.6s						
KSRS	**Korea Array**	**77.86**	**51**	P	**P**	**09 32 03.5**	**+1.0**
	0.5nm,0.4s,baz=287,slow=5.0,SNR=1.3						
	0.5nm,0.4s						
PLCA	**Paso Flores**	**115.41**	**237**	PKP	**PKPdf**	**09 38 44.0**	**-2.5**
	1.2nm,0.9s,baz=58,slow=5.3,SNR=3.1						
ASAR	**Alice Springs**	**123.27**	**93**	PKP	**PKPdf**	**09 39 01.6**	**-0.4**
	0.3nm,0.6s,baz=313,slow=1.5,SNR=5.5						

IDC 19 09:30:30.0±2.8, 53°.77N×87°.10E, h0km, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=24.6km s-min=17.0km az=64.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.36**	**279**	I	I	09 38 40.0	
	baz=99,slow=340,SNR=2.7						
ZALV	**Zalesovo Beam**	**1.36**	**278**	Pg	Pg	09 30 54.0	-2.1
	0.7nm,0.3s,baz=96,slow=16,SNR=15						
ZALV				Lg	Lg	09 31 13.6	
	1.0nm,0.3s,baz=96,slow=28,SNR=6.5						
KURBB	**Kurchatov Arra**	**6.14**	**243**	Pn	Pn	09 32 03.2	+1.4
	baz=58,slow=14,SNR=4.5						
KURBB				Sn	Sn	09 33 12.4	-0.3
	baz=63,slow=17,SNR=1.2						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**7.63**	**206**	Pn	Pn	09 32 23.6	+1.2
	0.1nm,0.3s,baz=24,slow=13,SNR=5.4						
	0.2nm,0.2s						

*SDD **19** 09:31:05.6±2.5, 19°.62N×70°.83W, h23km±11km, MD3.3, ML2.4, MW3.2, Presumed earthquake*
*OSPL **19** 09:31:07.4±3.2, 19°.57N×70°.85W, h0km±24km, ML1.8, Presumed earthquake*
ISC 19 09:31:04.4±1.0, 19°.66N±0°.04×70°.82W±0°.03, h23km±8km, n22, σ1$07/33, 14C-1D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SC01	**Santiago de lo**	**0.24**	**158**	⇑*e*Pg	**Pb**	**09 31 09.5**	**-1.0**
SC01				*e*Sg	**Sb**	**09 31 15.2**	**+0.7**
SC01				IAML		09 31 19.5	
	comp=N,149nm,0.2s						
SC01	**Santiago de lo**	**0.24**	**158**	*i* P	**Pb**	**09 31 09.9**	**-0.6**
SC01				*e*S	**Sb**	**09 31 15.0**	**+0.4**
SC01				IAML		09 31 17.6	
	comp=Z,111nm,0.2s						
LUDR	**Luperon**	**0.27**	**333**	⇓*e*Pg	**Pb**	**09 31 10.9**	**+0.1**
LUDR				⇑*e*Sg	**Sn**	**09 31 17.9**	**-0.5**
MADR	**Mao Valverde**	**0.28**	**251**	⇑*e*Pg	**Pb**	**09 31 11.0**	**0.0**
MADR				⇑*e*Sg	**Sn**	**09 31 17.1**	**-1.5**
MADR				IAML		09 31 21.4	
	comp

AFI Afiamalu 7.13 31 P Pn 09 37 56.1 -6.2
AFI S S 09 39 07.4 -16
RAO Raoul Island 9.38 193 P **Pn** **09 38 30.1 -1.2**
323nm,0.5s,baz=81,slow=22,SNR=1.6
FUNA Funafuti 12.54 336 P **Pn** **09 39 09.9 -2.0**
FUNA Funafuti 12.54 336 Pn **Pn** **09 39 08.0 -3.9**
RAR Rarotonga 14.85 97 P **P** **09 39 43.4 +2.2**
47nm,0.8s,baz=262,slow=6.0,SNR=6.0
RAR S **S** **09 42 24.7 -0.6**
14nm,0.7s,baz=177,slow=23,SNR=1.7
RAR LR LR 09 45 23.9
comp=Z,55nm,18.8s,baz=272,slow=36
DZM Mont Dzumac 16.89 260 P **P** **09 40 02.8 -1.0**
12nm,0.8s,baz=89,slow=21,SNR=6.6
OUZ Omahuta 17.85 210 P **Pn** **09 40 16.6 +0.4**
MXZ Matakaoa Point 18.22 196 P **Pn** **09 40 21.9 +1.4**
WMGZ Waiomatatini S 18.43 195 P **Pn** **09 40 24.8 +1.8**
WMGZ S **S** **09 43 33.4 -6.6**
HAZ Te Kaha 18.54 197 P **Pn** **09 40 24.3 +0.1**
HAZ S **S** **09 43 38.4 -3.7**
MBAZ Motutapu North 18.60 205 P **Pn** **09 40 27.6 +2.7**
PUZ Puketiti 18.71 195 P **Pn** **09 40 27.2 +0.9**
ETAZ East Tamaki Re 18.75 204 P **Pn** **09 40 29.1 +2.4**
RUGZ Raukumara Rang 18.76 197 P **Pn** **09 40 26.7 -0.3**
MKAZ Moumakai 18.79 204 P **Pn** **09 40 27.3 +0.1**
AWAZ Awhitu Peninsu 18.95 205 P **Pn** **09 40 29.1 -0.1**
CNGZ Carnagh Statio 19.12 195 P **Pn** **09 40 33.0 +2.0**
MWZ Matawai 19.15 197 P **P** **09 40 29.2 +1.1**
MWZ S **S** **09 43 49.7 -4.5**
TKGZ Te Karaka 19.16 196 P **Pn** **09 40 31.4 -0.2**
URZ Urewera 19.20 198 P **P** **09 40 28.6 +0.1**
21nm,0.4s,baz=309,slow=2.3,SNR=34
URZ S **S** **09 43 49.1 -5.9**
9.3nm,0.6s,baz=21,slow=21,SNR=8.4
URZ Urewera 19.20 198 P **P** **09 40 30.1 +1.5**
URZ Urewera 19.20 198 P **P** **09 40 29.0 +0.5**
URZ S **S** **09 43 49.7 -5.3**
TOZ Tahuroa Road 19.23 202 P **P** **09 40 30.9 +2.0**
TOZ IAmb IAmb 09 40 32.7
comp=Z,18nm,0.9s
RAGZ Rawiri 19.33 197 P **P** **09 40 31.7 +1.6**
RTZ Ruatahuna 19.56 198 P **P** **09 40 32.1 -0.5**
TLZ Tolley Road 19.75 201 P **P** **09 40 37.1 +2.5**
HIZ Hauiti 20.15 202 P **P** **09 40 41.1 +2.3**
HIZ Hauiti 20.15 202 P **P** **09 40 41.9 +3.0**
BKZ Black Stump Fm 20.21 198 P **P** **09 40 41.9 +2.3**
BKZ Black Stump Fm 20.21 198 P **P** **09 40 40.3 +0.7**
BKZ IAmb IAmb 09 41 24.3
comp=Z,39nm,1.4s
BKZ Black Stump Fm 20.21 198 P **P** **09 40 40.9 +1.4**
VRZ Vera Road 20.73 202 P **P** **09 40 47.3 +2.4**
QRZ Quartz Range 23.04 204 P **P** **09 41 09.6 +2.2**
QRZ Quartz Range 23.04 204 P **P** **09 41 09.4 +2.0**
MRNZ Matariki Terra 23.45 202 P **P** **09 41 12.0 +0.8**
KHZ Kahutara 24.09 200 P **P** **09 41 20.8 +3.8**
KHZ Kahutara 24.09 200 P **P** **09 41 17.6 +0.6**
INZ Inchbonnie 25.09 203 P **P** **09 41 28.9 +2.9**
TATA Tatamba Isabel 26.48 293 P **P** **09 41 39.1 +0.2**
EIDS Eidsvold 31.14 254 P **P** **09 42 20.3 +0.3**
EIDS IAmb IAmb 09 42 45.6
comp=Z,29nm,1.5s
CTA Charters Tower 35.78 263 P **P** **09 42 59.5 -0.6**
comp=Z,4.8nm,0.5s,baz=89,slow=10,SNR=13
comp=Z,4.8nm,0.5s
CTAO Charters Tower 35.78 263 P **P** **09 43 00.0 -0.2**
CTAO Charters Tower 35.78 263 P **P** **09 43 00.1 0.0**
CTAO IAmb IAmb 09 43 36.0
comp=Z,20nm,1.2s
COEN Coen 39.82 272 P **P** **09 43 33.0 -1.0**
COEN IAmb IAmb 09 43 47.6
comp=Z,18nm,1.1s
STKA Stephens Creek 40.01 244 P **P** **09 43 34.9 -0.5**
comp=Z,1.5nm,1.0s,baz=62,slow=15,SNR=1.5
comp=Z,1.5nm,1.0s
STKA Stephens Creek 40.01 244 IAmb IAmb 09 44 15.7
comp=Z,26nm,1.2s
MANU Manus Island 40.37 292 P **P** **09 43 38.1 -0.3**
JAY Jayapura 46.07 287 P **P** **09 44 23.1 -1.1**
comp=Z,11nm,0.6s,baz=148,slow=5.4,SNR=7.3
comp=Z,11nm,0.6s
AS31 Alice Springs 46.81 256 P **P** **09 44 29.5 -0.4**
ASAR Alice Springs 46.82 256 P **P** **09 44 29.4 -0.5**
comp=Z,2.7nm,0.5s,baz=97,slow=8.3,SNR=38
ASAR ScP **ScP** **09 49 37.0 +3.1**
comp=Z,0.4nm,0.6s,baz=105,slow=4.8,SNR=4.6
comp=Z,2.7nm,0.5s
WB0 Warramunga Arr 46.88 261 P **P** **09 44 29.7 -0.6**
WRAB Tennant Creek 46.89 261 P **P** **09 44 29.0 -1.5**
WRAB IAmb IAmb 09 44 37.3
comp=Z,13nm,1.4s
WRA Warramunga Arr 46.90 261 P **P** **09 44 29.2 -1.3**
comp=Z,1.0nm,0.5s,baz=91,slow=6.3,SNR=47
comp=Z,1.0nm,0.5s
WRA Warramunga Arr 46.90 261 IAmb IAmb 09 44 31.2
comp=Z,0.3nm,1.2s
KNRA Kununurra 52.95 265 P **P** **09 45 16.4 +0.4**
KNRA IAmb IAmb 09 45 24.5
comp=Z,7.8nm,1.2s
FAKI Fak Fak 53.62 282 P **P** **09 45 20.1 -0.8**
FAKI IAmb IAmb 09 45 21.7
comp=Z,6.0nm,0.7s
FITZ Fitzroy Crossi 55.33 261 P **P** **09 45 32.7 -0.5**
comp=Z,1.8nm,0.8s,baz=81,slow=19,SNR=1.9
comp=Z,1.8nm,0.8s
SIJI Sorong 55.33 283 P **P** **09 45 32.7 -0.6**
comp=Z,15nm,0.5s,baz=71,slow=7.9,SNR=7.3
comp=Z,15nm,0.5s
QSPA South Pole Qui 69.99 180 P **P** **09 47 11.7 +2.3**
comp=Z,5.1nm,0.9s,baz=47,slow=0.9,SNR=14
comp=Z,5.1nm,0.9s
QSPA South Pole Qui 69.99 180 IAmb IAmb 09 47 13.1
comp=Z,6.3nm,0.9s
MJAR Matsushiro Arr 71.24 322 P **P** **09 47 15.7 -1.5**
comp=Z,3.0nm,0.7s,baz=156,slow=6.3,SNR=9.9
comp=Z,3.0nm,0.7s
MJAR Matsushiro Arr 71.24 322 P **P** **09 47 16.6 -0.6**
JKA Kamikawa-asahi 74.46 330 P **P** **09 47 36.3 +0.4**
ASAJ Asahikawa 74.46 330 P **P** **09 47 36.3 +0.3**
comp=Z,4.4nm,0.7s,baz=95,slow=12,SNR=4.6
comp=Z,4.4nm,0.7s
TPUB Ta-pu 75.66 302 P **P** **09 47 41.8 -1.5**
TPUB IAmb IAmb 09 47 42.8
comp=Z,11nm,0.7s
PEA0B Petropavlovsk- 76.47 344 P **P** **09 47 46.9 -0.3**
PETK Petropavlovsk- 76.47 344 P **P** **09 47 46.7 -0.5**
comp=Z,4.3nm,0.7s,baz=111,slow=7.4,SNR=5.7
comp=Z,4.3nm,0.7s
NVAR Mina Array Bea 79.18 42 P **P** **09 48 04.7 +1.9**
comp=Z,0.4nm,0.5s,baz=224,slow=6.2,SNR=5.3
comp=Z,0.4nm,0.5s
USRK Ussuriysk Ar. 79.91 325 P **P** **09 48 06.5 +0.3**
comp=Z,2.5nm,0.8s,baz=170,slow=10,SNR=2.8
comp=Z,2.5nm,0.8s
N15K Kwethluk River 80.95 8 P **P** **09 48 12.3 +0.9**
N15K IAmb IAmb 09 48 50.5
comp=Z,21nm,1.4s
MAW Mawson 82.72 199 P **P** **09 48 22.5 +1.8**
comp=Z,2.8nm,0.8s,baz=180,slow=8.1,SNR=2.3
comp=Z,2.8nm,0.8s
H03S2 Juan Fernandez 84.36 124 T T 11 21 25.1
baz=248,slow=75,SNR=12
H03S1 Juan Fernandez 84.37 124 T T 11 21 30.9
baz=248,slow=75,SNR=9.8
H03S3 Juan Fernandez 84.38 124 T T 11 21 25.7
baz=248,slow=75,SNR=10
H03N2 Juan Fernandez 84.49 123 T T 11 21 39.5
baz=249,slow=71,SNR=11
H03N3 Juan Fernandez 84.49 123 T T 11 21 46.7
baz=249,slow=71,SNR=9.2
H03N1 Juan Fernandez 84.51 123 T T 11 21 51.4
baz=249,slow=71,SNR=8.6
TXAR Lajitas Array 84.93 56 P **P** **09 48 35.0 +2.3**
comp=Z,1.6nm,0.9s,baz=215,slow=8.3,SNR=12
comp=Z,1.6nm,0.9s
PDAR Pinedale Array 87.11 42 P **P** **09 48 45.0 +1.7**
comp=Z,0.2nm,0.4s,baz=247,slow=5.1,SNR=2.0
comp=Z,0.2nm,0.4s
ILAR Eielson Array 87.42 12 P **P** **09 48 43.1 -0.8**
comp=Z,0.2nm,0.4s,baz=241,slow=5.8,SNR=7.4
comp=Z,0.2nm,0.4s
PLCA Paso Flores 87.91 133 P **P** **09 48 48.8 +1.7**
comp=Z,0.7nm,0.7s,baz=319,slow=11,SNR=3.1
comp=Z,0.7nm,0.7s
CMAR Chiang Mai Arr 92.11 289 P **P** **09 49 05.9 -1.0**
comp=Z,0.9nm,0.3s,baz=72,slow=1.7,SNR=4.2
comp=Z,0.9nm,0.3s

YKA Yellowknife Ar 95.19 24 P **P** **09 49 19.4 -0.5**
comp=Z,0.2nm,0.8s,baz=235,slow=4.5,SNR=2.5
comp=Z,0.2nm,0.8s
SONM Songino Array 96.93 318 P **P** **09 49 29.6 +1.3**
comp=Z,0.3nm,0.5s,baz=111,slow=6.3,SNR=2.0
comp=Z,0.3nm,0.5s
FINES FINESS Array B 135.97 345 PKP **PKiKP** **09 55 19.2 +1.3**
comp=Z,1.5nm,0.8s,baz=106,slow=19,SNR=1.6
AKASG Malin Array Be 143.70 333 PKhKP PKPpre 09 55 27.5
comp=Z,0.8nm,0.5s,baz=42,slow=4.2,SNR=4.5
EKA Eskdalemuir Ar 144.34 7 PKP **PKPab** **09 55 30.4 +0.2**
comp=Z,0.5nm,0.5s,baz=327,slow=2.9,SNR=4.1
BRTR Keskin Array B 148.19 314 PKPbc **PKPbc** **09 55 43.2 +0.8**
comp=Z,0.5nm,0.3s,baz=120,slow=3.4,SNR=5.9
MMAI Mount Meron Ar 149.55 301 PKPbc **PiKiKP** **09 55 46.6 -0.2**
comp=Z,1.7nm,0.4s,baz=19,slow=9.2,SNR=1.8
GERES GERESS Array B 150.34 348 PKPbc **PKPbc** **09 55 47.7 +0.4**
comp=Z,0.3nm,0.3s,baz=64,slow=2.3,SNR=2.6
TORD Torodi Ar. Bea 172.64 159 PKPab **PKPab** **09 57 34.0 +2.0**
comp=Z,0.5nm,0.7s,baz=166,slow=1.2,SNR=2.4

*ASRS **19** 09:36:46.0±0.9,54.°17N×87.°08E±°, h0km,M2.3(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 19 09:36:47.7±3.5,54.°23N×87.°37E,h0km,mbmtp2.5/2, ML2.1/2,Error ellipse: s-maj=30.2km s-min=19.3km az=54.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.53**	**261**	I		I	09 45 50.0	
	baz=80,slow=338,SNR=3.9							
ZALV	**Zalesovo Beam**	**1.53**	**260**	Pg		Pn	09 37 13.9	-2.3
	1.2nm,0.3s,baz=82,slow=12,SNR=16							
ZALV				Lg		Lg	09 37 36.8	
	1.2nm,0.3s,baz=80,slow=24,SNR=6.4							
KURBB	**Kurchatov Arra**	**6.50**	**240**	Pn		Pn	09 38 25.3	+0.8
	baz=56,slow=14,SNR=3.5							
	0.2nm,0.4s							
MKAR	**Makanchi Array**	**8.12**	**206**	Pn		Pn	09 38 48.2	+1.5
	baz=26,slow=11,SNR=1.6							
MKAR				Lg		Lg	09 41 06.8	
	baz=24,slow=28							
	0.1nm,0.3s							

*AUST **19** 09:37:23.4±1.0,20.°S×9.°×11.°8E±°, h10km±10km, ML2.8/7, Error ellipse: s-maj=18.9km s-min=6.0km az=172.7*
*IDC **19** 09:37:25.4±6.2, 19.°91S×118.°42E, h0km, mb3.8/1, mbtmp3.5/5, ML3.1/3, Error ellipse: s-maj=81.1km s-min=29.3km az=131.0*
ISC 19 09:37:21.6±1.3,19.°56S±0.°07×118.°07E±0.°06,h10km,n17, σ2s53/28,Western Australia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MBWA	**Marble Bar**	**2.23**	**136**	P		**Pg**	**09 38 04.7**	**+0.3**
MBWA				S		**Sg**	**09 38 34.9**	**+1.6**
PSAC1	**Pilbara Seismi**	**2.55**	**141**	P		**Pb**	**09 38 08.9**	**+1.3**
PSAC1				S		**Sg**	**09 38 43.1**	**-0.6**
PSA00	**Pilbara Seismi**	**2.60**	**140**	P		**Pb**	**09 38 09.6**	**+1.2**
PSA00				S		**Sg**	**09 38 43.8**	**-1.6**
PSAB3	**Pilbara Seismi**	**2.62**	**141**	P		**Pb**	**09 38 09.8**	**+1.0**
PSAB3				S		**Sg**	**09 38 44.0**	**-2.0**
CAAN	**Eighty Mile Be**	**3.27**	**85**	P		**Pb**	**09 38 18.3**	**-1.4**
GIRL	**Giralia**	**4.71**	**229**	P		**Pn**	**09 38 34.0**	**+1.2**
GIRL				S		**Sn**	**09 39 24.9**	**-2.6**
MEEK	**Meekatharra**	**7.06**	**176**	P		**Pn**	**09 39 08.0**	**+2.9**
	comp=Z,11nm,2.6s,comp=Z,0.1nm							
FITZ	**Fitzroy Crossi**	**7.32**	**80**	Pn		**Pn**	**09 39 10.1**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=253,slow=11,SNR=9.0							
FITZ				Sn		**Sn**	**09 40 30.7**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=245,slow=14,SNR=5.8							
	comp=Z,1.5nm,0.9s							
MORW	**Morawa**	**9.64**	**191**	P		**Pn**	**09 39 40.9**	**+0.3**
	comp=Z,14nm,2.6s,comp=Z,0.1nm							
MORW				S		**Sn**	**09 41 22.7**	**-6.3**
WRKA	**Warakurna**	**10.92**	**122**	P		**Pn**	**09 40 01.9**	**+3.8**
	comp=Z,2.2nm,2.7s							
WRKA				S		**Sn**	**09 42 03.6**	**+3.1**
BLDU	**Ballidu**	**11.07**	**186**	P		**Pn**	**09 40 01.5**	**+1.4**
	comp=Z,19nm,2.3s							
BLDU				S		**Sn**	**09 41 58.8**	**-5.3**
KLBR	**Kellerberrin**	**11.98**	**181**	P		**Pn**	**09 40 14.4**	**+1.8**
	comp=Z,1.0nm,1.3s							
NWAO	**Narrogin (SRO)**	**13.33**	**183**	Pn		**Pn**	**09 40 30.9**	**-0.1**
	comp=Z,2.0nm,0.7s,baz=348,slow=19,SNR=1.0							
NWAO				Lg		Lg	09 44 18.3	
	comp=Z,0.1nm,0.3s,baz=288,slow=20,SNR=1.4							
FORT	**Forrest**	**14.36**	**143**	P		**Pn**	**09 40 47.7**	**+2.6**
	comp=Z,11nm,0.9s							
ASAR	**Alice Springs**	**15.28**	**108**	Pn		**Pn**	**09 40 58.5**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=288,slow=12,SNR=29							
ASAR				Sn		**Sn**	**09 43 43.4**	**-3.7**
	baz=281,slow=24,SNR=1.5							
	comp=Z,0.8nm,0.5s							
WRA	**Warramunga Arr**	**15.33**	**94**	Pn		**Pn**	**09 40 58.2**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=267,slow=13,SNR=7.0							
WRA				Sn		**Sn**	**09 43 45.7**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=320,slow=36,SNR=1.2							
	comp=Z,0.3nm,0.7s							
STKA	**Stephens Creek**	**24.43**	**125**	P		**P**	**09 42 41.4**	**+0.8**
	comp=Z,2.9nm,0.9s,baz=335,slow=17,SNR=3.6							
	comp=Z,2.9nm,0.9s							

*YARS **19** 09:42:21.6,61.°51N×141.°43E,h7km,ML2.2/3*
*IDC **19** 09:42:23.4±1.0,61.°25N×140.°77E,h0km,mb3.5/9, mbtmp3.5/9,Error ellipse: s-maj=28.3km s-min=24.1km az=25.0*
*NERS **19** 09:42:25.3,61.°39N×141.°59E,h16km*
ISC 19 09:42:23.1±0.7,61.°61N±0.°04×141.°49E±0.°04,h10km,n24, σ2s96/44,mb3.6/9,Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
UNR	**Ust'-Nera**	**3.08**	**14**	*e*Pn		**Pn**	**09 43 13.4**	**+1.7**
	3.2nm,0.8s							
UNR				*e*Pg		**Pg**	**09 43 19.8**	**-2.3**
	3.7nm,0.8s							
UNR				*e*Sg		**Sg**	**09 44 00.4**	**-1.5**
	11nm,0.6s							
UNR				*e*Sg		**Sg**	**09 44 00.4**	**-1.5**
	20nm,0.6s							
SUUS	**Susuman**	**3.34**	**66**	*e*P		**Pb**	**09 43 21.0**	**-1.4**
SUUS				Pmax			09 43 21.7	
	20nm,0.5s							
SUUS				*e*Pg		**Pg**	**09 43 27.3**	**+0.3**
SUUS				Pgmax			09 43 31.9	
	140nm,0.6s							
SUUS				*e*Sg		**Sg**	**09 44 11.4**	**+1.1**
SUUS				Sgmax			09 44 17.8	
	310nm,0.5s							
TLON	**Talon**	**3.98**	**115**	*e*Pg		**Pg**	**09 43 38.1**	**-1.2**
TLON				Pgmax			09 43 38.3	
	30nm,0.3s							
TLON				*e*Sg		**Sg**	**09 44 28.6**	**-2.2**
TLON				Sgmax			09 44 36.8	
	1µm,0.4s							
MGD	**Magadan 1**	**4.78**	**105**	*e*P		**Pn**	**09 43 36.2**	**+1.1**
MGD				Pmax			09 43 36.7	
	30nm,0.2s							
MGD				*e*Sg		**Sg**	**09 44 51.5**	**-5.0**
MGD				Sgmax			09 44 56.6	
	350nm,0.4s							
MOMR	**Moma**	**4.94**	**8**	*e*Pn		**Pn**	**09 43 39.4**	**+2.2**
MOMR				*e*Pg		**Pg**	**09 43 53.1**	**-4.4**
	1.5nm,0.5s							
MOMR				*e*Sn		**Sn**	**09 44 38.1**	**+3.8**
MOMR				*e*Sn		**Sn**	**09 44 38.1**	**+3.8**
MOMR				*e*Sg		**Sg**	**09 44 59.4**	**-2.0**
	18nm,0.7s							
MOMR				*e*Sg		**Sg**	**09 44 59.4**	**-2.0**
	15nm,0.9s							
MA2	**Magadan**	**5.00**	**110**	*e*P		**Pn**	**09 43 39.9**	**+1.7**
MA2				*e*Pg		**Pg**	**09 43 54.9**	**-3.9**
MA2				Pgmax			09 43 59.2	
	10.0nm,0.4s							
MA2				*e*Sg		**Sg**	**09 44 57.9**	**-5.7**
MA2				Sgmax			09 45 13.3	
	120nm,0.7s							
MA2				Sgmax			09 45 13.3	
	50nm,0.5s							
MA2	**Magadan**	**5.00**	**110**	*i* Pn		**Pn**	**09 43 38.6**	**+0.5**
MA2				*i* Pg		**Pb**	**09 43 51.8**	**+1.1**
MA2				*e*Sg		**Sg**	**09 44 58.1**	**-5.5**
GADL	**Gadlja**	**5.21**	**108**	*e*Pg		**Pb**	**09 43 57.8**	**+3.6**
GADL				*e*Sg		**Sg**	**09 45 03.3**	**-6.9**
GADL				Sgmax			09 45 10.1	
	1µm,0.7s							
SEY	**Seymchan**	**5.26**	**71**	*e*P		**Pn**	**09 43 44.9**	**+3.3**
SEY				Pmax			09 43 47.0	
	50nm,0.4s							
SEY				*e*S		**Sn**	**09 44 44.0**	**+1.8**
SEY				*e*Sg		**Sg**	**09 45 10.5**	**-1.2**
SEY				Sgmax			09 45 24.0	
	110nm,0.6s							
SEY				Sgmax			09 45 24.0	
	40nm,0.5s							
TLAR	**Talaya**	**5.27**	**90**	*e*P		**Pn**	**09 43 43.6**	**+1.8**
TLAR				Pmax			09 43 44.3	
	20nm,0.5s							
TLAR				*e*Pg		**Pg**	**09 44 01.0**	**-2.9**
TLAR				Pgmax			09 44 01.4	
	40nm,0.6s							
TLAR				*e*S		**Sn**	**09 44 44.3**	**+1.8**
TLAR				Smax			09 44 54.5	
	120nm,0.7s							
TLAR				*e*Sg		**Sg**	**09 45 11.3**	**-0.7**
TLAR				Sgmax			09 45 24.6	
	680nm,0.6s							
BTGS	**Batagay**	**6.74**	**337**	*i* Sg		**Sg**	**09 45 55.1**	**-4.0**
DEPR	**Deputatskiy**	**7.85**	**356**	*e*Sg		**Sg**	**09 46 29.6**	**-5.0**
KLR	**Kul'dur**	**13.56**	**208**	Lg		Lg	09 49 21.5	
	0.1nm,0.3s,baz=86,slow=17,SNR=4.3							
SONM	**Songino Array**	**24.14**	**251**	P		**P**	**09 47 36.1**	**-3.0**
	0.6nm,0.9s,baz=58,slow=8.7,SNR=2.5							
	0.6nm,0.9s							
MJAR	**Matsushiro Arr**	**25.17**	**186**	P		**P**	**09 47 48.6**	**+0.2**
	0.9nm,0.5s,baz=354,slow=11,SNR=2.2							
	0.9nm,0.5s							
KURBB	**Kurchatov Arra**	**35.36**	**281**	P		**P**	**09 49 18.4**	**+0.1**
	0.9nm,0.7s,baz=56,slow=9.4,SNR=9.1							
	0.9nm,0.7s							
MKAR	**Makanchi Array**	**36.26**	**274**	P		**P**	**09 49 25.8**	**-0.3**
	0.2nm,0.5s,baz=39,slow=9.3,SNR=1.8							
	0.2nm,0.5s							
BVAR	**Borovoye Array**	**37.48**	**290**	P		**P**	**09 49 35.5**	**-0.9**
	0.4nm,0.4s,baz=71,slow=10,SNR=2.3							
	0.4nm,0.4s							
FINES	**FINESS Array B**	**47.80**	**324**	P		**P**	**09 51 02.7**	**+2.7**
	1.9nm,0.8s,baz=27,slow=5.8,SNR=2.0							
	1.9nm,0.8s							
PDAR	**Pinedale Array**	**61.32**	**53**	P		P	09 52 43.8	+5.1
	0.2nm,0.4s,baz=324,slow=7.9,SNR=2.9							
	0.2nm,0.4s							
WRA	**Warramunga Arr**	**81.47**	**187**	P		**P**	**09 54 39.2**	**-0.8**
	0.4nm,0.9s,baz=4.1,slow=5.5,SNR=1.7							
	0.4nm,0.9s							
ASAR	**Alice Springs**	**85.19**	**187**	P		**P**	**09 54 59.0**	**-0.2**
	0.4nm,1.0s,baz=358,slow=5.2,SNR=2.5							
	0.4nm,1.0s							
QSPA	**South Pole Qui**	**151.37**	**180**	PKPbc		**PKPbc**	**10 02 14.5**	**-0.8**
	0.6nm,0.6s,baz=313,slow=1.8,SNR=1.8							
PLCA	**Paso Flores**	**151.50**	**58**	PKPbc		**PKiKP**	**10 02 20.9**	**+4.0**
	1.1nm,0.9s,baz=323,slow=5.1,SNR=3.0							

ISC 19 09:44:18.4±1.1,49.°24N±0.°09×18.°85E±0.°04,h10km,n7, σ0s72/10,Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LANS	**Liptovska Anna**	**0.41**	**102**	*e*PG		**Pg**	**09 44 26.2**	**-0.4**
LANS				*e*SG		**Sg**	**09 44 32.5**	**+0.5**
MORC	**Moravsky Berou**	**1.01**	**303**	*e*PG		**Pb**	**09 44 38.2**	**+0.1**
KECS	**Kecovo**	**1.31**	**124**	*e*PG		**Pn**	**09 44 41.8**	**-1.1**
KECS				*e*SG		**Sg**	**09 45 01.9**	**+1.2**
MODS	**Modra-Piesok**	**1.35**	**231**	*e*PG		**Pg**	**09 44 44.4**	**0.0**
MODS				*e*SG		**Sg**	**09 45 02.6**	**+0.6**
VRAC	**Vranov**	**1.48**	**274**	*e*PG		**Pb**	**09 44 46.2**	**+0.1**
STHS	**Stebnicka Huta**	**1.57**	**83**	*e*PG		**Pg**	**09 44 49.1**	**+0.5**
KRUC	**Moravsky**	**1.62**	**265**	*e*PG		**Pb**	**09 44 48.7**	**+0.2**

*CATAC **19** 09:54:04.5±0.4, 13.°N±2.°×9.°0W±°, h21km±2km, M3.9/28, MLv3.9/28, Error ellipse: s-maj=5.5km s-min=2.8km az=19.2, confirmed*
*SNET **19** 09:54:05.0±1.8, 13.°15N×89.°82W, h22km, ML3.7, Presumed earthquake*
*GCG **19** 09:54:06.7±1.9, 13.°30N×89.°88W, h35km±27km, MD4.1, ML4.2, MW3.4, Presumed earthquake*
ISC 19 09:54:03.3±1.3,13.°04N±0.°05×89.°75W±0.°03,h16km±9km, n54,σ0s79/79,El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LALI	**Alcalda de L**	**0.61**	**43**	P		**Pn**	**09 54 17.2**	**-0.2**
LALI				S		**Sb**	**09 54 25.4**	**+1.4**
LALI	**Alcalda de L**	**0.61**	**43**	*i* P		**Pn**	**09 54 17.1**	**-0.3**
JAYA	**Jayaque - finc**	**0.68**	**26**	P		**Pn**	**09 54 17.7**	**-0.7**
JAYA	**Jayaque - finc**	**0.68**	**26**	*i* P		**Pn**	**09 54 17.7**	**-0.7**
JAYA				*i* S		**Sg**	**09 54 26.8**	**+1.2**
JAYA	**Jayaque - finc**	**0.68**	**26**	*e*P		**Pn**	**09 54 17.8**	**-0.7**
JAYA				*e*S		**Sb**	**09 54 26.9**	**+0.8**
PMON	**Piamonte**	**0.79**	**32**	P		**Pn**	**09 54 19.4**	**-0.6**
CEVE	**Cerro Verde**	**0.79**	**9**	P		**Pb**	**09 54 18.8**	**-0.1**
CEVE	**Cerro Verde**	**0.79**	**9**	*i* P		**Pb**	**09 54 18.9**	**0.0**
PANCS	**Alcalda de**	**0.79**	**44**	P		**Pn**	**09 54 19.5**	**-0.5**
LOMA	**Loma Larga**	**0.82**	**43**	P		**Pn**	**09 54 20.0**	**-0.4**
LOMA				S		**Sb**	**09 54 31.5**	**+1.2**
BOQS	**Boqueron**	**0.83**	**33**	*e*P		**Pn**	**09 54 19.9**	**-0.7**
CEDA	**San Andres**	**0.83**	**24**	S		**Sg**	**09 54 31.0**	**+0.5**
CEDA	**San Andres**	**0.83**	**24**	*e*P		**Pb**	**09 54 19.6**	**+0.2**
SEMO	**Seminario San**	**0.83**	**38**	P		**Pn**	**09 54 19.9**	**-0.7**
UEES	**Universidad Ev**	**0.84**	**36**	P		**Pn**	**09 54 20.0**	**-0.6**
UEES				S		**Sb**	**09 54 31.5**	**+0.9**
FAME	**Alcaldia de Sa**	**0.84**	**342**	P		**Pg**	**09 54 18.4**	**-1.2**
UTEC	**Universidad Te**	**0.85**	**39**	P		**Pn**	**09 54 20.1**	**-0.6**
NUBE	**Las Nubes**	**0.86**	**358**	P		**Pg**	**09 54 19.1**	**-0.9**
NUBE	**Las Nubes**	**0.86**	**358**	*i* P		**Pg**	**09 54 19.3**	**-0.7**
NUBE				*i* S		**Sg**	**09 54 29.4**	**-1.9**
IGN	**Direccin Gen**	**0.88**	**40**	P		**Pn**	**09 54 20.9**	**-0.2**
IGN				S		**Sb**	**09 54 32.6**	**+0.9**
LOAL	**Lomas de Alarc**	**0.95**	**358**	P		**Pb**	**09 54 21.1**	**-0.4**
UNIC	**Universidad Ca**	**0.96**	**12**	P		**Pb**	**09 54 21.4**	**-0.2**
SLOZ	**Alcaldia de Sa**	**0.98**	**358**	P		**Pb**	**09 54 21.2**	**-0.8**
PAVA	**Las Pavas**	**1.04**	**50**	P		**Pg**	**09 54 23.7**	**+0.4**
TECO	**Alcaldia de Te**	**1.06**	**62**	P		**Pg**	**09 54 23.8**	**0.0**
SCLA	**Alcaldia de Sa**	**1.19**	**56**	P		**Pg**	**09 54 26.1**	**-0.2**
PQSS	**Presa 15 de Se**	**1.29**	**63**	P		**Pg**	**09 54 27.6**	**-0.6**
PQSS				S		**Sg**	**09 54 45.0**	**-0.1**
PCG5

STG5				*i* S		**Sb**	**09 55 05.0**	**-0.9**
APG	**El Apazote**	**2.07**	**341**	*i* P		**Pn**	**09 54 36.9**	**-0.7**
STG8	**El Palmar, Qui**	**2.09**	**312**	*i* P		**Pb**	**09 54 41.2**	**+0.1**
STG8				*i* S		**Sb**	**09 55 07.2**	**+0.3**
STG8				IAML			09 55 10.4	
	comp=E,1μm,0.2s							
STG2	**El Palmar, Qui**	**2.10**	**312**	*i* P		**Pb**	**09 54 41.4**	**+0.2**
STG2				*i* S		**Sb**	**09 55 07.3**	**+0.2**
CSGN	**Cosiguina Volc**	**2.14**	**91**	P		**Pb**	**09 54 40.8**	**-0.9**
CSGN				S		**Sb**	**09 55 08.2**	**+0.1**
RTAL	**Retalhuleu**	**2.40**	**308**	P		**Pn**	**09 54 42.1**	**+0.2**
RTAL				S		**Sn**	**09 55 08.9**	**-2.2**
TGUH	**Tegucigalpa,Un**	**2.61**	**67**	P		**Pn**	**09 54 46.5**	**+1.5**
CRIN	**San Cristobal**	**2.66**	**97**	S		**Sn**	**09 55 18.8**	**+1.3**

ASRS ***19*** *09:54:09.0±0.9,53.°61N×88.°05E,h0km,M2.6(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 19 09:54:10.3±3.0,53.°57N×87.°92E,h0km,mbtmp2.4/2, ML2.1/2,Error ellipse: s-maj=24.1km s-min=16.2km az=67.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.88**	**283**	I	I	10 06 30.0	
	0.1nm,1.0s,baz=97,slow=333,SNR=4.4						
ZALV	**Zalesovo Beam**	**1.88**	**283**	Pn	Pn	09 54 43.9	+0.2
	0.9nm,0.3s,baz=98,slow=15,SNR=10						
ZALV				Lg	Lg	09 55 08.8	
	1.7nm,0.3s,baz=103,slow=24,SNR=10						
KURBB	**Kurchatov Arra**	**6.49**	**247**	Pn	Pn	09 55 47.9	+0.9
	baz=60,slow=13,SNR=3.0						
KURBB				Sn	Sn	09 57 02.7	+1.0
	baz=74,slow=27,SNR=1.4						
KURBB				Lg	Lg	09 57 35.6	
	baz=56,slow=30,SNR=1.6						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**7.68**	**210**	Pn	Pn	09 56 04.5	+1.1
	baz=26,slow=13,SNR=1.5						
MKAR				Sn	Sn	09 57 29.7	-1.4
	baz=26,slow=21,SNR=1.8						
MKAR				Lg	Lg	09 58 12.1	
	baz=28,slow=29,SNR=2.6						
	0.1nm,0.3s						

IDC 19 09:59:41.2±8.8,61.°53S×154.°20E,h0km,mb3.7/2, mbtmp3.7/3,ML3.1/1,MS3.6/12,Error ellipse: s-maj=630.8km s-min=41.3km az=75.0,Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**16.26**	**174**	Pn	Pn	10 03 30.6	0.0
	0.1nm,0.3s,baz=339,slow=14,SNR=2.2						
VNDA				LR	LR	10 09 19.5	
	comp=Z,144nm,19.0s,baz=352,slow=36						
	1.5nm,0.9s						
RPZ	**Rata Peaks**	**20.45**	**37**	LR	LR	10 10 53.2	
	comp=Z,172nm,18.7s,baz=253,slow=33						
URZ	**Urewera**	**27.28**	**42**	LR	LR	10 16 15.6	
	comp=Z,100nm,18.5s,baz=206,slow=36						
QSPA	**South Pole Qui**	**28.57**	**180**	LR	LR	10 16 36.1	
	comp=Z,74nm,19.3s,baz=10,slow=36						
MAW	**Mawson**	**36.25**	**220**	LR	LR	10 21 36.7	
	comp=Z,113nm,18.9s,baz=112,slow=36						
ASAR	**Alice Springs**	**40.32**	**331**	P	P	10 07 19.9	-0.2
	1.2nm,0.9s,baz=159,slow=8.7,SNR=5.3						
	1.2nm,0.9s						
DZM	**Mont Dzumac**	**40.33**	**18**	LR	LR	10 20 28.0	
	comp=Z,82nm,18.2s,baz=180,slow=31						
CTA	**Charters Tower**	**41.77**	**349**	LR	LR	10 21 46.9	
	comp=Z,70nm,18.2s,baz=196,slow=32						
WRA	**Warramunga Arr**	**43.81**	**333**	P	P	10 07 48.7	0.0
	1.2nm,1.1s,baz=163,slow=8.1,SNR=4.0						
	1.2nm,1.1s						
SNAA	**Sanae**	**46.13**	**190**	LR	LR	10 28 18.9	
	comp=Z,83nm,19.4s,baz=191,slow=37						
PMG	**Port Moresby**	**52.28**	**351**	LR	LR	10 28 07.6	
	comp=Z,67nm,19.9s,baz=162,slow=33						
H03S2	**Juan Fernandez**	**75.69**	**137**	T	T	11 35 16.6	
	baz=201,slow=74,SNR=10						
H03S1	**Juan Fernandez**	**75.69**	**137**	T	T	11 35 17.6	
	baz=201,slow=74,SNR=12						
H03S3	**Juan Fernandez**	**75.71**	**137**	T	T	11 35 17.4	
	baz=201,slow=74,SNR=12						
SUR	**Sutherland**	**79.09**	**219**	LR	LR	10 46 28.8	
	comp=Z,19nm,18.1s,baz=160,slow=36						
H08S2	**Diego Garcia H**	**79.37**	**274**	T	T	11 39 17.9	
	baz=151,slow=76,SNR=42						
H08S1	**Diego Carcia H**	**79.38**	**274**	T	T	11 39 20.2	
	baz=151,slow=76,SNR=31						
H08S3	**Diego Garcia H**	**79.39**	**274**	T	T	11 39 19.4	
	baz=151,slow=76,SNR=56						
LBTB	**Lobatse**	**84.39**	**225**	LR	LR	10 46 48.1	
	comp=Z,25nm,19.5s,baz=171,slow=34						
TSUM	**Tsumeb**	**92.42**	**221**	LR	LR	10 53 07.4	
	comp=Z,20nm,19.0s,baz=160,slow=35						

IDC ***19*** *10:01:51.6±2.0,34.°38N×139.°02E,h0km,mb3.3/2, mbtmp3.3/3,ML2.4/1,MS2.5/1,Error ellipse: s-maj=41.8km s-min=25.5km az=81.0*
JMA ***19*** *10:01:55.9±0.2,35.°1N±0.°7×140.°2E±0.°8,h80km±1km, MV2.8/40,SE OFF BOSO PENINSULA*
ISC 19 10:01:56.9±1.3,35.°04N±0.°05×140.°14E±0.°06,h75km±8km, n27,σ0°57/30,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKUC	**kamogawauchiur**	**0.13**	**24**	*i* P	**Pn**	**10 02 07.4**	**-0.5**
JKUC				S	**Sn**	**10 02 15.6**	**-0.3**
BSO4	**Boso 4**	**0.17**	**107**	*i* P	**Pn**	**10 02 07.8**	**0.0**
BSO4				X		10 02 16.0	
KTR	**Katsuura**	**0.18**	**54**	P	**Pn**	**10 02 07.5**	**-0.5**
KTR				S	**Sn**	**10 02 16.0**	**-0.1**
TATJ	**Tateyama 2**	**0.20**	**268**	P	**Pn**	**10 02 08.3**	**+0.2**
TATJ				S	**Sn**	**10 02 17.4**	**+1.1**
JCCN	**Chibachonan**	**0.35**	**13**	P	**Pn**	**10 02 08.9**	**-0.1**
BSO3	**Boso 3**	**0.39**	**128**	*i* P	**Pn**	**10 02 08.8**	**-0.1**
BSO3				X		10 02 19.4	
JYO	**Yokosk**	**0.43**	**296**	P	**Pn**	**10 02 09.6**	**+0.1**
JYO				S	**Sn**	**10 02 20.0**	**+1.2**
JIM2	**Oshima 3**	**0.66**	**241**	*i* P	**Pn**	**10 02 11.1**	**-0.7**
JIM2				S	**Sn**	**10 02 21.9**	**-0.9**
BSO1	**Boso 1**	**0.79**	**119**	P	**Pn**	**10 02 12.4**	**-0.3**
JOD2	**Odawara 2**	**0.89**	**285**	*i* P	**Pn**	**10 02 13.4**	**-0.9**
JOD2				S	**Sn**	**10 02 26.4**	**-0.9**
JIZS	**Izushimoda**	**1.08**	**253**	P	**Pn**	**10 02 16.3**	**-0.4**
JIZS				S	**Sn**	**10 02 31.3**	**-0.2**
JMYK	**Miyake Tsubota**	**1.09**	**207**	P	**Pn**	**10 02 16.9**	**+0.1**
JMKN	**Mikurajimanish**	**1.23**	**202**	P	**Pn**	**10 02 18.4**	**-0.1**
JMKN				S	**Sn**	**10 02 34.9**	**+0.1**
JYN	**Shimob**	**1.38**	**290**	*i* P	**Pn**	**10 02 20.2**	**-0.4**
JYN				S	**Sn**	**10 02 38.4**	**+0.1**
JRY	**Ryogami san**	**1.40**	**314**	P	**Pn**	**10 02 20.3**	**-0.5**
JRY				S	**Sn**	**10 02 39.0**	**+0.3**
JAG	**Ashikaga**	**1.49**	**338**	P	**Pn**	**10 02 21.1**	**-0.8**
SHZ3	**Shizuoka 3**	**1.58**	**271**	P	**Pn**	**10 02 23.8**	**+0.6**
MJAR	**Matsushiro Arr**	**2.17**	**314**	Pn	**Pn**	**10 02 31.1**	**+0.2**
	1.0nm,0.3s,baz=161,slow=13,SNR=52						
MJAR				Sn	**Sn**	**10 02 57.6**	**+0.7**
	0.8nm,0.3s,baz=163,slow=30,SNR=2.1						
	8.0nm,0.4s						
KSRS	**Korea Array**	**10.15**	**287**	LR	LR	10 07 14.5	
	comp=Z,24nm,18.1s,baz=115,slow=34						
H11N2	**WAKE ISLAND Hy**	**28.12**	**116**	T	T	10 37 20.8	
	baz=308,slow=75,SNR=9.3						
H11N1	**WAKE ISLAND Hy**	**28.12**	**116**	T	T	10 37 22.9	
	baz=308,slow=75,SNR=9.1						
H11N3	**WAKE ISLAND Hy**	**28.13**	**116**	T	T	10 37 25.1	
	baz=308,slow=75,SNR=11						
H11S3	**WAKE ISLAND Hy**	**28.74**	**118**	T	T	10 37 43.8	
	baz=311						
H11S1	**WAKE ISLAND Hy**	**28.74**	**118**	T	T	10 37 48.1	
	baz=311						
H11S2	**WAKE ISLAND Hy**	**28.76**	**118**	T	T	10 37 54.6	
	baz=311						
MKAR	**Makanchi Array**	**44.33**	**304**	P	**P**	**10 09 59.6**	**+0.2**
	0.2nm,0.6s,baz=81,slow=7.9,SNR=2.5						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**54.96**	**187**	P	P	10 11 18.9	-1.4
	0.6nm,1.0s,baz=1.7,slow=7.4,SNR=2.0						
	0.6nm,1.0s						

BEO ***19*** *10:17:58.8±0.9,41.°50N×19.°33E,h17km±4km,ML2.3/7*
RHSSO ***19*** *10:17:58.4±0.9,41.°49N×19.°45E,h9km±3km,ML2.7/5*
PDG ***19*** *10:17:59.2±0.1,41.°59N×19.°41E,h12km,ML2.7/13,Error ellipse: s-maj=0.2km s-min=0.3km az=0.0*
ISC 19 10:17:58.3±1.6,41.°55N±0.°05×19.°46E±0.°04,h8km±10km, n30,σ1°03/60,7C-1D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULC	**Ulcinj**	**0.44**	**339**	*e*Pg	**Pg**	**10 18 06.8**	**-0.1**
ULC				*i* Sg	**Sg**	**10 18 13.3**	**+0.6**
DRME	**Dracevica, Mon**	**0.67**	**342**	⇑*i*Pg	**Pg**	**10 18 10.3**	**-0.8**
DRME				*i* Sg	**Sb**	**10 18 21.0**	**-0.5**
DRME	**Dracevica, Mon**	**0.67**	**342**	⇑*i*Pg	**Pg**	**10 18 10.9**	**-0.2**
DRME				*e*Sg	**Sb**	**10 18 22.2**	**+0.7**
BUM	**Brajici-Budva**	**0.86**	**331**	*e*Pg	**Pg**	**10 18 14.3**	**-0.5**
BUM				*i* Sg	**Sb**	**10 18 27.2**	**0.0**
PDG	**Podgorica**	**0.89**	**350**	*e*Pg	**Pn**	**10 18 18.0**	**+1.0**
PDG				*e*Sg	**Sn**	**10 18 29.8**	**-0.3**
PDG	**Podgorica**	**0.89**	**350**	*e*Pg	**Pg**	**10 18 15.1**	**-0.3**
PDG				*i* Sg	**Sb**	**10 18 28.5**	**+0.5**
PDG	**Podgorica**	**0.89**	**350**	*e*Pg	**Pb**	**10 18 15.4**	**-0.5**
PDG				*e*Sg	**Sb**	**10 18 28.9**	**+0.9**
CEME	**Cevo**	**1.07**	**338**	*e*Pg	**Pb**	**10 18 18.4**	**-0.7**
CEME				*i* Sg	**Sn**	**10 18 34.4**	**-0.3**
OHR	**Ohrid**	**1.10**	**113**	*i* Pn	**Pn**	**10 18 19.9**	**-0.1**
OHR				*i* Sn	**Sn**	**10 18 37.2**	**+1.9**
PVY	**Plav**	**1.11**	**19**	*e*Pg	**Pn**	**10 18 19.3**	**-0.8**
PVY				*i* Sg	**Sn**	**10 18 36.5**	**+0.9**
HCY	**Herceg Novi**	**1.15**	**321**	*e*Pg	**Pb**	**10 18 19.6**	**-0.7**
HCY				*i* Sg	**Sn**	**10 18 37.0**	**+0.4**
HCY	**Herceg Novi**	**1.15**	**321**	⇑*i*Pg	**Pg**	**10 18 20.6**	**+0.3**
HCY				*e*Sg	**Sn**	**10 18 36.9**	**+0.4**
NKME	**Niksic**	**1.27**	**343**	*e*Pg	**Pb**	**10 18 22.0**	**-0.5**
NKME				*i* Sg	**Sg**	**10 18 41.3**	**+2.1**
KOME	**Kolasin**	**1.30**	**2**	⇑*i*Pg	**Pb**	**10 18 22.5**	**-0.5**
KOME				*i* Sg	**Sg**	**10 18 42.4**	**+2.4**
IVA	**Berane**	**1.36**	**14**	*e*Pg	**Pg**	**10 18 23.9**	**-0.4**
IVA				*i* Sg	**Sg**	**10 18 45.0**	**+3.1**
TREB	**Trebinje**	**1.43**	**325**	*e*Pg	**Pb**	**10 18 24.1**	**-1.0**
TREB				*e*Sg	**Sg**	**10 18 44.6**	**+0.4**
BRY	**Bratogost**	**1.51**	**333**	*e*Pg	**Pb**	**10 18 26.2**	**-0.4**
BRY				*i* Sg	**Sg**	**10 18 48.2**	**+1.3**
BRY	**Bratogost**	**1.51**	**333**	⇑*i*Pn	**Pn**	**10 18 25.4**	**-0.3**
BRY				*e*Sn	**Sg**	**10 18 47.6**	**+0.7**
UPM	**Unac-Piva**	**1.70**	**346**	*e*Pn	**Pb**	**10 18 29.3**	**-0.6**
UPM				*i* Sn	**Sg**	**10 18 52.8**	**-0.2**
UPM	**Unac-Piva**	**1.70**	**346**	⇑*i*Pn	**Pb**	**10 18 29.0**	**-0.9**
UPM				*e*Sn	**Sb**	**10 18 51.2**	**-0.3**
SJES	**Sjenica**	**1.75**	**12**	*e*Pg	**Pg**	**10 18 31.1**	**-0.7**
SJES				*e*Sg	**Sg**	**10 18 55.1**	**+0.6**
SJES	**Sjenica**	**1.75**	**12**	⇑*i*Pn	**Pb**	**10 18 30.2**	**-0.5**
SJES				*e*Sn	**Sb**	**10 18 53.1**	**+0.3**
PLE	**Pljevlja**	**1.78**	**358**	⇓*i*Pn	**Pb**	**10 18 30.5**	**-0.6**
PLE				*i* Sn	**Sg**	**10 18 54.9**	**-0.5**
STON	**Ston**	**1.86**	**316**	*e*Pg	**Pb**	**10 18 31.6**	**-0.8**
STON				*e*Sg	**Sb**	**10 18 55.2**	**-0.6**
RUDO	**Rudo**	**2.07**	**358**	*e*Pn	**Pb**	**10 18 34.3**	**-1.7**
RUDO				*e*Sn	**Sb**	**10 19 00.5**	**-1.3**
SELS	**Selova**	**2.07**	**36**	*e*Pn	**Pb**	**10 18 34.1**	**-2.0**
SELS				*e*Sn	**Sn**	**10 19 00.1**	**+0.8**
IVAS	**Ivanjica**	**2.09**	**14**	*e*Pn	**Pn**	**10 18 33.6**	**0.0**
IVAS				*e*Sn	**Sb**	**10 19 02.5**	**0.0**
GOCS	**Kraljevo Serbi**	**2.26**	**27**	*e*Pn	**Pn**	**10 18 36.4**	**+0.4**
GOCS				*e*Sn	**Sn**	**10 19 03.9**	**-0.3**
BBLS	**Lazi&#263i**	**2.31**	**359**	*e*Pn	**Pb**	**10 18 38.3**	**-1.9**
BBLS				*e*Sn	**Sn**	**10 19 06.6**	**+1.3**
BBLS	**Lazi&#263i**	**2.31**	**359**	*e*Pn	**Pb**	**10 18 38.1**	**-2.1**
BBLS				*e*Sn	**Sn**	**10 19 06.4**	**+1.1**

IDC ***19*** *10:23:48.7±0.9,1.°16S×120.°83E,h0km,mb3.8/7, mbtmp3.9/10,ML3.6/3,MS3.3/5,Error ellipse: s-maj=40.7km s-min=16.0km az=61.0*
DJA ***19*** *10:23:51.8±0.2,1.°S±2.°×12.°1E±.°,h10km,M4.5/25,mb4.6/4, MLv4.4/25*
NEIC ***19*** *10:23:55.3±1.5,1.°35S±0.°03×120.°85E±0.°08,h53km±12km, mb4.2/6,Error ellipse: s-maj=12.2km s-min=3.8km az=77.0*
ISC 19 10:23:53.5±0.7,1.°28S±0.°05×120.°76E±0.°05,h35km,n42, σ1°88/40,mb3.9/10,MS3.3/4,Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	**Ampana**	**0.96**	**68**	P	**Pn**	**10 24 10.8**	**+0.2**
PCI	**Palu**	**0.99**	**292**	P	**Pn**	**10 24 08.2**	**-2.7**
PCI				S	**Sn**	**10 24 20.9**	**-2.8**
MPSI	**Mapaga**	**1.82**	**332**	P	**Pn**	**10 24 20.6**	**-1.7**
TTSI	**Tana Toraja**	**1.99**	**208**	P	**Pn**	**10 24 25.6**	**+0.9**
TTSI				S	**Sn**	**10 24 51.6**	**+3.1**
LUWI	**Luwuk**	**2.03**	**83**		**Pn**	**10 24 26.0**	**+0.8**
LUWI	**Luwuk**	**2.03**	**83**	P	**Pn**	**10 24 25.9**	**+0.7**
MRSI	**Marisa**	**2.10**	**34**	P	**Pn**	**10 24 26.9**	**+0.6**
MMSI	**Mamuju**	**2.32**	**233**	P	**Pn**	**10 24 29.7**	**+0.4**
TOLI2	**Tolitoli**	**2.37**	**1**		**Pn**	**10 24 31.3**	**+1.4**
SPSI	**Sidrap Palu**	**2.85**	**200**	P	**Pn**	**10 24 38.1**	**+1.6**
PMSI	**Majene**	**2.88**	**220**	P	**Pn**	**10 24 38.1**	**+1.2**
GTOI	**Gorontalo**	**2.95**	**50**	P	**Pn**	**10 24 38.9**	**+1.0**
KKSI	**Kolaka, Sulawe**	**3.01**	**163**	P	Pn	10 24 50.0	+11
KAPI	**Kappang**	**3.85**	**195**	Pn	**Pn**	**10 24 51.0**	**+0.8**
	6.8nm,0.3s,baz=17,slow=3.5,SNR=7.4						
KAPI				Sn	**Sn**	**10 25 30.6**	**-3.7**
	5.6nm,0.3s,baz=24,slow=20,SNR=6.5						
KAPI				LR	LR	10 26 28.1	
	comp=Z,260nm,20.5s,baz=350,slow=40						
	17nm,0.4s						
KAPI	**Kappang**	**3.85**	**195**		**Pn**	**10 24 50.8**	**+0.5**
KAPI	**Kappang**	**3.85**	**195**	P	**Pn**	**10 24 51.6**	**+1.3**
BKB	**Balikpapan**	**3.86**	**270**	Pn	**Pn**	**10 24 52.8**	**+2.4**
BKB	**Balikpapan**	**3.86**	**270**	P	**Pn**	**10 24 50.9**	**+0.5**
MKS	**Makassar**	**4.12**	**198**	P	**Pn**	**10 24 56.8**	**+2.7**
MYLDM	**Lahad Datu**	**6.80**	**341**		**Pn**	**10 25 33.9**	**+3.1**
KKM	**Kota Kinabalu**	**8.57**	**328**	Pn	**Pn**	**10 25 58.5**	**+3.2**
SBUM	**Sibu**	**9.30**	**293**		**Pn**	**10 26 08.5**	**+3.3**
SIJI	**Sorong**	**10.52**	**88**	Pn	**Pn**	**10 26 21.7**	**-0.2**
	0.5nm,0.3s,baz=255,slow=20,SNR=2.1						
	5.9nm,0.7s						
KNRA	**Kununurra**	**16.35**	**152**	P	**Pn**	**10 27 41.1**	**+0.6**
KNRA				IAmb	IAmb	10 27 53.1	
	comp=Z,9.6nm,1.2s						
FITZ	**Fitzroy Crossi**	**17.39**	**164**	P	**Pn**	**10 27 53.3**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=316,slow=13,SNR=2.9						
	comp=Z,2.3nm,0.9s						
WB0	**Warramunga Arr**	**22.71**	**145**	P	**P**	**10 28 51.5**	**-1.0**
WB0				IAmb	IAmb	10 29 28.2	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**22.82**	**145**	P	**P**	**10 28 53.3**	**-0.3**
	comp=Z,6.3nm,0.9s,baz=325,slow=10,SNR=31						
	comp=Z,6.3nm,0.9s						
WRA	**Warramunga Arr**	**22.82**	**145**	P	**P**	**10 28 50.5**	**-3.2**
WR8	**Warramunga Arr**	**22.92**	**145**	P	**P**	**10 28 53.9**	**-0.8**
ASAR	**Alice Springs**	**25.65**	**151**	P	**P**	**10 29 21.3**	**+1.1**
	comp=Z,1.9nm,0.8s,baz=334,slow=8.7,SNR=19						
	comp=Z,1.9nm,0.8s						
ASAR	**Alice Springs**	**25.65**	**151**	P	**P**	**10 29 16.1**	**-4.1**
CMAR	**Chiang Mai Arr**	**29.07**	**313**	P	**P**	**10 29 52.0**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=119,slow=6.8,SNR=1.4						
	comp=Z,0.3nm,0.3s						
FORT	**Forrest**	**30.15**	**167**	P	**P**	**10 29 59.8**	**-0.5**
FORT				IAmb	IAmb	10 30 03.5	
	comp=Z,5.4nm,0.8s						
MKAR	**Makanchi Array**	**58.55**	**330**	P	**P**	**10 33 47.4**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=139,slow=7.9,SNR=5.9						
MKAR				LR	LR	10 58 53.0	
	comp=Z,10nm,21.3s,baz=338,slow=36						
	comp=Z,1.0nm,0.8s						
PETK	**Petropavlovsk-**	**62.35**	**24**	LR	LR	11 00 42.2	
	comp=Z,30nm,20.6s,baz=76,slow=36						
ZALV	**Zalesovo Beam**	**62.57**	**337**	P	**P**	**10 34 13.4**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=134,slow=6.2,SNR=1.9						
	comp=Z,0.7nm,0.7s						
KURBB	**Kurchatov Arra**	**62.97**	**331**	P	**P**	**10 34 16.3**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=135,slow=6.4,SNR=4.3						
	comp=Z,0.7nm,0.8s						
KURK	**Kurchatov**	**62.98**	**331**	P	**P**	**10 34 16.3**	**-0.4**
KURK	**Kurchatov**	**62.98**	**331**	IAmb	IAmb	10 34 23.0	
	comp=Z,1.8nm,0.8s						
BVAR	**Borovoye Array**	**68.43**	**330**	P	**P**	**10 34 51.2**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=124,slow=7.2,SNR=4.8						
	comp=Z,0.6nm,0.7s						
KVAR	**Kislovodsk Arr**	**82.29**	**315**	LR	LR	11 18 55.0	
	comp=Z,60nm,19.6s,baz=264,slow=40						
BRTR	**Keskin Array B**	**88.58**	**310**	LR	LR	11 26 33.9	
	comp=Z,8.9nm,18.6s,baz=280,slow=42						

ISK ***19*** *10:25:06.9,38.°11N×44.°67E,h5km,ML3.2/3*
AFAD ***19*** *10:25:11.1,38.°48N×44.°52E,h7km±4km,ML2.9*
AZER ***19*** *10:25:11.1,38.°53N×44.°52E,h5km,ml3.1*
TEH ***19*** *10:25:12.1,38.°48N×44.°54E,h6km±59km,ML2.9, Presumed earthquake*
ISC 19 10:25:11.1±1.2,38.°47N±0.°03×44.°53E±0.°02,h2km±11km, n39,σ1°54/68,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**295**	P	**Pg**	**10 25 20.3**	**+0.3**
OZAP				S	**Sb**	**10 25 27.6**	**-2.1**
OZAP				IAML		10 25 30.0	
	comp=N,1μm,0.5s						
OZAP				IAML		10 25 30.0	
	comp=E,1μm,0.5s						
ISHB	**Shabestar**	**0.87**	**102**	Pg	**Pg**	**10 25 28.1**	**+0.3**
TVAN	**Van**	**0.89**	**274**	P	**Pg**	**10 25 27.2**	**-0.9**
TVAN				S	**Sg**	**10 25 40.1**	**+0.5**
TVAN				IAML		10 25 52.0	
	comp=E,473nm,0.4s						
TVAN				IAML		10 25 53.0	
	comp=N,394nm,0.5s						
MAKU	**Maku**	**0.89**	**7**	Pg	**Pb**	**10 25 28.7**	**-0.8**
YOVA	**Hakkari_Yksek**	**0.90**	**192**	P	**Pg**	**10 25 28.9**	**+0.6**
YOVA				S	**Sb**	**10 25 42.3**	**+0.3**
YOVA				IAML		10 25 48.0	
	comp=E,341nm,0.4s						
VMUR	**Van-Muradiye**	**0.92**	**305**	P	**Pg**	**10 25 28.5**	**-0.1**
VMUR				S	**Sb**	**10 25 42.2**	**-0.3**
IMRD	**Marand**	**0.95**	**75**	Pg	**Pb**	**10 25 30.4**	**0.0**
NAX	**Nakhchivan**	**1.03**	**46**	P	**Pn**	**10 25 31.9**	**-0.8**
NAX				S	**Sn**	**10 25 47.9**	**+0.1**
GEVA	**Gevas**	**1.17**	**263**	P	**Pg**	**10 25 31.9**	**-1.6**
GEVA				S	**Sb**	**10 25 49.1**	**-0.7**
SBZ	**Shahbuz**	**1.22**	**40**	P	**Pb**	**10 25 34.6**	**-0.4**
SBZ				S	**Sn**	**10 25 53.8**	**+1.2**
AKDM	**Akdamar-Van**	**1.23**	**264**	Pn	**Pg**	**10 25 33.5**	**-1.1**
AKDM				Sn	**Sn**	**10 25 53.4**	**+0.6**
ORD	**Ordubad**	**1.23**	**68**	P	**Pn**	**10 25 35.4**	**-0.1**
ORD				S	**Sn**	**10 25 53.6**	**+0.8**
DYDN	**Diyadin**	**1.26**	**329**	P	**Pn**	**10 25 35.5**	**-0.5**
DYDN				S	**Sg**	**10 25 51.2**	**-0.4**
DYDN				IAML		10 25 59.0	
	comp=E,197nm,0.6s						
DYDN				IAML		10 26 01.0	
	comp=N,210nm,1.2s						
HYR	**Heyderabad**	**1.27**	**11**	P	**Pn**	**10 25 36.6**	**+0.5**
HYR				S	**Sn**	**10 25 55.3**	**+1.5**
ITBZ	**Tabriz**	**1.29**	**100**	Pg	**Pb**	**10 25 36.0**	**-0.2**
IAZR	**Azarshahr**	**1.39**	**124**	Pg	**Pg**	**10 25 38.7**	**+1.0**
IGDI	**IGDIR**	**1.44**	**346**	P	**Pg**	**10 25 38.8**	**0.0**
IGDI				S	**Sg**	**10 25 60.0**	**+2.5**
ADCV	**BITLIS_Adilcev**	**1.46**	**284**	P	**Pg**	**10 25 38.9**	**-0.1**
ADCV				S	**Sg**	**10 26 00.3**	**+2.4**
AGRB	**Hanur-Agry**	**1.63**	**313**	Pn	**Pg**	**10 25 42.5**	**+0.1**
AGRB				Sn	**Sg**	**10 26 08.5**	**+4.9**
DORK	**Agr/Tutak/Do**	**1.65**	**304**	P	**Pn**	**10 25 41.0**	**-0.3**
DORK				S	**Sg**	**10 26 03.7**	**-0.4**
KOTA	**Agri, Merkez-K**	**1.69**	**323**	P	**Pb**	**10 25 42.2**	**-0.7**
KOTA				S	**Sg**	**10 26 06.4**	**+1.1**
GNI	**Garni**	**1.69**	**5**	Pn	**Pg**	**10 25 43.8**	**+0.4**
MLAZ	**Malazgirt-MUS**	**1.69**	**294**	Pn	**Pb**	**10 25 42.5**	**-0.5**
MLAZ				Sn	**Sg**	**10 26 08.3**	**+2.9**
GURO	**Guroymak-BITLI**	**1.96**	**273**	Pn	**Pn**	**10 25 44.9**	**-0.7**
IHRS	**Heris**	**1.98**	**94**	Pn	**Pg**	**10 25 48.4**	**-0.6**
QRD	**Qoradiz**	**2.39**	**65**	P	**Pb**	**10 25 54.7**	**-0.2**
QRD				S	**Sg**	**10 26 26.9**	**-0.9**
GDB	**GEDABAY**	**2.44**	**22**	P	**Pb**	**10 25 54.7**	**-1.2**
GDB				S	**Sg**	**10 26 29.2**	**-0.3**
GANJ	**Ganja**	**2.58**	**32**	P	**Pb**	**10 25 56.9**	**-1.2**
GANJ				S	**Sg**

NEIC ***19*** *11:23:14.9±1.5, 15°.6S±0°.1×168°.2E±0°.1, h181km±7km, mb4.2/10, Error ellipse: s-maj=21.3km s-min=16.0km az=59.0*

IDC ***19*** *11:23:18.0±8.8, 15°.79S×167°.84E, h203km±57km, mb3.3/4, mbtmp3.9/5, Error ellipse: s-maj=83.9km s-min=33.4km az=35.0*

ISC 19 11:23:15.6±1.9,**15°.6S**±0°.1×**168°.0E**±0°.2,**h200**km,**n17,** σ1§**61/18, mb3.9/9, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.81**	**281**		**Pn**	**11 23 41.7**	**-2.5**
SANVU				Sn	**Sn**	**11 24 03.2**	**-3.0**
MARNC	**Mare, Loyalty**	**5.84**	**180**	Pn	**Pn**	**11 24 38.7**	**-2.1**
DZM	**Mont Dzumac**	**6.60**	**193**	P	**Pn**	**11 24 50.9**	**+0.2**
	5.7nm,0.5s,baz=49,slow=20,SNR=16						
DZM				S	**Sn**	**11 26 03.1**	**-3.1**
	12nm,1.0s,baz=132,slow=22,SNR=1.9						
ONTNC	**Ouen Toro**	**6.83**	**192**	Pn	**Pn**	**11 24 52.8**	**-0.8**
OUENC	**Ouen Island, N**	**6.87**	**189**	Pn	**Pn**	**11 24 54.3**	**+0.2**
INZ	**Inchbonnie**	**27.18**	**174**	P	**P**	**11 28 40.5**	**0.0**
INKA	**Innaminka**	**28.01**	**240**	P	**P**	**11 28 49.6**	**+1.6**
INKA				IAmb	IAmb	11 28 57.5	
	comp=Z,3.1nm,1.2s						
STKA	**Stephens Creek**	**29.00**	**231**	P	**P**	**11 28 57.8**	**+0.9**
	comp=Z,1.7nm,0.6s,baz=68,slow=6.8,SNR=3.3						
	comp=Z,1.7nm,0.6s						
WB0	**Warramunga Arr**	**32.28**	**258**	P	**P**	**11 29 25.6**	**-0.2**
WB0				IAmb	IAmb	11 30 09.8	
	comp=Z,6.8nm,1.2s						
WRA	**Warramunga Arr**	**32.34**	**257**	P	**P**	**11 29 25.6**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=81,slow=7.2,SNR=9.6						
	comp=Z,0.4nm,0.7s						
AS31	**Alice Springs**	**33.06**	**251**	P	**P**	**11 29 33.1**	**+0.5**
ASAR	**Alice Springs**	**33.06**	**251**	P	**P**	**11 29 32.8**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=81,slow=8.5,SNR=38						
	comp=Z,1.0nm,0.5s						
BBOO	**Buckleboo**	**33.64**	**234**	P	**P**	**11 29 38.4**	**+1.0**
BBOO				IAmb	IAmb	11 30 19.1	
	comp=Z,17nm,1.4s						
FAKI	**Fak Fak**	**37.41**	**286**	P	**P**	**11 30 10.9**	**+1.1**
FAKI				IAmb	IAmb	11 30 49.9	
	comp=Z,7.5nm,1.0s						
MBWA	**Marble Bar**	**46.03**	**256**	P	**P**	**11 31 20.7**	**+1.2**
MBWA				IAmb	IAmb	11 31 32.5	
	comp=Z,6.9nm,1.1s						
QSPA	**South Pole Qui**	**74.43**	**180**	P	**P**	**11 34 32.4**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=304,slow=0.5,SNR=3.4						
	comp=Z,0.5nm,0.5s						
QSPA	**South Pole Qui**	**74.43**	**180**	IAmb	IAmb	11 35 06.7	
	comp=Z,6.6nm,1.4s						

TAP ***19*** *11:43:40.5, 24°.84N×122°.08E, h9km, ML2.7, C*

JMA ***19*** *11:43:41.0±0.2, 24°.9N±0°.8×122°.0E±0°.6, h41km±4km, MV2.2/10, TAIWAN REGION*

ISC 19 11:43:41.0±0.9,**24°.82N**±0°.02×**122°.08E**±0°.02,**h10**km±7km, **n70,** σ0§**63/91, 5C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGS		**0.14**	**282**	⇑*i* P	**Pg**	**11 43 44.1**	**0.0**
EGS				*i* S	**Sg**	**11 43 46.3**	**-0.1**
TWB1	**Santiao Chiao**	**0.21**	**337**	⇑*i* P	**Pg**	**11 43 45.0**	**-0.4**
TWB1				*i* S	**Sg**	**11 43 48.0**	**-0.4**
NTC	**Toucheng**	**0.23**	**280**	*i* P	**Pg**	**11 43 46.1**	**+0.4**
TIPB	**Shuangxi**	**0.28**	**304**	⇑P	**Pg**	**11 43 46.6**	**0.0**
TIPB				*i* S	**Sg**	**11 43 50.4**	**-0.1**
TWC	**Suao**	**0.29**	**226**	*i* P	**Pg**	**11 43 47.0**	**+0.1**
TWC				*i* S	**Sg**	**11 43 50.7**	**-0.2**
ILA	**Ilan**	**0.30**	**261**	S	**Sg**	**11 43 52.3**	**+1.0**
SXI1	**Grass Mountain**	**0.33**	**326**	⇑*i* P	**Pg**	**11 43 47.7**	**0.0**
SXI1				*i* S	**Sg**	**11 43 52.3**	**+0.1**
NWF	**Wu-fen Shan**	**0.37**	**313**	*i* P	**Pg**	**11 43 48.7**	**+0.2**
NWF				*i* S	**Sg**	**11 43 54.7**	**+1.4**
WFSB	**Wu-fen Shan**	**0.37**	**313**	*i* P	**Pg**	**11 43 48.5**	**+0.1**
WFSB				*e*S	**Sg**	**11 43 54.3**	**+0.9**
NDS	**Dongshan**	**0.38**	**241**	*e*P	**Pg**	**11 43 48.6**	**+0.1**
NDS				*e*S	**Sb**	**11 43 56.0**	**+0.4**
TWE	**Neicheng**	**0.39**	**256**	*i* P	**Pg**	**11 43 49.0**	**+0.4**
EOS2	**EOS2**	**0.42**	**161**	*e*P	**Pb**	**11 43 50.5**	**+0.2**
TNOU	**National Taiwa**	**0.43**	**320**	*e*P	**Pg**	**11 43 49.6**	**+0.1**
FUSB	**Fushanzhiwuyua**	**0.45**	**263**	⇑P	**Pg**	**11 43 49.9**	**0.0**
FUSB				S	**Sb**	**11 43 57.4**	**-0.4**
EWUT	**Wuta**	**0.46**	**217**	*e*P	**Pg**	**11 43 50.1**	**+0.1**
EWUT				*i* S	**Sg**	**11 43 55.8**	**-0.3**
TWA	**Mucha**	**0.48**	**290**	*i* P	**Pg**	**11 43 50.5**	**+0.1**
ENTT	**Nioudou**	**0.50**	**250**	*i* P	**Pg**	**11 43 51.0**	**+0.2**
ENTT				*i* S	**Sb**	**11 43 58.5**	**-0.7**
NHY	**Taipei**	**0.51**	**296**	*e*P	**Pb**	**11 43 52.9**	**+0.8**
NWLT	**Wulai**	**0.53**	**266**	P	**Pg**	**11 43 51.2**	**0.0**
NWLT				*e*S	**Sg**	**11 43 58.6**	**+0.4**
NDT	**Datong Townshi**	**0.56**	**248**	*e*P	**Pb**	**11 43 52.6**	**-0.2**
YM01	**YM01**	**0.57**	**306**	*e*P	**Pg**	**11 43 52.7**	**+0.6**
EAHA	**Aohua**	**0.57**	**213**	*e*P	**Pb**	**11 43 52.9**	**-0.2**
LATG	**Datong**	**0.57**	**241**	*e*P	**Pg**	**11 43 52.3**	**+0.1**
YM08	**YM08**	**0.58**	**310**	*e*P	**Pg**	**11 43 52.5**	**+0.2**
ZUZH	**Zhuzihu**	**0.60**	**306**	*e*P	**Pg**	**11 43 53.0**	**+0.4**
ANP	**Anpu**	**0.63**	**306**	P	**Pg**	**11 43 53.2**	**0.0**
YHNB	**Yeheng**	**0.66**	**257**	*e*P	**Pg**	**11 43 53.7**	**0.0**
TWS1	**Kuangyinshan**	**0.67**	**295**	*e*P	**Pb**	**11 43 55.0**	**+0.3**
NTST	**Danshui**	**0.67**	**301**	*e*P	**Pg**	**11 43 54.5**	**+0.5**
NSK	**Sanguang**	**0.67**	**258**	*e*P	**Pg**	**11 43 52.7**	**-1.3**
EOS4	**EOS4**	**0.72**	**163**	*e*P	**Pg**	**11 43 55.8**	**+0.9**
NNSB	**Datong**	**0.74**	**239**	*e*P	**Pg**	**11 43 55.6**	**+0.3**
NNS	**Nan Shan**	**0.74**	**240**	P	**Pb**	**11 43 56.4**	**+0.3**
ETL	**Fush Village**	**0.78**	**213**	P	**Pb**	**11 43 55.9**	**-0.6**
ETL				*e*S	**Sg**	**11 44 06.2**	**+0.2**
NACB	**Ninganchiao**	**0.78**	**215**	P	**Pg**	**11 43 56.5**	**+0.5**
NACB				S	**Sb**	**11 44 05.8**	**-1.3**
PCYT	**Pengchaiyu**	**0.81**	**359**	P	**Pb**	**11 43 57.4**	**+0.3**
ETLH	**Xiulin Townshi**	**0.81**	**222**	*e*P	**Pb**	**11 43 57.1**	**-0.2**
ETLH				*e*S	**Sb**	**11 44 07.1**	**-1.2**
TWD	**Chiawan**	**0.85**	**211**	P	**Pg**	**11 43 58.2**	**+0.7**
TWD				*e*S	**Sb**	**11 44 08.6**	**-0.7**
JYNG	**Yonagunijimaku**	**0.87**	**115**	P	**Pb**	**11 43 58.0**	**-0.1**
JYNG				*e*S	**Sg**	**11 44 10.5**	**+1.5**
YOJ	**Yonaguni jima**	**0.92**	**112**	*e*P	**Pb**	**11 43 59.0**	**+0.1**
YOJ				S	**Sg**	**11 44 11.8**	**+1.2**
YOJ	**Yonaguni jima**	**0.92**	**112**	*e*P	**Pb**	**11 43 58.7**	**-0.2**
YOJ				*e*S	**Sg**	**11 44 11.7**	**+1.1**
FUSS	**Fushou**	**0.95**	**234**	*e*P	**Pn**	**11 44 00.2**	**+1.4**
LIOB	**Emei**	**0.98**	**260**	*e*P	**Pn**	**11 44 01.9**	**+1.1**
TWT	**Tachien**	**0.99**	**236**	*e*P	**Pn**	**11 44 02.5**	**+1.4**
LXIB	**Xiulin Townshi**	**1.00**	**218**	*i* P	**Pb**	**11 44 00.4**	**0.0**
LXIB				S	**Sg**	**11 44 14.0**	**+0.8**
NSTT	**Nanjuang**	**1.00**	**260**	P	**Pn**	**11 44 00.9**	**-0.1**
WHF	**Hehuan Shan**	**1.00**	**228**	*e*P	**Pb**	**11 44 00.5**	**-0.1**
WHF				*e*S	**Sn**	**11 44 14.3**	**-1.4**
ETM	**Tongmen**	**1.00**	**212**	*e*P	**Pb**	**11 44 00.5**	**+0.1**
TDCB	**Techi**	**1.01**	**236**	*e*P	**Pn**	**11 44 01.4**	**+0.1**
SHUL	**Shoufeng**	**1.13**	**205**	*e*P	**Pn**	**11 44 02.7**	**0.0**
ESL	**Shilin**	**1.16**	**211**	P	**Pg**	**11 44 03.9**	**+0.7**
WHP	**Taichung City**	**1.16**	**243**	*e*P	**Pg**	**11 44 04.4**	**+1.0**
OWD	**Renai**	**1.19**	**224**	*e*P	**Pg**	**11 44 04.2**	**+0.3**
WUSB	**Renai**	**1.20**	**227**	*e*P	**Pg**	**11 44 04.3**	**+0.2**
WARBT	**Fenglin Townsh**	**1.26**	**210**	*e*P	**Pb**	**11 44 05.2**	**+0.3**
TWQ1	**Liyutan**	**1.28**	**249**	P	**Pg**	**11 44 07.3**	**+1.8**
WCS	**Beigang Elemen**	**1.30**	**235**	*e*P	**Pg**	**11 44 06.8**	**+0.7**
VWDT	**VWDT**	**1.36**	**219**	*e*P	**Pg**	**11 44 07.5**	**+0.4**
SMLT	**Sun Moon Lake**	**1.42**	**229**	*e*P	**Pg**	**11 44 08.8**	**+0.5**
TYC	**Yuchr**	**1.44**	**231**	*e*P	**Pg**	**11 44 09.2**	**+0.6**
HGSD	**Ruisui**	**1.45**	**205**	*e*P	**Pg**	**11 44 09.1**	**+0.3**
SSLB	**Suanglung**	**1.45**	**225**	*e*P	**Pg**	**11 44 09.0**	**+0.1**
EHY	**Hungye**	**1.48**	**208**	*e*P	**Pb**	**11 44 08.8**	**+0.2**
IRIF	**Iriomote-Funau**	**1.58**	**107**	*e*P	**Pn**	**11 44 07.7**	**-1.3**
YULB	**Yu-li**	**1.59**	**207**	*e*P	**Pb**	**11 44 10.3**	**-0.1**
ALS	**Alishan**	**1.74**	**222**	*e*P	**Pg**	**11 44 14.7**	**+0.2**
FULB	**Fuli**	**1.76**	**204**	*e*P	**Pb**	**11 44 14.1**	**+0.7**
CHN5	**Tsauling**	**1.76**	**227**	*e*P	**Pg**	**11 44 15.0**	**+0.2**
JKRS	**Kuro-shima**	**1.85**	**108**	P	**Pn**	**11 44 12.2**	**-0.5**
JISG	**Ishigakijimahi**	**2.04**	**96**	*e*P	**Pn**	**11 44 15.6**	**+0.2**

DJA 19 11:47:47.9±1.6,**11°.3E**±°,**h19**km±30km,**M3.9/8, mb3.8/1, MLv3.9/8, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAGI	**Jajag, Banyuwa**	**2.80**	**32**	P	Pn	11 48 31.8	+0.1
JAGI				S	Sn	11 49 06.0	+0.9
PCJI	**Pacitan**	**3.03**	**331**	P	Pn	11 48 33.7	-1.2
PCJI				S	Sn	11 49 11.4	+0.6
SNJI	**Sawahan-Nganju**	**3.20**	**344**	P	Pn	11 48 38.8	+1.5
RTBI	**Rangdo, Negare**	**3.29**	**43**	P	Pn	11 48 38.1	-0.3
UGM	**Wanagama**	**3.62**	**324**	P	Pn	11 48 42.1	-0.9
TWSI	**Taliwang, Sumb**	**4.67**	**63**	P	Pn	11 48 55.0	-2.4
KPJI	**Karang Pucung**	**5.09**	**313**	P	Pn	11 49 04.3	+1.1

IDC ***19*** *11:51:18.2±0.9, 45°.22N×25°.28E, h53km±7km, mbtmp3.9/16, MS2.9/4, Error ellipse: s-maj=20.3km s-min=12.0km az=168.0*

MCSM ***19*** *11:51:19.9±0.4, 45°.N±4°×2°.5E±°, h62km, mb4.3, MLv4.0*

NEIC ***19*** *11:51:19.9±2.1, 45°.30N±0°.06×25°.40E±0°.08, h72km±7km, mb4.3/8, Error ellipse: s-maj=8.8km s-min=7.9km az=205.0*

BUC ***19*** *11:51:20.0±0.1, 45°.23N×25°.41E, h64km±2km, ml4.2/70, Error ellipse: s-maj=1.0km s-min=0.9km az=3.0*

SOF ***19*** *11:51:19.7, 45°.22N±0°.01×25°.40E±0°.01, h60km±1km, MD4.2/13*

SIGU ***19*** *11:51:19.5±0.3, 45°.28N×25°.26E, h60km, mb3.1/15, MD3.8/18*

CFUSG ***19*** *11:51:21.9, 45°.29N×25°.97E, h50km, Mb3.6/4, MD3.3/4, MSH3.6/7*

ISC 19 11:51:19.1±0.7,**45°.22N**±0°.02×**25°.41E**±0°.02,**h70**km±5km, **n244,** σ1§**37/304, mb4.0/8, 63C-54D, Romania**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MTUR	**Matau**	**0.25**	**271**	⇑P	**Pn**	**11 51 29.9**	**-0.2**
VOIR		**0.34**	**310**	⇑P	**Pn**	**11 51 30.6**	**-0.1**
VOIR				⇑S	**Sn**	**11 51 37.9**	**-1.2**
VOIR		**0.34**	**310**	P	**Pn**	**11 51 30.6**	**-0.1**
MLR	**Muntele Rosu**	**0.46**	**54**	LR	LR	11 51 23.2	
	comp=Z,40nm,19.8s,baz=156,slow=9.1						
MLR				P	**Pn**	**11 51 32.1**	**+0.4**
	3µm,0.4s,baz=247,slow=2.7,SNR=4399						
MLR				S	**Sn**	**11 51 41.1**	**+0.1**
	5µm,0.4s,baz=191,slow=18,SNR=27						
MLR	**Muntele Rosu**	**0.46**	**54**	⇓P	**Pn**	**11 51 32.3**	**+0.6**
MLR				⇓S	**Sn**	**11 51 41.1**	**+0.1**
MLR	**Muntele Rosu**	**0.46**	**54**	P	**Pn**	**11 51 32.4**	**+0.6**
MLR	**Muntele Rosu**	**0.46**	**54**	P	**Pn**	**11 51 32.2**	**+0.4**
PLAR	**PLOIESTI**	**0.53**	**125**	⇑P	**Pn**	**11 51 33.4**	**+1.2**
PLAR				S	**Sn**	**11 51 45.1**	**+1.6**
ARR	**Arges**	**0.57**	**285**	⇑P	**Pn**	**11 51 33.3**	**+0.6**
ARR				⇑S	**Sn**	**11 51 42.7**	**0.0**
NEHR	**Nehoiu**	**0.66**	**71**	⇓P	**Pn**	**11 51 34.8**	**+1.2**
NEHR				⇑S	**Sn**	**11 51 45.3**	**+1.1**
DOPR	**Dopca**	**0.75**	**359**	⇓P	**Pn**	**11 51 34.9**	**+0.3**
DOPR				⇓S	**Sn**	**11 51 46.0**	**0.0**
HUMR	**Humele**	**0.76**	**204**	⇑P	**Pn**	**11 51 35.7**	**+1.0**
ISR	**Istrita**	**0.81**	**97**	⇓P	**Pn**	**11 51 36.6**	**+1.3**
ISR	**Istrita**	**0.81**	**97**	P	**Pn**	**11 51 36.2**	**+0.9**
SULR		**0.81**	**132**	⇓P	**Pn**	**11 51 36.4**	**+1.1**
SULR				⇑S	**Sn**	**11 51 47.9**	**+0.7**
COVR	**Voineasa-Covas**	**0.84**	**41**	⇑P	**Pn**	**11 51 35.9**	**+0.2**
COVR				⇑S	**Sn**	**11 51 48.5**	**+0.6**
BOSR	**Bodos**	**0.87**	**11**	⇓P	**Pn**	**11 51 36.7**	**+0.6**
BOSR				⇑S	**Sn**	**11 51 48.8**	**+0.2**
TNR	**Turnu Rosu**	**0.91**	**299**	⇓P	**Pn**	**11 51 37.5**	**+1.0**
TNR				⇑S	**Sn**	**11 51 50.8**	**+1.3**
OZUR		**0.91**	**17**	⇑P	**Pn**	**11 51 37.2**	**+0.6**
OZUR				⇑S	**Sn**	**11 51 49.5**	**0.0**
TURR	**Turia**	**0.94**	**27**	⇑P	**Pn**	**11 51 37.7**	**+0.9**
TURR				⇑S	**Sn**	**11 51 50.2**	**+0.2**
INCR	**INCERC-Sediu C**	**0.94**	**145**	⇓P	**Pn**	**11 51 37.9**	**+1.0**
BUC1	**Bucharest**	**0.98**	**153**	⇑P	**Pn**	**11 51 38.7**	**+1.4**
BUC1				⇑S	**Sn**	**11 51 52.1**	**+1.3**
PLOR	**Plostina**	**1.07**	**54**	⇑P	**Pn**	**11 51 39.7**	**+1.1**
PLOR				⇑S	**Sn**	**11 51 53.6**	**+0.5**
SGRR	**Singureni**	**1.08**	**158**	⇓P	**Pn**	**11 51 39.4**	**+0.9**
SGRR				⇓S	**Sn**	**11 51 53.7**	**+0.7**
COPA	**Copaceanca**	**1.10**	**187**	⇑P	**Pn**	**11 51 39.8**	**+1.0**
GRER		**1.11**	**81**	⇑P	**Pn**	**11 51 39.2**	**+0.2**
VRI	**Vrincioaia**	**1.13**	**55**	⇑P	**Pn**	**11 51 40.4**	**+1.1**
VRI				⇑S	**Sn**	**11 51 55.2**	**+1.0**
VRI	**Vrincioaia**	**1.13**	**55**	P	**Pn**	**11 51 40.2**	**+1.0**
MDB	**Medias**	**1.17**	**322**	⇓P	**Pn**	**11 51 41.2**	**+1.4**
MDB				⇑S	**Sn**	**11 51 57.1**	**+1.8**
LOT	**Lotru**	**1.18**	**282**	⇓P	**Pn**	**11 51 41.2**	**+1.2**
LOT				⇑S	**Sn**	**11 51 56.6**	**+1.0**
LEHL	**Lehliu**	**1.25**	**126**	⇑P	**Pn**	**11 51 41.3**	**+0.6**
LEHL				⇓S	**Sn**	**11 51 58.2**	**+1.2**
ODBI	**Odobesti**	**1.28**	**64**	⇑S	**Sn**	**11 51 58.7**	**+1.0**
ONER	**Baraj Valea Uz**	**1.31**	**31**	⇑P	**Pn**	**11 51 42.9**	**+1.3**
ONER				⇑S	**Sn**	**11 51 59.4**	**+1.0**
PANC	**Panciu**	**1.38**	**61**	⇑P	**Pn**	**11 51 45.5**	**+3.0**
VLAD	**Vladila**	**1.42**	**211**	⇑P	**Pn**	**11 51 43.7**	**+0.7**
VLAD				⇑S	**Sn**	**11 52 01.7**	**+0.7**
TGMR	**Targu Mures**	**1.45**	**335**	⇑P	**Pn**	**11 51 43.4**	**0.0**
JOSR	**Joseni**	**1.49**	**3**	⇓P	**Pn**	**11 51 44.4**	**+0.4**
TESR	**Tescani**	**1.55**	**33**	⇑P	**Pn**	**11 51 45.8**	**+1.0**
TESR				⇑S	**Sn**	**11 52 04.6**	**+0.4**
TESR	**Tescani**	**1.55**	**33**	P	**Pn**	**11 51 45.1**	**+0.3**
ZIMR		**1.56**	**181**	⇑P	**Pn**	**11 51 45.3**	**+0.4**
ZIMR				⇑S	**Sn**	**11 52 04.9**	**+0.6**
GHRR		**1.63**	**58**	⇑P	**Pn**	**11 51 47.1**	**+1.3**
GHRR				⇓S	**Sn**	**11 52 07.1**	**+1.1**
TUDR		**1.63**	**76**	⇑P	**Pn**	**11 51 47.1**	**+1.3**
TUDR				⇓S	**Sn**	**11 52 06.1**	**+0.1**
SRE	**Strehaia**	**1.66**	**251**	⇑P	**Pn**	**11 51 47.4**	**+1.2**
SRE				⇓S	**Sn**	**11 52 07.5**	**+0.7**
SCHL	**Schela**	**1.73**	**80**	⇑P	**Pn**	**11 51 48.8**	**+1.7**
SCHL				⇓S	**Sn**	**11 52 06.6**	**-1.6**
RAZG	**Razgrad**	**1.83**	**154**	⇓P	**Pn**	**11 51 49.8**	**+1.3**
RAZG				⇓S	**Sn**	**11 52 10.8**	**-0.1**
GZR	**Gura Zlata**	**1.87**	**276**	⇑S	**Sn**	**11 52 13.4**	**+1.7**
SCTR	**Scanteiesti**	**1.87**	**75**	⇑S	**Sn**	**11 52 13.4**	**+1.6**
DEV	**Deva**	**1.88**	**291**	⇓P	**Pn**	**11 51 50.5**	**+1.3**
DEV				⇑S	**Sn**	**11 52 12.7**	**+0.7**
GIRR	**Girov**	**1.89**	**23**	⇑P	**Pn**	**11 51 50.4**	**+1.1**
GIRR				⇓S	**Sn**	**11 52 13.1**	**+0.9**
TATR	**Tatarca**	**1.90**	**78**	⇑S	**Sn**	**11 52 13.4**	**+1.1**
PLVB	**Pleven**	**1.92**	**197**	⇑P	**Pn**	**11 51 50.4**	**+0.8**
CFR	**Carcaliu**	**1.93**	**90**	⇓P	**Pn**	**11 51 49.4**	**-0.3**
CJR	**Cluj-Napoca**	**1.96**	**320**	⇓P	**Pn**	**11 51 51.1**	**+0.9**
VLDR	**Vladesti**	**1.98**	**71**	⇓P	**Pn**	**11 51 51.4**	**+1.0**
GIUM	**Giurgiulesti**	**1.99**	**81**	⇑S	**Sn**	**11 52 15.1**	**+0.6**
SZH	**Strazhitsa**	**2.00**	**168**	P	**Pn**	**11 51 51.9**	**+1.2**
PUNG	**Punghina**	**2.00**	**243**	⇓P	**Pn**	**11 51 51.3**	**+0.5**
RMGR	**Halanga-Turnu**	**2.01**	**255**	⇓S	**Sn**	**11 52 15.4**	**+0.3**
ICOR	**Ion Corvin**	**2.03**	**122**	⇓P	**Pn**	**11 51 52.2**	**+1.0**
ICOR				⇑S	**Sn**	**11 52 16.6**	**+1.0**
CVDA	**Cernavoda**	**2.07**	**114**	⇓S	**Sn**	**11 52 16.0**	**-0.5**
VALD	**Valchedram**	**2.08**	**223**	⇑P	**Pn**	**11 51 52.7**	**+0.8**
PVL	**Pavlikeni**	**2.10**	**185**	P	**Pn**	**11 51 52.9**	**+0.7**
DJES	**Djerdap**	**2.13**	**256**	⇑P	**Pn**	**11 51 52.1**	**-0.4**
HERR	**Herculane**	**2.15**	**262**	⇓P	**Pn**	**11 51 53.3**	**+0.5**
MARR	**Marisel-Cluj**	**2.16**	**313**	⇓P	**Pn**	**11 51 54.0**	**+1.0**
TPGR	**Topolog**	**2.16**	**99**	⇓P	**Pn**	**11 51 52.1**	**-0.9**
VASR	**Vaslui**	**2.19**	**49**	⇑S	**Sn**	**11 52 20.4**	**+1.1**
PRAN	**RASCA**	**2.21**	**14**	⇑S	**Sn**	**11 52 20.6**	**+0.8**
MPEP	**Malo Peshtene**	**2.22**	**213**	⇑P	**Pn**	**11 51 54.7**	**+1.0**
TIRR	**Tirgusor**	**2.27**	**109**	⇓P	**Pn**	**11 51 54.6**	**+0.2**
TIRR	**Tirgusor**	**2.27**	**109**		**Pn**	**11 51 54.7**	**+0.4**
TIRR	**Tirgusor**	**2.27**	**109**	P	**Pn**	**11 51 55.5**	**+1.2**
ELND	**Elena**	**2.32**	**172**	⇑P	**Pn**	**11 51 56.2**	**+1.1**
NEF	**NEVSHA**	**2.37**	**145**	P	**Pn**	**11 51 56.9**	**+1.1**
MFTR	**Murfatlar**	**2.39**	**115**	⇓P	**Pn**	**11 51 56.5**	**+0.5**
BURAR	**Bucovina Array**	**2.40**	**357**	⇑P	**Pn**	**11 51 58.0**	**+1.7**
BURAR	**Bucovina Array**	**2.40**	**357**		**Pn**	**11 51 56.9**	**+0.7**
TLCR		**2.41**	**90**	⇓P	**Pn**	**11 51 57.4**	**+1.2**
TLCR				⇑S	**Sn**	**11 52 25.3**	**+0.7**
BUR08	**Bucovina Ar. S**	**2.43**	**357**		**Pn**	**11 51 57.9**	**+1.2**
DRGR		**2.45**	**311**	⇓P	**Pn**	**11 51 57.5**	**+0.6**
IASR	**Iasi**	**2.47**	**37**	⇓P	**Pn**	**11 51 58.3**	**+1.3**
PRD	**Provadia**	**2.51**	**144**	⇓P	**Pn**	**11 51 58.9**	**+1.2**
PSN	**Preselentsi**	**2.51**	**128**	⇓P	**Pn**	**11 51 58.7**	**+1.0**
PSN				S	**Sn**	**11 52 27.7**	**+0.5**
TSCT	**Constanta Port**	**2.55**	**113**	⇓P	**Pn**	**11 51 58.8**	**+0.7**
ROIA	**ROIAK**	**2.56**	**146**	P	**Pn**	**11 51 59.9**	**+1.6**
EFOR	**EFORIE**	**2.57**	**115**	⇓P	**Pn**	**11 51 59.0**	**+0.6**
MESR	**Meseseni**	**2.58**	**319**	⇓P	**Pn**	**11 51 59.0**	**+0.4**
AVR	**AVREN**	**2.66**	**142**	P	**Pn**	**11 52 01.0**	**+1.4**
MDVR	**Moldovita**	**2.66**	**262**	⇓P	**Pn**	**11 52 00.0**	**+0.3**
MANR	**Mangalia**	**2.67**	**121**	⇓P	**Pn**	**11 52 00.7**	**+0.9**
MANR				⇑S	**Sn**	**11 52 31.8**	**+0.8**
BMR	**Baia Mare**	**2.79**	**332**	⇓P	**Pn**	**11 52 02.5**	**+1.1**
BMR				⇑S	**Sn**	**11 52 34.9**	**+1.0**
JMB	**Yambol**	**2.85**	**163**	P	**Pn**	**11 52 03.6**	**+1.4**
PGB	**Panagyurishte**	**2.85**	**199**	P	**Pn**	**11 52 04.3**	**+2.0**
RAKU	**Rahkiv**	**2.93**	**343**	*e*Pn	**Pn**	**11 52 04.0**	**+0.6**
RAKU				pmax	pmax	11 52 04.4	
RAKU				Sn	**Sn**	**11 52 37.3**	**-0.2**
RAKU				smax	smax	11 52 38.8	
VTS	**Vitosha**	**3.04**	**212**	P	**Pn**	**11 52 06.3**	**+1.3**
NSLU	**Nyzhne Selyshc**	**3.05**	**348**	*e*Pn	**Pn**	**11 52 08.9**	**+4.0**
NSLU				pmax	pmax	11 52 23.1	
NSLU				*e*Sn	**Sn**	**11 52 46.3**	**+6.0**
NSLU				smax	smax	11 52 47.6	
NSLU	**Nyzhne Selyshc**	**3.05**	**348**	P	**Pn**	**11 52 08.6**	**+3.7**
TSSL	**Sulina**	**3.05**	**90**	⇓S	**Sn**	**11 52 40.9**	**+0.6**
DRBR	**Darabani**	**3.10**	**15**	⇑S	**Sn**	**11 52 43.4**	**+2.0**
PLNA	**Plana**	**3.10**	**208**	P	**Pn**	**11 52 07.4**	**+1.6**
KSV	**Kosov**	**3.10**	**356**	*e*Pn	**Pn**	**11 52 07.2**	**+1.5**
KSV				pmax	pmax	11 52 26.9	
KSV				*e*Sn	**Sn**	**11 52 42.3**	**+0.7**
KSV				smax	smax	11 52 49.0	
KSV	**Kosov**	**3.10**	**356**	P	**Pn**	**11 52 06.7**	**+1.0**
TRAN	**Tran**	**3.11**	**221**	P	**Pn**	**11 52 07.3**	**+1.5**
PLD	**Plovdiv**	**3.11**	**189**	*e*P	**Pn**	**11 52 07.6**	**+1.8**
PLD	**Plovdiv**	**3.11**	**189**	P	**Pn**	**11 52 07.3**	**+1.5**
DIM	**Dimitrovgrad**	**3.18**	**178**	P	**Pn**	**11 52 08.5**	**+1.8**
KORU	**Korolevo**	**3.33**	**333**	*e*Pn	**Pn**	**11 52 05.5**	**-3.2**
KORU				pmax	pmax	11 52 05.8	
KORU				*e*Sn	**Sn**	**11 52 43.5**	**-3.6**
KORU				smax	smax	11 52 45.7	
TRSU	**Trosnyk**	**3.33**	**330**	*e*Pn	**Pn**	**11 52 09.9**	**+1.1**
TRSU				pmax	pmax	11 52 15.6	
TRSU				*e*Sn	**Sn**	**11 52 46.5**	**-0.7**
TRSU				smax	smax	11 52

AK19	**Malin Array Si**	**6.01**	**22**	P		**Pn**	**11 52 45.7**	**+0.4**
AK11	**Malin Array Si**	**6.01**	**23**	P		**Pn**	**11 52 45.8**	**+0.4**
AK15	**Malin Array Si**	**6.02**	**23**	P		**Pn**	**11 52 45.8**	**+0.4**
KIEV	**Kiev**	**6.04**	**24**			**Pn**	**11 52 46.1**	**+0.3**
AKASG	**Malin Array Be**	**6.05**	**24**	P		**Pn**	**11 52 46.3**	**+0.4**
	comp=E,6.5nm,0.3s,baz=210,slow=11,SNR=55							
AKASG				S		**Sn**	**11 53 50.7**	**-2.9**
	comp=E,4.3nm,0.4s,baz=205,slow=22,SNR=5.1							
AKASG				LR		LR	11 55 17.0	
	comp=E,52nm,19.1s,baz=291,slow=39							
AKASG	**Malin Array Be**	**6.05**	**24**			**Pn**	**11 52 44.7**	**-1.1**
AKBB	**Malin Array Si**	**6.05**	**24**			**Pn**	**11 52 46.2**	**+0.3**
AKBB	**Malin Array Si**	**6.05**	**24**	P		**Pn**	**11 52 46.2**	**+0.3**
SIM	**Simferopol'**	**6.17**	**89**	*e*S		**Sn**	**11 53 53.6**	**-3.0**
SIM				smax	smax		11 53 58.9	
	comp=N,6.0nm,0.3s							
SIM				smax	smax		11 53 58.9	
	comp=E,25nm,0.4s							
SIM	**Simferopol'**	**6.17**	**89**	S		**Sn**	**11 53 58.9**	**+2.3**
SIM				smax	smax		11 53 58.9	
YAL	**Yalta**	**6.26**	**94**	*e*S		**Sn**	**11 53 57.0**	**-1.8**
YAL				smax	smax		11 53 59.8	
	comp=N,13nm,0.2s							
YAL				smax	smax		11 53 59.8	
	comp=E,27nm,0.3s							
YAL	**Yalta**	**6.26**	**94**	P		**Sn**	**11 53 57.0**	**-1.8**
YAL				S		**Sn**	**11 53 57.0**	**-1.8**
YAL				smax	smax		11 53 59.8	
OJC	**Ojcow**	**6.27**	**325**			**Pn**	**11 52 50.1**	**+1.2**
MDUB	**Mudurnu**	**6.37**	**136**			**Pn**	**11 52 52.4**	**+1.9**
ALU	**Alushta**	**6.40**	**92**	*e*S		**Sn**	**11 54 00.5**	**-1.8**
ALU				smax	smax		11 54 04.4	
	comp=N,67nm,0.3s							
ALU				smax	smax		11 54 04.4	
	comp=E,111nm,0.4s							
ALU	**Alushta**	**6.40**	**92**	S		**Sn**	**11 54 00.5**	**-1.8**
ALU				smax	smax		11 54 04.4	
JAVC	**Velka Javorina**	**6.42**	**307**	*e*PN		**Pn**	**11 52 52.1**	**+1.1**
SUDU	**Sudak**	**6.80**	**89**	*e*P		**Pn**	**11 52 56.6**	**+0.5**
SUDU				pmax	pmax		11 52 58.9	
	comp=Z,43nm,0.5s							
SUDU				*e*S		**Sn**	**11 54 09.6**	**-2.5**
SUDU				smax	smax		11 54 14.3	
	comp=N,102nm,0.5s							
SUDU				smax	smax		11 54 14.3	
	comp=E,4.0nm,0.2s							
SUDU	**Sudak**	**6.80**	**89**	P		**Pn**	**11 52 56.6**	**+0.5**
SUDU				pmax	pmax		11 52 58.9	
SUDU				S		**Sn**	**11 54 09.6**	**-2.5**
SUDU				smax	smax		11 54 14.3	
MORC	**Moravsky Berou**	**7.01**	**313**			**Pn**	**11 53 00.5**	**+1.4**
MORC	**Moravsky Berou**	**7.01**	**313**	*e*PN		**Pn**	**11 53 00.3**	**+1.2**
MANT	**Manisa**	**7.12**	**160**	Pn		**Pn**	**11 53 02.1**	**+1.3**
KRUC	**Moravsky**	**7.25**	**305**	*e*PN		**Pn**	**11 53 02.7**	**+0.4**
VRAC	**Vranov**	**7.26**	**307**	P		**Pn**	**11 53 01.3**	**-1.1**
	comp=E,7.2nm,0.7s,baz=123,slow=13,SNR=6.8							
VRAC	**Vranov**	**7.26**	**307**	*e*PN		**Pn**	**11 53 03.1**	**+0.7**
ILGA	**Ilgaz**	**7.36**	**122**			**Pn**	**11 53 05.3**	**+1.2**
BR131	**Keskin Array S**	**8.19**	**129**			**Pn**	**11 53 16.3**	**+1.0**
BRTR	**Keskin Array B**	**8.19**	**129**	P		**Pn**	**11 53 16.4**	**+1.0**
	comp=E,2.3nm,0.3s,baz=314,slow=13,SNR=20							
BRTR				S		**Sn**	**11 54 42.1**	**-4.3**
	comp=E,1.7nm,0.5s,baz=168,slow=12,SNR=5.7							
ACER	**Acerenza**	**8.23**	**241**	Pn		**Pn**	**11 53 17.4**	**+1.5**
ITM	**Ithomi**	**8.45**	**199**	Pn		**Pn**	**11 53 19.1**	**+0.3**
GERES	**GERESS Array B**	**8.78**	**299**	P		**Pn**	**11 53 21.9**	**-1.4**
	comp=E,0.4nm,0.5s,baz=111,slow=14,SNR=5.8							
CUC	**Castrocucco**	**8.79**	**237**	Pn		**Pn**	**11 53 25.5**	**+2.0**
TIP	**Timpagrande**	**8.81**	**230**	Pn		**Pn**	**11 53 25.4**	**+1.7**
NACGM	**Naroch**	**9.73**	**5**	*e*P		**Pn**	**11 53 37.5**	**+1.4**
	comp=N,42nm,0.8s							
DAVOX	**Davos/Dischmat**	**10.92**	**284**	P		**Pn**	**11 53 49.9**	**-2.7**
	comp=N,0.7nm,0.4s,baz=337,slow=22,SNR=3.3							
DAVOX				LR		LR	11 58 41.2	
	comp=N,96nm,20.8s,baz=242,slow=41							
GNI	**Garni**	**15.08**	**103**	LR		LR	12 02 46.1	
	comp=N,18nm,19.6s,baz=332,slow=45							
BELG	**Belogornoye**	**16.26**	**56**	P		**Pn**	**11 55 02.6**	**-0.2**
	comp=N,24nm,0.7s,baz=78,slow=1.7,SNR=11							
FINES	**FINESS Array B**	**16.26**	**1**	P		**Pn**	**11 54 59.5**	**-3.3**
	comp=N,2.9nm,0.6s,baz=172,slow=15,SNR=16							
FINES				S		Sn	11 57 48.7	-13
	comp=N,3.7nm,0.8s,baz=180,slow=19,SNR=5.3							
FIA1	**FINESS Array S**	**16.26**	**1**	Pn		**Pn**	**11 54 59.9**	**-2.9**
FIA1				IAmb		IAmb	11 55 02.2	
	comp=Z,17nm,0.7s							
HFS	**Hagfors**	**16.50**	**339**	P		**Pn**	**11 55 03.5**	**-2.3**
	comp=Z,1.1nm,0.7s,baz=148,slow=8.6,SNR=1.6							
NOA	**NORSAR Array B**	**17.92**	**337**	P		**P**	**11 55 20.2**	**-2.8**
	comp=Z,0.7nm,0.8s,baz=144,slow=10,SNR=1.9							
KIRV	**Kirov**	**19.81**	**39**	P		**P**	**11 55 44.4**	**+0.8**
	comp=Z,15nm,0.6s,baz=340,slow=1.1,SNR=6.2							
EKA	**Eskdalemuir Ar**	**20.73**	**309**	P		**P**	**11 55 53.2**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=124,slow=10,SNR=3.9							
	comp=Z,0.4nm,0.4s							
ESDC	**Sonseca Array**	**22.30**	**266**	P		**P**	**11 56 10.1**	**-0.6**
	comp=Z,3.7nm,0.9s,baz=63,slow=11,SNR=20							
	comp=Z,3.7nm,0.9s							
ARTI	**Arti**	**23.41**	**50**	P		**P**	**11 56 22.1**	**+0.5**
AB31	**Akbulak array**	**23.66**	**68**	P		**P**	**11 56 25.6**	**+1.6**
ABKAR	**Akbulak array**	**23.66**	**68**	P		**P**	**11 56 25.6**	**+1.6**
KURBB	**Kurchatov Arra**	**35.36**	**62**	P		**P**	**11 58 09.6**	**+2.0**
	comp=Z,0.6nm,0.5s,baz=287,slow=9.5,SNR=7.3							
	comp=Z,0.6nm,0.5s							
KURK	**Kurchatov**	**35.39**	**62**	P		**P**	**11 58 09.6**	**+1.7**
KURK	**Kurchatov**	**35.39**	**62**	IAmb		IAmb	11 58 35.0	
	comp=Z,5.0nm,1.5s							
TORD	**Torodi Ar. Bea**	**37.80**	**220**	P		**P**	**11 58 29.3**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=28,slow=7.6,SNR=7.1							
	comp=Z,0.7nm,0.7s							
ZAA0	**Zalesovo Array**	**38.44**	**55**	P		**P**	**11 58 34.1**	**+0.4**
ZAA0				IAmb		IAmb	11 59 13.7	
	comp=Z,2.0nm,0.9s							
ZALV	**Zalesovo Beam**	**38.44**	**55**	P		**P**	**11 58 35.7**	**+2.0**
	comp=Z,1.3nm,0.3s,baz=292,slow=9.3,SNR=8.0							
	comp=Z,1.3nm,0.3s							
ZALV	**Zalesovo Beam**	**38.44**	**55**	P		**P**	**11 58 34.1**	**+0.4**
MKAR	**Makanchi Array**	**38.80**	**67**	P		**P**	**11 58 38.9**	**+2.1**
	comp=Z,0.5nm,0.4s,baz=269,slow=8.5,SNR=8.2							
MKAR				LR		LR	12 18 17.0	
	comp=Z,38nm,18.2s,baz=338,slow=42							
	comp=Z,0.5nm,0.4s							
MKAR	**Makanchi Array**	**38.80**	**67**	P		**P**	**11 58 38.2**	**+1.3**
SONM	**Songino Array**	**53.31**	**56**	P		**P**	**12 00 31.2**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=291,slow=10,SNR=3.9							
	comp=Z,0.6nm,0.4s							
BOSA	**Boshof**	**73.48**	**180**	P		**P**	**12 02 43.4**	**-0.7**
	comp=Z,4.1nm,1.1s,baz=142,slow=14,SNR=2.7							
	comp=Z,4.1nm,1.1s							
BOSA	**Boshof**	**73.48**	**180**	IAmb		IAmb	12 03 13.3	
	comp=Z,7.2nm,1.2s							

*SOME **19** 11:51:23.5, 39˚.37N×75˚.02E, h5km*
*NNC **19** 11:51:26.6±2.7, 39˚.40N×75˚.48E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=21.0km s-min=15.9km az=130.0*
*KRNET **19** 11:51:31.8±0.1, 39˚.56N×75˚.10E, h20km, mb3.5*
ISC 19 11:51:28.4±3.2, 39˚.5N±0˚.1×75˚.23E±0˚.06, h6km±17km, n29, σ1§52/43, 10C-6D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
JNKS	**Jany-Kuch**	**1.59**	**11**	⇑*i*P		**Pg**	**11 52 01.1**	**+2.1**
JNKS				⇑*i*S		**Sg**	**11 52 22.2**	**+2.6**
SALK	**Salom-Alik**	**1.76**	**323**	⇑*e*P		**Pg**	**11 52 02.5**	**+0.3**
SALK				⇑*i*S		**Sg**	**11 52 25.1**	**+0.1**
NRN	**Naryn**	**2.03**	**17**	⇑*i*P		**Pg**	**11 52 08.4**	**+1.0**
NRN				⇑*i*S		**Sg**	**11 52 35.0**	**+1.3**
ARLS	**Aral**	**2.47**	**344**	⇓*i*P		**Pb**	**11 52 13.7**	**+0.4**
ARLS				⇓*i*S		**Sb**	**11 52 44.2**	**+0.2**
UCH	**Uchtor**	**2.79**	**349**	P		**Pg**	**11 52 23.8**	**+1.9**
	SNR=6.9							
UCH	**Uchtor**	**2.79**	**349**	⇑*i*P		**Pb**	**11 52 18.7**	**-0.2**
UCH				⇑*i*S		**Sb**	**11 52 52.9**	**-0.6**
ULHL	**Ulahol**	**2.86**	**15**	P		**Pg**	**11 52 24.9**	**+1.6**
	SNR=5.1							
BOOM	**Boomskoye usch**	**3.05**	**10**	⇓*i*P		**Pb**	**11 52 22.5**	**-0.7**
BOOM				⇓*i*S		**Sb**	**11 52 59.7**	**-1.0**
KBK	**Karagaybulak**	**3.17**	**356**	P		**Pg**	**11 52 29.8**	**+0.6**
	SNR=8.9							
AAK	**Ala-Archa**	**3.19**	**350**	P		**Pg**	**11 52 27.9**	**-1.8**
	SNR=12							
AAK	**Ala-Archa**	**3.19**	**350**	⇓Pg		**Pb**	**11 52 27.2**	**+1.5**
	3.8nm,0.6s							
AAK				⇑Lg		Lg	11 53 12.5	
	2.7nm,0.6s							
TKM2	**Tokmak 2**	**3.44**	**5**	P		**Pb**	**11 52 31.4**	**+1.5**
	SNR=8.8							
MRKS	**Merke**	**3.59**	**336**	*e*P		**Pb**	**11 52 30.8**	**-1.5**
	3.0nm,0.6s							
MRKS				*e*S		**Sb**	**11 53 19.5**	**+3.4**
	9.4nm,0.5s							
KST	**Kastek**	**3.59**	**9**	Pg		**Pb**	**11 52 33.4**	**+1.0**
	10nm,0.4s							
KST				Lg		Lg	11 53 23.9	
	21nm,0.8s							
KST	**Kastek**	**3.59**	**9**	*e*P		**Pb**	**11 52 33.4**	**+1.0**
	10nm,0.4s							
KST				*e*S		**Sg**	**11 53 23.9**	**0.0**
	21nm,0.8s							
IZV	**Izvestkoviy**	**3.70**	**16**	Pg		**Pb**	**11 52 33.4**	**-0.8**
	4.1nm,0.3s							
IZV				Lg		Lg	11 53 24.0	
	12nm,0.6s							
IZV	**Izvestkoviy**	**3.70**	**16**	*e*P		**Pb**	**11 52 33.4**	**-0.8**
	4.1nm,0.3s							
IZV				*e*S		**Sg**	**11 53 24.0**	**-3.1**
	12nm,0.6s							
MTBS	**Maitube**	**3.75**	**14**	Pg		**Pb**	**11 52 36.0**	**+0.9**
	7.5nm,0.5s							
MTBS				Lg		Lg	11 53 28.3	
	8.1nm,0.5s							
MTBS	**Maitube**	**3.75**	**14**	*e*P		**Pb**	**11 52 36.0**	**+0.9**
	7.5nm,0.5s							
MTBS				*e*S		**Sg**	**11 53 28.3**	**-0.6**
	8.1nm,0.5s							
DGS	**Degeres**	**3.77**	**6**	Pg		**Pb**	**11 52 35.8**	**+0.3**
	8.0nm,0.6s							
DGS				Lg		Lg	11 53 28.0	
	10nm,0.9s							
DGS	**Degeres**	**3.77**	**6**	*e*P		**Pb**	**11 52 35.8**	**+0.3**
	8.0nm,0.6s							
DGS				*e*S		**Sg**	**11 53 28.0**	**-1.6**
	10nm,0.9s							
TNSS	**Tian-Shan**	**3.78**	**20**	Pg		**Pb**	**11 52 36.5**	**+0.8**
TNSS				Lg		Lg	11 53 29.0	
TNSS	**Tian-Shan**	**3.78**	**20**	*e*P		**Pb**	**11 52 36.5**	**+0.8**
TNSS				*e*S		**Sg**	**11 53 29.0**	**-0.7**
MDOK	**Medeo**	**3.92**	**20**	Pg		**Pg**	**11 52 41.0**	**-2.5**
	1.2nm,0.1s							
MDOK				Lg		Lg	11 53 36.7	
	11nm,0.7s							
KOTS	**Kotyrbulak**	**4.00**	**20**	Pg		**Pb**	**11 52 39.7**	**+0.2**
	4.0nm,0.5s							
KOTS				Lg		Lg	11 53 34.4	
	13nm,0.8s							
KOTS	**Kotyrbulak**	**4.00**	**20**	*e*P		**Pb**	**11 52 39.7**	**+0.2**
	4.0nm,0.5s							
KOTS				*e*S		**Sg**	**11 53 34.4**	**-2.6**
	13nm,0.8s							
KRBS	**Karabastau**	**4.22**	**4**	Pg		**Pb**	**11 52 42.9**	**-0.1**
	1.3nm,0.6s							
KRBS				Lg		Lg	11 53 40.2	
	4.8nm,0.8s							
KRBS	**Karabastau**	**4.22**	**4**	*e*P		**Pb**	**11 52 42.9**	**-0.1**
	1.3nm,0.6s							
KRBS				*e*S		**Sg**	**11 53 40.2**	**-3.7**
	4.8nm,0.8s							
KK31	**Karatay Array**	**5.06**	**317**	⇓Pg		**Pg**	**11 53 04.7**	**-0.7**
	1.7nm,0.5s,baz=128,slow=17,SNR=3.5							
KK31				⇑Lg		Lg	11 54 14.0	
	3.1nm,0.6s,baz=141,slow=28,SNR=4.4							

*NAO **19** 12:13:33.4±0.4, 59˚.83N×5˚.17E, ML0.9*
BER 19 12:13:32.8±0.8, 59˚.83N×4˚.77E, h0km, ML1.2, ML0.9(NAO), Southern Norway

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
KMY	**Karmoy**	**0.66**	**159**	Pg		Pg	12 13 44.6	-0.9
KMY				Sg		Sg	12 13 51.7	-2.4
KMY	**Karmoy**	**0.66**	**159**	*e*P		Pg	12 13 44.6	-0.9
ASK	**Askoy**	**0.69**	**18**	Pg		Pg	12 13 44.9	-1.1
ASK				Sg		Sg	12 13 54.3	-0.6
ASK	**Askoy**	**0.69**	**18**	*e*P		Pg	12 13 45.7	-0.3
ASK				*e*S		Sg	12 13 54.4	-0.5
ASK	**Askoy**	**0.69**	**18**	*e*P		Pg	12 13 44.8	-1.2
ODD1	**Odda**	**0.94**	**84**	Pg		Pg	12 13 47.3	-3.5
ODD1				Sg		Sg	12 13 58.2	-4.7
ODD1	**Odda**	**0.94**	**84**	*e*P		Pg	12 13 49.5	-1.2
ODD1				*e*S		Sg	12 14 02.0	-0.9
ODD1	**Odda**	**0.94**	**84**	*e*P		Pg	12 13 47.1	-3.6
BLS5	**Blasjo**	**0.95**	**115**	Pg		Pg	12 13 47.4	-3.5
BLS5				Sg		Sg	12 13 58.9	-4.2
BLS5	**Blasjo**	**0.95**	**115**	*e*P		Pg	12 13 49.9	-1.0
BLS5				*e*S		Sg	12 14 02.4	-0.8
BLS5	**Blasjo**	**0.95**	**115**	*e*P		Pg	12 13 47.3	-3.6
BLS5				*e*S		Sg	12 13 58.9	-4.3
SUE	**Sulen**	**1.23**	**360**	Pg		Pg	12 13 55.5	-0.9
SUE				Sg		Sg	12 14 12.2	-0.1
HYA	**Hoyanger**	**1.51**	**27**	Pb		Pn	12 13 58.8	-2.3
HYA				Sb		Sg	12 14 17.9	-3.4
HYA	**Hoyanger**	**1.51**	**27**	*e*P		Pn	12 13 58.5	-2.6
HYA				*e*S		Sg	12 14 18.0	-3.3
HYA				IAML			12 14 24.9	
	comp=Z,3.7nm,0.7s							
SNART	**Snartemo**	**1.95**	**139**	IAML			12 14 28.5	
	comp=Z,7.6nm,0.8s							
SNART				*e*S		Sn	12 14 28.8	-3.5
SKAR	**Skarslia**	**1.96**	**63**	Pb		Pn	12 14 05.1	-2.2
SKAR				Sb		Sn	12 14 28.0	-4.5
SKAR	**Skarslia**	**1.96**	**63**	*e*P		Pn	12 14 05.4	-1.9
SKAR				*e*S		Sn	12 14 29.2	-3.4
SKAR				IAML			12 14 30.6	
	comp=Z,3.0nm,0.3s							
KONO	**Kongsberg**	**2.45**	**92**	*e*S		Sn	12 14 41.5	-3.0
KONO				IAML			12 14 46.0	
	comp=Z,2.1nm,0.9s							
NRA0	**NORESS Array S**	**3.49**	**72**	Pn		Pn	12 14 25.0	-3.2
	baz=251,slow=14							

*UUSS **19** 12:44:47.7±0.5, 40˚.74N±0˚.02×112˚.04W±0˚.02, h9km±3km, Error ellipse: s-maj=2.5km s-min=1.8km az=135.0*
NEIC 19 12:44:47.7±0.5, 40.74N±0.02×112.04W±0.02, h9km±3km, ML3.3/94, ML3.2/9(UUSS), Error ellipse: s-maj=2.5km s-min=1.9km az=135.0, Utah

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
RPF	**Rose Park Fire**	**0.10**	**69**			Pg	12 44 50.8	+0.6
RPF						Sg	12 44 52.1	0.0
NOQ	**North Oquirrh**	**0.10**	**214**			Pg	12 44 50.7	+0.3
NOQ						Sg	12 44 52.7	+0.4
CAPU	**Utah State Cap**	**0.12**	**71**			Pg	12 44 50.9	+0.3
EOCU	**Emergency Oper**	**0.12**	**72**			Pg	12 44 50.9	+0.3
HRU	**Hogsback Ridge**	**0.13**	**69**			Pg	12 44 50.9	+0.1
SAIU	**Southern Antel**	**0.16**	**318**			Pg	12 44 51.4	+0.3
RBU	**Red Butte Cany**	**0.18**	**77**			Pg	12 44 51.7	+0.1
MHD	**Mile High Driv**	**0.20**	**113**			Pg	12 44 52.1	+0.2
CTU	**Camp Tracy**	**0.23**	**102**			Pg	12 44 52.4	0.0
CTU						Sg	12 44 55.6	+0.1
CTU	**Camp Tracy**	**0.23**	**102**	IAML			12 44 56.2	
	comp=N,8μm,0.4s							
CTU				IAML			12 44 56.5	
	comp=E,6μm,0.3s							
GMU	**Granite Mounta**	**0.27**	**128**			Pg	12 44 53.2	+0.1
WTU	**Western Traver**	**0.29**	**167**			Pg	12 44 53.8	+0.2
CWU	**Camp Williams**	**0.30**	**189**			Pg	12 44 54.1	+0.5
NAIU	**Northern Antel**	**0.31**	**333**			Pg	12 44 54.2	+0.3
NAIU	**Northern Antel**	**0.31**	**333**			Pn	12 44 58.3	-0.3
NAIU						Sg	12 44 58.4	+0.3
FPU	**Francis Peak**	**0.33**	**28**			Pg	12 44 54.5	+0.2
AAU	**Alta**	**0.34**	**116**			Pg	12 44 54.7	+0.2
SNUT	**Stansbury Nort**	**0.38**	**293**			Pg	12 44 55.7	+0.4
AMF	**American Fork**	**0.39**	**150**			Pg	12 44 55.8	+0.5
TCVU	**Timpanogos Cav**	**0.39**	**139**			Pg	12 44 55.6	+0.1
WBC	**Weber Canyon**	**0.41**	**15**			Pg	12 44 56.0	+0.1
N16A	**Rees Ranch, Co**	**0.48**	**72**			Pg	12 44 57.6	+0.5
DCU	**Deer Creek Res**	**0.51**	**130**			Pg	12 44 57.8	+0.2
HEB	**Heber**	**0.59**	**114**			Pg	12 44 59.6	+0.5
TCUT	**Toone Canyon**	**0.61**	**52**			Pg	12 45 00.0	+0.5
TCUT	**Toone Canyon**	**0.61**	**52**			Pg	12 45 00.0	+0.5
HTU	**Hoyt Peak**	**0.63**	**96**			Pg	12 45 00.2	+0.3
SPUT	**South Promonto**	**0.65**	**332**			Pg	12 45 00.3	+0.1
SPUT	**South Promonto**	**0.65**	**332**	IAML			12 45 12.8	
	comp=N,675nm,0.7s							
WMUT	**West Mountain**	**0.68**	**166**			Pg	12 45 01.1	+0.3
DAU	**Daniels Canyon**	**0.68**	**118**			Pb	12 45 01.5	-0.4
EPU	**East Promontor**	**0.71**	**337**			Pg	12 45 01.5	+0.1
BGU	**Big Grassy Mou**	**0.77**	**284**	Pg		Pg	12 45 02.9	+0.3
BGU				IAML			12 45 16.2	
	comp=E,868nm,0.6s							
NLU	**North Lily Min**	**0.78**	**182**			Pg	12 45 03.1	+0.3
NLU	**North Lily Min**	**0.78**	**182**	IAML			12 45 16.9	
	comp=N,725nm,0.6s							
MPU	**Maple Canyon**	**0.79**	**157**			Pg	12 45 03.0	+0.2
MPU	**Maple Canyon**	**0.79**	**157**	IAML			12 45 17.4	
	comp=E,1μm,0.7s							
MPU				IAML			12 45 17.5	
	comp=N,1μm,0.5s							
DUG	**Dugway, Tooele**	**0.80**	**228**			Pg	12 45 03.0	-0.1
DUG	**Dugway, Tooele**	**0.80**	**228**	IAML			12 45 17.1	
	comp=N,713nm,0.7s							
LHUT	**Little Humpy P**	**0.81**	**79**			Pb	12 45 03.8	-0.3
MCU	**Monte Cristo P**	**0.83**	**29**			Pg	12 45 03.5	-0.1
LTU	**Little Mountai**	**0.86**	**350**			Pg	12 45 04.4	+0.1
WVUT	**Wellsville**	**0.87**	**4**			Pg	12 45 04.5	+0.1
HWUT	**Hardware Ranch**	**0.94**	**22**			Pg	12 45 05.5	-0.2
HWUT				IAML			12 45 20.4	
	comp=N,586nm,0.6s							
HWUT				IAML			12 45 20.7	
	comp=N,1μm,0.5s							
BSUT	**Blindstream Ca**	**1.00**	**101**			Pg	12 45 06.8	0.0
BSUT				IAML			12 45 24.1	
	comp=N,789nm,0.8s							
BSUT				IAML			12 45 24.1	
	comp=E,1μm,0.6s							
HVU	**Hansel Valley**	**1.18**	**332**			Pb	12 45 09.6	-0.7
HVU	**Hansel Valley**	**1.18**	**332**	IAML			12 45 28.4	
	comp=N,712nm,0.6s							
HVU				IAML			12 45 29.3	
	comp=E,747nm,0.7s							
P17A	**Butcher Ranch,**	**1.61**	**141**			Pn	12 45 17.0	+0.5
P17A				IAML			12 45 40.7	
	comp=N,174nm,0.5s							
P17A				IAML			12 45 42.9	
	comp=E,221nm,0.5s							
P18A	**Preston Nutter**	**1.77**	**128**			Pb	12 45 20.2	-0.2
P18A				IAML			12 45 44.8	
	comp=E,296nm,0.5s							
P18A				IAML			12 45 45.5	
	comp=N,304nm,0.5s							
RDMU	**Red Mountain**	**1.89**	**94**			Pb	12 45 21.6	-0.8
RDMU				IAML			12 45 51.0	
	comp=E,141nm,0.5s							
RDMU				IAML			12 45 52.8	
	comp=N,119nm,0.3s							
Q16A	**Castle Valley**	**1.94**	**160**			Pn	12 45 21.4	+0.4
SRU	**San Rafael Swe**	**2.00**	**144**			Pn	12 45 22.8	+1.0
SRU				IAML			12 45 53.6	
	comp=N,240nm,0.6s							
SRU				IAML			12 46 02.4	
	comp=E,245nm,0.8s							
AHID	**Auburn Hatcher**	**2.14**	**19**			Pn	12 45 24.8	+1.0
TCRU	**Three Creeks R**	**2.15**	**188**			Pn	12 45 24.2	+0.2
ELK	**Elko**	**2.43**	**271**			Pn	12 45 28.5	+0.7
PSUT	**Pine Spring**	**2.61**	**213**			Pn	12 45 31.4	+1.2
PSUT				IAML			12 46 15.1	
	comp=E,142nm,0.7s							
PSUT				IAML			12 46 16.6	
	comp=N,124nm,0.7s							
MTPU	**Mount Pierson**	**2.70**	**182**			Pn	12 45 32.7	+1.1
BW06	**Boulder Array**	**2.75**	**42**			Pn	12 45 33.5	+1.3
BW06				IAML			12 46 14.8	
	comp=N,207nm,0.6s							
PD31	**Pinedale Array**	**2.75**	**42**			Pn	12 45 33.5	+1.4
PDAR	**Pinedale Array**	**2.75**	**42**			Pn	12 45 32.8	+0.6
SNOW	**Snow King Moun**	**2.88**	**19**			Pn	12 45 35.4	+1.3
O20A	**White River Ci**	**2.96**	**101**			Pn	12 45 37.4	+2.3
O20A				IAML			12 46 28.5	
	comp=N,205nm,0.5s							
FXWY	**Fox Creek**	**2.99**	**14**			Pn	12 45 37.0	+1.5
LOHW	**Long Hollow**	**3.06**	**20**			Pn	12 45 37.5	+1.0
LOHW				IAML			12 46 26.5	
	comp=N,76nm,0.8s							
LOHW				IAML			12 46 28.5	
	comp=N,57nm,0.6s							
MOOW	**Moose Ponds**	**3.16**	**17**

comp=Z,8.3nm,1.0s,baz=57,slow=3.7,SNR=5.4
KSRS Korea Array 20.50 324 P **P** **12 56 48.1 -0.4**
comp=Z,3.8nm,0.6s,baz=147,slow=8.9,SNR=17
comp=Z,3.8nm,0.6s
KS19 Wonju Array Si 20.57 324 P **P** **12 56 49.5 +0.2**
KS19 IAmb IAmb 12 57 20.1
comp=Z,26nm,1.1s
JKA Kamikawa-asahi 22.41 359 P **P** **12 57 06.6 +0.5**
USRK Ussuriysk Ar. 24.30 340 P **P** **12 57 23.5 +0.3**
comp=Z,2.2nm,0.7s,baz=153,slow=8.0,SNR=5.8
comp=Z,2.2nm,0.7s
COEN Coen 35.39 180 P **P** **12 59 00.9 +0.4**
MTN Manton Dam 36.24 200 P **P** **12 59 06.7 -1.1**
MTN IAmb IAmb 12 59 08.1
comp=Z,15nm,1.5s
LZDM Lanzhou Array 37.09 301 P **P** **12 59 15.1 0.0**
comp=Z,1.5nm,0.3s,baz=119,slow=12,SNR=1.9
comp=Z,1.5nm,0.3s
SONM Songino Array 39.32 321 P **P** **12 59 33.9 +0.7**
comp=Z,0.8nm,0.6s,baz=117,slow=34,SNR=2.8
comp=Z,0.8nm,0.6s
KNRA Kununurra 39.67 202 P **P** **12 59 35.9 -0.3**
KNRA IAmb IAmb 12 59 36.2
comp=Z,5.0nm,0.6s
CMAR Chiang Mai Arr 41.50 274 P **P** **12 59 51.4 +0.2**
comp=Z,0.4nm,0.3s,baz=304,slow=16,SNR=1.6
comp=Z,0.4nm,0.3s
WB0 Warramunga Arr 42.04 192 P **P** **12 59 55.0 -0.4**
WB0 IAmb IAmb 12 59 55.2
comp=Z,7.1nm,1.1s
WR8 Warramunga Arr 42.20 192 P **P** **12 59 56.2 -0.5**
WR8 IAmb IAmb 13 00 22.4
comp=Z,10nm,1.4s
WRAB Tennant Creek 42.21 192 P **P** **12 59 56.5 -0.2**
WRAB IAmb IAmb 13 00 33.5
comp=Z,8.2nm,0.7s
WRA Warramunga Arr 42.22 192 P **P** **12 59 56.3 -0.5**
comp=Z,3.6nm,0.6s,baz=17,slow=9.8,SNR=64
comp=Z,3.6nm,0.6s
WRA Warramunga Arr 42.22 192 IAmb IAmb 12 59 56.9
comp=Z,0.4nm,1.0s
AS31 Alice Springs 45.92 192 P **P** **13 00 25.4 -0.6**
ASAR Alice Springs 45.93 192 P **P** **13 00 25.1 -0.9**
comp=Z,0.6nm,0.5s,baz=16,slow=9.6,SNR=20
comp=Z,0.6nm,0.5s
BILL Bilibino 48.58 11 P **P** **13 00 46.6 +0.9**
TIXI Tiksi 50.69 354 P **P** **13 01 01.1 -0.3**
comp=Z,5.1nm,0.3s,baz=157,slow=2.1,SNR=4.0
comp=Z,5.1nm,0.3s
TIXI Tiksi 50.69 354 IAmb IAmb 13 01 03.7
comp=Z,1.9nm,0.8s
EVN Everest 51.11 289 P **P** **13 01 06.7 +0.7**
STKA Stephens Creek 53.24 182 P **P** **13 01 19.9 -0.8**
comp=Z,1.5nm,0.3s,baz=22,slow=6.6,SNR=5.0
comp=Z,1.5nm,0.3s
FORT Forrest 54.10 196 P **P** **13 01 26.7 -0.1**
FORT IAmb IAmb 13 01 50.6
comp=Z,6.7nm,1.1s
MKAR Makanchi Array 54.67 313 P **P** **13 01 31.1 +0.2**
comp=Z,0.5nm,0.7s,baz=66,slow=8.1,SNR=2.1
comp=Z,0.5nm,0.7s
CHGN Chignik 54.86 36 P **P** **13 01 31.6 -0.4**
O15K Ungalikthiuk R 54.91 32 P **P** **13 01 33.3 +1.0**
O15K IAmb IAmb 13 01 34.2
comp=Z,23nm,1.4s
KURK Kurchatov 57.46 317 P **P** **13 01 50.8 +0.5**
KURBB Kurchatov Arra 57.50 317 P **P** **13 01 50.8 +0.1**
comp=Z,2.0nm,0.5s,baz=93,slow=7.6,SNR=26
comp=Z,2.0nm,0.5s
NRIK Noril'sk 58.01 340 P **P** **13 01 53.8 -0.1**
comp=Z,1.1nm,0.3s,baz=288,slow=3.0,SNR=1.4
comp=Z,1.1nm,0.3s
NRIK Noril'sk 58.01 340 IAmb IAmb 13 01 54.1
comp=Z,2.0nm,0.7s
C23K Itkillik River 61.72 21 P **P** **13 02 19.7 +0.8**
C23K IAmb IAmb 13 02 30.5
comp=Z,5.0nm,1.4s
ILAR Eielson Array 62.11 27 P **P** **13 02 20.9 -0.7**
comp=Z,0.6nm,0.6s,baz=272,slow=7.3,SNR=10
comp=Z,0.6nm,0.6s
BVAR Borovoye Array 62.66 320 P **P** **13 02 25.7 +0.3**
comp=Z,3.6nm,0.4s,baz=95,slow=8.0,SNR=41
comp=Z,3.6nm,0.4s
BORK Borovoye 62.70 320 P **P** **13 02 25.9 +0.3**
BORK IAmb IAmb 13 02 26.5
comp=Z,3.9nm,0.4s
BMRM Bremner River 62.73 32 P **P** **13 02 26.2 +0.4**
YKA Yellowknife Ar 76.53 28 P **P** **13 03 49.8 +0.4**
comp=Z,0.4nm,0.6s,baz=295,slow=5.9,SNR=7.7
comp=Z,0.4nm,0.6s
ARCES ARCESS Array B 78.94 341 P **P** **13 04 03.1 +0.6**
comp=Z,5.5nm,0.8s,baz=72,slow=7.8,SNR=9.4
comp=Z,5.5nm,0.8s
ARCES ARCESS Array B 78.94 341 IAmb IAmb 13 04 04.0
comp=Z,26nm,1.4s
KCPM Cahto Peak 78.94 52 P **P** **13 04 03.5 +0.3**
FINES FINESS Array B 83.19 334 P **P** **13 04 23.9 -0.9**
comp=Z,1.5nm,0.6s,baz=58,slow=4.7,SNR=11
comp=Z,1.5nm,0.6s
NVAR Mina Array Bea 83.23 51 P **P** **13 04 26.9 +1.0**
comp=Z,0.4nm,0.8s,baz=278,slow=5.7,SNR=4.2
comp=Z,0.4nm,0.8s
HFS Hagfors 88.74 337 P **P** **13 04 50.7 -1.2**
comp=Z,2.3nm,1.0s,baz=56,slow=3.6,SNR=4.9
comp=Z,2.3nm,1.0s
BOSA Boshof 123.83 249 PKP **PKPdf** **13 10 53.5 -1.6**
comp=Z,1.2nm,0.5s,baz=166,slow=8.3,SNR=3.1
PLCA Paso Flores 145.78 132 PKPbc **PKPbc** **13 11 36.8 +0.4**
comp=Z,2.9nm,0.7s,baz=262,slow=3.9,SNR=14
LPAZ La Paz 150.02 85 PKPbc **PiKiP** **13 11 49.5 -0.1**
comp=Z,1.0nm,0.5s,baz=352,slow=3.7,SNR=3.8

*IDC **19** 12:58:53.2±0.6,8.75N×93.91E,h0km,mb4.0/18, mbtmp3.9/20,ML3.8/2,MS3.5/35,Error ellipse: s-maj=24.2km s-min=16.3km az=68.0*
*NEIC **19** 12:58:56.5±1.3,8.86N±0.06×93.96E±0.07,h10km±1km, mb4.8/30,Error ellipse: s-maj=13.0km s-min=9.8km az=235.0*
*NDI **19** 12:58:58.5±2.3,8.92N×94.04E,h10km,mb4.7,ML4.4, MW4.4,Presumed earthquake*
*DJA **19** 12:59:21.8±0.5,7.7N±8×9.5E±1.4,h10km,M4.0/12, MLv4.0/12*
ISC 19 12:58:57.4±0.4,8.87N±0.04×93.83E±0.05,h22km,n126,
σ1s78/101,mb4.5/41,MS3.5/34,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CMBY	**CAMPBELL BAY**	**1.85**	**177**	***eP***		**Pb**	**12 59 29.5**	**-1.0**
CMBY				*eS*		**Sn**	**12 59 51.5**	**+1.0**
CMBY				IAML			13 00 02.6	
	comp=N,7μm,0.4s							
CMBY				IAML			13 00 06.1	
	comp=E,6μm,0.6s							
PBA	**Port Blair**	**2.97**	**339**	Pn		**Pn**	**12 59 42.6**	**-0.7**
PBA	**Port Blair**	**2.97**	**339**	*eS*		**Sn**	**13 00 21.5**	**+3.2**
BSI	**Banda Aceh**	**3.65**	**156**	P		**Pn**	**12 59 55.9**	**+3.2**
LHMI	**Lhok Sumawe**	**4.76**	**139**	Pn		**Pn**	**13 00 04.2**	**-3.7**
MLSI	**Meulaboh, Aceh**	**5.24**	**151**	P		**Pn**	**13 00 17.5**	**+3.0**
TPTI		**6.49**	**149**	P		**Pn**	**13 00 34.0**	**+2.3**
KCSI	**Kotacane, Aceh**	**6.60**	**143**	P		**Pn**	**13 00 36.5**	**+3.3**
KULM	**Kulim**	**7.64**	**117**	Pn		**Pn**	**13 00 43.7**	**-3.9**
KULM	**Kulim**	**7.64**	**117**	P		Pn	13 00 52.8	+5.2
PSI	**Prapat**	**7.87**	**140**	P		**Pn**	**13 00 51.4**	**+0.6**
RPSI	**Rantau Prapat**	**7.95**	**140**			**Pn**	**13 00 50.4**	**-1.4**
GSI	**Gunungsitoli**	**8.39**	**153**	Pn		**Pn**	**13 00 56.6**	**-1.2**
CMAR	**Chiang Mai Arr**	**10.75**	**27**	Pn		**Pn**	**13 01 29.0**	**-1.1**
	comp=E,0.5nm,0.3s,baz=214,slow=15,SNR=14							
	comp=E,1.4nm,0.5s							
CMAR	**Chiang Mai Arr**	**10.75**	**27**	Pn		**Pn**	**13 01 28.5**	**-1.6**
CHTO	**Chiang Mai**	**11.06**	**26**	Pn		**Pn**	**13 01 33.1**	**-1.3**
BKNI	**Bangkinang**	**11.12**	**139**	Pn		**Pn**	**13 01 34.1**	**-1.1**
PALK	**Pallekele**	**13.10**	**264**	Pn		**Pn**	**13 02 03.5**	**+1.1**
	comp=E,0.1nm,0.3s,baz=203,slow=20,SNR=1.7							
PALK				Sn		**Sn**	**13 04 19.6**	**-7.9**
	comp=E,2.4nm,0.3s,baz=342,slow=19,SNR=12							
PALK				LR		LR	13 06 49.7	
	comp=E,190nm,20.9s,baz=72,slow=36							
	comp=E,2.3nm,0.7s							
PALK	**Pallekele**	**13.10**	**264**	Pn		**Pn**	**13 02 02.7**	**+0.3**
PALK						**Sn**	**13 04 24.5**	**-3.0**
MDRS	**Chennai**	**13.97**	**289**	***eP***		**Pn**	**13 02 17.9**	**+3.6**
MDRS				IAmb		IAmb	13 02 21.9	
	comp=Z,21nm,0.9s							
MDRS				*eS*		**Sn**	**13 04 43.1**	**-5.7**
RAGD	**RAYAGADA**	**14.40**	**317**	***eP***		**Pn**	**13 02 21.9**	**+1.7**
RAGD				IAmb		IAmb	13 02 28.8	
	comp=Z,13nm,0.8s							
RAGD				*eS*		**Sn**	**13 04 54.3**	**-5.1**
SHL	**Shillong**	**16.71**	**354**			**Pn**	**13 02 50.9**	**+0.4**
KOHI	**KOHIMA**	**16.76**	**1**	***eP***		**Pn**	**13 02 51.0**	**-0.1**
QIZ	**Qiongzhong**	**18.52**	**55**	P		**P**	**13 03 11.3**	**-1.2**
QIZ				S		**Sn**	**13 06 39.0**	**-0.2**
QIZ				LR		LR		
	comp=N,580nm,12.0s							
QIZ				LR		LR		
	comp=E,180nm,10.0s							
QIZ				LR		LR		
	comp=Z,240nm,11.1s							
PZH	**PanZhiHua**	**19.08**	**22**	P		**Pn**	**13 03 22.0**	**+2.4**
PZH				pmax		pmax		
	comp=Z,10.0nm,0.7s							
SBUM	**Sibu**	**19.37**	**108**	P		**P**	**13 03 20.8**	**-1.1**
EVN	**Everest**	**20.11**	**342**			Pn	13 03 31.8	-0.6
EVN				IAmb		IAmb	13 03 41.1	
	comp=Z,50nm,0.8s							
LEM	**Lembang**	**20.78**	**138**	LR		LR	13 11 43.9	
	comp=Z,168nm,21.6s,baz=207,slow=37							
CD2	**Chengdu**	**23.81**	**22**	P		**P**	**13 04 09.4**	**+0.5**
MYLDM	**Lahad Datu**	**24.75**	**97**	P		**P**	**13 04 18.2**	**+0.5**
MYLDM				IAmb		IAmb	13 04 20.1	
	comp=Z,27nm,1.1s							
DGAR	**Diego Garcia**	**26.75**	**233**	P		**P**	**13 04 36.0**	**+0.2**
H08S3	**Diego Garcia H**	**26.85**	**233**	T		T	13 31 38.3	
	baz=52,slow=76							
H08S2	**Diego Garcia H**	**26.86**	**233**	T		T	13 31 38.9	
	baz=52,slow=76							
H08S1	**Diego Garcia H**	**26.87**	**233**	T		T	13 31 40.0	
	baz=52,slow=76							
TGY	**Tagaytay City**	**27.05**	**76**	LR		LR	13 14 43.5	
	comp=Z,113nm,20.1s,baz=302,slow=35							
GOMU	**GeErMu**	**27.22**	**2**	P		**P**	**13 04 41.8**	**+1.6**
GOMU				pmax		pmax		
	comp=Z,4.0nm,0.9s							
KAPI	**Kappang**	**29.29**	**117**	LR		LR	13 17 07.5	
	comp=Z,79nm,18.7s,baz=270,slow=38							
NIL	**Nilore**	**31.11**	**325**	P		**P**	**13 05 15.6**	**+1.1**
NIL				IAmb		IAmb	13 05 16.3	
	comp=Z,16nm,0.8s							
NJ2	**Nanjing**	**32.73**	**42**	***eP***		**P**	**13 05 29.3**	**+0.7**
NJ2				pmax		pmax		
	comp=Z,19nm,0.7s							
KSH2	**Kashi**	**34.31**	**334**	P		**P**	**13 05 42.9**	**+0.4**
KSH2				pP		sP	13 05 51.3	+0.8
KSH2				pmax		pmax		
	comp=Z,7.0nm,0.8s							
WUS	**Wushi**	**34.71**	**340**	P		**P**	**13 05 46.9**	**+0.9**
WUS				IAmb		IAmb	13 05 55.3	
	comp=Z,8.7nm,0.9s							
WMQ	**Urumqi**	**35.23**	**352**	***eP***		**P**	**13 05 51.9**	**+1.6**
WMQ				sP		sP	13 05 58.9	+0.8
WMQ				pmax		pmax		
	comp=Z,14nm,0.7s							
HHC	**Hu-ho-hao-te**	**35.53**	**23**	***eP***		**P**	**13 05 55.1**	**+2.1**
HHC				pmax		pmax		
	comp=Z,14nm,0.7s							
HHC				pmax		pmax		
	comp=Z,130nm,4.6s							
TARG	**Taragay, Kyrgy**	**35.66**	**339**			**P**	**13 05 55.4**	**+0.9**
TARG				IAmb		IAmb	13 06 04.7	
	comp=Z,5.8nm,0.8s							
KDJ	**Kajisay**	**36.23**	**339**	P		**P**	**13 05 59.5**	**+0.4**
KDJ				IAmb		IAmb	13 06 09.3	
	comp=Z,7.9nm,0.8s							
DRK	**Karamyk**	**36.30**	**331**	P		**P**	**13 06 01.4**	**+1.6**
SHLS	**Shalkode**	**36.40**	**342**	***eP***		**P**	**13 05 59.6**	**-0.9**
	comp=Z,7.2nm,1.3s							
UZB	**Uzynbulak**	**36.53**	**342**	***eP***		**P**	**13 06 01.6**	**0.0**
GAR	**Garm**	**36.67**	**329**	P		**P**	**13 06 03.7**	**+0.8**
GAR				IAmb		IAmb	13 06 12.4	
	comp=Z,9.4nm,0.5s							
SHAA	**Shahritus**	**36.82**	**325**	P		**P**	**13 06 04.3**	**+0.3**
SHAA				IAmb		IAmb	13 06 58.6	
	comp=Z,58nm,1.9s							
BJI2	**Beijing**	**36.87**	**29**	P		**P**	**13 06 06.0**	**+1.7**
BJI2				pmax		pmax		
	comp=Z,2.0nm,0.9s							
KPKS	**Kokpek**	**36.92**	**342**	***eP***		**P**	**13 06 04.9**	**0.0**
CHGR	**Chuyangaron**	**37.03**	**327**	P		**P**	**13 06 06.3**	**+0.5**
CHGR				IAmb		IAmb	13 06 15.0	
	comp=Z,14nm,0.6s							
TNSS	**Tian-Shan**	**37.11**	**339**	***eP***		**P**	**13 06 06.8**	**-0.1**
JOW	**Kuigarni**	**37.16**	**57**	LR		LR	13 24 07.9	
	comp=Z,43nm,18.3s,baz=350,slow=41							
MDOK	**Medeo**	**37.19**	**340**	***eP***		**P**	**13 06 07.4**	**+0.2**
ARSB	**Arslanbob**	**37.22**	**334**	P		**P**	**13 06 08.7**	**+1.2**
ARSB				IAmb		IAmb	13 06 17.8	
	comp=Z,18nm,0.6s							
AAA	**Alma-Ata**	**37.27**	**339**	***eP***		**P**	**13 06 07.1**	**-0.7**
AAK	**Ala-Archa**	**37.68**	**336**	P		**P**	**13 06 12.4**	**+1.1**
	comp=Z,2.8nm,0.7s,baz=156,slow=8.1,SNR=5.1							
AAK				LR		LR	13 23 02.6	
	comp=Z,137nm,20.3s,baz=161,slow=38							
	comp=Z,2.8nm,0.7s							
AAK	**Ala-Archa**	**37.68**	**336**			**P**	**13 06 12.5**	**+1.1**
SIJI	**Sorong**	**38.53**	**103**	LR		LR	13 23 39.4	
	comp=Z,37nm,19.1s,baz=119,slow=39							
MKAR	**Makanchi Array**	**39.06**	**347**	***eP***		**P**	**13 06 22.9**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=184,slow=8.0,SNR=7.3							
MKAR				LR		LR	13 24 26.0	
	comp=Z,60nm,20.3s,baz=147,slow=39							
	comp=Z,0.7nm,0.7s							
ZSN	**Zaisan**	**39.20**	**350**	***eP***		**P**	**13 06 23.9**	**+0.1**
DZA	**Taraz**	**39.21**	**334**	***eP***		**P**	**13 06 24.6**	**+0.5**
IUG	**Iuzhnay**	**39.22**	**332**	***eP***		**P**	**13 06 24.6**	**+0.3**
	comp=Z,5.2nm,0.6s							
CHM	**Chimkent**	**39.55**	**331**	***eP***		**P**	**13 06 27.3**	**+0.4**
	comp=Z,5.9nm,0.5s							
BRLS	**Borolday**	**39.99**	**332**	***eP***		**P**	**13 06 30.1**	**-0.5**
SONM	**Songino Array**	**40.27**	**13**	P		**P**	**13 06 33.2**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=201,slow=7.8,SNR=4.7							
SONM				PcP		**PcP**	**13 08 37.0**	**+0.5**
	comp=Z,0.6nm,0.4s,baz=200,slow=7.7,SNR=3.8							
SONM				LR		LR	13 24 46.5	
	comp=Z,46nm,18.6s,baz=218,slow=38							
	comp=Z,0.3nm,0.4s							
JNU	**Nakatsue**	**41.83**	**49**	LR		LR	13 24 40.7	
	comp=Z,42nm,19.2s,baz=236,slow=37							
KSRS	**Korea Array**	**41.93**	**42**	LR		LR	13 27 38.0	
	comp=Z,43nm,18.3s,baz=265,slow=41							
KURBB	**Kurchatov Arra**	**43.51**	**346**	P		**P**	**13 06 59.3**	**+0.1**
	comp=Z,1.3nm,0.9s,baz=161,slow=7.5,SNR=8.3							
KURBB				PcP		**PcP**	**13 08 46.7**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=158,slow=2.6,SNR=4.4							
KURBB				LR		LR	13 27 21.1	
	comp=Z,80nm,20.2s,baz=160,slow=39							
	comp=Z,1.3nm,0.9s							
KURK	**Kurchatov**	**43.58**	**346**			**P**	**13 07 00.7**	**+1.0**
BRZS	**Berezniki**	**44.61**	**341**	***eP***		**P**	**13 07 08.4**	**+0.3**
ZAA0	**Zalesovo Array**	**45.54**	**353**			**P**	**13 07 16.2**	**+0.8**
ZAA0				IAmb		IAmb	13 07 25.1	
	comp=Z,9.9nm,0.9s							
ZALV	**Zalesovo Beam**	**45.54**	**353**	P		**P**	**13 07 15.8**	**+0.5**
	comp=Z,1.7nm,0.5s,baz=169,slow=8.8,SNR=11							
ZALV				LR		LR	13 27 51.2	
	comp=Z,37nm,18.5s,baz=36,slow=38							
	comp=Z,1.7nm,0.5s							
ZALV	**Zalesovo Beam**	**45.54**	**353**	P		**P**	**13 07 16.0**	**+0.6**
BVAR	**Borovoye Array**	**47.96**	**341**	P		**P**	**13 07 34.0**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=167,slow=7.2,SNR=6.0							
BVAR				PcP		**PcP**	**13 09 02.0**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=151,slow=3.3,SNR=1.2							
BVAR				LR		LR	13 30 17.3	
	comp=Z,48nm,18.4s,baz=179,slow=39							
	comp=Z,1.0nm,0.8s							
BORK	**Borovoye**	**48.00**	**341**	P		**P**	**13 07 34.9**	**+0.3**
JAY	**Jayapura**	**48.07**	**101**	LR		LR	13 31 20.5	
	comp=Z,43nm,18.1s,baz=287,slow=41							
RAYN	**Ar Rayn**	**48.41**	**294**	P		**P**	**13 07 40.4**	**+2.0**
RAYN				IAmb		IAmb	13 07 50.0	
	comp=Z,5.1nm,0.7s							
MJAR	**Matsushiro Arr**	**48.73**	**49**	LR		LR	13 30 32.2	
	comp=Z,56nm,18.6s,baz=252,slow=39							
WB0	**Warramunga Arr**	**49.04**	**126**	P		**P**	**13 07 42.5**	**-0.6**
WB0				IAmb		IAmb	13 07 50.3	
	comp=Z,12nm,1.4s							
WRA	**Warramunga Arr**	**49.09**	**126**	P		**P**	**13 07 39.8**	**-3.8**
	comp=Z,1.0nm,0.7s,baz=304,slow=8.7,SNR=6.0							
	comp=Z,1.0nm,0.7s							
AB31	**Akbulak array**	**49.22**	**331**	P		**P**	**13 07 45.0**	**+0.9**
AB31				IAmb		IAmb	13 07 59.6	
	comp=Z,12nm,1.6s							
ABKAR	**Akbulak array**	**49.22**	**331**	P		**P**	**13 07 44.8**	**+0.7**
WR8	**Warramunga Arr**	**49.22**	**126**	P		**P**	**13 07 44.6**	**+0.1**
WR8				IAmb		IAmb	13 07 58.6	
	comp=Z,27nm,1.9s							
ASAR	**Alice Springs**	**50.79**	**130**	P		**P**	**13 07 54.1**	**-2.3**
	comp=Z,0.4nm,0.9s,baz=308,slow=7.1,SNR=4.1							
ASAR				PcP		**PcP**	**13 09 12.6**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=297,slow=3.5,SNR=4.4							
ASAR				LR		LR	13 31 25.4	
	comp=Z,25nm,19.9s,baz=324,slow=38							
	comp=Z,0.4nm,0.9s							
AKTO	**Aktyubinsk**	**50.94**	**331**	P		**P**	**13 07 57.0**	**-0.1**
	comp=Z,1.0nm,0.4s,baz=124,slow=7.3,SNR=1.5							
	comp=Z,1.0nm,0.4s							
GNI	**Garni**	**53.53**	**314**	LR		LR	13 33 56.2	
	comp=Z,30nm,18.7s,baz=100,slow=39							
FURI	**Furi**	**54.45**	**275**	LR		LR	13 29 08.4	
	comp=Z,46nm,19.9s,baz=126,slow=33							
VOI	**Vohitsoka**	**55.35**	**236**	P		**P**	**13 08 31.2**	**+1.0**
KBZ	**Khabaz**	**56.15**	**317**	LR		LR	13 34 21.6	
	comp=Z,39nm,19.9s,baz=32,slow=38							
KMBO	**Kilima Mbogo**	**57.24**	**263**	LR		LR	13 32 10.0	
	comp=Z,34nm,18.7s,baz=96,slow=35							
ASF	**Jabal al Asfar**	**57.43**	**303**	LR		LR	13 36 10.9	
	comp=Z,36nm,18.6s,baz=60,slow=39							
EIL	**Elat**	**58.67**	**299**	LR		LR	13 34 54.6	
	comp=Z,24nm,21.9s,baz=62,slow=37							
MMAI	**Mount Meron Ar**	**58.82**	**303**	LR		LR	13 39 23.6	
	comp=Z,22nm,18.1s,baz=123,slow=41							
CTA	**Charters Tower**	**59.06**	**120**	LR		LR	13 39 31.9	
	comp=Z,55nm,19.2s,baz=276,slow=41							
STKA	**Stephens Creek**	**61.01**	**134**	LR		LR	13 38 50.9	
	comp=Z,39nm,18.3s,baz=350,slow=39							
BRTR	**Keskin Array B**	**61.55**	**310**	P		**P**	**13 09 12.6**	**-0.8**
	comp=Z,1.0nm,0.9s,baz=90,slow=4.3,SNR=3.9							
	comp=Z,1.0nm,0.9s							
PAF	**Port-aux-Franc**	**61.56**	**197**	P		**P**	**13 09 14.5**	**+1.6**
MBAR	**Mbarara**	**63.54**	**265**	LR		LR	13 33 12.9	
	comp=Z,41nm,21.9s,baz=92,slow=32							
H04N2	**CROZET ISLANDS**	**66.42**	**211**	T		T	14 21 17.1	
	baz=46,slow=74							
H04N1	**CROZET ISLANDS**	**66.43**	**211**	T		T	14 21 19.6	
	baz=46,slow=74							
H04N3	**CROZET ISLANDS**	**66.44**	**211**	T		T	14 21 17.3	
	baz=46,slow=74							
LSZ	**Lusaka**	**69.31**	**250**	LR		LR	13 36 44.9	
	comp=Z,36nm,18.0s,baz=154,slow=33							
STHS	**Stebnicka Huta**	**72.00**	**319**	***eP***		P	13 10 26.0	+6.4
ARCES	**ARCESS Array B**	**74.23**	**340**	P		**P**	**13 10 32.5**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=106,slow=6.9,SNR=1.8							
ARCES				LR		LR	13 45 41.8	
	comp=Z,66nm,18.2s,baz=120,slow=38							
	comp=Z,1.8nm,0.8s							
ARCES	**ARCESS Array B**	**74.23**	**340**	P		**P**	**13 10 33.1**	**+0.7**
LBTB	**Lobatse**	**74.45**	**241**	P		**P**	**13 10 34.2**	**-0.4**
VRAC	**Vranov**	**75.01**	**319**	LR		LR	13 49 05.0	
	comp=Z,31nm,18.3s,baz=8.5,slow=40							
BOSA	**Boshof**	**75.85**	**238**	P		**P**	**13 10 41.6**	**-1.1**
	comp=Z,3.5nm,0.6s,baz=73,slow=4.9,SNR=12							
	comp=Z,3.5nm,0.6s							
BOSA	**Boshof**	**75.85**	**238**	P		**P**	**13 10 43.0**	**+0.4**
GERES	**GERESS Array B**	**76.89**	**318**	P		**P**	**13 10 46.4**	**-1.7**
	comp=Z,0.5nm,0.5s,baz=90,slow=6.7,SNR=4.1							
	comp=Z,0.5nm,0.5s							
HFS	**Hagfors**	**77.45**	**330**	P		**P**	**13 10 49.9**	**-1.0**
	comp=Z,4.0nm,1.0s,baz=83,slow=4.5,SNR=4.5							
	comp=Z,4.0nm,1.0s							
NOA	**NORSAR Array B**	**78.72**	**331**	LR		LR	13 47 33.9	
	comp=Z,25nm,19.5s,baz=320,slow=37							
SPITS	**Spitsbergen Ar**	**78.81**	**348**	P		**P**	**13 10 57.3**	**-0.9**
	comp=Z,8.9nm,1.1s,baz=74,slow=7.0,SNR=1.6							
	comp=Z,8.9nm,1.1s							
DAVOX	**Davis/Dischnat**	**79.47**	**316**	LR		LR	13 51 44.8	
	comp=Z,37nm,18.3s,baz=260,slow=40							
TSUM	**Tsumeb**	**80.10**	**249**	LR		LR	13 44 16.3	
	comp=Z,32nm,18.7s,baz=324,slow=34							
EKA	**Eskdalemuir Ar**	**86.73**	**325**	P		**P**	**13 11 40.6**	**+0.9**
	comp=Z,0.4nm,0.4s,baz=91,slow=5.4,SNR=5.6							
	comp=Z,0.4nm,0.4s							
ESDC	**Sonseca Array**	**90.35**	**310**	P		**P**	**13 11 58.1**	**+0.8**
	comp=Z,0.6nm,0.9s,baz=54,slow=4.0,SNR=2.1							
	comp=Z,0.6nm,0.9s							
MDT	**Midelt**	**92.27**	**304**	LR		LR	14 00 53.4	
	comp=Z,29nm,18.3s,baz=64,slow=40							
ILAR	**Eielson Array**	**93.94**	**22**	P		**P**	**13 12 14.1**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=312,slow=5.9,SNR=5.9							
	comp=Z,0.3nm,0.7s							
DBIC	**Dimbokro**	**97.50**	**278**	LR		LR	13 56 57.3	
	comp=Z,55nm,18.1s,baz=156,slow=36							
NVAR	**Mina Array Bea**	**124.22**	**30**	PKP		**PKiKP**	**13 17 56.0**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=333,slow=3.7,SNR=5.2							
PDAR	**Pinedale Array**	**124.35**	**21**	PKP		**PKPdf**	**13 17 54.9**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=178,slow=1.6,SNR=5.3							
PLCA	**Paso Flores**	**145.37**	**201**	PKPbc		**PKPdf**	**13 18 34.5**	**+0.3**
	comp=Z,2.7nm,0.8s,baz=233,slow=4.7,SNR=6.6							

*IDC **19** 13:00:36.4±4.7,17.16N×100.21W,h0km,mb3.2/3, mbtmp3.1/5,ML3.1/2,Error ellipse: s-maj=99.7km s

baz=326,slow=73,SNR=12
H03N3 Juan Fernandez 54.32 158 T T 14 08 22.4
baz=326,slow=73,SNR=9.3
ILAR Eielson Array 56.87 338 P **P** **13 10 22.9 +0.7**
0.2nm,0.8s,baz=129,slow=8.1,SNR=4.5
0.2nm,0.8s

*NOU **19** 13:04:21.3,33°.28S×176°.90W,h281km,mb4.3/6,South of Kermadec Islands*
*WEL **19** 13:05:06.4±1.1,35°S±11°×17°9E±1°1,h153km±24km, M4.2/23,ML4.2/23,MLv4.2/23,Error ellipse: s-maj=18.2km s-min=9.8km az=43.5,confirmed*
ISC 19 13:05:03.5±3.6,35°1S±0°2×179°6E±0°2,h150km,n65, σ1§29/65,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**2.70**	**202**	P	**Pn**	**13 05 47.8**	**+0.7**
MXZ	**Matakaoa Point**	**2.70**	**202**	P	**Pn**	**13 05 48.1**	**+1.1**
MXZ				S	**Sn**	**13 06 20.2**	**-0.5**
WMGZ	**Waiomatatini S**	**2.91**	**199**	P	**Pn**	**13 05 51.3**	**+1.7**
PKGZ	**Pakihiroa**	**3.05**	**203**	P	**Pn**	**13 05 52.9**	**+1.4**
PKGZ				S	**Sn**	**13 06 29.2**	**+0.5**
HAZ	**Te Kaha**	**3.06**	**208**	P	**Pn**	**13 05 52.3**	**+0.8**
HAZ				S	**Sn**	**13 06 29.5**	**+0.7**
PUZ	**Puketiti**	**3.19**	**199**	P	**Pn**	**13 05 54.2**	**+0.9**
PUZ				S	**Sn**	**13 06 30.4**	**-1.4**
RUGZ	**Raukumara Rang**	**3.28**	**208**	P	**Pn**	**13 05 55.8**	**+1.2**
RUGZ				S	**Sn**	**13 06 33.7**	**-0.4**
TWGZ	**Tauwhareparae**	**3.37**	**202**	P	**Pn**	**13 05 57.4**	**+1.8**
TWGZ				S	**Sn**	**13 06 36.5**	**+0.6**
WHRZ	**Whale Island**	**3.50**	**216**	MLv			
CNGZ	**Carnagh Statio**	**3.59**	**198**	P	**Pn**	**13 05 59.4**	**+1.0**
TKGZ	**Te Karaka**	**3.65**	**202**	P	**Pn**	**13 05 59.6**	**+0.5**
TKGZ				S	**Sn**	**13 06 42.2**	**-0.1**
MWZ	**Matawai**	**3.66**	**206**	P	**Pn**	**13 06 00.1**	**+0.7**
MWZ				S	**Sn**	**13 06 42.6**	**-0.1**
OPRZ	**Ohinepanea**	**3.70**	**221**	P	**Pn**	**13 06 01.3**	**+1.4**
OPRZ				S	**Sn**	**13 06 43.2**	**-0.4**
MARZ	**Manawahe**	**3.74**	**218**	MLv			
URZ	**Urewera**	**3.76**	**211**	P	**Pn**	**13 06 01.3**	**+0.7**
URZ	**Urewera**	**3.76**	**211**	P	**Pn**	**13 06 01.1**	**+0.5**
EDRZ	**Edgecumbe**	**3.81**	**216**	MLv			
RAGZ	**Rawiri**	**3.84**	**206**	P	**Pn**	**13 06 03.4**	**+1.6**
RAGZ				S	**Sn**	**13 06 47.4**	**+0.3**
LIRZ	**Lichensteins R**	**3.91**	**221**	MLv			
RIGZ	**Rimuhau**	**3.92**	**202**	P	**Pn**	**13 06 03.2**	**+0.5**
KARZ	**Kaharoa**	**4.00**	**222**	P	**Pn**	**13 06 05.2**	**+1.4**
KMRZ	**Kaimai**	**4.05**	**226**	P	**Pn**	**13 06 06.0**	**+1.6**
PRGZ	**Paritu Road**	**4.08**	**199**	P	**Pn**	**13 06 06.8**	**+1.9**
MUGZ	**Murupara**	**4.09**	**213**	P	**Pn**	**13 06 05.1**	**+0.1**
RRRZ	**Republican Roa**	**4.10**	**216**	P	**Pn**	**13 06 06.9**	**+1.9**
RTZ	**Ruatahuna**	**4.12**	**210**	P	**Pn**	**13 06 05.4**	**0.0**
MKAZ	**Moumakai**	**4.13**	**239**	P	**Pn**	**13 06 07.2**	**+1.8**
KNZ	**Kokohu**	**4.24**	**201**	P	**Pn**	**13 06 06.6**	**-0.2**
TOZ	**Tahuroa Road**	**4.24**	**230**	P	**Pn**	**13 06 07.3**	**+0.4**
MHGZ	**Mahia Peninsul**	**4.29**	**198**	P	**Pn**	**13 06 08.3**	**+0.7**
RAHZ	**Arahi**	**4.33**	**207**	P	**Pn**	**13 06 08.9**	**+0.8**
WCZ	**Waipu Caves**	**4.37**	**257**	P	**Pn**	**13 06 09.1**	**+0.5**
MTHZ	**Maungataniwha**	**4.38**	**210**	P	**Pn**	**13 06 09.4**	**+0.7**
WHHZ	**Waihua**	**4.42**	**205**	MLv			
MRHZ	**Matea Rd**	**4.54**	**213**	P	**Pn**	**13 06 10.8**	**-0.1**
NMHZ	**Naumai**	**4.60**	**208**	P	**Pn**	**13 06 12.0**	**+0.3**
ARHZ	**Aropaoanui**	**4.67**	**206**	P	**Pn**	**13 06 12.6**	**0.0**
BKZ	**Black Stump Fm**	**4.78**	**210**	P	**Pn**	**13 06 13.4**	**-0.7**
BKZ	**Black Stump Fm**	**4.78**	**210**	P	**Pn**	**13 06 13.6**	**-0.5**
OUZ	**Omahuta**	**4.92**	**267**	P	**Pn**	**13 06 15.9**	**0.0**
OUZ	**Omahuta**	**4.92**	**267**	P	**Pn**	**13 06 16.1**	**+0.2**
MCHZ	**McNeill Hill**	**4.94**	**207**	P	**Pn**	**13 06 15.9**	**-0.3**
NTVZ	**North Tongarir**	**5.10**	**217**	P	**Pn**	**13 06 19.2**	**+0.9**
TMVZ	**Te Maari**	**5.10**	**216**	P	**Pn**	**13 06 18.8**	**+0.5**
ETVZ	**East Tongariro**	**5.11**	**216**	P	**Pn**	**13 06 19.0**	**+0.5**
KRVZ	**Karewarewa**	**5.11**	**217**	P	**Pn**	**13 06 17.9**	**-0.7**
HIZ	**Hauiti**	**5.13**	**227**	P	**Pn**	**13 06 21.0**	**+2.4**
HIZ	**Hauiti**	**5.13**	**227**	P	**Pn**	**13 06 20.8**	**+2.2**
KAHZ	**Kahuranaki**	**5.19**	**204**	P	**Pn**	**13 06 18.7**	**-0.8**
NGZ	**Ngauruhoe**	**5.20**	**217**	P	**Pn**	**13 06 21.0**	**+1.4**
TWVZ	**Taurewa**	**5.20**	**219**	P	**Pn**	**13 06 20.2**	**+0.6**
TUVZ	**Tukino**	**5.24**	**216**	P	**Pn**	**13 06 21.9**	**+1.6**
MOVZ	**Moawhango**	**5.31**	**214**	P	**Pn**	**13 06 20.7**	**-0.4**
WNVZ	**Wahianoa**	**5.32**	**216**	P	**Pn**	**13 06 22.3**	**+1.0**
PXZ	**Pawanui**	**5.41**	**203**	P	**Pn**	**13 06 21.0**	**-1.3**
PKVZ	**Pokaka**	**5.41**	**218**	MLv			
PNHZ	**Pukenui**	**5.54**	**208**	MLv			
WPHZ	**Waipukurau**	**5.58**	**206**	MLv			
PRHZ	**Porangahau**	**5.70**	**203**	P	**Pn**	**13 06 25.2**	**-0.9**
TSZ	**Takapari Road**	**5.76**	**209**	P	**Pn**	**13 06 25.1**	**-1.9**
BFZ	**Birch Farm**	**6.20**	**204**	P	**Pn**	**13 06 31.2**	**-1.6**
HOWZ	**Holdsworth Sta**	**6.65**	**208**	MLv			
PAWZ	**Paruwai Farm**	**7.11**	**206**	MLv			
KHZ	**Kahutara**	**8.73**	**211**	P	**Pn**	**13 07 02.1**	**-4.4**
CTZ	**Chatham Island**	**9.14**	**162**	P	**Pn**	**13 07 15.6**	**+3.7**

*TEH **19** 13:10:26.0,26°.37N×58°.94E,h21km±72km,ML3.4, Presumed earthquake*
*DSN **19** 13:10:27.2±1.5,26°.33N×58°.82E,h20km±49km,ML2.7/7, Error ellipse: s-maj=42.5km s-min=11.9km az=60.0*
*OMAN **19** 13:10:29.8±0.1,26°.40N×58°.69E,h25km±2km,ml3.0/18, Error ellipse: s-maj=3.4km s-min=0.9km az=32.0*
ISC 19 13:10:26.6±3.4,26°37N±0°04×58°80E±0°04,h7km±26km, n39,σ1§19/51,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JASK	**Jask - Hormozg** SNR=270	**0.97**	**239**	P	**Pn**	**13 10 48.0**	**+1.2**
JASK	**Jask - Hormozg**	**0.97**	**239**	Pg	**Pn**	**13 10 47.8**	**+1.1**
CHBR	**Chabahar**	**1.70**	**117**	Pg	**Pn**	**13 10 55.0**	**-1.7**
KHNJ	**Kahnooj**	**1.85**	**329**	Pn	**Pb**	**13 11 00.4**	**-0.4**
IBND	**Bandar-abas**	**2.28**	**299**	Pn	**Pb**	**13 11 07.1**	**-1.1**
BANOM	**Banah**	**2.29**	**259**	P	**Pb**	**13 11 03.9**	**-1.0**
NGCH	**Negor - Chabah** SNR=11	**2.34**	**115**	P	**Pb**	**13 11 09.6**	**+0.5**
NGCH	**Negor - Chabah**	**2.34**	**115**	Pn	**Pn**	**13 11 04.3**	**-1.2**
SHME	**Shamm**	**2.41**	**263**	P	**Pn**	**13 11 06.2**	**-0.3**
MDH	**Madha**	**2.49**	**245**	P	**Pn**	**13 11 06.3**	**-1.3**
MDH				S	**Sn**	**13 11 37.1**	**-1.2**
MDH	**Madha** SNR=5.6	**2.49**	**245**	P	**Pn**	**13 11 07.0**	**-0.6**
MDH				S	**Sn**	**13 11 37.0**	**-1.2**
GENO	**Geno**	**2.56**	**294**	Pn	**Pn**	**13 11 10.9**	**+2.2**
MASF	**Masafi**	**2.58**	**248**	P	**Pn**	**13 11 08.4**	**-0.4**
MASF				S	**Sn**	**13 11 39.4**	**-1.1**
MSFE	**Esma-Masafi**	**2.58**	**248**	P	**Pn**	**13 11 08.2**	**-0.7**
UOSS	**Minazif**	**2.73**	**239**	P	**Pn**	**13 11 10.5**	**-0.5**
UOSS				S	**Sn**	**13 11 43.3**	**-1.1**
KBAM	**BAM**	**2.77**	**354**	Pn	**Pn**	**13 11 11.4**	**-0.1**
HATD	**Hatta, Dubai**	**2.85**	**238**	P	**Pn**	**13 11 10.9**	**-1.7**
HATD	**Hatta, Dubai**	**2.85**	**238**	P	**Pn**	**13 11 11.8**	**-0.9**
HATD				S	**Sn**	**13 11 46.1**	**-1.2**
BIDO	**Bidbid**	**2.90**	**192**	P	**Pn**	**13 11 14.2**	**+0.9**
ASHO	**Ashiyiah**	**2.99**	**236**	P	**Pn**	**13 11 13.9**	**-0.6**
ASHO	**Ashiyiah** SNR=21	**2.99**	**236**	P	**Pn**	**13 11 14.3**	**-0.2**
SOHO	**SOHO**	**3.02**	**223**	P	**Pn**	**13 11 13.7**	**-1.2**
SOHO	**SOHO**	**3.02**	**223**	P	**Pn**	**13 11 14.3**	**-0.6**
SOHO				S	**Sn**	**13 11 50.8**	**-0.7**
HOQ	**Hoqain** SNR=23	**3.08**	**206**	P	**Pn**	**13 11 15.1**	**-0.7**
HOQ				S	**Sn**	**13 11 52.6**	**-0.4**
WSAR	**Wadi Sarin**	**3.12**	**183**	P	**Pn**	**13 11 16.4**	**+0.1**
WSAR				S	**Sn**	**13 11 53.6**	**-0.3**
NAZ	**Nazwa, Dubai**	**3.14**	**245**	P	**Pn**	**13 11 16.9**	**+0.3**
FAQ	**Al Faqa, Dubai**	**3.31**	**241**	P	**Pn**	**13 11 19.8**	**+0.9**
SMDO	**Samad**	**3.37**	**192**	P	**Pn**	**13 11 21.4**	**+1.6**
SMDO				S	**Sn**	**13 12 01.4**	**+1.3**
SRVN	**Saravan**	**3.38**	**71**	Pn	**Pn**	**13 11 19.5**	**-0.5**
ALNE	**Al Ain**	**3.59**	**231**	P	**Pn**	**13 11 23.6**	**+0.7**
CHMN	**Cheshme madani**	**3.65**	**343**	Pn	**Pn**	**13 11 25.0**	**+1.1**
ARQ	**Araqi** SNR=25	**3.66**	**215**	P	**Pn**	**13 11 25.8**	**+2.1**
ARQ				S	**Sn**	**13 12 08.7**	**+1.5**
NGRK	**Negar Kerman**	**3.74**	**331**	Pn	**Pn**	**13 11 26.2**	**+1.1**
WBK	**Wadi Bani Khal** SNR=15	**3.75**	**178**	P	**Pn**	**13 11 26.8**	**+1.9**
WBK				S	**Sn**	**13 12 09.3**	**0.0**
BSY	**Bisya**	**3.89**	**202**	P	**Pn**	**13 11 28.3**	**+1.4**
BSY				S	**Sn**	**13 12 14.5**	**+1.5**
JMDO	**Jabal Madar**	**4.03**	**189**	P	**Pn**	**13 11 30.7**	**+1.8**
JLN	**Jalan Bani Buh**	**4.24**	**172**	P	**Pn**	**13 11 33.1**	**+1.4**
MHTO	**MHTO**	**5.41**	**188**	P	**Pn**	**13 11 49.9**	**+2.1**
ITEG	**Tejag**	**6.50**	**360**	Pn	**Pn**	**13 12 04.1**	**+1.1**

*RHSSO **19** 13:25:39.7±0.8,41°.53N×19°.54E,h6km±3km,ML3.3/4*
*BEO **19** 13:25:39.1±0.8,41°.46N×19°.42E,h9km±4km,ML3.1/6*
PDG 19 13:25:41.4±0.0,41°63N×19°41E,h13km,MD3.2/4, ML3.1/13,17C-4D,Error ellipse: s-maj=0.1km s-min=0.2km az=0.0,Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULC	**Ulcinj**	**0.35**	**340**	*i* Pg	Pg	13 25 48.0	-0.6
ULC				*i* Sg	Sg	13 25 54.1	+0.7
DRME	**Dracevica, Mon**	**0.58**	**344**	*e* Pg	Pg	13 25 52.4	-0.4
DRME				*i* Sg	Sb	13 26 01.5	-0.1
DRME	**Dracevica, Mon**	**0.58**	**344**	⇑*i* Pg	Pg	13 25 52.1	-0.7
DRME				*e* Sg	Sb	13 26 02.9	+1.3
BUM	**Brajici-Budva**	**0.77**	**330**	*e* Pg	Pg	13 25 55.7	-0.7
BUM				*i* Sg	Sb	13 26 08.1	+0.9
PDG	**Podgorica**	**0.81**	**352**	⇑P	Pg	13 25 56.1	-0.9
PDG	**Podgorica**	**0.81**	**352**	*e* Pg	Pg	13 25 56.6	-0.5
PDG				*e* Sg	Sn	13 26 10.8	+0.5
PDG	**Podgorica**	**0.81**	**352**	*e* Pg	Pg	13 25 56.4	-0.7
PDG				*i* Sg	Sb	13 26 09.2	+1.1
PDG	**Podgorica**	**0.81**	**352**	⇑*i* Pg	Pg	13 25 55.6	-1.5
PDG				*e* Sg	Sn	13 26 09.7	-0.6
CEME	**Cevo**	**0.99**	**339**	*e* Pg	Pb	13 25 59.7	-0.7
CEME				*i* Sg	Sn	13 26 15.2	+0.4
PVY	**Plav**	**1.05**	**23**	*e* Pg	Pb	13 26 00.8	-0.7
PVY				*i* Sg	Sn	13 26 17.4	+0.9
HCY	**Herceg Novi**	**1.06**	**321**	*e* Pg	Pb	13 26 01.1	-0.5
HCY				*i* Sg	Sn	13 26 17.4	+0.8
HCY	**Herceg Novi**	**1.06**	**321**	⇑*i* Pg	Pg	13 26 01.9	0.0
HCY				*e* Sg	Sn	13 26 17.8	+1.2
OHR	**Ohrid**	**1.17**	**116**	*i* Pg	Pb	13 26 01.5	-2.0
OHR				*i* Sg	Sn	13 26 19.9	+0.6
NKME	**Niksic**	**1.19**	**344**	*e* Pg	Pn	13 26 03.4	-0.3
NKME				*i* Sg	Sn	13 26 22.0	+2.3
KOME	**Kolasin**	**1.22**	**4**	*e* Pg	Pn	13 26 04.0	-0.3
KOME				*i* Sg	Sg	13 26 23.2	+2.3
IVA	**Berane**	**1.29**	**16**	*e* Pg	Pn	13 26 05.3	+0.1
IVA				*i* Sg	Sg	13 26 25.6	+2.5
TREB	**Trebinje**	**1.34**	**324**	⇑*i* Pg	Pb	13 26 06.2	-0.2
TREB				*e* Sg	Sg	13 26 28.0	+1.4
BRY	**Bratogost**	**1.42**	**333**	⇑*i* Pg	Pb	13 26 07.6	-0.3
BRY				*i* Sg	Sg	13 26 29.1	+1.8
SKO	**Skopje**	**1.56**	**77**	*i* Pn	Pb	13 26 09.8	-0.3
SKO				*i* Sn	Sg	13 26 31.8	+0.2
UPM	**Unac-Piva**	**1.61**	**347**	⇑*i* Pn	Pb	13 26 10.6	-0.6
UPM				*i* Sn	Sg	13 26 33.7	+0.3
UPM	**Unac-Piva**	**1.61**	**347**	*e* Pn	Pn	13 26 10.4	+0.6
UPM				*e* Sn	Sg	13 26 33.3	-0.1
KLINJ	**Klinje**	**1.65**	**339**	*e* Pn	Pn	13 26 10.4	+0.2
KLINJ				*e* Sn	Sg	13 26 34.5	-0.2
SJES	**Sjenica**	**1.68**	**14**	*e* Pg	Pb	13 26 11.9	-0.4
SJES				*e* Sg	Sg	13 26 36.5	+0.9
PLE	**Pljevlja**	**1.70**	**360**	*e* Pn	Pb	13 26 11.8	-0.8
PLE				*i* Sn	Sg	13 26 36.1	0.0
STON	**Ston**	**1.77**	**315**	*e* Pg	Pn	13 26 11.7	0.0
STON				*e* Sg	Sg	13 26 39.4	+1.0
RUDO	**Rudo**	**1.99**	**359**	*e* Pn	Pn	13 26 15.9	+1.2
RUDO				*e* Sn	Sb	13 26 41.5	-0.6
IVAS	**Ivanjica**	**2.02**	**16**	*e* Pn	Pn	13 26 15.4	+0.2
IVAS				*e* Sn	Sb	13 26 43.7	+0.6
SELS	**Selova**	**2.03**	**38**	*e* Pn	Pn	13 26 16.0	+0.6
BARS	**Barje**	**2.15**	**56**	*e* Pn	Pn	13 26 17.8	+0.9
GOCS	**Kraljevo Serbi**	**2.21**	**29**	*e* Pn	Pn	13 26 18.6	+0.7
BBLS	**Lazi&#263i**	**2.23**	**360**	*e* Pn	Pn	13 26 19.0	+0.8
BBLS				*e* Sn	Sn	13 26 47.2	+1.5
MATE	**Matera**	**2.26**	**245**	⇑P	Pb	13 26 21.4	-0.7
VAY	**Valandovo**	**2.40**	**96**	*i* Pn	Pn	13 26 20.7	+0.3
VAY				*i* Sn	Sg	13 26 56.8	-1.7
BOSS	**Bosilegrad**	**2.45**	**68**	*e* Pn	Pn	13 26 21.1	+0.1
BOSS				*e* Sn	Sn	13 26 48.6	-2.2
GRUS	**Gruza**	**2.46**	**23**	*e* Pn	Pn	13 26 22.0	+0.9
DIVS	**Divibare**	**2.50**	**10**	*e* Pn	Pn	13 26 22.2	+0.3
ZAPS	**Zavoj**	**2.90**	**54**	*e* Pn	Pn	13 26 28.2	+0.9
ZAPS				*e* Sn	Sn	13 27 02.0	0.0
TEKS	**Tekeris**	**2.92**	**2**	*e* Pn	Pn	13 26 27.4	-0.1
ZAGS	**Zajecar**	**3.02**	**43**	*e* Pn	Pn	13 26 29.4	+0.6
ZAGS				*e* Sn	Sn	13 27 06.1	+1.3
BORS2	**Bor- Borsko je**	**3.12**	**37**	*e* Pn	Pn	13 26 29.3	-1.0
TIP	**Timpagrande**	**3.17**	**220**	⇑P	Pn	13 26 28.4	-2.7
KUBS	**Kucevo**	**3.24**	**30**	*e* Pn	Pn	13 26 30.7	-1.2
BLY	**Banja Luka**	**3.52**	**333**	*e* Sn	Sn	13 27 19.4	+2.3
FRGS	**Fruska Gora**	**3.54**	**5**	*e* Pn	Pn	13 26 35.8	-0.2
FRGS				*e* Sn	Sn	13 27 19.2	+1.5
MDVR	**Moldovita**	**3.57**	**27**	⇓P	Pn	13 26 36.6	+0.1
HERR	**Herculane**	**3.92**	**33**	⇑P	Pn	13 26 41.9	+0.6
PLVB	**Pleven**	**4.24**	**64**	⇑P	Pg	13 27 04.4	+1.9
BZS	**Buzias**	**4.30**	**21**	⇑P	Pn	13 26 46.1	-0.3
GZR	**Gura Zlata**	**4.49**	**32**	⇑P	Pn	13 26 51.8	+2.7
MORH	**Mrgy, Hungar**	**4.62**	**353**	⇓P	Pn	13 26 55.4	+4.6
MORH	**Mrgy, Hungar**	**4.62**	**353**	*e* Pn	Pn	13 26 51.2	+0.4
MORH				*e* Sn	Sn	13 27 44.7	+0.5
MTUR	**Matau**	**5.47**	**47**	⇑P	Pn	13 27 06.9	+4.3
VOIR		**5.59**	**45**	⇓P	Pn	13 27 03.9	+0.5
MLR	**Muntele Rosu**	**6.12**	**49**	⇓P	Pn	13 27 18.1	+6.5
NEHR	**Nehoiu**	**6.28**	**51**	⇑P	Pb	13 27 29.0	-1.6
VRI	**Vrincioaia**	**6.78**	**49**	⇑P	Pn	13 27 19.4	-1.2

TIR 19 13:26:27.0,41°53N×19°33E,h7km±5km,Ml2.6/3,Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.44**	**114**	Pg	Pg	13 26 36.2	+0.7
TIR				S	Sg	13 26 42.3	+1.1
TIR				AML	AML	13 26 43.9	
	2.9nm,0.3s						
SDA	**Shkodra**	**0.54**	**13**	P	Pg	13 26 37.6	+0.1
SDA				S	Sb	13 26 45.7	-1.1
SDA				AML	AML	13 26 47.7	
	2.0nm,0.3s						
PHP	**Peshkopia**	**0.84**	**79**	P	Pg	13 26 42.9	-0.3
PHP					Sg	13 26 55.3	-0.3
PHP				AML	AML	13 26 59.4	
	1.5nm,0.4s						

*MOS **19** 13:39:12.5±0.9,27°.78N×139°.46E,h501km,mb4.1/16, Error ellipse: s-maj=15.7km s-min=6.3km az=105.4*
*IDC **19** 13:39:13.3±0.5,27°.85N×139°.56E,h494km±5km,mb3.5/29, mbtmp4.3/35,Error ellipse: s-maj=12.1km s-min=6.7km az=82.0*
*NEIC **19** 13:39:14.3±1.6,27°.9N±0°.1×139°.5E±0°.2,h499km±8km, mb4.1/31,Error ellipse: s-maj=22.9km s-min=14.9km az=84.0*
*JMA **19** 13:39:16.8±0.1,28°N±1°×14°0E±°,h486km,MV3.6/38,W OFF OGASAWARA*
ISC 19 13:39:14.0±0.6,27°85N±0°06×139°61E±0°09,h502km±6km, n128,σ1§10/152,mb4.0/56,10C-2D,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.41**	**108**	*e*P	**P**	**13 40 21.8**	**+0.3**
CBIJ				*e*S	**S**	**13 41 13.6**	**-2.7**
JCJ	**Chichijima**	**2.41**	**108**	P	**P**	**13 40 21.7**	**+0.2**
	62nm,0.4s,baz=288,slow=20,SNR=14						
JCJ				S	**S**	**13 41 13.3**	**-3.0**
	192nm,0.4s,baz=288,slow=19,SNR=16						
JCJ	**Chichijima**	**2.41**	**108**	P	**P**	**13 40 21.9**	**+0.4**
JHH2	**Haha-jima-NKT2**	**2.58**	**117**	*e*P	**P**	**13 40 23.9**	**+1.4**
JHH2				*e*S	**S**	**13 41 16.8**	**-1.4**
JHJ2	**Mitsune**	**5.25**	**2**	P	**P**	**13 40 44.0**	**+0.8**
JHJ	**Hachijo jima 2**	**5.26**	**2**	P	**P**	**13 40 43.8**	**+0.6**
	74nm,0.4s,baz=225,slow=20,SNR=4.7						
JHJ				S	**S**	**13 41 56.4**	**0.0**
	49nm,0.4s,baz=239,slow=18,SNR=1.6						
TTO1	**TONANKAI O.B.S**	**6.25**	**338**	*e*P	**P**	**13 40 56.3**	**+3.9**
JTNC	**Tanabenakahech**	**6.87**	**331**	*e*P	**P**	**13 41 00.9**	**+2.0**
BSO1	**Boso 1**	**6.88**	**9**	*e*P	**P**	**13 40 59.3**	**+1.0**
BSO3	**Boso 3**	**6.97**	**6**	*e*P	**P**	**13 40 59.7**	**+0.2**
JIE	**Ise**	**6.98**	**340**	*e*P	**P**	**13 41 02.3**	**+2.4**
JKN2	**Miekihoku**	**6.98**	**337**	*e*P	**P**	**13 41 01.8**	**+1.8**
BSO4	**Boso 4**	**7.15**	**5**	*e*P	**P**	**13 41 03.1**	**+1.6**
HMMJ	**Hamamatsu 2**	**7.17**	**347**	*e*P	**P**	**13 41 03.1**	**+1.3**
JWY	**Kouya**	**7.22**	**333**	*e*P	**P**	**13 41 05.0**	**+2.6**
JGF	**Kuroka**	**7.96**	**347**	P	**P**	**13 41 11.2**	**+1.3**
JRY	**Ryogami san**	**8.17**	**356**	*e*P	**P**	**13 41 12.2**	**+0.2**
MJA0	**Matsu Arr-Jizo**	**8.75**	**353**	*e*P	**P**	**13 41 17.7**	**-0.4**
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	**Matsushiro Arr**	**8.75**	**353**	P	**P**	**13 41 17.1**	**-1.0**
	comp=Z,1.1nm,0.3s,baz=177,slow=10,SNR=9.1						
MJAR				S	**S**	**13 42 57.7**	**-2.4**
	comp=Z,1.5nm,0.5s,baz=204,slow=12,SNR=4.8						
MJAR	**Matsushiro Arr**	**8.75**	**353**	P	**P**	**13 41 17.6**	**-0.5**
MAJO	**Matsushiro**	**8.75**	**353**	P	**P**	**13 41 17.5**	**-0.6**
MAJO	**Matsushiro**	**8.75**	**353**	⇑*e*P	**P**	**13 41 17.5**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MJB9	**Matsu-Tunnel**	**8.75**	**353**	P	**P**	**13 41 17.7**	**-0.4**
JNU	**Nakatsue**	**9.18**	**307**	P	**P**	**13 41 24.5**	**+1.8**
	comp=Z,12nm,1.0s,baz=349,slow=14,SNR=7.1						
KSRS	**Korea Array**	**13.72**	**317**	P	**P**	**13 42 10.8**	**+0.3**
	comp=Z,1.7nm,0.9s,baz=142,slow=8.0,SNR=11						
ASAJ	**Asahikawa**	**16.41**	**8**	P	**P**	**13 42 39.1**	**+0.5**
	comp=Z,4.9nm,0.8s,baz=180,slow=7.1,SNR=2.1						
USRK	**Ussuriysk Ar.**	**17.43**	**341**	P	**P**	**13 42 49.4**	**+0.6**
	comp=Z,14nm,0.7s,baz=160,slow=11,SNR=29						
KLR	**Kul'dur**	**22.19**	**346**	⇑*e*P	**P**	**13 43 32.6**	**+0.6**
KLR				pmax	pmax		
	comp=Z,10.0nm,1.7s						
HEH	**HeiHe**	**24.23**	**341**	*e*P	**P**	**13 43 51.0**	**+0.8**
HEH				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC	**Hu-ho-hao-te**	**26.41**	**307**	*e*P	**P**	**13 44 09.0**	**-0.8**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,100nm,4.9s						
ZEA	**Zeya**	**27.42**	**344**	*e*P	**P**	**13 44 19.1**	**+0.7**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ULN	**Ulaanbaatar**	**32.21**	**317**	*de*P	**P**	**13 45 00.6**	**+0.4**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SONM	**Songino Array**	**32.60**	**317**	P	**P**	**13 45 03.1**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=114,slow=7.0,SNR=3.9						
SONM				ScP	**ScP**	**13 50 30.8**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=134,slow=3.4,SNR=4.2						
	comp=Z,0.6nm,0.5s						
SONM	**Songino Array**	**32.60**	**317**	*e*P	**P**	**13 45 03.5**	**+0.1**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YAK	**Yakutsk**	**34.81**	**352**	*ce*P	**P**	**13 45 21.1**	**-0.6**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TLY	**Talaya**	**35.92**	**321**	⇑*e*P	**P**	**13 45 31.1**	**-0.1**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SEY	**Seymchan**	**36.08**	**10**	P	**P**	**13 45 32.7**	**+0.6**
	comp=Z,1.6nm,0.7s,baz=217,slow=20,SNR=10						
	comp=Z,1.6nm,0.7s						
SEY	**Seymchan**	**36.08**	**10**	⇓*e*P	**P**	**13 45 33.7**	**+1.5**
SEY				pmax	pmax		
	comp=Z,11nm,2.5s						
PMG	**Port Moresby**	**37.75**	**168**	P	**P**	**13 45 47.3**	**+0.7**
	comp=Z,12nm,0.9s,baz=3.6,slow=19,SNR=1.9						
	comp=Z,12nm,0.9s						
GOMU	**GeErMu**	**38.60**	**294**	P	**

	comp=Z,4.6nm,0.5s							
NRIK	**Noril'sk**		**51.12**	**339**	P	**P**	**13 47 28.3**	**-0.9**
NRIK					IAmb	IAmb	13 47 29.7	
	comp=Z,4.7nm,0.6s							
AS31	**Alice Springs**		**51.51**	**187**		**P**	**13 47 32.5**	**-0.2**
ASAR	**Alice Springs**		**51.51**	**187**	P	**P**	**13 47 32.6**	**-0.1**
	comp=Z,2.2nm,0.5s,baz=7.3,slow=5.9,SNR=139							
ASAR					PcP	**PcP**	**13 48 39.3**	**+0.9**
	comp=Z,0.6nm,1.1s,baz=10,slow=2.1,SNR=4.1							
ASAR					ScP	**ScP**	**13 51 45.8**	**-0.9**
	comp=Z,0.3nm,0.7s,baz=9.4,slow=4.8,SNR=4.8							
	comp=Z,2.2nm,0.5s							
ASAR	**Alice Springs**		**51.51**	**187**	P	**P**	**13 47 32.7**	**0.0**
ASAR						**PcP**	**13 48 39.6**	**+1.3**
ASAR						**ScP**	**13 51 46.6**	**0.0**
BOOM	**Boomskoye usch**		**52.90**	**304**	P	**P**	**13 47 42.5**	**-0.3**
BOOM					IAmb	IAmb	13 48 23.5	
	comp=Z,11nm,1.2s							
BOOM	**Boomskoye usch**		**52.90**	**304**	P	**P**	**13 47 42.5**	**-0.3**
BOOM					pmax	pmax		
	comp=Z,11nm,1.2s							
M17K	**Holitna River**		**53.05**	**32**	P	**P**	**13 47 44.9**	**+1.5**
M17K					IAmb	IAmb	13 47 46.7	
	comp=Z,15nm,1.4s							
KSH2	**Kashi**		**53.59**	**300**	P	**P**	**13 47 48.8**	**+1.0**
KSH2					pmax	pmax		
	comp=Z,4.0nm,0.6s							
O18K	**Koktuh Hills**		**53.93**	**35**	P	**P**	**13 47 51.4**	**+1.7**
O18K					IAmb	IAmb	13 48 00.0	
	comp=Z,10nm,1.5s							
J20K	**Nowinta River**		**54.97**	**29**	P	**P**	**13 47 58.9**	**+2.1**
KDAK	**Kodiak Island**		**55.14**	**37**	P	**P**	**13 47 58.2**	**+0.1**
	comp=Z,2.7nm,0.6s,baz=270,slow=6.1,SNR=13							
	comp=Z,2.7nm,0.6s							
KDAK	**Kodiak Island**		**55.14**	**37**	P	**P**	**13 47 58.2**	**+0.1**
INKA	**Innaminka**		**55.28**	**179**	P	**P**	**13 47 59.4**	**0.0**
BVAR	**Borovoye Array**		**55.94**	**317**	P	**P**	**13 48 03.7**	**-0.1**
	comp=Z,12nm,0.4s,baz=88,slow=6.7,SNR=90							
BVAR					PcP	**PcP**	**13 48 54.7**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=70,slow=4.7,SNR=1.1							
BVAR					ScP	**ScP**	**13 52 03.9**	**-1.9**
	comp=Z,0.4nm,0.5s,baz=85,slow=2.1,SNR=4.2							
	comp=Z,12nm,0.4s							
BORK	**Borovoye**		**55.98**	**317**	P	**P**	**13 48 04.4**	**+0.3**
BORK	**Borovoye**		**55.98**	**317**	P	**P**	**13 48 04.4**	**+0.3**
BORK					pmax	pmax		
	comp=Z,12nm,0.5s							
KK31	**Karatay Array**		**56.79**	**305**		**P**	**13 48 09.3**	**-0.5**
KK31					IAmb	IAmb	13 48 10.5	
	comp=Z,4.4nm,0.5s							
KK31	**Karatay Array**		**56.79**	**305**	P	**P**	**13 48 09.4**	**-0.5**
KK31					pmax	pmax		
	comp=Z,4.0nm,0.5s							
KKAR	**Karatay Array**		**56.79**	**305**		**P**	**13 48 10.2**	**+0.3**
KKAR	**Karatay Array**		**56.79**	**305**	P	**P**	**13 48 10.2**	**+0.3**
D24K	**Happy Valley**		**57.72**	**24**	P	**P**	**13 48 17.5**	**+1.8**
D24K					IAmb	IAmb	13 48 17.9	
	comp=Z,3.6nm,0.6s							
ILAR	**Eielson Array**		**58.16**	**29**	P	**P**	**13 48 18.9**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=270,slow=6.6,SNR=19							
	comp=Z,0.6nm,0.5s							
ILAR	**Eielson Array**		**58.16**	**29**	*eP*	**P**	**13 48 21.4**	**+2.6**
ILAR					pmax	pmax		
	comp=Z,1.0nm,0.6s							
SCRK	**Sand Creek**		**59.41**	**30**		**P**	**13 48 28.3**	**+0.9**
SCRK					IAmb	IAmb	13 48 28.8	
	comp=Z,4.3nm,0.6s							
STKA	**Stephens Creek**		**59.42**	**178**	P	**P**	**13 48 27.9**	**+0.1**
	comp=Z,1.6nm,0.5s,baz=351,slow=10,SNR=5.3							
	comp=Z,1.6nm,0.5s							
STKA	**Stephens Creek**		**59.42**	**178**	P	**P**	**13 48 27.3**	**-0.4**
STKA	**Stephens Creek**		**59.42**	**178**	P	**P**	**13 48 27.3**	**-0.4**
STKA					pmax	pmax		
	comp=Z,49nm,1.5s							
C27K	**Jago River**		**59.56**	**23**	P	**P**	**13 48 29.9**	**+1.8**
I28M	**Miner Creek**		**61.08**	**28**	P	**P**	**13 48 40.0**	**+1.5**
ARTI	**Arti**		**62.53**	**322**	P	**P**	**13 48 47.4**	**-0.4**
	comp=Z,4.8nm,0.5s,baz=15,slow=2.0,SNR=5.7							
	comp=Z,4.8nm,0.5s							
ARTI	**Arti**		**62.53**	**322**	P	**P**	**13 48 46.8**	**-1.1**
ARTI	**Arti**		**62.53**	**322**	*c iP*	**P**	**13 48 47.5**	**-0.4**
ARTI							13 49 18.6	
ARTI					*PP	**pP**		
ARTI							13 51 11.7	
ARTI					S	**S**	**13 56 36.4**	**+0.5**
ARTI					pmax	pmax		
	comp=Z,4.0nm,0.6s							
AB31	**Akbulak array**		**62.93**	**314**		**P**	**13 48 50.3**	**-0.3**
AB31					IAmb	IAmb	13 48 51.0	
	comp=Z,3.3nm,0.7s							
INK	**Inuvik**		**63.30**	**25**	P	**P**	**13 48 53.1**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=295,slow=7.6,SNR=7.3							
	comp=Z,0.7nm,0.5s							
INK	**Inuvik**		**63.30**	**25**	P	**P**	**13 48 52.7**	**+0.1**
INK					IAmb	IAmb	13 49 07.4	
	comp=Z,5.2nm,1.4s							
INK	**Inuvik**		**63.30**	**25**	P	**P**	**13 48 52.7**	**+0.1**
INK					pmax	pmax		
	comp=Z,5.0nm,1.5s							
NWAO	**Narrogin (SRO)**		**64.07**	**201**	P	**P**	**13 48 58.0**	**-0.1**
	comp=Z,3.5nm,0.7s,baz=58,slow=6.1,SNR=1.9							
	comp=Z,3.5nm,0.7s							
KIRV	**Kirov**		**66.78**	**325**	*ceP*	**P**	**13 49 15.9**	**+1.2**
SPITS	**Spitsbergen Ar**		**69.23**	**349**	P	**P**	**13 49 29.6**	**+0.2**
	comp=Z,6.6nm,1.0s,baz=91,slow=6.5,SNR=8.7							
	comp=Z,6.6nm,1.0s							
ARCES	**ARCESS Array B**		**72.07**	**340**	P	**P**	**13 49 46.6**	**+0.2**
	comp=Z,2.2nm,0.5s,baz=59,slow=5.8,SNR=17							
	comp=Z,2.2nm,0.5s							
ARCES	**ARCESS Array B**		**72.07**	**340**	P	**P**	**13 49 44.5**	**-1.9**
ARCES	**ARCESS Array B**		**72.07**	**340**	P	**P**	**13 49 44.5**	**-1.9**
ARCES					pmax	pmax		
	comp=Z,20nm,1.5s							
YKA	**Yellowknife Ar**		**72.56**	**28**	P	**P**	**13 49 49.2**	**0.0**
	comp=Z,0.6nm,0.6s,baz=301,slow=6.6,SNR=14							
	comp=Z,0.6nm,0.6s							
YKA	**Yellowknife Ar**		**72.56**	**28**	*eP*	**P**	**13 49 49.7**	**+0.4**
YKA					pmax	pmax		
	comp=Z,1.0nm,0.5s							
OBN	**Obninsk**		**74.60**	**325**	*i* P	**P**	**13 49 59.7**	**-1.3**
OBN					*i*		13 50 12.7	
OBN					pmax	pmax		
	comp=Z,9.0nm,1.0s							
KBZ	**Khabaz**		**75.82**	**312**	P	**P**	**13 50 07.9**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=44,slow=3.8,SNR=3.7							
	comp=Z,1.2nm,0.7s							
KBZ	**Khabaz**		**75.82**	**312**	*eP*	**P**	**13 50 07.2**	**-0.9**
KBZ					pmax	pmax		
	comp=Z,1.0nm,0.7s							
FINES	**FINESS Array B**		**76.25**	**333**	P	**P**	**13 50 09.8**	**-0.3**
	comp=Z,4.1nm,0.3s,baz=59,slow=5.4,SNR=57							
	comp=Z,4.1nm,0.3s							
FINES	**FINESS Array B**		**76.25**	**333**	P	**P**	**13 50 09.6**	**-0.5**
YBH	**Yreka Blue Hor**		**77.32**	**49**	P	**P**	**13 50 18.5**	**+2.0**
	baz=333,slow=2.3,SNR=3.0							
AKASG	**Malin Array Be**		**80.65**	**323**	P	**P**	**13 50 33.0**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=52,slow=6.1,SNR=4.2							
	comp=Z,0.3nm,0.3s							
HFS	**Hagfors**		**81.82**	**336**	P	**P**	**13 50 38.7**	**-1.1**
	comp=Z,1.4nm,0.5s,baz=46,slow=4.2,SNR=8.5							
	comp=Z,1.4nm,0.5s							
NVAR	**Mina Array Bea**		**81.84**	**51**	P	**P**	**13 50 42.0**	**+1.4**
	comp=Z,0.4nm,0.6s,baz=328,slow=8.5,SNR=4.1							
	comp=Z,0.4nm,0.6s							
NB2	**NORSAR Subarra**		**82.05**	**337**	P	**P**	**13 50 40.2**	**-0.8**
	comp=Z,0.8nm,0.5s,baz=48,slow=4.6							
NOA	**NORSAR Array B**		**82.05**	**337**	P	**P**	**13 50 40.2**	**-0.8**
	comp=Z,1.3nm,0.6s,baz=46,slow=5.0,SNR=5.5							
	comp=Z,1.3nm,0.6s							
PDAR	**Pinedale Array**		**85.27**	**44**	P	**P**	**13 50 58.5**	**+0.8**
	comp=Z,0.2nm,0.7s,baz=301,slow=3.8,SNR=2.8							
	comp=Z,0.2nm,0.7s							

*TAP **19** 13:50:52.6,24.°79N×122.°33E,h6km±1km,ML3.6,C*
*JMA **19** 13:50:53.0±0.1,24.°8N±0.°6×122.°4E±0.°2,h37km±1km, MV2.9/12,NW OFF ISHIGAKIJIMA IS*
ISC 19 13:50:51.8±1.0,**24.°81N**±0.°02×**122.°44E**±0.°02,**h13**km±9km, **n94**,σ0°**61**/144,**6C,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.43**	**206**	*i* P	**Pb**	**13 51 01.4**	**+0.2**
EOS2				*i* S	**Sb**	**13 51 08.4**	**+0.8**
TWB1	**Santiao Chiao**	**0.45**	**296**	⇑*iP*	**Pg**	**13 51 01.1**	**+0.3**
TWB1				*i* S	**Sg**	**13 51 06.7**	**-0.1**
EOS3	**EOS3**	**0.53**	**192**	*eP*	**Pb**	**13 51 03.3**	**+0.4**
EOS3				S	**Sb**	**13 51 11.6**	**+1.1**
TWC	**Suao**	**0.57**	**249**	*i* P	**Pg**	**13 51 02.5**	**-0.4**
TWC				*i* S	**Sg**	**13 51 10.4**	**-0.2**
TIPB	**Shuangxi**	**0.58**	**286**	⇑P	**Pg**	**13 51 03.5**	**+0.4**
TIPB				*eS*	**Sb**	**13 51 12.1**	**+0.1**
SXI1	**Grass Mountain**	**0.58**	**299**	⇑P	**Pb**	**13 51 03.9**	**0.0**
SXI1				*eS*	**Sb**	**13 51 12.3**	**+0.1**
JYNG	**Yonagunijimaku**	**0.58**	**128**	P	**Pb**	**13 51 04.5**	**+0.5**
JYNG				*eS*	**Sb**	**13 51 12.6**	**+0.5**
ESAO	**Su ao**	**0.59**	**247**	*eP*	**Pg**	**13 51 02.7**	**-0.6**
ESAO				*eS*	**Sg**	**13 51 10.1**	**-1.0**
ILA	**Ilan**	**0.63**	**266**	*i* P	**Pb**	**13 51 04.7**	**+0.1**
ILA				S	**Sg**	**13 51 12.8**	**+0.4**
YOJ	**Yonaguni jima**	**0.63**	**124**	P	**Pb**	**13 51 05.2**	**+0.5**
YOJ	**Yonaguni jima**	**0.63**	**124**	S	**Sb**	**13 51 13.9**	**+0.5**
YOJ	**Yonaguni jima**	**0.63**	**124**	⇑P	**Pb**	**13 51 05.2**	**+0.5**
YOJ	**Yonaguni jima**	**0.63**	**124**	P	**Pb**	**13 51 05.1**	**+0.5**
YOJ				*eS*	**Sb**	**13 51 13.5**	**+0.1**
NWF	**Wu-fen Shan**	**0.65**	**294**	*i* P	**Pb**	**13 51 05.3**	**+0.2**
NWF				*i* S	**Sb**	**13 51 14.1**	**0.0**
WFSB	**Wu-fen Shan**	**0.65**	**294**	⇑P	**Pb**	**13 51 05.2**	**+0.1**
WFSB				S	**Sb**	**13 51 14.3**	**+0.3**
NDS	**Dongshan**	**0.68**	**255**	*eP*	**Pg**	**13 51 05.1**	**+0.1**
NDS				*eS*	**Sg**	**13 51 13.6**	**-0.4**
TNOU	**National Taiwa**	**0.69**	**299**	*eP*	**Pb**	**13 51 05.7**	**0.0**
TNOU				*i* S	**Sg**	**13 51 14.7**	**+0.3**
EOS4	**EOS4**	**0.70**	**189**	*eP*	**Pn**	**13 51 06.4**	**-0.6**
EOS4				*eS*	**Sn**	**13 51 16.5**	**-1.0**
EWUT	**Wuta**	**0.70**	**239**	*eP*	**Pg**	**13 51 05.0**	**-0.4**
EWUT				S	**Sb**	**13 51 16.4**	**+0.9**
TWE	**Neicheng**	**0.70**	**263**	*i* P	**Pg**	**13 51 05.1**	**-0.5**
TWE				S	**Sg**	**13 51 14.2**	**-0.6**
FUSB	**Fushanzhiwuyua**	**0.77**	**266**	⇑P	**Pg**	**13 51 06.7**	**-0.2**
FUSB				S	**Sb**	**13 51 18.0**	**+0.4**
TWA	**Mucha**	**0.79**	**282**	*i* P	**Pg**	**13 51 07.5**	**+0.3**
TWA				*i* S	**Sg**	**13 51 17.6**	**0.0**
EAHA	**Aohua**	**0.80**	**233**	P	**Pg**	**13 51 07.2**	**0.0**
EAHA				S	**Sg**	**13 51 17.0**	**-0.7**
ENTT	**Nioudou**	**0.81**	**258**	*i* P	**Pg**	**13 51 06.9**	**-0.6**
ENTT				S	**Sg**	**13 51 18.3**	**+0.1**
NHY	**Taipei**	**0.82**	**286**	*eP*	**Pg**	**13 51 06.5**	**-1.2**
NHDH	**Xindian Distri**	**0.84**	**281**	*eP*	**Pg**	**13 51 08.3**	**+0.2**
NHDH				*i* S	**Sb**	**13 51 19.7**	**+0.1**
NWLT	**Wulai**	**0.85**	**268**	*eP*	**Pg**	**13 51 08.4**	**+0.2**
NWLT				*eS*	**Sg**	**13 51 19.4**	**0.0**
YM01	**YM01**	**0.85**	**293**	P	**Pb**	**13 51 08.7**	**+0.1**
YM01				*eS*	**Sb**	**13 51 20.0**	**0.0**
YM08	**YM08**	**0.85**	**296**	P	**Pg**	**13 51 08.4**	**0.0**
YM08				S	**Sg**	**13 51 19.6**	**-0.4**
NDT	**Datong Townshi**	**0.87**	**256**	*eP*	**Pg**	**13 51 08.4**	**-0.2**
NDT				*eS*	**Sg**	**13 51 19.7**	**-0.2**
LATG	**Datong**	**0.87**	**252**	P	**Pg**	**13 51 08.3**	**-0.4**
LATG				S	**Sb**	**13 51 20.6**	**+0.1**
TAP	**Taipei**	**0.88**	**285**	*i* P	**Pn**	**13 51 10.5**	**+0.6**
TAP				*eS*	**Sb**	**13 51 20.7**	**+0.2**
TATO	**Taipei**	**0.88**	**281**	P	**Pb**	**13 51 09.1**	**+0.2**
TATO	**Taipei**	**0.88**	**281**	S	**Sg**	**13 51 20.2**	**0.0**
PCYT	**Pengchaiyu**	**0.88**	**338**	*i* P	**Pn**	**13 51 10.1**	**+0.2**
ZUZH	**Zhuzihu**	**0.88**	**294**	P	**Pg**	**13 51 09.0**	**+0.1**
ZUZH				S	**Sg**	**13 51 20.3**	**-0.1**
TWY	**Chenhua**	**0.89**	**302**	*i* P	**Pn**	**13 51 09.9**	**-0.1**
TWY				*i* S	**Sb**	**13 51 21.2**	**+0.3**
ANP	**Anpu**	**0.91**	**294**	P	**Pb**	**13 51 09.8**	**+0.3**
NTST	**Danshui**	**0.96**	**292**	*eP*	**Pn**	**13 51 11.9**	**+0.9**
TWS1	**Kuangyinshan**	**0.97**	**288**	*i* P	**Pn**	**13 51 11.8**	**+0.6**
TWS1				*i* S	**Sg**	**13 51 23.4**	**+0.2**
YHNB	**Yeheng**	**0.97**	**262**	P	**Pb**	**13 51 10.1**	**-0.5**
YHNB	**Yeheng**	**0.97**	**262**	*eP*	**Pb**	**13 51 10.1**	**-0.5**
YHNB				*eS*	**Sb**	**13 51 23.3**	**-0.2**
ETL	**Fush Village**	**0.99**	**229**	*eP*	**Pb**	**13 51 10.6**	**-0.2**
NSK	**Sanguang**	**0.99**	**262**	*i* P	**Pb**	**13 51 10.5**	**-0.4**
NSK				*i* S	**Sb**	**13 51 22.2**	**-1.7**
NACB	**Ninganchiao**	**1.00**	**231**	P	**Pb**	**13 51 10.2**	**-0.7**
NACB	**Ninganchiao**	**1.00**	**231**	P	**Pb**	**13 51 10.3**	**-0.7**
NACB				*eS*	**Sb**	**13 51 23.4**	**-0.6**
NNSB	**Datong**	**1.03**	**249**	*i* P	**Pb**	**13 51 11.0**	**-0.6**
NNSB				*eS*	**Sb**	**13 51 25.0**	**-0.1**
NNS	**Nan Shan**	**1.04**	**249**	*i* P	**Pb**	**13 51 10.9**	**-0.8**
NNS				*i* S	**Sb**	**13 51 25.1**	**-0.2**
TWD	**Chiawan**	**1.06**	**227**	*i* P	**Pb**	**13 51 11.5**	**-0.5**
TWD				*i* S	**Sb**	**13 51 25.1**	**-0.7**
ETLH	**Xiulin Townshi**	**1.06**	**236**	*eP*	**Pb**	**13 51 11.7**	**-0.3**
ETLH				*eS*	**Sb**	**13 51 24.7**	**-1.1**
HWA	**Hwalien**	**1.12**	**223**	*eP*	**Pg**	**13 51 15.2**	**+1.7**
KSHI	**Guanxi Townshi**	**1.15**	**269**	*eP*	**Pg**	**13 51 14.4**	**+0.5**
NCUH	**Zhongli**	**1.15**	**278**	*eP*	**Pb**	**13 51 13.2**	**-0.3**
ETM	**Tongmen**	**1.20**	**226**	*eP*	**Pg**	**13 51 14.8**	**-0.2**
TEYL	**Yanliau Villag**	**1.21**	**219**	*eP*	**Pg**	**13 51 16.0**	**+0.9**
NFF	**Wufeng Townshi**	**1.21**	**262**	*eP*	**Pn**	**13 51 14.6**	**0.0**
NFF				*i* S	**Sb**	**13 51 30.5**	**+0.2**
LXIB	**Xiulin Townshi**	**1.22**	**230**	*eP*	**Pn**	**13 51 14.3**	**-0.4**
LXIB				*eS*	**Sg**	**13 51 31.8**	**+0.6**
FUSS	**Fushou**	**1.22**	**243**	*eP*	**Pg**	**13 51 15.7**	**+0.3**
FUSS				*eS*	**Sg**	**13 51 32.1**	**+0.8**
WHF	**Hehuan Shan**	**1.26**	**238**	*eP*	**Pn**	**13 51 15.5**	**0.0**
IRIF	**Iriomote-Funau**	**1.27**	**112**	*eP*	**Pn**	**13 51 14.4**	**-0.8**
IRIF				*eS*	**Sb**	**13 51 30.2**	**-1.7**
TWT	**Tachien**	**1.28**	**244**	*eP*	**Pg**	**13 51 16.2**	**-0.2**
TWT				*eS*	**Sg**	**13 51 33.4**	**+0.4**
TDCB	**Techi**	**1.29**	**245**	*eP*	**Pb**	**13 51 16.4**	**+0.3**
SHUL	**Shoufeng**	**1.29**	**218**	*eP*	**Pg**	**13 51 17.4**	**+0.7**
LIOB	**Emei**	**1.30**	**263**	*eP*	**Pg**	**13 51 17.6**	**+0.7**
NSTT	**Nanjuang**	**1.32**	**262**	*eP*	**Pg**	**13 51 17.7**	**+0.6**
NSTT				*i* S	**Sg**	**13 51 34.4**	**+0.1**
ESL	**Shilin**	**1.35**	**223**	*eP*	**Pb**	**13 51 17.3**	**+0.3**
TEGC	**Jichi Village**	**1.37**	**217**	*eP*	**Pg**	**13 51 19.2**	**+1.1**
OWD	**Renai**	**1.43**	**234**	P	**Pb**	**13 51 18.5**	**+0.1**
OWD				S	**Sg**	**13 51 38.7**	**+0.7**
WARBT	**Fenglin Townsh**	**1.45**	**222**	*eP*	**Pb**	**13 51 18.3**	**-0.4**
WUSB	**Renai**	**1.45**	**236**	*i* P	**Pb**	**13 51 19.1**	**+0.3**
WUSB				*eS*	**Sg**	**13 51 38.8**	**+0.2**
HATJ	**Hateruma jima**	**1.46**	**121**	*eP*	**Pn**	**13 51 17.9**	**+0.1**
WHP	**Taichung City**	**1.46**	**249**	P	**Pb**	**13 51 19.2**	**+0.3**
WHP				*eS*	**Sn**	**13 51 37.1**	**+0.1**
JKRS	**Kuro-shima**	**1.54**	**111**	*eP*	**Pn**	**13 51 18.8**	**-0.2**
JKRS				*eS*	**Sn**	**13 51 37.4**	**-1.6**
VWDT	**VWDT**	**1.58**	**229**	*eP*	**Pb**	**13 51 20.8**	**-0.1**
HGSD	**Ruisui**	**1.61**	**215**	*eP*	**Pb**	**13 51 21.4**	**0.0**
JJI	**Ishigaki jima**	**1.62**	**106**	P	**Pn**	**13 51 20.8**	**-0.1**
EHYH	**Wanrong**	**1.65**	**217**	*eP*	**Pb**	**13 51 22.2**	**+0.2**
EHY	**Hungye**	**1.65**	**218**	*eP*	**Pg**	**13 51 23.1**	**-0.4**
SMLT	**Sun Moon Lake**	**1.68**	**237**	*eP*	**Pb**	**13 51 23.4**	**+0.7**
SSLB	**Suanglung**	**1.69**	**233**	P	**Pb**	**13 51 22.6**	**-0.3**
SSLB	**Suanglung**	**1.69**	**233**	*eP*	**Pb**	**13 51 23.0**	**+0.1**
YULB	**Yu-li**	**1.75**	**217**	P	**Pn**	**13 51 22.9**	**+0.9**
YULB	**Yu-li**	**1.75**	**217**	*eP*	**Pn**	**13 51 22.1**	**+0.1**
WHYT	**Xinyi Township**	**1.82**	**233**	*eP*	**Pb**	**13 51 24.9**	**-0.1**
FULB	**Fuli**	**1.92**	**213**	*eP*	**Pn**	**13 51 24.6**	**+0.4**
ALS	**Alishan**	**1.97**	**229**	*eP*	**Pb**	**13 51 27.2**	**-0.6**
ALS				*i* S	**Sb**	**13 51 51.8**	**-0.7**
EHD	**Haiduan**	**2.00**	**214**	*eP*	**Pn**	**13 51 26.0**	**+0.6**
WDL	**Douliou City**	**2.05**	**238**	*eS*	**Sb**	**13 51 53.4**	**-0.9**
ELDTW	**Lidau**	**2.07**	**219**	*eP*	**Pn**	**13 51 27.6**	**+1.1**
CHY	**Chiayi**	**2.26**	**235**	*eP*	**Pb**	**13 51 31.6**	**-0.8**
TWGBT	**Beinan**	**2.34**	**212**	P	**Pn**	**13 51 31.8**	**+1.8**
TWK	**Hsinying**	**2.35**	**230**	*eP*	**Pb**	**13 51 33.0**	**-1.1**
WSL	**Shuilin Townsh**	**2.39**	**238**	*eP*	**Pb**	**13 51 33.2**	**-0.1**
PHUB	**P'eng-hu**	**2.92**	**244**	*eP*	**Pn**	**13 51 38.7**	**+0.8**
PHUB				S	**Sn**	**13 52 13.8**	**+0.9**

*TAP **19** 13:51:45.6,24.°81N×122.°37E,h13km,ML3.0,C*
*JMA **19** 13:51:46.6±0.1,25.°1N±1.°1×122.°4E±0.°4,h9km,MV2.7/8, TAIWAN REGION*
ISC 19 13:51:45.5±1.0,**24.°83N**±0.°03×**122.°41E**±0.°02,**h12**km±9km, **n57**,σ0°**48**/85,**3C-1D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.42**	**295**	⇑*iP*	**Pg**	**13 51 54.2**	**+0.3**
TWB1				*i* S	**Sg**	**13 51 59.7**	**+0.2**
EOS2	**EOS2**	**0.44**	**202**	*i* P	**Pg**	**13 51 54.7**	**+0.5**
EOS2				*i* S	**Sb**	**13 52 01.7**	**0.0**
EOS3	**EOS3**	**0.55**	**189**	P	**Pg**	**13 51 56.4**	**+0.2**
EOS3				*eS*	**Sg**	**13 52 04.3**	**+0.8**
TIPB	**Shuangxi**	**0.55**	**285**	P	**Pg**	**13 51 56.2**	**0.0**
TIPB				*eS*	**Sb**	**13 52 05.1**	**+0.2**
SXI1	**Grass Mountain**	**0.55**	**299**	P	**Pb**	**13 51 57.1**	**0.0**
SXI1				S	**Sb**	**13 52 05.4**	**+0.4**
TWC	**Suao**	**0.56**	**247**	⇑*iP*	**Pg**	**13 51 55.6**	**-0.7**
ESAO	**Su ao**	**0.57**	**244**	P	**Pg**	**13 51 56.1**	**-0.6**
ILA	**Ilan**	**0.60**	**264**	*eP*	**Pg**	**13 51 57.4**	**+0.1**
ILA				*i* S	**Sb**	**13 52 06.3**	**-0.2**
JYNG	**Yonagunijimaku**	**0.62**	**128**	P	**Pb**	**13 51 57.8**	**-0.4**
JYNG				*eS*	**Sg**	**13 52 05.8**	**+0.1**
NWF	**Wu-fen Shan**	**0.62**	**293**	*i* P	**Pb**	**13 51 58.5**	**+0.2**
NWF				*i* S	**Sb**	**13 52 07.2**	**+0.2**
WFSB	**Wu-fen Shan**	**0.62**	**293**	P	**Pb**	**13 51 58.4**	**+0.1**
WFSB				*i* S	**Sb**	**13 52 07.6**	**+0.7**
TNOU	**National Taiwa**	**0.66**	**299**	*eP*	**Pb**	**13 51 58.9**	**0.0**
TNOU				S	**Sb**	**13 52 08.2**	**+0.1**
YOJ	**Yonaguni jima**	**0.66**	**124**	⇓*iP*	**Pb**	**13 51 58.9**	**-0.1**
YOJ				S	**Sb**	**13 52 07.9**	**-0.1**
YOJ	**Yonaguni jima**	**0.66**	**124**	P	**Pb**	**13 51 58.6**	**-0.3**
YOJ				*eS*	**Sg**	**13 52 06.9**	**-0.1**
NDS	**Dongshan**	**0.66**	**253**	P	**Pg**	**13 51 57.9**	**-0.5**
NDS				S	**Sg**	**13 52 06.9**	**-0.2**
TWE	**Neicheng**	**0.68**	**261**	⇑*iP*	**Pg**	**13 51 58.3**	**-0.5**
TWE				*i* S	**Sg**	**13 52 07.7**	**-0.2**
EWUT	**Wuta**	**0.69**	**236**	*eS*	**Sg**	**13 52 08.8**	**+0.8**
EOS4	**EOS4**	**0.71**	**187**	*eP*	**Pb**	**13 51 60.0**	**+0.3**
EOS4				*eS*	**Sb**	**13 52 09.3**	**+0.1**
FUSB	**Fushanzhiwuyua**	**0.75**	**265**	P	**Pg**	**13 52 00.1**	**+0.1**
FUSB				*eS*	**Sg**	**13 52 09.9**	**0.0**
TWA	**Mucha**	**0.77**	**281**	*eS*	**Sg**	**13 52 10.7**	**+0.3**
EAHA	**Aohua**	**0.79**	**231**	*eP*	**Pg**	**13 52 00.3**	**-0.4**
EAHA				*eS*	**Sg**	**13 52 10.7**	**-0.5**
ENTT	**Nioudou**	**0.79**	**256**	*i* P	**Pg**	**13 52 00.4**	**-0.5**
ENTT				*i* S	**Sg**	**13 52 11.1**	**-0.1**
YM01	**YM01**	**0.82**	**293**	P	**Pb**	**13 52 02.5**	**+0.4**
YM01				*eS*	**Sb**	**13 52 13.0**	**+0.1**
YM08	**YM08**	**0.82**	**296**	P	**Pg**	**13 52 00.9**	**-0.6**
YM08				*eS*	**Sb**	**13 52 12.6**	**-0.2**
NWLT	**Wulai**	**0.83**	**267**	*eP*	**Pg**	**13 52 01.6**	**+0.1**
NWLT				*i* S	**Sg**	**13 52 11.3**	**-1.1**
NDT	**Datong Townshi**	**0.85**	**255**	*eP*	**Pb**	**13 52 02.4**	**+0.3**
ZUZH	**Zhuzihu**	**0.85**	**293**	*eP*	**Pn**	**13 52 03.1**	**-0.2**
PCYT	**Pengchaiyu**	**0.85**	**339**	*eP*	**Pn**	**13 52 03.8**	**+0.5**
LATG	**Datong**	**0.85**	**250**	P	**Pg**	**13 52 01.4**	**-0.7**
LATG				*eS*	**Sg**	**13 52 13.8**	**+0.5**
TWY	**Chenhua**	**0.86**	**301**	*i* P	**Pn**	**13 52 03.3

BSUT IAML 13 53 02.2
comp=N,127nm,0.3s
HVU Hansel Valley 1.18 332 Pb 13 52 47.8 -0.8
FSU Fish Springs 1.45 226 Pn 13 52 52.2 -0.2
P17A Butcher Ranch, 1.61 141 Pn 13 52 55.2 +0.4
P17A IAML 13 53 19.1
comp=N,56nm,0.7s
P17A IAML 13 53 21.0
comp=E,72nm,0.5s
P18A Preston Nutter 1.77 128 Pb 13 52 58.4 -0.4
P18A IAML 13 53 22.7
comp=E,89nm,0.3s
P18A IAML 13 53 23.7
comp=N,82nm,0.5s
RDMU Red Mountain 1.89 94 Pb 13 52 59.9 -0.9
Q16A Castle Valley 1.94 159 Pn 13 52 59.7 +0.5
WLD Wild Horse Can 2.36 196 Pb 13 53 09.9 +1.1
ELK Elko 2.42 271 Pn **Pn 13 53 06.1 +0.1**
comp=N,1.9nm,0.3s,baz=88,slow=11,SNR=25
ELK Lg Lg 13 53 41.7
comp=N,8.2nm,0.3s,baz=180,slow=20,SNR=16
comp=N,3.2nm,0.3s
PSUT Pine Spring 2.61 213 Pn 13 53 09.1 +0.6
PSUT IAML 13 53 53.0
comp=E,44nm,0.6s
PSUT IAML 13 53 54.8
comp=N,42nm,0.7s
PD31 Pinedale Array 2.75 42 Pn 13 53 12.5 +2.0
PDAR Pinedale Array 2.75 42 Pn **Pn 13 53 10.9 +0.4**
comp=N,3.6nm,0.3s,baz=229,slow=14,SNR=142
PDAR Pg **Pb 13 53 15.2 -0.2**
comp=N,3.6nm,0.3s,baz=216,slow=16,SNR=87
PDAR Lg Lg 13 53 50.3
comp=N,26nm,0.3s,baz=212,slow=28,SNR=43
comp=N,4.1nm,0.3s
PDAR Pinedale Array 2.75 42 Pn 13 53 12.0 +1.5
FXWY Fox Creek 2.99 14 Pn 13 53 15.3 +1.5
LOHW Long Hollow 3.06 20 Pn 13 53 16.0 +1.3
LOHW IAML 13 54 08.2
comp=N,25nm,0.5s
LOHW IAML 13 54 08.4
comp=N,18nm,1.5s
MOOW Moose Ponds 3.16 17 Pn 13 53 17.2 +1.2
PV22 Blue Mesa, Par 3.34 130 Pn 13 53 18.9 +0.4
U15A North Rim 4.31 183 IAML 13 55 21.8
comp=E,9.9nm,4.5s
U15A IAML 13 55 23.2
comp=N,7.1nm,4.9s
NVAR Mina Array Bea 5.36 246 Pn **Pn 13 53 43.8 -2.4**
comp=N,0.1nm,0.3s,baz=70,slow=12,SNR=2.1
NVAR Pg **Pb 13 53 58.5 -1.3**
comp=N,0.2nm,0.3s,baz=70,slow=16,SNR=2.4
NVAR Lg Lg 13 55 13.2
comp=N,1.2nm,0.3s,baz=63,slow=37,SNR=3.3
ANMO Albuquerque 7.28 141 Lg Lg 13 56 07.5
comp=N,0.1nm,0.3s,baz=328,slow=9.5,SNR=3.9
TXAR Lajitas Array 13.28 146 Pn **Pn 13 55 34.8 +0.1**
comp=N,0.2nm,0.3s,baz=335,slow=14,SNR=2.3
comp=N,0.1nm,0.4s

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*IDC **19** 13:52:53.9±0.5,20.91N×143.52E,h0km,mb4.4/30, mbtmp4.4/34,ML3.7/4,MS4.4/82,Error ellipse: s-maj=15.9km s-min=11.0km az=80.0*
*BJI **19** 13:52:53.7,20.91N×143.71E,h10km,mB5.4/46,mb4.6/61, Ms4.8/65,Ms7 4.6/62*
*NEIC **19** 13:52:55.2±1.6,20.70N±0.08×143.5E±0.1,h10km±1km, mb5.2/252,Ms_20 4.9/322,Mww5.5/50,Error ellipse: s-maj=19.9km s-min=13.7km az=87.0*
*NEIC **19** 13:52:55.7,20.72N×143.44E,h16km*
*MOS **19** 13:52:55.4±1.1,20.92N×143.52E,h19km,mb5.0/39, MS4.6/13,Error ellipse: s-maj=10.3km s-min=5.6km az=109.6*
*NEIC **19** 13:52:55.7,20.82N×143.54E,h16km,Moment Tensor Solution. Duration: 2s7 Moment tensor: Scale 10^17^Nm; Mrr-1.76; Mθθ0.19; Mφφ 1.58; Mrθ0.39; Mθφ-0.55; Mφr1.36; Fault plane solution: M0 2.27000×10^17^ NP1: φs324.63000°,δ30.49000°,λ-121.90000°. NP2: φs180.48000°,δ64.49000°,λ-72.72000°. Principal axes: T 2.1458, Plg18.0000°, Azm258.0000°; N 0.2250, Plg16.0000°, Azm353.0000°; P -2.3709, Plg66.0000°, Azm122.0000°;*
*GFZ **19** 13:52:56.8,20.82N×143.67E,h17km,MW5.5,Moment Tensor Solution. s98 Moment tensor: Mrr-1.49; Mθθ0.39; Mφφ1.10; Mrθ-0.08; Mθφ-0.35; Mφr1.37; Fault plane solution: NP1:φs170.00000°,δ67.00000°, λ-82.00000°. NP2:φs331.00000°,δ23.00000°, λ-107.00000°. Principal axes: T 1.7800, Plg22.0000°, Azm254.0000°; N 0.3000, Plg6.0000°, Azm347.0000°; P -2.0800, Plg66.0000°, Azm93.0000°;*
*GCMT **19** 13:53:00.2±0.1,20.76N±0.01×143.48E,h12km, MW5.4/158,Moment Tensor Solution. s117,c188; s158,c306; Duration: 1s2 Moment tensor: Scale 10^17^ Nm; Mrr-1.62±.01; Mθθ0.29±.01; Mφφ1.33±.01; Mrθ0.02±.04; Mθφ-0.57±.01; Mφr0.46±.04; Best double couple: M0 1.66400×10^17^ NP1:φs330.00000°,δ38.00000°, λ-101.00000°. NP2:φs163.00000°,δ53.00000°, λ-82.00000°. Principal axes: T 1.6320, Plg7.0000°, Azm247.0000°; N 0.0650, Plg7.0000°, Azm338.0000°; P -1.6960, Plg80.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 19 13:52:55.5±0.3,20.80N±0.04×143.55E±0.05,h10km,n725, σ1§41/476,mb5.1/219,MS4.8/267,13C-11D,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
JCJ	**Chichijima**	**6.39**	**349**	Pn	**Pn**		**13 54 29.4**	**-0.3**
	9.7nm,0.3s,baz=164,slow=20,SNR=3.5							
	45nm,0.8s							
JCJ	**Chichijima**	**6.39**	**349**		**Pn**		**13 54 27.4**	**-2.3**
GUMO	**Guam**	**7.28**	**170**	Pn	**Pn**		**13 54 44.6**	**+2.6**
	5.2nm,0.3s,baz=325,slow=17,SNR=2.6							
	167nm,1.1s							
GUMO	**Guam**	**7.28**	**170**	Pn	**Pn**		**13 54 39.8**	**-2.2**
JHJ	**Hachijo jima 2**	**12.72**	**345**	LR	LR		14 00 30.5	
	comp=Z,2μm,18.6s,baz=78,slow=36							
JOW	**Kunigami**	**15.21**	**296**	LR	LR		14 01 15.7	
	comp=Z,3μm,20.1s,baz=112,slow=33							
MJAR	**Matsushiro Arr**	**16.36**	**345**	Pn	**Pn**		**13 56 43.5**	**-1.9**
	0.1nm,0.3s,baz=164,slow=10,SNR=6.0							
MJAR				LR	LR		14 02 24.2	
	comp=Z,2μm,21.9s,baz=146,slow=35							
	2.6nm,1.1s							
MJAR	**Matsushiro Arr**	**16.36**	**345**	Pn	**Pn**		**13 56 44.6**	**-0.7**
MJAR	**Matsushiro Arr**	**16.36**	**345**	P	**Pn**		**13 56 44.6**	**-0.7**
MJAR				pmax	pmax			
	comp=Z,13nm,1.6s							
JNU	**Nakatsue**	**16.66**	**320**	Pn	**Pn**		**13 56 48.4**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=153,slow=14,SNR=2.1							
JNU				LR	LR		14 02 16.2	
	comp=Z,636nm,18.4s,baz=128,slow=34							
	comp=Z,10nm,0.9s							
KSRS	**Korea Array**	**21.43**	**324**	P	**P**		**13 57 44.4**	**+0.6**
	comp=Z,7.6nm,0.8s,baz=141,slow=9.2,SNR=18							
KSRS				LR	LR		14 04 41.5	
	comp=Z,1μm,21.9s,baz=145,slow=33							
	comp=Z,7.6nm,0.8s							
H11S3	**WAKE ISLAND Hy**	**21.91**	**92**	T	T		14 20 30.7	
	baz=280,slow=75,SNR=1046							
H11S1	**WAKE ISLAND Hy**	**21.92**	**92**	T	T		14 20 35.1	
	baz=280,slow=75,SNR=1195							
H11N1	**WAKE ISLAND Hy**	**21.92**	**89**	T	T		14 20 29.1	
	baz=277,slow=75,SNR=2275							
H11N2	**WAKE ISLAND Hy**	**21.93**	**89**	T	T		14 20 29.7	
	baz=277,slow=75,SNR=895							
H11S2	**WAKE ISLAND Hy**	**21.93**	**92**	T	T		14 20 33.0	
	baz=280,slow=75,SNR=297							
H11N3	**WAKE ISLAND Hy**	**21.94**	**89**	T	T		14 20 32.1	
	baz=277,slow=75,SNR=589							
DAV	**Davao City (W)**	**22.11**	**234**	LR	LR		14 04 36.2	
	comp=Z,4μm,21.1s,baz=72,slow=32							
DAV	**Davao City (W)**	**22.11**	**234**	IAMs_20	IAMs_20		14 04 26.3	
	comp=Z,4μm,20.0s							
SSE	**Sheshan**	**22.53**	**302**	P	**P**		**13 57 53.8**	**-1.8**
SSE				S	**S**		**14 02 02.0**	**-0.8**
SSE				pmax	pmax			
	comp=Z,11nm,0.8s							
SSE				pmax	pmax			
	comp=Z,440nm,5.6s							
SSE				L	L			
	comp=Z,590nm,16.5s							
SSE				L	L			
	comp=Z,640nm,13.7s							
TGY	**Tagaytay City**	**22.56**	**256**	P	**P**		**13 57 57.7**	**+1.5**
	comp=Z,131nm,0.4s,baz=72,slow=20,SNR=6.7							
TGY				LR	LR		14 04 55.0	
	comp=Z,3μm,21.7s,baz=83,slow=32							
MANU	**Manus Island**	**23.01**	**170**	P	**P**		**13 57 58.5**	**-2.3**
MANU				IAmb	IAmb		13 58 03.9	
	comp=Z,76nm,1.2s							
BAKI	**Biak**	**23.04**	**199**	P	**P**		**13 58 02.1**	**+1.0**
	comp=Z,2μmcomp=Z,68nm,1.6s							
ASAJ	**Asahikawa**	**23.26**	**358**	LR	LR		14 07 14.3	
	comp=Z,581nm,21.1s,baz=174,slow=37							
JAY	**Jayapura**	**23.34**	**187**	P	**P**		**13 58 06.0**	**+1.8**
	comp=Z,20nm,1.1s,baz=350,slow=5.1,SNR=15							
JAY				LR	LR		14 05 53.5	
	comp=Z,1μm,19.7s,baz=11,slow=33							
	comp=Z,20nm,1.1s							
JAY	**Jayapura**	**23.34**	**187**	P	**P**		**13 58 06.0**	**+1.8**
JAY	**Jayapura**	**23.34**	**187**	P	**P**		**13 58 04.6**	**+0.4**
	comp=Z,1μmcomp=Z,37nm,1.8s							
QZH2	**Quanzhou**	**23.34**	**285**	P	**P**		**13 58 06.5**	**+2.4**
QZH2				S	**S**		**14 02 18.8**	**+1.7**
QZH2				pmax	pmax			
	comp=Z,2μm,4.8s							
QZH2				L	L			
	comp=Z,1μm,14.4s							
QZH2				L	L			
	comp=Z,2μm,17.9s							
QZH2				L	L			
	comp=Z,3μm,24.1s							
GENI	**Genyem**	**23.49**	**189**	P	**P**		**13 58 07.2**	**+1.6**
	comp=Z,2μmcomp=Z,4μmcomp=Z,66nm,2.2s							
SWI	**Sorong**	**24.66**	**211**	P	**P**		**13 58 16.8**	**+0.1**
	comp=Z,2μmcomp=Z,45nm,1.3s							
SIJI	**Sorong**	**24.67**	**211**	LR	LR		14 05 37.5	
	comp=Z,1μm,19.4s,baz=36,slow=31							
SIJI	**Sorong**	**24.67**	**211**	P	**P**		**13 58 17.0**	**+0.3**
	comp=Z,2μmcomp=Z,1μmcomp=Z,33nm,1.5s							
NJ2	**Nanjing**	**24.73**	**302**	*e*P	**P**		**13 58 18.8**	**+1.6**
NJ2				S	**S**		**14 02 45.8**	**+6.6**
NJ2				pmax	pmax			
	comp=Z,24nm,0.5s							
NJ2				pmax	pmax			
	comp=Z,2μm,11.4s							
NJ2				L	L			
	comp=Z,3μm,18.0s							
NJ2				L	L			
	comp=Z,3μm,17.1s							
NJ2				L	L			
	comp=Z,7μm,22.3s							
USRK	**Ussuriysk Ar.**	**25.23**	**340**	P	**P**		**13 58 19.4**	**-2.2**
	comp=Z,3.6nm,0.9s,baz=140,slow=12,SNR=4.6							
	comp=Z,3.6nm,0.9s							
YSS	**Yuzhno-Sakhali**	**26.09**	**359**	*e*P	**P**		**13 58 27.9**	**-1.4**
YSS				*e*S	**S**		**14 02 56.5**	**-4.1**
YSS				pmax	pmax			
	comp=Z,300nm,5.9s							
YSS				pmax	pmax			
	comp=Z,20nm,1.3s							
YSS				MLR	MLR			
	comp=Z,600nm,11.0s							
DL2	**Dalian**	**26.10**	**319**	*e*P	**P**		**13 58 27.8**	**-1.7**
DL2				S	**S**		**14 03 01.4**	**+0.6**
DL2				pmax	pmax			
	comp=Z,20nm,1.1s							
DL2				pmax	pmax			
	comp=Z,720nm,4.9s							
DL2				L	L			
	comp=Z,1μm,16.9s							
DL2				L	L			
	comp=Z,1μm,15.1s							
DL2				L	L			
	comp=Z,1μm,15.1s							
RABL	**Rabaul**	**26.24**	**160**	P	**P**		**13 58 29.9**	**-1.0**
KRVT	**Keravat (AS076**	**26.30**	**161**	LR	LR		14 07 22.9	
	comp=Z,76nm,21.5s,baz=280,slow=33							
SNY	**Shenyang**	**26.90**	**326**	⇑P	**P**		**13 58 39.0**	**+2.3**
SNY				pmax	pmax			
	comp=Z,260nm,3.8s							
SNY				L	L			
	comp=Z,1μm,14.0s							
SNY				L	L			
	comp=Z,810nm,14.0s							
SNY				L	L			
	comp=Z,870nm,22.3s							
TIA	**Tai'an**	**27.72**	**309**	P	**P**		**13 58 42.6**	**-1.5**
TIA				PP	**PnPn**		**13 59 38.5**	**+8.7**
TIA				S	**S**		**14 03 26.0**	**-0.5**
TIA				pmax	pmax			
	comp=Z,7.0nm,0.9s							
TIA				pmax	pmax			
	comp=Z,500nm,4.8s							
TIA				L	L			
	comp=Z,1μm,14.1s							
TIA				L	L			
	comp=Z,1μm,16.3s							
GZH2	**Guangzhou**	**27.80**	**281**	P	**P**		**13 58 45.6**	**+0.7**
GZH2				S	**S**		**14 03 29.8**	**+1.8**
GZH2				pmax	pmax			
	comp=Z,720nm,7.4s							
GZH2				L	L			
	comp=Z,650nm,14.9s							
GZH2				L	L			
	comp=Z,800nm,15.5s							
GZH2				L	L			
	comp=Z,1μm,19.4s							
WHN	**Wuhan**	**27.98**	**296**	P	**P**		**13 58 50.5**	**+4.0**
WHN				S	**S**		**14 03 32.3**	**+1.6**
WHN				pmax	pmax			
	comp=Z,49nm,0.9s							
WHN				pmax	pmax			
	comp=Z,800nm,4.3s							
WHN				L	L			
	comp=Z,2μm,10.9s							
WHN				L	L			
	comp=Z,7μm,26.5s							
WHN				L	L			
	comp=Z,5μm,16.3s							
BNX	**BinXian**	**28.19**	**336**	⇑P	**P**		**13 58 48.8**	**+0.6**
BNX				pmax	pmax			
	comp=Z,11nm,1.7s							
KRAI	**Karang Ratu**	**28.21**	**214**	P	**P**		**13 58 48.0**	**-0.6**
	comp=Z,18nm,2.1s							
SANI	**Sanana**	**28.49**	**219**	P	**P**		**13 58 49.9**	**-1.3**
	comp=Z,518nmcomp=Z,8.4nm,0.8s							
AAI	**Ambon**	**28.62**	**213**	P	**P**		**13 58 52.0**	**-0.3**
CNSH	**ChangSha**	**28.76**	**291**	P	**P**		**13 58 52.8**	**-0.7**
CNSH				S	**S**		**14 03 43.9**	**+0.8**
CNSH				pmax	pmax			
	comp=Z,13nm,2.0s							
CNSH				L	L			
	comp=Z,980nm,17.7s							
CNSH				L	L			
	comp=Z,1μm,21.6s							
CNSH				L	L			
	comp=Z,2μm,28.2s							
MYLDM	**Lahad Datu**	**28.86**	**241**		**P**		**13 58 49.7**	**-4.7**
MYLDM				IAmb	IAmb		13 59 15.2	
	comp=Z,58nm,1.2s							
MYLDM	**Lahad Datu**	**28.86**	**241**	P	**P**		**13 58 55.6**	**+1.2**
	comp=Z,41nm,1.4s							
MRSI	**Marisa**	**29.22**	**229**	P	**P**		**13 58 57.5**	**-0.2**
	comp=Z,606nmcomp=Z,15nm,0.9s							
KLR	**Kul'dur**	**29.89**	**344**	LR	LR		14 10 47.4	
	comp=Z,745nm,19.8s,baz=152,slow=36							
KLR	**Kul'dur**	**29.89**	**344**	⇑*e*P	**P**		**13 59 02.8**	**-0.5**
KLR				pmax	pmax			
	comp=Z,6.0nm,0.9s							
HNS	**HongShan**	**29.98**	**310**	⇑P	**P**		**13 59 05.3**	**+1.1**
HNS				S	**S**		**14 04 01.3**	**-0.7**
HNS				pmax	pmax			
	comp=Z,11nm,1.0s							
HNS				pmax	pmax			
	comp=Z,300nm,7.5s							
HNS				L	L			
	comp=Z,570nm,17.1s							
HNS				L	L			
	comp=Z,880nm,16.9s							
HNS				L	L			
	comp=Z,1μm,18.4s							
BJI2	**Beijing**	**30.21**	**315**	P	**P**		**13 59 06.0**	**-0.2**
BJI2				S	**S**		**14 04 10.5**	**+4.8**
BJI2				L	L			
	comp=Z,170nm,18.5s							
BJI2				L	L			
	comp=Z,320nm,18.5s							
BJI2				L	L			
	comp=Z,220nm,19.3s							
PMG	**Port Moresby**	**30.23**	**173**	LR	LR		14 11 21.8	
	comp=Z,558nm,18.4s,baz=341,slow=36							
LYN	**LuoYang**	**30.61**	**303**	*e*P	**P**		**13 59 09.1**	**-0.7**
LYN				PP	**PnPn**		**14 00 09.8**	**+0.8**
LYN				S	**S**		**14 04 11.4**	**-0.5**
LYN				pmax	pmax			
	comp=Z,440nm,4.5s							
LYN				L	L			
	comp=Z,1μm,13.4s							
LYN				L	L			
	comp=Z,1μm,11.8s							
LYN				L	L			
	comp=Z,2μm,14.9s							
MPSI	**Mapaga**	**30.79**	**232**	P	**P**		**13 59 11.8**	**+0.2**
	comp=Z,493nmcomp=Z,15nm,1.6s							
QIZ	**Qiongzhong**	**31.71**	**273**	P	**P**		**13 59 18.3**	**-1.4**
QIZ				S	**S**		**14 04 27.1**	**-2.4**
QIZ				L	L			
	comp=Z,970nm,16.6s							
QIZ				L	L			
	comp=Z,870nm,20.5s							
QIZ				L	L			
	comp=Z,2μm,22.9s							
HEH	**HeiHe**	**32.04**	**340**	*e*P	**P**		**13 59 22.4**	**+0.2**
HEH				pP	**sP**		**13 59 26.3**	**+1.3**
HEH				S	**S**		**14 04 28.8**	**-5.2**
HEH				pmax	pmax			
	comp=Z,12nm,1.0s							
HEH				pmax	pmax			
	comp=Z,340nm,3.8s							
HEH				L	L			
	comp=Z,860nm,20.8s							
HEH				L	L			
	comp=Z,1μm,21.6s							
HEH				L	L			
	comp=Z,890nm,23.3s							
ENH	**Enshi**	**32.05**	**294**	IAMs_20	IAMs_20		14 11 06.6	
	comp=Z,2μm,20.0s							
XAN	**Xi'an**	**33.28**	**301**	P	**P**		**13 59 33.9**	**+0.5**
XAN				S	**S**		**14 04 53.3**	**-0.5**
XAN				pmax	pmax			
	comp=Z,400nm,10.3s							
XAN				L	L			
	comp=Z,1μm,15.6s							
XAN				L	L			
	comp=Z,2μm,16.0s							
XAN				L	L			
	comp=Z,2μm,22.5s							
HHC	**Hu-ho-hao-te**	**33.69**	**314**	*e*P	**P**		**13 59 38.8**	**+1.9**
HHC				PP	**PP**		**14 00 51.9**	**-1.2**
HHC				S	**S**		**14 05 01.5**	**+1.3**
HHC				sS	sS		14 05 08.1	+5.0
HHC				SS	**SnSn**		**14 07 07.1**	**+3.2**
HHC				pmax	pmax			
	comp=Z,16nm,0.6s							
HHC				L	L			
	comp=Z,440nm,14.5s							
HHC				L	L			
	comp=Z,800nm,14.1s							
HHC				L	L			
	comp=Z,530nm,14.6s							
SPSI	**Sidrap Palu**	**33.91**	**226**	P	**P**		**13 59 37.9**	**-1.0**
	comp=Z,22nm,1.3s							
PETK	**Petropavlovsk-**	**34.04**	**15**	P	**P**		**13 59 39.1**	**-0.5**
	comp=Z,2.0nm,0.8s,baz=213,slow=7.0,SNR=2.3							
PETK				LR	LR		14 11 05.9	
	comp=Z,1μm,21.7s,baz=197,slow=32							
	comp=Z,2.0nm,0.8s							
HNR	**Honiara**	**34.10**	**150**	LR	LR		14 11 55.1	
	comp=Z,37nm,22.0s,baz=63,slow=33							
PET	**Petropavlovsk**	**34.21**	**16**	*e*P	**P**		**13 59 39.3**	**-1.8**
PET				*e*S	**S**		**14 05 08.0**	**+0.5**
PET				pmax	pmax			
	comp=Z,500nm,5.0s							
PET				MLR	MLR			
	comp=Z,700nm,14.0s							
PET				MLR	MLR			
	comp=Z,400nm,13.0s							
KAPI	**Kappang**	**34.70**	**225**	LR	LR		14 13 21.2	
	comp=Z,597nm,19.2s,baz=51,slow=35							
KAPI	**Kappang**	**34.70**	**225**	⇑*e*P	**P**		**13 59 46.7**	**+0.9**
KAPI				pmax	pmax			
	comp=Z,39nm,1.6s							
KAPI	**Kappang**	**34.70**	**225**	P	**P**		**13 59 44.9**	**-0.9**
	comp=Z,13nm,1.6s							
BTO2	**Baotou**	**34.80**	**312**	*e*P	**P**		**13 59 47.8**	**+1.2**
BTO2				S	**S**		**14 05 20.4**	**+3.1**
BTO2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
BTO2				pmax	pmax			
	comp=Z,360nm,6.2s							
BTO2				L	L			
	comp=Z,2μm,14.9s							
BTO2				L	L			
	comp=Z,1μm,15.9s							
BTO2				L	L			
	comp=Z,2μm,18.1s							
ZEA	**Zeya**	**35.17**	**343**	*e*P	**P**		**13 59 49.1**	**-0.3**
ZEA				pmax	pmax			
	comp=Z,10.0nm,0.9s							
SBUM	**Sibu**	**35.57**	**243**	P	**P**		**13 59 51.8**	**-1.5**
SBUM				IAmb	IAmb		13 59 57.1	
	comp=Z,60nm,1.9s							
SBUM	**Sibu**	**35.57**	**243**	P	**P**		**13 59 53.9**	**+0.6**
	comp=Z,453nmcomp=Z,12nm,1.7s							
MTN	**Manton Dam**	**35.59**	**201**		**P**		**13 59 49.8**	**-3.6**
SOEI	**Soe**	**35.80**	**214**	P	**P**		**13 59 52.5**	**-2.8**
SOEI				IAmb	IAmb		14 00 02.3	
	comp=Z,32nm,1.2s							
SOEI				IAMs_20	IAMs_20		14 11 48.9	
	comp=Z,2μm,22.0s							
MMRI	**Maumere**	**35.98**	**218**	P	**P**		**13 59 55.2**	**-1.6**
MMRI				IAmb	IAmb		13 59 59.1	
	comp=Z,60nm,1.3s							
EDFI	**Ende, Flores**	**36.39**	**218**	P	**P**		**13 59 59.1**	**-1.3**
	comp=Z,421nmcomp=Z,23nm,1.7s							
BATI	**Baumata**	**36.50**	**214**	LR	LR		14 12 46.0	
	comp=Z,994nm,20.9s,baz=38,slow=33							
CD2	**Chengdu**	**37.03**	**294**	P	**P**		**14 00 04.3**	**-1.4**
CD2				pP	pP		14 00 07.3	-0.3
CD2				PP	**PnPn**		**14 01 30.5**	**+0.2**
CD2				S	**S**		**14 05 50.8**	**-0.8**
CD2				pmax	pmax			
	comp=Z,410nm,6.6s							
CD2				L	L			
	comp=Z,2μm,14.9s							
CD2				L	L			
	comp=Z,2μm,16.5s							
CD2				L	L			
	comp=Z,2μm,16.7s							
KMI2	**Kunming**	**37.72**	**285**	⇑P	**P**		**14 00 14.9**	**+3.1**
KMI2				S	**S**		**14 06 01.9**	**-0.6**
KMI2				pmax	pmax			
	comp=Z,14nm,1.0s							
KMI2				pmax	pmax			
	comp=Z,360nm,5.3s							
KMI2				L	L			
	comp=Z,880nm,22.9s							
KMI2				L	L			
	comp=Z,800nm,18.4s							
KMI2				L	L			
	comp=Z,860nm,24.1s							
LZH	**Lanzhou**	**37.81**	**302**	*e*P	**P**		**14 00 14.3**	**+1.9**
LZH				sP	pwP		14 00 25.8	+6.3
LZH				S	**S**		**14 06 04.8**	**+1.3**
LZH				pmax	pmax			
	comp=Z,13nm,1.6s							
LZH				pmax	pmax			
	comp=Z,240nm,4.3s							
LZH				L	L			
	comp=Z,840nm,17.1s							
LZH				L	L			
	comp=Z,810nm,18.4s							
LZH				L	L			
	comp=Z,1μm,16.5s							
LZDM	**Lanzhou Array**	**37.90**	**302**	P	**P**		**14 00 13.5**	**+0.2**
	comp=Z,1.7nm,0.3s,baz=106,slow=14,SNR=1.2							
LZDM				LR	LR		14 14 54.1	
	comp=Z,575nm,22.0s,baz=145,slow=35							
	comp=Z,1.7nm,0.3s							
PZH	**PanZhiHua**	**38.59**	**287**	P	**P**		**14 00 20.3**	**+1.2**
PZH				PP	**PnPn**		**14 01 54.8**	**+5.5**

PZH S **S** **14 06 12.3 -3.2**
PZH pmax pmax
comp=Z,10.0nm,1.6s
PZH pmax pmax
comp=Z,320nm,6.3s
PZH L L
comp=Z,610nm,18.6s
PZH L L
comp=Z,710nm,20.8s
PZH L L
comp=Z,1µm,24.5s
KNRA Kununurra 39.05 203 P 14 00 20.2 -2.5
SHEM Shemya Is, Ala 39.62 29 LR LR 14 13 38.4
comp=Z,1µm,20.5s,baz=300,slow=32
ULN Ulaanbaatar 39.87 321 *de*P **P 14 00 29.7 +0.2**
ULN pmax pmax
comp=Z,10.0nm,1.5s
ULN Ulaanbaatar 39.87 321 P **P 14 00 27.8 -1.7**
comp=Z,31nm,2.5s
KHKI Kahang-Kahang 39.93 226 P **P 14 00 31.3 +1.1**
comp=Z,34nm,1.7s
KMMI Kalianget 40.14 229 P **P 14 00 33.4 +1.5**
comp=Z,45nm,1.8s
SONM Songino Array 40.24 321 P **P 14 00 32.2 -0.4**
SONM LR LR 14 17 16.9
comp=Z,532nm,21.5s,baz=125,slow=36
comp=Z,3.9nm,0.9s
SONM Songino Array 40.24 321 P **P 14 00 31.9 -0.7**
SONM Songino Array 40.24 321 P **P 14 00 31.9 -0.7**
SONM pmax pmax
comp=Z,3.0nm,1.0s
CTA Charters Tower 40.73 176 LR LR 14 18 54.1
comp=Z,240nm,18.1s,baz=344,slow=38
CTAO Charters Tower 40.73 176 P **P 14 00 38.9 +2.3**
CTAO pmax pmax
comp=Z,39nm,2.0s
JAGI Jajag, Banyuwa 41.00 228 P **P 14 00 37.4 -1.7**
JAGI Jajag, Banyuwa 41.00 228 P **P 14 00 37.3 -1.7**
comp=Z,22nm,1.5s
WR8 Warramunga Arr 41.47 193 P 14 00 40.8 -1.9
WRAB Tennant Creek 41.48 193 *de*P **P 14 00 43.2 +0.4**
WRAB pmax pmax
comp=Z,23nm,1.7s
WRA Warramunga Arr 41.49 193 P **P 14 00 42.9 -0.1**
comp=Z,4.5nm,0.8s,baz=13,slow=8.2,SNR=19
WRA PcP **PcP 14 02 41.3 +0.6**
comp=Z,2.8nm,0.8s,baz=12,slow=3.3,SNR=7.4
comp=Z,4.5nm,0.8s
WRA Warramunga Arr 41.49 193 P **P 14 00 39.4 -3.5**
WRA Warramunga Arr 41.49 193 P **P 14 00 39.4 -3.5**
WRA pmax pmax
comp=Z,4.0nm,1.6s
TNCH TengChong 41.55 285 P **P 14 00 46.1 +2.4**
TNCH PP **PnPn 14 02 25.3 +0.8**
TNCH S **S 14 07 00.8 +0.8**
TNCH pmax pmax
comp=Z,16nm,0.7s
TNCH pmax pmax
comp=Z,330nm,5.4s
TNCH L L
comp=Z,430nm,14.8s
TNCH L L
comp=Z,350nm,14.8s
TNCH L L
comp=Z,1µm,21.9s
GTA2 Gaotai 41.73 306 *e*P **P 14 00 46.3 +1.3**
GTA2 sP pwP 14 00 51.3 -0.8
GTA2 S **S 14 07 01.5 -0.7**
GTA2 pmax pmax
comp=Z,5.0nm,1.5s
GTA2 pmax pmax
comp=Z,410nm,6.3s
GTA2 L L
comp=Z,710nm,16.5s
GTA2 L L
comp=Z,720nm,21.3s
GTA2 L L
comp=Z,1µm,22.9s
CHTO Chiang Mai 41.92 275 P **P 14 00 48.0 +1.4**
CHTO pmax pmax
comp=Z,10.0nm,2.0s
CHTO Chiang Mai 41.92 275 P **P 14 00 47.0 +0.4**
CMAR Chiang Mai Arr 41.98 275 P **P 14 00 48.5 +1.3**
comp=Z,1.9nm,0.6s,baz=86,slow=7.7,SNR=18
CMAR PcP **PcP 14 02 43.0 +0.5**
comp=Z,0.6nm,0.4s,baz=82,slow=2.9,SNR=4.7
CMAR LR LR 14 16 23.8
comp=Z,673nm,21.6s,baz=85,slow=34
comp=Z,1.9nm,0.6s
CMAR Chiang Mai Arr 41.98 275 P **P 14 00 46.0 -1.1**
SJI Sawahan 42.19 231 P **P 14 00 47.9 -1.0**
SNJI Sawahan-Nganju 42.23 231 P **P 14 00 50.5 +1.2**
comp=Z,896nmcomp=Z,47nm,1.5s
YAK Yakutsk 42.30 350 LR LR 14 18 48.0
comp=Z,415nm,20.1s,baz=146,slow=37
YAK Yakutsk 42.30 350 *e*P **P 14 00 48.2 -0.9**
YAK *e**PP **sP 14 00 51.8 -0.1**
YAK *e* 14 02 25.4
YAK *e* 14 02 41.9
YAK *e*PPP PPP 14 02 56.1
YAK *e*S **S 14 07 09.7 0.0**
YAK *e**SS **sS 14 07 15.5 +2.7**
YAK *e*SSS SSS 14 10 50.9
YAK pmax pmax
comp=Z,15nm,1.0s
YAK pmax pmax
comp=N,3.0nm,1.2s
YAK pmax pmax
comp=E,2.0nm,1.2s
YAK pmax pmax
comp=Z,165nm,5.1s
YAK pmax pmax
comp=N,62nm,5.3s
YAK pmax pmax
comp=E,75nm,5.2s
YAK smax smax
comp=E,110nm,4.3s
YAK smax smax
comp=N,97nm,4.1s
YAK MLR MLR
comp=Z,366nm,17.0s
YAK MLR MLR
comp=N,349nm,23.0s
YAK MLR MLR
comp=E,294nm,20.0s
FITZ Fitzroy Crossi 42.46 206 LR LR 14 18 20.1
comp=E,281nm,20.2s,baz=24,slow=36
SEY Seymchan 42.53 6⇓ *e*P **P 14 00 52.4 +1.4**
SEY pmax pmax
comp=Z,24nm,1.7s
PCJI Pacitan 42.93 231 P **P 14 00 53.8 -1.0**
MYKOM Kota Tinggi 43.08 249 P **P 14 00 57.6 +1.6**
comp=Z,755nmcomp=Z,27nm,1.7s
ZAK Zakamensk 43.26 323 *e*P **P 14 00 56.8 -0.4**
ZAK pmax pmax
comp=Z,14nm,1.8s
IRK Irkutsk 43.63 326 *e*P **P 14 00 58.2 -1.9**
IRK pmax pmax
comp=Z,49nm,3.5s
TLY Talaya 43.69 325 LR LR 14 20 20.1
comp=Z,430nm,19.0s,baz=116,slow=38
TLY Talaya 43.69 325⇓ *e*P **P 14 01 01.0 +0.5**
TLY pmax pmax
comp=Z,8.0nm,1.0s
KULM Kulim 44.37 256 P **P 14 01 06.3 -0.2**
KULM Kulim 44.37 256 P **P 14 01 07.4 +0.9**
comp=Z,531nmcomp=Z,17nm,1.7s
LEM Lembang 44.72 236 LR LR 14 20 54.3
comp=Z,548nm,20.3s,baz=42,slow=38
GOMU GeErMu 45.03 301 P **P 14 01 10.6 -1.4**
GOMU PP **PP 14 02 56.1 -1.0**
GOMU S **S 14 07 47.3 -3.8**
GOMU pmax pmax
comp=Z,10.0nm,1.2s
GOMU L L
comp=Z,320nm,20.2s
GOMU L L
comp=Z,400nm,19.7s
GOMU L L
comp=Z,570nm,18.6s
MOY Mondy 45.13 324 *e*P **P 14 01 15.0 +2.8**
MOY pmax pmax
comp=Z,30nm,3.5s
AS31 Alice Springs 45.19 193 P 14 01 10.2 -2.6
ASAR Alice Springs 45.19 193 P **P 14 01 12.6 -0.3**
comp=Z,1.0nm,0.4s,baz=11,slow=7.6,SNR=47
ASAR PcP **PcP 14 02 54.0 +0.9**
comp=Z,3.0nm,0.9s,baz=16,slow=3.4,SNR=7.9
ASAR LR LR 14 19 03.0
comp=Z,656nm,21.0s,baz=7.0,slow=35
comp=Z,1.0nm,0.4s
ASAR Alice Springs 45.19 193 P **P 14 01 12.9 +0.1**
BKNI Bangkinang 46.24 249 IAMs_20 IAMs_20 14 18 59.3
comp=Z,1µm,20.0s
KNGR Kungurtug, Tuv 46.69 321⇓ *e*P **P 14 01 24.1 -0.4**
KNGR pmax pmax
comp=Z,3.0nm,1.0s
PSI Prapat 46.98 254 P **P 14 01 25.7 -1.6**
PSI pmax pmax
comp=Z,21nm,1.1s
PSI MLR MLR
comp=Z,500nm,19.0s
PSI Prapat 46.98 254 P **P 14 01 28.2 +0.9**
comp=Z,560nmcomp=Z,21nm,1.1s
RPSI Rantau Prapat 47.03 254 P **P 14 01 25.7 -1.8**
RPSI IAmb IAmb 14 01 30.5
comp=Z,21nm,1.1s
MNSI Mandailing Nat 47.30 251 P **P 14 01 30.8 +1.2**
KCSI Kotacane, Aceh 47.71 255 P **P 14 01 31.4 -1.5**
comp=Z,500nmcomp=Z,18nm,1.1s
LSA Lhasa 47.88 292 IAMs_20 IAMs_20 14 20 55.4
comp=Z,1µm,22.0s
BRDH Bariadhala 48.05 282 LR LR 14 24 00.4
comp=Z,555nm,19.2s,baz=118,slow=39
INKA Innaminka 48.34 183 P 14 01 36.2 -1.1
INKA IAmb IAmb 14 01 39.4
comp=Z,34nm,1.8s
GSI Gunungsitoli 48.85 253 P 14 01 40.5 -1.1
GSI Gunungsitoli 48.85 253 P **P 14 01 41.9 +0.3**
comp=Z,49nm,1.9s
BILL Bilibino 49.33 11 P 14 01 45.5 +0.9
BILL IAmb IAmb 14 01 49.7
comp=Z,58nm,1.8s
BILL Bilibino 49.33 11 *de*P **P 14 01 45.2 +0.7**
BILL pmax pmax
comp=Z,32nm,1.7s
MSVF Nonsavu 51.10 136 LR LR 14 21 54.5
comp=Z,159nm,19.9s,baz=15,slow=34
WMQ Urumqi 51.41 310 *e*P **P 14 02 02.3 +1.5**
WMQ pmax pmax
comp=Z,8.0nm,0.9s
WMQ L L
comp=Z,400nm,12.5s
WMQ L L
comp=Z,360nm,18.7s
WMQ L L
comp=Z,420nm,23.9s
TIXI Tiksi 51.57 354⇓ *e*P **P 14 02 02.9 +1.5**
TIXI pmax pmax
comp=Z,10.0nm,2.5s
EVN Everest 51.78 290 P 14 02 05.8 +1.3
EVN IAmb IAmb 14 02 07.5
comp=Z,34nm,1.4s
FALS False Pass 52.16 36 IAMs_20 IAMs_20 14 20 01.3
comp=Z,1µm,22.0s
STKA Stephens Creek 52.41 182 P **P 14 02 08.3 +0.2**
comp=Z,3.8nm,0.8s,baz=351,slow=13,SNR=6.8
STKA LR LR 14 24 42.2
comp=Z,550nm,21.4s,baz=354,slow=36
comp=Z,3.8nm,0.8s
STKA Stephens Creek 52.41 182 P 14 02 08.7 +0.5
STKA Stephens Creek 52.41 182 P **P 14 02 08.7 +0.5**
STKA pmax pmax
comp=Z,47nm,1.0s
DGZ Jazzator, Alta 52.61 317⇓ *e*P **P 14 02 10.2 +0.4**
DGZ pmax pmax
comp=Z,14nm,1.5s
M11K Mekoryuk 52.87 29 P **P 14 02 12.0 +0.8**
baz=244
M13K Dall Lake 54.17 29 P **P 14 02 21.9 +1.1**
baz=247
K13K Kusilvak Mount 54.21 27 IAMs_20 IAMs_20 14 22 49.3
comp=Z,889nm,21.0s
K13K Kusilvak Mount 54.21 27 P **P 14 02 22.4 +1.3**
baz=245
CHNA Chernabura Isl 54.27 37 P **P 14 02 22.8 +1.1**
baz=255
TNA Tin City 54.63 22 P **P 14 02 25.1 +1.0**
baz=239
O14K Tigyukauivet M 54.73 31 IAMs_20 IAMs_20 14 23 31.2
comp=Z,1µm,20.0s
N14K Kuskokwak Cree 54.77 30 IAMs_20 IAMs_20 14 23 44.0
comp=Z,876nm,21.0s
N14K Kuskokwak Cree 54.77 30 P **P 14 02 26.1 +1.0**
baz=249
L14K Kuka Creek 54.84 28 P **P 14 02 26.8 +1.2**
baz=247
M14K Bethel 54.94 29 P **P 14 02 27.5 +1.2**
baz=248
ANM Nome 55.09 24 P 14 02 28.9 +1.5
ANM IAmb IAmb 14 02 32.4
comp=Z,20nm,1.2s
ANM Nome 55.09 24 P **P 14 02 29.0 +1.5**
ANM pmax pmax
comp=Z,20nm,1.2s
ANM MLR MLR
comp=Z,600nm,20.0s
ANM Nome 55.09 24 P **P 14 02 28.9 +1.5**
baz=243,SNR=5.1
ZALV Zalesovo Beam 55.12 322 P **P 14 02 26.9 -0.9**
comp=Z,6.3nm,0.9s,baz=100,slow=6.6,SNR=14
ZALV PcP **PcP 14 03 28.4 -0.6**
comp=Z,1.2nm,0.5s,baz=118,slow=3.9,SNR=4.6
ZALV LR LR 14 27 10.5
comp=Z,383nm,19.1s,baz=104,slow=37
comp=Z,6.3nm,0.9s
ZALV Zalesovo Beam 55.12 322 P **P 14 02 25.5 -2.4**
F14K Arctic Creek 55.16 23 P **P 14 02 29.1 +1.2**
baz=241
O15K Ungalikthiuk R 55.41 31 IAMs_20 IAMs_20 14 25 02.0
comp=Z,1µm,20.0s
O15K Ungalikthiuk R 55.41 31 P **P 14 02 30.6 +0.8**
baz=252
L15K Ungalak Mounta 55.49 28 P **P 14 02 31.3 +0.9**
baz=248
M15K Kasigluk River 55.50 30 P **P 14 02 31.3 +0.9**
baz=250
MK31 Makanchi Array 55.55 313⇑ *e*P **P 14 02 31.3 +0.2**
MKAR Makanchi Array 55.55 313 P **P 14 02 30.4 -0.8**
comp=Z,2.9nm,0.7s,baz=94,slow=9.0,SNR=36
MKAR LR LR 14 27 16.8
comp=Z,295nm,20.7s,baz=88,slow=37
comp=Z,2.9nm,0.7s
MKAR Makanchi Array 55.55 313 P 14 02 31.1 0.0
MKAR Makanchi Array 55.55 313 P **P 14 02 31.1 0.0**
N15K Kwethluk River 55.60 30 IAMs_20 IAMs_20 14 25 10.1
comp=Z,939nm,19.0s
N15K Kwethluk River 55.60 30 P **P 14 02 32.0 +0.8**
baz=251
K15K Wolf Creek Mou 55.70 28 IAMs_20 IAMs_20 14 22 41.7
comp=Z,775nm,21.0s
K15K Wolf Creek Mou 55.70 28 P **P 14 02 33.6 +1.7**
baz=248
MAKZ Makanchi 55.77 313 P 14 02 32.2 -0.4
MAKZ Makanchi 55.77 313 P **P 14 02 32.2 -0.4**
MAKZ pmax pmax
comp=Z,12nm,1.3s
MAKZ MLR MLR
comp=Z,400nm,19.0s
G15K Niukluk 55.79 24 P **P 14 02 34.3 +1.9**
baz=244
AFI Afiamalu 55.82 124 LR LR 14 21 43.2
comp=Z,236nm,21.1s,baz=312,slow=31
F15K North Star Dit 55.89 23 P **P 14 02 34.8 +1.6**
baz=243
CAN Canberra 56.05 175 P **P 14 02 37.0 +2.3**
CAN pmax pmax
comp=Z,34nm,1.1s
R16K Pilot Point 56.08 34 IAMs_20 IAMs_20 14 21 37.8
comp=Z,580nm,22.0s
P16K Nushagak River 56.27 32 IAMs_20 IAMs_20 14 22 17.8
comp=Z,961nm,21.0s
P16K Nushagak River 56.27 32 P **P 14 02 37.3 +1.4**
baz=254
N16K Nishlik Lake 56.32 30 P **P 14 02 37.1 +0.7**
baz=252
H16K Elim 56.34 25 P **P 14 02 37.1 +0.7**
baz=246
O16K Kokwok River B 56.38 31 IAMs_20 IAMs_20 14 25 14.7
comp=Z,1µm,20.0s
O16K Kokwok River B 56.38 31 P **P 14 02 37.7 +0.9**
baz=253
L16K Owhat River 56.40 29 P **P 14 02 37.4 +0.5**
baz=250
M16K Timber Creek 56.41 30 IAMs_20 IAMs_20 14 23 09.4
comp=Z,826nm,22.0s
M16K Timber Creek 56.41 30 P **P 14 02 36.9 -0.1**
baz=251
J16K Anvik River 56.47 27 IAMs_20 IAMs_20 14 25 00.4
comp=Z,684nm,20.0s
J16K Anvik River 56.47 27 P **P 14 02 38.2 +0.9**
baz=248
G16K Koyuk River 56.61 24 P **P 14 02 38.8 +0.5**
baz=245
I17K Unalakleet 56.66 26 P **P 14 02 38.6 0.0**
baz=248
R17L Mt. Peulik Vol 56.73 34 P **P 14 02 39.2 -0.1**
baz=256
PLK4 Peulik 4 56.73 34 IAMs_20 IAMs_20 14 23 21.0
comp=Z,890nm,22.0s
C16K Lisburne Hills 56.88 20 P **P 14 02 40.9 +0.8**
baz=240
O17K Koliganek Bris 56.92 31 P **P 14 02 41.4 +0.8**
baz=254
L17K Donlin 57.07 28 P **P 14 02 42.3 +0.7**
baz=251
P17K Kvichak River 57.08 32 IAMs_20 IAMs_20 14 22 42.3
comp=Z,1µm,22.0s
P17K Kvichak River 57.08 32 P **P 14 02 42.5 +0.8**
baz=255
N17K Nushagak Hills 57.09 30 IAMs_20 IAMs_20 14 26 07.4
comp=Z,973nm,19.0s
N17K Nushagak Hills 57.09 30 P **P 14 02 42.5 +0.7**
baz=253
M17K Holitna River 57.23 29 P **P 14 02 40.8 -2.0**
M17K IAmb IAmb 14 02 56.8
comp=Z,21nm,1.1s
M17K IAMs_20 IAMs_20 14 22 58.1
comp=Z,773nm,20.0s
M17K Holitna River 57.23 29 P **P 14 02 43.4 +0.6**
baz=252
K17K Iditarod 57.26 28 P **P 14 02 43.1 +0.2**
baz=251
G17K Kiwalik Mounta 57.30 24 P **P 14 02 44.3 +1.1**
baz=247
D17K Noatak River 57.35 21 P **P 14 02 44.0 +0.5**
baz=243
H17K Granite Mounta 57.37 25 P **P 14 02 44.1 +0.4**
baz=248
F17K Baldwin Pennin 57.46 23 P **P 14 02 44.5 +0.2**
baz=246
RDOG Red Dog Mine 57.58 21 P **P 14 02 45.6 +0.5**
baz=243
Q18K Katmai Hardscr 57.67 33 P **P 14 02 47.0 +0.9**
baz=256
C17K DeLong Mountai 57.68 20 P **P 14 02 47.1 +1.2**
baz=243
P18K Big Mountain, 57.73 32 IAMs_20 IAMs_20 14 23 12.5
comp=Z,886nm,22.0s
P18K Big Mountain, 57.73 32 P **P 14 02 47.0 +0.6**
baz=256
N18K Kilae Creek 57.74 30 IAMs_20 IAMs_20 14 26 15.8
comp=Z,910nm,20.0s
N18K Kilae Creek 57.74 30 P **P 14 02 47.1 +0.6**
baz=254
L18K Granite Mounta 57.81 29 IAMs_20 IAMs_20 14 22 27.5
comp=Z,677nm,20.0s
L18K Granite Mounta 57.81 29 P **P 14 02 47.0 +0.1**
baz=253
O18K Koktuh Hills 57.86 32 P 14 02 47.3 +0.1
O18K IAmb IAmb 14 02 52.6
comp=Z,28nm,1.0s
O18K IAMs_20 IAMs_20 14 26 58.8
comp=Z,912nm,19.0s
O18K Koktuh Hills 57.86 32 P **P 14 02 48.2 +1.0**
baz=256,SNR=10.0
M18K Stony River 58.00 30 P **P 14 02 49.1 +0.9**
baz=254
H18K Honhosa River 58.06 25 P **P 14 02 49.3 +0.7**
baz=249
E18K Tukpahlearik C 58.09 22 P 14 02 48.9 +0.2
E18K IAmb IAmb 14 03 04.8
comp=Z,26nm,1.4s
E18K Tukpahlearik C 58.09 22 P **P 14 02 49.9 +1.1**
baz=246
F18K Selawik 58.11 23 P **P 14 02 49.8 +1.0**
baz=247
J18K Innoko River 58.18 27 P **P 14 02 50.3 +0.9**
baz=252
G18K Tagagawik 58.22 24 IAmb IAmb 14 02 54.7
comp=Z,18nm,1.1s
G18K Tagagawik 58.22 24 P **P 14 02 50.7 +1.1**
baz=249,SNR=12
KURK Kurchatov 58.36 317 P 14 02 50.3 -0.6
KURK Kurchatov 58.36 317 IAMs_20 IAMs_20 14 28 58.1
comp=Z,709nm,19.0s
KURK Kurchatov 58.36 317 P **P 14 02 50.3 -0.6**
KURK pmax pmax
comp=Z,8.0nm,0.8s
KURK MLR MLR
comp=Z,700nm,19.0s
O19K Port Alsworth 58.38 31 IAMs_20 IAMs_20 14 25 56.4
comp=Z,913nm,20.0s
O19K Port Alsworth 58.38 31 P **P 14 02 51.4 +0.6**
baz=256
KURBB Kurchatov Arra 58.41 317 P **P 14 02 50.5 -0.8**
comp=Z,8.6nm,0.7s,baz=95,slow=7.6,SNR=94
KURBB LR LR 14 29 20.3
comp=Z,696nm,19.0s,baz=136,slow=38
comp=Z,8.6nm,0.7s
C18K Utukok River 58.41 21 P **P 14 02 51.9 +0.8**
baz=244
N19K Bonanza Creek 58.45 31 P 14 02 49.2 -2.2
N19K IAmb IAmb 14 02 56.2
comp=Z,33nm,1.5s
N19K IAMs_20 IAMs_20 14 26 59.3
comp=Z,872nm,20.0s
N19K Bonanza Creek 58.45 31 P **P 14 02 52.3 +0.9**
baz=256
GCSA Galena City Sc 58.52 26 P **P 14 02 52.6 +0.9**
baz=251
L19K White Mountain 58.63 29 IAmb IAmb 14 02 57.9
comp=Z,17nm,1.2s
L19K White Mountain 58.63 29 P **P 14 02 53.2 +0.6**
baz=255
KDAK Kodiak Island 58.74 34 LR LR 14 25 19.6
comp=Z,601nm,21.4s,baz=239,slow=33
KDAK Kodiak Island 58.74 34 IAMs_20 IAMs_20 14 24 47.2
comp=Z,1µm,22.0s
M19K Big River Lodg 58.76 29 IAMs_20 IAMs_20 14 24 32.7
comp=Z,826nm,22.0s
M19K Big River Lodg 58.76 29 P **P 14 02 54.4 +0.8**
baz=255
P19K Oil Pt 58.78 32 IAMs_20 IAMs_20 14 23 45.3
comp=Z,1µm,21.0s
P19K Oil Pt 58.78 32 P **P 14 02 54.5 +0.8**
baz=258
J19K Poorman 58.80 27 IAmb IAmb 14 02 59.0
comp=Z,25nm,1.4s
J19K IAMs_20 IAMs_20 14 25 40.1
comp=Z,708nm,20.0s
J19K Poorman 58.80 27 P **P 14 02 54.6 +0.9**
baz=253,SNR=5.0
F19K Shaleruckik Mo 58.89 23 P **P 14 02 55.7 +1.5**
baz=249
G19K Purcell Mounta 58.90 24 P **P 14 02 55.6 +1.2**
baz=250
H19K Roundabout Mou 58.95 25 P **P 14 02 55.5 +0.8**
H19K IAmb IAmb 14 03 00.2
comp=Z,32nm,1.3s
H19K Roundabout Mou 58.95 25 P **P 14 02 55.8 +1.1**
baz=251,SNR=5.8
NRIK Noril'sk 58.95 340 P **P 14 02 54.4 -0.2**
comp=Z,3.3nm,0.9s,baz=118,slow=8.3,SNR=5.1
NRIK LR LR 14 28 14.6
comp=Z,593nm,21.8s,baz=110,slow=36
comp=Z,3.3nm,0.9s
NRIK Noril'sk 58.95 340 *ce*P **P 14 02 54.3 -0.4**
NRIK pmax pmax
comp=Z,5.0nm,1.0s
Q20K Shuyak Island 59.00 33 P **P 14 02 55.7 +0.5**
baz=259
SYI Shuyak Island 59.00 33 IAMs_20 IAMs_20 14 23 20.9
comp=Z,814nm,22.0s
NWAO Narrogin (SRO) 59.05 206 LR LR 14 26 26.2
comp=Z,311nm,21.7s,baz=24,slow=34
A19K Wainwright 59.13 19 P **P 14 02 57.3 +1.4**
baz=244
C19K Lookout Ridge 59.13 20 P **P 14 02 57.1 +1.0**
baz=246

K20K	**Telida**	**59.29**	**28**	IAMs_20	IAMs_20	14 25 34.5
	comp=Z,679nm,20.0s					
K20K	**Telida**	**59.29**	**28**	P	**P**	**14 02 58.3 +1.1**
	baz=255					
E19K	**Redstone River**	**59.31**	**23**	P	**P**	**14 02 58.4 +1.2**
	baz=249					
M20K	**Styx River**	**59.34**	**29**	IAMs_20	IAMs_20	14 26 09.8
	comp=Z,849nm,20.0s					
M20K	**Styx River**	**59.34**	**29**	P	**P**	**14 02 58.5 +0.9**
	baz=256					
D19K	**Kuna River**	**59.38**	**21**	P	**P**	**14 02 58.2 +0.5**
	baz=248					
J20K	**Nowinta River**	**59.48**	**27**	IAmb	IAmb	14 03 04.2
	comp=Z,27nm,1.2s					
J20K				IAMs_20	IAMs_20	14 28 47.9
	comp=Z,667nm,21.0s					
J20K	**Nowinta River**	**59.48**	**27**	P	**P**	**14 02 59.2 +0.8**
	baz=254					
I20K	**Naaghedeneel**	**59.51**	**26**	IAMs_20	IAMs_20	14 27 32.8
	comp=Z,573nm,18.0s					
I20K	**Naaghedeneel**	**59.51**	**26**	P	**P**	**14 02 59.5 +0.9**
	baz=253					
H20K	**Anotleneega Mo**	**59.55**	**25**	P	**P**	**14 02 59.6 +0.7**
	baz=253					
HOM	**Homer**	**59.58**	**32**	P	**P**	**14 02 59.4 +0.3**
	baz=259					
N20K	**Mount Spurr**	**59.61**	**30**	P	**P**	**14 03 00.0 +0.5**
	baz=258					
SPCR	**Spurr Chakacha**	**59.61**	**30**	P	**P**	**14 03 00.2 +0.6**
	baz=258					
F20K	**Avaraart Lake**	**59.72**	**23**	P	**P**	**14 03 00.7 +0.6**
	baz=251					
CNPM	**China Poot**	**59.76**	**32**	IAMs_20	IAMs_20	14 26 38.9
	comp=Z,619nm,20.0s					
E20K	**Nigu River**	**59.96**	**22**	P	**P**	**14 03 03.1 +1.3**
	baz=250					
BRLK	**Bradley Lake**	**59.97**	**32**	IAMs_20	IAMs_20	14 26 56.4
	comp=Z,763nm,21.0s					
D20K	**Etivluk River**	**59.98**	**21**	P	**P**	**14 03 02.8 +0.9**
	baz=249					
PPLA	**Purkeypile**	**60.00**	**28**	P	**P**	**14 03 02.9 +0.7**
	baz=257					
BRSE	**Bradley Lake S**	**60.04**	**32**	P	**P**	**14 03 02.6 +0.2**
	baz=260					
SKT	**Skwentna**	**60.10**	**30**	IAMs_20	IAMs_20	14 26 00.9
	comp=Z,974nm,22.0s					
SKT	**Skwentna**	**60.10**	**30**	P	**P**	**14 03 03.6 +0.8**
	baz=258,SNR=6.9					
IMAR	**Indian Mountai**	**60.15**	**25**		**P**	**14 03 04.4 +1.4**
CHUM	**Lake Minchumin**	**60.18**	**27**	P	**P**	**14 03 04.1 +0.9**
	baz=256					
B20K	**Meade River**	**60.27**	**20**	P	**P**	**14 03 05.0 +1.2**
	baz=248					
KSH2	**Kashi**	**60.35**	**304**	P	**P**	**14 03 06.0 +0.9**
KSH2				pmax	pmax	
	comp=Z,7.0nm,0.9s					
KSH2				L	L	
	comp=Z,210nm,9.6s					
KSH2				L	L	
	comp=Z,500nm,15.8s					
KSH2				L	L	
	comp=Z,750nm,17.7s					
G21K	**Allakaket**	**60.39**	**24**	IAmb	IAmb	14 03 20.6
	comp=Z,31nm,1.4s					
G21K	**Allakaket**	**60.39**	**24**	P	**P**	**14 03 05.9 +1.2**
	baz=253,SNR=13					
H21K	**Melozitna Rive**	**60.43**	**25**	IAmb	IAmb	14 03 10.6
	comp=Z,32nm,1.3s					
H21K	**Melozitna Rive**	**60.43**	**25**	P	**P**	**14 03 06.1 +1.1**
	baz=255					
SLKM	**Skilak Lake**	**60.43**	**31**	IAMs_20	IAMs_20	14 26 40.8
	comp=Z,863nm,20.0s					
L22K	**Petersville**	**60.56**	**29**	IAmb	IAmb	14 03 10.1
	comp=Z,19nm,1.2s					
L22K				IAMs_20	IAMs_20	14 25 04.1
	comp=Z,723nm,21.0s					
F21K	**Alatna River**	**60.61**	**23**	P	**P**	**14 03 07.5 +1.3**
	baz=253					
I21K	**Tanana**	**60.64**	**26**	IAmb	IAmb	14 03 12.0
	comp=Z,26nm,1.3s					
I21K				IAMs_20	IAMs_20	14 26 57.6
	comp=Z,700nm,21.0s					
I21K	**Tanana**	**60.64**	**26**	P	**P**	**14 03 07.3 +0.9**
	baz=256,SNR=12					
O22K	**Cooper Landing**	**60.67**	**31**	IAMs_20	IAMs_20	14 28 19.1
	comp=Z,879nm,19.0s					
O22K	**Cooper Landing**	**60.67**	**31**	P	**P**	**14 03 07.7 +1.1**
	baz=260					
M22K	**Willow**	**60.71**	**30**	IAMs_20	IAMs_20	14 28 13.1
	comp=Z,711nm,20.0s					
M22K	**Willow**	**60.71**	**30**	P	**P**	**14 03 07.2 +0.3**
	baz=259					
KTH	**Kantishna Hill**	**60.71**	**28**	IAmb	IAmb	14 03 11.8
	comp=Z,31nm,1.4s					
SEW	**Seward**	**60.74**	**32**	IAMs_20	IAMs_20	14 27 52.0
	comp=Z,1μm,21.0s					
SEW	**Seward**	**60.74**	**32**	P	**P**	**14 03 07.5 +0.4**
	baz=261					
C21K	**Knifeblade Rid**	**60.75**	**21**	P	**P**	**14 03 08.3 +1.2**
	baz=251					
CUT	**Chulitna**	**60.76**	**29**	IAMs_20	IAMs_20	14 24 10.6
	comp=Z,986nm,22.0s					
CUT	**Chulitna**	**60.76**	**29**	P	**P**	**14 03 07.5 +0.2**
	baz=259					
RC01	**Rabbit Creek A**	**60.77**	**31**	IAMs_20	IAMs_20	14 27 43.7
	comp=Z,804nm,20.0s					
RC01	**Rabbit Creek A**	**60.77**	**31**	P	**P**	**14 03 07.9 +0.6**
	baz=260					
BPAW	**Bear Paw Mtn.**	**60.80**	**27**	IAMs_20	IAMs_20	14 27 45.5
	comp=Z,707nm,20.0s					
BPAW	**Bear Paw Mtn.**	**60.80**	**27**	P	**P**	**14 03 08.3 +0.7**
	baz=257,SNR=6.5					
A21K	**Barrow**	**60.94**	**19**	P	**P**	**14 03 09.0 +0.7**
	baz=248					
B21K	**Ikpikpuk River**	**60.96**	**21**	P	**P**	**14 03 08.4 -0.1**
	baz=251					
TRF	**Thorofare Moun**	**60.96**	**28**	IAmb	IAmb	14 03 13.2
	comp=Z,16nm,1.0s					
TRF				IAMs_20	IAMs_20	14 26 50.8
	comp=Z,585nm,20.0s					
TRF	**Thorofare Moun**	**60.96**	**28**	P	**P**	**14 03 09.2 +0.4**
	baz=258,SNR=9.6					
AAK	**Ala-Archa**	**60.98**	**308**	P	**P**	**14 03 09.4 0.0**
	comp=Z,2.1nm,0.7s,baz=78,slow=9.3,SNR=7.8					
AAK				LR	LR	14 32 24.8
	comp=Z,376nm,18.1s,baz=90,slow=39 comp=Z,2.1nm,0.7s					
AAK	**Ala-Archa**	**60.98**	**308**	*de*P	**P**	**14 03 09.7 +0.4**
AAK				pmax	pmax	
	comp=Z,5.0nm,1.7s					
H22K	**Ishtalitna Cre**	**61.06**	**25**	IAmb	IAmb	14 03 15.0
	comp=Z,21nm,1.4s					
H22K	**Ishtalitna Cre**	**61.06**	**25**	P	**P**	**14 03 09.9 +0.6**
	baz=256					
MLY	**Manley**	**61.12**	**26**	P	**P**	**14 03 10.1 +0.4**
	baz=257					
PMR	**Palmer**	**61.14**	**30**	IAmb	IAmb	14 03 13.9
	comp=Z,15nm,1.1s					
PMR	**Palmer**	**61.14**	**30**	P	**P**	**14 03 10.3 +0.5**
	baz=260					
HYB	**Hyderabad**	**61.15**	**279**	*e*P	**P**	**14 03 10.2 -0.5**
F22K	**John River**	**61.17**	**23**	P	**P**	**14 03 11.1 +1.1**
	baz=254					
G22K	**Bettles**	**61.27**	**24**	P	**P**	**14 03 11.6 +1.0**
	baz=255					
GHO	**Glory Hole Cre**	**61.27**	**30**	IAmb	IAmb	14 03 30.2
	comp=Z,31nm,1.3s					
GHO				IAMs_20	IAMs_20	14 27 18.9
	comp=Z,741nm,21.0s					
A22K	**Sinclair Lake**	**61.32**	**19**	P	**P**	**14 03 11.8 +1.0**
	baz=250					
KNK	**Knik Glacier**	**61.43**	**31**	IAmb	IAmb	14 03 16.4
	comp=Z,26nm,1.3s					
KNK				IAMs_20	IAMs_20	14 28 16.2
	comp=Z,887nm,20.0s					
KNK	**Knik Glacier**	**61.43**	**31**	P	**P**	**14 03 11.3 -0.6**
	baz=261					
E22K	**Anaktuvuk Pass**	**61.48**	**23**	P	**P**	**14 03 12.4 +0.3**
	baz=254					
SML	**Sawmill**	**61.55**	**30**	IAMs_20	IAMs_20	14 27 51.5
	comp=Z,674nm,21.0s					
SML	**Sawmill**	**61.55**	**30**	P	**P**	**14 03 13.3 +0.6**
	baz=261,SNR=10					
B22K	**Teshekpuk Lake**	**61.59**	**20**	IAmb	IAmb	14 03 18.0
	comp=Z,27nm,1.2s					
B22K	**Teshekpuk Lake**	**61.59**	**20**	P	**P**	**14 03 13.1 +0.4**
	baz=252,SNR=11					
MCK	**McKinley**	**61.61**	**28**	IAmb	IAmb	14 03 17.2
	comp=Z,21nm,1.4s					
MCK				IAMs_20	IAMs_20	14 28 30.9
	comp=Z,667nm,20.0s					
MCK	**McKinley**	**61.61**	**28**	P	**P**	**14 03 12.5 -0.5**
	baz=259					
WAT1	**Susitna Watana**	**61.62**	**29**	P	**P**	**14 03 13.4 +0.2**
	baz=260					
I23K	**Minto, Yukon-K**	**61.71**	**26**	IAmb	IAmb	14 03 29.3
	comp=Z,46nm,1.9s					
I23K				IAMs_20	IAMs_20	14 27 30.9
	comp=Z,711nm,21.0s					
I23K	**Minto, Yukon-K**	**61.71**	**26**	P	**P**	**14 03 14.5 +0.9**
	baz=258					
NEA2	**Nenana**	**61.72**	**27**	P	**P**	**14 03 14.8 +1.1**
	baz=259,SNR=5.6					
P23K	**Montague Islan**	**61.74**	**32**	P	**P**	**14 03 14.4 +0.4**
	baz=263					
H23K	**Yukon River**	**61.78**	**25**	P	**P**	**14 03 14.8 +0.7**
	baz=258					
G23K	**Bananza Creek**	**61.79**	**24**	P	**P**	**14 03 15.1 +0.9**
	baz=257					
COLD	**Coldfoot**	**61.84**	**24**	IAmb	IAmb	14 03 20.2
	comp=Z,12nm,1.1s					
COLD	**Coldfoot**	**61.84**	**24**	P	**P**	**14 03 15.3 +0.8**
	baz=256,SNR=9.8					
WAT6	**Susitna Watana**	**61.95**	**29**	P	**P**	**14 03 16.0 +0.5**
	baz=261,SNR=8.6					
GLI	**Glacier Island**	**62.01**	**31**	IAMs_20	IAMs_20	14 28 13.5
	comp=Z,896nm,20.0s					
GLI	**Glacier Island**	**62.01**	**31**	P	**P**	**14 03 15.9 +0.2**
	baz=262					
SCM	**Sheep Creek Mo**	**62.03**	**30**	IAMs_20	IAMs_20	14 29 26.0
	comp=Z,694nm,20.0s					
SCM	**Sheep Creek Mo**	**62.03**	**30**	P	**P**	**14 03 15.7 -0.2**
	baz=262,SNR=8.4					
PALK	**Pallekele**	**62.10**	**267**	LR	LR	14 27 54.0
	comp=Z,510nm,20.0s,baz=64,slow=34					
PALK	**Pallekele**	**62.10**	**267**	IAMs_20	IAMs_20	14 27 42.2
	comp=Z,592nm,20.0s					
PALK	**Pallekele**	**62.10**	**267**	*e*P	**P**	**14 03 18.1 +1.0**
PALK				pmax	pmax	
	comp=Z,17nm,1.3s					
RAO	**Raoul Island**	**62.10**	**142**	LR	LR	14 23 58.8
	comp=Z,202nm,21.9s,baz=66,slow=30					
D23K	**Nanushuk River**	**62.10**	**22**	P	**P**	**14 03 17.3 +1.1**
	baz=255					
WRH	**Wood River Hil**	**62.11**	**27**	IAMs_20	IAMs_20	14 31 50.6
	comp=Z,563nm,18.0s					
DHY	**Denali Highway**	**62.19**	**29**	IAMs_20	IAMs_20	14 25 07.3
	comp=Z,694nm,21.0s					
DHY	**Denali Highway**	**62.19**	**29**	P	**P**	**14 03 17.7 +0.6**
	baz=261					
HIN	**Hinchinbrook I**	**62.24**	**32**	IAMs_20	IAMs_20	14 32 27.6
	comp=Z,661nm,19.0s					
E23K	**Chandalar**	**62.26**	**23**	P	**P**	**14 03 18.3 +0.9**
	baz=256,SNR=18					
CCB	**Clear Creek Bu**	**62.27**	**27**	IAmb	IAmb	14 03 21.4
	comp=Z,23nm,1.7s					
CCB				IAMs_20	IAMs_20	14 31 54.6
	comp=Z,532nm,18.0s					
COLA	**College**	**62.29**	**27**	IAMs_20	IAMs_20	14 27 38.0
	comp=Z,624nm,21.0s					
COLA	**College**	**62.29**	**27**	*e*P	**P**	**14 03 18.8 +1.3**
COLA				pmax	pmax	
	comp=Z,6.0nm,1.0s					
COLA	**College**	**62.29**	**27**	P	**P**	**14 03 18.4 +1.0**
	baz=260					
C23K	**Itkillik River**	**62.36**	**21**	P	**P**	**14 03 19.3 +1.4**
	baz=254					
TOLK	**Toolik Lake Re**	**62.41**	**22**	P	**P**	**14 03 20.0 +1.6**
	baz=256,SNR=14					
H24K	**Noodor Dome**	**62.45**	**26**	P	**P**	**14 03 19.6 +0.9**
	baz=259					
POKR	**Poker Plat Res**	**62.50**	**26**	P	**P**	**14 03 19.0 0.0**
	baz=260					
HDA	**Harding Lake**	**62.59**	**27**	IAMs_20	IAMs_20	14 24 45.8
	comp=Z,623nm,20.0s					
HDA	**Harding Lake**	**62.59**	**27**	P	**P**	**14 03 20.6 +1.0**
	baz=261					
M24K	**Tolsona, Glenn**	**62.61**	**30**	IAMs_20	IAMs_20	14 26 56.3
	comp=Z,969nm,21.0s					
M24K	**Tolsona, Glenn**	**62.61**	**30**	P	**P**	**14 03 19.7 -0.1**
	baz=263					
EYAK	**Cordova Ski Ar**	**62.63**	**32**	IAMs_20	IAMs_20	14 30 21.9
	comp=Z,903nm,20.0s					
EYAK	**Cordova Ski Ar**	**62.63**	**32**	P	**P**	**14 03 20.3 +0.5**
	baz=264					
KLU	**Klutina**	**62.65**	**31**	IAmb	IAmb	14 03 29.4
	comp=Z,27nm,1.5s					
KLU				IAMs_20	IAMs_20	14 30 23.4
	comp=Z,684nm,20.0s					
KLU	**Klutina**	**62.65**	**31**	P	**P**	**14 03 20.9 +0.8**
	baz=263					
E24K	**Your Creek**	**62.67**	**23**	IAMs_20	IAMs_20	14 31 22.2
	comp=Z,609nm,19.0s					
E24K	**Your Creek**	**62.67**	**23**	P	**P**	**14 03 21.3 +1.1**
	baz=258					
IL31		**62.68**	**27**	IAmb	IAmb	14 03 33.9
	comp=Z,17nm,1.2s					
ILAR	**Eielson Array**	**62.68**	**27**	P	**P**	**14 03 19.7 -0.4**
	comp=Z,4.6nm,0.8s,baz=260,slow=6.4,SNR=52					
ILAR				LR	LR	14 27 51.4
	comp=Z,413nm,21.4s,baz=245,slow=34 comp=Z,4.6nm,0.8s					
ILAR	**Eielson Array**	**62.68**	**27**		**P**	**14 03 19.4 -0.7**
DIV	**Divide**	**62.68**	**31**	IAMs_20	IAMs_20	14 29 16.2
	comp=Z,1μm,20.0s					
G24K	**Hadweenzic Riv**	**62.78**	**25**	IAmb	IAmb	14 03 49.1
	comp=Z,12nm,1.1s					
G24K	**Hadweenzic Riv**	**62.78**	**25**	P	**P**	**14 03 22.2 +1.4**
	baz=259					
F24K	**Squaw Lake**	**62.78**	**24**	IAmb	IAmb	14 03 36.8
	comp=Z,13nm,1.1s					
F24K	**Squaw Lake**	**62.78**	**24**	P	**P**	**14 03 21.7 +0.9**
	baz=258					
D24K	**Happy Valley**	**62.80**	**22**	P	**P**	**14 03 20.8 0.0**
	baz=257					
C24K	**Franklin Bluff**	**62.97**	**21**	P	**P**	**14 03 22.9 +0.9**
	baz=256					
K24K	**Donnelly Dome**	**63.01**	**28**	IAMs_20	IAMs_20	14 29 33.9
	comp=Z,876nm,21.0s					
K24K	**Donnelly Dome**	**63.01**	**28**	P	**P**	**14 03 23.1 +0.7**
	baz=262					
PAX	**Paxson**	**63.04**	**29**	IAmb	IAmb	14 03 34.2
	comp=Z,18nm,1.4s					
PAX				IAMs_20	IAMs_20	14 27 50.7
	comp=Z,731nm,22.0s					
PAX	**Paxson**	**63.04**	**29**	P	**P**	**14 03 22.7 0.0**
	baz=263					
RAGM	**Ragged Mountai**	**63.14**	**32**	IAMs_20	IAMs_20	14 28 59.4
	comp=Z,798nm,20.0s					
BMRM	**Bremner River**	**63.23**	**31**	IAMs_20	IAMs_20	14 29 32.7
	comp=Z,799nm,20.0s					
BMRM	**Bremner River**	**63.23**	**31**	P	**P**	**14 03 24.8 +0.9**
	baz=265					
KAIM	**Kayak Island**	**63.23**	**32**	P	**P**	**14 03 24.7 +0.8**
	baz=265					
N25K	**Chitina, Valde**	**63.29**	**31**	IAmb	IAmb	14 03 53.6
	comp=Z,19nm,1.4s					
N25K				IAMs_20	IAMs_20	14 27 32.4
	comp=Z,959nm,22.0s					
N25K	**Chitina, Valde**	**63.29**	**31**	P	**P**	**14 03 24.7 +0.3**
	baz=264					
J25K	**Salcha River,**	**63.30**	**27**	IAMs_20	IAMs_20	14 28 33.4
	comp=Z,629nm,22.0s					
J25K	**Salcha River,**	**63.30**	**27**	P	**P**	**14 03 24.5 +0.1**
	baz=262					
G25K	**Bearman Lake**	**63.32**	**25**	P	**P**	**14 03 25.5 +1.1**
	baz=260					
PRP	**Porcupine Dome**	**63.36**	**26**	IAMs_20	IAMs_20	14 28 52.5
	comp=Z,712nm,20.0s					
PRP	**Porcupine Dome**	**63.36**	**26**	P	**P**	**14 03 25.1 +0.3**
	baz=262					
RIDG	**Independent Ri**	**63.41**	**28**	IAmb	IAmb	14 03 36.4
	comp=Z,15nm,1.0s					
RIDG				IAMs_20	IAMs_20	14 28 37.5
	comp=Z,821nm,21.0s					
RIDG	**Independent Ri**	**63.41**	**28**	P	**P**	**14 03 25.8 +0.7**
	baz=263,SNR=9.4					
BVAR	**Borovoye Array**	**63.57**	**320**	P	**P**	**14 03 25.7 -0.6**
	comp=Z,7.8nm,0.6s,baz=92,slow=7.2,SNR=48					
BVAR				LR	LR	14 33 30.1
	comp=Z,522nm,18.1s,baz=87,slow=38 comp=Z,7.8nm,0.6s					
BORK	**Borovoye**	**63.61**	**320**		**P**	**14 03 24.8 -1.7**
BORK				IAmb	IAmb	14 03 28.2
	comp=Z,10nm,0.8s					
BORK	**Borovoye**	**63.61**	**320**	IAMs_20	IAMs_20	14 32 22.1
	comp=Z,610nm,20.0s					
BORK	**Borovoye**	**63.61**	**320**	P	**P**	**14 03 24.8 -1.7**
BORK				pmax	pmax	
	comp=Z,10.0nm,0.8s					
BORK				MLR	MLR	
	comp=Z,600nm,20.0s					
BERG	**Berg Lake**	**63.62**	**32**	IAMs_20	IAMs_20	14 31 42.2
	comp=Z,698nm,18.0s					
F25K	**Christian Rive**	**63.64**	**24**	P	**P**	**14 03 27.3 +0.7**
	baz=260					
GLB	**Gilahina Butte**	**63.65**	**31**	IAmb	IAmb	14 03 31.8
	comp=Z,32nm,1.4s					
GLB				IAMs_20	IAMs_20	14 30 06.9
	comp=Z,783nm,19.0s					
D25K	**Kavik River**	**63.68**	**22**	P	**P**	**14 03 27.6 +0.7**
	baz=259					
DOT	**Dot Lake**	**63.75**	**28**	IAmb	IAmb	14 03 31.8
	comp=Z,33nm,1.6s					
DOT				IAMs_20	IAMs_20	14 31 14.3
	comp=Z,817nm,20.0s					
E25K	**Arctic Village**	**63.76**	**23**	P	**P**	**14 03 28.6 +1.4**
	baz=260,SNR=14					
VRDI	**Verde Repeater**	**63.81**	**31**	IAMs_20	IAMs_20	14 30 13.0
	comp=Z,567nm,20.0s					
SCRK	**Sand Creek**	**63.82**	**28**	IAmb	IAmb	14 03 32.3
	comp=Z,23nm,1.2s					
SCRK				IAMs_20	IAMs_20	14 28 26.2
	comp=Z,818nm,22.0s					
SCRK	**Sand Creek**	**63.82**	**28**	P	**P**	**14 03 28.1 +0.2**
	baz=264,SNR=12					
MENT	**Mentasta**	**63.83**	**29**	IAmb	IAmb	14 03 33.1
	comp=Z,30nm,1.7s					
KK31	**Karatay Array**	**63.88**	**309**	IAmb	IAmb	14 03 30.7
	comp=Z,12nm,0.9s					
KKAR	**Karatay Array**	**63.88**	**309**		**P**	**14 03 28.8 +0.3**
KKAR	**Karatay Array**	**63.88**	**309**	P	**P**	**14 03 28.8 +0.3**
CRQM	**Cirque**	**63.93**	**32**	IAMs_20	IAMs_20	14 29 45.8
	comp=Z,711nm,21.0s					
CRQE	**Cirque**	**63.95**	**32**	P	**P**	**14 03 28.8 0.0**
	baz=266					
L26K	**Log Cabin Wild**	**64.01**	**29**	P	**P**	**14 03 29.3 +0.2**
	baz=265					
BMAR	**Burnt Mountain**	**64.02**	**24**		**P**	**14 03 30.6 +1.5**
MCARA	**McCarthy VSAT**	**64.03**	**31**	IAMs_20	IAMs_20	14 30 48.8
	comp=Z,643nm,19.0s					
MCARA	**McCarthy VSAT**	**64.03**	**31**	P	**P**	**14 03 29.6 +0.4**
	baz=266					
TGL	**Tana Glacier**	**64.08**	**32**	IAMs_20	IAMs_20	14 30 10.2
	comp=Z,712nm,19.0s					
M26K	**Nabesna, AK**	**64.12**	**30**	IAMs_20	IAMs_20	14 28 51.2
	comp=Z,660nm,21.0s					
M26K	**Nabesna, AK**	**64.12**	**30**	P	**P**	**14 03 30.1 +0.3**
	baz=266					
F26K	**Sheenjek River**	**64.22**	**24**	P	**P**	**14 03 30.9 +0.5**
	baz=262					
G26K	**Porcupine Rive**	**64.26**	**25**	P	**P**	**14 03 31.1 +0.5**
	baz=262					
C26K	**Camden Bay**	**64.30**	**21**	P	**P**	**14 03 31.1 +0.3**
	baz=260					
I26K	**Coal Creek Min**	**64.32**	**27**	IAMs_20	IAMs_20	14 29 13.8
	comp=Z,600nm,20.0s					
I26K	**Coal Creek Min**	**64.32**	**27**	P	**P**	**14 03 31.0 0.0**
	baz=264					
MESA	**MESA**	**64.48**	**32**	IAMs_20	IAMs_20	14 27 19.9
	comp=Z,828nm,21.0s					
MESA	**MESA**	**64.48**	**32**	P	**P**	**14 03 32.4 0.0**
	baz=268					
GRNC	**Granite Creek**	**64.61**	**32**	IAmb	IAmb	14 03 38.0
	comp=Z,26nm,1.4s					
M27K	**Edge Creek, AK**	**64.63**	**30**	IAmb	IAmb	14 03 49.4
	comp=Z,47nm,2.0s					
M27K				IAMs_20	IAMs_20	14 29 18.8
	comp=Z,740nm,21.0s					
M27K	**Edge Creek, AK**	**64.63**	**30**	P	**P**	**14 03 33.4 +0.1**
	baz=266					
K27K	**Chicken**	**64.66**	**28**	IAMs_20	IAMs_20	14 30 33.5
	comp=Z,717nm,20.0s					
C27K	**Jago River**	**64.66**	**22**	IAMs_20	IAMs_20	14 30 50.7
	comp=Z,658nm,21.0s					
C27K	**Jago River**	**64.66**	**22**	P	**P**	**14 03 33.4 +0.3**
	baz=261					
BARN	**Barnard Glacie**	**64.67**	**31**	IAMs_20	IAMs_20	14 30 18.7
	comp=Z,726nm,20.0s					
L27K	**Beaver Creek,**	**64.70**	**29**	P	**P**	**14 03 33.7 +0.1**
	baz=266					
BCAR	**Beaver Creek A**	**64.72**	**29**		**P**	**14 03 33.8 +0.1**
CTG	**Chitna Glacier**	**64.82**	**31**	P	**P**	**14 03 34.5 -0.1**
	baz=268					
CTGM	**Chitina Glacie**	**64.82**	**31**	IAMs_20	IAMs_20	14 30 02.8
	comp=Z,567nm,20.0s					
LOGN	**Logan Glacier**	**64.98**	**32**	IAMs_20	IAMs_20	14 30 18.9
	comp=Z,534nm,20.0s					
I27K	**Kandik River**	**64.98**	**26**	IAMs_20	IAMs_20	14 29 10.5
	comp=Z,698nm,20.0s					
I27K	**Kandik River**	**64.98**	**26**	P	**P**	**14 03 35.5 +0.1**
	baz=265					
H27K	**Steamboat Moun**	**65.08**	**26**	IAMs_20	IAMs_20	14 28 22.8
	comp=Z,647nm,21.0s					
H27K	**Steamboat Moun**	**65.08**	**26**	P	**P**	**14 03 36.6 +0.7**
	baz=265					
G27K	**Doyon Strip**	**65.08**	**25**	P	**P**	**14 03 36.1 +0.2**
	baz=265					
E27K	**Coleen River**	**65.24**	**23**	P	**P**	**14 03 37.4 +0.4**
	baz=264					
YUK3	**Moose Creek**	**65.27**	**31**	P	**P**	**14 03 38.1 +0.5**
	baz=268					
PCA	**Pinnacle**	**65.33**	**32**	IAMs_20	IAMs_20	14 28 10.3
	comp=Z,681nm,21.0s					
PINM	**Pinnacle**	**65.33**	**32**	P	**P**	**14 03 38.3 +0.5**
	baz=269					
CHGR	**Chuyangaron**	**65.37**	**304**	*i*P	**P**	**14 03 38.9 +0.4**
CHGR				pmax	pmax	
	comp=Z,15nm,0.8s					
O28M	**Mount Upton**	**65.37**	**32**	P	**P**	**14 03 38.4 +0.1**
	baz=269					
D27M	**Malcolm River**	**65.58**	**22**	P	**P**	**14 03 40.1 +0.9**
	baz=264					
YUK8	**Steele Glacier**	**65.59**	**31**	P	**P**	**14 03 40.7 +1.0**
	baz=269					
I28M	**Miner Creek**	**65.67**	**26**	IAMs_20	IAMs_20	14 30 33.6
	comp=Z,639nm,20.0s					
I28M	**Miner Creek**	**65.67**	**26**	P	**P**	**14 03 40.6 +0.7**
	baz=267					
F28M	**Old Crow**	**65.84**	**24**	P	**P**	**14 03 42.0 +1.2**
	baz=266,SNR=18					
E28M	**Babbage River**	**66.03**	**23**	P	**P**	**14 03 43.2 +1.1**
	baz=266					
KBL	**Kabul**	**66.07**	**300**		**P**	**14 03 40.7 -2.5**
KBL				IAmb	IAmb	14 03 45.4
	comp=Z,12nm,0.9s					
KBL	**Kabul**	**66.07**	**300**	P	**P**	**14 03 40.7 -2.5**
KBL				pmax	pmax	
	comp=Z,12nm,1.0s					
YUK4	**Talbot Arm**	**66.13**	**31**	P	**P**	**14 03 44.6 +1.5**
	baz=270,SNR=7.9					
O29M	**Mount Kennedy**	**66.17**	**32**	IAmb	IAmb	14 03 49.1
	comp=Z,27nm,1.2s					
O29M				IAMs_20	IAMs_20	14 31 30.5
	comp=Z,812nm,20.0s					

comp=Z,17nm,1.3s
K29M Barlow Dome 66.66 28 P **P** **14 03 46.8 +0.5**
baz=270
URZ Urewera 66.67 152 LR LR 14 31 38.2
comp=Z,84nm,18.9s,baz=328,slow=35
HYT Haines Junctio 66.69 32 IAmb IAmb 14 03 52.3
comp=Z,23nm,1.1s
HYT Haines Junctio 66.69 32 P **P** **14 03 47.1 +0.6**
baz=271,SNR=7.0
N30M Aishikik Lake 66.88 31 IAMs_20 IAMs_20 14 32 31.3
comp=Z,843nm,20.0s
N30M Aishikik Lake 66.88 31 P **P** **14 03 48.2 +0.5**
baz=271
P30M Million Dollar 66.98 32 P **P** **14 03 48.3 0.0**
baz=272
M30M Minto, Yukon 67.00 30 IAmb IAmb 14 04 05.3
comp=Z,23nm,1.7s
M30M Minto, Yukon 67.00 30 P **P** **14 03 47.9 -0.6**
baz=271
EPYK Eagle Plains 67.02 26 IAMs_20 IAMs_20 14 30 57.3
comp=Z,518nm,20.0s
EPYK Eagle Plains 67.02 26 P **P** **14 03 49.0 +0.5**
baz=269,SNR=12
I30M Mount Dempster 67.16 27 P **P** **14 03 49.7 +0.2**
baz=270
J30M Hart River 67.18 27 IAmb IAmb 14 04 01.6
comp=Z,18nm,1.4s
J30M IAMs_20 IAMs_20 14 31 04.2
comp=Z,676nm,21.0s
J30M Hart River 67.18 27 P **P** **14 03 50.3 +0.6**
baz=270
G30M tAoh Zraii Nji 67.23 25 P **P** **14 03 50.5 +0.8**
baz=270
O30N Mendenhall 67.39 32 IAMs_20 IAMs_20 14 32 38.6
comp=Z,641nm,20.0s
O30N Mendenhall 67.39 32 P **P** **14 03 51.6 +0.7**
baz=272
F30M Barrier River 67.40 24 P **P** **14 03 51.7 +0.9**
baz=270,SNR=20
S31K Pelican 67.45 35 P **P** **14 03 52.0 +0.7**
baz=273
N31M Braeburn, Yuko 67.51 31 IAMs_20 IAMs_20 14 33 39.9
comp=Z,872nm,20.0s
N31M Braeburn, Yuko 67.51 31 P **P** **14 03 52.2 +0.5**
baz=272
SKAG Skagway 67.83 33 P **P** **14 03 54.5 +0.8**
baz=274
WHY Whitehorse 67.98 32 P **P** **14 03 55.2 +0.4**
baz=273
H31M Peel River 68.00 26 IAMs_20 IAMs_20 14 28 16.0
comp=Z,586nm,21.0s
H31M Peel River 68.00 26 P **P** **14 03 54.5 -0.2**
baz=272
SIT Sitka 68.00 36 P **P** **14 03 55.0 +0.3**
baz=274
M31M Drury Creek, Y 68.13 30 IAMs_20 IAMs_20 14 30 55.3
comp=Z,894nm,21.0s
M31M Drury Creek, Y 68.13 30 P **P** **14 03 55.9 +0.3**
baz=273
F31M Tsiigehtchic 68.19 24 IAmb IAmb 14 04 00.3
comp=Z,22nm,1.2s
F31M Tsiigehtchic 68.19 24 P **P** **14 03 56.7 +1.0**
baz=272,SNR=7.6
INK Inuvik 68.25 23 IAmb IAmb 14 04 00.7
comp=Z,28nm,1.2s
INK Inuvik 68.25 23 P **P** **14 03 57.0 +1.0**
baz=272,SNR=19
R32K Eaglecrest 68.34 34 P **P** **14 03 57.6 +0.8**
baz=275
P32M Atlin 68.64 33 IAMs_20 IAMs_20 14 30 18.9
comp=Z,542nm,22.0s
P32M Atlin 68.64 33 P **P** **14 03 59.3 +0.5**
baz=275
N32M Quiet Lake 68.83 31 IAMs_20 IAMs_20 14 32 34.7
comp=Z,979nm,20.0s
N32M Quiet Lake 68.83 31 P **P** **14 04 00.6 +0.6**
baz=275
RPZ Rata Peaks 68.99 159 LR LR 14 29 07.3
comp=Z,126nm,20.2s,baz=330,slow=32
P33M Teslin, Yukon 69.04 32 P **P** **14 04 01.7 +0.3**
baz=275
U33K Whale Pass 69.31 36 P **P** **14 04 03.4 +0.5**
baz=277
RAR Rarotonga 69.36 124 LR LR 14 29 35.5
comp=Z,242nm,21.0s,baz=304,slow=32
CRAG Craig 69.38 37 P **P** **14 04 04.4 +1.0**
baz=277
Q32M Nakina River 69.44 33 IAMs_20 IAMs_20 14 28 38.1
comp=Z,521nm,21.0s
Q32M Nakina River 69.44 33 P **P** **14 04 04.5 +0.5**
baz=276
WRAK Wrangell Islan 69.70 36 P **P** **14 04 06.6 +1.3**
baz=277
H02S2 DAWSON INLET T 70.05 40 T T 15 21 06.4
SNR=19
R33M Jennings River 70.06 33 IAMs_20 IAMs_20 14 31 13.3
comp=Z,598nm,22.0s
R33M Jennings River 70.06 33 P **P** **14 04 08.0 +0.3**
baz=277
S34M Telegraph Cree 70.16 34 IAmb IAmb 14 04 24.4
comp=Z,39nm,1.8s
S34M Telegraph Cree 70.16 34 P **P** **14 04 08.4 +0.2**
baz=278
V35K Ketchikan 70.25 37 P **P** **14 04 09.2 +0.5**
baz=278
ARTI Arti 70.29 324 P **P** **14 04 07.8 -1.2**
comp=Z,6.4nm,0.9s,baz=70,slow=6.4,SNR=5.1
ARTI LR LR 14 37 12.4
comp=Z,199nm,18.4s,baz=66,slow=38
comp=Z,6.4nm,0.9s
ARTI Arti 70.29 324 **P** **14 04 08.2 -0.7**
ARTI Arti 70.29 324 *c i* P **P** **14 04 09.0 0.0**
ARTI 14 06 40.0
ARTI S **S** **14 13 23.9 +3.0**
ARTI SS **SS** **14 17 48.4 -2.4**
ARTI pmax pmax
comp=Z,12nm,1.0s
ABKAR Akbulak array 70.43 316 **P** **14 04 09.0 -0.9**
DLBC Dease Lake 70.67 34 P **P** **14 04 11.8 +0.5**
comp=Z,2.5nm,0.9s,baz=282,slow=7.9,SNR=7.0
DLBC LR LR 14 32 16.8
comp=Z,334nm,21.6s,baz=271,slow=34
comp=Z,2.5nm,0.9s
DLBC Dease Lake 70.67 34 P **P** **14 04 12.1 +0.7**
baz=278
A36M Sachs Harbour 70.76 19 P **P** **14 04 12.2 +0.6**
baz=278,SNR=21
T35M Bob Quinn 70.77 35 P **P** **14 04 12.8 +0.9**
baz=279
WTLY Watson Lake, Y 71.05 32 IAmb IAmb 14 04 19.1
comp=Z,24nm,1.4s
WTLY Watson Lake, Y 71.05 32 P **P** **14 04 14.5 +0.9**
baz=279,SNR=9.1
U35K Hyder 71.06 36 P **P** **14 04 14.1 +0.5**
baz=279
AKTO Aktyubinsk 71.46 318 P **P** **14 04 15.1 -1.1**
comp=Z,2.3nm,0.7s,baz=83,slow=8.2,SNR=8.5
AKTO LR LR 14 38 01.0
comp=Z,307nm,18.1s,baz=65,slow=38
comp=Z,2.3nm,0.7s
C36M Paulatuk 71.56 22 P **P** **14 04 17.0 +0.6**
baz=280,SNR=14
BBB Bella Bella 72.84 40 LR LR 14 30 16.6
comp=Z,215nm,21.3s,baz=282,slow=31
WRGLY Wrigley 72.98 28 IAmb IAmb 14 04 36.1
comp=Z,37nm,1.3s
WRGLY Wrigley 72.98 28 P **P** **14 04 25.5 +0.4**
baz=282,SNR=8.1
KOTAN Kotaneelee Air 73.38 31 P **P** **14 04 27.5 0.0**
baz=283
KIRV Kirov 74.61 327 LR LR 14 39 31.9
comp=Z,299nm,20.8s,baz=68,slow=38
KIRV Kirov 74.61 327↑ *eP* **P** **14 04 34.7 +0.1**
PPT Papeete 75.84 115 LR LR 14 33 59.6
comp=Z,566nm,18.2s,baz=315,slow=32
NLWA Neilton Lookou 76.68 44 IAmb IAmb 14 05 06.2
comp=Z,21nm,1.4s
NLWA IAMs_20 IAMs_20 14 33 17.9
comp=Z,788nm,20.0s
SPITS Spitsbergen Ar 76.77 350 LR LR 14 39 16.1
comp=Z,148nm,20.1s,baz=33,slow=36
YKAW3 Yellowknife Wh 77.06 28 IAmb IAmb 14 04 53.2
comp=Z,22nm,1.2s
YKA Yellowknife Ar 77.08 28 P **P** **14 04 49.3 +0.5**
comp=Z,7.3nm,0.9s,baz=294,slow=6.4,SNR=70
YKA LR LR 14 37 53.8
comp=Z,419nm,20.7s,baz=272,slow=35
comp=Z,7.3nm,0.9s

YKA Yellowknife Ar 77.08 28 P **P** **14 04 48.9 +0.2**
YKAW1 Yellowknife Wh 77.14 28 IAmb IAmb 14 04 53.7
comp=Z,39nm,1.4s
RES Resolute Bay 77.86 13 LR LR 14 38 55.1
comp=Z,134nm,21.9s,baz=309,slow=36
KLMR Klimovskoe 78.65 331 *eP* **P** **14 04 56.0 -1.5**
KLMR pmax pmax
comp=Z,8.0nm,1.0s
KLMR MLR MLR
comp=Z,523nm,16.0s
BBOR Butler Butte 78.80 48 IAmb IAmb 14 05 04.3
comp=Z,44nm,2.0s
WIFE Three Sisters- 79.03 47 IAmb IAmb 14 05 05.7
comp=Z,37nm,1.5s
J04A Umpqua Nationa 79.09 48 IAmb IAmb 14 05 05.8
comp=Z,45nm,1.5s
KHBM Hayfork Bally 79.10 51 IAmb IAmb 14 05 06.3
comp=Z,34nm,1.7s
KHBM IAMs_20 IAMs_20 14 35 07.3
comp=Z,855nm,20.0s
YBH Yreka Blue Hor 79.14 50 LR LR 14 33 29.2
comp=Z,37nm,21.3s,baz=292,slow=31
YBH Yreka Blue Hor 79.14 50 IAmb IAmb 14 05 06.3
comp=Z,27nm,1.6s
M02C Callahan 79.14 50 IAMs_20 IAMs_20 14 33 45.3
comp=Z,620nm,20.0s
MXC Moxie City 79.26 44 IAmb IAmb 14 05 12.4
comp=Z,44nm,1.9s
L04D Klamath Falls 79.27 49 IAmb IAmb 14 05 06.8
comp=Z,52nm,1.7s
I05D Terrebonne, OR 79.27 47 IAmb IAmb 14 05 21.6
comp=Z,69nm,2.0s
N02D Trinity Center 79.38 50 IAMs_20 IAMs_20 14 35 33.5
comp=Z,685nm,19.0s
EPH Ephrata 79.45 43 IAmb IAmb 14 05 12.8
comp=Z,62nm,2.0s
O02D Mt. Diablo Mer 79.56 51 IAmb IAmb 14 05 09.0
comp=Z,36nm,1.5s
M03C McCloud 79.70 50 IAmb IAmb 14 05 14.8
comp=Z,25nm,1.2s
PINE Pine Mountain 79.72 47 IAmb IAmb 14 05 10.3
comp=Z,24nm,1.0s
HAWA Hanford 79.81 44 IAMs_20 IAMs_20 14 35 40.8
comp=Z,744nm,20.0s
ARCES ARCESS Array B 79.87 342 P **P** **14 05 03.2 -0.9**
comp=Z,5.6nm,0.9s,baz=60,slow=5.3,SNR=7.5
ARCES LR LR 14 43 58.7
comp=Z,228nm,19.9s,baz=63,slow=38
comp=Z,5.6nm,0.9s
D08A Wollman Farm, 79.99 43 IAmb IAmb 14 05 10.2
comp=Z,37nm,1.7s
E08A Dider Farm, El 80.09 44 IAmb IAmb 14 05 11.0
comp=Z,46nm,1.9s
O03E Paynes Creek 80.24 51 IAmb IAmb 14 05 18.0
comp=Z,50nm,1.5s
O03E IAMs_20 IAMs_20 14 34 14.5
comp=Z,459nm,19.0s
MAK Makhachkala 80.36 312 *eP* P 14 05 01.7 -5.5
MAK *e* 14 08 12.5
MAK *eS* S 14 15 04.4 -8.8
MAK *eSS* **SS** **14 20 21.8 -2.3**
MAK MLR MLR
comp=Z,901nm,19.0s
SUTB Sutter Butte 80.60 52 IAMs_20 IAMs_20 14 32 04.0
comp=Z,692nm,22.0s
E09A Wood Farm, Sta 80.67 44 IAmb IAmb 14 05 14.0
comp=Z,31nm,1.5s
ORV Oroville 80.70 51 IAmb IAmb 14 05 13.8
comp=Z,34nm,1.6s
ORV IAMs_20 IAMs_20 14 35 37.7
comp=Z,531nm,20.0s
NEW Newport 80.71 42 LR LR 14 34 47.2
comp=Z,525nm,21.5s,baz=294,slow=31
NEW Newport 80.71 42 **P** **14 05 08.4 -0.7**
NEW Newport 80.71 42 IAMs_20 IAMs_20 14 36 33.5
comp=Z,724nm,20.0s
NEW Newport 80.71 42 P **P** **14 05 08.4 -0.7**
NEW pmax pmax
comp=Z,15nm,1.3s
VRH Novokhopyorsk 81.15 321 *eP* **P** **14 05 10.3 -0.9**
VRH pmax pmax
comp=Z,7.0nm,0.9s
AFDM Forest Hills D 81.29 52 IAmb IAmb 14 05 17.3
comp=Z,32nm,1.7s
MHC Mount Hamilton 81.33 53 IAmb IAmb 14 05 17.8
comp=Z,41nm,1.6s
BEKR Beckworth 81.43 51 IAmb IAmb 14 05 18.1
comp=Z,45nm,1.9s
FORD Fort Ord Natur 81.44 54 IAMs_20 IAMs_20 14 35 28.4
comp=Z,891nm,22.0s
WVOR Wild Horse Val 81.77 48 IAmb IAmb 14 05 20.0
comp=Z,31nm,1.6s
BMO Blue Mountains 81.81 45 IAmb IAmb 14 05 20.0
comp=Z,35nm,1.6s
BMO IAMs_20 IAMs_20 14 38 09.8
comp=Z,432nm,19.0s
CMB Columbia Colle 82.03 52 IAmb IAmb 14 05 21.2
comp=Z,40nm,1.7s
PAHR Pah Rah Range 82.19 51 IAmb IAmb 14 05 22.1
comp=Z,34nm,1.8s
LPSR Galich'ya Gora 82.20 323 *eP* **P** **14 05 16.1 -0.6**
LPSR pmax pmax
comp=Z,10.0nm,0.9s
OBN Obninsk 82.42 326 LR LR 14 42 50.6
comp=Z,276nm,21.6s,baz=18,slow=36
OBN Obninsk 82.42 326 *i* P **P** **14 05 16.6 -1.2**
OBN *e* 14 05 24.8
OBN pmax pmax
comp=Z,7.0nm,0.9s
OBN MLR MLR
comp=Z,278nm,19.0s
VORR Voronezh 82.42 323 *eP* **P** **14 05 15.8 -2.1**
VORR pmax pmax
comp=Z,10.0nm,0.8s
PLID Pearl Lake 82.59 45 **P** **14 05 18.5 -0.8**
PLID IAMs_20 IAMs_20 14 37 36.3
comp=Z,531nm,21.0s
VSR Storozhevoye 82.63 322 *eP* **P** **14 05 16.8 -2.2**
VSR pmax pmax
comp=Z,10.0nm,0.9s
PKD Bear Valley Ra 82.63 54 IAmb IAmb 14 05 24.4
comp=Z,24nm,1.3s
VORD Divnogorie 82.66 322 *eP* **P** **14 05 18.4 -0.8**
VORD pmax pmax
comp=Z,10.0nm,0.9s
POIN Pond Inlet 82.69 12 IAmb IAmb 14 05 21.9
comp=Z,29nm,1.8s
KBZ Khabaz 83.23 314 P **P** **14 05 21.6 -0.7**
KBZ LR LR 14 44 48.5
comp=Z,11nm,0.9s,baz=72,slow=9.6,SNR=23
comp=Z,221nm,22.0s,baz=60,slow=38
comp=Z,11nm,0.9s
KBZ Khabaz 83.23 314 *deP* **P** **14 05 22.4 +0.1**
KBZ pmax pmax
comp=Z,16nm,1.0s
MSO Missoula 83.25 42 IAMs_20 IAMs_20 14 37 45.6
comp=Z,814nm,21.0s
KVAR Kislovodsk Arr 83.28 314 LR LR 14 43 11.9
comp=Z,210nm,21.6s,baz=282,slow=36
GNI Garni 83.28 310 LR LR 14 47 10.0
comp=Z,126nm,19.1s,baz=80,slow=39
KIV Kislovodsk 83.29 314 *eP* **P** **14 05 23.1 +0.3**
KIV pmax pmax
comp=Z,12nm,1.1s
KIV MLR MLR
comp=Z,217nm,19.0s
KIV Kislovodsk 83.29 314 P **P** **14 05 22.5 -0.3**
comp=Z,13nm,1.0s
MFID Camas Ranch 83.33 46 IAmb IAmb 14 05 28.1
comp=Z,35nm,1.6s
NVAR Mina Array Bea 83.43 52 P **P** **14 05 24.5 +0.8**
comp=Z,3.8nm,0.9s,baz=290,slow=5.5,SNR=15
NVAR LR LR 14 37 50.3
comp=Z,576nm,19.8s,baz=264,slow=32
comp=Z,3.8nm,0.9s
NVAR Mina Array Bea 83.43 52 **P** **14 05 22.6 -1.1**
NV11 Mina Array Sit 83.54 51 IAmb IAmb 14 05 29.3
comp=Z,43nm,1.9s
VES Vestal, Richgr 83.78 54 IAMs_20 IAMs_20 14 32 57.3
comp=Z,764nm,22.0s
DSP Deep Springs 84.06 52 IAmb IAmb 14 05 32.2
comp=Z,25nm,1.5s
FINES FINESS Array B 84.13 335 P **P** **14 05 24.5 -2.1**
comp=Z,3.0nm,0.5s,baz=59,slow=4.9,SNR=29
FINES LR LR 14 44 30.2
comp=Z,211nm,19.8s,baz=50,slow=37
comp=Z,3.0nm,0.5s
HLID Hailey 84.22 46 IAMs_20 IAMs_20 14 39 55.6
comp=Z,750nm,21.0s
ISA Isabella, Lake 84.31 54 IAMs_20 IAMs_20 14 37 45.2
comp=Z,805nm,21.0s
ILON Igloolik, Nuna 84.42 15 IAmb IAmb 14 05 31.6
comp=Z,23nm,1.8s
GMN Gold Mountain 84.61 52 IAmb IAmb 14 05 34.8
comp=Z,19nm,1.7s
DLMT Dillon 84.69 43 IAMs_20 IAMs_20 14 38 39.9
comp=Z,669nm,20.0s
ELK Elko 84.76 48 IAmb IAmb 14 05 36.3
comp=Z,19nm,1.3s
ELK IAMs_20 IAMs_20 14 36 40.9
comp=Z,644nm,21.0s
CLC China Lake 84.91 54 IAmb IAmb 14 05 35.9
comp=Z,21nm,1.6s
BOZ Bozeman (W) 85.22 43 IAmb IAmb 14 07 34.4
comp=Z,12nm,0.9s
BOZ IAMs_20 IAMs_20 14 38 54.7
comp=Z,683nm,20.0s
FURC Furnace Creek, 85.22 53 IAMs_20 IAMs_20 14 36 59.3
comp=Z,799nm,21.0s
WCT Wildcat Mounta 85.27 53 IAmb IAmb 14 05 37.9
comp=Z,34nm,1.7s
QSM Queen of Sheba 85.40 53 IAmb IAmb 14 05 40.5
comp=Z,21nm,1.4s
GWY Greenwater Val 85.47 53 IAmb IAmb 14 05 38.8
comp=Z,41nm,1.8s
TPNV Topopah Spring 85.49 52 IAMs_20 IAMs_20 14 38 05.5
comp=Z,750nm,20.0s
YHL Hebgen Lake 85.82 43 IAmb IAmb 14 07 53.4
comp=Z,22nm,0.9s
YHB Horse Butte 85.85 44 IAmb IAmb 14 07 24.6
comp=Z,13nm,0.8s
YMR Madison River 86.03 44 IAmb IAmb 14 07 12.9
comp=Z,15nm,0.9s
HVU Hansel Valley 86.05 47 IAmb IAmb 14 05 42.9
comp=Z,17nm,1.3s
FFC Flin Flon 86.40 32 **P** **14 05 38.8 +0.7**
FFC Flin Flon 86.40 32 IAMs_20 IAMs_20 14 42 21.4
comp=Z,556nm,19.0s
FFC Flin Flon 86.40 32 P **P** **14 05 38.8 +0.7**
FFC pmax pmax
comp=Z,48nm,1.8s
FLWY Flagg Ranch 86.46 44 IAMs_20 IAMs_20 14 40 39.7
comp=Z,619nm,19.0s
SHPR Sheep Range 86.47 52 IAmb IAmb 14 05 44.4
comp=Z,22nm,1.9s
PFO Pinyon Flats O 86.61 55 LR LR 14 40 51.1
comp=Z,289nm,19.0s,baz=250,slow=33
DUG Dugway, Tooele 86.67 48 IAmb IAmb 14 05 45.5
comp=Z,17nm,1.1s
AHID Auburn Hatcher 86.76 45 IAMs_20 IAMs_20 14 36 45.7
comp=Z,418nm,21.0s
HWUT Hardware Ranch 86.94 47 IAmb IAmb 14 05 51.8
comp=Z,25nm,1.5s
V12A Nelson 87.01 53 IAmb IAmb 14 05 51.6
comp=Z,29nm,1.6s
DANC Danby, Needles 87.04 54 IAMs_20 IAMs_20 14 39 50.6
comp=Z,680nm,22.0s
TCUT Toone Canyon 87.26 47 IAmb IAmb 14 08 36.5
comp=Z,10nm,0.8s
BC3 Big Chuckawall 87.37 55 IAmb IAmb 14 05 48.1
comp=Z,23nm,1.6s
BC3 IAMs_20 IAMs_20 14 36 14.4
comp=Z,534nm,21.0s
CCUT Cedar City 87.37 51 IAmb IAmb 14 05 54.4
comp=Z,32nm,1.9s
IRM Iron Mountain 87.41 54 IAmb IAmb 14 05 48.3
comp=Z,34nm,1.8s
IRM IAMs_20 IAMs_20 14 39 59.3
comp=Z,710nm,20.0s
LCMT Little Creek M 87.67 51 IAmb IAmb 14 05 49.9
comp=Z,24nm,1.6s
PDAR Pinedale Array 87.78 45 P **P** **14 05 46.0 +0.7**
comp=Z,0.6nm,0.9s,baz=295,slow=4.6,SNR=4.1
PDAR LR LR 14 40 37.3
comp=Z,361nm,19.9s,baz=303,slow=33
comp=Z,0.6nm,0.9s
KNB Kanab 87.98 51 IAmb IAmb 14 05 54.6
comp=Z,14nm,1.1s
W13A Hualapai Mount 87.98 53 IAmb IAmb 14 05 51.3
comp=Z,22nm,1.9s
MTPU Mount Pierson 88.01 50 IAmb IAmb 14 05 52.1
comp=Z,32nm,1.9s
AKASG Malin Array Be 88.43 325 P **P** **14 05 45.8 -2.1**
comp=Z,0.2nm,0.2s,baz=53,slow=4.3,SNR=5.5
AKASG LR LR 14 48 07.7
comp=Z,417nm,18.3s,baz=57,slow=38
comp=Z,0.2nm,0.2s
AK09 Malin Array Si 88.44 324 P **P** **14 05 47.4 -0.6**
P18A Preston Nutter 88.70 48 IAmb IAmb 14 09 14.3
comp=Z,10nm,0.9s
Y14A Wickenburg 89.12 54 IAmb IAmb 14 05 55.7
comp=Z,23nm,1.6s
WUAZ Wupatki 89.67 52 IAMs_20 IAMs_20 14 40 27.2
comp=Z,680nm,20.0s
HFS Hagfors 89.68 337 P **P** **14 05 51.4 -2.2**
comp=Z,1.4nm,0.5s,baz=22,slow=4.7,SNR=4.2
HFS LR LR 14 46 52.4
comp=Z,244nm,21.2s,baz=42,slow=36
comp=Z,1.4nm,0.5s
MSEY Mahe Island 89.84 265 IAMs_20 IAMs_20 14 39 50.4
comp=Z,405nm,20.0s
NB2 NORSAR Subarra 89.90 339 P **P** **14 05 53.0 -1.7**
comp=Z,20nm,1.4s,baz=44,slow=5.1
NB2 NORSAR Subarra 89.90 339 P **P** **14 05 53.0 -1.7**
NOA NORSAR Array B 89.90 339 P **P** **14 05 52.3 -2.4**
comp=Z,2.8nm,0.9s,baz=40,slow=4.3,SNR=5.4
NOA LR LR 14 48 54.4
comp=Z,124nm,18.5s,baz=35,slow=37
comp=Z,2.8nm,0.9s
HAYD Hayden 90.34 46 IAMs_20 IAMs_20 14 43 08.3
comp=Z,534nm,20.0s
RSSD Black Hills 90.69 42 IAMs_20 IAMs_20 14 43 29.4
comp=Z,550nm,20.0s
BRTR Keskin Array B 91.20 314 P **P** **14 05 59.6 -1.7**
comp=Z,0.7nm,0.5s,baz=81,slow=8.9,SNR=3.6
BRTR LR LR 14 50 34.7
comp=Z,98nm,21.8s,baz=44,slow=38
comp=Z,0.7nm,0.5s
SFJD Kangerlussuaq 91.83 6 LR LR 14 48 25.3
comp=Z,122nm,20.1s,baz=341,slow=36
ULM Lac du Bonnet 91.99 34 LR LR 14 48 31.7
comp=Z,344nm,19.3s,baz=356,slow=36
ASF Jabal al Asfar 92.31 306 LR LR 14 51 47.4
comp=Z,90nm,20.9s,baz=44,slow=38
MMAI Mount Meron Ar 93.06 307 LR LR 14 52 19.1
comp=Z,122nm,21.2s,baz=81,slow=38
MLR Muntele Rosu 93.09 321 LR LR 14 49 38.1
comp=Z,173nm,21.0s,baz=62,slow=37
STHS Stebnicka Huta 93.39 326 *eP* **P** **14 06 14.9 +3.8**
STHS Stebnicka Huta 93.39 326 *eP* **P** **14 06 14.9 +3.8**
ANMO Albuquerque 93.52 51 LR LR 14 43 40.2
comp=Z,460nm,19.8s,baz=302,slow=33
ANMO Albuquerque 93.52 51 IAMs_20 IAMs_20 14 43 58.0
comp=Z,542nm,20.0s
ANMO Albuquerque 93.52 51 IAMs_20 IAMs_20 14 43 58.1
comp=Z,538nm,20.0s
ANMO Albuquerque 93.52 51 IAMs_20 IAMs_20 14 43 58.1
comp=Z,544nm,20.0s
ANMO Albuquerque 93.52 51↑ *eP* **P** **14 06 14.7 +2.5**
ANMO pmax pmax
comp=Z,3.0nm,1.4s
SUSD Miller 93.61 40 IAMs_20 IAMs_20 14 42 49.7
comp=Z,594nm,21.0s
BORG Borgarnes 93.93 354 LR LR 14 48 51.0
comp=Z,43nm,21.4s,baz=1.1,slow=36
K30B Basset 94.19 41 IAMs_20 IAMs_20 14 45 07.0
comp=Z,619nm,20.0s
KSCO Kaye Shedlock' 94.19 46 IAMs_20 IAMs_20 14 44 12.4
comp=Z,566nm,20.0s
ISP Isparta 94.26 313 IAMs_20 IAMs_20 14 53 02.9
comp=Z,287nm,20.0s
F33A 5 Mile Ranch, 94.36 37 IAMs_20 IAMs_20 14 45 34.4
comp=Z,532nm,20.0s
EIL Elat 94.92 304 LR LR 14 54 22.2
comp=Z,101nm,19.9s,baz=62,slow=39
ECSD EROS Data Cent 95.40 39 IAMs_20 IAMs_20 14 44 28.1
comp=Z,596nm,21.0s
LPIG La Paz 95.41 62 LR LR 14 44 29.4
comp=Z,397nm,18.9s,baz=297,slow=32
VRAC Vranov 95.81 328 LR LR 14 52 20.9
comp=Z,266nm,18.9s,baz=40,slow=37
MODS Modra-Piesok 96.08 327 *eP* **P** **14 06 26.5 +3.1**
MODS Modra-Piesok 96.08 327 *eP* **P** **14 06 26.5 +3.1**
CLL Collm 96.14 331 *eP* **P** **14 06 24.0 +0.4**
CLL MLR MLR
comp=Z,300nm,19.6s

CLL	**Collm**	**96.14**	**331**	*e*P	**P**	**14 06 24.0**	**+0.4**
CLL				*e*SS	SS	14 24 18.0	+5.1
CLL				AMS	AMS	14 55 00.0	
	comp=Z,300nm,19.6s						
SPMN	**Marine on St.**	**96.69**	**36**	IAMs_20	IAMs_20	14 46 07.9	
	comp=Z,664nm,22.0s						
H06N1	**SOCORRO T-PHAS**	**97.05**	**67**	T	T	15 54 36.4	
	SNR=7.8						
GERES	**GERESS Array B**	**97.53**	**329**	LR	LR	14 52 20.1	
	comp=Z,280nm,21.4s,baz=42,slow=37						
TXAR	**Lajitas Array**	**98.29**	**54**	LR	LR	14 48 18.5	
	comp=Z,252nm,19.1s,baz=290,slow=34						
VNDA	**Vanda**	**98.71**	**176**	LR	LR	14 48 34.5	
	comp=Z,160nm,21.6s,baz=342,slow=34						
EKA	**Eskdalemuir Ar**	**99.04**	**341**	LR	LR	14 56 12.2	
	comp=Z,110nm,19.4s,baz=26,slow=38						
IDI	**Anoyia**	**99.44**	**313**	LR	LR	14 58 07.1	
	comp=Z,67nm,18.7s,baz=88,slow=39						
WHTX	**Lake Whitney,**	**101.49**	**49**	IAMs_20	IAMs_20	14 48 02.9	
	comp=Z,499nm,20.0s						
V48A	**Smith Brothers**	**106.27**	**41**	IAMs_20	IAMs_20	14 52 39.7	
	comp=Z,546nm,21.0s						
BCX	**Boston College**	**109.47**	**27**	IAMs_20	IAMs_20	14 41 49.7	
	comp=Z,416nm,18.0s						
QSPA	**South Pole Qui**	**110.60**	**180**	IAMs_20	IAMs_20	14 54 10.4	
	comp=Z,485nm,20.0s						
TGUH	**Tegucigalpa,Un**	**119.23**	**60**	IAMs_20	IAMs_20	14 56 05.7	
	comp=Z,311nm,20.0s						
TORD	**Torodi Ar. Bea**	**129.57**	**309**	PKP	**PKPdf**	**14 12 03.2**	**-2.5**
	comp=Z,0.3nm,0.4s,baz=12,slow=4.1,SNR=2.6						
SMRT	**St. Maarten**	**133.39**	**36**	IAMs_20	IAMs_20	15 06 09.7	
	comp=Z,302nm,18.0s						
H03N2	**Juan Fernandez**	**140.41**	**118**	T	T	16 48 41.7	
	baz=266,slow=74,SNR=22						
H03N3	**Juan Fernandez**	**140.41**	**118**	T	T	16 48 42.3	
	baz=266,slow=74,SNR=29						
H03N1	**Juan Fernandez**	**140.42**	**118**	T	T	16 48 41.7	
	baz=266,slow=74,SNR=16						
PLCA	**Paso Flores**	**144.91**	**132**	PKPbc	**PKPdf**	**14 12 32.8**	**-0.5**
	comp=Z,5.4nm,1.0s,baz=247,slow=2.5,SNR=8.2						
LPAZ	**La Paz**	**149.66**	**87**	PKP	**PKPdf**	**14 12 40.7**	**-1.7**
	comp=Z,5.9nm,0.7s,baz=316,slow=2.3,SNR=7.7						
LPAZ				PKPbc	**PKiKP**	**14 12 47.4**	**-0.7**
	comp=Z,19nm,1.0s,baz=291,slow=3.7,SNR=21						
LPAZ	**La Paz**	**149.66**	**87**		**PKiKP**	**14 12 48.7**	**+0.6**

*IDC **19** 13:58:56.9±1.1, 40.°66N×111.°96W, h0km, mbtmp2.7/4, ML3.3/4, Error ellipse: s-maj=19.8km s-min=7.8km az=143.0*

*UUSS **19** 13:58:57.8±0.7, 40.°742N±0.°010×112.°06W±0.°02, h8km±4km, Error ellipse: s-maj=2.0km s-min=1.4km az=106.0*

*NEIC **19** 13:58:57.9±0.9, 40.°750N±0.°010×112.°07W±0.°01, h10km±1km, ML2.3/26, ML2.4/14(UUSS), Error ellipse: s-maj=2.7km s-min=2.0km az=81.0*

ISC 19 13:58:58.1±0.9, 40.°74N±0.°02×112.°06W±0.°02, h8km±7km, n49, σ0°63/47, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOQ	**North Oquirrh**	**0.10**	**205**		**Pg**	**13 59 00.6**	**-0.1**
NOQ					**Sg**	**13 59 02.4**	**0.0**
RPF	**Rose Park Fire**	**0.11**	**74**		**Pg**	**13 59 01.2**	**+0.4**
SAIU	**Southern Antel**	**0.14**	**322**		**Sg**	**13 59 03.4**	**-0.1**
SAIU	**Southern Antel**	**0.14**	**322**		**Pg**	**13 59 01.3**	**0.0**
HRU	**Hogsback Ridge**	**0.14**	**72**		**Pg**	**13 59 01.3**	**0.0**
RBU	**Red Butte Cany**	**0.20**	**79**		**Pg**	**13 59 02.1**	**-0.1**
MHD	**Mile High Driv**	**0.22**	**112**		**Pg**	**13 59 02.5**	**-0.1**
CTU	**Camp Tracy**	**0.24**	**102**		**Pg**	**13 59 02.9**	**-0.2**
CTU	**Camp Tracy**	**0.24**	**102**	IAML		13 59 06.4	
	comp=N,394nm,0.3s						
CTU				IAML		13 59 06.5	
	comp=E,486nm,0.2s						
GMU	**Granite Mounta**	**0.28**	**126**		**Pg**	**13 59 03.6**	**-0.2**
CWU	**Camp Williams**	**0.30**	**186**		**Pg**	**13 59 04.1**	**0.0**
NAIU	**Northern Antel**	**0.30**	**336**		**Pg**	**13 59 04.1**	**0.0**
WTU	**Western Traver**	**0.30**	**164**		**Pg**	**13 59 04.6**	**+0.5**
FPU	**Francis Peak**	**0.33**	**31**		**Pg**	**13 59 04.8**	**0.0**
AAU	**Alta**	**0.36**	**115**		**Pg**	**13 59 05.2**	**-0.1**
SNUT	**Stansbury Nort**	**0.37**	**293**		**Pg**	**13 59 05.4**	**0.0**
TCVU	**Timpanogos Cav**	**0.41**	**137**		**Pg**	**13 59 05.9**	**-0.2**
RCJ	**Ross Creek**	**0.48**	**100**		**Pg**	**13 59 07.6**	**+0.1**
N16A	**Rees Ranch, Co**	**0.50**	**73**		**Pg**	**13 59 08.1**	**+0.3**
KLJ	**Keetly**	**0.51**	**102**		**Pg**	**13 59 08.1**	**0.0**
HLJ	**Hailstone**	**0.52**	**105**		**Pg**	**13 59 08.2**	**0.0**
TCUT	**Toone Canyon**	**0.62**	**53**		**Pg**	**13 59 10.2**	**+0.1**
TCUT	**Toone Canyon**	**0.62**	**53**		**Pg**	**13 59 10.4**	**+0.2**
SPUT	**South Promonto**	**0.64**	**333**		**Pg**	**13 59 10.4**	**0.0**
SPUT				IAML		13 59 20.0	
	comp=N,136nm,0.2s						
HTU	**Hoyt Peak**	**0.65**	**96**		**Pg**	**13 59 10.8**	**+0.2**
WMUT	**West Mountain**	**0.69**	**165**		**Pg**	**13 59 11.4**	**0.0**
DAU	**Daniels Canyon**	**0.70**	**118**		**Pb**	**13 59 12.0**	**-0.7**
BGU	**Big Grassy Mou**	**0.76**	**284**		**Pg**	**13 59 12.5**	**-0.1**
BGU	**Big Grassy Mou**	**0.76**	**284**	IAML		13 59 24.8	
	comp=N,114nm,0.3s						
BGU				IAML		13 59 25.6	
	comp=E,120nm,0.4s						
NLU	**North Lily Min**	**0.79**	**181**	IAML		13 59 26.8	
	comp=N,110nm,0.5s						
DUG	**Dugway, Tooele**	**0.79**	**226**		**Pg**	**13 59 13.1**	**-0.2**
DUG				IAML		13 59 26.4	
	comp=N,137nm,0.7s						
DUG				IAML		13 59 29.4	
	comp=N,113nm,0.6s						
MPU	**Maple Canyon**	**0.80**	**156**		**Pb**	**13 59 13.6**	**-0.7**
MPU				IAML		13 59 28.1	
	comp=N,106nm,0.3s						
MCU	**Monte Cristo P**	**0.83**	**30**		**Pg**	**13 59 13.9**	**-0.2**
LTU	**Little Mountai**	**0.86**	**351**		**Pg**	**13 59 14.5**	**-0.1**
HWUT	**Hardware Ranch**	**0.94**	**23**		**Pg**	**13 59 15.7**	**-0.5**
BSUT	**Blindstream Ca**	**1.01**	**101**		**Pg**	**13 59 17.2**	**-0.3**
BSUT				IAML		13 59 34.7	
	comp=N,103nm,0.7s						
HVU	**Hansel Valley**	**1.17**	**333**		**Pg**	**13 59 19.6**	**-0.8**
HVU				IAML		13 59 36.4	
	comp=N,86nm,0.2s						
HVU				IAML		13 59 39.7	
	comp=E,72nm,0.3s						
P17A	**Butcher Ranch,**	**1.62**	**141**		**Pn**	**13 59 27.1**	**0.0**
P18A	**Preston Nutter**	**1.78**	**128**		**Pb**	**13 59 30.6**	**-0.6**
RDMU	**Red Mountain**	**1.91**	**94**		**Pb**	**13 59 32.8**	**-0.4**
SRU	**San Rafael Swe**	**2.02**	**144**		**Pn**	**13 59 32.9**	**+0.4**
AHID	**Auburn Hatcher**	**2.15**	**19**		**Pb**	**13 59 37.5**	**+0.3**
ELK	**Elko**	**2.41**	**271**	Pn	**Pn**	**13 59 38.7**	**+0.7**
	comp=E,1.1nm,0.3s,baz=90,slow=9.8,SNR=8.7						
	comp=E,2.1nm,0.3s						
PSUT	**Pine Spring**	**2.60**	**213**	Pn	**Pn**	**13 59 41.4**	**+0.8**
PDAR	**Pinedale Array**	**2.76**	**42**	Pn	**Pb**	**13 59 45.1**	**-2.7**
	comp=E,2.6nm,0.3s,baz=220,slow=14,SNR=86						
PDAR				Lg	Lg	14 00 23.2	
	comp=E,5.7nm,0.3s,baz=221,slow=33,SNR=24						
	comp=E,3.6nm,0.3s						
PDAR	**Pinedale Array**	**2.76**	**42**		**Pn**	**13 59 43.9**	**+1.2**
MOOW	**Moose Ponds**	**3.16**	**18**		**Pn**	**13 59 49.9**	**+1.7**
MOOW				IAML		14 00 14.9	
	comp=E,5.6nm,4.8s						
NVAR	**Mina Array Bea**	**5.34**	**246**	Pn	**Pn**	**14 00 19.2**	**+0.9**
	comp=E,0.1nm,0.3s,baz=78,slow=16,SNR=1.7						
NVAR				Lg	Lg	14 01 45.9	
	comp=E,0.3nm,0.3s,baz=65,slow=32,SNR=3.9						
	comp=E,0.1nm,0.3s						
TXAR	**Lajitas Array**	**13.29**	**146**	Pn	**Pn**	**14 02 07.2**	**+0.1**
	baz=321,slow=12,SNR=1.8						
	comp=E,0.1nm,0.5s						

*IDC **19** 14:04:34.5±4.8, 38.°18N×74.°23E, h161km±44km, mb3.3/4, mbtmp3.8/9, Error ellipse: s-maj=45.3km s-min=27.3km az=31.0*

*NNC **19** 14:04:41.1±8.3, 39.°50N×73.°99E, h0km, mb3.9, mpv4.1, Error ellipse: s-maj=62.0km s-min=27.6km az=165.0*

ISC 19 14:04:33.9±0.7, 38.°11N±0.°05×74.°3E±0.°1, h150km, n33, σ2°29/41, mb3.6/3, 2C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**4.12**	**3**	P	**Pn**	**14 05 37.8**	**+1.7**
	SNR=16						
ULHL	**Ulahol**	**4.40**	**20**	P	**Pn**	**14 05 41.8**	**+2.2**
	SNR=10						
AAK	**Ala-Archa**	**4.53**	**2**	P	**Pn**	**14 05 41.6**	**+0.5**
	5.5nm,0.4s,baz=168,slow=8.7,SNR=21						
AAK				S	**Sn**	**14 06 33.3**	**-0.3**
	12nm,0.6s,baz=180,slow=20,SNR=6.5						
AAK	**Ala-Archa**	**4.53**	**2**	⇑Pg	**Pn**	**14 05 40.1**	**-1.1**
	SNR=12						
AAK	**Ala-Archa**	**4.53**	**2**	⇑Pg	**Pn**	**14 05 40.1**	**-1.1**
	2.2nm,0.5s						
AAK				⇓Lg	Lg	14 06 23.4	
	18nm,0.8s						
ALCI	**Alchi Leh**	**4.55**	**148**	*e*P	**Pn**	**14 05 45.2**	**+3.5**
ALCI				*e*S	**Sn**	**14 06 34.5**	**+0.1**
ALCI				IAML		14 06 39.7	
	comp=N,82nm,0.4s						
ALCI				IAML		14 06 40.4	
	comp=E,101nm,0.4s						
EKS2	**Erkin-Say**	**4.56**	**356**	P	**Pn**	**14 05 44.5**	**+2.9**
	SNR=5.9						
MRKS	**Merke**	**4.70**	**351**	Pg	**Pn**	**14 05 44.9**	**+1.5**
	comp=E,25nm,0.4s						
MRKS				Lg	Lg	14 06 35.8	
	comp=E,96nm,0.5s						
CHMS	**Chumysh**	**4.90**	**4**	P	**Pn**	**14 05 48.1**	**+2.2**
	SNR=18						
TKM2	**Tokmak 2**	**4.92**	**12**	P	**Pn**	**14 05 48.3**	**+1.9**
	SNR=34						
KST	**Kastek**	**5.10**	**14**	Pg	**Pn**	**14 05 50.7**	**+2.0**
	comp=E,17nm,0.6s						
KST				Lg	Lg	14 06 45.9	
	comp=E,41nm,0.9s						
USP	**Ospenovka**	**5.16**	**2**	P	**Pn**	**14 05 51.0**	**+1.6**
	SNR=5.4						
IUG	**Iuzhnay**	**5.17**	**323**	Pg	**Pn**	**14 05 50.7**	**+1.0**
	comp=E,22nm,0.1s						
IUG				Lg	Lg	14 06 46.0	
	comp=E,326nm,0.4s						
DGS	**Degeres**	**5.26**	**12**	Pg	**Pn**	**14 05 52.5**	**+1.7**
	comp=E,9.2nm,0.5s						
DGS				Lg	Lg	14 06 48.6	
	comp=E,11nm,0.6s						
DZA	**Taraz**	**5.27**	**336**	Pg	**Pn**	**14 05 51.9**	**+0.9**
	comp=E,78nm,0.1s						
DZA				Lg	Lg	14 06 47.6	
	comp=E,295nm,0.4s						
JMU	**Jammu**	**5.33**	**175**	*e*P	**Pn**	**14 05 55.7**	**+3.9**
JMU				*e*S	**Sn**	**14 06 52.5**	**0.0**
TSSA	**Tissa**	**5.48**	**163**	*e*P	**Pn**	**14 05 56.5**	**+2.5**
TSSA				*e*S	**Sn**	**14 06 55.5**	**-0.8**
TSSA				IAML		14 06 57.4	
	comp=N,110nm,0.5s						
TSSA				IAML		14 06 58.9	
	comp=E,140nm,0.4s						
KK31	**Karatay Array**	**5.75**	**331**	⇑Pg	**Pn**	**14 06 00.7**	**+3.5**
	comp=E,1.0nm,0.2s,baz=135,slow=13,SNR=27						
KK31				⇓Lg	Lg	14 07 01.6	
	comp=E,17nm,0.3s,baz=134,slow=22,SNR=14						
THN	**Thein Dam**	**5.79**	**167**	*e*P	**Pn**	**14 06 01.3**	**+3.5**
THN				*e*S	**Sn**	**14 07 03.0**	**-0.3**
THN				IAML		14 07 08.5	
	comp=N,68nm,0.6s						
THN				IAML		14 07 10.2	
	comp=E,68nm,0.4s						
BRLS	**Boroldoy**	**5.96**	**327**	Pg	**Pn**	**14 05 58.2**	**-1.8**
	comp=E,3.4nm,0.2s						
BRLS				Lg	Lg	14 06 58.6	
	comp=E,44nm,0.4s						
DHRM	**DHARAMSHALA**	**6.08**	**163**	*e*P	**Pn**	**14 06 04.5**	**+2.6**
DHRM				*e*S	**Sn**	**14 07 09.5**	**-1.1**
DHRM				IAML		14 07 16.3	
	comp=N,82nm,0.3s						
DHRM				IAML		14 07 17.0	
	comp=E,122nm,0.3s						
BHK	**Bhakra**	**6.92**	**165**	*e*S	**Sn**	**14 07 29.2**	**-1.4**
KLP	**Kalpa**	**7.33**	**152**	*e*P	**Pn**	**14 06 21.5**	**+2.8**
KLP				*e*S	**Sn**	**14 07 37.2**	**-3.6**
KLP				IAML		14 07 44.3	
	comp=E,43nm,0.5s						
KLP				IAML		14 07 44.4	
	comp=N,31nm,0.7s						
SMLA	**Simla**	**7.36**	**160**	*e*P	**Pn**	**14 06 21.3**	**+2.5**
SMLA				*e*S	**Sn**	**14 07 37.9**	**-3.2**
SMLA				IAML		14 07 43.6	
	comp=E,46nm,0.4s						
SMLA				IAML		14 07 43.8	
	comp=N,60nm,0.5s						
KUDL	**Kundal**	**10.11**	**169**	*e*S	**Sn**	**14 08 41.3**	**-6.0**
KUDL				IAML		14 08 44.7	
	comp=E,17nm,0.0s						
KUDL				IAML		14 08 49.6	
	comp=N,12nm,0.5s						
MKAR	**Makanchi Array**	**10.51**	**32**	P	**Pn**	**14 07 00.8**	**+0.3**
	comp=N,2.1nm,0.8s,baz=210,slow=13,SNR=15						
KURBB	**Kurchatov Arra**	**12.88**	**12**	P	**Pn**	**14 07 29.7**	**-1.6**
	comp=N,0.6nm,0.7s,baz=198,slow=11,SNR=4.0						
BVAR	**Borovoye Array**	**15.16**	**351**	P	**Pn**	**14 07 57.8**	**-2.2**
	comp=N,0.7nm,0.5s,baz=156,slow=13,SNR=4.2						
ZALV	**Zalesovo Beam**	**17.43**	**21**	P	**Pn**	**14 08 27.2**	**-0.4**
	comp=N,7.4nm,0.4s,baz=210,slow=11,SNR=38						
ARCES	**ARCESS Array B**	**40.69**	**336**	P	**P**	**14 11 57.9**	**-1.2**
	comp=N,3.3nm,1.0s,baz=121,slow=11,SNR=1.4						
	comp=N,3.3nm,1.0s						
TORD	**Torodi Ar. Bea**	**68.34**	**270**	P	**P**	**14 15 18.8**	**-0.5**
	comp=N,0.4nm,0.5s,baz=50,slow=6.3,SNR=2.0						
	comp=N,0.4nm,0.5s						
WRA	**Warramunga Arr**	**80.69**	**124**	P	**P**	**14 16 29.7**	**-0.7**
	comp=N,1.4nm,1.2s,baz=317,slow=5.5,SNR=5.8						
	comp=N,1.4nm,1.2s						
ASAR	**Alice Springs**	**83.10**	**127**	P	**P**	**14 16 42.8**	**-0.1**
	comp=N,0.3nm,0.8s,baz=326,slow=4.3,SNR=2.3						
	comp=N,0.3nm,0.8s						

*UPP **19** 14:32:10.9±0.2, 58.°17N×11.°21E, h0km, ML2.5, Suspected explosion*

*BER **19** 14:32:10.8±1.0, 58.°13N×11.°28E, h0km, ML1.7, Suspected explosion*

*DNK **19** 14:32:10.8±1.5, 58.°17N×11.°15E, h0km±5km, ML2.2, Presumed earthquake*

*IDC **19** 14:32:14.7±4.4, 58.°42N×11.°19E, h0km, mbtmp3.7/2, ML2.2/3, Error ellipse: s-maj=50.1km s-min=18.1km az=13.0*

ISC 19 14:32:09.5±0.7, 58.°22N±0.°03×11.°20E±0.°03, h0km, n29, σ0°88/51, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TJOU	**Tjoern**	**0.30**	**130**	P	**Pg**	**14 32 16.0**	**+0.8**
	baz=304						
TJOU				S	**Sg**	**14 32 19.5**	**+0.6**
TJOU	**Tjoern**	**0.30**	**130**	*i* P	**Pg**	**14 32 15.9**	**+0.8**
TJOU				*i* S	**Sg**	**14 32 19.5**	**+0.6**
VANU	**Vaenersborg**	**0.54**	**59**	P	**Pb**	**14 32 21.5**	**-0.2**
VANU				S	**Sb**	**14 32 29.1**	**-0.8**
STRU	**Stroemstad**	**0.82**	**359**	*e*P	**Pb**	**14 32 27.1**	**+0.6**
STRU				*e*S	**Sb**	**14 32 38.5**	**+0.4**
STRU	**Stroemstad**	**0.82**	**359**	P	**Pb**	**14 32 27.1**	**+0.6**
STRU				S	**Sb**	**14 32 38.6**	**+0.6**
STRU	**Stroemstad**	**0.82**	**359**	*e*P	**Pb**	**14 32 27.1**	**+0.6**
STRU				*i* P	**Pb**	**14 32 27.1**	**+0.6**
STRU				*e*S	**Sb**	**14 32 38.5**	**+0.4**
ONAU	**Onsala**	**0.91**	**155**	P	**Pg**	**14 32 27.1**	**+0.2**
ONAU				S	**Sg**	**14 32 38.6**	**-0.2**
ONAU	**Onsala**	**0.91**	**155**	*i* P	**Pg**	**14 32 27.1**	**+0.2**
ONAU				*i* S	**Sg**	**14 32 38.8**	**0.0**
BORU	**Boraas**	**1.02**	**124**	P	**Pg**	**14 32 29.1**	**0.0**
BORU				S	**Sg**	**14 32 42.5**	**+0.1**
BORU	**Boraas**	**1.02**	**124**	*i* P	**Pg**	**14 32 29.1**	**0.0**
BORU				*i* S	**Sg**	**14 32 42.5**	**+0.1**
NASU	**Vaermlandsnaes**	**1.26**	**55**	P	**Pn**	**14 32 34.7**	**+0.4**
NASU				S	**Sn**	**14 32 52.2**	**+0.2**
FINU	**Finntorp**	**1.36**	**29**	P	**Pb**	**14 32 36.8**	**+1.0**
HOMB	**Homborsund**	**1.42**	**273**	*e*P	**Pn**	**14 32 36.4**	**-0.1**
HOMB				*e*S	**Sg**	**14 32 55.2**	**+0.1**
HOMB				IAML		14 32 56.9	
	comp=Z,19nm,0.2s						
HOMB	**Homborsund**	**1.42**	**273**	*e*P	**Pn**	**14 32 36.4**	**-0.1**
HOMB				*i* P	**Pn**	**14 32 36.5**	**-0.1**
HOMB				*e*S	**Sg**	**14 32 55.2**	**+0.1**
HOMB				*i* S	**Sb**	**14 32 55.4**	**-0.2**
HOMB				IAML		14 32 56.9	
	comp=Z,19nm,0.2s						
KONO	**Kongsberg**	**1.66**	**331**	*e*P	**Pn**	**14 32 40.5**	**+0.7**
KONO				*e*S	**Sg**	**14 33 03.3**	**+0.7**
KONO				IAML		14 33 06.9	
	comp=Z,17nm,0.2s						
KONO	**Kongsberg**	**1.66**	**331**	*e*P	**Pn**	**14 32 40.5**	**+0.7**
KONO				*e*S	**Sg**	**14 33 03.3**	**+0.7**
KONO				IAML		14 33 06.9	
	comp=Z,17nm,0.2s						
GNOU	**Gnosjoe**	**1.66**	**123**	P	**Pn**	**14 32 40.1**	**+0.3**
SNART	**Snartemo**	**2.11**	**275**	*i* P	**Pn**	**14 32 46.2**	**+0.2**
SNART				*i* S	**Sn**	**14 33 13.4**	**+0.5**
DEL	**Delary**	**2.28**	**139**	*e*P	**Pn**	**14 32 49.6**	**+1.3**
DEL				*i* S	**Sn**	**14 33 17.6**	**+0.6**
DEL				IAML		14 33 22.7	
	comp=Z,3.3nm,0.3s						
BJUU	**Bjuv**	**2.37**	**154**	*i* P	**Pn**	**14 32 50.9**	**+1.3**
BJUU				*i* S	**Sb**	**14 33 21.7**	**-1.1**
COP	**Copenhagen**	**2.63**	**165**	*i* P	**Pn**	**14 32 54.1**	**+1.0**
BLS5	**Blasjo**	**2.74**	**298**	*e*P	**Pn**	**14 32 55.7**	**+0.9**
BLS5				IAML		14 33 37.5	
	comp=Z,4.9nm,0.9s						
BLS5	**Blasjo**	**2.74**	**298**	*e*P	**Pn**	**14 32 55.7**	**+0.9**
BLS5				IAML		14 33 37.5	
	comp=Z,4.9nm,0.9s						
NOA	**NORSAR Array B**	**2.83**	**0**	Pn	**Pn**	**14 32 56.6**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=182,slow=13,SNR=16						
LUNU	**Lund**	**2.87**	**154**	*i* P	**Pn**	**14 32 57.3**	**+0.8**
BLEU	**Blekinge**	**3.16**	**126**	*i* P	**Pn**	**14 33 02.5**	**+2.1**
BSD	**Bornholm Skovb**	**3.73**	**145**	*i* P	**Pn**	**14 33 08.6**	**+0.4**
FINES	**FINESS Array B**	**8.16**	**60**	Pn	**Pn**	**14 34 09.9**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=250,slow=13,SNR=18						
FINES				Sn	**Sn**	**14 35 38.6**	**-3.1**
	comp=Z,0.3nm,0.3s,baz=255,slow=24,SNR=1.6						
FINES				Lg	Lg	14 36 26.2	
	comp=Z,0.2nm,0.3s,baz=252,slow=23,SNR=1.1						
	comp=Z,1.4nm,0.7s						
ARCES	**ARCESS Array B**	**12.93**	**23**	Pn	**Pn**	**14 35 12.1**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=214,slow=13,SNR=2.3						
	comp=Z,5.2nm,1.1s						

*UPP **19** 14:33:13.3±0.2, 58.°17N×11.°22E, h0km, ML2.7, Suspected explosion*

*DNK **19** 14:33:13.4±1.6, 58.°18N×11.°19E, h0km, ML2.1, Explosion*

*IDC **19** 14:33:21.5±3.0, 58.°74N×11.°64E, h0km, mbtmp3.7/2, ML2.2/3, Error ellipse: s-maj=29.6km s-min=14.5km az=49.0*

ISC 19 14:33:11.4±0.8, 58.°14N±0.°03×11.°17E±0.°03, h0km, n24, σ1°02/46, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TJOU	**Tjoern**	**0.27**	**114**	P	**Pb**	**14 33 18.4**	**-0.7**
TJOU				S	**Sg**	**14 33 21.9**	**+2.0**
TJOU	**Tjoern**	**0.27**	**114**	*i* P	**Pb**	**14 33 18.3**	**-0.7**
TJOU				P	**Pb**	**14 33 18.4**	**-0.7**
TJOU				S	**Sg**	**14 33 21.9**	**+2.0**
TJOU				*i* S	**Sb**	**14 33 22.0**	**-2.1**
VANU	**Vaenersborg**	**0.59**	**53**	P	**Pg**	**14 33 23.8**	**+1.1**
VANU				S	**Sg**	**14 33 31.5**	**+1.1**
VANU	**Vaenersborg**	**0.59**	**53**	P	**Pg**	**14 33 23.8**	**+1.1**
VANU				S	**Sg**	**14 33 31.5**	**+1.1**
ONAU	**Onsala**	**0.85**	**151**	P	**Pb**	**14 33 29.4**	**+0.5**
ONAU				S	**Sb**	**14 33 40.7**	**-0.1**
ONAU	**Onsala**	**0.85**	**151**	P	**Pb**	**14 33 29.4**	**+0.5**
ONAU				*i* P	**Pb**	**14 33 29.5**	**+0.5**
ONAU				S	**Sb**	**14 33 40.7**	**-0.1**
ONAU				*i* S	**Sb**	**14 33 40.8**	**-0.1**
STRU	**Stroemstad**	**0.90**	**0**	P	**Pg**	**14 33 29.5**	**+0.9**
	baz=173						
STRU				S	**Sg**	**14 33 41.1**	**+0.9**
STRU	**Stroemstad**	**0.90**	**0**	*i* P	**Pg**	**14 33 29.2**	**+0.6**
STRU				P	**Pg**	**14 33 29.5**	**+0.9**
	baz=173						
STRU				*i* S	**Sg**	**14 33 38.6**	**-1.6**
STRU				S	**Sg**	**14 33 41.1**	**+0.9**
BORU	**Boraas**	**0.99**	**120**	P	**Pb**	**14 33 31.6**	**+0.1**
BORU				S	**Sb**	**14 33 45.2**	**+0.1**
BORU	**Boraas**	**0.99**	**120**	*i* P	**Pb**	**14 33 31.4**	**-0.1**
BORU				P	**Pb**	**14 33 31.6**	**+0.1**
BORU				S	**Sb**	**14 33 45.2**	**+0.1**
BORU				*i* S	**Sb**	**14 33 45.2**	**+0.1**
NASU	**Vaermlandsnaes**	**1.32**	**52**	P	**Pg**	**14 33 37.1**	**+0.4**
NASU	**Vaermlandsnaes**	**1.32**	**52**	P	**Pg**	**14 33 37.1**	**+0.4**
HOMB	**Homborsund**	**1.42**	**276**	*i* P	**Pb**	**14 33 39.1**	**+0.5**
HOMB				*i* S	**Sn**	**14 33 58.2**	**+0.5**
FINU	**Finntorp**	**1.44**	**28**	P	**Pn**	**14 33 39.2**	**+0.6**
FINU	**Finntorp**	**1.44**	**28**	P	**Pn**	**14 33 39.2**	**+0.6**
GNOU	**Gnosjoe**	**1.63**	**120**	P	**Pg**	**14 33 42.9**	**+0.3**
GNOU	**Gnosjoe**	**1.63**	**120**	P	**Pg**	**14 33 42.9**	**+0.3**
SNART	**Snartemo**	**2.10**	**277**	*i* P	**Pn**	**14 33 48.9**	**+1.0**
SNART				*i* S	**Sb**	**14 34 16.8**	**-0.2**
DEL	**Delary**	**2.23**	**138**	*i* P	**Pb**	**14 33 52.6**	**+0.1**
DEL				*i* S	**Sg**	**14 34 22.2**	**-0.6**
DEL				IAML		14 34 25.2	
	comp=Z,4.4nm,0.3s						
BJUU	**Bjuv**	**2.31**	**153**	*i* P	**Pb**	**14 33 54.3**	**+0.5**
BJUU				*i* S	**Sb**	**14 34 23.2**	**+0.4**
COP	**Copenhagen**	**2.56**	**164**	*i* P	**Pb**	**14 33 56.4**	**-1.7**
NOA	**NORSAR Array B**	**2.91**	**0**	Pn	**Pn**	**14 33 59.5**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=

0.2nm,0.3s,baz=106,slow=7.0,SNR=3.1
0.2nm,0.3s
BVAR Borovoye Array 69.31 322 P **P 14 50 49.5 +0.2**
0.3nm,0.4s,baz=91,slow=6.1,SNR=2.4
0.3nm,0.4s

UPP ***19*** *14:44:03.1±0.2,58°.17N×11°.22E, h0km, ML2.7, Suspected explosion*
DNK ***19*** *14:44:03.4±2.0,58°.18N×11°.20E, h0km, ML2.1, Explosion*
IDC ***19*** *14:44:05.4±1.9,58°.43N×10°.92E, h0km, mbtmp3.6/3, ML2.2/4, Error ellipse: s-maj=15.3km s-min=14.2km az=175.0*

ISC 19 14:44:01.5±0.8, 58°.20N±0°.02×11°.18E±0°.03, h0km, n30, σ1§11/57, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TJOU	**Tjoern**	**0.29**	**126**	P		**Pg**	**14 44 08.2**	**+1.1**
TJOU				S		**Sg**	**14 44 11.7**	**+0.9**
TJOU	**Tjoern**	**0.29**	**126**	P		**Pg**	**14 44 08.2**	**+1.1**
TJOU				*eP*		**Pb**	**14 44 08.3**	**-1.3**
TJOU				S		**Sg**	**14 44 11.7**	**+0.9**
TJOU				*i* S		**Sg**	**14 44 11.8**	**+0.9**
VANU	**Vaenersborg**	**0.55**	**58**	P		**Pb**	**14 44 13.6**	**-0.4**
VANU				S		**Sb**	**14 44 21.3**	**-1.2**
VANU	**Vaenersborg**	**0.55**	**58**	P		**Pb**	**14 44 13.6**	**-0.4**
VANU				S		**Sb**	**14 44 21.3**	**-1.2**
STRU	**Stroemstad** baz=170	**0.83**	**0**	P		**Pb**	**14 44 19.3**	**+0.5**
STRU				S		**Sb**	**14 44 31.1**	**+0.5**
STRU	**Stroemstad** baz=170	**0.83**	**0**	P		**Pb**	**14 44 19.3**	**+0.5**
STRU				*i* P		**Pn**	**14 44 19.6**	**-0.9**
STRU				S		**Sb**	**14 44 31.1**	**+0.5**
ONAU	**Onsala**	**0.90**	**154**	P		**Pg**	**14 44 19.3**	**+0.6**
ONAU				S		**Sg**	**14 44 30.6**	**+0.2**
ONAU	**Onsala**	**0.90**	**154**	P		**Pg**	**14 44 19.3**	**+0.6**
ONAU				*i* P		**Pb**	**14 44 19.5**	**-0.5**
ONAU				S		**Sg**	**14 44 30.6**	**+0.2**
ONAU				*i* S		**Sg**	**14 44 30.6**	**+0.2**
BORU	**Boraas**	**1.02**	**123**	P		**Pg**	**14 44 21.3**	**+0.2**
BORU				S		**Sg**	**14 44 34.6**	**+0.3**
BORU	**Boraas**	**1.02**	**123**	P		**Pg**	**14 44 21.3**	**+0.2**
BORU				*i* P		**Pb**	**14 44 21.6**	**-0.5**
BORU				S		**Sg**	**14 44 34.6**	**+0.3**
BORU				*i* S		**Sb**	**14 44 34.7**	**-1.3**
NASU	**Vaermlandsnaes**	**1.28**	**55**	P		**Pb**	**14 44 26.9**	**+0.5**
NASU				S		**Sb**	**14 44 43.8**	**+0.5**
NASU	**Vaermlandsnaes**	**1.28**	**55**	P		**Pb**	**14 44 26.9**	**+0.5**
NASU				S		**Sb**	**14 44 43.8**	**+0.5**
FINU	**Finntorp**	**1.38**	**29**	P		**Pb**	**14 44 29.0**	**+0.9**
FINU	**Finntorp**	**1.38**	**29**	P		**Pb**	**14 44 29.0**	**+0.9**
HOMB	**Homborsund**	**1.42**	**274**	*eP*		**Pn**	**14 44 28.9**	**+0.4**
HOMB	**Homborsund**	**1.42**	**274**	*i* P		**Pn**	**14 44 28.8**	**+0.3**
HOMB				*i* S		**Sb**	**14 44 48.2**	**+0.9**
GNOU	**Gnosjoe**	**1.66**	**122**	P		**Pn**	**14 44 32.3**	**+0.5**
GNOU	**Gnosjoe**	**1.66**	**122**	P		**Pn**	**14 44 32.3**	**+0.5**
KONO	**Kongsberg**	**1.67**	**331**	*eP*		**Pb**	**14 44 33.4**	**+0.4**
SNART	**Snartemo**	**2.10**	**275**	*i* P		**Pn**	**14 44 38.5**	**+0.6**
DEL	**Delary**	**2.27**	**139**	*i* P		**Pb**	**14 44 42.6**	**-0.7**
DEL				*i* S		**Sb**	**14 45 11.8**	**0.0**
DEL				IAML			14 45 14.8	
	comp=Z,4.2nm,0.4s							
HFS	**Hagfors**	**2.33**	**33**	Pn		**Pn**	**14 44 42.7**	**+1.6**
	comp=Z,2.0nm,0.3s,baz=216,slow=14,SNR=152							
HFS				Sn		**Sn**	**14 45 10.8**	**+0.5**
	comp=Z,3.3nm,0.3s,baz=218,slow=9.1,SNR=16							
HFS				Lg		Lg	14 45 15.8	
	comp=Z,8.7nm,0.3s,baz=219,slow=35,SNR=27							
	comp=Z,4.8nm,0.2s							
BJUU	**Bjuv**	**2.36**	**154**	*i* P		**Pn**	**14 44 43.2**	**+1.8**
BJUU				*i* S		**Sn**	**14 45 12.8**	**+1.7**
NOA	**NORSAR Array B**	**2.84**	**0**	Pn		**Pn**	**14 44 47.0**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=184,slow=12,SNR=17							
NOA				Lg		Lg	14 45 26.7	
	comp=Z,0.2nm,0.3s,baz=180,slow=17,SNR=2.5							
LUNU	**Lund**	**2.86**	**153**	*i* P		**Pb**	**14 44 52.1**	**-1.3**
LUNU				*i* S		**Sb**	**14 45 27.5**	**-1.4**
BLEU	**Blekinge**	**3.16**	**125**	*eP*		**Pn**	**14 44 54.3**	**+1.8**
BLEU				S		**Sn**	**14 45 33.6**	**+3.0**
HAMD	**Hammershus, De**	**3.54**	**145**	*i* P		**Pn**	**14 44 58.5**	**+0.8**
HAMD				*i* S		**Sn**	**14 45 41.2**	**+1.0**
BSD	**Bornholm Skovb**	**3.72**	**145**	*i* P		**Pn**	**14 45 00.6**	**+0.5**
FINES	**FINESS Array B**	**8.17**	**60**	Pn		**Pn**	**14 46 02.1**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=251,slow=13,SNR=13							
FINES				Sn		**Sn**	**14 47 31.3**	**-2.9**
	comp=Z,0.3nm,0.3s,baz=251,slow=22,SNR=5.2							
FINES				Lg		Lg	14 48 20.7	
	comp=Z,0.2nm,0.3s,baz=250,slow=20,SNR=1.9							
	comp=Z,2.3nm,0.8s							
ARCES	**ARCESS Array B**	**12.95**	**23**	Pn		**Pn**	**14 47 03.3**	**-3.2**
	comp=Z,0.1nm,0.3s,baz=222,slow=12,SNR=1.8							
	comp=Z,3.9nm,0.9s							

IDC ***19*** *14:56:31.4±0.6,38°.83N×72°.58E, h0km, mb4.3/23, mbtmp4.3/30, ML3.9/7, MS3.6/7, Error ellipse: s-maj=11.6km s-min=10.8km az=149.0*
MOS ***19*** *14:56:32.3±1.1,38°.93N×72°.42E, h11km, mb4.7/25, Error ellipse: s-maj=5.7km s-min=3.6km az=87.5*
KRNET ***19*** *14:56:32.0±0.1,39°.03N×72°.49E, h14km, mb4.8*
BJI ***19*** *14:56:34.4,39°.01N×72°.58E, h5km, mB4.7/5, mb4.2/26, ML3.9/5, Ms3.9/5, Ms7 3.6/5*
NEIC ***19*** *14:56:35.2±2.7,39°.07N±0°.04×72°.30E±0°.05, h10km±1km, mb4.6/62, Error ellipse: s-maj=8.8km s-min=3.0km az=224.0*
NNC ***19*** *14:56:36.8±2.4,39°.11N×72°.71E, h0km, mb4.9, mpv4.7, Error ellipse: s-maj=19.0km s-min=11.5km az=2.0*

ISC 19 14:56:33.7±0.8, 39°.02N±0°.03×72°.46E±0°.02, h7km±4km, n530, σ1§41/567, mb4.6/111, MS3.9/7, 47C-29D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.69**	**312**			**Pg**	**14 56 46.1**	**-1.0**
DRK	**Karamyk**	**0.69**	**312**	*e*PG		**Pg**	**14 56 45.6**	**-1.5**
DRK				*e*S		**Sg**	**14 56 55.7**	**-0.5**
DRK	**Karamyk**	**0.69**	**312**	⇑*e*P		**Pg**	**14 56 45.6**	**-1.5**
DRK				⇑*e*S		**Sg**	**14 56 55.7**	**-0.5**
OHH	**Osh**	**1.53**	**9**	*e*PN		**Pn**	**14 57 00.4**	**-1.2**
OHH				*e*S		**Sn**	**14 57 21.1**	**-0.7**
OHH	**Osh**	**1.53**	**9**	⇓*e*P		**Pn**	**14 57 00.4**	**-1.2**
OHH				⇓*e*S		**Sn**	**14 57 21.1**	**-0.7**
BTK	**Batken**	**1.64**	**310**			**Pn**	**14 57 03.9**	**+0.7**
BTK	**Batken**	**1.64**	**310**	*i* PN		**Pn**	**14 57 03.1**	**-0.1**
BTK				*i* S		**Sn**	**14 57 25.6**	**+0.9**
BTK	**Batken**	**1.64**	**310**	⇓*i*P		**Pn**	**14 57 03.1**	**-0.1**
BTK				⇓*i*S		**Sn**	**14 57 25.6**	**+0.9**
GAR	**Garm**	**1.67**	**270**			**Pn**	**14 57 03.7**	**+0.1**
GAR	**Garm**	**1.67**	**270**	*i* PN		**Pn**	**14 57 03.7**	**+0.1**
GAR				*i* S		**Sn**	**14 57 26.7**	**+1.3**
GAR	**Garm**	**1.67**	**270**	⇑*i*P		**Pn**	**14 57 03.7**	**+0.1**
GAR				⇑*i*S		**Sn**	**14 57 26.7**	**+1.3**
SALK	**Salom-Alik**	**2.14**	**29**	*i* PN		**Pn**	**14 57 10.6**	**+0.5**
SALK				*i* S		**Sb**	**14 57 38.9**	**-0.8**
SALK	**Salom-Alik**	**2.14**	**29**	⇑*i*P		**Pn**	**14 57 10.6**	**+0.5**
SALK				⇑*i*S		**Sb**	**14 57 38.9**	**-0.8**
ARSB	**Arslanbob**	**2.34**	**10**	Pn		**Pn**	**14 57 16.2**	**-0.2**
ARSB	**Arslanbob**	**2.34**	**10**	*i* PN		**Pn**	**14 57 13.5**	**+0.7**
ARSB				*i* S		**Sn**	**14 57 43.7**	**+1.8**
ARSB	**Arslanbob**	**2.34**	**10**	⇑*i*P		**Pn**	**14 57 13.5**	**+0.7**
ARSB				⇑*i*S		**Sn**	**14 57 43.7**	**+1.8**
KSH2	**Kashi**	**2.42**	**86**	Pn		**Pn**	**14 57 15.5**	**+1.6**
KSH2				Sn		**Sb**	**14 57 45.8**	**-2.0**
KSH2				SMN				
	2μm,0.7s							
KSH2				SME				
	1μm,0.9s							
CHGR	**Chuyangaron**	**2.61**	**263**			**Pn**	**14 57 17.6**	**+1.1**
CHGR	**Chuyangaron**	**2.61**	**263**	*i* PN		**Pn**	**14 57 17.8**	**+1.4**
CHGR				*i* S		**Sn**	**14 57 51.0**	**+2.6**
CHGR	**Chuyangaron**	**2.61**	**263**	⇑*i*P		**Pn**	**14 57 17.8**	**+1.4**
CHGR				⇑*i*S		**Sn**	**14 57 51.0**	**+2.6**
TRKS	**Terek-Say**	**2.71**	**338**	*i* PN		**Pn**	**14 57 18.0**	**+0.1**
TRKS				*i* S		**Sn**	**14 57 51.3**	**+0.3**
TRKS	**Terek-Say**	**2.71**	**338**	⇑*i*P		**Pn**	**14 57 18.0**	**+0.1**
TRKS				⇑*i*S		**Sn**	**14 57 51.3**	**+0.3**
ARK	**Arkit**	**2.81**	**352**	*i* PN		**Pn**	**14 57 19.9**	**+0.7**
ARK				*e*S		**Sn**	**14 57 55.3**	**+1.9**
ARK	**Arkit**	**2.81**	**352**	⇓*e*P		**Pn**	**14 57 19.9**	**+0.7**
ARK				⇓*e*S		**Sn**	**14 57 55.3**	**+1.9**
ARLS	**Aral**	**3.18**	**26**	*e*PN		**Pn**	**14 57 25.1**	**+0.8**
ARLS				*i* S		**Sn**	**14 58 03.7**	**+1.1**
ARLS	**Aral**	**3.18**	**26**	⇓*e*P		**Pn**	**14 57 25.1**	**+0.8**
ARLS				⇓*i*S		**Sn**	**14 58 03.7**	**+1.1**
MNAS	**Manas**	**3.47**	**0**	*i* PN		**Pn**	**14 57 29.2**	**+0.9**
MNAS				*i* S		**Sn**	**14 58 11.1**	**+1.4**
MNAS	**Manas**	**3.47**	**0**	⇑*i*P		**Pn**	**14 57 29.2**	**+0.9**
MNAS				⇑*i*S		**Sn**	**14 58 11.1**	**+1.4**
UCH	**Uchtor** SNR=37	**3.57**	**25**	P		**Pn**	**14 57 34.0**	**+4.1**
UCH	**Uchtor**	**3.57**	**25**	*i* PN		**Pn**	**14 57 30.6**	**+0.6**
UCH				*i* S		**Sn**	**14 58 13.6**	**+1.0**
UCH	**Uchtor**	**3.57**	**25**	⇓*i*P		**Pn**	**14 57 30.6**	**+0.6**
UCH				⇓*i*S		**Sn**	**14 58 13.6**	**+1.0**
NRN	**Naryn**	**3.63**	**47**			**Pn**	**14 57 32.4**	**+1.7**
NRN	**Naryn**	**3.63**	**47**	*e*PN		**Pn**	**14 57 31.0**	**+0.3**
NRN				*e*S		**Sn**	**14 58 14.0**	**+0.1**
NRN	**Naryn**	**3.63**	**47**	⇓*e*P		**Pn**	**14 57 31.0**	**+0.3**
NRN				⇓*e*S		**Sn**	**14 58 14.0**	**+0.1**
IUG	**Iuzhnay** 473nm,0.6s	**3.63**	**330**	Pg		**Pn**	**14 57 34.9**	**+4.3**
IUG				Lg		Lg	14 58 21.4	
	885nm,0.8s							
SHAA	**Shahritus**	**3.71**	**248**			**Pn**	**14 57 33.6**	**+2.0**
MRKS	**Merke**	**3.77**	**9**	Pg		**Pn**	**14 57 36.5**	**+4.1**
	247nm,0.5s							
MRKS				Lg		Lg	14 58 24.5	
	209nm,0.6s							
EKS2	**Erkin-Say** SNR=54	**3.78**	**15**	P		**Pb**	**14 57 37.8**	**-3.0**
EKS2	**Erkin-Say**	**3.78**	**15**	*i* PN		**Pn**	**14 57 33.4**	**+0.9**
EKS2				*i* S		**Sn**	**14 58 18.2**	**+0.9**
EKS2	**Erkin-Say**	**3.78**	**15**	⇑*i*P		**Pn**	**14 57 33.4**	**+0.9**
EKS2				⇑*i*S		**Sn**	**14 58 18.2**	**+0.9**
AAK	**Ala-Archa** 18nm,0.3s,baz=207,slow=10,SNR=190	**3.93**	**22**	Pn		**Pn**	**14 57 39.1**	**+4.4**
AAK				Sn		**Sb**	**14 58 27.8**	**-3.6**
	14nm,0.3s,baz=143,slow=20,SNR=14							
	71nm,0.5s							
AAK	**Ala-Archa** SNR=135	**3.93**	**22**	P		**Pn**	**14 57 38.9**	**+4.1**
AAK	**Ala-Archa**	**3.93**	**22**			**Pn**	**14 57 38.6**	**+3.9**
AAK	**Ala-Archa** 360nm,0.6s	**3.93**	**22**	⇓Pn		**Pn**	**14 57 37.5**	**+2.8**
AAK				⇓Lg		Lg	14 58 33.5	
	2μm,0.9s							
AAK	**Ala-Archa**	**3.93**	**22**	*e*PN		**Pn**	**14 57 35.5**	**+0.8**
AAK				*i* S		**Sn**	**14 58 22.1**	**+0.9**
AAK	**Ala-Archa**	**3.93**	**22**	⇑*e*P		**Pn**	**14 57 35.5**	**+0.8**
AAK				⇑*i*S		**Sn**	**14 58 22.1**	**+0.9**
DZA	**Taraz** 2μm,0.4s	**3.97**	**348**	Pg		Pn	14 57 40.1	+5.0
DZA				Lg		Lg	14 58 29.8	
	683nm,0.5s							
KBK	**Karagaybulak** SNR=53	**4.10**	**27**	P		**Pn**	**14 57 41.4**	**+4.4**
KBK	**Karagaybulak**	**4.10**	**27**	*i* PN		**Pn**	**14 57 37.9**	**+0.9**
KBK				*e*S		**Sn**	**14 58 25.8**	**+0.5**
KBK	**Karagaybulak**	**4.10**	**27**	⇑*i*P		**Pn**	**14 57 37.9**	**+0.9**
KBK				⇓*e*S		**Sn**	**14 58 25.8**	**+0.5**
FRU1	**Bishkek**	**4.13**	**23**			Pn	14 57 42.3	+5.0
FRU1	**Bishkek**	**4.13**	**23**	*i* PN		**Pn**	**14 57 38.5**	**+1.1**
FRU1				*i* S		**Sn**	**14 58 26.9**	**+0.9**
FRU1	**Bishkek**	**4.13**	**23**	⇓*i*P		**Pn**	**14 57 38.5**	**+1.1**
FRU1				⇓*i*S		**Sn**	**14 58 26.9**	**+0.9**
ULHL	**Ulahol** SNR=15	**4.32**	**40**	P		**Pn**	**14 57 44.0**	**+3.9**
ULHL	**Ulahol**	**4.32**	**40**	*e*PN		**Pn**	**14 57 40.9**	**+0.8**
ULHL				*i* S		**Sn**	**14 58 31.4**	**+0.5**
ULHL	**Ulahol**	**4.32**	**40**	⇑*e*P		**Pn**	**14 57 40.9**	**+0.8**
ULHL				⇑*i*S		**Sn**	**14 58 31.4**	**+0.5**
CHMS	**Chumysh** SNR=34	**4.34**	**23**	P		**Pn**	**14 57 44.4**	**+4.2**
KK31	**Karatay Array**	**4.34**	**341**			**Pn**	**14 57 44.1**	**+3.9**
KK31	**Karatay Array**	**4.34**	**341**	Pn		**Pn**	**14 57 44.3**	**+4.1**
	237nm,0.4s,baz=156,slow=11,SNR=2998							
KK31				Sn		**Sb**	**14 58 39.5**	**-3.5**
	182nm,0.6s,baz=143,slow=24,SNR=5.8							
KK31	**Karatay Array**	**4.34**	**341**	PN		**Pn**	**14 57 44.1**	**+3.9**
KKAR	**Karatay Array**	**4.34**	**341**			**Pn**	**14 57 43.8**	**+3.6**
KKAR	**Karatay Array**	**4.34**	**341**	PN		**Pn**	**14 57 43.8**	**+3.6**
BOOM	**Boomskoye usch**	**4.36**	**36**			**Pn**	**14 57 44.2**	**+3.6**
BOOM	**Boomskoye usch**	**4.36**	**36**	*e*PN		**Pn**	**14 57 41.4**	**+0.8**
BOOM				*i* S		**Sn**	**14 58 32.1**	**+0.3**
BOOM	**Boomskoye usch**	**4.36**	**36**	⇑*e*P		**Pn**	**14 57 41.4**	**+0.8**
BOOM				⇑*i*S		**Sn**	**14 58 32.1**	**+0.3**
BRLS	**Borolday** 60nm,0.3s	**4.47**	**334**	Pg		**Pn**	**14 57 43.4**	**+1.4**
BRLS				Lg		Lg	14 58 36.1	
	145nm,0.5s							
USP	**Ospenovka** SNR=51	**4.52**	**19**	P		Pn	14 57 47.7	+5.1
USP	**Ospenovka**	**4.52**	**19**	*e*PN		**Pn**	**14 57 43.6**	**+1.0**
USP				*e*S		**Sn**	**14 58 35.8**	**+0.3**
USP	**Ospenovka**	**4.52**	**19**	⇑*e*P		**Pn**	**14 57 43.6**	**+1.0**
TKM2	**Tokmak 2** SNR=23	**4.56**	**30**	P		**Pn**	**14 57 47.1**	**+3.6**
KDJ	**Kajisay**	**4.75**	**48**			**Pn**	**14 57 48.6**	**+2.6**
KDJ	**Kajisay**	**4.75**	**48**	PN		**Pn**	**14 57 48.6**	**+2.6**
KST	**Kastek** 43nm,0.6s	**4.81**	**32**	Pg		**Pb**	**14 57 59.7**	**+1.1**
KST				Lg		Lg	14 59 04.2	
	123nm,0.8s							
TARG	**Taragay, Kyrgy**	**4.90**	**55**			**Pn**	**14 57 51.1**	**+3.0**
TARG	**Taragay, Kyrgy**	**4.90**	**55**	PN		**Pn**	**14 57 51.2**	**+3.0**
DGS	**Degeres** 59nm,0.6s	**4.91**	**30**	Pg		**Pb**	**14 58 01.3**	**+1.2**
DGS				Lg		Lg	14 59 07.1	
	106nm,0.8s							
IZV	**Izvestkoviy** 69nm,0.7s	**5.10**	**37**	Pg		**Pb**	**14 58 05.3**	**+1.9**
IZV				Lg		Lg	14 59 13.5	
	210nm,0.9s							
KBL	**Kabul**	**5.24**	**213**			Pn	14 57 58.0	+5.2
KBL	**Kabul**	**5.24**	**213**	PN		Pn	14 57 58.0	+5.2
KRBS	**Karabastau** 16nm,0.7s	**5.26**	**26**	Pg		**Pb**	**14 58 07.9**	**+1.8**
KRBS				Lg		Lg	14 59 18.2	
	115nm,0.7s							
MDOK	**Medeo** 27nm,0.6s	**5.40**	**38**	Pg		**Pb**	**14 58 10.1**	**+1.6**
MDOK				Lg		Lg	14 59 22.5	
	160nm,1.1s							
KNDC	**Almaty** 117nm,0.7s	**5.40**	**38**	⇓Pg		**Pg**	**14 58 14.7**	**-2.5**
KNDC				⇓Lg		Lg	14 59 20.6	
	641nm,1.4s							
KOTS	**Kotyrbulak** 56nm,0.7s	**5.48**	**38**	Pg		**Pb**	**14 58 11.6**	**+1.6**
KOTS				Lg		Lg	14 59 24.3	
	300nm,0.9s							
KTBS	**Karatobe**	**5.66**	**33**	Pg		**Pb**	**14 58 15.6**	**+2.7**
KTBS				Lg		Lg	14 59 31.6	
KUU	**Kurty** 10nm,0.6s	**5.68**	**30**	Pg		Pb	14 58 17.6	+4.5
KUU				Lg		Lg	14 59 34.8	
	68nm,0.7s							
ALCI	**Alchi Leh**	**6.11**	**140**	*e*P		**Pn**	**14 58 05.2**	**+0.3**
ALCI				*e*S		**Sn**	**14 59 18.8**	**+3.5**
ALCI				IAML			14 59 22.3	
	comp=E,172nm,0.7s							
ALCI				IAML			14 59 22.4	
	comp=N,183nm,0.4s							
PDGK	**Podgornoye** comp=N,14nm,1.1s	**6.83**	**49**	⇑Pn		**Pn**	**14 58 16.5**	**+2.0**
PDGK				⇑Pg		Pb	14 58 38.7	+5.8
	comp=N,40nm,0.8s							
PDGK				⇑Lg		Lg	15 00 07.4	
	comp=N,99nm,1.4s							
PDGK	**Podgornoye**	**6.83**	**49**	PN		**Pn**	**14 58 16.5**	**+2.0**
PDGK				PG		Pb	14 58 38.7	+5.9
TSSA	**Tissa**	**6.85**	**153**	*e*P		**Pn**	**14 58 16.0**	**+1.1**
TSSA				*e*S		**Sn**	**14 59 33.8**	**+0.5**
TSSA				IAML			14 59 43.3	
	comp=N,196nm,0.5s							
TSSA				IAML			14 59 45.9	
	comp=E,154nm,0.6s							
THN	**Thein Dam**	**7.09**	**157**	*e*P		**Pn**	**14 58 22.5**	**+4.5**
THN				*e*S		**Sn**	**14 59 40.6**	**+1.8**
THN				IAML			14 59 52.3	
	comp=N,172nm,0.7s							
THN				IAML			14 59 56.7	

	comp=E,168nm,0.6s							
DHRM	**DHARAMSHALA**	**7.44**	**154**	*e*P		**Pn**	**14 58 23.8**	**+0.8**
DHRM				*e*S		**Sn**	**14 59 47.6**	**-0.1**
DHRM				IAML			15 00 01.7	
	comp=E,140nm,0.8s							
DHRM				IAML			15 00 03.1	
	comp=N,155nm,0.8s							
BHK	**Bhakra**	**8.25**	**156**	*e*P		**Pn**	**14 58 38.0**	**+4.1**
BHK				*e*S		**Sn**	**15 00 10.8**	**+3.4**
BHK				IAML			15 00 14.4	
	comp=E,170nm,0.8s							
BHK				IAML			15 00 21.0	
	comp=N,179nm,0.6s							
SMLA	**Simla**	**8.76**	**153**	*e*P		**Pn**	**14 58 41.4**	**+0.5**
SMLA				*e*S		**Sn**	**15 00 18.2**	**-1.6**
SMLA				IAML			15 00 25.0	
	comp=E,195nm,0.6s							
SMLA				IAML			15 00 31.4	
	comp=N,178nm,0.5s							
KLP	**Kalpa**	**8.84**	**146**	*e*P		**Pn**	**14 58 42.8**	**+0.6**
KLP				*e*S		**Sn**	**15 00 17.2**	**-5.0**
KLP				IAML			15 00 32.3	
	comp=N,167nm,0.9s							
KLP				IAML			15 00 38.6	
	comp=E,195nm,1.1s							
MAKZ	**Makanchi**	**10.45**	**39**			Pn	14 59 08.7	+4.7
MAKZ	**Makanchi**	**10.45**	**39**	⇑Pn		**Pn**	**14 59 08.2**	**+4.2**
	comp=E,18nm,1.4s							
MAKZ				⇓Lg		Lg	15 02 01.2	
MAKZ	**Makanchi**	**10.45**	**39**	P		Pn	14 59 08.7	+4.7
MK31	**Makanchi Array**	**10.59**	**40**	Pn		**Pn**	**14 59 08.5**	**+2.5**
MK31	**Makanchi Array**	**10.59**	**40**	⇓Pn		**Pn**	**14 59 08.7**	**+2.7**
	comp=E,5.7nm,0.9s,baz=224,slow=16,SNR=28							
MK31				⇓Lg		Lg	15 02 05.5	
	comp=E,8.4nm,1.0s,baz=227,slow=24,SNR=7.4							
MK31	**Makanchi Array**	**10.59**	**40**	P		**Pn**	**14 59 08.5**	**+2.5**
MKAR	**Makanchi Array**	**10.59**	**40**	Pn		**Pn**	**14 59 08.4**	**+2.4**
	comp=E,0.3nm,0.3s,baz=225,slow=13,SNR=26							
MKAR				LR		LR	15 03 26.6	
	comp=E,99nm,19.9s,baz=84,slow=39							
	comp=E,2.5nm,0.7s							
MKAR	**Makanchi Array**	**10.59**	**40**			**Pn**	**14 59 08.6**	**+2.6**
MKAR	**Makanchi Array**	**10.59**	**40**	*e*P		**Pn**	**14 59 08.6**	**+2.6**
KUDL	**Kundal**	**11.35**	**162**	*e*P		**Pn**	**14 59 15.4**	**-0.9**
KUDL				*e*S		**Sn**	**15 01 19.1**	**-4.3**
KUDL				IAML			15 01 22.9	
	comp=E,124nm,0.8s							
KUDL				IAML			15 01 27.9	
	comp=N,114nm,0.9s							
KURBB	**Kurchatov Arra**	**12.37**	**18**	Pn		**Pn**	**14 59 30.0**	**-0.2**
	comp=N,0.3nm,0.3s,baz=208,slow=12,SNR=15							
KURBB				Sn		**Sn**	**15 01 46.7**	**-1.6**
	baz=205,slow=26,SNR=1.9							
KURBB				Lg		Lg	15 02 57.5	
	baz=208,slow=28,SNR=5.0							
	comp=N,1.3nm,0.5s							
KURBB	**Kurchatov Arra**	**12.37**	**18**	⇑Pn		**Pn**	**14 59 29.2**	**-1.0**
	comp=N,3.8nm,0.5s							
KURBB				⇓Lg		Lg	15 03 04.6	
	comp=N,29nm,0.8s							
KURBB	**Kurchatov Arra**	**12.37**	**18**	P		**Pn**	**14 59 29.2**	**-1.0**
WMQ	**Urumqi**	**12.40**	**62**	*e*P		Pn	14 59 35.8	+5.1
WMQ				pmax		pmax		
	comp=N,11nm,0.9s							
KURK	**Kurchatov** comp=N,1.0nm,0.8s	**12.48**	**18**	⇓Pn		**Pn**	**14 59 35.1**	**+3.4**
KURK				⇑Lg		Lg	15 03 05.7	
	comp=N,24nm,1.4s							
KURK	**Kurchatov**	**12.48**	**18**	P		**Pn**	**14 59 30.0**	**-1.7**
KURK							15 01 46.7	
AB31	**Akbulak array**	**13.61**	**323**			**Pn**	**14 59 46.4**	**-0.7**
AB31	**Akbulak array**	**13.61**	**323**	⇓Pn		**Pn**	**14 59 46.5**	**-0.6**
	comp=N,7.6nm,0.5s							
AB31				⇑Sn		**Sn**	**15 02 24.2**	**+5.8**
	comp=N,8.8nm,0.7s,baz=132,slow=25,SNR=5.7							
AB31	**Akbulak array**	**13.61**	**323**	P		**Pn**	**14 59 46.5**	**-0.6**
AB31				SN		**Sn**	**15 02 17.7**	**-0.7**
ABKAR	**Akbulak array**	**13.61**	**323**			**Pn**	**14 59 46.4**	**-0.6**
BVA0	**Borovoye Array**	**14.09**	**355**	Pn		**Pn**	**14 59 54.0**	**+0.4**
	comp=N,6.4nm,0.9s,baz=158,slow=14,SNR=16							
BVA0				⇑Lg		Lg	15 04 01.2	
	comp=N,15nm,1.3s,baz=170,slow=24,SNR=3.6							
BVA0	**Borovoye Array**	**14.09**	**355**	P		**Pn**	**14 59 54.0**	**+0.4**
BVAR	**Borovoye Array**	**14.09**

SHA1 Shidzhatmaz 22.79 292 *ce*P P 15 01 36.6 -0.6
MOY Mondy 23.54 48 *e*P P 15 01 45.8 +1.2
MOY pmax pmax
comp=Z,16nm,1.8s
ZAK Zakamensk 24.50 52 *e*P P 15 01 53.3 -0.4
ZAK pmax pmax
comp=Z,7.0nm,1.4s
KIRV Kirov 24.55 330 *ce*P P 15 01 54.7 +0.8
TLY Talaya 25.10 49 P P 15 01 59.4 +0.5
TLY lAmb lAmb 15 02 04.1
comp=Z,6.3nm,0.6s
TLY Talaya 25.10 49⇑ *e*P P 15 01 59.8 +0.9
TLY pmax pmax
comp=Z,5.0nm,0.6s
SONM Songino Array 26.00 59 P P 15 02 06.8 -0.5
comp=Z,0.9nm,0.7s,baz=258,slow=7.2,SNR=6.8
SONM LR LR 15 12 16.3
comp=Z,71nm,19.8s,baz=255,slow=36
comp=Z,0.9nm,0.7s
SONM Songino Array 26.00 59 P P 15 02 09.3 +2.0
SONM Songino Array 26.00 59 P P 15 02 09.3 +2.0
SONM pmax pmax
comp=Z,4.0nm,1.1s
VORD Divnogorie 26.10 308 *e*P P 15 02 05.9 -2.1
VORD pmax pmax
comp=Z,8.0nm,1.0s
VSR Storozhevoye 26.24 309 *e*P P 15 02 07.4 -1.8
VSR pmax pmax
comp=Z,6.0nm,1.0s
ULN Ulaanbaatar 26.44 59 *ce*P P 15 02 11.6 +0.2
ULN pmax pmax
comp=Z,7.0nm,1.3s
PZH PanZhiHua 27.48 108 P P 15 02 24.0 +3.2
RAYN Ar Rayn 27.60 244 P P 15 02 21.1 -0.8
RAYN Ar Rayn 27.60 244 P P 15 02 21.1 -0.8
RAYN pmax pmax
comp=Z,6.0nm,1.1s
MOS Moscow 28.51 317 *e*P P 15 02 29.8 +0.2
MOS pmax pmax
comp=Z,34nm,0.6s
OBN Obninsk 28.86 316 *e*P P 15 02 33.5 +0.8
OBN *i* 15 05 41.4
OBN pmax pmax
comp=Z,19nm,1.3s
BRTR Keskin Array B 29.87 284 P P 15 02 42.9 +0.9
comp=Z,1.7nm,0.7s,baz=80,slow=10,SNR=7.3
comp=Z,1.7nm,0.7s
HHC Hu-ho-hao-te 29.87 74 *e*P P 15 02 42.3 +0.3
HHC pmax pmax
comp=Z,12nm,0.6s
BR106 Keskin Array S 29.88 284 P P 15 02 42.5 +0.4
comp=Z,4.3nm,1.2s
BR106 pP **pP** 15 02 45.2 -0.3
comp=Z,4.3nm,1.2s
KLMR Klimovskoe 29.92 328 *e*P P 15 02 41.2 -0.8
KLMR pmax pmax
comp=Z,19nm,1.2s
CMAR Chiang Mai Arr 30.77 124 P P 15 02 48.8 -1.2
comp=Z,0.2nm,0.3s,baz=310,slow=8.3,SNR=1.5
comp=Z,0.2nm,0.3s
NRIK Noril'sk 31.45 10 P P 15 02 56.2 +0.7
comp=Z,3.3nm,0.9s,baz=208,slow=9.1,SNR=5.1
comp=Z,3.3nm,0.9s
NRIK Noril'sk 31.45 10 *e*P P 15 02 56.3 +0.9
NRIK pmax pmax
comp=Z,2.0nm,0.6s
AK09 Malin Array Si 32.31 305 P P 15 03 03.2 0.0
AK08 Malin Array Si 32.33 305 P P 15 03 03.4 0.0
AK10 Malin Array Si 32.33 305 P P 15 03 03.4 0.0
AKASG Malin Array Be 32.35 306 P P 15 03 03.4 -0.2
comp=Z,1.0nm,0.5s,baz=82,slow=7.5,SNR=14
comp=Z,1.0nm,0.5s
AKASG Malin Array Be 32.35 306 *e*P P 15 03 03.7 +0.1
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKBB Malin Array Si 32.35 306⇑ *e*P P 15 03 03.9 +0.3
AKBB Malin Array Si 32.35 306 P P 15 03 03.3 -0.3
AK07 Malin Array Si 32.35 305 P P 15 03 03.3 -0.3
AK03 Malin Array Si 32.35 306 P P 15 03 03.4 -0.2
AK01 Malin Array Si 32.36 305 P P 15 03 03.4 -0.2
AK05 Malin Array Si 32.36 305 P P 15 03 03.4 -0.2
AK06 Malin Array Si 32.36 305 P P 15 03 03.4 -0.3
KIEV Kiev 32.36 305 P P 15 03 03.3 -0.4
comp=Z,29nm,1.6s
AK14 Malin Array Si 32.42 305 P P 15 03 03.5 -0.7
AK16 Malin Array Si 32.42 305 P P 15 03 03.7 -0.5
AK22 Malin Array Si 32.45 306 P P 15 03 03.9 -0.6
LUBAR Lubar, Ukraine 33.25 304 P P 15 03 11.7 +0.2
BJI2 Beijing 33.48 74 P P 15 03 13.4 -0.2
BJI2 pmax pmax
comp=Z,2.0nm,0.7s
NDNU Novodnistrovsk 33.49 302 P P 15 03 13.7 +0.1
MNK Minsk 33.60 312 *i* P P 15 03 14.6 +0.1
comp=E,6.0nm,0.5s
MNK *i* P P 15 03 14.6 +0.1
comp=N,15nm,0.7s
MNK *i* P P 15 03 14.6 +0.1
comp=Z,5.0nm,0.5s,baz=99
MNK *i* PP **PnPn** 15 04 23.5 -2.3
MNK *i* PPP PPP 15 04 36.1
MNK *i* PcP **PcP** 15 05 53.7 -0.9
MNK *i* S **S** 15 08 38.9 +1.9
MNK *i* ScP **ScP** 15 09 38.4 -1.1
MNK *i* SS **SnSn** 15 10 33.7 -5.9
MNK *i* LQ LQ 15 13 46.2
MNK *i* LR LR 15 16 43.8
MNK *i* LRM MLR 15 17 31.3
comp=E,69nm,13.6s
MNK *i* LRM MLR 15 18 05.7
comp=E,280nm,16.3s
MNK *i* LRM MLR 15 18 07.2
comp=N,287nm,14.5s
MNK Minsk 33.60 312 *i* P P 15 03 14.5 +0.1
MNK *i* 15 04 23.4
MNK *i* 15 05 53.6
MNK *i* S **S** 15 08 38.9 +1.9
MNK *i* SS **SnSn** 15 10 33.6 -5.9
MNK pmax pmax
comp=E,6.0nm,0.5s
MNK pmax pmax
comp=Z,5.0nm,0.5s
MNK pmax pmax
comp=N,15nm,0.7s
MNK MLR MLR
comp=Z,69nm,14.0s
MNK MLR MLR
comp=E,280nm,16.0s
MNK MLR MLR
comp=N,287nm,14.0s
KMPD K-Podol'skiy 34.09 302 P P 15 03 18.7 -0.1
NACGM Naroch 34.29 313 *e*P P 15 03 21.8 +1.3
comp=Z,37nm,0.9s,baz=98
MLR Muntele Rosu 34.64 296 P P 15 03 24.6 +0.8
comp=Z,11nm,1.0s
KSV Kosov 35.03 301 P P 15 03 25.8 -1.2
MORS Morshin 35.77 303 P P 15 03 34.3 +1.0
MEZ Mezhgor'ye 36.05 302 P P 15 03 37.0 +1.3
FIA1 FINESS Array S 36.09 324 P P 15 03 35.6 -0.2
FINES FINESS Array B 36.09 324 P P 15 03 36.4 +0.5
comp=Z,7.4nm,0.5s,baz=106,slow=8.2,SNR=59
comp=Z,7.4nm,0.5s
FINES FINESS Array B 36.09 324 P P 15 03 36.1 +0.2
SHIU Shidnytsya 36.12 303 P P 15 03 37.1 +0.8
KWP Kalwaria Pacla 36.52 303 P P 15 03 41.2 +1.4
BERU Beregovo 36.65 301 P P 15 03 41.7 +0.9
BERU pP **pP** 15 03 44.3 +0.1
NJ2 Nanjing 38.06 86 *e*P P 15 03 54.3 +1.4
NJ2 pmax pmax
comp=Z,15nm,0.6s
NIE Niedzica 38.10 303 *e*P P 15 03 55.1 +1.9
OJC Ojcow 38.37 305 *e*P P 15 03 56.6 +1.2
OJC Ojcow 38.37 305 P P 15 03 53.3 -2.1
OJC Ojcow 38.37 305 P P 15 03 53.3 -2.1
VADS Vadso 38.40 338 *e*P P 15 03 55.4 +0.1
VADS lAmb lAmb 15 04 17.9
comp=Z,385nm,2.3s
ARA0 ARCESS Array S 39.29 336 lAmb lAmb 15 04 03.3
comp=Z,422nm,2.4s
ARA0 *e*P P 15 04 03.4 +0.5
ARCES ARCESS Array B 39.29 336 P P 15 04 03.2 +0.3
comp=Z,5.4nm,0.5s,baz=119,slow=8.8,SNR=48
comp=Z,5.4nm,0.5s
ARCES ARCESS Array B 39.29 336 *e*P P 15 04 02.5 -0.4
ARCES pmax pmax
comp=Z,5.0nm,0.5s

ZEA Zeya 39.54 50 *e*P P 15 04 06.3 +1.2
STEB Steborice 39.69 304 *e*P P 15 04 07.6 +1.1
KTK1 Kautokeino 39.81 335 *e*P P 15 04 07.5 +0.3
KTK1 lAmb lAmb 15 04 48.4
comp=Z,2μm,4.8s
HEH HeiHe 39.83 55 *e*P P 15 04 05.6 -2.0
HEH pmax pmax
comp=Z,10.0nm,0.8s
MORC Moravsky Berou 39.86 304 *e*P P 15 04 08.7 +0.8
JAVC Velka Javorina 39.88 303 *e*P P 15 04 10.1 +2.0
KRLC Kraliky 40.32 305 *e*P P 15 04 12.7 +1.0
KRLC Kraliky 40.32 305 *e*P P 15 04 12.7 +1.0
HAMF Hammerfest 40.34 337 *e*P P 15 04 12.3 +0.9
HAMF lAmb lAmb 15 04 14.5
comp=Z,50nm,1.0s
VRAC Vranov 40.53 304 *e*P P 15 04 14.6 +1.2
DPC Dobruska-Polom 40.58 305 *e*P P 15 04 15.2 +1.3
DPC Dobruska-Polom 40.58 305 *e*P P 15 04 15.2 +1.3
KRUC Moravsky 40.69 303 *e*P P 15 04 16.1 +1.4
JETT Jettan, Norway 40.95 335 *e*P P 15 04 17.0 +0.4
JETT lAmb lAmb 15 04 28.5
comp=Z,589nm,2.9s
RONA Rosalia, Austr 40.95 301 *e*pP P 15 04 18.4 +1.4
comp=Z,2.2nm,0.5s
BSD Bornholm Skovb 41.12 313 *i* P P 15 04 18.2 +0.1
BSD lAmb lAmb 15 04 19.1
comp=Z,8.4nm,0.7s
CONA Conrad Observa 41.20 302 *e*pP P 15 04 20.7 +1.6
comp=Z,5.2nm,0.7s
YAK Yakutsk 41.25 37 *e*P P 15 04 18.2 -1.0
YAK *e* 15 05 53.9
YAK *e* 15 06 14.8
YAK *e*PPP PPP 15 06 24.4
YAK *e*S **S** 15 10 28.9 -4.2
YAK *e*SS **SS** 15 13 30.2 -5.6
YAK pmax pmax
comp=Z,11nm,1.1s
YAK pmax pmax
comp=N,3.0nm,1.5s
YAK pmax pmax
comp=E,5.0nm,1.8s
YAK pmax pmax
comp=N,70nm,4.9s
YAK pmax pmax
comp=Z,161nm,5.4s
YAK pmax pmax
comp=E,168nm,4.7s
YAK smax smax
comp=N,117nm,5.9s
YAK smax smax
comp=E,88nm,5.3s
TRO Tromso 41.46 335 *e*P P 15 04 21.4 +0.6
TRO lAmb lAmb 15 04 21.4
comp=Z,1μm,3.8s
ARSA Arzberg 41.54 301 *e*pP P 15 04 23.1 +1.3
comp=Z,4.2nm,0.7s
DEL Delary 41.68 315 *i* P P 15 04 22.9 +0.1
HFS Hagfors 41.84 320 P P 15 04 24.4 +0.3
comp=Z,12nm,0.5s,baz=97,slow=11,SNR=52
comp=Z,12nm,0.5s
LUNU Lund 41.94 313 *i* P P 15 04 25.6 +0.7
SOKA Soboth 41.98 300 *e*pP P 15 04 26.9 +1.4
comp=Z,5.6nm,0.8s
ZVC Zvikov 42.06 304 *e*P P 15 04 27.5 +1.5
FAUS Fauske 42.14 331 *e*P P 15 04 26.8 +0.4
FAUS lAmb lAmb 15 04 32.8
comp=Z,18nm,1.0s
BJUU Bjuv 42.16 314 *i* P P 15 04 27.3 +0.6
MOR8 Moi Rana 42.22 329 *e*P P 15 04 26.7 -0.4
MOR8 lAmb lAmb 15 04 34.3
comp=Z,430nm,2.8s
BORU Boraas 42.27 316 *i* P P 15 04 27.7 +0.2
MOA Molln 42.27 302 *e*pP P 15 04 28.9 +1.1
comp=Z,2.8nm,0.7s
STEI Steigen 42.28 332 *e*P P 15 04 27.9 +0.4
STEI lAmb lAmb 15 04 28.3
comp=Z,1μm,3.8s
OBKA Obir 42.34 300 *e*pP P 15 04 30.4 +2.0
comp=Z,3.9nm,0.8s
GERES GERESS Array B 42.47 303 P P 15 04 30.0 +0.5
comp=Z,2.3nm,0.5s,baz=61,slow=8.2,SNR=16
comp=Z,2.3nm,0.5s
GERES GERESS Array B 42.47 303 *e*P P 15 04 30.7 +1.2
GERES pmax pmax
comp=Z,2.0nm,0.5s
KHC Kasperske Hory 42.51 304 P 15 04 28.9 -0.8
KHC lAmb lAmb 15 04 31.9
comp=Z,8.8nm,0.6s
KHC Kasperske Hory 42.51 304 P P 15 04 28.9 -0.8
KHC pmax pmax
comp=Z,9.0nm,0.6s
KHC Kasperske Hory 42.51 304 *e*P P 15 04 31.0 +1.3
CLL Collm 42.56 307 *i* P P 15 04 30.6 +0.6
CLL *i* 15 04 34.6
CLL pmax pmax
comp=Z,7.0nm,0.6s
CLL Collm 42.56 307 *i* P P 15 04 30.6 +0.6
comp=Z,7.0nm,0.6s
CLL *i* x x 15 04 34.6
CLL *e*PP **PP** 15 06 07.0 -1.4
CLL *e*PPP PPP 15 06 39.0
LEIR Leirfjorden 42.74 329 *e*P P 15 04 31.7 +0.4
LEIR lAmb lAmb 15 05 05.5
comp=Z,464nm,2.3s
VAGH Vaagaholmen 42.79 330 *e*P P 15 04 32.0 +0.4
VAGH lAmb lAmb 15 04 33.9
comp=Z,254nm,2.0s
KONS Konsvik 42.81 329 *e*P P 15 04 32.3 +0.6
KONS lAmb lAmb 15 04 32.7
comp=Z,48nm,1.4s
STOK Stokkvaagen 42.82 329 *e*P P 15 04 32.2 +0.3
STOK lAmb lAmb 15 04 43.0
comp=Z,383nm,2.2s
HOPEN Hopen 42.85 345 *e*P P 15 04 32.8 +0.8
HOPEN lAmb lAmb 15 04 34.9
comp=Z,95nm,1.9s
NC602 NORSAR Array S 42.94 321 *e*P P 15 04 32.8 -0.1
NORES NORESS Array B 42.94 321 P P 15 04 32.0 -0.9
TIXI Tiksi 43.01 23 P P 15 04 32.5 -0.9
TIXI lAmb lAmb 15 04 33.8
comp=Z,13nm,0.7s
TIXI Tiksi 43.01 23 P P 15 04 32.5 -0.9
TIXI pmax pmax
comp=Z,13nm,0.7s
KSRS Korea Array 43.02 74 LR LR 15 24 17.4
comp=Z,35nm,20.3s,baz=300,slow=39
KBA Koelnbreinsper 43.03 301 *e*pP P 15 04 35.0 +0.9
comp=Z,3.6nm,0.6s
NC303 NORSAR Array S 43.04 322 P P 15 04 33.6 -0.2
NB2 NORSAR Subarra 43.11 321 P P 15 04 34.2 -0.1
comp=Z,3.0nm,0.6s,baz=88,slow=7.9
NB2 NORSAR Subarra 43.11 321 P P 15 04 34.2 -0.1
NOA NORSAR Array B 43.11 321 P P 15 04 34.3 -0.1
comp=Z,4.0nm,0.6s,baz=90,slow=8.1,SNR=16
comp=Z,4.0nm,0.6s
BJO1 Bjornoya 43.23 342 *e*P P 15 04 35.6 +0.5
BJO1 lAmb lAmb 15 04 37.2
comp=Z,189nm,1.9s
NC204 NORSAR Array S 43.33 322 P P 15 04 35.7 -0.6
LESA Schwarzleotal 43.41 301 *i* pP P 15 04 38.1 +1.0
comp=Z,5.6nm,0.7s,SNR=4.3
WTTA Wattenberg 44.13 301 *e*pP P 15 04 43.6 +0.6
comp=Z,6.9nm,0.7s
SQTA Sankt Quirin 44.43 301 *e*P P 15 04 45.4 +0.1
comp=Z,5.7nm,1.0s
MOTA Moosalm 44.47 302 *e*pP P 15 04 45.9 +0.3
comp=Z,6.4nm,1.0s
FUORN Ofenpass-Fuorn 45.20 301 P 15 04 51.0 -0.5
DAVA Damuels 45.30 302 *e*pP P 15 04 53.0 +0.8
comp=Z,9.7nm,0.6s
SPA0 Spitsbergen Ar 45.32 346 *e*P P 15 04 53.1 +1.2
SPA0 lAmb lAmb 15 04 53.9
comp=Z,11nm,0.8s
SPITS Spitsbergen Ar 45.32 346 P P 15 04 51.9 0.0
comp=Z,5.3nm,0.6s,baz=112,slow=11,SNR=22
comp=Z,5.3nm,0.6s
KBS Kingsbay 46.43 347 *e*P P 15 05 01.4 +0.9
KBS lAmb lAmb 15 05 07.8
comp=Z,92nm,2.1s
KBS Kingsbay 46.43 347 *i* P P 15 05 01.6 +1.1
BMRD Maredsous 47.88 307 *d*P P 15 05 11.6 -0.6
BNI Bardonecchia 48.03 300 P 15 05 12.7 -1.0
BNI lAmb lAmb 15 05 15.6
comp=Z,8.9nm,1.1s
BNI Bardonecchia 48.03 300 P P 15 05 12.7 -1.0
BNI pmax pmax
comp=Z,9.0nm,1.1s
MJAR Matsushiro Arr 50.99 71 P P 15 05 33.1 -3.2
comp=Z,1.6nm,0.6s,baz=289,slow=9.6,SNR=3.6
comp=Z,1.6nm,0.6s
EKA Eskdalemuir Ar 51.31 315 P P 15 05 38.3 0.0
comp=Z,1.4nm,0.5s,baz=87,slow=8.0,SNR=9.4
comp=Z,1.4nm,0.5s
SEY Seymchan 51.69 35⇑ *e*P P 15 05 41.6 +0.5
SEY pmax pmax
comp=Z,13nm,2.9s
CEST Esterri de Car 52.55 298 P P 15 05 47.5 -0.4
CEST lAmb lAmb 15 05 49.5
comp=Z,9.8nm,1.3s
DAG Danmarks Havn 52.65 343 P P 15 05 48.5 +0.5
DAG pmax pmax
comp=Z,23nm,0.8s
DAG Danmarks Havn 52.65 343 *i* P P 15 05 48.0 0.0
DAG lAmb lAmb 15 05 49.0
comp=Z,13nm,0.7s
DBG Daneborg 53.60 340 *i* P P 15 05 55.7 +0.7
DBG lAmb lAmb 15 05 56.9
comp=Z,3.3nm,0.7s
JHJ Hachijo jima 2 53.63 74 LR LR 15 27 53.8
comp=Z,510nm,20.8s,baz=83,slow=35
MBAR Mbarara 54.91 234⇑ *e*P P 15 06 03.5 -2.1
MBAR pmax pmax
comp=Z,5.0nm,0.8s
BILL Bilibino 55.84 27⇑ *e*P P 15 06 11.6 +0.2
ESDC Sonseca Array 57.33 297 P P 15 06 22.5 0.0
comp=Z,1.7nm,0.5s,baz=65,slow=7.0,SNR=25
comp=Z,1.7nm,0.5s
NEEM North Greenlan 58.83 348 *i* P P 15 06 33.0 +0.4
NEEM lAmb lAmb 15 06 33.6
comp=Z,5.1nm,0.6s
SUMG Summit 59.06 341 P P 15 06 33.9 -0.6
SUMG Summit 59.06 341 P P 15 06 33.9 -0.6
SUMG pmax pmax
comp=Z,12nm,0.7s
SUMG Summit 59.06 341 *i* P P 15 06 35.0 +0.5
SUMG lAmb lAmb 15 06 36.5
comp=Z,14nm,0.6s
A19K Wainwright 64.42 18 P P 15 07 10.7 +0.6
baz=316
C16K Lisburne Hills 64.70 20 P P 15 07 12.2 +0.2
baz=313
C17K DeLong Mountai 65.14 20 P P 15 07 15.0 +0.2
baz=315
A22K Sinclair Lake 65.17 15 P P 15 07 15.1 +0.1
baz=321
B20K Meade River 65.47 17 lAmb lAmb 15 07 17.5
comp=Z,4.9nm,0.8s
B20K Meade River 65.47 17 P P 15 07 17.0 +0.1
baz=320
C18K Utukok River 65.52 19 P P 15 07 17.5 +0.1
baz=317
C19K Lookout Ridge 65.58 18 P P 15 07 17.7 -0.1
baz=318
D17K Noatak River 65.71 20 P P 15 07 18.0 -0.6
baz=315,SNR=13
GAMB Gambell 65.74 26 P P 15 07 19.1 +0.3
baz=310
TNA Tin City 65.80 23 P P 15 07 19.3 +0.2
baz=312
B22K Teshekpuk Lake 66.02 15 lAmb lAmb 15 07 21.5
comp=Z,5.3nm,0.9s
B22K Teshekpuk Lake 66.02 15 P P 15 07 20.2 -0.3
baz=322
B21K Ikpikpuk River 66.33 16 lAmb lAmb 15 07 23.1
comp=Z,4.2nm,0.7s
B21K Ikpikpuk River 66.33 16 P P 15 07 22.2 -0.3
baz=322
F14K Arctic Creek 66.34 23 P P 15 07 22.7 0.0
baz=314
D19K Kuna River 66.40 18 P P 15 07 23.1 0.0
baz=319
E18K Tukpahlearik C 66.57 20 P P 15 07 24.1 0.0
baz=317
D20K Etivluk River 66.59 17 P P 15 07 24.5 +0.3
baz=320
C21K Knifeblade Rid 66.66 17 P P 15 07 25.0 +0.3
baz=322
F15K North Star Dit 66.68 22 P P 15 07 25.0 +0.2
baz=315
TORD Torodi Ar. Bea 66.94 268 P P 15 07 25.7 -1.6
comp=Z,1.7nm,0.5s,baz=46,slow=2.6,SNR=10
comp=Z,1.7nm,0.5s
C23K Itkillik River 67.00 15 P P 15 07 26.8 0.0
baz=325
E20K Nigu River 67.04 18 P P 15 07 27.2 0.0
baz=321,SNR=6.3
F17K Baldwin Pennin 67.12 21 P P 15 07 27.8 +0.2
baz=317
ANM Nome 67.27 23 P P 15 07 28.7 +0.1
baz=315
G15K Niukluk 67.37 23 P P 15 07 29.0 -0.2
baz=316
E19K Redstone River 67.41 19 lAmb lAmb 15 07 29.4
comp=Z,3.0nm,0.7s
E19K Redstone River 67.41 19 P P 15 07 29.0 -0.4
baz=320
F18K Selawik 67.43 20 P P 15 07 29.8 +0.2
baz=318
C24K Franklin Bluff 67.47 14 lAmb lAmb 15 07 30.5
comp=Z,3.9nm,0.7s
C24K Franklin Bluff 67.47 14 P P 15 07 29.8 0.0
baz=326
G16K Koyuk River 67.58 22 P P 15 07 31.0 +0.5
baz=317
D23K Nanushuk River 67.70 15 P P 15 07 31.5 +0.2
baz=325
F19K Shaleruckik Mo 67.75 19 P P 15 07 31.6 +0.1
baz=320
D24K Happy Valley 67.92 15 P P 15 07 32.1 -0.6
baz=326
G17K Kiwalik Mounta 67.98 21 P P 15 07 32.9 -0.2
baz=318
C26K Camden Bay 68.00 13 P P 15 07 32.7 -0.4
baz=330
F20K Avaraart Lake 68.09 18 P P 15 07 33.1 -0.6
baz=321
E22K Anaktuvuk Pass 68.14 16 P P 15 07 33.6 -0.5
baz=324
H16K Elim 68.16 22 P P 15 07 34.1 -0.1
baz=317
TOLK Toolik Lake Re 68.20 15 P P 15 07 34.0 -0.4
baz=326,SNR=9.9
G18K Tagagawik 68.23 20 P P 15 07 34.6 -0.1
baz=319
D25K Kavik River 68.25 14 P P 15 07 34.7 -0.1
baz=328
G19K Purcell Mounta 68.46 19 P P 15 07 35.9 -0.2
baz=321
C27K Jago River 68.47 13 lAmb lAmb 15 07 37.2
comp=Z,3.1nm,0.9s
C27K Jago River 68.47 13 P P 15 07 36.1 0.0
baz=331
F21K Alatna River 68.50 18 lAmb lAmb 15 07 37.9
comp=Z,3.6nm,0.7s
F21K Alatna River 68.50 18 P P 15 07 35.9 -0.4
baz=323,SNR=7.4
F22K John River 68.56 17 P P 15 07 36.8 +0.1
baz=324
A36M Sachs Harbour 68.59 6 P P 15 07 36.2 -0.6
baz=345,SNR=18
H17K Granite Mounta 68.61 21 P P 15 07 37.0 -0.1
baz=319
E23K Chandalar 68.67 16 lAmb lAmb 15 07 38.0
comp=Z,2.9nm,0.6s
E23K Chandalar 68.67 16 P P 15 07 37.3 -0.1
baz=326
H18K Honhosa River 68.88 21 P P 15 07 38.8 +0.1
baz=320
E24K Your Creek 68.89 15 lAmb lAmb 15 07 39.6
comp=Z,2.9nm,0.6s
E24K Your Creek 68.89 15 P P 15 07 38.7 -0.1
baz=327
G21K Allakaket 69.06 18 lAmb lAmb 15 07 39.8
comp=Z,3.2nm,0.8s
G21K Allakaket 69.06 18 P P 15 07 39.2 -0.6
baz=323
H19K Roundabout Mou 69.10 20 P P 15 07 39.9 -0.2
baz=321
I17K Unalakleet 69.17 22 P P 15 07 40.3 -0.2
baz=318
COLD Coldfoot 69.24 16 lAmb lAmb 15 07 41.6
comp=Z,5.3nm,0.9s
COLD Coldfoot 69.24 16 P P 15 07 40.6 -0.3

baz=326,SNR=6.9
D27M **Malcolm River** 69.27 12 P P 15 07 40.6 -0.5
baz=333
K13K **Kusilvak Mount** 69.37 25 P P 15 07 41.8 0.0
baz=316
E25K **Arctic Village** 69.43 14 P P 15 07 42.0 -0.1
baz=329
F24K **Squaw Lake** 69.49 15 P P 15 07 42.3 -0.2
baz=326
H20K **Anotleneega Mo** 69.53 19 P P 15 07 42.3 -0.5
baz=322,SNR=14
D28M **Stokes Point** 69.54 11 P P 15 07 42.7 0.0
baz=335
GCSA **Galena City Sc** 69.60 20 P P 15 07 43.1 0.0
baz=321
J16K **Anvik River** 69.65 23 P P 15 07 43.7 +0.2
baz=319
G23K **Bananza Creek** 69.70 17 P P 15 07 43.9 +0.1
baz=326
F25K **Christian Rive** 69.88 15 P P 15 07 44.9 0.0
baz=329
H21K **Melozitna Rive** 69.92 18 P P 15 07 44.9 -0.2
baz=324
M11K **Mekoryuk** 69.94 27 P P 15 07 45.7 +0.4
baz=315
H22K **Ishtalitna Cre** 70.07 18 P P 15 07 46.4 +0.3
baz=325
E28M **Babbage River** 70.07 12 P P 15 07 46.2 +0.1
baz=334
F26K **Sheenjek River** 70.08 14 P P 15 07 46.5 +0.3
baz=331
E27K **Coleen River** 70.10 13 IAmb IAmb 15 07 47.4
comp=Z,6.6nm,1.4s
E27K **Coleen River** 70.10 13 P P 15 07 46.3 0.0
baz=332
I20K **Naaghedeneel** 70.19 19 P P 15 07 46.8 0.0
baz=323
G24K **Hadweenzic Riv** 70.27 16 IAmb IAmb 15 07 47.9
comp=Z,3.2nm,0.8s
G24K **Hadweenzic Riv** 70.27 16 P P 15 07 47.3 0.0
baz=328
L14K **Kuka Creek** 70.44 25 P P 15 07 48.8 +0.5
baz=318
G25K **Bearman Lake** 70.50 15 P P 15 07 48.5 -0.1
baz=329
I21K **Tanana** 70.51 18 P P 15 07 49.0 +0.2
baz=325
E29M **Blow River** 70.53 11 P P 15 07 48.8 0.0
baz=336,SNR=5.4
J19K **Poorman** 70.53 20 P P 15 07 49.2 +0.3
baz=322
H23K **Yukon River** 70.55 17 P P 15 07 49.2 +0.1
baz=327
L15K **Ungalak Mounta** 70.58 24 P P 15 07 49.3 +0.1
baz=318
J18K **Innoko River** 70.64 21 P P 15 07 50.0 +0.4
baz=322
K17K **Iditarod** 70.77 22 P P 15 07 49.7 -0.6
baz=320
J20K **Nowinta River** 70.78 20 IAmb IAmb 15 07 51.1
comp=Z,5.5nm,0.8s
J20K **Nowinta River** 70.78 20 P P 15 07 50.8 +0.4
baz=323
G26K **Porcupine Rive** 70.80 14 P P 15 07 49.7 -0.7
baz=331
M13K **Dall Lake** 70.91 26 P P 15 07 51.0 -0.2
baz=317
F28M **Old Crow** 70.91 13 P P 15 07 50.7 -0.5
baz=334
H24K **Noodor Dome** 70.91 16 P P 15 07 50.7 -0.6
baz=328
MLY **Manley** 70.93 18 P P 15 07 51.1 -0.3
baz=326
M14K **Bethel** 71.12 25 P P 15 07 52.8 +0.3
baz=318
I23K **Minto, Yukon-K** 71.16 17 P P 15 07 51.8 -0.9
I23K IAmb IAmb 15 07 53.4
comp=Z,3.3nm,0.8s
I23K **Minto, Yukon-K** 71.16 17 P P 15 07 53.1 +0.5
baz=327
L16K **Owhat River** 71.19 23 P P 15 07 53.0 +0.1
baz=320
L17K **Donlin** 71.22 23 P P 15 07 53.3 +0.1
baz=321
INK **Inuvik** 71.23 10 P P 15 07 53.5 +0.5
baz=339,SNR=7.9
C36M **Paulatuk** 71.26 6 P P 15 07 52.8 -0.5
baz=347,SNR=9.0
G27K **Doyon Strip** 71.32 14 P P 15 07 53.6 -0.1
baz=333
K20K **Telida** 71.46 20 P P 15 07 54.9 +0.3
baz=324
CHUM **Lake Minchumin** 71.49 19 P P 15 07 54.7 0.0
baz=325
F30M **Barrier River** 71.56 11 P P 15 07 55.2 +0.1
baz=337
M15K **Kasigluk River** 71.58 25 P P 15 07 55.5 +0.2
baz=319
POKR **Poker Plat Res** 71.62 17 P P 15 07 55.6 +0.1
baz=328
L18K **Granite Mounta** 71.63 22 P P 15 07 55.4 -0.2
baz=322
BPAW **Bear Paw Mtn.** 71.64 19 P P 15 07 55.4 -0.3
baz=326
PRP **Porcupine Dome** 71.69 16 P P 15 07 55.9 -0.2
baz=330
NEA2 **Nenana** 71.70 18 P P 15 07 54.6 -1.4
NEA2 IAmb IAmb 15 07 56.2
comp=Z,3.8nm,0.8s
NEA2 **Nenana** 71.70 18 P P 15 07 55.9 -0.1
baz=327,SNR=6.3
COLA **College** 71.74 17 P P 15 07 54.4 -1.8
COLA IAmb IAmb 15 07 56.6
comp=Z,6.3nm,0.8s
COLA **College** 71.74 17 *c i* P P 15 07 56.0 -0.2
COLA pmax pmax
comp=Z,7.0nm,0.9s
COLA **College** 71.74 17 P P 15 07 56.3 +0.2
baz=328
N14K **Kuskokwak Cree** 71.83 25 P P 15 07 56.8 0.0
baz=319
G29M **Pine Creek** 71.86 12 P P 15 07 56.8 -0.1
baz=336
H27K **Steamboat Moun** 71.86 14 P P 15 07 57.2 +0.2
baz=333
M16K **Timber Creek** 71.88 24 P P 15 07 56.8 -0.3
baz=320
F31M **Tsiigehtchic** 72.02 10 IAmb IAmb 15 07 58.4
comp=Z,9.8nm,1.2s
F31M **Tsiigehtchic** 72.02 10 P P 15 07 57.6 -0.1
baz=339
ILAR **Eielson Array** 72.04 17 P P 15 07 56.3 -1.7
comp=Z,2.1nm,0.8s,baz=331,slow=6.4,SNR=34
ILAR PP PP 15 10 38.4 +1.0
comp=Z,0.4nm,1.0s,baz=320,slow=8.3,SNR=4.4
comp=Z,2.1nm,0.8s
ILAR **Eielson Array** 72.04 17 P P 15 07 56.7 -1.4
ILAR **Eielson Array** 72.04 17 *eP* P 15 07 56.9 -1.1
ILAR pmax pmax
comp=Z,2.0nm,0.8s
M17K **Holitna River** 72.05 23 P P 15 07 58.8 +0.7
baz=321
G30M **tAoh Zraii Nji** 72.08 11 P P 15 07 58.0 -0.3
baz=337
N15K **Kwethluk River** 72.17 25 P P 15 07 59.2 +0.3
baz=320
L19K **White Mountain** 72.19 21 P P 15 07 59.0 0.0
baz=323
PPLA **Purkeypile** 72.33 20 P P 15 07 59.5 -0.4
baz=325
HDA **Harding Lake** 72.34 17 P P 15 07 59.6 -0.2
baz=329
N16K **Nishlik Lake** 72.36 24 P P 15 07 59.8 -0.2
baz=321
TRF **Thorofare Moun** 72.36 19 P P 15 07 59.9 -0.3
baz=326
I26K **Coal Creek Min** 72.37 15 P P 15 07 59.9 -0.1
baz=332
I27K **Kandik River** 72.40 14 P P 15 08 00.2 -0.1
baz=333
H29M **Whitestone** 72.43 13 IAmb IAmb 15 08 07.7
comp=Z,4.2nm,0.9s
H29M **Whitestone** 72.43 13 P P 15 08 00.3 0.0
baz=335
MCK **McKinley** 72.45 18 P P 15 08 00.3 -0.2
baz=328
M18K **Stony River** 72.46 22 P P 15 08 00.5 -0.1
baz=323

J25K **Salcha River,** 72.51 16 P P 15 08 00.3 -0.6
baz=330
N17K **Nushagak Hills** 72.81 23 P P 15 08 02.5 -0.2
baz=322
I28M **Miner Creek** 72.85 14 IAmb IAmb 15 08 02.9
comp=Z,2.6nm,0.7s
I28M **Miner Creek** 72.85 14 P P 15 08 02.8 -0.2
baz=334
M20K **Styx River** 72.91 21 P P 15 08 03.0 -0.4
baz=325
L22K **Petersville** 73.01 19 P 15 08 02.2 -1.7
L22K IAmb IAmb 15 08 03.6
comp=Z,5.4nm,0.7s
O15K **Ungalikthiuk R** 73.02 25 P P 15 08 03.9 -0.1
baz=320
N18K **Kilae Creek** 73.08 23 P P 15 08 04.2 -0.1
baz=323
K24K **Donnelly Dome** 73.12 17 P P 15 08 03.9 -0.7
baz=330
CUT **Chulitna** 73.24 19 P P 15 08 04.8 -0.3
baz=327
O16K **Kokwok River B** 73.26 24 P P 15 08 05.4 +0.1
baz=321
SKT **Skwentna** 73.26 20 IAmb IAmb 15 08 05.5
comp=Z,6.7nm,0.9s
SKT **Skwentna** 73.26 20 P P 15 08 05.2 -0.1
baz=326
WAT1 **Susitna Watana** 73.31 18 P P 15 08 05.1 -0.6
baz=328
SCRK **Sand Creek** 73.36 16 P P 15 08 05.6 -0.5
baz=331
DHY **Denali Highway** 73.39 18 IAmb IAmb 15 08 07.8
comp=Z,5.7nm,1.0s
DHY **Denali Highway** 73.39 18 P P 15 08 05.7 -0.6
baz=329
RIDG **Independent Ri** 73.39 16 P P 15 08 05.5 -0.6
baz=331
N19K **Bonanza Creek** 73.39 22 P P 15 08 06.3 0.0
baz=324
O17K **Koliganek Bris** 73.43 24 P P 15 08 06.4 0.0
baz=322
H31M **Peel River** 73.46 11 P P 15 08 05.7 -0.8
baz=339
I30M **Mount Dempster** 73.68 12 IAmb IAmb 15 08 08.2
comp=Z,7.6nm,1.2s
I30M **Mount Dempster** 73.68 12 P P 15 08 07.6 -0.3
baz=337
K27K **Chicken** 73.72 15 IAmb IAmb 15 08 08.9
comp=Z,8.2nm,1.3s
WAT6 **Susitna Watana** 73.72 18 P P 15 08 07.8 -0.4
baz=329
N20K **Mount Spurr** 73.72 21 P P 15 08 07.9 -0.2
baz=325
P16K **Nushagak River** 73.73 25 P P 15 08 08.3 +0.2
baz=322
PAX **Paxson** 73.92 17 P P 15 08 09.1 -0.2
baz=330
O18K **Koktuh Hills** 73.95 23 P P 15 08 09.8 +0.3
baz=323
P17K **Kvichak River** 74.10 24 P P 15 08 10.3 +0.1
baz=323
J30M **Hart River** 74.28 12 P P 15 08 11.2 -0.3
baz=337
P18K **Big Mountain,** 74.31 23 P P 15 08 11.6 0.0
baz=323
Q16K **King Salmon** 74.44 24 P P 15 08 12.4 +0.2
baz=322
SCM **Sheep Creek Mo** 74.46 18 P P 15 08 12.3 -0.2
baz=329
RC01 **Rabbit Creek A** 74.48 20 P P 15 08 11.8 -0.7
baz=327
M24K **Tolsona, Glenn** 74.50 18 P P 15 08 12.8 +0.1
baz=330
UNV **Unalaska Valle** 74.51 32 P P 15 08 12.8 +0.1
baz=316
KNK **Knik Glacier** 74.54 19 P P 15 08 13.0 +0.1
baz=328
L27K **Beaver Creek,** 74.63 15 P P 15 08 13.4 0.0
baz=333
P19K **Oil Pt** 74.70 22 P P 15 08 13.7 -0.2
baz=325
K29M **Barlow Dome** 74.75 13 IAmb IAmb 15 08 19.2
comp=Z,8.2nm,1.4s
K29M **Barlow Dome** 74.75 13 P P 15 08 14.0 -0.2
baz=336
M26K **Nabesna, AK** 74.97 16 P P 15 08 14.6 -0.7
baz=332
Q18K **Katmai Hardscr** 74.98 24 P P 15 08 15.6 +0.1
baz=324
FALS **False Pass** 75.00 30 P P 15 08 16.0 +0.5
baz=318
Q17K **Contact Creek** 75.01 24 P P 15 08 15.2 -0.6
baz=323
KLU **Klutina** 75.10 18 P P 15 08 16.2 0.0
baz=330
Q19K **Cape Douglas,** 75.17 23 P P 15 08 16.7 +0.2
baz=325
M27K **Edge Creek, AK** 75.25 16 P P 15 08 17.3 +0.1
baz=333
N25K **Chitina, Valde** 75.31 17 P P 15 08 17.7 +0.3
baz=331
L29M **L29M** 75.32 14 P P 15 08 16.9 -0.4
baz=336
R17L **Mt. Peulik Vol** 75.37 25 P P 15 08 18.0 +0.3
baz=323
M29M **Somme Creek** 75.86 14 P P 15 08 20.8 +0.2
baz=336
MCARA **McCarthy VSAT** 75.87 17 P P 15 08 20.9 +0.4
baz=332
EYAK **Cordova Ski Ar** 75.96 18 P P 15 08 21.5 +0.5
baz=330
DBIC **Dimbokro** 75.98 267 LR LR 15 44 26.7
comp=Z,120nm,21.2s,baz=285,slow=38
P23K **Montague Islan** 76.02 19 P P 15 08 21.4 +0.1
baz=329
M30M **Minto, Yukon** 76.05 13 P P 15 08 21.6 0.0
baz=337
YUK3 **Moose Creek** 76.07 15 P P 15 08 22.0 +0.1
baz=334
KDAK **Kodiak Island** 76.43 23 P P 15 08 24.0 +0.2
baz=326
CTG **Chitna Glacier** 76.61 16 P P 15 08 24.8 -0.1
baz=334
YUK8 **Steele Glacier** 76.66 15 P P 15 08 25.2 -0.1
baz=335
OHAK **Old Harbor** 76.68 24 P P 15 08 25.4 +0.3
baz=325
M31M **Drury Creek, Y** 76.82 13 P P 15 08 25.9 0.0
baz=339
KAIM **Kayak Island** 76.83 18 P P 15 08 26.4 +0.5
baz=332
YUK4 **Talbot Arm** 76.83 15 P P 15 08 25.7 -0.5
baz=336
SII **Sitkinak Islan** 76.94 24 P P 15 08 27.1 +0.5
baz=325
N30M **Aishikik Lake** 77.03 14 P P 15 08 27.0 -0.1
baz=337
O28M **Mount Upton** 77.03 16 P P 15 08 26.9 -0.6
baz=335
YUK6 **Outpost Mounta** 77.25 15 P P 15 08 28.4 -0.2
baz=336
WRGLY **Wrigley** 77.31 7 P P 15 08 28.0 -0.5
baz=348
HYT **Haines Junctio** 77.53 15 P P 15 08 30.0 -0.1
baz=337
PINM **Pinnacle** 77.63 16 P P 15 08 30.0 -0.6
baz=335
O30N **Mendenhall** 77.85 14 P P 15 08 32.0 +0.2
baz=338
WHY **Whitehorse** 78.18 13 P P 15 08 33.3 -0.3
baz=339
P30M **Million Dollar** 78.29 15 P P 15 08 33.6 -0.5
baz=337
YKA **Yellowknife Ar** 78.68 3 P P 15 08 35.9 -0.3
comp=Z,3.1nm,0.8s,baz=350,slow=5.8,SNR=41
comp=Z,3.1nm,0.8s
YKA **Yellowknife Ar** 78.68 3 P P 15 08 35.5 -0.7
P33M **Teslin, Yukon** 78.96 13 P P 15 08 37.7 -0.2
P33M IAmb IAmb 15 08 57.1
comp=Z,8.0nm,1.4s
P33M **Teslin, Yukon** 78.96 13 P P 15 08 37.5 -0.4
baz=340
P32M **Atlin** 79.39 13 P P 15 08 39.3 -0.9
baz=340
R33M **Jennings River** 80.04 12 P P 15 08 42.9 -0.9
baz=342
SCHQ **Schefferville** 80.23 337 P P 15 08 44.7 -0.2
comp=Z,2.8nm,0.9s,baz=45,slow=8.6,SNR=3.6
comp=Z,2.8nm,0.9s
KOTAN **Kotaneelee Air** 80.27 8 P P 15 08 44.7 -0.3
baz=347
S31K **Pelican** 80.43 15 P P 15 08 46.2 +0.5
baz=338
S32K **Killisnoo** 81.22 14 P P 15 08 49.8 -0.2
baz=339
S34M **Telegraph Cree** 81.42 12 P P 15 08 51.2 0.0
baz=342
WRA **Warramunga Arr** 82.36 123 P P 15 08 54.4 -2.1
comp=Z,1.8nm,0.7s,baz=314,slow=5.5,SNR=11
comp=Z,1.8nm,0.7s
WRA **Warramunga Arr** 82.36 123 *eP* P 15 08 54.7 -1.9
WRA pmax pmax
comp=Z,2.0nm,0.7s
U33K **Whale Pass** 82.77 14 P P 15 08 59.0 +0.9
baz=340
V35K **Ketchikan** 83.80 14 P P 15 09 04.8 +1.3
baz=342
ASAR **Alice Springs** 84.77 126 P P 15 09 06.5 -2.4
comp=Z,1.0nm,0.7s,baz=314,slow=5.2,SNR=8.2
comp=Z,1.0nm,0.7s
SUR **Sutherland** 85.71 222 LR LR 15 49 17.5
comp=Z,57nm,19.9s,baz=300,slow=37
PLCA **Paso Flores** 151.69 255 PKPbc PKPbc 15 16 28.5 -0.3
comp=Z,0.7nm,0.5s,baz=85,slow=5.5,SNR=5.3

*IDC **19** 14:56:53.7±19.0,23°.86S×179°.47E, h423km±184km, mb2.9/4, mbtmp3.7/4, Error ellipse: s-maj=105.1km s-min=32.0km az=54.0*
ISC 19 14:57:05.6±1.4, 24°.1S±0°.3×179°.1E±0°.2, h548km, n7, σ0$27/8, mb3.3/4, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	33.85	248	P	P		P	15 03 03.1	+0.1
	1.1nm,0.5s,baz=85,slow=16,SNR=3.7								
	1.1nm,0.5s								
ASAR	**Alice Springs**	41.15	261	P	P		P	15 04 02.7	0.0
	0.2nm,0.3s,baz=101,slow=8.1,SNR=16								
ASAR				PcP	PcP		PcP	15 05 49.2	+0.3
	0.3nm,0.9s,baz=90,slow=5.2,SNR=1.6								
	0.2nm,0.3s								
WRA	**Warramunga Arr**	41.53	267	P	P		P	15 04 05.4	-0.3
	0.4nm,0.4s,baz=98,slow=7.2,SNR=30								
	0.4nm,0.4s								
QSPA	**South Pole Qui**	66.02	180	P	P		P	15 06 57.8	-0.1
	0.6nm,0.6s,baz=47,slow=4.2,SNR=5.8								
	0.6nm,0.6s								
AKASG	**Malin Array Be**	144.63	326	PKP			PKPdf	15 15 39.8	0.0
	0.4nm,0.4s,baz=57,slow=3.5,SNR=4.7								
BRTR	**Keskin Array B**	146.98	307	PKPbc			PKiKP	15 15 49.3	+0.2
	0.3nm,0.6s,baz=59,slow=6.0,SNR=1.7								
EKA	**Eskdalemuir Ar**	148.73	2	PKPbc			PKPbc	15 15 50.8	-0.2
	0.3nm,0.4s,baz=350,slow=3.2,SNR=2.9								

IDC 19 15:03:38.0±4.6, 6°.45S×149°.33E, h95km±41km, mb3.3/2, mbtmp3.9/4, Error ellipse: s-maj=120.3km s-min=33.6km az=126.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	3.65	216	P			Pn	15 04 31.8	-0.5
	24nm,0.3s,baz=43,slow=5.8,SNR=39								
PMG				S			Sn	15 05 14.8	+0.5
	25nm,0.4s,baz=156,slow=16,SNR=4.3								
WRA	**Warramunga Arr**	19.80	226	P			P	15 08 00.6	-0.5
	5.1nm,0.6s,baz=51,slow=10,SNR=40								
ASAR	**Alice Springs**	22.66	219	P			P	15 08 31.6	+0.2
	1.5nm,0.5s,baz=55,slow=9.0,SNR=95								
	1.5nm,0.5s								
ILAR	**Eielson Array**	84.98	23	P			P	15 16 03.0	+0.5
	0.3nm,0.9s,baz=238,slow=5.2,SNR=2.9								
	0.3nm,0.9s								

*IDC **19** 15:13:03.7±22.0, 27°.33N×140°.95E, h389km±226km, mb3.0/8, mbtmp3.7/8, Error ellipse: s-maj=168.0km s-min=25.0km az=72.0*
ISC 19 15:12:59.5±2.3, 27°.4N±0°.2×141°.2E±0°.6, h350km, n8, σ0$45/8, mb3.4/8, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SONM	**Songino Array**	33.89	316	P	P		P	15 19 10.7	+0.1
	0.1nm,0.3s,baz=101,slow=7.5,SNR=1.2								
	0.1nm,0.3s								
WRA	**Warramunga Arr**	47.52	189	P	P		P	15 21 00.9	0.0
	0.4nm,1.0s,baz=5.6,slow=7.4,SNR=1.5								
	0.4nm,1.0s								
MKAR	**Makanchi Array**	49.61	309	P	P		P	15 21 16.0	-0.4
	0.1nm,0.4s,baz=80,slow=8.9,SNR=2.1								
	0.1nm,0.4s								
KURBB	**Kurchatov Arra**	52.21	314	P	P		P	15 21 35.3	-0.1
	0.6nm,0.4s,baz=92,slow=8.1,SNR=10.0								
	0.6nm,0.4s								
BVAR	**Borovoye Array**	57.23	317	P	P		P	15 22 11.4	+0.3
	1.1nm,0.4s,baz=87,slow=6.7,SNR=8.5								
	1.1nm,0.4s								
FINES	**FINESS Array B**	77.29	334	P	P		P	15 24 16.3	+0.6
	1.0nm,0.4s,baz=61,slow=5.2,SNR=11								
	1.0nm,0.4s								
HFS	**Hagfors**	82.80	336	P	P		P	15 24 44.4	-0.6
	2.3nm,0.8s,baz=63,slow=5.1,SNR=2.7								
	2.3nm,0.8s								
NOA	**NORSAR Array B**	83.01	338	P	P		P	15 24 45.8	-0.2
	0.5nm,0.7s,baz=30,slow=3.5,SNR=1.5								
	0.5nm,0.7s								

*DNK **19** 15:13:34.6±2.5, 58°.20N×11°.21E, h0km, ML2.5, Suspected explosion*
*BER **19** 15:13:35.9±2.0, 58°.19N×11°.35E, h0km, ML1.9, Suspected explosion*
*UPP **19** 15:13:35.1±0.2, 58°.17N×11°.21E, h0km, ML2.7, Suspected explosion*
*IDC **19** 15:13:39.2±1.9, 58°.54N×10°.96E, h0km, mbtmp3.4/3, ML2.2/4, Error ellipse: s-maj=14.3km s-min=13.7km az=36.0*
ISC 19 15:13:33.5±0.7, 58°.19N±0°.02×11°.24E±0°.03, h0km, n50, σ1$15/83, 2C, Sweden

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TJOU	**Tjoern**	0.26	128	P	P		Pb	15 13 40.3	-0.8
TJOU				S			Sg	15 13 43.9	+2.0
TJOU	**Tjoern**	0.26	128	*i* P	P		Pb	15 13 40.3	-0.8
TJOU				*i* S			Sg	15 13 44.0	+2.1
VANU	**Vaenersborg**	0.53	55	P	P		Pb	15 13 45.7	0.0
VANU				S			Sb	15 13 53.3	-0.7
STRU	**Stroemstad**	0.84	358	⇑*i* P	P		Pb	15 13 51.2	+0.2
STRU				*e* S			Sb	15 14 02.6	-0.3
STRU	**Stroemstad**	0.84	358	P	P		Pb	15 13 51.3	+0.2
STRU				S			Sb	15 14 03.0	+0.1
STRU	**Stroemstad**	0.84	358	⇑*i* P	P		Pb	15 13 51.2	+0.2
STRU				*i* P	P		Pb	15 13 51.3	+0.2
STRU				*e* S			Sb	15 14 02.6	-0.3
STRU				*i* S			Sb	15 14 03.0	+0.1
ONAU	**Onsala**	0.88	155	P	P		Pb	15 13 51.4	-0.2
ONAU				S			Sg	15 14 02.9	+1.3
ONAU	**Onsala**	0.88	155	*i* P	P		Pb	15 13 51.4	-0.2
ONAU				*i* S			Sg	15 14 02.5	+0.9
BORU	**Boraas**	0.99	124	P	P		Pg	15 13 53.4	+0.9
BORU				S			Sb	15 14 07.2	+0.1
BORU	**Boraas**	0.99	124	*i* P	P		Pb	15 13 53.6	+0.1
BORU				*i* S			Sb	15 14 07.3	+0.1
NASU	**Vaermlandsnaes**	1.26	53	P	P		Pn	15 13 59.0	+0.7
NASU				S			Sb	15 14 16.0	+1.1
HOMB	**Homborsund**	1.45	274	*eP*	P		Pn	15 14 00.6	-0.3
HOMB				*eS*			Sn	15 14 20.6	+0.1
HOMB				IAML				15 14 55.4	
	comp=Z,27nm,0.2s								
HOMB	**Homborsund**	1.45	274	*i* P	P		Pn	15 14 00.0	-0.9
HOMB				*eP*	P		Pn	15 14 00.6	-0.3
HOMB				*eS*			Sn	15 14 20.6	+0.1
HOMB				IAML				15 14 38.7	
	comp=Z,19nm,0.4s								
HOMB				IAML				15 14 55.4	
	comp=Z,27nm,0.2s								
GNOU	**Gnosjoe**	1.63	123	P	P		Pb	15 14 04.5	+0.1
KONO	**Kongsberg**	1.69	331	*eP*	P		Pn	15 14 04.8	+0.5
KONO				*eS*			Sb	15 14 27.2	0.0
KONO				IAML				15 15 04.9	

	comp=Z,20nm,0.5s								
KONO	**Kongsberg**	**1.69**	**331**	*e*P		**Pn**	**15 14 04.8**	**+0.5**
KONO				*e*S		**Sb**	**15 14 27.2**	**0.0**
KONO				IAML			15 15 04.9	
	comp=Z,20nm,0.5s								
MUD	**Monsted U'grnd**	**2.07**	**214**	*e*P		**Pb**	**15 14 12.3**	**+0.4**
MUD	**Monsted U'grnd**	**2.07**	**214**	*e*P		**Pb**	**15 14 12.3**	**+0.4**
SNART	**Snartemo**	**2.13**	**276**	*e*P		**Pn**	**15 14 10.3**	**0.0**
SNART				IAML			15 15 16.3	
	comp=Z,32nm,0.2s								
SNART	**Snartemo**	**2.13**	**276**	*i* P		**Pn**	**15 14 09.0**	**-1.3**
SNART				*e*P		**Pn**	**15 14 10.3**	**0.0**
SNART				IAML			15 15 16.3	
	comp=Z,32nm,0.2s								
DEL	**Delary**	**2.24**	**139**	*i* P		**Pb**	**15 14 14.0**	**-0.8**
DEL				IAML			15 14 51.2	
	comp=Z,6.0nm,0.3s								
HFS	**Hagfors**	**2.32**	**32**	Pn		**Pn**	**15 14 14.4**	**+1.5**
	comp=Z,1.7nm,0.3s,baz=220,slow=16,SNR=206								
HFS				Sn		**Sn**	**15 14 42.1**	**-0.1**
	comp=Z,3.1nm,0.3s,baz=219,slow=24,SNR=13								
HFS				Lg	Lg		15 14 47.0		
	comp=Z,6.1nm,0.3s,baz=219,slow=30,SNR=18								
	comp=Z,5.6nm,0.2s								
BJUU	**Bjuv**	**2.34**	**155**	*i* P		**Pb**	**15 14 15.2**	**-1.3**
NC602	**NORSAR Array S**	**2.56**	**3**	*e*P		**Pn**	**15 14 17.0**	**+0.9**
NC602				*e*S		**Sn**	**15 14 46.8**	**-1.2**
NC602				IAML			15 15 36.0	
	comp=Z,13nm,0.2s								
NC602	**NORSAR Array S**	**2.56**	**3**	*e*P		**Pn**	**15 14 17.0**	**+0.9**
NC602				*e*S		**Sn**	**15 14 46.8**	**-1.2**
NC602				IAML			15 15 36.0	
	comp=Z,13nm,0.2s								
NAO01	**NORSAR Array S**	**2.67**	**356**	*e*P		**Pn**	**15 14 18.4**	**+0.7**
NAO01				*e*S		**Sn**	**15 14 49.9**	**-0.7**
NAO01				IAML			15 15 33.1	
	comp=Z,8.2nm,0.3s								
NAO01	**NORSAR Array S**	**2.67**	**356**	*e*P		**Pn**	**15 14 18.4**	**+0.7**
NAO01				*e*S		**Sn**	**15 14 49.9**	**-0.7**
NAO01				IAML			15 15 33.1	
	comp=Z,8.2nm,0.3s								
BLS5	**Blasjo**	**2.78**	**298**	*e*P		**Pn**	**15 14 20.9**	**+1.7**
BLS5				*e*S		**Sn**	**15 14 55.5**	**+2.1**
BLS5				IAML			15 15 34.0	
	comp=Z,6.8nm,0.2s								
BLS5	**Blasjo**	**2.78**	**298**	*e*P		**Pn**	**15 14 20.9**	**+1.7**
BLS5				*e*S		**Sn**	**15 14 55.5**	**+2.1**
BLS5				IAML			15 15 34.0	
	comp=Z,6.8nm,0.2s								
LUNU	**Lund**	**2.84**	**154**	*e*P		**Pn**	**15 14 17.4**	**-2.6**
LUNU				*i* S		**Sn**	**15 14 57.9**	**+3.0**
NOA	**NORSAR Array B**	**2.86**	**360**	Pn		**Pn**	**15 14 20.9**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=183,slow=13,SNR=16								
NOA				Lg	Lg		15 14 55.6		
	comp=Z,0.2nm,0.3s,baz=185,slow=14,SNR=5.8								
NBO00	**NORSAR Array S**	**2.86**	**356**	*e*P		**Pn**	**15 14 20.7**	**+0.4**
NBO00				IAML			15 15 43.8	
	comp=Z,8.4nm,0.6s								
NBO00	**NORSAR Array S**	**2.86**	**356**	*e*P		**Pn**	**15 14 20.7**	**+0.4**
NBO00				IAML			15 15 43.8	
	comp=Z,8.4nm,0.6s								
SKAR	**Skarslia**	**2.91**	**330**	*e*P		**Pn**	**15 14 21.4**	**+0.3**
SKAR				IAML			15 15 24.5	
	comp=Z,12nm,0.5s								
SKAR	**Skarslia**	**2.91**	**330**	*e*P		**Pn**	**15 14 21.4**	**+0.3**
SKAR				IAML			15 15 24.5	
	comp=Z,12nm,0.5s								
ODD1	**Odda**	**2.94**	**308**	*e*P		**Pn**	**15 14 22.5**	**+1.0**
ODD1				*e*S		**Sn**	**15 14 59.8**	**+2.3**
ODD1				IAML			15 15 14.4	
	comp=Z,7.2nm,0.5s								
ODD1	**Odda**	**2.94**	**308**	*e*P		**Pn**	**15 14 22.5**	**+1.0**
ODD1				*e*S		**Sn**	**15 14 59.8**	**+2.3**
ODD1				IAML			15 15 14.4	
	comp=Z,7.2nm,0.5s								
NC303	**NORSAR Array S**	**3.04**	**1**	*e*P		**Pn**	**15 14 23.6**	**+0.8**
NC303				*e*S		**Sn**	**15 14 58.6**	**-1.4**
NC303				IAML			15 15 23.7	
	comp=Z,8.6nm,0.3s								
NC303	**NORSAR Array S**	**3.04**	**1**	*e*P		**Pn**	**15 14 23.6**	**+0.8**
NC303				*e*S		**Sn**	**15 14 58.6**	**-1.4**
NC303				IAML			15 15 23.7	
	comp=Z,8.6nm,0.3s								
NC204	**NORSAR Array S**	**3.10**	**356**	*e*P		**Pn**	**15 14 24.9**	**+1.1**
NC204				IAML			15 15 50.7	
	comp=Z,5.9nm,0.3s								
NC204	**NORSAR Array S**	**3.10**	**356**	*e*P		**Pn**	**15 14 24.9**	**+1.1**
NC204				IAML			15 15 50.7	
	comp=Z,5.9nm,0.3s								
BLEU	**Blekinge**	**3.13**	**125**	*i* P		**Pn**	**15 14 25.3**	**+1.3**
HAMD	**Hammershus, De**	**3.52**	**145**	*i* P		**Pn**	**15 14 30.1**	**+0.8**
BSD	**Bornholm Skovb**	**3.69**	**145**	*i* P		**Pn**	**15 14 32.5**	**+0.7**
BSD				*i* S		**Sn**	**15 14 14.7**	**-1.2**
BSD				IAML			15 15 22.0	
	comp=Z,8.0nm,0.9s								
HYA	**Hoyanger**	**3.93**	**322**	*e*P		**Pn**	**15 14 35.3**	**+0.4**
HYA				IAML			15 16 02.4	
	comp=Z,5.1nm,0.8s								
HYA	**Hoyanger**	**3.93**	**322**	*e*P		**Pn**	**15 14 35.3**	**+0.4**
HYA				IAML			15 16 02.4	
	comp=Z,5.1nm,0.8s								
AKN	**Aaknes**	**4.52**	**334**	*e*P		**Pn**	**15 14 43.6**	**+0.4**
AKN	**Aaknes**	**4.52**	**334**	*e*P		**Pn**	**15 14 43.6**	**+0.4**
FINES	**FINESS Array B**	**8.15**	**60**	Pn		**Pn**	**15 14 34.0**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=253,slow=13,SNR=17								
FINES				Sn		**Sn**	**15 17 03.3**	**-2.4**
	comp=Z,0.2nm,0.3s,baz=259,slow=23,SNR=1.2								
FINES				Lg	Lg		15 17 48.7		
	comp=Z,0.3nm,0.3s,baz=255,slow=22,SNR=1.4								
	comp=Z,0.6nm,0.3s								
ARCES	**ARCESS Array B**	**12.95**	**23**	Pn		**Pn**	**15 16 35.1**	**-3.4**
	comp=Z,0.1nm,0.3s,baz=216,slow=13,SNR=1.6								
	comp=Z,1.4nm,0.8s								

IDC 19 15:13:49.2±2.2, 58°36N×11°18E, h0km, mbtmp3.5/3, ML2.3/4, Error ellipse: s-maj=23.1km s-min=16.9km az=135.0, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HFS	**Hagfors**	**2.20**	**35**	Pn		Pn	15 14 26.0	-0.9
	2.0nm,0.3s,baz=221,slow=19,SNR=5.5							
HFS				Lg		Lg	15 14 58.2	
	7.1nm,0.3s,baz=215,slow=35,SNR=11							
	8.2nm,0.2s							
NOA	**NORSAR Array B**	**2.69**	**0**	Pn		Pn	15 14 32.1	-1.6
	0.1nm,0.3s,baz=180,slow=13,SNR=2.2							
FINES	**FINESS Array B**	**8.10**	**61**	Pn		Pn	15 15 44.6	-3.3
	0.2nm,0.3s,baz=254,slow=13,SNR=8.9							
FINES				Sn		Sn	15 17 14.5	-5.5
	0.3nm,0.3s,baz=249,slow=24,SNR=0.9							
	1.7nm,0.8s							
ARCES	**ARCESS Array B**	**12.80**	**23**	Pn		Pn	15 16 46.9	-5.4
	0.1nm,0.3s,baz=214,slow=14,SNR=2.3							
	2.7nm,0.9s							

*UPP **19** 15:14:09.4±0.2, 58°17N×11°25E, h0km, ML2.9, Suspected explosion*
*DNK **19** 15:14:10.3±2.3, 58°16N×11°32E, h0km, ML2.9(UPP), Explosion*

ISC 19 15:14:08.8±1.3, 58°17N±0°.03×11°20E±0°.06, h0km, n14, σ0°34/26, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TJOU	**Tjoern**	**0.26**	**122**	P		**Pg**	**15 14 14.1**	**+0.3**
TJOU				S		**Sg**	**15 14 17.6**	**+0.4**
TJOU	**Tjoern**	**0.26**	**122**	P		**Pg**	**15 14 14.1**	**+0.3**
TJOU				S		**Sg**	**15 14 17.6**	**+0.4**
VANU	**Vaenersborg**	**0.56**	**55**	P		**Pg**	**15 14 19.7**	**+0.1**
	baz=214							
VANU				S		**Sg**	**15 14 27.0**	**+0.2**
VANU	**Vaenersborg**	**0.56**	**55**	P		**Pg**	**15 14 19.7**	**+0.1**
	baz=214							
VANU				S		**Sg**	**15 14 27.0**	**+0.2**
ONAU	**Onsala**	**0.86**	**153**	P		**Pg**	**15 14 25.4**	**0.0**
ONAU				S		**Sg**	**15 14 36.7**	**+0.1**
ONAU	**Onsala**	**0.86**	**153**	P		**Pg**	**15 14 25.4**	**0.0**
ONAU				S		**Sg**	**15 14 36.7**	**+0.1**
STRU	**Stroemstad**	**0.87**	**359**	P		**Pg**	**15 14 25.6**	**+0.1**
STRU				S		**Sg**	**15 14 37.3**	**+0.7**
STRU	**Stroemstad**	**0.87**	**359**	P		**Pg**	**15 14 25.6**	**+0.1**
STRU				S		**Sg**	**15 14 37.3**	**+0.7**
BORU	**Boraas**	**0.99**	**122**	P		**Pg**	**15 14 27.7**	**-0.2**
BORU				S		**Sg**	**15 14 40.9**	**+0.2**
BORU	**Boraas**	**0.99**	**122**	P		**Pg**	**15 14 27.7**	**-0.2**
BORU				S		**Sg**	**15 14 40.9**	**+0.2**
FINU	**Finntorp**	**1.40**	**28**	P		**Pn**	**15 14 34.9**	**-0.7**
FINU				S		**Sb**	**15 14 54.1**	**-0.1**
FINU	**Finntorp**	**1.40**	**28**	P		**Pn**	**15 14 34.9**	**-0.7**
FINU				S		**Sb**	**15 14 54.1**	**-0.1**
GNOU	**Gnosjoe**	**1.63**	**122**	P		**Pn**	**15 14 38.8**	**+0.1**
GNOU	**Gnosjoe**	**1.63**	**122**	P		**Pn**	**15 14 38.8**	**+0.1**

*SKHL **19** 15:25:56.9±0.8, 44°.70N×144°.90E, h28km±1km, mb4.2/3*
*JMA **19** 15:25:56.3±0.1, 44°.7N±0°.4×144°.9E±0°.5, h16km±1km, MV2.9/34, NE OFF HOKKAIDO*

ISC 19 15:25:56.0±1.2, 44°.72N±0°.04×144°.88E±0°.04, h22km±13km, n13, σ0°52/23, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JRA	**Rausu**	**0.81**	**167**	P		**Pb**	**15 26 11.1**	**-0.3**
JRA				S		**Sb**	**15 26 21.5**	**-0.3**
JNSB	**Nemuroshibetsu**	**0.95**	**174**	P		**Pb**	**15 26 13.7**	**-0.1**
JNSB				S		**Sb**	**15 26 25.8**	**-0.2**
YUK	**Yuzh-Kuril'sk**	**0.99**	**134**	*e*P		**Pn**	**15 26 13.9**	**-0.6**
YUK				AMB		AMB	15 26 14.5	
	230nm,0.4s							
YUK				*e*S		**Sb**	**15 26 26.3**	**-0.6**
YUK				A		A	15 26 27.7	
	980nm,0.3s							
YUK				A		A	15 26 27.7	
	440nm,0.3s							
JTKR	**Abashiri--Toko**	**1.02**	**223**	*i* P		**Pn**	**15 26 15.1**	**+0.1**
JTKR				S		**Sb**	**15 26 28.7**	**+0.6**
GLVR	**Golovnino**	**1.09**	**155**	*e*P		**Pb**	**15 26 16.3**	**+0.2**
GLVR				AMB		AMB	15 26 16.4	
	220nm,0.3s							
GLVR				*e*S		**Sn**	**15 26 30.7**	**+0.5**
GLVR				A		A	15 26 32.3	
	580nm,0.3s							
GLVR				A		A	15 26 32.3	
	690nm,0.3s							
JNK	**Nakash**	**1.14**	**186**	P		**Pn**	**15 26 16.6**	**-0.1**
JNK				S		**Sn**	**15 26 31.2**	**-0.5**
JMP	**Maruseppu**	**1.30**	**237**	P		**Pb**	**15 26 19.7**	**-0.2**
JMP				S		**Sb**	**15 26 36.9**	**+0.7**
NMR	**Nemuro--Hokkai**	**1.49**	**155**	*i* P		**Pn**	**15 26 21.5**	**+0.2**
NMR				*e*S		**Sn**	**15 26 40.3**	**+0.3**
NEM2	**Nemuro 2**	**1.50**	**155**	P		**Pn**	**15 26 21.8**	**+0.3**
NEM2				S		**Sn**	**15 26 40.6**	**+0.4**
SHO	**Shikotan**	**1.64**	**121**	*e*P		Pb	15 26 34.3	+8.8
SHO				AMB		AMB	15 26 35.3	
	30nm,0.4s							
SHO				*e*S		Sb	15 26 54.4	+8.6
SHO				A		A	15 26 56.1	
	60nm,0.5s							
SHO				A		A	15 26 56.1	
	90nm,0.5s							
AKK	**Akkeshi**	**1.71**	**181**	*e*P		**Pn**	**15 26 24.2**	**-0.2**
KUR	**Kuril'sk**	**2.18**	**75**	*e*P		**Pn**	**15 26 31.8**	**+0.9**
KUR				*e*S		**Sn**	**15 26 57.0**	**-0.2**
YSS	**Yuzhno-Sakhali**	**2.68**	**327**	*e*P		**Pn**	**15 26 38.0**	**+0.3**
YSS				*e*S		**Sn**	**15 27 08.3**	**-1.2**
YSS				A		A	15 27 25.7	

*MDD **19** 15:34:13.6±0.9, 34°.50N×5°.61W, h9km±11km, mb_Lg2.2/11, Error ellipse: s-maj=8.7km s-min=4.3km az=178.0*
*IGIL **19** 15:34:13.3, 34°.63N×5°.25W, h18km*
*CNRM **19** 15:34:13.5, 34°.49N×5°.57W, h6km, ML2.7*
*SFS **19** 15:34:13.1, 34°.57N×5°.57W, h3km, ML3.5/11, ML3.5/11, MLv3.6/11*
*INMG **19** 15:34:15.1±1.5, 34°.52N×5°.57W, h22km±4km, ML2.2, Error ellipse: s-maj=4.0km s-min=2.7km az=74.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NW Fez (Marr)*

ISC 19 15:34:13.1±1.1, 34°.54N±0°.02×5°.58W±0°.03, h13km±9km, n60, σ1°36/107, 1C, Morocco

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RSA	**Sarsar**	**0.40**	**330**	P		**Pb**	**15 34 22.0**	**0.0**
RSA				S		**Sb**	**15 34 29.1**	**+1.1**
SICH	**Sidi Chahed**	**0.49**	**154**	P		**Pg**	**15 34 22.3**	**-0.4**
SICH				S		**Sg**	**15 34 28.4**	**-0.9**
CHEFC	**Chefchaouen**	**0.60**	**19**	P		**Pb**	**15 34 25.9**	**+0.5**
CHEFC				S		**Sb**	**15 34 35.5**	**+1.7**
LCRM	**LCR**	**1.04**	**145**	P		**Pn**	**15 34 33.5**	**0.0**
LCRM				S		**Sn**	**15 34 48.3**	**+0.3**
IFR	**Ifrane**	**1.09**	**160**	Pg		**Pg**	**15 34 33.5**	**-0.6**
IFR				Sg		**Sb**	**15 34 47.7**	**-0.4**
SMIR	**Smir Dam**	**1.15**	**8**	P		**Pg**	**15 34 36.7**	**+1.4**
SMIR				S		**Sn**	**15 34 52.7**	**+2.3**
RTC	**Rabat Centre**	**1.19**	**243**	Pg		**Pn**	**15 34 33.9**	**-1.6**
RTC				Sg		**Sn**	**15 34 52.7**	**+1.1**
AKLM	**AKL**	**1.42**	**91**	P		**Pb**	**15 34 39.2**	**-0.3**
AKLM				S		**Sn**	**15 34 57.1**	**0.0**
PALE	**Palemas**	**1.51**	**63**	P		**Pb**	**15 34 41.4**	**+0.5**
PALE				S		**Sg**	**15 35 02.0**	**+0.4**
CZD	**Col de Zad**	**1.57**	**163**	P		**Pb**	**15 34 41.6**	**-0.5**
CZD				S		**Sg**	**15 35 02.9**	**-0.9**
EXAGE	**Algeciras**	**1.59**	**4**	Sn		**Sn**	**15 35 00.7**	**-0.6**
MD31	**MD31**	**1.81**	**158**	P		**Pn**	**15 34 43.4**	**-0.5**
MD31				S		**Sb**	**15 35 08.6**	**0.0**
MDT	**Midelt**	**1.90**	**155**	P		**Pn**	**15 34 44.9**	**-0.4**
MDT				S		**Sb**	**15 35 11.4**	**0.0**
AVE	**Averroes**	**1.97**	**231**	Pn		**Pn**	**15 34 47.0**	**+1.0**
AVE	**Averroes**	**1.97**	**231**	P		**Pn**	**15 34 47.3**	**+1.2**
AVE				S		**Sb**	**15 35 13.6**	**+0.4**
ESPR	**Espera**	**2.33**	**355**	Pn		**Pn**	**15 34 52.1**	**+1.0**
ESPR				Sn		**Sn**	**15 35 20.2**	**+0.6**
ESPR				*i* lVmb_Lg			15 35 24.2	
JBK	**JBK**	**2.50**	**94**	P		**Pn**	**15 34 53.3**	**-0.2**
JBK				S		**Sn**	**15 35 24.1**	**+0.1**
E1302	**La Puebla de C**	**2.60**	**6**	Pn		**Pn**	**15 34 56.3**	**+1.5**
E1302				Sn		**Sb**	**15 35 32.7**	**+1.3**
E1302				*i* lVmb_Lg			15 35 41.7	
ELGU	**Los Guajares,**	**2.81**	**34**	Pn		**Pn**	**15 34 57.7**	**-0.1**
ELGU	**Los Guajares,**	**2.81**	**34**	Pn		**Pn**	**15 34 57.5**	**-0.3**
ELGU				Sn		**Sn**	**15 35 30.8**	**-0.8**
ELGU				*i* lVmb_Lg			15 35 44.2	
EGOR	**Sierra Gorda,**	**2.83**	**25**	Pn		**Pn**	**15 34 58.3**	**+0.2**
EGOR	**Sierra Gorda,**	**2.83**	**25**	Pn		**Pn**	**15 34 58.5**	**+0.5**
EGOR				*i* lVmb_Lg			15 35 44.8	
SRHM	**Skhour des Reh**	**2.83**	**224**	P		**Pb**	**15 35 02.8**	**-0.7**
SRHM				S		**Sb**	**15 35 40.5**	**+2.3**
TISM	**Timmit**	**2.91**	**195**	P		**Pn**	**15 35 00.8**	**+1.8**
EBER	**Berja**	**3.21**	**42**	Pn		**Pn**	**15 35 04.0**	**+0.6**
EBER				Sn		**Sn**	**15 35 42.5**	**+0.9**
EBER				*i* lVmb_Lg			15 35 48.7	
PBDV	**Barranco-do-Ve**	**3.30**	**325**	*e*Pn		**Pn**	**15 35 04.7**	**+0.1**
EMIN	**Mina Concepcio**	**3.34**	**345**	Pn		**Pn**	**15 35 03.9**	**-1.1**
EMIN				Sn		**Sn**	**15 35 41.6**	**-2.8**
EMIN	**Mina Concepcio**	**3.34**	**345**	Pn		**Pn**	**15 35 06.5**	**+1.6**
EMIN				Sn		**Sn**	**15 35 44.6**	**+0.1**
EMIN				*i* lVmb_Lg			15 35 44.9	
PVAQ	**Vaqueiros**	**3.34**	**329**	*e*Pn		**Pn**	**15 35 05.1**	**+0.1**
PVAQ				*e*Sn		**Sn**	**15 35 43.6**	**-1.0**
PVAQ				*i* IAML			15 35 44.4	
PVAQ				*i* IAML			15 35 44.7	
PVAQ				*i* IAML			15 35 46.5	
PVAQ	**Vaqueiros**	**3.34**	**329**	P		**Pn**	**15 35 05.2**	**+0.1**
EGRO	**El Granado**	**3.36**	**333**	Pn		**Pn**	**15 35 05.0**	**-0.2**
EGRO				Sn		**Sn**	**15 35 44.0**	**-1.0**
EGRO	**El Granado**	**3.36**	**333**	Pn		**Pn**	**15 35 05.5**	**+0.2**
EGRO				Sn		**Sn**	**15 35 43.6**	**-1.4**
EGRO				*i* lVmb_Lg			15 35 47.8	
ECAB	**El Cabril**	**3.53**	**2**	Pn		**Pn**	**15 35 07.2**	**-0.4**
ECAB				Sn		**Sn**	**15 35 46.5**	**-2.7**
ECAB	**El Cabril**	**3.53**	**2**	Pn		**Pn**	**15 35 07.8**	**+0.2**
ECAB				Sn		**Sn**	**15 35 47.1**	**-2.1**
ECAB				*i* lVmb_Lg			15 35 49.6	
PCVE	**Castro Verde**	**3.67**	**328**	Pn		**Pn**	**15 35 09.5**	**0.0**
PCVE				Sn		**Sn**	**15 35 51.5**	**-1.2**
PCVE	**Castro Verde**	**3.67**	**328**	*e*Pn		**Pn**	**15 35 09.8**	**+0.3**
PCVE				*e*Sn		**Sn**	**15 35 51.7**	**-1.0**
PCVE				*i* IAML			15 35 52.2	
PCVE				*i* IAML			15 35 54.2	
PCVE				*i* IAML			15 35 54.3	
PFVI	**Vila Bisbo**	**3.69**	**315**	*e*Pn		**Pn**	**15 35 09.7**	**-0.1**
PFVI				*e*Sn		**Sn**	**15 35 53.2**	**0.0**
PFVI				*i* IAML			15 35 56.4	
PFVI				*i* IAML			15 35 57.5	
PFVI				*i* IAML			15 35 57.5	
EADA	**Adamuz**	**3.71**	**12**	Pn		**Pn**	**15 35 10.7**	**+0.6**
EADA				Sn		**Sn**	**15 35 52.3**	**-1.3**
EADA	**Adamuz**	**3.71**	**12**	Pn		**Pn**	**15 35 10.9**	**+0.8**
EADA				Sn		**Sn**	**15 35 51.3**	**-2.3**
EADA				*i* lVmb_Lg			15 35 57.4	
MORF	**Marmelete**	**3.72**	**319**	*e*P		**Pn**	**15 35 09.9**	**-0.3**
MORF	**Marmelete**	**3.72**	**319**	*e*Pn		**Pn**	**15 35 10.0**	**-0.2**
MORF				*e*Sn		**Sn**	**15 35 52.9**	**-0.9**
MORF				*i* IAML			15 35 54.2	
MORF				*i* IAML			15 35 54.6	
MORF				*i* IAML			15 35 54.8	
OUZM	**OUZ**	**3.76**	**196**	P		**Pn**	**15 35 12.8**	**+2.0**
OUZM				S		**Sn**	**15 35 59.6**	**+4.6**
PBAR	**Barrancos**	**3.81**	**342**	Pn		**Pn**	**15 35 11.4**	**0.0**
PBAR				Sn		**Sn**	**15 35 53.3**	**-2.9**
PBAR	**Barrancos**	**3.81**	**342**	*e*Pn		**Pn**	**15 35 12.7**	**+1.2**
PBAR				*e*Sn		**Sn**	**15 35 53.8**	**-2.4**
PBAR				*i* IAML			15 35 54.7	
PBAR				*i* IAML			15 35 58.6	
PBAR				*i* IAML			15 35 58.9	
MESJ	**Messejana**	**3.92**	**328**	*e*P		**Pn**	**15 35 12.3**	**-0.7**
MESJ	**Messejana**	**3.92**	**328**	*e*Pn		**Pn**	**15 35 13.1**	**+0.1**
MESJ				*e*Sn		**Sn**	**15 35 58.0**	**-0.9**
MESJ				*i* IAML			15 35 58.8	
MESJ				*i* IAML			15 36 00.4	
MESJ				*i* IAML			15 36 01.4	
EVO	**Evora**	**4.44**	**334**	Pn		**Pn**	**15 35 19.8**	**-0.3**
EVO				Sn		**Sn**	**15 36 08.8**	**-2.6**
EVO	**Evora**	**4.44**	**334**	*e*Pn		**Pn**	**15 35 20.2**	**+0.2**
EVO				*e*Sn		**Sn**	**15 36 09.9**	**-1.7**
EVO				*i* IAML			15 36 12.0	
EVO				*i* IAML			15 36 20.4	
EVO				*i* IAML			15 36 20.4	
PSIM	**Granatula de C**	**4.51**	**18**	Pn		**Pn**	**15 35 21.9**	**+0.8**
PSIM				Sn		**Sn**	**15 36 11.0**	**-2.5**
MOE	**Montemor**	**4.56**	**331**	*e*Pn		**Pn**	**15 35 22.6**	**+0.9**
MOE				*e*Sn		**Sn**	**15 36 13.0**	**-1.5**
MOE				*i* IAML			15 36 15.5	
MOE				*i* IAML			15 36 16.8	
MOE				*i* IAML			15 36 17.0	
PESTR	**Estremoz**	**4.61**	**340**	Pn		**Pn**	**15 35 22.9**	**+0.4**
PESTR				Sn		**Sn**	**15 36 12.6**	**-3.2**
PESTR	**Estremoz**	**4.61**	**340**	*e*Pn		**Pn**	**15 35 23.5**	**+1.1**
PESTR				*e*Sn		**Sn**	**15 36 14.0**	**-1.8**
PESTR				*i* IAML			15 36 19.8	
PESTR				*i* IAML			15 36 26.8	
PESTR				*i* IAML			15 36 31.0	
PESTR	**Estremoz**	**4.61**	**340**	P		**Pn**	**15 35 23.4**	**+1.0**
PARRA	**Arraiolos**	**4.70**	**336**	*e*Pn		**Pn**	**15 35 23.8**	**+0.1**
PARRA				*e*Sn		**Sn**	**15 36 16.4**	**-1.6**
PARRA				*i* IAML			15 36 18.0	
PARRA				*i* IAML			15 36 19.9	
PARRA				*i* IAML			15 36 21.7	
PMTG	**Montargil**	**4.99**	**336**	*e*Pn		**Pn**	**15 35 27.6**	**-0.1**
PMTG				*e*Sn		**Sn**	**15 36 23.8**	**-1.4**
PMTG				*i* IAML			15 36 24.2	
PMTG				*i* IAML			15 36 26.2	
PMTG				*i* IAML			15 36 36.0	
PMRV	**Marv??o**	**5.09**	**344**	*e*Pn		**Pn**	**15 35 30.0**	**+1.0**
PMRV				*e*Sn		**Sn**	**15 36 26.0**	**-1.7**
PMRV				*i* IAML			15 36 30.3	
PMRV				*i* IAML			15 36 40.6	
PMRV				*i* IAML			15 36 42.9	
PAB	**San Pablo**	**5.09**	**11**	Pn		**Pn**	**15 35 29.8**	**+0.7**
PAB				Sn		**Sn**	**15 36 23.2**	**-4.6**
PAB				*i* lVmb_Lg			15 36 28.2	
PSARD	**Sardoal**	**5.46**	**339**	*e*Pn		**Pn**	**15 35 34.4**	**+0.3**
PSARD				*e*Sn		**Sn**	**15 36 34.6**	**-2.1**
PSARD				*i* IAML			15 36 37.3	
PSARD				*i* IAML			15 36 38.2	
PSARD				*i* IAML			15 36 39.8	
MVO	**Moncorvo**	**6.71**	**351**	*e*Pn		**Pn**	**15 35 52.0**	**+0.7**
POLO	**Lamas de Olo**	**7.04**	**346**	*e*Pn		**Pn**	**15 35 56.5**	**+0.6**

*IDC **19** 15:41:20.7±60.0, 20°.44S×179°.95W, h0km, mb4.1/3, mbtmp4.1/3, Error ellipse: s-maj=1084.0km s-min=159.9km az=82.0*
*NEIC **19** 15:41:50.8±1.2, 20°.4S±0°.3×177°.4W±0°.2, h523km±27km, mb4.0/16, Error ellipse: s-maj=43.2km s-min=13.2km az=210.0*

ISC 19 15:41:49.3±1.1, 20°.3S±0°.2×177°.5W±0°.1, h500km, n21, σ0°66/21, mb4.0/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res

0.2nm,0.1s
APOL AML AML 15 52 30.8
0.2nm,0.1s
XYLS Xyliatos 0.99 326 *i* P **Pn 15 52 21.5 -0.1**
XYLS S **Sn 15 52 33.3 -1.1**
XYLS AML AML 15 52 34.3
0.2nm,0.2s
XYLS AML AML 15 52 34.5
0.4nm,0.3s
TROD Troodos 1.04 317 P **Pn 15 52 22.7 +0.3**
TROD S **Sn 15 52 35.5 -0.2**
TROD AML AML 15 52 40.3
0.1nm,0.3s
TROD AML AML 15 52 43.8
0.1nm,0.3s
ALFC Alefka 1.34 316 *i* P **Pn 15 52 27.1 +0.8**
ALFC S **Sn 15 52 43.1 +0.2**
ALFC AML AML 15 52 44.6
0.3nm,0.5s
ALFC AML AML 15 52 45.6
0.2nm,0.3s
AKMS Akamas 1.42 306 P **Pn 15 52 27.9 +0.6**
AKMS S **Sn 15 52 46.0 +1.2**
QRWL Qaraoun 1.75 111 *e*P **Pb 15 52 36.3 +0.8**
ZAHL Zahle 1.82 100 *e*P **Pb 15 52 37.2 +0.4**
HWQ Hawqa 1.84 87 *e*P **Pb 15 52 37.5 +0.4**
RCY Rachaya 1.89 111 *e*P **Pb 15 52 38.3 +0.3**
RCY *e*S **Sb 15 53 00.7 -0.5**
BEIL Beino 2.06 79 *e*P **Pb 15 52 40.6 -0.3**
BEIL *e*S **Sb 15 53 04.5 -1.7**

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*BER **19** 16:22:08.6±1.9,58°.06N×11°.45E, h0km, ML1.7, Suspected explosion*
*UPP **19** 16:22:09.8±0.2,58°.17N×11°.23E, h0km, ML2.6, Suspected explosion*
*DNK **19** 16:22:09.4±1.9,58°.16N×11°.15E, h0km, ML2.3, Explosion*
*IDC **19** 16:22:21.9±2.2,58°.41N×11°.19E, h0km, mbtmp3.5/3, ML2.3/4, Error ellipse: s-maj=18.2km s-min=15.2km az=67.0*
ISC 19 16:22:08.6±0.8,**58°.17N**±0°.02×**11°.15E**±0°.03,**h0**km,**n43,** σ1°**13**/74,**Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TJOU	**Tjoern**	**0.28**	**118**	P	**Pg**	**16 22 14.9**	**+0.8**
TJOU				S	**Sg**	**16 22 18.4**	**+0.7**
TJOU	**Tjoern**	**0.28**	**118**	P	**Pg**	**16 22 14.9**	**+0.8**
TJOU				*e*P	**Pb**	**16 22 15.1**	**-1.5**
TJOU				S	**Sg**	**16 22 18.4**	**+0.7**
TJOU				*i* S	**Sb**	**16 22 18.5**	**-3.3**
VANU	**Vaenersborg**	**0.58**	**56**	P	**Pg**	**16 22 20.3**	**+0.5**
VANU				S	**Sg**	**16 22 27.7**	**+0.3**
VANU	**Vaenersborg**	**0.58**	**56**	P	**Pg**	**16 22 20.3**	**+0.5**
VANU				S	**Sg**	**16 22 27.7**	**+0.3**
STRU	**Stroemstad**	**0.87**	**1**	*e*P	**Pb**	**16 22 25.9**	**-0.6**
STRU				*e*S	**Sb**	**16 22 38.4**	**-0.4**
STRU	**Stroemstad**	**0.87**	**1**	P	**Pb**	**16 22 26.0**	**-0.6**
STRU				S	**Sg**	**16 22 37.6**	**+1.1**
STRU	**Stroemstad**	**0.87**	**1**	*i* P	**Pb**	**16 22 25.9**	**-0.6**
STRU				*e*P	**Pb**	**16 22 25.9**	**-0.6**
STRU				P	**Pb**	**16 22 26.0**	**-0.6**
STRU				S	**Sg**	**16 22 37.6**	**+1.1**
STRU				*e*S	**Sb**	**16 22 38.4**	**-0.4**
ONAU	**Onsala**	**0.88**	**152**	P	**Pb**	**16 22 26.0**	**-0.7**
ONAU				S	**Sg**	**16 22 37.5**	**+0.9**
ONAU	**Onsala**	**0.88**	**152**	*i* P	**Pb**	**16 22 25.9**	**-0.7**
ONAU				P	**Pb**	**16 22 26.0**	**-0.7**
ONAU				S	**Sg**	**16 22 37.5**	**+0.9**
BORU	**Boraas**	**1.01**	**121**	P	**Pg**	**16 22 27.9**	**-0.1**
BORU				S	**Sg**	**16 22 41.3**	**+0.1**
BORU	**Boraas**	**1.01**	**121**	P	**Pg**	**16 22 27.9**	**-0.1**
BORU				*i* P	**Pb**	**16 22 28.3**	**-0.7**
BORU				*i* S	**Sg**	**16 22 41.1**	**-0.1**
BORU				S	**Sg**	**16 22 41.3**	**+0.1**
NASU	**Vaermlandsnaes**	**1.31**	**54**	P	**Pg**	**16 22 33.6**	**-0.1**
NASU				S	**Sg**	**16 22 50.6**	**-0.1**
NASU	**Vaermlandsnaes**	**1.31**	**54**	P	**Pg**	**16 22 33.6**	**-0.1**
NASU				S	**Sg**	**16 22 50.6**	**-0.1**
FKPU	**Falk**	**1.36**	**89**	P	**Pg**	**16 22 34.0**	**-0.8**
FKPU				S	**Sg**	**16 22 52.0**	**-0.3**
FKPU	**Falk**	**1.36**	**89**	P	**Pg**	**16 22 34.0**	**-0.8**
FKPU				S	**Sg**	**16 22 52.0**	**-0.3**
HOMB	**Homborsund**	**1.41**	**275**	*i* P	**Pn**	**16 22 35.2**	**-0.3**
HOMB				*e*S	**Sg**	**16 22 53.5**	**-0.2**
FINU	**Finntorp**	**1.42**	**29**	P	**Pn**	**16 22 35.7**	**+0.1**
FINU	**Finntorp**	**1.42**	**29**	P	**Pn**	**16 22 35.7**	**+0.1**
GNOU	**Gnosjoe**	**1.65**	**121**	P	**Pn**	**16 22 39.0**	**+0.2**
GNOU	**Gnosjoe**	**1.65**	**121**	P	**Pn**	**16 22 39.0**	**+0.2**
KONO	**Kongsberg**	**1.69**	**332**	*e*P	**Pn**	**16 22 39.6**	**+0.2**
KONO				*e*S	**Sg**	**16 23 03.8**	**+0.9**
KONO				IAML		16 23 15.0	
	comp=Z,12nm,0.3s						
KONO	**Kongsberg**	**1.69**	**332**	*e*P	**Pn**	**16 22 39.6**	**+0.2**
KONO				*e*S	**Sg**	**16 23 03.8**	**+0.9**
KONO				IAML		16 23 15.0	
	comp=Z,12nm,0.3s						
SNART	**Snartemo**	**2.09**	**276**	*e*P	**Pn**	**16 22 44.9**	**0.0**
SNART				IAML		16 23 23.5	
	comp=Z,20nm,0.5s						
SNART	**Snartemo**	**2.09**	**276**	*e*P	**Pn**	**16 22 44.9**	**0.0**
SNART				*i* P	**Pn**	**16 22 45.0**	**0.0**
SNART				IAML		16 23 23.5	
	comp=Z,20nm,0.5s						
DEL	**Delary**	**2.25**	**138**	IAML		16 23 34.5	
	comp=Z,3.7nm,0.3s						
BJUU	**Bjuv**	**2.33**	**153**	*i* P	**Pn**	**16 22 49.5**	**+1.3**
HFS	**Hagfors**	**2.37**	**32**	Pn	**Pg**	**16 22 57.7**	**+3.7**
	comp=Z,1.8nm,0.3s,baz=214,slow=14,SNR=6.5						
HFS				Lg	Lg	16 23 29.0	
	comp=Z,4.9nm,0.3s,baz=214,slow=32,SNR=4.4						
	comp=Z,4.4nm,0.2s						
NC602	**NORSAR Array S**	**2.58**	**4**	*e*P	**Pn**	**16 22 51.8**	**+0.2**
NC602				*e*S	**Sn**	**16 23 24.2**	**+0.4**
NC602				IAML		16 23 41.6	
	comp=Z,7.4nm,0.2s						
NC602	**NORSAR Array S**	**2.58**	**4**	*e*P	**Pn**	**16 22 51.8**	**+0.2**
NC602				*e*S	**Sn**	**16 23 24.2**	**+0.4**
NC602				IAML		16 23 41.6	
	comp=Z,7.4nm,0.2s						
NAO01	**NORSAR Array S**	**2.69**	**357**	*e*P	**Pn**	**16 22 52.2**	**-0.9**
NAO01				*e*S	**Sn**	**16 23 24.7**	**-1.6**
NAO01				IAML		16 23 43.4	
	comp=Z,4.6nm,0.2s						
NAO01	**NORSAR Array S**	**2.69**	**357**	*e*P	**Pn**	**16 22 52.2**	**-0.9**
NAO01				*e*S	**Sn**	**16 23 24.7**	**-1.6**
NAO01				IAML		16 23 43.4	
	comp=Z,4.6nm,0.2s						
BLS5	**Blasjo**	**2.75**	**299**	*e*P	**Pn**	**16 22 55.7**	**+1.7**
BLS5				IAML		16 23 43.9	
	comp=Z,5.1nm,0.2s						
BLS5	**Blasjo**	**2.75**	**299**	*e*P	**Pn**	**16 22 55.7**	**+1.7**
BLS5				IAML		16 23 43.9	
	comp=Z,5.1nm,0.2s						
LUNU	**Lund**	**2.84**	**153**	*i* P	**Pn**	**16 22 56.0**	**+0.9**
NOA	**NORSAR Array B**	**2.88**	**1**	Pn	**Pg**	**16 23 03.1**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=181,slow=15,SNR=3.7						
NOA				Lg	Lg	16 23 45.6	
	comp=Z,0.2nm,0.3s,baz=168,slow=19,SNR=2.6						
BLEU	**Blekinge**	**3.15**	**124**	*i* P	**Pn**	**16 23 00.2**	**+0.8**
BSD	**Bornholm Skovb**	**3.70**	**144**	*i* P	**Pn**	**16 23 09.4**	**+2.4**
HYA	**Hoyanger**	**3.92**	**322**	*e*P	**Pn**	**16 23 09.6**	**-0.4**
HYA				IAML		16 24 25.5	
	comp=Z,3.2nm,0.6s						
HYA	**Hoyanger**	**3.92**	**322**	*e*P	**Pn**	**16 23 09.6**	**-0.4**
HYA				IAML		16 24 25.5	
	comp=Z,3.2nm,0.6s						
AKN	**Aaknes**	**4.53**	**334**	*e*P	**Pn**	**16 23 18.1**	**-0.3**
AKN				*e*S	**Sn**	**16 24 10.2**	**-1.5**
AKN				IAML		16 24 41.9	
	comp=Z,3.1nm,0.8s						
AKN	**Aaknes**	**4.53**	**334**	*e*P	**Pn**	**16 23 18.1**	**-0.3**
AKN				*e*S	**Sn**	**16 24 10.2**	**-1.5**
AKN				IAML		16 24 41.9	
	comp=Z,3.1nm,0.8s						
FINES	**FINESS Array B**	**8.20**	**60**	Pn	Pn	16 24 17.2	+8.4
	comp=Z,0.3nm,0.3s,baz=252,slow=11,SNR=11						
FINES				Sn	**Sn**	**16 25 46.7**	**+4.6**
	comp=Z,0.2nm,0.3s,baz=259,slow=24,SNR=1.6						
	comp=Z,0.7nm,0.3s						
ARCES	**ARCESS Array B**	**12.99**	**23**	Pn	Pn	16 25 20.2	+6.0
	comp=Z,0.1nm,0.3s,baz=218,slow=11,SNR=1.8						
	comp=Z,3.4nm,1.0s						

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*DNK **19** 16:22:24.8±1.0,57°.92N×11°.72E, h0km, ML2.5(UPP), Explosion*
UPP 19 16:22:24.3±0.1,**57°.92N**×**11°.69E**,**h0**km,**ML2.5, Suspected explosion**,**Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TJOU	**Tjoern**	**0.12**	**344**	P	**Pg**	16 22 26.9	+0.3
TJOU				S	**Sg**	16 22 28.9	+0.8
TJOU	**Tjoern**	**0.12**	**344**	P	**Pg**	16 22 26.9	+0.3
TJOU				S	**Sg**	16 22 28.9	+0.8
ONAU	**Onsala**	**0.54**	**167**	P	**Pg**	16 22 34.5	0.0
	baz=353						
ONAU				S	**Sg**	16 22 41.4	-0.1
ONAU	**Onsala**	**0.54**	**167**	P	**Pg**	16 22 34.5	0.0
	baz=353						
ONAU				S	**Sg**	16 22 41.4	-0.1
VANU	**Vaenersborg**	**0.61**	**19**	P	**Pg**	16 22 35.8	-0.2
VANU				S	**Sg**	16 22 44.1	+0.2
VANU	**Vaenersborg**	**0.61**	**19**	P	**Pg**	16 22 35.8	-0.2
VANU				S	**Sg**	16 22 44.1	+0.2
BORU	**Boraas**	**0.65**	**116**	P	**Pg**	16 22 36.6	-0.1
BORU				S	**Sg**	16 22 45.2	+0.2
BORU	**Boraas**	**0.65**	**116**	P	**Pg**	16 22 36.6	-0.1
BORU				S	**Sg**	16 22 45.2	+0.2
FKPU	**Falk**	**1.11**	**77**	P	**Pg**	16 22 44.6	-1.0
FKPU	**Falk**	**1.11**	**77**	P	**Pg**	16 22 44.6	-1.0
STRU	**Stroemstad**	**1.15**	**347**	P	**Pg**	16 22 45.0	-1.4
STRU	**Stroemstad**	**1.15**	**347**	P	**Pg**	16 22 45.0	-1.4
GNOU	**Gnosjoe**	**1.28**	**119**	P	**Pg**	16 22 48.5	-0.2
GNOU	**Gnosjoe**	**1.28**	**119**	P	**Pg**	16 22 48.5	-0.2
NASU	**Vaermlandsnaes**	**1.28**	**37**	P	**Pg**	16 22 48.4	-0.5
NASU	**Vaermlandsnaes**	**1.28**	**37**	P	**Pg**	16 22 48.4	-0.5

JMA 19 16:26:35.2±0.8,**42°N**±4°×**14°9E**±°,**h30**km,**MV3.7**/13,**FAR SE OFF HOKKAIDO,Off southeast coast of Hokkaido**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**2.67**	**291**	*e*P	Pn	16 27 15.3	-0.8
NEM2				*e*S	Sn	16 27 45.5	-2.0
JAK	**Akkeshi**	**3.33**	**281**	*e*P	Pn	16 27 24.6	-0.7
JAK				*e*S	Sn	16 28 00.5	-3.3
JNK	**Nakash**	**3.45**	**291**	*e*S	Sn	16 28 03.4	-3.2
JOB	**Onbets**	**3.95**	**278**	*e*P	Pn	16 27 33.6	-0.2
JOB				*e*S	Sn	16 28 16.3	-2.8
JAR	**Ashorobuto**	**4.05**	**284**	*e*P	Pn	16 27 34.9	-0.3
JAR				*e*S	Sn	16 28 19.5	-2.0
JTKR	**Abashiri--Toko**	**4.13**	**293**	*e*P	Pn	16 27 37.0	+0.8
JCH	**Churui**	**4.29**	**274**	*e*P	Pn	16 27 37.7	-0.7
JCH				*e*S	Sn	16 28 23.5	-3.9
JNBK	**Urakawa-nobuka**	**4.75**	**270**	*e*P	Pn	16 27 44.0	-0.7
JTH	**Tanohata**	**6.05**	**248**	*e*S	Sn	16 29 00.4	-10
JANG	**Nango**	**6.12**	**253**	*e*S	Sn	16 29 03.1	-9.3

WEL 19 16:34:00.9±1.9,**34°S**±25°×**18°0E**±2°5,**h313**km±42km, **M4.0/7,mB4.4/4,MLv4.1/7,Mw(mB)3.5/4,Error ellipse: s-maj=39.1km s-min=24.6km az=43.2,confirmed,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.18**	**196**	S	S	16 36 04.4	-0.6
WMGZ	**Waiomatatini S**	**4.41**	**194**	P	Pn	16 35 12.7	+0.5
WMGZ				S	S	16 36 11.7	+2.2
HAZ	**Te Kaha**	**4.50**	**200**	P	Pn	16 35 13.6	+0.4
HAZ				S	S	16 36 12.1	+0.7
PKGZ	**Pakihiroa**	**4.53**	**197**	P	Pn	16 35 13.5	0.0
PUZ	**Puketiti**	**4.68**	**194**	P	Pn	16 35 14.8	-0.5
PUZ				S	S	16 36 14.8	-0.3
RUGZ	**Raukumara Rang**	**4.73**	**200**	P	Pn	16 35 16.4	+0.5
OPRZ	**Ohinepanea**	**5.02**	**210**	P	Pn	16 35 21.0	+2.0
WCZ	**Waipu Caves**	**5.04**	**240**	P	Pn	16 35 18.6	-0.8
MWZ	**Matawai**	**5.11**	**200**	P	Pn	16 35 19.4	-0.8
TKGZ	**Te Karaka**	**5.13**	**197**	P	Pn	16 35 19.0	-1.3
TKGZ				S	S	16 36 24.6	+0.4
MKAZ	**Moumakai**	**5.16**	**225**	P	Pn	16 35 21.5	+0.8
URZ	**Urewera**	**5.17**	**203**	P	Pn	16 35 20.7	-0.1
HLRZ	**Highlands Stat**	**5.45**	**209**	P	Pn	16 35 23.0	-1.1
MUGZ	**Murupara**	**5.49**	**205**	P	Pn	16 35 24.3	-0.1
RAHZ	**Arahi**	**5.78**	**201**	P	Pn	16 35 28.4	+0.5
MTHZ	**Maungataniwha**	**5.80**	**203**	P	Pn	16 35 28.9	+0.7
BKZ	**Black Stump Fm**	**6.20**	**204**	P	Pn	16 35 32.7	-0.2

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*IDC **19** 16:34:10.5±1.2,32°.71N×85°.46E, h0km, mb3.3/5, mbtmp3.4/8, ML3.1/3, MS3.1/7, Error ellipse: s-maj=39.7km s-min=21.1km az=67.0*
ISC 19 16:34:15.6±1.1,**32°.8N**±0°.1×**85°.5E**±0°.2,**h35**km,**n12,** σ0**99**/8,**mb3.2**/4,**MS3.1**/5,**Xizang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**14.19**	**351**	Pn	**Pn**	**16 37 32.8**	**-1.1**
	baz=168,slow=12,SNR=10						
MKAR				LR	LR	16 43 45.6	
	comp=Z,46nm,20.0s,baz=212,slow=40						
	0.8nm,0.8s						
KURBB	**Kurchatov Arra**	**18.53**	**346**	P	**Pn**	**16 38 29.2**	**-0.2**
	baz=159,slow=11,SNR=7.4						
	0.9nm,0.9s						
CMAR	**Chiang Mai Arr**	**18.70**	**137**	P	**P**	**16 38 30.1**	**-1.0**
	0.1nm,0.3s,baz=317,slow=12,SNR=18						
CMAR				LR	LR	16 46 24.4	
	comp=Z,31nm,19.3s,baz=255,slow=39						
	2.2nm,0.8s						
ZALV	**Zalesovo Beam**	**21.14**	**359**	P	**P**	**16 38 57.5**	**+0.2**
	0.7nm,0.7s,baz=186,slow=8.9,SNR=3.9						
ZALV				LR	LR	16 48 20.9	
	comp=Z,37nm,18.7s,baz=350,slow=40						
	0.7nm,0.7s						
SONM	**Songino Array**	**21.78**	**40**	P	**P**	**16 39 05.6**	**+1.2**
	0.5nm,0.5s,baz=240,slow=12,SNR=3.7						
	0.5nm,0.5s						
PALK	**Pallekele**	**25.80**	**191**	LR	LR	16 49 47.3	
	comp=Z,17nm,21.2s,baz=5.0,slow=36						
ARTI	**Arti**	**30.12**	**330**	LR	LR	16 53 33.0	
	comp=Z,107nm,18.2s,baz=63,slow=38						
EIL	**Elat**	**43.02**	**280**	LR	LR	17 03 56.9	
	comp=Z,25nm,18.6s,baz=58,slow=42						
NOA	**NORSAR Array B**	**54.41**	**325**	LR	LR	17 07 27.0	
	comp=Z,24nm,18.3s,baz=20,slow=37						
WRA	**Warramunga Arr**	**70.20**	**131**	P	**P**	**16 45 24.6**	**-0.4**
	0.2nm,0.5s,baz=326,slow=6.4,SNR=6.1						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**72.69**	**134**	P	**P**	**16 45 40.8**	**+0.7**
	0.2nm,0.7s,baz=324,slow=5.7,SNR=1.9						
	0.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**77.87**	**278**	P	**P**	**16 46 10.6**	**+0.5**
	0.3nm,0.6s,baz=58,slow=2.6,SNR=1.6						
	0.3nm,0.6s						

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*NEIC **19** 16:49:01.8±1.2,2°.56N±0°.08×127°.03E±0°.07, h59km±7km, mb4.3/29, Error ellipse: s-maj=12.5km s-min=8.8km az=209.0*
*DJA **19** 16:49:01.7±0.3,2°N±3°×12°7E±°, h10km, M4.2/22, mB4.8/4, mb4.4/9, MLv4.2/22, Mw(mB)4.1/4*
*IDC **19** 16:49:02.4±2.5,2°.30N×126°.89E, h47km±26km, mb3.7/13, mbtmp4.0/15, ML3.8/2, Error ellipse: s-maj=26.1km s-min=13.2km az=71.0*
*MAN **19** 16:49:06.0,2°.64N×126°.78E, h83km, MS3.7*
ISC 19 16:49:01.8±0.4,**2°.44N**±0°.04×**126°.98E**±0°.05,**h53**km,**n79,** σ1°**75**/83,**mb4.3**/23,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.70**	**167**	P	**Pn**	**16 49 31.1**	**+2.0**
TNTI	**Ternate**	**1.70**	**167**		**Pn**	**16 49 30.6**	**+1.5**
TNTI				Sn	**Sn**	**16 49 49.8**	**0.0**
TNTI	**Ternate**	**1.70**	**167**	P	**Pn**	**16 49 30.5**	**+1.4**
SGSI	**Sangihe**	**1.90**	**311**	P	**Pn**	**16 49 33.8**	**+2.0**
SGSI				S	**Sn**	**16 49 57.0**	**+2.3**
MNI	**Manado**	**2.35**	**245**	P	**Pn**	**16 49 41.5**	**+3.5**
DDMP	**Don Marcelino,**	**3.85**	**341**	*e*P	**Pn**	**16 50 01.0**	**+2.4**
DDMP				*i* S	**Sn**	**16 50 41.1**	**-1.5**
GSPH	**General Santos**	**4.15**	**331**	*i* P	Pn	16 49 58.3	-4.4
GSPH				*i* S	**Sn**	**16 50 50.4**	**+0.3**
GTOI	**Gorontalo**	**4.35**	**246**	P	Pn	16 50 09.6	+4.2
SANI	**Sanana**	**4.57**	**192**	P	**Pn**	**16 50 08.9**	**+0.5**
SANI	**Sanana**	**4.57**	**192**	P	**Pn**	**16 50 08.9**	**+0.5**
SWI	**Sorong**	**5.39**	**127**	P	**Pn**	**16 50 23.2**	**+3.5**
	0.1nm14nm,0.6s						
MRSI	**Marisa**	**5.40**	**249**	P	Pn	16 50 25.1	+5.3
	0.2nm801nm54nm,0.6s						
SIJI	**Sorong**	**5.40**	**127**	P	**Pn**	**16 50 21.4**	**+1.5**
	2.5nm,0.3s,baz=346,slow=13,SNR=19						
SIJI				S	**Sn**	**16 51 21.3**	**+0.5**
	3.7nm,0.6s,baz=215,slow=19,SNR=0.8						
	5.5nm,0.2s						
SIJI	**Sorong**	**5.40**	**127**	P	**Pn**	**16 50 23.2**	**+3.3**
LUWI	**Luwuk**	**5.44**	**231**	P	**Pn**	**16 50 23.5**	**+3.1**
LUWI	**Luwuk**	**5.44**	**231**		**Pn**	**16 50 20.6**	**+0.2**
LUWI				Sn	**Sn**	**16 51 23.4**	**+1.7**
LUWI	**Luwuk**	**5.44**	**231**	P	Pn	16 50 25.5	+5.1
	0.3nm979nm41nm,0.8s						
NLAI	**Namlea**	**5.64**	**179**	P	**Pn**	**16 50 26.0**	**+2.9**
	0.1nm909nm37nm,0.8s						
BIPH	**Bislig**	**5.74**	**354**	*e*P	Pn	16 50 31.2	+6.8
BIPH				*e*S	**Sn**	**16 51 27.1**	**-1.9**
TOLI2	**Tolitoli**	**6.33**	**258**	P	**Pn**	**16 50 35.2**	**+2.6**
TOLI2	**Tolitoli**	**6.33**	**258**		**Pn**	**16 50 34.8**	**+2.3**
TOLI2				Sn	**Sn**	**16 51 42.8**	**-0.7**
FAKI	**Fak Fak**	**7.49**	**135**	P	**Pn**	**16 50 52.1**	**+3.6**
FAKI	**Fak Fak**	**7.49**	**135**	Pn	**Pn**	**16 50 49.2**	**+0.7**
FAKI	**Fak Fak**	**7.49**	**135**	P	**Pn**	**16 50 50.8**	**+2.3**
	0.1nm16nm,1.0s						
KAPI	**Kappang**	**10.34**	**224**	P	**Pn**	**16 51 25.4**	**-2.1**
	0.8nm,0.3s,baz=53,slow=15,SNR=5.2						
	2.9nm,0.6s						
KAPI	**Kappang**	**10.34**	**224**	Pn	**Pn**	**16 51 30.1**	**+2.6**
MMRI	**Maumere**	**11.97**	**203**	Pn	**Pn**	**16 51 50.1**	**+0.3**
SOEI	**Soe**	**12.41**	**193**	P	**Pn**	**16 51 59.5**	**+3.6**
SOEI	**Soe**	**12.41**	**193**	Pn	**Pn**	**16 51 56.9**	**+1.0**
PLAI	**Plampang**	**14.47**	**219**	P	**P**	**16 52 26.9**	**-2.2**
SBUM	**Sibu**	**14.74**	**270**		**P**	**16 52 31.0**	**-1.1**
DRS	**Darwin Rock St**	**15.28**	**165**	P	**P**	**16 52 38.3**	**+0.2**
MTN	**Manton Dam**	**15.73**	**165**		**Pn**	**16 52 38.9**	**-1.2**
MTN				IAmb	IAmb	16 52 45.3	
	comp=Z,12nm,0.5s						
KNRA	**Kununurra**	**18.09**	**174**		**P**	**16 53 06.2**	**-3.0**
KNRA				IAmb	IAmb	16 53 10.6	
	comp=Z,15nm,0.7s						
FITZ	**Fitzroy Crossi**	**20.45**	**184**	P	**P**	**16 53 35.1**	**+0.1**
	comp=Z,3.2nm,0.6s,baz=23,slow=9.9,SNR=24						
	comp=Z,3.2nm,0.6s						
TPUB	**Ta-pu**	**21.63**	**344**		**P**	**16 53 45.4**	**-2.2**
TPUB				IAmb	IAmb	16 54 17.3	
	comp=Z,26nm,1.2s						
WB0	**Warramunga Arr**	**23.24**	**162**		**P**	**16 54 03.9**	**-0.7**
WB0				IAmb	IAmb	16 54 04.7	
	comp=Z,14nm,0.9s						
WRA	**Warramunga Arr**	**23.39**	**162**	P	**P**	**16 54 05.6**	**-0.5**
	comp=Z,5.5nm,0.5s,baz=339,slow=10,SNR=123						
	comp=Z,5.5nm,0.5s						
WRA	**Warramunga Arr**	**23.39**	**162**		**P**	**16 54 04.2**	**-1.9**
WR8	**Warramunga Arr**	**23.45**	**162**		**P**	**16 54 06.0**	**-0.6**
WR8				IAmb	IAmb	16 54 07.0	
	comp=Z,13nm,0.9s						
MBWA	**Marble Bar**	**24.50**	**196**	P	**P**	**16 54 16.5**	**+0.2**
MBWA				IAmb	IAmb	16 54 18.7	
	comp=Z,7.3nm,0.8s						
PSA00	**Pilbara Seismi**	**24.86**	**196**		**P**	**16 54 19.5**	**-0.1**
PSA00	**Pilbara Seismi**	**24.86**	**196**	P	**P**	**16 54 19.5**	**-0.1**
PSA00				IAmb	IAmb	16 54 51.4	
	comp=Z,16nm,1.4s						
KULM	**Kulim**	**26.41**	**277**	P	**P**	**16 54 34.5**	**+0.7**
KULM				IAmb	IAmb	16 54 45.7	
	comp=Z,15nm,1.5s						
AS31	**Alice Springs**	**26.81**	**166**		**P**	**16 54 36.7**	**-0.5**
ASAR	**Alice Springs**	**26.81**	**166**	P	**P**	**16 54 37.2**	**0.0**
	comp=Z,1.6nm,0.5s,baz=347,slow=7.3,SNR=38						
ASAR				PcP	**PcP**	**16 58 00.2**	**+1.1**
	comp=Z,0.7nm,0.9s,baz=346,slow=2.2,SNR=4.5						
	comp=Z,1.6nm,0.5s						
ASAR	**Alice Springs**	**26.81**	**166**	P	**P**	**16 54 36.6**	**-0.7**
INKA	**Innaminka**	**32.80**	**157**		**P**	**16 55 30.0**	**-0.2**
INKA				IAmb	IAmb	16 55 31.5	
	comp=Z,2.5nm,0.6s						
MORW	**Morawa**	**33.04**	**198**	P	**P**	**16 55 33.2**	**+1.0**
FORT	**Forrest**	**33.05**	**178**	P	**P**	**16 55 32.1**	**-0.2**
PZH	**PanZhiHua**	**34.04**	**317**	P	**P**	**16 55 41.6**	**+0.4**
KSRS	**Korea Array**	**34.85**	**1**	P	**P**	**16 55 49.9**	**+2.0**
	comp=Z,1.2nm,0.7s,baz=184,slow=10.0,SNR=4.3						
	comp=Z,1.2nm,0.7s						
BBOO	**Buckleboo**	**36.10**	**167**	P	**P**	**16 55 58.1**	**-0.5**
NWAO	**Narrogin (SRO)**	**36.36**	**194**	P	**P**	**16 56 01.4**	**+0.6**
STKA	**Stephens Creek**	**36.84**	**159**	P	**P**	**16 56 05.5**	**+0.5**
	comp=Z,9.5nm,0.7s,baz=331,slow=9.8,SNR=16						
	comp=Z,9.5nm,0.7s						
STKA	**Stephens Creek**	**36.84**	**159**		**P**	**16 56 04.6**	**-0.4**
ARMA	**Armidale**	**40.26**	**146**	P	**P**	**16 56 33.5**	**-0.4**
ARMA				IAmb	IAmb	16 56 35.6	
	comp=Z,10.0nm,1.4s						
HHC	**Hu-ho-hao-te**	**40.69**	**342**	*e*P	**P**	**16 56 38.4**	**+1.1**
HHC				pmax	pmax		
	comp=Z,14nm,0.6s						
HHC				pmax	pmax		
	comp=Z,130nm,6.4s						
ASAJ	**Asahikawa**	**43.75**	**16**

0.1nm,0.5s,baz=233,slow=9.9,SNR=1.5
0.1nm,0.5s

IDC ***19*** *16:52:09.6±1.1,26°.68N×144°.00E,h0km,mb3.7/10, mbtmp3.7/13,ML3.4/3,Error ellipse: s-maj=30.4km s-min=16.3km az=67.0*

ISC 19 16:52:14.0±1.0,26°.8N±0°.1×144°.1E±0°.1,h35km,n15, σ1§07/16,mb3.8/10,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.71**	**281**	Pn	**Pn**	**16 52 40.6**	**-0.7**
	32nm,0.3s,baz=263,slow=22,SNR=26						
JCJ				Sn	**Sn**	**16 53 01.9**	**0.0**
	134nm,0.3s,baz=94,slow=22,SNR=14						
MJAR	**Matsushiro Arr**	**10.92**	**334**	Pn	**Pn**	**16 54 45.7**	**-2.1**
	0.1nm,0.3s,baz=158,slow=9.9,SNR=5.6						
	0.9nm,0.5s						
KSRS	**Korea Array**	**17.29**	**312**	P	**P**	**16 56 14.1**	**+0.3**
	0.2nm,0.3s,baz=121,slow=13,SNR=3.1						
	1.4nm,0.7s						
USRK	**Ussuriysk Ar.**	**19.92**	**334**	P	**Pn**	**16 56 44.3**	**-0.1**
	0.2nm,0.3s,baz=131,slow=12,SNR=4.8						
	2.4nm,0.7s						
SONM	**Songino Array**	**36.10**	**316**	P	**P**	**16 59 12.9**	**+0.3**
	0.3nm,0.5s,baz=111,slow=6.8,SNR=1.7						
	0.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**42.29**	**268**	P	**P**	**17 00 04.9**	**+0.4**
	0.2nm,0.3s,baz=82,slow=11,SNR=1.5						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**47.41**	**192**	P	**P**	**17 00 45.0**	**-0.1**
	0.8nm,0.5s,baz=15,slow=8.6,SNR=13						
	0.8nm,0.5s						
FITZ	**Fitzroy Crossi**	**48.08**	**204**	P	**P**	**17 00 49.9**	**-0.4**
	2.9nm,0.6s,baz=32,slow=8.5,SNR=10						
	2.9nm,0.6s						
ZALV	**Zalesovo Beam**	**50.81**	**319**	P	**P**	**17 01 12.0**	**+1.2**
	0.7nm,0.9s,baz=82,slow=10,SNR=1.7						
	0.7nm,0.9s						
ASAR	**Alice Springs**	**51.12**	**192**	P	**P**	**17 01 12.6**	**-0.8**
	0.1nm,0.3s,baz=12,slow=15,SNR=4.0						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**51.96**	**310**	P	**P**	**17 01 21.4**	**+1.8**
	0.9nm,0.7s,baz=89,slow=8.1,SNR=7.2						
	0.9nm,0.7s						
KURBB	**Kurchatov Arra**	**54.45**	**315**	P	**P**	**17 01 38.3**	**+0.5**
	0.5nm,0.6s,baz=90,slow=7.9,SNR=8.0						
	0.5nm,0.6s						
BVAR	**Borovoye Array**	**59.40**	**318**	P	**P**	**17 02 14.0**	**+1.2**
	0.8nm,0.6s,baz=86,slow=7.4,SNR=3.9						
	0.8nm,0.6s						
KBZ	**Khabaz**	**79.43**	**314**	P	**P**	**17 04 18.1**	**+1.4**
	1.2nm,0.7s,baz=88,slow=9.4,SNR=3.6						
	1.2nm,0.7s						
LPAZ	**La Paz**	**148.36**	**77**	PKPbc	**PKiKP**	**17 11 59.0**	**-0.8**
	0.7nm,0.4s,baz=218,slow=3.2,SNR=3.7						

HVO ***19*** *16:54:51.8±1.2,19°.217N±0°.010×155°.543W±0°.009, h0km±9km,Error ellipse: s-maj=1.5km s-min=1.0km az=154.0*

NEIC ***19*** *16:54:52.6±1.1,19°.217N±0°.010×155°.545W±0°.005, h5km±1km,ML3.9/48, ML3.9/45(HVO),Error ellipse: s-maj=2.9km s-min=1.6km az=255.0*

IDC ***19*** *16:54:53.3±4.3,19°.38N×155°.43W,h0km,mb3.2/4, mbtmp3.2/4,Error ellipse: s-maj=96.4km s-min=9.9km az=13.0*

ISC 19 16:54:51.4±0.8,19°.23N±0°.03×155°.56W±0°.02,h17km±4km, n82,σ1§00/106,mb3.1/4,Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHU	**Kahuku**	**0.06**	**291**		**Pg**	**16 54 55.2**	**+0.2**
KHU					**Sg**	**16 54 57.4**	**0.0**
WOH	**Wood Valley**	**0.06**	**63**		**Pg**	**16 54 54.6**	**-0.2**
PPL	**Puu Pili**	**0.11**	**127**		**Pg**	**16 54 54.6**	**-0.5**
HPO	**Honuapo**	**0.14**	**179**		**Pg**	**16 54 55.8**	**+0.4**
HTC	**Hot Caves**	**0.15**	**85**		**Pg**	**16 54 55.6**	**0.0**
DAH	**Dandelion**	**0.17**	**322**		**Pg**	**16 54 56.6**	**+0.4**
TRH	**Trail**	**0.19**	**2**		**Pg**	**16 54 57.0**	**+0.5**
RCO	**Red Cone**	**0.19**	**339**		**Pg**	**16 54 56.9**	**+0.3**
DES	**Desert**	**0.20**	**55**		**Pg**	**16 54 56.3**	**0.0**
DES				Sg	**Sg**	**16 54 59.2**	**-0.4**
DES				IAML		16 54 59.6	
	comp=N,13μm,0.7s						
DES				IAML		16 55 03.8	
	comp=E,13μm,0.6s						
OVEH	**Oceanview Est**	**0.21**	**250**		**Pg**	**16 54 56.9**	**+0.3**
OVEH				Sg	**Sb**	**16 55 00.1**	**-0.4**
OVEH				IAML		16 55 04.2	
	comp=N,40μm,0.5s						
OVEH				IAML		16 55 04.3	
	comp=E,34μm,0.5s						
SWH	**Southwest Rift**	**0.23**	**349**		**Pg**	**16 54 57.4**	**+0.2**
WIH	**Wilkes Camp**	**0.24**	**354**		**Pg**	**16 54 57.7**	**+0.3**
WIH					**Sg**	**16 55 02.2**	**+0.7**
HLP	**Hilina Pali**	**0.25**	**73**		**Pg**	**16 54 57.8**	**+0.7**
HLP				IAML		16 55 05.2	
	comp=E,30μm,0.6s						
HLP				IAML		16 55 06.4	
	comp=N,17μm,0.4s						
MWH	**Mokuaweoweo**	**0.26**	**352**		**Pg**	**16 54 57.9**	**+0.2**
SPT	**South Point**	**0.26**	**204**		**Pg**	**16 54 57.7**	**+0.4**
SPT					**Sb**	**16 55 01.2**	**-0.7**
SPT				IAML		16 55 03.1	
	comp=E,92μm,0.5s						
SPT				IAML		16 55 03.3	
	comp=N,60μm,0.5s						
CPK	**Cone Peak**	**0.28**	**52**		**Pg**	**16 54 57.6**	**0.0**
KNH	**Kipuka Nene**	**0.28**	**66**		**Pg**	**16 54 57.4**	**-0.1**
SDHHI	**Sand Hill**	**0.30**	**57**		**Pg**	**16 54 58.5**	**+0.5**
SDHHI					**Sg**	**16 55 03.2**	**+0.7**
KUH	**Kaapuna**	**0.30**	**278**		**Pb**	**16 54 58.6**	**+0.3**
WRMHI	**West Rim**	**0.30**	**53**		**Pg**	**16 54 58.6**	**+0.5**
WRMHI					**Sg**	**16 55 03.4**	**+0.8**
OUT	**Outlet**	**0.31**	**58**		**Pb**	**16 54 58.3**	**-0.2**
MLOA	**Mauna Loa Obse**	**0.31**	**357**		**Pg**	**16 54 58.6**	**+0.3**
MLOA				Sg	**Sg**	**16 55 04.4**	**+1.3**
MLOA				IAML		16 55 05.3	
	comp=E,12μm,0.4s						
MLOA				IAML		16 55 07.2	
	comp=N,20μm,0.6s						
AHA	**Ahua**	**0.31**	**62**		**Pb**	**16 54 58.5**	**-0.1**
AHA					**Sg**	**16 55 03.7**	**+0.8**
AHA	**Ahua**	**0.31**	**62**		**Pb**	**16 54 59.0**	**+0.4**
AHA					**Sg**	**16 55 04.1**	**+1.3**
MLH	**Mauna Loa**	**0.31**	**31**		**Pg**	**16 54 59.0**	**+0.7**
MLH				Sg	**Sg**	**16 55 04.0**	**+1.0**
MLH				IAML		16 55 04.7	
	comp=E,14μm,0.8s						
MLH				IAML		16 55 04.9	
	comp=N,16μm,0.6s						
RIM	**Rim**	**0.32**	**58**		**Pb**	**16 54 58.5**	**-0.2**
RIM					**Sg**	**16 55 03.9**	**+0.9**
UWE	**Uwekahuna**	**0.32**	**52**		**Pb**	**16 54 58.3**	**-0.4**
UWE				Sg	**Sg**	**16 55 03.7**	**+0.7**
UWE				IAML		16 55 07.4	
	comp=N,26μm,0.5s						
PLL	**Puu Ulaula**	**0.32**	**17**		**Pb**	**16 54 58.8**	**-0.1**
PWH	**Poliokeawe Pal**	**0.32**	**79**		**Pb**	**16 54 59.0**	**+0.3**
OBL	**Observatory Le**	**0.32**	**53**		**Pb**	**16 54 58.8**	**+0.1**
OBL					**Sg**	**16 55 04.2**	**+1.1**
ALEP	**Alea Permanent**	**0.33**	**345**		**Pb**	**16 54 59.0**	**0.0**
ALEP					**Sb**	**16 55 05.0**	**+0.9**
KKO	**Keanakako'i**	**0.33**	**58**		**Pb**	**16 54 58.7**	**-0.1**
KKO					**Sg**	**16 55 04.1**	**+0.9**
UWB	**Uwekahuna Bluf**	**0.33**	**53**		**Pb**	**16 54 59.0**	**0.0**
UWB					**Sb**	**16 55 04.1**	**+0.1**
BYL	**Byron's Ledge**	**0.34**	**56**		**Pb**	**16 54 58.9**	**-0.1**
BYL					**Sb**	**16 55 03.6**	**-0.6**
BYL				IAML		16 55 09.1	
	comp=N,18μm,0.7s						
SBLHI	**Steaming Bluff**	**0.34**	**54**		**Pb**	**16 54 59.0**	**0.0**
SBLHI					**Sb**	**16 55 04.3**	**+0.1**
HATHI	**Halema'uma'u T**	**0.34**	**55**		**Pb**	**16 54 58.9**	**-0.2**
HATHI				Sg	**Sb**	**16 55 03.9**	**-0.5**
ESR	**Escape Road**	**0.35**	**58**		**Pb**	**16 54 59.3**	**0.0**
ESR					**Sb**	**16 55 04.8**	**+0.1**
PUH	**Pauahi**	**0.35**	**65**		**Pb**	**16 54 59.0**	**-0.3**
PUH				Sg	**Sb**	**16 55 04.1**	**-0.6**
PUH				IAML		16 55 08.4	
	comp=E,14μm,0.5s						
RSD	**Rainshed**	**0.35**	**48**		**Pb**	**16 54 59.2**	**-0.2**
RSD					**Sb**	**16 55 04.6**	**-0.1**
RSD				IAML		16 55 05.7	
	comp=N,17μm,0.6s						
RSD				IAML		16 55 10.1	
	comp=E,14μm,0.6s						
HMH	**Humu'ula Sheep**	**0.38**	**11**		**Pb**	**16 54 59.8**	**-0.2**
HMH				Sg	**Sb**	**16 55 06.7**	**+1.0**
HMH				IAML		16 55 07.5	
	comp=E,18μm,0.4s						
HMH				IAML		16 55 08.2	
	comp=N,15μm,0.6s						
KNHH	**Kane Nui o Ham**	**0.40**	**67**		**Pb**	**16 54 59.7**	**-0.4**
KAE	**Kaena**	**0.41**	**81**		**Pb**	**16 55 00.0**	**-0.1**
CPH	**Captain Cook**	**0.43**	**308**		**Pb**	**16 55 00.9**	**+0.4**
STCH	**Steam Cracks**	**0.44**	**69**		**Pb**	**16 55 00.3**	**-0.5**
STCH					**Sb**	**16 55 06.4**	**-0.6**
STCH				IAML		16 55 07.3	
	comp=N,12μm,0.8s						
NPOC	**North of Pu'u**	**0.46**	**68**		**Pb**	**16 55 00.6**	**-0.4**
NPOC					**Sb**	**16 55 07.3**	**-0.2**
JCUZ	**Jacuzzi**	**0.46**	**70**		**Pb**	**16 55 00.7**	**-0.4**
JCUZ					**Sb**	**16 55 06.9**	**-0.8**
I59US	**HAWAII INFRASO**	**0.48**	**319**	Pg	**Pb**	**16 55 02.2**	**+0.6**
	baz=148,slow=26						
I59US				Lg	Lg	16 55 09.9	
	baz=152,slow=24						
KHLU	**Kahalu`u**	**0.48**	**319**		**Pb**	**16 55 01.9**	**+0.4**
KHLU				Sg	**Sb**	**16 55 09.1**	**+0.7**
KLCH	**Kalalua Cone**	**0.50**	**69**		**Pb**	**16 55 01.1**	**-0.6**
HUH	**Hualalai**	**0.53**	**330**		**Pg**	**16 55 02.9**	**+0.8**
HUH				Sg	**Sn**	**16 55 11.4**	**-1.6**
POHA	**Pohakuloa**	**0.53**	**3**		**Pg**	**16 55 02.5**	**+0.4**
POHA				IAML		16 55 13.2	
	comp=N,9μm,0.5s						
POHA				IAML		16 55 17.4	
	comp=N,8μm,0.6s						
POHA	**Pohakuloa**	**0.53**	**3**		**Sg**	**16 55 10.0**	**+0.6**
HPU	**Hale Pohaku**	**0.56**	**10**		**Pg**	**16 55 03.1**	**+0.4**
JOKA	**Jonika Flow**	**0.56**	**68**		**Pb**	**16 55 01.8**	**-1.1**
JOKA				Sg	**Sb**	**16 55 09.0**	**-1.6**
JOKA				IAML		16 55 20.6	
	comp=N,8μm,0.6s						
KKH	**Kailua Kona**	**0.61**	**315**	Pg	**Pb**	**16 55 03.3**	**-0.3**
KKH				Sg	**Sg**	**16 55 12.2**	**+0.4**
PKL	**Puu Kaliu**	**0.64**	**69**		**Pg**	**16 55 03.9**	**-0.2**
HIL	**Hilo**	**0.66**	**42**		**Pb**	**16 55 03.8**	**-0.6**
HIL				Sg	**Sg**	**16 55 12.8**	**-0.4**
HIL				IAML		16 55 16.9	
	comp=E,4μm,0.6s						
HIL				IAML		16 55 17.0	
	comp=N,4μm,0.8s						
HPAH	**Hawaii Prepara**	**0.81**	**351**		**Pb**	**16 55 06.3**	**-0.8**
HPAH				Sg	**Sb**	**16 55 15.7**	**-2.1**
HPAH				IAML		16 55 21.1	
	comp=N,5μm,0.5s						
HPAH				IAML		16 55 36.0	
	comp=E,6μm,0.7s						
KOH	**Kohala**	**0.92**	**347**		**Pb**	**16 55 07.8**	**-1.3**
KOH					**Sb**	**16 55 19.6**	**-1.2**
MHA	**Mahukona**	**1.01**	**341**		**Pb**	**16 55 09.3**	**-1.2**
MHA				Sg	**Sb**	**16 55 21.8**	**-1.7**
HLK	**Haleakala**	**1.66**	**337**		**Pn**	**16 55 18.0**	**-1.9**
HLK	**Haleakala**	**1.66**	**337**		**Sn**	**16 55 38.9**	**-2.1**
KHLH	**Kahului Airpor**	**1.85**	**334**		**Pn**	**16 55 21.3**	**-1.1**
KHLH				Sn	**Sn**	**16 55 43.1**	**-2.3**
WMR	**Waimanalo Ridg**	**2.88**	**317**		**Pn**	**16 55 34.6**	**-1.9**
DHH	**Diamond Head**	**2.92**	**314**	Pn	**Pn**	**16 55 34.5**	**-2.6**
HON	**Honolulu**	**3.10**	**313**	Pn	**Pn**	**16 55 37.6**	**-1.9**
KIP	**Kipapa**	**3.18**	**314**	Pn	**Pn**	**16 55 38.5**	**-2.1**
KIP	**Kipapa**	**3.18**	**314**	IAML		16 56 37.7	
	comp=E,272nm,4.4s						
KEKH	**Kekaha**	**4.76**	**306**	Pn	**Pn**	**16 55 59.0**	**-3.4**
H11N3	**WAKE ISLAND Hy**	**35.34**	**277**	T	T	17 38 53.2	
	baz=84,slow=75,SNR=418						
H11N2	**WAKE ISLAND Hy**	**35.35**	**277**	T	T	17 38 54.4	
	baz=84,slow=75,SNR=574						
H11N1	**WAKE ISLAND Hy**	**35.36**	**277**	T	T	17 38 55.3	
	baz=84,slow=75,SNR=792						
H11S2	**WAKE ISLAND Hy**	**35.67**	**275**	T	T	17 39 20.1	
	baz=83,slow=75,SNR=133						
H11S1	**WAKE ISLAND Hy**	**35.68**	**275**	T	T	17 39 19.0	
	baz=83,slow=75,SNR=128						
H11S3	**WAKE ISLAND Hy**	**35.69**	**275**	T	T	17 39 19.7	
	baz=83,slow=75,SNR=166						
NVAR	**Mina Array Bea**	**37.50**	**51**	P	P	17 02 08.1	+3.4
	comp=E,0.1nm,0.3s,baz=243,slow=12,SNR=1.7						
	comp=E,0.1nm,0.3s						
ILAR	**Eielson Array**	**45.89**	**5**	P	**P**	**17 03 15.3**	**+2.7**
	comp=E,0.6nm,0.8s,baz=194,slow=7.7,SNR=5.8						
	comp=E,0.6nm,0.8s						
TXAR	**Lajitas Array**	**48.03**	**68**	P	P	17 03 34.0	+3.9
	comp=E,0.1nm,0.6s,baz=242,slow=6.5,SNR=1.8						
	comp=E,0.1nm,0.6s						
YKA	**Yellowknife Ar**	**51.59**	**23**	P	**P**	**17 03 59.3**	**+2.8**
	comp=E,0.2nm,0.7s,baz=232,slow=7.0,SNR=2.3						
	comp=E,0.2nm,0.7s						
H03N2	**Juan Fernandez**	**89.81**	**126**	T	T	18 47 03.7	
	baz=298,slow=76,SNR=114						
H03N3	**Juan Fernandez**	**89.83**	**126**	T	T	18 47 08.6	
	baz=298,slow=76,SNR=125						
H03N1	**Juan Fernandez**	**89.83**	**126**	T	T	18 47 05.8	
	baz=298,slow=76,SNR=96						

IDC 19 16:55:43.6±1.4,2°.15N×126°.61E,h0km,mb3.2/4, mbtmp3.2/5,ML2.9/1,Error ellipse: s-maj=78.7km s-min=22.2km az=60.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.54**	**123**	Pn	Pn	16 57 06.7	-0.8
	0.4nm,0.3s,baz=207,slow=20,SNR=1.6						
	1.7nm,0.4s						
WRA	**Warramunga Arr**	**23.23**	**161**	P	P	17 00 52.6	-0.1
	0.6nm,0.4s,baz=338,slow=10,SNR=9.0						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**26.63**	**165**	P	P	17 01 24.3	+0.2
	0.1nm,0.3s,baz=348,slow=8.4,SNR=2.2						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**58.78**	**326**	P	P	17 05 43.4	-0.3
	0.2nm,0.8s,baz=116,slow=6.6,SNR=1.9						
	0.2nm,0.8s						
KURBB	**Kurchatov Arra**	**63.00**	**328**	P	P	17 06 12.7	+0.4
	0.1nm,0.5s,baz=127,slow=6.7,SNR=1.7						
	0.1nm,0.5s						

NEIC ***19*** *16:59:01.5±1.8,30°.64S±0°.08×179°.4W±0°.2,h317km±7km, mb4.1/13,Error ellipse: s-maj=18.9km s-min=11.3km az=89.0*

IDC ***19*** *16:59:07.5±4.5,30°.92S×179°.91W,h359km±40km,mb3.1/3, mbtmp4.0/4,Error ellipse: s-maj=41.3km s-min=21.9km az=46.0*

WEL ***19*** *16:59:17.7±1.3,32°.S±28°×17°.9W±3°.4,h379km±63km, M4.5/14,mB4.7/7,ML4.4/6,MLv5.0/14,Mw(mB)4.0/7,Error ellipse: s-maj=50.6km s-min=27.5km az=125.5,confirmed*

ISC 19 16:59:01.6±0.5,30°.70S±0°.04×179°.77W±0°.08,h300km, n61,σ1§94/49,mb3.9/7,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.16**	**49**	Pn	**Pn**	**16 59 49.2**	**-0.5**
RAO				Sn	**S**	**17 00 25.6**	**-2.4**
MXZ	**Matakaoa Point**	**7.03**	**193**	Pn	**Pn**	**17 00 44.6**	**+1.3**
MXZ	**Matakaoa Point**	**7.03**	**193**	P	Pn	17 00 49.4	+6.2
MXZ				S	**S**	**17 02 05.3**	**-0.1**
HAZ	**Te Kaha**	**7.33**	**195**	P	Pn	17 00 52.3	+5.5
HAZ				S	**S**	**17 02 11.5**	**-0.5**
PKGZ	**Pakihiroa**	**7.37**	**193**	P	Pn	17 00 53.8	+6.4
PKGZ				S	**S**	**17 02 11.2**	**-1.8**
PUZ	**Puketiti**	**7.54**	**192**	P	Pn	17 00 54.3	+4.9
PUZ				S	**S**	**17 02 15.5**	**-1.2**
RUGZ	**Raukumara Rang**	**7.55**	**196**	P	Pn	17 00 55.4	+5.7
TWGZ	**Tauwhareparae**	**7.69**	**193**	P	Pn	17 00 59.6	+8.2
TWGZ				S	**S**	**17 02 20.4**	**+0.2**
OPRZ	**Ohinepanea**	**7.75**	**202**	P	Pn	17 01 00.1	+8.1
MARZ	**Manawahe**	**7.84**	**201**	P	Pn	17 01 00.8	+7.7
MWZ	**Matawai**	**7.94**	**196**	P	Pn	17 00 59.3	+4.9
MWZ				S	**S**	**17 02 23.7**	**-2.0**
CNGZ	**Carnagh Statio**	**7.94**	**192**	P	Pn	17 01 00.1	+5.7
TKGZ	**Te Karaka**	**7.97**	**194**	P	**Pn**	**17 00 59.3**	**+4.6**
URZ	**Urewera**	**7.97**	**198**	P	**Pn**	**17 00 57.7**	**+3.0**
	19nm,0.3s,baz=251,slow=3.9,SNR=101						
URZ				S	**S**	**17 02 25.7**	**-0.7**
	44nm,0.4s,baz=77,slow=22,SNR=31						
URZ	**Urewera**	**7.97**	**198**	P	Pn	17 01 00.5	+5.8
URZ				S	**S**	**17 02 25.3**	**-1.1**
KARZ	**Kaharoa**	**8.01**	**203**	P	Pn	17 01 02.9	+7.7
TOZ	**Tahuroa Road**	**8.03**	**208**	Pn	**Pn**	**17 00 58.3**	**+2.8**
TOZ	**Tahuroa Road**	**8.03**	**208**	P	Pn	17 01 05.4	+10
RAGZ	**Rawiri**	**8.12**	**196**	P	Pn	17 01 02.9	+6.3
RRRZ	**Republican Roa**	**8.22**	**201**	P	Pn	17 01 05.5	+7.7
RIGZ	**Rimuhau**	**8.24**	**194**	P	**Pn**	**17 01 02.7**	**+4.6**
MUGZ	**Murupara**	**8.27**	**199**	P	Pn	17 01 04.2	+5.8
RTZ	**Ruatahuna**	**8.34**	**198**		**Pn**	**17 01 00.9**	**+1.6**
PRRZ	**Plateau Road**	**8.40**	**201**	P		17 01 06.5	
ALRZ	**Allen Road**	**8.47**	**201**	P		17 01 07.4	
TLZ	**Tolley Road**	**8.54**	**206**	P	**P**	**17 01 10.2**	**+3.2**
KNZ	**Kokohu**	**8.57**	**194**	P	**Pn**	**17 01 05.3**	**+3.3**
MHGZ	**Mahia Peninsul**	**8.65**	**192**	P	**P**	**17 01 09.1**	**+0.9**
BKZ	**Black Stump Fm**	**8.99**	**199**		**Pn**	**17 01 08.5**	**+1.3**
BKZ	**Black Stump Fm**	**8.99**	**199**	P	**P**	**17 01 11.6**	**-0.4**
VRZ	**Vera Road**	**9.53**	**207**	P	**P**	**17 01 19.9**	**+2.0**
PWZ	**Pawanui**	**9.71**	**196**	P	**P**	**17 01 20.2**	**+0.3**
PXZ	**Pawanui**	**9.71**	**196**	P	**Pn**	**17 01 19.1**	**+3.1**
BFZ	**Birch Farm**	**10.47**	**197**		**Pn**	**17 01 26.8**	**+1.3**
TCW	**Tory Channel**	**11.54**	**203**	Pn	**Pn**	**17 01 37.6**	**-0.9**
THZ	**Tophouse**	**12.52**	**206**	P	**Pn**	**17 01 50.3**	**-0.1**
GVZ	**Greta Valley S**	**13.53**	**203**	P	**P**	**17 02 01.2**	**-1.1**
MQZ	**McQueen's Vall**	**14.31**	**203**	P	**P**	**17 02 10.5**	**-0.4**
FOZ	**Fox Glacier**	**15.25**	**210**	P	**P**	**17 02 21.2**	**0.0**
WKZ	**Wanaka**	**16.64**	**209**	P	**P**	**17 02 35.5**	**-0.9**
PYZ	**Puysegur Point**	**18.70**	**211**	P	**P**	**17 02 56.9**	**-1.7**
ASAR	**Alice Springs**	**41.57**	**268**	P	**P**	**17 06 20.4**	**-0.5**
	0.2nm,0.3s,baz=108,slow=7.5,SNR=7.3						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**41.57**	**268**	P	**P**	**17 06 19.5**	**-1.4**
WR0	**Warramunga Arr**	**42.41**	**274**	P	**P**	**17 06 27.4**	**-0.2**
WRA	**Warramunga Arr**	**42.59**	**273**	P	**P**	**17 06 29.2**	**+0.1**
	0.7nm,0.3s,baz=111,slow=8.2,SNR=51						
	0.7nm,0.3s						
WB0	**Warramunga Arr**	**42.61**	**274**	P	**P**	**17 06 29.3**	**0.0**
FORT	**Forrest**	**44.50**	**256**	P	**P**	**17 06 43.1**	**-0.9**
FORT				IAmb	IAmb	17 06 51.0	
	comp=Z,7.6nm,1.0s						
NWAO	**Narrogin (SRO)**	**52.86**	**250**	P	**P**	**17 07 46.4**	**-0.9**
PSA00	**Pilbara Seismi**	**54.42**	**264**	P	**P**	**17 07 59.3**	**+0.7**
PSA00				IAmb	IAmb	17 08 26.2	
	comp=Z,6.6nm,1.5s						
PSA00	**Pilbara Seismi**	**54.42**	**264**	P	**P**	**17 07 59.4**	**+0.8**
PSA00				IAmb	IAmb	17 08 25.0	
	comp=Z,11nm,1.1s						
QSPA	**South Pole Qui**	**59.41**	**180**	P	**P**	**17 08 32.5**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=18,slow=3.2,SNR=13						
	comp=Z,1.1nm,0.6s						
QSPA	**South Pole Qui**	**59.41**	**180**	P	**P**	**17 08 32.0**	**-0.9**
QSPA				IAmb	IAmb	17 08 55.8	
	comp=Z,11nm,1.4s						
BELA	**Belgrano 2**	**69.69**	**173**	P	**P**	**17 09 36.9**	**-1.8**
BELA				IAmb	IAmb	17 10 15.6	
	comp=Z,2.9nm,1.1s						
GO06	**Curarrehue**	**83.49**	**132**	P	**P**	**17 10 53.4**	**-2.9**
GO06				IAmb	IAmb	17 11 15.9	
	comp=Z,6.7nm,1.2s						
PETK	**Petropavlovsk-**	**85.73**	**347**	P	**P**	**17 11 04.8**	**-2.0**
SDCO	**Great Sand Dun**	**97.15**	**50**	P	P	17 11 55.5	-4.9
MNTQ	**Montreal, Queb**	**121.98**	**53**		**PKPdf**	**17 17 15.6**	**-4.6**
FIA1	**FINESS Array S**	**144.88**	**339**	PKPdf	PKPbc	17 18 01.5	-0.7
FINES	**FINESS Array B**	**144.88**	**339**	PKPbc	PKPbc	17 18 01.6	-0.6
	comp=Z,1.9nm,0.6s,baz=37,slow=4.2,SNR=15						
NOA	**NORSAR Array B**	**148.79**	**350**	PKPbc	**PKPdf**	**17 18 10.8**	**+1.9**
	comp=Z,0.3nm,0.5s,baz=22,slow=3.6,SNR=1.5						
HFS	**Hagfors**	**149.21**	**347**	PKPbc	**PKPbc**	**17 18 12.5**	**-1.6**
	comp=Z,1.6nm,0.8s,baz=10,slow=3.2,SNR=4.7						

IDC ***19*** *17:09:19.8±1.4,3°.05S×130°.23E,h0km,mb3.4/3, mbtmp3.4/6,ML3.2/3,Error ellipse: s-maj=51.5km s-min=22.0km az=86.0*

DJA ***19*** *17:09:22.9±0.2,3°.S±3°×13°.0E±°,h10km,M3.6/19,mb4.1/2, MLv3.4/19*

ISC 19 17:09:22.6±0.8,3°.01S±0°.06×130°.42E±0°.07,h24km,n17, σ2§22/19,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.59**	**199**	P	**Pb**	**17 09 52.7**	**+1.4**
FAKI	**Fak Fak**	**1.83**	**87**	P	**Pn**	**17 09 53.5**	**+0.9**
KRAI	**Karang Ratu**	**2.04**	**261**	P	**Pb**	**17 09 59.4**	**+0.3**
SIJI	**Sorong**	**2.29**	**22**	Pn	**Pn**	**17 09 59.9**	**+1.0**
	1.2nm,0.3s,baz=56,slow=22,SNR=20						
SIJI				Sn	**Sn**	**17 10 25.4**	**-0.9**
	2.1nm,0.3s,baz=236,slow=23,SNR=7.5						
	3.1nm,0.3s						
SIJI	**Sorong**	**2.29**	**22**	P	**Pn**	**17 09 59.6**	**+0.7**
SWI	**Sorong**	**2.29**	**22**	P	**Pn**	**17 09 59.4**	**+0.5**
AAI	**Ambon**	**2.32

GNOU	**Gnosjoe**	**1.62**	**122**	P	Pn	17 09 59.2	-0.6
SNART	**Snartemo**	**2.13**	**276**	*i* P	Pn	17 10 05.3	-1.5
SNART				*i* S	Sn	17 10 32.2	-1.7
DEL	**Delay**	**2.23**	**139**	*i* P	Pn	17 10 09.4	+1.3
DEL				*i* S	Sb	17 10 38.8	-0.4
DEL				IAML		17 10 47.4	
	comp=Z,3.6nm,0.3s						
BJUU	**Bjuv**	**2.32**	**154**	*i* P	Pn	17 10 10.0	+0.6
BJUU				*i* S	Sn	17 10 38.7	+0.1
NC602	**NORSAR Array S**	**2.58**	**3**	*e*P	Pn	17 10 11.7	-1.2
NC602				IAML		17 11 28.1	
	comp=Z,8.9nm,0.2s						
NC602	**NORSAR Array S**	**2.58**	**3**	*e*P	Pn	17 10 11.7	-1.2
NC602				IAML		17 11 28.1	
	comp=Z,8.9nm,0.2s						
NAO01	**NORSAR Array S**	**2.69**	**356**	*e*P	Pn	17 10 13.2	-1.3
NAO01				*e*S	Sn	17 10 44.5	-3.2
NAO01				IAML		17 11 33.4	
	comp=Z,5.0nm,0.2s						
NAO01	**NORSAR Array S**	**2.69**	**356**	*e*P	Pn	17 10 13.2	-1.3
NAO01				*e*S	Sn	17 10 44.5	-3.2
NAO01				IAML		17 11 33.4	
	comp=Z,5.0nm,0.2s						
BLEU	**Blekinge**	**3.12**	**125**	*i* P	Pn	17 10 20.4	+0.1
HAMD	**Hammershus, De**	**3.50**	**145**	*i* P	Pn	17 10 24.9	-0.8
BSD	**Bornholm Skovb**	**3.68**	**145**	*i* P	Pn	17 10 29.2	+1.1
BSD				*i* S	Sn	17 11 10.6	-1.5
BSD				IAML		17 11 36.8	
	comp=Z,7.6nm,0.8s						

UPP **19** *17:10:06.6±0.2,58.°17N×11.°24E, h0km, ML2.5, Suspected explosion*
DNK **19** *17:10:06.7±1.6,58.°16N×11.°20E, h0km, ML2.3, Explosion*
IDC **19** *17:10:10.4±1.9,58.°51N×11.°36E, h0km, mbtmp3.1/4, ML2.4/4, Error ellipse: s-maj=14.7km s-min=13.0km az=54.0*
ISC 19 17:10:04.7±0.8**,58°21N**±0.°02×**11°19E**±0.°04**, h0**km**, n29,** σ1f**34**/48**, Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TJOU	**Tjoern**	**0.29**	**127**	P	**Pg**	**17 10 11.5**	**+1.3**
TJOU				S	**Sg**	**17 10 14.8**	**+0.9**
TJOU	**Tjoern**	**0.29**	**127**	P	**Pg**	**17 10 11.5**	**+1.3**
TJOU				*i* P	**Pg**	**17 10 11.5**	**+1.3**
TJOU				S	**Sg**	**17 10 14.8**	**+0.9**
TJOU				*i* S		17 10 15.1	
VANU	**Vaenersborg**	**0.55**	**58**	P	**Pb**	**17 10 16.9**	**-0.2**
	baz=224						
VANU				S	**Sg**	**17 10 24.3**	**+2.1**
VANU	**Vaenersborg**	**0.55**	**58**	P	**Pb**	**17 10 16.9**	**-0.2**
	baz=224						
VANU				S	**Sg**	**17 10 24.3**	**+2.1**
STRU	**Stroemstad**	**0.83**	**360**	P	**Pb**	**17 10 22.7**	**+0.8**
STRU				S	**Sb**	**17 10 34.8**	**+1.2**
STRU	**Stroemstad**	**0.83**	**360**	P	**Pb**	**17 10 22.7**	**+0.8**
STRU				*i* P	**Pb**	**17 10 22.7**	**+0.8**
STRU				S	**Sb**	**17 10 34.8**	**+1.2**
STRU				*i* S	**Sb**	**17 10 34.8**	**+1.2**
ONAU	**Onsala**	**0.90**	**154**	P	**Pg**	**17 10 22.7**	**+0.8**
ONAU				S	**Sg**	**17 10 34.2**	**+0.6**
ONAU	**Onsala**	**0.90**	**154**	P	**Pg**	**17 10 22.7**	**+0.8**
ONAU				*i* P	**Pb**	**17 10 22.9**	**-0.2**
ONAU				*i* S	**Sg**	**17 10 34.1**	**+0.6**
ONAU				S	**Sg**	**17 10 34.2**	**+0.6**
BORU	**Boraas**	**1.02**	**124**	P	**Pg**	**17 10 24.7**	**+0.6**
BORU				S	**Sg**	**17 10 38.1**	**+0.7**
BORU	**Boraas**	**1.02**	**124**	*i* P	**Pg**	**17 10 24.4**	**+0.2**
BORU				P	**Pg**	**17 10 24.7**	**+0.6**
BORU				S	**Sg**	**17 10 38.1**	**+0.7**
NASU	**Vaermlandsnaes**	**1.27**	**55**	P	**Pb**	**17 10 30.2**	**+0.8**
NASU	**Vaermlandsnaes**	**1.27**	**55**	P	**Pb**	**17 10 30.2**	**+0.8**
FKPU	**Falk**	**1.34**	**91**	P	**Pg**	**17 10 30.7**	**+0.3**
FKPU	**Falk**	**1.34**	**91**	P	**Pg**	**17 10 30.7**	**+0.3**
FINU	**Finntorp**	**1.37**	**29**	P	**Pb**	**17 10 32.4**	**+1.2**
FINU	**Finntorp**	**1.37**	**29**	P	**Pb**	**17 10 32.4**	**+1.2**
HOMB	**Homborsund**	**1.42**	**274**	*i* P	**Pb**	**17 10 32.2**	**+0.2**
HOMB				*i* S	**Sn**	**17 10 51.0**	**-0.1**
GNOU	**Gnosjoe**	**1.65**	**123**	P	**Pb**	**17 10 36.2**	**+0.2**
GNOU	**Gnosjoe**	**1.65**	**123**	P	**Pb**	**17 10 36.2**	**+0.2**
DEL	**Delary**	**2.27**	**139**	*i* P	**Pb**	**17 10 45.9**	**-0.6**
DEL				*i* S	**Sb**	**17 11 14.6**	**-0.4**
DEL				IAML		17 11 18.2	
	comp=Z,7.7nm,0.4s						
HFS	**Hagfors**	**2.32**	**33**	Pn	**Pn**	**17 10 42.8**	**-1.3**
	comp=Z,5.4nm,0.3s,baz=215,slow=19,SNR=32						
HFS				Lg	Lg	17 11 13.8	
	comp=Z,4.5nm,0.3s,baz=215,slow=22,SNR=9.7						
	comp=Z,12nm,0.4s						
BJUU	**Bjuv**	**2.36**	**154**	*i* S	**Sn**	**17 11 15.4**	**+1.1**
COP	**Copenhagen**	**2.62**	**164**	*i* P	**Pn**	**17 10 49.2**	**+1.1**
NOA	**NORSAR Array B**	**2.84**	**0**	Pn	**Pn**	**17 10 51.5**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=178,slow=15,SNR=7.0						
NOA				Lg	Lg	17 11 31.1	
	comp=Z,0.2nm,0.3s,baz=169,slow=19,SNR=6.4						
	comp=Z,0.4nm,0.2s						
BLEU	**Blekinge**	**3.15**	**125**	*i* P	**Pn**	**17 10 57.8**	**+2.2**
HAMD	**Hammershus, De**	**3.54**	**145**	*i* P	**Pn**	**17 11 00.8**	**0.0**
BSD	**Bornholm Skovb**	**3.72**	**145**	*i* P	**Pn**	**17 11 04.4**	**+1.1**
FINES	**FINESS Array B**	**8.17**	**60**	Pn	**Pn**	**17 12 05.4**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=250,slow=13,SNR=14						
FINES				Sn	**Sn**	**17 13 32.0**	**-5.2**
	comp=Z,0.3nm,0.3s,baz=255,slow=21,SNR=5.6						
FINES				Lg	Lg	17 14 19.9	
	comp=Z,0.2nm,0.3s,baz=256,slow=29,SNR=1.7						
	comp=Z,0.7nm,0.3s						
ARCES	**ARCESS Array B**	**12.95**	**23**	Pn	**Pn**	**17 13 06.0**	**-3.6**
	comp=Z,0.1nm,0.3s,baz=215,slow=13,SNR=1.2						
	comp=Z,0.6nm,0.4s						

IDC 19 17:15:21.4±3.0**,21°59S**×**176°26W, h0**km**, mb4.0**/4**, mbtmp4.0/4, Error ellipse: s-maj=201.6km s-min=26.8km az=157.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**35.01**	**266**	P	P	17 22 16.8	+0.9
	2.4nm,0.4s,baz=88,slow=9.6,SNR=9.4						
	2.4nm,0.4s						
ASAR	**Alice Springs**	**45.86**	**258**	P	P	17 23 46.0	+0.2
	1.8nm,0.7s,baz=92,slow=8.0,SNR=34						
ASAR				PcP	PcP	17 25 22.4	-0.8
	0.8nm,1.1s,baz=100,slow=3.4,SNR=4.1						
	1.8nm,0.7s						
WRA	**Warramunga Arr**	**46.07**	**263**	P	P	17 23 46.4	-1.0
	0.5nm,0.5s,baz=98,slow=7.5,SNR=28						
	0.5nm,0.5s						
NVAR	**Mina Array Bea**	**80.71**	**42**	P	P	17 27 37.0	+0.2
	0.5nm,0.3s,baz=203,slow=7.5,SNR=11						
	0.5nm,0.3s						

IDC **19** *17:23:03.3±2.9,47.°71N×92.°12W, h0km, mb2.9/1, mbtmp2.8/3, ML1.1/1, Error ellipse: s-maj=50.9km s-min=17.6km az=62.0*
NEIC **19** *17:23:04.4±1.9,47.°67N±0.°05×92.°60W±0.°05, h0km±2km, ML3.0/12, Error ellipse: s-maj=9.4km s-min=5.4km az=203.0*
ISC 19 17:23:03.2±0.9**,47°64N**±0.°04×**92°65W**±0.°05**, h0**km**, n23,** σ1f**13**/23**, Minnesota**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EYMN	**Ely**	**0.83**	**68**		**Pg**	**17 23 19.1**	**-0.1**
EYMN				IAML		17 23 34.0	
	373nm,0.9s						
E38A	**The Farm, Brul**	**1.28**	**144**		**Pg**	**17 23 26.5**	**-1.2**
E38A				IAML		17 23 46.8	
	240nm,0.8s						
E38A				IAML		17 23 47.0	
	246nm,0.9s						
EPLO	**Experimental L**	**2.16**	**341**		**Pb**	**17 23 43.0**	**-0.2**
AGMN	**Agassiz Nation**	**2.26**	**288**		**Pn**	**17 23 42.0**	**+0.1**
AGMN				IAML		17 24 21.5	
	87nm,0.8s						
TBO	**Thunder Bay**	**2.39**	**64**		**Pb**	**17 23 46.8**	**-0.4**
TBO				IAML		17 24 31.9	
	comp=N,78nm,1.1s						
TBO				IAML		17 24 32.4	
	comp=E,104nm,1.1s						
SPMN	**Marine on St.**	**2.42**	**183**		**Pn**	**17 23 43.9**	**-0.1**

G40A	**Rib Lake**	**2.91**	**144**		**Pn**	**17 23 51.9**	**+1.1**
F33A	**5 Mile Ranch,**	**3.09**	**236**		**Pn**	**17 23 53.8**	**+0.6**
ULM	**Lac du Bonnet**	**3.37**	**322**	Pn	**Pn**	**17 23 59.1**	**+2.1**
	comp=E,0.2nm,0.3s,baz=138,slow=14,SNR=2.0						
ULM				Pg	**Pg**	**17 24 06.5**	**-1.3**
	comp=E,0.4nm,0.3s,baz=143,slow=16,SNR=6.5						
ULM				Sn	**Sn**	**17 24 40.4**	**+2.6**
	comp=E,0.7nm,0.3s,baz=131,slow=21,SNR=5.7						
ULM				Lg	Lg	17 24 51.9	
	comp=E,3.6nm,0.3s,baz=60,slow=21,SNR=6.8						
	comp=E,0.8nm,0.5s						
ULM	**Lac du Bonnet**	**3.37**	**322**		**Sn**	**17 24 37.1**	**-0.6**
ULM	**Lac du Bonnet**	**3.37**	**322**		**Pn**	**17 23 55.4**	**-1.7**
I10CA	**LAC DU BONNET**	**3.40**	**320**	I	I	17 46 50.0	
	baz=132,slow=339,SNR=0.6						
I37A	**Lemond, Waseca**	**3.67**	**189**		**Pn**	**17 24 00.4**	**-0.7**
I42A	**Draeger Farm,**	**4.57**	**144**	Pn	**Pn**	**17 24 13.3**	**-0.3**
H43A	**Windswept, Lux**	**4.64**	**131**		**Pn**	**17 24 15.2**	**+0.6**
ECSD	**EROS Data Cent**	**4.80**	**217**		**Pn**	**17 24 18.4**	**+1.7**
JFWS	**Jewell Farm**	**5.02**	**159**		**Pb**	**17 24 31.9**	**0.0**
SUSD	**Miller**	**5.43**	**236**	Pn	**Pn**	**17 24 25.9**	**+0.5**
L40A	**Anamosa**	**5.67**	**169**		**Pn**	**17 24 28.8**	**+0.1**
SCIA	**State Center**	**5.75**	**184**		**Pn**	**17 24 30.0**	**+0.2**
N38A	**Joes South For**	**6.86**	**184**		**Pn**	**17 24 46.5**	**+1.5**
YKA	**Yellowknife Ar**	**19.32**	**328**	P	**P**	**17 27 29.6**	**0.0**
	comp=E,0.2nm,0.6s,baz=143,slow=12,SNR=2.2						
TXAR	**Lajitas Array**	**20.18**	**209**	P	Pn	17 27 41.5	+0.4
	comp=E,0.5nm,0.7s,baz=21,slow=14,SNR=2.9						
	comp=E,0.5nm,0.7s						

CNRM **19** *17:35:10.6,32.°39N×5.°59W, h2km, ML3.0*
MDD **19** *17:35:12.4±0.7,32.°51N×5.°44W, h0km, Mb4.2/7, M_mb3.6/7, Error ellipse: s-maj=7.6km s-min=4.2km az=119.0*
SFS **19** *17:35:12.5,32.°50N×5.°52W, h3km, mb3.7/7, ML4.1/12, ML4.0/12, MLv4.1/12*
INMG **19** *17:35:13.3±1.2,32.°41N×5.°49W, h29km±11km, ML2.5, Error ellipse: s-maj=5.5km s-min=4.9km az=108.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Fez (Marr)*
IGIL **19** *17:35:14.6,32.°50N×5.°56W, h13km*
ISC 19 17:35:12.6±1.1**,32°48N**±0.°02×**5°56W**±0.°02**, h26**km±13km**, n58,** σ1f**42**/111**, 6C, Morocco**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CZD	**Col de Zad**	**0.71**	**38**	P	**Pb**	**17 35 25.9**	**-0.6**
CZD				S	**Sn**	**17 35 36.9**	**-0.5**
MD31	**MD31**	**0.78**	**60**	P	**Pb**	**17 35 26.8**	**-0.8**
MD31				S	**Sn**	**17 35 38.5**	**-0.5**
MDT	**Midelt**	**0.87**	**67**	P	**Pb**	**17 35 27.6**	**-1.6**
MDT				S	**Sn**	**17 35 41.4**	**+0.2**
GOLM	**Goulmima**	**0.93**	**146**	P	**Pb**	**17 35 29.2**	**-0.9**
GOLM				S	**Sb**	**17 35 42.2**	**+0.1**
TISM	**Timmit**	**1.06**	**225**	P	**Pn**	**17 35 29.7**	**-2.1**
TISM				S	**Sb**	**17 35 43.6**	**-2.1**
IFR	**Ifrane**	**1.10**	**19**	Pg	**Pn**	**17 35 32.3**	**-0.2**
IFR				Sn	**Sn**	**17 35 49.0**	**+2.0**
IFR				Sg	**Sb**	**17 35 49.5**	**+2.4**
ZHG	**ZHG**	**1.33**	**317**	P	**Pb**	**17 35 37.0**	**+0.1**
ZHG				S	**Sn**	**17 35 55.6**	**+2.1**
LCRM	**LCR**	**1.34**	**26**	P	**Pn**	**17 35 35.6**	**-0.2**
LCRM				S	**Sb**	**17 35 54.3**	**+0.2**
SICH	**Sidi Chahed**	**1.64**	**7**	P	**Pb**	**17 35 41.2**	**-1.0**
SICH				S	**Sb**	**17 36 05.9**	**+3.6**
TZRR	**Tazzarine**	**1.69**	**180**	P	**Pn**	**17 35 40.7**	**+0.2**
TZRR				S	**Sb**	**17 36 03.1**	**-0.7**
AVE	**Averroes**	**1.76**	**298**	Pn	**Pb**	**17 35 44.1**	**-0.1**
AVE				Sn	**Sb**	**17 36 07.8**	**+1.9**
AVE	**Averroes**	**1.76**	**298**	P	**Pb**	**17 35 44.6**	**+0.4**
AVE				S	**Sb**	**17 36 06.9**	**+1.0**
OUZM	**OUZ**	**1.87**	**214**	P	**Pn**	**17 35 44.4**	**+1.4**
OUZM				S	**Sb**	**17 36 10.6**	**+1.5**
SRHM	**Skhour des Reh**	**1.98**	**271**	P	**Pb**	**17 35 46.5**	**-1.4**
SRHM				S	**Sb**	**17 36 14.0**	**+1.8**
TIO	**Tiouine**	**2.12**	**224**	Pn	**Pn**	**17 35 48.7**	**+2.2**
TIO				Sn	**Sb**	**17 36 15.5**	**-0.8**
TIO	**Tiouine**	**2.12**	**224**	P	**Pn**	**17 35 46.9**	**+0.4**
TIO				S	**Sn**	**17 36 13.4**	**+1.3**
OUK	**Oukaimeden**	**2.33**	**238**	P	**Pn**	**17 35 49.9**	**+0.3**
OUK				S	**Sn**	**17 36 18.6**	**+1.0**
ZGR	**Zagora**	**2.35**	**181**	P	**Pn**	**17 35 49.0**	**-0.6**
ZGR				S	**Sn**	**17 36 18.6**	**+0.9**
RSA	**Sarsar**	**2.41**	**355**	P	**Pn**	**17 35 52.5**	**+2.1**
RSA				S	**Sb**	**17 36 24.1**	**-0.6**
AKLM	**AKL**	**2.48**	**34**	P	**Pb**	**17 35 53.6**	**-2.9**
AKLM				S	**Sb**	**17 36 27.5**	**+0.9**
JBK	**JBK**	**3.12**	**53**	P	**Pn**	**17 36 00.7**	**+0.5**
JBK				S	**Sn**	**17 36 38.0**	**+1.2**
FIGM	**Figuig**	**3.66**	**94**	P	**Pn**	**17 36 08.9**	**+1.3**
FIGM				S	**Sn**	**17 36 54.1**	**+4.1**
ESPR	**Espera**	**4.39**	**357**	Pn	**Pn**	**17 36 18.8**	**+1.2**
ESPR				Sn	**Sn**	**17 37 09.2**	**+1.3**
ESPR	**Espera**	**4.39**	**357**	Sn	**Sn**	**17 37 08.4**	**+0.5**
E1302	**La Puebla de C**	**4.65**	**3**	Pn	**Pn**	**17 36 20.7**	**-0.6**
E1302				⇑*i*IVmb_VC		17 36 20.9	
	266nm,SNR=1.3						
E1302				Sn	**Sn**	**17 37 14.2**	**-0.2**
ELGU	**Los Guajares,**	**4.66**	**19**	Pn	**Pn**	**17 36 21.0**	**-0.3**
ELGU				Sn	**Sn**	**17 37 15.4**	**+0.7**
ELGU	**Los Guajares,**	**4.66**	**19**	Pn	**Pn**	**17 36 21.1**	**-0.3**
ELGU				⇑*i*IVmb_VC		17 36 28.3	
	258nm,SNR=1.5						
ELGU				Sn	**Sn**	**17 37 14.5**	**-0.2**
PBDV	**Barranco-do-Ve**	**5.14**	**338**	Pn	**Pn**	**17 36 27.7**	**-0.2**
PBDV				Sn	**Sn**	**17 37 24.6**	**-1.8**
PBDV	**Barranco-do-Ve**	**5.14**	**338**	*e*Pn	**Pn**	**17 36 28.5**	**+0.6**
PBDV				*e*Sn	**Sn**	**17 37 25.7**	**-0.7**
PBDV				*i* IAML		17 37 27.6	
PBDV				*i* IAML		17 37 44.7	
PVAQ	**Vaqueiros**	**5.23**	**341**	*e*Pn	**Pn**	**17 36 29.4**	**+0.4**
PVAQ				*e*Sn	**Sn**	**17 37 27.8**	**-0.7**
PVAQ				*i* IAML		17 37 30.0	
PVAQ				*i* IAML		17 37 31.8	
PVAQ				*i* IAML		17 37 34.7	
PVAQ	**Vaqueiros**	**5.23**	**341**	P	**Pn**	**17 36 30.0**	**+0.9**
EGRO	**El Granado**	**5.29**	**343**	Pn	**Pn**	**17 36 30.1**	**+0.2**
EGRO				Sn	**Sn**	**17 37 28.5**	**-1.5**
EGRO	**El Granado**	**5.29**	**343**	Pn	**Pn**	**17 36 31.1**	**+1.2**
EGRO				⇑*i*IVmb_VC		17 36 31.5	
	274nm,SNR=1.4						
EGRO				Sn	**Sn**	**17 37 29.6**	**-0.3**
EMIN	**Mina Concepcio**	**5.36**	**351**	Pn	**Pn**	**17 36 31.4**	**+0.5**
EMIN				Sn	**Sn**	**17 37 30.5**	**-1.3**
EMIN	**Mina Concepcio**	**5.36**	**351**	Pn	**Pn**	**17 36 31.7**	**+0.8**
EMIN				⇑*i*IVmb_VC		17 36 33.2	
	156nm,SNR=1.4						
EMIN				Sn	**Sn**	**17 37 31.3**	**-0.4**
PFVI	**Vila Bisbo**	**5.37**	**331**	Pn	**Pn**	**17 36 30.5**	**-0.5**
PFVI				Sn	**Sn**	**17 37 30.6**	**-1.4**
PFVI	**Vila Bisbo**	**5.37**	**331**	*e*Pn	**Pn**	**17 36 31.8**	**+0.8**
PFVI				*e*Sn	**Sn**	**17 37 30.8**	**-1.2**
PFVI				*i* IAML		17 37 34.1	
PFVI				*i* IAML		17 37 34.1	
PFVI				*i* IAML		17 37 43.5	
MORF	**Marmelete**	**5.45**	**333**	*e*P	**Pn**	**17 36 33.1**	**+1.0**
MORF	**Marmelete**	**5.45**	**333**	*e*Pn	**Pn**	**17 36 33.2**	**+1.0**
MORF				*e*Sn	**Sn**	**17 37 33.6**	**-0.3**
MORF				*i* IAML		17 37 38.2	
MORF				*i* IAML		17 37 40.6	
MORF				*i* IAML		17 37 41.6	
PCVE	**Castro Verde**	**5.53**	**339**	Pn	**Pn**	**17 36 33.4**	**+0.1**
PCVE				Sn	**Sn**	**17 37 34.1**	**-1.9**
PCVE	**Castro Verde**	**5.53**	**339**	*e*Pn	**Pn**	**17 36 34.3**	**+1.0**
PCVE				*e*Sn	**Sn**	**17 37 35.2**	**-0.8**
PCVE				*i* IAML		17 37 37.1	
PCVE				*i* IAML		17 37 38.9	
PCVE				*i* IAML		17 37 42.3	
ECAB	**El Cabril**	**5.59**	**1**	Pn	**Pn**	**17 36 34.1**	**0.0**
ECAB				Sn	**Sn**	**17 37 34.4**	**-3.0**
ECAB	**El Cabril**	**5.59**	**1**	Pn	**Pn**	**17 36 33.9**	**-0.2**
ECAB				⇑*i*IVmb_VC		17 36 36.9	
	98nm,SNR=1.6						
ECAB				Sn	**Sn**	**17 37 34.5**	**-2.9**
PTEO	**Sao Teotonio**	**5.69**	**334**	*e*Sn	**Sn**	**17 37 39.0**	**-0.8**
PTEO				*i* IAML		17 37 39.7	
PTEO				*i* IAML		17 37 41.2	
EADA	**Adamuz**	**5.74**	**8**	Pn	**Pn**	**17 36 36.2**	**+0.1**
EADA				Sn	**Sn**	**17 37 38.8**	**-2.3**

EADA	**Adamuz**	**5.74**	**8**	Pn	**Pn**	**17 36 38.6**	**+2.5**
EADA				⇑*i*IVmb_VC		17 36 40.5	
	172nm,SNR=2.6						
EADA				Sn	**Sn**	**17 37 37.1**	**-4.0**
MESJ	**Messejana**	**5.78**	**339**	*e*P	**Pn**	**17 36 37.5**	**+0.9**
MESJ	**Messejana**	**5.78**	**339**	*e*Pn	**Pn**	**17 36 37.5**	**+0.9**
MESJ				*e*Sn	**Sn**	**17 37 41.0**	**-1.1**
MESJ				*i* IAML		17 37 41.8	
MESJ				*i* IAML		17 37 43.8	
MESJ				*i* IAML		17 37 50.4	
PBAR	**Barrancos**	**5.81**	**348**	Pn	**Pn**	**17 36 37.2**	**+0.1**
PBAR				Sn	**Sn**	**17 37 40.1**	**-2.9**
PBAR	**Barrancos**	**5.81**	**348**	*e*Pn	**Pn**	**17 36 37.9**	**+0.8**
PBAR				*e*Sn	**Sn**	**17 37 41.3**	**-1.7**
PBAR				*i* IAML		17 37 45.5	
PBAR				*i* IAML		17 37 45.7	
PBAR				*i* IAML		17 37 47.1	
MOE	**Montemor**	**6.45**	**340**	*e*Pn	**Pn**	**17 36 47.2**	**+1.3**
MOE				*e*Sn	**Sn**	**17 37 57.7**	**-0.9**
MOE				*i* IAML		17 38 01.1	
MOE				*i* IAML		17 38 02.5	
MOE				*i* IAML		17 38 06.0	
PSIM	**Granatula de C**	**6.50**	**13**	Pn	**Pn**	**17 36 47.5**	**+0.9**
PSIM				Sn	**Sn**	**17 37 58.5**	**-1.4**
PESTR	**Estremoz**	**6.59**	**346**	Pn	**Pn**	**17 36 47.6**	**-0.2**
PESTR				Sn	**Sn**	**17 37 59.6**	**-2.5**
PESTR	**Estremoz**	**6.59**	**346**	*e*Pn	**Pn**	**17 36 49.0**	**+1.2**
PESTR				*e*Sn	**Sn**	**17 38 00.7**	**-1.4**
PESTR				*i* IAML		17 38 01.9	
PESTR				*i* IAML		17 38 03.0	
PESTR				*i* IAML		17 38 03.1	
PARRA	**Arraiolos**	**6.64**	**343**	*e*Pn	**Pn**	**17 36 49.6**	**+1.1**
PARRA				*e*Sn	**Sn**	**17 38 01.6**	**-1.7**
PARRA				*i* IAML		17 38 03.5	
PARRA				*i* IAML		17 38 03.7	
PMTG	**Montargil**	**6.93**	**343**	*e*Pn	**Pn**	**17 36 53.2**	**+0.8**
PMTG				*e*Sn	**Sn**	**17 38 10.1**	**-0.2**
PMRV	**Marv??o**	**7.09**	**348**	*e*Pn	**Pn**	**17 36 55.9**	**+1.1**
PMRV				*e*Sn	**Sn**	**17 38 12.8**	**-1.7**
MVO	**Moncorvo**	**8.75**	**353**	*e*Pn	**Pn**	**17 37 18.6**	**+1.1**

PDG **19** *17:53:04.7,38.°42N×39.°03E, h21km, mb5.0/6*
ISK **19** *17:53:30.9,38.°39N×39.°09E, h5km, ML5.1/9*
MCSM **19** *17:53:31.2±0.3,38.°N±3.°×3.°9E±.°, h10km, mb4.7, mB5.2, Mw(mB)4.5*
MOS **19** *17:53:31.6±1.2,38.°31N×39.°05E, h11km, mb5.0/39, MS4.3/26, Error ellipse: s-maj=4.9km s-min=3.2km az=97.3*
AFAD **19** *17:53:31.2,38.°37N×39.°10E, h7km±2km, MW5.0*
IDC **19** *17:53:31.5±0.4,38.°40N×39.°02E, h0km, mb4.4/32, mbtmp4.4/46, ML4.1/12, MS4.5/81, Error ellipse: s-maj=9.7km s-min=7.2km az=167.0*
MED_RC **19** *17:53:32.0±0.4,38.°40N×39.°22E, h18km, MW5.2/76, Moment Tensor Solution. Mantle waves: s76,c116; Duration: 1f3 Moment tensor: Scale 10^16Nm; Mrr-0.06±.19; Mθθ-4.60±.20; Mϕϕ4.66±.18; Mrθ0.07±.31; Mrϕ4.52±.16; Mθϕ1.55±.30; Best double couple: M0 6.65000×10^16 NP1:ϕs68.00000°, δ78.00000°, λ5.00000°. NP2:ϕs337.00000°, δ85.00000°, λ168.00000°. Principal axes: T 6.8100, Plg12.0000°, Azm292.0000°; N -0.3300, Plg77.0000°, Azm134.0000°; P -6.4800, Plg5.0000°, Azm23.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
DSN **19** *17:53:32.6±0.4,38.°26N×38.°88E, h15km, mb4.9/17, Ms4.9/5 Error ellipse: s-maj=8.6km s-min=3.7km az=65.0*
BGR **19** *17:53:32.1,38.°26N×39.°83E, h33km, mb4.7, Ms4.3*
NEIC **19** *17:53:33.4±2.5,38.°39N±0.°02×39.°07E±0.°05, h10km±1km, mb4.8/167, Mwr5.1/19, Mww5.2/26, Error ellipse: s-maj=6.6km s-min=4.3km az=80.0, Moment Tensor Solution. Moment tensor: Scale 10^16Nm; Mrr-0.07; Mθθ-3.31; Mϕϕ3.38; Mrθ0.06; Mϕϕ2.16; Mrϕ2.56; Fault plane solution: M0 4.73000×10^16 NP1:ϕs64.74000°, δ63.66000°, λ10.41000°. NP2:ϕs330.08000°, δ80.68000°, λ153.28000°. Principal axes: T 5.1908, Plg25.0000°, Azm284.0000°; N -1.1120, Plg62.0000°, Azm132.0000°; P -4.0788, Plg11.0000°, Azm20.0000°;*
NEIC **19** *17:53:33.4,38.°39N×39.°08E, h10km*
GII **19** *17:53:33.2±0.0,38.°389N±0.°003×39.°197E±0.°001, h0km, Mws5.0, confirmed*
GCMT **19** *17:53:34.4±0.1,38.°35N±0.°01×39.°06E±0.°01, h12km, MW5.2/130, Moment Tensor Solution. s72,c110; s130,c233; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.40±.09; Mθθ-4.08±.10; Mϕϕ4.48±.09; Mrθ3.14±.24; Mθϕ4.35±.08; Mrϕ0.04±.24; Best double couple: M0 6.85200×10^16 NP1:ϕs340.00000°, δ65.00000°, λ-171.00000°. NP2:ϕs246.00000°, δ82.00000°, λ-25.00000°. Principal axes: T 6.5490, Plg11.0000°, Azm295.0000°; N 0.6030, Plg64.0000°, Azm49.0000°; P -7.1540, Plg23.0000°, Azm200.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
GFZ **19** *17:53:34.0,38.°38N×39.°01E, h10km, MW5.1, Moment Tensor Solution. s90 Moment tensor: Mrr-0.42; Mθθ-2.77;

HEKM S Sg 17 54 05.8 -0.7
HEKM IAML 17 54 10.0
comp=E,2µm,0.4s
HEKM IAML 17 54 10.0
comp=N,2µm,0.4s
MAYK 1.05 69 P Pg 17 53 51.6 -1.6
ATAB Bozova 1.10 216 P Pg 17 53 52.3 -1.8
ILIC ilic-Erzincan 1.17 339 Pn Pg 17 53 53.0 -2.5
ILIC Sn Sg 17 54 08.8 -1.9
SANL SANLIURFA_Merk 1.19 185 P Pg 17 53 54.2 -1.7
SANL S Sg 17 54 11.3 0.0
SANL IAML 17 54 15.0
comp=N,3µm,0.7s
AKCA Adyaman/G¶l 1.26 244 P Pn 17 53 56.4 -0.7
AKCA S Sn 17 54 14.8 +0.6
AKCA IAML 17 54 23.0
comp=N,4µm,0.9s
MDIV 1.27 319 P Pn 17 53 54.5 -2.8
MDIV S Sb 17 54 13.9 -0.1
MDIV IAML 17 54 16.0
comp=N,1µm,1.5s
MDIV IAML 17 54 18.0
comp=E,2µm,1.1s
MIMR Divri 1.27 319 P Pg 17 54 01.9 +4.5
MIMR S Sn 17 54 26.4 +12
ERZN Erzincan 1.31 21 Pn Pn 17 53 55.0 -2.9
BNGB Bingl 1.38 62 Pn Pn 17 53 57.6 -1.2
EUZM Uzumlu 1.42 19 P Pn 17 53 57.8 -1.6
EUZM S Sg 17 54 20.7 +2.0
SURC SANLIURFA_SURC 1.53 195 P Pn 17 53 59.2 -1.6
SURC S Sg 17 54 24.8 +2.6
YEDI Yedisu-Bingol 1.55 46 Pn Pn 17 53 59.5 -1.7
ELBS KAHRAMANMARAS 1.56 269 P Pn 17 53 58.9 -2.3
ELBS S Sg 17 54 24.0 +1.0
GZT Gaziantep 1.58 231 P Pn 17 54 01.1 -0.5
SLHN Bingol, Solhan 1.61 68 P Pn 17 54 02.7 +0.6
SLHN S Sg 17 54 25.6 +0.7
SVAN Silvan-Diyarba 1.66 97 Pn Pn 17 54 01.5 -1.1
SVAN Silvan-Diyarba 1.66 97 P Pn 17 54 01.8 -1.8
SVAN S Sn 17 54 23.8 -0.4
SVAN IAML 17 54 26.0
comp=N,2µm,1.2s
NZIP Nizip/Gaziante 1.74 221 P Pn 17 54 01.9 -1.8
BTMN Batman 1.77 105 P Pn 17 54 01.4 -2.8
BTMN S Sn 17 54 26.5 -0.4
BTMN IAML 17 54 36.0
comp=N,3µm,1.2s
KARO Karliova-Bingo 1.79 57 Pn Pn 17 54 03.2 -1.3
KELT Kelkit 1.79 4 P Pn 17 54 01.9 -2.7
KELT S Sn 17 54 27.3 -0.4
KHMN Narli-Kahraman 1.82 239 Pn Pn 17 54 04.0 -0.8
KHMN Narli-Kahraman 1.82 239 P Pn 17 54 03.5 -1.3
KHMN P Pn 17 54 04.1 -0.8
KHMN S Sg 17 54 33.0 +1.4
KAHM Kahramanmaras, 1.88 244 P Pn 17 54 06.3 +0.7
KAHM S Sn 17 54 29.3 -0.3
KAHM IAML 17 54 47.0
comp=N,5µm,1.4s
ECAT Cat-ERZURUM 1.91 49 P Pn 17 54 06.8 +0.6
GAZ Gaziantep 1.92 232 Pn 17 54 05.0 -1.2
GAZ Gaziantep 1.92 232 Pn Pn 17 54 05.1 -1.0
MUSM Mu-Merkez 1.92 78 P Pn 17 54 06.3 0.0
MUSM S Sn 17 54 30.9 +0.2
MUSM IAML 17 54 44.0
comp=N,1µm,1.2s
KMRS Kahramanmaras 1.94 245 Pn Pn 17 54 05.6 -0.9
KOPT Kop Dagi 1.98 33 Pn 17 54 07.2 +0.1
KOPT Kop Dagi 1.98 33 P Pn 17 54 07.4 +0.2
KOPT S Sg 17 54 44.5 +7.9
SUSE Susehri 1.98 339 P Pb 17 54 09.0 -0.4
SUSE S Sg 17 54 35.3 -1.2
SUSE IAML 17 54 41.0
comp=N,1µm,1.5s
ALUC Giresun/Alucra 2.00 353 P Pb 17 54 09.0 -0.8
ALUC S Sg 17 54 37.5 +0.2
ALUC IAML 17 54 45.0
comp=N,3µm,1.2s
VRTB Varto-Mus 2.00 66 Pn Pn 17 54 06.1 -1.3
VRTB Varto-Mus 2.00 66 P Pn 17 54 07.4 0.0
VRTB S Sg 17 54 46.1 +8.8
KHMR Kahramanmara 2.02 240 P Pn 17 54 06.8 -0.7
KHMR P Pb 17 54 07.4 -2.6
MIDY Mardin/Midyat- 2.05 117 P Pn 17 54 07.6 -0.4
MIDY S Sn 17 54 34.6 +0.9
CUAYA Sivas-Altinyay 2.06 297 P Pn 17 54 06.8 -1.3
CUAYA S Sg 17 54 38.0 -1.1
CUAYA IAML 17 54 46.0
comp=N,7µm,0.9s
BAYB BAYBURT 2.10 25 P Pn 17 54 09.6 +0.8
GUMT Gumushane 2.12 8 Pn Pn 17 54 07.9 -1.1
SCER sogukcermik 2.15 315 P Pn 17 54 07.9 -1.5
SCER S Sg 17 54 41.3 -0.8
SCER IAML 17 54 47.0
comp=N,9µm,0.7s
BAYT Aydintepe-Bayb 2.18 21 Pn Pn 17 54 08.7 -1.2
EMRE Erzurum,Aziziy 2.21 40 P Pn 17 54 10.9 +0.5
EMRE S Sg 17 54 52.7 +8.6
SRTM Siirt_Merkez 2.25 99 P Pn 17 54 09.2 -1.5
SRTM S Sb 17 54 43.7 +1.6
EJDE Erzurum, Palan 2.25 49 P Pn 17 54 10.9 -0.2
KAMA Osmaniye 2.26 240 P Pn 17 54 10.1 -0.9
KAMA S Sg 17 54 46.9 +1.2
GURO Guroymak-BITLI 2.30 84 Pn 17 54 10.6 -0.9
GURO Sn 17 54 41.8 +1.6
GURO Guroymak-BITLI 2.30 84 Pn Pn 17 54 10.8 -0.7
ANDN Andirin 2.32 251 P Pn 17 54 11.7 0.0
ANDN S Sb 17 54 45.3 +1.2
ERZM Erzurum 2.34 48 P Pn 17 54 13.3 +1.2
ERZM S Sg 17 54 47.8 -0.4
BLIS Bitlis-Merkez 2.36 88 P Pn 17 54 11.7 -0.7
BLIS S Sb 17 54 45.3 -0.2
SAIM ADANA 2.42 262 P Pn 17 54 13.3 +0.3
SAIM S Sg 17 54 51.0 +0.4
IZDR Rize 2.67 24 P Pn 17 54 17.4 +0.9
IZDR S Sg 17 54 59.2 +0.4
PERV Siirt/Pervari- 2.74 98 P Pn 17 54 16.6 -0.9
PERV S Sg 17 54 59.2 -1.7
SIRN Sırnak 2.75 107 P Pn 17 54 16.6 -1.0
SIRN S Sg 17 55 00.1 -1.3
GUNE Kayseri 2.78 282 P Pn 17 54 16.6 -1.5
GUNE S Sg 17 55 10.7 +8.3
ORDU Ordu-Boztepe 2.80 340 P Pn 17 54 19.1 +0.8
TOKA Tokat 2.83 315 Pn 17 54 18.9 +0.2
TOKA Tokat 2.83 315 P Pn 17 54 19.9 +1.2
TOKA S Sg 17 55 01.7 -2.2
ADCV BITLIS_Adilcev 2.87 80 P Pn 17 54 20.7 +1.4
RHAN Hatay/Reyhanl 2.90 224 P Pn 17 54 18.2 -1.3
RHAN S Sg 17 55 05.8 -0.3
ERBA Erbaa 2.95 323 P Pn 17 54 19.1 -1.3
ERBA S Sg 17 55 09.1 +1.4
HACI Hacifakili, Ak 2.95 298 P Pn 17 54 20.7 +0.3
HACI S Sg 17 55 10.7 +2.8
YAHY KAYSERI_Yahyal 2.96 266 P Pn 17 54 19.1 -1.5
YAHY S Sb 17 55 04.2 +1.5
DORK Agr/Tutak/Do 3.04 69 P Pn 17 54 23.2 +1.4
GEVA Gevas 3.11 90 Pn 17 54 22.2 -0.4
GEVA Gevas 3.11 90 P Pn 17 54 21.5 -1.1
EOLT Oltu 3.11 45 P Pn 17 54 22.3 -0.3
SIRC Yozgat 3.24 289 P Pn 17 54 24.8 +0.4
SIRC S Sg 17 55 26.3 +9.1
DDEM Demirkent 3.25 38 P Pn 17 54 22.3 -2.2
DDEM S Sg 17 55 18.1 +0.7
CKRK Yozgat, Cekere 3.28 303 P Pn 17 54 22.3 -2.6
CKRK S Sg 17 55 23.0 +4.5
DBAD Bademkaya 3.32 36 P Pn 17 54 24.8 -0.7
DBAD S Sg 17 55 23.0 +3.3
YAYL Yayladag 3.34 227 S Pn 17 54 27.3 +1.5
YAYL S Sg 17 55 23.8 +3.6
ASUZ Hatay-Arsuz 3.36 233 P Pn 17 54 26.4 +0.6
ASUZ S Sg 17 55 21.4 +0.5
AVNS Nevsehir-Avano 3.37 279 P Pn 17 54 25.6 -0.6
AVNS S Sg 17 55 26.3 +5.0
TVAN Van 3.38 86 P Pn 17 54 24.8 -1.6
TVAN S Sg 17 55 25.5 +3.9
NIDE Nigde/Merkez-G 3.43 265 P Pn 17 54 26.4 -0.6
NIDE S Sg 17 55 24.6 +1.4
VMUR Van-Muradiye 3.55 78 P Pn 17 54 30.5 +1.8
VMUR S Sg 17 55 29.6 +2.6
DBOC Borcka 3.57 33 P Pn 17 54 29.7 +0.8
GULE Gulek 3.59 254 S Sg 17 55 33.7 +5.2
YOZG Bozok Univ. Me 3.64 294 P Pn 17 54 28.9 -1.1

YOZG S Sg 17 55 32.0 +2.0
GOLE Ardahan-G¶le 3.66 46 S Sg 17 55 36.9 +6.5
MCUR KIREHR 3.67 284 P Pn 17 54 29.7 -0.6
MCUR S Sg 17 55 30.4 -0.5
COAL Corum-Alaca 3.72 302 P Pn 17 54 30.5 -0.4
COAL S Sg 17 55 43.5 +11
BOZK Kars-Merkez-Bo 3.73 52 S Sg 17 55 39.4 +6.6
SAMS Samsun-Alacam 3.75 324 P Pb 17 54 35.5 -4.0
SAMS S Sg 17 55 32.0 -1.3
DYDN Diyadin 3.76 70 P Pb 17 54 36.3 -3.6
DYDN S Sg 17 55 36.9 +3.1
BSIR Belisirma, Guz 3.79 270 P Pn 17 54 33.0 +1.0
BSIR S Sg 17 55 44.3 +10
KARS Kars 3.81 52 Pn 17 54 32.8 +0.5
KARS Kars 3.81 52 P Pn 17 54 32.8 +0.5
DIGO Kars 3.89 57 P Pn 17 54 32.2 -1.3
DIGO S Sg 17 55 48.4 +10
AHAN Ardahan-Merkez 3.90 43 P Pn 17 54 36.3 +2.8
CDAG Cicekdag 3.90 290 P Pn 17 54 32.2 -1.3
CDAG S Sg 17 55 41.0 +2.7
KERG Konya-Eregli 4.05 258 P Pn 17 54 35.5 -0.2
KERG S Sb 17 55 37.8 +3.7
KIRS Kirsehir-Merke 4.13 282 ⇑P Pn 17 54 38.2 +1.6
KIRS Kirsehir-Merke 4.13 282 P Pn 17 54 37.1 +0.5
AKPI Kirsehir/Akpin 4.15 288 P Pn 17 54 37.9 +1.1
AKPI S Sg 17 55 51.7 +5.5
IGDI IGDIR 4.15 67 P Pb 17 54 46.1 -0.3
IGDI S Sg 17 55 50.0 +3.8
EAK Akyaka 4.18 55 P Pn 17 54 42.0 +4.6
SUNG orum-Sungurl 4.19 297 P Pn 17 54 40.4 +2.9
SUNG S Sg 17 55 59.1 +11
EPOS Posof 4.19 40 S Sg 17 55 52.5 +4.8
AKSY AKSARAY - Alti 4.21 276 P Pn 17 54 36.3 -1.4
AKSY S Sg 17 55 48.4 +0.3
SRFK ereflkohsa 4.27 278 P Pn 17 54 37.1 -1.4
SRFK S Sg 17 55 55.8 +5.8
DELI KIRIKKALE 4.35 294 P Pn 17 54 37.9 -1.7
DELI S Sg 17 56 04.0 +11
KIZK Mersin 4.38 246 P Pb 17 54 45.3 -4.9
KIZK S Sg 17 55 52.5 -1.0
BR131 Keskin Array S 4.47 289 Pn 17 54 41.3 0.0
BR131 Keskin Array S 4.47 289*c i* P Pn 17 54 41.3 0.0
BR131 Keskin Array S 4.47 289 P Pn 17 54 41.7 +0.4
SNR=76
BR131 S Sn 17 55 34.5 +0.8
BRTR Keskin Array B 4.47 289 Pn Pn 17 54 41.5 +0.1
14nm,0.3s,baz=136,slow=7.0,SNR=259
BRTR Lg Lg 17 55 52.9
baz=105,slow=32
BRTR LR LR 17 56 43.1
comp=Z,18µm,18.4s,baz=90,slow=44
109nm,0.6s
BRTR Keskin Array B 4.47 289 Pn 17 54 41.2 -0.2
BEIL Beino 4.48 213 *e*P Pn 17 54 41.1 -0.2
KESK Krkkale-Ke 4.49 288 P Pn 17 54 42.8 +1.3
KESK S Sg 17 55 59.9 +2.7
KAGI orum-Kargı 4.52 309 P Pn 17 54 36.3 -5.6
KAGI S Sg 17 55 55.8 -2.4
GOKD Ankara-Kalecik 4.70 293 P Pn 17 54 42.8 -1.6
GNI Garni 4.72 66 Pn Pn 17 54 46.1 +1.3
8.9nm,0.3s,baz=293,slow=5.0,SNR=26
GNI Lg Lg 17 56 02.2
1.6nm,0.3s,baz=8.9,slow=20,SNR=3.9
GNI LR LR 17 56 25.0
comp=Z,2µm,18.5s,baz=259,slow=36
25nm,0.5s
GNI Garni 4.72 66 Pn 17 54 45.4 +0.5
GNI Garni 4.72 66 P Pn 17 54 45.9 +1.1
GNI Garni 4.72 66*c e*P Pn 17 54 45.6 +0.8
GNI Garni 4.72 66 P Pn 17 54 46.9 +2.1
GNI S Sb 17 55 47.2 -6.1
KRGN Kargin 4.72 296 P Pn 17 54 43.7 -1.1
HWQ Hawqa 4.81 213 *e*P Pn 17 54 45.5 -0.4
BBAL Bala 4.81 286 P Pn 17 54 46.9 +0.9
ALIN Konya, Altinte 4.90 271 P Pn 17 54 48.6 +1.4
KKUL Konya-Kulu 4.91 281 P Pn 17 54 48.6 +1.3
GULN MERSIN_Gulnar 4.94 246 P Pb 17 54 57.6 -2.3
ILGA Ilgaz 4.95 305 Pn 17 54 48.6 +0.6
ILGA Ilgaz 4.95 305 P Pn 17 54 47.8 -0.3
ILGA S Sg 17 56 15.5 +3.4
KKBE Karaman, Kazim 5.02 259 P Pb 17 55 02.5 +1.3
ZAHL Zahle 5.20 211 *e*P Pn 17 54 50.9 -0.4
SOC Sochi 5.24 5 *e*P Pn 17 54 54.6 +2.9
SOC *e*S Sn 17 55 57.8 +5.4
SOC pmax pmax
comp=Z,189nm,0.8s
SOC MLR MLR
comp=Z,5µm,13.0s
BHL Bhannes 5.25 213 *e*P Pn 17 54 52.0 0.0
BZK Bozkurt 5.31 314 ⇓P Pn 17 54 54.3 +1.6
BZK Bozkurt 5.31 314 Pn 17 54 52.7 0.0
DQRL Deir Qamar 5.46 213 *e*P Pn 17 54 55.8 +0.9
RCY Rachaya 5.53 210 *e*P Pn 17 54 56.9 +1.0
QRWL Qaraoun 5.55 211 *e*P Pn 17 54 56.5 +0.5
NEUR Neytrino 5.60 28⇓*e*P Pn 17 54 58.7 +1.8
CSS Mathiatis 5.75 236 Pn 17 54 58.9 0.0
CSS Mathiatis 5.75 236 P Pn 17 54 59.1 +0.3
NATI Neve Ativ 5.78 209 P Pn 17 55 00.3 +1.2
NATI S Sn 17 56 08.9 +3.2
GEM Giv'at Ha'Em 5.85 210 P Pn 17 55 01.3 +1.1
GEM S Sn 17 56 10.4 +2.8
KSHT Keshet 6.00 208 P Pn 17 55 03.0 +0.8
KSHT S Sn 17 56 12.6 +1.3
SHA1 Shidzhatmaz 6.00 25⇑*e*P Pn 17 55 04.8 +2.3
KBZ Khabaz 6.08 27 Pn Pn 17 55 04.1 +0.9
comp=Z,0.7nm,0.3s,baz=351,slow=5.0,SNR=12
KBZ Lg Lg 17 56 40.2
comp=Z,0.2nm,0.3s,baz=143,slow=12,SNR=1.9
KBZ LR LR 17 57 49.2
comp=Z,10µm,18.9s,baz=218,slow=42
comp=Z,4.7nm,0.6s
KBZ Khabaz 6.08 27⇑*e*P Pn 17 55 04.6 +1.4
MMA0B Mount Meron ar 6.13 211 P Pn 17 55 04.5 +0.5
MMAI Mount Meron Ar 6.13 211 Pn Pn 17 55 04.7 +0.6
comp=Z,16nm,0.3s,baz=32,slow=13,SNR=58
MMAI Lg Lg 17 56 44.4
comp=Z,22nm,0.3s,baz=20,slow=27,SNR=4.3
comp=Z,13nm,0.4s
NCK Nalchik 6.15 32⇓*e*P Pn 17 55 07.2 +2.9
HNTI Hanita 6.16 212 P Pn 17 55 05.5 +1.0
KIV Kislovodsk 6.21 25 Pn 17 55 05.2 +0.1
KIV Kislovodsk 6.21 25 *i* P Pn 17 55 06.4 +1.3
SNR=8.1
KIV Kislovodsk 6.21 25 *e*P Pn 17 55 06.8 +1.7
KIV pmax pmax
comp=Z,47nm,1.1s
KIV MLR MLR
comp=Z,3µm,12.0s
KIV Kislovodsk 6.21 25 P Pn 17 55 07.4 +2.2
KIV P Pn 17 55 07.4 +2.2
KVAR Kislovodsk Arr 6.21 25 Lg Lg 17 56 41.8
baz=226,slow=25
LABN Labinsk 6.39 10 *e*P Pn 17 55 10.7 +3.1
LABN *e*S Sn 17 56 26.0 +5.2
LABN pmax pmax
comp=Z,171nm,0.9s
LABN MLR MLR
comp=N,13µm,13.0s
LABN MLR MLR
comp=E,7µm,11.0s
LABN MLR MLR
comp=Z,6µm,12.0s
ASF Jabal al Asfar 6.43 197 Pn Pn 17 55 08.3 0.0
comp=Z,3.3nm,0.3s,baz=20,slow=5.1,SNR=37
ASF Lg Lg 17 56 50.8
comp=Z,6.7nm,0.3s,baz=316,slow=12,SNR=3.2
comp=Z,69nm,0.9s
BLGI Bet Lehem HaGe 6.46 211 P Pn 17 55 09.8 +1.3
ANN Anapa 6.56 349 *e*P Pn 17 55 11.6 +1.8
ANN *e*S Sn 17 56 26.5 +1.7
ANN pmax pmax
comp=Z,36nm,1.0s
ANN MLR MLR
comp=Z,3µm,10.0s
MMLI Mount Malkishu 6.63 208 P Pn 17 55 12.1 +1.1
OFRI `Ofer 6.64 212 P Pn 17 55 12.4 +1.3
HMDT Nahal Hemdat 6.76 207 P Pn 17 55 13.8 +1.2
SAHE Sakarya_HENDEK 6.84 294 ⇓P Pn 17 55 15.5 +1.7
BORA Eskisehir 6.90 285 Pn 17 55 15.5 +0.9
SLTI Sal'it 6.95 210 P Pn 17 55 17.6 +2.3
SALP Salfit 7.05 208 P Pn 17 55 18.1 +1.4
UJAP Al Uja 7.05 206 P Pn 17 55 18.6 +1.9
GOF Gofitskoye 7.31 22*c e*P Pn 17 55 27.5 +7.3

GOF *e*S Sn 17 56 40.9 -2.5
AKT Akhty 7.32 62 *e*P Pn 17 55 22.8 +2.4
AKT *e*S Sn 17 56 46.8 +3.0
AKT pmax pmax
comp=Z,18nm,0.8s
AKT smax smax
comp=N,17nm,1.0s
AKT MLR MLR
comp=Z,3µm,9.0s
ERBR Yeremizino-Bor 7.42 7 *e*P Pn 17 55 22.9 +1.2
ERBR *e*S Sn 17 56 47.6 +1.5
ERBR pmax pmax
comp=Z,177nm,1.1s
ERBR MLR MLR
comp=E,8µm,13.0s
ERBR MLR MLR
comp=Z,4µm,13.0s
ERBR MLR MLR
comp=N,7µm,12.0s
DSI Dead Sea 7.43 205 P Pn 17 55 22.7 +0.8
SIM Simferopol' 7.57 332 *e*P Pb 17 55 34.3 -10
SIM pmax pmax
comp=Z,32nm,1.0s
GHAJ Ghor Haditha 7.62 204 Pn 17 55 24.6 +0.2
GHAJ Ghor Haditha 7.62 204 P Pn 17 55 24.9 +0.5
YTIR Yattir 7.71 206 P Pn 17 55 26.3 +0.5
MAK Makhachkala 7.86 52*c i* P Pn 17 55 23.6 -4.1
MAK *e*S Sn 17 56 51.0 -5.9
MAK pmax pmax
comp=Z,164nm,1.0s
MAK MLR MLR
comp=Z,10µm,12.0s
MANT Manisa 8.28 274 Pn 17 55 35.0 +1.3
PRNI Paran 8.68 204 P Pn 17 55 39.1 +0.1
PRNI S Sn 17 57 20.2 +3.0
HRFI Mount Harif 8.96 203 P Pn 17 55 44.1 +1.2
KRMI Paran Flat 8.99 205 P Pn 17 55 43.9 +0.6
EIL Elat 9.33 203 Pn Pn 17 55 47.8 -0.2
comp=Z,0.6nm,0.3s,baz=24,slow=12,SNR=5.7
EIL Lg Lg 17 58 22.9
comp=Z,0.8nm,0.3s,baz=71,slow=19,SNR=1.4
EIL LR LR 17 59 44.6
comp=Z,9µm,20.6s,baz=9.5,slow=40
comp=Z,7.6nm,0.7s
EIL Elat 9.33 203 P Pn 17 55 47.7 -0.2
TIRR Tirgusor 10.08 311 ⇓P Pn 17 55 58.4 +0.3
TIRR Tirgusor 10.08 311 P Pn 17 55 58.4 +0.3
TIRR Tirgusor 10.08 311 P Pn 17 55 54.7 -3.4
comp=Z,43nm,0.9s
CFR Carcaliu 10.65 313 ⇑P Pn 17 56 05.9 0.0
CFR Carcaliu 10.65 313 P Pn 17 56 05.9 0.0
RDO Rodhopi 10.81 289 Pn 17 56 09.2 +1.0
ELND Elena 11.04 299 ⇑P Pn 17 56 12.4 +1.1
VARL Varlezi 11.25 316 ⇑P Pn 17 56 14.5 +0.5
ISR Istrita 11.56 310 ⇓P Pn 17 56 19.8 +1.4
ISR Istrita 11.56 310 P Pn 17 56 19.8 +1.4
ISR Istrita 11.56 310 P Pn 17 56 15.0 -3.4
comp=Z,79nm,1.2s
KBD Kabd 11.61 140 P Pn 17 56 19.1 0.0
IDI Anoyia 11.80 259 Pn Pn 17 56 19.8 -2.0
comp=Z,6.1nm,0.6s,baz=81,slow=20,SNR=5.7
IDI Lg Lg 17 59 40.4
comp=Z,0.3nm,0.3s,baz=252,slow=9.4,SNR=1.6
IDI LR LR 18 01 56.6
comp=Z,2µm,18.4s,baz=69,slow=43
VRI Vrincioaia 11.86 313 ⇑P Pn 17 56 23.4 +0.9
VRI Vrincioaia 11.86 313 P Pn 17 56 23.4 +0.9
VRI Vrincioaia 11.86 313 P Pn 17 56 18.5 -4.0
comp=Z,31nm,0.9s
PLOR Plostina 11.89 313 ⇑P Pn 17 56 24.0 +0.9
PLOR Plostina 11.89 313 P Pn 17 56 23.9 +0.9
MLR Muntele Rosu 12.11 310 Pn Pn 17 56 24.7 -1.4
comp=Z,0.3nm,0.3s,baz=68,slow=7.2,SNR=6.4
MLR Lg Lg 17 59 40.1
comp=Z,0.2nm,0.3s,baz=173,slow=13,SNR=1.6
MLR LR LR 18 02 18.4
comp=Z,4µm,20.5s,baz=120,slow=44
comp=Z,8.9nm,1.0s
MLR Muntele Rosu 12.11 310 ⇓P Pn 17 56 27.3 +1.2
MLR Muntele Rosu 12.11 310 Pn 17 56 26.2 +0.1
MLR Muntele Rosu 12.11 310 P Pn 17 56 27.2 +1.2
MLR Muntele Rosu 12.11 310 P Pn 17 56 23.9 -2.2
comp=Z,17nm,0.8s
COVR Voineasa-Covas 12.15 312 ⇑P Pn 17 56 27.0 +0.6
TESR Tescani 12.28 316 ⇑P Pn 17 56 28.7 +0.5
TESR Tescani 12.28 316 P Pn 17 56 24.3 -3.9
comp=Z,26nm,1.4s
ONER Baraj Valea Uz 12.32 314 ⇑P Pn 17 56 29.0 +0.2
TURR Turia 12.37 313 ⇓P Pn 17 56 30.4 +0.9
SORM Soroca 12.52 325 ⇑P Pn 17 56 31.6 +0.1
SORM Soroca 12.52 325 P Pn 17 56 31.5 +0.1
SORM Soroca 12.52 325 P Pn 17 56 27.4 -4.0
comp=Z,18nm,0.6s
VORD Divnogorie 12.61 1 *e*P Pn 17 56 36.1 +3.5
VORD pmax pmax
comp=Z,20nm,0.7s
VOIR 12.63 309 ⇑P Pn 17 56 34.3 +1.2
VOIR 12.63 309 P Pn 17 56 34.3 +1.2
VOIR 12.63 309 P Pn 17 56 29.3 -3.8
comp=Z,42nm,1.1s
DOPR Dopca 12.69 311 ⇑P Pn 17 56 33.8 -0.1
VSR Storozhevoye 12.86 0 *e*P Pn 17 56 39.5 +3.4
VSR *e*S Sn 17 59 04.2 +4.9
VSR pmax pmax
comp=Z,40nm,1.6s
VSR smax smax
comp=E,110nm,1.0s
VSR MLR MLR
comp=Z,2µm,14.0s
VRH Novokhopyorsk 12.97 7 *e*P Pn 17 56 39.3 +1.6
VRH pmax pmax
comp=Z,159nm,1.9s
NDNU Novodnistrovsk 13.30 324 P Pn 17 56 38.2 -3.9
VORR Voronezh 13.31 0 *e*P Pn 17 56 45.1 +2.8
VORR pmax pmax
comp=Z,74nm,1.7s
LOT Lotru 13.43 307 ⇓P Pn 17 56 45.8 +1.7
ITM Ithomi 13.65 270 Pn 17 56 48.5 +1.6
KMPD K-Podol'skiy 13.71 322 P Pn 17 56 43.8 -3.9
KMPD P Pn 17 56 44.0 -3.7
BURAR Bucovina Array 13.73 317 ⇑P Pn 17 56 48.3 +0.1
BURAR Bucovina Array 13.73 317 Pn 17 56 46.9 -1.2
BURAR Bucovina Array 13.73 317 P Pn 17 56 48.2 +0.1
BUR08 Bucovina Ar. S 13.75 317 Pn 17 56 46.3 -2.1
GZR Gura Zlata 14.04 305 ⇑P Pn 17 56 54.1 +1.7
GZR Gura Zlata 14.04 305 P Pn 17 56 54.0 +1.7
HERR Herculane 14.07 303 ⇓P Pn 17 56 54.7 +2.0
AK07 Malin Array Si 14.07 333 P Pn 17 56 49.0 -3.7
AK10 Malin Array Si 14.10 333 P Pn 17 56 49.5 -3.5
AK09 Malin Array Si 14.10 333 P Pn 17 56 49.8 -3.2
AK06 Malin Array Si 14.11 333 P Pn 17 56 50.0 -3.1
LUBAR Lubar, Ukraine 14.12 329 P Pn 17 56 49.5 -3.9
AK08 Malin Array Si 14.13 333 P Pn 17 56 49.4 -4.0
AK05 Malin Array Si 14.13 333 P Pn 17 56 49.2 -4.3
AK02 Malin Array Si 14.16 333 P Pn 17 56 49.9 -4.0
AK12 Malin Array Si 14.17 333 P Pn 17 56 50.7 -3.3
AK13 Malin Array Si 14.18 333 P Pn 17 56 50.1 -4.0
AK01 Malin Array Si 14.19 334 P Pn 17 56 50.5 -3.8
AKASG Malin Array Be 14.19 334 Pn Pn 17 56 51.5 -2.9
comp=Z,1.0nm,0.3s,baz=144,slow=13,SNR=13
AKASG LR LR 18 02 48.9
comp=Z,977nm,21.0s,baz=148,slow=40
comp=Z,0.9nm,0.4s
AKBB Malin Array Si 14.19 334 Pn 17 56 52.4 -1.9
AKBB Malin Array Si 14.19 334⇓*e*P Pn 17 56 53.0 -1.3
AKBB Malin Array Si 14.19 334 P Pn 17 56 50.5 -3.8
KIEV Kiev 14.19 334 Pn 17 56 52.3 -2.0
KIEV Kiev 14.19 334 P Pn 17 56 52.9 -1.4
KIEV Kiev 14.19 334 P Pn 17 56 52.3 -2.0
KIEV Kiev 14.19 334 P Pn 17 56 50.4 -3.9
comp=Z,88nm,1.4s
AK03 Malin Array Si 14.21 334 P Pn 17 56 52.0 -2.6
AK04 Malin Array Si 14.23 333 P Pn 17 56 52.3 -2.5
AK17 Malin Array Si 14.24 333 P Pn 17 56 51.2 -3.7
LPSR Galich'ya Gora 14.24 360 *e*P Pn 17 56 57.2 +2.2
LPSR *e*S Sn 17 59 37.8 +4.7
LPSR pmax pmax
comp=Z,100nm,1.6s
LPSR smax smax
comp=E,80nm,1.6s
LPSR MLR MLR
comp=Z,2µm,13.0s
AK20 Malin Array Si 14.30 333 P Pn 17 56 52.8 -3.0
KBN Korca 14.33 285 P P 17 57 00.5 -3.1

MARR Marisel-Cluj 14.41 310 ⇓P Pn 17 56 58.5 +1.1
MI29 MI29, Kamyanyy 14.47 330 P Pn 17 56 57.2 -1.0
comp=Z,107nm,1.6s
MDVR Moldovita 14.51 302 ⇑P Pn 17 56 59.9 +1.2
RAKU Rahkiv 14.54 316 P Pn 17 56 56.9 -2.2
MI30 MI30,Zelenitsa 14.61 331 P Pn 17 56 55.1 -4.9
comp=Z,25nm,1.3s
MI28 Mi28,Pidlybu 14.95 331 P Pn 17 57 01.0 -3.6
KEK Kerkira 15.07 281 Pn Pn 17 57 04.1 -2.3
KEK IAmb IAmb 17 57 14.4
comp=Z,29nm,0.8s
PVY Plav 15.17 292⇑*i*P P 17 57 10.4 -2.6
BELG Belogornoye 15.24 20 Pn Pn 17 57 07.8 -0.6
comp=Z,0.3nm,0.3s,baz=22,slow=12,SNR=8.2
BELG LR LR 18 03 34.2
comp=Z,2µm,21.8s,baz=225,slow=40
comp=Z,29nm,1.1s
BELG Belogornoye 15.24 20⇓*e*P P 17 57 07.4 -1.0
IVA Berane 15.27 293⇑*i*P P 17 57 11.5 -2.5
SJES Sjenica 15.29 295⇑*i*P Pn 17 57 11.2 +1.9
KOME Kolasin 15.54 293⇑*i*P P 17 57 15.1 -1.9
ULC Ulcinj 15.61 290⇑*i*P P 17 57 16.0 -1.7
PDG Podgorica 15.66 291 P 17 57 16.1 -2.1
PDG Podgorica 15.66 291⇑*i*P P 17 57 16.5 -1.7
PDG Podgorica 15.66 291 *e*P P 17 57 16.9 -1.3
SAKB Bahrain 15.67 139 P Pn 17 57 14.2 -0.1
DRME Dracevica, Mon 15.68 290⇑*i*P P 17 57 16.4 -2.0
DRME Dracevica, Mon 15.68 290 *e*P Pn 17 57 16.2 +1.9
PLE Pljevlja 15.72 295⇑*i*P P 17 57 17.9 -1.1
LVV L'vov 15.73 322 P Pn 17 57 15.8 +0.8
RAYN Ar Rayn 15.77 158 Pn 17 57 13.8 -1.8
RAYN Ar Rayn 15.77 158 P Pn
RAYN pmax pmax
comp=Z,12nm,1.6s
RUDO Rudo 15.79 296 *e*P Pn 17 57 17.5 +1.7
BBLS Lazi&#263i 15.82 297⇑*i*P Pn 17 57 17.5 +1.2
FRGS Fruska Gora 15.90 301⇑*i*P Pn 17 57 18.2 +1.0
BUM Brajici-Budva 15.91 291⇑*i*P P 17 57 19.6 -1.5
CEME Cevo 15.92 292⇑*i*P P 17 57 19.5 -1.7
NKME Niksic 15.93 292⇑*i*P P 17 57 19.7 -1.6
SHMA Al-Shehemyia 15.99 138 P Pn 17 57 17.6 -0.8
SHMA S Sn 18 00 12.2 -3.8
UPM Unac-Piva 16.04 294⇑*i*P P 17 57 21.0 -1.7
UPM Unac-Piva 16.04 294 *e*P Pn 17 57 20.6 +1.4
HCY Herceg Novi 16.22 291⇑*i*P P 17 57 23.2 -1.3
HCY Herceg Novi 16.22 291 *e*P P 17 57 23.6 -0.9
BRY Bratogost 16.25 293⇑*i*P Pn 17 57 23.1 +1.2
BRY Bratogost 16.25 293⇑*i*P P 17 57 24.7 -0.3
KLINJ Klinje 16.27 294 *e*P P 17 57 24.8 -0.3
TREB Trebinje 16.36 292 *e*P Pn 17 57 24.2 +1.1
SMRA Abu-Samra 16.83 140 P Pn 17 57 27.7 -1.4
SMRA S Sn 18 00 33.4 -2.9
OBN Obninsk 16.85 355 Pn Pn 17 57 27.4 -1.8
comp=Z,5.3nm,0.3s,baz=122,slow=3.5,SNR=4.2
OBN LR LR 18 05 00.1
comp=Z,881nm,19.2s,baz=178,slow=41
comp=Z,14nm,0.5s
OBN Obninsk 16.85 355 IAmb IAmb 17 57 32.3
comp=Z,48nm,0.4s
OBN Obninsk 16.85 355 *e*P Pn 17 57 27.3 -1.8
OBN pmax pmax
comp=Z,10.0nm,0.9s
OBN MLR MLR
comp=Z,941nm,14.0s
KECS Kecovo 16.85 313 *e*P P 17 57 34.5 +3.1
KECS Kecovo 16.85 313 *e*P P 17 57 34.5 +3.1
STHS Stebnicka Huta 16.92 317 *e*P P 17 57 35.5 +3.2
STHS Stebnicka Huta 16.92 317 *e*P P 17 57 35.5 +3.2
PSZ Piszkesteto 16.93 311 P P 17 57 31.9 -0.5
MORH Mrgy, Hungar 17.03 304⇑*i*P Pn 17 57 30.4 -1.1
TRNA Turayna 17.03 139 P Pn 17 57 29.2 -2.5
TRNA S Sn 18 00 41.3 +0.1
MOS Moscow 17.41 357 *e*P Pn 17 57 32.6 -3.7
MOS *e*S Sn 18 00 40.5 -10
MOS pmax pmax
comp=Z,32nm,1.0s
MOS MLR MLR
comp=Z,2µm,12.0s
NIE Niedzica 17.44 315 *e*P P 17 57 45.4 +7.4
TIP Timpagrande 17.45 280 IAmb IAmb 17 57 43.0
comp=Z,64nm,1.1s
BLY Banja Luka 17.58 298 *e*P Pn 17 57 38.1 -0.4
LANS Liptovska Anna 17.77 314 *e*P P 17 57 41.8 +0.2
LANS Liptovska Anna 17.77 314 *e*P P 17 57 41.8 +0.2
MNK Minsk 17.87 338 *i*P Pn 17 57 41.2 -0.7
comp=E,5.0nm,0.6s
MNK *i*P Pn 17 57 41.2 -0.7
comp=N,6.0nm,0.7s
MNK *i*P Pn 17 57 41.2 -0.7
comp=Z,9.0nm,0.7s,baz=150
MNK *i*PP PnPn 17 57 51.8 -0.8
MNK *i*S Sn 18 00 60.0 -1.2
MNK *i*SS SnSn 18 01 23.8 +9.2
MNK *i*LQ LQ 18 02 58.0
MNK *i*LR LR 18 04 19.1
MNK *i*LRM MLR 18 06 01.9
comp=E,513nm,12.5s
MNK *i*LRM MLR 18 06 42.8
comp=N,1µm,14.5s
MNK *i*LRM MLR 18 06 45.7
comp=Z,1µm,17.7s
MNK Minsk 17.87 338 *i*P Pn 17 57 41.2 -0.7
MNK *i*S Sn 18 00 59.9 -1.2
MNK pmax pmax
comp=E,5.0nm,0.6s
MNK pmax pmax
comp=N,6.0nm,0.7s
MNK pmax pmax
comp=Z,9.0nm,0.7s
MNK MLR MLR
comp=E,513nm,12.0s
MNK MLR MLR
comp=N,1µm,14.0s
MNK MLR MLR
comp=Z,1µm,18.0s
ACER Acerenza 18.02 285 IAmb IAmb 17 57 48.6
comp=Z,197nm,1.9s
AKTO Aktyubinsk 18.05 42 P Pn 17 57 42.4 -1.9
comp=Z,0.4nm,0.3s,baz=232,slow=12,SNR=33
AKTO LR LR 18 06 10.5
comp=Z,1µm,21.1s,baz=220,slow=42
comp=Z,7.9nm,0.6s
OJC Ojcow 18.15 317 *e*P P 17 57 45.8 0.0
OJC Ojcow 18.15 317 P Pn 17 57 41.7 -3.7
comp=Z,19nm,1.5s
CEL Celeste 18.22 277 Pn 17 57 45.6 -0.8
AB31 Akbulak array 18.50 47 P 17 57 47.8 -1.8
ABKAR Akbulak array 18.50 47 P 17 57 47.7 -2.0
GHWR Ruwais 18.53 137 P P 17 57 49.2 -1.0
GHWR S Sn 18 01 18.8 +1.1
NACGM Naroch 18.54 337 *e*P P 17 57 48.8 -1.2
comp=Z,22nm,0.8s,baz=148
BEL Belsk 18.60 322 *e*P Pn 17 57 51.6 +0.6
KOGS Kog 18.67 303 *e*P Pn 17 57 51.9 +0.1
SMOL Smolenice 18.67 310 *e*P Pn 17 57 53.6 +1.8
JAVC Velka Javorina 18.68 311 *e*P Pn 17 57 52.9 +1.0
MODS Modra-Piesok 18.70 309 *e*P Pn 17 57 53.3 +1.1
MODS Modra-Piesok 18.70 309 *e*P Pn 17 57 53.3 +1.1
MAUC Maruska 18.81 313 *e*P Pn 17 57 54.8 +1.2
OKC Ostrava-Krasne 18.86 314 *e*S S 18 01 30.1 +2.0
OKC AMS AMS 18 06 50.0
comp=Z,1µm,17.0s
SHME Shamm 18.89 126 *i*P P 17 57 52.7 -1.4
SNR=7.6
SHME Shamm 18.89 126 P P 17 57 53.2 -0.9
SNR=7.8
SHME S Sn 18 01 26.1 -0.3
HRA Herat 19.03 95 P 17 57 56.0 +0.2
RONA Rosalia, Austr 19.05 307 *i*P Pn 17 57 57.0 +0.5
comp=Z,34nm,1.3s,SNR=14
SUW Suwalki 19.08 330 *e*P Pn 17 57 58.4 +1.7
SUW Suwalki 19.08 330 P 17 57 55.3 -0.6
SUW Suwalki 19.08 330 P P 17 57 55.3 -0.6
BANOM Banah 19.08 126 P P 17 57 55.8 -0.4
BANOM S Sn 18 01 32.1 +1.1
STEB Steborice 19.12 314 *e*P Pn 17 57 57.6 +0.4
GROS Grobnik 19.17 303 *e*P Pn 17 57 57.5 -0.4
GROS *e*S S 18 01 39.9 +5.3
MORC Moravsky Berou 19.17 313 IAmb IAmb 17 58 02.5
comp=Z,83nm,1.8s
MORC Moravsky Berou 19.17 313 *e*P Pn 17 57 57.7 -0.2
MZWR Madinat Zayed 19.25 135 S Sn 18 01 34.6 -0.3
AJN Ajban 19.26 131 *i*P P 17 57 57.2 -0.9
SNR=9.8
AJN Ajban 19.26 131 P P 17 57 57.6 -0.5
SNR=10
AJN P P 17 57 57.6 -0.5
SNR=10
AJN S Sn 18 01 34.4 -0.8
AJN S Sn 18 01 34.4 -0.8
WINA Alland / Wiene 19.34 308 *i*P Pn 17 58 00.5 +0.6
SNR=14
NAZ Nazwa, Dubai 19.35 129 *i*P P 17 57 58.3 -0.9
SNR=15
NAZ Nazwa, Dubai 19.35 129 P P 17 57 59.0 -0.1
SNR=8.9
NAZ P P 17 57 59.0 -0.1
SNR=8.9
MASF Masafi 19.39 127 P P 17 57 59.2 -0.3
SNR=7.3
MASF S Sn 18 01 36.9 -1.4
ARSA Arzberg 19.39 305 *e*P Pn 17 58 01.5 +0.9
comp=Z,5.2nm,0.8s
MSFE Esma-Masafi 19.39 127 *i*P P 17 57 58.2 -1.4
SNR=14
CONA Conrad Observa 19.41 307 *i*P Pn 17 58 01.0 +0.2
comp=Z,47nm,1.5s,SNR=20
ASUD Al Ashush, Dub 19.42 130 *i*P P 17 57 59.2 -0.7
SNR=7.1
ASUD Al Ashush, Dub 19.42 130 P P 17 58 00.3 +0.4
ASUD P P 17 58 00.3 +0.4
ASUD S Sn 18 01 38.7 -0.4
ASUD S Sn 18 01 38.7 -0.4
FAQ Al Faqa, Dubai 19.49 129 P P 17 58 00.4 -0.2
FAQ Al Faqa, Dubai 19.49 129 P P 17 58 00.8 +0.1
FAQ P P 17 58 00.8 +0.1
FAQ P P 17 58 00.8 +0.1
FAQ S Sn 18 01 39.3 -1.4
FAQ S Sn 18 01 39.3 -1.4
FAQ S Sn 18 01 39.3 -1.4
VAE Valguarnera 19.50 275 P P 17 57 58.9 -1.8
comp=Z,5.2nm,0.6s,baz=86,slow=10,SNR=5.9
VAE LR LR 18 06 01.3
comp=Z,617nm,18.4s,baz=92,slow=38
VRAC Vranov 19.51 311 P P 17 57 59.2 -1.5
comp=Z,0.3nm,0.3s,baz=112,slow=12,SNR=11
VRAC LR LR 18 07 27.1
comp=Z,1µm,18.7s,baz=106,slow=43
comp=Z,8.8nm,0.9s
VRAC Vranov 19.51 311 *e*P Pn 17 58 01.6 -0.3
KRUC Moravsky 19.52 311 *e*P Pn 17 58 01.6 -0.5
MDH Madha 19.52 127 *i*P P 17 58 00.5 -0.6
SNR=6.4
MDH Madha 19.52 127 P P 17 58 00.7 -0.3
SNR=5.7
MDH P P 17 58 00.7 -0.3
SNR=5.7
MDH P P 17 58 00.7 -0.3
SNR=5.7
MDH S Sn 18 01 39.8 -1.8
MDH S Sn 18 01 39.8 -1.8
MDH S Sn 18 01 39.8 -1.8
RAFF Raffo Rosso 19.58 274 P P 17 58 01.8 +0.2
RAFF IAmb IAmb 17 58 12.4
comp=Z,75nm,1.2s
MZR Muzera 19.64 137 *i*P P 17 58 02.0 -0.2
SNR=22
MZR Muzera 19.64 137 P P 17 58 02.3 +0.1
SNR=8.7
CEY Cerknica 19.71 300 *e*P Pn 17 58 03.6 -0.7
UOSS Minazif 19.72 128 P 17 58 01.8 -1.4
UOSS IAmb IAmb 17 58 07.8
comp=Z,50nm,0.8s
UOSS Minazif 19.72 128 *i*P P 17 58 02.5 -0.7
SNR=11
UOSS Minazif 19.72 128 P P 17 58 03.0 -0.1
UOSS P P 17 58 03.0 -0.1
UOSS P P 17 58 03.0 -0.1
UOSS S S 18 01 42.6 -3.2
UOSS S S 18 01 42.6 -3.2
UOSS S S 18 01 42.6 -3.2
KRLC Kraliky 19.75 314 *e*P Pn 17 58 04.3 -0.5
KRLC *e*S Sn 18 01 49.7 +3.0
KRLC MLR MLR
comp=Z,1µm,18.3s
KRLC Kraliky 19.75 314 *e*P Pn 17 58 04.3 -0.5
KRLC *e*S Sn 18 01 49.7 +3.0
KRLC AMS AMS 18 06 10.0
comp=Z,1µm,18.3s
HATD Hatta, Dubai 19.76 128 *i*P P 17 58 03.1 -0.5
SNR=16
HATD Hatta, Dubai 19.76 128 P P 17 58 03.7 +0.1
HATD P P 17 58 03.7 +0.1
HATD S S 18 01 44.7 -1.9
HATD S S 18 01 44.7 -1.9
OBKA Obir 19.82 302 *i*P Pn 17 58 08.1 +2.4
comp=Z,26nm,1.8s,SNR=5.2
ASHO Ashiyiah 19.82 129 *i*P P 17 58 03.5 -0.8
SNR=30
ASHO Ashiyiah 19.82 129 P P 17 58 04.5 +0.2
SNR=13
ASHO P P 17 58 04.5 +0.2
SNR=13
PABE Paberze 19.95 334 P 17 58 05.2 -0.2
AQU L'Aquila 19.96 290 P P 17 58 06.3 +0.5
AQU L'Aquila 19.96 290⇑*i*P P 17 58 06.4 +0.6
GUMA Gualdo di Mace 20.06 292 IAmb IAmb 17 58 22.6
comp=Z,64nm,0.9s
ALNE Al Ain 20.10 130 *i*P P 17 58 07.4 +0.1
SNR=12
ALNE Al Ain 20.10 130 P P 17 58 07.9 +0.6
SNR=20
DPC Dobruska-Polom 20.14 314 *e*P Pn 17 58 08.9 -0.5
DPC *e*S Sn 18 01 56.6 +0.5
DPC Dobruska-Polom 20.14 314 *e*P Pn 17 58 08.9 -0.5
DPC *e*S Sn 18 01 56.6 +0.5
DPC Dobruska-Polom 20.14 314 P P 17 58 04.6 -3.0
comp=Z,19nm,1.2s
JASK Jask - Hormozg 20.14 123 P Pn 17 58 08.8 -0.8
SNR=8.1
JASK S Sn 18 01 57.1 +0.7
TREC Trest 20.16 310 *e*P Pn 17 58 09.2 -0.5
TREC MLR MLR
comp=Z,1µm,17.4s
TREC Trest 20.16 310 *e*P Pn 17 58 09.2 -0.5
TREC AMS AMS 18 07 20.0
comp=Z,2µm,17.4s
NRCA Norcia 20.21 291 IAmb IAmb 17 58 13.8
comp=Z,57nm,1.0s
OSTC Ostas 20.29 314 *e*S Sn 18 02 00.6 +0.8
SABO M.te Sabotino 20.32 300 IAmb IAmb 17 58 19.9
comp=Z,93nm,1.6s
UPC Upice 20.38 314 *e*P Pn 17 58 11.4 -0.9
UPC Upice 20.38 314 *e*P Pn 17 58 11.4 -0.9
MOA Molln 20.39 306 *i*pP Pn 17 58 11.6 -0.8
comp=Z,34nm,1.0s,SNR=16
MYKA Tera Mystica 20.45 302 *i*P Pn 17 58 13.0 -0.2
comp=Z,16nm,0.9s,SNR=12
PRED Cave del Predi 20.46 301 IAmb IAmb 17 58 25.9
comp=Z,78nm,1.8s
SOHO SOHO 20.52 129 *i*P P 17 58 11.8 0.0
SNR=14
SOHO SOHO 20.52 129 P P 17 58 12.6 +0.7
SOHO P P 17 58 12.6 +0.7
CESX Cesi 20.59 290 IAmb IAmb 17 58 17.1
comp=Z,42nm,0.9s
CKRC Cesky Krumlov 20.70 308 *e*P P 17 58 14.4 +0.8
CKRC MLR MLR
comp=Z,2µm,16.6s
CKRC Cesky Krumlov 20.70 308 *e*P P 17 58 14.4 +0.8
CKRC *e*S Sn 18 02 10.6 +1.1
CKRC AMS AMS 18 08 30.0
comp=Z,2µm,16.6s
BIOA Bad Ischl, Aus 20.75 305 *i*pP Pn 17 58 15.3 -1.3
comp=Z,60nm,1.1s,SNR=26
KBA Koelnbreinsper 20.77 303 *i*pP Pn 17 58 15.8 -1.1
comp=Z,48nm,1.1s,SNR=20
UMZA Um Al Zommool 20.79 134 P P 17 58 15.5 +0.8
STAL STALIGIAL 20.99 301 IAmb IAmb 17 58 22.0
comp=Z,38nm,1.1s
ZVC Zvikov 21.00 310 *e*P P 17 58 17.6 +0.7
ZVC AMS AMS 18 08 40.0
comp=Z,1µm,13.9s
PRU Pruhonice 21.00 312 *e*P P 17 58 17.9 +1.0
PRU *e*S Sn 18 02 15.5 -1.4
PRU MLR MLR
comp=Z,2µm,17.2s
PRU Pruhonice 21.00 312 *e*P P 17 58 17.9 +1.0
PRU *e*S Sn 18 02 15.5 -1.4
PRU AMS AMS 18 08 20.0
comp=Z,2µm,17.2s
GEC2 GERESS Array S 21.08 308 *e*P P 17 58 18.0 +0.2
comp=Z,24nm,1.0s,baz=108,slow=9.9
GERES GERESS Array B 21.08 308 P P 17 58 17.8 0.0
comp=Z,11nm,0.9s,baz=118,slow=11,SNR=66
GERES LR LR 18 08 11.9
comp=Z,835nm,18.3s,baz=111,slow=42
comp=Z,11nm,0.9s
PRA Prague 21.10 312 *e*S Sn 18 02 21.6 +2.4
ARQ Araqi 21.11 130 P P 17 58 18.8 +0.5
SNR=26
PVCC Panska Ves 21.22 313 *e*P P 17 58 20.2 +1.0
PVCC MLR MLR
comp=Z,1µm,14.2s
PVCC Panska Ves 21.22 313 *e*P P 17 58 20.2 +1.0
PVCC AMS AMS 18 09 00.0
comp=Z,1µm,14.2s
ABTA Abfaltersbach 21.23 302 *e*pP P 17 58 20.6 +1.1
comp=Z,20nm,1.4s
KHC Kasperske Hory 21.26 309 *e*P P 17 58 20.1 +0.4
KHC *e*S Sn 18 02 21.6 -1.4
KHC MLR MLR
comp=Z,1µm,13.3s
KHC Kasperske Hory 21.26 309 *e*P P 17 58 20.1 +0.4
KHC *e*S Sn 18 02 21.6 -1.4
KHC AMS AMS 18 08 50.0
comp=Z,1µm,13.3s
LESA Schwarzleotal 21.30 304 *i*pP P 17 58 20.7 +0.5
comp=Z,32nm,1.4s,SNR=13
RJOB Jochberg 21.30 305 *e*P P 17 58 20.7 +0.4
comp=Z,16nm,0.9s,baz=108,slow=9.9
KIRV Kirov 21.31 15 P P 17 58 19.3 -0.8
comp=Z,34nm,0.8s,baz=216,slow=9.3,SNR=14
KIRV LR LR 18 07 34.9
comp=Z,2µm,18.3s,baz=204,slow=40
comp=Z,34nm,0.8s
KIRV Kirov 21.31 15⇑*e*P P 17 58 19.1 -1.0
HOQ Hoqain 21.40 128 P P 17 58 21.4 0.0
SNR=15
HOQ P P 17 58 21.4 0.0
SNR=15
RICC Richard 21.50 313 *e*P P 17 58 27.1 +4.9
RICC AMS AMS 18 09 00.0
comp=Z,2µm,14.3s
TEOL Teolo 21.53 298 IAmb IAmb 17 58 27.1
comp=Z,50nm,0.9s
VSU Vasula 21.66 342⇓*e*P P 17 58 23.5 -0.4
VSU pmax pmax
comp=Z,43nm,0.8s
CTI Castel Tesino 21.67 300 IAmb IAmb 17 58 33.5
comp=Z,40nm,1.0s
WET Wettzell 21.69 308 *e*P P 17 58 23.8 -0.6
comp=Z,19nm,1.1s,baz=108,slow=9.9
BRG Berggiesshubel 21.73 313 *e*P P 17 58 24.8 +0.2
comp=Z,36nm,1.7s,baz=108,slow=9.9
ZCCA Zocca 21.89 295 IAmb IAmb 17 58 39.9
comp=Z,45nm,1.0s
HSKC Hora Svate Kat 21.91 312 *e*S S 18 02 33.5 +4.7
HSKC AMS AMS 18 09 10.0
comp=Z,2µm,15.4s
WTTA Wattenberg 21.94 303 *i*pP P 17 58 27.8 +0.6
comp=Z,49nm,1.1s,SNR=18
BIDO Bidbid 21.96 127 P P 17 58 29.1 +1.8
SNR=9.1
BIDO P P 17 58 29.1 +1.8
SNR=9.1
BSY Bisya 21.96 130 P P 17 58 28.2 +0.8
SNR=31
WATA Walderalm 22.00 303 *i*pP P 17 58 28.4 +0.6
comp=Z,54nm,1.1s,SNR=18
ARTI Arti 22.13 29 LR LR 18 08 21.4
comp=Z,1µm,21.7s,baz=214,slow=40
ARTI Arti 22.13 29 P 17 58 27.5 -1.5
ARTI IAmb IAmb 17 58 35.9
comp=Z,46nm,0.8s
ARTI Arti 22.13 29*d*iP P 17 58 27.9 -1.0
ARTI S S 18 02 31.4 -1.5
ARTI pmax pmax
comp=Z,140nm,2.0s
ARTI MLR MLR
comp=Z,1µm,22.0s
SQTA Sankt Quirin 22.21 302 *i*pP pP 17 58 31.5 -0.9
comp=Z,19nm,0.9s,SNR=8.3
SMDO Samad 22.25 128 P P 17 58 30.9 +0.3
SNR=32
SMDO P P 17 58 30.9 +0.3
SNR=32
MOTA Moosalm 22.31 303 *i*pP P 17 58 30.5 -0.7
comp=Z,21nm,0.9s,SNR=11
ROTZ Rotzenmuhle 22.32 309 *e*P P 17 58 32.3 +1.2
comp=Z,11nm,1.0s,baz=108,slow=9.9
NKC Novy Kostel 22.34 311 *e*P P 17 58 33.8 +2.5
NKC MLR MLR
comp=Z,2µm,16.6s
NKC Novy Kostel 22.34 311 *e*P P 17 58 33.8 +2.5
NKC AMS AMS 18 08 50.0
comp=Z,2µm,16.6s
TANN Tannenbergstha 22.40 311 *e*P P 17 58 32.1 +0.1
comp=Z,35nm,1.2s,baz=108,slow=9.9
FUR Furstenfeldbru 22.40 305 *e*P P 17 58 34.1 +2.1
comp=Z,49nm,0.9s,baz=108,slow=9.9
CLL Collm 22.45 314 *e*P P 17 58 32.0 -0.4
CLL *i* 17 58 35.1
CLL *e*S S 18 02 39.0 0.0
CLL Collm 22.45 314 *e*P P 17 58 32.0 -0.4
CLL *i*x x 17 58 35.1
comp=Z,24nm,1.4s
CLL *e*x x 17 58 47.0
comp=Z,32nm,1.3s
CLL *e*PPP PPP 17 58 59.0
CLL *e*x x 17 59 16.0
CLL *e*S S 18 02 39.0 0.0
CLL *e*SSS SSS 18 03 18.0
CLL Collm 22.45 314 P P 17 58 28.6 -3.8
comp=Z,16nm,1.3s
MANZ Manzenberg 22.45 310 *e*P P 17 58 34.2 +1.7
comp=Z,5.0nm,1.0s,baz=108,slow=9.9
WSAR Wadi Sarin 22.48 126 LR LR 18 08 17.5
comp=Z,16nm,20.0s,baz=336,slow=39
FETA Feichten 22.49 302 *i*pP P 17 58 33.8 +0.7
comp=Z,12nm,1.0s,SNR=11
KLMR Klimovskoe 22.52 1 *e*P P 17 58 31.5 -1.6
KLMR S S 18 02 38.7 -1.4
KLMR pmax pmax
comp=Z,156nm,1.5s
KLMR MLR MLR
comp=Z,2µm,13.0s
RETA Reutte 22.57 303 *i*pP P 17 58 34.4 +0.5
comp=Z,8.9nm,0.7s,SNR=5.7
NGCH Negor - Chabah 22.69 118 P P 17 58 37.5 +2.3
FUORN Ofenpass-Fuorn 22.72 301 IAmb IAmb 17 58 45.5
comp=Z,38nm,1.1s
JMDO Jabal Madar 22.79 129 P P 17 58 37.6 +1.3
SNR=9.0
SHAA Shahritus 22.85 83 P 17 58 35.6 -1.3
SHAA IAmb IAmb 17 58 55.2
comp=Z,82nm,1.2s
GRF Grafenberg Arr 22.89 309 *e*P P 17 58 38.0 +0.8
comp=Z,61nm,1.0s,baz=108,slow=9.9
GRF *e*L L 18 09 08.9
comp=Z,798nm,18.3s
GRFO Grafenberg 22.89 309 P P 17 58 37.2 0.0
GRFO Grafenberg 22.89 309 P P 17 58 37.2 0.0
GRFO pmax pmax
comp=Z,55nm,1.0s
MOX Moxa 22.99 311 *e*P P 17 58 38.0 -0.2
comp=Z,18nm,1.1s,baz=108,slow=9.9
MOX *e*L L 18 09 39.4
comp=Z,1µm,18.7s
DAVOX Davos/Dischmat 23.01 301 LR LR 18 09 08.7
comp=Z,2µm,18.1s,baz=90,slow=41
UBR Ueberruh 23.05 303 *e*P P 17 58 38.6 -0.2
comp=Z,29nm,1.1s,baz=108,slow=9.9
DAVA Damuels 23.11 302 *i*pP P 17 58 39.5 -0.1
comp=Z,30nm,0.8s,SNR=19
TUE Stuetta 23.32 300 IAmb IAmb 17 58 57.1
comp=Z,25nm,1.1s
SVE Sverdlovsk 23.32 31 *e*P P 17 58 41.3 -0.2
SVE *e*S S 18 02 55.0 +0.8
SVE pmax pmax
comp=Z,95nm,1.4s
SVE MLR MLR
comp=Z,1µm,13.0s
CHGR Chuyangaron 23.47 80 IAmb IAmb 17 59 01.6
comp=Z,46nm,1.1s
CHGR Chuyangaron 23.47 80⇓*e*P P 17 58 44.5 +1.2

CHGR pmax pmax
comp=Z,49nm,1.8s
BRLS Borolday 23.69 69 *e*P **P 17 58 44.7 -0.6**
BRLS pmax pmax
comp=Z,38nm,2.1s
MHTO MHTO 23.76 131 P **P 17 58 46.8 +0.8**
SNR=11
MHTO P **P 17 58 46.8 +0.8**
SNR=11
JLN Jalan Bani Buh 23.76 127 P **P 17 58 46.2 +0.1**
JLN P **P 17 58 46.2 +0.1**
IUG Iuzhnay 23.83 71 *e*P **P 17 58 46.5 -0.3**
IUG pmax pmax
comp=Z,66nm,1.8s
KEST Kesra 23.85 273 P **P 17 58 46.8 -0.2**
comp=Z,32nm,0.8s,baz=109,slow=1.0,SNR=31
KEST LR LR 18 10 37.3
comp=Z,818nm,18.5s,baz=86,slow=43
comp=Z,32nm,0.8s
KEST Kesra 23.85 273 **P 17 58 47.1 +0.1**
KEST Kesra 23.85 273 P **P 17 58 48.4 +1.3**
SNR=11
KEST P **P 17 58 48.4 +1.3**
SNR=11
WHFO Wadi Hawf 24.06 144 P **P 17 58 48.8 -0.2**
KK31 Karatay Array 24.18 69 **P 17 58 50.2 +0.2**
KK31 Karatay Array 24.18 69 P **P 17 58 50.2 +0.2**
KK31 pmax pmax
comp=Z,87nm,1.4s
KKAR Karatay Array 24.18 69 **P 17 58 49.4 -0.6**
KKAR Karatay Array 24.18 69 P **P 17 58 49.4 -0.6**
KBL Kabul 24.33 90 P **P 17 58 53.9 +2.3**
SNR=9.4
ABTO Aybut 24.34 145 P **P 17 58 52.0 +0.4**
SNR=6.5
BFO Black Forest 24.35 304 P **P 17 58 49.6 -1.9**
BFO IAmb IAmb 17 59 00.8
comp=Z,26nm,1.2s
BFO Black Forest 24.35 304 P **P 17 58 49.6 -1.9**
BFO pmax pmax
comp=Z,26nm,1.2s
BFO Black Forest 24.35 304 *e*P **P 17 58 52.7 +1.1**
comp=Z,25nm,1.2s,baz=108,slow=9.9
FINES FINESS Array B 24.49 345 P **P 17 58 52.6 0.0**
comp=Z,6.2nm,0.8s,baz=157,slow=9.7,SNR=18
FINES LR LR 18 10 38.1
comp=Z,1µm,19.6s,baz=154,slow=42
comp=Z,6.2nm,0.8s
FINES FINESS Array B 24.49 345 P **P 17 58 54.2 +1.7**
FINES FINESS Array B 24.49 345 P **P 17 58 54.2 +1.7**
BTK Batken 24.56 76 IAmb IAmb 17 59 13.3
comp=Z,40nm,1.3s
RBK Rabkut 24.62 143 P **P 17 58 54.7 +0.5**
TNS Taunus Mts 24.76 309 *e*P **P 17 58 55.0 -0.2**
comp=Z,36nm,1.4s,baz=108,slow=9.9
DMTO DMTO 24.80 142 P **P 17 58 56.2 +0.6**
BNI Bardonecchia 25.00 296 **P 17 58 56.7 -0.8**
BNI IAmb IAmb 17 59 01.4
comp=Z,36nm,1.1s
BNI Bardonecchia 25.00 296 P **P 17 58 56.7 -0.8**
BNI pmax pmax
comp=Z,36nm,1.1s
KASTN Kahler Asten 25.08 311 *e*P **P 17 58 58.6 +0.5**
comp=Z,84nm,1.6s,baz=108,slow=9.9
RETH Rethem/Aller, 25.09 315 *e*P **P 17 58 58.5 +0.6**
comp=Z,55nm,1.8s,baz=108,slow=9.9
DRK Karamyk 25.39 77 IAmb IAmb 17 59 32.1
comp=Z,27nm,1.2s
BORK Borovoye 26.02 45 **P 17 59 06.2 -0.3**
BORK Borovoye 26.02 45⇑ *e*P **P 17 59 07.1 +0.6**
BORK pmax pmax
comp=Z,29nm,1.7s
WLF Walferdange 26.05 306 P **P 17 59 07.5 +0.7**
WLF Walferdange 26.05 306 IAmb IAmb 17 59 11.7
comp=Z,21nm,1.1s
WLF Walferdange 26.05 306 *d*P **P 17 59 06.4 -0.4**
comp=Z,11nm,1.2s
WLF Walferdange 26.05 306 *e*P **P 17 59 06.5 -0.3**
comp=Z,22nm,1.1s,baz=108,slow=9.9
BVAR Borovoye Array 26.05 46 P **P 17 59 06.8 0.0**
comp=Z,4.6nm,0.7s,baz=245,slow=6.4,SNR=27
BVAR LR LR 18 11 02.6
comp=Z,1µm,21.4s,baz=251,slow=40
comp=Z,4.6nm,0.7s
BTNL Ternell 26.29 308 *d*P **P 17 59 11.2 +2.2**
MEM Membach 26.37 308 *d*P **P 17 59 11.0 +1.4**
SSB Saint Sauveur 26.52 296 IAmb IAmb 17 59 33.1
comp=Z,42nm,1.7s
RCHB Rochefort 26.74 307 *d*P **P 17 59 11.9 -1.2**
RCHB *dx* x 17 59 33.8
BTLS Baital 26.78 64 *e*P **P 17 59 11.7 -1.7**
ATD Arta Tunnel 26.93 172 LR LR 18 10 10.7
comp=Z,97nm,18.3s,baz=354,slow=37
HFS Hagfors 27.07 332 P **P 17 59 14.2 -1.7**
comp=Z,3.7nm,0.8s,baz=152,slow=6.7,SNR=13
HFS LR LR 18 12 27.7
comp=Z,2µm,19.1s,baz=134,slow=42
comp=Z,3.7nm,0.8s
AAK Ala-Archa 27.12 70 LR LR 18 10 50.4
comp=Z,1µm,22.0s,baz=287,slow=38
AAK Ala-Archa 27.12 70 **P 17 59 17.8 +1.1**
AAK Ala-Archa 27.12 70 *i* P **P 17 59 17.1 +0.4**
SNR=11
AAK Ala-Archa 27.12 70⇓ *e*P **P 17 59 18.3 +1.6**
AAK pmax pmax
comp=Z,21nm,1.7s
AAK Ala-Archa 27.12 70 P **P 17 59 18.5 +1.8**
DOU Dourbes 27.13 307 *d*P **P 17 59 17.7 +1.2**
FRU1 Bishkek 27.21 69 IAmb IAmb 17 59 43.5
comp=Z,28nm,0.9s
ETOS Mallorca 28.10 284 P **P 17 59 27.2 +1.8**
BOOM Boomskoye usch 28.19 70 IAmb IAmb 18 00 22.9
comp=Z,16nm,1.2s
KSH2 Kashi 28.32 77 P **P 17 59 29.8 +2.2**
KSH2 S **S 18 04 15.0 +0.6**
KSH2 pmax pmax
comp=Z,6.0nm,2.1s
KSH2 L L
comp=Z,1µm,18.2s
KSH2 L L
comp=Z,700nm,15.1s
KSH2 L L
comp=Z,970nm,17.9s
CORI Orista 28.41 289 IAmb IAmb 17 59 32.8
comp=Z,28nm,1.2s
NOA NORSAR Array B 28.59 332 P **P 17 59 27.9 -1.7**
comp=Z,2.0nm,1.0s,baz=126,slow=9.0,SNR=5.7
NOA LR LR 18 13 24.0
comp=Z,2µm,18.4s,baz=140,slow=42
comp=Z,2.0nm,1.0s
KDJ Kajisay 29.14 70 P **P 17 59 33.1 -1.7**
KDJ Kajisay 29.14 70 P **P 17 59 33.1 -1.7**
KDJ pmax pmax
comp=Z,10.0nm,1.0s
FURI Furi 29.34 181 LR LR 18 10 05.9
comp=Z,935nm,20.1s,baz=3.5,slow=34
APA Apatity 29.43 356⇓ *e*P **P 17 59 37.8 +0.9**
APA *e* 18 00 28.9
APA pmax pmax
comp=Z,10.0nm,1.1s
APA MLR MLR
comp=Z,1µm,14.9s
TARG Taragay, Kyrgy 29.65 71 P **P 17 59 36.6 -2.9**
TARG Taragay, Kyrgy 29.65 71 P **P 17 59 36.7 -2.9**
TARG pmax pmax
comp=Z,9.0nm,1.2s
KURBB Kurchatov Arra 30.31 53 P **P 17 59 45.0 +0.1**
comp=Z,18nm,0.8s,baz=266,slow=9.1,SNR=89
KURBB PcP **PcP 18 02 44.8 -0.1**
comp=Z,5.8nm,1.1s,baz=266,slow=3.0,SNR=8.8
KURBB LR LR 18 13 58.7
comp=Z,1µm,18.7s,baz=314,slow=40
comp=Z,18nm,0.8s
KURK Kurchatov 30.39 53 **PcP 18 02 44.8 -0.3**
KURK Kurchatov 30.39 53 **P 17 59 45.4 -0.1**
KURK Kurchatov 30.39 53 *d* *i*P **P 17 59 46.5 +1.0**
KURK pmax pmax
comp=Z,28nm,0.9s
KURK Kurchatov 30.39 53 P **P 17 59 47.2 +1.8**
KURK P **P 17 59 47.2 +1.8**
SHLS Shalkode 30.73 68 *e*P **P 17 59 51.3 +2.5**
WUS Wushi 30.77 72 P **P 17 59 50.2 +1.0**
WUS IAmb IAmb 17 59 54.8
comp=Z,19nm,1.2s
ECHE Chera 31.00 285 P **P 17 59 53.5 +2.3**
EMUR La Murta 31.58 282 P **P 17 59 57.2 +1.0**

ETOB Tobarra 31.64 283 P **P 17 59 57.8 +1.0**
ARCES ARCESS Array B 32.08 351 P **P 17 59 58.9 -1.4**
comp=Z,3.7nm,0.7s,baz=153,slow=8.2,SNR=6.7
ARCES LR LR 18 14 12.3
comp=Z,908nm,21.6s,baz=152,slow=39
comp=Z,3.7nm,0.7s
MAKZ Makanchi 32.33 61 **P 18 00 01.8 -0.9**
MAKZ IAmb IAmb 18 00 06.6
comp=Z,9.4nm,0.8s
MAKZ Makanchi 32.33 61 P **P 18 00 01.8 -0.9**
MAKZ pmax pmax
comp=Z,9.0nm,0.8s
ENIJ Nijar 32.54 281 P **P 18 00 05.4 +0.7**
MK31 Makanchi Array 32.55 61 *de*P **P 18 00 05.7 +1.0**
MKAR Makanchi Array 32.55 61 P **P 18 00 05.8 +1.2**
comp=Z,12nm,0.8s,baz=271,slow=7.3,SNR=68
MKAR PcP **PcP 18 02 51.2 +0.1**
comp=Z,1.8nm,0.8s,baz=256,slow=3.5,SNR=3.8
MKAR LR LR 18 14 47.6
comp=Z,893nm,19.6s,baz=260,slow=39
comp=Z,12nm,0.8s
MKAR Makanchi Array 32.55 61 **P 18 00 04.9 +0.3**
MKAR Makanchi Array 32.55 61 P **P 18 00 04.9 +0.3**
MKAR 18 02 51.2
UCM Universidad Co 32.59 287 P **P 18 00 06.6 +1.5**
TAM Tamanrasset 32.60 251 **P 18 00 03.4 -2.1**
TAM Tamanrasset 32.60 251 P **P 18 00 03.4 -2.1**
EKA Eskdalemuir Ar 32.90 315 P **P 18 00 06.7 -0.9**
comp=Z,1.7nm,0.6s,baz=104,slow=8.8,SNR=7.7
EKA LR LR 18 15 16.4
comp=Z,946nm,21.8s,baz=110,slow=40
comp=Z,1.7nm,0.6s
EBER Berja 33.09 281 P **P 18 00 11.8 +2.1**
ESDC Sonseca Array 33.26 286 P **P 18 00 09.8 -1.2**
comp=Z,2.6nm,0.7s,baz=66,slow=9.3,SNR=19
ESDC LR LR 18 14 08.9
comp=Z,434nm,21.9s,baz=96,slow=37
comp=Z,2.6nm,0.7s
EMAL Malaga-Limoner 34.32 281 P **P 18 00 20.3 +0.2**
ZALV Zalesovo Beam 34.61 48 P **P 18 00 22.5 0.0**
comp=Z,2.7nm,0.7s,baz=258,slow=8.3,SNR=13
ZALV LR LR 18 15 28.1
comp=Z,855nm,20.0s,baz=260,slow=38
comp=Z,2.7nm,0.7s
ZALV Zalesovo Beam 34.61 48 **P 18 00 19.8 -2.7**
LODK Lodwar 34.94 187 **P 18 00 24.8 -0.9**
LODK Lodwar 34.94 187 P **P 18 00 25.2 -0.5**
MDT Midelt 35.73 275 LR LR 18 16 28.2
comp=Z,153nm,19.1s,baz=78,slow=39
MD01 Midelt array s 35.83 275 P **P 18 00 31.1 -2.3**
IFR Ifrane 35.88 276 P **P 18 00 35.2 +1.4**
DGZ Jazzator, Alta 35.96 56⇑ *e*P **P 18 00 35.2 +0.9**
DGZ pmax pmax
comp=Z,15nm,0.8s
WMQ Urumqi 36.60 66 *e*P **P 18 00 41.0 +1.3**
WMQ sP sP 18 00 46.8 +3.4
WMQ pmax pmax
comp=Z,21nm,0.9s
WMQ pmax pmax
comp=Z,170nm,3.7s
WMQ L L
comp=Z,2µm,16.3s
WMQ L L
comp=Z,730nm,19.3s
WMQ L L
comp=Z,630nm,20.7s
TIO Tiouine 38.54 273 P **P 18 00 57.1 +0.7**
KMBO Kilima Mbogo 39.33 183 P **P 18 01 02.5 -0.7**
baz=27,slow=4.5
KMBO LR LR 18 15 48.4
comp=Z,338nm,21.2s,baz=324,slow=34
KMBO Kilima Mbogo 39.33 183⇓ *e*P **P 18 01 04.4 +1.2**
MBAR Mbarara 39.53 193 LR LR 18 17 39.3
comp=Z,954nm,18.4s,baz=11,slow=37
MBAR Mbarara 39.53 193 P **P 18 01 04.1 -0.7**
MBAR Mbarara 39.53 193⇑ *i*P **P 18 01 05.2 +0.4**
MBAR pmax pmax
comp=Z,10.0nm,1.1s
MBAR Mbarara 39.53 193 P **P 18 01 04.5 -0.3**
HYB Hyderabad 40.23 110 *e*P **P 18 01 11.0 +0.5**
NRIK Noril'sk 40.28 24 P **P 18 01 10.1 -0.2**
comp=Z,8.3nm,0.9s,baz=246,slow=7.9,SNR=17
NRIK LR LR 18 19 56.1
comp=Z,744nm,20.5s,baz=235,slow=39
comp=Z,8.3nm,0.9s
NRIK Noril'sk 40.28 24 P **P 18 01 09.9 -0.4**
NRIK Noril'sk 40.28 24 *de*P **P 18 01 11.1 +0.8**
NRIK pmax pmax
comp=Z,10.0nm,1.0s
KIBK Kibwezi 40.51 182 P **P 18 01 13.2 +0.4**
KIBK Kibwezi 40.51 182 **P 18 01 12.3 -0.5**
EVN Everest 40.87 90 **P 18 01 13.7 -2.8**
SPITS Spitsbergen Ar 41.04 353 P **P 18 01 15.8 -0.7**
comp=Z,5.9nm,0.7s,baz=145,slow=9.2,SNR=6.2
comp=Z,5.9nm,0.7s
TORD Torodi Ar. Bea 41.59 243 P **P 18 01 20.9 -0.8**
comp=Z,2.8nm,1.0s,baz=58,slow=5.1,SNR=9.3
TORD LR LR 18 21 11.5
comp=Z,284nm,20.9s,baz=25,slow=40
comp=Z,2.8nm,1.0s
TORD Torodi Ar. Bea 41.59 243 **P 18 01 20.2 -1.4**
KNGR Kungurtug, Tuv 42.38 54⇑ *i*P **P 18 01 29.7 +1.8**
KNGR pmax pmax
comp=Z,16nm,0.8s
GOMU GeErMu 43.80 75 P **P 18 01 41.5 +1.5**
GOMU S **S 18 08 12.9 +1.6**
GOMU pmax pmax
comp=Z,8.0nm,0.8s
GOMU L L
comp=Z,360nm,13.2s
GOMU L L
comp=Z,540nm,16.6s
GOMU L L
comp=Z,580nm,18.4s
MOY Mondy 44.42 52 *e*P **P 18 01 46.0 +1.6**
MOY pmax pmax
comp=Z,26nm,2.5s
SCO Scoresbysund 44.77 335 *i* P **P 18 01 51.0 +4.2**
SCO IAmb IAmb 18 01 52.0
comp=Z,4.9nm,1.0s
DBG Daneborg 45.26 341 *i* P **P 18 01 52.9 +2.2**
DBG IAmb IAmb 18 01 53.8
comp=Z,32nm,1.8s
DAG Danmarks Havn 45.73 344 *i* P **P 18 01 55.6 +1.3**
DAG IAmb IAmb 18 02 02.4
comp=Z,8.1nm,1.0s
SHL Shillong 45.99 90 P **P 18 01 55.1 -2.1**
SHL Shillong 45.99 90 P **P 18 01 55.1 -2.1**
SHL pmax pmax
comp=Z,21nm,0.3s
TLY Talaya 46.05 51 LR LR 18 21 29.1
comp=Z,436nm,20.4s,baz=280,slow=36
TLY Talaya 46.05 51 P **P 18 01 58.4 +1.2**
TLY IAmb IAmb 18 02 07.0
comp=Z,15nm,1.2s
TLY Talaya 46.05 51 *de*P **P 18 01 58.6 +1.4**
TLY pmax pmax
comp=Z,6.0nm,1.1s
TLY Talaya 46.05 51 P **P 18 02 00.0 +2.8**
ZAK Zakamensk 46.05 53 *e*P **P 18 01 58.6 +1.3**
ZAK pmax pmax
comp=Z,10.0nm,1.6s
IRK Irkutsk 46.34 50 *e*P **P 18 01 56.2 -3.2**
IRK *e* 18 03 37.7
IRK pmax pmax
comp=Z,40nm,2.3s
GTA2 Gaotai 46.40 69 *e*P **P 18 02 01.4 +1.1**
GTA2 sP sP 18 02 08.5 +4.5
GTA2 pmax pmax
comp=Z,7.0nm,0.7s
GTA2 L L
comp=Z,590nm,14.9s
GTA2 L L
comp=Z,670nm,13.3s
GTA2 L L
comp=Z,500nm,16.5s
BRDH Bariadhala 47.27 94 LR LR 18 25 55.8
comp=Z,657nm,18.5s,baz=306,slow=41
NOR Nord 47.44 350 *i* P **P 18 02 08.3 +0.6**
NOR IAmb IAmb 18 02 15.2
comp=Z,4.0nm,0.9s
MALK Mahakanadarawa 47.72 118 P **P 18 02 11.3 +0.7**
SONM Songino Array 48.61 56 P **P 18 02 18.3 +1.0**
comp=Z,3.7nm,0.7s,baz=282,slow=8.5,SNR=22
SONM PcP **PcP 18 03 43.7 +0.8**
comp=Z,2.3nm,0.9s,baz=258,slow=4.0,SNR=5.3

SONM LR LR 18 25 08.8
comp=Z,2µm,18.8s,baz=292,slow=39
comp=Z,3.7nm,0.7s
SONM Songino Array 48.61 56 P **P 18 02 18.0 +0.6**
PALK Pallekele 48.62 119 LR LR 18 24 35.2
comp=Z,501nm,19.6s,baz=318,slow=38
PALK Pallekele 48.62 119⇑ *i*P **P 18 02 18.2 +0.5**
PALK pmax pmax
comp=Z,8.0nm,0.9s
PALK Pallekele 48.62 119 P **P 18 02 18.5 +0.9**
PALK P **P 18 02 18.5 +0.9**
PALK P **P 18 02 18.6 +0.9**
PALK P **P 18 02 18.6 +0.9**
ULN Ulaanbaatar 49.03 56 P **P 18 02 21.2 +0.6**
ULN IAmb IAmb 18 02 27.2
comp=Z,11nm,0.8s
ULN Ulaanbaatar 49.03 56 *de*P **P 18 02 21.6 +1.0**
ULN pmax pmax
comp=Z,9.0nm,0.7s
ULN Ulaanbaatar 49.03 56 P **P 18 02 22.8 +2.2**
ULN P **P 18 02 22.8 +2.2**
ULN Ulaanbaatar 49.03 56 P **P 18 02 20.2 -0.4**
comp=Z,1µmcomp=Z,59nm,1.3s
SUMG Summit 50.18 337 P **P 18 02 29.5 +0.2**
SUMG Summit 50.18 337 P **P 18 02 27.6 -1.7**
SUMG IAmb IAmb 18 02 38.4
comp=Z,20nm,1.3s
SUMG Summit 50.18 337 P **P 18 02 27.6 -1.7**
SUMG pmax pmax
comp=Z,20nm,1.3s
SUMG Summit 50.18 337 *i* P **P 18 02 33.1 +3.7**
SUMG IAmb IAmb 18 02 38.7
comp=Z,22nm,1.2s
LZDM Lanzhou Array 50.58 72 P **P 18 02 32.8 0.0**
comp=Z,2.8nm,0.4s,baz=298,slow=3.2,SNR=3.8
comp=Z,2.8nm,0.4s
LZH Lanzhou 50.64 71 *e*P **P 18 02 33.3 +0.3**
LZH sP sP 18 02 40.3 +3.6
LZH pmax pmax
comp=Z,18nm,1.6s
LZH L L
comp=Z,730nm,16.5s
LZH L L
comp=Z,720nm,16.2s
LZH L L
comp=Z,820nm,17.1s
DBIC Dimbokro 50.70 243 P **P 18 02 32.2 -1.3**
comp=Z,4.2nm,0.8s,baz=108,slow=4.5,SNR=3.4
DBIC LR LR 18 29 02.2
comp=Z,479nm,19.8s,baz=56,slow=42
comp=Z,4.2nm,0.8s
DBIC Dimbokro 50.70 243 IAmb IAmb 18 04 06.5
comp=Z,14nm,1.2s
BOD Bodaibo 50.82 42 *e*P **P 18 02 33.2 -0.7**
BOD pmax pmax
comp=Z,26nm,1.5s
TNCH TengChong 51.47 87 P **P 18 02 39.8 +0.4**
TNCH ScP **ScP 18 07 51.1 +0.4**
TNCH S **S 18 09 59.1 -0.9**
TNCH ScS **ScS 18 12 28.3 -2.4**
TNCH pmax pmax
comp=Z,9.0nm,0.4s
TNCH L L
comp=Z,210nm,15.6s
TNCH L L
comp=Z,260nm,17.6s
TNCH L L
comp=Z,650nm,18.7s
CD2 Chengdu 52.76 77 P **P 18 02 49.3 +0.5**
CD2 pmax pmax
comp=Z,20nm,0.7s
NEEM North Greenlan 52.95 344 *i* P **P 18 02 50.3 +0.5**
NEEM IAmb IAmb 18 02 56.1
comp=Z,13nm,1.2s
BTO2 Baotou 53.23 64 *e*P **P 18 02 52.5 +0.2**
BTO2 pP **sP 18 02 58.9 +2.9**
BTO2 PP **PP 18 04 56.5 +4.4**
BTO2 S **S 18 10 26.1 +2.4**
BTO2 pmax pmax
comp=Z,16nm,0.8s
BTO2 pmax pmax
comp=Z,340nm,4.0s
BTO2 L L
comp=Z,2µm,17.5s
BTO2 L L
comp=Z,1µm,13.6s
BTO2 L L
comp=Z,860nm,19.8s
PZH PanZhiHua 53.26 83 P **P 18 02 53.8 +1.2**
PZH pmax pmax
comp=Z,10.0nm,1.2s
LSZ Lusaka 54.33 193 LR LR 18 26 48.2
comp=Z,1µm,18.6s,baz=18,slow=37
LSZ Lusaka 54.33 193 **P 18 03 00.3 0.0**
LSZ IAmb IAmb 18 03 03.1
comp=Z,21nm,1.4s
LSZ Lusaka 54.33 193 P **P 18 03 00.3 0.0**
LSZ pmax pmax
comp=Z,21nm,1.4s
LSZ Lusaka 54.33 193 P **P 18 03 01.1 +0.7**
HHC Hu-ho-hao-te 54.38 63 *e*P **P 18 02 59.0 -1.6**
HHC S **S 18 10 33.9 -5.3**
HHC pmax pmax
comp=Z,11nm,0.6s
HHC pmax pmax
comp=Z,87nm,5.0s
HHC L L
comp=Z,560nm,15.3s
HHC L L
comp=Z,530nm,15.6s
HHC L L
comp=Z,500nm,17.0s
HHC Hu-ho-hao-te 54.38 63 *e*P **P 18 03 01.6 +1.0**
HHC pmax pmax
comp=Z,12nm,0.6s
HHC pmax pmax
comp=Z,87nm,4.9s
HHC LR LR
comp=N,560nm,15.3s
HHC LR LR
comp=E,530nm,17.0s
HHC LR LR
comp=Z,490nm,16.2s
CHTO Chiang Mai 55.09 93 **P 18 03 04.7 -1.2**
CHTO Chiang Mai 55.09 93 P **P 18 03 04.7 -1.2**
CHTO pmax pmax
comp=Z,31nm,1.9s
CHTO Chiang Mai 55.09 93 P **P 18 03 07.9 +2.0**
CHTO P **P 18 03 07.9 +2.0**
CHTO Chiang Mai 55.09 93 P **P 18 03 04.0 -1.9**
comp=Z,7.8nm,1.4s
DGAR Diego Garcia 55.10 138 P **P 18 03 08.2 +2.3**
SFJD Kangerlussuaq 55.27 331 LR LR 18 28 39.2
comp=Z,190nm,18.9s,baz=77,slow=38
XAN Xi'an 55.27 71⇓ P **P 18 03 08.8 +1.7**
XAN pP sP 18 03 13.5 +2.7
XAN S **S 18 10 56.0 +4.7**
XAN pmax pmax
comp=Z,12nm,1.0s
XAN pmax pmax
comp=Z,190nm,3.9s
XAN L L
comp=Z,830nm,18.0s
XAN L L
comp=Z,750nm,22.5s
XAN L L
comp=Z,880nm,13.7s
CM31 Chiang Mai Arr 55.29 93 P **P 18 03 06.8 -0.6**
CM31 IAmb IAmb 18 03 27.5
comp=Z,13nm,1.4s
CMAR Chiang Mai Arr 55.29 93 P **P 18 03 06.2 -1.1**
comp=Z,2.4nm,0.7s,baz=298,slow=7.8,SNR=14
CMAR LR LR 18 32 19.6
comp=Z,201nm,20.8s,baz=310,slow=42
comp=Z,2.4nm,0.7s
CMAR Chiang Mai Arr 55.29 93 **P 18 03 05.2 -2.1**
YAK Yakutsk 57.23 34 LR LR 18 32 16.8
comp=Z,1µm,18.7s,baz=282,slow=41
YAK Yakutsk 57.23 34 *e*P **P 18 03 18.9 -1.6**
YAK *e**PP **sP 18 03 27.4 +3.2**
YAK *e* 18 04 13.4
YAK *e* 18 05 23.1
YAK *e*S **S 18 11 15.3 -0.9**
YAK *e**SS sS 18 11 30.2 +10
YAK *e*SS **SS 18 15 05.3 +0.7**
YAK *e*SSS SSS 18 17 25.3

YAK pmax pmax
comp=N,4.0nm,1.5s
YAK pmax pmax
comp=Z,10.0nm,0.9s
YAK pmax pmax
comp=E,4.0nm,1.2s
YAK pmax pmax
comp=Z,138nm,4.8s
YAK pmax pmax
comp=N,97nm,4.2s
YAK pmax pmax
comp=E,244nm,5.7s
YAK smax smax
comp=E,131nm,6.1s
YAK smax smax
comp=N,105nm,4.3s
YAK MLR MLR
comp=Z,1µm,23.0s
YAK MLR MLR
comp=N,339nm,24.0s
ENH Enshi 57.43 75 P **P** **18 03 21.3 -1.2**
BJI2 Beijing 57.92 62 P **P** **18 03 27.3 +1.5**
BJI2 pmax pmax
comp=N,2.0nm,0.9s
BJI2 L L
comp=N,590nm,18.8s
BJI2 L L
comp=N,330nm,17.5s
BJI2 L L
comp=N,300nm,22.7s
HNS HongShan 58.03 65 ⇓P **P** **18 03 29.3 +2.7**
HNS pmax pmax
comp=N,5.0nm,1.0s
HNS L L
comp=N,630nm,20.6s
HNS L L
comp=N,340nm,20.6s
HNS L L
comp=N,410nm,16.5s
ZEA Zeya 59.18 44 *e*P **P** **18 03 36.4 +2.0**
ZEA MLR MLR
comp=E,200nm,16.0s
ZEA MLR MLR
comp=Z,400nm,16.0s
VOI Vohitsoka 60.38 172 P **P** **18 03 44.8 +1.8**
TSUM Tsumeb 60.72 203 LR LR 18 30 28.4
comp=Z,1µm,20.3s,baz=16,slow=36
HEH HeiHe 60.74 47 *e*P **P** **18 03 45.8 +0.7**
HEH pmax pmax
comp=Z,11nm,0.9s
HEH L L
comp=Z,1µm,21.2s
HEH L L
comp=Z,710nm,18.9s
HEH L L
comp=Z,750nm,22.6s
KHWEE **KHWEE 61.34 194** P **P** **18 03 49.4 -0.1**
BNX BinXian 62.77 52 ⇑P **P** **18 03 54.5 -4.4**
BNX pmax pmax
comp=Z,11nm,2.1s
KGCAE **Kacgae 62.92 198** **P** **18 04 01.2 +1.1**
RES Resolute Bay 63.21 348 LR LR 18 33 30.6
comp=Z,174nm,18.6s,baz=19,slow=38
FRB Frobisher Bay 63.42 332 LR LR 18 31 24.7
comp=Z,200nm,21.9s,baz=65,slow=36
QIZ Qiongzhong 63.53 86 P **P** **18 04 04.0 -0.3**
QIZ S **S** **18 12 38.4 +0.1**
QIZ L L
comp=Z,190nm,12.8s
QIZ L L
comp=Z,180nm,9.4s
QIZ L L
comp=Z,200nm,16.7s
NJ2 Nanjing 63.56 69 *e*P **P** **18 04 04.6 +0.3**
NJ2 pmax pmax
comp=Z,24nm,0.7s
KLR Kul'dur 63.71 47 LR LR 18 36 31.1
comp=Z,662nm,18.7s,baz=299,slow=40
KLR Kul'dur 63.71 47⇑ *e*P **P** **18 04 05.0 0.0**
KLR pmax pmax
comp=Z,18nm,2.5s
ILON Igloolik, Nuna 64.23 340 **P** **18 04 07.5 -0.7**
ILON IAmb IAmb 18 04 18.0
comp=Z,11nm,1.1s
LBTB Lobatse 64.30 194 LR LR 18 32 33.4
comp=Z,720nm,18.4s,baz=17,slow=36
LBTB Lobatse 64.30 194 P **P** **18 04 09.8 +0.6**
LBTB Lobatse 64.30 194 P **P** **18 04 09.8 +0.6**
LBTB pmax pmax
comp=Z,26nm,1.7s
PSI Prapat 64.86 108 P **P** **18 04 11.5 -1.7**
PSI pmax pmax
comp=Z,10.0nm,0.5s
RPSI Rantau Prapat 64.93 108 P **P** **18 04 11.5 -2.0**
SEY Seymchan 65.95 27⇑ *e*P **P** **18 04 21.0 +1.6**
SEY pmax pmax
comp=Z,10.0nm,0.9s
USRK Ussuriysk Ar. 66.36 52 P **P** **18 04 22.4 +0.1**
comp=Z,2.2nm,0.8s,baz=300,slow=4.6,SNR=3.2
comp=Z,2.2nm,0.8s
BILL Bilibino 66.80 19 **P** **18 04 24.6 -0.2**
BILL Bilibino 66.80 19⇓ *e*P **P** **18 04 25.3 +0.5**
BILL pmax pmax
comp=Z,32nm,2.7s
KSRS Korea Array 67.22 60 P **P** **18 04 27.9 0.0**
comp=Z,8.0nm,0.9s,baz=285,slow=5.1,SNR=14
KSRS LR LR 18 37 15.9
comp=Z,739nm,18.1s,baz=300,slow=39
comp=Z,8.0nm,0.9s
SCHQ Schefferville 67.72 323 P **P** **18 04 29.6 -1.3**
comp=Z,7.8nm,1.1s,baz=253,slow=15,SNR=7.0
SCHQ LR LR 18 34 10.6
comp=Z,175nm,21.7s,baz=34,slow=36
comp=Z,7.8nm,1.1s
SCHQ Schefferville 67.72 323 **P** **18 04 28.7 -2.2**
BOSA Boshof 67.87 193 P **P** **18 04 31.2 -0.9**
comp=Z,3.4nm,0.9s,baz=354,slow=7.2,SNR=4.3
BOSA LR LR 18 35 18.2
comp=Z,851nm,18.1s,baz=22,slow=37
comp=Z,3.4nm,0.9s
TYV Tymovskoe 68.81 41 *e*P P 18 04 48.6 +11
TYV pmax pmax
comp=Z,7.0nm,1.6s
TYV pmax pmax
comp=Z,100nm,3.3s
A36M Sachs Harbour 69.40 355 **P** **18 04 42.0 +1.0**
A36M IAmb IAmb 18 05 07.0
comp=Z,8.1nm,0.9s
B22K Teshekpuk Lake 71.23 4 IAmb IAmb 18 05 15.9
comp=Z,14nm,1.2s
B20K Meade River 71.29 6 IAmb IAmb 18 05 01.5
comp=Z,9.7nm,1.1s
JNU Nakatsue 71.59 62 LR LR 18 41 02.4
comp=Z,305nm,18.1s,baz=316,slow=40
B21K Ikpikpuk River 71.86 5 IAmb IAmb 18 05 05.0
comp=Z,6.8nm,1.1s
C36M Paulatuk 71.89 354 P **P** **18 04 56.0 -0.2**
C18K Utukok River 72.24 8 IAmb IAmb 18 05 06.4
comp=Z,11nm,0.9s
C27K Jago River 72.31 1 IAmb IAmb 18 05 02.5
comp=Z,25nm,1.9s
SUR Sutherland 72.41 196 LR LR 18 37 19.9
comp=Z,580nm,19.1s,baz=13,slow=36
SUR Sutherland 72.41 196 P **P** **18 05 01.4 +1.5**
D25K Kavik River 72.56 2 IAmb IAmb 18 05 04.4
comp=Z,7.9nm,1.1s
D20K Etivluk River 72.60 6 P **P** **18 04 59.5 -1.1**
D20K IAmb IAmb 18 05 12.6
comp=Z,20nm,1.8s
ASAJ Asahikawa 72.74 47 LR LR 18 42 17.8
comp=Z,512nm,19.0s,baz=314,slow=40
D23K Nanushuk River 72.74 4 IAmb IAmb 18 05 24.6
comp=Z,8.3nm,1.1s
E18K Tukpahlearik C 73.48 8 IAmb IAmb 18 05 14.0
comp=Z,9.3nm,1.1s
INK Inuvik 73.51 357 LR LR 18 42 41.5
comp=Z,184nm,19.2s,baz=21,slow=40
INK Inuvik 73.51 357 IAmb IAmb 18 05 27.9
comp=Z,14nm,1.6s
D62A Allapoint, All 73.52 317 **P** **18 05 05.7 -0.6**
D62A IAmb IAmb 18 05 15.4
comp=Z,14nm,1.0s
E29M Blow River 73.55 359 IAmb IAmb 18 05 29.2
comp=Z,14nm,1.2s
COCO West Island 73.69 121 P **P** **18 05 09.7 +2.0**
E24K Your Creek 73.73 3 IAmb IAmb 18 05 10.8
comp=Z,28nm,2.0s

E27K Coleen River 73.77 0 IAmb IAmb 18 05 17.6
comp=Z,13nm,1.4s
E25K Arctic Village 73.78 2 IAmb IAmb 18 05 11.7
comp=Z,7.3nm,1.1s
F26K Sheenjek River 74.24 1 IAmb IAmb 18 05 45.7
comp=Z,11nm,1.6s
F31M Tsiigehtchic 74.38 357 IAmb IAmb 18 05 19.7
comp=Z,11nm,1.2s
PETK Petropavlovsk- 74.56 33 P **P** **18 05 11.9 -0.4**
comp=Z,7.3nm,1.0s,baz=64,slow=3.4,SNR=5.3
PETK LR LR 18 41 01.8
comp=Z,424nm,19.9s,baz=314,slow=38
comp=Z,7.3nm,1.0s
MJAR Matsushiro Arr 74.56 56 P **P** **18 05 13.7 +1.0**
comp=Z,3.4nm,1.0s,baz=330,slow=7.2,SNR=4.3
MJAR LR LR 18 40 51.7
comp=Z,470nm,20.1s,baz=316,slow=38
comp=Z,3.4nm,1.0s
MJAR Matsushiro Arr 74.56 56 IAmb IAmb 18 05 23.1
comp=Z,9.7nm,1.2s
G26K Porcupine Rive 74.99 1 IAmb IAmb 18 05 18.6
comp=Z,16nm,1.6s
G21K Allakaket 75.00 5 IAmb IAmb 18 05 18.8
comp=Z,9.7nm,1.2s
TGY Tagaytay City 75.05 84 LR LR 18 43 34.4
comp=Z,96nm,18.2s,baz=277,slow=40
G27K Doyon Strip 75.16 0 IAmb IAmb 18 05 26.9
comp=Z,23nm,1.8s
G18K Tagagawik 75.17 7 IAmb IAmb 18 05 19.0
comp=Z,13nm,1.4s
FCC Fort Churchill 75.70 337 IAmb IAmb 18 05 29.3
comp=Z,8.1nm,1.0s
H27K Steamboat Moun 75.74 0 IAmb IAmb 18 05 23.6
comp=Z,13nm,1.4s
H22K Ishtalitna Cre 75.76 4 IAmb IAmb 18 05 32.6
comp=Z,9.1nm,1.3s
H21K Melozitna Rive 75.90 5 IAmb IAmb 18 05 24.2
comp=Z,13nm,1.4s
H23K Yukon River 75.93 4 IAmb IAmb 18 05 29.3
comp=Z,10nm,1.4s
CGJI Cibinong 76.13 110 P **P** **18 05 19.7 -2.2**
I21K Tanana 76.43 5 IAmb IAmb 18 05 31.7
comp=Z,7.1nm,1.1s
I28M Miner Creek 76.52 360 IAmb IAmb 18 05 26.3
comp=Z,23nm,1.9s
I29M Ogilvie Camp, 76.59 359 IAmb IAmb 18 06 27.3
comp=Z,6.0nm,0.8s
I30M Mount Dempster 76.69 358 IAmb IAmb 18 05 47.8
comp=Z,7.4nm,1.0s
COLA College 76.96 3*c e*P **P** **18 05 26.7 +0.9**
COLA pmax pmax
comp=Z,16nm,1.8s
ILAR Eielson Array 77.10 3 P **P** **18 05 26.2 -0.4**
comp=Z,2.2nm,1.2s,baz=325,slow=3.3,SNR=6.9
ILAR LR LR 18 46 32.1
comp=Z,102nm,18.4s,baz=3.5,slow=41
comp=Z,2.2nm,1.2s
CCB Clear Creek Bu 77.19 3 P **P** **18 05 24.6 -2.5**
CCB IAmb IAmb 18 05 29.6
comp=Z,20nm,1.6s
YKA Yellowknife Ar 77.28 348 P **P** **18 05 27.5 -0.1**
comp=Z,2.1nm,1.0s,baz=14,slow=6.3,SNR=13
YKA LR LR 18 41 35.1
comp=Z,213nm,19.9s,baz=334,slow=37
comp=Z,2.1nm,1.0s
J19K Poorman 77.32 7 IAmb IAmb 18 05 36.7
comp=Z,9.1nm,1.2s
J30M Hart River 77.34 358 IAmb IAmb 18 05 37.7
comp=Z,19nm,1.6s
JHJ Hachijo jima 2 77.65 58 LR LR 18 43 52.2
comp=Z,438nm,19.2s,baz=94,slow=39
LEM Lembang 77.70 109 LR LR 18 41 58.5
comp=Z,295nm,19.3s,baz=298,slow=37
SCRK Sand Creek 77.97 1 **P** **18 05 31.3 -0.4**
SCRK IAmb IAmb 18 05 35.8
comp=Z,7.3nm,1.1s
MCK McKinley 78.05 4 IAmb IAmb 18 05 51.5
comp=Z,10.0nm,1.2s
K29M Barlow Dome 78.10 358 IAmb IAmb 18 05 41.1
comp=Z,23nm,1.8s
KTH Kantishna Hill 78.11 5 IAmb IAmb 18 06 14.6
comp=Z,8.1nm,1.1s
BBJI Bungbulang 78.14 109 **P** **18 05 31.8 -1.5**
BBJI IAmb IAmb 18 05 34.9
comp=Z,14nm,1.0s
BBJI Bungbulang 78.14 109 P **P** **18 05 31.4 -1.9**
comp=Z,14nm,1.1s
RIDG Independent Ri 78.19 2 IAmb IAmb 18 05 36.5
comp=Z,9.1nm,1.1s
RND Reindeer 78.38 4 IAmb IAmb 18 05 44.7
comp=Z,14nm,1.3s
L29M L29M 78.85 359 IAmb IAmb 18 06 25.9
comp=Z,14nm,1.5s
SADO Sadowa 80.29 320 LR LR 18 43 20.2
comp=Z,330nm,18.1s,baz=91,slow=37
KLU Klutina 80.41 2 IAmb IAmb 18 05 58.0
comp=Z,16nm,1.4s
N19K Bonanza Creek 80.55 7 IAmb IAmb 18 05 54.5
comp=Z,17nm,1.2s
SHEM Shemya Is, Ala 81.22 26 LR LR 18 47 06.3
comp=Z,346nm,18.3s,baz=288,slow=40
FFC Flin Flon 81.45 338 **P** **18 05 49.9 -0.7**
FFC Flin Flon 81.45 338 P **P** **18 05 49.9 -0.7**
FFC pmax pmax
comp=Z,7.0nm,1.3s
DAV Davao City (W) 82.90 87 LR LR 18 47 12.5
comp=Z,205nm,18.5s,baz=338,slow=39
DLBC Dease Lake 83.13 354 LR LR 18 47 17.5
comp=Z,175nm,18.7s,baz=357,slow=39
ULM Lac du Bonnet 83.28 333 P **P** **18 05 58.8 -1.4**
comp=Z,2.1nm,0.8s,baz=64,slow=3.1,SNR=3.9
ULM LR LR 18 44 37.7
comp=Z,210nm,19.0s,baz=14,slow=37
comp=Z,2.1nm,0.8s
ULM Lac du Bonnet 83.28 333⇑ *e*P **P** **18 06 00.1 -0.1**
KDAK Kodiak Island 83.72 6 LR LR 18 47 07.0
comp=Z,112nm,19.3s,baz=352,slow=38
KAPI Kappang 85.77 100 P **P** **18 06 13.3 0.0**
comp=Z,5.1nm,0.3s,baz=292,slow=18,SNR=2.4
KAPI LR LR 18 48 33.9
comp=Z,88nm,20.0s,baz=262,slow=38
comp=Z,5.1nm,0.3s
KAPI Kappang 85.77 100 IAmb IAmb 18 06 15.8
comp=Z,11nm,1.0s
KAPI Kappang 85.77 100⇓ *e*P **P** **18 06 14.9 +1.5**
KAPI pmax pmax
comp=Z,10.0nm,1.0s
KAPI Kappang 85.77 100 P **P** **18 06 13.4 0.0**
MDP Montagnes des 88.24 275 LR LR 18 45 13.1
comp=Z,108nm,20.9s,baz=119,slow=35
BBB Bella Bella 89.14 352 LR LR 18 48 38.0
comp=Z,130nm,20.8s,baz=15,slow=37
TKL Tuckaleechee C 89.36 317 LR LR 18 48 20.2
comp=Z,162nm,19.6s,baz=52,slow=37
SJG San Juan 90.33 293 LR LR 18 43 12.8
comp=Z,72nm,22.0s,baz=78,slow=33
NEW Newport 91.20 344 LR LR 18 50 26.1
comp=Z,147nm,18.8s,baz=18,slow=38
NEW Newport 91.20 344 IAmb IAmb 18 06 42.9
comp=Z,7.9nm,1.1s
BATI Baumata 92.03 101 LR LR 18 55 30.5
comp=Z,115nm,18.0s,baz=293,slow=40
SIJI Sorong 92.23 89 LR LR 18 53 57.0
comp=Z,69nm,19.7s,baz=242,slow=39
PDAR Pinedale Array 94.38 337 P **P** **18 06 53.7 -0.1**
comp=Z,0.2nm,0.7s,baz=56,slow=3.7,SNR=3.8
PDAR LR LR 18 52 06.4
comp=Z,145nm,18.4s,baz=14,slow=37
comp=Z,0.2nm,0.7s
BMO Blue Mountains 94.48 343 IAmb IAmb 18 07 16.3
comp=Z,9.7nm,1.7s
BDFB Brasilia 97.33 256 LR LR 18 53 56.1
comp=Z,222nm,18.4s,baz=65,slow=37
FITZ Fitzroy Crossi 98.37 106 P **P** **18 07 11.2 -0.6**
comp=Z,2.8nm,1.1s,baz=6.3,slow=18,SNR=2.6
FITZ LR LR 18 56 38.0
comp=Z,97nm,18.4s,baz=316,slow=38
comp=Z,2.8nm,1.1s
YBH Yreka Blue Hor 98.58 346 LR LR 18 56 20.9
comp=Z,9.4nm,18.2s,baz=23,slow=38
SDV Santo Domingo 99.65 289 LR LR 18 50 06.6
comp=Z,87nm,19.4s,baz=72,slow=34
NVL N'lazarevskaya 110.58 189 *i* PKIKP **PKiKP** **18 12 03.4 -1.7**
NVL *e* 18 12 39.8
NVL *e*PPP PPP 18 14 59.5
NVL *e* 18 19 14.2
NVL *e*SS SS 18 28 09.4 -1.5
NVL *e*SSS SSS 18 32 17.1
NVL pmax pmax
comp=Z,22nm,1.7s
NVL MLR MLR
comp=Z,507nm,19.0s
QSPA South Pole Qui 128.19 180 PKP **PKPdf** **18 12 38.5 -0.5**
comp=Z,2.1nm,1.0s,baz=200,slow=0.8,SNR=5.3
TBI Tubuai 163.34 29 *e*LR LR 19 09 11.7
comp=Z,984nm,27.8s

*UPP **19** 18:01:55.9±0.1, 67.05N×20.96E, h0km, ML2.0, Suspected explosion*
*HEL **19** 18:01:56.2±0.3, 67.05N×20.79E, h0km, ML1.9, Explosion*
*IDC **19** 18:01:57.2±1.1, 66.99N×21.25E, h0km, mbtmp3.3/4, ML2.0/3, Error ellipse: s-maj=22.4km s-min=9.9km az=99.0*

ISC 19 18:01:55.6±0.8, **67.03N**±0.02×**20.94E**±0.03, **h0km, n36, σ0s 93/49, Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.17**	**303**	P	**Pg**	**18 01 59.4**	**+0.5**
DUNU				S	**Sg**	**18 02 01.7**	**+0.6**
MASU	**Masugnsbyn**	**0.60**	**43**	P	**Pg**	**18 02 06.9**	**-0.2**
MASU				S	**Sg**	**18 02 15.1**	**+0.3**
ERTU	**Ertsjaerv**	**0.69**	**133**	P	**Pg**	**18 02 09.0**	**+0.2**
ERTU				S	**Sg**	**18 02 18.1**	**+0.4**
ERTU	**Ertsjaerv**	**0.69**	**133**	*e*P	**Pg**	**18 02 08.8**	**0.0**
ERTU				*e*S	**Sb**	**18 02 20.5**	**0.0**
HARU	**Harads**	**0.87**	**179**	P	**Pg**	**18 02 12.4**	**+0.2**
RATU	**Laukkuluspa**	**0.95**	**328**	P	**Pg**	**18 02 13.3**	**-0.5**
RATU				S	**Sg**	**18 02 26.1**	**0.0**
KUA	**Kurravaara** baz=182	**0.96**	**346**	P	**Pg**	**18 02 13.3**	**-0.6**
KUA				S	**Sg**	**18 02 26.3**	**0.0**
LANU	**Lannavaara**	**1.10**	**21**	P	**Pg**	**18 02 16.0**	**-0.7**
LANU	**Lannavaara**	**1.10**	**21**	*e*P	**Pg**	**18 02 15.6**	**-1.1**
NIKU	**Nikkaluokta**	**1.12**	**320**	P	**Pg**	**18 02 16.4**	**-0.6**
KLF	**Kolari**	**1.20**	**79**	*e*P	**Pg**	**18 02 18.2**	**-0.4**
KLF				*e*S	**Sg**	**18 02 34.4**	**+0.2**
KLF				smax	smax	18 02 40.3	
	comp=Z,5.9nm,0.2s						
KOVU	**Salmi**	**1.23**	**346**	P	**Pg**	**18 02 18.3**	**-1.0**
KALU	**Kalix**	**1.53**	**139**	P	**Pn**	**18 02 24.1**	**+0.1**
SJUU	**Sjulsmark**	**1.55**	**170**	P	**Pn**	**18 02 24.6**	**+0.1**
TOF	**Tornio**	**1.66**	**124**	*e*P	**Pn**	**18 02 26.2**	**+0.3**
TOF				*e*S	**Sb**	**18 02 48.5**	**+0.1**
HEF	**Hetta**	**1.73**	**36**	*e*P	**Pn**	**18 02 27.2**	**+0.2**
HEF	**Hetta**	**1.73**	**36**	*e*P	**Pn**	**18 02 26.9**	**-0.1**
HEF				smax	smax	18 02 40.8	
	comp=Z,8.2nm,0.2s						
HEF				*e*S	**Sn**	**18 02 49.7**	**0.0**
KIF	**Kilpisjarvi**	**1.98**	**359**	*e*P	**Pb**	**18 02 32.8**	**+0.3**
KIF	**Kilpisjarvi**	**1.98**	**359**	*e*PG	**Pb**	**18 02 32.4**	**-0.1**
KIF				smax	smax	18 02 49.1	
	comp=Z,17nm,0.2s						
RNF	**Rovaniemi**	**2.05**	**100**	*e*P	**Pb**	**18 02 32.5**	**-1.2**
RNF				*e*S	**Sb**	**18 02 59.8**	**+0.1**
KTK1	**Kautokeino**	**2.17**	**22**	*e*PG	**Pb**	**18 02 34.9**	**-0.8**
I37NO	**I37NO**	**2.23**	**338**	I	I	18 16 15.0	
	baz=153,slow=328,SNR=3.6						
RANF	**Ranua**	**2.56**	**111**	*e*P	**Pn**	**18 02 39.5**	**+1.2**
TRO	**Tromso**	**2.72**	**345**	*e*SB	**Sb**	**18 03 17.0**	**-1.9**
OUL	**Oulu**	**2.81**	**132**	*e*P	**Pb**	**18 02 44.6**	**-2.0**
ARA0	**ARCESS Array S**	**3.04**	**32**	*e*P	**Pn**	**18 02 46.1**	**+1.3**
ARCES	**ARCESS Array B**	**3.04**	**32**	Pn	**Pn**	**18 02 45.6**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=212,slow=16,SNR=21						
ARCES				Sn	**Sn**	**18 03 23.6**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=210,slow=25,SNR=2.3						
	comp=Z,3.7nm,0.9s						
RAJF	**Raja-Jooseppi**	**3.16**	**59**	*e*PB	**Pb**	**18 02 50.9**	**-1.7**
VRF	**Varrio**	**3.43**	**74**	*e*PG	**Pg**	**18 03 00.8**	**-0.5**
VRF				smax	smax	18 03 38.9	
	comp=Z,2.6nm,0.2s						
VRF				*e*SB	**Sb**	**18 03 40.8**	**+1.5**
MSF	**Maaselka**	**3.44**	**105**	*e*PG	**Pg**	**18 03 01.3**	**-0.1**
MSF				*e*SB	**Sb**	**18 03 40.3**	**+0.6**
OLKF	**Oulanka, Finla**	**3.44**	**98**	*e*P	**Pn**	**18 02 51.7**	**+1.3**
KEV	**Kevo**	**3.54**	**37**	*e*P	**Pn**	**18 02 53.7**	**+1.9**
KUK	**Riekki**	**3.72**	**102**	*e*PG	**Pg**	**18 03 06.1**	**-0.8**
KUK				*e*		18 03 57.2	
FINES	**FINESS Array B**	**6.04**	**156**	Pn	**Pn**	**18 03 28.0**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=345,slow=13,SNR=1.2						
FINES				Sn	**Sn**	**18 04 34.5**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=344,slow=22,SNR=1.6						
	comp=Z,1.3nm,0.8s						
HFS	**Hagfors**	**7.63**	**208**	Pn	**Pn**	**18 03 46.9**	**-1.0**
	comp=Z,1.5nm,0.8s,baz=27,slow=13,SNR=1.0						
SPITS	**Spitsbergen Ar** baz=170,slow=14	**11.29**	**355**	Pn	**Pn**	**18 04 38.6**	**+0.7**
	comp=Z,3.8nm,0.9s						

*ISK **19** 18:05:38.9, 38.38N×39.10E, h5km, ML3.3/14*
*AFAD **19** 18:05:38.9, 38.40N×39.09E, h15km±1km, ML3.6*

ISC 19 18:05:38.9±0.8, **38.39N**±0.03×**39.09E**±0.02, **h9km**±5km, **n33, σ0s 78/44, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESGZ	**Sivrice-Elazig**	**0.05**	**333**	Pg	**Pg**	**18 05 41.1**	**+0.1**
ESGZ				Sg	**Sg**	**18 05 42.3**	**-0.1**
MDYL	**Doganyol-Malat**	**0.08**	**209**	Pg	**Pg**	**18 05 41.2**	**0.0**
MDYL				Sg	**Sg**	**18 05 42.7**	**-0.2**
ELZG	**Elazig**	**0.14**	**323**	P	**Pg**	**18 05 42.9**	**+0.8**
ELZG				IAML		18 05 45.0	
	comp=N,3µm,0.3s						
ELZG				S	**Sg**	**18 05 45.0**	**+0.7**
SVRC	**Sivrice-ELAZID**	**0.17**	**93**	Pg	**Pg**	**18 05 42.3**	**-0.3**
ESIJ	**Sivrice-Elazig**	**0.18**	**70**	Pg	**Pg**	**18 05 43.1**	**+0.3**
ESIJ				Sg	**Sg**	**18 05 45.9**	**+0.4**
ELZ	**Elazig**	**0.32**	**17**	P	**Pg**	**18 05 45.5**	**+0.2**
ELZ				S	**Sg**	**18 05 50.4**	**+0.9**
ELZ				IAML		18 05 51.0	
	comp=N,5µm,0.3s						
MDNT	**Maden**	**0.47**	**89**	P	**Pn**	**18 05 50.6**	**-1.3**
MDNT				S	**Sb**	**18 05 57.2**	**+0.8**
MAYA	**Malatya/Merkez**	**0.53**	**263**	P	**Pg**	**18 05 49.3**	**+0.1**
MAYA				S	**Sb**	**18 05 57.4**	**-0.9**
MAYA				IAML		18 05 58.0	
	comp=N,7µm,0.3s						
NARI	**Adyaman-Kaht**	**0.56**	**207**	P	**Pb**	**18 05 50.6**	**-0.5**
KOVA	**Elazig, Kovanc**	**0.65**	**60**	P	**Pg**	**18 05 51.3**	**-0.2**
KAHTU	**Kahta**	**0.69**	**213**	P	**Pb**	**18 05 53.0**	**-0.3**
MCKZ	**Bingol**	**0.74**	**353**	P	**Pg**	**18 05 52.8**	**-0.4**
HANM	**anlurfa/Hi**	**0.82**	**192**	P	**Pb**	**18 05 55.2**	**-0.3**
AZEY	**Adyaman-Merk**	**0.88**	**229**	P	**Pb**	**18 05 56.6**	**+0.1**
ARPR	**Arapgir-MALATY**	**0.92**	**320**	Pg	**Pb**	**18 05 57.0**	**-0.2**
ARPR				Sg	**Sb**	**18 06 10.2**	**+0.6**
AKCD	**Akcadag**	**0.92**	**265**	P	**Pg**	**18 05 56.6**	**-0.1**
AKCD				S	**Sg**	**18 06 09.0**	**+0.3**
AKCD				IAML		18 06 11.0	
	comp=E,2µm,0.4s						
DYBB	**Diyarbakir**	**0.93**	**117**	Pg	**Pb**	**18 05 57.3**	**-0.1**
DIYA	**Diyarbakir**	**0.94**	**119**	P	**Pn**	**18 06 00.3**	**+1.9**
HEKM	**Malatya_Hekimh**	**1.01**	**299**	P	**Pg**	**18 05 58.3**	**-0.1**
MAYK		**1.06**	**70**	P	**Pg**	**18 05 58.9**	**-0.3**
ATAB	**Bozova**	**1.11**	**215**	P	**Pn**	**18 06 00.5**	**-0.2**
ATAB				S	**Sb**	**18 06 15.3**	**+0.4**
ATAB				IAML		18 06 19.0	
	comp=E,2µm,0.5s						
ILIC	**ilic-Erzincan**	**1.14**	**339**	Pn	**Pb**	**18 06 00.6**	**-0.3**
MDIV		**1.24**	**319**	P	**Pn**	**18 06 01.7**	**-1.0**
MDIV				S	**Sn**	**18 06 21.1**	**+1.6**
MDIV				IAML		18 06 26.0	
	comp=E,518nm,0.6s						
ERZN	**Erzincan**	**1.29**	**22**	Pn	**Pg**	**18 06 04.2**	**+0.4**
BNGB	**Bingl**	**1.38**	**64**	Pn	**Pb**	**18 06 05.1**	**0.0**
YEDI	**Yedisu-Bingol**	**1.54**	**47**	Pn	**Pb**	**18 06 07.7**	**-0.2**
SVAN	**Silvan-Diyarba**	**1.68**	**97**	Pn	**Pb**	**18 06 09.4**	**-0.6**
KARO	**Karliova-Bingo**	**1.79**	**58**	Pn	**Pb**	**18 06 11.2**	**-0.8**
KHMN	**Narli-Kahraman**	**1.82**	**238**	Pn	**Pb**	**18 06 11.6**	**-0.9**
GAZ	**Gaziantep**	**1.92**	**231**	Pn	**Pb**	**18 06 13.3**	**-0.9**
KMRS	**Kahramanmaras**	**1.94**	**244**	Pn	**Pb**	**18 06 13.6**	**-1.0**
BAYT	**Aydıntepe-Bayb**	**2.16**	**22**	Pn	**Pb**	**18 06 16.7**	**-1.7**
GURO	**Guroymak-BITLI**	**2.31**	**85**	Pn	**Pb**	**18 06 19.0**	**-2.0**

*IDC **19** 18:08:25.0±2.4, 11.01S×115.47E, h0km, mb3.2/5, mbtmp3.3/6, ML2.6/1, Error ellipse: s-maj=132.4km s-min=21.9km az=46.0*

ISC 19 18:08:32.0±2.8, 10°45'±0.8× 116°3E±0.9, h35km, n6, σ0§46/7, mb3.5/5, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.86**	**131**	Pn	**Pn**	**18 11 18.5**	**-0.1**
	baz=309,slow=13,SNR=1.7						
FITZ				Sn	**Sn**	**18 13 29.5**	**-0.3**
	0.1nm,0.3s,baz=190,slow=17,SNR=1.7 1.4nm,0.9s						
WRA	**Warramunga Arr**	**19.83**	**121**	P	**Pn**	**18 13 01.6**	**0.0**
	0.6nm,1.0s,baz=293,slow=11,SNR=2.5 0.6nm,1.0s						
ASAR	**Alice Springs**	**21.36**	**130**	P	**P**	**18 13 17.1**	**+0.6**
	0.3nm,0.9s,baz=299,slow=9.5,SNR=4.9 0.3nm,0.9s						
MKAR	**Makanchi Array**	**64.55**	**335**	P	**P**	**18 19 05.1**	**-0.5**
	0.3nm,0.6s,baz=144,slow=7.8,SNR=6.5 0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**69.10**	**335**	P	**P**	**18 19 34.2**	**-0.1**
	0.2nm,0.6s,baz=151,slow=5.8,SNR=3.4 0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**69.46**	**341**	P	**P**	**18 19 36.8**	**+0.3**
	0.4nm,0.5s,baz=143,slow=7.1,SNR=2.1 0.4nm,0.5s						

*ISK **19** 18:21:49.9, 38°40N×39°12E, h5km, ML3.8/11*
*AFAD **19** 18:21:50.0, 38°43N×39°10E, h16km, MW3.7*
*IDC **19** 18:21:52.8±5.7, 38°34N×39°70E, h0km, mb3.4/4, mbtmp3.3/6, ML2.7/2, MS3.3/1, Error ellipse: s-maj=79.4km s-min=49.2km az=58.0*

ISC 19 18:21:50.6±0.8, 38°40N±0°02×39°12E±0°02, h8km±6km, n48, σ0§82/56, mb3.4/4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESGZ	**Sivrice-Elazig**	**0.05**	**307**	Pg	**Pg**	**18 21 52.0**	**-0.4**
ESGZ				Sg	**Sg**	**18 21 53.9**	**+0.1**
MDYL	**Doganyol-Malat**	**0.10**	**216**	Pg	**Pg**	**18 21 52.7**	**-0.3**
MDYL				Sg	**Sg**	**18 21 54.7**	**0.0**
ELZG	**Elazig**	**0.14**	**314**	P	**Pg**	**18 21 53.9**	**+0.2**
ELZG				S	**Sg**	**18 21 56.4**	**+0.5**
ELZG				IAML		18 21 57.0	
	comp=N,5μm,0.3s						
ELZG				IAML		18 21 57.0	
	comp=E,4μm,0.3s						
SVRC	**Sivrice-ELAZID**	**0.15**	**97**	Pg	**Pg**	**18 21 53.0**	**-0.8**
ESIJ	**Sivrice-Elazig**	**0.16**	**72**	Pg	**Pg**	**18 21 53.6**	**-0.4**
ESIJ				Sg	**Sg**	**18 21 56.6**	**+0.3**
ELZ	**Elazig**	**0.30**	**14**	P	**Pg**	**18 21 56.2**	**-0.3**
ELZ				S	**Sg**	**18 22 00.5**	**0.0**
ELZ				IAML		18 22 01.0	
	comp=N,7μm,0.4s						
ELZ				IAML		18 22 01.0	
	comp=E,8μm,0.6s						
MDNT	**Maden**	**0.45**	**90**	P	**Pb**	**18 22 01.0**	**+0.3**
MDNT				S	**Sb**	**18 22 07.9**	**+0.3**
MAYA	**Malatya/Merkez**	**0.55**	**263**	P	**Pg**	**18 22 01.0**	**-0.2**
MAYA				S	**Sg**	**18 22 08.8**	**+0.5**
MAYA				IAML		18 22 10.0	
	comp=N,5μm,0.5s						
NARI	**Adyaman-Kaht**	**0.58**	**209**	P	**Pg**	**18 22 02.0**	**+0.1**
KOVA	**Elazig, Kovanc**	**0.63**	**60**	P	**Pg**	**18 22 02.1**	**-0.5**
KAHTU	**Kahta**	**0.71**	**214**	P	**Pb**	**18 22 04.6**	**-0.7**
MCKZ	**Bingol**	**0.73**	**351**	P	**Pg**	**18 22 03.5**	**-1.1**
HANM	**anlurfa/Hi**	**0.84**	**193**	P	**Pb**	**18 22 06.6**	**-0.8**
AZEY	**Adyaman-Merk**	**0.90**	**230**	P	**Pb**	**18 22 08.2**	**-0.3**
DYBB	**Diyarbakir**	**0.92**	**119**	Pg	**Pb**	**18 22 08.2**	**-0.7**
DYBB				Sg	**Sb**	**18 22 21.2**	**-0.1**
DIYA	**Diyarbakir**	**0.92**	**121**	P	**Pn**	**18 22 11.3**	**+1.4**
ARPR	**Arapgir-MALATY**	**0.92**	**319**	Pg	**Pg**	**18 22 07.9**	**-0.4**
ARPR				Sg	**Sb**	**18 22 21.4**	**-0.1**
AKCD	**Akcadag**	**0.94**	**264**	P	**Pg**	**18 22 08.1**	**-0.6**
HEKM	**Malatya_Hekimh**	**1.02**	**298**	P	**Pg**	**18 22 09.6**	**-0.7**
MAYK		**1.03**	**71**	P	**Pg**	**18 22 09.7**	**-0.8**
ATAB	**Bozova**	**1.13**	**215**	P	**Pn**	**18 22 12.3**	**-0.5**
ILIC	**ilic-Erzincan**	**1.14**	**338**	Pn	**Pg**	**18 22 11.5**	**-0.9**
SANL	**SANLIURFA_Merk**	**1.23**	**185**	P	**Pn**	**18 22 14.2**	**0.0**
MDIV		**1.25**	**318**	P	**Pg**	**18 22 13.1**	**-1.4**
AKCA	**Adyaman/G¶**	**1.28**	**242**	P	**Pb**	**18 22 14.9**	**-0.1**
ERZN	**Erzincan**	**1.28**	**22**	Pn	**Pn**	**18 22 14.9**	**0.0**
BNGB	**Bingl**	**1.36**	**64**	Pn	**Pb**	**18 22 15.9**	**-0.5**
EUZM	**Uzumlu**	**1.38**	**19**	Pn	**Pb**	**18 22 15.8**	**-0.6**
YEDI	**Yedisu-Bingol**	**1.52**	**47**	Pn	**Pb**	**18 22 18.4**	**-0.8**
SURC	**SANLIURFA_SURC**	**1.57**	**195**	P	**Pn**	**18 22 17.9**	**-0.9**
SVAN	**Silvan-Diyarba**	**1.66**	**98**	Pn	**Pn**	**18 22 20.1**	**+0.1**
SVAN	**Silvan-Diyarba**	**1.66**	**98**	P	**Pn**	**18 22 19.4**	**-0.6**
KELT	**Kelkit**	**1.75**	**4**	P	**Pn**	**18 22 20.5**	**-1.0**
KARO	**Karliova-Bingo**	**1.76**	**58**	Pn	**Pb**	**18 22 22.2**	**-1.1**
NZIP	**Nizip/Gaziante**	**1.77**	**221**	P	**Pn**	**18 22 21.3**	**-0.3**
SUSE	**Susehri**	**1.94**	**339**	P	**Pb**	**18 22 26.0**	**-0.3**
GAZ	**Gaziantep**	**1.94**	**232**	Pn	**Pn**	**18 22 24.5**	**+0.5**
KMRS	**Kahramanmaras**	**1.96**	**244**	Pn	**Pn**	**18 22 25.1**	**+0.8**
VRTB	**Varto-Mus**	**1.98**	**67**	Pn	**Pn**	**18 22 25.1**	**+0.5**
BAYT	**Aydıntepe-Bayb**	**2.15**	**21**	Pn	**Pn**	**18 22 27.2**	**+0.3**
GURO	**Guroymak-BITLI**	**2.29**	**85**	Pn	**Pn**	**18 22 29.7**	**+0.8**
GNI	**Garni**	**4.70**	**66**	Pn	**Pn**	**18 23 01.8**	**-0.2**
	0.7nm,0.3s,baz=56,slow=20,SNR=1.3 2.6nm,0.4s						
KBZ	**Khabaz**	**6.04**	**27**	Pn	**Pn**	**18 23 24.0**	**+3.8**
	0.1nm,0.3s,baz=188,slow=15,SNR=1.3 0.4nm,0.4s						
EIL	**Elat**	**9.37**	**203**	LR	LR	18 28 01.4	
	comp=Z,196nm,20.2s,baz=52,slow=39						
BVAR	**Borovoye Array**	**26.02**	**46**	P	**P**	**18 27 24.1**	**+0.1**
	0.3nm,0.5s,baz=249,slow=8.5,SNR=2.3 0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**30.29**	**53**	P	**P**	**18 28 02.3**	**+0.2**
	0.4nm,0.6s,baz=264,slow=8.8,SNR=8.7 0.4nm,0.6s						
MKAR	**Makanchi Array**	**32.53**	**61**	P	**P**	**18 28 22.0**	**+0.1**
	0.3nm,0.7s,baz=267,slow=8.3,SNR=4.6 0.3nm,0.7s						
ZALV	**Zalesovo Beam**	**34.59**	**48**	P	**P**	**18 28 41.2**	**+1.5**
	0.3nm,0.3s,baz=269,slow=8.6,SNR=2.0 0.3nm,0.3s						

*IDC **19** 18:22:41.4±1.4, 30°46N×131°37E, h0km, mb3.3/6, mbtmp3.3/8, ML3.3/1, Error ellipse: s-maj=45.3km s-min=21.7km az=69.0*
*JMA **19** 18:22:48.8±0.1, 30°6N±0°2×131°1E±0°5, h30km, MV3.3/39, NEAR TANEGASHIMA ISLAND*
JMA Felt I J1 at NEAR TANEGASHIMA ISLAND .

ISC 19 18:22:46.3±1.6, 30°50N±0°06×131°27E±0°09, h31km±9km, n21, σ0§92/26, mb3.2/6, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTN	**Tanegashima 3**	**0.29**	**302**	*i* P	**Pb**	**18 22 54.2**	**+0.4**
JTN				S	**Sb**	**18 22 58.3**	**-0.5**
JMTN	**Minamitane**	**0.33**	**252**	*i* P	**Pn**	**18 22 55.8**	**+0.7**
JMTN				S	**Sn**	**18 23 01.2**	**+0.4**
JYAK	**Yakushimahirau**	**0.70**	**249**	*i* P	**Pn**	**18 23 00.8**	**+0.6**
JYAK				S	**Sb**	**18 23 09.9**	**+0.3**
JTSR	**Tashiro 2**	**0.73**	**336**	*i* P	**Pb**	**18 23 00.2**	**-0.3**
JTSR				S	**Sb**	**18 23 08.2**	**-2.1**
JKC	**Kuchinoerabu**	**0.93**	**268**	*i* P	**Pb**	**18 23 03.7**	**-0.2**
JKC				*eS*	**Sb**	**18 23 15.1**	**-0.7**
JNAR	**Kushima--Naru**	**1.02**	**0**	P	**Pb**	**18 23 06.0**	**+0.6**
JNAR				*eS*	**Sb**	**18 23 18.4**	**-0.2**
JNKG	**Nichinankitago**	**1.16**	**5**	P	**Pb**	**18 23 08.8**	**+0.9**
JNKG				*eS*	**Sb**	**18 23 23.9**	**+1.3**
JSU	**Suzuyama**	**1.22**	**325**	*i* P	**Pn**	**18 23 07.7**	**+0.4**
JNN	**Nakanoshima**	**1.37**	**242**	*eP*	**Pb**	**18 23 11.4**	**0.0**
JNN				*eS*	**Sb**	**18 23 28.3**	**-0.2**
JTZ	**Takazaki**	**1.41**	**354**	P	**Pb**	**18 23 11.8**	**-0.1**
KSRS	**Korea Array**	**7.47**	**339**	Pn	**Pn**	**18 24 34.5**	**+1.3**
	0.4nm,0.3s,baz=155,slow=14,SNR=5.0 1.1nm,0.4s						
MJAR	**Matsushiro Arr**	**8.36**	**42**	Pn	**Pn**	**18 24 43.0**	**-2.3**
	1.6nm,1.0s,baz=225,slow=14,SNR=1.7						
SONM	**Songino Array**	**25.74**	**319**	P	**P**	**18 28 15.1**	**+0.9**
	0.2nm,0.4s,baz=134,slow=8.3,SNR=2.1 0.2nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**33.87**	**100**	T	T	19 05 27.8	
	baz=296,slow=74,SNR=9.0						
H11N1	**WAKE ISLAND Hy**	**33.87**	**100**	T	T	19 05 26.2	
	baz=296,slow=74,SNR=6.5						
H11N3	**WAKE ISLAND Hy**	**33.88**	**100**	T	T	19 05 31.3	
	baz=296,slow=74,SNR=7.3						
MKAR	**Makanchi Array**	**40.87**	**308**	P	**P**	**18 30 25.0**	**-0.4**
	0.5nm,1.0s,baz=98,slow=7.6,SNR=2.4 0.5nm,1.0s						
KURBB	**Kurchatov Arra**	**43.77**	**313**	P	**P**	**18 30 49.0**	**+0.2**
	0.2nm,0.4s,baz=95,slow=8.5,SNR=4.2 0.2nm,0.4s						
BVAR	**Borovoye Array**	**48.99**	**316**	P	**P**	**18 31 29.9**	**0.0**
	0.8nm,0.5s,baz=95,slow=9.8,SNR=10 0.8nm,0.5s						
WRA	**Warramunga Arr**	**50.24**	**176**	P	**P**	**18 31 39.4**	**-0.2**
	0.7nm,1.1s,baz=354,slow=8.0,SNR=2.6 0.7nm,1.1s						
ASAR	**Alice Springs**	**53.91**	**177**	P	**P**	**18 32 06.2**	**-0.8**
	0.1nm,0.7s,baz=359,slow=7.2,SNR=1.0 0.1nm,0.7s						

*IDC **19** 18:26:04.4±1.3, 30°21N×130°77E, h0km, mb3.5/6, mbtmp3.5/8, ML2.1/2, Error ellipse: s-maj=44.5km s-min=21.3km az=68.0*
*JMA **19** 18:26:06.5±0.1, 29°6N±0°6×130°9E±0°7, h47km±2km, MV3.4/27, NEAR AMAMI-OSHIMA ISLAND*

ISC 19 18:26:05.7±1.4, 29°62N±0°08×131°0E±0°1, h38km, n18, σ1§40/16, mb3.4/6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYAK	**Yakushimahirau**	**0.73**	**327**	*i* P	**Pn**	**18 26 19.7**	**+0.3**
JYAK				*eS*	**Sn**	**18 26 29.6**	**+0.2**
JMTN	**Minamitane**	**0.78**	**356**	P	**Pn**	**18 26 21.2**	**+1.1**
JNN	**Nakanoshima**	**0.97**	**283**	*eP*	**Pn**	**18 26 22.8**	**0.0**
JTN	**Tanegashima 3**	**1.03**	**1**	*eP*	**Pn**	**18 26 24.9**	**+1.3**
JKC	**Kuchinoerabu**	**1.07**	**322**	*eP*	**Pn**	**18 26 24.6**	**+0.5**
JTSR	**Tashiro 2**	**1.54**	**359**	*eP*	**Pn**	**18 26 32.4**	**+1.8**
JTAJ	**Takarajima**	**1.61**	**254**	*eP*	**Pn**	**18 26 32.1**	**+0.6**
JAM	**Amami Oshima**	**1.70**	**225**	*eP*	**Pn**	**18 26 33.1**	**+0.4**
JNAR	**Kushima--Naru**	**1.92**	**8**	*eP*	**Pn**	**18 26 38.0**	**+2.3**
JSU	**Suzuyama**	**1.93**	**347**	*eP*	**Pn**	**18 26 36.9**	**+0.9**
KSRS	**Korea Array**	**8.21**	**343**	Pn	Pn	18 27 57.7	-4.5
	0.1nm,0.3s,baz=160,slow=14,SNR=1.9 0.9nm,0.7s						
MJAR	**Matsushiro Arr**	**9.19**	**39**	Pn	**Pn**	**18 28 13.7**	**-2.0**
	baz=238,slow=13,SNR=1.9 1.2nm,0.9s						
SONM	**Songino Array**	**26.24**	**321**	P	**P**	**18 31 34.4**	**-2.8**
	0.4nm,0.5s,baz=133,slow=10,SNR=2.5 0.4nm,0.5s						
MKAR	**Makanchi Array**	**41.21**	**308**	P	**P**	**18 33 46.6**	**0.0**
	0.3nm,0.5s,baz=90,slow=10,SNR=5.5 0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**44.17**	**314**	P	**P**	**18 34 10.9**	**+0.3**
	0.7nm,0.5s,baz=94,slow=8.9,SNR=18 0.7nm,0.5s						
WRA	**Warramunga Arr**	**49.38**	**176**	P	P	18 35 00.2	+8.6
	0.3nm,0.7s,baz=354,slow=7.5,SNR=1.4 0.3nm,0.7s						
BVAR	**Borovoye Array**	**49.44**	**316**	P	**P**	**18 34 52.2**	**+0.5**
	1.7nm,0.4s,baz=97,slow=10,SNR=24 1.7nm,0.4s						
ASAR	**Alice Springs**	**53.06**	**177**	P	P	18 35 28.0	+8.9
	0.4nm,1.1s,baz=355,slow=8.0,SNR=1.8 0.4nm,1.1s						

*IDC **19** 18:37:40.9±2.7, 8°94S×115°79E, h0km, mb2.8/3, mbtmp3.1/4, ML2.7/1, Error ellipse: s-maj=161.5km s-min=27.2km az=49.0*
*DJA **19** 18:37:42.7±0.3, 8°S±4°×11°6E±°, h10km, M3.5/15, mb3.6/1, MLv3.4/15*

ISC 19 18:37:42.4±0.8, 8°53S±0°08×116°09E±0°03, h10km, n19, σ1§62/24, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHKI	**Kahang-Kahang**	**0.51**	**289**	P	**Pg**	**18 37 52.5**	**+0.2**
KHKI				S	**Sg**	**18 37 59.0**	**+0.4**
DNP	**Denpasar**	**0.89**	**260**	P	**Pg**	**18 38 00.1**	**+0.6**
DNP				S	**Sn**	**18 38 15.8**	**+2.0**
IGBI	**Denpasar**	**0.98**	**253**	P	**Pg**	**18 38 01.8**	**+0.5**
IGBI				S	**Sb**	**18 38 16.5**	**+2.0**
RTBI	**Rangdo, Negare**	**1.14**	**273**	P	**Pb**	**18 38 03.5**	**-0.7**
RTBI				S	**Sg**	**18 38 19.9**	**+0.7**
PLAI	**Plampang**	**1.69**	**100**	P	**Pb**	**18 38 14.3**	**+0.7**
JAGI	**Jajag, Banyuwa**	**1.92**	**272**	P	**Pn**	**18 38 13.7**	**-1.5**
ABJI	**Asem Bagus**	**1.98**	**291**	P	**Pn**	**18 38 16.0**	**+0.1**
DBNI	**Kabupaten Domp**	**2.20**	**90**	P	**Pn**	**18 38 19.6**	**+0.6**
KMMI	**Kalianget**	**2.57**	**305**	P	**Pb**	**18 38 26.0**	**-2.6**
BLJI	**Banyuglugur**	**2.59**	**287**	P	**Pn**	**18 38 25.9**	**+1.5**
WBSI	**Waikabubak, Su**	**3.44**	**109**	P	**Pn**	**18 38 37.2**	**+1.1**
LBFI	**Labuhan Bajo,**	**3.76**	**90**	P	**Pn**	**18 38 40.2**	**-0.3**
SNJI	**Sawahan-Nganju**	**4.35**	**279**	P	**Pn**	**18 38 47.7**	**-1.1**
PCJI	**Pacitan**	**4.88**	**274**	P	**Pn**	**18 38 55.2**	**-0.6**
BSSI	**Bau Bau, Buton**	**4.96**	**62**	P	**Pn**	**18 38 55.9**	**-1.2**
FITZ	**Fitzroy Crossi**	**13.29**	**137**	Pn	**Pn**	**18 40 50.9**	**-0.4**
	baz=316,slow=11,SNR=0.8						
FITZ				Sn	**Sn**	**18 43 14.2**	**-5.0**
	baz=282,slow=20,SNR=1.4 2.3nm,1.1s						
WRA	**Warramunga Arr**	**20.99**	**125**	P	**P**	**18 42 25.7**	**-0.4**
	0.3nm,0.7s,baz=298,slow=12,SNR=4.6 0.3nm,0.7s						
ASAR	**Alice Springs**	**22.75**	**134**	P	**P**	**18 42 44.4**	**-0.6**
	0.2nm,0.5s,baz=310,slow=9.5,SNR=6.5 0.2nm,0.5s						
MKAR	**Makanchi Array**	**62.76**	**335**	P	**P**	**18 48 09.8**	**+1.9**
	0.1nm,0.7s,baz=130,slow=5.8,SNR=1.5 0.1nm,0.7s						

IDC 19 18:41:29.2±2.2, 6°81S×129°49E, h0km, mb3.4/1, mbtmp3.4/4, ML3.5/3, MS4.0/1, Error ellipse: s-maj=96.2km s-min=27.9km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.83**	**198**	Pn	Pn	18 44 19.8	+0.5
	0.2nm,0.3s,baz=16,slow=11,SNR=14						
FITZ				Sn	Sn	18 46 19.4	-13
	0.1nm,0.3s,baz=46,slow=23,SNR=1.2 2.2nm,1.1s						
WRA	**Warramunga Arr**	**13.88**	**161**	Pn	Pn	18 44 46.7	-0.6
	0.2nm,0.3s,baz=333,slow=14,SNR=18						
WRA				Sn	Sn	18 47 08.6	-14
	0.4nm,0.3s,baz=344,slow=23,SNR=7.2 0.5nm,0.7s						
ASAR	**Alice Springs**	**17.29**	**166**	P	Pn	18 45 32.2	0.0
	0.1nm,0.3s,baz=349,slow=11,SNR=12						
ASAR				S	Sn	18 48 32.6	-13
	0.3nm,0.8s,baz=355,slow=26,SNR=2.1 0.2nm,0.4s						
AFI	**Afiamalu**	**58.09**	**102**	LR	LR	19 16 08.3	
	comp=Z,123nm,20.3s,baz=348,slow=36						
MKAR	**Makanchi Array**	**67.79**	**327**	P	P	18 52 29.1	0.0
	0.2nm,0.5s,baz=134,slow=8.2,SNR=6.5 0.2nm,0.5s						

*DJA **19** 18:57:45.6±0.3, 8°S±3°×11°6E±°, h11km±3km, M4.5/38, mB4.9/8, mb4.6/16, MLv4.7/38, Mw(mB)4.2/8*
*NEIC **19** 18:57:47.1±2.0, 8°33S±0°08×116°06E±0°06, h26km±3km, mb4.2/18, Error ellipse: s-maj=12.2km s-min=7.8km az=197.0*
*IDC **19** 18:57:48.0±2.2, 8°15S×116°19E, h43km±18km, mb3.6/13, mbtmp3.9/15, ML4.2/3, MS3.4/7, Error ellipse: s-maj=19.4km s-min=10.2km az=51.0*

ISC 19 18:57:43.9±0.4, 8°29S±0°05×116°09E±0°04, h10km, n98, σ1§56/94, mb4.1/19, MS3.5/3, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHKI	**Kahang-Kahang**	**0.48**	**261**	P	**Pb**	**18 57 55.1**	**+0.6**
KHKI				S	**Sb**	**18 58 01.8**	**+0.1**
DNP	**Denpasar**	**0.95**	**246**	P	**Pg**	**18 58 02.6**	**+0.3**
IGBI	**Denpasar**	**1.07**	**241**	P	**Pg**	**18 58 04.2**	**-0.4**
IGBI				S	**Sg**	**18 58 18.8**	**+0.3**
RTBI	**Rangdo, Negare**	**1.15**	**262**	P	**Pg**	**18 58 05.9**	**-0.1**
PLAI	**Plampang**	**1.75**	**108**	P	**Pn**	**18 58 17.6**	**+3.2**
PLAI	**Plampang**	**1.75**	**108**	P	**Pn**	**18 58 17.2**	**+2.8**
ABJI	**Asem Bagus**	**1.90**	**285**	P	**Pn**	**18 58 16.3**	**-0.2**
JAGI	**Jajag, Banyuwa**	**1.93**	**265**	P	**Pn**	**18 58 16.4**	**-0.4**
JAGI	**Jajag, Banyuwa**	**1.93**	**265**		**Pn**	**18 58 16.3**	**-0.6**
JAGI	**Jajag, Banyuwa**	**1.93**	**265**	P	**Pn**	**18 58 16.2**	**-0.6**
DBNI	**Kabupaten Domp**	**2.21**	**96**	P	**Pn**	**18 58 22.6**	**+1.9**
KMMI	**Kaliangel**	**2.44**	**300**	P	**Pn**	**18 58 24.2**	**+0.3**
BLJI	**Banyuglugur**	**2.53**	**282**	P	**Pn**	**18 58 26.0**	**+0.9**
WBSI	**Waikabubak, Su**	**3.52**	**113**	P	**Pn**	**18 58 41.0**	**+2.2**
LBFI	**Labuhan Bajo,**	**3.76**	**93**	P	**Pn**	**18 58 43.5**	**+1.4**
SJI	**Sawahan**	**4.32**	**277**	P	**Pn**	**18 58 51.0**	**+1.2**
SNJI	**Sawahan-Nganju**	**4.32**	**276**	P	**Pn**	**18 58 51.0**	**+1.1**
WSI	**Waingapu**	**4.38**	**109**	P	**Pn**	**18 58 53.7**	**+3.2**
MKS	**Makassar**	**4.54**	**48**	P	**Pn**	**18 58 54.1**	**+1.4**
NGJI	**Ngawi**	**4.68**	**281**	P	**Pn**	**18 58 57.0**	**+2.3**
BSSI	**Bau Bau, Buton**	**4.86**	**64**	P	**Pn**	**18 58 58.8**	**+1.6**
PCJI	**Pacitan**	**4.87**	**271**	P	**Pn**	**18 58 57.8**	**+0.6**
KAPI	**Kappang**	**4.88**	**48**	P	**Pn**	**18 58 58.2**	**+0.8**
	18nm,0.3s,baz=208,slow=4.4,SNR=48						
KAPI				S	**Sn**	**18 59 50.9**	**-3.1**
	37nm,0.6s,baz=231,slow=14,SNR=5.7						
KAPI				LR	LR	19 01 13.8	
	comp=Z,258nm,19.8s,baz=163,slow=44						
KAPI	**Kappang**	**4.88**	**48**	P	**Pn**	**18 58 59.0**	**+1.5**
KAPI	**Kappang**	**4.88**	**48**		**Pn**	**18 58 58.5**	**+1.1**
KAPI	**Kappang**	**4.88**	**48**	P	**Pn**	**18 58 58.9**	**+1.5**
PMSI	**Majene**	**5.53**	**31**	P	**Pn**	**18 59 08.0**	**+1.6**
UGM	**Wanagama**	**5.53**	**274**	P	**Pn**	**18 59 06.9**	**+0.5**
UGM	**Wanagama**	**5.53**	**274**		**Pn**	**18 59 07.1**	**+0.7**
UGM	**Wanagama**	**5.53**	**274**	P	**Pn**	**18 59 06.4**	**0.0**
EDFI	**Ende, Flores**	**5.56**	**95**	P	**Pn**	**18 59 09.3**	**+2.4**
	0.2nm61nm,0.7s						
SPSI	**Sidrap Palu**	**5.64**	**41**	P	**Pn**	**18 59 09.1**	**+1.2**
	0.2nm552nm16nm,0.8s						
MMRI	**Maumere**	**6.09**	**94**	P	**Pn**	**18 59 17.5**	**+3.4**
MMRI	**Maumere**	**6.09**	**94**	Pn	**Pn**	**18 59 14.3**	**+0.2**
MMRI	**Maumere**	**6.09**	**94**	P	**Pn**	**18 59 14.5**	**+0.4**
	0.4nm941nm89nm,0.7s						
TTSI	**Tana Toraja**	**6.40**	**36**	P	**Pn**	**18 59 20.6**	**+2.3**
	0.3nm47nm,0.7s						
BKB	**Balikpapan**	**7.03**	**7**	P	**Pn**	**18 59 30.6**	**+3.6**
	93nm,1.3s						
KPJI	**Karang Pucung**	**7.16**	**277**	P	**Pn**	**18 59 29.4**	**+0.6**
	0.3nm37nm,0.5s						
BATI	**Baumata**	**7.71**	**105**	P	**Pn**	**18 59 37.6**	**+1.2**
	4.7nm,0.3s,baz=15,slow=1.8,SNR=5.7 5.1nm,0.3s						
BBJI	**Bungbulang**	**8.40**	**275**	P	**Pn**	**18 59 45.4**	**-0.5**
BBJI	**Bungbulang**	**8.40**	**275**	Pn	**Pn**	**18 59 47.1**	**+1.2**
BBJI	**Bungbulang**	**8.40**	**275**	P	**Pn**	**18 59 47.4**	**+1.5**
LEM	**Lembang**	**8.53**	**279**	LR	LR	19 04 25.7	
	comp=Z,108nm,20.5s,baz=26,slow=46						
MBWA	**Marble Bar**	**13.27**	**165**	P	**Pn**	**19 00 51.3**	**-1.2**
MBWA	**Marble Bar**	**13.27**	**165**		Pn	19 00 49.6	-2.9
FITZ	**Fitzroy Crossi**	**13.46**	**137**	P	**Pn**	**19 00 55.2**	**0.0**
	0.4nm,0.3s,baz=329,slow=11,SNR=19						
FITZ				S	Sn	19 03 18.4	-6.5
	4.7nm,0.8s,baz=355,slow=23,SNR=2.1 2.3nm,0.6s						
PSA00	**Pilbara Seismi**	**13.69**	**165**	P	**Pn**	**19 00 56.8**	**-1.5**
PSA00	**Pilbara Seismi**	**13.69**	**165**	Pn	**Pn**	**19 00 56.0**	**-2.3**
PSA00	**Pilbara Seismi**	**13.69**	**165**	Pn	Pn	**19 00 56.5**	**-1.8**
GIRL	**Giralia**	**14.38**	**187**	Pn	**Pn**	**19 01 06.0**	**-1.7**
KNRA	**Kununurra**	**14.40**	**122**	Pn	**Pn**	**19 01 08.5**	**+0.5**
MTN	**Manton Dam**	**15.46**	**108**	Pn	**Pn**	**19 01 21.2**	**-1.1**
MTN				IAmb	IAmb	19 01 43.2	
	comp=Z,18nm,1.4s						
MYKOM	**Kota Tinggi**	**15.79**	**309**	Pn	**Pn**	**19 01 27.9**	**+1.3**
SIJI	**Sorong**	**16.82**	**65**	LR	LR	19 09 36.1	
	comp=Z,105nm,18.6s,baz=142,slow=42						
FAKI	**Fak Fak**	**16.94**	**73**	P	**P**	**19 01 45.4**	**+2.2**
FAKI	**Fak Fak**	**16.94**	**73**	Pn	**Pn**	**19 01 40.9**	**-0.4**
FAKI				IAmb	IAmb	19 01 49.9	
	comp=Z,33nm,1.4s						
DAV	**Davao City (W)**	**17.95**	**32**	LR	LR	19 08 56.9	
	comp=Z,108nm,19.5s,baz=294,slow=38						
MEEK	**Meeckatharra**	**18.40**	**173**	P	**P**	**19 02 00.2**	**+0.8**
RPSI	**Rantau Prapat**	**20.30**	**302**	P	**P**	**19 02 21.4**	**+1.1**
RPSI				IAmb	IAmb	19 02 45.9	
	comp=Z,14nm,1.3s						
GSI	**Gunungsitoli**	**20.78**	**296**	P	**P**	**19 02 26.7**	**+1.3**
GSI				IAmb	IAmb	19 03 02.2	
	comp=Z,16nm,1.1s						
WB0	**Warramunga Arr**	**21.08**	**125**		**P**	**19 02 29.7**	**+1.1**
WB0				IAmb	IAmb	19 03 03.8	
	comp=Z,13nm,1.1s						
WRA	**Warramunga Arr**	**21.12**	**125**	P	**P**	**19 02 29.8**	**+0.7**
	comp=Z,2.7nm,0.7s,baz=301,slow=12,SNR=58						
WRA				S	**S**	**19 06 22.3**	**-2.0**
	comp=Z,0.5nm,0.6s,baz=299,slow=20,SNR=2.5						
WRA				ScP	**ScP**	**19 10

BOSA	**Boshof**	**86.81**	**242**	P	**P**	**19 10 28.5**	**-0.8**

*IDC **19** 19:09:19.1±2.4, 32.71N×85.13E, h0km, mb3.2/4, mbtmp3.3/7, ML2.8/2, MS3.2/1, Error ellipse: s-maj=74.9km s-min=23.4km az=69.0*

ISC 19 19:09:21.4±2.0, 32.7N±0.2×85.2E±0.4, h16km, n8, σ0§73/7, mb3.3/4, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**14.20**	**352**	Pn	**Pn**	**19 12 40.8**	**-1.0**
	0.1nm,0.3s,baz=174,slow=14,SNR=4.6 0.4nm,0.9s						
KURBB	**Kurchatov Arra**	**18.52**	**347**	P	**Pn**	**19 13 37.5**	**+0.3**
	baz=162,slow=11,SNR=8.0 1.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**18.87**	**136**	P	**Pn**	**19 13 41.1**	**-0.5**
	1.4nm,0.9s,baz=319,slow=12,SNR=9.8						
ZALV	**Zalesovo Beam**	**21.20**	**359**	P	**P**	**19 14 06.3**	**+0.2**
	0.9nm,0.6s,baz=182,slow=9.6,SNR=5.3 0.9nm,0.6s						
SONM	**Songino Array**	**22.03**	**41**	P	**P**	**19 14 15.7**	**+0.4**
	0.4nm,0.6s,baz=226,slow=12,SNR=3.7 0.4nm,0.6s						
NRIK	**Noril'sk**	**36.67**	**1**	LR	LR	19 31 57.1	
	comp=Z,35nm,19.0s,baz=33,slow=37						
WRA	**Warramunga Arr**	**70.39**	**131**	P	**P**	**19 20 34.9**	**0.0**
	0.2nm,0.8s,baz=318,slow=6.2,SNR=1.2 0.2nm,0.8s						
YKA	**Yellowknife Ar**	**83.77**	**9**	P	**P**	**19 21 50.1**	**+0.7**
	0.2nm,0.7s,baz=332,slow=5.3,SNR=3.9 0.2nm,0.7s						

IDC 19 19:46:11.6±75.0, 42.27S×84.12E, h0km, Error ellipse: s-maj=207.2km s-min=11.8km az=114.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H04S1	**CROZET ISLANDS**	**23.31**	**248**	H	H	20 15 23.7	
	baz=89,slow=75,SNR=7.0						
H04S2	**CROZET ISLANDS**	**23.32**	**248**	H	H	20 15 23.8	
	baz=89,slow=75,SNR=19						
H04S3	**CROZET ISLANDS**	**23.32**	**248**	H	H	20 15 26.6	
	baz=89,slow=75,SNR=19						
H04N2	**CROZET ISLANDS**	**23.40**	**249**	H	H	20 15 31.3	
	baz=92,slow=75,SNR=136						
H04N3	**CROZET ISLANDS**	**23.41**	**249**	H	H	20 15 32.2	
	baz=92,slow=75,SNR=139						
H04N1	**CROZET ISLANDS**	**23.41**	**249**	H	H	20 15 31.0	
	baz=92,slow=75,SNR=118						
H08S2	**Diego Garcia H**	**35.99**	**340**	H	H	20 31 04.6	
	baz=166,slow=76,SNR=87						
H08S1	**Diego Carcia H**	**35.99**	**340**	H	H	20 31 04.6	
	baz=166,slow=76,SNR=86						
H08S3	**Diego Garcia H**	**36.01**	**340**	H	H	20 31 07.1	
	baz=166,slow=76,SNR=125						

*IDC **19** 19:48:16.5±1.3, 53.74N×165.94W, h0km, mb3.8/7, mbtmp3.8/9, ML3.8/2, MS4.2/1, Error ellipse: s-maj=29.2km s-min=20.9km az=124.0*

*AEIC **19** 19:48:26.8±1.4, 53.79N±0.05×165.21W±0.06, h48km±6km, Error ellipse: s-maj=8.9km s-min=3.1km az=148.0*

*NEIC **19** 19:48:26.2±1.7, 53.69N±0.06×165.14W±0.05, h35km±2km, mb3.8/42, ML3.9/16, ML3.7(AEIC), Error ellipse: s-maj=9.4km s-min=5.3km az=175.0*

ISC 19 19:48:26.6±0.9, 53.84N±0.09×165.24W±0.06, h64km±9km, n118, σ1§32/96, mb3.8/6, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKSA	**Akutan Strait**	**0.40**	**318**		**Pn**	**19 48 37.9**	**0.0**
AKSA					**Sn**	**19 48 46.2**	**+0.1**
AKUT	**Akutan**	**0.43**	**313**		**Pn**	**19 48 38.1**	**0.0**
AKUT				IAML		19 48 48.7	
	comp=E,4μm,0.1s						
AKUT	**Akutan**	**0.43**	**313**		**Sn**	**19 48 46.8**	**+0.2**
AHB	**Akutan Harbor**	**0.43**	**309**		**Pn**	**19 48 38.2**	**0.0**
AHB					**Sn**	**19 48 47.0**	**+0.2**
AKBBA	**Akutan Broad B**	**0.48**	**302**		**Pn**	**19 48 38.7**	**+0.1**
ZRO	**Akutan Zero**	**0.50**	**300**		**Pn**	**19 48 39.0**	**+0.1**
ZRO					**Sn**	**19 48 48.1**	**+0.3**
AKV	**Akutan Volcano**	**0.51**	**304**		**Pn**	**19 48 39.0**	**0.0**
AKV					**Sn**	**19 48 48.4**	**+0.2**
AKLV	**Akutan Long Va**	**0.53**	**307**		**Pn**	**19 48 39.1**	**-0.1**
LVA	**Lava Point**	**0.57**	**305**	Pn	**Pn**	**19 48 39.7**	**+0.1**
LVA				IAML		19 48 59.5	
	comp=N,4μm,0.7s						
AKRB	**Akutan Reef Bi**	**0.57**	**301**		**Pn**	**19 48 39.5**	**0.0**
AKGG	**Akutan Green G**	**0.57**	**309**		**Pn**	**19 48 39.8**	**+0.2**
UNV	**Unalaska Valle**	**0.75**	**271**		**Pn**	**19 48 41.4**	**-0.2**
UNV				Sn	**Sn**	**19 48 52.8**	**+0.2**
UNV				IAML		19 48 53.8	
	comp=E,4μm,0.2s						
UNV				IAML		19 48 53.9	
	comp=N,5μm,0.3s						
MNAT	**Makushin Natee**	**0.85**	**273**		**Pn**	**19 48 43.0**	**+0.1**
MREP	**Makushin Rep't**	**0.89**	**268**		**Pn**	**19 48 43.7**	**+0.3**
MAPS	**Pakushin South**	**1.01**	**269**		**Pn**	**19 48 45.1**	**+0.3**
SSLS	**Shishaldin Sou**	**1.14**	**39**		**Pn**	**19 48 46.9**	**+0.3**
SSBA	**Shishaldin**	**1.14**	**35**		**Pn**	**19 48 46.8**	**+0.2**
SSBA					**Sn**	**19 49 03.1**	**+1.6**
SSLN	**Shishaldin Nor**	**1.21**	**36**		**Pn**	**19 48 48.3**	**+0.7**
SSLN					**Sn**	**19 49 04.6**	**+1.3**
ISNN	**Isanotski Nort**	**1.31**	**40**		**Pn**	**19 48 49.7**	**+0.9**
ISNN					**Sn**	**19 49 07.7**	**+2.3**
FALS	**False Pass**	**1.47**	**46**		**Pn**	**19 48 51.5**	**+0.6**
FALS				Sn	**Sn**	**19 49 10.7**	**+1.4**
OKFG	**Magazine Ridge**	**1.65**	**256**		**Pn**	**19 48 54.3**	**+1.0**
OKER	**Okmok East Rim**	**1.72**	**258**		**Pn**	**19 48 55.2**	**+0.9**
OKTU	**Okmok Mt. Tuli**	**1.73**	**256**		**Pn**	**19 48 55.5**	**+1.0**
OKRE	**Okmok R'deer P**	**1.77**	**261**		**Pn**	**19 48 56.9**	**+2.0**
OKWR	**Okmok West Rim**	**1.81**	**258**		**Pn**	**19 48 56.8**	**+1.2**
OKWE	**Okmok W'ng Wal**	**1.82**	**259**		**Pn**	**19 48 56.8**	**+1.2**
OKSP	**Okmok Steeple**	**1.91**	**253**		**Pn**	**19 48 58.0**	**+1.1**
DTNA	**Dutton South F**	**2.18**	**52**		**Pn**	**19 49 01.1**	**+0.6**
NIKH	**Nikolski High**	**2.33**	**249**		**Sn**	**19 49 31.0**	**+0.9**
NIKH	**Nikolski High**	**2.33**	**249**		**Pn**	**19 49 03.4**	**+0.9**
NIKH				IAML		19 49 35.4	
	comp=N,736nm,0.8s						
NIKH				IAML		19 49 35.8	
	comp=E,784nm,0.6s						
DOL	**Dolgoi Island**	**2.37**	**55**		**Pn**	**19 49 03.8**	**+0.8**
HAG	**Hague Volcano**	**2.44**	**51**		**Pn**	**19 49 05.2**	**+1.1**
PS4A	**Pavlof South-4**	**2.48**	**51**		**Pn**	**19 49 05.7**	**+1.2**
SDPT	**Sand Point**	**3.16**	**60**		**Pn**	**19 49 14.3**	**+0.5**
SDPT				IAML		19 50 00.6	
	comp=E,379nm,0.6s						
CNBA	**Chernabura Isl**	**3.45**	**71**	Pn	**Pn**	**19 49 17.4**	**-0.3**
CHGN	**Chignik**	**4.63**	**55**		**Pn**	**19 49 34.9**	**+1.1**
CHGN				IAML		19 50 37.8	
	comp=N,86nm,0.8s						
O14K	**Tigyukauivet M**	**5.85**	**20**		**Pn**	**19 49 52.2**	**+1.6**
O15K	**Ungalikthiuk R**	**6.13**	**27**		**Pn**	**19 49 55.2**	**+0.8**
PLK4	**Peulik 4**	**6.29**	**49**		**Pn**	**19 49 58.1**	**+1.5**
N14K	**Kuskokwak Cree**	**6.40**	**16**		**Pn**	**19 49 58.9**	**+0.9**
P16K	**Nushagak River**	**6.57**	**35**		**Pn**	**19 50 01.7**	**+1.3**
N15K	**Kwethluk River**	**6.94**	**22**		**Pn**	**19 50 06.8**	**+1.4**
O16K	**Kokwok River B**	**6.98**	**31**		**Pn**	**19 50 07.2**	**+1.3**
ACHA	**Angle Creek He**	**7.07**	**48**		**Pn**	**19 50 09.4**	**+2.1**
M14K	**Bethel**	**7.15**	**13**		**Pn**	**19 50 09.8**	**+1.5**
ADK	**Adak**	**7.20**	**259**	Pn	**Pn**	**19 50 08.8**	**-0.2**
P17K	**Kvichak River**	**7.24**	**39**		**Pn**	**19 50 11.8**	**+2.2**
KIWB	**Kanaga Island**	**7.48**	**259**	Pn	**Pn**	**19 50 12.8**	**-0.1**
OHAK	**Old Harbor**	**7.58**	**59**	Pn	**Pn**	**19 50 13.5**	**-0.7**
P18K	**Big Mountain,**	**7.83**	**41**		**Pn**	**19 50 19.5**	**+1.8**
M16K	**Timber Creek**	**7.95**	**23**		**Pn**	**19 50 20.0**	**+0.7**
N17K	**Nushagak Hills**	**8.00**	**30**		**Pn**	**19 50 20.9**	**+1.1**
K13K	**Kusilvak Mount**	**8.12**	**2**		**Pn**	**19 50 23.3**	**+1.8**
KDAK	**Kodiak Island**	**8.15**	**56**	Pn	**Pn**	**19 50 21.0**	**-0.9**
KDAK	comp=N,1.7nm,0.3s,baz=197,slow=3.4,SNR=25			Sn	**Sn**	**19 51 46.9**	**-5.4**
KDAK	comp=N,0.3nm,0.3s,baz=192,slow=16,SNR=0.9			LR	LR	19 53 15.7	
	comp=N,45nm,21.7s,baz=231,slow=35 comp=N,3.6nm,0.3s						
KDAK	**Kodiak Island**	**8.15**	**56**	Pn	**Pn**	**19 50 21.5**	**-0.5**
O18K	**Koktuh Hills**	**8.15**	**38**		**Pn**	**19 50 24.0**	**+2.0**
Q19K	**Cape Douglas,**	**8.20**	**47**		**Pn**	**19 50 23.0**	**+0.3**
L16K	**Owhat River**	**8.46**	**19**		**Pn**	**19 50 27.5**	**+1.3**
N18K	**Kilae Creek**	**8.52**	**33**	Pn	**Pn**	**19 50 27.5**	**+0.5**
SYI	**Shuyak Island**	**8.60**	**51**	Pn	**Pn**	**19 50 28.4**	**+0.3**
ILSW	**Iliamna Southw**	**9.03**	**42**		**Pn**	**19 50 35.3**	**+1.2**
L18K	**Granite Mounta**	**9.54**	**25**	Pn	**Pn**	**19 50 42.0**	**+1.1**
CNPM	**China Poot**	**9.57**	**48**		**Pn**	**19 50 41.3**	**-0.1**
STLK	**Strandline Lak**	**10.49**	**38**		**Pn**	**19 50 55.8**	**+1.9**
SEW	**Seward**	**10.64**	**48**		**Pn**	**19 50 56.5**	**+0.5**
RC01	**Rabbit Creek A**	**11.04**	**43**		**Pn**	**19 51 02.2**	**+0.7**
J19K	**Poorman**	**11.31**	**22**		**Pn**	**19 51 06.4**	**+1.3**
PPLA	**Purkeypile**	**11.35**	**32**		**Pn**	**19 51 09.3**	**+3.6**
GHO	**Glory Hole Cre**	**11.75**	**41**		**Pn**	**19 51 09.8**	**-1.4**
KTH	**Kantishna Hill**	**12.22**	**32**	Pn	**Pn**	**19 51 18.9**	**+1.4**
KAIM	**Kayak Island**	**12.88**	**53**	Pn	**Pn**	**19 51 26.8**	**+0.3**
CCB	**Clear Creek Bu**	**13.97**	**32**		**Pn**	**19 51 38.5**	**-2.5**
ILAR	**Eielson Array**	**14.34**	**33**	Pn	**Pn**	**19 51 44.0**	**-2.0**
ILAR	comp=N,0.2nm,0.3s,baz=231,slow=13,SNR=11 baz=231,slow=23,SNR=1.4 comp=N,0.4nm,0.7s			Sn	**Sn**	**19 54 21.3**	**-2.0**
E22K	**Anaktuvuk Pass**	**15.68**	**19**	IAmb	IAmb	19 52 09.8	
	comp=Z,4.9nm,0.8s						
O29M	**Mount Kennedy**	**15.80**	**55**	IAmb	IAmb	19 52 09.5	
	comp=Z,4.8nm,0.6s						
F24K	**Squaw Lake**	**16.04**	**25**	IAmb	IAmb	19 52 24.6	
	comp=Z,5.3nm,1.1s						
E23K	**Chandalar**	**16.07**	**21**	IAmb	IAmb	19 52 13.3	
	comp=Z,7.3nm,1.4s						
HYT	**Haines Junctio**	**16.43**	**54**	IAmb	IAmb	19 52 24.7	
	comp=Z,5.3nm,0.6s						
M29M	**Somme Creek**	**16.44**	**48**	IAmb	IAmb	19 52 19.7	
	comp=Z,6.1nm,0.7s						
B21K	**Ikpikpuk River**	**16.57**	**13**	IAmb	IAmb	19 52 32.7	
	comp=Z,5.3nm,0.8s						
N30M	**Aishikik Lake**	**16.77**	**52**	IAmb	IAmb	19 52 26.1	
	comp=Z,7.2nm,0.8s						
L29M	**L29M**	**16.81**	**46**	IAmb	IAmb	19 52 24.5	
	comp=Z,3.4nm,0.6s						
O30N	**Mendenhall**	**17.09**	**54**	IAmb	IAmb	19 52 27.9	
	comp=Z,12nm,1.4s						
I28M	**Miner Creek**	**17.12**	**37**	IAmb	IAmb	19 52 25.6	
	comp=Z,3.0nm,0.6s						
K29M	**Barlow Dome**	**17.34**	**44**	IAmb	IAmb	19 52 29.3	
	comp=Z,5.0nm,0.6s						
C23K	**Itkillik River**	**17.38**	**17**	IAmb	IAmb	19 52 40.6	
	comp=Z,6.1nm,1.2s						
B22K	**Teshekpuk Lake**	**17.39**	**13**	IAmb	IAmb	19 52 26.7	
	comp=Z,11nm,1.1s						
WHY	**Whitehorse**	**17.66**	**55**	IAmb	IAmb	19 52 37.0	
	comp=Z,6.3nm,0.9s						
J30M	**Hart River**	**18.10**	**42**	IAmb	IAmb	19 52 36.3	
	comp=Z,6.9nm,1.2s						
M31M	**Drury Creek, Y**	**18.19**	**50**	IAmb	IAmb	19 52 40.1	
	comp=Z,5.7nm,0.7s						
I30M	**Mount Dempster**	**18.34**	**40**	IAmb	IAmb	19 52 38.4	
	comp=Z,3.7nm,0.7s						
EPYK	**Eagle Plains**	**18.73**	**37**	IAmb	IAmb	19 52 42.2	
	comp=Z,12nm,1.2s						
S34M	**Telegraph Cree**	**19.43**	**64**	IAmb	IAmb	19 52 54.5	
	comp=Z,9.6nm,1.2s						
F30M	**Barrier River**	**19.66**	**34**	IAmb	IAmb	19 53 19.9	
	comp=Z,6.1nm,1.1s						
INK	**Inuvik**	**20.74**	**33**	P	**P**	**19 53 01.2**	**-0.3**
	comp=Z,2.0nm,0.3s,baz=254,slow=12,SNR=12 comp=Z,2.0nm,0.3s						
INK	**Inuvik**	**20.74**	**33**	P	**P**	**19 52 59.2**	**-2.2**
INK				IAmb	IAmb	19 53 07.2	
	comp=Z,5.2nm,1.1s						
BBB	**Bella Bella**	**22.24**	**79**	P	**P**	**19 53 16.7**	**-0.9**
A36M	**Sachs Harbour**	**24.94**	**28**	P	**P**	**19 53 44.4**	**+1.1**
YKAW3	**Yellowknife Wh**	**27.38**	**51**	P	**P**	**19 54 06.1**	**+0.7**
YKA	**Yellowknife Ar**	**27.39**	**51**	P	**P**	**19 54 05.4**	**0.0**
	comp=Z,2.0nm,0.3s,baz=277,slow=9.3,SNR=8.4 comp=Z,0.2nm,0.3s						
YKA	**Yellowknife Ar**	**27.39**	**51**	P	**P**	**19 54 06.7**	**+1.3**
BEKR	**Beckworth**	**33.13**	**96**	P	**P**	19 54 53.8	-2.8
NVAR	**Mina Array Bea**	**35.28**	**96**	P	**P**	**19 55 17.2**	**+2.0**
	comp=Z,0.7nm,0.7s,baz=300,slow=8.5,SNR=4.8 comp=Z,0.7nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**40.20**	**223**	T	T	20 38 52.3	
	baz=26,slow=76,SNR=29						
H11N3	**WAKE ISLAND Hy**	**40.20**	**223**	T	T	20 38 52.8	
	baz=26,slow=76,SNR=29						
H11N1	**WAKE ISLAND Hy**	**40.22**	**223**	T	T	20 38 53.6	
	baz=26,slow=76,SNR=25						
H11S1	**WAKE ISLAND Hy**	**41.38**	**222**	T	T	20 40 20.8	
	baz=25,slow=76,SNR=75						
H11S2	**WAKE ISLAND Hy**	**41.39**	**222**	T	T	20 40 19.8	
	baz=25,slow=76,SNR=28						
H11S3	**WAKE ISLAND Hy**	**41.39**	**222**	T	T	20 40 22.4	
	baz=25,slow=76,SNR=24						
TXAR	**Lajitas Array**	**50.29**	**93**	P	**P**	**19 57 17.8**	**+1.3**
	comp=Z,0.9nm,0.5s,baz=300,slow=4.8,SNR=13 comp=Z,0.9nm,0.5s						
HFS	**Hagfors**	**66.37**	**1**	P	**P**	**19 59 06.8**	**-1.2**
	comp=Z,1.5nm,0.5s,baz=353,slow=5.8,SNR=14 comp=Z,1.5nm,0.5s						
EKA	**Eskdalemuir Ar**	**70.19**	**11**	P	**P**	**19 59 31.3**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=351,slow=6.0,SNR=4.1 comp=Z,0.8nm,0.6s						
PMG	**Port Moresby**	**74.72**	**229**	LR	LR	20 28 07.4	
	comp=Z,152nm,19.6s,baz=309,slow=32						
ASAR	**Alice Springs**	**93.26**	**233**	P	**P**	**20 01 32.2**	**-1.6**
	comp=Z,0.2nm,0.5s,baz=16,slow=5.2,SNR=1.8 comp=Z,0.2nm,0.5s						
H03N2	**Juan Fernandez**	**114.20**	**114**	T	T	22 11 55.9	
	baz=322,slow=77,SNR=16						
H03N1	**Juan Fernandez**	**114.21**	**114**	T	T	22 11 56.2	
	baz=322,slow=77,SNR=20						
H03N3	**Juan Fernandez**	**114.22**	**114**	T	T	22 11 55.3	
	baz=322,slow=77,SNR=20						
QSPA	**South Pole Qui**	**143.61**	**180**	PKP	PKPbc	20 07 50.0	-0.1
	comp=Z,1.4nm,0.5s,baz=309,slow=1.0,SNR=12						

KRSC 19 19:50:15.5±1.5, 50.41N×157.68E, h48km±24km, MI3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.03**	**286**	*eP*	Pn	19 50 34.4	+0.8
SKR				*eS*	Sn	19 50 46.7	-0.2
PAU	**Pauzhetka**	**1.19**	**333**	*eP*	Pn	19 50 37.9	+2.2
PAU				*eS*	Sn	19 50 52.7	+1.9
KDTR	**Khodutka, Kamc**	**1.42**	**10**	*eP*	Pn	19 50 41.3	+2.5
KDTR				*eS*	Sn	19 50 58.7	+2.3
MIPR	**Malaya Ipel'ka**	**1.96**	**343**	*eP*	Pn	19 50 48.7	+2.5
MIPR				*eS*	Sn	19 51 12.1	+2.6
ASAK	**Asacha**	**1.98**	**4**	*eP*	Pn	19 50 49.4	+2.8
ASAK				*eS*	Sn	19 51 13.2	+3.0
RUS	**Russkaya**	**2.09**	**14**	*eP*	Pn	19 50 50.5	+2.5
RUS				*eS*	Sn	19 51 14.2	+1.4
MTVR	**Mutnovka**	**2.10**	**8**	*eP*	Pn	19 50 51.2	+2.9
MTVR				*eS*	Sn	19 51 16.2	+3.0
GRL	**Gorelyy**	**2.16**	**6**	*eP*	Pn	19 50 52.3	+3.2
GRL				*eS*	Sn	19 51 17.5	+2.8
KRMR	**Karymshinskiy**	**2.44**	**6**	*eP*	Pn	19 50 56.2	+3.4
APC	**Apacha**	**2.54**	**353**	*eP*	Pn	19 50 57.0	+2.9
PET	**Petropavlovsk**	**2.69**	**13**	*eP*	Pn	19 50 59.4	+3.3
PET				*eS*	Sn	19 51 31.2	+3.8
DALK	**Dalny**	**2.71**	**14**	*eP*	Pn	19 50 59.5	+3.1
DALK				*eS*	Sn	19 51 30.2	+2.3
UGLR	**Uglovaya**	**2.89**	**14**	*eP*	Pn	19 51 02.8	+3.8
AVH	**Avacha**	**2.94**	**12**	*eP*	Pn	19 51 03.9	+4.2
AVH				*eS*	Sn	19 51 37.5	+3.9
SMAR	**Somma**	**2.94**	**13**	*eP*	Pn	19 51 03.3	+3.5
KOK	**Koryaka**	**2.95**	**11**	*eP*	Pn	19 51 04.2	+4.4
KOK				*eS*	Sn	19 51 39.2	+5.2
SDLR	**Sedlovina**	**2.97**	**14**	*eP*	Pn	19 51 03.4	+3.2
KRER	**Koryakskii**	**2.97**	**12**	*eP*	Pn	19 51 04.5	+4.2
KRER				*eS*	Sn	19 51 39.6	+4.8
KRX	**Arik**	**3.02**	**11**	*eP*	Pn	19 51 05.0	+4.2
KRX				*eS*	Sn	19 51 40.3	+4.6
SPN	**Mys Shipunski**	**3.06**	**27**	*eP*	Pn	19 51 04.5	+3.2
SPN				*eS*	Sn	19 51 38.8	+2.2
GNL	**Ganaly**	**3.29**	**3**	*eP*	Pn	19 51 07.5	+2.9
MKZ	**Mys Kozlova**	**4.83**	**29**	*eP*	Pn	19 51 28.3	+2.7
KBTR	**Krutoberegovo**	**6.57**	**26**	*eP*	Pn	19 51 52.4	+3.0

*DJA **19** 20:08:17.0±0.7, 15°N±4°×12°4E±°, h22km±4km, M5.0/106, mb5.2/106, mb5.5/72, Mw(mB)5.0/72, MwMwp5.0/13, Mwp5.3/13*

*MAN **19** 20:08:18.0, 14.78N×124.23E, h8km, MS5.0*

MAN INTENSITY III - PANDAN AND VIRAC CATANDUANES; LIGAO CITY ALBAY; MERCEDES AND DAET CAMARINES NORTE; . INTENSITY II - PARACALE CAMARINES NORTE; BULA CAMARINES SUR; GUINAYANGAN QUEZON; . INTENSITY II - IRIGA CITY AND PILI CAMARINES SUR; JOSE PANGANIBAN CAMARINES NORTE; . INTENSITY I - MAUBAN QUEZON.

*MOS **19** 20:08:20.4±0.9, 14.45N×124.04E, h21km, mb5.1/60, MS4.4/9, Error ellipse: s-maj=7.9km s-min=4.4km az=119.9*

*NEIC **19** 20:08:20.6, 14.48N×124.07E, h26km*

*NEIC **19** 20:08:20.6, 14.48N×124.07E, h26km, Moment Tensor Solution. Duration: 1§4 Moment tensor: Scale 10^16 Nm; Mrr4.34; Mθθ-0.95; Mφφ-3.38; Mrθ 0.09; Mrφ 1.57; Mθφ 0.19; Fault plane solution: M0 4.25000×10^16 NP1: φs151.80000°, δ44.18000°, λ87.07000°. NP2: φs335.88000°, δ45.89000°, λ92.84000°. Principal axes: T 4.3433, Plg88.0000°, Azm311.0000°; N -0.1864, Plg2.0000°, Azm154.0000°; P -4.1569, Plg1.0000°, Azm64.0000°;*

*BJI **19** 20:08:20.0, 14.44N×124.05E, h20km, mB5.1/50, mb4.8/80, Ms4.7/78, Ms7 4.5/75*

*GFZ **19** 20:08:21.3, 14.53N×124.03E, h28km, MW5.0, Moment Tensor Solution. s31 Moment tensor: Mrr3.71; Mθθ-1.24; Mφφ-2.47; Mrθ 1.36; Mrφ 1.65; Mθφ 1.06; Fault plane solution: NP1:φs125.00000°, δ47.00000°, λ61.00000°. NP2:φs345.00000°, δ49.00000°, λ118.00000°.*

*NEIC **19** 20:08:22.7±1.8, 14.51N±0.06×124.06E±0.07, h22km±2km, mb5.1/190, Mww5.0/16 Error ellipse: s-maj=9.7km s-min=8.4km az=68.0*

*GCMT **19** 20:08:24.7±0.2, 14.72N±0.01×124.01E±0.01, h24km, MW5.1/116, Moment Tensor Solution. s78,c111; s116,c174; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr3.52±.15; Mθθ-1.85±.09; Mφφ-1.67±.09; Mrθ-2.11±.14; Mθφ 2.10±.06; Mφr4.68±.22; Best double couple: M0 6.33000×10^16 NP1:φs117.00000°, δ21.00000°, λ57.00000°. NP2:φs331.00000°, δ73.00000°, λ102.00000°. Principal axes: T 6.3520, Plg61.0000°, Azm258.0000°; N -0.0460, Plg11.0000°, Azm148.0000°; P -6.3070, Plg27.0000°, Azm52.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **19** 20:08:26.3±1.8, 14.46N×123.94E, h52km±16km, mb4.5/31, mbtmp4.8/35, ML4.5/4, MS4.3/68 Error ellipse: s-maj=12.2km s-min=8.8km az=82.0*

ISC 19 20:08:21.6±0.5, 14.47N±0.02×124.07E±0.03, h17km±2km, n947, σ1§38/899, mb5.1/268, MS4.4/94, 73C-33D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**2.14**	**192**	*eP*	**Pb**	**20 09 00.0**	**0.0**
MMPH				*i* S	**Sg**	**20 09 33.4**	**+2.8**
BOAC	**Boac**	**2.38**	**245**	*eP*	**Pb**	**20 09 02.1**	**-1.9**
BOAC				*i* S	**Sb**	**20 09 35.8**	**+2.6**
PCPS	**Palayan City**	**2.92**	**274**	*eP*	**Pn**	**20 09 07.1**	**-0.2**
PCPS				*eS*	**Sg**	**20 09 57.4**	**+1.8**
TGY	**Tagaytay City**	**3.06**	**264**	P	**Pn**	**20 09 09.2**	**0.0**
	146nm,0.3s,baz=104,slow=2.7,SNR=30						
TGY				S	**Sn**	**20 09 45.2**	**-0.3**
	6μm,0.7s,baz=100,slow=10,SNR=6.0						
TGY				LR	LR	20 10 29.3	
	comp=Z,16μm,20.9s,baz=34,slow=42 364nm,0.4s						
TGY	**Tagaytay City**	**3.06**	**264**	*eP*	**Pn**	**20 09 11.7**	**+2.5**
TGY				*eS*	**Sb**	**20 09 55.5**	**+2.7**
RCP	**Roxas**	**3.17**	**204**	*eP*	**Pn**	**20 09 13.5**	**+2.9**
RCP				*i* S	**Sg**	**20 10 05.9**	**+2.5**
PGP	**Puerto Galera**	**3.17**	**253**	*eP*	**Pb**	**20 09 14.5**	**-3.1**
PLP	**Palo**	**3.40**	**165**	*eP*	**Pn**	**20 09 17.3**	**+3.5**
PLP				*eS*	**Sn**	**20 09 57.8**	**+4.0**
LLP	**Lapu-Lapu**	**4.13**	**181**	*i* P	**Pn**	**20 09 27.3**	**+3.4**
LLP				*i* S	**Sb**	**20 10 27.2**	**+3.8**
JAP	**San Jose, Anti**	**4.24**	**210**	*eP*	Pn	20 09 30.7	+5.3
BOLP	**Bolinao**	**4.44**	**296**	*i* P	**Pn**	**20 09 28.0**	**-0.1**
BOLP				*i* S	**Sb**	**20 10 37.8**	**+5.5**
ABRA	**Dolores**	**4.52**	**315**	*eP*	**Pn**	**20 09 28.1**	**-1.2**
ABRA				*i* S	**Sn**	**20 10 19.9**	**-1.5**
TBP	**Tagbilaran**	**4.75**	**182**	*eP*	**Pn**	**20 09 35.6**	**+3.2**
TBP				*eS*	**Sn**	**20 10 26.5**	**-0.7**
SIPP	**Brgy, Tapao**	**4.88**	**315**	*eP*	**Pn**	**20 09 33.5**	**-0.8**
SNPH	**Sibulan**	**5.16**	**189**	*eP*	Pb	20 09 46.9	-4.5
SNPH				*eS*	**Sb**	**20 10 57.4**	**+4.2**
TSSP	**Tandag City**	**5.78**	**159**	*eP*	Pn	20 09 52.1	+5.5
TSSP				*eS*	**Sn**	**20 10 47.5**	**-5.1**
DCPH	**Dipolog City**	**5.89**	**187**	*i* P	Pb	20 09 56.4	-7.5
CGP	**Cagayan de Oro**	**6.01**	**174**	*eP*	Pn	20 09 55.3	+5.6
BUKP	**Musuan**	**6.62**	**171**	*eP*	Pn	20 10 05.5	+7.3
BUKP

SSE pmax pmax
comp=Z,10.0nm,0.7s
SSE pmax pmax
comp=Z,140nm,4.1s
SSE L L
comp=Z,540nm,18.7s
SSE L L
comp=Z,310nm,17.5s
GULI GuiLin 16.78 312 P **P** **20 12 18.3 +0.3**
GULI S **S** **20 15 27.8 -4.8**
GULI pmax pmax
comp=Z,86nm,1.3s
GULI pmax pmax
comp=Z,510nm,11.5s
GULI L L
comp=Z,2µm,16.8s
GULI L L
comp=Z,2µm,17.2s
GULI L L
comp=Z,2µm,15.1s
SWI Sorong 16.81 154 P **P** **20 12 18.0 -0.4**
comp=Z,53nm,1.0s
SIJI Sorong 16.82 154 P **P** **20 12 20.5 +2.0**
comp=Z,1.0nm,0.3s,baz=346,slow=11,SNR=8.4
SIJI LR LR 20 22 08.1
comp=Z,652nm,18.0s,baz=316,slow=49
comp=Z,18nm,0.9s
SIJI Sorong 16.82 154 P **Pn** **20 12 15.6 -0.9**
CNSH ChangSha 17.13 325 P **Pn** **20 12 20.6 +0.4**
CNSH S **Sn** **20 15 31.4 +1.1**
CNSH pmax pmax
comp=Z,17nm,1.3s
CNSH L L
comp=Z,820nm,19.6s
CNSH L L
comp=Z,1µm,21.6s
CNSH L L
comp=Z,1µm,15.3s
MMSI Mamuju 17.80 197 P **P** **20 12 32.4 +3.1**
comp=Z,2µmcomp=Z,180nm,1.0s
NLAI Namlea 17.85 170 P **Pn** **20 12 29.3 +0.1**
TTSI Tana Toraja 17.90 194 P **P** **20 12 33.1 +2.6**
NJ2 Nanjing 18.14 346 *e*P **P** **20 12 33.4 +0.4**
NJ2 S **Sn** **20 15 54.3 -0.6**
NJ2 pmax pmax
comp=Z,11nm,0.6s
NJ2 L L
comp=Z,2µm,14.2s
NJ2 L L
comp=Z,810nm,14.2s
NJ2 L L
comp=Z,2µm,18.9s
KRAI Karang Ratu 18.18 166 P **P** **20 12 34.9 +1.3**
WHN Wuhan 18.33 332 P **P** **20 12 36.0 +0.9**
WHN pmax pmax
comp=Z,240nm,1.4s
WHN pmax pmax
comp=Z,1µm,9.8s
WHN L L
comp=Z,1µm,11.4s
WHN L L
comp=Z,900nm,10.2s
WHN L L
comp=Z,2µm,13.9s
AAI Ambon 18.50 167 P **Pn** **20 12 38.5 +1.3**
comp=Z,66nm,0.9s
PMSI Majene 18.57 196 P **Pn** **20 12 39.0 +0.9**
comp=Z,3µmcomp=Z,3µmcomp=Z,212nm,1.0s
SPSI Sidrap Palu 18.80 193 P **Pn** **20 12 42.2 +1.3**
comp=Z,2µmcomp=Z,1µmcomp=Z,209nm,0.8s
FAKI Fak Fak 19.08 154 **P** **20 12 43.9 +0.4**
FAKI Fak Fak 19.08 154 P **P** **20 12 43.7 +0.2**
comp=Z,59nm,1.1s
JNU Nakatsue 19.57 17 P **Pn** **20 12 50.6 +0.4**
comp=Z,0.5nm,0.3s,baz=9.9,slow=2.2,SNR=4.6
JNU LR LR 20 20 57.6
comp=Z,1µm,18.9s,baz=194,slow=38
comp=Z,5.2nm,0.7s
BAKI Biak 19.60 142 P **Pn** **20 12 53.5 +3.0**
BNDI Bandanaira 19.73 163 P **Pn** **20 12 54.0 +1.9**
comp=Z,3µmcomp=Z,219nm,1.0s
KAPI Kappang 19.82 193 P **Pn** **20 12 53.3 +0.1**
KAPI comp=Z,3.3nm,0.3s,baz=32,slow=8.0,SNR=50 LR LR 20 20 50.5
comp=Z,1µm,21.1s,baz=17,slow=38
comp=Z,162nm,1.1s
KAPI Kappang 19.82 193 **Pn** **20 12 53.0 -0.2**
KAPI Kappang 19.82 193 *c*e**P** **Pn** **20 12 53.6 +0.4**
KAPI pmax pmax
comp=Z,195nm,1.1s
KAPI Kappang 19.82 193 P **Pn** **20 12 54.1 +0.9**
KAPI P **Pn** **20 12 54.1 +0.9**
KAPI Kappang 19.82 193 P **P** **20 12 52.5 +0.9**
comp=Z,1µmcomp=Z,98nm,1.3s
MKS Makassar 20.08 193 P Pn 20 12 55.8 -0.5
comp=Z,4µmcomp=Z,333nm,1.4s
GYA Guiyang 20.18 309 ⇑P Pn 20 12 56.8 -0.6
GYA S **S** **20 16 41.4 -0.2**
GYA pmax pmax
comp=Z,50nm,1.3s
GYA L L
comp=Z,2µm,14.3s
GYA L L
comp=Z,1µm,14.7s
GYA L L
comp=Z,3µm,15.8s
GUMO Guam 20.20 90 P Pn 20 12 58.3 +0.6
comp=Z,266nm,1.1s,baz=279,slow=13,SNR=4.1
GUMO LR LR 20 20 24.0
comp=Z,1µm,18.8s,baz=276,slow=35
comp=Z,266nm,1.1s
GUMO Guam 20.20 90 P **P** **20 12 56.2 +0.5**
GUMO Guam 20.20 90 P **P** **20 12 56.2 +0.5**
GUMO pmax pmax
comp=Z,280nm,1.1s
SRPI Serui, Papua 20.22 142 P Pn 20 12 58.0 +0.1
comp=Z,2µmcomp=Z,72nm,1.0s
KMPI Kaimana, Papua 20.39 151 P **P** **20 12 58.3 +0.6**
comp=Z,2µmcomp=Z,151nm,0.8s
ENH Enshi 20.68 322 IAmb IAmb 20 13 09.2
comp=Z,91nm,1.5s
BSSI Bau Bau, Buton 20.78 190 P **P** **20 13 00.8 -1.2**
comp=Z,1µmcomp=Z,118nm,1.1s
JCJ Chichijima 21.05 50 LR LR 20 19 35.9
comp=Z,976nm,20.3s,baz=337,slow=32
TIA Tai'an 22.53 345 P **P** **20 13 21.3 +0.7**
TIA S **S** **20 17 22.3 -4.8**
TIA pmax pmax
comp=Z,15nm,1.1s
TIA pmax pmax
comp=Z,290nm,4.9s
TIA L L
comp=Z,510nm,14.4s
TIA L L
comp=Z,420nm,19.5s
TIA L L
comp=Z,720nm,15.3s
LYN LuoYang 22.57 334 P **P** **20 13 22.0 +0.9**
LYN S **S** **20 17 27.0 -0.9**
LYN pmax pmax
comp=Z,89nm,1.2s
LYN pmax pmax
comp=Z,370nm,8.7s
LYN L L
comp=Z,1µm,16.1s
LYN L L
comp=Z,690nm,16.1s
LYN L L
comp=Z,820nm,14.3s
KMI2 Kunming 22.67 301 ⇑P **P** **20 13 23.3 +0.8**
KMI2 sP sP 20 13 29.4 -0.1
KMI2 PcP **PcP** **20 17 16.6 +1.6**
KMI2 S **S** **20 17 28.3 -1.9**
KMI2 pmax pmax
comp=Z,79nm,1.2s
KMI2 pmax pmax
comp=Z,680nm,3.9s
KMI2 L L
comp=Z,790nm,14.8s
KMI2 L L
comp=Z,1µm,14.8s
KMI2 L L
comp=Z,1µm,18.0s
MMRI Maumere 23.03 185 **P** **20 13 27.1 +1.1**
MMRI Maumere 23.03 185 P **P** **20 13 27.1 +1.1**
comp=Z,2µmcomp=Z,90nm,1.0s
KSRS Korea Array 23.15 8 P **P** **20 13 27.9 +0.8**
comp=Z,19nm,1.2s,baz=192,slow=10,SNR=7.0
KSRS LR LR 20 22 31.3
comp=Z,496nm,19.0s,baz=195,slow=36
comp=Z,19nm,1.2s
LBFI Labuhan Bajo, 23.17 191 P **P** **20 13 26.9 -0.6**
EDFI Ende, Flores 23.19 186 P **P** **20 13 27.1 -0.7**
comp=Z,946nmcomp=Z,105nm,1.0s
GENI Genyem 23.28 135 P **P** **20 13 29.3 +0.7**
comp=Z,2µmcomp=Z,86nm,2.0s
JHJ Hachijo jima 2 23.43 35 LR LR 20 21 53.0
comp=Z,2µm,18.9s,baz=90,slow=34
DBNI Kabupaten Domp 23.52 194 P **P** **20 13 30.5 -0.5**
comp=Z,1µmcomp=Z,1µmcomp=Z,75nm,0.8s
JAY Jayapura 23.59 134 LR LR 20 20 39.6
comp=Z,610nm,21.9s,baz=340,slow=31
JAY Jayapura 23.59 134 P **P** **20 13 32.7 +1.0**
KMMI Kalianget 23.61 206 P **P** **20 13 31.0 -0.9**
comp=Z,2µmcomp=Z,137nm,1.6s
MYKOM Kota Tinggi 23.61 240 **P** **20 13 31.6 -0.3**
MYKOM Kota Tinggi 23.61 240 P **P** **20 13 28.1 -3.8**
XAN Xi'an 23.83 328 ⇑P **P** **20 13 33.6 -0.3**
XAN pP pP 20 13 37.4 -1.5
XAN S **S** **20 17 53.1 +4.1**
XAN pmax pmax
comp=Z,98nm,1.3s
XAN pmax pmax
comp=Z,640nm,6.3s
XAN L L
comp=Z,750nm,13.7s
XAN L L
comp=Z,1µm,15.0s
XAN L L
comp=Z,1µm,14.7s
INU Inuyama 23.83 27 P **P** **20 13 33.5 -0.3**
INU IAmb IAmb 20 13 40.1
comp=Z,182nm,1.8s
PLAI Plampang 23.97 195 P **P** **20 13 35.5 +0.2**
PZH PanZhiHua 24.05 303 P **P** **20 13 35.8 -0.4**
PZH S **S** **20 17 49.6 -3.4**
PZH pmax pmax
comp=Z,30nm,1.2s
PZH pmax pmax
comp=Z,350nm,5.7s
PZH L L
comp=Z,580nm,17.1s
PZH L L
comp=Z,1µm,15.9s
PZH L L
comp=Z,1µm,14.5s
SOEI Soe 24.07 180 **P** **20 13 35.3 -1.0**
SOEI Soe 24.07 180 P **P** **20 13 33.1 -3.2**
comp=Z,1µmcomp=Z,163nm,1.0s
ABJI Asem Bagus 24.18 204 P **P** **20 13 35.2 -2.0**
comp=Z,95nm,1.1s
KHKI Kahang-Kahang 24.19 201 P **P** **20 13 34.7 -2.6**
comp=Z,2µmcomp=Z,722nmcomp=Z,40nm,1.1s
HNS HongShan 24.31 342 ⇑P **P** **20 13 38.3 0.0**
HNS S **S** **20 17 51.1 -5.5**
HNS pmax pmax
comp=Z,50nm,1.2s
HNS L L
comp=Z,600nm,17.2s
HNS L L
comp=Z,920nm,18.0s
HNS L L
comp=Z,930nm,18.4s
BLJI Banyuglugur 24.39 206 P **P** **20 13 39.4 +0.2**
comp=Z,1µmcomp=Z,55nm,0.8s
WBSI Waikabubak, Su 24.40 191 P **P** **20 13 38.6 -0.7**
comp=Z,1µmcomp=Z,85nm,0.8s
CM31 Chiang Mai Arr 24.41 283 IAmb IAmb 20 13 40.9
comp=Z,97nm,1.1s
CM31 Chiang Mai Arr 24.41 283 P **P** **20 13 38.9 -0.5**
SNR=41
CM31 P **P** **20 13 38.9 -0.5**
SNR=41
CMAR Chiang Mai Arr 24.41 283 P **P** **20 13 39.0 -0.4**
comp=Z,48nm,0.9s,baz=95,slow=7.8,SNR=188
CMAR LR LR 20 23 51.9
comp=Z,1µm,18.0s,baz=105,slow=38
comp=Z,48nm,0.9s
CMAR Chiang Mai Arr 24.41 283 **P** **20 13 38.2 -1.2**
DL2 Dalian 24.44 355 *e*P **P** **20 13 39.1 -0.3**
DL2 S **S** **20 17 59.0 +0.4**
DL2 pmax pmax
comp=Z,37nm,1.0s
DL2 pmax pmax
comp=Z,460nm,7.0s
DL2 L L
comp=Z,530nm,17.0s
DL2 L L
comp=Z,2µm,18.5s
DL2 L L
comp=Z,1µm,19.2s
CHTO Chiang Mai 24.45 284 **P** **20 13 38.4 -1.4**
CHTO IAmb IAmb 20 13 40.6
comp=Z,45nm,1.1s
CHTO Chiang Mai 24.45 284 P **P** **20 13 38.4 -1.4**
CHTO pmax pmax
comp=Z,45nm,1.1s
CHTO Chiang Mai 24.45 284 P **P** **20 13 38.9 -0.9**
CHTO P **P** **20 13 38.9 -0.9**
CHTO S **S** **20 17 56.7 -2.6**
CHTO S **S** **20 17 56.7 -2.6**
CHTO Chiang Mai 24.45 284 P **P** **20 13 34.5 -5.3**
comp=Z,718nmcomp=Z,42nm,1.0s
BATI Baumata 24.52 181 LR LR 20 24 04.5
comp=Z,719nm,21.2s,baz=289,slow=38
BATI Baumata 24.52 181 P **P** **20 13 38.8 -1.6**
CD2 Chengdu 24.81 315 P **P** **20 13 42.8 -0.2**
CD2 sP pP 20 13 48.3 +0.3
CD2 S **S** **20 18 06.3 +1.4**
CD2 pmax pmax
comp=Z,150nm,1.0s
CD2 L L
comp=Z,2µm,16.9s
CD2 L L
comp=Z,2µm,16.5s
CD2 L L
comp=Z,1µm,16.1s
JAGI Jajag, Banyuwa 24.82 204 **P** **20 13 42.9 -0.2**
JAGI IAmb IAmb 20 13 52.1
comp=Z,62nm,1.0s
JAGI Jajag, Banyuwa 24.82 204 P **P** **20 13 42.6 -0.5**
comp=Z,61nm,1.0s
NGJI Ngawi 25.04 211 P **P** **20 13 45.7 +0.6**
SJI Sawahan 25.21 210 P **P** **20 13 47.2 +0.5**
SNJI Sawahan-Nganju 25.25 210 P **P** **20 13 48.4 +1.2**
comp=Z,1µmcomp=Z,89nm,0.9s
SMRI Semarang 25.30 213 **P** **20 13 47.9 +0.5**
SMRI Semarang 25.30 213 P **P** **20 13 46.6 -0.8**
TIY Taiyuan 25.35 338 *e*P **P** **20 13 50.1 +2.3**
TIY PP **PnPn** **20 14 25.8 +2.9**
TIY S **S** **20 18 11.0 -2.5**
TIY pmax pmax
comp=Z,150nm,6.4s
TIY L L
comp=Z,360nm,13.1s
TIY L L
comp=Z,480nm,15.1s
TIY L L
comp=Z,480nm,19.2s
MJAR Matsushiro Arr 25.36 27 P **P** **20 13 47.4 -0.4**
comp=Z,9.2nm,1.2s,baz=208,slow=7.5,SNR=6.6
MJAR LR LR 20 22 03.1
comp=Z,1µm,22.0s,baz=211,slow=32
comp=Z,9.2nm,1.2s
PCJI Pacitan 25.89 210 P **P** **20 13 52.9 +0.1**
comp=Z,123nm,1.1s
CTJI Waduk Cacaban 25.95 216 P **P** **20 13 49.8 -3.5**
comp=Z,81nm,1.4s
YOGI Yogyakarta 26.02 213 P **P** **20 13 53.0 -1.0**
TNCH TengChong 26.20 298 P **P** **20 13 55.6 -0.1**
TNCH PcP **PcP** **20 17 23.8 +1.1**
TNCH S **S** **20 18 25.3 -2.0**
TNCH SS **SnSn** **20 19 33.1 +6.5**
TNCH pmax pmax
comp=Z,86nm,1.3s
TNCH pmax pmax
comp=Z,180nm,3.8s
TNCH L L
comp=Z,970nm,13.8s
TNCH L L
comp=Z,980nm,14.3s
TNCH L L
comp=Z,2µm,16.9s
KPJI Karang Pucung 26.36 216 P **P** **20 13 55.8 -1.2**
comp=Z,46nm,1.4s
BJI2 Beijing 26.38 346 P **P** **20 13 59.1 +2.1**
BJI2 S **S** **20 18 27.8 -1.7**
BJI2 pmax pmax
comp=Z,7.0nm,1.1s
BJI2 L L
comp=Z,170nm,14.3s
BJI2 L L
comp=Z,290nm,20.2s
BJI2 L L
comp=Z,230nm,19.3s
BJT Baijiatuau 26.38 346 **P** **20 13 56.9 -0.1**
BJT Baijiatuau 26.38 346 P **P** **20 13 56.9 -0.1**
BJT pmax pmax
comp=Z,21nm,1.2s
LEM Lembang 26.72 219 LR LR 20 26 30.3
comp=Z,1µm,20.0s,baz=31,slow=41
LEM Lembang 26.72 219 P **P** **20 13 57.5 -3.0**
comp=Z,42nm,1.1s
KLSI 27.02 227 P **P** **20 14 01.8 -1.2**
BBJI Bungbulang 27.20 218 P **P** **20 14 03.5 -1.2**
BBJI Bungbulang 27.20 218 P **P** **20 14 02.1 -2.6**
comp=Z,25nm,1.1s
MDSI Maura Dua 27.27 228 P **P** **20 14 04.4 -0.9**
comp=Z,632nmcomp=Z,44nm,1.1s
PSI Prapat 27.39 247 P **P** **20 14 05.8 -0.7**
PSI pmax pmax
comp=Z,37nm,1.2s
PSI Prapat 27.39 247 P **P** **20 14 04.0 -2.5**
comp=Z,31nm,1.6s
RPSI Rantau Prapat 27.44 247 **P** **20 14 05.8 -1.0**
RPSI IAmb IAmb 20 14 21.6
comp=Z,37nm,1.2s
LWLI Liwa 27.73 227 P **P** **20 14 07.7 -1.8**
PPI Padang Panjang 27.73 240 P **P** **20 14 07.8 -1.6**
comp=Z,21nm,1.0s
MNSI Mandailing Nat 27.76 243 P **P** **20 14 08.2 -1.5**
comp=Z,19nm,0.8s
MTN Manton Dam 28.02 165 P **P** **20 14 12.1 +0.1**
comp=Z,35nm,1.3s
MTN Manton Dam 28.02 165 IAmb IAmb 20 14 12.9
comp=Z,20nm,0.8s
LZDM Lanzhou Array 28.13 323 P **P** **20 14 13.7 +0.6**
comp=Z,3.9nm,0.4s,baz=119,slow=12,SNR=8.7
LZDM LR LR 20 25 34.8
comp=Z,235nm,20.0s,baz=130,slow=37
comp=Z,3.9nm,0.4s
LZH Lanzhou 28.13 324 P **P** **20 14 14.0 +1.0**
LZH sP sP 20 14 21.9 +1.6
LZH S **S** **20 18 55.8 -1.9**
LZH pmax pmax
comp=Z,58nm,1.8s
LZH pmax pmax
comp=Z,170nm,4.2s
LZH L L
comp=Z,1µm,16.2s
LZH L L
comp=Z,560nm,15.9s
LZH L L
comp=Z,950nm,15.2s
KDU Kakadu 28.23 162 P **P** **20 14 13.8 0.0**
comp=Z,18nm,1.1s
HHC Hu-ho-hao-te 28.46 340 *e*P **P** **20 14 16.9 +1.1**
HHC S **S** **20 19 02.9 +0.4**
HHC SS **SnSn** **20 20 30.5 +9.1**
HHC pmax pmax
comp=Z,18nm,0.9s
HHC pmax pmax
comp=Z,140nm,5.7s
BTO2 Baotou 28.96 337 *e*P **P** **20 14 20.1 -0.2**
BTO2 PP **PnPn** **20 15 12.4 +0.3**
BTO2 S **S** **20 19 11.3 +0.8**
BTO2 pmax pmax
comp=Z,14nm,1.1s
BTO2 pmax pmax
comp=Z,280nm,6.4s
BTO2 L L
comp=Z,860nm,17.3s
BTO2 L L
comp=Z,1µm,17.8s
BTO2 L L
comp=Z,740nm,19.7s
MORE Moreh 29.66 294 IAmb IAmb 20 14 26.5
comp=Z,25nm,1.1s
PASG PASIGHAT 29.91 302 *e*P **P** **20 14 28.5 -0.3**
PASG IAmb IAmb 20 14 30.9
comp=Z,38nm,1.1s
MOKO MOKOCHONG 30.03 298 *e*P **P** **20 14 28.5 -1.5**
MOKO IAmb IAmb 20 14 35.0
comp=Z,19nm,1.1s
XLT XiLinHaoTe 30.12 348 *e*P **P** **20 14 32.8 +2.4**
XLT sP sP 20 14 40.8 +3.0
XLT S **S** **20 19 27.4 -1.1**
XLT pmax pmax
comp=Z,12nm,0.9s
XLT pmax pmax
comp=Z,140nm,3.7s
XLT L L
comp=Z,650nm,16.6s
XLT L L
comp=Z,480nm,14.6s
IMP Imphal 30.12 295 *e*P **P** **20 14 28.9 -1.8**
IMP IAmb IAmb 20 14 31.1
comp=Z,24nm,1.2s
KOHI KOHIMA 30.21 296 *e*P **P** **20 14 29.8 -1.8**
KOHI IAmb IAmb 20 14 41.8
comp=Z,45nm,1.4s
KNRA Kununurra 30.31 171 P **P** **20 14 32.3 0.0**
comp=Z,19nm,1.8s
KNRA Kununurra 30.31 171 **P** **20 14 32.1 -0.1**
USRK Ussuriysk Ar. 30.39 11 P **P** **20 14 33.6 +0.9**
comp=Z,4.1nm,0.8s,baz=172,slow=8.7,SNR=4.8
comp=Z,4.1nm,0.8s
SAIH SAIHA 30.49 290 *e*P **P** **20 14 33.6 -0.5**
SAIH IAmb IAmb 20 14 43.4
comp=Z,44nm,1.3s
ZIRO ZIRO 30.96 300 *e*P **P** **20 14 38.2 0.0**
ZIRO IAmb IAmb 20 14 48.1
comp=Z,35nm,1.1s
BNX BinXian 31.30 4 ⇑P **P** **20 14 43.6 +2.9**
BNX pmax pmax
comp=Z,19nm,1.3s
TEZP TEZPUR 31.59 297 *e*P **P** **20 14 42.7 -0.9**
TEZP IAmb IAmb 20 14 43.6
comp=Z,48nm,1.1s
BRDH Bariadhala 31.75 290 LR LR 20 29 15.7
comp=Z,2µm,18.9s,baz=130,slow=40
SHL Shillong 32.11 295 P **P** **20 14 47.8 -0.6**
SHL pmax pmax
comp=Z,38nm,1.1s
SHL Shillong 32.11 295 P **P** **20 14 47.7 -0.7**
SNR=26
SHL Shillong 32.11 295 *e*P **P** **20 14 47.4 -1.0**
SHL IAmb IAmb 20 14 49.7
comp=Z,38nm,0.9s
AGT Agartala 32.32 292 *e*P **P** **20 14 47.3 -2.6**
TAWA Tawang 32.66 299 *e*P **P** **20 14 53.8 +0.4**
TAWA IAmb IAmb 20 15 04.3
comp=Z,39nm,0.8s
GTA2 Gaotai 32.82 324 ⇑P **P** **20 14 55.0 +0.7**
GTA2 pP pP 20 14 58.3 -1.2
GTA2 PcP **PcP** **20 17 39.6 +0.4**
GTA2 S **S** **20 20 12.5 +1.6**
GTA2 pmax pmax
comp=Z,30nm,1.1s
GTA2 pmax pmax
comp=Z,170nm,9.8s
GTA2 L L
comp=Z,450nm,15.2s
GTA2 L L
comp=Z,430nm,16.5s
GTA2 L L
comp=Z,620nm,18.4s
KRVT Keravat (AS076 33.41 122 LR LR 20 26 07.6
comp=Z,106nm,20.6s,baz=301,slow=32
ASAJ Asahikawa 33.51 24 LR LR 20 28 47.5
comp=Z,582nm,18.6s,baz=176,slow=36
DHUB DHUBRI 33.87 295 *e*P **P** **20 15 02.9 -0.7**
DHUB IAmb IAmb 20 15 05.0
comp=Z,43nm,1.2s
LSA Lhasa 33.91 302 IAmb IAmb 20 15 06.5
comp=Z,26nm,1.0s
LSA Lhasa 33.91 302 P **P** **20 15 05.5 +1.1**
LSA P **P** **20 15 05.5 +1.1**
LSA Lhasa 33.91 302 P **P** **20 15 02.6 -1.8**

LSA S **S** **20 20 28.0 -0.8**
LSA pmax pmax
comp=Z,25nm,0.9s
LSA L L
comp=Z,430nm,17.8s
LSA L L
comp=Z,470nm,18.2s
GOMU GeErMu 33.94 315 P **P** **20 15 04.6 +0.1**
GOMU PcP **PcP** **20 17 43.6 +0.8**
GOMU S **S** **20 20 29.1 +0.1**
GOMU pmax pmax
comp=Z,29nm,1.3s
GOMU L L
comp=Z,530nm,12.1s
GOMU L L
comp=Z,520nm,14.7s
GOMU L L
comp=Z,1μm,14.7s
COBR COOCHBEHAR 34.40 296⇑ *eP* **P** **20 15 07.3 -0.8**
JPG JALPAIGURI 35.11 296⇑ *eP* **P** **20 15 14.2 0.0**
KLR Kul'dur 35.23 9⇑ *eP* **P** **20 15 16.4 +1.4**
KLR pmax pmax
comp=Z,3.0nm,0.8s
GTK Tadong 35.39 297 *eP* **P** **20 15 17.1 +0.3**
GTK IAmb IAmb 20 15 19.1
comp=Z,38nm,1.2s
WB0 Warramunga Arr 35.50 163 IAmb IAmb 20 15 18.9
comp=Z,37nm,1.0s
WRAB Tennant Creek 35.65 163 P **P** **20 15 18.2 -0.7**
WRAB Tennant Creek 35.65 163 *ceP* **P** **20 15 19.0 +0.1**
WRAB pmax pmax
comp=Z,64nm,1.3s
WRA Warramunga Arr 35.66 163 P **P** **20 15 18.9 0.0**
comp=Z,22nm,1.0s,baz=338,slow=9.3,SNR=74
WRA S **S** **20 20 49.2 -5.6**
comp=Z,3.5nm,1.2s,baz=342,slow=15,SNR=5.8
comp=Z,22nm,1.0s
WRA Warramunga Arr 35.66 163 P **P** **20 15 17.6 -1.4**
WRA Warramunga Arr 35.66 163 P **P** **20 15 17.6 -1.4**
WRA pmax pmax
comp=Z,2.0nm,1.1s
MBWA Marble Bar 35.66 187 P **P** **20 15 18.4 -0.6**
MBWA Marble Bar 35.66 187 **P** **20 15 18.4 -0.6**
MBWA Marble Bar 35.66 187 P **P** **20 15 18.3 -0.6**
MBWA IAmb IAmb 20 15 20.2
comp=Z,24nm,0.9s
MBWA Marble Bar 35.66 187 P **P** **20 15 18.9 0.0**
MBWA P **P** **20 15 18.9 0.0**
MBWA S **S** **20 20 57.1 +2.3**
MBWA S **S** **20 20 57.1 +2.3**
WR8 Warramunga Arr 35.71 163 IAmb IAmb 20 15 20.8
comp=Z,44nm,0.9s
HEH HeiHe 35.79 4 *eP* **P** **20 15 17.8 -2.0**
HEH S **S** **20 20 59.6 +3.3**
HEH sS **sS** **20 21 04.6 -0.5**
HEH pmax pmax
comp=Z,13nm,1.2s
HEH pmax pmax
comp=Z,220nm,4.8s
HEH L L
comp=Z,420nm,16.7s
HEH L L
comp=Z,1μm,16.6s
HEH L L
comp=Z,600nm,18.3s
YSS Yuzhno-Sakhali 35.95 22 *eP* **P** **20 15 22.9 +1.7**
YSS pmax pmax
comp=Z,40nm,3.0s
PSAC1 Pilbara Seismi 36.02 187 P **P** **20 15 22.5 +0.4**
comp=Z,46nm,1.1s
PSAC2 Pilbara Seismi 36.04 187 P **P** **20 15 22.0 -0.2**
comp=Z,34nm,1.0s
PSA00 Pilbara Seismi 36.06 187 P **P** **20 15 22.1 -0.2**
comp=Z,40nm,1.1s
PSA00 Pilbara Seismi 36.06 187 P **P** **20 15 21.4 -0.9**
PSA00 IAmb IAmb 20 15 24.3
comp=Z,36nm,1.1s
PSAB3 Pilbara Seismi 36.08 187 P **P** **20 15 22.5 0.0**
comp=Z,44nm,1.1s
ULN Ulaanbaatar 36.17 340 **P** **20 15 23.9 +0.6**
ULN Ulaanbaatar 36.17 340 *c iP* **P** **20 15 24.1 +0.8**
ULN pmax pmax
comp=Z,88nm,1.3s
ULN Ulaanbaatar 36.17 340 P **P** **20 15 24.2 +0.9**
ULN P **P** **20 15 24.2 +0.9**
ULN S **S** **20 21 03.7 +1.2**
ULN S **S** **20 21 03.7 +1.2**
SONM Songino Array 36.36 340 P **P** **20 15 25.6 +0.7**
comp=Z,39nm,1.0s,baz=161,slow=7.4,SNR=129
SONM PcP **PcP** **20 17 49.4 +0.1**
comp=Z,2.7nm,1.0s,baz=160,slow=4.6,SNR=2.8
SONM LR LR 20 33 01.2
comp=Z,289nm,18.2s,baz=148,slow=41
comp=Z,39nm,1.0s
SONM Songino Array 36.36 340 P **P** **20 15 25.1 +0.2**
SONM IAmb IAmb 20 15 27.3
comp=Z,52nm,1.1s
JMUI Jamui 37.00 292 *eP* **P** **20 15 30.0 -0.5**
EVN Everest 37.08 297 IAmb IAmb 20 15 33.5
comp=Z,54nm,1.3s
GAYA Gaya 37.88 292 *eP* **P** **20 15 36.6 -1.4**
QIS Mount Isa 38.01 156 P **P** **20 15 39.9 +0.9**
comp=Z,131nm,0.9s
MTSU Mount Surprise 38.05 148 P **P** **20 15 41.3 +1.9**
comp=Z,15nm,1.0s
STMR SITAMARHI 38.16 295 *eP* **P** **20 15 39.3 -1.0**
CIT Chita 38.40 350 *eP* **P** **20 15 41.9 -0.1**
CIT *e* 20 17 11.6
CIT pmax pmax
comp=Z,59nm,3.1s
ASAR Alice Springs 39.10 166 P **P** **20 15 48.9 +0.7**
comp=Z,47nm,0.9s,baz=347,slow=6.7,SNR=281
ASAR PcP **PcP** **20 17 58.4 +0.5**
comp=Z,3.9nm,0.9s,baz=335,slow=3.2,SNR=2.6
ASAR S **S** **20 21 44.6 -2.6**
comp=Z,2.0nm,0.7s,baz=346,slow=18,SNR=8.0
ASAR LR LR 20 34 26.1
comp=Z,132nm,18.7s,baz=334,slow=40
comp=Z,47nm,0.9s
ASAR Alice Springs 39.10 166 P **P** **20 15 48.4 +0.3**
ZEA Zeya 39.26 3 *eP* P 20 15 55.9 +6.8
ZEA pmax pmax
comp=Z,10.0nm,1.3s
ZEA MLR MLR
comp=E,200nm,16.0s
ZEA MLR MLR
comp=Z,400nm,16.0s
ZEA MLR MLR
comp=N,200nm,17.0s
WRKA Warakurna 39.48 174 P **P** **20 15 51.6 +0.3**
comp=Z,24nm,1.0s
ZAK Zakamensk 39.60 339 *eP* **P** **20 15 51.8 -0.4**
ZAK pmax pmax
comp=Z,15nm,1.8s
BLSP Bilaspur 40.39 287⇑ *eP* **P** **20 15 57.7 -1.3**
TLY Talaya 40.58 340 LR LR 20 33 10.2
comp=Z,326nm,21.6s,baz=143,slow=37
TLY Talaya 40.58 340 *ceP* **P** **20 16 00.7 +0.5**
TLY pmax pmax
comp=Z,19nm,1.7s
CTA Charters Tower 40.69 147 LR LR 20 32 04.0
comp=Z,272nm,21.6s,baz=322,slow=35
IRK Irkutsk 40.87 341 *eP* **P** **20 15 59.3 -3.2**
IRK pmax pmax
comp=Z,44nm,1.6s
H11S3 WAKE ISLAND Hy 40.99 78 T T 20 59 54.7
baz=271,slow=75,SNR=1472
H11S1 WAKE ISLAND Hy 41.01 78 T T 20 59 58.4
baz=271,slow=75,SNR=1347
H11S2 WAKE ISLAND Hy 41.01 78 T T 20 59 58.4
baz=271,slow=75,SNR=1767
H11N1 WAKE ISLAND Hy 41.18 77 T T 21 00 09.0
baz=269,slow=74,SNR=1026
H11N2 WAKE ISLAND Hy 41.19 77 T T 21 00 07.0
baz=269,slow=74,SNR=858
H11N3 WAKE ISLAND Hy 41.20 77 T T 21 00 07.9
baz=269,slow=74,SNR=684
MEEK Meekatharra 41.20 187 P **P** **20 16 05.7 +0.2**
comp=Z,90nm,0.9s
MOY Mondy 41.47 338 *eP* **P** **20 16 07.8 +0.2**
MOY pmax pmax
comp=Z,43nm,2.0s
BRCI Bahraich 41.53 295 *eP* **P** **20 16 08.1 -0.2**
KNGR Kungurtug, Tuv 41.97 335⇓ *eP* **P** **20 16 11.8 +0.1**
KNGR pmax pmax
comp=Z,9.0nm,1.0s

BNDA BANDA 42.37 292⇑ *eP* **P** **20 16 13.5 -1.7**
MDRS Chennai 42.54 274 *eP* **P** **20 16 17.5 +0.8**
WMQ Urumqi 42.62 321 *eP* **P** **20 16 18.3 +1.2**
WMQ sP sP 20 16 26.0 +1.5
WMQ pmax pmax
comp=Z,19nm,1.7s
WMQ pmax pmax
comp=Z,110nm,4.5s
WMQ L L
comp=Z,590nm,15.7s
WMQ L L
comp=Z,920nm,15.7s
WMQ L L
comp=Z,480nm,17.3s
HNR Honiara 42.78 122 LR LR 20 31 18.2
comp=Z,42nm,20.9s,baz=17,slow=32
PTH Pithoragarh 43.09 298⇑ *eP* **P** **20 16 20.2 -1.0**
PALK Pallekele 43.13 265 LR LR 20 34 21.9
comp=Z,723nm,18.7s,baz=70,slow=36
PALK Pallekele 43.13 265 P **P** **20 16 21.7 +0.2**
LGTI Lohaghat 43.16 298⇓ *eP* **P** **20 16 19.2 -2.6**
FRKB FARRUKHABAD 43.28 295⇑ *eP* **P** **20 16 21.2 -1.4**
HYB Hyderabad 43.79 280 *eP* **P** **20 16 26.4 -0.5**
HYB IVmB_BB 20 16 27.3
comp=Z,592nm,1.5s
HYB *ep*P **sP** **20 16 33.5 -0.8**
HYB *eP*P **PP** **20 18 09.8 +0.9**
JOSI Joshimath 43.82 299 *eP* **P** **20 16 26.9 -0.3**
JOSI IAmb IAmb 20 16 32.5
comp=Z,32nm,0.8s
JHNI Jhansi 43.91 292 *eP* **P** **20 16 26.3 -1.4**
MORW Morawa 43.97 190 P **P** **20 16 28.4 +0.5**
comp=Z,82nm,1.1s
MORW Morawa 43.97 190 P **P** **20 16 28.0 0.0**
SALM Salem 44.76 272 *eP* **P** **20 16 34.2 -0.4**
BHPL Bhopal 44.84 288 *eP* **P** **20 16 34.3 -0.9**
INKA Innaminka 44.97 159 P **P** **20 16 36.3 +0.4**
INKA IAmb IAmb 20 16 47.8
comp=Z,24nm,0.9s
GUNA GUNA 45.00 290 *eP* **P** **20 16 35.8 -0.7**
ASOR Ausora 45.05 296⇓ *eP* **P** **20 16 38.9 +2.1**
NRDN NARMADA NAGAR 45.05 288⇑ *eP* **P** **20 16 38.7 +1.8**
KLP Kalpa 45.12 300⇑ *eP* **P** **20 16 38.0 +0.4**
FORT Forest 45.15 175 P **P** **20 16 37.6 +0.2**
comp=Z,24nm,0.9s
AKL Akola 45.16 285 IAmb IAmb 20 16 40.1
comp=Z,50nm,1.4s
QLP Quilpie 45.27 154 P **P** **20 16 39.7 +1.3**
comp=Z,154nm,1.1s
BISR Bishrakh 45.31 296⇑ *eP* **P** **20 16 36.2 -2.6**
BLDU Ballidu 45.38 189 P **P** **20 16 38.6 -0.6**
comp=Z,39nm,1.2s
NPLP NPLP New Delhi 45.56 296⇑ *eP* **P** **20 16 38.0 -2.8**
SONA Sohna 45.60 295⇑ *eP* **P** **20 16 39.3 -1.9**
KMBL Kambalda 45.62 183 P **P** **20 16 41.2 +0.1**
comp=Z,24nm,1.1s
KOD Kodaikanal 45.66 270⇑ *eP* **P** **20 16 42.4 +0.3**
SMLA Simla 45.95 299 *eP* **P** **20 16 43.5 -0.3**
SMLA IAmb IAmb 20 16 46.2
comp=Z,46nm,1.7s
DGZ Jazzator, Alta 46.09 327 *c iP* **P** **20 16 45.3 +0.4**
DGZ pmax pmax
comp=Z,23nm,1.4s
KUDL Kundal 46.09 295⇑ *eP* **P** **20 16 43.4 -1.6**
KLBR Kellerberrin 46.20 187 P **P** **20 16 45.7 +0.1**
comp=Z,78nm,0.9s
CGRH CHANDIGARH 46.21 299⇑ *eP* **P** **20 16 46.2 +0.2**
ZSN Zaisan 46.23 324 *eP* **P** **20 16 46.1 +0.3**
ZSN Zaisan 46.23 324 *eP* **P** **20 16 46.2 +0.4**
RTK Rohtak 46.27 296 *eP* **P** **20 16 43.9 -2.5**
ALCI Alchi Leh 46.56 304 *eP* **P** **20 16 48.8 -0.3**
ALCI IAmb IAmb 20 16 50.8
comp=Z,43nm,1.2s
BHK Bhakra 46.66 300 *eP* **P** **20 16 48.1 -1.4**
MUN Mundaring 46.79 189 P **P** **20 16 50.6 +0.3**
comp=Z,33nm,1.1s
PEA0B Petropavlovsk- 46.81 27 P **P** **20 16 49.5 -0.8**
PEA0B IAmb IAmb 20 17 02.7
comp=Z,42nm,1.1s
PEA0B Petropavlovsk- 46.81 27 P **P** **20 16 49.5 -0.8**
PEA0B pmax pmax
comp=Z,42nm,1.2s
PETK Petropavlovsk- 46.81 27 P **P** **20 16 51.4 +1.1**
comp=Z,16nm,1.0s,baz=211,slow=3.8,SNR=9.4
PETK LR LR 20 36 35.4
comp=Z,230nm,18.6s,baz=222,slow=36
comp=Z,16nm,1.0s
PETK Petropavlovsk- 46.81 27 P **P** **20 16 50.0 -0.3**
DHRM DHARAMSHALA 46.88 301 *eP* **P** **20 16 50.5 -0.9**
DHRM IAmb IAmb 20 16 52.9
comp=Z,44nm,1.1s
WUS Wushi 47.07 313 IAmb IAmb 20 18 26.3
comp=Z,22nm,1.3s
TLWR Talawar 47.12 300 *eP* **P** **20 16 51.9 -1.2**
TSSA Tissa 47.12 301⇑ *eP* **P** **20 16 51.9 -1.4**
PET Petropavlovsk 47.19 28 *eP* **P** **20 16 55.5 +2.3**
PET *eS* **S** **20 23 47.8 +2.8**
PET pmax pmax
comp=Z,32nm,1.1s
PET MLR MLR
comp=Z,500nm,14.0s
PET MLR MLR
comp=Z,800nm,13.0s
THN Thein Dam 47.37 301⇑ *eP* **P** **20 16 53.5 -1.5**
MK31 Makanchi Array 47.41 322 *c iP* **P** **20 16 55.2 +0.1**
MKAR Makanchi Array 47.41 322 P **P** **20 16 55.4 +0.3**
comp=Z,30nm,1.1s,baz=116,slow=7.5,SNR=106
MKAR PcP **PcP** **20 18 25.7 +0.2**
comp=Z,7.1nm,1.0s,baz=130,slow=5.1,SNR=5.0
MKAR LR LR 20 37 41.3
comp=Z,217nm,19.5s,baz=126,slow=37
comp=Z,30nm,1.1s
MKAR Makanchi Array 47.41 322 P **P** **20 16 54.6 -0.5**
AJM Ajmer 47.57 293 *eP* **P** **20 16 56.3 -0.4**
NWAO Narrogin (SRO) 47.58 188 P **P** **20 16 57.0 +0.5**
comp=Z,43nm,1.6s
NWAO Narrogin (SRO) 47.58 188 LR LR 20 38 27.1
comp=Z,113nm,19.2s,baz=339,slow=38
NWAO Narrogin (SRO) 47.58 188 P **P** **20 16 56.3 -0.2**
NWAO Narrogin (SRO) 47.58 188 P **P** **20 16 56.3 -0.2**
NWAO pmax pmax
comp=Z,95nm,1.4s
NWAO Narrogin (SRO) 47.58 188 P **P** **20 16 56.2 -0.2**
NWAO P **P** **20 16 56.2 -0.2**
MAKZ Makanchi 47.61 321 P **P** **20 16 56.2 -0.4**
MAKZ IAmb IAmb 20 16 58.3
comp=Z,23nm,1.1s
MAKZ Makanchi 47.61 321 P **P** **20 16 56.2 -0.4**
MAKZ pmax pmax
comp=Z,23nm,1.1s
SHLS Shalkode 47.63 316 *c iP* **P** **20 16 55.3 -1.7**
SHLS pmax pmax
comp=Z,14nm,1.2s
SHLS Shalkode 47.63 316⇑ *iP* **P** **20 16 55.4 -1.7**
comp=Z,14nm,1.2s
YAK Yakutsk 47.67 4 LR LR 20 39 45.7
comp=Z,509nm,18.0s,baz=188,slow=39
YAK Yakutsk 47.67 4 P **P** **20 16 56.1 -0.6**
YAK IAmb IAmb 20 17 54.3
comp=Z,12nm,0.8s
YAK Yakutsk 47.67 4 *eP* **P** **20 16 56.4 -0.3**
YAK *e**PP **sP** **20 17 05.4 +1.1**
YAK *e* 20 18 25.2
YAK *e* 20 18 48.1
YAK *e*PPP PPP 20 19 34.5
YAK *eS* **S** **20 23 50.7 -0.9**
YAK *e**SS sS 20 24 08.2 +7.7
YAK *e* 20 26 46.1
YAK *e*SSS SSS 20 28 24.3
YAK pmax pmax
comp=Z,10.0nm,1.1s
YAK pmax pmax
comp=N,6.0nm,1.4s
YAK pmax pmax
comp=E,2.0nm,1.3s
YAK pmax pmax
comp=Z,161nm,5.1s
YAK pmax pmax
comp=N,109nm,4.1s
YAK pmax pmax
comp=E,129nm,4.9s
YAK smax smax
comp=N,116nm,4.7s
YAK smax smax
comp=E,60nm,3.5s

YAK MLR MLR
comp=Z,495nm,26.0s
YAK MLR MLR
comp=N,231nm,22.0s
YAK MLR MLR
comp=E,292nm,25.0s
UZB Uzynbulak 47.93 316 *c iP* **P** **20 16 59.8 +0.5**
UZB pmax pmax
comp=Z,15nm,1.2s
UZB Uzynbulak 47.93 316⇑ *iP* **P** **20 16 59.8 +0.5**
comp=Z,14nm,1.2s
TARG Taragay, Kyrgy 48.25 314 IAmb IAmb 20 17 04.6
comp=Z,28nm,1.4s
KPKS Kokpek 48.28 316 *eP* **P** **20 17 02.4 +0.4**
KPKS Kokpek 48.28 316 *eP* **P** **20 17 02.4 +0.4**
UDPR Udaipur 48.29 290 *eP* **P** **20 17 00.7 -1.6**
SATY Saty 48.31 315 *c iP* **P** **20 17 02.8 +0.5**
SATY pmax pmax
comp=Z,18nm,1.3s
SATY Saty 48.31 315⇑ *iP* **P** **20 17 02.8 +0.5**
comp=Z,18nm,1.3s
BBOO Buckleboo 48.39 166 P **P** **20 17 03.8 +1.1**
comp=Z,58nm,1.1s
BBOO Buckleboo 48.39 166 P **P** **20 17 03.2 +0.5**
SRGN SRI GANGA NAGA 48.57 297 *eP* **P** **20 17 03.2 -1.1**
BKNR BIKANER 48.90 295⇑ *eP* **P** **20 17 05.4 -1.4**
STKA Stephens Creek 49.05 160 P **P** **20 17 09.5 +1.7**
comp=Z,105nm,0.9s
STKA Stephens Creek 49.05 160 P **P** **20 17 08.8 +0.9**
comp=Z,11nm,0.7s,baz=344,slow=8.3,SNR=15
STKA LR LR 20 41 20.1
comp=Z,139nm,19.0s,baz=353,slow=40
comp=Z,11nm,0.7s
TDK Taldyqorghan 49.06 318 *c iP* **P** **20 17 08.5 +0.7**
TDK pmax pmax
comp=Z,22nm,1.0s
TDK Taldyqorghan 49.06 318⇑ *iP* **P** **20 17 08.6 +0.7**
comp=Z,22nm,1.0s
KSH2 Kashi 49.07 310 P **P** **20 17 08.9 +0.7**
KSH2 pmax pmax
comp=Z,25nm,1.2s
KSH2 L L
comp=Z,440nm,14.4s
KSH2 L L
comp=Z,760nm,15.5s
KSH2 L L
comp=Z,1μm,15.1s
MDOK Medeo 49.27 315 *eP* **P** **20 17 10.3 +0.6**
MDOK Medeo 49.27 315 *eP* **P** **20 17 10.3 +0.6**
TNSS Tian-Shan 49.30 315 *eP* **P** **20 17 10.5 +0.3**
TNSS Tian-Shan 49.30 315 *eP* **P** **20 17 10.6 +0.3**
AAA Alma-Ata 49.38 315 *eP* **P** **20 17 11.2 +0.8**
AAA pmax pmax
comp=Z,14nm,1.0s
AAA Alma-Ata 49.38 315 *eP* **P** **20 17 11.2 +0.8**
comp=Z,14nm,1.0s
ULHL Ulahol 49.52 314 P **P** **20 17 12.4 +0.7**
SNR=7.7
HTT Hallett 49.70 164 P **P** **20 17 14.4 +1.7**
comp=Z,8.1nm,1.2s
BOOM Boomskoye usch 49.81 314 IAmb IAmb 20 18 36.5
comp=Z,28nm,1.2s
ZALV Zalesovo Beam 49.94 331 P **P** **20 17 13.9 -0.4**
comp=Z,10nm,1.0s,baz=123,slow=7.4,SNR=25
ZALV PcP **PcP** **20 18 33.5 -0.9**
comp=Z,2.5nm,0.8s,baz=104,slow=6.3,SNR=4.1
ZALV LR LR 20 39 22.7
comp=Z,196nm,18.8s,baz=123,slow=37
comp=Z,10nm,1.0s
ZALV Zalesovo Beam 49.94 331 P **P** **20 17 12.6 -1.7**
TKM2 Tokmak 2 50.19 314 P **P** **20 17 17.4 +0.6**
SNR=10
CMSA Cobar Meteorol 50.23 156 P **P** **20 17 19.1 +2.2**
comp=Z,69nm,1.0s
KBK Karagaybulak 50.56 314 P **P** **20 17 20.6 +1.1**
SNR=12
UCH Uchtor 50.73 313 P **P** **20 17 22.4 +1.2**
SNR=31
CHMS Chumysh 50.80 314 P **P** **20 17 21.6 +0.5**
SNR=13
AAK Ala-Archa 50.87 314 LR LR 20 39 02.5
comp=Z,609nm,20.2s,baz=97,slow=36
AAK Ala-Archa 50.87 314 P **P** **20 17 22.6 +0.7**
SNR=6.3
AAK Ala-Archa 50.87 314 P **P** **20 17 22.0 +0.2**
AAK Ala-Archa 50.87 314 *ceP* **P** **20 17 22.7 +0.9**
AAK pmax pmax
comp=Z,11nm,1.3s
AAK Ala-Archa 50.87 314 P **P** **20 17 22.8 +1.0**
AAK P **P** **20 17 22.8 +1.0**
USP Ospenovka 51.06 314 P **P** **20 17 23.7 +0.5**
SNR=14
EKS2 Erkin-Say 51.38 313 P **P** **20 17 26.6 +0.9**
SNR=17
KURK Kurchatov 51.42 325 P **P** **20 17 25.6 +0.1**
KURK Kurchatov 51.42 325 *c iP* **P** **20 17 25.7 +0.1**
KURK pmax pmax
comp=Z,79nm,1.3s
KURK Kurchatov 51.42 325 P **P** **20 17 26.2 +0.6**
KURK P **P** **20 17 26.2 +0.6**
KURBB Kurchatov Arra 51.42 324 P **P** **20 17 25.8 +0.2**
comp=Z,28nm,0.9s,baz=120,slow=7.7,SNR=175
comp=Z,28nm,0.9s
ARSB Arslanbob 51.57 312 IAmb IAmb 20 17 28.9
comp=Z,39nm,1.3s
ARMA Armidale 51.92 149 P **P** **20 17 29.0 -0.7**
comp=Z,14nm,1.6s
SEY Seymchan 52.34 16 LR LR 20 41 08.2
comp=Z,332nm,18.8s,baz=174,slow=37
SEY Seymchan 52.34 16⇓ *eP* **P** **20 17 34.8 +2.5**
SEY pmax pmax
comp=Z,10.0nm,1.7s
BTK Batken 52.84 309 IAmb IAmb 20 17 38.3
comp=Z,42nm,1.2s
DZA Taraz 53.17 313 *eP* **P** **20 17 39.3 +0.5**
DZA pmax pmax
comp=Z,20nm,1.3s
DZA Taraz 53.17 313 *eP* **P** **20 17 39.4 +0.6**
comp=Z,20nm,1.3s
KBL Kabul 53.24 302 P **P** **20 17 38.8 -0.9**
KBL Kabul 53.24 302 P **P** **20 17 38.8 -0.9**
KBL pmax pmax
comp=Z,47nm,1.0s
KBL Kabul 53.24 302 P **P** **20 17 40.1 +0.4**
SNR=30
KBL P **P** **20 17 40.1 +0.4**
SNR=30
YNG Young 53.74 155 P **P** **20 17 45.2 +2.3**
comp=Z,18nm,1.4s
KKAR Karatay Array 53.81 313 P **P** **20 17 42.9 -0.6**
KKAR Karatay Array 53.81 313 P **P** **20 17 42.9 -0.6**
CHGR Chuyangaron 53.81 307 *c iP* **P** **20 17 43.8 +0.1**
IUG luzhnay 53.91 312 *c iP* **P** **20 17 44.9 +0.6**
IUG pmax pmax
comp=Z,16nm,1.3s
IUG luzhnay 53.91 312⇑ *iP* **P** **20 17 45.0 +0.6**
comp=Z,16nm,1.3s
MGCD Mangrove Creek 53.98 152 P **P** **20 17 46.5 +1.7**
comp=Z,126nm,1.0s
CHM Chimkent 54.26 312 *eP* **P** **20 17 47.4 +0.6**
CHM pmax pmax
comp=Z,11nm,1.0s
CHM Chimkent 54.26 312 *eP* **P** **20 17 47.5 +0.6**
comp=Z,11nm,1.0s
BRLS Borolday 54.27 313 *eP* **P** **20 17 47.5 +0.7**
BRLS pmax pmax
comp=Z,23nm,1.3s
BRLS Borolday 54.27 313 *eP* **P** **20 17 47.5 +0.7**
comp=Z,23nm,1.3s
SHAA Shahritus 54.42 306 IAmb IAmb 20 18 53.7
comp=Z,68nm,1.2s
BRZS Berezniki 54.56 322 *eP* **P** **20 17 49.7 +0.9**
BRZS Berezniki 54.56 322 *eP* **P** **20 17 49.7 +0.9**
SHEM Shemya Is, Ala 54.86 35 LR LR 20 40 11.4
comp=Z,209nm,19.3s,baz=292,slow=35
CNB Canberra Magne 55.01 155 P **P** **20 17 54.3 +2.0**
comp=Z,29nm,1.0s
DGAR Diego Garcia 55.62 250 P **P** **20 17 55.9 -1.1**
DGAR Diego Garcia 55.62 250 *deP* **P** **20 17 57.8 +0.8**
DGAR pmax pmax
comp=Z,89nm,1.1s
BVAR Borovoye Array 57.02 325 P **P** **20 18 06.4 +0.1**
comp=Z,2.5nm,0.5s,baz=117,slow=5.4,SNR=20
BVAR LR LR 20 42 19.0
comp=Z,253nm,20.0s,baz=121,slow=36
comp=Z,2.5nm,0.5s

BORK Borovoye 57.06 325 P **P** 20 18 06.6 -0.1
BORK Borovoye 57.06 325*c i* P **P** 20 18 06.9 +0.2
BORK pmax pmax
comp=Z,22nm,1.6s
TIXI Tiksi 57.23 2 P **P** 20 18 07.7 -0.9
TIXI IAmb IAmb 20 18 57.0
comp=Z,31nm,1.7s
TIXI Tiksi 57.23 2⇓ *e* P **P** 20 18 07.1 -0.4
TIXI pmax pmax
comp=Z,8.0nm,1.0s
HRA Herat 58.81 302 **P** 20 18 19.0 -0.6
HRA IAmb IAmb 20 18 20.8
comp=Z,41nm,1.6s
NRIK Noril'sk 59.44 346 P **P** 20 18 23.0 -0.1
comp=Z,9.3nm,1.1s,baz=117,slow=7.0,SNR=7.0
NRIK LR LR 20 48 07.8
comp=Z,315nm,18.1s,baz=146,slow=40
comp=Z,9.3nm,1.1s
NRIK Noril'sk 59.44 346 IAmb IAmb 20 18 41.1
comp=Z,16nm,1.1s
NRIK Noril'sk 59.44 346*c i* P **P** 20 18 22.7 -0.3
NRIK pmax pmax
comp=Z,12nm,1.1s
BILL Bilibino 60.00 17 **P** 20 18 27.1 +0.2
BILL IAmb IAmb 20 18 34.0
comp=Z,34nm,1.5s
BILL Bilibino 60.00 17 *de* P **P** 20 18 28.6 +1.7
BILL pmax pmax
comp=Z,13nm,1.3s
WBK Wadi Bani Khal 61.85 288 P **P** 20 18 40.2 -0.1
WBK P **P** 20 18 40.2 -0.1
MSVF Nonsavu 62.11 119 LR LR 20 41 26.1
comp=Z,297nm,21.5s,baz=305,slow=32
WSAR Wadi Sarin 62.11 289 P **P** 20 18 41.9 -0.2
AB31 Akbulak array 62.32 318 P **P** 20 18 42.1 -0.9
ABKAR Akbulak array 62.32 318 P **P** 20 18 42.5 -0.5
BIDO Bidbid 62.55 289 P **P** 20 18 43.9 -1.1
JASK Jask - Hormozg 62.62 292 P **P** 20 18 45.1 -0.4
JASK S **S** 20 27 15.1 +1.9
JMDO Jabal Madar 62.67 288 P **P** 20 18 45.3 -0.6
JMDO P **P** 20 18 45.3 -0.6
MHTO MHTO 62.93 286 P **P** 20 18 46.5 -1.0
MHTO P **P** 20 18 46.5 -1.0
HOQ Hoqain 63.29 289 P **P** 20 18 50.4 +0.5
HOQ P **P** 20 18 50.4 +0.5
DQM DQM 63.44 285 P **P** 20 18 51.1 +0.1
BSY Bisya 63.47 288 P **P** 20 18 50.7 -0.4
BSY P **P** 20 18 50.7 -0.4
SVE Sverdlovsk 63.54 327 *de* P **P** 20 18 50.9 -0.1
SVE pmax pmax
comp=Z,42nm,1.2s
AKTO Aktyubinsk 63.75 319 LR LR 20 49 41.9
comp=Z,250nm,18.6s,baz=90,slow=39
BANOM Banah 64.03 292 P **P** 20 18 55.4 +0.6
UOSS Minazif 64.19 291 P **P** 20 18 55.7 -0.1
ASHO Ashiyiah 64.34 291 P **P** 20 18 56.8 -0.1
SNR=5.2
ASHO P **P** 20 18 56.8 -0.1
SNR=5.2
ARTI Arti 64.65 326 P **P** 20 18 56.8 -1.5
ARTI IAmb IAmb 20 18 58.6
comp=Z,22nm,0.8s
ARTI Arti 64.65 326 *ce* P **P** 20 18 57.4 -0.8
ARTI pmax pmax
comp=Z,32nm,1.0s
ALNE Al Ain 64.67 290 P **P** 20 18 58.9 -0.1
SNR=8.9
ALNE P **P** 20 18 58.9 -0.1
SNR=8.9
UMZA Um Al Zommool 65.34 289 P **P** 20 19 02.7 -0.6
UMZA P **P** 20 19 02.7 -0.6
SHAO Shalim 65.48 283 P **P** 20 19 04.8 +0.5
DOK Doka 66.81 284 P **P** 20 19 12.5 -0.3
DOK P **P** 20 19 12.5 -0.3
MZR Muzera 66.85 289 P **P** 20 19 13.1 0.0
SNR=6.4
MZR P **P** 20 19 13.1 0.0
SNR=6.4
WHFO Wadi Hawf 67.24 284 P **P** 20 19 14.9 -0.8
WHFO P **P** 20 19 14.9 -0.8
ABTO Aybut 67.78 283 P **P** 20 19 19.0 -0.1
ABTO P **P** 20 19 19.0 -0.1
F14K Arctic Creek 68.50 25 P **P** 20 19 20.6 -2.0
baz=257
K13K Kusilvak Mount 68.54 29 P **P** 20 19 21.9 -1.0
baz=260
ANM Nome 68.70 26 **P** 20 19 22.8 -1.2
ANM IAmb IAmb 20 19 35.2
comp=Z,11nm,1.0s
ANM Nome 68.70 26 P **P** 20 19 22.8 -1.2
ANM pmax pmax
comp=Z,11nm,1.0s
ANM Nome 68.70 26 P **P** 20 19 23.0 -1.0
baz=259
TRNA Turayna 68.72 291 P **P** 20 19 25.1 +0.3
M13K Dall Lake 68.93 30 P **P** 20 19 24.4 -1.1
baz=262
SMRA Abu-Samra 69.07 291 P **P** 20 19 27.3 +0.3
F15K North Star Dit 69.23 25 P **P** 20 19 26.2 -1.0
baz=259
G15K Niukluk 69.35 26 P **P** 20 19 26.8 -1.1
baz=260
L14K Kuka Creek 69.38 30 P **P** 20 19 27.3 -0.9
baz=262
AFI Afiamalu 69.46 111 LR LR 20 43 21.9
comp=Z,327nm,20.7s,baz=316,slow=30
C16K Lisburne Hills 69.49 22 P **P** 20 19 28.1 -0.7
baz=257
M14K Bethel 69.66 30 P **P** 20 19 29.1 -0.8
baz=263
N14K Kuskokwak Cree 69.70 31 P **P** 20 19 29.6 -0.6
baz=264
KIRV Kirov 69.77 327 *de* P **P** 20 19 30.6 -0.1
K15K Wolf Creek Mou 70.05 29 P **P** 20 19 31.8 -0.5
baz=263
H16K Elim 70.05 26 P **P** 20 19 31.6 -0.7
baz=262
G16K Koyuk River 70.11 25 P **P** 20 19 31.8 -0.9
baz=261
D17K Noatak River 70.21 23 P **P** 20 19 32.4 -0.9
baz=260
M15K Kasigluk River 70.27 30 P **P** 20 19 32.1 -1.6
baz=264
C17K DeLong Mountai 70.32 22 P **P** 20 19 32.5 -1.5
baz=259
RDOG Red Dog Mine 70.34 22 P **P** 20 19 32.7 -1.4
baz=260
AKT Akhty 70.38 309 P **P** 20 19 34.0 -1.0
AKT *e* 20 19 55.7
AKT *e* 20 22 11.0
AKT pmax pmax
comp=Z,23nm,1.3s
BELG Belogornoye 70.41 321 *c i* P **P** 20 19 34.2 -0.5
BELG pmax pmax
comp=Z,8.0nm,1.1s
CHNA Chernabura Isl 70.44 37 P **P** 20 19 33.3 -1.5
baz=267
MAK Makhachkala 70.50 311 *e* P **P** 20 19 30.7 -4.8
MAK *e* 20 22 11.8
MAK *e* PPP PPP 20 23 47.3
MAK *e* S **S** **20 28 41.4 -6.6**
MAK *e* SS **SS** **20 33 17.0 -2.1**
MAK *e* SSS SSS 20 36 28.8
MAK MLR MLR
comp=Z,322nm,17.0s
N15K Kwethluk River 70.52 31 P **P** 20 19 33.8 -1.5
baz=265
O15K Ungalikthiuk R 70.57 32 P **P** 20 19 34.0 -1.6
baz=266
J16K Anvik River 70.59 28 P **P** 20 19 34.1 -1.5
baz=264
MSEY Mahe Island 70.59 260 P **P** 20 19 37.3 +0.7
I17K Unalakleet 70.62 27 P **P** 20 19 34.2 -1.5
baz=263
F17K Baldwin Pennin 70.72 24 P **P** 20 19 34.9 -1.4
baz=262
G17K Kiwalik Mounta 70.83 25 P **P** 20 19 35.7 -1.4
baz=263
L16K Owhat River 70.95 29 P **P** 20 19 36.4 -1.5
baz=265
C18K Utukok River 71.07 22 P **P** 20 19 36.4 -2.1
baz=261
H17K Granite Mounta 71.08 26 P **P** 20 19 37.2 -1.4
baz=264
E18K Tukpahlearik C 71.11 23 P **P** 20 19 37.6 -1.1
baz=262
M16K Timber Creek 71.14 30 P **P** 20 19 37.5 -1.6
baz=266
CHGN Chignik 71.16 35 P **P** 20 19 37.6 -1.6
baz=268
N16K Nishlik Lake 71.20 31 P **P** 20 19 37.5 -2.0
baz=266
J17K VABM Dome 71.28 28 P **P** 20 19 37.4 -2.4
baz=265
KBD Kabd 71.34 296 P **P** 20 19 40.6 -0.3
A19K Wainwright 71.36 20 P **P** 20 19 37.9 -2.3
baz=261
F18K Selawik 71.37 24 P **P** 20 19 39.1 -1.2
baz=263
O16K Kokwok River B 71.48 32 P **P** 20 19 38.6 -2.5
baz=267
P16K Nushagak River 71.51 32 P **P** 20 19 39.3 -1.9
baz=267
L17K Donlin 71.54 29 P **P** 20 19 38.9 -2.5
baz=266
K17K Iditarod 71.58 28 P **P** 20 19 39.2 -2.5
baz=266
G18K Tagagawik 71.70 25 P **P** 20 19 40.8 -1.6
baz=264
C19K Lookout Ridge 71.71 22 P **P** 20 19 42.0 -0.4
baz=262
H18K Honhosa River 71.75 26 P **P** 20 19 42.5 -0.2
baz=265
M17K Holitna River 71.90 30 P **P** 20 19 43.5 -0.2
baz=267
N17K Nushagak Hills 71.98 31 **P** 20 19 44.4 +0.3
N17K IAmb IAmb 20 19 56.7
comp=Z,24nm,1.4s
N17K Nushagak Hills 71.98 31 P **P** 20 19 44.4 +0.3
baz=268
O17K Koliganek Bris 72.00 31 P **P** 20 19 44.3 +0.1
baz=268
RPZ Rata Peaks 72.05 146 LR LR 20 53 08.6
comp=Z,120nm,18.7s,baz=55,slow=37
F19K Shaleruckik Mo 72.14 24 P **P** 20 19 44.6 -0.3
baz=265
D19K Kuna River 72.17 22 P **P** 20 19 45.1 -0.1
baz=264
URZ Urewera 72.22 139 LR LR 20 53 08.2
comp=Z,112nm,19.5s,baz=302,slow=37
L18K Granite Mounta 72.30 29 P **P** 20 19 45.6 -0.3
baz=267
P17K Kvichak River 72.31 32 **P** 20 19 46.2 +0.1
P17K Kvichak River 72.31 32 P **P** 20 19 46.0 -0.1
baz=269
R17L Mt. Peulik Vol 72.32 34 P **P** 20 19 46.1 -0.1
baz=269
G19K Purcell Mounta 72.36 25 IAmb IAmb 20 19 45.5
comp=Z,8.2nm,0.5s
E19K Redstone River 72.41 23 P **P** 20 19 46.4 -0.2
baz=265
H19K Roundabout Mou 72.58 25 P **P** 20 19 47.2 -0.3
baz=267
Q17K Contact Creek 72.58 33 P **P** 20 19 47.5 -0.3
baz=269
B20K Meade River 72.66 21 IAmb IAmb 20 19 56.6
comp=Z,15nm,0.8s
B20K Meade River 72.66 21 P **P** 20 19 48.1 +0.1
baz=264
M18K Stony River 72.68 30 P **P** 20 19 48.4 +0.1
baz=268
GNI Garni 72.73 308 P **P** 20 19 47.8 -1.4
GNI IAmb IAmb 20 21 01.5
comp=Z,35nm,1.4s
GNI Garni 72.73 308 *de* P **P** 20 19 50.4 +1.2
GNI pmax pmax
comp=Z,12nm,1.3s
GNI Garni 72.73 308 P **P** 20 19 48.3 -0.9
comp=Z,11nm,1.4s
D20K Etivluk River 72.74 22 P **P** 20 19 48.2 -0.4
baz=265
J19K Poorman 72.86 27 P **P** 20 19 48.8 -0.5
baz=268
E20K Nigu River 72.86 23 P **P** 20 19 49.2 -0.1
baz=266
P18K Big Mountain, 72.94 32 P **P** 20 19 49.4 -0.5
baz=270
O18K Koktuh Hills 72.95 31 P **P** 20 19 49.3 -0.6
baz=269
F20K Avaraart Lake 72.96 24 P **P** 20 19 50.0 +0.2
baz=267
Q18K Katmai Hardscr 73.05 33 P **P** 20 19 50.5 -0.2
baz=270
L19K White Mountain 73.16 29 P **P** 20 19 50.8 -0.3
baz=269
H20K Anotleneega Mo 73.23 25 P **P** 20 19 51.5 0.0
baz=268
N19K Bonanza Creek 73.32 30 sP 20 20 00.5 +1.1
N19K Bonanza Creek 73.32 30 P **P** 20 19 51.4 -0.8
baz=270
I20K Naaghedeneel 73.38 26 P **P** 20 19 51.9 -0.4
baz=269
O19K Port Alsworth 73.40 31 **P** 20 19 51.9 -0.6
O19K IAmb IAmb 20 20 05.1
comp=Z,32nm,1.4s
C21K Knifeblade Rid 73.43 22 P **P** 20 19 52.7 +0.1
baz=267,SNR=5.7
A22K Sinclair Lake 73.47 20 P **P** 20 19 52.4 -0.4
baz=266
J20K Nowinta River 73.51 27 P **P** 20 19 52.7 -0.4
baz=269
B21K Ikpikpuk River 73.51 21 P **P** 20 19 52.6 -0.4
baz=267,SNR=15
K20K Telida 73.53 28 P **P** 20 19 53.2 -0.1
baz=269
IMAR Indian Mountai 73.71 25 P **P** 20 19 54.4 +0.1
KBZ Khabaz 73.81 312 P **P** 20 19 54.7 -0.5
comp=Z,2.2nm,0.9s,baz=84,slow=11,SNR=5.3
KBZ LR LR 20 54 26.7
comp=Z,225nm,19.7s,baz=76,slow=37
comp=Z,2.2nm,0.9s
KBZ Khabaz 73.81 312⇑ *e* P **P** 20 19 55.2 -0.1
KBZ pmax pmax
comp=Z,13nm,1.8s
G21K Allakaket 73.82 24 P **P** 20 19 54.6 -0.3
baz=269
F21K Alatna River 73.84 24 P **P** 20 19 54.5 -0.5
baz=269
KIV Kislovodsk 73.95 312 ⇓P **P** 20 19 56.4 +0.2
KIV Kislovodsk 73.95 312 P **P** 20 19 53.8 -2.4
KIV IAmb IAmb 20 20 28.3
comp=Z,20nm,1.1s
KIV Kislovodsk 73.95 312 *e* P **P** 20 19 56.4 +0.2
KIV pmax pmax
comp=Z,9.0nm,1.0s
KIV MLR MLR
comp=Z,137nm,18.0s
KIV Kislovodsk 73.95 312 P **P** 20 19 55.4 -0.8
comp=Z,12nm,0.9s
P19K Oil Pt 73.95 32 P **P** 20 19 55.3 -0.6
baz=271
B22K Teshekpuk Lake 73.96 20 IAmb IAmb 20 20 04.0
comp=Z,16nm,0.9s
B22K Teshekpuk Lake 73.96 20 P **P** 20 19 55.3 -0.3
baz=268,SNR=6.5
M20K Styx River 73.97 29 P **P** 20 19 55.8 -0.2
baz=271
OHAK Old Harbor 73.99 34 P **P** 20 19 55.6 -0.4
baz=272
RAYN Ar Rayn 74.05 291 P **P** 20 19 56.9 -0.3
RAYN Ar Rayn 74.05 291 P **P** 20 19 56.9 -0.3
RAYN pmax pmax
comp=Z,43nm,1.0s
RAYN Ar Rayn 74.05 291 P **P** 20 19 57.7 +0.5
VRH Novokhopyorsk 74.09 320 *e* P **P** 20 19 54.5 -2.2
VRH pmax pmax
comp=Z,14nm,1.2s
H21K Melozitna Rive 74.10 25 P **P** 20 19 55.7 -0.8
baz=270
CHUM Lake Minchumin 74.32 27 P **P** 20 19 57.2 -0.6
baz=271
KDAK Kodiak Island 74.35 34 P **P** 20 19 59.1 +1.0
comp=Z,6.8nm,1.0s,baz=286,slow=0.5,SNR=5.4
KDAK LR LR 20 47 53.5
comp=Z,170nm,20.7s,baz=248,slow=32
comp=Z,6.8nm,1.0s
F22K John River 74.35 23 P **P** 20 19 58.2 +0.1
baz=270
PPLA Purkeypile 74.39 28 IAmb IAmb 20 20 17.9
comp=Z,31nm,1.5s
PPLA Purkeypile 74.39 28 P **P** 20 19 58.3 -0.2
baz=271
N20K Mount Spurr 74.42 30 P **P** 20 19 58.3 -0.3
baz=272
SPCR Spurr Chakacha 74.42 30 P **P** 20 19 58.4 -0.2
baz=272
I21K Tanana 74.44 26 P **P** 20 19 58.5 0.0
baz=271
E22K Anaktuvuk Pass 74.49 23 IAmb IAmb 20 20 08.8
comp=Z,25nm,1.6s
E22K Anaktuvuk Pass 74.49 23 P **P** 20 19 58.7 -0.2
baz=270
H22K Ishtalitna Cre 74.68 25 IAmb IAmb 20 20 10.2
comp=Z,21nm,1.3s
H22K Ishtalitna Cre 74.68 25 P **P** 20 19 59.7 -0.3
baz=271
SKT Skwentna 74.72 29 IAmb IAmb 20 20 11.8
comp=Z,19nm,1.4s
SKT Skwentna 74.72 29 P **P** 20 20 00.8 +0.6
baz=272
KLMR Klimovskoe 74.84 330 *e* P **P** 20 19 59.3 -1.6
KLMR pmax pmax
comp=Z,35nm,1.3s
BPAW Bear Paw Mtn. 74.90 27 IAmb IAmb 20 20 10.8
comp=Z,46nm,1.4s
BPAW Bear Paw Mtn. 74.90 27 P **P** 20 20 01.2 -0.1
baz=272
D23K Nanushuk River 74.90 22 IAmb IAmb 20 20 11.4
comp=Z,24nm,1.1s
D23K Nanushuk River 74.90 22 P **P** 20 20 01.2 0.0
baz=271
C23K Itkillik River 74.91 21 IAmb IAmb 20 20 13.8
comp=Z,37nm,1.4s
C23K Itkillik River 74.91 21 P **P** 20 20 01.3 +0.1
baz=271
CAPN Captain Cook N 74.95 30 P **P** 20 20 01.7 +0.1
baz=273
GURO Guroymak-BITLI 74.97 306 IAmb IAmb 20 20 04.5
comp=Z,19nm,1.1s
MLY Manley 74.97 26 P **P** 20 20 01.2 -0.5
baz=272
COLD Coldfoot 75.12 24 P **P** 20 20 02.2 -0.2
baz=272
G23K Bananza Creek 75.21 24 P **P** 20 20 02.5 -0.5
baz=272
BRSE Bradley Lake S 75.21 31 P **P** 20 20 03.1 -0.1
baz=273
TRF Thorofare Moun 75.23 28 IAmb IAmb 20 20 15.4
comp=Z,29nm,1.4s
TRF Thorofare Moun 75.23 28 P **P** 20 20 03.2 -0.2
baz=273
CUT Chulitna 75.30 29 P **P** 20 20 03.9 +0.3
baz=273
TOLK Toolik Lake Re 75.31 22 P **P** 20 20 03.7 +0.1
baz=272
E23K Chandalar 75.32 23 P **P** 20 20 03.6 -0.1
baz=272
ERBR Yeremizino-Bor 75.35 314 *e* P **P** 20 20 03.5 -0.7
ERBR pmax pmax
comp=Z,9.0nm,0.4s
H23K Yukon River 75.44 25 P **P** 20 20 04.3 -0.1
baz=273
I23K Minto, Yukon-K 75.55 26 P **P** 20 20 05.1 +0.2
baz=273
D24K Happy Valley 75.56 22 P **P** 20 20 05.0 0.0
baz=273
C24K Frankiln Bluff 75.58 21 P **P** 20 20 05.2 +0.1
baz=272
RC01 Rabbit Creek A 75.63 30 P **P** 20 20 05.4 0.0
baz=274
VSR Storozhevoye 75.69 320 *e* P P 20 19 57.4 -8.6
VSR pmax pmax
comp=Z,6.0nm,1.0s
NEA2 Nenana 75.71 26 IAmb IAmb 20 20 15.0
comp=Z,38nm,1.8s
NEA2 Nenana 75.71 26 P **P** 20 20 06.1 +0.2
baz=274
LPSR Galich'ya Gora 75.71 321 *e* P P 20 20 00.8 -5.3
LPSR pmax pmax
comp=Z,15nm,1.0s
E24K Your Creek 75.74 23 P **P** 20 20 06.5 +0.4
baz=273
MCK McKinley 75.82 27 P **P** 20 20 06.6 +0.1
baz=274,SNR=11
SEW Seward 75.84 31 P **P** 20 20 06.9 +0.3
baz=274
RND Reindeer 75.88 28 IAmb IAmb 20 20 15.4
comp=Z,30nm,1.3s
PMR Palmer 75.88 29 P **P** 20 20 07.3 +0.4
baz=274
KOPT Kop Dagi 75.98 308 IAmb IAmb 20 20 58.8
comp=Z,49nm,2.0s
F24K Squaw Lake 76.00 23 P **P** 20 20 07.2 -0.4
baz=274
WAT1 Susitna Watana 76.06 28 P **P** 20 20 07.7 -0.3
baz=274
H24K Noodor Dome 76.12 25 P **P** 20 20 08.3 0.0
baz=274
SOC Sochi 76.12 312 *e* P P 20 20 13.8 +5.1
SOC *e* 20 23 04.5
SOC *e* PPP PPP 20 24 44.4
SOC *e* S **S** **20 29 55.8 +4.0**
SOC *e* SS **SS** **20 34 49.3 +4.4**
SOC *e* SSS SSS 20 38 05.4
SOC pmax pmax
comp=Z,15nm,1.1s
SOC MLR MLR
comp=Z,139nm,18.0s
MOS Moscow 76.19 324 *e* P **P** **20 20 07.4 -1.4**
MOS *e* 20 23 00.0
MOS *e* S **S** **20 29 46.2 -5.9**
MOS MLR MLR
comp=Z,300nm,18.0s
COLA College 76.21 26⇑ *e* P **P** 20 20 09.3 +0.6
COLA pmax pmax
comp=Z,4.0nm,0.9s
KNK Knik Glacier 76.22 30 IAmb IAmb 20 20 17.7
comp=Z,21nm,1.2s
KNK Knik Glacier 76.22 30 P **P** 20 20 08.9 0.0
baz=275
G24K Hadweenzic Riv 76.22 24 P **P** 20 20 09.3 +0.5
baz=274
SML Sawmill 76.25 29 IAmb IAmb 20 20 17.8
comp=Z,32nm,1.2s
SML Sawmill 76.25 29 P **P** 20 20 09.2 +0.1
baz=275
POKR Poker Plat Res 76.37 26 P **P** 20 20 10.2 +0.6
baz=275
D25K Kavik River 76.42 21 P **P** 20 20 10.3 +0.4
baz=275
WAT6 Susitna Watana 76.45 28 P **P** 20 20 10.2 -0.1
baz=275,SNR=17
M23K Glacier View 76.53 29 P **P** 20 20 11.2 +0.5
baz=275
DHY Denali Highway 76.57 28 P **P** 20 20 11.3 +0.3
baz=275
ILAR Eielson Array 76.63 26 P **P** 20 20 11.3 +0.2
comp=Z,1.0nm,0.9s,baz=248,slow=6.6,SNR=6.0
ILAR LR LR 20 52 19.0
comp=Z,89nm,21.9s,baz=280,slow=34
ILAR Eielson Array 76.63 26 P **P** 20 20 10.7 -0.5
HDA Harding Lake 76.64 27 P **P** 20 20 11.0 -0.2
baz=276
SCM Sheep Creek Mo 76.72 29 IAmb IAmb 20 20 20.7
comp=Z,38nm,1.4s
SCM Sheep Creek Mo 76.72 29 P **P** 20 20 11.7 0.0
baz=276
G25K Bearman Lake 76.76 24 P **P** 20 20 11.8 0.0
baz=276
E25K Arctic Village 76.83 23 P **P** 20 20 12.8 +0.6
baz=276
OBN Obninsk 76.85 324 LR LR 20 54 38.9
comp=Z,220nm,19.6s,baz=4.5,slow=36
OBN Obninsk 76.85 324 *e* P **P** 20 20 12.3 -0.2
OBN *i* 20 20 21.5
OBN *i* S **S** **20 29 57.5 -1.8**
OBN pmax pmax
comp=Z,10.0nm,1.0s
OBN MLR MLR
comp=Z,191nm,18.0s
F25K Christian Rive 76.85 23 P **P** 20 20 12.4 0.0
baz=276
P23K Montague Islan 76.87 31 P **P** 20 20 12.8 +0.2
baz=276
C26K Camden Bay 76.88 21 P **P** 20 20 13.1 +0.7
baz=276,SNR=11
GLI Glacier Island 76.93 30 P **P** 20 20 13.2 +0.3
baz=276
APA Apatity 77.00 337⇓ *e* P P 20 20 21.8 +8.7
APA pmax pmax

	comp=Z,10.0nm,1.1s								
APA				MLR	MLR				
	comp=Z,1μm,5.1s								
PRP	**Porcupine Dome**	**77.12**	**25**	P	**P**	**20**	**20**	**14.1**	**0.0**
	baz=276								
M24K	**Tolsona, Glenn**	**77.23**	**29**	P	**P**	**20**	**20**	**14.7**	**+0.1**
	baz=277								
BMAR	**Burnt Mountain**	**77.28**	**23**	P	**P**	**20**	**20**	**14.8**	**0.0**
J25K	**Salcha River,**	**77.29**	**26**	P	**P**	**20**	**20**	**15.3**	**+0.3**
	baz=277								
C27K	**Jago River**	**77.33**	**21**	P	**P**	**20**	**20**	**15.5**	**+0.5**
	baz=277								
F26K	**Sheenjek River**	**77.41**	**23**	IAmb	IAmb	20	20	25.9	
	comp=Z,19nm,1.4s								
F26K	**Sheenjek River**	**77.41**	**23**	P	**P**	**20**	**20**	**16.2**	**+0.7**
	baz=277								
KLU	**Klutina**	**77.42**	**29**	P	**P**	**20**	**20**	**16.1**	**+0.3**
	baz=277								
PAX	**Paxson**	**77.45**	**28**	P	**P**	**20**	**20**	**16.6**	**+0.7**
	baz=277								
EYAK	**Cordova Ski Ar**	**77.62**	**30**	P	**P**	**20**	**20**	**16.9**	**+0.2**
	baz=277								
RIDG	**Independent Ri**	**77.63**	**27**	IAmb	IAmb	20	20	25.4	
	comp=Z,43nm,1.4s								
RIDG	**Independent Ri**	**77.63**	**27**	P	**P**	**20**	**20**	**16.5**	**-0.3**
	baz=278,SNR=12								
G26K	**Porcupine Rive**	**77.65**	**24**	IAmb	IAmb	20	20	27.9	
	comp=Z,18nm,1.4s								
G26K	**Porcupine Rive**	**77.65**	**24**	P	**P**	**20**	**20**	**16.7**	**0.0**
	baz=278								
SCRK	**Sand Creek**	**77.98**	**27**	IAmb	IAmb	20	20	27.7	
	comp=Z,30nm,1.6s								
SCRK	**Sand Creek**	**77.98**	**27**	P	**P**	**20**	**20**	**18.6**	**-0.2**
	baz=278								
DOT	**Dot Lake**	**77.99**	**27**	IAmb	IAmb	20	20	27.6	
	comp=Z,51nm,1.4s								
N25K	**Chitina, Valde**	**78.03**	**29**	P	**P**	**20**	**20**	**18.9**	**-0.3**
	baz=278								
BMRM	**Bremner River**	**78.12**	**30**	IAmb	IAmb	20	20	27.1	
	comp=Z,19nm,1.3s								
BMRM	**Bremner River**	**78.12**	**30**	P	**P**	**20**	**20**	**19.3**	**-0.3**
	baz=278								
I26K	**Coal Creek Min**	**78.14**	**25**	P	**P**	**20**	**20**	**19.6**	**+0.1**
	baz=279								
E27K	**Coleen River**	**78.29**	**22**	IAmb	IAmb	20	20	30.3	
	comp=Z,18nm,1.3s								
E27K	**Coleen River**	**78.29**	**22**	P	**P**	**20**	**20**	**20.1**	**-0.3**
	baz=280								
D27M	**Malcolm River**	**78.34**	**21**		pP	20	20	28.6	+2.6
D27M	**Malcolm River**	**78.34**	**21**	P	**P**	**20**	**20**	**20.6**	**-0.2**
	baz=280								
KAIM	**Kayak Island**	**78.37**	**31**	P	**P**	**20**	**20**	**21.0**	**+0.1**
	baz=279								
L26K	**Log Cabin Wild**	**78.40**	**28**	P	**P**	**20**	**20**	**21.6**	**+0.5**
	baz=279								
GLB	**Gilahina Butte**	**78.43**	**29**	IAmb	IAmb	20	20	30.6	
	comp=Z,24nm,1.3s								
G27K	**Doyon Strip**	**78.50**	**24**	P	**P**	**20**	**20**	**21.5**	**-0.1**
	baz=280								
H27K	**Steamboat Moun**	**78.65**	**24**	P	**P**	**20**	**20**	**22.3**	**-0.2**
	baz=280								
M26K	**Nabesna, AK**	**78.66**	**28**	P	**P**	**20**	**20**	**22.5**	**-0.1**
	baz=279								
I27K	**Kandik River**	**78.72**	**25**	IAmb	IAmb	20	20	32.1	
	comp=Z,24nm,1.0s								
I27K	**Kandik River**	**78.72**	**25**	P	**P**	**20**	**20**	**22.9**	**+0.1**
	baz=280,SNR=18								
ATD	**Arta Tunnel**	**78.80**	**279**	LR	LR	20	54	09.3	
	comp=Z,5.4nm,20.6s,baz=82,slow=35								
MCARA	**McCarthy VSAT**	**78.81**	**29**	P	**P**	**20**	**20**	**23.1**	**-0.3**
	baz=280								
CRQM	**Cirque**	**78.86**	**30**	IAmb	IAmb	20	20	36.1	
	comp=Z,13nm,1.0s								
CRQE	**Cirque**	**78.89**	**30**	P	**P**	**20**	**20**	**24.0**	**0.0**
	baz=280								
E28M	**Babbage River**	**78.97**	**22**	P	**P**	**20**	**20**	**24.0**	**-0.1**
	baz=281								
TGL	**Tana Glacier**	**79.01**	**30**	IAmb	IAmb	20	20	32.0	
	comp=Z,22nm,1.3s								
F28M	**Old Crow**	**79.04**	**23**	IAmb	IAmb	20	20	32.4	
	comp=Z,25nm,1.4s								
F28M	**Old Crow**	**79.04**	**23**	P	**P**	**20**	**20**	**24.9**	**+0.4**
	baz=281,SNR=12								
L27K	**Beaver Creek,**	**79.08**	**28**	P	**P**	**20**	**20**	**24.9**	**+0.1**
	baz=280								
BCAR	**Beaver Creek A**	**79.10**	**28**	P	**P**	**20**	**20**	**24.4**	**-0.6**
M27K	**Edge Creek, AK**	**79.18**	**28**	P	**P**	**20**	**20**	**25.2**	**-0.4**
	baz=280								
I28M	**Miner Creek**	**79.44**	**25**	IAmb	IAmb	20	20	39.7	
	comp=Z,16nm,1.0s								
I28M	**Miner Creek**	**79.44**	**25**	P	**P**	**20**	**20**	**27.1**	**+0.2**
	baz=282,SNR=17								
SPITS	**Spitsbergen Ar**	**79.50**	**348**	P	**P**	**20**	**20**	**27.6**	**+0.7**
	comp=Z,44nm,1.2s,baz=83,slow=8.5,SNR=19								
SPITS				LR	LR	21	00	00.9	
	comp=Z,148nm,18.3s,baz=44,slow=39								
	comp=Z,44nm,1.2s								
SPITS	**Spitsbergen Ar**	**79.50**	**348**	P	**P**	**20**	**20**	**25.5**	**-1.4**
SPITS				pmax	pmax				
	comp=Z,40nm,1.2s								
ARCES	**ARCESS Array B**	**79.53**	**339**	P	**P**	**20**	**20**	**27.2**	**+0.1**
	comp=Z,16nm,1.0s,baz=76,slow=6.4,SNR=12								
ARCES				LR	LR	20	59	48.8	
	comp=Z,165nm,18.1s,baz=82,slow=39								
	comp=Z,16nm,1.0s								
ARCES	**ARCESS Array B**	**79.53**	**339**	IAmb	IAmb	20	20	29.6	
	comp=Z,29nm,1.1s								
E29M	**Blow River**	**79.60**	**22**	P	**P**	**20**	**20**	**28.2**	**+0.7**
	baz=283								
CTG	**Chitna Glacier**	**79.69**	**30**	P	**P**	**20**	**20**	**29.8**	**+1.5**
	baz=281								
CTGM	**Chitina Glacie**	**79.70**	**30**	IAmb	IAmb	20	20	37.5	
	comp=Z,16nm,0.9s								
LOGN	**Logan Glacier**	**79.88**	**30**	IAmb	IAmb	20	20	53.0	
	comp=Z,15nm,1.1s								
G29M	**Pine Creek**	**79.89**	**23**	P	**P**	**20**	**20**	**29.4**	**+0.2**
	baz=283								
H29M	**Whitestone**	**79.91**	**24**	P	**P**	**20**	**20**	**30.2**	**+0.9**
	baz=283								
YUK3	**Moose Creek**	**79.95**	**29**	P	**P**	**20**	**20**	**30.6**	**+0.8**
	baz=282								
ASF	**Jabal al Asfar**	**80.09**	**301**	LR	LR	21	00	28.3	
	comp=Z,106nm,19.1s,baz=65,slow=39								
O28M	**Mount Upton**	**80.28**	**30**	P	**P**	**20**	**20**	**32.2**	**+0.5**
	baz=282								
YUK8	**Steele Glacier**	**80.38**	**29**	P	**P**	**20**	**20**	**32.6**	**+0.4**
	baz=282								
EPYK	**Eagle Plains**	**80.52**	**24**	P	**P**	**20**	**20**	**33.1**	**+0.6**
	baz=284								
G30M	**tAoh Zraii Nji**	**80.56**	**23**	P	**P**	**20**	**20**	**33.6**	**+0.8**
	baz=285								
F30M	**Barrier River**	**80.56**	**22**	P	**P**	**20**	**20**	**33.1**	**+0.3**
	baz=285								
L29M	**L29M**	**80.72**	**27**	P	**P**	**20**	**20**	**34.5**	**+0.8**
	baz=284								
M29M	**Somme Creek**	**80.72**	**28**	P	**P**	**20**	**20**	**34.3**	**+0.4**
	baz=283								
K29M	**Barlow Dome**	**80.81**	**26**	P	**P**	**20**	**20**	**34.8**	**+0.5**
	baz=284								
YUK4	**Talbot Arm**	**80.89**	**29**	P	**P**	**20**	**20**	**35.4**	**+0.5**
	baz=283								
I30M	**Mount Dempster**	**80.94**	**25**	P	**P**	**20**	**20**	**35.4**	**+0.4**
	baz=285								
YUK6	**Outpost Mounta**	**81.12**	**29**	P	**P**	**20**	**20**	**36.7**	**+0.5**
	baz=284								
J30M	**Hart River**	**81.13**	**26**	P	**P**	**20**	**20**	**36.2**	**+0.2**
	baz=285								
O29M	**Mount Kennedy**	**81.17**	**30**	P	**P**	**20**	**20**	**36.8**	**+0.6**
	baz=284								
INK	**Inuvik**	**81.19**	**22**	P	**P**	**20**	**20**	**35.7**	**-0.3**
	comp=Z,5.3nm,1.1s,baz=300,slow=5.4,SNR=8.2								
INK				LR	LR	20	59	30.1	
	comp=Z,94nm,19.9s,baz=302,slow=38								
	comp=Z,5.3nm,1.1s								
INK	**Inuvik**	**81.19**	**22**	P	**P**	**20**	**20**	**36.8**	**+0.8**
	baz=287								
FINES	**FINESS Array B**	**81.20**	**331**	P	**P**	**20**	**20**	**35.9**	**-0.3**
	comp=Z,6.7nm,0.9s,baz=53,slow=6.3,SNR=16								
FINES				LR	LR	20	58	38.0	
	comp=Z,244nm,19.4s,baz=78,slow=37								
	comp=Z,6.7nm,0.9s								
BRTR	**Keskin Array B**	**81.23**	**309**	P	**P**	**20**	**20**	**36.5**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=123,slow=4.6,SNR=5.3								
	comp=Z,1.0nm,0.8s								
BR104	**Keskin Array S**	**81.23**	**309**	P	**P**	**20**	**20**	**34.9**	**-2.2**
	comp=Z,2.7nm,1.2s								
G31M	**Satah River**	**81.31**	**23**	P	**P**	**20**	**20**	**37.6**	**+0.9**
	baz=286								
F31M	**Tsiigehtchic**	**81.36**	**22**	P	**P**	**20**	**20**	**37.7**	**+0.8**
	baz=287								
M30M	**Minto, Yukon**	**81.44**	**28**	IAmb	IAmb	20	20	47.7	
	comp=Z,31nm,1.6s								
M30M	**Minto, Yukon**	**81.44**	**28**	P	**P**	**20**	**20**	**38.1**	**+0.5**
	baz=285								
HYT	**Haines Junctio**	**81.55**	**29**	P	**P**	**20**	**20**	**38.9**	**+0.6**
HYT	**Haines Junctio**	**81.55**	**29**	P	**P**	**20**	**20**	**39.0**	**+0.6**
	baz=284								
N30M	**Aishikik Lake**	**81.59**	**29**	P	**P**	**20**	**20**	**39.1**	**+0.6**
	baz=285								
VSU	**Vasula**	**81.59**	**328**	⇑*e*P	**P**	**20**	**20**	**37.9**	**-0.5**
VSU				pmax	pmax				
	comp=Z,26nm,1.1s								
H31M	**Peel River**	**81.60**	**24**	IAmb	IAmb	20	20	46.6	
	comp=Z,14nm,1.0s								
H31M	**Peel River**	**81.60**	**24**	P	**P**	**20**	**20**	**38.9**	**+0.5**
	baz=286								
MNK	**Minsk**	**81.91**	**324**	*i* LRM	MLR	20	57	36.8	
	comp=Z,125nm,15.6s								
MNK	**Minsk**	**81.91**	**324**	*i* P	**P**	**20**	**20**	**40.1**	**0.0**
MNK				*i*		20	20	45.3	
MNK				*i*		20	23	47.6	
MNK				*i* PPP	PPP	20	25	38.2	
MNK				*i* S	**S**	**20**	**30**	**55.6**	**+2.6**
MNK				*i* SSS	SSS	20	39	38.2	
MNK				pmax	pmax				
	comp=N,12nm,0.8s								
MNK				pmax	pmax				
	comp=Z,10.0nm,0.7s								
MNK				pmax	pmax				
	comp=E,6.0nm,0.8s								
MNK				MLR	MLR				
	comp=Z,125nm,16.0s								
MNK	**Minsk**	**81.91**	**324**	*i* P	**P**	**20**	**20**	**40.1**	**0.0**
	comp=Z,10.0nm,0.7s,baz=77								
MNK	**Minsk**	**81.91**	**324**	*i* P	**P**	**20**	**20**	**40.1**	**0.0**
	comp=N,12nm,0.8s								
MNK	**Minsk**	**81.91**	**324**	*i* P	**P**	**20**	**20**	**40.1**	**0.0**
	comp=E,6.0nm,0.8s								
MNK	**Minsk**	**81.91**	**324**	*i* PcP	**PcP**	**20**	**20**	**45.4**	**-0.3**
MNK	**Minsk**	**81.91**	**324**	*i* PP	PP	20	23	47.7	+0.4
MNK	**Minsk**	**81.91**	**324**	*i* PPP	PPP	20	25	38.3	
MNK	**Minsk**	**81.91**	**324**	*i* S	**S**	**20**	**30**	**55.6**	**+2.6**
MNK	**Minsk**	**81.91**	**324**	*i* PS		20	31	32.0	
MNK	**Minsk**	**81.91**	**324**	*i* SS	SS	20	35	59.1	-12
MNK	**Minsk**	**81.91**	**324**	*i* SSS	SSS	20	39	38.3	
MNK	**Minsk**	**81.91**	**324**	*i* LQ	LQ	20	50	02.5	
AK09	**Malin Array Si**	**81.96**	**320**	P	**P**	**20**	**20**	**40.1**	**-0.4**
AK03	**Malin Array Si**	**81.97**	**320**	P	**P**	**20**	**20**	**39.4**	**-1.1**
AK08	**Malin Array Si**	**81.97**	**320**	P	**P**	**20**	**20**	**39.4**	**-1.1**
AKASG	**Malin Array Be**	**81.98**	**320**	P	**P**	**20**	**20**	**39.1**	**-1.4**
	comp=E,6.6nm,1.0s,baz=63,slow=5.1,SNR=14								
	comp=E,6.6nm,1.0s								
AKASG	**Malin Array Be**	**81.98**	**320**	P	**P**	**20**	**20**	**39.7**	**-0.9**
AKBB	**Malin Array Si**	**81.98**	**320**	IAmb	IAmb	20	20	40.8	
	comp=Z,32nm,1.7s								
AKBB	**Malin Array Si**	**81.98**	**320**	*de*P	**P**	**20**	**20**	**39.7**	**-0.9**
AKBB	**Malin Array Si**	**81.98**	**320**	P	**P**	**20**	**20**	**39.7**	**-0.9**
AK10	**Malin Array Si**	**81.98**	**320**	P	**P**	**20**	**20**	**39.6**	**-1.0**
AK01	**Malin Array Si**	**81.99**	**320**	P	**P**	**20**	**20**	**39.6**	**-1.0**
KIEV	**Kiev**	**81.99**	**320**	⇓P	**P**	**20**	**20**	**40.9**	**+0.3**
KIEV	**Kiev**	**81.99**	**320**	P	**P**	**20**	**20**	**39.3**	**-1.3**
KIEV				IAmb	IAmb	20	20	40.8	
	comp=Z,29nm,1.7s								
KIEV	**Kiev**	**81.99**	**320**	P	**P**	**20**	**20**	**39.3**	**-1.3**
KIEV				pmax	pmax				
	comp=Z,29nm,1.7s								
KIEV	**Kiev**	**81.99**	**320**	P	**P**	**20**	**20**	**39.8**	**-0.8**
	comp=Z,29nm,2.1s								
P30M	**Million Dollar**	**81.99**	**30**	P	**P**	**20**	**20**	**41.2**	**+0.6**
	baz=285								
AK02	**Malin Array Si**	**82.00**	**320**	P	**P**	**20**	**20**	**39.7**	**-1.0**
AK04	**Malin Array Si**	**82.01**	**320**	P	**P**	**20**	**20**	**39.8**	**-0.9**
AK05	**Malin Array Si**	**82.01**	**320**	P	**P**	**20**	**20**	**39.8**	**-0.9**
AK11	**Malin Array Si**	**82.02**	**320**	P	**P**	**20**	**20**	**39.8**	**-1.0**
AK06	**Malin Array Si**	**82.02**	**320**	P	**P**	**20**	**20**	**39.8**	**-1.0**
AK07	**Malin Array Si**	**82.02**	**320**	P	**P**	**20**	**20**	**39.8**	**-1.0**
AK15	**Malin Array Si**	**82.04**	**320**	P	**P**	**20**	**20**	**39.7**	**-1.2**
AK16	**Malin Array Si**	**82.06**	**320**	P	**P**	**20**	**20**	**39.8**	**-1.2**
AK22	**Malin Array Si**	**82.06**	**320**	P	**P**	**20**	**20**	**39.8**	**-1.2**
AK14	**Malin Array Si**	**82.06**	**320**	P	**P**	**20**	**20**	**39.9**	**-1.1**
N31M	**Braeburn, Yuko**	**82.19**	**28**	P	**P**	**20**	**20**	**42.4**	**+0.8**
	baz=286								
NOR	**Nord**	**82.23**	**355**	*i* P	**P**	**20**	**20**	**40.5**	**-0.8**
NOR				IAmb	IAmb	20	20	42.2	
	comp=Z,8.4nm,1.3s								
EIL	**Elat**	**82.23**	**299**	LR	LR	21	02	55.4	
	comp=Z,155nm,20.2s,baz=76,slow=40								
O30N	**Mendenhall**	**82.24**	**29**	P	**P**	**20**	**20**	**42.4**	**+0.5**
	baz=286								
NACGM	**Naroch**	**82.43**	**325**	LRM	MLR	20	58	31.4	
	comp=N,223nm,16.2s								
NACGM	**Naroch**	**82.43**	**325**	*e*P	**P**	**20**	**20**	**43.9**	**+1.0**
	comp=Z,41nm,1.1s,baz=76								
NACGM	**Naroch**	**82.43**	**325**	*e*PcP	**PcP**	**20**	**20**	**52.0**	**+4.0**
NACGM	**Naroch**	**82.43**	**325**	*e*PP	PP	20	23	56.0	+4.4
NACGM	**Naroch**	**82.43**	**325**	*e*PPP	PPP	20	25	47.4	
NACGM	**Naroch**	**82.43**	**325**	S	**S**	**20**	**30**	**58.8**	**+0.4**
NACGM	**Naroch**	**82.43**	**325**	SS	SS	20	35	49.4	-29
NACGM	**Naroch**	**82.43**	**325**	SSS	SSS	20	39	28.0	
NACGM	**Naroch**	**82.43**	**325**	LQ	LQ	20	51	15.9	
NACGM	**Naroch**	**82.43**	**325**	LRM	MLR	20	57	24.0	
	comp=Z,196nm,19.3s								
A36M	**Sachs Harbour**	**82.56**	**17**	P	**P**	**20**	**20**	**44.2**	**+1.0**
	baz=294								
M31M	**Drury Creek, Y**	**82.62**	**28**	P	**P**	**20**	**20**	**44.5**	**+0.8**
	baz=287								
ABPO	**Ambohimpanom**	**82.64**	**248**	P	**P**	**20**	**20**	**44.8**	**0.0**
ABPO				IAmb	IAmb	20	20	46.3	
	comp=Z,29nm,1.1s								
ABPO	**Ambohimpanom**	**82.64**	**248**	P	**P**	**20**	**20**	**44.8**	**0.0**
ABPO				pmax	pmax				
	comp=Z,29nm,1.1s								
RAR	**Rarotonga**	**82.71**	**114**	LR	LR	20	52	50.7	
	comp=Z,216nm,20.3s,baz=292,slow=32								
WHY	**Whitehorse**	**82.84**	**29**	P	**P**	**20**	**20**	**44.2**	**-0.8**
WHY				IAmb	IAmb	20	20	53.4	
	comp=Z,34nm,1.2s								
WHY	**Whitehorse**	**82.84**	**29**	P	**P**	**20**	**20**	**45.2**	**+0.1**
	baz=287								
MI28	**MI28,Pidlybu**	**82.88**	**321**	P	**P**	**20**	**20**	**43.7**	**-1.6**
S31K	**Pelican**	**82.93**	**32**	P	**P**	**20**	**20**	**46.4**	**+1.0**
	baz=286								
LUBAR	**Lubar, Ukraine**	**83.07**	**320**	P	**P**	**20**	**20**	**45.0**	**-1.3**
SORM	**Soroca**	**83.13**	**318**	⇓P	**P**	**20**	**20**	**46.3**	**-0.4**
SORM	**Soroca**	**83.13**	**318**	P	**P**	**20**	**20**	**46.2**	**-0.4**
SORM	**Soroca**	**83.13**	**318**	P	**P**	**20**	**20**	**45.2**	**-1.4**
FURI	**Furi**	**83.39**	**277**	LR	LR	20	58	41.6	
	comp=Z,131nm,18.2s,baz=102,slow=36								
N32M	**Quiet Lake**	**83.53**	**28**	P	**P**	**20**	**20**	**48.9**	**+0.4**
	baz=288								
SIT	**Sitka**	**83.65**	**33**	P	**P**	**20**	**20**	**49.4**	**+0.3**
	baz=287								
R32K	**Eaglecrest**	**83.71**	**31**	P	**P**	**20**	**20**	**49.5**	**+0.1**
	baz=287								
P32M	**Atlin**	**83.71**	**30**	P	**P**	**20**	**20**	**49.5**	**0.0**
	baz=288								
PABE	**Paberze**	**83.83**	**326**	P	**P**	**20**	**20**	**49.4**	**-0.6**
VLDR	**Vladesti**	**83.86**	**316**	⇑P	**P**	**20**	**20**	**51.5**	**+1.0**
MMPY	**Sheldon Lake,**	**83.87**	**27**	IAmb	IAmb	20	21	00.2	
	comp=Z,18nm,1.4s								
MMPY	**Sheldon Lake,**	**83.87**	**27**	P	**P**	**20**	**20**	**50.7**	**+0.4**
	baz=290								
TPGR	**Topolog**	**83.88**	**315**	⇑P	**P**	**20**	**20**	**51.3**	**+0.7**
VOI	**Vohitsoka**	**83.91**	**246**	P	**P**	**20**	**20**	**49.9**	**-1.4**
VOI	**Vohitsoka**	**83.91**	**246**	P	**P**	**20**	**20**	**51.1**	**-0.1**
S32K	**Killisnoo**	**83.92**	**32**	P	**P**	**20**	**20**	**50.7**	**+0.2**
	baz=287								
TATR	**Tatarca**	**83.95**	**315**	⇑P	**P**	**20**	**20**	**51.5**	**+0.7**
P33M	**Teslin, Yukon**	**83.95**	**29**	IAmb	IAmb	20	21	38.3	
	comp=Z,21nm,1.6s								
P33M	**Teslin, Yukon**	**83.95**	**29**	P	**P**	**20**	**20**	**50.9**	**+0.2**
	baz=288								
CFR	**Carcaliu**	**83.99**	**315**	⇑P	**P**	**20**	**20**	**51.6**	**+0.5**
CFR	**Carcaliu**	**83.99**	**315**	P	**P**	**20**	**20**	**51.6**	**+0.5**
C36M	**Paulatuk**	**84.02**	**19**	IAmb	IAmb	20	21	03.7	
	comp=Z,13nm,1.1s								
C36M	**Paulatuk**	**84.02**	**19**	P	**P**	**20**	**20**	**50.9**	**+0.1**
	baz=295								
KMPD	**K-Podol'skiy**	**84.24**	**319**	P	**P**	**20**	**20**	**51.5**	**-0.8**
ICOR	**Ion Corvin**	**84.49**	**314**	⇓P	**P**	**20**	**20**	**54.5**	**+0.8**
ODBI	**Odobesti**	**84.58**	**316**	⇑P	**P**	**20**	**20**	**55.1**	**+1.0**
Q32M	**Nakina River**	**84.62**	**30**	P	**P**	**20**	**20**	**53.8**	**-0.5**
	baz=289								
TESR	**Tescani**	**84.66**	**317**	⇑P	**P**	**20**	**20**	**55.3**	**+0.8**
	comp=Z,44nm,1.2s								
PRAR	**RASCA**	**84.71**	**317**	⇑P	**P**	**20**	**20**	**55.2**	**+0.5**
FOMA	**Nahampoana Res**	**84.71**	**243**	P	**P**	**20**	**20**	**54.7**	**-0.4**
GRER		**84.73**	**315**	⇑P	**P**	**20**	**20**	**56.1**	**+1.2**
VRI	**Vrincioaia**	**84.77**	**316**	⇓P	**P**	**20**	**20**	**56.1**	**+1.0**
VRI	**Vrincioaia**	**84.77**	**316**	P	**P**	**20**	**20**	**56.1**	**+1.0**
VRI	**Vrincioaia**	**84.77**	**316**	P	**P**	**20**	**20**	**54.9**	**-0.2**
	comp=Z,43nm,1.2s								
PLOR	**Plostina**	**84.83**	**316**	⇓P	**P**	**20**	**20**	**56.0**	**+0.5**
PLOR	**Plostina**	**84.83**	**316**	P	**P**	**20**	**20**	**55.9**	**+0.5**
ONER	**Baraj Valea Uz**	**84.87**	**316**	⇑P	**P**	**20**	**20**	**56.2**	**+0.6**
ISR	**Istrita**	**85.10**	**315**	⇑P	**P**	**20**	**20**	**56.6**	**-0.2**
ISR	**Istrita**	**85.10**	**315**	P	**P**	**20**	**20**	**56.6**	**-0.2**
U33K	**Whale Pass**	**85.10**	**33**	P	**P**	**20**	**20**	**56.2**	**-0.2**
	baz=289								
R33M	**Jennings River**	**85.10**	**30**	P	**P**	**20**	**20**	**56.0**	**-0.6**
	baz=290								
COVR	**Voineasa-Covas**	**85.13**	**316**	⇑P	**P**	**20**	**20**	**57.5**	**+0.6**
NEHR	**Nehoiu**	**85.18**	**316**	⇑P	**P**	**20**	**20**	**57.9**	**+0.7**
KSV	**Kosov**	**85.20**	**319**	P	**P**	**20**	**20**	**55.5**	**-1.7**
BURAR	**Bucovina Array**	**85.30**	**318**	⇓P	**P**	**20**	**20**	**58.3**	**+0.4**
BURAR	**Bucovina Array**	**85.30**	**318**	P	**P**	**20**	**20**	**56.7**	**-1.1**
BURAR	**Bucovina Array**	**85.30**	**318**	P	**P**	**20**	**20**	**58.2**	**+0.4**
BUR08	**Bucovina Ar. S**	**85.30**	**318**	IAmb	IAmb	20	20	59.3	
	comp=Z,24nm,1.0s								
CRAG	**Craig**	**85.31**	**34**	P	**P**	**20**	**20**	**57.5**	**0.0**
	baz=289								
OZUR		**85.34**	**316**	⇑P	**P**	**20**	**20**	**58.4**	**+0.3**
MANT	**Manisa**	**85.36**	**308**	IAmb	IAmb	20	20	59.0	
	comp=Z,25nm,1.2s								
MLR	**Muntele Rosu**	**85.40**	**316**	LR	LR	21	03	07.2	
	comp=Z,242nm,19.1s,baz=64,slow=38								
MLR	**Muntele Rosu**	**85.40**	**316**	⇑P	**P**	**20**	**20**	**59.1**	**+0.7**
MLR	**Muntele Rosu**	**85.40**	**316**	IAmb	IAmb	20	20	59.7	
	comp=Z,19nm,0.9s								
MLR	**Muntele Rosu**	**85.40**	**316**	P	**P**	**20**	**20**	**59.1**	**+0.7**
MLR	**Muntele Rosu**	**85.40**	**316**	P	**P**	**20**	**20**	**57.8**	**-0.6**
	comp=Z,27nm,1.4s								
MLR				pP	**PcP**	**20**	**21**	**00.5**	**-1.0**
	comp=Z,27nm,1.4s								
LOZB	**Loznitsa**	**85.53**	**314**	⇓P	**P**	**20**	**20**	**59.1**	**+0.2**
S34M	**Telegraph Cree**	**85.53**	**31**	P	**P**	**20**	**20**	**55.9**	**-2.8**
S34M	**Telegraph Cree**	**85.53**	**31**	P	**P**	**20**	**20**	**59.1**	**+0.5**
	baz=290								
TGTN	**Hyland Airport**	**85.58**	**27**	P	**P**	**20**	**20**	**59.2**	**+0.4**
	baz=292								
DOPR	**Dopca**	**85.64**	**316**	⇓P	**P**	**20**	**21**	**00.1**	**+0.7**
WTLY	**Watson Lake, Y**	**85.87**	**29**	IAmb	IAmb	20	21	09.4	
	comp=Z,13nm,0.7s								
WTLY	**Watson Lake, Y**	**85.87**	**29**	P	**P**	**20**	**21**	**00.9**	**+0.6**
	baz=292								
DLBC	**Dease Lake**	**85.90**	**30**	LR	LR	21	00	55.4	
	comp=Z,81nm,18.8s,baz=274,slow=37								
DLBC	**Dease Lake**	**85.90**	**30**	P	**P**	**20**	**21**	**00.7**	**+0.2**
	baz=291								
VOIR		**86.02**	**316**	⇑P	**P**	**20**	**21**	**01.7**	**+0.3**
VOIR		**86.02**	**

CLL				*i* *SP	**sP**	**20 21 33.7**	**-1.1**
CLL				*e*S	**S**	**20 32 28.0**	**+2.3**
CLL				pmax	pmax		
	comp=Z,12nm,1.5s						
CLL	**Collm**	**91.45**	**324**	*i* P	**P**	**20 21 26.6**	**-0.4**
	comp=Z,12nm,1.5s						
CLL				*i* sP	**sP**	**20 21 33.7**	**-1.1**
CLL				*e*S	**S**	**20 32 28.0**	**+2.3**
CLL				*e*PS	**PS**	**20 33 36.0**	**-0.3**
CLL				*e*SS	SS	20 38 18.0	-13
CLL				*e*SSSS		20 45 12.0	
CLL				AMS	AMS	21 06 00.0	
	comp=N,100nm,19.4s						
CLL				AMS	AMS	21 06 00.0	
	comp=E,200nm,19.4s						
ARSA	**Arzberg**	**91.61**	**320**	*e*PcP	**P**	**20 21 27.6**	**-0.3**
	comp=E,7.0nm,1.2s						
SCO	**Scoresbysund**	**92.07**	**349**	IAmb	IAmb	20 21 31.7	
	comp=Z,27nm,1.3s						
SCO	**Scoresbysund**	**92.07**	**349**	*i* P	**P**	**20 21 29.9**	**+0.5**
SCO				IAmb	IAmb	20 21 31.3	
	comp=Z,19nm,1.2s						
GERES	**GERESS Array B**	**92.08**	**322**	P	**P**	**20 21 29.6**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=86,slow=3.0,SNR=6.8						
	comp=Z,0.9nm,0.8s						
PERS	**Pernice**	**92.11**	**319**	*i* P	**P**	**20 21 29.7**	**-0.6**
SOKA	**Soboth**	**92.15**	**319**	*e*PcP	**P**	**20 21 30.1**	**-0.3**
	comp=Z,7.8nm,1.3s						
SUMG	**Summit**	**92.39**	**355**	*i* P	**P**	**20 21 32.3**	**+0.9**
SUMG				IAmb	IAmb	20 21 33.4	
	comp=Z,24nm,1.3s						
OBKA	**Obir**	**92.52**	**319**	*e*PcP	**P**	**20 21 31.9**	**-0.3**
	comp=Z,6.7nm,1.1s						
LJU	**Ljubljana**	**92.73**	**319**	*e*P	**P**	**20 21 31.7**	**-1.3**
MAW	**Mawson**	**92.89**	**200**	LR	LR	21 02 14.7	
	comp=Z,95nm,18.8s,baz=60,slow=35						
KBA	**Koelnbreinsper**	**93.04**	**320**	*i* PcP	**P**	**20 21 33.9**	**-0.8**
	comp=Z,7.4nm,1.2s,SNR=5.5						
CADS	**Cadrg**	**93.15**	**319**	*i* P	**P**	**20 21 34.0**	**-1.0**
ABTA	**Abfaltersbach**	**93.70**	**320**	*i* P	**P**	**20 21 36.4**	**-1.1**
	comp=Z,6.8nm,1.0s,SNR=5.6						
STAL	**STALIGIAL**	**93.78**	**320**			**20 21 35.4**	**-2.5**
STAL				IAmb	IAmb	20 21 37.9	
	comp=Z,14nm,1.1s						
TIP	**Timpagrande**	**93.89**	**312**	⇓P	**P**	**20 21 38.7**	**+0.1**
WTTA	**Wattenberg**	**94.01**	**321**	*e*PcP	**P**	**20 21 38.6**	**-0.5**
	comp=Z,12nm,1.2s						
WATA	**Walderalm**	**94.02**	**321**	*e*PcP	**P**	**20 21 39.1**	**0.0**
	comp=Z,11nm,1.3s						
CUC	**Castrocucco**	**94.25**	**313**	IAmb	IAmb	20 21 40.3	
	comp=Z,18nm,1.4s						
SQTA	**Sankt Quirin**	**94.29**	**321**	*e*PcP	**P**	**20 21 40.1**	**-0.3**
	comp=Z,8.5nm,1.1s						
MOTA	**Moosalm**	**94.30**	**321**	*e*PcP	**P**	**20 21 39.6**	**-0.8**
	comp=Z,9.4nm,1.3s						
VNDA	**Vanda**	**94.35**	**172**	P	**P**	**20 21 39.4**	**-0.3**
	comp=Z,4.2nm,1.0s,baz=300,slow=4.9,SNR=11						
VNDA				LR	LR	21 04 27.1	
	comp=Z,59nm,19.9s,baz=326,slow=36						
	comp=Z,4.2nm,1.0s						
VNDA	**Vanda**	**94.35**	**172**	P	**P**	**20 21 39.5**	**-0.1**
VNDA	**Vanda**	**94.35**	**172**	P	**P**	**20 21 39.5**	**-0.1**
VNDA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
FETA	**Feichten**	**94.68**	**321**	*i* PcP	**P**	**20 21 42.3**	**+0.1**
	comp=Z,9.9nm,1.2s,SNR=5.1						
DAVA	**Damuels**	**95.07**	**321**	*e*PcP	**P**	**20 21 43.6**	**-0.3**
	comp=Z,6.0nm,1.3s						
FUORN	**Ofenpass-Fuorn**	**95.14**	**321**	IAmb	IAmb	20 21 45.5	
	comp=Z,14nm,1.1s						
MURB	**Monte Urbino**	**95.18**	**317**	IAmb	IAmb	20 22 13.6	
	comp=Z,17nm,1.3s						
TUE	**Stuetta**	**95.77**	**321**	IAmb	IAmb	20 21 48.1	
	comp=Z,12nm,1.4s						
WLF	**Walferdange**	**96.08**	**325**	IAmb	IAmb	20 21 50.2	
	comp=Z,12nm,1.0s						
WLF	**Walferdange**	**96.08**	**325**	*d*P	**P**	**20 21 48.2**	**-0.1**
	comp=Z,8.0nm,1.1s						
VAE	**Valguarnera**	**96.25**	**311**	LR	LR	21 11 49.1	
	comp=Z,65nm,19.0s,baz=212,slow=40						
BORG	**Borgarnes**	**96.76**	**346**	LR	LR	21 09 41.2	
	comp=Z,122nm,19.4s,baz=71,slow=38						
YBH	**Yreka Blue Hor**	**96.96**	**44**	LR	LR	20 57 34.4	
	comp=Z,8.4nm,21.9s,baz=291,slow=30						
NEW	**Newport**	**97.31**	**36**	LR	LR	21 04 58.5	
	comp=Z,70nm,18.0s,baz=320,slow=35						
EKA	**Eskdalemuir Ar**	**97.53**	**333**	P	**P**	**20 21 54.5**	**-0.2**
	comp=Z,3.1nm,1.0s,baz=57,slow=3.1,SNR=5.4						
EKA				LR	LR	21 08 14.3	
	comp=Z,146nm,18.5s,baz=49,slow=37						
	comp=Z,3.1nm,1.0s						
LSZ	**Lusaka**	**99.25**	**257**	LR	LR	21 05 27.1	
	comp=Z,248nm,18.4s,baz=114,slow=34						
KEST	**Kesra**	**100.68**	**311**	P	**Pdif**	**20 22 10.9**	**+1.5**
VNA2	**Neumayer--Watz**	**116.45**	**196**	⇑Pdiff	**Pdif**	**20 23 16.4**	**-2.1**
	comp=N,6.1nm,0.8s,baz=130,slow=7.2						
TORD	**Torodi Ar. Bea**	**116.69**	**293**	PKP	**PKPdf**	**20 27 05.1**	**-0.8**
	comp=N,1.6nm,0.8s,baz=23,slow=0.2,SNR=7.8						
VNA1	**Neumayer--Stat**	**116.84**	**196**	⇑Pdiff	**Pdif**	**20 23 16.2**	**-4.0**
	comp=Z,10nm,0.8s						
VNA3	**Neumayer Olymp**	**116.84**	**195**	⇑Pdiff	**Pdif**	**20 23 17.0**	**-3.3**
	comp=Z,6.3nm,1.0s						
TZTN	**Tazewell**	**122.96**	**26**		**PKPdf**	**20 27 15.8**	**-1.7**
LL02	**Futaleuf**	**148.28**	**158**		**PKPbc**	**20 28 07.3**	**+0.3**
LR05	**Currie**	**150.73**	**154**		**PKPdf**	**20 28 06.8**	**-0.9**
PLCA	**Paso Flores**	**150.89**	**157**	PKPbc	**PKiKP**	**20 28 14.7**	**+0.4**
	comp=Z,8.9nm,0.9s,baz=220,slow=3.4,SNR=19						
PLCA	**Paso Flores**	**150.89**	**157**		**PKiKP**	**20 28 14.6**	**+0.3**
PLCA	**Paso Flores**	**150.89**	**157**	*e*P	**PKPdf**	**20 28 06.5**	**-1.5**
GO06	**Curarrehue**	**151.50**	**154**		**PKPdf**	**20 28 06.8**	**-2.3**
SDV	**Santo Domingo**	**152.59**	**33**	PKPbc	**PKPbc**	**20 28 18.5**	**0.0**
	comp=Z,2.5nm,0.5s,baz=2.4,slow=8.7,SNR=4.6						
SDV	**Santo Domingo**	**152.59**	**33**	*e*P	**PKPdf**	**20 28 09.2**	**-2.4**
OTAV	**Otavalo**	**153.35**	**59**		**PKPdf**	**20 28 08.8**	**-4.2**
OTAV	**Otavalo**	**153.35**	**59**	PKiKP	**PKPdf**	**20 28 08.8**	**-4.2**
BI02	**San Fabin de**	**153.99**	**151**		**PKPbc**	**20 28 20.5**	**-0.3**
CMC01	**Camacan, BA**	**164.11**	**265**	*e*P	**PKPdf**	**20 28 25.4**	**+0.4**
BSFB	**Barra de Sao F**	**164.91**	**251**	*e*P	**PKPdf**	**20 28 25.9**	**+0.3**
JANB	**Januaria**	**168.75**	**266**	*e*P	**PKPdf**	**20 28 29.7**	**+1.0**
SMTB	**Santa Maria do**	**170.11**	**303**	*e*P	**PKPdf**	**20 28 27.8**	**-1.8**

KRSC 19 20:12:01.1±1.4, 49°11N×156°60E, h46km±25km, MI3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.61**	**349**	*e*P	Pn	20 12 28.8	+1.7
SKR				*e*S	Sn	20 12 47.8	+1.2
PAU	**Pauzhetka**	**2.37**	**3**	*e*P	Pn	20 12 39.8	+2.4
PAU				*e*S	Sn	20 13 08.7	+3.4
KDTR	**Khodutka, Kamc**	**2.87**	**19**	*e*P	Pn	20 12 47.8	+3.5
KDTR				*e*S	Sn	20 13 23.0	+5.5
ASAK	**Asacha**	**3.38**	**14**	*e*P	Pn	20 12 55.7	+4.2
MTVR	**Mutnovka**	**3.53**	**16**	*e*P	Pn	20 12 57.6	+4.1
MTVR				*e*S	Sn	20 13 40.0	+6.0
RUS	**Russkaya**	**3.55**	**19**	*e*P	Pn	20 12 56.9	+3.3
RUS				*e*S	Sn	20 13 38.4	+4.2
GRL	**Gorelyy**	**3.58**	**15**	*e*P	Pn	20 12 58.5	+4.3
GRL				*e*S	Sn	20 13 41.2	+6.0
UGLR	**Uglovaya**	**4.34**	**18**	*e*P	Pn	20 13 08.8	+4.1
KOK	**Koryaka**	**4.38**	**16**	*e*P	Pn	20 13 09.5	+4.3
SMAR	**Somma**	**4.39**	**18**	*e*P	Pn	20 13 09.5	+4.1
SDLR	**Sedlovina**	**4.42**	**18**	*e*P	Pn	20 13 09.4	+3.7
KRX	**Arik**	**4.45**	**16**	*e*P	Pn	20 13 09.9	+3.8
SPN	**Mys Shipunski**	**4.54**	**27**	*e*S	Sn	20 14 02.9	+4.2
MKZ	**Mys Kozlova**	**6.32**	**28**	*e*P	Pn	20 13 36.0	+4.4
KBTR	**Krutoberegovo**	**8.05**	**26**	*e*P	Pn	20 13 59.4	+4.0

*IDC **19** 20:16:38.5±0.6, 60°.72S×25°.93W, h0km, mb4.4/9, mbtmp4.4/9, MS4.0/19, Error ellipse: s-maj=25.5km s-min=18.1km az=57.0*

*NEIC **19** 20:16:38.2±2.1, 60°.7S±0°.1×25°.5W±0°.2, h10km±1km, mb5.0/44, Error ellipse: s-maj=21.0km s-min=10.8km az=219.0*

*GCMT **19** 20:16:42.2±0.3, 60°.91S±0°.02×25°.49W±0°.04, h27km±1km, MW5.0/87, Moment Tensor Solution. s15,c17; s87,c107; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=2.48±.31; Mθθ 4.17±.21; Mφφ -1.69±.19; Mrθ 0.22±.27; Mφφ 1.26±.12; Mφr 0.19±.32; Best double couple: M0 3.48100×10^16 NP1: φs 92.00000°, δ 45.00000°, λ -70.00000°. NP2: φs 245.00000°, δ 49.00000°, λ -109.00000°. Principal axes:*

T 4.4390, Plg2.0000°, Azm348.0000°; N -1.9140, Plg14.0000°, Azm258.0000°; P -2.5240, Plg76.0000°, Azm87.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 19 20:16:38.4±0.4, 60°.81S±0°.08×25°.58W±0°.08, h10km, n100, σ1§63/81, mb4.8/28, MS4.0/17, 4C-5D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**8.78**	**313**	Pn	**Pn**	**20 18 43.8**	**-1.4**
VNA1	**Neumayer--Stat**	**12.11**	**152**	⇓P	**Pn**	**20 19 30.3**	**-0.3**
	comp=Z,80nm,0.2s						
VNA1				⇑S	**Sn**	**20 21 38.0**	**-7.5**
VNA3	**Neumayer Olymp**	**12.24**	**155**	⇓P	**Pn**	**20 19 31.7**	**-0.9**
	comp=Z,62nm,0.2s						
VNA3				⇑S	Sn	20 21 36.8	-12
VNA2	**Neumayer--Watz**	**12.51**	**152**	⇓P	**Pn**	**20 19 35.1**	**-1.0**
	comp=Z,37nm,0.3s,baz=313,slow=13						
VNA2				⇑S	Sn	20 21 44.7	-11
	baz=327,slow=23						
SNAA	**Sanae**	**14.10**	**150**	⇓P	**Pn**	**20 19 57.3**	**-0.6**
	comp=Z,1μm,0.4s						
SNAA				⇑S	Sn	20 22 21.8	-12
SNAA	**Sanae**	**14.10**	**150**	Pn	**Pn**	**20 19 57.8**	**-0.1**
	comp=Z,15nm,0.3s,baz=309,slow=16,SNR=81						
SNAA				Sn	Sn	20 22 20.9	-13
	comp=Z,0.5nm,0.3s,baz=328,slow=9.1,SNR=1.3						
SNAA				LR	LR	20 24 18.4	
	comp=Z,792nm,20.1s,baz=0.5,slow=32						
SNAA	**Sanae**	**14.10**	**150**		**Pn**	**20 19 57.3**	**-0.6**
ESPZ	**Base Esperanza**	**14.85**	**246**	Pn	**Pn**	**20 20 07.9**	**-0.1**
TROLL	**Troll, Antarti**	**15.67**	**147**	P	**Pn**	**20 20 18.5**	**-0.6**
BELA	**Belgrano 2**	**17.40**	**186**		**Pn**	**20 20 41.9**	**+1.1**
PMSA	**Palmer Station**	**17.83**	**241**	LR	LR	20 26 15.9	
	comp=Z,304nm,18.9s,baz=132,slow=33						
EFI	**East Falkland**	**20.03**	**283**	P	**P**	**20 21 10.8**	**-0.3**
EFI				IAmb	IAmb	20 21 25.1	
	comp=Z,111nm,1.5s						
ELIB	**Princess Elisa**	**21.79**	**141**	*d*P	**P**	**20 21 32.8**	**+2.7**
	comp=Z,12nm,1.1s						
MG03	**Isla Dawson**	**24.78**	**266**	P	**P**	**20 22 01.8**	**+1.8**
MG03				IAmb	IAmb	20 22 03.6	
	comp=Z,67nm,1.1s						
QSPA	**South Pole Qui**	**29.43**	**180**	P	**P**	**20 22 44.8**	**+3.0**
	comp=Z,12nm,1.0s,baz=219,slow=4.6,SNR=38						
QSPA				LR	LR	20 33 50.7	
	comp=Z,407nm,21.4s,baz=190,slow=35						
	comp=Z,12nm,1.0s						
QSPA	**South Pole Qui**	**29.43**	**180**	P	**P**	**20 22 43.9**	**+2.1**
QSPA				IAmb	IAmb	20 23 27.1	
	comp=Z,19nm,0.8s						
TRQA	**Tornquist**	**32.16**	**298**		**P**	**20 23 05.4**	**-0.6**
TRQA				IAmb	IAmb	20 23 16.5	
	comp=Z,14nm,0.8s						
PLCA	**Paso Flores**	**33.89**	**286**	P	**P**	**20 23 21.1**	**0.0**
	comp=Z,1.3nm,0.7s,baz=118,slow=8.0,SNR=4.7						
PLCA				LR	LR	20 36 48.7	
	comp=Z,247nm,18.1s,baz=133,slow=36						
	comp=Z,1.3nm,0.7s						
PLCA	**Paso Flores**	**33.89**	**286**	P	**P**	**20 23 18.7**	**-2.4**
PLTB	**Pedras Altas**	**34.39**	**315**	P	**P**	**20 23 24.1**	**-1.4**
MAW	**Mawson**	**35.89**	**139**	P	**P**	**20 23 41.3**	**+3.4**
	comp=Z,13nm,1.0s,baz=228,slow=5.0,SNR=7.0						
MAW				LR	LR	20 36 50.1	
	comp=Z,190nm,19.0s,baz=234,slow=34						
	comp=Z,13nm,1.0s						
MAW	**Mawson**	**35.89**	**139**	P	**P**	**20 23 36.8**	**-1.1**
BI02	**San Fabin de**	**37.48**	**289**	P	**P**	**20 23 50.9**	**-1.1**
BO02	**Sierra Bellavi**	**38.80**	**291**	P	**P**	**20 24 03.7**	**+0.6**
GO05	**Hualane**	**39.15**	**290**	P	**P**	**20 24 05.9**	**-0.1**
GO05				IAmb	IAmb	20 24 30.4	
	comp=Z,72nm,1.8s						
BO04	**La Punta**	**39.39**	**292**	P	**P**	**20 24 07.8**	**-0.2**
BO04				IAmb	IAmb	20 24 11.5	
	comp=Z,17nm,0.8s						
MT08	**Bocatoma Ro**	**39.58**	**293**	P	**P**	**20 24 09.0**	**-0.8**
MT08				IAmb	IAmb	20 24 14.2	
	comp=Z,16nm,0.7s						
MT09	**Talagante**	**39.74**	**292**		**P**	**20 24 10.0**	**-1.1**
MT09				IAmb	IAmb	20 24 14.2	
	comp=Z,36nm,0.8s						
MT03	**Universidad Ad**	**39.76**	**293**	P	**P**	**20 24 09.0**	**-2.1**
MT03				IAmb	IAmb	20 24 15.0	
	comp=Z,28nm,0.8s						
MT01	**Popeta**	**39.78**	**292**	P	**P**	**20 24 10.5**	**-0.8**
MT16	**CCHEN**	**39.82**	**293**	P	**P**	**20 24 09.6**	**-2.0**
MT16				IAmb	IAmb	20 24 15.6	
	comp=Z,35nm,0.7s						
MT05	**Renca**	**39.95**	**292**	P	**P**	**20 24 11.1**	**-1.5**
PEL	**Peldehue**	**40.13**	**293**	P	**P**	**20 24 14.1**	**-0.1**
PEL				IAmb	IAmb	20 24 18.0	
	comp=Z,40nm,0.8s						
MT02	**Curacav**	**40.24**	**292**	P	**P**	**20 24 14.9**	**-0.1**
MT02				IAmb	IAmb	20 25 25.6	
	comp=Z,106nm,1.9s						
VA03	**San Esteban**	**40.39**	**293**	P	**P**	**20 24 15.3**	**-1.1**
ZON	**Zonda**	**40.59**	**296**		**P**	**20 24 17.4**	**-0.6**
CPUP	**Villa Florida**	**40.66**	**314**	P	**P**	**20 24 17.4**	**-1.1**
	comp=Z,5.2nm,0.8s,baz=170,slow=10,SNR=10						
CPUP				LR	LR	20 39 03.7	
	comp=Z,162nm,21.6s,baz=141,slow=33						
	comp=Z,5.2nm,0.8s						
CPUP	**Villa Florida**	**40.66**	**314**		**P**	**20 24 17.0**	**-1.5**
CO04	**Los Peladeros**	**41.19**	**293**	P	**P**	**20 24 24.2**	**+1.0**
CO04				IAmb	IAmb	20 24 36.5	
	comp=Z,36nm,1.1s						
SUR	**Sutherland**	**41.35**	**68**	LR	LR	20 38 25.9	
	comp=Z,159nm,20.9s,baz=204,slow=32						
VNDA	**Vanda**	**41.84**	**182**	P	**P**	**20 24 29.3**	**+1.6**
	comp=Z,2.6nm,1.0s,baz=197,slow=5.1,SNR=4.4						
VNDA				LR	LR	20 40 34.5	
	comp=Z,136nm,21.3s,baz=166,slow=34						
	comp=Z,2.6nm,1.0s						
VNDA	**Vanda**	**41.84**	**182**	P	**P**	**20 24 28.8**	**+1.2**
CO02	**Combarbal**	**41.91**	**294**	P	**P**	**20 24 29.3**	**+0.3**
CO02				IAmb	IAmb	20 24 32.0	
	comp=Z,49nm,1.2s						
CO03	**El Pedregal**	**42.08**	**295**	P	**P**	**20 24 30.4**	**+0.1**
CO03				IAmb	IAmb	20 24 33.6	
	comp=Z,18nm,1.1s						
CO01	**Juntas del Tor**	**42.56**	**296**		**P**	**20 24 34.9**	**+0.5**
CO01				IAmb	IAmb	20 24 50.6	
	comp=Z,16nm,0.8s						
CO06	**Fray Jorge**	**42.65**	**294**	P	**P**	**20 24 35.4**	**+0.6**
AC05	**El Transito**	**43.62**	**297**	P	**P**	**20 24 42.7**	**-0.1**
LCO	**Las Campanas**	**43.66**	**296**	P	**P**	**20 24 42.4**	**-0.8**
LCO				IAmb	IAmb	20 24 48.8	
	comp=Z,22nm,1.2s						
GO03	**Copiapo**	**44.68**	**297**	P	**P**	**20 24 52.9**	**+1.7**
GO03				IAmb	IAmb	20 24 53.9	
	comp=Z,13nm,0.8s						
AC02	**Maricunga**	**44.86**	**299**		**P**	**20 24 52.8**	**-0.4**
AC02				IAmb	IAmb	20 24 57.0	
	comp=Z,15nm,0.9s						
H04S2	**CROZET ISLANDS**	**45.02**	**109**	T	T	21 13 52.9	
	baz=223,slow=75,SNR=16						
H04S3	**CROZET ISLANDS**	**45.03**	**109**	T	T	21 14 02.7	
	baz=223,slow=75,SNR=19						
H04S1	**CROZET ISLANDS**	**45.03**	**109**	T	T	21 14 05.8	
	baz=223,slow=75,SNR=13						
CRZF	**Crozet Islands**	**45.31**	**108**	P	**P**	**20 24 54.2**	**-1.8**
BOSA	**Boshof**	**46.57**	**70**	P	**P**	**20 25 07.4**	**+1.1**
	comp=Z,1.7nm,0.8s,baz=178,slow=4.6,SNR=3.7						
BOSA				LR	LR	20 40 10.5	
	comp=Z,114nm,20.8s,baz=187,slow=30						
	comp=Z,1.7nm,0.8s						
BOSA	**Boshof**	**46.57**	**70**	IAmb	IAmb	20 25 40.5	
	comp=Z,36nm,1.9s						
BDFB	**Brasilia**	**47.93**	**330**	LR	LR	20 43 41.1	
	comp=Z,155nm,19.7s,baz=218,slow=34						
PB07	**IPOC Station P**	**49.69**	**302**	P	**P**	**20 25 30.2**	**-0.3**
GO01	**Chusmiza**	**51.24**	**304**	IAmb	IAmb	20 25 53.2	
	comp=Z,8.4nm,0.7s						
PTLB	**Pontes e Lacer**	**51.34**	**317**		**P**	**20 25 40.8**	**-2.0**
PB16	**IPOC Station P**	**52.56**	**304**	P	**P**	**20 25 52.2**	**-0.3**
H10N1	**ASCENSION HYDR**	**53.50**	**14**	T	T	21 24 13.4	
	baz=180,slow=71,SNR=12						
H10N3	**ASCENSION HYDR**	**53.51**	**14**	T	T	21 24 06.5	
	baz=180,slow=71,SNR=30						
H10N2	**ASCENSION HYDR**	**53.52**	**14**	T	T	21 24 15.0	
	baz=180,slow=71,SNR=16						
LPAZ	**La Paz**	**53.86**	**306**	P	**P**	**20 26 03.1**	**+0.9**
	comp=Z,2.9nm,0.5s,baz=158,slow=6.7,SNR=5.6						
LPAZ				LR	LR	20 51 36.8	
	comp=Z,68nm,18.9s,baz=160,slow=39						
	comp=Z,2.9nm,0.5s						
LPAZ	**La Paz**	**53.86**	**306**	P	**P**	**20 26 02.2**	**0.0**
OPO	**Ambohidratompo**	**65.56**	**84**	LR	LR	20 51 06.5	
	comp=Z,98nm,18.8s,baz=214,slow=32						
ATAH	**Atahualpa**	**66.33**	**300**	LR	LR	20 55 10.8	
	comp=Z,58nm,21.5s,baz=149,slow=35						
BOAV	**Boa Vista**	**68.58**	**322**	P	**P**	**20 27 39.9**	**-1.2**
BOAV				IAmb	IAmb	20 28 37.7	
	comp=Z,31nm,1.9s						
MDP	**Montagnes des**	**69.03**	**331**	LR	LR	20 55 34.8	
	comp=Z,105nm,20.4s,baz=144,slow=34						
OTAV	**Otavalo**	**73.00**	**304**	*e*P	**P**	**20 28 10.6**	**+1.9**
ROSC	**El Rosal**	**75.58**	**309**	LR	LR	21 03 32.8	
	comp=Z,75nm,19.6s,baz=217,slow=37						
TORD	**Torodi Ar. Bea**	**76.86**	**27**	P	**P**	**20 28 32.8**	**+2.5**
	comp=Z,10nm,0.9s,baz=200,slow=7.4,SNR=24						
	comp=Z,10nm,0.9s						
SDV	**Santo Domingo**	**77.97**	**314**	LR	LR	21 03 56.9	
	comp=Z,88nm,20.6s,baz=161,slow=36						
MLPR	**Magueyes Islan**	**85.28**	**321**	P	**P**	**20 29 14.5**	**-0.5**
CRPR	**Cabo Rojo, PR**	**85.33**	**321**	P	**P**	**20 29 15.5**	**+0.2**
STKA	**Stephens Creek**	**87.05**	**169**	LR	LR	21 07 05.2	
	comp=Z,141nm,18.7s,baz=204,slow=35						
ASAR	**Alice Springs**	**94.19**	**161**	P	**P**	**20 29 58.6**	**+1.2**
	comp=Z,0.7nm,0.9s,baz=199,slow=3.8,SNR=4.4						
ASAR				LR	LR	21 09 37.5	
	comp=Z,263nm,20.3s,baz=186,slow=34						
	comp=Z,0.7nm,0.9s						
CTA	**Charters Tower**	**99.12**	**172**	LR	LR	21 14 04.6	
	comp=Z,165nm,20.3s,baz=217,slow=35						
CMAR	**Chiang Mai Arr**	**122.55**	**112**	PKP	**PKiKP**	**20 35 36.2**	**+2.3**
	comp=Z,0.5nm,0.5s,baz=226,slow=3.4,SNR=5.9						
MOOW	**Moose Ponds**	**124.80**	**298**		**PKiKP**	**20 35 37.9**	**0.0**
FINES	**FINESS Array B**	**128.19**	**29**	PKP	**PKiKP**	**20 35 44.6**	**+0.8**
	comp=Z,3.2nm,0.9s,baz=222,slow=2.6,SNR=3.5						
PZH	**PanZhiHua**	**130.78**	**110**	PKP	**PKPdf**	**20 35 48.3**	**-1.1**
MKAR	**Makanchi Array**	**137.45**	**75**	PKP	**PKPdf**	**20 36 01.4**	**+0.2**
	comp=Z,0.9nm,1.0s,baz=225,slow=3.3,SNR=4.5						
WMQ	**Urumqi**	**137.87**	**82**	*e*PKP	**PKiKP**	**20 36 02.9**	**-1.2**
KURBB	**Kurchatov Arra**	**138.42**	**69**	PKP	**PKiKP**	**20 36 05.1**	**+0.3**
	comp=Z,0.2nm,0.7s,baz=222,slow=1.2,SNR=1.9						
KURK	**Kurchatov**	**138.53**	**69**		**PKiKP**	**20 36 05.1**	**0.0**
YKA	**Yellowknife Ar**	**140.18**	**314**	PKP	**PKiKP**	**20 36 07.0**	**-1.0**
	comp=Z,0.6nm,0.7s,baz=136,slow=1.5,SNR=3.8						
RES	**Resolute Bay**	**142.59**	**336**	PKhKP	PKPpre	20 36 07.1	
	comp=Z,1.7nm,0.9s,baz=90,slow=1.0,SNR=8.2						
NJ2	**Nanjing**	**143.03**	**125**	*e*P	**PKPdf**	**20 36 11.4**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
ZALV	**Zalesovo Beam**	**143.52**	**69**	PKhKP	PKPpre	20 36 09.8	
	comp=Z,0.2nm,0.3s,baz=247,slow=3.0,SNR=1.8						
S32K	**Killisnoo**	**145.05**	**297**	PKPbc	**PKPab**	**20 36 13.9**	**+0.1**
R32K	**Eaglecrest**	**145.49**	**298**	PKPdf	**PKPdf**	**20 36 13.2**	**-1.9**
P33M	**Teslin, Yukon**	**145.87**	**302**	PKPdf	**PKPdf**	**20 36 14.8**	**-1.0**
P32M	**Atlin**	**145.90**	**300**	PKPdf	**PKPdf**	**20 36 13.4**	**-2.4**
HHC	**Hu-ho-hao-te**	**147.19**	**108**	*e*P	**PKPdf**	**20 36 14.3**	**-4.4**
M31M	**Drury Creek, Y**	**147.56**	**304**	PKPbc	**PKiKP**	**20 36 22.3**	**-1.0**
SONM	**Songino Array**	**149.88**	**93**	PKPbc	**PKiKP**	**20 36 30.1**	**+1.4**
	comp=Z,2.1nm,0.8s,baz=206,slow=2.6,SNR=13						
ILAR	**Eielson Array**	**153.72**	**304**	PKPbc	**PKiKP**	**20 36 37.4**	**+1.4**
	comp=Z,3.2nm,1.0s,baz=151,slow=1.5,SNR=18						
ILAR	**Eielson Array**	**153.72**	**304**		**PKPdf**	**20 36 29.9**	**+1.9**

*IPEC **19** 20:18:43.2±0.3, 49°.82N×18°.57E, h1km, ML1.5/5, Error ellipse: s-maj=1.9km s-min=1.7km az=73.0*

PRU 19 20:18:46.1, 49°.78N×18°.37E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**

CVER			S	Sb	20 38 51.5	-0.7
PIZC	**Pizarro, Choco**	**1.97 307**	P	Pg	20 38 32.4	+1.2
PIZC			S	Sg	20 39 00.7	+3.9
NORC	**Norcasia**	**1.99 27**	P	Pb	20 38 29.2	-1.3
NORC			S	Sb	20 38 54.4	-1.4
CBOC	**Ciudad Bolivar**	**2.09 354**	P	Pb	20 38 31.2	-1.0
VILC	**Villavicencio,**	**2.10 81**	P	Pb	20 38 32.1	-0.3
VILC			S	Sg	20 39 00.2	-0.8
FLOC	**Florencia**	**2.18 177**	P	Pb	20 38 34.0	+0.2
FLOC			S	Sb	20 39 01.6	+0.2
CHIC	**Chingaza**	**2.21 67**	P	Pb	20 38 33.2	-1.2
CHIC			S	Sn	20 38 58.5	-1.3
BBAC	**Balboa, Cauca**	**2.28 220**	P	Pg	20 38 36.5	-0.6
BBAC			S	Sg	20 39 06.7	-0.1
HELC	**Santa Helena**	**2.41 6**	P	Pb	20 38 36.6	-1.2
HELC			S	Sg	20 39 09.5	-1.4
HELC	**Santa Helena**	**2.41 6**	P	Pb	20 38 36.4	-1.4
GR1C	**Gorgona, Isla**	**2.51 252**	P	Pb	20 38 38.1	-1.2
GR1C			S	Sg	20 39 13.1	-1.0
MACC	**Macarena, Meta**	**2.52 130**	P	Pn	20 38 36.8	+1.3
MACC			S	Sb	20 39 09.7	-1.3
SPBC	**San Pablo de B**	**2.52 42**	P	Pb	20 38 37.7	-1.8
SPBC			S	Sb	20 39 08.6	-2.5
GCUF	**Volcan Galeras**	**2.98 212**	P	Pg	20 38 50.0	-0.6
PTBC	**PUERTO BERRIO,**	**3.04 26**	P	Pn	20 38 44.8	+2.1
PTBC			S	Sb	20 39 24.2	-1.9
DBBC	**Dabeiba**	**3.25 352**	P	Pb	20 38 50.1	-1.8
RUSC	**La Rusia**	**3.41 52**	P	Pn	20 38 50.4	+2.2
RUSC			S	Sb	20 39 32.7	-4.3
RUSC	**La Rusia**	**3.41 52**	P	Pn	20 38 50.5	+2.3
PTLC	**Puerto Leguiza**	**3.71 165**	P	Pb	20 38 59.9	0.0
BRJC	**Barrancabermej**	**3.76 32**	P	Pn	20 38 55.5	+2.9
CASC	**Dorado de Casc**	**3.94 203**	P	Pg	20 39 07.0	-2.0
UREC	**San Jos de Ur**	**3.96 3**	P	Pb	20 38 59.2	-4.8
APAC	**Apartado, Choc**	**4.17 349**	P	Pb	20 39 06.4	-1.3
OTAV	**Otavalo**	**4.42 217**	P	Pb	20 39 08.6	-3.5
OTAV	**Otavalo**	**4.42 217**	P	Pb	20 39 09.0	-3.1
PAC1	**Pacto, Paraso**	**4.61 221**	P	Pb	20 39 13.2	-2.0
PULU	**Pululahua**	**4.62 216**	P	Pb	20 39 12.4	-3.1
PAMC	**Pamplona, Colo**	**4.68 41**	P	Pn	20 39 09.0	+3.3
GGPC	**Guagua Pichinc**	**4.84 216**	P	Pb	20 39 17.2	-2.2
ANTS	**Antisana-Sarah**	**4.88 209**	P	Pb	20 39 17.6	-2.4
OCAC	**Ocana**	**5.06 29**	P	Pn	20 39 13.8	+3.2
SLOR	**San Lorenzo -**	**5.24 211**	P	Pn	20 39 17.2	+3.8
VCES	**Cotopaxi**	**5.25 210**	P	Pb	20 39 22.9	-3.4
VCES			S	Sg	20 40 52.6	+10
PUYO	**Puyo, Santa Ro**	**5.70 203**	P	Pb	20 39 29.5	-4.2
PUYO			S	Sg	20 40 55.7	-0.9
SJCC	**San Jacinto, C**	**6.11 6**	P	Pn	20 39 26.5	+1.5
SJCC			S	Sn	20 40 39.0	+3.3
SDV	**Santo Domingo**	**7.20 45**	Pn	Pn	20 39 41.4	+1.3
	2.2nm,0.3s,baz=285,slow=5.8,SNR=8.3					
SDV			Sn	Sn	20 41 01.1	-1.7
	4.4nm,0.3s,baz=17,slow=12,SNR=5.4					
SDV			LR	LR	20 42 49.8	
	comp=Z,62nm,21.2s,baz=184,slow=41					
	4.1nm,0.3s					
ATAH	**Atahualpa**	**11.15 194**	Pn	Pn	20 40 37.5	+3.0
	0.1nm,0.3s,baz=0.2,slow=5.3,SNR=3.6					
	1.6nm,0.6s					
LPAZ	**La Paz**	**21.32 159**	P	P	20 42 45.3	+2.6
	0.6nm,0.4s,baz=326,slow=7.3,SNR=2.1					
	0.6nm,0.4s					
SIV	**San Ignacio**	**24.44 144**	P	P	20 43 15.1	+1.0
	3.1nm,0.7s,baz=316,slow=8.2,SNR=15					
	3.1nm,0.7s					
ANMO	**Albuquerque**	**42.07 321**	LR	LR	21 06 52.3	
	comp=Z,81nm,19.6s,baz=297,slow=41					
PDAR	**Pinedale Array**	**49.08 327**	P	P	20 46 43.6	+0.9
	0.3nm,0.6s,baz=111,slow=8.3,SNR=3.8					
	0.3nm,0.6s					
YKA	**Yellowknife Ar**	**65.24 341**	P	P	20 48 35.8	-0.6
	0.4nm,0.7s,baz=138,slow=5.4,SNR=8.1					
	0.4nm,0.7s					
ILAR	**Eielson Array**	**78.61 336**	P	P	20 49 56.2	-0.5
	0.5nm,0.7s,baz=108,slow=3.4,SNR=4.3					
	0.5nm,0.7s					
ASAR	**Alice Springs**	**145.19 233**	PKPbc	**PKiKP**	20 57 34.8	-3.0
	0.2nm,0.5s,baz=122,slow=3.5,SNR=5.2					
WRA	**Warramunga Arr**	**146.54 239**	PKPbc	**PKiKP**	20 57 39.8	-0.8
	0.3nm,0.7s,baz=111,slow=2.7,SNR=2.0					

*SKHL **19** 20:41:42.0±0.4, 44°.50N×146°.50E, h157km±1km, mb4.2/4, msh4.9/3*
*JMA **19** 20:41:43.2±0.5, 45°.N±2°×14°.6E±°, h160km, MV3.0/21, NEAR KUNASHIRI ISLAND*
ISC 19 20:41:41.4±2.6, 44°.57N±0°.10×146°.5E±0°.1, h178km±18km, n17, σ0s85/23, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
YUK	**Yuzh-Kuril'sk**	**0.70**	**220**	*eP*		**Pn**	**20 42 06.9**	**0.0**
YUK				AMB		AMB	20 42 08.9	
	60nm,0.2s							
YUK				*eS*		**Sn**	**20 42 26.5**	**0.0**
YUK				A		A	20 42 32.5	
	170nm,0.5s							
YUK				A		A	20 42 32.5	
	120nm,0.5s							
SHO	**Shikotan**	**0.75**	**160**	*eP*		Pn	20 42 17.4	+10
SHO				AMB		AMB	20 42 18.4	
	60nm,0.3s							
SHO				*eS*		Sn	20 42 35.6	+8.6
SHO				A		A	20 42 37.7	
	330nm,0.3s							
SHO				A		A	20 42 37.7	
	500nm,0.3s							
GLVR	**Golovnino**	**1.08**	**220**	*eP*		**Pn**	**20 42 10.3**	**+0.8**
GLVR				AMB		AMB	20 42 13.6	
	90nm,0.4s							
GLVR				*eS*		**Sn**	**20 42 32.5**	**+1.3**
GLVR				A		A	20 42 37.8	
	290nm,0.4s							
GLVR				A		A	20 42 37.8	
	160nm,0.4s							
KUR	**Kuril'sk**	**1.19**	**56**	*eP*		**Pn**	**20 42 10.5**	**+0.2**
KUR				AMB		AMB	20 42 11.1	
	70nm,0.3s							
KUR				*eS*		**Sn**	**20 42 32.4**	**-0.3**
KUR				A		A	20 42 35.5	
	30nm,0.7s							
KUR				A		A	20 42 35.5	
	50nm,0.7s							
NEM2	**Nemuro 2**	**1.32**	**204**	*i* P		**Pn**	**20 42 11.4**	**-0.1**
NMR	**Nemuro--Hokkai**	**1.32**	**204**	*i* P		**Pn**	**20 42 11.5**	**0.0**
NMR				*eS*		**Sn**	**20 42 33.5**	**-1.2**
JKHN	**Kushirohamanak**	**1.77**	**213**	P		**Pn**	**20 42 16.3**	**+0.5**
JTKR	**Abashiri--Toko**	**1.94**	**253**	*eP*		**Pn**	**20 42 17.5**	**-0.1**
AKK	**Akkeshi**	**1.96**	**218**	*eP*		**Pn**	**20 42 18.1**	**+0.3**
JAK	**Akkeshi**	**2.04**	**220**	P		**Pn**	**20 42 19.1**	**+0.4**
JAK				S		**Sn**	**20 42 46.6**	**-1.0**
JAR	**Ashorobuto**	**2.34**	**238**	*eP*		**Pn**	**20 42 23.5**	**+1.5**
JOB	**Onbets**	**2.54**	**230**	P		**Pn**	**20 42 25.7**	**+1.3**
JOB				*eS*		**Sn**	**20 42 57.5**	**-0.4**
JKK2	**Kamakawa 2**	**2.77**	**257**	*eP*		**Pn**	**20 42 27.7**	**+0.5**
JSE	**Soyaes**	**2.80**	**279**	*eP*		**Pn**	**20 42 27.2**	**-0.2**
ASAJ	**Asahikawa**	**2.82**	**262**	P		**Pn**	**20 42 28.4**	**+0.7**
JCH	**Churui**	**2.99**	**230**	P		**Pn**	**20 42 30.6**	**+0.8**
JCH				S		**Sn**	**20 43 05.8**	**-1.7**
JNBK	**Urakawa-nobuka**	**3.55**	**231**	P		**Pn**	**20 42 36.8**	**0.0**

*NNC **19** 21:00:47.4±1.2, 44°.55N×81°.57E, h0km, mb2.6, mpv3.2, Error ellipse: s-maj=10.4km s-min=7.3km az=127.0*
*SOME **19** 21:00:47.2, 44°.55N×81°.63E, h25km*
ISC 19 21:00:44.1±1.4, 44°.49N±0°.05×81°.93E±0°.07, h17km±13km, n18, σ1s02/32, 3C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DJR	**Jarkent**	**1.54**	**265**	P		**Pb**	**21 01 12.4**	**+0.2**
	6.5nm,0.2s							
DJR				S		**Sn**	**21 01 30.9**	**+0.4**
	10nm,0.2s							
DJR	**Jarkent**	**1.54**	**265**	*eP*		**Pb**	**21 01 12.2**	**0.0**
	6.5nm,0.2s							
DJR				*eS*		**Sn**	**21 01 30.3**	**-0.2**
	10nm,0.2s							
KTMS	**Ketmen**	**1.54**	**228**	*eP*		**Pg**	**21 01 13.5**	**-0.3**
	4.8nm,0.1s							
KTMS				*eS*		**Sb**	**21 01 32.4**	**+0.9**
	11nm,0.1s							
KAPS	**Kapalarasan**	**2.00**	**295**	P		**Pb**	**21 01 19.2**	**-0.7**
	6.9nm,0.1s							
KAPS				S		**Sn**	**21 01 42.7**	**+1.0**
	67nm,0.1s							
PDGK	**Podgornoye**	**2.11**	**238**	⇓Pn		**Pb**	**21 01 20.9**	**-1.0**
	1.1nm,0.5s							
PDGK				⇑Sn		**Sb**	**21 01 47.7**	**-0.1**
	8.7nm,0.5s							
SHLS	**Shalkode**	**2.23**	**234**	P		**Pn**	**21 01 20.9**	**+0.6**
	13nm,0.1s							
SHLS				S		**Sn**	**21 01 45.4**	**-2.1**
	44nm,0.2s							
SHLS	**Shalkode**	**2.23**	**234**	*eP*		**Pn**	**21 01 20.9**	**+0.6**
	13nm,0.1s							
SHLS				*eS*		**Sn**	**21 01 45.4**	**-2.1**
	44nm,0.2s							
MK31	**Makanchi Array**	**2.32**	**6**	⇑Pn		**Pg**	**21 01 27.3**	**-1.3**
	0.4nm,0.2s,baz=195,slow=17,SNR=93							
MK31				Sn		**Sb**	**21 01 54.4**	**+0.4**
	0.7nm,0.2s,baz=198,slow=27,SNR=27							
MAKZ	**Makanchi**	**2.32**	**1**	⇓Pn		**Pb**	**21 01 25.4**	**-0.2**
	1.1nm,0.7s							
MAKZ				⇑Sn		**Sb**	**21 01 53.4**	**-0.5**
	5.9nm,0.5s							
UZB	**Uzynbulak**	**2.49**	**239**	Pg		**Pb**	**21 01 29.0**	**+0.5**
	3.0nm,0.2s							
UZB				Lg		Lg	21 01 59.3	
	11nm,0.2s							
UZB	**Uzynbulak**	**2.49**	**239**	*eP*		**Pb**	**21 01 29.0**	**+0.5**
	3.0nm,0.2s							
UZB				*eS*		**Sb**	**21 01 59.3**	**+0.3**
	11nm,0.2s							
BLB	**Baldybastay**	**2.51**	**262**	Pg		**Pb**	**21 01 28.3**	**-0.5**
	9.7nm,0.1s							
BLB				Lg		Lg	21 01 58.2	
	19nm,0.3s							
KPKS	**Kokpek**	**2.55**	**248**	*eP*		**Pb**	**21 01 29.6**	**+0.1**
	0.2nm,0.1s							
KPKS				*eS*		**Sb**	**21 02 00.3**	**-0.4**
	32nm,0.3s							
TDK	**Taldyqorghan**	**2.56**	**283**	Pg		**Pb**	**21 01 29.2**	**-0.4**
	4.7nm,0.2s							
TDK				Lg		Lg	21 01 59.7	
	65nm,0.3s							
TDK	**Taldyqorghan**	**2.56**	**283**	*eP*		**Pb**	**21 01 29.2**	**-0.4**
	4.7nm,0.2s							
TDK				*eS*		**Sb**	**21 01 59.7**	**-1.1**
	65nm,0.3s							
SATY	**Saty**	**2.92**	**242**	Pg		**Pb**	**21 01 34.3**	**-1.5**
	2.0nm,0.1s							
SATY				Lg		Lg	21 02 08.7	
	22nm,0.1s							
ZSN	**Zaisan**	**3.60**	**34**	*eP*		**Pg**	**21 01 53.3**	**+0.2**
	0.8nm,0.3s							
ZSN				*eS*		**Sg**	**21 02 40.8**	**+1.0**
	2.8nm,0.4s							
KTBS	**Karatobe**	**3.86**	**260**	*eP*		**Pb**	**21 01 53.1**	**+1.4**
	0.3nm,0.2s							
KTBS				*eS*		**Sb**	**21 02 40.6**	**+2.5**
	1.7nm,0.2s							

*TAP **19** 21:08:14.7, 21°.72N×121°.74E, h25km, ML3.5, D*
*JMA **19** 21:08:15.8±0.8, 22°.N±3°×121°.9E±0°.7, h0km, MV3.4/12, TAIWAN REGION*
ISC 19 21:08:13.3±1.7, 21°.81N±0°.06×121°.84E±0°.04, h4km±11km, n99, σ0s99/120, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LYUB	**Lan-yu**	**0.30**	**309**	P		**Pb**	**21 08 22.5**	**+1.1**
LYUB				S		**Sb**	**21 08 27.4**	**+0.6**
LAY	**Lan-yu**	**0.35**	**311**	*i* P		**Pb**	**21 08 22.7**	**+0.5**
LAY				S		**Sb**	**21 08 27.7**	**-0.4**
TSEB	**Hengchuen, Pin**	**0.88**	**276**	P		**Pn**	**21 08 31.2**	**-1.3**
TSEB				S		**Sb**	**21 08 43.1**	**-0.1**
LDUT	**Ludao**	**0.93**	**338**	*eP*		**Pb**	**21 08 31.8**	**-0.2**
LDUT				*eS*		**Sb**	**21 08 44.7**	**+0.1**
SMST	**Manzhou Townsh**	**0.95**	**283**	*eP*		**Pg**	**21 08 31.2**	**-0.4**
SMST				*eS*		**Sg**	**21 08 44.2**	**+0.2**
TWKBT	**Hengchun**	**0.96**	**278**	P		**Pg**	**21 08 31.5**	**-0.3**
TWKBT				S		**Sb**	**21 08 45.0**	**-0.6**
TWK1	**Hengchun**	**0.97**	**278**	P		**Pg**	**21 08 31.6**	**-0.3**
TAW	**Tawu**	**1.03**	**302**	*eP*		**Pg**	**21 08 33.1**	**0.0**
TAW				*eS*		**Sg**	**21 08 46.1**	**-0.4**
HEN	**Hengchun**	**1.04**	**281**	*eP*		**Pg**	**21 08 33.1**	**-0.2**
HEN				*eS*		**Sg**	**21 08 46.4**	**-0.3**
SLIU	**Shizi**	**1.04**	**293**	P		**Pb**	**21 08 33.5**	**-0.5**
SLIU				*eS*		**Sg**	**21 08 46.9**	**0.0**
EAST	**Anshuo**	**1.08**	**302**	*eP*		**Pg**	**21 08 34.0**	**-0.1**
ECL	**Taimali**	**1.13**	**314**	*eP*		**Pb**	**21 08 35.0**	**-0.6**
TTN	**Taitung**	**1.14**	**326**	*eP*		**Pn**	**21 08 36.7**	**+0.6**
TTN				*eS*		**Sn**	**21 08 52.1**	**0.0**
TWGBT	**Beinan**	**1.22**	**325**	P		**Pg**	**21 08 37.2**	**+0.4**
TWGBT	**Beinan**	**1.22**	**325**	*eP*		**Pg**	**21 08 37.4**	**+0.6**
TWG	**Pinlang**	**1.23**	**325**	*eP*		**Pg**	**21 08 37.3**	**+0.4**
SCZT	**Fangliau**	**1.26**	**297**	*eP*		**Pb**	**21 08 37.2**	**-0.4**
LONT	**Longtian**	**1.27**	**329**	*eP*		**Pg**	**21 08 38.5**	**+0.7**
SSPT	**Xinshi**	**1.35**	**300**	*eP*		**Pg**	**21 08 40.7**	**+1.3**
CHKT	**Chengkung**	**1.36**	**341**	*eP*		**Pn**	**21 08 38.3**	**-0.8**
CHKT				*eS*		**Sb**	**21 08 55.8**	**-1.3**
MASBT	**Mashibuluo**	**1.37**	**306**	*eP*		**Pg**	**21 08 40.1**	**+0.5**
ECS	**Chishang**	**1.40**	**336**	*eP*		**Pg**	**21 08 41.7**	**+1.5**
TSMG	**Majia**	**1.42**	**309**	*eP*		**Pg**	**21 08 41.6**	**+1.0**
CHKH	**Chenggong**	**1.44**	**344**	*eP*		**Pn**	**21 08 39.5**	**-0.7**
CHKH				*eS*		**Sn**	**21 08 58.0**	**-1.5**
SSD	**Sandimen**	**1.45**	**310**	*eP*		**Pb**	**21 08 41.0**	**0.0**
EHD	**Haiduan**	**1.46**	**336**	*eP*		**Pb**	**21 08 41.2**	**+0.2**
WLCH	**Liuqiu**	**1.46**	**292**	*eP*		**Pg**	**21 08 41.5**	**+0.2**
TWP	**Hsiaoliuchiu**	**1.47**	**292**	*eP*		**Pg**	**21 08 43.0**	**+1.5**
FULB	**Fuli**	**1.47**	**340**	*eP*		**Pb**	**21 08 40.9**	**-0.5**
ECBN	**Changbin**	**1.54**	**347**	*eP*		**Pn**	**21 08 41.0**	**-0.7**
ELDTW	**Lidau**	**1.57**	**331**	*eP*		**Pn**	**21 08 42.3**	**+0.2**
EYUL	**Yuli**	**1.60**	**343**	*eP*		**Pb**	**21 08 43.6**	**+0.1**
SLGT	**Liugui**	**1.61**	**317**	*eP*		**Pg**	**21 08 44.4**	**+0.1**
TWF1	**Yuli**	**1.61**	**342**	*eP*		**Pn**	**21 08 42.3**	**-0.4**
TWM1	**Shoushan**	**1.65**	**308**	*eP*		**Pg**	**21 08 46.3**	**+1.2**
YULB	**Yu-li**	**1.65**	**343**	P		**Pn**	**21 08 43.5**	**+0.3**
YULB	**Yu-li**	**1.65**	**343**	*eP*		**Pn**	**21 08 43.6**	**+0.3**
STYH	**Taoyuan**	**1.67**	**324**	*eP*		**Pb**	**21 08 44.5**	**-0.3**
HGSD	**Ruisui**	**1.72**	**347**	*eP*		**Pg**	**21 08 46.2**	**-0.1**
SGST	**Jiashian**	**1.72**	**318**	*eP*		**Pg**	**21 08 46.1**	**-0.2**
SGST				*eS*		**Sb**	**21 09 07.9**	**+0.4**
EHY	**Hungye**	**1.75**	**344**	*eP*		**Pn**	**21 08 45.0**	**+0.4**
WTP	**Ta-pu**	**1.82**	**322**	*eP*		**Pg**	**21 08 49.0**	**+0.7**
CHN1	**Nanshi**	**1.83**	**319**	*eP*		**Pg**	**21 08 48.2**	**-0.2**
TPUB	**Ta-pu**	**1.86**	**323**	P		**Pb**	**21 08 48.2**	**+0.3**
TPUB	**Ta-pu**	**1.86**	**323**	S		**Sb**	**21 09 11.3**	**-0.2**
TPUB	**Ta-pu**	**1.86**	**323**	*eP*		**Pb**	**21 08 48.0**	**+0.1**
TPUB				*eS*		**Sb**	**21 09 12.0**	**+0.4**
TWK	**Hsinying**	**1.91**	**320**	*eP*		**Pg**	**21 08 49.5**	**-0.5**
ALS	**Alishan**	**1.94**	**331**	*eP*		**Pb**	**21 08 49.1**	**-0.5**
ALS				*eS*		**Sb**	**21 09 14.6**	**+0.3**
WARBT	**Fenglin Townsh**	**1.94**	**348**	*eP*		**Pn**	**21 08 47.7**	**+0.4**
WCKO	**Fanlu**	**1.98**	**325**	*eP*		**Pb**	**21 08 50.6**	**+0.6**
SHUL	**Shoufeng**	**1.98**	**353**	*eP*		**Pn**	**21 08 47.6**	**-0.1**
ESL	**Shilin**	**2.03**	**350**	*eP*		**Pn**	**21 08 48.6**	**+0.2**
VWDT	**VWDT**	**2.04**	**342**	*eP*		**Pb**	**21 08 50.6**	**-0.4**
CHN5	**Tsauling**	**2.08**	**329**	*eP*		**Pb**	**21 08 52.2**	**+0.5**
CHN5				*eS*		**Sb**	**21 09 16.9**	**-1.0**
WHYT	**Xinyi Township**	**2.09**	**334**	*eP*		**Pb**	**21 08 51.8**	**0.0**
TSCK	**Chigu Township**	**2.10**	**310**	*eP*		**Pb**	**21 08 51.4**	**-0.5**
SSLB	**Suanglung**	**2.13**	**338**	P		**Pb**	**21 08 51.9**	**-0.7**
SSLB	**Suanglung**	**2.13**	**338**	*eP*		**Pb**	**21 08 53.3**	**+0.8**
OWD	**Renai**	**2.22**	**344**	*eP*		**Pn**	**21 08 52.2**	**+1.1**
WDLH	**Douliu**	**2.22**	**328**	*eP*		**Pb**	**21 08 54.1**	**0.0**
LXIB	**Xiulin Townshi**	**2.24**	**350**	*eP*		**Pn**	**21 08 51.5**	**+0.1**
SMLT	**Sun Moon Lake**	**2.24**	**337**	*eP*		**Pb**	**21 08 53.5**	**-0.9**
SMLT				*eS*		**Sb**	**21 09 22.1**	**-0.5**
WUSB	**Renai**	**2.27**	**343**	*eP*		**Pb**	**21 08 53.4**	**-1.6**
WNT	**Mingjian**	**2.32**	**333**	*eP*		**Pb**	**21 08 55.3**	**-0.4**
NACB	**Ninganchiao**	**2.36**	**355**	P		**Pn**	**21 08 53.5**	**+0.5**
NACB	**Ninganchiao**	**2.36**	**355**	*eP*		**Pn**	**21 08 52.9**	**-0.1**
WHF	**Hehuan Shan**	**2.38**	**347**	*eP*		**Pn**	**21 08 55.1**	**+1.4**
ETLH	**Xiulin Townshi**	**2.41**	**352**	*eP*		**Pn**	**21 08 54.0**	**+0.3**
FUSS	**Fushou**	**2.49**	**347**	*eP*		**Pn**	**21 08 56.1**	**+1.1**
EOS3	**EOS3**	**2.50**	**10**	*eP*		**Pn**	**21 08 55.7**	**+0.9**
TWT	**Tachien**	**2.51**	**346**	*eP*		**Pn**	**21 08 56.2**	**+1.1**
WHP	**Taichung City**	**2.59**	**342**	*eP*		**Pb**	**21 08 59.4**	**-1.0**
WHP				*eS*		**Sb**	**21 09 33.0**	**+0.2**
EOS2	**EOS2**	**2.62**	**8**	*eP*		**Pb**	**21 08 59.1**	**-1.8**
VCHM	**Qimei**	**2.63**	**302**	*eP*		**Pn**	**21 08 56.4**	**-0.2**
NNSB	**Datong**	**2.64**	**351**	*eP*		**Pb**	**21 09 00.0**	**-1.3**
NNS	**Nan Shan**	**2.65**	**351**	*eP*		**Pb**	**21 09 00.3**	**-1.3**
PHUB	**P'eng-hu**	**2.69**	**309**	*eP*		**Pn**	**21 08 57.8**	**+0.3**
TWQ1	**Liyutan**	**2.71**	**339**	*eP*		**Pb**	**21 09 01.0**	**-1.5**
LATG	**Datong**	**2.73**	**354**	*eP*		**Pn**	**21 08 59.9**	**+1.8**
JYNG	**Yonagunijimaku**	**2.82**	**21**	*eS*		**Sn**	**21 09 34.1**	**+0.3**
ENTT	**Nioudou**	**2.83**	**355**	*eP*		**Pb**	**21 09 03.0**	**-1.4**
YOJ	**Yonaguni jima**	**2.85**	**22**	*eP*		**Pb**	**21 09 02.3**	**-2.5**
YHNB	**Yeheng**	**2.88**	**352**	P		**Pn**	**21 09 01.0**	**+0.9**
YHNB	**Yeheng**	**2.88**	**352**	*eP*		**Pb**	**21 09 03.0**	**-2.3**
HATJ	**Hateruma jima**	**2.88**	**39**	*eS*		**Sn**	**21 09 35.6**	**+0.4**
NFF	**Wufeng Townshi**	**2.89**	**347**	*eP*		**Pb**	**21 09 03.9**	**-1.6**
NSK	**Sanguang**	**2.89**	**351**	*eP*		**Pn**	**21 09 02.6**	**+2.3**
NSTT	**Nanjuang**	**2.91**	**345**	*eP*		**Pn**	**21 09 01.6**	**+1.1**
EIDB	**Emei**	**2.92**	**345**	*eP*		**Pb**	**21 09 03.5**	**-2.5**
FUSB	**Fushanzhiwuyua**	**2.95**	**356**	*eP*		**Pb**	**21 09 04.5**	**-2.0**
NWLT	**Wulai**	**2.97**	**354**	*eP*		**Pb**	**21 09 04.5**	**-2.4**
IRIF	**Iriomote-Funau**	**3.06**	**34**	*eP*		**Pn**	**21 09 04.5**	**+1.9**
IRIF				*eS*		**Sn**	**21 09 40.0**	**+0.4**
JKRS	**Kuro-shima**	**3.14**	**39**	*eP*		**Pn**	**21 09 06.0**	**+2.3**
JIJ	**Ishigaki jima**	**3.31**	**39**	*eP*		**Pn**	**21 09 07.8**	**+1.8**
JIJ				*eS*		**Sn**	**21 09 44.8**	**-1.1**
JISG	**Ishigakijimahi**	**3.58**	**39**	P		**Pn**	**21 09 11.4**	**+1.7**
JISG				*eS*		**Sn**	**21 09 52.6**	**+0.1**
JTJ	**Tarama**	**3.86**	**43**	*eS*		**Sn**	**21 09 59.4**	**+0.1**
PTMZ	**Houxiangcun**	**4.07**	**323**	*eP*		**Pn**	**21 09 18.2**	**+1.8**
KNMB	**Chin-men Tao**	**4.13**	**310**	*eP*		**Pn**	**21 09 18.4**	**+1.1**
AXDP	**Jialang**	**4.70**	**312**	*eP*		**Pn**	**21 09 26.2**	**+1.1**

*IDC **19** 21:14:09.9±0.9, 24°.10N×122°.63E, h0km, mb3.5/7, mbtmp3.6/9, ML3.4/2, MS3.2/3, Error ellipse: s-maj=34.4km s-min=20.0km az=67.0*
*JMA **19** 21:14:14.5±0.2, 24°.N±1°×122°.7E±0°.5, h26km±3km, MV3.4/15, NW OFF ISHIGAKIJIMA IS*
*TAP **19** 21:14:14.8, 24°.05N×122°.67E, h31km, ML3.9, C*
ISC 19 21:14:12.8±0.7, 23°.92N±0°.02×122°.69E±0°.02, h22km±6km, n163, σ0s95/254, mb3.4/7, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
EOS4	**EOS4**	**0.39**	**301**	*i* P		**Pn**	**21 14 22.7**	**0.0**
EOS4				S		**Sn**	**21 14 28.4**	**-0.9**
EOS3	**EOS3**	**0.50**	**317**	*i* P		**Pn**	**21 14 24.3**	**-0.1**
EOS3				S		**Sb**	**21 14 31.1**	**+1.6**
JYNG	**Yonagunijimaku**	**0.58**	**24**	P		**Pb**	**21 14 25.0**	**+0.6**
JYNG				*eS*		**Sb**	**21 14 32.3**	**+0.2**
YOJ	**Yonaguni jima**	**0.62**	**29**	P		**Pn**	**21 14 25.9**	**-0.3**
YOJ	**Yonaguni jima**	**0.62**	**29**	S		**Sb**	**21 14 33.8**	**+0.6**
YOJ	**Yonaguni jima**	**0.62**	**29**	*i* P		**Pn**	**21 14 25.7**	**-0.5**
YOJ				S		**Sb**	**21 14 33.3**	**+0.1**
YOJ	**Yonaguni jima**	**0.62**	**29**	P		**Pn**	**21 14 25.8**	**-0.5**
YOJ				S		**Sb**	**21 14 33.8**	**+0.6**
EOS2	**EOS2**	**0.65**	**320**	*eP*		**Pn**	**21 14 26.1**	**+0.4**
EOS2				S		**Sn**	**21 14 36.5**	**+0.5**
EAHA	**Aohua**	**0.96**	**295**	*eP*		**Pn**	**21 14 31.8**	**+0.9**
EAHA				*eS*		**Sn**	**21 14 45.0**	**+1.2**
EWUT	**Wuta**	**0.98**	**302**	P		**Pn**	**21 14 31.5**	**+0.3**
EWUT				S		**Sn**	**21 14 45.0**	**+0.5**
**TE

EHD				eS	Sn	21 14 59.4	+0.6
YM01	YM01	1.59	320	eP	Pb	21 14 40.7	-0.8
SSLB	Suanglung	1.59	266	P	Pb	21 14 42.4	+0.9
SSLB	Suanglung	1.59	266	eP	Pb	21 14 41.7	+0.1
NFF	Wufeng Townshi	1.60	297	eP	Pb	21 14 41.2	-0.4
YM08	YM08	1.61	322	eP	Pn	21 14 40.3	+0.4
ZUZH	Zhuzihu	1.61	320	eP	Pn	21 14 40.9	+0.9
KSHI	Guanxi Townshi	1.62	302	eP	Pb	21 14 42.6	+0.6
JISG	Ishigakijimahi	1.63	66	P	Pb	21 14 41.4	-0.7
JISG				S	Sb	21 15 01.6	-0.6
WCS	Beigang Elemen	1.63	275	eP	Pb	21 14 42.2	0.0
WHP	Taichung City	1.63	283	P	Pb	21 14 43.1	+0.9
WHP				eS	Sb	21 15 02.3	-0.1
SMLT	Sun Moon Lake	1.63	269	eP	Pb	21 14 42.2	-0.1
SMLT				S	Sn	21 15 01.5	+0.7
ANP	Anpu	1.65	320	eP	Pb	21 14 41.6	-0.9
TWS1	Kuangyinshan	1.65	316	eP	Pb	21 14 42.0	-0.4
LDUT	Ludao	1.67	222	eP	Pn	21 14 41.1	+0.4
LDUT				eS	Sn	21 15 00.4	-1.1
TWY	Chenhua	1.67	324	eP	Pb	21 14 42.4	-0.5
NTST	Danshui	1.67	318	eP	Pn	21 14 41.0	+0.2
LIOB	Emei	1.69	296	eP	Pb	21 14 43.3	+0.2
NSTT	Nanjuang	1.69	295	eP	Pb	21 14 43.4	+0.2
WHYT	Xinyi Township	1.69	263	eP	Pb	21 14 43.1	-0.2
ELDTW	Lidau	1.69	245	eP	Pn	21 14 42.1	+0.9
ELDTW				eS	Sn	21 15 02.2	0.0
NCUH	Zhongli	1.72	308	eP	Pb	21 14 45.9	+2.2
ALS	Alishan	1.77	257	eP	Pb	21 14 44.6	-0.2
ALS				eS	Sb	21 15 05.8	-0.9
PCYT	Pengchaiyu	1.79	342	eP	Pn	21 14 43.1	+0.7
TWQ1	Liyutan	1.80	284	eP	Pb	21 14 45.4	+0.4
TWQ1				eS	Sb	21 15 08.6	+1.4
TTN	Taitung	1.83	231	eP	Pb	21 14 44.2	-1.4
WNT	Mingjian	1.83	269	eP	Pb	21 14 46.7	+1.1
WNT				eS	Sb	21 15 08.4	+0.3
TWGBT	Beinan	1.84	234	P	Pb	21 14 44.3	-1.4
TWGBT	Beinan	1.84	234	eP	Pb	21 14 44.4	-1.3
TWGBT				eS	Sn	21 15 06.2	+0.6
TWG	Pinlang	1.84	234	eP	Pb	21 14 44.3	-1.5
TWG				S	Sn	21 15 06.1	+0.4
TCU	Taichung	1.85	277	eP	Pb	21 14 45.9	0.0
TCU				eS	Sb	21 15 10.4	+1.7
CHN5	Tsauling	1.87	260	eP	Pb	21 14 46.6	+0.3
CHN5				eS	Sb	21 15 10.0	+0.8
STYH	Taoyuan	1.90	247	eP	Pb	21 14 46.0	-0.8
WCHH	Zhanghua	1.95	275	eP	Pb	21 14 47.4	-0.3
WCHH				eS	Sb	21 15 11.9	+0.4
WGK	Gukeng	1.96	264	eP	Pb	21 14 47.6	-0.1
WCKO	Fanlu	1.97	256	eP	Pb	21 14 48.5	+0.6
WCKO				eS	Sb	21 15 12.9	+0.9
JTJ	Tarama	1.98	68	eP	Pb	21 14 46.6	-1.5
JTJ				eS	Sb	21 15 11.0	-1.2
WDLH	Douliu	1.98	264	eP	Pb	21 14 48.4	+0.2
WDLH				eS	Sb	21 15 13.7	+1.3
TPUB	Ta-pu	1.98	252	P	Pb	21 14 47.8	-0.4
TPUB	Ta-pu	1.98	252	P	Pb	21 14 48.2	0.0
TPUB				eS	Sb	21 15 13.2	+0.7
WTP	Ta-pu	2.02	251	eP	Pb	21 14 49.4	+0.6
WTP				eS	Sb	21 15 15.0	+1.6
ECL	Taimali	2.07	231	eP	Pn	21 14 47.1	+0.9
SLGT	Liugui	2.09	244	eP	Pb	21 14 50.3	+0.3
SLGT				eS	Sb	21 15 17.3	+1.9
SGST	Jiashian	2.10	247	eP	Pb	21 14 50.1	-0.2
SGST				S	Sb	21 15 15.1	-0.8
CHN1	Nanshi	2.11	250	eP	Pb	21 14 50.5	+0.1
CHN1				S	Sb	21 15 17.0	+0.8
WRL	Guolierlin Hig	2.11	270	eP	Pb	21 14 50.3	-0.1
WRL				eS	Sb	21 15 16.1	+0.1
WTK	Tuku	2.12	264	eP	Pb	21 14 49.7	-0.8
WTK				eS	Sb	21 15 17.2	+0.9
TWK	Hsinying	2.12	253	P	Pb	21 14 50.0	-0.5
TWK				eS	Sb	21 15 16.6	+0.1
RLNB	Erlin	2.13	270	eP	Pb	21 14 50.3	-0.4
RLNB				eS	Sb	21 15 17.2	+0.6
LAY	Lan-yu	2.14	209	eP	Pn	21 14 47.4	+0.1
LYUB	Lan-yu	2.16	208	eP	Pn	21 14 47.7	+0.2
LYUB				eS	Sn	21 15 12.7	-0.9
SSD	Sandimen	2.22	239	eP	Pb	21 14 51.1	-1.2
TSMG	Majia	2.23	238	eP	Pb	21 14 53.1	+0.7
TSMG				eS	Sb	21 15 18.8	-0.9
TAW	Tawu	2.27	227	eP	Pn	21 14 49.9	+1.0
WSF	Szhu	2.27	263	eP	Pb	21 14 52.1	-1.0
WSF				eS	Sb	21 15 21.1	+0.2
ICHU	Yijhu	2.27	256	eP	Pb	21 14 52.7	-0.5
EAST	Anshuo	2.28	228	eP	Pb	21 14 52.0	-1.3
WSL	Shuilin Townsh	2.29	261	eP	Pb	21 14 53.2	-0.2
WSL				S	Sb	21 15 20.0	-1.2
CHN3	Shinhua	2.29	249	eP	Pb	21 14 55.0	+1.5
CHN3				eS	Sb	21 15 23.3	+2.0
MASBT	Mashibuluo	2.29	236	eP	Pb	21 14 51.6	-1.9
CHN8	Yiju	2.34	256	eS	Sb	21 15 21.7	-1.0
SLIU	Shizi	2.43	226	eP	Pn	21 14 53.1	+2.0
SCZT	Fangliau	2.45	231	eP	Pb	21 14 55.1	-1.0
SCZT				eS	Sb	21 15 23.9	-1.9
TSCK	Chigu Township	2.51	253	eP	Pb	21 14 55.8	-1.3
TSCK				eS	Sb	21 15 25.7	-1.8
SMST	Manzhou Townsh	2.54	222	eP	Pb	21 14 55.0	-2.8
SMST				eS	Sn	21 15 23.6	+0.5
TSEB	Hengchuen, Pin	2.60	220	eP	Pn	21 14 55.8	+2.3
TWKBT	Hengchun	2.62	222	eP	Pn	21 14 55.8	+2.0
TWKBT				eS	Sn	21 15 26.5	+1.6
TWK1	Hengchun	2.62	222	eP	Pn	21 14 55.8	+2.0
TWK1				eS	Sn	21 15 26.8	+1.8
WDGT	Dungji	2.85	257	eP	Pn	21 14 59.6	+2.6
WDGT				eS	Sn	21 15 32.7	+2.1
PHUB	P'eng-hu	2.88	263	eP	Pn	21 14 59.1	+1.8
PHUB				eS	Sn	21 15 32.4	+1.1
PNG	Penghu	2.89	264	eP	Pn	21 15 00.2	+2.7
PNG				eS	Sn	21 15 33.0	+1.4
VCHM	Qimei	3.07	257	eP	Pn	21 15 02.2	+2.3
VCHM				eS	Sn	21 15 36.8	+0.7
VWUC	VWUC	3.14	291	eP	Pn	21 15 01.3	+0.4
MATB	Ma-tsu	3.33	312	eP	Pn	21 15 04.0	+0.4
PTMZ	Houxiangcun	3.43	290	eP	Pn	21 15 05.2	+0.2
LYJJ	Jianjiangzhen	3.73	315	eP	Pn	21 15 09.1	+0.1
XPSS	Dashiqiu	3.75	324	eP	Pn	21 15 10.3	+1.0
KNMB	Chin-men Tao	3.96	279	eP	Pn	21 15 12.1	-0.1
MHZQ	Yeshan	3.96	304	eP	Pn	21 15 13.0	+0.8
AXDP	Jialang	4.41	284	eP	Pn	21 15 18.7	+0.3
ZPLA	Ao Xicun	4.52	271	eP	Pn	21 15 21.3	+1.4
ZPLA				eS	Sn	21 16 09.9	+4.8
DSXP	Dongshan	4.82	269	eP	Pn	21 15 26.5	+2.4
JOW	Kunigami	5.83	59	Pn	Pn	21 15 37.6	-0.3
	2.0nm,0.3s,baz=279,slow=13,SNR=8.8						
JOW				Sn	Sn	21 16 42.7	-1.4
	1.1nm,0.3s,baz=278,slow=20,SNR=1.4 18nm,0.8s						
JNU	Nakatsue	11.65	36	LR	LR	21 22 20.3	
	comp=Z,62nm,19.1s,baz=214,slow=42						
KSRS	Korea Array	14.22	17	Pn	Pn	21 17 31.4	-1.4
	0.2nm,0.3s,baz=196,slow=12,SNR=7.7 0.7nm,0.4s						
SONM	Songino Array	27.16	336	P	P	21 19 53.4	-1.2
	0.6nm,0.6s,baz=158,slow=9.0,SNR=5.9						
SONM				LR	LR	21 32 06.0	
	comp=Z,70nm,18.1s,baz=164,slow=40 0.6nm,0.6s						
TLY	Talaya	31.34	337	LR	LR	21 33 50.2	
	comp=Z,40nm,18.3s,baz=177,slow=38						
MKAR	Makanchi Array	39.48	316	P	P	21 21 40.8	-0.8
	0.6nm,0.7s,baz=104,slow=9.6,SNR=7.6						
MKAR				PcP	PcP	21 23 49.3	+0.2
	0.5nm,0.8s,baz=95,slow=3.3,SNR=5.2 0.6nm,0.7s						
ZALV	Zalesovo Beam	41.22	327	P	P	21 21 54.5	-1.2
	0.3nm,0.4s,baz=106,slow=9.2,SNR=1.7 0.3nm,0.4s						
WRA	Warramunga Arr	45.05	164	P	P	21 22 28.6	+1.5
	0.6nm,0.7s,baz=345,slow=8.4,SNR=4.7 0.6nm,0.7s						
ASAR	Alice Springs	48.54	166	P	P	21 22 57.2	+2.8
	0.2nm,0.4s,baz=349,slow=6.4,SNR=4.1 0.2nm,0.4s						
BVAR	Borovoye Array	48.75	321	P	P	21 22 55.4	-0.3
	0.5nm,0.6s,baz=108,slow=9.3,SNR=2.4						
BVAR				PcP	PcP	21 24 20.0	-0.5
	0.5nm,0.6s,baz=114,slow=3.5,SNR=3.6 0.5nm,0.6s						
YKA	Yellowknife Ar	82.68	23	P	P	21 26 33.5	-0.9
	0.2nm,0.7s,baz=314,slow=5.6,SNR=4.5 0.2nm,0.7s						

IDC 19 21:23:55.9±3.6, 22°29N×143°15E, h0km, mb3.4/3, mbtmp3.5/5, ML3.7/2, Error ellipse: s-maj=138.9km s-min=24.8km az=81.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	4.87	350	Pn	Pn	21 25 09.9	-0.5
	5.7nm,0.3s,baz=304,slow=21,SNR=0.9						
JCJ				Sn	Sn	21 26 01.5	-6.0
	12nm,0.3s,baz=305,slow=23,SNR=6.1 31nm,0.6s						
MJAR	Matsushiro Arr	14.84	344	Pn	Pn	21 27 28.1	+1.0
	0.2nm,0.3s,baz=287,slow=20,SNR=8.7 0.7nm,0.6s						
H11S3	WAKE ISLAND Hy	22.38	95	T	T	21 51 29.6	
	baz=283,slow=75,SNR=8.5						
H11S1	WAKE ISLAND Hy	22.39	95	T	T	21 51 29.3	
	baz=283,slow=75,SNR=5.4						
H11S2	WAKE ISLAND Hy	22.39	95	T	T	21 51 34.4	
	baz=283,slow=75,SNR=7.7						
SONM	Songino Array	38.87	320	P	P	21 31 21.6	-1.5
	0.3nm,0.7s,baz=126,slow=6.8,SNR=2.6 0.3nm,0.7s						
WRA	Warramunga Arr	42.84	192	P	P	21 31 55.8	-0.2
	0.1nm,0.3s,baz=13,slow=8.9,SNR=10 0.1nm,0.3s						
MKAR	Makanchi Array	54.28	312	P	P	21 33 24.7	+0.8
	0.4nm,0.6s,baz=89,slow=8.3,SNR=5.7 0.4nm,0.6s						

IDC 19 22:35:31.5±2.1, 7°24S×128°78E, h0km, mb3.3/1, mbtmp3.2/3, ML2.9/2, Error ellipse: s-maj=125.8km s-min=32.5km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.73	157	Pn	Pn	22 38 49.7	+2.0
	baz=336,slow=13,SNR=1.3 0.1nm,0.5s						
ASAR	Alice Springs	17.06	164	P	Pn	22 39 30.1	-1.6
	0.1nm,0.3s,baz=350,slow=11,SNR=8.7 0.4nm,0.5s						
MKAR	Makanchi Array	67.77	327	P	P	22 46 31.2	0.0
	0.1nm,0.3s,baz=126,slow=7.6,SNR=6.1 0.1nm,0.3s						

IDC 19 22:35:41.2±3.4, 1°74S×29°10E, h0km, mb3.8/12, mbtmp3.8/12, MS3.2/11, Error ellipse: s-maj=78.8km s-min=25.8km az=6.0
NEIC 19 22:35:49.1±1.1, 0°.8S±0°.1×29°.76E±0°.04, h10km±1km, mb4.3/9, Error ellipse: s-maj=19.1km s-min=6.1km az=169.0

ISC 19 22:35:48.8±0.7, 0°.81S±0°.09×29°.66E±0°.06, h10km, n38, σ1§14/27, mb3.9/15, MS3.2/10, Zaire

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBAR	Mbarara	1.10	79	Pn	Pg	22 36 09.3	-0.6
MBAR				Sn	Sg	22 36 22.8	-1.4
KMBO	Kilima Mbogo	7.60	92	Pn	Pn	22 37 39.4	-0.5
	baz=216,slow=17						
KMBO				Sn	Sn	22 39 08.2	+1.9
	baz=94,slow=16						
KMBO				Lg	Lg	22 39 45.0	
	baz=212,slow=19						
KIBK	Kibwezi	8.52	100		Pn	22 37 50.6	-1.8
FURI	Furi	13.18	43	LR	LR	22 44 25.6	
	comp=Z,68nm,19.8s,baz=194,slow=37						
LSZ	Lusaka	14.45	186	Pn	Pn	22 39 13.7	0.0
EDA	Edea	20.02	283	P	P	22 40 13.9	-8.1
EDA				IAmb	IAmb	22 40 29.0	
	comp=Z,11nm,0.5s						
KHWEE	KHWEE	21.41	191	P	P	22 40 38.5	+1.4
GRTLG	Ghanzi	22.03	201	P	P	22 40 43.5	-0.3
GRTLG				IAmb	IAmb	22 40 51.0	
	comp=Z,8.4nm,0.9s						
LPHEP	Lephephe	22.72	189	P	P	22 40 51.1	-0.1
LPHEP				IAmb	IAmb	22 40 58.7	
	comp=Z,10nm,1.1s						
KGCAE	Kacgae	23.08	198	P	P	22 40 55.0	+0.1
KGCAE				IAmb	IAmb	22 40 56.9	
	comp=Z,12nm,1.1s						
LBTB	Lobatse	24.38	189	LR	LR	22 50 14.9	
	comp=Z,73nm,19.1s,baz=16,slow=37						
LKGWB	Lokgwabe	24.57	199	P	P	22 41 07.1	-2.1
LKGWB				IAmb	IAmb	22 41 24.4	
	comp=Z,12nm,1.1s						
BOSA	Boshof	27.97	188	LR	LR	22 51 36.0	
	comp=Z,25nm,21.4s,baz=10,slow=35						
EIL	Elat	30.73	9	LR	LR	22 55 08.4	
	comp=Z,45nm,19.1s,baz=249,slow=37						
TORD	Torodi Ar. Bea	31.01	298	P	P	22 41 58.9	-7.9
	comp=Z,1.5nm,0.7s,baz=117,slow=6.3,SNR=12 comp=Z,1.5nm,0.7s						
SUR	Sutherland	32.49	194	LR	LR	22 56 06.5	
	comp=Z,97nm,18.6s,baz=24,slow=39						
MMAI	Mount Meron Ar	34.08	9	LR	LR	22 56 21.9	
	comp=Z,44nm,20.3s,baz=190,slow=35						
BRTR	Keskin Array B	40.50	5	P	P	22 43 28.9	+0.7
	comp=Z,1.8nm,0.7s,baz=187,slow=9.1,SNR=11						
BRTR				LR	LR	23 02 27.1	
	comp=Z,29nm,18.1s,baz=232,slow=39 comp=Z,1.8nm,0.7s						
BRTR	Keskin Array B	40.50	5	P	P	22 43 28.7	+0.5
BR131	Keskin Array S	40.50	5	P	P	22 43 29.8	+1.7
KEST	Kesra	40.99	334	LR	LR	23 01 37.5	
	comp=Z,50nm,18.4s,baz=36,slow=37						
GNI	Garni	43.03	17	LR	LR	23 01 22.3	
	comp=Z,28nm,19.3s,baz=255,slow=35						
KVAR	Kislovodsk Arr	46.06	13	LR	LR	23 03 15.3	
	comp=Z,34nm,20.1s,baz=104,slow=35						
MLR	Muntele Rosu	46.22	356	P	P	22 44 15.2	+1.0
DAVOX	Davos/Dischmat	50.47	342	LR	LR	23 06 09.3	
	comp=Z,26nm,20.9s,baz=250,slow=36						
ESDC	Sonseca Array	50.68	326	P	P	22 44 47.3	-1.3
	comp=Z,1.1nm,1.1s,baz=141,slow=8.3,SNR=2.8 comp=Z,1.1nm,1.1s						
PAB	San Pablo	50.80	326	P	P	22 44 49.2	-0.4
AKASG	Malin Array Be	51.32	360	P	P	22 44 52.2	-0.9
	comp=Z,1.1nm,0.7s,baz=183,slow=6.8,SNR=5.4 comp=Z,1.1nm,0.7s						
GERES	GERESS Array B	51.35	347	P	P	22 44 52.9	-0.7
	comp=Z,0.5nm,0.6s,baz=175,slow=4.9,SNR=5.1 comp=Z,0.5nm,0.6s						
EKA	Eskdalemuir Ar	62.05	339	P	P	22 46 09.3	-0.1
	comp=Z,0.8nm,0.6s,baz=128,slow=6.8,SNR=4.6 comp=Z,0.8nm,0.6s						
NOA	NORSAR Array B	63.29	350	P	P	22 46 17.3	-0.4
	comp=Z,1.0nm,0.9s,baz=176,slow=6.4,SNR=2.1 comp=Z,1.0nm,0.9s						
BVAR	Borovoye Array	63.48	26	P	P	22 46 20.8	+1.8
	comp=Z,0.6nm,0.7s,baz=223,slow=5.9,SNR=2.9 comp=Z,0.6nm,0.7s						
KURBB	Kurchatov Arra	65.91	32	P	P	22 46 37.4	+2.5
	comp=Z,0.2nm,0.5s,baz=242,slow=7.1,SNR=3.0 comp=Z,0.2nm,0.5s						
MKAR	Makanchi Array	66.00	37	P	P	22 46 36.6	+1.0
	comp=Z,0.3nm,0.5s,baz=245,slow=6.4,SNR=7.2 comp=Z,0.3nm,0.5s						
MKAR	Makanchi Array	66.00	37	P	P	22 46 35.3	-0.3
ARCES	ARCESS Array B	70.27	358	P	P	22 47 02.1	+0.1
	comp=Z,3.4nm,1.0s,baz=168,slow=4.6,SNR=3.6 comp=Z,3.4nm,1.0s						
ARCES	ARCESS Array B	70.27	358	P	P	22 47 01.5	-0.4
ZALV	Zalesovo Beam	70.95	31	P	P	22 47 06.5	+0.1
	comp=Z,0.2nm,0.3s,baz=243,slow=6.3,SNR=1.9 comp=Z,0.2nm,0.3s						

KRSC 19 23:15:18.5±2.2, 54°50N×165°92E, h20km±25km, Ml3.8, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	Bering	0.71	2	eP	Pb	23 15 30.4	-1.7
BKI				eS	Sb	23 15 38.3	-3.0
MKZ	Mys Kozlova	2.44	273	eP	Pb	23 16 01.0	-0.6
MKZ				eS	Sb	23 16 29.6	-1.7
KBTR	Krutoberegovo	2.46	315	eP	Pn	23 15 59.6	+2.1
KBTR				eS	Sb	23 16 30.4	-1.5
KBG	Krutoberegovo	2.54	315	eP	Pb	23 16 01.8	-1.6
KBG				eS	Sb	23 16 33.1	-1.1
SMKR	Semkarok	3.28	311	eP	Pb	23 16 12.8	-3.2
SPN	Mys Shipunski	3.77	251	eP	Pn	23 16 19.7	+4.3
SPN				eS	Sn	23 17 02.0	+2.9
KII	Karymskiy	3.82	266	eP	Pb	23 16 21.4	-3.8
KII				eS	Sn	23 17 05.3	+4.7
NLC	Nalytchevo	4.12	254	eP	Pn	23 16 24.4	+4.2
NLC				eS	Sn	23 17 11.4	+3.7
SDLR	Sedlovina	4.34	256	eP	Pn	23 16 28.4	+5.0
SDLR				eS	Sn	23 17 19.4	+6.0
SMAR	Somma	4.39	257	eP	Pn	23 16 28.8	+4.7
SMAR				eS	Sn	23 17 18.4	+3.6
UGLR	Uglovaya	4.40	256	eP	Pn	23 16 29.3	+5.2
UGLR				eS	Sn	23 17 20.3	+5.5
KRER	Koryakskii	4.41	257	eP	Pn	23 16 29.7	+5.3
KRER				eS	Sn	23 17 20.1	+4.9
AVH	Avacha	4.43	257	eP	Pn	23 16 29.7	+5.2
AVH				eS	Sn	23 17 20.9	+5.4
KRX	Arik	4.45	258	eP	Pn	23 16 30.0	+5.1
KRX				eS	Sn	23 17 21.0	+4.9
KOK	Koryaka	4.48	257	eP	Pn	23 16 30.2	+5.0
KOK				eS	Sn	23 17 21.1	+4.4
DALK	Dalny	4.50	254	eS	Sn	23 17 20.7	+3.6
GNL	Ganaly	4.77	264	eP	Pn	23 16 33.8	+4.6
KRMR	Karymshinskiy	4.93	253	eP	Pn	23 16 36.7	+5.4
KRMR				eS	Sn	23 17 32.5	+4.8
MTVR	Mutnovka	5.04	250	eP	Pn	23 16 38.3	+5.3
MTVR				eS	Sn	23 17 34.5	+3.7
GRL	Gorelyy	5.07	251	eP	Pn	23 16 39.0	+5.6
GRL				eS	Sn	23 17 36.0	+4.5
ASAK	Asacha	5.24	249	eP	Pn	23 16 41.4	+5.6
ASAK				eS	Sn	23 17 41.4	+5.8
KDTR	Khodutka, Kamc	5.43	243	eP	Pn	23 16 42.6	+4.3
KDTR				eS	Sn	23 17 41.8	+1.7

NEIC 19 23:16:55.1±1.8, 17°.83N±0°.01×66°.98W±0°.01, h10km±1km, ML3.7/39, Md3.4/5(RSPR), Mwr3.4/14(SLM), Error ellipse: s-maj=3.0km s-min=2.2km az=333.0
NEIC 19 23:16:56, 17°.93N×66°.99W, h9km, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr=0.00; Mθθ=0.00; Mθθ=0.00; Mrθ=-0.46; Mθφ=1.70; Mφr=0.00; Fault plane solution: M0=1.76000×10^14 NP1:φ=90.00000°, δ=90.00000°, λ=-15.00000°. NP2:φ=180.00000°, δ=75.00000°, λ=-180.00000°. Principal axes: T 1.7598, Plg=11.0000°, Azm=136.0000°; N 0.0000, Plg=75.0000°, Azm=270.0000°; P -1.7598, Plg=11.0000°, Azm=44.0000°;
OSPL 19 23:16:56.4±0.4, 17°.97N×67°.03W, h20km±2km, ML3.8, Presumed earthquake
SDD 19 23:16:56.4±1.9, 17°.89N×66°.98W, h12km±9km, MD3.2, ML3.5, MW3.5, Presumed earthquake

ISC 19 23:16:55.7±1.0, 17°.91N±0°.05×66°.97W±0°.02, h15km±5km, n33, σ0§77/55, 10C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLPR	Magueyes Islan	0.09	312		Pg	23 16 59.0	+0.1
MLPR				Sg	Sg	23 17 00.5	-0.5
MLPR	Magueyes Islan	0.09	312	⇑eP	Pg	23 16 59.0	+0.1
MLPR				⇑eSg	Sg	23 17 00.5	-0.5
MLPR				IAML		23 17 00.9	
	comp=N,49μm,0.2s						
GBPR	Guanica, Bosqu	0.11	53		Pg	23 16 59.6	+0.5
GBPR					Sg	23 17 01.8	+0.5
CRPR	Cabo Rojo, PR	0.16	307	Pg	Pg	23 17 00.1	+0.3
CRPR				IAML		23 17 02.5	
	comp=N,30μm,0.3s						
CRPR				IAML		23 17 03.5	
	comp=N,20μm,0.2s						
CRPR	Cabo Rojo, PR	0.16	307		Sg	23 17 02.4	-0.1
CRPR	Cabo Rojo, PR	0.16	307	*i* P	Pg	23 17 00.1	+0.3
CRPR				eS	Sg	23 17 02.4	-0.1
CRPR				IAML		23 17 03.3	
	comp=Z,21μm,0.8s						
LSP	Las Mesas	0.29	338		Pg	23 17 02.1	+0.3
PRSN	Puerto Rico Se	0.35	332		Pg	23 17 03.1	+0.3
PRSN				Sg	Sg	23 17 08.0	+0.3
PRSN	Puerto Rico Se	0.35	332	⇑eP	Pg	23 17 03.2	+0.3
PRSN				⇑eSg	Sg	23 17 07.9	+0.1
PRSN				IAML		23 17 08.7	
	comp=N,27μm,0.3s						
OBIP	Obispado Ponce	0.37	69		Pg	23 17 04.0	+0.8
OBIP					Sg	23 17 09.7	+1.2
OBIP	Obispado Ponce	0.37	69	*i* P	Pg	23 17 04.1	+0.8
OBIP				eS	Sg	23 17 10.1	+1.6
OBIP				IAML		23 17 10.6	
	comp=Z,7μm,0.1s						
CELP	Cerrillos	0.41	66		Pg	23 17 04.7	+0.7
CELP				Sg	Sg	23 17 10.9	+1.3
CELP	Cerrillos	0.41	66	⇓eP	Pg	23 17 04.8	+0.8
CELP				⇓eSg	Sg	23 17 09.8	+0.2
CELP				IAML		23 17 11.3	
	comp=N,650nm,0.4s						
UUPR	Utuado, UPR, P	0.42	35	Pg	Pg	23 17 04.4	+0.2
UUPR				Sg	Sg	23 17 09.8	-0.1
AOPR	Arecibo Observ	0.48	25		Pg	23 17 05.5	+0.2
AOPR				Sg	Sg	23 17 12.0	+0.1
AOPR				IAML		23 17 12.8	
	comp=N,7μm,0.5s						
AOPR	Arecibo Observ	0.48	25	⇓eP	Pg	23 17 05.6	+0.2
AOPR				⇑eSg	Sg	23 17 11.7	-0.2
AOPR				IAML		23 17 12.8	
	comp=N,6μm,0.6s						
AGPR	Aguadilla, PR	0.57	347		Pg	23 17 07.1	+0.1
AGPR				Sg	Sg	23 17 14.7	0.0
AGPR				IAML		23 17 15.3	
	comp=N,6μm,0.5s						
AGPR				IAML		23 17 15.3	
	comp=N,3μm,0.5s						
AGPR	Aguadilla, PR	0.57	347	⇑eP	Pg	23 17 07.2	+0.1
AGPR				⇑eSg	Sg	23 17 15.0	+0.4
AGPR				IAML		23 17 15.2	
	comp=N,4μm,0.4s						
IDE	Isla Desecheo	0.67	315		Pg	23 17 08.9	-0.1
IDE					Sg	23 17 18.5	+0.6
EMPR	Esperanza - Ma	0.71	37		Pg	23 17 10.0	+0.5

SALTA				*e*S		**S**	**23 20 16.8**	**-0.9**
SLA	**San Lorenzo**	**1.35**	**119**⇓	*e*P		**Pn**	**23 19 59.2**	**+0.5**
SLA				*e*S		**S**	**23 20 24.4**	**-1.3**
SLA	**San Lorenzo**	**1.35**	**119**	*e*P		**Pn**	**23 19 59.2**	**+0.5**
SLA				*e*S		**S**	**23 20 25.4**	**-0.3**
HJA	**Humahuaca**	**1.53**	**56**	*e*P		**Pn**	**23 20 00.9**	**+0.4**
AF01	**San Pedro de A**	**1.68**	**311**	*e*P		Pn	23 20 13.9	+12
AF01				*e*S		**S**	**23 20 35.1**	**+4.2**
FSA	**Cafayete**	**2.17**	**160**	*e*P		**Pn**	**23 20 06.8**	**+0.7**
FSA				*e*S		**S**	**23 20 37.2**	**-1.7**
YJA	**Yavi**	**2.22**	**32**	*e*P		**Pn**	**23 20 08.2**	**+1.2**
PB06	**IPOC Station P**	**2.89**	**297**‖	*e*P		**Pn**	**23 20 15.0**	**+1.2**
PB06				*i* S		**S**	**23 20 51.2**	**-1.3**
PB06				IAML			23 20 53.2	
	comp=E,229nm,0.1s							
PB06	**IPOC Station P**	**2.89**	**297**	*e*P		**Pn**	**23 20 14.3**	**+0.5**
PB06				*e*S		**S**	**23 20 51.8**	**-0.7**
PB06				IAML			23 20 55.1	
	comp=Z,190nm,0.3s							
AHML	**Horco Molle**	**3.01**	**154**	*e*P		Pn	23 20 03.8	-11
AHML				*e*S		S	23 20 41.0	-14
PB09	**IPOC Station P**	**3.19**	**315**	*e*P		**Pn**	**23 20 18.8**	**+1.5**
PB09				IAML			23 21 01.9	
	comp=N,89nm,0.1s							
PB09	**IPOC Station P**	**3.19**	**315**	*e*P		**Pn**	**23 20 18.2**	**+0.9**
PB09				*e*S		**S**	**23 20 59.1**	**+0.2**
PB09				IAML			23 21 00.9	
	comp=Z,91nm,0.5s							
PB14	**IPOC Station P**	**3.33**	**260**	*e*P		**Pn**	**23 20 20.1**	**+0.9**
PB14	**IPOC Station P**	**3.33**	**260**	*e*P		**Pn**	**23 20 20.0**	**+0.9**
PB14				*e*S		**S**	**23 21 00.8**	**-1.2**
PB14				IAML			23 21 03.5	
	comp=Z,93nm,0.4s							
PB05	**IPOC Station P**	**3.35**	**290**	*e*P		**Pn**	**23 20 20.1**	**+1.0**
PB05	**IPOC Station P**	**3.35**	**290**	*e*P		**Pn**	**23 20 19.9**	**+0.8**
PB05				*e*S		**S**	**23 20 60.0**	**-2.1**
PB05				IAML			23 21 03.2	
	comp=Z,60nm,0.3s							
PB03	**IPOC Station P**	**3.38**	**306**	*e*P		**Pn**	**23 20 20.3**	**+0.8**
PB03	**IPOC Station P**	**3.38**	**306**	*e*P		**Pn**	**23 20 19.7**	**+0.2**
PB03				*e*S		**S**	**23 21 01.8**	**-1.0**
PB03				IAML			23 21 02.6	
	comp=Z,258nm,0.8s							
AC02	**Maricunga**	**3.47**	**217**	*e*P		**Pn**	**23 20 22.2**	**+1.4**
AC02				*e*S		**S**	**23 21 04.3**	**-0.9**
AC02				IAML			23 21 21.1	
	comp=Z,186nm,0.8s							
PB10	**IPOC Station P**	**3.48**	**278**	*e*P		**Pn**	**23 20 21.7**	**+1.2**
PB10	**IPOC Station P**	**3.48**	**278**	*e*P		**Pn**	**23 20 21.2**	**+0.7**
PB10				*e*S		**S**	**23 21 04.1**	**-0.6**
PB10				IAML			23 21 06.3	
	comp=Z,80nm,0.2s							
PB07	**IPOC Station P**	**3.68**	**309**⇑	*e*P		**Pn**	**23 20 23.7**	**+0.6**
PB07	**IPOC Station P**	**3.68**	**309**	*e*P		**Pn**	**23 20 23.6**	**+0.6**
PB07				*e*S		**S**	**23 21 08.4**	**-0.8**
PB07				IAML			23 21 09.7	
	comp=Z,109nm,0.3s							
PB01	**IPOC Station P**	**3.90**	**320**	*e*P		**Pn**	**23 20 26.3**	**+0.7**
PB01	**IPOC Station P**	**3.90**	**320**	*e*P		**Pn**	**23 20 26.3**	**+0.7**
PB01				*e*S		**S**	**23 21 13.3**	**-0.7**
PB01				IAML			23 21 15.6	
	comp=Z,61nm,0.2s							
PB02	**IPOC Station P**	**3.96**	**313**	*e*P		**Pn**	**23 20 26.6**	**+0.3**
PB02	**IPOC Station P**	**3.96**	**313**	*e*P		**Pn**	**23 20 26.9**	**+0.6**
PB02				*e*S		**S**	**23 21 13.6**	**-1.6**
PB02				IAML			23 21 18.7	
	comp=Z,187nm,0.5s							
AC01	**Pan de Azucar**	**4.02**	**238**	*e*P		**Pn**	**23 20 27.4**	**+0.4**
AC01				*e*S		**S**	**23 21 14.8**	**-1.6**
AC01				IAML			23 21 15.5	
	comp=Z,50nm,0.3s							
TINO	**Tinogasta**	**4.04**	**190**	*e*P		**Pn**	**23 20 29.7**	**+2.4**
PB08	**IPOC Station P**	**4.47**	**330**	*e*P		**Pn**	**23 20 33.7**	**+0.8**
PB08				*e*S		**S**	**23 21 27.1**	**0.0**
PB08				IAML			23 21 30.1	
	comp=Z,50nm,0.7s							
PATCX	**Punta Patache**	**4.48**	**315**	*e*P		**Pn**	**23 20 33.1**	**+0.4**
PATCX				*e*S		**S**	**23 21 26.4**	**-0.3**
PATCX				IAML			23 21 29.4	
	comp=Z,30nm,0.5s							
GO03	**Copiapo**	**4.68**	**221**	*e*P		**Pn**	**23 20 35.7**	**+0.6**
GO03				*e*S		**S**	**23 21 30.0**	**-1.2**
GO03				IAML			23 21 33.0	
	comp=Z,20nm,0.1s							
TA01	**Diego Aracena**	**4.68**	**317**	*e*P		**Pn**	**23 20 35.8**	**+0.6**
TA01				*e*S		**S**	**23 21 29.9**	**-1.3**
TA01				IAML			23 22 02.5	
	comp=Z,34nm,0.8s							
GO01	**Chusmiza**	**4.91**	**333**	*e*P		**Pn**	**23 20 38.9**	**+0.5**
GO01				*e*S		**S**	**23 21 35.0**	**-2.0**
GO01				IAML			23 21 44.0	
	comp=Z,24nm,0.1s							
PB11	**IPOC Station P**	**5.04**	**328**	*e*P		**Pn**	**23 20 39.4**	**-0.3**
PB11				*e*S		**S**	**23 21 37.1**	**-2.4**
PB11				IAML			23 21 40.1	
	comp=Z,42nm,0.3s							
ACLC	**CERRO LA CRUZ**	**5.34**	**181**	*e*P		**Pn**	**23 20 44.6**	**+1.2**
ACLC				*e*S		**S**	**23 21 45.3**	**-1.0**

*GUC **19** 23:34:59.5±0.7, 29°.14S×70°.66W, h74km±3km, ML3.8*
*IDC **19** 23:35:13.6±2.0, 30°.29S×69°.61W, h189km±20km, mb2.9/1, mbtmp3.4/2, Error ellipse: s-maj=50.1km s-min=31.3km az=80.0*
ISC 19 23:35:00.4±1.0, **29°.14S**±0°.03×**70°.76W**±0°.07, **h78**km±7km, **n22**, σ0**80**/34, **3C-2D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.14**	**24**	*i* P		**Pn**	**23 35 11.6**	**-0.4**
LCO				*i* S		**Sn**	**23 35 21.0**	**+0.4**
AC05	**El Transito**	**0.52**	**55**⇓	*i* P		**Pn**	**23 35 14.4**	**+0.1**
AC05				*i* S		**Sn**	**23 35 23.9**	**-0.6**
AC05				IAML			23 35 26.1	
	comp=N,16μm,0.1s							
CO05	**La Serena**	**0.88**	**208**	*i* P		**Pn**	**23 35 18.5**	**+0.6**
CO05				*i* S		**Sn**	**23 35 32.3**	**+1.3**
CO05				IAML			23 35 33.4	
	comp=E,4μm,0.2s							
AC04	**Llanos de Chal**	**0.97**	**344**	*i* P		**Pn**	**23 35 19.2**	**+0.3**
AC04				*i* S		**Sn**	**23 35 33.9**	**+1.2**
AC04				IAML			23 35 39.6	
	comp=E,3μm,0.2s							
CO01	**Juntas del Tor**	**1.02**	**145**	*i* P		**Pn**	**23 35 19.8**	**0.0**
CO01				*i* S		**Sn**	**23 35 33.7**	**-0.6**
GO04	**Tololo Observa**	**1.03**	**182**	*i* P		**Pn**	**23 35 20.1**	**+0.2**
GO04				*i* S		**Sn**	**23 35 33.1**	**-1.5**
GO04				IAML			23 35 37.3	
	comp=N,4μm,0.4s							
GO03	**Copiapo**	**1.60**	**17**⇑	*i* P		**Pn**	**23 35 27.4**	**+0.4**
GO03				*i* S		**Sn**	**23 35 47.8**	**+0.6**
GO03				IAML			23 35 48.6	
	comp=N,2μm,0.6s							
CO03	**El Pedregal**	**1.70**	**178**⇑	*i* P		**Pn**	**23 35 28.9**	**+0.5**
CO03				*i* S		**Sn**	**23 35 50.4**	**+0.9**
CO03				IAML			23 35 55.1	
	comp=E,1μm,0.1s							
CO06	**Fray Jorge**	**1.71**	**206**⇓	*i* P		**Pn**	**23 35 29.0**	**+0.6**
CO06				*i* S		**Sn**	**23 35 47.3**	**-2.3**
AC06	**Mina Casimiro**	**1.81**	**12**	*i* P		**Pn**	**23 35 29.9**	**+0.3**
AC06				*i* S		**Sn**	**23 35 52.3**	**+0.4**
AC06				IAML			23 35 54.0	
	comp=E,837nm,0.3s							
CO02	**Combarbal**	**2.07**	**186**	*i* P		**Pn**	**23 35 33.5**	**+0.2**
CO02				*i* S		**Sn**	**23 35 58.7**	**+0.4**
CO02				IAML			23 36 04.5	
	comp=E,2μm,0.7s							
AC02	**Maricunga**	**2.71**	**33**⇑	*i* P		**Pn**	**23 35 42.7**	**+0.5**
AC02				*i* S		**Sn**	**23 36 14.3**	**+0.1**
CO04	**Los Peladeros**	**2.91**	**184**	*i* P		**Pn**	**23 35 44.9**	**+0.2**
CO04				*i* S		**Sn**	**23 36 18.4**	**-0.3**
AC01	**Pan de Azucar**	**2.98**	**3**	*i* P		**Pn**	**23 35 44.4**	**-1.0**
CFA	**Coronel Fontan**	**3.29**	**139**	P		**Pn**	**23 35 50.5**	**+0.8**
	comp=E,18nm,0.3s,baz=318,slow=15,SNR=58							
CFA				S		Sn	23 36 16.1	-12
	comp=E,12nm,0.3s,baz=313,slow=18,SNR=16							
VA06	**Catapilco**	**3.45**	**188**	*i* P		**Pn**	**23 35 51.6**	**-0.1**
VA03	**San Esteban**	**3.62**	**177**	*e*P		**Pn**	**23 35 55.1**	**+0.9**
VA03				*e*S		**Sn**	**23 36 37.0**	**+1.2**
LPAZ	**La Paz**	**13.01**	**11**	P		P	23 38 24.6	+14
	comp=E,0.6nm,0.6s,baz=198,slow=9.6,SNR=2.2							
TXAR	**Lajitas Array**	**66.09**	**329**	P		P	23 45 49.5	+10
	comp=E,0.2nm,0.6s,baz=119,slow=6.7,SNR=2.6							
	comp=E,0.2nm,0.6s							
WRA	**Warramunga Arr**	**125.53**	**209**	PKP		**PKPdf**	**23 53 52.5**	**-0.8**
	comp=E,0.4nm,0.7s,baz=146,slow=2.0,SNR=1.9							
KURBB	**Kurchatov Arra**	**148.49**	**38**	PKPbc		**PKPbc**	**23 54 37.5**	**-0.2**
	comp=E,0.3nm,0.5s,baz=303,slow=3.2,SNR=5.8							
ZALV	**Zalesovo Beam**	**149.49**	**29**	PKPbc		**PKPbc**	**23 54 40.2**	**0.0**
	comp=E,0.9nm,0.5s,baz=315,slow=4.2,SNR=5.1							

*AZER **19** 23:53:15.7, 38°.37N×44°.45E, h3km, ml2.6*
*AFAD **19** 23:53:18.0, 38°.35N×44°.38E, h15km±16km, ML2.2*
*TEH **19** 23:53:19.1, 38°.39N×44°.50E, h6km±92km, ML2.5, Presumed earthquake*
*ISK **19** 23:53:20.4, 38°.46N×44°.32E, h7km, ML2.4/6*
ISC 19 23:53:18.2±1.3, **38°.37N**±0°.02×**44°.39E**±0°.02, **h1**km±11km, **n43**, σ1**922**/70, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.42**	**313**	P		**Pb**	**23 53 27.8**	**-0.9**
YOVA	**Hakkari_Yksek**	**0.79**	**186**	P		**Pb**	**23 53 34.8**	**-0.1**
TVAN	**Van**	**0.79**	**282**	P		**Pg**	**23 53 32.6**	**-0.7**
VMUR	**Van-Muradiye**	**0.89**	**314**	P		**Pn**	**23 53 37.6**	**-0.5**
VMUR				S		**Sn**	**23 53 50.0**	**-1.8**
HAKT	**HAKKARI**	**0.97**	**214**	P		**Pg**	**23 53 37.0**	**+0.1**
HAKT				S		**Sb**	**23 53 51.2**	**-0.3**
HAKT				IAML			23 53 55.0	
	comp=N,106nm,0.5s							
HAKT	**HAKKARI**	**0.97**	**214**	P		**Pg**	**23 53 36.9**	**0.0**
HAKT				S		**Sn**	**23 53 54.2**	**+0.3**
MAKU	**Maku**	**1.01**	**13**	Pg		**Pg**	**23 53 37.5**	**-0.1**
ERCV	**ERCIS-VAN**	**1.05**	**309**	Pg		**Pb**	**23 53 38.9**	**-0.4**
ERCV				Sg		**Sb**	**23 53 52.8**	**-0.8**
GEVA	**Gevas**	**1.05**	**267**	P		**Pg**	**23 53 38.3**	**0.0**
GEVA				S		**Sn**	**23 53 55.3**	**-0.3**
GEVA				IAML			23 54 01.0	
	comp=N,86nm,0.6s							
IMRD	**Marand**	**1.09**	**71**	Pg		**Pg**	**23 53 38.0**	**-1.1**
AKDM	**Akdamar-Van**	**1.11**	**268**	Pg		**Pb**	**23 53 39.6**	**-0.7**
AKDM				Sg		**Sn**	**23 53 56.4**	**-0.7**
NAX	**Nakhchivan**	**1.18**	**47**	P		**Pg**	**23 53 40.1**	**-0.8**
NAX				S		**Sb**	**23 53 57.4**	**+0.1**
DYDN	**Diyadin**	**1.29**	**335**	P		**Pn**	**23 53 44.0**	**+0.3**
SBZ	**Shahbuz**	**1.37**	**41**	P		**Pn**	**23 53 43.4**	**-1.3**
SBZ				S		**Sn**	**23 54 05.3**	**+1.8**
ADCV	**BITLIS_Adilcev**	**1.38**	**289**	P		**Pg**	**23 53 44.3**	**-0.3**
ADCV				S		**Sn**	**23 54 05.8**	**+2.0**
ADCV				IAML			23 54 10.0	
	comp=N,49nm,0.7s							
ORD	**Ordubad**	**1.38**	**66**	P		**Pn**	**23 53 43.1**	**-1.6**
ORD				S		**Sb**	**23 54 02.4**	**-0.5**
ITBZ	**Tabriz**	**1.39**	**95**	Pg		**Pn**	**23 53 43.4**	**-1.6**
HYR	**Heyderabad**	**1.39**	**15**	P		**Pn**	**23 53 44.4**	**-0.5**
HYR				S		**Sn**	**23 54 05.8**	**+1.7**
IAZR	**Azarshahr**	**1.44**	**118**	Pg		**Pn**	**23 53 44.9**	**-0.8**
IGDI	**IGDIR**	**1.52**	**351**	P		**Pb**	**23 53 46.5**	**-0.7**
IGDI				S		**Sn**	**23 54 05.8**	**-1.3**
IGDI				IAML			23 54 13.0	
	comp=N,28nm,1.0s							
IGDI	**IGDIR**	**1.52**	**351**	P		**Pg**	**23 53 47.7**	**+0.4**
IGDI				S		**Sg**	**23 54 11.1**	**+4.1**
PERV	**Siirt/Pervari-**	**1.52**	**254**	P		**Pb**	**23 53 46.5**	**-0.8**
DORK	**Agr/Tutak/Do**	**1.61**	**309**	P		**Pb**	**23 53 48.4**	**-0.6**
AGRB	**Hanur-Agry**	**1.62**	**318**	Pn		**Pg**	**23 53 49.2**	**-0.1**
AGRB				Sn		**Sb**	**23 54 09.2**	**-1.0**
MLAZ	**Malazgirt-MUS**	**1.63**	**299**	Pn		**Pg**	**23 53 49.3**	**-0.2**
MLAZ				Sn		**Sg**	**23 54 09.9**	**-0.7**
KOTA	**Agri, Merkez-K**	**1.70**	**328**	P		**Pg**	**23 53 51.2**	**+0.4**
SIRN	**Sirnak**	**1.79**	**241**	P		**Pg**	**23 53 54.4**	**+1.9**
GNI	**Garni**	**1.80**	**9**	Pn		**Pb**	**23 53 51.5**	**-0.6**
GNI				Sn		**Sb**	**23 54 14.1**	**-1.1**
GURO	**Guroymak-BITLI**	**1.86**	**276**	Pn		**Pb**	**23 53 52.8**	**-0.3**
IHRS	**Heris**	**2.09**	**91**	Pn		**Pb**	**23 53 55.8**	**-1.3**
QRD	**Qoradiz**	**2.53**	**64**	P		**Pn**	**23 54 01.0**	**+0.5**
QRD				S		**Sb**	**23 54 35.0**	**-1.2**
GDB	**GEDABAY**	**2.57**	**24**	P		**Pn**	**23 54 01.6**	**+0.4**
GDB				S		**Sb**	**23 54 36.9**	**-0.6**
ISRB	**Sarab**	**2.64**	**101**	Pn		**Pb**	**23 54 04.9**	**-1.6**
GANJ	**Ganja**	**2.72**	**33**	P		**Pn**	**23 54 03.1**	**-0.1**
GANJ				S		**Sb**	**23 54 40.5**	**-1.1**
AGDM	**Agdam**	**2.73**	**50**	P		**Pn**	**23 54 03.8**	**+0.4**
AGDM				S		**Sn**	**23 54 38.8**	**+1.7**
GRMI	**Germi**	**2.78**	**80**	Pn		**Pn**	**23 54 05.9**	**+1.9**
QZX	**Qazax, Azerbai**	**2.79**	**15**	P		**Pn**	**23 54 05.3**	**+1.2**
QZX				S		**Sb**	**23 54 42.5**	**-1.1**
BLQ	**Beylaqan**	**2.81**	**60**	P		**Pn**	**23 54 04.9**	**+0.5**
BLQ				S		**Sb**	**23 54 42.1**	**-2.2**
BRDA	**Brd**	**2.87**	**48**	P		**Pn**	**23 54 08.8**	**+0.6**
BRDA				S		**Sb**	**23 54 44.5**	**-1.5**
YRD	**Yardimli**	**3.07**	**79**	P		**Pn**	**23 54 08.2**	**+0.1**
YRD				S		**Sn**	**23 54 47.7**	**+2.2**
LRK	**Lerik**	**3.11**	**84**	P		**Pn**	**23 54 09.2**	**+0.6**
LRK				S		**Sn**	**23 54 49.3**	**+2.7**
GLBA	**Clilabad**	**3.25**	**73**	P		**Pn**	**23 54 11.2**	**+0.8**
GLBA				S		**Sn**	**23 54 52.0**	**+2.4**
ASTR	**Astara**	**3.46**	**86**	P		**Pn**	**23 54 13.4**	**+0.1**
ASTR				S		**Sn**	**23 54 55.6**	**+0.7**

*SSNC **20** 00:02:29.7±1.7, 18°.99N×81°.05W, h6km±18km, MD3.2, Presumed earthquake*
*JSN **20** 00:02:30.1±1.1, 19°.19N×81°.05W, h46km±999km, MW4.7, Presumed earthquake*
ISC 20 00:02:30.6±2.0, **19°.04N**±0°.10×**81°.00W**±0°.08, **h35**km, **n10**, σ1**55**/16, **1D, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LCCY	**Blossom Villag**	**1.07**	**54**	*e*P		**Pn**	**00 02 48.7**	**-0.3**
LCCY				*e*S		**Sn**	**00 03 01.2**	**-1.5**
CBCY	**The Bluff, Cay**	**1.36**	**59**	*e*P		**Pn**	**00 02 52.2**	**-0.9**
CBCY				*e*S		**Sn**	**00 03 07.9**	**-2.0**
MGV	**Manicaragua**	**3.20**	**17**	*e*P		**Pn**	**00 03 18.1**	**-0.3**
MGV				*e*S		**Sn**	**00 03 55.7**	**+0.3**
MTDJ	**Mount Denham**	**3.38**	**103**	*i* P		**Pn**	**00 03 21.1**	**+0.1**
MTDJ	**Mount Denham**	**3.38**	**103**	*e*P		**Pn**	**00 03 20.4**	**-0.5**
MTDJ				*e*S		**Sn**	**00 03 57.8**	**-2.1**
CCCC	**Cccc**	**3.72**	**54**	*e*P		Pn	00 03 31.8	+6.2
CCCC				*e*S		Sn	00 04 18.6	+10
LMGC	**Las Mercedes**	**3.90**	**74**	*e*P		**Pn**	**00 03 29.0**	**+1.0**
LMGC				*e*S		**Sn**	**00 04 12.7**	**+0.1**
STH	**Stony Hill**	**4.08**	**103**⇓	*i* P		**Pn**	**00 03 31.3**	**+0.7**
SOR	**Soroa**	**4.18**	**334**	*e*P		**Pn**	**00 03 33.2**	**+1.2**
SOR				*e*S		**Sn**	**00 04 18.0**	**-1.6**
YAR	**Yar**	**4.56**	**72**	*e*P		**Pn**	**00 03 38.9**	**+1.8**
YAR				*e*S		**Sn**	**00 04 32.3**	**+3.3**

*IDC **20** 00:27:26.5±1.3, 12°.70N×125°.90E, h0km, mb3.8/10, mbtmp3.8/10, Error ellipse: s-maj=62.2km s-min=15.5km az=70.0*
ISC 20 00:27:31.0±1.1, **12°.7N**±0°.1×**126°.0E**±0°.1, **h32**km, **n11**, σ1**09**/12, **mb3.8**/10, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RCP	**Roxas**	**3.39**	**251**	*i* P		**Pn**	**00 28 22.7**	**+1.1**
RCP				*e*S		**Sn**	**00 29 00.2**	**-0.6**
BATI	**Baturata**	**22.88**	**186**	P		**P**	**00 32 30.3**	**-1.7**
	11nm,0.4s,baz=53,slow=3.5,SNR=3.8							
	11nm,0.4s							
CMAR	**Chiang Mai Arr**	**26.67**	**286**	P		**P**	**00 33 06.7**	**-0.6**
	1.1nm,0.3s,baz=115,slow=7.5,SNR=4.7							
	1.1nm,0.3s							
FITZ	**Fitzroy Crossi**	**30.61**	**181**	P		**P**	**00 33 43.5**	**+1.2**
	4.3nm,0.7s,baz=8.1,slow=7.1,SNR=12							
	4.3nm,0.7s							
WRA	**Warramunga Arr**	**33.46**	**166**	P		**P**	**00 34 08.4**	**+1.0**
	0.3nm,0.6s,baz=340,slow=9.0,SNR=2.0							
	0.3nm,0.6s							
ASAR	**Alice Springs**	**36.96**	**168**	P		**P**	**00 34 37.1**	**-0.4**
	0.4nm,0.4s,baz=344,slow=7.4,SNR=8.2							
	0.4nm,0.4s							
SONM	**Songino Array**	**38.67**	**339**	P		**P**	**00 34 51.8**	**+0.1**
	0.2nm,0.3s,baz=153,slow=9.6,SNR=2.1							
	0.2nm,0.3s							
MKAR	**Makanchi Array**	**49.96**	**322**	P		**P**	**00 36 22.9**	**+0.9**
	0.6nm,0.9s,baz=114,slow=8.9,SNR=6.2							
	0.6nm,0.9s							
ZALV	**Zalesovo Beam**	**52.39**	**331**	P		**P**	**00 36 40.5**	**+0.5**
	0.4nm,0.4s,baz=110,slow=7.8,SNR=2.1							
	0.4nm,0.4s							
KURBB	**Kurchatov Arra**	**53.95**	**325**	P		**P**	**00 36 50.7**	**-0.9**
	0.9nm,0.9s,baz=119,slow=7.7,SNR=6.0							
	0.9nm,0.9s							
BVAR	**Borovoye Array**	**59.54**	**325**	P		**P**	**00 37 30.1**	**-1.2**
	0.6nm,0.8s,baz=103,slow=13,SNR=2.4							
	0.6nm,0.8s							

*SDD **20** 00:30:16.7±1.7, 17°.96N×66°.84W, h20km±10km, MD3.2, ML3.3, MW3.5, Presumed earthquake*
*OSPL **20** 00:30:16.3±0.3, 17°.87N×66°.83W, h10km±3km, ML3.9, Presumed earthquake*
*NEIC **20** 00:30:17.2±1.9, 17°.98N±0°.01×66°.815W±0°.009, h10km±1km, ML3.6/33, ML3.3(RSPR), Error ellipse: s-maj=3.2km s-min=1.8km az=175.0*
ISC 20 00:30:16.2±0.9, **17°.94N**±0°.04×**66°.82W**±0°.02, **h16**km±5km, **n31**, σ0**90**/55, **14C, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.07**	**307**			**Pg**	**00 30 19.1**	**-0.2**
GBPR						**Sg**	**00 30 21.3**	**-0.1**
MLPR	**Magueyes Islan**	**0.21**	**279**			**Pg**	**00 30 20.9**	**-0.3**
MLPR					Sg	**Sg**	**00 30 24.2**	**-0.2**
MLPR					IAML		00 30 24.7	
	20μm,0.4s							
MLPR					IAML		00 30 24.9	
	12μm,0.1s							
MLPR	**Magueyes Islan**	**0.21**	**279**⇑	*e*Pg		**Pg**	**00 30 21.1**	**0.0**
MLPR					IAML		00 30 24.6	
	comp=N,6μm,0.4s							
MLPR			⇑	*e*Sg		**Sg**	**00 30 24.6**	**+0.1**
OBIP	**Obispado Ponce**	**0.23**	**63**	Pg		**Pg**	**00 30 21.4**	**-0.1**
OBIP						**Sg**	**00 30 25.0**	**0.0**
OBIP	**Obispado Ponce**	**0.23**	**63**	*i* P		**Pg**	**00 30 21.5**	**+0.1**
OBIP				*e*S		**Sg**	**00 30 25.4**	**+0.3**
OBIP				IAML			00 30 27.1	
	comp=Z,14μm,0.1s							
CELP	**Cerrillos**	**0.27**	**59**			**Pg**	**00 30 22.1**	**0.0**
CELP					Sg	**Sg**	**00 30 26.6**	**+0.5**
CELP					IAML		00 30 27.2	
	comp=Z,7μm,0.3s							
CELP					IAML		00 30 27.4	
	comp=Z,6μm,0.4s							
CELP	**Cerrillos**	**0.27**	**59**⇑	*e*Pg		**Pg**	**00 30 22.4**	**+0.3**
CELP			⇑	*e*Sg		**Sb**	**00 30 27.1**	**0.0**
CELP				IAML			00 30 27.3	
	comp=N,2μm,0.3s							
CRPR	**Cabo Rojo, PR**	**0.28**	**285**			**Pg**	**00 30 22.0**	**-0.3**
CRPR					Sg	**Sg**	**00 30 25.9**	**-0.5**
CRPR					IAML		00 30 26.5	
	comp=N,15μm,0.3s							
CRPR	**Cabo Rojo, PR**	**0.28**	**285**	*i* P		**Pg**	**00 30 22.0**	**-0.3**
CRPR				*e*S		**Sg**	**00 30 26.1**	**-0.3**
CRPR				IAML			00 30 26.3	
	comp=Z,18μm,0.2s							
UUPR	**Utuado, UPR, P**	**0.33**	**17**			**Pg**	**00 30 22.9**	**-0.2**
UUPR					Sg	**Sg**	**00 30 27.5**	**-0.3**
LSP	**Las Mesas**	**0.34**	**314**			**Pg**	**00 30 23.2**	**-0.2**
LSP						**Sg**	**00 30 28.3**	**0.0**
AOPR	**Arecibo Observ**	**0.41**	**9**	Pg		**Pg**	**00 30 24.4**	**-0.2**
AOPR				Sg		**Sg**	**00 30 29.9**	**-0.5**
AOPR				IAML			00 30 32.2	
	comp=Z,7μm,0.3s							
AOPR	**Arecibo Observ**	**0.41**	**9**⇑	*e*Pg		**Pg**	**00 30 24.5**	**-0.2**
AOPR			⇑	*e*Sg		**Sg**	**00 30 29.6**	**-0.7**
AOPR				IAML			00 30 32.1	
	comp=N,6μm,0.4s							
PRSN	**Puerto Rico Se**	**0.41**	**313**	Pg		**Pg**	**00 30 24.2**	**-0.4**
PRSN				Sg		**Sg**	**00 30 30.1**	**-0.2**
PRSN	**Puerto Rico Se**	**0.41**	**313**⇑	*e*Pg		**Pg**	**00 30 24.3**	**-0.3**
PRSN			⇑	*e*Sg		**Sg**	**00 30 30.3**	**0.0**
PRSN				IAML			00 30 35.4	
	comp=N,8μm,0.3s							
ECPR	**Experimental S**	**0.58**	**49**			**Pg**	**00 30 27.1**	**-0.6**
ECPR					Sg	**Sg**	**00 30 35.1**	**-0.4**
ECPR					IAML		00 30 36.9	
	comp=N,5μm,0.3s							
ECPR					IAML		00 30 37.3	
	comp=N,4μm,0.2s							
AGPR	**Aguadilla, PR**	**0.59**	**333**			**Pg**	**00 30 27.4

AOPR					Sg	**Sn**	**00 32 12.6**	**-1.0**
AOPR					IAML		00 32 14.0	
	comp=Z,3μm,0.2s							
AOPR	**Arecibo Observ**	**0.37**	**11**	⇑*e*Pg		**Pn**	**00 32 06.9**	**-0.3**
AOPR				⇑*e*Sg		**Sn**	**00 32 12.9**	**-0.7**
AOPR				IAML			00 32 13.3	
	comp=N,3μm,0.3s							
PRSN	**Puerto Rico Se**	**0.38**	**309**			**Pn**	**00 32 06.7**	**-0.5**
PRSN				Sg		**Sb**	**00 32 12.7**	**+1.1**
PRSN	**Puerto Rico Se**	**0.38**	**309**	⇑*e*Pg		**Pn**	**00 32 06.8**	**-0.5**
PRSN				⇑*e*Sg		**Sb**	**00 32 11.1**	**-0.4**
PRSN				IAML			00 32 16.2	
	comp=N,3μm,0.3s							
AGPR	**Aguadilla, PR**	**0.55**	**331**			**Pn**	**00 32 09.8**	**+0.2**
AGPR						**Sn**	**00 32 18.2**	**+0.2**
AGPR	**Aguadilla, PR**	**0.55**	**331**	⇑*e*Pg		**Pn**	**00 32 09.9**	**+0.2**
AGPR				⇑*e*Sg		**Sb**	**00 32 17.0**	**+0.7**
AGPR				IAML			00 32 29.6	
	comp=N,354nm,0.3s							
ECPR	**Experimental S**	**0.56**	**53**			**Pn**	**00 32 09.6**	**-0.1**
ECPR				Sg		**Sn**	**00 32 17.8**	**-0.4**
ECPR				IAML			00 32 19.6	
	comp=N,2μm,0.2s							
ECPR				IAML			00 32 19.7	
	comp=N,2μm,0.2s							
SJG	**San Juan**	**0.66**	**78**			**Pn**	**00 32 11.2**	**+0.1**
SJG	**San Juan**	**0.66**	**78**			**Sn**	**00 32 20.1**	**-0.6**
SJG				IAML			00 32 22.4	
	comp=N,635nm,0.2s							
SJG				IAML			00 32 23.0	
	comp=N,444nm,0.3s							
SJG	**San Juan**	**0.66**	**78**	*i* P		**Pn**	**00 32 11.2**	**+0.1**
SJG				*e*S		**Sn**	**00 32 20.6**	**0.0**
SJG				IAML			00 32 21.0	
	comp=Z,8μm,0.2s							
HUMP	**Col San Antoni**	**0.95**	**80**			**Pn**	**00 32 15.8**	**+0.8**
HUMP						**Sn**	**00 32 28.4**	**+0.6**
HIDR	**Higuey Centro**	**1.89**	**289**	⇑*e*Pg		**Pb**	**00 32 30.5**	**-0.8**
HIDR				⇑*e*Sg		**Sb**	**00 32 55.8**	**+1.3**
HIDR				IAML			00 32 59.7	
	comp=N,66nm,0.3s							
HATOM	**Hato Mayor del**	**2.55**	**289**	⇑*e*Pg		**Pb**	**00 32 44.2**	**+1.6**
HATOM				⇑*e*Sg		**Sb**	**00 33 13.5**	**-0.1**
HATOM				IAML			00 33 31.5	
	comp=N,19nm,1.9s							

UPP 20 00:34:16.6±0.3, 67°.83N×20°.25E, h1km, ML2.1,
Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.13**	**14**	P	Pg	00 34 19.2	+0.2
KUA				S	Sg	00 34 20.8	0.0
RATU	**Laukkuluspa**	**0.25**	**269**	P	Pg	00 34 21.6	+0.2
NIKU	**Nikkaluokta**	**0.46**	**275**	P	Pg	00 34 25.2	-0.2

*IDC **20** 00:41:39.4±1.2, 35°.09N×26°.97E, h0km, mb3.6/9, mbtmp3.5/11, ML2.5/2, Error ellipse: s-maj=32.1km s-min=17.4km az=168.0*
*THE **20** 00:41:42.1, 35°.N±81°×2°.7E±7°.5, h1km±42km, MLh2.7/3*
ISC 20 00:41:42.7±0.8, 35°.02N±0°.07×26°.99E±0°.05, h23km, n16, σ1§11/19, mb3.5/8, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.55**	**15**	P	**Pb**	**00 41 53.0**	**-0.7**
KARP				S	**Sb**	**00 42 02.0**	**+0.8**
ZKR	**Zakros**	**0.64**	**279**	P	**Pb**	**00 41 54.8**	**-0.5**
NPS	**Neapolis**	**1.16**	**283**	P	**Pn**	**00 42 04.1**	**+0.6**
ARG	**Arkhangelos**	**1.51**	**37**	P	**Pb**	**00 42 09.9**	**-0.2**
THR6	**Thira Island,**	**1.86**	**316**	P	**Pb**	**00 42 15.5**	**-0.6**
BRTR	**Keskin Array B**	**7.08**	**46**	Pn	**Pn**	**00 43 24.7**	**-0.3**
	baz=236,slow=11,SNR=1.6						
BRTR				Sn	**Sn**	**00 44 45.8**	**+1.0**
	baz=234,slow=19,SNR=1.9						
	0.6nm,0.8s						
MMAI	**Mount Meron Ar**	**7.26**	**104**	Pn	**Pn**	**00 43 26.0**	**-1.5**
	0.2nm,0.3s,baz=264,slow=14,SNR=1.7						
MMAI				Sn	**Sn**	**00 44 51.9**	**+2.6**
	0.5nm,0.3s,baz=279,slow=31,SNR=1.6						
	5.9nm,0.9s						
ESDC	**Sonseca Array**	**24.98**	**290**	P	**P**	**00 47 05.3**	**+0.7**
	0.5nm,0.6s,baz=88,slow=9.7,SNR=6.4						
	0.5nm,0.6s						
FINES	**FINESS Array B**	**26.45**	**359**	P	**P**	**00 47 15.3**	**-2.3**
	1.8nm,0.9s,baz=209,slow=14,SNR=1.9						
	1.8nm,0.9s						
TORD	**Torodi Ar. Bea**	**31.57**	**233**	P	**P**	**00 48 03.3**	**-0.3**
	0.6nm,1.0s,baz=17,slow=6.8,SNR=2.5						
	0.6nm,1.0s						
KURBB	**Kurchatov Arra**	**40.05**	**51**	P	**P**	**00 49 16.6**	**+0.7**
	0.7nm,0.7s,baz=275,slow=8.9,SNR=7.9						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**42.60**	**57**	P	**P**	**00 49 37.4**	**+0.4**
	0.5nm,0.6s,baz=287,slow=6.4,SNR=8.6						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**44.02**	**46**	P	**P**	**00 49 47.8**	**-0.5**
	0.4nm,0.3s,baz=272,slow=9.4,SNR=3.9						
	0.4nm,0.3s						
SONM	**Songino Array**	**58.41**	**51**	P	**P**	**00 51 37.3**	**+0.7**
	0.3nm,0.6s,baz=294,slow=8.5,SNR=2.4						
	0.3nm,0.6s						
SCHQ	**Schefferville**	**64.26**	**320**	P	**P**	**00 52 16.0**	**+0.1**
	1.2nm,0.7s,baz=72,slow=9.6,SNR=3.9						
	1.2nm,0.7s						
YKA	**Yellowknife Ar**	**78.04**	**343**	P	**P**	**00 53 38.8**	**-0.2**
	0.1nm,0.3s,baz=31,slow=6.0,SNR=4.4						
	0.1nm,0.3s						

*IDC **20** 00:47:50.3±1.3, 4°.97S×153°.62E, h0km, mb3.9/6, mbtmp4.0/7, ML2.1/1, MS2.8/1, Error ellipse: s-maj=29.2km s-min=26.3km az=78.0*
*NEIC **20** 00:48:00.2±1.0, 5°.16S±0°.09×153°.7E±0°.1, h69km±11km, mb4.2/8, Error ellipse: s-maj=15.3km s-min=13.1km az=102.0*
ISC 20 00:47:57.4±0.9, 5°.29S±0°.08×153°.79E±0°.10, h50km, n24, σ1§34/22, mb4.2/8, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.96**	**304**		**Pn**	**00 48 29.0**	**+0.7**
RABL				Sn	**Sn**	**00 48 53.9**	**+2.3**
KRVT	**Keravat (AS076**	**2.01**	**299**	LR	LR	00 48 54.0	
	comp=Z,8.4nm,20.9s,baz=295,slow=37						
MANU	**Manus Island**	**7.18**	**296**	Pn	**Pn**	**00 49 40.4**	**+0.6**
PMG	**Port Moresby**	**7.75**	**238**	Pn	**Pn**	**00 49 46.2**	**-1.5**
	1.4nm,0.3s,baz=84,slow=18,SNR=1.7						
PMG				Sn	**Sn**	**00 51 13.3**	**-0.8**
	2.4nm,0.3s,baz=109,slow=21,SNR=7.8						
PMG				LR	LR	00 52 15.2	
	comp=Z,67nm,20.0s,baz=76,slow=34						
	5.5nm,0.4s						
PMG	**Port Moresby**	**7.75**	**238**		**Pn**	**00 49 48.5**	**+0.8**
PMG				Sn	**Sn**	**00 51 15.4**	**+1.3**
DZM	**Mont Dzumac**	**20.69**	**145**	P	Pn	00 52 37.0	+0.5
	5.2nm,0.5s,baz=322,slow=19,SNR=11						
	5.2nm,0.5s						
MTN	**Manton Dam**	**23.59**	**250**	P	**P**	**00 53 03.9**	**0.0**
MTN				IAmb	IAmb	00 53 26.8	
	comp=Z,9.1nm,1.1s						
WB0	**Warramunga Arr**	**23.74**	**231**	P	**P**	**00 53 05.2**	**-0.1**
WB0				IAmb	IAmb	00 53 06.5	
	comp=Z,9.5nm,1.2s						
WR8	**Warramunga Arr**	**23.77**	**230**	P	**P**	**00 53 04.7**	**-0.9**
WRAB	**Tennant Creek**	**23.87**	**231**	P	**P**	**00 53 06.9**	**+0.4**
WRA	**Warramunga Arr**	**23.88**	**231**	P	**P**	**00 53 06.8**	**+0.1**
	comp=Z,2.1nm,0.6s,baz=54,slow=10.0,SNR=13						
	comp=Z,2.1nm,0.6s						
WRA	**Warramunga Arr**	**23.88**	**231**	P	**P**	**00 53 05.5**	**-1.1**
ASAR	**Alice Springs**	**26.48**	**224**	P	**P**	**00 53 30.4**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=56,slow=9.0,SNR=9.3						
	comp=Z,0.5nm,0.5s						
KNRA	**Kununurra**	**26.65**	**245**	P	**P**	**00 53 31.4**	**-0.4**
H11S3	**WAKE ISLAND Hy**	**26.84**	**28**	T	T	01 22 00.8	
	baz=208						
H11S2	**WAKE ISLAND Hy**	**26.84**	**28**	T	T	01 21 54.7	
	baz=208						
H11S1	**WAKE ISLAND Hy**	**26.86**	**28**	T	T	01 21 56.9	
	baz=208						
TCW	**Tory Channel**	**40.19**	**156**	P	**P**	**00 55 31.2**	**+2.3**
CMAR	**Chiang Mai Arr**	**58.98**	**295**	P	**P**	**00 57 52.0**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=110,slow=9.5,SNR=1.5						
	comp=Z,0.8nm,0.3s						

SONM	**Songino Array**	**67.26**	**327**	P		**P**	**00 58 43.3**	**-3.6**
	comp=Z,0.2nm,0.4s,baz=116,slow=3.4,SNR=1.7							
	comp=Z,0.2nm,0.4s							
M29M	**Somme Creek**	**84.59**	**26**	P		**P**	**01 00 25.1**	**-0.2**
M29M				IAmb		IAmb	01 00 25.7	
	comp=Z,4.5nm,1.5s							
QSPA	**South Pole Qui**	**84.67**	**180**	P		**P**	**01 00 26.4**	**+0.7**
	comp=Z,1.7nm,0.7s,baz=12,slow=0.2,SNR=12							
	comp=Z,1.7nm,0.7s							
QSPA	**South Pole Qui**	**84.67**	**180**	P		**P**	**01 00 26.9**	**+1.1**
QSPA				IAmb		IAmb	01 00 53.8	
	comp=Z,3.2nm,1.1s							
TORD	**Torodi Ar. Bea**	**151.40**	**288**	PKPbc		**PKPbc**	**01 07 46.6**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=59,slow=4.2,SNR=4.0							

*KRNET **20** 00:49:01.9±0.1, 42°.05N×77°.16E, h22km, mb5.2*
*SOME **20** 00:49:01.7, 42°.07N×77°.15E, h0km, MS4.1*
*BJI **20** 00:49:01.0, 42°.14N×77°.18E, h6km, mB4.4/7, mb4.3/28, ML4.3/9, Ms4.1/18, Ms7 3.9/21*
*NNC **20** 00:49:02.3±0.6, 42°.09N×77°.17E, h0km, mb5.0, mpv5.0, Error ellipse: s-maj=4.1km s-min=2.6km az=176.0*
*NEIC **20** 00:49:02, 42°.05N×77°.17E, h12km*
*NEIC **20** 00:49:02.4±2.8, 42°.05N±0°.04×77°.19E±0°.04, h14km±1km, mb4.5/33, Mwr4.5/18, Error ellipse: s-maj=6.5km s-min=4.0km az=197.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr5.82; Mθθ-6.50; Mφφ0.67; Mrθ-0.41; Mrφ-1.02; Mθφ0.94; Fault plane solution: M₀6.35000×10¹⁵ NP1:φs272.51000°, δ47.24000°, λ74.68000°. NP2:φs272.51000°, δ47.24000°, λ104.67000°. Principal axes: T 6.0140, Plg79.0000°, Azm256.0000°; N 0.6322, Plg11.0000°, Azm82.0000°; P -6.6462, Plg1.0000°, Azm352.0000°;*
*MOS **20** 00:49:02.4±1.1, 42°.05N×77°.23E, h23km, mb4.6/15 Error ellipse: s-maj=4.2km s-min=4.0km az=39.1*
*IDC **20** 00:49:03.9±2.7, 41°.99N×77°.20E, h29km±19km, mb4.0/31, mbtmp4.1/38, ML3.7/7, MS3.8/38, Error ellipse: s-maj=11.3km s-min=8.5km az=10.0*
*KNET **20** 00:49:03.5±0.3, 42°.06N×77°.01E, h17km, ml4.6, Error ellipse: s-maj=4.7km s-min=2.3km az=24.0*
ISC 20 00:49:01.0±0.6, 42°.05N±0°.02×77°.14E±0°.01, h6km±3km, n348, σ1§63/427, mb4.4/72, MS3.9/39, 53C-46D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**0.09**	**22**		**Pg**	**00 49 05.2**	**+2.0**
KDJ				Sg	**Sg**	**00 49 07.0**	**+2.3**
KDJ	**Kajisay**	**0.09**	**22**	PG	**Pg**	**00 49 05.2**	**+2.0**
KDJ	**Kajisay**	**0.09**	**22**	⇑*i*P	**Pg**	**00 49 05.2**	**+2.0**
KDJ				⇑*i*S	**Sg**	**00 49 07.5**	**+2.7**
TARG	**Taragay, Kyrgy**	**0.59**	**122**	Pg	**Pg**	**00 49 13.1**	**+0.6**
TARG				Sg	**Sg**	**00 49 21.0**	**+0.7**
TARG	**Taragay, Kyrgy**	**0.59**	**122**	*i* PG	**Pg**	**00 49 13.1**	**+0.6**
TARG				*i* S	**Sg**	**00 49 21.3**	**+1.0**
TARG	**Taragay, Kyrgy**	**0.59**	**122**	⇑*i*P	**Pg**	**00 49 13.1**	**+0.6**
TARG				⇑*i*S	**Sg**	**00 49 21.3**	**+1.0**
ULHL	**Ulahol**	**0.69**	**287**	⇓P	**Pg**	**00 49 15.4**	**+1.0**
	758nm,0.1s						
ULHL				⇓S	**Sg**	**00 49 25.2**	**+1.8**
	5μm,0.2s						
ULHL	**Ulahol**	**0.69**	**287**	*i* PG	**Pg**	**00 49 13.4**	**-1.0**
ULHL				*i* S	**Sg**	**00 49 25.1**	**+1.6**
ULHL	**Ulahol**	**0.69**	**287**	⇓*i*P	**Pg**	**00 49 15.4**	**+1.0**
ULHL				⇓*i*S	**Sg**	**00 49 25.1**	**+1.6**
BOOM	**Boomskoye usch**	**0.99**	**297**	Pg	**Pb**	**00 49 20.6**	**-0.2**
BOOM				Sg	**Sb**	**00 49 34.5**	**+0.4**
BOOM	**Boomskoye usch**	**0.99**	**297**	PG	**Pb**	**00 49 20.6**	**-0.2**
BOOM						00 49 34.5	
BOOM	**Boomskoye usch**	**0.99**	**297**	⇑*i*P	**Pb**	**00 49 20.5**	**-0.2**
BOOM				⇑*i*S	**Sb**	**00 49 34.3**	**+0.2**
TNSS	**Tian-Shan**	**1.00**	**352**	P	**Pb**	**00 49 20.4**	**-0.6**
	1μm,0.2s						
TNSS				S	**Sb**	**00 49 33.9**	**-0.7**
	1μm,0.2s						
TNSS	**Tian-Shan**	**1.00**	**352**	*e*PG	**Pb**	**00 49 20.4**	**-0.6**
TNSS	**Tian-Shan**	**1.00**	**352**	*e*P	**Pb**	**00 49 20.4**	**-0.6**
TNSS	**Tian-Shan**	**1.00**	**352**	*e*P	**Pb**	**00 49 20.4**	**-0.6**
	1μm,0.2s						
TNSS				*e*S	**Sb**	**00 49 33.9**	**-0.7**
	1μm,0.2s						
NRN	**Naryn**	**1.05**	**235**		**Pn**	**00 49 23.0**	**+0.4**
NRN				Sg	**Sg**	**00 49 37.3**	**+2.5**
NRN	**Naryn**	**1.05**	**235**	PG	**Pn**	**00 49 23.0**	**+0.4**
NRN						00 49 37.3	
NRN	**Naryn**	**1.05**	**235**	⇑*e*P	**Pb**	**00 49 22.1**	**+0.3**
NRN				⇑*e*S	**Sb**	**00 49 36.9**	**+1.0**
IZV	**Izvestkoviy**	**1.06**	**339**	P	**Pb**	**00 49 20.9**	**-1.0**
	404nm,0.3s						
IZV				S	**Sb**	**00 49 34.5**	**-1.6**
	1μm,0.3s						
IZV	**Izvestkoviy**	**1.06**	**339**	*e*P	**Pb**	**00 49 20.9**	**-1.0**
	404nm,0.3s						
IZV				*e*S	**Sb**	**00 49 34.5**	**-1.6**
	1μm,0.3s						
MDOK	**Medeo**	**1.12**	**357**	Pg	**Pb**	**00 49 22.4**	**-0.4**
	4μm,0.2s						
MDOK				Lg	Lg	00 49 38.0	
	6μm,0.3s						
MDOK	**Medeo**	**1.12**	**357**	*e*PG	**Pb**	**00 49 22.4**	**-0.4**
MDOK				*e*S	**Sb**	**00 49 35.0**	**-2.7**
MDOK	**Medeo**	**1.12**	**357**	*e*P	**Pb**	**00 49 22.4**	**-0.4**
MDOK				*e*S	**Sb**	**00 49 35.1**	**-2.7**
AAA	**Alma-Ata**	**1.17**	**352**	P	**Pn**	**00 49 24.0**	**-0.1**
	13μm,0.2s						
AAA				S	**Sg**	**00 49 40.4**	**+1.6**
	414nm,0.2s						
AAA	**Alma-Ata**	**1.17**	**352**	*e*PG	**Pn**	**00 49 23.9**	**-0.1**
AAA	**Alma-Ata**	**1.17**	**352**	*e*P	**Pn**	**00 49 23.9**	**-0.1**
AAA	**Alma-Ata**	**1.17**	**352**	*e*P	**Pn**	**00 49 24.0**	**-0.1**
	13μm,0.2s						
AAA				*e*S	**Sg**	**00 49 40.4**	**+1.6**
	414nm,0.2s						
KNDC	**Almaty**	**1.18**	**354**	⇓P	**Pn**	**00 49 23.7**	**-0.4**
	6μm,0.7s						
KNDC				⇓S	**Sg**	**00 49 40.7**	**+1.8**
	8μm,0.7s						
KNDC	**Almaty**	**1.18**	**354**	PG	**Pn**	**00 49 23.7**	**-0.4**
KNDC				S	**Sg**	**00 49 40.7**	**+1.8**
KOTS	**Kotyrbulak**	**1.19**	**359**	P	**Pn**	**00 49 23.9**	**-0.4**
	5μm,0.2s						
KOTS				S	**Sg**	**00 49 40.3**	**+1.1**
	13μm,0.3s						
KOTS	**Kotyrbulak**	**1.19**	**359**	*e*P	**Pn**	**00 49 23.9**	**-0.4**
KOTS				*e*S	**Sg**	**00 49 40.3**	**+1.1**
KOTS	**Kotyrbulak**	**1.19**	**359**	*e*P	**Pn**	**00 49 23.9**	**-0.4**
	5μm,0.2s						
KOTS				*e*S	**Sg**	**00 49 40.3**	**+1.1**
	13μm,0.3s						
KST	**Kastek**	**1.32**	**319**	P	**Pn**	**00 49 26.4**	**+0.2**
	2μm,0.1s						
KST				S	**Sb**	**00 49 44.6**	**+1.1**
	11μm,0.4s						
KST	**Kastek**	**1.32**	**319**	*e*P	**Pn**	**00 49 26.4**	**+0.2**
	2μm,0.1s						
KST				*e*S	**Sb**	**00 49 44.6**	**+1.1**
	11μm,0.4s						
SATY	**Saty**	**1.38**	**42**	P	**Pn**	**00 49 26.9**	**-0.1**
	1μm,0.3s						
SATY				S	**Sg**	**00 49 45.6**	**+0.2**
	5μm,0.2s						
SATY	**Saty**	**1.38**	**42**	*e*PG	**Pn**	**00 49 26.8**	**-0.1**
SATY	**Saty**	**1.38**	**42**	*e*P	**Pn**	**00 49 26.8**	**-0.1**
SATY	**Saty**	**1.38**	**42**	*e*P	**Pn**	**00 49 26.9**	**-0.1**
	1μm,0.3s						
SATY				*e*S	**Sg**	**00 49 45.6**	**+0.2**
	5μm,0.2s						
TKM2	**Tokmak 2**	**1.43**	**308**	P	**Pn**	**00 49 28.4**	**+0.7**
	565nm,0.1s,SNR=1630						
TKM2				⇓S	**Sb**	**00 49 48.3**	**+1.4**
	7μm,0.1s						
TKM2	**Tokmak 2**	**1.43**	**308**	*i* PG	**Pn**	**00 49 28.5**	**+0.7**
TKM2				*i* S	**Sb**	**00 49 47.9**	**+1.0**
TKM2	**Tokmak 2**	**1.43**	**308**	⇓*i*P	**Pn**	**00 49 28.5**	**+0.7**
TKM2				⇓*i*S	**Sb**	**00 49 47.9**	**+1.0**
JNKS	**Jany-Kuch**	**1.51**	**229**	⇓*i*P	**Pn**	**00 49 29.4**	**+0.6**
JNKS				⇓*i*S	**Sn**	**00 49 49.4**	**+0.5**
DGS	**Degeres**	**1.56**	**320**	P	**Pb**	**00 49 30.8**	**+0.4**
	611nm,0.3s						
DGS				S	**Sb**	**00 49 51.6**	**+1.1**
	5μm,0.3s						
DGS	**Degeres**	**1.56**	**320**	*e*P	**Pb**	**00 49 30.8**	**+0.4**
	611nm,0.3s						
DGS				*e*S	**Sb**	**00 49 51.6**	**+1.1**
	5μm,0.3s						
KURS	**Kuram**	**1.63**	**28**	P	**Pb**	**00 49 31.3**	**-0.2**
	715nm,0.2s						
KURS				S	**Sb**	**00 49 52.8**	**+0.5**
	2μm,0.7s						
KTBS	**Karatobe**	**1.70**	**349**	P	**Pb**	**00 49 32.9**	**+0.2**
	824nm,0.1s						
KTBS				S	**Sb**	**00 49 55.4**	**+1.1**
	1.1nm,0.2s						
KTBS	**Karatobe**	**1.70**	**349**	*e*P	**Pb**	**00 49 32.9**	**+0.2**
	824nm,0.1s						
KTBS				*e*S	**Sb**	**00 49 55.4**	**+1.1**
	1.1nm,0.2s						
KBK	**Karagaybulak**	**1.73**	**291**	⇑P	**Pb**	**00 49 34.0**	**+0.6**
	467nm,0.2s,SNR=727						
KBK				⇓S	**Sb**	**00 49 57.3**	**+1.8**
	10μm,0.5s						
KBK	**Karagaybulak**	**1.73**	**291**	*i* PN	**Pb**	**00 49 33.6**	**+0.3**
KBK				*i* S	**Sb**	**00 49 56.6**	**+1.2**
KBK	**Karagaybulak**	**1.73**	**291**	⇓*i*P	**Pb**	**00 49 33.6**	**+0.3**
KBK				⇓*i*S	**Sb**	**00 49 56.6**	**+1.2**
UZB	**Uzynbulak**	**1.77**	**51**	P	**Pb**	**00 49 33.7**	**-0.4**
	538nm,0.3s						
UZB				S	**Sb**	**00 49 56.7**	**+0.1**
	6μm,0.4s						
UZB	**Uzynbulak**	**1.77**	**51**	*e*PN	**Pb**	**00 49 33.8**	**-0.2**
UZB				*e*S	**Sb**	**00 49 56.1**	**-0.5**
UZB	**Uzynbulak**	**1.77**	**51**	*e*P	**Pb**	**00 49 33.7**	**-0.4**
UZB				*e*S	**Sb**	**00 49 56.7**	**+0.1**
UZB	**Uzynbulak**	**1.77**	**51**	*e*P	**Pb**	**00 49 33.9**	**-0.2**
UZB				*e*S	**Sb**	**00 49 56.1**	**-0.5**
UZB	**Uzynbulak**	**1.77**	**51**	*e*P	**Pb**	**00 49 33.7**	**-0.4**
	538nm,0.3s						
UZB				*e*S	**Sb**	**00 49 56.7**	**+0.1**
	6μm,0.4s						
WUS	**Wushi**	**1.78**	**118**	Pn	**Pb**	**00 49 33.2**	**-0.9**
KPKS	**Kokpek**	**1.82**	**38**	P	**Pb**	**00 49 34.0**	**-0.8**
	0.8nm,0.2s						
KPKS				S	**Sb**	**00 49 57.5**	**-0.4**
	5μm,0.3s						
KPKS	**Kokpek**	**1.82**	**38**	*e*PN	**Pb**	**00 49 34.2**	**-0.6**
KPKS	**Kokpek**	**1.82**	**38**	*e*P	**Pb**	**00 49 34.2**	**-0.6**
KPKS	**Kokpek**	**1.82**	**38**	*e*P	**Pb**	**00 49 34.0**	**-0.8**
	0.8nm,0.2s						
KPKS				*e*S	**Sb**	**00 49 57.5**	**-0.4**
	5μm,0.3s						
KUU	**Kurty**	**1.94**	**343**	P	**Pb**	**00 49 37.2**	**+0.5**
	497nm,0.4s						
KUU				S	**Sg**	**00 50 03.0**	**-0.3**
	5μm,0.6s						
KUU	**Kurty**	**1.94**	**343**	*e*P	**Pb**	**00 49 37.2**	**+0.5**
	497nm,0.4s						
KUU				*e*S	**Sg**	**00 50 03.0**	**-0.3**
	5μm,0.6s						
UCH	**Uchtor**	**1.96**	**276**	⇑P	**Pb**	**00 49 37.5**	**+0.1**
	356nm,0.3s,SNR=457						
UCH				⇓S	**Sb**	**00 50 03.4**	**+1.2**
	3μm,0.5s						
UCH	**Uchtor**	**1.96**	**276**	*i* PN	**Pn**	**00 49 36.8**	**+1.6**
UCH				*i* S	**Sb**	**00 50 02.5**	**+0.3**
UCH	**Uchtor**	**1.96**	**276**	⇑*i*P	**Pn**	**00 49 36.8**	**+1.6**
UCH				⇑*i*S	**Sb**	**00 50 02.5**	**+0.3**
KRBS	**Karabastau**	**1.97**	**327**	Pg	**Pb**	**00 49 37.5**	**+0.2**
	1μm,0.3s						
KRBS				Lg	Lg	00 50 03.3	
	9μm,0.5s						
KRBS	**Karabastau**	**1.97**	**327**	*e*P	**Pb**	**00 49 37.5**	**+0.2**
	1μm,0.3s						
KRBS				*e*S	**Sb**	**00 50 03.3**	**+1.2**
	9μm,0.5s						
CHMS	**Chumysh**	**2.00**	**299**	⇓P	**Pb**	**00 49 37.9**	**0.0**
	435nm,0.4s,SNR=442						
CHMS				⇑S	**Sb**	**00 50 04.6**	**+1.6**
	5μm,0.5s						
CHMS	**Chumysh**	**2.00**	**299**	*i* PN	**Pb**	**00 49 37.3**	**-0.6**
CHMS				*i* S	**Sb**	**00 50 02.9**	**-0.2**
CHMS	**Chumysh**	**2.00**	**299**	⇑*i*P	**Pb**	**00 49 37.3**	**-0.6**
CHMS				⇑*i*S	**Sb**	**00 50 02.9**	**-0.2**
FRU1	**Bishkek**	**2.00**	**293**		**Pn**	**00 49 38.8**	**+0.9**
FRU1				Sg	**Sg**	**00 50 06.5**	**+1.0**
FRU1	**Bishkek**	**2.00**	**293**	*i* PN	**Pn**	**00 49 37.4**	**+1.9**
FRU1				*i* S	**Sb**	**00 50 03.4**	**+0.2**
FRU1	**Bishkek**	**2.00**	**293**	⇑*i*P	**Pn**	**00 49 37.4**	**+1.9**
FRU1				⇑*i*S	**Sb**	**00 50 03.4**	**+0.2**
AAK	**Ala-Archa**	**2.04**	**288**	Pn	**Pb**	**00 49 39.5**	**+0.9**
	166nm,0.3s,baz=120,slow=9.6,SNR=1696						
AAK				Lg	Lg	00 50 06.4	
	608nm,0.3s,baz=24,slow=19,SNR=34						
AAK				LR	LR	00 50 44.1	
	comp=Z,2μm,19.4s,baz=107,slow=48						
	369nm,0.3s						
AAK	**Ala-Archa**	**2.04**	**288**	⇓P	**Pb**	**00 49 38.9**	**+0.3**
	495nm,0.3s,SNR=801						
AAK				⇓S	**Sb**	**00 50 06.0**	**+1.6**
	4μm,0.4s						
AAK	**Ala-Archa**	**2.04**	**288**		**Pb**	**00 49 39.2**	**+0.5**
AAK	**Ala-Archa**	**2.04**	**288**	⇓Pn	**Pb**	**00 49 39.6**	**+0.9**
	1μm,0.5s						
AAK				⇓Sn	**Sb**	**00

KTMS Ketmen 2.75 58 Pg **Pb** **00 49 50.6 -0.1**
107nm,0.2s
KTMS Lg Lg 00 50 25.9
1µm,0.4s
KTMS Ketmen 2.75 58 *e*P **Pb** **00 49 50.6 -0.1**
107nm,0.2s
KTMS *e*S **Sb** **00 50 25.9 +1.2**
1µm,0.4s
KNOS Konyrlen 2.75 32 Pg **Pb** **00 49 50.7 0.0**
167nm,0.4s
KNOS Lg Lg 00 50 26.1
1µm,0.4s
MRKS Merke 2.98 285 Pg **Pb** **00 49 55.2 +0.6**
405nm,0.5s
MRKS Lg Lg 00 50 34.0
3µm,0.4s
MRKS Merke 2.98 285 *e*P **Pb** **00 49 55.2 +0.6**
405nm,0.5s
MRKS *e*S **Sb** **00 50 34.0 +2.8**
3µm,0.4s
DJR Jarkent 3.00 39 Pg **Pb** **00 49 55.2 +0.4**
173nm,0.4s
DJR Lg Lg 00 50 34.0
1µm,0.5s
DJR Jarkent 3.00 39 *e*P **Pb** **00 49 55.2 +0.4**
173nm,0.4s
DJR *e*S **Sb** **00 50 34.0 +2.3**
1µm,0.5s
TDK Taldyqorghan 3.10 17 Pg **Pb** **00 49 57.2 +0.7**
1µm,0.6s
TDK Lg Lg 00 50 37.2
3µm,0.5s
TDK Taldyqorghan 3.10 17 *e*P **Pb** **00 49 57.2 +0.7**
1µm,0.6s
TDK *e*S **Sb** **00 50 37.2 +2.8**
3µm,0.5s
KSH2 Kashi 3.13 203 Pn **Pb** **00 49 56.0 -1.3**
KSH2 Sn **Sb** **00 50 38.9 +3.1**
KSH2 SMN
3µm,0.7s
KSH2 SME
5µm,0.8s
ARSB Arslanbob 3.19 258 **Pn** **00 49 54.6 +2.7**
ARSB Arslanbob 3.19 258 *i* PN **Pn** **00 49 53.8 +1.9**
ARSB *i* S **Sn** **00 50 31.6 +1.3**
ARSB Arslanbob 3.19 258⇑ *i*P **Pn** **00 49 53.8 +1.9**
ARSB ⇑*i*S **Sn** **00 50 31.6 +1.3**
SFK Sufi-Kurgan 3.42 235 *i* PN **Pn** **00 49 57.0 +1.9**
SFK *i* S **Sn** **00 50 37.1 +1.1**
SFK Sufi-Kurgan 3.42 235⇓ *i*P **Pn** **00 49 57.0 +1.9**
SFK ⇓*i*S **Sn** **00 50 37.1 +1.1**
MNAS Manas 3.46 279 *i* PN **Pn** **00 49 57.8 +2.2**
MNAS *i* S **Sn** **00 50 38.2 +1.2**
MNAS Manas 3.46 279⇑ *i*P **Pn** **00 49 57.8 +2.2**
MNAS ⇑*i*S **Sn** **00 50 38.2 +1.2**
OHH Osh 3.61 247 *i* PN **Pn** **00 49 59.7 +2.1**
OHH *i* S **Sn** **00 50 41.6 +1.0**
OHH Osh 3.61 247⇓ *i*P **Pn** **00 49 59.7 +2.1**
BTLS Baital 3.74 324 Pg **Pb** **00 50 09.4 +1.9**
208nm,0.6s
BTLS Lg Lg 00 50 58.2
760nm,0.7s
BTLS Baital 3.74 324 *e*PN **Pn** **00 50 01.4 +2.2**
BTLS Baital 3.74 324 *e*P **Pn** **00 50 01.5 +2.2**
BTLS Baital 3.74 324 *e*P **Pb** **00 50 09.4 +1.9**
208nm,0.6s
BTLS *e*S **Sg** **00 50 58.2 -3.0**
760nm,0.7s
ARK Arkit 3.87 268 *i* PN **Pn** **00 50 03.2 +2.1**
ARK *i* S **Sn** **00 50 47.8 +0.9**
ARK Arkit 3.87 268⇑ *i*P **Pn** **00 50 03.2 +2.1**
ARK ⇑*i*S **Sn** **00 50 47.8 +0.9**
DZA Taraz 4.38 283 Pg **Pb** **00 50 21.1 +2.8**
127nm,0.2s
DZA Lg Lg 00 51 18.6
2µm,0.8s
DZA Taraz 4.38 283 *e*PN **Pn** **00 50 10.9 +2.9**
DZA Taraz 4.38 283 *e*P **Pn** **00 50 11.0 +2.9**
DZA Taraz 4.38 283 *e*P **Pb** **00 50 21.1 +2.8**
127nm,0.2s
DZA *e*S **Sg** **00 51 18.6 -2.9**
2µm,0.8s
TRKS Terek-Say 4.51 265 PN **Pn** **00 50 12.7 +2.7**
DRK Karamyk 4.79 239 Pn Pn 00 50 19.9 +5.9
DRK Karamyk 4.79 239 PN Pn 00 50 19.9 +5.9
KK31 Karatay Array 5.00 284 **Pn** **00 50 19.2 +2.5**
KK31 Karatay Array 5.00 284⇓ Pg **Pg** **00 50 34.9 -2.0**
59nm,0.6s,baz=103,slow=13,SNR=95
KK31 ⇑Lg Lg 00 51 40.4
224nm,0.5s,baz=102,slow=28
KK31 Karatay Array 5.00 284 PN **Pn** **00 50 19.2 +2.5**
KKAR Karatay Array 5.00 284 **Pn** **00 50 19.4 +2.8**
KKAR Karatay Array 5.00 284 PN **Pn** **00 50 19.4 +2.8**
BTK Batken 5.17 250 **Pn** **00 50 22.0 +3.0**
BTK Batken 5.17 250 PN **Pn** **00 50 22.0 +3.0**
IUG luzhnay 5.29 273 Pg **Pg** **00 50 41.0 -1.3**
316nm,0.6s
IUG Lg Lg 00 51 53.3
2µm,1.2s
IUG luzhnay 5.29 273 *e*PN **Pn** **00 50 24.0 +3.4**
IUG luzhnay 5.29 273 *e*P **Pn** **00 50 24.0 +3.4**
IUG *e*LQ LQ 00 51 52.1
IUG luzhnay 5.29 273 *e*P **Pg** **00 50 41.0 -1.3**
316nm,0.6s
IUG *e*S **Sg** **00 51 53.3 +2.5**
2µm,1.2s
BRLS Boroldaу 5.48 283 Pg **Pg** **00 50 45.7 -0.3**
35nm,0.5s
BRLS Lg Lg 00 52 00.9
321nm,0.4s
BRLS Boroldaу 5.48 283 *e*PN **Pn** **00 50 27.2 +4.0**
BRLS Boroldaу 5.48 283 *e*P **Pn** **00 50 27.2 +4.0**
BRLS Boroldaу 5.48 283 *e*P **Pg** **00 50 45.7 -0.3**
35nm,0.5s
BRLS *e*S **Sg** **00 52 00.9 +3.9**
321nm,0.4s
CHM Chimkent 5.60 275 *e*P **Pg** **00 50 46.6 -1.8**
112nm,0.4s
CHM *e*S **Sg** **00 52 02.5 +1.6**
736nm,0.7s
MAKZ Makanchi 5.89 34 **Pn** **00 50 30.3 +1.5**
MAKZ Makanchi 5.89 34⇓Pn **Pn** **00 50 30.7 +1.9**
4.2nm,0.4s
MAKZ ⇑Lg Lg 00 52 04.9
120nm,0.9s
MAKZ Makanchi 5.89 34 PN **Pn** **00 50 30.3 +1.5**
MK31 Makanchi Array 6.01 36 Pn **Pn** **00 50 32.2 +1.7**
7.7nm,0.6s,baz=212,slow=13,SNR=230
MK31 ⇑Lg Lg 00 52 10.4
59nm,0.6s
MK31 Makanchi Array 6.01 36*d* PN **Pn** **00 50 32.4 +1.9**
MKAR Makanchi Array 6.01 36 Pn **Pn** **00 50 32.4 +1.9**
3.2nm,0.3s,baz=213,slow=15,SNR=104
MKAR Lg Lg 00 52 06.9
7.1nm,0.3s,baz=218,slow=21,SNR=5.3
MKAR LR LR 00 53 13.9
comp=Z,569nm,21.9s,baz=200,slow=42
7.7nm,0.4s
GAR Garm 6.02 242 **Pn** **00 50 34.4 +3.7**
CHGR Chuyangaron 6.97 244 **Pn** **00 50 46.2 +2.5**
CHGR Chuyangaron 6.97 244*d* PN **Pn** **00 50 47.0 +3.3**
ZSN Zaisan 7.71 43 Pg Pb 00 51 25.3 +10
17nm,0.6s
ZSN Zaisan 7.71 43 *e*P Pb 00 51 25.3 +10
17nm,0.6s
ZSN *e*S Sb 00 53 09.5 +22
75nm,1.6s
WMQ Urumqi 7.95 74 P **Pn** **00 50 58.3 +1.2**
WMQ S **Sn** **00 52 28.8 +1.4**
WMQ SMN
94nm,1.3s
WMQ SME
84nm,1.5s
SHAA Shahritus 8.26 240 **Pn** **00 51 02.5 +1.1**
BRZS Berezniki 8.52 340 Pg Pn 00 51 40.9 +36
0.7nm,0.2s
BRZS Lg Lg 00 53 36.6
136nm,0.6s
BRZS Berezniki 8.52 340 *e*P Pn 00 51 40.9 +36
0.7nm,0.2s
BRZS *e*S Sn 00 53 36.6 +55
136nm,0.6s
KURBB Kurchatov Arra 8.63 6 Pn **Pn** **00 51 06.3 0.0**
0.2nm,0.3s,baz=193,slow=12,SNR=9.6
KURBB Sn **Sn** **00 52 41.6 -2.4**
0.5nm,0.3s,baz=189,slow=27,SNR=4.1
KURBB Lg Lg 00 53 31.0
1.2nm,0.3s,baz=193,slow=32,SNR=6.3
0.4nm,0.3s
KURBB Kurchatov Arra 8.63 6⇑Pn **Pn** **00 51 06.4 0.0**
9.4nm,0.7s
KURBB ⇓Lg Lg 00 53 33.9
294nm,0.8s
SEM Semipalatinsk 8.64 13 Pg Pn 00 51 43.1 +36
12nm,0.4s
SEM Lg Lg 00 53 40.1
65nm,0.8s
SEM Semipalatinsk 8.64 13 *e*P Pn 00 51 43.1 +36
12nm,0.4s
SEM *e*S Sn 00 53 40.1 +56
65nm,0.8s
KURK Kurchatov 8.73 6 **Pn** **00 51 08.2 +0.5**
KURK Kurchatov 8.73 6⇑Pn **Pn** **00 51 08.5 +0.8**
4.3nm,0.8s
KURK ⇓Lg Lg 00 53 37.1
95nm,1.0s
KURK Kurchatov 8.73 6 P **Pn** **00 51 06.3 -1.4**
KURK 00 52 41.6
KBL Kabul 9.82 223 **Pn** **00 51 22.9 0.0**
KBL Kabul 9.82 223 P **Pn** **00 51 23.0 0.0**
DGZ Jazzator, Alta 10.48 40⇓ *e*P **Pn** **00 51 33.5 +1.6**
DGZ pmax pmax
comp=Z,5.0nm,1.3s
BVAR Borovoye Array 11.88 340 Pn **Pn** **00 51 50.6 -0.3**
comp=Z,0.3nm,0.3s,baz=142,slow=13,SNR=23
BVAR Sn **Sn** **00 53 57.8 -6.0**
comp=Z,0.2nm,0.3s,baz=156,slow=25,SNR=3.4
BVAR Lg Lg 00 55 15.8
comp=Z,0.6nm,0.3s,baz=153,slow=27,SNR=6.0
BVAR LR LR 00 56 34.8
comp=Z,351nm,19.3s,baz=156,slow=38
comp=Z,3.5nm,0.4s
BORK Borovoye 11.92 340 **Pn** **00 51 50.1 -1.3**
BORK Borovoye 11.92 340*de*P **Pn** **00 51 51.1 -0.3**
ZAA0 Zalesovo Array 12.96 21 **Pn** **00 52 05.4 -0.2**
ZALV Zalesovo Beam 12.96 21 Pn **Pn** **00 52 06.6 +1.0**
comp=Z,0.5nm,0.3s,baz=212,slow=14,SNR=14
ZALV Sn **Sn** **00 54 26.8 -3.2**
comp=Z,0.7nm,0.3s,baz=208,slow=21,SNR=1.8
ZALV Lg Lg 00 55 48.2
comp=Z,0.1nm,0.3s,baz=204,slow=25,SNR=2.0
ZALV LR LR 00 57 22.7
comp=Z,370nm,20.2s,baz=188,slow=38
comp=Z,1.7nm,0.6s
ZALV Zalesovo Beam 12.96 21 Pn **Pn** **00 52 06.4 +0.8**
ZALV Zalesovo Beam 12.96 21 P **Pn** **00 52 06.4 +0.8**
HRA Herat 13.97 242 **Pn** **00 52 16.1 -3.6**
AB31 Akbulak array 14.00 307 **Pn** **00 52 18.3 -1.5**
ABKAR Akbulak array 14.00 307 **Pn** **00 52 19.9 0.0**
GOMU GeErMu 14.90 107 P **Pn** **00 52 30.5 -2.1**
GOMU pmax pmax
comp=Z,10.0nm,1.0s
GOMU L L
comp=Z,260nm,7.3s
GOMU L L
comp=Z,220nm,9.0s
GOMU L L
comp=Z,160nm,8.0s
AKTO Aktyubinsk 15.63 309 Pn **Pn** **00 52 41.0 -0.8**
comp=Z,0.4nm,0.3s,baz=113,slow=13,SNR=4.0
AKTO Sn **Sn** **00 55 25.9 -9.2**
baz=165,slow=21
AKTO Lg Lg 00 57 09.2
baz=205,slow=23
AKTO LR LR 00 59 07.0
comp=Z,413nm,19.0s,baz=71,slow=38
comp=Z,0.8nm,0.4s
AKTO Aktyubinsk 15.63 309 P **Pn** **00 52 41.0 -0.8**
EVN Everest 16.12 148 Pn **Pn** **00 52 48.5 -0.4**
KNGR Kungurtug, Tuv 16.43 52⇓ *e*P **P** **00 52 54.2 -0.8**
GTA2 Gaotai 17.32 91 *e*P **Pn** **00 53 03.4 -0.1**
GTA2 pP P 00 53 06.8 +1.9
GTA2 pmax pmax
comp=Z,6.0nm,1.0s
GTA2 L L
comp=Z,250nm,15.9s
GTA2 L L
comp=Z,510nm,13.3s
GTA2 L L
comp=Z,460nm,13.3s
SVE Sverdlovsk 18.20 330 *e*P **P** **00 53 20.5 +6.2**
SVE *e*S **S** **00 56 43.9 +1.1**
SVE MLR MLR
comp=Z,447nm,10.0s
ARTI Arti 18.77 326 P **Pn** **00 53 21.9 +0.9**
comp=Z,0.9nm,0.3s,baz=155,slow=4.8,SNR=6.0
ARTI Sn **S** **00 56 52.9 -1.5**
comp=Z,0.3nm,0.3s,baz=180,slow=20,SNR=2.3
ARTI Lg Lg 00 58 55.8
comp=Z,0.4nm,0.3s,baz=198,slow=16,SNR=6.4
ARTI LR LR 01 00 54.0
comp=Z,314nm,20.4s,baz=192,slow=38
comp=Z,2.5nm,0.6s
ARTI Arti 18.77 326 P **Pn** **00 53 22.0 +0.9**
ARTI S **Sn** **00 56 51.6 +0.4**
ARTI MLR MLR
comp=Z,352nm,15.0s
MOY Mondy 18.86 51 *e*P **Pn** **00 53 23.0 +0.7**
ZAK Zakamensk 19.84 56 *e*P **P** **00 53 30.8 -1.7**
ZAK pmax pmax
comp=Z,8.0nm,1.7s
TLY Talaya 20.42 53 Lg Lg 00 59 48.0
baz=235,slow=17
TLY LR LR 01 01 01.2
comp=Z,13nm,21.6s,baz=254,slow=35
SONM Songino Array 21.43 64 P **P** **00 53 49.8 0.0**
comp=Z,3.5nm,1.0s,baz=262,slow=12,SNR=20
SONM Lg Lg 01 00 19.5
comp=Z,0.1nm,0.3s,baz=261,slow=28,SNR=1.6
SONM LR LR 01 03 06.0
comp=Z,547nm,18.7s,baz=274,slow=39
comp=Z,3.5nm,1.0s
SONM Songino Array 21.43 64 P **P** **00 53 50.4 +0.6**
SONM Songino Array 21.43 64 P **P** **00 53 50.4 +0.6**
SONM pmax pmax
comp=Z,6.0nm,0.8s
LZDM Lanzhou Array 21.47 98 P **P** **00 53 51.2 +0.7**
comp=Z,3.1nm,0.5s,baz=306,slow=5.0,SNR=5.6
comp=Z,3.1nm,0.5s
LZH Lanzhou 21.53 97 *e*P **P** **00 53 50.5 -0.5**
LZH sP pP 00 53 56.6 +3.0
LZH S **S** **00 57 51.6 +1.6**
LZH pmax pmax
comp=Z,22nm,1.8s
LZH pmax pmax
comp=Z,160nm,4.2s
LZH L L
comp=Z,300nm,14.9s
LZH L L
comp=Z,350nm,15.9s
LZH L L
comp=Z,480nm,16.2s
LKRN Lenkeran, Azer 21.82 271 P **P** **00 53 56.7 +2.9**
ULN Ulaanbaatar 21.87 64 P **P** **00 53 54.6 0.0**
ULN Ulaanbaatar 21.87 64*ce*P **P** **00 53 56.7 +2.1**
ULN pmax pmax
comp=Z,14nm,1.7s
AKT Akhty 21.90 278 *e*P **P** **00 53 56.5 +1.7**
AKT *e*PPP PPP 00 54 25.6
AKT pmax pmax
comp=Z,37nm,1.2s
SEKA Sheki 22.34 278 P **P** **00 54 01.2 +1.6**
BELG Belogornoye 22.41 308 P **P** **00 53 59.8 -0.3**
comp=Z,8.1nm,0.8s,baz=168,slow=14,SNR=3.7
comp=Z,8.1nm,0.8s
BELG Belogornoye 22.41 308*de*P **P** **00 53 59.7 -0.3**
BELG pmax pmax
comp=Z,2.0nm,1.0s
MNGR Mingechevir, A 22.52 277 P **P** **00 54 04.0 +2.6**
BRDH Bariadhala 22.81 143 LR LR 01 04 11.0
comp=Z,230nm,18.8s,baz=323,slow=40
GANJ Ganja 23.12 277 P **P** **00 54 10.1 +2.4**
KIRV Kirov 23.97 323 LR LR 01 03 58.0
comp=Z,358nm,18.6s,baz=142,slow=37
KIRV Kirov 23.97 323⇑ *e*P **P** **00 54 16.7 +0.8**
NAX Nakhchivan 24.12 274 P **P** **00 54 19.5 +1.9**
UOSS Minazif 24.30 232 P **P** **00 54 18.9 -0.3**
UOSS IAmb IAmb 00 54 22.3
comp=Z,8.8nm,0.8s
GNI Garni 24.41 276 LR LR 01 05 09.2
comp=Z,152nm,19.3s,baz=65,slow=40
GNI Garni 24.41 276 P **P** **00 54 21.3 +0.9**
GNI Garni 24.41 276*ce*P **P** **00 54 23.6 +3.2**
GNI pmax pmax
comp=Z,46nm,1.3s
NCK Nalchik 24.57 285⇑ *e*P **P** **00 54 22.7 +1.1**
NCK pmax pmax
comp=Z,26nm,2.2s
GOF Gofitskoye 24.78 289*ce*P **P** **00 54 25.6 +2.1**
KBZ Khabaz 25.04 286 P **P** **00 54 26.2 +0.4**
comp=Z,3.1nm,0.9s,baz=163,slow=4.8,SNR=6.9
KBZ LR LR 01 05 47.9
comp=Z,117nm,21.5s,baz=60,slow=40
comp=Z,3.1nm,0.9s
KBZ Khabaz 25.04 286⇑ *e*P **P** **00 54 26.9 +1.1**
KBZ pmax pmax
comp=Z,6.0nm,1.0s
KVAR Kislovodsk Arr 25.16 286 P **P** **00 54 27.8 +0.8**
comp=Z,2.2nm,0.7s,baz=78,slow=9.3,SNR=2.3
KVAR LR LR 01 04 59.5
comp=Z,174nm,20.8s,baz=274,slow=38
comp=Z,2.2nm,0.7s
KIV Kislovodsk 25.16 286 P **P** **00 54 27.1 +0.1**
KIV IAmb IAmb 00 54 29.8
comp=Z,12nm,0.7s
KIV Kislovodsk 25.16 286 *e*P **P** **00 54 28.8 +1.8**
KIV *e*S **S** **00 58 54.3 +1.9**
KIV pmax pmax
comp=Z,10.0nm,1.1s
KIV MLR MLR
comp=Z,130nm,15.0s
SHA1 Shidzhatmaz 25.21 286⇓ *e*P **P** **00 54 28.6 +0.9**
NEUR Neytrino 25.25 284⇑ *e*P **P** **00 54 28.8 +0.8**
NEUR pmax pmax
comp=Z,12nm,1.3s
PZH PanZhiHua 25.45 120 P **P** **00 54 31.8 +2.0**
PZH pmax pmax
comp=Z,10.0nm,1.3s
KARS Kars 25.52 278 P **P** **00 54 30.1 -0.2**
KARS IAmb IAmb 00 54 41.2
comp=Z,11nm,1.0s
KARS Kars 25.52 278 P **P** **00 54 30.1 -0.2**
KARS pmax pmax
comp=Z,11nm,1.0s
HHC Hu-ho-hao-te 25.74 81 *e*P **P** **00 54 31.9 -0.4**
HHC pmax pmax
comp=Z,10.0nm,0.6s
HHC pmax pmax
comp=Z,38nm,4.6s
HHC L L
comp=Z,190nm,12.0s
HHC L L
comp=Z,180nm,11.9s
HHC L L
comp=Z,170nm,11.2s
GURO Goruymak-BITLI 26.88 274 P **P** **00 54 42.5 -0.2**
KMI2 Kunming 27.04 120⇑P **P** **00 54 45.3 +1.0**
KMI2 pmax pmax
comp=Z,13nm,0.7s
KMI2 L L
comp=Z,210nm,19.4s
KMI2 L L
comp=Z,280nm,18.1s
KMI2 L L
comp=Z,350nm,20.2s
SOC Sochi 27.34 286 *e*P **P** **00 54 48.6 +2.0**
SOC *e* 00 55 29.1
SOC *e*S **S** **00 59 26.8 +0.1**
SOC *e*SS **SnSn** **01 00 37.1 +2.2**
SOC pmax pmax
comp=Z,6.0nm,0.8s
SOC MLR MLR
comp=Z,130nm,12.0s
KOPT Kop Dagi 27.58 278 P **P** **00 54 47.5 -1.7**
KOPT IAmb IAmb 00 54 53.4
comp=Z,8.0nm,1.1s
NRIK Noril'sk 27.89 8 P **P** **00 54 51.3 0.0**
comp=Z,3.1nm,0.8s,baz=186,slow=6.2,SNR=7.7
NRIK LR LR 01 07 33.0
comp=Z,113nm,18.5s,baz=182,slow=40
comp=Z,3.1nm,0.8s
NRIK Noril'sk 27.89 8 P **P** **00 54 50.5 -0.8**
NRIK Noril'sk 27.89 8⇑ *e*P **P** **00 54 51.1 -0.2**
NRIK pmax pmax
comp=Z,13nm,1.4s
OBN Obninsk 29.40 310 LR LR 01 07 10.3
comp=Z,150nm,21.2s,baz=136,slow=37
KLMR Klimovskoe 29.46 323 *e*P **P** **00 55 03.6 -1.7**
KLMR pmax pmax
comp=Z,5.0nm,1.0s
KLMR MLR MLR
comp=Z,629nm,13.0s
CMAR Chiang Mai Arr 29.96 135 P **P** **00 55 08.8 -1.3**
comp=Z,0.9nm,0.7s,baz=319,slow=10,SNR=5.3
comp=Z,0.9nm,0.7s
RAYN Ar Rayn 32.12 245 P **P** **00 55 30.2 +0.9**
RAYN Ar Rayn 32.12 245 P **P** **00 55 30.2 +0.9**
RAYN pmax pmax
comp=Z,9.0nm,0.8s
BR131 Keskin Array S 32.71 281 P **P** **00 55 35.6 +1.3**
BR131 IAmb IAmb 00 55 36.4
comp=Z,8.5nm,1.0s
BR131 Keskin Array S 32.71 281*d* iP **P** **00 55 35.6 +1.3**
BRTR Keskin Array B 32.71 281 P **P** **00 55 35.2 +0.9**
comp=Z,3.5nm,0.8s,baz=92,slow=8.6,SNR=21
comp=Z,3.5nm,0.8s
BRTR Keskin Array B 32.71 281 P **P** **00 55 35.9 +1.6**
BRTR Keskin Array B 32.71 281 P **P** **00 55 35.9 +1.6**
AKASG Malin Array Be 33.65 302 P **P** **00 55 41.3 -0.9**
comp=Z,0.2nm,0.3s,baz=76,slow=8.1,SNR=1.8
AKASG LR LR 01 12 11.1
comp=Z,236nm,18.4s,baz=90,slow=41
comp=Z,0.2nm,0.3s
NJ2 Nanjing 34.46 93 *e*P **P** **00 55 49.0 -0.5**
NJ2 pmax pmax
comp=Z,23nm,0.6s
PALK Pallekele 34.77 174 LR LR 01 10 50.0
comp=Z,245nm,19.8s,baz=338,slow=38
HEH HeiHe 35.20 59 *e*P **P** **00 55 56.6 +1.0**
HEH pmax pmax
comp=Z,9.0nm,0.7s
FINES FINESS Array B 35.89 320 P **P** **00 56 01.8 +0.3**
comp=Z,1.9nm,0.7s,baz=96,slow=9.3,SNR=16
FINES LR LR 01 11 19.5
comp=Z,200nm,19.8s,baz=100,slow=37
comp=Z,1.9nm,0.7s
TESR Tescani 35.92 295⇑P **P** **00 56 02.4 +0.5**
EIL Elat 36.01 264 LR LR 01 14 10.1
comp=Z,74nm,19.1s,baz=62,slow=42
MLR Muntele Rosu 36.62 293 LR LR 01 13 35.9
comp=Z,205nm,18.8s,baz=74,slow=40
MLR Muntele Rosu 36.62 293⇓P **P** **00 56 10.4 +2.4**
MLR Muntele Rosu 36.62 293 P P 00 56 12.9 +4.8
YAK Yakutsk 36.68 39 LR LR 01 11 57.5
comp=Z,261nm,18.9s,baz=252,slow=37
DOPR Dopca 36.89 294⇑P **P** **00 56 11.8 +1.5**
ARR Arges 37.54 293⇓P **P** **00 56 17.5 +1.6**
KWP Kalwaria Pacla 37.94 301 P **P** **00 56 20.7 +1.6**
ARCES ARCESS Array B 38.07 333 P **P** **00 56 20.1 +0.1**
comp=Z,0.9nm,0.4s,baz=101,slow=8.3,SNR=12
ARCES LR LR 01 12 52.9
comp=Z,209nm,18.1s,baz=76,slow=38
comp=Z,0.9nm,0.4s
KLR Kul'dur 38.13 60 LR LR 01 13 38.1
comp=Z,132nm,18.1s,baz=288,slow=39
KLR Kul'dur 38.13 60⇓ *e*P **P** **00 56 20.8 +0.1**
KLR pmax pmax
comp=Z,17nm,1.9s
MARR Marisel-Cluj 38.26 296⇓P **P** **00 56 22.8 +0.9**
TIXI Tiksi 38.83 23⇓ *e*P **P** **00 56 25.7 -0.6**
TIXI pmax pmax
comp=Z,9.0nm,1.6s
KSRS Korea Array 38.85 79 P **P** **00 56 26.7 -0.2**
comp=Z,0.8nm,0.4s,baz=272,slow=5.0,SNR=1.3
KSRS LR LR 01 13 23.9
comp=Z,52nm,18.5s,baz=290,slow=38
comp=Z,0.8nm,0.4s
BZS Buzias 39.53 295⇓P **P** **00 56 33.7 +1.2**
LANS Liptovska Anna 40.11 301 *e*P **P** **00 56 39.1 +1.8**
LANS Liptovska Anna 40.11 301 *e*P **P** **00 56 39.1 +1.8**
MORC Moravsky Berou 41.20 302⇑P **P** **00 56 46.4 +0.1**
MORH Mrgy, Hungar 41.37 296⇑P **P** **00 56 47.0 -0.7**
KRLC Kraliky 41.61 303 *e*P P 00 56 38.2 -11
DPC Dobruska-Polom 41.84 303 *e*P **P** **00 56 52.3 +0.8**
DPC Dobruska-Polom 41.84 303 *e*P **P** **00 56 52.3 +0.8**
HFS Hagfors 41.90 318 P **P** **00 56 51.9 +0.1**
comp=Z,0.9nm,0.4s,baz=94,slow=11,SNR=12
HFS LR LR 01 13 24.8

comp=Z,75nm,19.5s,baz=80,slow=35
comp=Z,0.9nm,0.4s
VRAC Vranov 41.91 301 LR LR 01 18 02.9
comp=Z,145nm,18.4s,baz=93,slow=41
UPC Upice 41.99 303 *eP* **P 00 56 54.0 +1.2**
UPC Upice 41.99 303 *eP* **P 00 56 54.0 +1.2**
PDG Podgorica 42.12 291 ⇓P **P 00 56 54.8 +0.9**
PDG Podgorica 42.12 291 P **P 00 56 53.8 0.0**
ITM Ithomi 42.19 282 P **P 00 56 52.7 -1.9**
ITM IAmb IAmb 00 57 02.1
comp=Z,15nm,1.2s
RONA Rosalia, Austr 42.51 299 *ep*P pP 00 56 59.9 -0.1
comp=Z,2.1nm,1.3s
CONA Conrad Observa 42.73 300 *i* P **P 00 56 59.5 +0.6**
comp=Z,3.6nm,1.1s
JNU Nakatsue 42.90 84 LR LR 01 16 22.2
comp=Z,123nm,19.4s,baz=305,slow=38
NORES NORESS Array B 42.91 319 P **P 00 57 00.0 -0.1**
NB2 NORSAR Subarra 43.05 319 P **P 00 57 01.2 0.0**
comp=Z,1.0nm,0.5s,baz=85,slow=8.6
NOA NORSAR Array B 43.05 319 P **P 00 57 00.7 -0.5**
comp=Z,1.5nm,0.6s,baz=86,slow=8.0,SNR=7.0
NOA LR LR 01 15 39.2
comp=Z,176nm,18.8s,baz=95,slow=37
comp=Z,1.5nm,0.6s
SPITS Spitsbergen Ar 43.29 345 P **P 00 57 03.5 +0.5**
comp=Z,8.4nm,1.0s,baz=157,slow=9.4,SNR=1.8
SPITS LR LR 01 18 32.4
comp=Z,153nm,18.8s,baz=115,slow=41
comp=Z,8.4nm,1.0s
CKRC Cesky Krumlov 43.48 301 *eP* **P 00 57 06.5 +1.6**
CKRC Cesky Krumlov 43.48 301 *eP* **P 00 57 06.5 +1.6**
SOKA Soboth 43.63 298 *eP* **P 00 57 06.4 +0.3**
comp=Z,4.4nm,1.4s
CLL Collm 43.66 305 *i* P **P 00 57 06.4 +0.1**
CLL *e* 00 57 15.0
CLL *eS* **S 01 03 42.0 +5.8**
CLL Collm 43.66 305 *i* P **P 00 57 06.4 +0.1**
CLL *ex* x 00 57 15.0
CLL *eS* **S 01 03 42.0 +5.8**
GERES GERESS Array B 43.86 301 P **P 00 57 08.6 +0.5**
comp=Z,0.7nm,0.7s,baz=67,slow=7.8,SNR=5.5
comp=Z,0.7nm,0.7s
KHC Kasperske Hory 43.86 302 *eP* **P 00 57 04.9 -3.1**
KHC Kasperske Hory 43.86 302 *eP* **P 00 57 04.9 -3.1**
OBKA Obir 44.00 298 *i* P **P 00 57 10.3 +1.2**
comp=Z,4.9nm,1.5s
TRI Trieste 44.77 297 P **P 00 57 13.5 -1.7**
TRI IAmb IAmb 00 57 15.1
comp=Z,8.7nm,1.0s
TRI Trieste 44.77 297 P **P 00 57 13.5 -1.7**
TRI pmax pmax
comp=Z,9.0nm,1.0s
LESA Schwarzleotal 44.94 300 *eP* **P 00 57 17.0 +0.4**
comp=Z,2.2nm,1.0s
TIP Timpagrande 45.09 287 P **P 00 57 17.3 -0.6**
TIP **pP 00 57 17.9 -3.0**
CUC Castrocucco 45.43 289 P **P 00 57 21.1 +0.5**
CUC IAmb IAmb 00 57 23.1
comp=Z,5.6nm,0.9s
WTTA Wattenberg 45.66 300 *eP* **P 00 57 22.3 -0.1**
comp=Z,4.8nm,1.3s
MOTA Moosalm 45.98 300 *i* P **P 00 57 24.9 -0.1**
comp=Z,6.2nm,1.1s
RETA Reutte 46.15 300 *eP* **P 00 57 26.3 +0.1**
comp=Z,3.1nm,0.6s
AQU L'Aquila 46.19 293 P **P 00 57 29.0 +2.4**
FETA Feichten 46.32 300 *i* P **P 00 57 27.6 -0.1**
comp=Z,3.1nm,1.3s
MJAR Matsushiro Arr 46.71 76 P **P 00 57 28.4 -2.3**
comp=Z,0.8nm,0.5s,baz=299,slow=8.3,SNR=4.2
MJAR LR LR 01 18 05.2
comp=Z,46nm,18.2s,baz=242,slow=37
comp=Z,0.8nm,0.5s
ASAJ Asahikawa 46.71 64 LR LR 01 18 26.5
comp=Z,158nm,18.4s,baz=193,slow=38
DAVA Damuels 46.78 301 *i* P **P 00 57 31.3 0.0**
comp=Z,8.7nm,1.4s
DAVOX Davos/Dischmat 46.95 300 LR LR 01 20 10.7
comp=Z,135nm,20.4s,baz=67,slow=40
SEY Seymchan 47.15 37 LR LR 01 18 24.0
comp=Z,105nm,21.7s,baz=314,slow=37
SEY Seymchan 47.15 37⇑ *eP* **P 00 57 34.4 +0.7**
SEY pmax pmax
comp=Z,5.0nm,1.6s
FURI Furi 47.25 237 LR LR 01 20 35.8
comp=Z,180nm,18.1s,baz=26,slow=40
BNI Bardonecchia 49.66 299 P **P 00 57 53.9 +0.3**
BNI **pP 00 57 54.1 -2.4**
BNI sP 00 57 54.3 -3.3
BNI Bardonecchia 49.66 299 P **P 00 57 53.9 +0.3**
EKA Eskdalemuir Ar 51.73 314 P **P 00 58 08.0 -0.8**
comp=Z,3.0nm,0.8s,baz=70,slow=8.4,SNR=10
EKA LR LR 01 20 03.5
comp=Z,107nm,18.6s,baz=61,slow=36
comp=Z,3.0nm,0.8s
PETK Petropavlovsk- 52.70 48 P **P 00 58 15.6 -0.5**
comp=Z,2.0nm,0.8s,baz=297,slow=13,SNR=6.3
PETK LR LR 01 21 20.6
comp=Z,72nm,19.9s,baz=283,slow=37
comp=Z,2.0nm,0.8s
BORG Borgarnes 56.24 329 LR LR 01 22 20.5
comp=Z,72nm,20.8s,baz=55,slow=36
ESDC Sonseca Array 59.12 297 P **P 00 59 01.9 -0.5**
comp=Z,1.6nm,0.9s,baz=46,slow=6.3,SNR=9.0
comp=Z,1.6nm,0.9s
RES Resolute Bay 63.43 358 P **P 00 59 29.7 -1.2**
comp=Z,1.4nm,1.0s,baz=18,slow=3.5,SNR=4.7
RES LR LR 01 29 40.2
comp=Z,39nm,20.6s,baz=22,slow=38
comp=Z,1.4nm,1.0s
F21K Alatna River 64.50 19 IAmb IAmb 00 59 39.7
comp=Z,3.8nm,1.1s
F25K Christian Rive 66.00 17 IAmb IAmb 00 59 49.0
comp=Z,3.5nm,1.0s
G24K Hadweenzic Riv 66.34 18 IAmb IAmb 00 59 50.5
comp=Z,5.1nm,1.0s
INK Inuvik 67.59 12 P **P 00 59 57.3 -0.5**
comp=Z,2.6nm,0.8s,baz=357,slow=8.8,SNR=6.6
comp=Z,2.6nm,0.8s
ILAR Eielson Array 68.08 19 P **P 01 00 00.1 -1.0**
comp=Z,1.7nm,0.9s,baz=317,slow=5.6,SNR=18
ILAR LR LR 01 31 40.0
comp=Z,68nm,19.7s,baz=260,slow=38
comp=Z,1.7nm,0.9s
SKT Skwentna 69.15 22 IAmb IAmb 01 00 08.3
comp=Z,6.0nm,1.1s
SCRK Sand Creek 69.43 18 IAmb IAmb 01 00 09.5
comp=Z,2.9nm,0.9s
TORD Torodi Ar. Bea 70.54 270 P **P 01 00 15.9 -1.0**
comp=Z,7.6nm,0.9s,baz=42,slow=4.1,SNR=35
comp=Z,7.6nm,0.9s
TORD Torodi Ar. Bea 70.54 270 **P 01 00 16.5 -0.5**
N25K Chitina, Valde 71.31 20 P **P 01 00 22.1 +1.0**
N25K IAmb IAmb 01 00 23.0
comp=Z,5.2nm,1.0s
BMRM Bremner River 71.86 20 P **P 01 00 24.4 0.0**
M31M Drury Creek, Y 73.04 15 IAmb IAmb 01 00 31.4
comp=Z,4.1nm,0.9s
HYT Haines Junctio 73.66 17 **P 01 00 35.5 +0.3**
HYT IAmb IAmb 01 00 36.0
comp=Z,4.5nm,0.8s
PSA00 Pilbara Seismi 74.60 139 P **P 01 00 40.5 -0.4**
PSA00 Pilbara Seismi 74.60 139 **P 01 00 40.3 -0.7**
PSA00 IAmb IAmb 01 00 41.6
comp=Z,14nm,1.1s
YKA Yellowknife Ar 75.38 6 P **P 01 00 43.9 -1.1**
comp=Z,1.5nm,0.9s,baz=345,slow=6.2,SNR=20
comp=Z,1.5nm,0.9s
YKAW1 Yellowknife Wh 75.40 6 IAmb IAmb 01 00 45.5
comp=Z,3.6nm,0.9s
WRA Warramunga Arr 81.18 127 P **P 01 01 16.4 -1.2**
comp=Z,6.7nm,1.0s,baz=332,slow=5.5,SNR=31
comp=Z,6.7nm,1.0s
ASAR Alice Springs 83.81 130 P **P 01 01 30.0 -1.3**
comp=Z,2.3nm,1.0s,baz=328,slow=5.5,SNR=12
comp=Z,2.3nm,1.0s
CTA Charters Tower 88.76 119 P **P 01 01 54.5 -1.2**
comp=Z,4.4nm,0.9s,baz=333,slow=2.3,SNR=2.2
comp=Z,4.4nm,0.9s
NEW Newport 89.19 9 P **P 01 01 56.9 -0.6**
comp=Z,1.3nm,0.6s,baz=319,slow=3.5,SNR=4.6
comp=Z,1.3nm,0.6s
YBH Yreka Blue Hor 94.70 15 P **P 01 02 23.6 +0.4**
baz=360,slow=3.3
PDAR Pinedale Array 95.35 5 P **P 01 02 25.5 -0.8**
comp=Z,0.3nm,0.5s,baz=64,slow=3.4,SNR=5.6
comp=Z,0.3nm,0.5s
ELK Elko 96.83 9 P **P 01 02 32.6 -0.5**
comp=Z,0.4nm,0.4s,baz=38,slow=6.5,SNR=2.8
comp=Z,0.4nm,0.4s

*GII **20** 00:50:10.9±0.0, 36.°62N±0.°07×23.°28E±0.°02, h0km, Md3.5/1, confirmed*
*THE **20** 00:50:11.5, 37.°N±2.°×2.°3E±.°, h51km±3km, M3.1/16, MLh3.1/16*
*ATH **20** 00:50:11.0, 37.°35N×22.°76E, h54km±1km, ML3.3/22, Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*
ISC 20 00:50:11.0±1.3, 37.°33N±0.°03×22.°76E±0.°02, h55km±8km, n69, σ0s57/118, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARS1	**Argos**	**0.31**	**355**	P	**Pn**	**00 50 20.8**	**+0.2**
ARS1				S	**Sn**	**00 50 27.5**	**-0.1**
VLX	**Vlachokerasia**	**0.31**	**278**	P	**Pn**	**00 50 20.6**	**-0.2**
VLX				S	**Sn**	**00 50 27.9**	**0.0**
VLX	**Vlachokerasia**	**0.31**	**278**	P	**Pn**	**00 50 20.4**	**-0.4**
VLX				S	**Sn**	**00 50 27.9**	**0.0**
MET3	**Ano Fanari,Met**	**0.44**	**56**	P	**Pn**	**00 50 22.0**	**0.0**
MET3				S	**Sn**	**00 50 29.9**	**-0.1**
MET2	**Kameni Chora,**	**0.53**	**58**	P	**Pn**	**00 50 23.5**	**+0.5**
MET2				S	**Sn**	**00 50 31.5**	**-0.1**
MET6	**Megalochori,Me**	**0.54**	**61**	P	**Pn**	**00 50 23.6**	**+0.6**
MET6				S	**Sn**	**00 50 31.4**	**-0.3**
MET1	**Methana Town,**	**0.55**	**63**	P	**Pn**	**00 50 23.5**	**+0.3**
MET1				S	**Sn**	**00 50 31.5**	**-0.5**
MET5	**Makryloggos,Me**	**0.56**	**58**	P	**Pn**	**00 50 23.9**	**+0.7**
MET5				S	**Sn**	**00 50 31.9**	**-0.2**
MET4	**Agioi Theodoro**	**0.58**	**60**	P	**Pn**	**00 50 24.3**	**+0.8**
MET4				S	**Sn**	**00 50 32.4**	**-0.2**
VLI	**Veliai**	**0.63**	**167**	P	**Pn**	**00 50 23.1**	**-0.9**
VLI				S	**Sn**	**00 50 34.0**	**+0.4**
ITM	**Ithomi**	**0.68**	**258**	P	**Pn**	**00 50 24.6**	**-0.2**
ITM				S	**Sn**	**00 50 35.8**	**+1.0**
ITM	**Ithomi**	**0.68**	**258**	P	**Pn**	**00 50 24.4**	**-0.4**
ITM				S	**Sn**	**00 50 34.9**	**+0.1**
GUR	**Goura**	**0.69**	**331**	P	**Pn**	**00 50 24.9**	**0.0**
GUR				S	**Sn**	**00 50 35.0**	**-0.1**
GUR	**Goura**	**0.69**	**331**	P	**Pn**	**00 50 24.8**	**-0.2**
GUR				S	**Sn**	**00 50 34.4**	**-0.7**
LTK	**Loutraki**	**0.71**	**13**	P	**Pn**	**00 50 25.3**	**+0.2**
LTK				S	**Sn**	**00 50 36.7**	**+1.3**
LTK	**Loutraki**	**0.71**	**13**	P	**Pn**	**00 50 25.3**	**+0.2**
LTK				S	**Sn**	**00 50 36.0**	**+0.5**
NPS1	**Neapolis Lacon**	**0.85**	**164**	P	**Pn**	**00 50 26.3**	**-0.5**
NPS1				S	**Sn**	**00 50 38.3**	**-0.2**
KLV	**Kalavryta, Ach**	**0.86**	**326**	P	**Pn**	**00 50 26.9**	**-0.2**
KLV				S	**Sn**	**00 50 39.0**	**+0.1**
KLV	**Kalavryta, Ach**	**0.86**	**326**	P	**Pn**	**00 50 27.0**	**-0.1**
KLV				S	**Sn**	**00 50 37.8**	**-1.2**
AMT	**Artemida-Makis**	**0.86**	**284**	P	**Pn**	**00 50 27.0**	**0.0**
AMT				S	**Sn**	**00 50 39.7**	**+0.8**
AMT	**Artemida-Makis**	**0.86**	**284**	P	**Pn**	**00 50 27.1**	**0.0**
AMT				S	**Sn**	**00 50 39.5**	**+0.6**
KLV1	**Kalavrita**	**0.87**	**324**	P	**Pn**	**00 50 27.0**	**-0.2**
KLV1				S	**Sn**	**00 50 39.3**	**+0.1**
VILL	**Villia**	**0.94**	**27**	P	**Pn**	**00 50 28.1**	**0.0**
VILL				S	**Sn**	**00 50 41.9**	**+1.2**
MAGU	**Magoula**	**0.96**	**38**	P	**Pn**	**00 50 28.4**	**+0.2**
MAGU				S	**Sn**	**00 50 42.0**	**+1.0**
MAGU	**Magoula**	**0.96**	**38**	P	**Pn**	**00 50 28.0**	**-0.3**
MAGU				S	**Sn**	**00 50 40.6**	**-0.4**
VIL2	**Platees**	**0.97**	**24**	P	**Pn**	**00 50 28.1**	**-0.4**
VIL2				S	**Sn**	**00 50 40.4**	**-0.9**
VLY	**Voula,Athens**	**0.97**	**57**	P	**Pn**	**00 50 28.7**	**+0.3**
VLY				S	**Sn**	**00 50 41.7**	**+0.4**
VLY	**Voula,Athens**	**0.97**	**57**	P	**Pn**	**00 50 28.5**	**+0.1**
VLY				S	**Sn**	**00 50 40.5**	**-0.9**
ATH	**Athens Observa**	**0.99**	**49**	P	**Pn**	**00 50 29.1**	**+0.4**
ATH				S	**Sn**	**00 50 42.5**	**+0.7**
ATH	**Athens Observa**	**0.99**	**49**	P	**Pn**	**00 50 29.2**	**+0.4**
ATH				S	**Sn**	**00 50 41.5**	**-0.3**
ATH5	**Athens Parliam**	**1.01**	**50**	P	**Pn**	**00 50 28.2**	**-0.7**
ATH5				S	**Sn**	**00 50 40.9**	**-1.3**
AIOA	**Agios Ioannis,**	**1.03**	**327**	P	**Pn**	**00 50 28.7**	**-0.5**
AIOA				S	**Sn**	**00 50 41.5**	**-1.1**
ATHU	**Athens Univers**	**1.03**	**52**	P	**Pn**	**00 50 29.5**	**+0.3**
ATHU				S	**Sn**	**00 50 43.5**	**+0.8**
ATHU	**Athens Univers**	**1.03**	**52**	P	**Pn**	**00 50 29.4**	**+0.1**
ATHU				S	**Sn**	**00 50 42.5**	**-0.2**
TEME	**Temeni, Aigial**	**1.04**	**331**	P	**Pn**	**00 50 29.5**	**+0.2**
TEME				S	**Sn**	**00 50 42.2**	**-0.7**
DRO	**Drossia**	**1.04**	**307**	P	**Pn**	**00 50 29.7**	**+0.3**
STFN	**Stefani**	**1.05**	**36**	P	**Pn**	**00 50 29.9**	**+0.4**
STFN				S	**Sn**	**00 50 44.2**	**+0.9**
STFN	**Stefani**	**1.05**	**36**	P	**Pn**	**00 50 29.7**	**+0.2**
STFN				S	**Sn**	**00 50 43.2**	**0.0**
PTL	**Penteli**	**1.13**	**50**	P	**Pn**	**00 50 30.8**	**+0.2**
PTL				S	**Sn**	**00 50 45.9**	**+0.7**
PTL	**Penteli**	**1.13**	**50**	P	**Pn**	**00 50 30.8**	**+0.2**
PTL				S	**Sn**	**00 50 45.0**	**-0.2**
KALE	**Kalithea**	**1.17**	**335**	P	**Pn**	**00 50 31.2**	**0.0**
KALE	**Kalithea**	**1.17**	**335**	P	**Pn**	**00 50 30.7**	**-0.5**
KALE				S	**Sn**	**00 50 45.2**	**-0.9**
ZIRI	**Ziria, Aigiali**	**1.17**	**327**	P	**Pn**	**00 50 30.8**	**-0.4**
DION	**Dionisos Attik**	**1.19**	**51**	P	**Pn**	**00 50 31.9**	**+0.5**
DION				S	**Sn**	**00 50 47.3**	**+0.7**
DION	**Dionisos Attik**	**1.19**	**51**	P	**Pn**	**00 50 31.9**	**+0.5**
DION				S	**Sn**	**00 50 46.6**	**-0.1**
RLS	**Riolos of Patr**	**1.26**	**306**	P	**Pn**	**00 50 33.7**	**+1.4**
RLS				S	**Sn**	**00 50 48.9**	**+0.7**
MG00	**Magoula, Dorid**	**1.26**	**329**	P	**Pn**	**00 50 32.1**	**-0.2**
MG00				S	**Sn**	**00 50 47.8**	**-0.5**
EFP	**Efpalio**	**1.29**	**328**	P	**Pn**	**00 50 32.4**	**-0.3**
EFP				S	**Sn**	**00 50 48.9**	**0.0**
LKR	**Lokris**	**1.33**	**8**	P	**Pn**	**00 50 33.4**	**+0.2**
LKR				S	**Sn**	**00 50 50.1**	**+0.2**
LKR	**Lokris**	**1.33**	**8**	P	**Pn**	**00 50 33.2**	**-0.1**
LKR				S	**Sn**	**00 50 49.0**	**-1.0**
AGRP	**Agrapidokambos**	**1.35**	**323**	P	**Pn**	**00 50 34.0**	**+0.6**
YRMI	**Loutra Irminis**	**1.36**	**305**	P	**Pn**	**00 50 35.0**	**+1.3**
YRMI				S	**Sn**	**00 50 51.7**	**+1.1**
ATAL	**Atalanti**	**1.38**	**8**	P	**Pn**	**00 50 33.8**	**-0.1**
ATAL				S	**Sn**	**00 50 50.5**	**-0.5**
CLEM	**Kyllini,Ilia,G**	**1.41**	**294**	P	**Pn**	**00 50 34.8**	**+0.5**
ANX	**Ano Chora**	**1.43**	**332**	P	**Pn**	**00 50 34.4**	**-0.2**
ANX				S	**Sn**	**00 50 51.4**	**-1.0**
AXAR	**Agios Charalam**	**1.44**	**357**	P	**Pn**	**00 50 34.9**	**+0.2**
AXAR	**Agios Charalam**	**1.44**	**357**	P	**Pn**	**00 50 35.0**	**+0.2**
AXAR				S	**Sn**	**00 50 51.9**	**-0.6**
KARY	**Karystos**	**1.50**	**62**	P	**Pn**	**00 50 35.4**	**-0.1**
KARY				S	**Sn**	**00 50 54.1**	**0.0**
KYMI	**Kymi, Euboea I**	**1.68**	**39**	P	**Pn**	**00 50 37.9**	**0.0**
KYMI				S	**Sn**	**00 50 58.4**	**+0.1**
EVR	**Evrytania**	**1.75**	**335**	P	**Pn**	**00 50 39.8**	**+0.7**
EVR				S	**Sn**	**00 50 59.3**	**-1.1**
NEO	**Neokhori**	**2.01**	**10**	P	**Pn**	**00 50 42.0**	**-0.5**
NEO				S	**Sn**	**00 51 05.4**	**-1.0**
THL	**Klokotos Trika**	**2.31**	**345**	P	**Pn**	**00 50 46.3**	**-0.2**
THL				S	**Sn**	**00 51 14.3**	**+0.6**
KZIT	**Kziot**	**11.57**	**120**	P	Pn	00 52 47.9	-5.5
KZIT				S	Sn	00 54 50.0	-11
AMAZ	**Amatzia**	**11.58**	**116**	P	Pn	00 52 48.2	-5.3
AMAZ				S	Sn	00 54 51.9	-9.3
YTIR	**Yattir**	**11.81**	**117**	P	Pn	00 52 51.9	-4.9
YTIR				S	Sn	00 54 56.9	-10
DSI	**Dead Sea**	**11.89**	**115**	P	Pn	00 52 52.9	-4.8
DSI				S	Sn	00 55 00.0	-8.8
GHAJ	**Ghor Haditha**	**12.17**	**116**	P	Pn	00 52 55.8	-5.7
GHAJ				S	Sn	00 55 05.9	-10
KRMI	**Paran Flat**	**12.28**	**122**	P	Pn	00 52 57.7	-5.3
KRMI				S	Sn	00 55 08.2	-10
PRNI	**Paran**	**12.32**	**121**	P	Pn	00 52 58.3	-5.3
PRNI				S	Sn	00 55 08.5	-11

*IDC **20** 01:01:47.3±1.2, 12.°91S×67.°07E, h0km, mb3.6/6, mbtmp3.7/7, ML3.9/1, Error ellipse: s-maj=33.0km s-min=29.0km az=31.0*
ISC 20 01:01:48.6±1.1, 13.°0S±0.°2×67.°0E±0.°2, h10km, n14, σ0s80/8, mb3.9/6, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**7.55**	**46**	T	T	01 11 54.4	
	baz=226,slow=76,SNR=196						
H08S2	**Diego Garcia H**	**7.56**	**46**	T	T	01 11 56.0	
	baz=226,slow=76,SNR=180						
H08S3	**Diego Garcia H**	**7.57**	**46**	T	T	01 11 49.0	
	baz=226,slow=76,SNR=387						
OPO	**Ambohidratompo**	**19.85**	**251**	P	**Pn**	**01 06 22.3**	**+0.5**
	baz=84,slow=6.9,SNR=6.3						
	9.3nm,0.9s						
H04N2	**CROZET ISLANDS**	**35.50**	**198**	T	T	01 45 52.9	
	baz=27,slow=75,SNR=27						
H04N1	**CROZET ISLANDS**	**35.51**	**198**	T	T	01 45 51.7	
	baz=27,slow=75,SNR=33						
H04N3	**CROZET ISLANDS**	**35.52**	**198**	T	T	01 45 58.5	
	baz=27,slow=75,SNR=26						
CMAR	**Chiang Mai Arr**	**44.35**	**46**	P	**P**	**01 10 00.3**	**+0.9**
	1.1nm,0.3s,baz=248,slow=5.7,SNR=1.6						
	1.1nm,0.3s						
MKAR	**Makanchi Array**	**61.05**	**12**	P	**P**	**01 12 02.5**	**0.0**
	0.2nm,0.7s,baz=208,slow=7.2,SNR=2.4						
	0.2nm,0.7s						
ASAR	**Alice Springs**	**63.93**	**110**	P	**P**	**01 12 21.9**	**-0.5**
	0.5nm,0.6s,baz=278,slow=6.2,SNR=6.9						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**64.11**	**8**	P	**P**	**01 12 22.7**	**-0.2**
	0.1nm,0.2s,baz=208,slow=7.0,SNR=2.2						
	0.1nm,0.2s						
WRA	**Warramunga Arr**	**64.61**	**106**	P	**P**	**01 12 27.3**	**+0.4**
	0.6nm,0.7s,baz=272,slow=6.2,SNR=7.3						
	0.6nm,0.7s						
ZALV	**Zalesovo Beam**	**68.36**	**11**	P	**P**	**01 12 49.5**	**-0.5**
	0.5nm,0.3s,baz=212,slow=5.1,SNR=2.4						
	0.5nm,0.3s						
PDAR	**Pinedale Array**	**150.15**	**355**	PKPbc	**PKPbc**	**01 21 39.2**	**-1.2**
	0.3nm,0.5s,baz=111,slow=2.7,SNR=4.4						

*MOS **20** 01:33:12.9±1.0, 28.°62N×87.°39E, h10km, mb5.8/82, MS5.4/59, Error ellipse: s-maj=5.5km s-min=2.8km az=120.8*
*IDC **20** 01:33:12.9±0.3, 28.°64N×87.°38E, h0km, mb5.3/45, mbtmp5.2/50, ML4.6/4, MS5.2/80, Error ellipse: s-maj=8.3km s-min=6.0km az=40.0*
*DMN **20** 01:33:14.1±0.9, 28.°58N×87.°41E, h2km, Ml6.1/8, Error ellipse: s-maj=13.3km s-min=7.4km az=31.0*
*BJI **20** 01:33:14.0, 28.°63N×87.°42E, h10km, mB5.9/76, mb5.3/87, Ms5.9/98, Ms7 5.8/93*
*NEIC **20** 01:33:15.4±2.1, 28.°59N±0.°05×87.°31E±0.°06, h10km±1km, mb5.7/446, Ms_20 5.5/595, Mwb5.5/79, Mww5.7/24, Error ellipse: s-maj=10.1km s-min=7.4km az=119.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=1.67; Mθθ=0.46; Mϕϕ2.13; Mrθ0.34; Mθϕ-0.06; Mϕr-0.21; Fault plane solution: M₀1.98000×10¹⁷ NP1: ϕs345.21000°, δ49.96000°, λ-108.70000°. NP2: ϕs192.97000°, δ43.52000°, λ-69.11000°. Principal axes: T 2.1450, Plg3.0000°, Azm88.0000°; N -0.3741, Plg14.0000°, Azm358.0000°; P -1.7709, Plg75.0000°, Azm191.0000°;*
*GFZ **20** 01:33:15.1, 28.°65N×87.°33E, h13km, MW5.7, Moment Tensor Solution. s210 Moment tensor: Mrr=3.73; Mθθ-0.01; Mϕϕ3.74; Mrθ1.23; Mθϕ-0.65; Mϕr-0.67; Fault plane solution: NP1:ϕs185.00000°, δ40.00000°, λ-66.00000°. NP2:ϕs335.00000°, δ53.00000°, λ-108.00000°. Principal axes: T 3.9500, Plg6.0000°, Azm78.0000°; N 0.1800, Plg14.0000°, Azm346.0000°; P -4.1300, Plg73.0000°, Azm192.0000°;*
*ISC-PP **20** 01:33:15, 28.°59N×87.°31E, h8km, Mwppsm5.9, Moment Tensor Solution. s49 Moment tensor: Scale 10¹⁸Nm; Mrr0.33±.14; Mθθ-0.05±.06; Mϕϕ0.90±.10; Mrθ-0.12±.11; Mθϕ0.02±.07; Mϕr-0.16±.06; Fault plane solution: M₀1.01000×10¹⁸ NP1:ϕs34.60000°, δ77.00000°, λ352.00000°. NP2:ϕs126.40000°, δ82.20000°, λ-166.90000°.*
*GCMT **20** 01:33:15.5±0.1, 28.°51N±0.°01×87.°42E, h12km, MW5.7/162, Moment Tensor Solution. s135,c251; s162,c364; Duration: 1s7 Moment tensor: Scale 10¹⁷Nm; Mrr-3.98±.04; Mθθ-0.62±.04; Mϕϕ4.59±.03; Mrθ0.54±.10; Mθϕ-0.51±.03; Mϕr0.23±.09; Best double couple: M₀4.35900×10¹⁷ NP1:ϕs345.00000°, δ45.00000°, λ-103.00000°. NP2:ϕs184.00000°, δ47.00000°, λ-77.00000°. Principal axes: T 4.6430, Plg1.0000°, Azm265.0000°; N -0.5740, Plg9.0000°, Azm355.0000°; P -4.0750, Plg81.0000°, Azm167.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **20** 01:33:15.3, 28.°57N×87.°29E, h10km*
*NEIC **20** 01:33:15.4, 28.°61N×87.°33E, h14km*
*NEIC **20** 01:33:15.4, 28.°41N×87.°22E, h14km, Moment Tensor Solution. Duration: 3s4 Moment tensor: Scale 10¹⁷Nm; Mrr-3.88; Mθθ0.24; Mϕϕ3.64; Mrθ0.70; Mθϕ-0.52; Mϕr-0.40; Fault plane solution: M₀3.88000×10¹⁷ NP1: ϕs179.75000°, δ41.86000°, λ-77.23000°. NP2: ϕs342.83000°, δ49.40000°, λ-101.20000°. Principal axes: T 3.7477, Plg4.0000°, Azm81.0000°; N 0.2588, Plg8.0000°, Azm350.0000°; P -4.0065, Plg81.0000°, Azm195.0000°;*
*IPGP **20** 01:33:15.0, 28.°60N×87.°32E, h7km, Mw5.6, Fault plane solution: NP1:ϕs353.00000°, δ42.00000°, λ-82.00000°. NP2:ϕs162.00000°, δ48.00000°, λ-97.00000°.*
*PTWC **20** 01:33:15, 28.°70N×87.°40E, h10km, Mwp5.7/16*
*NDI **20** 01:33:17.9±4.3, 28.°49N×87.°31E, h10km, ML5.4, MW5.4, Presumed earthquake*
*BGR **20** 01:33:18.9, 28.°17N×86.°69E, h26km±1km, mb5.9, mB_BB6.2, Ms5.4*
ISC 20 01:33:15.1±0.4, 28.°61N±0.°02×87.°37E±0.°02, h12km±2km, h13km:pP-P, n1867, σ1s61/1702, mb5.7/532, MS5.5/460, 68C-104D, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EVN	**Everest**	**0.81**	**217**		**Pg**	**01 33 28.4**	**-2.4**
JIRN	**Jiri**	**1.40**	**228**	Pg	**Pn**	**01 33 39.8**	**-1.0**
	baz=230,slow=0.0						
JIRN				Sg	**Sn**	**01 33 59.2**	**-0.2**
	45μm,0.4s,baz=230,slow=0.0						
GUN	**Gumba**	**1.48**	**243**	Pg	**Pn**	**01 33 41.6**	**-0.3**
	baz=244,slow=0.0						
GUN				Sg	**Sg**	**01 34 02.4**	**-0.6**
	28μm,0.4s,baz=244,slow=0.0						
GTK	**Tadong**	**1.68**	**139**	*eP*	**Pg**	**01 33 46.9**	**-0.5**
GTK				IAML		01 34 09.9	
	comp=N,16μm,0.7s						
GTK				*eS*	**Sg**	**01 34 10.6**	**+1.4**
ODAN	**Odare**	**1.74**	**179**	Pg	**Pb**	**01 33 46.5**	**-0.5**
	baz=180,slow=0.0						
ODAN				Sg	**Sb**	**01 34 08.8**	**-0.1**
	comp=N,119μm,0.9s,baz=180,slow=0.0						
RAMN	**Ramite**	**1.78**	**203**	Pg	**Pn**	**01 33 46.7**	**+0.8**
	baz=204,slow=0.0						
RAMN				Sg	**Sg**	**01 34 11.4**	**-1.1**
	comp=N,49μm,0.6s,baz=204,slow=0.0						
KKN	**Kakani**	**2.02**	**247**	Pg	**Pb**	**01 33 52.5**	**+0.8**
	baz=248,slow=0.0						
KKN				Sg	**Sg**	**01 34 20.1**	**+0.2**
	baz=248,slow=0.0						
PKI	**Pulchoki**	**2.02**	**240**	Pg	**Pb**	**01 33 51.4**	**-0.4**
	baz=241,slow=0.0						
PKI				Sg	**Sg**	**01 34 18.7**	**-1.2**
	comp=N,74μm,0.7s,baz=241,slow=0.0						
DMN	**Daman**	**2.23**	**244**	Pg	**Pb**	**01 33 55.2**	**-0.3**
	baz=245,slow=0.0	

DANN Dangsing 3.19 266 Pn **Pn** **01 34 06.7 +1.5**
baz=267,slow=0.0
DANN Sg **Sb** **01 34 53.6 +2.9**
comp=E,35µm,1.1s,baz=267,slow=0.0
KOLN Koldanda 3.43 257 Pn **Pn** **01 34 09.7 +1.2**
baz=257,slow=0.0
KOLN Sg **Sg** **01 35 03.8 -1.5**
comp=E,105µm,1.7s,baz=257,slow=0.0
DHUB DHUBRI 3.48 137 eP **Pn** **01 34 11.8 +2.9**
DHUB eS **Sn** **01 34 52.2 +2.2**
DHUB IAML 01 35 02.1
comp=N,4µm,0.7s
DHUB IAML 01 35 10.9
comp=E,3µm,0.7s
LSA Lhasa 3.48 71 **Pn** **01 34 12.7 +3.2**
LSA Lhasa 3.48 71 P **Pn** **01 34 12.2 +2.8**
LSA Lhasa 3.48 71 P **Pn** **01 34 12.7 +3.2**
LSA Lhasa 3.48 71 Pn **Pn** **01 34 09.9 +0.5**
LSA L L
comp=E,122µm,7.3s
LSA L L
comp=E,130µm,10.2s
PYUN Piuthan 3.89 264 Pn **Pn** **01 34 15.1 +0.3**
baz=264,slow=0.0
PYUN Sg **Sg** **01 35 18.2 -1.9**
baz=264,slow=0.0
TAWA Tawang 4.10 103 eP **Pn** **01 34 21.1 +3.2**
TAWA eS **Sn** **01 35 07.9 +2.0**
TAWA IAML 01 35 27.6
comp=N,12µm,1.1s
TAWA IAML 01 35 30.9
comp=E,7µm,1.1s
GAYA Gaya 4.24 207 eP **Pn** **01 34 21.0 +1.5**
GUWA GUWAHATI 4.53 121 eP **Pn** **01 34 25.2 +1.7**
GUWA eS **Sn** **01 35 17.8 +1.7**
GUWA IAML 01 35 40.3
comp=N,1µm,0.8s
GUWA IAML 01 35 41.3
comp=E,2µm,0.6s
SHL Shillong 5.04 126 **Pn** **01 34 31.6 +1.0**
SHL Shillong 5.04 126 P **Pn** **01 34 31.6 +1.0**
SHL Shillong 5.04 126 P **Pn** **01 34 31.2 +0.6**
SNR=583
SHL Shillong 5.04 126 P **Pn** **01 34 31.2 +0.6**
SHL Shillong 5.04 126 eP **Pn** **01 34 31.5 +1.0**
SHL eS **Sn** **01 35 28.4 -0.3**
TEZP TEZPUR 5.21 111 eP **Pn** **01 34 36.3 +3.5**
ITAN ITANAGAR 5.81 103 eP **Pn** **01 34 45.3 +4.3**
ITAN eS **Sn** **01 35 49.4 +1.8**
ITAN IAML 01 36 26.8
comp=E,12µm,1.6s
ITAN IAML 01 36 29.9
comp=N,10µm,1.3s
ZIRO ZIRO 5.83 99 eP **Pn** **01 34 42.6 +1.2**
ZIRO eS **Sn** **01 35 47.5 -0.7**
ZIRO IAML 01 35 52.8
comp=E,8µm,0.7s
ZIRO IAML 01 35 55.5
comp=N,13µm,0.7s
AGT Agartala 5.85 143 eP **Pn** **01 34 45.2 +3.7**
AGT eS **Sn** **01 35 48.4 -0.1**
ALBI Allahabad 5.95 238 eP **Pn** **01 34 44.1 +1.1**
ALBI IAML 01 36 23.8
comp=N,3µm,1.3s
SILR SILCHAR 6.17 127 eP **Pn** **01 34 49.9 +3.8**
SILR eS **Sn** **01 35 57.1 +0.5**
SILR IAML 01 36 39.2
comp=E,6µm,1.1s
PTH Pithoragarh 6.34 281 eP **Pn** **01 34 50.8 +2.3**
PTH eS **Sn** **01 36 00.3 -0.7**
JORH JORHAT 6.38 105 eP **Pn** **01 34 51.1 +2.3**
LGTI Lohaghat 6.43 279 eP **Pn** **01 34 51.5 +1.8**
BELO BELONIA 6.47 145 eP **Pn** **01 34 51.6 +1.5**
BELO IAML 01 36 13.7
comp=N,3µm,1.1s
KOHI KOHIMA 6.66 114 eP **Pn** **01 34 53.1 +0.4**
KOHI eS **Sn** **01 36 08.5 -0.1**
KOHI IAML 01 36 13.0
comp=N,3µm,1.0s
KOHI IAML 01 36 19.1
comp=E,3µm,1.1s
MOKO MOKOCHONG 6.74 108 eP **Pn** **01 34 54.7 +0.7**
MOKO eS **Sn** **01 36 10.9 +0.1**
MOKO IAML 01 36 15.1
comp=E,4µm,0.8s
MOKO IAML 01 36 20.3
comp=N,2µm,0.7s
IMP Imphal 6.98 121 eP **Pn** **01 34 58.4 +1.3**
IMP eS **Sn** **01 36 15.2 -1.4**
IMP IAML 01 36 27.2
comp=E,603nm,0.9s
IMP IAML 01 36 29.6
comp=N,899nm,0.9s
FRKB FARRUKHABAD 7.00 262 eP **Pn** **01 34 58.9 +1.6**
FRKB eS **Sn** **01 36 18.4 +1.6**
PASG PASIGHAT 7.03 93 eP **Pn** **01 34 59.0 +1.2**
BRDH Bariadhala 7.05 146 Pn **Pn** **01 34 59.3 +1.3**
comp=N,77nm,0.3s,baz=354,slow=4.8,SNR=44
BRDH Sn **Sn** **01 36 19.7 +1.6**
comp=N,61nm,0.3s,baz=336,slow=20,SNR=12
BRDH LR LR 01 38 46.5
comp=N,17µm,18.5s,baz=351,slow=47
comp=N,788nm,0.8s
JOSI Joshimath 7.07 288 eP **Pn** **01 35 01.2 +2.6**
JOSI eS **Sn** **01 36 17.1 -1.9**
JOSI IAML 01 36 35.8
comp=E,1µm,0.8s
JOSI IAML 01 36 45.1
comp=N,1µm,1.3s
JHSG JHARSUGUGA 7.55 206 eP **Pn** **01 35 08.2 +3.2**
JHSG eS **Sn** **01 36 25.8 -4.8**
MORE Moreh 7.59 123 **Pn** **01 35 07.7 +2.3**
SAIH SAIHA 7.92 139 eP **Pn** **01 35 11.8 +1.6**
SAIH eS **Sn** **01 36 36.6 -3.3**
SAIH IAML 01 36 51.6
comp=N,2µm,0.8s
SAIH IAML 01 36 53.5
comp=E,2µm,1.4s
BLSP Bilaspur 8.00 217 eP **Pn** **01 35 12.7 +1.5**
DDI Dehra Dun 8.30 284 eP **Pn** **01 35 18.0 +2.8**
DDI eS **Sn** **01 36 46.1 -2.8**
DDI IAML 01 36 54.1
comp=N,7µm,0.9s
DDI IAML 01 36 56.3
comp=E,5µm,1.5s
HNLY HANLEY 8.34 302 eP **Pn** **01 35 18.6 +2.3**
HNLY eS **Sn** **01 36 48.3 -2.3**
HNLY IAML 01 37 06.3
comp=N,4µm,1.2s
HNLY IAML 01 37 08.5
comp=E,4µm,2.1s
JHNI Jhansi 8.41 250 eP **Pn** **01 35 15.9 -0.9**
JHNI eS **Sn** **01 36 46.2 -5.5**
JHNI IAML 01 36 50.9
comp=N,5µm,0.3s
JHNI IAML 01 36 51.3
comp=E,4µm,0.2s
KLP Kalpa 8.42 292 eP **Pn** **01 35 18.9 +1.8**
KLP eS **Sn** **01 36 50.5 -1.8**
BWNR Bhubaneshwar 8.44 190 eP **Pn** **01 35 17.5 +0.4**
BISR Bishrakh 8.73 272 eP **Pn** **01 35 23.2 +2.1**
BISR eS **Sn** **01 36 56.6 -2.8**
NDI New Delhi 8.92 273 eP **Pn** **01 35 23.5 -0.3**
NDI eS **Sn** **01 37 00.4 -3.8**
NDI IAML 01 37 04.6
comp=E,4µm,1.2s
NDI IAML 01 37 18.0
comp=N,5µm,1.2s
LDR Lodi Road 8.93 272 eP **Pn** **01 35 26.0 +2.2**
NPLP NPLP New Delhi 8.96 273 eP **Pn** **01 35 24.3 -0.1**
NPLP eS **Sn** **01 37 01.3 -4.0**
AYAN Aya Nagar 9.01 272 eP **Pn** **01 35 26.1 +1.2**
AYAN eS **Sn** **01 37 03.1 -3.2**
AYAN IAML 01 37 11.0
comp=N,5µm,1.6s
AYAN IAML 01 37 14.3
comp=E,5µm,1.2s
SMLA Simla 9.21 288 eP **Pn** **01 35 29.4 +1.8**
SMLA eS **Sn** **01 37 10.1 -1.0**
SMLA IAML 01 37 23.9
comp=N,7µm,2.0s
JHJR Jhajjar 9.43 273 eP **Pn** **01 35 29.7 -1.0**
CGRH CHANDIGARH 9.45 286 eP **Pn** **01 35 33.0 +1.9**
KUDL Kundal 9.60 270 eP **Pn** **01 35 32.2 -0.8**

RTK Rohtak 9.62 275 eP **Pn** **01 35 34.0 +0.8**
GUNA GUNA 9.81 249 eP **Pn** **01 35 34.0 -1.9**
GUNA eS **Sn** **01 37 20.1 -5.8**
GOMU GeErMu 9.84 38 P **Pn** **01 35 38.0 +1.3**
GOMU S **Sn** **01 37 30.9 +3.6**
GOMU pmax pmax
comp=N,180nm,1.1s
GOMU L L
comp=N,43µm,9.3s
GOMU L L
comp=N,38µm,9.3s
GOMU L L
comp=N,65µm,10.1s
BHK Bhakra 9.92 289 eP **Pn** **01 35 34.1 -3.4**
DHRM DHARAMSHALA 10.22 294 eP **Pn** **01 35 43.0 +1.2**
DHRM eS **Sn** **01 37 31.1 -5.3**
DHRM IAML 01 37 45.5
comp=E,1µm,1.3s
DHRM IAML 01 37 46.2
comp=N,717nm,0.8s
ALCI Alchi Leh 10.34 305 eP **Pn** **01 35 43.8 +0.3**
ALCI eS **Sn** **01 37 34.6 -4.9**
ALCI IAML 01 37 44.1
comp=N,4µm,1.1s
ALCI IAML 01 37 51.3
comp=E,6µm,1.6s
TLWR Talawar 10.41 291 eP **Pn** **01 35 46.1 +1.9**
BHPL Bhopal 10.42 241 eP **Pn** **01 35 42.4 -1.9**
BHPL eS Sn 01 37 30.3 -11
BHPL IAML 01 37 39.1
comp=E,4µm,0.6s
BHPL IAML 01 37 40.8
comp=N,4µm,0.5s
TSSA Tissa 10.53 296 eP **Pn** **01 35 46.3 +0.3**
TSSA eS **Sn** **01 37 38.3 -5.7**
TSSA IAML 01 37 59.0
comp=N,4µm,1.4s
TSSA IAML 01 37 59.7
comp=E,4µm,1.3s
NGP Nagpur 10.57 227 eP **Pn** **01 35 46.4 0.0**
TNCH TengChong 10.58 107 P **Pn** **01 35 47.0 +0.4**
TNCH pP 01 35 49.5
TNCH sP 01 35 52.3
TNCH S **Sn** **01 37 45.3 +0.2**
TNCH pmax pmax
comp=E,84nm,1.4s
TNCH pmax pmax
comp=E,2µm,3.7s
TNCH L L
comp=E,34µm,9.2s
TNCH L L
comp=E,24µm,8.4s
TNCH L L
comp=E,34µm,13.0s
THN Thein Dam 10.72 294 eP **Pn** **01 35 49.0 +0.6**
THN IAML 01 37 54.0
comp=E,3µm,1.1s
THN IAML 01 38 03.9
comp=N,2µm,1.1s
VIS Vishakhapatnam 11.45 200 eP **Pn** **01 35 55.0 -3.5**
AJM Ajmer 11.52 262 eP **Pn** **01 35 59.8 +0.4**
AJM eS **Sn** **01 38 01.6 -6.3**
JMU Jammu 11.56 294 eP **Pn** **01 36 00.3 +0.3**
JMU eS **Sn** **01 38 05.3 -3.8**
JMU IAML 01 38 19.1
comp=E,3µm,1.6s
JMU IAML 01 38 19.2
comp=N,3µm,1.1s
SRGN SRI GANGA NAGA 11.85 280 eP **Pn** **01 36 04.3 +0.5**
SRGN eS **Sn** **01 38 10.2 -5.7**
AKL Akola 12.26 232 eP **Pn** **01 36 09.3 -0.3**
BKNR BIKANER 12.43 271 eP **Pn** **01 36 09.7 -2.1**
BKNR eS Sn 01 38 21.1 -9.2
UDPR Udaipur 12.86 255 eP **Pn** **01 36 14.9 -2.8**
PZH PanZhiHua 12.92 96 P **Pn** **01 36 18.1 -0.6**
PZH S **Sn** **01 38 45.1 +2.6**
PZH pmax pmax
comp=N,30nm,0.8s
PZH pmax pmax
comp=N,1µm,6.9s
PZH L L
comp=N,11µm,15.1s
PZH L L
comp=N,30µm,13.5s
PZH L L
comp=N,40µm,13.7s
NIL Nilore 13.09 296 **Pn** **01 36 18.6 -2.3**
NIL Nilore 13.09 296 P **Pn** **01 36 18.6 -2.3**
VJD Vijayawada 13.53 209 eP **Pn** **01 36 27.7 +0.8**
HYB Hyderabad 13.77 218 eP **Pn** **01 36 29.5 -0.7**
HYB eS **Sn** **01 39 04.7 +1.5**
HYB IVMs_BB IVMs_BB 01 41 04.9
comp=Z,28µm,3.9s
KMI2 Kunming 14.15 101 ⇓P **Pn** **01 36 35.5 0.0**
KMI2 S **Sn** **01 39 06.6 -6.0**
KMI2 pmax pmax
comp=Z,65nm,0.8s
KMI2 pmax pmax
comp=Z,2µm,5.7s
KMI2 L L
comp=Z,45µm,15.8s
KMI2 L L
comp=Z,22µm,16.0s
KMI2 L L
comp=Z,48µm,14.6s
LATR Latur 14.19 227 eP **Pn** **01 36 32.6 -3.4**
LATR eS Sn 01 39 01.1 -12
WUS Wushi 14.22 334 **Pn** **01 36 34.4 -2.0**
KSH2 Kashi 14.36 320 P **Pn** **01 36 35.4 -2.9**
KSH2 PP **PnPn** **01 36 46.8 +0.6**
KSH2 S **Sn** **01 39 11.3 -6.2**
KSH2 SS **S** **01 39 35.9 -1.8**
KSH2 pmax pmax
comp=Z,300nm,1.0s
KSH2 pmax pmax
comp=Z,1µm,2.7s
KSH2 L L
comp=Z,22µm,16.5s
KSH2 L L
comp=Z,30µm,18.1s
KSH2 L L
comp=Z,16µm,12.5s
CHTO Chiang Mai 14.39 130 P **Pn** **01 36 38.8 +0.1**
CHTO Chiang Mai 14.39 130 **Pn** **01 36 37.4 -1.3**
CHTO Chiang Mai 14.39 130 P **Pn** **01 36 37.4 -1.3**
CHTO Chiang Mai 14.39 130 P **Pn** **01 36 38.5 -0.1**
CHTO P **Pn** **01 36 38.5 -0.1**
CHTO P **Pn** **01 36 38.5 -0.1**
CHTO S **Sn** **01 39 19.1 +0.9**
CHTO S **Sn** **01 39 19.1 +0.9**
CHTO S **Sn** **01 39 19.1 +0.9**
CHTO Chiang Mai 14.39 130 P **Pn** **01 36 34.5 -4.2**
comp=Z,7µmcomp=Z,109nm,1.0s
CD2 Chengdu 14.42 77 P **Pn** **01 36 36.8 -2.3**
CD2 S **Sn** **01 39 20.5 +1.6**
CD2 pmax pmax
comp=Z,190nm,1.2s
CD2 pmax pmax
comp=Z,3µm,5.8s
CD2 L L
comp=Z,74µm,12.2s
CD2 L L
comp=Z,79µm,11.3s
CM31 Chiang Mai Arr 14.64 131 **Pn** **01 36 40.3 -1.8**
CM31 Chiang Mai Arr 14.64 131 P **Pn** **01 36 41.2 -0.8**
SNR=51
CMAR Chiang Mai Arr 14.64 131 Pn **Pn** **01 36 40.4 -1.7**
comp=Z,9.3nm,0.8s,baz=305,slow=13,SNR=24
CMAR Sn **Sn** **01 39 26.3 +1.9**
comp=Z,0.3nm,0.3s,baz=310,slow=19,SNR=1.4
CMAR PcP **PcP** **01 41 55.6 +0.5**
comp=Z,3.2nm,0.8s,baz=288,slow=2.3,SNR=4.5
CMAR LR LR 01 43 42.5
comp=Z,13µm,19.1s,baz=310,slow=43
CMAR ScP **ScP** **01 45 28.7 -0.1**
comp=Z,1.3nm,0.4s,baz=298,slow=2.9,SNR=7.2
CMAR Chiang Mai Arr 14.64 131 **Pn** **01 36 40.7 -1.4**
GTA2 Gaotai 14.93 40 P **Pn** **01 36 43.6 -2.3**
GTA2 sP P 01 36 51.0 -0.6
GTA2 S **Sn** **01 39 32.3 +1.1**
GTA2 pmax pmax
comp=Z,34nm,1.6s
GTA2 pmax pmax
comp=Z,2µm,7.0s
GTA2 L L
comp=Z,35µm,14.0s
GTA2 L L
comp=Z,46µm,12.7s
WMQ Urumqi 15.19 1 eP **Pn** **01 36 50.1 +0.7**
WMQ pP P 01 36 54.1 -0.3
WMQ S **Sn** **01 39 45.8 +8.3**
WMQ SS **S** **01 39 56.6 +2.1**
WMQ PcP **PcP** **01 41 55.9 +0.3**
WMQ pmax pmax
comp=Z,45nm,1.3s
WMQ pmax pmax
comp=Z,820nm,3.6s
WMQ L L
comp=Z,11µm,7.5s
WMQ L L
comp=Z,15µm,7.5s
WMQ L L
comp=Z,2µm,12.3s
TARG Taragay, Kyrgy 15.24 332 **Pn** **01 36 49.9 -0.5**
TARG Taragay, Kyrgy 15.24 332 P **Pn** **01 36 49.9 -0.5**
TARG pmax pmax
comp=Z,277nm,1.8s
LZDM Lanzhou Array 15.62 58 Pn **Pn** **01 36 53.6 -1.7**
baz=244,slow=12
LZDM Sn **Sn** **01 39 49.6 +1.1**
baz=195,slow=16
LZDM LR LR 01 43 29.4
comp=Z,17µm,19.2s,baz=250,slow=40
comp=Z,5.8nm,0.5s
LZH Lanzhou 15.78 58 P **Pn** **01 36 55.0 -2.3**
LZH sP P 01 37 01.5 +0.3
LZH S **Sn** **01 39 52.3 +0.1**
LZH SS **S** **01 40 08.5 +1.6**
LZH pmax pmax
comp=Z,110nm,1.8s
LZH pmax pmax
comp=Z,4µm,4.2s
LZH L L
comp=Z,28µm,13.0s
LZH L L
comp=Z,24µm,14.0s
LZH L L
comp=Z,33µm,15.2s
NRN Naryn 15.81 327 P **Pn** **01 36 54.8 -2.9**
NRN Naryn 15.81 327 P **Pn** **01 36 54.8 -2.9**
NRN pmax pmax
comp=Z,113nm,1.2s
KDJ Kajisay 15.83 331 **Pn** **01 36 57.8 0.0**
KDJ Kajisay 15.83 331 P **Pn** **01 36 57.8 0.0**
KDJ pmax pmax
comp=Z,116nm,1.7s
SHLS Shalkode 15.86 338 eP **Pn** **01 36 57.4 -0.7**
SHLS eS **Sn** **01 39 51.5 -2.4**
SHLS pmax pmax
comp=Z,357nm,1.7s
SHLS Shalkode 15.86 338 eP **Pn** **01 36 57.5 -0.7**
comp=Z,357nm,1.7s
SHLS eS **Sn** **01 39 51.6 -2.4**
POO Poona 15.93 234 eP **Pn** **01 36 58.4 -0.8**
UZB Uzynbulak 15.99 337 eP **Pn** **01 37 00.9 +0.9**
UZB eS **Sn** **01 39 58.3 +1.1**
UZB Uzynbulak 15.99 337 eP **Pn** **01 37 00.9 +0.9**
UZB eS **Sn** **01 39 58.3 +1.1**
PDGK Podgornoye 16.00 339 P **Pn** **01 37 00.2 +0.1**
SATY Saty 16.13 336 eP **Pn** **01 37 02.7 +1.0**
SATY eS **Sn** **01 40 01.7 +1.1**
SATY Saty 16.13 336 eP **Pn** **01 37 02.7 +1.0**
SATY eS **Sn** **01 40 01.7 +1.1**
ULHL Ulahol 16.33 329 P **Pn** **01 37 05.6 +1.2**
SNR=27
KPKS Kokpek 16.39 337 eP **Pn** **01 37 05.7 +0.7**
KPKS Kokpek 16.39 337 eP **Pn** **01 37 05.7 +0.7**
BOM Bombay 16.45 237 eP **Pn** **01 37 06.7 +1.0**
KAD Karad 16.53 230 eP **Pn** **01 37 04.2 -2.6**
BOOM Boomskoye usch 16.66 329 P **Pn** **01 37 08.2 -0.3**
BOOM IAmb IAmb 01 37 16.3
comp=Z,804nm,1.5s
BOOM Boomskoye usch 16.66 329 P **Pn** **01 37 08.2 -0.3**
BOOM pmax pmax
comp=Z,804nm,1.5s
TNSS Tian-Shan 16.68 332 eP **Pn** **01 37 09.6 +0.7**
TNSS Tian-Shan 16.68 332 eP **Pn** **01 37 09.7 +0.7**
KBL Kabul 16.69 295 P **Pn** **01 37 05.8 -3.2**
KBL Kabul 16.69 295 P **Pn** **01 37 05.8 -3.2**
KBL pmax pmax
comp=Z,120nm,0.8s
KBL Kabul 16.69 295 P **Pn** **01 37 07.5 -1.5**
SNR=135
KBL P **Pn** **01 37 07.5 -1.5**
SNR=135
KBL P **Pn** **01 37 07.5 -1.5**
SNR=135
MDOK Medeo 16.74 333 eP **Pn** **01 37 10.4 +1.0**
MDOK eS **Sn** **01 40 16.5 +1.2**
MDOK Medeo 16.74 333 eP **Pn** **01 37 10.5 +1.0**
MDOK eS **Sn** **01 40 16.5 +1.2**
MDOK LR LR 01 43 45.4
BHUJ Bhuj 16.80 256 eP **Pn** **01 37 09.2 -0.9**
DRK Karamyk 16.83 314 **Pn** **01 37 07.1 -3.7**
DRK Karamyk 16.83 314 P **Pn** **01 37 07.1 -3.7**
DRK pmax pmax
comp=Z,265nm,1.5s
UCH Uchtor 17.13 326 P **Pn** **01 37 13.9 -0.8**
SNR=24
TKM2 Tokmak 2 17.16 329 P **Pn** **01 37 14.2 -0.5**
SNR=33
GYA Guiyang 17.25 93 ⇑P **Pn** **01 37 14.5 -1.4**
GYA S **Sn** **01 40 25.3 -2.5**
GYA pmax pmax
comp=Z,100nm,0.9s
GYA pmax pmax
comp=Z,4µm,4.2s
GYA L L
comp=Z,14µm,13.9s
GYA L L
comp=Z,16µm,14.5s
GYA L L
comp=Z,29µm,14.7s
KBK Karagaybulak 17.25 328 P **P** **01 37 18.9 +1.6**
SNR=67
ARSB Arslanbob 17.29 321 P **Pn** **01 37 12.5 -3.9**
ARSB Arslanbob 17.29 321 P **Pn** **01 37 12.5 -3.9**
ARSB pmax pmax
comp=Z,537nm,1.6s
AAK Ala-Archa 17.45 327 P **P** **01 37 19.1 -0.5**
comp=Z,0.5nm,0.3s,baz=145,slow=11,SNR=53
AAK S **Sn** **01 40 33.4 +0.8**
comp=Z,9.3nm,1.0s,baz=69,slow=17,SNR=1.6
AAK LR LR 01 44 06.7
comp=Z,8µm,19.8s,baz=142,slow=38
comp=Z,32nm,1.1s
AAK Ala-Archa 17.45 327 P **P** **01 37 22.2 +2.6**
SNR=78
AAK Ala-Archa 17.45 327 **Pn** **01 37 18.6 +0.2**
AAK IAmb IAmb 01 37 24.7
comp=Z,962nm,1.9s
AAK Ala-Archa 17.45 327 *i* P **P** **01 37 19.0 -0.6**
SNR=112
AAK Ala-Archa 17.45 327 P **P** **01 37 20.0 +0.4**
AAK P **P** **01 37 20.0 +0.4**
AAK S **Sn** **01 40 34.4 +1.8**
AAK S **Sn** **01 40 34.4 +1.8**
AAK Ala-Archa 17.45 327 P **Pn** **01 37 18.5 +0.1**
FRU1 Bishkek 17.52 327 P **P** **01 37 19.8 -0.5**
FRU1 Bishkek 17.52 327 P **P** **01 37 19.8 -0.5**
FRU1 pmax pmax
comp=Z,381nm,1.7s
GAR Garm 17.53 311 P **Pn** **01 37 13.2 -6.2**
PBA Port Blair 17.60 162 P **P** **01 37 21.4 +0.3**
PBA IAmb IAmb 01 37 26.1
comp=Z,2µm,1.7s
PBA Port Blair 17.60 162 P **P** **01 37 23.9 +2.7**
SNR=38
PBA Port Blair 17.60 162 P **P** **01 37 22.3 +1.1**
PBA Port Blair 17.60 162 eP **Pn** **01 37 18.8 -1.4**
CHMS Chumysh 17.60 328 P **P** **01 37 20.8 -0.4**
SNR=15
EKS2 Erkin-Say 17.82 325 P **P** **01 37 25.8 +2.1**
SNR=52
TDK Taldyqorghan 17.85 339 eP **P** **01 37 24.3 +0.5**
TDK pmax pmax
comp=Z,968nm,2.2s
TDK MLR MLR
comp=Z,6µm,14.0s
TDK Taldyqorghan 17.85 339 eP **P** **01 37 24.4 +0.5**

	comp=Z,968nm,2.2s							
TDK					LR	LR	01 44 24.4	
	comp=Z,6µm,13.8s							
USP	**Ospenovka**		**17.93**	**328**	P	**P**	**01 37 25.2**	**+0.5**
	SNR=42							
SGDS	**Sogindy**		**18.01**	**329**	*e*P	**P**	**01 37 26.4**	**+0.7**
SGDS					*e*S	**Sn**	**01 40 47.3**	**+1.3**
GOA	**Goa**		**18.09**	**227**	*e*P	**P**	**01 37 27.9**	**+1.4**
CHGR	**Chuyangaron**		**18.15**	**308**	P	**Pn**	**01 37 24.0**	**-3.0**
CHGR	**Chuyangaron**		**18.15**	**308**	*d i*P	**Pn**	**01 37 24.4**	**-2.6**
CHGR					pmax	pmax		
	comp=Z,140nm,1.0s							
CHGR					MLR	MLR		
	comp=Z,24µm,12.0s							
SHAA	**Shahritus**		**18.41**	**304**	P	**P**	**01 37 25.9**	**-4.2**
SHAA					IAmb	IAmb	01 37 35.4	
	comp=Z,6µm,1.9s							
MK01	**Makanchi Array**		**18.56**	**349**	P	**P**	**01 37 30.7**	**-1.0**
MK31	**Makanchi Array**		**18.59**	**349**	*d i*P	**P**	**01 37 30.7**	**-1.3**
MK31					pmax	pmax		
	comp=Z,149nm,1.1s							
MK31	**Makanchi Array**		**18.59**	**349**	P	**P**	**01 37 30.0**	**-2.0**
MKAR	**Makanchi Array**		**18.59**	**349**	P	**P**	**01 37 30.9**	**-1.1**
	comp=Z,1.1nm,0.3s,baz=158,slow=10,SNR=65							
MKAR					S	**Sn**	**01 41 00.7**	**+0.8**
	comp=Z,1.6nm,0.7s,baz=176,slow=22,SNR=1.0							
MKAR					LR	LR	01 45 52.5	
	comp=Z,2µm,18.8s,baz=163,slow=41							
	comp=Z,41nm,0.9s							
MKAR	**Makanchi Array**		**18.59**	**349**	P	**P**	**01 37 31.3**	**-0.6**
MKAR	**Makanchi Array**		**18.59**	**349**	P	**P**	**01 37 31.3**	**-0.6**
MKAR							01 41 00.7	
MAKZ	**Makanchi**		**18.66**	**348**	P	**P**	**01 37 31.5**	**-1.2**
MAKZ	**Makanchi**		**18.66**	**348**	P	**P**	**01 37 31.5**	**-1.2**
MAKZ					pmax	pmax		
	comp=Z,138nm,1.3s							
MAKZ	**Makanchi**		**18.66**	**348**	P	**P**	**01 37 31.8**	**-0.9**
XAN	**Xi'an**		**19.18**	**68**	⇑P	**P**	**01 37 35.8**	**-2.8**
XAN					pP	Pn	01 37 41.0	+1.5
XAN					S	**S**	**01 41 15.5**	**-0.4**
XAN					pmax	pmax		
	comp=Z,52nm,2.1s							
XAN					pmax	pmax		
	comp=Z,5µm,8.5s							
XAN					L	L		
	comp=Z,16µm,9.6s							
XAN					L	L		
	comp=Z,15µm,10.4s							
DZA	**Taraz**		**19.26**	**322**	*e*P	**Pn**	**01 37 40.7**	**+0.4**
DZA	**Taraz**		**19.26**	**322**	*e*P	**Pn**	**01 37 40.8**	**+0.4**
ENH	**Enshi**		**19.34**	**80**	P	**P**	**01 37 37.7**	**-2.6**
IUG	**Iuzhnay**		**19.50**	**318**	*e*P	**Pn**	**01 37 43.5**	**+0.1**
IUG					pmax	pmax		
	comp=Z,406nm,1.2s							
IUG	**Iuzhnay**		**19.50**	**318**	*e*P	**Pn**	**01 37 43.5**	**+0.1**
	comp=Z,406nm,1.2s							
BTLS	**Baital**		**19.52**	**331**	*e*P	**Pn**	**01 37 43.4**	**0.0**
BTLS					*e*S	**S**	**01 41 23.0**	**+0.6**
BTLS	**Baital**		**19.52**	**331**	*e*P	**Pn**	**01 37 43.5**	**0.0**
BTLS					*e*S	**S**	**01 41 23.1**	**+0.6**
KK31	**Karatay Array**		**19.84**	**321**	P	**P**	**01 37 45.9**	**+0.1**
KK31	**Karatay Array**		**19.84**	**321**	P	**P**	**01 37 45.9**	**+0.1**
KK31					pmax	pmax		
	comp=Z,152nm,1.6s							
KKAR	**Karatay Array**		**19.84**	**321**	P	**P**	**01 37 45.5**	**-0.2**
KKAR	**Karatay Array**		**19.84**	**321**	P	**P**	**01 37 45.5**	**-0.2**
CHM	**Chimkent**		**19.86**	**318**	*e*P	**Pn**	**01 37 47.4**	**-0.1**
CHM					*e*S	**Sn**	**01 41 31.0**	**+0.4**
CHM					MLR	MLR		
	comp=Z,3µm,9.0s							
CHM	**Chimkent**		**19.86**	**318**	*e*P	**Pn**	**01 37 47.5**	**-0.1**
CHM					*e*S	**Sn**	**01 41 31.1**	**+0.4**
CHM					LR	LR	01 45 36.8	
	comp=Z,3µm,8.5s							
BRLS	**Boroldaу**		**20.17**	**320**	*e*P	**P**	**01 37 49.1**	**-0.2**
BRLS	**Boroldaу**		**20.17**	**320**	*e*P	**P**	**01 37 49.1**	**-0.2**
GULI	**GuiLin**		**20.76**	**94**	P	**P**	**01 37 56.3**	**+0.5**
GULI					S	**S**	**01 41 46.8**	**-0.6**
GULI					pmax	pmax		
	comp=Z,120nm,2.6s							
GULI					L	L		
	comp=Z,21µm,21.1s							
GULI					L	L		
	comp=Z,5µm,17.9s							
GULI					L	L		
	comp=Z,18µm,14.6s							
DGZ	**Jazzator, Alta**		**21.07**	**0**	*d i*P	**P**	**01 37 59.0**	**-0.1**
MALK	**Mahakanadarawa**		**21.11**	**199**	P	**P**	**01 38 00.4**	**+0.8**
BTO2	**Baotou**		**22.05**	**51**	*e*P	**P**	**01 38 08.6**	**-1.1**
BTO2					PP	**PnPn**	**01 38 33.4**	**+1.8**
BTO2					S	**S**	**01 42 11.8**	**-1.0**
BTO2					pmax	pmax		
	comp=Z,100nm,1.5s							
BTO2					pmax	pmax		
	comp=Z,7µm,6.0s							
BTO2					L	L		
	comp=Z,22µm,14.7s							
BTO2					L	L		
	comp=Z,24µm,13.1s							
PALK	**Pallekele**		**22.13**	**198**	LR	LR	01 47 10.2	
	comp=Z,5µm,21.2s,baz=30,slow=38							
PALK	**Pallekele**		**22.13**	**198**	P	**P**	**01 38 10.8**	**+0.1**
PALK	**Pallekele**		**22.13**	**198**	*i* P	**P**	**01 38 11.9**	**+1.3**
	SNR=51							
PALK	**Pallekele**		**22.13**	**198**	*de*P	**P**	**01 38 12.0**	**+1.3**
PALK					pmax	pmax		
	comp=Z,96nm,1.3s							
PALK	**Pallekele**		**22.13**	**198**	S	**S**	**01 42 19.2**	**+4.7**
PALK	**Pallekele**		**22.13**	**198**	P	**P**	**01 38 11.9**	**+1.3**
PALK	**Pallekele**		**22.13**	**198**	P	**P**	**01 38 11.6**	**+0.9**
HRA	**Herat**		**22.16**	**291**	P	**P**	**01 38 11.6**	**+0.5**
LYN	**LuoYang**		**22.16**	**68**	⇓P	**P**	**01 38 10.5**	**-0.3**
LYN					pP	pP	01 38 13.4	-2.3
LYN					sP	sP	01 38 16.3	-1.7
LYN					S	**S**	**01 42 10.6**	**-4.2**
LYN					sS	pS	01 42 17.1	-5.0
LYN					pmax	pmax		
	comp=Z,64nm,1.0s							
LYN					pmax	pmax		
	comp=Z,6µm,6.0s							
LYN					L	L		
	comp=Z,18µm,23.4s							
LYN					L	L		
	comp=Z,21µm,23.4s							
LYN					L	L		
	comp=Z,43µm,27.7s							
TRD	**Trivandrum**		**22.27**	**208**	*e*P	P	01 38 22.3	+10
CNSH	**ChangSha**		**22.48**	**85**	P	**P**	**01 38 13.3**	**-1.0**
CNSH					S	**S**	**01 42 15.8**	**-5.1**
CNSH					pmax	pmax		
	comp=Z,150nm,1.3s							
CNSH					L	L		
	comp=Z,14µm,12.4s							
CNSH					L	L		
	comp=Z,15µm,13.9s							
CNSH					L	L		
	comp=Z,23µm,20.2s							
QIZ	**Qiongzhong**		**22.63**	**110**	P	**P**	**01 38 16.5**	**+0.6**
QIZ	**Qiongzhong**		**22.63**	**110**	P	**P**	**01 38 15.8**	**-0.1**
QIZ					S	**S**	**01 42 23.3**	**-0.4**
QIZ					pmax	pmax		
	comp=Z,120nm,1.2s							
QIZ					pmax	pmax		
	comp=Z,4µm,4.6s							
QIZ					L	L		
	comp=Z,10µm,17.9s							
QIZ					L	L		
	comp=Z,7µm,18.5s							
QIZ					L	L		
	comp=Z,8µm,10.3s							
TIY	**Taiyuan**		**22.81**	**60**	*e*P	**P**	**01 38 17.3**	**-0.5**
TIY					S	**S**	**01 42 20.8**	**-6.0**
TIY					pmax	pmax		
	comp=Z,120nm,1.2s							
TIY					pmax	pmax		
	comp=Z,2µm,5.4s							
TIY					L	L		
	comp=Z,12µm,14.4s							
TIY					L	L		
	comp=Z,17µm,16.8s							
TIY					L	L		
	comp=Z,25µm,16.5s							
KURBB	**Kurchatov Arra**		**22.99**	**345**	P	**P**	**01 38 18.7**	**-0.7**
	comp=Z,70nm,0.8s,baz=161,slow=8.8,SNR=197							
KURBB					PcP	**PcP**	**01 42 08.8**	**-0.2**
	comp=Z,4.3nm,0.7s,baz=175,slow=1.8,SNR=4.4							
KURBB					S	**S**	**01 42 30.8**	**+1.3**
	comp=Z,17nm,1.3s,baz=154,slow=20,SNR=7.0							
KURBB					ScP	**ScP**	**01 45 46.3**	**-0.4**
	comp=Z,2.1nm,1.0s,baz=185,slow=2.4,SNR=4.2							
KURBB					LR	LR	01 48 00.7	
	comp=Z,3µm,19.5s,baz=168,slow=39							
	comp=Z,70nm,0.8s							
KURK	**Kurchatov**		**23.05**	**346**	P	**P**	**01 38 19.7**	**-0.4**
KURK	**Kurchatov**		**23.05**	**346**		**PcP**	**01 42 08.8**	**-0.4**
KURK						**ScP**	**01 45 46.3**	**-0.6**
KURK	**Kurchatov**		**23.05**	**346**	*d i*P	**P**	**01 38 18.8**	**-1.3**
KURK					pmax	pmax		
	comp=Z,840nm,1.7s							
KURK					MLR	MLR		
	comp=Z,3µm,14.0s							
KURK	**Kurchatov**		**23.05**	**346**	P	**P**	**01 38 19.5**	**-0.6**
KURK					P	**P**	**01 38 19.8**	**-0.4**
KURK	**Kurchatov**		**23.05**	**346**	P	**P**	**01 38 19.1**	**-1.0**
HHC	**Hu-ho-hao-te**		**23.25**	**52**	*e*P	**P**	**01 38 22.3**	**-0.1**
HHC					pP	pP	01 38 26.9	-0.4
HHC					PP	**PnPn**	**01 38 54.0**	**+6.0**
HHC					S	**S**	**01 42 29.3**	**-5.1**
HHC					sS	pS	01 42 36.8	-3.1
HHC					SS	**SnSn**	**01 43 14.3**	**+6.0**
HHC					pmax	pmax		
	comp=Z,64nm,1.0s							
HHC					pmax	pmax		
	comp=Z,3µm,4.1s							
HHC					L	L		
	comp=Z,12µm,11.7s							
HHC					L	L		
	comp=Z,11µm,12.2s							
HALK	**Hakmana**		**23.27**	**197**	P	**P**	**01 38 26.1**	**+3.5**
KNGR	**Kungurtug, Tuv**		**23.28**	**17**	*de*P	**P**	**01 38 23.0**	**+0.5**
KNGR					pmax	pmax		
	comp=Z,175nm,1.1s							
WHN	**Wuhan**		**23.53**	**79**	P	**P**	**01 38 24.3**	**-0.8**
WHN					S	**S**	**01 42 34.9**	**-3.9**
WHN					pmax	pmax		
	comp=Z,12µm,3.6s							
WHN					L	L		
	comp=Z,62µm,14.9s							
WHN					L	L		
	comp=Z,108µm,15.8s							
NGCH	**Negor - Chabah**		**23.58**	**268**	P	**P**	**01 38 28.2**	**+2.5**
	SNR=8.4							
NGCH					S	**S**	**01 42 44.8**	**+5.1**
GZH2	**Guangzhou**		**24.09**	**96**	P	**P**	**01 38 29.9**	**-0.6**
GZH2					S	**S**	**01 42 47.6**	**-0.2**
GZH2					pmax	pmax		
	comp=Z,160nm,1.3s							
GZH2					pmax	pmax		
	comp=Z,3µm,6.4s							
GZH2					L	L		
	comp=Z,10µm,16.5s							
GZH2					L	L		
	comp=Z,31µm,15.0s							
BRZS	**Berezniki**		**24.10**	**336**	*e*P	**P**	**01 38 31.8**	**+1.4**
BRZS	**Berezniki**		**24.10**	**336**	*e*P	**P**	**01 38 31.9**	**+1.4**
BSI	**Banda Aceh**		**24.18**	**160**	P	**P**	**01 38 27.2**	**-4.2**
SONA0	**Songino Array**		**24.21**	**32**	P	**P**	**01 38 32.3**	**+0.7**
SONM	**Songino Array**		**24.21**	**32**	P	**P**	**01 38 31.7**	**+0.1**
	comp=Z,25nm,0.6s,baz=222,slow=11,SNR=187							
SONM					PcP	**PcP**	**01 42 11.9**	**0.0**
	comp=Z,4.4nm,0.5s,baz=217,slow=3.4,SNR=13							
SONM					S	**S**	**01 42 53.5**	**+3.7**
	comp=Z,3.2nm,1.1s,baz=213,slow=16,SNR=1.5							
SONM					ScP	**ScP**	**01 45 50.5**	**+0.3**
	comp=Z,2.6nm,0.7s,baz=214,slow=3.2,SNR=5.8							
SONM					LR	LR	01 49 15.9	
	comp=Z,15µm,20.8s,baz=224,slow=40							
SONM					P3KPbc		02 11 42.9	
	comp=Z,0.8nm,0.8s,baz=39,slow=3.5,SNR=4.8							
	comp=Z,25nm,0.6s							
SONM	**Songino Array**		**24.21**	**32**	P	**P**	**01 38 32.2**	**+0.6**
HNS	**HongShan**		**24.48**	**62**	⇑P	**P**	**01 38 34.3**	**+0.3**
HNS					S	**S**	**01 42 47.1**	**-6.8**
HNS					pmax	pmax		
	comp=Z,220nm,1.0s							
HNS					pmax	pmax		
	comp=Z,5µm,5.4s							
HNS					L	L		
	comp=Z,18µm,13.9s							
HNS					L	L		
	comp=Z,27µm,13.1s							
ULN	**Ulaanbaatar**		**24.55**	**33**	P	**P**	**01 38 34.8**	**+0.1**
ULN					IAmb	IAmb	01 38 37.4	
	comp=Z,182nm,1.0s							
ULN	**Ulaanbaatar**		**24.55**	**33**	*de*P	**P**	**01 38 34.9**	**+0.2**
ULN					pmax	pmax		
	comp=Z,538nm,2.5s							
ULN					MLR	MLR		
	comp=Z,10µm,15.0s							
ULN	**Ulaanbaatar**		**24.55**	**33**	P	**P**	**01 38 34.4**	**-0.3**
ULN					P	**P**	**01 38 34.4**	**-0.3**
ULN					S	**S**	**01 42 51.9**	**-3.3**
ULN					S	**S**	**01 42 51.9**	**-3.3**
ULN	**Ulaanbaatar**		**24.55**	**33**	P	**P**	**01 38 35.1**	**+0.4**
ULN	**Ulaanbaatar**		**24.55**	**33**	P	**P**	**01 38 34.6**	**-0.1**
	comp=Z,23µmcomp=Z,788nm,1.7s							
ZAK	**Zakamensk**		**24.87**	**25**	*e*P	**P**	**01 38 37.8**	**+0.3**
ZAK					pmax	pmax		
	comp=Z,222nm,1.0s							
HKPS	**Hong Kong Po S**		**24.95**	**99**	P	**P**	**01 38 39.9**	**+1.5**
HKPS	**Hong Kong Po S**		**24.95**	**99**	P	**P**	**01 38 38.9**	**+0.5**
HKPS					IAmb	IAmb	01 38 58.3	
	comp=Z,437nm,1.9s							
LHMI	**Lhok Sumawe**		**24.96**	**157**	P	**P**	**01 38 40.7**	**+2.2**
LHMI	**Lhok Sumawe**		**24.96**	**157**	P	**P**	**01 38 41.2**	**+2.7**
LHMI	**Lhok Sumawe**		**24.96**	**157**	P	**P**	**01 38 40.1**	**+1.6**
	comp=Z,22µmcomp=Z,707nm,1.7s							
MOY	**Mondy**		**25.20**	**20**	*e*P	**P**	**01 38 41.5**	**+1.1**
MOY					pmax	pmax		
	comp=Z,444nm,1.5s							
ZALV	**Zalesovo Beam**		**25.39**	**356**	P	**P**	**01 38 41.8**	**-0.3**
	comp=Z,30nm,0.7s,baz=183,slow=8.9,SNR=70							
ZALV					PcP	**PcP**	**01 42 13.2**	**-1.0**
	comp=Z,3.1nm,0.5s,baz=189,slow=2.8,SNR=5.0							
ZALV					S	**S**	**01 43 08.8**	**+0.6**
	comp=Z,4.3nm,0.9s,baz=173,slow=13,SNR=1.4							
ZALV					LR	LR	01 48 39.1	
	comp=Z,2µm,21.5s,baz=182,slow=36							
	comp=Z,30nm,0.7s							
ZALV	**Zalesovo Beam**		**25.39**	**356**	P	**P**	**01 38 42.0**	**-0.1**
HMDM	**Hanimaadhoo**		**25.52**	**214**	P	**P**	**01 38 45.7**	**+2.1**
HMDM	**Hanimaadhoo**		**25.52**	**214**	P	**P**	**01 38 46.4**	**+2.8**
HMDM	**Hanimaadhoo**		**25.52**	**214**	P	**P**	**01 38 50.1**	**+6.5**
JLN	**Jalan Bani Buh**		**26.03**	**262**	P	**P**	**01 38 49.1**	**+1.0**
	SNR=16							
JLN					P	**P**	**01 38 49.1**	**+1.0**
	SNR=16							
JLN					S	**S**	**01 43 29.1**	**+10**
JLN					S	**S**	**01 43 29.1**	**+10**
TLY	**Talaya**		**26.07**	**23**	LR	LR	01 48 27.2	
	comp=Z,3µm,18.0s,baz=210,slow=35							
TLY	**Talaya**		**26.07**	**23**	P	**P**	**01 38 49.7**	**+1.4**
TLY	**Talaya**		**26.07**	**23**	*d i*P	**P**	**01 38 49.5**	**+1.2**
TLY					pmax	pmax		
	comp=Z,112nm,1.7s							
TLY	**Talaya**		**26.07**	**23**	P	**P**	**01 38 47.1**	**-1.2**
TLY					S	**S**	**01 43 15.5**	**-3.7**
TIA	**Tai'an**		**26.17**	**66**	P	**P**	**01 38 49.6**	**+0.3**
TIA					PcP	**PcP**	**01 42 17.4**	**+1.1**
TIA					S	**S**	**01 43 21.3**	**+0.3**
TIA					pmax	pmax		
	comp=Z,74nm,1.0s							
TIA					pmax	pmax		
	comp=Z,2µm,5.3s							
TIA					L	L		
	comp=Z,6µm,16.7s							
TIA					L	L		
	comp=Z,20µm,21.0s							
TIA					L	L		
	comp=Z,42µm,22.2s							
BJT	**Baijiatuau**		**26.26**	**57**	P	**P**	**01 38 51.2**	**+1.1**
WBK	**Wadi Bani Khal**		**26.26**	**263**	P	**P**	**01 38 51.8**	**+1.5**
	SNR=12							
WBK					P	**P**	**01 38 51.8**	**+1.5**
	SNR=12							
WBK					P	**P**	**01 38 51.8**	**+1.5**
	SNR=12							
WBK					S	**S**	**01 43 28.8**	**+6.2**
WBK					S	**S**	**01 43 28.8**	**+6.2**
WBK					S	**S**	**01 43 28.8**	**+6.2**
BJI2	**Beijing**		**26.26**	**57**	P	**P**	**01 38 51.0**	**+0.9**
BJI2					S	**S**	**01 43 22.3**	**0.0**
BJI2					pmax	pmax		
	comp=Z,38nm,1.5s							
BJI2					pmax	pmax		
	comp=Z,930nm,7.5s							
BJI2					L	L		
	comp=Z,9µm,11.4s							
BJI2					L	L		
	comp=Z,3µm,11.4s							
BJI2					L	L		
	comp=Z,12µm,19.1s							
JASK	**Jask - Hormozg**		**26.34**	**271**	P	**P**	**01 38 52.9**	**+1.9**
	SNR=12							
WSAR	**Wadi Sarin**		**26.36**	**265**	LR	LR	01 50 52.1	
	comp=Z,51nm,18.8s,baz=98,slow=40							
WSAR	**Wadi Sarin**		**26.36**	**265**	P	**P**	**01 38 51.5**	**+0.3**
	SNR=9.4							
WSAR					S	**S**	**01 43 24.7**	**+0.6**
KULM	**Kulim**		**26.39**	**149**	P	**P**	**01 38 52.6**	**+1.2**
KULM	**Kulim**		**26.39**	**149**	P	**P**	**01 38 52.0**	**+0.6**
KULM					IAmb	IAmb	01 38 54.8	
	comp=Z,259nm,1.4s							
KULM	**Kulim**		**26.39**	**149**	P	**P**	**01 38 51.2**	**-0.2**
	comp=Z,2µmcomp=Z,159nm,1.3s							
BIDO	**Bidbid**		**26.72**	**266**	P	**P**	**01 38 56.3**	**+1.9**
	SNR=6.4							
BIDO					P	**P**	**01 38 56.3**	**+1.9**
	SNR=6.4							
IRK	**Irkutsk**		**26.76**	**23**	*e*P	**P**	**01 38 54.7**	**+0.2**
IRK					pmax	pmax		
	comp=Z,372nm,3.0s							
KCSI	**Kotacane, Aceh**		**26.84**	**156**	P	**P**	**01 38 56.1**	**+0.6**
	comp=Z,3µmcomp=Z,49nm,1.0s							
TPTI			**26.88**	**158**	P	**P**	**01 38 51.3**	**-4.5**
SMDO	**Samad**		**26.92**	**265**	P	**P**	**01 38 57.2**	**+0.8**
	SNR=11							
SMDO					P	**P**	**01 38 57.2**	**+0.8**
	SNR=11							
SMDO					P	**P**	**01 38 57.2**	**+0.8**
	SNR=11							
NJ2	**Nanjing**		**27.34**	**75**	⇓P	**P**	**01 39 00.3**	**+0.4**
NJ2					pP	**pP**	**01 39 04.6**	**-0.5**
NJ2					S	**S**	**01 43 40.8**	**+1.3**
NJ2					pmax	pmax		
	comp=Z,180nm,2.5s							
NJ2					pmax	pmax		
	comp=Z,4µm,4.6s							
NJ2					L	L		
	comp=Z,26µm,15.9s							
NJ2					L	L		
	comp=Z,89µm,18.0s							
BVAR	**Borovoye Array**		**27.43**	**337**	P	**P**	**01 39 00.8**	**+0.2**
	comp=Z,8.9nm,0.9s,baz=150,slow=12,SNR=20							
BVAR					PcP	**PcP**	**01 42 18.9**	**0.0**
	comp=Z,8.6nm,0.8s,baz=171,slow=2.2,SNR=8.2							
BVAR					S	**S**	**01 43 42.6**	**+2.1**
	comp=Z,2.5nm,1.0s,baz=152,slow=24,SNR=1.7							
BVAR					ScP	**ScP**	**01 45 59.2**	**-0.1**
	comp=Z,2.2nm,0.8s,baz=134,slow=6.2,SNR=2.6							
BVAR					LR	LR	01 50 02.2	
	comp=Z,3µm,19.6s,baz=148,slow=37							
BVAR					P3KPbc		02 11 31.1	
	comp=Z,3.2nm,0.9s,baz=309,slow=3.1,SNR=11							
	comp=Z,8.9nm,0.9s							
BORK	**Borovoye**		**27.47**	**337**	P	**P**	**01 39 01.2**	**+0.3**
BORK					IAmb	IAmb	01 39 43.5	
	comp=Z,331nm,2.0s							
BORK	**Borovoye**		**27.47**	**337**	*d i*P	**P**	**01 39 01.2**	**+0.3**
BORK					pmax	pmax		
	comp=Z,196nm,2.5s							
BORK					MLR	MLR		
	comp=Z,5µm,17.0s							
XLT	**XiLinHaoTe**		**27.55**	**49**	*e*P	**P**	**01 39 02.6**	**+0.8**
XLT					sP	sP	01 39 08.8	-0.4
XLT					S	**S**	**01 43 40.0**	**-2.8**
XLT					pmax	pmax		
	comp=Z,96nm,1.0s							
XLT					pmax	pmax		
	comp=Z,1µm,7.0s							
XLT					L	L		
	comp=Z,2µm,16.2s							
XLT					L	L		
	comp=Z,10µm,17.3s							
XLT					L	L		
	comp=Z,10µm,14.3s							
BANOM	**Banah**		**27.71**	**272**	P	**P**	**01 39 03.8**	**+0.5**
BSY	**Bisya**		**27.77**	**265**	P	**P**	**01 39 05.5**	**+1.6**
	SNR=9.1							
BSY					P	**P**	**01 39 05.5**	**+1.6**
	SNR=9.1							
SHME	**Shamm**		**27.82**	**272**	*i* P	**P**	**01 39 04.6**	**+0.3**
	SNR=13							
SHME	**Shamm**		**27.82**	**272**	P	**P**	**01 39 08.0**	**+3.7**
	SNR=11							
SHME					P	**P**	**01 39 08.0**	**+3.7**
	SNR=11							
SHME					P	**P**	**01 39 08.0**	**+3.7**
	SNR=11							
MDH	**Madha**		**27.85**	**271**	P	**P**	**01 39 03.8**	**-0.7**
PSI	**Prapat**		**27.93**	**155**	P	**P**	**01 39 06.0**	**+0.6**
PSI	**Prapat**		**27.93**	**155**	P	**P**	**01 39 04.3**	**-1.1**
MSFE	**Esma-Masafi**		**27.96**	**271**	*i* P	**P**	**01 39 05.7**	**+0.1**
	SNR=5.1							
UOSS	**Minazif**		**28.02**	**270**	P	**P**	**01 39 06.1**	**0.0**
QZH2	**Quanzhou**		**28.08**	**90**	P	**P**	**01 39 06.3**	**-0.3**
QZH2					S	**S**	**01 43 51.0**	**-0.2**
QZH2					pmax	pmax		
	comp=Z,920nm,4.5s							
QZH2					L	L		
	comp=Z,6µm,16.5s							
QZH2					L	L		
	comp=Z,23µm,17.5s							
QZH2					L	L		
	comp=Z,28µm,17.2s							
HATD	**Hatta, Dubai**		**28.11**	**270**	*i* P	**P**	**01 39 07.4**	**+0.5**
	SNR=6.8							
ASHO	**Ashiyiah**		**28.21**	**269**	*i* P	**P**	**01 39 09.2**	**+1.4**
	SNR=11							
ASHO	**Ashiyiah**		**28.21**	**269**	P	**P**	**01 39 09.6**	**+1.7**
	SNR=12							
ASHO					P	**P**	**01 39 09.6**	**+1.7**
	SNR=12							
NAZ	**Nazwa, Dubai**		**28.49**	**270**	*i* P	**P**	**01 39 11.1**	**+0.9**
	SNR=9.1							
NAZ	**Nazwa, Dubai**		**28.49**	**270**	P	**P**	**01 39 13.2**	**+3.0**
	SNR=5.8							
NAZ					P	**P**	**01 39 13.2**	**+3.0**
	SNR=5.8							
FAQ	**Al Faqa, Dubai**		**28.61**	**270**	*i* P	**P**	**01 39 11.8**	**+0.5**
	SNR=8.2							
ALNE	**Al Ain**		**28.65**	**268**	*i* P	**P**	**01 39 11.7**	**0.0**
	SNR=9.3							
ALNE	**Al Ain**		**28.65**	**268**	P	**P**	**01 39 13.5**	**+1.8**
	SNR=7.9							
ALNE					P	**P**	**01 39 13.5**	**+1.8**
	SNR=7.9							
GSI	**Gunungsitoli**		**28.85**	**158**	P	**P**	**01 39 15.2**	**+1.8**
GSI	**Gunungsitoli**		**28.85**	**158**	P	**P**	**01 39 14.8**	**+1.3**
GSI	**Gunungsitoli**		**28.85**	**158**	P	**P**	**01 39 15.3**	**+1.8**
	comp=Z,5µmcomp=Z,8µmcomp=Z,398nm,1.5s							
ASUD	**Al Ashush, Dub**		**28.87**	**270**	P	**

comp=Z,2µm,3.9s
DL2 L L
comp=Z,10µm,17.1s
DL2 L L
comp=Z,20µm,17.2s
DL2 L L
comp=Z,28µm,16.8s
CIT Chita 30.45 33 *e*P **P 01 39 28.0 +0.6**
CIT *e* 01 39 37.0
CIT *e* 01 40 28.0
CIT *e* 01 40 37.4
CIT *e* 01 42 27.6
CIT pmax pmax
comp=Z,143nm,3.3s
SSLB Suanglung 30.45 91 P **P 01 39 28.3 +0.6**
SSLB Suanglung 30.45 91 P **P 01 39 26.8 -0.9**
TWG Pinlang 30.84 93 IAMs_20 IAMs_20 01 53 25.4
comp=Z,9µm,18.0s
YULB Yu-li 30.87 92 P **P 01 39 33.0 +1.6**
YULB Yu-li 30.87 92 P **P 01 39 31.0 -0.4**
NACB Ninganchiao 30.91 90 P **P 01 39 33.4 +1.7**
MZR Muzera 30.95 267 *i* P **P 01 39 31.6 -0.5**
SNR=6.0
MYKOM Kota Tinggi 30.96 147 P **P 01 39 33.3 +1.2**
MYKOM Kota Tinggi 30.96 147 IAmb IAmb 01 39 35.5
comp=Z,100nm,1.2s
MYKOM Kota Tinggi 30.96 147 P **P 01 39 33.5 +1.4**
comp=Z,2µmcomp=Z,74nm,1.2s
BKNI Bangkinang 31.01 153 P **P 01 39 33.3 +0.7**
BKNI Bangkinang 31.01 153 P **P 01 39 35.1 +2.5**
comp=Z,284nm,1.1s
AKTO Aktyubinsk 31.10 323 LR LR 01 53 21.8
comp=Z,10µm,21.7s,baz=135,slow=39
PPI Padang Panjang 31.48 154 P **P 01 39 37.4 +0.7**
comp=Z,2µmcomp=Z,2µmcomp=Z,69nm,0.9s
PDSI Padang 31.92 155 P **P 01 39 40.4 -0.2**
comp=Z,147nm,1.2s
SNY Shenyang 32.15 56 ⇓P **P 01 39 42.5 +0.1**
SNY S **S 01 44 46.3 -8.4**
SNY pmax pmax
comp=Z,82nm,1.6s
SNY pmax pmax
comp=Z,1µm,3.5s
SNY L L
comp=Z,5µm,10.8s
SNY L L
comp=Z,6µm,11.4s
SNY L L
comp=Z,10µm,12.8s
HIA Hailar 32.18 41 P **P 01 39 43.6 +0.9**
HIA Hailar 32.18 41 *d* P **P 01 39 43.1 +0.4**
HIA pmax pmax
comp=Z,45nm,0.9s
HIA MLR MLR
comp=Z,7µm,17.0s
SZP Santa 32.27 103 P **P 01 39 45.4 +1.7**
SUJ Sinuiju 32.51 59 P **P 01 39 45.5 -0.1**
HJU Haeju 33.21 63 P **P 01 39 51.4 -0.4**
HJU S S 01 44 59.4 -12
HJU AmB
comp=Z,476nm,2.3s
HJU AMS AMS
comp=Z,15µm,15.6s
DSRI Dabo 33.29 147 P **P 01 39 55.0 +2.4**
comp=Z,2µmcomp=Z,148nm,1.1s
PYAG Pyongyang 33.33 62 S S 01 45 00.9 -12
PPSI Pulau Pagai 33.47 157 P **P 01 39 56.2 +2.0**
JMBI JAMBI 33.88 150 P **P 01 40 02.5 +4.8**
INCN Inchon 33.88 65 P **P 01 39 58.7 +1.0**
INCN Inchon 33.88 65 P **P 01 39 57.7 0.0**
INCN IAmb IAmb 01 40 10.4
comp=Z,84nm,1.1s
INCN Inchon 33.88 65 IAMs_20 IAMs_20 01 54 42.8
comp=Z,8µm,20.0s
INCN Inchon 33.88 65 P **P 01 39 57.7 0.0**
INCN pmax pmax
comp=Z,84nm,1.1s
INCN MLR MLR
comp=Z,8µm,20.0s
CN2 Changchun 33.94 53 *e*P **P 01 39 57.8 -0.2**
CN2 PP **PnPn 01 41 07.8 -3.1**
CN2 *e*S **S 01 45 25.8 +3.3**
CN2 pmax pmax
comp=Z,40nm,1.2s
CN2 pmax pmax
comp=Z,1µm,3.5s
CN2 L L
comp=Z,7µm,17.0s
CN2 L L
comp=Z,10µm,17.0s
CN2 L L
comp=Z,12µm,18.1s
SVE Sverdlovsk 33.94 334 *ce*P **P 01 39 58.8 +0.9**
SVE *e*S **S 01 45 24.2 +1.9**
SVE pmax pmax
comp=Z,193nm,1.6s
SVE MLR MLR
comp=Z,4µm,12.0s
TGY Tagaytay City 34.29 108 P **P 01 40 01.8 +0.4**
comp=Z,68nm,0.3s,baz=288,slow=2.2,SNR=5.6
TGY S **S 01 45 29.1 +0.4**
comp=Z,32nm,0.3s,baz=37,slow=20,SNR=1.1
TGY LR LR 01 55 11.8
comp=Z,3µm,18.7s,baz=321,slow=38
comp=Z,68nm,0.3s
TJN Taejon 34.42 67 P **P 01 40 02.3 0.0**
ARTI Arti 34.55 332 P **P 01 40 03.8 +0.6**
ARTI Arti 34.55 332 *d* P **P 01 40 03.7 +0.5**
ARTI 01 41 14.8
ARTI 01 42 36.0
ARTI S **S 01 45 32.1 +0.4**
ARTI SS **SnSn 01 47 40.6 -2.5**
ARTI pmax pmax
comp=Z,168nm,1.5s
ARTI MLR MLR
comp=Z,3µm,13.0s
AKT Akhty 34.61 302 *e*P **P 01 40 02.7 -1.3**
AKT *e* 01 41 18.6
AKT *e* 01 42 38.8
AKT *e*S **S 01 45 33.3 +0.1**
AKT pmax pmax
comp=Z,444nm,1.8s
AKT MLR MLR
comp=Z,4µm,18.0s
BOD Bodaibo 34.62 25 *e*P **P 01 40 03.6 -0.1**
BOD pmax pmax
comp=Z,231nm,1.5s
MASI Maura Aman, Be 34.65 153 P **P 01 40 05.5 +1.0**
comp=Z,4µmcomp=Z,115nm,0.5s
HHU Hamhung 34.79 60 P **P 01 40 04.7 -0.8**
HHU AMS AMS
comp=Z,16µm,15.6s
KSRS Korea Array 34.91 65 P **P 01 40 05.3 -1.2**
comp=Z,11nm,0.8s,baz=256,slow=8.2,SNR=14
KSRS PcP **PcP 01 42 39.0 -0.1**
comp=Z,4.2nm,0.9s,baz=276,slow=1.4,SNR=6.4
KSRS S **S 01 45 36.9 -0.7**
comp=Z,3.0nm,0.4s,baz=280,slow=6.7,SNR=7.3
KSRS ScP **ScP 01 46 24.5 +0.1**
comp=Z,2.4nm,0.9s,baz=267,slow=2.4,SNR=4.6
KSRS LR LR 01 55 36.5
comp=Z,7µm,20.5s,baz=260,slow=39
comp=Z,11nm,0.8s
SEKA Sheki 34.96 302 P **P 01 40 08.3 +1.3**
MNGR Mingechevir, A 34.99 301 P **P 01 40 09.1 +2.0**
MAK Makhachkala 35.03 305 *e*P **P 01 40 04.1 -3.3**
MAK *e* 01 41 21.8
MAK *e*S **S 01 45 34.7 -4.6**
MAK *e*SS **SnSn 01 47 52.8 -2.1**
MAK pmax pmax
comp=Z,265nm,1.2s
MAK MLR MLR
comp=Z,13µm,17.0s
SBUM Sibu 35.18 133 P **P 01 40 10.5 +1.5**
SBUM Sibu 35.18 133 P **P 01 40 10.2 +1.2**
SBUM Sibu 35.18 133 P **P 01 40 09.5 +0.5**
comp=Z,46nm,1.4s
KSI Kapahiang 35.26 153 P **P 01 40 10.3 +0.6**
KKM Kota Kinabalu 35.34 124 P **P 01 40 11.9 +1.4**
KKM Kota Kinabalu 35.34 124 P **P 01 40 13.0 +2.5**
comp=Z,4µmcomp=Z,146nm,1.4s
PPBI Pangkal Pinang 35.50 146 P **P 01 40 14.2 +2.4**
PMBI Palembang 35.53 149 P **P 01 40 13.6 +1.6**
GANJ Ganja 35.55 301 P **P 01 40 13.7 +1.7**
GQP Guinayangan 35.66 107 *e*P P 01 40 08.2 -5.0

BNX BinXian 35.76 50 ⇓P **P 01 40 13.8 +0.1**
BNX S **S 01 45 49.3 -1.3**
BNX pmax pmax
comp=Z,140nm,1.7s
BNX pmax pmax
comp=Z,1µm,3.6s
BNX L L
comp=Z,7µm,16.3s
BNX L L
comp=Z,12µm,17.1s
BNX L L
comp=Z,14µm,18.2s
NAX Nakhchivan 36.04 298 P **P 01 40 17.6 +1.2**
JOW Kunigami 36.13 83 LR LR 01 56 22.7
comp=Z,7µm,19.2s,baz=292,slow=38
MDSI Maura Dua 36.66 151 P **P 01 40 20.2 -1.5**
comp=Z,50nm,1.2s
GNI Garni 36.70 300 LR LR 01 58 05.9
comp=Z,3µm,20.2s,baz=90,slow=41
GNI Garni 36.70 300 P **P 01 40 24.4 +2.3**
GNI Garni 36.70 300 P **P 01 40 22.9 +0.9**
GNI Garni 36.70 300 P **P 01 40 24.4 +2.3**
GNI pmax pmax
comp=Z,399nm,1.5s
GNI MLR MLR
comp=Z,3µm,19.0s
GNI Garni 36.70 300 P **P 01 40 22.8 +0.7**
comp=Z,5µmcomp=Z,157nm,1.8s
TPI Tanjungpandan 36.77 145 P **P 01 40 25.4 +2.8**
comp=Z,2µmcomp=Z,2µmcomp=Z,84nm,1.2s
TBLG Delisi 36.86 302 P **P 01 40 22.8 -0.5**
MDJ Mudanjiang 37.02 53 P **P 01 40 24.1 -0.4**
MDJ pP pP 01 40 27.4 -2.3
MDJ S **S 01 46 08.4 -1.5**
MDJ ScS **ScS 01 50 40.6 +1.3**
MDJ pmax pmax
comp=Z,44nm,1.5s
MDJ L L
comp=Z,8µm,14.4s
MDJ L L
comp=Z,12µm,16.8s
MDJ L L
comp=Z,20µm,19.6s
KLSI 37.08 150 P **P 01 40 24.8 -0.5**
LWLI Liwa 37.09 152 P **P 01 40 28.1 +2.6**
comp=Z,100nm,0.9s
HEH HeiHe 37.12 43 *e*P **P 01 40 25.4 +0.1**
HEH PP **PnPn 01 41 55.0 +4.8**
HEH S **S 01 46 03.1 -8.2**
HEH pmax pmax
comp=Z,93nm,1.5s
HEH pmax pmax
comp=Z,1µm,3.9s
HEH L L
comp=Z,4µm,13.1s
HEH L L
comp=Z,8µm,11.2s
HEH L L
comp=Z,15µm,15.0s
GUDG Gudauri 37.15 303 P **P 01 40 28.2 +2.3**
KLI Kotabumi 37.29 150 P **P 01 40 28.6 +1.5**
comp=Z,2µmcomp=Z,71nm,0.9s
TRLG Trialeti 37.31 302 P **P 01 40 28.9 +1.6**
JNU Nakatsue 37.42 72 P **P 01 40 28.9 +0.8**
comp=Z,13nm,0.8s,baz=249,slow=13,SNR=4.6
JNU LR LR 01 57 18.8
comp=Z,20µm,19.0s,baz=275,slow=39
comp=Z,13nm,0.8s
JNU Nakatsue 37.42 72 IAmb IAmb 01 41 11.8
comp=Z,83nm,0.8s
MYLDM Lahad Datu 37.60 122 P **P 01 40 31.2 +1.5**
MYLDM Lahad Datu 37.60 122 IAmb IAmb 01 40 34.6
comp=Z,259nm,1.3s
KASI Kota Agung 37.73 151 P **P 01 40 29.8 -1.0**
comp=Z,69nm,0.5s
BELG Belogornoye 37.75 320 *d* P **P 01 40 30.2 -0.4**
BELG pmax pmax
comp=Z,60nm,2.1s
RAYN Ar Rayn 37.81 272 P **P 01 40 31.3 -0.2**
RAYN Ar Rayn 37.81 272 *i* P **P 01 40 31.1 -0.4**
SNR=6.9
RAYN Ar Rayn 37.81 272 P **P 01 40 31.3 -0.2**
RAYN pmax pmax
comp=Z,14nm,1.0s
NCK Nalchik 37.93 305 *d* P **P 01 40 33.0 +0.7**
NCK pmax pmax
comp=Z,116nm,0.8s
NCK MLR MLR
comp=Z,7µm,17.0s
ZEA Zeya 38.37 38 *e*P **P 01 40 36.9 +1.1**
ZEA *e* 01 42 09.9
ZEA *e*S **S 01 46 25.8 -4.3**
ZEA pmax pmax
comp=E,400nm,3.8s
ZEA pmax pmax
comp=Z,500nm,3.4s
ZEA pmax pmax
comp=E,10.0nm,1.1s
ZEA pmax pmax
comp=Z,30nm,1.1s
ZEA smax smax
comp=E,400nm,12.0s
ZEA MLR MLR
comp=E,4µm,11.0s
ZEA MLR MLR
comp=N,3µm,17.0s
ZEA MLR MLR
comp=Z,7µm,12.0s
VLA Vladivostok 38.42 56 *e*P **P 01 40 38.2 +1.8**
VLA pmax pmax
comp=Z,71nm,0.9s
KBZ Khabaz 38.47 305 P **P 01 40 37.3 +0.5**
comp=Z,37nm,0.7s,baz=115,slow=6.1,SNR=64
KBZ S **S 01 46 31.5 -0.3**
comp=Z,1.4nm,0.9s,baz=51,slow=14,SNR=1.3
KBZ LR LR 01 58 59.1
comp=Z,9µm,18.7s,baz=90,slow=40
comp=Z,37nm,0.7s
KBZ Khabaz 38.47 305 *d* P **P 01 40 36.9 +0.2**
KBZ pmax pmax
comp=Z,143nm,1.9s
KBZ MLR MLR
comp=Z,8µm,18.0s
NEUR Neytrino 38.55 305 *d* P **P 01 40 38.8 +1.1**
NEUR pmax pmax
comp=Z,65nm,1.1s
NEUR MLR MLR
comp=Z,7µm,17.0s
GOF Gofitskoye 38.57 307 *d* P **P 01 40 38.7 +1.1**
GOF *e*S **S 01 46 34.7 +1.3**
SHA1 Shidzhatmaz 38.64 305 *de*P **P 01 40 39.3 +0.8**
USRK Ussuriysk Ar. 38.64 54 P **P 01 40 38.0 -0.2**
comp=Z,27nm,0.8s,baz=258,slow=8.8,SNR=34
comp=Z,27nm,0.8s
KIV Kislovodsk 38.65 306 ⇓P **P 01 40 39.2 +0.8**
KIV Kislovodsk 38.65 306 P **P 01 40 39.1 +0.7**
KIV IAmb IAmb 01 40 43.3
comp=Z,238nm,1.3s
KIV Kislovodsk 38.65 306 *i* P **P 01 40 38.6 +0.2**
SNR=54
KIV Kislovodsk 38.65 306 *e*P **P 01 40 39.1 +0.7**
KIV *e* 01 42 03.7
KIV *e*S **S 01 46 36.1 +1.3**
KIV pmax pmax
comp=Z,94nm,1.0s
KIV pmax pmax
comp=Z,192nm,3.6s
KIV MLR MLR
comp=Z,5µm,16.0s
KIV Kislovodsk 38.65 306 P **P 01 40 38.2 -0.2**
comp=Z,2µmcomp=Z,101nm,0.8s
KIV pP **pP 01 40 41.1 -2.6**
comp=Z,2µmcomp=Z,101nm,0.8s
GURO Guroymak-BITLI 38.72 297 IAmb IAmb 01 40 45.2
comp=Z,202nm,1.5s
TBP Tagbilaran 39.05 111 *e*P **P 01 40 42.5 +0.5**
DCPH Dipolog City 39.26 113 *i* P **P 01 40 44.1 +0.4**
KLR Kul'dur 39.50 46 P **P 01 40 45.1 -0.2**
comp=Z,52nm,0.9s,baz=272,slow=9.2,SNR=65
KLR PcP **PcP 01 42 52.7 -0.2**
comp=Z,14nm,0.9s,baz=300,slow=5.4,SNR=3.9
KLR LR LR 01 58 53.7
comp=Z,4µm,18.0s,baz=256,slow=39
comp=Z,52nm,0.9s
KLR Kul'dur 39.50 46 *de*P **P 01 40 45.4 +0.1**
KLR pmax pmax
comp=Z,33nm,1.3s
KLR MLR MLR
comp=Z,5µm,25.0s
DBJI Dramaga 39.64 149 P **P 01 40 46.9 +0.1**
comp=Z,87nm,1.1s
KIRV Kirov 39.74 330 LR LR 01 59 28.5
comp=Z,8µm,21.0s,baz=130,slow=40
KIRV Kirov 39.74 330 *de*P **P 01 40 47.8 +0.6**
LABN Labinsk 40.14 306 *e*P **P 01 40 52.3 +1.6**
LABN *e* 01 42 22.5
LABN *e*S S 01 47 06.1 +9.1
LABN pmax pmax
comp=Z,165nm,1.0s
LABN MLR MLR
comp=E,21µm,17.0s
LEM Lembang 40.28 148 LR LR 02 01 12.3
comp=E,3µm,19.7s,baz=321,slow=42
ERBR Yeremizino-Bor 40.46 308 *e*P **P 01 40 52.6 -0.7**
ERBR *e* 01 42 29.6
ERBR *e*S **S 01 46 59.8 -1.9**
ERBR pmax pmax
comp=Z,54nm,0.9s
ERBR MLR MLR
comp=E,17µm,17.0s
SOC Sochi 40.74 305 *d* P **P 01 40 54.7 -1.0**
SOC *e**PP **pP 01 41 01.0 -0.1**
SOC *e* 01 42 29.6
SOC *e*PPP PPP 01 42 52.7
SOC *e*S **S 01 47 06.1 +0.1**
SOC *e*SS **SS 01 50 06.6 0.0**
SOC *e*SSS SSS 01 50 32.0
SOC pmax pmax
comp=Z,48nm,0.9s
SOC MLR MLR
comp=Z,4µm,18.0s
NRIK Noril'sk 40.77 0 P **P 01 40 56.1 +0.5**
comp=Z,155nm,1.1s,baz=176,slow=7.5,SNR=83
NRIK S S 01 46 51.0 -15
comp=Z,6.3nm,1.1s,baz=148,slow=5.0,SNR=4.2
NRIK LR LR 01 59 32.3
comp=Z,3µm,18.7s,baz=184,slow=39
comp=Z,155nm,1.1s
NRIK Noril'sk 40.77 0 P **P 01 40 56.2 +0.6**
NRIK Noril'sk 40.77 0 *d* P **P 01 40 56.0 +0.5**
NRIK pmax pmax
comp=Z,196nm,1.3s
VRH Novokhopyorsk 40.80 316 *e*P **P 01 40 55.2 -0.9**
VRH *e*S **S 01 47 04.1 -2.5**
VRH pmax pmax
comp=Z,900nm,2.1s
VRH pmax pmax
comp=Z,292nm,2.1s
VRH smax smax
comp=N,600nm,2.0s
BBJI Bungbulang 40.85 148 P **P 01 40 58.5 +1.6**
BBJI Bungbulang 40.85 148 P **P 01 41 01.4 +4.5**
CTJI Waduk Cacaban 41.19 146 P **P 01 41 01.3 +1.7**
comp=N,4µmcomp=N,205nm,1.0s
KPJI Karang Pucung 41.34 147 P **P 01 41 00.8 -0.1**
comp=N,106nm,0.7s
BBKI Banjar Baru 41.40 136 P **P 01 41 03.4 +2.0**
comp=N,7µmcomp=N,220nm,1.3s
KCP Kidapawan 41.57 114 *e*P **P 01 41 04.2 +1.3**
ARPR Arapgir-MALATY 41.60 298 P **P 01 41 05.0 +1.9**
SMRI Semarang 41.85 144 P **P 01 41 06.8 +1.7**
SMRI Semarang 41.85 144 P **P 01 41 06.5 +1.4**
SMRI Semarang 41.85 144 P **P 01 41 07.5 +2.4**
MPSI Mapaga 41.92 126 P **P 01 41 08.1 +2.4**
comp=N,2µmcomp=N,47nm,1.1s
DAV Davao City (W) 41.93 113 P **P 01 41 06.6 +0.8**
comp=N,532nm,0.4s,baz=254,slow=2.0,SNR=3.7
DAV S **S 01 47 17.0 -7.2**
comp=N,217nm,0.5s,baz=257,slow=22,SNR=1.1
DAV LR LR 02 01 26.4
comp=N,2µm,18.2s,baz=322,slow=40
DAV Davao City (W) 41.93 113 IAmb IAmb 01 41 09.4
comp=Z,583nm,0.4s
BIPH Bislig 41.94 111 *e*P **P 01 41 06.5 +0.6**
TOLI2 Tolitoli 42.01 125 P **P 01 41 06.8 +0.3**
TOLI2 Tolitoli 42.01 125 P **P 01 41 06.4 -0.1**
TOLI2 IAmb IAmb 01 41 09.3
comp=Z,166nm,1.2s
VORD Divnogorie 42.23 316 *e*P **P 01 41 06.6 -1.2**
VORD *e*S **S 01 47 24.8 -3.0**
VORD pmax pmax
comp=Z,130nm,0.6s
VORD smax smax
comp=N,250nm,6.2s
VORD MLR MLR
comp=Z,2µm,13.0s
VSR Storozhevoye 42.36 316 *e*P **P 01 41 06.6 -2.3**
VSR *e*S **S 01 47 24.8 -5.0**
VSR *e*SS **SS 01 50 39.0 +0.6**
VSR pmax pmax
comp=Z,210nm,1.8s
VSR smax smax
comp=N,850nm,12.0s
VSR MLR MLR
comp=Z,5µm,15.0s
VORR Voronezh 42.45 317 *e*P **P 01 41 08.9 -0.7**
VORR *e*S **S 01 47 28.8 -2.2**
VORR pmax pmax
comp=Z,99nm,0.6s
VORR pmax pmax
comp=Z,600nm,1.9s
VORR smax smax
comp=E,100nm,0.8s
ANN Anapa 42.49 306 *e*P **P 01 41 09.7 -0.3**
ANN *e* 01 42 49.5
ANN *e*S **S 01 47 30.6 -1.2**
ANN pmax pmax
comp=Z,445nm,1.8s
ANN pmax pmax
comp=Z,125nm,1.2s
ANN MLR MLR
comp=E,9µm,18.0s
ANN MLR MLR
comp=N,8µm,18.0s
ANN MLR MLR
comp=Z,7µm,19.0s
GAZ Gaziantep 42.56 295 IAmb IAmb 01 42 27.9
comp=Z,81nm,0.4s
DDMP Don Marcelino, 42.60 114 *e*P **P 01 41 11.3 +0.1**
NGJI Ngawi 42.65 143 P **P 01 41 15.4 +3.8**
comp=Z,8µmcomp=Z,283nm,1.2s
XMI Christmas Isla 42.67 153 P **P 01 41 13.3 +1.5**
PCI Palu 42.75 128 P **P 01 41 16.4 +3.9**
comp=Z,4µmcomp=Z,42nm,1.0s
GRNR Gornyy 42.79 45 ⇑*i*P **P 01 41 12.0 -0.4**
GRNR pmax pmax
comp=Z,40nm,0.6s
GRNR pmax pmax
comp=N,30nm,0.8s
GRNR MLR MLR
comp=E,3µm,15.0s
GRNR MLR MLR
comp=N,2µm,11.0s
GRNR MLR MLR
comp=Z,4µm,17.0s
LPSR Galich'ya Gora 42.84 318 *e*P **P 01 41 11.9 -0.9**
LPSR *e*S **S 01 47 35.3 -1.5**
LPSR pmax pmax
comp=Z,214nm,0.8s
LPSR pmax pmax
comp=Z,1µm,2.3s
LPSR smax smax
comp=N,500nm,2.4s
TOKA Tokat 43.02 300 IAmb IAmb 01 41 19.0
comp=Z,192nm,1.5s
SJI Sawahan 43.12 143 P **P 01 41 16.1 +0.6**
comp=Z,333nm,1.3s
MAJO Matsushiro 43.15 66 P **P 01 41 16.3 +0.7**
MAJO Matsushiro 43.15 66 P **P 01 41 15.8 +0.3**
MAJO Matsushiro 43.15 66 ⇑*i*P **P 01 41 15.4 -0.2**
MAJO pmax pmax
comp=Z,77nm,1.3s
MAJO MLR MLR
comp=Z,6µm,23.0s
MJAR Matsushiro Arr 43.15 66 P **P 01 41 15.2 -0.3**
comp=Z,33nm,1.1s,baz=279,slow=8.0,SNR=24
MJAR S **S 01 47 42.7 +0.8**
comp=Z,0.7nm,0.4s,baz=282,slow=5.8,SNR=1.0
MJAR LR LR 02 00 11.0
comp=Z,4µm,21.9s,baz=266,slow=38
comp=Z,33nm,1.1s
MJAR Matsushiro Arr 43.15 66 P **P 01 41 15.6 0.0**

SNJI Sawahan-Nganju 43.16 143 P **P** **01 41 17.1 +1.2**
comp=Z,2μmcomp=Z,153nm,1.0s
MRSI Marisa 43.29 124 P **P** **01 41 18.6 +1.8**
comp=Z,3μmcomp=Z,69nm,1.5s
ASF Jabal al Asfar 43.37 288 LR LR 02 02 38.3
comp=Z,6μm,18.4s,baz=73,slow=41
YAK Yakutsk 43.40 28 LR LR 01 58 45.9
comp=Z,3μm,20.5s,baz=237,slow=35
YAK Yakutsk 43.40 28 P **P** **01 41 16.6 -0.5**
YAK Yakutsk 43.40 28 IAMs_20 IAMs_20 02 00 19.6
comp=Z,6μm,21.0s
YAK Yakutsk 43.40 28 *e*P **P** **01 41 17.1 0.0**
YAK *e**PP **sP** **01 41 26.0 +1.4**
YAK *e* 01 42 55.8
YAK *e*PPP PPP 01 43 31.9
YAK *e*S **S** **01 47 43.1 -1.6**
YAK *e*SS **SS** **01 50 58.6 +0.2**
YAK pmax pmax
comp=Z,71nm,1.5s
YAK pmax pmax
comp=N,19nm,1.3s
YAK pmax pmax
comp=E,32nm,1.2s
YAK pmax pmax
comp=Z,892nm,7.0s
YAK pmax pmax
comp=N,259nm,3.6s
YAK pmax pmax
comp=E,346nm,4.0s
YAK smax smax
comp=E,609nm,5.1s
YAK smax smax
comp=N,291nm,2.5s
MMSI Mamuju 43.42 131 P **P** **01 41 20.0 +2.1**
comp=N,3μmcomp=N,120nm,1.0s
KMMI Kalianget 43.76 140 P **P** **01 41 22.5 +2.0**
comp=N,3μmcomp=N,4μmcomp=N,268nm,1.0s
KHAM Kharkiv 43.94 314 P **P** **01 41 22.4 +0.6**
PMSI Majene 44.02 131 P **P** **01 41 25.5 +2.7**
comp=N,3μmcomp=N,6μmcomp=N,238nm,1.2s
BLJI Banyuglugur 44.12 141 P **P** **01 41 25.5 +2.1**
comp=N,5μmcomp=N,237nm,1.1s
TTSI Tana Toraja 44.29 130 P **P** **01 41 26.2 +1.3**
MOS Moscow 44.43 322 *e*P **P** **01 41 21.9 -3.6**
MOS *e* 01 43 09.7
MOS *e*S **S** **01 47 52.6 -7.2**
MOS *e*SS **SS** **01 51 11.4 -7.3**
MOS pmax pmax
comp=Z,2μm,2.4s
MOS pmax pmax
comp=E,71nm,1.1s
MOS MLR MLR
comp=Z,6μm,20.0s
MOS MLR MLR
comp=E,6μm,18.0s
MMAI Mount Meron Ar 44.48 289 P **P** **01 41 27.4 +1.0**
comp=E,6.5nm,0.7s,baz=67,slow=11,SNR=7.1
MMAI PcP **PP** **01 43 10.6 +0.5**
comp=E,3.4nm,0.7s,baz=93,slow=2.9,SNR=2.3
MMAI S **S** **01 47 59.1 -2.4**
comp=E,11nm,1.1s,baz=162,slow=5.6,SNR=1.8
MMAI LR LR 02 03 42.7
comp=E,4μm,19.9s,baz=82,slow=41
comp=E,6.5nm,0.7s
ABJI Asem Bagus 44.52 140 P **P** **01 41 28.2 +1.6**
comp=E,4μmcomp=E,220nm,1.1s
OBN Obninsk 44.84 321 ⇓P **P** **01 41 29.1 +0.3**
OBN Obninsk 44.84 321 P **P** **01 41 28.5 -0.2**
OBN Obninsk 44.84 321 *i*P **P** **01 41 28.5 -0.2**
OBN *i* 01 41 31.5
OBN *e* 01 41 34.0
OBN *i*S **S** **01 48 04.0 -1.8**
OBN pmax pmax
comp=Z,101nm,1.3s
OBN Obninsk 44.84 321 P **P** **01 41 28.5 -0.2**
comp=Z,3μmcomp=Z,159nm,2.1s
JHJ Hachijo jima 2 44.84 71 LR LR 02 01 57.5
comp=Z,8μm,18.6s,baz=282,slow=38
ATD Arta Tunnel 44.84 257 LR LR 01 59 51.7
comp=Z,142nm,18.8s,baz=64,slow=36
SIM Simferopol' 44.85 306 *e*P **P** **01 41 29.5 +0.4**
SIM *e* 01 43 13.1
SIM *e*S **S** **01 48 07.4 +1.0**
SIM pmax pmax
comp=Z,243nm,1.2s
BZK Bozkurt 44.88 302 ⇑P **P** **01 41 30.6 +1.3**
BZK Bozkurt 44.88 302 P **P** **01 41 29.7 +0.4**
comp=Z,4μmcomp=Z,187nm,1.4s
LUWI Luwuk 44.93 125 P **P** **01 41 31.8 +1.8**
LUWI Luwuk 44.93 125 IAmb IAmb 01 41 48.1
comp=Z,124nm,1.0s
LUWI Luwuk 44.93 125 P **P** **01 41 33.1 +3.1**
comp=Z,6μmcomp=Z,133nm,1.7s
SPSI Sidrap Palu 44.93 131 P **P** **01 41 31.5 +1.5**
comp=Z,7μmcomp=Z,147nm,1.8s
JAGI Jajag, Banyuwa 45.02 141 P **P** **01 41 29.9 -0.8**
JAGI Jajag, Banyuwa 45.02 141 P **P** **01 41 30.5 -0.2**
comp=Z,2μmcomp=Z,76nm,0.9s
KIRS Kirsehir-Merke 45.04 298 ⇑P **P** **01 41 31.8 +1.0**
ILGA Ilgaz 45.11 301 P **P** **01 41 31.9 +0.4**
MSEY Mahe Island 45.12 228 P **P** **01 41 32.4 +0.8**
MSEY IAmb IAmb 01 41 34.5
comp=Z,106nm,1.6s
MSEY Mahe Island 45.12 228 *i*P **P** **01 41 32.2 +0.6**
SNR=6.4
MSEY Mahe Island 45.12 228 P **P** **01 41 32.4 +0.8**
MSEY pmax pmax
comp=Z,106nm,1.7s
BR104 Keskin Array S 45.22 299 P **P** **01 41 32.1 -0.1**
comp=Z,287nmcomp=Z,16nm,1.0s
BR131 Keskin Array S 45.22 299 P **P** **01 41 32.4 +0.1**
BR131 IAmb IAmb 01 41 35.9
comp=Z,155nm,1.7s
BR131 Keskin Array S 45.22 299 P **P** **01 41 32.4 +0.1**
BR131 pmax pmax
comp=Z,155nm,1.7s
BR131 Keskin Array S 45.22 299 P **P** **01 41 32.5 +0.3**
SNR=14
BRTR Keskin Array B 45.22 299 P **P** **01 41 32.9 +0.6**
comp=Z,10nm,1.0s,baz=116,slow=7.0,SNR=32
BRTR PcP **PcP** **01 43 13.3 +1.0**
comp=Z,7.1nm,1.1s,baz=91,slow=5.6,SNR=2.4
BRTR ScP **ScP** **01 47 06.0 +1.2**
comp=Z,1.4nm,0.9s,baz=94,slow=4.6,SNR=3.4
BRTR S **S** **01 48 13.8 +1.6**
comp=Z,0.2nm,0.3s,baz=104,slow=9.0,SNR=4.1
BRTR LR LR 02 04 40.0
comp=Z,2μm,19.1s,baz=70,slow=42
comp=Z,10nm,1.0s
BRTR Keskin Array B 45.22 299 P **P** **01 41 32.4 +0.1**
KLMR Klimovskoe 45.24 329 *e*P **P** **01 41 30.0 -1.9**
KLMR *e* 01 43 12.1
KLMR S **S** **01 48 06.4 -5.0**
KLMR pmax pmax
comp=Z,196nm,1.5s
KLMR MLR MLR
comp=Z,5μm,14.0s
BR106 Keskin Array S 45.24 299 P **P** **01 41 32.1 -0.3**
BR105 Keskin Array S 45.24 299 P **P** **01 41 32.1 -0.3**
comp=Z,333nmcomp=Z,15nm,0.9s
RTBI Rangdo, Negare 45.46 140 P **P** **01 41 35.1 +0.9**
comp=Z,3μmcomp=Z,3μmcomp=Z,118nm,1.6s
EIL Elat 45.47 285 LR LR 02 04 06.8
comp=Z,9μm,18.6s,baz=86,slow=41
MKS Makassar 45.67 132 P **P** **01 41 37.6 +1.8**
comp=Z,2μmcomp=Z,133nm,1.3s
KAPI Kappang 45.70 132 P **P** **01 41 36.0 -0.1**
comp=Z,39nm,1.0s,baz=300,slow=11,SNR=14
KAPI LR LR 02 05 03.6
comp=Z,1μm,18.2s,baz=306,slow=42
comp=Z,39nm,1.0s
KAPI Kappang 45.70 132 P **P** **01 41 37.7 +1.6**
KAPI Kappang 45.70 132 P **P** **01 41 35.8 -0.3**
KAPI Kappang 45.70 132 P **P** **01 41 35.8 -0.3**
KAPI pmax pmax
comp=Z,61nm,1.2s
KAPI MLR MLR
comp=Z,1μm,21.0s
KAPI Kappang 45.70 132 P **P** **01 41 37.2 +1.1**
KHKI Kahang-Kahang 45.76 139 P **P** **01 41 37.6 +1.1**
comp=Z,3μmcomp=Z,147nm,1.3s
CSS Mathiatis 45.91 292 IAmb IAmb 01 41 40.0
comp=Z,178nm,1.9s
UGL Uglegorsk 46.13 48 *e*P **P** **01 41 39.5 +0.4**
UGL *e* 01 43 34.0
UGL *e*S **S** **01 48 29.9 +5.2**
UGL pmax pmax
comp=Z,200nm,1.1s
UGL MLR MLR
comp=E,10μm,17.0s
UGL MLR MLR
comp=N,8μm,10.0s
UGL MLR MLR
comp=Z,8μm,18.0s
ASAJ Asahikawa 46.24 55 LR LR 02 02 17.3
comp=Z,5μm,18.8s,baz=276,slow=38
ASAJ Asahikawa 46.24 55 P **P** **01 41 39.9 -0.2**
JKA Kamikawa-asahi 46.25 55 IAmb IAmb 01 41 57.0
comp=Z,98nm,1.1s
YSS Yuzhno-Sakhali 46.44 51 P **P** **01 41 42.5 +0.9**
YSS Yuzhno-Sakhali 46.44 51 P **P** **01 41 41.1 -0.5**
YSS Yuzhno-Sakhali 46.44 51 *e*P **P** **01 41 41.4 -0.2**
YSS *e* 01 43 30.9
YSS *e*S **S** **01 48 25.3 -3.8**
YSS pmax pmax
comp=Z,1μm,4.2s
YSS pmax pmax
comp=Z,90nm,0.9s
YSS smax smax
comp=N,900nm,6.3s
YSS smax smax
comp=E,600nm,8.3s
YSS MLR MLR
comp=Z,8μm,15.0s
YSS MLR MLR
comp=E,11μm,14.0s
TYV Tymovskoe 46.70 46 *e*P **P** **01 41 43.8 +0.2**
TYV *e*S **S** **01 48 31.2 -1.6**
TYV pmax pmax
comp=Z,73nm,1.1s
TYV pmax pmax
comp=Z,400nm,2.6s
TYV smax smax
comp=N,300nm,3.5s
TYV smax smax
comp=E,400nm,3.5s
TYV smax smax
comp=N,8.0nm,2.2s
TYV smax smax
comp=E,13nm,2.2s
TWSI Taliwang, Sumb 46.80 138 P **P** **01 41 44.4 -0.3**
comp=E,44nm,0.9s
ADZR Andozero 47.02 333*d i*P **P** **01 41 46.1 +0.3**
ADZR *e*S **S** **01 48 37.3 +0.3**
ADZR pmax pmax
comp=Z,116nm,0.7s
ADZR MLR MLR
comp=Z,4μm,10.0s
BSSI Bau Bau, Buton 47.03 132 P **P** **01 41 47.7 +1.1**
comp=Z,2μmcomp=Z,116nm,1.0s
MDUB Mudurnu 47.05 300 IAmb IAmb 01 41 50.3
comp=Z,109nm,1.1s
TNTI Ternate 47.16 119 P **P** **01 41 49.0 +1.4**
TNTI Ternate 47.16 119 P **P** **01 41 47.6 0.0**
TNTI Ternate 47.16 119 P **P** **01 41 49.0 +1.4**
comp=Z,2μmcomp=Z,101nm,1.1s
SAHE Sakarya_HENDEK 47.28 301 ⇓P **P** **01 41 49.7 +1.4**
PLAI Plampang 47.40 137 P **P** **01 41 48.7 -0.7**
PLAI Plampang 47.40 137 P **P** **01 41 48.7 -0.7**
comp=Z,1μmcomp=Z,59nm,1.0s
DBNI Kabupaten Domp 47.47 136 P **P** **01 41 50.4 +0.5**
comp=Z,3μmcomp=Z,114nm,1.7s
ISP Isparta 47.80 297⇑ *e*P **P** **01 41 52.7 +0.2**
ISP pmax pmax
comp=Z,82nm,2.5s
PURM Purcari 47.87 308 ⇑P **P** **01 41 53.7 +0.9**
PURM Purcari 47.87 308 P **P** **01 41 52.8 +0.1**
comp=Z,6μmcomp=Z,357nm,1.0s
SANI Sanana 47.96 123 P **P** **01 41 53.0 -0.8**
SANI Sanana 47.96 123 P **P** **01 41 53.3 -0.5**
BAL3X Bal3x, Balta 48.09 310 P **P** **01 41 53.9 -0.6**
JCJ Chichijima 48.13 78 LR LR 02 03 22.6
comp=Z,4μm,19.5s,baz=303,slow=38
AK09 Malin Array Si 48.45 314 P **P** **01 41 56.9 -0.3**
AK10 Malin Array Si 48.47 314 P **P** **01 41 57.0 -0.3**
AK08 Malin Array Si 48.47 314 P **P** **01 41 57.0 -0.3**
AKASG Malin Array Be 48.49 314 P **P** **01 41 56.5 -1.0**
comp=Z,19nm,0.7s,baz=80,slow=7.4,SNR=127
AKASG PcP **PcP** **01 43 23.4 -0.1**
comp=Z,6.2nm,0.8s,baz=80,slow=4.4,SNR=4.8
AKASG S **S** **01 48 54.2 -4.1**
comp=Z,1.6nm,0.8s,baz=111,slow=21,SNR=5.5
AKASG LR LR 02 05 15.8
comp=Z,6μm,19.9s,baz=94,slow=40
comp=Z,19nm,0.7s
AKASG Malin Array Be 48.49 314 P **P** **01 41 56.8 -0.7**
AKASG IAmb IAmb 01 42 01.0
comp=Z,108nm,1.2s
AKASG Malin Array Be 48.49 314 P **P** **01 41 56.8 -0.7**
AKASG pmax pmax
comp=Z,108nm,1.2s
AKBB Malin Array Si 48.49 314 IAmb IAmb 01 41 59.3
comp=Z,81nm,0.8s
AKBB Malin Array Si 48.49 314*de*P **P** **01 41 56.9 -0.6**
AKBB Malin Array Si 48.49 314 P **P** **01 41 56.8 -0.7**
AK01 Malin Array Si 48.50 314 P **P** **01 41 57.1 -0.4**
AK05 Malin Array Si 48.50 314 P **P** **01 41 57.1 -0.5**
KIEV Kiev 48.50 314 ⇑P **P** **01 41 57.5 -0.1**
KIEV Kiev 48.50 314 P **P** **01 41 56.9 -0.7**
KIEV IAmb IAmb 01 41 59.3
comp=Z,72nm,0.8s
KIEV Kiev 48.50 314 *i*P **P** **01 41 56.5 -1.0**
SNR=52
KIEV Kiev 48.50 314 P **P** **01 41 56.9 -0.7**
KIEV pmax pmax
comp=Z,72nm,0.8s
KIEV MLR MLR
comp=Z,6μm,19.0s
KIEV Kiev 48.50 314 P **P** **01 41 56.8 -0.7**
comp=Z,14μmcomp=Z,617nm,1.6s
JURR Jurilovca 48.58 306 ⇑P **P** **01 41 58.8 +0.6**
YUK Yuzh-Kuril'sk 48.60 55*d*iP **P** **01 41 58.0 -0.4**
YUK *e*S **S** **01 48 55.9 -4.0**
YUK pmax pmax
comp=E,626nm,1.3s
YUK pmax pmax
comp=Z,729nm,1.3s
YUK pmax pmax
comp=N,348nm,1.4s
YUK MLR MLR
comp=Z,5μm,22.0s
KIS Kishinev 48.60 309 ⇑P **P** **01 41 58.5 +0.1**
KIS Kishinev 48.60 309 P **P** **01 41 58.5 +0.1**
TLCR 48.61 306 ⇓P **P** **01 41 58.8 +0.3**
TLCR 48.61 306 P **P** **01 41 58.8 +0.3**
TIXI Tiksi 48.67 16 P **P** **01 41 58.1 -0.4**
TIXI Tiksi 48.67 16*d*iP **P** **01 41 57.9 -0.6**
TIXI pmax pmax
comp=Z,481nm,2.5s
EFOR EFORIE 48.77 305 ⇓P **P** **01 42 00.5 +0.8**
MANR Mangalia 48.81 305 ⇑P **P** **01 42 00.9 +0.8**
TPGR Topolog 48.90 306 ⇓P **P** **01 42 01.0 +0.2**
TIRR Tirgusor 48.92 306 ⇑P **P** **01 42 01.5 +0.6**
TIRR Tirgusor 48.92 306 IAmb IAmb 01 42 04.2
comp=Z,156nm,1.5s
TIRR Tirgusor 48.92 306 P **P** **01 42 01.4 +0.6**
TIRR Tirgusor 48.92 306 P **P** **01 42 00.6 -0.2**
comp=Z,2μmcomp=Z,71nm,2.4s
MFTR Murfatlar 48.92 305 ⇑P **P** **01 42 01.7 +0.8**
SORM Soroca 48.94 310 ⇑P **P** **01 42 00.8 -0.1**
SORM Soroca 48.94 310 P **P** **01 42 00.8 -0.1**
SORM Soroca 48.94 310 P **P** **01 42 00.1 -0.9**
comp=Z,3μmcomp=Z,101nm,1.6s
WBSI Waikabubak, Su 49.02 136 P **P** **01 42 01.1 -0.8**
CFR Carcaliu 49.09 306 ⇓P **P** **01 42 02.6 +0.4**
CFR Carcaliu 49.09 306 P **P** **01 42 02.5 +0.4**
VLDR Vladesti 49.12 307 ⇑P **P** **01 42 03.5 +1.2**
TATR Tatarca 49.14 307 ⇑P **P** **01 42 03.5 +0.9**
PSN Preselentsi 49.15 304 P **P** **01 42 03.1 +0.5**
SCTR Scanteiesti 49.18 307 ⇑P **P** **01 42 03.9 +1.1**
PUL Pulkovo 49.24 326*de*P **P** **01 42 03.5 +0.4**
PUL pmax pmax
comp=Z,266nm,1.3s
PUL MLR MLR
comp=Z,8μm,21.0s
MANT Manisa 49.27 298 IAmb IAmb 01 42 06.6
comp=Z,135nm,1.7s
VARL Varlezi 49.28 307 ⇑P **P** **01 42 04.8 +1.2**
ICOR Ion Corvin 49.37 305 ⇓P **P** **01 42 05.5 +1.1**
LUBAR Lubar, Ukraine 49.39 313 P **P** **01 42 04.2 -0.2**
TUDR 49.41 307 ⇑P **P** **01 42 05.8 +1.2**
BAND Balkesir-Ban 49.41 300 ⇓P **P** **01 42 06.1 +1.4**
BIR Birlad 49.43 308 ⇑P **P** **01 42 05.0 +0.3**
BIR Birlad 49.43 308 P **P** **01 42 05.0 +0.3**
IASR Iasi 49.45 309 ⇑P **P** **01 42 05.0 0.0**
NLAI Namlea 49.58 123 P **P** **01 42 07.9 +1.7**
comp=Z,1μmcomp=Z,106nm,0.8s
GHRR 49.58 308 ⇑P **P** **01 42 07.4 +1.4**
GHRR 49.58 308 P **P** **01 42 05.8 -0.1**
NDNU Novodnistrovsk 49.61 311 P **P** **01 42 05.5 -0.6**
BALB Balikesir 49.66 299 IAmb IAmb 01 42 09.8
comp=Z,213nm,1.6s
MNK Minsk 49.66 319 *i*P **P** **01 42 06.7 +0.3**
comp=E,23nm,1.0s
MNK *i*P **P** **01 42 06.7 +0.3**
comp=N,101nm,0.9s
MNK *i*P **P** **01 42 06.7 +0.3**
comp=Z,177nm,0.9s,baz=96
MNK *i*PcP **PcP** **01 43 28.9 +1.3**
MNK *i*PP **PP** **01 44 02.9 +2.2**
MNK *i*PPP PPP 01 44 53.5
MNK *i*S **S** **01 49 15.9 +1.2**
MNK *i*SS **SS** **01 52 49.7 +3.1**
MNK *i*SSS SSS 01 54 12.7
MNK *i*LQ LQ 02 00 29.3
MNK *i*LR LR 02 04 00.2
MNK *i*LRM MLR 02 06 03.2
comp=E,3μm,16.2s
MNK *i*LRM MLR 02 06 34.7
comp=Z,12μm,18.7s
MNK *i*LRM MLR 02 06 41.4
comp=N,10μm,19.6s
MNK Minsk 49.66 319 *i*P **P** **01 42 06.6 +0.3**
MNK *i* 01 43 28.8
MNK *i* 01 44 02.9
MNK *i*PPP PPP 01 44 53.4
MNK *i*S **S** **01 49 15.8 +1.2**
MNK *i*SS **SS** **01 52 49.6 +3.1**
MNK *i*SSS SSS 01 54 12.6
MNK pmax pmax
comp=Z,177nm,0.9s
MNK pmax pmax
comp=E,23nm,1.0s
MNK pmax pmax
comp=N,101nm,0.9s
MNK MLR MLR
comp=E,3μm,16.0s
MNK MLR MLR
comp=Z,12μm,19.0s
MNK MLR MLR
comp=N,10μm,20.0s
AMRR Amara 49.68 306 ⇑P **P** **01 42 08.1 +1.4**
AMRR Amara 49.68 306 P **P** **01 42 08.0 +1.4**
FURI Furi 49.70 257 LR LR 02 02 25.3
comp=N,2μm,20.0s,baz=40,slow=35
PANC Panciu 49.77 307 ⇑P **P** **01 42 08.1 +0.8**
NEF NEVSHA 49.80 304 P **P** **01 42 08.1 +0.5**
ODBI Odobesti 49.84 307 ⇑P **P** **01 42 09.2 +1.5**
LVZ Lovozero 50.03 337 P **P** **01 42 08.8 -0.2**
LVZ IAmb IAmb 01 42 11.6
comp=Z,73nm,0.9s
LVZ Lovozero 50.03 337⇓ *e*P **P** **01 42 08.8 -0.2**
LVZ pmax pmax
comp=Z,88nm,0.9s
MMRI Maumere 50.04 132 P **P** **01 42 09.3 -0.4**
MMRI Maumere 50.04 132 P **P** **01 42 09.3 -0.4**
comp=Z,3μmcomp=Z,165nm,1.1s
VRI Vrincioaia 50.06 307 ⇓P **P** **01 42 10.7 +1.1**
VRI Vrincioaia 50.06 307 P **P** **01 42 10.7 +1.1**
VRI Vrincioaia 50.06 307 P **P** **01 42 09.7 +0.1**
comp=Z,4μmcomp=Z,170nm,2.3s
TESR Tescani 50.10 308 ⇓P **P** **01 42 10.3 +0.5**
TESR Tescani 50.10 308 P **P** **01 42 09.9 0.0**
comp=Z,3μmcomp=Z,124nm,1.7s
PLOR Plostina 50.12 307 ⇓P **P** **01 42 11.4 +1.3**
PLOR Plostina 50.12 307 P **P** **01 42 11.3 +1.3**
GIRR Girov 50.19 309 ⇑P **P** **01 42 11.1 +0.5**
KMPD K-Podol'skiy 50.21 311 P **P** **01 42 09.9 -0.7**
KMPD P **P** **01 42 10.3 -0.3**
ISR Istrita 50.22 306 ⇑P **P** **01 42 10.8 -0.1**
ISR Istrita 50.22 306 P **P** **01 42 10.8 -0.1**
HORU Horodok 50.23 312 P **P** **01 42 10.7 -0.2**
ONER Baraj Valea Uz 50.28 308 ⇓P **P** **01 42 12.5 +1.2**
LOZB Loznitsa 50.28 304 ⇑P **P** **01 42 11.3 0.0**
APA Apatity 50.33 336⇓ *e*P **P** **01 42 11.3 0.0**
APA *e* 01 43 29.9
APA *e* 01 44 11.0
APA *e*S **S** **01 49 21.4 -2.2**
APA *e*SS **SS** **01 52 58.2 +1.4**
APA pmax pmax
comp=Z,25nm,0.7s
RAZG Razgrad 50.33 304 ⇑P **P** **01 42 12.2 +0.5**
NACGM Naroch 50.34 319⇓ *i*P **P** **01 42 11.8 +0.3**
comp=Z,211nm,0.8s,baz=96
PRAR RASCA 50.37 309 ⇑P **P** **01 42 12.3 +0.4**
NEHR Nehoiu 50.38 307 ⇑P **P** **01 42 12.1 +0.1**
JMB Yambol 50.40 303 P **P** **01 42 12.7 +0.5**
COVR Voineasa-Covas 50.43 307 ⇑P **P** **01 42 13.6 +1.1**
SULR 50.45 306 ⇑P **P** **01 42 14.3 +1.8**
KRAI Karang Ratu 50.59 122 P **P** **01 42 14.6 +0.7**
comp=Z,5μmcomp=Z,130nm,1.5s
MLR Muntele Rosu 50.62 307 LR LR 02 08 51.6
comp=Z,7μm,18.4s,baz=66,slow=42
MLR Muntele Rosu 50.62 307 ⇑P **P** **01 42 15.7 +1.6**
MLR Muntele Rosu 50.62 307 P **P** **01 42 15.6 +1.6**
MLR Muntele Rosu 50.62 307 P **P** **01 42 13.8 -0.2**
comp=Z,4μmcomp=Z,276nm,1.6s
SGRR Singureni 50.67 305 ⇑P **P** **01 42 15.5 +1.2**
OZUR 50.71 308 ⇑P **P** **01 42 15.5 +1.0**
SZH Strazhitsa 50.74 304 P **P** **01 42 15.3 +0.5**
BOSR Bodos 50.80 308 ⇑P **P** **01 42 16.4 +1.2**
VSU Vasula 50.81 324*de*P **P** **01 42 13.6 -1.4**
VSU pmax pmax
comp=Z,146nm,1.3s
VSU MLR MLR
comp=Z,7μm,23.0s
EZN Ezine 50.83 300 P **P** **01 42 15.6 +0.2**
EZN Ezine 50.83 300 P **P** **01 42 15.2 -0.2**
comp=Z,2μmcomp=Z,72nm,1.9s
ELND Elena 50.84 304 ⇓P **P** **01 42 17.0 +1.4**
ALN Alexandroupoli 50.91 301 IAmb IAmb 01 42 19.6
comp=Z,201nm,1.4s
ALN Alexandroupoli 50.91 301 P **P** **01 42 14.9 -1.2**
DOPR Dopca 50.99 308 ⇓P **P** **01 42 17.6 +0.9**
MSAI Masohi 51.01 122 P P 01 42 25.1 +8.0
BURAR Bucovina Array 51.05 310 ⇑P **P** **01 42 17.8 +0.6**
BURAR Bucovina Array 51.05 310 P **P** **01 42 17.2 0.0**
BURAR Bucovina Array 51.05 310 P **P** **01 42 17.7 +0.6**
KSV Kosov 51.14 311 P **P** **01 42 17.0 -0.7**
SWI Sorong 51.21 117 P **P** **01 42 18.4 -0.2**
comp=Z,2μmcomp=Z,105nm,1.1s
SIJI Sorong 51.22 117 P **P** **01 42 18.1 -0.6**
comp=Z,2μmcomp=Z,85nm,2.1s
COPA Copaceanca 51.22 305 ⇓P **P** **01 42 20.2 +1.9**
VOIR 51.26 307 ⇑P **P** **01 42 19.3 +0.5**
VOIR 51.26 307 P **P** **01 42 19.2 +0.5**
VOIR 51.26 307 P **P** **01 42 18.6 -0.1**
comp=Z,2μmcomp=Z,30nm,1.3s
RDO Rodhopi 51.27 301 IAmb IAmb 01 42 22.3
comp=Z,228nm,1.6s
HUMR Humele 51.37 306 ⇑P **P** **01 42 20.8 +1.4**
STNU Starunia 51.51 311 P **P** **01 42 20.4 0.0**
ARR Arges 51.55 307 ⇓P **P** **01 42 21.4 +0.5**
TGMR Targu Mures 51.57 308 ⇑P **P** **01 42 22.2 +1.3**
FINES FINESS Array B 51.64 327 P **P** **01 42 21.1 0.0**
comp=Z,58nm,0.7s,baz=101,slow=8.8,SNR=219
FINES S **S** **01 49 42.0 +0.2**
comp=Z,1.9nm,0.8s,baz=132,slow=23,SNR=1.7
comp=Z,58nm,0.7s
MDB Medias 51.68 308 ⇓P **P** **01 42 23.7 +1.8**
MDB Medias 51.68 308 P **P** **01 42 23.6 +1.8**
PLVB Pleven 51.72 304 ⇑P **P** **01 42 22.9 +0.8**
RAKU Rahkiv 51.75 310 P **P** **01 42 22.2 -0.1**
PLD Plovdiv 51.75 303 P **P** **01 42 22.8 +0.5**
TNR Turnu Rosu 51.79 307 ⇓P **P** **01 42 24.1 +1.5**
TNR Turnu Rosu 51.79 307 P **P** **01 42 24.1 +1.5**
LVV L'vov 51.80 313 P **P** **01 42 22.5 -0.1**
RZN Rozhen 51.80 302 P **P** **01 42 23.4 +0.4**
VLAD Vladila 51.82 305 ⇑P **P** **01 42 23.5 +0.7**
MORS Morshin 51.90 312 P **P** **01 42 23.4 +0.1**
PGB Panagyurishte 52.13 303 P **P** **01 42 22.7 +1.9**
BATI Baumata 52.14 132 P **P** **01 42 24.0 -1.5**
comp=Z,44nm,0.5s,baz=341,slow=0.7,SNR=5.7
BATI LR LR 02 10 53.6

comp=Z,580nm,18.3s,baz=332,slow=43
comp=Z,44nm,0.5s
BATI Baumata 52.14 132 P **P** **01 42 25.4 -0.1**
comp=Z,2µmcomp=Z,60nm,0.5s
LOT Lotru 52.16 307 ⇓P **P** **01 42 25.7 +0.2**
MEZ Mezhgor'ye 52.16 311 P **P** **01 42 25.5 +0.1**
CJR Cluj-Napoca 52.19 309 ⇑P **P** **01 42 27.1 +1.4**
CJR Cluj-Napoca 52.19 309 P **P** **01 42 27.1 +1.4**
SOEI Soe 52.20 131 P **P** **01 42 27.4 +1.3**
BMR Baia Mare 52.21 310 ⇑P **P** **01 42 26.9 +1.2**
BMR Baia Mare 52.21 310 P **P** **01 42 26.9 +1.2**
SHIU Shidnytsya 52.24 312 P **P** **01 42 25.9 -0.1**
MPEP Malo Peshtene 52.36 304 P **P** **01 42 27.8 +0.9**
SUW Suwalki 52.38 318 *e*P **P** **01 42 26.6 -0.2**
MA2 Magadan 52.38 35 P **P** **01 42 26.2 -0.6**
MA2 Magadan 52.38 35 P **P** **01 42 26.2 -0.6**
OUL Oulu 52.46 332 P **P** **01 42 27.1 -0.1**
BRIU Brid 52.50 311 P **P** **01 42 27.9 +0.1**
BNDI Bandanaira 52.51 122 P **P** **01 42 27.5 -0.8**
BNDI Bandanaira 52.51 122 P **P** **01 42 27.7 -0.6**
comp=Z,197nm,1.2s
MARR Marisel-Cluj 52.52 309 ⇓P **P** **01 42 29.2 +1.0**
VALD Valchedram 52.55 305 P **P** **01 42 29.0 +0.8**
MESR Meseseni 52.61 309 ⇑P **P** **01 42 30.1 +1.5**
VADS Vadso 52.63 339 *e*P **P** **01 42 29.0 +0.5**
KWP Kalwaria Pacla 52.66 312 *e*P **P** **01 42 29.4 +0.4**
KWP Kalwaria Pacla 52.66 312 P **P** **01 42 28.4 -0.6**
KWP Kalwaria Pacla 52.66 312 P **P** **01 42 29.0 0.0**
comp=Z,3µmcomp=Z,247nm,1.0s
PLNA Plana 52.68 303 P **P** **01 42 30.2 +0.7**
MUKU Mukachevo 52.72 311 P **P** **01 42 29.5 +0.1**
DEV Deva 52.73 308 ⇑P **P** **01 42 30.9 +1.3**
DEV Deva 52.73 308 P **P** **01 42 30.8 +1.3**
BLSH Balsha 52.75 304 P **P** **01 42 30.6 +0.8**
BERU Beregovo 52.76 311 P **P** **01 42 29.8 +0.1**
DRGR 52.80 309 ⇓P **P** **01 42 31.1 +1.0**
DRGR 52.80 309 P **P** **01 42 31.1 +1.0**
VTS Vitosha 52.81 304 P **P** **01 42 30.9 +0.5**
PUNG Punghina 52.85 306 ⇑P **P** **01 42 31.2 +0.8**
GZR Gura Zlata 52.86 307 ⇓P **P** **01 42 30.8 +0.2**
GZR Gura Zlata 52.86 307 P **P** **01 42 30.8 +0.2**
HOLU Holmets 52.92 311 P **P** **01 42 30.0 -0.9**
UZHM Uzhgorod 52.97 311 P **P** **01 42 31.2 -0.1**
KKB Krupnik 52.98 303 P **P** **01 42 31.6 +0.1**
HERR Herculane 53.16 306 ⇑P **P** **01 42 32.9 +0.1**
TRAN Tran 53.21 304 P **P** **01 42 34.7 +1.5**
FAKI Fak Fak 53.26 118 P **P** **01 42 33.3 -0.6**
FAKI Fak Fak 53.26 118 P **P** **01 42 32.9 -1.0**
FAKI Fak Fak 53.26 118 P **P** **01 42 33.3 -0.6**
comp=Z,2µmcomp=Z,188nm,1.0s
KEV Kevo 53.28 338 P **P** **01 42 33.9 +0.6**
KEV IAmb IAmb 01 42 35.1
comp=Z,57nm,0.7s
KEV IAMs_20 IAMs_20 02 09 08.7
comp=Z,4µm,22.0s
KEV Kevo 53.28 338 P **P** **01 42 33.9 +0.6**
KEV pmax pmax
comp=Z,57nm,0.7s
KEV MLR MLR
comp=Z,4µm,22.0s
LTVH Ltavrtes, Hu 53.31 310 ⇑P **P** **01 42 35.2 +1.4**
BORR Bors 53.41 309 ⇑P **P** **01 42 36.3 +1.8**
VAY Valandovo 53.47 302 *i* P **P** **01 42 35.0 0.0**
R9F13 Warsaw-Wawer 53.59 316 *e*P **P** **01 42 36.5 +0.7**
comp=Z,3.7nm,0.9s
R9F13 *e*PP PP 01 44 57.5 +21
R9F13 *e*S **S** **01 50 10.9 +2.2**
SEY Seymchan 53.60 31 LR LR 02 07 26.2
comp=Z,6µm,20.1s,baz=260,slow=38
SEY Seymchan 53.60 31 ⇓*e*P **P** **01 42 35.2 -0.5**
SEY pmax pmax
comp=Z,51nm,1.3s
SEY MLR MLR
comp=Z,5µm,15.0s
STHS Stebnicka Huta 53.62 312 *e*P **P** **01 42 35.2 -0.9**
STHS pmax pmax
comp=Z,21nm,0.8s
STHS Stebnicka Huta 53.62 312 *e*P **P** **01 42 35.2 -0.9**
BZS Buzias 53.65 307 ⇑P **P** **01 42 37.2 +0.8**
BZS Buzias 53.65 307 P **P** **01 42 37.1 +0.8**
MDVR Moldovita 53.67 306 ⇑P **P** **01 42 37.5 +1.0**
ARA0 ARCESS Array S 53.72 337 *e*P **P** **01 42 36.9 +0.4**
ARA0 IAmb IAmb 01 42 39.2
comp=Z,493nm,2.0s
ARA0 *e*S **S** **01 50 10.3 +0.1**
ARA0 IAMs_20 IAMs_20 02 09 10.2
comp=Z,5µm,24.4s
ARCES ARCESS Array B 53.72 337 P **P** **01 42 36.7 +0.2**
comp=Z,50nm,0.7s,baz=108,slow=6.9,SNR=80
comp=Z,50nm,0.7s
ARCES ARCESS Array B 53.72 337 P **P** **01 42 37.1 +0.6**
ARCES IAmb IAmb 01 42 39.7
comp=Z,155nm,1.4s
ARCES ARCESS Array B 53.72 337 P **P** **01 42 37.1 +0.6**
ARCES pmax pmax
comp=Z,155nm,1.4s
BEL Belsk 53.82 315 *e*P **P** **01 42 37.8 +0.3**
RKPI Ransiki, Papua 53.90 116 P **P** **01 42 40.3 +1.7**
comp=Z,5µmcomp=Z,114nm,1.1s
AGG Agios Georgios 54.01 299 P **P** **01 42 36.7 -2.4**
BANR Banloc 54.01 307 ⇑P **P** **01 42 40.5 +1.5**
KECS Kecovo 54.18 311 *e*P **P** **01 42 41.7 +1.5**
KECS pmax pmax
comp=Z,261nm,2.4s
KECS Kecovo 54.18 311 *e*P **P** **01 42 41.7 +1.5**
SKO Skopje 54.21 303 *i* P **P** **01 42 40.6 +0.1**
NIE Niedzica 54.24 312 *e*P **P** **01 42 41.6 +1.0**
NIE Niedzica 54.24 312 P **P** **01 42 40.4 -0.2**
comp=Z,1µmcomp=Z,47nm,1.8s
KTK1 Kautokeino 54.37 336 *e*P **P** **01 42 40.5 -0.8**
KTK1 IAmb IAmb 01 42 41.6
comp=Z,246nm,1.9s
KTK1 *e*S **S** **01 50 21.9 +2.9**
KTK1 IAMs_20 IAMs_20 02 06 45.0
comp=Z,4µm,16.0s
BSZH Besenyszg 54.42 310 ⇑P **P** **01 42 43.4 +1.4**
OJC Ojcow 54.51 313 *e*P **P** **01 42 42.9 +0.3**
OJC Ojcow 54.51 313 P **P** **01 42 41.0 -1.6**
OJC Ojcow 54.51 313 P **P** **01 42 42.3 -0.3**
comp=Z,2µmcomp=Z,84nm,1.8s
HAMF Hammerfest 54.62 338 *e*P **P** **01 42 43.8 +0.8**
HAMF IAmb IAmb 01 42 44.9
comp=Z,190nm,0.7s
HAMF *e*S **S** **01 50 14.3 -7.8**
HAMF IAMs_20 IAMs_20 02 09 44.1
comp=Z,4µm,24.5s
PSZ Piszkesteto 54.62 310 ⇑P **P** **01 42 44.2 +0.6**
PSZ Piszkesteto 54.62 310 P **P** **01 42 44.1 +0.6**
LANS Liptovska Anna 54.80 312 *e*P **P** **01 42 45.7 +1.0**
LANS pmax pmax
comp=Z,55nm,2.4s
LANS Liptovska Anna 54.80 312 *e*P **P** **01 42 45.7 +1.0**
OHR Ohrid 54.82 302 *i* P **P** **01 42 45.2 +0.2**
FRGS Fruska Gora 54.97 307 ⇓*i*P **P** **01 42 46.0 0.0**
SJES Sjenica 55.10 305 ⇓*i*P **P** **01 42 47.4 +0.3**
PVY Plav 55.21 304 ⇓*i*P **P** **01 42 47.1 -0.8**
GUMO Guam 55.21 93 LR LR 02 05 15.6
comp=Z,2µm,21.8s,baz=286,slow=35
IVA Berane 55.21 304 ⇓*i*P **P** **01 42 47.5 -0.4**
BAKI Biak 55.26 114 P **P** **01 42 50.5 +2.1**
comp=Z,3µmcomp=Z,95nm,1.1s
LODK Lodwar 55.35 253 P **P** **01 42 49.5 +0.3**
LODK Lodwar 55.35 253 P **P** **01 42 49.5 +0.3**
SNR=8.0
BBLS Lazi&#263i 55.42 305 ⇓*i*P **P** **01 42 49.3 -0.1**
JETT Jettan, Norway 55.47 337 *e*P **P** **01 42 50.1 +0.8**
JETT IAmb IAmb 01 42 50.8
comp=Z,73nm,0.7s
JETT IAMs_20 IAMs_20 02 07 28.3
comp=Z,7µm,30.7s
RUDO Rudo 55.48 305 *e*P **P** **01 42 49.1 -0.6**
KOME Kolasin 55.49 304 ⇓*i*P **P** **01 42 49.5 -0.4**
OKC Ostrava-Krasne 55.60 313 *e*P **P** **01 42 49.0 -1.5**
OKC MLR MLR
comp=Z,2µm,17.4s
OKC Ostrava-Krasne 55.60 313 *e*P **P** **01 42 49.0 -1.5**
OKC AMS AMS 02 08 00.0
comp=Z,2µm,17.4s
MORH Mrgy, Hungar 55.65 308 ⇓P **P** **01 42 50.7 -0.1**
MORH Mrgy, Hungar 55.65 308 P **P** **01 42 50.6 -0.2**
MORH Mrgy, Hungar 55.65 308 ⇓*i*P **P** **01 42 50.1 -0.7**
SRO Srobarova 55.69 310 *e*P **P** **01 42 51.5 +0.4**
SRO pmax pmax
comp=Z,230nm,1.6s
SRO Srobarova 55.69 310 *e*P **P** **01 42 51.5 +0.4**
PDG Podgorica 55.75 304 ⇑P **P** **01 42 51.6 0.0**
PDG Podgorica 55.75 304 ⇓*i*P **P** **01 42 51.0 -0.6**
PDG Podgorica 55.75 304 ⇓*i*P **P** **01 42 50.8 -0.8**
ULC Ulcinj 55.83 303 ⇓*i*P **P** **01 42 51.3 -1.0**
STEB Steborice 55.83 313 *e*P P 01 42 45.6 -6.5
DRME Dracevica, Mon 55.84 304 ⇓*i*P **P** **01 42 51.7 -0.6**
DRME Dracevica, Mon 55.84 304 ⇓*i*P **P** **01 42 51.4 -0.9**
SAUI Saumlaki 55.84 124 IAMs_20 IAMs_20 02 08 18.0
comp=Z,3µm,19.0s
MAUC Maruska 55.85 312 *e*P **P** **01 42 49.7 -2.6**
UPM Unac-Piva 55.88 305 ⇓*i*P **P** **01 42 52.3 -0.5**
UPM Unac-Piva 55.88 305 ⇓*i*P **P** **01 42 52.4 -0.4**
NKME Niksic 55.91 304 ⇓*i*P **P** **01 42 52.5 -0.4**
GKP Gorka Klasztor 55.92 317 *e*P **P** **01 42 53.1 +0.4**
CEME Cevo 55.98 304 ⇓*i*P **P** **01 42 52.7 -0.6**
TRO Tromso 55.99 337 *e*P **P** **01 42 53.1 +0.2**
TRO IAmb IAmb 01 42 55.4
comp=Z,163nm,1.4s
TRO *e*S **S** **01 50 42.0 +1.5**
TRO IAMs_20 IAMs_20 02 07 45.8
comp=Z,6µm,32.5s
MORC Moravsky Berou 56.00 313 ⇓P **P** **01 42 53.7 +0.3**
MORC Moravsky Berou 56.00 313 IAmb IAmb 01 42 56.7
comp=Z,138nm,1.3s
MORC Moravsky Berou 56.00 313 P **P** **01 42 53.6 +0.3**
MORC Moravsky Berou 56.00 313 *e*P **P** **01 42 53.0 -0.4**
JAVC Velka Javorina 56.00 312 *e*P **P** **01 42 53.7 +0.3**
HOPEN Hopen 56.03 345 *e*P **P** **01 42 54.0 +0.9**
HOPEN IAmb IAmb 01 42 56.9
comp=Z,251nm,1.3s
HOPEN *e*S **S** **01 50 42.6 +1.7**
HOPEN IAMs_20 IAMs_20 02 12 55.7
comp=Z,3µm,11.9s
BUM Brajici-Budva 56.03 304 ⇓*i*P **P** **01 42 53.2 -0.6**
PEA0B Petropavlovsk- 56.05 43 *e*P **P** **01 42 53.0 -0.6**
PETK Petropavlovsk- 56.05 43 P **P** **01 42 52.6 -1.0**
comp=Z,13nm,0.8s,baz=230,slow=8.2,SNR=8.8
PETK LR LR 02 10 02.5
comp=Z,4µm,18.4s,baz=279,slow=39
comp=Z,13nm,0.8s
PETK Petropavlovsk- 56.05 43 P **P** **01 42 50.9 -2.8**
KLINJ Klinje 56.12 305 *e*P **P** **01 42 53.9 -0.5**
BRY Bratogost 56.19 304 ⇓*i*P **P** **01 42 54.7 -0.3**
BRY Bratogost 56.19 304 ⇓*i*P **P** **01 42 54.5 -0.5**
SMOL Smolenice 56.20 311 *e*P **P** **01 42 55.4 +0.6**
SMOL pmax pmax
comp=Z,82nm,2.0s
MPLH Magyarpolny 56.28 310 P **P** **01 42 55.2 -0.2**
comp=Z,5µmcomp=Z,177nm,1.8s
HCY Herceg Novi 56.30 304 ⇓*i*P **P** **01 42 55.0 -0.6**
MODS Modra-Piesok 56.32 311 *e*P **P** **01 42 55.4 -0.2**
MODS pmax pmax
comp=Z,900nm,2.9s
MODS Modra-Piesok 56.32 311 *e*P **P** **01 42 55.4 -0.2**
KMBO Kilima Mbogo 56.33 247 P **P** **01 42 56.2 -0.3**
baz=59,slow=8.4
KMBO LR LR 02 08 13.9
comp=Z,3µm,18.2s,baz=85,slow=37
KMBO Kilima Mbogo 56.33 247 *de*P **P** **01 42 56.0 -0.4**
TREB Trebinje 56.36 304 *e*P **P** **01 42 54.9 -1.1**
KIBK Kibwezi 56.41 245 P **P** **01 42 55.5 -1.3**
KIBK Kibwezi 56.41 245 P **P** **01 42 57.3 +0.5**
SNR=9.0
KRLC Kraliky 56.46 313 *e*P **P** **01 42 52.4 -4.3**
KRLC MLR MLR
comp=Z,2µm,19.6s
KRLC Kraliky 56.46 313 *e*P **P** **01 42 52.4 -4.3**
KRLC AMS AMS 02 08 10.0
comp=Z,2µm,19.6s
BLEU Blekinge 56.60 321 *i* P **P** **01 42 56.6 -0.8**
PET Petropavlovsk 56.63 43 P **P** **01 42 58.1 +0.4**
PET Petropavlovsk 56.63 43 IAMs_20 IAMs_20 02 11 36.1
comp=Z,3µm,19.0s
PET Petropavlovsk 56.63 43 *e*P **P** **01 42 55.8 -1.9**
PET *e* 01 43 51.1
PET *e*S **S** **01 50 47.9 -1.6**
PET *e* 01 52 38.2
PET *e*SS **SS** **01 54 40.8 +4.1**
PET pmax pmax
comp=Z,39nm,1.7s
PET pmax pmax
comp=Z,300nm,7.0s
PET pmax pmax
comp=Z,500nm,7.2s
PET MLR MLR
comp=Z,4µm,16.0s
PET MLR MLR
comp=Z,4µm,17.0s
VRAC Vranov 56.66 312 LR LR 02 10 33.9
comp=Z,3µm,18.3s,baz=84,slow=40
VRAC Vranov 56.66 312 ⇓P **P** **01 42 58.8 +0.7**
VRAC Vranov 56.66 312 P **P** **01 42 58.7 +0.7**
VRAC Vranov 56.66 312 *e*P **P** **01 42 58.0 -0.1**
KSP Ksiaz 56.69 314 *e*P **P** **01 42 58.7 +0.4**
KSP Ksiaz 56.69 314 P **P** **01 42 58.0 -0.2**
comp=Z,2µmcomp=Z,74nm,2.3s
DPC Dobruska-Polom 56.72 314 *e*P **P** **01 42 56.5 -2.0**
DPC Dobruska-Polom 56.72 314 *e*P **P** **01 42 56.5 -2.0**
DPC AMS AMS 02 04 40.0
comp=Z,5µm,36.8s
DPC Dobruska-Polom 56.72 314 P **P** **01 42 58.4 -0.1**
comp=Z,2µmcomp=Z,87nm,1.3s
OSTC Ostas 56.77 314 *e*P **P** **01 42 55.1 -3.7**
OSTC Ostas 56.77 314 *e*P **P** **01 42 55.1 -3.7**
KRUC Moravsky 56.82 312 *e*P **P** **01 42 59.1 -0.1**
BLY Banja Luka 56.87 307 ⇑P **P** **01 43 00.2 +0.6**
BLY Banja Luka 56.87 307 ⇓*i*P **P** **01 42 59.4 -0.2**
CHVC Chvalec 56.87 314 *e*P **P** **01 42 55.8 -3.7**
CHVC Chvalec 56.87 314 *e*P **P** **01 42 55.8 -3.7**
CHVC AMS AMS 02 04 40.0
comp=Z,4µm,32.2s
BEHE Becsehely 56.90 309 IAmb IAmb 01 43 03.3
comp=Z,86nm,1.3s
BEHE Becsehely 56.90 309 ⇓*i*P **P** **01 42 59.9 +0.1**
UPC Upice 56.90 314 *e*P **P** **01 42 56.5 -3.3**
UPC Upice 56.90 314 *e*P **P** **01 42 56.5 -3.3**
UPC AMS AMS 02 04 50.0
comp=Z,5µm,32.5s
BJO1 Bjornoya 56.91 343 *e*P **P** **01 43 00.1 +0.7**
BJO1 IAMs_20 IAMs_20 02 10 27.3
comp=Z,2µm,13.9s
RONA Rosalia, Austr 57.05 310 *i* P **P** **01 43 00.9 0.0**
comp=Z,37nm,1.0s,SNR=38
FAUS Fauske 57.05 334 *e*P **P** **01 43 00.5 0.0**
FAUS IAmb IAmb 01 43 02.7
comp=Z,555nm,2.2s
FAUS *e*S **S** **01 50 57.1 +2.5**
FAUS IAMs_20 IAMs_20 02 09 21.0
comp=Z,6µm,31.1s
STEI Steigen 57.11 335 *e*P **P** **01 43 01.4 +0.5**
STEI IAmb IAmb 01 43 07.4
comp=Z,443nm,2.5s
STEI *e*S **S** **01 51 04.0 +8.6**
STEI IAMs_20 IAMs_20 02 10 43.5
comp=Z,5µm,23.4s
WINA Alland / Wiene 57.15 311 *i* P **P** **01 43 01.7 +0.1**
SNR=42
BSD Bornholm Skovb 57.17 319 *i* P **P** **01 43 00.8 -0.7**
BSD IAmb IAmb 01 43 02.6
comp=Z,28nm,0.8s
HAMD Hammershus, De 57.24 320 *i* P **P** **01 43 01.1 -0.9**
HAMD IAmb IAmb 01 43 05.8
comp=Z,39nm,0.9s
KOGS Kog 57.26 309 *e*P **P** **01 43 02.2 -0.1**
KOGS *e*SS SS 01 55 55.2 +68
MOR8 Moi Rana 57.31 333 *e*P **P** **01 43 01.3 -1.1**
MOR8 IAmb IAmb 01 43 02.4
comp=Z,41nm,0.8s
MOR8 *e*S **S** **01 50 57.7 -0.4**
MOR8 IAMs_20 IAMs_20 02 10 40.1
comp=Z,6µm,23.2s
CONA Conrad Observa 57.31 311 *i* P **P** **01 43 02.8 0.0**
comp=Z,57nm,0.9s,SNR=68
HFS Hagfors 57.58 325 P **P** **01 43 04.0 -0.4**
comp=Z,66nm,0.7s,baz=94,slow=8.2,SNR=116
HFS LR LR 02 10 44.2
comp=Z,5µm,21.4s,baz=95,slow=39
comp=Z,66nm,0.7s
ARSA Arzberg 57.63 310 IAmb IAmb 01 43 08.1
comp=Z,216nm,1.8s
ARSA Arzberg 57.63 310 *i* P **P** **01 43 05.0 0.0**
comp=Z,59nm,1.6s,SNR=30
DEL Delary 57.67 321 *i* P **P** **01 43 05.1 +0.1**
LOF Lofoten 57.77 335 *e*P **P** **01 43 04.4 -1.1**
GROS Grobnik 57.77 309 *e*P **P** **01 43 05.8 -0.2**
VAGH Vaagaholmen 57.80 333 *e*P **P** **01 43 05.5 -0.3**
VAGH IAmb IAmb 01 43 08.0
comp=Z,564nm,2.2s
VAGH IAMs_20 IAMs_20 02 11 02.4
comp=Z,5µm,18.5s
PVCC Panska Ves 57.82 314 *e*P **P** **01 43 01.9 -4.3**
PVCC Panska Ves 57.82 314 *e*P **P** **01 43 01.9 -4.3**
PVCC AMS AMS 02 06 40.0
comp=Z,5µm,36.3s
SMPI Sarmi 57.83 113 P **P** **01 43 08.7 +2.0**
comp=Z,3µmcomp=Z,135nm,1.5s
LEIR Leirfjorden 57.85 332 *e*P **P** **01 43 05.6 -0.5**
LEIR IAmb IAmb 01 43 07.1
comp=Z,52nm,0.8s
LEIR *e*S **S** **01 51 08.6 +3.5**
LEIR IAMs_20 IAMs_20 02 11 00.2
comp=Z,9µm,20.8s
STOK Stokkvaagen 57.89 333 *e*P **P** **01 43 05.7 -0.7**
STOK IAMs_20 IAMs_20 02 11 01.6
comp=Z,8µm,27.6s
PRU Pruhonice 57.90 313 *e*P **P** **01 43 05.2 -1.6**
PRU MLR MLR
comp=Z,3µm,16.1s
PRU Pruhonice 57.90 313 *e*P **P** **01 43 05.2 -1.6**
PRU AMS AMS 02 09 20.0
comp=Z,3µm,16.1s
MATE Matera 57.95 302 ⇑P **P** **01 43 07.0 -0.3**
LUNU Lund 57.97 320 *i* P **P** **01 43 07.2 0.0**
SOKA Soboth 58.05 309 *i* P **P** **01 43 08.1 +0.1**
comp=Z,60nm,1.0s,SNR=85
RUE Ruedersdorf 58.08 316 *e*P **P** **01 43 08.2 +0.3**
comp=Z,200nm,1.2s,baz=81,slow=6.8
RGN Rugen 58.14 319 IAMs_20 IAMs_20 02 09 55.0
comp=Z,5µm,22.0s
RGN Rugen 58.14 319 *e*P **P** **01 43 08.9 +0.6**
comp=Z,304nm,1.1s,baz=81,slow=6.8
BJUU Bjuv 58.17 321 *i* P **P** **01 43 07.4 -1.1**
BRG Berggiesshubel 58.17 314 *e*P **P** **01 43 08.8 +0.2**
comp=Z,204nm,1.6s,baz=81,slow=6.8
BORU Boras 58.19 322 *i* P **P** **01 43 08.3 -0.4**
ZVC Zvikov 58.20 313 *e*P **P** **01 43 05.2 -3.7**
ZVC *ex* x 01 51 05.3
ZVC AMS AMS 02 09 20.0
comp=Z,3µm,24.1s
CKRC Cesky Krumlov 58.21 312 *e*P **P** **01 43 04.6 -4.4**
CKRC MLR MLR
comp=Z,3µm,16.6s
CKRC Cesky Krumlov 58.21 312 *e*P **P** **01 43 04.6 -4.4**
CKRC *ex* x 01 50 51.7
CKRC AMS AMS 02 11 00.0
comp=Z,3µm,16.6s
TIP Timpagrande 58.23 300 ⇑P **P** **01 43 09.5 +0.1**
TIP Timpagrande 58.23 300 IAmb IAmb 01 43 12.2
comp=Z,144nm,1.4s
TIP Timpagrande 58.23 300 P **P** **01 43 09.0 -0.3**
comp=Z,2µmcomp=Z,60nm,1.7s
HSPB Hornsund (broa 58.27 345 *e*P **P** **01 43 09.5 +0.6**
NSS Namsos 58.31 331 *e*P **P** **01 43 09.7 +0.3**
NSS IAMs_20 IAMs_20 02 09 48.5
comp=Z,8µm,35.3s
SPB2 Spitsbergen Ar 58.32 347 IAmb IAmb 01 43 13.0
comp=Z,95nm,1.1s
SPA0 Spitsbergen Ar 58.33 347 *e*P **P** **01 43 10.1 +0.7**
SPA0 IAmb IAmb 01 43 12.8
comp=Z,186nm,1.3s
SPA0 *e*S **S** **01 51 13.1 +1.9**
SPA0 IAMs_20 IAMs_20 02 12 44.6
comp=Z,4µm,18.0s
SPITS Spitsbergen Ar 58.33 347 P **P** **01 43 09.7 +0.3**
comp=Z,42nm,0.9s,baz=108,slow=11,SNR=34
comp=Z,42nm,0.9s
SPITS Spitsbergen Ar 58.33 347 P **P** **01 43 10.1 +0.7**
SPITS pmax pmax
comp=Z,257nm,1.6s
MOA Molln 58.39 311 *i* P **P** **01 43 10.1 -0.2**
comp=Z,34nm,0.8s,SNR=37
OBKA Obir 58.41 309 *e*P **P** **01 43 10.7 +0.2**
comp=Z,73nm,1.3s
ACER Acerenza 58.49 302 IAmb IAmb 01 43 15.3
comp=Z,152nm,1.5s
LJU Ljubljana 58.50 309 *i* P **P** **01 43 11.4 +0.3**
LJU *e*S **S** **01 51 13.4 -1.0**
MBWA Marble Bar 58.51 144 P **P** **01 43 11.6 +0.3**
MBWA Marble Bar 58.51 144 P **P** **01 43 11.6 +0.3**
HSKC Hora Svate Kat 58.53 314 *e*P P 01 43 05.9 -5.3
HSKC AMS AMS 02 05 30.0
comp=Z,5µm,37.0s
COP Copenhagen 58.53 320 *i* P **P** **01 43 09.8 -1.3**
COP IAmb IAmb 01 43 13.9
comp=Z,83nm,0.9s
GEC2 GERESS Array S 58.61 312 IAmb IAmb 01 43 15.0
comp=Z,94nm,1.2s
GEC2 GERESS Array S 58.61 312 *e*P **P** **01 43 12.1 +0.2**
comp=Z,106nm,1.2s,baz=81,slow=6.8
GEC2 *e*pP **sP** **01 43 19.3 -0.2**
baz=81,slow=6.9
GERES GERESS Array B 58.61 312 P **P** **01 43 11.9 +0.1**
comp=Z,34nm,0.8s,baz=85,slow=5.6,SNR=110
GERES LR LR 02 11 53.0
comp=Z,3µm,18.5s,baz=80,slow=40
GERES PKP2bc **P'P'bc** **02 12 59.5 -6.5**
comp=Z,0.5nm,0.8s,baz=300,slow=2.6,SNR=4.4
comp=Z,34nm,0.8s
GERES GERESS Array B 58.61 312 P **P** **01 43 12.0 +0.1**
DRS Darwin Rock St 58.61 128 P **P** **01 43 12.4 +0.3**
NC602 NORSAR Array S 58.63 326 IAmb IAmb 01 43 14.0
comp=Z,81nm,1.2s
NC602 NORSAR Array S 58.63 326 *e*P **P** **01 43 11.2 -0.5**
NC602 *e*S **S** **01 51 16.1 +0.6**
NC602 IAMs_20 IAMs_20 02 10 22.6
comp=Z,8µm,20.0s
NORES NORESS Array B 58.63 326 P **P** **01 43 11.8 +0.1**
KHC Kasperske Hory 58.64 312 IAmb IAmb 01 43 13.8
comp=Z,93nm,0.8s
KHC Kasperske Hory 58.64 312 *de*P **P** **01 43 12.2 +0.1**
KHC pmax pmax
comp=Z,153nm,2.5s
KHC Kasperske Hory 58.64 312 *e*P **P** **01 43 07.9 -4.2**
KHC *ex* x 01 51 13.0
KHC AMS AMS 02 08 50.0
comp=Z,3µm,26.3s
KHC Kasperske Hory 58.64 312 P **P** **01 43 12.0 -0.1**
comp=Z,2µmcomp=Z,63nm,1.6s
NC303 NORSAR Array S 58.68 327 IAmb IAmb 01 43 13.1
comp=Z,43nm,0.7s
CLL Collm 58.70 315 IAmb IAmb 01 43 15.3
comp=Z,178nm,1.7s
CLL Collm 58.70 315 *i* P **P** **01 43 11.9 -0.4**
CLL *e*S **S** **01 51 17.0 +0.3**
CLL pmax pmax
comp=Z,943nm,3.1s
CLL MLR MLR
comp=Z,5µm,21.5s
CLL Collm 58.70 315 *i* P **P** **01 43 11.9 -0.4**
comp=Z,943nm,3.1s
CLL *e*Pmax 01 43 15.0
CLL *e*PP **PP** **01 45 24.0 +2.1**
CLL *e*PPPP 01 47 06.0
CLL *e*S **S** **01 51 17.0 +0.3**
CLL *ex* x 01 53 12.0
CLL *e*SS **SS** **01 55 06.0 -3.3**
CLL *e*SSmax 01 55 48.0
CLL *e*SSS SSS 01 57 47.0
CLL AMS AMS 02 11 00.0
comp=Z,5µm,21.5s
CLL AMS AMS 02 11 00.0
CLL Collm 58.70 315 *e*P **P** **01 43 12.0 -0.4**
comp=Z,170nm,1.6s,baz=81,slow=6.8
CLL *e*pP **sP** **01 43 19.5 -0.5**
baz=81,slow=6.9
CLL Collm 58.70 315 P **P** **01 43 11.8 -0.5**
comp=Z,2µmcomp=Z,58nm,2.4s
NB201 NORSAR Array S 58.73 326 IAmb IAmb 01 43 14.8
comp=Z,67nm,1.1s
CUC Castrocucco 58.76 302 IAmb IAmb 01 43 15.6
comp=Z,60nm,1.0s
NB2 NORSAR Subarra 58.77 326 P **P** **01 43 11.6 -1.1**
comp=Z,325nm,2.0s,baz=85,slow=7.4
NB2 NORSAR Subarra 58.77 326 P **P** **01 43 11.6 -1.1**
NOA NORSAR Array B 58.77 326 P **P** **01 43 11.8 -1.0**
comp=Z,20nm,0.7s,baz=86,slow=6.8,SNR=94
NOA LR LR 02 11 32.6
comp=Z,6µm,21.1s,baz=85,slow=39

comp=Z,20nm,0.7s
BIOA Bad Ischl, Aus 58.83 311 *i* P **P 01 43 12.9 -0.5**
comp=Z,2.0nm,0.4s,SNR=25
JAVS Javornik 58.85 309 *e*P **P 01 43 13.4 -0.2**
JAVS *i* S **S 01 51 17.8 -1.3**
PSA00 Pilbara Seismi 58.91 144 P **P 01 43 14.2 +0.1**
PSA00 Pilbara Seismi 58.91 144 P **P 01 43 14.2 +0.1**
STRU Stroemstad 58.92 324 *i* P **P 01 43 13.3 -0.4**
NAO01 NORSAR Array S 58.94 326 IAmb IAmb 01 43 21.4
comp=Z,87nm,1.2s
SKDS Skadanscina 58.95 308 *e*P **P 01 43 13.4 -0.8**
SKDS *e*S **S 01 51 18.4 -1.7**
NC204 NORSAR Array S 58.97 327 IAmb IAmb 01 43 21.9
comp=Z,81nm,1.2s
MYKA Terra Mystica 59.01 309 *i* P **P 01 43 14.4 -0.2**
comp=Z,9.5nm,0.7s,SNR=9.3
OSL Oslo 59.08 325 *e*P **P 01 43 15.4 +0.6**
OSL IAmb IAmb 01 43 17.1
comp=Z,173nm,1.4s
OSL *e*S **S 01 51 22.7 +1.3**
OSL IAMs_20 IAMs_20 02 10 47.5
comp=Z,7µm,18.4s
PRED Cave del Predi 59.09 309 IAmb IAmb 01 43 17.8
comp=Z,56nm,1.3s
CEL Celeste 59.09 300 P **P 01 43 15.2 -0.2**
comp=Z,3µmcomp=Z,248nm,1.7s
WET Wettzell 59.09 312 *e*P **P 01 43 15.5 +0.3**
comp=Z,390nm,2.1s,baz=81,slow=6.8
KBA Koelnbreinsper 59.13 310 *i* P **P 01 43 15.2 -0.5**
comp=Z,2.9nm,0.5s,SNR=14
TANN Tannenbergstha 59.17 314 *e*P **P 01 43 15.9 +0.2**
comp=Z,139nm,1.5s,baz=81,slow=6.8
TANN *ep*P **sP 01 43 22.7 -0.6**
baz=81,slow=6.9
NKC Novy Kostel 59.20 314 *e*P **P 01 43 11.3 -4.6**
NKC Novy Kostel 59.20 314 *e*P **P 01 43 11.3 -4.6**
KBS Kingsbay 59.33 347 P **P 01 43 15.6 -0.7**
KBS IAMs_20 IAMs_20 02 13 49.5
comp=Z,3µm,22.0s
KBS Kingsbay 59.33 347 *e*P **P 01 43 17.3 +1.0**
KBS IAmb IAmb 01 43 19.2
comp=Z,241nm,1.8s
KBS *e*S **S 01 51 26.3 +2.2**
KBS IAMs_20 IAMs_20 02 13 38.4
comp=Z,4µm,28.7s
KBS Kingsbay 59.33 347 *ce*P **P 01 43 17.2 +0.9**
KBS pmax pmax
comp=Z,105nm,1.7s
KBS Kingsbay 59.33 347 *i* P **P 01 43 15.9 -0.4**
PLN Plauen 59.35 314 *e*P **P 01 43 17.0 +0.2**
comp=Z,80nm,1.8s,baz=81,slow=6.8
PLN *ep*P **sP 01 43 24.2 -0.3**
baz=81,slow=6.9
GENI Genyem 59.36 112 P **P 01 43 18.7 +1.3**
GENI Genyem 59.36 112 P **P 01 43 19.3 +1.9**
comp=Z,5µmcomp=Z,175nm,1.3s
FITZ Fitzroy Crossi 59.37 137 S **S 01 51 23.7 -2.3**
comp=Z,1.6nm,0.8s,baz=8.2,slow=19,SNR=1.5
FITZ LR LR 02 14 31.2
comp=Z,1µm,20.0s,baz=311,slow=42
RJOB Jochberg 59.38 311 *e*P **P 01 43 16.9 -0.3**
comp=Z,466nm,2.3s,baz=81,slow=6.8
ROTZ Rotzenmuhle 59.43 313 *e*P **P 01 43 18.0 +0.5**
comp=Z,75nm,1.8s,baz=81,slow=6.8
ROTZ *ep*P **sP 01 43 25.3 +0.2**
baz=81,slow=6.9
MANZ Manzenberg 59.46 314 *e*P **P 01 43 18.2 +0.5**
comp=Z,60nm,1.7s,baz=81,slow=6.8
MANZ *ep*P **sP 01 43 25.7 +0.3**
baz=81,slow=6.9
PAOL Paolisi 59.46 303 IAmb IAmb 01 43 32.2
comp=Z,102nm,1.6s
NEUB Neuenburg 59.48 315 *e*P **P 01 43 18.0 +0.3**
comp=Z,266nm,1.6s,baz=81,slow=6.8
NEUB *ep*P **sP 01 43 25.0 -0.4**
baz=81,slow=6.9
KNRA Kununurra 59.50 132 IAmb IAmb 01 43 20.2
comp=Z,103nm,1.4s
GORT1 Trebel 59.51 317 *e*P **P 01 43 18.0 +0.2**
comp=Z,217nm,1.3s,baz=81,slow=6.8
LESA Schwarzleotal 59.52 311 *i* P **P 01 43 17.4 -0.8**
comp=Z,23nm,1.1s,SNR=28
FLTG Flechtingen 59.64 316 *e*P **P 01 43 18.5 -0.4**
comp=Z,150nm,1.4s,baz=81,slow=6.8
MOX Moxa 59.66 314 *e*P **P 01 43 19.2 +0.1**
comp=Z,310nm,1.9s,baz=81,slow=6.8
MOX *ep*P **sP 01 43 26.4 -0.3**
baz=81,slow=6.9
MOX *e*L L 02 11 15.2
comp=Z,4µm,22.0s
BILL Bilibino 59.67 25 P **P 01 43 19.1 +0.2**
BILL IAmb IAmb 01 43 22.4
comp=Z,51nm,1.1s
BILL Bilibino 59.67 25 IAMs_20 IAMs_20 02 11 08.4
comp=Z,3µm,18.0s
BILL Bilibino 59.67 25 *de*P **P 01 43 19.0 +0.2**
BILL pmax pmax
comp=Z,60nm,1.3s
BILL MLR MLR
comp=Z,3µm,17.0s
KONO Kongsberg 59.67 325 P **P 01 43 18.9 0.0**
KONO Kongsberg 59.67 325 *e*P **P 01 43 19.4 +0.5**
KONO IAmb IAmb 01 43 21.2
comp=Z,166nm,1.5s
KONO *e*S **S 01 51 31.4 +2.4**
KONO IAMs_20 IAMs_20 02 11 13.7
comp=Z,8µm,33.2s
KONO Kongsberg 59.67 325 *ce*P **P 01 43 19.1 +0.2**
KONO pmax pmax
comp=Z,141nm,1.7s
KONO MLR MLR
comp=Z,5µm,22.0s
DOMB Dombas 59.73 328 *e*P **P 01 43 19.0 -0.4**
DOMB IAMs_20 IAMs_20 02 11 49.7
comp=Z,10µm,18.4s
ABTA Abfaltersbach 59.75 310 *i* P **P 01 43 18.7 -1.2**
comp=Z,18nm,0.9s,SNR=17
JAY Jayapura 59.75 112 S **S 01 51 34.8 +3.5**
comp=Z,3.9nm,0.7s,baz=240,slow=20,SNR=1.5
JAY LR LR 02 08 23.6
comp=Z,869nm,22.0s,baz=316,slow=35
JAY Jayapura 59.75 112 P **P 01 43 21.7 +1.5**
comp=Z,1µmcomp=Z,54nm,1.4s
BSEG Bad Segeberg 59.96 318 *e*P **P 01 43 21.5 +0.6**
comp=Z,140nm,1.4s,baz=81,slow=6.8
BSEG *ep*P **sP 01 43 28.8 +0.1**
baz=81,slow=6.9
ASSE Asse, Remlinge 60.02 316 *e*P **P 01 43 20.9 -0.4**
comp=Z,290nm,2.0s,baz=81,slow=6.8
ASSE *ep*P **sP 01 43 28.6 -0.4**
baz=81,slow=6.9
AQU L'Aquila 60.02 305 P **P 01 43 20.9 -0.8**
AQU L'Aquila 60.02 305 P **P 01 43 21.6 -0.1**
comp=Z,2µmcomp=Z,94nm,1.9s
AQU L'Aquila 60.02 305 ‖ *i* P **P 01 43 21.2 -0.5**
GRA1 Grafenberg Arr 60.07 313 IAMs_20 IAMs_20 02 11 42.3
comp=Z,4µm,22.0s
GRF Grafenberg Arr 60.07 313 *e*P **P 01 43 22.5 +0.6**
comp=Z,144nm,1.3s,baz=81,slow=6.8
GRF *ep*P **sP 01 43 29.4 -0.1**
baz=81,slow=6.9
GRF *e*L L 02 11 43.2
comp=Z,3µm,20.9s
GRFO Grafenberg 60.07 313 P **P 01 43 22.9 +1.0**
GRFO IAMs_20 IAMs_20 02 11 42.3
comp=Z,4µm,22.0s
GRFO Grafenberg 60.07 313 P **P 01 43 22.9 +1.0**
GRFO MLR MLR
comp=Z,4µm,22.0s
SKAR Skarslia 60.22 326 *e*P **P 01 43 23.2 +0.5**
SKAR IAmb IAmb 01 43 24.2
comp=Z,1µm,2.9s
SKAR *e*S **S 01 51 38.2 +2.0**
SKAR IAMs_20 IAMs_20 02 11 08.8
comp=Z,10µm,24.6s
WTTA Wattenberg 60.24 311 *i* P **P 01 43 22.5 -0.8**
comp=Z,71nm,1.2s,SNR=29
CLZ Clausthal 60.24 316 *e*P **P 01 43 23.3 +0.3**
comp=Z,140nm,1.1s,baz=81,slow=6.8
MUD Monsted U'grnd 60.26 321 *i* P **P 01 43 23.8 +0.8**
MUD IAmb IAmb 01 43 25.5
comp=Z,22nm,1.1s
WATA Walderalm 60.27 311 *i* P **P 01 43 22.4 -1.1**
comp=Z,12nm,0.6s,SNR=23
FUR Furstenfeldbru 60.31 312 *e*P **P 01 43 23.9 +0.4**
comp=Z,234nm,1.3s,baz=81,slow=6.8
FUR *ep*P **sP 01 43 30.9 -0.4**
baz=81,slow=6.9
HOMB Homborsund 60.39 323 *e*P **P 01 43 24.5 +0.7**
HOMB Homborsund 60.39 323 *i* P **P 01 43 23.2 -0.6**
MOL Molde 60.39 328 *e*P **P 01 43 23.9 +0.2**
MOL IAmb IAmb 01 43 25.0
comp=Z,381nm,1.8s
MOL IAMs_20 IAMs_20 02 11 16.5
comp=Z,10µm,24.2s
VAE Valguarnera 60.42 299 LR LR 02 13 60.0
comp=Z,886nm,21.3s,baz=62,slow=40
RAFF Raffo Rosso 60.53 299 P **P 01 43 25.7 +0.5**
SQTA Sankt Quirin 60.54 311 *i* P **P 01 43 24.3 -0.9**
comp=Z,37nm,0.8s,SNR=22
GTTG Gottingen 60.54 316 *e*P **P 01 43 25.2 +0.2**
comp=Z,152nm,1.3s,baz=81,slow=6.8
CESX Cesi 60.55 305 P **P 01 43 24.4 -0.9**
MOTA Moosalm 60.58 311 *i* P **P 01 43 24.3 -1.3**
comp=Z,64nm,0.8s,SNR=45
TEOL Teolo 60.60 308 P **P 01 43 24.8 -0.7**
UBBA Unterbreizbach 60.65 315 *e*P **P 01 43 25.6 0.0**
comp=Z,158nm,1.9s,baz=81,slow=6.8
UBBA *ep*P **sP 01 43 33.5 +0.2**
baz=81,slow=6.9
AKN Aaknes 60.68 328 *e*P **P 01 43 26.3 +0.4**
AKN *e*S **S 01 51 41.1 -1.0**
AKN IAMs_20 IAMs_20 02 12 21.7
comp=Z,9µm,13.8s
RETH Rethem/Aller, 60.71 317 *e*P **P 01 43 26.3 +0.2**
comp=Z,194nm,1.7s,baz=81,slow=6.8
RETH *ep*P **sP 01 43 33.6 -0.1**
baz=81,slow=6.9
RETA Reutte 60.78 311 *i* P **P 01 43 26.1 -0.7**
comp=Z,16nm,0.8s,SNR=34
OPO Ambohidratompo 60.89 224 LR LR 02 06 42.0
comp=Z,4µm,18.1s,baz=169,slow=33
FETA Feichten 60.90 310 *e*P **P 01 43 26.6 -1.1**
comp=Z,42nm,1.2s,SNR=32
SNART Snartemo 61.06 324 *i* P **P 01 43 27.5 -0.9**
UBR Ueberruh 61.18 311 *e*P **P 01 43 28.8 -0.7**
comp=Z,4µm,4.7s,baz=81,slow=6.8
UBR *ep*P **sP 01 43 36.2 -1.0**
baz=81,slow=6.9
ABPO Ambohimpanom 61.21 224 P **P 01 43 30.2 +0.1**
ABPO IAmb IAmb 01 43 32.1
comp=Z,79nm,1.4s
ABPO Ambohimpanom 61.21 224 P **P 01 43 30.2 +0.1**
ABPO pmax pmax
comp=Z,79nm,1.4s
FUORN Ofenpass-Fuorn 61.29 310 IAmb IAmb 01 43 32.8
comp=Z,44nm,0.9s
MBAR Mbarara 61.40 252 LR LR 02 08 44.1
comp=Z,1µm,21.8s,baz=62,slow=35
MBAR Mbarara 61.40 252 P **P 01 43 31.2 -0.4**
MBAR Mbarara 61.40 252 P **P 01 43 31.2 -0.4**
MBAR pmax pmax
comp=Z,44nm,1.7s
MBAR MLR MLR
comp=Z,2µm,18.0s
DAVA Damuels 61.41 311 *i* P **P 01 43 30.7 -0.6**
comp=Z,88nm,1.0s,SNR=41
DAVOX Dapos/Dischmat 61.52 310 LR LR 02 14 04.7
comp=Z,3µm,19.7s,baz=64,slow=40
STU Stuttgart 61.55 313 *e*P **P 01 43 32.1 +0.2**
comp=Z,759nm,1.7s,baz=81,slow=6.8
STU *ep*P **sP 01 43 39.6 -0.1**
baz=81,slow=6.9
KASTN Kahler Asten 61.56 315 *e*P **P 01 43 32.0 -0.1**
comp=Z,169nm,1.9s,baz=81,slow=6.8
KASTN *ep*P **sP 01 43 39.6 -0.1**
baz=81,slow=6.9
TNS Taunus Mts 61.73 314 *e*P **P 01 43 33.2 0.0**
comp=Z,170nm,1.6s,baz=81,slow=6.8
CASP Castiglione de 61.74 306 IAmb IAmb 01 43 35.1
comp=Z,100nm,1.7s
IBBN Ibbenburen 61.75 317 *e*P **P 01 43 33.4 +0.2**
comp=Z,219nm,1.5s,baz=81,slow=6.8
TUE Stuetta 61.94 310 IAmb IAmb 01 43 52.4
comp=Z,96nm,1.6s
TUE IAMs_20 IAMs_20 02 14 08.8
comp=Z,3µm,20.0s
TUE Stuetta 61.94 310 P **P 01 43 33.8 -1.1**
comp=Z,6µmcomp=Z,175nm,1.0s
BFO Black Forest 62.21 312 P **P 01 43 35.5 -0.9**
BFO Black Forest 62.21 312 P **P 01 43 35.5 -0.9**
BFO pmax pmax
comp=Z,18nm,1.0s
BFO Black Forest 62.21 312 *e*P **P 01 43 35.9 -0.6**
comp=Z,886nm,2.4s,baz=81,slow=6.8
BUG Bochum-Univer 62.22 316 *e*P **P 01 43 36.4 +0.1**
comp=Z,458nm,2.0s,baz=81,slow=6.8
MEEK Meekatharra 62.58 148 P **P 01 43 38.8 -0.3**
ECH Echery 62.99 312 P **P 01 43 41.2 -0.5**
BTNL Ternell 63.10 315 *d*P **P 01 43 42.5 +0.2**
comp=Z,25nm,0.9s
MEM Membach 63.17 315 *d*P **P 01 43 43.1 +0.3**
comp=Z,27nm,0.9s
BHOU Houvegnez 63.23 315 *d*P **P 01 43 43.9 +0.6**
comp=Z,27nm,1.1s
BHOU *d*PP **PP 01 46 02.4 +0.4**
WLF Walferdange 63.30 314 *d*P **P 01 43 43.6 0.0**
comp=Z,51nm,0.8s
WLF Walferdange 63.30 314 *e*P **P 01 43 44.2 +0.5**
comp=Z,776nm,2.1s,baz=81,slow=6.8
BEBN Eben Emael 63.34 315 *d*P **P 01 43 43.7 -0.1**
SENIN Lac Senin/Sane 63.34 310 IAMs_20 IAMs_20 02 15 00.9
comp=Z,3µm,19.0s
BSTI Sart Tilman 63.45 315 *d*P **P 01 43 45.1 +0.4**
MORW Morawa 63.57 152 P **P 01 43 45.7 +0.2**
MORW Morawa 63.57 152 P **P 01 43 45.3 -0.3**
MORW IAmb IAmb 01 43 47.5
comp=Z,85nm,1.2s
BCLA Clavier 63.66 315 *d*P **P 01 43 46.6 +0.6**
VOI Vohitsoka 63.67 222 P **P 01 43 47.1 +0.6**
VOI IAmb IAmb 01 43 48.3
comp=Z,56nm,1.0s
RCHB Rochefort 63.77 315 *d*P **P 01 43 46.6 -0.1**
comp=Z,28nm,1.3s
BGES Gesves 63.80 315 *d*P **P 01 43 47.1 +0.2**
comp=Z,19nm,0.9s
NOR Nord 63.91 351 *i* P **P 01 43 46.9 -0.3**
NOR IAmb IAmb 01 43 48.5
comp=Z,17nm,0.8s
BMRD Maredsous 64.02 315 *d*P **P 01 43 48.3 0.0**
comp=Z,20nm,0.8s
BNI Bardonecchia 64.10 309 IAmb IAmb 01 43 51.7
comp=Z,70nm,1.4s
UCC Uccle 64.15 316 IAmb IAmb 01 43 51.9
comp=Z,128nm,1.8s
UCC Uccle 64.15 316 *d*P **P 01 43 48.6 -0.6**
comp=Z,12nm,0.8s
DOU Dourbes 64.18 315 *d*P **P 01 43 49.0 -0.4**
DOU *d*PP **PP 01 46 09.6 -0.6**
KEST Kesra 64.83 298 P **P 01 43 53.7 -0.3**
comp=Z,48nm,1.0s,baz=48,slow=2.7,SNR=31
KEST S **S 01 52 31.6 -3.4**
comp=Z,2.1nm,0.9s,baz=30,slow=12,SNR=1.7
KEST LR LR 02 19 09.7
comp=Z,1µm,18.4s,baz=67,slow=42
comp=Z,48nm,1.0s
KEST Kesra 64.83 298 P **P 01 43 54.4 +0.4**
SNR=24
KEST P **P 01 43 54.4 +0.4**
SNR=24
LRW Lerwick 64.94 326 *e*P **P 01 43 54.5 +0.3**
LRW IAmb IAmb 01 43 56.2
comp=Z,22nm,1.1s
MANU Manus Island 65.01 107 P **P 01 43 56.0 +0.6**
JMIC Jan Mayen 65.13 339 LR LR 02 16 22.0
comp=Z,1µm,18.4s,baz=84,slow=40
BLDU Balidu 65.20 152 P **P 01 43 55.7 -0.5**
SSB Saint Sauveur 65.49 310 IAmb IAmb 01 44 00.8
comp=Z,109nm,1.5s
ELMS Elmsett, Ipswi 65.85 318 *e*P **P 01 43 59.8 -0.4**
SHEM Shemya Is, Ala 65.88 42 P **P 01 44 00.0 -0.4**
comp=Z,70nm,0.7s,baz=304,slow=7.3,SNR=2.0
SHEM LR LR 02 15 03.4
comp=Z,863nm,20.0s,baz=292,slow=38
comp=Z,70nm,0.7s
WACR West Acre 65.89 318 *e*P **P 01 44 01.1 +0.7**
WACR IAmb IAmb 01 44 02.6
comp=Z,105nm,0.8s
FOMA Nahampoana Res 65.93 220 P **P 01 43 59.9 -1.2**
FOMA IAmb IAmb 01 44 02.8
comp=Z,59nm,1.1s
DAG Danmarks Havn 65.95 346 P **P 01 43 57.9 -2.6**
DAG Danmarks Havn 65.95 346 *i* P **P 01 43 59.5 -1.0**
DAG IAmb IAmb 01 44 03.2
comp=Z,28nm,1.0s
ELSH Elham, Standar 66.03 317 *e*P **P 01 44 01.5 +0.1**
ELSH IAmb IAmb 01 44 02.8
comp=Z,90nm,0.7s
MUN Mundaring 66.20 153 P **P 01 44 02.6 0.0**
CLF Chambon-Foret 66.21 313 IAmb IAmb 01 44 06.5
comp=Z,94nm,1.3s
CLF IAMs_20 IAMs_20 02 13 23.7
comp=Z,3µm,22.0s
WRA Warramunga Arr 66.24 131 P **P 01 44 02.9 -0.2**
comp=Z,35nm,0.6s,baz=324,slow=6.4,SNR=244
WRA S **S 01 52 47.6 -4.6**
comp=Z,0.6nm,1.0s,baz=325,slow=19,SNR=1.6
WRA PKP2bc **P'P'df 02 12 39.6 +5.8**
comp=Z,3.5nm,1.1s,baz=130,slow=2.4,SNR=8.9
comp=Z,35nm,0.6s
WRA Warramunga Arr 66.24 131 P **P 01 44 02.9 -0.2**
WRAB Tennant Creek 66.24 131 P **P 01 44 03.1 0.0**
WRAB Tennant Creek 66.24 131 P **P 01 44 03.3 +0.2**
WRAB Tennant Creek 66.24 131 P **P 01 44 03.3 +0.2**
WRAB pmax pmax
comp=Z,123nm,1.3s
LMK Market Rasen 66.24 319 *e*P **P 01 44 03.0 +0.3**
LMK IAmb IAmb 01 44 04.6
comp=Z,62nm,0.7s
WB1 Warramunga Ar. 66.25 131 P **P 01 44 03.6 +0.4**
DRUM Mains of Drumt 66.45 323 *e*P **P 01 44 04.5 +0.5**
DRUM IAmb IAmb 01 44 06.3
comp=Z,27nm,0.7s
KLBR Kellerberrin 66.48 152 P **P 01 44 05.2 +0.7**
MCD Coleburn Disti 66.66 324 *e*P **P 01 44 05.5 +0.1**
MCD IAmb IAmb 01 44 08.1
comp=Z,49nm,0.8s
BIGH Upper Bighouse 66.73 325 *e*P **P 01 44 06.0 +0.2**
BIGH IAmb IAmb 01 44 08.3
comp=Z,23nm,0.7s
EDMD Edmundbyers 66.77 321 *e*P **P 01 44 05.8 -0.3**
EDMD IAmb IAmb 01 44 07.5
comp=Z,12nm,0.8s
HPK Haverah Park 66.84 320 *e*P **P 01 44 05.8 -0.7**
HPK IAmb IAmb 01 44 08.2
comp=Z,23nm,0.8s
LBWR Ladybower, Pea 67.06 319 *e*P **P 01 44 07.8 -0.2**
LBWR IAmb IAmb 01 44 11.8
comp=Z,15nm,0.9s
EDI Edinburgh 67.11 322 *e*P **P 01 44 08.3 0.0**
EDI IAmb IAmb 01 44 10.8
comp=Z,32nm,0.8s
EKA Eskdalemuir Ar 67.28 322 P **P 01 44 08.9 -0.3**
comp=Z,32nm,0.9s,baz=73,slow=6.4,SNR=43
EKA PKPPKP **P'P'bc** 02 12 35.3 -8.0
comp=Z,2.9nm,1.0s,baz=251,slow=2.6,SNR=3.8
EKA LR LR 02 17 38.6
comp=Z,4µm,21.6s,baz=80,slow=40
comp=Z,32nm,0.9s
EKA Eskdalemuir Ar 67.28 322 P **P 01 44 09.0 -0.3**
DBG Daneborg 67.29 344 *i* P **P 01 44 08.8 -0.3**
DBG IAmb IAmb 01 44 12.1
comp=Z,37nm,0.8s
ESK Eskdalemuir 67.31 322 *e*P **P 01 44 09.3 -0.2**
ESK IAmb IAmb 01 44 11.7
comp=Z,18nm,0.8s
ESK Eskdalemuir 67.31 322 P **P 01 44 09.3 -0.2**
ESK Eskdalemuir 67.31 322 P **P 01 44 09.3 -0.2**
ESK pmax pmax
comp=Z,204nm,1.7s
ESK MLR MLR
comp=Z,5µm,21.0s
WOL Wolverton 67.39 317 *e*P **P 01 44 10.2 0.0**
WOL IAmb IAmb 01 44 11.9
comp=Z,55nm,0.8s
NWAO Narrogin (SRO) 67.44 153 LR LR 02 16 36.8
comp=Z,610nm,19.0s,baz=312,slow=39
NWAO Narrogin (SRO) 67.44 153 P **P 01 44 11.4 +0.9**
NWAO Narrogin (SRO) 67.44 153 P **P 01 44 09.7 -0.8**
NWAO IAmb IAmb 01 44 11.8
comp=Z,82nm,1.1s
NWAO Narrogin (SRO) 67.44 153 P **P 01 44 09.7 -0.8**
NWAO pmax pmax
comp=Z,82nm,1.1s
KESW Keswick, Cumbr 67.47 321 *e*P **P 01 44 10.6 0.0**
KESW IAmb IAmb 01 44 13.4
comp=Z,27nm,0.8s
AUKUL Kulin High Sch 67.59 152 P **P 01 44 11.9 +0.4**
EAB Aberfoyle 67.65 323 *e*P **P 01 44 11.6 -0.1**
EAB IAmb IAmb 01 44 13.4
comp=Z,9.1nm,0.7s
STRD Stroud 67.81 318 *e*P **P 01 44 12.4 -0.3**
STRD IAmb IAmb 01 44 14.5
comp=Z,66nm,0.7s
NEWG New Galloway 67.93 322 *e*P **P 01 44 12.8 -0.6**
NEWG IAmb IAmb 01 44 15.8
comp=Z,14nm,0.6s
HLM1 Long Mynd 68.00 319 *e*P **P 01 44 13.9 0.0**
HLM1 IAmb IAmb 01 44 16.2
comp=Z,19nm,0.7s
MONM Monmouth 68.17 318 *e*P **P 01 44 14.7 -0.3**
MONM IAmb IAmb 01 44 16.4
comp=Z,32nm,0.7s
LAWE Loch Awe, Argy 68.19 323 *e*P **P 01 44 13.7 -1.3**
KAVG Kavieng 68.19 106 P **P 01 44 16.7 +1.0**
MCH1 Michaelchurch 68.23 318 *e*P **P 01 44 15.1 -0.3**
MCH1 IAmb IAmb 01 44 16.8
comp=Z,16nm,0.8s
CORI Orista 68.23 307 IAmb IAmb 01 44 19.9
comp=Z,126nm,1.5s
GAL1 Galloway 68.27 322 *e*P **P 01 44 15.2 -0.3**
GAL1 IAmb IAmb 01 44 17.9
comp=Z,16nm,0.7s
CEST Esterri de Car 68.58 308 IAmb IAmb 01 44 20.6
comp=Z,90nm,1.3s
ASAR Alice Springs 68.62 134 P **P 01 44 18.7 +0.5**
comp=Z,39nm,0.5s,baz=318,slow=6.2,SNR=57
ASAR PKP2bc **P'P'bc 02 12 33.2 +3.1**
comp=Z,3.7nm,1.0s,baz=143,slow=3.2,SNR=12
ASAR LR LR 02 19 22.1
comp=Z,719nm,18.4s,baz=310,slow=40
comp=Z,39nm,0.5s
PMG Port Moresby 68.95 114 P **P 01 44 21.6 +1.2**
PMG Port Moresby 68.95 114 P **P 01 44 20.2 -0.2**
PMG Port Moresby 68.95 114 P **P 01 44 20.2 -0.2**
PMG pmax pmax
comp=Z,120nm,1.1s
PMG Port Moresby 68.95 114 P **P 01 44 22.0 +1.6**
comp=Z,2µmcomp=Z,120nm,1.1s
RSBS Rosebush, Pemb 69.26 319 *e*P **P 01 44 20.9 -0.9**
RSBS IAmb IAmb 01 44 23.4
comp=Z,17nm,0.7s
GAMB Gambell 69.35 28 IAMs_20 IAMs_20 02 16 49.6
comp=Z,3µm,18.0s
GAMB Gambell 69.35 28 P **P 01 44 21.4 -0.7**
baz=293
ILTH Belurgan, Co L 69.45 321 P **P 01 44 23.2 +0.3**
SCO Scoresbysund 69.46 340 P **P 01 44 23.7 +1.0**
SCO IAmb IAmb 01 44 26.9
comp=Z,80nm,1.3s
SCO Scoresbysund 69.46 340 P **P 01 44 23.7 +1.0**
SCO pmax pmax
comp=Z,80nm,1.3s
SCO Scoresbysund 69.46 340 *i* P **P 01 44 23.2 +0.5**
SCO IAmb IAmb 01 44 26.6
comp=Z,96nm,1.4s
AUALB St Joseph's Co 69.53 154 P **P 01 44 25.3 +1.8**
IDGL Inch Island, C 69.72 322 P **P 01 44 25.4 +0.9**
DSB Dublin 69.75 320 IAMs_20 IAMs_20 02 17 51.0
comp=Z,3µm,22.0s
C16K Lisburne Hills 69.83 22 IAmb IAmb 01 44 27.0
comp=Z,48nm,1.0s
C16K IAMs_20 IAMs_20 02 19 38.0
comp=Z,2µm,18.0s
C16K Lisburne Hills 69.83 22 P **P 01 44 25.1 +0.1**
baz=297
TNA Tin City 70.11 25 IAMs_20 IAMs_20 02 13 53.5
comp=Z,2µm,19.0s
TNA Tin City 70.11 25 P **P 01 44 26.8 +0.1**
baz=295
KRVT Keravat (AS076 70.14 107 LR LR 02 13 19.1
comp=Z,116nm,21.8s,baz=238,slow=34
QIS Mount Isa 70.22 128 P **P 01 44 29.2 +1.0**
A19K Wainwright 70.26 20 P **P 01 44 28.6 +1.0**
baz=300
IWEX Carrickbyrne, 70.28 319 P **P 01 44 29.2 +1.1**
C17K DeLong Mountai 70.45 22 P **P 01 44 29.0 +0.2**
baz=298,SNR=9.2
RDOG Red Dog Mine 70.74 22 IAMs_20 IAMs_20 02 17 47.1
comp=Z,3µm,20.0s

RDOG **Red Dog Mine** 70.74 22 P P 01 44 30.8 +0.1
baz=299
F14K **Arctic Creek** 70.74 25 P P 01 44 31.1 +0.5
baz=297
D17K **Noatak River** 70.86 22 P P 01 44 31.2 -0.1
baz=299,SNR=28
A21K **Barrow** 70.93 18 P P 01 44 31.6 -0.1
baz=303
C18K **Utukok River** 71.00 21 IAmb IAmb 01 44 34.5
comp=Z,76nm,1.1s
C18K IAMs_20 IAMs_20 02 17 06.9
comp=Z,3μm,19.0s
C18K **Utukok River** 71.00 21 P P 01 44 32.4 +0.1
baz=300,SNR=20
F15K **North Star Dit** 71.26 25 IAMs_20 IAMs_20 02 18 24.7
comp=Z,2μm,19.0s
F15K **North Star Dit** 71.26 25 P P 01 44 33.9 +0.1
baz=298
C19K **Lookout Ridge** 71.27 20 P P 01 44 34.4 +0.6
baz=301
NEEM **North Greenlan** 71.29 351 *i* P P 01 44 34.0 -0.2
NEEM IAmb IAmb 01 44 36.9
comp=Z,52nm,0.7s
IGLA **Glengowla, Co** 71.35 321 P P 01 44 34.8 +0.3
B20K **Meade River** 71.51 19 IAmb IAmb 01 44 38.8
comp=Z,64nm,1.2s
B20K IAMs_20 IAMs_20 02 18 00.0
comp=Z,3μm,21.0s
B20K **Meade River** 71.51 19 P P 01 44 35.4 +0.2
baz=303
ANM **Nome** 71.52 26 P P 01 44 35.3 -0.2
baz=298,SNR=7.3
A22K **Sinclair Lake** 71.56 18 P P 01 44 35.4 -0.1
baz=305
E18K **Tukpahlearik C** 71.82 22 IAmb IAmb 01 44 41.7
comp=Z,135nm,1.4s
E18K IAMs_20 IAMs_20 02 19 53.6
comp=Z,2μm,18.0s
E18K **Tukpahlearik C** 71.82 22 P P 01 44 37.3 +0.2
baz=301
G15K **Niukluk** 71.82 25 P P 01 44 36.9 -0.3
baz=299
LSZ **Lusaka** 71.94 241 LR LR 02 13 01.9
comp=Z,3μm,21.8s,baz=64,slow=33
LSZ **Lusaka** 71.94 241 P P 01 44 38.1 -0.7
LSZ **Lusaka** 71.94 241 IAMs_20 IAMs_20 02 13 01.2
comp=Z,3μm,20.0s
LSZ **Lusaka** 71.94 241 P P 01 44 38.1 -0.7
LSZ pmax pmax
comp=Z,14nm,0.7s
BORG **Borgarnes** 71.98 335 LR LR 02 18 26.1
comp=Z,2μm,20.9s,baz=85,slow=38
MTSU **Mount Surprise** 72.02 123 P P 01 44 40.4 +1.3
D19K **Kuna River** 72.05 21 IAmb IAmb 01 44 40.8
comp=Z,99nm,1.1s
D19K **Kuna River** 72.05 21 P P 01 44 38.8 +0.2
baz=303
F17K **Baldwin Pennin** 72.10 23 IAmb IAmb 01 44 41.5
comp=Z,84nm,1.0s
F17K **Baldwin Pennin** 72.10 23 P P 01 44 39.5 +0.6
baz=301,SNR=23
G16K **Koyuk River** 72.24 24 IAmb IAmb 01 44 43.5
comp=Z,99nm,1.6s
G16K IAMs_20 IAMs_20 02 18 57.8
comp=Z,3μm,20.0s
G16K **Koyuk River** 72.24 24 P P 01 44 39.9 +0.2
baz=300
B22K **Teshekpuk Lake** 72.36 18 IAmb IAmb 01 44 42.2
comp=Z,71nm,1.1s
B22K **Teshekpuk Lake** 72.36 18 P P 01 44 40.5 +0.2
baz=306,SNR=11
D20K **Etivluk River** 72.39 20 P P 01 44 41.0 +0.4
baz=304
VAL **Valentia** 72.42 320 P P 01 44 42.0 +1.0
B21K **Ikpikpuk River** 72.46 19 IAMs_20 IAMs_20 02 17 00.2
comp=Z,2μm,19.0s
B21K **Ikpikpuk River** 72.46 19 P P 01 44 41.4 +0.5
baz=306,SNR=31
F18K **Selawik** 72.57 23 P P 01 44 42.2 +0.6
baz=302,SNR=42
SUMG **Summit** 72.59 345 P P 01 44 42.6 +0.4
SUMG **Summit** 72.59 345 P P 01 44 42.6 +0.4
SUMG pmax pmax
comp=Z,524nm,1.9s
SUMG **Summit** 72.59 345 *i* P P 01 44 43.0 +0.8
SUMG IAmb IAmb 01 44 45.8
comp=Z,61nm,1.0s
TAM **Tamanrasset** 72.63 287 P P 01 44 43.9 +0.9
H16K **Elim** 72.67 25 P P 01 44 42.2 0.0
baz=300,SNR=9.5
C21K **Knifeblade Rid** 72.68 19 P P 01 44 42.1 -0.2
baz=306,SNR=24
SPIA **Saint Paul Isl** 72.74 34 IAMs_20 IAMs_20 02 15 03.5
comp=Z,2μm,19.0s
E20K **Nigu River** 72.78 20 P P 01 44 42.8 -0.1
baz=305
G17K **Kiwalik Mounta** 72.80 24 P P 01 44 43.3 +0.3
baz=302,SNR=13
E19K **Redstone River** 72.90 21 IAMs_20 IAMs_20 02 20 52.6
comp=Z,3μm,21.0s
E19K **Redstone River** 72.90 21 P P 01 44 43.7 +0.1
baz=304
K13K **Kusilvak Mount** 73.06 28 IAmb IAmb 01 44 46.5
comp=Z,98nm,1.6s
K13K IAMs_20 IAMs_20 02 18 42.7
comp=Z,2μm,19.0s
K13K **Kusilvak Mount** 73.06 28 P P 01 44 44.3 -0.3
baz=299
F19K **Shaleruckik Mo** 73.07 22 IAmb IAmb 01 44 46.2
comp=Z,76nm,1.3s
F19K **Shaleruckik Mo** 73.07 22 P P 01 44 44.5 -0.1
baz=304
J14K **Nanvaranak Lak** 73.11 27 IAmb IAmb 01 44 49.3
comp=Z,63nm,1.3s
J14K **Nanvaranak Lak** 73.11 27 P P 01 44 44.6 -0.3
baz=300
M11K **Mekoryuk** 73.15 30 IAMs_20 IAMs_20 02 17 50.2
comp=Z,3μm,21.0s
M11K **Mekoryuk** 73.15 30 P P 01 44 44.5 -0.6
baz=298
G18K **Tagagawik** 73.29 23 IAMs_20 IAMs_20 02 20 04.1
comp=Z,2μm,19.0s
G18K **Tagagawik** 73.29 23 P P 01 44 46.1 +0.1
baz=303
ESDC **Sonseca Array** 73.32 306 P P 01 44 46.5 -0.2
comp=Z,17nm,0.9s,baz=54,slow=6.1,SNR=76
ESDC LR LR 02 22 38.7
comp=Z,1μm,18.3s,baz=51,slow=40
comp=Z,17nm,0.9s
E21K **Killik River** 73.34 20 IAmb IAmb 01 44 48.0
comp=Z,75nm,0.9s
E21K **Killik River** 73.34 20 P P 01 44 46.2 -0.1
baz=306
H17K **Granite Mounta** 73.36 24 IAmb IAmb 01 44 48.9
comp=Z,96nm,1.4s
H17K **Granite Mounta** 73.36 24 P P 01 44 47.1 +0.7
baz=302
C23K **Itkillik River** 73.44 18 IAmb IAmb 01 44 48.8
comp=Z,109nm,1.1s
C23K IAMs_20 IAMs_20 02 19 29.0
comp=Z,2μm,21.0s
C23K **Itkillik River** 73.44 18 P P 01 44 47.0 +0.2
baz=309,SNR=42
F20K **Avaraart Lake** 73.61 21 IAmb IAmb 01 44 49.6
comp=Z,156nm,1.9s
F20K IAMs_20 IAMs_20 02 15 48.0
comp=Z,2μm,20.0s
F20K **Avaraart Lake** 73.61 21 P P 01 44 48.0 +0.1
baz=305
I17K **Unalakleet** 73.64 25 IAMs_20 IAMs_20 02 19 05.7
comp=Z,2μm,19.0s
I17K **Unalakleet** 73.64 25 P P 01 44 48.4 +0.4
baz=302
PAB **San Pablo** 73.64 306 P P 01 44 48.0 -0.5
PAB IAmb IAmb 01 44 52.6
comp=Z,202nm,2.0s
PAB **San Pablo** 73.64 306 P P 01 44 48.1 -0.5
PAB pmax pmax
comp=Z,202nm,2.0s
G19K **Purcell Mounta** 73.69 22 IAMs_20 IAMs_20 02 20 11.8
comp=Z,2μm,21.0s
G19K **Purcell Mounta** 73.69 22 P P 01 44 48.5 +0.3
baz=304
H18K **Honhosa River** 73.80 24 IAmb IAmb 01 44 51.1
comp=Z,64nm,1.1s
H18K IAMs_20 IAMs_20 02 16 22.4
comp=Z,3μm,21.0s
H18K **Honhosa River** 73.80 24 P P 01 44 49.5 +0.5
baz=304
D23K **Nanushuk River** 73.97 19 IAmb IAmb 01 44 52.0
comp=Z,111nm,1.4s
D23K **Nanushuk River** 73.97 19 P P 01 44 49.8 0.0
baz=309
J16K **Anvik River** 73.99 26 P P 01 44 50.3 +0.2
baz=302
C24K **Franklin Bluff** 74.02 18 IAmb IAmb 01 44 53.2
comp=Z,176nm,1.7s
C24K **Franklin Bluff** 74.02 18 P P 01 44 50.1 0.0
baz=311
TULEG **Thule** 74.06 354 IAmb IAmb 01 44 52.6
comp=Z,134nm,1.3s
TULEG **Thule** 74.06 354 *i* P P 01 44 48.8 -1.5
TULEG IAmb IAmb 01 44 52.3
comp=Z,139nm,1.3s
K15K **Wolf Creek Mou** 74.15 27 IAmb IAmb 01 44 55.1
comp=Z,182nm,1.9s
K15K **Wolf Creek Mou** 74.15 27 P P 01 44 51.5 +0.5
baz=302
E22K **Anaktuvuk Pass** 74.16 20 IAmb IAmb 01 44 53.0
comp=Z,92nm,1.4s
E22K IAMs_20 IAMs_20 02 19 26.3
comp=Z,3μm,22.0s
E22K **Anaktuvuk Pass** 74.16 20 P P 01 44 51.6 +0.4
baz=308
L14K **Kuka Creek** 74.18 28 IAMs_20 IAMs_20 02 20 39.1
comp=Z,2μm,20.0s
L14K **Kuka Creek** 74.18 28 P P 01 44 51.5 +0.3
baz=301
F21K **Alatna River** 74.22 21 IAmb IAmb 01 44 53.5
comp=Z,73nm,1.1s
F21K IAMs_20 IAMs_20 02 21 23.9
comp=Z,2μm,21.0s
F21K **Alatna River** 74.22 21 P P 01 44 51.8 +0.3
baz=307,SNR=56
H19K **Roundabout Mou** 74.25 23 IAmb IAmb 01 44 54.1
comp=Z,139nm,1.4s
H19K IAMs_20 IAMs_20 02 23 05.9
comp=Z,2μm,18.0s
H19K **Roundabout Mou** 74.25 23 P P 01 44 52.3 +0.7
baz=305
D24K **Happy Valley** 74.36 18 IAmb IAmb 01 44 55.2
comp=Z,154nm,1.8s
D24K IAMs_20 IAMs_20 02 19 25.0
comp=Z,3μm,21.0s
D24K **Happy Valley** 74.36 18 P P 01 44 51.3 -0.8
baz=311
M13K **Dall Lake** 74.37 29 IAmb IAmb 01 44 56.4
comp=Z,160nm,1.6s
M13K IAMs_20 IAMs_20 02 15 50.3
comp=Z,3μm,19.0s
M13K **Dall Lake** 74.37 29 P P 01 44 52.7 +0.4
baz=301
PBRG **Braganca** 74.38 309 *eP* P 01 44 52.7 -0.2
PBRG *i* IAmb IAmb 01 44 57.5
comp=Z,77nm,2.0s
TOLK **Toolik Lake Re** 74.49 19 P P 01 44 53.2 +0.3
baz=310,SNR=44
L15K **Ungalak Mounta** 74.49 27 P P 01 44 53.3 +0.3
baz=302
KULLO **Kullorsuaq** 74.50 351 *i* P P 01 44 52.4 -0.5
KULLO IAmb IAmb 01 44 56.1
comp=Z,200nm,1.3s
GCSA **Galena City Sc** 74.55 24 P P 01 44 53.7 +0.4
baz=305,SNR=15
G21K **Allakaket** 74.64 21 P P 01 44 53.6 -0.2
baz=307
CTA **Charters Tower** 74.67 123 P P 01 44 54.5 -0.2
comp=Z,37nm,0.9s,baz=298,slow=7.7,SNR=8.1
CTA LR LR 02 22 57.0
comp=Z,464nm,19.2s,baz=275,slow=40
comp=Z,37nm,0.9s
CTA **Charters Tower** 74.67 123 P P 01 44 56.2 +1.5
CTAO **Charters Tower** 74.67 123 P P 01 44 56.1 +1.4
CTAO **Charters Tower** 74.67 123 P P 01 44 55.1 +0.4
CTAO IAmb IAmb 01 44 57.2
comp=Z,90nm,1.1s
CTAO **Charters Tower** 74.67 123 P P 01 44 55.1 +0.4
CTAO pmax pmax
comp=Z,90nm,1.1s
M14K **Bethel** 74.78 28 IAmb IAmb 01 45 00.4
comp=Z,75nm,1.2s
M14K **Bethel** 74.78 28 P P 01 44 55.0 +0.3
baz=302,SNR=8.5
H20K **Anotleneega Mo** 74.81 22 P P 01 44 54.9 +0.1
baz=306
MVO **Moncorvo** 74.85 309 *eP* P 01 44 55.5 -0.1
MVO *i* IAmb IAmb 01 45 00.5
comp=Z,81nm,1.5s
MVO *eS* S 01 54 35.7 +3.2
MVO *eLR* LR 02 10 55.4
MVO *i* IAMs_20 IAMs_20 02 21 47.0
comp=Z,997nm,20.0s
E23K **Chandalar** 74.85 19 IAMs_20 IAMs_20 02 18 36.4
comp=Z,2μm,19.0s
E23K **Chandalar** 74.85 19 P P 01 44 55.3 +0.1
baz=310
C26K **Camden Bay** 74.86 16 P P 01 44 55.2 +0.1
baz=314
IMAR **Indian Mountai** 74.89 22 P P 01 44 55.1 -0.1
D25K **Kavik River** 74.90 17 IAMs_20 IAMs_20 02 18 13.6
comp=Z,2μm,19.0s
D25K **Kavik River** 74.90 17 P P 01 44 55.2 -0.1
baz=313
E24K **Your Creek** 75.16 19 IAmb IAmb 01 44 59.0
comp=Z,61nm,1.1s
E24K **Your Creek** 75.16 19 P P 01 44 57.3 +0.4
baz=311,SNR=70
K17K **Iditarod** 75.18 26 IAmb IAmb 01 44 59.5
comp=Z,86nm,1.4s
K17K IAMs_20 IAMs_20 02 16 55.6
comp=Z,3μm,20.0s
K17K **Iditarod** 75.18 26 P P 01 44 57.1 +0.1
baz=304
COLD **Coldfoot** 75.22 20 IAMs_20 IAMs_20 02 20 19.2
comp=Z,2μm,20.0s
COLD **Coldfoot** 75.22 20 P P 01 44 57.6 +0.4
baz=310,SNR=35
PVRL **Vila Real** 75.27 309 *eP* P 01 44 58.6 +0.6
PVRL *i* IAmb IAmb 01 45 02.7
comp=Z,51nm,1.7s
POLO **Lamas de Olo** 75.28 309 *eP* P 01 44 59.0 +0.9
POLO *i* IAmb IAmb 01 45 02.0
comp=Z,26nm,1.8s
L16K **Owhat River** 75.28 27 IAmb IAmb 01 45 01.5
comp=Z,104nm,1.7s
L16K **Owhat River** 75.28 27 P P 01 44 56.6 -1.0
baz=303,SNR=7.0
PCAB **Cabril** 75.30 310 *eP* P 01 44 59.0 +0.8
PCAB *i* IAmb IAmb 01 45 04.0
comp=Z,108nm,1.9s
N14K **Kuskokwak Cree** 75.34 29 IAMs_20 IAMs_20 02 16 18.8
comp=Z,2μm,22.0s
N14K **Kuskokwak Cree** 75.34 29 P P 01 44 58.0 +0.1
baz=302
M15K **Kasigluk River** 75.34 28 P P 01 44 57.8 -0.2
baz=303,SNR=12
J18K **Innoko River** 75.35 25 IAmb IAmb 01 45 00.1
comp=Z,71nm,1.4s
J18K IAMs_20 IAMs_20 02 21 40.5
comp=Z,2μm,19.0s
J18K **Innoko River** 75.35 25 P P 01 44 58.3 +0.4
baz=305
PGAV **Gavieira, Arco** 75.35 310 *eP* P 01 45 00.2 +1.7
PGAV *i* IAmb IAmb 01 45 03.5
comp=Z,76nm,1.7s
PGAV *eS* S 01 54 41.4 +3.2
PGAV *eLR* LR 02 11 30.5
PGAV *i* IAMs_20 IAMs_20 02 22 16.6
comp=Z,1μm,20.0s
I20K **Naaghedeneel** 75.36 23 IAmb IAmb 01 45 00.7
comp=Z,120nm,1.2s
I20K IAMs_20 IAMs_20 02 20 11.0
comp=Z,2μm,20.0s
I20K **Naaghedeneel** 75.36 23 P P 01 44 58.5 +0.6
baz=307
C27K **Jago River** 75.36 16 IAmb IAmb 01 45 00.3
comp=Z,88nm,0.9s
C27K IAMs_20 IAMs_20 02 20 15.8
comp=Z,2μm,20.0s
C27K **Jago River** 75.36 16 P P 01 44 58.2 +0.2
baz=315
H21K **Melozitna Rive** 75.39 22 IAmb IAmb 01 45 00.4
comp=Z,62nm,1.2s
H21K **Melozitna Rive** 75.39 22 P P 01 44 58.2 0.0
baz=308
J19K **Poorman** 75.44 24 IAmb IAmb 01 45 01.1
comp=Z,83nm,1.1s
J19K IAMs_20 IAMs_20 02 17 25.1
comp=Z,2μm,21.0s
J19K **Poorman** 75.44 24 P P 01 44 59.3 +0.8
baz=306,SNR=42
L17K **Donlin** 75.51 26 P P 01 44 59.6 +0.7
baz=304
MTE **Manteigas** 75.52 308 IAmb IAmb 01 45 03.0
comp=Z,149nm,1.6s
MTE **Manteigas** 75.52 308 *eP* P 01 45 00.2 +0.7
MTE *i* IAmb IAmb 01 45 04.7
comp=Z,117nm,1.7s
MTE *eS* S 01 54 44.4 +4.4
MTE *eLR* LR 02 11 52.5
MTE *i* IAMs_20 IAMs_20 02 23 00.5
comp=Z,1μm,20.0s
G23K **Bananza Creek** 75.60 20 IAMs_20 IAMs_20 02 20 22.4
comp=Z,2μm,21.0s
G23K **Bananza Creek** 75.60 20 P P 01 44 59.8 +0.3
baz=310
PVIS **Viseu** 75.63 309 *eP* P 01 44 59.9 -0.2
F24K **Squaw Lake** 75.70 19 IAMs_20 IAMs_20 02 17 17.9
comp=Z,2μm,21.0s
F24K **Squaw Lake** 75.70 19 P P 01 45 00.6 +0.6
baz=312
H22K **Ishtalitna Cre** 75.71 21 IAmb IAmb 01 45 02.3
comp=Z,80nm,1.4s
H22K **Ishtalitna Cre** 75.71 21 P P 01 45 00.2 +0.2
baz=309,SNR=22
PCBR **Castelo Branco** 75.72 308 *eP* P 01 45 01.9 +1.4
PCBR *i* IAmb IAmb 01 45 05.4
comp=Z,58nm,1.6s
KSANE **Kasane** 75.77 240 *i* P P 01 44 59.7 -1.5
PMRV **Marv??o** 75.83 307 *eP* P 01 45 01.1 -0.1
PMRV *i* IAmb IAmb 01 45 31.1
comp=Z,43nm,1.8s
PMRV *eS* S 01 54 46.3 +3.0
PMRV *eLR* LR 02 15 14.1
PMRV *i* IAMs_20 IAMs_20 02 22 24.7
comp=Z,816nm,18.0s
J20K **Nowinta River** 75.85 23 IAmb IAmb 01 45 03.5
comp=Z,65nm,0.9s
J20K **Nowinta River** 75.85 23 P P 01 45 01.7 +0.9
baz=307
UPNV **Upernavik** 75.87 349 *i* P P 01 45 01.4 +0.6
UPNV IAmb IAmb 01 45 03.2
comp=Z,115nm,1.3s
M16K **Timber Creek** 75.87 27 IAMs_20 IAMs_20 02 20 54.9
comp=Z,3μm,21.0s
M16K **Timber Creek** 75.87 27 P P 01 45 01.7 +0.7
baz=304
O14K **Tigyukauivet M** 75.88 30 IAMs_20 IAMs_20 02 16 34.1
comp=Z,2μm,20.0s
O14K **Tigyukauivet M** 75.88 30 P P 01 45 01.5 +0.5
baz=302
N15K **Kwethluk River** 75.88 28 IAMs_20 IAMs_20 02 19 29.1
comp=Z,3μm,20.0s
N15K **Kwethluk River** 75.88 28 P P 01 45 01.9 +0.8
baz=303
E25K **Arctic Village** 75.94 18 IAmb IAmb 01 45 05.5
comp=Z,86nm,1.4s
E25K **Arctic Village** 75.94 18 P P 01 45 01.6 +0.3
baz=314,SNR=34
I21K **Tanana** 75.96 22 IAmb IAmb 01 45 06.3
comp=Z,147nm,2.0s
I21K **Tanana** 75.96 22 P P 01 45 02.2 +0.8
baz=309,SNR=21
L18K **Granite Mounta** 76.08 26 IAMs_20 IAMs_20 02 17 41.4
comp=Z,2μm,18.0s
L18K **Granite Mounta** 76.08 26 P P 01 45 02.7 +0.5
baz=306
PBAR **Barrancos** 76.12 306 *eP* P 01 45 02.9 0.0
PBAR *i* IAmb IAmb 01 45 07.8
comp=Z,141nm,1.8s
BROLN **Tlhalogang** 76.14 236 *i* P P 01 45 01.9 -1.3
UNV **Unalaska Valle** 76.17 36 P P 01 45 02.9 +0.1
baz=300
PESTR **Estremoz** 76.21 307 *eP* P 01 45 02.4 -1.0
PESTR *i* IAmb IAmb 01 45 08.0
comp=Z,52nm,1.8s
N16K **Nishlik Lake** 76.26 28 P P 01 45 03.0 -0.3
baz=304
M17K **Holitna River** 76.26 27 IAmb IAmb 01 45 07.6
comp=Z,60nm,1.2s
M17K **Holitna River** 76.26 27 P P 01 45 04.0 +0.8
baz=305
F25K **Christian Rive** 76.28 18 IAmb IAmb 01 45 07.5
comp=Z,122nm,1.4s
F25K IAMs_20 IAMs_20 02 17 50.4
comp=Z,3μm,22.0s
F25K **Christian Rive** 76.28 18 P P 01 45 04.3 +0.9
baz=314,SNR=38
PSARD **Sardoal** 76.30 308 *eP* P 01 45 04.1 +0.2
PSARD *i* IAmb IAmb 01 45 08.9
comp=Z,159nm,1.8s
D27M **Malcolm River** 76.31 16 IAmb IAmb 01 45 08.1
comp=Z,184nm,1.8s
D27M IAMs_20 IAMs_20 02 19 02.9
comp=Z,2μm,19.0s
D27M **Malcolm River** 76.31 16 P P 01 45 03.9 +0.4
baz=318
H23K **Yukon River** 76.33 21 IAMs_20 IAMs_20 02 22 49.2
comp=Z,2μm,19.0s
H23K **Yukon River** 76.33 21 P P 01 45 03.9 +0.3
baz=311
PCAS **Casmilo, Conde** 76.33 308 *eP* P 01 45 04.4 +0.3
PCAS *i* IAmb IAmb 01 45 09.0
comp=Z,84nm,1.7s
K20K **Telida** 76.37 24 IAmb IAmb 01 45 06.6
comp=Z,88nm,1.0s
K20K IAMs_20 IAMs_20 02 21 39.0
comp=Z,2μm,20.0s
K20K **Telida** 76.37 24 P P 01 45 05.2 +1.4
baz=307
G24K **Hadweenzic Riv** 76.37 20 IAmb IAmb 01 45 06.2
comp=Z,77nm,1.2s
G24K **Hadweenzic Riv** 76.37 20 P P 01 45 04.5 +0.8
baz=312,SNR=34
NUUG **Nuugaatsiaq** 76.40 348 *i* P P 01 45 05.0 +1.2
NUUG IAmb IAmb 01 45 06.3
comp=Z,121nm,1.4s
MLY **Manley** 76.46 22 P P 01 45 04.7 +0.4
baz=310,SNR=38
O15K **Ungalikthiuk R** 76.54 29 IAMs_20 IAMs_20 02 17 05.6
comp=Z,3μm,21.0s
O15K **Ungalikthiuk R** 76.54 29 P P 01 45 04.3 -0.6
baz=304
PARRA **Arraiolos** 76.55 307 *eP* P 01 45 06.6 +1.3
PARRA *i* IAmb IAmb 01 45 09.0
comp=Z,64nm,1.8s
PMTG **Montargil** 76.57 307 *eP* P 01 45 05.5 +0.1
PMTG *i* IAmb IAmb 01 45 10.0
comp=Z,67nm,1.8s
BBOO **Buckleboo** 76.59 139 P P 01 45 05.7 +0.3
F26K **Sheenjek River** 76.62 18 IAmb IAmb 01 45 08.9
comp=Z,168nm,1.9s
F26K **Sheenjek River** 76.62 18 P P 01 45 05.5 +0.3
baz=315
MDT **Midelt** 76.62 300 LR LR 02 23 42.9
comp=Z,581nm,20.2s,baz=71,slow=40
SOOWA **Sowa** 76.63 238 *i* P P 01 45 05.1 -0.9
EVO **Evora** 76.66 307 *eP* P 01 45 07.1 +1.2
EVO *i* IAmb IAmb 01 45 10.8
comp=Z,119nm,1.8s
CHUM **Lake Minchumin** 76.66 23 P P 01 45 06.5 +1.1
baz=309,SNR=23
BMAR **Burnt Mountain** 76.69 18 P P 01 45 06.6 +1.0
SAATT **Saattut** 76.70 347 *i* P P 01 45 05.0 -0.5
SAATT IAmb IAmb 01 45 07.3
comp=Z,74nm,1.3s
MD01 **Midelt array s** 76.72 300 P P 01 45 06.9 +0.4
MD31 **MD31** 76.72 300 IAmb IAmb 01 45 10.0
comp=Z,102nm,1.6s
G25K **Bearman Lake** 76.73 19 P P 01 45 06.1 +0.4
baz=314
PBEJ **Beja** 76.77 306 *eP* P 01 45 09.0 +2.5
PBEJ *i* IAmb IAmb 01 45 52.2
comp=Z,53nm,1.8s
PSBE **So Bento** 76.77 308 *eP* P 01 45 05.7 -0.9
PSBE *i* IAmb IAmb 01 45 11.9
comp=Z,168nm,1.5s
D28M **Stokes Point** 76.77 15 P P 01 45 06.7 +0.7
baz=320
L19K **White Mountain** 76.80 25 IAmb IAmb 01 45 10.5
comp=Z,81nm,1.4s
L19K IAMs_20 IAMs_20 02 18 06.2
comp=Z,2μm,20.0s

L19K White Mountain 76.80 25 P P 01 45 07.2 +0.9
baz=307
I23K Minto, Yukon-K 76.83 21 IAMs_20 IAMs_20 02 22 16.0
comp=Z,2µm,20.0s
I23K Minto, Yukon-K 76.83 21 P P 01 45 06.7 +0.4
baz=311,SNR=22
H24K Noodor Dome 76.83 20 IAMs_20 IAMs_20 02 22 11.9
comp=Z,2µm,18.0s
H24K Noodor Dome 76.83 20 P P 01 45 07.2 +0.7
baz=312,SNR=24
M18K Stony River 76.84 26 P P 01 45 07.2 +0.7
baz=306,SNR=12
N17K Nushagak Hills 76.87 27 IAmb IAmb 01 45 09.5
comp=Z,115nm,1.7s
N17K Nushagak Hills 76.87 27 P P 01 45 07.0 +0.3
baz=306,SNR=8.7
MOE Montemor 76.90 307 *e*P P 01 45 07.8 +0.5
MOE *i* IAmb IAmb 01 45 12.4
comp=Z,113nm,1.9s
E27K Coleen River 76.94 17 P P 01 45 07.0 0.0
baz=317,SNR=46
PVAQ Vaqueiros 76.94 305 *e*P P 01 45 07.5 0.0
PVAQ *i* IAmb IAmb 01 45 23.2
comp=Z,112nm,1.6s
PVAQ *e*S S 01 54 58.1 +2.6
PVAQ *e*LR LR 02 12 50.9
PVAQ *i* IAMs_20 IAMs_20 02 22 15.3
comp=Z,732nm,22.0s
RES Resolute Bay 76.96 1 P P 01 45 06.3 -0.6
comp=Z,6.6nm,0.8s,baz=356,slow=6.4,SNR=24
comp=Z,6.6nm,0.8s
RES Resolute Bay 76.96 1 IAmb IAmb 01 45 10.1
comp=Z,134nm,1.9s
EDA Edea 76.98 267 P P 01 45 08.7 +0.6
EDA IAMs_20 IAMs_20 02 22 18.3
comp=Z,2µm,18.0s
BPAW Bear Paw Mtn. 76.98 23 IAmb IAmb 01 45 10.7
comp=Z,135nm,1.6s
BPAW Bear Paw Mtn. 76.98 23 P P 01 45 07.5 +0.2
baz=310,SNR=24
O16K Kokwok River B 77.04 28 IAmb IAmb 01 45 10.0
comp=Z,86nm,1.4s
O16K IAMs_20 IAMs_20 02 21 16.7
comp=Z,3µm,22.0s
O16K Kokwok River B 77.04 28 P P 01 45 08.1 +0.5
baz=305
ANGG Ammassalik, Gr 77.06 340 *i* P P 01 45 07.5 -0.1
ANGG IAmb IAmb 01 45 13.2
comp=Z,126nm,1.0s
PCVE Castro Verde 77.07 306 *e*P P 01 45 09.4 +1.2
MESJ Messejana 77.11 306 *e*P P 01 45 08.8 +0.4
MESJ IAmb IAmb 01 45 12.2
comp=Z,153nm,1.8s
MESJ *e*S S 01 54 58.5 +1.2
MESJ Messejana 77.11 306 *e*P P 01 45 09.1 +0.6
MESJ *i* IAmb IAmb 01 45 14.5
comp=Z,108nm,2.0s
MESJ Messejana 77.11 306 *e*P P 01 45 08.8 +0.4
MESJ *e*S S 01 54 58.5 +1.2
E28M Babbage River 77.14 16 IAmb IAmb 01 45 11.7
comp=Z,109nm,1.4s
E28M Babbage River 77.14 16 P P 01 45 08.6 +0.5
baz=319
M19K Big River Lodg 77.14 25 IAMs_20 IAMs_20 02 17 42.2
comp=Z,2µm,21.0s
M19K Big River Lodg 77.14 25 P P 01 45 09.1 +0.9
baz=308
A36M Sachs Harbour 77.16 10 P P 01 45 08.4 +0.4
baz=331,SNR=27
PBDV Barranco-do-Ve 77.16 305 *e*P P 01 45 10.6 +1.7
PBDV *i* IAmb IAmb 01 45 14.0
comp=Z,196nm,1.8s
FALS False Pass 77.22 34 P P 01 45 09.1 +0.5
baz=302
G26K Porcupine Rive 77.25 18 IAmb IAmb 01 45 11.2
comp=Z,69nm,1.1s
G26K IAMs_20 IAMs_20 02 18 31.4
comp=Z,3µm,22.0s
G26K Porcupine Rive 77.25 18 P P 01 45 09.4 +0.7
baz=316
NEA2 Nenana 77.29 22 IAmb IAmb 01 45 10.7
comp=Z,83nm,0.9s
NEA2 IAMs_20 IAMs_20 02 24 24.1
comp=Z,2µm,19.0s
NEA2 Nenana 77.29 22 P P 01 45 09.0 0.0
baz=311,SNR=39
N18K Kilae Creek 77.30 27 IAmb IAmb 01 45 13.3
comp=Z,76nm,1.6s
N18K IAMs_20 IAMs_20 02 17 24.6
comp=Z,3µm,20.0s
N18K Kilae Creek 77.30 27 P P 01 45 10.0 +0.9
baz=306,SNR=9.2
PPLA Purkeypile 77.33 24 IAMs_20 IAMs_20 02 22 18.3
comp=Z,2µm,19.0s
PPLA Purkeypile 77.33 24 P P 01 45 09.7 +0.3
baz=309,SNR=30
O17K Koliganek Bris 77.35 28 P P 01 45 08.9 -0.4
baz=306
KTH Kantishna Hill 77.35 23 IAmb IAmb 01 45 11.4
comp=Z,88nm,1.4s
KTH IAMs_20 IAMs_20 02 25 01.9
comp=Z,2µm,18.0s
PMAFR Mafra 77.36 307 *e*P P 01 45 08.5 -1.4
PMAFR *i* IAmb IAmb 01 45 14.9
comp=Z,216nm,1.8s
LIS Lisbon 77.37 307 *e*P P 01 45 10.6 +0.7
LIS *i* IAmb IAmb 01 45 13.9
comp=Z,188nm,2.3s
QLP Quilpie 77.39 130 P P 01 45 11.2 +1.2
P16K Nushagak River 77.40 29 P P 01 45 09.7 0.0
baz=305
BWN Browne 77.44 22 IAmb IAmb 01 45 12.7
comp=Z,85nm,1.0s
POKR Poker Plat Res 77.46 21 P P 01 45 09.8 -0.1
baz=313
COLA College 77.49 21 P P 01 45 09.9 -0.2
COLA College 77.49 21 P P 01 45 09.8 -0.3
COLA IAmb IAmb 01 45 11.7
comp=Z,70nm,0.9s
COLA College 77.49 21 IAMs_20 IAMs_20 02 22 36.4
comp=Z,2µm,18.0s
COLA College 77.49 21 P P 01 45 09.8 -0.3
COLA pmax pmax
comp=Z,70nm,0.9s
COLA MLR MLR
comp=Z,2µm,18.0s
COLA College 77.49 21 P P 01 45 09.7 -0.4
baz=312
PTEO Sao Teotonio 77.59 306 *e*P P 01 45 12.6 +1.5
M20K Styx River 77.62 25 IAmb IAmb 01 45 13.6
comp=Z,140nm,1.6s
M20K IAMs_20 IAMs_20 02 18 09.0
comp=Z,2µm,22.0s
M20K Styx River 77.62 25 P P 01 45 11.8 +0.8
baz=308
TRF Thorofare Moun 77.64 23 P P 01 45 11.0 -0.2
baz=311
CCB Clear Creek Bu 77.66 21 IAMs_20 IAMs_20 02 22 49.9
comp=Z,2µm,19.0s
WRH Wood River Hil 77.69 21 IAmb IAmb 01 45 13.8
comp=Z,164nm,2.0s
WRH IAMs_20 IAMs_20 02 22 49.6
comp=Z,2µm,20.0s
E29M Blow River 77.69 16 IAmb IAmb 01 45 13.4
comp=Z,87nm,1.1s
E29M Blow River 77.69 16 P P 01 45 11.5 +0.3
baz=320
PRP Porcupine Dome 77.77 20 IAmb IAmb 01 45 14.2
comp=Z,72nm,1.0s
PRP Porcupine Dome 77.77 20 P P 01 45 12.3 +0.5
baz=314,SNR=58
N19K Bonanza Creek 77.77 26 IAmb IAmb 01 45 15.9
comp=Z,82nm,1.5s
N19K IAMs_20 IAMs_20 02 21 39.0
comp=Z,3µm,20.0s
N19K Bonanza Creek 77.77 26 P P 01 45 12.8 +1.0
baz=308
F28M Old Crow 77.80 17 IAmb IAmb 01 45 13.9
comp=Z,72nm,1.3s
F28M IAMs_20 IAMs_20 02 25 21.3
comp=Z,2µm,19.0s
F28M Old Crow 77.80 17 P P 01 45 11.9 +0.1
baz=319,SNR=33
PFVI Vila Bisbo 77.85 306 *e*P P 01 45 14.3 +1.7
ILAR Eielson Array 77.87 21 P P 01 45 11.2 -1.0
comp=Z,18nm,0.8s,baz=306,slow=4.3,SNR=136
ILAR PP PP 01 48 05.7 -1.6
comp=Z,7.1nm,0.9s,baz=314,slow=6.1,SNR=18
ILAR LR LR 02 23 01.7
comp=Z,1µm,18.8s,baz=302,slow=38
comp=Z,18nm,0.8s
ILAR Eielson Array 77.87 21 P P 01 45 11.4 -0.8
ILAR Eielson Array 77.87 21 P P 01 45 11.4 -0.8
MCK McKinley 77.91 22 P P 01 45 12.0 -0.5
baz=312,SNR=20
G27K Doyon Strip 77.94 18 IAMs_20 IAMs_20 02 19 04.9
comp=Z,2µm,22.0s
G27K Doyon Strip 77.94 18 P P 01 45 12.7 +0.1
baz=317
P17K Kvichak River 77.96 28 P P 01 45 13.6 +0.8
P17K IAmb IAmb 01 45 16.6
comp=Z,59nm,1.0s
P17K IAMs_20 IAMs_20 02 22 21.2
comp=Z,3µm,21.0s
P17K Kvichak River 77.96 28 P P 01 45 13.0 +0.2
baz=306
KHWEE KHWEE 78.04 237 *i* P P 01 45 13.4 -0.5
O18K Koktuh Hills 78.07 27 IAmb IAmb 01 45 17.4
comp=Z,51nm,1.0s
O18K Koktuh Hills 78.07 27 P P 01 45 13.7 +0.3
baz=307,SNR=16
L22K Petersville 78.07 24 IAmb IAmb 01 45 15.1
comp=Z,84nm,1.0s
L22K IAMs_20 IAMs_20 02 19 08.3
comp=Z,2µm,19.0s
HDA Harding Lake 78.09 21 P P 01 45 12.2 -1.3
baz=313,SNR=21
SKT Skwentna 78.15 24 IAmb IAmb 01 45 15.4
comp=Z,93nm,1.0s
SKT Skwentna 78.15 24 P P 01 45 13.5 -0.3
baz=310,SNR=87
RND Reindeer 78.15 22 P P 01 45 13.1 -0.8
RND IAMs_20 IAMs_20 02 25 38.9
comp=Z,2µm,19.0s
RND Reindeer 78.15 22 P P 01 45 13.1 -0.8
RND pmax pmax
comp=Z,296nm,2.0s
Q16K King Salmon 78.17 29 P P 01 45 14.0 0.0
baz=306
O19K Port Alsworth 78.21 27 IAmb IAmb 01 45 17.9
comp=Z,196nm,1.9s
O19K IAMs_20 IAMs_20 02 23 30.8
comp=Z,2µm,20.0s
O19K Port Alsworth 78.21 27 P P 01 45 14.2 +0.1
baz=308,SNR=11
S14K Fog Glacier 78.28 32 P P 01 45 13.5 -1.2
baz=304
CUT Chulitna 78.33 24 IAMs_20 IAMs_20 02 24 48.7
comp=Z,2µm,19.0s
CUT Chulitna 78.33 24 P P 01 45 13.9 -0.8
baz=311
P18K Big Mountain, 78.34 28 P P 01 45 14.5 -0.5
baz=307,SNR=7.1
GDH Godhavn 78.36 347 *i* P P 01 45 15.4 +0.6
GDH IAmb IAmb 01 45 16.9
comp=Z,114nm,1.3s
N20K Mount Spurr 78.40 25 P P 01 45 14.8 -0.5
baz=309,SNR=13
SPCR Spurr Chakacha 78.40 25 P P 01 45 14.5 -0.8
baz=309,SNR=6.1
H27K Steamboat Moun 78.40 18 IAmb IAmb 01 45 17.4
comp=Z,56nm,1.1s
H27K IAMs_20 IAMs_20 02 22 29.1
comp=Z,2µm,22.0s
H27K Steamboat Moun 78.40 18 P P 01 45 15.1 -0.1
baz=318
J25K Salcha River, 78.45 20 IAMs_20 IAMs_20 02 23 39.6
comp=Z,2µm,18.0s
J25K Salcha River, 78.45 20 P P 01 45 14.4 -1.1
baz=314
POIN Pond Inlet 78.46 356 IAmb IAmb 01 45 18.4
comp=Z,120nm,1.3s
LPHEP Lephephe 78.60 235 *i* P P 01 45 16.3 -0.7
LPHEP Lephephe 78.60 235 IAmb IAmb 01 45 18.6
comp=Z,112nm,1.9s
I26K Coal Creek Min 78.61 19 IAmb IAmb 01 45 18.5
comp=Z,72nm,1.0s
I26K IAMs_20 IAMs_20 02 23 24.0
comp=Z,2µm,20.0s
I26K Coal Creek Min 78.61 19 P P 01 45 16.6 +0.3
baz=316
WAT1 Susitna Watana 78.64 23 P P 01 45 15.6 -1.0
baz=312
RED Redoubt Volcan 78.68 26 IAmb IAmb 01 45 18.5
comp=Z,168nm,2.0s
HTT Hallett 78.70 138 P P 01 45 18.4 +1.2
Q17K Contact Creek 78.75 29 P P 01 45 17.0 -0.3
baz=307
INK Inuvik 78.75 14 P P 01 45 16.4 -0.6
comp=Z,49nm,1.1s,baz=322,slow=5.5,SNR=56
INK PP PP 01 48 14.2 -0.4
comp=Z,7.5nm,1.0s,baz=343,slow=10,SNR=8.4
INK LR LR 02 24 45.6
comp=Z,809nm,20.5s,baz=300,slow=39
comp=Z,49nm,1.1s
INK Inuvik 78.75 14 IAmb IAmb 01 45 21.1
comp=Z,103nm,1.2s
INK Inuvik 78.75 14 P P 01 45 16.8 -0.2
baz=324,SNR=56
CHGN Chignik 78.79 31 P P 01 45 16.1 -1.3
baz=305
F30M Barrier River 78.80 15 IAmb IAmb 01 45 19.5
comp=Z,98nm,1.1s
F30M IAMs_20 IAMs_20 02 20 23.6
comp=Z,2µm,19.0s
F30M Barrier River 78.80 15 P P 01 45 17.5 +0.2
baz=322
G29M Pine Creek 78.80 17 P P 01 45 17.5 +0.1
baz=320
M22K Willow 78.81 24 P P 01 45 17.0 -0.4
baz=311
I27K Kandik River 78.84 19 IAmb IAmb 01 45 20.0
comp=Z,73nm,0.9s
I27K IAMs_20 IAMs_20 02 22 40.8
comp=Z,2µm,21.0s
I27K Kandik River 78.84 19 P P 01 45 18.2 +0.5
baz=318
TATA Tatamba Isabel 78.84 106 P P 01 45 19.5 +1.1
DHY Denali Highway 78.87 22 P P 01 45 16.9 -1.1
baz=313,SNR=16
Q18K Katmai Hardscr 78.88 28 P P 01 45 16.2 -1.8
baz=308,SNR=7.8
K24K Donnelly Dome 78.89 21 P P 01 45 17.2 -0.7
baz=314,SNR=44
R17L Mt. Peulik Vol 78.92 29 P P 01 45 16.9 -1.2
baz=307
P19K Oil Pt 78.98 27 IAMs_20 IAMs_20 02 24 14.1
comp=Z,3µm,21.0s
P19K Oil Pt 78.98 27 P P 01 45 18.1 -0.3
baz=309,SNR=6.9
CAPN Captain Cook N 79.07 25 P P 01 45 19.4 +0.5
baz=310
CHNA Chernabura Isl 79.08 33 P P 01 45 17.7 -1.3
baz=305
WAT6 Susitna Watana 79.08 23 P P 01 45 18.7 -0.4
baz=313,SNR=18
G30M tAoh Zraii Nji 79.19 16 IAmb IAmb 01 45 21.1
comp=Z,81nm,1.0s
G30M tAoh Zraii Nji 79.19 16 P P 01 45 18.6 -1.0
baz=322
GHO Glory Hole Cre 79.22 24 IAMs_20 IAMs_20 02 25 25.3
comp=Z,2µm,20.0s
STKA Stephens Creek 79.22 135 P P 01 45 19.9 -0.2
comp=Z,36nm,0.8s,baz=321,slow=4.2,SNR=24
STKA LR LR 02 23 52.6
comp=Z,594nm,20.5s,baz=309,slow=38
comp=Z,36nm,0.8s
STKA Stephens Creek 79.22 135 P P 01 45 20.3 +0.2
STKA Stephens Creek 79.22 135 *de*P P 01 45 20.1 0.0
RIDG Independent Ri 79.23 21 IAmb IAmb 01 45 20.9
comp=Z,62nm,1.0s
RIDG IAMs_20 IAMs_20 02 25 36.3
comp=Z,2µm,19.0s
RIDG Independent Ri 79.23 21 P P 01 45 19.2 -0.6
baz=315,SNR=41
H29M Whitestone 79.25 17 IAmb IAmb 01 45 21.6
comp=Z,54nm,0.9s
H29M IAMs_20 IAMs_20 02 20 08.6
comp=Z,2µm,20.0s
H29M Whitestone 79.25 17 P P 01 45 19.7 -0.1
baz=320,SNR=38
Q19K Cape Douglas, 79.27 28 IAmb IAmb 01 45 20.5
comp=Z,107nm,1.6s
Q19K Cape Douglas, 79.27 28 P P 01 45 18.3 -1.7
baz=309
PMR Palmer 79.27 24 P P 01 45 19.6 -0.3
PMR Palmer 79.27 24 IAmb IAmb 01 45 21.5
comp=Z,60nm,1.0s
PMR Palmer 79.27 24 P P 01 45 19.9 0.0
baz=312,SNR=24
SCRK Sand Creek 79.33 21 IAmb IAmb 01 45 21.9
comp=Z,63nm,0.8s
SCRK IAMs_20 IAMs_20 02 24 03.8
comp=Z,2µm,20.0s
SCRK Sand Creek 79.33 21 P P 01 45 20.1 -0.3
baz=316,SNR=85
RC01 Rabbit Creek A 79.38 25 IAmb IAmb 01 45 22.2
comp=Z,88nm,1.2s
RC01 IAMs_20 IAMs_20 02 24 41.6
comp=Z,2µm,18.0s
RC01 Rabbit Creek A 79.38 25 P P 01 45 20.3 -0.3
baz=311,SNR=28
SML Sawmill 79.41 24 IAMs_20 IAMs_20 02 25 41.2
comp=Z,2µm,20.0s
SML Sawmill 79.41 24 P P 01 45 20.8 0.0
baz=312,SNR=46
F31M Tsiigehtchic 79.41 15 IAmb IAmb 01 45 22.3
comp=Z,90nm,1.1s
F31M Tsiigehtchic 79.41 15 P P 01 45 20.6 0.0
baz=324,SNR=44
I28M Miner Creek 79.42 18 IAMs_20 IAMs_20 02 23 11.7
comp=Z,2µm,20.0s
I28M Miner Creek 79.42 18 P P 01 45 20.6 -0.3
baz=319
KDWAN Kaudwane 79.48 236 *i* P P 01 45 20.8 -1.1
HNR Honiara 79.50 107 LR LR 02 18 13.1
comp=Z,36nm,21.9s,baz=24,slow=34
DOT Dot Lake 79.54 21 IAMs_20 IAMs_20 02 23 49.4
comp=Z,2µm,19.0s
EPYK Eagle Plains 79.55 17 IAmb IAmb 01 45 22.8
comp=Z,55nm,0.9s
EPYK Eagle Plains 79.55 17 P P 01 45 20.9 -0.6
baz=322,SNR=36
SFJD Kangerlussuaq 79.56 344 LR LR 02 26 44.0
comp=Z,776nm,18.2s,baz=44,slow=40
SFJD Kangerlussuaq 79.56 344 P P 01 45 20.6 -0.8
SFJD Kangerlussuaq 79.56 344 P P 01 45 20.7 -0.8
SFJD pmax pmax
comp=Z,213nm,1.5s
SFJD Kangerlussuaq 79.56 344 *i* P P 01 45 20.8 -0.6
SFJD IAmb IAmb 01 45 24.6
comp=Z,228nm,1.5s
PAX Paxson 79.57 22 P P 01 45 21.1 -0.6
baz=315,SNR=20
SLKM Skilak Lake 79.59 25 IAMs_20 IAMs_20 02 22 52.0
comp=Z,2µm,20.0s
HOM Homer 79.60 26 IAMs_20 IAMs_20 02 24 50.4
comp=Z,2µm,21.0s
HOM Homer 79.60 26 P P 01 45 20.9 -0.9
baz=310
M23K Glacier View 79.63 23 P P 01 45 21.9 -0.1
baz=313,SNR=32
KNK Knik Glacier 79.63 24 IAmb IAmb 01 45 24.0
comp=Z,58nm,1.0s
KNK IAMs_20 IAMs_20 02 23 42.0
comp=Z,2µm,18.0s
KNK Knik Glacier 79.63 24 P P 01 45 22.3 +0.3
baz=312,SNR=26
C36M Paulatuk 79.68 11 IAmb IAmb 01 45 25.4
comp=Z,190nm,1.5s
C36M Paulatuk 79.68 11 P P 01 45 21.5 -0.5
baz=332,SNR=53
G31M Satah River 79.71 15 IAmb IAmb 01 45 23.7
comp=Z,97nm,0.9s
G31M Satah River 79.71 15 P P 01 45 21.8 -0.4
baz=324,SNR=62
SCM Sheep Creek Mo 79.74 23 IAmb IAmb 01 45 24.6
comp=Z,88nm,0.9s
SCM Sheep Creek Mo 79.74 23 P P 01 45 22.2 -0.4
baz=313,SNR=33
O22K Cooper Landing 79.79 25 IAMs_20 IAMs_20 02 23 37.4
comp=Z,2µm,19.0s
O22K Cooper Landing 79.79 25 P P 01 45 22.4 -0.4
baz=312,SNR=5.5
AUNRC North Rockhamp 79.80 124 P P 01 45 25.2 +1.8
LBTB Lobatse 79.80 234 LR LR 02 16 52.7
comp=Z,4µm,21.6s,baz=49,slow=33
BRLK Bradley Lake 79.82 26 IAmb IAmb 01 45 25.6
comp=Z,62nm,1.0s
BRLK IAMs_20 IAMs_20 02 22 56.4
comp=Z,2µm,19.0s
CNPM China Poot 79.84 26 IAMs_20 IAMs_20 02 25 06.9
comp=Z,2µm,18.0s
K27K Chicken 79.87 20 IAmb IAmb 01 45 25.6
comp=Z,78nm,1.1s
K27K IAMs_20 IAMs_20 02 25 57.0
comp=Z,2µm,19.0s
BRSE Bradley Lake S 79.89 26 P P 01 45 22.8 -0.7
baz=311,SNR=9.0
I29M Ogilvie Camp, 79.93 18 P P 01 45 23.0 -0.5
baz=320,SNR=9.6
M24K Tolsona, Glenn 79.94 23 IAmb IAmb 01 45 26.1
comp=Z,87nm,0.9s
M24K IAMs_20 IAMs_20 02 26 33.3
comp=Z,2µm,19.0s
M24K Tolsona, Glenn 79.94 23 P P 01 45 24.1 +0.3
baz=314,SNR=15
Q20K Shuyak Island 79.97 27 P P 01 45 22.6 -1.2
baz=310
TOA0 Torodi Ar. Sit 80.08 280 P P 01 45 25.8 +0.6
SNR=6.7
TORD Torodi Ar. Bea 80.08 280 P P 01 45 25.1 -0.2
comp=Z,14nm,0.9s,baz=62,slow=2.9,SNR=49
TORD PP PP 01 48 26.3 -0.9
comp=Z,4.2nm,1.0s,baz=67,slow=6.1,SNR=3.8
TORD LR LR 02 26 01.0
comp=Z,2µm,18.1s,baz=65,slow=40
comp=Z,14nm,0.9s
TORD Torodi Ar. Bea 80.08 280 P P 01 45 25.0 -0.2
TORD IAmb IAmb 01 45 28.4
comp=Z,150nm,1.8s
SEW Seward 80.14 25 IAmb IAmb 01 45 26.3
comp=Z,102nm,1.4s
SEW IAMs_20 IAMs_20 02 23 07.8
comp=Z,3µm,21.0s
SEW Seward 80.14 25 P P 01 45 24.3 -0.4
baz=312,SNR=8.7
MENT Mentasta 80.16 21 P P 01 45 25.5 +0.7
L26K Log Cabin Wild 80.21 21 IAmb IAmb 01 45 28.8
comp=Z,178nm,2.0s
L26K Log Cabin Wild 80.21 21 P P 01 45 25.0 -0.1
baz=316,SNR=11
KDAK Kodiak Island 80.42 28 P P 01 45 26.1 -0.1
comp=Z,26nm,1.0s,baz=307,slow=6.6,SNR=16
comp=Z,26nm,1.0s
KDAK Kodiak Island 80.42 28 P P 01 45 26.4 +0.1
KDAK IAmb IAmb 01 45 28.0
comp=Z,168nm,1.6s
KDAK Kodiak Island 80.42 28 *de*P P 01 45 26.2 -0.1
KDAK pmax pmax
comp=Z,55nm,1.3s
KDAK MLR MLR
comp=Z,3µm,18.0s
KDAK Kodiak Island 80.42 28 P P 01 45 26.0 -0.3
baz=310
KLU Klutina 80.46 23 P P 01 45 26.9 +0.3
baz=314,SNR=22
GLI Glacier Island 80.48 24 IAMs_20 IAMs_20 02 25 54.5
comp=Z,2µm,21.0s
GLI Glacier Island 80.48 24 P P 01 45 25.9 -0.6
baz=314,SNR=12
OHAK Old Harbor 80.49 29 P P 01 45 27.9 +1.3
OHAK Old Harbor 80.49 29 IAmb IAmb 01 45 28.3
comp=Z,204nm,1.9s
OHAK Old Harbor 80.49 29 P P 01 45 26.5 -0.1
baz=309,SNR=7.0
SII Sitkinak Islan 80.52 30 P P 01 45 26.5 -0.4
baz=308
I30M Mount Dempster 80.55 17 IAmb IAmb 01 45 28.5
comp=Z,80nm,1.1s
I30M IAMs_20 IAMs_20 02 20 48.9
comp=Z,2µm,21.0s
I30M Mount Dempster 80.55 17 P P 01 45 26.9 -0.1
baz=322,SNR=20
H31M Peel River 80.59 16 P P 01 45 26.7 -0.4
baz=324
J29N Klondike Camp 80.66 18 P P 01 45 28.1 +0.5
baz=320,SNR=10
L27K Beaver Creek, 80.66 20 IAmb IAmb 01 45 30.1
comp=Z,62nm,1.0s
L27K Beaver Creek, 80.66 20 P P 01 45 28.0 +0.5
baz=318
BCAR Beaver Creek A 80.67 20 P P 01 45 28.3 +0.7

M26K Nabesna, AK 80.78 21 IAmb IAmb 01 45 32.1
comp=Z,91nm,1.2s
M26K IAMs_20 IAMs_20 02 24 39.2
comp=Z,2µm,18.0s
M26K Nabesna, AK 80.78 21 P **P** **01 45 28.5 +0.3**
baz=317,SNR=48
N25K Chitina, Valde 80.83 22 IAmb IAmb 01 45 31.0
comp=Z,100nm,1.0s
N25K IAMs_20 IAMs_20 02 20 38.7
comp=Z,2µm,21.0s
N25K Chitina, Valde 80.83 22 P **P** **01 45 29.1 +0.6**
baz=316,SNR=49
GRTLG Ghanzi 80.86 240 *i* P **P** **01 45 29.4 +0.1**
MAKGR Makgori 80.86 234 *i* P **P** **01 45 28.4 -0.8**
P23K Montague Islan 80.97 25 IAmb IAmb 01 45 31.4
comp=Z,100nm,1.0s
P23K IAMs_20 IAMs_20 02 20 14.6
comp=Z,2µm,20.0s
P23K Montague Islan 80.97 25 P **P** **01 45 29.2 0.0**
baz=313
KGCAE Kacgae 80.98 238 *i* P **P** **01 45 28.8 -1.2**
HIN Hinchinbrook I 81.02 24 IAmb IAmb 01 45 31.8
comp=Z,87nm,0.9s
HIN IAMs_20 IAMs_20 02 25 47.9
comp=Z,2µm,18.0s
J30M Hart River 81.07 18 IAMs_20 IAMs_20 02 24 33.7
comp=Z,2µm,20.0s
J30M Hart River 81.07 18 P **P** **01 45 29.6 -0.3**
baz=322
M27K Edge Creek, AK 81.16 21 P **P** **01 45 30.7 +0.4**
baz=318,SNR=24
EYAK Cordova Ski Ar 81.18 24 P **P** **01 45 31.0 +0.7**
EYAK Cordova Ski Ar 81.18 24 IAmb IAmb 01 45 32.7
comp=Z,56nm,1.0s
EYAK Cordova Ski Ar 81.18 24 P **P** **01 45 30.6 +0.3**
baz=315,SNR=12
GLB Gilahina Butte 81.21 22 IAMs_20 IAMs_20 02 22 25.7
comp=Z,2µm,19.0s
BMRM Bremner River 81.28 23 IAmb IAmb 01 45 34.5
comp=Z,91nm,1.2s
BMRM Bremner River 81.28 23 P **P** **01 45 31.5 +0.6**
baz=316,SNR=21
K29M Barlow Dome 81.32 18 IAmb IAmb 01 45 33.2
comp=Z,63nm,0.9s
K29M Barlow Dome 81.32 18 P **P** **01 45 31.3 +0.1**
baz=321,SNR=62
EIDS Eidsvold 81.41 125 P **P** **01 45 33.4 +1.4**
EIDS Eidsvold 81.41 125 IAmb IAmb 01 45 34.6
comp=Z,100nm,1.2s
BVCY Beaver Creek 81.44 21 P **P** **01 45 32.6 +0.9**
baz=318,SNR=6.1
VRDI Verde Repeater 81.48 22 IAmb IAmb 01 45 34.4
comp=Z,115nm,1.4s
MCARA McCarthy VSAT 81.51 22 P **P** **01 45 32.6 +0.5**
baz=317
CMSA Cobar Meteorol 81.58 133 P **P** **01 45 32.8 0.0**
RAGM Ragged Mountai 81.67 23 IAmb IAmb 01 45 35.5
comp=Z,76nm,0.8s
L29M L29M 81.72 19 IAmb IAmb 01 45 35.4
comp=Z,75nm,1.2s
L29M IAMs_20 IAMs_20 02 26 24.0
comp=Z,2µm,19.0s
L29M L29M 81.72 19 P **P** **01 45 33.5 +0.3**
baz=321
Q23K Middleton Isla 81.75 25 P **P** **01 45 34.2 +0.9**
baz=314
MID Middleton Isla 81.76 25 IAMs_20 IAMs_20 02 25 09.4
comp=Z,2µm,19.0s
CRQM Cirque 81.93 23 IAmb IAmb 01 45 36.8
comp=Z,87nm,1.1s
CRQM IAMs_20 IAMs_20 02 21 35.4
comp=Z,2µm,22.0s
CRQE Cirque 81.95 22 P **P** **01 45 34.8 +0.3**
baz=317,SNR=22
MAYO Mayo, Yukon 81.97 18 P **P** **01 45 34.9 +0.5**
baz=323,SNR=13
ILON Igloolik, Nuna 81.99 356 IAmb IAmb 01 45 35.2
comp=Z,42nm,0.8s
BERG Berg Lake 82.01 23 IAmb IAmb 01 45 38.6
comp=Z,195nm,1.8s
BERG IAMs_20 IAMs_20 02 26 49.9
comp=Z,2µm,19.0s
TGL Tana Glacier 82.04 22 IAMs_20 IAMs_20 02 21 37.7
comp=Z,2µm,22.0s
YUK3 Moose Creek 82.04 21 P **P** **01 45 35.5 +0.3**
baz=319,SNR=20
KAIM Kayak Island 82.09 24 P **P** **01 45 35.7 +0.5**
baz=316,SNR=18
NUUK Nuuk 82.12 343 *i* P **P** **01 45 34.8 -0.3**
NUUK IAmb IAmb 01 45 36.6
comp=Z,61nm,0.9s
M29M Somme Creek 82.14 20 IAmb IAmb 01 45 38.0
comp=Z,47nm,0.8s
M29M IAMs_20 IAMs_20 02 23 27.1
comp=Z,2µm,20.0s
M29M Somme Creek 82.14 20 P **P** **01 45 36.1 +0.6**
baz=320
BARN Barnard Glacie 82.20 22 IAmb IAmb 01 45 38.6
comp=Z,93nm,1.0s
BARN IAMs_20 IAMs_20 02 21 04.8
comp=Z,2µm,22.0s
BOSA Boshof 82.26 232 P **P** **01 45 36.4 -0.2**
comp=Z,9.3nm,0.8s,baz=52,slow=6.9,SNR=16
BOSA LR LR 02 19 52.1
comp=Z,4µm,19.1s,baz=54,slow=34
comp=Z,9.3nm,0.8s
BGLC Bering Glacier 82.35 23 P **P** **01 45 37.4 +1.0**
baz=317
CTG Chitna Glacier 82.37 22 P **P** **01 45 37.5 +0.7**
baz=318,SNR=49
CTGM Chitina Glacie 82.38 22 IAmb IAmb 01 45 39.5
comp=Z,74nm,1.0s
GRNC Granite Creek 82.41 22 IAmb IAmb 01 45 39.5
comp=Z,48nm,1.0s
GRNC IAMs_20 IAMs_20 02 21 31.5
comp=Z,2µm,20.0s
TSUM Tsumeb 82.45 243 LR LR 02 20 15.6
comp=Z,3µm,21.6s,baz=59,slow=34
M30M Minto, Yukon 82.52 19 P **P** **01 45 37.5 +0.1**
baz=322,SNR=31
KOOLE Kule 82.57 239 *i* P **P** **01 45 37.4 -1.0**
LOGN Logan Glacier 82.59 22 IAMs_20 IAMs_20 02 21 41.2
comp=Z,2µm,21.0s
YUK8 Steele Glacier 82.64 21 P **P** **01 45 38.7 +0.4**
baz=320,SNR=25
NRS Narsarsuaq 82.70 339 *i* P **P** **01 45 38.1 -0.2**
NRS IAmb IAmb 01 45 39.8
comp=Z,81nm,1.0s
MESA MESA 82.76 22 IAMs_20 IAMs_20 02 21 33.7
comp=Z,2µm,21.0s
MESA MESA 82.76 22 P **P** **01 45 40.1 +1.3**
baz=318,SNR=24
O28M Mount Upton 82.89 21 IAmb IAmb 01 45 44.6
comp=Z,131nm,1.8s
O28M IAMs_20 IAMs_20 02 28 37.0
comp=Z,2µm,21.0s
O28M Mount Upton 82.89 21 P **P** **01 45 40.5 +0.8**
baz=319
YUK4 Talbot Arm 82.94 20 P **P** **01 45 40.0 +0.2**
baz=321,SNR=30
N30M Aishikik Lake 83.32 20 IAMs_20 IAMs_20 02 24 26.3
comp=Z,1µm,18.0s
N30M Aishikik Lake 83.32 20 P **P** **01 45 42.3 +0.7**
baz=322
YUK6 Outpost Mounta 83.33 21 P **P** **01 45 42.5 +0.6**
baz=321,SNR=24
TW1H Toowoomba 1 Ha 83.35 126 P **P** **01 45 43.7 +1.5**
PCA Pinnacle 83.38 22 IAmb IAmb 01 45 44.5
comp=Z,58nm,1.1s
PINM Pinnacle 83.38 22 P **P** **01 45 42.8 +0.9**
baz=319,SNR=12
M31M Drury Creek, Y 83.50 18 P **P** **01 45 42.7 +0.2**
baz=324,SNR=46
IVI Ivigtut 83.52 340 *i* P **P** **01 45 41.7 -0.8**
N31M Braeburn, Yuko 83.68 19 P **P** **01 45 43.7 +0.3**
baz=323,SNR=62
HYT Haines Junctio 83.69 20 IAmb IAmb 01 45 46.0
comp=Z,56nm,0.9s
HYT Haines Junctio 83.69 20 P **P** **01 45 44.0 +0.5**
baz=322,SNR=54
O29M Mount Kennedy 83.77 21 IAmb IAmb 01 45 47.6
comp=Z,104nm,1.6s
O29M IAMs_20 IAMs_20 02 29 26.2
comp=Z,2µm,20.0s
O29M Mount Kennedy 83.77 21 P **P** **01 45 44.3 +0.3**
baz=321,SNR=14
MMPY Sheldon Lake, 83.99 17 IAmb IAmb 01 45 47.5
comp=Z,69nm,1.1s
MMPY Sheldon Lake, 83.99 17 P **P** **01 45 45.1 +0.1**
baz=327,SNR=52
O30N Mendenhall 84.16 20 IAmb IAmb 01 45 48.3
comp=Z,67nm,1.1s
O30N Mendenhall 84.16 20 P **P** **01 45 46.3 +0.4**
baz=323,SNR=50
P30M Million Dollar 84.41 21 P **P** **01 45 47.8 +0.6**
baz=322
BRAT Ballarat 84.49 138 P **P** **01 45 49.2 +1.6**
AUMTC Mt Clear Colle 84.50 138 P **P** **01 45 49.1 +1.4**
WHY Whitehorse 84.61 19 P **P** **01 45 48.0 -0.2**
baz=324,SNR=40
ARMA Armidale 84.84 129 P **P** **01 45 51.5 +1.7**
ARMA Armidale 84.84 129 IAmb IAmb 01 45 53.0
comp=Z,119nm,1.6s
WRGLY Wrigley 85.25 13 IAmb IAmb 01 45 59.9
comp=Z,42nm,1.3s
WRGLY Wrigley 85.25 13 P **P** **01 45 51.9 +0.6**
baz=333,SNR=7.7
TOO Toolangi 85.42 137 IAmb IAmb 01 45 55.3
comp=Z,47nm,1.3s
SKAG Skagway 85.44 20 P **P** **01 45 53.3 +1.1**
SKAG Skagway 85.44 20 IAmb IAmb 01 45 55.0
comp=Z,52nm,0.9s
SKAG Skagway 85.44 20 P **P** **01 45 53.2 +0.9**
baz=323,SNR=25
P33M Teslin, Yukon 85.57 19 IAmb IAmb 01 45 54.9
comp=Z,49nm,0.8s
P33M IAMs_20 IAMs_20 02 28 14.8
comp=Z,2µm,18.0s
P33M Teslin, Yukon 85.57 19 P **P** **01 45 53.0 0.0**
baz=325,SNR=40
TGTN Hyland Airport 85.66 16 P **P** **01 45 54.3 +0.8**
baz=329,SNR=21
PMAR Madeira 85.79 305 *e*P **P** **01 45 54.0 -0.7**
PMAR *i* IAmb IAmb 01 46 00.1
comp=Z,316nm,1.5s
P32M Atlin 85.82 20 IAmb IAmb 01 45 56.7
comp=Z,65nm,1.1s
P32M Atlin 85.82 20 P **P** **01 45 54.9 +0.6**
baz=325,SNR=34
FRB Frobisher Bay 86.01 350 LR LR 02 30 55.1
comp=Z,1µm,18.5s,baz=22,slow=40
CAN Canberra 86.13 134 P **P** **01 45 57.5 +1.5**
CAN Canberra 86.13 134 P **P** **01 45 55.5 -0.5**
R31K City Hall, Gus 86.15 21 P **P** **01 45 55.5 -0.3**
baz=323
AUMHS Melrose High S 86.21 134 P **P** **01 45 57.5 +1.1**
BESE Bessie Mountai 86.30 21 IAmb IAmb 01 45 59.3
comp=Z,56nm,1.0s
BESE IAMs_20 IAMs_20 02 24 18.1
comp=Z,2µm,21.0s
S31K Pelican 86.36 22 IAmb IAmb 01 46 00.9
comp=Z,140nm,1.7s
S31K Pelican 86.36 22 P **P** **01 45 56.7 -0.1**
baz=323,SNR=9.3
R32K Eaglecrest 86.65 21 IAmb IAmb 01 46 02.6
comp=Z,72nm,1.1s
R32K Eaglecrest 86.65 21 P **P** **01 45 59.0 +0.7**
baz=324,SNR=20
JIS Juneau Island 86.69 21 P **P** **01 45 59.7 +1.3**
WTLY Watson Lake, Y 86.75 17 P **P** **01 45 58.8 +0.1**
baz=329,SNR=13
Q32M Nakina River 86.76 19 IAmb IAmb 01 46 02.9
comp=Z,63nm,1.3s
Q32M IAMs_20 IAMs_20 02 29 08.3
comp=Z,2µm,20.0s
Q32M Nakina River 86.76 19 P **P** **01 45 59.2 +0.2**
baz=326
R33M Jennings River 86.77 19 IAmb IAmb 01 46 01.3
comp=Z,34nm,0.9s
R33M Jennings River 86.77 19 P **P** **01 45 59.1 0.0**
baz=327
S32K Killisnoo 87.28 21 IAmb IAmb 01 46 05.3
comp=Z,75nm,1.6s
S32K IAMs_20 IAMs_20 02 24 25.2
comp=Z,1µm,20.0s
S32K Killisnoo 87.28 21 P **P** **01 46 01.5 +0.2**
baz=324
BLKN Baker Lake 87.35 1 IAmb IAmb 01 46 03.9
comp=Z,48nm,1.2s
SIT Sitka 87.37 22 P **P** **01 46 03.3 +1.5**
SIT Sitka 87.37 22 IAmb IAmb 01 46 04.5
comp=Z,38nm,1.0s
SIT Sitka 87.37 22 P **P** **01 46 01.5 -0.3**
baz=323,SNR=5.2
YKAW3 Yellowknife Wh 87.45 10 IAmb IAmb 01 46 04.7
comp=Z,36nm,0.9s
YKA Yellowknife Ar 87.52 10 P **P** **01 46 01.6 -0.8**
comp=Z,16nm,0.9s,baz=335,slow=5.5,SNR=119
YKA PP **PP** **01 49 25.4 -1.0**
comp=Z,4.5nm,1.1s,baz=335,slow=8.4,SNR=5.7
YKA PKKPbc **PKKPbc** **02 03 50.0 -2.2**
comp=Z,0.4nm,0.8s,baz=177,slow=7.7,SNR=6.6
YKA LR LR 02 27 54.0
comp=Z,546nm,21.6s,baz=300,slow=38
comp=Z,16nm,0.9s
YKAW1 Yellowknife Wh 87.55 10 IAmb IAmb 01 46 05.1
comp=Z,46nm,1.0s
SUR Sutherland 87.58 231 LR LR 02 23 13.4
comp=Z,5µm,18.0s,baz=66,slow=34
DLBC Dease Lake 87.84 19 P **P** **01 46 03.9 -0.3**
comp=Z,18nm,0.9s,baz=322,slow=5.7,SNR=33
DLBC PP **PP** **01 49 27.6 -1.6**
comp=Z,11nm,1.1s,baz=299,slow=9.4,SNR=6.5
DLBC LR LR 02 27 59.1
comp=Z,1µm,18.5s,baz=300,slow=37
comp=Z,18nm,0.9s
DLBC Dease Lake 87.84 19 P **P** **01 46 05.0 +0.9**
baz=328,SNR=19
KOTAN Kotaneelee Air 87.89 15 P **P** **01 46 03.6 -0.7**
baz=333,SNR=8.1
AUBRN Burnie High Sc 87.94 140 P **P** **01 46 06.0 +1.5**
S34M Telegraph Cree 87.97 19 IAMs_20 IAMs_20 02 30 05.2
comp=Z,2µm,20.0s
S34M Telegraph Cree 87.97 19 P **P** **01 46 05.7 +1.0**
baz=327,SNR=33
T33K Petersburg 88.33 21 P **P** **01 46 07.2 +0.9**
baz=325
DBIC Dimbokro 88.79 277 P **P** **01 46 09.5 +0.1**
comp=Z,12nm,0.9s,baz=103,slow=6.2,SNR=9.1
DBIC LR LR 02 29 19.5
comp=Z,3µm,20.4s,baz=81,slow=38
comp=Z,12nm,0.9s
WRAK Wrangell Islan 88.85 21 IAmb IAmb 01 46 12.8
comp=Z,70nm,1.4s
WRAK Wrangell Islan 88.85 21 P **P** **01 46 09.8 +1.0**
baz=326,SNR=6.8
U33K Whale Pass 88.85 21 IAmb IAmb 01 46 12.8
comp=Z,56nm,1.4s
U33K Whale Pass 88.85 21 P **P** **01 46 09.7 +0.9**
baz=325
T35M Bob Quinn 89.01 20 P **P** **01 46 11.0 +1.4**
baz=328,SNR=13
CRAG Craig 89.38 22 P **P** **01 46 12.2 +0.9**
baz=325
U35K Hyder 89.98 20 IAMs_20 IAMs_20 02 33 06.4
comp=Z,1µm,18.0s
U35K Hyder 89.98 20 P **P** **01 46 15.0 +0.9**
baz=328
V35K Ketchikan 89.98 21 IAMs_20 IAMs_20 02 28 01.6
comp=Z,1µm,20.0s
V35K Ketchikan 89.98 21 P **P** **01 46 14.5 +0.4**
baz=326
KUQ Kuujjuuaa 91.26 347 IAmb IAmb 01 46 21.0
comp=Z,48nm,0.8s
DZM Mont Dzumac 91.34 114 P **P** **01 46 21.6 +0.5**
comp=Z,14nm,0.9s,baz=343,slow=20,SNR=4.8
DZM LR LR 02 28 13.2
comp=Z,336nm,21.9s,baz=81,slow=36
comp=Z,14nm,0.9s
FCC Fort Churchill 92.96 1 IAmb IAmb 01 46 30.5
comp=Z,59nm,1.2s
BBB Bella Bella 93.76 21 P **P** **01 46 31.7 0.0**
comp=Z,3.4nm,0.7s,baz=242,slow=5.6,SNR=3.0
BBB LR LR 02 32 05.1
comp=Z,1µm,19.0s,baz=324,slow=38
comp=Z,3.4nm,0.7s
SCHQ Schefferville 93.99 345 P **P** **01 46 32.1 -0.7**
comp=Z,8.3nm,0.7s,baz=40,slow=4.6,SNR=20
SCHQ LR LR 02 36 58.0
comp=Z,885nm,18.7s,baz=22,slow=41
comp=Z,8.3nm,0.7s
DRLN Deer Lake 96.39 338 IAmb IAmb 01 46 46.9
comp=Z,44nm,1.3s
CBB Campbell River 96.49 21 IAmb IAmb 01 46 48.0
comp=Z,25nm,1.2s
EDM Edmonton 96.54 12 IAmb IAmb 01 46 47.2
comp=Z,19nm,1.1s
FFC Flin Flon 96.62 5 P **P** **01 46 44.2 -0.6**
FFC IAmb IAmb 01 46 47.2
comp=Z,26nm,1.1s
FFC Flin Flon 96.62 5 IAMs_20 IAMs_20 02 35 57.2
comp=Z,1µm,22.0s
FFC Flin Flon 96.62 5 P **P** **01 46 44.2 -0.6**
FFC pmax pmax
comp=Z,26nm,1.1s
MAW Mawson 97.66 189 P Pdif 01 46 49.6 +0.7
comp=Z,4.7nm,0.8s,baz=352,slow=7.4,SNR=3.0
MAW LR LR 02 26 27.7
comp=Z,635nm,19.5s,baz=16,slow=33
comp=Z,4.7nm,0.8s
MAW Mawson 97.66 189 P Pdif 01 46 50.0 +1.2
MAW Mawson 97.66 189 P Pdif 01 46 50.0 +1.1
MAW pmax pmax
comp=Z,7.0nm,1.2s
A04D Lummi Island 98.45 20 IAmb IAmb 01 46 56.9
comp=Z,23nm,1.1s
MSVF Nonsavu 98.87 105 LR LR 02 32 17.9
comp=Z,396nm,18.4s,baz=320,slow=36
NLWA Neilton Lookou 99.28 21 IAMs_20 IAMs_20 02 31 29.6
comp=Z,1µm,21.0s
NEW Newport 100.39 16 IAMs_20 IAMs_20 02 35 50.4
comp=Z,2µm,21.0s
ULM Lac du Bonnet 101.44 2 P **Pdif** **01 47 05.4 -1.0**
comp=Z,3.1nm,0.7s,baz=357,slow=6.7,SNR=6.5
ULM Lac du Bonnet 101.44 2 *e*P **Pdif** **01 47 05.7 -0.7**
D62A Allapoint, All 101.71 344 IAMs_20 IAMs_20 02 35 38.7
comp=Z,2µm,22.0s
COR Corvallis 101.96 22 IAMs_20 IAMs_20 02 34 38.4
comp=Z,2µm,20.0s
EGMT Eagleton 102.19 12 IAMs_20 IAMs_20 02 34 31.7
comp=Z,2µm,21.0s
F64A Sherman 102.67 343 IAMs_20 IAMs_20 02 40 56.0
comp=Z,1µm,20.0s
G65A Princeton 103.08 342 IAMs_20 IAMs_20 02 36 21.8
comp=Z,1µm,21.0s
AGMN Agassiz Nation 103.39 2 IAMs_20 IAMs_20 02 41 01.3
comp=Z,1µm,19.0s
PKME Peaks-Kenny Pk 103.47 343 IAMs_20 IAMs_20 02 41 23.2
comp=Z,1µm,20.0s
PLID Pearl Lake 103.63 17 IAMs_20 IAMs_20 02 40 25.2
comp=Z,1µm,19.0s
MDND Maddock 103.64 5 IAMs_20 IAMs_20 02 40 35.9
comp=Z,1µm,18.0s
EYMN Ely 103.79 359 IAMs_20 IAMs_20 02 40 02.8
comp=Z,1µm,21.0s
LAO LASA Array 104.06 10 IAMs_20 IAMs_20 02 41 29.1
comp=Z,1µm,18.0s
BOZ Bozeman (W) 104.16 14 IAMs_20 IAMs_20 02 39 50.9
comp=Z,1µm,19.0s
DLMT Dillon 104.17 14 IAMs_20 IAMs_20 02 36 31.4
comp=Z,1µm,22.0s
WVL Waterville 104.22 343 IAMs_20 IAMs_20 02 41 53.9
comp=Z,1µm,19.0s
H62A Milan 104.58 344 IAMs_20 IAMs_20 02 42 18.4
comp=Z,1µm,19.0s
E28A Huff 104.82 6 IAMs_20 IAMs_20 02 35 40.0
comp=Z,2µm,22.0s
I63A Otisfield 104.93 344 IAMs_20 IAMs_20 02 37 30.8
comp=Z,1µm,20.0s
M02C Callahan 104.95 23 IAMs_20 IAMs_20 02 36 38.6
comp=Z,1µm,20.0s
LBNH Lisbon 105.07 345 IAMs_20 IAMs_20 02 37 46.5
comp=Z,1µm,22.0s
RLMT Red Lodge 105.07 12 IAMs_20 IAMs_20 02 36 56.2
comp=Z,1µm,19.0s
KHMM Horse Mountain 105.10 24 IAMs_20 IAMs_20 02 35 19.6
comp=Z,1µm,20.0s
I62A Tamworth 105.28 344 IAMs_20 IAMs_20 02 37 47.0
comp=Z,1µm,20.0s
WVOR Wild Horse Val 105.36 20 IAMs_20 IAMs_20 02 37 26.2
comp=Z,1µm,20.0s
KMPM Mount Pierce 105.36 24 IAMs_20 IAMs_20 02 32 35.6
comp=Z,1µm,22.0s
N02D Trinity Center 105.37 23 IAMs_20 IAMs_20 02 36 50.8
comp=Z,1µm,22.0s
HNH Hanover 105.66 345 IAMs_20 IAMs_20 02 38 15.1
comp=Z,1µm,21.0s
KMRM Mail Ridge 105.68 24 IAMs_20 IAMs_20 02 32 47.5
comp=Z,2µm,22.0s
F42A Maple Grove Fa 105.88 357 IAMs_20 IAMs_20 02 44 40.8
comp=Z,1µm,19.0s
HATC Hat Creek Radi 105.93 22 IAMs_20 IAMs_20 02 36 42.6
comp=Z,1µm,20.0s
J61A Chester 106.06 345 IAMs_20 IAMs_20 02 38 26.8
comp=Z,1µm,21.0s
FXWY Fox Creek 106.15 14 IAMs_20 IAMs_20 02 39 49.8
comp=Z,1µm,19.0s
KCPM Cahto Peak 106.20 24 IAMs_20 IAMs_20 02 36 42.8
comp=Z,1µm,22.0s
LOHW Long Hollow 106.27 14 IAMs_20 IAMs_20 02 39 08.8
comp=Z,2µm,22.0s
J59A Piesco 106.38 346 IAMs_20 IAMs_20 02 38 26.0
comp=Z,1µm,21.0s
SNOW Snow King Moun 106.38 14 IAMs_20 IAMs_20 02 40 32.8
comp=Z,1µm,20.0s
SPMN Marine on St. 106.52 0 IAMs_20 IAMs_20 02 41 53.0
comp=Z,1µm,22.0s
GLMI Grayling 106.56 354 IAMs_20 IAMs_20 02 40 55.8
comp=Z,1µm,21.0s
HRV Adam Dziewonsk 106.62 344 IAMs_20 IAMs_20 02 45 26.6
comp=Z,1µm,19.0s
K62A Royalston 106.64 344 IAMs_20 IAMs_20 02 38 36.9
comp=Z,1µm,21.0s
WES Weston 106.68 344 IAMs_20 IAMs_20 02 44 29.1
comp=Z,1µm,20.0s
J57A Williamstown 106.73 347 IAMs_20 IAMs_20 02 39 51.3
comp=Z,1µm,21.0s
TRY Troy 106.90 346 IAMs_20 IAMs_20 02 38 56.8
comp=Z,2µm,22.0s
L61B Northampton 106.94 345 IAMs_20 IAMs_20 02 43 55.0
comp=Z,1µm,20.0s
AHID Auburn Hatcher 106.97 14 IAMs_20 IAMs_20 02 35 31.5
comp=Z,1µm,19.0s
L64A Middleborough 106.98 343 IAMs_20 IAMs_20 02 40 03.1
comp=Z,1µm,22.0s
SUSD Miller 107.08 5 IAMs_20 IAMs_20 02 39 19.7
comp=Z,1µm,20.0s
H43A Windswept, Lux 107.14 356 IAMs_20 IAMs_20 02 43 28.3
comp=Z,1µm,21.0s
I49A Point Hope 107.25 353 IAMs_20 IAMs_20 02 44 43.1
comp=Z,1µm,19.0s
M65A Busby, Falmout 107.28 343 P **PKiKP** **01 51 41.4 0.0**
baz=20
BW06 Boulder Array 107.29 13 IAMs_20 IAMs_20 02 40 44.8
comp=Z,1µm,20.0s
PDAR Pinedale Array 107.29 13 PKiKP **PKiKP** **01 51 40.9 -0.9**
comp=Z,1.2nm,0.6s,baz=62,slow=3.2,SNR=12
PDAR PKKPbc **PKKPbc** **02 02 56.0 -2.0**
comp=Z,0.4nm,0.5s,baz=142,slow=5.2,SNR=6.6
I45A Fountain 107.47 355 IAMs_20 IAMs_20 02 42 48.1
comp=Z,1µm,20.0s
K57A Scipio Center 107.48 348 IAMs_20 IAMs_20 02 40 14.2
comp=Z,1µm,21.0s
L59A Walton 107.71 346 IAMs_20 IAMs_20 02 39 05.3
comp=Z,1µm,22.0s
I37A Lemond, Waseca 107.73 1 IAMs_20 IAMs_20 02 39 54.9
comp=Z,1µm,20.0s
I42A Draeger Farm, 107.78 357 IAMs_20 IAMs_20 02 43 57.1
comp=Z,1µm,19.0s
ELK Elko 107.88 18 PKiKP **PKiKP** **01 51 43.4 +0.5**
comp=Z,0.2nm,0.3s,baz=308,slow=3.6,SNR=3.1
ELK Elko 107.88 18 IAMs_20 IAMs_20 02 39 27.8
comp=Z,1µm,19.0s
BINY Binghamton 107.89 347 IAMs_20 IAMs_20 02 40 00.1
comp=Z,1µm,20.0s
ECSD EROS Data Cent 107.92 3 IAMs_20 IAMs_20 02 40 30.1
comp=Z,1µm,21.0s
K22A Casper 107.95 11 IAMs_20 IAMs_20 02 46 31.2
comp=Z,1µm,20.0s
HWUT Hardware Ranch 107.98 15 IAMs_20 IAMs_20 02 37 24.1
comp=Z,2µm,22.0s
J47A Sunmer 108.15 354 IAMs_20 IAMs_20 02 42 01.9
comp=Z,1µm,20.0s
L56A Greenwood 108.25 348 IAMs_20 IAMs_20 02 41 01.5
comp=Z,1µm,22.0s
PAL Palisades 108.60 345 IAMs_20 IAMs_20 02 41 37.8
comp=Z,1µm,20.0s
ERPA Erie 108.67 350 IAMs_20 IAMs_20 02 43 14.6
comp=Z,1µm,20.0s
K30B Basset 108.78 5 IAMs_20 IAMs_20 02 39 46.9
comp=Z,1µm,20.0s
K43A Burlington 108.93 357 IAMs_20 IAMs_20 02 43 36.7
comp=Z,1µm,20.0s
M57A Sunshine Farm, 108.94 348 IAMs_20 IAMs_20 02 42 52.9

comp=Z,1μm,21.0s
AAM Ann Arbor 108.96 353 IAMs_20 IAMs_20 02 42 15.4
comp=Z,1μm,20.0s
NVAR Mina Array Bea 109.12 21 PKiKP **PKiKP 01 51 45.1 -0.1**
comp=Z,1.2nm,0.7s,baz=304,slow=0.7,SNR=5.8
NVAR PP **PP 01 52 12.7 +0.4**
comp=Z,2.0nm,1.0s,baz=313,slow=4.9,SNR=4.2
NVAR PKKPbc **PKKPbc 02 02 50.5 -1.6**
comp=Z,0.5nm,0.8s,baz=145,slow=5.4,SNR=3.6
NVAR PKKPab **PKKPdf 02 03 03.6 -2.6**
comp=Z,0.9nm,0.8s,baz=156,slow=6.0,SNR=6.1
N58A Sunbury 109.35 347 IAMs_20 IAMs_20 02 46 15.6
comp=Z,1μm,20.0s
M52A Chesterland 109.43 351 IAMs_20 IAMs_20 02 43 56.8
comp=Z,2μm,22.0s
SSPA Standing Stone 109.76 348 IAMs_20 IAMs_20 02 43 26.6
comp=Z,1μm,20.0s
M50A Fremont 109.78 352 IAMs_20 IAMs_20 02 42 19.0
comp=Z,1μm,20.0s
P61A Hammonton 110.07 345 IAMs_20 IAMs_20 02 46 04.7
comp=Z,1μm,18.0s
N53A Lisbon 110.08 350 IAMs_20 IAMs_20 02 46 53.9
comp=Z,1μm,20.0s
O20A White River Ci 110.09 13 IAMs_20 IAMs_20 02 47 25.8
comp=Z,1μm,20.0s
N51A Ashland 110.18 352 IAMs_20 IAMs_20 02 45 57.5
comp=Z,1μm,21.0s
N49A Columbus Grove 110.38 353 IAMs_20 IAMs_20 02 42 57.0
comp=Z,1μm,21.0s
N47A Urbana 110.57 354 IAMs_20 IAMs_20 02 41 24.9
comp=Z,1μm,21.0s
O54A Avella 110.62 350 IAMs_20 IAMs_20 02 44 46.3
comp=Z,1μm,20.0s
O52A Adamsville 110.90 351 IAMs_20 IAMs_20 02 44 27.6
comp=Z,1μm,20.0s
ACSO Alum Creek Sta 110.93 352 IAMs_20 IAMs_20 02 46 09.5
comp=Z,1μm,20.0s
N38A Joes South For 110.95 0 IAMs_20 IAMs_20 02 39 00.2
comp=Z,1μm,21.0s
HDIL Hopedale 111.12 357 IAMs_20 IAMs_20 02 45 44.6
comp=Z,1μm,21.0s
TPNV Topopah Spring 111.12 20 IAMs_20 IAMs_20 02 41 08.7
comp=Z,1μm,20.0s
O48B Farmland 111.14 354 IAMs_20 IAMs_20 02 40 38.0
comp=Z,2μm,22.0s
SFIN Lafayette 111.17 355 IAMs_20 IAMs_20 02 45 32.0
comp=Z,1μm,19.0s
VES Vestal, Richgr 111.22 23 IAMs_20 IAMs_20 02 39 49.6
comp=Z,1μm,21.0s
FURC Furnace Creek, 111.38 21 IAMs_20 IAMs_20 02 46 07.5
comp=Z,885nm,18.0s
Q24A Divide 111.77 10 IAMs_20 IAMs_20 02 47 19.3
comp=Z,1μm,20.0s
P46A Rosedale 111.94 355 IAMs_20 IAMs_20 02 49 45.2
comp=Z,1μm,20.0s
P43A Skaggs, Pawnee 112.04 357 IAMs_20 IAMs_20 02 44 56.0
comp=Z,1μm,19.0s
Q52A Bidwell 112.09 351 IAMs_20 IAMs_20 02 45 06.2
comp=Z,1μm,20.0s
P38A Dawn 112.11 1 IAMs_20 IAMs_20 02 45 17.0
comp=Z,1μm,21.0s
NVL N'lazarevskaya 112.12 200 *i* PKiKP **PKiKP 01 51 51.7 +2.3**
NVL *e* 01 52 35.8
NVL *e*PPP PPP 01 54 57.4
NVL *e* 01 59 03.9
NVL *e*SS SS 02 08 15.8 +3.7
NVL *e*SSS SSS 02 12 26.1
NVL pmax pmax
comp=Z,18nm,0.9s
NVL MLR MLR
comp=Z,868nm,16.0s
Q51A Peebles 112.16 352 IAMs_20 IAMs_20 02 45 10.7
comp=Z,1μm,21.0s
S61A Accomac 112.17 346 IAMs_20 IAMs_20 02 45 15.4
comp=Z,1μm,19.0s
R55A Marlinton 112.44 349 IAMs_20 IAMs_20 02 43 13.4
comp=Z,1μm,21.0s
KSU1 Kansas State U 112.54 3 IAMs_20 IAMs_20 02 43 01.3
comp=Z,1μm,21.0s
CBKS Cedar Bluff 112.60 6 IAMs_20 IAMs_20 02 49 38.1
comp=Z,1μm,20.0s
S22A 4UR Ranch, Cre 112.67 12 IAMs_20 IAMs_20 02 45 18.1
comp=Z,1μm,21.0s
S57A Dark Hollow, R 112.75 348 IAMs_20 IAMs_20 02 42 41.6
comp=Z,1μm,21.0s
R50A Paris 113.01 353 IAMs_20 IAMs_20 02 47 02.5
comp=Z,1μm,20.0s
MWC Mount Wilson 113.04 23 IAMs_20 IAMs_20 02 43 14.7
comp=Z,1μm,19.0s
PASC Pasadena Art C 113.04 23 IAMs_20 IAMs_20 02 43 02.9
comp=Z,1μm,20.0s
R32A Long Quarter, 113.08 5 IAMs_20 IAMs_20 02 40 58.6
comp=Z,1μm,22.0s
R49A Shelbyville 113.09 354 IAMs_20 IAMs_20 02 47 04.6
comp=Z,1μm,19.0s
T59A Double "B" Far 113.25 347 IAMs_20 IAMs_20 02 42 52.9
comp=Z,1μm,20.0s
R40A Maddies Statio 113.45 360 IAMs_20 IAMs_20 02 47 50.3
comp=Z,1μm,20.0s
BLA Blacksburg 113.53 349 IAMs_20 IAMs_20 02 48 58.4
comp=Z,1μm,20.0s
S51A Beattyville 113.56 352 IAMs_20 IAMs_20 02 46 07.1
comp=Z,1μm,20.0s
T25A Trinidad 113.67 10 IAMs_20 IAMs_20 02 46 55.6
comp=Z,1μm,20.0s
PFO Pinyon Flats O 114.13 22 IAMs_20 IAMs_20 02 44 15.6
comp=Z,1μm,18.0s
U56A King 114.37 349 IAMs_20 IAMs_20 02 47 26.6
comp=Z,1μm,19.0s
U54A Nelsons Funny 114.42 350 IAMs_20 IAMs_20 02 49 09.0
comp=Z,1μm,19.0s
CPE Camp Elliot 114.58 23 IAMs_20 IAMs_20 02 38 43.5
comp=Z,1μm,22.0s
TZTN Tazewell 114.64 352 IAMs_20 IAMs_20 02 45 18.6
comp=Z,1μm,21.0s
V58A Windy Hill, Pi 114.69 348 IAMs_20 IAMs_20 02 47 41.0
comp=Z,1μm,20.0s
T42A Van Buren 114.69 359 IAMs_20 IAMs_20 02 45 56.8
comp=Z,1μm,19.0s
U49A Red Boiling Sp 114.91 354 IAMs_20 IAMs_20 02 47 11.8
comp=Z,1μm,20.0s
V55A Taylorsville 114.99 350 IAMs_20 IAMs_20 02 44 15.0
comp=Z,1μm,20.0s
GLA Glamis 115.16 21 IAMs_20 IAMs_20 02 41 33.8
comp=Z,1μm,19.0s
ANMO Albuquerque 115.45 13 PKP **PKiKP 01 51 57.3 -0.1**
ANMO PP **PP 01 52 56.5 -0.9**
comp=Z,2.0nm,0.9s,baz=58,slow=2.4,SNR=6.6
comp=Z,2.2nm,1.0s,baz=340,slow=8.7,SNR=5.6
ANMO Albuquerque 115.45 13 IAMs_20 IAMs_20 02 49 47.9
comp=Z,1μm,22.0s
ANMO Albuquerque 115.45 13 IAMs_20 IAMs_20 02 49 47.6
comp=Z,1μm,22.0s
ANMO Albuquerque 115.45 13 IAMs_20 IAMs_20 02 49 48.0
comp=Z,1μm,22.0s
ANMO Albuquerque 115.45 13⇑ *i*PKiKP **PKPdf 01 51 57.5 +0.1**
ANMO pmax pmax
comp=Z,6.0nm,2.5s
KMSC Kings Mountain 115.70 350 IAMs_20 IAMs_20 02 47 47.9
comp=Z,1μm,18.0s
TUL3 Leonard 115.76 3 IAMs_20 IAMs_20 02 46 13.5
comp=Z,1μm,20.0s
W50A Signal Mountai 116.16 353 IAMs_20 IAMs_20 02 48 35.0
comp=Z,1μm,20.0s
WMOK Wichita Mounta 116.73 6 IAMs_20 IAMs_20 02 48 19.3
comp=Z,1μm,20.0s
X51A Calhoun 116.74 353 IAMs_20 IAMs_20 02 48 58.3
comp=Z,1μm,21.0s
TUC Tucson 117.01 17 PKiKP **PKiKP 01 52 00.9 +0.6**
X48A Hartselle 117.06 355 IAMs_20 IAMs_20 02 49 39.8
comp=Z,1μm,21.0s
Y49A Blount Mountai 117.60 354 IAMs_20 IAMs_20 02 49 42.0
comp=Z,1μm,21.0s
GOGA Godfrey 117.71 351 IAMs_20 IAMs_20 02 45 48.0
comp=Z,1μm,21.0s
Z35A Perchaven, San 118.25 4 IAMs_20 IAMs_20 02 52 59.4
comp=Z,1μm,20.0s
Z47A Carrollton 118.38 356 IAMs_20 IAMs_20 02 48 19.8
comp=Z,1μm,20.0s
QSPA South Pole Qui 118.41 180 PKP **PKPdf 01 52 00.3 -1.4**
comp=Z,1.6nm,0.7s,baz=310,slow=1.8,SNR=5.4
QSPA PKKPbc **PKKPab 02 02 19.6 -0.4**
comp=Z,2.7nm,0.8s,baz=144,slow=1.1,SNR=12
154A Montrose 118.45 351 IAMs_20 IAMs_20 02 47 22.5
comp=Z,1μm,22.0s
EPT El Paso 118.52 13 IAMs_20 IAMs_20 02 46 44.2
comp=Z,1μm,20.0s
MNTX Cornudas Mount 118.81 12 IAMs_20 IAMs_20 02 46 44.9
comp=Z,1μm,20.0s
143A Socs Landing, 119.02 359 IAMs_20 IAMs_20 02 48 01.6
comp=Z,1μm,22.0s
250A Grady 119.45 354 IAMs_20 IAMs_20 02 52 59.0
comp=Z,1μm,19.0s
VBMS Vicksburg 119.48 358 IAMs_20 IAMs_20 02 48 55.8
comp=Z,1μm,21.0s
TIGA Tifton 119.67 351 IAMs_20 IAMs_20 02 51 08.9
comp=Z,1μm,20.0s
352A Blakely 119.80 352 IAMs_20 IAMs_20 02 46 59.3
comp=Z,989nm,20.0s
BRAL Brewton 120.32 354 IAMs_20 IAMs_20 02 48 34.1
comp=Z,1μm,22.0s
451A Vernon 120.74 353 IAMs_20 IAMs_20 02 47 20.3
comp=Z,1μm,21.0s
JCT Junction City 120.85 7 IAMs_20 IAMs_20 02 47 11.4
comp=Z,1μm,22.0s
TXAR Lajitas Array 121.43 11 PKP **PKPdf 01 52 08.1 -0.8**
comp=Z,9.8nm,0.9s,baz=22,slow=0.5,SNR=56
TXAR PKKPbc **PKKPbc 02 02 08.5 -0.9**
comp=Z,0.9nm,0.8s,baz=172,slow=7.4,SNR=10
TXAR Lajitas Array 121.43 11 PKIKP **PKPdf 01 52 08.2 -0.7**
RCBR Riachuelo 121.87 282 IAMs_20 IAMs_20 02 45 40.5
comp=Z,1μm,20.0s
DWPF Disney Wildern 122.59 348 IAMs_20 IAMs_20 02 52 36.3
comp=Z,1μm,20.0s
060A Indiantown 123.44 347 IAMs_20 IAMs_20 02 53 15.7
comp=Z,1μm,20.0s
NBMA Muriti-CE 125.09 282 *e*P **PKiKP 01 52 17.1 +0.7**
SMRT St. Maarten 125.52 325 IAMs_20 IAMs_20 02 43 13.0
comp=Z,1μm,22.0s
GDSD La Dsirade Is 125.91 322 IAMs_20 IAMs_20 02 46 59.4
comp=Z,964nm,21.0s
SEUS St. Eustatius 125.94 324 IAMs_20 IAMs_20 02 49 26.2
comp=Z,840nm,20.0s
GDHS Morne Mazeau, 126.32 322 IAMs_20 IAMs_20 02 46 12.9
comp=Z,994nm,21.0s
MAGL Barre de l'ile 126.32 322 IAMs_20 IAMs_20 02 47 52.4
comp=Z,1μm,21.0s
MTDJ Mount Denham 131.21 341 IAMs_20 IAMs_20 02 50 22.7
comp=Z,844nm,20.0s
TEIG Tepich 131.27 355 IAMs_20 IAMs_20 02 53 38.2
comp=Z,1μm,22.0s
TAOE Nuku Hiva Isla 131.28 76 *e*SS SS 02 12 18.1 -0.8
comp=Z,441nm,31.2s
TAOE *e*LR LR 02 34 08.6
comp=Z,2μm,25.0s
BDFB Brasilia 136.94 278 PKP **PKPdf 01 52 39.3 +0.8**
comp=Z,5.7nm,1.0s,baz=70,slow=7.3,SNR=3.9
SDV Santo Domingo 137.10 327 PKhKP PKPpre 01 52 30.1
comp=Z,4.5nm,0.8s,baz=5.0,slow=8.8,SNR=5.4
SDV PKP **PKPdf 01 52 39.2 +0.2**
comp=Z,8.8nm,1.0s,baz=67,slow=4.0,SNR=6.4
SDV SKPbc **SKPbc 01 56 10.7 -1.3**
comp=Z,4.4nm,0.8s,baz=0.0,slow=3.0,SNR=4.3
SDV Santo Domingo 137.10 327 IAMs_20 IAMs_20 02 53 45.1
comp=Z,998nm,21.0s
TGUH Tegucigalpa,Un 137.27 352 IAMs_20 IAMs_20 03 01 06.7
comp=Z,819nm,22.0s
ROSC El Rosal 142.36 329 PKP **PKPdf 01 52 46.0 -2.9**
comp=Z,9.1nm,0.5s,baz=354,slow=4.3,SNR=8.8
ROSC El Rosal 142.36 329 PKIKP **PKPdf 01 52 46.0 -2.9**
ITAB Concordia 144.31 262 PKPbc 01 52 50.4 +0.7
EFI East Falkland 145.44 219 PKPbc **PKPdf 01 52 52.6 +0.1**
EFI East Falkland 145.44 219 PKIKP **PKPdf 01 52 52.6 +0.1**
AQDB Aquidauana 145.55 275 PKPdf **PKPdf 01 52 53.7 0.0**
VILB Vilhena 146.06 291 **PKPab 01 52 56.0 -0.2**
PTLB Pontes e Lacer 146.43 286 **PKPbc 01 52 56.9 +0.3**
OTAV Otavalo 148.27 332 IAMs_20 IAMs_20 03 00 57.7
comp=Z,713nm,21.0s
OTAV Otavalo 148.27 332 PKIKP **PKPdf 01 52 59.6 +0.5**
CPUP Villa Florida 148.66 266 PKPbc **PKPbc 01 53 01.1 -1.4**
comp=Z,17nm,0.8s,baz=76,slow=2.7,SNR=40
CPUP Villa Florida 148.66 266 **PKPbc 01 53 01.5 -1.0**
LPAZ La Paz 154.31 293 PKP **PKPdf 01 53 07.8 -0.6**
comp=Z,5.4nm,1.0s,baz=79,slow=5.2,SNR=3.8
LPAZ PKPbc **PKiKP 01 53 16.9 +0.3**
comp=Z,5.4nm,1.0s,baz=52,slow=3.3,SNR=10
ATAH Atahualpa 154.76 325 PKP **PKPdf 01 53 08.4 -0.4**
comp=Z,2.4nm,1.0s,baz=4.3,slow=6.0,SNR=4.0
ATAH PKPbc **PKiKP 01 53 18.1 +0.7**
comp=Z,1.9nm,0.6s,baz=117,slow=2.3,SNR=4.0
ATAH PKPab **PKPab 01 53 32.8 +0.6**
comp=Z,12nm,0.9s,baz=22,slow=5.7,SNR=6.2
NNA Nana 157.85 315 PKPab **PKPab 01 53 45.6 +0.6**
comp=Z,18nm,0.9s,baz=12,slow=2.3,SNR=7.1
PLCA Paso Flores 158.25 230 PKPab **PKPab 01 53 45.9 -0.4**
comp=Z,1.5nm,0.8s,baz=127,slow=5.6,SNR=3.2

*IDC **20** 01:36:08.9±0.4,34.˚11S×179.˚06W,h0km,mb4.9/22, mbtmp4.9/25,ML5.4/3,MS4.4/4, Error ellipse: s-maj=14.3km s-min=13.4km az=117.0*
*WEL **20** 01:36:08.3±0.7,34.˚5S×17.˚9W±1.˚1,h12km,M5.4/22, mB5.8/13,ML5.3/21,MLv5.4/22,Mw(mB)5.3/13, Error ellipse: s-maj=15.4km s-min=3.6km az=114.0,confirmed*
*BJI **20** 01:36:09.3,34.˚52S×179.˚34W,h10km,mb5.3/10,Ms5.4/3, Ms7 5.1/3*
*NEIC **20** 01:36:10.9,34.˚41S×177.˚74W,h24km,Moment Tensor Solution. Duration: 1s6 Moment tensor: Scale 10^16^Nm; Mrr=-1.93; Mθθ0.65; Mφφ 1.29; Mrθ -0.66; Mθφ 0.48; Mφr-3.45; Fault plane solution: M0 3.94000×10^16^ NP1: φs212.63000°,δ13.71000°,λ-70.72000°. NP2:φs12.83000°, δ77.08000°,λ-94.60000°. Principal axes: T 3.6771, Plg32.0000°, Azm107.0000°; N 0.4760, Plg4.0000°, Azm14.0000°; P -4.1530, Plg58.0000°, Azm277.0000°;*
*MOS **20** 01:36:10.9±0.9,34.˚02S×179.˚15W,h16km,mb5.4/14 Error ellipse: s-maj=11.8km s-min=10.3km az=93.6*
*NEIC **20** 01:36:10.8±2.3,34.˚21S±0.˚07×179.˚1W±0.˚1,h10km±1km, mb5.4/59,Mww5.0/10,Error ellipse: s-maj=18.4km s-min=11.2km az=111.0*
*NEIC **20** 01:36:10.9,34.˚21S×179.˚07W,h24km*
ISC 20 01:36:09.8±0.3,34.˚28S±0.˚04×178.˚86W±0.˚05,h10km, n413,σ1§70/438,mb5.3/97,MS4.5/4,25C-17D,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.00**	**214**				**Pn**	**01 37 10.5**	**-0.7**
MXZ	**Matakaoa Point**	**4.00**	**214**	P			**Pn**	**01 37 10.5**	**-0.7**
MXZ				S			**Sn**	**01 37 58.6**	**+0.4**
MXZ				T			T	01 41 21.0	
WMGZ	**Waiomatatini S**	**4.17**	**211**	P			**Pn**	**01 37 13.2**	**-0.3**
WMGZ				S			**Sn**	**01 38 01.8**	**-0.4**
PKGZ	**Pakihiroa**	**4.35**	**214**	P			**Pn**	**01 37 15.8**	**-0.2**
PKGZ				S			**Sn**	**01 38 07.4**	**+0.5**
HAZ	**Te Kaha**	**4.41**	**217**	P			**Pn**	**01 37 16.7**	**-0.1**
HAZ				S			**Sn**	**01 38 11.0**	**+2.9**
PUZ	**Puketiti**	**4.45**	**211**	P			**Pn**	**01 37 16.3**	**-1.0**
PUZ				S			**Sn**	**01 38 09.3**	**+0.1**
WIZ	**White Island**	**4.56**	**224**	P			**Pn**	**01 37 19.4**	**+0.6**
RUGZ	**Raukumara Rang**	**4.62**	**216**	P			**Pn**	**01 37 19.3**	**-0.6**
RUGZ				S			**Sn**	**01 38 13.5**	**-0.2**
TWGZ	**Tauwhareparae**	**4.65**	**212**	P			**Pn**	**01 37 19.7**	**-0.5**
TWGZ				S			**Sn**	**01 38 14.8**	**+0.5**
CNGZ	**Carnagh Statio**	**4.82**	**209**	P			**Pn**	**01 37 22.0**	**-0.4**
CNGZ				S			**Sn**	**01 38 17.1**	**-1.1**
WHRZ	**Whale Island**	**4.91**	**222**	P			**Pn**	**01 37 25.2**	**+1.5**
TKGZ	**Te Karaka**	**4.93**	**212**	P			**Pn**	**01 37 23.1**	**-0.8**
MYRZ	**Mayor Island**	**4.98**	**232**	P			**Pn**	**01 37 26.1**	**+1.4**
MWZ	**Matawai**	**4.99**	**215**	P			**Pn**	**01 37 23.5**	**-1.3**
GRZ	**Great Barrier**	**5.04**	**245**	P			**Pn**	**01 37 27.6**	**+2.1**
GLKZ	**Green Lake**	**5.07**	**9**	P			**Pn**	**01 37 24.3**	**-1.6**
GLKZ				S			**Sn**	**01 38 20.8**	**-3.6**
RAO	**Raoul Island**	**5.08**	**9**	Pn			**Pn**	**01 37 24.7**	**-1.3**
RAO	142nm,0.3s,baz=270,slow=17,SNR=4.7			Sn			**Sn**	**01 38 19.9**	**-4.8**
RAO	146nm,0.3s,baz=242,slow=23,SNR=5.0 **Raoul Island**	**5.08**	**9**	Pn			**Pn**	**01 37 25.0**	**-1.0**
URZ	233nm,0.3s **Urewera**	**5.13**	**218**	Pn			**Pn**	**01 37 26.2**	**-0.5**
URZ	61nm,0.3s,baz=27,slow=8.1,SNR=134			Sn			**Sn**	**01 38 25.6**	**-0.5**
URZ	74nm,0.3s,baz=116,slow=23,SNR=10 **Urewera**	**5.13**	**218**	P			**Pn**	**01 37 25.5**	**-1.3**
URZ	429nm,0.7s			S			**Sn**	**01 38 24.3**	**-1.8**
OPRZ	**Ohinepanea**	**5.14**	**225**	P			**Pn**	**01 37 27.7**	**+0.8**
MARZ	**Manawahe**	**5.17**	**223**	P			**Pn**	**01 37 27.8**	**+0.5**
RAGZ	**Rawiri**	**5.17**	**214**	P			**Pn**	**01 37 26.5**	**-0.9**
RAGZ				S			**Sn**	**01 38 26.2**	**-0.9**
RIGZ	**Rimuhau**	**5.19**	**211**	P			**Pn**	**01 37 26.4**	**-1.1**
RIGZ				S			**Sn**	**01 38 26.1**	**-1.3**
TGRZ	**Tauranga**	**5.24**	**228**	P			**Pn**	**01 37 29.5**	**+1.2**
PRGZ	**Paritu Road**	**5.32**	**208**	P			**Pn**	**01 37 28.1**	**-1.3**
PRGZ				S			**Sn**	**01 38 26.0**	**-4.8**
MKRZ	**Makatiti**	**5.39**	**223**	P			**Pn**	**01 37 32.7**	**+2.3**
OMRZ	**Omania**	**5.42**	**224**	P			**Pn**	**01 37 31.4**	**+0.5**
TARZ	**Mount Tarawera**	**5.44**	**222**	P			**Pn**	**01 37 32.3**	**+1.2**
TARZ				S			**Sn**	**01 38 35.7**	**+1.9**
KARZ	**Kaharoa**	**5.44**	**225**	P			**Pn**	**01 37 32.2**	**+1.2**
RTZ	**Ruatahuna**	**5.47**	**217**				**Pn**	**01 37 30.4**	**-1.1**
RTZ	**Ruatahuna**	**5.47**	**217**	P			**Pn**	**01 37 30.8**	**-0.7**
RTZ				S			**Sn**	**01 38 30.5**	**-4.1**
MUGZ	**Murupara**	**5.47**	**219**	P			**Pn**	**01 37 30.9**	**-0.6**
MUGZ				S			**Sn**	**01 38 32.5**	**-2.0**
KNZ	**Kokohu**	**5.49**	**209**	P			**Pn**	**01 37 29.7**	**-2.0**
WIAZ	**Waiheke Island**	**5.50**	**241**	P			**Pn**	**01 37 34.4**	**+2.6**
RRRZ	**Republican Roa**	**5.51**	**221**	P			**Pn**	**01 37 32.5**	**+0.5**
RRRZ				S			**Sn**	**01 38 35.9**	**+0.6**
KMRZ	**Kaimai**	**5.51**	**228**	P			**Pn**	**01 37 33.1**	**+1.1**
MHGZ	**Mahia Peninsul**	**5.51**	**207**	P			**Pn**	**01 37 31.2**	**-0.8**
MHGZ				S			**Sn**	**01 38 34.6**	**-0.8**
NGRZ	**Ngongotaha**	**5.53**	**225**	P			**Pn**	**01 37 33.9**	**+1.6**
HLRZ	**Highlands Stat**	**5.54**	**223**	P			**Pn**	**01 37 33.3**	**+0.9**
MKAZ	**Moumakai**	**5.62**	**238**	P			**Pn**	**01 37 35.6**	**+2.2**
HSRZ	**Hossack Road**	**5.64**	**223**	P			**Pn**	**01 37 35.3**	**+1.6**
ABAZ	**Army Bay**	**5.64**	**244**	P			**Pn**	**01 37 36.5**	**+2.8**
RAHZ	**Arahi**	**5.66**	**214**	P			**Pn**	**01 37 34.0**	**0.0**
MBAZ	**Motutapu North**	**5.66**	**242**	P			**Pn**	**01 37 36.8**	**+2.8**
HRRZ	**Handcock Road**	**5.67**	**222**	P			**Pn**	**01 37 35.1**	**+0.9**
PRRZ	**Plateau Road**	**5.69**	**221**	P			**Pn**	**01 37 34.9**	**+0.4**
ETAZ	**East Tamaki Re**	**5.72**	**240**	P			Pb	01 37 41.8	-7.8
TOZ	**Tahuroa Road**	**5.72**	**231**	P			**Pn**	**01 37 36.4**	**+1.6**
WHHZ	**Waihua**	**5.72**	**212**	P			**Pn**	**01 37 34.7**	**-0.2**
WHHZ				S			**Sn**	**01 38 38.2**	**-2.5**
MTHZ	**Maungataniwha**	**5.73**	**216**	P			**Pn**	**01 37 34.7**	**-0.2**
WCZ	**Waipu Caves**	**5.81**	**251**	P			**Pn**	**01 37 39.3**	**+3.2**
MRHZ	**Matea Rd**	**5.92**	**219**	P			**Pn**	**01 37 37.2**	**-0.5**
MRHZ				S			**Sn**	**01 38 44.3**	**-1.3**
NMHZ	**Naumai**	**5.94**	**215**	P			**Pn**	**01 37 37.9**	**+0.1**
WTAZ	**Waiatarua**	**5.97**	**242**	P			**Pn**	**01 37 40.9**	**+2.7**
AWAZ	**Awhitu Peninsu**	**5.97**	**240**	P			**Pn**	**01 37 41.8**	**+3.5**
ARHZ	**Aropaoanui**	**5.98**	**213**	P			**Pn**	**01 37 36.9**	**-1.6**
ARHZ				S			**Sn**	**01 38 45.9**	**-1.1**
KUTZ	**Kaahu Road**	**6.00**	**224**	P			**Pn**	**01 37 39.5**	**+0.8**
WHTZ	**Whakaora**	**6.05**	**222**	P			**Pn**	**01 37 40.2**	**+0.8**
TLZ	**Tolley Road**	**6.06**	**227**	P			**Pn**	**01 37 40.4**	**+0.8**
BKZ	**Black Stump Fm**	**6.14**	**216**	P			**Pn**	**01 37 38.8**	**-1.8**
BKZ				S			**Sn**	**01 38 46.9**	**-4.0**
WATZ	**Wairara**	**6.20**	**223**	P			**Pn**	**01 37 41.7**	**+0.2**
MCHZ	**McNeill Hill**	**6.26**	**213**	P			**Pn**	**01 37 40.6**	**-1.7**
MCHZ				S			**Sn**	**01 38 53.3**	**-0.7**
CKHZ	**Cape Kidnapper**	**6.28**	**210**	P			**Pn**	**01 37 39.6**	**-2.9**
RATZ	**Rangitukua**	**6.29**	**222**	P			**Pn**	**01 37 43.1**	**+0.3**
RITZ	**Rihia Road**	**6.32**	**221**	P			**Pn**	**01 37 43.1**	**-0.1**
RITZ				S			**Sn**	**01 38 54.0**	**-1.5**
KWHZ	**Kaweka Forest**	**6.38**	**215**	P			**Pn**	**01 37 43.2**	**-0.7**
KATZ	**Kakaramea**	**6.41**	**221**	P			**Pn**	**01 37 45.4**	**+0.9**
KAHZ	**Kahuranaki**	**6.47**	**211**	P			**Pn**	**01 37 42.1**	**-3.1**
TMVZ	**Te Maari**	**6.51**	**221**	P			**Pn**	**01 37 44.7**	**-1.1**
NTVZ	**North Tongarir**	**6.51**	**221**	P			**Pn**	**01 37 45.0**	**-0.8**
KRHZ	**Kereru**	**6.57**	**214**	P			**Pn**	**01 37 45.0**	**-1.6**
KRHZ				S			**Sn**	**01 38 58.6**	**-3.0**
HIZ	**Hauiti**	**6.60**	**228**	P			**Pn**	**01 37 50.0**	**+3.1**
PXZ	**Pawanui**	**6.68**	**209**	S			**Sn**	**01 38 59.2**	**-4.9**
MOVZ	**Moawhango**	**6.70**	**219**	P			**Pn**	**01 37 44.6**	**-3.7**
TSZ	**Takapari Road**	**7.09**	**214**	P			**Pn**	**01 37 51.3**	**-2.4**
CTZ	**Chatham Island**	**9.60**	**170**	Pn			Pn	01 38 23.5	-4.6
RPZ	**Rata Peaks**	**12.25**	**217**	Pn			**Pn**	**01 39 01.9**	**-2.4**
RPZ	8.8nm,0.3s,baz=319,slow=0.2,SNR=13			Sn			Sn	01 41 06.4	-15
MSVF	4.7nm,0.3s,baz=4.9,slow=23,SNR=6.8 **Nonsavu**	**16.71**	**350**	Pn			**Pn**	**01 40 01.6**	**-2.6**
MSVF	1.1nm,0.3s,baz=124,slow=13,SNR=8.8			LR			LR	01 45 15.2	
MSVF	comp=Z,2μm,19.2s,baz=177,slow=33 31nm,0.9s **Nonsavu**	**16.71**	**350**⇑	*e*P			**Pn**	**01 40 02.4**	**-1.8**
MSVF	comp=Z,53nm,1.0s			pmax			pmax		
ONTNC	**Ouen Toro**	**17.57**	**309**				**P**	**01 40 14.5**	**-1.4**
DZM	**Mont Dzumac**	**17.74**	**309**	P			**P**	**01 40 20.4**	**+2.4**
AFI	comp=Z,40nm,0.9s,baz=125,slow=13,SNR=14 **Afiamalu**	**21.27**	**19**	P			**P**	**01 40 56.0**	**-0.5**
AFI	comp=Z,41nm,0.7s,baz=214,slow=17,SNR=8.5			S			**S**	**01 44 47.2**	**-5.8**
RAR	comp=Z,14nm,0.6s,baz=162,slow=19,SNR=2.4 41nm,0.7s **Rarotonga**	**21.28**	**57**	P			**P**	**01 40 58.4**	**+1.9**
RAR	comp=Z,28nm,0.9s,baz=243,slow=9.0,SNR=2.8			LR			LR	01 50 00.3	
RAR	comp=Z,375nm,18.1s,baz=270,slow=39 comp=Z,28nm,0.9s **Rarotonga**	**21.28**	**57**	IAmb			IAmb	01 41 01.3	
SANVU	comp=Z,391nm,1.9s **Saraoutou**	**22.57**	**323**				**P**	**01 41 08.9**	**-1.4**
SANVU				IAmb			IAmb	01 41 24.2	
ARMA	comp=Z,160nm,0.8s **Armidale**	**25.18**	**271**	P			**P**	**01 41 38.7**	**+3.0**
CNB	comp=Z,55nm,1.4s **Canberra Magne**	**26.06**	**259**	P			**P**	**01 41 46.2**	**+2.6**
YNG	comp=Z,38nm,1.9s **Young**	**26.99**	**261**	P			**P**	**01 41 54.2**	**+2.3**
EIDS	comp=Z,33nm,1.7s **Eidsvold**	**27.46**	**281**	P			**P**	**01 41 58.0**	**+1.8**
EIDS	comp=Z,32nm,1.4s								
EIDS	**Eidsvold**	**27.46**	**281**				**P**	**01 41 56.3**	**+0.1**
EIDS	comp=Z,62nm,1.2s			IAmb			IAmb	01 41 58.7	
TAU	**Tasmania Unive**	**27.65**	**242**	P			**P**	**01 41 56.0**	**-1.7**
TAU	comp=Z,124nm,1.6s			IAmb			IAmb	01 42 22.6	
TAU	**Tasmania Unive**	**27.65**	**242**	P			**P**	**01 41 56.0**	**-1.7**
TAU	comp=Z,124nm,1.6s			pmax			pmax		
TBI	**Tubuai**	**27.88**	**75**	*e*S			**S**	**01 46 47.6**	**+4.3**
TBI	comp=Z,2μm,26.5s			eLR			LR	01 48 56.5	
RMQ	comp=Z,2μm,25.8s **Roma**	**28.90**	**277**	P			**P**	**01 42 12.1**	**+3.0**
TOO	comp=Z,48nm,1.2s **Toolangi**	**28.95**	**253**	P			**P**	**01 42 08.7**	**-0.7**
TOO	**Toolangi**	**28.95**	**253**	P			**P**	**01 42 08.7**	**-0.7**
TOO	comp=Z,12nm,1.2s			pmax			pmax		
CMSA	**Cobar Meteorol**	**29.79**	**265**	P			**P**	**01 42 18.4**	**+1.6**
PPT2	comp=Z,30nm,1.2s **Papeete2**	**30.99**	**65**	*e*S			S	01 47 25.6	-6.9
PPT2	comp=Z,97nm,25.2s			eLR			LR	01 50 18.0	
PPT2	comp=Z,578nm,25.5s			eLR			LR	01 50 27.5	

BBOO **Buckleboo** 37.37 259 P 01 43 21.3 -1.5
QIS **Mount Isa** 39.05 280 P P 01 43 37.8 +0.8
comp=Z,56nm,1.1s
COEN **Coen** 39.81 291 P P 01 43 45.0 +1.7
comp=Z,118nm,1.1s
COEN **Coen** 39.81 291 P 01 43 43.8 +0.5
COEN IAmb IAmb 01 43 46.2
comp=Z,93nm,1.0s
AS31 **Alice Springs** 42.33 272 P 01 44 03.5 -0.6
ASAR **Alice Springs** 42.33 272 P P 01 44 03.6 -0.5
comp=Z,21nm,0.7s,baz=115,slow=7.8,SNR=130
ASAR PcP PcP 01 45 57.4 -0.4
comp=Z,7.7nm,0.6s,baz=117,slow=3.9,SNR=6.2
ASAR ScP ScP 01 49 49.4 +1.0
comp=Z,1.0nm,0.8s,baz=131,slow=4.2,SNR=4.0
ASAR S S 01 50 20.3 -5.0
comp=Z,4.7nm,0.9s,baz=114,slow=15,SNR=8.1
comp=Z,21nm,0.7s
TAOE **Nuku Hiva Isla** 43.59 64 *e*S S 01 50 42.2 -1.9
comp=Z,134nm,24.2s
TAOE *e*SS SS 01 53 54.9 -4.1
comp=Z,157nm,23.8s
TAOE *e*LR LR 01 56 10.1
comp=Z,390nm,28.2s
WRAB **Tennant Creek** 43.66 277 *e*P P 01 44 14.6 -0.3
WRA **Warramunga Arr** 43.66 277 P P 01 44 14.7 -0.3
comp=Z,40nm,0.9s,baz=118,slow=7.6,SNR=30
WRA PcP PcP 01 46 01.9 -0.3
comp=Z,3.3nm,0.5s,baz=116,slow=3.1,SNR=2.8
WRA S S 01 50 38.3 -6.7
comp=Z,4.8nm,1.0s,baz=118,slow=14,SNR=7.9
comp=Z,40nm,0.9s
VNDA **Vanda** 44.17 186 P P 01 44 21.0 +2.7
comp=Z,3.2nm,1.0s,baz=16,slow=5.1,SNR=4.2
VNDA **Vanda** 44.17 186 P P 01 44 21.0 +2.7
FORT **Forrest** 44.47 259 P P 01 44 19.4 -1.9
comp=Z,44nm,0.8s
FORT **Forrest** 44.47 259 P 01 44 20.5 -0.8
FORT IAmb IAmb 01 44 32.5
comp=Z,29nm,0.8s
JAY **Jayapura** 49.15 301 P P 01 44 58.1 0.0
comp=Z,53nm,1.1s
KMBL **Kambalda** 49.27 256 P P 01 44 57.4 -1.5
comp=Z,16nm,1.1s
MTN **Manton Dam** 49.99 283 P P 01 45 04.0 -0.5
comp=Z,30nm,1.4s
MTN **Manton Dam** 49.99 283 P P 01 45 03.2 -1.3
MTN IAmb IAmb 01 45 04.6
comp=Z,103nm,1.8s
KNRA **Kununurra** 50.39 278 P P 01 45 07.5 0.0
comp=Z,37nm,1.8s
KNRA **Kununurra** 50.39 278 P P 01 45 04.8 -2.7
KNRA IAmb IAmb 01 45 08.1
comp=Z,47nm,1.2s
CASY **Casey** 51.39 209 P P 01 45 14.3 -0.1
CASY IAmb IAmb 01 45 25.0
comp=Z,49nm,1.1s
FITZ **Fitzroy Crossi** 51.74 273 S S 01 52 36.9 -2.7
comp=Z,6.3nm,1.1s,baz=167,slow=14,SNR=4.5
NWAO **Narrogin (SRO)** 52.44 252 P 01 45 22.9 +0.2
NWAO **Narrogin (SRO)** 52.44 252 P P 01 45 22.9 +0.2
NWAO pmax pmax
comp=Z,33nm,1.2s
KLBR **Kellerberrin** 52.49 254 P P 01 45 22.2 -1.0
comp=Z,79nm,1.1s
BAKI **Biak** 53.37 298 P P 01 45 33.3 +3.6
comp=Z,98nm,1.1s
MEEK **Meekatharra** 53.70 260 P P 01 45 30.8 -1.3
comp=Z,54nm,1.5s
PSA00 **Pilbara Seismi** 54.89 266 P P 01 45 39.4 -1.4
comp=Z,32nm,0.9s
PSA00 **Pilbara Seismi** 54.89 266 P P 01 45 39.3 -1.5
PSA00 IAmb IAmb 01 45 53.9
comp=Z,26nm,0.9s
PSA00 **Pilbara Seismi** 54.89 266 P 01 45 39.1 -1.7
PSA00 IAmb IAmb 01 45 53.9
comp=Z,15nm,0.8s
PSAC1 **Pilbara Seismi** 54.94 266 P P 01 45 44.2 +3.1
comp=Z,27nm,0.8s
FAKI **Fak Fak** 55.10 293 P 01 45 41.5 -0.9
FAKI IAmb IAmb 01 45 42.1
comp=Z,56nm,0.9s
FAKI **Fak Fak** 55.10 293 P P 01 45 41.5 -0.9
comp=Z,72nm,1.2s
MBWA **Marble Bar** 55.17 267 P P 01 45 41.2 -1.7
comp=Z,30nm,2.0s
MBWA **Marble Bar** 55.17 267 P 01 45 41.7 -1.2
MBWA IAmb IAmb 01 45 43.3
comp=Z,67nm,1.5s
QSPA **South Pole Qui** 55.84 180 P P 01 45 49.5 +2.3
comp=Z,23nm,1.0s,baz=306,slow=0.6,SNR=42
comp=Z,23nm,1.0s
QSPA **South Pole Qui** 55.84 180 P P 01 45 49.4 +2.2
SIJI **Sorong** 57.17 295 P P 01 45 56.5 -0.7
comp=Z,24nm,0.7s,baz=108,slow=6.1,SNR=4.5
SIJI S S 01 53 49.7 -3.2
comp=Z,4.1nm,0.3s,baz=143,slow=20,SNR=0.9
comp=Z,24nm,0.7s
SIJI **Sorong** 57.17 295 P P 01 45 57.5 +0.3
comp=Z,51nm,1.6s
SWI **Sorong** 57.18 295 P P 01 45 57.8 +0.5
comp=Z,71nm,1.2s
SOEI **Soe** 57.28 281 P 01 45 58.7 +0.6
SOEI **Soe** 57.28 281 P P 01 45 57.2 -1.0
comp=Z,72nm,1.1s
BATI **Baumata** 57.52 280 P P 01 45 59.1 -0.6
comp=Z,17nm,0.4s,baz=182,slow=2.5,SNR=4.5
comp=Z,17nm,0.4s
KRAI **Karang Ratu** 57.81 290 P P 01 46 00.7 -1.0
comp=Z,4µmcomp=Z,25nm,1.0s
NLAI **Namlea** 58.87 289 P P 01 46 08.5 -0.6
comp=Z,55nm,1.7s
MMRI **Maumere** 59.56 281 P P 01 46 15.5 +1.5
SANI **Sanana** 60.47 290 P P 01 46 19.0 -1.2
comp=Z,1µmcomp=Z,82nm,0.9s
LUWI **Luwuk** 63.62 288 P P 01 46 40.1 -1.2
LUWI **Luwuk** 63.62 288 P P 01 46 43.9 +2.6
comp=Z,70nm,1.0s
KAPI **Kappang** 63.66 283 P P 01 46 41.1 -0.4
comp=Z,8.4nm,0.8s,baz=132,slow=12,SNR=3.5
comp=Z,8.4nm,0.8s
KAPI **Kappang** 63.66 283 IAmb IAmb 01 47 03.0
comp=Z,19nm,1.2s
KAPI **Kappang** 63.66 283⇑ *e*P P 01 46 41.2 -0.4
KAPI pmax pmax
comp=Z,9.0nm,0.8s
TWSI **Taliwang, Sumb** 63.88 277 P P 01 46 42.3 -0.8
comp=Z,895nmcomp=Z,61nm,1.5s
RTBI **Rangdo, Negare** 65.63 276 P P 01 46 56.0 +1.5
comp=Z,61nm,0.9s
PCI **Palu** 66.02 286 P P 01 46 59.1 +2.1
comp=Z,9µmcomp=Z,74nm,1.2s
BELA **Belgrano 2** 66.05 172 P P 01 46 56.4 +0.1
BELA IAmb IAmb 01 47 08.0
comp=Z,45nm,1.4s
JAGI **Jajag, Banyuwa** 66.28 276 P P 01 46 55.5 -3.2
JAGI **Jajag, Banyuwa** 66.28 276 P P 01 46 57.2 -1.5
comp=Z,50nm,1.1s
TOLI2 **Tolitoli** 66.50 289 P P 01 46 57.7 -2.4
TOLI2 IAmb IAmb 01 46 60.0
comp=Z,53nm,1.7s
DAV **Davao City (W)** 66.65 297 P P 01 46 59.0 -2.0
comp=Z,318nm,0.4s,baz=90,slow=1.0,SNR=1.6
DAV **Davao City (W)** 66.65 297 IAmb IAmb 01 47 11.5
comp=Z,546nm,0.4s
MAW **Mawson** 68.44 201 P P 01 47 13.8 +2.3
comp=Z,5.9nm,1.3s
MAW **Mawson** 68.44 201 P P 01 47 12.5 +1.0
comp=Z,17nm,1.1s,baz=134,slow=10,SNR=6.5
comp=Z,17nm,1.1s
MAW **Mawson** 68.44 201 P P 01 47 10.8 -0.6
MAW **Mawson** 68.44 201 P P 01 47 10.8 -0.6
MAW pmax pmax
comp=Z,7.0nm,1.2s
SNJI **Sawahan-Nganju** 68.63 275 P P 01 47 15.5 +1.7
comp=Z,6µmcomp=Z,33nm,1.5s
PCJI **Pacitan** 68.88 274 P P 01 47 14.6 -0.5
KPJI **Karang Pucung** 71.21 274 P P 01 47 28.5 -0.9
comp=Z,77nm,0.9s
BBJI **Bungbulang** 72.20 273 P 01 47 33.7 -1.8
BBJI IAmb IAmb 01 47 34.4
comp=Z,27nm,0.8s
BBJI **Bungbulang** 72.20 273 P P 01 47 33.7 -1.8
comp=Z,36nm,0.9s
LEM **Lembang** 72.57 274 P P 01 47 37.0 -0.9
comp=Z,52nm,0.9s,baz=130,slow=19,SNR=7.2
comp=Z,52nm,0.9s
LEM **Lembang** 72.57 274 P P 01 47 37.0 -0.9
ELIB **Princess Elisa** 72.92 187 *d*P P 01 47 39.7 +0.7
comp=Z,30nm,1.2s
KKM **Kota Kinabalu** 73.12 290 P P 01 47 39.2 -1.7
KKM IAmb IAmb 01 47 41.5
comp=Z,18nm,0.9s
SYO **Syowa Base** 73.18 194⇑ *e*P P 01 47 41.4 +1.1
DBJI **Dramaga** 73.44 273 P P 01 47 42.3 -0.5
TROLL **Troll, Antarti** 74.00 180 ⇑P P 01 47 46.4 +1.1
SNAA **Sanae** 74.31 179 P P 01 47 49.9 +2.9
comp=Z,2.4nm,0.7s,baz=203,slow=7.9,SNR=3.9
comp=Z,2.4nm,0.7s
SNAA **Sanae** 74.31 179 P P 01 47 46.7 -0.3
SNAA **Sanae** 74.31 179 P P 01 47 46.7 -0.3
SNAA pmax pmax
comp=Z,123nm,1.9s
VNA3 **Neumayer Olymp** 74.49 176 ⇑P P 01 47 49.9 +1.8
comp=Z,31nm,0.7s
TGY **Tagaytay City** 74.72 299 P P 01 47 49.1 -1.1
comp=Z,49nm,0.3s,baz=108,slow=19,SNR=3.8
VNA2 **Neumayer--Watz** 74.92 177 ⇑P P 01 47 50.2 -0.3
comp=Z,9.8nm,0.7s,baz=195,slow=5.4
VNA1 **Neumayer--Stat** 75.15 177 ⇑P P 01 47 50.4 -1.4
comp=Z,56nm,1.0s
KLSI 76.14 274 P P 01 47 56.3 -2.1
COYC **Coyhaique** 76.64 136 P P 01 48 00.9 +0.1
COYC IAmb IAmb 01 48 25.3
comp=Z,31nm,1.0s
MDSI **Maura Dua** 76.71 274 P P 01 47 59.3 -2.3
comp=Z,37nm,1.0s
H03S2 **Juan Fernandez** 78.94 123 T T 03 14 58.3
baz=234
H03S1 **Juan Fernandez** 78.95 123 T T 03 15 17.0
baz=234
H03S3 **Juan Fernandez** 78.96 123 T T 03 15 11.1
baz=234
H03N3 **Juan Fernandez** 79.16 123 T T 03 15 08.0
baz=239,slow=2,SNR=14
H03N2 **Juan Fernandez** 79.16 123 T T 03 15 14.6
baz=239,slow=72,SNR=11
H03N1 **Juan Fernandez** 79.17 123 T T 03 15 26.7
baz=239,slow=72,SNR=14
PLCA **Paso Flores** 80.41 133 P P 01 48 23.4 +1.7
comp=Z,8.2nm,1.2s,baz=225,slow=6.6,SNR=8.5
comp=Z,8.2nm,1.2s
PLCA **Paso Flores** 80.41 133 P 01 48 23.5 +1.7
MJAR **Matsushiro Arr** 81.03 326 P P 01 48 24.1 -0.7
comp=Z,5.3nm,1.0s,baz=158,slow=4.3,SNR=4.6
comp=Z,5.3nm,1.0s
MJAR **Matsushiro Arr** 81.03 326 IAmb IAmb 01 48 24.3
comp=Z,31nm,1.6s
BKNI **Bangkinang** 82.00 276 P P 01 48 26.8 -3.7
BKNI **Bangkinang** 82.00 276 P P 01 48 43.6 +13
BO02 **Sierra Bellavi** 83.86 128 P P 01 48 42.2 +2.2
MT01 **Popeta** 84.12 127 IAmb IAmb 01 48 57.3
comp=Z,30nm,1.1s
GSI **Gunungsitoli** 85.40 275 P 01 48 46.8 -1.2
GSI **Gunungsitoli** 85.40 275 P P 01 48 47.5 -0.5
KSRS **Korea Array** 86.84 320 P P 01 48 54.6 +0.2
comp=Z,3.2nm,0.6s,baz=142,slow=5.8,SNR=9.8
comp=Z,3.2nm,0.6s
YSS **Yuzhno-Sakhali** 87.92 335 *e*P P 01 49 01.4 +2.0
YSS pmax pmax
comp=Z,20nm,1.2s
NJ2 **Nanjing** 88.22 311 *e*P P 01 49 02.3 +1.1
NJ2 pmax pmax
comp=Z,22nm,0.6s
PET **Petropavlovsk** 89.12 347⇑ *i*P P 01 49 05.6 +0.8
PET pmax pmax
comp=Z,25nm,1.2s
PET **Petropavlovsk** 89.12 347 P P 01 49 04.9 +0.1
comp=Z,42nm,1.2s
PFO **Pinyon Flats O** 89.36 48⇑ *e*P P 01 49 08.3 +1.6
PFO pmax pmax
comp=Z,21nm,2.5s
PEA0B **Petropavlovsk-** 89.38 346 P 01 49 07.1 +0.9
PEA0B **Petropavlovsk-** 89.38 346 P P 01 49 07.1 +0.9
PETK **Petropavlovsk-** 89.38 346 P P 01 49 07.0 +0.8
comp=Z,39nm,0.7s,baz=120,slow=7.0,SNR=60
comp=Z,39nm,0.7s
PETK **Petropavlovsk-** 89.38 346 P 01 49 06.9 +0.8
USRK **Ussuriysk Ar.** 90.00 327 P P 01 49 09.7 +0.5
comp=Z,5.1nm,0.8s,baz=149,slow=1.2,SNR=8.5
comp=Z,5.1nm,0.8s
CMB **Columbia Colle** 90.12 42 P P 01 49 11.9 +1.9
CMB **Columbia Colle** 90.12 42 P P 01 49 11.9 +1.9
CMB pmax pmax
comp=Z,12nm,1.4s
O02D **Mt. Diablo Mer** 90.35 39 IAmb IAmb 01 49 31.3
comp=Z,24nm,1.0s
AFDM **Forest Hills D** 90.44 41 P P 01 49 12.2 +0.7
AFDM IAmb IAmb 01 52 16.8
comp=Z,26nm,1.8s
KHBM **Hayfork Bally** 90.48 39 P P 01 49 12.4 +0.6
IRM **Iron Mountain** 90.53 48 P P 01 49 13.6 +1.5
IRM IAmb IAmb 01 49 20.8
comp=Z,43nm,1.6s
N02D **Trinity Center** 90.98 39 P P 01 49 12.6 -1.4
N02D IAmb IAmb 01 49 34.6
comp=Z,19nm,1.3s
L02F **Cave Junction** 91.37 38 P P 01 49 15.8 +0.1
L02F IAmb IAmb 01 49 36.3
comp=Z,36nm,1.7s
MDJ **Mudanjiang** 91.41 326 P P 01 49 16.3 +0.5
MDJ pmax pmax
comp=Z,12nm,1.5s
YBH **Yreka Blue Hor** 91.52 38 P P 01 49 16.6 0.0
YBH **Yreka Blue Hor** 91.52 38 P P 01 49 16.6 0.0
YBH pmax pmax
comp=Z,7.0nm,1.1s
NVAR **Mina Array Bea** 91.57 43 P P 01 49 18.7 +1.7
comp=Z,0.9nm,0.8s,baz=223,slow=5.9,SNR=5.1
comp=Z,0.9nm,0.8s
K02D **Willamette Mer** 91.74 37 IAmb IAmb 01 49 36.5
comp=Z,11nm,1.0s
CN2 **Changchun** 92.79 323 *e*P P 01 49 24.9 +2.7
CN2 pmax pmax
comp=Z,10.0nm,0.7s
X16A **Lo Mia Camp, P** 93.02 50 IAmb IAmb 01 49 32.2
comp=Z,22nm,2.0s
I04A **Tendick Farm,** 93.17 37 IAmb IAmb 01 51 31.6
comp=Z,49nm,2.0s
K05A **Summer Lake** 93.17 39 P P 01 49 25.0 +0.7
K05A IAmb IAmb 01 49 43.7
comp=Z,16nm,1.1s
WIFE **Three Sisters-** 93.66 37 IAmb IAmb 01 51 31.6
comp=Z,39nm,1.5s
PINE **Pine Mountain** 93.91 38 P P 01 49 27.9 +0.3
CMAR **Chiang Mai Arr** 94.00 289 P P 01 49 28.2 -0.2
comp=Z,2.8nm,0.3s,baz=121,slow=5.6,SNR=6.0
CMAR PP PP 01 53 14.2 -0.5
comp=Z,2.7nm,0.9s,baz=135,slow=6.8,SNR=12
comp=Z,2.8nm,0.3s
KLR **Kul'dur** 94.01 330⇑ *e*P P 01 49 26.3 -1.4
TXAR **Lajitas Array** 95.08 58 P P 01 49 35.7 +2.5
comp=Z,1.4nm,1.1s,baz=210,slow=7.2,SNR=8.0
comp=Z,1.4nm,1.1s
PZH **PanZhiHua** 96.44 298 P P 01 49 40.6 +1.0
ANMO **Albuquerque** 96.55 52⇑ *e*P P 01 49 40.5 +0.5
ANMO pmax pmax
comp=Z,7.0nm,3.2s
SRU **San Rafael Swe** 96.57 47 IAmb IAmb 01 52 27.5
comp=Z,8.7nm,1.1s
HHC **Hu-ho-hao-te** 98.40 314 *e*P Pdif 01 49 48.9 +0.8
HHC pmax pmax
comp=Z,15nm,0.9s
BTO2 **Baotou** 99.34 313 *e*P **Pdif** 01 49 52.6 +0.3
BTO2 pmax pmax
comp=Z,8.0nm,0.5s
BTO2 pmax pmax
comp=Z,11µm,13.4s
PDAR **Pinedale Array** 99.43 44 P **Pdif** 01 49 54.2 +1.4
comp=Z,0.1nm,0.6s,baz=235,slow=4.5,SNR=1.7
PDAR PKKP **PKKPdf** 02 06 22.4 +1.1
comp=Z,0.5nm,0.7s,baz=77,slow=3.6,SNR=5.4
comp=Z,0.1nm,0.6s
SEY **Seymchan** 99.58 347⇑ *e*P **Pdif** 01 49 51.3 -1.3
SEY pmax pmax
comp=Z,8.0nm,1.1s
ILAR **Eielson Array** 101.86 13 P **Pdif** 01 50 01.0 -1.7
comp=Z,0.7nm,1.1s,baz=205,slow=4.9,SNR=2.0
ILAR **Eielson Array** 101.86 13 P **Pdif** 01 50 01.0 -1.7
YKA **Yellowknife Ar** 109.24 26 PKiKP **PKiKP** 01 54 39.6 +0.4
comp=Z,0.6nm,0.9s,baz=273,slow=2.1,SNR=6.1
YKA PKKPbc **PKKPbc** 02 05 47.3 +0.4
comp=Z,0.2nm,0.8s,baz=32,slow=3.5,SNR=4.2
TIXI **Tiksi** 111.79 344⇑ *i*PKiKP **PKiKP** 01 54 43.5 -0.3
WMQ **Urumqi** 115.01 307 *e*PKP PKPdf 01 54 51.3 +0.4
BLKN **Baker Lake** 117.37 29 **PKPdf** 01 54 54.5 -0.2
DGZ **Jazzator, Alta** 117.46 313⇑ *i*PKiKP **PKPdf** 01 54 55.4 -0.1
MK31 **Makanchi Array** 119.66 309⇑ *i*PKiKP **PKPdf** 01 54 59.0 -0.7
MKAR **Makanchi Array** 119.66 309 PKP **PKPdf** 01 54 59.1 -0.6
comp=Z,4.1nm,0.9s,baz=90,slow=2.4,SNR=22
MKAR SKP **SKPdf** 01 58 36.4 +1.2
comp=Z,2.7nm,1.1s,baz=102,slow=3.0,SNR=5.3
MAKZ **Makanchi** 119.87 309 **PKPdf** 01 54 59.1 -1.0
MAKZ **Makanchi** 119.87 309 PKiKP **PKPdf** 01 54 59.1 -1.0
ZALV **Zalesovo Beam** 120.40 317 PKP **PKPdf** 01 54 59.3 -1.5
comp=Z,1.4nm,0.5s,baz=114,slow=2.1,SNR=6.8
RES **Resolute Bay** 121.15 18 PKP **PKPdf** 01 55 01.4 -0.3
comp=Z,2.8nm,0.9s,baz=254,slow=1.6,SNR=8.2
RES **Resolute Bay** 121.15 18 **PKPdf** 01 55 01.6 -0.1
RES **Resolute Bay** 121.15 18 PKiKP **PKPdf** 01 55 01.6 -0.1
NRIK **Noril'sk** 122.85 335 PKP **PKPdf** 01 55 04.8 -0.3
comp=Z,2.4nm,0.6s,baz=70,slow=3.9,SNR=4.7
KURK **Kurchatov** 123.15 312 PKP **PKPdf** 01 55 05.8 -0.4
KURBB **Kurchatov Arra** 123.18 312 PKP **PKPdf** 01 55 05.8 -0.5
comp=Z,8.9nm,1.0s,baz=108,slow=2.0,SNR=36
KURBB SKP **SKPdf** 01 58 43.2 +1.5
comp=Z,2.7nm,0.2s,baz=97,slow=2.0,SNR=4.2
AAK **Ala-Archa** 123.60 302 ⇓ *i*PKiKP **PKPdf** 01 55 08.0 +0.4
BVAR **Borovoye Array** 128.61 314 PKP **PKPdf** 01 55 16.2 -0.4
comp=Z,3.8nm,0.7s,baz=116,slow=3.4,SNR=17
BORK **Borovoye** 128.65 314 ⇓ *i*PKiKP **PKPdf** 01 55 17.3 +0.6
SCHQ **Schefferville** 129.57 44 PKP **PKPdf** 01 55 18.5 +0.1
comp=Z,2.5nm,0.9s,baz=312,slow=5.4,SNR=1.8
SPA0 **Spitsbergen Ar** 135.51 356 *e*PKPdf **PKiKP** 01 55 31.5 +0.9
SPITS **Spitsbergen Ar** 135.51 356 PKP **PKPdf** 01 55 28.7 -0.3
comp=Z,9.0nm,1.0s,baz=106,slow=5.3,SNR=4.9
SPITS SKPbc **SKPbc** 01 59 00.7 +0.6
comp=Z,31nm,1.1s,baz=12,slow=7.7,SNR=7.0
ARTI **Arti** 135.65 318 *i* PKiKP **PKPdf** 01 55 29.6 -0.2
ARTI 01 58 06.7
LKRN **Lenkeran, Azer** 141.78 291 PKiKP **PKPdf** 01 55 41.7 +0.1
ARA0 **ARCESS Array S** 142.19 346 *e*PKPdf **PKPdf** 01 55 39.6 -1.8
ARCES **ARCESS Array B** 142.19 346 PKP **PKPdf** 01 55 39.3 -2.2
comp=Z,9.5nm,0.8s,baz=42,slow=5.6,SNR=18
ARCES SKP **SKPdf** 01 59 14.8 -1.2
comp=Z,13nm,1.0s,baz=16,slow=4.2,SNR=4.3
AKT **Akhty** 142.89 295 *e*PKiKP **PKPdf** 01 55 43.7 +0.1
AKT pmax pmax
comp=Z,23nm,1.2s
KTK1 **Kautokeino** 143.07 347 *e*PKPdf **PKPdf** 01 55 43.2 +0.3
JETT **Jettan, Norway** 143.08 349 *e*PKPdf **PKPdf** 01 55 42.8 -0.2
SEKA **Sheki** 143.27 295 PKiKP **PKPdf** 01 55 44.7 +0.4
MNGR **Mingechevir, A** 143.32 294 PKiKP **PKPdf** 01 55 44.9 +0.7
KLMR **Klimovskoe** 143.77 329 *e*PKiKP PKPbc 01 55 43.8 +1.8
KLMR pmax pmax
comp=Z,41nm,1.3s
GANJ **Ganja** 143.89 294 PKiKP **PKPdf** 01 55 45.8 +0.5
NAX **Nakhchivan** 144.38 291 PKiKP **PKPdf** 01 55 46.5 +0.2
GNI **Garni** 145.05 293 PKP **PKPab** 01 55 45.9 -1.1
STEI **Steigen** 145.34 351 *e*PKPbc **PKPbc** 01 55 47.4 +0.6
LOF **Lofoten** 145.36 352 *e*PKPbc **PKPbc** 01 55 47.3 +0.5
FAUS **Fauske** 145.85 350 *e*PKPdf **PKPdf** 01 55 48.7 +0.9
VRH **Novokhopyorsk** 146.24 313 *e*PKP2 **PKPdf** 01 55 49.1 +0.2
VRH pmax pmax
comp=Z,100nm,0.9s
GOF **Gofitskoye** 146.33 301 *ce*PKP2 **PKPdf** 01 55 50.1 +0.8
KBZ **Khabaz** 146.51 299 PKPbc **PKPdf** 01 55 50.2 +0.6
comp=Z,17nm,1.0s,baz=116,slow=4.0,SNR=22
KIV **Kislovodsk** 146.65 299 ⇓P **PKPbc** 01 55 51.7 +0.1
KIV **Kislovodsk** 146.65 299 **PKPdf** 01 55 50.3 +0.3
KIV **Kislovodsk** 146.65 299 *e*PKP2 **PKPdf** 01 55 50.8 +0.8
KIV pmax pmax
comp=Z,18nm,1.1s
KIV **Kislovodsk** 146.65 299 PKP **PKPdf** 01 55 48.9 -1.1
VAGH **Vaagaholmen** 146.73 351 *e*PKPdf **PKPdf** 01 55 50.4 +1.1
MOS **Moscow** 147.02 322 *i* PKiKP **PKPdf** 01 55 50.1 0.0
MOS pmax pmax
comp=Z,85nm,0.8s
MOR8 **Moi Rana** 147.10 350 *e*PKPdf **PKPdf** 01 55 50.8 +0.8
STOK **Stokkvaagen** 147.14 351 *e*PKPbc **PKPbc** 01 55 52.9 +0.7
LEIR **Leirfjorden** 147.34 351 *e*PKPbc **PKPbc** 01 55 53.2 +0.5
LPSR **Galich'ya Gora** 147.50 316 *e*PKiKP **PKPdf** 01 55 52.0 +1.0
LPSR pmax pmax
comp=Z,89nm,1.0s
VORR **Voronezh** 147.63 314 *e*PKiKP **PKPdf** 01 55 51.1 -0.2
VORR pmax pmax
comp=Z,60nm,1.0s
VORD **Divnogorie** 147.78 313 *e*PKiKP **PKPdf** 01 55 51.5 0.0
VORD pmax pmax
comp=Z,40nm,1.0s
VSR **Storozhevoye** 147.79 313 *e*PKiKP **PKPdf** 01 55 51.3 -0.2
VSR pmax pmax
comp=Z,60nm,1.0s
OBN **Obninsk** 147.83 321 ⇑P **PKPbc** 01 55 54.7 +0.3
OBN **Obninsk** 147.83 321 **PKPdf** 01 55 52.5 +1.0
OBN **Obninsk** 147.83 321⇑ *e*PKiKP **PKPdf** 01 55 52.0 +0.5
OBN *i* 01 55 54.0
OBN *i* 01 55 59.7
OBN *e* 01 59 17.9
OBN SSS SSS 02 23 59.0
OBN pmax pmax
comp=Z,9.0nm,1.2s
OBN pmax pmax
comp=Z,151nm,1.3s
OBN MLR MLR
comp=Z,117nm,17.0s
OBN **Obninsk** 147.83 321 PKP **PKPdf** 01 55 50.8 -0.7
LABN **Labinsk** 148.01 301 *i* PKP2 **PKPbc** 01 55 55.3 0.0
LABN pmax pmax
comp=Z,22nm,0.7s
ERBR **Yeremizino-Bor** 148.07 303 *i* PKP2 **PKPbc** 01 55 54.9 -0.5
ERBR pmax pmax
comp=Z,50nm,1.4s
FINES **FINESS Array B** 148.48 337 PKPbc **PKPbc** 01 55 55.8 -0.2
comp=Z,60nm,0.7s,baz=57,slow=5.1,SNR=148
FINES **FINESS Array B** 148.48 337 **PKPbc** 01 55 55.4 -0.5
FINES **FINESS Array B** 148.48 337 PKP2 **PKPbc** 01 55 55.4 -0.5
EDA **Edea** 148.52 197 **PKPbc** 01 55 57.2 -0.3
NSS **Namsos** 149.00 351 *e*PKPbc **PKPbc** 01 55 57.8 +0.6
ANN **Anapa** 150.32 302 *i* PKiKP **PKPbc** 01 56 00.6 -0.4
ANN pmax pmax
comp=Z,54nm,0.9s
HWQ **Hawqa** 151.32 280 *e*P **PKPbc** 01 56 03.5 -0.4
MOL **Molde** 151.40 354 *e*PKPbc **PKiKP** 01 56 04.0 +0.6
BHL **Bhannes** 151.49 279 *e*P **PKPbc** 01 56 04.7 +0.4
MMAI **Mount Meron Ar** 151.52 277 PKPbc **PKPbc** 01 56 05.0 +0.6
comp=Z,25nm,0.8s,baz=68,slow=9.1,SNR=18
DOMB **Dombas** 151.76 352 *e*PKPbc **PKPbc** 01 56 04.7 +0.8
AKN **Aaknes** 151.83 354 *e*PKPbc **PKPbc** 01 56 04.6 +0.5
DBIC **Dimbokro** 151.97 167 PKPbc **PKPbc** 01 56 06.7 +0.9
comp=Z,12nm,0.9s,baz=174,slow=3.5,SNR=7.9
NB2 **NORSAR Subarra** 152.44 349 PKP **PKPbc** 01 56 05.3 -0.2
comp=Z,48nm,1.1s,baz=17,slow=2.6
NB2 **NORSAR Subarra** 152.44 349 PKPbc **PKPbc** 01 56 05.3 -0.2
NOA **NORSAR Array B** 152.44 349 PKPbc **PKPbc** 01 56 05.6 +0.1
comp=Z,5.3nm,0.7s,baz=14,slow=4.1,SNR=22
MNK **Minsk** 152.46 325 *i* PKiKP **PKPbc** 01 56 06.4 +0.7
MNK comp=E,29nm,1.6s *i* PKiKP **PKPbc** 01 56 06.4 +0.7
MNK comp=N,26nm,1.1s *i* PKiKP **PKPbc** 01 56 06.4 +0.7
MNK comp=Z,65nm,1.0s,baz=54 *i* PP **PP** 01 59 49.1 +0.6
MNK *i* SKS **SKSdf** 02 03 06.0 +0.1
MNK *i* PPP PPP 02 03 14.1
MNK *i* SKKS **SKKSdf** 02 11 44.6 -7.4
MNK *i* SS **SS** 02 19 24.2 +6.2
MNK *i* SSS SSS 02 25 15.1
MNK **Minsk** 152.46 325 *i* PKiKP **PKPbc** 01 56 06.3 +0.7
MNK *i* 01 59 49.1
MNK *i* 02 03 05.9
MNK *i* PPP PPP 02 03 14.1
MNK pmax pmax
comp=E,29nm,1.6s
MNK pmax pmax
comp=N,26nm,1.1s
MNK pmax pmax
comp=Z,65nm,1.0s
FOO **Floro** 152.55 356 *e*PKPbc **PKPbc** 01 56 06.5 +0.9
SIM **Simferopol'** 152.62 303 *e*PKiKP **PKPbc** 01 56 06.8 +0.4
SIM pmax pmax
comp=Z,35nm,0.8s
NC602 **NORSAR Array S** 152.68 349 *e*PKPbc **PKPbc** 01 56 06.4 +0.4
HFS **Hagfors** 152.86 346 PKPbc **PKPbc** 01 56 06.5 +0.1
comp=Z,8.1nm,0.8s,baz=72,slow=4.8,SNR=18
SKAR **Skarslia** 153.18 352 *e*PKPbc **PKiKP** 01 56 08.6 +1.2
KIRS **Kirsehir-Merke** 153.36 290 ⇑P **PKPbc** 01 56 08.1 -0.2

PABE	**Paberze**	**153.54**	**330**			**PKiKP**	**01 56 08.8**	**+0.7**
BRTR	**Keskin Array B**	**153.57**	**291**	PKP		**PKPdf**	**01 56 02.2**	**+1.1**
	comp=Z,0.7nm,0.8s,baz=57,slow=5.3,SNR=4.1							
BRTR				PKPbc		**PKPbc**	**01 56 08.4**	**-0.5**
	comp=Z,6.4nm,0.8s,baz=132,slow=3.4,SNR=30							
BRTR	**Keskin Array B**	**153.57**	**291**			**PKPbc**	**01 56 07.8**	**-1.0**
AKASG	**Malin Array Be**	**153.80**	**317**	PKP		**PKPdf**	**01 56 02.1**	**+1.3**
	comp=Z,5.4nm,0.8s,baz=67,slow=1.6,SNR=4.5							
AKASG				PKPbc		**PKPbc**	**01 56 08.8**	**+0.1**
	comp=Z,8.5nm,0.8s,baz=62,slow=2.1,SNR=23							
AKASG	**Malin Array Be**	**153.80**	**317**			**PKPbc**	**01 56 08.6**	**-0.1**
KIEV	**Kiev**	**153.81**	**317**			**PKPbc**	**01 56 08.5**	**-0.3**
KIEV	**Kiev**	**153.81**	**317**	PKIKP		**PKPbc**	**01 56 08.5**	**-0.3**
KONO	**Kongsberg**	**154.01**	**350**	*e*PKPbc		**PKiKP**	**01 56 10.7**	**+1.7**
STRU	**Stroemstad**	**154.35**	**348**	*i* P		**PKPab**	**01 56 24.0**	**+0.2**
TJOU	**Tjoern**	**155.21**	**347**	*i* P		**PKPab**	**01 56 27.0**	**-0.4**
BORU	**Boraas**	**155.35**	**345**	*i* P		**PKPab**	**01 56 28.0**	**-0.1**
SORM	**Soroca**	**155.44**	**313**	⇑P		PKPdf	01 56 12.5	+9.3
SORM	**Soroca**	**155.44**	**313**	⇑PKIKP		PKPdf	01 56 12.5	+9.3
HOMB	**Homborsund**	**155.50**	**351**	*i* P		**PKPab**	**01 56 29.5**	**+0.8**
BLEU	**Blekinge**	**155.78**	**340**	*i* P		**PKPab**	**01 56 29.1**	**-0.8**
DEL	**Delary**	**156.15**	**342**	*i* P		**PKPab**	**01 56 31.1**	**-0.5**
CFR	**Carcaliu**	**156.66**	**306**	⇓P		PKPdf	01 56 17.1	+12
CFR	**Carcaliu**	**156.66**	**306**	⇓PKIKP		PKPdf	01 56 17.1	+12
BJUU	**Bjuv**	**156.72**	**343**	*i* P		**PKPab**	**01 56 33.4**	**-0.5**
LUNU	**Lund**	**157.01**	**342**	*i* P		**PKPab**	**01 56 34.9**	**-0.3**
BSD	**Bornholm Skovb**	**157.06**	**339**	*i* P		**PKPab**	**01 56 35.6**	**+0.1**
BSD				IAmb		IAmb	01 56 35.9	
	comp=Z,13nm,0.8s							
TESR	**Tescani**	**157.16**	**310**	⇓P		**PKPab**	**01 56 36.0**	**-0.3**
COP	**Copenhagen**	**157.21**	**343**	*i* P		**PKPab**	**01 56 36.1**	**0.0**
COP				IAmb		IAmb	01 56 36.6	
	comp=Z,98nm,1.0s							
VRI	**Vrincioaia**	**157.35**	**308**	⇑P		**PKPab**	**01 56 37.6**	**+0.4**
VRI	**Vrincioaia**	**157.35**	**308**	⇑PKP2		**PKPab**	**01 56 37.6**	**+0.4**
MLR	**Muntele Rosu**	**158.00**	**308**	⇑P		**PKPdf**	**01 56 12.7**	**+5.9**
MLR	**Muntele Rosu**	**158.00**	**308**	⇑PKIKP		**PKPdf**	**01 56 12.7**	**+5.9**
EKA	**Eskdalemuir Ar**	**158.74**	**7**	PKPab		**PKPab**	**01 56 41.7**	**-1.0**
	comp=Z,1.6nm,0.9s,baz=6,8,slow=15,SNR=3.7							
STHS	**Stebnicka Huta**	**158.81**	**322**	*e*PKP2		**PKPab**	**01 56 43.9**	**+0.5**
STHS	**Stebnicka Huta**	**158.81**	**322**	*e*PKP		**PKPab**	**01 56 43.9**	**+0.5**
TORD	**Torodi Ar. Bea**	**158.96**	**182**	PKP		**PKPdf**	**01 56 09.4**	**+0.8**
	comp=Z,1.2nm,0.9s,baz=188,slow=1.6,SNR=4.7							
TORD				PKPab		**PKPab**	**01 56 45.0**	**+0.3**
	comp=Z,7.7nm,1.0s,baz=193,slow=3.5,SNR=9.1							
LANS	**Liptovska Anna**	**159.88**	**323**	*e*PKP2		**PKPab**	**01 56 48.2**	**+0.2**
LANS	**Liptovska Anna**	**159.88**	**323**	*e*PKP		**PKPab**	**01 56 48.2**	**+0.2**
STEB	**Steborice**	**160.14**	**327**	*e*PKPAB		**PKPab**	**01 56 47.4**	**-1.7**
MORC	**Moravsky Berou**	**160.36**	**327**	*e*PKP		**PKPab**	**01 56 53.3**	**+3.2**
CHVC	**Chvalec**	**160.39**	**331**	*e*PKP2		**PKPab**	**01 56 51.1**	**+0.9**
CHVC	**Chvalec**	**160.39**	**331**	*e*PKPAB		**PKPab**	**01 56 51.1**	**+0.9**
DPC	**Dobruska-Polom**	**160.47**	**330**	*e*PKP2		**PKPab**	**01 56 53.4**	**+2.9**
DPC	**Dobruska-Polom**	**160.47**	**330**	*e*PKPAB		**PKPab**	**01 56 53.4**	**+2.9**
CLL	**Collm**	**160.93**	**337**	*i* PKP2		**PKPab**	**01 56 51.7**	**-0.7**
CLL				pmax		pmax		
	comp=Z,48nm,1.6s							
CLL	**Collm**	**160.93**	**337**	*e*PKPdif		PKPab	01 56 35.0	-17
CLL				*i* PKPab		**PKPab**	**01 56 51.7**	**-0.7**
	comp=Z,48nm,1.6s							
CLL				*i* x		x	01 57 01.5	
JAVC	**Velka Javorina**	**160.95**	**325**	*e*PKP		**PKPab**	**01 56 57.4**	**+4.7**
VRAC	**Vranov**	**161.13**	**327**	PKPab		**PKPab**	**01 56 51.5**	**-1.9**
	comp=Z,5.7nm,0.8s,baz=42,slow=10,SNR=3.1							
VRAC	**Vranov**	**161.13**	**327**	*e*PKP		**PKPab**	**01 56 56.7**	**+3.3**
KRUC	**Moravsky**	**161.40**	**327**	*e*PKP		**PKPab**	**01 56 58.0**	**+3.4**
NKC	**Novy Kostel**	**162.03**	**336**	*e*PKP2		**PKPab**	**01 56 58.6**	**+1.3**
NKC	**Novy Kostel**	**162.03**	**336**	*e*PKPAB		**PKPab**	**01 56 58.6**	**+1.3**
CKRC	**Cesky Krumlov**	**162.48**	**330**	*e*PKP2		**PKPab**	**01 57 02.8**	**+3.5**
CKRC	**Cesky Krumlov**	**162.48**	**330**	*e*PKPAB		**PKPab**	**01 57 02.8**	**+3.5**
KHC	**Kasperske Hory**	**162.53**	**332**	*e*PKP2		**PKPab**	**01 56 53.5**	**-6.1**
KHC	**Kasperske Hory**	**162.53**	**332**	*e*PKPAB		**PKPab**	**01 56 53.5**	**-6.1**
GERES	**GERESS Array B**	**162.71**	**331**	PKP		**PKPdf**	**01 56 13.2**	**+1.3**
	comp=Z,0.8nm,0.9s,baz=73,slow=4.6,SNR=4.7							
GERES				PKPab		**PKPab**	**01 57 00.5**	**+0.1**
	comp=Z,2.2nm,0.9s,baz=25,slow=4.4,SNR=8.3							
GRF	**Grafenberg Arr**	**162.90**	**337**	*e*PKPab		**PKPab**	**01 57 01.2**	**+0.1**
	baz=39,slow=4.0							
GRFO	**Grafenberg**	**162.90**	**337**			**PKPab**	**01 57 02.0**	**+0.9**
GRFO	**Grafenberg**	**162.90**	**337**	PKP2		**PKPab**	**01 57 02.0**	**+0.9**
BEBN	**Eben Emael**	**163.16**	**350**	*d*PKP		**PKPab**	**01 57 01.9**	**-0.2**
MEM	**Membach**	**163.29**	**349**	*d*PKP		**PKPab**	**01 57 02.2**	**-0.6**
BTNL	**Ternell**	**163.30**	**349**	*d*PKP		**PKPab**	**01 57 03.0**	**+0.2**
UCC	**Uccle**	**163.32**	**353**	*d*PKP		**PKPab**	**01 57 03.1**	**+0.3**
BSTI	**Sart Tilman**	**163.38**	**350**	*d*PKP		**PKPab**	**01 57 03.7**	**+0.5**
BHOU	**Houvegnez**	**163.54**	**349**	*d*PKP		**PKPab**	**01 57 03.4**	**-0.5**
BGES	**Gesves**	**163.65**	**351**	*d*PKP		**PKPab**	**01 57 04.0**	**-0.3**
BMRD	**Maredsous**	**163.77**	**352**	*d*PKP		**PKPab**	**01 57 04.8**	**0.0**
RCHB	**Rochefort**	**163.85**	**351**	*d*PKP		**PKPab**	**01 57 05.1**	**-0.1**
WLF	**Walferdange**	**164.19**	**348**	*d*PKP		**PKPab**	**01 57 07.2**	**+0.4**
BFO	**Black Forest**	**164.97**	**341**			**PKPab**	**01 57 10.0**	**-0.2**
BFO	**Black Forest**	**164.97**	**341**	PKP2		**PKPab**	**01 57 10.0**	**-0.2**
DAVOX	**Davos/Dischmat**	**165.87**	**335**	PKP		**PKPdf**	**01 56 14.4**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=2.7,slow=13,SNR=4.8							
DAVOX				PKPab		**PKPab**	**01 57 13.4**	**-1.1**
	comp=Z,3.7nm,0.7s,baz=0.0,slow=3.0,SNR=6.7							
TUE	**Stuetta**	**166.32**	**335**			**PKPdf**	**01 56 15.2**	**-0.1**
KEST	**Kesra**	**173.11**	**284**	PKP		**PKPdf**	**01 56 18.0**	**-1.5**
	comp=Z,3.5nm,1.1s,baz=32,slow=9.5,SNR=1.7							
ESDC	**Sonseca Array**	**173.24**	**36**	PKP		**PKPdf**	**01 56 20.4**	**+1.0**
	comp=Z,3.2nm,1.1s,baz=341,slow=2.7,SNR=6.4							
ESDC				PKPab		**PKPab**	**01 57 48.6**	**+1.4**
	comp=Z,0.6nm,0.9s,baz=334,slow=4.5,SNR=1.8							
MDT	**Midelt**	**174.99**	**105**	PKP		**PKPdf**	**01 56 19.9**	**-0.3**
	comp=Z,2.1nm,0.9s,baz=307,slow=4.9,SNR=2.6							

*NEIC **20** 01:45:11.1±0.9, 17°.92N±0°.03×66°.81W±0°.01, h10km±1km, ML2.5/35, Md3.3/7(RSPR), Error ellipse: s-maj=4.3km s-min=2.4km az=173.0*
*SDD **20** 01:45:11.8±1.8, 17°.97N×66°.81W, h13km±21km, MD3.0, ML2.4, MW2.8, Presumed earthquake*
*OSPL **20** 01:45:11.6±0.3, 17°.88N×66°.81W, h8km±90km, ML3.0, Presumed earthquake*

ISC 20 01:45:10.2±1.2, 17°.93N±0°.05×66°.80W±0°.03, h21km±1km, n27, σ0°.67/50, 11C-1D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.09**	**300**			**Pb**	**01 45 14.1**	**-0.1**
GBPR						**Sb**	**01 45 15.8**	**-1.0**
OBIP	**Obispado Ponce**	**0.21**	**58**			**Pb**	**01 45 16.2**	**+0.1**
OBIP				Sg		**Sb**	**01 45 20.0**	**-0.1**
OBIP	**Obispado Ponce**	**0.21**	**58**	*i* P		**Pb**	**01 45 16.3**	**+0.3**
OBIP				*e*S		**Sb**	**01 45 19.9**	**-0.2**
OBIP				IAML			01 45 20.9	
	comp=Z,3μm,0.5s							
MLPR	**Magueyes Islan**	**0.24**	**280**	Pg		**Pb**	**01 45 15.8**	**-0.3**
MLPR				Sg		**Sb**	**01 45 19.9**	**-0.5**
MLPR				IAML			01 45 20.6	
	comp=Z,725nm,0.2s							
MLPR				IAML			01 45 21.9	
	comp=Z,582nm,0.1s							
MLPR	**Magueyes Islan**	**0.24**	**280**	⇓*e*Pg		**Pb**	**01 45 16.1**	**0.0**
MLPR				⇑*e*Sg		**Sb**	**01 45 19.5**	**-0.8**
MLPR				IAML			01 45 20.8	
	comp=N,195nm,0.1s							
CELP	**Cerrillos**	**0.25**	**55**			**Pb**	**01 45 16.9**	**+0.6**
CELP				Sg		**Sb**	**01 45 20.3**	**-0.3**
CELP				IAML			01 45 21.7	
	comp=N,428nm,0.2s							
CRPR	**Cabo Rojo, PR**	**0.31**	**284**			**Pb**	**01 45 17.3**	**+0.4**
CRPR				Sg		**Sb**	**01 45 21.1**	**-0.6**
CRPR				IAML			01 45 21.9	
	comp=N,444nm,0.3s							
CRPR				IAML			01 45 23.7	
	comp=N,395nm,0.2s							
CRPR	**Cabo Rojo, PR**	**0.31**	**284**	*i* P		**Pb**	**01 45 17.4**	**+0.4**
CRPR				*e*S		**Sb**	**01 45 21.4**	**-0.2**
CRPR				IAML			01 45 21.9	
	comp=Z,321nm,0.3s							
UUPR	**Utuado, UPR, P**	**0.33**	**12**			**Pb**	**01 45 17.8**	**+0.5**
UUPR				Sg		**Sb**	**01 45 21.9**	**-0.2**
LSP	**Las Mesas**	**0.37**	**312**			**Pb**	**01 45 18.3**	**+0.4**
LSP						**Sb**	**01 45 24.4**	**+1.2**
AOPR	**Arecibo Observ**	**0.42**	**5**			**Pb**	**01 45 19.3**	**+0.6**
AOPR				Sg		**Sb**	**01 45 24.3**	**-0.3**
AOPR				IAML			01 45 25.3	
	comp=Z,703nm,0.2s							
AOPR	**Arecibo Observ**	**0.42**	**5**	⇑*e*Pg		**Pb**	**01 45 19.3**	**+0.6**
AOPR				⇑*e*Sg		**Sb**	**01 45 23.7**	**-0.9**
AOPR				IAML			01 45 25.6	
	comp=N,591nm,0.1s							
PRSN	**Puerto Rico Se**	**0.44**	**311**			**Pb**	**01 45 19.4**	**+0.3**
PRSN				Sg		**Sb**	**01 45 25.0**	**-0.2**
PRSN				IAML			01 45 27.8	
	comp=N,717nm,0.3s							
PRSN	**Puerto Rico Se**	**0.44**	**311**	⇑*e*Pg		**Pb**	**01 45 19.4**	**+0.3**
PRSN				⇑*e*Sg		**Sb**	**01 45 25.1**	**-0.1**
PRSN				IAML			01 45 28.1	
	comp=N,428nm,0.3s							
ECPR	**Experimental S**	**0.56**	**47**			**Pn**	**01 45 22.1**	**-0.9**
ECPR				Sg		**Sb**	**01 45 30.1**	**+1.0**
EMPR	**Esperanza - Ma**	**0.60**	**25**			**Pn**	**01 45 23.2**	**-0.3**
EMPR						**Sn**	**01 45 32.0**	**-0.6**
AGPR	**Aguadilla, PR**	**0.61**	**331**			**Pb**	**01 45 22.5**	**+0.2**
AGPR				Sg		**Sb**	**01 45 30.4**	**-0.2**
AGPR				IAML			01 45 36.3	
	comp=N,173nm,1.0s							
AGPR	**Aguadilla, PR**	**0.61**	**331**	⇑*e*Pg		**Pb**	**01 45 21.6**	**-0.7**
AGPR				⇑*e*Sg		**Sb**	**01 45 30.3**	**-0.3**
AGPR				IAML			01 45 33.7	
	comp=N,112nm,0.3s							
SJG	**San Juan**	**0.64**	**73**	Pg		**Pn**	**01 45 23.5**	**-0.6**
SJG				IAML			01 45 33.4	
	comp=N,143nm,0.4s							
SJG	**San Juan**	**0.64**	**73**	*i* P		**Pn**	**01 45 23.6**	**-0.4**
SJG				*e*S		**Sn**	**01 45 32.8**	**-0.8**
SJG				IAML			01 45 33.8	
	comp=Z,2μm,0.1s							
PDPR	**Patillas Dam,**	**0.74**	**83**	Pg		**Pn**	**01 45 25.4**	**0.0**
IDE	**Isla Desecheo**	**0.79**	**305**			**Pn**	**01 45 25.8**	**-0.3**
IDE						**Sn**	**01 45 36.2**	**-1.1**
HUMP	**Col San Antoni**	**0.92**	**77**			**Pn**	**01 45 28.1**	**+0.2**
HUMP				Sg		**Sn**	**01 45 41.0**	**+0.4**
CUPR	**Culebra, Puert**	**1.49**	**75**	Pn		**Pb**	**01 45 37.9**	**+0.9**
HIDR	**Higuey Centro**	**1.94**	**290**	⇑*e*Pg		**Pb**	**01 45 44.8**	**0.0**
HIDR				⇑*e*Sg		**Sb**	**01 46 10.1**	**+1.5**
HIDR				IAML			01 46 20.4	
	comp=N,41nm,3.1s							
DR12	**Loma Pena Alta**	**2.60**	**290**	Pn		**Pn**	**01 45 53.0**	**+1.9**
HATOM	**Hato Mayor del**	**2.60**	**290**	⇑*e*Pg		**Pb**	**01 45 56.1**	**0.0**
HATOM				⇑*e*Sg		**Sb**	**01 46 26.6**	**-1.0**
HATOM				IAML			01 46 34.1	
	comp=N,30nm,2.1s							

*KRNET **20** 02:11:04.5±0.1, 42°.06N×77°.16E, h21km, mb2.8*
*SOME **20** 02:11:04.4, 42°.03N×77°.12E, h10km*
*NNC **20** 02:11:05.5±0.7, 42°.13N×77°.14E, h0km, mb2.4, mpv2.6, Error ellipse: s-maj=5.0km s-min=3.2km az=4.0*

ISC 20 02:11:04.5±0.9, 42°.06N±0°.03×77°.13E±0°.03, h15km±7km, n28, σ0°.62/52, 16C-4D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KDJ	**Kajisay**	**0.09**	**28**	⇑*i* P		**Pg**	**02 11 07.9**	**0.0**
KDJ				⇑*i* S		**Sg**	**02 11 10.3**	**+0.2**
TARG	**Taragay, Kyrgy**	**0.60**	**122**	⇑*i* P		**Pg**	**02 11 15.8**	**-0.7**
TARG				⇑*i* S		**Sg**	**02 11 23.9**	**-0.7**
ULHL	**Ulahol**	**0.69**	**286**	⇓*i* P		**Pg**	**02 11 18.3**	**+0.3**
ULHL				⇓*i* S		**Sb**	**02 11 28.1**	**+0.4**
BOOM	**Boomskoye usch**	**0.98**	**297**	⇑*i* P		**Pg**	**02 11 23.3**	**-0.3**
BOOM				⇑*i* S		**Sb**	**02 11 37.0**	**+0.8**
TNSS	**Tian-Shan**	**0.99**	**352**	P		**Pg**	**02 11 23.4**	**-0.4**
	1.3nm,0.1s							
TNSS				S		**Sg**	**02 11 36.7**	**-0.1**
	2.7nm,0.1s							
TNSS	**Tian-Shan**	**0.99**	**352**	*e*P		**Pg**	**02 11 23.4**	**-0.4**
	1.3nm,0.1s							
TNSS				*e*S		**Sg**	**02 11 36.7**	**-0.1**
	2.7nm,0.1s							
NRN	**Naryn**	**1.05**	**234**	⇑*i* P		**Pg**	**02 11 24.6**	**-0.2**
NRN				⇑*i* S		**Sb**	**02 11 39.1**	**+0.9**
IZV	**Izvestkoviy**	**1.05**	**339**	P		**Pg**	**02 11 24.1**	**-0.7**
	1.0nm,0.1s							
IZV				S		**Sg**	**02 11 38.0**	**-0.7**
	26nm,0.1s							
IZV	**Izvestkoviy**	**1.05**	**339**	*e*P		**Pg**	**02 11 24.1**	**-0.7**
	1.0nm,0.1s							
IZV				*e*S		**Sg**	**02 11 38.0**	**-0.7**
	26nm,0.1s							
MDOK	**Medeo**	**1.11**	**357**	Pg		**Pg**	**02 11 25.3**	**-0.7**
	6.4nm,0.1s							
MDOK				Lg		Lg	02 11 40.0	
	15nm,0.4s							
KOTS	**Kotyrbulak**	**1.18**	**359**	P		**Pb**	**02 11 26.4**	**-0.3**
	7.3nm,0.1s							
KOTS				S		**Sb**	**02 11 42.0**	**+0.2**
	19nm,0.2s							
KOTS	**Kotyrbulak**	**1.18**	**359**	*e*P		**Pb**	**02 11 26.4**	**-0.3**
KOTS				*e*S		**Sb**	**02 11 42.0**	**+0.2**
KOTS	**Kotyrbulak**	**1.18**	**359**	*e*P		**Pb**	**02 11 26.4**	**-0.3**
	7.3nm,0.1s							
KOTS				*e*S		**Sb**	**02 11 42.0**	**+0.2**
	19nm,0.2s							
KST	**Kastek**	**1.31**	**319**	P		**Pn**	**02 11 28.5**	**+0.1**
	2.0nm,0.2s							
KST				S		**Sb**	**02 11 45.5**	**-0.1**
	15nm,0.2s							
KST	**Kastek**	**1.31**	**319**	*e*P		**Pn**	**02 11 28.5**	**+0.1**
	2.0nm,0.2s							
KST				*e*S		**Sb**	**02 11 45.5**	**-0.1**
	15nm,0.2s							
TKM2	**Tokmak 2**	**1.42**	**308**	⇑*i* P		**Pb**	**02 11 31.3**	**+0.4**
TKM2				⇑*i* S		**Sg**	**02 11 50.7**	**+0.2**
DGS	**Degeres**	**1.55**	**320**	P		**Pb**	**02 11 33.3**	**+0.3**
	1.4nm,0.2s							
DGS				S		**Sb**	**02 11 53.7**	**+1.2**
	9.2nm,0.3s							
DGS	**Degeres**	**1.55**	**320**	*e*P		**Pb**	**02 11 33.3**	**+0.3**
	1.4nm,0.2s							
DGS				*e*S		**Sb**	**02 11 53.7**	**+1.2**
	9.2nm,0.3s							
KTBS	**Karatobe**	**1.69**	**349**	P		**Pb**	**02 11 35.8**	**+0.5**
	1.9nm,0.2s							
KTBS				S		**Sg**	**02 11 58.2**	**-0.7**
	0.7nm,0.2s							
KTBS	**Karatobe**	**1.69**	**349**	*e*P		**Pb**	**02 11 35.8**	**+0.5**
	1.9nm,0.2s							
KTBS				*e*S		**Sg**	**02 11 58.2**	**-0.7**
	0.7nm,0.2s							
UZB	**Uzynbulak**	**1.77**	**51**	P		**Pb**	**02 11 37.1**	**+0.3**
	3.8nm,0.3s							
UZB				S		**Sb**	**02 12 00.2**	**+1.2**
	9.5nm,0.2s							
UZB	**Uzynbulak**	**1.77**	**51**	*e*P		**Pb**	**02 11 37.1**	**+0.3**
	3.8nm,0.3s							
UZB				*e*S		**Sb**	**02 12 00.2**	**+1.2**
	9.5nm,0.2s							
UCH	**Uchtor**	**1.95**	**276**	⇑*i* P		**Pb**	**02 11 39.8**	**-0.2**
UCH				⇑*i* S		**Sb**	**02 12 05.5**	**+1.2**
KRBS	**Karabastau**	**1.96**	**327**	Pg		**Pb**	**02 11 40.6**	**+0.7**
	3.7nm,0.3s							
KRBS				Lg		Lg	02 12 06.3	
	1.8nm,0.3s							
KRBS	**Karabastau**	**1.96**	**327**	*e*P		**Pb**	**02 11 40.6**	**+0.7**
	3.7nm,0.3s							
KRBS				*e*S		**Sg**	**02 12 06.3**	**-1.2**
	1.8nm,0.3s							
AAK	**Ala-Archa**	**2.04**	**287**	⇑Pg		**Pg**	**02 11 43.0**	**-0.6**
	0.1nm,0.4s							
AAK				⇑Lg		Lg	02 12 10.0	
	0.9nm,0.5s							
ARLS	**Aral**	**2.10**	**266**	⇓*i* P		**Pb**	**02 11 41.6**	**-0.8**
ARLS				⇓*i* S		**Sb**	**02 12 08.4**	**+0.1**
PDGK	**Podgornoye**	**2.16**	**53**	⇑Pg		**Pb**	**02 11 43.6**	**+0.2**
	0.1nm,0.3s							
PDGK				⇑Lg		Lg	02 12 10.8	
	7.5nm,0.8s							

TAP 20 02:16:19.3, 24°.39N×121°.43E, h4km±1km, ML1.4, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
NNSB	**Datong**	**0.06**	**318**	*i* P		Pg	02 16 21.3	+0.6
NNSB				S		Sg	02 16 22.4	+0.8
NNS	**Nan Shan**	**0.07**	**319**	*i* P		Pg	02 16 21.5	+0.5
NNS				*i* S		Sg	02 16 22.7	+0.6
LATG	**Datong**	**0.17**	**32**	*e*P		Pg	02 16 24.0	+1.2
LATG				*e*S		Sg	02 16 26.7	+1.6
ETLH	**Xiulin Townshi**	**0.19**	**164**	*e*P		Pg	02 16 24.3	+1.3
ETLH				*e*S		Sg	02 16 27.2	+1.8
NACB	**Ninganchiao**	**0.26**	**144**	*e*P		Pg	02 16 25.4	+1.1
NACB				*e*S		Sg	02 16 29.7	+1.8

TAP 20 02:16:20.3, 24°.42N×121°.36E, h8km, ML1.5, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
NNS	**Nan Shan**	**0.02**	**42**	*i* S		Sg	02 16 23.6	+0.4
NNSB	**Datong**	**0.02**	**79**	*i* S		Sg	02 16 23.3	+0.1
LATG	**Datong**	**0.19**	**54**	*e*P		Pg	02 16 25.0	+0.7
LATG				*e*S		Sg	02 16 27.7	+0.7
FUSS	**Fushou**	**0.20**	**210**	*e*P		Pg	02 16 25.0	+0.4
FUSS				*e*S		Sg	02 16 28.3	+0.9
FUSS	**Fushou**	**0.20**	**210**	*e*P		Pg	02 16 25.0	+0.5
FUSS				*e*S		Sg	02 16 28.8	+1.3
YHNB	**Yeheng**	**0.24**	**4**	*e*P		Pg	02 16 26.4	+1.1
YHNB	**Yeheng**	**0.24**	**4**	*e*P		Pg	02 16 26.3	+1.0
ENTT	**Nioudou**	**0.29**	**41**	*e*P		Pg	02 16 26.3	+0.3
NFF	**Wufeng Townshi**	**0.30**	**314**	*e*P		Pb	02 16 27.2	-0.7
NACB	**Ninganchiao**	**0.33**	**139**	*e*P		Pg	02 16 26.3	-0.5
FUSB	**Fushanzhiwuyua**	**0.40**	**32**	*e*P		Pg	02 16 28.3	+0.2
LXIB	**Xiulin Townshi**	**0.40**	**173**	*e*P		Pg	02 16 28.8	+0.6

IDC 20 02:47:36.3±4.8, 6°.30S×128°.42E, h359km±58km, mb2.6/1, mbtmp3.6/3, Error ellipse: s-maj=171.3km s-min=16.8km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.74**	**158**	P		P	02 50 46.7	-1.0
	0.5nm,0.4s,baz=333,slow=13,SNR=14							
WRA				S		S	02 53 25.2	-1.1
	0.2nm,0.5s,baz=335,slow=20,SNR=1.6							
ASAR	**Alice Springs**	**18.06**	**164**	P		P	02 51 23.9	+0.3
	0.8nm,0.3s,baz=346,slow=12,SNR=14							
ASAR				S		S	02 54 32.9	+1.0
	1.5nm,0.9s,baz=344,slow=19,SNR=8.8							
MKAR	**Makanchi Array**	**66.78**	**327**	P		P	02 57 50.2	0.0
	0.2nm,0.6s,baz=118,slow=8.0,SNR=2.3							
	0.2nm,0.6s							

*IDC **20** 03:03:11.1±0.4, 46°.00N×94°.02E, h0km, mb5.4/34, mbtmp5.4/42, ML4.2/7, MS5.1/93, Error ellipse: s-maj=10.7km s-min=7.7km az=17.0*
*BJI **20** 03:03:11.2, 45°.97N×94°.06E, h10km, mB5.7/47, mb5.6/77, ML6.1/8, Ms5.9/99, Ms7 5.9/96*
*MOS **20** 03:03:12.3±1.2, 45°.97N×93°.98E, h17km, mb6.0/84, MS5.4/66, Error ellipse: s-maj=3.9km s-min=2.8km az=125.6*
*NEIC **20** 03:03:13.7±1.9, 46°.05N±0°.07×94°.00E±0°.09, h10km±1km, mb5.7/878, Ms_20 5.3/524, Mwb5.4/66, Mww5.5/19, Error ellipse: s-maj=11.3km s-min=10.0km az=171.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.06; $M_{\theta\theta}$0.27; $M_{\phi\phi}$-1.33; $M_{r\theta}$-0.06; $M_{\theta\phi}$0.79; $M_{\phi r}$0.64; Fault plane solution: $M_0$1.58000×10^{17} NP1: ϕ_s351.19000°, δ58.91000°, λ107.43000°. NP2: ϕ_s139.90000°, δ35.21000°, λ63.59000°. Principal axes: T 1.2406, Plg71.0000°, Azm301.0000°; N 0.5421, Plg15.0000°, Azm162.0000°; P -1.7827, Plg12.0000°, Azm69.0000°;*
*ISC-PP **20** 03:03:13, 46°.05N×94°.00E, h15km*
*NEIC **20** 03:03:13.8, 46°.06N×93°.96E, h22km*
*NEIC **20** 03:03:13.8, 46°.46N×93°.96E, h22km,

comp=Z,34µm,10.0s
TLY Talaya 8.54 45 P **Pn** **03 05 16.1 -0.6**
TLY P **Pn** **03 05 16.1 -0.6**
TLY S **Sn** **03 06 43.8 -9.0**
TLY S **Sn** **03 06 43.8 -9.0**
MALIN Malinovka, Kuz 8.63 332 P **Pn** **03 05 15.8 -2.1**
SONM Songino Array 8.69 73 Pn **Pn** **03 05 19.7 +0.9**
comp=Z,3.1nm,0.3s,baz=256,slow=12,SNR=84
SONM Lg Lg 03 07 43.3
comp=Z,108nm,0.3s,baz=259,slow=29,SNR=6.2
SONM LR LR 03 08 55.9
comp=Z,28µm,18.6s,baz=268,slow=40
comp=Z,134nm,0.9s
SONM Songino Array 8.69 73 **Pn** **03 05 18.9 0.0**
SONM Songino Array 8.69 73 P **Pn** **03 05 18.9 0.0**
I34MN SONGINO INFRAS 8.69 73 Pg Pn 03 05 45.1 +26
baz=268,slow=27
ELT Eltsovka 8.86 328 P **Pn** **03 05 21.6 +0.6**
MINR Mina 8.93 1 P **Pn** **03 05 25.1 +3.0**
ULN Ulaanbaatar 9.13 73 **Pn** **03 05 25.0 0.0**
ULN Ulaanbaatar 9.13 73 *de*P **Pn** **03 05 24.8 -0.2**
ULN pmax pmax
comp=Z,189nm,1.3s
ULN MLR MLR
comp=Z,36µm,10.0s
ULN Ulaanbaatar 9.13 73 S **Sn** **03 06 59.3 -8.2**
ULN Ulaanbaatar 9.13 73 P **Pn** **03 05 25.6 +0.6**
comp=Z,48µmcomp=Z,524nm,0.9s
ULN S Sn 03 07 16.9 +9.4
comp=Z,48µmcomp=Z,524nm,0.9s
IRK Irkutsk 9.20 43 *e*P **Pn** **03 05 25.5 -0.2**
ERU Erunakovo, Kuz 9.21 335 P **Pn** **03 05 28.6 +2.8**
VCHU Verkh-Chumysh, 9.35 331 P **Pn** **03 05 29.7 +1.9**
KOTO Kotino, Kuzbas 9.39 334 P **Pn** **03 05 30.2 +1.9**
BJR3 Bachatsky-3 (S 9.67 331 P **Pn** **03 05 33.7 +1.6**
BJR2 Bachatsky-2, K 9.72 332 P **Pn** **03 05 34.4 +1.5**
GOMU GeErMu 9.79 176 P **Pn** **03 05 32.9 -1.3**
GOMU pmax pmax
comp=Z,260nm,1.0s
GOMU L L
comp=Z,34µm,10.9s
ZAA0 Zalesovo Array 9.92 327 **Pn** **03 05 35.2 -0.4**
ZALV Zalesovo Beam 9.92 327 Pn **Pn** **03 05 35.9 +0.3**
comp=Z,1.1nm,0.3s,baz=150,slow=11,SNR=48
ZALV Lg Lg 03 08 23.8
comp=Z,24nm,0.3s,baz=144,slow=23,SNR=6.1
ZALV LR LR 03 09 30.7
comp=Z,17µm,19.8s,baz=146,slow=38
comp=Z,19nm,0.8s
ZALV Zalesovo Beam 9.92 327 **Pn** **03 05 34.9 -0.7**
SALR Pechorkino, Sa 9.98 331 P **Pn** **03 05 37.4 +1.1**
PDGK Podgornoye 10.67 261 P **Pn** **03 05 44.8 -1.3**
SHLS Shalkode 10.75 260 *e*P Pn 03 05 42.4 -4.7
SHLS *e*S **Sn** **03 07 40.9 -6.3**
SHLS Shalkode 10.75 260 *e*P Pn 03 05 42.4 -4.7
SHLS *e*S **Sn** **03 07 41.0 -6.3**
TDK Taldyqorghan 11.00 271 *e*P **Pn** **03 05 49.8 -0.6**
TDK *e*S **Sn** **03 07 54.0 +1.0**
TDK MLR MLR
comp=Z,11µm,9.0s
TDK Taldyqorghan 11.00 271 *e*P **Pn** **03 05 49.8 -0.6**
TDK *e*S **Sn** **03 07 54.1 +1.0**
TDK LR LR 03 09 45.9
comp=Z,11µm,9.1s
UZB Uzynbulak 11.06 261 *e*P **Pn** **03 05 50.2 -1.1**
UZB *e*S **Sn** **03 07 55.2 +0.5**
UZB Uzynbulak 11.06 261 *e*P **Pn** **03 05 50.3 -1.1**
UZB *e*S **Sn** **03 07 55.3 +0.5**
KPKS Kokpek 11.19 263 *e*P **Pn** **03 05 52.2 -0.8**
KPKS Kokpek 11.19 263 *e*P **Pn** **03 05 52.3 -0.8**
KURK Kurchatov 11.28 300 **Pn** **03 05 52.5 -1.6**
KURK Kurchatov 11.28 300 P **Pn** **03 05 53.0 -1.1**
KURK Kurchatov 11.28 300 P **Pn** **03 05 53.7 -0.5**
KURK P **Pn** **03 05 53.7 -0.5**
KURK S **Sn** **03 08 04.4 +4.7**
KURK S **Sn** **03 08 04.4 +4.7**
KURBB Kurchatov Arra 11.30 300 Pn **Pn** **03 05 53.0 -1.5**
comp=Z,3.5nm,0.3s,baz=104,slow=14,SNR=369
KURBB Lg Lg 03 09 06.2
comp=Z,10nm,0.3s,baz=108,slow=33,SNR=7.6
KURBB LR LR 03 10 35.9
comp=Z,16µm,18.5s,baz=109,slow=39
comp=Z,214nm,1.0s
KURBB Kurchatov Arra 11.30 300 P **Pn** **03 05 52.7 -1.8**
ARXS Arharly 11.57 267 *e*P **Pn** **03 06 01.1 +2.8**
WUS Wushi 11.73 251 **Pn** **03 05 59.3 -1.3**
LZH Lanzhou 12.35 140 *e*P **Pn** **03 06 09.0 -0.1**
LZH pP P 03 06 12.8 -8.4
LZH sP 03 06 14.9
LZH S **Sn** **03 08 26.9 +0.3**
LZH SS **SnSn** **03 08 46.5 +8.1**
LZH pmax pmax
comp=Z,140nm,1.8s
LZH L L
comp=Z,32µm,12.7s
LZH L L
comp=Z,45µm,13.3s
LZH L L
comp=Z,49µm,13.0s
LZDM Lanzhou Array 12.39 140 Pn **Pn** **03 06 09.0 -0.9**
baz=304,slow=12
LZDM Lg Lg 03 09 41.4
baz=321,slow=32
LZDM LR LR 03 11 09.1
comp=Z,13µm,18.3s,baz=5.0,slow=38
comp=Z,25nm,0.5s
MDOK Medeo 12.41 263 *e*P **Pn** **03 06 08.8 -1.1**
MDOK Medeo 12.41 263 *e*P **Pn** **03 06 08.8 -1.1**
MDOK LR LR 03 10 37.9
TARG Taragay, Kyrgy 12.44 256 **Pn** **03 06 08.8 -1.7**
TARG Taragay, Kyrgy 12.44 256 P **Pn** **03 06 08.8 -1.7**
KNDC Almaty 12.45 263 P **Pn** **03 06 11.6 +1.2**
AAA Alma-Ata 12.49 263 *e*P **Pn** **03 06 09.8 -1.1**
AAA MLR MLR
comp=Z,12µm,11.0s
AAA Alma-Ata 12.49 263 *e*P **Pn** **03 06 09.9 -1.1**
AAA LR LR 03 10 37.5
comp=Z,12µm,10.9s
TNSS Tian-Shan 12.53 263 *e*P **Pn** **03 06 10.5 -1.1**
TNSS Tian-Shan 12.53 263 *e*P **Pn** **03 06 10.6 -1.1**
BTO2 Baotou 12.68 109 *e*P **Pn** **03 06 12.8 -0.7**
BTO2 PP **P** **03 06 23.3 -1.5**
BTO2 S **Sn** **03 08 33.0 -1.4**
BTO2 pmax pmax
comp=Z,290nm,1.0s
BTO2 pmax pmax
comp=Z,780nm,4.1s
BTO2 L L
comp=Z,67µm,9.4s
BTO2 L L
comp=Z,32µm,4.0s
BTO2 L L
comp=Z,52µm,9.2s
KDJ Kajisay 12.70 258 **Pn** **03 06 12.6 -1.2**
KDJ Kajisay 12.70 258 P **Pn** **03 06 12.6 -1.2**
ULHL Ulahol 13.29 260 P **Pn** **03 06 21.2 -0.8**
SNR=11
BOOM Boomskoye usch 13.41 261 **Pn** **03 06 22.7 -0.8**
BOOM Boomskoye usch 13.41 261 P **Pn** **03 06 22.7 -0.8**
TKM2 Tokmak 2 13.50 264 P **Pn** **03 06 23.9 -0.9**
SNR=28
HHC Hu-ho-hao-te 13.75 106 *e*P **Pn** **03 06 26.4 -1.7**
HHC PP **P** **03 06 38.0 +1.3**
HHC S **Sn** **03 09 00.6 +0.1**
HHC SS **SnSn** **03 09 12.5 -0.1**
HHC pmax pmax
comp=Z,85nm,0.8s
HHC pmax pmax
comp=Z,220nm,4.4s
HHC L L
comp=Z,32µm,8.5s
HHC L L
comp=Z,28µm,8.6s
HHC L L
comp=Z,29µm,10.4s
NRN Naryn 13.79 257 **Pn** **03 06 29.5 +0.7**
NRN Naryn 13.79 257 P **Pn** **03 06 29.5 +0.7**
SGDS Sogindy 14.00 267 *e*P **Pn** **03 06 30.6 -0.9**
BTLS Baital 14.03 273 *e*P **Pn** **03 06 30.1 -1.7**
KBK Karagaybulak 14.04 263 P **Pn** **03 06 32.3 +0.2**
SNR=32
CHMS Chumysh 14.06 265 P **Pn** **03 06 33.5 +1.2**
SNR=17
USP Ospenovka 14.15 266 P **Pn** **03 06 33.6 +0.1**
SNR=37
CIT Chita 14.17 58 *e*P **Pn** **03 06 33.2 -0.5**
CIT *e* 03 09 19.0
CIT pmax pmax
comp=Z,489nm,2.2s
FRU1 Bishkek 14.21 264 **Pn** **03 06 34.1 -0.2**
FRU1 Bishkek 14.21 264 P **Pn** **03 06 34.1 -0.2**
AAK Ala-Archa 14.36 264 Pn **Pn** **03 06 35.8 -0.7**
comp=Z,0.7nm,0.3s,baz=89,slow=8.2,SNR=22
AAK Lg Lg 03 10 45.3
comp=Z,4.3nm,0.3s,baz=318,slow=22,SNR=4.1
AAK LR LR 03 12 30.5
comp=Z,9µm,19.5s,baz=77,slow=39
comp=Z,28nm,0.9s
AAK Ala-Archa 14.36 264 P **Pn** **03 06 36.3 -0.2**
SNR=25
AAK Ala-Archa 14.36 264 *i* P **Pn** **03 06 35.6 -0.9**
SNR=36
AAK Ala-Archa 14.36 264 *ce*P **Pn** **03 06 35.5 -1.0**
AAK pmax pmax
comp=Z,73nm,1.7s
AAK MLR MLR
comp=Z,9µm,12.0s
AAK Ala-Archa 14.36 264 P **Pn** **03 06 35.8 -0.7**
AAK S **Sn** **03 09 15.6 +0.2**
UCH Uchtor 14.49 262 P **Pn** **03 06 40.0 +1.4**
SNR=63
BRZS Berezniki 14.82 293 *e*P **Pn** **03 06 41.5 -1.1**
BRZS Berezniki 14.82 293 *e*P **Pn** **03 06 41.5 -1.1**
EKS2 Erkin-Say 14.85 264 P **Pn** **03 06 44.3 +1.2**
SNR=29
KSH2 Kashi 15.19 250 P **Pn** **03 06 47.0 -0.7**
KSH2 sP pP 03 06 55.6 -2.0
KSH2 PP **sP** **03 06 59.5 -0.4**
KSH2 SS **S** **03 09 54.0 +1.4**
KSH2 pmax pmax
comp=Z,74nm,1.8s
KSH2 pmax pmax
comp=Z,3µm,4.0s
KSH2 L L
comp=Z,22µm,13.0s
KSH2 L L
comp=Z,19µm,13.0s
KSH2 L L
comp=Z,32µm,12.4s
XLT XiLinHaoTe 15.77 90 *e*P **Pn** **03 06 53.8 -1.4**
XLT sP pP 03 07 00.6 -3.3
XLT S **Sn** **03 09 53.4 +3.8**
XLT pmax pmax
comp=Z,1µm,3.7s
XLT L L
comp=Z,68µm,10.0s
XLT L L
comp=Z,72µm,10.5s
ARSB Arslanbob 15.90 261 **Pn** **03 06 57.2 +0.3**
ARSB Arslanbob 15.90 261 P **Pn** **03 06 57.2 +0.3**
ARSB pmax pmax
comp=Z,622nm,1.9s
TIY Taiyuan 16.00 115 P **Pn** **03 06 57.3 -0.9**
TIY pmax pmax
comp=Z,210nm,1.1s
TIY pmax pmax
comp=Z,340nm,3.5s
TIY L L
comp=Z,20µm,11.3s
TIY L L
comp=Z,29µm,10.6s
TIY L L
comp=Z,42µm,10.3s
LSA Lhasa 16.41 189 *i* P **P** **03 07 07.1 +0.6**
SNR=72
LSA Lhasa 16.41 189 P **P** **03 07 05.4 -1.2**
LSA S **Sn** **03 10 08.3 +2.5**
LSA L L
comp=Z,11µm,11.2s
LSA L L
comp=Z,19µm,15.7s
LSA L L
comp=Z,16µm,11.3s
DZA Taraz 16.47 267 *e*P **Pn** **03 07 03.2 -0.9**
DZA pmax pmax
comp=Z,334nm,1.0s
DZA Taraz 16.47 267 *e*P **Pn** **03 07 03.3 -0.9**
comp=Z,334nm,1.0s
XAN Xi'an 16.48 131 P **Pn** **03 07 01.9 -2.5**
XAN pP P 03 07 07.5 +0.5
XAN S **Sn** **03 10 06.5 -0.5**
XAN pmax pmax
comp=Z,58nm,1.0s
XAN pmax pmax
comp=Z,680nm,3.8s
XAN L L
comp=Z,48µm,12.4s
XAN L L
comp=Z,33µm,13.6s
XAN L L
comp=Z,54µm,11.7s
BVA0 Borovoye Array 16.83 303 P **Pn** **03 07 05.1 -3.5**
BVAR Borovoye Array 16.83 303 Pn **Pn** **03 07 06.1 -2.5**
comp=Z,0.2nm,0.3s,baz=103,slow=13,SNR=110
BVAR Lg Lg 03 12 00.6
comp=Z,0.8nm,0.3s,baz=94,slow=21,SNR=3.9
BVAR LR LR 03 13 42.2
comp=Z,20µm,18.4s,baz=104,slow=38
comp=Z,73nm,0.9s
CD2 Chengdu 16.85 150 P **P** **03 07 10.1 -1.0**
CD2 pP pP 03 07 14.9 -1.1
CD2 S **Sn** **03 10 18.8 +2.8**
CD2 pmax pmax
comp=Z,130nm,1.1s
CD2 pmax pmax
comp=Z,1µm,9.5s
CD2 L L
comp=Z,34µm,12.2s
CD2 L L
comp=Z,14µm,8.2s
CD2 L L
comp=Z,39µm,11.6s
BORK Borovoye 16.88 303 **Pn** **03 07 06.7 -2.4**
BORK Borovoye 16.88 303 *c* *i*P **Pn** **03 07 06.8 -2.4**
BORK pmax pmax
comp=Z,239nm,0.9s
BORK MLR MLR
comp=Z,27µm,10.0s
KK31 Karatay Array 16.98 269 **Pn** **03 07 08.1 -2.4**
KK31 Karatay Array 16.98 269 P **Pn** **03 07 08.1 -2.4**
KK31 pmax pmax
comp=Z,284nm,1.0s
KKAR Karatay Array 16.98 269 **Pn** **03 07 08.0 -2.5**
KKAR Karatay Array 16.98 269 P **Pn** **03 07 08.0 -2.5**
BOD Bodaibo 17.03 39 *e*P **Pn** **03 07 08.8 -2.3**
BOD pmax pmax
comp=Z,332nm,1.5s
BJT Baijiatuau 17.25 102 **Pn** **03 07 12.5 -1.4**
BJT Baijiatuau 17.25 102 P **Pn** **03 07 12.5 -1.4**
BJT pmax pmax
comp=Z,126nm,1.1s
BJI2 Beijing 17.25 102 P **Pn** **03 07 13.3 -0.6**
BJI2 S **S** **03 10 30.3 -4.1**
BJI2 pmax pmax
comp=Z,51nm,1.1s
BJI2 pmax pmax
comp=Z,630nm,7.1s
BJI2 L L
comp=Z,24µm,13.1s
BJI2 L L
comp=Z,12µm,14.4s
BJI2 L L
comp=Z,18µm,11.5s
BRLS Borolday 17.47 269 *e*P **P** **03 07 17.9 +0.1**
BRLS Borolday 17.47 269 *e*P **P** **03 07 17.9 +0.1**
DRK Karamyk 17.53 256 IAmb IAmb 03 07 22.5
comp=Z,903nm,1.6s
IUG luzhnay 17.63 266 *e*P **Pn** **03 07 17.9 -0.8**
IUG pmax pmax
comp=Z,313nm,1.1s
IUG luzhnay 17.63 266 *e*P **Pn** **03 07 17.9 -0.8**
comp=Z,313nm,1.1s
HIA Hailar 17.63 70 P **P** **03 07 18.1 -1.4**
HIA Hailar 17.63 70 *d* *i*P **P** **03 07 18.0 -1.6**
HIA pmax pmax
comp=Z,195nm,1.6s
HIA MLR MLR
comp=Z,13µm,11.0s
HNS HongShan 17.64 112 ⇓P **P** **03 07 18.8 -0.9**
HNS S **S** **03 10 41.8 -0.6**
HNS pmax pmax
comp=Z,170nm,1.4s
HNS pmax pmax
comp=Z,2µm,7.6s
HNS L L
comp=Z,32µm,11.8s
HNS L L
comp=Z,23µm,14.1s
HNS L L
comp=Z,34µm,14.3s
CHM Chimkent 17.87 267 *e*P **Pn** **03 07 20.7 -0.9**
CHM MLR MLR
comp=Z,4µm,13.0s
CHM Chimkent 17.87 267 *e*P **Pn** **03 07 20.7 -0.9**
CHM LR LR 03 13 52.5
comp=Z,4µm,13.3s
LYN LuoYang 18.09 123 ⇓P **Pn** **03 07 21.8 -2.5**
LYN pP P 03 07 24.9 +0.2
LYN sS Sn 03 10 47.6 +1.8
LYN pmax pmax
comp=Z,120nm,1.0s
LYN pmax pmax
comp=Z,2µm,3.5s
LYN L L
comp=Z,30µm,10.0s
LYN L L
comp=Z,14µm,12.7s
LYN L L
comp=Z,38µm,12.4s
GAR Garm 18.77 257 P **P** **03 07 31.6 -0.6**
GAR IAmb IAmb 03 07 42.0
comp=Z,712nm,1.1s
EVN Everest 18.87 200 **Pn** **03 07 35.4 +0.9**
CHGR Chuyangaron 19.72 257 P **P** **03 07 42.5 -0.2**
CHGR Chuyangaron 19.72 257 *c* *i*P **P** **03 07 42.4 -0.3**
CHGR pmax pmax
comp=Z,665nm,1.1s
CHGR MLR MLR
comp=Z,30µm,15.0s
ENH Enshi 19.80 137 P **Pn** **03 07 43.9 -1.2**
ENH IAmb IAmb 03 07 48.3
comp=Z,271nm,0.9s
TIA Tai'an 19.91 111 P **Pn** **03 07 46.1 -0.2**
TIA PP **PnPn** **03 08 01.4 +1.1**
TIA S **S** **03 11 27.0 -1.2**
TIA pmax pmax
comp=Z,240nm,1.3s
TIA pmax pmax
comp=Z,2µm,3.5s
TIA L L
comp=Z,14µm,13.6s
TIA L L
comp=Z,24µm,13.4s
TIA L L
comp=Z,35µm,14.5s
NIL Nilore 20.07 239 P **P** **03 07 47.0 +0.6**
NIL Nilore 20.07 239 P **P** **03 07 47.0 +0.6**
NIL pmax pmax
comp=Z,817nm,0.9s
PZH PanZhiHua 20.39 160 P Pn 03 07 50.8 -1.4
PZH S **S** **03 11 35.9 -2.2**
PZH pmax pmax
comp=Z,150nm,1.6s
PZH pmax pmax
comp=Z,1µm,11.0s
PZH L L
comp=Z,5µm,14.3s
PZH L L
comp=Z,10µm,16.1s
PZH L L
comp=Z,8µm,13.9s
SHL Shillong 20.44 185 **P** **03 07 51.0 +0.4**
SHL IAmb IAmb 03 07 56.8
comp=Z,351nm,1.0s
SHL Shillong 20.44 185 P **P** **03 07 51.0 +0.4**
SHL pmax pmax
comp=Z,351nm,1.0s
SHL Shillong 20.44 185 P Pn 03 07 51.5 -1.3
SNR=71
SHAA Shahritus 20.98 256 **P** **03 07 56.0 -0.4**
SHAA IAmb IAmb 03 08 10.7
comp=Z,627nm,1.1s
TNCH TengChong 21.22 169 ⇑*i*P **P** **03 08 01.1 +2.0**
TNCH pP pP 03 08 04.3 +0.2
TNCH S Sn 03 11 58.8 -2.8
TNCH pmax pmax
comp=Z,430nm,1.0s
TNCH L L
comp=Z,26µm,9.3s
TNCH L L
comp=Z,4µm,9.1s
TNCH L L
comp=Z,34µm,10.3s
DL2 Dalian 21.51 99 P **P** **03 08 02.8 +0.9**
DL2 S **S** **03 12 01.5 +1.7**
DL2 pmax pmax
comp=Z,290nm,1.2s
DL2 pmax pmax
comp=Z,2µm,3.6s
DL2 L L
comp=Z,23µm,10.1s
DL2 L L
comp=Z,17µm,12.8s
DL2 L L
comp=Z,31µm,11.6s
SNY Shenyang 21.65 90 ⇓P **P** **03 08 03.4 +0.1**
SNY pmax pmax
comp=Z,390nm,0.9s
SNY pmax pmax
comp=Z,2µm,3.5s
SNY L L
comp=Z,7µm,10.2s
SNY L L
comp=Z,9µm,10.7s
SNY L L
comp=Z,10µm,10.4s
MORE Moreh 21.70 179 IAmb IAmb 03 08 11.0
comp=Z,788nm,1.0s
MORE IAMs_20 IAMs_20 03 15 55.2
comp=Z,6µm,20.0s
KMI2 Kunming 21.94 158 ⇑P **P** **03 08 06.6 -0.3**
KMI2 S **S** **03 12 05.9 -2.9**
KMI2 pmax pmax
comp=Z,160nm,1.5s
KMI2 L L
comp=Z,5µm,12.9s
KMI2 L L
comp=Z,4µm,7.9s
KMI2 L L
comp=Z,6µm,12.8s
GYA Guiyang 21.94 148 ⇓P **P** **03 08 07.4 +0.6**
GYA S **S** **03 12 06.4 -2.3**
GYA pmax pmax
comp=Z,180nm,1.0s
GYA L L
comp=Z,6µm,13.0s
GYA L L
comp=Z,16µm,14.6s
GYA L L
comp=Z,18µm,12.4s
WHN Wuhan 22.10 127 ⇑*i*P **P** **03 08 08.8 +0.5**
WHN pP **pP** **03 08 11.9 -1.4**
WHN S **S** **03 12 10.1 -1.4**
WHN sS **pS** **03 12 16.9 -2.4**
WHN pmax pmax
comp=Z,790nm,0.9s
WHN L L
comp=Z,54µm,10.2s
WHN L L
comp=Z,26µm,10.1s
WHN L L
comp=Z,76µm,12.9s
KBL Kabul 22.12 248 **P** **03 08 08.2 -0.4**
KBL Kabul 22.12 248 P **P** **03 08 08.3 -0.4**
KBL pmax pmax
comp=Z,1µm,1.7s
KBL Kabul 22.12 248 P **P** **03 08 08.5 -0.2**
SNR=311
KBL P **P** **03 08 08.5 -0.2**
SNR=311
KBL P **P** **03 08 08.5 -0.2**
SNR=311
KBL S **S** **03 12 12.9 +0.8**
KBL S **S** **03 12 12.9 +0.8**
KBL S **S** **03 12 12.9 +0.8**
CN2 Changchun 22.31 84 *e*P **P** **03 08 10.6 +0.1**

CN2 PP **PnPn** **03 08 37.1 +4.0**
CN2 *e*S **S** **03 12 12.8 -2.5**
CN2 pmax pmax
comp=Z,300nm,1.4s
CN2 pmax pmax
comp=Z,900nm,3.0s
CN2 L L
comp=Z,19µm,11.0s
CN2 L L
comp=Z,13µm,11.0s
CN2 L L
comp=Z,16µm,10.0s
HEH HeiHe 22.60 67 *e*P **P** **03 08 12.9 -0.6**
HEH pP **pP** **03 08 15.4 -2.9**
HEH S **S** **03 12 18.3 -2.1**
HEH pmax pmax
comp=Z,210nm,1.2s
HEH pmax pmax
comp=Z,1µm,5.8s
HEH L L
comp=Z,13µm,8.7s
HEH L L
comp=Z,18µm,8.3s
HEH L L
comp=Z,23µm,9.2s
ZEA Zeya 22.63 58 *e*P **P** **03 08 14.7 +0.9**
ZEA *e*S **S** **03 12 13.0 -7.9**
ZEA pmax pmax
comp=N,50nm,1.2s
ZEA pmax pmax
comp=E,110nm,1.0s
ZEA pmax pmax
comp=Z,180nm,1.0s
ZEA pmax pmax
comp=E,500nm,6.5s
ZEA pmax pmax
comp=N,300nm,3.4s
ZEA pmax pmax
comp=Z,900nm,4.9s
ZEA smax smax
comp=N,1µm,11.1s
ZEA smax smax
comp=E,2µm,11.5s
ZEA MLR MLR
comp=E,17µm,9.0s
ZEA MLR MLR
comp=Z,17µm,9.0s
SUJ Sinuiju 22.96 94 P **P** **03 08 17.8 +0.4**
AB31 Akbulak array 23.07 291 **P** **03 08 17.9 -0.6**
ABKAR Akbulak array 23.07 291 P **P** **03 08 17.8 -0.7**
BNX BinXian 23.17 78 ⇓P **P** **03 08 19.4 -0.1**
BNX S **S** **03 12 31.0 +0.5**
BNX pmax pmax
comp=Z,170nm,1.1s
BNX pmax pmax
comp=Z,1µm,3.5s
BNX L L
comp=Z,17µm,8.4s
BNX L L
comp=Z,18µm,9.2s
BNX L L
comp=Z,24µm,12.5s
CNSH ChangSha 23.22 133 P **P** **03 08 18.6 -1.5**
CNSH S **S** **03 12 30.3 -1.1**
CNSH pmax pmax
comp=Z,450nm,4.0s
CNSH L L
comp=Z,7µm,17.5s
CNSH L L
comp=Z,6µm,12.0s
CNSH L L
comp=Z,12µm,14.9s
SVE Sverdlovsk 23.23 310*d i*P **P** **03 08 19.9 -0.1**
SVE *e*S **S** **03 12 33.2 +1.8**
SVE pmax pmax
comp=Z,438nm,1.1s
SVE MLR MLR
comp=Z,19µm,10.0s
SVE MLR MLR
comp=E,10µm,10.0s
BRDH Bariadhala 23.32 186 LR LR 03 19 27.5
comp=E,10µm,18.6s,baz=9.5,slow=42
NRIK Noril'sk 23.65 354 P **P** **03 08 23.2 -0.8**
comp=E,350nm,1.1s,baz=161,slow=9.0,SNR=191
NRIK S **S** **03 12 38.4 +0.5**
comp=E,23nm,0.8s,baz=250,slow=21,SNR=1.4
NRIK Lg Lg 03 15 30.4
comp=E,0.3nm,0.3s,baz=225,slow=19,SNR=4.4
comp=E,350nm,1.1s
NRIK Noril'sk 23.65 354 P **P** **03 08 23.5 -0.5**
NRIK Noril'sk 23.65 354 P **P** **03 08 23.5 -0.5**
NRIK S **S** **03 12 38.4 +0.5**
NRIK pmax pmax
comp=Z,701nm,1.3s
NJ2 Nanjing 23.67 117 ⇓P **P** **03 08 25.6 +1.0**
NJ2 pP **sP** **03 08 30.1 -1.8**
NJ2 sP **pP** **03 08 32.6 +2.9**
NJ2 S **S** **03 12 41.6 +2.8**
NJ2 pmax pmax
comp=Z,890nm,1.4s
NJ2 pmax pmax
comp=Z,7µm,4.0s
NJ2 L L
comp=Z,22µm,12.3s
NJ2 L L
comp=Z,14µm,10.9s
NJ2 L L
comp=Z,20µm,16.1s
AKTO Aktyubinsk 24.23 294 LR LR 03 18 20.7
comp=Z,13µm,20.9s,baz=95,slow=38
AKTO Aktyubinsk 24.23 294 P **P** **03 08 28.8 -0.9**
PYAG Pyongyang 24.30 95 S **S** **03 12 52.8 +4.1**
ARTI Arti 24.36 308 LR LR 03 18 44.3
comp=Z,9µm,20.1s,baz=104,slow=38
ARTI Arti 24.36 308 **P** **03 08 30.9 +0.1**
ARTI IAMs_20 IAMs_20 03 18 23.4
comp=Z,10µm,20.0s
ARTI Arti 24.36 308*c i*P **P** **03 08 31.0 +0.1**
ARTI PP **PnPn** **03 09 00.9 -0.1**
ARTI S **S** **03 12 52.0 +2.5**
ARTI pmax pmax
comp=Z,1µm,1.8s
GULI GuiLin 24.46 142 P **P** **03 08 33.9 +1.9**
GULI S **S** **03 12 50.4 -1.2**
GULI pmax pmax
comp=Z,110nm,1.4s
GULI L L
comp=Z,13µm,14.1s
GULI L L
comp=Z,4µm,10.3s
GULI L L
comp=Z,17µm,11.9s
HJU Haeju 24.75 97 P **P** **03 08 34.1 -0.4**
HJU S **S** **03 12 59.2 +3.3**
HJU AmB
comp=Z,899nm,1.8s
HJU AMS AMS
comp=Z,32µm,14.0s
MDJ Mudanjiang 24.95 80 P **P** **03 08 36.8 +0.5**
MDJ pmax pmax
comp=Z,430nm,1.0s
MDJ L L
comp=Z,16µm,9.3s
MDJ L L
comp=Z,15µm,10.8s
MDJ L L
comp=Z,24µm,11.0s
HHU Hamhung 25.15 92 P **P** **03 08 39.0 +1.0**
HHU S **S** **03 13 07.4 +5.1**
HHU AmB
comp=Z,655nm,1.1s
HHU AMS AMS
comp=Z,21µm,8.4s
KLR Kul'dur 25.48 69 P **P** **03 08 41.1 0.0**
comp=Z,37nm,0.8s,baz=278,slow=10,SNR=81
KLR LR LR 03 19 21.3
comp=Z,9µm,18.1s,baz=283,slow=38
comp=Z,37nm,0.8s
KLR Kul'dur 25.48 69*de*P **P** **03 08 41.4 +0.4**
KLR MLR MLR
comp=Z,9µm,18.0s
INCN Inchon 25.65 98 P **P** **03 08 45.0 +2.3**
INCN Inchon 25.65 98 **P** **03 08 44.2 +1.5**
INCN IAmb IAmb 03 08 52.5
comp=Z,210nm,1.0s
INCN Inchon 25.65 98 P **P** **03 08 44.2 +1.5**
INCN pmax pmax
comp=Z,210nm,1.0s
INCN MLR MLR
comp=Z,14µm,18.0s
INCN Inchon 25.65 98 P **P** **03 08 38.5 -4.1**
SSE Sheshan 25.78 116 P **P** **03 08 45.3 +1.4**
SSE S **S** **03 13 14.8 +2.3**
SSE pmax pmax
comp=Z,180nm,1.1s
SSE pmax pmax
comp=Z,700nm,3.7s
SSE L L
comp=Z,1µm,16.7s
SSE L L
comp=Z,3µm,16.4s
YAK Yakutsk 25.95 39 **P** **03 08 45.1 -0.1**
YAK Yakutsk 25.95 39 IAMs_20 IAMs_20 03 19 12.1
comp=Z,7µm,19.0s
YAK Yakutsk 25.95 39 *e*P **P** **03 08 45.1 -0.1**
YAK *e* 03 09 21.6
YAK *e* 03 12 13.2
YAK *e*S **S** **03 13 17.1 +2.4**
YAK *e*SS **SnSn** **03 14 13.6 +2.1**
YAK pmax pmax
comp=Z,290nm,0.9s
YAK pmax pmax
comp=N,94nm,1.6s
YAK pmax pmax
comp=E,122nm,1.9s
YAK pmax pmax
comp=Z,195nm,2.0s
YAK pmax pmax
comp=N,369nm,4.5s
YAK pmax pmax
comp=E,222nm,2.5s
YAK smax smax
comp=E,4µm,11.9s
YAK smax smax
comp=N,3µm,13.8s
YAK MLR MLR
comp=Z,7µm,20.0s
YAK MLR MLR
comp=N,3µm,18.0s
YAK MLR MLR
comp=E,4µm,18.0s
PSTR Posyet 26.39 84*c i*P **P** **03 08 50.7 +1.4**
KSRS Korea Array 26.55 97 P **P** **03 08 51.8 +1.0**
comp=E,47nm,1.0s,baz=289,slow=7.7,SNR=43
KSRS Lg Lg 03 17 13.2
comp=E,0.3nm,0.3s,baz=307,slow=32,SNR=2.0
KSRS LR LR 03 20 27.7
comp=E,9µm,19.0s,baz=295,slow=39
comp=E,47nm,1.0s
HRA Herat 26.71 256 **P** **03 08 53.9 +1.4**
HRA IAmb IAmb 03 09 07.0
comp=Z,426nm,1.5s
TJN Taejon 26.71 99 P **P** **03 08 55.9 +3.6**
TJN Taejon 26.71 99 P **P** **03 08 53.2 +0.9**
USRK Ussuriysk Ar. 26.71 80 P **P** **03 08 52.9 +0.6**
comp=Z,99nm,0.9s,baz=283,slow=9.8,SNR=73
comp=Z,99nm,0.9s
VLA Vladivostok 26.98 82⇓*e*P **P** **03 08 55.0 +0.4**
VLA pmax pmax
comp=Z,75nm,0.8s
VLA MLR MLR
comp=Z,5µm,15.0s
GZH2 Guangzhou 27.36 138 P **P** **03 09 02.1 +3.9**
GZH2 S **S** **03 13 38.8 +1.3**
GZH2 pmax pmax
comp=Z,180nm,1.4s
GZH2 L L
comp=Z,6µm,10.8s
GZH2 L L
comp=Z,4µm,11.7s
GZH2 L L
comp=Z,11µm,15.2s
CHTO Chiang Mai 27.40 170 P **P** **03 08 59.6 +1.0**
CHTO Chiang Mai 27.40 170 **P** **03 08 59.1 +0.6**
CHTO Chiang Mai 27.40 170 P **P** **03 08 59.1 +0.6**
CHTO pmax pmax
comp=Z,70nm,1.1s
CHTO MLR MLR
comp=Z,3µm,18.0s
CHTO Chiang Mai 27.40 170 P **P** **03 08 59.1 +0.6**
CHTO S **S** **03 13 40.9 +2.7**
CHTO Chiang Mai 27.40 170 P **P** **03 08 59.2 +0.6**
CM31 Chiang Mai Arr 27.75 170 P **P** **03 09 03.0 +1.3**
SNR=11
CMAR Chiang Mai Arr 27.75 170 P **P** **03 09 02.5 +0.8**
comp=Z,13nm,0.8s,baz=356,slow=9.4,SNR=67
CMAR LR LR 03 20 51.2
comp=Z,4µm,19.3s,baz=355,slow=38
comp=Z,13nm,0.8s
GRNR Gornyy 28.29 65⇓*i*P **P** **03 09 07.1 +0.8**
GRNR pmax pmax
comp=N,40nm,1.2s
GRNR pmax pmax
comp=Z,60nm,1.0s
GRNR MLR MLR
comp=E,9µm,16.0s
GRNR MLR MLR
comp=N,4µm,15.0s
GRNR MLR MLR
comp=Z,13µm,18.0s
HKC Hong Kong Obse 28.76 138⇓P P 03 09 15.0 +4.3
HKPS Hong Kong Po S 28.77 138 P P 03 09 15.1 +4.3
HKPS Hong Kong Po S 28.77 138 P **P** **03 09 14.7 +3.9**
HKPS IAmb IAmb 03 09 16.2
comp=Z,202nm,1.4s
QZH2 Quanzhou 28.81 128 P **P** **03 09 14.1 +3.0**
QZH2 S **S** **03 14 03.0 +2.7**
QZH2 L L
comp=Z,20µm,11.7s
QZH2 L L
comp=Z,18µm,12.0s
QZH2 L L
comp=Z,32µm,12.0s
KIRV Kirov 29.46 312 LR LR 03 21 58.8
comp=Z,12µm,19.6s,baz=98,slow=38
KIRV Kirov 29.46 312*c i*P **P** **03 09 16.5 -0.1**
QIZ Qiongzhong 29.89 149 IAmb IAmb 03 09 26.6
comp=Z,310nm,1.4s
QIZ Qiongzhong 29.89 149 P **P** **03 09 21.8 +1.0**
QIZ pP **pP** **03 09 25.0 -1.1**
QIZ S **S** **03 14 18.8 +1.3**
QIZ pmax pmax
comp=Z,150nm,1.4s
QIZ L L
comp=Z,7µm,10.3s
QIZ L L
comp=Z,5µm,10.3s
QIZ L L
comp=Z,11µm,9.6s
BELG Belogornoye 30.55 299 LR LR 03 22 16.0
comp=Z,6µm,18.5s,baz=86,slow=38
BELG Belogornoye 30.55 299*c i*P **P** **03 09 26.3 +0.1**
BELG pmax pmax
comp=Z,104nm,1.0s
TIXI Tiksi 30.56 21 **P** **03 09 26.4 +0.2**
TIXI Tiksi 30.56 21 IAMs_20 IAMs_20 03 21 48.0
comp=Z,7µm,20.0s
TIXI Tiksi 30.56 21*ce*P **P** **03 09 26.0 -0.2**
TIXI pmax pmax
comp=Z,61nm,0.9s
TIXI MLR MLR
comp=Z,6µm,16.0s
YHNB Yeheng 30.58 125 P P 03 09 31.2 +4.3
YHNB Yeheng 30.58 125 IAmb IAmb 03 09 34.2
comp=Z,93nm,0.8s
JNU Nakatsue 30.92 101 LR LR 03 23 23.0
comp=Z,6µm,18.2s,baz=313,slow=39
SSLB Suanglung 31.03 126 P **P** **03 09 32.8 +1.9**
SSLB Suanglung 31.03 126 **P** **03 09 32.4 +1.5**
SSLB IAMs_20 IAMs_20 03 22 47.8
comp=Z,7µm,19.0s
NACB Ninganchiao 31.09 125 P **P** **03 09 34.7 +3.4**
TPUB Ta-pu 31.24 127 P P 03 09 37.5 +4.9
TPUB Ta-pu 31.24 127 P **P** **03 09 33.6 +1.0**
TPUB IAmb IAmb 03 09 40.5
comp=Z,167nm,1.1s
TPUB IAMs_20 IAMs_20 03 23 15.3
comp=Z,6µm,20.0s
HYB Hyderabad 31.25 209 *e*P **P** **03 09 33.7 +0.9**
HYB *e*S **S** **03 14 41.8 +3.1**
HYB IVMs_BB IVMs_BB 03 23 18.6
comp=Z,2µm,10.4s
YULB Yu-li 31.54 126 P P 03 09 40.5 +5.2
YULB Yu-li 31.54 126 P 03 09 40.0 +4.8
YULB IAmb IAmb 03 09 50.9
comp=Z,137nm,1.2s
JSU Suzuyama 31.59 104 P **P** **03 09 38.7 +3.0**
TWG Pinlang 31.86 127 IAMs_20 IAMs_20 03 23 15.1
comp=Z,6µm,22.0s
TWGBT Beinan 31.87 127 P P 03 09 43.5 +5.3
UGL Uglegorsk 32.17 67 *e*P **P** **03 09 40.7 +0.1**
UGL *e*S **S** **03 14 52.3 -0.3**
UGL pmax pmax
comp=Z,80nm,0.8s
UGL MLR MLR
comp=N,9µm,9.0s
UGL MLR MLR
comp=E,13µm,9.0s
UGL MLR MLR
comp=Z,10µm,9.0s
TYV Tymovskoe 32.18 63 *e*P **P** **03 09 42.0 +1.3**
TYV *e*S **S** **03 14 53.3 +0.6**
TYV pmax pmax
comp=Z,82nm,1.0s
TYV pmax pmax
comp=Z,200nm,2.6s
TYV smax smax
comp=N,300nm,3.4s
TYV smax smax
comp=E,300nm,3.4s
JMN Monobe 32.64 98 P **P** **03 09 46.0 +1.1**
MAK Makhachkala 32.95 282*d i*P **P** **03 09 43.9 -3.6**
MAK *e*S **S** **03 15 00.1 -4.8**
MAK *e*SS **SnSn** **03 17 00.9 -1.5**
MAK pmax pmax
comp=Z,182nm,0.9s
MAK MLR MLR
comp=Z,17µm,13.0s
YSS Yuzhno-Sakhali 33.16 70 *e*P **P** **03 09 48.5 -0.8**
YSS *e*S **S** **03 15 04.2 -3.9**
YSS pmax pmax
comp=Z,227nm,1.4s
YSS MLR MLR
comp=Z,5µm,13.8s
JOW Kunigami 33.21 113 LR LR 03 24 32.2
comp=Z,4µm,19.2s,baz=314,slow=39
JOW Kunigami 33.21 113 P **P** **03 09 50.7 +0.8**
JOW Kunigami 33.21 113 IAmb IAmb 03 09 54.3
comp=Z,104nm,0.9s
NGCH Negor - Chabah 33.36 243 P **P** **03 09 54.3 +3.1**
SNR=5.5
AKT Akhty 33.37 279⇑*i*P **P** **03 09 52.5 +1.2**
AKT *e* 03 11 02.1
AKT *e*PPP PPP 03 11 12.9
AKT *e*SS SS 03 17 19.1 -16
AKT *e* 03 20 09.3
AKT pmax pmax
comp=Z,1µm,1.2s
AKT pmax pmax
comp=Z,867nm,1.0s
AKT pmax pmax
comp=N,153nm,1.0s
AKT pmax pmax
comp=E,240nm,0.8s
AKT MLR MLR
comp=Z,5µm,14.0s
AKT MLR MLR
comp=E,4µm,11.0s
AKT MLR MLR
comp=N,4µm,17.0s
INU Inuyama 33.94 93 P **P** **03 09 59.2 +3.0**
ASAJ Asahikawa 33.96 75 LR LR 03 23 12.8
comp=N,2µm,18.1s,baz=282,slow=35
ASAJ Asahikawa 33.96 75 P **P** **03 09 55.5 -0.8**
ASAJ pmax pmax
comp=Z,126nm,1.5s
JKA Kamikawa-asahi 33.97 75 **P** **03 09 55.5 -0.9**
JKA IAmb IAmb 03 10 01.7
comp=Z,126nm,1.5s
JGF Kuroka 34.05 92 P **P** **03 09 59.3 +2.1**
MAJO Matsushiro 34.16 90 P **P** **03 10 01.2 +3.1**
MAJO Matsushiro 34.16 90 **P** **03 09 57.0 -1.1**
MAJO Matsushiro 34.16 90 P **P** **03 09 57.0 -1.1**
MAJO pmax pmax
comp=Z,105nm,1.6s
MAJO MLR MLR
comp=Z,8µm,18.0s
MJAR Matsushiro Arr 34.16 90 P **P** **03 09 56.9 -1.3**
comp=Z,31nm,1.0s,baz=300,slow=8.4,SNR=22
MJAR PcP **PcP** **03 12 34.0 -0.9**
comp=Z,6.7nm,1.1s,baz=299,slow=4.4,SNR=4.0
MJAR LR LR 03 24 18.4
comp=Z,5µm,20.3s,baz=308,slow=37
comp=Z,31nm,1.0s
MJAR Matsushiro Arr 34.16 90 P **P** **03 09 57.8 -0.3**
PBA Port Blair 34.22 182 P **P** **03 10 01.3 +2.6**
SNR=16
VRH Novokhopyorsk 34.36 298 *e*P **P** **03 09 56.7 -2.9**
VRH *e* 03 09 59.1
VRH pmax pmax
comp=Z,610nm,1.3s
VRH MLR MLR
comp=Z,6µm,9.0s
KLMR Klimovskoe 34.58 315 *e*P **P** **03 10 00.2 -1.3**
KLMR *e* 03 11 15.3
KLMR pmax pmax
comp=Z,514nm,1.1s
KLMR MLR MLR
comp=Z,18µm,15.0s
JASK Jask - Hormozg 35.07 248 P **P** **03 10 08.2 +2.1**
SNR=28
JASK S **S** **03 15 43.1 +5.0**
GUDG Gudauri 35.21 283 P **P** **03 10 08.8 +1.4**
GOF Gofitskoye 35.22 287*c i*P **P** **03 10 08.6 +1.4**
ADZR Andozero 35.26 321 *e*P **P** **03 10 05.6 -1.7**
ADZR *e* 03 11 23.8
ADZR pmax pmax
comp=Z,179nm,1.6s
ADZR MLR MLR
comp=Z,24µm,14.0s
TBLG Delisi 35.32 281 P **P** **03 10 09.7 +1.6**
NCK Nalchik 35.41 285*c i*P **P** **03 10 09.8 +0.9**
NCK pmax pmax
comp=Z,87nm,1.0s
NCK MLR MLR
comp=Z,7µm,14.0s
LPSR Galich'ya Gora 35.76 301 *e*P **P** **03 10 11.4 -0.3**
LPSR *e*S **S** **03 15 49.8 +1.8**
LPSR pmax pmax
comp=Z,1µm,1.2s
LPSR pmax pmax
comp=Z,770nm,1.0s
LPSR smax smax
comp=N,600nm,4.2s
MA2 Magadan 35.76 47 P **P** **03 10 12.3 +0.7**
MA2 IAmb IAmb 03 10 17.0
comp=Z,124nm,0.9s
MA2 IAMs_20 IAMs_20 03 25 20.5
comp=Z,4µm,18.0s
MA2 Magadan 35.76 47 P **P** **03 10 12.3 +0.7**
MA2 pmax pmax
comp=Z,124nm,0.9s
MA2 MLR MLR
comp=Z,4µm,18.0s
VORR Voronezh 35.79 300 *e*P **P** **03 10 09.1 -2.9**
VORR *e* 03 10 12.6
VORR pmax pmax
comp=Z,610nm,1.4s
KBZ Khabaz 35.79 285 P **P** **03 10 12.4 +0.4**
comp=Z,31nm,0.9s,baz=61,slow=13,SNR=55
KBZ LR LR 03 28 31.9
comp=Z,3µm,18.5s,baz=82,slow=42
comp=Z,31nm,0.9s
KBZ Khabaz 35.79 285*ce*P **P** **03 10 13.2 +1.1**
KBZ pmax pmax
comp=Z,85nm,1.1s
KBZ MLR MLR
comp=Z,5µm,15.0s
TRLG Trialeti 35.84 281 P **P** **03 10 14.3 +1.6**
KVAR Kislovodsk Arr 35.85 286 LR LR 03 27 35.1
comp=Z,4µm,18.4s,baz=4.5,slow=41
KIV Kislovodsk 35.85 286 ⇓P **P** **03 10 15.1 +2.3**
KIV Kislovodsk 35.85 286 **P** **03 10 14.6 +1.8**
KIV IAmb IAmb 03 10 15.7
comp=Z,269nm,1.4s
KIV Kislovodsk 35.85 286 *i* P **P** **03 10 14.0 +1.3**
SNR=36
KIV Kislovodsk 35.85 286 *e*P **P** **03 10 13.5 +0.8**

KIV *e* 03 11 34.0
KIV *eS* **S** **03 15 52.1 +2.2**
KIV pmax pmax
comp=Z,112nm,1.1s
KIV pmax pmax
comp=Z,213nm,4.6s
KIV MLR MLR
comp=Z,4μm,16.0s
KIV Kislovodsk 35.85 286 P **P** **03 10 13.9 +1.2**
KIV P **P** **03 10 13.9 +1.2**
KIV P **P** **03 10 13.9 +1.2**
KIV S **S** **03 15 54.2 +4.3**
KIV *S* **S** **03 15 54.2 +4.3**
KIV S **S** **03 15 54.2 +4.3**
KIV Kislovodsk 35.85 286 P **P** **03 10 12.5 -0.2**
comp=Z,2μmcomp=Z,82nm,1.0s
SZP Santa 35.86 133 P **P** **03 10 15.8 +2.9**
VORD Divnogorie 35.90 298 *eP* **P** **03 10 10.9 -2.0**
VORD *e* 03 10 12.9
VORD pmax pmax
comp=Z,400nm,1.2s
VORD MLR MLR
comp=Z,1μm,8.0s
VSR Storozhevoye 35.92 299 *eP* **P** **03 10 10.7 -2.4**
VSR *e* 03 10 12.7
VSR pmax pmax
comp=Z,560nm,1.1s
VSR MLR MLR
comp=Z,6μm,9.0s
SHA1 Shidzhatmaz 35.95 285*ceP* **P** **03 10 15.1 +1.3**
MOS Moscow 35.95 307 *eP* **P** **03 10 12.9 -0.4**
MOS *e* 03 11 33.3
MOS *eS* **S** **03 15 50.1 -0.8**
MOS *eSS* **SnSn** **03 18 17.5 +2.8**
MOS pmax pmax
comp=Z,900nm,1.0s
MOS pmax pmax
comp=Z,655nm,1.0s
MOS pmax pmax
comp=N,200nm,1.1s
MOS pmax pmax
comp=E,300nm,1.0s
MOS pmax pmax
comp=N,190nm,1.0s
MOS pmax pmax
comp=E,286nm,0.9s
MOS MLR MLR
comp=Z,6μm,11.0s
MOS MLR MLR
comp=N,3μm,12.0s
MOS MLR MLR
comp=E,4μm,10.0s
GNI Garni 35.99 279 LR LR 03 26 32.3
comp=E,3μm,19.9s,baz=77,slow=39
GNI Garni 35.99 279 P **P** **03 10 16.9 +2.9**
GNI Garni 35.99 279 IAMs_20 IAMs_20 03 26 21.3
comp=Z,3μm,18.0s
GNI Garni 35.99 279 P **P** **03 10 16.9 +2.9**
GNI pmax pmax
comp=Z,2μm,1.3s
GNI MLR MLR
comp=Z,3μm,18.0s
GNI Garni 35.99 279 P **P** **03 10 15.3 +1.3**
BANOM Banah 36.05 249 *i* P **P** **03 10 15.5 +0.9**
SNR=12
BANOM Banah 36.05 249 P **P** **03 10 14.2 -0.3**
BANOM P **P** **03 10 14.2 -0.3**
SHME Shamm 36.07 250 *i* P **P** **03 10 15.6 +0.9**
SNR=23
SHME Shamm 36.07 250 P **P** **03 10 16.0 +1.4**
SNR=32
SHME P **P** **03 10 16.0 +1.4**
SNR=32
NEUR Neytrino 36.10 285*ceP* **P** **03 10 16.2 +1.2**
NEUR pmax pmax
comp=Z,195nm,1.2s
NEUR MLR MLR
comp=Z,7μm,17.0s
YUK Yuzh-Kuril'sk 36.19 74 *eP* **P** **03 10 15.8 +0.3**
YUK *eS* **S** **03 15 56.0 +1.3**
YUK MLR MLR
comp=E,16μm,13.0s
YUK MLR MLR
comp=Z,13μm,13.0s
YUK MLR MLR
comp=N,6μm,12.0s
SEY Seymchan 36.43 41 LR LR 03 27 31.7
comp=N,555nm,21.5s,baz=273,slow=40
SEY Seymchan 36.43 41|| *eP* **P** **03 10 17.8 +0.5**
SEY pmax pmax
comp=Z,51nm,1.3s
SEY MLR MLR
comp=Z,5μm,15.0s
WSAR Wadi Sarin 36.46 244 LR LR 03 28 19.6
comp=Z,15nm,20.2s,baz=34,slow=41
WSAR Wadi Sarin 36.46 244 P **P** **03 10 20.3 +2.2**
SNR=30
MDH Madha 36.48 249 *i* P **P** **03 10 18.1 -0.1**
SNR=6.1
MDH Madha 36.48 249 P **P** **03 10 17.3 -0.9**
MDH P **P** **03 10 17.3 -0.9**
MDH S **S** **03 15 58.8 -0.8**
MDH S **S** **03 15 58.8 -0.8**
MASF Masafi 36.52 249 P **P** **03 10 20.4 +1.8**
SNR=8.8
MASF P **P** **03 10 20.4 +1.8**
SNR=8.8
MASF P **P** **03 10 20.4 +1.8**
SNR=8.8
MASF S **S** **03 15 59.8 -0.6**
MASF S **S** **03 15 59.8 -0.6**
MASF S **S** **03 15 59.8 -0.6**
MSFE Esma-Masafi 36.53 249 *i* P **P** **03 10 19.6 +1.0**
SNR=12
BIDO Bidbid 36.57 245 P **P** **03 10 22.0 +3.0**
SNR=13
BIDO P **P** **03 10 22.0 +3.0**
SNR=13
OBN Obninsk 36.65 306 LR LR 03 26 57.2
comp=Z,3μm,19.2s,baz=72,slow=39
OBN Obninsk 36.65 306 **P** **03 10 19.1 -0.1**
OBN IAMs_20 IAMs_20 03 27 45.6
comp=Z,4μm,18.0s
OBN Obninsk 36.65 306*c i*P **P** **03 10 19.3 0.0**
OBN *i* *SP **pP** **03 10 24.9 +0.3**
OBN *i* 03 10 29.9
OBN *i* 03 11 43.2
OBN *e* 03 12 44.1
OBN *eS* **S** **03 16 04.0 +2.5**
OBN *i* SS **SnSn** **03 18 23.4 -8.1**
OBN pmax pmax
comp=Z,1μm,1.7s
OBN MLR MLR
comp=Z,5μm,15.0s
OBN Obninsk 36.65 306 P **P** **03 10 18.6 -0.7**
comp=Z,6μmcomp=Z,555nm,1.2s
ERBR Yeremizino-Bor 36.69 289 *eP* **P** **03 10 21.2 +1.5**
ERBR *eS* **S** **03 16 03.0 +0.6**
ERBR pmax pmax
comp=Z,1μm,1.0s
ERBR MLR MLR
comp=Z,8μm,15.0s
WBK Wadi Bani Khal 36.72 243 P **P** **03 10 23.0 +2.7**
SNR=18
WBK P **P** **03 10 23.0 +2.7**
SNR=18
UMQ Umm Al-Quwin 36.74 250 *i* P **P** **03 10 22.4 +2.0**
SNR=12
UMQ Umm Al-Quwin 36.74 250 P **P** **03 10 23.7 +3.4**
SNR=13
UMQ P **P** **03 10 23.7 +3.4**
SNR=13
UMQ P **P** **03 10 23.7 +3.4**
SNR=13
JLN Jalan Bani Buh 36.78 242 P **P** **03 10 23.0 +2.2**
SNR=29
JLN P **P** **03 10 23.0 +2.2**
SNR=29
JLN P **P** **03 10 23.0 +2.2**
SNR=29
UOSS Minazif 36.79 248 **P** **03 10 21.6 +0.8**
UOSS Minazif 36.79 248 IAMs_20 IAMs_20 03 27 31.0
comp=Z,4μm,20.0s
UOSS Minazif 36.79 248 *i* P **P** **03 10 21.1 +0.3**
SNR=8.4
LABN Labinsk 36.91 288 *eP* **P** **03 10 23.4 +1.7**
LABN *eS* **S** **03 16 10.0 +4.2**
LABN pmax pmax
comp=Z,457nm,1.0s
LABN MLR MLR
comp=E,8μm,15.0s
HATD Hatta, Dubai 36.92 248 *i* P **P** **03 10 22.9 +1.0**
SNR=20
HATD Hatta, Dubai 36.92 248 P **P** **03 10 25.0 +3.0**
SNR=15
HATD P **P** **03 10 25.0 +3.0**
SNR=15
SMDO Samad 36.96 244 P **P** **03 10 25.0 +2.6**
SNR=31
SMDO P **P** **03 10 25.0 +2.6**
SNR=31
HOQ Hoqain 37.05 245 P **P** **03 10 25.0 +1.9**
SNR=24
HOQ P **P** **03 10 25.0 +1.9**
SNR=24
HOQ P **P** **03 10 25.0 +1.9**
SNR=24
HOQ S **S** **03 16 14.8 +6.5**
HOQ S **S** **03 16 14.8 +6.5**
HOQ S **S** **03 16 14.8 +6.5**
LVZ Lovozero 37.06 327 P **P** **03 10 21.9 -0.9**
LVZ IAmb IAmb 03 10 24.0
comp=Z,397nm,1.9s
LVZ Lovozero 37.06 327*deP* **P** **03 10 23.3 +0.6**
LVZ pmax pmax
comp=Z,157nm,1.7s
LVZ MLR MLR
comp=Z,8μm,18.0s
ASHO Ashiyiah 37.07 248 *i* P **P** **03 10 24.8 +1.6**
SNR=44
ASHO Ashiyiah 37.07 248 P **P** **03 10 25.1 +1.9**
SNR=30
ASHO P **P** **03 10 25.1 +1.9**
SNR=30
JHJ Hachijo jima 2 37.07 94 LR LR 03 25 25.3
comp=Z,3μm,18.3s,baz=46,slow=36
NAZ Nazwa, Dubai 37.11 249 *i* P **P** **03 10 24.5 +1.0**
SNR=21
NAZ Nazwa, Dubai 37.11 249 P **P** **03 10 25.1 +1.5**
SNR=13
NAZ P **P** **03 10 25.1 +1.5**
SNR=13
SOHO SOHO 37.15 247 *i* P **P** **03 10 24.4 +0.6**
SNR=34
FAQ Al Faqa, Dubai 37.33 249 *i* P **P** **03 10 26.4 +1.0**
SNR=13
FAQ Al Faqa, Dubai 37.33 249 P **P** **03 10 27.0 +1.6**
SNR=15
FAQ P **P** **03 10 27.0 +1.6**
SNR=15
JMDO Jabal Madar 37.43 243 P **P** **03 10 29.0 +2.7**
SNR=9.8
APA Apatity 37.51 327|| *i*P **P** **03 10 25.0 -1.4**
APA *i* 03 11 51.7
APA *i* 03 12 44.0
APA *i* S **S** **03 16 12.6 -1.8**
APA *i* SS **SnSn** **03 18 49.1 -2.9**
APA pmax pmax
comp=Z,97nm,1.2s
APA MLR MLR
comp=Z,25μm,12.1s
ASUD Al Ashush, Dub 37.58 249 *i* P **P** **03 10 29.1 +1.6**
SNR=24
ASUD Al Ashush, Dub 37.58 249 P **P** **03 10 30.0 +2.5**
SNR=20
ASUD P **P** **03 10 30.0 +2.5**
SNR=20
ALNE Al Ain 37.71 248 *i* P **P** **03 10 30.2 +1.7**
SNR=27
ALNE Al Ain 37.71 248 P **P** **03 10 30.3 +1.7**
SNR=44
ALNE P **P** **03 10 30.3 +1.7**
SNR=44
BSY Bisya 37.72 245 P **P** **03 10 31.0 +2.3**
SNR=22
BSY P **P** **03 10 31.0 +2.3**
SNR=22
ARQ Araqi 37.72 246 P **P** **03 10 31.0 +2.2**
SNR=71
AJN Ajban 37.85 249 *i* P **P** **03 10 30.7 +0.9**
SNR=12
AJN Ajban 37.85 249 P **P** **03 10 31.6 +1.8**
SNR=14
AJN P **P** **03 10 31.6 +1.8**
SNR=14
SOC Sochi 37.98 287*c i*P **P** **03 10 31.7 +1.0**
SOC *e**PP **pP** **03 10 35.3 -0.8**
SOC *e* 03 11 55.7
SOC *eS* **S** **03 16 22.6 +0.5**
SOC *e*SSS SSS 03 19 23.1
SOC pmax pmax
comp=Z,150nm,1.1s
SOC MLR MLR
comp=Z,6μm,15.0s
KHAM Kharkiv 38.03 298 P **P** **03 10 30.8 -0.4**
JOF Joensuu 38.40 319 *eP* **P** **03 10 34.6 +0.6**
MHTO MHTO 38.54 242 P **P** **03 10 38.0 +2.3**
SNR=35
MHTO P **P** **03 10 38.0 +2.3**
SNR=35
MHTO P **P** **03 10 38.0 +2.3**
SNR=35
KOPT Kop Dagi 38.96 281 IAmb IAmb 03 10 44.0
comp=Z,324nm,1.2s
JRN Qarnain Island 38.99 252 P **P** **03 10 40.3 +0.9**
SNR=5.8
JRN P **P** **03 10 40.3 +0.9**
SNR=5.8
ANN Anapa 39.03 289*d i*P **P** **03 10 40.3 +0.8**
ANN *eS* **S** **03 16 43.0 +5.2**
ANN pmax pmax
comp=Z,664nm,1.2s
TGY Tagaytay City 39.04 136 LR LR 03 27 09.6
comp=Z,2μm,19.3s,baz=318,slow=37
UMZA Um Al Zommool 39.04 247 P **P** **03 10 41.4 +1.6**
UMZA P **P** **03 10 41.4 +1.6**
UMZA P **P** **03 10 41.4 +1.6**
VADS Vadso 39.13 331 *eP* **P** **03 10 40.6 +0.5**
VADS IAmb IAmb 03 10 41.7
comp=Z,224nm,0.9s
VADS *e*PP **PP** **03 12 09.6 0.0**
VADS *eS* **S** **03 16 40.9 +2.0**
VADS *eSS* **SS** **03 19 35.4 +4.2**
VADS IAMs_20 IAMs_20 03 29 14.7
comp=Z,7μm,11.7s
MALK Mahakanadarawa 39.20 201 P **P** **03 10 41.3 +0.2**
PUL Pulkovo 39.23 314*ceP* **P** **03 10 41.3 +0.4**
PUL pmax pmax
comp=Z,306nm,0.8s
PUL MLR MLR
comp=Z,17μm,17.0s
PUL Pulkovo 39.23 314 *eP* **P** **03 10 41.8 +0.9**
DQM DQM 39.60 241 P **P** **03 10 47.0 +2.5**
SNR=5.7
SHMA Al-Shehemyia 39.63 255 P **P** **03 10 44.9 +0.2**
KBD Kabd 39.75 261 P **P** **03 10 46.3 +0.6**
KBD S **S** **03 16 52.6 +3.6**
MZR Muzera 39.92 249 *i* P **P** **03 10 47.5 +0.3**
SNR=37
MZR Muzera 39.92 249 P **P** **03 10 47.9 +0.7**
SNR=17
MZR P **P** **03 10 47.9 +0.7**
SNR=17
KEV Kevo 39.93 330 **P** **03 10 47.2 +0.5**
KEV Kevo 39.93 330 P **P** **03 10 47.2 +0.5**
KEV pmax pmax
comp=Z,87nm,0.9s
KEV MLR MLR
comp=Z,2μm,21.0s
SGF Sodankyl 40.15 326 P **P** **03 10 49.2 +0.6**
SGF pmax pmax
comp=Z,224nm,1.2s
TRNA Turayna 40.22 253 P **P** **03 10 51.0 +1.4**
SNR=5.6
PALK Pallekele 40.24 201 LR LR 03 30 04.8
comp=Z,851nm,20.1s,baz=26,slow=40
PALK Pallekele 40.24 201 **P** **03 10 51.1 +1.2**
PALK Pallekele 40.24 201 *i* P **P** **03 10 51.2 +1.4**
SNR=29
PALK Pallekele 40.24 201*c i*P **P** **03 10 51.1 +1.2**
PALK pmax pmax
comp=Z,97nm,1.0s
PALK Pallekele 40.24 201 P **P** **03 10 49.0 -0.8**
PALK S **S** **03 16 59.1 +2.5**
PALK Pallekele 40.24 201 P **P** **03 10 51.0 +1.2**
comp=Z,58nm,1.2s
ARA0 ARCESS Array S 40.46 330 *eP* **P** **03 10 51.6 +0.5**
ARA0 IAmb IAmb 03 10 52.1
comp=Z,146nm,1.1s
ARA0 *e*PP **PP** **03 12 24.6 +0.6**
ARA0 *eS* **S** **03 17 01.9 +3.1**
ARA0 *eSS* **SnSn** **03 20 00.3 -2.7**
ARA0 IAMs_20 IAMs_20 03 29 45.9
comp=Z,11μm,13.3s
ARCES ARCESS Array B 40.46 330 P **P** **03 10 50.9 -0.3**
comp=Z,71nm,0.8s,baz=77,slow=8.4,SNR=104
ARCES PP **PP** **03 12 26.9 +2.8**
comp=Z,41nm,1.0s,baz=80,slow=12,SNR=5.7
ARCES PcP **PcP** **03 12 52.3 -1.2**
comp=Z,17nm,0.6s,baz=92,slow=3.8,SNR=8.4
ARCES LR LR 03 29 27.0
comp=Z,3μm,18.3s,baz=98,slow=39
comp=Z,71nm,0.8s
ARCES ARCESS Array B 40.46 330 P **P** **03 10 51.7 +0.5**
ARCES ARCESS Array B 40.46 330 P **P** **03 10 51.7 +0.5**
ARCES 03 12 52.3
ARCES pmax pmax
comp=Z,103nm,0.9s
SMRA Abu-Samra 40.47 253 P **P** **03 10 53.0 +1.3**
SNR=10
SKR Severo-Kuril's 40.49 60*ceP* **P** **03 10 51.5 -0.1**
OUL Oulu 40.59 323 P **P** **03 10 52.2 0.0**
OUL pmax pmax
comp=Z,170nm,1.4s
LHMI Lhok Sumawe 40.67 175 P **P** **03 10 56.0 +2.6**
LHMI Lhok Sumawe 40.67 175 **P** **03 10 55.1 +1.7**
LHMI IAmb IAmb 03 10 57.0
comp=Z,117nm,0.8s
LHMI Lhok Sumawe 40.67 175 P **P** **03 10 56.2 +2.8**
comp=Z,2μmcomp=Z,119nm,0.9s
PEA0B Petropavlovsk- 40.70 56 **P** **03 10 54.2 +0.9**
PEA0B Petropavlovsk- 40.70 56 P **P** **03 10 54.2 +0.9**
PEA0B pmax pmax
comp=Z,292nm,1.0s
PETK Petropavlovsk- 40.70 56 P **P** **03 10 54.0 +0.7**
comp=Z,168nm,0.9s,baz=246,slow=2.9,SNR=89
PETK LR LR 03 28 30.1
comp=Z,1μm,21.9s,baz=277,slow=37
comp=Z,168nm,0.9s
PETK Petropavlovsk- 40.70 56 **P** **03 10 54.3 +1.0**
PETK Petropavlovsk- 40.70 56 P **P** **03 10 54.3 +1.0**
SUF Sumiainen 40.78 319 *eP* **P** **03 10 54.1 +0.3**
HOPEN Hopen 40.94 340 *eP* **P** **03 10 55.9 +0.9**
HOPEN IAmb IAmb 03 10 57.1
comp=Z,218nm,0.9s
HOPEN *e*PP **PP** **03 12 29.8 +0.6**
HOPEN *eS* **S** **03 17 06.0 +0.2**
HOPEN *eSS* **SS** **03 20 09.4 +2.4**
HOPEN IAMs_20 IAMs_20 03 34 00.5
comp=Z,4μm,11.6s
KULM Kulim 40.94 170 P **P** **03 10 56.3 +0.7**
KULM Kulim 40.94 170 IAmb IAmb 03 11 01.1
comp=Z,337nm,1.8s
FINES FINESS Array B 41.02 317 P **P** **03 10 56.0 +0.2**
comp=Z,91nm,0.9s,baz=90,slow=9.5,SNR=96
FINES LR LR 03 29 32.4
comp=Z,6μm,20.3s,baz=92,slow=39
comp=Z,91nm,0.9s
FINES FINESS Array B 41.02 317 **P** **03 10 56.1 +0.3**
FINES FINESS Array B 41.02 317 P **P** **03 10 56.1 +0.3**
HAMF Hammerfest 41.06 331 *eP* **P** **03 10 56.4 +0.4**
HAMF IAmb IAmb 03 10 58.6
comp=Z,179nm,0.8s
HAMF *e*PP **PP** **03 12 31.7 +1.2**
HAMF *eS* **S** **03 17 10.1 +2.4**
HAMF IAMs_20 IAMs_20 03 30 26.4
comp=Z,10μm,11.5s
SIM Simferopol' 41.14 291 *eP* **P** **03 10 57.6 +0.6**
SIM pmax pmax
comp=Z,484nm,1.1s
PET Petropavlovsk 41.28 56 P **P** **03 10 58.8 +0.8**
PET Petropavlovsk 41.28 56 P **P** **03 10 57.7 -0.3**
PET IAmb IAmb 03 11 03.5
comp=Z,151nm,1.3s
PET Petropavlovsk 41.28 56 *eP* **P** **03 10 58.2 +0.2**
PET *e* 03 12 42.8
PET *eS* **S** **03 17 08.0 -3.2**
PET *eSS* **SS** **03 20 14.1 -0.2**
PET pmax pmax
comp=Z,600nm,5.5s
PET pmax pmax
comp=Z,300nm,9.4s
PET pmax pmax
comp=Z,96nm,1.3s
PET MLR MLR
comp=Z,2μm,13.0s
PET MLR MLR
comp=Z,2μm,13.0s
PET Petropavlovsk 41.28 56 P **P** **03 10 57.9 -0.1**
comp=Z,2μmcomp=Z,126nm,1.6s
VSU Vasula 41.29 313*c i*P **P** **03 10 57.4 -0.6**
VSU pmax pmax
comp=Z,334nm,1.2s
VSU MLR MLR
comp=Z,11μm,18.0s
VSU Vasula 41.29 313 *eP* **P** **03 10 58.1 0.0**
KTK1 Kautokeino 41.29 329 *eP* **P** **03 10 58.5 +0.5**
KTK1 IAmb IAmb 03 10 59.6
comp=Z,473nm,1.7s
KTK1 *e*PP **PP** **03 12 33.8 +0.8**
KTK1 *eS* **S** **03 17 13.4 +2.2**
KTK1 *eSS* **SS** **03 20 17.2 +3.0**
KTK1 IAMs_20 IAMs_20 03 30 25.4
comp=Z,12μm,13.3s
KEF Keuruu 41.45 319 *eP* **P** **03 10 59.8 +0.4**
ARBE Arbavere 41.45 314 *eP* **P** **03 11 00.2 +0.8**
TOKA Tokat 41.56 284 IAmb IAmb 03 11 03.7
comp=Z,192nm,1.2s
MNK Minsk 41.68 307 *i* P **P** **03 11 02.1 +0.8**
comp=E,158nm,1.5s
MNK *i* P **P** **03 11 02.1 +0.8**
comp=N,281nm,1.4s
MNK *i* P **P** **03 11 02.1 +0.8**
comp=Z,221nm,1.1s,baz=73
MNK *i* PP **PP** **03 12 38.3 +0.8**
MNK *i* PPP PPP 03 13 07.3
MNK *i* S **S** **03 17 20.9 +3.6**
MNK *i* SS **SS** **03 20 23.6 +1.2**
MNK *i* SSS SSS 03 21 00.8
MNK *i* LQ LQ 03 24 59.5
MNK *i* LR LR 03 27 10.3
MNK *i* LRM MLR 03 28 46.6
comp=Z,5μm,18.8s
MNK Minsk 41.68 307 *i* P **P** **03 11 02.1 +0.8**
MNK *i* 03 12 38.2
MNK *i* PPP PPP 03 13 07.2
MNK *i* S **S** **03 17 20.8 +3.6**
MNK *i* SS **SS** **03 20 23.5 +1.2**
MNK *i* SSS SSS 03 21 00.7
MNK pmax pmax
comp=Z,221nm,1.1s
MNK pmax pmax
comp=N,281nm,1.4s
MNK pmax pmax
comp=E,158nm,1.5s
MNK MLR MLR
comp=N,3μm,12.0s
MNK MLR MLR
comp=E,3μm,16.0s
MNK MLR MLR
comp=Z,5μm,19.0s
BILL Bilibino 41.93 32 **P** **03 11 04.3 +1.1**
BILL IAmb IAmb 03 11 09.0
comp=Z,211nm,1.5s
BILL Bilibino 41.93 32*d i*P **P** **03 11 04.0 +0.8**
BILL pmax pmax
comp=Z,43nm,1.2s
BILL MLR MLR
comp=Z,5μm,17.0s
MEF Metsahovi 42.07 316 *eP* **P** **03 11 04.9 +0.5**
AK03 Malin Array Si 42.08 301 P **P** **03 11 04.3 -0.3**
AK09 Malin Array Si 42.08 301 P **P** **03 11 04.3 -0.3**
AKASG Malin Array Be 42.09 301 P **P** **03 11 04.9 +0.2**
comp=Z,67nm,0.7s,baz=60,slow=8.4,SNR=259
AKASG PP **PP** **03 12 41.1 -0.8**
comp=Z,11nm,0.7s,baz=63,slow=8.6,SNR=4.5
AKASG LR LR 03 29 07.0

comp=Z,8µm,19.0s,baz=68,slow=37
comp=Z,67nm,0.7s
AKASG Malin Array Be 42.09 301 P **P** **03 11 04.9 +0.2**
AKASG IAmb IAmb 03 11 06.2
comp=Z,198nm,0.9s
AKBB Malin Array Si 42.09 301 IAmb IAmb 03 11 07.2
comp=Z,154nm,0.8s
AKBB Malin Array Si 42.09 301 *c i*P **P** **03 11 04.8 +0.1**
AKBB Malin Array Si 42.09 301 P **P** **03 11 04.0 -0.7**
AK01 Malin Array Si 42.10 301 P **P** **03 11 04.1 -0.7**
KIEV Kiev 42.10 301 ⇑P **P** **03 11 05.2 +0.4**
KIEV Kiev 42.10 301 **P** **03 11 05.0 +0.3**
KIEV IAmb IAmb 03 11 07.2
comp=Z,139nm,0.8s
KIEV Kiev 42.10 301 *i* P **P** **03 11 05.0 +0.3**
SNR=118
KIEV Kiev 42.10 301 P **P** **03 11 05.1 +0.3**
KIEV pmax pmax
comp=Z,139nm,0.8s
KIEV MLR MLR
comp=Z,11µm,18.0s
KIEV Kiev 42.10 301 P **P** **03 11 04.4 -0.4**
comp=Z,11µmcomp=Z,819nm,1.0s
AK10 Malin Array Si 42.11 301 P **P** **03 11 04.2 -0.7**
AK02 Malin Array Si 42.11 301 P **P** **03 11 04.3 -0.6**
AK04 Malin Array Si 42.12 301 P **P** **03 11 04.3 -0.6**
AK23 Malin Array Si 42.13 301 P **P** **03 11 04.4 -0.6**
NACGM Naroch 42.18 308⇑ *i*P **P** **03 11 05.9 +0.5**
comp=Z,288nm,1.2s,baz=73
AK13 Malin Array Si 42.22 301 P **P** **03 11 05.3 -0.5**
SHAO Shalim 42.22 242 *i* P **P** **03 11 06.4 +0.3**
SNR=9.6
SHAO Shalim 42.22 242 P **P** **03 11 09.0 +2.8**
SNR=5.4
SHAO P **P** **03 11 09.0 +2.8**
SNR=5.4
JETT Jettan, Norway 42.25 330 *e*P **P** **03 11 06.5 +0.7**
JETT IAmb IAmb 03 11 07.7
comp=Z,314nm,0.8s
JETT *e*PP **PP** **03 12 43.9 +0.5**
JETT *e*SS SS 03 20 35.4 +2.2
JETT IAMs_20 IAMs_20 03 30 48.1
comp=Z,7µm,14.6s
VAF Ylistaro 42.29 320 *e*P **P** **03 11 07.2 +1.0**
JCJ Chichijima 42.34 99 LR LR 03 29 17.9
comp=Z,3µm,18.8s,baz=312,slow=37
ISAL Salakas 42.35 309 *e*P **P** **03 11 07.0 +0.2**
KCSI Kotacane, Aceh 42.42 174 P **P** **03 11 06.0 -1.7**
BZK Bozkurt 42.48 287 ⇑P **P** **03 11 10.4 +2.4**
BZK Bozkurt 42.48 287 P **P** **03 11 09.7 +1.7**
BZK Bozkurt 42.48 287 P **P** **03 11 09.0 +1.0**
comp=Z,4µmcomp=Z,331nm,1.0s
NE56 Odesa 42.52 295 P **P** **03 11 07.2 -1.1**
GAZ Gaziantep 42.58 279 P **P** **03 11 11.4 +2.4**
TPTI 42.64 175 P **P** **03 11 08.8 -0.7**
DOK Doka 42.70 244 P **P** **03 11 11.0 +1.0**
SNR=10.0
DOK P **P** **03 11 11.0 +1.0**
SNR=10.0
DOK P **P** **03 11 11.0 +1.0**
SNR=10.0
MTSE Matsula 42.71 314 *e*P **P** **03 11 10.4 +0.7**
TRO Tromso 42.76 330 *e*P **P** **03 11 10.8 +1.0**
BAL3X Bal3x, Balta 42.85 297 P **P** **03 11 10.1 -0.9**
SPB2 Spitsbergen Ar 42.93 343 **P** **03 11 12.2 +0.9**
SPB2 IAmb IAmb 03 11 17.2
comp=Z,167nm,1.0s
SPA0 Spitsbergen Ar 42.93 343 *e*P **P** **03 11 12.0 +0.8**
SPA0 IAmb IAmb 03 11 13.2
comp=Z,236nm,1.2s
SPA0 *e*PP **PP** **03 12 52.1 +1.4**
SPA0 *e*S **S** **03 17 38.1 +2.8**
SPA0 *e*SS **SS** **03 20 48.3 +1.8**
SPA0 IAMs_20 IAMs_20 03 35 32.1
comp=Z,5µm,11.4s
SPITS Spitsbergen Ar 42.93 343 P **P** **03 11 11.7 +0.4**
comp=Z,72nm,0.8s,baz=91,slow=14,SNR=46
SPITS LR LR 03 32 45.7
comp=Z,4µm,18.9s,baz=78,slow=41
comp=Z,72nm,0.8s
SPITS Spitsbergen Ar 42.93 343 P **P** **03 11 12.1 +0.8**
SPITS pmax pmax
comp=Z,202nm,1.1s
MI28 Mi28,Pidlybu 42.94 302 P **P** **03 11 11.0 -0.6**
HMDM Hanimaadhoo 43.01 211 **P** **03 11 13.7 +1.2**
HMDM IAmb IAmb 03 11 15.0
comp=Z,178nm,1.1s
HMDM Hanimaadhoo 43.01 211 P **P** **03 11 14.4 +1.9**
comp=Z,3µmcomp=Z,148nm,1.2s
ILGA Ilgaz 43.09 286 IAmb IAmb 03 11 16.5
comp=Z,243nm,1.0s
HSPB Hornsund (broa 43.14 341 *e*P **P** **03 11 12.7 -0.2**
HSPB *e*L L 03 29 29.9
comp=Z,3µm,19.7s
HSPB *e*L L 03 33 40.8
comp=Z,5µm,16.3s
HSPB Hornsund (broa 43.14 341 *e*P **P** **03 11 13.2 +0.2**
RAF Rauma 43.15 317 *e*P **P** **03 11 11.8 -1.3**
PSI Prapat 43.22 173 P **P** **03 11 14.3 -0.1**
PSI Prapat 43.22 173 P **P** **03 11 16.0 +1.6**
PURM Purcari 43.23 295 ⇑P **P** **03 11 14.4 +0.4**
PURM Purcari 43.23 295 P **P** **03 11 13.7 -0.3**
comp=Z,7µmcomp=Z,880nm,1.0s
LUBAR Lubar, Ukraine 43.24 300 P **P** **03 11 13.2 -0.9**
VSVD Vaisvydziai 43.41 310 *e*P **P** **03 11 16.0 +0.7**
WHFO Wadi Hawf 43.44 243 P **P** **03 11 17.0 +0.9**
SNR=13
WHFO P **P** **03 11 17.0 +0.9**
SNR=13
RBK Rabkut 43.49 243 P **P** **03 11 19.0 +2.5**
SNR=6.4
RBK P **P** **03 11 19.0 +2.5**
SNR=6.4
PABE Paberze 43.54 309 *e*P **P** **03 11 17.2 +0.8**
SORM Soroca 43.55 298 ⇑P **P** **03 11 16.9 +0.2**
SORM Soroca 43.55 298 P **P** **03 11 16.8 +0.2**
SORM Soroca 43.55 298 P **P** **03 11 16.2 -0.4**
comp=Z,2µmcomp=Z,193nm,1.1s
KIS Kishinev 43.71 296 ⇓P **P** **03 11 18.7 +0.8**
KIS Kishinev 43.71 296 P **P** **03 11 18.6 +0.8**
KIS Kishinev 43.71 296 P **P** **03 11 17.5 -0.4**
comp=Z,3µmcomp=Z,387nm,0.9s
BR131 Keskin Array S 43.76 284 IAmb IAmb 03 11 21.3
comp=Z,222nm,0.9s
BR131 Keskin Array S 43.76 284*c i*P **P** **03 11 19.7 +1.1**
BR131 Keskin Array S 43.76 284 P **P** **03 11 20.2 +1.6**
SNR=76
BRTR Keskin Array B 43.76 284 P **P** **03 11 19.9 +1.4**
comp=Z,131nm,0.9s,baz=80,slow=6.8,SNR=439
BRTR LR LR 03 33 16.3
comp=Z,2µm,18.1s,baz=68,slow=41
comp=Z,131nm,0.9s
BRTR Keskin Array B 43.76 284 P **P** **03 11 20.0 +1.4**
BRTR Keskin Array B 43.76 284 P **P** **03 11 20.0 +1.4**
BR104 Keskin Array S 43.77 284 P **P** **03 11 19.2 +0.5**
comp=Z,2µmcomp=Z,197nm,1.0s
BR106 Keskin Array S 43.77 284 P **P** **03 11 19.2 +0.5**
comp=Z,1µmcomp=Z,181nm,1.0s
SLIT Slitere, Latvi 43.79 312 *e*P **P** **03 11 18.5 +0.2**
KBS Kingsbay 43.79 344 P **P** **03 11 18.8 +0.6**
KBS IAmb IAmb 03 11 20.1
comp=Z,100nm,1.0s
KBS IAMs_20 IAMs_20 03 32 48.5
comp=Z,3µm,20.0s
KBS Kingsbay 43.79 344 *e*P **P** **03 11 19.5 +1.3**
KBS IAmb IAmb 03 11 19.7
comp=Z,102nm,1.0s
KBS *e*S **S** **03 17 49.0 +1.2**
KBS *e*SS **SS** **03 21 07.1 +3.9**
KBS IAMs_20 IAMs_20 03 35 07.7
comp=Z,4µm,12.8s
KBS Kingsbay 43.79 344*ce*P **P** **03 11 18.8 +0.6**
KBS pmax pmax
comp=Z,138nm,1.3s
KBS Kingsbay 43.79 344 *i* P **P** **03 11 18.6 +0.4**
KIRS Kirsehir-Merke 43.86 283 ⇓P **P** **03 11 21.1 +1.8**
NDNU Novodnistrovsk 43.98 299 P **P** **03 11 19.7 -0.3**
ABTO Aybut 44.16 243 P **P** **03 11 23.0 +1.0**
SNR=27
ABTO P **P** **03 11 23.0 +1.0**
SNR=27
KKM Kota Kinabalu 44.19 147 P **P** **03 11 23.4 +1.2**
KKM Kota Kinabalu 44.19 147 P **P** **03 11 23.3 +1.1**
KKM Kota Kinabalu 44.19 147 P **P** **03 11 23.2 +1.1**
comp=Z,3µmcomp=Z,271nm,1.2s

AAL Aland 44.21 316 *e*P **P** **03 11 21.8 +0.1**
HORU Horodok 44.31 300 P **P** **03 11 22.4 -0.3**
STEI Steigen 44.36 328 *e*P **P** **03 11 22.9 +0.1**
STEI IAmb IAmb 03 11 24.1
comp=Z,1µm,1.8s
STEI *e*PP **PP** **03 13 05.3 -0.7**
STEI *e*S **S** **03 17 54.4 -1.8**
STEI *e*SS **SS** **03 21 15.5 +1.0**
STEI IAMs_20 IAMs_20 03 32 08.4
comp=Z,15µm,12.8s
IASR Iasi 44.41 297 ⇑P **P** **03 11 24.2 +0.7**
SUW Suwalki 44.45 307 *e*P **P** **03 11 23.6 -0.1**
SUW *e*PP **PP** **03 13 05.8 -1.5**
SUW *e*S **S** **03 17 57.0 -0.9**
SUW *e*L L 03 29 46.6
comp=Z,12µm,12.4s
SUW Suwalki 44.45 307 *e*P **P** **03 11 24.6 +0.8**
FAUS Fauske 44.46 327 *e*P **P** **03 11 24.1 +0.5**
FAUS IAMs_20 IAMs_20 03 31 41.1
comp=Z,11µm,12.6s
TLCR 44.46 294 ⇑P **P** **03 11 25.4 +1.5**
TLCR 44.46 294 P **P** **03 11 25.4 +1.5**
PBUR Paburge 44.47 310 *e*P **P** **03 11 24.7 +0.8**
VASR Vaslui 44.50 296 ⇑P **P** **03 11 25.4 +1.2**
KMPD K-Podol'skiy 44.54 299 P **P** **03 11 23.9 -0.7**
KMPD P **P** **03 11 23.9 -0.7**
DRBR Darabani 44.59 298 ⇓P **P** **03 11 25.6 +0.6**
GSI Gunungsitoli 44.60 175 P **P** **03 11 25.9 +0.6**
GSI Gunungsitoli 44.60 175 **P** **03 11 25.6 +0.2**
GSI IAmb IAmb 03 11 36.6
comp=Z,100nm,1.0s
GSI Gunungsitoli 44.60 175 P **P** **03 11 25.7 +0.4**
comp=Z,4µmcomp=Z,108nm,1.0s
JURR Jurilovca 44.60 293 ⇓P **P** **03 11 25.7 +0.7**
VLDR Vladesti 44.65 295 ⇑P **P** **03 11 26.6 +1.2**
GIUM Giurgiulesti 44.72 294 ⇑P **P** **03 11 27.3 +1.2**
VARL Varlezi 44.77 295 ⇓P **P** **03 11 28.2 +1.8**
TATR Tatarca 44.77 294 ⇑P **P** **03 11 27.9 +1.4**
SCTR Scanteiesti 44.78 295 ⇑P **P** **03 11 27.9 +1.4**
MYKOM Kota Tinggi 44.85 166 P **P** **03 11 28.1 +0.8**
MYKOM Kota Tinggi 44.85 166 P **P** **03 11 28.1 +0.8**
MYKOM IAmb IAmb 03 11 29.4
comp=Z,89nm,1.0s
MYKOM Kota Tinggi 44.85 166 P **P** **03 11 28.2 +0.9**
comp=Z,1µmcomp=Z,103nm,1.2s
TPGR Topolog 44.86 293 ⇑P **P** **03 11 28.2 +1.0**
RAYN Ar Rayn 44.88 257 P **P** **03 11 28.1 +0.5**
RAYN IAmb IAmb 03 11 29.4
comp=Z,187nm,1.1s
RAYN Ar Rayn 44.88 257 *i* P **P** **03 11 28.1 +0.5**
SNR=174
RAYN Ar Rayn 44.88 257 P **P** **03 11 28.1 +0.5**
CFR Carcaliu 44.90 294 ⇑P **P** **03 11 28.1 +0.6**
CFR Carcaliu 44.90 294 P **P** **03 11 28.0 +0.6**
LOF Lofoten 44.94 328 *e*P **P** **03 11 26.1 -1.3**
SCHL Schela 44.95 294 ⇓P **P** **03 11 29.1 +1.2**
SCHLR Schela 44.97 294 ⇓P **P** **03 11 29.7 +1.7**
IZVR Izvoarele 44.98 294 ⇑P **P** **03 11 29.4 +1.4**
HWQ Hawqa 44.98 276 *e*P **P** **03 11 29.8 +1.4**
GHRR 44.98 295 ⇑P **P** **03 11 30.0 +1.9**
GHRR 44.98 295 P **P** **03 11 29.2 +1.1**
TUDR 45.02 295 ⇓P **P** **03 11 29.4 +1.0**
TIRR Tirgusor 45.04 293 ⇑P **P** **03 11 29.4 +0.9**
TIRR Tirgusor 45.04 293 IAmb IAmb 03 11 30.6
comp=Z,139nm,1.1s
TIRR Tirgusor 45.04 293 P **P** **03 11 29.4 +0.9**
TIRR Tirgusor 45.04 293 P **P** **03 11 28.2 -0.3**
comp=Z,2µmcomp=Z,138nm,1.2s
EFOR EFORIE 45.06 292 ⇓P **P** **03 11 30.3 +1.6**
MOR8 Moi Rana 45.07 326 *e*P **P** **03 11 27.0 -1.5**
MOR8 IAmb IAmb 03 11 28.6
comp=Z,1µm,1.9s
MOR8 *e*S **S** **03 18 07.2 +0.6**
MOR8 IAMs_20 IAMs_20 03 31 49.5
comp=Z,17µm,13.2s
COSR Cosmesti PH 45.13 295 ⇑P **P** **03 11 30.6 +1.4**
MFTR Murfatlar 45.15 292 ⇑P **P** **03 11 30.6 +1.1**
GIRR Girov 45.17 297 ⇑P **P** **03 11 31.2 +1.6**
PRAR RASCA 45.17 297 ⇓P **P** **03 11 30.0 +0.4**
MANR Mangalia 45.21 292 ⇑P **P** **03 11 30.3 +0.4**
PANC Panciu 45.23 295 ⇑P **P** **03 11 31.2 +1.2**
MNSI Mandailing Nat 45.26 172 P **P** **03 11 30.7 +0.1**
comp=Z,68nm,1.0s
TESR Tescani 45.27 296 ⇑P **P** **03 11 30.9 +0.5**
TESR Tescani 45.27 296 P **P** **03 11 30.3 -0.1**
comp=Z,4µmcomp=Z,291nm,1.2s
ODBI Odobesti 45.33 295 ⇑P **P** **03 11 32.7 +1.9**
VAGH Vaagaholmen 45.38 327 *e*P **P** **03 11 31.0 0.0**
VAGH IAmb IAmb 03 11 32.1
comp=Z,284nm,1.2s
VAGH *e*S **S** **03 18 12.8 +1.7**
VAGH IAMs_20 IAMs_20 03 32 07.3
comp=Z,14µm,12.2s
BHL Bhannes 45.39 276 *e*P **P** **03 11 32.7 +1.1**
ASF Jabal al Asfar 45.49 273 LR LR 03 34 33.3
comp=Z,2µm,18.2s,baz=24,slow=41
KSV Kosov 45.49 299 P **P** **03 11 31.7 -0.5**
VRI Vrincioaia 45.49 295 ⇑P **P** **03 11 34.0 +1.7**
VRI Vrincioaia 45.49 295 P **P** **03 11 33.9 +1.7**
VRI Vrincioaia 45.49 295 P **P** **03 11 31.8 -0.4**
comp=Z,3µmcomp=Z,242nm,1.5s
ONER Baraj Valea Uz 45.50 296 ⇓P **P** **03 11 32.8 +0.5**
LVV L'vov 45.51 301 P **P** **03 11 31.8 -0.5**
PLOR Plostina 45.55 295 ⇑P **P** **03 11 34.3 +1.6**
PLOR Plostina 45.55 295 P **P** **03 11 34.2 +1.6**
ICOR Ion Corvin 45.58 293 ⇑P **P** **03 11 34.3 +1.4**
PSN Preselentsi 45.58 292 P **P** **03 11 34.2 +1.3**
STOK Stokkvaagen 45.58 326 *e*P **P** **03 11 32.1 -0.4**
STOK IAmb IAmb 03 11 33.4
comp=Z,150nm,0.9s
STOK *e*S **S** **03 18 15.2 +1.3**
STOK IAMs_20 IAMs_20 03 32 11.9
comp=Z,15µm,13.5s
LEIR Leirfjorden 45.60 326 *e*P **P** **03 11 33.0 +0.3**
LEIR IAmb IAmb 03 11 33.8
comp=Z,802nm,1.8s
LEIR *e*S **S** **03 18 17.5 +3.2**
LEIR IAMs_20 IAMs_20 03 32 11.3
comp=Z,16µm,13.4s
AMRR Amara 45.66 294 ⇑P **P** **03 11 34.9 +1.4**
AMRR Amara 45.66 294 P **P** **03 11 34.9 +1.4**
STNU Starunia 45.67 300 P **P** **03 11 33.1 -0.5**
BURAR Bucovina Array 45.69 298 ⇑P **P** **03 11 34.9 +1.1**
BURAR Bucovina Array 45.69 298 P **P** **03 11 34.7 +0.9**
BURAR Bucovina Array 45.69 298 P **P** **03 11 34.9 +1.1**
SILT Sile 45.75 288 ⇑P **P** **03 11 35.5 +1.3**
BORA Eskisehir 45.83 286 IAmb IAmb 03 11 37.2
comp=Z,164nm,1.1s
COVR Voineasa-Covas 45.83 296 ⇓P **P** **03 11 36.1 +1.2**
MORS Morshin 45.87 301 P **P** **03 11 34.8 -0.3**
MYLDM Lahad Datu 45.87 145 P **P** **03 11 37.9 +2.5**
MYLDM Lahad Datu 45.87 145 P **P** **03 11 38.4 +3.0**
MYLDM IAMs_20 IAMs_20 03 33 05.5
comp=Z,3µm,19.0s
BKNI Bangkinang 45.88 170 P **P** **03 11 36.3 +0.8**
BKNI Bangkinang 45.88 170 IAMs_20 IAMs_20 03 32 01.1
comp=Z,3µm,20.0s
ISR Istrita 45.94 294 ⇓P **P** **03 11 38.0 +2.2**
ISR Istrita 45.94 294 P **P** **03 11 37.9 +2.2**
ISR Istrita 45.94 294 P **P** **03 11 36.4 +0.6**
comp=Z,6µmcomp=Z,649nm,1.1s
NEHR Nehoiu 45.96 295 ⇓P **P** **03 11 37.9 +2.0**
OZUR 45.99 296 ⇓P **P** **03 11 37.4 +1.2**
PBSI Pulau Batu 46.00 174 P **P** **03 11 39.5 +3.1**
comp=Z,3µmcomp=Z,199nm,1.7s
LEHL Lehliu 46.05 294 ⇓P **P** **03 11 37.4 +0.8**
MMAI Mount Meron Ar 46.06 275 P **P** **03 11 37.8 +0.9**
comp=Z,74nm,1.0s,baz=33,slow=11,SNR=29
MMAI LR LR 03 31 24.9
comp=Z,2µm,21.2s,baz=34,slow=37
comp=Z,74nm,1.0s
BOSR Bodos 46.07 296 ⇑P **P** **03 11 38.3 +1.5**
KLYT Kilyos 46.10 289 P **P** **03 11 37.0 0.0**
comp=Z,3µmcomp=Z,273nm,1.2s
SHIU Shidnytsya 46.15 301 P **P** **03 11 37.2 -0.2**
MLR Muntele Rosu 46.15 295 LR LR 03 33 33.4
comp=Z,4µm,19.7s,baz=60,slow=40
MLR Muntele Rosu 46.15 295 ⇑P **P** **03 11 38.6 +1.0**
MLR Muntele Rosu 46.15 295 P **P** **03 11 38.5 +1.0**
MLR Muntele Rosu 46.15 295 P **P** **03 11 37.3 -0.2**
comp=Z,2µmcomp=Z,147nm,1.7s
RAKU Rahkiv 46.16 299 P **P** **03 11 36.6 -0.8**
SBUM Sibu 46.19 154 P **P** **03 11 40.3 +2.4**

SBUM Sibu 46.19 154 IAmb IAmb 03 11 45.0
comp=Z,81nm,1.0s
SBUM Sibu 46.19 154 P **P** **03 11 39.9 +2.0**
comp=Z,1µmcomp=Z,103nm,1.1s
R9F13 Warsaw-Wawer 46.25 306 *e*P **P** **03 11 38.8 +0.8**
comp=Z,8.2nm,0.7s
R9F13 *e*PP **PP** **03 13 26.2 -0.2**
R9F13 *e*S **S** **03 18 26.5 +2.6**
R9F13 *e*SS **SS** **03 21 51.7 +2.8**
PRD Provadia 46.27 292 P **P** **03 11 40.0 +1.7**
DOPR Dopca 46.29 296 ⇑P **P** **03 11 40.1 +1.6**
NEF NEVSHA 46.31 292 P **P** **03 11 40.0 +1.3**
SULR 46.32 294 ⇑P **P** **03 11 40.7 +2.1**
MEZ Mezhgor'ye 46.35 300 P **P** **03 11 39.2 +0.3**
KWP Kalwaria Pacla 46.37 302 *e*P **P** **03 11 40.2 +1.1**
KWP *e*S **S** **03 18 19.8 -6.0**
KWP *e*L L 03 31 29.9
comp=Z,7µm,19.2s
KWP Kalwaria Pacla 46.37 302 P **P** **03 11 39.7 +0.6**
comp=Z,5µmcomp=Z,440nm,1.1s
CSS Mathiatis 46.42 279 **P** **03 11 40.2 +0.6**
CSS Mathiatis 46.42 279 P **P** **03 11 39.6 0.0**
comp=Z,3µmcomp=Z,137nm,1.3s
NSS Namsos 46.52 324 *e*P **P** **03 11 39.1 -0.9**
NSS IAmb IAmb 03 11 40.7
comp=Z,204nm,0.9s
NSS *e*S **S** **03 18 30.3 +2.8**
NSS IAMs_20 IAMs_20 03 32 19.0
comp=Z,11µm,14.5s
PPI Padang Panjang 46.58 171 P **P** **03 11 40.9 -0.1**
BEL Belsk 46.60 305 *e*P **P** **03 11 41.5 +0.7**
BEL *e*S S 03 18 39.4 +10
BEL *e*L L 03 31 24.4
comp=Z,13µm,13.6s
RAZG Razgrad 46.66 293 ⇑P **P** **03 11 42.6 +1.1**
LOZB Loznitsa 46.70 292 ⇑P **P** **03 11 42.9 +1.2**
SGRR Singureni 46.70 294 ⇑P **P** **03 11 43.2 +1.5**
BMR Baia Mare 46.72 299 ⇓P **P** **03 11 43.5 +1.6**
BMR Baia Mare 46.72 299 P **P** **03 11 43.4 +1.6**
BRIU Brid 46.73 300 P **P** **03 11 41.7 -0.1**
VOIR 46.74 296 ⇓P **P** **03 11 43.8 +1.6**
VOIR 46.74 296 P **P** **03 11 43.7 +1.6**
VOIR 46.74 296 P **P** **03 11 42.0 -0.1**
comp=Z,944nmcomp=Z,70nm,1.2s
ISP Isparta 46.82 284 IAMs_20 IAMs_20 03 34 20.8
comp=Z,3µm,22.0s
ISP Isparta 46.82 284⇑ *e*P **P** **03 11 43.8 +0.9**
ISP pmax pmax
comp=Z,408nm,1.4s
ISP MLR MLR
comp=Z,4µm,23.0s
ISP Isparta 46.82 284 *e*P **P** **03 11 44.2 +1.4**
MTUR Matau 46.83 295 ⇑P **P** **03 11 44.5 +1.7**
MTUR Matau 46.83 295 P **P** **03 11 44.5 +1.7**
MDB Medias 46.84 297 ⇑P **P** **03 11 44.1 +1.2**
MDB Medias 46.84 297 P **P** **03 11 44.0 +1.2**
MUKU Mukachevo 46.88 300 P **P** **03 11 42.9 -0.1**
BERU Beregovo 47.00 300 P **P** **03 11 43.8 -0.1**
HOLU Holmets 47.03 300 P **P** **03 11 43.5 -0.7**
ARR Arges 47.03 296 ⇑P **P** **03 11 45.6 +1.2**
PDSI Padang 47.04 171 P **P** **03 11 43.2 -1.4**
comp=Z,54nm,1.0s
CJR Cluj-Napoca 47.08 298 ⇓P **P** **03 11 46.8 +2.1**
CJR Cluj-Napoca 47.08 298 P **P** **03 11 46.8 +2.1**
TNR Turnu Rosu 47.13 296 ⇑P **P** **03 11 47.1 +2.0**
TNR Turnu Rosu 47.13 296 P **P** **03 11 47.1 +2.0**
SZH Strazhitsa 47.15 292 P **P** **03 11 46.1 +0.9**
JMB Yambol 47.16 291 P **P** **03 11 46.5 +1.2**
BAND Balkesir-Ban 47.17 288 ⇓P **P** **03 11 46.8 +1.4**
DSRI Dabo 47.20 166 P **P** **03 11 47.2 +1.4**
comp=Z,121nm,1.6s
HUMR Humele 47.20 294 ⇓P **P** **03 11 46.2 +0.6**
HFS Hagfors 47.21 318 P **P** **03 11 45.5 0.0**
comp=Z,265nm,0.8s,baz=75,slow=6.9,SNR=273
HFS LR LR 03 32 53.5
comp=Z,10µm,18.1s,baz=72,slow=38
comp=Z,265nm,0.8s
COPA Copaceanca 47.23 294 ⇑P **P** **03 11 46.5 +0.7**
MESR Meseseni 47.28 299 ⇑P **P** **03 11 48.4 +2.2**
STHS Stebnicka Huta 47.33 302 *e*P **P** **03 11 46.1 -0.5**
STHS pmax pmax
comp=Z,36nm,1.1s
STHS Stebnicka Huta 47.33 302 *e*P **P** **03 11 46.1 -0.5**
STHS *e*PP **PP** **03 13 36.7 -0.8**
DAV Davao City (W) 47.37 135 LR LR 03 33 35.4
comp=Z,3µm,18.2s,baz=343,slow=38
ELND Elena 47.37 292 ⇑P **P** **03 11 48.1 +1.1**
MARR Marisel-Cluj 47.39 298 ⇓P **P** **03 11 48.1 +0.9**
LOT Lotru 47.54 296 ⇑P **P** **03 11 49.6 +1.2**
BLEU Blekinge 47.57 312 *i* P **P** **03 11 47.7 -0.6**
DRGR 47.59 298 ⇑P **P** **03 11 50.2 +1.5**
DRGR 47.59 298 P **P** **03 11 50.2 +1.5**
NOR Nord 47.72 349 *i* P **P** **03 11 49.9 +0.8**
NOR IAmb IAmb 03 11 50.8
comp=Z,608nm,1.9s
PVL Pavlikeni 47.73 293 P **P** **03 11 50.4 +0.6**
VLAD Vladila 47.81 294 ⇑P **P** **03 11 51.0 +0.6**
LTVH Ltavrtes, Hu 47.82 299 ⇓P **P** **03 11 52.3 +2.0**
OJC Ojcow 47.84 303 *e*P **P** **03 11 51.1 +0.7**
OJC *e*PP **PP** **03 13 41.9 -0.2**
OJC *e*S **S** **03 18 40.0 -6.7**
OJC *e*L L 03 32 20.7
comp=Z,9µm,16.8s
OJC Ojcow 47.84 303 P **P** **03 11 50.8 +0.3**
OJC Ojcow 47.84 303 P **P** **03 11 49.9 -0.6**
comp=Z,3µmcomp=Z,227nm,1.4s
DEV Deva 47.88 297 ⇓P **P** **03 11 53.0 +2.1**
DEV Deva 47.88 297 P **P** **03 11 52.9 +2.1**
NIE Niedzica 47.89 302 *e*P **P** **03 11 52.5 +1.5**
NIE *e*PP **PP** **03 13 43.9 +1.4**
NIE *e*S S 03 19 04.9 +17
NIE *e*L L 03 32 34.6
comp=Z,4µm,19.6s
NIE Niedzica 47.89 302 P **P** **03 11 51.4 +0.5**
comp=Z,1µmcomp=Z,73nm,1.6s
PLVB Pleven 47.96 293 ⇑P **P** **03 11 52.3 +0.8**
DIM Dimitrovgrad 47.99 291 P **P** **03 11 53.3 +1.5**
NC602 NORSAR Array S 47.99 319 *e*P **P** **03 11 50.9 -0.7**
NC602 IAmb IAmb 03 11 52.3
comp=Z,356nm,1.1s
NC602 *e*PP **PP** **03 13 45.4 +2.1**
NC602 *e*S **S** **03 18 51.2 +2.7**
NC602 *e*ScS **ScS** **03 21 45.9 +2.1**
NC602 *e*SS **SS** **03 22 22.0 +5.2**
NC602 IAMs_20 IAMs_20 03 33 04.9
comp=Z,11µm,12.4s
NORES NORESS Array B 47.99 319 P **P** **03 11 51.1 -0.4**
GKP Gorka Klasztor 48.01 308 *e*P **P** **03 11 52.5 +0.7**
GKP *e*PP **PP** **03 13 42.4 -1.1**
GKP *e*S **S** **03 18 46.4 -2.6**
GKP *e*L L 03 34 48.7
comp=Z,8µm,15.0s
GKP Gorka Klasztor 48.01 308 *e*P **P** **03 11 53.3 +1.5**
BORR Bors 48.02 299 ⇑P **P** **03 11 53.5 +1.6**
NB2 NORSAR Subarra 48.03 320 P **P** **03 11 51.4 -0.4**
comp=Z,289nm,1.1s,baz=67,slow=7.9
NB2 NORSAR Subarra 48.03 320 P **P** **03 11 51.4 -0.4**
NOA NORSAR Array B 48.03 320 P **P** **03 11 51.5 -0.4**
comp=Z,100nm,0.9s,baz=65,slow=7.4,SNR=259
NOA LR LR 03 33 31.9
comp=Z,8µm,20.2s,baz=70,slow=38
comp=Z,100nm,0.9s
JMBI JAMBI 48.17 167 P P 03 12 00.2 +6.9
GZR Gura Zlata 48.19 296 ⇑P **P** **03 11 54.8 +1.4**
GZR Gura Zlata 48.19 296 P **P** **03 11 54.7 +1.4**
KECS Kecovo 48.19 301 *e*P **P** **03 11 54.8 +1.6**
KECS pmax pmax
comp=Z,63nm,1.0s
KECS Kecovo 48.19 301 *e*P **P** **03 11 54.8 +1.6**
KECS *e*PP **PP** **03 13 46.8 +1.5**
ALN Alexandroupoli 48.25 290 P **P** **03 11 54.9 +1.1**
SRE Strehaia 48.26 295 ⇑P **P** **03 11 54.6 +0.7**
SRE Strehaia 48.26 295 P **P** **03 11 54.5 +0.7**
CAVK Edirne/Enez-Ca 48.27 289 ⇓P **P** **03 11 55.7 +1.7**
EIL Elat 48.31 272 LR LR 03 35 54.6
comp=Z,2µm,18.6s,baz=52,slow=41
PLD Plovdiv 48.48 292 P **P** **03 11 56.9 +1.4**
LANS Liptovska Anna 48.49 302 *e*P **P** **03 11 57.3 +1.7**
LANS pmax pmax
comp=Z,51nm,1.4s
LANS Liptovska Anna 48.49 302 *e*P **P** **03 11 57.3 +1.7**
LANS *e*PP **PP** **03 13 49.1 +1.0**
DEL Delary 48.50 313 *i* P **P** **03 11 55.4 -0.1**

BSD Bornholm Skovb 48.51 311 *e*P **P** **03 11 55.9 +0.4**
BSD Bornholm Skovb 48.51 311 *i* P **P** **03 11 55.0 -0.5**
BSD IAmb IAmb 03 11 57.0
comp=Z,58nm,0.9s
HAMD Hammershus, De 48.52 311 *i* P **P** **03 11 55.2 -0.4**
HAMD IAmb IAmb 03 11 56.6
comp=Z,194nm,1.2s
MPEP Malo Peshtene 48.54 294 P **P** **03 11 57.0 +1.0**
BORU Boraas 48.59 315 *i* P **P** **03 11 55.8 -0.4**
EZN Ezine 48.61 288 P **P** **03 11 57.7 +1.2**
EZN Ezine 48.61 288 P **P** **03 11 56.3 -0.2**
comp=Z,2µmcomp=Z,125nm,1.4s
DOMB Dombas 48.61 321 *e*P **P** **03 11 56.3 0.0**
HERR Herculane 48.65 296 ⇓P **P** **03 11 58.5 +1.6**
PGB Panagyurishte 48.67 292 P **P** **03 11 58.3 +1.2**
OSL Oslo 48.67 318 *e*P **P** **03 11 56.3 -0.4**
OSL IAmb IAmb 03 11 57.8
comp=Z,284nm,0.8s
OSL IAMs_20 IAMs_20 03 33 23.7
comp=Z,13µm,17.4s
PSZ Piszkesteto 48.79 301 ⇓P **P** **03 11 59.4 +1.4**
PSZ Piszkesteto 48.79 301 P **P** **03 11 59.3 +1.4**
PSZ Piszkesteto 48.79 301 *e*P **P** **03 11 59.8 +1.9**
BZS Buzias 48.80 297 ⇑P **P** **03 11 59.4 +1.4**
BZS Buzias 48.80 297 P **P** **03 11 59.3 +1.4**
STRU Stroemstad 48.81 317 *i* P **P** **03 11 57.7 -0.1**
RAC Raciborz 48.83 304 *e*P **P** **03 11 59.3 +1.2**
RAC AMS AMS 03 32 59.0
comp=Z,6.0nm,20.2s
RAC Raciborz 48.83 304 *e*P **P** **03 11 59.3 +1.2**
RAC MLR MLR
comp=Z,6µm,20.2s
BSZH Besenyszg 48.85 300 ⇓P **P** **03 11 59.4 +1.1**
OKC Ostrava-Krasne 48.96 304 *e*P **P** **03 12 00.3 +1.2**
OKC *e* 03 13 50.5
OKC MLR MLR
comp=Z,8µm,10.9s
OKC Ostrava-Krasne 48.96 304 *e*P **P** **03 12 00.3 +1.2**
OKC *e*PP **PP** **03 13 50.5 -1.8**
OKC AMS AMS 03 32 40.0
comp=Z,8µm,10.9s
TJOU Tjoern 49.00 316 *i* P **P** **03 11 58.9 -0.4**
LUNU Lund 49.06 312 *i* P **P** **03 11 59.9 +0.1**
MOL Molde 49.06 322 *e*P **P** **03 12 00.1 +0.4**
MOL IAmb IAmb 03 12 01.1
comp=Z,647nm,1.7s
MOL *e*S **S** **03 19 06.5 +3.0**
MOL IAMs_20 IAMs_20 03 34 05.1
comp=Z,16µm,14.9s
BLSH Balsha 49.08 293 P **P** **03 12 01.6 +1.4**
BJUU Bjuv 49.10 313 *i* P **P** **03 12 00.3 +0.3**
ONAU Onsala 49.11 315 *i* P **P** **03 11 59.6 -0.5**
STEB Steborice 49.14 304 *e*P **P** **03 12 01.3 +0.8**
MDVR Moldovita 49.14 296 ⇑P **P** **03 12 01.5 +0.9**
PLNA Plana 49.17 293 P **P** **03 12 02.4 +1.4**
BANR Banloc 49.21 297 ⇓P **P** **03 12 02.1 +1.0**
VTS Vitosha 49.22 293 P **P** **03 12 02.6 +1.2**
KONO Kongsberg 49.31 318 P **P** **03 12 01.1 -0.6**
KONO Kongsberg 49.31 318 *e*P **P** **03 12 01.2 -0.4**
KONO *e*S **S** **03 19 10.0 +2.9**
KONO IAMs_20 IAMs_20 03 33 43.5
comp=Z,9µm,17.2s
KONO Kongsberg 49.31 318 *c*e**P** **P** **03 12 01.8 +0.2**
KONO pmax pmax
comp=Z,153nm,1.1s
KONO MLR MLR
comp=Z,8µm,17.0s
MORC Moravsky Berou 49.34 304 ⇓P **P** **03 12 02.7 +0.6**
MORC Moravsky Berou 49.34 304 P **P** **03 12 02.7 +0.6**
MORC Moravsky Berou 49.34 304 *e*P **P** **03 12 03.0 +0.9**
MORC *e*PP **PP** **03 13 56.0 +0.2**
MAUC Maruska 49.36 303 *e*P **P** **03 12 03.5 +1.3**
MASI Maura Aman, Be 49.45 169 P **P** **03 12 02.9 -0.3**
AKN Aaknes 49.45 322 *e*P **P** **03 12 03.5 +0.7**
AKN *e*S **S** **03 19 10.2 +1.1**
AKN IAMs_20 IAMs_20 03 34 22.9
comp=Z,16µm,17.9s
SKAR Skarslia 49.48 320 *e*P **P** **03 12 03.8 +0.8**
SKAR IAmb IAmb 03 12 04.7
comp=Z,276nm,0.9s
SKAR *e*S **S** **03 19 10.2 +0.6**
SKAR IAMs_20 IAMs_20 03 34 01.4
comp=Z,12µm,13.2s
COP Copenhagen 49.56 313 *i* P **P** **03 12 04.4 +0.8**
COP IAmb IAmb 03 12 05.6
comp=Z,153nm,1.0s
KSP Ksiaz 49.58 306 *e*P **P** **03 12 04.7 +0.9**
KSP *e*PP **PP** **03 13 56.0 -1.9**
KSP *e*S **S** **03 19 06.3 -4.8**
KSP *e*L L 03 33 28.9
comp=Z,7µm,15.0s
KSP Ksiaz 49.58 306 P **P** **03 12 03.8 -0.1**
comp=Z,2µmcomp=Z,146nm,1.4s
RGN Rugen 49.58 311 *e*P **P** **03 12 05.1 +1.3**
comp=Z,472nm,1.2s,baz=61,slow=7.4
PMBI Palembang 49.62 166 IAMs_20 IAMs_20 03 34 11.2
comp=Z,3µm,20.0s
KRLC Kraliky 49.65 304 *e*P **P** **03 12 05.4 +1.0**
KRLC MLR MLR
comp=Z,7µm,12.4s
KRLC Kraliky 49.65 304 *e*P **P** **03 12 05.4 +1.0**
KRLC AMS AMS 03 33 10.0
comp=Z,7µm,12.4s
KKB Krupnik 49.68 292 P **P** **03 12 06.2 +1.4**
JAVC Velka Javorina 49.68 303 *e*P **P** **03 12 06.9 +2.2**
JAVC *e*PP **PP** **03 14 01.3 +2.3**
OSTC Ostas 49.75 305 *e*P **P** **03 12 06.6 +1.4**
OSTC MLR MLR
comp=Z,9µm,11.7s
OSTC Ostas 49.75 305 *e*P **P** **03 12 06.6 +1.4**
OSTC AMS AMS 03 33 10.0
comp=Z,9µm,11.7s
DPC Dobruska-Polom 49.78 305 *e*P **P** **03 12 06.9 +1.4**
DPC MLR MLR
comp=Z,9µm,11.1s
DPC Dobruska-Polom 49.78 305 *e*P **P** **03 12 06.9 +1.4**
DPC AMS AMS 03 33 10.0
comp=Z,10µm,11.1s
DPC Dobruska-Polom 49.78 305 P **P** **03 12 05.8 +0.3**
comp=Z,2µmcomp=Z,174nm,1.7s
SRO Srobarova 49.78 301 *e*P **P** **03 12 07.2 +1.8**
SRO pmax pmax
comp=Z,286nm,1.6s
SRO Srobarova 49.78 301 *e*P **P** **03 12 07.2 +1.8**
SRO *e*PP **PP** **03 14 03.4 +3.6**
CHVC Chvalec 49.83 305 *e*P **P** **03 12 07.1 +1.3**
CHVC *e* 03 14 00.1
CHVC MLR MLR
comp=Z,9µm,11.1s
CHVC Chvalec 49.83 305 *e*P **P** **03 12 07.1 +1.3**
CHVC *ex* x 03 14 00.1
CHVC AMS AMS 03 33 10.0
comp=Z,9µm,11.1s
UPC Upice 49.89 305 *e*P **P** **03 12 07.7 +1.5**
UPC *e* 03 13 58.1
UPC MLR MLR
comp=Z,10µm,11.4s
UPC Upice 49.89 305 *e*P **P** **03 12 07.7 +1.5**
UPC *e*PP **PP** **03 13 58.1 -2.6**
UPC AMS AMS 03 33 10.0
comp=Z,10µm,11.4s
SMOL Smolenice 49.98 302 *e*P **P** **03 12 08.5 +1.5**
SMOL pmax pmax
comp=Z,82nm,1.5s
KSI Kapahiang 50.00 169 P **P** **03 12 06.9 -0.5**
comp=Z,191nm,1.0s
TPI Tanjungpandan 50.01 162 P **P** **03 12 09.1 +1.7**
comp=Z,2µmcomp=Z,132nm,1.3s
SHEM Shemya Is, Ala 50.07 51 LR LR 03 34 12.3
comp=Z,2µm,19.7s,baz=296,slow=37
VRAC Vranov 50.10 304 LR LR 03 34 00.6
comp=Z,4µm,19.7s,baz=68,slow=37
VRAC Vranov 50.10 304 ⇑P **P** **03 12 09.5 +1.6**
VRAC Vranov 50.10 304 P **P** **03 12 09.4 +1.6**
VRAC Vranov 50.10 304 *e*P **P** **03 12 08.9 +1.0**
VRAC *e*PP **PP** **03 14 02.8 +0.1**
MODS Modra-Piesok 50.14 302 *e*P **P** **03 12 09.7 +1.5**
MODS pmax pmax
comp=Z,393nm,1.6s
MODS Modra-Piesok 50.14 302 *e*P **P** **03 12 09.7 +1.5**
MODS *e*PP **PP** **03 14 04.6 +1.5**
FRGS Fruska Gora 50.14 298 ⇑*i*P **P** **03 12 08.7 +0.5**
HYA Hoyanger 50.22 321 *e*P **P** **03 12 08.4 -0.1**
HYA IAmb IAmb 03 12 09.9
comp=Z,218nm,1.0s
HYA *e*S **S** **03 19 23.1 +3.3**
HYA IAMs_20 IAMs_20 03 34 07.6
comp=Z,11µm,12.9s
RUE Ruedersdorf 50.25 308 *e*P **P** **03 12 10.3 +1.5**
RUE Ruedersdorf 50.25 308 *e*P **P** **03 12 09.9 +1.0**
comp=Z,415nm,1.2s,baz=61,slow=7.4
VAY Valandovo 50.30 292 *i* P **P** **03 12 10.3 +0.9**
KARP Karpathos 50.32 283 *e*P **P** **03 12 10.3 +0.6**
KARP Karpathos 50.32 283 P **P** **03 12 09.4 -0.3**
comp=Z,278nm,0.9s
KRUC Moravsky 50.33 303 *e*P **P** **03 12 10.7 +1.1**
KRUC *e*PP **PP** **03 14 04.5 -0.3**
MORH Mrgy, Hungar 50.34 299 ⇑P **P** **03 12 10.1 +0.4**
MORH Mrgy, Hungar 50.34 299 P **P** **03 12 09.4 -0.3**
comp=Z,2µmcomp=Z,139nm,1.4s
MORH Mrgy, Hungar 50.34 299 ⇑*i*P **P** **03 12 10.3 +0.6**
HOMB Homborsund 50.40 317 *e*P **P** **03 12 08.7 -1.2**
HOMB IAmb IAmb 03 12 10.9
comp=Z,219nm,0.9s
HOMB *e*S **S** **03 19 25.0 +2.6**
HOMB IAMs_20 IAMs_20 03 34 33.8
comp=Z,14µm,13.4s
HOMB Homborsund 50.40 317 *i* P **P** **03 12 09.9 -0.1**
TOLI2 Tolitoli 50.49 144 P **P** **03 12 12.3 +1.2**
TOLI2 Tolitoli 50.49 144 IAmb IAmb 03 12 17.2
comp=Z,152nm,1.2s
DAG Danmarks Havn 50.53 344 P **P** **03 12 10.0 -0.7**
DAG pmax pmax
comp=Z,111nm,1.0s
DAG Danmarks Havn 50.53 344 *i* P **P** **03 12 09.7 -1.0**
DAG IAmb IAmb 03 12 10.9
comp=Z,92nm,1.1s
FOO Floro 50.54 322 *e*P **P** **03 12 10.7 -0.3**
FOO IAMs_20 IAMs_20 03 35 14.0
comp=Z,12µm,12.4s
MPLH Magyarpolny 50.55 301 P **P** **03 12 10.9 -0.4**
comp=Z,5µmcomp=Z,420nm,1.4s
ODD1 Odda 50.56 319 *e*P **P** **03 12 11.7 +0.5**
ODD1 *e*S **S** **03 19 29.2 +4.5**
ODD1 IAMs_20 IAMs_20 03 34 34.9
comp=Z,12µm,15.1s
GOET G??ttrup 50.59 315 *i* P **P** **03 12 12.2 +0.8**
GOET IAmb IAmb 03 12 13.3
comp=Z,253nm,1.0s
PVCC Panska Ves 50.70 306 *e*P **P** **03 12 13.7 +1.4**
PVCC MLR MLR
comp=Z,9µm,10.9s
PVCC Panska Ves 50.70 306 *e*P **P** **03 12 13.7 +1.4**
PVCC AMS AMS 03 33 50.0
comp=Z,9µm,10.9s
SKO Skopje 50.70 293 *i* P **P** **03 12 13.9 +1.4**
MNAI Manna 50.75 168 IAMs_20 IAMs_20 03 35 35.0
comp=Z,3µm,19.0s
MPSI Mapaga 50.84 146 P **P** **03 12 15.3 +1.6**
comp=Z,2µmcomp=Z,86nm,0.9s
BLS5 Blasjo 50.86 319 *e*P **P** **03 12 13.9 +0.5**
BLS5 IAmb IAmb 03 12 15.0
comp=Z,189nm,0.9s
BLS5 *e*S **S** **03 19 30.0 +1.3**
BLS5 IAMs_20 IAMs_20 03 34 42.8
comp=Z,11µm,15.9s
MUD Monsted U'grnd 50.87 315 *i* P **P** **03 12 14.6 +1.1**
MUD IAmb IAmb 03 12 15.8
comp=Z,202nm,0.8s
BRG Berggiesshubel 50.89 306 *e*P **P** **03 12 14.4 +0.6**
comp=Z,184nm,1.3s,baz=61,slow=7.4
PRU Pruhonice 50.97 305 *e*P **P** **03 12 15.0 +0.6**
PRU *e* 03 14 11.5
PRU Pruhonice 50.97 305 *e*P **P** **03 12 15.0 +0.6**
PRU *e*PP **PP** **03 14 11.5 +1.0**
WINA Alland / Wiene 50.97 302 *i* pP **P** **03 12 16.1 +1.7**
SNR=93
SJES Sjenica 50.98 295 ⇑*i*P **P** **03 12 15.3 +0.6**
SNART Snartemo 50.98 317 *i* P **P** **03 12 14.5 +0.1**
BBLS Lazi&#263i 51.03 296 ⇑*i*P **P** **03 12 15.6 +0.6**
RONA Rosalia, Austr 51.04 302 *i* pP **P** **03 12 16.6 +1.6**
comp=Z,292nm,1.5s,SNR=124
MDSI Maura Dua 51.05 167 P **P** **03 12 13.9 -1.4**
comp=Z,52nm,1.1s
SSRD Sdr. Stenderup 51.08 313 *i* P **P** **03 12 16.5 +1.4**
JMIC Jan Mayen 51.12 336 LR LR 03 36 31.9
comp=Z,2µm,19.6s,baz=68,slow=39
RUDO Rudo 51.18 296 *e*P **P** **03 12 15.4 -0.7**
CONA Conrad Observa 51.18 302 *i* pP **P** **03 12 18.0 +1.8**
comp=Z,412nm,1.5s,SNR=183
BKB Balikpapan 51.20 150 P **P** **03 12 17.9 +1.5**
BKB Balikpapan 51.20 150 P **P** **03 12 21.8 +5.4**
CLL Collm 51.21 307 ⇑*i*P **P** **03 12 16.7 +0.5**
CLL *i* 03 12 20.8
CLL *i* 03 12 22.6
CLL *e*S **S** **03 19 36.0 +2.2**
CLL pmax pmax
comp=Z,251nm,1.2s
CLL Collm 51.21 307 ⇑*i*P **P** **03 12 16.7 +0.5**
comp=Z,251nm,1.2s
CLL *e*Pmax 03 12 19.0
CLL *i* x x 03 12 20.8
CLL *i* x x 03 12 22.6
CLL *e*PP **PP** **03 14 12.0 -0.7**
CLL *e*S **S** **03 19 36.0 +2.2**
CLL *e*SS **SS** **03 23 12.0 +3.3**
CLL AMS AMS 03 34 00.0
comp=Z,3µm,21.2s
CLL *e*AMS AMS 03 34 32.0
CLL Collm 51.21 307 *e*P **P** **03 12 16.8 +0.7**
comp=Z,223nm,1.1s,baz=61,slow=7.4
CLL Collm 51.21 307 P **P** **03 12 15.7 -0.5**
comp=Z,2µmcomp=Z,181nm,1.2s
IVA Berane 51.23 295 ⇑*i*P **P** **03 12 17.6 +1.1**
HSKC Hora Svate Kat 51.30 306 *e*P **P** **03 12 17.8 +0.9**
HSKC AMS AMS 03 34 10.0
comp=Z,10µm,11.1s
PLE Pljevlja 51.31 296 ⇑*i*P **P** **03 12 18.1 +0.9**
PVY Plav 51.33 295 ⇑*i*P **P** **03 12 17.9 +0.6**
KLSI 51.34 166 P **P** **03 12 17.0 -0.5**
BEHE Becsehely 51.35 300 IAmb IAmb 03 12 19.6
comp=Z,82nm,1.1s
BEHE Becsehely 51.35 300 ⇑*i*P **P** **03 12 18.0 +0.7**
GORT1 Trebel 51.35 310 *e*P **P** **03 12 18.7 +1.6**
comp=Z,521nm,1.3s,baz=61,slow=7.4
ZVC Zvikov 51.43 305 *e*P **P** **03 12 19.0 +1.2**
ZVC AMS AMS 03 34 10.0
comp=Z,12µm,11.2s
BSEG Bad Segeberg 51.44 311 *e*P **P** **03 12 19.2 +1.4**
comp=Z,126nm,1.0s,baz=61,slow=7.4
KOME Kolasin 51.48 295 ⇑*i*P **P** **03 12 18.7 +0.3**
KLI Kotabumi 51.53 166 P **P** **03 12 18.9 0.0**
comp=Z,94nm,1.1s
MRSI Marisa 51.54 143 P **P** **03 12 20.6 +1.6**
comp=Z,3µmcomp=Z,262nm,1.2s
OHR Ohrid 51.56 293 *i* P **P** **03 12 19.3 +0.3**
CKRC Cesky Krumlov 51.66 304 *e*P **P** **03 12 20.4 +0.8**
CKRC MLR MLR
comp=Z,5µm,11.7s
CKRC Cesky Krumlov 51.66 304 *e*P **P** **03 12 20.4 +0.8**
CKRC AMS AMS 03 34 10.0
comp=Z,5µm,11.7s
KOGS Kog 51.68 301 *e*P **P** **03 12 19.9 +0.2**
UPM Unac-Piva 51.68 296 ⇑*i*P **P** **03 12 20.0 0.0**
UPM Unac-Piva 51.68 296 ⇑*i*P **P** **03 12 20.3 +0.3**
FLTG Flechtingen 51.70 309 *e*P **P** **03 12 20.2 +0.4**
comp=Z,192nm,1.1s,baz=61,slow=7.4
ARSA Arzberg 51.72 302 IAmb IAmb 03 12 22.5
comp=Z,124nm,1.7s
ARSA Arzberg 51.72 302 *i* pP **P** **03 12 21.0 +1.0**
comp=Z,22nm,0.7s,SNR=29
GTOI Gorontalo 51.85 142 P **P** **03 12 21.0 -0.3**
comp=Z,4µmcomp=Z,276nm,1.4s
PDG Podgorica 51.86 295 ⇓P **P** **03 12 21.7 +0.6**
PDG Podgorica 51.86 295 IAmb IAmb 03 12 23.1
comp=Z,153nm,0.9s
PDG IAMs_20 IAMs_20 03 36 19.3
comp=Z,3µm,21.0s
PDG Podgorica 51.86 295 ⇑*i*P **P** **03 12 21.8 +0.6**
PDG Podgorica 51.86 295 ⇑*i*P **P** **03 12 21.6 +0.5**
NKME Niksic 51.87 295 ⇑*i*P **P** **03 12 21.4 +0.1**
C16K Lisburne Hills 51.89 28 P **P** **03 12 21.4 +0.5**
baz=300,SNR=27
KLINJ Klinje 51.90 296 *e*P **P** **03 12 22.2 +0.6**
KHC Kasperske Hory 51.93 305 IAmb IAmb 03 12 24.1
comp=Z,154nm,1.4s
KHC Kasperske Hory 51.93 305 *c* i*P* **P** **03 12 22.5 +0.9**
KHC pmax pmax
comp=Z,73nm,1.3s
KHC MLR MLR
comp=Z,6µm,15.0s
KHC Kasperske Hory 51.93 305 *e*P **P** **03 12 21.9 +0.3**
KHC *e*PCP **PcP** **03 13 32.5 -1.6**
KHC AMS AMS 03 34 30.0
comp=Z,10µm,11.7s
KHC Kasperske Hory 51.93 305 P **P** **03 12 21.2 -0.4**
comp=Z,1µmcomp=Z,81nm,1.6s
MNI Manado 51.94 139 P P 03 12 27.8 +5.8
comp=Z,187nm,0.8s
NEUB Neuenburg 51.94 308 *e*P **P** **03 12 22.3 +0.7**
comp=Z,309nm,1.2s,baz=61,slow=7.4
TANN Tannenbergstha 51.94 307 *e*P **P** **03 12 22.6 +0.9**
comp=Z,202nm,1.3s,baz=61,slow=7.4
PCI Palu 51.95 146 P **P** **03 12 24.0 +1.9**
BLY Banja Luka 51.96 298 ⇓P **P** **03 12 22.9 +1.1**
BLY Banja Luka 51.96 298 ⇑*i*P **P** **03 12 22.3 +0.4**
GEC2 GERESS Array S 52.00 304 IAmb IAmb 03 12 24.5
comp=Z,158nm,1.5s
GEC2 GERESS Array S 52.00 304 *e*P **P** **03 12 23.1 +0.8**
comp=Z,153nm,1.5s,baz=61,slow=7.4
GERES GERESS Array B 52.00 304 P **P** **03 12 22.4 +0.2**
comp=Z,22nm,1.1s,baz=64,slow=6.1,SNR=89
GERES PP **PP** **03 14 18.4 -1.6**
comp=Z,14nm,1.0s,baz=69,slow=7.3,SNR=5.4
GERES LR LR 03 35 27.2
comp=Z,4µm,18.1s,baz=74,slow=37
comp=Z,22nm,1.1s
IDI Anoyia 52.00 284 LR LR 03 38 19.8
comp=Z,2µm,19.0s,baz=52,slow=40
IDI Anoyia 52.00 284 P **P** **03 12 20.9 -1.5**
IDI Anoyia 52.00 284 IAmb IAmb 03 12 24.9
comp=Z,89nm,0.9s
CEME Cevo 52.01 295 ⇑*i*P **P** **03 12 22.5 +0.1**
DRME Dracevica, Mon 52.03 295 ⇑*i*P **P** **03 12 22.8 +0.4**
NKC Novy Kostel 52.03 306 *e*P **P** **03 12 22.9 +0.5**
NKC Novy Kostel 52.03 306 *e*P **P** **03 12 22.9 +0.5**
BRY Bratogost 52.06 296 ⇑*i*P **P** **03 12 22.4 -0.4**
BRY Bratogost 52.06 296 ⇑*i*P **P** **03 12 22.5 -0.4**
PLN Plauen 52.08 307 *e*P **P** **03 12 23.5 +0.8**
comp=Z,65nm,1.2s,baz=61,slow=7.4
ASSE Asse, Remlinge 52.10 309 *e*P **P** **03 12 23.5 +0.8**
comp=Z,174nm,1.4s,baz=61,slow=7.4
ULC Ulcinj 52.11 294 ⇑*i*P **P** **03 12 23.7 +0.7**
GROS Grobnik 52.12 301 *i* P **P** **03 12 23.4 +0.3**
BUM Brajici-Budva 52.15 295 ⇑*i*P **P** **03 12 23.9 +0.5**
MOA Molln 52.16 303 *e*pP **P** **03 12 24.6 +1.3**
comp=Z,184nm,1.3s,SNR=110
A19K Wainwright 52.22 25 P **P** **03 12 24.5 +1.1**
baz=302
DBG Daneborg 52.28 342 *i* P **P** **03 12 24.0 +0.2**
DBG IAmb IAmb 03 12 24.6
comp=Z,59nm,1.1s
TREB Trebinje 52.28 295 *e*P **P** **03 12 24.1 -0.2**
SOKA Soboth 52.29 301 *i* pP **P** **03 12 25.1 +0.6**
comp=Z,181nm,1.6s,SNR=118
MOX Moxa 52.30 307 *e*P **P** **03 12 25.2 +0.8**
comp=Z,210nm,1.2s,baz=61,slow=7.4
MOX *e*L L 03 35 35.2
comp=Z,4µm,19.8s
WET Wettzell 52.32 305 *e*P **P** **03 12 25.7 +1.1**
comp=Z,185nm,1.3s,baz=61,slow=7.4
HCY Herceg Novi 52.33 295 ⇑*i*P **P** **03 12 24.8 +0.1**
HCY Herceg Novi 52.33 295 *e*P **P** **03 12 25.0 +0.3**
TNA Tin City 52.34 31 P **P** **03 12 25.4 +1.0**
baz=299,SNR=8.0
MANZ Manzenberg 52.35 306 *e*P **P** **03 12 25.6 +0.9**
comp=Z,33nm,1.3s,baz=61,slow=7.4
ROTZ Rotzenmuhle 52.40 306 *e*P **P** **03 12 26.2 +1.2**
comp=Z,57nm,1.4s,baz=61,slow=7.4
CLZ Clausthal 52.40 309 *e*P **P** **03 12 26.2 +1.1**
comp=Z,183nm,1.2s,baz=61,slow=7.4
C17K DeLong Mountai 52.48 27 P **P** **03 12 26.0 +0.5**
baz=301,SNR=20
RETH Rethem/Aller, 52.51 310 *e*P **P** **03 12 27.0 +1.2**
comp=Z,249nm,1.3s,baz=61,slow=7.4
BBKI Banjar Baru 52.59 153 P **P** **03 12 29.0 +2.2**
comp=Z,82nm,0.9s
BIOA Bad Ischl, Aus 52.60 303 *i* pP **P** **03 12 28.0 +1.3**
comp=Z,248nm,1.4s,SNR=152
OBKA Obir 52.66 301 *i* pP **P** **03 12 27.9 +0.7**
comp=Z,194nm,1.5s,SNR=95
APSI Ampana 52.68 144 P **P** **03 12 29.7 +2.3**
GTTG Gottingen 52.77 309 *e*P **P** **03 12 29.1 +1.3**
comp=Z,413nm,1.1s,baz=61,slow=7.4
RDOG Red Dog Mine 52.78 27 P **P** **03 12 27.5 -0.2**
RDOG Red Dog Mine 52.78 27 P **P** **03 12 27.7 0.0**
baz=302
A21K Barrow 52.84 22 P **P** **03 12 28.4 +0.4**
baz=304
LJU Ljubljana 52.91 301 ⇑*i*P **P** **03 12 29.3 +0.3**
D17K Noatak River 52.91 28 P **P** **03 12 29.1 +0.6**
baz=302,SNR=64
ITM Ithomi 52.94 288 IAmb IAmb 03 12 29.1
comp=Z,88nm,1.0s
KEK Kerkira 52.95 292 IAmb IAmb 03 12 31.0
comp=Z,78nm,1.0s
F14K Arctic Creek 52.96 31 P **P** **03 12 29.9 +0.9**
baz=301,SNR=5.8
GAMI Galela, Maluku 52.98 136 P **P** **03 12 31.3 +1.6**
comp=Z,6µmcomp=Z,429nm,1.8s
GRF Grafenberg Arr 52.99 306 *e*P **P** **03 12 30.9 +1.5**
comp=Z,427nm,1.2s,baz=61,slow=7.4
GRF *e*L L 03 35 54.9
comp=Z,3µm,19.4s
GRFO Grafenberg 52.99 306 P **P** **03 12 31.1 +1.6**
GRFO Grafenberg 52.99 306 P **P** **03 12 31.1 +1.6**
GRFO pmax pmax
comp=Z,295nm,1.1s
C18K Utukok River 53.01 26 P **P** **03 12 30.0 +0.6**
baz=302
RJOB Jochberg 53.07 303 *e*P **P** **03 12 31.5 +1.3**
comp=Z,123nm,1.2s,baz=61,slow=7.4
KBA Koelnbreinsper 53.09 302 *i* pP **P** **03 12 31.7 +1.2**
comp=Z,227nm,1.3s,SNR=203
UBBA Unterbreizbach 53.11 308 *e*P **P** **03 12 30.6 +0.5**
comp=Z,217nm,1.5s,baz=61,slow=7.4
MYKA Terra Mystica 53.14 302 *e*pP **P** **03 12 31.3 +0.6**
comp=Z,58nm,1.2s,SNR=18
MMSI Mamuju 53.25 148 P **P** **03 12 33.3 +1.6**
comp=Z,2µmcomp=Z,168nm,1.1s
C19K Lookout Ridge 53.25 25 IAMs_20 IAMs_20 03 35 19.8
comp=Z,2µm,18.0s
C19K Lookout Ridge 53.25 25 P **P** **03 12 32.0 +0.8**
baz=304
LUWI Luwuk 53.26 143 P **P** **03 12 28.2 -3.5**
LUWI Luwuk 53.26 143 P **P** **03 12 34.4 +2.7**
LUWI Luwuk 53.26 143 P **P** **03 12 35.2 +3.5**
comp=Z,3µmcomp=Z,204nm,1.3s
LESA Schwarzleotal 53.30 303 *e*pP **P** **03 12 33.1 +1.2**
comp=Z,120nm,1.3s,SNR=78
F15K North Star Dit 53.43 30 P **P** **03 12 33.2 +0.7**
baz=302,SNR=7.5
B20K Meade River 53.45 24 P **P** **03 12 32.9 +0.4**
baz=305
A22K Sinclair Lake 53.47 22 P **P** **03 12 32.8 +0.2**
baz=306
GUMO Guam 53.47 110 LR LR 03 36 06.7
comp=Z,2µm,18.1s,baz=322,slow=37
GUMO Guam 53.47 110 IAMs_20 IAMs_20 03 35 54.6
comp=Z,2µm,19.0s
SKDS Skadanscina 53.48 301 ⇑*i*P **P** **03 12 33.1 0.0**
TRI Trieste 53.54 301 IAmb IAmb 03 12 33.7
comp=Z,194nm,1.3s
IBBN Ibbenburen 53.58 310 *e*P **P** **03 12 34.6 +0.9**
comp=Z,207nm,1.0s,baz=61,slow=7.4
TNTI Ternate 53.70 137 P **P** **03 12 36.6 +1.6**
TNTI Ternate 53.70 137 P **P** **03 12 37.1 +2.1**
comp=Z,4µmcomp=Z,263nm,1.7s
FUR Furstenfeldbru 53.73 305 *e*P **P** **03 12 36.3 +1.3**
comp=Z,323nm,1.3s,baz=61,slow=7.4
ABTA Abfaltersbach 53.75 303 *i* P **P** **03 12 35.3 +0.1**
comp=Z,121nm,1.2s,SNR=72
ANM Nome 53.78 32 P **P** **03 12 36.8 +1.8**
ANM IAmb IAmb 03 12 41.2
comp=Z,182nm,2.0s
ANM Nome 53.78 32 P **P** **03 12 36.8 +1.8**
ANM pmax pmax
comp=Z,182nm,2.0s
ANM MLR MLR
comp=Z,3µm,19.0s
ANM Nome 53.78 32 P **P** **03 12 36.1 +1.1**
baz=302,SNR=11
KASTN Kahler Asten 53.78 309 *e*P **P** **03 12 36.2 +0.9**
comp=Z,82nm,1.1s,baz=61,slow=7.4
E18K Tukpahlearik C 53.87 27 P **P** **03 12 36.0 +0.4**
baz=304,SNR=25

TTSI Tana Toraja 53.91 147 P **P** 03 12 37.0 +0.5
LRW Lerwick 53.91 322 *e*P **P** 03 12 36.5 +0.5
LRW IAmb IAmb 03 12 38.0
comp=Z,114nm,0.9s
LEM Lembang 53.96 163 LR LR 03 35 50.7
comp=Z,1µm,18.8s,baz=336,slow=36
WATA Walderalm 53.99 304 *i* pP **P** 03 12 37.8 +0.8
comp=Z,161nm,1.3s,SNR=75
WTTA Wattenberg 53.99 303 *e*pP **P** 03 12 37.8 +0.7
comp=Z,125nm,1.0s,SNR=98
PMSI Majene 54.00 149 P **P** 03 12 40.3 +3.1
comp=Z,4µmcomp=Z,228nm,1.2s
G15K Niukluk 54.03 31 P **P** 03 12 37.8 +0.9
baz=303,SNR=16
D19K Kuna River 54.03 26 IAmb IAmb 03 12 42.0
comp=Z,170nm,1.4s
D19K Kuna River 54.03 26 P **P** 03 12 37.2 +0.3
baz=305
F17K Baldwin Pennin 54.20 29 IAmb IAmb 03 12 43.9
comp=Z,42nm,0.7s
F17K IAMs_20 IAMs_20 03 38 00.1
comp=Z,2µm,20.0s
F17K Baldwin Pennin 54.20 29 P **P** 03 12 39.1 +1.1
baz=304,SNR=13
MOTA Moosalm 54.26 304 *i* pP **P** 03 12 39.8 +0.8
comp=Z,219nm,1.2s,SNR=62
SQTA Sankt Quirin 54.26 304 *e*pP **P** 03 12 39.8 +0.9
comp=Z,280nm,1.3s,SNR=101
TNS Taunus Mts 54.26 308 *e*P **P** 03 12 39.7 +0.8
comp=Z,183nm,1.3s,baz=61,slow=7.4
BUG Bochum--Univer 54.28 310 *e*P **P** 03 12 39.9 +1.1
comp=Z,255nm,1.1s,baz=61,slow=7.4
B22K Teshekpuk Lake 54.28 23 P **P** 03 12 38.9 +0.3
baz=308,SNR=24
D20K Etivluk River 54.36 25 IAmb IAmb 03 12 44.4
comp=Z,69nm,0.7s
D20K IAMs_20 IAMs_20 03 36 43.1
comp=Z,2µm,20.0s
D20K Etivluk River 54.36 25 P **P** 03 12 39.5 +0.3
baz=306
RETA Reutte 54.38 304 *i* pP **P** 03 12 40.8 +1.0
comp=Z,194nm,1.5s,SNR=69
B21K Ikpikpuk River 54.39 24 IAmb IAmb 03 12 44.7
comp=Z,65nm,0.8s
B21K Ikpikpuk River 54.39 24 P **P** 03 12 40.0 +0.7
baz=307,SNR=47
G16K Koyuk River 54.41 30 P **P** 03 12 40.5 +0.9
baz=304,SNR=17
MATE Matera 54.42 294 ⇓P **P** 03 12 40.1 0.0
MATE Matera 54.42 294 *e*P **P** 03 12 38.6 -1.5
CTJI Waduk Cacaban 54.47 161 P **P** 03 12 42.1 +1.6
comp=Z,4µmcomp=Z,280nm,1.5s
BBJI Bungbulang 54.58 163 P **P** 03 12 43.2 +1.7
BBJI Bungbulang 54.58 163 P **P** 03 12 44.1 +2.6
STU Stuttgart 54.60 306 *e*P **P** 03 12 41.9 +0.7
comp=Z,645nm,1.5s,baz=61,slow=7.4
C21K Knifeblade Rid 54.62 24 P **P** 03 12 42.0 +0.9
baz=307,SNR=89
F18K Selawik 54.64 28 P **P** 03 12 41.9 +0.7
baz=305,SNR=39
FETA Feichten 54.65 304 *i* pP **P** 03 12 42.6 +0.8
comp=Z,249nm,1.4s,SNR=124
UBR Ueberruh 54.66 305 *e*P **P** 03 12 42.6 +0.9
comp=Z,233nm,1.2s,baz=61,slow=7.4
KPJI Karang Pucung 54.73 162 P **P** 03 12 42.2 -0.2
comp=Z,51nm,1.3s
SPSI Sidrap Palu 54.74 148 P **P** 03 12 42.4 -0.1
E20K Nigu River 54.75 25 P **P** 03 12 42.9 +0.7
baz=307,SNR=93
SMRI Semarang 54.80 160 P **P** 03 12 44.8 +1.8
SMRI Semarang 54.80 160 P **P** 03 12 44.6 +1.7
SMRI Semarang 54.80 160 P **P** 03 12 45.1 +2.1
H16K Elim 54.87 31 P **P** 03 12 43.8 +0.9
baz=304,SNR=25
E19K Redstone River 54.91 26 IAmb IAmb 03 12 48.5
comp=Z,59nm,0.7s
E19K IAMs_20 IAMs_20 03 38 47.8
comp=Z,2µm,18.0s
E19K Redstone River 54.91 26 P **P** 03 12 43.8 +0.6
baz=306
G17K Kiwalik Mounta 54.94 29 P **P** 03 12 44.0 +0.6
baz=305,SNR=19
NEEM North Greenlan 54.95 351 *i* P **P** 03 12 44.2 +0.5
NEEM IAmb IAmb 03 12 44.8
comp=Z,184nm,0.8s
DAVA Damuels 55.00 304 *i* pP **P** 03 12 45.1 +0.7
comp=Z,149nm,1.3s,SNR=56
SCO Scoresbysund 55.08 338 IAmb IAmb 03 12 46.5
comp=Z,74nm,1.0s
SCO Scoresbysund 55.08 338 *i* P **P** 03 12 45.8 +1.5
SCO IAmb IAmb 03 12 47.0
comp=Z,39nm,0.8s
F19K Shaleruckik Mo 55.11 27 IAMs_20 IAMs_20 03 39 00.2
comp=Z,2µm,18.0s
F19K Shaleruckik Mo 55.11 27 P **P** 03 12 44.8 +0.1
baz=306
ATD Arta Tunnel 55.18 248 LR LR 03 39 51.5
comp=Z,79nm,19.4s,baz=43,slow=40
ATD Arta Tunnel 55.18 248 P **P** 03 12 47.3 +1.4
SNR=16
TIP Timpagrande 55.20 293 ⇑P **P** 03 12 47.1 +1.3
TIP Timpagrande 55.20 293 P **P** 03 12 45.5 -0.3
comp=Z,3µmcomp=Z,229nm,1.2s
DAVOX Davos/Dischmat 55.27 304 LR LR 03 37 45.0
comp=Z,3µm,21.3s,baz=56,slow=38
E21K Killik River 55.30 25 IAmb IAmb 03 12 51.2
comp=Z,191nm,1.4s
E21K Killik River 55.30 25 P **P** 03 12 46.1 +0.1
baz=308
BFO Black Forest 55.33 306 P **P** 03 12 46.9 +0.4
BFO Black Forest 55.33 306 P **P** 03 12 46.9 +0.4
BFO pmax pmax
comp=Z,287nm,1.8s
BFO MLR MLR
comp=Z,5µm,18.0s
BFO Black Forest 55.33 306 *e*P **P** 03 12 46.8 +0.3
comp=Z,279nm,1.8s,baz=61,slow=7.4
BTNL Ternell 55.34 309 *d*P **P** 03 12 47.0 +0.4
comp=Z,61nm,1.1s
C23K Itkillik River 55.35 22 IAMs_20 IAMs_20 03 38 26.1
comp=Z,2µm,20.0s
C23K Itkillik River 55.35 22 P **P** 03 12 47.0 +0.7
baz=310,SNR=94
CUC Castrocucco 55.35 294 IAMs_20 IAMs_20 03 38 45.0
comp=Z,2µm,20.0s
NGJI Ngawi 55.36 159 P **P** 03 12 49.6 +2.6
comp=Z,7µmcomp=Z,268nm,1.1s
FDMO Fiordimonte 55.38 298 IAmb IAmb 03 12 51.7
comp=Z,126nm,1.0s
G18K Tagagawik 55.38 28 P **P** 03 12 47.0 +0.3
baz=306
MEM Membach 55.39 309 *d*P **P** 03 12 47.7 +0.8
comp=Z,109nm,1.0s
J14K Nanvaranak Lak 55.45 33 P **P** 03 12 47.8 +0.7
baz=304
BEBN Eben Emael 55.47 310 *d*P **P** 03 12 48.1 +0.7
comp=Z,110nm,1.1s
K13K Kusilvak Mount 55.48 34 IAmb IAmb 03 12 52.8
comp=Z,56nm,0.8s
K13K IAMs_20 IAMs_20 03 37 03.3
comp=Z,3µm,18.0s
K13K Kusilvak Mount 55.48 34 P **P** 03 12 48.2 +0.9
baz=304,SNR=21
H17K Granite Mounta 55.52 30 IAmb IAmb 03 12 53.8
comp=Z,85nm,0.7s
H17K IAMs_20 IAMs_20 03 40 07.9
comp=Z,2µm,18.0s
H17K Granite Mounta 55.52 30 P **P** 03 12 48.6 +1.0
baz=306
BHOU Houvegnez 55.53 309 *d*P **P** 03 12 49.0 +1.0
comp=Z,70nm,1.2s
SANI Sanana 55.55 140 P **P** 03 12 48.1 -0.4
SANI Sanana 55.55 140 P **P** 03 12 48.2 -0.2
SANI Sanana 55.55 140 P **P** 03 12 48.2 -0.2
comp=Z,5µmcomp=Z,317nm,1.6s
AQU L'Aquila 55.56 298 P **P** 03 12 49.0 +0.7
AQU L'Aquila 55.56 298 P **P** 03 12 49.0 +0.7
AQU pmax pmax
comp=Z,133nm,1.2s
AQU L'Aquila 55.56 298 P **P** 03 12 48.0 -0.3
comp=Z,2µmcomp=Z,133nm,1.2s
AQU L'Aquila 55.56 298 ⇑ *i*P **P** 03 12 49.2 +0.9
F20K Avaraart Lake 55.63 26 P **P** 03 12 48.6 +0.2
baz=308,SNR=26
BSTI Sart Tilman 55.64 309 *d*P **P** 03 12 49.8 +1.1
comp=Z,23nm,1.1s
UGM Wanagama 55.65 160 P **P** 03 12 51.2 +2.1
comp=Z,111nm,1.7s
KAPI Kappang 55.70 148 LR LR 03 40 42.6
comp=Z,488nm,18.9s,baz=326,slow=40
KAPI Kappang 55.70 148 P **P** 03 12 49.9 +0.4
KAPI Kappang 55.70 148 P **P** 03 12 49.3 -0.2
KAPI IAmb IAmb 03 12 54.4
comp=Z,119nm,1.1s
KAPI Kappang 55.70 148 P **P** 03 12 49.3 -0.2
KAPI pmax pmax
comp=Z,119nm,1.1s
KAPI MLR MLR
comp=Z,600nm,20.0s
KAPI Kappang 55.70 148 P **P** 03 12 49.6 +0.1
comp=Z,56nm,1.2s
KMMI Kalianget 55.73 156 P **P** 03 12 51.2 +1.6
comp=Z,2µmcomp=Z,110nm,1.4s
M11K Mekoryuk 55.73 36 P **P** 03 12 50.6 +1.4
baz=304
TUE Stuetta 55.74 304 IAmb IAmb 03 12 51.4
comp=Z,106nm,1.2s
TUE Stuetta 55.74 304 P **P** 03 12 49.2 -0.6
comp=Z,6µmcomp=Z,301nm,1.1s
G19K Purcell Mounta 55.75 28 IAmb IAmb 03 12 57.0
comp=Z,158nm,1.9s
G19K Purcell Mounta 55.75 28 P **P** 03 12 49.9 +0.7
baz=307,SNR=16
SJI Sawahan 55.79 159 P **P** 03 12 50.5 +0.3
comp=Z,178nm,1.0s
MKS Makassar 55.79 149 P **P** 03 12 56.1 +6.0
comp=Z,2µmcomp=Z,93nm,1.1s
WLF Walferdange 55.82 308 P **P** 03 12 50.1 +0.1
WLF Walferdange 55.82 308 *d*P **P** 03 12 49.8 -0.2
WLF Walferdange 55.82 308 *e*P **P** 03 12 51.1 +1.1
comp=Z,362nm,1.8s,baz=61,slow=7.4
SNJI Sawahan-Nganju 55.83 159 P **P** 03 12 51.5 +0.9
comp=Z,1µmcomp=Z,103nm,1.1s
I17K Ulalakleet 55.85 31 P **P** 03 12 51.1 +1.1
baz=306
BCLA Clavier 55.87 309 *d*P **P** 03 12 51.3 +0.9
comp=Z,57nm,1.1s
D23K Nanushuk River 55.89 23 IAmb IAmb 03 12 55.2
comp=Z,77nm,0.8s
D23K IAMs_20 IAMs_20 03 38 58.6
comp=Z,2µm,20.0s
D23K Nanushuk River 55.89 23 P **P** 03 12 50.9 +0.6
baz=310
H18K Honhosa River 55.92 29 IAMs_20 IAMs_20 03 39 11.6
comp=Z,2µm,21.0s
H18K Honhosa River 55.92 29 P **P** 03 12 51.3 +0.8
baz=307,SNR=35
C24K Franklin Bluff 55.93 22 P **P** 03 12 51.1 +0.6
baz=312,SNR=128
BIGH Upper Bighouse 55.98 321 ⇑ *e*P **P** 03 12 51.2 +0.3
BIGH IAmb IAmb 03 12 53.1
comp=Z,91nm,0.8s
BGES Gesves 56.01 309 *d*P **P** 03 12 52.3 +1.0
comp=Z,45nm,0.0s
ECH Echery 56.05 306 IAmb IAmb 03 12 53.2
comp=Z,63nm,1.1s
ECH Echery 56.05 306 P **P** 03 12 51.9 +0.2
RCHB Rochefort 56.06 309 *d*P **P** 03 12 51.8 +0.1
comp=Z,51nm,1.3s
PCJI Pacitan 56.08 159 P P 03 12 56.6 +4.5
comp=Z,154nm,1.6s
E22K Anaktuvuk Pass 56.11 24 IAmb IAmb 03 12 57.0
comp=Z,202nm,1.5s
E22K IAMs_20 IAMs_20 03 37 34.5
comp=Z,2µm,18.0s
E22K Anaktuvuk Pass 56.11 24 P **P** 03 12 52.3 +0.4
baz=310,SNR=103
UCC Uccle 56.17 310 *d*P **P** 03 12 53.1 +0.6
comp=Z,85nm,1.1s
MCD Coleburn Disti 56.19 320 *e*P **P** 03 12 52.9 +0.4
MCD IAmb IAmb 03 12 54.9
comp=Z,221nm,0.8s
F21K Alatna River 56.21 26 IAmb IAmb 03 12 58.0
comp=Z,170nm,1.4s
F21K IAMs_20 IAMs_20 03 39 06.0
comp=Z,2µm,19.0s
F21K Alatna River 56.21 26 P **P** 03 12 53.2 +0.7
baz=309,SNR=98
DRUM Mains of Drumt 56.21 319 *e*P **P** 03 12 53.0 +0.2
DRUM IAmb IAmb 03 12 54.5
comp=Z,112nm,0.8s
BMRD Mandsous 56.22 310 *d*P **P** 03 12 53.4 +0.5
comp=Z,55nm,1.1s
J16K Anvik River 56.24 32 IAmb IAmb 03 12 58.8
comp=Z,87nm,1.1s
J16K IAMs_20 IAMs_20 03 39 10.2
comp=Z,2µm,18.0s
J16K Anvik River 56.24 32 P **P** 03 12 54.0 +1.2
baz=306,SNR=15
D24K Happy Valley 56.27 23 IAmb IAmb 03 12 58.0
comp=Z,50nm,0.8s
D24K Happy Valley 56.27 23 P **P** 03 12 53.2 +0.2
baz=312
CEL Celeste 56.28 292 IAMs_20 IAMs_20 03 39 15.7
comp=Z,2µm,21.0s
CEL Celeste 56.28 292 P **P** 03 12 53.2 -0.4
comp=Z,4µmcomp=Z,455nm,1.1s
H19K Roundabout Mou 56.33 28 IAmb IAmb 03 12 59.3
comp=Z,109nm,0.9s
H19K IAMs_20 IAMs_20 03 39 26.4
comp=Z,2µm,19.0s
H19K Roundabout Mou 56.33 28 P **P** 03 12 54.4 +1.0
baz=308
TOLK Toolik Lake Re 56.41 23 P **P** 03 12 54.3 +0.3
baz=312,SNR=149
DOU Dourbes 56.43 309 *d*P **P** 03 12 54.9 +0.6
comp=Z,65nm,1.3s
K15K Wolf Creek Mou 56.48 33 IAmb IAmb 03 13 00.6
comp=Z,58nm,0.8s
K15K Wolf Creek Mou 56.48 33 P **P** 03 12 55.7 +1.2
baz=306,SNR=22
ABJI Asem Bagus 56.51 156 P P 03 13 00.6 +5.4
comp=Z,67nm,1.3s
DGAR Diego Garcia 56.54 206 *de*P **P** 03 12 55.9 +0.5
DGAR pmax pmax
comp=Z,73nm,1.2s
DGAR MLR MLR
comp=Z,1µm,18.0s
L14K Kuka Creek 56.60 34 IAMs_20 IAMs_20 03 39 11.7
comp=Z,2µm,21.0s
L14K Kuka Creek 56.60 34 P **P** 03 12 56.6 +1.2
baz=306,SNR=40
G21K Allakaket 56.65 26 IAMs_20 IAMs_20 03 39 38.8
comp=Z,2µm,20.0s
G21K Allakaket 56.65 26 P **P** 03 12 55.9 +0.2
baz=310
GCSA Galena City Sc 56.67 29 P **P** 03 12 56.9 +1.1
baz=308,SNR=19
LINV Loch Inver, As 56.73 321 *e*P **P** 03 12 56.9 +0.5
C26K Camden Bay 56.75 21 P **P** 03 12 57.2 +0.9
baz=314,SNR=40
E23K Chandalar 56.79 24 IAMs_20 IAMs_20 03 41 24.3
comp=Z,2µm,18.0s
E23K Chandalar 56.79 24 P **P** 03 12 57.0 +0.2
baz=312
D25K Kavik River 56.80 22 IAmb IAmb 03 13 03.7
comp=Z,70nm,0.7s
D25K Kavik River 56.80 22 P **P** 03 12 56.9 +0.1
baz=314,SNR=154
L15K Ungalak Mounta 56.86 33 P **P** 03 12 58.2 +0.9
baz=306,SNR=19
H20K Anotleneega Mo 56.87 28 P **P** 03 12 58.2 +0.9
baz=309,SNR=95
M13K Dall Lake 56.87 35 IAmb IAmb 03 13 03.7
comp=Z,83nm,0.9s
M13K Dall Lake 56.87 35 P **P** 03 12 58.7 +1.4
baz=306
IMAR Indian Mountai 56.91 27 P **P** 03 12 58.2 +0.6
SENIN Lac Senin/Sane 56.99 304 IAmb IAmb 03 13 01.7
comp=Z,81nm,0.9s
BSSI Bau Bau, Buton 57.02 148 P P 03 13 03.1 +4.2
comp=Z,1µmcomp=Z,91nm,1.1s
SWI Sorong 57.03 134 P P 03 13 05.7 +6.7
comp=Z,2µmcomp=Z,29nm,0.5s
SIJI Sorong 57.04 134 LR LR 03 39 55.9
comp=Z,411nm,19.1s,baz=326,slow=39
SIJI Sorong 57.04 134 P **P** 03 13 01.8 +2.7
WACR West Acre 57.05 314 *e*P **P** 03 12 58.6 -0.1
WACR IAmb IAmb 03 13 00.9
comp=Z,189nm,1.0s
E24K Your Creek 57.09 23 IAmb IAmb 03 13 04.0
comp=Z,67nm,0.7s
E24K Your Creek 57.09 23 P **P** 03 12 59.4 +0.5
baz=313,SNR=107
EDI Edinburgh 57.09 318 *e*P **P** 03 12 58.5 -0.4
EDI IAmb IAmb 03 13 00.5
comp=Z,56nm,0.9s
NLAI Namlea 57.11 140 P **P** 03 13 00.6 +1.1
comp=Z,2µmcomp=Z,96nm,1.1s
LMK Market Rasen 57.11 315 *e*P **P** 03 12 59.5 +0.4
JAGI Jajag, Banyuwa 57.13 156 P **P** 03 12 58.6 -1.0
JAGI Jajag, Banyuwa 57.13 156 P **P** 03 12 58.4 -1.2
comp=Z,2µmcomp=Z,154nm,1.3s
EDMD Edmundbyers 57.13 317 *e*P **P** 03 12 59.0 -0.3
EDMD IAmb IAmb 03 13 00.6
comp=Z,77nm,0.8s
COLD Coldfoot 57.18 25 IAmb IAmb 03 13 04.8
comp=Z,90nm,0.8s
COLD IAMs_20 IAMs_20 03 40 07.5
comp=Z,2µm,18.0s
COLD Coldfoot 57.18 25 P **P** 03 12 59.9 +0.5
baz=312,SNR=73
INVG Invergeldie, C 57.20 319 *e*P **P** 03 12 59.9 +0.1
INVG IAmb IAmb 03 13 02.8
comp=Z,72nm,0.8s
SUMG Summit 57.20 345 P **P** 03 12 59.4 -0.7
SUMG Summit 57.20 345 *i* P **P** 03 12 59.3 -0.8
SUMG IAmb IAmb 03 13 02.0
comp=Z,24nm,1.4s
M14K Bethel 57.23 35 IAmb IAmb 03 13 05.6
comp=Z,104nm,0.8s
M14K IAMs_20 IAMs_20 03 38 33.5
comp=Z,2µm,18.0s
M14K Bethel 57.23 35 P **P** 03 13 01.0 +1.2
baz=306,SNR=20
C27K Jago River 57.26 21 IAmb IAmb 03 13 05.6
comp=Z,117nm,1.1s
C27K Jago River 57.26 21 P **P** 03 13 00.6 +0.6
baz=316
TULEG Thule 57.27 355 IAmb IAmb 03 13 00.4
comp=Z,78nm,0.9s
TULEG Thule 57.27 355 *i* P **P** 03 12 58.9 -1.0
RTBI Rangdo, Negare 57.35 155 P **P** 03 13 02.4 +1.2
comp=Z,2µmcomp=Z,126nm,1.4s
KPL Plockton 57.40 321 *e*P **P** 03 13 01.2 +0.2
KPL IAmb IAmb 03 13 04.0
comp=Z,25nm,0.8s
EKA Eskdalemuir Ar 57.41 318 P **P** 03 13 01.2 -0.1
comp=Z,85nm,0.9s,baz=60,slow=7.3,SNR=116
EKA LR LR 03 39 32.9
comp=Z,4µm,18.4s,baz=65,slow=38
comp=Z,85nm,0.9s
H21K Melozitna Rive 57.42 27 IAmb IAmb 03 13 06.7
comp=Z,83nm,0.9s
H21K Melozitna Rive 57.42 27 P **P** 03 13 02.1 +0.9
baz=311
K17K Iditarod 57.42 31 IAmb IAmb 03 13 07.9
comp=Z,65nm,0.8s
K17K IAMs_20 IAMs_20 03 39 24.4
comp=Z,2µm,20.0s
K17K Iditarod 57.42 31 P **P** 03 13 02.2 +1.0
baz=308,SNR=38
I20K Naaghedeneel 57.44 28 IAmb IAmb 03 13 07.2
comp=Z,78nm,1.0s
I20K IAMs_20 IAMs_20 03 40 19.7
comp=Z,2µm,21.0s
I20K Naaghedeneel 57.44 28 P **P** 03 13 02.2 +0.9
baz=310,SNR=7.5
ESK Eskdalemuir 57.45 318 *e*P **P** 03 13 01.3 -0.2
ESK IAmb IAmb 03 13 03.6
comp=Z,53nm,0.9s
ESK Eskdalemuir 57.45 318 P **P** 03 13 01.7 +0.2
ESK Eskdalemuir 57.45 318 P **P** 03 13 01.7 +0.2
ESK pmax pmax
comp=Z,167nm,1.2s
ESK MLR MLR
comp=Z,4µm,19.0s
KHKI Kahang-Kahang 57.46 154 P **P** 03 13 04.5 +2.6
EAB Aberfoyle 57.47 319 *e*P **P** 03 13 01.7 +0.1
EAB IAmb IAmb 03 13 04.0
comp=Z,75nm,0.8s
J18K Innoko River 57.52 30 IAmb IAmb 03 13 07.4
comp=Z,93nm,1.3s
J18K IAMs_20 IAMs_20 03 39 20.0
comp=Z,2µm,19.0s
J18K Innoko River 57.52 30 P **P** 03 13 02.6 +0.7
baz=309
J19K Poorman 57.57 29 IAmb IAmb 03 13 08.2
comp=Z,97nm,1.1s
J19K Poorman 57.57 29 P **P** 03 13 03.4 +1.1
baz=309,SNR=74
G23K Bananza Creek 57.57 25 IAMs_20 IAMs_20 03 40 24.1
comp=Z,2µm,22.0s
G23K Bananza Creek 57.57 25 P **P** 03 13 02.6 +0.3
baz=312,SNR=69
L16K Owhat River 57.61 33 P **P** 03 13 03.8 +1.3
baz=308,SNR=18
GGERF Dalmarnock 57.62 319 *e*P **P** 03 13 03.0 +0.3
F24K Squaw Lake 57.64 24 IAmb IAmb 03 13 07.9
comp=Z,42nm,0.7s
F24K IAMs_20 IAMs_20 03 40 18.8
comp=Z,2µm,20.0s
F24K Squaw Lake 57.64 24 P **P** 03 13 03.2 +0.5
baz=313,SNR=104
VAE Valguarnera 57.69 292 LR LR 03 40 19.0
comp=Z,2µm,18.0s,baz=98,slow=39
H22K Ishtalitna Cre 57.71 26 P **P** 03 13 03.9 +0.6
baz=312,SNR=25
IGBI Denpasar 57.75 155 P **P** 03 13 06.7 +2.7
comp=Z,156nm,1.2s
PGBU Glenifferbraes 57.76 319 *e*P **P** 03 13 03.7 +0.1
M15K Kasigluk River 57.76 34 P **P** 03 13 04.5 +0.8
baz=307,SNR=19
KRAI Karang Ratu 57.77 138 P **P** 03 13 05.9 +1.7
comp=Z,157nm,1.3s
L17K Donlin 57.79 32 P **P** 03 13 05.2 +1.4
baz=308
KESW Keswick, Cumbr 57.82 317 ⇑ *e*P **P** 03 13 04.1 0.0
KESW IAmb IAmb 03 13 05.6
comp=Z,70nm,0.9s
LBWR Ladybower, Pea 57.83 315 *e*P **P** 03 13 04.1 -0.1
LBWR IAmb IAmb 03 13 06.9
comp=Z,86nm,0.9s
N14K Kuskokwak Cree 57.84 35 IAmb IAmb 03 13 09.8
comp=Z,76nm,0.8s
N14K IAMs_20 IAMs_20 03 39 47.5
comp=Z,2µm,18.0s
N14K Kuskokwak Cree 57.84 35 P **P** 03 13 04.9 +0.8
baz=307
E25K Arctic Village 57.85 22 P **P** 03 13 04.4 +0.2
baz=315,SNR=93
LAWE Loch Awe, Argy 57.91 319 *e*P **P** 03 13 05.1 +0.4
LAWE IAmb IAmb 03 13 06.6
comp=Z,56nm,0.8s
J20K Nowinta River 57.95 29 P **P** 03 13 06.2 +1.3
baz=310,SNR=51
I21K Tanana 58.00 27 IAmb IAmb 03 13 11.0
comp=Z,78nm,1.2s
I21K IAMs_20 IAMs_20 03 40 15.4
comp=Z,2µm,19.0s
I21K Tanana 58.00 27 P **P** 03 13 06.3 +1.1
baz=311,SNR=49
AAI Ambon 58.01 139 P **P** 03 13 09.9 +4.0
comp=Z,2µmcomp=Z,85nm,0.9s
CWF Charnwood Fore 58.01 314 *e*P **P** 03 13 04.9 -0.5
CWF IAmb IAmb 03 13 08.1
comp=Z,55nm,0.8s
NEWG New Galloway 58.04 318 *e*P **P** 03 13 05.7 +0.1
NEWG IAmb IAmb 03 13 07.4
comp=Z,65nm,0.8s
MSAI Masohi 58.05 138 P P 03 13 10.5 +4.3
comp=Z,89nm,0.9s
KULLO Kullorsuaq 58.19 351 *i* P **P** 03 13 05.6 -0.8
KULLO IAmb IAmb 03 13 07.0
comp=Z,174nm,1.1s
D27M Malcolm River 58.20 20 IAmb IAmb 03 13 13.5
comp=Z,63nm,0.7s
D27M Malcolm River 58.20 20 P **P** 03 13 07.3 +0.6
baz=318
TWSI Taliwang, Sumb 58.20 153 P **P** 03 13 05.9 -1.3
comp=Z,983nmcomp=Z,61nm,0.9s
F25K Christian Rive 58.20 23 IAmb IAmb 03 13 12.5
comp=Z,82nm,0.9s
F25K Christian Rive 58.20 23 P **P** 03 13 07.7 +0.9
baz=315,SNR=162
M16K Timber Creek 58.23 33 IAmb IAmb 03 13 12.9
comp=Z,49nm,0.8s
M16K Timber Creek 58.23 33 P **P** 03 13 08.3 +1.4
baz=308
HMNX Herstmonceux 58.25 312 *e*P **P** 03 13 07.7 +0.5
H23K Yukon River 58.32 26 IAmb IAmb 03 13 13.4

H23K comp=Z,78nm,0.9s IAMs_20 IAMs_20 03 40 43.8
H23K **Yukon River** comp=Z,2µm,21.0s baz=313 **58.32 26** P **P** **03 13 08.6 +1.1**
N15K **Kwethluk River** comp=Z,66nm,0.9s **58.32 34** IAmb IAmb 03 13 13.7
N15K **Kwethluk River** comp=Z,5nm,1.5s baz=308,SNR=15 **58.32 34** P **P** **03 13 09.1 +1.5**
L18K **Granite Mounta** comp=Z,2µm,18.0s **58.32 31** IAMs_20 IAMs_20 03 40 27.1
L18K **Granite Mounta** baz=309,SNR=20 **58.32 31** P **P** **03 13 08.8 +1.2**
G24K **Hadweenzic Riv** comp=Z,59nm,0.8s **58.32 24** IAmb IAmb 03 13 13.0
G24K IAMs_20 IAMs_20 03 42 02.8
G24K **Hadweenzic Riv** comp=Z,2µm,18.0s baz=314 **58.32 24** P **P** **03 13 08.1 +0.6**
GAL1 **Galloway** GAL1 comp=Z,91nm,0.8s **58.41 318**⇈ *e*P IAmb **P** IAmb **03 13 08.4 +0.2** 03 13 10.0
O14K **Tigyukauivet M** comp=Z,2µm,19.0s **58.41 36** IAMs_20 IAMs_20 03 39 32.9
O14K **Tigyukauivet M** baz=308 **58.41 36** P **P** **03 13 09.1 +0.9**
DBNI **Kabupaten Domp** comp=Z,2µmcomp=Z,175nm,0.8s **58.44 151** P **P** **03 13 08.0 -0.9**
MLY **Manley** comp=Z,2µm,18.0s **58.49 27** IAMs_20 IAMs_20 03 40 41.3
MLY **Manley** baz=312,SNR=22 **58.49 27** P **P** **03 13 09.7 +1.0**
K20K **Telida** comp=Z,154nm,1.7s **58.51 29** IAmb IAmb 03 13 15.1
K20K **Telida** baz=311 **58.51 29** P **P** **03 13 09.9 +1.1**
MWPI **Manokwari, Pap** **58.52 131** P P 03 13 15.2 +5.8
F26K **Sheenjek River** comp=Z,75nm,1.2s **58.53 22** IAmb IAmb 03 13 14.2
F26K **Sheenjek River** baz=316,SNR=80 **58.53 22** P **P** **03 13 09.3 +0.3**
M17K **Holitna River** comp=Z,73nm,0.8s **58.57 32** IAmb IAmb 03 13 15.6
M17K **Holitna River** baz=309,SNR=32 **58.57 32** P **P** **03 13 10.7 +1.4**
PLAI **Plampang** **58.57 152** P **P** **03 13 11.3 +1.5**
PLAI **Plampang** comp=Z,44nm,1.0s **58.57 152** P **P** **03 13 11.5 +1.7**
BMAR **Burnt Mountain** **58.61 23** P **P** **03 13 10.4 +0.9**
N16K **Nishlik Lake** baz=309,SNR=35 **58.65 34** P **P** **03 13 11.5 +1.7**
D28M **Stokes Point** baz=320 **58.66 19** P **P** **03 13 10.5 +0.8**
G25K **Bearman Lake** baz=315,SNR=34 **58.67 24** P **P** **03 13 10.9 +1.1**
BORG **Borgarnes** comp=Z,723nm,19.6s,baz=56,slow=38 **58.70 333** LR LR 03 40 10.9
CHUM **Lake Minchumin** baz=312,SNR=32 **58.75 28** P **P** **03 13 11.7 +1.2**
NIKH **Nikolski High** baz=306 **58.78 45** P **P** **03 13 11.8 +1.0**
WOL **Wolverton** WOL comp=Z,80nm,0.9s **58.79 313** *e*P IAmb **P** IAmb **03 13 10.8 -0.1** 03 13 12.9
H24K **Noodor Dome** baz=314,SNR=38 **58.81 25** P **P** **03 13 11.6 +0.7**
WIM **Isle of Man** **58.82 317** *e*P **P** **03 13 11.6 +0.4**
E27K **Coleen River** comp=Z,49nm,0.8s **58.83 21** IAmb IAmb 03 13 16.2
E27K **Coleen River** baz=318 **58.83 21** P **P** **03 13 11.2 +0.1**
I23K **Minto, Yukon-K** comp=Z,2µm,18.0s **58.84 26** IAMs_20 IAMs_20 03 41 12.6
I23K **Minto, Yukon-K** baz=313,SNR=75 **58.84 26** P **P** **03 13 11.8 +0.8**
HLM1 **Long Mynd** HLM1 comp=Z,187nm,0.8s **58.92 315** *e*P IAmb **P** IAmb **03 13 12.1 +0.3** 03 13 13.6
CLGH **Cloghs, Cushen** CLGH comp=Z,40nm,0.9s **58.93 319**⇈ *e*P IAmb **P** IAmb **03 13 12.0 +0.1** 03 13 13.7
LBFI **Labuhan Bajo,** **58.96 150** P **P** **03 13 11.6 -0.9**
SWN1 **Swindon** SWN1 comp=Z,244nm,0.8s **58.97 313**⇈ *e*P IAmb **P** IAmb **03 13 12.4 +0.2** 03 13 13.8
STRD **Stroud** STRD comp=Z,224nm,0.8s **59.00 314** *e*P IAmb **P** IAmb **03 13 12.3 0.0** 03 13 14.5
L19K **White Mountain** comp=Z,140nm,1.5s **59.00 31** IAmb IAmb 03 13 20.6
L19K IAMs_20 IAMs_20 03 41 24.2
L19K **White Mountain** comp=Z,2µm,18.0s baz=311 **59.00 31** P **P** **03 13 13.8 +1.5**
E28M **Babbage River** baz=319,SNR=52 **59.02 20** P **P** **03 13 12.8 +0.4**
BPAW **Bear Paw Mtn.** comp=Z,111nm,1.2s **59.04 28** IAmb IAmb 03 13 18.1
BPAW **Bear Paw Mtn.** baz=313,SNR=66 **59.04 28** P **P** **03 13 13.3 +0.7**
O15K **Ungalikthiuk R** comp=Z,50nm,0.9s **59.04 35** IAmb IAmb 03 13 18.2
O15K IAMs_20 IAMs_20 03 40 05.5
O15K **Ungalikthiuk R** comp=Z,2µm,20.0s baz=309 **59.04 35** P **P** **03 13 13.4 +0.8**
FYU **Fort Yukon** comp=Z,113nm,1.4s **59.05 24** IAmb IAmb 03 13 18.5
FYU IAMs_20 IAMs_20 03 42 46.1
RKPI **Ransiki, Papua** comp=Z,108nm,1.4s **59.08 131** P P 03 13 20.7 +7.3
M18K **Stony River** baz=310,SNR=43 **59.10 32** P **P** **03 13 14.0 +1.1**
LLW **Llanuwychllyn** **59.11 316** *e*P **P** **03 13 13.2 +0.1**
A36M **Sachs Harbour** baz=329,SNR=55 **59.12 13** P **P** **03 13 13.2 +0.2**
G26K **Porcupine Rive** comp=Z,58nm,0.9s **59.17 23** IAmb IAmb 03 13 19.2
G26K **Porcupine Rive** baz=317,SNR=58 **59.17 23** P **P** **03 13 14.5 +1.1**
SSB **Saint Sauveur** comp=Z,2µm,20.0s **59.19 305** IAMs_20 IAMs_20 03 43 22.8
WLF1 **Llynfaes** **59.20 316** *e*P **P** **03 13 13.4 -0.4**
N17K **Nushagak Hills** baz=310,SNR=18 **59.22 33** P **P** **03 13 15.4 +1.6**
MONM **Monmouth** MONM comp=Z,161nm,0.9s **59.28 314**⇈ *e*P IAmb **P** IAmb **03 13 14.3 0.0** 03 13 15.9
MCH1 **Michaelchurch** MCH1 comp=Z,122nm,0.8s **59.28 314**⇈ *e*P IAmb **P** IAmb **03 13 14.4 0.0** 03 13 15.9
FAKI **Fak Fak** **59.29 134** P **P** **03 13 15.4 +0.6**
FAKI **Fak Fak** comp=Z,2µmcomp=Z,125nm,1.4s **59.29 134** P **P** **03 13 15.9 +1.1**
NEA2 **Nenana** comp=Z,77nm,0.9s **59.31 27** IAmb IAmb 03 13 19.8
NEA2 **Nenana** baz=314,SNR=69 **59.31 27** P **P** **03 13 15.0 +0.6**
M19K **Big River Lodg** comp=Z,54nm,0.8s **59.35 31** IAmb IAmb 03 13 21.2
M19K IAMs_20 IAMs_20 03 41 36.4
M19K **Big River Lodg** comp=Z,2µm,18.0s baz=311 **59.35 31** P **P** **03 13 16.5 +1.8**
UNV **Unalaska Valle** baz=307 **59.39 43** P **P** **03 13 15.9 +0.8**
POKR **Poker Plat Res** baz=315 **59.45 26** P **P** **03 13 16.0 +0.7**
PPLA **Purkeypile** baz=312,SNR=44 **59.46 29** P **P** **03 13 16.8 +1.2**
O16K **Kokwok River B** comp=Z,62nm,1.1s **59.47 34** IAmb IAmb 03 13 21.7
O16K IAMs_20 IAMs_20 03 41 00.6
O16K **Kokwok River B** comp=Z,2µm,20.0s baz=310 **59.47 34** P **P** **03 13 16.8 +1.4**
RES **Resolute Bay** comp=Z,2µm,18.7s,baz=354,slow=37 **59.48 3** LR LR 03 39 57.8
COLA **College** **59.49 26** P **P** **03 13 16.3 +0.7**
COLA **College** COLA comp=Z,92nm,1.1s **59.49 26** P IAmb **P** IAmb **03 13 16.4 +0.9** 03 13 21.0
COLA **College** comp=Z,2µm,18.0s **59.49 26** IAMs_20 IAMs_20 03 41 42.7
COLA **College** COLA **59.49 26** P pmax **P** pmax **03 13 16.4 +0.9**
COLA comp=Z,92nm,1.1s MLR MLR
COLA **College** baz=314 **59.49 26** P **P** **03 13 16.4 +0.9**
BNDI **Bandanaira** **59.54 137** P **P** **03 13 17.4 +0.9**
BNDI **Bandanaira** comp=Z,21nm,1.5s **59.54 137** P **P** **03 13 18.1 +1.6**
E29M **Blow River** comp=Z,74nm,0.7s **59.58 20** IAmb IAmb 03 13 21.6
E29M **Blow River** baz=320,SNR=190 **59.58 20** P **P** **03 13 16.8 +0.6**
IDGL **Inch Island, C** **59.58 319** P **P** **03 13 17.0 +0.7**
IDGL **Inch Island, C** **59.58 319** *e*P **P** **03 13 16.6 +0.3**
N18K **Kilae Creek** comp=Z,48nm,0.9s **59.61 32** IAmb IAmb 03 13 22.9
N18K **Kilae Creek** baz=311,SNR=24 **59.61 32** P **P** **03 13 18.1 +1.6**
CCB **Clear Creek Bu** comp=Z,80nm,1.1s **59.66 26** IAmb IAmb 03 13 21.9
CCB IAMs_20 IAMs_20 03 41 56.5
ILTH **Belurgan, Co L** comp=Z,2µm,18.0s **59.68 318** P **P** **03 13 17.0 0.0**
F28M **Old Crow** comp=Z,53nm,0.9s **59.70 21** IAmb IAmb 03 13 23.7
F28M **Old Crow** baz=319,SNR=81 **59.70 21** P **P** **03 13 17.4 +0.4**
VSL **Villasalto** VSL comp=Z,2µm,18.0s **59.70 297** IAmb IAmb 03 13 19.0
VSL IAMs_20 IAMs_20 03 40 28.8
WRH **Wood River Hil** comp=Z,81nm,1.0s **59.70 26** IAmb IAmb 03 13 23.4
WRH IAMs_20 IAMs_20 03 41 46.4
TRF **Thorofare Moun** comp=Z,46nm,0.9s **59.71 28** IAmb IAmb 03 13 22.9
TRF **Thorofare Moun** baz=313,SNR=27 **59.71 28** P **P** **03 13 17.6 +0.3**
PRP **Porcupine Dome** comp=Z,66nm,1.1s **59.72 25** IAmb IAmb 03 13 23.1
PRP IAMs_20 IAMs_20 03 43 06.9
PRP **Porcupine Dome** comp=Z,2µm,19.0s baz=316,SNR=25 **59.72 25** P **P** **03 13 18.3 +0.9**
UPNV **Upernavik** **59.73 350** *i* P **P** **03 13 16.7 -0.4**
O17K **Koliganek Bris** baz=310,SNR=11 **59.74 34** P **P** **03 13 18.4 +1.0**
M20K **Styx River** comp=Z,65nm,0.7s **59.81 30** IAmb IAmb 03 13 24.2
M20K IAMs_20 IAMs_20 03 41 10.5
M20K **Styx River** comp=Z,2µm,18.0s baz=312 **59.81 30** P **P** **03 13 19.3 +1.3**
BAKI **Biak** comp=Z,3µmcomp=Z,154nm,1.1s **59.84 129** P P 03 13 24.5 +5.9
G27K **Doyon Strip** comp=Z,77nm,1.5s **59.84 22** IAmb IAmb 03 13 23.7
G27K IAMs_20 IAMs_20 03 43 18.0
G27K **Doyon Strip** comp=Z,2µm,18.0s baz=318,SNR=46 **59.84 22** P **P** **03 13 18.8 +0.7**
IL31 **59.86 26** IAmb IAmb 03 13 22.9
comp=Z,43nm,0.9s
ILAR **Eielson Array** comp=Z,20nm,0.7s,baz=310,slow=4.8,SNR=135 **59.86 26** P **P** **03 13 17.9 -0.1**
ILAR comp=Z,1µm,20.9s,baz=316,slow=39 LR LR 03 41 42.5
ILAR comp=Z,1.8nm,1.0s,baz=145,slow=1.1,SNR=9.8 comp=Z,20nm,0.7s PKPPKP P'P'df 03 42 39.3 -13
ILAR **Eielson Array** **59.86 26** P **P** **03 13 18.0 -0.1**
ILAR **Eielson Array** **59.86 26** P **P** **03 13 18.0 -0.1**
FURI **Furi** comp=Z,2µm,18.1s,baz=38,slow=40 **59.86 250** LR LR 03 43 04.3
FURI **Furi** **59.86 250** P **P** **03 13 21.4 +2.2**
FURI **Furi** comp=Z,2µm,18.0s **59.86 250** IAMs_20 IAMs_20 03 42 53.1
EDFI **Ende, Flores** comp=Z,47nm,1.1s **59.86 148** P **P** **03 13 16.5 -2.3**
P16K **Nushagak River** comp=Z,2µm,22.0s **59.87 35** IAMs_20 IAMs_20 03 41 01.2
P16K **Nushagak River** baz=310 **59.87 35** P **P** **03 13 19.0 +0.7**
WBSI **Waikabubak, Su** comp=Z,3µmcomp=Z,254nm,1.1s **59.87 151** P **P** **03 13 16.8 -2.0**
MCK **McKinley** comp=Z,2µm,18.0s **59.95 27** IAMs_20 IAMs_20 03 42 08.1
MCK **McKinley** baz=314,SNR=23 **59.95 27** P **P** **03 13 19.3 +0.4**
N19K **Bonanza Creek** comp=Z,2µm,19.0s **60.04 32** IAMs_20 IAMs_20 03 41 20.7
N19K **Bonanza Creek** baz=312 **60.04 32** P **P** **03 13 20.4 +0.8**
HDA **Harding Lake** comp=Z,50nm,1.1s **60.09 26** IAmb IAmb 03 13 24.0
HDA IAMs_20 IAMs_20 03 42 17.8
HDA **Harding Lake** comp=Z,2µm,18.0s baz=315,SNR=34 **60.09 26** P **P** **03 13 19.2 -0.6**
DSB **Dublin** **60.17 317** P **P** **03 13 19.5 -1.0**
DSB **Dublin** **60.17 317** P **P** **03 13 20.5 0.0**
DSB **Dublin** comp=Z,94nm,0.9s **60.17 317** IAmb IAmb 03 13 21.9
RSBS **Rosebush, Pemb** RSBS comp=Z,56nm,0.8s **60.17 315** *e*P IAmb **P** IAmb **03 13 19.9 -0.6** 03 13 21.9
L22K **Petersville** comp=Z,2µm,19.0s **60.19 29** IAMs_20 IAMs_20 03 42 07.4
FALS **False Pass** baz=308 **60.20 41** P **P** **03 13 21.1 +0.5**
RND **Reindeer** comp=Z,2µm,20.0s **60.21 27** IAMs_20 IAMs_20 03 42 24.8
SKT **Skwentna** SKT comp=Z,64nm,1.0s **60.30 30** IAmb IAmb 03 13 27.4
IAMs_20 IAMs_20 03 41 10.5
SKT **Skwentna** comp=Z,2µm,19.0s baz=313,SNR=53 **60.30 30** P **P** **03 13 21.7 +0.5**
H27K **Steamboat Moun** baz=319,SNR=45 **60.31 23** P **P** **03 13 21.9 +0.5**
P17K **Kvichak River** comp=Z,183nm,1.7s **60.37 34** IAmb IAmb 03 13 29.9
P17K IAMs_20 IAMs_20 03 41 32.5
P17K **Kvichak River** comp=Z,2µm,20.0s baz=311 **60.37 34** P **P** **03 13 22.1 +0.4**
O18K **Koktuh Hills** baz=312,SNR=12 **60.41 33** P **P** **03 13 22.5 +0.5**
J25K **Salcha River,** baz=316,SNR=27 **60.42 25** P **P** **03 13 21.4 -0.7**
CUT **Chulitna** comp=Z,2µm,19.0s **60.44 29** IAMs_20 IAMs_20 03 42 14.1
CUT **Chulitna** baz=314,SNR=54 **60.44 29** P **P** **03 13 22.7 +0.6**
NUUG **Nuugaatsiaq** NUUG comp=Z,68nm,1.3s **60.48 349** *i* P IAmb **P** IAmb **03 13 21.5 -0.8** 03 13 23.5
O19K **Port Alsworth** comp=Z,62nm,1.1s **60.51 32** IAmb IAmb 03 13 28.9
O19K **Port Alsworth** baz=312,SNR=7.8 **60.51 32** P **P** **03 13 23.9 +1.3**
STLK **Strandline Lak** comp=Z,76nm,0.8s **60.53 30** IAmb IAmb 03 13 28.4
JSA **Saint Aubin** JSA comp=Z,107nm,0.8s **60.55 311**⇈ *e*P IAmb **P** IAmb **03 13 22.8 -0.2** 03 13 24.5
I26K **Coal Creek Min** baz=318 **60.56 24** P **P** **03 13 23.6 +0.7**
SPCR **Spurr Chakacha** baz=313,SNR=15 **60.60 31** P **P** **03 13 24.3 +0.9**
N20K **Mount Spurr** baz=313,SNR=30 **60.60 31** P **P** **03 13 24.6 +1.2**
Q16K **King Salmon** baz=311 **60.63 34** P **P** **03 13 24.3 +0.9**
HTL **Hartland** **60.63 314**⇈ *e*P **P** **03 13 23.7 +0.1**
INK **Inuvik** comp=Z,800nm,20.8s,baz=2.0,slow=40 **60.64 18** LR LR 03 43 06.9
INK **Inuvik** comp=Z,107nm,1.1s **60.64 18** P IAmb **P** IAmb **03 13 23.6 +0.2** 03 13 28.5
INK **Inuvik** baz=324,SNR=90 **60.64 18** P **P** **03 13 23.6 +0.2**
KMPI **Kaimana, Papua** comp=Z,3µmcomp=Z,208nm,1.4s **60.66 133** P P 03 13 29.4 +5.2
F30M **Barrier River** comp=Z,79nm,0.8s **60.69 20** IAmb IAmb 03 13 29.1
F30M comp=Z,2µm,18.0s IAMs_20 IAMs_20 03 41 36.1
F30M **Barrier River** baz=322 **60.69 20** P **P** **03 13 24.2 +0.5**
DYA **Yadsworthy** DYA comp=Z,119nm,0.8s **60.69 313** *e*P IAmb **P** IAmb **03 13 23.4 -0.7** 03 13 25.2
G29M **Pine Creek** comp=Z,62nm,0.8s **60.70 21** IAmb IAmb 03 13 30.8
G29M **Pine Creek** baz=321 **60.70 21** P **P** **03 13 24.5 +0.6**
P18K **Big Mountain,** comp=Z,124nm,1.6s **60.71 33** IAmb IAmb 03 13 30.1
P18K **Big Mountain,** baz=312,SNR=12 **60.71 33** P **P** **03 13 25.3 +1.2**
WAT1 **Susitna Watana** baz=315 **60.71 28** P **P** **03 13 23.7 -0.3**
I27K **Kandik River** comp=Z,66nm,0.8s **60.76 23** IAmb IAmb 03 13 30.0
I27K **Kandik River** baz=319,SNR=74 **60.76 23** P **P** **03 13 24.9 +0.5**
K24K **Donnelly Dome** baz=316,SNR=30 **60.89 26** P **P** **03 13 24.9 -0.4**
IWEX **Carrickbyrne,** **60.90 316** P **P** **03 13 25.9 +0.5**
IWEX **Carrickbyrne,** **60.90 316** *e*P **P** **03 13 25.9 +0.5**
DHY **Denali Highway** comp=Z,40nm,0.8s **60.92 27** IAmb IAmb 03 13 30.2
DHY **Denali Highway** baz=316,SNR=31 **60.92 27** P **P** **03 13 25.2 -0.4**
SAATT **Saattut** **60.92 348** *i* P **P** **03 13 24.6 -0.6**
MSEY **Mahe Island** **60.94 225** P **P** **03 13 25.8 -0.4**
MSEY **Mahe Island** SNR=26 **60.94 225** *i* P **P** **03 13 25.9 -0.3**
MSEY **Mahe Island** MSEY comp=Z,147nm,1.1s **60.94 225** P pmax **P** pmax **03 13 25.8 -0.4**
MSEY **Mahe Island** **60.94 225** P **P** **03 13 26.3 +0.2**
M22K **Willow** baz=314 **60.95 29** P **P** **03 13 25.8 +0.2**
S14K **Fog Glacier** baz=310 **61.00 38** P **P** **03 13 26.0 -0.1**
G30M **tAoh Zraii Nji** baz=322,SNR=37 **61.08 20** P **P** **03 13 26.4 -0.1**
ILSW **Iliamna Southw** comp=Z,62nm,1.3s **61.09 32** IAmb IAmb 03 13 31.4
H29M **Whitestone** comp=Z,39nm,0.7s **61.15 22** IAmb IAmb 03 13 31.9
H29M **Whitestone** baz=321 **61.15 22** P **P** **03 13 27.0 0.0**
WAT6 **Susitna Watana** baz=316,SNR=28 **61.15 28** P **P** **03 13 27.0 -0.2**
SDPT **Sand Point** baz=310 **61.20 39** P **P** **03 13 27.2 -0.2**
Q17K **Contact Creek** baz=312 **61.20 34** P **P** **03 13 27.4 -0.1**
RIDG **Independent Ri** comp=Z,2µm,18.0s **61.22 26** IAMs_20 IAMs_20 03 42 40.5
RIDG **Independent Ri** baz=317,SNR=127 **61.22 26** P **P** **03 13 27.0 -0.5**
NIAQ **Niaqornat** NIAQ comp=Z,77nm,1.2s **61.23 348** *i* P IAmb **P** IAmb **03 13 28.4 +1.0** 03 13 29.1
CAPN **Captain Cook N** baz=314 **61.27 31** P **P** **03 13 27.7 0.0**
P19K **Oil Pt** comp=Z,54nm,0.8s **61.29 32** IAmb IAmb 03 13 33.5
P19K **Oil Pt** baz=313 **61.29 32** P **P** **03 13 28.3 +0.3**
Q18K **Katmai Hardscr** baz=312 **61.29 34** P **P** **03 13 28.3 +0.2**
F31M **Tsiigehtchic** comp=Z,121nm,1.3s **61.29 19** IAmb IAmb 03 13 32.6
F31M IAMs_20 IAMs_20 03 42 25.2
F31M **Tsiigehtchic** comp=Z,1µm,18.0s baz=324,SNR=60 **61.29 19** P **P** **03 13 27.6 -0.3**
SCRK **Sand Creek** baz=318,SNR=26 **61.30 25** P **P** **03 13 27.9 -0.3**
GHO **Glory Hole Cre** comp=Z,42nm,1.0s **61.34 29** IAmb IAmb 03 13 35.6
I28M **Miner Creek** comp=Z,1µm,18.0s **61.34 23** IAMs_20 IAMs_20 03 44 31.5
I28M **Miner Creek** baz=320,SNR=36 **61.34 23** P **P** **03 13 28.3 0.0**
PMR **Palmer** **61.40 29** P **P** **03 13 29.0 +0.4**
PMR **Palmer** baz=315,SNR=26 **61.40 29** P **P** **03 13 28.7 +0.1**
R17L **Mt. Peulik Vol** baz=312 **61.44 35** P **P** **03 13 29.9 +0.9**
PLK4 **Peulik 4** PLK4 comp=Z,2µm,21.0s comp=Z,130nm,1.6s **61.44 35** IAmb IAMs_20 IAMs_20 03 13 35.2 03 41 39.7
EPYK **Eagle Plains** comp=Z,68nm,1.2s **61.45 21** IAmb IAmb 03 13 33.6
EPYK **Eagle Plains** baz=322,SNR=38 **61.45 21** P **P** **03 13 28.7 -0.3**
IGLA **Glengowla, Co** **61.47 318** P **P** **03 13 29.4 +0.2**
IGLA **Glengowla, Co** **61.47 318** *e*P **P** **03 13 29.1 -0.2**
SML **Sawmill** comp=Z,74nm,1.0s **61.51 29** IAmb IAmb 03 13 34.7
SML **Sawmill** baz=315,SNR=28 **61.51 29** P **P** **03 13 30.0 +0.5**
DOT **Dot Lake** comp=Z,94nm,1.4s **61.52 26** IAmb IAmb 03 13 34.2
RC01 **Rabbit Creek A** comp=Z,80nm,1.0s **61.54 30** IAmb IAmb 03 13 34.8
RC01 **Rabbit Creek A** baz=315,SNR=46 **61.54 30** P **P** **03 13 30.0 +0.3**
G31M **Satah River** baz=324,SNR=124 **61.59 20** P **P** **03 13 29.6 -0.3**
PAX **Paxson** comp=Z,118nm,1.7s **61.59 27** IAmb IAmb 03 13 34.7
PAX IAMs_20 IAMs_20 03 43 03.4
PAX **Paxson** comp=Z,2µm,18.0s baz=317,SNR=44 **61.59 27** P **P** **03 13 29.9 -0.2**
C36M **Paulatuk** baz=331,SNR=81 **61.62 14** P **P** **03 13 29.6 -0.4**
Q19K **Cape Douglas,** comp=Z,2µm,20.0s **61.62 33** IAMs_20 IAMs_20 03 42 13.6
Q19K **Cape Douglas,** baz=313 **61.62 33** P **P** **03 13 29.9 -0.4**
SAQQ **Saqqaq** **61.68 347** *i* P **P** **03 13 29.8 -0.6**
M23K **Glacier View** baz=316,SNR=42 **61.72 28** P **P** **03 13 31.1 +0.2**
KNK **Knik Glacier** comp=Z,51nm,0.9s **61.75 29** IAmb IAmb 03 13 36.0
KNK **Knik Glacier** baz=316,SNR=24 **61.75 29** P **P** **03 13 31.8 +0.7**
SOEI **Soe** **61.77 146** P **P** **03 13 30.0 -1.8**
SOEI **Soe** **61.77 146** P **P** **03 13 30.7 -1.1**
SOEI **Soe** **61.77 146** P **P** **03 13 30.7 -1.1**
K27K **Chicken** K27K comp=Z,92nm,1.2s **61.82 24** IAmb IAMs_20 IAmb IAMs_20 03 13 37.0 03 44 19.4
SCM **Sheep Creek Mo** comp=Z,139nm,1.5s **61.83 28** IAmb IAMs_20 IAmb IAMs_20 03 13 38.8 03 42 58.7
SCM **Sheep Creek Mo** comp=Z,2µm,19.0s baz=316,SNR=29 **61.83 28** P **P** **03 13 32.0 +0.3**
I29M **Ogilvie Camp,** comp=Z,2µm,20.0s **61.84 22** IAMs_20 IAMs_20 03 43 38.7
I29M **Ogilvie Camp,** baz=321,SNR=13 **61.84 22** P **P** **03 13 31.1 -0.5**
EJON **La Jonquera** **61.84 303** P **P** **03 13 31.4 -0.6**
HOM **Homer** baz=314 **61.87 32** P **P** **03 13 32.1 +0.2**
CHNA **Chernabura Isl** baz=311 **61.92 39** P **P** **03 13 31.8 -0.5**
SMPI **Sarmi** comp=Z,3µmcomp=Z,204nm,1.3s **61.93 127** P **P** **03 13 34.8 +2.0**
BATI **Baumata** comp=Z,615nm,20.8s,baz=318,slow=39 **61.95 146** LR LR 03 43 02.7
BATI **Baumata** comp=Z,1µmcomp=Z,102nm,0.8s **61.95 146** P **P** **03 13 32.3 -0.6**
O22K **Cooper Landing** comp=Z,2µm,19.0s **61.98 30** IAMs_20 IAMs_20 03 42 15.8
O22K **Cooper Landing** baz=315,SNR=30 **61.98 30** P **P** **03 13 32.5 -0.1**
KEST **Kesra** comp=Z,62nm,1.1s,baz=52,slow=1.5,SNR=33 **61.99 293** P LR **P** 03 43 46.9 **03 13 33.5 +0.2**
KEST **Kesra** SNR=19 comp=Z,2µm,18.4s,baz=50,slow=39 comp=Z,62nm,1.1s **61.99 293** P **P** **03 13 34.3 +1.1**
M24K **Tolsona, Glenn** **62.00 28** IAmb IAmb 03 13 38.3

	comp=Z,71nm,0.8s								
M24K	**Tolsona, Glenn**	**62.00**	**28**	P	**P**	**03 13 33.4**	**+0.6**		
	baz=317,SNR=36								
BRLK	**Bradley Lake**	**62.07**	**31**	IAMs_20	IAMs_20	03 42 06.3			
	comp=Z,2µm,18.0s								
CNPM	**China Poot**	**62.11**	**32**	IAmb	IAmb	03 13 39.6			
CNPM	comp=Z,50nm,0.9s			IAMs_20	IAMs_20	03 42 58.3			
	comp=Z,2µm,19.0s								
BRSE	**Bradley Lake S**	**62.14**	**31**	P	**P**	**03 13 33.7**	**0.0**		
	baz=315								
MENT	**Mentasta**	**62.16**	**26**	P	**P**	**03 13 33.9**	**+0.1**		
L26K	**Log Cabin Wild**	**62.20**	**26**	IAMs_20	IAMs_20	03 43 02.6			
	comp=Z,2µm,20.0s								
L26K	**Log Cabin Wild**	**62.20**	**26**	P	**P**	**03 13 33.9**	**-0.2**		
	baz=318,SNR=16								
ILULI	**Ilulissat**	**62.27**	**347**	*i* P	**P**	**03 13 33.4**	**-1.0**		
ILULI				IAmb	IAmb	03 13 34.7			
	comp=Z,94nm,0.9s								
Q20K	**Shuyak Island**	**62.32**	**33**	P	**P**	**03 13 34.8**	**-0.1**		
	baz=314								
SYI	**Shuyak Island**	**62.32**	**33**	IAMs_20	IAMs_20	03 42 23.9			
	comp=Z,2µm,21.0s								
SEW	**Seward**	**62.34**	**30**	IAmb	IAmb	03 13 39.9			
	comp=Z,75nm,1.0s								
SEW				IAMs_20	IAMs_20	03 42 36.4			
	comp=Z,2µm,18.0s								
SEW	**Seward**	**62.34**	**30**	P	**P**	**03 13 35.2**	**+0.2**		
	baz=315,SNR=18								
I30M	**Mount Dempster**	**62.45**	**21**	P	**P**	**03 13 35.4**	**-0.4**		
	baz=323,SNR=58								
H31M	**Peel River**	**62.48**	**20**	IAmb	IAmb	03 13 42.7			
	comp=Z,40nm,0.9s								
H31M	**Peel River**	**62.48**	**20**	P	**P**	**03 13 35.5**	**-0.4**		
	baz=324,SNR=31								
KLU	**Klutina**	**62.53**	**28**	P	**P**	**03 13 36.7**	**+0.3**		
	baz=317,SNR=22								
J29N	**Klondike Camp**	**62.57**	**23**	IAmb	IAmb	03 13 41.6			
	comp=Z,56nm,0.8s								
J29N	**Klondike Camp**	**62.57**	**23**	P	**P**	**03 13 37.0**	**+0.3**		
	baz=322,SNR=33								
MAHO	**Mahon**	**62.59**	**300**	IAMs_20	IAMs_20	03 42 28.1			
	comp=Z,2µm,18.0s								
GLI	**Glacier Island**	**62.59**	**29**	P	**P**	**03 13 36.9**	**+0.1**		
	baz=317,SNR=12								
GDH	**Godhavn**	**62.61**	**348**	*i* P	**P**	**03 13 34.9**	**-1.7**		
GDH				IAmb	IAmb	03 13 37.1			
	comp=Z,34nm,0.9s								
CORI	**Orista**	**62.62**	**303**	P	**P**	**03 13 37.7**	**+0.5**		
CORI				IAmb	IAmb	03 13 39.0			
	comp=Z,100nm,1.1s								
ANGG	**Ammassalik, Gr**	**62.63**	**340**	*i* P	**P**	**03 13 36.9**	**+0.1**		
ANGG				IAmb	IAmb	03 13 37.9			
	comp=Z,91nm,0.9s								
L27K	**Beaver Creek,**	**62.63**	**25**	IAmb	IAmb	03 13 42.8			
	comp=Z,131nm,1.6s								
L27K				IAMs_20	IAMs_20	03 43 42.8			
	comp=Z,2µm,18.0s								
L27K	**Beaver Creek,**	**62.63**	**25**	P	**P**	**03 13 37.7**	**+0.7**		
	baz=320,SNR=51								
BCAR	**Beaver Creek A**	**62.64**	**25**	P	**P**	**03 13 37.7**	**+0.6**		
M26K	**Nabesna, AK**	**62.78**	**26**	IAmb	IAmb	03 13 43.7			
	comp=Z,70nm,1.4s								
M26K	**Nabesna, AK**	**62.78**	**26**	P	**P**	**03 13 38.9**	**+0.8**		
	baz=319,SNR=25								
KDAK	**Kodiak Island**	**62.82**	**34**	LR	LR	03 43 49.0			
	comp=Z,2µm,18.5s,baz=324,slow=39								
KDAK	**Kodiak Island**	**62.82**	**34**	P	**P**	**03 13 38.5**	**+0.3**		
KDAK	**Kodiak Island**	**62.82**	**34**	*eP*	**P**	**03 13 37.9**	**-0.3**		
KDAK				pmax	pmax				
	comp=Z,46nm,0.9s								
KDAK				MLR	MLR				
	comp=Z,3µm,18.0s								
KDAK	**Kodiak Island**	**62.82**	**34**	P	**P**	**03 13 38.3**	**0.0**		
	baz=314								
VAL	**Valentia**	**62.83**	**318**	P	**P**	**03 13 35.8**	**-2.5**		
VAL	**Valentia**	**62.83**	**318**	P	**P**	**03 13 38.9**	**+0.5**		
DIV	**Divide**	**62.85**	**28**	IAmb	IAmb	03 13 45.2			
	comp=Z,108nm,1.7s								
DIV				IAMs_20	IAMs_20	03 43 50.7			
	comp=Z,2µm,20.0s								
N25K	**Chitina, Valde**	**62.88**	**27**	P	**P**	**03 13 39.3**	**+0.5**		
	baz=318,SNR=28								
OHAK	**Old Harbor**	**62.94**	**34**	P	**P**	**03 13 40.4**	**+1.4**		
OHAK	**Old Harbor**	**62.94**	**34**	IAmb	IAmb	03 13 44.0			
	comp=Z,86nm,1.3s								
OHAK	**Old Harbor**	**62.94**	**34**	P	**P**	**03 13 39.3**	**+0.3**		
	baz=314								
J30M	**Hart River**	**62.98**	**22**	IAMs_20	IAMs_20	03 45 33.8			
	comp=Z,1µm,18.0s								
J30M	**Hart River**	**62.98**	**22**	P	**P**	**03 13 39.1**	**-0.3**		
	baz=323,SNR=18								
SII	**Sitkinak Islan**	**63.04**	**35**	P	**P**	**03 13 40.0**	**+0.2**		
	baz=314								
P23K	**Montague Islan**	**63.13**	**30**	P	**P**	**03 13 41.2**	**+0.9**		
	baz=317,SNR=18								
HIN	**Hinchinbrook I**	**63.15**	**29**	IAmb	IAmb	03 13 49.0			
	comp=Z,66nm,1.1s								
M27K	**Edge Creek, AK**	**63.16**	**26**	IAMs_20	IAMs_20	03 43 49.7			
	comp=Z,2µm,19.0s								
M27K	**Edge Creek, AK**	**63.16**	**26**	P	**P**	**03 13 41.7**	**+1.1**		
	baz=320,SNR=120								
SAUI	**Saumlaki**	**63.22**	**138**	P	**P**	**03 13 44.0**	**+2.6**		
SAUI	**Saumlaki**	**63.22**	**138**	P	P	03 13 48.2	+6.8		
GENI	**Genyem**	**63.24**	**126**	P	**P**	**03 13 44.3**	**+2.7**		
GENI	**Genyem**	**63.24**	**126**	P	**P**	**03 13 44.8**	**+3.2**		
	comp=Z,5µmcomp=Z,254nm,1.3s								
K29M	**Barlow Dome**	**63.24**	**23**	IAmb	IAmb	03 13 46.2			
	comp=Z,36nm,0.8s								
K29M				IAMs_20	IAMs_20	03 43 24.9			
	comp=Z,2µm,18.0s								
K29M	**Barlow Dome**	**63.24**	**23**	P	**P**	**03 13 41.4**	**+0.2**		
	baz=322,SNR=63								
EYAK	**Cordova Ski Ar**	**63.29**	**29**	P	**P**	**03 13 42.4**	**+1.1**		
EYAK	**Cordova Ski Ar**	**63.29**	**29**	IAmb	IAmb	03 13 47.1			
	comp=Z,52nm,1.2s								
EYAK	**Cordova Ski Ar**	**63.29**	**29**	P	**P**	**03 13 41.9**	**+0.6**		
	baz=318,SNR=11								
BMRM	**Bremner River**	**63.35**	**28**	P	**P**	**03 13 42.3**	**+0.4**		
	baz=318,SNR=15								
BVCY	**Beaver Creek**	**63.42**	**25**	P	**P**	**03 13 43.5**	**+1.3**		
	baz=320,SNR=26								
JAY	**Jayapura**	**63.48**	**126**	LR	LR	03 41 28.7			
	comp=Z,903nm,19.2s,baz=3.0,slow=36								
JAY	**Jayapura**	**63.48**	**126**	P	P	03 13 48.2	+5.0		
ETOS	**Mallorca**	**63.54**	**301**	P	**P**	**03 13 41.2**	**-2.2**		
MCARA	**McCarthy VSAT**	**63.55**	**27**	IAmb	IAmb	03 13 48.7			
	comp=Z,56nm,0.9s								
MCARA	**McCarthy VSAT**	**63.55**	**27**	P	**P**	**03 13 43.9**	**+0.8**		
	baz=319,SNR=38								
L29M	**L29M**	**63.66**	**24**	IAMs_20	IAMs_20	03 44 16.9			
	comp=Z,2µm,22.0s								
L29M	**L29M**	**63.66**	**24**	P	**P**	**03 13 44.5**	**+0.6**		
	baz=322,SNR=52								
RAGM	**Ragged Mountai**	**63.77**	**28**	IAmb	IAmb	03 13 52.3			
	comp=Z,103nm,1.1s								
MAYO	**Mayo, Yukon**	**63.88**	**22**	IAmb	IAmb	03 14 16.2			
	comp=Z,44nm,0.8s								
Q23K	**Middleton Isla**	**63.91**	**30**	P	**P**	**03 13 46.4**	**+1.0**		
	baz=318								
CRQM	**Cirque**	**63.98**	**27**	IAmb	IAmb	03 14 23.6			
	comp=Z,39nm,0.9s								
CRQM				IAMs_20	IAMs_20	03 44 22.2			
	comp=Z,2µm,19.0s								
CRQE	**Cirque**	**64.00**	**27**	P	**P**	**03 13 46.6**	**+0.4**		
	baz=319,SNR=10								
YUK3	**Moose Creek**	**64.03**	**25**	P	**P**	**03 13 47.4**	**+0.9**		
	baz=321,SNR=43								
BERG	**Berg Lake**	**64.08**	**28**	IAmb	IAmb	03 13 53.4			
	comp=Z,62nm,1.3s								
TGL	**Tana Glacier**	**64.08**	**27**	IAmb	IAmb	03 13 52.0			
	comp=Z,40nm,0.8s								
TGL				IAMs_20	IAMs_20	03 44 25.4			
	comp=Z,2µm,18.0s								
M29M	**Somme Creek**	**64.09**	**24**	IAmb	IAmb	03 13 52.5			
	comp=Z,63nm,0.8s								
M29M				IAMs_20	IAMs_20	03 44 06.4			
	comp=Z,2µm,19.0s								
M29M	**Somme Creek**	**64.09**	**24**	P	**P**	**03 13 47.7**	**+0.9**		
	baz=322,SNR=83								
SFJD	**Kangerlussuaq**	**64.18**	**345**	LR	LR	03 44 49.4			
	comp=Z,2µm,21.3s,baz=27,slow=39								
SFJD	**Kangerlussuaq**	**64.18**	**345**	P	**P**	**03 13 46.6**	**-0.4**		
SFJD	**Kangerlussuaq**	**64.18**	**345**	P	**P**	**03 13 46.6**	**-0.4**		
SFJD				pmax	pmax				
	comp=Z,104nm,1.0s								
SFJD	**Kangerlussuaq**	**64.18**	**345**	*i* P	**P**	**03 13 46.4**	**-0.6**		
KAIM	**Kayak Island**	**64.20**	**28**	IAmb	IAmb	03 13 53.3			
	comp=Z,57nm,0.9s								
KAIM	**Kayak Island**	**64.20**	**28**	P	**P**	**03 13 48.2**	**+0.9**		
	baz=319,SNR=9.7								
SUCK	**Suckling Hills**	**64.30**	**28**	IAmb	IAmb	03 13 54.1			
SUCK	comp=Z,95nm,1.7s			IAMs_20	IAMs_20	03 44 34.0			
	comp=Z,2µm,19.0s								
CTG	**Chitna Glacier**	**64.39**	**26**	P	**P**	**03 13 49.5**	**+0.7**		
	baz=321,SNR=100								
GRNC	**Granite Creek**	**64.44**	**27**	IAmb	IAmb	03 13 56.3			
	comp=Z,146nm,1.8s								
GRNC				IAMs_20	IAMs_20	03 46 47.8			
	comp=Z,1µm,18.0s								
M30M	**Minto, Yukon**	**64.46**	**23**	IAMs_20	IAMs_20	03 44 22.0			
	comp=Z,2µm,18.0s								
M30M	**Minto, Yukon**	**64.46**	**23**	P	**P**	**03 13 49.1**	**+0.1**		
	baz=323,SNR=27								
LOGN	**Logan Glacier**	**64.61**	**26**	IAMs_20	IAMs_20	03 44 31.1			
	comp=Z,2µm,18.0s								
YUK8	**Steele Glacier**	**64.62**	**26**	P	**P**	**03 13 50.8**	**+0.4**		
	baz=322,SNR=14								
MESA	**MESA**	**64.81**	**27**	IAmb	IAmb	03 13 59.0			
MESA	comp=Z,81nm,0.9s			IAMs_20	IAMs_20	03 45 06.5			
	comp=Z,2µm,20.0s								
MESA	**MESA**	**64.81**	**27**	P	**P**	**03 13 52.4**	**+0.8**		
	baz=320								
EIBI	**Ibiza**	**64.89**	**301**	P	**P**	**03 13 50.4**	**-1.9**		
O28M	**Mount Upton**	**64.90**	**26**	P	**P**	**03 13 53.1**	**+0.9**		
	baz=321,SNR=17								
YUK4	**Talbot Arm**	**64.91**	**25**	P	**P**	**03 13 52.5**	**+0.3**		
	baz=322,SNR=21								
ILON	**Igloolik, Nuna**	**64.93**	**358**	P	**P**	**03 13 51.4**	**-0.5**		
ILON				IAmb	IAmb	03 13 52.7			
	comp=Z,44nm,1.1s								
N30M	**Aishikik Lake**	**65.27**	**24**	IAmb	IAmb	03 14 00.2			
	comp=Z,63nm,1.1s								
N30M				IAMs_20	IAMs_20	03 45 19.6			
	comp=Z,2µm,18.0s								
N30M	**Aishikik Lake**	**65.27**	**24**	P	**P**	**03 13 55.2**	**+0.8**		
	baz=323,SNR=44								
YUK6	**Outpost Mounta**	**65.31**	**25**	P	**P**	**03 13 55.1**	**+0.2**		
	baz=323,SNR=8.4								
PCA	**Pinnacle**	**65.41**	**27**	IAmb	IAmb	03 14 01.1			
	comp=Z,70nm,0.9s								
PINM	**Pinnacle**	**65.41**	**27**	P	**P**	**03 13 56.1**	**+0.7**		
	baz=322,SNR=27								
M31M	**Drury Creek, Y**	**65.42**	**23**	IAmb	IAmb	03 14 00.3			
	comp=Z,70nm,0.9s								
M31M				IAMs_20	IAMs_20	03 44 33.3			
	comp=Z,2µm,20.0s								
M31M	**Drury Creek, Y**	**65.42**	**23**	P	**P**	**03 13 55.4**	**+0.1**		
	baz=325,SNR=86								
N31M	**Braeburn, Yuko**	**65.62**	**24**	IAmb	IAmb	03 14 01.9			
	comp=Z,82nm,1.1s								
N31M	**Braeburn, Yuko**	**65.62**	**24**	P	**P**	**03 13 57.0**	**+0.4**		
	baz=324,SNR=49								
HYT	**Haines Junctio**	**65.66**	**25**	IAmb	IAmb	03 14 02.5			
	comp=Z,77nm,0.9s								
HYT	**Haines Junctio**	**65.66**	**25**	P	**P**	**03 13 57.4**	**+0.4**		
	baz=323,SNR=91								
O29M	**Mount Kennedy**	**65.76**	**26**	P	**P**	**03 13 58.0**	**+0.4**		
	baz=323,SNR=15								
ECHE	**Chera**	**65.90**	**303**	P	**P**	**03 13 56.5**	**-2.3**		
O30N	**Mendenhall**	**66.11**	**24**	IAmb	IAmb	03 14 05.3			
	comp=Z,64nm,1.3s								
O30N				IAMs_20	IAMs_20	03 46 05.9			
	comp=Z,1µm,18.0s								
O30N	**Mendenhall**	**66.11**	**24**	P	**P**	**03 14 00.1**	**+0.3**		
	baz=324,SNR=29								
LODK	**Lodwar**	**66.12**	**249**	P	**P**	**03 14 00.9**	**+0.3**		
LODK				IAmb	IAmb	03 14 02.6			
	comp=Z,73nm,1.0s								
LODK				IAMs_20	IAMs_20	03 46 53.3			
	comp=Z,2µm,19.0s								
LODK	**Lodwar**	**66.12**	**249**	P	**P**	**03 14 01.4**	**+0.8**		
	SNR=35								
P30M	**Million Dollar**	**66.39**	**25**	P	**P**	**03 14 02.0**	**+0.4**		
	baz=324,SNR=13								
WHY	**Whitehorse**	**66.55**	**24**	IAmb	IAmb	03 14 07.2			
	comp=Z,42nm,0.9s								
WHY	**Whitehorse**	**66.55**	**24**	P	**P**	**03 14 02.4**	**-0.4**		
	baz=325,SNR=26								
UCM	**Universidad Co**	**66.76**	**304**	P	**P**	**03 14 03.4**	**-0.9**		
NUUK	**Nuuk**	**66.92**	**344**	*i* P	**P**	**03 14 03.9**	**-1.0**		
NUUK				IAmb	IAmb	03 14 05.6			
	comp=Z,123nm,1.4s								
DRS	**Darwin Rock St**	**66.95**	**140**	P	**P**	**03 14 08.3**	**+2.7**		
WRGLY	**Wrigley**	**67.15**	**17**	IAmb	IAmb	03 14 11.4			
	comp=Z,52nm,1.1s								
WRGLY	**Wrigley**	**67.15**	**17**	P	**P**	**03 14 06.6**	**+0.4**		
	baz=333,SNR=23								
CART	**Cartagena**	**67.23**	**301**	IAMs_20	IAMs_20	03 47 24.9			
	comp=Z,2µm,20.0s								
SKAG	**Skagway**	**67.41**	**25**	P	**P**	**03 14 08.9**	**+0.9**		
SKAG	**Skagway**	**67.41**	**25**	P	**P**	**03 14 09.0**	**+1.0**		
	baz=325,SNR=14								
MTN	**Manton Dam**	**67.42**	**140**	P	**P**	**03 14 08.5**	**-0.1**		
	comp=Z,38nm,1.6s								
MTN	**Manton Dam**	**67.42**	**140**	IAmb	IAmb	03 14 13.2			
	comp=Z,111nm,1.6s								
P33M	**Teslin, Yukon**	**67.50**	**23**	IAmb	IAmb	03 14 13.6			
	comp=Z,67nm,1.1s								
P33M				IAMs_20	IAMs_20	03 46 15.3			
	comp=Z,2µm,18.0s								
P33M	**Teslin, Yukon**	**67.50**	**23**	P	**P**	**03 14 08.6**	**-0.1**		
	baz=327,SNR=50								
TGTN	**Hyland Airport**	**67.55**	**20**	P	**P**	**03 14 09.7**	**+0.6**		
	baz=330,SNR=22								
ESDC	**Sonseca Array**	**67.59**	**304**	P	**P**	**03 14 09.7**	**+0.1**		
	comp=Z,67nm,1.0s,baz=46,slow=6.6,SNR=254								
ESDC				PKPPKP	P'P'df	03 42 30.1	-8.0		
	comp=Z,2.5nm,1.3s,baz=225,slow=1.6,SNR=4.8								
ESDC				LR	LR	03 45 03.6			
	comp=Z,2µm,18.9s,baz=56,slow=37								
	comp=Z,67nm,1.0s								
PBRG	**Braganca**	**67.74**	**307**	*eP*	**P**	**03 14 11.3**	**+0.8**		
PBRG				*i* IAmb	IAmb	03 14 12.1			
	comp=Z,105nm,1.0s								
P32M	**Atlin**	**67.77**	**24**	IAmb	IAmb	03 14 15.7			
	comp=Z,74nm,1.4s								
P32M	**Atlin**	**67.77**	**24**	P	**P**	**03 14 10.7**	**+0.4**		
	baz=326,SNR=19								
KDU	**Kakadu**	**67.89**	**139**	P	**P**	**03 14 12.1**	**+0.5**		
	comp=Z,32nm,1.4s								
PAB	**San Pablo**	**67.90**	**304**	P	**P**	**03 14 12.0**	**+0.4**		
PAB				IAmb	IAmb	03 14 13.5			
	comp=Z,83nm,1.1s								
PAB	**San Pablo**	**67.90**	**304**	P	**P**	**03 14 12.0**	**+0.4**		
PAB				pmax	pmax				
	comp=Z,83nm,1.2s								
PAB				MLR	MLR				
	comp=Z,2µm,18.0s								
BESE	**Bessie Mountai**	**68.27**	**25**	IAmb	IAmb	03 14 15.4			
	comp=Z,51nm,1.2s								
NRS	**Narsarsuaq**	**68.28**	**340**	*i* P	**P**	**03 14 12.2**	**-1.3**		
NRS				IAmb	IAmb	03 14 14.1			
	comp=Z,64nm,1.1s								
MVO	**Moncorvo**	**68.33**	**307**	*eP*	**P**	**03 14 14.9**	**+0.6**		
MVO				*i* IAmb	IAmb	03 14 16.4			
	comp=Z,163nm,1.2s								
MVO				*eLQ*	LQ	03 39 24.5			
MVO				*eLR*	LR	03 40 31.8			
MVO				*i* IAMs_20	IAMs_20	03 47 35.9			
	comp=Z,2µm,16.0s								
S31K	**Pelican**	**68.37**	**26**	IAMs_20	IAMs_20	03 48 03.5			
	comp=Z,1µm,19.0s								
S31K	**Pelican**	**68.37**	**26**	P	**P**	**03 14 14.7**	**+0.7**		
	baz=325								
KMBO	**Kilima Mbogo**	**68.39**	**244**	LR	LR	03 46 33.7			
	comp=Z,1µm,20.8s,baz=65,slow=38								
KMBO	**Kilima Mbogo**	**68.39**	**244**	*c i* P	**P**	**03 14 15.4**	**+0.3**		
PGAV	**Gavieira, Arco**	**68.47**	**308**	*eP*	**P**	**03 14 16.3**	**+1.2**		
PGAV				*i* IAmb	IAmb	03 14 17.6			
	comp=Z,180nm,1.4s								
PGAV				*eS*	**S**	**03 23 24.2**	**+7.8**		
PGAV				*eLQ*	LQ	03 39 11.1			
PGAV				*eLR*	LR	03 41 40.0			
PGAV				*i* IAMs_20	IAMs_20	03 46 26.9			
	comp=Z,1µm,22.0s								
PCAB	**Cabril**	**68.51**	**308**	*eP*	**P**	**03 14 16.2**	**+0.9**		
PCAB				*i* IAmb	IAmb	03 14 17.7			
	comp=Z,270nm,1.1s								
POLO	**Lamas de Olo**	**68.61**	**308**	*eP*	**P**	**03 14 16.8**	**+0.7**		
POLO				*i* IAmb	IAmb	03 14 19.1			
	comp=Z,55nm,1.7s								
R32K	**Eaglecrest**	**68.63**	**25**	IAMs_20	IAMs_20	03 47 24.3			
	comp=Z,2µm,18.0s								
R32K	**Eaglecrest**	**68.63**	**25**	P	**P**	**03 14 16.4**	**+0.7**		
	baz=326								
PVRL	**Vila Real**	**68.64**	**308**	*eP*	**P**	**03 14 16.8**	**+0.6**		
PVRL				*i* IAmb	IAmb	03 14 19.1			
	comp=Z,87nm,1.7s								
WTLY	**Watson Lake, Y**	**68.65**	**21**	P	**P**	**03 14 15.7**	**-0.1**		
	baz=330,SNR=27								
JIS	**Juneau Island**	**68.67**	**25**	P	**P**	**03 14 16.7**	**+0.8**		
R33M	**Jennings River**	**68.69**	**23**	IAmb	IAmb	03 14 21.6			
	comp=Z,90nm,1.4s								
R33M				IAMs_20	IAMs_20	03 46 53.8			
	comp=Z,1µm,18.0s								
R33M	**Jennings River**	**68.69**	**23**	P	**P**	**03 14 16.7**	**+0.4**		
	baz=328								
Q32M	**Nakina River**	**68.70**	**24**	P	**P**	**03 14 16.8**	**+0.3**		
	baz=327								
KIBK	**Kibwezi**	**68.84**	**243**	P	**P**	**03 14 18.5**	**+0.8**		
	SNR=50								
IVI	**Ivigtut**	**68.87**	**341**	P	**P**	**03 14 16.1**	**-1.0**		
IVI	**Ivigtut**	**68.87**	**341**	*i* P	**P**	**03 14 16.5**	**-0.6**		
IVI				IAmb	IAmb	03 14 17.6			
	comp=Z,123nm,0.8s								
KNRA	**Kununurra**	**68.94**	**144**	P	**P**	**03 14 18.8**	**+0.8**		
	comp=Z,107nm,1.5s								
PVIS	**Viseu**	**69.12**	**307**	*eP*	**P**	**03 14 20.1**	**+1.0**		
MTE	**Manteigas**	**69.14**	**307**	*eP*	**P**	**03 14 20.5**	**+1.2**		
MTE				*i* IAmb	IAmb	03 14 21.7			
	comp=Z,145nm,1.2s								
MTE				*eLQ*	LQ	03 40 55.4			
MTE				*eLR*	LR	03 42 34.4			
MTE				*i* IAMs_20	IAMs_20	03 50 50.6			
	comp=Z,1µm,18.0s								
S32K	**Killisnoo**	**69.28**	**26**	P	**P**	**03 14 20.5**	**+0.8**		
	baz=326								
SIT	**Sitka**	**69.39**	**26**	P	**P**	**03 14 22.1**	**+1.7**		
SIT	**Sitka**	**69.39**	**26**	IAmb	IAmb	03 14 27.9			
	comp=Z,46nm,1.1s								
SIT	**Sitka**	**69.39**	**26**	P	**P**	**03 14 21.6**	**+1.1**		
	baz=326								
YKAW3	**Yellowknife Wh**	**69.41**	**14**	IAmb	IAmb	03 14 27.3			
	comp=Z,57nm,1.1s								
YKA	**Yellowknife Ar**	**69.48**	**14**	P	**P**	**03 14 20.5**	**-0.4**		
	comp=Z,15nm,0.9s,baz=334,slow=6.9,SNR=159								
YKA				PKPPKP	P'P'df	03 42 27.2	-9.4		
	comp=Z,0.2nm,0.5s,baz=160,slow=2.2,SNR=4.2								
YKA				LR	LR	03 45 36.6			
	comp=Z,662nm,21.8s,baz=310,slow=37								
	comp=Z,15nm,0.9s								
YKA	**Yellowknife Ar**	**69.48**	**14**	P	**P**	**03 14 20.8**	**-0.1**		
YKA	**Yellowknife Ar**	**69.48**	**14**	P	**P**	**03 14 20.8**	**-0.1**		
PCBR	**Castelo Branco**	**69.48**	**306**	*eP*	**P**	**03 14 23.1**	**+1.8**		
PCBR				*i* IAmb	IAmb	03 14 24.6			
	comp=Z,100nm,1.5s								
YKAW1	**Yellowknife Wh**	**69.51**	**14**	IAmb	IAmb	03 14 26.0			
	comp=Z,86nm,1.2s								
PMRV	**Marv??o**	**69.72**	**306**	*eP*	**P**	**03 14 23.6**	**+0.8**		
PMRV				*i* IAmb	IAmb	03 14 25.0			
	comp=Z,152nm,1.4s								
PMRV				*eS*	S	03 23 40.3	+9.3		
PMRV				*eLQ*	LQ	03 40 21.2			
PMRV				*eLR*	LR	03 41 51.2			
PMRV				*i* IAMs_20	IAMs_20	03 48 02.0			
	comp=Z,3µm,18.0s								
FRB	**Frobisher Bay**	**69.75**	**352**	LR	LR	03 45 14.3			
	comp=Z,674nm,19.2s,baz=22,slow=36								
BLKN	**Baker Lake**	**69.76**	**5**	IAmb	IAmb	03 14 23.2			
	comp=Z,54nm,1.0s								
DLBC	**Dease Lake**	**69.77**	**23**	P	**P**	**03 14 22.9**	**0.0**		
	comp=Z,16nm,1.2s,baz=310,slow=9.3,SNR=18								
DLBC				LR	LR	03 47 47.8			
	comp=Z,1µm,18.6s,baz=316,slow=38								
	comp=Z,16nm,1.2s								
DLBC	**Dease Lake**	**69.77**	**23**	P	**P**	**03 14 23.6**	**+0.7**		
	baz=329,SNR=20								
KOTAN	**Kotaneelee Air**	**69.78**	**19**	P	**P**	**03 14 23.3**	**+0.5**		
	baz=333,SNR=8.6								
PCAS	**Casmilo, Conde**	**69.91**	**307**	*eP*	**P**	**03 14 25.2**	**+1.2**		
PCAS				*i* IAmb	IAmb	03 14 26.5			
	comp=Z,214nm,1.2s								
S34M	**Telegraph Cree**	**69.91**	**24**	P	**P**	**03

PVAQ eLQ LQ 03 41 40.0
PVAQ eLR LR 03 44 17.7
PVAQ i IAms_20 IAms_20 03 48 02.0
comp=Z,2µm,16.0s
PCVE Castro Verde 71.32 305 eP P 03 14 33.5 +0.9
PCVE i IAmb IAmb 03 14 35.0
comp=Z,106nm,1.3s
CRAG Craig 71.40 26 P P **03 14 34.3 +1.6**
CRAG Craig 71.40 26 P P **03 14 34.0 +1.2**
baz=328
PBDV Barranco-do-Ve 71.53 305 eP P 03 14 35.4 +1.5
PBDV i IAmb IAmb 03 14 42.1
comp=Z,188nm,1.6s
KRVT Keravat (AS076 71.65 117 LR LR 03 44 26.2
comp=Z,78nm,21.8s,baz=236,slow=34
PTEO Sao Teotonio 71.77 305 eP P 03 14 37.2 +2.0
PTEO i IAmb IAmb 03 14 44.4
comp=Z,166nm,1.9s
MORF Marmelete 71.90 305 eP P 03 14 36.5 +0.4
MORF IAMs_20 IAMs_20 03 48 14.2
comp=Z,3µm,14.4s
MORF Marmelete 71.90 305 eP P 03 14 38.1 +1.9
MORF i IAmb IAmb 03 14 44.2
comp=Z,146nm,1.7s
MORF Marmelete 71.90 305 eP P 03 14 36.5 +0.4
U35K Hyder 71.94 24 P P **03 14 37.1 +1.1**
baz=329
V35K Ketchikan 71.97 25 IAMs_20 IAMs_20 03 49 12.8
comp=Z,1µm,19.0s
V35K Ketchikan 71.97 25 P P **03 14 36.9 +0.7**
baz=328
PFVI Vila Bisbo 72.12 305 eP P 03 14 38.5 +1.1
PFVI i IAmb IAmb 03 14 40.9
comp=Z,214nm,1.4s
MBAR Mbarara 72.17 250 LR LR 03 50 06.5
comp=Z,2µm,18.1s,baz=40,slow=39
MBAR Mbarara 72.17 250 P P **03 14 38.5 +0.3**
MBAR IAmb IAmb 03 14 40.0
comp=Z,101nm,1.1s
MBAR Mbarara 72.17 250 *c* iP P **03 14 38.5 +0.3**
MBAR pmax pmax
comp=Z,72nm,1.1s
MBAR MLR MLR
comp=Z,2µm,18.0s
MBAR Mbarara 72.17 250 P P **03 14 40.0 +1.8**
MD01 Midelt array s 72.68 299 P P **03 14 41.8 +0.8**
MD31 MD31 72.68 299 IAmb IAmb 03 14 43.2
comp=Z,92nm,1.1s
PMG Port Moresby 72.77 124 LR LR 03 49 01.2
comp=Z,296nm,18.6s,baz=330,slow=38
TAM Tamanrasset 72.95 285 P P **03 14 43.2 +0.4**
TAM pmax pmax
comp=Z,43nm,1.5s
COEN Coen 74.29 130 P P **03 14 48.4 -2.0**
COEN Coen 74.29 130 IAmb IAmb 03 14 55.8
comp=Z,131nm,1.6s
WB0 Warramunga Arr 74.97 141 IAmb IAmb 03 14 59.3
comp=Z,138nm,1.3s
WRAB Tennant Creek 75.10 141 P P **03 14 55.0 0.0**
WRAB Tennant Creek 75.10 141 P P **03 14 54.8 -0.2**
WRAB IAmb IAmb 03 15 00.2
comp=Z,128nm,1.2s
WRAB Tennant Creek 75.10 141 *ce* iP P **03 14 54.8 -0.2**
WRAB pmax pmax
comp=Z,167nm,1.7s
WRA Warramunga Arr 75.11 141 P P **03 14 54.7 -0.3**
comp=Z,42nm,1.0s,baz=336,slow=4.9,SNR=96
WRA PKPPKP **P'P'df 03 42 10.4 -4.2**
comp=Z,0.2nm,0.3s,baz=152,slow=1.8,SNR=6.5
comp=Z,42nm,1.0s
WRA Warramunga Arr 75.11 141 P P **03 14 54.0 -0.9**
WRA Warramunga Arr 75.11 141 P P **03 14 54.1 -0.9**
WR8 Warramunga Arr 75.19 141 P P **03 14 55.2 -0.2**
WR8 Warramunga Arr 75.19 141 IAmb IAmb 03 15 00.7
comp=Z,105nm,1.2s
FCC Fort Churchill 75.41 4 IAmb IAmb 03 14 57.0
comp=Z,79nm,1.0s
MEEK Meekatharra 75.65 157 P P **03 14 57.6 -0.4**
comp=Z,84nm,1.0s
MEEK Meekatharra 75.65 157 P P **03 14 57.9 -0.1**
BBB Bella Bella 75.74 25 P P **03 14 58.0 -0.3**
comp=Z,19nm,0.9s,baz=31,slow=3.1,SNR=6.1
BBB LR LR 03 51 39.0
comp=Z,416nm,18.0s,baz=333,slow=38
comp=Z,19nm,0.9s
OPO Ambohidratompo 76.95 225 LR LR 03 47 26.6
comp=Z,393nm,21.8s,baz=170,slow=34
HOLB Holberg 77.09 26 IAmb IAmb 03 15 11.8
comp=Z,118nm,1.5s
WRKA Warakurna 77.24 148 P P **03 15 07.4 +0.4**
comp=Z,33nm,1.3s
ABPO Ambohimpanom 77.31 225 P P **03 15 08.2 +0.4**
ABPO Ambohimpanom 77.31 225 P P **03 15 08.2 +0.4**
ABPO pmax pmax
comp=Z,131nm,1.1s
MORW Morawa 77.33 160 P P **03 15 07.6 +0.2**
comp=Z,40nm,1.6s
MORW Morawa 77.33 160 P P **03 15 07.7 +0.3**
MORW Morawa 77.33 160 P P **03 15 07.5 0.0**
QIS Mount Isa 78.06 137 P P **03 15 11.5 -0.2**
comp=Z,51nm,1.8s
QIS Mount Isa 78.06 137 P P **03 15 11.5 -0.2**
ASAR Alice Springs 78.21 143 P P **03 15 11.8 -0.6**
comp=Z,21nm,0.9s,baz=332,slow=5.5,SNR=125
ASAR PKPPKP **P'P'df 03 42 04.7 -4.3**
comp=Z,1.0nm,0.9s,baz=144,slow=3.6,SNR=4.8
comp=Z,21nm,0.9s
ASAR Alice Springs 78.21 143 P P **03 15 12.5 0.0**
SCHQ Schefferville 78.26 349 P P **03 15 11.1 -1.4**
comp=Z,26nm,0.7s,baz=4.0,slow=3.8,SNR=54
SCHQ LR LR 03 52 14.3
comp=Z,1µm,21.2s,baz=15,slow=38
comp=Z,26nm,0.7s
SCHQ Schefferville 78.26 349 IAmb IAmb 03 15 12.8
comp=Z,158nm,1.5s
MTSU Mount Surprise 78.36 132 P P **03 15 14.3 +0.8**
comp=Z,49nm,1.2s
MTSU Mount Surprise 78.36 132 P P **03 15 14.6 +1.1**
EDM Edmonton 78.45 16 IAmb IAmb 03 15 15.0
comp=Z,65nm,0.9s
FFC Flin Flon 78.76 9 P P **03 15 15.1 -0.1**
FFC IAmb IAmb 03 15 16.3
comp=Z,58nm,0.9s
FFC Flin Flon 78.76 9 IAMs_20 IAMs_20 03 49 04.6
comp=Z,1µm,21.0s
FFC Flin Flon 78.76 9 P P **03 15 15.1 -0.1**
FFC pmax pmax
comp=Z,58nm,0.9s
LLLB Lillooet 78.91 22 IAmb IAmb 03 15 23.4
comp=Z,150nm,2.0s
BLDU Ballidu 78.97 160 P P **03 15 15.9 -0.6**
comp=Z,59nm,1.3s
BLDU Ballidu 78.97 160 P P **03 15 16.2 -0.3**
TATA Tatamba Isabel 79.69 113 P P **03 15 21.9 +1.1**
PMAR Madeira 79.88 307 eP P 03 15 23.0 +1.1
PMAR i IAmb IAmb 03 15 25.7
comp=Z,775nm,1.4s
PMOZ Porto Moniz, M 79.96 307 eP P 03 15 23.7 +1.4
PMOZ i IAmb IAmb 03 15 25.5
comp=Z,406nm,1.3s
PMOZ eLR LR 03 47 31.2
PMOZ i IAMs_20 IAMs_20 03 49 49.7
comp=Z,507nm,22.0s
VOI Vohitsoka 79.98 224 P P **03 15 23.4 +1.0**
SNR=30
KLBR Kellerberrin 80.15 160 P P **03 15 21.9 -1.0**
comp=Z,81nm,1.0s
KLBR Kellerberrin 80.15 160 P P **03 15 22.6 -0.3**
MUN Mundaring 80.16 161 P P **03 15 22.9 0.0**
comp=Z,46nm,1.7s
MUN Mundaring 80.16 161 P P **03 15 22.8 -0.1**
PGC Sidney 80.25 24 IAmb IAmb 03 15 25.5
comp=Z,196nm,2.0s
SAVO Savo Central 80.28 114 P P **03 15 24.3 +0.3**
A04D Lummi Island 80.40 24 IAmb IAmb 03 15 27.2
comp=Z,212nm,1.5s
CMLA Cha da Macela 80.52 316 *e*P P **03 15 25.2 +0.1**
CMLA IAmb IAmb 03 15 26.7
comp=Z,321nm,1.2s
HNR Honiara 80.58 114 LR LR 03 50 01.6
comp=Z,29nm,21.1s,baz=56,slow=35
PGRA Graciosa 80.69 318 *e*P P **03 15 26.0 0.0**
PGRA IAmb IAmb 03 15 30.9
comp=Z,492nm,1.7s
CTA Charters Tower 81.00 131 LR LR 03 51 00.3
comp=Z,443nm,21.2s,baz=352,slow=35
CTA Charters Tower 81.00 131 P P **03 15 28.7 +1.0**
CTAO Charters Tower 81.00 131 P P **03 15 28.7 +1.0**
CTAO Charters Tower 81.00 131 P P **03 15 28.6 +0.9**
CTAO IAmb IAmb 03 15 33.5
comp=Z,130nm,1.4s
CTAO Charters Tower 81.00 131 P P **03 15 28.6 +0.9**
CTAO pmax pmax
comp=Z,130nm,1.5s
KMBL Kambalda 81.03 156 P P **03 15 30.2 +2.6**
comp=Z,14nm,1.4s
ROSA Rosais 81.06 318 *e*P P **03 15 29.0 +1.1**
ROSA IAmb IAmb 03 15 30.0
comp=Z,262nm,1.1s
AUKUL Kulin High Sch 81.28 160 P P **03 15 28.2 -0.7**
NWAO Narrogin (SRO) 81.31 160 P P **03 15 27.8 -1.2**
comp=Z,39nm,1.9s
NWAO Narrogin (SRO) 81.31 160 LR LR 03 54 29.1
comp=Z,868nm,19.3s,baz=305,slow=38
NWAO Narrogin (SRO) 81.31 160 P P **03 15 28.5 -0.5**
NWAO IAmb IAmb 03 15 33.8
comp=Z,132nm,1.8s
NWAO Narrogin (SRO) 81.31 160 P P **03 15 28.5 -0.5**
NWAO pmax pmax
comp=Z,132nm,1.8s
PICO Pico 81.32 318 *e*P P **03 15 29.8 +0.4**
PICO IAmb IAmb 03 15 32.9
comp=Z,416nm,1.5s
PCAN Candelaria 81.38 318 *e*P P **03 15 31.7 +2.0**
PCAN IAmb IAmb 03 15 33.2
comp=Z,355nm,1.5s
CALA Caldeira 81.38 318 *e*P P **03 15 30.9 +1.1**
CALA IAmb IAmb 03 15 33.0
comp=Z,501nm,1.4s
HOR Horta 81.39 318 *e*P P **03 15 31.3 +1.6**
HOR IAmb IAmb 03 15 32.9
comp=Z,409nm,1.3s
GNW Green Mountain 81.41 24 IAmb IAmb 03 15 32.4
comp=Z,70nm,1.2s
WISH Wishkah 81.54 25 IAmb IAmb 03 15 38.5
comp=Z,91nm,1.4s
DRLN Deer Lake 81.96 342 IAmb IAmb 03 15 32.4
comp=Z,49nm,0.9s
D05A Enumclaw 81.99 24 IAmb IAmb 03 15 35.4
comp=Z,160nm,1.5s
NGOA Tingoa Renbel 82.26 115 P P **03 15 35.1 +0.6**
TOA0 Torodi Ar. Sit 82.26 281 P P **03 15 35.0 +0.3**
SNR=9.0
TORD Torodi Ar. Bea 82.26 281 P P **03 15 34.1 -0.6**
comp=Z,29nm,1.1s,baz=34,slow=3.4,SNR=103
TORD LR LR 03 57 15.0
comp=Z,780nm,20.1s,baz=50,slow=39
comp=Z,29nm,1.1s
TORD Torodi Ar. Bea 82.26 281 P P **03 15 34.5 -0.2**
NEW Newport 82.28 20 LR LR 03 55 35.8
comp=Z,726nm,18.5s,baz=349,slow=38
NEW Newport 82.28 20 IAMs_20 IAMs_20 03 55 33.0
comp=Z,945nm,18.0s
FORT Forrest 82.40 151 P P **03 15 34.6 -0.3**
comp=Z,50nm,1.0s
FORT Forrest 82.40 151 IAmb IAmb 03 15 40.1
comp=Z,45nm,1.0s
C09A Chrisman Ranch 82.42 21 IAmb IAmb 03 15 40.3
comp=Z,68nm,0.9s
EPH Ephrata 82.49 22 IAmb IAmb 03 15 40.3
comp=Z,37nm,1.0s
F03A Seaside 82.67 25 IAmb IAmb 03 15 38.9
comp=Z,71nm,1.2s
F04D Rainier, OR 82.70 25 IAmb IAmb 03 15 42.1
comp=Z,40nm,0.9s
RKGY Rocky Gully 82.86 161 P P **03 15 39.2 +2.0**
comp=Z,72nm,1.5s
MXC Moxie City 83.02 23 IAmb IAmb 03 15 40.3
comp=Z,45nm,0.8s
EDA Edea 83.02 268 IAmb IAmb 03 15 39.9
comp=Z,85nm,1.1s
EDA IAMs_20 IAMs_20 03 58 00.8
comp=Z,966nm,19.0s
WAH2 Wahluke Slope 83.05 23 IAmb IAmb 03 15 44.0
comp=Z,62nm,1.1s
HAWA Hanford 83.40 23 IAMs_20 IAMs_20 03 57 00.8
comp=Z,874nm,18.0s
E08A Dider Farm, El 83.43 22 IAmb IAmb 03 15 42.4
comp=Z,43nm,0.9s
ICQ Pointe Anglais 83.50 348 IAmb IAmb 03 15 41.5
comp=Z,91nm,1.0s
ULM Lac du Bonnet 83.77 6 P P **03 15 40.5 -1.4**
comp=Z,23nm,0.8s,baz=343,slow=4.3,SNR=53
ULM LR LR 03 53 00.5
comp=Z,934nm,21.9s,baz=353,slow=36
comp=Z,23nm,0.8s
HOOD Mount Hood Mea 83.79 24 IAmb IAmb 03 15 47.7
comp=Z,61nm,1.0s
YPT Yellepit 83.87 22 IAmb IAmb 03 15 48.0
comp=Z,41nm,1.0s
COR Corvallis 83.97 26 P P **03 15 44.7 +1.7**
COR IAmb IAmb 03 15 45.9
comp=Z,67nm,0.9s
COR Corvallis 83.97 26 P P **03 15 44.7 +1.7**
COR pmax pmax
comp=Z,67nm,1.0s
EGMT Eagleton 84.10 16 IAmb IAmb 03 15 44.6
comp=Z,53nm,0.9s
EGMT IAMs_20 IAMs_20 03 58 11.0
comp=Z,927nm,18.0s
H04D Lebanon 84.20 25 IAmb IAmb 03 15 56.8
comp=Z,45nm,1.1s
I02E Swishome, OR 84.23 26 IAmb IAmb 03 15 46.9
comp=Z,48nm,0.9s
MSO Missoula 84.37 19 IAmb IAmb 03 15 46.4
comp=Z,60nm,1.2s
MSO IAMs_20 IAMs_20 03 57 15.3
comp=Z,863nm,18.0s
F10A Beach Ranch, E 84.39 21 IAmb IAmb 03 15 47.2
comp=Z,40nm,0.9s
BUCK Buck Mountain 84.42 26 IAmb IAmb 03 15 48.0
comp=Z,70nm,1.2s
EPLO Experimental L 84.49 5 IAmb IAmb 03 15 45.7
comp=Z,49nm,0.9s
I03D Drain, OR 84.76 26 IAmb IAmb 03 15 49.5
comp=Z,41nm,0.9s
WIFE Three Sisters- 84.89 25 IAmb IAmb 03 15 50.3
comp=Z,54nm,1.1s
LSZ Lusaka 84.95 242 LR LR 03 55 22.9
comp=Z,768nm,19.5s,baz=28,slow=37
LSZ Lusaka 84.95 242 P P **03 15 49.0 +0.6**
LSZ IAmb IAmb 03 15 50.4
comp=Z,91nm,1.1s
LSZ Lusaka 84.95 242 P P **03 15 49.0 +0.6**
LSZ pmax pmax
comp=Z,91nm,1.1s
LSZ Lusaka 84.95 242 P P **03 15 48.6 +0.1**
I04A Tendick Farm, 84.96 26 IAmb IAmb 03 15 49.8
comp=Z,36nm,1.0s
QLP Quilpie 85.39 136 P P **03 15 51.4 +1.2**
comp=Z,112nm,1.4s
QLP Quilpie 85.39 136 P P **03 15 50.8 +0.6**
PINE Pine Mountain 85.39 25 IAmb IAmb 03 15 53.2
comp=Z,56nm,1.2s
BMO Blue Mountains 85.41 22 IAMs_20 IAMs_20 03 58 49.0
comp=Z,947nm,18.0s
PLID Pearl Lake 85.52 21 IAmb IAmb 03 15 52.4
comp=Z,60nm,1.2s
PLID IAMs_20 IAMs_20 03 58 13.9
comp=Z,1µm,18.0s
J04A Umpqua Nationa 85.55 26 IAmb IAmb 03 15 53.5
comp=Z,85nm,0.9s
TBO Thunder Bay 85.71 2 IAmb IAmb 03 15 53.4
comp=Z,49nm,1.0s
AGMN Agassiz Nation 85.71 7 IAmb IAmb 03 15 51.7
comp=Z,35nm,0.8s
AGMN IAMs_20 IAMs_20 03 59 27.3
comp=Z,1µm,19.0s
J05D Fort Rock, OR 85.77 25 IAmb IAmb 03 15 54.9
comp=Z,43nm,0.9s
MDND Maddock 85.80 9 IAmb IAmb 03 15 53.1
comp=Z,71nm,0.9s
MDND IAMs_20 IAMs_20 03 53 21.8
comp=Z,975nm,19.0s
KBO Bosley Butte 85.82 27 IAmb IAmb 03 17 41.4
comp=Z,88nm,1.7s
LMQ La Malbaie 85.85 349 IAmb IAmb 03 15 53.8
comp=Z,61nm,1.1s
AUNRC North Rockhamp 85.93 130 P P **03 15 54.0 +1.0**
BOZ Bozeman (W) 86.05 18 IAMs_20 IAMs_20 03 58 28.6
comp=Z,1µm,20.0s
DLMT Dillon 86.06 18 IAMs_20 IAMs_20 03 57 22.0
comp=Z,1µm,18.0s
K04D Chiloquin, OR 86.22 26 IAmb IAmb 03 15 56.6
comp=Z,46nm,0.9s
EYMN Ely 86.33 4 IAMs_20 IAMs_20 03 54 32.8
comp=Z,1µm,20.0s
K05A Summer Lake 86.38 25 IAmb IAmb 03 15 58.1
comp=Z,80nm,1.3s
L04D Klamath Falls 86.42 26 IAmb IAmb 03 15 57.4
comp=Z,49nm,1.0s
GBN Guysborough 86.47 343 IAmb IAmb 03 15 56.4
comp=Z,74nm,1.1s
J08A Circle Bar Ran 86.49 23 IAmb IAmb 03 16 01.3
comp=Z,39nm,1.0s
YBH Yreka Blue Hor 86.74 27 LR LR 03 55 46.9
comp=Z,37nm,19.2s,baz=321,slow=36
E28A Huff 86.93 10 IAMs_20 IAMs_20 03 54 09.6
comp=Z,1µm,19.0s
YNE Yellowstone No 86.94 17 IAmb IAmb 03 15 59.6
comp=Z,67nm,1.8s
M02C Callahan 87.00 27 IAmb IAmb 03 16 05.2
comp=Z,96nm,1.9s
JCC Jacoby Creek, 87.14 28 IAmb IAmb 03 16 01.3
comp=Z,45nm,1.1s
BBOO Buckleboo 87.16 146 P P **03 15 58.8 0.0**
BBOO Buckleboo 87.16 146 IAmb IAmb 03 16 03.4
comp=Z,72nm,1.1s
F64A Sherman 87.23 348 IAmb IAmb 03 16 00.2
comp=Z,45nm,1.0s
WVOR Wild Horse Val 87.30 24 IAMs_20 IAMs_20 03 59 40.1
comp=Z,788nm,18.0s
HLID Hailey 87.34 20 IAMs_20 IAMs_20 03 59 19.1
comp=Z,1µm,18.0s
HAL Halifax 87.61 344 IAmb IAmb 03 16 01.8
comp=Z,67nm,1.0s
TRQ Mont Tremblant 87.63 352 IAmb IAmb 03 16 02.3
comp=Z,67nm,1.1s
E38A The Farm, Brul 87.67 4 IAmb IAmb 03 16 01.9
comp=Z,56nm,0.8s
FLWY Flagg Ranch 87.69 18 IAMs_20 IAMs_20 03 58 51.0
comp=Z,869nm,20.0s
G65A Princeton 87.76 347 IAMs_20 IAMs_20 03 55 43.4
comp=Z,1µm,20.0s
EIDS Eidsvold 87.85 131 P P **03 16 03.0 +0.7**
comp=Z,25nm,1.3s
EIDS Eidsvold 87.85 131 P P **03 16 03.4 +1.1**
PKME Peaks-Kenny Pk 87.95 348 IAmb IAmb 03 16 03.4
comp=Z,76nm,1.1s
HATC Hat Creek Radi 87.96 26 IAmb IAmb 03 16 05.2
comp=Z,51nm,1.1s
F33A 5 Mile Ranch, 88.12 7 IAMs_20 IAMs_20 03 59 40.0
comp=Z,936nm,18.0s
EMMW East Machias 88.22 347 IAMs_20 IAMs_20 03 59 33.7
comp=Z,978nm,18.0s
O03E Paynes Creek 88.33 27 IAmb IAmb 03 16 06.3
comp=Z,100nm,1.8s
F42A Maple Grove Fa 88.63 1 IAMs_20 IAMs_20 03 56 25.4
comp=Z,821nm,18.0s
STKA Stephens Creek 88.66 141 P P **03 16 05.0 -1.0**
comp=Z,129nm,1.1s
STKA Stephens Creek 88.66 141 P P **03 16 05.0 -1.0**
comp=Z,24nm,1.0s,baz=324,slow=6.6,SNR=20
STKA LR LR 03 59 51.8
comp=Z,281nm,19.6s,baz=318,slow=38
comp=Z,24nm,1.0s
STKA Stephens Creek 88.66 141 P P **03 16 04.8 -1.2**
STKA Stephens Creek 88.66 141 *de*P P **03 16 04.2 -1.8**
WVL Waterville 88.69 348 IAMs_20 IAMs_20 03 59 51.0
comp=Z,1µm,19.0s
KSANE Kasane 88.74 243 *i* P P **03 16 06.4 -0.4**
BUKO Buck Lake 88.78 355 IAmb IAmb 03 16 07.5
comp=Z,49nm,0.9s
HTT Hallett 88.86 144 P P **03 16 07.0 +0.1**
comp=Z,14nm,2.0s
HTT Hallett 88.86 144 P P **03 16 07.1 +0.1**
AHID Auburn Hatcher 88.86 18 IAMs_20 IAMs_20 04 02 25.1
comp=Z,742nm,18.0s
RSSD Black Hills 88.87 13 P P **03 16 07.7 +0.3**
RSSD Black Hills 88.87 13 IAMs_20 IAMs_20 03 55 22.1
comp=Z,968nm,21.0s
RSSD Black Hills 88.87 13 P P **03 16 07.7 +0.3**
RSSD pmax pmax
comp=Z,113nm,0.9s
RSSD MLR MLR
comp=Z,1µm,21.0s
H62A Milan 88.88 349 IAmb IAmb 03 16 11.6
comp=Z,52nm,1.1s
SPMN Marine on St. 88.98 5 IAmb IAmb 03 16 08.3
comp=Z,52nm,0.7s
SPMN IAMs_20 IAMs_20 03 57 11.8
comp=Z,985nm,21.0s
HOPS Hopland Field 89.11 28 IAmb IAmb 03 16 11.0
comp=Z,71nm,1.1s
BEKR Beckworth 89.17 26 IAmb IAmb 03 16 10.8
comp=Z,36nm,1.0s
PDAR Pinedale Array 89.19 17 P P **03 16 08.2 -0.7**
comp=Z,4.7nm,0.8s,baz=32,slow=2.9,SNR=47
PDAR PKKP **PKKPbc 03 33 42.1 -2.2**
comp=Z,0.5nm,0.6s,baz=169,slow=2.0,SNR=6.3
PDAR LR LR 04 01 24.1
comp=Z,399nm,18.3s,baz=332,slow=39
comp=Z,4.7nm,0.8s
LONY Lake Ozonia 89.22 352 IAmb IAmb 03 16 10.0
comp=Z,63nm,1.1s
LONY IAMs_20 IAMs_20 03 59 18.1
comp=Z,1µm,21.0s
LBNH Lisbon 89.30 350 IAMs_20 IAMs_20 03 58 45.3
comp=Z,913nm,20.0s
I63A Otisfield 89.32 349 IAMs_20 IAMs_20 03 58 18.7
comp=Z,1µm,21.0s
GDXM Geysers 89.36 28 IAmb IAmb 03 16 12.8
comp=Z,48nm,1.2s
MNRC McLaughlin Min 89.42 28 IAmb IAmb 03 16 12.7
comp=Z,46nm,0.9s
HVU Hansel Valley 89.42 20 IAmb IAmb 03 16 11.9
comp=Z,100nm,2.0s
SADO Sadowa 89.43 355 LR LR 04 01 05.4
comp=Z,416nm,18.5s,baz=26,slow=39
SADO Sadowa 89.43 355 IAmb IAmb 03 16 10.4
comp=Z,41nm,1.0s
GLMI Grayling 89.57 359 IAMs_20 IAMs_20 03 57 16.4
comp=Z,1µm,20.0s
AULRC Lightning Ridg 89.58 135 P P **03 16 11.0 +0.6**
DELO Deloro Mine 89.58 354 IAmb IAmb 03 16 11.5
comp=Z,72nm,0.9s
PAHR Pah Rah Range 89.61 25 IAmb IAmb 03 16 16.9
comp=Z,47nm,1.4s
MPK Martis Peak 89.79 26 IAmb IAmb 03 16 14.2
comp=Z,62nm,1.2s
HWUT Hardware Ranch 89.86 19 IAMs_20 IAMs_20 04 00 57.7
comp=Z,952nm,19.0s
CVS Carmenet Viney 89.89 28 IAmb IAmb 03 16 18.4
comp=Z,76nm,1.1s
BROLN Tlhalogang 89.92 239 *i* P P **03 16 11.9 -0.4**
H43A Windswept, Lux 89.92 1 IAmb IAmb 03 16 13.0
comp=Z,45nm,0.8s
SPUT South Promonto 89.94 20 IAmb IAmb 03 16 14.3
comp=Z,56nm,1.6s
I37A Lemond, Waseca 90.15 5 IAmb IAmb 03 16 14.5
comp=Z,63nm,1.3s
I37A IAMs_20 IAMs_20 04 03 36.8
comp=Z,973nm,20.0s
BGU Big Grassy Mou 90.17 20 IAmb IAmb 03 16 15.6
comp=Z,56nm,1.5s
SOOWA Sowa 90.18 240 *i* P P **03 16 13.9 +0.4**
CMSA Cobar Meteorol 90.23 138 P P **03 16 13.8 +0.5**
comp=Z,24nm,3.0s
CMSA Cobar Meteorol 90.23 138 P P **03 16 13.6 +0.3**
J61A Chester 90.26 350 IAMs_20 IAMs_20 03 59 26.6
comp=Z,821nm,20.0s
J59A Piesco 90.36 352 IAmb IAmb 03 16 15.5
comp=Z,53nm,1.1s
J59A IAMs_20 IAMs_20 03 59 59.2
comp=Z,1µm,21.0s
I45A Fountain 90.37 0 IAMs_20 IAMs_20 03 56 11.5
comp=Z,926nm,20.0s
I40A Norwalk 90.42 3 IAMs_20 IAMs_20 04 02 43.9
comp=Z,1µm,20.0s
I49A Point Hope 90.42 358 IAMs_20 IAMs_20 03 58 51.8
comp=Z,843nm,20.0s
I42A Draeger Farm, 90.48 2 IAmb IAmb 03 16 15.8
comp=Z,68nm,0.9s
J57A Williamstown 90.55 353 IAmb IAmb 03 16 15.9
comp=Z,63nm,0.9s
J57A IAMs_20 IAMs_20 03 59 51.3
comp=Z,1µm,22.0s
JRSC Jasper Ridge 90.82 28 IAmb IAmb 03 16 22.6
comp=Z,52nm,1.4s
J55A Hilton 90.84 354 IAMs_20 IAMs_20 03 59 45.0
comp=Z,1µm,20.0s

K62A **Royalston** 90.89 350 IAMs_20 IAMs_20 03 59 55.4
comp=Z,1µm,21.0s
K30B **Basset** 90.90 10 IAmb IAmb 03 16 18.6
comp=Z,89nm,1.3s
DUG **Dugway, Tooele** 90.91 20 IAmb IAmb 03 16 24.9
comp=Z,70nm,1.1s
TRY **Troy** 91.00 351 IAmb IAmb 03 16 19.3
TRY comp=Z,63nm,1.2s
IAMs_20 IAMs_20 03 57 15.0
comp=Z,1µm,22.0s
MHC **Mount Hamilton** 91.07 28 IAmb IAmb 03 16 24.1
comp=Z,63nm,1.8s
NVAR **Mina Array Bea** 91.10 25 P P 03 16 18.9 +1.0
comp=Z,7.6nm,0.7s,baz=313,slow=3.6,SNR=56
NVAR PKPPKP P'P'df 03 41 49.2 -7.5
comp=Z,0.5nm,0.9s,baz=166,slow=2.8,SNR=4.7
NVAR LR LR 04 00 49.2
comp=Z,520nm,19.4s,baz=348,slow=38
comp=Z,7.6nm,0.7s
L61B **Northampton** 91.16 350 IAMs_20 IAMs_20 03 59 53.4
comp=Z,1µm,20.0s
J47A **Sunmer** 91.16 359 IAmb IAmb 03 16 19.8
comp=Z,77nm,1.2s
LHV **Little Huntoon** 91.21 25 IAmb IAmb 03 16 21.2
comp=Z,47nm,1.3s
K57A **Scipio Center** 91.27 353 IAMs_20 IAMs_20 04 00 47.3
comp=Z,1µm,20.0s
DBIC **Dimbokro** 91.37 281 P P 03 16 18.9 -0.4
comp=Z,39nm,1.1s,baz=79,slow=5.7,SNR=18
DBIC PP PP 03 19 48.6 -7.9
comp=Z,7.3nm,1.0s,baz=63,slow=9.0,SNR=3.5
DBIC LR LR 04 04 37.7
comp=Z,887nm,18.4s,baz=52,slow=40
comp=Z,39nm,1.1s
JFWS **Jewell Farm** 91.41 3 IAmb IAmb 03 16 19.7
comp=Z,53nm,0.9s
L64A **Middleborough** 91.43 349 IAMs_20 IAMs_20 04 01 52.6
comp=Z,1µm,20.0s
K50A **Casco** 91.58 358 IAMs_20 IAMs_20 03 59 37.5
comp=Z,983nm,20.0s
L59A **Walton** 91.67 352 IAmb IAmb 03 16 21.2
comp=Z,49nm,1.2s
L59A IAMs_20 IAMs_20 04 00 59.0
comp=Z,1µm,20.0s
K43A **Burlington** 91.68 2 IAmb IAmb 03 16 21.0
comp=Z,75nm,1.2s
K43A IAMs_20 IAMs_20 04 04 52.1
comp=Z,846nm,18.0s
KHWEE **KHWEE** 91.70 240 *i* P P 03 16 20.6 0.0
HAYD **Hayden** 91.81 16 IAmb IAmb 03 16 23.4
comp=Z,32nm,1.0s
BBGB **Big Mountain B** 91.97 28 IAmb IAmb 03 16 31.6
comp=Z,48nm,1.0s
KSCT **Kent School K** 91.97 351 IAmb IAmb 03 16 27.1
comp=Z,63nm,1.6s
O20A **White River Ci** 91.98 17 IAMs_20 IAMs_20 04 02 28.7
comp=Z,864nm,20.0s
P18A **Preston Nutter** 92.05 19 IAmb IAmb 03 16 25.3
comp=Z,26nm,0.9s
AAM **Ann Arbor** 92.08 358 IAMs_20 IAMs_20 03 57 50.7
comp=Z,927nm,22.0s
P17A **Butcher Ranch,** 92.08 19 IAmb IAmb 03 16 24.4
comp=Z,66nm,1.1s
ERPA **Erie** 92.12 356 IAMs_20 IAMs_20 04 02 28.9
comp=Z,841nm,19.0s
DSP **Deep Springs** 92.18 25 IAmb IAmb 03 16 25.8
comp=Z,29nm,1.1s
ARMA **Armidale** 92.21 133 P P 03 16 24.2 +1.4
comp=Z,27nm,1.4s
ARMA **Armidale** 92.21 133 P P 03 16 24.3 +1.6
ARMA **Armidale** 92.21 133 IAmb IAmb 03 16 28.8
comp=Z,50nm,1.4s
L44A **Lake County Fo** 92.21 1 IAMs_20 IAMs_20 03 57 27.2
comp=Z,955nm,21.0s
L40A **Anamosa** 92.22 4 IAmb IAmb 03 16 23.3
comp=Z,49nm,1.4s
PSUT **Pine Spring** 92.23 22 IAmb IAmb 03 16 25.2
comp=Z,32nm,0.9s
SCIA **State Center** 92.26 5 IAMs_20 IAMs_20 04 05 07.6
comp=Z,990nm,18.0s
OGNE **Ogallala** 92.28 12 IAMs_20 IAMs_20 04 03 41.3
comp=Z,908nm,20.0s
L42A **Oliver, Polo** 92.34 3 IAmb IAmb 03 16 23.9
comp=Z,50nm,1.1s
L42A IAMs_20 IAMs_20 04 02 43.6
comp=Z,1µm,20.0s
PMPB **Monarch Peak** 92.37 28 IAmb IAmb 03 16 43.5
comp=Z,40nm,1.2s
TIN **Tinemaha, Big** 92.40 25 IAMs_20 IAMs_20 03 59 07.2
comp=Z,972nm,21.0s
HULI **Fort Hunter Li** 92.41 28 IAmb IAmb 03 16 30.3
comp=Z,30nm,0.8s
WSPT **Westport, CT** 92.50 350 IAMs_20 IAMs_20 04 00 32.8
comp=Z,1µm,21.0s
TCRU **Three Creeks R** 92.51 20 IAmb IAmb 03 16 27.0
comp=Z,50nm,1.0s
Q16A **Castle Valley** 92.52 19 IAmb IAmb 03 16 26.5
comp=Z,36nm,1.0s
LPHEP **Lephephe** 92.52 239 *i* P P 03 16 24.6 +0.3
S11A **Rachel** 92.56 23 IAmb IAmb 03 16 30.3
comp=Z,34nm,0.9s
GRAC **Grapevine Rang** 92.71 25 IAmb IAmb 03 16 31.3
comp=Z,25nm,0.9s
PAL **Palisades** 92.73 351 IAmb IAmb 03 16 26.3
comp=Z,67nm,1.4s
PAL IAMs_20 IAMs_20 04 01 16.9
comp=Z,945nm,19.0s
N62A **Caumsett State** 92.75 351 IAMs_20 IAMs_20 04 01 58.5
comp=Z,1µm,19.0s
ARPS **Mount Arapiles** 92.94 143 P P 03 16 25.9 +0.1
comp=Z,27nm,2.6s
M50A **Fremont** 92.96 358 IAMs_20 IAMs_20 04 03 44.0
comp=Z,833nm,19.0s
M44A **Midewin, Midew** 93.00 2 IAmb IAmb 03 16 27.3
comp=Z,57nm,1.1s
M44A IAMs_20 IAMs_20 04 04 23.0
comp=Z,812nm,18.0s
MTPU **Mount Pierson** 93.11 20 IAmb IAmb 03 16 30.3
comp=Z,57nm,1.5s
N58A **Sunbury** 93.17 353 IAmb IAmb 03 16 27.9
comp=Z,47nm,1.0s
KDWAN **Kaudwane** 93.25 239 *i* P P 03 16 27.6 -0.1
VES **Vestal, Richgr** 93.26 26 IAmb IAmb 03 16 29.1
comp=Z,66nm,1.5s
SZCU **Shurtz Canyon** 93.31 21 IAmb IAmb 03 16 30.3
comp=Z,24nm,1.0s
PV21 **Cone Mtn., Par** 93.35 18 IAmb IAmb 03 16 33.6
comp=Z,63nm,1.5s
N38A **Joes South For** 93.37 5 IAmb IAmb 03 16 28.9
comp=Z,32nm,0.9s
N38A IAMs_20 IAMs_20 03 59 09.9
comp=Z,821nm,20.0s
PV22 **Blue Mesa, Par** 93.41 18 IAmb IAmb 03 16 30.6
comp=Z,38nm,0.9s
SSPA **Standing Stone** 93.46 354 P P 03 16 28.0 -0.5
SSPA **Standing Stone** 93.46 354 IAMs_20 IAMs_20 04 02 21.3
comp=Z,1µm,20.0s
N49A **Columbus Grove** 93.47 359 IAMs_20 IAMs_20 03 59 36.4
comp=Z,1µm,18.0s
N53A **Lisbon** 93.47 356 IAMs_20 IAMs_20 04 04 07.6
comp=Z,856nm,18.0s
PV14 **Lion Creek, Pa** 93.52 18 IAmb IAmb 03 16 31.1
comp=Z,37nm,1.2s
N47A **Urbana** 93.52 360 IAMs_20 IAMs_20 04 02 26.9
comp=Z,1µm,19.0s
PV07 **Paradox Valley** 93.53 18 IAmb IAmb 03 16 31.2
comp=Z,48nm,1.2s
HMU **Henry Mountain** 93.55 19 IAmb IAmb 03 16 32.4
comp=Z,46nm,1.0s
PV20 **West Nyswonger** 93.56 18 IAmb IAmb 03 16 32.5
comp=Z,34nm,0.8s
PV19 **Morning Glory** 93.59 18 IAmb IAmb 03 16 35.5
comp=Z,42nm,0.9s
PV16 **Nyswonger Mesa** 93.60 18 IAmb IAmb 03 16 32.7
comp=Z,18nm,0.8s
ISA **Isabella, Lake** 93.61 26 IAMs_20 IAMs_20 04 02 31.4
comp=Z,777nm,19.0s
PV12 **Saucer Basin,** 93.62 18 IAmb IAmb 03 16 34.9
comp=Z,47nm,0.9s
PV11 **David Mesa, Pa** 93.62 18 IAmb IAmb 03 16 35.7
comp=Z,29nm,0.7s
PKCU **Pink Cliffs** 93.65 21 IAmb IAmb 03 16 32.7
comp=Z,59nm,1.4s
PV18 **Skein Mesa, Pa** 93.66 18 IAmb IAmb 03 16 35.7
comp=Z,47nm,1.1s
GWY **Greenwater Val** 93.66 24 IAmb IAmb 03 16 32.0
comp=Z,44nm,1.8s
PV03 **Paradox Valley** 93.67 18 IAmb IAmb 03 16 31.8
comp=Z,60nm,1.6s
Q24A **Divide** 93.71 15 IAmb IAmb 03 16 35.5
comp=Z,40nm,1.6s
CLC **China Lake** 93.74 25 IAmb IAmb 03 16 32.3
comp=Z,24nm,0.9s
PV02 **Paradox Valley** 93.74 18 IAmb IAmb 03 16 32.2
comp=Z,54nm,1.1s
PV13 **Radium Mtn., P** 93.77 18 IAmb IAmb 03 16 32.3
comp=Z,59nm,1.4s
PV05 **Paradox Valley** 93.78 18 IAmb IAmb 03 16 32.1
comp=Z,24nm,0.9s
HDIL **Hopedale** 93.80 3 IAmb IAmb 03 16 30.7
comp=Z,44nm,1.1s
HDIL IAMs_20 IAMs_20 04 01 58.2
comp=Z,822nm,20.0s
PV01 **Paradox Valley** 93.84 18 IAmb IAmb 03 16 34.0
comp=Z,31nm,0.8s
GRTLG **Ghanzi** 93.85 243 *i* P P 03 16 29.8 -0.7
GRTLG **Ghanzi** 93.85 243 IAmb IAmb 03 16 32.0
comp=Z,83nm,1.9s
KNB **Kanab** 93.92 21 IAmb IAmb 03 16 33.5
comp=Z,47nm,1.2s
LBTB **Lobatse** 93.93 238 LR LR 04 00 43.7
comp=Z,376nm,20.9s,baz=27,slow=37
LBTB **Lobatse** 93.93 238 IAmb IAmb 03 16 32.7
comp=Z,46nm,0.9s
SFIN **Lafayette** 94.02 1 IAmb IAmb 03 16 32.0
comp=Z,47nm,1.1s
SFIN IAMs_20 IAMs_20 04 02 55.1
comp=Z,796nm,18.0s
LRMC **Laurel Mtn Rad** 94.02 25 IAmb IAmb 03 18 54.8
comp=Z,41nm,0.7s
SHOC **Shoshone, Teco** 94.04 24 IAmb IAmb 03 16 33.7
comp=Z,34nm,1.1s
O54A **Avella** 94.07 356 IAmb IAmb 03 16 32.0
comp=Z,46nm,0.9s
CCCA **Chr Cany lake** 94.08 25 IAmb IAmb 03 16 34.0
comp=Z,27nm,0.9s
KSCO **Kaye Shedlock'** 94.08 13 IAmb IAmb 03 16 33.0
comp=Z,64nm,1.1s
ACSO **Alum Creek Sta** 94.13 358 IAMs_20 IAMs_20 04 06 29.9
comp=Z,812nm,19.0s
P61A **Hammonton** 94.14 351 IAMs_20 IAMs_20 04 02 21.3
comp=Z,1µm,20.0s
O48B **Fairland** 94.14 359 IAMs_20 IAMs_20 04 01 02.3
comp=Z,852nm,19.0s
O49A **Covington** 94.20 359 IAMs_20 IAMs_20 04 00 07.9
comp=Z,944nm,19.0s
O52A **Adamsville** 94.21 357 IAMs_20 IAMs_20 04 04 30.0
comp=Z,780nm,19.0s
KGCAE **Kacgae** 94.35 241 *i* P P 03 16 32.7 -0.1
BRAT **Ballarat** 94.48 142 P P 03 16 33.4 +0.6
P38A **Dawn** 94.51 6 IAmb IAmb 03 16 34.2
comp=Z,42nm,0.9s
P38A IAMs_20 IAMs_20 04 06 28.2
comp=Z,1µm,18.0s
TSUM **Tsumeb** 94.56 247 LR LR 04 04 13.2
comp=Z,1µm,18.3s,baz=31,slow=39
TSUM **Tsumeb** 94.56 247 P P 03 16 33.4 -0.4
TSUM IAmb IAmb 03 16 34.4
comp=Z,32nm,1.1s
MCWV **Mont Chateau** 94.57 355 IAmb IAmb 03 16 34.6
comp=Z,47nm,1.0s
MCWV IAMs_20 IAMs_20 04 01 53.5
comp=Z,1µm,19.0s
S22A **4UR Ranch, Cre** 94.57 16 IAMs_20 IAMs_20 04 04 27.2
comp=Z,1µm,20.0s
P40A **Paris** 94.70 5 IAmb IAmb 03 16 35.0
comp=Z,20nm,0.8s
P40A IAMs_20 IAMs_20 03 59 32.1
comp=Z,1µm,22.0s
P43A **Skaggs, Pawnee** 94.70 3 IAmb IAmb 03 16 35.1
comp=Z,58nm,1.0s
P43A IAMs_20 IAMs_20 03 58 35.2
comp=Z,870nm,21.0s
KSU1 **Kansas State U** 94.77 8 IAmb IAmb 03 16 35.3
comp=Z,24nm,0.9s
KSU1 **Kansas State U** 94.77 8 IAMs_20 IAMs_20 04 03 37.0
comp=Z,833nm,18.0s
P46A **Rosedale** 94.78 1 IAmb IAmb 03 16 35.6
comp=Z,48nm,1.0s
P53A **Whipple** 94.81 356 IAMs_20 IAMs_20 04 04 18.1
comp=Z,816nm,18.0s
SDCO **Great Sand Dun** 94.83 15 IAmb IAmb 03 16 36.7
comp=Z,25nm,1.0s
P51A **Williamsport** 94.88 358 IAmb IAmb 03 16 35.2
comp=Z,51nm,1.1s
CAN **Canberra** 94.90 138 P P 03 16 35.1 +0.2
comp=Z,29nm,1.6s
P48A **Milroy** 94.94 360 IAMs_20 IAMs_20 04 00 31.4
comp=Z,956nm,19.0s
MAKGR **Makgori** 95.00 238 *i* P P 03 16 35.7 0.0
Q56A **Snyder Ridge,** 95.14 355 IAmb IAmb 03 16 36.8
comp=Z,25nm,0.9s
Q56A IAMs_20 IAMs_20 04 01 42.7
comp=Z,1µm,18.0s
TOO **Toolangi** 95.17 141 P P 03 16 36.5 +0.4
comp=Z,9.0nm,1.1s
R32A **Long Quarter,** 95.20 10 IAMs_20 IAMs_20 04 02 05.7
comp=Z,1µm,20.0s
BLO **Bloomington** 95.23 0 IAmb IAmb 03 16 37.3
comp=Z,23nm,0.8s
Q54A **Coxs Mills** 95.29 356 IAmb IAmb 03 16 37.5
comp=Z,43nm,0.8s
Q51A **Peebles** 95.34 358 IAMs_20 IAMs_20 04 00 14.1
comp=Z,852nm,22.0s
Q52A **Bidwell** 95.37 357 IAMs_20 IAMs_20 04 06 57.9
comp=Z,720nm,19.0s
Q44A **Meyer Farm, Va** 95.45 2 IAMs_20 IAMs_20 04 06 53.1
comp=Z,966nm,20.0s
T25A **Trinidad** 95.61 15 IAMs_20 IAMs_20 04 03 09.7
comp=Z,707nm,18.0s
OLIL **Olney** 95.65 2 IAmb IAmb 03 16 39.7
comp=Z,49nm,0.9s
KOOLE **Kule** 95.69 243 *i* P P 03 16 38.3 -0.6
KOOLE **Kule** 95.69 243 IAmb IAmb 03 16 40.2
comp=Z,40nm,0.9s
WUAZ **Wupatki** 95.71 21 IAmb IAmb 03 16 41.5
comp=Z,33nm,1.0s
CBN **Corbin Frederi** 95.84 353 IAmb IAmb 03 16 40.8
comp=Z,61nm,1.2s
R55A **Marlinton** 95.95 355 IAmb IAmb 03 16 40.5
comp=Z,24nm,0.9s
R55A IAMs_20 IAMs_20 04 02 47.2
comp=Z,985nm,18.0s
IRM **Iron Mountain** 96.00 24 IAmb IAmb 03 16 42.8
comp=Z,25nm,1.1s
R49A **Shelbyville** 96.11 359 IAmb IAmb 03 16 41.3
comp=Z,49nm,1.1s
R49A IAMs_20 IAMs_20 04 02 29.3
comp=Z,794nm,19.0s
R50A **Paris** 96.11 359 IAmb IAmb 03 16 41.1
comp=Z,34nm,1.1s
R50A IAMs_20 IAMs_20 04 02 05.3
comp=Z,1µm,20.0s
DNR **Dunn Ranch,Anz** 96.12 25 IAmb IAmb 03 16 46.6
comp=Z,30nm,0.8s
R58B **Mineral** 96.12 354 IAmb IAmb 03 16 41.3
comp=Z,40nm,1.0s
PFO **Pinon Flats O** 96.12 25 LR LR 04 04 24.7
comp=Z,444nm,18.6s,baz=345,slow=38
PFO **Pinyon Flats O** 96.12 25 P P 03 16 42.4 +1.4
PFO **Pinyon Flats O** 96.12 25 P P 03 16 42.4 +1.4
PFO pmax pmax
comp=Z,23nm,1.2s
PFO MLR MLR
comp=Z,600nm,19.0s
WCI **Wyandotte Cave** 96.17 0 P P 03 16 39.9 -1.0
WCI IAmb IAmb 03 16 41.9
comp=Z,36nm,0.8s
WCI IAMs_20 IAMs_20 04 00 15.0
comp=Z,975nm,20.0s
WCI **Wyandotte Cave** 96.17 0 P P 03 16 39.9 -1.0
WCI pmax pmax
comp=Z,36nm,0.8s
WCI MLR MLR
comp=Z,1µm,20.0s
CCM **Cathedral Cave** 96.21 4 P P 03 16 40.2 -0.9
CCM IAmb IAmb 03 16 41.8
comp=Z,34nm,1.6s
CCM **Cathedral Cave** 96.21 4 IAMs_20 IAMs_20 04 00 47.1
comp=Z,923nm,19.0s
CCM **Cathedral Cave** 96.21 4 P P 03 16 40.2 -0.9
CCM pmax pmax
comp=Z,34nm,1.7s
CCM MLR MLR
comp=Z,900nm,19.0s
FVM **French Village** 96.32 4 IAmb IAmb 03 16 42.4
comp=Z,56nm,1.6s
USIN **University of** 96.42 1 IAmb IAmb 03 16 43.0
comp=Z,42nm,1.0s
S39A **Bolivar** 96.45 6 IAMs_20 IAMs_20 04 06 10.5
comp=Z,932nm,20.0s
W18A **Petrified Fore** 96.48 19 IAmb IAmb 03 16 45.7
comp=Z,67nm,1.6s
S54A **Dingess, Beckl** 96.49 356 IAmb IAmb 03 16 42.8
comp=Z,32nm,0.9s
S54A IAMs_20 IAMs_20 04 08 13.5
comp=Z,805nm,18.0s
RTBA **Rita Blanca** 96.58 14 IAmb IAmb 03 16 44.2
comp=Z,29nm,1.1s
SIUC **Southern Illin** 96.63 3 IAmb IAmb 03 16 48.7
comp=Z,23nm,0.8s
S44A **Carbondale** 96.66 3 IAmb IAmb 03 16 48.8
comp=Z,22nm,0.9s
S44A IAMs_20 IAMs_20 04 00 58.8
comp=Z,955nm,18.0s
S51A **Beattyville** 96.73 358 IAMs_20 IAMs_20 04 04 23.9
comp=Z,930nm,20.0s
BOSA **Boshof** 96.85 236 P P 03 16 43.7 -0.3
comp=Z,14nm,1.1s,baz=30,slow=5.8,SNR=8.5
BOSA PP PP 03 20 34.2 -5.6
comp=Z,6.6nm,1.0s,baz=41,slow=9.1,SNR=3.7
BOSA LR LR 04 01 45.6
comp=Z,394nm,19.7s,baz=12,slow=36
comp=Z,14nm,1.1s
BOSA **Boshof** 96.85 236 IAmb IAmb 03 16 50.4
comp=Z,39nm,1.3s
T35A **Sooner Cattle** 96.94 8 IAMs_20 IAMs_20 04 09 15.5
comp=Z,823nm,20.0s
X18A **Snowflake** 96.99 20 IAmb IAmb 03 16 47.0
comp=Z,47nm,1.9s
BLA **Blacksburg** 97.03 356 IAMs_20 IAMs_20 04 06 24.9
comp=Z,973nm,19.0s
CGM3 **Cape Girardeau** 97.04 3 IAmb IAmb 03 16 45.9
comp=Z,29nm,1.4s
MGMO **Mountain Grove** 97.05 5 IAmb IAmb 03 16 45.6
comp=Z,19nm,0.9s
T59A **Double "B" Far** 97.08 353 IAmb IAmb 03 16 45.6
comp=Z,25nm,1.0s
T42A **Van Buren** 97.24 4 IAmb IAmb 03 16 46.4
comp=Z,18nm,0.9s
T42A IAMs_20 IAMs_20 04 01 02.4
comp=Z,1µm,20.0s
OK051 **E0350 and S346** 97.31 9 IAMs_20 IAMs_20 04 02 57.4
comp=Z,812nm,20.0s
WIN **Windhoek** 97.32 245 IAMs_20 IAMs_20 04 02 06.4
comp=Z,992nm,22.0s
T45A **Paducah** 97.34 2 IAMs_20 IAMs_20 04 00 16.2
comp=Z,752nm,20.0s
ANMO **Albuquerque** 97.36 17 LR LR 04 06 29.2
comp=Z,414nm,18.6s,baz=352,slow=39
ANMO **Albuquerque** 97.36 17 P Pdif 03 16 48.0 +1.3
ANMO IAmb IAmb 03 16 48.8
comp=Z,24nm,0.9s
ANMO **Albuquerque** 97.36 17 IAmb IAmb 03 16 48.9
comp=Z,30nm,1.0s
ANMO **Albuquerque** 97.36 17 IAMs_20 IAMs_20 04 03 16.0
comp=Z,662nm,20.0s
ANMO **Albuquerque** 97.36 17 IAMs_20 IAMs_20 04 03 15.9
comp=Z,992nm,20.0s
ANMO **Albuquerque** 97.36 17 P Pdif 03 16 48.0 +1.3
ANMO pmax pmax
comp=Z,24nm,1.0s
ANMO MLR MLR
comp=Z,700nm,20.0s
T50A **Nancy** 97.37 359 IAMs_20 IAMs_20 04 03 27.8
comp=Z,799nm,19.0s
OK048 **Pawnee Station** 97.39 9 IAMs_20 IAMs_20 04 08 32.5
comp=Z,977nm,19.0s
T47A **Sharon Grove** 97.40 1 IAmb IAmb 03 16 47.4
comp=Z,29nm,0.9s
T47A IAMs_20 IAMs_20 04 01 01.7
comp=Z,808nm,21.0s
U38A **Gravette** 97.61 7 IAmb IAmb 03 16 47.6
comp=Z,14nm,0.8s
U38A IAMs_20 IAMs_20 04 07 31.2
comp=Z,816nm,19.0s
PH02 **Texas Public H** 97.73 13 IAmb IAmb 03 16 51.3
comp=Z,65nm,0.4s
U54A **Nelsons Funny** 97.79 357 IAMs_20 IAMs_20 04 06 57.9
comp=Z,911nm,18.0s
HHAR **Hobbs** 97.80 6 IAmb IAmb 03 16 48.5
comp=Z,14nm,0.8s
OK052 **Battle Ridge R** 97.82 9 IAmb IAmb 03 16 49.5
comp=Z,20nm,1.0s
U49A **Red Boiling Sp** 97.88 360 IAmb IAmb 03 16 49.1
comp=Z,17nm,0.8s
OK029 **Liberty Lake** 97.94 9 IAmb IAmb 03 16 50.2
comp=Z,21nm,0.9s
V61A **Roper** 98.16 352 IAMs_20 IAMs_20 04 04 05.7
comp=Z,949nm,20.0s
Y22A **Socorro** 98.23 17 IAmb IAmb 03 16 52.9
comp=Z,25nm,1.1s
WVT **Waverly** 98.25 1 P P 03 16 49.3 -1.0
WVT IAmb IAmb 03 16 51.1
comp=Z,27nm,0.9s
WVT **Waverly** 98.25 1 P P 03 16 49.3 -1.0
WVT pmax pmax
comp=Z,27nm,0.9s
WVT MLR MLR
comp=Z,600nm,20.0s
AMTX **Amarillo** 98.27 13 IAMs_20 IAMs_20 04 00 59.0
comp=Z,826nm,21.0s
FCAR **Ozark Folk Cen** 98.32 5 IAmb IAmb 03 16 51.0
comp=Z,17nm,1.1s
V58A **Windy Hill, Pi** 98.36 354 IAmb IAmb 03 16 51.7
comp=Z,17nm,1.0s
V55A **Taylorsville** 98.43 356 IAmb IAmb 03 16 51.9
comp=Z,25nm,1.0s
V55A IAMs_20 IAMs_20 04 03 54.8
comp=Z,1µm,20.0s
FNO **Franklin** 98.48 9 IAmb IAmb 03 16 52.9
comp=Z,16nm,0.9s
MSVF **Nonsavu** 98.52 107 LR LR 03 58 14.0
comp=Z,445nm,21.6s,baz=328,slow=34
V48A **Smith Brothers** 98.65 1 IAmb IAmb 03 16 52.7
comp=Z,23nm,1.0s
V48A IAMs_20 IAMs_20 04 01 40.7
comp=Z,1µm,20.0s
V53A **Saluda** 98.67 357 IAMs_20 IAMs_20 04 04 17.3
comp=Z,816nm,19.0s
TKL **Tuckaleechee C** 98.71 358 LR LR 04 03 58.2
comp=Z,623nm,18.3s,baz=3.0,slow=37
TKL **Tuckaleechee C** 98.71 358 IAmb IAmb 03 16 53.0
comp=Z,18nm,0.9s
WHAR **Wolf Hollow** 98.91 5 IAmb IAmb 03 16 57.2
comp=Z,13nm,0.8s
TUC **Tucson** 98.91 21 P Pdif 03 16 53.2 -0.3
TUC **Tucson** 98.91 21 P Pdif 03 16 53.2 -0.3
TUC pmax pmax
comp=Z,24nm,2.0s
CPCT **Cooper Cave** 98.94 359 IAmb IAmb 03 16 53.9
comp=Z,22nm,1.1s
MSTX **Muleshoe** 98.99 14 IAmb IAmb 03 16 59.0
comp=Z,16nm,1.0s
MSTX IAMs_20 IAMs_20 04 02 09.0
comp=Z,765nm,21.0s
W57A **Gilead** 99.06 355 IAmb IAmb 03 16 54.7
comp=Z,22nm,0.9s
W57A IAMs_20 IAMs_20 04 07 05.5
comp=Z,953nm,19.0s
KMSC **Kings Mountain** 99.14 356 IAmb IAmb 03 16 54.9
comp=Z,24nm,0.9s
SWET **Sewanee** 99.18 360 IAmb IAmb 03 16 54.4
comp=Z,18nm,0.9s
W50A **Signal Mountai** 99.19 359 IAmb IAmb 03 16 54.8
comp=Z,14nm,1.0s
W50A IAMs_20 IAMs_20 04 05 60.0
comp=Z,886nm,19.0s
W52A **Murphy** 99.28 358 IAMs_20 IAMs_20 04 04 04.3
comp=Z,768nm,19.0s
BG3 **Lake Jocassee** 99.35 357 IAmb IAmb 03 16 55.9
comp=Z,21nm,1.0s
UALR **University of** 99.41 5 IAmb IAmb 03 16 57.0
comp=Z,65nm,1.9s
PAULI **Pauline** 99.48 357 IAmb IAmb 03 16 57.0
comp=Z,63nm,1.8s
X58A **Rowland** 99.61 354 IAMs_20 IAMs_20 04 05 34.1
comp=Z,907nm,20.0s
X40A **Basin Creek Fa** 99.67 6 IAmb IAmb 03 16 58.2
comp=Z,33nm,1.9s
X51A **Calhoun** 99.82 359 IAMs_20 IAMs_20 04 10 36.6
comp=Z,692nm,19.0s
OXF **Oxford** 99.82 3 IAMs_20 IAMs_20 04 08 36.7
comp=Z,990nm,19.0s

X48A **Hartselle** **99.94** 1 IAMs_20 IAMs_20 04 02 29.7
comp=Z,844nm,20.0s
Y60A **Bolivia** **100.08** 353 IAMs_20 IAMs_20 04 07 26.4
comp=Z,825nm,19.0s
Y57A **Sumter** **100.21** 355 IAMs_20 IAMs_20 04 07 42.0
comp=Z,944nm,19.0s
Z35A **Perchaven, San** **100.41** 10 IAMs_20 IAMs_20 04 09 47.3
comp=Z,953nm,20.0s
EPT **El Paso** **100.41** 18 IAMs_20 IAMs_20 04 09 32.9
comp=Z,818nm,18.0s
Y45A **Yeager Farm, C** **100.46** 3 IAMs_20 IAMs_20 04 09 30.6
comp=Z,938nm,18.0s
Y52A **Lilburn** **100.51** 358 IAMs_20 IAMs_20 04 07 45.8
comp=Z,915nm,21.0s
Z38A **Mt. Pleasant** **100.71** 8 IAMs_20 IAMs_20 04 09 51.4
comp=Z,726nm,19.0s
MNTX **Cornudas Mount** **100.72** 17 IAMs_20 IAMs_20 04 09 33.9
comp=Z,612nm,18.0s
ABTX **Abilene, Hawle** **100.79** 12 IAMs_20 IAMs_20 04 02 40.7
comp=Z,1μm,20.0s
NHSC **New Hope** **101.11** 355 IAMs_20 IAMs_20 04 10 32.7
comp=Z,813nm,18.0s
Z47A **Carrollton** **101.17** 2 IAMs_20 IAMs_20 04 05 26.3
comp=Z,750nm,18.0s
LRAL **Lakeview Retre** **101.35** 1 IAMs_20 IAMs_20 04 09 41.0
comp=Z,906nm,18.0s
WHTX **Lake Whitney,** **101.70** 10 IAMs_20 IAMs_20 04 11 43.7
comp=Z,862nm,18.0s
NATX **Nacogdoches** **102.23** 8 IAMs_20 IAMs_20 04 11 02.5
comp=Z,882nm,19.0s
257A **Skidaway Islan** **102.28** 356 IAMs_20 IAMs_20 04 07 24.8
comp=Z,1μm,20.0s
JCT **Junction City** **102.88** 12 IAMs_20 IAMs_20 04 05 05.9
comp=Z,923nm,20.0s
352A **Blakely** **102.90** 359 IAMs_20 IAMs_20 04 06 47.1
comp=Z,881nm,19.0s
TIGA **Tifton** **102.92** 358 IAMs_20 IAMs_20 04 07 02.5
comp=Z,783nm,19.0s
TXAR **Lajitas Array** **103.35** 16 Pdiff **Pdif** **03 17 13.5 +0.2**
comp=Z,0.8nm,0.7s,baz=15,slow=4.2,SNR=6.7
SMRT **St. Maarten** **112.97** 336 IAMs_20 IAMs_20 04 06 29.6
comp=Z,853nm,21.0s
SDDR **Presa de Saban** **113.99** 345 IAMs_20 IAMs_20 04 12 57.0
comp=Z,610nm,20.0s
TEIG **Tepich** **114.08** 2 IAMs_20 IAMs_20 04 11 56.3
comp=Z,757nm,21.0s
FDFM **Morne la Roset** **115.54** 333 IAMs_20 IAMs_20 04 11 53.8
comp=Z,662nm,20.0s
MAW **Mawson** **115.68** 193 PKP **PKPdf** **03 21 52.3 -1.6**
comp=Z,2.5nm,0.7s,baz=297,slow=6.8,SNR=4.0
PPT2 **Papeete2** **120.75** 84 eLQ LQ 03 54 01.4
comp=Z,1μm,34.8s
PPT2 eLR LR 03 59 13.7
comp=Z,498nm,21.8s
PPT2 eLR LR 03 59 15.2
comp=Z,578nm,21.5s
TAOE **Nuku Hiva Isla** **120.88** 69 eLR LR 03 59 06.4
comp=Z,961nm,24.1s
RCBR **Riachuelo** **121.15** 297 IAMs_20 IAMs_20 04 17 13.2
comp=Z,698nm,18.0s
SYO **Syowa Base** **121.49** 200⇓ *e*P **PKiKP** **03 22 04.8 -0.4**
NBPA **Parau_RN** **121.84** 298 *e*P **PKiKP** **03 22 07.2 -0.5**
NBPS **Pedro II - PI** **123.37** 303 *e*P **PKPdf** **03 22 08.9 -1.7**
SDV **Santo Domingo** **123.67** 342 *e*P **PKPdf** **03 22 10.1 -1.2**
TBI **Tubuai** **124.67** 89 eLQ LQ 03 55 40.1
comp=Z,3μm,40.0s
TBI eLR LR 04 01 03.9
comp=Z,2μm,26.5s
BOAV **Boa Vista** **126.81** 328 *e*P **PKiKP** **03 22 16.7 -0.9**
ELIB **Princess Elisa** **127.52** 202 *d*PKPdf **PKPdf** **03 22 16.0 -0.7**
ROSC **El Rosal** **128.35** 345 PKP **PKiKP** **03 22 20.3 -0.9**
comp=Z,40nm,0.8s,baz=45,slow=3.3,SNR=23
VNDA **Vanda** **129.97** 165 PKP **PKiKP** **03 22 21.1 -0.8**
comp=Z,2.4nm,0.8s,baz=300,slow=3.9,SNR=5.7
NVL **N'Iazarevskaya** **130.15** 205 *e*PKIKP **PKPdf** **03 22 20.0 -1.6**
NVL *e* 03 24 33.3
NVL *e*PPP PPP 03 27 21.0
NVL *e* 03 29 31.6
NVL *e*SS SS 03 42 01.2 +0.7
NVL *e*SSS SSS 03 46 49.8
NVL pmax pmax
comp=Z,28nm,1.2s
NVL MLR MLR
comp=Z,930nm,19.0s
SMTB **Santa Maria do** **130.52** 306 *e*P **PKPdf** **03 22 23.7 -0.4**
CMC01 **Camacan, BA** **130.69** 293 *e*P **PKiKP** **03 22 24.3 -0.8**
ITTB **Itaituba** **130.90** 318 *e*P **PKPdf** **03 22 24.3 -0.5**
GUA01 **Guaratinga, BA** **131.77** 292 *e*P **PKPdf** **03 22 26.1 -0.2**
SDBA **SAO DESIDERIO** **131.79** 301 *e*P **PKPdf** **03 22 26.1 -0.4**
MACA **Manacapuru-AM** **131.97** 325 **PKPdf** **03 22 26.9 -1.0**
MACA **Manacapuru-AM** **131.97** 325 *e*P **PKPdf** **03 22 26.1 -0.7**
NPGB **Novo Progresso** **133.07** 316 *e*P **PKPdf** **03 22 27.9 -1.0**
TROLL **Troll, Antarti** **133.38** 205 ⇑PKPdf **PKiKP** **03 22 28.4 -0.7**
JANB **Januaria** **133.48** 298 *e*P **PKPdf** **03 22 29.1 -0.5**
OTAV **Otavalo** **133.50** 350 *e*P **PKPdf** **03 22 27.8 -2.6**
TEFE **Tefe** **133.77** 330 *e*P **PKPdf** **03 22 29.9 -0.3**
BSFB **Barra de Sao F** **134.09** 291 *e*P **PKPdf** **03 22 29.9 -0.7**
RIB01 **Linhares ES** **134.14** 290 *e*P **PKiKP** **03 22 30.8 -1.3**
SJMB **Sao Joao De Ma** **134.21** 291 *e*P **PKPdf** **03 22 29.9 -0.9**
SNAA **Sanae** **134.93** 206 ⇑PKPdf **PKiKP** **03 22 31.4 -0.7**
comp=Z,185nm,1.0s
SNAA **Sanae** **134.93** 206 PKP **PKiKP** **03 22 30.9 -1.3**
comp=Z,7.8nm,0.9s,baz=71,slow=1.2,SNR=4.6
SNDB **Serra Nova Dou** **135.13** 308 *e*P **PKPdf** **03 22 30.1 -2.6**
QSPA **South Pole Qui** **135.74** 180 PKhKP PKPpre 03 22 17.1
comp=Z,2.9nm,0.9s,baz=310,slow=1.1,SNR=6.8
QSPA PKP **PKPdf** **03 22 31.8 -0.5**
comp=Z,13nm,1.0s,baz=259,slow=1.7,SNR=12
BDFB **Brasilia** **136.18** 301 PKP **PKPdf** **03 22 33.6 -1.1**
comp=Z,5.9nm,0.9s,baz=58,slow=1.8,SNR=6.9
BDFB PKPPKP 03 40 22.5
comp=Z,1.5nm,0.7s,baz=136,slow=7.7,SNR=3.0
VNA2 **Neumayer--Watz** **136.24** 208 ⇑PKPdf **PKiKP** **03 22 34.6 -0.2**
comp=Z,24nm,0.7s,baz=40,slow=3.9
VNA1 **Neumayer--Stat** **136.48** 208 ⇑PKPdf **PKiKP** **03 22 35.2 0.0**
comp=Z,15nm,0.9s
CLDB **Colider** **136.58** 314 *e*P **PKPdf** **03 22 33.4 -2.1**
VNA3 **Neumayer Olymp** **137.01** 207 ⇑PKPdf **PKPdf** **03 22 34.6 +0.1**
comp=Z,20nm,0.8s
PMNB **Patos De Minas** **137.44** 297 *e*P **PKPdf** **03 22 35.2 -1.8**
PDRB **Porto dos Gac** **137.68** 315 *e*P **PKPdf** **03 22 36.6 -0.9**
IPMB **Ipameri, GO** **138.11** 299 *e*P **PKPdf** **03 22 36.7 -1.5**
BSCB **Bom Sucesso** **138.19** 293 *e*P **PKPdf** **03 22 38.0 -0.4**
ARAG **Araguaiana, MT** **138.45** 305 *e*P **PKPdf** **03 22 38.4 -0.4**
CZSB **Cruzeiro do Su** **140.21** 295 *e*P **PKPdf** **03 22 40.8 -1.4**
PARB **Paraiba** **140.41** 291 *e*P **PKPdf** **03 22 40.3 -1.9**
VILB **Vilhena** **140.51** 318 *e*P **PKPdf** **03 22 40.7 -2.0**
BB19B **Bebedouro** **140.63** 296 *e*P **PKPdf** **03 22 40.3 -2.4**
ITRB **Iturama** **140.73** 300 *e*P **PKPdf** **03 22 41.5 -1.4**
SALV **Santo Antonio** **140.76** 310 *e*P **PKPdf** **03 22 41.9 -1.1**
VAO **Valinhos** **141.04** 293 *e*P **PKPdf** **03 22 41.8 -1.6**
C2SB **Chapadao do Su** **141.47** 304 *e*P **PKPdf** **03 22 41.9 -2.3**
PET01 **Itanhaem-SP** **142.15** 292 *e*P **PKPdf** **03 22 43.4 -1.9**
PTLB **Pontes e Lacer** **142.15** 315 *e*P **PKPdf** **03 22 43.3 -2.2**
FRTB **Fartura** **142.94** 295 *e*P **PKPdf** **03 22 45.0 -1.8**
LDASE **Londrina, Braz** **143.96** 297 *e*P PKPbc 03 22 46.5 +0.1
BBSD **Serra de San D** **144.36** 315 *e*P **PKPab** **03 22 45.8 -1.6**
TRCB **Terra Rica** **144.45** 299 *e*P PKPbc 03 22 47.8 -0.2
BDQN **Bodoquena, MS** **145.03** 307 *e*P **PKPbc** **03 22 48.6 -1.2**
NNA **Nana** **145.24** 344 **PKPbc** **03 22 49.5 -1.2**
NNA **Nana** **145.24** 344 PKIKP **PKPbc** **03 22 49.5 -1.2**
MAJ01 **Sao Joao Batis** **145.42** 290 *e*P **PKPbc** **03 22 49.3 -1.7**
PTGB **Pitanga** **145.51** 296 *e*P **PKPdf** **03 22 49.5 -1.8**
AMBA **Amambai (Brazi** **145.96** 302 *e*P **PKPdf** **03 22 50.1 -1.9**
MURT **Porto Murtinho** **146.48** 307 *e*P **PKPdf** **03 22 51.4 -1.5**
LPAZ **La Paz** **146.84** 327 PKPbc **PKPdf** **03 22 53.7 -0.7**
comp=Z,36nm,0.8s,baz=31,slow=3.2,SNR=57
LPAZ **La Paz** **146.84** 327 *e*P **PKPdf** **03 22 51.5 -2.9**
ITAB **Concordia** **147.33** 293 *e*P **PKPdf** **03 22 52.5 -1.6**
HOPE **Hope Point** **147.79** 237 **PKiKP** **03 22 57.3 -1.5**
HOPE **Hope Point** **147.79** 237 PKP2 **PKiKP** **03 22 57.3 -1.5**
CNLB **Canela** **147.90** 289 *e*P **PKPdf** **03 22 53.5 -1.6**
CPUP **Villa Florida** **149.92** 301 PKP **PKPdf** **03 22 57.6 -0.8**
comp=Z,78nm,0.9s,baz=62,slow=3.1,SNR=43
CPUP PKPbc **PKPbc** **03 23 01.5 -1.7**
comp=Z,68nm,0.9s,baz=52,slow=3.3,SNR=64
CPSB **Cacapava Do Su** **150.31** 290 *e*P **PKPdf** **03 22 57.4 -1.5**
PSAL **Palomas, Salto** **153.45** 294 *e*P **PKPdf** **03 23 03.4 -0.1**
LCO **Las Campanas** **159.22** 319 **PKPdf** **03 23 11.8 +0.2**
LCO **Las Campanas** **159.22** 319 PKIKP **PKPdf** **03 23 11.8 +0.2**
TRQA **Tornquist** **160.53** 285 **PKPdf** **03 23 12.4 0.0**
TRQA **Tornquist** **160.53** 285 PKIKP **PKPdf** **03 23 12.4 0.0**
PLCA **Paso Flores** **167.60** 290 PKP **PKPdf** **03 23 18.0 -0.8**
comp=Z,14nm,1.1s,baz=65,slow=2.0,SNR=11
PLCA PP **PP** **03 28 12.5 -1.5**
comp=Z,13nm,1.2s,baz=47,slow=8.3,SNR=3.7
PLCA **Paso Flores** **167.60** 290 *e*P **PKPdf** **03 23 18.4 -0.4**

*IGQ **20** 03:12:13.0±0.8,2°N±5°×7°9W±°, h2km±2km, M3.8/27, Mjma3.7/27, ML4.1/27, MLv3.6/27, Ms(BB)3.7/16*
*RSNC **20** 03:12:16.6±0.0, 1°N±3°×7°9W±°, h28km±3km, M3.3, mb4.0, ML2.9*
ISC 20 03:12:08.4±1.2,**1°83N**±0°03×**79°34W**±0°04,**h15**km±10km,
n90,σ1°36/110,17C-3D,Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNLR	**San Lorenzo-Es**	**0.72**	**137**	⇑P	**Pn**	**03 12 26.9**	**+2.8**
SNLR				S	**Sn**	**03 12 36.5**	**+1.7**
RVRD	**Rio Verde**	**0.76**	**184**	⇑P	**Pn**	**03 12 24.7**	**+0.2**
RVRD				S	**Sg**	**03 12 32.3**	**-0.8**
AES2	**Ecuador-Puerto**	**0.89**	**200**	P	**Pn**	**03 12 26.8**	**+0.5**
AES2				S	**Sb**	**03 12 37.2**	**0.0**
AMA1	**Acelerografo,**	**0.97**	**204**	P	**Pn**	**03 12 29.4**	**+1.9**
AMA1				S	**Sb**	**03 12 40.6**	**+1.1**
ATON	**Ecuador-Tonsup**	**1.05**	**207**	P	**Pn**	**03 12 29.6**	**+1.0**
ATON				S	**Sg**	**03 12 41.7**	**-0.6**
AATC	**Ecuador-Atacam**	**1.09**	**209**	P	**Pn**	**03 12 30.5**	**+1.3**
AV21	**Acelerografo,**	**1.18**	**190**	P	**Pg**	**03 12 32.0**	**+0.9**
AV21				S	**Sb**	**03 12 44.4**	**-1.1**
LITE1	**Lita**	**1.41**	**136**	P	**Pg**	**03 12 36.0**	**+0.3**
ALIT	**Ecuador-Imbabu**	**1.42**	**136**	P	**Pg**	**03 12 36.1**	**+0.5**
AV18	**Acelerografo,**	**1.51**	**185**	P	**Pg**	**03 12 37.8**	**+0.4**
CHMA	**Chilma**	**1.59**	**127**	P	**Pg**	**03 12 38.9**	**-0.1**
PAC1	**Pacto, Paraso**	**1.64**	**161**	P	**Pb**	**03 12 38.1**	**-0.4**
PAC1	**Pacto, Paraso**	**1.64**	**161**	P	**Pb**	**03 12 37.9**	**-0.6**
PAC1				S	**Sn**	**03 12 57.0**	**-0.9**
GR1C	**Gorgona, Isla**	**1.65**	**45**	P	Pg	03 12 49.0	+8.8
GR1C				S	Sg	03 13 15.9	+14
BV15	**Puerto Quito-O**	**1.66**	**176**	⇑P	**Pb**	**03 12 38.9**	**+0.2**
ECEN	**Cerro Negro**	**1.69**	**126**	P	**Pg**	**03 12 42.0**	**+1.0**
LNGL	**El Angel-Carch**	**1.71**	**129**	P	**Pg**	**03 12 42.2**	**+0.8**
CHL1	**Volcın Chiles**	**1.73**	**126**	⇑P	**Pg**	**03 12 42.3**	**+0.6**
CHL2	**Volcın Chiles**	**1.75**	**126**	P	**Pg**	**03 12 42.7**	**+0.7**
CMBC	**Cumbal**	**1.75**	**120**	P	**Pg**	**03 12 43.4**	**+1.4**
CMBC	**Cumbal**	**1.75**	**120**	P	**Pg**	**03 12 43.0**	**+1.0**
CMBC				S	**Sn**	**03 12 59.1**	**-1.8**
URCU	**Urcuqui**	**1.75**	**142**	⇑P	**Pg**	**03 12 41.5**	**-0.6**
APR2	**Miler**	**1.78**	**168**	P	**Pb**	**03 12 40.6**	**-0.2**
CUSE	**Cuicocha Este**	**1.78**	**148**	P	**Pg**	**03 12 41.5**	**-1.2**
CUSE	**Cuicocha Este**	**1.78**	**148**	P	**Pb**	**03 12 41.0**	**0.0**
CUSE				S	**Sn**	**03 13 00.0**	**-1.6**
COTA	**Cotacachi**	**1.79**	**146**	P	**Pg**	**03 12 42.1**	**-0.7**
CUIC	**Cuicocha-Domo**	**1.80**	**147**	⇑P	**Pg**	**03 12 41.7**	**-1.3**
OTAV	**Otavalo**	**1.81**	**151**	⇑P	**Pb**	**03 12 41.4**	**-0.1**
OTAV	**Otavalo**	**1.81**	**151**	P	**Pb**	**03 12 41.0**	**-0.5**
OTAV				S	**Sn**	**03 13 00.5**	**-1.9**
AAT1	**Ecuador-Atunta**	**1.86**	**143**	P	**Pg**	**03 12 43.8**	**-0.4**
TULM	**Tulcn-Chalpat**	**1.90**	**125**	P	**Pg**	**03 12 46.4**	**+1.4**
TULM	**Tulcn-Chalpat**	**1.90**	**125**	P	**Pg**	**03 12 45.7**	**+0.7**
TULM				S	**Sg**	**03 13 09.8**	**+0.1**
IMBA	**Imbabura, San**	**1.91**	**144**	⇑P	**Pg**	**03 12 44.9**	**-0.3**
YAHU	**Yahuarcocha**	**1.92**	**139**	P	**Pg**	**03 12 44.9**	**-0.4**
PULU	**Pululahua**	**1.98**	**155**	P	**Pb**	**03 12 44.4**	**0.0**
GCUF	**Volcan Galeras**	**2.08**	**107**	P	**Pg**	**03 12 49.0**	**+0.7**
GCUF				S	**Sg**	**03 13 14.1**	**-1.3**
YANA	**Yana**	**2.08**	**158**	P	**Pb**	**03 12 46.0**	**-0.1**
BBAC	**Balboa, Cauca**	**2.10**	**85**	P	**Pg**	**03 12 50.5**	**+1.8**
BBAC	**Balboa, Cauca**	**2.10**	**85**	P	**Pg**	**03 12 50.3**	**+1.6**
BBAC				S	**Sg**	**03 13 18.2**	**+2.3**
TERV	**Terraza Guagua**	**2.12**	**160**	⇑P	**Pb**	**03 12 46.6**	**-0.2**
GGPC	**Guagua Pichinc**	**2.12**	**160**	P	**Pb**	**03 12 47.0**	**0.0**
FENY	**Casa Vinicio C**	**2.14**	**156**	P	**Pg**	**03 12 48.0**	**-1.5**
JUA2	**San Juan 2**	**2.15**	**160**	P	**Pb**	**03 12 47.2**	**-0.2**
GGPT	**Toaza - Volcan**	**2.16**	**161**	P	**Pb**	**03 12 47.3**	**-0.2**
PUEM	**Granja Avicola**	**2.18**	**154**	⇑P	**Pb**	**03 12 48.6**	**+0.8**
ANGU	**Angureal**	**2.21**	**143**	P	**Pg**	**03 12 50.5**	**-0.4**
CAYR	**Refugio Cayamb**	**2.24**	**144**	P	**Pg**	**03 12 49.9**	**-1.5**
BONI	**La Bonita**	**2.26**	**127**	⇓P	**Pg**	**03 12 51.5**	**-0.3**
BONI	**La Bonita**	**2.26**	**127**	P	**Pg**	**03 12 51.4**	**-0.5**
BONI				S	**Sb**	**03 13 16.8**	**-0.3**
TING	**Casa Alexandra**	**2.27**	**157**	P	**Pb**	**03 12 50.0**	**+0.6**
CRUC	**La Cruz**	**2.40**	**96**	P	**Pg**	**03 12 55.5**	**+1.1**
CRUC				S	**Sg**	**03 13 24.3**	**-1.3**
TOMA	**Boca Toma-Volc**	**2.48**	**159**	⇓P	**Pb**	**03 12 53.6**	**+0.1**
PITA	**Cotopaxi Volc**	**2.54**	**159**	P	**Pb**	**03 12 54.0**	**+0.1**
ANTI	**Antisana**	**2.55**	**153**	⇓P	**Pb**	**03 12 54.5**	**+0.3**
ANTG	**Antisana-Guama**	**2.55**	**155**	⇑P	**Pb**	**03 12 54.0**	**-0.3**
REVS	**Reventador Sur**	**2.57**	**138**	P	**Pg**	**03 12 55.9**	**-1.9**
ANTS	**Antisana-Sarah**	**2.59**	**153**	⇑P	**Pb**	**03 12 54.8**	**-0.1**
SUCR	**Mariscal Sucre**	**2.59**	**161**	P	**Pb**	**03 12 54.9**	**0.0**
ILLI	**Illinizas Sur**	**2.60**	**166**	P	**Pb**	**03 12 53.7**	**-1.3**
ANTM	**Antisana-La Mi**	**2.60**	**155**	P	**Pb**	**03 12 54.8**	**-0.2**
NAS2	**Nasa**	**2.60**	**161**	P	**Pb**	**03 12 55.3**	**+0.1**
CASC	**Dorado de Casc**	**2.61**	**130**	P	**Pg**	**03 12 57.2**	**-1.3**
CASC	**Dorado de Casc**	**2.61**	**130**	P	**Pg**	**03 12 56.9**	**-1.6**
CASC				S	**Sb**	**03 13 27.6**	**+0.7**
VC1	**Cotopaxi 1**	**2.62**	**159**	P	**Pb**	**03 12 55.3**	**-0.1**
BNAS	**Cotopaxi Volca**	**2.62**	**161**	⇑P	**Pb**	**03 12 55.4**	**0.0**
BVC2	**Cotopaxi Volca**	**2.63**	**159**	⇑P	**Pb**	**03 12 55.8**	**+0.1**
BREF	**Cotopaxi Volca**	**2.64**	**160**	⇑P	**Pb**	**03 12 55.9**	**+0.1**
BTAM	**Cotopaxi Volca**	**2.66**	**159**	⇑P	**Pb**	**03 12 56.1**	**0.0**
SRAM	**San Ramn-Vol**	**2.67**	**163**	P	**Pb**	**03 12 56.8**	**+0.6**
SLOR	**San Lorenzo -**	**2.67**	**162**	P	**Pb**	**03 12 56.4**	**+0.1**
BMOR	**Cotopaxi Volca**	**2.69**	**161**	⇑P	**Pb**	**03 12 56.1**	**-0.5**
BRRN	**Barrancas-Volc**	**2.73**	**162**	P	**Pb**	**03 12 57.1**	**-0.2**
POPC	**Popayan, Colom**	**2.75**	**75**	P	**Pg**	**03 13 01.1**	**-0.1**
POPC				S	**Sg**	**03 13 35.5**	**-1.4**
VCES	**Cotopaxi**	**2.77**	**160**	P	**Pb**	**03 12 57.7**	**-0.3**
JAMC	**Jamundi, Valle**	**3.00**	**63**	P	**Pb**	**03 13 03.4**	**+1.8**
JAMC				S	**Sb**	**03 13 40.9**	**+2.7**
JUI6	**Juive**	**3.34**	**165**	P	**Pb**	**03 13 07.1**	**-0.5**
TAMH	**Tambohuasha Ch**	**3.39**	**171**	P	**Pb**	**03 13 07.9**	**-0.6**
YOTC	**Yotoco, Valle**	**3.68**	**54**	P	**Pb**	**03 13 14.3**	**+1.1**
YOTC				S	**Sb**	**03 13 57.9**	**+0.2**
FLOC	**Florencia**	**3.69**	**94**	P	**Pb**	**03 13 13.8**	**+0.4**
FLOC				S	**Sb**	**03 13 58.5**	**+0.5**
GARC	**Garzon, Huila**	**3.86**	**85**	P	**Pb**	**03 13 15.7**	**-0.6**
MILO	**Milagro-Astudi**	**4.08**	**183**	P	**Pb**	**03 13 13.5**	**+3.1**
PLMC	**San Jos del P**	**4.32**	**45**	P	**Pg**	**03 13 40.0**	**-3.2**
ANIL	**Santa Ana**	**4.74**	**56**	P	**Pb**	**03 13 32.2**	**+0.9**
PRAC	**Prado**	**4.82**	**67**	P	**Pb**	**03 13 31.5**	**-1.2**
	13nm,0.7s						
PCRA	**Pucara 2**	**5.00**	**182**	P	**Pn**	**03 13 26.6**	**+3.1**
URMC	**La Uribe, Meta**	**5.15**	**74**	P	**Pb**	**03 13 35.1**	**-3.2**
	14nm,0.9s						
CBOC	**Ciudad Bolivar**	**5.20**	**39**	P	**Pb**	**03 13 41.7**	**+2.4**
GUY2C	**Guyana, Caldas**	**5.21**	**49**	P	**Pb**	**03 13 39.0**	**-0.5**
GUY2C				S	**Sb**	**03 14 37.9**	**-4.1**
MACC	**Macarena, Meta**	**5.49**	**87**	P	**Pb**	**03 13 39.6**	**-4.5**
PTBC	**PUERTO BERRIO,**	**6.75**	**46**	P	**Pb**	**03 14 01.4**	**-4.2**

IDC 20 03:18:39.2±8.4,**1°47S**×**12°11W**,**h0**km,**mb3.8**/2,
mbtmp3.7/4,**ML3.0**/2,**Error ellipse: s-maj=289.2km**
s-min=56.4km az=147.0,North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**6.75**	**200**	T	T	03 25 50.4	
	baz=22,slow=74,SNR=50						
H10N1	**ASCENSION HYDR**	**6.76**	**200**	T	T	03 25 48.9	
	baz=22,slow=74,SNR=79						
H10N3	**ASCENSION HYDR**	**6.76**	**201**	T	T	03 25 51.8	
	baz=22,slow=74,SNR=54						
H10S2	**ASCENSION HYDR**	**7.86**	**199**	T	T	03 27 34.5	
	baz=22,slow=74,SNR=11						
H10S3	**ASCENSION HYDR**	**7.86**	**199**	T	T	03 27 28.3	
	baz=198,slow=74,SNR=5.5						
DBIC	**Dimbokro**	**10.86**	**42**	Pn	Pn	03 21 16.7	+0.8
	0.1nm,0.3s,baz=73,slow=15,SNR=1.2						
DBIC				Sn	Sn	03 23 19.1	+0.8
	0.1nm,0.3s,baz=128,slow=7.5,SNR=1.1						
	1.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**19.96**	**43**	P	P	03 23 12.8	-0.3
	baz=224,slow=14,SNR=5.9						
	1.6nm,0.7s						
GERES	**GERESS Array B**	**54.88**	**21**	P	P	03 28 11.5	0.0
	0.3nm,0.6s,baz=229,slow=9.0,SNR=4.0						
	0.3nm,0.6s						
FINES	**FINESS Array B**	**69.19**	**19**	P	P	03 29 47.4	0.0
	2.1nm,0.9s,baz=223,slow=5.1,SNR=3.9						
	2.1nm,0.9s						

*IDC **20** 03:33:15.7±2.6,46°21N×93°93E,h0km,mbtmp3.0/6, ML2.7/5,Error ellipse: s-maj=39.8km s-min=14.5km az=175.0*
*ASRS **20** 03:33:27.7±0.6,47°N±3°×9°4E±°, h10km,MLh4.3/6,Error ellipse: s-maj=6.4km s-min=3.4km az=178.0,confirmed*
ISC 20 03:33:29.5±2.0,**46.7N**±0.1×**94.14E**±0.04,**h10**km,**n23,**
σ2§38/30,Mongolia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNGR	**Kungurtug, Tuv**	**4.54**	**28**	Pg	**Pb**	**03 34 51.8**	**+2.6**
KNGR				Sg	**Sg**	**03 35 56.0**	**+0.9**
KZLR	**Kyzyl**	**5.05**	**2**	Sg	**Sg**	**03 36 13.5**	**+1.8**
TEL	**Teeli**	**5.08**	**331**	Pn	Pn	03 34 40.1	-5.6
TEL				Pg	Pb	03 34 52.1	-6.3
TEL				Sg	**Sg**	**03 36 11.5**	**-1.0**
CUR	**Chagan-Uzun**	**5.17**	**314**	Pg	**Pb**	**03 35 02.2**	**+2.1**
CUR				Sg	**Sg**	**03 36 14.3**	**-1.1**
DGZ	**Jazzator, Alta**	**5.42**	**307**	Pg	**Pb**	**03 35 05.4**	**+1.1**
DGZ				Sg	**Sg**	**03 36 21.6**	**-1.9**
AKAR	**Aktash**	**5.67**	**313**	Sg	**Sg**	**03 36 31.7**	**+0.1**
ULGR	**Ulagan, Altay**	**5.70**	**316**	Pn	**Pn**	**03 34 53.6**	**-0.6**
ULGR				Pg	**Pg**	**03 35 14.9**	**-3.8**
ULGR				Sg	**Sg**	**03 36 34.2**	**+1.8**
CHBI	**Chibit, Altay**	**5.73**	**312**	Pn	**Pn**	**03 34 57.8**	**+3.1**
CHBI				Pg	**Pb**	**03 35 13.8**	**+4.2**
CHBI				Sg	**Sg**	**03 36 32.1**	**-1.2**
ARDR	**Aradan**	**5.94**	**356**	Pn	**Pn**	**03 34 54.7**	**-2.9**
ARDR				Pg	**Pg**	**03 35 18.6**	**-4.6**
ARDR				Sg	**Sg**	**03 36 39.3**	**-0.9**
TUNR	**Tungur**	**6.27**	**307**	Pg	**Pb**	**03 35 21.4**	**+2.7**
TUNR				Sg	**Sg**	**03 36 49.0**	**-1.6**
DJO	**Djoy, Khakassi**	**6.41**	**344**	Pg	**Pg**	**03 35 29.0**	**-3.2**
DJO				Sg	**Sg**	**03 36 56.9**	**+1.7**
CERR	**Cheremushki**	**6.45**	**345**	Sg	**Sg**	**03 36 59.7**	**+3.5**
YALR	**Yailyu, Altay**	**6.66**	**322**	Pg	**Pb**	**03 35 29.8**	**+4.4**
YALR				Sg	**Sg**	**03 37 02.3**	**-0.9**
MOY	**Mondy**	**6.73**	**39**	Pg	**Pb**	**03 35 30.2**	**+3.7**
MOY				Sg	**Sg**	**03 37 05.0**	**-0.3**
ARTR	**Artybash**	**6.82**	**321**	Pg	Pg	03 35 34.9	-5.2
ARTR				Sg	**Sg**	**03 37 09.5**	**+1.1**
VEH	**Verkhnyaya Baz**	**7.04**	**341**	Pg	Pb	03 35 36.9	+5.0
VEH				Sg	**Sg**	**03 37 14.7**	**-0.7**
ZAK	**Zakamensk**	**7.12**	**55**	Pg	**Pb**	**03 35 34.1**	**+0.9**
ZAK				Sg	**Sg**	**03 37 16.2**	**-1.7**
TLY	**Talaya**	**8.00**	**48**	Pn	Pn	03 35 20.1	-5.7
	1.5nm,0.5s,baz=225,slow=17						
TLY				Lg	Lg	03 37 40.4	
	baz=45,slow=17						
MKAR	**Makanchi Array**	**8.14**	**275**	Pn	Pn	03 35 14.1	-14
	0.2nm,0.3s,baz=89,slow=15,SNR=7.1						
MKAR				Lg	Lg	03 37 29.6	
	0.6nm,0.3s,baz=85,slow=33,SNR=2.0						
	0.2nm,0.7s						
SONM	**Songino Array**	**8.42**	**78**	Pn	Pn	03 35 23.6	-8.1
	0.1nm,0.3s,baz=240,slow=12,SNR=1.1						
SONM				Lg	Lg	03 37 49.4	
	0.9nm,0.3s,baz=269,slow=33,SNR=4.2						
	0.1nm,0.3s						
ZALV	**Zalesovo Beam**	**9.41**	**324**	Pn	Pn	03 35 36.3	-8.8
	0.2nm,0.3s,baz=141,slow=12,SNR=2.3						
ZALV				Lg	Lg	03 38 26.9	
	0.2nm,0.3s,baz=142,slow=26,SNR=1.4						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**11.06**	**297**	Pn	Pn	03 35 55.8	-12
	baz=102,slow=13,SNR=1.3						
KURBB				Lg	Lg	03 39 13.0	
	0.1nm,0.3s,baz=104,slow=31,SNR=5.1						
	0.2nm,0.3s						
BVAR	**Borovoye Array**	**16.55**	**301**	Pn	Pn	03 37 07.6	-14
	baz=100,slow=12,SNR=1.8						
	0.2nm,0.3s						

*IDC **20** 03:55:02.0±0.9,45°91N×94°04E,h0km,mb3

	comp=Z,11nm,0.6s						
BVAR	**Borovoye Array**	**16.75**	**303**	Pn	**Pn**	**03 58 58.2**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=96,slow=9.1,SNR=7.8						
	comp=Z,2.3nm,0.8s						
BORK	**Borovoye**	**16.80**	**303**		**Pn**	**03 59 00.4**	**+0.3**
BORK	**Borovoye**	**16.80**	**303**	P	**Pn**	**03 59 00.4**	**+0.3**
BORK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KK31	**Karatay Array**	**16.95**	**268**		**Pn**	**03 59 02.8**	**+0.8**
KK31	**Karatay Array**	**16.95**	**268**	P	**Pn**	**03 59 02.8**	**+0.8**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KKAR	**Karatay Array**	**16.95**	**268**		**P**	**03 59 03.5**	**-0.5**
KKAR	**Karatay Array**	**16.95**	**268**	P	**P**	**03 59 03.5**	**-0.5**
GAR	**Garm**	**18.76**	**256**	P	**P**	**03 59 23.3**	**-0.8**
GAR				IAmb	IAmb	03 59 31.1	
	comp=Z,15nm,1.2s						
EVN	**Everest**	**18.95**	**200**		**Pn**	**03 59 28.6**	**+1.3**
EVN				IAmb	IAmb	03 59 35.6	
	comp=Z,5.3nm,0.6s						
PZH	**PanZhiHua**	**20.50**	**160**	P	Pn	03 59 48.6	+3.3
AB31	**Akbulak array**	**23.01**	**290**		**P**	**04 00 09.9**	**+0.1**
AB31				IAmb	IAmb	04 00 11.8	
	comp=Z,4.4nm,0.8s						
ABKAR	**Akbulak array**	**23.01**	**290**		**P**	**04 00 09.4**	**-0.4**
NRIK	**Noril'sk**	**23.55**	**354**	P	**P**	**04 00 14.6**	**-0.5**
	comp=Z,3.3nm,0.5s,baz=156,slow=8.8,SNR=5.9						
	comp=Z,3.3nm,0.5s						
NRIK	**Noril'sk**	**23.55**	**354**		**P**	**04 00 14.5**	**-0.5**
NRIK				IAmb	IAmb	04 00 16.3	
	comp=Z,12nm,1.3s						
NRIK	**Noril'sk**	**23.55**	**354**	P	**P**	**04 00 14.5**	**-0.5**
NRIK				pmax	pmax		
	comp=Z,12nm,1.3s						
ARTI	**Arti**	**24.28**	**308**		**P**	**04 00 21.3**	**-0.8**
ARTI				IAmb	IAmb	04 00 23.9	
	comp=Z,11nm,0.6s						
ARTI	**Arti**	**24.28**	**308**	P	**P**	**04 00 21.3**	**-0.8**
ARTI				pmax	pmax		
	comp=Z,11nm,0.6s						
TIXI	**Tiksi**	**30.48**	**21**	P	**P**	**04 01 16.5**	**-1.0**
TIXI				IAmb	IAmb	04 01 22.8	
	comp=Z,4.6nm,0.6s						
TIXI	**Tiksi**	**30.48**	**21**	P	**P**	**04 01 16.5**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
YSS	**Yuzhno-Sakhali**	**33.16**	**70**	P	**P**	**04 01 44.7**	**+3.4**
YSS	**Yuzhno-Sakhali**	**33.16**	**70**	P	**P**	**04 01 44.7**	**+3.4**
ARCES	**ARCESS Array B**	**40.36**	**330**	P	**P**	**04 02 42.9**	**+0.5**
	comp=Z,3.5nm,0.8s,baz=80,slow=7.5,SNR=8.1						
ARCES				PcP	**PcP**	**04 04 44.0**	**-1.3**
	comp=Z,1.7nm,0.6s,baz=76,slow=3.8,SNR=5.9						
	comp=Z,3.5nm,0.8s						
FINES	**FINESS Array B**	**40.92**	**317**	P	**P**	**04 02 47.2**	**+0.1**
	comp=Z,2.7nm,0.8s,baz=90,slow=9.5,SNR=4.8						
	comp=Z,2.7nm,0.8s						
AKASG	**Malin Array Be**	**42.01**	**301**	P	**P**	**04 02 56.2**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=62,slow=8.6,SNR=7.7						
	comp=Z,1.3nm,0.6s						
AKASG	**Malin Array Be**	**42.01**	**301**	IAmb	IAmb	04 03 40.3	
	comp=Z,2.0nm,1.1s						
SPITS	**Spitsbergen Ar**	**42.83**	**343**	P	**P**	**04 03 03.1**	**+0.6**
	comp=Z,6.1nm,1.1s,baz=102,slow=11,SNR=6.1						
	comp=Z,6.1nm,1.1s						
BRTR	**Keskin Array B**	**43.71**	**284**	P	**P**	**04 03 10.7**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=86,slow=7.6,SNR=10.0						
	comp=Z,1.8nm,0.8s						
BURAR	**Bucovina Array**	**45.62**	**298**	P	**P**	**04 03 26.0**	**+0.7**
BURAR				IAmb	IAmb	04 03 27.2	
	comp=Z,1.7nm,0.9s						
BURAR	**Bucovina Array**	**45.62**	**298**	P	**P**	**04 03 25.0**	**-0.3**
BURAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HFS	**Hagfors**	**47.12**	**318**	P	**P**	**04 03 36.6**	**-0.2**
	comp=Z,5.6nm,0.5s,baz=84,slow=7.6,SNR=26						
	comp=Z,5.6nm,0.5s						
DAV	**Davao City (W)**	**47.46**	**135**	LR	LR	04 24 32.9	
	comp=Z,192nm,18.6s,baz=112,slow=37						
NB2	**NORSAR Subarra**	**47.94**	**319**	P	**P**	**04 03 43.0**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=67,slow=7.9						
NOA	**NORSAR Array B**	**47.94**	**319**	P	**P**	**04 03 43.0**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=72,slow=8.9,SNR=17						
	comp=Z,1.4nm,0.6s						
CLL	**Collm**	**51.13**	**307**	*e*P	**P**	**04 04 07.0**	**-0.6**
CLL	**Collm**	**51.13**	**307**	*e*P	**P**	**04 04 07.0**	**-0.6**
EKA	**Eskdalemuir Ar**	**57.32**	**318**	P	**P**	**04 04 51.8**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=57,slow=6.9,SNR=1.5						
	comp=Z,0.5nm,0.7s						
ILAR	**Eielson Array**	**59.78**	**26**	P	**P**	**04 05 09.0**	**-0.7**
	comp=Z,0.4nm,0.8s,baz=313,slow=4.3,SNR=6.2						
	comp=Z,0.4nm,0.8s						
ESDC	**Sonseca Array**	**67.51**	**304**	P	**P**	**04 06 01.0**	**-0.2**
	comp=Z,1.0nm,0.8s,baz=40,slow=6.0,SNR=6.4						
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**69.39**	**14**	P	**P**	**04 06 11.6**	**-0.9**
	comp=Z,0.3nm,0.8s,baz=332,slow=6.7,SNR=5.2						
	comp=Z,0.3nm,0.8s						
WRA	**Warramunga Arr**	**75.20**	**141**	P	**P**	**04 06 46.0**	**-1.6**
	comp=Z,0.8nm,1.0s,baz=328,slow=6.0,SNR=5.1						
	comp=Z,0.8nm,1.0s						
WRA	**Warramunga Arr**	**75.20**	**141**	P	**P**	**04 06 46.0**	**-1.6**
SCHQ	**Schefferville**	**78.16**	**349**	P	**P**	**04 07 02.3**	**-1.7**
	comp=Z,1.6nm,0.8s,baz=352,slow=7.1,SNR=5.8						
	comp=Z,1.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**82.21**	**281**	P	**P**	**04 07 25.1**	**-1.4**
	comp=Z,0.3nm,0.6s,baz=15,slow=5.1,SNR=1.9						
	comp=Z,0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**82.21**	**281**	IAmb	IAmb	04 07 58.7	
	comp=Z,3.5nm,1.4s						
NVAR	**Mina Array Bea**	**91.03**	**25**	P	**P**	**04 08 10.0**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=346,slow=6.5,SNR=1.9						
	comp=Z,0.2nm,0.5s						
LPAZ	**La Paz**	**146.75**	**327**	PKPbc	**PKPdf**	**04 14 45.3**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=34,slow=3.6,SNR=5.8						
CPUP	**Villa Florida**	**149.84**	**301**	PKPbc	**PKPdf**	**04 14 52.5**	**+2.1**
	comp=Z,1.4nm,0.6s,baz=346,slow=4.4,SNR=4.9						

*DJA **20** 04:05:53.6±0.1,9°S±2°×11°8E±°, h10km,M4.9/47, mB5.5/17, mb4.8/44, MLv4.8/47, Mw(mB)5.0/17, MwMwp4.4/1, Mwp4.8/1*

*NEIC **20** 04:05:56.1±2.2,8.87S±0.04×117.81E±0.06, h36km±6km, mb4.6/24, Error ellipse: s-maj=9.6km s-min=2.9km az=60.0*

*IDC **20** 04:06:01.4±2.8,8.75S×118.10E,h96km±25km, mb4.0/11, mbtmp4.3/15, MS3.7/2, Error ellipse: s-maj=26.3km s-min=9.4km az=59.0*

ISC 20 04:05:53.1±0.4,**9.04S**±0.04×**117.82E**±0.03,**h10**km,**n136,** σ1s**72**/127,**mb4.5**/23,**Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**0.21**	**348**	P	**Pg**	**04 05 57.5**	**-0.1**
PLAI	**Plampang**	**0.21**	**348**	S	**Sg**	**04 05 59.8**	**-0.8**
PLAI	**Plampang**	**0.21**	**348**	P	**Pg**	**04 05 57.0**	**-0.6**
PLAI				S	**Sg**	**04 06 00.0**	**-0.6**
DBNI	**Kabupaten Domp**	**0.72**	**42**	P	**Pg**	**04 06 06.3**	**-0.7**
DBNI				S	**Sg**	**04 06 16.4**	**-0.1**
TWSI	**Taliwang, Sumb**	**0.97**	**288**	P	**Pg**	**04 06 10.3**	**-1.6**
TWSI				S	**Sg**	**04 06 22.8**	**-1.8**
WBSI	**Waikabubak, Su**	**1.66**	**111**	P	**Pn**	**04 06 20.9**	**-1.5**
KLNI	**Mataram**	**1.81**	**290**	P	**Pn**	**04 06 23.8**	**-0.6**
KLNI				S	**Sn**	**04 06 49.1**	**+1.6**
LBFI	**Labuhan Bajo,**	**2.12**	**75**	P	**Pn**	**04 06 29.9**	**+1.3**
KHKI	**Kahang-Kahang**	**2.29**	**287**	P	**Pn**	**04 06 32.2**	**+1.2**
WSI	**Waingapu**	**2.52**	**105**	P	**Pn**	**04 06 35.8**	**+1.6**
DNP	**Denpasar**	**2.60**	**278**	P	**Pn**	**04 06 38.1**	**+2.8**
IGBI	**Denpasar**	**2.65**	**274**	P	**Pn**	**04 06 37.2**	**+1.2**
SRBI	**Singaraja**	**2.75**	**290**	P	**Pn**	**04 06 38.1**	**+0.8**
RTBI	**Rangdo, Negare**	**2.90**	**281**	P	**Pn**	**04 06 41.1**	**+1.6**
BYJI	**Banyuwangi**	**3.52**	**283**	P	**Pn**	**04 06 50.3**	**+2.3**
JAGI	**Jajag, Banyuwa**	**3.67**	**279**	P	**Pn**	**04 06 50.5**	**+0.5**
JAGI	**Jajag, Banyuwa**	**3.67**	**279**	S	**Sn**	**04 07 35.9**	**+2.5**
JAGI	**Jajag, Banyuwa**	**3.67**	**279**		**Pn**	**04 06 50.4**	**+0.4**
JAGI	**Jajag, Banyuwa**	**3.67**	**279**	P	**Pn**	**04 06 50.7**	**+0.7**
ABJI	**Asem Bagus**	**3.76**	**289**	P	**Pn**	**04 06 52.9**	**+1.7**
EDFI	**Ende, Flores**	**3.83**	**86**	P	**Pn**	**04 06 53.0**	**+0.7**
BSSI	**Bau Bau, Buton**	**3.91**	**43**	P	**Pn**	**04 06 53.9**	**+0.6**
MKS	**Makassar**	**4.13**	**23**	P	**Pn**	**04 06 56.5**	**+0.2**
KMMI	**Kalianget**	**4.30**	**297**	P	**Pn**	**04 07 00.0**	**+1.4**
BLJI	**Banyuglugur**	**4.38**	**287**	P	**Pn**	**04 07 01.7**	**+2.0**
MMRI	**Maumere**	**4.38**	**85**	S	**Sn**	**04 07 53.5**	**+2.5**
MMRI	**Maumere**	**4.38**	**85**	P	**Pn**	**04 07 00.7**	**+0.9**
MMRI	**Maumere**	**4.38**	**85**		**Pn**	**04 07 00.2**	**+0.4**
MMRI	**Maumere**	**4.38**	**85**	P	**Pn**	**04 07 01.7**	**+1.9**
GMJI	**Gumukmas**	**4.39**	**280**	P	**Pn**	**04 07 01.0**	**+1.0**
KAPI	**Kappang**	**4.43**	**26**	P	**Pn**	**04 07 00.6**	**+0.2**
	36nm,0.3s,baz=169,slow=4.5,SNR=27						
KAPI				S	**Sn**	**04 07 49.1**	**-3.0**
	91nm,0.3s,baz=19,slow=23,SNR=19						
KAPI	**Kappang**	**4.43**	**26**	P	**Pn**	**04 07 00.4**	**-0.1**
KAPI	**Kappang**	**4.43**	**26**	P	**Pn**	**04 07 00.2**	**-0.3**
SPSI	**Sidrap Palu**	**5.40**	**21**	P	**Pn**	**04 07 15.4**	**+1.6**
	0.3nm2µm45nm,0.7s						
PMSI	**Majene**	**5.61**	**11**	P	**Pn**	**04 07 15.9**	**-0.8**
	0.5nm63nm,0.5s						
BATI	**Baumata**	**5.88**	**102**	P	**Pn**	**04 07 22.2**	**+1.8**
	47nm,0.3s,baz=156,slow=4.1,SNR=9.1						
BATI				S	**Sn**	**04 08 29.2**	**+1.4**
	45nm,0.4s,baz=183,slow=21,SNR=1.2						
BATI	**Baumata**	**5.88**	**102**	P	**Pn**	**04 07 20.5**	**+0.1**
	0.6nm2µm158nm,0.7s						
SNJI	**Sawahan-Nganju**	**6.13**	**281**	P	**Pn**	**04 07 25.1**	**+1.2**
	0.6nm2µm119nm,0.6s						
SJI	**Sawahan**	**6.13**	**282**	P	**Pn**	**04 07 24.4**	**+0.5**
BBKI	**Banjar Baru**	**6.28**	**332**	P	**Pn**	**04 07 27.0**	**+1.1**
	0.6nm11µm70nm,0.7s						
TBJI	**Tambak Boyo**	**6.31**	**290**	P	**Pn**	**04 07 30.0**	**+3.6**
MMSI	**Mamuju**	**6.40**	**10**	P	**Pn**	**04 07 27.2**	**-0.3**
	28nm,0.7s						
SOEI	**Soe**	**6.40**	**97**	P	**Pn**	**04 07 30.6**	**+2.9**
SOEI	**Soe**	**6.40**	**97**		**Pn**	**04 07 29.6**	**+1.9**
SOEI	**Soe**	**6.40**	**97**	P	**Pn**	**04 07 29.8**	**+2.1**
	0.5nm1µm128nm,1.0s						
NGJI	**Ngawi**	**6.51**	**284**	P	**Pn**	**04 07 31.9**	**+2.8**
	124nm,0.6s						
PCJI	**Pacitan**	**6.62**	**277**	P	**Pn**	**04 07 31.6**	**+1.0**
UGM	**Wanagama**	**7.31**	**278**	S	**Sn**	**04 09 05.7**	**+2.6**
UGM	**Wanagama**	**7.31**	**278**	P	**Pn**	**04 07 42.2**	**+2.2**
UGM	**Wanagama**	**7.31**	**278**		**Pn**	**04 07 39.0**	**-1.0**
UGM	**Wanagama**	**7.31**	**278**	P	**Pn**	**04 07 42.4**	**+2.4**
KPJI	**Karang Pucung**	**8.96**	**280**	P	**Pn**	**04 08 04.7**	**+2.0**
	34nm,0.5s						
CMJI	**Cimerak**	**9.36**	**277**	P	**Pn**	**04 08 08.2**	**+0.1**
	29nm,0.7s						
BBJI	**Bungbulang**	**10.19**	**278**	P	**Pn**	**04 08 20.0**	**+0.4**
BBJI	**Bungbulang**	**10.19**	**278**		**Pn**	**04 08 19.3**	**-0.4**
BBJI	**Bungbulang**	**10.19**	**278**	P	**Pn**	**04 08 18.9**	**-0.7**
	30nm,0.7s						
SANI	**Sanana**	**10.69**	**50**	P	**Pn**	**04 08 29.2**	**+2.8**
	19nm,0.9s						
FITZ	**Fitzroy Crossi**	**11.78**	**141**	P	Pn	04 08 40.2	-1.2
	3.2nm,0.5s,baz=326,slow=12,SNR=11						
FITZ				S	Sn	04 10 44.5	-8.5
	7.1nm,0.5s,baz=184,slow=20,SNR=7.0						
XMI	**Christmas Isla**	**12.04**	**262**	P	**Pn**	**04 08 45.2**	**+0.2**
MBWA	**Marble Bar**	**12.19**	**172**	P	Pn	04 08 45.9	-1.1
MBWA	**Marble Bar**	**12.19**	**172**		Pn	04 08 44.2	-2.8
KNRA	**Kununurra**	**12.56**	**123**		**Pn**	**04 08 51.4**	**-0.6**
PSA00	**Pilbara Seismi**	**12.62**	**171**	P	**Pn**	**04 08 53.9**	**+1.1**
PSA00	**Pilbara Seismi**	**12.62**	**171**	Pn	Pn	04 08 49.3	-3.5
MTN	**Manton Dam**	**13.61**	**107**		**Pn**	**04 09 04.6**	**-1.7**
GIRL	**Giralia**	**13.96**	**194**	Pn	Pn	04 09 08.2	-2.9
FAKI	**Fak Fak**	**15.58**	**68**	P	**Pn**	**04 09 34.1**	**+1.1**
FAKI	**Fak Fak**	**15.58**	**68**	Pn	**Pn**	**04 09 30.8**	**-2.2**
FAKI				IAmb	IAmb	04 09 40.9	
	comp=Z,14nm,0.7s						
FAKI	**Fak Fak**	**15.58**	**68**	P	**Pn**	**04 09 30.9**	**-2.1**
	comp=Z,20nm,1.1s						
SIJI	**Sorong**	**15.65**	**60**	P	**Pn**	**04 09 32.7**	**-1.3**
	comp=Z,4.7nm,0.4s,baz=236,slow=9.6,SNR=3.9						
SIJI	**Sorong**	**15.65**	**60**	P	**Pn**	**04 09 33.0**	**-1.0**
	comp=Z,15nm,1.3s						
MEEK	**Meekatharra**	**17.52**	**178**	P	**Pn**	**04 09 58.8**	**+1.1**
WRA	**Warramunga Arr**	**19.30**	**126**	P	**P**	**04 10 17.7**	**-0.7**
	comp=Z,5.9nm,0.8s,baz=303,slow=12,SNR=40						
WRA				S	Sn	04 13 41.0	-15
	comp=Z,0.8nm,0.7s,baz=299,slow=26,SNR=1.9						
WRA	**Warramunga Arr**	**19.30**	**126**	P	**P**	**04 10 17.7**	**-0.7**
WRAB	**Tennant Creek**	**19.30**	**126**	P	**P**	**04 10 17.7**	**-0.8**
WR8	**Warramunga Arr**	**19.43**	**126**		**P**	**04 10 19.6**	**-0.3**
AS31	**Alice Springs**	**21.17**	**135**		**P**	**04 10 38.5**	**-0.3**
ASAR	**Alice Springs**	**21.17**	**135**	P	**P**	**04 10 38.3**	**-0.5**
	comp=Z,15nm,0.6s,baz=308,slow=9.0,SNR=68						
ASAR				S	**S**	**04 14 28.8**	**-5.7**
	comp=Z,1.3nm,0.8s,baz=310,slow=24,SNR=5.1						
	comp=Z,15nm,0.6s						
ASAR	**Alice Springs**	**21.17**	**135**	P	**P**	**04 10 38.5**	**-0.3**
BLDU	**Ballidu**	**21.49**	**183**	P	**P**	**04 10 44.8**	**+2.6**
RPSI	**Rantau Prapat**	**22.15**	**301**		**P**	**04 10 46.3**	**-3.0**
RPSI				IAmb	IAmb	04 10 50.5	
	comp=Z,15nm,1.2s						
PSI	**Prapat**	**22.21**	**301**	P	**P**	**04 10 47.8**	**-2.3**
FORT	**Forrest**	**23.65**	**158**	P	**P**	**04 11 04.0**	**-0.7**
FORT				IAmb	IAmb	04 11 05.9	
	comp=Z,8.7nm,0.6s						
NWAO	**Narrogin (SRO)**	**23.78**	**181**	P	**P**	**04 11 05.6**	**-0.4**
NWAO	**Narrogin (SRO)**	**23.78**	**181**	P	**P**	**04 11 05.1**	**-0.9**
NWAO				IAmb	IAmb	04 11 38.9	
	comp=Z,18nm,1.1s						
QIS	**Mount Isa**	**23.94**	**121**	P	**P**	**04 11 07.8**	**+0.1**
COEN	**Coen**	**25.31**	**104**	P	**P**	**04 11 19.7**	**-0.6**
COEN	**Coen**	**25.31**	**104**	P	**P**	**04 11 18.5**	**-1.8**
COEN				IAmb	IAmb	04 12 02.4	
	comp=Z,20nm,1.2s						
SZP	**Santa**	**26.55**	**6**	P	**P**	**04 11 33.0**	**+1.7**
BBOO	**Buckleboo**	**29.05**	**147**	P	**P**	**04 11 53.4**	**-0.3**
BBOO	**Buckleboo**	**29.05**	**147**	P	**P**	**04 11 53.2**	**-0.5**
BBOO				IAmb	IAmb	04 12 18.4	
	comp=Z,25nm,1.4s						
CTA	**Charters Tower**	**29.58**	**115**	LR	LR	04 25 31.3	
	comp=Z,149nm,19.4s,baz=50,slow=40						
PTPS	**Port Pirie**	**30.39**	**145**	P	**P**	**04 12 06.8**	**+1.3**
QLP	**Quilpie**	**30.50**	**128**	P	**P**	**04 12 07.8**	**+1.2**
HTT	**Hallett**	**31.11**	**144**	P	**P**	**04 12 13.1**	**+1.1**
STKA	**Stephens Creek**	**31.67**	**139**	P	**P**	**04 12 16.1**	**-0.8**
	comp=Z,5.5nm,0.8s,baz=309,slow=9.8,SNR=8.8						
	comp=Z,5.5nm,0.8s						
STKA	**Stephens Creek**	**31.67**	**139**	P	**P**	**04 12 17.3**	**+0.4**
CMAR	**Chiang Mai Arr**	**33.07**	**326**	P	P	04 12 25.5	-3.7
	comp=Z,0.8nm,0.3s,baz=158,slow=6.8,SNR=4.2						
	comp=Z,0.8nm,0.3s						
TOO	**Toolangi**	**37.83**	**143**	P	**P**	**04 13 10.4**	**+0.3**
TOO				IAmb	IAmb	04 13 15.0	
	comp=Z,9.0nm,1.3s						
PZH	**PanZhiHua**	**38.63**	**337**	P	**P**	**04 13 19.0**	**+2.0**
NJ2	**Nanjing**	**40.87**	**1**	*e*P	**P**	**04 13 36.1**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,16nm,0.7s						
HHC	**Hu-ho-hao-te**	**49.97**	**354**	*e*P	**P**	**04 14 50.3**	**+2.7**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,61nm,4.9s						
USRK	**Ussuriysk Ar.**	**54.52**	**12**	P	P	04 15 17.6	-3.6
	comp=Z,1.2nm,0.4s,baz=181,slow=5.6,SNR=7.2						
	comp=Z,1.2nm,0.4s						
SONM	**Songino Array**	**57.52**	**351**	P	P	04 15 37.9	-4.9
	comp=Z,1.4nm,0.6s,baz=170,slow=9.5,SNR=1.4						
	comp=Z,1.4nm,0.6s						
WMQ	**Urumqi**	**59.29**	**335**	*e*P	**P**	**04 15 56.8**	**+1.6**
WMQ				PcP	**PcP**	**04 16 43.8**	**+0.5**
RTZ	**Ruatahuna**	**60.42**	**129**	P	**P**	**04 16 02.2**	**-0.9**
MKAR	**Makanchi Array**	**63.97**	**334**	P	P	04 16 23.1	-3.5
	comp=Z,1.2nm,0.5s,baz=140,slow=6.2,SNR=2.7						
	comp=Z,1.2nm,0.5s						
MKAR	**Makanchi Array**	**63.97**	**334**	P	P	04 16 23.7	-3.0
GAR	**Garm**	**65.03**	**321**	P	P	04 16 29.6	-4.3
GAR				IAmb	IAmb	04 16 36.5	
	comp=Z,7.9nm,0.9s						
ZALV	**Zalesovo Beam**	**68.67**	**340**	P	P	04 16 52.2	-4.3
	comp=Z,1.0nm,0.4s,baz=145,slow=4.8,SNR=2.1						
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**68.67**	**340**	P	P	04 16 51.8	-4.7
MAW	**Mawson**	**68.81**	**200**	P	**P**	**04 16 57.5**	**+0.2**
VOI	**Vohitsoka**	**69.14**	**250**	P	**P**	**04 16 59.6**	**-0.8**
VOI				IAmb	IAmb	04 17 30.8	
	comp=Z,18nm,1.4s						
VNDA	**Vanda**	**72.13**	**171**	P	**P**	**04 17 16.5**	**-1.0**
	comp=Z,0.7nm,0.4s,baz=315,slow=9.8,SNR=6.6						
	comp=Z,0.7nm,0.4s						
VNDA	**Vanda**	**72.13**	**171**	P	**P**	**04 17 18.0**	**+0.5**
SBA	**Scott Base**	**73.14**	**170**	P	**P**	**04 17 23.9**	**+0.4**
BVAR	**Borovoye Array**	**73.78**	**332**	P	P	04 17 24.4	-3.1
	comp=Z,1.7nm,0.7s,baz=157,slow=8.0,SNR=7.0						
	comp=Z,1.7nm,0.7s						
ABKAR	**Akbulak array**	**76.92**	**325**	P	P	04 17 42.8	-3.0
SHEM	**Shemya Is, Ala**	**77.90**	**31**	P	**P**	**04 17 48.6**	**-2.4**
SMY	**Shemya**	**77.90**	**31**	P	**P**	**04 17 48.7**	**-2.4**
QSPA	**South Pole Qui**	**80.96**	**180**	P	**P**	**04 18 07.3**	**-0.4**
	comp=Z,3.3nm,0.7s,baz=305,slow=1.6,SNR=16						
	comp=Z,3.3nm,0.7s						
QSPA	**South Pole Qui**	**80.96**	**180**	P	**P**	**04 18 07.4**	**-0.4**
QSPA				IAmb	IAmb	04 18 08.1	
	comp=Z,7.1nm,1.0s						
LSZ	**Lusaka**	**87.31**	**255**	P	**P**	**04 18 39.8**	**-1.3**
LSZ				IAmb	IAmb	04 18 41.7	
	comp=Z,3.8nm,0.8s						
BOSA	**Boshof**	**87.97**	**242**	P	**P**	**04 18 43.3**	**-0.8**
	comp=Z,5.3nm,0.8s,baz=114,slow=4.8,SNR=10						
	comp=Z,5.3nm,0.8s						
LBTB	**Lobatse**	**88.23**	**245**	P	**P**	**04 18 45.5**	**+0.1**
BELA	**Belgrano 2**	**91.87**	**186**	P	**P**	**04 19 00.0**	**-1.2**
BELA				IAmb	IAmb	04 19 19.1	
	comp=Z,7.6nm,1.5s						
AKASG	**Malin Array Be**	**96.03**	**320**	LR	LR	05 12 47.1	
	comp=Z,39nm,19.4s,baz=26,slow=42						
TORD	**Torodi Ar. Bea**	**117.32**	**280**	PKP	**PKPdf**	**04 24 37.2**	**-2.7**
	comp=Z,0.3nm,0.5s,baz=300,slow=1.0,SNR=9.7						
CPUP	**Villa Florida**	**144.53**	**188**	PKP	**PKPab**	**04 25 28.0**	**-1.0**
	comp=Z,2.0nm,0.6s,baz=166,slow=4.6,SNR=9.0						
CPUP	**Villa Florida**	**144.53**	**188**		**PKPab**	**04 25 28.4**	**-0.6**
O54A	**Avella**	**145.00**	**25**	PKPdf	**PKPab**	**04 25 28.6**	**-1.8**
P53A	**Whipple**	**145.15**	**26**		**PKPbc**	**04 25 28.0**	**-2.9**
AQDB	**Aquidauana**	**149.99**	**192**		**PKPdf**	**04 25 44.3**	**+4.4**
GO01	**Chusmiza**	**150.65**	**166**		**PKPdf**	**04 25 46.1**	**+4.5**
BDFB	**Brasilia**	**151.75**	**210**	PKPbc	**PKPdf**	**04 25 48.1**	**+5.2**
	comp=Z,1.9nm,0.4s,baz=138,slow=2.8,SNR=8.9						
LPAZ	**La Paz**	**154.16**	**167**	PKPab	**PKPab**	**04 26 07.5**	**-1.0**
	comp=Z,1.0nm,0.7s,baz=119,slow=3.4,SNR=4.1						

*IDC **20** 04:08:53.5±2.0,46°.28N×93°.85E, h0km, mb3.8/3, mbtmp3.5/9, ML2.9/5, MS3.7/2, Error ellipse: s-maj=35.6km s-min=14.0km az=173.0*

*ASRS **20** 04:09:06.4±0.5,47°N±3°×9°4E±°, h4km, MLh4.5/12, Error ellipse: s-maj=5.7km s-min=3.5km az=178.3, confirmed*

ISC 20 04:09:06.3±2.0,**46.7N**±0.1×**93.97E**±0.04,**h10**km,**n28,** σ2s**68**/40,**mb3.8/3,Mongolia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNGR	**Kungurtug, Tuv**	**4.58**	**30**	Pn	**Pn**	**04 10 15.7**	**0.0**
KNGR				Pg	**Pg**	**04 10 28.2**	**+1.5**
KNGR				Sg	**Sg**	**04 11 36.9**	**+3.6**
TEL	**Teeli**	**5.01**	**332**	Pn	**Pn**	**04 10 21.7**	**+0.1**
TEL				Pg	**Pb**	**04 10 32.6**	**-1.4**
TEL				Sg	**Sg**	**04 11 46.4**	**-0.6**
KZLR	**Kyzyl**	**5.04**	**3**	Pg	**Pg**	**04 10 40.6**	**-2.2**
KZLR				Sg	**Sg**	**04 11 50.7**	**+2.7**
CUR	**Chagan-Uzun**	**5.07**	**315**	Pn	**Pn**	**04 10 21.1**	**-1.4**
CUR				Pg	**Pg**	**04 10 39.0**	**-4.4**
CUR				Sg	**Sg**	**04 11 51.0**	**+1.9**
DGZ	**Jazzator, Alta**	**5.32**	**307**	Pn	**Pn**	**04 10 25.7

TWC				eS	Sb	04 11 31.7	-1.7	
ETL	**Fush Village**	**0.47**	**255**	*i* P	Pb	04 11 28.3	+0.3	
ETL				S	Sn	04 11 36.7	+1.1	
NACB	**Ninganchiao**	**0.49**	**257**	P	Pb	04 11 28.5	+0.2	
NACB	**Ninganchiao**	**0.49**	**257**	S	Sn	04 11 37.4	+1.3	
NACB	**Ninganchiao**	**0.49**	**257**		Pb	04 11 28.1	-0.2	
NACB				Sn	Sb	04 11 36.1	+0.8	
NACB	**Ninganchiao**	**0.49**	**257**	⇓ *i* P	Pb	04 11 28.4	+0.2	
NACB				eS	Sb	04 11 36.6	+1.2	
NDS	**Dongshan**	**0.50**	**314**	⇑ *e* P	Pb	04 11 28.0	-0.6	
TWD	**Chiawan**	**0.51**	**247**	⇓ *i* P	Pb	04 11 29.0	+0.2	
TWD				eS	Sb	04 11 37.6	+1.5	
HWA	**Hwalien**	**0.56**	**237**	*e* P	Pn	04 11 29.9	+0.3	
HWA				eS	Sn	04 11 39.8	+2.1	
ETLH	**Xiulin Townshi**	**0.58**	**263**	P	Pn	04 11 30.2	+0.1	
ETLH				S	Sb	04 11 39.2	+1.1	
ILA	**Ilan**	**0.59**	**325**	*e* P	Pn	04 11 29.6	-0.4	
ILA				eS	Sb	04 11 37.9	-0.2	
LATG	**Datong**	**0.59**	**295**	⇑ *i* P	Pn	04 11 29.8	-0.5	
LATG				S	Sb	04 11 39.7	+1.3	
TWE	**Neicheng**	**0.60**	**317**	⇑ *e* P	Pn	04 11 29.6	-0.6	
ENTT	**Nioudou**	**0.61**	**306**	⇑ *e* P	Pn	04 11 29.9	-0.5	
NTC	**Toucheng**	**0.63**	**336**	P	Pn	04 11 30.6	0.0	
NTC				S	Sn	04 11 39.9	+0.3	
TEYL	**Yanliau Villag**	**0.63**	**229**	*e* P	Pn	04 11 30.4	-0.2	
TEYL				eS	Sb	04 11 41.4	+2.3	
NDT	**Datong Townshi**	**0.63**	**300**	*e* P	Pn	04 11 30.5	-0.2	
NDT				S	Sn	04 11 39.6	-0.2	
ETM	**Tongmen**	**0.65**	**241**	⇓ *e* P	Pn	04 11 30.8	-0.2	
ETM				S	Sn	04 11 40.5	+0.4	
FUSB	**Fushanzhiwuyua**	**0.68**	**315**	⇑ *i* P	Pn	04 11 31.1	-0.2	
NNSB	**Datong**	**0.68**	**282**	⇑ *i* P	Pn	04 11 31.5	0.0	
NNSB				S	Sn	04 11 41.4	+0.3	
LXIB	**Xiulin Townshi**	**0.69**	**248**	⇓ *i* P	Pn	04 11 31.5	-0.1	
LXIB				S	Sn	04 11 42.1	+0.7	
NNS	**Nan Shan**	**0.69**	**283**	*i* P	Pn	04 11 31.7	0.0	
NNS				S	Sn	04 11 41.5	+0.1	
SHUL	**Shoufeng**	**0.70**	**226**	P	Pn	04 11 31.7	0.0	
SHUL				eS	Sb	04 11 44.4	+3.1	
TWB1	**Santiao Chiao**	**0.73**	**351**	⇓ *i* P	Pn	04 11 32.3	+0.2	
TIPB	**Shuangxi**	**0.73**	**339**	⇓ *i* P	Pn	04 11 32.2	+0.1	
TIPB				S	Sn	04 11 41.6	-0.7	
NWLT	**Wulai**	**0.74**	**312**	*e* P	Pn	04 11 32.5	+0.2	
NWLT				eS	Sn	04 11 41.1	-1.3	
TEGC	**Jichi Village**	**0.78**	**223**	*e* P	Pn	04 11 32.5	-0.2	
TEGC				eS	Sb	04 11 45.0	+1.7	
JYNG	**Yonagunijimaku**	**0.78**	**77**	*i* P	Pn	04 11 33.2	+0.5	
JYNG				eS	Sn	04 11 44.3	+1.1	
YHNB	**Yeheng**	**0.78**	**300**	P	Pn	04 11 33.1	+0.3	
YHNB	**Yeheng**	**0.78**	**300**	S	Sn	04 11 44.7	+1.4	
YHNB	**Yeheng**	**0.78**	**300**		Pn	04 11 32.8	0.0	
YHNB				Sn	Sn	04 11 43.2	-0.1	
YHNB	**Yeheng**	**0.78**	**300**	⇑ *i* P	Pn	04 11 32.9	+0.1	
YHNB				S	Sn	04 11 44.3	+1.0	
ESL	**Shilin**	**0.78**	**233**	⇓ *e* P	Pn	04 11 32.3	-0.4	
ESL				eS	Sn	04 11 43.8	+0.5	
WHF	**Hehuan Shan**	**0.79**	**260**	P	Pn	04 11 33.4	+0.2	
WHF				*i* S	Sn	04 11 44.8	+0.7	
NSK	**Sanguang**	**0.79**	**300**	⇑ *i* P	Pn	04 11 33.1	+0.1	
NSK				S	Sn	04 11 44.2	+0.4	
FUSS	**Fushou**	**0.80**	**268**	⇑ *i* P	Pn	04 11 33.6	+0.5	
FUSS				*i* S	Sn	04 11 45.4	+1.3	
SXI1	**Grass Mountain**	**0.84**	**345**	*i* P	Pn	04 11 34.0	+0.4	
SXI1				S	Sn	04 11 45.8	+0.9	
YOJ	**Yonaguni jima**	**0.84**	**77**	P	Pn	04 11 34.2	+0.6	
YOJ	**Yonaguni jima**	**0.84**	**77**	S	Sn	04 11 46.1	+1.4	
YOJ	**Yonaguni jima**	**0.84**	**77**		Pn	04 11 34.1	+0.6	
YOJ				Sn	Sn	04 11 45.3	+0.6	
YOJ	**Yonaguni jima**	**0.84**	**77**	⇓ *i* P	Pn	04 11 34.1	+0.6	
YOJ				S	Sn	04 11 45.7	+1.0	
YOJ	**Yonaguni jima**	**0.84**	**77**	*e* P	Pn	04 11 34.2	+0.6	
YOJ				A	A	04 11 34.2		
	comp=N,20nm,1.3s,comp=E,15nm,0.8s							
YOJ				eS	Sn	04 11 45.8	+1.0	
NWF	**Wu-fen Shan**	**0.84**	**339**	*e* P	Pn	04 11 34.7	+1.0	
WFSB	**Wu-fen Shan**	**0.84**	**339**	P	Pn	04 11 34.7	+1.1	
WFSB				eS	Sn	04 11 45.4	+0.6	
TWA	**Mucha**	**0.85**	**325**	*e* P	Pn	04 11 34.9	+1.3	
TWA				S	Sb	04 11 46.9	+1.6	
TWT	**Tachien**	**0.86**	**268**	*e* P	Pn	04 11 34.9	+1.0	
TWT				S	Sn	04 11 46.9	+1.4	
WARBT	**Fenglin Townsh**	**0.87**	**230**	⇓ *i* P	Pn	04 11 33.4	-0.6	
WARBT				S	Sn	04 11 45.4	-0.2	
TDCB	**Techi**	**0.87**	**268**	P	Sn	04 11 34.9	+0.8	
TDCB				S	Sn	04 11 47.1	+1.3	
TATO	**Taipei**	**0.90**	**321**	P	Pn	04 11 35.5	+1.2	
TATO	**Taipei**	**0.90**	**321**	S	Sn	04 11 47.8	+1.6	
TATO	**Taipei**	**0.90**	**321**		Pn	04 11 35.1	+0.8	
TATO				Sn	Sn	04 11 47.4	+1.2	
NHY	**Taipei**	**0.90**	**327**	P	Pn	04 11 36.2	+1.8	
OWD	**Renai**	**0.92**	**249**	⇓ *i* P	Pn	04 11 34.9	+0.1	
OWD				S	Sn	04 11 46.9	0.0	
TNOU	**National Taiwa**	**0.92**	**340**	*e* P	Pn	04 11 35.3	+0.6	
TNOU				S	Sn	04 11 47.4	+0.7	
WUSB	**Renai**	**0.95**	**253**	*i* P	Pn	04 11 35.9	+0.7	
WUSB				S	Sn	04 11 48.7	+0.8	
NFF	**Wufeng Townshi**	**0.97**	**291**	*i* P	Pn	04 11 36.5	+1.1	
NFF				eS	Sn	04 11 49.8	+1.6	
KSHI	**Guanxi Townshi**	**0.99**	**300**	*i* P	Pn	04 11 37.3	+1.8	
KSHI				S	Sb	04 11 51.6	+2.3	
YM01	**YM01**	**0.99**	**330**	*e* P	Pn	04 11 37.1	+1.4	
YM01				eS	Sn	04 11 50.0	+1.3	
HGSD	**Ruisui**	**1.01**	**219**	*e* P	Pn	04 11 35.5	-0.4	
ZUZH	**Zhuzihu**	**1.02**	**330**	*i* P	Pn	04 11 37.2	+1.2	
ZUZH				S	Sn	04 11 51.1	+1.8	
YM08	**YM08**	**1.02**	**332**	*e* P	Pn	04 11 36.8	+0.7	
YM08				S	Sn	04 11 50.6	+1.3	
TWS1	**Kuangyinshan**	**1.03**	**322**	*e* P	Pn	04 11 37.8	+1.6	
TWS1				eS	Sb	04 11 52.6	+2.0	
VWDT	**VWDT**	**1.03**	**240**	*e* P	Pn	04 11 36.8	+0.5	
VWDT				eS	Sn	04 11 50.9	+1.4	
ANP	**Anpu**	**1.05**	**329**	*e* P	Pn	04 11 38.1	+1.5	
EHYH	**Wanrong**	**1.05**	**222**	P	Pn	04 11 36.2	-0.3	
EHY	**Hungye**	**1.06**	**223**	P	Pn	04 11 36.0	-0.6	
LIOB	**Emei**	**1.06**	**290**	⇑ *i* P	Pn	04 11 38.5	+1.9	
NTST	**Danshui**	**1.07**	**326**	*e* P	Pn	04 11 38.4	+1.8	
NTST				eS	Sn	04 11 53.1	+1.6	
WHP	**Taichung City**	**1.07**	**270**	*i* P	Pn	04 11 38.5	+1.8	
WHP				S	Sb	04 11 52.6	+1.0	
NSTT	**Nanjuang**	**1.07**	**289**	*i* P	Pn	04 11 38.5	+1.7	
NSTT				eS	Sb	04 11 53.1	+1.4	
NCUH	**Zhongli**	**1.09**	**309**	*e* P	Pn	04 11 38.4	+1.4	
TWY	**Chenhua**	**1.09**	**335**	*e* P	Pn	04 11 39.3	+2.2	
TWY				eS	Sn	04 11 53.1	+2.0	
ECBN	**Changbin**	**1.14**	**212**	*e* P	Pn	04 11 37.2	-0.4	
ECBN				eS	Sn	04 11 50.9	-1.2	
SBCB	**Hsinchu**	**1.15**	**297**	*i* P	Pn	04 11 39.6	+1.9	
SBCB				eS	Sb	04 11 56.6	+2.8	
YULB	**Yu-li**	**1.16**	**220**	P	Pn	04 11 37.4	-0.6	
YULB	**Yu-li**	**1.16**	**220**		Pn	04 11 37.2	-0.7	
YULB	**Yu-li**	**1.16**	**220**	⇓ P	Pn	04 11 37.3	-0.7	
HSN	**Hsinchu**	**1.16**	**297**	*e* P	Pn	04 11 39.3	+1.3	
HSN				eS	Sb	04 11 56.8	+2.5	
SSLB	**Suanglung**	**1.17**	**245**	P	Pn	04 11 38.7	+0.6	
SSLB	**Suanglung**	**1.17**	**245**		Pn	04 11 38.6	+0.5	
SSLB	**Suanglung**	**1.17**	**245**	*e* P	Pn	04 11 38.7	+0.5	
SSLB				eS	Sn	04 11 54.8	+1.8	
SMLT	**Sun Moon Lake**	**1.18**	**251**	P	Pn	04 11 39.3	+1.0	
SMLT				eS	Sn	04 11 55.3	+2.0	
EYUL	**Yuli**	**1.18**	**218**	*e* P	Pn	04 11 38.0	-0.3	
EYUL				eS	Sb	04 11 56.0	+1.1	
TWF1	**Yuli**	**1.19**	**219**	⇓ *e* P	Pn	04 11 37.9	-0.5	
TYC	**Yuchr**	**1.21**	**252**	*e* P	Pn	04 11 39.6	+1.0	
TYC				S	Sn	04 11 55.6	+1.7	
TWQ1	**Liyutan**	**1.23**	**273**	*e* P	Pn	04 11 41.1	+2.3	
TWQ1				eS	Sb	04 11 57.5	+1.4	
NMLH	**Miaoli**	**1.23**	**282**	*e* P	Pb	04 11 41.4	+0.7	
CHKH	**Chenggong**	**1.27**	**211**	*e* P	Pn	04 11 38.6	-0.9	
WHYT	**Xinyi Township**	**1.29**	**243**	*i* P	Pn	04 11 41.2	+1.4	
WHYT				S	Sn	04 11 58.2	+2.1	
FULB	**Fuli**	**1.31**	**215**	*e* P	Pn	04 11 39.6	-0.5	
FULB				eS	Sn	04 11 56.3	-0.3	
TCU	**Taichung**	**1.32**	**264**	*e* P	Pn	04 11 42.4	+2.3	
TCU				eS	Sb	04 12 00.2	+1.4	
PCYT	**Pengchaiyu**	**1.34**	**358**	P	Pn	04 11 40.8	+0.3	
WDJ	**Dajia District**	**1.35**	**273**	*e* P	Pn	04 11 42.6	+2.1	
WDJ				eS	Sb	04 12 01.0	+1.5	
WJS	**Zhushan**	**1.35**	**250**	*e* P	Pb	04 11 43.4	+0.7	
WJS				S	Sb	04 12 01.5	+2.0	

CHKT	**Chengkung**	**1.36**	**210**	*e* P	Pn	04 11 40.1	-0.7	
WNT	**Mingjian**	**1.37**	**253**	*e* P	Pn	04 11 43.1	+2.3	
WNT				S	Sb	04 12 01.6	+1.5	
EHD	**Haiduan**	**1.40**	**217**	*e* P	Pn	04 11 40.3	-1.0	
ALS	**Alishan**	**1.42**	**238**	*i* P	Pn	04 11 43.2	+1.3	
WCHH	**Zhanghua**	**1.44**	**262**	*e* P	Pn	04 11 43.5	+1.8	
WCHH				eS	Sb	04 12 02.4	+0.4	
ECS	**Chishang**	**1.44**	**215**	*e* P	Pn	04 11 40.9	-1.0	
IRIF	**Iriomote-Funau**	**1.48**	**88**	*e* P	Pn	04 11 43.2	+0.9	
IRIF				A	A	04 11 43.2		
	comp=N,5.0nm,0.5s,comp=E,5.0nm,5.4s							
IRIF				eS	Sn	04 12 02.2	+1.8	
CHN5	**Tsauling**	**1.48**	**243**	P	Pn	04 11 44.4	+1.9	
CHN5				eS	Sb	04 12 04.3	+0.9	
ELDTW	**Lidau**	**1.48**	**223**	*e* P	Pn	04 11 42.6	+0.1	
WGK	**Gukeng**	**1.54**	**248**	*e* P	Pn	04 11 45.1	+1.9	
WGK				eS	Sb	04 12 06.4	+1.4	
WDL	**Douliou City**	**1.55**	**249**	*e* P	Pn	04 11 45.6	+2.4	
WDL				eS	Sb	04 12 06.5	+1.3	
WDLH	**Douliu**	**1.56**	**248**	*e* P	Pn	04 11 45.8	+2.3	
WDLH				eS	Sb	04 12 06.6	+1.1	
HATJ	**Hateruma jima**	**1.56**	**98**	*e* P	Pn	04 11 45.3	+1.8	
HATJ				A	A	04 11 45.3		
	comp=N,8.0nm,3.5s,comp=E,9.0nm,2.9s							
HATJ				eS	Sn	04 12 05.8	+3.2	
WCKO	**Fanlu**	**1.62**	**239**	P	Pn	04 11 46.7	+2.4	
WRL	**Guolierlin Hig**	**1.63**	**257**	*e* P	Pn	04 11 46.7	+2.3	
WRL				S	Sb	04 12 07.7	0.0	
LONT	**Longtian**	**1.64**	**214**	*e* P	Pn	04 11 43.6	-1.0	
RLNB	**Erlin**	**1.65**	**257**	P	Pn	04 11 47.0	+2.3	
RLNB				S	Sb	04 12 08.1	-0.1	
STYH	**Taoyuan**	**1.65**	**228**	P	Pn	04 11 45.9	+1.1	
STYH				eS	Sn	04 12 06.9	+2.0	
TPUB	**Ta-pu**	**1.67**	**235**	P	Pn	04 11 46.8	+1.7	
TPUB	**Ta-pu**	**1.67**	**235**		Pn	04 11 46.6	+1.5	
TPUB	**Ta-pu**	**1.67**	**235**	P	Pn	04 11 47.0	+1.9	
TPUB				eS	Sb	04 12 08.9	0.0	
LDUT	**Ludao**	**1.71**	**200**	*e* P	Pn	04 11 44.3	-1.2	
LDUT				eS	Sn	04 12 05.0	-1.2	
WTP	**Ta-pu**	**1.72**	**233**	*e* P	Pn	04 11 47.5	+1.8	
WTP				S	Sb	04 12 09.8	-0.4	
WTCT	**Ta-ch'eng**	**1.73**	**256**	*e* P	Pn	04 11 46.6	+0.9	
JKRS	**Kuro-shima**	**1.73**	**91**	P	Pn	04 11 47.6	+1.8	
JKRS				A	A	04 11 47.6		
	comp=N,9.0nm,5.1s,comp=E,7.0nm,2.4s							
JKRS				S	Sn	04 12 09.3	+2.5	
CHY	**Chiayi**	**1.73**	**244**	*e* P	Pn	04 11 48.5	+2.7	
CHY				S	Sb	04 12 10.5	-0.1	
TWGBT	**Beinan**	**1.74**	**213**	P	Pn	04 11 45.1	-0.9	
TWGBT	**Beinan**	**1.74**	**213**	P	Pn	04 11 45.0	-0.9	
TWG	**Pinlang**	**1.74**	**214**		Pn	04 11 44.8	-1.2	
TWG	**Pinlang**	**1.74**	**214**	*e* P	Pn	04 11 45.2	-0.7	
TWG				eS	Sn	04 12 07.4	+0.3	
TTN	**Taitung**	**1.76**	**210**	*i* P	Pn	04 11 46.5	+0.3	
TTN				eS	Sn	04 12 09.8	+2.3	
TWK	**Hsinying**	**1.80**	**236**	*i* P	Pn	04 11 48.9	+2.1	
TWK				eS	Sb	04 12 12.3	-0.2	
CHN1	**Nanshi**	**1.82**	**233**	P	Pn	04 11 49.3	+2.3	
CHN1				eS	Sb	04 12 13.1	+0.1	
SGST	**Jiashian**	**1.84**	**230**	P	Pn	04 11 48.6	+1.2	
SGST				eS	Sb	04 12 13.6	-0.1	
WSF	**Szhu**	**1.85**	**250**	*e* P	Pn	04 11 49.7	+2.3	
WSF				eS	Sb	04 12 14.4	+0.6	
JIJ	**Ishigaki jima**	**1.85**	**87**	P	Pn	04 11 48.3	+0.8	
JIJ				eS	Sn	04 12 11.3	+1.5	
SLGT	**Liugui**	**1.86**	**227**	P	Pn	04 11 49.4	+1.8	
SLGT				eS	Sb	04 12 13.6	-0.6	
WSL	**Shuilin Townsh**	**1.89**	**247**	*e* P	Pn	04 11 50.1	+2.2	
WSL				eS	Sb	04 12 14.5	-0.4	
ICHU	**Yijhu**	**1.91**	**242**	*e* P	Pn	04 11 50.6	+2.3	
ICHU				eS	Sb	04 12 15.6	-0.1	
CHN8	**Yiju**	**1.98**	**242**	*e* P	Pn	04 11 51.5	+2.3	
CHN8				eS	Sb	04 12 16.7	-0.8	
ECL	**Taimali**	**1.99**	**213**	*e* P	Pn	04 11 48.6	-0.8	
CHN3	**Shinhua**	**2.00**	**234**	*e* P	Pb	04 11 54.7	+1.0	
JISG	**Ishigakijimahi**	**2.02**	**81**	*e* P	Pn	04 11 50.8	+1.0	
JISG				eS	Sn	04 12 15.1	+1.1	
SCST	**Cishan**	**2.04**	**227**	*e* P	Pn	04 11 53.2	+3.2	
SCST				eS	Sb	04 11 49.8	+0.6	
SSD	**Sandimen**	**2.05**	**222**	P	Pn	04 12 52.1	+1.9	
SSD				S	Sn	04 12 17.9	+3.3	
TSMG	**Majia**	**2.07**	**221**	*e* P	Pn	04 11 52.3	+1.8	
TSMG				eS	Sn	04 12 18.1	+2.9	
TWM1	**Shoushan**	**2.13**	**227**	*e* P	Pb	04 11 55.6	-0.2	
TWM1				eS	Sb	04 12 22.6	+0.7	
MASBT	**Mashibuluo**	**2.15**	**220**	*e* P	Pn	04 11 52.6	+1.1	
MASBT				S	Sn	04 12 20.6	+3.5	
TSCK	**Chigu Township**	**2.17**	**239**	*e* P	Pn	04 11 52.8	+0.8	
TSCK				eS	Sn	04 12 20.8	+3.0	
EAST	**Anshuo**	**2.22**	**212**	*e* P	Pn	04 11 51.9	-0.7	
SSPT	**Xinbi**	**2.29**	**219**	*e* P	Pn	04 11 57.2	+3.7	
LAY	**Lan-yu**	**2.29**	**193**	*e* P	Pn	04 11 52.7	-0.9	
LYUB	**Lan-yu**	**2.32**	**192**	*e* P	Pn	04 11 51.8	-2.1	
LYUB				eS	Sn	04 12 19.6	-1.8	
SCZT	**Fangliau**	**2.34**	**216**	*e* P	Pn	04 11 57.1	+2.8	
SCZT				eS	Sn	04 12 25.9	+3.9	
WSSB	**Gushan**	**2.36**	**227**	*e* P	Pn	04 11 56.2	+1.8	
JTJ	**Tarama**	**2.38**	**81**	P	Pn	04 11 56.3	+1.5	
JTJ				eS	Sn	04 12 24.8	+1.8	
SLIU	**Shizi**	**2.39**	**211**	*e* P	Pn	04 11 54.7	-0.2	
PNG	**Penghu**	**2.45**	**254**	*e* P	Pn	04 11 56.3	+0.6	
PNG				eS	Sn	04 12 25.6	+1.1	
PHUB	**P'eng-hu**	**2.45**	**252**	*e* P	Pn	04 11 56.7	+1.0	
PHUB				S	Sn	04 12 25.7	+1.2	
WDGT	**Dungji**	**2.47**	**246**	P	Pn	04 11 57.4	+1.5	
WDGT				eS	Sn	04 12 26.5	+1.5	
WLCH	**Liuqiu**	**2.50**	**220**	*e* P	Pb	04 12 01.2	-1.0	
TWP	**Hsiaoliuchiu**	**2.51**	**220**	*e* P	Pn	04 12 00.9	+4.4	
VWUC	**VWUC**	**2.53**	**287**	*e* P	Pn	04 11 57.2	+0.4	
VWUC				eS	Sn	04 12 26.4	0.0	
SMST	**Manzhou Townsh**	**2.54**	**208**	*e* P	Pn	04 11 56.9	0.0	
HEN	**Hengchun**	**2.60**	**209**	*e* P	Pn	04 12 00.5	+2.8	
HEN				eS	Sn	04 12 31.2	+3.0	
TWK1	**Hengchun**	**2.62**	**208**	*e* P	Pn	04 11 58.4	+0.3	
TWKBT	**Hengchun**	**2.62**	**207**	*e* P	Pn	04 11 57.8	-0.3	
VCHM	**Qimei**	**2.68**	**247**	*e* P	Pn	04 11 59.7	+0.8	
VCHM				*i* S	Sn	04 12 32.2	+1.9	
MATB	**Ma-tsu**	**2.71**	**314**	P	Pn	04 11 59.6	+0.4	
MATB				eS	Sn	04 12 31.4	+0.5	
PTMZ	**Houxiangcun**	**2.83**	**286**	P	Pn	04 12 01.5	+0.6	
PTMZ				eS	Sn	04 12 33.6	-0.2	
JIRB	**Irabujima**	**2.84**	**78**	*e* P	Pn	04 12 02.0	+1.0	
JIKM	**Ikemajima**	**2.92**	**77**	*e* P	Pn	04 12 02.6	+0.4	
JIKM				eS	Sn	04 12 38.0	+1.8	
JMJ	**Miyako jima 2**	**2.94**	**79**	P	Pn	04 12 05.3	+2.8	
JMJ2	**Miyako jima3**	**2.96**	**80**	*e* P	Pn	04 12 05.2	+2.4	
JMJ2				eS	Sn	04 12 39.7	+2.5	
LYJJ	**Jianjiangzhen**	**3.10**	**317**	*e* P	Pn	04 12 05.3	+0.6	
LYJJ				eS	Sn	04 12 41.5	+0.8	
XPSS	**Dashiqiu**	**3.16**	**327**	*e* P	Pn	04 12 06.1	+0.7	
MHZQ	**Yeshan**	**3.33**	**304**	*e* P	Pn	04 12 08.1	+0.3	
KNM	**Kinmen**	**3.36**	**273**	*e* P	Pn	04 12 10.1	+1.9	
KNM				eS	Sn	04 12 49.5	+2.5	
KNMB	**Chin-men Tao**	**3.40**	**274**		Pn	04 12 09.0	+0.2	
KNMB	**Chin-men Tao**	**3.40**	**274**	*e* P	Pn	04 12 09.2	+0.4	
AXDP	**Jialang**	**3.82**	**280**	*e* P	Pn	04 12 15.3	+0.7	
ZPLA	**Ao Xicun**	**4.00**	**266**	*e* P	Pn	04 12 17.8	+0.7	
ZPLA				eS	Sn	04 13 02.9	0.0	
DSXP	**Dongshan**	**4.33**	**263**	*e* P	Pn	04 12 22.3	+0.8	
DSXP				S	Sn	04 13 10.7	-0.2	
SXFK	**Yanhouchang**	**4.56**	**298**	*e* P	Pn	04 12 24.9	+0.1	
JOW	**Kunigami**	**6.12**	**64**	Pn	Pn	04 12 45.1	-1.0	
	comp=E,4.0nm,0.3s,baz=234,slow=16,SNR=8.6 comp=E,8.9nm,0.3s							
JOW	**Kunigami**	**6.12**	**64**	P	Pn	04 12 47.0	+0.9	
JOW	**Kunigami**	**6.12**	**64**		Pn	04 12 47.1	+0.9	
KSRS	**Korea Array**	**14.04**	**19**	Pn	Pn	04 14 33.6	-1.0	
	comp=E,0.2nm,0.3s,baz=196,slow=16,SNR=1.6 comp=E,0.5nm,0.3s							
LZDM	**Lanzhou Array**	**19.69**	**310**	P	**P**	04 15 45.9	+1.0	
	baz=147,slow=8.8 comp=E,1.1nm,0.3s							
USRK	**Ussuriysk Ar.**	**21.45**	**20**	P	**P**	04 16 04.4	+1.0	
	comp=E,1.7nm,0.7s,baz=197,slow=11,SNR=1.3 comp=E,1.7nm,0.7s							
CMAR	**Chiang Mai Arr**	**22.33**	**259**	LR	LR	04 24 21.5		
	comp=E,92nm,18.4s,baz=80,slow=35							
KLR	**Kul'dur**	**26.03**	**14**	P	**P**	04 16 47.3	-0.7	
	comp=E,0.8nm,0.5s,baz=225,slow=5.7,SNR=2.0 comp=E,0.8nm,0.5s							
SONM	**Songino Array**	**26.62**	**336**	P	**P**	04 16 53.0	-0.5	
	comp=E,3.3nm,0.7s,baz=153,slow=9.3,SNR=4.4 comp=E,3.3nm,0.7s							
SONM	**Songino Array**	**26.62**	**336**	P	**P**	04 16 54.0	+0.4	
MKAR	**Makanchi Array**	**38.86**	**315**	P	**P**	04 18 40.5	+0.2	
	comp=E,1.4nm,0.5s,baz=103,slow=9.6,SNR=9.7 comp=E,1.4nm,0.5s							
MKAR	**Makanchi Array**	**38.86**	**315**	P	**P**	04 18 39.2	-1.0	
MAKZ	**Makanchi**	**39.07**	**315**	P	**P**	04 18 41.3	-0.6	
MAKZ				IAmb	IAmb	04 18 43.1		
	comp=Z,5.4nm,1.1s							
ZAA0	**Zalesovo Array**	**40.63**	**327**	P	**P**	04 18 53.4	-1.4	
ZAA0				IAmb	IAmb	04 18 54.4		
	comp=Z,3.0nm,0.8s							
ZALV	**Zalesovo Beam**	**40.63**	**327**	P	**P**	04 18 53.9	-0.9	
	comp=Z,2.5nm,0.5s,baz=117,slow=8.4,SNR=6.9 comp=Z,2.5nm,0.5s							
ZALV	**Zalesovo Beam**	**40.63**	**327**	P	**P**	04 18 53.1	-1.6	
WRA	**Warramunga Arr**	**45.54**	**164**	P	**P**	04 19 34.0	-0.9	
	comp=Z,0.4nm,0.4s,baz=345,slow=8.6,SNR=6.7 comp=Z,0.4nm,0.4s							
WR8	**Warramunga Arr**	**45.60**	**164**	P	**P**	04 19 33.3	-2.0	
KKAR	**Karatay Array**	**46.09**	**307**	P	**P**	04 19 37.8	-1.2	
BVAR	**Borovoye Array**	**48.14**	**320**	P	**P**	04 19 54.1	-0.7	
	comp=Z,1.4nm,0.6s,baz=97,slow=5.9,SNR=4.7 comp=Z,1.4nm,0.6s							
ASAR	**Alice Springs**	**49.02**	**166**	P	**P**	04 20 03.1	+1.2	
	comp=Z,0.2nm,0.3s,baz=340,slow=8.2,SNR=5.6 comp=Z,0.2nm,0.3s							
ASAR	**Alice Springs**	**49.02**	**166**	P	**P**	04 20 00.4	-1.5	
AB31	**Akbulak array**	**53.98**	**314**		**P**	04 20 39.1	+0.3	
AB31				IAmb	IAmb	04 20 39.8		
	comp=Z,4.6nm,0.9s							
ABKAR	**Akbulak array**	**53.98**	**314**		**P**	04 20 38.9	+0.1	
B22K	**Teshekpuk Lake**	**65.51**	**22**	P	**P**	04 21 57.3	-0.4	
H21K	**Melozitna Rive**	**66.14**	**27**	P	**P**	04 22 01.3	-0.6	
H21K				IAmb	IAmb	04 22 28.6		
	comp=Z,3.9nm,1.3s							
E22K	**Anaktuvuk Pass**	**66.26**	**24**	P	**P**	04 22 02.8	+0.1	
E22K				IAmb	IAmb	04 22 35.1		
	comp=Z,4.8nm,1.4s							
**F24

RCFN				S	Sg	04 35 12.8	-0.1
RCON	**San Juan de Ri**	**1.73**	**135**	P	Pg	**04 34 52.0**	**-0.7**
RCPN	**Sur Rio San Ju**	**1.75**	**133**	P	Pg	**04 34 52.2**	**-0.7**
RCPN				S	Sg	**04 35 15.8**	**+0.2**
CSGN	**Cosiguina Volc**	**1.75**	**185**	P	Pg	**04 34 53.0**	**+0.1**
CSGN				S	Sg	**04 35 15.5**	**-0.2**
TECO	**Alcaldia de Te**	**1.79**	**229**	P	Pb	**04 34 52.2**	**+0.2**
TECO				S	Sg	**04 35 16.1**	**-0.6**
PAVA	**Las Pavas**	**1.80**	**236**	P	Pg	**04 34 52.7**	**-1.1**
PAVA				S	Sg	**04 35 16.7**	**-0.5**
ESQI	**Esquipulas**	**1.88**	**265**	P	Pg	**04 34 54.6**	**-0.8**
ESQI				S	Sg	**04 35 19.9**	**0.0**
ESQI	**Esquipulas**	**1.88**	**265**	*i* P	Pg	**04 34 54.4**	**-1.0**
MTO3	**Montecristo**	**1.92**	**260**	P	Pg	**04 34 54.9**	**-1.3**
MTO3				S	Sg	**04 35 19.8**	**-1.4**
MTO3	**Montecristo**	**1.92**	**260**	*i* P	Pb	**04 34 53.3**	**-1.1**
LIMN	**Finca el Limon**	**1.94**	**149**	P	Pg	**04 34 55.8**	**-0.8**
LIMN				S	Sb	**04 35 20.0**	**+1.0**
UDBS	**Universidad Do**	**1.97**	**239**	S	Sg	**04 35 21.8**	**-1.0**
UTEC	**Universidad Te**	**2.02**	**240**	S	Sb	**04 35 22.3**	**+1.1**
SEMO	**Seminario San**	**2.04**	**240**	S	Sg	**04 35 23.5**	**-1.3**
UEES	**Universidad Ev**	**2.04**	**241**	P	Pg	**04 34 57.7**	**-0.9**
UEES				S	Sg	**04 35 23.8**	**-1.3**
CRIN	**San Cristobal**	**2.05**	**170**	P	Pg	**04 34 58.1**	**-0.5**
CRIN				S	Sb	**04 35 22.9**	**+0.9**
PANCS	**Alcalda de**	**2.05**	**237**	P	Pb	**04 34 55.8**	**-0.7**
PANCS				S	Sn	**04 35 19.4**	**+0.1**
PMON	**Piamonte**	**2.11**	**242**	P	Pb	**04 34 58.2**	**+0.6**
PMON				S	Sb	**04 35 25.0**	**+1.2**
CEDA	**San Andres**	**2.14**	**245**	S	Sb	**04 35 24.6**	**+0.1**
CEDA	**San Andres**	**2.14**	**245**	*eS*	Sg	**04 35 27.1**	**-0.9**
POLN	**Al Sur del Vol**	**2.15**	**164**	S	Sb	**04 35 26.3**	**+1.4**
HERN	**Volcan Telica**	**2.18**	**165**	P	Pb	**04 34 59.1**	**+0.3**
HERN				S	Sb	**04 35 26.3**	**+0.5**
UNIC	**Universidad Ca**	**2.21**	**251**	S	Sb	**04 35 27.4**	**+0.9**
JAYA	**Jayaque - finc**	**2.25**	**242**	P	Pb	**04 35 00.1**	**0.0**
JAYA				S	Sb	**04 35 28.5**	**+0.5**
JAYA	**Jayaque - finc**	**2.25**	**242**	*i* P	Pn	**04 34 57.9**	**+1.3**
MATN	**Matagalpa**	**2.30**	**141**	P	Pb	**04 35 00.1**	**-0.7**
MATN				S	Sb	**04 35 29.6**	**+0.4**
CEVE	**Cerro Verde**	**2.33**	**248**	P	Pb	**04 35 01.5**	**+0.1**
CEVE				S	Sg	**04 35 32.2**	**-2.1**
MOM3	**MOM3**	**2.37**	**159**	P	Pb	**04 35 02.0**	**0.0**
MOM3				S	Sb	**04 35 31.7**	**+0.5**
SLOZ	**Alcaldia de Sa**	**2.41**	**253**	P	Pb	**04 35 03.0**	**+0.3**
NUBE	**Las Nubes**	**2.44**	**251**	P	Pb	**04 35 03.1**	**-0.2**
NUBE				S	Sb	**04 35 33.7**	**+0.2**
NUBE	**Las Nubes**	**2.44**	**251**	*i* P	Pb	**04 35 02.9**	**-0.5**
FAME	**Alcaldia de Sa**	**2.68**	**251**	P	Pb	**04 35 07.1**	**-0.2**
FAME				S	Sb	**04 35 39.8**	**-0.3**
SIUN	**Universidad Ur**	**2.75**	**111**	P	Pb	**04 35 08.0**	**-0.4**
BOAB	**BOACO BROADBAN**	**2.83**	**143**	P	Pb	**04 35 07.9**	**-1.9**
BOAB				S	Sb	**04 35 43.0**	**-1.5**
APG	**El Apazote**	**2.97**	**276**	*i* P	Pb	**04 35 10.6**	**-1.8**
APG				*i* S	Sb	**04 35 48.7**	**0.0**

NEIC ***20*** *04:35:08.7±0.8, 17°.787N×0°.009×66°.88W±0°.01, h10km±2km, ML3.0/35, Md3.4/3(RSPR), Error ellipse: s-maj=3.2km s-min=2.2km az=358.0*
OSPL ***20*** *04:35:09.4±0.3, 17°.80N×66°.89W, h10km±3km, ML3.2, Presumed earthquake*
SDD ***20*** *04:35:09.4±1.9, 17°.85N×66°.88W, h20km±12km, MD3.3, ML2.7, MW3.1, Presumed earthquake*

ISC 20 04:35:09.9±1.1**, 17°.89N**±0°.07×**66°.87W**±0°.02**, h17**km±5km**, n30**, σ0°.73/44**, 11C-1D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.09**	**351**			**Pg**	**04 35 13.1**	**-0.1**
GBPR						**Sg**	**04 35 15.9**	**+0.5**
MLPR	**Magueyes Islan**	**0.19**	**295**			**Pg**	**04 35 14.0**	**-0.5**
MLPR				Sg		**Sg**	**04 35 17.3**	**-0.3**
MLPR				IAML			04 35 18.0	
	2µm,0.5s							
MLPR	**Magueyes Islan**	**0.19**	**295**	⇑*e*Pg		**Pg**	**04 35 14.1**	**-0.5**
MLPR				⇑*e*Sg		**Sg**	**04 35 17.1**	**-0.5**
MLPR				IAML			04 35 18.9	
	comp=N,372nm,0.1s							
CRPR	**Cabo Rojo, PR**	**0.26**	**296**			**Pg**	**04 35 15.1**	**-0.5**
CRPR				Sg		**Sg**	**04 35 19.3**	**-0.3**
CRPR				IAML			04 35 19.6	
	comp=N,2µm,0.5s							
CRPR	**Cabo Rojo, PR**	**0.26**	**296**	*i* P		**Pg**	**04 35 15.1**	**-0.5**
CRPR				*eS*		**Sg**	**04 35 19.0**	**-0.5**
CRPR				IAML			04 35 19.8	
	comp=Z,918nm,0.5s							
OBIP	**Obispado Ponce**	**0.29**	**58**			**Pg**	**04 35 16.1**	**-0.1**
OBIP	**Obispado Ponce**	**0.29**	**58**			**Sg**	**04 35 21.7**	**+1.2**
OBIP	**Obispado Ponce**	**0.29**	**58**	IAML			04 35 21.6	
	comp=N,222nm,0.8s							
OBIP	**Obispado Ponce**	**0.29**	**58**	*i* P		**Pg**	**04 35 16.0**	**-0.1**
OBIP				*eS*		**Sg**	**04 35 21.1**	**+0.7**
OBIP				IAML			04 35 21.9	
	comp=Z,3µm,0.1s							
CELP	**Cerrillos**	**0.33**	**56**			**Pb**	**04 35 16.8**	**-0.5**
CELP				Sg		**Sb**	**04 35 22.3**	**0.0**
CELP				IAML			04 35 23.0	
	comp=Z,1µm,0.5s							
LSP	**Las Mesas**	**0.35**	**324**			**Pg**	**04 35 17.1**	**-0.2**
LSP						**Sb**	**04 35 23.2**	**+0.1**
UUPR	**Utuado, UPR, P**	**0.39**	**21**			**Pb**	**04 35 17.7**	**-0.7**
UUPR				Sg		**Sb**	**04 35 23.7**	**-0.3**
PRSN	**Puerto Rico Se**	**0.42**	**321**			**Pg**	**04 35 18.1**	**-0.4**
PRSN	**Puerto Rico Se**	**0.42**	**321**	⇑*e*Pg		**Pg**	**04 35 18.1**	**-0.4**
PRSN				⇑*e*Sg		**Sb**	**04 35 24.3**	**-0.7**
PRSN				IAML			04 35 26.8	
	comp=N,1µm,0.2s							
AOPR	**Arecibo Observ**	**0.47**	**13**	IAML			04 35 28.5	
	comp=N,2µm,0.3s							
AOPR	**Arecibo Observ**	**0.47**	**13**	⇓*e*Pg		**Pb**	**04 35 19.1**	**-0.7**
AOPR				⇑*e*Sg		**Sb**	**04 35 25.6**	**-0.7**
AOPR				IAML			04 35 28.4	
	comp=N,1µm,0.2s							
AGPR	**Aguadilla, PR**	**0.62**	**338**			**Pg**	**04 35 21.6**	**-0.5**
AGPR				IAML			04 35 31.2	
	comp=N,496nm,0.5s							
AGPR	**Aguadilla, PR**	**0.62**	**338**	⇑*e*Pg		**Pg**	**04 35 21.6**	**-0.5**
AGPR				⇑*e*Sg		**Sb**	**04 35 29.8**	**-1.0**
AGPR				IAML			04 35 31.1	
	comp=N,364nm,0.6s							
ECPR	**Experimental S**	**0.64**	**48**			**Pg**	**04 35 21.7**	**-0.8**
ECPR				IAML			04 35 33.6	
	comp=N,578nm,0.2s							
ECPR				IAML			04 35 34.6	
	comp=N,771nm,0.2s							
EMPR	**Esperanza - Ma**	**0.67**	**29**			**Pb**	**04 35 22.9**	**-0.2**
EMPR						**Sb**	**04 35 32.2**	**+0.2**
SJG	**San Juan**	**0.72**	**72**			**Pg**	**04 35 23.0**	**-0.9**
SJG				IAML			04 35 37.5	
	comp=N,446nm,0.6s							
SJG	**San Juan**	**0.72**	**72**	*i* P		**Pg**	**04 35 23.1**	**-0.8**
SJG				*eS*		**Sb**	**04 35 33.3**	**-0.2**
SJG				IAML			04 35 36.1	
	comp=Z,10µm,0.3s							
IDE	**Isla Desecheo**	**0.76**	**311**			**Pg**	**04 35 23.8**	**-1.0**
PDPR	**Patillas Dam,**	**0.81**	**81**			**Pg**	**04 35 24.9**	**-0.8**
PDPR				IAML			04 35 39.0	
	comp=Z,417nm,0.7s							
HUMP	**Col San Antoni**	**1.00**	**75**			**Sb**	**04 35 41.6**	**-0.1**
HUMP	**Col San Antoni**	**1.00**	**75**			**Pg**	**04 35 27.6**	**-1.7**
HUMP				IAML			04 35 44.2	
	comp=Z,526nm,0.3s							
CUPR	**Culebra, Puert**	**1.56**	**74**	Pn		**Pn**	**04 35 37.3**	**+0.4**
HIDR	**Higuey Centro**	**1.89**	**292**	⇑*e*Pg		**Pn**	**04 35 41.4**	**0.0**
HIDR				⇑*e*Sg		**Sn**	**04 36 06.8**	**+1.8**
HIDR				IAML			04 36 20.9	
	comp=N,48nm,1.0s							
DR12	**Loma Pena Alta**	**2.55**	**291**	Pn		**Pn**	**04 35 51.7**	**+1.1**
HATOM	**Hato Mayor del**	**2.55**	**291**	⇑*e*Pg		**Pn**	**04 35 51.7**	**+1.1**
HATOM				⇑*e*Sg		**Sn**	**04 36 22.2**	**+0.9**
HATOM				IAML			04 36 29.5	
	comp=N,41nm,2.0s							

OSPL ***20*** *04:40:16.8±0.4, 17°.80N×66°.89W, h10km±4km, ML2.6, Presumed earthquake*
SDD ***20*** *04:40:17.6±1.6, 17°.92N×66°.92W, h23km±9km, MD3.0, ML2.2, MW2.7, Presumed earthquake*

ISC 20 04:40:16.0±1.4**, 17°.94N**±0°.10×**66°.92W**±0°.04**, h31**km±7km**,**

n8, σ0°.47/16, 8C-2D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MLPR	**Magueyes Islan**	**0.12**	**282**	⇑*e*Pg		**Pb**	**04 40 21.5**	**0.0**
MLPR				⇑*e*Sg		**Sb**	**04 40 24.8**	**-0.6**
MLPR				IAML			04 40 25.7	
	comp=N,141nm,0.2s							
CRPR	**Cabo Rojo, PR**	**0.19**	**289**	*i* P		**Pb**	**04 40 22.6**	**+0.4**
CRPR				*eS*		**Sb**	**04 40 26.4**	**0.0**
CRPR				IAML			04 40 27.0	
	comp=Z,306nm,0.3s							
OBIP	**Obispado Ponce**	**0.31**	**72**	*i* P		**Pb**	**04 40 23.4**	**-0.3**
OBIP				*eS*		**Sb**	**04 40 28.5**	**-0.4**
OBIP				IAML			04 40 30.1	
	comp=Z,636nm,0.1s							
PRSN	**Puerto Rico Se**	**0.35**	**322**	⇑*e*Pg		**Pn**	**04 40 25.6**	**+0.7**
PRSN				⇑*e*Sg		**Sn**	**04 40 31.1**	**+0.3**
PRSN				IAML			04 40 35.9	
	comp=N,370nm,0.2s							
AOPR	**Arecibo Observ**	**0.43**	**21**	⇓*e*Pg		**Pn**	**04 40 26.5**	**+0.4**
AOPR				⇓*e*Sg		**Sn**	**04 40 32.9**	**-0.1**
AOPR				IAML			04 40 35.9	
	comp=N,299nm,0.2s							
AGPR	**Aguadilla, PR**	**0.55**	**341**	⇑*e*Pg		**Pb**	**04 40 26.9**	**-0.4**
AGPR				⇑*e*Sg		**Sb**	**04 40 35.1**	**0.0**
AGPR				IAML			04 40 40.4	
	comp=N,85nm,0.4s							
SJG	**San Juan**	**0.75**	**77**	*i* P		**Pb**	**04 40 30.4**	**-0.1**
SJG				*eS*		**Sn**	**04 40 40.8**	**0.0**
SJG				IAML			04 40 43.5	
	comp=Z,1µm,0.2s							
HATOM	**Hato Mayor del**	**2.48**	**290**	⇑*e*Pg		**Pb**	**04 40 59.1**	**-0.9**
HATOM				⇑*e*Sg		**Sb**	**04 41 29.7**	**-0.5**
HATOM				IAML			04 42 09.7	
	comp=N,23nm,3.0s							

CNRM ***20*** *04:51:27.2, 36°.29N×7°.84W, h9km, ML3.3*
INMG ***20*** *04:51:33.7±1.5, 36°.63N×7°.22W, h18km±3km, ML1.6, Error ellipse: s-maj=3.7km s-min=2.3km az=44.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Golfo de Cadiz*
SFS ***20*** *04:51:33.7, 36°.64N×7°.16W, h31km, ML2.5/7, ML2.5/7, MLv2.5/7*
IGIL ***20*** *04:51:33.9, 36°.65N×7°.22W, h23km, ML1.5*
MDD ***20*** *04:51:34.5±0.5, 36°.66N×7°.19W, h37km±9km, mb_Lg2.2/9, Error ellipse: s-maj=5.1km s-min=2.7km az=20.0*

ISC 20 04:51:31.9±1.2**, 36°.62N**±0°.03×**7°.17W**±0°.02**, h27**km±12km**,**
n51, σ1°.17/94, 1D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EXAYA	**Ayamonte**	**0.63**	**342**	Pg		**Pn**	**04 51 45.4**	**+0.3**
EXAYA				Sg		**Sn**	**04 51 54.0**	**-0.4**
EXHU	**Huelva**	**0.68**	**16**	Pg		**Pn**	**04 51 46.6**	**+0.8**
EXHU				Sg		**Sn**	**04 51 55.9**	**+0.4**
PBDV	**Barranco-do-Ve**	**0.88**	**316**	P		**Pb**	**04 51 48.7**	**+0.2**
PBDV				S		**Sb**	**04 51 59.2**	**-0.6**
PBDV	**Barranco-do-Ve**	**0.88**	**316**	*e*P		**Pb**	**04 51 48.9**	**+0.4**
PBDV				*e*S		**Sb**	**04 51 59.6**	**-0.2**
PBDV				*i* IAML			04 52 00.9	
PBDV				*i* IAML			04 52 01.0	
PBDV				*i* IAML			04 52 02.2	
PVAQ	**Vaqueiros**	**0.90**	**331**	⇓*e*P		**Pb**	**04 51 49.2**	**+0.4**
PVAQ				*e*S		**Sn**	**04 52 00.6**	**-0.4**
PVAQ				*i* IAML			04 52 00.7	
PVAQ				*i* IAML			04 52 00.7	
PVAQ				*i* IAML			04 52 01.1	
PVAQ	**Vaqueiros**	**0.90**	**331**	P		**Pn**	**04 51 49.5**	**+0.7**
PVAQ				S		**Sn**	**04 52 02.6**	**+1.7**
EGRO	**El Granado**	**0.95**	**345**	P		**Pb**	**04 51 49.8**	**+0.1**
EGRO				S		**Sn**	**04 52 01.8**	**-0.4**
EGRO	**El Granado**	**0.95**	**345**	Pg		**Pn**	**04 51 50.0**	**+0.5**
EGRO				Sg		**Sn**	**04 52 02.0**	**-0.1**
EGRO				*i* IVmb_Lg			04 52 05.0	
ESPR	**Espera**	**1.08**	**76**	P		**Pn**	**04 51 52.1**	**+0.8**
ESPR				S		**Sb**	**04 52 05.4**	**-0.2**
ESPR	**Espera**	**1.08**	**76**	Pg		**Pn**	**04 51 52.1**	**+0.8**
ESPR				Sg		**Sb**	**04 52 05.8**	**+0.1**
ESPR				*i* IVmb_Lg			04 52 06.8	
EMIN	**Mina Concepcio**	**1.21**	**19**	P		**Pn**	**04 51 52.9**	**-0.2**
EMIN				S		**Sb**	**04 52 07.3**	**-2.2**
EMIN	**Mina Concepcio**	**1.21**	**19**	Pg		**Pb**	**04 51 54.2**	**0.0**
EMIN				Sg		**Sb**	**04 52 08.3**	**-1.2**
EMIN				*i* IVmb_Lg			04 52 10.9	
PCVE	**Castro Verde**	**1.23**	**326**	P		**Pn**	**04 51 54.1**	**+0.8**
PCVE				S		**Sn**	**04 52 08.6**	**-0.5**
PCVE	**Castro Verde**	**1.23**	**326**	*e*P		**Pn**	**04 51 54.3**	**+1.0**
PCVE				*e*S		**Sn**	**04 52 09.2**	**+0.1**
PCVE				*i* IAML			04 52 09.5	
PCVE				*i* IAML			04 52 10.2	
PCVE				*i* IAML			04 52 11.2	
MORF	**Marmelete**	**1.37**	**300**	*e*P		**Pn**	**04 51 55.6**	**+0.3**
MORF				*e*S		**Sn**	**04 52 11.5**	**-1.2**
MORF				IAML			04 52 12.9	
	comp=N,9.5nm,0.1s							
MORF	**Marmelete**	**1.37**	**300**	*e*P		**Pn**	**04 51 55.8**	**+0.4**
MORF				*e*S		**Sn**	**04 52 11.7**	**-1.0**
MORF				*i* IAML			04 52 12.3	
MORF				*i* IAML			04 52 12.3	
MORF				*i* IAML			04 52 13.5	
EJIF	**Jimena Fronter**	**1.38**	**96**	Pn		**Pn**	**04 51 57.0**	**+1.6**
EJIF				Sn		**Sn**	**04 52 14.0**	**+1.4**
PFVI	**Vila Bisbo**	**1.43**	**292**	P		**Pn**	**04 51 55.7**	**-0.3**
PFVI				S		**Sn**	**04 52 13.3**	**-0.7**
PFVI	**Vila Bisbo**	**1.43**	**292**	*e*S		**Sn**	**04 52 13.8**	**-0.1**
PFVI				*i* IAML			04 52 18.3	
PFVI				*i* IAML			04 52 20.9	
PFVI				*i* IAML			04 52 24.5	
MESJ	**Messejana**	**1.48**	**326**	*e*P		**Pn**	**04 51 57.3**	**+0.6**
MESJ				*e*S		**Sn**	**04 52 14.3**	**-0.9**
MESJ				IAML			04 52 15.2	
	comp=N,3.3nm,0.2s							
MESJ	**Messejana**	**1.48**	**326**	*e*P		**Pn**	**04 51 57.4**	**+0.6**
MESJ				*e*S		**Sn**	**04 52 15.7**	**+0.4**
MESJ				*i* IAML			04 52 18.2	
MESJ				*i* IAML			04 52 18.9	
MESJ				*i* IAML			04 52 21.1	
PBEJ	**Beja**	**1.51**	**339**	*e*S		**Sn**	**04 52 16.4**	**+0.4**
PTEO	**Sao Teotonio**	**1.55**	**307**	*e*P		**Pn**	**04 51 58.6**	**+0.8**
PTEO				*e*S		**Sn**	**04 52 16.3**	**-0.7**
PTEO				*i* IAML			04 52 17.6	
PTEO				*i* IAML			04 52 17.8	
PTEO				*i* IAML			04 52 19.6	
PBAR	**Barrancos**	**1.56**	**4**	P		**Pn**	**04 51 58.4**	**+0.6**
PBAR				S		**Sn**	**04 52 16.1**	**-1.0**
PBAR	**Barrancos**	**1.56**	**4**	*e*P		**Pn**	**04 51 58.5**	**+0.6**
PBAR				*e*S		**Sn**	**04 52 17.0**	**-0.2**
PBAR				*i* IAML			04 52 20.4	
PBAR				*i* IAML			04 52 21.2	
PBAR				*i* IAML			04 52 25.3	
E1302	**La Puebla de C**	**1.62**	**71**	Pn		**Pn**	**04 52 00.4**	**+1.6**
E1302				Sn		**Sn**	**04 52 20.0**	**+1.2**
E1302				*i* IVmb_Lg			04 52 20.5	
ECAB	**El Cabril**	**2.01**	**43**	P		**Pn**	**04 52 03.6**	**-0.5**
ECAB				S		**Sn**	**04 52 26.7**	**-1.8**
ECAB	**El Cabril**	**2.01**	**43**	Pn		**Pn**	**04 52 04.8**	**+0.6**
ECAB				Sn		**Sn**	**04 52 27.4**	**-1.1**
ECAB				*i* IVmb_Lg			04 52 35.1	
EVO	**Evora**	**2.03**	**341**	P		**Pn**	**04 52 04.9**	**+0.7**
EVO				S		**Sn**	**04 52 28.2**	**-0.5**
EVO	**Evora**	**2.03**	**341**	*e*P		**Pn**	**04 52 05.0**	**+0.7**
EVO				*e*S		**Sn**	**04 52 28.6**	**-0.2**
MOE	**Montemor**	**2.12**	**334**	*e*P		**Pn**	**04 52 06.4**	**+0.8**
MOE				*e*S		**Sn**	**04 52 31.3**	**+0.2**
MOE				*i* IAML			04 52 31.9	
MOE				*i* IAML			04 52 32.1	
MOE				*i* IAML			04 52 33.4	
PESTR	**Estremoz**	**2.27**	**352**	*e*S		**Sn**	**04 52 34.7**	**-0.1**
PESTR	**Estremoz**	**2.27**	**352**	P		**Pn**	**04 52 09.8**	**+2.2**
PESTR				S		**Sb**	**04 52 42.2**	**+2.4**
PARRA	**Arraiolos**	**2.30**	**343**	*e*P		**Pn**	**04 52 08.8**	**+0.7**
PARRA				*e*S		**Sn**	**04 52 35.1**	**-0.4**
PARRA				*i* IAML			04 52 35.7	
PARRA				*i* IAML			04 52 38.8	
PARRA				*i* IAML			04 52 40.2	
EADA	**Adamuz**	**2.58**	**52**	Pn		**Pn**	**04 52 12.7**	**+0.8**
EADA				Sn		**Sn**	**04 52 41.6**	**-0.7**
EADA				*i* IVmb_Lg			04 52 44.0	
PMTG	**Montargil**	**2.59**	**341**	*e*P		**Pn**	**04 52 12.7**	**+0.8**
PMTG				*e*S		**Sn**	**04 52 42.6**	**+0.1**
PMTG				*i* IAML			04 52 44.0	
PMTG				*i* IAML			04 52 44.1	
PMTG				*i* IAML			04 52 45.4	
PMRV	**Marv??o**	**2.81**	**356**	*e*P		**Pn**	**04 52 15.6**	**+0.5**
PMRV				*e*S		**Sn**	**04 52 47.6**	**-0.6**
PMRV				*i* IAML			04 52 48.0	
PMRV				*i* IAML			04 52 48.4	
PMRV				*i* IAML			04 52 48.5	
PMAFR	**Mafra**	**2.87**	**325**	*e*P		**Pn**	**04 52 17.6**	**+1.7**
PMAFR				*e*S		**Sn**	**04 52 49.6**	**0.0**
PSARD	**Sardoal**	**3.08**	**346**	*e*P		**Pn**	**04 52 19.4**	**+0.7**
PSARD				*e*S		**Sn**	**04 52 53.6**	**-1.1**
PSARD				*i* IAML			04 52 54.9	
PSARD				*i* IAML			04 52 55.3	
PSARD				*i* IAML			04 52 57.6	
PCBR	**Castelo Branco**	**3.23**	**356**	*e*P		**Pn**	**04 52 21.4**	**+0.6**
PCBR				*e*S		**Sn**	**04 52 57.4**	**-0.9**
PCBR				*i* IAML			04 52 57.9	
PCBR				*i* IAML			04 52 57.9	
PCBR				*i* IAML			04 52 58.0	
AKLM	**AKL**	**3.42**	**127**	P		**Pn**	**04 52 21.6**	**-1.8**
AKLM				S		**Sn**	**04 53 07.0**	**+3.9**
EQES	**Quesada**	**3.48**	**69**	Pn		**Pn**	**04 52 26.1**	**+1.8**
EQES				Sn		**Sn**	**04 53 04.3**	**-0.3**
EQES				*i* IVmb_Lg			04 53 05.3	
PSIM	**Granatula de C**	**3.48**	**50**	Pn		**Pn**	**04 52 25.3**	**+1.0**
PSIM				Sn		**Sn**	**04 53 01.6**	**-3.2**
PCAS	**Casmilo, Conde**	**3.59**	**343**	*eS*		**Sn**	**04 53 07.4**	**+0.2**
PAB	**San Pablo**	**3.67**	**36**	Pn		**Pn**	**04 52 28.2**	**+1.2**
PAB				Sn		**Sn**	**04 53 05.2**	**-4.3**
PAB				*i* IVmb_Lg			04 53 05.5	
MTE	**Manteigas**	**3.79**	**356**	*e*P		**Pn**	**04 52 30.0**	**+1.4**
MTE				*e*S		**Sn**	**04 53 10.9**	**-1.3**
MTE				*i* IAML			04 53 11.3	
MTE				*i* IAML			04 53 12.3	
MD31	**MD31**	**4.23**	**151**	P		**Pn**	**04 52 33.2**	**-1.6**
MD31				S		**Sn**	**04 53 22.2**	**-1.1**
MDT	**Midelt**	**4.34**	**150**	P		**Pn**	**04 52 35.2**	**-1.0**
MDT				S		**Sn**	**04 53 26.5**	**+0.6**
MVO	**Moncorvo**	**4.54**	**1**	*e*P		**Pn**	**04 52 39.5**	**+0.6**
MVO				*e*S		**Sn**	**04 53 28.9**	**-2.0**
MVO				*i* IAML			04 53 29.4	
MVO				*i* IAML			04 53 29.7	
MVO				*i* IAML			04 53 32.1	
TIO	**Tiouine**	**5.68**	**181**	P		Pn	04 52 48.6	-6.0
TIO				S		Sn	04 53 50.0	-9.0
OUZM	**OUZ**	**5.70**	**176**	P		Pn	04 52 50.7	-4.3
OUZM				S		Sn	04 53 54.2	-5.4

NEIC ***20*** *04:57:18.8±1.7, 20°.9S±0°.2×177°.9W±0°.2, h499km±2km, mb4.0/22, Error ellipse: s-maj=25.9km s-min=16.3km az=142.0*
IDC ***20*** *04:57:20.8±2.2, 20°.84S×178°.06W, h524km±23km, mb3.4/10, mbtmp4.1/11, Error ellipse: s-maj=24.1km s-min=16.5km az=143.0*

ISC 20 04:57:18.2±0.6**, 20°.9S**±0°.1×**177°.9W**±0°.1**, h495**km**, n46,**
σ1°11/44, mb4.0/21, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.97**	**309**	P		**P**	**04 58 47.6**	**+2.8**
	8.4nm,0.5s,baz=248,slow=21,SNR=5.5							
AFI	**Afiamalu**	**9.09**	**41**	P		**P**	**04 59 24.5**	**-1.6**
	43nm,0.4s,baz=222,slow=6.0,SNR=4.5							
AFI				S		S	05 01 01.8	-9.3
	44nm,0.5s,baz=135,slow=18,SNR=6.4							
EIDS	**Eidsvold**	**28.83**	**255**	P		**P**	**05 02 35.9**	**+0.1**
ARMA	**Armidale**	**28.98**	**245**	P		**P**	**05 02 38.4**	**+1.3**
CTAO	**Charters Tower**	**33.55**	**265**	P		**P**	**05 03 16.2**	**-0.2**
MGBR	**Mount Gambier**	**39.54**	**236**	P		**P**	**05 04 05.3**	**-0.4**
BBOO	**Buckleboo**	**42.45**	**244**	P		**P**	**05 04 28.7**	**-0.3**
BBOO				IAmb		IAmb	05 04 51.3	
	comp=Z,14nm,1.1s							
WR8	**Warramunga Arr**	**44.49**	**262**	P		**P**	**05 04 43.9**	**-1.2**
WR8				IAmb		IAmb	05 04 45.4	
	comp=Z,9.7nm,1.2s							
AS31	**Alice Springs**	**44.52**	**257**	P		**P**	**05 04 44.8**	**-0.5**
ASAR	**Alice Springs**	**44.52**	**257**	P		**P**	**05 04 44.5**	**-0.8**
	comp=Z,3.7nm,0.7s,baz=96,slow=7.9,SNR=38							
ASAR				PcP		**PcP**	**05 06 17.5**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=100,slow=3.6,SNR=6.8							
	comp=Z,3.7nm,0.7s							
ASAR	**Alice Springs**	**44.52**	**257**	P		**P**	**05 04 44.1**	**-1.3**
WRA	**Warramunga Arr**	**44.64**	**262**	P		**P**	**05 04 45.2**	**-1.1**

TORD Torodi Ar. Bea 172.26 177 PKP **PKPdf** **05 16 28.9 -1.7**
comp=Z,0.5nm,0.7s,baz=196,slow=3.6,SNR=3.1

MOS ***20*** *05:02:07.2±1.0,3˚.47N×126˚.22E,h70km,mb4.9/30,Error ellipse: s-maj=10.0km s-min=5.2km az=115.3*
NEIC ***20*** *05:02:08.6±2.4,3˚.40N±0˚.08×126˚.47E±0˚.08,h63km±7km, mb4.9/69,Error ellipse: s-maj=12.8km s-min=10.1km az=46.0*
DJA ***20*** *05:02:08.1±0.4,3˚N±3˚×12˚.7E±˚,h31km±8km,M5.0/37, mB5.5/24,mb5.1/37,MLv5.0/25,Mw(mB)5.0/24*
IDC ***20*** *05:02:08.2±1.3,3˚.47N×126˚.34E,h67km±11km,mb4.2/31, mbtmp4.5/35,MS3.6/32,Error ellipse: s-maj=18.0km s-min=8.0km az=73.0*
MAN ***20*** *05:02:10.0,3˚.63N×126˚.19E,h28km,MS4.6*
ISC 20 05:02:08.1±0.4,3˚.40N±0˚.03×126˚.41E±0˚.04,h64km±3km, h65km:pP-P,n361,σ1§58/370,mb4.8/110,15C-1D,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SGSI	**Sangihe**	**0.92**	**288**	P		**Pn**	**05 02 24.7**	**-0.6**
SGSI				S		**Sn**	**05 02 37.6**	**-0.4**
GAMI	**Galela, Maluku**	**2.08**	**138**	P		**Pn**	**05 02 39.6**	**-1.1**
GAMI				S		**Sn**	**05 03 03.8**	**-1.8**
MNI	**Manado**	**2.49**	**219**	P		**Pn**	**05 02 47.8**	**+1.4**
DDMP	**Don Marcelino,**	**2.77**	**346**	*e*P		**Pn**	**05 02 48.7**	**-1.5**
DDMP				*e*S		**Sn**	**05 03 19.2**	**-3.3**
TNTI	**Ternate**	**2.78**	**160**	P		**Pn**	**05 02 49.8**	**-0.5**
TNTI	**Ternate**	**2.78**	**160**			**Pn**	**05 02 50.3**	**-0.1**
TNTI	**Ternate**	**2.78**	**160**	P		**Pn**	**05 02 50.2**	**-0.1**
GSPH	**General Santos**	**3.04**	**332**	*i* P		**Pn**	**05 02 53.8**	**-0.1**
GSPH				*i* S		**Sn**	**05 03 25.9**	**-3.2**
DAV	**Davao City (W)**	**3.74**	**347**	P		**Pn**	**05 03 03.0**	**-0.3**
	382nm,0.4s,baz=106,slow=5.0,SNR=2.4							
DAV				S		**Sn**	**05 03 44.1**	**-2.0**
	412nm,0.4s,baz=127,slow=22,SNR=3.9							
DAV				LR		LR	05 04 40.4	
	comp=Z,654nm,18.2s,baz=161,slow=42							
DAV	**Davao City (W)**	**3.74**	**347**	P		**Pn**	**05 03 02.5**	**-0.9**
DMPH	**Davao City--Mi**	**3.77**	**346**	*e*P		**Pn**	**05 03 04.5**	**+0.7**
DMPH				*i* S		**Sn**	**05 03 44.8**	**-2.1**
CDOP	**Cateel, Davao**	**4.36**	**0**	*i* P		**Pn**	**05 03 12.4**	**+0.6**
CDOP				*i* S		**Sn**	**05 04 00.0**	**-1.2**
GTOI	**Gorontalo**	**4.36**	**231**	P		**Pn**	**05 03 13.4**	**+1.5**
BUKP	**Musuan**	**4.64**	**343**	*e*P		**Pn**	**05 03 16.9**	**+1.1**
BUKP				*e*S		**Sn**	**05 04 03.5**	**-5.0**
BIPH	**Bislig**	**4.75**	**359**	*e*P		Pn	05 03 21.6	+4.4
BIPH				*e*S		**Sn**	**05 04 14.0**	**+3.0**
CGP	**Cagayan de Oro**	**5.30**	**341**	*e*P		**Pn**	**05 03 27.3**	**+2.5**
CGP				*e*S		**Sn**	**05 04 24.7**	**+0.1**
MRSI	**Marisa**	**5.32**	**237**	P		**Pn**	**05 03 27.5**	**+2.4**
MRSI				S		**Sn**	**05 04 25.1**	**0.0**
SANI	**Sanana**	**5.43**	**184**	P		**Pn**	**05 03 25.7**	**-0.8**
SANI	**Sanana**	**5.43**	**184**	P		**Pn**	**05 03 25.4**	**-1.1**
ZCP	**Zamboanga City**	**5.56**	**309**	*e*P		**Pn**	**05 03 28.7**	**+0.4**
ZCP				*e*S		**Sn**	**05 04 28.1**	**-2.8**
TSSP	**Tandag City**	**5.61**	**358**	*e*P		**Pn**	**05 03 29.4**	**+0.5**
LUWI	**Luwuk**	**5.71**	**220**	P		**Pn**	**05 03 34.3**	**+3.9**
LUWI	**Luwuk**	**5.71**	**220**			**Pn**	**05 03 33.2**	**+2.8**
LUWI	**Luwuk**	**5.71**	**220**	P		**Pn**	**05 03 34.9**	**+4.5**
DCPH	**Dipolog City**	**5.98**	**330**	*e*P		Pn	05 03 22.1	-12
TOLI2	**Tolitoli**	**6.06**	**248**	P		**Pn**	**05 03 35.9**	**+0.7**
TOLI2	**Tolitoli**	**6.06**	**248**			**Pn**	**05 03 35.3**	**+0.1**
APSI	**Ampana**	**6.40**	**228**	P		Pn	05 03 45.0	+5.2
SWI	**Sorong**	**6.44**	**131**	P		**Pn**	**05 03 40.9**	**+0.5**
	0.3nm82nm,0.7s							
SIJI	**Sorong**	**6.45**	**131**	P		**Pn**	**05 03 41.4**	**+0.9**
	36nm,0.3s,baz=277,slow=21,SNR=16							
SIJI				S		**Sn**	**05 04 50.1**	**-2.7**
	15nm,0.4s,baz=102,slow=20,SNR=3.6							
SIJI	**Sorong**	**6.45**	**131**	P		**Pn**	**05 03 41.2**	**+0.7**
	47nm,0.4s							
NLAI	**Namlea**	**6.63**	**174**	P		**Pn**	**05 03 42.9**	**-0.1**
	1.0nm2μm85nm,0.6s							
TBP	**Tagbilaran**	**6.74**	**338**	*e*P		Pn	05 03 48.1	+3.7
KRAI	**Karang Ratu**	**6.96**	**163**	P		**Pn**	**05 03 48.5**	**+0.9**
MPSI	**Mapaga**	**7.18**	**245**	P		**Pn**	**05 03 52.2**	**+1.7**
	0.3nm2μm54nm,0.7s							
PCI	**Palu**	**7.84**	**237**	P		**Pn**	**05 04 01.2**	**+1.7**
	0.6nm82nm,0.7s							
MYLDM	**Lahad Datu**	**8.08**	**283**	P		Pn	05 04 06.5	+3.7
MYLDM	**Lahad Datu**	**8.08**	**283**			**Pn**	**05 04 06.0**	**+3.3**
MYLDM	**Lahad Datu**	**8.08**	**283**	P		Pn	05 04 06.4	+3.7
	154nm,0.9s							
FAKI	**Fak Fak**	**8.57**	**137**	Pn		**Pn**	**05 04 09.2**	**-0.4**
FAKI	**Fak Fak**	**8.57**	**137**	P		**Pn**	**05 04 09.6**	**0.0**
RCP	**Roxas**	**8.88**	**336**	*e*P		**Pn**	**05 04 15.0**	**+1.2**
RKPI	**Ransiki, Papua**	**9.17**	**122**	P		**Pn**	**05 04 19.2**	**+1.4**
	60nm,1.1s							
TTSI	**Tana Toraja**	**9.18**	**226**	P		**Pn**	**05 04 21.6**	**+3.7**
	2μm168nm,1.0s							
MMSI	**Mamuju**	**9.63**	**231**	P		**Pn**	**05 04 25.5**	**+1.5**
	57nm,0.7s							
SPSI	**Sidrap Palu**	**9.87**	**222**	P		**Pn**	**05 04 30.5**	**+3.1**
	2μm49nm,0.8s							
KKM	**Kota Kinabalu**	**10.49**	**285**	P		**Pn**	**05 04 39.1**	**+3.2**
KKM	**Kota Kinabalu**	**10.49**	**285**			**Pn**	**05 04 37.6**	**+1.8**
KAPI	**Kappang**	**10.68**	**219**	P		**Pn**	**05 04 39.7**	**+1.4**
	8.7nm,0.5s,baz=14,slow=12,SNR=4.4							
KAPI				LR		LR	05 09 15.1	
	comp=Z,458nm,20.9s,baz=44,slow=40							
KAPI	**Kappang**	**10.68**	**219**	Pn		**Pn**	**05 04 40.7**	**+2.3**
KAPI	**Kappang**	**10.68**	**219**	P		**Pn**	**05 04 40.7**	**+2.3**
BAKI	**Biak**	**10.72**	**115**	P		**Pn**	**05 04 40.5**	**+1.6**
	2μm119nm,1.7s							
TGY	**Tagaytay City**	**11.93**	**333**	LR		LR	05 09 56.6	
	comp=Z,479nm,20.9s,baz=122,slow=40							
EDFI	**Ende, Flores**	**12.95**	**201**	P		**Pn**	**05 05 11.9**	**+2.4**
	29nm,0.7s							
SOEI	**Soe**	**13.24**	**189**	P		**P**	**05 05 18.3**	**-2.8**
	37nm,0.7s							
SBUM	**Sibu**	**14.20**	**267**	P		**P**	**05 05 31.0**	**-0.6**
SBUM	**Sibu**	**14.20**	**267**			**P**	**05 05 27.8**	**-3.8**
DBNI	**Kabupaten Dompu**	**14.31**	**214**	P		**P**	**05 05 31.8**	**-1.1**
WBSI	**Waikabubak, Su**	**14.72**	**208**	P		**P**	**05 05 37.3**	**-0.2**
	1μm133nm,0.8s							
PLAI	**Plampang**	**14.88**	**215**	P		**P**	**05 05 39.4**	**+0.1**
PLAI	**Plampang**	**14.88**	**215**	P		**P**	**05 05 36.9**	**-2.4**
	70nm,0.9s							
GENI	**Genyem**	**14.99**	**113**	P		**Pn**	**05 05 38.7**	**+2.3**
TWSI	**Taliwang, Sumb**	**15.35**	**218**	P		**P**	**05 05 44.2**	**-0.2**
	55nm,0.6s							
JAY	**Jayapura**	**15.45**	**112**	P		**Pn**	**05 05 44.9**	**+2.5**
	102nm,0.8s,baz=280,slow=4.5,SNR=22							
JAY	**Jayapura**	**15.45**	**112**	P		**Pn**	**05 05 44.4**	**+2.0**
	961nm105nm,0.8s							
KLNI	**Mataram**	**15.61**	**221**	P		**P**	**05 05 46.4**	**-0.9**
	4μm51nm,0.5s							
KHKI	**Kahang-Kahang**	**15.89**	**223**	P		**P**	**05 05 52.5**	**+2.1**
	57nm,1.0s							
SRBI	**Singaraja**	**15.96**	**224**	P		**P**	**05 05 52.3**	**+1.1**
	67nm,0.8s							
DRS	**Darwin Rock St**	**16.35**	**164**	P		**Pn**	**05 05 51.7**	**-2.0**
MTN	**Manton Dam**	**16.81**	**164**	P		**Pn**	**05 05 56.9**	**-2.5**
	comp=Z,30nm,0.5s							
MTN	**Manton Dam**	**16.81**	**164**			**Pn**	**05 05 57.1**	**-2.2**
JAGI	**Jajag, Banyuwa**	**16.98**	**226**	P		**P**	**05 06 04.9**	**+2.4**
JAGI	**Jajag, Banyuwa**	**16.98**	**226**			**P**	**05 06 04.0**	**+1.4**
JAGI					IAmb	IAmb	05 06 08.3	
	comp=Z,41nm,0.7s							
KDU	**Kakadu**	**17.08**	**159**	P		**Pn**	**05 06 01.7**	**-1.1**
	comp=Z,12nm,0.6s							
KNRA	**Kununurra**	**19.10**	**173**	P		**P**	**05 06 25.6**	**-0.2**
	comp=Z,71nm,0.8s							
KNRA	**Kununurra**	**19.10**	**173**			**P**	**05 06 25.9**	**+0.2**
KNRA					IAmb	IAmb	05 06 28.6	
	comp=Z,45nm,0.8s							
UGM	**Wanagama**	**19.43**	**235**	P		**Pn**	**05 06 34.3**	**+3.1**
TWGBT	**Beinan**	**19.98**	**345**	P		**P**	**05 06 31.9**	**-3.5**
YULB	**Yu-li**	**20.48**	**346**	P		**P**	**05 06 37.1**	**-3.7**
GUMO	**Guam**	**20.86**	**60**	LR		LR	05 13 36.5	
	comp=Z,107nm,21.6s,baz=186,slow=33							
SSLB	**Suanglung**	**20.94**	**346**	P		**P**	**05 06 43.1**	**-2.7**
NACB	**Ninganchiao**	**21.17**	**348**	P		**P**	**05 06 44.9**	**-3.3**
LEM	**Lembang**	**21.33**	**242**	P		**P**	**05 06 50.6**	**+0.4**
	comp=Z,16nm,0.4s,baz=77,slow=13,SNR=1.7							
LEM				LR		LR	05 16 52.6	
	comp=Z,200nm,18.1s,baz=12,slow=42							
	comp=Z,16nm,0.4s							
FITZ	**Fitzroy Crossi**	**21.38**	**182**	P		**P**	**05 06 50.6**	**+0.2**
	comp=Z,6.0nm,0.6s,baz=16,slow=10,SNR=19							
FITZ				S		**S**	**05 10 39.0**	**-5.4**
	comp=Z,1.9nm,0.5s,baz=78,slow=6.5,SNR=3.3							
	comp=Z,6.0nm,0.6s							
BBJI	**Bungbulang**	**21.60**	**240**	P		**P**	**05 06 56.6**	**+3.6**
BBJI	**Bungbulang**	**21.60**	**240**			**P**	**05 06 52.6**	**-0.4**
YHNB	**Yeheng**	**21.70**	**348**	P		**P**	**05 06 51.4**	**-2.5**
QIZ	**Qiongzhong**	**22.44**	**315**	P		**P**	**05 07 01.4**	**-0.5**
QIZ				S		**S**	**05 11 05.4**	**+1.3**
QIZ				LR		LR		
	comp=N,160nm,9.9s							
QIZ				LR		LR		
	comp=E,130nm,8.7s							
QIZ				LR		LR		
	comp=Z,200nm,20.4s							
MYKOM	**Kota Tinggi**	**22.59**	**267**	P		**P**	**05 07 03.1**	**-0.5**
MYKOM					IAmb	IAmb	05 07 11.3	
	comp=Z,73nm,1.8s							
JOW	**Kunigami**	**23.37**	**4**	P		**P**	**05 07 11.4**	**+0.3**
JOW					IAmb	IAmb	05 07 27.9	
	comp=Z,28nm,0.8s							
COEN	**Coen**	**23.96**	**136**	P		**P**	**05 07 15.8**	**-0.9**
PMG	**Port Moresby**	**24.28**	**122**	LR		LR	05 16 57.8	
	comp=Z,288nm,21.8s,baz=302,slow=36							
WB0	**Warramunga Arr**	**24.32**	**161**	P		**P**	**05 07 19.5**	**-0.5**
WRAB	**Tennant Creek**	**24.47**	**162**	P		**P**	**05 07 21.2**	**0.0**
WRAB	**Tennant Creek**	**24.47**	**162**	P		**P**	**05 07 20.9**	**-0.3**
WRAB					IAmb	IAmb	05 07 22.6	
	comp=Z,33nm,0.6s							
WRAB	**Tennant Creek**	**24.47**	**162**	*c* *i* P		**P**	**05 07 21.6**	**+0.4**
WRAB					pmax	pmax		
	comp=Z,74nm,1.7s							
WRA	**Warramunga Arr**	**24.47**	**162**	P		**P**	**05 07 21.0**	**-0.3**
	comp=Z,20nm,0.5s,baz=334,slow=11,SNR=98							
WRA					PcP	**PcP**	**05 10 58.5**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=334,slow=2.4,SNR=2.5							
WRA					S	**S**	**05 11 35.8**	**-1.5**
	comp=Z,3.0nm,0.8s,baz=332,slow=22,SNR=4.5							
	comp=Z,20nm,0.5s							
WRA	**Warramunga Arr**	**24.47**	**162**	P		**P**	**05 07 20.0**	**-1.3**
WRA	**Warramunga Arr**	**24.47**	**162**	P		**P**	**05 07 20.0**	**-1.3**
WB2	**Warramunga Arr**	**24.48**	**162**	P		**P**	**05 07 21.2**	**-0.1**
	comp=Z,68nm,0.7s							
WB1	**Warramunga Ar.**	**24.49**	**162**	P		**P**	**05 07 21.4**	**-0.1**
WR8	**Warramunga Arr**	**24.54**	**161**	P		**P**	**05 07 21.9**	**0.0**
	comp=Z,41nm,0.8s							
WR8	**Warramunga Arr**	**24.54**	**161**	P		**P**	**05 07 21.4**	**-0.5**
WR8					IAmb	IAmb	05 07 22.8	
	comp=Z,29nm,0.6s							
MBWA	**Marble Bar**	**25.27**	**195**	P		**P**	**05 07 29.9**	**+1.4**
	comp=Z,23nm,0.9s							
MBWA	**Marble Bar**	**25.27**	**195**	P		**P**	**05 07 29.9**	**+1.4**
PSAC1	**Pilbara Seismi**	**25.61**	**194**	P		**P**	**05 07 33.0**	**+1.4**
	comp=Z,41nm,0.9s							
PSAC2	**Pilbara Seismi**	**25.61**	**194**	P		**P**	**05 07 33.2**	**+1.6**
	comp=Z,24nm,0.6s							
PSA00	**Pilbara Seismi**	**25.64**	**194**	P		**P**	**05 07 32.8**	**+1.0**
	comp=Z,24nm,0.6s							
PSA00	**Pilbara Seismi**	**25.64**	**194**	P		**P**	**05 07 33.2**	**+1.4**
PSA00	**Pilbara Seismi**	**25.64**	**194**	P		**P**	**05 07 32.9**	**+1.0**
PSA00	**Pilbara Seismi**	**25.64**	**194**	P		**P**	**05 07 32.8**	**+1.0**
PSA00					IAmb	IAmb	05 07 34.9	
	comp=Z,15nm,0.9s							
PSAB3	**Pilbara Seismi**	**25.66**	**194**	P		**P**	**05 07 33.1**	**+1.1**
	comp=Z,30nm,0.9s							
KULM	**Kulim**	**25.75**	**275**	P		**P**	**05 07 34.5**	**+1.5**
KULM	**Kulim**	**25.75**	**275**	P		**P**	**05 07 33.5**	**+0.5**
KULM					IAmb	IAmb	05 07 39.8	
	comp=Z,41nm,1.0s							
QIS	**Mount Isa**	**27.11**	**152**	P		**P**	**05 07 45.8**	**+0.7**
	comp=Z,23nm,0.8s							
QIS	**Mount Isa**	**27.11**	**152**	P		**P**	**05 07 45.3**	**+0.2**
AS31	**Alice Springs**	**27.88**	**165**	P		**P**	**05 07 51.9**	**-0.1**
ASAR	**Alice Springs**	**27.88**	**165**	P		**P**	**05 07 52.0**	**0.0**
	comp=Z,4.5nm,0.5s,baz=347,slow=7.4,SNR=78							
ASAR					PcP	**PcP**	**05 11 07.4**	**+0.7**
	comp=Z,1.4nm,0.6s,baz=348,slow=3.0,SNR=4.1							
ASAR					S	**S**	**05 12 29.1**	**-2.1**
	comp=Z,0.9nm,0.9s,baz=355,slow=29,SNR=2.5							
ASAR					ScP	**ScP**	**05 14 41.1**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=327,slow=3.2,SNR=3.0							
	comp=Z,4.5nm,0.5s							
ASAR	**Alice Springs**	**27.88**	**165**	P		**P**	**05 07 52.4**	**+0.4**
JCJ	**Chichijima**	**27.98**	**31**	LR		LR	05 17 05.3	
	comp=Z,62nm,20.6s,baz=123,slow=32							
WRKA	**Warakurna**	**28.33**	**176**	P		**P**	**05 07 56.8**	**+0.8**
	comp=Z,7.3nm,0.6s							
NJ2	**Nanjing**	**29.37**	**347**	*e*P		**P**	**05 08 07.1**	**+1.9**
NJ2					pmax	pmax		
	comp=Z,18nm,0.6s							
CTA	**Charters Tower**	**30.41**	**141**	LR		LR	05 21 19.6	
	comp=Z,103nm,18.8s,baz=244,slow=38							
CMAR	**Chiang Mai Arr**	**30.76**	**301**	P		**P**	**05 08 17.8**	**+0.1**
	comp=Z,2.9nm,0.5s,baz=113,slow=7.3,SNR=21							
CMAR					ScP	**ScP**	**05 14 50.5**	**-0.9**
	comp=Z,0.9nm,0.3s,baz=158,slow=1.5,SNR=11							
CMAR					LR	LR	05 22 40.1	
	comp=Z,57nm,18.3s,baz=105,slow=40							
	comp=Z,2.9nm,0.5s							
MEEK	**Meekatharra**	**30.80**	**194**	P		**P**	**05 08 19.3**	**+1.4**
	comp=Z,17nm,0.7s							
MEEK	**Meekatharra**	**30.80**	**194**	P		**P**	**05 08 19.0**	**+1.1**
CHTO	**Chiang Mai**	**30.91**	**302**	P		**P**	**05 08 19.0**	**0.0**
CHTO	**Chiang Mai**	**30.91**	**302**	P		**P**	**05 08 19.0**	**0.0**
CHTO					pmax	pmax		
	comp=Z,6.0nm,0.7s							
CHTO	**Chiang Mai**	**30.91**	**302**	P		**P**	**05 08 19.3**	**+0.3**
CHTO					pP	**pP**	**05 08 34.5**	**+0.5**
PZH	**PanZhiHua**	**32.95**	**317**	P		**P**	**05 08 39.5**	**+2.5**
MORW	**Morawa**	**33.78**	**196**	P		**P**	**05 08 45.9**	**+1.9**
MORW	**Morawa**	**33.78**	**196**	P		**P**	**05 08 45.3**	**+1.4**
KSRS	**Korea Array**	**33.92**	**2**	P		**P**	**05 08 45.7**	**+0.7**
	comp=Z,2.2nm,0.4s,baz=188,slow=10.0,SNR=9.6							
	comp=Z,2.2nm,0.4s							
FORT	**Forrest**	**34.02**	**177**	P		**P**	**05 08 47.0**	**+0.9**
	comp=Z,19nm,0.7s							
FORT	**Forrest**	**34.02**	**177**	P		**P**	**05 08 46.5**	**+0.4**
FORT					IAmb	IAmb	05 08 48.0	
	comp=Z,11nm,0.6s							
QLP	**Quilpie**	**34.43**	**151**	P		**P**	**05 08 49.9**	**+0.3**
	comp=Z,23nm,0.8s							
CD2	**Chengdu**	**34.72**	**324**	P		**P**	**05 08 51.1**	**-1.0**
CD2					pmax	pmax		
	comp=Z,30nm,0.8s							
MJAR	**Matsushiro Arr**	**34.73**	**17**	P		**P**	**05 08 51.7**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=192,slow=8.8,SNR=1.4							
MJAR					LR	LR	05 22 01.3	
	comp=Z,29nm,21.1s,baz=170,slow=34							
	comp=Z,0.5nm,0.3s							
BLDU	**Ballidu**	**35.07**	**195**	P		**P**	**05 08 56.3**	**+1.2**
KLBR	**Kellerberrin**	**35.76**	**193**	P		**P**	**05 09 01.8**	**+0.8**
HNR	**Honiara**	**35.77**	**111**	LR		LR	05 23 33.1	
	comp=Z,5.2nm,20.5s,baz=348,slow=36							
MUN	**Mundaring**	**36.49**	**195**	P		**P**	**05 09 09.6**	**+2.3**
BBOO	**Buckleboo**	**37.16**	**166**	P		**P**	**05 09 13.3**	**+0.5**
	comp=Z,30nm,2.3s							
BBOO	**Buckleboo**	**37.16**	**166**	P		**P**	**05 09 13.5**	**+0.6**
BBOO	**Buckleboo**	**37.16**	**166**	P		**P**	**05 09 13.0**	**+0.2**
NWAO	**Narrogin (SRO)**	**37.16**	**193**	P		**P**	**05 09 16.3**	**+3.4**
NWAO	**Narrogin (SRO)**	**37.16**	**193**	P		**P**	**05 09 13.8**	**+0.9**
NWAO	**Narrogin (SRO)**	**37.16**	**193**	P		**P**	**05 09 13.8**	**+0.9**
NWAO					pmax	pmax		
	comp=Z,64nm,1.8s							
STKA	**Stephens Creek**	**37.94**	**159**	P		**P**	**05 09 20.8**	**+1.3**
	comp=Z,81nm,0.6s							
STKA	**Stephens Creek**	**37.94**	**159**	P		**P**	**05 09 20.9**	**+1.3**
	comp=Z,11nm,0.5s,baz=332,slow=8.3,SNR=28							
STKA					PcP	**PcP**	**05 11 34.0**	**-0.3**
	comp=Z,2.6nm,0.5s,baz=338,slow=8.0,SNR=2.1							
	comp=Z,11nm,0.5s							
STKA	**Stephens Creek**	**37.94**	**159**	P		**P**	**05 09 20.8**	**+1.3**
STKA	**Stephens Creek**	**37.94**	**159**	P		**P**	**05 09 20.5**	**+1.0**
STKA	**Stephens Creek**	**37.94**	**159**	P		**P**	**05 09 20.5**	**+1.0**
STKA					pmax	pmax		
	comp=Z,51nm,0.7s							
HTT	**Hallett**	**38.50**	**163**	P		**P**	**05 09 24.3**	**+0.1**
LZDM	**Lanzhou Array**	**38.59**	**330**	P		**P**	**05 09 25.0**	**-0.4**
	comp=Z,1.3nm,0.3s,baz=94,slow=7.7,SNR=1.9							
	comp=Z,1.3nm,0.3s							
LZH	**Lanzhou**	**38.62**	**330**	*e*P		**P**	**05 09 24.6**	**-0.8**
LZH					pP	pP	05 09 29.8	-11
LZH					pmax	pmax		
	comp=Z,23nm,1.5s							
BRDH	**Bariadhala**	**38.74**	**303**	LR		LR	05 28 26.3	
	comp=Z,59nm,18.1s,baz=122,slow=41							
PSTR	**Posyet**	**39.28**	**5**	*e*P		**P**	**05 09 30.1**	**-0.4**
CMSA	**Cobar Meteorol**	**39.30**	**154**	P		**P**	**05 09 32.0**	**+1.2**
	comp=Z,13nm,0.9s							
CMSA	**Cobar Meteorol**	**39.30**	**154**	P		**P**	**05 09 32.1**	**+1.2**
HHC	**Hu-ho-hao-te**	**39.61**	**342**	*e*P		**P**	**05 09 35.6**	**+2.1**
HHC					pmax	pmax		
	comp=Z,11nm,0.6s							
HHC					pmax	pmax		
	comp=Z,80nm,4.6s							
SHL	**Shillong**	**39.81**	**307**	P		**P**	**05 09 34.5**	**-1.0**
SHL					pmax	pmax		
	comp=Z,29nm,0.6s							
USRK	**Ussuriysk Ar.**	**40.93**	**6**	P		**P**	**05 09 43.1**	**-1.2**
	comp=Z,2.6nm,0.7s,baz=200,slow=6.9,SNR=5.8							
	comp=Z,2.6nm,0.7s							
MDJ	**Mudanjiang**	**41.14**	**3**	P		**P**	**05 09 47.5**	**+1.5**
MDJ				*p*P		pwP	05 10 04.4	-0.8
MDJ				sP		sP	05 10 12.5	+4.2
MDJ				PcS		**PcS**	**05 15 34.6**	**-0.7**
MDJ				S		**S**	**05 15 57.6**	**+3.1**
MDJ				pmax		pmax		
	comp=Z,23nm,1.1s							
MDJ				LR		LR		
	comp=N,610nm,3.9s							
MDJ				LR		LR		
	comp=E,680nm,4.5s							
MDJ				LR		LR		
	comp=Z,460nm,4.7s							
ARMA	**Armidale**	**41.37**	**146**	P		**P**	**05 09 50.1**	**+1.9**
ARMA	**Armidale**	**41.37**	**146**	P		**P**	**05 09 48.7**	**+0.5**
ARMA	**Armidale**	**41.37**	**146**	P		**P**	**05 09 49.3**	**+1.0**
ARMA					IAmb	IAmb	05 09 51.9	
	comp=Z,11nm,0.8s							
BNX	**BinXian**	**42.18**	**1**	⇑P		**P**	**05 09 56.3**	**+1.9**
BNX					pmax	pmax		
	comp=Z,14nm,2.1s							
H11N1	**WAKE ISLAND Hy**	**42.69**	**64**	T		T	05 56 23.1	
	baz=255,slow=75,SNR=7.4							
H11N2	**WAKE ISLAND Hy**	**42.70**	**64**	T		T	05 56 20.3	
	baz=255							
H11N3	**WAKE ISLAND Hy**	**42.71**	**64**	T		T	05 56 20.1	
	baz=255,slow=75,SNR=5.5							
MGBR	**Mount Gambier**	**42.98**	**163**	P		**P**	**05 10 01.0**	**0.0**
ASAJ	**Asahikawa**	**43.00**	**17**	P		**P**	**05 10 00.8**	**-0.3**
ASAJ					pmax	pmax		
	comp=Z,72nm,1.4s							
JKA	**Kamikawa-asahi**	**43.00**	**17**	P		**P**	**05 10 00.8**	**-0.4**
GTA2	**Gaotai**	**43.30**	**330**	*e*P		**P**	**05 10 03.0**	**-0.8**
GTA2				*p*P		pP	05 10 06.3	-13
GTA2				pmax		pmax		
	comp=Z,6.0nm,0.5s							
GOMU	**GeErMu**	**43.74**	**322**	P		**P**	**05 10 07.9**	**+0.2**
GOMU					pmax	pmax		
	comp=Z,6.0nm,1.0s							
SANVU	**Saraoutou**	**44.51**	**116**	P		**P**	**05 10 13.8**	**+0.1**
EVN	**Everest**	**44.93**	**307**	P		**P**	**05 10 17.4**	**-0.2**
EVN					IAmb	IAmb	05 10 19.3	
	comp=Z,9.7nm,0.6s							
PALK	**Pallekele**	**45.65**	**277**	LR		LR	05 31 50.2	
	comp=Z,56nm,19.1s,baz=110,slow=39							
PALK	**Pallekele**	**45.65**	**277**	P		**P**	**05 10 22.3**	**-0.5**
PALK					IAmb	IAmb	05 10 23.7	
	comp=Z,29nm,1.6s							
PALK	**Pallekele**	**45.65**	**277**	P		**P**	**05 10 22.3**	**-0.5**
PALK					pmax	pmax		
	comp=Z,29nm,1.7s							
KLR	**Kul'dur**	**45.89**	**5**	⇑*e*P		**P**	**05 10 24.9**	**+0.8**
HIA	**Hailar**	**46.05**	**354**	*de*P		**P**	**05 10 26.4**	**+1.0**
HIA					pmax	pmax		
	comp=Z,21nm,1.0s

YAK smax smax
comp=N,227nm,5.8s
YAK smax smax
comp=E,72nm,2.9s
MDOK Medeo 58.94 320 *e*P **P 05 11 59.5 -1.5**
MDOK Medeo 58.94 320 *e*P **P 05 11 59.6 -1.5**
TNSS Tian-Shan 58.95 319 *e*P **P 05 11 59.7 -1.7**
TNSS Tian-Shan 58.95 319 *e*P **P 05 11 59.7 -1.7**
TDK Taldyqorghan 58.97 322 *e*P **P 05 11 59.9 -1.2**
TDK Taldyqorghan 58.97 322 *e*P **P 05 11 59.9 -1.2**
AAA Alma-Ata 59.05 320 *e*P **P 05 12 00.5 -1.2**
AAA Alma-Ata 59.05 320 *e*P **P 05 12 00.5 -1.2**
ARLS Aral 60.17 317 P **P 05 12 10.0 +0.4**
AAK Ala-Archa 60.38 318 LR LR 05 39 40.8
comp=E,36nm,20.6s,baz=76,slow=37
AAK Ala-Archa 60.38 318⇑*e*P **P 05 12 11.0 0.0**
AAK pmax pmax
comp=Z,10.0nm,3.5s
ZAA0 Zalesovo Array 60.73 333 P **P 05 12 11.2 -1.7**
ZAA0 IAmb IAmb 05 12 13.1
comp=Z,9.8nm,1.4s
ZALV Zalesovo Beam 60.73 333 P **P 05 12 11.2 -1.8**
comp=Z,2.6nm,0.4s,baz=127,slow=5.7,SNR=11
ZALV LR LR 05 40 01.5
comp=Z,36nm,18.8s,baz=76,slow=38
comp=Z,2.6nm,0.4s
ZALV Zalesovo Beam 60.73 333 P **P 05 12 10.9 -2.0**
KBL Kabul 61.47 308 P **P 05 12 17.8 -0.8**
KBL pmax pmax
comp=Z,7.0nm,1.0s
BTLS Baital 61.72 320 *e*P **P 05 12 18.5 -1.3**
BTLS Baital 61.72 320 *e*P **P 05 12 18.6 -1.3**
ARK Arkit 61.76 316 P **P 05 12 18.9 -1.4**
ARK pmax pmax
comp=Z,12nm,0.8s
KURBB Kurchatov Array 61.84 328 P **P 05 12 19.2 -1.2**
comp=Z,10.0nm,0.6s,baz=129,slow=6.5,SNR=74
comp=Z,10.0nm,0.6s
KURK Kurchatov 61.84 328 P **P 05 12 19.3 -1.1**
KURK Kurchatov 61.84 328 P **P 05 12 19.3 -1.1**
KURK pmax pmax
comp=Z,21nm,0.5s
KURK Kurchatov 61.84 328 P **P 05 12 19.4 -1.1**
KURK x x 05 12 42.1
KURK x x 05 12 43.4
GAR Garm 61.91 313 P **P 05 12 20.2 -1.1**
GAR IAmb IAmb 05 12 21.7
comp=Z,11nm,1.0s
SEY Seymchan 62.42 13⇑*e*P **P 05 12 26.4 +2.3**
SEY pmax pmax
comp=Z,4.0nm,1.0s
RTZ Ruatahuna 62.61 137 P **P 05 12 26.7 +0.8**
DZA Taraz 62.61 317 *e*P **P 05 12 24.6 -1.2**
DZA Taraz 62.61 317 *e*P **P 05 12 24.7 -1.2**
CHGR Chuyangaron 62.64 312⇑*e*P **P 05 12 25.8 -0.4**
CHGR pmax pmax
comp=Z,6.0nm,0.9s
SHEM Shemya Is, Ala 62.91 30 LR LR 05 44 28.9
comp=Z,6.7nm,18.4s,baz=280,slow=40
IUG Iuzhnay 63.22 316 *e*P **P 05 12 28.7 -1.3**
IUG pmax pmax
comp=Z,4.0nm,0.6s
IUG Iuzhnay 63.22 316 *e*P **P 05 12 28.7 -1.3**
comp=Z,4.4nm,0.6s
KK31 Karatay Array 63.25 317 P **P 05 12 29.2 -0.9**
KK31 Karatay Array 63.25 317 P **P 05 12 29.2 -0.9**
KK31 pmax pmax
comp=Z,6.0nm,1.1s
KKAR Karatay Array 63.25 317 P **P 05 12 28.5 -1.6**
KKAR Karatay Array 63.25 317 P **P 05 12 28.5 -1.6**
CHM Chimkent 63.58 316 *e*P **P 05 12 31.1 -1.2**
CHM Chimkent 63.58 316 *e*P **P 05 12 31.1 -1.2**
AFI Afiamalu 63.66 107 LR LR 05 36 23.1
comp=Z,59nm,21.0s,baz=220,slow=32
BRZS Berezniki 64.77 325 *e*P **P 05 12 38.9 -1.0**
BRZS Berezniki 64.77 325 *e*P **P 05 12 38.9 -1.0**
BVAR Borovoye Array 67.42 327 P **P 05 12 55.8 -1.1**
comp=Z,4.1nm,0.8s,baz=134,slow=8.5,SNR=17
BVAR LR LR 05 44 39.1
comp=Z,29nm,18.9s,baz=78,slow=38
comp=Z,4.1nm,0.8s
BORK Borovoye 67.47 327 P **P 05 12 56.1 -1.0**
BORK IAmb IAmb 05 12 58.2
comp=Z,8.6nm,1.0s
BORK Borovoye 67.47 327 P **P 05 12 56.1 -1.0**
BORK pmax pmax
comp=Z,9.0nm,1.0s
BORK Borovoye 67.47 327 P **P 05 12 55.9 -1.2**
BORK pP **pP 05 13 12.4 -1.0**
BORK x x 05 13 16.9
BORK PcP **PcP 05 13 24.1 +0.1**
TIXI Tiksi 68.17 1 P **P 05 13 00.9 -0.3**
TIXI IAmb IAmb 05 13 18.5
comp=Z,4.8nm,0.6s
TIXI Tiksi 68.17 1⇑*e*P **P 05 13 03.6 +2.4**
TIXI pmax pmax
comp=Z,2.0nm,0.6s
TIXI Tiksi 68.17 1 P **P 05 13 02.1 +1.0**
TIXI pP **pP 05 13 19.0 +1.4**
CASY Casey 70.45 187 P **P 05 13 14.6 -0.7**
NRIK Noril'sk 70.67 346 P **P 05 13 16.6 0.0**
comp=Z,11nm,0.8s,baz=127,slow=6.7,SNR=14
NRIK LR LR 05 47 00.8
comp=Z,80nm,18.6s,baz=149,slow=38
comp=Z,11nm,0.8s
NRIK Noril'sk 70.67 346 P **P 05 13 16.5 -0.1**
NRIK IAmb IAmb 05 13 17.8
comp=Z,10nm,0.8s
NRIK Noril'sk 70.67 346*c* *i*P **P 05 13 16.3 -0.3**
NRIK pmax pmax
comp=Z,12nm,0.9s
AB31 Akbulak array 72.20 321 P **P 05 13 24.9 -1.3**
ABKAR Akbulak array 72.20 321 P **P 05 13 24.6 -1.6**
AKTO Aktyubinsk 73.71 322 LR LR 05 48 13.3
comp=Z,80nm,21.1s,baz=128,slow=38
AKUT Akutan 74.37 34 P **P 05 13 38.0 -0.9**
ARTI Arti 75.12 328 P **P 05 13 41.4 -1.8**
ARTI IAmb IAmb 05 13 42.9
comp=Z,9.3nm,0.4s
ARTI Arti 75.12 328⇑*e*P **P 05 13 42.7 -0.5**
ARTI pmax pmax
comp=Z,21nm,2.6s
SDPT Sand Point 77.65 34 P **P 05 13 57.5 0.0**
ABPO Ambohimpanom 80.89 250 P **P 05 14 15.6 -0.6**
ABPO IAmb IAmb 05 15 34.8
comp=Z,31nm,1.8s
ABPO Ambohimpanom 80.89 250 P **P 05 14 15.6 -0.6**
ABPO pmax pmax
comp=Z,31nm,1.8s
GNI Garni 81.44 310 LR LR 05 55 55.8
comp=Z,27nm,20.1s,baz=117,slow=40
G19K Purcell Mounta 81.46 24 P **P 05 14 19.3 +1.3**
G19K IAmb IAmb 05 14 40.2
comp=Z,9.5nm,0.8s
H19K Roundabout Mou 81.60 24 P **P 05 14 19.9 +1.2**
H19K IAmb IAmb 05 14 41.3
comp=Z,15nm,1.0s
VOI Vohitsoka 81.64 247 P **P 05 14 19.6 -0.4**
E19K Redstone River 81.66 22 P **P 05 14 20.9 +1.8**
E19K IAmb IAmb 05 14 42.3
comp=Z,18nm,0.8s
FOMA Nahampoana Res 81.86 244 P **P 05 14 20.3 -0.7**
FOMA x x 05 14 42.9
F20K Avaraart Lake 82.16 23 P **P 05 14 22.6 +0.9**
KDAK Kodiak Island 82.34 32 LR LR 05 44 09.1
comp=Z,73nm,21.8s,baz=236,slow=31
SPU Mount Spurr 82.95 29 P **P 05 14 26.7 +0.7**
KBZ Khabaz 82.97 313 P **P 05 14 26.2 -0.2**
comp=Z,0.6nm,0.7s,baz=117,slow=9.0,SNR=1.5
comp=Z,0.6nm,0.7s
H21K Melozitna Rive 83.12 24 P **P 05 14 28.3 +1.6**
H21K IAmb IAmb 05 14 48.3
comp=Z,11nm,1.2s
VNDA Vanda 83.14 173 P **P 05 14 26.1 -0.5**
comp=Z,1.5nm,0.7s,baz=300,slow=4.8,SNR=5.5
comp=Z,1.5nm,0.7s
SKT Skwentna 83.28 28 P **P 05 14 27.3 -0.3**
I21K Tanana 83.40 25 P **P 05 14 29.5 +1.3**
I21K IAmb IAmb 05 14 50.7
comp=Z,9.9nm,0.9s
L22K Petersville 83.68 28 P **P 05 14 30.0 +0.3**
L22K IAmb IAmb 05 14 49.8
comp=Z,10.0nm,1.0s
SLKM Skilak Lake 83.79 30 P **P 05 14 30.3 0.0**
E22K Anaktuvuk Pass 83.80 22 P **P 05 14 31.6 +1.3**
E22K IAmb IAmb 05 14 52.2
comp=Z,18nm,1.1s
VRH Novokhopyorsk 84.03 321 *e*P **P 05 14 30.4 -1.2**
VRH pmax pmax
comp=Z,4.0nm,0.8s
RC01 Rabbit Creek A 84.06 29 P **P 05 14 31.4 -0.2**
RC01 IAmb IAmb 05 14 52.8
comp=Z,22nm,1.2s
COLD Coldfoot 84.32 23 P **P 05 14 33.9 +1.0**
COLD IAmb IAmb 05 14 55.4
comp=Z,14nm,0.9s
PMR Palmer 84.39 29 P **P 05 14 33.5 +0.3**
PMR IAmb IAmb 05 14 54.0
comp=Z,16nm,1.2s
PMR Palmer 84.39 29 P **P 05 14 33.5 +0.3**
PMR pmax pmax
comp=Z,16nm,1.2s
MCK McKinley 84.60 26 P **P 05 14 34.2 -0.2**
MCK IAmb IAmb 05 14 59.5
comp=Z,7.9nm,1.1s
MCK McKinley 84.60 26 P **P 05 14 34.2 -0.2**
MCK pmax pmax
comp=Z,8.0nm,1.1s
SML Sawmill 84.78 28 P **P 05 14 36.1 +0.8**
SML IAmb IAmb 05 14 57.0
comp=Z,12nm,1.0s
GLI Glacier Island 85.34 29 P **P 05 14 38.8 +0.7**
GLI IAmb IAmb 05 15 05.8
comp=Z,7.7nm,0.8s
KLMR Klimovskoe 85.53 331 *e*P **P 05 14 37.6 -1.4**
KLMR pmax pmax
comp=Z,21nm,0.7s
ILAR Eielson Array 85.54 25 P **P 05 14 38.2 -0.7**
comp=Z,0.3nm,0.5s,baz=234,slow=5.3,SNR=10
comp=Z,0.3nm,0.5s
VSR Storozhevoye 85.64 321 *e*P **P 05 14 37.6 -2.1**
VSR pmax pmax
comp=Z,8.0nm,0.9s
LPSR Galich'ya Gora 85.78 322 *e*P **P 05 14 38.3 -2.1**
LPSR pmax pmax
comp=Z,10.0nm,0.9s
E25K Arctic Village 86.13 22 P **P 05 14 42.7 +0.8**
E25K IAmb IAmb 05 15 04.7
comp=Z,5.1nm,0.8s
BMAR Burnt Mountain 86.50 23 P **P 05 14 45.0 +1.2**
MOS Moscow 86.53 325 *e*P **P 05 14 42.5 -1.5**
OBN Obninsk 87.14 325⇑*i*P **P 05 14 46.1 -0.9**
OBN *i* *PP **pP 05 15 05.2 +1.2**
OBN *e**SP **sP 05 15 12.9 +2.2**
OBN PPP PPP 05 20 04.0
OBN *e*S **S 05 25 18.8 -2.5**
OBN *e* 05 26 49.7
OBN SS **SS 05 31 10.0 +4.2**
OBN pmax pmax
comp=Z,8.0nm,0.9s
OBN MLR MLR
comp=Z,41nm,17.0s
FURI Furi 87.24 279 LR LR 05 53 22.8
comp=Z,32nm,19.4s,baz=122,slow=35
D27M Malcolm River 87.78 21 P **P 05 14 50.5 +0.6**
D27M IAmb IAmb 05 15 11.0
comp=Z,9.0nm,1.4s
F28M Old Crow 88.30 22 P **P 05 14 53.2 +0.8**
F28M IAmb IAmb 05 15 13.2
comp=Z,7.8nm,1.1s
KIBK Kibwezi 88.50 268 P **P 05 14 54.6 +0.1**
KIBK IAmb IAmb 05 14 56.1
comp=Z,8.1nm,1.1s
EIL Elat 89.60 300 LR LR 06 02 01.2
comp=Z,40nm,18.4s,baz=244,slow=40
BRTR Keskin Array B 89.98 310 P **P 05 14 58.4 -2.6**
comp=Z,1.3nm,0.7s,baz=131,slow=5.9,SNR=8.1
comp=Z,1.3nm,0.7s
ARCES ARCESS Array B 90.64 340 P **P 05 15 01.8 -1.5**
comp=Z,2.1nm,0.6s,baz=79,slow=6.3,SNR=10
comp=Z,2.1nm,0.6s
SPITS Spitsbergen Ar 90.74 349 P **P 05 15 03.4 -0.2**
comp=Z,0.7nm,0.4s,baz=90,slow=9.2,SNR=7.5
SPITS LR LR 06 02 43.4
comp=Z,26nm,18.9s,baz=27,slow=40
comp=Z,0.7nm,0.4s
AK09 Malin Array Si 91.92 321 P **P 05 15 07.7 -1.8**
AK08 Malin Array Si 91.93 321 P **P 05 15 07.8 -1.8**
AK10 Malin Array Si 91.94 321 P **P 05 15 07.9 -1.7**
AK03 Malin Array Si 91.94 321 P **P 05 15 08.0 -1.6**
AKASG Malin Array Be 91.94 321 P **P 05 15 08.5 -1.2**
comp=Z,3.1nm,0.7s,baz=69,slow=4.7,SNR=12
comp=Z,3.1nm,0.7s
AKBB Malin Array Si 91.94 321 P **P 05 15 08.2 -1.4**
AKBB Malin Array Si 91.94 321 P **P 05 15 08.2 -1.4**
AKBB pmax pmax
comp=Z,28nm,1.6s
AK01 Malin Array Si 91.95 321 P **P 05 15 07.9 -1.8**
KIEV Kiev 91.95 321 P **P 05 15 08.2 -1.5**
KIEV Kiev 91.95 321 P **P 05 15 08.2 -1.5**
KIEV pmax pmax
comp=Z,25nm,1.6s
AK02 Malin Array Si 91.96 321 P **P 05 15 07.9 -1.8**
AK05 Malin Array Si 91.97 321 P **P 05 15 08.0 -1.8**
FINES FINESS Array B 91.97 332 P **P 05 15 08.8 -0.7**
comp=Z,1.9nm,0.6s,baz=58,slow=5.1,SNR=12
FINES LR LR 05 58 36.7
comp=Z,18nm,18.5s,baz=86,slow=37
comp=Z,1.9nm,0.6s
AK06 Malin Array Si 91.97 321 P **P 05 15 08.0 -1.8**
AK07 Malin Array Si 91.97 321 P **P 05 15 08.0 -1.8**
AK04 Malin Array Si 91.97 321 P **P 05 15 08.0 -1.8**
AK11 Malin Array Si 91.98 321 P **P 05 15 08.0 -1.8**
AK12 Malin Array Si 91.99 321 P **P 05 15 08.1 -1.8**
AK15 Malin Array Si 92.00 321 P **P 05 15 08.2 -1.7**
AK16 Malin Array Si 92.02 321 P **P 05 15 08.2 -1.8**
AK22 Malin Array Si 92.03 321 P **P 05 15 08.3 -1.7**
AK18 Malin Array Si 92.04 321 P **P 05 15 08.2 -1.9**
AK21 Malin Array Si 92.05 321 P **P 05 15 08.2 -1.9**
AK17 Malin Array Si 92.05 321 P **P 05 15 08.3 -1.8**
AK13 Malin Array Si 92.06 321 P **P 05 15 08.3 -1.9**
AK20 Malin Array Si 92.07 321 P **P 05 15 08.5 -1.7**
AK19 Malin Array Si 92.07 321 P **P 05 15 08.5 -1.7**
LUBAR Lubar, Ukraine 92.98 320 P **P 05 15 13.3 -1.2**
QSPA South Pole Qui 93.31 180 P **P 05 15 16.0 +0.3**
comp=Z,1.3nm,0.8s,baz=292,slow=1.3,SNR=5.3
comp=Z,1.3nm,0.8s
NDNU Novodnistrovsk 93.44 319 P **P 05 15 15.0 -1.6**
DLBC Dease Lake 94.19 31 LR LR 05 51 32.6
comp=Z,35nm,20.9s,baz=284,slow=32
BURAR Bucovina Array 95.03 318 P **P 05 15 22.8 -1.3**
BURAR pmax pmax
comp=Z,6.0nm,1.0s
HFS Hagfors 98.16 332 P **P 05 15 37.1 -0.7**
comp=Z,1.9nm,0.6s,baz=72,slow=4.8,SNR=6.8
comp=Z,1.9nm,0.6s
RES Resolute Bay 98.19 10 P **P 05 15 37.0 -0.6**
comp=Z,0.6nm,0.9s,baz=113,slow=14,SNR=2.4
comp=Z,0.6nm,0.9s
LSZ Lusaka 98.81 255 LR LR 05 56 08.0
comp=Z,51nm,19.4s,baz=152,slow=33
NOA NORSAR Array B 98.94 334 P **P 05 15 39.9 -1.5**
comp=Z,0.7nm,0.7s,baz=65,slow=4.7,SNR=3.9
NOA LR LR 06 03 34.3
comp=Z,35nm,20.8s,baz=345,slow=37
comp=Z,0.7nm,0.7s
YKA Yellowknife Ar 99.93 24 P **Pdif 05 15 45.4 -0.3**
comp=Z,0.1nm,0.7s,baz=303,slow=5.8,SNR=4.8
comp=Z,0.1nm,0.7s
CLL Collm 101.71 324 *e*P **Pdif 05 15 54.0 +0.1**
GERES GERESS Array B 102.14 321 P **Pdif 05 15 55.1 -0.9**
comp=Z,0.7nm,0.8s,baz=74,slow=4.9,SNR=4.5
PDAR Pinedale Array 111.81 41 PKKP 05 31 50.8
comp=Z,0.6nm,0.8s,baz=144,slow=2.8,SNR=3.6
TXAR Lajitas Array 122.06 52 PKP **PKPdf 05 20 56.1 -0.1**
comp=Z,0.4nm,0.6s,baz=347,slow=5.9,SNR=2.7
TORD Torodi Ar. Bea 122.71 288 PKP **PKiKP 05 20 57.8 -0.2**
comp=Z,1.8nm,0.7s,baz=126,slow=1.2,SNR=12
PLCA Paso Flores 139.81 160 PKhKP PKPpre 05 21 24.6
comp=Z,1.8nm,1.1s,baz=223,slow=4.5,SNR=3.3
PLCA PKP **PKPdf 05 21 29.4 0.0**
comp=Z,0.8nm,0.6s,baz=138,slow=1.0,SNR=5.9
LPAZ La Paz 160.81 133 PKP **PKPdf 05 22 01.5 -1.2**
comp=Z,0.5nm,0.8s,baz=149,slow=5.9,SNR=1.4

IDC 20 05:08:07.3±7.9, 19°.12S×177°.50W, h0km, mb3.7/2, mbtmp3.7/2, Error ellipse: s-maj=390.6km s-min=63.1km az=147.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.28**	**261**	P	P	05 16 27.0	-0.1
	0.7nm,0.8s,baz=92,slow=8.2,SNR=4.9						
	0.7nm,0.8s						
ASAR	**Alice Springs**	**45.31**	**255**	P	P	05 16 27.1	-0.2
	0.9nm,0.7s,baz=95,slow=7.7,SNR=7.8						
	0.9nm,0.7s						
AKASG	**Malin Array Be**	**142.03**	**332**	PKP	PKPdf	05 27 39.2	-2.0
	1.3nm,0.5s,baz=53,slow=3.1,SNR=10.0						
BRTR	**Keskin Array B**	**146.24**	**314**	PKPbc	PKPbc	05 27 49.7	-0.5
	0.2nm,0.3s,baz=48,slow=2.3,SNR=4.0						

*ISK **20** 05:13:33.8, 36°.98N×27°.39E, h12km, ML2.6/8*
*AFAD **20** 05:13:33.3, 36°.95N×27°.33E, h9km±1km, ML2.3*
ISC 20 05:13:33.9±1.0, 36°.96N±0°.03×27°.35E±0°.04, h12km±6km, n23, σ0°78/32, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BODT	**Bodrum**	**0.11**	**342**	Pg	**Pb**	**05 13 37.7**	**-0.2**
BODT				Sg	**Sg**	**05 13 39.8**	**+0.6**
BDRM	**Kayabasi**	**0.13**	**34**	P	**Pg**	**05 13 37.0**	**-0.2**
BDRM				IAML		05 13 39.0	
	comp=E,2μm,0.3s						
BDRM				S	**Sg**	**05 13 39.1**	**-0.5**
YKAV	**Yalikavak-Bodr**	**0.18**	**341**	Pg	**Pg**	**05 13 37.8**	**-0.1**
YKAV				Sg	**Sg**	**05 13 40.8**	**+0.1**
YAZI	**Mula-Dat§a-**	**0.29**	**164**	P	**Pg**	**05 13 39.7**	**-0.1**
YAZI				S	**Sg**	**05 13 44.1**	**+0.3**
DAT	**Datca**	**0.29**	**142**	Pg	**Pg**	**05 13 40.2**	**+0.3**
DAT				Sg	**Sb**	**05 13 44.9**	**-0.9**
DDIM	**Aydin, Didim**	**0.51**	**350**	P	**Pg**	**05 13 43.3**	**-0.5**
DDIM				S	**Sg**	**05 13 50.7**	**+0.1**
DDIM				IAML		05 13 53.0	
	comp=N,138nm,0.2s						
TURN	**Turunc**	**0.74**	**104**	Pg	**Pg**	**05 13 48.0**	**-0.1**
TURN	**Turunc**	**0.74**	**104**	P	**Pg**	**05 13 47.8**	**-0.4**
TURN				S	**Sb**	**05 13 58.8**	**+0.2**
TURN				IAML		05 14 01.0	
	comp=N,178nm,0.5s						
GCAM	**G?zelcaml?**	**0.75**	**353**	Pg	**Pb**	**05 13 48.2**	**-0.5**
GCAM	**G?zelcaml?**	**0.75**	**353**	P	**Pb**	**05 13 48.3**	**-0.5**
GCAM				S	**Sb**	**05 13 59.2**	**+0.3**
GCAM				IAML		05 14 03.0	
	comp=N,112nm,0.2s						
AYDN	**Tasoluk**	**0.82**	**31**	P	**Pg**	**05 13 49.1**	**-0.6**
AYDN				S	**Sg**	**05 13 59.1**	**-1.3**
AYDN				IAML		05 14 03.0	
	comp=N,90nm,0.5s						
ARG	**Arkhangelos**	**0.97**	**140**	Pg	**Pn**	**05 13 52.9**	**-0.3**
DALY	**Dalyan (Mula)**	**1.05**	**97**	Pg	**Pg**	**05 13 53.9**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**1.08**	**23**	Pg	**Pb**	**05 13 54.2**	**-0.3**
ESEN	**Aydn-Nazilli**	**1.15**	**43**	P	**Pg**	**05 13 56.0**	**-0.1**
DGB	**zmir**	**1.16**	**341**	P	**Pb**	**05 13 54.1**	**-1.7**
GMLD	**Gumuldur**	**1.17**	**343**	Pn	**Pg**	**05 13 56.7**	**+0.3**
DUVT	**Torbali**	**1.26**	**3**	P	**Pg**	**05 13 58.1**	**0.0**
SABU	**Mula-Dalaman**	**1.30**	**95**	P	**Pg**	**05 13 58.6**	**-0.3**
TAVA	**DENIZLI_Tavas**	**1.34**	**67**	P	**Pb**	**05 13 58.7**	**-0.3**
KIRA	**zmir-Kiraz**	**1.49**	**34**	P	**Pn**	**05 14 00.6**	**+0.1**
BR106	**Keskin Array S**	**5.65**	**59**	P	**Pn**	**05 14 59.9**	**+2.2**
BR104	**Keskin Array S**	**5.65**	**59**	P	**Pn**	**05 14 59.8**	**+2.0**
	2.5nm,1.0s						

*NEIC **20** 05:25:41.1±0.8, 17°.81N±0°.03×66°.84W±0°.01, h10km±1km, ML3.2/35, Md3.4/8(RSPR), Error ellipse: s-maj=4.8km s-min=2.7km az=12.0*
*SDD **20** 05:25:41.5±1.5, 17°.82N×66°.85W, h21km±10km, MD3.2, ML3.0, MW3.3, Presumed earthquake*
*OSPL **20** 05:25:41.4±0.5, 17°.76N×66°.86W, h2km±999km, ML3.5, Presumed earthquake*
ISC 20 05:25:41.7±1.3, 17°.84N±0°.07×66°.84W±0°.02, h12km±7km, n29, σ0°65/43, 11C-1D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.14**	**344**		**Pg**	**05 25 44.9**	**-0.2**
GBPR					**Sg**	**05 25 47.3**	**-0.3**
MLPR	**Magueyes Islan**	**0.24**	**304**		**Pg**	**05 25 46.3**	**-0.4**
MLPR				IAML		05 25 50.5	
	2μm,0.5s						
MLPR				IAML		05 25 50.6	
	3μm,0.6s						
MLPR	**Magueyes Islan**	**0.24**	**304**⇑*e*P		**Pg**	**05 25 46.4**	**-0.3**
MLPR			⇑*e*Sg		**Sg**	**05 25 50.0**	**0.0**
MLPR				IAML		05 25 50.5	
	comp=N,1μm,0.2s						
OBIP	**Obispado Ponce**	**0.30**	**47**		**Pg**	**05 25 47.6**	**-0.3**
OBIP					**Sg**	**05 25 52.4**	**+0.4**
OBIP	**Obispado Ponce**	**0.30**	**47**	*i* P	**Pg**	**05 25 47.8**	**-0.1**
OBIP				*e*S	**Sg**	**05 25 52.8**	**+0.8**
OBIP				IAML		05 25 55.7	
	comp=Z,2μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.31**	**303**		**Pg**	**05 25 47.5**	**-0.5**
CRPR					**Sg**	**05 25 52.3**	**+0.1**
CRPR	**Cabo Rojo, PR**	**0.31**	**303**	IAML		05 25 52.7	
	comp=Z,8μm,0.3s						
CRPR				IAML		05 25 53.3	
	comp=Z,6μm,0.3s						
CRPR	**Cabo Rojo, PR**	**0.31**	**303**	*i* P	**Pg**	**05 25 47.6**	**-0.3**
CRPR				*e*S	**Sg**	**05 25 52.3**	**+0.1**
CRPR				IAML		05 25 53.1	
	comp=Z,6μm,0.2s						
CELP	**Cerrillos**	**0.34**	**46**		**Pg**	**05 25 48.3**	**-0.3**
CELP				IAML		05 25 55.1	
	comp=Z,1μm,0.3s						
LSP	**Las Mesas**	**0.41**	**325**		**Pg**	**05 25 49.6**	**-0.2**
LSP					**Sg**	**05 25 56.2**	**+0.8**
UUPR	**Utuado, UPR, P**	**0.43**	**15**		**Pg**	**05 25 49.8**	**-0.4**
PRSN	**Puerto Rico Se**	**0.48**	**323**		**Pg**	**05 25 50.3**	**-0.8**
PRSN	**Puerto Rico Se**	**0.48**	**323**⇑*e*Pg		**Pg**	**05 25 50.7**	**-0.4**
PRSN			⇓⇓*e*Sg		**Sg**	**05 25 57.4**	**-0.1**
PRSN				IAML		05 26 00.8	
	comp=N,4μm,0.3s						
AOPR	**Arecibo Observ**	**0.52**	**9**		**Pg**	**05 25 51.0**	**-0.8**
AOPR				IAML		05 25 59.5	
	comp=N,2μm,0.3s						
AOPR	**Arecibo Observ**	**0.52**	**9**⇑*e*Pg		**Pg**	**05 25 51.3**	**-0.5**
AOPR			⇑*e*Sg		**Sg**	**05 25 57.8**	**-0.9**
AOPR				IAML		05 25 59.5	
	comp=N,1μm,0.2s						
ECPR	**Experimental S**	**0.66**	**43**		**Pg**	**05 25 53.8**	**-0.7**
ECPR				IAML		05 26 04.2	
	comp=N,2μm,0.2s						
AGPR	**Aguadilla, PR**	**0.68**	**338**		**Pg**	**05 25 54.0**	**-0.9**
AGPR				IAML		05 26 04.2	
	comp=N,646nm,0.5s						
AGPR				IAML		05 26 04.9	
	comp=N,745nm,0.3s						
AGPR	**Aguadilla, PR**	**0.68**	**338**⇑*e*Pg		**Pg**	**05 25 54.2**	**-0.7**
AGPR			⇑*e*Sg		**Sg**	**05 26 03.9**	**0.0**
AGPR				IAML		05 26 04.4	
	comp=N,474nm,0.2s						
EMPR	**Esperanza - Ma**	**0.70**	**25**		**Pg**	**05 25 55.1**	**-0.2**
EMPR					**Sg**	**05 26 05.8**	**+1.2**
SJG	**San Juan**	**0.71**	**67**		**Pg**	**05 25 54.8**	**-0.6**
SJG	**San Juan**	**0.71**	**67**	*i* P	**Pg**	**05 25 54.9**	**-0.6**
SJG				*e*S	**Sg**	**05 26 05.4**	**+0.6**
SJG				IAML		05 26 06.8	
	comp=Z,4μm,0.3s						
PDPR	**Patillas Dam,**	**0.80**	**77**		**Pg**	**05 25 56.4**	**-0.7**
IDE	**Isla Desecheo**	**0.82**	**312**		**Pg**	**05 25 56.6**	**-0.9**
IDE					**Sg**	**05 26 07.5**	**-0.7**
HUMP	**Col San Antoni**	**0.99**	**72**		**Pg**	**05 25 59.6**	**-1.1**
HUMP					**Sg**	**05 26 14.1**	**+0.4**
HUMP	**Col San Antoni**	**0.99**	**72**	IAML		05 26 17.4	
	comp=Z,292nm,0.2s						
HUMP				IAML		05 26 18.1	
	comp=Z,302nm,0.2s						
CUPR	**Culebra, Puert**	**1.55**	**72**	Pn	**Pn**	**05 26 08.9**	**-0.3**
HIDR	**Higuey Centro**	**1.94**	**293**⇑*e*Pg		**Pn**	**05 26 15.1**	**+0.6**
HIDR			⇑*e*Sg		**Sn**	**05 26 37.9**	**-0.9**
HIDR				IAML		05 26 51.9	
	comp=N,103nm,0.2s						
DR12	**Loma Pena Alta**	**2.59**	**292**	Pn	**Pn**	**05 26 24.3**	**+0.7**
HATOM	**Hato Mayor del**	**2.59**	**292**⇑*e*Pg		**Pn**	**05 26 24.4**	**+0.8**
HATOM			⇑*e*Sg		**Sn**	**05 26 56.2**	**+1.1**
HATOM				IAML		05 27 04.2	
	comp=N,39nm,4.1s						

IDC ***20*** *06:12:36.2±0.5,2°.87S×129°.71E,h0km,mb4.6/21, mbtmp4.6/27,ML4.7/5,MS4.1/32,Error ellipse: s-maj=16.8km s-min=11.2km az=78.0*

NEIC ***20*** *06:12:38.7±1.4,2°.84S±0°.05×129°.81E±0°.04,h10km±1km, mb4.8/45,Error ellipse: s-maj=10.1km s-min=3.2km az=144.0*

GCMT ***20*** *06:12:40.7±0.2,2°.94S±0°.02×129°.89E±0°.02,h16km±1km, MW5.0/94,Moment Tensor Solution. s42,c52; s94,c127; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr 1.81±.14; Mθθ 0.29±.10; Mϕϕ -2.11±.11; Mrθ -1.57±.37; Mθϕ 1.74±.07; Mϕr 2.85±.43; Best double couple: Mo4.05300×10¹⁶ NP1:ϕs 155.00000°,δ 18.00000°,λ 94.00000°. NP2: ϕs 331.00000°,δ 72.00000°,λ 89.00000°. Principal axes: T 3.4480, Plg63.0000°, Azm239.0000°; N 1.2050, Plg1.0000°, Azm331.0000°; P -4.6590, Plg27.0000°, Azm62.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***20*** *06:12:43.0±0.1,3°.5S±2°.×13°.0E±°,h44km±4km,M5.0/61, mB5.5/39,mb5.1/61,MLv5.2/35,Mw(mB)4.9/39, MwMwp4.7/4,Mwp5.1/4*

ISC 20 06:12:38.1±0.3,**2°.90S**±0°.04×**129°.80E**±0°.04,**h10**km,**n181,** σ1**§52**/149,**mb4.8**/42,**MS4.1**/32,**3C**,**Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.97**	**243**	P	**Pn**	**06 12 58.6**	**+0.7**
KRAI	**Karang Ratu**	**1.46**	**253**	P	**Pg**	**06 13 06.9**	**+0.7**
BNDI	**Bandanaira**	**1.62**	**176**	P	**Pb**	**06 13 09.8**	**+1.7**
AAI	**Ambon**	**1.78**	**244**	P	**Pb**	**06 13 11.2**	**+0.3**
FAKI	**Fak Fak**	**2.45**	**91**		**Pn**	**06 13 19.0**	**+0.8**
FAKI	**Fak Fak**	**2.45**	**91**	P	**Pn**	**06 13 19.0**	**+0.8**
SIJI	**Sorong**	**2.50**	**36**	Pn	**Pn**	**06 13 18.6**	**-0.2**
	193nm,0.3s,baz=204,slow=23,SNR=197						
SIJI				Sn	**Sn**	**06 13 49.8**	**+0.4**
	162nm,0.3s,baz=211,slow=9.8,SNR=7.5						
SIJI				LR	LR	06 14 40.6	
	comp=Z,6µm,18.3s,baz=92,slow=49 446nm,0.3s						
SIJI	**Sorong**	**2.50**	**36**	P	**Pn**	**06 13 19.3**	**+0.5**
SWI	**Sorong**	**2.50**	**36**	P	**Pn**	**06 13 18.4**	**-0.4**
NLAI	**Namlea**	**2.71**	**263**	P	**Pn**	**06 13 23.4**	**+1.6**
SANI	**Sanana**	**3.90**	**282**	P	**Pn**	**06 13 37.5**	**-0.6**
KMPI	**Kaimana, Papua**	**3.97**	**101**	P	**Pn**	**06 13 41.4**	**+2.2**
TNTI	**Ternate**	**4.38**	**326**		**Pn**	**06 13 44.6**	**-0.2**
TNTI	**Ternate**	**4.38**	**326**	P	**Pn**	**06 13 45.7**	**+0.9**
RKPI	**Ransiki, Papua**	**4.59**	**73**	P	**Pn**	**06 13 49.2**	**+1.6**
MWPI	**Manokwari, Pap**	**4.67**	**65**	P	**Pn**	**06 13 51.5**	**+2.8**
GAMI	**Galela, Maluku**	**5.12**	**337**	P	**Pn**	**06 13 56.0**	**+1.1**
SAUI	**Saumlaki**	**5.27**	**164**	P	**Pn**	**06 13 59.7**	**+2.8**
	2.4nm541nm,1.2s						
SRPI	**Serui, Papua**	**6.52**	**81**	P	**Pn**	**06 14 15.8**	**+1.6**
BAKI	**Biak**	**6.53**	**75**	P	**Pn**	**06 14 16.5**	**+2.2**
MNI	**Manado**	**6.57**	**311**	P	**Pn**	**06 14 13.7**	**-1.2**
	1.7nm176nm,0.5s						
LUWI	**Luwuk**	**7.26**	**285**		**Pn**	**06 14 23.6**	**-0.7**
LUWI	**Luwuk**	**7.26**	**285**	P	**Pn**	**06 14 23.5**	**-0.8**
	1.3nm8µm153nm,0.7s						
APSI	**Ampana**	**8.38**	**283**	P	**Pn**	**06 14 40.2**	**+0.5**
MRSI	**Marisa**	**8.54**	**293**	P	**Pn**	**06 14 41.9**	**0.0**
	2µm140nm,0.6s						
SOEI	**Soe**	**8.75**	**219**	Pn	**Pn**	**06 14 46.7**	**+1.8**
SOEI	**Soe**	**8.75**	**219**	P	Pn	06 14 51.8	+6.9
	3µm180nm,1.4s						
SMPI	**Sarmi**	**8.95**	**84**	P	**Pn**	**06 14 50.3**	**+2.7**
	130nm,1.1s						
MMRI	**Maumere**	**9.43**	**233**	Pn	**Pn**	**06 14 55.1**	**+0.9**
BATI	**Baumata**	**9.47**	**220**	LR	LR	06 18 39.9	
	comp=Z,4µm,19.1s,baz=46,slow=38						
BSSI	**Bau Bau, Buton**	**9.82**	**251**	P	Pn	06 15 04.5	+5.0
	2µm1µm121nm,1.0s						
TOLI2	**Tolitoli**	**9.85**	**294**		**Pn**	**06 14 60.0**	**0.0**
EDFI	**Ende, Flores**	**9.94**	**234**	P	Pn	06 15 06.3	+5.1
	1µm64nm,0.8s						
MTN	**Manton Dam**	**9.97**	**172**		**Pn**	**06 15 03.5**	**+1.9**
SPSI	**Sidrap Palu**	**10.07**	**264**	P	Pn	06 15 07.8	+4.9
	3µm3µm59nm,1.0s						
PCI	**Palu**	**10.15**	**281**	P	**Pn**	**06 15 06.1**	**+2.1**
	148nm,0.9s						
KAPI	**Kappang**	**10.24**	**258**	Pn	**Pn**	**06 15 04.2**	**-1.0**
	5.5nm,0.3s,baz=122,slow=5.6,SNR=7.5						
KAPI				LR	LR	06 20 12.5	
	comp=Z,2µm,19.1s,baz=70,slow=45 3.7nm,0.4s						
KAPI	**Kappang**	**10.24**	**258**		**Pn**	**06 15 06.7**	**+1.4**
KAPI	**Kappang**	**10.24**	**258**	P	**Pn**	**06 15 09.8**	**+4.6**
GENI	**Genyem**	**10.36**	**89**	P	**Pn**	**06 15 10.8**	**+3.8**
MPSI	**Mapaga**	**10.40**	**288**	P	**Pn**	**06 15 09.8**	**+2.3**
	47nm,0.8s						
JAY	**Jayapura**	**10.90**	**88**	Pn	**Pn**	**06 15 14.2**	**-0.2**
	7.6nm,0.3s,baz=277,slow=10,SNR=12 26nm,0.7s						
JAY	**Jayapura**	**10.90**	**88**	P	**Pn**	**06 15 15.7**	**+1.3**
	52nm,1.1s						
LBFI	**Labuhan Bajo,**	**11.31**	**240**	P	Pn	06 15 25.5	+5.6
BASI	**Baing, Sumba**	**11.69**	**231**	P	Pn	06 15 33.5	+8.4
WBSI	**Waikabubak, Su**	**12.32**	**237**	P	Pn	06 15 40.9	+7.1
	2µm115nm,0.7s						
DBNI	**Kabupaten Domp**	**12.71**	**244**	P	**Pn**	**06 15 42.8**	**+3.7**
	667nm39nm,0.7s						
KNRA	**Kununurra**	**12.74**	**185**		**Pn**	**06 15 40.3**	**+0.8**
PLAI	**Plampang**	**13.32**	**243**	P	Pn	06 15 52.4	+4.9
MYLDM	**Lahad Datu**	**13.85**	**305**	P	**Pn**	**06 15 56.7**	**+2.0**
MYLDM	**Lahad Datu**	**13.85**	**305**	P	Pn	**06 15 58.1**	**+3.5**
	882nm50nm,0.8s						
TWSI	**Taliwang, Sumb**	**14.09**	**245**	P	**Pn**	**06 15 59.5**	**+1.5**
	70nm,1.1s						
KLNI	**Mataram**	**14.69**	**248**	P	**Pn**	**06 16 08.8**	**+2.6**
	5µm52nm,0.9s						
BBKI	**Banjar Baru**	**14.94**	**267**	P	**P**	**06 16 16.3**	**+1.1**
	52nm,0.4s						
KHKI	**Kahang-Kahang**	**15.12**	**248**	P	**Pn**	**06 16 12.9**	**+0.9**
SRBI	**Singaraja**	**15.40**	**250**	P	**Pn**	**06 16 15.3**	**-0.4**
	53nm,1.1s						
FITZ	**Fitzroy Crossi**	**15.64**	**195**	Pn	**Pn**	**06 16 18.6**	**-0.2**
	1.1nm,0.3s,baz=27,slow=12,SNR=10						
FITZ				Sn	**Sn**	**06 19 10.5**	**-1.8**
	0.5nm,0.3s,baz=95,slow=18,SNR=1.1						
FITZ				LR	LR	06 22 36.6	
	comp=Z,603nm,19.0s,baz=22,slow=38 6.1nm,0.5s						
KKM	**Kota Kinabalu**	**16.21**	**303**	P	**P**	**06 16 29.5**	**0.0**
ABJI	**Asem Bagus**	**16.24**	**252**	P	**Pn**	**06 16 28.9**	**+2.4**
	67nm,0.9s						
KMMI	**Kalianget**	**16.30**	**255**	P	**Pn**	**06 16 29.3**	**+2.0**
	91nm,1.1s						
JAGI	**Jajag, Banyuwa**	**16.52**	**250**	Pn	**Pn**	**06 16 30.8**	**+0.7**
JAGI				IAmb	IAmb	06 16 39.3	
	comp=Z,69nm,1.1s						
JAGI	**Jajag, Banyuwa**	**16.52**	**250**	P	**Pn**	**06 16 30.5**	**+0.4**
	comp=Z,1µmcomp=Z,67nm,1.0s						
BLJI	**Banyuglugur**	**16.83**	**253**	P	**Pn**	**06 16 36.0**	**+1.9**
	comp=Z,3µmcomp=Z,84nm,1.0s						
GMJI	**Gumukmas**	**17.12**	**251**	P	**P**	**06 16 39.9**	**+0.5**
	comp=Z,75nm,0.8s						
COEN	**Coen**	**17.18**	**131**	Pn	**Pn**	**06 16 38.2**	**-0.3**
WB0	**Warramunga Arr**	**17.36**	**165**	Pn	**Pn**	**06 16 40.8**	**+0.2**
WB0				IAmb	IAmb	06 16 45.0	
	comp=Z,48nm,0.7s						
WRAB	**Tennant Creek**	**17.50**	**166**		**Pn**	**06 16 42.9**	**+0.4**
WRA	**Warramunga Arr**	**17.51**	**166**	P	**Pn**	**06 16 41.0**	**-1.5**
	comp=Z,2.8nm,0.3s,baz=350,slow=12,SNR=40						
WRA				S	Sn	06 19 48.4	-9.4
	comp=Z,3.8nm,0.5s,baz=344,slow=22,SNR=3.4 comp=Z,83nm,1.2s						
WRA	**Warramunga Arr**	**17.51**	**166**		**Pn**	**06 16 43.0**	**+0.4**
MANU	**Manus Island**	**17.57**	**88**	Pn	**Pn**	**06 16 41.9**	**-1.5**
SBUM	**Sibu**	**18.36**	**287**	P	**Pn**	**06 16 52.9**	**-0.2**
SBUM	**Sibu**	**18.36**	**287**	P	**P**	**06 16 54.1**	**+1.0**
PMG	**Port Moresby**	**18.42**	**111**	P	**Pn**	**06 16 54.7**	**+0.9**
	comp=Z,4.3nm,0.3s,baz=328,slow=8.1,SNR=3.7						
PMG				LR	LR	06 25 39.8	
	comp=Z,394nm,19.8s,baz=290,slow=42						
PMG	**Port Moresby**	**18.42**	**111**	P	**Pn**	**06 16 56.1**	**+2.2**
SJI	**Sawahan**	**18.58**	**254**	P	**Pn**	**06 16 57.9**	**+2.1**
	comp=Z,178nm,1.0s						
SNJI	**Sawahan-Nganju**	**18.60**	**254**	P	**Pn**	**06 16 59.4**	**+3.2**
	comp=Z,81nm,1.0s						
PCJI	**Pacitan**	**19.26**	**253**	P	**P**	**06 17 00.8**	**-2.2**
	comp=Z,144nm,0.7s						
SMRI	**Semarang**	**19.71**	**257**	P	**P**	**06 17 08.4**	**+0.4**
SMRI				IAmb	IAmb	06 17 24.4	
	comp=Z,92nm,1.1s						
UGM	**Wanagama**	**19.82**	**255**		**P**	**06 17 09.8**	**+0.7**
UGM				IAmb	IAmb	06 17 23.6	
	comp=Z,116nm,1.4s						
UGM	**Wanagama**	**19.82**	**255**	P	**Pn**	**06 17 11.1**	**+0.4**
MBWA	**Marble Bar**	**20.63**	**208**		**P**	**06 17 18.6**	**+0.8**
MBWA				IAmb	IAmb	06 17 28.8	
	comp=Z,45nm,1.0s						
PSA00	**Pilbara Seismi**	**20.93**	**207**	P	**P**	**06 17 20.1**	**-1.0**
PSA00				IAmb	IAmb	06 17 38.6	
	comp=Z,40nm,0.9s						
PSA00	**Pilbara Seismi**	**20.93**	**207**		**P**	**06 17 20.4**	**-0.8**
PSA00				IAmb	IAmb	06 17 38.6	
	comp=Z,26nm,1.1s						
AS31	**Alice Springs**	**21.02**	**169**		**P**	**06 17 22.2**	**0.0**
AS31				IAmb	IAmb	06 17 30.0	
	comp=Z,32nm,0.8s						
ASAR	**Alice Springs**	**21.02**	**169**	P	**P**	**06 17 22.2**	**0.0**
	comp=Z,85nm,0.8s,baz=350,slow=11,SNR=203						
ASAR				S	**S**	**06 21 09.7**	**-6.8**
	comp=Z,8.8nm,0.8s,baz=348,slow=24,SNR=7.6 comp=Z,85nm,0.8s						
ASAR	**Alice Springs**	**21.02**	**169**		**P**	**06 17 21.8**	**-0.4**
KRVT	**Keravat (AS076**	**22.23**	**94**	LR	LR	06 26 49.6	
	comp=Z,103nm,19.0s,baz=245,slow=38						
LEM	**Lembang**	**22.44**	**259**	P	**P**	**06 17 36.1**	**-1.5**
	comp=Z,23nm,0.6s,baz=18,slow=19,SNR=5.0						
LEM				LR	LR	06 27 50.7	
	comp=Z,2µm,19.4s,baz=150,slow=41 comp=Z,23nm,0.6s						
BBJI	**Bungbulang**	**22.51**	**258**	P	**P**	**06 17 35.1**	**-3.2**
BBJI				IAmb	IAmb	06 17 37.7	
	comp=Z,22nm,0.6s						
CTAO	**Charters Tower**	**23.45**	**138**		**P**	**06 17 48.1**	**+0.2**
CTAO				IAmb	IAmb	06 17 58.0	
	comp=Z,46nm,1.1s						
MYKOM	**Kota Tinggi**	**26.35**	**280**		**P**	**06 18 15.2**	**+0.4**
MYKOM				IAmb	IAmb	06 18 22.2	
	comp=Z,22nm,0.7s						
INKA	**Innaminka**	**26.83**	**158**	P	**P**	**06 18 20.1**	**+1.3**
FORT	**Forrest**	**27.78**	**183**	P	**P**	**06 18 26.5**	**-0.8**
FORT				IAmb	IAmb	06 18 41.2	
	comp=Z,12nm,0.8s						
QIZ	**Qiongzhong**	**29.33**	**319**	P	**P**	**06 18 40.1**	**-1.2**
QIZ				S	**S**	**06 23 37.8**	**+3.0**
QIZ				LR	LR		
	comp=N,230nm,11.7s						
QIZ				LR	LR		
	comp=E,210nm,15.1s						
QIZ				LR	LR		
	comp=Z,210nm,12.3s						
KNMB	**Chin-men Tao**	**29.37**	**338**	P	**P**	**06 18 41.3**	**-0.3**
JOW	**Kunigami**	**29.59**	**357**	P	**P**	**06 18 43.1**	**-0.4**
KULM	**Kulim**	**30.23**	**286**	P	**P**	**06 18 49.6**	**+0.3**
EIDS	**Eidsvold**	**30.31**	**139**	P	**P**	**06 18 49.9**	**-0.1**
EIDS				IAmb	IAmb	06 18 53.9	
	comp=Z,36nm,1.6s						
HNR	**Honiara**	**30.65**	**104**	LR	LR	06 33 34.6	
	comp=Z,15nm,18.8s,baz=15,slow=41						
STKA	**Stephens Creek**	**30.89**	**160**	P	**P**	**06 18 54.8**	**-0.2**
	comp=Z,6.4nm,0.4s,baz=335,slow=8.3,SNR=14 comp=Z,6.4nm,0.4s						
STKA	**Stephens Creek**	**30.89**	**160**		**P**	**06 18 54.8**	**-0.2**
RPSI	**Rantau Prapat**	**31.36**	**280**		**P**	**06 18 59.0**	**-0.3**
RPSI				IAmb	IAmb	06 19 13.4	
	comp=Z,12nm,0.9s						
JCJ	**Chichijima**	**32.13**	**21**	LR	LR	06 30 27.7	
	comp=Z,459nm,20.1s,baz=158,slow=33						
GSI	**Gunungsitoli**	**32.48**	**277**	P	**P**	**06 19 09.1**	**-0.1**
ARMA	**Armidale**	**34.29**	**145**		**P**	**06 19 24.9**	**0.0**
ARMA				IAmb	IAmb	06 20 04.2	
	comp=Z,15nm,1.1s						
JNU	**Nakatsue**	**35.84**	**2**	LR	LR	06 35 58.1	
	comp=Z,337nm,18.1s,baz=167,slow=39						
NJ2	**Nanjing**	**36.28**	**344**	*e*P	**P**	**06 19 43.3**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,22nm,0.6s						
CMAR	**Chiang Mai Arr**	**37.06**	**306**	P	**P**	**06 19 47.4**	**-1.4**
	comp=Z,3.4nm,0.7s,baz=135,slow=7.6,SNR=20						
CMAR				LR	LR	06 38 18.8	
	comp=Z,153nm,19.2s,baz=135,slow=42 comp=Z,3.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**37.06**	**306**		**P**	**06 19 48.9**	**+0.2**
CHTO	**Chiang Mai**	**37.25**	**307**		**P**	**06 19 50.6**	**+0.3**
CHTO				IAmb	IAmb	06 19 55.6	
	comp=Z,13nm,0.8s						
PZH	**PanZhiHua**	**39.87**	**319**	P	**P**	**06 20 15.8**	**+3.4**
MJAR	**Matsushiro Arr**	**40.02**	**11**	P	**P**	**06 20 11.5**	**-1.8**
	comp=Z,4.0nm,0.7s,baz=181,slow=10.0,SNR=8.0						
MJAR				LR	LR	06 36 03.5	
	comp=Z,263nm,20.3s,baz=200,slow=35 comp=Z,4.0nm,0.7s						
KSRS	**Korea Arr**	**40.19**	**358**	P	**P**	**06 20 13.9**	**-0.8**
	comp=Z,2.2nm,1.1s,baz=177,slow=12,SNR=2.4						
KSRS				LR	LR	06 35 52.0	
	comp=Z,150nm,21.4s,baz=180,slow=35 comp=Z,2.2nm,1.1s						
HNS	**HongShan**	**42.48**	**342**	⇑P	P	06 20 39.4	+5.9
HNS				pmax	pmax		
	comp=Z,9.0nm,1.9s						
HNS				LR	LR		
	comp=N,200nm,14.4s						
HNS				LR	LR		
	comp=E,150nm,13.9s						
HNS				LR	LR		
	comp=Z,230nm,13.5s						
BRDH	**Bariadhala**	**45.08**	**306**	LR	LR	06 43 45.3	
	comp=Z,151nm,19.3s,baz=132,slow=42						
LZDM	**Lanzhou Array**	**45.71**	**330**	P	**P**	**06 20 58.8**	**-1.2**
	comp=Z,1.4nm,0.3s,baz=139,slow=11,SNR=1.5 comp=Z,1.4nm,0.3s						
SHL	**Shillong**	**46.36**	**310**		**P**	**06 21 04.6**	**-0.5**
HHC	**Hu-ho-hao-te**	**46.62**	**341**	*e*P	**P**	**06 21 08.8**	**+2.1**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,75nm,5.2s						
HHC				LR	LR		
	comp=N,140nm,11.5s						
HHC				LR	LR		
	comp=E,200nm,12.4s						
HHC				LR	LR		
	comp=Z,120nm,11.8s						
USRK	**Ussuriysk Ar.**	**46.93**	**2**	P	**P**	**06 21 08.7**	**-0.3**
	comp=Z,3.5nm,0.6s,baz=172,slow=6.3,SNR=6.4 comp=Z,3.5nm,0.6s						
ASAJ	**Asahikawa**	**48.19**	**12**	LR	LR	06 42 59.3	
	comp=Z,194nm,18.4s,baz=132,slow=38						
MSVF	**Nonsavu**	**49.53**	**111**	LR	LR	06 42 08.7	
	comp=Z,322nm,21.1s,baz=283,slow=36						
PALK	**Pallekele**	**50.02**	**282**	LR	LR	06 44 49.0	
	comp=Z,324nm,20.1s,baz=108,slow=39						
GTA2	**Gaotai**	**50.41**	**330**	*e*P	**P**	**06 21 37.3**	**+1.3**
GTA2				pP	sP	06 21 42.0	+1.6
GTA2				pmax	pmax		
	comp=Z,6.0nm,0.8s						
EVN	**Everest**	**51.47**	**310**		**P**	**06 21 44.3**	**-0.5**
KLR	**Kul'dur**	**51.95**	**2**	LR	LR	06 46 03.2	
	comp=Z,107nm,18.0s,baz=200,slow=39						
HEH	**HeiHe**	**52.98**	**358**	*e*P	**P**	**06 21 56.3**	**+1.4**
HEH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ULN	**Ulaanbaatar**	**54.33**	**341**		**P**	**06 22 04.4**	**-0.7**
ULN				IAmb	IAmb	06 23 22.7	
	comp=Z,6.5nm,0.8s						
SONM	**Songino Array**	**54.52**	**341**	P	**P**	**06 22 06.1**	**-0.3**
	comp=Z,2.1nm,0.8s,baz=155,slow=8.1,SNR=6.4 comp=Z,2.1nm,0.8s						
SONM	**Songino Array**	**54.52**	**341**	P	**P**	**06 22 05.9**	**-0.4**
RPZ	**Rata Peaks**	**54.62**	**144**	LR	LR	06 47 08.8	
	comp=Z,259nm,18.8s,baz=89,slow=38						
TUWZ	**Tuamarina**	**55.11**	**140**	P	**P**	**06 22 10.2**	**-0.4**
BKZ	**Black Stump Fm**	**55.66**	**137**	P	**P**	**06 22 15.1**	**+0.4**
RTZ	**Ruatahuna**	**55.74**	**136**	P	**P**	**06 22 15.5**	**+0.2**
AFI	**Afiamalu**	**58.68**	**104**	LR	LR	06 47 32.8	
	comp=Z,186nm,19.8s,baz=280,slow=36						
WMQ	**Urumqi**	**59.89**	**326**	*e*P	**P**	**06 22 46.8**	**+2.5**
WMQ				LR	LR		
	comp=Z,120nm,21.5s						
PETK	**Petropavlovsk-**	**60.52**	**19**	P	**P**	**06 22 48.3**	**-0.1**
	comp=Z,7.9nm,0.8s,baz=197,slow=5.2,SNR=8.7						
PETK				LR	LR	06 49 35.7	
	comp=Z,58nm,19.0s,baz=195,slow=37 comp=Z,7.9nm,0.8s						
MKAR	**Makanchi Array**	**64.72**	**326**	P	**P**	**06 23 15.8**	**-0.9**
	comp=Z,6.3nm,0.7s,baz=127,slow=7.7,SNR=13 comp=Z,6.3nm,0.7s						
MKAR	**Makanchi Array**	**64.72**	**326**		**P**	**06 23 16.1**	**-0.5**
YAK	**Yakutsk**	**64.75**	**360**	LR	LR	06 50 38.1	
	comp=Z,109nm,20.4s,baz=172,slow=35						
KSH2	**Kashi**	**65.02**	**316**	P	**P**	**06 23 20.8**	**+1.9**
KSH2				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KDJ	**Kajisay**	**65.33**	**319**	P	**P**	**06 23 20.2**	**-0.7**
KDJ				IAmb	IAmb	06 23 23.2	
	comp=Z,6.1nm,0.8s						
SHEM	**Shemya Is, Ala**	**66.75**	**28**	LR	LR	06 50 00.6	
	comp=Z,135nm,18.9s,baz=188,slow=34						
ZAA0	**Zalesovo Array**	**67.85**	**333**		**P**	**06 23 35.2**	**-1.3**
ZALV	**Zalesovo Beam**	**67.85**	**333**	P	**P**	**06 23 35.8**	**-0.7**
	comp=Z,12nm,0.8s,baz=108,slow=5.4,SNR=28 comp=Z,12nm,0.8s						
KURBB	**Kurchatov Arra**	**68.94**	**328**	P	**P**	**06 23 43.0**	**-0.4**
	comp=Z,23nm,0.9s,baz=127,slow=5.6,SNR=50 comp=Z,23nm,0.9s						
KURK	**Kurchatov**	**68.95**	**328**		**P**	**06 23 43.0**	**-0.5**
TIXI	**Tiksi**	**74.42**	**360**		**P**	**06 24 14.8**	**-1.1**
TIXI				IAmb	IAmb	06 24 19.5	
	comp=Z,6.7nm,0.7s						
BVAR	**Borovoye Array**	**74.52**	**327**	P	**P**	**06 24 16.5**	**-0.4**
	comp=Z,4.6nm,0.8s,baz=133,slow=8.5,SNR=15 comp=Z,4.6nm,0.8s						
BORK	**Borovoye**	**74.56**	**327**		**P**	**06 24 16.8**	**-0.3**
BORK				IAmb	IAmb	06 24 34.0	
	comp=Z,9.2nm,1.0s						
VNDA	**Vanda**	**76.52**	**173**	P	**P**	**06 24 27.7**	**-0.3**
	comp=Z,2.6nm,0.8s,baz=322,slow=6.1,SNR=9.5						
VNDA				LR	LR	06 59 38.0	
	comp=Z,149nm,18.0s,baz=338,slow=37 comp=Z,2.6nm,0.8s						
VNDA	**Vanda**	**76.52**	**173**		**P**	**06 24 28.0**	**0.0**
NRIK	**Noril'sk**	**77.56**	**346**	P	**P**	**06 24 33.2**	**-0.7**
	comp=Z,8.8nm,0.8s,baz=138,slow=7.4,SNR=11						
NRIK				LR	LR	07 00 41.4	
	comp=Z,165nm,21.3s,baz=142,slow=37 comp=Z,8.8nm,0.8s						
NRIK	**Noril'sk**	**77.56**	**346**		**P**	**06 24 32.9**	**-1.0**
NRIK				IAmb	IAmb	06 24 37.7	
	comp=Z,9.3nm,0.8s						
MAW	**Mawson**	**78.67**	**201**	P	**P**	**06 24 38.6**	**-1.5**
	comp=Z,6.1nm,1.0s,baz=58,slow=11,SNR=3.2 comp=Z,6.1nm,1.0s						
AB31	**Akbulak array**	**79.20**	**321**		**P**	**06 24 42.6**	**-0.8**
AB31				IAmb	IAmb	06 24 55.1	
	comp=Z,7.2nm,0.8s						
ABKAR	**Akbulak array**	**79.20**	**321**		**P**	**06 24 42.7**	**-0.7**
PPT	**Papeete**	**80.20**	**107**	LR	LR	06 57 39.7	
	comp=Z,78nm,21.2s,baz=315,slow=34						
PPT2	**Papeete2**	**80.20**	**107**	*e*LR	LR	06 49 42.4	
	comp=Z,112nm,22.2s						
PPT2				*e*LR	LR	06 49 44.5	
	comp=Z,206nm,33.5s						
TBI	**Tubuai**	**80.36**	**113**	*e*LR	LR	06 49 47.1	
	comp=Z,694nm,24.5s						
ARTI	**Arti**	**82.22**	**328**		**P**	**06 24 59.1**	**-0.4**
ARTI				IAmb	IAmb	06 25 01.8	
	comp=Z,8.4nm,0.6s						
KDAK	**Kodiak Island**	**85.86**	**32**	LR	LR	06 59 45.3	
	comp=Z,101nm,20.6s,baz=239,slow=33						
QSPA	**South Pole Qui**	**87.05**	**180**	P	**P**	**06 25 23.2**	**-0.7**
	comp=Z,4.8nm,0.9s,baz=319,slow=1.2,SNR=11 comp=Z,4.8nm,0.9s						
QSPA	**South Pole Qui**	**87.05**	**180**	P	**P**	**06 25 23.8**	**-0.1**
QSPA				IAmb	IAmb	06 25 25.8	
	comp=Z,7.1nm,0.9s						
TAOE	**Nuku Hiva Isla**	**89.61**	**99**	*e*LR	LR	06 54 07.1	
	comp=Z,141nm,24.4s						
KBZ	**Khabaz**	**89.74**	**314**	P	**P**	**06 25 36.2**	**-0.7**
	comp=Z,1.2nm,0.7s,baz=45,slow=5.4,SNR=4.3 comp=Z,1.2nm,0.7s						
ILAR	**Eielson Array**	**89.75**	**25**	P	**P**	**06 25 36.1**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=244,slow=5.4,SNR=14						
ILAR				LR	LR	07 03 43.7	
	comp=Z,87nm,18.9s,baz=262,slow=34 comp=Z,0.5nm,0.6s						
OBN	**Obninsk**	**94.21**	**325**	LR	LR	07 13 26.1	
	comp=Z,49nm,18.2s,baz=24,slow=39						
SPITS	**Spitsbergen Ar**	**97.53**	**349**	LR	LR	07 15 57.3	
	comp=Z,48nm,20.9s,baz=44,slow=39						
ARCES	**ARCESS Array B**	**97.69**	**340**	P	**P**	**06 26 11.5**	**-1.4**
	comp=Z,2.4nm,0.8s,baz=81,slow=7.5,SNR=4.2 comp=Z,2.4nm,0.8s						
DLBC	**Dease Lake**	**97.79**	**32**	LR	LR	07 09 47.7	
	comp=Z,50nm,18.1s,baz=282,slow=35						
TROLL	**Troll, Antarti**	**98.06**	**194**	⇑P	Pdif	06 26 17.6	+2.8
AKASG	**Malin Array Be**	**98.94**	**321**	LR	LR	07 16 36.5	
	comp=Z,61nm,20.2s,baz=77,slow=39						
SNAA	**Sanae**	**99.58**	**194**	⇑P	**Pdif**	**06 26 19.3**	**-2.1**
BBB	**Bella Bella**	**99.69**	**38**	LR	LR	07 08 14.3	
	comp=Z,46nm,18.9s,baz=248,slow=34		

ULGR			Sg	Sg	06 21 32.2	+5.7
CHBI	**Chibit, Altay**	**5.76 313**	Pg	Pg	06 20 12.4	-0.3
CHBI			Sg	Sg	06 21 34.0	+6.8
ARDR	**Aradan**	**6.01 356**	Sg	Sg	06 21 39.0	+3.8
TUNR	**Tungur**	**6.29 307**	Pg	Pg	06 20 22.3	-0.5
TUNR			Sg	Sg	06 21 49.9	+5.5
MOY	**Mondy**	**6.79 39**	Pg	Pg	06 20 30.7	-1.7
MOY			Sg	Sg	06 22 04.7	+4.3
ARTR	**Artybash**	**6.87 322**	Sg	Sg	06 22 08.9	+6.2

*IDC **20** 06:28:24.4±1.6,2.°89S×129.°72E, h0km, mb3.6/2, mbtmp3.7/5, ML3.6/3, Error ellipse: s-maj=44.1km s-min=21.7km az=100.0*
*DJA **20** 06:28:30.1±0.5,3.°5S×3.°13×13.°0E±.°, h37km±13km, M3.8/18, mb4.0/2, MLv3.6/18*
ISC 20 06:28:28.4±1.0, 2.°92S±0.°06×129.°81E±0.°05, h25km, n15, σ1s73/16, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.98**	**244**	P	**Pn**	**06 28 49.0**	**+2.4**
KRAI	**Karang Ratu**	**1.47**	**254**	P	**Pn**	**06 28 54.9**	**+1.6**
BNDI	**Bandanaira**	**1.60**	**177**	P	**Pn**	**06 28 54.7**	**-0.4**
AAI	**Ambon**	**1.79**	**245**	P	**Pn**	**06 28 59.5**	**+1.8**
FAKI	**Fak Fak**	**2.44**	**90**	P	**Pn**	**06 29 08.3**	**+1.6**
SIJI	**Sorong**	**2.50**	**36**	Pn	**Pn**	**06 29 07.8**	**+0.2**
	9.0nm,0.3s,baz=187,slow=22,SNR=19						
SIJI				Sn	**Sn**	**06 29 37.8**	**+0.4**
	10nm,0.3s,baz=258,slow=23,SNR=5.5						
	18nm,0.3s						
SIJI	**Sorong**	**2.50**	**36**	P	**Pn**	**06 29 08.0**	**+0.4**
SWI	**Sorong**	**2.50**	**35**	P	**Pn**	**06 29 08.5**	**+0.9**
NLAI	**Namlea**	**2.73**	**263**	P	**Pn**	**06 29 13.3**	**+2.7**
SANI	**Sanana**	**3.91**	**283**	P	**Pn**	**06 29 25.1**	**-1.9**
RKPI	**Ransiki, Papua**	**4.58**	**72**	P	**Pn**	**06 29 38.3**	**+2.1**
FITZ	**Fitzroy Crossi**	**15.63**	**195**	Pn	**Pn**	**06 32 05.2**	**-2.0**
	0.1nm,0.3s,baz=16,slow=11,SNR=1.4						
	1.9nm,0.9s						
WRA	**Warramunga Arr**	**17.49**	**166**	P	**Pn**	**06 32 29.0**	**-1.8**
	0.3nm,0.3s,baz=350,slow=12,SNR=12						
	1.2nm,0.7s						
ASAR	**Alice Springs**	**21.00**	**169**	P	**P**	**06 33 10.9**	**+0.7**
	4.2nm,0.7s,baz=352,slow=11,SNR=53						
	4.2nm,0.7s						
MKAR	**Makanchi Array**	**64.74**	**326**	P	**P**	**06 39 04.2**	**-0.6**
	0.3nm,0.8s,baz=120,slow=8.5,SNR=2.2						
	0.3nm,0.8s						

*IDC **20** 06:30:00.4±1.2,10.°00S×152.°57E, h0km, mb3.9/8, mbtmp3.9/9, ML3.5/1, Error ellipse: s-maj=49.3km s-min=22.3km az=113.0*
ISC 20 06:30:05.9±1.2, 10.°1S±0.°2×152.°4E±0.°3, h35km, n10, σ1s11/10, mb3.9/7, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**11.58**	**210**	Pn	**Pn**	**06 32 47.5**	**-1.3**
	0.2nm,0.3s,baz=27,slow=14,SNR=1.6						
	2.4nm,0.6s						
WRA	**Warramunga Arr**	**19.99**	**239**	P	**Pn**	**06 34 37.5**	**+0.1**
	4.4nm,0.7s,baz=61,slow=10,SNR=20						
	4.4nm,0.7s						
ASAR	**Alice Springs**	**22.23**	**230**	P	**P**	**06 35 01.6**	**+1.9**
	2.1nm,0.8s,baz=64,slow=9.4,SNR=13						
	2.1nm,0.8s						
STKA	**Stephens Creek**	**23.88**	**203**	P	**P**	**06 35 15.5**	**-0.9**
	2.4nm,0.7s,baz=13,slow=13,SNR=2.9						
	2.4nm,0.7s						
QSPA	**South Pole Qui**	**79.90**	**180**	P	**P**	**06 42 12.3**	**+1.2**
	2.0nm,1.0s,baz=308,slow=3.5,SNR=2.9						
	2.0nm,1.0s						
MKAR	**Makanchi Array**	**84.05**	**319**	P	**P**	**06 42 32.6**	**-0.5**
	0.4nm,0.7s,baz=94,slow=7.2,SNR=4.8						
	0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**85.32**	**327**	P	**P**	**06 42 38.4**	**-0.8**
	1.1nm,0.6s,baz=96,slow=6.0,SNR=3.8						
	1.1nm,0.6s						
ILAR	**Eielson Array**	**87.18**	**22**	P	**P**	**06 42 47.8**	**-0.4**
	0.7nm,0.9s,baz=250,slow=5.2,SNR=6.9						
	0.7nm,0.9s						
KURBB	**Kurchatov Arra**	**87.70**	**322**	P	**P**	**06 42 51.3**	**+0.3**
	0.2nm,0.5s,baz=111,slow=5.0,SNR=1.9						
	0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**151.16**	**279**	PKPbc	**PKiKP**	**06 49 57.4**	**+0.3**
	0.8nm,0.7s,baz=107,slow=1.1,SNR=4.5						

*SNET **20** 06:32:07.2±1.4, 13.°71N×91.°42W, h28km, ML3.4, Presumed earthquake*
*CATAC **20** 06:32:08.2±0.5, 14.°N±5.°×9.°1W±.°, h50km±15km, M3.5/17, MLv3.5/17, Error ellipse: s-maj=11.9km s-min=3.5km az=25.1, confirmed*
*GCG **20** 06:32:09.3±1.1, 14.°09N×91.°27W, h77km±7km, MD3.8, ML4.0, MW3.1, Presumed earthquake*
ISC 20 06:32:10.8±1.7, 14.°11N±0.°10×91.°19W±0.°06, h82km±11km, n41, σ1s72/62, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG5	**El Palmar, Qui**	**0.33**	**333**	*i* P	**Pn**	**06 32 24.7**	**+1.1**
STG5				*i* S	**Sn**	**06 32 36.2**	**+3.1**
STG2	**El Palmar, Qui**	**0.37**	**331**	*i* P	**Pn**	**06 32 25.5**	**+1.6**
STG2				*i* S	**Sn**	**06 32 37.5**	**+3.8**
STG2				IAML		06 32 38.9	
	comp=E,9μm,0.3s						
STG8	**El Palmar, Qui**	**0.37**	**336**	*i* P	**Pn**	**06 32 25.5**	**+1.4**
STG8				*i* S	**Sn**	**06 32 38.1**	**+4.2**
STG8				IAML		06 32 39.9	
	comp=E,2μm,0.2s						
FG8	**Yepocapa, Chim**	**0.63**	**76**	*i* P	**Pn**	**06 32 23.3**	**-2.7**
FG8				*i* S	**Sn**	**06 32 33.8**	**-3.6**
RTAL	**Retalhuleu**	**0.64**	**310**	P	**Pn**	**06 32 24.0**	**-2.0**
RTAL				S	**Sn**	**06 32 35.7**	**-1.6**
FG16	**Alotenango, Sa**	**0.68**	**76**	*i* P	**Pn**	**06 32 24.1**	**-2.6**
FG16				*i* S	**Sn**	**06 32 35.2**	**-3.3**
SOKI	**Kika Raxquin**	**0.73**	**344**	*i* P	**Pn**	**06 32 26.8**	**-0.7**
SOKI				*i* S	**Sn**	**06 32 39.7**	**0.0**
GCG4	**OSOP**	**0.80**	**54**	*i* P	**Pn**	**06 32 27.4**	**-0.4**
PCG5	**San Vicente Pa**	**0.80**	**82**	*i* P	**Pn**	**06 32 25.2**	**-2.7**
PCG5				*i* S	**Sn**	**06 32 37.4**	**-3.1**
QUEO	**Labor Ovalle**	**0.82**	**338**	*i* P	**Pn**	**06 32 28.1**	**-0.1**
ESSJ	**San Jos, E**	**0.87**	**129**	*i* P	Pn	06 32 22.8	-5.6
SMCA	**Catarina**	**1.13**	**311**	*i* P	**Pn**	**06 32 29.5**	**-2.0**
SMCA				*i* S	**Sn**	**06 32 44.5**	**-2.7**
APG	**El Apazote**	**1.13**	**38**	*i* P	**Pn**	**06 32 31.9**	**0.0**
FAME	**Alcaldia de Sa**	**1.18**	**103**	P	**Pn**	**06 32 31.1**	**-1.0**
FAME				S	**Sn**	**06 32 48.5**	**+0.4**
HUEH	**Huehuetenango**	**1.24**	**346**	P	**Pn**	**06 32 33.3**	**+0.3**
SLOZ	**Alcaldia de Sa**	**1.37**	**93**	P	**Pn**	**06 32 34.2**	**-0.4**
SLOZ				S	**Sn**	**06 32 55.8**	**+3.2**
LOAL	**Lomas de Alarc**	**1.38**	**95**	P	**Pn**	**06 32 34.6**	**-0.1**
LOAL				S	**Sn**	**06 32 55.0**	**+2.3**
NUBE	**Las Nubes**	**1.39**	**98**	P	**Pn**	**06 32 34.2**	**-0.7**
NUBE				S	**Sn**	**06 32 54.1**	**+1.0**
NUBE	**Las Nubes**	**1.39**	**98**	*i* P	**Pn**	**06 32 34.2**	**-0.7**
NUBE	**Las Nubes**	**1.39**	**98**	*e*P	**Pn**	**06 32 34.0**	**-1.0**
NUBE				*e*S	**Sn**	**06 32 53.7**	**+0.6**
RBDL	**Robledal**	**1.46**	**90**	*e*P	**Pn**	**06 32 35.4**	**-0.5**
SBLS	**San Blas**	**1.55**	**100**	*e*P	**Pn**	**06 32 36.6**	**-0.4**
CEVE	**Cerro Verde**	**1.55**	**100**	P	**Pn**	**06 32 36.7**	**-0.4**
CEVE	**Cerro Verde**	**1.55**	**100**	*e*P	**Pn**	**06 32 36.8**	**-0.3**
CEVE				*e*S	**Sn**	**06 32 58.1**	**+1.1**
SNJE	**San Jose**	**1.56**	**99**	*e*P	**Pn**	**06 32 37.0**	**-0.2**
UNIC	**Universidad Ca**	**1.60**	**94**	P	**Pn**	**06 32 37.0**	**-0.6**
UNIC				S	**Sn**	**06 33 00.2**	**+2.3**
JAYA	**Jayaque - finc**	**1.75**	**105**	P	**Pn**	**06 32 38.9**	**-0.8**
JAYA				S	**Sn**	**06 33 02.4**	**+0.9**
JAYA	**Jayaque - finc**	**1.75**	**105**	*i* P	**Pn**	**06 32 38.7**	**-0.9**
JAYA				*i* S	**Sn**	**06 33 00.9**	**-0.7**
JAYA				IAML		06 33 03.1	
	comp=N,558nm,0.2s						
JAYA	**Jayaque - finc**	**1.75**	**105**	*e*P	**Pn**	**06 32 38.8**	**-0.9**
JAYA				*e*S	**Sn**	**06 33 01.4**	**-0.2**
MTO3	**Montecristo**	**1.80**	**81**	P	**Pn**	**06 32 39.6**	**-0.8**
MTO3	**Montecristo**	**1.80**	**81**	*i* P	**Pn**	**06 32 39.5**	**-0.8**
PMON	**Piamonte**	**1.87**	**102**	P	**Pn**	**06 32 40.5**	**-0.7**
PMON				S	**Sn**	**06 33 06.4**	**+2.3**
PMON	**Piamonte**	**1.87**	**102**	*e*P	**Pn**	**06 32 40.4**	**-0.7**
UEES	**Universidad Ev**	**1.94**	**101**	*e*P	**Pn**	**06 32 42.1**	**+0.1**
LOMA	**Loma Larga**	**2.02**	**103**	*e*P	**Pn**	**06 32 42.4**	**-0.7**
SJTE	**Alcalda de S**	**2.18**	**103**	*e*P	**Pn**	**06 32 44.5**	**-0.8**
PAVA	**Las Pavas**	**2.23**	**100**	P	**Pn**	**06 32 45.4**	**-0.4**
SCLA	**Alcaldia de Sa**	**2.43**	**99**	P	**Pn**	**06 32 48.1**	**-0.4**
SCLA				S	**Sn**	**06 33 20.3**	**+2.8**
SARH	**Santa Rosa de**	**2.45**	**74**	*i* P	**Pn**	**06 32 48.9**	**+0.1**
LCND	**La Caada**	**3.31**	**104**	P	**Pn**	**06 33 00.1**	**-0.3**
CNCH	**Conchagua**	**3.37**	**104**	P	**Pn**	**06 33 01.0**	**-0.3**
CNCH				S	**Sn**	**06 33 41.9**	**+1.6**

*IDC **20** 06:35:55.8±1.2,2.°88S×129.°57E, h0km, mb3.9/4, mbtmp3.9/7, ML3.9/3, Error ellipse: s-maj=40.6km s-min=21.2km az=81.0*
*DJA **20** 06:36:01.2±0.7,3.°5S×13.°0E±.°, h19km±7km, M4.0/18, mB4.8/1, mb4.2/4, MLv3.9/18, Mw(mB)4.0/1*
ISC 20 06:35:57.3±0.8, 2.°74S±0.°06×129.°94E±0.°06, h10km, n16, σ1s37/18, mb4.1/4, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.18**	**239**	P	**Pb**	**06 36 20.8**	**+1.1**
KRAI	**Karang Ratu**	**1.65**	**249**	P	**Pn**	**06 36 27.5**	**+1.2**
BNDI	**Bandanaira**	**1.78**	**181**	P	**Pb**	**06 36 31.4**	**+1.4**
AAI	**Ambon**	**1.98**	**241**	P	**Pn**	**06 36 31.6**	**+0.7**
SIJI	**Sorong**	**2.28**	**36**	Pn	**Pb**	**06 36 38.6**	**+0.1**
	22nm,0.3s,baz=224,slow=22,SNR=61						
SIJI				Sn	**Sb**	**06 37 08.1**	**+1.2**
	32nm,0.3s,baz=284,slow=23,SNR=13						
	44nm,0.3s						
SIJI	**Sorong**	**2.28**	**36**	P	**Pb**	**06 36 39.5**	**+0.9**
SWI	**Sorong**	**2.28**	**35**	P	**Pb**	**06 36 39.2**	**+0.6**
SWI				S	**Sb**	**06 37 08.6**	**+1.7**
FAKI	**Fak Fak**	**2.32**	**95**	P	**Pb**	**06 36 40.0**	**+0.8**
NLAI	**Namlea**	**2.88**	**260**	P	**Pn**	**06 36 44.0**	**+0.8**
SANI	**Sanana**	**4.00**	**280**	P	**Pn**	**06 36 57.6**	**-1.1**
FITZ	**Fitzroy Crossi**	**15.84**	**195**	Pn	**Pn**	**06 39 38.1**	**-2.4**
	0.3nm,0.3s,baz=18,slow=11,SNR=7.4						
	1.8nm,0.8s						
WRA	**Warramunga Arr**	**17.64**	**166**	P	**Pn**	**06 40 00.7**	**-2.6**
	0.5nm,0.3s,baz=341,slow=12,SNR=22						
	1.4nm,0.6s						
ASAR	**Alice Springs**	**21.16**	**170**	P	**P**	**06 40 42.5**	**-0.4**
	5.8nm,0.7s,baz=352,slow=11,SNR=63						
	5.8nm,0.7s						
MKAR	**Makanchi Array**	**64.66**	**326**	P	**P**	**06 46 35.6**	**+0.2**
	0.3nm,0.5s,baz=120,slow=6.9,SNR=4.9						
	0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**67.77**	**333**	P	**P**	**06 46 53.8**	**-1.3**
	0.6nm,0.4s,baz=112,slow=11,SNR=2.1						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**68.88**	**328**	P	**P**	**06 47 02.7**	**+0.6**
	0.7nm,0.3s,baz=130,slow=5.8,SNR=4.1						
	0.7nm,0.3s						

AFAD 20 06:41:08.1, 38.°75N×43.°25E, h7km±2km, ML1.3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TVAN	**Van**	**0.25**	**150**	P	Pg	06 41 13.8	+0.7
TVAN				S	Sg	06 41 17.9	+1.4
TVAN				IAML		06 41 18.0	
	comp=N,262nm,0.3s						
TVAN				IAML		06 41 18.0	
	comp=E,186nm,0.3s						
VMUR	**Van-Muradiye**	**0.35**	**46**	P	Pg	06 41 15.5	+0.5
VMUR				IAML		06 41 26.0	
	comp=N,20nm,0.4s						
VMUR				S	Sb	06 41 26.9	+4.4
VMUR				IAML		06 41 29.0	
	comp=E,32nm,0.4s						
VMUR	**Van-Muradiye**	**0.35**	**46**	P	Pg	06 41 14.6	-0.4
VMUR				IAML		06 41 25.0	
	comp=E,31nm,0.9s						
VMUR				IAML		06 41 26.0	
	comp=N,20nm,0.4s						
ADCV	**BITLIS_Adilcev**	**0.41**	**278**	P	Pg	06 41 16.3	+0.1
ADCV				S	Sb	06 41 25.3	+0.9
ADCV				IAML		06 41 27.0	
	comp=N,34nm,0.4s						
ADCV				IAML		06 41 28.0	
	comp=E,24nm,0.3s						
ADCV	**BITLIS_Adilcev**	**0.41**	**278**	P	Pg	06 41 16.3	+0.1
ADCV				S	Sg	06 41 22.8	+1.2
ADCV				IAML		06 41 24.0	
	comp=N,56nm,0.3s						
ADCV				IAML		06 41 24.0	
	comp=E,49nm,0.1s						
GEVA	**Gevas**	**0.46**	**199**	P	Pg	06 41 15.5	-1.6
GEVA				S	Sb	06 41 24.5	-1.2
GEVA				IAML		06 41 25.0	
	comp=N,29nm,0.5s						
GEVA				IAML		06 41 25.0	
	comp=E,18nm,0.8s						
DORK	**Agr/Tutak/Do**	**0.73**	**330**	P	Pb	06 41 22.8	-0.5
DORK				S	Sb	06 41 34.3	+0.6
DORK				IAML		06 41 35.0	
	comp=N,9.9nm,0.2s						
DORK				IAML		06 41 35.0	
	comp=E,16nm,0.4s						
BLIS	**Bitlis-Merkez**	**0.95**	**250**	P	Pg	06 41 23.7	-2.7
BLIS				S	Sg	06 41 36.0	-2.7
KOTA	**Agri, Merkez-K**	**1.05**	**358**	P	Pb	06 41 28.6	-0.2
KOTA				S	Sb	06 41 42.5	-0.3
KOTA				IAML		06 41 48.0	
	comp=E,2.0nm,0.4s						
KOTA				IAML		06 42 17.0	
	comp=N,4.4nm,4.1s						
KOTA	**Agri, Merkez-K**	**1.05**	**358**	P	Pb	06 41 28.6	-0.2
KOTA				S	Sb	06 41 43.3	+0.5
KOTA				IAML		06 42 08.0	
	comp=N,3.5nm,2.3s						
MUSM	**Mu-Merkez**	**1.36**	**270**	P	Pn	06 41 31.0	-2.6
MUSM				S	Sb	06 41 49.9	-1.7
MUSM				IAML		06 41 59.0	
	comp=E,1.8nm,0.9s						
MUSM				IAML		06 42 12.0	
	comp=N,1.6nm,0.8s						

*ASRS **20** 06:45:16.0±0.8, 53.°46N×87.°24E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 20 06:45:17.3±3.3, 53.°48N×87.°27E, h0km, mbtmp2.8/2, ML2.1/2, Error ellipse: s-maj=31.2km s-min=17.3km az=64.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.53**	**289**	I	I	06 55 41.2	
	baz=107,slow=334,SNR=6.5						
ZALV	**Zalesovo Beam**	**1.53**	**289**	Pg	Pn	06 45 44.3	-1.6
	0.4nm,0.3s,baz=108,slow=17,SNR=4.4						
ZALV				Lg	Lg	06 46 05.8	
	0.6nm,0.3s,baz=110,slow=25,SNR=4.9						
KURBB	**Kurchatov Arra**	**6.10**	**246**	Pn	Pn	06 46 49.8	+1.1
	baz=63,slow=10,SNR=1.9						
	0.5nm,0.2s						
MKAR	**Makanchi Array**	**7.42**	**208**	Pn	Pn	06 47 07.8	+1.1
	baz=28,slow=11,SNR=2.4						
	0.2nm,0.4s						

DJA 20 06:50:20.8±0.3, 0.°5S±2.°×12.°3E±.°, h64km±6km, M3.7/12, mB4.7/1, mb3.9/2, MLv3.5/12, Mw(mB)3.9/1, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**0.82**	**199**	P	Pn	06 50 37.1	+0.3
LUWI				S	Sn	06 50 49.8	+1.3
GTOI	**Gorontalo**	**0.89**	**358**	P	Pn	06 50 39.9	+2.3
GTOI				S	Sn	06 50 53.4	+3.3
MRSI	**Marisa**	**1.32**	**304**	P	Pn	06 50 43.0	-0.2
MRSI				S	Sn	06 50 59.6	-0.4
APSI	**Ampana**	**1.53**	**245**	P	Pn	06 50 46.7	+0.7
MPSI	**Mapaga**	**3.20**	**281**	P	Pn	06 51 09.0	+0.3
SANI	**Sanana**	**3.44**	**121**	P	Pn	06 51 09.7	-2.3
MMSI	**Mamuju**	**4.78**	**240**	P	Pn	06 51 30.3	-0.1
NLAI	**Namlea**	**5.02**	**126**	P	Pn	06 51 33.4	-0.2
	0.1nm798nm22nm,0.9s						

*KMA **20** 07:02:45.4, 35.°40N×128.°03E, h14km*
*JMA **20** 07:02:46.4±0.6, 35.°N±3.°×12.°8E±.°, h0km, MV3.5/30, S KOREAN PENINSULA REG*

*KEA **20** 07:02:48.6, 35.°51N×128.°00E, h18km, ML3.1/1*
ISC 20 07:02:45.3±1.0, 35.°40N±0.°02×128.°01E±0.°02, h11km±8km, n45, σ0s78/50, South Korea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HACA	**Hapcheon Acc B**	**0.07**	**78**	P	**Pg**	**07 02 48.0**	**+0.3**
	SNR=2609						
KSSAC	**SANCHEONG**	**0.11**	**274**	P	**Pg**	**07 02 48.6**	**+0.3**
	SNR=906						
KSHAC	**HAPCHEON**	**0.20**	**39**	P	**Pb**	**07 02 50.3**	**-0.8**
	SNR=60						
KSKCH	**Geochang**	**0.23**	**340**	P	**Pg**	**07 02 50.6**	**+0.4**
	SNR=823						
KSJIN	**Jinju**	**0.24**	**177**	P	**Pg**	**07 02 50.5**	**+0.3**
	SNR=997						
EURB	**Uiryeong-eup**	**0.24**	**108**	P	**Pg**	**07 02 50.7**	**+0.5**
	SNR=74						
HAMB	**Hamyang**	**0.25**	**297**	P	**Pg**	**07 02 50.8**	**+0.4**
	SNR=56						
YALB	**Yaro**	**0.36**	**24**	P	**Pg**	**07 02 52.9**	**+0.3**
	SNR=198						
GACA	**Gaecheon**	**0.37**	**140**	P	**Pg**	**07 02 53.0**	**+0.3**
	SNR=284						
KSHAD	**HADONG**	**0.38**	**212**	P	**Pg**	**07 02 52.8**	**+0.1**
	SNR=84						
GMNA0	**Geumnam**	**0.42**	**193**	P	**Pg**	**07 02 53.7**	**0.0**
	SNR=122						
KSYSU	**YEOSU**	**0.45**	**229**	P	**Pg**	**07 02 54.3**	**+0.1**
	SNR=619						
NAWB	**Namwon**	**0.51**	**273**	P	**Pg**	**07 02 55.3**	**+0.2**
	SNR=44						
KSMAS	**Masan**	**0.51**	**116**	P	**Pg**	**07 02 55.4**	**+0.2**
	SNR=26						
GWYB	**Gwangyang**	**0.53**	**210**	P	**Pg**	**07 02 55.6**	**+0.1**
	SNR=88						
DUSB	**Deogyusan**	**0.53**	**338**	P	**Pg**	**07 02 56.1**	**+0.3**
	SNR=235						
YGAA	**Yongam**	**0.54**	**32**	P	**Pg**	**07 02 55.0**	**-0.8**
	SNR=48						
DGHA	**Donghyang**	**0.57**	**321**	P	**Pg**	**07 02 56.6**	**+0.2**
	SNR=53						
KSNAH	**Namhae**	**0.58**	**187**	P	**Pg**	**07 02 56.7**	**0.0**
	SNR=46						
JNYA	**Jinyeong**	**0.59**	**101**	P	**Pb**	**07 02 57.0**	**-0.6**
	SNR=80						
CGDA	**Cheongdo**	**0.60**	**64**	P	**Pb**	**07 02 57.1**	**-0.6**
	SNR=108						
MIYA	**Miryang-si**	**0.60**	**81**	P	**Pb**	**07 02 57.3**	**-0.6**
	SNR=20						
MALA0	**Maryeong**	**0.64**	**303**	P	**Pg**	**07 02 58.2**	**+0.3**
	SNR=62						
JUCA	**Juchon**	**0.68**	**103**	P	**Pb**	**07 02 58.7**	**-0.5**
	SNR=43						
KSYOS	**Yeosu**	**0.70**	**199**	P	**Pg**	**07 02 58.8**	**0.0**
	SNR=45						
KUJA	**Jangpyeong**	**0.70**	**136**	P	**Pg**	**07 02 58.9**	**0.0**
	SNR=22						
KSCIG	**Chilgok**	**0.71**	**25**	P	**Pg**	**07 02 59.1**	**+0.1**
	SNR=108						
KSSCH	**SUNCHEON**	**0.71**	**243**	P	**Pg**	**07 02 57.8**	**-1.3**
	SNR=128						
SUCA	**Sunchang**	**0.71**	**268**	P	**Pg**	**07 02 59.1**	**-0.1**
	SNR=26						
GDDB	**Gadeokdo**	**0.78**	**121**	P	**Pg**	**07 03 00.3**	**-0.1**
	SNR=56						
MSNA0	**Miryangsannae**	**0.79**	**76**	P	**Pg**	**07 03 00.6**	**0.0**
	SNR=22						
KSJEO	**Jeonju**	**0.80**	**313**	P	**Pg**	**07 03 00.9**	**+0.2**
	SNR=136						
YKDB	**Yokjido**	**0.80**	**165**	P	**Pg**	**07 03 00.5**	**-0.3**
	SNR=224						
MLGA	**Mulgeum**	**0.81**	**96**	P	**Pb**	**07 03 01.0**	**-0.4**
	SNR=37						
KSDAG	**Daegu**	**0.81**	**63**	P	**Pg**	**07 03 00.9**	**-0.1**
	SNR=142						
KSCPR	**CHUPUNGNYEONG**	**0.82**	**358**	P	**Pg**	**07 03 01.3**	**+0.1**
	SNR=53						
KSKWJ	**Gwangju**	**0.87**	**254**	P	**Pg**	**07 03 01.8**	**-0.3**
	SNR=78						
GSNA	**Gyeongjusannae**	**0.89**	**66**	P	**Pg**	**07 03 02.3**	**-0.1**
	SNR=30						
KSJEU	**Jeongeup**	**0.89**	**276**	P	**Pb**	**07 03 02.4**	**-0.3**
	SNR=90						
BOSB	**Boseong-gun**	**0.91**	**226**	P	**Pb**	**07 03 02.4**	**-0.7**
	SNR=173						
JTU	**Tsushima**	**1.43**	**127**	P	**Pb**	**07 03 11.8**	**-0.2**
JTU				S	**Sg**	**07 03 30.6**	**-0.9**
JTSM	**Tsushimamitsus**	**1.54**	**133**	P	**Pb**	**07 03 13.9**	**0.0**
JTSM				*e*S	**Sg**	**07 03 34.1**	**-0.9**
JII	**Iki**	**2.14**	**138**	P	**Pb**	**07 03 23.8**	**-0.3**
JII				S	**Sb**	**07 03 51.7**	**+1.2**
JFU	**Fukue jima 2**	**2.80**	**167**	*e*P	**Pn**	**07 03 31.6**	**+1.5**
JFU				*e*S	**Sb**	**07 04 09.6**	**-0.1**
HJU	**Haeju**	**3.22**	**326**	Pg	**Pb**	**07 03 44.4**	**+2.0**
HJU				Sg	**Sg**	**07 04 25.1**	**-3.5**
HJU				AML	AML		
	comp=N,115nm,0.7s						
HJU				AML	AML		
	comp=E,75nm,0.4s						
HJU				AML	AML		
	comp=Z,46nm,0.4s						

*AFAD **20** 07:02:42.2, 38.°34N×44.°71E, h4km±4km, ML2.7*
*AZER **20** 07:02:44.5, 38.°39N×44.°66E, h10km, ml2.7*
*TEH **20** 07:02:45.1, 38.°46N×44.°48E, h10km±999km, ML2.6, Presumed earthquake*
ISC 20 07:02:46.0±1.2, 38.°41N±0.°04×44.°60E±0.°03, h12km±10km, n22, σ1s77/41, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.54**	**298**	P	**Pg**	**07 02 55.1**	**-1.7**
OZAP				S	**Sg**	**07 03 04.2**	**+0.2**
OZAP				IAML		07 03 05.0	
	comp=N,402nm,0.8s						
OZAP				IAML		07 03 12.0	
	comp=E,509nm,1.2s						
ISHB	**Shabestar**

GDB	**GEDABAY**	**2.48**	**21**	P	**Pb**	**07 03 29.0**	**-1.6**
GDB				S	**Sb**	**07 04 00.4**	**-0.7**
GANJ	**Ganja**	**2.60**	**30**	P	**Pb**	**07 03 31.6**	**-1.0**
GANJ				S	**Sb**	**07 04 05.3**	**+0.7**
QZX	**Qazax, Azerbai**	**2.71**	**12**	P	**Pn**	**07 03 29.9**	**+0.4**
QZX				S	**Sb**	**07 04 08.3**	**+0.5**
YRD	**Yardimli**	**2.89**	**79**	P	**Pb**	**07 03 33.9**	**-3.8**
YRD				S	**Sb**	**07 04 10.2**	**-2.9**

IDC ***20*** *07:05:53.8±0.5, 14°.03N×56°.86E, h0km, mb4.4/35, mbtmp4.4/35, MS3.8/41, Error ellipse: s-maj=14.6km s-min=12.2km az=18.0*

MOS ***20*** *07:05:54.4±1.0, 14°.11N×56°.79E, h10km, mb5.0/36, Error ellipse: s-maj=7.7km s-min=4.2km az=104.6*

NEIC ***20*** *07:05:57.2±1.6, 14°.15N±0°.09×56°.9E±0°.1, h10km±1km, mb4.9/67, Error ellipse: s-maj=16.8km s-min=15.7km az=118.0*

GCMT ***20*** *07:05:57.2±0.3, 14°.09N±0°.03×56°.97E±0°.03, h17km±1km, MW4.8/85, Moment Tensor Solution. s16,c17; s85,c105; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.02±.14; $M_{\theta\theta}$1.28±.09; $M_{\phi\phi}$0.74±.08; $M_{r\theta}$-0.37±.23; $M_{r\phi}$-0.83±.05; $M_{\theta\phi}$-0.86±.26; Best double couple: M_o2.12600×10^{16} NP1:ϕs326.00000°, δ52.00000°, λ-64.00000°. Principal axes: T 1.8920, Plg3.0000°, Azm38.0000°; N 0.4690, Plg20.0000°, Azm129.0000°; P -2.3600, Plg70.0000°, Azm298.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DSN ***20*** *07:05:59.9±1.7, 14°.50N×56°.49E, h10km, mb5.5/2, ML3.6/1 Error ellipse: s-maj=19.7km s-min=14.5km az=0.0*

OMAN ***20*** *07:06:00.1±0.7, 14°.34N×56°.91E, h40km±13km, mb4.0/18, ml4.1/6, ms3.6/10, Error ellipse: s-maj=6.2km s-min=5.7km az=29.0*

ISC 20 07:05:56.2±0.8, 14°.19N±0°.05×56°.86E±0°.05, h9km±4km, n389, σ1$0^2$/405, mb4.8/148, MS3.8/47, 35C-10D, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DMTO	**DMTO**	**3.96**	**333**	P	**Pn**	**07 06 56.5**	**-0.7**
DMTO				S	**Sn**	**07 07 41.5**	**-2.4**
SHAO	**Shalim**	**4.00**	**343**	*i* P	Pn	07 06 55.9	-1.7
	SNR=14						
SHAO	**Shalim**	**4.00**	**343**	P	**Pn**	**07 06 56.4**	**-1.2**
SHAO				S	**Sn**	**07 07 41.8**	**-2.9**
RBK	**Rabkut**	**4.17**	**323**	P	**Pn**	**07 07 00.2**	**0.0**
RBK				S	**Sn**	**07 07 48.3**	**-0.9**
ABTO	**Aybut**	**4.66**	**313**	P	**Pn**	**07 07 06.7**	**-0.2**
WHFO	**Wadi Hawf**	**4.76**	**322**	P	**Pn**	**07 07 08.9**	**+0.7**
DOK	**Doka**	**5.13**	**330**	P	**Pn**	**07 07 13.0**	**-0.3**
DOK				S	**Sn**	**07 08 12.1**	**-0.5**
MHTO	**MHTO**	**6.84**	**9**	P	**Pn**	**07 07 35.9**	**-0.9**
	SNR=5.1						
JMDO	**Jabal Madar**	**8.22**	**8**	P	**Pn**	**07 07 55.8**	**0.0**
JMDO				P	**Pn**	**07 07 55.8**	**0.0**
JLN	**Jalan Bani Buh**	**8.28**	**17**	P	**Pn**	**07 07 56.1**	**-0.5**
JLN				P	**Pn**	**07 07 56.1**	**-0.5**
BSY	**Bisya**	**8.52**	**2**	P	**Pn**	**07 07 59.0**	**-0.9**
	SNR=5.9						
WBK	**Wadi Bani Khal**	**8.61**	**13**	P	**Pn**	**07 08 00.8**	**-0.4**
WBK				P	**Pn**	**07 08 00.8**	**-0.4**
ARQ	**Araqi**	**9.11**	**358**	P	**Pn**	**07 08 08.5**	**+0.6**
	SNR=7.4						
ARQ				P	**Pn**	**07 08 08.5**	**+0.6**
	SNR=7.4						
WSAR	**Wadi Sarin**	**9.16**	**10**	LR	LR	07 11 27.5	
	comp=Z,7.1nm,20.7s,baz=212,slow=36						
WSAR	**Wadi Sarin**	**9.16**	**10**	P	**Pn**	**07 08 08.5**	**-0.1**
MZR	**Muzera**	**9.34**	**340**	P	**Pn**	**07 08 10.8**	**-0.3**
	SNR=8.3						
MZR				P	**Pn**	**07 08 10.8**	**-0.3**
	SNR=8.3						
HOQ	**Hoqain**	**9.36**	**3**	P	**Pn**	**07 08 10.6**	**-0.7**
	SNR=8.4						
HOQ				P	**Pn**	**07 08 10.6**	**-0.7**
	SNR=8.4						
ALNE	**Al Ain**	**9.87**	**354**	*i* P	**Pn**	**07 08 18.2**	**-0.2**
	SNR=11						
ALNE	**Al Ain**	**9.87**	**354**	P	**Pn**	**07 08 18.4**	**0.0**
	SNR=8.8						
ALNE				S	**Sn**	**07 10 07.6**	**-1.9**
SOHO	**SOHO**	**9.90**	**358**	*i* P	**Pn**	**07 08 18.7**	**-0.1**
	SNR=18						
SOHO	**SOHO**	**9.90**	**358**	P	**Pn**	**07 08 18.9**	**+0.2**
SOHO				P	**Pn**	**07 08 18.9**	**+0.2**
ASHO	**Ashiyiah**	**10.47**	**356**	P	**Pn**	**07 08 25.4**	**-1.2**
ASHO	**Ashiyiah**	**10.47**	**356**	P	**Pn**	**07 08 25.8**	**-0.8**
ASHO				S	**Sn**	**07 10 21.6**	**-2.5**
ASUD	**Al Ashush, Dub**	**10.49**	**352**	*i* P	**Pn**	**07 08 26.7**	**-0.1**
	SNR=6.4						
ASUD	**Al Ashush, Dub**	**10.49**	**352**	P	**Pn**	**07 08 27.0**	**+0.3**
	SNR=5.9						
ASUD				P	**Pn**	**07 08 27.0**	**+0.3**
	SNR=5.9						
HATD	**Hatta, Dubai**	**10.61**	**356**	*i* P	**Pn**	**07 08 29.1**	**+0.6**
	SNR=7.9						
HATD	**Hatta, Dubai**	**10.61**	**356**	P	**Pn**	**07 08 29.3**	**+0.8**
UOSS	**Minazif**	**10.72**	**357**		**Pn**	**07 08 28.4**	**-1.6**
UOSS	**Minazif**	**10.72**	**357**	P	**Pn**	**07 08 28.5**	**-1.6**
UOSS	**Minazif**	**10.72**	**357**	P	**Pn**	**07 08 28.4**	**-1.6**
NAZ	**Nazwa, Dubai**	**10.81**	**354**	*i* P	**Pn**	**07 08 31.7**	**+0.5**
	SNR=6.5						
NAZ	**Nazwa, Dubai**	**10.81**	**354**	P	**Pn**	**07 08 32.0**	**+0.8**
	SNR=11						
MSFE	**Esma-Masafi**	**11.14**	**357**	*i* P	**Pn**	**07 08 36.0**	**+0.3**
	SNR=6.4						
MASF	**Masafi**	**11.15**	**357**	P	**Pn**	**07 08 35.8**	**-0.1**
JASK	**Jask - Hormozg**	**11.66**	**4**	P	**Pn**	**07 08 43.5**	**+0.7**
	SNR=7.4						
BANOM	**Banah**	**11.69**	**357**	P	**Pn**	**07 08 42.3**	**-1.0**
BANOM				P	**Pn**	**07 08 42.3**	**-1.0**
TRNA	**Turayna**	**11.77**	**334**	P	**Pn**	**07 08 43.9**	**-0.4**
SHME	**Shamm**	**11.82**	**357**	*i* P	**Pn**	**07 08 45.5**	**+0.4**
	SNR=12						
SHME	**Shamm**	**11.82**	**357**	P	**Pn**	**07 08 45.5**	**+0.4**
	SNR=5.7						
SHME				P	**Pn**	**07 08 45.5**	**+0.4**
	SNR=5.7						
ATD	**Arta Tunnel**	**13.92**	**261**	Pn	**Pn**	**07 09 14.8**	**+0.9**
RAYN	**Ar Rayn**	**14.20**	**313**		**Pn**	**07 09 15.7**	**-1.9**
RAYN	**Ar Rayn**	**14.20**	**313**	*i* P	**Pn**	**07 09 15.6**	**-2.1**
	SNR=18						
RAYN	**Ar Rayn**	**14.20**	**313**	P	**Pn**	**07 09 15.7**	**-1.9**
RAYN	**Ar Rayn**	**14.20**	**313**	P	**Pn**	**07 09 16.7**	**-0.9**
KBD	**Kabd**	**17.16**	**332**	P	**Pn**	**07 09 54.4**	**-2.0**
MSEY	**Mahe Island**	**18.79**	**184**	P	**P**	**07 10 15.0**	**-1.1**
MSEY	**Mahe Island**	**18.79**	**184**	P	**P**	**07 10 15.0**	**-1.1**
MSEY				pmax	pmax		
	comp=Z,38nm,1.4s						
HRA	**Herat**	**20.69**	**13**		**P**	**07 10 35.9**	**-1.0**
HRA				IAmb	IAmb	07 10 49.6	
	comp=Z,107nm,1.9s						
KBL	**Kabul**	**23.06**	**26**		**P**	**07 11 02.8**	**+0.5**
KBL				IAmb	IAmb	07 11 13.1	
	comp=Z,33nm,1.4s						
KBL	**Kabul**	**23.06**	**26**	P	**P**	**07 11 02.8**	**+0.5**
KBL				pmax	pmax		
	comp=Z,33nm,1.4s						
LODK	**Lodwar**	**23.76**	**245**		**P**	**07 11 10.5**	**+1.2**
LODK				IAmb	IAmb	07 11 20.0	
	comp=Z,28nm,1.3s						
LODK	**Lodwar**	**23.76**	**245**	P	**P**	**07 11 11.6**	**+2.3**
	SNR=7.9						
PALK	**Pallekele**	**24.39**	**104**	LR	LR	07 19 01.9	
	comp=Z,176nm,20.0s,baz=286,slow=32						
PALK	**Pallekele**	**24.39**	**104**	*i* P	**P**	**07 11 16.4**	**+1.2**
PALK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NIL	**Nilore**	**24.43**	**35**	P	**P**	**07 11 16.2**	**+0.9**
NIL				IAmb	IAmb	07 11 25.5	
	comp=Z,24nm,1.1s						
NIL	**Nilore**	**24.43**	**35**	P	**P**	**07 11 16.2**	**+0.9**
NIL				pmax	pmax		
	comp=Z,25nm,1.1s						
KMBO	**Kilima Mbogo**	**24.67**	**234**	LR	LR	07 21 34.1	
	comp=Z,459nm,18.4s,baz=96,slow=38						
KMBO	**Kilima Mbogo**	**24.67**	**234**	*i* P	**P**	**07 11 18.1**	**+0.2**
KIBK	**Kibwezi**	**24.85**	**230**		**P**	**07 11 19.3**	**0.0**
KIBK	**Kibwezi**	**24.85**	**230**	P	**P**	**07 11 21.3**	**+2.0**
	SNR=5.4						
SHAA	**Shahritus**	**25.35**	**21**		**P**	**07 11 25.1**	**+1.5**
SHAA				IAmb	IAmb	07 11 38.6	
	comp=Z,55nm,1.1s						
EIL	**Elat**	**25.44**	**311**	LR	LR	07 21 47.8	
	comp=Z,335nm,19.3s,baz=112,slow=37						
ASF	**Jabal al Asfar**	**25.56**	**318**	P	**P**	**07 11 25.8**	**+0.1**
	comp=Z,11nm,0.8s,baz=142,slow=3.7,SNR=13						
	comp=Z,11nm,0.8s						
CHGR	**Chuyangaron**	**26.69**	**22**		**P**	**07 11 36.5**	**+0.7**
CHGR				IAmb	IAmb	07 11 49.0	
	comp=Z,30nm,1.1s						
CHGR	**Chuyangaron**	**26.69**	**22**	*i* P	**P**	**07 11 36.7**	**+0.9**
CHGR				pmax	pmax		
	comp=Z,18nm,0.9s						
GEVA	**Gevas**	**26.96**	**336**	P	**P**	**07 11 39.9**	**+1.5**
GEVA				IAmb	IAmb	07 11 57.5	
	comp=Z,18nm,0.9s						
GURO	**Guroymak-BITLI**	**27.59**	**334**	P	**P**	**07 11 45.2**	**+1.2**
GURO				IAmb	IAmb	07 11 47.3	
	comp=Z,30nm,1.8s						
GNI	**Garni**	**27.96**	**340**	P	**P**	**07 11 48.9**	**+1.6**
	comp=Z,10nm,0.7s,baz=121,slow=3.1,SNR=5.3						
GNI				LR	LR	07 23 13.2	
	comp=Z,97nm,20.5s,baz=148,slow=37						
	comp=Z,10nm,0.7s						
GNI	**Garni**	**27.96**	**340**	P	**P**	**07 11 47.9**	**+0.6**
GNI				IAmb	IAmb	07 11 56.4	
	comp=Z,41nm,1.3s						
GNI	**Garni**	**27.96**	**340**	P	**P**	**07 11 47.9**	**+0.6**
GNI				pmax	pmax		
	comp=Z,41nm,1.3s						
BTK	**Batken**	**28.53**	**23**	P	**P**	**07 11 53.4**	**+1.1**
BTK				IAmb	IAmb	07 12 03.2	
	comp=Z,31nm,1.2s						
BTK	**Batken**	**28.53**	**23**	P	**P**	**07 11 53.4**	**+1.1**
BTK				pmax	pmax		
	comp=Z,31nm,1.2s						
KOPT	**Kop Dagi**	**29.47**	**334**	P	**P**	**07 12 02.2**	**+1.4**
KOPT				IAmb	IAmb	07 12 11.7	
	comp=Z,14nm,1.1s						
ARPR	**Arapgir-MALATY**	**29.70**	**330**	P	**P**	**07 12 04.7**	**+1.9**
ARPR				IAmb	IAmb	07 12 18.1	
	comp=Z,23nm,1.4s						
MBAR	**Mbarara**	**29.75**	**243**	LR	LR	07 24 18.0	
	comp=Z,260nm,18.3s,baz=67,slow=37						
KSH2	**Kashi**	**29.83**	**30**	P	**P**	**07 12 05.3**	**+1.4**
KSH2				sP	pwP	07 12 11.8	+1.8
KSH2				pmax	pmax		
	comp=Z,15nm,0.9s						
KSH2				LR	LR		
	comp=N,220nm,16.2s						
KSH2				LR	LR		
	comp=E,170nm,15.1s						
KSH2				LR	LR		
	comp=Z,280nm,16.2s						
TRKS	**Terek-Say**	**29.94**	**22**	P	**P**	**07 12 06.7**	**+1.8**
EVN	**Everest**	**31.02**	**59**	P	**P**	**07 12 15.8**	**+0.6**
EVN				IAmb	IAmb	07 12 19.4	
	comp=Z,14nm,0.7s						
KKAR	**Karatay Array**	**31.12**	**20**	P	**P**	**07 12 16.0**	**+0.9**
KKAR	**Karatay Array**	**31.12**	**20**	P	**P**	**07 12 16.0**	**+0.9**
NCK	**Nalchik**	**31.35**	**341**	*i* P	**P**	**07 12 18.8**	**+1.7**
NCK				pmax	pmax		
	comp=Z,14nm,0.9s						
NEUR	**Neytrino**	**31.43**	**340**	*i* P	**P**	**07 12 19.4**	**+1.4**
NEUR				pmax	pmax		
	comp=Z,12nm,1.1s						
KBZ	**Khabaz**	**31.78**	**341**	P	**P**	**07 12 22.0**	**+1.2**
	comp=Z,12nm,0.9s,baz=167,slow=6.6,SNR=19						
KBZ				LR	LR	07 28 25.7	
	comp=Z,94nm,21.8s,baz=148,slow=42						
	comp=Z,12nm,0.9s						
KBZ	**Khabaz**	**31.78**	**341**	*ce*P	**P**	**07 12 22.3**	**+1.5**
KBZ				pmax	pmax		
	comp=Z,15nm,1.0s						
SHA1	**Shidzhatmaz**	**31.87**	**340**	*ce*P	**P**	**07 12 24.1**	**+2.2**
KIV	**Kislovodsk**	**32.05**	**341**	⇑P	**P**	**07 12 25.4**	**+2.0**
KIV	**Kislovodsk**	**32.05**	**341**		**P**	**07 12 24.4**	**+1.1**
KIV	**Kislovodsk**	**32.05**	**341**	*e*P	**P**	**07 12 25.0**	**+1.6**
KIV				pmax	pmax		
	comp=Z,22nm,1.0s						
KIV				MLR	MLR		
	comp=Z,61nm,15.0s						
KIV	**Kislovodsk**	**32.05**	**341**	P	**P**	**07 12 24.7**	**+1.3**
	comp=Z,20nm,1.1s						
AAK	**Ala-Archa**	**32.17**	**25**	P	**P**	**07 12 26.3**	**+1.7**
	comp=Z,4.0nm,0.8s,baz=224,slow=2.5,SNR=11						
AAK				LR	LR	07 26 54.0	
	comp=Z,118nm,21.5s,baz=205,slow=39						
	comp=Z,4.0nm,0.8s						
AAK	**Ala-Archa**	**32.17**	**25**		**P**	**07 12 26.7**	**+2.1**
AAK				IAmb	IAmb	07 12 35.8	
	comp=Z,11nm,0.9s						
AAK	**Ala-Archa**	**32.17**	**25**	P	**P**	**07 12 27.6**	**+3.1**
AAK	**Ala-Archa**	**32.17**	**25**	*i* P	**P**	**07 12 27.4**	**+2.8**
AAK				pmax	pmax		
	comp=Z,16nm,1.1s						
BR104	**Keskin Array S**	**32.59**	**326**	P	**P**	**07 12 28.0**	**-0.2**
	comp=Z,3.5nm,0.9s						
BRTR	**Keskin Array B**	**32.60**	**326**	P	**P**	**07 12 29.8**	**+1.4**
	comp=Z,3.4nm,1.1s,baz=134,slow=11,SNR=8.5						
BRTR				PcP	**PcP**	**07 15 13.3**	**-1.4**
	comp=Z,0.6nm,0.8s,baz=146,slow=5.5,SNR=4.3						
BRTR				LR	LR	07 27 29.9	
	comp=Z,117nm,18.1s,baz=127,slow=40						
	comp=Z,3.4nm,1.1s						
BOOM	**Boomskoye usch**	**32.66**	**27**	P	**P**	**07 12 30.2**	**+1.3**
BOOM				IAmb	IAmb	07 12 39.7	
	comp=Z,22nm,1.7s						
BOOM	**Boomskoye usch**	**32.66**	**27**	P	**P**	**07 12 30.2**	**+1.3**
BOOM				pmax	pmax		
	comp=Z,22nm,1.7s						
TARG	**Taragay, Kyrgy**	**32.91**	**29**	P	**P**	**07 12 35.6**	**+4.3**
TARG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
OPO	**Ambohidratompo**	**33.92**	**197**	LR	LR	07 23 46.2	
	comp=Z,237nm,21.1s,baz=204,slow=32						
BRDH	**Bariadhala**	**33.99**	**70**	LR	LR	07 27 19.6	
	comp=Z,230nm,18.7s,baz=257,slow=38						
SHL	**Shillong**	**34.72**	**66**	P	**P**	**07 12 47.0**	**0.0**
SHL				IAmb	IAmb	07 12 48.3	
	comp=Z,7.7nm,0.7s						
SHL	**Shillong**	**34.72**	**66**	P	**P**	**07 12 47.0**	**0.0**
SHL				pmax	pmax		
	comp=Z,8.0nm,0.7s						
AB31	**Akbulak array**	**35.06**	**4**	P	**P**	**07 12 50.3**	**+0.9**
ABKAR	**Akbulak array**	**35.06**	**4**	P	**P**	**07 12 50.3**	**+0.9**
IDI	**Anoyia**	**35.60**	**312**	P	**P**	**07 12 54.9**	**+0.5**
	comp=Z,38nm,1.1s,baz=114,slow=8.2,SNR=4.1						
	comp=Z,38nm,1.1s						
AKTO	**Aktyubinsk**	**36.16**	**1**	P	**P**	**07 12 59.3**	**+0.5**
	comp=Z,4.8nm,0.9s,baz=188,slow=7.2,SNR=7.7						
AKTO				LR	LR	07 29 38.4	
	comp=Z,154nm,19.7s,baz=266,slow=39						
	comp=Z,4.8nm,0.9s						
RDO	**Rodhopi**	**38.25**	**321**	P	**P**	**07 13 18.2**	**+1.5**
ITM	**Ithomi**	**38.59**	**313**	P	**P**	**07 13 20.0**	**+0.3**
ITM				IAmb	IAmb	07 13 21.1	
	comp=Z,18nm,0.8s						
TIRR	**Tirgusor**	**38.68**	**327**	⇑P	**P**	**07 13 21.3**	**+1.0**
TIRR	**Tirgusor**	**38.68**	**327**	P	**P**	**07 13 21.2**	**+1.0**
TIRR	**Tirgusor**	**38.68**	**327**	P	**P**	**07 13 20.0**	**-0.3**
	comp=Z,17nm,0.9s						
MAKZ	**Makanchi**	**38.72**	**28**	P	**P**	**07 13 21.4**	**+0.7**
MAKZ	**Makanchi**	**38.72**	**28**	P	**P**	**07 13 21.4**	**+0.7**
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BSI	**Banda Aceh**	**38.79**	**99**	P	**P**	**07 13 23.1**	**+1.5**
	comp=Z,29nm,1.4s						
BELG	**Belogornoye**	**38.82**	**351**	*i* P	**P**	**07 13 21.9**	**+0.6**
BELG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MK31	**Makanchi Array**	**38.85**	**28**	*ce*P	**P**	**07 13 23.4**	**+1.7**
MKAR	**Makanchi Array**	**38.85**	**28**	P	**P**	**07 13 23.0**	**+1.3**
	comp=Z,3.2nm,0.7s,baz=214,slow=8.0,SNR=30						
MKAR				PcP	**PcP**	**07 15 31.7**	**-1.1**
	comp=Z,1.0nm,0.8s,baz=250,slow=3.6,SNR=4.3						
MKAR				LR	LR	07 31 13.7	
	comp=Z,124nm,20.3s,baz=228,slow=39						
	comp=Z,3.2nm,0.7s						
MKAR	**Makanchi Array**	**38.85**	**28**	P	**P**	**07 13 22.9**	**+1.1**
VRH	**Novokhopyorsk**	**38.90**	**345**	*e*P	**P**	**07 13 22.2**	**+0.2**
VRH				pmax	pmax		
	comp=Z,79nm,0.8s						
TPGR	**Topolog**	**38.95**	**327**	⇑P	**P**	**07 13 22.9**	**+0.3**
NE56	**Odesa**	**39.01**	**331**	P	**P**	**07 13 23.3**	**+0.3**
ELND	**Elena**	**39.11**	**323**	⇑P	**P**	**07 13 24.1**	**+0.2**
VORD	**Divnogorie**	**39.34**	**342**	*e*P	**P**	**07 13 25.2**	**-0.5**
VORD				pmax	pmax		
	comp=Z,30nm,0.5s						
WMQ	**Urumqi**	**39.57**	**36**	*e*P	**P**	**07 13 29.9**	**+2.0**
WMQ				sP	pwP	07 13 37.0	+3.0
WMQ				S	**S**	**07 19 31.8**	**+1.1**
WMQ				pmax	pmax		
	comp=Z,15nm,0.9s						
WMQ				LR	LR		
	comp=Z,130nm,24.2s						
VSR	**Storozhevoye**	**39.60**	**343**	*e*P	**P**	**07 13 27.6**	**-0.3**
VSR				pmax	pmax		
	comp=Z,40nm,0.8s						
KNT	**Kendrikon**	**39.91**	**319**	P	**P**	**07 13 31.5**	**+0.8**
KNT				pmax	pmax		
	comp=Z,12nm,1.3s						
VORR	**Voronezh**	**40.00**	**343**	*e*P	**P**	**07 13 30.7**	**-0.5**
BVAR	**Borovoye Array**	**40.21**	**13**	P	**P**	**07 13 33.8**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=177,slow=5.3,SNR=6.0						
BVAR				PcP	**PcP**	**07 15 36.0**	**-1.0**
	comp=Z,1.8nm,0.8s,baz=208,slow=2.9,SNR=6.1						
	comp=Z,1.3nm,0.7s						
BORK	**Borovoye**	**40.21**	**13**	*i* P	**P**	**07 13 34.1**	**+1.1**
BORK				pmax	pmax		
	comp=Z,11nm,2.7s						
KURBB	**Kurchatov Arra**	**40.37**	**21**	P	**P**	**07 13 35.2**	**+0.9**
	comp=Z,2.2nm,1.0s,baz=220,slow=8.1,SNR=10						
KURBB				PcP	**PcP**	**07 15 36.8**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=230,slow=3.1,SNR=6.7						
KURBB				LR	LR	07 32 05.2	
	comp=Z,111nm,19.5s,baz=178,slow=39						
	comp=Z,2.2nm,1.0s						
GOMU	**GeErMu**	**40.38**	**50**	P	**P**	**07 13 36.1**	**+1.1**
GOMU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KURK	**Kurchatov**	**40.48**	**21**	P	**P**	**07 13 36.7**	**+1.5**
KURK	**Kurchatov**	**40.48**	**21**	*i* P	**P**	**07 13 36.0**	**+0.8**
KURK				pmax	pmax		
	comp=Z,13nm,3.2s						
VRI	**Vrincioaia**	**40.51**	**327**	⇓P	**P**	**07 13 36.6**	**+1.0**
VRI	**Vrincioaia**	**40.51**	**327**	P	**P**	**07 13 36.5**	**+1.0**
VRI	**Vrincioaia**	**40.51**	**327**	P	**P**	**07 13 36.6**	**+1.0**
	comp=Z,30nm,0.8s						
BAL3X	**Bal3x, Balta**	**40.54**	**332**	P	**P**	**07 13 35.2**	**-0.5**
PLOR	**Plostina**	**40.54**	**327**	⇑P	**P**	**07 13 36.9**	**+1.0**
PLOR	**Plostina**	**40.54**	**327**	P	**P**	**07 13 36.8**	**+1.0**
CMAR	**Chiang Mai Arr**	**40.54**	**78**	P	**P**	**07 13 35.6**	**-0.6**
	comp=Z,1.9nm,0.4s,baz=275,slow=9.2,SNR=18						
CMAR				PcP	**PcP**	**07 15 38.2**	**-0.4**
	comp=Z,1.4nm,0.4s,baz=266,slow=2.9,SNR=2.1						
CMAR				LR	LR	07 30 45.3	
	comp=Z,40nm,19.7s,baz=270,slow=37						
	comp=Z,1.9nm,0.4s						
CMAR	**Chiang Mai Arr**	**40.54**	**78**	P	**P**	**07 13 37.1**	**+0.9**
MLR	**Muntele Rosu**	**40.68**	**326**	P	**P**	**07 13 38.1**	**+1.0**
	comp=Z,12nm,0.8s,baz=209,slow=5.3,SNR=17						
	comp=Z,12nm,0.8s						
MLR	**Muntele Rosu**	**40.68**	**326**	⇑P	**P**	**07 13 38.3**	**+1.2**
MLR	**Muntele Rosu**	**40.68**	**326**	P	**P**	**07 13 37.9**	**+0.8**
MLR				IAmb	IAmb	07 13 40.9	
	comp=Z,17nm,0.9s						
MLR	**Muntele Rosu**	**40.68**	**326**	P	**P**	**07 13 37.9**	**+0.8**
MLR				pmax	pmax		
	comp=Z,17nm,0.9s						
LSZ	**Lusaka**	**40.76**	**225**	LR	LR	07 31 02.7	
	comp=Z,161nm,18.7s,baz=355,slow=37						
COVR	**Voineasa-Covas**	**40.77**	**327**	⇓P	**P**	**07 13 39.0**	**+1.3**
LPSR	**Galich'ya Gora**	**40.90**	**343**	*eP*	**P**	**07 13 38.5**	**-0.2**
LPSR				pmax	pmax		
	comp=Z,60nm,0.7s						
TESR	**Tescani**	**40.98**	**328**	⇑P	**P**	**07 13 39.8**	**+0.4**
TESR	**Tescani**	**40.98**	**328**	P	**P**	**07 13 40.1**	**+0.7**
	comp=Z,47nm,0.8s						
ONER	**Baraj Valea Uz**	**40.99**	**328**	⇑P	**P**	**07 13 41.1**	**+1.6**
TURR	**Turia**	**41.01**	**327**	⇑P	**P**	**07 13 40.5**	**+0.9**
KBN	**Korca**	**41.01**	**317**	P	**P**	**07 13 40.4**	**+0.6**
VOIR		**41.13**	**326**	⇑P	**P**	**07 13 41.5**	**+0.7**
VOIR		**41.13**	**326**	P	**P**	**07 13 41.4**	**+0.7**
VOIR		**41.13**	**326**	P	**P**	**07 13 41.4**	**+0.7**
	comp=Z,18nm,1.1s						
OZUR		**41.15**	**327**	⇓P	**P**	**07 13 41.7**	**+0.8**
TPTI		**41.23**	**101**	P	**P**	**07 13 41.3**	**-0.6**
	comp=Z,13nm,0.8s						
SORM	**Soroca**	**41.26**	**331**	⇑P	**P**	**07 13 41.7**	**0.0**
SORM	**Soroca**	**41.26**	**331**	P	**P**	**07 13 41.6**	**0.0**
SORM	**Soroca**	**41.26**	**331**	P	**P**	**07 13 40.7**	**-1.0**
	comp=Z,30nm,0.9s						
DOPR	**Dopca**	**41.28**	**326**	⇑P	**P**	**07 13 43.1**	**+1.2**
ARR	**Arges**	**41.31**	**325**	⇑P	**P**	**07 13 43.0**	**+0.8**
KCSI	**Kotacane, Aceh**	**41.71**	**101**	P	**P**	**07 13 45.6**	**-0.3**
	comp=Z,803nmcomp=Z,8.4nm,0.8s						
PRAR	**RASCA**	**41.76**	**329**	⇑P	**P**	**07 13 46.6**	**+0.8**
LOT	**Lotru**	**41.84**	**325**	⇑P	**P**	**07 13 46.4**	**-0.3**
MDB	**Medias**	**41.94**	**326**	⇑P	**P**	**07 13 48.5**	**+1.2**
MDB	**Medias**	**41.94**	**326**	P	**P**	**07 13 48.5**	**+1.2**
NDNU	**Novodnistrovsk**	**42.05**	**331**	P	**P**	**07 13 47.6**	**-0.6**
ARTI	**Arti**	**42.13**	**1**	P	**P**	**07

comp=Z,100nm,3.5s
MATE Matera 43.78 315 ⇑P **P** **07 14 03.3 +1.1**
OBN Obninsk 43.78 343⇑*e*P **P** **07 14 02.6 +0.6**
OBN *PP **sP** **07 14 06.0 +1.5**
OBN *e*SP **pwP** **07 14 08.4 +0.2**
OBN 07 15 48.0
OBN *e*S **S** **07 20 35.9 +3.3**
OBN SS **SS** **07 23 52.0 +3.7**
OBN SSS SSS 07 24 40.0
OBN pmax pmax
comp=Z,19nm,0.6s
OBN MLR MLR
comp=Z,56nm,16.0s
MOS Moscow 44.05 344 *e*P **P** **07 14 03.5 -0.7**
MOS pmax pmax
comp=Z,47nm,0.6s
CUC Castrocucco 44.12 314 P **P** **07 14 05.3 +0.2**
CUC IAmb IAmb 07 14 08.1
comp=Z,21nm,0.7s
ACER Acerenza 44.36 315 P **P** **07 14 07.9 +0.9**
KIRV Kirov 44.67 354 LR LR 07 35 49.9
comp=Z,116nm,20.2s,baz=170,slow=40
SGRT San Giovanni R 44.91 316 P **P** **07 14 11.3 -0.1**
SGRT IAmb IAmb 07 14 13.8
comp=Z,13nm,0.7s
KWP Kalwaria Pacla 45.02 329 P **P** **07 14 11.8 -0.3**
comp=Z,20nm,1.0s
MORH Mrgy, Hungar 45.22 323 ⇑P **P** **07 14 13.9 +0.1**
MORH Mrgy, Hungar 45.22 323 P **P** **07 14 13.5 -0.2**
comp=Z,14nm,1.4s
ZAA0 Zalesovo Array 45.34 23 P **P** **07 14 14.8 +0.2**
ZALV Zalesovo Beam 45.34 23 P **P** **07 14 15.0 +0.4**
comp=Z,3.8nm,0.7s,baz=226,slow=7.2,SNR=12
ZALV LR LR 07 35 23.3
comp=Z,67nm,21.2s,baz=352,slow=39
comp=Z,3.8nm,0.7s
ZALV Zalesovo Beam 45.34 23 P **P** **07 14 14.5 -0.1**
BLY Banja Luka 45.35 320 ⇑P **P** **07 14 16.0 +1.2**
KECS Kecovo 45.46 326 *e*P **P** **07 14 17.3 +1.7**
KECS pmax pmax
comp=Z,13nm,0.6s
KECS Kecovo 45.46 326 *e*P **P** **07 14 17.3 +1.7**
PPI Padang Panjang 45.48 105 P **P** **07 14 16.7 +0.5**
comp=Z,15nm,1.3s
STHS Stebnicka Huta 45.63 328 *e*P **P** **07 14 17.6 +0.6**
STHS Stebnicka Huta 45.63 328 *e*P **P** **07 14 17.6 +0.6**
NIE Niedzica 46.12 327 *e*P **P** **07 14 21.7 +0.9**
NIE Niedzica 46.12 327 P **P** **07 14 21.1 +0.2**
comp=Z,3.6nm,1.3s
MNK Minsk 46.16 337 *i*P **P** **07 14 21.1 +0.1**
comp=E,19nm,0.7s
MNK *i*P **P** **07 14 21.1 +0.1**
comp=N,12nm,0.6s
MNK *i*P **P** **07 14 21.1 +0.1**
comp=Z,50nm,0.8s,baz=139
MNK *i*PP **PP** **07 16 10.1 +0.8**
MNK *i*PPP PPP 07 16 48.6
MNK *i*S **S** **07 21 07.8 +0.8**
MNK *i*SS **SS** **07 24 34.7 +2.4**
MNK *i*SSS SSS 07 25 21.5
MNK *i*LQ LQ 07 30 49.0
MNK *i*LR LR 07 34 27.5
MNK *i*LRM MLR 07 36 37.3
comp=N,92nm,21.4s
MNK *i*LRM MLR 07 36 38.2
comp=Z,82nm,16.9s
MNK *i*LRM MLR 07 36 58.2
comp=E,78nm,19.3s
MNK Minsk 46.16 337*c i*P **P** **07 14 21.0 +0.1**
MNK *e*S **S** **07 21 07.0 -0.1**
MPLH Magyarpolny 46.37 323 P **P** **07 14 22.6 -0.2**
comp=E,20nm,0.9s
LANS Liptovska Anna 46.40 327 *e*P **P** **07 14 24.0 +0.9**
LANS pmax pmax
comp=Z,6.0nm,0.7s
LANS Liptovska Anna 46.40 327 *e*P **P** **07 14 24.0 +0.9**
BEHE Becsehely 46.46 322 P **P** **07 14 24.1 +0.6**
OJC Ojcow 46.86 328 *e*P **P** **07 14 26.1 -0.5**
OJC Ojcow 46.86 328 P **P** **07 14 26.1 -0.5**
OJC Ojcow 46.86 328 P **P** **07 14 26.1 -0.5**
OJC Ojcow 46.86 328 P **P** **07 14 25.7 -0.9**
comp=Z,9.2nm,1.3s
NACGM Naroch 46.88 337⇓*i*P **P** **07 14 27.3 +0.6**
comp=Z,47nm,1.0s,baz=138
BOJS Bojanci 46.91 320 *e*P **P** **07 14 27.1 0.0**
CRES Cresnjevec Ost 46.94 321 *i*P **P** **07 14 27.4 +0.1**
GUMA Gualdo di Mace 47.07 316 P **P** **07 14 29.1 +0.6**
LZDM Lanzhou Array 47.10 54 LR LR 07 35 18.9
comp=Z,104nm,19.6s,baz=65,slow=37
NRCA Norcia 47.13 316 P **P** **07 14 28.8 -0.1**
NRCA IAmb IAmb 07 14 37.8
comp=Z,12nm,1.1s
SMOL Smolenice 47.16 325 *e*P **P** **07 14 29.1 +0.1**
SMOL pmax pmax
comp=Z,4.0nm,1.0s
MODS Modra-Piesok 47.17 325 *e*P **P** **07 14 29.2 +0.1**
MODS pmax pmax
comp=Z,30nm,0.8s
MODS Modra-Piesok 47.17 325 *e*P **P** **07 14 29.2 +0.1**
JAVC Velka Javorina 47.21 325 *e*P **P** **07 14 30.2 +0.7**
GROS Grobnik 47.22 322 *i*P **P** **07 14 29.7 +0.1**
FDMO Fiordimonte 47.23 316 P **P** **07 14 30.0 +0.4**
FDMO IAmb IAmb 07 14 31.9
comp=Z,8.1nm,0.8s
VISS Visnje 47.31 320 *i*P **P** **07 14 30.3 +0.1**
RONA Rosalia, Austr 47.37 323 *i*P **P** **07 14 30.9 +0.2**
comp=Z,15nm,0.6s,SNR=9.0
MAUC Maruska 47.41 326 *e*P **P** **07 14 31.7 +0.8**
KEST Kesra 47.58 306 P **P** **07 14 33.2 +0.7**
comp=Z,3.3nm,0.7s,baz=346,slow=7.0,SNR=3.7
KEST LR LR 07 36 20.2
comp=Z,95nm,18.2s,baz=359,slow=38
comp=Z,3.3nm,0.7s
ARSA Arzberg 47.60 322 P **P** **07 14 32.7 +0.3**
ARSA IAmb IAmb 07 14 33.6
comp=Z,8.4nm,0.8s
ARSA Arzberg 47.60 322 *i*P **P** **07 14 32.8 +0.4**
comp=Z,7.6nm,0.7s,SNR=5.2
SOKA Soboth 47.61 322 *i*P **P** **07 14 32.6 0.0**
comp=Z,8.0nm,0.8s,SNR=6.8
SUW Suwalki 47.71 334 *e*P **P** **07 14 33.3 +0.2**
SUW Suwalki 47.71 334 P **P** **07 14 32.6 -0.5**
SUW Suwalki 47.71 334 P **P** **07 14 32.6 -0.5**
CONA Conrad Observa 47.74 323 *i*P **P** **07 14 33.5 -0.1**
comp=Z,19nm,1.0s,SNR=11
MORC Moravsky Berou 47.79 326 P **P** **07 14 33.8 -0.1**
MORC IAmb IAmb 07 14 34.8
comp=Z,12nm,0.7s
MORC Moravsky Berou 47.79 326 P **P** **07 14 33.8 -0.1**
MORC pmax pmax
comp=Z,12nm,0.7s
MORC Moravsky Berou 47.79 326 *e*P **P** **07 14 33.9 0.0**
OBKA Obir 47.82 321 *i*P **P** **07 14 34.7 +0.4**
comp=Z,8.2nm,0.8s,SNR=6.9
TRI Trieste 47.94 320 P **P** **07 14 34.1 -0.9**
TRI Trieste 47.94 320 P **P** **07 14 34.1 -0.9**
TRI pmax pmax
comp=Z,19nm,0.7s
MYKOM Kota Tinggi 48.02 101 P **P** **07 14 35.8 -0.4**
MYKOM Kota Tinggi 48.02 101 P **P** **07 14 35.9 -0.3**
comp=Z,21nm,0.8s
KRUC Moravsky 48.03 325 *e*P **P** **07 14 35.6 -0.1**
VRAC Vranov 48.05 325 P **P** **07 14 35.1 -0.8**
comp=Z,7.5nm,0.7s,baz=132,slow=6.5,SNR=7.3
comp=Z,7.5nm,0.7s
VRAC Vranov 48.05 325 *e*P **P** **07 14 36.0 +0.1**
KLMR Klimovskoe 48.27 349 *e*P **P** **07 14 36.4 -1.0**
KLMR pmax pmax
comp=Z,23nm,1.2s
KRLC Kraliky 48.37 326 *e*P **P** **07 14 37.8 -0.6**
KRLC Kraliky 48.37 326 *e*P **P** **07 14 37.8 -0.6**
PABE Paberze 48.43 336 P **P** **07 14 38.7 +0.1**
MYKA Terra Mystica 48.43 321 *i*P **P** **07 14 39.3 +0.3**
comp=Z,11nm,0.8s,SNR=5.8
MOA Molln 48.63 323 *i*P **P** **07 14 40.4 0.0**
comp=Z,11nm,0.7s,SNR=5.3
DPC Dobruska-Polom 48.76 326 P **P** **07 14 40.7 -0.7**
comp=Z,14nm,1.1s
KBA Koelnbreinsper 48.82 321 *i*P **P** **07 14 41.5 -0.6**
comp=Z,5.2nm,1.1s
STAL STALIGIAL 48.84 320 P **P** **07 14 41.2 -0.8**
STAL IAmb IAmb 07 14 42.3
comp=Z,12nm,0.8s
BIOA Bad Ischl, Aus 48.93 322 *i*P **P** **07 14 42.3 -0.4**
comp=Z,15nm,1.2s
KNGR Kungurtug, Tuv 48.96 33 *i*P **P** **07 14 44.9 +1.9**
KNGR pmax pmax
comp=Z,7.0nm,0.8s
UPC Upice 49.02 326 *e*P **P** **07 14 43.2 -0.1**
UPC Upice 49.02 326 *e*P **P** **07 14 43.2 -0.1**
CHVC Chvalec 49.04 327 *e*P **P** **07 14 43.5 0.0**
CHVC Chvalec 49.04 327 *e*P **P** **07 14 43.5 0.0**
KSP Ksiaz 49.05 327 *e*P **P** **07 14 43.7 +0.2**
KSP Ksiaz 49.05 327 P **P** **07 14 43.1 -0.5**
comp=Z,17nm,1.0s
ABTA Abfaltersbach 49.18 321 *i*P **P** **07 14 44.3 -0.4**
comp=Z,4.6nm,0.6s
TAM Tamanrasset 49.24 288 P **P** **07 14 45.9 +0.3**
TAM Tamanrasset 49.24 288 P **P** **07 14 45.9 +0.3**
TAM pmax pmax
comp=Z,23nm,0.7s
LESA Schwarzleotal 49.38 321 *i*P **P** **07 14 45.2 -1.1**
comp=Z,10nm,0.6s,SNR=8.4
GERES GERESS Array B 49.45 324 P **P** **07 14 45.7 -1.1**
comp=Z,1.3nm,0.7s,baz=133,slow=7.5,SNR=8.4
comp=Z,1.3nm,0.7s
ZVC Zvikov 49.46 324 *e*P **P** **07 14 46.1 -0.6**
LBTB Lobatse 49.48 218 LR LR 07 35 42.5
comp=Z,99nm,18.6s,baz=56,slow=36
VSU Vasula 49.60 340*ce*P **P** **07 14 47.7 +0.1**
VSU pmax pmax
comp=Z,40nm,1.3s
KHC Kasperske Hory 49.66 324*ce*P **P** **07 14 47.8 -0.5**
KHC pmax pmax
comp=Z,6.0nm,1.3s
KHC Kasperske Hory 49.66 324 *e*P **P** **07 14 47.7 -0.5**
KHC Kasperske Hory 49.66 324 P **P** **07 14 47.0 -1.3**
comp=Z,7.1nm,1.4s
WTTA Wattenberg 49.94 321 *i*P **P** **07 14 49.9 -0.8**
comp=Z,12nm,0.7s,SNR=5.9
WATA Walderalm 50.01 321 *i*P **P** **07 14 50.0 -1.2**
comp=Z,10.0nm,0.6s
SQTA Sankt Quirin 50.19 321 *i*P **P** **07 14 51.4 -1.0**
comp=Z,14nm,0.6s,SNR=9.9
MOTA Moosalm 50.30 321 *i*P **P** **07 14 52.0 -1.4**
comp=Z,7.1nm,0.7s,SNR=6.3
FETA Feichten 50.40 320 *i*P **P** **07 14 53.3 -0.8**
comp=Z,5.3nm,0.7s
RETA Reutte 50.58 321 *i*P **P** **07 14 53.9 -1.4**
comp=Z,8.2nm,0.6s
DAVOX Davos/Dischmat 50.83 320 P **P** **07 14 56.4 -1.0**
comp=Z,5.2nm,0.6s,baz=116,slow=10,SNR=8.6
comp=Z,5.2nm,0.6s
TSUM Tsumeb 50.96 230 LR LR 07 35 40.8
comp=Z,178nm,21.6s,baz=338,slow=35
DAVA Damuels 51.03 320 *i*P **P** **07 14 57.6 -1.3**
comp=Z,10nm,0.6s,SNR=5.3
CLL Collm 51.06 326 *e*P **P** **07 14 59.0 +0.2**
CLL pmax pmax
comp=Z,12nm,1.0s
CLL Collm 51.06 326 *e*P **P** **07 14 59.0 +0.2**
comp=Z,12nm,1.0s
FIA1 FINESS Array S 52.12 342 P **P** **07 15 06.9 +0.3**
FINES FINESS Array B 52.12 342 P **P** **07 15 06.6 0.0**
comp=Z,9.0nm,0.5s,baz=139,slow=8.2,SNR=46
FINES LR LR 07 39 35.1
comp=Z,77nm,20.7s,baz=166,slow=39
comp=Z,9.0nm,0.5s
FINES FINESS Array B 52.12 342 P **P** **07 15 07.0 +0.4**
FINES FINESS Array B 52.12 342 P **P** **07 15 07.0 +0.4**
SENIN Lac Senin/Sane 52.31 318 P **P** **07 15 08.1 -0.4**
BOSA Boshof 52.39 216 P **P** **07 15 08.2 -1.0**
comp=Z,1.2nm,0.6s,baz=20,slow=6.2,SNR=5.9
BOSA LR LR 07 35 44.7
comp=Z,139nm,20.1s,baz=30,slow=34
comp=Z,1.2nm,0.6s
TLY Talaya 52.84 35 LR LR 07 39 59.9
comp=Z,92nm,18.4s,baz=238,slow=39
SONM Songino Array 52.84 40 P **P** **07 15 12.6 +0.3**
comp=Z,1.4nm,0.8s,baz=238,slow=8.0,SNR=9.5
SONM PcP **PcP** **07 16 21.2 -0.4**
comp=Z,0.5nm,0.6s,baz=266,slow=3.8,SNR=4.6
SONM LR LR 07 39 32.9
comp=Z,116nm,20.2s,baz=262,slow=38
comp=Z,1.4nm,0.8s
SONM Songino Array 52.84 40 P **P** **07 15 12.5 +0.2**
SONM Songino Array 52.84 40 P **P** **07 15 12.5 +0.2**
SONM pmax pmax
comp=Z,6.0nm,1.8s
ULN Ulaanbaatar 53.26 40 *i*P **P** **07 15 16.0 +0.5**
ULN pmax pmax
comp=Z,2.0nm,1.0s
TORD Torodi Ar. Bea 53.51 276 P **P** **07 15 17.4 -0.2**
comp=Z,4.6nm,0.8s,baz=88,slow=5.3,SNR=26
TORD PcP **PcP** **07 16 24.2 -0.3**
comp=Z,0.7nm,0.6s,baz=76,slow=2.5,SNR=1.7
comp=Z,4.6nm,0.8s
TORD Torodi Ar. Bea 53.51 276 P **P** **07 15 16.8 -0.8**
SSB Saint Sauveur 53.77 316 P **P** **07 15 18.0 -1.1**
SSB IAmb IAmb 07 15 19.3
comp=Z,11nm,1.0s
SSB Saint Sauveur 53.77 316 P **P** **07 15 18.0 -1.1**
SSB pmax pmax
comp=Z,11nm,1.0s
WLF Walferdange 54.25 322 *d*P **P** **07 15 21.5 -1.0**
HHC Hu-ho-hao-te 54.28 50 *e*P **P** **07 15 24.8 +1.8**
HHC pmax pmax
comp=Z,11nm,0.7s
HHC pmax pmax
comp=Z,99nm,4.6s
HHC LR LR
comp=N,170nm,13.9s
HHC LR LR
comp=E,280nm,13.7s
HHC LR LR
comp=Z,210nm,12.6s
LEM Lembang 54.51 109 LR LR 07 36 05.3
comp=Z,76nm,18.8s,baz=309,slow=33
BMRD Maredsous 55.32 322 *d*P **P** **07 15 31.1 +0.9**
DOU Dourbes 55.35 322 *d*P **P** **07 15 29.7 -0.7**
HFS Hagfors 55.61 335 P **P** **07 15 31.2 -0.9**
comp=Z,5.1nm,0.7s,baz=117,slow=8.5,SNR=10
comp=Z,5.1nm,0.7s
NB2 NORSAR Subarra 57.13 336 P **P** **07 15 41.5 -1.5**
comp=Z,12nm,1.4s,baz=118,slow=7.9
NOA NORSAR Array B 57.13 336 P **P** **07 15 41.5 -1.5**
comp=Z,1.6nm,0.8s,baz=119,slow=7.5,SNR=6.4
NOA LR LR 07 43 19.9
comp=Z,37nm,19.2s,baz=35,slow=39
comp=Z,1.6nm,0.8s
SUR Sutherland 57.74 216 LR LR 07 38 42.2
comp=Z,196nm,20.7s,baz=39,slow=34
NRIK Noril'sk 58.42 12 P **P** **07 15 51.5 -0.4**
comp=Z,3.1nm,0.7s,baz=209,slow=5.6,SNR=6.0
NRIK LR LR 07 44 56.9
comp=Z,83nm,18.6s,baz=210,slow=40
comp=Z,3.1nm,0.7s
NRIK Noril'sk 58.42 12 P **P** **07 15 52.3 +0.5**
NRIK Noril'sk 58.42 12 *i*P **P** **07 15 52.0 +0.1**
NRIK pmax pmax
comp=Z,4.0nm,0.9s
MDT Midelt 58.57 300 LR LR 07 42 44.9
comp=Z,186nm,18.4s,baz=96,slow=38
ESDC Sonseca Array 58.69 308 P **P** **07 15 53.3 -1.1**
comp=Z,5.7nm,0.7s,baz=82,slow=6.1,SNR=36
comp=Z,5.7nm,0.7s
MD01 Midelt array s 58.70 300 **P** **07 15 54.3 -0.4**
MD31 MD31 58.70 300 P **P** **07 15 54.6 0.0**
MD31 IAmb IAmb 07 15 56.4
comp=Z,21nm,1.4s
ARCES ARCESS Array B 58.72 348 P **P** **07 15 53.3 -0.6**
comp=Z,3.3nm,0.7s,baz=147,slow=6.8,SNR=9.5
ARCES PcP **PcP** **07 16 43.6 -0.2**
comp=Z,1.7nm,0.6s,baz=57,slow=4.5,SNR=4.2
ARCES LR LR 07 43 13.9
comp=Z,62nm,19.2s,baz=144,slow=38
comp=Z,3.3nm,0.7s
NJ2 Nanjing 58.98 61 *e*P **P** **07 15 57.3 +0.9**
NJ2 pmax pmax
comp=Z,20nm,0.5s
TARAI Tarakan 60.80 94 P **P** **07 16 08.8 -0.5**
DBIC Dimbokro 61.02 270 P **P** **07 16 09.6 -1.2**
comp=Z,2.8nm,0.6s,baz=103,slow=6.5,SNR=5.1
comp=Z,2.8nm,0.6s
EKA Eskdalemuir Ar 61.53 326 P **P** **07 16 11.8 -1.6**
comp=Z,1.6nm,0.6s,baz=115,slow=6.8,SNR=8.6
comp=Z,1.6nm,0.6s
KAPI Kappang 65.22 102 LR LR 07 44 23.3
comp=Z,24nm,18.1s,baz=278,slow=35
MRSI Marisa 65.75 96 P **P** **07 16 40.8 -1.3**
comp=Z,28nm,1.0s
KSRS Korea Array 66.55 55 P **P** **07 16 44.9 -1.9**
comp=Z,2.4nm,0.6s,baz=262,slow=6.8,SNR=7.7
KSRS LR LR 07 47 43.9
comp=Z,72nm,19.5s,baz=270,slow=38
comp=Z,2.4nm,0.6s
JOW Kunigami 67.32 67 LR LR 07 46 58.5
comp=Z,50nm,20.5s,baz=279,slow=37
JNU Nakatsue 69.11 60 LR LR 07 49 59.6
comp=Z,64nm,19.4s,baz=290,slow=38
YAK Yakutsk 69.52 29*ce*P **P** **07 17 05.0 0.0**
YAK pmax pmax
comp=Z,22nm,0.6s
KLR Kul'dur 69.53 42 LR LR 07 51 04.5
comp=Z,131nm,19.1s,baz=240,slow=39
KLR Kul'dur 69.53 42 *i*P **P** **07 17 04.3 -1.1**
KLR pmax pmax
comp=Z,1.0nm,0.6s
SOEI Soe 70.95 106 P **P** **07 17 13.7 -1.1**
TIXI Tiksi 70.98 19 **P** **07 17 13.5 -0.3**
TIXI IAmb IAmb 07 17 15.3
comp=Z,5.2nm,0.8s
TIXI Tiksi 70.98 19*ce*P **P** **07 17 13.7 -0.1**
TIXI pmax pmax
comp=Z,6.0nm,0.8s
DBG Daneborg 72.94 344 *i*P **P** **07 17 26.2 +0.7**
DBG IAmb IAmb 07 17 27.5
comp=Z,42nm,1.8s
DAG Danmarks Havn 72.97 347 P **P** **07 17 25.6 -0.1**
DAG Danmarks Havn 72.97 347 *i*P **P** **07 17 25.0 -0.7**
DAG IAmb IAmb 07 17 25.9
comp=Z,6.2nm,0.8s
SCO Scoresbysund 72.99 340 *i*P **P** **07 17 27.0 +1.1**
SCO IAmb IAmb 07 17 31.1
comp=Z,17nm,1.3s
NOR Nord 73.66 352 *i*P **P** **07 17 29.4 -0.3**
NOR IAmb IAmb 07 17 30.6
comp=Z,3.6nm,1.0s
MJAR Matsushiro Arr 74.82 56 P **P** **07 17 36.3 -1.0**
comp=Z,2.0nm,0.7s,baz=273,slow=6.0,SNR=4.9
MJAR LR LR 07 52 59.9
comp=Z,36nm,20.5s,baz=310,slow=38
comp=Z,2.0nm,0.7s
SEY Seymchan 79.99 28*ce*P **P** **07 18 06.6 +0.9**
SEY pmax pmax
comp=Z,11nm,1.0s
MAW Mawson 81.68 178 LR LR 07 48 17.1
comp=Z,50nm,19.0s,baz=22,slow=31
WRA Warramunga Arr 83.38 112 P **P** **07 18 22.9 -1.6**
comp=Z,6.7nm,0.9s,baz=298,slow=4.2,SNR=37
comp=Z,6.7nm,0.9s
WRA Warramunga Arr 83.38 112 P **P** **07 18 23.0 -1.4**
WRA Warramunga Arr 83.38 112 P **P** **07 18 23.0 -1.4**
WR8 Warramunga Arr 83.53 112 **P** **07 18 22.9 -2.3**
WR8 IAmb IAmb 07 18 24.4
comp=Z,6.1nm,0.8s
BILL Bilibino 84.01 21*ce*P **P** **07 18 27.8 +1.1**
BILL pmax pmax
comp=Z,7.0nm,1.0s
AS31 Alice Springs 84.13 116 P **P** **07 18 26.8 -1.4**
ASAR Alice Springs 84.13 116 P **P** **07 18 26.6 -1.6**
comp=Z,4.9nm,0.7s,baz=292,slow=4.9,SNR=65
ASAR LR LR 07 51 10.6
comp=Z,46nm,19.2s,baz=273,slow=32
comp=Z,4.9nm,0.7s
NVL N'lazarevskaya 90.15 194 *e*P **P** **07 18 58.6 +2.3**
NVL *e* 07 22 31.7
NVL 07 24 28.7
NVL *e*S **SKSac** **07 29 29.1 +2.0**
NVL *e*SS **SS** **07 35 52.2 +3.3**
NVL *e*SSS SSS 07 39 28.4
NVL pmax pmax
comp=Z,37nm,1.0s
C18K Utukok River 93.04 13 **P** **07 19 10.4 +0.4**
B22K Teshekpuk Lake 93.11 10 P **P** **07 19 11.2 +1.0**
C23K Itkillik River 94.01 9 P **P** **07 19 14.9 +0.5**
SNAA Sanae 94.37 196 LR LR 07 52 53.2
comp=Z,76nm,19.9s,baz=50,slow=30
C24K Franklin Bluff 94.41 9 P **P** **07 19 16.7 +0.5**
D23K Nanushuk River 94.78 10 P **P** **07 19 18.4 +0.5**
D23K IAmb IAmb 07 19 21.5
comp=Z,9.3nm,1.2s
C27K Jago River 95.16 7 P **P** **07 19 20.8 +1.1**
F20K Avaraart Lake 95.53 12 P **P** **07 19 21.1 -0.3**
F20K IAmb IAmb 07 19 22.8
comp=Z,11nm,1.7s
E24K Your Creek 95.94 9 P **P** **07 19 24.3 +1.0**
E24K IAmb IAmb 07 19 24.9
comp=Z,3.9nm,0.7s
ILAR Eielson Array 99.23 10 P **Pdif** **07 19 36.5 -1.6**
comp=Z,0.5nm,0.8s,baz=320,slow=4.1,SNR=6.7
comp=Z,0.5nm,0.8s
YKA Yellowknife Ar 103.28 356 Pdiff **Pdif** **07 19 55.2 -0.9**
comp=Z,0.1nm,0.7s,baz=359,slow=5.6,SNR=4.0
PDAR Pinedale Array 121.97 348 PKP **PKPdf** **07 24 51.0 -0.7**
comp=Z,1.4nm,0.6s,baz=67,slow=2.9,SNR=17
LPAZ La Paz 127.02 260 PKP **PKPdf** **07 25 02.0 -0.5**
comp=Z,0.6nm,0.6s,baz=200,slow=4.4,SNR=3.9
LPAZ La Paz 127.02 260 PKIKP **PKPdf** **07 25 02.0 -0.5**
PLCA Paso Flores 127.31 229 PKP **PKPdf** **07 25 00.6 -1.1**
comp=Z,1.3nm,0.6s,baz=2.1,slow=5.7,SNR=11
NVAR Mina Array Bea 127.47 355 PKP **PKiKP** **07 25 03.1 +0.2**
comp=Z,2.4nm,0.8s,baz=35,slow=0.8,SNR=17
TXAR Lajitas Array 132.83 337 PKP **PKPdf** **07 25 12.4 -0.3**
comp=Z,0.7nm,0.7s,baz=122,slow=1.2,SNR=7.5

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*ASRS **20** 07:09:43.0±1.4, 53.59N×87.66E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 20 07:09:45.8±3.3, 53.55N×87.70E, h0km, mbtmp2.7/2, ML2.2/2, Error ellipse: s-maj=31.8km s-min=16.0km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.75**	**284**	I	I	07 21 29.3	
	baz=100,slow=335,SNR=1.2						
ZALV	**Zalesovo Beam**	**1.75**	**284**	Pg	Pn	07 10 17.9	+0.5
	1.5nm,0.3s,baz=103,slow=18,SNR=14						
ZALV				Lg	Lg	07 10 40.9	
	3.3nm,0.3s,baz=104,slow=28,SNR=13						
KURBB	**Kurchatov Arra**	**6.36**	**246**	Pn	Pn	07 11 21.6	+0.8
	baz=63,slow=15,SNR=1.7						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**7.60**	**209**	Pn	Pn	07 11 38.8	+1.0
	0.2nm,0.3s,baz=27,slow=13,SNR=8.8						
	0.3nm,0.4s						

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*NEIC **20** 07:11:22.5±0.7, 17.80N±0.03×66.846W±0.008, h10km±1km, ML2.9/35, Md3.3/8(RSPR), Error ellipse: s-maj=5.1km s-min=2.7km az=4.0*
*OSPL **20** 07:11:22.8±0.6, 17.75N×66.86W, h3km±896km, ML3.2, Presumed earthquake*
*SDD **20** 07:11:23.2±1.9, 17.80N×66.85W, h12km±33km, MD3.1, ML2.8, MW2.9, Presumed earthquake*
ISC 20 07:11:22.6±1.2, 17.82N±0.06×66.85W±0.02, h15km±7km, n28, σ0.953/43, 8C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.16**	**348**		**Pg**	**07 11 26.5**	**-0.1**
GBPR					**Sg**	**07 11 28.9**	**-0.4**
MLPR	**Magueyes Islan**	**0.24**	**308**		**Pg**	**07 11 27.8**	**-0.2**
MLPR				IAML		07 11 32.1	
	1μm,0.4s						
MLPR				IAML		07 11 32.8	
	993nm,0.2s						
MLPR	**Magueyes Islan**	**0.24**	**308**⇑*e*P		**Pg**	**07 11 27.9**	**0.0**
MLPR			⇑*e*Sg		**Sg**	**07 11 31.6**	**0.0**
MLPR				IAML		07 11 32.0	
	comp=N,507nm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.31**	**307**		**Pg**	**07 11 29.3**	**+0.1**
CRPR					**Sg**	**07 11 34.1**	**+0.5**
CRPR	**Cabo Rojo, PR**	**0.31**	**307**	IAML		07 11 34.2	
	comp=N,5μm,0.3s						
CRPR				IAML		07 11 34.8	
	comp=N,2μm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.31**	**307**	*i*P	**Pg**	**07 11 29.2**	**+0.1**
CRPR				*e*S	**Sg**	**07 11 33.8**	**+0.2**
CRPR				IAML		07 11 34.6	
	comp=Z,2μm,0.2s						
OBIP	**Obispado Ponce**	**0.32**	**46**		**Pg**	**07 11 29.2**	**0.0**
OBIP					**Sb**	**07 11 34.5**	**-0.5**
OBIP	**Obispado Ponce**	**0.32**	**46**	*i*P	**Pg**	**07 11 29.4**	**+0.2**
OBIP				*e*S	**Sb**	**07 11 34.7**	**-0.3**
OBIP				IAML		07 11 35.6	

	comp=Z,3μm,0.1s							
CELP	**Cerrillos**	**0.36**	**45**			**Pg**	**07 11 30.1**	**+0.2**
CELP				IAML			07 11 37.3	
	comp=Z,696nm,0.2s							
LSP	**Las Mesas**	**0.42**	**327**			**Pg**	**07 11 31.2**	**+0.1**
LSP						**Sb**	**07 11 38.0**	**0.0**
UUPR	**Utuado, UPR, P**	**0.45**	**15**			**Pg**	**07 11 31.2**	**-0.4**
PRSN	**Puerto Rico Se**	**0.49**	**324**			**Pg**	**07 11 32.0**	**-0.3**
PRSN	**Puerto Rico Se**	**0.49**	**324**	⇑*e*Pg		**Pg**	**07 11 32.2**	**-0.1**
PRSN				⇓*e*Sg		**Sg**	**07 11 39.7**	**+0.8**
PRSN				IAML			07 11 42.5	
	comp=N,2μm,0.3s							
AOPR	**Arecibo Observ**	**0.53**	**9**			**Pg**	**07 11 32.8**	**-0.4**
AOPR				IAML			07 11 41.1	
	comp=N,1μm,0.3s							
AOPR	**Arecibo Observ**	**0.53**	**9**	⇑*e*Pg		**Pg**	**07 11 32.9**	**-0.2**
AOPR				⇓*e*Sg		**Sg**	**07 11 40.3**	**0.0**
AOPR				IAML			07 11 41.1	
	comp=N,925nm,0.2s							
ECPR	**Experimental S**	**0.68**	**43**			**Pg**	**07 11 35.4**	**-0.4**
ECPR				IAML			07 11 46.9	
	comp=N,1μm,0.2s							
AGPR	**Aguadilla, PR**	**0.69**	**339**			**Pg**	**07 11 35.6**	**-0.6**
AGPR				IAML			07 11 45.9	
	comp=N,570nm,0.3s							
AGPR				IAML			07 11 46.1	
	comp=N,653nm,0.3s							
AGPR	**Aguadilla, PR**	**0.69**	**339**	⇑*e*Pg		**Pg**	**07 11 35.8**	**-0.4**
AGPR				⇓*e*Sg		**Sg**	**07 11 45.6**	**+0.2**
AGPR				IAML			07 11 45.8	
	comp=N,426nm,0.3s							
EMPR	**Esperanza - Ma**	**0.72**	**25**			**Pg**	**07 11 36.7**	**+0.1**
EMPR						**Sb**	**07 11 47.5**	**+0.9**
SJG	**San Juan**	**0.72**	**66**			**Pg**	**07 11 36.4**	**-0.2**
SJG	**San Juan**	**0.72**	**66**	*i* P		**Pg**	**07 11 36.5**	**-0.2**
SJG				*e*S		**Sb**	**07 11 47.1**	**+0.5**
SJG				IAML			07 11 50.3	
	comp=Z,3μm,0.2s							
PDPR	**Patillas Dam,**	**0.81**	**76**			**Pg**	**07 11 38.1**	**-0.2**
PDPR				IAML			07 11 54.1	
	comp=Z,194nm,0.6s							
IDE	**Isla Desecheo**	**0.82**	**313**			**Pg**	**07 11 38.1**	**-0.5**
IDE						**Sg**	**07 11 49.6**	**+0.1**
HUMP	**Col San Antoni**	**1.00**	**71**			**Pb**	**07 11 41.3**	**-0.4**
HUMP						**Sg**	**07 11 54.9**	**-0.1**
CUPR	**Culebra, Puert**	**1.56**	**72**	Pn		**Pb**	**07 11 50.7**	**-0.6**
HIDR	**Higuey Centro**	**1.94**	**294**	⇑*e*Pg		**Pb**	**07 11 57.4**	**-0.2**
HIDR				⇓*e*Sg		**Sb**	**07 12 22.4**	**+0.7**
HIDR				IAML			07 12 26.8	
	comp=N,42nm,0.3s							
DR12	**Loma Pena Alta**	**2.59**	**292**	Pn		**Pn**	**07 12 05.2**	**+1.1**
HATOM	**Hato Mayor del**	**2.59**	**292**	⇑*e*Pg		**Pb**	**07 12 08.0**	**-0.9**
HATOM				⇑*e*Sg		**Sb**	**07 12 38.7**	**-1.9**
HATOM				IAML			07 12 43.3	
	comp=N,35nm,4.3s							

*TEH **20** 07:18:16.8, 38°.66N×43°.16E, h10km, ML2.7, Presumed earthquake*
*ISK **20** 07:18:17.1, 38°.69N×43°.15E, h5km, ML2.9/11*
*AFAD **20** 07:18:19.2, 38°.73N×43°.27E, h5km±3km, ML2.7*
ISC 20 07:18:18.7±1.0,**38°.69N**±0°.02×**43°.22E**±0°.02,**h8**km±9km, **n32,**σ1°**23°/50,Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TVAN	**Van**	**0.22**	**138**	P		**Pg**	**07 18 22.6**	**-0.6**
TVAN				IAML			07 18 27.0	
	comp=N,6μm,0.3s							
TVAN				IAML			07 18 27.0	
	comp=E,6μm,0.7s							
TVAN				S		**Sg**	**07 18 27.3**	**+1.0**
ERCV	**ERCIS-VAN**	**0.34**	**16**	Pg		**Pg**	**07 18 25.1**	**-0.5**
ERCV				Sg		**Sb**	**07 18 31.6**	**-1.3**
GEVA	**Gevas**	**0.40**	**199**	P		**Pg**	**07 18 25.8**	**-0.8**
GEVA				IAML			07 18 34.0	
	comp=E,586nm,0.5s							
GEVA				IAML			07 18 35.0	
	comp=N,888nm,0.4s							
GEVA				S		**Sb**	**07 18 35.3**	**+0.9**
ADCV	**BITLIS_Adilcev**	**0.41**	**287**	P		**Pg**	**07 18 26.7**	**0.0**
ADCV				IAML		**Sb**	**07 18 34.0**	**-0.7**
	comp=E,611nm,0.2s							
ADCV				S		**Sb**	**07 18 34.0**	**-0.7**
ADCV				IAML			07 18 35.0	
	comp=N,578nm,0.2s							
AKDM	**Akdamar-Van**	**0.41**	**208**	Pg		**Pg**	**07 18 25.7**	**-1.0**
VMUR	**Van-Muradiye**	**0.41**	**42**	P		**Pg**	**07 18 26.7**	**-0.1**
VMUR				S		**Sb**	**07 18 34.8**	**0.0**
VMUR				IAML			07 18 35.0	
	comp=E,2μm,0.2s							
VMUR				IAML			07 18 36.0	
	comp=N,1μm,0.3s							
MLAZ	**Malazgirt-MUS**	**0.69**	**311**	Pg		**Pg**	**07 18 30.8**	**-1.3**
DORK	**Agr/Tutak/Do**	**0.78**	**334**	P		**Pg**	**07 18 32.9**	**-0.8**
DORK				S		**Sg**	**07 18 44.3**	**+0.4**
DORK				IAML			07 18 47.0	
	comp=E,230nm,0.3s							
DORK				IAML			07 18 49.0	
	comp=N,268nm,0.6s							
AGRB	**Hanur-Agry**	**0.90**	**349**	Pg		**Pg**	**07 18 34.8**	**-1.3**
BLIS	**Bitlis-Merkez**	**0.91**	**253**	P		**Pg**	**07 18 34.8**	**-1.5**
BLIS				S		**Sg**	**07 18 46.9**	**-1.1**
BLIS				IAML			07 18 50.0	
	comp=N,431nm,0.3s							
BLIS				IAML			07 18 50.0	
	comp=E,370nm,0.3s							
PERV	**Siirt/Pervari-**	**0.91**	**216**	P		**Pg**	**07 18 35.3**	**-1.0**
PERV				S		**Sn**	**07 18 52.2**	**+0.8**
PERV				IAML			07 18 53.0	
	comp=N,189nm,0.3s							
PERV				IAML			07 18 57.0	
	comp=E,258nm,0.4s							
GURO	**Guroymak-BITLI**	**0.94**	**262**	Pg		**Pg**	**07 18 35.0**	**-1.8**
KOTA	**Agri, Merkez-K**	**1.11**	**359**	P		**Pb**	**07 18 38.9**	**-1.5**
KOTA				IAML			07 19 00.0	
	comp=N,121nm,1.0s							
SRTM	**Siirt_Merkez**	**1.23**	**236**	P		**Pb**	**07 18 42.6**	**+0.2**
SRTM				S		**Sn**	**07 19 00.6**	**+1.3**
SRTM				IAML			07 19 01.0	
	comp=N,210nm,0.9s							
SRTM				IAML			07 19 04.0	
	comp=E,220nm,0.5s							
EATA	**Eleskirt**	**1.30**	**334**	P		**Pn**	**07 18 42.4**	**-1.1**
EATA				S		**Sn**	**07 19 01.5**	**+0.3**
EATA				IAML			07 19 06.0	
	comp=E,131nm,0.7s							
EATA				IAML			07 19 09.0	
	comp=N,91nm,0.7s							
MAKU	**Maku**	**1.32**	**59**	Pg		**Pn**	**07 18 43.2**	**-0.5**
MAKU				Sg		**Sg**	**07 19 03.4**	**+2.2**
MUSM	**Mu-Merkez**	**1.34**	**272**	P		**Pn**	**07 18 42.4**	**-1.4**
MUSM				S		**Sg**	**07 19 02.3**	**+0.5**
SIRN	**Sirnak**	**1.35**	**208**	P		**Pg**	**07 18 44.7**	**0.0**
SIRN				IAML			07 19 07.0	
	comp=N,151nm,0.9s							
SIRN				IAML			07 19 13.0	
	comp=E,130nm,0.7s							
SVAN	**Silvan-Diyarba**	**1.68**	**252**	Pn		**Pn**	**07 18 48.2**	**-0.2**
SVAN	**Silvan-Diyarba**	**1.68**	**252**	P		**Pb**	**07 18 50.1**	**+0.2**
SVAN				S		**Sg**	**07 19 12.8**	**+0.1**
SVAN				IAML			07 19 14.0	
	comp=N,57nm,0.7s							
HOMI	**Horasan**	**1.69**	**323**	P		**Pb**	**07 18 49.5**	**-0.8**
HOMI				S		**Sg**	**07 19 17.4**	**+4.2**
HOMI				IAML			07 19 18.0	
	comp=N,107nm,0.9s							
HOMI				IAML			07 19 26.0	
	comp=E,88nm,1.0s							
BTMN	**Batman**	**1.73**	**243**	P		**Pg**	**07 18 51.8**	**-0.1**
BTMN				S		**Sg**	**07 19 15.0**	**+0.7**
BTMN				IAML			07 19 16.0	
	comp=E,170nm,0.4s							
BTMN				IAML			07 19 18.0	
	comp=N,160nm,0.8s							
SLHN	**Bingol, Solhan**	**1.74**	**280**	P		**Pn**	**07 18 50.1**	**+0.8**
SLHN				S		**Sg**	**07 19 15.2**	**+0.6**
KARO	**Karliova-Bingo**	**1.80**	**291**	Pn		**Pn**	**07 18 49.8**	**-0.5**
GNI	**Garni**	**1.88**	**38**	Pn		**Pb**	**07 18 52.6**	**-0.7**
ERZM	**Erzurum**	**1.88**	**311**	P		**Pg**	**07 18 54.4**	**-0.5**
ERZM				S		**Sg**	**07 19 23.2**	**+3.9**
ISHB	**Shabestar**	**1.92**	**101**	Pn		**Pn**	**07 18 52.2**	**+0.2**
KARS	**Kars**	**1.94**	**357**	Pn		**Pn**	**07 18 52.4**	**+0.3**
IMRD	**Marand**	**1.94**	**89**	Pn		**Pb**	**07 18 53.1**	**-1.4**
SENK	**Senkaya-Erzuru**	**1.99**	**341**	Pn		**Pn**	**07 18 52.9**	**+0.1**
BNGB	**Bingl**	**2.01**	**279**	Pn		**Pn**	**07 18 53.1**	**+0.1**
EMRE	**Erzurum,Aziziy**	**2.19**	**308**	P		**Pb**	**07 18 59.5**	**+0.6**
EMRE				IAML			07 19 40.0	
	comp=E,34nm,0.6s							

DJA 20 07:19:13.7±0.5,**3°S**±2°×**13°0E**±°,**h22**km±4km,**M3.8**/15, **mB6.2/2,mb4.5/3,MLv3.4**/15,**Mw(mB)5.9/2,Seram**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSAI	**Masohi**	**1.00**	**232**	P		Pn	07 19 32.6	+0.2
KRAI	**Karang Ratu**	**1.45**	**246**	P		Pn	07 19 39.1	+0.5
BNDI	**Bandanaira**	**1.79**	**174**	P		Pn	07 19 43.8	+0.5
BNDI				S		Sb	07 20 06.7	-1.1
AAI	**Ambon**	**1.79**	**238**	P		Pn	07 19 42.5	-0.9
SIJI	**Sorong**	**2.41**	**40**	P		Pn	07 19 52.2	+0.4
SIJI				S		Sn	07 20 21.5	+0.8
SWI	**Sorong**	**2.41**	**40**	P		Pn	07 19 53.2	+1.4
SWI				S		Sn	07 20 21.8	+1.1
FAKI	**Fak Fak**	**2.53**	**94**	P		Pn	07 19 53.2	-0.3
NLAI	**Namlea**	**2.67**	**259**	P		Pn	07 19 56.2	+0.9
SANI	**Sanana**	**3.79**	**280**	P		Pn	07 20 10.0	-0.8
SAUI	**Saumlaki**	**5.45**	**163**	P		Pn	07 20 33.0	-0.7

*ASRS **20** 07:26:16.0±1.2, 54°.42N×86°.78E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 20 07:26:19.2±3.6,**54°.48N×86°.46E,h0km,mbtmp2.6/2, ML2.4/2,Error ellipse: s-maj=28.7km s-min=16.7km az=49.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.10**	**242**	I		I	07 32 33.9	
	baz=61,slow=343,SNR=5.1							
ZALV	**Zalesovo Beam**	**1.10**	**242**	Pg		Pg	07 26 40.0	-0.3
	0.7nm,0.3s,baz=56,slow=16,SNR=5.3							
ZALV				Lg		Lg	07 26 55.5	
	0.9nm,0.3s,baz=60,slow=26,SNR=5.2							
KURBB	**Kurchatov Arra**	**6.19**	**235**	Pn		Pn	07 27 52.5	+0.8
	0.1nm,0.3s,baz=53,slow=14,SNR=4.1							
	0.1nm,0.3s							
MKAR	**Makanchi Array**	**8.14**	**201**	Pn		Pn	07 28 19.2	+0.7
	0.1nm,0.3s,baz=22,slow=14,SNR=2.1							
	0.1nm,0.3s							

*ASRS **20** 07:30:07.0±1.0, 53°.54N×87°.50E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 20 07:30:09.3±3.2,**53°.53N×87°.58E,h0km,mbtmp2.7/2, ML2.5/2,Error ellipse: s-maj=30.5km s-min=17.0km az=60.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.69**	**286**	I		I	07 41 21.0	
	0.2nm,0.6s,baz=102,slow=330,SNR=5.7							
ZALV	**Zalesovo Beam**	**1.69**	**286**	Pn		Pn	07 30 39.3	-0.8
	1.1nm,0.3s,baz=100,slow=13,SNR=13							
ZALV				Lg		Lg	07 31 02.8	
	2.1nm,0.3s,baz=105,slow=27,SNR=11							
KURBB	**Kurchatov Arra**	**6.29**	**246**	Pn		Pn	07 31 44.3	+1.1
	0.1nm,0.3s,baz=63,slow=13,SNR=4.3							
	0.3nm,0.3s							
MKAR	**Makanchi Array**	**7.54**	**209**	Pn		Pn	07 32 01.9	+1.4
	0.1nm,0.3s,baz=31,slow=15,SNR=4.2							
MKAR				Lg		Lg	07 34 04.7	
	0.1nm,0.3s,baz=27,slow=29,SNR=2.5							
	0.2nm,0.3s							

*IDC **20** 07:31:20.6±1.2, 40°.75N×112°.03W, h0km, mb2.5/1, mbtmp2.5/4, ML3.1/1, Error ellipse: s-maj=17.1km s-min=7.3km az=158.0*
*NEIC **20** 07:31:20.4±0.9, 40°.76N±0°.01×112°.05W±0°.01, h2km, ML1.5/22, ML1.5(UUSS), Error ellipse: s-maj=2.1km s-min=1.4km az=156.0*
*UUSS **20** 07:31:20.7±1.0, 40°.75N±0°.01×112°.05W±0°.02, h9km±8km, Error ellipse: s-maj=1.9km s-min=1.8km az=126.0*
ISC 20 07:31:20.8±1.1,**40°.77N**±0°.03×**112°.06W**±0°.03,**h7**km±11km, **n18,**σ0°**66/24,Utah**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
CTU	**Camp Tracy**	**0.24**	**107**			**Pg**	**07 31 25.7**	**0.0**
CTU				Sg		**Sg**	**07 31 28.8**	**-0.2**
CTU				IAML			07 31 29.4	
	comp=N,113nm,0.2s							
CTU				IAML			07 31 29.7	
	comp=E,80nm,0.2s							
TCUT	**Toone Canyon**	**0.60**	**54**			**Pb**	**07 31 33.2**	**-0.6**
TCUT				Sg		**Sb**	**07 31 41.9**	**-0.8**
SPUT	**South Promonto**	**0.62**	**331**			**Pg**	**07 31 33.2**	**+0.5**
BGU	**Big Grassy Mou**	**0.76**	**282**			**Pg**	**07 31 35.9**	**+0.6**
BGU				Sg		**Sg**	**07 31 45.4**	**+0.3**
BGU				IAML			07 31 48.8	
	comp=E,21nm,0.5s							
DUG	**Dugway, Tooele**	**0.81**	**226**			**Pg**	**07 31 36.4**	**+0.1**
DUG				Sg		**Sb**	**07 31 48.0**	**-0.6**
DUG				IAML			07 31 49.5	
	comp=E,14nm,0.5s							
DUG				IAML			07 31 51.0	
	comp=E,16nm,0.4s							
MPU	**Maple Canyon**	**0.82**	**157**	Pg		**Pg**	**07 31 36.2**	**-0.3**
MPU				Sg		**Sb**	**07 31 49.5**	**+0.8**
MPU				IAML			07 31 50.1	
	comp=N,15nm,0.6s							
HWUT	**Hardware Ranch**	**0.92**	**24**			**Pg**	**07 31 38.7**	**+0.3**
HWUT				Sg		**Sg**	**07 31 51.0**	**+0.7**
HWUT				IAML			07 31 53.3	
	comp=N,13nm,0.4s							
HWUT				IAML			07 31 53.8	
	comp=N,9.6nm,0.5s							
BSUT	**Blindstream Ca**	**1.01**	**103**			**Pg**	**07 31 40.2**	**0.0**
BSUT				IAML			07 31 57.1	
	comp=E,11nm,0.5s							
HVU	**Hansel Valley**	**1.15**	**332**			**Pg**	**07 31 42.6**	**-0.2**
HVU				IAML			07 32 00.8	
	comp=E,8.5nm,0.9s							
HVU				IAML			07 32 03.7	
	comp=N,8.9nm,0.4s							
P18A	**Preston Nutter**	**1.79**	**129**	Pn		**Pn**	**07 31 53.1**	**+0.6**
ELK	**Elko**	**2.42**	**271**	Pn		**Pb**	**07 32 03.4**	**-1.4**
	comp=N,0.4nm,0.3s,baz=283,slow=8.3,SNR=2.0							
ELK				Lg		Lg	07 32 36.2	
	comp=N,0.3nm,0.3s,baz=196,slow=3.3,SNR=7.7							
PSUT	**Pine Spring**	**2.63**	**212**	Pn		**Pn**	**07 32 04.0**	**+0.2**
BW06	**Boulder Array**	**2.74**	**42**	Pn		**Pn**	**07 32 05.9**	**+0.5**
BW06				IAML			07 32 46.1	
	comp=N,3.7nm,3.5s							
PDAR	**Pinedale Array**	**2.74**	**42**	Pn		**Pb**	**07 32 09.3**	**-0.8**
	comp=N,0.4nm,0.3s,baz=215,slow=14,SNR=14							
PDAR				Lg		Lg	07 32 45.0	
	comp=N,1.1nm,0.3s,baz=219,slow=30,SNR=19							
	comp=N,0.4nm,0.3s							
PDAR	**Pinedale Array**	**2.74**	**42**			**Pn**	**07 32 04.5**	**-0.8**
LOHW	**Long Hollow**	**3.04**	**20**	Pn		**Pn**	**07 32 10.2**	**+0.7**
TXAR	**Lajitas Array**	**13.31**	**146**	Pn		**Pn**	**07 34 31.1**	**+0.9**
	comp=N,0.1nm,0.4s,baz=334,slow=13,SNR=2.0							
YKA	**Yellowknife Ar**	**21.81**	**357**	P		**P**	**07 36 13.0**	**-0.2**
	comp=N,0.1nm,0.3s,baz=181,slow=8.6,SNR=1.2							
	comp=N,0.1nm,0.3s							

*IDC **20** 07:33:21.8±2.8, 13°.70N×92°.26W, h0km, mb3.4/4, mbtmp3.4/8, ML3.4/4, Error ellipse: s-maj=52.8km s-min=28.7km az=5.0*
*GCG **20** 07:33:26.5±1.9, 13°.76N×91°.98W, h8km±14km, MD4.5, ML3.8, MW3.3, Presumed earthquake*
*MEX **20** 07:33:26.4±1.1, 13°.74N×92°.43W, h11km±321km, MD4.1*
*CATAC **20** 07:33:27.5±0.8, 14°N±4°×92°W±°, h30km±7km, M3.8/19, MLv3.8/19, Error ellipse: s-maj=10.2km s-min=4.1km az=39.3, confirmed*
ISC 20 07:33:23.6±1.8,**13°.73N**±0°.06×**92°.14W**±0°.04,**h9**km±10km, **n59,**σ1°**88/79,mb3.5/4,Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
RTAL	**Retalhuleu**	**0.90**	**28**	*e*P		**Pb**	**07 33 42.6**	**+1.2**
RTAL				*e*S		**Sn**	**07 33 55.5**	**0.0**
RTAL	**Retalhuleu**	**0.90**	**28**	P		**Pb**	**07 33 42.8**	**+1.4**
STG5	**El Palmar, Qui**	**1.02**	**49**	*i* P		**Pb**	**07 33 44.7**	**+1.3**
STG2	**El Palmar, Qui**	**1.02**	**46**	*e*P		**Pb**	**07 33 44.9**	**+1.4**
STG8	**El Palmar, Qui**	**1.05**	**47**	*e*P		**Pb**	**07 33 45.3**	**+1.3**
STG8				IAML			07 34 05.0	
	comp=N,3μm,0.2s							
SMCA	**Catarina**	**1.12**	**3**	*e*P		**Pg**	**07 33 45.1**	**0.0**
THIG		**1.18**	**354**	*e*P		**Pb**	**07 33 46.0**	**-0.1**
THIG				*e*S		**Sg**	**07 33 59.6**	**-2.0**
QUEO	**Labor Ovalle**	**1.29**	**28**	*e*P		**Pg**	**07 33 48.0**	**-0.3**
QUEO				IAML			07 34 07.9	
	comp=N,2μm,0.2s							
CHUJ	**Union Juarez**	**1.36**	**1**	*e*P		**Pn**	**07 33 47.8**	**-1.1**
CHUJ				*e*S		**Sb**	**07 34 05.5**	**-1.4**
PATR	**El Naranjo**	**1.38**	**356**	*e*P		**Pn**	**07 33 48.2**	**-1.1**
PATR				*e*S		**Sb**	**07 34 04.4**	**-3.2**
PAVE	**Pavencul**	**1.46**	**358**	*e*P		**Pn**	**07 33 49.4**	**-0.9**
PAVE				*e*S		**Sb**	**07 34 06.2**	**-3.6**
FG8	**Yepocapa, Chim**	**1.62**	**71**	*i* P		**Pn**	**07 33 49.2**	**-3.2**
FG16	**Alotenango, Sa**	**1.67**	**71**	*e*P		**Pn**	**07 33 50.5**	**-2.7**
FG16				IAML			07 34 14.7	
	comp=E,14μm,0.2s							
HUEH	**Huehuetenango**	**1.70**	**21**	*e*P		**Pn**	**07 33 54.6**	**+1.0**
HUEH				*e*S		**Sb**	**07 34 17.3**	**+0.7**
HUEH	**Huehuetenango**	**1.70**	**21**	P		**Pn**	**07 33 54.9**	**+1.4**
HUEH	**Huehuetenango**	**1.70**	**21**	*e*P		**Pn**	**07 33 55.0**	**+1.4**
HUEH				*i* S		**Sg**	**07 34 20.1**	**+1.9**
HUEH				IAML			07 34 33.3	
	comp=N,833nm,0.5s							
GCG4	**OSOP**	**1.77**	**61**	*i* P		**Pn**	**07 33 56.1**	**+1.5**
GCG4				*i* S		**Sg**	**07 34 18.9**	**-1.8**
GCG4				IAML			07 34 26.9	
	comp=E,1μm,0.4s							
APG	**El Apazote**	**2.06**	**52**	Pn		**Pn**	**07 34 00.7**	**+2.1**
	comp=E,1.8nm,0.3s,baz=202,slow=14,SNR=116							
APG				Lg		Lg	07 34 24.0	
	comp=E,3.5nm,0.3s,baz=83,slow=17,SNR=8.8							
	comp=E,11nm,0.7s							
APG	**El Apazote**	**2.06**	**52**	*i* P		**Pn**	**07 34 00.3**	**+1.7**
APG				*e*S		**Sn**	**07 34 24.9**	**+0.4**
FAME	**Alcaldia de Sa**	**2.06**	**87**	P		**Pn**	**07 33 58.5**	**+0.1**
FAME				S		**Sn**	**07 34 23.2**	**-1.2**
PCIG		**2.23**	**332**	*e*P		**Pn**	**07 34 00.2**	**-0.5**
PCIG				*e*S		Sn	07 34 18.9	-9.4
NUBE	**Las Nubes**	**2.29**	**85**	P		**Pn**	**07 34 02.7**	**+1.0**
NUBE	**Las Nubes**	**2.29**	**85**	*e*P		**Pn**	**07 34 03.1**	**+1.4**
NUBE				*i* S		**Sn**	**07 34 29.0**	**-1.2**
SLOZ	**Alcaldia de Sa**	**2.30**	**82**	P		**Pn**	**07 34 02.7**	**+0.9**
CEVE	**Cerro Verde**	**2.44**	**87**	P		**Pn**	**07 34 05.6**	**+1.7**
CEVE				S		**Sn**	**07 34 35.1**	**+1.1**
CCIG	**Comitan**	**2.54**	**360**	*e*P		**Pn**	**07 34 08.5**	**+3.4**
CCIG				*e*S		**Sn**	**07 34 38.8**	**+2.5**
CCIG	**Comitan**	**2.54**	**360**	P		**Pn**	**07 34 08.9**	**+3.8**
CCIG	**Comitan**	**2.54**	**360**	*e*P		**Pn**	**07 34 08.7**	**+3.6**
CCIG				IAML			07 34 55.8	
	comp=N,188nm,0.5s							
JAYA	**Jayaque - finc**	**2.61**	**91**	P		**Pn**	**07 34 07.3**	**+1.1**
JAYA				S		**Sn**	**07 34 36.8**	**-1.3**
JAYA	**Jayaque - finc**	**2.61**	**91**	*e*P		**Pn**	**07 34 06.9**	**+0.8**
JAYA				*e*S		**Sn**	**07 34 37.0**	**-1.1**
CEDA	**San Andres**	**2.66**	**88**	P		**Pn**	**07 34 08.7**	**+1.9**
CEDA				S		**Sn**	**07 34 40.5**	**+1.3**
PMON	**Piamonte**	**2.74**	**90**	P		**Pn**	**07 34 09.9**	**+2.0**
PMON				S		**Sn**	**07 34 41.0**	**-0.2**
MTO3	**Montecristo**	**2.77**	**76**	P		**Pn**	**07 34 09.9**	**+1.5**
MTO3	**Montecristo**	**2.77**	**76**	*e*P		**Pn**	**07 34 09.6**	**+1.1**
ESQI	**Esquipulas**	**2.83**	**73**	P		**Pn**	**07 34 10.9**	**+1.8**
CARR	**Arriaga**	**3.04**	**326**	*e*P		**Pn**	**07 34 14.6**	**+2.8**
CARR				*e*S		**Sn**	**07 34 50.0**	**+1.7**
PAVA	**Las Pavas**	**3.11**	**90**	P		**Pn**	**07 34 14.8**	**+1.9**
TGIG		**3.18**	**343**	*e*P		**Pn**	**07 34 13.8**	**0.0**
TGIG				*e*S		**Sn**	**07 34 53.6**	**+1.6**
TGIG		**3.18**	**343**	*e*P		**Pn**	**07 34 15.0**	**+1.2**
TECO	**Alcaldia de Te**	**3.27**	**93**	P		**Pn**	**07 34 17.0**	**+2.0**
SCLA	**Alcaldia de Sa**	**3.31**	**90**	P		**Pn**	**07 34 17.7**	**+2.0**
SARH	**Santa Rosa de**	**3.43**	**72**	P		**Pn**	**07 34 19.3**	**+1.9**
PETF	**Flores**	**3.85**	**34**	P		**Pn**	**07 34 25.3**	**+2.3**
CMIG	**Matias Romero**	**4.27**	**322**	Pn		**Pn**	**07 34 29.0**	**+0.2**
	comp=N,1.1nm,0.3s,baz=144,slow=13,SNR=19							
CMIG				Sn		**Sn**	**07 35 18.7**	**0.0**
	comp=N,4.3nm,0.3s,baz=141,slow=9.6,SNR=5.2							
	comp=N,5.0nm,0.6s							
CMIG	**Matias Romero**	**4.27**	**322**	*e*P		**Pn**	**07 34 29.7**	**+0.9**
CMIG				*e*S		**Sn**	**07 35 14.6**	**-4.1**
HUIG	**Huatulco**	**4.34**	**298**	*e*P		Pn	07 34 28.7	-1.1
HUIG				*e*S		Sn	07 35 15.4	-5.2
NEUV	**Arroyo Zacate**	**5.31**	**319**	*e*P		**Pn**	**07 34 47.5**	**+4.4**
NEUV				*e*S		**Sn**	**07 35 45.8**	**+1.5**
PEIG	**Puerto Escondi**	**5.34**	**296**	*e*P		Pn	07 34 40.3	-3.3
PEIG				*e*S		Sn	07 35 40.9	-4.5
VHO	**Vista Hermosa**	**5.54**	**307**	*e*S		**Sn**	**07 35 51.2**	**+0.8**
YOIG	**Yosondua**	**6.08**

σ1^{s}42/23, **Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDFI	**Ende, Flores**	**1.44**	**161**	P	**Pn**	**07 36 49.5**	**+1.0**
MMRI	**Maumere**	**1.61**	**141**	P	**Pn**	**07 36 51.2**	**+2.0**
LBFI	**Labuhan Bajo,**	**1.70**	**230**	P	**Pn**	**07 36 50.2**	**+0.5**
WSI	**Waingapu**	**2.44**	**202**	P	**Pn**	**07 36 54.3**	**0.0**
WBSI	**Waikabubak, Su**	**2.87**	**219**	P	**Pn**	**07 36 57.3**	**-0.4**
WBSI				S	**S**	**07 37 48.8**	**+0.8**
BASI	**Baing, Sumba**	**2.88**	**192**	P	**Pn**	**07 36 59.4**	**+1.7**
BASI				S	**S**	**07 37 50.2**	**+2.1**
DBNI	**Kabupaten Domp**	**3.07**	**249**	P	**Pn**	**07 37 00.1**	**+0.8**
DBNI				S	**S**	**07 37 51.3**	**+0.4**
PLAI	**Plampang**	**3.68**	**247**	P	**Pn**	**07 37 04.9**	**+0.3**
BATI	**Baumata**	**3.71**	**139**	P	**Pn**	**07 37 06.9**	**+2.0**
SOEI	**Soe**	**3.83**	**128**	P	**Pn**	**07 37 07.9**	**+1.8**
PMSI	**Majene**	**4.49**	**329**	P	**Pn**	**07 37 12.1**	**-0.2**
TWSI	**Taliwang, Sumb**	**4.49**	**252**	P	**Pn**	**07 37 12.0**	**-0.3**
KLNI	**Mataram** 0.1nm1μm22nm,0.6s	**5.17**	**258**	P	**Pn**	**07 37 20.5**	**+1.3**
SRBI	**Singaraja**	**5.98**	**263**	P	**Pn**	**07 37 28.8**	**+0.9**
JAGI	**Jajag, Banyuwa**	**7.07**	**261**	P	**Pn**	**07 37 40.4**	**+0.4**
BKB	**Balikpapan** 85nm,0.4s	**7.45**	**325**	P	**P**	**07 37 46.3**	**+1.5**
GMJI	**Gumukmas** 0.2nm30nm,0.9s	**7.74**	**263**	P	**Pn**	**07 37 47.2**	**-0.3**
FITZ	**Fitzroy Crossi** 0.2nm,0.3s,baz=328,slow=9.5,SNR=1.9 0.7nm,0.6s	**11.49**	**158**	Pn	P	07 38 18.4	-11
WRA	**Warramunga Arr** 0.8nm,0.5s,baz=326,slow=12,SNR=6.7 0.8nm,0.5s	**17.83**	**136**	P	**P**	**07 39 35.8**	**-2.5**
ASAR	**Alice Springs** 0.5nm,0.4s,baz=317,slow=9.0,SNR=8.4 0.5nm,0.4s	**20.26**	**144**	P	**P**	**07 40 00.6**	**-1.8**
STKA	**Stephens Creek** 0.9nm,0.3s,baz=335,slow=8.9,SNR=5.6 0.9nm,0.3s	**30.90**	**145**	P	**P**	**07 41 35.2**	**-1.9**

*IDC **20** 07:37:19.7±0.7,29.°50S×61.°30E, h0^{km}, mb4.2/14, mbtmp4.1/15, ML3.7/1, Error ellipse: s-maj=26.5km s-min=18.5km az=37.0*

*NEIC **20** 07:37:22.4±1.1,29.°38S±0.°08×61.°4E±0.°1, h10^{km}±1^{km}, mb4.6/24, Error ellipse: s-maj=16.3km s-min=13.4km az=109.0*

ISC 20 07:37:21.6±0.6, **29.°4S**±0.°1×**61.°35E**±0.°09, **h10**^{km}, **n58,** σ0^{s}**84**/52, **mb4.5**/22, **Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCAM	**Rodrigues Isla**	**9.81**	**11**	Pn	**Pn**	**07 39 42.1**	**-0.7**
FOMA	**Nahampoana Res**	**13.54**	**286**	Pn	**Pn**	**07 40 32.8**	**-0.9**
VOI	**Vohitsoka**	**15.11**	**296**	Pn	**Pn**	**07 40 56.0**	**+0.8**
VOI	comp=Z,33nm,1.5s			IAmb	IAmb	07 40 57.8	
OPO	**Ambohidratompo** baz=49,slow=1.4,SNR=3.4 comp=Z,3.0nm,0.8s	**16.85**	**307**	Pn	**Pn**	**07 41 16.9**	**-0.9**
H04N2	**CROZET ISLANDS** baz=28,slow=75,SNR=8331	**18.30**	**202**	T	T	08 00 12.1	
H04N1	**CROZET ISLANDS** baz=28,slow=75	**18.30**	**202**	T	T	08 00 10.2	
H04N3	**CROZET ISLANDS** baz=28,slow=75,SNR=8995	**18.32**	**202**	T	T	08 00 13.6	
H08S1	**Diego Carcia H** baz=204,slow=76,SNR=302	**24.07**	**28**	T	T	08 07 32.3	
H08S2	**Diego Garcia H** baz=204,slow=76,SNR=100	**24.08**	**28**	T	T	08 07 32.9	
H08S3	**Diego Garcia H** baz=204,slow=76,SNR=296	**24.09**	**28**	T	T	08 07 33.8	
LSZ	**Lusaka**	**33.61**	**288**		**P**	**07 44 02.3**	**-0.2**
LSZ	comp=Z,7.9nm,1.0s			IAmb	IAmb	07 44 03.9	
KSANE	**Kasane**	**34.98**	**281**	P	**P**	**07 44 15.2**	**+0.8**
KSANE	comp=Z,7.5nm,0.9s			IAmb	IAmb	07 44 22.7	
LKGWB	**Lokgwabe**	**36.09**	**269**	P	**P**	**07 44 20.3**	**-3.5**
COCO	**West Island**	**37.15**	**70**	P	**P**	**07 44 32.1**	**-0.7**
KOOLE	**Kule**	**37.33**	**270**	P	**P**	**07 44 34.6**	**+0.2**
KOOLE	comp=Z,14nm,0.8s			IAmb	IAmb	07 44 36.0	
LODK	**Lodwar**	**41.09**	**318**	P	**P**	**07 45 05.4**	**-0.4**
RAYN	**Ar Rayn**	**54.82**	**342**	P	**P**	**07 46 52.7**	**+0.8**
RAYN	comp=Z,3.4nm,0.9s			IAmb	IAmb	07 46 54.4	
EDA	**Edea**	**59.10**	**295**	P	**P**	**07 47 23.4**	**+0.9**
FITZ	**Fitzroy Crossi** comp=Z,8.5nm,0.9s,baz=206,slow=5.7,SNR=8.2 comp=Z,8.5nm,0.9s	**59.28**	**95**	P	**P**	**07 47 23.9**	**+0.1**
CM31	**Chiang Mai Arr**	**59.86**	**42**	P	**P**	**07 47 28.4**	**+0.8**
CM31	comp=Z,8.9nm,1.0s			IAmb	IAmb	07 47 29.5	
CMAR	**Chiang Mai Arr** comp=Z,1.5nm,0.3s,baz=231,slow=6.6,SNR=18 comp=Z,1.5nm,0.3s	**59.86**	**42**	P	**P**	**07 47 28.2**	**+0.6**
CMAR	**Chiang Mai Arr**	**59.86**	**42**	P	**P**	**07 47 27.3**	**-0.3**
CHTO	**Chiang Mai**	**60.14**	**42**	P	**P**	**07 47 29.5**	**0.0**
CHTO	comp=Z,5.2nm,1.3s			IAmb	IAmb	07 47 31.9	
QSPA	**South Pole Qui** comp=Z,7.4nm,1.1s,baz=280,slow=6.7,SNR=8.8 comp=Z,7.4nm,1.1s	**60.72**	**180**	P	**P**	**07 47 32.1**	**-1.0**
QSPA	**South Pole Qui**	**60.72**	**180**	P	**P**	**07 47 34.0**	**+0.9**
ASAR	**Alice Springs** comp=Z,4.2nm,0.9s,baz=241,slow=6.4,SNR=23 comp=Z,4.2nm,0.9s	**64.22**	**104**	P	**P**	**07 47 56.9**	**-0.2**
ASAR	**Alice Springs**	**64.22**	**104**	P	**P**	**07 47 57.0**	**-0.1**
AS31	**Alice Springs**	**64.22**	**104**	P	**P**	**07 47 56.4**	**-0.7**
WRA	**Warramunga Arr** comp=Z,5.6nm,0.9s,baz=246,slow=5.9,SNR=19 comp=Z,5.6nm,0.9s	**66.06**	**100**	P	**P**	**07 48 09.2**	**+0.1**
WRA	**Warramunga Arr**	**66.06**	**100**	P	**P**	**07 48 09.1**	**0.0**
WB0	**Warramunga Arr**	**66.17**	**100**		**P**	**07 48 09.7**	**-0.1**
TORD	**Torodi Ar. Bea** comp=Z,1.1nm,0.9s,baz=179,slow=4.2,SNR=5.2 comp=Z,1.1nm,0.9s	**71.41**	**298**	P	**P**	**07 48 42.6**	**+0.3**
BR131	**Keskin Array S**	**73.48**	**338**	P	**P**	**07 48 54.3**	**-0.1**
BR131	comp=Z,4.5nm,1.1s			IAmb	IAmb	07 48 55.6	
BRTR	**Keskin Array B** comp=Z,1.2nm,0.9s,baz=186,slow=8.7,SNR=5.0 comp=Z,1.2nm,0.9s	**73.48**	**338**	P	**P**	**07 48 54.3**	**-0.1**
EIDS	**Eidsvold**	**77.76**	**112**	P	**P**	**07 49 20.1**	**+0.9**
MAKZ	**Makanchi**	**78.15**	**14**	P	**P**	**07 49 20.4**	**-0.3**
MKAR	**Makanchi Array** comp=Z,0.4nm,0.6s,baz=151,slow=5.3,SNR=3.6 comp=Z,0.4nm,0.6s	**78.20**	**15**	P	**P**	**07 49 21.2**	**+0.2**
MKAR	**Makanchi Array**	**78.20**	**15**	P	**P**	**07 49 20.7**	**-0.3**
ABKAR	**Akbulak array**	**78.35**	**359**	P	**P**	**07 49 21.9**	**+0.2**
CUC	**Castrocucco**	**81.00**	**326**	P	**P**	**07 49 37.0**	**+0.5**
KURBB	**Kurchatov Arra** comp=Z,0.6nm,0.9s,baz=203,slow=5.8,SNR=3.0 comp=Z,0.6nm,0.9s	**81.15**	**11**	P	**P**	**07 49 37.3**	**+0.4**
KURK	**Kurchatov**	**81.25**	**11**	P	**P**	**07 49 37.6**	**+0.2**
BVAR	**Borovoye Array** comp=Z,0.7nm,0.4s,baz=160,slow=6.0,SNR=3.4 comp=Z,0.7nm,0.4s	**82.49**	**5**	P	**P**	**07 49 43.8**	**-0.1**
AKASG	**Malin Array Be** comp=Z,0.2nm,0.3s,baz=177,slow=5.2,SNR=5.7 comp=Z,0.2nm,0.3s	**84.70**	**340**	P	**P**	**07 49 54.1**	**-1.2**
ZAA0	**Zalesovo Array**	**85.50**	**14**	P	**P**	**07 49 59.2**	**0.0**
ZAA0	comp=Z,2.1nm,0.9s			IAmb	IAmb	07 50 13.2	
ZALV	**Zalesovo Beam**	**85.50**	**14**	P	**P**	**07 49 58.8**	**-0.4**
SONM	**Songino Array** comp=Z,0.5nm,0.4s,baz=194,slow=5.6,SNR=5.7 comp=Z,0.5nm,0.4s	**86.91**	**29**	P	**P**	**07 50 06.2**	**-0.4**
SONM	**Songino Array**	**86.91**	**29**	P	**P**	**07 50 07.8**	**+1.2**
SONM	comp=Z,3.3nm,1.3s			IAmb	IAmb	07 50 08.7	
ULN	**Ulaanbaatar**	**87.21**	**29**	P	**P**	**07 50 08.3**	**+0.3**
ULN	comp=Z,4.1nm,1.2s			IAmb	IAmb	07 50 09.7	
MORC	**Moravsky Berou**	**87.95**	**333**	P	**P**	**07 50 12.1**	**+0.7**
MORC	comp=Z,7.7nm,1.5s			IAmb	IAmb	07 50 13.9	
MD01	**Midelt array s**	**88.10**	**310**	P	**P**	**07 50 14.3**	**+1.7**
KSRS	**Korea Array** comp=Z,1.8nm,0.8s,baz=161,slow=32,SNR=5.1 comp=Z,1.8nm,0.8s	**91.15**	**47**	P	**P**	**07 50 25.8**	**-0.8**
ESDC	**Sonseca Array** comp=Z,0.9nm,0.8s,baz=108,slow=4.8,SNR=5.2 comp=Z,0.9nm,0.8s	**91.70**	**315**	P	**P**	**07 50 30.1**	**+0.9**
YKA	**Yellowknife Ar** comp=Z,4.5nm,0.9s,baz=342,slow=3.2,SNR=48	**146.83**	**357**	PKPbc	**PKPbc**	**07 57 03.6**	**+0.3**
ULM	**Lac du Bonnet** comp=Z,6.8nm,0.8s,baz=2.2,slow=1.2,SNR=8.3	**153.03**	**327**	PKPbc	**PKPbc**	**07 57 17.3**	**-1.6**
PDAR	**Pinedale Array** comp=Z,0.6nm,0.9s,baz=108,slow=4.8,SNR=4.2	**164.82**	**334**	PKP	**PKPdf**	**07 57 25.4**	**-0.7**
TXAR	**Lajitas Array** comp=Z,0.3nm,0.8s,baz=43,slow=2.0,SNR=2.4	**166.93**	**273**	PKP	**PKPdf**	**07 57 27.5**	**-0.5**
NVAR	**Mina Array Bea** comp=Z,0.4nm,0.8s,baz=151,slow=1.5,SNR=3.7	**171.03**	**358**	PKP	**PKPdf**	**07 57 30.9**	**+0.4**

*IDC **20** 07:42:33.9±1.4,2.°78S×129.°39E, h0^{km}, mb3.4/3, mbtmp3.5/5, ML3.4/2, Error ellipse: s-maj=41.4km s-min=24.3km az=81.0*

*DJA **20** 07:42:39.6±0.7,3.°5S±3.°×13.°0E±.°, h17^{km}±7^{km}, M3.7/16, mB5.2/1, mb4.3/5, MLv3.4/16, Mw(mB)4.6/1*

ISC 20 07:42:39.7±1.0, **2.°76S**±0.°07×**129.°76E**±0.°07, **h35**^{km}, **n15,** σ2^{s}**09**/16, **mb3.5/3, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.01**	**235**	P	**Pn**	**07 42 59.4**	**+2.0**
KRAI	**Karang Ratu**	**1.47**	**248**	P	**Pn**	**07 43 05.7**	**+2.0**
BNDI	**Bandanaira**	**1.76**	**175**	P	**Pn**	**07 43 10.5**	**+2.9**
AAI	**Ambon**	**1.81**	**239**	P	**Pn**	**07 43 10.0**	**+1.6**
SIJI	**Sorong** 4.3nm,0.3s,baz=49,slow=23,SNR=18	**2.41**	**39**	Pn	**Pn**	**07 43 18.9**	**+2.2**
SIJI	4.6nm,0.3s,baz=208,slow=23,SNR=6.0 10nm,0.3s			Sn	**Sn**	**07 43 46.6**	**+1.6**
SIJI	**Sorong**	**2.41**	**39**	P	**Pn**	**07 43 18.3**	**+1.7**
SWI	**Sorong**	**2.41**	**39**	P	**Pn**	**07 43 17.1**	**+0.5**
FAKI	**Fak Fak**	**2.49**	**94**	P	**Pn**	**07 43 20.4**	**+2.6**
NLAI	**Namlea**	**2.70**	**260**	P	**Pn**	**07 43 22.9**	**+2.3**
SANI	**Sanana**	**3.83**	**281**	P	**Pn**	**07 43 36.6**	**+0.4**
SGSI	**Sangihe**	**7.67**	**327**	P	**Pn**	**07 44 31.1**	**+2.0**
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=346,slow=12,SNR=8.3 0.7nm,0.5s	**17.65**	**166**	P	**Pn**	**07 46 40.5**	**-2.5**
ASAR	**Alice Springs** 2.0nm,0.6s,baz=351,slow=10,SNR=36 2.0nm,0.6s	**21.17**	**169**	P	**P**	**07 47 21.6**	**-0.5**
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=114,slow=5.4,SNR=1.7 0.2nm,0.6s	**64.59**	**326**	P	**P**	**07 53 11.7**	**-1.9**
KURBB	**Kurchatov Arra** 0.3nm,0.7s,baz=123,slow=6.9,SNR=2.5 0.3nm,0.7s	**68.81**	**328**	P	**P**	**07 53 39.2**	**-1.2**

*ASRS **20** 07:44:52.0±1.0,53.°60N×87.°68E, h0^{km}, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 20 07:44:55.4±2.8, **53.°52N**×**87.°65E, h0**^{km}, **mbtmp2.7**/2, **ML2.6**/2, **Error ellipse: s-maj=22.9km s-min=14.9km az=65.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** 0.1nm,0.6s,baz=100,slow=336,SNR=6.0	**1.73**	**286**	I	I	07 56 39.9	
ZALV	**Zalesovo Beam** 1.1nm,0.3s,baz=102,slow=15,SNR=8.8	**1.73**	**286**	Pn	Pn	07 45 26.8	0.0
ZALV	3.0nm,0.3s,baz=102,slow=27,SNR=12			Lg	Lg	07 45 51.0	
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=61,slow=14,SNR=5.1	**6.32**	**246**	Pn	Pn	07 46 30.6	+0.8
KURBB	baz=61,slow=26,SNR=1.6			Sn	Sn	07 47 41.1	-1.5
KURBB	baz=60,slow=31,SNR=7.2 0.2nm,0.3s			Lg	Lg	07 48 12.8	
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=27,slow=12,SNR=5.8	**7.56**	**209**	Pn	Pn	07 46 48.0	+1.2
MKAR	0.1nm,0.3s,baz=29,slow=28,SNR=4.3			Sn	Sn	07 48 13.0	-0.1
MKAR	0.1nm,0.3s,baz=25,slow=32,SNR=3.5 0.2nm,0.4s			Lg	Lg	07 48 55.3	

*IDC **20** 07:48:04.5±0.6,29.°56S×61.°29E, h0^{km}, mb4.2/13, mbtmp4.2/13, MS3.5/8, Error ellipse: s-maj=23.2km s-min=19.8km az=27.0*

*NEIC **20** 07:48:07.0±1.6,29.°52S±0.°06×61.°4E±0.°1, h10^{km}±1^{km}, mb4.7/30, Error ellipse: s-maj=18.0km s-min=5.9km az=244.0*

ISC 20 07:48:06.1±0.5, **29.°6S**±0.°1×**61.°37E**±0.°08, **h10**^{km}, **n66,** σ1^{s}**01**/52, **mb4.6**/24, **MS3.5**/8, **Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOMA	**Nahampoana Res**	**13.59**	**286**	Pn	**Pn**	**07 51 17.2**	**-1.7**
VOI	**Vohitsoka**	**15.18**	**297**		**Pn**	**07 51 40.3**	**-0.4**
AIS	**Amsterdam Isla**	**15.78**	**126**	Pn	**Pn**	**07 51 49.3**	**+1.0**
H04N2	**CROZET ISLANDS** baz=28,slow=75,SNR=6162	**18.19**	**202**	T	T	08 10 55.6	
H04N1	**CROZET ISLANDS** baz=28,slow=75	**18.20**	**202**	T	T	08 10 58.3	
H04N3	**CROZET ISLANDS** baz=28,slow=75	**18.21**	**202**	T	T	08 10 56.0	
PAF	**Port-aux-Franc**	**20.88**	**164**	P	Pn	07 52 51.2	+0.5
H08S1	**Diego Garcia H** baz=204,slow=76,SNR=92	**24.17**	**28**	T	T	08 18 17.0	
H08S2	**Diego Garcia H** baz=204,slow=76,SNR=47	**24.18**	**28**	T	T	08 18 18.3	
H08S3	**Diego Garcia H** baz=204,slow=76,SNR=142	**24.19**	**28**	T	T	08 18 18.3	
DGAR	**Diego Garcia**	**24.38**	**28**	P	**P**	**07 53 24.1**	**-0.4**
DGAR	comp=Z,38nm,1.1s			IAmb	IAmb	07 54 03.5	
GRHM	**Grahamstown, E**	**30.01**	**254**	P	**P**	**07 54 15.5**	**+0.5**
BOSA	**Boshof** comp=Z,3.3nm,0.9s,baz=302,slow=0.4,SNR=3.5	**31.50**	**263**	P	**P**	**07 54 27.2**	**-1.2**
BOSA	comp=Z,84nm,20.9s,baz=169,slow=31 comp=Z,3.3nm,0.9s			LR	LR	08 04 15.0	
BOSA	**Boshof**	**31.50**	**263**	P	**P**	**07 54 28.1**	**-0.3**
LBTB	**Lobatse** comp=Z,54nm,18.9s,baz=134,slow=34	**32.03**	**269**	LR	LR	08 06 25.2	
LSZ	**Lusaka** comp=Z,92nm,18.7s,baz=115,slow=36	**33.67**	**288**	LR	LR	08 08 04.5	
LSZ	**Lusaka**	**33.67**	**288**		**P**	**07 54 47.6**	**+0.1**
LSZ	comp=Z,8.8nm,1.1s			IAmb	IAmb	07 54 48.8	
SUR	**Sutherland** comp=Z,43nm,21.2s,baz=136,slow=32	**34.75**	**255**	LR	LR	08 06 20.7	
KIBK	**Kibwezi**	**34.98**	**316**	P	**P**	**07 54 59.1**	**+0.3**
KSANE	**Kasane**	**35.03**	**281**		**P**	**07 54 59.2**	**0.0**
KSANE	comp=Z,14nm,1.1s			IAmb	IAmb	07 55 01.2	
KGCAE	**Kacgae**	**35.64**	**271**	P	**P**	**07 55 05.1**	**+0.6**
KGCAE	comp=Z,13nm,1.1s			IAmb	IAmb	07 55 06.5	
LKGWB	**Lokgwabe**	**36.11**	**269**		**P**	**07 55 05.2**	**-3.3**
KMBO	**Kilima Mbogo** comp=Z,79nm,21.1s,baz=118,slow=33	**36.42**	**317**	LR	LR	08 07 52.3	
MAW	**Mawson** comp=Z,89nm,18.1s,baz=80,slow=35	**38.08**	**179**	LR	LR	08 10 02.1	
TSUM	**Tsumeb** comp=Z,81nm,20.2s,baz=162,slow=34	**40.98**	**274**	LR	LR	08 10 58.5	
TSUM	**Tsumeb**	**40.98**	**274**	P	**P**	**07 55 51.1**	**+1.5**
MBAR	**Mbarara** comp=Z,65nm,20.9s,baz=190,slow=33	**41.00**	**309**	LR	LR	08 10 27.2	
RAYN	**Ar Rayn**	**54.94**	**342**	P	**P**	**07 57 37.6**	**+0.3**
RAYN	comp=Z,6.0nm,1.2s			IAmb	IAmb	07 57 39.5	
FORT	**Forrest**	**56.86**	**109**	P	**P**	**07 57 52.3**	**+1.2**
FORT	comp=Z,7.4nm,1.1s			IAmb	IAmb	07 57 53.7	
CMAR	**Chiang Mai Arr** comp=Z,1.8nm,0.4s,baz=230,slow=7.3,SNR=14 comp=Z,1.8nm,0.4s	**59.93**	**42**	P	**P**	**07 58 13.6**	**+1.0**
CMAR	**Chiang Mai Arr**	**59.93**	**42**	P	**P**	**07 58 11.8**	**-0.8**
QSPA	**South Pole Qui** comp=Z,7.3nm,1.0s,baz=278,slow=2.1,SNR=17 comp=Z,7.3nm,1.0s	**60.60**	**180**	P	**P**	**07 58 16.4**	**-0.3**
QSPA	**South Pole Qui**	**60.60**	**180**		**P**	**07 58 18.1**	**+1.4**
QSPA	comp=Z,17nm,1.4s			IAmb	IAmb	07 58 19.8	
SHL	**Shillong**	**62.14**	**31**	P	**P**	**07 58 27.3**	**-0.4**
SHL	comp=Z,10nm,1.2s			IAmb	IAmb	07 58 29.3	
BELA	**Belgrano 2**	**62.58**	**194**	P	**P**	**07 58 29.0**	**-0.8**
BELA	comp=Z,3.8nm,0.9s			IAmb	IAmb	07 58 31.2	
BBOO	**Buckleboo**	**62.71**	**114**	P	**P**	**07 58 31.3**	**-0.2**
ASAR	**Alice Springs** comp=Z,4.3nm,0.8s,baz=245,slow=6.2,SNR=35 comp=Z,4.3nm,0.8s	**64.17**	**104**	P	**P**	**07 58 41.9**	**+0.6**
ASAR	**Alice Springs**	**64.17**	**104**		**P**	**07 58 41.8**	**+0.5**
AS31	**Alice Springs**	**64.17**	**104**		**P**	**07 58 40.8**	**-0.5**
WRA	**Warramunga Arr** comp=Z,6.7nm,0.9s,baz=246,slow=5.7,SNR=23 comp=Z,6.7nm,0.9s	**66.02**	**100**	P	**P**	**07 58 54.1**	**+0.9**
WRA	**Warramunga Arr**	**66.02**	**100**	P	**P**	**07 58 54.2**	**+1.0**
WRAB	**Tennant Creek**	**66.03**	**100**	P	**P**	**07 58 53.8**	**+0.4**
WRAB				IAmb	IAmb	07 58 59.0	
GURO	**Guroymak-BITLI** comp=Z,6.8nm,0.7s	**70.12**	**344**	P	**P**	**07 59 20.0**	**+1.3**
GURO	comp=Z,6.7nm,1.2s			IAmb	IAmb	07 59 24.3	
TORD	**Torodi Ar. Bea** comp=Z,1.2nm,0.9s,baz=140,slow=4.1,SNR=5.9 comp=Z,1.2nm,0.9s	**71.48**	**298**	P	**P**	**07 59 27.6**	**+0.3**
KARP	**Karpathos**	**72.33**	**331**	P	**P**	**07 59 34.4**	**+2.4**
HKPS	**Hong Kong Po S**	**72.35**	**51**	P	**P**	**07 59 31.6**	**-0.7**
KKAR	**Karatay Array**	**72.79**	**7**	P	**P**	**07 59 35.4**	**+0.8**
BRTR	**Keskin Array B** comp=Z,1.3nm,1.0s,baz=179,slow=6.2,SNR=5.5 comp=Z,1.3nm,1.0s	**73.60**	**338**	P	**P**	**07 59 39.5**	**-0.1**
BRTR	**Keskin Array B**	**73.60**	**338**	P	**P**	**07 59 39.3**	**-0.3**
ENH	**Enshi**	**75.11**	**42**	P	**P**	**07 59 48.4**	**0.0**
ENH	comp=Z,6.5nm,0.7s			IAmb	IAmb	07 59 50.0	
EIDS	**Eidsvold**	**77.69**	**112**	P	**P**	**08 00 01.2**	**-2.1**
EIDS	comp=Z,20nm,1.2s			IAmb	IAmb	08 00 06.0	
MKAR	**Makanchi Array** 0.5nm,0.8s,baz=190,slow=4.3,SNR=5.2 comp=Z,0.5nm,0.8s	**78.31**	**15**	P	**P**	**08 00 05.0**	**-1.1**
MKAR	**Makanchi Array**	**78.31**	**15**	P	**P**	**08 00 05.7**	**-0.5**
AB31	**Akbulak array**	**78.47**	**359**	P	**P**	**08 00 07.0**	**+0.2**
ABKAR	**Akbulak array**	**78.47**	**359**	P	**P**	**08 00 06.7**	**-0.1**
KURBB	**Kurchatov Arra** comp=Z,0.5nm,0.8s,baz=208,slow=6.1,SNR=5.7 comp=Z,0.5nm,0.8s	**81.26**	**11**	P	**P**	**08 00 22.5**	**+0.5**
AKASG	**Malin Array Be** comp=Z,0.3nm,0.3s,baz=173,slow=4.7,SNR=5.8 comp=Z,0.3nm,0.3s	**84.82**	**340**	P	**P**	**08 00 39.6**	**-0.7**
SONM	**Songino Array** comp=Z,0.7nm,0.5s,baz=214,slow=5.0,SNR=7.2 comp=Z,0.7nm,0.5s	**87.01**	**29**	P	**P**	**08 00 51.5**	**0.0**
SONM	**Songino Array**	**87.01**	**29**	P	**P**	**08 00 52.1**	**+0.6**
SONM	comp=Z,4.7nm,1.4s			IAmb	IAmb	08 00 54.2	
KSRS	**Korea Array** comp=Z,1.8nm,0.9s,baz=243,slow=4.6,SNR=3.7 comp=Z,1.8nm,0.9s	**91.22**	**47**	P	**P**	**08 01 10.2**	**-1.2**
ESDC	**Sonseca Array** comp=Z,1.4nm,0.8s,baz=117,slow=4.1,SNR=6.4 comp=Z,1.4nm,0.8s	**91.80**	**315**	P	**P**	**08 01 15.5**	**+1.3**
ILAR	**Eielson Array** comp=Z,1.0nm,0.9s,baz=318,slow=3.4,SNR=7.2	**140.57**	**19**	PKP	**PKPdf**	**08 07 34.6**	**-0.4**
YKA	**Yellowknife Ar** comp=Z,4.9nm,0.9s,baz=342,slow=3.2,SNR=36	**146.96**	**357**	PKPbc	**PKPbc**	**08 07 48.4**	**+0.2**
ULM	**Lac du Bonnet** comp=Z,7.3nm,0.9s,baz=53,slow=3.9,SNR=6.9	**153.14**	**327**	PKPbc	**PKPbc**	**08 08 03.0**	**-0.7**
PDAR	**Pinedale Array** comp=Z,0.6nm,0.9s,baz=172,slow=3.0,SNR=4.7	**164.94**	**333**	PKP	**PKPdf**	**08 08 10.3**	**-0.4**
TXAR	**Lajitas Array** comp=Z,0.6nm,0.9s,baz=177,slow=2.5,SNR=3.8	**166.96**	**273**	PKP	**PKPdf**	**08 08 13.8**	**+1.3**

*ASRS **20** 07:50:19.0±0.4,55.°58N×86.°17E, h0^{km}, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 20 07:50:21.3±3.9, **55.°55N**×**86.°26E, h0**^{km}, **mbtmp2.3**/2, **ML2.0**/2, **Error ellipse: s-maj=31.1km s-min=27.8km az=43.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=25,slow=327,SNR=3.8	**1.81**	**208**	I	I	08 02 30.0	
ZALV	**Zalesovo Beam** 0.6nm,0.3s,baz=26,slow=14,SNR=2.9	**1.81**	**208**	Pg	Pb	07 50 54.6	-0.7
ZALV	1.9nm,0.3s,baz=27,slow=29,SNR=7.3			Lg	Lg	07 51 18.5	
KURBB	**Kurchatov Arra** baz=44,slow=14,SNR=2.0 0.1nm,0.3s	**6.78**	**226**	Pn	Pn	07 52 02.5	+0.5
MKAR	**Makanchi Array** baz=20,slow=14,SNR=1.7 0.1nm,0.3s	**9.12**	**197**	Pn	Pn	07 52 33.5	-0.5

*BJI **20** 07:53:24.7,56.°38N×148.°81W, h8^{km}, mB5.3/17, mb4.8/57, Ms5.0/43, Ms7 4.6/42*

*IDC **20** 07:53:26.8±0.6,56.°62N×148.°44W, h0^{km}, mb4.6/37, mbtmp4.7/42, ML4.5/5, MS4.2/71, Error ellipse: s-maj=16.9km s-min=9.6km az=20.0*

*NEIC **20** 07:53:27.5,56.°26N×148.°47W, h20^{km}, Moment Tensor Solution. Duration: 1^{s}9 Moment tensor: Scale 10^{16}Nm; M_{rr}0.92; $M_{\theta\theta}$-4.29; $M_{\phi\phi}$3.36; $M_{r\theta}$-1.50; $M_{\theta\phi}$5.13; $M_{\phi r}$-2.21; Fault plane solution: $M_0$6.98000×10^{16} NP1: ϕ_s159.21000°, δ71.70000°, λ165.03000°. NP2: ϕ_s254.01000°, δ75.80000°, λ18.89000°. Principal axes: T 7.0740, Plg23.0000°, Azm117.0000°; N -0.2009, Plg67.0000°, Azm290.0000°; P -6.8731, Plg3.0000°, Azm26.0000°;*

*NEIC **20** 07:53:27.4±1.2,56.°52N±0.°07×148.°68W±0.°10, h10^{km}±1^{km}, mb5.2/140, ML5.2/88, Mww5.2/111 Error ellipse: s-maj=11.8km s-min=9.2km az=178.0*

*NEIC **20** 07:53:27.5,56.°56N×148.°65W, h20^{km}*

*MOS **20** 07:53:28.1±1.1,56.°59N×148.°41W, h20^{km}, mb5.2/62, MS4.2/6, Error ellipse: s-maj=10.5km s-min=4.0km az=98.2*

*GFZ **20** 07:53:28.3,56.°47N×148.°68W, h19^{km}, MW5.1, Moment Tensor Solution. s47 Moment tensor: M_{rr}0.31; $M_{\theta\theta}$-4.00; $M_{\phi\phi}$3.69; $M_{r\theta}$0.04; $M_{\theta\phi}$4.16; $M_{\phi r}$-0.77; Fault plane solution: NP1:ϕ_s158.00000°, δ87.00000°, λ172.00000°. NP2:ϕ_s248.00000°, δ82.00000°, λ2.00000°.

Q20K				S		Sn	07 54 47.5	-2.0	
	baz=135								
SII	**Sitkinak Islan**	**3.08**	**274**			Pn	07 54 14.2	-1.8	
SII	**Sitkinak Islan**	**3.08**	**274**	IAML			07 54 54.6		
	comp=N,5µm,0.8s								
SII	**Sitkinak Islan**	**3.08**	**274**	P		Pn	07 54 14.1	-1.9	
	baz=88								
MID	**Middleton Isla**	**3.20**	**21**			Pn	07 54 16.3	-1.3	
Q23K	**Middleton Isla**	**3.20**	**21**	P		Pn	07 54 16.4	-1.2	
	baz=204,SNR=62								
Q23K				S		Sn	07 54 52.0	-3.7	
	baz=204								
CNPM	**China Poot**	**3.36**	**337**			Pn	07 54 19.0	-0.8	
CNPM				IAML			07 55 01.7		
	comp=N,3µm,1.4s								
CNPM				IAML			07 55 03.9		
	comp=E,3µm,1.2s								
CNPM	**China Poot**	**3.36**	**337**			Sn	07 54 57.3	-2.4	
BRSE	**Bradley Lake S**	**3.46**	**342**			Pn	07 54 20.1	-1.1	
BRSE						Sn	07 55 00.0	-2.2	
BRSE	**Bradley Lake S**	**3.46**	**342**	P		Pn	07 54 20.3	-0.9	
	baz=160,SNR=121								
BRSE				S		Sn	07 54 59.1	-3.1	
	baz=160								
BRLK	**Bradley Lake**	**3.51**	**341**			Pn	07 54 20.5	-1.3	
BRLK	**Bradley Lake**	**3.51**	**341**			Sn	07 55 00.4	-3.0	
HOM	**Homer**	**3.57**	**335**			Pn	07 54 22.2	-0.5	
HOM	**Homer**	**3.57**	**335**			Sn	07 55 03.7	-1.1	
HOM	**Homer**	**3.57**	**335**	P		Pn	07 54 22.1	-0.6	
	baz=152,SNR=33								
P23K	**Montague Islan**	**3.59**	**10**			Pn	07 54 21.8	-1.1	
P23K				IAML			07 55 03.9		
	comp=E,3µm,0.3s								
P23K				IAML			07 55 08.8		
	comp=N,3µm,0.6s								
P23K	**Montague Islan**	**3.59**	**10**	P		Pn	07 54 21.9	-1.0	
	baz=192,SNR=198								
P23K				S		Sn	07 55 01.3	-4.0	
	baz=192								
Q19K	**Cape Douglas,**	**3.64**	**314**			Pn	07 54 23.1	-0.6	
Q19K	**Cape Douglas,**	**3.64**	**314**	P		Pn	07 54 23.3	-0.4	
	baz=130,SNR=116								
SEW	**Seward**	**3.66**	**354**			Pn	07 54 22.4	-1.6	
SEW	**Seward**	**3.66**	**354**	P		Pn	07 54 22.7	-1.2	
	baz=173,SNR=213								
SEW				S		Sn	07 55 03.5	-3.7	
	baz=173								
KAHG	**Katmai Hook Gl**	**3.78**	**305**			Pn	07 54 25.8	+0.1	
KAHG						Sn	07 55 08.9	-1.3	
AUI	**Augustine Isla**	**3.84**	**320**			Pn	07 54 26.2	-0.2	
AUI						Sn	07 55 09.8	-1.8	
AU22	**Augustine Moun**	**3.84**	**321**			Pn	07 54 26.3	-0.1	
AU22						Sn	07 55 10.0	-1.6	
KAWH	**Katmai**	**3.84**	**302**			Pn	07 54 26.6	+0.1	
KAWH						Sn	07 55 10.5	-1.2	
AUJK	**Augustine Jueg**	**3.85**	**320**			Pn	07 54 26.3	-0.2	
KARR	**Katmai Rainbow**	**3.85**	**304**			Pn	07 54 27.0	+0.4	
AGU	**Augustine-Summ**	**3.86**	**320**			Pn	07 54 26.8	0.0	
AUCH	**Augustine Cone**	**3.87**	**320**			Pn	07 54 26.8	-0.1	
AUL	**Augustine Lava**	**3.88**	**321**			Pn	07 54 26.9	0.0	
AUW	**Augustine West**	**3.88**	**320**			Pn	07 54 26.7	-0.3	
KAKN	**Katmai Knife C**	**3.93**	**300**			Pn	07 54 27.5	-0.2	
P19K	**Oil Pt**	**4.01**	**324**			Pn	07 54 28.0	-0.8	
P19K	**Oil Pt**	**4.01**	**324**	P		Pn	07 54 27.7	-1.1	
	baz=140,SNR=49								
P19K				S		Sn	07 55 14.9	-1.0	
	baz=140								
ACHA	**Angle Creek He**	**4.02**	**298**			Pn	07 54 28.1	-0.9	
KABU	**Katmai Buttres**	**4.03**	**299**			Pn	07 54 29.4	+0.3	
O22K	**Cooper Landing**	**4.06**	**352**			Pn	07 54 28.2	-1.2	
O22K	**Cooper Landing**	**4.06**	**352**	P		Pn	07 54 28.3	-1.0	
	baz=172,SNR=90								
O22K				S		Sn	07 55 12.9	-3.9	
	baz=172								
KAHC	**Katmai Hardscr**	**4.07**	**305**			Pn	07 54 29.4	-0.3	
Q18K	**Katmai Hardscr**	**4.07**	**305**	P		Pn	07 54 29.1	-0.5	
	baz=119,SNR=273								
Q18K				S		Sn	07 55 14.4	-2.9	
	baz=119								
HIN	**Hinchinbrook I**	**4.09**	**15**			Pn	07 54 28.7	-1.1	
ANCK	**Angle Creek**	**4.10**	**298**			Pn	07 54 30.3	+0.3	
KAIM	**Kayak Island**	**4.11**	**31**			Pn	07 54 29.5	-0.7	
KAIM				IAML			07 55 18.1		
	comp=E,3µm,1.5s								
KAIM				IAML			07 55 26.7		
	comp=N,3µm,1.2s								
KAIM	**Kayak Island**	**4.11**	**31**	P		Pn	07 54 29.5	-0.7	
	baz=215,SNR=470								
KAIM				S		Sn	07 55 15.1	-3.1	
	baz=215								
SLKM	**Skilak Lake**	**4.13**	**349**			Pn	07 54 29.2	-1.1	
SLKM				IAML			07 55 16.7		
	comp=N,4µm,0.2s								
ILS	**Iliamna Low So**	**4.21**	**328**			Pn	07 54 30.6	-0.9	
ILSW	**Iliamna Southw**	**4.25**	**328**			Pn	07 54 30.8	-1.3	
ILSW				IAML			07 55 23.4		
	comp=N,3µm,1.0s								
ILSW				IAML			07 55 25.0		
	comp=E,3µm,0.9s								
CNTC	**Contact Creek**	**4.32**	**298**			Pn	07 54 32.7	-0.3	
Q17K	**Contact Creek**	**4.32**	**298**	P		Pn	07 54 32.4	-0.6	
	baz=111,SNR=273								
EYAK	**Cordova Ski Ar**	**4.35**	**19**	P		Pn	07 54 33.0	-0.4	
EYAK	**Cordova Ski Ar**	**4.35**	**19**			Pn	07 54 32.5	-0.9	
EYAK				IAML			07 55 24.4		
	comp=E,3µm,1.1s								
EYAK				IAML			07 55 24.8		
	comp=N,3µm,0.9s								
EYAK	**Cordova Ski Ar**	**4.35**	**19**	P		Pn	07 54 32.8	-0.6	
	baz=202,SNR=1000								
EYAK				S		Sn	07 55 20.5	-3.6	
	baz=202								
PLK4	**Peulik 4**	**4.38**	**289**			Pn	07 54 33.0	-0.8	
PLK4				IAML			07 55 27.4		
	comp=N,2µm,0.8s								
PLK4				IAML			07 55 32.0		
	comp=E,3µm,0.9s								
R17L	**Mt. Peulik Vol**	**4.38**	**289**	P		Pn	07 54 33.1	-0.7	
	baz=102,SNR=172								
R17L				S		Sn	07 55 20.6	-4.2	
	baz=102								
SUCK	**Suckling Hills**	**4.42**	**33**			Pn	07 54 33.5	-0.9	
SUCK				IAML			07 55 24.6		
	comp=N,3µm,0.6s								
SUCK				IAML			07 55 38.1		
	comp=E,3µm,1.2s								
RAGM	**Ragged Mountai**	**4.44**	**26**			Pn	07 54 33.8	-0.8	
GLI	**Glacier Island**	**4.49**	**10**			Pn	07 54 34.0	-1.3	
GLI				IAML			07 55 26.1		
	comp=E,2µm,0.9s								
GLI				IAML			07 55 26.2		
	comp=N,1µm,1.0s								
GLI	**Glacier Island**	**4.49**	**10**	P		Pn	07 54 34.3	-1.0	
	baz=191,SNR=308								
CAPN	**Captain Cook N**	**4.50**	**344**	P		Pn	07 54 35.5	0.0	
	baz=162,SNR=14								
PLK1	**Peulik 1**	**4.54**	**290**			Pn	07 54 35.6	-0.5	
RDT	**Redoubt**	**4.56**	**336**			Pn	07 54 35.0	-1.4	
P18K	**Big Mountain,**	**4.57**	**312**			Pn	07 54 35.1	-1.4	
P18K	**Big Mountain,**	**4.57**	**312**	P		Pn	07 54 35.5	-1.0	
	baz=127,SNR=127								
GOAT	**Goat Mountain**	**4.59**	**25**			Pn	07 54 36.5	-0.3	
BGLC	**Bering Glacier**	**4.61**	**35**			Pn	07 54 36.6	-0.3	
BGLC	**Bering Glacier**	**4.61**	**35**	P		Pn	07 54 36.8	-0.2	
	baz=221,SNR=27								
PLBL	**Peulik Blue Cr**	**4.63**	**289**			Pn	07 54 36.8	-0.5	
DFR	**Drift River**	**4.64**	**334**			Pn	07 54 36.0	-1.5	
RC01	**Rabbit Creek A**	**4.66**	**353**			Pn	07 54 37.0	-0.6	
RC01				IAML			07 55 30.0		
	comp=E,3µm,0.5s								
RC01				IAML			07 55 30.0		
	comp=N,2µm,0.5s								
RC01	**Rabbit Creek A**	**4.66**	**353**	P		Pn	07 54 37.2	-0.5	
	baz=173,SNR=155								
NCT	**North Crescent**	**4.67**	**333**			Pn	07 54 36.9	-1.1	
BERG	**Berg Lake**	**4.70**	**31**			Pn	07 54 36.6	-1.6	
BERG				IAML			07 55 36.4		
	comp=N,3µm,0.8s								
PLK5	**Peulik 5**	**4.73**	**292**			Pn	07 54 38.2	-0.5	
O19K	**Port Alsworth**	**4.78**	**324**			Pn	07 54 38.5	-0.9	
O19K	**Port Alsworth**	**4.78**	**324**	P		Pn	07 54 38.3	-1.0	
	baz=139,SNR=138								
Q16K	**King Salmon**	**4.85**	**300**			Pn	07 54 40.2	0.0	
Q16K	**King Salmon**	**4.85**	**300**	P		Pn	07 54 40.1	-0.2	
	baz=113,SNR=77								
CYK	**Cape Yakataga**	**4.85**	**39**			Pn	07 54 39.8	-0.5	
O18K	**Koktuh Hills**	**4.86**	**317**			Pn	07 54 39.1	-1.2	
O18K	**Koktuh Hills**	**4.86**	**317**	P		Pn	07 54 39.4	-1.0	
	baz=131,SNR=120								
DIV	**Divide**	**4.90**	**16**			Pn	07 54 39.7	-1.3	
KNK	**Knik Glacier**	**4.95**	**1**			Pn	07 54 41.0	-0.7	
KNK				IAML			07 55 48.4		
	comp=E,1µm,1.0s								
KNK				IAML			07 55 48.5		
	comp=N,1µm,1.0s								
KNK	**Knik Glacier**	**4.95**	**1**	P		Pn	07 54 40.7	-0.9	
	baz=182,SNR=127								
BMRM	**Bremner River**	**4.97**	**23**			Pn	07 54 40.9	-1.0	
BMRM				IAML			07 55 41.4		
	comp=E,1µm,1.1s								
BMRM				IAML			07 55 53.1		
	comp=N,1µm,1.0s								
BMRM	**Bremner River**	**4.97**	**23**	P		Pn	07 54 41.4	-0.5	
	baz=207,SNR=457								
P17K	**Kvichak River**	**4.98**	**306**			Pn	07 54 41.2	-0.8	
P17K	**Kvichak River**	**4.98**	**306**	P		Pn	07 54 41.7	-0.4	
	baz=120,SNR=333								
R16K	**Pilot Point**	**5.01**	**286**			Pn	07 54 41.5	-0.9	
R16K	**Pilot Point**	**5.01**	**286**	IAML			07 55 41.4		
	comp=E,1µm,0.8s								
R16K				IAML			07 56 52.5		
	comp=N,1µm,1.5s								
R16K	**Pilot Point**	**5.01**	**286**	P		Pn	07 54 41.7	-0.8	
	baz=98								
SPU	**Mount Spurr**	**5.04**	**341**			Pn	07 54 41.9	-1.0	
BARK	**Barkley Ridge**	**5.09**	**37**			Pn	07 54 43.0	-0.6	
N20K	**Mount Spurr**	**5.09**	**340**	P		Pn	07 54 42.5	-1.1	
	baz=157,SNR=73								
SPCR	**Spurr Chakacha**	**5.09**	**340**			Pn	07 54 42.6	-1.0	
SPCR	**Spurr Chakacha**	**5.09**	**340**			Pn	07 54 42.6	-1.0	
SPCR	**Spurr Chakacha**	**5.09**	**340**	P		Pn	07 54 42.5	-1.0	
	baz=157,SNR=27								
SPCN	**Chakachatna No**	**5.11**	**340**			Pn	07 54 42.9	-0.9	
CKL	**Chakachamna La**	**5.11**	**339**			Pn	07 54 42.8	-1.2	
MESA	**MESA**	**5.11**	**41**			Pn	07 54 42.9	-1.1	
MESA				IAML			07 55 50.6		
	comp=E,1µm,1.3s								
MESA				IAML			07 55 52.0		
	comp=N,1µm,1.5s								
MESA	**MESA**	**5.11**	**41**	P		Pn	07 54 43.3	-0.7	
	baz=227,SNR=250								
PMR	**Palmer**	**5.14**	**357**	P		Pn	07 54 43.6	-0.6	
PMR	**Palmer**	**5.14**	**357**			Pn	07 54 42.7	-1.4	
PMR				IAML			07 55 41.5		
	comp=E,1µm,0.9s								
PMR				IAML			07 55 46.8		
	comp=N,868nm,0.8s								
PMR	**Palmer**	**5.14**	**357**	P		Pn	07 54 42.7	-1.4	
PMR	**Palmer**	**5.14**	**357**	P		Pn	07 54 43.5	-0.7	
	baz=177,SNR=205								
SPCG	**Spurr Capps Gl**	**5.14**	**341**			Pn	07 54 43.5	-0.8	
CRQM	**Cirque**	**5.16**	**31**			Pn	07 54 43.9	-0.8	
CRQM				IAML			07 55 47.0		
	comp=N,2µm,1.0s								
CRQM				IAML			07 55 51.2		
	comp=E,1µm,0.9s								
CRQE	**Cirque**	**5.17**	**32**	P		Pn	07 54 44.3	-0.5	
	baz=217,SNR=846								
SPBG	**Spurr Blockage**	**5.17**	**340**			Pn	07 54 44.0	-0.8	
KLU	**Klutina**	**5.22**	**14**			Pn	07 54 44.5	-1.0	
KLU				IAML			07 55 44.8		
	comp=E,1µm,0.8s								
KLU				IAML			07 55 45.5		
	comp=N,1µm,0.6s								
KLU	**Klutina**	**5.22**	**14**	P		Pn	07 54 45.0	-0.4	
	baz=197,SNR=572								
SPWE	**Spurr West**	**5.22**	**339**			Pn	07 54 44.5	-1.0	
TGL	**Tana Glacier**	**5.25**	**33**			Pn	07 54 45.1	-0.8	
TGL				IAML			07 55 48.2		
	comp=N,1µm,0.9s								
TGL				IAML			07 55 48.0		
	comp=E,1µm,0.9s								
STLK	**Strandline Lak**	**5.30**	**343**			Pn	07 54 45.5	-1.1	
STLK				IAML			07 55 48.4		
	comp=N,2µm,0.9s								
STLK				IAML			07 55 49.1		
	comp=E,2µm,1.1s								
ANNW	**Aniakchak Nort**	**5.30**	**279**			Pn	07 54 46.3	-0.2	
AZAC	**Aniakchak**	**5.31**	**279**			Pn	07 54 46.0	-0.6	
GHO	**Glory Hole Cre**	**5.31**	**358**			Pn	07 54 46.6	0.0	
GHO				IAML			07 55 49.8		
	comp=N,2µm,1.1s								
N19K	**Bonanza Creek**	**5.31**	**327**			Pn	07 54 45.7	-1.1	
N19K	**Bonanza Creek**	**5.31**	**327**	IAML			07 55 53.3		
	comp=N,780nm,1.1s								
N19K	**Bonanza Creek**	**5.31**	**327**	P		Pn	07 54 45.5	-1.3	
	baz=142,SNR=79								
SPNN	**North Nagishla**	**5.34**	**338**			Pn	07 54 46.4	-0.7	
ANPB	**Aniakchak Plen**	**5.34**	**278**			Pn	07 54 46.5	-0.6	
M22K	**Willow**	**5.35**	**352**			Pn	07 54 46.6	-0.4	
M22K	**Willow**	**5.35**	**352**	IAML			07 56 02.9		
	comp=E,2µm,1.2s								
M22K	**Willow**	**5.35**	**352**	P		Pn	07 54 46.3	-0.8	
	baz=171								
SML	**Sawmill**	**5.35**	**2**			Pn	07 54 47.0	-0.2	
SML	**Sawmill**	**5.35**	**2**	IAML			07 55 51.0		
	comp=E,1µm,1.1s								
SML				IAML			07 55 52.9		
	comp=N,2µm,0.9s								
SML	**Sawmill**	**5.35**	**2**	P		Pn	07 54 46.9	-0.2	
	baz=182,SNR=303								
M23K	**Glacier View**	**5.35**	**5**			Pn	07 54 47.2	0.0	
M23K	**Glacier View**	**5.35**	**5**	P		Pn	07 54 47.1	0.0	
	baz=186,SNR=266								
SCM	**Sheep Creek Mo**	**5.41**	**7**	Pn		Pn	07 54 47.3	-0.8	
SCM	**Sheep Creek Mo**	**5.41**	**7**	P		Pn	07 54 47.3	-0.8	
SCM	**Sheep Creek Mo**	**5.41**	**7**	P		Pn	07 54 48.0	0.0	
	baz=188								
RKAV	**Rock Avalanche**	**5.42**	**42**			Pn	07 54 47.9	-0.3	
CHGN	**Chignik**	**5.44**	**272**			Pn	07 54 47.1	-1.2	
CHGN	**Chignik**	**5.44**	**272**	P		Pn	07 54 47.6	-0.7	
	baz=84,SNR=61								
VRDI	**Verde Repeater**	**5.47**	**27**			Pn	07 54 47.6	-1.3	
KIAG	**Kiagna River**	**5.53**	**34**			Pn	07 54 49.0	-0.7	
N25K	**Chitina, Valde**	**5.55**	**20**			Pn	07 54 49.1	-0.8	
N25K	**Chitina, Valde**	**5.55**	**20**	P		Pn	07 54 49.5	-0.4	
	baz=204,SNR=1000								
GLB	**Gilahina Butte**	**5.57**	**25**			Pn	07 54 49.6	-0.6	
O17K	**Koliganek Bris**	**5.57**	**310**			Pn	07 54 49.2	-0.9	
O17K	**Koliganek Bris**	**5.57**	**310**	P		Pn	07 54 49.2	-0.9	
	baz=122,SNR=82								
GRNC	**Granite Creek**	**5.58**	**37**			Pn	07 54 49.7	-0.7	
BALM	**Baldy**	**5.62**	**33**			Pn	07 54 50.3	-0.6	
P16K	**Nushagak River**	**5.63**	**301**			Pn	07 54 50.8	-0.1	
P16K	**Nushagak River**	**5.63**	**301**	P		Pn	07 54 51.0	0.0	
	baz=113,SNR=102								
YKU2	**Yakutat**	**5.65**	**54**	P		Pn	07 54 51.1	-0.1	
YKU2	**Yakutat**	**5.65**	**54**			Pn	07 54 50.6	-0.6	
N18K	**Kilae Creek**	**5.67**	**321**			Pn	07 54 50.4	-1.2	
N18K	**Kilae Creek**	**5.67**	**321**	P		Pn	07 54 50.2	-1.3	
	baz=135,SNR=56								
PTPK	**Patty Peak**	**5.70**	**32**			Pn	07 54 51.8	-0.3	
MCARA	**McCarthy VSAT**	**5.71**	**28**			Pn	07 54 50.7	-1.4	
MCARA	**McCarthy VSAT**	**5.71**	**28**	P		Pn	07 54 51.7	-0.4	
	baz=214,SNR=343								
PCA	**Pinnacle**	**5.71**	**47**			Pn	07 54 51.7	-0.5	
PINM	**Pinnacle**	**5.71**	**47**	P		Pn	07 54 51.5	-0.7	
	baz=235,SNR=277								
SKT	**Skwentna**	**5.72**	**346**			Pn	07 54 51.0	-1.2	
SKT	**Skwentna**	**5.72**	**346**	P		Pn	07 54 51.5	-0.7	
	baz=164,SNR=53								
M24K	**Tolsona, Glenn**	**5.78**	**12**			Pn	07 54 52.9	-0.3	
M24K	**Tolsona, Glenn**	**5.78**	**12**	P		Pn	07 54 53.5	+0.3	
	baz=194								
VNSG	**Veniaminof 6**	**5.83**	**271**			Pn	07 54 53.6	-0.2	
BARN	**Barnard Glacie**	**5.85**	**35**			Pn	07 54 53.6	-0.6	
VNHG	**Veniaminof 1**	**5.87**	**272**			Pn	07 54 54.0	-0.3	
CTG	**Chitna Glacier**	**5.88**	**37**	P		Pn	07 54 54.0	-0.6	
	baz=224,SNR=312								
CTGM	**Chitina Glacie**	**5.89**	**37**			Pn	07 54 53.8	-0.8	
M20K	**Styx River**	**5.89**	**339**			Pn	07 54 53.6	-1.0	
M20K	**Styx River**	**5.89**	**339**	P		Pn	07 54 53.8	-0.9	
	baz=155,SNR=45								
LOGN	**Logan Glacier**	**5.90**	**39**			Pn	07 54 54.0	-0.8	
O16K	**Kokwok River B**	**5.92**	**306**			Pn	07 54 54.5	-0.4	
O16K	**Kokwok River B**	**5.92**	**306**	P		Pn	07 54 54.4	-0.5	
	baz=118,SNR=188								
WASW	**Wrangell South**	**5.92**	**21**			Pn	07 54 55.2	-0.1	
WACK	**Wrangell Chich**	**5.95**	**20**			Pn	07 54 55.3	-0.3	
CUT	**Chulitna**	**6.00**	**353**			Pn	07 54 55.9	-0.2	
CUT	**Chulitna**	**6.00**	**353**	P		Pn	07 54 55.4	-0.7	
	baz=172,SNR=51								
VNKR	**Veniaminof 5**	**6.00**	**270**			Pn	07 54 56.1	0.0	
VNSS	**Veniaminof 8**	**6.03**	**272**			Pn	07 54 56.6	0.0	
N17K	**Nushagak Hills**	**6.05**	**316**			Pn	07 54 55.8	-0.9	
N17K	**Nushagak Hills**	**6.05**	**316**	P		Pn	07 54 55.9	-0.9	
	baz=126,SNR=132								
S14K	**Fog Glacier**	**6.07**	**273**	P		Pn	07 54 56.0	-1.2	
	baz=83								
VNFG	**Fog Glacier, M**	**6.07**	**273**			Pn	07 54 56.6	-0.5	
WAT6	**Susitna Watana**	**6.14**	**4**			Pn	07 54 57.6	-0.5	
WAT6	**Susitna Watana**	**6.14**	**4**	P		Pn	07 54 57.6	-0.5	
	baz=185,SNR=266								
O28M	**Mount Upton**	**6.16**	**42**			Pn	07 54 57.9	-0.6	
O28M	**Mount Upton**	**6.16**	**42**	P		Pn	07 54 57.9	-0.6	
	baz=230,SNR=248								
L22K	**Petersville**	**6.16**	**351**			Pn	07 54 58.4	+0.1	
M19K	**Big River Lodg**	**6.19**	**334**			Pn	07 54 57.5	-1.2	
M19K	**Big River Lodg**	**6.19**	**334**	P		Pn	07 54 57.3	-1.4	
	baz=149								
M18K	**Stony River**	**6.25**	**326**			Pn	07 54 58.0	-1.5	
M18K	**Stony River**	**6.25**	**326**	P		Pn	07 54 58.0	-1.5	
	baz=140,SNR=132								
WAT1	**Susitna Watana**	**6.37**	**0**			Pn	07 55 01.0	-0.2	
WAT1	**Susitna Watana**	**6.37**	**0**	P		Pn	07 55 00.9	-0.3	
	baz=181								
WAT7	**Susitna Watana**	**6.38**	**359**			Pn	07 55 01.1	-0.2	
CHNA	**Chernabura Isl**	**6.42**	**260**	P		Pn	07 55 00.7	-1.1	
CHNA	**Chernabura Isl**	**6.42**	**260**	P		Pn	07 55 00.8	-1.0	
	baz=70,SNR=21								
CNBA	**Chernabura Isl**	**6.42**	**260**			Pn	07 55 00.5	-1.3	
O29M	**Mount Kennedy**	**6.53**	**50**			Pn	07 55 03.4	0.0	
O29M	**Mount Kennedy**	**6.53**	**50**	P		Pn	07 55 02.7	-0.7	
	baz=239,SNR=784								
L19K	**White Mountain**	**6.54**	**333**			Pn	07 55 02.2	-1.4	
L19K	**White Mountain**	**6.54**	**333**	P		Pn	07 55 02.1	-1.5	
	baz=148,SNR=92								
O15K	**Ungalikthiuk R**	**6.56**	**299**			Pn	07 55 03.7	-0.1	
O15K	**Ungalikthiuk R**	**6.56**	**299**	P		Pn	07 55 03.7	-0.1	
	baz=109,SNR=217								
M26K	**Nabesna, AK**	**6.60**	**23**			Pn	07 55 03.9	-0.4	
M26K	**Nabesna, AK**	**6.60**	**23**	P		Pn	07 55 03.9	-0.4	
	baz=209,SNR=173								
DHY	**Denali Highway**	**6.65**	**5**			Pn	07 55 05.1	0.0	
DHY	**Denali Highway**	**6.65**	**5**	P		Pn	07 55 05.0	0.0	
	baz=186,SNR=142								
YUK8	**Steele Glacier**	**6.66**	**40**			Pn	07 55 05.9	+0.6	
YUK8	**Steele Glacier**	**6.66**	**40**	P		Pn	07 55 05.7	+0.5	
	baz=228,SNR=466								
N16K	**Nishlik Lake**	**6.66**	**311**			Pn	07 55 04.7	-0.4	
N16K	**Nishlik Lake**	**6.66**	**311**	P		Pn	07 55 04.6	-0.5	
	baz=122,SNR=116								
YUK2	**White River**	**6.66**	**34**			Pn	07 55 05.6	+0.4	
PPLA	**Purkeypile**	**6.69**	**346**			Pn	07 55 05.3	-0.3	
PPLA	**Purkeypile**	**6.69**	**346**	P		Pn	07 55 05.4	-0.2	
	baz=163,SNR=14								
PAX	**Paxson**	**6.71**	**12**			Pn	07 55 05.8	0.0	
PAX	**Paxson**	**6.71**	**12**	P		Pn	07 55 05.8	0.0	
PAX	**Paxson**	**6.71**	**12**	P		Pn	07 55 05.3	-0.5	
	baz=196,SNR=216								
M17K	**Holitna River**	**6.72**	**321**			Pn	07 55 05.1	-0.8	
M17K	**Holitna River**	**6.72**	**321**	P		Pn	07 55 05.0	-0.8	
	baz=133,SNR=108								
SDPT	**Sand Point**	**6.76**	**265**	P		Pn	07 55 06.0	-0.4	
SDPT	**Sand Point**	**6.76**	**265**	P		Pn	07 55 05.7	-0.8	
SDPT	**Sand Point**	**6.76**	**265**	P		Pn	07 55 05.6	-0.8	
	baz=75,SNR=44								
YUK3	**Moose Creek**	**6.77**	**35**			Pn	07 55 07.3	+0.5	
YUK3	**Moose Creek**	**6.77**	**35**	P		Pn	07 55 07.3	+0.5	
	baz=222,SNR=429								
M27K	**Edge Creek, AK**	**6.83**	**27**			Pn	07 55 07.4	-0.2	
M27K	**Edge Creek, AK**	**6.83**	**27**	P		Pn	07 55 07.3	-0.2	
	baz=214,SNR=170								
S31K	**Pelican**	**6.89**	**72**	P		Pn	07 55 06.3	-2.0	
	baz=

N30M	Aishikik Lake	7.77	45	P		Pn	07 55 20.4	0.0	
	baz=236,SNR=188								
DTNA	Dutton South F	7.79	266			Pn	07 55 19.3	-1.3	
DT1	Dutton Round H	7.82	266			Pn	07 55 19.7	-1.3	
O30N	Mendenhall	7.83	51	P		Pn	07 55 20.9	-0.2	
	baz=243,SNR=128								
R32K	Eaglecrest	7.84	71	P		Pn	07 55 20.4	-0.8	
	baz=263,SNR=93								
SCRK	Sand Creek	7.87	15			Pn	07 55 21.2	-0.6	
SCRK	Sand Creek	7.87	15	P		Pn	07 55 21.1	-0.6	
	baz=199,SNR=72								
M29M	Somme Creek	7.90	37			Pn	07 55 22.2	0.0	
M29M	Somme Creek	7.90	37	P		Pn	07 55 22.3	+0.1	
	baz=226,SNR=402								
JIS	Juneau Island	7.91	71	P		Pn	07 55 21.2	-1.0	
JIS	Juneau Island	7.91	71			Pn	07 55 21.2	-1.0	
K17K	Iditarod	7.94	326	P		Pn	07 55 21.4	-1.3	
	baz=138,SNR=49								
HDA	Harding Lake	8.00	5	P		Pn	07 55 23.1	-0.4	
	baz=187,SNR=91								
J18K	Innoko River	8.09	333			Pn	07 55 23.6	-1.1	
J18K	Innoko River	8.09	333	P		Pn	07 55 23.5	-1.2	
	baz=146,SNR=50								
NEA2	Nenana	8.14	359	P		Pn	07 55 24.7	-0.8	
	baz=178,SNR=112								
M14K	Bethel	8.17	307	P		Pn	07 55 25.4	-0.3	
	baz=116,SNR=33								
J20K	Nowinta River	8.19	343			Pn	07 55 25.7	-0.4	
J20K	Nowinta River	8.19	343	P		Pn	07 55 25.6	-0.4	
	baz=158,SNR=68								
J19K	Poorman	8.30	338	P		Pn	07 55 26.4	-1.1	
	baz=152,SNR=39								
WHY	Whitehorse	8.31	54			Pn	07 55 27.5	-0.3	
WHY	Whitehorse	8.31	54	P		Pn	07 55 27.6	-0.2	
	baz=246,SNR=513								
N31M	Braeburn, Yuko	8.31	48	Pn		Pn	07 55 27.5	-0.3	
N31M	Braeburn, Yuko	8.31	48	P		Pn	07 55 28.0	+0.2	
	baz=239,SNR=263								
J25K	Salcha River,	8.32	10	P		Pn	07 55 26.9	-1.0	
	baz=193,SNR=89								
ILAR	Eielson Array	8.37	5	Pn		Pn	07 55 27.9	-0.5	
	comp=N,6.9nm,0.3s,baz=192,slow=14,SNR=204								
ILAR				Sn		Sn	07 56 57.7	-5.2	
	comp=N,14nm,0.3s,baz=189,slow=23,SNR=14								
ILAR				LR		LR	07 58 59.5		
	comp=N,2µm,19.9s,baz=186,slow=40								
ILAR	Eielson Array	8.37	5			Pn	07 55 26.9	-1.6	
ILAR	Eielson Array	8.37	5	P		Pn	07 55 26.9	-1.6	
L15K	Ungalak Mounta	8.42	314	P		Pn	07 55 28.5	-0.7	
	baz=122,SNR=55								
COLA	College	8.43	2	P		Pn	07 55 29.5	+0.2	
COLA	College	8.43	2			Pn	07 55 28.8	-0.6	
COLA	College	8.43	2	P		Pn	07 55 28.8	-0.6	
COLA	College	8.43	2	P		Pn	07 55 28.7	-0.6	
	baz=183								
L29M	L29M	8.49	34			Pn	07 55 30.4	+0.2	
L29M	L29M	8.49	34	P		Pn	07 55 30.2	0.0	
	baz=224,SNR=358								
P32M	Atlin	8.50	62			Pn	07 55 29.8	-0.6	
P32M	Atlin	8.50	62	P		Pn	07 55 29.8	-0.6	
	baz=255,SNR=144								
MDM	Murphy Dome	8.51	1			Pn	07 55 30.1	-0.4	
FALS	False Pass	8.52	265	P		Pn	07 55 29.9	-0.6	
FALS	False Pass	8.52	265			Pn	07 55 29.4	-1.1	
FALS	False Pass	8.52	265	P		Pn	07 55 29.6	-1.0	
	baz=73,SNR=33								
M30M	Minto, Yukon	8.57	40	P		Pn	07 55 31.1	-0.2	
	baz=230,SNR=144								
U33K	Whale Pass	8.63	86			Pn	07 55 29.7	-2.4	
U33K	Whale Pass	8.63	86	P		Pn	07 55 28.1	-4.1	
	baz=279,SNR=32								
MLY	Manley	8.64	354			Pn	07 55 31.8	-0.5	
MLY	Manley	8.64	354	P		Pn	07 55 31.3	-1.0	
	baz=172,SNR=25								
M13K	Dall Lake	8.66	303			Pn	07 55 32.6	+0.1	
M13K	Dall Lake	8.66	303	P		Pn	07 55 32.1	-0.4	
	baz=110								
J17K	VABM Dome	8.69	327			Pn	07 55 31.5	-1.3	
J17K	VABM Dome	8.69	327	P		Pn	07 55 30.6	-2.3	
	baz=138								
POKR	Poker Plat Res	8.69	3			Pn	07 55 32.5	-0.3	
POKR	Poker Plat Res	8.69	3	P		Pn	07 55 32.2	-0.7	
	baz=185								
I23K	Minto, Yukon-K	8.71	358	P		Pn	07 55 32.4	-0.7	
	baz=178,SNR=187								
ISNN	Isanotski Nort	8.72	265			Pn	07 55 32.8	-0.6	
L14K	Kuka Creek	8.75	310			Pn	07 55 33.6	0.0	
L14K	Kuka Creek	8.75	310	P		Pn	07 55 33.0	-0.7	
	baz=118								
CRAG	Craig	8.76	90	P		Pn	07 55 29.8	-4.0	
CRAG	Craig	8.76	90	P		Pn	07 55 29.8	-4.0	
	baz=283,SNR=11								
K15K	Wolf Creek Mou	8.78	317	P		Pn	07 55 33.2	-1.0	
	baz=126,SNR=32								
I20K	Naaghedeneel	8.82	343			Pn	07 55 34.1	-0.5	
I20K	Naaghedeneel	8.82	343	P		Pn	07 55 34.2	-0.5	
	baz=158								
SSLN	Shishaldin Nor	8.85	266			Pn	07 55 34.8	-0.4	
I21K	Tanana	8.88	351			Pn	07 55 34.3	-1.2	
I21K	Tanana	8.88	351	P		Pn	07 55 34.6	-0.9	
	baz=168,SNR=73								
SSLS	Shishaldin Sou	8.88	265			Pn	07 55 35.0	-0.6	
WRAK	Wrangell Islan	9.02	84	P		Pn	07 55 34.8	-2.6	
	baz=278,SNR=23								
J16K	Anvik River	9.09	324	P		Pn	07 55 36.9	-1.5	
	baz=133,SNR=30								
Q32M	Nakina River	9.10	67	P		Pn	07 55 37.3	-1.4	
	baz=262								
P33M	Teslin, Yukon	9.11	59	P		Pn	07 55 38.2	-0.5	
	baz=253,SNR=271								
PRP	Porcupine Dome	9.19	8			Pn	07 55 38.8	-1.1	
PRP	Porcupine Dome	9.19	8	P		Pn	07 55 38.4	-1.5	
	baz=191,SNR=30								
K29M	Barlow Dome	9.22	32	P		Pn	07 55 40.3	0.0	
	baz=222,SNR=186								
GCSA	Galena City Sc	9.22	337			Pn	07 55 39.8	-0.4	
GCSA	Galena City Sc	9.22	337	P		Pn	07 55 38.9	-1.2	
	baz=150,SNR=18								
I26K	Coal Creek Min	9.25	14	P		Pn	07 55 40.1	-0.5	
	baz=200,SNR=96								
M31M	Drury Creek, Y	9.25	46			Pn	07 55 40.6	0.0	
M31M	Drury Creek, Y	9.25	46	P		Pn	07 55 40.9	+0.3	
	baz=238,SNR=268								
H23K	Yukon River	9.39	358	P		Pn	07 55 41.9	-0.7	
	baz=177								
H24K	Noodor Dome	9.40	2	P		Pn	07 55 41.9	-0.7	
	baz=183								
H21K	Melozitna Rive	9.43	349			Pn	07 55 42.2	-0.9	
H21K	Melozitna Rive	9.43	349	P		Pn	07 55 41.9	-1.1	
	baz=166,SNR=83								
J29N	Klondike Camp	9.49	28	Pn		Pn	07 55 43.9	-0.1	
J29N	Klondike Camp	9.49	28	P		Pn	07 55 43.9	-0.1	
	baz=218,SNR=104								
H20K	Anotleneega Mo	9.54	344			Pn	07 55 44.1	-0.4	
H20K	Anotleneega Mo	9.54	344	P		Pn	07 55 43.5	-1.0	
	baz=159,SNR=34								
H22K	Ishtalitna Cre	9.54	353	P		Pn	07 55 43.6	-0.9	
	baz=171,SNR=60								
I17K	Unalakleet	9.54	326			Pn	07 55 43.9	-0.6	
I17K	Unalakleet	9.54	326	P		Pn	07 55 43.7	-0.8	
	baz=136								
MAYO	Mayo, Yukon	9.55	36	Pn		Pn	07 55 44.6	-0.1	
MAYO	Mayo, Yukon	9.55	36	P		Pn	07 55 44.3	-0.5	
	baz=228,SNR=51								
S34M	Telegraph Cree	9.60	74	Pn		Pn	07 55 44.1	-1.4	
S34M	Telegraph Cree	9.60	74	P		Pn	07 55 44.8	-0.6	
	baz=269,SNR=11								
V35K	Ketchikan	9.62	90	P		Pn	07 55 43.0	-2.8	
	baz=284,SNR=24								
I27K	Kandik River	9.76	17	P		Pn	07 55 47.3	-0.3	
	baz=204,SNR=162								
J14K	Nanvaranak Lak	9.82	316	P		Pn	07 55 47.9	-0.3	
	baz=123								
R33M	Jennings River	9.83	65			Pn	07 55 48.2	-0.4	
R33M	Jennings River	9.83	65	P		Pn	07 55 48.2	-0.4	
	baz=261,SNR=101								
H19K	Roundabout Mou	9.83	341	P		Pn	07 55 48.5	0.0	
	baz=154								
IMAR	Indian Mountai	9.85	348	Pn		Pn	07 55 47.7	-1.1	
K13K	Kusilvak Mount	9.86	310	P		Pn	07 55 48.4	-0.5	
	baz=116,SNR=24								
H02S2	DAWSON INLET T	9.88	103	Pn		Pn	07 55 42.9	-6.2	
H02S2				Sn		Sn	07 57 30.1	-10	
H02S2				T		T	08 06 29.2		
H18K	Honhosa River	9.90	335	P		Pn	07 55 48.3	-1.2	
	baz=147,SNR=28								
I28M	Miner Creek	9.93	21	P		Pn	07 55 49.6	-0.4	
	baz=209,SNR=64								
M11K	Mekoryuk	10.00	300	P		Pn	07 55 50.2	-0.6	
	baz=105								
AKUT	Akutan	10.05	264			Pn	07 55 49.8	-1.7	
H17K	Granite Mounta	10.11	332	P		Pn	07 55 51.0	-1.3	
	baz=142,SNR=7.5								
T35M	Bob Quinn	10.11	79	P		Pn	07 55 51.7	-0.7	
	baz=275,SNR=18								
J30M	Hart River	10.11	32	P		Pn	07 55 52.4	-0.1	
	baz=223,SNR=73								
MOBC	Moresby Island	10.18	102			Pn	07 55 52.7	-0.6	
LVA	Lava Point	10.19	264	Pn		Pn	07 55 51.9	-1.6	
DLBC	Dease Lake	10.21	71	Pn		Pn	07 55 53.4	-0.4	
	comp=N,7.4nm,0.3s,baz=238,slow=8.2,SNR=440								
DLBC				Sn		Sn	07 57 37.9	-10	
	comp=N,2.2nm,0.3s,baz=42,slow=26,SNR=3.3								
DLBC				LR		LR	07 59 01.6		
	comp=N,1µm,18.3s,baz=248,slow=33								
	comp=N,25nm,0.4s								
DLBC	Dease Lake	10.21	71	P		Pn	07 55 53.1	-0.7	
	baz=267,SNR=94								
I29M	Ogilvie Camp,	10.21	25	P		Pn	07 55 53.1	-0.7	
	baz=214,SNR=60								
G24K	Hadweenzic Riv	10.27	3	P		Pn	07 55 53.7	-0.9	
	baz=184,SNR=60								
G23K	Bananza Creek	10.29	357	P		Pn	07 55 54.1	-0.7	
	baz=176,SNR=186								
G21K	Allakaket	10.33	349	P		Pn	07 55 54.0	-1.4	
	baz=165,SNR=57								
H27K	Steamboat Moun	10.35	16	P		Pn	07 55 54.9	-0.8	
	baz=203,SNR=74								
U35K	Hyder	10.38	85	P		Pn	07 55 53.7	-2.4	
	baz=281								
G25K	Bearman Lake	10.39	6	P		Pn	07 55 55.3	-0.9	
	baz=188,SNR=38								
G19K	Purell Mounta	10.50	341	P		Pn	07 55 56.8	-0.9	
	baz=154								
H16K	Elim	10.55	326	P		Pn	07 55 57.1	-1.2	
	baz=134,SNR=9.7								
UNV	Unalaska Valle	10.56	263	P		Pn	07 55 56.2	-2.3	
UNV	Unalaska Valle	10.56	263			Pn	07 55 56.8	-1.7	
UNV	Unalaska Valle	10.56	263	P		Pn	07 55 56.2	-2.3	
	baz=68								
I30M	Mount Dempster	10.59	29	P		Pn	07 55 58.5	-0.5	
	baz=220,SNR=46								
G18K	Tagagawik	10.60	337	P		Pn	07 55 58.4	-0.6	
	baz=148,SNR=16								
RUBB	Prince Rupert	10.67	94	Pn		Pn	07 55 59.7	-0.2	
G17K	Kiwalik Mounta	10.75	332	P		Pn	07 55 59.9	-1.1	
	baz=142								
G26K	Porcupine Rive	10.75	10	P		Pn	07 56 00.3	-0.8	
	baz=195,SNR=37								
COLD	Coldfoot	10.81	357	P		Pn	07 56 01.1	-0.8	
	baz=176,SNR=95								
G27K	Doyon Strip	10.87	15	P		Pn	07 56 02.1	-0.7	
	baz=201,SNR=76								
H29M	Whitestone	10.92	22	P		Pn	07 56 02.7	-0.8	
	baz=212								
HG4B	Hotspring	10.99	105			Pn	07 56 04.8	+0.5	
F21K	Alatna River	11.02	350	P		Pn	07 56 03.7	-1.1	
	baz=166,SNR=83								
WTLY	Watson Lake, Y	11.04	63			Pn	07 56 04.3	-0.8	
WTLY	Watson Lake, Y	11.04	63	P		Pn	07 56 04.4	-0.8	
	baz=260,SNR=31								
F24K	Squaw Lake	11.09	1	P		Pn	07 56 05.2	-0.5	
	baz=182,SNR=75								
F20K	Avaraart Lake	11.12	345	P		Pn	07 56 04.7	-1.4	
	baz=159,SNR=58								
G16K	Koyuk River	11.13	329	P		Pn	07 56 05.3	-0.9	
	baz=137								
F22K	John River	11.19	353	P		Pn	07 56 07.0	-0.2	
	baz=170								
F25K	Christian Rive	11.24	6	P		Pn	07 56 07.0	-0.9	
	baz=189,SNR=40								
F19K	Shaleruckik Mo	11.24	341	P		Pn	07 56 07.1	-0.7	
	baz=153,SNR=22								
G15K	Niukluk	11.36	325	P		Pn	07 56 08.5	-0.9	
	baz=132,SNR=15								
F18K	Selawik	11.41	337	P		Pn	07 56 09.7	-0.4	
	baz=148,SNR=28								
EPYK	Eagle Plains	11.42	25	P		Pn	07 56 09.6	-0.7	
	baz=216,SNR=72								
F26K	Sheenjek River	11.45	9	P		Pn	07 56 09.8	-0.8	
	baz=193,SNR=81								
ANM	Nome	11.53	321	P		Pn	07 56 10.9	-0.9	
	baz=127,SNR=22								
H31M	Peel River	11.59	30	P		Pn	07 56 11.8	-0.8	
	baz=223,SNR=117								
G29M	Pine Creek	11.59	21	P		Pn	07 56 11.8	-0.8	
	baz=211								
E23K	Chandalar	11.63	358	P		Pn	07 56 13.0	-0.3	
	baz=177,SNR=32								
E24K	Your Creek	11.64	0			Pn	07 56 12.7	-0.6	
E24K	Your Creek	11.64	0	P		Pn	07 56 12.6	-0.7	
	baz=180,SNR=42								
F17K	Baldwin Pennin	11.64	334	P		Pn	07 56 12.1	-1.2	
	baz=143,SNR=11								
E19K	Redstone River	11.72	344	P		Pn	07 56 13.4	-1.0	
	baz=156,SNR=47								
E25K	Arctic Village	11.77	6			Pn	07 56 13.4	-1.7	
E25K	Arctic Village	11.77	6	P		Pn	07 56 14.1	-1.0	
	baz=188,SNR=34								
E22K	Anaktuvuk Pass	11.79	354	P		Pn	07 56 14.8	-0.6	
	baz=172,SNR=66								
SPIA	Saint Paul Isl	11.86	282			Pn	07 56 14.5	-1.7	
SPIA	Saint Paul Isl	11.86	282	P		Pn	07 56 15.7	-0.5	
	baz=84								
F28M	Old Crow	11.89	16	P		Pn	07 56 15.8	-0.8	
	baz=204,SNR=78								
F15K	North Star Dit	12.03	327	P		Pn	07 56 17.7	-0.9	
	baz=133,SNR=7.7								
G30M	tAoh Zrail Nji	12.03	24	P		Pn	07 56 17.6	-1.1	
	baz=215,SNR=66								
E27K	Coleen River	12.18	13	P		Pn	07 56 20.4	-0.3	
	baz=199,SNR=77								
TOLK	Toolik Lake Re	12.22	358	P		Pn	07 56 20.0	-1.1	
	baz=178,SNR=30								
E21K	Killik River	12.25	351			Pn	07 56 21.9	+0.3	
E21K	Killik River	12.25	351	P		Pn	07 56 21.4	-0.2	
	baz=166								
E18K	Tukpahlearik C	12.31	338	P		Pn	07 56 20.8	-1.6	
	baz=147,SNR=17								
E20K	Nigu River	12.32	347	P		Pn	07 56 21.5	-1.0	
	baz=160,SNR=53								
F14K	Arctic Creek	12.41	324	P		Pn	07 56 22.9	-0.8	
	baz=128								
G31M	Satah River	12.45	27	P		Pn	07 56 23.1	-1.2	
	baz=220,SNR=120								
D23K	Nanushuk River	12.57	357	P		Pn	07 56 25.5	-0.4	
	baz=175,SNR=89								
F30M	Barrier River	12.65	23			Pn	07 56 26.7	-0.3	
F30M	Barrier River	12.65	23	P		Pn	07 56 26.3	-0.7	
	baz=214,SNR=106								
BBB	Bella Bella	12.70	101	Pn		Pn	07 56 25.6	-2.3	
	comp=N,0.5nm,0.3s,baz=283,slow=11,SNR=24								
BBB				Sn		Sn	07 58 38.1	-11	
	comp=N,1.2nm,0.3s,baz=98,slow=16,SNR=9.6								
BBB				LR		LR	08 00 17.0		
	comp=N,2µm,21.0s,baz=309,slow=32								
	comp=N,38nm,0.8s								
BBB	Bella Bella	12.70	101			Pn	07 56 27.9	+0.1	
D24K	Happy Valley	12.72	360	P		Pn	07 56 27.0	-1.0	
	baz=180								
D20K	Etivluk River	12.80	347	P		Pn	07 56 28.5	-0.6	
	baz=160								
D19K	Kuna River	12.81	344	P		Pn	07 56 28.4	-0.8	
	baz=156,SNR=14								
E28M	Babbage River	12.85	15	P		Pn	07 56 29.4	-0.4	
	baz=203,SNR=132								
E29M	Blow River	12.91	18	P		Pn	07 56 29.6	-1.0	
	baz=208,SNR=71								
D25K	Kavik River	12.93	4			Pn	07 56 31.5	+0.6	
D25K	Kavik River	12.93	4	P		Pn	07 56 29.8	-1.1	
	baz=186,SNR=94								
F31M	Tsiigehtchic	12.98	26	P		Pn	07 56 31.0	-0.6	
	baz=220,SNR=82								
TNA	Tin City	12.99	322			Pn	07 56 31.6	-0.1	
TNA	Tin City	12.99	322	P		Pn	07 56 31.0	-0.6	
	baz=125								
C21K	Knifebide Rid	13.02	350	P		Pn	07 56 31.0	-1.1	
	baz=165,SNR=47								
D17K	Noatak River	13.08	335	P		Pn	07 56 32.0	-0.9	
	baz=142,SNR=5.1								
D27M	Malcolm River	13.26	12	P		Pn	07 56 35.0	-0.5	
	baz=199,SNR=112								
C24K	Franklin Bluff	13.29	360	P		Pn	07 56 35.2	-0.6	
	baz=180,SNR=44								
RDOG	Red Dog Mine	13.33	336			Pn	07 56 36.9	+0.6	
RDOG	Red Dog Mine	13.33	336	P		Pn	07 56 35.4	-0.9	
	baz=144,SNR=11								
C27K	Jago River	13.38	7	P		Pn	07 56 36.7	-0.2	
	baz=192,SNR=102								
KOTAN	Kotaneelee Air	13.39	64	P		Pn	07 56 36.1	-1.1	
	baz=265,SNR=93								
C23K	Itkillik River	13.44	357	P		Pn	07 56 36.6	-1.1	
	baz=175,SNR=111								
B21K	Ikpikpuk River	13.46	351	P		Pn	07 56 37.2	-0.8	
	baz=166,SNR=20								
C18K	Utukok River	13.47	340	P		Pn	07 56 37.1	-1.2	
	baz=149								
HOLB	Holberg	13.48	107	Pn		Pn	07 56 39.7	+1.2	
GAMB	Gambell	13.56	312	P		Pn	07 56 38.8	-0.6	
	baz=112								
C19K	Lookout Ridge	13.59	343	P		Pn	07 56 38.5	-1.4	
	baz=153								
C26K	Camden Bay	13.59	5	P		Pn	07 56 39.4	-0.4	
	baz=189,SNR=88								
D28M	Stokes Point	13.63	15	P		Pn	07 56 40.9	+0.5	
	baz=204,SNR=124								
INK	Inuvik	13.72	24	Pn		Pn	07 56 40.5	-1.0	
	comp=N,1.7nm,0.3s,baz=213,slow=14,SNR=189								
INK				LR		LR	08 02 51.2		
	comp=N,702nm,18.4s,baz=228,slow=42								
	comp=N,140nm,0.9s								
INK	Inuvik	13.72	24			Pn	07 56 42.5	+1.0	
INK	Inuvik	13.72	24	P		Pn	07 56 42.5	+1.0	
INK	Inuvik	13.72	24	P		Pn	07 56 41.1	-0.5	
	baz=218,SNR=218								
C17K	DeLong Mountai	13.73	337	P		Pn	07 56 40.6	-1.1	
	baz=144								
B22K	Teshekpuk Lake	14.07	353	P		Pn	07 56 45.7	-0.6	
	baz=169,SNR=14								
C16K	Lisburne Hills	14.07	334	P		Pn	07 56 45.8	-0.6	
	baz=139								
B20K	Meade River	14.09	348	P		Pn	07 56 45.5	-1.1	
	baz=160,SNR=21								
WRGLY	Wrigley	14.27	51	Pn		Pn	07 56 49.8	+0.7	
WRGLY	Wrigley	14.27	51	P		Pn	07 56 49.6	+0.5	
	baz=254,SNR=130								
A19K	Wainwright	14.81	343	P		Pn	07 56 55.6	-0.9	
	baz=152								
A22K	Sinclair Lake	14.84	352	P		Pn	07 56 55.7	-1.1	
	baz=166								
A21K	Barrow	15.29	350	P		Pn	07 57 00.6	-2.2	
	baz=163,SNR=5.6								
CBB	Campbell River	15.30	105	Pn		Pn	07 57 02.7	-0.4	
CBB				IAmb		IAmb	07 57 05.1		
	comp=Z,144nm,1.5s								
CLRS	Cowichan Lake	16.66	107	Pn		Pn	07 57 21.2	+0.6	
LLLB	Lillooet	16.88	99	P		Pn	07 57 23.6	+0.1	
C36M	Paulatuk	16.89	31	Pn		Pn	07 57 21.4	-1.9	
C36M	Paulatuk	16.89	31	P		Pn	07 57 21.2	-2.2	
	baz=233,SNR=63								
KIWB	Kanaga Island	17.26	266	P		Pn	07 57 28.2	+0.1	
A04D	Lummi Island	17.48	105	Pn		Pn	07 57 30.4	-0.4	
A04D				IAmb		IAmb	07 57 37.7		
	comp=Z,200nm,1.6s								
NLWA	Neilton Lookou	17.68	110	P		Pn	07 57 33.1	-0.4	
NLWA				IAmb		IAmb	07 57 36.2		
	comp=Z,171nm,1.4s								
WISH	Wishkah	17.91	111	P		Pn	07 57 36.5	+0.3	
WISH				IAmb		IAmb	07 57 39.2		
	comp=Z,146nm,1.1s								
YKA	Yellowknife Ar	18.13	57	P		Pn	07 57 38.9	0.0	
	comp=Z,0.9nm,0.3s,baz=267,slow=13,SNR=108								
YKA				LR		LR	08 03 52.5		
	comp=Z,384nm,18.7s,baz=279,slow=35								
	comp=Z,41nm,1.0s								
YKAW3	Yellowknife Wh	18.13	56	P		Pn	07 57 38.6	-0.3	
YKAW1	Yellowknife Wh	18.18	57	P		Pn	07 57 38.7	-0.8	
A36M	Sachs Harbour	18.36	23	P		Pn	07 57 40.9	-0.6	
	baz=224,SNR=264								
D05A	Enumclaw	18.80	108	P		P	07 57 47.1	+0.5	
F03A	Seaside	18.81	114	P		P	07 57 46.8	0.0	
F04D	Rainier, OR	18.99	112	P		P	07 57 49.1	+0.4	
F04D				IAmb		IAmb	07 58 00.9		
	comp=Z,231nm,1.4s								
LON	Longmire	19.17	109	P		P	07 57 50.2	-0.6	
LON				IAmb		IAmb	07 57 55.0		
	comp=Z,209nm,2.0s								
LON	Longmire	19.17	109	P		P	07 57 50.2	-0.6	
LON				pmax		pmax			
	comp=Z,209nm,2.0s								
LTY	Liberty	19.45	106	P		P	07 57 54.0	+0.2	
LTY				IAmb		IAmb	07 57 58.0		
	comp=Z,216nm,1.3s								
G03D	McMinnville, O	19.46	115	P		P	07 57 54.3	+0.4	
G03D				IAmb		IAmb	07 57 59.0		
	comp=Z,99nm,1.1s								
COR	Corvallis	19.88	116	P		P	07 57 57.5	-1.0	
COR	Corvallis	19.88	116	P		P	07 57 57.5	-1.0	
COR				pmax		pmax			
	comp=Z,429nm,1.8s								
MXC	Moxie City	20.08	108	P		P	07 58 00.6	-0.1	

BILL Bilibino 23.34 318 *ce*P **P** **07 58 35.7 +0.4**
BILL pmax pmax
comp=Z,184nm,1.7s
MSO Missoula 23.35 100 P **P** **07 58 35.0 -0.6**
MSO IAmb IAmb 07 58 37.7
comp=Z,151nm,1.9s
KCPM Cahto Peak 23.50 125 P **P** **07 58 37.2 -0.1**
KCPM IAmb IAmb 07 58 41.0
comp=Z,76nm,1.1s
HOPS Hopland Field 24.30 125 P **P** **07 58 44.9 +0.3**
HOPS IAmb IAmb 07 59 10.2
comp=Z,115nm,1.8s
ORV Oroville 24.57 122 P **P** **07 58 46.4 -0.8**
ORV Oroville 24.57 122 P **P** **07 58 46.4 -0.8**
ORV pmax pmax
comp=Z,17nm,0.8s
DLMT Dillon 24.99 101 P **P** **07 58 50.9 -0.3**
AFDM Forest Hills D 25.30 122 P **P** **07 58 52.9 -0.9**
AFDM IAmb IAmb 07 58 57.3
comp=Z,74nm,1.2s
PAHR Pah Rah Range 25.46 119 P **P** **07 58 55.3 -0.1**
PAHR IAmb IAmb 07 58 57.6
comp=Z,49nm,1.0s
MPK Martis Peak 25.47 120 P **P** **07 58 55.3 -0.4**
YHL Hebgen Lake 26.09 100 P **P** **07 59 01.0 -0.3**
CMB Columbia Colle 26.31 123 P **P** **07 59 02.3 -0.7**
CMB IAmb IAmb 07 59 08.4
comp=Z,67nm,1.8s
CMB Columbia Colle 26.31 123 P **P** **07 59 02.3 -0.7**
CMB pmax pmax
comp=Z,67nm,1.8s
BLKN Baker Lake 26.42 51 P **P** **07 59 03.6 0.0**
BLKN IAmb IAmb 07 59 05.6
comp=Z,39nm,0.8s
ELK Elko 26.76 112 LR LR 08 08 13.7
comp=Z,319nm,20.2s,baz=300,slow=33
ELK Elko 26.76 112 P **P** **07 59 08.3 +1.0**
NVAR Mina Array Bea 26.99 119 P **P** **07 59 10.5 +1.2**
comp=Z,22nm,0.9s,baz=305,slow=9.1,SNR=118
NVAR PcP **PcP** **08 02 30.8 +0.2**
comp=Z,2.4nm,0.8s,baz=253,slow=3.0,SNR=6.3
NVAR LR LR 08 07 55.5
comp=Z,717nm,20.0s,baz=320,slow=32
comp=Z,22nm,0.9s
LHV Little Huntoon 27.03 120 P **P** **07 59 10.0 +0.7**
LHV IAmb IAmb 07 59 12.2
comp=Z,57nm,1.2s
RES Resolute Bay 27.22 28 LR LR 08 10 26.0
comp=Z,548nm,18.4s,baz=239,slow=38
RES Resolute Bay 27.22 28 P **P** **07 59 11.0 +0.3**
RES pmax pmax
comp=Z,29nm,1.2s
PKD Bear Valley Ra 27.94 125 P **P** **07 59 17.8 +0.2**
PKD IAmb IAmb 07 59 20.1
comp=Z,37nm,1.1s
PDAR Pinedale Array 28.35 102 P **P** **07 59 21.5 0.0**
comp=Z,4.3nm,0.6s,baz=314,slow=5.0,SNR=47
PDAR LR LR 08 10 34.1
comp=Z,194nm,19.3s,baz=306,slow=36
comp=Z,4.3nm,0.6s
PDAR Pinedale Array 28.35 102 P **P** **07 59 21.0 -0.5**
WCT Wildcat Mounta 29.09 119 P **P** **07 59 27.8 -0.2**
WCT IAmb IAmb 07 59 30.5
comp=Z,45nm,1.1s
TPNV Topopah Spring 29.15 118 P **P** **07 59 28.9 +0.3**
TPNV IAmb IAmb 07 59 31.0
comp=Z,38nm,1.1s
TPNV Topopah Spring 29.15 118 P **P** **07 59 28.9 +0.3**
TPNV pmax pmax
comp=Z,38nm,1.1s
SEY Seymchan 29.48 307 LR LR 08 12 31.3
comp=Z,1μm,18.6s,baz=102,slow=39
SEY Seymchan 29.48 307 *ce*P **P** **07 59 31.7 +0.7**
SEY pmax pmax
comp=Z,47nm,2.5s
PET Petropavlovsk 30.00 286 *e*P **P** **07 59 36.2 +0.5**
PET *e*S **S** **08 04 30.9 -2.3**
PET pmax pmax
comp=Z,59nm,1.3s
PET MLR MLR
comp=Z,400nm,19.0s
PEA0B Petropavlovsk- 30.47 287 *i* P **P** **07 59 39.8 -0.1**
PETK Petropavlovsk- 30.47 287 P **P** **07 59 41.0 +1.1**
comp=Z,9.4nm,0.9s,baz=67,slow=11,SNR=7.5
PETK LR LR 08 11 29.7
comp=Z,265nm,20.9s,baz=83,slow=36
comp=Z,9.4nm,0.9s
PETK Petropavlovsk- 30.47 287 P **P** **07 59 39.9 +0.1**
PETK Petropavlovsk- 30.47 287 P **P** **07 59 41.0 +1.1**
PASC Pasadena Art C 30.49 124 P **P** **07 59 40.4 +0.2**
ULM Lac du Bonnet 31.41 79 P **P** **07 59 47.4 -0.8**
comp=Z,10nm,1.1s,baz=285,slow=6.7,SNR=8.4
ULM LR LR 08 12 07.3
comp=Z,687nm,19.8s,baz=302,slow=36
comp=Z,10nm,1.1s
ULM Lac du Bonnet 31.41 79 P **P** **07 59 48.3 +0.1**
ULM IAmb IAmb 07 59 49.9
comp=Z,30nm,1.3s
ULM Lac du Bonnet 31.41 79 P **P** **07 59 48.3 +0.1**
ULM pmax pmax
comp=Z,30nm,1.3s
PFO Pinyon Flats O 31.75 122 LR LR 08 10 15.1
comp=Z,839nm,20.2s,baz=336,slow=32
PFO Pinyon Flats O 31.75 122 *i* P **P** **07 59 53.2 +1.7**
W13A Hualapai Mount 31.78 117 P **P** **07 59 51.6 -0.3**
W13A IAmb IAmb 07 59 54.4
comp=Z,24nm,0.9s
AGMN Agassiz Nation 32.49 82 P **P** **07 59 58.0 +0.3**
EPLO Experimental L 32.89 78 P **P** **08 00 01.4 +0.2**
EPLO IAmb IAmb 08 00 03.2
comp=Z,34nm,1.3s
Y14A Wickenburg 33.15 118 P **P** **08 00 04.1 +0.4**
TULEG Thule 33.71 25 *i* P **P** **08 00 08.9 +0.8**
TULEG IAmb IAmb 08 00 09.7
comp=Z,96nm,1.9s
SDCO Great Sand Dun 34.09 105 P **P** **08 00 12.2 +0.1**
ECSD EROS Data Cent 34.85 89 P **P** **08 00 17.6 -0.7**
TUC Tucson 35.55 117 P **P** **08 00 26.2 +1.7**
TUC pmax pmax
comp=Z,19nm,1.8s
ANMO Albuquerque 35.69 109 LR LR 08 15 00.1
comp=Z,285nm,18.0s,baz=320,slow=36
ANMO Albuquerque 35.69 109 *ce*P **P** **08 00 26.8 +1.0**
ANMO pmax pmax
comp=Z,15nm,1.3s
TIXI Tiksi 35.70 327 P **P** **08 00 25.1 -0.2**
TIXI Tiksi 35.70 327 *ce*P **P** **08 00 26.3 +1.0**
TIXI pmax pmax
comp=Z,12nm,1.3s
Y22A Socorro 36.20 111 P **P** **08 00 29.6 -0.6**
Y22A IAmb IAmb 08 00 32.9
comp=Z,32nm,1.2s
DUN6 Lazy B Ranch 36.21 114 P **P** **08 00 29.9 -0.3**
CRNM Carthage 36.31 110 P **P** **08 00 31.2 +0.1**
CBKS Cedar Bluff 36.45 98 P **P** **08 00 31.5 -0.7**
CBKS Cedar Bluff 36.45 98 P **P** **08 00 31.5 -0.7**
CBKS pmax pmax
comp=Z,46nm,0.9s
121A Cookes Peak, D 36.89 113 P **P** **08 00 35.0 -1.1**
319A Douglas 37.06 116 P **P** **08 00 37.5 +0.1**
319A IAmb IAmb 08 00 40.2
comp=Z,50nm,1.5s
KULLO Kullorsuaq 37.06 26 *i* P **P** **08 00 37.9 +1.1**
KULLO IAmb IAmb 08 00 38.7
comp=Z,43nm,1.1s
NEEM North Greenlan 37.27 21 *i* P **P** **08 00 39.8 +0.9**
NEEM IAmb IAmb 08 00 40.5
comp=Z,36nm,1.0s
FRB Frobisher Bay 38.03 45 LR LR 08 15 15.6
comp=Z,521nm,21.6s,baz=292,slow=35
UPNV Upernavik 38.09 29 *i* P **P** **08 00 46.6 +1.0**
UPNV IAmb IAmb 08 00 47.2
comp=Z,46nm,1.1s
MSTX Muleshoe 38.38 106 P **P** **08 00 48.7 +0.1**
MSTX IAmb IAmb 08 00 50.4
comp=Z,28nm,0.8s
GDL2 Guadalupe Moun 38.92 110 P **P** **08 00 53.5 +0.4**
NUUG Nuugaatsiaq 39.48 30 *i* P **P** **08 00 56.9 -0.3**
NUUG IAmb IAmb 08 00 59.3
comp=Z,14nm,0.9s
YAK Yakutsk 39.51 313 P **P** **08 00 57.7 +0.1**
comp=Z,18nm,0.4s,baz=64,slow=11,SNR=6.7
YAK LR LR 08 18 19.0
comp=Z,377nm,18.5s,baz=52,slow=38
comp=Z,18nm,0.4s

YAK Yakutsk 39.51 313 *e*P **P** **08 00 54.7 -2.9**
YAK *e**PP **sP** **08 00 59.9 -0.2**
YAK *e*PPP PPP 08 02 41.9
YAK *e* 08 03 02.5
YAK *e*S **S** **08 06 57.5 -1.9**
YAK *e*SS **SS** **08 09 45.8 -7.6**
YAK *e* 08 10 58.5
YAK pmax pmax
comp=Z,22nm,0.9s
YAK pmax pmax
comp=E,16nm,2.3s
YAK pmax pmax
comp=N,15nm,2.5s
YAK smax smax
comp=E,173nm,5.2s
YAK smax smax
comp=N,118nm,5.3s
YAK MLR MLR
comp=Z,559nm,27.0s
YAK MLR MLR
comp=N,759nm,20.0s
YAK MLR MLR
comp=E,448nm,23.0s
TYV Tymovskoe 39.54 292 *e*P P 08 01 03.0 +5.1
TYV pmax pmax
comp=Z,18nm,1.2s
TYV pmax pmax
comp=Z,100nm,3.1s
DKNS Dickens 39.60 105 P **P** **08 00 58.8 0.0**
NIAQ Niaqornat 39.72 31 *i* P **P** **08 01 01.1 +1.9**
NIAQ IAmb IAmb 08 01 02.1
comp=Z,29nm,1.1s
NOR Nord 39.79 10 *i* P **P** **08 01 00.4 +0.7**
NOR IAmb IAmb 08 01 01.6
comp=Z,14nm,1.1s
PECS Pecos 39.83 110 P **P** **08 01 01.0 +0.3**
PECS IAmb IAmb 08 01 02.9
comp=Z,73nm,1.7s
SAATT Saattut 40.29 31 *i* P **P** **08 01 04.6 +0.7**
SAATT IAmb IAmb 08 01 05.6
comp=Z,14nm,0.9s
APMT Aspermont 40.30 104 P **P** **08 01 03.9 -0.6**
GDH Godhavn 40.55 33 *i* P **P** **08 01 07.5 +1.4**
GDH IAmb IAmb 08 01 08.2
comp=Z,150nm,1.5s
SAQQ Saqqaq 40.62 32 *i* P **P** **08 01 08.2 +1.5**
SAQQ IAmb IAmb 08 01 13.9
comp=Z,71nm,1.4s
HHAR Hobbs 41.47 95 P **P** **08 01 13.0 -1.2**
TXAR Lajitas Array 41.56 112 P **P** **08 01 16.2 +1.2**
comp=Z,8.2nm,0.9s,baz=325,slow=6.3,SNR=61
TXAR PcP **PcP** **08 03 12.2 +0.1**
comp=Z,1.4nm,0.8s,baz=145,slow=1.6,SNR=6.5
TXAR LR LR 08 17 53.6
comp=Z,403nm,18.2s,baz=318,slow=35
comp=Z,8.2nm,0.9s
TXAR Lajitas Array 41.56 112 P **P** **08 01 15.4 +0.4**
OZNA Ozona 41.62 107 P **P** **08 01 15.6 +0.1**
OZNA IAmb IAmb 08 01 17.0
comp=Z,30nm,0.7s
SAND Sanderson 41.86 109 P **P** **08 01 17.6 +0.1**
SUMG Summit 42.64 25 *i* P **P** **08 01 24.3 +0.6**
SUMG IAmb IAmb 08 01 25.5
comp=Z,86nm,1.1s
LPIG La Paz 42.64 123 LR LR 08 15 53.9
comp=Z,277nm,21.3s,baz=315,slow=32
SFJD Kangerlussuaq 42.72 35 LR LR 08 18 50.2
comp=Z,534nm,18.7s,baz=308,slow=36
SFJD Kangerlussuaq 42.72 35 *i* P **P** **08 01 24.6 +0.7**
SFJD IAmb IAmb 08 01 25.8
comp=Z,63nm,1.2s
DRIO Del Rio 43.08 108 P **P** **08 01 27.0 -0.3**
DRIO IAmb IAmb 08 01 28.3
comp=Z,39nm,0.7s
DAG Danmarks Havn 43.32 15 P **P** **08 01 28.8 +0.1**
DAG pmax pmax
comp=Z,54nm,1.0s
DAG Danmarks Havn 43.32 15 *i* P **P** **08 01 28.8 +0.1**
DAG IAmb IAmb 08 01 29.8
comp=Z,45nm,1.0s
SCHQ Schefferville 43.58 56 P **P** **08 01 31.2 +0.2**
comp=Z,11nm,1.0s,baz=297,slow=11,SNR=8.3
SCHQ LR LR 08 19 10.9
comp=Z,199nm,20.3s,baz=306,slow=36
comp=Z,11nm,1.0s
ASAJ Asahikawa 43.80 284 LR LR 08 21 11.3
comp=Z,188nm,18.6s,baz=328,slow=38
DBG Daneborg 45.03 18 *i* P **P** **08 01 42.3 -0.1**
DBG IAmb IAmb 08 01 43.6
comp=Z,21nm,0.9s
HKT Hockley 45.22 103 *i* P **P** **08 01 45.1 +0.8**
HKT pmax pmax
comp=Z,25nm,1.3s
SPITS Spitsbergen Ar 45.28 4 P **P** **08 01 43.6 -0.8**
comp=Z,17nm,1.0s,baz=60,slow=4.9,SNR=5.9
SPITS LR LR 08 19 09.2
comp=Z,289nm,21.4s,baz=354,slow=34
comp=Z,17nm,1.0s
SPITS Spitsbergen Ar 45.28 4 P **P** **08 01 45.2 +0.8**
SPITS pmax pmax
comp=Z,45nm,1.2s
ZEA Zeya 45.33 304 *e*P **P** **08 01 48.2 +3.2**
ZEA pmax pmax
comp=Z,20nm,1.4s
ZEA MLR MLR
comp=Z,600nm,14.0s
KLR Kul'dur 46.07 296 LR LR 08 21 11.2
comp=Z,323nm,21.9s,baz=46,slow=36
KLR Kul'dur 46.07 296 *ce*P **P** **08 01 50.8 -0.1**
KLR pmax pmax
comp=Z,19nm,0.9s
Y49A Blount Mountai 47.42 91 P **P** **08 02 01.0 -0.7**
Y49A IAmb IAmb 08 02 02.9
comp=Z,27nm,1.1s
ZAIG Zacatecas 47.51 116 P **P** **08 02 02.9 +0.1**
ZAIG IAmb IAmb 08 02 05.3
comp=Z,39nm,1.6s
HEH HeiHe 47.52 300 *e*P **P** **08 02 01.5 -0.7**
HEH pmax pmax
comp=Z,37nm,1.1s
HEH L L
comp=Z,690nm,15.2s
HEH L L
comp=Z,420nm,20.3s
TKL Tuckaleechee C 47.56 87 LR LR 08 21 38.9
comp=Z,685nm,18.9s,baz=325,slow=36
ANGG Ammassalik, Gr 47.59 32 *i* P **P** **08 02 02.3 -0.3**
X51A Calhoun 47.76 89 P **P** **08 02 04.2 -0.1**
SCO Scoresbysund 47.76 21 *i* P **P** **08 02 04.5 +0.6**
SCO IAmb IAmb 08 02 05.5
comp=Z,13nm,1.0s
NRIK Noril'sk 48.07 337 P **P** **08 02 07.0 +0.8**
comp=Z,12nm,0.6s,baz=53,slow=6.6,SNR=19
NRIK LR LR 08 24 16.1
comp=Z,397nm,21.2s,baz=46,slow=38
comp=Z,12nm,0.6s
NRIK Noril'sk 48.07 337 P **P** **08 02 05.9 -0.4**
NRIK Noril'sk 48.07 337 *d* iP **P** **08 02 07.1 +0.8**
NRIK pmax pmax
comp=Z,27nm,1.0s
BOD Bodaibo 48.34 315 *e*P **P** **08 02 08.7 +0.2**
BOD pmax pmax
comp=Z,64nm,1.6s
BG3 Lake Jocassee 48.51 87 P **P** **08 02 10.6 +0.5**
BG3 IAmb IAmb 08 02 11.9
comp=Z,27nm,1.1s
250A Grady 48.91 93 P **P** **08 02 13.1 -0.1**
BRAL Brewton 49.09 94 P **P** **08 02 15.4 +0.8**
H11N2 WAKE ISLAND Hy 49.30 241 T T 08 55 26.8
baz=30,slow=76,SNR=13
H11N3 WAKE ISLAND Hy 49.30 241 T T 08 55 25.4
baz=30,slow=76,SNR=13
H11N1 WAKE ISLAND Hy 49.31 241 T T 08 55 32.1
baz=30,slow=76,SNR=14
USRK Ussuriysk Ar. 49.34 291 P **P** **08 02 19.5 +3.1**
comp=Z,2.9nm,0.8s,baz=75,slow=14,SNR=2.5
comp=Z,2.9nm,0.8s
JMIC Jan Mayen 49.73 16 LR LR 08 24 57.2
comp=Z,126nm,21.0s,baz=300,slow=38
352A Blakely 50.03 92 P **P** **08 02 21.2 -0.6**
H11S1 WAKE ISLAND Hy 50.44 240 T T 08 56 57.0
baz=30,slow=76,SNR=23
H11S2 WAKE ISLAND Hy 50.45 240 T T 08 56 56.6
baz=30,slow=76,SNR=31
H11S3 WAKE ISLAND Hy 50.45 240 T T 08 56 51.5
baz=30,slow=76,SNR=19

BNX BinXian 50.60 296 ⇓P **P** **08 02 24.4 -1.5**
BNX pmax pmax
comp=Z,10.0nm,1.4s
MJAR Matsushiro Arr 51.49 280 P **P** **08 02 35.3 +2.5**
comp=Z,2.0nm,0.8s,baz=41,slow=6.8,SNR=7.1
MJAR LR LR 08 23 18.5
comp=Z,101nm,22.0s,baz=46,slow=35
comp=Z,2.0nm,0.8s
BORG Borgarnes 52.60 25 LR LR 08 25 57.6
comp=Z,445nm,18.2s,baz=299,slow=37
CN2 Changchun 52.96 295 *e*P **P** **08 02 42.8 -0.7**
CN2 *e*S **S** **08 10 12.8 +0.2**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 L L
comp=Z,200nm,11.0s
CN2 L L
comp=Z,300nm,11.0s
CN2 L L
comp=Z,100nm,10.0s
TLIG Tlapa 53.89 115 P **P** **08 02 50.3 -0.5**
TLIG IAmb IAmb 08 02 52.8
comp=Z,22nm,1.1s
ARCES ARCESS Array B 54.22 3 P **P** **08 02 51.9 -0.6**
comp=Z,1.9nm,0.5s,baz=5.0,slow=7.2,SNR=15
comp=Z,1.9nm,0.5s
CMIG Matias Romero 56.16 112 LR LR 08 25 30.9
comp=Z,254nm,21.6s,baz=318,slow=34
APA Apatity 56.26 359 ⇓*e*P **P** **08 03 05.0 -2.1**
APA *e* 08 04 08.0
APA *e* 08 05 09.6
APA pmax pmax
comp=Z,15nm,1.2s
APA MLR MLR
comp=Z,1μm,3.9s
KSRS Korea Array 56.35 288 P **P** **08 03 10.2 +2.0**
comp=Z,5.9nm,0.9s,baz=49,slow=5.6,SNR=8.4
KSRS LR LR 08 28 11.6
comp=Z,70nm,18.5s,baz=55,slow=37
comp=Z,5.9nm,0.9s
KSAR Wonju Array Be 56.38 288 P **P** **08 03 08.1 -0.3**
KSAR Wonju Array Be 56.38 288 P **P** **08 03 08.1 -0.3**
JCJ Chichijima 56.45 269 LR LR 08 23 00.0
comp=Z,43nm,21.6s,baz=322,slow=31
TLY Talaya 56.92 315 P **P** **08 03 12.4 +0.3**
comp=Z,6.6nm,0.9s,baz=20,slow=12
comp=Z,6.6nm,0.9s
TLY Talaya 56.92 315 *i* P **P** **08 03 14.7 +2.6**
TLY pmax pmax
comp=Z,9.0nm,0.9s
XLT XiLinHaoTe 57.46 301 *e*P **P** **08 03 20.3 +4.2**
XLT pmax pmax
comp=Z,10.0nm,2.0s
XLT L L
comp=Z,510nm,11.7s
XLT L L
comp=Z,310nm,16.5s
MOY Mondy 57.95 316 *e*P **P** **08 03 22.9 +3.4**
MOY pmax pmax
comp=Z,37nm,2.1s
ZAK Zakamensk 58.08 314 *e*P **P** **08 03 20.0 -0.4**
ZAK pmax pmax
comp=Z,13nm,2.5s
CCIG Comitan 58.27 110 P **P** **08 03 22.2 0.0**
CCIG IAmb IAmb 08 03 24.5
comp=Z,20nm,1.0s
ULN Ulaanbaatar 58.49 310 *ce*P **P** **08 03 24.6 +1.2**
ULN pmax pmax
comp=Z,13nm,0.8s
SONM Songino Array 58.79 310 P **P** **08 03 27.0 +1.5**
comp=Z,21nm,1.0s,baz=50,slow=6.7,SNR=24
SONM LR LR 08 31 08.5
comp=Z,188nm,19.4s,baz=34,slow=38
comp=Z,21nm,1.0s
SONM Songino Array 58.79 310 P **P** **08 03 26.1 +0.7**
SONM Songino Array 58.79 310 P **P** **08 03 26.1 +0.7**
SONM pmax pmax
comp=Z,32nm,1.0s
HUEH Huehuetenango 59.40 110 P **P** **08 03 29.8 -0.4**
KNGR Kungurtug, Tuv 60.12 318 *i* P **P** **08 03 34.9 +0.3**
KNGR pmax pmax
comp=Z,7.0nm,0.9s
BJI2 Beijing 60.38 298 P **P** **08 03 40.0 +3.7**
BJI2 pmax pmax
comp=Z,7.0nm,0.8s
MTO3 Montecristo 61.29 108 P **P** **08 03 42.5 -0.5**
MTO3 IAmb IAmb 08 03 44.2
comp=Z,27nm,1.4s
ZAA0 Zalesovo Array 61.59 327 P **P** **08 03 44.1 -0.2**
ZAA0 IAmb IAmb 08 03 55.4
comp=Z,26nm,1.2s
ZALV Zalesovo Beam 61.59 327 P **P** **08 03 45.0 +0.6**
comp=Z,16nm,0.9s,baz=28,slow=7.1,SNR=19
ZALV LR LR 08 34 27.9
comp=Z,334nm,18.5s,baz=93,slow=40
comp=Z,16nm,0.9s
ZALV Zalesovo Beam 61.59 327 P **P** **08 03 44.0 -0.4**
ZALV Zalesovo Beam 61.59 327 P **P** **08 03 45.0 +0.6**
NB2 NORSAR Subarra 61.75 11 P **P** **08 03 45.2 -0.2**
comp=Z,6.4nm,0.8s,baz=348,slow=6.9
NOA NORSAR Array B 61.75 11 P **P** **08 03 45.4 0.0**
comp=Z,3.0nm,0.7s,baz=349,slow=6.8,SNR=13
comp=Z,3.0nm,0.7s
HHC Hu-ho-hao-te 61.94 302 *e*P **P** **08 03 46.3 -0.8**
HHC pP sP 08 03 51.8 +2.2
HHC sP pwP 08 03 57.8 +3.2
HHC pmax pmax
comp=Z,13nm,0.5s
HHC pmax pmax
comp=Z,200nm,4.6s
HHC L L
comp=Z,330nm,12.1s
HHC L L
comp=Z,150nm,14.7s
FINES FINESS Array B 62.34 3 P **P** **08 03 49.4 +0.1**
comp=Z,4.8nm,0.6s,baz=358,slow=9.0,SNR=18
comp=Z,4.8nm,0.6s
TGUH Tegucigalpa,Un 62.68 107 P **P** **08 03 52.3 0.0**
BTO2 Baotou 62.81 303 *e*P **P** **08 03 52.1 -0.8**
BTO2 sP **pwP** **08 04 01.3 +0.9**
BTO2 S **S** **08 12 22.0 0.0**
BTO2 pmax pmax
comp=Z,11nm,0.6s
BTO2 pmax pmax
comp=Z,260nm,4.6s
BTO2 L L
comp=Z,790nm,16.2s
BTO2 L L
comp=Z,1μm,13.8s
KLMR Klimovskoe 62.83 356 *e*P **P** **08 03 52.6 +0.1**
KLMR S **S** **08 12 22.1 +0.8**
KLMR pmax pmax
comp=Z,40nm,1.4s
TIA Tai'an 62.86 295 P **P** **08 03 55.9 +2.7**
TIA pmax pmax
comp=Z,17nm,1.5s
HFS Hagfors 62.89 10 P **P** **08 03 52.8 -0.2**
comp=Z,1.6nm,0.6s,baz=3.2,slow=5.1,SNR=4.7
comp=Z,1.6nm,0.6s
HNS HongShan 63.14 298 ⇑P **P** **08 03 56.0 +1.1**
HNS S **S** **08 12 29.3 +3.5**
HNS pmax pmax
comp=Z,14nm,1.0s
HNS L L
comp=Z,230nm,18.0s
HNS L L
comp=Z,620nm,20.0s
HNS L L
comp=Z,350nm,22.2s
SIUN Universidad Ur 64.30 104 P **P** **08 04 02.9 0.0**
SIUN IAmb IAmb 08 04 04.1
comp=Z,21nm,1.2s
JOW Kunigami 64.33 280 LR LR 08 30 16.7
comp=Z,73nm,21.9s,baz=343,slow=34
KIRV Kirov 64.38 350 LR LR 08 36 09.7
comp=Z,273nm,19.0s,baz=20,slow=40
KIRV Kirov 64.38 350 *ce*P **P** **08 04 04.0 +1.2**
DGZ Jazzator, Alta 64.43 323 *i* P **P** **08 04 03.6 +0.1**
DGZ pmax pmax
comp=Z,38nm,1.3s
SVE Sverdlovsk 64.60 343 *e*P **P** **08 04 05.5 +1.2**
EKA Eskdalemuir Ar 65.06 21 P **P** **08 04 06.5 -0.8**
comp=Z,3.7nm,0.7s,baz=331,slow=5.0,SNR=10.0
EKA LR LR 08 32 45.5
comp=Z,280nm,18.7s,baz=354,slow=36

comp=Z,3.7nm,0.7s
NJ2 Nanjing 65.25 291 *e*P **P** **08 04 07.0 -1.9**
NJ2 pmax pmax
comp=Z,27nm,0.5s
VSU Vasula 65.35 3 *i* P **P** **08 04 08.9 -0.2**
VSU pmax pmax
comp=Z,20nm,0.9s
ARTI Arti 65.39 344 LR LR 08 33 49.2
comp=Z,341nm,21.4s,baz=16,slow=37
GUMO Guam 65.84 258 LR LR 08 29 54.9
comp=Z,61nm,19.3s,baz=60,slow=33
KURK Kurchatov 66.25 329 P **P** **08 04 14.9 -0.1**
KURK Kurchatov 66.25 329 *ce*P **P** **08 04 16.1 +1.1**
KURK pmax pmax
comp=Z,8.0nm,1.0s
BORK Borovoye 66.25 336 P **P** **08 04 15.4 +0.4**
BORK Borovoye 66.25 336 *ce*P **P** **08 04 16.0 +1.0**
BORK pmax pmax
comp=Z,12nm,1.0s
BVAR Borovoye Array 66.26 335 P **P** **08 04 15.6 +0.5**
comp=Z,11nm,0.8s,baz=46,slow=6.4,SNR=20
comp=Z,11nm,0.8s
KURBB Kurchatov Arra 66.36 329 P **P** **08 04 16.0 +0.3**
comp=Z,8.9nm,1.0s,baz=25,slow=5.8,SNR=16
KURBB LR LR 08 37 05.5
comp=Z,376nm,18.1s,baz=153,slow=40
comp=Z,8.9nm,1.0s
LYN LuoYang 66.50 297 P **P** **08 04 18.3 +1.4**
LYN pP pwP 08 04 21.9 -2.5
LYN sP sP 08 04 27.8 +8.4
LYN pmax pmax
comp=Z,18nm,0.7s
LYN L L
comp=Z,560nm,19.6s
LYN L L
comp=Z,480nm,15.1s
LYN L L
comp=Z,410nm,19.9s
JTS Las Juntas de 67.06 107 LR LR 08 36 47.6
comp=Z,158nm,18.3s,baz=314,slow=39
ZSN Zaisan 67.23 324 *e*P **P** **08 04 23.0 +1.6**
ZSN pmax pmax
comp=Z,13nm,1.0s
ZSN Zaisan 67.23 324 *e*P **P** **08 04 23.0 +1.6**
comp=Z,13nm,1.0s
PABE Paberze 68.21 5 P **P** **08 04 28.3 +0.9**
GTA2 Gaotai 68.36 309 *e*P **P** **08 04 29.6 +0.8**
GTA2 pP sP 08 04 32.9 +1.6
GTA2 pmax pmax
comp=Z,7.0nm,0.8s
GTA2 pmax pmax
comp=Z,200nm,5.8s
GTA2 L L
comp=Z,760nm,17.9s
GTA2 L L
comp=Z,650nm,20.3s
BANI BANI 68.41 89 P **P** **08 04 29.6 +0.3**
BRZS Berezniki 68.51 333 *e*P **P** **08 04 31.3 +1.9**
BRZS Berezniki 68.51 333 *e*P **P** **08 04 31.3 +1.9**
MK31 Makanchi Array 68.64 325 *ce*P **P** **08 04 30.7 +0.4**
MKAR Makanchi Array 68.64 325 P **P** **08 04 30.5 +0.2**
comp=Z,5.9nm,0.9s,baz=46,slow=6.4,SNR=17
MKAR PP **PP** **08 06 58.6 -2.5**
comp=Z,2.8nm,0.9s,baz=51,slow=9.6,SNR=3.7
MKAR PKP2bc P'P'bc 08 32 42.2 -10
comp=Z,1.2nm,1.1s,baz=150,slow=2.7,SNR=4.5
MKAR LR LR 08 39 21.9
comp=Z,343nm,18.4s,baz=11,slow=40
comp=Z,5.9nm,0.9s
MKAR Makanchi Array 68.64 325 P **P** **08 04 30.2 -0.1**
OBN Obninsk 68.69 357 LR LR 08 39 22.8
comp=Z,155nm,19.1s,baz=1.5,slow=40
OBN Obninsk 68.69 357⇑ *e*P **P** **08 04 31.1 +0.8**
OBN *e**PP **sP** **08 04 35.1 +2.2**
OBN *SP **pwP** **08 04 38.0 +0.3**
OBN 08 04 57.0
OBN *i* S **S** **08 13 39.8 +7.0**
OBN *i* 08 14 31.1
OBN *e*SS **SS** **08 18 03.0 +7.0**
OBN *e*SSS SSS 08 21 04.7
OBN pmax pmax
comp=Z,53nm,1.7s
OBN MLR MLR
comp=Z,199nm,21.0s
MAKZ Makanchi 68.73 325 P **P** **08 04 30.2 -0.7**
MAKZ Makanchi 68.73 325 P **P** **08 04 30.2 -0.7**
MAKZ pmax pmax
comp=Z,40nm,1.5s
WHN Wuhan 68.77 293 P **P** **08 04 33.4 +2.2**
NACGM Naroch 68.91 3 *e*P **P** **08 04 32.1 +0.4**
comp=Z,18nm,1.0s,baz=357
MNK Minsk 69.34 2 *i* P **P** **08 04 35.0 +0.6**
comp=E,41nm,0.8s
MNK *i* P **P** **08 04 35.0 +0.6**
comp=N,19nm,0.7s
MNK *i* P **P** **08 04 35.0 +0.6**
comp=Z,31nm,0.8s,baz=358
MNK *i* PcP **PcP** **08 04 57.9 -0.1**
MNK *i* PP **PP** **08 07 08.1 +1.2**
MNK *i* PPP PPP 08 08 49.2
MNK *i* S **S** **08 13 42.7 +2.0**
MNK *i* SS **SS** **08 18 10.7 +4.5**
MNK *i* SSS SSS 08 21 28.0
MNK *i* LQ LQ 08 29 01.7
MNK *i* LRM MLR 08 38 50.9
comp=Z,99nm,19.4s
MNK Minsk 69.34 2 *i* P **P** **08 04 35.0 +0.6**
MNK *i* 08 04 57.8
MNK *i* 08 07 08.1
MNK *i* PPP PPP 08 08 49.1
MNK *i* S **S** **08 13 42.7 +2.0**
MNK *i* SS **SS** **08 18 10.7 +4.5**
MNK pmax pmax
comp=E,41nm,0.8s
MNK pmax pmax
comp=Z,31nm,0.8s
MNK pmax pmax
comp=N,19nm,0.7s
MNK MLR MLR
comp=Z,99nm,19.0s
MNK MLR MLR
comp=N,327nm,22.0s
LZH Lanzhou 69.36 304 *e*P **P** **08 04 36.9 +1.8**
LZH sP pwP 08 04 45.9 +3.3
LZH pmax pmax
comp=N,16nm,1.8s
LZH L L
comp=N,560nm,16.2s
LZH L L
comp=N,590nm,16.2s
WMQ Urumqi 69.43 320 *e*P **P** **08 04 38.1 +2.8**
WMQ sP pwP 08 04 46.8 +4.1
WMQ pmax pmax
comp=N,17nm,0.7s
WMQ L L
comp=N,590nm,14.9s
WMQ L L
comp=N,260nm,14.9s
LZDM Lanzhou Array 69.53 304 P **P** **08 04 37.7 +1.3**
comp=N,1.0nm,0.3s,baz=59,slow=7.3,SNR=1.4
LZDM LR LR 08 37 53.1
comp=N,425nm,18.3s,baz=50,slow=38
comp=N,1.0nm,0.3s
BELG Belogornoye 70.67 350 *i* P **P** **08 04 42.6 0.0**
BELG pmax pmax
comp=Z,5.0nm,0.8s
SJG San Juan 70.97 86 LR LR 08 37 02.8
comp=Z,70nm,20.3s,baz=321,slow=37
LPSR Galich'ya Gora 71.11 355 *e*P **P** **08 04 44.9 -0.4**
LPSR pmax pmax
comp=Z,20nm,1.0s
AKTO Aktyubinsk 71.19 342 LR LR 08 40 59.3
comp=Z,156nm,18.4s,baz=34,slow=40
BTNL Ternell 71.27 17 *d*P **P** **08 04 45.8 -0.6**
comp=Z,6.7nm,0.9s
BCLA Clavier 71.30 17 *d*P **P** **08 04 45.5 -1.0**
CNSH ChangSha 71.40 293 P **P** **08 04 47.8 +0.4**
CNSH pmax pmax
comp=Z,12nm,0.6s
TDK Taldyqorghan 71.45 327 *e*P **P** **08 04 49.5 +1.9**
TDK pmax pmax
comp=Z,7.0nm,0.7s
TDK Taldyqorghan 71.45 327 *e*P **P** **08 04 49.5 +1.9**
comp=Z,7.0nm,0.7s
CLL Collm 71.51 12 *e*P **P** **08 04 48.0 +0.2**
CLL Collm 71.51 12 *e*P **P** **08 04 48.0 +0.2**
CLL *e*S **S** **08 14 06.0 -0.1**
CLL *e*SS **SS** **08 18 36.0 -3.6**
CLL *e*SSS SSS 08 21 54.0
CLL *e*SSSS 08 23 30.0
CLL AMS AMS 08 36 00.0
comp=Z,200nm,20.1s
AB31 Akbulak array 71.99 341 P **P** **08 04 50.7 +0.1**
AB31 lAmb lAmb 08 05 02.7
comp=Z,33nm,1.2s
ABKAR Akbulak array 71.99 341 P **P** **08 04 51.2 +0.5**
VORR Voronezh 72.02 355 *e*P **P** **08 04 46.2 -4.6**
VORR pmax pmax
comp=Z,50nm,0.4s
HSKC Hora Svate Kat 72.25 12 *e*P **P** **08 04 53.2 +0.9**
KSP Ksiaz 72.32 10 P **P** **08 04 53.6 +1.0**
comp=Z,12nm,0.9s
VRH Novokhopyorsk 72.34 353 *e*P **P** **08 04 51.5 -1.2**
VRH pmax pmax
comp=Z,5.0nm,0.3s
VSR Storozhevoye 72.48 355 *e*P **P** **08 04 52.7 -0.8**
VSR pmax pmax
comp=Z,10.0nm,0.8s
VORD Divnogorie 72.72 355 *e*P **P** **08 04 54.2 -0.8**
VORD pmax pmax
comp=Z,20nm,0.6s
AFI Afiamalu 72.74 204 LR LR 08 30 51.5
comp=Z,214nm,21.2s,baz=50,slow=31
KPKS Kokpek 72.76 326 *e*P **P** **08 04 57.4 +1.9**
KPKS Kokpek 72.76 326 *e*P **P** **08 04 57.4 +1.9**
SHLS Shalkode 72.79 325 *e*P **P** **08 04 56.4 +0.7**
SHLS pmax pmax
comp=Z,19nm,1.3s
SHLS Shalkode 72.79 325 *e*P **P** **08 04 56.5 +0.7**
comp=Z,19nm,1.3s
DPC Dobruska-Polom 72.81 10 *e*P **P** **08 04 56.6 +1.0**
DPC Dobruska-Polom 72.81 10 *e*P **P** **08 04 56.6 +1.0**
DPC Dobruska-Polom 72.81 10 P **P** **08 04 56.8 +1.2**
comp=Z,12nm,1.1s
MI28 Mi28,Pidlybu 72.91 2 P **P** **08 04 55.8 -0.3**
UZB Uzynbulak 72.94 326 *e*P **P** **08 04 58.4 +1.7**
UZB Uzynbulak 72.94 326 *e*P **P** **08 04 58.4 +1.7**
KUU Kurty 73.08 328 *e*P **P** **08 04 59.3 +2.0**
KUU Kurty 73.08 328 *e*P **P** **08 04 59.4 +2.0**
AK21 Malin Array Si 73.09 2 P **P** **08 04 56.7 -0.5**
AK23 Malin Array Si 73.11 1 P **P** **08 04 57.6 +0.3**
AK22 Malin Array Si 73.11 2 P **P** **08 04 57.3 0.0**
KRLC Kraliky 73.12 10 *e*P **P** **08 04 58.4 +0.9**
KRLC Kraliky 73.12 10 *e*P **P** **08 04 58.4 +0.9**
AK19 Malin Array Si 73.15 2 P **P** **08 04 57.0 -0.5**
AKASG Malin Array Be 73.17 1 P **P** **08 04 57.6 -0.1**
comp=Z,7.5nm,0.6s,baz=1.8,slow=6.0,SNR=31
comp=Z,7.5nm,0.6s
AKBB Malin Array Si 73.17 1 *ce*P **P** **08 04 57.5 -0.2**
AKBB Malin Array Si 73.17 1 P **P** **08 04 57.3 -0.4**
AK15 Malin Array Si 73.18 1 P **P** **08 04 57.3 -0.4**
KIEV Kiev 73.18 1⇑ P **P** **08 04 57.8 +0.2**
KIEV Kiev 73.18 1 P **P** **08 04 57.4 -0.3**
KIEV lAmb lAmb 08 04 58.7
comp=Z,14nm,0.9s
KIEV Kiev 73.18 1 P **P** **08 04 57.4 -0.3**
KIEV pmax pmax
comp=Z,14nm,0.9s
KIEV Kiev 73.18 1 P **P** **08 04 57.9 +0.2**
comp=Z,81nm,0.8s
AK01 Malin Array Si 73.18 1 P **P** **08 04 57.4 -0.3**
AK17 Malin Array Si 73.19 2 P **P** **08 04 57.7 -0.1**
SATY Saty 73.21 326 *e*P **P** **08 04 59.8 +1.6**
SATY Saty 73.21 326 *e*P **P** **08 04 59.9 +1.6**
GOMU GeErMu 73.23 311 P **P** **08 04 57.3 -1.4**
GOMU S **S** **08 14 23.1 -3.9**
GOMU pmax pmax
comp=Z,11nm,1.0s
GOMU L L
comp=Z,190nm,16.2s
GOMU L L
comp=Z,250nm,16.6s
GOMU L L
comp=Z,420nm,16.2s
AK06 Malin Array Si 73.29 1 P **P** **08 04 58.1 -0.3**
STEB Steborice 73.35 9 *e*P **P** **08 05 00.1 +1.3**
ZVC Zvikov 73.49 12 *e*P **P** **08 05 00.5 +0.9**
MORC Moravsky Berou 73.49 9⇑ P **P** **08 04 58.4 -1.2**
MORC Moravsky Berou 73.49 9 P **P** **08 04 58.4 -1.2**
MORC Moravsky Berou 73.49 9 *e*P **P** **08 05 00.2 +0.5**
AAA Alma-Ata 73.53 327 *e*P **P** **08 05 01.7 +1.7**
AAA Alma-Ata 73.53 327 *e*P **P** **08 05 01.8 +1.7**
MDOK Medeo 73.53 327 *e*P **P** **08 05 01.7 +1.6**
MDOK Medeo 73.53 327 *e*P **P** **08 05 01.8 +1.6**
TNSS Tian-Shan 73.68 327 *e*P **P** **08 05 02.7 +1.4**
TNSS Tian-Shan 73.68 327 *e*P **P** **08 05 02.8 +1.4**
CD2 Chengdu 73.68 301 P **P** **08 04 58.6 -2.5**
CD2 S **SKiKP** **08 14 28.8 -1.7**
CD2 pmax pmax
comp=Z,140nm,5.9s
CD2 L L
comp=Z,570nm,18.4s
CD2 L L
comp=Z,350nm,13.3s
KHC Kasperske Hory 73.72 12 P **P** **08 05 01.6 +0.6**
KHC Kasperske Hory 73.72 12 *ce*P **P** **08 05 02.8 +1.8**
KHC pmax pmax
comp=Z,7.0nm,1.7s
KHC Kasperske Hory 73.72 12 *e*P **P** **08 05 02.3 +1.3**
KHC Kasperske Hory 73.72 12 P **P** **08 05 02.1 +1.1**
comp=Z,7.6nm,1.1s
ECH Echery 73.73 17 P **P** **08 05 01.3 +0.2**
ECH lAmb lAmb 08 05 49.8
comp=Z,21nm,1.3s
ECH Echery 73.73 17 P **P** **08 05 01.3 +0.2**
ECH pmax pmax
comp=Z,21nm,1.3s
VRAC Vranov 73.87 10 P **P** **08 05 01.4 -0.4**
comp=Z,6.5nm,0.8s,baz=166,slow=5.1,SNR=4.2
comp=Z,6.5nm,0.8s
VRAC Vranov 73.87 10⇑ P **P** **08 05 00.5 -1.3**
VRAC Vranov 73.87 10 *e*P **P** **08 05 02.6 +0.8**
LUBAR Lubar, Ukraine 73.93 2 P **P** **08 05 01.9 -0.2**
SGDS Sogindy 73.98 329 *e*P **P** **08 05 04.5 +1.8**
KWP Kalwaria Pacla 74.01 6 P **P** **08 05 02.6 -0.1**
GEC2 GERESS Array S 74.02 12 P **P** **08 05 03.0 +0.2**
GERES GERESS Array B 74.02 12 P **P** **08 05 03.4 +0.5**
comp=Z,1.9nm,0.6s,baz=1.4,slow=5.3,SNR=13
comp=Z,1.9nm,0.6s
NIE Niedzica 74.07 7 P **P** **08 05 03.9 +0.9**
comp=Z,5.0nm,1.1s
KRUC Moravsky 74.09 10 *e*P **P** **08 05 03.7 +0.6**
CKRC Cesky Krumlov 74.11 12 *e*P **P** **08 05 04.1 +0.8**
CKRC Cesky Krumlov 74.11 12 *e*P **P** **08 05 04.1 +0.8**
STHS Stebnicka Huta 74.14 7 *e*P **P** **08 05 04.1 +0.7**
STHS pmax pmax
comp=Z,12nm,0.7s
STHS Stebnicka Huta 74.14 7 *e*P **P** **08 05 04.1 +0.7**
LANS Liptovska Anna 74.27 8 *e*P **P** **08 05 06.1 +1.8**
LANS Liptovska Anna 74.27 8 *e*P **P** **08 05 06.0 +1.8**
JAVC Velka Javorina 74.41 9 *e*P **P** **08 05 06.8 +1.7**
SHIU Shidnytsya 74.45 5 P **P** **08 05 06.6 +1.3**
BOOM Boomskoye usch 74.48 327 P **P** **08 05 04.8 -0.9**
BOOM Boomskoye usch 74.48 327 P **P** **08 05 04.8 -0.9**
BOOM pmax pmax
comp=Z,10.0nm,0.9s
HORU Horodok 74.59 3 P **P** **08 05 05.9 -0.2**
SMOL Smolenice 74.73 10 *e*P **P** **08 05 08.6 +1.7**
SMOL pmax pmax
comp=Z,5.0nm,1.1s
AAK Ala-Archa 74.77 328 P **P** **08 05 08.3 +0.9**
comp=Z,4.0nm,0.7s,baz=64,slow=0.6,SNR=10
AAK LR LR 08 41 06.4
comp=Z,348nm,19.2s,baz=21,slow=38
comp=Z,4.0nm,0.7s
AAK Ala-Archa 74.77 328 P **P** **08 05 07.6 +0.2**
AAK lAmb lAmb 08 05 18.9
comp=Z,60nm,2.0s
AAK Ala-Archa 74.77 328 *ce*P **P** **08 05 08.9 +1.5**
AAK pmax pmax
comp=Z,7.0nm,1.0s
MODS Modra-Piesok 74.86 10 *e*P **P** **08 05 09.1 +1.5**
MODS pmax pmax
comp=Z,23nm,1.0s
MODS Modra-Piesok 74.86 10 *e*P **P** **08 05 09.1 +1.5**
STNU Starunia 75.02 5 P **P** **08 05 09.4 +0.8**
MOA Molln 75.06 12 *e*pP **P** **08 05 09.5 +0.7**
comp=Z,8.3nm,1.7s
BIOA Bad Ischl, Aus 75.15 12 *e*pP **P** **08 05 10.1 +0.8**
comp=Z,3.5nm,0.6s
CONA Conrad Observa 75.16 11 *i* pP **P** **08 05 10.7 +1.3**
comp=Z,9.4nm,1.1s
MOTA Moosalm 75.17 14 *e*pP **P** **08 05 10.7 +1.1**
comp=Z,8.6nm,1.1s
MUKU Mukachevo 75.19 6 P **P** **08 05 10.3 +0.8**
WATA Walderalm 75.24 14 *i* pP **P** **08 05 11.0 +1.0**
comp=Z,6.9nm,0.7s
NDNU Novodnistrovsk 75.24 3 P **P** **08 05 10.0 +0.2**
KMPD K-Podol'skiy 75.25 3 P **P** **08 05 10.3 +0.5**
LESA Schwarzleotal 75.29 13 *e*pP **P** **08 05 11.2 +0.9**
comp=Z,6.8nm,1.4s
SQTA Sankt Quirin 75.30 14 *i* pP **P** **08 05 11.5 +1.1**
comp=Z,10nm,0.9s
WTTA Wattenberg 75.32 14 *i* pP **P** **08 05 11.7 +1.2**
comp=Z,6.2nm,0.6s
BRIU Brid 75.32 6 P **P** **08 05 11.3 +1.1**
BERU Beregovo 75.40 6 P **P** **08 05 12.0 +1.3**
DZA Taraz 75.42 331 *e*P **P** **08 05 12.7 +1.7**
DZA pmax pmax
comp=Z,4.0nm,0.5s
DZA Taraz 75.42 331 *e*P **P** **08 05 12.8 +1.7**
comp=Z,4.4nm,0.5s
RONA Rosalia, Austr 75.43 10 *i* pP **P** **08 05 12.0 +1.1**
comp=Z,2.9nm,0.8s
FETA Feichten 75.43 14 *i* pP **P** **08 05 12.2 +1.1**
comp=Z,6.3nm,1.0s
KSV Kosov 75.44 4 P **P** **08 05 11.2 +0.2**
KK31 Karatay Array 75.45 331 P **P** **08 05 11.0 -0.1**
KK31 lAmb lAmb 08 05 22.2
comp=Z,52nm,1.9s
KK31 Karatay Array 75.45 331 P **P** **08 05 11.0 -0.1**
KK31 pmax pmax
comp=Z,52nm,1.9s
KKAR Karatay Array 75.45 331 P **P** **08 05 11.2 +0.1**
KKAR Karatay Array 75.45 331 P **P** **08 05 11.2 +0.1**
PSZ Piszkesteto 75.53 8⇑ P **P** **08 05 10.8 -0.8**
PSZ Piszkesteto 75.53 8 P **P** **08 05 12.2 +0.7**
PSZ Piszkesteto 75.53 8 P **P** **08 05 12.3 +0.7**
PSZ pmax pmax
comp=Z,9.0nm,0.9s
NSLU Nyzhne Selyshc 75.53 5 P **P** **08 05 12.5 +1.0**
DAVOX Davos/Dischmat 75.55 15 P **P** **08 05 12.0 +0.1**
comp=Z,3.5nm,0.8s,baz=320,slow=6.0,SNR=4.4
comp=Z,3.5nm,0.8s
DAVOX Davos/Dischmat 75.55 15 P **P** **08 05 12.0 +0.1**
BRLS Borolday 75.69 332 *e*P **P** **08 05 15.4 +2.9**
BRLS Borolday 75.69 332 *e*P **P** **08 05 15.5 +2.9**
KBA Koelnbreinsper 75.72 13 *i* pP **P** **08 05 13.9 +1.1**
comp=Z,12nm,1.1s
SORM Soroca 75.72 2⇑ P **P** **08 05 12.0 -0.5**
SORM Soroca 75.72 2 P **P** **08 05 12.0 -0.5**
TUE Stuetta 75.77 16 P **P** **08 05 14.4 +1.3**
ARSA Arzberg 75.79 11 *e*pP **P** **08 05 14.4 +1.4**
comp=Z,5.0nm,0.9s
ABTA Abfaltersbach 75.94 13 *e*pP **P** **08 05 15.1 +1.1**
comp=Z,2.1nm,0.8s
SDV Santo Domingo 76.01 95 LR LR 08 39 54.2
comp=Z,126nm,18.7s,baz=356,slow=37
MPLH Magyarpolny 76.07 10 P **P** **08 05 15.5 +0.9**
comp=Z,31nm,1.2s
BUR08 Bucovina Ar. S 76.12 4 P **P** **08 05 15.0 0.0**
BURAR Bucovina Array 76.15 4⇑ P **P** **08 05 15.4 +0.2**
BURAR Bucovina Array 76.15 4 P **P** **08 05 15.3 +0.2**
MYKA Terra Mystica 76.19 12 *e*pP **P** **08 05 16.0 +0.7**
comp=Z,2.2nm,0.6s
SOKA Soboth 76.31 12 *i* pP **P** **08 05 17.1 +1.1**
comp=Z,11nm,1.1s
PERS Pernice 76.36 11 *e*P **P** **08 05 17.3 +1.1**
OBKA Obir 76.42 12 *i* pP **P** **08 05 17.6 +0.9**
comp=Z,15nm,0.8s
CHM Chimkent 76.42 332 *e*P **P** **08 05 18.5 +1.9**
CHM pmax pmax
comp=Z,24nm,1.1s
CHM Chimkent 76.42 332 *e*P **P** **08 05 18.6 +1.9**
comp=Z,24nm,1.1s
IUG Iuzhnay 76.47 331 *e*P **P** **08 05 18.8 +1.7**
IUG pmax pmax
comp=Z,19nm,1.1s
IUG Iuzhnay 76.47 331 *e*P **P** **08 05 18.9 +1.8**
comp=Z,19nm,1.1s
DRGR 76.84 6⇑ P **P** **08 05 18.2 -0.9**
DRGR 76.84 6 P **P** **08 05 18.1 -0.9**
PBRG Braganca 76.93 28 *e*P **P** **08 05 20.3 +0.7**
MARR Marisel-Cluj 76.98 6⇓ P **P** **08 05 19.2 -0.7**
POLO Lamas de Olo 77.05 29 *e*P **P** **08 05 22.0 +1.6**
MORH Mrgy, Hungar 77.12 9⇑ P **P** **08 05 19.7 -0.8**
ROSC El Rosal 77.33 100 P **P** **08 05 23.8 +1.1**
comp=Z,9.0nm,0.8s,baz=25,slow=5.7,SNR=5.2
ROSC LR LR 08 41 02.5
comp=Z,110nm,21.2s,baz=18,slow=37
comp=Z,9.0nm,0.8s
GBRS Gornja Briga 77.41 12 *i* P **P** **08 05 22.7 +0.4**
ONER Baraj Valea Uz 77.47 4⇑ P **P** **08 05 21.8 -0.7**
BOJS Bojanci 77.49 12 *i* P **P** **08 05 23.2 +0.7**
PVIS Viseu 77.64 30 *e*P **P** **08 05 24.7 +1.1**
KSH2 Kashi 77.66 326 P **P** **08 05 24.5 +0.6**
KSH2 pmax pmax
comp=Z,15nm,1.3s
KSH2 L L
comp=Z,520nm,17.5s
KSH2 L L
comp=Z,340nm,17.2s
OZUR 77.69 4⇑ P **P** **08 05 23.3 -0.4**
VRI Vrincioaia 77.95 3⇓ P **P** **08 05 25.1 -0.2**
VRI Vrincioaia 77.95 3 P **P** **08 05 25.0 -0.2**
COVR Voineasa-Covas 77.95 4⇑ P **P** **08 05 24.3 -0.9**
PLOR Plostina 77.96 3⇑ P **P** **08 05 25.4 +0.1**
PLOR Plostina 77.96 3 P **P** **08 05 25.4 +0.1**
MTE Manteigas 78.03 29 *e*P **P** **08 05 27.3 +1.5**
PCAS Casmilo, Conde 78.09 30 *e*P **P** **08 05 27.4 +1.4**
HNR Honiara 78.12 232 LR LR 08 32 11.4
comp=Z,7.6nm,20.2s,baz=100,slow=30
BTK Batken 78.20 330 P **P** **08 05 26.3 -0.5**
BTK lAmb lAmb 08 05 38.1
comp=Z,17nm,1.0s
BTK Batken 78.20 330 P **P** **08 05 26.3 -0.5**
BTK pmax pmax
comp=Z,17nm,1.0s
GZR Gura Zlata 78.24 6⇑ P **P** **08 05 26.7 -0.2**
GZR Gura Zlata 78.24 6 P **P** **08 05 26.7 -0.2**
MLR Muntele Rosu 78.30 4 P **P** **08 05 27.9 +0.6**
comp=Z,4.6nm,0.8s,baz=7.2,slow=5.7,SNR=5.5
MLR LR LR 08 40 05.2
comp=Z,126nm,21.1s,baz=13,slow=36
comp=Z,4.6nm,0.8s
MLR Muntele Rosu 78.30 4⇑ P **P** **08 05 27.9 +0.6**
MLR Muntele Rosu 78.30 4 P **P** **08 05 27.2 -0.1**
MLR Muntele Rosu 78.30 4 P **P** **08 05 27.2 -0.1**
MLR pmax pmax
comp=Z,15nm,1.3s
MLR Muntele Rosu 78.30 4 P **P** **08 05 28.2 +0.9**
comp=Z,7.0nm,1.1s
VOIR 78.31 5⇑ P **P** **08 05 27.5 +0.2**
VOIR 78.31 5 P **P** **08 05 27.5 +0.2**
VOIR 78.31 5 P **P** **08 05 27.9 +0.6**
comp=Z,6.5nm,1.2s
GOF Gofitskoye 78.36 352 *ce*P **P** **08 05 28.1 +0.7**
NEHR Nehoiu 78.38 4⇑ P **P** **08 05 27.4 -0.1**
DRK Karamyk 78.46 329 P **P** **08 05 29.1 +0.6**
DRK lAmb lAmb 08 05 40.2
comp=Z,23nm,1.0s
DRK Karamyk 78.46 329 P **P** **08 05 29.1 +0.6**
DRK pmax pmax
comp=Z,23nm,1.0s
CFR Carcaliu 78.68 2⇑ P **P** **08 05 29.8 +0.6**
CFR Carcaliu 78.68 2 P **P** **08 05 29.7 +0.6**
TLCR 78.68 2⇑ P **P** **08 05 29.1 -0.1**
TLCR 78.68 2 P **P** **08 05 29.1 -0.1**
MDVR Moldovita 78.78 7⇑ P **P** **08 05 30.3 +0.4**
OTAV Otavalo 78.95 107 P **P** **08 05 29.6 -2.1**
ANN Anapa 78.96 356 *e*P **P** **08 05 33.5 +2.8**
ANN pmax pmax
comp=Z,160nm,3.2s
MSVF Nonsavu 79.05 212 LR LR 08 33 12.9
comp=Z,65nm,21.9s,baz=29,slow=30
GAR Garm 79.33 330 P **P** **08 05 33.7 +0.7**
PARRA Arraiolos 79.37 30 *e*P **P** **08 05 33.6 +0.5**
TIRR Tirgusor 79.40 2⇑ P **P** **08 05 34.3 +1.2**
TIRR Tirgusor 79.40 2 P **P** **08 05 34.3 +1.2**
KIV Kislovodsk 79.48 352 *e*P **P** **08 05 34.7 +0.9**
KIV pmax pmax
comp=Z,14nm,1.1s
KIV MLR MLR
comp=Z,105nm,19.0s

ESDC	**Sonseca Array**	**79.65**	**27**	P		**P**	**08 05 35.9**	**+1.2**
	comp=Z,6.6nm,0.9s,baz=336,slow=5.3,SNR=24							
	comp=Z,6.6nm,0.9s							
KBZ	**Khabaz**	**79.69**	**352**	P		**P**	**08 05 36.0**	**+1.2**
	comp=Z,4.3nm,0.8s,baz=244,slow=5.7,SNR=9.4							
KBZ				LR		LR	08 45 40.9	
	comp=Z,77nm,18.5s,baz=8.5,slow=39							
	comp=Z,4.3nm,0.8s							
KBZ	**Khabaz**	**79.69**	**352**	*ce*P		**P**	**08 05 36.3**	**+1.6**
KBZ				pmax		pmax		
	comp=Z,5.0nm,0.8s							
SHA1	**Shidzhatmaz**	**79.70**	**352**	*ce*P		**P**	**08 05 37.4**	**+2.3**
SLOR	**San Lorenzo -**	**79.75**	**107**	P		**P**	**08 05 36.8**	**+0.8**
NCK	**Nalchik**	**79.86**	**351**	*i* P		**P**	**08 05 37.1**	**+1.4**
NCK				pmax		pmax		
	comp=Z,19nm,1.0s							
NRCA	**Norcia**	**79.86**	**14**	P		**P**	**08 05 36.1**	**+0.3**
CHGR	**Chuyangaron**	**79.97**	**331**	P		**P**	**08 05 36.9**	**+0.4**
CHGR	**Chuyangaron**	**79.97**	**331**	P		**P**	**08 05 36.9**	**+0.4**
CHGR				pmax		pmax		
	comp=Z,45nm,0.8s							
SOC	**Sochi**	**80.06**	**354**	*e*P		P	08 05 44.6	+7.8
SOC				*e*PPP		PPP	08 10 26.2	
SOC				*e*S		**SKSac**	**08 15 49.3**	**-4.6**
SOC				*e*SS		**SS**	**08 20 50.7**	**+1.5**
SOC				pmax		pmax		
	comp=Z,10.0nm,0.7s							
NEUR	**Neytrino**	**80.17**	**352**	*i* P		**P**	**08 05 38.9**	**+1.3**
NEUR				pmax		pmax		
	comp=Z,4.0nm,1.1s							
PBAR	**Barrancos**	**80.25**	**30**	*e*P		**P**	**08 05 38.5**	**+0.7**
LSA	**Lhasa**	**80.38**	**310**	P		**P**	**08 05 41.9**	**+2.6**
LSA				pmax		pmax		
	comp=Z,11nm,0.9s							
QIZ	**Qiongzhong**	**80.52**	**290**	P		**P**	**08 05 36.4**	**-3.2**
QIZ				S		**S**	**08 15 46.1**	**-0.1**
QIZ				L		L		
	comp=Z,180nm,17.7s							
QIZ				L		L		
	comp=Z,290nm,17.6s							
QIZ				L		L		
	comp=Z,150nm,10.8s							
SHAA	**Shahritus**	**81.27**	**331**	P		**P**	**08 05 44.9**	**+1.5**
SHAA				IAmb		IAmb	08 05 56.1	
	comp=Z,27nm,0.9s							
RDO	**Rodhopi**	**82.62**	**4**	P		**P**	**08 05 51.1**	**+0.7**
RDO				IAmb		IAmb	08 06 02.5	
	comp=Z,16nm,0.9s							
GNI	**Garni**	**83.07**	**350**	LR		LR	08 48 09.8	
	comp=Z,122nm,19.1s,baz=21,slow=40							
GNI	**Garni**	**83.07**	**350**	*ce*P		**P**	**08 05 55.4**	**+2.4**
GNI				pmax		pmax		
	comp=Z,18nm,1.7s							
EVN	**Everest**	**83.71**	**313**	P		**P**	**08 05 57.8**	**+0.8**
TIP	**Timpagrande**	**83.91**	**11**	⇑P		**P**	**08 05 56.5**	**-0.6**
BR131	**Keskin Array S**	**84.14**	**358**	P		**P**	**08 05 58.9**	**+0.4**
BR131	**Keskin Array S**	**84.14**	**358**	P		**P**	**08 05 58.9**	**+0.4**
BR131				pmax		pmax		
	comp=Z,5.0nm,0.8s							
BRTR	**Keskin Array B**	**84.14**	**358**	P		**P**	**08 05 59.3**	**+0.8**
	comp=Z,3.5nm,0.7s,baz=8.9,slow=3.2,SNR=17							
BRTR				LR		LR	08 46 05.4	
	comp=Z,53nm,20.3s,baz=2.0,slow=38							
	comp=Z,3.5nm,0.7s							
BRTR	**Keskin Array B**	**84.14**	**358**	P		**P**	**08 05 58.4**	**0.0**
BR105	**Keskin Array S**	**84.15**	**358**	P		**P**	**08 05 59.5**	**+1.0**
	comp=Z,70nmcomp=Z,7.0nm,0.9s							
BR104	**Keskin Array S**	**84.16**	**358**	P		**P**	**08 05 59.2**	**+0.7**
ATAH	**Atahualpa**	**85.21**	**110**	LR		LR	08 43 13.4	
	comp=Z,99nm,21.3s,baz=344,slow=35							
SIJI	**Sorong**	**85.25**	**261**	LR		LR	08 39 28.6	
	comp=Z,32nm,19.2s,baz=142,slow=32							
VAE	**Valguarnera**	**85.30**	**13**	LR		LR	08 48 07.2	
	comp=Z,104nm,18.4s,baz=317,slow=38							
MDT	**Midelt**	**85.95**	**30**	P		**P**	**08 06 08.3**	**+0.7**
	comp=Z,5.8nm,1.0s,baz=357,slow=10,SNR=5.1							
MDT				LR		LR	08 46 08.3	
	comp=Z,82nm,18.1s,baz=355,slow=37							
	comp=Z,5.8nm,1.0s							
KEST	**Kesra**	**86.26**	**18**	LR		LR	08 46 43.9	
	comp=Z,62nm,20.6s,baz=36,slow=37							
CMAR	**Chiang Mai Arr**	**86.51**	**298**	P		**P**	**08 06 11.2**	**+0.7**
	comp=Z,3.7nm,0.6s,baz=18,slow=4.7,SNR=14							
CMAR				LR		LR	08 49 13.1	
	comp=Z,134nm,18.6s,baz=40,slow=39							
	comp=Z,3.7nm,0.6s							
CMAR	**Chiang Mai Arr**	**86.51**	**298**	P		**P**	**08 06 10.3**	**-0.1**
CZSB	**Cruzeiro do Su**	**88.71**	**106**	P		**P**	**08 06 20.4**	**-0.5**
MDP	**Montagnes des**	**89.09**	**82**	LR		LR	08 44 31.4	
	comp=Z,180nm,21.4s,baz=332,slow=34							
RPN	**Rapa Nui**	**89.69**	**146**	LR		LR	08 38 32.3	
	comp=Z,113nm,18.1s,baz=214,slow=30							
MMAI	**Mount Meron Ar**	**90.79**	**357**	LR		LR	08 52 58.2	
	comp=Z,36nm,19.6s,baz=3.0,slow=39							
CTA	**Charters Tower**	**93.71**	**239**	LR		LR	08 41 28.9	
	comp=Z,52nm,21.6s,baz=44,slow=31							
EIL	**Elat**	**94.14**	**357**	LR		LR	08 57 08.5	
	comp=Z,56nm,18.0s,baz=63,slow=41							
LPAZ	**La Paz**	**98.28**	**107**	P		**P**	**08 07 03.5**	**-2.0**
	comp=Z,0.8nm,0.6s,baz=8.4,slow=7.2,SNR=4.8							
LPAZ				LR		LR	08 54 42.5	
	comp=Z,109nm,19.6s,baz=336,slow=37							
URZ	**Urewera**	**98.75**	**207**	LR		LR	08 44 42.5	
	comp=Z,85nm,19.8s,baz=32,slow=31							
RAYN	**Ar Rayn**	**99.42**	**347**	P		**Pdif**	**08 07 09.4**	**-0.7**
RAYN				IAmb		IAmb	08 07 21.7	
	comp=Z,7.8nm,1.1s							
RAYN	**Ar Rayn**	**99.42**	**347**	P		**Pdif**	**08 07 09.4**	**-0.7**
RAYN				pmax		pmax		
	comp=Z,8.0nm,1.2s							
QSPA	**South Pole Qui**	**146.27**	**180**	PKPbc		**PKPbc**	**08 13 06.4**	**-0.1**
	comp=Z,30nm,1.1s,baz=50,slow=0.3,SNR=52							
BOSA	**Boshof**	**151.81**	**11**	PKPbc		**PKPbc**	**08 13 21.6**	**-0.4**
	comp=Z,4.8nm,0.6s,baz=349,slow=1.4,SNR=22							
VNA3	**Neumayer Olymp**	**157.31**	**147**	⇑PKPab		**PKPab**	**08 13 52.5**	**-0.6**
	comp=Z,7.1nm,0.8s							
VNA2	**Neumayer--Watz**	**158.12**	**146**	⇑PKPab		**PKPab**	**08 14 04.2**	**+7.6**
	comp=Z,4.5nm,0.3s,baz=272,slow=2.8							
TROLL	**Troll, Antarti**	**160.36**	**154**	⇑PKPab		**PKPab**	**08 14 06.3**	**-0.2**
NVL	**N'lazarevskaya**	**163.38**	**157**	*e*PKIKP		**PKPdf**	**08 13 23.0**	**-5.4**
NVL				pmax		pmax		
	comp=Z,26nm,1.8s							

*ASRS **20** 07:55:03.0±1.0,53.°68N×87.°96E,h0km,M2.4(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 20 07:55:04.6±3.6,53.°67N×87.°93E,h0km,mbtmp2.4/2, ML2.1/2,Error ellipse: s-maj=35.7km s-min=19.9km az=49.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.86**	**280**	I	I	08 07 30.0	
	0.1nm,0.9s,baz=96,slow=339,SNR=6.2						
ZALV	**Zalesovo Beam**	**1.86**	**280**	Pn	Pb	07 55 38.9	-0.6
	0.8nm,0.3s,baz=95,slow=14,SNR=7.7						
ZALV				Lg	Lg	07 56 03.4	
	0.8nm,0.3s,baz=98,slow=31,SNR=8.4						
KURBB	**Kurchatov Arra**	**6.54**	**246**	Pn	Pn	07 56 42.1	+0.1
	baz=58,slow=13,SNR=3.6						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**7.78**	**210**	Pn	Pn	07 57 00.0	+1.1
	baz=29,slow=12,SNR=2.4						
	0.1nm,0.3s						

*ASRS **20** 08:13:37.0±0.6,54.°61N×83.°67E,h0km,M2.3(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 20 08:13:38.5±2.1,54.°58N×83.°76E,h0km,mbtmp2.6/2, ML2.3/2,Error ellipse: s-maj=17.1km s-min=9.7km az=168.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.89**	**135**	I	I	08 19 00.0	
	0.2nm,0.9s,baz=317,slow=329,SNR=3.9						
ZALV	**Zalesovo Beam**	**0.89**	**135**	Pg	Pg	08 13 55.6	0.0
	1.5nm,0.3s,baz=319,slow=17,SNR=15						
ZALV				Lg	Lg	08 14 08.4	
	7.7nm,0.3s,baz=318,slow=29,SNR=16						
KURBB	**Kurchatov Arra**	**5.09**	**221**	Pn	Pn	08 14 56.6	+0.7
	0.1nm,0.3s,baz=40,slow=13,SNR=6.8						
KURBB				Sn	Sn	08 15 53.3	-2.0
	baz=20,slow=25,SNR=2.4						
KURBB				Lg	Lg	08 16 16.6	
	baz=40,slow=30,SNR=4.4						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**7.86**	**187**	Pn	Pn	08 15 33.9	0.0
	0.1nm,0.3s,baz=9.9,slow=14,SNR=3.1						
MKAR				Lg	Lg	08 17 47.9	
	0.1nm,0.3s,baz=10.0,slow=34,SNR=5.8						
	0.2nm,0.5s						

*ASRS **20** 08:14:42.0±1.0,53.°70N×88.°16E,h0km,M2.5(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 20 08:14:42.8±3.3,53.°69N×88.°18E,h0km,mbtmp2.7/3, ML2.1/3,Error ellipse: s-maj=29.5km s-min=19.9km az=54.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**2.01**	**279**	I	I	08 27 53.9	
	0.1nm,0.7s,baz=94,slow=340,SNR=5.8						
ZALV	**Zalesovo Beam**	**2.01**	**279**	Pn	Pb	08 15 19.6	-0.6
	0.9nm,0.3s,baz=97,slow=13,SNR=4.9						
ZALV				Lg	Lg	08 15 47.0	
	2.1nm,0.3s,baz=92,slow=29,SNR=7.6						
	3.3nm,0.5s						
KURBB	**Kurchatov Arra**	**6.69**	**247**	Pn	Pn	08 16 21.6	-0.6
	0.1nm,0.3s,baz=60,slow=14,SNR=4.8						
KURBB				Lg	Lg	08 18 13.7	
	baz=62,slow=36						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**7.87**	**211**	Pn	Pn	08 16 40.4	+2.0
	0.1nm,0.3s,baz=28,slow=13,SNR=2.3						
MKAR				Lg	Lg	08 18 50.9	
	baz=32,slow=31						
	0.2nm,0.4s						

NNC 20 08:16:03.5±8.2,38.°08N×71.°60E,h0km,mb4.2,mpv3.8, 2C-2D,Error ellipse: s-maj=62.4km s-min=41.9km az=161.0,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**4.24**	**344**	Pg	Pg	08 17 24.1	-0.8
	29nm,0.2s						
IUG				Lg	Lg	08 18 24.3	
	31nm,0.5s						
MRKS	**Merke**	**4.83**	**14**	Pg	Pb	08 17 32.3	+3.3
	10nm,0.5s						
MRKS				Lg	Lg	08 18 38.4	
	10nm,0.5s						
AAK	**Ala-Archa**	**5.06**	**25**	⇓Pg	Pb	08 17 34.8	+1.7
	1.3nm,0.4s						
AAK				⇑Lg	Lg	08 18 44.9	
	1.6nm,0.6s						
KK31	**Karatay Array**	**5.09**	**351**	⇓Pg	Pb	08 17 34.8	+1.3
	1.7nm,0.2s,baz=178,slow=13,SNR=30						
KK31				⇑Lg	Lg	08 18 43.1	
	4.0nm,0.4s,baz=183,slow=25,SNR=4.6						
BRLS	**Borolday**	**5.13**	**345**	Pg	Pb	08 17 31.6	-2.5
	3.2nm,0.2s						
BRLS				Lg	Lg	08 18 37.7	
	12nm,0.2s						

*IDC **20** 08:25:01.8±4.2,5.°65S×153.°76E,h0km,mb3.8/7, mbtmp3.8/7,MS3.3/1,Error ellipse: s-maj=148.2km s-min=29.5km az=109.0*
ISC 20 08:25:08.4±4.7,5.°7S±0.°4×15.°4E±,h43km,n9,σ0s57/8, mb3.9/7,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.54**	**231**	P	**P**	**08 30 15.0**	**0.0**
	0.6nm,0.9s,baz=59,slow=11,SNR=2.6						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**26.11**	**225**	P	**P**	**08 30 38.3**	**-0.2**
	0.5nm,0.8s,baz=60,slow=8.2,SNR=4.8						
	0.5nm,0.8s						
BATI	**Baumata**	**30.04**	**259**	LR	LR	08 46 13.5	
	comp=Z,52nm,18.1s,baz=77,slow=42						
SONM	**Songino Array**	**67.52**	**328**	P	**P**	**08 36 00.2**	**-0.1**
	0.3nm,0.4s,baz=123,slow=5.3,SNR=2.0						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**81.54**	**319**	P	**P**	**08 37 22.4**	**+0.8**
	1.0nm,0.8s,baz=95,slow=6.6,SNR=6.7						
	1.0nm,0.8s						
ZALV	**Zalesovo Beam**	**82.35**	**326**	P	**P**	**08 37 24.7**	**-0.9**
	0.5nm,0.4s,baz=117,slow=5.7,SNR=1.8						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**85.01**	**322**	P	**P**	**08 37 39.5**	**+0.1**
	0.9nm,0.8s,baz=108,slow=3.5,SNR=7.3						
	0.9nm,0.8s						
BVAR	**Borovoye Array**	**90.45**	**323**	P	**P**	**08 38 05.5**	**+0.1**
	1.2nm,0.7s,baz=90,slow=1.8,SNR=5.8						
	1.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**151.39**	**287**	PKPbc	**PKPbc**	**08 44 58.9**	**+0.3**
	1.7nm,0.8s,baz=73,slow=0.4,SNR=11						

IDC 20 08:31:03.4±2.3,54.°58N×83.°74E,h0km,mbtmp2.7/2, ML2.5/2,Error ellipse: s-maj=17.6km s-min=10.6km az=162.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.89**	**134**	I	I	08 36 30.0	
	0.2nm,0.7s,baz=317,slow=332,SNR=11						
ZALV	**Zalesovo Beam**	**0.89**	**135**	Pg	Pg	08 31 20.2	-0.3
	1.7nm,0.3s,baz=317,slow=17,SNR=10.0						
ZALV				Lg	Lg	08 31 33.6	
	8.5nm,0.3s,baz=315,slow=29,SNR=32						
KURBB	**Kurchatov Arra**	**5.08**	**221**	Pn	Pn	08 32 21.5	+0.8
	0.2nm,0.3s,baz=41,slow=13,SNR=2.8						
KURBB				Lg	Lg	08 33 41.9	
	baz=38,slow=30,SNR=1.2						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**7.85**	**187**	Pn	Pn	08 32 58.6	-0.1
	0.1nm,0.3s,baz=13,slow=12,SNR=2.4						
MKAR				Lg	Lg	08 35 10.4	
	0.1nm,0.3s,baz=3.3,slow=30,SNR=4.5						
	0.1nm,0.4s						

*ASRS **20** 08:44:24.0±1.0,53.°55N×87.°64E,h0km,M2.4(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 20 08:44:26.8±3.3,53.°50N×87.°63E,h0km,mbtmp2.5/2, ML2.3/2,Error ellipse: s-maj=28.4km s-min=16.8km az=59.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.73**	**286**	I	I	08 55 50.0	
	0.1nm,0.7s,baz=101,slow=335,SNR=6.7						
ZALV	**Zalesovo Beam**	**1.73**	**286**	Pg	Pn	08 44 58.2	+0.1
	0.7nm,0.3s,baz=105,slow=17,SNR=5.2						
ZALV				Lg	Lg	08 45 21.4	
	1.3nm,0.3s,baz=105,slow=27,SNR=7.3						
KURBB	**Kurchatov Arra**	**6.31**	**246**	Pn	Pn	08 46 02.1	+1.1
	baz=61,slow=13,SNR=2.7						
KURBB				Lg	Lg	08 47 45.0	
	baz=64,slow=32,SNR=2.9						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**7.54**	**209**	Pn	Pn	08 46 18.9	+1.0
	0.1nm,0.3s,baz=25,slow=15,SNR=3.0						
MKAR				Lg	Lg	08 48 24.5	
	baz=28,slow=30,SNR=3.0						
	0.1nm,0.3s						

*ASRS **20** 08:49:23.0±1.5,54.°25N×86.°81E,h0km,M2.9(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 20 08:49:23.6±3.2,54.°28N×86.°85E,h0km,mbtmp2.5/2, ML2.4/2,Error ellipse: s-maj=29.0km s-min=17.2km az=55.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.24**	**255**	I	I	08 58 10.0	
	baz=74,slow=334,SNR=1.0						
ZALV	**Zalesovo Beam**	**1.24**	**255**	Pg	Pg	08 49 47.0	-0.2
	2.7nm,0.3s,baz=75,slow=16,SNR=15						
ZALV				Lg	Lg	08 50 03.3	
	2.3nm,0.3s,baz=77,slow=31,SNR=5.1						
KURBB	**Kurchatov Arra**	**6.26**	**238**	Pn	Pn	08 50 57.6	+0.5
	baz=51,slow=13,SNR=5.9						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**8.03**	**203**	Pn	Pn	08 51 22.6	+1.2
	0.2nm,0.3s,baz=22,slow=13,SNR=6.2						
MKAR				Lg	Lg	08 53 40.3	
	baz=22,slow=31,SNR=2.3						
	0.1nm,0.3s						

*IDC **20** 08:59:04.2±1.4,2.°44N×90.°30E,h0km,mb3.9/4, mbtmp3.9/6,ML4.0/2,MS2.9/1,Error ellipse: s-maj=42.2km s-min=27.4km az=59.0*
ISC 20 08:59:09.3±1.2,2.°6N±0.°2×90.°2E±0.°1,h35km,n14,σ1s68/9, mb3.9/4,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**10.54**	**297**	Pn	**Pn**	**09 01 39.7**	**+1.6**
	0.4nm,0.3s,baz=89,slow=11,SNR=1.7						
PALK				Sn	**Sn**	**09 03 32.3**	**-2.7**
	1.6nm,0.3s,baz=178,slow=4.1,SNR=7.5						
	0.9nm,0.3s						
CMAR	**Chiang Mai Arr**	**17.99**	**28**	P	**Pn**	**09 03 14.9**	**-1.9**
	0.4nm,0.3s,baz=203,slow=12,SNR=5.7						
CMAR				LR	LR	09 10 15.8	
	comp=Z,32nm,18.3s,baz=195,slow=37						
	1.1nm,0.3s						
H08S2	**Diego Garcia H**	**20.34**	**240**	T	T	09 24 46.6	
	baz=60,slow=76,SNR=53						
H08S3	**Diego Garcia H**	**20.34**	**240**	T	T	09 24 47.2	
	baz=60,slow=76,SNR=84						
H08S1	**Diego Garcia H**	**20.36**	**240**	T	T	09 24 47.3	
	baz=60,slow=76,SNR=22						
MKAR	**Makanchi Array**	**44.60**	**352**	P	**P**	**09 07 19.1**	**+0.9**
	0.9nm,0.7s,baz=166,slow=8.6,SNR=11						
	0.9nm,0.7s						
SONM	**Songino Array**	**47.24**	**15**	P	**P**	**09 07 40.3**	**+1.2**
	3.0nm,0.6s,baz=197,slow=9.7,SNR=14						
	3.0nm,0.6s						
WRA	**Warramunga Arr**	**48.76**	**119**	P	**P**	**09 07 50.1**	**-1.0**
	1.0nm,0.8s,baz=294,slow=8.8,SNR=6.3						
	1.0nm,0.8s						
ZALV	**Zalesovo Beam**	**51.42**	**356**	P	**P**	**09 08 11.2**	**+0.5**
	0.6nm,0.4s,baz=180,slow=8.1,SNR=2.0						
	0.6nm,0.4s						
H04N2	**CROZET ISLANDS**	**59.17**	**210**	T	T	10 13 15.8	
	baz=46,slow=75,SNR=39						
H04N1	**CROZET ISLANDS**	**59.18**	**210**	T	T	10 13 15.5	
	baz=46,slow=75,SNR=15						
H04N3	**CROZET ISLANDS**	**59.19**	**210**	T	T	10 13 14.4	
	baz=46,slow=75,SNR=45						
TXAR	**Lajitas Array**	**145.63**	**22**	PKPbc	**PKPdf**	**09 18 45.0**	**+0.1**
	0.4nm,0.6s,baz=279,slow=2.4,SNR=4.6						
LPAZ	**La Paz**	**154.66**	**236**	PKPbc	**PKPbc**	**09 19 08.4**	**-0.1**
	0.4nm,0.5s,baz=173,slow=3.3,SNR=1.8						

IDC 20 09:02:14.8±3.3,34.°21S×179.°28W,h0km,mb3.6/2, mbtmp3.6/3,ML3.7/1,Error ellipse: s-maj=75.7km s-min=36.9km az=115.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**4.98**	**215**	Pn	Pn	09 03 30.8	0.0
	2.8nm,0.3s,baz=258,slow=1.6,SNR=14						
URZ				Sn	Sn	09 04 30.1	+1.0
	2.5nm,0.3s,baz=235,slow=19,SNR=6.1						
	4.7nm,0.3s						
ASAR	**Alice Springs**	**41.98**	**272**	P	P	09 10 07.8	0.0
	0.6nm,0.7s,baz=115,slow=8.1,SNR=5.8						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**43.31**	**277**	P	P	09 10 18.3	-0.3
	0.9nm,1.0s,baz=118,slow=7.6,SNR=4.6						
	0.9nm,1.0s						
H03N3	**Juan Fernandez**	**79.48**	**123**	T	T	10 41 27.2	
	baz=246,slow=23,SNR=5.7						
H03N2	**Juan Fernandez**	**79.49**	**123**	T	T	10 41 27.2	
	baz=246,slow=23,SNR=5.4						
H03N1	**Juan Fernandez**	**79.50**	**123**	T	T	10 41 27.2	
	baz=246,slow=23,SNR=7.6						
FINES	**FINESS Array B**	**148.28**	**337**	PKPbc	PKPbc	09 22 01.4	-0.6
	1.1nm,0.7s,baz=41,slow=4.6,SNR=3.5						

*IDC **20** 09:03:28.9±0.5,16.°64N×95.°41W,h0km,mb4.6/25, mbtmp4.6/28,ML4.2/3,MS3.9/43,Error ellipse: s-maj=11.0km s-min=8.1km az=130.0*
*MOS **20** 09:03:30.3±0.9,16.°84N×95.°22W,h13km,mb5.1/39,Error ellipse: s-maj=8.8km s-min=5.5km az=103.4*
*NEIC **20** 09:03:31.2±1.9,16.°73N±0.°03×95.°38W±0.°03,h10km±1km, mb5.0/686,Mww4.8/38,Md5.4/171(MEX),Error ellipse: s-maj=5.9km s-min=5.2km az=150.0*
*NEIC **20** 09:03:31.2,16.°73N×95.°38W,h20km*
*NEIC **20** 09:03:31.2,16.°73N×95.°38W,h20km,Moment Tensor Solution. Duration: 1s2 Moment tensor: Scale 10^{16}Nm; M_{rr}=1.89; $M_{\theta\theta}$=1.74; $M_{\phi\phi}$=0.15; $M_{r\theta}$=0.42; $M_{\theta\phi}$=0.75; $M_{r\phi}$=0.30; Fault plane solution: $M_0$2.03000×10^{16} NP1:ϕ_s72.45000°, δ38.02000°,λ-83.78000°. NP2:ϕ_s244.58000°, δ52.24000°, λ-94.84000°. Principal axes: T 2.0993, Plg7.0000°, Azm338.0000°; N -0.1370, Plg4.0000°, Azm248.0000°; P -1.9623, Plg82.0000°, Azm130.0000°;*
*CATAC **20** 09:03:33.1±0.8,17.°N±3.°×-9.°5W±.°,h1km,M5.6/10,mb5.8/6, mB5.7/6,MLv5.7/10,Mw(mB)5.2/6 Error ellipse: s-maj=10.6km s-min=5.6km az=80.6,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=8.22; $M_{\theta\theta}$5.66; $M_{\phi\phi}$2.56; $M_{r\theta}$4.00; $M_{\theta\phi}$4.26; $M_{r\phi}$1.77; Fault plane solution: $M_0$9.50545×10^{15} NP1:ϕ_s49.41572°, δ31.75891°, λ-99.28500°. NP2:ϕ_s240.29956°, δ58.70464°, λ-84.29631°. Principal axes: T 9.6727, Plg13.5283°, Azm326.1546°; N -0.3438, Plg4.8716°, Azm57.3296°; P -9.3289, Plg75.5897°, Azm166.7021°; confirmed*
*MEX **20** 09:03:34.9±2.6,16.°64N×95.°39W,h17km±74km,MD5.4*
*GCMT **20** 09:03:35.2±0.3,16.°80N±0.°02×95.°33W±0.°03,h21km, MW4.9/88,Moment Tensor Solution. s30,c37; s88,c122; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.26±.15; $M_{\theta\theta}$2.05±.10; $M_{\phi\phi}$0.21±.09; $M_{r\theta}$0.72±.12; $M_{\theta\phi}$0.61±.05; $M_{r\phi}$0.67±.16; Best double couple: $M_0$2.45100×10^{16} NP1:ϕ_s83.00000°,δ35.00000°,λ-74.00000°. NP2: ϕ_s244.00000°, δ57.00000°,λ-101.00000°. Principal axes: T 2.4030, Plg11.0000°, Azm341.0000°; N 0.0960, Plg9.0000°, Azm250.0000°; P -2.4990, Plg76.0000°, Azm121.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 20 09:03:30.8±0.5,16.°62N±0.°02×95.°38W±0.°02,h14km±2km, n1108,σ1s64/997,mb5.0/333,MS3.9/43,23C-12D,Oaxaca

| Code | Station Name | Δ° | AZ° | Phase ID Op | IS

PEIG Sn 09 04 23.9 -0.3
PEIG Puerto Escondi 1.81 250⇑ eP Pn 09 04 01.5 0.0
PEIG eS Sn 09 04 23.9 -0.3
PMUV Sontecomapan 1.93 7 Pn 09 04 02.6 -0.7
PMUV Sn 09 04 27.8 +0.4
PMUV Sontecomapan 1.93 7⇑ iP Pn 09 04 02.6 -0.7
PMUV i S Sn 09 04 27.8 +0.4
YOIG Yosondua 2.08 277 Pb 09 04 07.7 -1.0
YOIG Sb 09 04 34.0 -0.5
YOIG Yosondua 2.08 277⇓ eP Pb 09 04 07.7 -1.0
YOIG eS Sb 09 04 34.0 -0.5
TGIG 2.17 86 Pn 09 04 07.8 +1.2
TGIG Sn 09 04 31.5 -1.8
TGIG 2.17 86⇓ eP Pn 09 04 07.8 +1.2
TGIG eS Sn 09 04 31.5 -1.8
TOIG Toxpalan 2.17 313 Pb 09 04 09.1 -1.0
TOIG Sn 09 04 35.4 +1.9
TOIG Toxpalan 2.17 313⇑ eP Pb 09 04 09.1 -1.0
TOIG eS Sn 09 04 35.4 +1.9
TGBT Tuxtla Gutierr 2.20 86 Pb 09 04 09.6 -0.8
TGBT Sb 09 04 37.0 -0.6
TGBT Tuxtla Gutierr 2.20 86 eP Pb 09 04 09.6 -0.8
TGBT eS Sb 09 04 37.0 -0.6
PCIG 2.27 113 Pn 09 04 09.4 +1.5
PCIG 2.27 113⇑ eP Pn 09 04 09.4 +1.5
TXIG Tlaxiaco 2.37 286 Pn 09 04 11.6 +2.1
TXIG Sn 09 04 40.0 +1.5
TXIG Tlaxiaco 2.37 286⇑ eP Pn 09 04 11.6 +2.1
TXIG eS Sn 09 04 40.0 +1.5
TPIG Tehuac#an 2.60 314 Pn 09 04 15.0 +2.4
TPIG Sn 09 04 45.0 +1.0
TPIG Tehuac#an 2.60 314 eP Pn 09 04 45.0 +2.4
TPIG eS Sn 09 04 45.0 +1.0
HLIG Huajuapan de L 2.61 298 Pn 09 04 14.8 +2.1
HLIG Sn 09 04 46.2 +1.9
HLIG Huajuapan de L 2.61 298⇑ eP Pn 09 04 14.8 +2.1
HLIG eS Sn 09 04 46.2 +1.9
PNIG Pinotepa 2.64 265 Pn 09 04 13.2 +0.2
PNIG Sn 09 04 45.4 +0.4
PNIG Pinotepa 2.64 265⇓ eP Pn 09 04 13.2 +0.2
PNIG eS Sn 09 04 45.4 +0.4
VHSA Villahermosa 2.70 60 Pn 09 04 15.5 +1.7
VHSA Sn 09 04 47.7 +1.4
VHSA Villahermosa 2.70 60 eP Pn 09 04 15.5 +1.7
VHSA eS Sn 09 04 47.7 +1.4
FTIG Fresnillo de T 2.92 296 Pb 09 04 20.7 -2.1
FTIG Sn 09 04 53.9 +2.0
FTIG Fresnillo de T 2.92 296 eP Pb 09 04 20.7 -2.1
FTIG eS Sn 09 04 53.9 +2.0
JAUV Jalcomulco 3.04 334 Pn 09 04 17.4 -1.2
JAUV Sn 09 04 52.7 -2.2
JAUV Jalcomulco 3.04 334⇑ eP Pn 09 04 17.4 -1.2
JAUV eS Sn 09 04 52.7 -2.2
CCIG Comitan 3.13 96 Pn 09 04 20.6 +0.7
CCIG Comitan 3.13 96 eP Pn 09 04 21.7 +1.8
CCIG eS Sn 09 04 57.6 +0.3
MGIG Malinaltepec 3.17 281 Pn 09 04 23.2 +2.8
MGIG Sn 09 04 59.2 +1.1
MGIG Malinaltepec 3.17 281 eP Pn 09 04 23.2 +2.8
MGIG eS Sn 09 04 59.2 +1.1
TLIG Tlapa 3.18 288 Pn Pn 09 04 22.5 +1.9
TLIG Tlapa 3.18 288 eP Pn 09 04 23.0 +2.4
TLIG eS Sn 09 04 59.7 +1.2
LVIG Laguna Verde 3.24 342 Pn 09 04 19.5 -1.7
LVIG Sn 09 04 58.0 -1.6
LVIG Laguna Verde 3.24 342 eP Pn 09 04 19.5 -1.7
LVIG eS Sn 09 04 58.0 -1.6
HMTT Tlapaneco 3.25 292 Pb 09 04 29.8 +1.4
HMTT Sb 09 05 09.7 +1.7
HMTT Tlapaneco 3.25 292 eP Pb 09 04 29.8 +1.4
HMTT eS Sb 09 05 09.7 +1.7
PATR El Naranjo 3.38 116 Pn 09 04 25.4 +1.9
PATR Sn 09 05 04.8 +1.3
PATR El Naranjo 3.38 116 eP Pn 09 04 25.4 +1.9
PATR eS Sn 09 05 04.8 +1.3
PAVE Pavencul 3.40 114 Pn 09 04 26.2 +2.6
PAVE Sn 09 05 06.3 +2.4
PAVE Pavencul 3.40 114 eP Pn 09 04 26.2 +2.6
PAVE eS Sn 09 05 06.3 +2.4
THIG 3.45 119 Pn 09 04 25.4 +1.2
THIG Sn 09 05 03.4 -1.5
THIG 3.45 119 eP Pn 09 04 25.4 +1.2
THIG eS Sn 09 05 03.4 -1.5
CHUJ Union Juarez 3.50 115 eP Pn 09 04 27.3 +2.2
CHUJ eS Sn 09 04 38.9 +1.6
CRIG Cruz Grande 3.59 272 Pn 09 04 26.3 +0.2
CRIG Sn 09 05 12.7 +4.3
CRIG Cruz Grande 3.59 272⇓ eP Pn 09 04 26.3 +0.2
CRIG eS Sn 09 05 12.7 +4.3
PPAX Atlixo 3.69 309 eP Pn 09 04 29.9 +2.3
PPAX eS Sn 09 05 08.2 -2.8
PBCV Popocatepetl 3.83 308 eP Pn 09 04 33.2 +3.6
PBCV eS Sb 09 05 23.1 -1.7
PPCL Tochimilco 3.83 307 eP Pn 09 04 32.8 +3.1
PPCL eS Sn 09 05 15.8 +1.1
PPSX Xalitzintla 3.85 310 eP Pb 09 04 34.7 -4.1
PPSX eS Sn 09 05 18.4 +3.1
PPPT Popocatepetl 3.87 308 eP Pn 09 04 33.6 +3.2
PPPT eS Sn 09 05 17.3 +1.3
PPCU Popocatapetl 3.89 308 eP Pn 09 04 34.1 +3.5
PPCU eS Sn 09 05 17.7 +1.3
PBXN Popocatepetl 3.92 308 eP Pn 09 04 34.4 +3.3
PBXN eP Pb 09 04 34.5 -5.5
PBXN eS Sn 09 05 16.2 -0.9
PPM Popocatepetl 3.93 309 eP Pn 09 04 34.6 +3.4
PPM eS Sb 09 05 26.1 -1.8
PPIG Popocatepetl 3.93 309 Pn 09 04 34.6 +3.4
PPIG Sb 09 05 26.1 -1.8
HUEH Huehuetenango 3.95 109 Pn 09 04 32.6 +1.3
HUEH Huehuetenango 3.95 109 eP Pn 09 04 33.0 +1.7
HUEH eS Sn 09 05 18.2 +0.7
HUEH Huehuetenango 3.95 109 P Pn 09 04 34.1 +2.8
AMVM AMECAMECA 4.09 308 Pn 09 04 33.0 -0.2
AMVM AMECAMECA 4.09 308 eP Pn 09 04 33.0 -0.2
CXUV Coxquihui 4.11 330 Pn 09 04 32.8 -0.4
CXUV Sn 09 05 19.8 -1.3
CXUV Coxquihui 4.11 330⇑ eP Pn 09 04 32.8 -0.4
CXUV eS Sn 09 05 19.8 -1.3
DAIG Los Arroyos 4.11 276 Pn 09 04 34.1 +1.0
DAIG Sn 09 05 21.4 +0.3
DAIG Los Arroyos 4.11 276 eP Pn 09 04 34.1 +1.0
DAIG eS Sn 09 05 21.4 +0.3
RTAL Retalhuleu 4.12 120 Pn 09 04 35.0 +1.6
RTAL Retalhuleu 4.12 120 eP Pn 09 04 34.9 +1.5
RTAL eS Sn 09 05 23.1 +1.7
RTAL Retalhuleu 4.12 120 P Pn 09 04 34.6 +1.2
RTAL S Sn 09 05 22.9 +1.4
YAIG Yautepec 4.16 303 Pn 09 04 36.9 +2.9
YAIG Sn 09 05 24.3 +1.8
YAIG Yautepec 4.16 303⇑ eP Pn 09 04 36.9 +2.9
YAIG eS Sn 09 05 24.3 +1.8
MEIG Mezcala 4.25 288 Pn 09 04 37.5 +2.3
MEIG Sn 09 05 27.8 +3.1
MEIG Mezcala 4.25 288⇑ eP Pn 09 04 37.5 +2.3
MEIG eS Sn 09 05 27.8 +3.1
MPVM San Francisco 4.30 307 Pn 09 04 39.2 +3.1
MPVM San Francisco 4.30 307 eP Pn 09 04 39.2 +3.1
PLIG Platanillo 4.31 295 Pn 09 04 39.9 +3.9
PLIG eS Sn 09 05 28.7 +2.6
PLIG Platanillo 4.31 295 eP Pn 09 04 39.9 +3.9
PLIG eS Sn 09 05 28.7 +2.6
ACP2 Acapulco 4.32 274 Pn 09 04 36.5 +0.3
ACP2 Sb 09 05 33.0 -5.6
ACP2 Acapulco 4.32 274 eP Pn 09 04 36.5 +0.3
ACP2 eS Sb 09 05 33.0 -5.6
THVM De Xico 4.34 309 Pn 09 04 38.9 +2.3
THVM De Xico 4.34 309 eP Pn 09 04 38.9 +2.3
TXVM Universitario 4.37 310 Pn 09 04 39.4 +2.4
TXVM Universitario 4.37 310 eP Pn 09 04 39.4 +2.4
XCVM Xochimilco 4.41 307 Pn 09 04 40.7 +3.1
XCVM Xochimilco 4.41 307 eP Pn 09 04 40.7 +3.1
TLVM San Miguel Top 4.42 306 Pn 09 04 40.0 +2.2
TLVM San Miguel Top 4.42 306 eP Pn 09 04 40.0 +2.2
VTVM Tizayuca 4.49 315 Pn 09 04 42.0 +3.3
VTVM Tizayuca 4.49 315 eP Pn 09 04 42.0 +3.3
CNCY Coyoacan 4.49 307 eP Pn 09 04 41.8 +3.1
CNCY eS Sn 09 05 32.2 +1.2
PBVM Pinon 4.50 309 Pn 09 04 41.1 +2.5
PBVM Pinon 4.50 309 eP Pn 09 04 41.1 +2.5

UNM Universidad Na 4.50 307 Pn Pn 09 04 40.6 +1.7
UNM Universidad Na 4.50 307 P Pn 09 04 40.6 +1.7
UNM Universidad Na 4.50 307 eP Pn 09 04 42.4 +3.5
UNM eS Sn 09 05 36.1 +4.9
VRVM Mexico City 4.51 309 Pn 09 04 41.9 +3.0
VRVM Mexico City 4.51 309 eP Pn 09 04 41.9 +3.0
BJVM Benito Juarez 4.53 308 Pn 09 04 41.3 +2.1
BJVM Benito Juarez 4.53 308 eP Pn 09 04 41.3 +2.1
MAVM Malinalco, Edo 4.55 301 Pn 09 04 40.2 +0.7
MAVM Sn 09 05 35.3 +2.9
MAVM Malinalco, Edo 4.55 301 eP Pn 09 04 40.2 +0.7
MAVM eS Sn 09 05 35.3 +2.9
MCRU Las Cruces 4.56 307 eP Pn 09 04 41.6 +1.9
AOVM Tlapan 4.58 306 Pn 09 04 43.4 +3.2
AOVM Tlapan 4.58 306 eP Pn 09 04 43.4 +3.2
PTVM Pico Tres Padr 4.62 310 Pn 09 04 43.2 +2.8
PTVM Pico Tres Padr 4.62 310 eP Pn 09 04 43.2 +2.8
APVM Azcapotzalco 4.62 309 Pn 09 04 42.9 +2.4
APVM Azcapotzalco 4.62 309 eP Pn 09 04 42.9 +2.4
SCIG Sabancuy 4.63 59 Pn 09 04 40.7 +0.4
SCIG Sn 09 05 33.8 -0.2
SCIG Sabancuy 4.63 59⇓ eP Pn 09 04 40.7 +0.4
SCIG eS Sn 09 05 33.8 -0.2
INVM La Marquesa 4.64 305 Pn 09 04 42.8 +2.0
INVM La Marquesa 4.64 305 eP Pn 09 04 42.8 +2.0
CAIG El Cayaco 4.70 276 Pn 09 04 42.2 +0.9
CAIG Sn 09 05 38.2 +2.6
CAIG El Cayaco 4.70 276 eP Pn 09 04 42.2 +0.9
CAIG eS Sn 09 05 38.2 +2.6
AZVM Cuida Lopez Ma 4.74 309 Pn 09 04 44.9 +2.8
AZVM Cuida Lopez Ma 4.74 309 eP Pn 09 04 44.9 +2.8
ZUVM ZUMPANGO 4.74 310 Pn 09 04 44.5 +2.4
ZUVM ZUMPANGO 4.74 313 eP Pn 09 04 44.5 +2.4
ATYC Atoyac 4.87 278 Pn 09 04 45.8 +2.1
ATYC Sn 09 05 44.8 +4.9
ATYC Atoyac 4.87 278 eP Pn 09 04 45.8 +2.1
ATYC eS Sn 09 05 44.8 +4.9
TOVM TOLUCA 4.87 304 Pn 09 04 47.3 +3.3
TOVM TOLUCA 4.87 304 eP Pn 09 04 47.3 +3.3
APG El Apazote 5.00 108 Pn Pn 09 04 47.4 +1.7
3.1nm,0.3s,baz=226,slow=15,SNR=159
APG Sn Sn 09 05 45.1 +1.6
11nm,0.3s,baz=165,slow=10,SNR=8.5
APG LR LR 09 06 40.8
comp=Z,269nm,18.7s,baz=283,slow=38
8.5nm,0.4s
ARIG Puente Sto Nin 5.02 290 Pn 09 04 48.4 +2.6
ARIG Sn 09 05 47.1 +3.5
ARIG Puente Sto Nin 5.02 290 eP Pn 09 04 48.4 +2.6
ARIG eS Sn 09 05 47.1 +3.5
DHIG Demacu 5.04 317 Pn 09 04 48.7 +2.5
DHIG Sn 09 05 47.4 +3.1
DEIG Demacu 5.04 317 eP Pn 09 04 48.7 +2.4
DEIG eS Sn 09 05 47.4 +3.0
ATVM ATLACOMULCO 5.26 307 Pn 09 04 52.3 +2.9
ATVM ATLACOMULCO 5.26 307 eP Pn 09 04 52.3 +2.9
PETF Flores 5.29 86 Pn 09 04 50.0 +0.5
PETF Flores 5.29 86 eP Pn 09 04 50.7 +1.2
PETF eS Sn 09 05 49.1 -1.3
PETF Flores 5.29 86 P Sn 09 04 51.6 +2.1
PETF S Sn 09 05 52.6 +2.2
ACIG Acambay 5.42 309 Pn 09 04 52.1 +0.7
ACIG Acambay 5.42 309 eP Pn 09 04 52.1 +0.7
PET2 Petatlan 5.70 280 Sn 09 06 07.4 +7.1
PET2 Petatlan 5.70 280 eS Sn 09 06 07.4 +7.1
FAME Alcaldia de Sa 5.87 117 P Pn 09 04 58.9 +1.4
ZIIG Zihuatanejo 5.90 280 Pn 09 04 59.6 +1.8
ZIIG Sn 09 06 05.3 +0.1
ZIIG Zihuatanejo 5.90 280 eP Pn 09 04 59.6 +1.8
ZIIG eS Sn 09 06 05.3 +0.1
SLOZ Alcaldia de Sa 5.99 115 P Pn 09 05 02.0 +2.9
SLOZ S Sn 09 06 11.0 +3.4
NUBE Las Nubes 6.05 116 P Pn 09 05 02.3 +2.3
NUBE S Sn 09 06 10.7 +1.6
ACAM Acambaro 6.10 305 Sn 09 06 18.1 +7.5
ACAM Acambaro 6.10 305 eS Sn 09 06 18.1 +7.5
ESQI Esquipulas 6.17 109 Pn 09 05 02.0 +0.3
MTO3 Montecristo 6.21 110 Pn 09 05 02.6 +0.3
MTO3 Montecristo 6.21 110 P Pn 09 05 03.7 +1.4
MTO3 S Sn 09 06 15.0 +1.7
UON La Union 6.29 283 eS Sn 09 06 22.4 +7.6
MOIG Morelia 6.30 300 Pn 09 05 07.0 +3.4
MOIG Morelia 6.30 300 eP Pn 09 05 07.4 +3.8
MOIG eS Sn 09 06 22.5 +7.0
JAYA Jayaque - finc 6.45 116 P Pn 09 05 07.9 +2.4
JAYA S Sn 09 06 19.6 +0.5
IZABA Izabal, Puerto 6.59 97 eP Pn 09 05 10.1 +2.7
IZABA eS Sn 09 06 22.1 -0.3
MYIG Merida 6.87 50 Pn 09 05 12.2 +1.1
MYIG Sn 09 06 22.9 -6.2
MYIG Merida 6.87 50 eP Pn 09 05 12.2 +1.1
MYIG eS Sn 09 06 22.9 -6.2
IGIG Irapuato, Guan 6.97 307 Pn 09 05 15.9 +3.1
IGIG Sn 09 06 36.2 +4.2
IGIG Irapuato, Guan 6.97 307 eP Pn 09 05 15.9 +3.1
IGIG eS Sn 09 06 36.2 +4.2
GTIG Gomez Farias 7.33 332 Pn 09 05 18.2 +0.7
GTIG Sn 09 06 47.5 +6.8
GTIG Gomez Farias 7.33 332 eP Pn 09 05 18.2 +0.7
GTIG eS Sn 09 06 47.5 +6.8
TEIG Tepich 7.64 61 Pn 09 05 21.3 -0.4
TEIG Tepich 7.64 61⇓ eP Pn 09 05 20.5 -1.2
TEIG eS Sn 09 06 41.6 -6.5
TEIG Tepich 7.64 61 P Pn 09 05 21.9 +0.2
30µm924nm,0.7s
MMIG Aquila 7.78 283 Pn 09 05 25.3 +1.6
MMIG Sn 09 06 51.9 +0.3
MMIG Aquila 7.78 283 eP Pn 09 05 25.3 +1.6
MMIG eS Sn 09 06 51.9 +0.3
TGUH Tegucigalpa,Un 8.23 107 Pn 09 05 30.1 +0.2
INCO Volcan de Coli 8.33 291 eP Pn 09 05 35.0 +3.4
SOMAC Volcano de Col 8.36 291 eP Pn 09 05 35.6 +3.7
CEGR Campo Tres 8.52 290 eP Pn 09 05 36.6 +2.6
CDAR Ciudad de Arme 8.54 287 eP Pn 09 05 36.5 +2.5
CRIN San Cristobal 8.96 115 Pn Pn 09 05 40.9 +1.0
LNIG Linares 9.07 336 Pn 09 05 43.2 +1.8
LNIG Sn 09 07 27.7 +4.2
LNIG Linares 9.07 336 eP Pn 09 05 43.2 +1.8
LNIG eS Sn 09 07 27.7 +4.2
ZAIG Zacatecas 9.12 313 Pn Pn 09 05 40.8 -1.5
ZAIG Zacatecas 9.12 313 eP Pn 09 05 45.6 +3.3
ZAIG eS Sn 09 07 27.7 +2.7
HERN Volcan Telica 9.19 115 Pn 09 05 43.4 +0.2
CNGN Cerro Negro 9.35 115 Pn 09 05 45.4 +0.1
MGAN Managua 9.91 116 Pn Pn 09 05 52.4 -0.5
BOAB BOACO BROADBAN 10.28 113 Pn Pn 09 05 57.2 -0.8
SIUN Universidad Ur 10.64 104 Pn Pn 09 06 02.4 -0.6
JUD3 Juan Diaz 3 11.53 123 Pn Pn 09 06 17.5 +2.3
JTS Las Juntas de 11.94 121 Pn Pn 09 06 22.1 +1.4
8.0nm,0.3s,baz=309,slow=8.0,SNR=25
JTS Sn Sn 09 08 37.4 +3.6
0.6nm,0.3s,baz=280,slow=23,SNR=1.0
31nm,0.5s
JTS Las Juntas de 11.94 121 Pn 09 06 22.9 +2.2
833A Chaparral WMA, 12.22 343 Pn 09 06 24.5 0.0
735A Kenedy 12.38 350 Pn Pn 09 06 25.8 -0.9
EF02 Christine 12.44 347 Pn Pn 09 06 25.2 -2.2
EF04 Eagle Ford 04 12.72 350 Pn 09 06 29.1 -2.3
HDC Heredia 12.79 120 Pn 09 06 32.9 +0.4
HDC Heredia 12.79 120 eP Pn 09 06 32.9 +0.4
RAFA San Farael, Vo 13.06 119 Pn 09 06 37.2 +0.9
EGUB Earth Gujpi 13.12 118 Pn 09 06 38.1 +1.2
SOR Soroa 13.17 60 Pn 09 06 35.9 -1.6
SOR Soroa 13.17 60 P Pn 09 06 35.9 -1.6
HKT Hockley 13.27 358 Pn 09 06 37.2 -1.6
HKT Hockley 13.27 358 i P Pn 09 06 39.6 +0.8
HNDO Hondo 13.33 345 Pn 09 06 39.9 +0.2
DRIO Del Rio 13.62 340 Pn 09 06 43.6 0.0
HPIG 14.01 319 Pn 09 06 50.5 +1.4
HNVL Huntsville, TX 14.07 360 Pn 09 06 47.8 -1.9
441A DeRidder 14.20 8 Pn 09 06 50.8 -0.8
435B Jarrell 14.24 352 Pn Pn 09 06 51.6 -0.5
JCT Junction City 14.37 344 Pn 09 06 51.8 -2.2
JCT Junction City 14.37 344 P Pn 09 06 51.8 -2.2
BRU2 Volcan 14.62 121 Pn 09 06 56.0 -1.5
SAND Sanderson 14.64 336 Pn Pn 09 06 56.6 -1.0
TXAR Lajitas Array 14.76 330 Pn Pn 09 06 57.3 -2.1
TXAR Lg Lg 09 11 15.3
0.1nm,0.3s,baz=150,slow=22,SNR=1.4

TXAR Lajitas Array 14.76 330 Pn 09 06 56.3 -3.1
TXAR Lajitas Array 14.76 330 P Pn 09 06 56.3 -3.1
TX31 Lajitas Ar. Si 14.76 330 Pn Pn 09 06 57.6 -1.8
BRDY Brady 14.96 348 Pn 09 07 00.1 -1.9
NATX Nacogdoches 15.08 2 Pn Pn 09 07 02.1 -1.4
OZNA Ozona 15.17 341 Pn 09 07 03.3 -1.5
237A Washetta, Mont 15.31 359 Pn 09 07 06.0 -0.6
237A IAmb IAmb 09 07 10.4
comp=Z,57nm,1.1s
SLBS Sierra La Lagu 15.36 300 Pn Pn 09 07 07.3 -0.1
WHTX Lake Whitney, 15.41 353 Pn 09 07 07.4 -0.5
ALPN Alpine 15.63 333 Pn Pn 09 07 10.1 -0.9
ALPN IAmb IAmb 09 07 18.4
comp=Z,89nm,0.6s
346A Big Creek Wild 15.65 19 Pn Pn 09 07 09.4 -1.6
346A IAmb IAmb 09 07 16.3
comp=Z,46nm,0.6s
FW13 Cleburne 15.77 354 Pn Pn 09 07 10.9 -1.7
FW13 IAmb IAmb 09 07 19.6
comp=Z,80nm,0.6s
LPIG La Paz 15.84 300 Pn Pn 09 07 14.4 +0.9
comp=Z,0.7nm,0.3s,baz=42,slow=2.9,SNR=5.7
LPIG LR LR 09 13 03.0
comp=Z,1µm,18.9s,baz=126,slow=36
comp=Z,17nm,0.9s
TREL Terrell 16.05 358 Pn 09 07 15.0 -1.2
TREL IAmb IAmb 09 07 23.7
comp=Z,72nm,0.8s
SGCY Sterling City 16.09 342 Pn 09 07 14.8 -1.9
SGCY IAmb IAmb 09 07 22.4
comp=Z,52nm,0.5s
MNHN Monahans 16.12 337 Pn Pn 09 07 17.7 +0.6
VBMS Vicksburg 16.14 15 Pn Pn 09 07 17.1 -0.2
PLPT Palo Pinto 16.34 351 IAmb IAmb 09 07 25.3
comp=Z,72nm,0.8s
BRAL Brewton 16.35 26 IAmb IAmb 09 07 26.5
comp=Z,163nm,1.3s
ABTX Abilene, Hawle 16.39 347 Pn 09 07 20.4 -0.1
ABTX IAmb IAmb 09 07 26.3
comp=Z,95nm,0.6s
FW06 Azle 16.40 354 Pn 09 07 19.8 -0.8
143A Socs Landing, 16.41 12 Pn 09 07 19.5 -1.3
TPB06 Permian Basin 16.57 336 IAmb IAmb 09 07 28.2
comp=Z,77nm,0.6s
Z38A Mt. Pleasant 16.57 1 Pn 09 07 22.5 -0.3
Z38A IAmb IAmb 09 07 30.1
comp=Z,118nm,1.0s
PECS Pecos 16.59 334 IAmb IAmb 09 07 29.2
comp=Z,94nm,0.8s
Z41A Richland Creek 16.73 8 IAmb IAmb 09 07 32.1
comp=Z,149nm,0.8s
ODSA Odessa 16.74 338 Pn Pn 09 07 23.6 -1.4
129A Stewart Farms, 16.98 341 IAmb IAmb 09 07 35.4
comp=Z,28nm,0.8s
WLAR White Oak Lake 17.11 6 IAmb IAmb 09 07 36.4
comp=Z,66nm,0.6s
DWPF Disney Wildern 17.22 46 Pn Pn 09 07 30.5 -0.5
DWPF IAmb IAmb 09 07 33.6
comp=Z,239nm,1.6s
POST Post 17.28 342 Pn 09 07 30.8 -1.0
WTFS Witchita Falls 17.29 351 IAmb IAmb 09 07 41.2
comp=Z,281nm,1.6s
656A Willston 17.32 41 Pn 09 07 30.1 -2.2
LOOK Love County 17.37 355 P Pn 09 07 32.5 -0.4
CLNB Carlsbad 17.37 335 P 09 07 34.3 0.0
250A Grady 17.38 27 Pn 09 07 30.7 -2.4
CCAR Cane Creek 17.52 10 IAmb IAmb 09 07 40.9
comp=Z,72nm,0.8s
MNTX Cornudas Mount 17.55 331 Pn Pn 09 07 34.3 -0.8
DKNS Dickens 17.69 345 P Pn 09 07 37.1 +0.2
Y45A Yeager Farm, C 17.95 16 P Pn 09 07 40.2 +0.2
Y45A IAmb IAmb 09 07 49.4
comp=Z,48nm,0.6s
X34A Smith Ranch, M 18.04 353 Pn 09 07 39.8 -1.3
X34A IAmb IAmb 09 07 50.5
comp=Z,101nm,0.8s
UALR University of 18.28 8 IAmb IAmb 09 07 47.3
comp=Z,67nm,0.8s
WMOK Wichita Mounta 18.29 351 Pn 09 07 41.9 -2.4
WMOK Wichita Mounta 18.29 351 P Pn 09 07 41.9 -2.4
WMOK pmax pmax
comp=Z,19nm,0.9s
W35A Tecumseh 18.50 356 IAmb IAmb 09 07 55.3
comp=Z,114nm,1.2s
FNO Franklin 18.64 355 P P 09 07 45.9 -2.3
OKCSW OKLAHOMA CITY 18.80 355 P P 09 07 48.0 -1.8
SMWD Samnorwood 18.91 348 P Pn 09 07 51.8 0.0
SMWD IAmb IAmb 09 08 00.6
comp=Z,62nm,0.8s
AMTX Amarillo 19.04 344 P 09 07 52.2 -0.5
AMTX IAmb IAmb 09 08 04.0
comp=Z,49nm,0.6s
DEOK Depew 19.17 357 IAmb IAmb 09 08 06.6
comp=Z,86nm,0.7s
OK029 Liberty Lake 19.18 355 P P 09 07 53.9 -0.2
OK029 IAmb IAmb 09 08 00.6
comp=Z,174nm,1.6s
TUL3 Leonard 19.21 359 P 09 07 53.5 -0.9
TUL3 IAmb IAmb 09 08 05.8
comp=Z,69nm,1.1s
OK052 Battle Ridge R 19.33 357 IAmb IAmb 09 08 04.8
comp=Z,94nm,0.7s
FCAR Ozark Folk Cen 19.41 8 IAmb IAmb 09 08 03.1
comp=Z,44nm,0.7s
154A Montrose 19.41 33 P P 09 07 54.4 -2.2
154A IAmb IAmb 09 08 02.2
comp=Z,60nm,1.0s
121A Cookes Peak, D 19.42 327 IAmb IAmb 09 08 09.7
comp=Z,47nm,0.7s
HHAR Hobbs 19.62 3 IAmb IAmb 09 08 09.2
comp=Z,48nm,0.7s
LCAR Lake Charles 19.73 10 IAmb IAmb 09 08 02.3
comp=Z,50nm,0.8s
U38A Gravette 19.76 2 IAmb IAmb 09 08 06.8
comp=Z,62nm,0.9s
OK048 Pawnee Station 19.76 356 IAmb IAmb 09 08 07.8
comp=Z,138nm,1.2s
GNAR Gosnell 19.85 13 IAmb IAmb 09 08 15.2
comp=Z,77nm,1.0s
GOGA Godfrey 19.87 31 P 09 08 00.6 -1.0
GOGA Godfrey 19.87 31 P P 09 08 00.6 -1.0
GOGA pmax pmax
comp=Z,29nm,0.9s
CROK Carrier 19.94 354 IAmb IAmb 09 08 15.8
comp=Z,69nm,0.7s
Y52A Lilburn 19.96 29 P P 09 08 02.8 +0.1
Y52A IAmb IAmb 09 08 15.6
comp=Z,91nm,0.8s
BLOK Blackwell 20.12 356 IAmb IAmb 09 08 18.6
comp=Z,77nm,0.7s
Y22A Socorro 20.14 331 P P 09 08 04.9 +0.1
X51A Calhoun 20.21 26 IAmb IAmb 09 08 09.1
comp=Z,29nm,0.6s
T35A Sooner Cattle 20.24 357 P 09 08 05.4 -0.2
UTMT University of 20.48 15 IAmb IAmb 09 08 16.5
comp=Z,140nm,1.2s
WVT Waverly 20.56 18 P 09 08 07.9 -1.2
WVT IAmb IAmb 09 08 12.5
comp=Z,36nm,0.5s
WVT Waverly 20.56 18 P P 09 08 07.9 -1.2
WVT pmax pmax
comp=Z,36nm,0.5s
MGMO Mountain Grove 20.64 7 P 09 08 09.6 -0.4
MGMO IAmb IAmb 09 08 14.9
comp=Z,38nm,0.7s
ANMO Albuquerque 20.76 334 P Pn 09 08 12.9 -1.1
comp=Z,27nm,1.1s,baz=141,slow=12,SNR=21
ANMO LR LR 09 17 27.2
comp=Z,240nm,18.7s,baz=147,slow=40
comp=Z,27nm,1.1s
ANMO Albuquerque 20.76 334 P 09 08 12.0 +0.4
ANMO Albuquerque 20.76 334 ce eP Pn 09 08 13.1 -0.9
ANMO pmax pmax
comp=Z,27nm,1.0s
RTBA Rita Blanca 20.79 343 IAmb IAmb 09 08 23.1
comp=Z,63nm,0.9s
TUC Tucson 20.95 321 P 09 08 14.2 +0.8
TUC IAmb IAmb 09 08 24.0
comp=Z,43nm,0.9s
TUC Tucson 20.95 321 P P 09 08 14.2 +0.8
TUC pmax pmax
comp=Z,43nm,0.9s
TUC Tucson 20.95 321 eP Pn 09 08 15.5 -0.5
DBBC Dabeiba 21.04 115 P P 09 08 18.5 +4.0
W52A Murphy 21.05 27 P P 09 08 14.0 -0.5

CPCT Cooper Cave 21.11 25 P 09 08 14.1 -1.0
CPCT IAmb IAmb 09 08 17.5
comp=Z,31nm,0.7s
HODGE Hodges 21.13 31 IAmb IAmb 09 08 15.2
comp=Z,42nm,0.7s
T45A Paducah 21.17 15 P **P 09 08 14.9 -0.9**
BG3 Lake Jocassee 21.42 29 P **P 09 08 17.9 -0.6**
BG3 IAmb IAmb 09 08 34.9
comp=Z,68nm,0.7s
U49A Red Boiling Sp 21.57 21 P **P 09 08 18.4 -1.6**
T47A Sharon Grove 21.57 18 P 09 08 18.5 -1.5
TKL Tuckaleechee C 21.60 26 P **P 09 08 19.6 -0.8**
comp=Z,22nm,0.7s,baz=198,slow=6.4,SNR=40
TKL S **S 09 12 17.3 -2.0**
comp=Z,12nm,0.8s,baz=132,slow=8.4,SNR=4.4
TKL LR LR 09 18 00.8
comp=Z,151nm,21.4s,baz=192,slow=40
comp=Z,22nm,0.7s
TKL Tuckaleechee C 21.60 26 P 09 08 18.0 -2.3
CCM Cathedral Cave 21.66 9 P 09 08 19.6 -1.3
CCM IAmb IAmb 09 08 27.5
comp=Z,39nm,0.6s
CCM Cathedral Cave 21.66 9 P **P 09 08 19.7 -1.3**
CCM pmax pmax
comp=Z,39nm,0.6s
JSC Jenkinsville 21.68 33 P **P 09 08 19.7 -1.5**
JSC Jenkinsville 21.68 33 P **P 09 08 19.7 -1.5**
JSC pmax pmax
comp=Z,37nm,1.0s
FVM French Village 21.72 11 IAmb IAmb 09 08 30.1
comp=Z,25nm,0.6s
R40A Maddies Statio 21.76 7 IAmb IAmb 09 08 24.8
comp=Z,51nm,0.8s
R32A Long Quarter, 21.91 353 IAmb IAmb 09 08 32.2
comp=Z,47nm,0.8s
T25A Trinidad 21.94 340 IAmb IAmb 09 08 32.9
comp=Z,91nm,1.4s
Y57A Sumter 21.94 35 IAmb IAmb 09 08 36.1
comp=Z,26nm,0.5s
214A Organ Pipe Nat 21.98 317 P 09 08 25.7 +1.2
214A IAmb IAmb 09 08 32.2
comp=Z,80nm,1.1s
V53A Saluda 22.03 28 IAmb IAmb 09 08 46.8
comp=Z,33nm,0.7s
X18A Snowflake 22.10 327 IAmb IAmb 09 08 36.3
comp=Z,52nm,1.0s
PIX Pinacate 22.16 315 IAmb IAmb 09 08 33.8
comp=Z,83nm,1.2s
KMSC Kings Mountain 22.31 32 IAmb IAmb 09 08 32.3
comp=Z,60nm,0.9s
USIN University of 22.32 16 P **P 09 08 27.7 -0.3**
USIN IAmb IAmb 09 08 36.1
comp=Z,42nm,0.6s
T50A Nancy 22.36 23 IAmb IAmb 09 08 33.2
comp=Z,38nm,0.8s
KSU1 Kansas State U 22.42 357 P 09 08 28.5 -0.6
TZTN Tazewell 22.45 26 IAmb IAmb 09 08 30.9
comp=Z,37nm,0.7s
YOTC Yotoco, Valle 22.52 122 P **P 09 08 31.8 +1.3**
comp=Z,628nmcomp=Z,50nm,0.8s
GUY2C Guyana, Caldas 22.66 118 P **P 09 08 34.2 +1.8**
comp=Z,563nmcomp=Z,53nm,0.7s
JAMC Jamundi, Valle 22.71 124 P **P 09 08 35.4 +2.8**
comp=Z,43nm,0.9s
X16A Lo Mia Camp, P 22.83 324 IAmb IAmb 09 08 45.9
comp=Z,34nm,1.0s
SDCO Great Sand Dun 22.85 339 P **P 09 08 33.5 -0.6**
V55A Taylorsville 22.93 31 IAmb IAmb 09 08 34.3
comp=Z,47nm,0.7s
OLIL Olney 22.93 15 IAmb IAmb 09 08 35.4
comp=Z,54nm,0.8s
WCI Wyandotte Cave 22.96 19 P **P 09 08 33.1 -1.7**
WCI Wyandotte Cave 22.96 19 P **P 09 08 33.1 -1.7**
WCI pmax pmax
comp=Z,59nm,0.7s
P38A Dawn 22.97 4 IAmb IAmb 09 08 58.7
comp=Z,49nm,0.7s
BBAC Balboa, Cauca 23.00 127 P **P 09 08 39.1 +3.4**
comp=Z,1µmcomp=Z,85nm,1.1s
W57A Gilead 23.01 34 P **P 09 08 34.3 -1.1**
W57A IAmb IAmb 09 08 35.5
comp=Z,43nm,0.7s
POPC Popayan, Colom 23.12 125 P **P 09 08 39.7 +2.8**
comp=Z,672nmcomp=Z,29nm,1.8s
113A Mohawk Valley, 23.12 317 IAmb IAmb 09 08 45.0
comp=Z,127nm,1.9s
KSCO Kaye Shedlock' 23.19 346 P **P 09 08 36.5 -0.8**
KSCO IAmb IAmb 09 08 43.5
comp=Z,51nm,0.8s
OTAV Otavalo 23.32 133 P 09 08 41.3 +2.1
OTAV IAmb IAmb 09 08 50.3
comp=Z,78nm,1.6s
OTAV Otavalo 23.32 133 P **P 09 08 41.3 +2.1**
OTAV pmax pmax
comp=Z,78nm,1.7s
OTAV Otavalo 23.32 133 P **P 09 08 43.4 +4.2**
comp=Z,786nmcomp=Z,22nm,1.3s
OTAV Otavalo 23.32 133 *eP* **P 09 08 38.4 -0.7**
S51A Beattyville 23.37 24 IAmb IAmb 09 09 02.1
comp=Z,25nm,0.8s
R49A Shelbyville 23.38 21 IAmb IAmb 09 08 39.3
comp=Z,52nm,0.8s
Y14A Wickenburg 23.41 321 IAmb IAmb 09 08 46.4
comp=Z,74nm,1.7s
WUAZ Wupatki 23.61 326 P **P 09 08 41.6 0.0**
WUAZ IAmb IAmb 09 08 48.5
comp=Z,29nm,0.8s
R50A Paris 23.66 22 P 09 08 40.6 -1.3
R50A IAmb IAmb 09 08 45.7
comp=Z,30nm,0.6s
ROSC El Rosal 23.74 117 P **P 09 08 43.5 +0.2**
comp=Z,3.7nm,0.3s,baz=299,slow=11,SNR=5.8
ROSC LR LR 09 18 15.2
comp=Z,268nm,21.0s,baz=268,slow=37
comp=Z,3.7nm,0.3s
ROSC El Rosal 23.74 117 P 09 08 44.8 +1.5
ROSC IAmb IAmb 09 08 54.7
comp=Z,38nm,1.2s
ROSC El Rosal 23.74 117 P **P 09 08 44.8 +1.5**
ROSC pmax pmax
comp=Z,38nm,1.2s
BONI La Bonita 23.83 131 P **P 09 08 47.9 +3.9**
comp=Z,1µmcomp=Z,84nm,1.0s
V58A Windy Hill, Pi 23.97 34 IAmb IAmb 09 08 45.1
comp=Z,43nm,1.2s
GLA Glamis 23.99 317 IAmb IAmb 09 08 55.8
comp=Z,41nm,0.8s
P46A Rosedale 23.99 16 P **P 09 08 44.3 -0.7**
PAMC Pamplona, Colo 24.01 110 P **P 09 08 45.4 -0.5**
comp=Z,145nmcomp=Z,21nm,0.8s
ESJX Sierra Juarez 24.13 313 IAmb IAmb 09 08 54.0
comp=Z,78nm,1.7s
N35A Tabor 24.15 360 P **P 09 08 44.2 -2.3**
N38A Joes South For 24.16 4 P **P 09 08 45.5 -1.1**
BLYC Blythe 24.23 318 P 09 08 47.5 +0.2
P48A Milroy 24.36 19 P 09 08 47.2 -1.2
PV01 Paradox Valley 24.36 334 IAmb IAmb 09 08 56.3
comp=Z,42nm,1.1s
S54A Dingess, Becki 24.47 28 IAmb IAmb 09 08 49.2
comp=Z,26nm,0.8s
YUH Yuha Desert 24.49 314 IAmb IAmb 09 08 57.4
comp=Z,30nm,1.2s
PV13 Radium Mtn., P 24.49 334 P **P 09 08 51.1 +1.1**
PV13 IAmb IAmb 09 08 57.2
comp=Z,46nm,1.1s
PV15 Paradox Valley 24.50 335 IAmb IAmb 09 09 12.4
comp=Z,26nm,0.8s
PV05 Paradox Valley 24.54 333 IAmb IAmb 09 08 57.6
comp=Z,57nm,1.3s
PV03 Paradox Valley 24.58 334 IAmb IAmb 09 08 58.1
comp=Z,50nm,1.1s
PV17 East Wray Mesa 24.65 334 IAmb IAmb 09 08 58.7
comp=Z,56nm,1.3s
PV07 Paradox Valley 24.65 334 IAmb IAmb 09 08 59.1
comp=Z,35nm,1.0s
PV16 Nyswonger Mesa 24.66 334 IAmb IAmb 09 08 58.9
comp=Z,80nm,1.4s
Q51A Peebles 24.68 23 P 09 08 50.4 -0.9
SFIN Lafayette 24.74 15 P 09 08 50.9 -0.9
SFIN IAmb IAmb 09 08 52.5
comp=Z,36nm,0.7s
ISCO Idaho Springs 24.75 341 P **P 09 08 51.8 -0.5**
ISCO IAmb IAmb 09 08 59.3
comp=Z,27nm,1.1s
ISCO Idaho Springs 24.75 341 P **P 09 08 51.8 -0.5**
ISCO pmax pmax
comp=Z,27nm,1.2s

PV14 Lion Creek, Pa 24.76 334 IAmb IAmb 09 08 59.7
comp=Z,54nm,1.4s
BC3 Big Chuckawall 24.78 317 IAmb IAmb 09 09 04.5
comp=Z,51nm,1.0s
U15A North Rim 24.78 326 P **P 09 08 52.9 +0.3**
U15A IAmb IAmb 09 09 00.5
comp=Z,24nm,1.0s
PV22 Blue Mesa, Par 24.80 334 IAmb IAmb 09 09 06.8
comp=Z,26nm,0.9s
IRM Iron Mountain 24.89 318 IAmb IAmb 09 09 05.5
comp=Z,51nm,1.1s
PV21 Cone Mtn., Par 24.89 334 IAmb IAmb 09 09 15.8
comp=Z,21nm,0.8s
OGNE Ogallala 24.91 348 P **P 09 08 53.0 -0.5**
BAR Barrett 25.02 314 IAmb IAmb 09 09 03.4
comp=Z,33nm,1.4s
O48B Farmland 25.17 19 P **P 09 08 54.1 -1.6**
HMU Henry Mountain 25.17 331 IAmb IAmb 09 09 05.2
comp=Z,48nm,1.2s
BORC Borrego Spring 25.18 315 IAmb IAmb 09 09 05.0
comp=Z,49nm,1.3s
SDV Santo Domingo 25.31 105 LR LR 09 19 35.8
comp=Z,448nm,21.3s,baz=294,slow=38
SDV Santo Domingo 25.31 105 P 09 08 55.8 -1.7
SDV Santo Domingo 25.31 105 *eP* **P 09 08 55.9 -1.7**
DANC Danby, Needles 25.35 319 P **P 09 08 58.5 +1.1**
DANC IAmb IAmb 09 09 09.4
comp=Z,33nm,0.9s
PMD Palm Desert 25.38 316 IAmb IAmb 09 09 06.8
comp=Z,42nm,1.2s
PFO Pinyon Flats O 25.42 316 LR LR 09 20 41.8
comp=Z,716nm,18.0s,baz=137,slow=41
PFO Pinyon Flats O 25.42 316 P 09 08 58.3 +0.1
PFO IAmb IAmb 09 09 06.8
comp=Z,34nm,1.1s
PFO Pinyon Flats O 25.42 316 *i* P **P 09 09 00.6 +2.4**
PFO pmax pmax
comp=Z,67nm,1.3s
DNR Dunn Ranch,Anz 25.50 315 IAmb IAmb 09 09 09.0
comp=Z,22nm,0.8s
KNB Kanab 25.51 326 IAmb IAmb 09 09 10.7
comp=Z,37nm,1.0s
S57A Dark Hollow, R 25.55 31 IAmb IAmb 09 09 07.7
comp=Z,18nm,0.8s
N47A Urbana 25.58 17 P 09 08 57.9 -1.6
MACC Macarena, Meta 25.61 122 P **P 09 09 02.2 +2.2**
comp=Z,856nmcomp=Z,46nm,0.7s
Q54A Coxs Mills 25.66 27 IAmb IAmb 09 09 01.1
comp=Z,23nm,0.6s
T59A Dodie "B" Far 25.68 34 P 09 09 00.4 0.0
V12A Nelson 25.74 321 IAmb IAmb 09 09 09.0
comp=Z,26nm,1.1s
P53A Whipple 25.84 25 P 09 09 01.0 -0.9
MTPU Mount Pierson 25.95 329 IAmb IAmb 09 09 12.3
comp=Z,26nm,0.9s
O20A White River Ci 25.95 337 IAmb IAmb 09 09 36.6
comp=Z,101nm,1.8s
PTLC Puerto Leguiza 26.06 127 P **P 09 09 09.6 +5.5**
N49A Columbus Grove 26.08 20 IAmb IAmb 09 09 05.3
comp=Z,31nm,0.6s
Q16A Castle Valley 26.16 331 P **P 09 09 03.1 -1.8**
Q16A IAmb IAmb 09 09 30.3
comp=Z,22nm,1.0s
O52A Adamsville 26.20 24 P 09 09 03.8 -1.3
O52A IAmb IAmb 09 09 09.0
comp=Z,46nm,1.0s
L44A Lake County Fo 26.26 13 P **P 09 09 05.1 -0.5**
Q56A Snyder Ridge, 26.45 29 IAmb IAmb 09 09 16.6
comp=Z,21nm,0.8s
L46A Eue Claire 26.48 15 P **P 09 09 06.0 -1.6**
O53A New Philadelph 26.56 25 P **P 09 09 07.2 -1.2**
O54A Avella 26.85 26 IAmb IAmb 09 09 16.1
comp=Z,21nm,0.6s
ECSD EROS Data Cent 27.04 358 IAmb IAmb 09 09 51.9
comp=Z,32nm,0.7s
N53A Lisbon 27.19 25 P **P 09 09 12.8 -1.2**
PAMR Moraine State 27.60 26 IAmb IAmb 09 09 17.1
comp=Z,33nm,1.3s
M52A Chesterland 27.61 23 IAmb IAmb 09 09 23.7
comp=Z,31nm,0.8s
K22A Casper 27.64 342 IAmb IAmb 09 09 24.1
comp=Z,44nm,1.3s
I42A Draeger Farm, 27.73 10 IAmb IAmb 09 09 23.3
comp=Z,29nm,0.9s
CTU Camp Tracy 27.86 333 P **P 09 09 18.3 -1.9**
SJG San Juan 27.93 83 LR LR 09 22 06.8
comp=Z,106nm,18.1s,baz=262,slow=40
DUG Dugway, Tooele 27.94 331 P **P 09 09 20.0 -0.9**
DUG Dugway, Tooele 27.94 331 P **P 09 09 20.0 -0.9**
DUG pmax pmax
comp=Z,19nm,1.6s
ISA Isabella, Lake 27.97 317 P **P 09 09 20.6 -0.6**
ISA Isabella, Lake 27.97 317 P **P 09 09 20.6 -0.6**
ISA pmax pmax
comp=Z,7.0nm,0.8s
GRAC Grapevine Rang 28.10 320 P **P 09 09 20.1 -2.2**
GRAC IAmb IAmb 09 09 34.5
comp=Z,42nm,1.6s
CWC Cottonwood Cre 28.19 319 P **P 09 09 22.5 -0.8**
PAOC Oil Creek Stat 28.25 25 IAmb IAmb 09 09 27.6
comp=Z,20nm,0.9s
HWUT Hardware Ranch 28.53 334 P **P 09 09 25.1 -1.1**
ERPA Erie 28.64 24 P **P 09 09 25.7 -1.2**
PDAR Pinedale Array 28.73 338 P **P 09 09 28.9 +0.8**
comp=Z,3.4nm,0.9s,baz=140,slow=9.1,SNR=13
PDAR PcP **PcP 09 12 37.8 -0.5**
comp=Z,0.9nm,0.6s,baz=147,slow=5.3,SNR=3.7
PDAR LR LR 09 23 42.9
comp=Z,124nm,18.8s,baz=154,slow=42
comp=Z,3.4nm,0.9s
PDAR Pinedale Array 28.73 338 P **P 09 09 27.4 -0.7**
PDAR **PcP 09 12 37.6 -0.6**
G40A Rib Lake 28.89 8 P **P 09 09 27.6 -1.6**
G40A IAmb IAmb 09 09 33.4
comp=Z,16nm,0.6s
ATAH Atahualpa 28.98 143 LR LR 09 19 52.3
comp=Z,341nm,18.1s,baz=320,slow=34
HVU Hansel Valley 29.19 333 P **P 09 09 32.3 +0.3**
HVU Hansel Valley 29.19 333 P **P 09 09 32.3 +0.3**
HVU pmax pmax
comp=Z,13nm,0.8s
AHID Auburn Hatcher 29.31 336 IAmb IAmb 09 09 40.8
comp=Z,64nm,1.6s
PKD Bear Valley Ra 29.50 316 IAmb IAmb 09 09 41.9
comp=Z,31nm,1.4s
ELK Elko 29.54 328 LR LR 09 23 14.0
comp=Z,542nm,18.2s,baz=170,slow=40
NVAR Mina Array Bea 29.60 322 P **P 09 09 37.2 +1.4**
comp=Z,12nm,0.8s,baz=138,slow=8.9,SNR=93
NVAR PcP **PcP 09 12 41.2 +0.7**
comp=Z,2.4nm,0.8s,baz=148,slow=2.8,SNR=4.6
NVAR LR LR 09 22 27.9
comp=Z,542nm,19.9s,baz=140,slow=39
comp=Z,12nm,0.8s
NVAR Mina Array Bea 29.60 322 P **P 09 09 35.6 -0.1**
NVAR **PcP 09 12 41.6 +1.1**
LHV Little Huntoon 29.60 321 P **P 09 09 35.9 +0.4**
LHV IAmb IAmb 09 09 56.6
comp=Z,22nm,1.1s
PMPB Monarch Peak 29.83 316 P **P 09 09 37.5 -0.1**
PMPB IAmb IAmb 09 09 44.8
comp=Z,37nm,1.2s
LOHW Long Hollow 29.85 337 IAmb IAmb 09 09 44.1
comp=Z,29nm,1.1s
MMNY Mt. Morris Dam 30.00 26 IAmb IAmb 09 09 38.3
comp=Z,29nm,1.0s
HULI Fort Hunter Li 30.01 315 IAmb IAmb 09 09 55.9
comp=Z,40nm,1.2s
MOOW Moose Ponds 30.02 337 IAmb IAmb 09 09 45.5
comp=Z,14nm,0.9s
E38A The Farm, Brul 30.06 5 P 09 09 39.0 -0.5
E28A Huff 30.19 353 P **P 09 09 41.1 +0.4**
RLMT Red Lodge 30.71 341 IAmb IAmb 09 09 51.5
comp=Z,26nm,1.1s
PNTR Pine Nut 30.80 321 IAmb IAmb 09 09 54.7
comp=Z,32nm,1.4s
YNE Yellowstone No 30.86 340 IAmb IAmb 09 10 00.7
comp=Z,16nm,0.8s
YMR Madison River 30.89 338 IAmb IAmb 09 09 53.8
comp=Z,21nm,0.9s
MHC Mount Hamilton 31.02 317 IAmb IAmb 09 09 55.5
comp=Z,20nm,1.1s
YHB Horse Butte 31.04 338 P **P 09 09 48.7 +0.2**
PAHR Pah Rah Range 31.07 323 P **P 09 09 49.3 +0.6**
YHL Hebgen Lake 31.13 338 IAmb IAmb 09 09 57.0
comp=Z,35nm,1.4s

MPK Martis Peak 31.18 321 IAmb IAmb 09 10 16.2
comp=Z,33nm,1.1s
SADO Sadowa 31.22 23 LR LR 09 24 32.9
comp=Z,82nm,19.0s,baz=216,slow=40
LAO LASA Array 31.30 346 IAmb IAmb 09 09 56.9
comp=Z,34nm,1.7s
MDND Maddock 31.33 355 P **P 09 09 49.0 -1.7**
PECO Prince Edward 31.37 26 IAmb IAmb 09 09 54.0
comp=Z,28nm,0.9s
DELO Deloro Mine 31.59 25 P **P 09 09 51.4 -1.6**
BUKO Buck Lake 31.70 22 IAmb IAmb 09 09 52.9
comp=Z,23nm,0.8s
BEKR Beckworth 31.74 322 IAmb IAmb 09 10 02.1
comp=Z,17nm,1.2s
CVS Carmenet Viney 32.12 318 IAmb IAmb 09 10 05.8
comp=Z,30nm,1.4s
MNRC McLaughlin Min 32.42 319 IAmb IAmb 09 10 08.3
comp=Z,21nm,1.2s
WVOR Wild Horse Val 32.52 327 P **P 09 10 01.2 -0.2**
WVOR IAmb IAmb 09 10 08.7
comp=Z,32nm,1.3s
WVOR Wild Horse Val 32.52 327 P **P 09 10 01.2 -0.2**
WVOR pmax pmax
comp=Z,32nm,1.3s
M65A Busby, Falmout 32.71 36 P **P 09 10 01.8 -1.1**
baz=228
O03E Paynes Creek 32.87 321 IAmb IAmb 09 10 10.8
comp=Z,17nm,1.0s
WBO Williamsburg 32.95 27 IAmb IAmb 09 10 04.8
comp=Z,14nm,0.7s
LONY Lake Ozonia 32.96 28 P **P 09 10 03.4 -1.7**
EPLO Experimental L 32.99 2 P **P 09 10 05.1 -0.2**
HATC Hat Creek Radi 33.00 322 IAmb IAmb 09 10 41.2
comp=Z,30nm,1.3s
CZSB Cruzeiro do Su 33.00 135 P 09 10 06.8 +1.1
CZSB IAmb IAmb 09 10 22.6
comp=Z,18nm,0.9s
CZSB Cruzeiro do Su 33.00 135 *eP* **P 09 10 04.7 -1.0**
CZSB epP **sP 09 10 11.7 -0.3**
PLID Pearl Lake 33.24 333 IAmb IAmb 09 10 13.9
comp=Z,29nm,1.1s
LYMT Lyon Mountain 33.34 339 P **P 09 10 08.5 -0.2**
ULM Lac du Bonnet 33.54 359 P **P 09 10 09.4 -0.6**
comp=Z,17nm,0.8s,baz=176,slow=9.8,SNR=22
ULM LR LR 09 27 23.5
comp=Z,110nm,18.1s,baz=173,slow=43
comp=Z,17nm,0.8s
ULM Lac du Bonnet 33.54 359 P **P 09 10 09.5 -0.6**
ULM Lac du Bonnet 33.54 359 P **P 09 10 09.5 -0.6**
ULM pmax pmax
comp=Z,66nm,1.5s
KCPM Cahto Peak 33.61 319 IAmb IAmb 09 10 18.7
comp=Z,37nm,1.4s
BMO Blue Mountains 33.65 331 IAmb IAmb 09 10 17.5
comp=Z,16nm,1.3s
MSO Missoula 33.82 337 IAmb IAmb 09 10 21.2
comp=Z,16nm,0.9s
NNA Nana 33.83 146 LR LR 09 21 45.7
comp=Z,207nm,20.2s,baz=336,slow=32
KMRM Mail Ridge 34.00 319 IAmb IAmb 09 10 21.6
comp=Z,25nm,1.1s
MNTQ Montreal, Queb 34.07 28 P **P 09 10 12.9 -1.8**
MNTQ IAmb IAmb 09 10 14.8
comp=Z,19nm,0.7s
M02C Callahan 34.18 322 P **P 09 10 15.5 -0.3**
TRQ Mont Tremblant 34.23 26 P **P 09 10 15.2 -1.0**
TRQ IAmb IAmb 09 10 26.8
comp=Z,21nm,1.0s
YBH Yreka Blue Hor 34.30 322 LR LR 09 25 13.3
comp=Z,29nm,21.6s,baz=134,slow=38
YBH Yreka Blue Hor 34.30 322 P **P 09 10 17.4 +0.5**
YBH Yreka Blue Hor 34.30 322 P **P 09 10 17.4 +0.5**
YBH pmax pmax
comp=Z,16nm,1.9s
KMPM Mount Pierce 34.37 319 IAmb IAmb 09 10 24.2
comp=Z,18nm,1.0s
L04D Klamath Falls 34.38 323 IAmb IAmb 09 10 23.7
comp=Z,35nm,1.5s
KHMM Horse Mountain 34.39 320 IAmb IAmb 09 10 27.8
comp=Z,20nm,0.9s
F10A Beach Ranch, E 34.47 333 IAmb IAmb 09 10 32.3
comp=Z,30nm,0.9s
J04A Umpqua Nationa 34.93 325 P **P 09 10 21.7 -0.8**
J04A IAmb IAmb 09 10 29.7
comp=Z,19nm,0.8s
I05D Terrebonne, OR 35.26 327 P **P 09 10 24.7 -0.4**
I05D IAmb IAmb 09 10 31.1
comp=Z,19nm,1.2s
E09A Wood Farm, Sta 35.30 332 IAmb IAmb 09 10 31.1
comp=Z,22nm,1.4s
HAWA Hanford 35.83 331 P **P 09 10 29.4 -0.6**
J01E Myrtle Point 35.90 323 IAmb IAmb 09 10 37.3
comp=Z,25nm,1.0s
H04A Detroit Lake 35.93 327 IAmb IAmb 09 10 37.0
comp=Z,18nm,0.9s
BUCK Buck Mountain 36.04 325 IAmb IAmb 09 10 38.2
comp=Z,45nm,1.3s
D08A Wollman Farm, 36.06 332 P **P 09 10 32.2 +0.3**
E07A Sunnyside 36.11 331 P **P 09 10 32.5 +0.2**
H04D Lebanon 36.12 326 IAmb IAmb 09 10 37.9
comp=Z,21nm,1.0s
MXC Moxie City 36.33 331 P **P 09 10 34.8 +0.6**
C09A Chrisman Ranch 36.35 334 IAmb IAmb 09 10 40.9
comp=Z,22nm,1.1s
TEFE Tefe 36.38 121 *eP* **P 09 10 33.5 -1.4**
G04A Mulino 36.44 327 IAmb IAmb 09 10 41.2
comp=Z,35nm,1.1s
EPH Ephrata 36.58 332 P **P 09 10 36.3 -0.1**
EPH IAmb IAmb 09 10 42.1
comp=Z,14nm,1.3s
LTY Liberty 37.00 331 IAmb IAmb 09 10 46.0
comp=Z,43nm,1.6s
LDAQ Lac Daran 37.01 27 IAmb IAmb 09 10 43.9
comp=Z,68nm,2.0s
B08A Colville Reser 37.23 333 P **P 09 10 42.3 +0.4**
D62A Allapoint, All 37.37 30 P **P 09 10 41.8 -1.2**
D62A IAmb IAmb 09 10 60.0
comp=Z,25nm,1.2s
F03A Seaside 37.49 327 IAmb IAmb 09 11 09.1
comp=Z,26nm,0.9s
RADR Rader Ridge 37.94 328 IAmb IAmb 09 11 21.4
comp=Z,32nm,1.2s
FFC Flin Flon 38.37 354 P **P 09 10 51.7 +0.4**
FFC IAmb IAmb 09 10 56.3
comp=Z,26nm,0.9s
FFC Flin Flon 38.37 354 P **P 09 10 51.7 +0.4**
FFC pmax pmax
comp=Z,26nm,1.0s
NLWA Neilton Lookou 38.63 329 IAmb IAmb 09 11 00.3
comp=Z,36nm,1.4s
A04D Lummi Island 39.00 331 IAmb IAmb 09 11 03.0
comp=Z,42nm,1.1s
EDM Edmonton 39.15 343 IAmb IAmb 09 11 02.5
comp=Z,35nm,1.3s
LLLB Lillooet 40.02 334 IAmb IAmb 09 11 11.3
comp=Z,32nm,1.3s
FCC Fort Churchill 42.08 1 P **P 09 11 22.2 +0.2**
FCC IAmb IAmb 09 11 26.8
comp=Z,28nm,1.1s
FCC Fort Churchill 42.08 1 P **P 09 11 22.2 +0.2**
FCC pmax pmax
comp=Z,28nm,1.1s
LPAZ La Paz 42.33 139 P **P 09 11 25.8 +0.5**
comp=Z,3.0nm,0.7s,baz=305,slow=2.4,SNR=17
LPAZ LR LR 09 27 13.8
comp=Z,179nm,21.2s,baz=314,slow=34
comp=Z,3.0nm,0.7s
LPAZ La Paz 42.33 139 P **P 09 11 26.3 +1.0**
LPAZ La Paz 42.33 139 P **P 09 11 26.3 +1.0**
LPAZ pmax pmax
comp=Z,4.0nm,0.9s
LPAZ La Paz 42.33 139 *eP* **P 09 11 23.2 -2.1**
MDP Montagnes des 43.41 100 LR LR 09 30 54.8
comp=Z,83nm,19.0s,baz=284,slow=38
BBB Bella Bella 43.90 331 LR LR 09 33 17.7
comp=Z,249nm,18.5s,baz=166,slow=41
SCHQ Schefferville 44.02 23 P **P 09 11 35.4 -2.4**
comp=Z,7.1nm,0.8s,baz=220,slow=6.2,SNR=8.7
SCHQ LR LR 09 32 30.8
comp=Z,142nm,20.3s,baz=224,slow=40
SCHQ Schefferville 44.02 23 P **P 09 11 36.0 -1.8**
SCHQ IAmb IAmb 09 11 49.4
comp=Z,20nm,1.2s
GO01 Chusmiza 44.31 143 IAmb IAmb 09 11 50.1
comp=Z,19nm,1.3s
ITTB Itaituba 44.39 115 *eP* **P 09 11 39.9 -1.4**

VILB Vilhena 45.53 128 P P 09 11 50.9 +0.5
VILB IAmb IAmb 09 11 53.2
comp=Z,25nm,0.9s
VILB Vilhena 45.53 128 eP P 09 11 49.3 -1.1
RPN Rapa Nui 45.55 198 LR LR 09 25 55.5
comp=Z,88nm,21.8s,baz=211,slow=30
KUQ Kuujjuaa 46.01 20 P P 09 11 52.6 -0.9
DIB Dawson Inlet, 46.59 330 P P 09 11 59.5 +1.2
DIB IAmb IAmb 09 12 05.3
comp=Z,25nm,1.1s
SIV San Ignacio 46.86 132 LR LR 09 31 07.9
comp=Z,109nm,21.7s,baz=278,slow=35
U35K Hyder 47.23 334 P P 09 12 04.0 +0.9
baz=132
PDRB Porto dos Gac 47.41 124 eP P 09 12 03.5 -1.7
V35K Ketchikan 47.52 333 IAmb IAmb 09 12 12.8
comp=Z,18nm,1.1s
V35K Ketchikan 47.52 333 P P 09 12 06.7 +1.2
baz=130
BLKN Baker Lake 47.65 360 P P 09 12 05.6 -0.7
BLKN IAmb IAmb 09 12 10.3
comp=Z,13nm,0.9s
YKAW1 Yellowknife Wh 47.73 348 P P 09 12 07.2 +0.2
CLDB Colider 47.74 122 eP P 09 12 06.0 -1.8
YKA Yellowknife Ar 47.77 348 P P 09 12 07.3 0.0
comp=Z,3.8nm,0.7s,baz=157,slow=7.0,SNR=42
comp=Z,3.8nm,0.7s
YKAW3 Yellowknife Wh 47.83 348 P P 09 12 07.8 +0.1
PTLB Pontes e Lacer 47.91 130 P P 09 12 09.3 +0.4
PTLB IAmb IAmb 09 12 10.1
comp=Z,15nm,1.2s
PTLB Pontes e Lacer 47.91 130 eP P 09 12 07.4 -1.5
BBSD Serra de San D 47.99 133 eP P 09 12 08.1 -1.5
T35M Bob Quinn 48.04 335 IAmb IAmb 09 12 17.2
comp=Z,19nm,1.0s
T35M Bob Quinn 48.04 335 P P 09 12 10.4 +0.9
baz=132,SNR=16
KOTAN Kotaneelee Air 48.15 341 P P 09 12 10.9 +0.6
baz=142,SNR=11
CRAG Craig 48.28 332 P P 09 12 12.5 +1.2
baz=128
WRAK Wrangell Islan 48.54 334 P P 09 12 14.1 +0.7
baz=130
U33K Whale Pass 48.68 333 P P 09 12 15.6 +1.2
baz=128
DLBC Dease Lake 48.95 337 LR LR 09 36 16.4
comp=Z,267nm,18.4s,baz=121,slow=40
DLBC Dease Lake 48.95 337 P P 09 12 18.4 +1.8
baz=134,SNR=37
S34M Telegraph Cree 49.02 336 IAmb IAmb 09 12 24.7
comp=Z,14nm,1.1s
S34M Telegraph Cree 49.02 336 P P 09 12 18.5 +1.5
baz=132,SNR=9.8
T33K Petersburg 49.05 334 P P 09 12 18.8 +1.5
baz=129
WTLY Watson Lake, Y 49.69 339 P P 09 12 22.0 -0.2
WTLY Watson Lake, Y 49.69 339 P P 09 12 22.9 +0.7
baz=136,SNR=17
R33M Jennings River 49.97 337 IAmb IAmb 09 12 31.8
comp=Z,31nm,1.1s
R33M Jennings River 49.97 337 P P 09 12 25.4 +1.0
baz=133
S32K Killisnoo 50.15 334 P P 09 12 26.7 +1.1
baz=128
AC02 Maricunga 50.16 149 P P 09 12 28.0 +1.3
AC02 IAmb IAmb 09 12 29.6
comp=Z,12nm,0.8s
Q32M Nakina River 50.17 336 IAmb IAmb 09 12 33.8
comp=Z,21nm,1.0s
Q32M Nakina River 50.17 336 P P 09 12 26.4 +0.4
baz=131
SIT Sitka 50.23 333 P P 09 12 27.1 +0.9
baz=126
PRPB Parauapebas 50.44 113 eP P 09 12 26.6 -1.9
WRGLY Wrigley 50.46 344 IAmb IAmb 09 12 33.7
comp=Z,34nm,1.3s
WRGLY Wrigley 50.46 344 P P 09 12 28.5 +0.6
baz=144,SNR=8.3
FRB Frobisher Bay 50.57 15 LR LR 09 37 02.5
comp=Z,78nm,19.3s,baz=236,slow=40
R32K Eaglecrest 50.63 334 P P 09 12 29.8 +0.5
baz=128
SALV Santo Antonio 50.77 128 eP P 09 12 29.1 -1.8
P32M Atlin 51.14 336 IAmb IAmb 09 12 40.3
comp=Z,18nm,1.1s
P32M Atlin 51.14 336 P P 09 12 33.2 0.0
baz=130
S31K Pelican 51.16 333 P P 09 12 33.5 +0.2
baz=126
P33M Teslin, Yukon 51.21 337 IAmb IAmb 09 12 40.8
comp=Z,22nm,1.4s
P33M Teslin, Yukon 51.21 337 P P 09 12 34.2 +0.5
baz=131,SNR=13
R31K City Hall, Gus 51.22 334 P P 09 12 34.3 +0.6
baz=127
LCO Las Campanas 51.26 152 P P 09 12 36.6 +2.0
LCO IAmb IAmb 09 12 37.1
comp=Z,16nm,0.8s
LCO Las Campanas 51.26 152 P P 09 12 36.6 +2.0
LCO pmax pmax
comp=Z,16nm,0.9s
AC05 El Transito 51.30 152 P P 09 12 36.8 +2.0
AC05 IAmb IAmb 09 12 37.2
comp=Z,12nm,0.8s
SKAG Skagway 51.70 335 P P 09 12 37.6 +0.3
baz=128
SNDB Serra Nova Dou 52.03 120 eP P 09 12 38.4 -2.0
WHY Whitehorse 52.28 337 IAmb IAmb 09 12 48.3
comp=Z,18nm,1.1s
WHY Whitehorse 52.28 337 P P 09 12 42.1 +0.4
baz=129,SNR=6.3
PP1B Ponte de Pedra 52.42 129 eP P 09 12 41.6 -1.6
PP1B epP pP 09 12 48.8 +0.9
P30M Million Dollar 52.76 335 P P 09 12 45.4 +0.2
baz=127
O30N Mendenhall 52.81 336 IAmb IAmb 09 12 52.7
comp=Z,20nm,1.4s
O30N Mendenhall 52.81 336 P P 09 12 45.8 +0.2
baz=128
M31M Drury Creek, Y 53.10 338 P P 09 12 48.1 +0.4
baz=131
N31M Braeburn, Yuko 53.14 337 IAmb IAmb 09 12 54.9
comp=Z,24nm,1.2s
N31M Braeburn, Yuko 53.14 337 P P 09 12 48.4 +0.4
baz=129,SNR=5.5
HYT Haines Junctio 53.40 336 IAmb IAmb 09 12 57.6
comp=Z,28nm,1.5s
HYT Haines Junctio 53.40 336 P P 09 12 50.2 +0.2
baz=126
ILON Igloolik, Nuna 53.40 6 P P 09 12 49.5 -0.2
O29M Mount Kennedy 53.52 335 IAmb IAmb 09 12 58.0
comp=Z,17nm,1.2s
O29M Mount Kennedy 53.52 335 P P 09 12 51.0 +0.1
baz=125
N30M Aishikik Lake 53.62 337 P P 09 12 52.7 +1.1
N30M IAmb IAmb 09 12 58.9
comp=Z,20nm,1.4s
N30M Aishikik Lake 53.62 337 P P 09 12 52.1 +0.5
baz=127,SNR=5.9
SMTB Santa Maria do 53.63 115 eP P 09 12 50.3 -2.0
SMTB epP pP 09 12 56.8 -0.1
ARAG Araguaiana, MT 53.66 125 eP P 09 12 50.7 -1.7
YUK6 Outpost Mounta 53.80 336 P P 09 12 53.5 +0.4
baz=126,SNR=6.3
PINM Pinnacle 54.09 334 P P 09 12 55.9 +0.9
baz=123
PCA Pinnacle 54.09 334 IAmb IAmb 09 13 02.5
comp=Z,22nm,1.1s
YUK4 Talbot Arm 54.15 336 P P 09 12 56.0 +0.4
baz=126,SNR=5.3
M30M Minto, Yukon 54.20 338 IAmb IAmb 09 13 02.4
comp=Z,15nm,1.3s
M30M Minto, Yukon 54.20 338 P P 09 12 56.3 +0.5
baz=128,SNR=6.6
ZON Zonda 54.32 152 P P 09 12 59.3 +2.3
ZON IAmb IAmb 09 13 00.1
comp=Z,14nm,1.1s
ZON Zonda 54.32 152 P P 09 12 59.3 +2.3
ZON pmax pmax
comp=Z,14nm,1.1s
O28M Mount Upton 54.44 335 P P 09 12 57.6 -0.2
baz=124
MAYO Mayo, Yukon 54.53 339 IAmb IAmb 09 13 04.9
comp=Z,22nm,0.9s
MAYO Mayo, Yukon 54.53 339 P P 09 12 58.7 +0.5
baz=130
VA03 San Esteban 54.55 154 P P 09 12 59.7 +1.0

YUK8 Steele Glacier 54.56 336 P P 09 12 59.2 +0.6
baz=124
M29M Somme Creek 54.73 337 IAmb IAmb 09 13 06.8
comp=Z,16nm,0.9s
M29M Somme Creek 54.73 337 P P 09 13 00.4 +0.7
baz=126
LOGN Logan Glacier 54.80 335 IAmb IAmb 09 13 15.6
comp=Z,15nm,1.3s
MESA MESA 54.85 334 P P 09 13 01.1 +0.3
baz=121
CTGM Chitina Glacie 55.01 335 IAmb IAmb 09 13 09.5
comp=Z,35nm,1.5s
L29M L29M 55.01 338 IAmb IAmb 09 13 08.2
comp=Z,15nm,0.9s
L29M L29M 55.01 338 P P 09 13 02.5 +0.8
baz=127
CTG Chitna Glacier 55.02 335 P P 09 13 02.7 +0.9
baz=122
MT05 Renca 55.02 155 P P 09 13 02.2 +0.1
GRNC Granite Creek 55.06 334 IAmb IAmb 09 13 09.6
comp=Z,28nm,1.3s
YUK3 Moose Creek 55.11 336 P P 09 13 03.3 +0.8
baz=124
MT16 CCHEN 55.14 155 P P 09 13 03.7 +0.8
MT16 IAmb IAmb 09 13 12.3
comp=Z,18nm,0.8s
BARN Barnard Glacie 55.20 335 P P 09 13 02.8 -0.4
BARN IAmb IAmb 09 13 11.5
comp=Z,23nm,1.4s
MT01 Popeta 55.23 156 P P 09 13 04.2 +0.7
K29M Barlow Dome 55.25 339 IAmb IAmb 09 13 09.7
comp=Z,36nm,1.8s
K29M Barlow Dome 55.25 339 P P 09 13 04.0 +0.5
baz=128,SNR=14
J30M Hart River 55.31 340 IAmb IAmb 09 13 25.2
comp=Z,17nm,1.6s
J30M Hart River 55.31 340 P P 09 13 04.8 +0.9
baz=130
BGLC Bering Glacier 55.39 333 P P 09 13 04.9 +0.5
baz=120
H31M Peel River 55.51 342 IAmb IAmb 09 14 06.3
comp=Z,10nm,1.0s
H31M Peel River 55.51 342 P P 09 13 05.3 +0.1
baz=133
MT13 San Alfonso 55.51 155 IAmb IAmb 09 13 15.4
comp=Z,24nm,1.1s
TGL Tana Glacier 55.52 334 IAmb IAmb 09 13 12.7
comp=Z,25nm,1.2s
BVCY Beaver Creek 55.63 336 P P 09 13 06.5 +0.4
baz=124
CRQE Cirque 55.63 334 P P 09 13 06.8 +0.5
baz=120
C36M Paulatuk 55.65 348 P P 09 13 06.5 +0.5
baz=146
CRQM Cirque 55.66 334 P P 09 13 06.1 -0.4
CRQM IAmb IAmb 09 13 13.5
comp=Z,20nm,1.2s
BERG Berg Lake 55.71 333 P P 09 13 06.6 0.0
BERG IAmb IAmb 09 13 14.3
comp=Z,18nm,1.0s
I30M Mount Dempster 55.75 340 IAmb IAmb 09 13 12.9
comp=Z,27nm,1.6s
I30M Mount Dempster 55.75 340 P P 09 13 07.6 +0.6
baz=130,SNR=8.7
BO01 Tunca 55.76 156 P P 09 13 08.9 +1.6
BO01 IAmb IAmb 09 13 09.1
comp=Z,12nm,0.9s
KAIM Kayak Island 55.79 333 P P 09 13 08.0 +0.7
baz=119
J29N Klondike Camp 55.87 339 IAmb IAmb 09 13 13.8
comp=Z,13nm,1.2s
J29N Klondike Camp 55.87 339 P P 09 13 08.3 +0.4
baz=128
MCARA McCarthy VSAT 55.93 335 IAmb IAmb 09 13 23.4
comp=Z,16nm,0.9s
MCARA McCarthy VSAT 55.93 335 P P 09 13 08.6 +0.3
baz=121,SNR=7.3
M27K Edge Creek, AK 55.99 336 P P 09 13 08.9 0.0
baz=123
VRDI Verde Repeater 56.03 334 P P 09 13 08.4 -0.7
G31M Satah River 56.26 343 P P 09 13 11.0 +0.6
baz=133,SNR=19
GLB Gilahina Butte 56.28 334 IAmb IAmb 09 13 17.9
comp=Z,17nm,1.2s
BCAR Beaver Creek A 56.34 337 P P 09 13 11.2 0.0
L27K Beaver Creek, 56.36 337 IAmb IAmb 09 13 17.9
comp=Z,12nm,1.2s
L27K Beaver Creek, 56.36 337 P P 09 13 12.1 +0.8
baz=123,SNR=11
BMRM Bremner River 56.38 334 P P 09 13 12.1 +0.6
baz=119
Q23K Middleton Isla 56.43 332 P P 09 13 11.6 -0.2
baz=116
M26K Nabesna, AK 56.45 336 P P 09 13 13.0 +0.9
M26K IAmb IAmb 09 13 18.8
comp=Z,16nm,1.2s
M26K Nabesna, AK 56.45 336 P P 09 13 12.6 +0.6
baz=122
I29M Ogilvie Camp, 56.47 340 IAmb IAmb 09 13 19.8
comp=Z,7.7nm,0.6s
I29M Ogilvie Camp, 56.47 340 P P 09 13 12.5 +0.5
baz=128
F31M Tsiigehtchic 56.47 343 IAmb IAmb 09 13 17.4
comp=Z,24nm,1.1s
F31M Tsiigehtchic 56.47 343 P P 09 13 12.7 +0.8
baz=134,SNR=20
CPUP Villa Florida 56.49 138 P P 09 13 12.3 -0.3
comp=Z,2.3nm,0.8s,baz=342,slow=11,SNR=4.6
CPUP LR LR 09 39 12.1
comp=Z,78nm,20.4s,baz=329,slow=38
comp=Z,2.3nm,0.8s
CPUP Villa Florida 56.49 138 P P 09 13 12.2 -0.5
CPUP IAmb IAmb 09 13 13.1
comp=Z,16nm,1.6s
CPUP Villa Florida 56.49 138 P P 09 13 12.2 -0.5
CPUP pmax pmax
comp=Z,16nm,1.6s
EPYK Eagle Plains 56.61 341 IAmb IAmb 09 13 18.8
comp=Z,22nm,1.5s
EPYK Eagle Plains 56.61 341 P P 09 13 13.2 +0.2
baz=130
BDFB Brasilia 56.67 122 P P 09 13 14.6 +0.3
comp=Z,12nm,0.8s,baz=284,slow=7.0,SNR=20
BDFB LR LR 09 39 35.7
comp=Z,170nm,18.4s,baz=322,slow=38
comp=Z,12nm,0.8s
BDFB Brasilia 56.67 122 IAmb IAmb 09 13 17.2
comp=Z,15nm,0.9s
EYAK Cordova Ski Ar 56.67 333 P P 09 13 14.3 +0.8
baz=118
N25K Chitina, Valde 56.70 334 IAmb IAmb 09 13 21.1
comp=Z,16nm,1.0s
N25K Chitina, Valde 56.70 334 P P 09 13 14.5 +0.7
baz=120,SNR=11
NRS Narsarsuaq 56.79 26 iP P 09 13 12.5 -1.8
NRS IAmb IAmb 09 13 13.1
comp=Z,315nm,2.0s
G30M tAoh Zraii Nji 56.86 342 P P 09 13 15.0 +0.2
baz=131
L26K Log Cabin Wild 56.92 336 P P 09 13 15.6 +0.3
baz=122
POIN Pond Inlet 56.98 6 P P 09 13 15.2 -0.2
POIN IAmb IAmb 09 13 20.4
comp=Z,12nm,0.8s
K27K Chicken 56.99 338 IAmb IAmb 09 13 22.4
comp=Z,18nm,1.2s
H29M Whitestone 57.02 341 IAmb IAmb 09 13 21.8
comp=Z,12nm,1.0s
H29M Whitestone 57.02 341 P P 09 13 16.8 +0.8
baz=129
INK Inuvik 57.02 344 LR LR 09 41 49.0
comp=Z,299nm,19.4s,baz=354,slow=40
INK Inuvik 57.02 344 P P 09 13 15.9 +0.1
baz=135,SNR=31
I28M Miner Creek 57.06 340 P P 09 13 16.8 +0.5
baz=126
F30M Barrier River 57.16 343 P P 09 13 17.2 +0.4
baz=132
P23K Montague Islan 57.16 332 P P 09 13 17.6 +0.6
baz=116
KLU Klutina 57.19 334 IAmb IAmb 09 13 24.3
comp=Z,13nm,0.9s
KLU Klutina 57.19 334 P P 09 13 17.5 +0.2
baz=118,SNR=9.3
G29M Pine Creek 57.35 342 P P 09 13 19.3 +1.0
G29M IAmb IAmb 09 13 24.0
comp=Z,16nm,1.1s
G29M Pine Creek 57.35 342 P P 09 13 18.6 +0.4
baz=129
GLI Glacier Island 57.41 333 IAmb IAmb 09 13 32.5
comp=Z,15nm,1.2s
GLI Glacier Island 57.41 333 P P 09 13 19.1 +0.3
baz=116
M24K Tolsona, Glenn 57.59 334 P P 09 13 21.2 +1.2
baz=118
SDBA SAO DESIDERIO 57.63 117 eP P 09 13 19.0 -2.1
SDBA epP pP 09 13 25.8 0.0
SCRK Sand Creek 57.67 337 IAmb IAmb 09 13 27.3
comp=Z,15nm,1.2s
SCRK Sand Creek 57.67 337 P P 09 13 21.8 +1.2
baz=121,SNR=12
BI02 San Fabin de 57.68 157 P P 09 13 22.5 +1.5
BI02 IAmb IAmb 09 13 30.9
comp=Z,11nm,1.1s
I27K Kandik River 57.72 339 P P 09 13 21.7 +0.8
baz=125
PAX Paxson 57.73 336 IAmb IAmb 09 13 27.2
comp=Z,13nm,1.0s
PAX Paxson 57.73 336 P P 09 13 21.5 +0.4
baz=119,SNR=15
IPMB Ipameri, GO 57.79 124 eP P 09 13 20.1 -2.0
IPMB epP sP 09 13 28.1 -0.4
RIDG Independent Ri 57.87 336 P P 09 13 22.2 +0.2
baz=120,SNR=20
SCM Sheep Creek Mo 57.95 334 P P 09 13 23.1 +0.5
baz=117
H27K Steamboat Moun 58.05 340 P P 09 13 24.3 +1.1
H27K IAmb IAmb 09 13 30.2
comp=Z,26nm,1.5s
H27K Steamboat Moun 58.05 340 P P 09 13 23.6 +0.3
baz=125
SFJD Kangerlussuaq 58.06 19 LR LR 09 43 01.4
comp=Z,95nm,18.1s,baz=228,slow=41
A36M Sachs Harbour 58.07 349 IAmb IAmb 09 13 28.1
comp=Z,24nm,0.9s
A36M Sachs Harbour 58.07 349 P P 09 13 23.2 +0.1
baz=146,SNR=26
RES Resolute Bay 58.07 0 LR LR 09 41 11.6
comp=Z,141nm,19.2s,baz=86,slow=39
RES Resolute Bay 58.07 0 IAmb IAmb 09 13 27.7
comp=Z,39nm,1.8s
I26K Coal Creek Min 58.08 339 P P 09 13 23.6 +0.2
baz=123
M23K Glacier View 58.10 334 P P 09 13 24.0 +0.4
baz=116
SEW Seward 58.14 331 P P 09 13 24.1 +0.3
baz=114
KNK Knik Glacier 58.24 333 IAmb IAmb 09 13 31.9
comp=Z,38nm,1.6s
KNK Knik Glacier 58.24 333 P P 09 13 25.2 +0.5
baz=115
K24K Donnelly Dome 58.26 336 IAmb IAmb 09 13 31.0
comp=Z,24nm,1.0s
K24K Donnelly Dome 58.26 336 P P 09 13 25.0 +0.3
baz=120,SNR=13
E29M Blow River 58.27 343 IAmb IAmb 09 13 30.8
comp=Z,27nm,1.2s
E29M Blow River 58.27 343 P P 09 13 25.0 +0.4
baz=130
F28M Old Crow 58.36 342 IAmb IAmb 09 13 31.3
comp=Z,24nm,1.1s
F28M Old Crow 58.36 342 P P 09 13 25.7 +0.3
baz=128,SNR=25
SML Sawmill 58.36 334 P P 09 13 25.4 -0.1
baz=116
O22K Cooper Landing 58.41 332 P P 09 13 25.9 +0.2
baz=114
G27K Doyon Strip 58.43 340 P P 09 13 25.9 0.0
baz=125
WAT6 Susitna Watana 58.46 335 P P 09 13 26.2 -0.1
baz=117,SNR=15
J25K Salcha River, 58.51 337 IAmb IAmb 09 13 32.8
comp=Z,9.5nm,1.0s
J25K Salcha River, 58.51 337 P P 09 13 27.5 +1.0
baz=120
DHY Denali Highway 58.54 335 P P 09 13 27.6 +0.8
baz=118
BRSE Bradley Lake S 58.59 331 P P 09 13 28.3 +1.2
baz=112
GHO Glory Hole Cre 58.60 333 P P 09 13 28.2 +1.1
GHO IAmb IAmb 09 13 33.4
comp=Z,16nm,0.8s
PMR Palmer 58.61 333 IAmb IAmb 09 13 33.3
comp=Z,30nm,1.6s
PMR Palmer 58.61 333 P P 09 13 28.3 +1.2
baz=115,SNR=6.7
SLKM Skilak Lake 58.65 332 IAmb IAmb 09 13 33.8
comp=Z,22nm,1.3s
RC01 Rabbit Creek A 58.67 332 IAmb IAmb 09 13 33.7
comp=Z,22nm,1.1s
RC01 Rabbit Creek A 58.67 332 P P 09 13 28.6 +1.0
baz=114
KDAK Kodiak Island 58.78 328 LR LR 09 39 04.0
comp=Z,224nm,18.5s,baz=122,slow=36
KDAK Kodiak Island 58.78 328 P P 09 13 29.1 +0.7
baz=109
E28M Babbage River 58.88 343 IAmb IAmb 09 13 34.4
comp=Z,16nm,1.4s
E28M Babbage River 58.88 343 P P 09 13 29.5 +0.6
baz=128
WAT1 Susitna Watana 58.91 335 P P 09 13 30.2 +0.9
baz=116
OHAK Old Harbor 58.96 327 P P 09 13 30.5 +0.9
baz=108
Q20K Shuyak Island 58.97 329 P P 09 13 30.4 +0.7
baz=110
HOM Homer 58.98 330 P P 09 13 30.2 +0.5
baz=111
HDA Harding Lake 59.01 337 IAmb IAmb 09 13 35.6
comp=Z,14nm,1.1s
HDA Harding Lake 59.01 337 P P 09 13 30.0 +0.2
baz=119,SNR=8.5
PRP Porcupine Dome 59.03 338 IAmb IAmb 09 13 36.1
comp=Z,10nm,1.0s
PRP Porcupine Dome 59.03 338 P P 09 13 30.7 +0.4
baz=121
M22K Willow 59.11 333 P P 09 13 30.9 +0.4
baz=114
D28M Stokes Point 59.11 343 P P 09 13 31.2 +0.7
baz=130
IL31 59.16 337 IAmb IAmb 09 13 36.8
comp=Z,13nm,1.1s
ILAR Eielson Array 59.16 337 P P 09 13 31.2 +0.3
comp=Z,5.3nm,1.1s,baz=127,slow=4.8,SNR=39
ILAR LR LR 09 43 00.5
comp=Z,143nm,21.9s,baz=108,slow=40
comp=Z,5.3nm,1.1s
ILAR Eielson Array 59.16 337 P P 09 13 31.4 +0.5
ILAR Eielson Array 59.16 337 P P 09 13 31.4 +0.5
CAPN Captain Cook N 59.17 332 P P 09 13 31.4 +0.4
baz=112
G26K Porcupine Rive 59.20 340 IAmb IAmb 09 13 37.0
comp=Z,12nm,1.1s
G26K Porcupine Rive 59.20 340 P P 09 13 31.8 +0.6
baz=123
E27K Coleen River 59.22 342 IAmb IAmb 09 13 37.5
comp=Z,16nm,1.1s
E27K Coleen River 59.22 342 P P 09 13 31.8 +0.4
baz=126
RND Reindeer 59.29 335 P P 09 13 33.1 +1.2
RND Reindeer 59.29 335 P P 09 13 33.1 +1.2
RND pmax pmax
comp=Z,43nm,1.2s
BB19B Bebedouro 59.29 128 eP P 09 13 30.5 -2.0
BB19B epP pP 09 13 37.9 +0.7
CUT Chulitna 59.44 334 P P 09 13 33.2 +0.3
baz=114
MCK McKinley 59.47 335 IAmb IAmb 09 13 38.6
comp=Z,12nm,0.8s
MCK McKinley 59.47 335 P P 09 13 33.8 +0.7
baz=116
POKR Poker Plat Res 59.53 337 P P 09 13 34.0 +0.5
baz=118
COLA College 59.57 337 P P 09 13 34.6 +0.9
COLA IAmb IAmb 09 13 47.0
comp=Z,11nm,0.8s
COLA College 59.57 337 P P 09 13 34.6 +0.9
COLA pmax pmax
comp=Z,11nm,0.8s
COLA College 59.57 337 P P 09 13 34.1 +0.4
baz=118
D27M Malcolm River 59.68 343 IAmb IAmb 09 13 40.4
comp=Z,9.3nm,1.1s
D27M Malcolm River 59.68 343 P P 09 13 34.9 +0.4
baz=127
Q19K Cape Douglas, 59.69 329 P P 09 13 35.7 +1.0

baz=109
BMAR **Burnt Mountain** 59.73 340 P P 09 13 35.3 +0.5
F26K **Sheenjek River** 59.73 341 IAmb IAmb 09 13 41.1
comp=Z,11nm,1.2s
F26K **Sheenjek River** 59.73 341 P P 09 13 35.8 +0.9
baz=123,SNR=9.1
P19K **Oil Pt** 59.73 330 P P 09 13 35.9 +0.9
baz=110
STLK **Strandline Lak** 59.76 332 IAmb IAmb 09 13 43.6
comp=Z,10nm,0.9s
SKT **Skwentna** 59.81 333 P P 09 13 36.1 +0.6
baz=113,SNR=12
N20K **Mount Spurr** 59.81 332 P P 09 13 36.2 +0.6
baz=112,SNR=10
SPCR **Spurr Chakacha** 59.81 332 P P 09 13 36.0 +0.5
baz=112
G25K **Bearman Lake** 59.88 339 P P 09 13 36.3 +0.5
baz=121
TRF **Thorofare Moun** 59.89 335 P P 09 13 36.6 +0.4
baz=115,SNR=21
NEA2 **Nenana** 59.90 336 P P 09 13 36.5 +0.4
baz=116
H24K **Noodor Dome** 60.04 338 P P 09 13 37.9 +0.8
H24K IAmb IAmb 09 13 50.4
comp=Z,8.3nm,0.8s
H24K **Noodor Dome** 60.04 338 P P 09 13 37.5 +0.4
baz=118
F25K **Christian Rive** 60.16 340 IAmb IAmb 09 13 44.3
comp=Z,16nm,1.4s
F25K **Christian Rive** 60.16 340 P P 09 13 38.6 +0.7
baz=122,SNR=9.3
SAATT **Saattut** 60.18 15 *i* P P 09 13 37.7 -0.1
SAATT IAmb IAmb 09 13 44.9
comp=Z,23nm,1.1s
I23K **Minto, Yukon-K** 60.27 337 P P 09 13 39.1 +0.7
baz=116,SNR=18
Q18K **Katmai Hardscr** 60.27 329 P P 09 13 39.2 +0.3
baz=108
G24K **Hadweenzic Riv** 60.32 339 IAmb IAmb 09 13 45.0
comp=Z,8.0nm,0.9s
G24K **Hadweenzic Riv** 60.32 339 P P 09 13 39.4 +0.5
baz=119
E25K **Arctic Village** 60.42 341 IAmb IAmb 09 13 46.0
comp=Z,24nm,1.5s
E25K **Arctic Village** 60.42 341 P P 09 13 40.1 +0.5
baz=122,SNR=9.4
O19K **Port Alsworth** 60.43 331 P P 09 13 40.8 +1.1
O19K **Port Alsworth** 60.43 331 P P 09 13 40.2 +0.5
baz=109
BPAW **Bear Paw Mtn.** 60.44 335 P P 09 13 40.0 +0.2
BPAW IAmb IAmb 09 13 45.4
comp=Z,16nm,1.0s
BPAW **Bear Paw Mtn.** 60.44 335 P P 09 13 40.0 +0.2
baz=114
PPLA **Purkeypile** 60.45 334 P P 09 13 40.2 +0.2
baz=112
M20K **Styx River** 60.48 333 IAmb IAmb 09 13 46.0
comp=Z,17nm,0.8s
M20K **Styx River** 60.48 333 P P 09 13 40.8 +0.7
baz=111,SNR=14
Q17K **Contact Creek** 60.60 328 P P 09 13 41.5 +0.4
baz=106
P18K **Big Mountain,** 60.61 329 P P 09 13 42.1 +1.1
P18K IAmb IAmb 09 13 46.2
comp=Z,12nm,0.8s
P18K **Big Mountain,** 60.61 329 P P 09 13 41.5 +0.5
baz=108
H23K **Yukon River** 60.64 337 P P 09 13 41.5 +0.3
baz=117
R17L **Mt. Peulik Vol** 60.67 327 P P 09 13 42.2 +0.8
baz=106
C27K **Jago River** 60.69 343 IAmb IAmb 09 13 47.5
comp=Z,13nm,1.1s
C27K **Jago River** 60.69 343 P P 09 13 42.0 +0.7
baz=125
N19K **Bonanza Creek** 60.72 331 P P 09 13 42.2 +0.4
baz=109
MLY **Manley** 60.74 336 P P 09 13 42.4 +0.6
baz=115
O18K **Koktuh Hills** 60.75 330 P P 09 13 42.9 +1.0
O18K **Koktuh Hills** 60.75 330 P P 09 13 42.4 +0.5
baz=108
RCLB **Rio Claro- Sao** 60.82 128 *e*P P 09 13 41.5 -1.5
F24K **Squaw Lake** 60.86 340 IAmb IAmb 09 13 50.0
comp=Z,24nm,1.9s
F24K **Squaw Lake** 60.86 340 P P 09 13 43.5 +0.9
baz=119
CHUM **Lake Minchumin** 60.89 335 P P 09 13 43.7 +0.9
baz=113
M19K **Big River Lodg** 61.04 332 P P 09 13 45.0 +1.1
baz=110
Q16K **King Salmon** 61.11 328 P P 09 13 44.7 +0.4
baz=106
P17K **Kvichak River** 61.15 329 P P 09 13 45.4 +0.8
baz=106
C26K **Camden Bay** 61.20 343 P P 09 13 45.1 +0.4
baz=124
G23K **Bananza Creek** 61.22 338 P P 09 13 45.8 +0.8
baz=117
I21K **Tanana** 61.28 336 IAmb IAmb 09 13 50.5
comp=Z,13nm,1.1s
I21K **Tanana** 61.28 336 P P 09 13 46.0 +0.6
baz=114,SNR=8.8
D25K **Kavik River** 61.31 342 P P 09 13 46.0 +0.4
baz=122
N18K **Kilae Creek** 61.33 331 P P 09 13 46.7 +0.9
baz=108
E24K **Your Creek** 61.34 340 IAmb IAmb 09 13 52.2
comp=Z,12nm,1.2s
E24K **Your Creek** 61.34 340 P P 09 13 46.9 +1.1
baz=119
L19K **White Mountain** 61.34 333 IAmb IAmb 09 13 51.6
comp=Z,10nm,1.0s
L19K **White Mountain** 61.34 333 P P 09 13 46.2 +0.3
baz=110,SNR=6.9
H22K **Ishtalitna Cre** 61.35 337 IAmb IAmb 09 13 51.3
comp=Z,12nm,1.0s
H22K **Ishtalitna Cre** 61.35 337 P P 09 13 46.5 +0.6
baz=115
K20K **Telida** 61.42 334 P P 09 13 46.6 +0.2
baz=111
CHGN **Chignik** 61.42 326 P P 09 13 47.0 +0.5
baz=103
TULEG **Thule** 61.49 7 P P 09 13 46.8 +0.1
TULEG IAmb IAmb 09 13 52.0
comp=Z,23nm,1.3s
TULEG **Thule** 61.49 7 *i* P P 09 13 46.6 -0.1
TULEG IAmb IAmb 09 13 47.4
comp=Z,6.5nm,0.7s
COLD **Coldfoot** 61.51 339 P P 09 13 47.9 +0.9
baz=117,SNR=6.9
M18K **Stony River** 61.55 332 P P 09 13 47.7 +0.4
baz=108,SNR=7.4
PLCA **Paso Flores** 61.55 159 P P 09 13 48.4 +0.7
comp=Z,8.9nm,1.0s,baz=325,slow=7.9,SNR=19
PLCA LR LR 09 35 28.4
comp=Z,154nm,18.4s,baz=345,slow=31
comp=Z,8.9nm,1.0s
PLCA **Paso Flores** 61.55 159 P P 09 13 49.1 +1.6
PLCA IAmb IAmb 09 13 49.8
comp=Z,14nm,1.0s
PLCA **Paso Flores** 61.55 159 P P 09 13 49.2 +1.6
PLCA pmax pmax
comp=Z,14nm,1.0s
PLCA **Paso Flores** 61.55 159 *e*P P 09 13 45.7 -1.9
PLCA *ep*P **pP** 09 13 53.0 +0.7
VAO **Valinhos** 61.59 128 P P 09 13 48.9 +0.7
VAO **Valinhos** 61.59 128 *e*P P 09 13 46.2 -2.0
DIAM **Diamantina, MG** 61.60 122 *e*P P 09 13 46.4 -2.1
DIAM *ep*P **pP** 09 13 54.0 +0.8
KULLO **Kullorsuaq** 61.60 11 *i* P P 09 13 47.4 0.0
KULLO IAmb IAmb 09 13 52.0
comp=Z,19nm,1.0s
O17K **Koliganek Bris** 61.63 330 P P 09 13 48.4 +0.6
baz=106,SNR=7.5
E23K **Chandalar** 61.70 340 P P 09 13 49.2 +0.8
baz=118
J20K **Nowinta River** 61.75 335 P P 09 13 48.8 +0.2
baz=111
CHNA **Chernabura Isl** 61.75 324 P P 09 13 49.1 +0.3
baz=101
H21K **Melozitna Rive** 61.79 337 IAmb IAmb 09 13 54.1
comp=Z,9.5nm,1.0s
H21K **Melozitna Rive** 61.79 337 P P 09 13 49.0 +0.1
baz=113,SNR=8.5
P16K **Nushagak River** 61.87 329 P P 09 13 50.0 +0.5
baz=105
N17K **Nushagak Hills** 61.89 330 P P 09 13 49.9 +0.3
baz=106
TOLK **Toolik Lake Re** 61.96 340 P P 09 13 50.1 +0.1
baz=118
D24K **Happy Valley** 61.97 341 IAmb IAmb 09 13 55.4
comp=Z,13nm,1.2s
D24K **Happy Valley** 61.97 341 P P 09 13 50.0 0.0
baz=119
S14K **Fog Glacier** 62.03 325 P P 09 13 51.2 +0.5
baz=102
O16K **Kokwok River B** 62.07 329 P P 09 13 51.1 +0.2
baz=105
I20K **Naaghedeneel** 62.11 335 P P 09 13 51.3 +0.3
baz=111
BSCB **Bom Sucesso** 62.15 125 *e*P P 09 13 50.1 -1.9
L18K **Granite Mounta** 62.17 332 IAmb IAmb 09 13 57.1
comp=Z,13nm,1.0s
L18K **Granite Mounta** 62.17 332 P P 09 13 52.0 +0.5
baz=108
C24K **Franklin Bluff** 62.21 342 P P 09 13 52.0 +0.4
baz=119
M17K **Holitna River** 62.26 331 IAmb IAmb 09 13 57.2
comp=Z,18nm,1.1s
M17K **Holitna River** 62.26 331 P P 09 13 52.5 +0.4
baz=107
IMAR **Indian Mountai** 62.27 337 P P 09 13 52.2 0.0
J19K **Poorman** 62.29 334 P P 09 13 52.4 +0.2
baz=110,SNR=20
F22K **John River** 62.33 339 P P 09 13 53.0 +0.6
baz=115
SDPT **Sand Point** 62.35 324 P P 09 13 53.1 +0.3
baz=101
G21K **Allakaket** 62.39 337 IAmb IAmb 09 13 58.6
comp=Z,9.8nm,1.1s
G21K **Allakaket** 62.39 337 P P 09 13 53.3 +0.4
baz=113
D23K **Nanushuk River** 62.47 340 IAmb IAmb 09 14 00.0
comp=Z,21nm,1.2s
D23K **Nanushuk River** 62.47 340 P P 09 13 53.7 +0.3
baz=117
E22K **Anaktuvuk Pass** 62.47 339 IAmb IAmb 09 13 59.3
comp=Z,14nm,1.4s
E22K **Anaktuvuk Pass** 62.47 339 P P 09 13 53.7 +0.3
baz=116,SNR=8.1
H20K **Anotleneega Mo** 62.52 336 P P 09 13 54.2 +0.4
baz=103
J18K **Innoko River** 62.57 334 IAmb IAmb 09 13 59.4
comp=Z,16nm,1.4s
J18K **Innoko River** 62.57 334 P P 09 13 54.3 +0.1
baz=108
N16K **Nishlik Lake** 62.63 330 P P 09 13 55.2 +0.6
baz=105,SNR=7.5
F21K **Alatna River** 62.67 338 P P 09 13 55.7 +0.9
baz=113,SNR=15
TRQA **Tornquist** 62.79 151 P P 09 13 57.0 +1.1
TRQA **Tornquist** 62.79 151 P P 09 13 57.0 +1.1
TRQA pmax pmax
comp=Z,48nm,1.7s
O15K **Ungalikthiuk R** 62.82 329 P P 09 13 55.8 -0.1
baz=103
C23K **Itkillik River** 62.85 341 P P 09 13 56.5 +0.6
baz=118,SNR=8.3
L17K **Donlin** 62.86 332 P P 09 13 56.2 +0.1
baz=106
M16K **Timber Creek** 62.86 331 P P 09 13 55.9 -0.3
baz=105
RCBR **Riachuelo** 62.89 106 P P 09 13 57.4 +0.3
RCBR **Riachuelo** 62.89 106 P P 09 13 57.4 +0.3
RCBR pmax pmax
comp=Z,24nm,1.1s
K17K **Iditarod** 63.03 333 IAmb IAmb 09 14 02.4
comp=Z,15nm,0.9s
K17K **Iditarod** 63.03 333 P P 09 13 57.4 +0.2
baz=106
GCSA **Galena City Sc** 63.06 335 P P 09 13 57.5 +0.2
baz=109
H19K **Roundabout Mou** 63.15 336 IAmb IAmb 09 14 03.2
comp=Z,13nm,0.9s
H19K **Roundabout Mou** 63.15 336 P P 09 13 58.1 +0.2
baz=110
N15K **Kwethluk River** 63.19 330 P P 09 13 58.5 +0.2
baz=104
L16K **Owhat River** 63.28 331 P P 09 13 59.1 +0.2
baz=105
F20K **Avaraart Lake** 63.41 338 P P 09 14 01.0 +1.4
F20K IAmb IAmb 09 14 05.8
comp=Z,14nm,1.1s
F20K **Avaraart Lake** 63.41 338 P P 09 14 00.2 +0.6
baz=111
O14K **Tigyukauivet M** 63.56 328 P P 09 14 00.7 -0.1
baz=102
J17K **VABM Dome** 63.57 333 P P 09 14 00.7 -0.1
baz=106
M15K **Kasigluk River** 63.60 330 P P 09 14 01.2 +0.2
baz=108
H18K **Honhosa River** 63.79 335 P P 09 14 02.8 +0.6
baz=108
C21K **Knifeblade Rid** 63.89 340 P P 09 14 03.6 +0.8
baz=113
N14K **Kuskokwak Cree** 63.91 329 P P 09 14 03.4 +0.4
baz=102
B22K **Teshekpuk Lake** 63.94 341 P P 09 14 03.5 +0.5
baz=115
FALS **False Pass** 63.94 323 P P 09 14 03.7 +0.4
baz=98
B21K **Ikpikpuk River** 64.02 340 P P 09 14 03.7 +0.1
baz=113
E20K **Nigu River** 64.02 339 P P 09 14 04.3 +0.6
baz=111,SNR=9.7
F19K **Shaleruckik Mo** 64.09 337 IAmb IAmb 09 14 10.0
comp=Z,19nm,1.2s
F19K **Shaleruckik Mo** 64.09 337 P P 09 14 04.7 +0.6
baz=103
E19K **Redstone River** 64.10 338 P P 09 14 04.8 +0.6
baz=110
G18K **Tagagawik** 64.13 336 IAmb IAmb 09 14 09.9
comp=Z,8.7nm,1.1s
G18K **Tagagawik** 64.13 336 P P 09 14 05.2 +0.8
baz=108
J16K **Anvik River** 64.20 333 IAmb IAmb 09 14 11.2
comp=Z,12nm,0.8s
J16K **Anvik River** 64.20 333 P P 09 14 05.4 +0.5
baz=105
L15K **Ungalak Mounta** 64.21 331 P P 09 14 05.5 +0.5
baz=103
M14K **Bethel** 64.22 330 P P 09 14 05.5 +0.5
baz=102
D20K **Etivluk River** 64.33 339 IAmb IAmb 09 14 11.2
comp=Z,19nm,1.2s
D20K **Etivluk River** 64.33 339 P P 09 14 06.3 +0.5
baz=111
H17K **Granite Mounta** 64.35 335 P P 09 14 06.1 +0.3
baz=106
K15K **Wolf Creek Mou** 64.37 332 P P 09 14 06.7 +0.6
baz=103
I17K **Unalakleet** 64.39 334 P P 09 14 06.5 +0.3
baz=105
SUMG **Summit** 64.61 16 P P 09 14 08.3 +0.3
SUMG IAmb IAmb 09 14 21.0
comp=Z,16nm,1.2s
SUMG **Summit** 64.61 16 P P 09 14 08.3 +0.3
SUMG pmax pmax
comp=Z,16nm,1.2s
A22K **Sinclair Lake** 64.69 342 P P 09 14 08.1 +0.1
baz=114
NEEM **North Greenlan** 64.69 10 *i* P P 09 14 08.2 -0.1
NEEM IAmb IAmb 09 14 13.2
comp=Z,38nm,0.9s
L14K **Kuka Creek** 64.69 331 P P 09 14 08.8 +0.7
baz=102
F18K **Selawik** 64.73 337 P P 09 14 08.9 +0.6
baz=107
D19K **Kuna River** 64.77 339 IAmb IAmb 09 14 14.4
comp=Z,12nm,0.9s
D19K **Kuna River** 64.77 339 P P 09 14 08.8 +0.2
baz=109
RIB01 **Linhares ES** 64.79 121 *e*P P 09 14 07.7 -1.7
RIB01 *ep*P **pP** 09 14 15.1 +0.9
G17K **Kiwalik Mounta** 64.81 335 P P 09 14 09.2 +0.4
baz=106
M13K **Dall Lake** 64.83 329 P P 09 14 09.6 +0.6
baz=101
B20K **Meade River** 64.98 340 P P 09 14 10.5 +0.6
baz=111
CAM01 **Campos-RJ** 65.04 124 *e*P P 09 14 08.8 -2.3
CAM01 *ep*P **pP** 09 14 16.3 +0.6
H16K **Elim** 65.23 334 P P 09 14 11.9 +0.3
baz=104
F17K **Baldwin Pennin** 65.30 336 P P 09 14 12.5 +0.5
baz=105
A21K **Barrow** 65.30 342 P P 09 14 12.3 +0.4
baz=112
E18K **Tukpahlearik C** 65.33 337 IAmb IAmb 09 14 17.9
comp=Z,11nm,1.1s
E18K **Tukpahlearik C** 65.33 337 P P 09 14 12.7 +0.5
baz=106
J14K **Nanvaranak Lak** 65.39 332 P P 09 14 13.4 +0.8
baz=102
G16K **Koyuk River** 65.47 335 IAmb IAmb 09 14 19.4
comp=Z,11nm,1.1s
G16K **Koyuk River** 65.47 335 P P 09 14 13.7 +0.6
baz=104
C19K **Lookout Ridge** 65.48 339 P P 09 14 13.6 +0.4
baz=108
UNV **Unalaska Valle** 65.62 322 P P 09 14 15.1 +0.8
baz=95
K13K **Kusilvak Mount** 65.73 331 P P 09 14 15.8 +0.9
baz=100
C18K **Utukok River** 65.89 339 P P 09 14 16.2 +0.2
baz=106
G15K **Niukluk** 66.07 334 P P 09 14 17.7 +0.7
baz=102
M11K **Mekoryuk** 66.22 329 P P 09 14 18.4 +0.3
baz=98
A19K **Wainwright** 66.31 340 P P 09 14 19.3 +0.8
baz=107
D17K **Noatak River** 66.32 337 P P 09 14 18.9 +0.4
baz=104
RDOG **Red Dog Mine** 66.34 338 P P 09 14 19.0 +0.2
baz=104
F15K **North Star Dit** 66.47 335 IAmb IAmb 09 14 26.0
comp=Z,15nm,0.9s
F15K **North Star Dit** 66.47 335 P P 09 14 20.5 +0.9
baz=102
ANM **Nome** 66.54 334 P P 09 14 20.5 +0.5
baz=101
C17K **DeLong Mountai** 66.55 338 P P 09 14 20.6 +0.5
baz=104
F14K **Arctic Creek** 67.11 335 P P 09 14 24.1 +0.5
baz=100
C16K **Lisburne Hills** 67.28 338 P P 09 14 25.4 +0.7
baz=102
TNA **Tin City** 67.78 335 P P 09 14 28.2 +0.4
baz=99
SPIA **Saint Paul Isl** 67.99 325 P P 09 14 30.4 +1.1
baz=93
GAMB **Gambell** 69.18 332 P P 09 14 37.1 +0.5
baz=94
DBG **Daneborg** 70.10 16 *i* P P 09 14 41.9 -0.3
DBG IAmb IAmb 09 14 45.5
comp=Z,4.1nm,1.0s
DAG **Danmarks Havn** 70.89 14 *i* P P 09 14 46.4 -0.6
DAG IAmb IAmb 09 14 47.5
comp=Z,12nm,0.7s
NOR **Nord** 72.01 9 *i* P P 09 14 54.0 +0.3
NOR IAmb IAmb 09 14 54.5
comp=Z,8.0nm,0.8s
VAL **Valentia** 74.12 40 P P 09 15 06.6 0.0
IGLA **Glengowla, Co** 74.47 38 P P 09 15 09.2 +0.6
IDGL **Inch Island, C** 75.34 36 P P 09 15 13.1 -0.5
IDGL **Inch Island, C** 75.34 36 *e*P P 09 15 13.2 -0.5
KPL **Plockton** 76.03 34 *e*P P 09 15 17.0 -0.6
KPL IAmb IAmb 09 15 18.3
comp=Z,13nm,0.7s
CLGH **Cloghs, Cushen** 76.14 36 *e*P P 09 15 16.8 -1.5
CLGH IAmb IAmb 09 15 18.9
comp=Z,18nm,0.7s
ILTH **Belurgan, Co L** 76.17 37 P P 09 15 17.6 -0.8
IWEX **Carrickbyrne,** 76.18 39 P P 09 15 18.0 -0.5
EAB **Aberfoyle** 76.94 35 *e*P P 09 15 22.4 -0.4
EAB IAmb IAmb 09 15 23.8
comp=Z,11nm,0.7s
PGAV **Gavieira, Arco** 76.97 50 *e*P P 09 15 23.1 -0.3
PSBE **So Bento** 77.04 52 *e*P P 09 15 24.4 +0.7
INVG **Invergeldie, C** 77.06 35 *e*P P 09 15 22.7 -0.7
INVG IAmb IAmb 09 15 24.2
comp=Z,9.6nm,0.7s
KBS **Kingsbay** 77.07 11 P P 09 15 22.8 -0.3
KBS **Kingsbay** 77.07 11 P P 09 15 22.8 -0.3
KBS pmax pmax
comp=Z,25nm,1.1s
KBS **Kingsbay** 77.07 11 *i* P P 09 15 24.5 +1.4
PCAS **Casmilo, Conde** 77.16 52 *e*P P 09 15 24.9 +0.5
PCAS *i* IAmb IAmb 09 15 25.9
comp=Z,54nm,1.0s
PCAB **Cabril** 77.20 50 *e*P P 09 15 24.9 +0.3
POLO **Lamas de Olo** 77.43 50 *e*P P 09 15 25.9 0.0
PVIS **Viseu** 77.49 51 *e*P P 09 15 26.2 0.0
PSARD **Sardoal** 77.50 52 *e*P P 09 15 26.6 +0.3
PMTG **Montargil** 77.56 53 *e*P P 09 15 26.8 +0.2
MOE **Montemor** 77.57 53 *e*P P 09 15 27.1 +0.4
MORF **Marmelete** 77.57 55 *e*P P 09 15 26.5 -0.2
MORF IAmb IAmb 09 15 28.2
comp=Z,175nm,1.6s
MORF **Marmelete** 77.57 55 *e*P P 09 15 27.9 +1.1
MORF **Marmelete** 77.57 55 *e*P P 09 15 26.5 -0.2
EDI **Edinburgh** 77.62 35 *e*P P 09 15 26.4 -0.2
EDI IAmb IAmb 09 15 27.4
comp=Z,20nm,0.6s
ESK **Eskdalemuir** 77.73 36 *e*P P 09 15 26.9 -0.3
ESK IAmb IAmb 09 15 27.9
comp=Z,13nm,0.7s
ESK **Eskdalemuir** 77.73 36 P P 09 15 26.7 -0.5
ESK **Eskdalemuir** 77.73 36 P P 09 15 26.7 -0.5
ESK pmax pmax
comp=Z,18nm,0.8s
EKB **Eskdalemuir** 77.74 36 P P 09 15 26.5 -0.8
EKB IAmb IAmb 09 15 31.2
comp=Z,23nm,1.2s
PARRA **Arraiolos** 77.75 53 *e*P P 09 15 27.9 +0.2
EKA **Eskdalemuir Ar** 77.76 36 P P 09 15 26.7 -0.6
comp=Z,8.9nm,0.7s,baz=283,slow=5.6,SNR=33
comp=Z,8.9nm,0.7s
EKA **Eskdalemuir Ar** 77.76 36 P P 09 15 27.0 -0.3
EKA pmax pmax
comp=Z,9.0nm,0.8s
MESJ **Messejana** 77.80 54 *e*P P 09 15 27.5 -0.5
MESJ IAmb IAmb 09 15 28.4
comp=Z,63nm,1.4s
MESJ **Messejana** 77.80 54 *e*P P 09 15 27.9 -0.1
MESJ **Messejana** 77.80 54 *e*P P 09 15 27.5 -0.5
DRUM **Mains of Drumt** 77.81 34 *e*P P 09 15 27.3 -0.3
DRUM IAmb IAmb 09 15 28.5
comp=Z,18nm,0.5s
MTE **Manteigas** 77.81 51 P P 09 15 27.8 -0.3
MTE **Manteigas** 77.81 51 *e*P P 09 15 28.1 +0.1
MTE *i* IAmb IAmb 09 15 28.8
comp=Z,60nm,1.3s
BILL **Bilibino** 77.81 338 P P 09 15 27.9 +0.5
BILL IAmb IAmb 09 15 33.6
comp=Z,14nm,1.1s
BILL **Bilibino** 77.81 338 *ce*P P 09 15 29.0 +1.6
BILL pmax pmax
comp=Z,24nm,1.7s
EVO **Evora** 77.83 53 *e*P P 09 15 28.5 +0.5
PCBR **Castelo Branco** 77.97 52 *e*P P 09 15 29.1 +0.2
PCBR *i* IAmb IAmb 09 15 30.5
comp=Z,36nm,1.2s
MVO **Moncorvo** 78.04 50 *e*P P 09 15 29.5 +0.2
MVO *i* IAmb IAmb 09 15 30.5
comp=Z,45nm,1.2s
PBEJ **Beja** 78.04 54 *e*tx tx 09 15 29.9
PBEJ *e*P P 09 15 29.9 +0.6
PESTR **Estremoz** 78.08 53 *e*P P 09 15 29.8 +0.3
PMRV **Marv??o** 78.12 52 *e*P P 09 15 29.8 +0.1
PMRV *i* IAmb IAmb 09 15 33.7
comp=Z,37nm,1.8s
PBRG **Braganca** 78.12 50 *e*P P 09 15 29.8 0.0
PBRG *i* IAmb IAmb 09 15 31.4
comp=Z,40nm,1.5s
SPITS **Spitsbergen Ar** 78.17 11 P P 09 15 29.4 0.0
comp=Z,2.3nm,0.5s,baz=276,slow=4.2,SNR=5.5
SPITS LR LR 09 55 01.2
comp=Z,59nm,18.5s,baz=268,slow=40
comp=Z,2.3nm,0.5s
EDMD **Edmundbyers** 78.53 36 *e*P P 09 15 31.7 0.0
EDMD IAmb IAmb 09 15 32.8
comp=Z,15nm,0.8s
PBAR **Barrancos** 78.65 53 *e*P P 09 15 33.3 +0.6
PAB **San Pablo** 80.39 52 P P 09 15 42.5 +0.3
PAB **San Pablo** 80.39 52 P P 09 15 42.5 +0.3
PAB pmax pmax
comp=Z,29nm,1.0s

ESDC Sonseca Array 80.65 51 P **P** 09 15 43.6 0.0
comp=Z,18nm,0.9s,baz=295,slow=4.5,SNR=64
ESDC LR LR 09 50 18.6
comp=Z,66nm,19.0s,baz=320,slow=35
comp=Z,18nm,0.9s
AFI Afiamalu 81.31 253 P **P** 09 15 49.4 +1.9
comp=Z,8.2nm,0.3s,baz=60,slow=20,SNR=1.6
comp=Z,8.2nm,0.3s
MD01 Midelt array s 81.67 58 P **P** 09 15 49.5 +0.2
MD31 MD31 81.67 58 P **P** 09 15 49.1 -0.1
MDT Midelt 81.81 58 LR LR 09 48 01.9
comp=Z,41nm,19.6s,baz=267,slow=33
NB2 NORSAR Subarra 83.39 28 P **P** 09 15 58.4 +0.8
comp=Z,21nm,1.4s,baz=291,slow=5.3
NB2 NORSAR Subarra 83.39 28 P **P** 09 15 58.4 +0.8
NOA NORSAR Array B 83.39 28 P **P** 09 15 58.3 +0.8
comp=Z,5.2nm,1.0s,baz=297,slow=5.9,SNR=9.1
NOA LR LR 09 53 06.4
comp=Z,39nm,20.3s,baz=290,slow=36
comp=Z,5.2nm,1.0s
DOU Dourbes 83.66 40 *dP* **P** 09 15 59.5 +0.5
CEST Esterri de Car 83.69 48 P **P** 09 16 00.1 +0.5
CEST IAmb IAmb 09 16 02.9
comp=Z,14nm,0.9s
BMRD Maredsous 83.69 39 *dP* **P** 09 15 59.8 +0.5
comp=Z,6.8nm,1.0s
BGES Gesves 83.86 39 *dP* **P** 09 16 00.6 +0.5
comp=Z,12nm,0.8s
BCLA Clavier 83.98 39 *dP* **P** 09 16 01.2 +0.4
comp=Z,5.8nm,1.3s
CORI Orista 84.44 48 P **P** 09 16 03.2 0.0
ARCES ARCESS Array B 84.66 18 P **P** 09 16 03.8 0.0
comp=Z,6.8nm,0.8s,baz=290,slow=5.0,SNR=10
ARCES LR LR 09 54 40.5
comp=Z,47nm,21.3s,baz=285,slow=36
comp=Z,6.8nm,0.8s
ARCES ARCESS Array B 84.66 18 P **P** 09 16 04.3 +0.5
ARCES ARCESS Array B 84.66 18 P **P** 09 16 04.3 +0.5
ARCES pmax pmax
comp=Z,128nm,2.0s
WLF Walferdange 84.75 40 *dP* **P** 09 16 05.3 +0.7
HFS Hagfors 84.88 28 P **P** 09 16 05.5 +0.5
comp=Z,6.7nm,0.8s,baz=236,slow=2.6,SNR=7.9
HFS LR LR 09 54 30.3
comp=Z,46nm,19.7s,baz=306,slow=36
comp=Z,6.7nm,0.8s
SEY Seymchan 85.02 335 *ceP* **P** 09 16 07.4 +1.7
SEY pmax pmax
comp=Z,11nm,1.7s
ECH Echery 85.86 41 P **P** 09 16 10.5 +0.2
ECH IAmb IAmb 09 16 33.5
comp=Z,14nm,1.1s
ECH Echery 85.86 41 P **P** 09 16 10.5 +0.2
ECH pmax pmax
comp=Z,14nm,1.1s
BFO Black Forest 86.56 41 P **P** 09 16 13.5 -0.2
BFO IAmb IAmb 09 16 15.5
comp=Z,27nm,1.6s
BFO Black Forest 86.56 41 P **P** 09 16 13.5 -0.2
SENIN Lac Senin/Sane 86.60 43 P **P** 09 16 14.4 +0.2
SENIN IAmb IAmb 09 16 16.0
comp=Z,14nm,1.1s
PETK Petropavlovsk- 86.64 325 P **P** 09 16 15.4 +1.4
comp=Z,1.4nm,0.6s,baz=75,slow=7.9,SNR=2.1
comp=Z,1.4nm,0.6s
PETK Petropavlovsk- 86.64 325 P **P** 09 16 14.8 +0.8
BNI Bardonecchia 86.64 44 P **P** 09 16 15.4 +1.1
BNI Bardonecchia 86.64 44 P **P** 09 16 15.4 +1.1
BNI pmax pmax
comp=Z,44nm,1.6s
TIXI Tiksi 87.01 347 LR LR 09 58 59.7
comp=Z,98nm,21.2s,baz=38,slow=38
TIXI Tiksi 87.01 347 P **P** 09 16 15.1 -0.3
TIXI IAmb IAmb 09 16 59.6
comp=Z,17nm,1.7s
TIXI Tiksi 87.01 347 *ceP* **P** 09 16 15.6 +0.2
TIXI pmax pmax
comp=Z,9.0nm,1.7s
MA2 Magadan 87.28 332 P **P** 09 16 17.9 +1.0
MA2 IAmb IAmb 09 16 23.1
comp=Z,14nm,1.0s
MA2 Magadan 87.28 332 P **P** 09 16 17.9 +1.0
MA2 pmax pmax
comp=Z,14nm,1.0s
TUE Stuetta 87.88 42 P **P** 09 16 21.3 +0.9
DAVOX Davos/Dischmat 88.10 42 P **P** 09 16 21.3 -0.1
DAVOX LR LR 09 55 42.6
comp=Z,80nm,18.7s,baz=258,slow=36
comp=Z,1.8nm,0.7s
FUORN Ofenpass-Fuorn 88.41 42 P **P** 09 16 23.1 +0.1
FUORN IAmb IAmb 09 16 31.9
comp=Z,7.3nm,1.2s
DBIC Dimbokro 88.62 83 P **P** 09 16 24.2 0.0
comp=Z,2.9nm,0.6s,baz=314,slow=6.8,SNR=4.2
comp=Z,2.9nm,0.6s
DBIC Dimbokro 88.62 83 P **P** 09 16 24.2 0.0
DBIC Dimbokro 88.62 83 P **P** 09 16 24.2 0.0
DBIC pmax pmax
comp=Z,34nm,1.7s
KHC Kasperske Hory 89.44 38 *ceP* **P** 09 16 28.7 +1.2
KHC pmax pmax
comp=Z,6.0nm,1.7s
FINES FINESS Array B 89.49 24 P **P** 09 16 27.0 -0.3
comp=Z,3.7nm,0.9s,baz=282,slow=1.3,SNR=3.9
FINES LR LR 10 00 09.5
comp=Z,42nm,18.2s,baz=246,slow=38
comp=Z,3.7nm,0.9s
FINES FINESS Array B 89.49 24 P **P** 09 16 27.0 -0.3
GERES GERESS Array B 89.64 39 P **P** 09 16 28.2 -0.2
comp=Z,1.1nm,0.7s,baz=267,slow=8.2,SNR=6.4
comp=Z,1.1nm,0.7s
FDMO Fiordimonte 91.68 44 IAmb IAmb 09 16 38.7
comp=Z,14nm,1.4s
MODS Modra-Piesok 91.97 38 *eP* **P** 09 16 42.1 +2.9
MODS Modra-Piesok 91.97 38 *eP* **P** 09 16 42.1 +2.9
TORD Torodi Ar. Bea 92.91 75 P **P** 09 16 43.1 -1.1
comp=Z,0.7nm,0.7s,baz=273,slow=7.5,SNR=3.4
comp=Z,0.7nm,0.7s
TAM Tamanrasset 93.32 65 P **P** 09 16 46.7 +0.6
TAM Tamanrasset 93.32 65 P **P** 09 16 46.7 +0.6
YAK Yakutsk 93.93 340 LR LR 10 02 32.6
comp=Z,40nm,18.8s,baz=43,slow=38
NRIK Noril'sk 94.24 359 LR LR 10 05 33.5
comp=Z,44nm,18.1s,baz=11,slow=40
OBN Obninsk 97.79 26 *ij e* P Pdif 09 17 05.8 +0.2
OBN 09 17 10.8
OBN S **SKSac** 09 27 45.0 +2.2
OBN pmax pmax
comp=Z,6.0nm,0.7s
OBN MLR MLR
comp=Z,65nm,19.0s
NVL N'lazarevskaya 111.24 160 *e* PKIKP **PKiKP** 09 21 57.4 -6.1
NVL pmax pmax
comp=Z,39nm,2.1s
KURK Kurchatov 112.75 4 PKIKP PKiKP 09 22 16.8 +10
MK31 Makanchi Array 116.84 2 *ci* PKIKP **PKPdf** 09 22 14.7 -0.5
HHC Hu-ho-hao-te 117.58 337 *eP* **PKPdf** 09 22 14.3 -2.6
WMQ Urumqi 119.79 357 PKP **PKiKP** 09 22 21.9 +0.8
WMQ PP **PP** 09 23 48.4 +5.5
WMQ LR LR
comp=N,310nm,24.0s
WMQ LR LR
comp=E,530nm,23.9s
AAK Ala-Archa 120.30 9 *ce* PKIKP **PKiKP** 09 22 23.2 +1.0
AAK pmax pmax
comp=Z,3.0nm,1.7s
NJ2 Nanjing 121.53 326 *eP* **PKiKP** 09 22 26.1 +1.4
NJ2 pmax pmax
comp=Z,22nm,0.5s
CHGR Chuyangaron 123.13 14 *i* PKIKP **PKPdf** 09 22 26.8 -0.8
BOSA Boshof 124.41 114 PKP **PKPdf** 09 22 30.1 -0.1
comp=Z,4.6nm,0.8s,baz=284,slow=3.0,SNR=6.4
STKA Stephens Creek 126.44 242 PKP **PKiKP** 09 22 34.4 +0.1
comp=Z,8.4nm,0.7s,baz=113,slow=2.4,SNR=15
STKA Stephens Creek 126.44 242 **PKiKP** 09 22 34.9 +0.6
STKA Stephens Creek 126.44 242 PKIKP **PKiKP** 09 22 34.9 +0.6
GOMU GeErMu 126.59 350 PKP **PKPdf** 09 22 32.0 -2.7
KMBO Kilima Mbogo 130.91 77 *i* PKIKP **PKPdf** 09 22 42.8 -0.5
WRAB Tennant Creek 132.79 258 *ce* PKIKP **PKPdf** 09 22 46.6 +0.3
WRAB pmax pmax
comp=Z,7.0nm,0.8s
WRA Warramunga Arr 132.81 258 PKP **PKPdf** 09 22 46.9 +0.5
comp=Z,5.4nm,0.7s,baz=83,slow=2.2,SNR=42
WRA Warramunga Arr 132.81 258 **PKiKP** 09 22 47.2 -0.3
WRA Warramunga Arr 132.81 258 PKIKP **PKiKP** 09 22 47.2 -0.3

ASAR Alice Springs 133.38 253 PKP **PKPdf** 09 22 47.5 +0.1
comp=Z,0.3nm,0.5s,baz=106,slow=1.9,SNR=6.2
ASAR Alice Springs 133.38 253 **PKPdf** 09 22 47.2 -0.2
PZH PanZhiHua 134.01 338 PKP **PKPdf** 09 22 49.0 +0.3
CMAR Chiang Mai Arr 142.40 337 PKhKP PKPpre 09 22 59.3
comp=Z,1.2nm,0.3s,baz=327,slow=3.3,SNR=6.2
PSA00 Pilbara Seismi 146.40 256 P **PKPbc** 09 23 12.7 +0.5
PSA00 Pilbara Seismi 146.40 256 PKPbc **PKPab** 09 23 12.9 -0.2
MBWA Marble Bar 146.52 257 P **PKPbc** 09 23 13.0 +0.5
MBWA Marble Bar 146.52 257 PKPbc **PKPbc** 09 23 13.0 +0.5
PLAI Plampang 146.78 279 P **PKPdf** 09 23 11.1 -0.6
MORW Morawa 148.61 241 PKPbc **PKiKP** 09 23 19.0 -0.5

*ASRS **20** 09:09:31.0±0.9, 53.°61N×87.°76E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 20 09:09:33.1±3.5, 53.70N×87.92E, h0km, mbtmp2.6/2, ML2.0/1, Error ellipse: s-maj=31.2km s-min=19.3km az=45.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.86**	**279**	I		09 21 50.0	
	0.1nm,0.7s,baz=98,slow=337,SNR=11						
ZALV	**Zalesovo Beam**	**1.86**	**279**	Pg	Pn	09 10 06.0	-0.2
	0.6nm,0.3s,baz=98,slow=18,SNR=5.9						
ZALV				Lg	Lg	09 10 32.9	
	1.0nm,0.3s,baz=99,slow=18,SNR=6.4						
KURBB	**Kurchatov Arra**	**6.55**	**246**	Pn	Pn	09 11 10.2	-0.4
	baz=62,slow=14,SNR=4.6						
KURBB				Sn	Sn	09 12 25.6	-0.4
	baz=65,slow=37,SNR=1.0						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.80**	**210**	Pn	Pn	09 11 30.1	+2.3
	0.1nm,0.3s,baz=23,slow=14,SNR=1.6						

*IDC **20** 09:16:07.5±1.4, 28.°50N×52.°01E, h0km, mb3.7/12, mbtmp3.7/13, ML3.2/1, MS3.7/2, Error ellipse: s-maj=33.0km s-min=22.5km az=170.0*
*TEH **20** 09:16:10.0, 28.°59N×52.°00E, h17km±17km, ML3.4, Presumed earthquake*
*OMAN **20** 09:16:13.7±1.2, 28.°46N×52.°22E, h18km, mb3.4/10, ml3.7/10, Error ellipse: s-maj=11.2km s-min=5.9km az=179.0*
*DSN **20** 09:16:14.2±1.0, 28.°43N×52.°35E, h10km, ML3.0/14, Error ellipse: s-maj=13.3km s-min=6.6km az=5.0*
ISC 20 09:16:09.6±0.6, 28.°46N±0.°04×51.°93E±0.°04, h15km, n75, σ1s64/93, mb3.6/11, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QIR1	**Qir**	**0.98**	**89**	Pg	**Pb**	**09 16 27.8**	**-0.5**
KAZ2	**Kazeron-Fars-I**	**1.17**	**349**	Pg	**Pn**	**09 16 30.5**	**-1.0**
SHI	**Shiraz**	**1.29**	**23**	Pg	**Pn**	**09 16 31.0**	**-2.2**
JHRM	**Jahrom**	**1.45**	**88**	Pg	**Pb**	**09 16 36.9**	**+0.5**
KHL1	**Khalili_Fars**	**1.46**	**124**	Pg	**Pg**	**09 16 37.6**	**-0.1**
LMD1	**Lamerd**	**1.56**	**135**	Pg	**Pg**	**09 16 39.8**	**+0.2**
KLNJ	**Kolanjah**	**2.56**	**354**	Pn	**Pn**	**09 16 51.0**	**+0.1**
SAKB	**Bahrain**	**2.76**	**207**	P	**Pb**	**09 16 58.2**	**-0.4**
SAKB				S	**Sg**	**09 17 34.9**	**-3.4**
IRAM	**Ramesheh**	**3.36**	**7**	Pn	**Pn**	**09 17 01.6**	**-0.2**
IMEH	**Mehriz**	**3.74**	**38**	Pn	**Pn**	**09 17 06.8**	**-0.1**
TRNA	**Turayna**	**3.76**	**190**	P	**Pb**	**09 17 18.0**	**+2.3**
TRNA				S	**Sb**	**09 17 57.1**	**-4.0**
TAFT	**Taft - Yazd**	**3.79**	**30**	Pn	**Pn**	**09 17 08.0**	**+0.4**
SMRA	**Abu-Samra**	**3.83**	**195**	P	**Pb**	**09 17 15.0**	**-1.8**
	SNR=5.6						
SMRA				S	**Sb**	**09 17 59.9**	**-3.0**
GENO	**Geno**	**3.90**	**105**	Pn	**Pn**	**09 17 11.0**	**+1.9**
AMIS	**Naft Sefid**	**3.93**	**325**	Pn	**Pn**	**09 17 10.7**	**+1.3**
SLWR	**Sila**	**4.38**	**183**	P	**Pn**	**09 17 20.3**	**+4.8**
KHGB	**Koh Gabri**	**4.41**	**63**	Pn	**Pn**	**09 17 16.4**	**+0.3**
IBAF	**Bafgh**	**4.44**	**44**	Pn	**Pn**	**09 17 16.7**	**+0.2**
SHME	**Shamm**	**4.45**	**122**	P	**Pn**	**09 17 17.3**	**+0.8**
SHME	**Shamm**	**4.45**	**122**	P	**Pn**	**09 17 18.0**	**+1.5**
SHME				S	**Sn**	**09 18 08.1**	**0.0**
BANOM	**Banah**	**4.64**	**122**	*i* P	**Pn**	**09 17 19.5**	**+0.4**
	SNR=13						
BANOM				S	**Sn**	**09 18 11.3**	**-1.6**
BANOM	**Banah**	**4.64**	**122**	P	**Pn**	**09 17 20.8**	**+1.6**
BANOM				S	**Sn**	**09 18 12.5**	**-0.3**
ZRDN	**Zarand Kerman**	**4.72**	**57**	Pn	**Pn**	**09 17 20.8**	**+0.3**
NAZ	**Nazwa, Dubai**	**4.80**	**135**	*i* P	**Pn**	**09 17 23.5**	**+2.1**
	SNR=9.2						
NAZ	**Nazwa, Dubai**	**4.80**	**135**	P	**Pn**	**09 17 23.9**	**+2.5**
	SNR=9.3						
NAZ				S	**Sn**	**09 18 18.3**	**+1.5**
MASF	**Masafi**	**4.87**	**128**	P	**Pn**	**09 17 24.3**	**+1.9**
	SNR=6.1						
MSFE	**Esma-Masafi**	**4.88**	**128**	*i* P	**Pn**	**09 17 23.9**	**+1.4**
	SNR=6.1						
ASUD	**Al Ashush, Dub**	**4.88**	**141**	*i* P	**Pn**	**09 17 25.0**	**+2.5**
	SNR=16						
ASUD	**Al Ashush, Dub**	**4.88**	**141**	P	**Pn**	**09 17 25.4**	**+2.9**
	SNR=16						
ASUD				S	**Sn**	**09 18 21.4**	**+2.7**
FAQ	**Al Faqa, Dubai**	**4.94**	**138**	P	**Pn**	**09 17 25.3**	**+2.0**
FAQ				S	**Sn**	**09 18 21.5**	**+1.3**
MDH	**Madha**	**5.01**	**128**	P	**Pn**	**09 17 25.3**	**+1.0**
MDH	**Madha**	**5.01**	**128**	P	**Pn**	**09 17 25.7**	**+1.4**
KHNJ	**Kahnooj**	**5.12**	**94**	Pn	**Pn**	**09 17 26.9**	**+1.0**
UOSS	**Minazif**	**5.18**	**131**	P	**Pn**	**09 17 27.5**	**+0.9**
UOSS	**Minazif**	**5.18**	**131**	P	**Pn**	**09 17 27.7**	**+1.1**
UOSS				S	**Sn**	**09 18 26.7**	**+0.5**
HATD	**Hatta, Dubai**	**5.22**	**133**	*i* P	**Pn**	**09 17 28.7**	**+1.6**
	SNR=7.3						
HATD	**Hatta, Dubai**	**5.22**	**133**	P	**Pn**	**09 17 30.0**	**+2.9**
	SNR=7.3						
ASHO	**Ashiyiah**	**5.27**	**135**	*i* P	**Pn**	**09 17 29.3**	**+1.4**
	SNR=14						
ASHO	**Ashiyiah**	**5.27**	**135**	P	**Pn**	**09 17 29.4**	**+1.5**
	SNR=14						
ASHO				S	**Sn**	**09 18 28.7**	**+0.3**
ALNE	**Al Ain**	**5.57**	**141**	*i* P	**Pn**	**09 17 34.4**	**+2.5**
	SNR=11						
ALNE	**Al Ain**	**5.57**	**141**	P	**Pn**	**09 17 34.4**	**+2.5**
	SNR=11						
ALNE				S	**Sn**	**09 18 36.9**	**+1.3**
MZR	**Muzera**	**5.61**	**165**	*i* P	**Pn**	**09 17 35.7**	**+3.2**
	SNR=6.4						
MZR	**Muzera**	**5.61**	**165**	P	**Pn**	**09 17 36.0**	**+3.6**
KBAM	**BAM**	**5.77**	**82**	Pn	**Pn**	**09 17 35.6**	**+0.9**
JASK	**Jask - Hormozg**	**5.89**	**115**	P	**Pn**	**09 17 36.1**	**-0.1**
JASK				S	**Sn**	**09 18 43.5**	**0.0**
SOHO	**SOHO**	**5.97**	**135**	*i* P	**Pn**	**09 17 38.0**	**+0.6**
	SNR=6.4						
SOHO	**SOHO**	**5.97**	**135**	P	**Pn**	**09 17 38.2**	**+0.8**
SOHO				S	**Sn**	**09 18 45.6**	**+0.1**
ARQ	**Araqi**	**6.57**	**140**	P	**Pn**	**09 17 47.1**	**+1.5**
ARQ				P	**Pn**	**09 17 47.1**	**+1.5**
	SNR=19						
ARQ				S	**Sn**	**09 19 00.6**	**+0.3**
ARQ				S	**Sn**	**09 19 01.2**	**+0.9**
HOQ	**Hoqain**	**6.86**	**134**	P	**Pn**	**09 17 50.9**	**+1.3**
HOQ				S	**Sn**	**09 19 06.7**	**-0.8**
BSY	**Bisya**	**7.42**	**139**	P	**Pn**	**09 17 59.0**	**+1.7**
	SNR=14						
BSY				S	**Sn**	**09 19 21.0**	**-0.2**
RAYN	**Ar Rayn**	**7.59**	**231**	P	**Pn**	**09 18 03.4**	**+3.8**
SMDO	**Samad**	**7.70**	**133**	P	**Pn**	**09 18 03.0**	**+1.6**
	SNR=7.8						
WSAR	**Wadi Sarin**	**7.96**	**129**	P	**Pn**	**09 18 05.9**	**+1.0**
WSAR				S	**Sn**	**09 19 32.6**	**-2.1**
JMDO	**Jabal Madar**	**8.24**	**136**	P	**Pn**	**09 18 10.3**	**+1.7**
WBK	**Wadi Bani Khal**	**8.62**	**131**	P	**Pn**	**09 18 14.2**	**+0.4**
MHTO	**MHTO**	**9.24**	**142**	P	**Pn**	**09 18 24.0**	**+1.6**
	SNR=17						
MHTO				S	**Sn**	**09 20 03.1**	**-3.0**
DOK	**Doka**	**10.00**	**168**	P	**Pn**	**09 18 33.3**	**+0.5**
WHFO	**Wadi Hawf**	**10.63**	**170**	P	**Pn**	**09 18 43.2**	**+1.9**
ABTO	**Aybut**	**11.12**	**173**	P	**Pn**	**09 18 51.5**	**+3.2**
BRTR	**Keskin Array B**	**18.82**	**311**	P	**Pn**	**09 20 30.2**	**+0.8**
	0.1nm,0.3s,baz=128,slow=13,SNR=3.1						
	0.4nm,0.4s						
AKTO	**Aktyubinsk**	**22.43**	**10**	P	**P**	**09 21 06.8**	**-0.9**
	1.7nm,0.7s,baz=220,slow=7.0,SNR=5.1						
	1.7nm,0.7s						
KURBB	**Kurchatov Arra**	**29.90**	**35**	P	**P**	**09 22 16.8**	**+0.2**
	0.8nm,0.7s,baz=235,slow=9.3,SNR=5.2						
	0.8nm,0.7s						
MKAR	**Makanchi Array**	**29.95**	**44**	P	**P**	**09 22 17.8**	**+0.6**
	0.3nm,0.6s,baz=231,slow=8.9,SNR=12						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**29.95**	**44**	PKIKP	**P**	**09 22 17.8**	**+0.6**
ZALV	**Zalesovo Beam**	**34.98**	**34**	P	**P**	**09 23 00.3**	**-0.7**
	1.5nm,0.6s,baz=231,slow=10,SNR=4.1						
	1.5nm,0.6s						
FINES	**FINESS Array B**	**37.20**	**340**	P	**P**	**09 23 19.5**	**-0.4**
	1.1nm,0.6s,baz=154,slow=7.1,SNR=4.9						
	1.1nm,0.6s						
HFS	**Hagfors**	**40.84**	**332**	P	**P**	**09 23 50.3**	**-0.1**
	3.0nm,0.8s,baz=128,slow=12,SNR=4.9						
	3.0nm,0.8s						
NOA	**NORSAR Array B**	**42.36**	**332**	P	**P**	**09 24 02.8**	**-0.2**
	0.2nm,0.5s,baz=122,slow=8.3,SNR=1.6						
	0.2nm,0.5s						
SONM	**Songino Array**	**45.97**	**50**	P	**P**	**09 24 31.2**	**-0.9**
	0.3nm,0.4s,baz=271,slow=8.8,SNR=2.1						
	0.3nm,0.4s						
TORD	**Torodi Ar. Bea**	**49.02**	**263**	P	**P**	**09 24 57.4**	**+1.3**
	0.5nm,0.5s,baz=62,slow=7.0,SNR=5.4						
	0.5nm,0.5s						
JMIC	**Jan Mayen**	**53.83**	**339**	LR	LR	09 48 46.7	
	comp=Z,72nm,21.3s,baz=324,slow=36						
MJAR	**Matsushiro Arr**	**70.91**	**58**	LR	LR	09 59 59.8	
	comp=Z,55nm,19.8s,baz=36,slow=37						
ILAR	**Eielson Array**	**85.92**	**8**	P	**P**	**09 28 48.3**	**-0.3**
	0.3nm,0.9s,baz=320,slow=2.7,SNR=3.0						
	0.3nm,0.9s						
YKA	**Yellowknife Ar**	**88.72**	**354**	P	**P**	**09 29 02.9**	**+0.7**
	0.2nm,0.8s,baz=356,slow=5.1,SNR=5.8						
	0.2nm,0.8s						
ASAR	**Alice Springs**	**94.39**	**114**	P	**P**	**09 29 28.6**	**-0.5**
	0.3nm,0.6s,baz=303,slow=4.9,SNR=4.3						
	0.3nm,0.6s						

*NEIC **20** 09:18:43.7±2.2, 5.°83S±0.°06×153.°64E±0.°09, h10km±1km, mb4.5/20, Error ellipse: s-maj=15.6km s-min=10.6km az=93.0*
*IDC **20** 09:18:53.8±3.8, 5.°87S×153.°35E, h92km±33km, mb3.7/13, mbtmp4.1/14, MS3.3/2, Error ellipse: s-maj=24.8km s-min=17.2km az=84.0*
ISC 20 09:18:46.7±0.5, 5.83S±0.°07×153.64E±0.°07, h35km, n50, σ1s31/51, mb4.4/19, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**2.19**	**318**	Pn	**Pn**	**09 19 20.8**	**0.0**
TATA	**Tatamba Isabel**	**6.62**	**113**	P	**Pn**	**09 20 24.9**	**+3.3**
SAVO	**Savo Central**	**6.95**	**119**	P	**Pn**	**09 20 24.4**	**-1.8**
PMG	**Port Moresby**	**7.34**	**241**	P	**Pn**	**09 20 34.2**	**+2.7**
	11nm,0.6s,baz=59,slow=12,SNR=2.1						
PMG				S	**Sn**	**09 21 55.0**	**+1.4**
	12nm,0.7s,baz=56,slow=22,SNR=1.5						
PMG				LR	LR	09 23 28.4	
	comp=Z,193nm,19.7s,baz=16,slow=39						
PMG	**Port Moresby**	**7.34**	**241**	Pn	**Pn**	**09 20 29.5**	**-2.0**
COEN	**Coen**	**13.09**	**231**	Pn	**Pn**	**09 21 50.1**	**-0.2**
PATS	**Pohnpei**	**13.42**	**20**	Pn	**Pn**	**09 21 53.4**	**-1.4**
CTAO	**Charters Tower**	**15.88**	**206**	Pn	**Pn**	**09 22 26.2**	**-1.6**
SANVU	**Saraoutou**	**16.39**	**127**	Pn	**Pn**	**09 22 31.8**	**-2.4**
SANVU				IAmb	IAmb	09 22 37.6	
	comp=Z,26nm,0.8s						
DZM	**Mont Dzumac**	**20.34**	**144**	P	Pn	09 23 23.4	+0.9
	comp=Z,5.0nm,0.7s,baz=308,slow=16,SNR=7.7						
	comp=Z,5.0nm,0.7s						
MTN	**Manton Dam**	**23.26**	**251**	P	**P**	**09 23 51.3**	**0.0**
MTN				IAmb	IAmb	09 24 15.6	
	comp=Z,15nm,1.2s						
WB0	**Warramunga Arr**	**23.29**	**232**	P	**P**	**09 23 51.8**	**+0.2**
WB0				IAmb	IAmb	09 24 27.1	
	comp=Z,8.3nm,1.1s						
WR8	**Warramunga Arr**	**23.31**	**231**	P	**P**	**09 23 52.4**	**+0.6**
WRA	**Warramunga Arr**	**23.43**	**231**	P	**P**	**09 23 53.3**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=56,slow=9.2,SNR=4.6						
WRA				PcP	**PcP**	**09 27 38.9**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=60,slow=1.9,SNR=3.2						
	comp=Z,0.8nm,0.7s						
WRA	**Warramunga Arr**	**23.43**	**231**	P	**P**	**09 23 51.6**	**-1.4**
WRA				PcP	**PcP**	**09 27 37.1**	**-1.7**
AS31	**Alice Springs**	**25.98**	**225**	P	**P**	**09 24 15.9**	**-0.5**
ASAR	**Alice Springs**	**25.98**	**225**	P	**P**	**09 24 16.6**	**+0.1**
	comp=Z,1.1nm,0.9s,baz=62,slow=8.3,SNR=5.2						
ASAR				PcP	**PcP**	**09 27 45.0**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=56,slow=2.5,SNR=3.9						
ASAR				LR	LR	09 34 49.7	
	comp=Z,88nm,18.7s,baz=97,slow=37						
	comp=Z,1.1nm,0.9s						
ASAR	**Alice Springs**	**25.98**	**225**	P	**P**	**09 24 16.9**	**+0.4**
ASAR				PcP	**PcP**	**09 27 42.7**	**-1.7**
KNRA	**Kununurra**	**26.29**	**246**	P	**P**	**09 24 18.4**	**-0.9**
KNRA				IAmb	IAmb	09 24 39.2	
	comp=Z,7.3nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**27.39**	**28**	T	T	09 52 43.2	
	baz=208,slow=76,SNR=5.1						
H11S2	**WAKE ISLAND Hy**	**27.39**	**28**	T	T	09 52 46.0	
	baz=208,slow=76,SNR=5.8						
H11S1	**WAKE ISLAND Hy**	**27.40**	**28**	T	T	09 52 46.7	
	baz=208,slow=76,SNR=4.2						
LUWI	**Luwuk**	**31.17**	**278**	P	**P**	**09 25 01.2**	**-1.5**
FORT	**Forrest**	**34.54**	**221**	P	**P**	**09 25 32.3**	**+0.3**
FORT				IAmb	IAmb	09 26 14.0	
	comp=Z,11nm,1.2s						
BKZ	**Black Stump Fm**	**39.09**	**151**	P	**P**	**09 26 11.8**	**+1.2**
BKZ				IAmb	IAmb	09 26 16.8	
	comp=Z,17nm,1.3s						
LTZ	**Lake Taylor**	**40.33**	**159**	P	**P**	**09 26 22.1**	**+1.2**
LTZ				IAmb	IAmb	09 26 40.4	
	comp=Z,20nm,1.1s						
JKA	**Kamikawa-asahi**	**50.71**	**350**	P	**P**	**09 27 43.1**	**+0.2**
MA2	**Magadan**	**65.24**	**358**	P	**P**	**09 29 27.0**	**+2.5**
	comp=Z,3.2nm,0.6s,baz=166,slow=5.8,SNR=9.2						
	comp=Z,3.2nm,0.6s						
MA2	**Magadan**	**65.24**	**358**	P	**P**	**09 29 24.6**	**+0.1**
MA2				IAmb	IAmb	09 29 28.2	
	comp=Z,3.9nm,0.7s						
CASY	**Casey**	**67.28**	**197**	P	**P**	**09 29 38.3**	**+0.7**
SONM	**Songino Array**	**67.64**	**328**	P	**P**	**09 29 39.6**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=146,slow=7.2,SNR=4.0						
	comp=Z,0.5nm,0.5s						
SONM	**Songino Array**	**67.64**	**328**	P	**P**	**09 29 40.4**	**+0.2**
SEY	**Seymchan**	**68.58**	**359**	P	**P**	**09 29 47.5**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=157,slow=6.6,SNR=3.6						
	comp=Z,0.3nm,0.3s						
VNDA	**Vanda**	**71.78**	**178**	P	**P**	**09 30 05.8**	**+0.7**
	comp=Z,1.3nm,0.9s,baz=336,slow=4.9,SNR=3.5						
	comp=Z,1.3nm,0.9s						
VNDA	**Vanda**	**71.78**	**178**	P	**P**	**09 30 06.3**	**+1.2**
VNDA				IAmb	IAmb	09 30 06.9	
	comp=Z,2.8nm,1.1s						
MKAR	**Makanchi Array**	**81.65**	**319**	P	**P**	**09 31 00.8**	**-0.6**
	comp=Z,2.4nm,0.8s,baz=106,slow=5.5,SNR=20

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CARR	**Arriaga**	**1.19**	**47**	*eP*	**Pg**	**09 26 40.5**	**0.0**
CARR				*eS*	**Sg**	**09 26 53.5**	**-2.5**
HUIG	**Huatulco**	**1.29**	**285**	*eP*	**Pg**	**09 26 43.5**	**+0.9**
HUIG				*eS*	**Sg**	**09 26 57.6**	**-1.7**
HUIG	**Huatulco**	**1.29**	**285**	*eP*	**Pg**	**09 26 43.1**	**+0.6**
HUIG				*eS*	**Sg**	**09 26 57.7**	**-1.7**
PCIG		**1.56**	**80**	*eP*	**Pn**	**09 26 46.9**	**+0.6**
PCIG				*eS*	**Sn**	**09 27 04.7**	**-2.3**
CMIG	**Matias Romero**	**1.65**	**358**	*eP*	**Pn**	**09 26 48.6**	**+1.0**
CMIG				*eS*	**Sn**	**09 27 07.2**	**-2.2**
TGIG		**2.11**	**50**	*eP*	**Pn**	**09 26 55.7**	**+1.8**
TGIG				*eS*	**Sn**	**09 27 19.5**	**-1.1**
TGIG		**2.11**	**50**	*eP*	**Pn**	**09 26 55.7**	**+1.8**
TGIG				*eS*	**Sn**	**09 27 20.2**	**-0.4**
TGIG				IAML		09 27 22.4	
	comp=E,476nm,0.4s						
TGBT	**Tuxtla Gutierr**	**2.13**	**51**	*eS*	**Sn**	**09 27 17.7**	**-3.4**
PEIG	**Puerto Escondi**	**2.32**	**284**	*eP*	**Pn**	**09 26 58.0**	**+1.2**
PEIG				*eS*	**Sn**	**09 27 22.5**	**-3.3**
NEUV	**Arroyo Zacate**	**2.46**	**337**	*eP*	**Pn**	**09 27 00.2**	**+1.5**
NEUV				*eS*	**Sn**	**09 27 28.1**	**-1.2**
VHO	**Vista Hermosa**	**2.46**	**312**	*eP*	**Pn**	**09 27 02.0**	**+3.1**
VHO				*eS*	**Sn**	**09 27 31.2**	**+1.6**
PATR	**El Naranjo**	**2.51**	**97**	*eP*	**Pn**	**09 27 00.6**	**+1.0**
PATR				*eS*	**Sn**	**09 27 28.9**	**-1.8**
THIG		**2.51**	**102**	*eS*	**Sn**	**09 27 29.1**	**-1.4**
PAVE	**Pavencul**	**2.55**	**95**	*eP*	**Pn**	**09 27 00.9**	**+0.7**
PAVE				*eS*	**Sn**	**09 27 30.2**	**-1.7**
TUIG	**Tuzandepetl**	**2.62**	**8**	*eP*	**Pn**	**09 27 01.8**	**+0.9**
TUIG				*eS*	**Sn**	**09 27 31.0**	**-2.1**
CHUJ	**Union Juarez**	**2.63**	**97**	*eP*	**Pn**	**09 27 02.2**	**+1.0**
CHUJ				*eS*	**Sn**	**09 27 32.0**	**-1.8**
CCIG	**Comitan**	**2.71**	**71**	*eP*	**Pn**	**09 27 05.6**	**+3.3**
CCIG				*eS*	**Sn**	**09 27 39.4**	**+3.7**
CCIG	**Comitan**	**2.71**	**71**	*eP*	**Pn**	**09 27 06.8**	**+4.5**
CCIG				*eS*	**Sn**	**09 27 37.9**	**+2.3**
CCIG				IAML		09 27 45.7	
	comp=N,286nm,0.3s						
YOIG	**Yosondua**	**2.99**	**299**	*eP*	**Pn**	**09 27 08.9**	**+2.7**
YOIG				*eS*	**Sn**	**09 27 41.4**	**-1.3**
PMUV	**Sontecomapan**	**3.11**	**355**	*eS*	Sn	09 27 39.5	-5.9
RTAL	**Retalhuleu**	**3.14**	**106**	*eP*	**Pn**	**09 27 07.9**	**-0.2**
RTAL				*eS*	**Sn**	**09 27 44.6**	**-1.5**
HUEH	**Huehuetenango**	**3.19**	**92**	*eP*	**Pn**	**09 27 10.6**	**+1.6**
HUEH				*eS*	**Sn**	**09 27 47.0**	**-0.7**
PNIG	**Pinotepa**	**3.33**	**287**	*eP*	**Pn**	**09 27 13.0**	**+2.3**
PNIG				*eS*	**Sn**	**09 27 47.3**	**-3.5**
TXIG	**Tlaxiaco**	**3.37**	**303**	*eP*	**Pn**	**09 27 15.2**	**+3.7**
TXIG				*eS*	**Sn**	**09 27 51.6**	**-0.5**
TOIG	**Toxpalan**	**3.42**	**321**	*eP*	Pn	09 27 17.3	+5.3
TOIG				*eS*	**Sn**	**09 27 55.5**	**+2.4**
STG8	**El Palmar, Qui**	**3.48**	**106**	*eP*	Pn	09 27 10.9	-2.1
STG8				*eS*	Sn	09 27 45.5	-9.4
STG5	**El Palmar, Qui**	**3.50**	**106**	*eP*	Pn	09 27 10.6	-2.5
HLIG	**Huajuapan de L**	**3.73**	**310**	*eP*	**Pn**	**09 27 20.1**	**+3.7**
HLIG				*eS*	**Sn**	**09 27 59.6**	**-1.4**
TPIG	**Tehuac#an**	**3.85**	**321**	*eS*	**Sn**	**09 28 01.3**	**-2.4**
FTIG	**Fresnillo de T**	**4.03**	**308**	*eP*	**Pn**	**09 27 23.4**	**+3.0**
FTIG				*eS*	**Sn**	**09 28 04.8**	**-3.2**
MGIG	**Malinaltepec**	**4.08**	**297**	*eP*	**Pn**	**09 27 23.7**	**+2.5**
MGIG				*eS*	**Sn**	**09 28 06.0**	**-3.6**
TLIG	**Tlapa**	**4.18**	**301**	*eP*	Pn	09 27 27.4	+4.9
TLIG				*eS*	**Sn**	**09 28 08.8**	**-3.1**
APG	**El Apazote**	**4.22**	**95**	*eP*	**Pn**	**09 27 26.7**	**+3.7**
CRIG	**Cruz Grande**	**4.35**	**288**	*eP*	**Pn**	**09 27 27.2**	**+2.5**
CRIG				*eS*	Sn	09 28 10.3	-5.7
JAUV	**Jalcomulco**	**4.35**	**334**	*eP*	**Pn**	**09 27 25.1**	**+0.3**
JAUV				*eS*	Sn	09 28 12.1	-3.9
PETF	**Flores**	**4.98**	**72**	*eP*	**Pn**	**09 27 36.1**	**+2.8**
PETF				*eS*	**Sn**	**09 28 28.4**	**-2.9**

IDC 20 09:35:24.2±3.8, 54°.16N×87°.38E, h0km, mbtmp2.6/2, ML2.5/2, Error ellipse: s-maj=36.8km s-min=20.5km az=41.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.52**	**263**	I	I	09 46 20.0	
	baz=80,slow=335,SNR=2.1						
ZALV	**Zalesovo Beam**	**1.52**	**263**	Pg	Pn	09 35 52.5	-0.1
	1.3nm,0.3s,baz=81,slow=9.1,SNR=13						
ZALV				Lg	Lg	09 36 11.8	
	0.7nm,0.3s,baz=91,slow=28,SNR=1.9						
KURBB	**Kurchatov Arra**	**6.47**	**240**	Pn	Pn	09 37 01.3	+0.7
	0.1nm,0.3s,baz=59,slow=13,SNR=4.4						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**8.06**	**206**	Pn	Pn	09 37 23.4	+0.9
	0.1nm,0.3s,baz=24,slow=14,SNR=6.7						
	0.1nm,0.3s						

*ASRS **20** 09:39:33.0±1.3, 53°.56N×87°.66E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 20 09:39:34.5±3.2, 53°.59N×87°.93E, h0km, mbtmp2.5/2, ML2.3/2, Error ellipse: s-maj=27.4km s-min=18.1km az=48.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.88**	**282**	I	I	09 51 10.0	
	0.1nm,0.8s,baz=100,slow=339,SNR=2.1						
ZALV	**Zalesovo Beam**	**1.88**	**282**	Pg	Pn	09 40 07.8	-0.1
	0.5nm,0.3s,baz=100,slow=16,SNR=6.2						
ZALV				Lg	Lg	09 40 33.8	
	1.4nm,0.3s,baz=98,slow=25,SNR=4.8						
KURBB	**Kurchatov Arra**	**6.51**	**247**	Pn	Pn	09 41 13.6	+2.1
	baz=61,slow=14,SNR=2.2						
KURBB				Sn	Sn	09 42 25.4	-0.9
	baz=59,slow=27,SNR=1.4						
KURBB				Lg	Lg	09 43 01.5	
	baz=60,slow=32,SNR=4.2						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**7.70**	**210**	Pn	Pn	09 41 28.4	+0.5
	0.1nm,0.3s,baz=33,slow=14,SNR=4.9						
	0.1nm,0.4s						

*SNET **20** 09:42:17.3±1.1, 13°.58N×90°.06W, h61km, ML2.7, Presumed earthquake*
*GCG **20** 09:42:17.3±0.6, 13°.58N×90°.08W, h58km±5km, MD4.0, ML3.0, Presumed earthquake*
*CATAC **20** 09:42:17.0±0.6, 13°.N±4".×9°.0W±°, h42km±5km, M2.8/15, MLv2.8/15, Error ellipse: s-maj=8.9km s-min=6.5km az=40.5, confirmed*

ISC 20 09:42:20.1±2.0, 13°.58N±0°.08×89°.94W±0°.07, h53km±10km, n37, σ1°.28/51, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	**Alcaldia de Sa**	**0.27**	**344**	P	**Pn**	**09 42 27.1**	**-2.1**
FAME				S	**Sn**	**09 42 35.3**	**-0.5**
NUBE	**Las Nubes**	**0.35**	**26**	P	**Pn**	**09 42 29.1**	**-1.1**
NUBE	**Las Nubes**	**0.35**	**26**	*eP*	**Pn**	**09 42 28.9**	**-1.2**
NUBE				*eS*	**Sn**	**09 42 37.9**	**+0.6**
NUBE	**Las Nubes**	**0.35**	**26**	*eP*	**Pn**	**09 42 29.0**	**-1.1**
NUBE				*eS*	**Sn**	**09 42 38.0**	**+0.6**
CEVE	**Cerro Verde**	**0.39**	**52**	P	**Pn**	**09 42 29.8**	**-0.8**
CEVE				S	**Sn**	**09 42 40.6**	**+2.4**
CEVE	**Cerro Verde**	**0.39**	**52**	*eP*	**Pn**	**09 42 29.7**	**-0.8**
RTR	**El Retiro**	**0.42**	**43**	*i* P	**Pn**	**09 42 30.1**	**-0.8**
LOAL	**Lomas de Alarc**	**0.44**	**21**	P	**Pn**	**09 42 29.6**	**-1.4**
LOAL				S	**Sn**	**09 42 40.4**	**+1.7**
SLOZ	**Alcaldia de Sa**	**0.47**	**19**	P	**Pn**	**09 42 29.8**	**-1.4**
SLOZ	**Alcaldia de Sa**	**0.47**	**19**	*eP*	**Pn**	**09 42 29.6**	**-1.5**
SLOZ				*eS*	**Sn**	**09 42 40.5**	**+1.3**
JAYA	**Jayaque - finc**	**0.48**	**82**	P	**Pn**	**09 42 30.5**	**-0.9**
JAYA	**Jayaque - finc**	**0.48**	**82**	*i* P	**Pn**	**09 42 30.6**	**-0.9**
JAYA				*eS*	**Sn**	**09 42 40.5**	**+0.8**
JAYA	**Jayaque - finc**	**0.48**	**82**	*i* P	**Pn**	**09 42 30.7**	**-0.8**
JAYA				*eS*	**Sn**	**09 42 40.5**	**+0.8**
UNIC	**Universidad Ca**	**0.55**	**44**	S	**Sn**	**09 42 42.1**	**+1.3**
CEDA	**San Andres**	**0.57**	**68**	S	**Sn**	**09 42 42.8**	**+1.5**
LALI	**Alcalda de L**	**0.61**	**99**	P	**Pn**	**09 42 32.0**	**-0.8**
PMON	**Piamonte**	**0.62**	**78**	P	**Pn**	**09 42 32.4**	**-0.6**
PMON				S	**Sn**	**09 42 45.0**	**+2.5**
PMON	**Piamonte**	**0.62**	**78**	*eP*	**Pn**	**09 42 32.2**	**-0.9**
PMON				*eS*	**Sn**	**09 42 44.6**	**+2.1**
UEES	**Universidad Ev**	**0.69**	**79**	P	**Pn**	**09 42 33.3**	**-0.7**
UEES				S	**Sn**	**09 42 45.5**	**+1.5**
UTEC	**Universidad Te**	**0.73**	**81**	P	**Pn**	**09 42 34.0**	**-0.4**
PANCS	**Alcalda de**	**0.74**	**88**	P	**Pn**	**09 42 33.8**	**-0.7**
PANCS				S	**Sn**	**09 42 45.9**	**+0.9**
FG16	**Alotenango, Sa**	**0.88**	**321**	*eP*	**Pn**	**09 42 37.7**	**+1.2**
FG8	**Yepocapa, Chim**	**0.90**	**318**	*eP*	Pn	09 42 38.1	+1.4
PAVA	**Las Pavas**	**0.98**	**82**	P	**Pn**	**09 42 36.8**	**-0.9**
MTO3	**Montecristo**	**0.99**	**35**	P	**Pn**	**09 42 36.4**	**-1.5**
MTO3				S	**Sn**	**09 42 52.1**	**+1.0**
MTO3	**Montecristo**	**0.99**	**35**	*i* P	**Pn**	**09 42 36.5**	**-1.5**
MTO3	**Montecristo**	**0.99**	**35**	*eP*	**Pn**	**09 42 36.3**	**-1.6**
TECO	**Alcaldia de Te**	**1.13**	**92**	P	**Pn**	**09 42 38.5**	**-1.1**
TECO				S	**Sn**	**09 42 56.1**	**+2.0**
TECO	**Alcaldia de Te**	**1.13**	**92**	*eP*	**Pn**	**09 42 38.5**	**-1.1**
ESQI	**Esquipulas**	**1.13**	**31**	P	**Pn**	**09 42 38.4**	**-1.4**
ESQI				S	**Sn**	**09 42 55.1**	**+0.8**
SCLA	**Alcaldia de Sa**	**1.18**	**84**	P	**Pn**	**09 42 39.8**	**-0.6**
SCLA				S	**Sn**	**09 42 56.2**	**+0.7**
STG5	**El Palmar, Qui**	**1.59**	**301**	*eP*	Pn	09 42 46.9	+1.0
RANC	**El Ranchito**	**1.61**	**95**	P	**Pn**	**09 42 45.5**	**-0.8**
RANC				S	**Sn**	**09 43 04.6**	**-1.4**
STG8	**El Palmar, Qui**	**1.62**	**302**	*i* P	Pn	09 42 47.7	+1.2
STG8				IAML		09 43 14.1	
	comp=N,136nm,0.2s						
STG2	**El Palmar, Qui**	**1.63**	**302**	*eP*	Pn	09 42 47.7	+1.2
SARH	**Santa Rosa de**	**1.65**	**44**	P	**Pn**	**09 42 45.9**	**-0.8**
CNCH	**Conchagua**	**2.07**	**98**	P	**Pn**	**09 42 51.5**	**-1.1**
CNCH				S	**Sn**	**09 43 17.8**	**+0.5**

*ASRS **20** 09:44:37.0±1.1, 53°.51N×87°.97E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 20 09:44:36.4±3.0, 53°.51N×87°.97E, h0km, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=28.3km s-min=19.0km az=87.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.92**	**285**	I	I	09 57 00.0	
	0.1nm,0.7s,baz=97,slow=339,SNR=4.9						
ZALV	**Zalesovo Beam**	**1.92**	**285**	Pn	Pn	09 45 10.1	-0.3
	1.0nm,0.3s,baz=105,slow=14,SNR=14						
ZALV				Sn	Sb	09 45 36.7	-0.1
	2.3nm,0.3s,baz=103,slow=25,SNR=20						
KURBB	**Kurchatov Arra**	**6.50**	**247**	Pn	Pn	09 46 14.3	+1.1
	0.1nm,0.3s,baz=62,slow=14,SNR=6.4						
KURBB				Sn	Sn	09 47 26.4	-1.6
	baz=61,slow=31,SNR=1.6						
KURBB				Lg	Lg	09 48 02.2	
	baz=61,slow=31,SNR=5.7						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**7.64**	**211**	Pn	Pn	09 46 30.1	+1.1
	0.1nm,0.3s,baz=28,slow=14,SNR=4.3						
MKAR				Sn	Sn	09 47 55.4	-0.9
	0.1nm,0.3s,baz=30,slow=32,SNR=2.4						
	0.1nm,0.3s						

*KRNET **20** 09:45:14.0±0.1, 42°.04N×77°.14E, h22km, mb3.4*
*NNC **20** 09:45:14.8±0.8, 42°.10N×77°.16E, h0km, mb3.5, mpv3.6, Error ellipse: s-maj=5.3km s-min=3.5km az=178.0*
*SOME **20** 09:45:14.4, 42°.12N×77°.08E, h10km*
*KNET **20** 09:45:16.0±0.3, 42°.10N×76°.99E, h14km±1km, ml2.7, Error ellipse: s-maj=2.5km s-min=1.8km az=7.0*

ISC 20 09:45:14.6±0.9, 42°.06N±0°.02×77°.12E±0°.02, h14km±6km, n77, σ1°.10/138, 43C-24D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**0.08**	**34**	*i* P	**Pg**	**09 45 17.8**	**+0.1**
KDJ				*i* S	**Sg**	**09 45 20.3**	**+0.4**
TARG	**Taragay, Kyrgy**	**0.61**	**123**	*i* P	**Pg**	**09 45 25.2**	**-1.4**
TARG				*i* S	**Sg**	**09 45 33.3**	**-1.5**
ULHL	**Ulahol**	**0.68**	**286**	P	**Pg**	**09 45 27.2**	**-0.7**
	38nm,0.1s						
ULHL				S	**Sg**	**09 45 36.5**	**-0.3**
	142nm,0.1s						
ULHL	**Ulahol**	**0.68**	**286**	*i* P	**Pg**	**09 45 27.6**	**-0.3**
ULHL				*i* S	**Sg**	**09 45 37.4**	**+0.6**
BOOM	**Boomskoye usch**	**0.97**	**296**	*i* P	**Pb**	**09 45 32.8**	**-0.6**
BOOM				*i* S	**Sb**	**09 45 46.4**	**+0.2**
TNSS	**Tian-Shan**	**0.98**	**353**	P	**Pg**	**09 45 33.0**	**-0.7**
	46nm,0.2s						
TNSS				S	**Sb**	**09 45 46.5**	**-0.2**
	34nm,0.2s						
TNSS	**Tian-Shan**	**0.98**	**353**	*eP*	**Pg**	**09 45 33.0**	**-0.7**
	46nm,0.2s						
TNSS				*eS*	**Sb**	**09 45 46.5**	**-0.2**
	34nm,0.2s						
PRZ	**Przheval'sk**	**1.04**	**66**	*i* P	**Pb**	**09 45 33.6**	**-0.9**
PRZ				*i* S	**Sg**	**09 45 47.8**	**-0.5**
IZV	**Izvestkoviy**	**1.04**	**339**	P	**Pb**	**09 45 33.9**	**-0.7**
	41nm,0.1s						
IZV				S	**Sg**	**09 45 48.0**	**-0.4**
	198nm,0.2s						
IZV	**Izvestkoviy**	**1.04**	**339**	*eP*	**Pb**	**09 45 33.9**	**-0.7**
	41nm,0.1s						
IZV				*eS*	**Sg**	**09 45 48.0**	**-0.4**
	198nm,0.2s						
NRN	**Naryn**	**1.05**	**234**	*i* P	**Pb**	**09 45 33.7**	**-1.0**
NRN				*i* S	**Sb**	**09 45 48.0**	**-0.4**
MDOK	**Medeo**	**1.10**	**357**	Pg	**Pb**	**09 45 34.9**	**-0.6**
	113nm,0.2s						
MDOK				Lg	Lg	09 45 49.8	
	170nm,0.3s						
AAA	**Alma-Ata**	**1.16**	**353**	P	**Pg**	**09 45 36.6**	**-0.3**
	576nm,0.1s						
AAA				S	**Sn**	**09 45 52.6**	**+0.5**
	36nm,0.2s						
AAA	**Alma-Ata**	**1.16**	**353**	*eP*	**Pg**	**09 45 36.5**	**-0.3**
	576nm,0.1s						
AAA				*eS*	**Sn**	**09 45 52.6**	**+0.5**
	36nm,0.2s						
KNDC	**Almaty**	**1.16**	**354**	P	**Pg**	**09 45 36.4**	**-0.6**
	52nm,0.4s						
KNDC				S	**Sn**	**09 45 52.5**	**+0.3**
	60nm,0.2s						
KOTS	**Kotyrbulak**	**1.17**	**360**	P	**Pn**	**09 45 36.4**	**-0.4**
	362nm,0.1s						
KOTS				S	**Sn**	**09 45 52.3**	**-0.4**
	287nm,0.2s						
KOTS	**Kotyrbulak**	**1.17**	**360**	*eP*	**Pn**	**09 45 36.4**	**-0.4**
KOTS				*eS*	**Sn**	**09 45 52.3**	**-0.4**
KOTS	**Kotyrbulak**	**1.17**	**360**	*eP*	**Pn**	**09 45 36.4**	**-0.4**
	362nm,0.1s						
KOTS				*eS*	**Sn**	**09 45 52.3**	**-0.4**
	287nm,0.2s						
KST	**Kastek**	**1.30**	**319**	P	**Pn**	**09 45 38.5**	**0.0**
	24nm,0.2s						
KST				S	**Sg**	**09 45 55.9**	**-0.6**
	178nm,0.2s						
KST	**Kastek**	**1.30**	**319**	*eP*	**Pn**	**09 45 38.5**	**0.0**
	24nm,0.2s						
KST				*eS*	**Sg**	**09 45 55.9**	**-0.6**
	178nm,0.2s						
SATY	**Saty**	**1.38**	**43**	P	**Pb**	**09 45 39.7**	**-0.5**
	8.1nm,0.1s						
SATY				S	**Sg**	**09 45 57.9**	**-1.1**
	166nm,0.1s						
SATY	**Saty**	**1.38**	**43**	*eP*	**Pb**	**09 45 39.7**	**-0.5**
	8.1nm,0.1s						
SATY				*eS*	**Sg**	**09 45 57.9**	**-1.1**
	166nm,0.1s						
TKM2	**Tokmak 2**	**1.42**	**308**	P	**Pb**	**09 45 40.7**	**-0.3**
	22nm,0.1s,SNR=47						
TKM2				S	**Sg**	**09 45 59.7**	**-0.5**
	153nm,0.1s						
TKM2	**Tokmak 2**	**1.42**	**308**	*i* P	**Pb**	**09 45 40.7**	**-0.3**
TKM2				*i* S	**Sg**	**09 46 00.2**	**-0.1**
JNKS	**Jany-Kuch**	**1.51**	**229**	*i* P	**Pn**	**09 45 41.1**	**-0.3**
JNKS				*i* S	**Sn**	**09 46 00.8**	**-0.2**
DGS	**Degeres**	**1.54**	**320**	P	**Pb**	**09 45 42.9**	**-0.1**
	6.7nm,0.2s						
DGS				S	**Sg**	**09 46 03.5**	**-0.8**
	107nm,0.4s						
DGS	**Degeres**	**1.54**	**320**	*eP*	**Pb**	**09 45 42.9**	**-0.1**
	6.7nm,0.2s						
DGS				*eS*	**Sg**	**09 46 03.5**	**-0.8**
	107nm,0.4s						
KURS	**Kuram**	**1.62**	**28**	P	**Pb**	**09 45 44.1**	**-0.3**
	7.9nm,0.3s						
KURS				S	**Sg**	**09 46 05.3**	**-1.5**
	48nm,0.3s						
KTBS	**Karatobe**	**1.68**	**349**	P	**Pb**	**09 45 45.0**	**-0.4**
	23nm,0.3s						
KTBS				S	**Sg**	**09 46 06.9**	**-1.8**
	0.4nm,0.2s						
KBK	**Karagaybulak**	**1.71**	**291**	P	**Pb**	**09 45 46.0**	**0.0**
	13nm,0.1s,SNR=16						
KBK				S	**Sg**	**09 46 09.0**	**-0.9**
	116nm,0.2s						
KBK	**Karagaybulak**	**1.71**	**291**	*i* P	**Pb**	**09 45 45.7**	**-0.3**
KBK				*i* S	**Sb**	**09 46 08.8**	**+1.3**
UZB	**Uzynbulak**	**1.77**	**52**	P	**Pb**	**09 45 46.0**	**-1.0**
	12nm,0.2s						
UZB				S	**Sb**	**09 46 08.7**	**-0.6**
	90nm,0.2s						
UZB	**Uzynbulak**	**1.77**	**52**	*eP*	**Pb**	**09 45 46.0**	**-1.0**
	12nm,0.2s						
UZB				*eS*	**Sb**	**09 46 08.7**	**-0.6**
	90nm,0.2s						
KPKS	**Kokpek**	**1.82**	**39**	P	**Pb**	**09 45 47.0**	**-0.7**
	0.2nm,0.1s						
KPKS				S	**Sb**	**09 46 10.4**	**+0.1**
	147nm,0.2s						
KPKS	**Kokpek**	**1.82**	**39**	*eP*	**Pb**	**09 45 47.0**	**-0.7**
	0.2nm,0.1s						
KPKS				*eS*	**Sb**	**09 46 10.4**	**+0.1**
	147nm,0.2s						
UCH	**Uchtor**	**1.94**	**276**	P	**Pb**	**09 45 50.2**	**+0.1**
	5.5nm,0.3s,SNR=8.1						
UCH				S	**Sb**	**09 46 16.1**	**+1.7**
	35nm,0.3s						
UCH	**Uchtor**	**1.94**	**276**	*i* P	**Pn**	**09 45 49.0**	**+1.3**
UCH				*i* S	**Sb**	**09 46 14.4**	**0.0**
KRBS	**Karabastau**	**1.95**	**327**	Pg	**Pb**	**09 45 49.7**	**-0.2**
	54nm,0.4s						
KRBS				Lg	Lg	09 46 15.1	
	17nm,0.2s						
KRBS	**Karabastau**	**1.95**	**327**	*eP*	**Pb**	**09 45 49.7**	**-0.2**
KRBS				*eS*	**Sb**	**09 46 15.1**	**+1.0**
KRBS	**Karabastau**	**1.95**	**327**	*eP*	**Pb**	**09 45 49.7**	**-0.2**
	54nm,0.4s						
KRBS				*eS*	**Sb**	**09 46 15.1**	**+1.0**
	17nm,0.2s						
CHMS	**Chumysh**	**1.98**	**299**	P	**Pb**	**09 45 50.1**	**-0.5**
	8.0nm,0.1s,SNR=10						
CHMS				S	**Sg**	**09 46 17.2**	**-1.2**
	35nm,0.2s						
CHMS	**Chumysh**	**1.98**	**299**	*i* P	**Pb**	**09 45 49.4**	**-1.1**
CHMS				*i* S	**Sb**	**09 46 15.0**	**-0.1**
FRU1	**Bishkek**	**1.99**	**293**	*i* P	**Pb**	**09 45 49.7**	**-0.9**
FRU1				*i* S	**Sb**	**09 46 15.5**	**+0.2**
AAK	**Ala-Archa**	**2.03**	**287**	P	**Pb**	**09 45 51.2**	**-0.1**
	17nm,0.2s,SNR=37						
AAK				S	**Sg**	**09 46 18.6**	**-1.3**
	72nm,0.4s						
AAK	**Ala-Archa**	**2.03**	**287**	Pn	**Pb**	**09 45 51.3**	**-0.1**
	1.3nm,0.3s						
AAK				Sn	**Sg**	**09 46 18.5**	**-1.3**
	20nm,0.6s						
AAK	**Ala-Archa**	**2.03**	**287**	*i* P	**Pn**	**09 45 50.1**	**+1.6**
AAK				*i* S	**Sb**	**09 46 16.2**	**-0.3**
SHLS	**Shalkode**	**2.05**	**57**	Pg	**Pg**	**09 45 54.8**	**+1.0**
	28nm,0.2s						
SHLS				Lg	Lg	09 46 23.7	
	118nm,0.4s						
SHLS	**Shalkode**	**2.05**	**57**	*eP*	**Pg**	**09 45 54.8**	**+1.0**
	28nm,0.2s						
SHLS				*eS*	**Sg**	**09 46 23.7**	**+3.3**
	118nm,0.4s						
ARLS	**Aral**	**2.10**	**265**	*i* P	**Pn**	**09 45 50.6**	**+1.1**
ARLS				*i* S	**Sn**	**09 46 17.4**	**+2.0**
PDGK	**Podgornoye**	**2.16**	**53**	*i* Pn	**Pn**	**09 45 51.3**	**+1.0**
	6.1nm,0.4s						
PDGK				Sn	**Sb**	**09 46 20.1**	**-0.1**
	91nm,0.8s						
ARXS	**Arharly**	**2.21**	**13**	Pg	**Pb**	**09 45 53.7**	**-0.7**
	4.5nm,0.2s						
ARXS				Lg	Lg	09 46 22.1	
	66nm,0.3s						
ARXS	**Arharly**	**2.21**	**13**	*eP*	**Pb**	**09 45 53.7**	**-0.7**
	4.5nm,0.2s						
ARXS				*eS*	**Sb**	**09 46 22.1**	**+0.4**
	66nm,0.3s						
BLB	**Baldybastay**	**2.27**	**26**	Pg	**Pb**	**09 45 55.2**	**-0.2**
	14nm,0.2s						
BLB				Lg	Lg	09 46 24.6	
	131nm,0.5s						
USP	**Ospenovka**	**2.28**	**303**	P	**Pb**	**09 45 54.9**	**-0.6**
	SNR=27						
USP				S	**Sb**	**09 46 24.9**	**+1.3**
	56nm,0.2s						
USP	**Ospenovka**	**2.28**	**303**	*i* P	**Pn**	**09 45 53.4**	**+1.6**
USP				*i* S	**Sb**	**09 46 22.2**	**-1.4**
SGDS	**Sogindy**	**2.30**	**308**	Pg	**Pb**	**09 45 55.6**	**-0.4**
	10nm,0.2s						
SGDS				Lg	Lg	09 46 25.0	
	51nm,0.3s						
EKS2	**Erkin-Say**	**2.55**	**285**	P	**Pb**	**09 45 58.6**	**-1.6**
	11nm,0.5s,SNR=12						
EKS2	**Erkin-Say**	**2.55**	**285**	*i* P	**Pn**	**09 45 57.1**	**+1.4**
EKS2				*i* S	**Sn**	**09 46 28.6**	**+2.0**
SALK	**Salom-Alik**	**2.74**	**246**	*i* P	**Pn**	**09 45 59.5**	**+1.1**
SALK				*i* S	**Sn**	**09 46 32.6**	**+1.2**
KTMS	**Ketmen**	**2.75**	**59**	Pg	**Pb**	**09

NEIC ***20*** *09:54:18.6,48˚.01S×31˚.88E,h12km, Moment Tensor Solution. Duration: 2s2 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.86; $M_{\theta\theta}$3.45; $M_{\phi\phi}$0.41; $M_{r\theta}$-3.60; $M_{r\phi}$2.41; $M_{\theta r}$-2.01; Fault plane solution: $M_0$6.02000×10^{16} NP1: ϕ_s241.51000°,δ23.17000°,λ-89.44000°. NP2:ϕ_s60.90000°, δ66.83000°,λ-90.24000°. Principal axes: T 6.4262, Plg22.0000°, Azm151.0000°; N -0.9204, Plg0.0000°, Azm61.0000°; P -5.5058, Plg68.0000°, Azm330.0000°;*

GCMT ***20*** *09:54:20.0±0.2,48˚.66S±0˚.01×31˚.08E±0˚.02,h12km, MW5.1/110,Moment Tensor Solution. s43,c57; s110,c163; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.58±.14; $M_{\theta\theta}$4.99±.12; $M_{\phi\phi}$-3.41±.15; $M_{r\theta}$2.27±.34; $M_{\theta\phi}$4.05±.13; $M_{\phi r}$0.81±.42; Best double couple: $M_0$6.16400×10^{16} NP1:ϕ_s22.00000°,δ78.00000°, λ170.00000°. NP2:ϕ_s114.00000°,δ81.00000°,λ12.00000°. Principal axes: T 7.2800, Plg15.0000°, Azm338.0000°; N -2.2330, Plg75.0000°, Azm151.0000°; P -5.0480, Plg2.0000°, Azm248.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 09:54:18.2±0.3,48˚.50S±0˚.05×31˚.47E±0˚.06,h10km,n310, σ1$55/254,mb5.2/89,MS4.4/57,4C-2D,South of Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H04S2	**CROZET ISLANDS**	**13.86**	**91**	Pn	**Pn**	**09 57 30.3**	**-4.0**
	baz=355,slow=74						
H04S2				T	T	10 12 02.8	
	baz=256,slow=76,SNR=171						
H04S3	**CROZET ISLANDS**	**13.86**	**91**	Pn	**Pn**	**09 57 30.3**	**-4.0**
	baz=355,slow=74						
H04S3				T	T	10 12 08.2	
	baz=256,slow=76,SNR=174						
H04S1	**CROZET ISLANDS**	**13.87**	**91**	Pn	Pn	09 57 29.8	-4.8
	baz=355,slow=74						
H04S1				T	T	10 12 07.4	
	baz=256,slow=76,SNR=134						
CRZF	**Crozet Islands**	**13.95**	**89**	Pn	**Pn**	**09 57 34.5**	**-1.2**
H04N3	**CROZET ISLANDS**	**13.96**	**88**	Pn	**Pn**	**09 57 32.2**	**-3.6**
	baz=253,slow=12						
H04N1	**CROZET ISLANDS**	**13.97**	**88**	Pn	**Pn**	**09 57 31.5**	**-4.3**
	baz=253,slow=12						
H04N2	**CROZET ISLANDS**	**13.98**	**88**	Pn	Pn	09 57 30.9	-5.0
	baz=253,slow=12						
GRHM	**Grahamstown, E**	**15.68**	**344**	Pn	**Pn**	**09 57 56.5**	**-2.7**
SUR	**Sutherland**	**18.00**	**330**	P	**Pn**	**09 58 26.9**	**-1.7**
	15nm,0.5s,baz=148,slow=10,SNR=40						
SUR				S	Sn	10 01 33.1	-16
	8.0nm,1.0s,baz=230,slow=1.8,SNR=1.7						
SUR				LR	LR	10 04 04.9	
	comp=Z,3μm,20.6s,baz=161,slow=32						
SUR	**Sutherland**	**18.00**	**330**		**Pn**	**09 58 27.4**	**-1.2**
SUR	**Sutherland**	**18.00**	**330**	P	Pn	09 58 18.8	-10
SUR				S	Sn	10 01 34.7	-15
BOSA	**Boshof**	**20.43**	**344**	P	Pn	09 58 56.5	-1.2
	18nm,0.7s,baz=174,slow=11,SNR=40						
BOSA				LR	LR	10 05 21.2	
	comp=Z,1μm,21.9s,baz=169,slow=32						
	18nm,0.7s						
BOSA	**Boshof**	**20.43**	**344**	P	**P**	**09 58 54.0**	**-1.6**
BOSA				IAmb	IAmb	09 59 00.6	
	comp=Z,222nm,1.7s						
BOSA	**Boshof**	**20.43**	**344**	P	**P**	**09 58 54.0**	**-1.6**
BOSA				pmax	pmax		
	comp=Z,222nm,1.7s						
POGA	**Pongola**	**21.12**	**1**	P	**P**	**09 59 00.3**	**-2.6**
MAKGR	**Makgori**	**23.25**	**345**	*i* P	**P**	**09 59 25.5**	**-0.2**
ELIB	**Princess Elisa**	**23.82**	**186**	*d*P	**P**	**09 59 29.7**	**-1.4**
LBTB	**Lobatse**	**23.89**	**347**	LR	LR	10 07 14.7	
	comp=Z,987nm,21.9s,baz=185,slow=32						
LBTB	**Lobatse**	**23.89**	**347**	P	**P**	**09 59 29.8**	**-2.3**
LBTB	**Lobatse**	**23.89**	**347**	P	**P**	**09 59 29.8**	**-2.3**
LBTB				pmax	pmax		
	comp=Z,28nm,1.0s						
NVL	**N'lazarevskaya**	**24.20**	**196**	*e*P	**P**	**09 59 30.3**	**-4.1**
NVL				*e*PPP	PPP	10 00 05.7	
NVL				*e*		10 03 10.4	
NVL				*e*S	**S**	**10 03 49.5**	**-2.7**
NVL				pmax	pmax		
	comp=Z,121nm,1.3s						
NVL				MLR	MLR		
	comp=Z,599nm,21.0s						
MAW	**Mawson**	**24.87**	**152**	P	**P**	**09 59 41.6**	**+1.1**
	comp=Z,13nm,0.7s						
MAW	**Mawson**	**24.87**	**152**	P	**P**	**09 59 41.3**	**+0.9**
	comp=Z,44nm,0.8s,baz=307,slow=11,SNR=32						
MAW				S	**S**	**10 04 04.4**	**+1.3**
	comp=Z,6.7nm,0.5s,baz=94,slow=21,SNR=3.8						
MAW				LR	LR	10 07 07.7	
	comp=Z,893nm,21.4s,baz=306,slow=31						
	comp=Z,44nm,0.8s						
MAW	**Mawson**	**24.87**	**152**	P	**P**	**09 59 41.4**	**+0.9**
LPHEP	**Lephephe**	**25.48**	**348**	*i* P	**P**	**09 59 45.4**	**-1.1**
LPHEP	**Lephephe**	**25.48**	**348**	P	**P**	**09 59 44.6**	**-2.0**
LPHEP				IAmb	IAmb	10 00 07.5	
	comp=Z,44nm,1.3s						
KDWAN	**Kaudwane**	**25.65**	**345**	*i* P	**P**	**09 59 47.1**	**-0.9**
LKGWB	**Lokgwabe**	**25.66**	**338**	P	**P**	**09 59 44.9**	**-3.2**
LKGWB				IAmb	IAmb	10 00 02.2	
	comp=Z,48nm,1.1s						
KGCAE	**Kacgae**	**26.64**	**341**	*i* P	**P**	**09 59 55.7**	**-1.4**
KGCAE	**Kacgae**	**26.64**	**341**	P	**P**	**09 59 54.8**	**-2.2**
KGCAE				IAmb	IAmb	10 00 15.2	
	comp=Z,61nm,1.2s						
KHWEE	**KHWEE**	**26.93**	**348**	*i* P	**P**	**09 59 59.1**	**-0.6**
KHWEE	**KHWEE**	**26.93**	**348**	P	**P**	**09 59 58.9**	**-0.8**
KHWEE				IAmb	IAmb	10 00 21.8	
	comp=Z,50nm,0.9s						
KOOLE	**Kule**	**26.99**	**337**	*i* P	**P**	**09 59 56.2**	**-4.0**
KOOLE	**Kule**	**26.99**	**337**	P	**P**	**09 59 58.4**	**-1.8**
TROLL	**Troll, Antarti**	**27.05**	**199**	⇑P	**P**	**09 59 59.6**	**-0.7**
BROLN	**Tlhalogang**	**27.54**	**352**	*i* P	**P**	**10 00 04.8**	**-0.4**
SNAA	**Sanae**	**28.09**	**202**	⇑P	**P**	**10 00 13.4**	**+3.8**
	comp=Z,960nm,0.7s						
SNAA	**Sanae**	**28.09**	**202**	P	**P**	**10 00 10.8**	**+1.2**
	comp=Z,22nm,0.7s,baz=74,slow=5.3,SNR=19						
SNAA				LR	LR	10 08 35.9	
	comp=Z,693nm,21.4s,baz=39,slow=31						
	comp=Z,22nm,0.7s						
SNAA	**Sanae**	**28.09**	**202**	P	**P**	**10 00 09.4**	**-0.2**
SNAA				IAmb	IAmb	10 00 17.3	
	comp=Z,49nm,0.8s						
SNAA	**Sanae**	**28.09**	**202**	P	**P**	**10 00 09.4**	**-0.2**
SNAA				pmax	pmax		
	comp=Z,49nm,0.8s						
SOOWA	**Sowa**	**28.19**	**350**	*i* P	**P**	**10 00 09.3**	**-1.6**
GRTLG	**Ghanzi**	**28.30**	**340**	P	**P**	**10 00 11.0**	**-1.0**
WIN	**Windhoek**	**28.30**	**331**	P	**P**	**10 00 10.5**	**-1.6**
WIN	**Windhoek**	**28.30**	**331**	P	**P**	**10 00 10.5**	**-1.6**
WIN				pmax	pmax		
	comp=Z,20nm,1.1s						
VNA2	**Neumayer--Watz**	**28.90**	**205**	⇑P	**P**	**10 00 16.1**	**-0.6**
	comp=Z,36nm,0.7s,baz=63,slow=9.8						
VNA1	**Neumayer--Stat**	**29.01**	**206**	⇑P	**P**	**10 00 17.8**	**+0.1**
	comp=Z,85nm,0.9s						
VOI	**Vohitsoka**	**29.23**	**30**	P	**P**	**10 00 18.6**	**-1.6**
VNA3	**Neumayer Olymp**	**29.70**	**205**	⇓P	**P**	**10 00 22.9**	**-0.9**
	comp=Z,4.4nm,0.6s						
KSANE	**Kasane**	**31.05**	**348**	*i* P	**P**	**10 00 36.1**	**-0.2**
KSANE	**Kasane**	**31.05**	**348**	P	**P**	**10 00 35.1**	**-1.2**
KSANE				IAmb	IAmb	10 00 38.2	
	comp=Z,22nm,0.8s						
TSUM	**Tsumeb**	**31.32**	**334**	LR	LR	10 12 43.7	
	comp=Z,2μm,18.4s,baz=153,slow=35						
TSUM	**Tsumeb**	**31.32**	**334**	P	**P**	**10 00 37.1**	**-1.6**
OPO	**Ambohidratompo**	**32.47**	**29**	LR	LR	10 12 35.9	
	comp=Z,531nm,18.1s,baz=358,slow=34						
LSZ	**Lusaka**	**33.24**	**354**	LR	LR	10 13 08.3	
	comp=Z,1μm,19.4s,baz=165,slow=34						
LSZ	**Lusaka**	**33.24**	**354**	P	**P**	**10 00 53.6**	**-2.0**
LSZ				IAmb	IAmb	10 01 17.1	
	comp=Z,29nm,1.4s						
LSZ	**Lusaka**	**33.24**	**354**	P	**P**	**10 00 53.6**	**-2.0**
LSZ				pmax	pmax		
	comp=Z,29nm,1.4s						
LSZ	**Lusaka**	**33.24**	**354**	P	**P**	**10 00 54.1**	**-1.5**
AIS	**Amsterdam Isla**	**34.80**	**90**	P	**P**	**10 01 06.8**	**-2.1**
BELA	**Belgrano 2**	**38.11**	**198**		**P**	**10 01 36.1**	**-0.6**
ROCAM	**Rodrigues Isla**	**38.49**	**53**	P	**P**	**10 01 39.2**	**-1.2**
QSPA	**South Pole Qui**	**41.72**	**180**	P	**P**	**10 02 05.8**	**-1.2**
	comp=Z,57nm,1.0s,baz=252,slow=2.7,SNR=137						
QSPA				LR	LR	10 18 10.7	
	comp=Z,400nm,20.7s,baz=250,slow=34						
	comp=Z,57nm,1.0s						
QSPA	**South Pole Qui**	**41.72**	**180**	P	**P**	**10 02 06.1**	**-0.9**
QSPA				IAmb	IAmb	10 02 07.0	
	comp=Z,50nm,0.9s						
CASY	**Casey**	**42.78**	**144**	P	**P**	**10 02 15.6**	**+0.3**
SHEL	**Horse Pasture**	**44.48**	**304**	P	**P**	**10 02 28.3**	**-1.3**
SHEL	**Horse Pasture**	**44.48**	**304**	P	**P**	**10 02 28.3**	**-1.3**
SHEL				pmax	pmax		
	comp=Z,113nm,1.3s						
KMBO	**Kilima Mbogo**	**47.45**	**8**	LR	LR	10 21 33.6	
	comp=Z,615nm,18.1s,baz=191,slow=34						
KMBO	**Kilima Mbogo**	**47.45**	**8**	*i* P	**P**	**10 02 54.5**	**+1.2**
MBAR	**Mbarara**	**47.72**	**359**	LR	LR	10 21 12.2	
	comp=Z,714nm,21.3s,baz=166,slow=34						
MBAR	**Mbarara**	**47.72**	**359**	P	**P**	**10 02 54.0**	**-1.2**
MBAR				IAmb	IAmb	10 03 19.2	
	comp=Z,17nm,1.3s						
MBAR	**Mbarara**	**47.72**	**359**	*i* P	**P**	**10 02 56.1**	**+0.8**
MBAR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MBAR	**Mbarara**	**47.72**	**359**	P	**P**	**10 02 55.0**	**-0.3**
MBAR				S	**S**	**10 09 56.3**	**+4.8**
MSEY	**Mahe Island**	**48.24**	**33**	P	**P**	**10 02 58.1**	**-1.1**
MSEY				IAmb	IAmb	10 03 26.5	
	comp=Z,64nm,1.9s						
MSEY	**Mahe Island**	**48.24**	**33**	P	**P**	**10 02 58.1**	**-1.1**
MSEY				pmax	pmax		
	comp=Z,64nm,2.0s						
PMSA	**Palmer Station**	**49.66**	**214**	LR	LR	10 20 24.9	
	comp=Z,114nm,19.7s,baz=120,slow=32						
PMSA	**Palmer Station**	**49.66**	**214**	P	**P**	**10 03 10.7**	**+1.2**
VNDA	**Vanda**	**50.57**	**168**	P	**P**	**10 03 15.8**	**-0.4**
	comp=Z,9.6nm,0.8s,baz=242,slow=8.0,SNR=36						
VNDA				LR	LR	10 23 52.5	
	comp=Z,1μm,19.5s,baz=212,slow=35						
	comp=Z,9.6nm,0.8s						
VNDA	**Vanda**	**50.57**	**168**		**P**	**10 03 16.7**	**+0.5**
VNDA	**Vanda**	**50.57**	**168**	P	**P**	**10 03 16.7**	**+0.5**
VNDA				pmax	pmax		
	comp=Z,14nm,0.9s						
SBA	**Scott Base**	**50.97**	**169**	P	**P**	**10 03 20.9**	**+1.6**
SBA				IAmb	IAmb	10 03 29.9	
	comp=Z,39nm,0.9s						
SBA	**Scott Base**	**50.97**	**169**	P	**P**	**10 03 20.9**	**+1.6**
SBA				pmax	pmax		
	comp=Z,39nm,0.9s						
DGAR	**Diego Garcia**	**53.58**	**54**	P	**P**	**10 03 38.2**	**-1.2**
DGAR				IAmb	IAmb	10 05 01.5	
	comp=Z,36nm,0.9s						
DGAR	**Diego Garcia**	**53.58**	**54**	P	**P**	**10 03 38.2**	**-1.2**
DGAR				pmax	pmax		
	comp=Z,36nm,0.9s						
FURI	**Furi**	**57.50**	**8**	LR	LR	10 27 35.1	
	comp=Z,608nm,19.6s,baz=189,slow=35						
ATD	**Arta Tunnel**	**60.61**	**13**	LR	LR	10 29 02.2	
	comp=Z,12nm,21.9s,baz=186,slow=34						
DBIC	**Dimbokro**	**63.51**	**319**	P	**P**	**10 04 48.6**	**+0.1**
	comp=Z,9.6nm,0.8s,baz=180,slow=9.2,SNR=10						
DBIC				LR	LR	10 31 05.1	
	comp=Z,266nm,18.0s,baz=180,slow=35						
	comp=Z,9.6nm,0.8s						
DBIC	**Dimbokro**	**63.51**	**319**	P	**P**	**10 04 48.3**	**-0.2**
DBIC				IAmb	IAmb	10 04 59.9	
	comp=Z,25nm,0.9s						
DBIC	**Dimbokro**	**63.51**	**319**	P	**P**	**10 04 48.3**	**-0.2**
DBIC				pmax	pmax		
	comp=Z,25nm,1.0s						
NWAO	**Narrogin (SRO)**	**63.55**	**110**	LR	LR	10 25 43.8	
	comp=Z,231nm,21.3s,baz=192,slow=30						
NWAO	**Narrogin (SRO)**	**63.55**	**110**	P	**P**	**10 04 47.9**	**-0.9**
NWAO				IAmb	IAmb	10 04 58.5	
	comp=Z,16nm,0.8s						
NWAO	**Narrogin (SRO)**	**63.55**	**110**	P	**P**	**10 04 47.9**	**-0.9**
NWAO				pmax	pmax		
	comp=Z,16nm,0.9s						
AY03	**Cochrane**	**64.11**	**227**	P	**P**	**10 04 52.6**	**+0.3**
TRQA	**Tornquist**	**64.74**	**241**	P	**P**	**10 04 56.3**	**-0.2**
TRQA	**Tornquist**	**64.74**	**241**	P	**P**	**10 04 56.3**	**-0.2**
TRQA				pmax	pmax		
	comp=Z,54nm,1.0s						
COYC	**Coyhaique**	**65.04**	**229**	P	**P**	**10 04 57.9**	**-0.4**
MORW	**Morawa**	**65.41**	**107**	P	**P**	**10 05 01.8**	**+0.8**
MORW				IAmb	IAmb	10 06 15.5	
	comp=Z,23nm,1.4s						
AY01	**Puyuhuapi**	**66.13**	**229**		**P**	**10 05 06.2**	**+0.8**
LL02	**Futaleuf**	**66.60**	**231**	P	**P**	**10 05 08.3**	**-0.1**
LL02				IAmb	IAmb	10 05 17.5	
	comp=Z,19nm,0.8s						
TORD	**Torodi Ar. Bea**	**66.82**	**328**	P	**P**	**10 05 10.9**	**+0.9**
	comp=Z,3.7nm,0.7s,baz=173,slow=7.8,SNR=23						
TORD				LR	LR	10 32 02.2	
	comp=Z,280nm,21.5s,baz=129,slow=34						
	comp=Z,3.7nm,0.7s						
TORD	**Torodi Ar. Bea**	**66.82**	**328**	P	**P**	**10 05 08.2**	**-1.9**
GO07	**Milladeo Hill,**	**67.58**	**230**	P	**P**	**10 05 14.1**	**-0.5**
PLCA	**Paso Flores**	**67.66**	**233**	P	**P**	**10 05 16.4**	**+1.1**
	comp=Z,13nm,0.9s,baz=130,slow=6.9,SNR=22						
PLCA				LR	LR	10 29 22.3	
	comp=Z,132nm,21.8s,baz=140,slow=31						
	comp=Z,13nm,0.9s						
PLCA	**Paso Flores**	**67.66**	**233**		**P**	**10 05 15.4**	**+0.1**
PLCA				IAmb	IAmb	10 05 24.2	
	comp=Z,18nm,0.8s						
PLCA	**Paso Flores**	**67.66**	**233**	*e*P	**P**	**10 05 16.1**	**+0.8**
PLCA				pmax	pmax		
	comp=Z,13nm,0.9s						
LL07	**Hotel Espejo d**	**67.69**	**230**	P	**P**	**10 05 14.4**	**-0.9**
LL05	**Los Muermos**	**68.72**	**231**	P	**P**	**10 05 21.0**	**-0.8**
LR05	**Currie**	**68.79**	**233**		**P**	**10 05 22.5**	**+0.2**
GO06	**Curarrehue**	**68.97**	**234**	P	**P**	**10 05 22.9**	**-0.7**
LR04	**Corral**	**69.80**	**232**	P	**P**	**10 05 28.3**	**-0.3**
CPUP	**Villa Florida**	**70.01**	**253**	P	**P**	**10 05 31.2**	**+1.2**
	comp=Z,7.5nm,0.7s,baz=138,slow=8.9,SNR=10						
CPUP				LR	LR	10 29 53.0	
	comp=Z,76nm,19.1s,baz=118,slow=30						
	comp=Z,7.5nm,0.7s						
CPUP	**Villa Florida**	**70.01**	**253**	P	**P**	**10 05 29.7**	**-0.3**
CPUP				IAmb	IAmb	10 05 39.6	
	comp=Z,28nm,0.9s						
CPUP	**Villa Florida**	**70.01**	**253**	P	**P**	**10 05 29.7**	**-0.3**
CPUP				pmax	pmax		
	comp=Z,28nm,1.0s						
PALK	**Pallekele**	**70.31**	**53**	LR	LR	10 28 59.2	
	comp=Z,294nm,20.9s,baz=216,slow=30						
PALK	**Pallekele**	**70.31**	**53**	*i* P	**P**	**10 05 31.5**	**-0.4**
PALK				pmax	pmax		
	comp=Z,27nm,1.7s						
BI02	**San Fabin de**	**70.98**	**236**	P	**P**	**10 05 35.0**	**-0.9**
BI02				IAmb	IAmb	10 05 46.2	
	comp=Z,25nm,1.4s						
BDFB	**Brasilia**	**71.52**	**267**	P	**P**	**10 05 41.4**	**+1.9**
	comp=Z,4.4nm,0.9s,baz=118,slow=3.7,SNR=4.2						
BDFB				LR	LR	10 30 09.3	
	comp=Z,336nm,21.1s,baz=134,slow=30						
	comp=Z,4.4nm,0.9s						
BDFB	**Brasilia**	**71.52**	**267**	P	**P**	**10 05 37.9**	**-1.6**
BDFB				IAmb	IAmb	10 05 59.8	
	comp=Z,15nm,1.2s						
BDFB	**Brasilia**	**71.52**	**267**	P	**P**	**10 05 37.9**	**-1.6**
BDFB				pmax	pmax		
	comp=Z,15nm,1.2s						
FORT	**Forrest**	**71.66**	**116**	P	**P**	**10 05 39.9**	**-0.2**
ML02	**Panimavida**	**71.71**	**237**	P	**P**	**10 05 39.5**	**-0.7**
BI05	**Punta Hualpn**	**71.96**	**235**	P	**P**	**10 05 41.0**	**-0.7**
BO02	**Sierra Bellavi**	**72.06**	**238**	P	**P**	**10 05 41.3**	**-1.2**
BO02				IAmb	IAmb	10 05 54.0	
	comp=Z,17nm,0.9s						
BO01	**Tunca**	**72.53**	**238**	IAmb	IAmb	10 05 53.4	
	comp=Z,14nm,1.0s						
GO05	**Hualane**	**72.55**	**237**	IAmb	IAmb	10 05 55.2	
	comp=Z,27nm,0.8s						
MT13	**San Alfonso**	**72.55**	**239**	IAmb	IAmb	10 06 00.9	
	comp=Z,16nm,0.8s						
BO04	**La Punta**	**72.55**	**238**	IAmb	IAmb	10 06 00.1	
	comp=Z,22nm,0.9s						
MT08	**Bocatoma Ro**	**72.61**	**239**	P	**P**	**10 05 46.0**	**0.0**
MT08				IAmb	IAmb	10 05 56.0	
	comp=Z,34nm,0.8s						
RAYN	**Ar Rayn**	**72.79**	**13**	P	**P**	**10 05 46.3**	**-0.3**
RAYN	**Ar Rayn**	**72.79**	**13**	P	**P**	**10 05 46.3**	**-0.3**
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MT03	**Universidad Ad**	**72.86**	**239**	P	**P**	**10 05 46.3**	**-0.9**
MT03				IAmb	IAmb	10 05 56.7	
	comp=Z,35nm,0.9s						
MT16	**CCHEN**	**72.91**	**239**	P	**P**	**10 05 46.5**	**-1.0**
CFA	**Coronel Fontan**	**72.92**	**242**	LR	LR	10 34 20.2	
	comp=Z,115nm,20.0s,baz=125,slow=33						
MT09	**Talagante**	**72.92**	**238**	P	**P**	**10 05 47.1**	**-0.6**
MT09				IAmb	IAmb	10 06 24.7	
	comp=Z,21nm,1.1s						
MT01	**Popeta**	**73.01**	**238**	P	**P**	**10 05 47.3**	**-0.7**
MT01				IAmb	IAmb	10 05 56.4	
	comp=Z,19nm,0.8s						
PSA00	**Pilbara Seismi**	**73.11**	**104**	P	**P**	**10 05 49.3**	**+0.5**
	comp=Z,9.3nm,1.7s						
PSA00	**Pilbara Seismi**	**73.11**	**104**	P	**P**	**10 05 48.2**	**-0.6**
MHTO	**MHTO**	**73.12**	**26**	P	**P**	**10 05 51.0**	**+2.5**
PEL	**Peldehue**	**73.21**	**239**	P	**P**	**10 05 46.9**	**-2.4**
PEL	**Peldehue**	**73.21**	**239**	P	**P**	**10 05 46.9**	**-2.4**
PEL				pmax	pmax		
	comp=Z,51nm,0.9s						
ZON	**Zonda**	**73.22**	**241**	P	**P**	**10 05 47.1**	**-2.3**
ZON				IAmb	IAmb	10 05 58.0	
	comp=Z,16nm,0.7s						
ZON	**Zonda**	**73.22**	**241**	P	**P**	**10 05 47.1**	**-2.3**
ZON				pmax	pmax		
	comp=Z,16nm,0.7s						
MBWA	**Marble Bar**	**73.33**	**103**	P	**P**	**10 05 49.9**	**-0.2**
MT02	**Curacav**	**73.39**	**239**	P	**P**	**10 05 49.1**	**-1.2**
MT02				IAmb	IAmb	10 05 59.7	
	comp=Z,27nm,0.8s						
VA03	**San Esteban**	**73.41**	**239**	P	**P**	**10 05 49.7**	**-0.9**
VA03				IAmb	IAmb	10 06 15.1	
	comp=Z,31nm,0.9s						
MZR	**Muzera**	**73.86**	**21**	P	**P**	**10 05 55.3**	**+2.4**
VA06	**Catapilco**	**73.99**	**239**	P	**P**	**10 05 52.9**	**-0.9**
VA06				IAmb	IAmb	10 06 08.9	
	comp=Z,30nm,0.9s						
CO04	**Los Peladeros**	**74.19**	**240**	P	**P**	**10 05 54.1**	**-1.2**
CO04				IAmb	IAmb	10 06 05.8	
	comp=Z,27nm,0.9s						
MNAI	**Manna**	**74.51**	**79**	P	**P**	**10 05 56.9**	**-0.2**
BSY	**Bisya**	**74.57**	**25**	P	**P**	**10 05 59.7**	**+2.6**
JLN	**Jalan Bani Buh**	**74.64**	**27**	P	**P**	**10 05 59.9**	**+2.3**
CO02	**Combarbal**	**74.82**	**240**	P	**P**	**10 05 59.1**	**+0.3**
CO02				IAmb	IAmb	10 06 56.6	
	comp=Z,56nm,1.4s						
BBOO	**Buckleboo**	**74.83**	**122**	P	**P**	**10 05 58.1**	**-0.6**
BBOO				IAmb	IAmb	10 08 02.0	
	comp=Z,38nm,1.4s						
CO03	**El Pedregal**	**74.91**	**241**	IAmb	IAmb	10 06 08.2	
	comp=Z,22nm,0.8s						
WBK	**Wadi Bani Khal**	**74.95**	**26**	P	**P**	**10 06 01.2**	**+1.9**
ARQ	**Araqi**	**74.95**	**24**	P	**P**	**10 06 01.2**	**+1.9**
ARQ				P	**sP**	**10 06 02.0**	**+0.6**
	SNR=8.7						
SMDO	**Samad**	**75.11**	**25**	P	**P**	**10 06 02.1**	**+1.8**
CO01	**Juntas del Tor**	**75.20**	**242**	IAmb	IAmb	10 06 11.2	
	comp=Z,31nm,0.8s						
MDSI	**Maura Dua**	**75.22**	**80**	P	**P**	**10 06 03.1**	**+2.0**
	comp=Z,20nm,1.3s						
HOQ	**Hoqain**	**75.39**	**24**	P	**P**	**10 06 04.5**	**+2.6**
KLSI		**75.43**	**80**	P	**P**	**10 06 05.1**	**+2.8**
WSAR	**Wadi Sarin**	**75.44**	**26**	P	**P**	**10 06 03.6**	**+1.5**
PDSI	**Padang**	**75.51**	**75**	P	**P**	**10 06 05.7**	**+2.9**
	comp=Z,17nm,0.9s						
SOHO	**SOHO**	**75.71**	**24**	P	**P**	**10 06 05.9**	**+2.3**
LEM	**Lembang**	**75.74**	**84**	LR	LR	10 32 48.7	
	comp=Z,176nm,19.1s,baz=204,slow=30						
WRKA	**Warakurna**	**75.96**	**112**	P	**P**	**10 06 06.2**	**+0.8**
	comp=Z,7.3nm,0.8s						
ASHO	**Ashiyiah**	**76.11**	**23**	P	**P**	**10 06 08.4**	**+2.5**
	SNR=20						
AC05	**El Transito**	**76.14**	**242**	IAmb	IAmb	10 06 15.6	
	comp=Z,17nm,0.8s						
KPJI	**Karang Pucung**	**76.23**	**85**	P	**P**	**10 06 09.4**	**+2.4**
	comp=Z,25nm,0.9s						
HATD	**Hatta, Dubai**	**76.26**	**23**	P	**P**	**10 06 10.0**	**+3.2**
	SNR=8.2						
LCO	**Las Campanas**	**76.27**	**242**	P	**P**	**10 06 07.3**	**0.0**
LCO				IAmb	IAmb	10 06 16.8	
	comp=Z,26nm,0.8s						
LCO	**Las Campanas**	**76.27**	**242**	P	**P**	**10 06 07.3**	**0.0**
LCO				pmax	pmax		
	comp=Z,26nm,0.9s						
NAZ	**Nazwa, Dubai**	**76.30**	**23**	P	**P**	**10 06 08.5**	**+1.5**
UOSS	**Minazif**	**76.40**	**23**	P	**P**	**10 06 07.3**	**-0.2**
AC02	**Maricunga**	**76.94**	**244**	P	**P**	**10 06 11.0**	**-0.5**
AC02				IAmb	IAmb	10 06 21.4	
	comp=Z,20nm,1.1s						
PCJI	**Pacitan**	**77.09**	**88**	P	**P**	**10 06 14.2**	**+2.4**
KCSI	**Kotacane, Aceh**	**77.22**	**70**	P	**P**	**10 06 15.0**	**+2.5**
	comp=Z,513nmcomp=Z,27nm,1.5s						
AC06	**Mina Casimiro**	**77.29**	**243**	IAmb	IAmb	10 06 21.5	
	comp=Z,21nm,0.8s						
RPSI	**Rantau Prapat**	**77.30**	**71**	P	**P**	**10 06 11.4**	**-1.5**
RPSI				IAmb	IAmb	10 06 16.9	
	comp=Z,20nm,1.0s						
BANOM	**Banah**	**

QLP	Quilpie	84.15	124	P		P	10 06 50.8	+1.3
	comp=Z,23nm,1.9s							
LPAZ	La Paz	84.17	252	P		P	10 06 52.9	+2.4
	comp=Z,1.5nm,0.8s,baz=149,slow=5.6,SNR=5.0							
LPAZ				LR		LR	10 41 48.9	
	comp=Z,212nm,18.4s,baz=94,slow=34							
	comp=Z,1.5nm,0.8s							
SOEI	Soe	84.62	99	P		P	10 06 52.6	+0.4
SOEI				IAmb		IAmb	10 07 18.9	
	comp=Z,18nm,0.7s							
KAPI	Kappang	85.14	92	LR		LR	10 39 11.5	
	comp=Z,103nm,19.7s,baz=224,slow=32							
SBUM	Sibu	85.69	81			P	10 06 58.8	+1.5
KEST	Kesra	86.15	342	P		P	10 07 02.1	+3.0
	comp=Z,4.5nm,0.9s,baz=141,slow=6.5,SNR=3.9							
	comp=Z,4.5nm,0.9s							
KEST	Kesra	86.15	342	P		P	10 06 58.8	-0.3
KEST				IAmb		IAmb	10 07 13.6	
	comp=Z,11nm,1.0s							
QIS	Mount Isa	86.17	117	P		P	10 07 00.4	+0.6
	comp=Z,18nm,1.1s							
VAE	Valguarnera	86.94	346	LR		LR	10 48 08.3	
	comp=Z,2µm,18.1s,baz=153,slow=37							
HRA	Herat	86.97	25	P		P	10 07 04.0	+0.6
HRA				IAmb		IAmb	10 07 15.0	
	comp=Z,15nm,1.1s							
MDT	Midelt	87.14	330	LR		LR	10 47 09.1	
	comp=Z,310nm,19.1s,baz=164,slow=36							
MD31	MD31	87.24	330	P		P	10 07 03.7	-0.9
MD31				IAmb		IAmb	10 09 32.2	
	comp=Z,17nm,1.4s							
MD01	Midelt array s	87.24	330	P		P	10 07 03.7	-1.0
BRTR	Keskin Array B	87.87	2	P		P	10 07 10.2	+2.7
	comp=Z,0.3nm,0.4s,baz=206,slow=13,SNR=3.5							
	comp=Z,0.3nm,0.4s							
BRTR	Keskin Array B	87.87	2	P		P	10 07 05.5	-2.0
BR131	Keskin Array S	87.87	2	*i* P		P	10 07 08.6	+1.1
URZ	Urewera	88.38	154	LR		LR	10 43 18.7	
	comp=Z,255nm,21.3s,baz=182,slow=33							
BRDH	Bariadhala	88.89	53	LR		LR	10 40 12.3	
	comp=Z,316nm,21.4s,baz=189,slow=31							
GNI	Garni	89.05	10	LR		LR	10 47 32.3	
	comp=Z,95nm,18.5s,baz=198,slow=36							
CMAR	Chiang Mai Arr	89.60	61	P		P	10 07 17.7	+1.7
	comp=Z,3.1nm,0.8s,baz=230,slow=4.9,SNR=22							
CMAR				LR		LR	10 39 35.9	
	comp=Z,166nm,21.8s,baz=230,slow=30							
	comp=Z,3.1nm,0.8s							
CMAR	Chiang Mai Arr	89.60	61			P	10 07 17.4	+1.4
CHTO	Chiang Mai	89.88	61	P		P	10 07 18.6	+1.4
CHTO				IAmb		IAmb	10 07 20.2	
	comp=Z,28nm,1.4s							
CHTO	Chiang Mai	89.88	61	P		P	10 07 18.7	+1.4
CHTO				pmax		pmax		
	comp=Z,28nm,1.4s							
CHTO	Chiang Mai	89.88	61	P		P	10 07 19.1	+1.8
CHTO	Chiang Mai	89.88	61	P		P	10 07 18.7	+1.4
	comp=Z,18nm,1.3s							
MDP	Montagnes des	89.89	278	LR		LR	10 41 59.6	
	comp=Z,186nm,19.7s,baz=156,slow=32							
NIL	Nilore	89.89	34	P		P	10 07 16.6	-0.5
NIL				IAmb		IAmb	10 07 19.8	
	comp=Z,8.9nm,0.9s							
NIL	Nilore	89.89	34	P		P	10 07 16.6	-0.5
NIL				pmax		pmax		
	comp=Z,9.0nm,1.0s							
CTA	Charters Tower	90.40	121	LR		LR	10 40 58.9	
	comp=Z,186nm,21.9s,baz=208,slow=31							
EVN	Everest	90.78	47	IAmb		IAmb	10 07 24.8	
	comp=Z,12nm,1.2s							
SANI	Sanana	91.48	95	P		P	10 07 26.2	+1.2
KBZ	Khabaz	92.39	8	LR		LR	10 47 40.7	
	comp=Z,99nm,21.4s,baz=192,slow=35							
KBZ	Khabaz	92.39	8	*i* P		P	10 07 30.5	+2.2
KBZ				pmax		pmax		
	comp=Z,4.0nm,1.1s							
KIV	Kislovodsk	92.60	8	*e*P		P	10 07 32.3	+2.9
KIV				pmax		pmax		
	comp=Z,6.0nm,1.1s							
KIV				MLR		MLR		
	comp=Z,88nm,20.0s							
NNA	Nana	92.89	248	LR		LR	10 44 45.9	
	comp=Z,122nm,19.3s,baz=165,slow=33							
ESDC	Sonseca Array	93.25	333	P		P	10 07 35.4	+2.9
	comp=Z,1.0nm,1.0s,baz=157,slow=4.2,SNR=5.2							
ESDC				LR		LR	10 50 55.3	
	comp=Z,335nm,18.9s,baz=148,slow=36							
	comp=Z,1.0nm,1.0s							
MLR	Muntele Rosu	93.73	356	LR		LR	10 50 34.6	
	comp=Z,181nm,21.4s,baz=208,slow=36							
QIZ	Qiongzhong	96.61	69	P		P	10 07 48.4	+0.1
QIZ	Qiongzhong	96.61	69	S		S	10 19 09.1	-0.4
QIZ				pmax		pmax		
	comp=Z,29nm,1.4s							
QIZ				LR		LR		
	comp=N,110nm,9.4s							
QIZ				LR		LR		
	comp=E,130nm,16.7s							
QIZ				LR		LR		
	comp=Z,160nm,13.7s							
DAVOX	Davos/Dischmat	96.75	345	LR		LR	10 55 07.5	
	comp=Z,348nm,18.4s,baz=222,slow=38							
RPN	Rapa Nui	96.94	215	LR		LR	10 41 41.3	
	comp=Z,102nm,20.4s,baz=228,slow=29							
PZH	PanZhiHua	97.48	58	P		Pdif	10 07 56.0	+3.7
ATAH	Atahualpa	97.59	250	LR		LR	10 47 50.0	
	comp=Z,128nm,21.7s,baz=141,slow=33							
DAV	Davao City (W)	97.97	88	LR		LR	10 44 24.2	
	comp=Z,51nm,21.8s,baz=185,slow=31							
GERES	GERESS Array B	98.18	348	LR		LR	10 57 25.7	
	comp=Z,218nm,18.1s,baz=180,slow=39							
RAO	Raoul Island	98.24	154	LR		LR	10 51 50.2	
	comp=Z,151nm,18.1s,baz=116,slow=35							
VRAC	Vranov	98.27	350	LR		LR	10 57 15.5	
	comp=Z,166nm,18.4s,baz=190,slow=38							
AAK	Ala-Archa	98.35	31	LR		LR	10 47 36.4	
	comp=Z,52nm,19.9s,baz=226,slow=32							
AKASG	Malin Array Be	98.84	359	LR		LR	10 56 09.7	
	comp=Z,98nm,19.3s,baz=202,slow=38							
PMG	Port Moresby	99.39	116	LR		LR	10 50 17.0	
	comp=Z,256nm,18.7s,baz=144,slow=34							
CLL	Collm	100.68	348	*e*PS		PS	10 21 19.0	+4.9
CLL				*e*SS		SS	10 26 48.0	+7.5
CD2	Chengdu	101.99	57	P		Pdif	10 08 13.3	+1.1
KURBB	Kurchatov Arra	106.68	29	Pdiff		Pdif	10 08 36.8	+4.4
	comp=Z,0.3nm,0.8s,baz=220,slow=5.6,SNR=2.4							
TBI	Tubuai	108.48	179	*e*LR		LR	10 44 29.8	
TBI	comp=Z,968nm,25.2s							
				*e*LR		LR	10 44 38.0	
HHC	comp=Z,2µm,26.2s							
PPT2	Hu-ho-hao-te	113.56	55	*e*P		PKiKP	10 12 52.9	-3.2
	Papeete2	114.20	179	*e*LR		LR	10 47 07.4	
	comp=Z,418nm,26.2s							
PPT2				*e*LR		LR	10 47 18.0	
	comp=Z,582nm,25.8s							
SCHQ	Schefferville	131.66	310	PKP		PKiKP	10 13 30.6	-0.6
	comp=Z,2.3nm,0.9s,baz=100,slow=6.1,SNR=3.7							
MGMO	Mountain Grove	138.09	276			PKPdf	10 13 42.9	+0.1
BRDY	Brady	139.07	264			PKPdf	10 13 45.4	+0.6
TXAR	Lajitas Array	140.86	257	PKhKP		PKPpre	10 13 44.6	
	comp=Z,0.9nm,0.9s,baz=142,slow=6.3,SNR=4.8							
TXAR				PKP		PKiKP	10 13 51.1	+0.2
	comp=Z,1.0nm,0.7s,baz=145,slow=4.6,SNR=7.6							
TPB01	Permian Basin	141.99	259			PKPdf	10 13 48.4	-1.8
ILON	Igloolik, Nuna	142.33	328			PKPdf	10 13 49.9	+0.5
PECS	Pecos	142.33	260			PKPdf	10 13 48.9	-1.9
ECSD	EROS Data Cent	144.27	282			PKPbc	10 13 52.4	+0.4
EPT	El Paso	144.31	258	PKPdf		PKPab	10 13 51.7	-0.6
RTBA	Rita Blanca	144.55	267	PKPdf		PKPab	10 13 53.1	-0.4
EPLO	Experimental L	144.76	293			PKPbc	10 13 53.5	+0.1
SRIG	Santa Rosalia	144.88	246	PKPdf		PKPab	10 13 52.7	-1.6
F33A	5 Mile Ranch,	144.96	286	PKPdf		PKPab	10 13 53.6	-0.6
RES	Resolute Bay	145.56	338			PKPab	10 13 55.7	+0.2
RES	Resolute Bay	145.56	338	PKIKP		PKPab	10 13 55.7	+0.2
AGMN	Agassiz Nation	145.61	290	PKPdf		PKPdf	10 13 55.1	-0.7
121A	Cookes Peak, D	145.62	258	PKPdf		PKPab	10 13 57.3	+0.1
K30B	Basset	145.76	279			PKiKP	10 13 58.9	-1.6
CRNM	Carthage	145.82	260			PKPab	10 13 58.4	+0.5
319A	Douglas	145.84	255			PKPab	10 13 58.9	+1.0
Y22A	Socorro	145.97	260			PKPab	10 13 59.0	+0.6
KSCO	Kaye Shedlock'	145.97	271			PKPab	10 13 59.0	+0.7
SUSD	Miller	146.10	282	PKPbc		PKPab	10 13 58.7	+0.3
ANMO	Albuquerque	146.24	262	PKPbc		PKPbc	10 13 58.7	-0.1
ANMO	Albuquerque	146.24	262	PKPbc		PKPab	10 13 59.4	-0.2
ANMO	Albuquerque	146.24	262	PKP2		PKPbc	10 13 58.7	-0.1
ULM	Lac du Bonnet	146.26	293	PKPbc		PKPbc	10 13 57.9	-0.2
	comp=Z,17nm,0.9s,baz=98,slow=2.5,SNR=14							
ULM	Lac du Bonnet	146.26	293			PKPbc	10 13 58.0	0.0
ULM	Lac du Bonnet	146.26	293	PKP2		PKPbc	10 13 58.0	0.0
PETK	Petropavlovsk-	146.38	61	PKPbc		PKPdf	10 13 57.3	+0.3
	comp=Z,5.3nm,1.1s,baz=210,slow=6.2,SNR=4.2							
BILL	Bilibino	150.25	33			PKiKP	10 14 09.0	+0.1
FFC	Flin Flon	150.88	300			PKPbc	10 14 09.9	0.0
FFC	Flin Flon	150.88	300	PKIKP		PKPbc	10 14 09.9	0.0
PDAR	Pinedale Array	152.38	273	PKPbc		PKPbc	10 14 13.4	-0.7
	comp=Z,5.9nm,1.0s,baz=110,slow=0.4,SNR=21							
A36M	Sachs Harbour	154.13	344			PKiKP	10 14 18.0	+1.3
NVAR	Mina Array Bea	156.01	256	PKP		PKPdf	10 14 13.4	+0.9
	comp=Z,0.7nm,0.8s,baz=164,slow=0.9,SNR=6.1							
YKA	Yellowknife Ar	156.58	319	PKP		PKPdf	10 14 11.9	-0.2
	comp=Z,0.5nm,0.8s,baz=41,slow=0.9,SNR=6.9							
ILAR	Eielson Array	163.66	358	PKP		PKPdf	10 14 20.7	+0.7
	comp=Z,0.3nm,0.8s,baz=336,slow=2.0,SNR=2.9							
BCAR	Beaver Creek A	164.93	348			PKPdf	10 14 19.4	-1.9

ASRS ***20*** *09:58:40.0±1.2, 53°.64N×87°.95E, h0km, M2.6(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 20 09:58:43.1±3.1, 53°.56N×87°.94E, h0km, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=25.4km s-min=17.6km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.89	283	I	I	10 11 20.0	
	0.1nm,0.7s,baz=98,slow=337,SNR=6.7						
ZALV	Zalesovo Beam	1.89	283	Pg	Pn	09 59 16.4	-0.2
	0.9nm,0.3s,baz=104,slow=18,SNR=6.1						
ZALV				Lg	Lg	09 59 43.6	
	2.5nm,0.3s,baz=103,slow=24,SNR=18						
KURBB	Kurchatov Arra	6.50	247	Pn	Pn	10 00 20.9	+0.9
	0.1nm,0.3s,baz=62,slow=14,SNR=4.5						
KURBB				Sn	Sn	10 01 34.0	-0.7
	baz=66,slow=28,SNR=1.1						
KURBB				Lg	Lg	10 02 08.9	
	baz=63,slow=28,SNR=2.4						
	0.9nm,0.6s						
MKAR	Makanchi Array	7.68	210	Pn	Pn	10 00 37.5	+1.3
	0.1nm,0.3s,baz=30,slow=13,SNR=2.8						
MKAR				Lg	Lg	10 02 44.6	
	baz=28,slow=29,SNR=2.7						
	0.1nm,0.3s						

HEL 20 09:58:46.6±0.3, 62°.55N×30°.80E, h0km, ML1.3, Explosion, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOF	Joensuu	0.44	32	PG	Pg	09 58 54.4	-0.7
	baz=212						
JOF				SG	Sg	09 59 00.2	-0.6
NIF	Nilsia	1.61	303	PG	Pn	09 59 15.2	-1.0
NIF				smax	smax	09 59 34.5	
	comp=Z,1.4nm,0.2s						
NIF				SG	Sn	09 59 35.9	-1.7
RMF	Romuvaara	1.72	347	PG	Pn	09 59 17.4	-0.4
RMF				smax	smax	09 59 37.9	
	comp=Z,2.0nm,0.2s						
RMF				SG	Sn	09 59 38.7	-1.7
SUF	Sumiainen	2.15	277	smax	smax	09 59 50.6	
	comp=Z,1.0nm,0.2s						
SUF				SG	Sb	09 59 53.6	0.0
FIA0	FINESS Array S	2.49	246	PG	Pb	09 59 31.5	-0.6
FIA0				smax	smax	10 00 00.2	
	comp=Z,0.8nm,0.2s						
OBF0	Syolatti, Pyha	3.53	307	PG	Pb	09 59 48.0	-1.9
RAF	Rauma	4.55	254	PB	Pb	10 00 03.0	-4.2
RAF				SG	Sb	10 01 06.2	+3.6

KRSC 20 09:58:57.2±1.8, 48°.84N×156°.56E, h17km±30km, Ml4.1, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.87	351	*e*P	Pn	09 59 29.4	+1.0
SKR				*e*S	Sn	09 59 51.7	+0.1
PAU	Pauzhetka	2.64	3	*e*P	Pb	09 59 41.5	-2.5
PAU				*e*S	Sn	10 00 13.1	+2.5
KDTR	Khodutka, Kamc	3.13	17	*e*P	Pb	09 59 49.6	-2.8
KDTR				*e*S	Sb	10 00 27.1	-3.1
MIPR	Malaya Ipel'ka	3.45	2	*e*P	Pn	09 59 52.3	+2.2
ASAK	Asacha	3.65	13	*e*P	Pn	09 59 56.9	+4.0
MTVR	Mutnovka	3.79	15	*e*P	Pn	09 59 58.9	+3.9
MTVR				*e*S	Sn	10 00 44.3	+5.1
RUS	Russkaya	3.81	18	*e*P	Pn	09 59 58.6	+3.6
RUS				*e*S	Sn	10 00 43.2	+3.9
GRL	Gorelyy	3.84	14	*e*P	Pn	09 59 60.0	+4.4
GRL				*e*S	Sb	10 00 46.1	-4.7
APC	Apacha	4.11	5	*e*P	Pn	10 00 02.7	+3.5
KRMR	Karymshinskiy	4.12	13	*e*P	Pn	10 00 03.4	+4.1
KRMR				*e*S	Sn	10 00 51.9	+4.8
DALK	Dalny	4.42	17	*e*P	Pn	10 00 07.1	+3.6
DALK				*e*S	Sn	10 00 59.9	+5.4
UGLR	Uglovaya	4.61	17	*e*P	Pn	10 00 10.7	+4.6
AVH	Avacha	4.64	16	*e*P	Pn	10 00 11.6	+5.1
KOK	Koryaka	4.65	16	*e*P	Pn	10 00 11.8	+5.1
SMAR	Somma	4.65	17	*e*P	Pn	10 00 12.3	+5.5
KRER	Koryakskii	4.68	16	*e*P	Pn	10 00 12.3	+5.1
KRER				*e*S	Sn	10 01 07.9	+6.7
SDLR	Sedlovina	4.68	17	*e*P	Pn	10 00 11.2	+4.0
KRX	Arik	4.71	15	*e*P	Pn	10 00 12.2	+4.6
SPN	Mys Shipunski	4.79	26	*e*P	Pn	10 00 13.1	+4.5
SPN				*e*S	Sn	10 01 08.3	+4.6
GNL	Ganaly	4.94	10	*e*P	Pn	10 00 14.7	+4.0
MKZ	Mys Kozlova	6.56	27	*e*P	Pn	10 00 36.2	+3.3
KBTR	Krutoberegovo	8.31	25	*e*P	Pn	10 01 01.5	+4.7

BGSI ***20*** *10:22:45.4±1.5, 25°.50S×29°.48E, h0km±55km, ML3.0*

PRE 20 10:22:49.9±1.0, 25°.58S×28°.76E, h5km, ML2.5, Presumed earthquake, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HRAO	HartRAO	1.02	252	*e*P	Pb	10 23 10.0	-0.2
HRAO				*e*S	Sb	10 23 23.5	-0.4
HRAO				IAML		10 23 31.4	
	comp=Z,105nm,1.0s						
WDLM	Western Deep L	1.47	235	*e*P	Pb	10 23 17.8	0.0
WDLM				*e*S	Sg	10 23 38.4	+1.2
WDLM				IAML		10 23 38.8	
	comp=Z,101nm,0.2s						
PRYS	Parys	1.84	223	*e*P	Pn	10 23 23.1	+0.8
PRYS				*e*S	Sb	10 23 47.3	-0.3
PRYS				IAML		10 23 56.1	
	comp=Z,34nm,0.6s						
PILG	Pilgrimsrest,	1.88	70	*e*P	Pn	10 23 23.2	+0.3
PILG				*e*S	Sb	10 23 48.0	-0.7
PILG				IAML		10 23 50.6	
	comp=Z,110nm,0.5s						
LEPH	Lephalale, Lim	1.92	333	*e*P	Pn	10 23 23.9	+0.5
LEPH				*e*S	Sn	10 23 48.3	+0.3
LEPH				IAML		10 23 54.1	
	comp=Z,48nm,1.0s						
HOED	Hoedspruit, Li	2.29	60	*e*P	Pn	10 23 29.4	+1.0
HOED				*e*S	Sn	10 23 58.3	+1.3
HOED				IAML		10 24 05.4	
	comp=Z,32nm,0.5s						
LBTB	Lobatse	2.92	280	*e*P	Pn	10 23 38.0	+0.8
LBTB				*e*S	Sn	10 24 13.6	+0.9
LBTB				IAML		10 24 25.9	
	comp=Z,29nm,0.7s						
MUSN	Musina, Limpop	3.42	17	*e*P	Pn	10 23 44.2	+0.2
MUSN				*e*S	Sn	10 24 25.3	+0.3
MUSN				IAML		10 24 43.1	
	comp=Z,37nm,0.6s						
LPHEP	Lephephe	3.44	309	*i* P	Pn	10 23 44.3	0.0
LPHEP				IAML		10 24 40.1	
	comp=E,30nm,0.5s						
MAKGR	Makgori	3.58	265	*i* P	Pb	10 23 50.4	-3.4
MAKGR				*i* S	Sb	10 24 36.7	-1.0
MAKGR				IAML		10 24 43.3	
	comp=N,137nm,0.6s						
PMBG	Pietermaritzbu	4.22	159	*e*P	Pn	10 23 55.0	+0.1
PMBG				*e*S	Sn	10 24 44.0	-0.5
PMBG				IAML		10 25 03.8	
	comp=Z,23nm,0.6s						
KDWAN	Kaudwane	4.33	299	*i* P	Pn	10 23 57.5	+1.0
KDWAN				IAML		10 25 06.6	
	comp=E,39nm,0.6s						
BOSA	Boshof	4.35	225	*e*P	Pn	10 23 57.9	+1.1
BOSA				*e*S	Sn	10 24 46.3	-1.7
BOSA				IAML		10 25 11.6	
	comp=Z,7.8nm,0.6s						
BROLN	Tlhalogang	4.64	343	*i* P	Pn	10 23 57.2	-3.7
BROLN				*i* S	Sn	10 24 50.3	-4.9
SOOWA	Sowa	5.51	334	IAML		10 25 41.1	
	comp=E,49nm,0.6s						
KGCAE	Kacgae	6.57	293	*i* P	Pn	10 24 27.7	+0.4
FRAZ	Fraserburg	9.04	224	*e*P	Pn	10 25 02.1	+1.0
FRAZ				*e*S	Sn	10 26 39.8	-3.6
FRAZ				IAML		10 27 40.0	
	comp=Z,3.2nm,0.7s						

MDD ***20*** *10:25:56.8±0.5, 37°.44N×11°.52W, h27km±12km, Mb4.7/34, M_mb4.1/34, Error ellipse: s-maj=11.3km s-min=3.4km az=68.0*

INMG ***20*** *10:26:00.0±1.7, 37°.42N×11°.30W, h64km±12km, ML3.3, Error ellipse: s-maj=5.6km s-min=3.2km az=85.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Abissal do Tejo*

IGIL ***20*** *10:26:00.1, 37°.42N×11°.30W, h66km, ML3.4*

ISC 20 10:25:57.4±2.2, 37°.47N±0'.05×11°.3W±0'.1, h84km±19km, n90, σ2s02/173, 27C-3D, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	2.01	99	Pn	Pn	10 26 30.3	+0.8
PFVI	Vila Bisbo	2.01	99	*e*P	Pn	10 26 30.3	+0.8
PFVI				*e*S	Sn	10 26 52.6	-1.4
PFVI				*i* IAML		10 26 52.9	
PFVI				*i* IAML		10 26 54.5	
PFVI				*i* IAML		10 26 55.1	
PTEO	Sao Teotonio	2.06	87	*e*P	Pn	10 26 31.3	+1.1
PTEO				*e*S	Sn	10 26 54.3	-0.9
PTEO				*i* IAML		10 26 54.7	
PTEO				*i* IAML		10 26 54.7	
PTEO				*i* IAML		10 26 58.6	
LIS	Lisbon	2.11	53	*e*P	Pn	10 26 32.1	+1.2
LIS				*e*S	Sn	10 26 56.1	-0.3
LIS				IAML		10 26 58.7	
	comp=N,466nm,0.2s						
LIS	Lisbon	2.11	53	*e*P	Pn	10 26 33.0	+2.1
LIS				*e*S	Sn	10 26 56.9	+0.5
LIS				*i* IAML		10 26 58.7	
LIS				*i* IAML		10 26 58.9	
LIS				*i* IAML		10 26 58.9	
MORF	Marmelete	2.12	94	*e*P	Pn	10 26 32.0	+0.9
MORF				*e*S	Sn	10 26 55.6	-1.2
MORF				IAML		10 26 57.0	
	comp=E,209nm,0.1s						
MORF	Marmelete	2.12	94	*e*P	Pn	10 26 32.0	+0.9
MORF				*e*S	Sn	10 26 55.5	-1.2
MORF				*i* IAML		10 26 59.3	
MORF				*i* IAML		10 26 59.6	
MORF				*i* IAML		10 27 01.6	
PMAFR	Mafra	2.18	47	Pn	Pn	10 26 33.1	+1.3
PMAFR				Sn	Sn	10 26 58.5	+0.4
PMAFR	Mafra	2.18	47	*e*P	Pn	10 26 33.1	+1.3
PMAFR				*e*S	Sn	10 26 59.0	+0.9
PMAFR				*i* IAML		10 26 59.4	
PMAFR				*i* IAML		10 26 59.5	
PMAFR				*i* IAML		10 26 59.9	
MESJ	Messejana	2.48	81	*e*P	Pn	10 26 37.0	+1.3
MESJ				*e*S	Sn	10 27 04.1	-1.1
MESJ				IAML		10 27 08.7	
	comp=N,105nm,0.1s						
MESJ	Messejana	2.48	81	*e*P	Pn	10 26 37.1	+1.3
MESJ				*e*S	Sn	10 27 04.6	-0.7
MESJ				*i* IAML		10 27 08.8	
MESJ				*i* IAML		10 27 09.8	
MESJ				*i* IAML		10 27 10.0	
MOE	Montemor	2.56	65	*e*P	Pn	10 26 38.3	+1.4
MOE				*e*S	Sn	10 27 06.5	-0.8
MOE				*i* IAML		10 27 08.1	
MOE				*i* IAML		10 27 08.3	
MOE				*i* IAML		10 27 09.4	
PCVE	Castro Verde	2.61	85	Pn	Pn	10 26 39.6	+2.1
PCVE				Sn	Sn	10 27 06.3	-2.0
PCVE	Castro Verde	2.61	85	*e*P	Pn	10 26 38.7	+1.3
PCVE				*e*S	Sn	10 27 07.2	-1.0
PCVE				*i* IAML		10 27 11.0	
PCVE				*i* IAML		10 27 12.1	
PCVE				*i* IAML		10 27 12.4	
PBDV	Barranco-do-Ve	2.70	94	Pn	Pn	10 26 40.4	+1.6
PBDV				Sn	Sn	10 27 09.4	-1.3
PBDV	Barranco-do-Ve	2.70	94	*e*P	Pn	10 26 40.4	+1.6
PBDV				*e*S	Sn	10 27 10.0	-0.6
PBDV				*i* IAML		10 27 12.6	
PBDV				*i* IAML		10 27 14.8	
PBDV				*i* IAML		10 27 15.1	
PBEJ	Beja	2.79	77	*e*P	Pn	10 26 41.9	+2.0
PBEJ				*e*S	Sn	10 27 11.6	-1.0
PBEJ				*i* IAML		10 27 14.5	
PBEJ				*i* IAML		10 27 15.0	
PBEJ				*i* IAML		10 27 15.7	
EVO	Evora	2.81	67	Pn	Pn	10 26 41.9	+1.6
EVO				Sn	Sn	10 27 12.6	-0.7
EVO	Evora	2.81	67	*e*P	Pn	10 26 41.6	+1.4
EVO				*e*S	Sn	10 27 12.7	-0.6
EVO				*i* IAML		10 27 15.8	
EVO				*i* IAML		10 27 15.9	
EVO				*i* IAML		10 27 17.7	
PSBE	So Bento	2.84	43	*e*P	Pn	10 26 42.2	+1.6
PSBE				*e*S	Sn	10 27 14.9	+0.9
PSBE				*i* IAML		10 27 15.7	
PSBE				*i* IAML		10 27 18.5	
PSBE				*i* IAML		10 27 19.2	
PVAQ	Vaqueiros	2.86	90

PMRV				*i* IAML			10 27 35.8
ARNO	**Arenosillo**	**3.67**	**94**	Pn		**Pn**	**10 26 54.2 +2.4**
ARNO				Sn		**Sn**	**10 27 33.8 -0.2**
EMIN	**Mina Concepcio**	**3.70**	**84**	Pn		**Pn**	**10 26 53.4 +1.2**
EMIN				Sn		**Sn**	**10 27 32.8 -1.8**
EMIN	**Mina Concepcio**	**3.70**	**84**	P		**Pn**	**10 26 53.8 +1.6**
EMIN				⇑*i*VmB_VC			10 26 55.0
	comp=N,479nm,SNR=3.6						
EMIN				S		**Sn**	**10 27 32.9 -1.8**
PCBR	**Castelo Branco**	**3.82**	**51**	*e*P		**Pn**	**10 26 55.3 +1.4**
PCBR				*e*S		**Sn**	**10 27 37.1 -0.5**
PCBR				*i* IAML			10 27 41.9
PCBR				*i* IAML			10 27 42.3
PCBR				*i* IAML			10 27 42.7
MTE	**Manteigas**	**4.15**	**44**	*e*P		**Pn**	**10 26 59.8 +1.5**
MTE				*e*S		**Sn**	**10 27 44.8 -0.9**
MTE				*i* IAML			10 27 47.3
MTE				*i* IAML			10 27 47.4
MTE				*i* IAML			10 27 48.5
PVIS	**Viseu**	**4.19**	**38**	*e*P		**Pn**	**10 26 59.8 +0.9**
PVIS				*e*S		**Sn**	**10 27 45.8 -1.0**
ESPR	**Espera**	**4.40**	**96**	Pn		**Pn**	**10 27 03.8 +2.0**
ESPR				Sn		**Sn**	**10 27 51.4 -0.3**
ESPR	**Espera**	**4.40**	**96**	P		**Pn**	**10 27 03.7 +2.0**
ESPR				S		**Sn**	**10 27 52.8 +1.0**
ECAB	**El Cabril**	**4.71**	**81**	Pn		**Pn**	**10 27 07.6 +1.7**
ECAB				Sn		**Sn**	**10 27 57.8 -1.6**
ECAB	**El Cabril**	**4.71**	**81**	P		**Pn**	**10 27 07.9 +1.9**
ECAB				S		**Sn**	**10 27 58.3 -1.0**
PVRL	**Vila Real**	**4.71**	**35**	*e*P		**Pn**	**10 27 07.0 +1.0**
PVRL				*e*S		**Sn**	**10 27 57.8 -1.6**
PVRL				*i* IAML			10 28 01.4
PVRL				*i* IAML			10 28 01.5
PVRL				*i* IAML			10 28 01.5
POLO	**Lamas de Olo**	**4.76**	**34**	*e*P		**Pn**	**10 27 07.7 +1.0**
POLO				*e*S		**Sn**	**10 27 59.2 -1.3**
POLO				*i* IAML			10 28 00.7
POLO				*i* IAML			10 28 01.8
POLO				*i* IAML			10 28 02.1
EJIF	**Jimena Fronter**	**4.79**	**100**	P		**Pn**	**10 27 09.5 +2.4**
EJIF				S		**Sn**	**10 28 01.7 +0.4**
EPLA	**Plasencia**	**4.84**	**56**	P		**Pn**	**10 27 09.4 +1.6**
EPLA				⇑*i*VmB_VC			10 27 10.6
	comp=N,900nm,SNR=6.4						
EPLA				S		**Sn**	**10 28 01.8 -0.7**
E1302	**La Puebla de C**	**4.85**	**92**	P		**Pn**	**10 27 10.7 +2.8**
E1302				⇑*i*VmB_VC			10 27 12.4
	comp=N,877nm,SNR=4.1						
E1302				S		**Sn**	**10 28 02.7 -0.1**
PCAB	**Cabril**	**4.94**	**30**	*e*P		**Pn**	**10 27 10.0 +0.9**
PCAB				*e*S		**Sn**	**10 28 03.6 -1.3**
PCAB				*i* IAML			10 28 06.6
PCAB				*i* IAML			10 28 06.8
PCAB				*i* IAML			10 28 07.0
MVO	**Moncorvo**	**4.96**	**41**	*e*P		**Pn**	**10 27 10.4 +1.0**
MVO				*e*S		**Sn**	**10 28 03.9 -1.7**
MVO				*i* IAML			10 28 07.2
MVO				*i* IAML			10 28 07.5
MVO				*i* IAML			10 28 08.5
ECEU	**Ceuta**	**5.02**	**106**	Pn		**Pn**	**10 27 12.2 +2.0**
ECEU	**Ceuta**	**5.02**	**106**	P		**Pn**	**10 27 10.8 +0.6**
ECEU				⇑*i*VmB_VC			10 27 12.9
	comp=N,747nm,SNR=1.4						
ECEU				S		**Sn**	**10 28 07.7 +0.8**
ELOB	**Lobios**	**5.06**	**29**	P		**Pn**	**10 27 11.4 +0.6**
ELOB				⇑*i*VmB_VC			10 27 13.9
	comp=N,510nm,SNR=4.1						
ELOB				S		**Sn**	**10 28 05.8 -2.1**
PGAV	**Gavieira, Arco**	**5.07**	**27**	*e*P		**Pn**	**10 27 11.9 +1.0**
PGAV				*e*S		**Sn**	**10 28 06.3 -1.8**
PGAV				*i* IAML			10 28 07.0
PGAV				*i* IAML			10 28 08.5
PGAV				*i* IAML			10 28 09.1
EZAM	**Zamans**	**5.09**	**23**	P		**Pn**	**10 27 10.8 -0.3**
EZAM				⇑*i*VmB_VC			10 27 14.6
	comp=N,350nm,SNR=1.9						
EZAM				S		**Sn**	**10 28 04.8 -3.7**
AVE	**Averroes**	**5.24**	**141**	Sn		**Sn**	**10 28 05.2 -7.1**
EADA	**Adamuz**	**5.38**	**81**	Pn		**Pn**	**10 27 16.7 +1.6**
EADA				Sn		**Sn**	**10 28 12.7 -3.0**
EADA	**Adamuz**	**5.38**	**81**	P		**Pn**	**10 27 16.6 +1.5**
EADA				⇑*i*VmB_VC			10 27 18.7
	comp=N,370nm,SNR=3.5						
EADA				S		**Sn**	**10 28 14.1 -1.6**
EJUZ	**Juzbado, Salam**	**5.54**	**48**	P		**Pn**	**10 27 18.3 +1.0**
EJUZ				S		**Sn**	**10 28 20.0 +0.3**
PBRG	**Braganca**	**5.58**	**38**	*e*P		**Pn**	**10 27 19.4 +1.5**
PBRG				*e*S		**Sn**	**10 28 18.5 -2.2**
PBRG				*i* IAML			10 28 21.0
PBRG				*i* IAML			10 28 21.2
PBRG				*i* IAML			10 28 21.6
ECAL	**Calabor**	**5.69**	**37**	Pn		**Pn**	**10 27 20.5 +1.1**
ECAL				Sn		**Sn**	**10 28 19.9 -3.4**
ECAL	**Calabor**	**5.69**	**37**	P		**Pn**	**10 27 20.4 +1.1**
ECAL				S		**Sn**	**10 28 21.6 -1.8**
EGOR	**Sierra Gorda,**	**5.75**	**91**	Pn		**Pn**	**10 27 23.1 +2.7**
EGOR	**Sierra Gorda,**	**5.75**	**91**	P		**Pn**	**10 27 20.9 +0.6**
EGOR				⇑*i*VmB_VC			10 27 29.7
	comp=N,231nm,SNR=1.5						
EGOR				S		**Sn**	**10 28 22.3 -2.7**
EMAZ	**Mazaricos**	**5.76**	**17**	P		**Pn**	**10 27 19.1 -1.1**
EMAZ				⇑*i*VmB_VC			10 27 22.0
	comp=N,484nm,SNR=2.1						
EMAZ				S		**Sn**	**10 28 19.6 -5.3**
PAB	**San Pablo**	**5.84**	**67**	P		**Pn**	**10 27 23.2 +1.8**
PAB				S		**Sn**	**10 28 24.9 -2.2**
EAGO	**Agolada(Pontev**	**5.87**	**24**	P		**Pn**	**10 27 22.0 +0.2**
EAGO				⇑*i*VmB_VC			10 27 23.7
	comp=N,330nm,SNR=2.3						
EAGO				S		**Sn**	**10 28 22.2 -5.5**
PSIM	**Granatula de C**	**6.11**	**75**	P		**Pn**	**10 27 27.1 +2.0**
PSIM				S		**Sn**	**10 28 32.1 -1.4**
ESDC	**Sonseca Array**	**6.17**	**67**	P		**Pn**	**10 27 27.1 +1.2**
ESDC				⇑*i*VmB_VC			10 27 29.1
	comp=N,313nm,SNR=3.6						
ESDC				S		**Sn**	**10 28 31.2 -3.7**
ESBB	**Sonseca Array**	**6.17**	**67**	P		**Pn**	**10 27 27.1 +1.3**
ESBB				⇑*i*VmB_VC			10 27 29.1
	comp=N,237nm,SNR=2.6						
ESBB				S		**Sn**	**10 28 31.5 -3.5**
ELGU	**Los Guajares,**	**6.17**	**93**	Pn		**Pn**	**10 27 29.5 +3.6**
ELGU	**Los Guajares,**	**6.17**	**93**	P		**Pn**	**10 27 28.4 +2.5**
ELGU				⇑*i*VmB_VC			10 27 29.1
	comp=N,265nm,SNR=1.6						
ELGU				S		**Sn**	**10 28 34.6 -0.4**
EQTA	**Presa de Quent**	**6.28**	**90**	Pn		**Pn**	**10 27 29.7 +2.3**
EQTA				Sn		**Sn**	**10 28 35.3 -2.5**
EQUE	**Quentar**	**6.28**	**90**	P		**Pn**	**10 27 28.2 +0.7**
EQUE				S		**Sn**	**10 28 37.5 -0.3**
IFR	**Ifrane**	**6.40**	**126**	Pn		**Pn**	**10 27 28.9 -0.4**
IFR				Sn		**Sn**	**10 28 35.5 -5.5**
EQES	**Quesada**	**6.55**	**85**	P		**Pn**	**10 27 32.6 +1.4**
EQES				⇑*i*VmB_VC			10 27 36.1
	comp=N,183nm,SNR=1.4						
EQES				S		**Sn**	**10 28 42.9 -1.5**
EPON	**Pontenova**	**6.66**	**27**	P		**Pn**	**10 27 33.0 +0.6**
EPON				⇑*i*VmB_VC			10 27 33.7
	comp=N,374nm,SNR=2.2						
EPON				S		**Sn**	**10 28 42.9 -3.9**
PMOZ	**Porto Moniz, M**	**6.69**	**228**	Sn		Sn	10 28 32.4 -15
EBER	**Berja**	**6.75**	**92**	Pn		**Pn**	**10 27 37.0 +3.1**
EBER	**Berja**	**6.75**	**92**	⇑*i*VmB_VC		**Pn**	**10 27 35.7 +1.7**
	comp=N,342nm,SNR=1.3						
EBER				P		**Pn**	**10 27 35.7 +1.7**
EBER				S		**Sn**	**10 28 53.0 +3.6**
UCM	**Universidad Co**	**6.90**	**63**	Pn		**Pn**	**10 27 37.9 +2.1**
UCM				Sn		**Sn**	**10 28 49.9 -3.0**
YEBES	**Yebes (Guadala**	**7.09**	**62**	P		**Pn**	**10 27 40.8 +2.3**
YEBES				S		**Sn**	**10 28 57.6 0.0**
TIO	**Tiouine**	**7.34**	**152**	Pn		**Pn**	**10 27 41.5 -0.5**
TIO				Sn		**Sn**	**10 28 56.9 -6.9**
EARI	**Arriondas**	**7.46**	**37**	P		**Pn**	**10 27 44.7 +1.3**
EARI				⇑*i*VmB_VC			10 27 46.0
	comp=N,201nm,SNR=1.7						
EARI				S		**Sn**	**10 29 04.4 -2.0**
ETOB	**Tobarra**	**7.79**	**78**	Pn		**Pn**	**10 27 49.9 +1.8**
ETOB				Sn		**Sn**	**10 29 11.0 -3.8**
ETOB	**Tobarra**	**7.79**	**78**	P		**Pn**	**10 27 48.6 +0.5**
ETOB				⇑*i*VmB_VC			10 27 52.6
	comp=N,277nm,SNR=1.5						
ETOB				S		**Sn**	**10 29 12.5 -2.2**
ETOR	**Torete**	**7.93**	**62**	P		**Pn**	**10 27 51.3 +1.3**
ETOR				S		**Sn**	**10 29 13.9 -4.2**
EVIV	**Cofrentes, Val**	**8.21**	**74**	P		**Pn**	**10 27 53.5 -0.2**
EVIV				⇑*i*VmB_VC			10 28 01.1
	comp=N,246nm,SNR=1.5						
EVIV				S		**Sn**	**10 29 23.0 -1.8**
EMOS	**Mosqueruela**	**8.93**	**68**	P		**Pn**	**10 28 05.1 +1.5**
EMOS				⇑*i*VmB_VC			10 28 11.8
	comp=N,133nm,SNR=0.9						
EMOS				S		**Sn**	**10 29 39.7 -2.9**
EORO	**Oroz-Betelu**	**9.37**	**52**	P		**Pn**	**10 28 12.7 +3.1**
EORO				S		**Sn**	**10 29 48.8 -4.5**
ESAC	**San Caprasio**	**9.38**	**60**	P		**Pn**	**10 28 12.9 +3.1**
ESAC				⇑*i*VmB_VC			10 28 18.5
	comp=N,300nm,SNR=1.7						
ESAC				S		**Sn**	**10 29 51.6 -1.9**

*GCG **20** 10:37:04.2±1.2, 14°.51N×92°.03W, h70km±8km, MD3.9, ML3.2, Presumed earthquake*
*MEX **20** 10:37:04.6±1.3, 14°.49N×92°.13W, h79km±9km, MD3.9*
ISC 20 10:36:59.9±2.0, 14°.3N±0°.1×92°.11W±0°.07, h85km±12km, **n18,** σ1°51/31, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.47**	**59**	*e*P			**Pn**	**10 37 16.5**	**+2.6**
RTAL				*e*S			**Sn**	**10 37 25.3**	**+1.0**
SMCA	**Catarina**	**0.57**	**3**	*e*P			**Pn**	**10 37 15.7**	**+0.9**
SMCA				IAML				10 37 25.3	
	comp=E,621nm,0.3s								
THIG		**0.64**	**346**	*e*P			**Pn**	**10 37 16.8**	**+1.4**
THIG				*e*S			**Sn**	**10 37 25.8**	**-1.2**
THIG		**0.64**	**346**	*e*P			**Pn**	**10 37 16.8**	**+1.4**
STG2	**El Palmar, Qui**	**0.73**	**77**	*e*P			**Pn**	**10 37 16.7**	**+0.3**
STG2				*e*S			**Sn**	**10 37 27.2**	**-1.5**
STG2				IAML				10 37 27.7	
	comp=N,7μm,0.1s								
STG5	**El Palmar, Qui**	**0.75**	**80**	*i* P			**Pn**	**10 37 16.8**	**+0.3**
STG5				*e*S			**Sn**	**10 37 27.1**	**-1.8**
STG8	**El Palmar, Qui**	**0.75**	**77**	*e*P			**Pn**	**10 37 16.9**	**+0.2**
STG8				*e*S			**Sn**	**10 37 28.2**	**-1.1**
STG8				IAML				10 37 31.1	
	comp=E,2μm,0.1s								
CHUJ	**Union Juarez**	**0.81**	**360**	*e*P			**Pn**	**10 37 17.4**	**0.0**
CHUJ				*e*S			**Sn**	**10 37 28.6**	**-1.9**
QUEO	**Labor Ovalle**	**0.82**	**44**	*i* P			**Pn**	**10 37 19.6**	**+2.0**
QUEO				IAML				10 37 35.7	
	comp=N,492nm,0.2s								
PATR	**El Naranjo**	**0.84**	**352**	*e*P			**Pn**	**10 37 17.3**	**-0.4**
PATR				*e*S			**Sn**	**10 37 28.8**	**-2.3**
PAVE	**Pavencul**	**0.91**	**356**	*e*P			**Pn**	**10 37 18.6**	**+0.1**
PAVE				*e*S			**Sn**	**10 37 30.7**	**-1.7**
HUEH	**Huehuetenango**	**1.19**	**29**	*e*P			**Pn**	**10 37 22.9**	**+1.2**
HUEH				*e*S			**Sn**	**10 37 37.7**	**-0.4**
HUEH	**Huehuetenango**	**1.19**	**29**	*e*P			**Pn**	**10 37 22.9**	**+1.2**
HUEH				*i* S			**Sn**	**10 37 38.3**	**+0.2**
FG8	**Yepocapa, Chim**	**1.50**	**91**	*e*P			**Pn**	**10 37 24.7**	**-0.8**
APG	**El Apazote**	**1.75**	**65**	*i* P			**Pn**	**10 37 30.9**	**+2.1**
PCIG		**1.78**	**323**	*e*P			**Pn**	**10 37 30.2**	**+1.2**
PCIG				*e*S			**Sn**	**10 37 51.0**	**-0.1**
TGIG		**2.67**	**339**	*e*P			**Pn**	**10 37 41.6**	**+0.7**
TGIG				*e*S			**Sn**	**10 38 11.0**	**-1.5**
CMIG	**Matias Romero**	**3.87**	**317**	*e*P			**Pn**	**10 37 59.5**	**+2.4**
CMIG				*e*S			**Sn**	**10 38 38.6**	**-2.8**

*IDC **20** 10:38:44.3±1.3, 22°.21S×114°.58W, h0km, mb3.7/4, mbtmp3.7/4, MS3.7/2, Error ellipse: s-maj=51.0km s-min=37.0km az=32.0*
ISC 20 10:38:45.2±1.5, 22°.3S±0°.4×114°.6W±0°.3, h10km, **n18,** σ0°63/10, **mb3.9/4, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
H03N2	**Juan Fernandez**	**33.30**	**117**	T			T	11 20 22.1	
	baz=285,slow=75,SNR=5.4								
H03N3	**Juan Fernandez**	**33.31**	**117**	T			T	11 20 16.6	
	baz=285,slow=75,SNR=38								
H03N1	**Juan Fernandez**	**33.32**	**117**	T			T	11 20 21.1	
	baz=285,slow=75,SNR=45								
PLCA	**Paso Flores**	**41.34**	**127**	LR			LR	10 59 11.5	
	comp=Z,117nm,18.3s,baz=214,slow=30								
LPAZ	**La Paz**	**44.16**	**91**	P			**P**	**10 46 55.3**	**+0.2**
	1.9nm,0.7s,baz=258,slow=4.7,SNR=6.2								
	1.9nm,0.7s								
CPUP	**Villa Florida**	**52.02**	**107**	LR			LR	11 04 59.1	
	comp=Z,63nm,20.2s,baz=260,slow=30								
NVAR	**Mina Array Bea**	**60.51**	**357**	P			**P**	**10 48 56.7**	**+1.0**
	1.0nm,0.7s,baz=183,slow=9.2,SNR=9.6								
	1.0nm,0.7s								
PDAR	**Pinedale Array**	**64.91**	**4**	P			**P**	**10 49 24.1**	**-1.0**
	0.6nm,0.8s,baz=174,slow=6.0,SNR=4.8								
	0.6nm,0.8s								
YKA	**Yellowknife Ar**	**84.50**	**0**	P			**P**	**10 51 17.9**	**+0.1**
	0.1nm,0.4s,baz=193,slow=4.7,SNR=5.3								
	0.1nm,0.4s								
H11S2	**WAKE ISLAND Hy**	**86.92**	**291**	T			T	12 27 38.6	
	baz=114,slow=75,SNR=22								
H11S1	**WAKE ISLAND Hy**	**86.93**	**291**	T			T	12 27 51.1	
	baz=114,slow=75,SNR=13								
H11S3	**WAKE ISLAND Hy**	**86.93**	**291**	T			T	12 27 46.9	
	baz=114,slow=75,SNR=10								
ZALV	**Zalesovo Beam**	**145.14**	**340**	PKPbc			**PKPab**	**10 58 22.2**	**-0.1**
	1.2nm,0.8s,baz=29,slow=3.3,SNR=6.2								
BRTR	**Keskin Array B**	**147.96**	**50**	PKPbc			**PKPbc**	**10 58 31.6**	**+0.4**
	0.5nm,0.4s,baz=270,slow=2.9,SNR=4.3								
CMAR	**Chiang Mai Arr**	**148.34**	**269**	PKPbc			**PKPbc**	**10 58 32.9**	**+0.3**
	0.5nm,0.3s,baz=76,slow=1.5,SNR=5.0								
BVAR	**Borovoye Array**	**149.09**	**354**	PKPbc			**PKiKP**	**10 58 34.1**	**-0.6**
	1.0nm,0.6s,baz=5.7,slow=2.9,SNR=5.4								
KURBB	**Kurchatov Arra**	**149.91**	**343**	PKPbc			**PKPbc**	**10 58 35.2**	**-0.4**
	1.5nm,0.2s,baz=22,slow=2.0,SNR=7.4								
MKAR	**Makanchi Array**	**152.00**	**335**	PKPbc			**PKiKP**	**10 58 40.9**	**-0.1**
	1.3nm,0.9s,baz=28,slow=1.9,SNR=9.3								

*NEIC **20** 10:43:42.8±1.4, 17°.49N±0°.04×67°.48W±0°.03, h10km, 2km, ML3.0/39, Md3.0/5(RSPR), Error ellipse: s-maj=7.3km s-min=5.0km az=173.0*
*OSPL **20** 10:43:45.7±0.3, 17°.63N×67°.49W, h1km±4km, ML3.4, Presumed earthquake*
*SDD **20** 10:43:46.3±0.7, 17°.64N×67°.47W, h19km±20km, MD3.3, ML2.8, MW3.3, Presumed earthquake*
ISC 20 10:43:44.8±1.8, 17°.62N±0°.08×67°.46W±0°.04, h15km±11km, **n29,** σ0°58/40, **8C-1D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CRPR	**Cabo Rojo, PR**	**0.51**	**41**				**Pg**	**10 43 54.9**	**+0.1**
CRPR				IAML				10 44 04.5	
	696nm,0.4s								
CRPR				IAML				10 44 05.1	
	526nm,0.5s								
CRPR	**Cabo Rojo, PR**	**0.51**	**41**				**Sb**	**10 44 02.9**	**+0.3**
CRPR	**Cabo Rojo, PR**	**0.51**	**41**	*i* P			**Pg**	**10 43 55.0**	**+0.1**
CRPR				*e*S			**Sb**	**10 44 01.9**	**-0.7**
CRPR				IAML				10 44 02.6	
	comp=Z,484nm,0.3s								
MLPR	**Magueyes Islan**	**0.52**	**49**				**Pg**	**10 43 55.4**	**+0.2**
MLPR				IAML				10 44 03.8	
	comp=Z,1μm,0.5s								
MLPR				IAML				10 44 05.1	
	comp=Z,1μm,0.5s								
MLPR	**Magueyes Islan**	**0.52**	**49**	⇑*e*Pg			**Pb**	**10 43 55.7**	**-0.1**
MLPR				⇓*e*Sg			**Sb**	**10 44 03.4**	**+0.3**
MLPR				IAML				10 44 03.7	
	comp=N,427nm,0.3s								
GBPR	**Guanica, Bosqu**	**0.65**	**58**				**Pb**	**10 43 58.5**	**+0.6**
GBPR							**Sb**	**10 44 08.2**	**+1.3**
LSP	**Las Mesas**	**0.65**	**33**				**Pb**	**10 43 58.5**	**+0.6**
LSP							**Sb**	**10 44 08.0**	**+1.1**
PRSN	**Puerto Rico Se**	**0.66**	**27**				**Pb**	**10 43 58.0**	**-0.1**
PRSN	**Puerto Rico Se**	**0.66**	**27**	⇑*e*Pg			**Pb**	**10 43 58.0**	**-0.1**
PRSN				⇑*e*Sg			**Sb**	**10 44 06.7**	**-0.4**
PRSN				IAML				10 44 11.8	
	comp=N,996nm,0.3s								
IDE	**Isla Desecheo**	**0.76**	**359**				**Pb**	**10 44 00.3**	**+0.5**
IDE							**Sb**	**10 44 10.7**	**+0.8**
AGPR	**Aguadilla, PR**	**0.90**	**21**				**Pg**	**10 44 02.0**	**-0.3**
AGPR				IAML				10 44 18.1	
	comp=N,230nm,0.5s								
AGPR	**Aguadilla, PR**	**0.90**	**21**	⇑*e*Pg			**Pg**	**10 44 02.0**	**-0.3**
AGPR				⇑*e*Sg			**Sg**	**10 44 13.8**	**-0.4**
AGPR				IAML				10 44 18.0	
	comp=N,169nm,0.5s								
OBIP	**Obispado Ponce**	**0.91**	**63**				**Pg**	**10 44 02.5**	**-0.1**
OBIP							**Sb**	**10 44 14.7**	**+0.4**
OBIP	**Obispado Ponce**	**0.91**	**63**	*i* P			**Pg**	**10 44 02.5**	**-0.1**
OBIP				*e*S			**Sb**	**10 44 14.9**	**+0.5**
OBIP				IAML				10 44 16.1	
	comp=Z,1μm,0.1s								
UUPR	**Utuado, UPR, P**	**0.94**	**48**	Pn			**Pg**	**10 44 02.9**	**-0.2**
CELP	**Cerrillos**	**0.95**	**62**				**Pg**	**10 44 03.1**	**-0.1**
CELP				IAML				10 44 16.8	
	comp=Z,420nm,0.6s								
CELP				IAML				10 44 17.5	
	comp=Z,264nm,0.3s								
AOPR	**Arecibo Observ**	**0.98**	**43**				**Pb**	**10 44 03.5**	**-0.1**
AOPR	**Arecibo Observ**	**0.98**	**43**	⇑*e*Pg			**Pb**	**10 44 03.4**	**-0.2**
AOPR				⇑*e*Sg			**Sb**	**10 44 16.8**	**+0.4**
AOPR				IAML				10 44 17.4	
	comp=N,462nm,0.2s								
EMPR	**Esperanza - Ma**	**1.23**	**46**				**Pb**	**10 44 07.9**	**+0.2**
EMPR							**Sb**	**10 44 22.6**	**-0.8**
ECPR	**Experimental S**	**1.25**	**56**				**Pb**	**10 44 07.7**	**-0.1**
ECPR				IAML				10 44 32.4	
	comp=N,307nm,0.2s								
SJG	**San Juan**	**1.34**	**69**	Pn			**Pn**	**10 44 08.9**	**0.0**
SJG				IAML				10 44 32.5	
	comp=N,120nm,0.7s								
SJG	**San Juan**	**1.34**	**69**	*i* P			**Pb**	**10 44 09.9**	**+0.3**
SJG				IAML				10 44 29.5	
	comp=Z,1μm,0.3s								
PDPR	**Patillas Dam,**	**1.42**	**74**	Pn			**Pn**	**10 44 10.0**	**-0.1**
HUMP	**Col San Antoni**	**1.62**	**71**				**Pn**	**10 44 12.6**	**-0.2**
HUMP	**Col San Antoni**	**1.62**	**71**				**Sn**	**10 44 32.7**	**-0.7**
DR12	**Loma Pena Alta**	**2.16**	**303**	Pn			**Pn**	**10 44 22.0**	**+1.6**
HATM	**Hato Mayor del**	**2.16**	**303**	⇑*e*Pg			**Pb**	**10 44 23.5**	**-0.2**
HATOM				IAML				10 45 02.2	
	comp=N,40nm,2.0s								
CUPR	**Culebra, Puert**	**2.18**	**71**	Pn			**Pn**	**10 44 21.2**	**+0.6**
SDDR	**Presa de Saban**	**3.88**	**291**	Pn			**Pn**	**10 44 42.9**	**-1.1**
SDDR				IAML				10 45 57.9	
	comp=N,23nm,1.8s								
SDDR				IAML				10 46 17.6	
	comp=N,31nm,3.0s								

*BGSI **20** 10:44:11.5±1.4, 22°.23S×24°.82E, h2km±147km, ML1.7*
PRE 20 10:44:08.3±1.3, 23°.71S×27°.44E, h0km, **ML1.7,**
Suspected explosion, South Africa

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LEPH	**Lephalale, Lim**	**0.36**	**115**	*e*P			Pg	10 44 15.7	+0.4
LEPH				*e*S			Sg	10 44 20.0	0.0
LEPH				IAML				10 44 24.1	
	comp=Z,72nm,0.4s								
LPHEP	**Lephephe**	**1.49**	**283**	*i* P			Pg	10 44 36.7	-0.1
LPHEP				*i* S			Sb	10 44 56.5	+0.1
LPHEP				IAML				10 45 01.5	
	comp=N,17nm,0.3s								
LBTB	**Lobatse**	**2.12**	**232**	*e*P			Pn	10 44 45.9	+0.7
LBTB				*e*S			Sb	10 45 14.0	-0.7
LBTB				IAML				10 45 20.7	
	comp=Z,4.9nm,0.2s								
HRAO	**HartRAO**	**2.19**	**174**	*e*P			Pn	10 44 47.0	+0.9
HRAO				*e*S			Sn	10 45 14.3	+0.3
HRAO				IAML				10 45 36.8	
	comp=Z,4.7nm,1.0s								
BROLN	**Tlhalogang**	**2.59**	**358**	*i* P			Pn	10 44 52.1	+0.5
BROLN				*i* S			Sn	10 45 23.9	-0.1
MUSN	**Musina, Limpop**	**2.64**	**58**	*e*P			Pn	10 44 52.9	+0.7
MUSN				*e*S			Sn	10 45 25.2	+0.2
MUSN				IAML				10 45 29.7	
	comp=Z,4.5nm,0.2s								
PRYS	**Parys**	**3.21**	**181**	*e*P			Pn	10 45 00.3	+0.1
PRYS				*e*S			Sn	10 45 40.4	+1.2
PRYS				IAML				10 45 57.8	
	comp=Z,2.2nm,0.4s								
PILG	**Pilgrimsrest,**	**3.23**	**113**	*e*P			Pn	10 45 01.9	+1.4
PILG				*e*S			Sn	10 45 40.6	+0.9
PILG				IAML				10 45 55.0	
	comp=N,9.4nm,0.2s								
BOSA	**Boshof**	**5.27**	**201**	*e*P			Pn	10 45 28.6	+0.2
BOSA				*e*S			Sn	10 46 27.6	-2.3
BOSA				IAML				10 46 58.7	
	comp=Z,1.8nm,0.4s								

*OSPL **20** 10:54:25.9±0.3, 17°.89N×66°.85W, h12km±2km, ML2.7, Presumed earthqu

	comp=N,118nm,0.4s								
EMPR	**Esperanza - Ma**	**0.65**	**27**			**Pg**	**10 54 38.0**	**+0.7**
EMPR						**Sg**	**10 54 47.2**	**+1.2**
SJG	**San Juan**	**0.69**	**72**	Pg		**Pn**	**10 54 38.5**	**-0.8**
SJG						**Sn**	**10 54 48.3**	**-1.3**
SJG	**San Juan**	**0.69**	**72**	*i* P		**Pn**	**10 54 38.5**	**-0.8**
SJG				*e*S		**Sg**	**10 54 47.7**	**+0.4**
SJG				IAML			10 54 49.4	
	comp=Z,763nm,0.2s							
IDE	**Isla Desecheo**	**0.78**	**309**			**Pb**	**10 54 39.7**	**+0.3**
IDE						**Sb**	**10 54 49.9**	**+0.3**
PDPR	**Patillas Dam,**	**0.79**	**81**			**Pn**	**10 54 40.2**	**-0.4**
HUMP	**Col San Antoni**	**0.97**	**75**			**Pn**	**10 54 43.0**	**-0.2**
HUMP				IAML			10 54 59.4	
	comp=Z,71nm,0.3s							
HUMP	**Col San Antoni**	**0.97**	**75**			**Sb**	**10 54 55.2**	**-0.1**
CUPR	**Culebra, Puert**	**1.54**	**74**	Pn		**Pn**	**10 54 50.5**	**-0.5**
HATOM	**Hato Mayor del**	**2.57**	**291**	*e*Pg		**Pb**	**10 55 09.7**	**-0.4**
HATOM				⇑*e*Sg		**Sb**	**10 55 39.5**	**-1.9**
HATOM				IAML			10 55 43.2	
	comp=N,24nm,3.3s							

SDD 20 11:07:33.9±1.7, 17°92N×66°96W, h14km±9km, MD2.9, ML2.2, MW2.4, 8C-2D, Presumed earthquake, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLPR	**Magueyes Islan**	**0.10**	**305**	⇑*e*Pg	Pg	11 07 36.8	-0.1
MLPR				⇑*e*Sg	Sg	11 07 38.5	-0.6
MLPR				IAML		11 07 38.6	
	comp=N,517nm,0.2s						
PRSN	**Puerto Rico Se**	**0.35**	**330**	⇑*e*Pg	Pg	11 07 41.2	+0.2
PRSN				⇑*e*Sg	Sg	11 07 46.3	+0.5
PRSN				IAML		11 07 47.6	
	comp=N,558nm,0.2s						
AOPR	**Arecibo Observ**	**0.47**	**25**	⇓*e*Pg	Pg	11 07 43.6	+0.3
AOPR				⇑*e*Sg	Sg	11 07 48.6	-1.0
AOPR				IAML		11 07 51.1	
	comp=N,111nm,0.2s						
AGPR	**Aguadilla, PR**	**0.57**	**346**	⇑*e*Pg	Pg	11 07 43.1	-2.0
AGPR				⇓*e*Sg	Sg	11 07 51.3	-1.3
AGPR				IAML		11 07 57.8	
	comp=N,96nm,1.4s						
HATOM	**Hato Mayor del**	**2.46**	**291**	⇑*e*Pg	Pn	11 08 15.6	+1.9
HATOM				⇑*e*Sg	Sb	11 08 47.3	-0.8
HATOM				IAML		11 08 59.9	
	comp=N,25nm,2.6s						

*ISK **20** 11:12:55.9, 38°30N×44°53E, h5km, ML3.1/7*
*AZER **20** 11:12:55.4, 38°46N×44°50E, h3km, ml3.1*
*AFAD **20** 11:12:56.7, 38°48N×44°65E, h11km±5km, ML2.9*
*NSSP **20** 11:12:57.7, 38°43N×44°58E, h10km, Ms3.2*
*TEH **20** 11:12:58.4, 38°48N×44°56E, h10km±86km, ML2.9, Presumed earthquake*

ISC 20 11:12:58.8±1.1, 38°44N±0°02×44°51E±0°02, h1km±10km, n56, σ1s27/98, 1C-3D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.46**	**299**	P	**Pg**	**11 13 07.6**	**-0.1**
OZAP				S	**Sb**	**11 13 15.8**	**-1.6**
OZAP				IAML		11 13 17.0	
	comp=N,1μm,0.6s						
OZAP				IAML		11 13 18.0	
	comp=E,1μm,0.5s						
YOVA	**Hakkari_Yksek**	**0.87**	**192**	P	**Pg**	**11 13 15.8**	**+0.4**
YOVA				S	**Sg**	**11 13 28.0**	**+1.4**
YOVA				IAML		11 13 34.0	
	comp=N,176nm,0.4s						
YOVA				IAML		11 13 34.0	
	comp=E,372nm,0.5s						
TVAN	**Van**	**0.87**	**276**	P	**Pg**	**11 13 15.0**	**-0.6**
TVAN				S	**Sb**	**11 13 28.9**	**-0.3**
TVAN				IAML		11 13 34.0	
	comp=N,507nm,0.6s						
TVAN				IAML		11 13 45.0	
	comp=E,509nm,0.8s						
ISHB	**Shabestar**	**0.88**	**100**	Pg	**Pg**	**11 13 14.9**	**-0.9**
VANB	**Van**	**0.89**	**280**	Pg	**Pg**	**11 13 14.5**	**-1.4**
VANB				Sg	**Sg**	**11 13 28.1**	**+0.6**
VMUR	**Van-Muradiye**	**0.92**	**307**	P	**Pg**	**11 13 15.0**	**-1.5**
VMUR				S	**Sb**	**11 13 30.5**	**0.0**
VMUR				IAML		11 13 33.0	
	comp=E,329nm,0.5s						
VMUR				IAML		11 13 40.0	
	comp=N,354nm,0.8s						
MAKU	**Maku**	**0.93**	**8**	Pg	**Pg**	**11 13 15.5**	**-1.0**
NAX	**Nakhchivan**	**1.06**	**46**	P	**Pg**	**11 13 19.0**	**-0.2**
NAX				S	**Sb**	**11 13 35.1**	**+0.5**
HAKT	**HAKKARI**	**1.08**	**216**	P	**Pg**	**11 13 19.0**	**-0.5**
HAKT				IAML		11 13 37.0	
	comp=N,316nm,0.3s						
HAKT				S	**Sn**	**11 13 37.8**	**+0.7**
HAKT				IAML		11 13 38.0	
	comp=E,318nm,0.3s						
HAKT	**HAKKARI**	**1.08**	**216**	P	**Pg**	**11 13 18.9**	**-0.7**
HAKT				S	**Sn**	**11 13 37.0**	**-0.2**
AKDM	**Akdamar-Van**	**1.21**	**265**	Pn	**Pg**	**11 13 20.1**	**-1.9**
AKDM				Sn	**Sg**	**11 13 38.4**	**+0.8**
SBZ	**Shahbuz**	**1.26**	**40**	P	**Pg**	**11 13 22.3**	**-0.6**
SBZ				S	**Sn**	**11 13 40.8**	**-0.5**
ORD	**Ordubad**	**1.26**	**67**	P	**Pg**	**11 13 22.4**	**-0.6**
ORD				S	**Sb**	**11 13 40.1**	**-0.1**
DYDN	**Diyadin**	**1.28**	**330**	P	**Pg**	**11 13 23.1**	**-0.2**
DYDN				S	**Sb**	**11 13 40.3**	**-0.5**
DYDN				IAML		11 13 45.0	
	comp=N,280nm,0.4s						
DYDN				IAML		11 13 49.0	
	comp=E,211nm,0.9s						
ITBZ	**Tabriz**	**1.30**	**98**	Pg	**Pn**	**11 13 23.0**	**-1.3**
HYR	**Heyderabad**	**1.31**	**12**	P	**Pn**	**11 13 24.1**	**-0.2**
HYR				S	**Sn**	**11 13 43.2**	**+0.7**
IAZR	**Azarshahr**	**1.39**	**123**	Pg	**Pn**	**11 13 25.1**	**-0.5**
VAYK	**Vayk**	**1.44**	**29**	⇓*e*P	**Pn**	**11 13 25.0**	**-1.3**
VAYK				⇓*e*S	**Sb**	**11 13 45.0**	**-0.5**
ADCV	**BITLIS_Adilcev**	**1.45**	**285**	P	**Pn**	**11 13 26.4**	**+0.1**
ADCV				S	**Sg**	**11 13 48.5**	**+3.1**
ADCV				IAML		11 13 51.0	
	comp=N,156nm,0.6s						
ADCV				IAML		11 13 51.0	
	comp=E,130nm,0.9s						
IGDI	**IGDIR**	**1.47**	**347**	P	**Pn**	**11 13 23.9**	**-2.6**
IGDI				S	**Sb**	**11 13 45.2**	**-1.0**
IGDI				IAML		11 13 51.0	
	comp=N,111nm,1.0s						
IGDI				IAML		11 13 54.0	
	comp=E,103nm,0.9s						
IGDI	**IGDIR**	**1.47**	**347**	P	**Pn**	**11 13 24.6**	**-1.9**
IGDI				S	**Sg**	**11 13 48.6**	**+2.6**
ALVK	**Alvank**	**1.52**	**70**	*e*P	**Pn**	**11 13 26.3**	**-1.0**
ALVK				*e*S	**Sn**	**11 13 47.0**	**-0.8**
PERV	**Siirt/Pervari-**	**1.63**	**253**	P	**Pb**	**11 13 30.5**	**+0.8**
PERV				IAML		11 14 02.0	
	comp=N,253nm,1.2s						
PERV				IAML		11 14 06.0	
	comp=E,224nm,0.6s						
AGRB	**Hanur-Agry**	**1.64**	**314**	Pn	**Pn**	**11 13 28.5**	**-0.5**
DORK	**Agr/Tutak/Do**	**1.65**	**306**	P	**Pn**	**11 13 28.9**	**-0.3**
DORK				IAML		11 13 54.0	
	comp=E,73nm,0.6s						
DORK				S	**Sg**	**11 13 55.0**	**+3.2**
DORK				IAML		11 14 03.0	
	comp=N,118nm,0.9s						
MLAZ	**Malazgirt-MUS**	**1.69**	**295**	Pn	**Pn**	**11 13 28.9**	**-0.7**
KOTA	**Agri, Merkez-K**	**1.70**	**324**	P	**Pb**	**11 13 30.5**	**-0.5**
KOTA				S	**Sn**	**11 13 51.7**	**-0.6**
KOTA				IAML		11 13 57.0	
	comp=N,40nm,0.6s						
GNI	**Garni**	**1.72**	**6**	Pn	**Pn**	**11 13 30.2**	**+0.1**
GNI	**Garni**	**1.72**	**6**	*e*P	**Pb**	**11 13 31.4**	**+0.1**
GNI				*e*S	**Sg**	**11 13 56.3**	**+2.2**
METS	**Metsamor**	**1.74**	**349**	*e*P	**Pb**	**11 13 31.8**	**+0.1**
METS				*e*S	**Sg**	**11 13 56.5**	**+1.7**
EGVZ	**Egvard**	**1.77**	**63**	*e*P	**Pn**	**11 13 30.6**	**-0.2**
EGVZ				*e*S	**Sb**	**11 13 54.4**	**-0.6**
GRS	**Goris**	**1.77**	**53**	⇓*i*P	**Pn**	**11 13 29.0**	**-1.8**
GRS				⇑*i*S	**Sn**	**11 13 53.0**	**-1.1**
ARUZ	**Aruch**	**1.87**	**350**	*e*P	**Pb**	**11 13 33.6**	**-0.3**
ARUZ				*e*S	**Sg**	**11 13 59.9**	**+1.0**
BLIS	**Bitlis-Merkez**	**1.88**	**270**	P	**Pn**	**11 13 32.1**	**-0.2**
BLIS				IAML		11 14 03.0	
	comp=E,41nm,0.7s						
BLIS				IAML		11 14 07.0	
	comp=N,94nm,0.8s						
KAPZ	**Kaputan**	**1.89**	**4**	*e*P	**Pb**	**11 13 34.0**	**-0.2**
KAPZ				*e*S	**Sg**	**11 14 00.3**	**+0.9**
SIRN	**Sırnak**	**1.91**	**241**	P	**Pb**	**11 13 34.6**	**+0.1**
SIRN				S	**Sg**	**11 14 00.7**	**+0.7**
SIRN				IAML		11 14 09.0	
	comp=N,141nm,0.6s						
SIRN				IAML		11 14 11.0	
	comp=E,131nm,0.7s						
AYRK	**Ayrk**	**1.95**	**30**	*e*P	**Pn**	**11 13 34.3**	**+1.0**
AYRK				*e*S	**Sg**	**11 14 00.8**	**-0.5**
GURO	**Guroymak-BITLI**	**1.95**	**274**	Pn	**Pn**	**11 13 32.1**	**-1.1**
AMBZ	**Amberd**	**1.96**	**354**	*e*P	**Pb**	**11 13 35.6**	**+0.2**
AMBZ				*e*S	**Sg**	**11 14 03.3**	**+1.6**
IHRS	**Heris**	**1.99**	**93**	Pn	**Pb**	**11 13 35.9**	**-0.1**
SRTM	**Siirt_Merkez**	**2.09**	**258**	P	**Pb**	**11 13 37.0**	**-0.5**
SRTM				IAML		11 14 13.0	
	comp=E,185nm,0.6s						
SRTM				IAML		11 14 14.0	
	comp=N,178nm,0.9s						
DIGO	**Kars**	**2.16**	**336**	P	**Pb**	**11 13 39.5**	**+0.6**
DIGO				S	**Sg**	**11 14 08.1**	**-0.2**
QRD	**Qoradiz**	**2.42**	**64**	P	**Pn**	**11 13 40.8**	**+1.3**
QRD				S	**Sb**	**11 14 12.7**	**-0.8**
GDB	**GEDABAY**	**2.48**	**22**	P	**Pn**	**11 13 41.8**	**+1.4**
GDB				S	**Sb**	**11 14 13.3**	**-2.0**
LSVT	**Lusahovit**	**2.53**	**12**	*e*P	**Pb**	**11 13 43.4**	**-1.7**
LSVT				*e*S	**Sb**	**11 14 16.9**	**+0.1**
GANJ	**Ganja**	**2.61**	**32**	P	**Pn**	**11 13 43.7**	**+1.5**
GANJ				S	**Sb**	**11 14 19.0**	**-0.1**
AGDM	**Agdam**	**2.62**	**50**	P	**Pn**	**11 13 43.4**	**+1.1**
SRTK	**Saratovka**	**2.63**	**357**	*e*P	**Pb**	**11 13 46.3**	**-0.6**
SRTK				*e*S	**Sg**	**11 14 21.5**	**-1.8**
QZX	**Qazax, Azerbai**	**2.70**	**14**	P	**Pn**	**11 13 44.1**	**+0.6**
QZX				S	**Sn**	**11 14 16.7**	**-0.1**
SENK	**Senkaya-Erzuru**	**2.70**	**322**	Pn	**Pn**	**11 13 43.9**	**+0.3**
YRD	**Yardimli**	**2.96**	**80**	P	**Pn**	**11 13 47.8**	**+0.7**
YRD				S	**Sb**	**11 14 26.6**	**-2.6**
LRK	**Lerik**	**3.01**	**85**	P	**Pn**	**11 13 49.3**	**+1.5**
LRK				S	**Sb**	**11 14 27.8**	**-2.8**
LKRN	**Lenkeran, Azer**	**3.36**	**84**	P	**Pn**	**11 13 51.2**	**-1.2**
LKRN				S	**Sn**	**11 14 34.3**	**+1.4**
ASTR	**Astara**	**3.36**	**87**	P	**Pn**	**11 13 52.7**	**+0.3**
ASTR				S	**Sn**	**11 14 34.5**	**+1.5**
QBL	**Gabala**	**3.59**	**45**	P	**Pn**	**11 13 56.5**	**+0.9**
QBL				S	**Sn**	**11 14 42.2**	**+3.5**
XNQ	**Khinaliq**	**3.91**	**45**	P	**Pn**	**11 14 01.7**	**+1.5**
XNQ				S	**Sn**	**11 14 50.0**	**+3.2**

*BGSI **20** 11:25:56.6±1.2, 25°12S×28°12E, h0km±28km, ML2.1*

PRE 20 11:25:29.6±0.9, 26°06S×29°06E, h0km, ML2.3, Suspected explosion, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HRAO	**HartRAO**	**1.25**	**277**	*e*P	Pg	11 25 53.2	-0.4
HRAO				*e*S	Sb	11 26 11.2	+0.5
HRAO				IAML		11 26 13.1	
	comp=Z,52nm,0.2s						
WDLM	**Western Deep L**	**1.52**	**256**	*e*P	Pn	11 25 58.4	+0.2
WDLM				*e*S	Sn	11 26 20.1	+1.3
WDLM				IAML		11 26 21.1	
	comp=Z,72nm,0.3s						
PRYS	**Parys**	**1.75**	**240**	*e*P	Pn	11 26 01.5	+0.1
PRYS				*e*S	Sg	11 26 25.8	-0.1
PRYS				IAML		11 26 30.4	
	comp=Z,37nm,0.3s						
PILG	**Pilgrimsrest,**	**1.86**	**53**	*e*P	Pn	11 26 03.6	+0.6
PILG				*e*S	Sb	11 26 28.5	-0.1
PILG				IAML		11 26 29.8	
	comp=Z,43nm,0.4s						
LEPH	**Lephalale, Lim**	**2.47**	**332**	*e*P	Pn	11 26 11.3	+0.1
LEPH				*e*S	Sn	11 26 43.2	+1.1
LEPH				IAML		11 26 48.9	
	comp=Z,25nm,0.3s						
SNKL	**Senekal, Frees**	**2.49**	**207**	*e*P	Pn	11 26 12.7	+1.0
SNKL				*e*S	Sn	11 26 43.2	+0.4
SNKL				IAML		11 26 49.8	
	comp=Z,19nm,0.3s						
LBTB	**Lobatse**	**3.29**	**288**	*e*P	Pn	11 26 23.6	+1.0
LBTB				*e*S	Sn	11 27 03.0	+0.5
LBTB				IAML		11 27 14.9	
	comp=Z,18nm,0.3s						
PMBG	**Pietermaritzbu**	**3.68**	**160**	*e*P	Pn	11 26 28.0	+0.2
PMBG				*e*S	Sn	11 27 12.0	+0.1
PMBG				IAML		11 27 20.8	
	comp=Z,17nm,0.3s						
MUSN	**Musina, Limpop**	**3.82**	**11**	*e*P	Pn	11 26 30.8	+1.0
MUSN				*e*S	Sn	11 27 15.4	-0.1
MUSN				IAML		11 27 26.1	
	comp=Z,8.3nm,0.5s						
MAKGR	**Makgori**	**3.84**	**273**	*i* P	Pg	11 26 45.4	+2.1
MAKGR				IAML		11 27 35.5	
	comp=N,54nm,0.3s						
LPHEP	**Lephephe**	**3.96**	**312**	*i* P	Pb	11 26 39.3	-1.0
LPHEP				*i* S	Sn	11 27 12.0	-6.8
LPHEP				IAML		11 27 36.9	
	comp=E,7.3nm,0.5s						
BOSA	**Boshof**	**4.24**	**232**	*e*P	Pn	11 26 36.6	+1.1
BOSA				*e*S	Sn	11 27 25.0	-0.8
BOSA				IAML		11 27 41.6	
	comp=Z,8.1nm,0.3s						
KSTD	**Kokstad**	**4.55**	**177**	*e*P	Pn	11 26 41.5	+1.6
KSTD				*e*S	Sn	11 27 33.5	-0.1
KSTD				IAML		11 27 52.0	
	comp=Z,3.6nm,0.5s						
KDWAN	**Kaudwane**	**4.80**	**303**	*i* P	Pb	11 26 51.4	-3.4
KDWAN				*i* S	Sn	11 27 32.4	-7.4
KDWAN				IAML		11 28 05.2	
	comp=N,9.6nm,0.7s						
BROLN	**Tlhalogang**	**5.18**	**342**	*i* P	Pb	11 26 58.2	-3.0
BROLN				*i* S	Sn	11 27 44.1	-5.0
BROLN				IAML		11 28 12.2	
	comp=E,6.3nm,0.5s						
GRAF	**Camdeboo Natio**	**7.38**	**212**	*e*P	Pn	11 27 19.6	+1.0
GRAF				*e*S	Sn	11 28 39.5	-3.6
GRAF				IAML		11 28 47.7	
	comp=Z,2.0nm,0.3s						

*IDC **20** 11:28:39.0±1.2, 5°66N×125°16E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=49.6km s-min=13.4km az=96.0*
*MAN **20** 11:28:40.0, 5°70N×125°22E, h5km, MS3.1*

ISC 20 11:28:40.0±2.0, 5°72N±0°07×125°25E±0°06, h6km±12km, n11, σ1s30/17, mb3.2/4, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**0.47**	**321**	*i* P	**Pb**	**11 28 50.6**	**-0.1**
GSPH				*i* S	**Sg**	**11 28 56.3**	**+1.1**
DDMP	**Don Marcelino,**	**0.60**	**50**	*i* P	**Pb**	**11 28 53.1**	**+0.4**
DDMP				*i* S	**Sg**	**11 29 00.9**	**+1.6**
KCP	**Kidapawan**	**1.29**	**353**	*i* P	**Pg**	**11 29 04.4**	**-0.3**
KCP				*i* S	**Sg**	**11 29 20.3**	**-1.1**
DMPH	**Davao City--Mi**	**1.38**	**11**	*i* P	Pn	11 28 59.8	-5.8
DMPH				*e*S	**Sg**	**11 29 21.7**	**-2.5**
DAV	**Davao City (W)**	**1.38**	**14**	Pg	**Pn**	**11 29 06.0**	**+0.3**
	80nm,0.3s,baz=237,slow=17,SNR=3.8						
DAV				Lg	Lg	11 29 25.8	
	53nm,0.3s,baz=244,slow=23,SNR=1.6						
BIPH	**Bislig**	**2.68**	**24**	*e*P	**Pb**	**11 29 27.3**	**-1.1**
BIPH				*e*S	**Sn**	**11 29 56.9**	**+0.4**
CGP	**Cagayan de Oro**	**2.77**	**349**	*e*P	**Pn**	**11 29 25.3**	**+0.5**
CGP				*e*S	**Sb**	**11 30 06.2**	**+2.1**
FITZ	**Fitzroy Crossi**	**23.67**	**179**	P	**P**	**11 33 53.0**	**+0.5**
	0.6nm,0.3s,baz=4.3,slow=10,SNR=7.6						
	0.6nm,0.3s						
WRA	**Warramunga Arr**	**27.03**	**161**	P	**P**	**11 34 22.9**	**-0.2**
	0.2nm,0.4s,baz=340,slow=10,SNR=11						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**30.41**	**164**	P	**P**	**11 34 53.0**	**-0.2**
	0.2nm,0.5s,baz=343,slow=7.2,SNR=12						
ASAR				PcP	**PcP**	**11 37 51.2**	**-1.9**
	0.1nm,0.6s,baz=333,slow=2.1,SNR=1.6						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**55.09**	**325**	P	**P**	**11 38 13.0**	**+0.2**
	0.1nm,0.4s,baz=124,slow=7.2,SNR=1.8						
	0.1nm,0.4s						

*IDC **20** 11:44:32.6±1.9, 51°72N×175°53W, h0km, mb3.4/2, mbtmp3.2/3, ML3.3/1, Error ellipse: s-maj=102.8km s-min=35.0km az=141.0*
*NEIC **20** 11:44:39.7±1.0, 51°63N±0°07×175°17W±0°04, h35km±2km, mb3.5/5, ML3.5/8, ML3.0(AEIC), Error ellipse: s-maj=13.3km s-min=3.1km az=162.0*
*AEIC **20** 11:44:40.0±1.2, 51°60N±0°07×175°15W±0°03, h25km±7km, Error ellipse: s-maj=10.6km s-min=1.0km az=166.0*

ISC 20 11:44:38.3±1.7, 51°61N±0°10×175°15W±0°04, h28km±12km, n44, σ0s67/45, mb3.3/3, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSIG	**Igitkin Island**	**0.61**	**309**		**Pn**	**11 44 51.1**	**0.0**
GSIG					**Sn**	**11 45 00.2**	**+0.1**
GSMY	**Great Sitkin M**	**0.71**	**308**		**Pn**	**11 44 52.6**	**+0.1**
GSTR	**Great Sitkin T**	**0.75**	**311**		**Pn**	**11 44 53.5**	**+0.5**
GSTR				IAML		11 45 07.9	
	comp=N,2μm,0.5s						
GSTR				IAML		11 45 08.1	
	comp=E,2μm,0.6s						
GSTR	**Great Sitkin T**	**0.75**	**311**		**Sn**	**11 45 04.2**	**+0.9**
GSCK	**Great Sitkin C**	**0.75**	**303**		**Pn**	**11 44 53.1**	**+0.1**
GSCK					**Sn**	**11 45 03.6**	**+0.2**
GSTD	**Great Sitkin T**	**0.76**	**307**		**Pn**	**11 44 53.4**	**+0.2**
GSTD					**Sn**	**11 45 04.0**	**+0.1**
GSSP	**Great Sitkin S**	**0.80**	**308**		**Pn**	**11 44 54.1**	**+0.4**
ETKA	**Kagalaska Isla**	**0.82**	**289**		**Pb**	**11 44 53.8**	**-0.1**
ETKA					**Sb**	**11 45 04.6**	**-0.1**
KOKL	**Mount Kliuchef**	**0.93**	**39**		**Pn**	**11 44 55.7**	**+0.2**
KOKL					**Sn**	**11 45 07.7**	**-0.2**
KOFP	**Korovin Flat P**	**0.94**	**44**		**Pn**	**11 44 55.7**	**+0.2**
KOFP					**Sn**	**11 45 07.9**	**-0.1**
KOWE	**Korovin West**	**0.94**	**36**		**Pn**	**11 44 56.1**	**+0.5**
KOWE					**Sn**	**11 45 08.5**	**+0.3**
KOKV	**Korovin Volcan**	**0.97**	**38**		**Pn**	**11 44 56.4**	**+0.3**
ADAG	**Mount Adagdak**	**0.98**	**293**		**Pn**	**11 44 56.9**	**+0.8**
KONW	**Korovin Northw**	**0.98**	**36**		**Pn**	**11 44 56.7**	**+0.5**
ADK	**Adak**	**0.99**	**287**		**Pb**	**11 44 56.4**	**-0.5**
ADK	**Adak**	**0.99**	**287**		**Sb**	**11 45 09.1**	**-0.5**
KOSE	**Korovin Southe**	**1.00**	**42**		**Pn**	**11 44 57.2**	**+0.7**
KIRH	**Kanaga Island**	**1.24**	**284**		**Pn**	**11 45 00.2**	**+0.5**
KIWB	**Kanaga Island**	**1.27**	**282**		**Pn**	**11 45 00.3**	**+0.2**
KIWB				IAML		11 45 21.6	
	comp=E,729nm,0.3s						
KIWB				IAML		11 45 22.8	
	comp=N,661nm,0.2s						
KIMD	**Kanaga Island**	**1.31**	**278**		**Pn**	**11 45 01.0**	**+0.3**
TAPA	**Tanaga Point A**	**1.67**	**278**		**Pn**	**11 45 06.4**	**+0.7**
TAFL	**Tanaga Flats**	**1.72**	**276**		**Pn**	**11 45 06.9**	**+0.7**
TAFP	**Tanaga Falls P**	**1.79**	**281**		**Pn**	**11 45 08.1**	**+0.9**
TASE	**Tanaga Southea**	**1.81**	**278**		**Pn**	**11 45 08.6**	**+1.0**
GANE	**Gareloi Northe**	**2.27**	**277**		**Pn**	**11 45 14.7**	**+0.9**
GAKI	**Gareloi-Kavalg**	**2.29**	**270**		**Pn**	**11 45 14.6**	**+0.5**
AMKA	**Amchitka**	**3.48**	**268**	Pn	**Pn**	**11 45 31.8**	**+1.4**
UNV	**Unalaska Valle**	**5.71**	**64**	Pn	**Pn**	**11 46 02.3**	**+1.2**
MCK	**McKinley**	**18.37**	**39**	P	**Pn**	**11 48 51.1**	**+0.4**
MCK				IAmb	IAmb	11 48 55.8	
	comp=Z,6.9nm,1.3s						
I23K	**Minto, Yukon-K**	**18.95**	**34**	P	**Pn**	**11 48 58.4**	**+0.8**
IL31		**19.66**	**37**	P	**P**	**11 49 04.5**	**-0.1**
IL31				IAmb	IAmb	11 49 25.3	
	comp=Z,2.9nm,1.2s						
ILAR	**Eielson Array**	**19.66**	**37**	P	**P**	**11 49 03.5**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=242,slow=10,SNR=8.1						
	comp=Z,0.2nm,0.5s						
ILAR	**Eielson Array**	**19.66**	**37**	P	**P**	**11 49 05.2**	**+0.6**
J25K	**Salcha River,**	**20.17**	**38**	P	**P**	**11 49 09.1**	**-1.0**
K27K	**Chicken**	**21.26**	**42**	P	**P**	**11 49 22.6**	**+0.7**
K27K				IAmb	IAmb	11 49 46.5	
	comp=Z,1.8nm,1.3s						
C23K	**Itkillik River**	**21.57**	**23**	P	**P**	**11 49 26.1**	**+0.9**
H11N2	**WAKE ISLAND Hy**	**34.80**	**211**	T	T	12 28 20.6	
	baz=19						
H11N3	**WAKE ISLAND Hy**	**34.80**	**211**	T	T	12 28 23.5	
	baz=19,slow=74						
H11N1	**WAKE ISLAND Hy**	**34.81**	**211**	T	T	12 28 29.6	
	baz=19,slow=74						
H11S1	**WAKE ISLAND Hy**	**36.00**	**210**	T	T	12 30 08.6	
	baz=19,slow=76,SNR=2.7						
H11S2	**WAKE ISLAND Hy**	**36.02**	**210**	T	T	12 30 08.8	
	baz=19,slow=76,SNR=5.2						
H11S3	**WAKE ISLAND Hy**	**36.02**	**210**	T	T	12 30 15.1	
	baz=19,slow=76,SNR=4.5						
PDAR	**Pinedale Array**	**44.06**	**75**	P	**P**	**11 52 43.7**	**0.0**
	comp=Z,0.2nm,0.5s,baz=307,slow=2.8,SNR=5.2						
	comp=Z,0.2nm,0.5s						
WRA	**Warramunga Arr**	**83.80**	**227**	P	**P**	**11 57 03.2**	**-1.6**
	comp=Z,0.3nm,0.8s,baz=28,slow=5.3,SNR=0.9						
	comp=Z,0.3nm,0.8s						

*PAS **20** 11:52:54.0±1.6, 35°66N±0°01×117°52W±0°01, h10km±6km, Error ellipse: s-maj=2.1km s-min=1.0km az=129.0*

NEIC 20 11:52:53.3±1.9, 35°65N±0°01×117°51W±0°01, h10km±2km, ML3.3/159, ML3.6/153(PAS), Error ellipse: s-maj=3.1km s-min=2.0km az=307.0, Central California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GPO	**China Lake**	**0.13**	**268**		Pg	11 52 56.9	+0.5
GPO					Sg	11 52 59.2	+0.7
CCCA	**Chr Cany lake**	**0.17**	**138**		Pg	11 52 58.4	+1.3

comp=E,1μm,0.6s
TPO **Tropico Hills** **0.97 218** Pg 11 53 12.0 -0.1
TPO IAML 11 53 32.1
comp=N,855nm,0.6s
SHOC **Shoshone, Teco** **1.03 76** Pg 11 53 12.9 -0.3
DSCC **Desert Studies** **1.25 114** Pn 11 53 15.9 -1.0
VES **Vestal, Richgr** **1.30 279** Pn 11 53 17.2 -0.4
WCT **Wildcat Mounta** **1.34 32** Pn 11 53 17.7 -0.6
WCT IAML 11 53 41.8
comp=E,295nm,0.6s
GRAC **Grapevine Rang** **1.34 5** Pn 11 53 18.2 -0.1
GRAC IAML 11 53 40.6
comp=N,662nm,0.6s
GRAC IAML 11 53 46.0
comp=E,606nm,0.5s
OSI **Osito Audit: C** **1.44 224** IAML 11 53 42.2
comp=E,405nm,0.6s
OSI IAML 11 53 44.4
comp=N,326nm,0.8s
MWC **Mount Wilson** **1.50 198** Pn 11 53 20.3 -0.2
MWC IAML 11 53 43.4
comp=E,431nm,0.4s
MWC IAML 11 53 44.2
comp=N,392nm,0.3s
TIN **Tinemaha, Big** **1.52 338** IAML 11 53 47.1
comp=N,485nm,0.8s
TIN IAML 11 53 48.8
comp=E,467nm,0.8s
PASC **Pasadena Art C** **1.58 201** Pb 11 53 22.3 -0.4
PASC IAML 11 53 51.0
comp=N,236nm,0.5s
MTPC **Mountain Pass** **1.60 95** Pn 11 53 21.1 -0.8
MTPC IAML 11 53 46.6
comp=E,329nm,0.3s
MTPC IAML 11 53 49.5
comp=N,281nm,0.5s
TPNV **Topopah Spring** **1.64 38** Pn 11 53 22.2 -0.2
TPNV IAML 11 53 50.3
comp=N,337nm,0.6s
TPNV IAML 11 53 50.0
comp=N,291nm,0.5s
GMN **Gold Mountain** **1.66 7** Pn 11 53 22.6 -0.1
DSP **Deep Springs** **1.75 348** Pn 11 53 23.9 +0.1
ELS **Elsinore Mount** **2.00 178** Pn 11 53 27.3 0.0
ELS IAML 11 54 03.8
comp=E,181nm,0.6s
YEG **Yeguas Mountai** **2.01 265** Pb 11 53 30.2 +0.1
DANC **Danby, Needles** **2.02 120** Pn 11 53 26.6 -0.8
MURC **Murrieta** **2.06 173** Pn 11 53 28.2 +0.1
BACC **Bachelor Mtn.** **2.07 169** Pn 11 53 28.5 +0.3
SHPR **Sheep Range** **2.08 65** Pn 11 53 28.3 -0.2
V12A **Nelson** **2.16 87** Pn Pn 11 53 29.0 -0.5
V12A IAML 11 54 04.6
comp=N,115nm,0.6s
V12A IAML 11 54 09.1
comp=E,160nm,0.4s
PMD **Palm Desert** **2.21 155** Pn 11 53 29.6 -0.5
PMD IAML 11 54 04.7
comp=E,159nm,0.6s
PMD IAML 11 54 06.2
comp=N,131nm,0.7s
PFO **Pinyon Flats O** **2.21 157** Pn 11 53 30.0 -0.3
PFO IAML 11 54 05.6
comp=N,118nm,0.6s
MDPB **Devils Postpil** **2.34 328** Pn 11 53 33.4 +1.2
MDPB IAML 11 54 10.9
comp=N,113nm,0.5s
MDPB IAML 11 54 12.2
comp=E,154nm,0.9s
S11A **Rachel** **2.44 35** Pn 11 53 33.6 +0.2
S11A IAML 11 54 16.3
comp=E,147nm,0.7s
S11A IAML 11 54 19.2
comp=N,136nm,0.8s
IRM **Iron Mountain** **2.45 127** IAML 11 54 13.5
comp=N,223nm,0.3s
PKD **Bear Valley Ra** **2.48 278** Pn 11 53 33.1 -0.8
PKD IAML 11 54 28.2
comp=E,106nm,1.0s
BORC **Borrego Spring** **2.54 159** Pn 11 53 34.4 -0.3
BORC IAML 11 54 15.8
comp=E,202nm,0.8s
BORC IAML 11 54 17.8
comp=N,154nm,0.8s
BC3 **Big Chuckawall** **2.62 139** Pn 11 53 34.7 -1.1
BC3 IAML 11 54 18.6
comp=E,162nm,0.6s
BC3 IAML 11 54 20.1
comp=N,218nm,0.5s
PMPB **Monarch Peak** **2.73 283** Pb 11 53 40.4 -1.9
PMPB IAML 11 54 28.1
comp=N,191nm,0.6s
PMPB IAML 11 54 32.5
comp=E,186nm,0.8s
CPE **Camp Elliot** **2.78 173** IAML 11 54 21.9
comp=E,119nm,0.2s
CPE IAML 11 54 26.4
comp=N,93nm,0.4s
BBGB **Big Mountain B** **3.00 289** Pn 11 53 41.6 +0.5
W13A **Hualapai Mount** **3.01 100** Pn 11 53 40.9 -0.4
W13A IAML 11 53 33.6
comp=N,58nm,0.7s
BAR **Barrett** **3.05 167** Pn 11 53 41.8 +0.2
BAR IAML 11 54 29.6
comp=N,144nm,0.4s
HULI **Fort Hunter Li** **3.05 278** Pn 11 53 41.0 -0.7
HULI IAML 11 54 44.6
comp=E,79nm,1.3s
HULI IAML 11 54 48.0
comp=N,72nm,1.3s
BLYC **Blythe** **3.11 127** Pn 11 53 41.4 -1.0
BLYC IAML 11 54 37.8
comp=N,121nm,0.6s
CMB **Columbia Colle** **3.31 317** IAML 11 54 41.1
comp=N,54nm,0.9s
CMB IAML 11 54 41.2
comp=E,82nm,0.8s
MHC **Mount Hamilton** **3.73 298** IAML 11 54 55.1
comp=N,50nm,1.1s
MHC IAML 11 55 02.3
comp=E,40nm,0.8s
PNTR **Pine Nut** **3.81 335** IAML 11 55 11.2
comp=E,47nm,0.8s
PNTR IAML 11 55 18.2
comp=N,32nm,1.1s
ESJX **Sierra Juarez** **3.86 160** IAML 11 54 55.8
comp=N,46nm,0.9s
ESJX IAML 11 55 00.9
comp=E,45nm,1.2s
PSUT **Pine Spring** **4.10 44** IAML 11 55 18.4
comp=N,22nm,1.2s
MPK **Martis Peak** **4.15 332** IAML 11 55 15.4
comp=E,53nm,0.9s
AFDM **Forest Hills D** **4.29 321** IAML 11 55 11.6
comp=N,41nm,0.6s
AFDM IAML 11 55 15.8
comp=E,30nm,0.7s
VTX **Valle De La Tr** **4.49 161** IAML 11 55 15.0
comp=E,42nm,0.6s
VTX IAML 11 55 18.0
comp=N,26nm,0.8s
PKCU **Pink Cliffs** **4.55 65** IAML 11 55 25.1
comp=N,26nm,0.8s
PKCU IAML 11 55 28.8
comp=E,39nm,1.1s
BEKR **Beckworth** **4.77 333** IAML 11 55 33.6
comp=N,15nm,0.7s
BEKR IAML 11 55 40.3
comp=E,32nm,0.7s
WUAZ **Wupatki** **5.00 90** IAML 11 55 35.5
comp=E,28nm,0.9s
WUAZ IAML 11 55 36.4
comp=N,26nm,0.9s

*OSPL **20** 12:05:01.3±0.7, 17°.75N×66°.88W, h9km±7km, ML2.6, Presumed earthquake*
*SDD **20** 12:05:02.1±0.7, 17°.83N×66°.88W, h21km±5km, MD2.6, ML2.0, MW2.5, Presumed earthquake*
ISC 20 12:05:01.4±2.0, 17°.8N±0°.1×66°.83W±0°.06, h13km±16km, n8, σ0°.34/14, 3C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLPR	**Magueyes Islan**	**0.25**	**305**	⇑*e*Pg	**Pg**	**12 05 06.7**	**0.0**
MLPR				IAML		12 05 10.7	
comp=N,175nm,0.2s
MLPR ⇓*e*Sg **Sg** **12 05 10.7 +0.5**
MLPR IAML 12 05 10.8
comp=E,99nm,0.2s
OBIP **Obispado Ponce** **0.30 44** *i* P **Pb** **12 05 08.6 -0.1**
OBIP *e*S **Sb** **12 05 13.6 0.0**
OBIP IAML 12 05 15.7
comp=Z,642nm,0.1s
CRPR **Cabo Rojo, PR** **0.32 304** *i* P **Pg** **12 05 07.8 -0.1**
CRPR *e*S **Sg** **12 05 12.0 -0.3**
CRPR IAML 12 05 12.4
comp=Z,187nm,0.1s
CELP **Cerrillos** **0.35 44** ⇓*e*Pg **Pb** **12 05 09.3 -0.1**
CELP *e*Sg **Sb** **12 05 15.2 +0.4**
CELP IAML 12 05 15.6
comp=N,57nm,0.1s
CELP IAML 12 05 15.8
comp=E,41nm,0.1s
PRSN **Puerto Rico Se** **0.49 323** ⇓*e*Pg **Pg** **12 05 10.8 -0.2**
PRSN IAML 12 05 21.4
comp=E,122nm,0.2s
PRSN IAML 12 05 21.7
comp=N,196nm,0.2s
AOPR **Arecibo Observ** **0.53 8** ⇑*e*Pg **Pg** **12 05 11.7 0.0**
AOPR ⇑*e*Sg **Sg** **12 05 18.7 0.0**
AOPR IAML 12 05 19.2
comp=E,555nm,0.1s
AOPR IAML 12 05 21.1
comp=N,276nm,0.4s
AGPR **Aguadilla, PR** **0.69 337** *e*Pg **Pg** **12 05 14.6 -0.3**
AGPR IAML 12 05 23.7
comp=E,50nm,0.3s
AGPR IAML 12 05 59.9
comp=N,88nm,1.8s
SJG **San Juan** **0.71 66** *i* P **Pg** **12 05 14.8 -0.3**
SJG *e*S **Sb** **12 05 25.9 +0.6**
SJG IAML 12 05 29.1
comp=Z,791nm,0.2s

DJA 20 12:23:25.9±0.7, 3°S±3°×13°0E±°, h19km±6km, M3.6/18, mB5.5/1, mb4.2/4, MLv3.2/18, Mw(mB)4.9/1, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRAI	**Karang Ratu**	**1.45**	**245**	P	Pb	12 23 52.3	+0.1
AAI	**Ambon**	**1.80**	**237**	P	Pn	12 23 54.4	-1.5
BNDI	**Bandanaira**	**1.81**	**174**	P	Pn	12 23 56.0	-0.1
SIJI	**Sorong**	**2.40**	**40**	P	Pn	12 24 04.5	+0.3
SWI	**Sorong**	**2.40**	**40**	P	Pn	12 24 04.7	+0.5
SWI				S	Sn	12 24 34.1	+1.0
FAKI	**Fak Fak**	**2.54**	**95**	P	Pn	12 24 05.6	-0.6
NLAI	**Namlea**	**2.66**	**259**	P	Pn	12 24 07.1	-0.7
MWPI	**Manokwari, Pap**	**4.67**	**68**	P	Pn	12 24 35.1	-0.4
LUWI	**Luwuk**	**7.13**	**283**	P	Pn	12 25 09.5	+0.2
	3μm19nm,0.8s						

*DJA **20** 12:45:24.3±0.4, 3°S±2°×13°0E±°, h17km±4km, M4.0/25, mB5.1/1, mb4.3/6, MLv3.9/25, Mw(mB)4.5/1*
*IDC **20** 12:45:28.6±3.8, 2°.93S×130°.10E, h75km±46km, mb3.5/4, mbtmp3.8/6, ML3.7/2, Error ellipse: s-maj=52.5km s-min=17.3km az=83.0*
ISC 20 12:45:22.8±0.8, 2°.80S±0°.06×129°.74E±0°.06, h10km, n19, σ1s23/23, mb3.8/4, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRAI	**Karang Ratu**	**1.44**	**249**	P	**Pn**	**12 45 50.8**	**+1.8**
BNDI	**Bandanaira**	**1.72**	**175**	P	**Pn**	**12 45 54.4**	**+1.6**
BNDI				S	**Sg**	**12 46 19.5**	**+1.3**
AAI	**Ambon**	**1.78**	**240**	P	**Pn**	**12 45 54.2**	**+0.6**
SIJI	**Sorong**	**2.45**	**38**	P	**Pn**	**12 46 03.2**	**+0.4**
	19nm,0.3s,baz=207,slow=22,SNR=142						
SIJI				S	**Sn**	**12 46 34.1**	**+1.3**
	46nm,0.4s,baz=320,slow=24,SNR=5.5						
	45nm,0.3s						
SIJI	**Sorong**	**2.45**	**38**	P	**Pn**	**12 46 03.0**	**+0.2**
SIJI				S	**Sn**	**12 46 32.5**	**-0.3**
SWI	**Sorong**	**2.45**	**38**	P	**Pn**	**12 46 03.4**	**+0.6**
SWI				S	**Sn**	**12 46 32.6**	**-0.2**
FAKI	**Fak Fak**	**2.50**	**93**	P	**Pn**	**12 46 03.5**	**-0.1**
NLAI	**Namlea**	**2.68**	**260**	P	**Pn**	**12 46 07.5**	**+1.6**
SANI	**Sanana**	**3.83**	**281**	P	**Pn**	**12 46 21.1**	**-0.7**
KMPI	**Kaimana, Papua**	**4.05**	**102**	P	**Pn**	**12 46 25.8**	**+1.0**
RKPI	**Ransiki, Papua**	**4.61**	**74**	P	**Pn**	**12 46 33.5**	**+0.9**
BAKI	**Biak**	**6.56**	**76**	P	**Pn**	**12 47 00.3**	**+1.0**
	31nm,0.9s						
LUWI	**Luwuk**	**7.18**	**284**	P	**Pn**	**12 47 07.7**	**-0.2**
	1μm25nm,0.8s						
APSI	**Ampana**	**8.30**	**283**	P	**Pn**	**12 47 23.3**	**0.0**
WRA	**Warramunga Arr**	**17.62**	**166**	P	**Pn**	**12 49 25.4**	**-3.2**
	0.3nm,0.3s,baz=349,slow=12,SNR=21						
	0.7nm,0.3s						
ASAR	**Alice Springs**	**21.13**	**169**	P	**P**	**12 50 06.4**	**-1.6**
	4.1nm,0.7s,baz=352,slow=11,SNR=65						
	4.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**36.96**	**306**	P	**P**	**12 52 33.7**	**+1.2**
	0.5nm,0.3s,baz=124,slow=9.0,SNR=5.2						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**64.61**	**326**	P	**P**	**12 56 00.5**	**0.0**
	0.3nm,0.7s,baz=118,slow=8.1,SNR=4.2						
	0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**68.83**	**328**	P	**P**	**12 56 26.9**	**-0.4**
	0.8nm,0.5s,baz=129,slow=5.9,SNR=13						
	0.8nm,0.5s						

*IDC **20** 12:55:05.9±1.5, 12°.76N×90°.16W, h0km, mb3.7/8, mbtmp3.7/8, ML2.8/1, MS3.2/6, Error ellipse: s-maj=38.3km s-min=28.4km az=54.0*
*GCG **20** 12:55:08.6±1.0, 12°.68N×90°.79W, h27km±42km, MD4.5, ML4.4, Presumed earthquake*
*SNET **20** 12:55:09.8±0.9, 12°.75N×90°.61W, h15km±6km, ML3.7, Presumed earthquake*
*CATAC **20** 12:55:10.2±0.5, 13°N±3°×9°1W±°, h14km±3km, M3.8/20, MLv3.8/20, Error ellipse: s-maj=6.5km s-min=3.9km az=21.3, confirmed*
ISC 20 12:55:08.8±1.8, 12°.73N±0°.06×90°.64W±0°.04, h17km±10km, n72, σ1s28/91, mb3.6/7, MS3.3/5, 4C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAME	**Alcaldia de Sa**	**1.26**	**29**	P	**Pn**	**12 55 31.7**	**0.0**
NUBE	**Las Nubes**	**1.43**	**36**	P	**Pn**	**12 55 34.3**	**+0.2**
NUBE				S	**Sn**	**12 55 52.1**	**-0.6**
NUBE	**Las Nubes**	**1.43**	**36**	*i* P	**Pn**	**12 55 34.4**	**+0.2**
NUBE	**Las Nubes**	**1.43**	**36**	*e*P	**Pn**	**12 55 34.1**	**0.0**
NUBE				*e*S	**Sb**	**12 55 53.9**	**+0.7**
CEVE	**Cerro Verde**	**1.47**	**42**	P	**Pn**	**12 55 35.5**	**+0.7**
CEVE				S	**Sg**	**12 55 55.4**	**-1.0**
CEVE	**Cerro Verde**	**1.47**	**42**	⇑*e*P	**Pn**	**12 55 35.5**	**+0.7**
CEVE				IAML		12 56 04.5	
	comp=Z,1μm,0.3s						
JAYA	**Jayaque - finc**	**1.48**	**52**	P	**Pn**	**12 55 35.4**	**+0.6**
JAYA				S	**Sg**	**12 55 55.5**	**-1.0**
JAYA	**Jayaque - finc**	**1.48**	**52**	*i* P	**Pn**	**12 55 35.4**	**+0.6**
JAYA				*e*S	**Sg**	**12 55 56.1**	**-0.4**
JAYA	**Jayaque - finc**	**1.48**	**52**	⇑*e*P	**Pn**	**12 55 35.4**	**+0.6**
SBLS	**San Blas**	**1.48**	**42**	⇑*i*P	**Pn**	**12 55 35.5**	**+0.6**
SBLS				*e*S	**Sb**	**12 55 55.6**	**+1.0**
LALI	**Alcalda de L**	**1.49**	**59**	P	**Pn**	**12 55 35.3**	**+0.5**
LALI				S	**Sb**	**12 55 54.8**	**+0.2**
LALI	**Alcalda de L**	**1.49**	**59**	*e*P	**Pn**	**12 55 35.2**	**+0.5**
PCG5	**San Vicente Pa**	**1.50**	**10**	*e*P	**Pb**	**12 55 36.6**	**+0.3**
RTR	**El Retiro**	**1.51**	**40**	*e*P	**Pn**	**12 55 36.1**	**+0.8**
LOAL	**Lomas de Alarc**	**1.51**	**33**	P	**Pn**	**12 55 35.9**	**+0.7**
LOAL				S	**Sn**	**12 55 54.3**	**-0.1**
SNJE	**San Jose**	**1.51**	**42**	⇑*i*P	**Pn**	**12 55 36.0**	**+0.7**
FG8	**Yepocapa, Chim**	**1.52**	**3**	*i* P	**Pb**	**12 55 37.2**	**+0.5**
SLOZ	**Alcaldia de Sa**	**1.53**	**33**	P	**Pn**	**12 55 35.9**	**+0.5**
SLOZ				S	**Sn**	**12 55 55.4**	**+0.4**
SLOZ	**Alcaldia de Sa**	**1.53**	**33**	*e*P	**Pn**	**12 55 35.9**	**+0.5**
FG16	**Alotenango, Sa**	**1.54**	**5**	*e*P	**Pb**	**12 55 37.6**	**+0.6**
FG16				IAML		12 56 09.3	
	comp=N,8μm,0.2s						
CEDA	**San Andres**	**1.61**	**49**	S	**Sb**	**12 55 58.0**	**-0.3**
PMON	**Piamonte**	**1.61**	**53**	P	**Pn**	**12 55 37.6**	**+1.0**
PMON	**Piamonte**	**1.61**	**53**	*e*P	**Pn**	**12 55 37.4**	**+0.7**
UNIC	**Universidad Ca**	**1.63**	**40**	P	**Pn**	**12 55 37.6**	**+0.8**
UNIC				S	**Sb**	**12 55 59.1**	**+0.2**

BOQS **Boqueron** **1.66 53** *e*P **Pn** **12 55 38.2 +0.9**
RBDL **Robledal** **1.66 34** *e*P **Pn** **12 55 38.0 +0.7**
PANCS **Alcalda de** **1.67 58** P **Pn** **12 55 38.0 +0.7**
PANCS S **Sb** **12 56 00.1 +0.2**
LOMA **Loma Larga** **1.69 57** *e*P **Pn** **12 55 38.4 +0.7**
LFRS **El Faro** **1.77 60** *e*P **Pn** **12 55 39.4 +0.6**
STG5 **El Palmar, Qui** **1.80 337** *e*P **Pb** **12 55 42.6 +1.2**
SJTE **Alcalda de S** **1.81 61** *e*P **Pn** **12 55 39.9 +0.5**
STG8 **El Palmar, Qui** **1.84 338** *e*P **Pg** **12 55 44.5 +0.2**
STG8 IAML 12 56 15.9
comp=E,3μm,0.2s
LBRS **Las Brisas** **1.85 57** *e*P **Pn** **12 55 41.2 +1.4**
PAVA **Las Pavas** **1.92 59** P **Pn** **12 55 42.5 +1.6**
PAVA S **Sn** **12 56 06.2 +1.5**
PAVA **Las Pavas** **1.92 59** *e*P **Pn** **12 55 42.3 +1.5**
TECO **Alcaldia de Te** **1.98 66** S **Sn** **12 56 07.7 +1.7**
RTAL **Retalhuleu** **2.06 330** S **Sn** **12 56 09.0 +1.1**
MTO3 **Montecristo** **2.07 37** P **Pn** **12 55 44.1 +1.1**
MTO3 S **Sn** **12 56 09.3 +0.7**
MTO3 **Montecristo** **2.07 37** *i* P **Pn** **12 55 44.1 +1.1**
SCLA **Alcaldia de Sa** **2.09 62** P **Pn** **12 55 44.5 +1.3**
SCLA **Alcaldia de Sa** **2.09 62** *e*P **Pn** **12 55 44.4 +1.2**
LLGN **La Laguna** **2.18 49** P **Pn** **12 55 45.5 +1.1**
PQSS **Presa 15 de Se** **2.21 66** P **Pn** **12 55 46.1 +1.4**
PQSS S **Sn** **12 56 13.9 +2.2**
ESQI **Esquipulas** **2.21 35** P **Pn** **12 55 46.4 +1.6**
ESQI S **Sn** **12 56 12.7 +0.9**
P5NO **Presa 5 de nov** **2.21 56** P **Pn** **12 55 45.8 +1.1**
P5NO S **Sn** **12 56 13.9 +2.1**
TECA **Tecapa** **2.21 70** *e*P **Pn** **12 55 45.4 +0.5**
APG **El Apazote** **2.26 4** Pn **Pn** **12 55 46.5 +0.8**
comp=E,2.6nm,0.3s,baz=151,slow=9.8,SNR=128
APG Sn **Sn** **12 56 15.9 +2.5**
comp=E,4.3nm,0.3s,baz=77,slow=19,SNR=18
APG **El Apazote** **2.26 4** *e*P **Pn** **12 55 46.8 +1.1**
APG *e*S **Sn** **12 56 15.6 +2.2**
PACA **Pacayal** **2.37 72** P **Pn** **12 55 48.3 +1.2**
PACA S **Sn** **12 56 18.4 +2.6**
PACA **Pacayal** **2.37 72** *e*P **Pn** **12 55 47.9 +0.8**
RANC **El Ranchito** **2.39 73** P **Pn** **12 55 49.4 +2.0**
RANC S **Sn** **12 56 18.7 +2.3**
SARH **Santa Rosa de** **2.73 42** P **Pn** **12 55 53.8 +1.8**
LCND **La Caada** **2.74 78** P **Pn** **12 55 53.1 +1.1**
LCND **La Caada** **2.74 78** *e*P **Pn** **12 55 52.8 +0.8**
CNCH **Conchagua** **2.79 79** P **Pn** **12 55 53.4 +0.7**
CNCH S **Sn** **12 56 27.9 +1.8**
CNCH **Conchagua** **2.79 79** *e*P **Pn** **12 55 53.3 +0.5**
CMIG **Matias Romero** **5.97 317** Pn **Pn** **12 56 35.6 -0.8**
comp=E,1.6nm,0.3s,baz=127,slow=11,SNR=9.5
CMIG Sn **Sn** **12 57 41.2 -3.3**
comp=E,1.1nm,0.3s,baz=69,slow=9.8,SNR=3.9
CMIG LR LR 12 58 54.9
comp=E,57nm,21.5s,baz=150,slow=36
JTS **Las Juntas de** **6.08 113** Pn **Pn** **12 56 34.9 -3.1**
comp=E,1.1nm,0.3s,baz=313,slow=21,SNR=1.9
JTS Sn **Sn** **12 57 44.4 -2.8**
comp=E,0.8nm,0.3s,baz=275,slow=18,SNR=1.1
TXAR **Lajitas Array** **20.48 326** P Pn 12 59 48.5 +0.3
comp=E,0.9nm,0.4s,baz=147,slow=10,SNR=21
comp=E,0.9nm,0.4s
TKL **Tuckaleechee C** **23.65 14** LR LR 13 09 53.2
comp=E,66nm,19.0s,baz=181,slow=38
SADO **Sadowa** **33.41 15** LR LR 13 15 46.0
comp=E,66nm,18.9s,baz=244,slow=37
PDAR **Pinedale Array** **34.12 335** P **P** **13 01 53.7 +0.6**
comp=E,0.1nm,0.6s,baz=128,slow=4.2,SNR=1.8
comp=E,0.1nm,0.6s
NVAR **Mina Array Bea** **35.48 321** P **P** **13 02 07.4 +2.6**
comp=E,1.9nm,0.8s,baz=137,slow=8.6,SNR=19
comp=E,1.9nm,0.8s
ULM **Lac du Bonnet** **37.66 354** P **P** **13 02 21.0 -2.0**
comp=E,1.5nm,0.5s,baz=170,slow=10,SNR=3.2
ULM LR LR 13 18 48.5
comp=E,55nm,19.2s,baz=183,slow=38
comp=E,1.5nm,0.5s
SCHQ **Schefferville** **45.96 19** P **P** **13 03 28.8 -2.0**
comp=E,7.7nm,0.8s,baz=225,slow=9.1,SNR=14
SCHQ LR LR 13 24 33.3
comp=E,29nm,18.3s,baz=202,slow=39
comp=E,7.7nm,0.8s
SFJD **Kangerlussuaq** **60.33 17** LR LR 13 33 02.7
comp=E,24nm,21.5s,baz=214,slow=38
ILAR **Eielson Array** **64.52 337** P **P** **13 05 44.8 +0.2**
comp=E,0.3nm,0.9s,baz=107,slow=7.9,SNR=5.0
comp=E,0.3nm,0.9s
EKA **Eskdalemuir Ar** **78.21 36** P **P** **13 07 05.4 -2.1**
comp=E,0.2nm,0.3s,baz=265,slow=5.6,SNR=1.9
comp=E,0.2nm,0.3s
ESDC **Sonseca Array** **79.46 52** P **P** **13 07 13.7 -1.0**
comp=E,0.3nm,0.4s,baz=274,slow=5.7,SNR=1.7
comp=E,0.3nm,0.4s
WRA **Warramunga Arr** **136.35 254** PKP **PKPdf** **13 14 31.3 +0.8**
comp=E,0.3nm,0.7s,baz=93,slow=3.0,SNR=1.7
ASAR **Alice Springs** **136.47 249** PKP **PKPdf** **13 14 31.7 +1.0**
comp=E,0.3nm,0.8s,baz=70,slow=3.9,SNR=2.4
CMAR **Chiang Mai Arr** **147.60 343** PKPbc **PKPbc** **13 14 53.3 +0.1**
comp=E,0.7nm,0.5s,baz=339,slow=3.6,SNR=5.4

*BGSI **20** 13:03:28.3±0.9, 26°.12S×30°.11E, h77km±174km, ML3.0*
PRE 20 13:03:27.0±0.9, 26°.12S×29°.15E, h0km, ML2.5, Suspected explosion, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HRAO	**HartRAO**	**1.34**	**280**	*e*P	Pg	13 03 51.9	-0.7
HRAO				*e*S	Sb	13 04 10.9	+0.1
HRAO				IAML		13 04 13.4	
	comp=Z,58nm,0.4s						
PILG	**Pilgrimsrest,**	**1.84**	**50**	*e*P	Pn	13 04 00.1	0.0
PILG				*e*S	Sb	13 04 25.3	-0.1
PILG				IAML		13 04 26.2	
	comp=Z,182nm,0.4s						
LEPH	**Lephalale, Lim**	**2.57**	**331**	*e*P	Pn	13 04 10.2	+0.2
LEPH				*e*S	Sn	13 04 42.8	+0.8
LEPH				IAML		13 04 46.6	
	comp=Z,66nm,0.4s						
LBTB	**Lobatse**	**3.39**	**288**	*e*P	Pn	13 04 22.4	+1.0
LBTB				*e*S	Sn	13 05 02.7	+0.3
LBTB				IAML		13 05 12.0	
	comp=Z,32nm,0.5s						
PMBG	**Pietermaritzbu**	**3.58**	**161**	*e*P	Pn	13 04 25.1	+1.2
PMBG				IAML		13 05 19.2	
	comp=Z,14nm,0.3s						
MUSN	**Musina, Limpop**	**3.87**	**10**	*e*P	Pn	13 04 28.2	+0.3
MUSN				*e*S	Sn	13 05 14.1	0.0
MUSN				IAML		13 05 27.3	
	comp=Z,18nm,0.5s						
MAKGR	**Makgori**	**3.93**	**274**	*i* P	Pb	13 04 35.7	-1.6
MAKGR				*i* S	Sb	13 05 25.5	+0.1
MAKGR				IAML		13 05 29.9	
	comp=N,148nm,0.6s						
LPHEP	**Lephephe**	**4.06**	**312**	*i* P	Pb	13 04 35.5	-4.0
BOSA	**Boshof**	**4.26**	**234**	*e*P	Pn	13 04 35.0	+1.8
BOSA				*e*S	Sn	13 05 23.8	0.0
BOSA				IAML		13 05 40.1	
	comp=Z,13nm,0.5s						
KSTD	**Kokstad**	**4.48**	**178**	*e*P	Pn	13 04 37.1	+0.8
KSTD				*e*S	Sn	13 05 28.6	-0.7
KSTD				IAML		13 05 49.6	
	comp=Z,8.9nm,0.4s						
KDWAN	**Kaudwane**	**4.91**	**303**	*i* P	Pn	13 04 47.1	+4.8
KDWAN				IAML		13 06 00.2	
	comp=E,24nm,0.6s						
BROLN	**Tlhalogang**	**5.27**	**341**	*i* P	Pn	13 04 45.9	-1.3
BROLN				*i* S	Sn	13 05 44.4	-4.3
BROLN				IAML		13 06 09.3	
	comp=E,16nm,0.7s						
KGCAE	**Kacgae**	**7.11**	**296**	*i* P	Pn	13 05 17.0	+4.5
GRAF	**Camdeboo Natio**	**7.36**	**212**	*e*P	Pn	13 05 16.6	+0.8
GRAF				*e*S	Sn	13 06 37.1	-3.1
GRAF				IAML		13 07 27.5	
	comp=Z,4.0nm,0.5s						
BFON	**Badsfontein, M**	**7.41**	**219**	*e*P	Pn	13 05 17.6	+1.1
BFON				*e*S	Sn	13 06 37.6	-3.8
BFON				IAML		13 07 46.2	
	comp=Z,2.3nm,0.8s						
BRAK	**Brakfontein**	**7.86**	**223**	*e*P	Pn	13 05 23.8	+1.0
BRAK				*e*S	Sn	13 06 49.2	-3.3
BRAK				IAML		13 07 43.7	
	comp=Z,3.9nm,0.5s						
FRAZ	**Fraserburg**	**8.91**	**228**	*e*P	Pn	13 05 38.1	+0.9
FRAZ				*e*S	Sn	13 07 13.6	-4.7
FRAZ				IAML		13 07 42.5	
	comp=Z,1.3nm,0.6s						

RHSSO ***20*** *13:04:39.4±0.9, 41°.90N×20°.39E, h5km±3km, ML2.6/5*
PDG ***20*** *13:04:40.7±0.2, 41°.96N×20°.26E, h10km, ML2.5/13, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0*
BEO ***20*** *13:04:41.4±0.5, 41°.94N×20°.33E, h0km, ML2.4/15*
TIR ***20*** *13:04:41.1, 41°.79N×20°.15E, h1km, Ml2.5/3*

ISC 20 13:04:39.1±1.0, 41°.92N±0°.02×20°.32E±0°.02, h17km±9km, n46, σ1§14/82, 7C-7D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.25**	**158**	P		**Pb**	**13 04 45.7**	**+0.5**
PHP				S		**Sb**	**13 04 49.6**	**+0.3**
PHP				AML		AML	13 04 51.5	
	3.8nm,0.4s							
SDA	**Shkodra**	**0.62**	**283**	P		**Pn**	**13 04 52.1**	**-1.1**
SDA				S		**Sb**	**13 05 00.2**	**+0.1**
SDA				AML		AML	13 05 03.0	
	0.4nm,0.5s							
TIR	**Tirane**	**0.66**	**211**	P		**Pb**	**13 04 50.8**	**-1.4**
PVY	**Plav**	**0.73**	**339**	⇓*i*Pg		**Pb**	**13 04 53.6**	**+0.1**
PVY				*i* Sg		**Sb**	**13 05 03.9**	**+0.7**
ULC	**Ulcinj**	**0.80**	**274**	⇑*i*Pg		**Pn**	**13 04 54.9**	**-0.8**
ULC				*i* Sg		**Sn**	**13 05 06.9**	**-0.3**
SKO	**Skopje**	**0.84**	**86**	*e*Pg		**Pb**	**13 04 54.8**	**-0.4**
SKO				*i* Sg		**Sn**	**13 05 08.4**	**+0.3**
OHR	**Ohrid**	**0.88**	**156**	⇑*i*Pg		**Pn**	**13 04 57.2**	**+0.4**
OHR				*i* Sg		**Sn**	**13 05 11.1**	**+1.9**
DRME	**Dracevica, Mon**	**0.89**	**288**	⇓*i*Pg		**Pn**	**13 04 56.0**	**-0.8**
DRME				*i* Sg		**Sn**	**13 05 09.3**	**0.0**
DRME	**Dracevica, Mon**	**0.89**	**288**	*e*Pg		**Pn**	**13 04 56.0**	**-0.8**
DRME				*e*Sg		**Sn**	**13 05 09.9**	**+0.6**
PDG	**Podgorica**	**0.94**	**303**	P		**Pn**	**13 04 57.0**	**-0.6**
PDG				S		**Sn**	**13 05 11.0**	**+0.4**
PDG	**Podgorica**	**0.94**	**303**	*e*Pg		**Pn**	**13 04 58.5**	**+0.9**
PDG				*e*Sg		**Sn**	**13 05 11.1**	**+0.4**
PDG	**Podgorica**	**0.94**	**303**	*e*Pg		**Pg**	**13 04 56.7**	**-0.7**
PDG				*i* Sg		**Sn**	**13 05 11.0**	**+0.4**
PDG	**Podgorica**	**0.94**	**303**	*e*Pg		**Pg**	**13 04 56.7**	**-0.7**
PDG				*e*Sg		**Sn**	**13 05 10.9**	**+0.3**
IVA	**Berane**	**1.00**	**342**	⇓*i*Pg		**Pn**	**13 04 58.5**	**-0.1**
IVA				*i* Sg		**Sn**	**13 05 13.5**	**+1.1**
KOME	**Kolasin**	**1.11**	**328**	⇓*i*Pg		**Pg**	**13 04 59.9**	**-0.7**
KOME				*i* Sg		**Sn**	**13 05 16.6**	**+1.7**
BUM	**Brajici-Budva**	**1.13**	**290**	⇑*i*Pg		**Pg**	**13 05 00.6**	**-0.4**
BUM				*i* Sg		**Sn**	**13 05 17.7**	**+2.4**
CEME	**Cevo**	**1.22**	**302**	⇓*i*Pg		**Pg**	**13 05 01.7**	**-0.9**
CEME				*i* Sg		**Sg**	**13 05 20.3**	**+1.8**
NKME	**Niksic**	**1.32**	**310**	⇓*i*Pg		**Pg**	**13 05 03.6**	**-1.0**
NKME				*i* Sg		**Sg**	**13 05 23.7**	**+1.8**
KBN	**Korca**	**1.34**	**165**	S		**Sg**	**13 05 25.5**	**+3.0**
SJES	**Sjenica**	**1.37**	**349**	*e*Pg		**Pg**	**13 05 05.5**	**0.0**
SJES				*e*Sg		**Sg**	**13 05 24.2**	**+0.8**
SJES	**Sjenica**	**1.37**	**349**	⇑*i*Pg		**Pg**	**13 05 04.7**	**-0.8**
SJES				*e*Sg		**Sg**	**13 05 24.2**	**+0.8**
BARS	**Barje**	**1.43**	**50**	*e*Pg		**Pg**	**13 05 06.5**	**-0.2**
BARS				*e*Sg		**Sg**	**13 05 25.5**	**+0.2**
SELS	**Selova**	**1.43**	**24**	*e*Pg		**Pg**	**13 05 06.4**	**-0.3**
SELS				*e*Sg		**Sg**	**13 05 26.9**	**+1.5**
HCY	**Herceg Novi**	**1.46**	**292**	⇑*i*Pg		**Pg**	**13 05 05.8**	**-1.4**
HCY				*i* Sg		**Sg**	**13 05 28.8**	**+2.7**
HCY	**Herceg Novi**	**1.46**	**292**	*e*Pn		**Pg**	**13 05 06.7**	**-0.5**
HCY				*e*Sn		**Sg**	**13 05 27.3**	**+1.2**
PLE	**Pljevlja**	**1.57**	**334**	⇑*i*Pg		**Pg**	**13 05 08.9**	**-0.5**
PLE				*i* Sg		**Sg**	**13 05 30.6**	**+0.8**
NEST	**Nestorio**	**1.60**	**160**	P		**Pb**	**13 05 06.9**	**-1.4**
NEST				S		**Sg**	**13 05 31.7**	**+0.9**
NEST				AML		AML	13 05 41.2	
	0.2nm,0.5s							
BRY	**Bratogost**	**1.64**	**307**	⇓*i*Pn		**Pg**	**13 05 10.1**	**-0.7**
BRY				*i* Sn		**Sg**	**13 05 32.8**	**+0.6**
BRY	**Bratogost**	**1.64**	**307**	*e*Pn		**Pg**	**13 05 10.1**	**-0.7**
BRY				*e*Sn		**Sg**	**13 05 32.1**	**-0.1**
UPM	**Unac-Piva**	**1.66**	**321**	⇑*i*Pn		**Pg**	**13 05 10.1**	**-0.9**
UPM				*i* Sn		**Sg**	**13 05 33.3**	**+0.7**
UPM	**Unac-Piva**	**1.66**	**321**	*e*Pn		**Pg**	**13 05 09.7**	**-1.3**
UPM				*e*Sn		**Sg**	**13 05 32.1**	**-0.5**
IVAS	**Ivanjica**	**1.66**	**356**	*e*Pg		**Pb**	**13 05 09.7**	**+0.3**
IVAS				*e*Sg		**Sg**	**13 05 32.1**	**-0.7**
TREB	**Trebinje**	**1.66**	**299**	*e*Pg		**Pg**	**13 05 10.6**	**-0.5**
TREB				*e*Sg		**Sg**	**13 05 36.3**	**+3.5**
TREB	**Trebinje**	**1.66**	**299**	*e*Pn		**Pg**	**13 05 10.2**	**-0.9**
TREB				*e*Sn		**Sg**	**13 05 32.5**	**-0.3**
GOCS	**Kraljevo Serbi**	**1.69**	**14**	*e*Pg		**Pg**	**13 05 10.5**	**-1.3**
GOCS				*e*Sg		**Sg**	**13 05 35.5**	**+1.7**
BOSS	**Bosilegrad**	**1.71**	**69**	*e*Pg		**Pg**	**13 05 11.7**	**-0.3**
VAY	**Valandovo**	**1.79**	**109**	*e*Pn		**Pn**	**13 05 06.8**	**-2.5**
VAY				*e*Sn		**Sg**	**13 05 37.4**	**+0.6**
RUDO	**Rudo**	**1.84**	**338**	*e*Pn		**Pb**	**13 05 11.6**	**-0.7**
RUDO				*e*Sn		**Sb**	**13 05 36.1**	**+1.1**
GRUS	**Gruza**	**1.99**	**8**	*e*Pn		**Pg**	**13 05 17.1**	**-0.3**
BBLS	**Lazi&#263i**	**2.06**	**341**	*e*Pn		**Pb**	**13 05 15.2**	**-0.9**
BBLS	**Lazi&#263i**	**2.06**	**341**	*e*Pn		**Pb**	**13 05 14.9**	**-1.2**
BBLS				*e*Sn		**Sb**	**13 05 41.6**	**+0.1**
STON	**Ston**	**2.16**	**297**	*e*Pn		**Pg**	**13 05 18.6**	**-2.0**
ZAPS	**Zavoj**	**2.18**	**51**	*e*Pn		**Pg**	**13 05 19.7**	**-1.3**
DIVS	**Divibare**	**2.19**	**354**	*e*Pn		**Pb**	**13 05 17.9**	**-0.5**
TRUS	**Trudelj**	**2.31**	**2**	*e*Pg		**Pg**	**13 05 22.9**	**-0.5**
ZAGS	**Zajecar**	**2.36**	**36**	*e*Pg		**Pg**	**13 05 23.6**	**-0.8**

MAN ***20*** *13:16:44.0,2°.67N×127°.72E, h31km, MS3.3*

IDC 20 13:16:33.3±3.0, 3°.07N×128°.47E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=273.0km s-min=21.8km az=69.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.59**	**166**	P		P	13 21 45.0	-0.9
	0.3nm,0.4s,baz=343,slow=9.3,SNR=7.9 0.3nm,0.4s							
ASAR	**Alice Springs**	**27.10**	**169**	P		P	13 22 18.1	0.0
	0.1nm,0.3s,baz=349,slow=9.0,SNR=1.0 0.1nm,0.3s							
MKAR	**Makanchi Array**	**59.09**	**325**	P		P	13 26 35.7	+0.2
	0.5nm,0.4s,baz=118,slow=8.2,SNR=14 0.5nm,0.4s							
KURBB	**Kurchatov Arra**	**63.23**	**327**	P		P	13 27 03.7	+0.2
	0.4nm,0.4s,baz=123,slow=6.4,SNR=8.4 0.4nm,0.4s							

UPP ***20*** *13:30:34.8±0.3, 67°.44N×23°.42E, h0km, ML1.8, Suspected explosion*
IDC ***20*** *13:30:36.9±1.1, 67°.44N×23°.66E, h0km, mbtmp3.5/3, ML2.3/3, Error ellipse: s-maj=24.2km s-min=6.8km az=93.0*

ISC 20 13:30:34.4±0.8, 67°.48N±0°.03×23°.41E±0°.04, h0km, n16, σ0§93/20, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MASU	**Masugnsbyn**	**0.55**	**268**	P		**Pg**	**13 30 45.2**	**+0.4**
LANU	**Lannavaara**	**0.78**	**317**	P		**Pb**	**13 30 50.2**	**-0.7**
HEF	**Hetta**	**0.94**	**6**	*e*P		**Pb**	**13 30 52.8**	**-0.8**
ERTU	**Ertsjaerv**	**1.05**	**208**	P		**Pg**	**13 30 53.5**	**-1.1**
ERTU				S		**Sb**	**13 31 09.6**	**-0.1**
DUNU	**Dundret**	**1.16**	**253**	P		**Pg**	**13 30 56.2**	**-0.5**
KUA	**Kurravaara**	**1.27**	**293**	P		**Pg**	**13 30 58.6**	**0.0**
	baz=125							
KUA				S		**Sn**	**13 31 18.4**	**+1.4**
KOVU	**Salmi**	**1.44**	**303**	P		**Pg**	**13 31 01.9**	**-0.1**
RATU	**Laukkuluspa**	**1.50**	**285**	P		**Pn**	**13 31 02.6**	**0.0**
KTK1	**Kautokeino**	**1.54**	**358**	*e*P		**Pg**	**13 31 04.0**	**+0.1**
KALU	**Kalix**	**1.63**	**181**	P		**Pb**	**13 31 04.2**	**-1.1**
HARU	**Harads**	**1.64**	**217**	P		**Pn**	**13 31 04.4**	**0.0**
NIKU	**Nikkaluokta**	**1.72**	**285**	P		**Pb**	**13 31 06.2**	**-0.6**
ARCES	**ARCESS Array B**	**2.20**	**20**	Pn		**Pb**	**13 31 13.9**	**-1.1**
	0.9nm,0.3s,baz=197,slow=15,SNR=33							
ARCES				Pg		**Pg**	**13 31 16.4**	**-0.2**
	0.9nm,0.3s,baz=198,slow=15,SNR=6.7							
ARCES				Sn		**Sg**	**13 31 44.4**	**-0.6**
	1.5nm,0.3s,baz=195,slow=24,SNR=16							
ARCES				Lg		Lg	13 31 46.9	
	1.5nm,0.3s,baz=199,slow=28,SNR=7.3 2.7nm,0.4s							
I37NO	**I37NO**	**2.40**	**314**	I		I	13 46 30.0	
	baz=130,slow=325,SNR=6.8							
FINES	**FINESS Array B**	**6.17**	**168**	Pn		**Pn**	**13 32 09.2**	**+2.5**
	0.1nm,0.3s,baz=355,slow=13,SNR=7.1							
FINES				Sn		**Sn**	**13 33 18.5**	**+0.7**
	0.2nm,0.3s,baz=350,slow=24,SNR=5.8							
FINES				Lg		Lg	13 33 49.2	
	0.3nm,0.3s,baz=351,slow=24,SNR=2.4 1.5nm,0.6s							
SPITS	**Spitsbergen Ar**	**10.94**	**352**	Pn		**Pn**	**13 33 11.9**	**0.0**
	baz=161,slow=14 7.3nm,0.9s							

IDC ***20*** *13:32:50.2±4.8, 40°.67N×51°.05E, h0km, mb3.4/5, mbtmp3.5/8, ML2.6/2, Error ellipse: s-maj=100.1km s-min=15.5km az=8.0*
MOS ***20*** *13:32:51.9±0.6, 40°.07N×51°.06E, h72km, mb4.2/1, Error ellipse: s-maj=14.6km s-min=7.6km az=39.6*
TEH ***20*** *13:32:51.8, 39°.96N×51°.11E, h80km, ML3.7, Presumed earthquake*
AZER ***20*** *13:32:52.4, 39°.98N×50°.99E, h59km, ml3.1*
DRS ***20*** *13:32:55.4, 39°.98N×50°.97E, h21km*

ISC 20 13:32:53.7±0.9, 39°.98N±0°.04×51°.02E±0°.05, h87km±9km, n79, σ1§15/125, mb3.1/5, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GALA	**Gala**	**0.79**	**303**	Pg		**Pn**	**13 33 09.7**	**-1.1**
GALA	**Gala**	**0.79**	**303**	P		**Pn**	**13 33 09.5**	**-1.4**
GALA				S		**Sn**	**13 33 25.8**	**+2.1**
NDR	**Nardaran**	**0.99**	**308**	Pg		**Pn**	**13 33 12.6**	**-0.5**
NDR	**Nardaran**	**0.99**	**308**	P		**Pn**	**13 33 12.6**	**-0.5**
NDR				S		**Sn**	**13 33 27.9**	**+0.3**
GOBA	**Gobu**	**1.07**	**293**	Pg		**Pn**	**13 33 13.5**	**-0.5**
GOBA	**Gobu**	**1.07**	**293**	P		**Pn**	**13 33 13.5**	**-0.5**
GOBA				S		**Sn**	**13 33 29.4**	**+0.1**
ALIB	**&Aumlli-Bayram**	**1.55**	**270**	Pg		**Pn**	**13 33 18.7**	**-1.2**
ALIB	**&Aumlli-Bayram**	**1.55**	**270**	Pn		**Pn**	**13 33 18.7**	**-1.2**
ALIB				Sn		**Sn**	**13 33 38.8**	**-0.9**
GBS	**Qobustan**	**1.68**	**290**	Pg		**Pn**	**13 33 22.3**	**+0.6**
GBS	**Qobustan**	**1.68**	**290**	Pg		**Pn**	**13 33 23.1**	**+1.4**
GBS				Sg		**Sn**	**13 33 46.6**	**+3.6**
ATGJ	**Altiaghaj**	**1.81**	**300**	Pn		**Pn**	**13 33 23.1**	**-0.4**
ATGJ				Sn		**Sn**	**13 33 45.6**	**-0.5**
SIZA	**Siyzn**	**1.95**	**305**	Pn		**Pn**	**13 33 24.7**	**-0.5**
SIZA				Sn		**Sn**	**13 33 48.7**	**-0.6**
PQL	**Pirkuli**	**2.02**	**294**	Pn		**Pn**	**13 33 26.0**	**-0.2**
PQL				Sn		**Sn**	**13 33 51.9**	**+0.9**
LKRN	**Lenkeran, Azer**	**2.15**	**234**	P		**Pn**	**13 33 27.3**	**-0.5**
LKRN	**Lenkeran, Azer**	**2.15**	**234**	Pn		**Pn**	**13 33 27.4**	**-0.5**
LKRN				Sn		**Sn**	**13 33 53.8**	**-0.1**
GLBA	**Clilabad**	**2.16**	**251**	Pn		**Pn**	**13 33 27.6**	**-0.3**
GLBA				Sn		**Sn**	**13 33 54.6**	**+0.6**
KDMR	**Kurdemir**	**2.21**	**281**	Sn		**Sn**	**13 33 53.9**	**-1.3**
ASTR	**Astara**	**2.24**	**231**	Pn		**Pn**	**13 33 28.0**	**-0.9**
ASTR				Sn		**Sn**	**13 33 55.8**	**-0.1**
IML	**Ismayilli**	**2.31**	**291**	Pn		**Pn**	**13 33 30.2**	**+0.2**
IML				Sn		**Sn**	**13 33 57.6**	**-0.1**
GAS1	**Astara - Iran**	**2.32**	**227**	Pn		**Pn**	**13 33 29.0**	**-1.1**
QUBA	**Quba, Azerbaij**	**2.36**	**306**	Pn		**Pn**	**13 33 29.6**	**-1.0**
QUBA				Sn		**Sn**	**13 33 58.3**	**-0.6**
YRD	**Yardimli**	**2.40**	**245**	Pn		**Pn**	**13 33 30.4**	**-0.9**
YRD				Sn		**Sn**	**13 33 59.1**	**-1.0**
LRK	**Lerik**	**2.47**	**238**	Pn		**Pn**	**13 33 31.6**	**-0.6**
LRK				Sn		**Sn**	**13 34 01.2**	**-0.5**
XNQ	**Khinaliq**	**2.49**	**299**	Pn		**Pn**	**13 33 31.7**	**-0.8**
XNQ				Sn		**Sn**	**13 34 02.1**	**-0.2**
ZRD	**Zardab**	**2.57**	**278**	Pn		**Pn**	**13 33 33.2**	**-0.1**
ZRD				Sn		**Sn**	**13 34 05.5**	**+1.7**
QSAR	**Qusar**	**2.59**	**307**	Pn		**Pn**	**13 33 33.1**	**-0.6**
QSAR				Sn		**Sn**	**13 34 04.0**	**-0.4**
QBL	**Gabala**	**2.61**	**293**	Pn		**Pn**	**13 33 34.0**	**+0.1**
QBL				Sn		**Sn**	**13 34 03.3**	**-1.6**
BLQ	**Beylaqan**	**2.67**	**266**	Pn		**Pn**	**13 33 34.0**	**-0.8**
BLQ				Sn		**Sn**	**13 34 06.3**	**0.0**
KSMR	**Kasumkent**	**2.73**	**307**	*e*Pn		**Pn**	**13 33 34.8**	**-0.8**
	37nm,0.2s							
KSMR				*e*Sn		**Sn**	**13 34 07.0**	**-0.7**
	365nm,0.4s							
KSMR	**Kasumkent**	**2.73**	**307**	*e*P		**Pn**	**13 33 34.7**	**-0.8**
KSMR				*e*S		**Sn**	**13 34 07.0**	**-0.7**
KSMR				pmax	pmax			
	comp=Z,37nm,0.2s							
DRN	**Derbent**	**2.88**	**316**	*e*P		**Pn**	**13 33 36.6**	**-1.0**
DRN				*e*S		**Sn**	**13 34 11.3**	**0.0**
DRN				pmax	pmax			
	comp=Z,101nm,0.1s							
AKT	**Akhty**	**2.91**	**302**	*e*Pn		**Pn**	**13 33 37.2**	**-0.9**
	comp=Z,19nm,0.2s							
AKT				*e*Sn		**Sn**	**13 34 11.7**	**-0.6**
	comp=Z,75nm,0.4s							
AKT	**Akhty**	**2.91**	**302**	*e*P		**Pn**	**13 33 37.2**	**-0.9**
AKT				*e*S		**Sn**	**13 34 11.6**	**-0.6**
AKT				pmax	pmax			
	comp=Z,19nm,0.2s							
AGDM	**Agdam**	**3.00**	**274**	Pn		**Pn**	**13 33 38.3**	**-0.9**
AGDM				Sn		**Sn**	**13 34 15.0**	**+0.7**
MNGR	**Mingechevir, A**	**3.10**	**286**	Sn		**Sn**	**13 34 17.3**	**+0.6**
SEKA	**Sheki**	**3.15**	**294**	P		**Pn**	**13 33 39.7**	**-1.6**
SEKA	**Sheki**	**3.15**	**294**	Pn		**Pn**	**13 33 39.7**	**-1.6**
SEKA				Sn		**Sn**	**13 34 17.8**	**-0.2**
URKR	**Urkarakh**	**3.36**	**312**	*e*Pn		**Pn**	**13 33 43.8**	**-0.4**
	comp=Z,37nm,0.1s							
URKR				*e*Sn		**Sn**	**13 34 23.9**	**+0.7**
	comp=Z,99nm,0.2s							
URKR	**Urkarakh**	**3.36**	**312**	*e*P		**Pn**	**13 33 43.7**	**-0.4**
URKR				*e*S		**Sn**	**13 34 23.8**	**+0.7**
URKR				pmax	pmax			
	comp=Z,37nm,0.1s							
ISRB	**Sarab**	**3.39**	**232**	Pn		**Pn**	**13 33 45.3**	**+0.6**
IHRS	**Heris**	**3.51**	**243**	Pn		**Pn**	**13 33 46.4**	**+0.2**
SGKR	**Sergokala**	**3.54**	**315**	*e*Pn		**Pn**	**13 33 45.4**	**-1.1**
	comp=Z,18nm,0.2s							
SGKR				*e*Sn		**Sn**	**13 34 27.1**	**-0.2**
	comp=Z,106nm,0.4s							
SGKR	**Sergokala**	**3.54**	**315**	*e*P		**Pn**	**13 33 45.4**	**-1.1**
SGKR				*e*S		**Sn**	**13 34 27.1**	**-0.2**
SGKR				pmax	pmax			
	comp=Z,18nm,0.2s							
MZPU	**Pul - Mazandar**	**3.56**	**173**	Pn		**Pn**	**13 33 46.1**	**-0.9**
IGZV	**Ghazvin**	**3.65**	**190**	Pn		**Pn**	**13 33 47.4**	**-0.7**
GANJ	**Ganja**	**3.65**	**282**	P		**Pn**	**13 33 46.7**	**-1.2**
GANJ	**Ganja**	**3.65**	**282**	Pn		**Pn**	**13 33 46.8**	**-1.2**
GANJ				Sn		**Sn**	**13 34 27.7**	**-2.3**
KMKR	**Kumukh**	**3.66**	**307**	*e*Pn		**Pn**	**13 33 48.3**	**+0.1**
	comp=Z,11nm,0.4s							
KMKR				*e*Sn		**Sn**	**13 34 31.9**	**+1.4**
	comp=Z,149nm,0.3s							
KMKR	**Kumukh**	**3.66**	**307**	*e*P		**Pn**	**13 33 48.3**	**+0.1**
KMKR				*e*S		**Sn**	**13 34 31.8**	**+1.4**
KMKR				pmax	pmax			
	comp=Z,11nm,0.4s							
ZKTA	**Zakatala**	**3.72**	**298**	Pn		**Pn**	**13 33 50.5**	**+1.6**
ZKTA				Sn		**Sn**	**13 34 31.4**	**-0.3**
VSHL	**Vashlovani**	**3.73**	**291**	P		**Pn**	**13 33 49.6**	**+0.6**
ZNJK	**Zanjan**	**3.78**	**210**	Pn		**Pn**	**13 33 48.9**	**-1.1**
IPRN	**Peran**	**3.88**	**164**	Pn		**Pn**	**13 33 50.1**	**-1.1**
LGD	**Lagodekhi**	**4.06**	**299**	P		**Pn**	**13 33 53.1**	**-0.5**
LGD				S		**Sn**	**13 34 39.4**	**-0.6**
LGD	**Lagodekhi**	**4.06**	**299**	P		**Pn**	**13 33 53.1**	**-0.5**
LGD				S		**Sn**	**13 34 39.4**	**-0.6**
GDB	**GEDABAY**	**4.09**	**282**	Pn		**Pn**	**13 33 53.2**	**-0.8**
GDB				Sn		**Sn**	**13 34 38.2**	**-2.7**
IGLO	**Ghaloghah**	**4.12**	**147**	Pn		**Pn**	**13 33 53.2**	**-1.4**
IALA	**Alasht**	**4.14**	**159**	Pn		**Pn**	**13 33 54.5**	**-0.4**
NAX	**Nakhchivan**	**4.34**	**261**	P		**Pn**	**13 33 59.2**	**+1.8**
NAX	**Nakhchivan**	**4.34**	**261**	Pn		**Pn**	**13 33 59.2**	**+1.8**
NAX				Sn		**Sn**	**13 34 47.0**	**+0.1**
QABG	**Abgarm-Qazvin**	**4.42**	**195**	Pn		**Pn**	**13 33 58.4**	**-0.2**
QZX	**Qazax, Azerbai**	**4.43**	**286**	Pn		**Pn**	**13 33 57.4**	**-1.3**
QZX				Sn		**Sn**	**13 34 47.7**	**-1.4**
DGRG	**David-gareji**	**4.53**	**291**	P		**Pn**	**13 33 59.4**	**-0.6**
DGRG				S		**Sn**	**13 34 51.4**	**-0.1**
DGRG	**David-gareji**	**4.53**	**291**	P		**Pn**	**13 33 59.4**	**-0.6**
DGRG				S		**Sn**	**13 34 51.4**	**-0.1**
MRVT	**Maraveh tapeh**	**4.59**	**119**	Pn		**Pn**	**13 33 59.0**	**-1.8**
SHTL	**Shatili**	**5.16**	**303**	P		**Pn**	**13 34 07.6**	**-1.0**
SHTL				S		**Sn**	**13 35 06.7**	**-0.2**
SHTL	**Shatili**	**5.16**	**303**	P		**Pn**	**13 34 07.6**	**-1.0**
SHTL				S		**Sn**	**13 35 06.7**	**-0.2**
CHRG	**Chargali**	**5.16**	**299**	P		**Pn**	**13 34 07.3**	**-1.3**
CHRG				S		**Sn**	**13 35 04.9**	**-1.9**
ISFR	**Sfrayin**	**6.21**	**116**	Pn		**Pn**	**13 34 21.8**	**-1.2**
SBZV	**Sabzevar**	**6.31**	**123**	Pn		**Pn**	**13 34 23.1**	**-1.2**
KBZ	**Khabaz**	**7.12**	**304**	Pn		**Pn**	**13 34 33.6**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=116,slow=5.8,SNR=1.4							
KBZ				Sn		**Sn**	**13 35 49.3**	**-5.1**
	baz=168,slow=19 comp=Z,0.5nm,0.2s							
BVAR	**Borovoye Array**	**18.57**	**39**	P		**Pn**	**13 37 03.9**	**-0.9**
	baz=234,slow=12,SNR=4.6 comp=Z,0.7nm,0.4s							
AKASG	**Malin Array Be**	**18.62**	**312**	P		**P**	**13 37 02.8**	**-1.4**
	comp=Z,0.6nm,0.4s,baz=112,slow=13,SNR=6.8							
KURBB	**Kurchatov Arra**	**21.96**	**52**	P		**P**	**13 37 40.9**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=254,slow=11,SNR=4.5 comp=Z,0.3nm,0.7s							
KURK	**Kurchatov**	**22.04**	**52**	P		**P**	**13 37 40.9**	**-0.1**
MKAR	**Makanchi Array**	**23.62**	**63**	P		**P**	**13 37 58.4**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=262,slow=9.4,SNR=4.4 comp=Z,0.3nm,0.6s							
FINES	**FINESS Array B**	**26.36**	**333**	P		**P**	**13 38 22.1**	**+0.9**
	comp=Z,0.7nm,0.4s,baz=133,slow=9.2,SNR=6.5 comp=Z,0.7nm,0.4s							
HFS	**Hagfors**	**30.69**	**324**	P		**P**	**13 39 02.2**	**+2.4**
	comp=Z,1.5nm,0.5s,baz=121,slow=10,SNR=5.0 comp=Z,1.5nm,0.5s							
NOA	**NORSAR Array B**	**32.18**	**324**	P		**P**	**13 39 14.4**	**+1.5**
	comp=Z,0.2nm,0.5s,baz=95,slow=7.8,SNR=2.0 comp=Z,0.2nm,0.5s							

IDC ***20*** *13:44:20.0±0.6, 8°.22S×150°.20E, h0km, mb4.5/22, mbtmp4.5/24, ML3.5/2, MS3.5/20, Error ellipse: s-maj=18.9km s-min=11.1km az=119.0*
NEIC ***20*** *13:44:21.5±2.1, 8°.25S±0°.06×150°.34E±0°.10, h10km±1km, mb4.7/52, Error ellipse: s-maj=18.4km s-min=4.3km az=119.0*
DJA ***20*** *13:44:31.9±1.7, 8°.S±6°×15°0E±1°1, h79km±11km, M4.7/28, mb4.9/28, mB5.2/6, MLv4.8/1, Mw(mB)4.5/6*

ISC 20 13:44:21.5±0.5, 8°.17S±0°.05×150°.31E±0°.07, h10km, n134, σ1§41/109, mb4.7/56, MS3.4/16, 1C, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BULU	**Kimbe**	**2.62**	**0**	P		**Pg**	**13 45 13.2**	**+1.4**
BULU	**Kimbe**	**2.62**	**0**	S		**Sg**	**13 45 46.0**	**+0.3**
PMG	**Port Moresby**	**3.35**	**248**	Pn		**Pn**	**13 45 13.5**	**-0.5**
	47nm,0.3s,baz=48,slow=8.8,SNR=86							
PMG				Sn		**Sn**	**13 45 56.7**	**+2.8**
	151nm,0.3s,baz=78,slow=19,SNR=15							
PMG				LR		LR	13 46 31.6	
	comp=Z,1μm,19.4s,baz=292,slow=41 241nm,0.6s							
PMG	**Port Moresby**	**3.35**	**248**	P		**Pn**	**13 45 16.3**	**+2.3**
PMG	**Port Moresby**	**3.35**	**248**			**Pn**	**13 45 12.0**	**-2.0**
PMG	**Port Moresby**	**3.35**	**248**	P		**Pn**	**13 45 16.2**	**+2.3**
KRVT	**Keravat (AS076**	**4.20**	**24**	LR		LR	13 46 52.8	
	comp=Z,62nm,21.1s,baz=92,slow=36							
RABL	**Rabaul**	**4.36**	**25**			**Pn**	**13 45 26.5**	**-1.4**
MANU	**Manus Island**	**6.76**	**334**			**Pn**	**13 46 01.1**	**+0.2**
COEN	**Coen**	**9.06**	**230**	Pn		**Pn**	**13 46 30.9**	**-1.6**
HNR	**Honiara**	**9.60**	**98**	LR		LR	13 49 43.8	
	comp=Z,11nm,21.9s,baz=348,slow=33							
JAY	**Jayapura**	**11.09**	**300**	LR		LR	13 51 45.0	
	comp=Z,358nm,20.6s,baz=148,slow=40							
CTA	**Charters Tower**	**12.48**	**198**	LR		LR	13 52 00.5	
	comp=Z,197nm,18.0s,baz=12,slow=37						

WHN	**Wuhan**	**51.69**	**320**	P	**P**	**13 53 30.4**	**+1.4**
WHN				pmax	pmax		
	comp=Z,100nm,1.3s						
RPSI	**Rantau Prapat**	**52.37**	**280**	P	**P**	**13 53 32.0**	**-2.4**
USRK	**Ussuriysk Ar.**	**54.70**	**344**	P	**P**	**13 53 51.9**	**+1.0**
	comp=Z,2.7nm,0.7s,baz=143,slow=11,SNR=2.6						
	comp=Z,2.7nm,0.7s						
ENH	**Enshi**	**54.74**	**316**	P	**P**	**13 53 50.2**	**-1.3**
ENH				IAmb	IAmb	13 53 54.4	
	comp=Z,10nm,1.0s						
LYN	**LuoYang**	**55.56**	**322**	P	**P**	**13 53 58.0**	**+0.7**
LYN				pmax	pmax		
	comp=Z,41nm,1.2s						
HNS	**HongShan**	**56.25**	**326**	⇑P	**P**	**13 54 02.8**	**+0.6**
HNS				pmax	pmax		
	comp=Z,28nm,1.2s						
CM31	**Chiang Mai Arr**	**57.17**	**298**	P	**P**	**13 54 09.2**	**+0.1**
CM31				IAmb	IAmb	13 54 10.4	
	comp=Z,13nm,1.4s						
CMAR	**Chiang Mai Arr**	**57.17**	**298**	P	**P**	**13 54 09.3**	**+0.2**
	comp=Z,2.1nm,0.7s,baz=110,slow=6.6,SNR=18						
CMAR				LR	LR	14 21 02.1	
	comp=Z,9.4nm,18.2s,baz=155,slow=39						
	comp=Z,2.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**57.17**	**298**		**P**	**13 54 08.6**	**-0.5**
CHTO	**Chiang Mai**	**57.30**	**298**	P	**P**	**13 54 10.3**	**+0.2**
BJT	**Baijiatuau**	**57.40**	**329**	P	**P**	**13 54 10.0**	**-0.3**
BJT				IAmb	IAmb	13 54 22.6	
	comp=Z,5.2nm,0.8s						
CD2	**Chengdu**	**59.14**	**313**	P	**P**	**13 54 23.0**	**+0.2**
CD2				pmax	pmax		
	comp=Z,30nm,1.0s						
CD2				pmax	pmax		
	comp=Z,130nm,4.9s						
XLT	**XiLinHaoTe**	**60.39**	**332**	*e*P	**P**	**13 54 32.3**	**+1.1**
XLT				pmax	pmax		
	comp=Z,13nm,1.2s						
XLT				pmax	pmax		
	comp=Z,140nm,6.2s						
PETK	**Petropavlovsk-**	**61.36**	**5**	P	**P**	**13 54 39.6**	**+2.1**
	comp=Z,11nm,1.0s,baz=178,slow=5.5,SNR=6.2						
	comp=Z,11nm,1.0s						
HEH	**HeiHe**	**61.50**	**343**	*e*P	**P**	**13 54 39.3**	**+0.9**
HEH				pmax	pmax		
	comp=Z,12nm,1.2s						
LZDM	**Lanzhou Array**	**62.02**	**318**	P	**P**	**13 54 43.5**	**+0.8**
	comp=Z,2.2nm,0.3s,baz=112,slow=6.4,SNR=1.4						
	comp=Z,2.2nm,0.3s						
HIA	**Hailar**	**63.15**	**338**	P	**P**	**13 54 49.9**	**+0.4**
CASY	**Casey**	**64.09**	**197**	P	**P**	**13 54 54.8**	**-0.7**
SHL	**Shillong**	**65.95**	**303**	P	**P**	**13 55 08.2**	**-0.3**
MA2	**Magadan**	**67.52**	**0**	P	**P**	**13 55 17.1**	**-0.6**
MA2				IAmb	IAmb	13 55 20.1	
	comp=Z,7.7nm,1.1s						
ULN	**Ulaanbaatar**	**67.60**	**330**		**P**	**13 55 18.1**	**-0.5**
ULN				IAmb	IAmb	13 55 20.3	
	comp=Z,3.6nm,0.7s						
ULN	**Ulaanbaatar**	**67.60**	**330**	P	**P**	**13 55 19.7**	**+1.1**
	comp=Z,27nm,0.8s						
SONM	**Songino Array**	**67.91**	**330**	P	**P**	**13 55 21.4**	**+0.9**
	comp=Z,3.6nm,0.8s,baz=141,slow=5.5,SNR=18						
	comp=Z,3.6nm,0.8s						
SONM	**Songino Array**	**67.91**	**330**	P	**P**	**13 55 20.5**	**0.0**
SONM				IAmb	IAmb	13 55 22.7	
	comp=Z,5.8nm,1.0s						
SBA	**Scott Base**	**70.18**	**176**	P	**P**	**13 55 33.8**	**-0.3**
TLY	**Talaya**	**71.79**	**332**	LR	LR	14 29 03.4	
	comp=Z,13nm,18.1s,baz=110,slow=37						
BILL	**Bilibino**	**76.87**	**6**		**P**	**13 56 14.7**	**+1.3**
BILL				IAmb	IAmb	13 56 16.8	
	comp=Z,5.4nm,1.0s						
KDAK	**Kodiak Island**	**80.28**	**27**	LR	LR	14 26 08.9	
	comp=Z,26nm,20.4s,baz=212,slow=31						
MK31	**Makanchi Array**	**81.26**	**320**	P	**P**	**13 56 37.9**	**-0.1**
MKAR	**Makanchi Array**	**81.26**	**320**	P	**P**	**13 56 37.8**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=101,slow=6.0,SNR=11						
	comp=Z,0.8nm,0.6s						
MKAR	**Makanchi Array**	**81.26**	**320**		**P**	**13 56 37.7**	**-0.3**
MAKZ	**Makanchi**	**81.46**	**320**		**P**	**13 56 39.1**	**0.0**
MAW	**Mawson**	**81.53**	**203**	P	**P**	**13 56 39.3**	**+0.3**
	comp=Z,5.6nm,0.9s,baz=90,slow=7.1,SNR=2.2						
	comp=Z,5.6nm,0.9s						
QSPA	**South Pole Qui**	**81.81**	**180**	P	**P**	**13 56 41.2**	**+0.5**
	comp=Z,3.1nm,0.9s,baz=339,slow=2.8,SNR=4.3						
	comp=Z,3.1nm,0.9s						
QSPA	**South Pole Qui**	**81.81**	**180**	P	**P**	**13 56 38.9**	**-1.8**
QSPA				IAmb	IAmb	13 56 48.8	
	comp=Z,13nm,1.3s						
ZALV	**Zalesovo Beam**	**82.60**	**327**	P	**P**	**13 56 44.4**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=116,slow=6.6,SNR=5.8						
ZALV				LR	LR	14 33 39.6	
	comp=Z,13nm,19.1s,baz=20,slow=36						
	comp=Z,1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**82.60**	**327**	P	**P**	**13 56 44.2**	**-0.6**
KDJ	**Kajisay**	**83.15**	**314**	IAmb	IAmb	13 56 50.4	
	comp=Z,3.6nm,1.0s						
G19K	**Purcell Mounta**	**83.36**	**19**	IAmb	IAmb	13 56 51.6	
	comp=Z,7.0nm,1.2s						
BOOM	**Boomskoye usch**	**84.13**	**314**	IAmb	IAmb	13 56 54.6	
	comp=Z,8.3nm,1.4s						
IMAR	**Indian Mountai**	**84.37**	**20**	P	**P**	**13 56 54.3**	**+0.6**
KURK	**Kurchatov**	**84.91**	**323**		**P**	**13 56 56.4**	**-0.3**
KURBB	**Kurchatov Arra**	**84.93**	**323**	P	**P**	**13 56 56.5**	**-0.4**
	comp=Z,3.2nm,1.0s,baz=112,slow=3.6,SNR=24						
	comp=Z,3.2nm,1.0s						
AAK	**Ala-Archa**	**85.20**	**314**	LR	LR	14 36 37.1	
	comp=Z,13nm,19.2s,baz=114,slow=37						
AAK	**Ala-Archa**	**85.20**	**314**		**P**	**13 56 57.8**	**-0.8**
AAK				IAmb	IAmb	13 56 59.7	
	comp=Z,4.5nm,1.0s						
IL31		**86.19**	**22**	IAmb	IAmb	13 57 03.8	
	comp=Z,4.0nm,1.0s						
ILAR	**Eielson Array**	**86.19**	**22**	P	**P**	**13 57 02.5**	**-0.3**
	comp=Z,2.2nm,0.9s,baz=256,slow=5.2,SNR=18						
	comp=Z,2.2nm,0.9s						
J25K	**Salcha River,**	**86.70**	**23**	IAmb	IAmb	13 57 07.4	
	comp=Z,5.2nm,0.9s						
L27K	**Beaver Creek,**	**87.46**	**25**	IAmb	IAmb	13 57 12.2	
	comp=Z,3.0nm,1.0s						
K27K	**Chicken**	**87.75**	**24**	IAmb	IAmb	13 57 13.8	
	comp=Z,5.1nm,0.9s						
KK31	**Karatay Array**	**88.15**	**314**	P	**P**	**13 57 12.4**	**-0.5**
KK31				IAmb	IAmb	13 57 13.2	
	comp=Z,4.8nm,1.1s						
KKAR	**Karatay Array**	**88.15**	**314**	P	**P**	**13 57 12.4**	**-0.5**
NRIK	**Noril'sk**	**88.35**	**342**	P	**P**	**13 57 12.4**	**-0.8**
	comp=Z,1.3nm,0.3s,baz=108,slow=3.2,SNR=2.9						
	comp=Z,1.3nm,0.3s						
HYT	**Haines Junctio**	**88.55**	**28**		**P**	**13 57 14.0**	**-0.5**
HYT				IAmb	IAmb	13 57 17.4	
	comp=Z,4.0nm,1.0s						
I27K	**Kandik River**	**88.56**	**23**	IAmb	IAmb	13 57 17.2	
	comp=Z,4.8nm,0.9s						
H27K	**Steamboat Moun**	**88.84**	**22**	IAmb	IAmb	13 57 28.9	
	comp=Z,7.7nm,1.4s						
C27K	**Jago River**	**89.49**	**19**	IAmb	IAmb	13 57 21.6	
	comp=Z,4.3nm,0.8s						
K29M	**Barlow Dome**	**89.55**	**25**	IAmb	IAmb	13 57 22.9	
	comp=Z,3.8nm,1.1s						
E27K	**Coleen River**	**89.59**	**20**	IAmb	IAmb	13 57 22.9	
	comp=Z,3.3nm,1.0s						
BVAR	**Borovoye Array**	**90.45**	**324**	P	**P**	**13 57 22.0**	**-1.4**
	comp=Z,2.2nm,0.8s,baz=107,slow=5.0,SNR=8.0						
	comp=Z,2.2nm,0.8s						
NVAR	**Mina Array Bea**	**96.09**	**52**	P	**P**	**13 57 52.3**	**+2.3**
	comp=Z,0.6nm,0.8s,baz=277,slow=6.4,SNR=4.1						
	comp=Z,0.6nm,0.8s						
AB31	**Akbulak array**	**96.36**	**319**	P	**P**	**13 57 48.7**	**-2.0**
AB31				IAmb	IAmb	13 57 49.8	
	comp=Z,1.9nm,0.8s						
ABKAR	**Akbulak array**	**96.36**	**319**	P	**P**	**13 57 49.0**	**-1.7**
GERES	**GERESS Array B**	**125.54**	**326**	PKP	**PKPdf**	**14 03 22.4**	**-1.0**
	comp=Z,0.7nm,0.8s,baz=57,slow=3.6,SNR=3.5						
MD01	**Midelt array s**	**146.28**	**320**	PKPdf	**PKPdf**	**14 04 01.0**	**-1.1**
MD31	**MD31**	**146.28**	**320**	PKPdf	**PKPdf**	**14 04 00.7**	**-1.4**
TORD	**Torodi Ar. Bea**	**148.78**	**282**	PKPbc	**PKPbc**	**14 04 08.9**	**-1.5**
	comp=Z,3.5nm,0.8s,baz=94,slow=0.8,SNR=19						
BDFB	**Brasilia**	**150.18**	**142**	PKPbc	**PKPbc**	**14 04 14.0**	**0.0**
	comp=Z,1.4nm,0.3s,baz=166,slow=4.2,SNR=3.3						

*IDC **20** 13:52:29.1±1.1,34°.18N×24°.02E, h0km, mb3.7/9, mbtmp3.6/16, ML3.3/7, MS3.2/4, Error ellipse: s-maj=19.8km s-min=14.7km az=142.0*
*ISK **20** 13:52:34.4,34°.48N×24°.48E, h5km, ML3.6/9*
*ATH **20** 13:52:41.9,34°.85N×24°.30E, h45km±4km, ML3.1/6,*

Latitude uncertainty: 4 km; Longitude uncertainty: 2 km
*THE **20** 13:52:42.5,35°N±6°×2°4E±°, h60km±6km, M3.1/7, MLh3.1/7*
*GII **20** 13:52:42.3±0.0,34°.052N±0°.002×24°.815E±0°.001, h0km, Mws3.5, confirmed*

ISC 20 13:52:34.7±1.3,34°.21N±0°.07×24°.29E±0°.06, h47km±13km, n78, σ2s16/104, mb3.6/8, MS3.4/3, Crete

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.65**	**345**	P	Pn	13 52 51.7	+4.0
GVD				S	**Sn**	**13 52 58.9**	**+1.9**
GVD	**Gavdhos**	**0.65**	**345**	P	**Pn**	**13 52 49.7**	**+2.0**
GVD				S	**Sn**	**13 52 55.0**	**-2.0**
IDI	**Anoyia**	**1.19**	**25**	Pg	**Pn**	**13 52 55.9**	**+0.9**
	18nm,0.3s,baz=198,slow=19,SNR=59						
IDI				Lg	Lg	13 53 13.1	
	50nm,0.3s,baz=131,slow=19,SNR=8.5						
IDI	**Anoyia**	**1.19**	**25**	P	**Pn**	**13 52 56.2**	**+1.3**
IDI	**Anoyia**	**1.19**	**25**	P	**Pn**	**13 52 55.7**	**+0.8**
VAM	**Vamos**	**1.20**	**357**	P	**Pn**	**13 52 54.3**	**-0.7**
VAM				S	**Sn**	**13 53 06.2**	**-3.9**
VAM	**Vamos**	**1.20**	**357**	P	**Pn**	**13 52 54.5**	**-0.6**
IMMV	**Iera Moni Meta**	**1.28**	**349**	P	**Pn**	**13 52 55.6**	**-0.4**
IMMV				S	**Sn**	**13 53 06.9**	**-5.1**
IMMV	**Iera Moni Meta**	**1.28**	**349**	P	**Pn**	**13 52 55.0**	**-1.1**
CHAN	**Chania**	**1.32**	**351**	P	**Pn**	**13 52 55.6**	**-1.1**
NPS	**Neapolis**	**1.52**	**46**	P	**Pn**	**13 53 02.5**	**+3.1**
NPS				S	**Sn**	**13 53 17.8**	**-0.1**
NPS	**Neapolis**	**1.52**	**46**	P	**Pn**	**13 53 01.6**	**+2.2**
ZKR	**Zakros**	**1.83**	**60**	P	Pn	13 53 08.8	+5.2
ZKR	**Zakros**	**1.83**	**60**	P	**Pn**	**13 53 07.5**	**+3.8**
KTHA	**Kythira Island**	**2.28**	**334**	P	**Pn**	**13 53 10.5**	**+0.7**
KTHA	**Kythira Island**	**2.28**	**334**	P	**Pn**	**13 53 09.6**	**-0.2**
THERA	**Ancient Thera,**	**2.36**	**24**	P	**Pn**	**13 53 11.3**	**+0.3**
THERA				S	**Sn**	**13 53 32.6**	**-6.1**
THERA	**Ancient Thera,**	**2.36**	**24**	P	**Pn**	**13 53 10.4**	**-0.6**
THR5	**Thira Island,**	**2.37**	**21**	Pn	**Pn**	**13 53 11.5**	**+0.5**
THR5				Sn	**Sn**	**13 53 38.5**	**-0.4**
KARP	**Karpathos**	**2.71**	**60**	P	**Pn**	**13 53 19.3**	**+3.5**
KARP				S	**Sn**	**13 53 49.5**	**+2.0**
KARP	**Karpathos**	**2.71**	**60**	P	**Pn**	**13 53 19.3**	**+3.5**
VLI	**Veliai**	**2.74**	**337**	P	**Pn**	**13 53 16.2**	**+0.1**
ITM	**Ithomi**	**3.53**	**328**	P	**Pn**	**13 53 27.0**	**0.0**
VLY	**Voula,Athens**	**3.66**	**354**	P	**Pn**	**13 53 27.4**	**-1.4**
DAT	**Datca**	**3.68**	**46**	Pn	**Pn**	**13 53 30.3**	**+1.2**
ARG	**Arkhangelos**	**3.73**	**56**	Pn	**Pn**	**13 53 31.2**	**+1.5**
ARG				Sn	**Sn**	**13 54 12.8**	**+0.5**
DION	**Dionisos Attik**	**3.87**	**356**	P	**Pn**	**13 53 30.3**	**-1.4**
GUR	**Goura**	**4.04**	**338**	P	**Pn**	**13 53 33.7**	**-0.4**
SMG	**Samos**	**4.06**	**30**	P	**Pn**	**13 53 35.0**	**+0.8**
VIL2	**Platees**	**4.08**	**349**	P	**Pn**	**13 53 32.2**	**-2.4**
TURN	**Turunc**	**4.12**	**50**	Pn	**Pn**	**13 53 36.7**	**+1.6**
TURN				Sn	**Sn**	**13 54 22.2**	**+0.2**
KLV	**Kalavryta, Ach**	**4.20**	**336**	P	**Pn**	**13 53 35.5**	**-0.7**
YER	**Yerkesik**	**4.37**	**47**	Pn	**Pn**	**13 53 40.2**	**+1.6**
YER				Sn	**Sn**	**13 54 28.2**	**-0.1**
DALY	**Dalyan (Mula)**	**4.41**	**53**	Pn	**Pn**	**13 53 40.9**	**+1.9**
EFP	**Efpalio**	**4.63**	**336**	P	**Pn**	**13 53 42.3**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**4.74**	**37**	Pn	**Pn**	**13 53 45.2**	**+1.6**
AKAS	**Kas**	**4.80**	**64**	Pn	**Pn**	**13 53 46.8**	**+2.3**
APMY	**Acipayam-Deniz**	**5.21**	**50**	Pn	**Pn**	**13 53 52.2**	**+2.0**
ELL	**Elmali**	**5.24**	**59**	Pn	**Pn**	**13 53 52.9**	**+2.3**
KORT	**Korkueli**	**5.67**	**59**	Pn	**Pn**	**13 53 59.1**	**+2.6**
CSS	**Mathiatis**	**7.50**	**82**	P	**Pn**	**13 54 24.1**	**+2.7**
CSS				S	**Sn**	**13 55 43.1**	**-1.9**
OFRI	**`Ofer**	**9.08**	**97**	P	**Pn**	**13 54 45.1**	**+1.9**
OFRI				S	**Sn**	**13 56 20.8**	**-3.3**
KZIT	**Kziot**	**9.14**	**108**	P	**Pn**	**13 54 45.7**	**+1.7**
KZIT				S	**Sn**	**13 56 22.6**	**-3.0**
SLTI	**Sal'it**	**9.22**	**99**	P	**Pn**	**13 54 46.6**	**+1.6**
SLTI				S	**Sn**	**13 56 24.1**	**-3.2**
BRTR	**Keskin Array B**	**9.29**	**51**	Pn	**Pn**	**13 54 49.3**	**+3.3**
	baz=230,slow=8.3,SNR=1.6						
	0.3nm,0.6s						
MMA0B	**Mount Meron ar**	**9.35**	**94**	P	**Pn**	**13 54 49.0**	**+2.2**
MMA0B				S	**Sn**	**13 56 28.0**	**-2.7**
MMAI	**Mount Meron Ar**	**9.35**	**94**	Pn	**Pn**	**13 54 46.8**	**-0.1**
	1.6nm,0.3s,baz=290,slow=9.1,SNR=8.4						
MMAI				Sn	**Sn**	**13 56 29.3**	**-1.3**
	3.4nm,0.3s,baz=270,slow=20,SNR=6.3						
	0.7nm,0.3s						
SALP	**Salfit**	**9.39**	**100**	P	**Pn**	**13 54 49.0**	**+1.7**
SALP				S	**Sn**	**13 56 28.1**	**-3.4**
MMLI	**Mount Malkishu**	**9.48**	**98**	P	**Pn**	**13 54 50.3**	**+1.6**
MMLI				S	**Sn**	**13 56 31.0**	**-2.9**
GEM	**Giv'at Ha'Em**	**9.53**	**93**	P	**Pn**	**13 54 51.4**	**+2.1**
GEM				S	**Sn**	**13 56 32.1**	**-2.8**
YTIR	**Yattir**	**9.55**	**104**	P	**Pn**	**13 54 51.3**	**+1.8**
YTIR				S	**Sn**	**13 56 32.7**	**-2.9**
HMDT	**Nahal Hemdat**	**9.61**	**99**	P	**Pn**	**13 54 52.0**	**+1.6**
HMDT				S	**Sn**	**13 56 34.8**	**-2.3**
DSI	**Dead Sea**	**9.69**	**103**	P	**Pn**	**13 54 53.0**	**+1.5**
DSI				S	**Sn**	**13 56 36.0**	**-3.0**
KRMI	**Paran Flat**	**9.74**	**112**	P	**Pn**	**13 54 53.4**	**+1.2**
KRMI				S	**Sn**	**13 56 37.3**	**-2.9**
MSBI	**Mazada**	**9.76**	**104**	P	**Pn**	**13 54 54.1**	**+1.8**
MSBI				S	**Sn**	**13 56 37.3**	**-3.2**
PRNI	**Paran**	**9.85**	**110**	P	**Pn**	**13 54 55.3**	**+1.6**
PRNI				S	**Sn**	**13 56 39.4**	**-3.5**
ZFRI	**Zfri**	**9.90**	**109**	P	**Pn**	**13 54 55.2**	**+0.8**
ZFRI				S	**Sn**	**13 56 40.6**	**-3.4**
GHAJ	**Ghor Haditha**	**9.93**	**104**	P	**Pn**	**13 54 56.6**	**+1.9**
GHAJ				S	**Sn**	**13 56 42.0**	**-2.7**
HRFI	**Mount Harif**	**10.02**	**112**	P	**Pn**	**13 54 57.5**	**+1.5**
HRFI				S	**Sn**	**13 56 43.8**	**-3.2**
EIL	**Elat**	**10.12**	**114**	Pn	**Pn**	**13 54 58.6**	**+1.2**
EIL	0.6nm,0.3s,baz=315,slow=14,SNR=16			Sn	**Sn**	**13 56 45.5**	**-4.1**
	1.4nm,0.3s,baz=348,slow=20,SNR=5.9						
	1.3nm,0.3s						
EIL	**Elat**	**10.12**	**114**	P	**Pn**	**13 54 59.1**	**+1.6**
EIL				S	**Sn**	**13 56 46.6**	**-3.0**
ASF	**Jabal al Asfar**	**10.76**	**97**	Pn	**Pn**	**13 55 07.3**	**+1.1**
	0.3nm,0.3s,baz=281,slow=19,SNR=1.5						
ASF				Sn	**Sn**	**13 57 06.0**	**+0.8**
	0.4nm,0.3s,baz=288,slow=19,SNR=1.6						
	0.7nm,0.3s						
MLR	**Muntele Rosu**	**11.34**	**6**	LR	LR	14 00 47.0	
	comp=Z,24nm,21.2s,baz=234,slow=44						
GERES	**GERESS Array B**	**16.61**	**335**	Pn	**Pn**	**13 56 23.8**	**-0.4**
	baz=143,slow=9.9,SNR=1.8						
	0.2nm,0.4s						
AKASG	**Malin Array Be**	**16.88**	**11**	Pn	**Pn**	**13 56 26.8**	**-0.5**
	0.9nm,0.3s,baz=203,slow=10,SNR=4.7						
	0.2nm,0.3s						
KBZ	**Khabaz**	**17.28**	**51**	P	**P**	**13 56 34.1**	**+0.7**
	0.1nm,0.3s,baz=234,slow=14,SNR=1.4						
	0.4nm,0.4s						
ESDC	**Sonseca Array**	**23.18**	**292**	P	**P**	**13 57 36.8**	**-0.4**
	0.5nm,0.8s,baz=96,slow=12,SNR=2.1						
	0.8nm,0.8s						
HFS	**Hagfors**	**26.85**	**348**	P	**P**	**13 58 09.3**	**-1.2**
	1.0nm,0.5s,baz=159,slow=12,SNR=6.2						
	1.0nm,0.5s						
FINES	**FINESS Array B**	**27.28**	**2**	P	**P**	**13 58 14.8**	**+0.5**
	1.1nm,0.7s,baz=180,slow=8.7,SNR=0.9						
	1.1nm,0.7s						
NOA	**NORSAR Array B**	**28.14**	**347**	P	**P**	**13 58 21.5**	**-0.7**
	0.2nm,0.4s,baz=150,slow=11,SNR=1.5						
	0.2nm,0.4s						
TORD	**Torodi Ar. Bea**	**29.33**	**230**	P	**P**	**13 58 33.7**	**+0.7**
	0.2nm,0.3s,baz=37,slow=7.4,SNR=3.5						
	0.2nm,0.3s						
ARCES	**ARCESS Array B**	**35.39**	**1**	LR	LR	14 14 43.4	
	comp=Z,44nm,18.2s,baz=330,slow=38						
BORG	**Borgarnes**	**41.05**	**332**	LR	LR	14 19 06.1	
	comp=Z,46nm,19.0s,baz=188,slow=39						
KURBB	**Kurchatov Arra**	**42.28**	**50**	P	**P**	**14 00 25.6**	**+2.2**
	0.2nm,0.3s,baz=273,slow=8.6,SNR=5.8						
	0.2nm,0.3s						
SPITS	**Spitsbergen Ar**	**44.21**	**358**	P	**P**	**14 00 39.2**	**+0.5**
	5.8nm,0.9s,baz=191,slow=12,SNR=1.7						
	5.8nm,0.9s						
MKAR	**Makanchi Array**	**44.90**	**56**	P	**P**	**14 00 46.7**	**+2.1**
	0.4nm,0.5s,baz=278,slow=7.8,SNR=6.9						
	0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**46.18**	**45**	P	**P**	**14 00 55.7**	**+1.1**
	0.9nm,0.3s,baz=276,slow=8.2,SNR=3.6						
	0.9nm,0.3s						
YKA	**Yellowknife Ar**	**78.13**	**342**	LR	LR	14 41 20.7	
	comp=Z,30nm,18.3s,baz=356,slow=38						

IDC 20 14:06:42.8±2.5,7°.25S×129°.51E, h0km, mb3.5/1, mbtmp3.4/3, ML3.4/2, Error ellipse: s-maj=195.7km s-min=32.4km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.46**	**160**	Pn	Pn	14 09 53.6	-1.6
	0.2nm,0.3s,baz=342,slow=13,SNR=34						
WRA				Sn	Sn	14 12 14.7	-11
	0.4nm,0.3s,baz=340,slow=22,SNR=8.0						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**16.86**	**166**	Pn	P	14 10 42.0	-0.6
	0.1nm,0.3s,baz=346,slow=8.7,SNR=6.2						
ASAR				Sn	Sn	14 13 35.4	-13
	0.1nm,0.3s,baz=348,slow=25,SNR=5.0						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**68.17**	**327**	P	P	14 17 45.0	0.0
	0.2nm,0.4s,baz=121,slow=7.2,SNR=5.4						
	0.2nm,0.4s						

*IDC **20** 14:26:31.3±0.7,22°.08S×114°.35W, h0km, mb3.8/7, mbtmp3.8/7, MS3.9/39, Error ellipse: s-maj=34.6km s-min=22.3km az=89.0*
*NEIC **20** 14:26:32.5±1.1,22°.1S±0°.1×114°.3W±0°.1, h10km±1km, mb4.5/25, Error ellipse: s-maj=23.3km s-min=15.0km az=221.0*
*GCMT **20** 14:26:34.5±0.3,22°.09S±0°.02×114°.17W±0°.02, h12km, MW4.8/77, Moment Tensor Solution. s11,c11; s77,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=0.57±.09; $M_{\theta\theta}$-1.48±.07; $M_{\phi\phi}$2.06±.07; $M_{r\theta}$0.42±.23; $M_{r\phi}$0.12±.07; $M_{\theta\phi}$0.27±.23; Best double couple: $M_0$1.87100×10^{16} NP1:ϕ_s318.00000°,δ70.00000°,λ-169.00000°. NP2: ϕ_s225.00000°,δ79.00000°,λ-20.00000°. Principal axes: T 2.0950, Plg6.0000°, Azm273.0000°; N -0.4400, Plg68.0000°, Azm18.0000°; P -1.6470, Plg21.0000°, Azm180.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 14:26:32.4±0.6,22°.1S±0°.1×114°.2W±0°.1, h10km, n94, σ0s83/50, mb4.5/18, MS4.0/39, Easter Island region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**6.70**	**140**	LR	LR	14 30 07.2	
	comp=Z,226nm,20.9s,baz=262,slow=32						
TAOE	**Nuku Hiva Isla**	**28.20**	**294**	*e*LR	LR	14 39 18.0	
	545nm,25.1s						
TBI	**Tubuai**	**32.51**	**261**	*e*LR	LR	14 41 17.0	
	3μm,26.8s						
H03N2	**Juan Fernandez**	**33.05**	**118**	T	T	15 08 08.3	
	baz=285,slow=75,SNR=154						
H03N3	**Juan Fernandez**	**33.05**	**118**	T	T	15 08 09.5	
	baz=285,slow=75,SNR=115						
H03N1	**Juan Fernandez**	**33.06**	**118**	T	T	15 08 09.5	
	baz=285,slow=75,SNR=112						
PPT2	**Papeete2**	**33.54**	**271**	*e*LR	LR	14 41 36.5	
	534nm,28.2s						
PPT2				*e*LR	LR	14 41 43.4	
	373nm,31.5s						
NNA	**Nana**	**37.00**	**81**	LR	LR	14 44 38.0	
	comp=Z,482nm,20.9s,baz=248,slow=29						
ATAH	**Atahualpa**	**37.56**	**72**	LR	LR	14 45 18.9	
	comp=Z,413nm,19.0s,baz=240,slow=30						
LCO	**Las Campanas**	**39.67**	**109**	P	**P**	**14 34 05.0**	**-0.1**
LCO				IAmb	IAmb	14 34 09.4	
	comp=Z,15nm,1.1s						
AC06	**Mina Casimiro**	**40.02**	**107**	P	**P**	**14 34 07.8**	**0.0**
AC05	**El Transito**	**40.05**	**109**		**P**	**14 34 06.9**	**-1.3**
AC05				IAmb	IAmb	14 34 13.6	
	comp=Z,11nm,1.1s						
LL01	**San Ignacio de**	**40.23**	**130**	P	**P**	**14 34 08.9**	**-0.4**
AC02	**Maricunga**	**41.13**	**106**		**P**	**14 34 17.2**	**-0.3**
PLCA	**Paso Flores**	**41.15**	**127**	LR	LR	14 45 48.6	
	comp=Z,40nm,18.9s,baz=284,slow=28						
OTAV	**Otavalo**	**41.29**	**62**	P	**P**	**14 34 19.8**	**+0.9**
OTAV				IAmb	IAmb	14 34 22.2	
	comp=Z,6.2nm,1.0s						
ZON	**Zonda**	**41.45**	**113**		**P**	**14 34 20.1**	**+0.5**
ZON				IAmb	IAmb	14 34 24.9	
	comp=Z,12nm,1.1s						
**PB

G08A	**Pilot Rock**	**67.18**	**356**	P	**P**	**14 37 26.5**	**0.0**
G08A				IAmb	IAmb	14 37 42.3	
	comp=Z,4.2nm,1.1s						
VNDA	**Vanda**	**67.30**	**194**	P	**P**	**14 37 28.7**	**+1.8**
	comp=Z,0.8nm,0.9s,baz=90,slow=20,SNR=2.4						
	comp=Z,0.8nm,0.9s						
VNDA	**Vanda**	**67.30**	**194**	P	**P**	**14 37 26.4**	**-0.6**
BOZ	**Bozeman (W)**	**67.38**	**2**	P	**P**	**14 37 28.2**	**+0.3**
QSPA	**South Pole Qui**	**68.08**	**180**	P	**P**	**14 37 32.7**	**+0.5**
	comp=Z,2.2nm,0.9s,baz=106,slow=4.0,SNR=5.4						
QSPA				LR	LR	15 02 01.7	
	comp=Z,125nm,19.7s,baz=42,slow=31						
	comp=Z,2.2nm,0.9s						
QSPA	**South Pole Qui**	**68.08**	**180**	P	**P**	**14 37 32.0**	**-0.2**
NEW	**Newport**	**70.06**	**358**	LR	LR	15 03 21.9	
	comp=Z,142nm,19.1s,baz=178,slow=32						
ULM	**Lac du Bonnet**	**73.81**	**12**	LR	LR	15 06 25.0	
	comp=Z,47nm,19.9s,baz=182,slow=32						
DLBC	**Dease Lake**	**81.28**	**352**	LR	LR	15 10 03.4	
	comp=Z,38nm,18.8s,baz=126,slow=32						
HNR	**Honiara**	**82.71**	**263**	LR	LR	15 08 36.4	
	comp=Z,5.6nm,18.8s,baz=206,slow=31						
YKA	**Yellowknife Ar**	**84.27**	**360**	P	**P**	**14 39 04.4**	**+0.6**
	comp=Z,0.5nm,0.9s,baz=188,slow=4.2,SNR=5.4						
YKA				LR	LR	15 11 28.3	
	comp=Z,136nm,20.7s,baz=270,slow=32						
	comp=Z,0.5nm,0.9s						
KDAK	**Kodiak Island**	**85.76**	**341**	LR	LR	15 10 31.6	
	comp=Z,73nm,18.4s,baz=162,slow=31						
SCHQ	**Schefferville**	**86.63**	**25**	LR	LR	15 16 22.4	
	comp=Z,52nm,18.1s,baz=188,slow=34						
H11S2	**WAKE ISLAND Hy**	**87.21**	**291**	T	T	16 15 32.3	
	baz=114,slow=75,SNR=45						
H11S1	**WAKE ISLAND Hy**	**87.22**	**291**	T	T	16 15 34.2	
	baz=114,slow=75,SNR=36						
H11S3	**WAKE ISLAND Hy**	**87.23**	**291**	T	T	16 15 34.4	
	baz=114,slow=75,SNR=40						
H11N3	**WAKE ISLAND Hy**	**87.54**	**292**	T	T	16 15 58.1	
	baz=117,slow=74,SNR=3.6						
H11N1	**WAKE ISLAND Hy**	**87.55**	**292**	T	T	16 15 57.6	
	baz=117						
H11N2	**WAKE ISLAND Hy**	**87.55**	**292**	T	T	16 16 01.5	
	baz=117,slow=74,SNR=7.2						
STKA	**Stephens Creek**	**89.85**	**236**	LR	LR	15 15 15.5	
	comp=Z,37nm,18.2s,baz=195,slow=33						
ILAR	**Eielson Array**	**90.17**	**347**	LR	LR	15 12 35.4	
	comp=Z,47nm,18.4s,baz=119,slow=31						
MAW	**Mawson**	**90.57**	**179**	LR	LR	15 15 41.6	
	comp=Z,69nm,19.6s,baz=132,slow=33						
CTA	**Charters Tower**	**90.98**	**248**	LR	LR	15 12 24.5	
	comp=Z,90nm,20.6s,baz=72,slow=30						
INK	**Inuvik**	**91.22**	**353**	LR	LR	15 16 27.5	
	comp=Z,66nm,18.5s,baz=285,slow=33						
KRVT	**Keravat (AS076**	**91.90**	**265**	LR	LR	15 16 57.4	
	comp=Z,8.0nm,18.4s,baz=38,slow=33						
FRB	**Frobisher Bay**	**92.65**	**19**	LR	LR	15 18 00.2	
	comp=Z,75nm,20.1s,baz=248,slow=33						
PMG	**Port Moresby**	**94.42**	**258**	LR	LR	15 14 14.5	
	comp=Z,86nm,21.6s,baz=164,slow=30						
ASAR	**Alice Springs**	**99.68**	**240**	LR	LR	15 20 52.7	
	comp=Z,86nm,18.6s,baz=136,slow=33						
ZALV	**Zalesovo Beam**	**145.06**	**340**	PKPbc	**PKPbc**	**14 46 09.1**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=35,slow=3.5,SNR=8.6						
ZALV	**Zalesovo Beam**	**145.06**	**340**		**PKPbc**	**14 46 08.9**	**-0.2**
BRTR	**Keskin Array B**	**147.50**	**50**	PKPbc	**PKPbc**	**14 46 16.7**	**-0.4**
	comp=Z,2.2nm,1.1s,baz=274,slow=3.9,SNR=6.8						
BRTR	**Keskin Array B**	**147.50**	**50**		**PKPbc**	**14 46 17.3**	**+0.2**
CMAR	**Chiang Mai Arr**	**148.75**	**269**	PKPbc	**PKPbc**	**14 46 20.8**	**0.0**
	comp=Z,0.8nm,0.8s,baz=119,slow=1.7,SNR=8.5						
CMAR	**Chiang Mai Arr**	**148.75**	**269**		**PKiKP**	**14 46 22.2**	**0.0**
BVAR	**Borovoye Array**	**148.90**	**355**	PKPbc	**PKPbc**	**14 46 19.5**	**-0.7**
	comp=Z,2.7nm,1.0s,baz=20,slow=4.6,SNR=6.2						
KURK	**Kurchatov**	**149.70**	**344**		**PKPbc**	**14 46 22.2**	**0.0**
KURBB	**Kurchatov Arra**	**149.81**	**344**	PKPbc	**PKPbc**	**14 46 21.4**	**-1.1**
	comp=Z,2.5nm,1.0s,baz=26,slow=2.3,SNR=13						
KBZ	**Khabaz**	**151.25**	**36**	PKPbc	**PKiKP**	**14 46 26.6**	**0.0**
	comp=Z,2.4nm,1.0s,baz=243,slow=4.5,SNR=3.8						
MKAR	**Makanchi Array**	**151.96**	**336**	PKPbc	**PKPbc**	**14 46 26.8**	**-1.0**
	comp=Z,1.5nm,1.0s,baz=40,slow=2.5,SNR=8.2						
MKAR				PKPab	**PKPab**	**14 46 37.1**	**+0.2**
	comp=Z,1.3nm,0.8s,baz=44,slow=2.5,SNR=8.4						
MKAR	**Makanchi Array**	**151.96**	**336**		**PKPbc**	**14 46 26.9**	**-0.8**
MKAR					**PKPab**	**14 46 35.0**	**-1.9**

*IDC **20** 14:30:17.5±7.2,23°84N×122°69E, h0km, mb3.4/3, mbtmp3.6/5, ML3.5/2, Error ellipse: s-maj=143.5km s-min=36.5km az=171.0*
*JMA **20** 14:30:37.0±0.2,25°N±2°×123°3E±0°5, h124km±2km, MV3.3/16, NW OFF ISHIGAKIJIMA IS*

ISC 20 14:30:35.5±1.0, 24°9N±0°1×123°30E±0°05, h133km±10km, n25, σ1°05/37, mb3.4/3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.53**	**210**	P	**Pn**	**14 30 55.1**	**0.0**
YOJ	**Yonaguni jima**	**0.53**	**210**	P	**Pn**	**14 30 55.4**	**+0.3**
YOJ				*eS*	**Sn**	**14 31 09.1**	**-0.8**
JYNG	**Yonagunijimaku**	**0.57**	**215**	*i* P	**Pn**	**14 30 55.7**	**+0.3**
JYNG				S	**Sn**	**14 31 09.8**	**-0.5**
IRIF	**Iriomote-Funau**	**0.70**	**146**	*i* P	**Pn**	**14 30 56.3**	**+0.1**
IRIF				S	**Sn**	**14 31 10.9**	**-1.0**
JKRS	**Kuro-shima**	**0.94**	**136**	P	**Pn**	**14 30 58.8**	**+0.7**
JKRS				S	**Sn**	**14 31 14.9**	**-0.3**
JIJ	**Ishigaki jima**	**0.94**	**126**	*i* P	**Pn**	**14 30 58.5**	**+0.3**
JIJ				S	**Sn**	**14 31 14.1**	**-1.4**
HATJ	**Hateruma jima**	**0.97**	**152**	P	**Pn**	**14 30 59.0**	**+0.6**
HATJ				S	**Sn**	**14 31 15.1**	**-0.7**
JISG	**Ishigakijimahi**	**0.98**	**110**	*i* P	**Pn**	**14 30 59.0**	**+0.6**
JISG				S	**Sn**	**14 31 15.4**	**-0.4**
JTJ	**Tarama**	**1.30**	**102**	P	**Pn**	**14 31 02.7**	**+1.1**
JTJ				S	**Sn**	**14 31 21.6**	**0.0**
TATO	**Taipei**	**1.65**	**272**	P	**Pn**	**14 31 06.9**	**+1.5**
NACB	**Ninganchiao**	**1.72**	**245**	P	**Pn**	**14 31 06.1**	**-0.2**
YHNB	**Yeheng**	**1.77**	**262**	P	**Pn**	**14 31 08.1**	**+1.2**
JIKM	**Ikemajima**	**1.77**	**89**	P	**Pn**	**14 31 08.1**	**+1.2**
JIKM				S	**Sn**	**14 31 31.1**	**+0.3**
JMJ	**Miyako jima 2**	**1.81**	**93**	P	**Pn**	**14 31 09.2**	**+1.8**
JMJ2	**Miyako jima3**	**1.85**	**95**	P	**Pn**	**14 31 09.2**	**+1.4**
JMJ2				S	**Sn**	**14 31 32.8**	**+0.2**
JOGS	**Gusukube**	**1.92**	**94**	P	**Pn**	**14 31 10.1**	**+1.5**
JOGS				S	**Sn**	**14 31 34.3**	**+0.3**
YULB	**Yu-li**	**2.38**	**231**	P	**Pn**	**14 31 13.9**	**-0.4**
SSLB	**Suanglung**	**2.42**	**243**	P	**Pn**	**14 31 15.1**	**+0.3**
TWGBT	**Beinan**	**2.92**	**225**	P	**Pn**	**14 31 21.3**	**+0.1**
TPUB	**Ta-pu**	**2.92**	**237**	P	**Pn**	**14 31 22.5**	**+1.2**
JOW	**Kunigami**	**4.87**	**66**	Pn	**Pn**	**14 31 45.9**	**-1.0**
	3.5nm,0.3s,baz=288,slow=20,SNR=45						
JOW				Sn	**Sn**	**14 32 39.3**	**-3.1**
	2.6nm,0.3s,baz=180,slow=19,SNR=2.2						
	15nm,0.2s						
KSRS	**Korea Array**	**13.10**	**16**	Pn	**P**	**14 33 41.0**	**-0.6**
	0.2nm,0.3s,baz=198,slow=11,SNR=5.6						
	0.9nm,0.6s						
MKAR	**Makanchi Array**	**39.18**	**314**	P	**P**	**14 37 50.8**	**+0.5**
	0.4nm,0.4s,baz=102,slow=9.9,SNR=12						
	0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**40.70**	**326**	P	**P**	**14 38 04.4**	**+1.7**
	0.3nm,0.4s,baz=111,slow=8.5,SNR=2.0						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**42.81**	**319**	P	**P**	**14 38 19.2**	**-0.7**
	0.3nm,0.7s,baz=110,slow=8.1,SNR=2.1						
	0.3nm,0.7s						

*IDC **20** 14:41:22.7±1.2,34°40S×178°82W, h0km, mb4.1/4, mbtmp4.1/5, ML3.8/1, Error ellipse: s-maj=37.3km s-min=27.8km az=121.0*
*WEL **20** 14:41:25.9±1.1,34°S±10°×17°9W±1°2, h33km, M4.0/12, mB4.6/7, ML4.1/18, MLv4.2/12, Mw(mB)3.8/7, Error ellipse: s-maj=16.9km s-min=10.1km az=123.9, confirmed*

ISC 20 14:41:28.9±0.9, 34°33S±0°09×178°7W±0°1, h51km, n39, σ1°54/46, mb4.0/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.05**	**216**	P	**Pn**	**14 42 27.9**	**-0.4**
WMGZ	**Waiomatatini S**	**4.20**	**213**	P	**Pn**	**14 42 29.9**	**-0.5**
WMGZ				S	**Sn**	**14 43 20.7**	**+2.4**
PKGZ	**Pakihiroa**	**4.40**	**216**	P	**Pn**	**14 42 32.0**	**-1.1**
PKGZ				S	**Sn**	**14 43 24.4**	**+1.2**
HAZ	**Te Kaha**	**4.46**	**219**	P	**Pn**	**14 42 33.6**	**-0.4**
HAZ				S	**Sn**	**14 43 28.0**	**+3.4**
PUZ	**Puketiti**	**4.48**	**213**	P	**Pn**	**14 42 32.7**	**-1.6**
RUGZ	**Raukumara Rang**	**4.67**	**218**	P	**Pn**	**14 42 36.1**	**-0.9**
TWGZ	**Tauwhareparae**	**4.69**	**214**	P	**Pn**	**14 42 36.7**	**-0.6**
TWGZ				S	**Sn**	**14 43 32.2**	**+1.8**
CNGZ	**Carnagh Statio**	**4.85**	**210**	P	**Pn**	**14 42 39.5**	**+0.2**
TKGZ	**Te Karaka**	**4.97**	**213**	P	**Pn**	**14 42 40.9**	**0.0**
TKGZ				S	**Sn**	**14 43 37.4**	**+0.4**
MWZ	**Matawai**	**5.03**	**216**	P	**Pn**	**14 42 40.2**	**-1.7**
URZ	**Urewera**	**5.19**	**220**	Pn	**Pn**	**14 42 41.2**	**-2.8**
	3.4nm,0.3s,baz=29,slow=4.3,SNR=85						
URZ				Sn	**Sn**	**14 43 40.9**	**-1.6**
	1.8nm,0.3s,baz=68,slow=14,SNR=1.2						
	7.0nm,0.3s						
URZ	**Urewera**	**5.19**	**220**	P	**Pn**	**14 42 41.9**	**-2.0**
RAGZ	**Rawiri**	**5.22**	**216**	P	**Pn**	**14 42 43.1**	**-1.3**
MUGZ	**Murupara**	**5.53**	**220**	P	**Pn**	**14 42 47.0**	**-1.7**
MHGZ	**Mahia Peninsul**	**5.54**	**209**	P	**Pn**	**14 42 48.2**	**-0.6**
RAHZ	**Arahi**	**5.71**	**215**	P	**Pn**	**14 42 51.1**	**0.0**
MTHZ	**Maungataniwha**	**5.78**	**217**	P	**Pn**	**14 42 50.9**	**-1.2**
WCZ	**Waipu Caves**	**5.94**	**252**	P	Pn	14 42 59.9	+5.6
MRHZ	**Matea Rd**	**5.98**	**220**	P	**Pn**	**14 42 52.8**	**-2.1**
NMHZ	**Naumai**	**5.98**	**216**	P	**Pn**	**14 42 54.8**	**-0.1**
BKZ	**Black Stump Fm**	**6.19**	**217**	P	**Pn**	**14 42 55.2**	**-2.5**
MCHZ	**McNeill Hill**	**6.31**	**215**	P	**Pn**	**14 42 57.6**	**-1.7**
OUZ	**Omahuta**	**6.42**	**260**	P	**Pn**	**14 43 01.4**	**+0.5**
KWHZ	**Kaweka Forest**	**6.42**	**216**	P	**Pn**	**14 42 59.3**	**-1.7**
KAHZ	**Kahuranaki**	**6.51**	**212**	P	**Pn**	**14 42 59.5**	**-2.6**
ETVZ	**East Tongariro**	**6.58**	**222**	P	**Pn**	**14 43 02.1**	**-1.1**
OTVZ	**Ohutere**	**6.62**	**222**	P	**Pn**	**14 43 02.9**	**-0.9**
PNHZ	**Pukenui**	**6.91**	**215**	P	**Pn**	**14 43 05.6**	**-2.1**
TSZ	**Takapari Road**	**7.14**	**215**	P	**Pn**	**14 43 09.0**	**-1.7**
MRZ	**Mangatainoka R**	**7.79**	**214**	P	**Pn**	**14 43 16.8**	**-2.9**
CTZ	**Chatham Island**	**9.53**	**171**	P	**Pn**	**14 43 42.8**	**-0.5**
ASAR	**Alice Springs**	**42.48**	**272**	P	**P**	**14 49 18.7**	**-0.7**
	1.1nm,0.7s,baz=117,slow=8.4,SNR=21						
ASAR				PcP	**PcP**	**14 51 12.1**	**+0.7**
	0.6nm,0.7s,baz=124,slow=3.8,SNR=4.0						
	1.1nm,0.7s						
WRA	**Warramunga Arr**	**43.83**	**277**	P	**P**	**14 49 29.4**	**-0.7**
	2.1nm,0.7s,baz=119,slow=8.1,SNR=18						
WRA				PcP	**PcP**	**14 51 15.7**	**-0.3**
	0.5nm,0.9s,baz=118,slow=3.0,SNR=2.1						
	2.1nm,0.7s						
QSPA	**South Pole Qui**	**55.79**	**180**	P	**P**	**14 51 00.1**	**-0.4**
	1.5nm,1.1s,baz=268,slow=1.5,SNR=3.4						
	1.5nm,1.1s						
PETK	**Petropavlovsk-**	**89.47**	**346**	P	**P**	**14 54 20.6**	**+0.7**
	5.1nm,0.9s,baz=172,slow=6.3,SNR=4.4						
	5.1nm,0.9s						
KURBB	**Kurchatov Arra**	**123.33**	**312**	PKP	**PKiKP**	**15 00 19.9**	**0.0**
	0.4nm,0.8s,baz=92,slow=2.8,SNR=2.4						
FINES	**FINESS Array B**	**148.59**	**337**	PKPbc	**PKPab**	**15 01 11.9**	**-1.2**
	2.7nm,0.7s,baz=48,slow=2.1,SNR=6.9						
NOA	**NORSAR Array B**	**152.52**	**350**	PKPbc	**PKiKP**	**15 01 20.9**	**+1.8**
	0.2nm,0.6s,baz=21,slow=3.8,SNR=1.2						
BRTR	**Keskin Array B**	**153.73**	**291**	PKPbc	**PKiKP**	**15 01 23.7**	**+1.3**
	0.3nm,0.6s,baz=117,slow=5.0,SNR=3.6						

*IDC **20** 15:05:06.4±0.7,22°01S×114°36W, h0km, mb4.1/9, mbtmp4.1/9, MS3.8/19, Error ellipse: s-maj=31.2km s-min=19.5km az=62.0*
*NEIC **20** 15:05:08.8±1.0,22°1S±0°1×114°4W±0°2, h10km±1km, mb4.4/29, Error ellipse: s-maj=25.6km s-min=19.4km az=234.0*

ISC 20 15:05:07.6±0.6, 22°1S±0°1×114°4W±0°1, h10km, n79, σ0°93/46, mb4.4/20, MS3.7/19, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAOE	**Nuku Hiva Isla**	**27.99**	**294**	*e*LR	LR	15 17 51.6	
	586nm,25.7s						
TAOE	**Nuku Hiva Isla**	**27.99**	**294**	P	**P**	**15 10 57.1**	**-1.8**
TBI	**Tubuai**	**32.30**	**261**	*e*LR	LR	15 19 51.9	
	752nm,26.0s						
H03N2	**Juan Fernandez**	**33.24**	**118**	T	T	15 46 45.4	
	baz=285,slow=75						
H03N3	**Juan Fernandez**	**33.25**	**118**	T	T	15 46 45.8	
	baz=285,slow=75						
H03N1	**Juan Fernandez**	**33.26**	**118**	T	T	15 46 43.9	
	baz=285,slow=75						
PPT2	**Papeete2**	**33.32**	**271**	*e*LR	LR	15 20 11.0	
	268nm,31.0s						
PPT2				*e*LR	LR	15 20 20.9	
	158nm,28.5s						
NNA	**Nana**	**37.21**	**81**	LR	LR	15 23 13.5	
	comp=Z,162nm,20.2s,baz=257,slow=29						
ATAH	**Atahualpa**	**37.76**	**72**	LR	LR	15 23 22.1	
	comp=Z,118nm,22.0s,baz=246,slow=29						
LCO	**Las Campanas**	**39.88**	**109**	P	**P**	**15 12 41.8**	**-0.2**
LCO				IAmb	IAmb	15 12 43.8	
	comp=Z,22nm,1.0s						
AC06	**Mina Casimiro**	**40.23**	**107**	P	**P**	**15 12 44.5**	**-0.2**
AC05	**El Transito**	**40.26**	**109**		**P**	**15 12 44.9**	**-0.1**
AC05				IAmb	IAmb	15 12 47.9	
	comp=Z,7.3nm,1.0s						
PLCA	**Paso Flores**	**41.33**	**127**	P	**P**	**15 12 53.7**	**0.0**
	comp=Z,4.5nm,1.2s,baz=274,slow=10,SNR=3.6						
	comp=Z,4.5nm,1.2s						
OTAV	**Otavalo**	**41.48**	**62**		**P**	**15 12 55.6**	**+0.1**
ZON	**Zonda**	**41.66**	**113**		**P**	**15 12 55.5**	**-0.9**
JTS	**Las Juntas de**	**43.23**	**45**	LR	LR	15 26 20.3	
	comp=Z,104nm,21.9s,baz=222,slow=30						
LPAZ	**La Paz**	**43.97**	**91**	P	**P**	**15 13 16.5**	**+0.5**
	comp=Z,9.4nm,1.0s,baz=281,slow=5.0,SNR=19						
	comp=Z,9.4nm,1.0s						
LPAZ	**La Paz**	**43.97**	**91**		**P**	**15 13 13.9**	**-2.1**
LPAZ				IAmb	IAmb	15 13 17.0	
	comp=Z,8.1nm,0.9s						
LPIG	**La Paz**	**46.05**	**5**	LR	LR	15 28 16.5	
	comp=Z,80nm,20.3s,baz=189,slow=30						
ROSC	**El Rosal**	**47.48**	**61**	LR	LR	15 31 01.8	
	comp=Z,87nm,19.2s,baz=34,slow=33						
CPUP	**Villa Florida**	**51.90**	**107**	P	**P**	**15 14 15.9**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=278,slow=11,SNR=3.3						
	comp=Z,0.9nm,0.3s						
TXAR	**Lajitas Array**	**52.13**	**12**	P	**P**	**15 14 18.0**	**-0.3**
	comp=Z,1.1nm,1.1s,baz=199,slow=7.3,SNR=5.2						
	comp=Z,1.1nm,1.1s						
TXAR	**Lajitas Array**	**52.13**	**12**	P	**P**	**15 14 19.5**	**+1.3**
833A	**Chaparral WMA,**	**52.14**	**17**	P	**P**	**15 14 19.1**	**+0.9**
PTLB	**Pontes e Lacer**	**52.53**	**93**		**P**	**15 14 21.0**	**-0.5**
SAND	**Sanderson**	**53.05**	**13**		**P**	**15 14 26.3**	**+1.3**
SAND				IAmb	IAmb	15 14 28.0	
	comp=Z,4.7nm,0.8s						
PMSA	**Palmer Station**	**53.78**	**156**	LR	LR	15 31 32.5	
	comp=Z,63nm,19.4s,baz=296,slow=30						
JCT	**Junction City**	**54.09**	**16**	P	**P**	**15 14 33.5**	**+0.9**
MNTX	**Cornudas Mount**	**54.15**	**10**		**P**	**15 14 33.5**	**+0.5**
MNTX				IAmb	IAmb	15 14 34.7	
	comp=Z,2.6nm,0.9s						
AFI	**Afiamalu**	**54.89**	**268**	LR	LR	15 32 13.1	
	comp=Z,66nm,21.0s,baz=134,slow=30						
PFO	**Pinyon Flats O**	**55.39**	**358**	LR	LR	15 34 10.8	
	comp=Z,46nm,18.7s,baz=186,slow=32						
LENM	**Lemitar**	**56.36**	**7**	P	**P**	**15 14 49.7**	**+0.6**
APMT	**Aspermont**	**56.74**	**14**	P	**P**	**15 14 51.6**	**0.0**
ANMO	**Albuquerque**	**57.19**	**8**	LR	LR	15 34 50.9	
	comp=Z,56nm,19.0s,baz=192,slow=31						
NVAR	**Mina Array Bea**	**60.27**	**356**	P	**P**	**15 15 17.7**	**+1.3**
	comp=Z,2.2nm,0.7s,baz=188,slow=10,SNR=15						
	comp=Z,2.2nm,0.7s						
WVOR	**Wild Horse Val**	**64.28**	**357**	IAmb	IAmb	15 15 46.9	
	comp=Z,2.8nm,1.0s						
TKL	**Tuckaleechee C**	**64.33**	**27**	LR	LR	15 41 13.9	
	comp=Z,50nm,18.8s,baz=256,slow=34						
PD31	**Pinedale Array**	**64.65**	**4**	P	**P**	**15 15 45.0**	**-0.7**
PD31				IAmb	IAmb	15 15 46.7	
	comp=Z,1.9nm,0.8s						
PDAR	**Pinedale Array**	**64.65**	**4**	P	**P**	**15 15 45.6**	**0.0**
	comp=Z,1.5nm,0.7s,baz=169,slow=6.2,SNR=16						
PDAR				LR	LR	15 39 30.2	
	comp=Z,18nm,18.2s,baz=184,slow=32						
	comp=Z,1.5nm,0.7s						
HLID	**Hailey**	**65.29**	**0**	P	**P**	**15 15 50.5**	**+0.7**
HLID				IAmb	IAmb	15 15 52.5	
	comp=Z,5.0nm,0.9s						
LOHW	**Long Hollow**	**65.44**	**3**	P	**P**	**15 15 51.6**	**+0.9**
LOHW				IAmb	IAmb	15 15 56.3	
	comp=Z,2.9nm,1.0s						
FLWY	**Flagg Ranch**	**65.90**	**3**	IAmb	IAmb	15 15 55.3	
	comp=Z,2.5nm,0.8s						
I07A	**Izee**	**65.98**	**356**	P	**P**	**15 15 55.8**	**+1.7**
MDP	**Montagnes des**	**66.17**	**74**	LR	LR	15 40 40.2	
	comp=Z,78nm,20.8s,baz=191,slow=32						
BELA	**Belgrano 2**	**66.44**	**167**		**P**	**15 15 57.5**	**+0.9**
MCMT	**McKenzie Canyo**	**66.57**	**1**		**P**	**15 15 58.9**	**+0.9**
BMO	**Blue Mountains**	**66.63**	**358**	IAmb	IAmb	15 16 00.3	
	comp=Z,1.7nm,0.9s						
PLID	**Pearl Lake**	**66.83**	**359**	IAmb	IAmb	15 16 01.7	
	comp=Z,2.5nm,0.9s						
G08A	**Pilot Rock**	**67.15**	**357**	P	**P**	**15 16 02.9**	**+1.3**
G08A				IAmb	IAmb	15 16 04.7	
	comp=Z,4.2nm,1.0s						
VNDA	**Vanda**	**67.27**	**194**	LR	LR	15 38 26.9	
	comp=Z,159nm,20.6s,baz=332,slow=30						
QSPA	**South Pole Qui**	**68.09**	**180**	P	**P**	**15 16 08.6**	**+1.2**
	comp=Z,3.3nm,1.1s,baz=141,slow=1.3,SNR=6.6						
	comp=Z,3.3nm,1.1s						
QSPA	**South Pole Qui**	**68.09**	**180**	P	**P**	**15 16 08.5**	**+1.1**
QSPA				IAmb	IAmb	15 16 16.5	
	comp=Z,1.8nm,0.9s						
ULM	**Lac du Bonnet**	**73.84**	**12**	LR	LR	15 46 45.0	
	comp=Z,5nm,18.2s,baz=197,slow=34						
SADO	**Sadowa**	**73.89**	**25**	LR	LR	15 46 47.0	
	comp=Z,42nm,18.6s,baz=325,slow=34						
YKA	**Yellowknife Ar**	**84.26**	**360**	P	**P**	**15 17 39.4**	**+0.5**
	comp=Z,0.8nm,0.9s,baz=188,slow=5.1,SNR=13						
	comp=Z,0.8nm,0.9s						
KDAK	**Kodiak Island**	**85.67**	**341**	LR	LR	15 48 14.0	
	comp=Z,64nm,18.2s,baz=178,slow=30						
H11S2	**WAKE ISLAND Hy**	**87.01**	**291**	T	T	16 54 08.4	
	baz=115,slow=75						
H11S1	**WAKE ISLAND Hy**	**87.02**	**291**	T	T	16 54 11.8	
	baz=115,slow=75						
H11S3	**WAKE ISLAND Hy**	**87.03**	**291**	T	T	16 54 11.9	
	baz=115,slow=75						
H11N3	**WAKE ISLAND Hy**	**87.33**	**292**	T	T	16 54 33.7	
	baz=116,slow=74						
H11N1	**WAKE ISLAND Hy**	**87.35**	**292**	T	T	16 54 41.3	
	baz=116						
H11N2	**WAKE ISLAND Hy**	**87.35**	**292**	T	T	16 54 36.0	
	baz=116,slow=74						
ILAR	**Eielson Array**	**90.11**	**347**	P	**P**	**15 18 06.2**	**-1.1**
	comp=Z,0.4nm,0.9s,baz=184,slow=5.9,SNR=3.2						
	comp=Z,0.4nm,0.9s						
FRB	**Frobisher Bay**	**92.70**	**19**	LR	LR	15 57 22.2	
	comp=Z,65nm,18.2s,baz=232,slow=34						
SHEM	**Shemya Is, Ala**	**96.73**	**325**	LR	LR	15 51 32.6	
	comp=Z,41nm,20.6s,baz=282,slow=29						
ASAR	**Alice Springs**	**99.50**	**240**	LR	LR	15 59 58.7	
	comp=Z,62nm,18.8s,baz=132,slow=33						
TORD	**Torodi Ar. Bea**	**118.83**	**87**	PKP	**PKPdf**	**15 23 56.2**	**-0.8**
	comp=Z,0.9nm,1.0s,baz=279,slow=3.6,SNR=3.7						
ZALV	**Zalesovo Beam**	**144.97**	**340**	PKP	**PKPbc**	**15 24 43.7**	**-0.3**
	comp=Z,6.8nm,1.0s,baz=38,slow=2.6,SNR=20						
ZALV	**Zalesovo Beam**	**144.97**	**340**		**PKPbc**	**15 24 44.1**	**+0.1**
BRTR	**Keskin Array B**	**147.65**	**50**	PKPbc	**PKPbc**	**15 24 52.2**	**-0.5**
	comp=Z,2.2nm,1.0s,baz=247,slow=2.5,SNR=8.8						
BRTR	**Keskin Array B**	**147.65**	**50**		**PKPbc**	**15 24 52.0**	**-0.8**
CMAR	**Chiang Mai Arr**	**148.53**	**270**	PKPbc	**PKiKP**	**15 24 56.6**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=68,slow=1.0,SNR=12						
CMAR	**Chiang Mai Arr**	**148.53**	**270**		**PKiKP**	**15 24 56.4**	**-0.6**
BVAR	**Borovoye Array**	**148.86**	**354**	PKPbc	**PKPbc**	**15 24 55.4**	**+0.1**
	comp=Z,4.0nm,0.9s,baz=22,slow=1.6,SNR=14						
KURK	**Kurchatov**	**149.62**	**344**	PKPdf	**PKPdf**	**15 24 55.0**	**+2.4**
KURBB	**Kurchatov Arra

PFARO	**Faro**	**0.53**	**322**	*e*P	**Pn**	**15 31 05.3**	**-0.2**
PFARO				*e*S	**Sn**	**15 31 13.2**	**-0.3**
PFARO				*i* IAML		15 31 15.4	
PFARO				*i* IAML		15 31 19.0	
PFARO				*i* IAML		15 31 20.9	
PBDV	**Barranco-do-Ve**	**0.72**	**332**	Pg	**Pn**	**15 31 08.0**	**0.0**
PBDV	**Barranco-do-Ve**	**0.72**	**332**⇓	*e*P	**Pn**	**15 31 08.0**	**0.0**
PBDV				*e*S	**Sn**	**15 31 18.1**	**+0.2**
PBDV				*i* IAML		15 31 18.2	
PBDV				*i* IAML		15 31 24.9	
PALBU	**Albufeira**	**0.76**	**310**⇓	*i*P	**Pn**	**15 31 08.4**	**-0.2**
PALBU				*e*S	**Sn**	**15 31 19.0**	**0.0**
PALBU				*i* IAML		15 31 19.3	
PALBU				*i* IAML		15 31 26.6	
PALBU				*i* IAML		15 31 28.0	
ARNO	**Arenosillo**	**0.80**	**52**	Pg	**Pn**	**15 31 09.4**	**+0.3**
ARNO				Sg	**Sn**	**15 31 20.8**	**+1.0**
PVAQ	**Vaqueiros**	**0.81**	**349**⇓	*e*P	**Pn**	**15 31 09.4**	**+0.1**
PVAQ				*e*S	**Sn**	**15 31 19.9**	**-0.3**
PVAQ				*i* IAML		15 31 20.3	
PVAQ				*i* IAML		15 31 20.4	
PVAQ				*i* IAML		15 31 20.8	
EXHU	**Huelva**	**0.81**	**35**	Pg	**Pn**	**15 31 08.1**	**-1.2**
EXHU				Sg	**Sn**	**15 31 19.9**	**-0.4**
EGRO	**El Granado**	**0.92**	**2**	Pg	**Pn**	**15 31 11.2**	**+0.4**
EGRO				Sg	**Sn**	**15 31 23.2**	**+0.2**
EGRO				*i* IVmb_Lg		15 31 24.0	
PPOR	**Portimao**	**0.97**	**303**	*e*S	**Sn**	**15 31 27.7**	**+3.6**
PLAGO	**Lagos**	**1.06**	**298**	*e*P	**Pn**	**15 31 12.8**	**+0.2**
PLAGO				*e*S	**Sn**	**15 31 25.9**	**-0.3**
PLAGO				*i* IAML		15 31 31.9	
PLAGO				*i* IAML		15 31 32.3	
PLAGO				*i* IAML		15 31 35.9	
PCVE	**Castro Verde**	**1.10**	**338**	Pn	**Pn**	**15 31 13.6**	**+0.3**
PCVE	**Castro Verde**	**1.10**	**338**	*e*P	**Pn**	**15 31 13.6**	**+0.3**
PCVE				*e*S	**Sn**	**15 31 27.5**	**+0.1**
PCVE				*i* IAML		15 31 28.0	
PCVE				*i* IAML		15 31 35.3	
MORF	**Marmelete**	**1.15**	**308**	*e*P	**Pn**	**15 31 13.5**	**-0.4**
MORF				*e*S	**Sn**	**15 31 27.6**	**-0.8**
MORF				IAML		15 31 35.0	
	comp=N,535nm,0.3s						
MORF	**Marmelete**	**1.15**	**308**⇓	*e*P	**Pn**	**15 31 13.5**	**-0.4**
MORF				*i* IAML		15 31 36.9	
MORF				*i* IAML		15 31 37.1	
MORF				*i* IAML		15 31 37.6	
PFVI	**Vila Bisbo**	**1.17**	**297**	Pn	**Pn**	**15 31 13.8**	**-0.4**
PFVI	**Vila Bisbo**	**1.17**	**297**	*e*P	**Pn**	**15 31 13.8**	**-0.4**
PFVI				*e*S	**Sn**	**15 31 28.5**	**-0.5**
PFVI				*i* IAML		15 31 35.9	
PFVI				*i* IAML		15 31 39.0	
PFVI				*i* IAML		15 31 42.6	
CNIL	**Conil**	**1.20**	**101**	Pn	**Pn**	**15 31 14.8**	**+0.2**
PALJ	**Aljezur**	**1.25**	**305**	*e*P	**Pn**	**15 31 15.1**	**-0.2**
PALJ				*e*S	**Sn**	**15 31 30.2**	**-0.6**
PALJ				*i* IAML		15 31 37.0	
PALJ				*i* IAML		15 31 38.9	
PALJ				*i* IAML		15 31 40.8	
PSVI	**Cabo S. Vicent**	**1.26**	**290**	*e*S	**Sn**	**15 31 35.0**	**+3.9**
EMIN	**Mina Concepcio**	**1.34**	**30**	Pn	**Pn**	**15 31 16.8**	**+0.3**
EMIN				Sn	**Sn**	**15 31 32.3**	**-0.9**
EMIN	**Mina Concepcio**	**1.34**	**30**	Pg	**Pn**	**15 31 17.2**	**+0.7**
EMIN				Sg	**Sn**	**15 31 35.7**	**+2.6**
EMIN				*i* IVmb_Lg		15 31 41.8	
PTEO	**Sao Teotonio**	**1.34**	**314**⇓	*e*P	**Pn**	**15 31 19.7**	**+0.1**
PTEO				*e*S	**Sn**	**15 31 33.5**	**+0.2**
PTEO				*i* IAML		15 31 41.3	
PTEO				*i* IAML		15 31 42.3	
PTEO				*i* IAML		15 31 42.7	
MESJ	**Messejana**	**1.35**	**336**	*e*P	**Pn**	**15 31 17.0**	**+0.3**
MESJ				*e*S	**Sn**	**15 31 33.1**	**-0.3**
MESJ				IAML		15 31 37.3	
	comp=N,147nm,0.3s						
MESJ	**Messejana**	**1.35**	**336**⇓	*e*P	**Pn**	**15 31 17.0**	**+0.3**
MESJ				*e*S	**Sn**	**15 31 33.2**	**-0.2**
MESJ				*i* IAML		15 31 43.3	
MESJ				*i* IAML		15 31 43.4	
MESJ				*i* IAML		15 31 48.9	
ESPR	**Espera**	**1.36**	**78**	Pn	**Pn**	**15 31 16.9**	**+0.2**
ESPR	**Espera**	**1.36**	**78**	Pg	**Pn**	**15 31 17.0**	**+0.2**
ESPR				Sg	**Sn**	**15 31 34.4**	**+0.8**
ESPR				*i* IVmb_Lg		15 35.0	
PBEJ	**Beja**	**1.44**	**349**	*e*P	**Pn**	**15 31 18.3**	**+0.3**
PBEJ				*e*S	**Sn**	**15 31 36.2**	**+0.5**
PBEJ				*i* IAML		15 31 49.2	
PBEJ				*i* IAML		15 31 49.5	
PBEJ				*i* IAML		15 31 50.9	
PBAR	**Barrancos**	**1.61**	**14**	Pn	**Pn**	**15 31 20.6**	**+0.3**
PBAR	**Barrancos**	**1.61**	**14**⇓	*e*P	**Pn**	**15 31 20.5**	**+0.3**
PBAR				*e*S	**Sn**	**15 31 40.6**	**+0.9**
PBAR				*i* IAML		15 31 45.7	
PBAR				*i* IAML		15 31 48.3	
PBAR				*i* IAML		15 31 48.7	
EJIF	**Jimena Fronter**	**1.66**	**95**	Pn	**Pn**	**15 31 20.9**	**+0.1**
EJIF				Sn	**Sn**	**15 31 43.1**	**+2.2**
ECEU	**Ceuta**	**1.87**	**112**	Pn	**Pn**	**15 31 24.4**	**+0.6**
ECEU	**Ceuta**	**1.87**	**112**	Pn	**Pn**	**15 31 24.0**	**+0.2**
ECEU				Sn	**Sn**	**15 31 47.9**	**+1.8**
E1302	**La Puebla de C**	**1.90**	**73**	Pn	**Pn**	**15 31 25.2**	**+1.1**
E1302				Sn	**Sn**	**15 31 47.0**	**+0.1**
EVO	**Evora**	**1.96**	**349**	Pn	**Pn**	**15 31 25.5**	**+0.5**
EVO				Sn	**Sn**	**15 31 47.7**	**-0.8**
EVO	**Evora**	**1.96**	**349**	*e*P	**Pn**	**15 31 25.5**	**+0.5**
EVO				*e*S	**Sn**	**15 31 47.6**	**-0.8**
EVO				*i* IAML		15 31 52.8	
EVO				*i* IAML		15 31 59.0	
EVO				*i* IAML		15 31 59.2	
MOE	**Montemor**	**2.02**	**341**	*e*P	**Pn**	**15 31 26.3**	**+0.4**
MOE				*e*S	**Sn**	**15 31 50.4**	**+0.4**
MOE				*i* IAML		15 32 04.8	
MOE				*i* IAML		15 32 08.2	
MOE				*i* IAML		15 32 09.8	
ECAB	**El Cabril**	**2.22**	**48**	Pn	**Pn**	**15 31 28.7**	**0.0**
ECAB				Sn	**Sn**	**15 31 53.5**	**-1.4**
ECAB	**El Cabril**	**2.22**	**48**	Pn	**Pn**	**15 31 29.1**	**+0.5**
ECAB				Sn	**Sn**	**15 31 59.1**	**+4.2**
ECAB				*i* IVmb_Lg		15 32 01.5	
EXCBR	**El Cabril**	**2.23**	**48**	Pn	**Pn**	**15 31 30.3**	**+1.6**
EXCBR				Sn	**Sn**	**15 31 57.1**	**+2.2**
PARRA	**Arraiolos**	**2.24**	**349**⇓	*e*P	**Pn**	**15 31 29.3**	**+0.4**
PARRA				*e*S	**Sn**	**15 31 55.6**	**+0.3**
PARRA				*i* IAML		15 31 58.2	
PARRA				*i* IAML		15 32 10.6	
PARRA				*i* IAML		15 32 11.8	
PESTR	**Estremoz**	**2.26**	**359**	Pn	**Pn**	**15 31 29.2**	**+0.1**
PESTR				Sn	**Sn**	**15 31 54.8**	**-0.9**
PESTR	**Estremoz**	**2.26**	**359**	*e*P	**Pn**	**15 31 29.2**	**+0.1**
PESTR				*e*S	**Sn**	**15 31 55.8**	**+0.1**
PESTR				*i* IAML		15 32 05.1	
PESTR				*i* IAML		15 32 11.9	
PESTR				*i* IAML		15 32 16.1	
PMTG	**Montargil**	**2.52**	**347**⇓	*e*P	**Pn**	**15 31 33.1**	**+0.4**
PMTG				*e*S	**Sn**	**15 32 02.2**	**+0.1**
PMTG				*i* IAML		15 32 03.0	
PMTG				*i* IAML		15 32 03.3	
PMTG				*i* IAML		15 32 21.8	
AML03	**Fanhoes/Loures**	**2.62**	**331**	*e*P	**Pn**	**15 31 34.9**	**+0.9**
AML03				*i* IAML		15 32 06.5	
AML03				*i* IAML		15 32 06.5	
PMAFR	**Mafra**	**2.73**	**330**	Pn	**Pn**	**15 31 36.2**	**+0.6**
PMAFR	**Mafra**	**2.73**	**330**	*e*P	**Pn**	**15 31 36.2**	**+0.6**
PMAFR				*e*S	**Sn**	**15 32 06.3**	**-1.1**
PMAFR				*i* IAML		15 32 08.5	
PMAFR				*i* IAML		15 32 09.4	
PMAFR				*i* IAML		15 32 10.1	
EGOR	**Sierra Gorda,**	**2.78**	**79**	Pn	**Pn**	**15 31 37.2**	**+0.8**
EGOR	**Sierra Gorda,**	**2.78**	**79**	Pn	**Pn**	**15 31 37.4**	**+1.1**
EGOR				Sn	**Sn**	**15 32 09.9**	**+1.1**
EGOR				*i* IVmb_Lg		15 32 11.9	
EADA	**Adamuz**	**2.81**	**56**	Pn	**Pn**	**15 31 37.2**	**+0.4**
EADA				Sn	**Sn**	**15 32 07.8**	**-1.6**
EADA	**Adamuz**	**2.81**	**56**	Pn	**Pn**	**15 31 37.5**	**+0.8**
EADA				Sn	**Sn**	**15 32 09.5**	**+0.1**
EADA				*i* IVmb_Lg		15 32 11.1	
PMRV	**Marv??o**	**2.82**	**2**	*e*P	**Pn**	**15 31 37.0**	**+0.2**
PMRV				*e*S	**Sn**	**15 32 09.3**	**-0.2**
PMRV				*i* IAML		15 32 10.6	
PMRV				*i* IAML		15 32 11.2	
PMRV				*i* IAML		15 32 26.1	
AML05	**Montejunto**	**2.84**	**335**	*e*P	**Pn**	**15 31 37.6**	**+0.5**
AML05				*i* IAML		15 32 11.3	
AML05				*i* IAML		15 32 11.5	
AML05				*i* IAML		15 32 12.4	
PSARD	**Sardoal**	**3.03**	**351**⇓	*e*P	**Pn**	**15 31 40.3**	**+0.6**
PSARD				*e*S	**Sn**	**15 32 13.9**	**-0.8**
PSARD				*i* IAML		15 32 15.6	
PSARD				*i* IAML		15 32 15.6	
PSARD				*i* IAML		15 32 36.1	
PSBE	**So Bento**	**3.07**	**341**	*e*P	**Pn**	**15 31 41.1**	**+0.8**
PSBE				*e*S	**Sn**	**15 32 14.5**	**-1.3**
PSBE				*i* IAML		15 32 43.1	
PSBE				*i* IAML		15 32 43.2	
PSBE				*i* IAML		15 32 45.9	
ELGU	**Los Guajares,**	**3.13**	**84**	Pn	**Pn**	**15 31 41.6**	**+0.4**
ELGU	**Los Guajares,**	**3.13**	**84**	Pn	**Pn**	**15 31 43.4**	**+2.2**
ELGU				Sn	**Sn**	**15 32 19.0**	**+1.6**
ELGU				*i* IVmb_Lg		15 32 24.1	
PCBR	**Castelo Branco**	**3.23**	**1**	*e*P	**Pn**	**15 31 42.8**	**+0.4**
PCBR				*e*S	**Sn**	**15 32 19.4**	**-0.2**
PCBR				*i* IAML		15 32 20.1	
PCBR				*i* IAML		15 32 20.6	
PCBR				*i* IAML		15 32 21.4	
AVE	**Averroes**	**3.30**	**179**	Pn	**Pn**	**15 31 42.8**	**-0.6**
AVE				Sn	**Sn**	**15 32 16.8**	**-4.7**
PCAS	**Casmilo, Conde**	**3.52**	**348**	*e*P	**Pn**	**15 31 47.1**	**+0.6**
PCAS				*e*S	**Sn**	**15 32 26.4**	**-0.6**
PCAS				*i* IAML		15 32 54.7	
PCAS				*i* IAML		15 32 55.9	
PCAS				*i* IAML		15 33 05.1	
EPLA	**Plasencia**	**3.63**	**18**	Pn	**Pn**	**15 31 48.6**	**+0.6**
EPLA				Sn	**Sn**	**15 32 28.6**	**-1.0**
EPLA				*i* IVmb_Lg		15 33 25.9	
IFR	**Ifrane**	**3.65**	**147**	Pn	**Pn**	**15 31 46.6**	**-1.9**
IFR				Sn	**Sn**	**15 32 26.3**	**-4.1**
PSIM	**Granatula de C**	**3.71**	**52**	Pn	**Pn**	**15 31 49.5**	**+0.4**
PSIM				Sn	**Sn**	**15 32 31.4**	**-0.2**
EBER	**Berja**	**3.73**	**84**	Pn	**Pn**	**15 31 49.5**	**+0.1**
EBER	**Berja**	**3.73**	**84**	Pn	**Pn**	**15 31 50.4**	**+0.9**
EBER				Sn	**Sn**	**15 32 33.4**	**+1.2**
EBER				*i* IVmb_Lg		15 32 35.1	
EQES	**Quesada**	**3.74**	**70**	Pn	**Pn**	**15 31 49.9**	**+0.3**
EQES				Sn	**Sn**	**15 32 31.9**	**-0.6**
EQES				*i* IVmb_Lg		15 32 35.3	
MTE	**Manteigas**	**3.79**	**360**⇓	*e*P	**Pn**	**15 31 50.4**	**+0.3**
MTE				*e*S	**Sn**	**15 32 31.8**	**-1.7**
MTE				*i* IAML		15 32 33.6	
MTE				*i* IAML		15 32 33.8	
MTE				*i* IAML		15 32 34.0	
PAB	**San Pablo**	**3.85**	**39**	Pn	**Pn**	**15 31 51.7**	**+0.7**
PAB				Sn	**Sn**	**15 32 34.0**	**-1.1**
PAB				*i* IVmb_Lg		15 32 34.8	
PVIS	**Viseu**	**4.11**	**356**	*e*P	**Pn**	**15 31 55.0**	**+0.3**
PVIS				*e*S	**Sn**	**15 32 40.7**	**-0.7**
ESDC	**Sonseca Array**	**4.15**	**41**	Pn	**Pn**	**15 31 55.0**	**-0.1**
	comp=N,1.1nm,0.3s,baz=225,slow=13,SNR=18						
ESDC				Sn	**Sn**	**15 32 38.1**	**-4.3**
	comp=N,3.0nm,0.3s,baz=226,slow=16,SNR=18						
ESDC				Lg	Lg	15 33 03.3	
	comp=N,1.4nm,0.3s,baz=221,slow=29,SNR=5.3						
	comp=N,2.7nm,0.3s						
ESDC	**Sonseca Array**	**4.15**	**41**	Pn	**Pn**	**15 31 55.4**	**+0.3**
ESDC				Sn	**Sn**	**15 32 40.6**	**-1.8**
ESDC				*i* IVmb_Lg		15 32 41.1	
MDT	**Midelt**	**4.48**	**147**	Pn	**Pn**	**15 31 58.5**	**-1.3**
	comp=N,24nm,0.3s,baz=334,slow=13,SNR=365						
MDT				Sn	**Sn**	**15 32 45.0**	**-5.7**
	comp=N,16nm,0.3s,baz=168,slow=15,SNR=14						
MVO	**Moncorvo**	**4.56**	**5**⇑	*e*P	**Pn**	**15 32 01.0**	**+0.1**
MVO				*e*S	**Sn**	**15 32 50.1**	**-2.6**
MVO				*i* IAML		15 32 51.4	
MVO				*i* IAML		15 32 51.7	
MVO				*i* IAML		15 32 52.0	
EJUZ	**Juzbado, Salam**	**4.65**	**15**	Pn	**Pn**	**15 32 02.0**	**+0.1**
EJUZ				Sn	**Sn**	**15 32 53.9**	**-0.8**
PVRL	**Vila Real**	**4.66**	**358**	*e*P	**Pn**	**15 32 02.3**	**+0.1**
PVRL				*e*S	**Sn**	**15 32 52.5**	**-2.6**
PVRL				*i* IAML		15 32 54.7	
PVRL				*i* IAML		15 32 54.8	
PVRL				*i* IAML		15 32 55.9	
POLO	**Lamas de Olo**	**4.76**	**357**	*e*P	**Pn**	**15 32 03.8**	**+0.2**
POLO				*e*S	**Sn**	**15 32 55.4**	**-2.2**
POLO				*i* IAML		15 32 57.2	
POLO				*i* IAML		15 32 57.4	
POLO				*i* IAML		15 32 57.5	
UCM	**Universidad Co**	**4.99**	**41**	Pn	**Pn**	**15 32 07.4**	**+0.8**
UCM				Sn	**Sn**	**15 32 59.8**	**-3.2**
PCAB	**Cabril**	**5.11**	**356**	*e*P	**Pn**	**15 32 08.5**	**+0.2**
PCAB				*e*S	**Sn**	**15 33 02.2**	**-3.8**
PCAB				*i* IAML		15 33 06.1	
PCAB				*i* IAML		15 33 06.9	
PCAB				*i* IAML		15 33 06.9	
ETOB	**Tobarra**	**5.16**	**65**	Pn	**Pn**	**15 32 08.4**	**-0.5**
ETOB				Sn	**Sn**	**15 33 04.2**	**-3.0**
ETOB	**Tobarra**	**5.16**	**65**	Pn	**Pn**	**15 32 08.4**	**-0.5**
ETOB				Sn	**Sn**	**15 33 05.9**	**-1.2**
ETOB				*i* IVmb_Lg		15 33 07.1	
PBRG	**Braganca**	**5.22**	**6**	*e*P	**Pn**	**15 32 10.0**	**+0.1**
PBRG				*e*S	**Sn**	**15 33 06.5**	**-2.4**
PBRG				*i* IAML		15 33 07.3	
PBRG				*i* IAML		15 33 08.1	
PBRG				*i* IAML		15 33 08.1	
ELOB	**Lobios**	**5.27**	**356**	Pn	**Pn**	**15 32 10.5**	**0.0**
ELOB				Sn	**Sn**	**15 33 08.8**	**-1.2**
ELOB				*i* IVmb_Lg		15 33 10.6	
CART	**Cartagena**	**5.30**	**77**	Pn	**Pn**	**15 32 10.8**	**0.0**
CART				Sn	**Sn**	**15 33 06.5**	**-4.1**
ECAL	**Calabor**	**5.36**	**6**	Pn	**Pn**	**15 32 11.8**	**0.0**
ECAL				Sn	**Sn**	**15 33 10.1**	**-2.1**
ECAL	**Calabor**	**5.36**	**6**	Pn	**Pn**	**15 32 11.8**	**0.0**
ECAL				Sn	**Sn**	**15 33 11.5**	**-0.7**
ECAL				*i* IVmb_Lg		15 33 49.8	
PGAV	**Gavieira, Arco**	**5.38**	**354**	*e*P	**Pn**	**15 32 12.3**	**+0.2**
PGAV				*e*S	**Sn**	**15 33 09.5**	**-3.3**
PGAV				*i* IAML		15 33 13.3	
PGAV				*i* IAML		15 33 13.5	
PGAV				*i* IAML		15 34 03.3	
TIO	**Tiouine**	**5.67**	**178**	Pn	**Pn**	**15 32 15.0**	**-1.1**
TIO				Sn	**Sn**	**15 33 13.5**	**-6.5**
EVIV	**Cofrentes, Val**	**5.71**	**60**	Pn	**Pn**	**15 32 16.1**	**-0.5**
EVIV				Sn	**Sn**	**15 33 19.2**	**-1.6**
EVIV				*i* IVmb_Lg		15 33 20.0	
ECHE	**Chera**	**5.96**	**58**	Pn	**Pn**	**15 32 19.7**	**-0.3**
ECHE				Sn	**Sn**	**15 33 23.0**	**-4.0**
ECHE	**Chera**	**5.96**	**58**	Pn	**Pn**	**15 32 19.8**	**-0.1**
ECHE				Sn	**Sn**	**15 33 26.1**	**-0.9**
ECHE				*i* IVmb_Lg		15 33 27.8	
ETOR	**Torete**	**5.99**	**44**	Pn	**Pn**	**15 32 21.2**	**+0.8**
ETOR				Sn	**Sn**	**15 33 26.9**	**-0.9**
ETOR				*i* IVmb_Lg		15 33 28.2	
EAGO	**Agolada(Pontev**	**6.20**	**356**	Pn	**Pn**	**15 32 23.5**	**+0.2**
EAGO				Sn	**Sn**	**15 33 31.0**	**-1.9**
EAGO				*i* IVmb_Lg		15 33 32.7	
EMAZ	**Mazaricos**	**6.43**	**350**	Pn	**Pn**	**15 32 26.6**	**+0.2**
EMAZ				*i* IVmb_Lg		15 33 04.5	
EMOS	**Mosqueruela**	**6.68**	**54**	Pn	**Pn**	**15 32 30.7**	**+0.8**
EMOS				Sn	**Sn**	**15 33 43.4**	**-1.3**
EMOS				*i* IVmb_Lg		15 33 47.3	
EARI	**Arriondas**	**6.92**	**14**	Pn	**Pn**	**15 32 33.2**	**+0.1**
EARI				Sn	**Sn**	**15 33 49.0**	**-1.4**
EARI				*i* IVmb_Lg		15 35 58.0	
ELAN	**Lanestosa**	**7.32**	**24**	Pn	**Pn**	**15 32 39.4**	**+0.8**
TORD	**Torodi Ar. Bea**	**24.78**	**158**	P	**P**	**15 36 16.1**	**+4.0**
	comp=N,0.1nm,0.3s,baz=335,slow=11,SNR=4.6						
	comp=N,0.1nm,0.3s						
ASAR	**Alice Springs**	**144.46**	**80**	PKP	**PKiKP**	**15 50 27.6**	**-2.2**
	comp=N,0.3nm,0.7s,baz=295,slow=2.7,SNR=5.1						

WEL 20 15:31:46.3±1.2, 31°S±8°×17°8E±1°, h12km, ML4.3/7,
Error ellipse: s-maj=19.6km s-min=4.1km az=121.3,
confirmed, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**4.10**	**58**	P	Pn	15 32 46.9	-2.0
RIZ				S	Sn	15 33 35.7	-1.1
RAO	**Raoul Island**	**4.11**	**59**	S	Sn	15 33 40.6	+3.7
PKGZ	**Pakihiroa**	**6.39**	**180**	P	Pn	15 33 22.5	+2.2
PKGZ				S	Sn	15 34 30.2	-2.9
RUGZ	**Raukumara Rang**	**6.50**	**183**	P	Pn	15 33 22.6	+0.7
RUGZ				S	Sn	15 34 38.3	+2.4
URZ	**Urewera**	**6.83**	**186**	P	Pn	15 33 26.2	-0.1
URZ				S	Sn	15 34 46.9	+3.1
MWZ	**Matawai**	**6.87**	**184**	P	Pn	15 33 26.8	-0.1
MWZ				S	Sn	15 34 43.9	-1.1
CNGZ	**Carnagh Statio**	**7.01**	**179**	P	Pn	15 33 28.0	-0.7
CNGZ				S	Sn	15 34 51.8	+3.4
RAGZ	**Rawiri**	**7.04**	**184**	P	Pn	15 33 29.0	-0.3
OTVZ	**Oturere**	**7.93**	**194**	P	Pn	15 33 40.9	-0.7
FWVZ	**Far West T-bar**	**8.04**	**194**	P	Pn	15 33 44.9	+1.7
FWVZ				S	Sn	15 35 13.3	-0.9
MAVZ	**Matarangi**	**8.05**	**194**	P	Pn	15 33 44.1	+0.7

IDC 20 15:34:19.9±2.5, 1°55S×134°03E, h0km, mb3.2/2,
mbtmp3.3/5, ML3.2/3, MS3.2/1, Error ellipse:
s-maj=58.4km s-min=25.7km az=69.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.84**	**284**	Pn	Pn	15 35 05.1	-1.5
	1.5nm,0.3s,baz=164,slow=18,SNR=11						
SIJI				Sn	Sn	15 35 37.8	-3.8
	2.2nm,0.3s,baz=138,slow=22,SNR=5.5						
	2.9nm,0.3s						
DAV	**Davao City (W)**	**12.02**	**316**	LR	LR	15 40 49.5	
	comp=Z,101nm,19.4s,baz=317,slow=32						
WRA	**Warramunga Arr**	**18.28**	**179**	P	Pn	15 38 34.9	-0.3
	0.1nm,0.3s,baz=0.5,slow=12,SNR=6.5						
	0.4nm,0.7s						
FITZ	**Fitzroy Crossi**	**18.39**	**206**	P	Pn	15 38 36.2	-0.2
	0.1nm,0.3s,baz=25,slow=14,SNR=1.6						
	1.2nm,0.8s						
ASAR	**Alice Springs**	**21.98**	**180**	P	P	15 39 15.5	-0.2
	0.8nm,0.9s,baz=6.3,slow=11,SNR=8.5						
	0.8nm,0.9s						
MKAR	**Makanchi Array**	**66.06**	**324**	P	P	15 45 09.5	+0.8
	0.2nm,0.6s,baz=110,slow=7.5,SNR=2.7						
	0.2nm,0.6s						

*BGSI **20** 15:44:44.7±1.7, 23°.92S×27°.35E, h166km±34km, ML1.6*
PRE 20 15:44:46.4±1.1, 23.79S×27.40E, h0km, ML1.6,
Suspected explosion, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEPH	**Lephalale, Lim**	**0.37**	**101**	*e*P	Pg	15 44 53.9	+0.3
LEPH				*e*S	Sg	15 44 58.3	-0.1
LEPH				IAML		15 45 02.2	
	comp=Z,80nm,0.6s						
LPHEP	**Lephephe**	**1.47**	**286**	*i* P	Pb	15 45 14.9	+0.2
LPHEP				*i* S	Sn	15 45 35.2	+0.8
LPHEP				IAML		15 45 39.1	
	comp=N,10nm,0.4s						
LBTB	**Lobatse**	**2.04**	**233**	*e*P	Pn	15 45 22.7	+0.5
LBTB				*e*S	Sb	15 45 49.6	-1.0
LBTB				IAML		15 45 56.7	
	comp=Z,4.3nm,0.2s						
HRAO	**HartRAO**	**2.11**	**173**	*e*P	Pb	15 45 24.7	-0.9
HRAO				*e*S	Sb	15 45 51.4	-1.1
HRAO				IAML		15 45 56.8	
	comp=Z,4.7nm,0.4s						
KDWAN	**Kaudwane**	**2.54**	**279**	*i* P	Pn	15 45 24.4	-4.6
KDWAN				*i* S	Sn	15 45 56.0	-4.8
KDWAN				IAML		15 46 21.9	
	comp=N,5.1nm,0.3s						
BROLN	**Tlhalogang**	**2.68**	**359**	*i* P	Pn	15 45 28.7	-2.2
BROLN				IAML		15 46 11.0	
	comp=E,3.9nm,0.4s						
BOSA	**Boshof**	**5.18**	**201**	*e*P	Pn	15 46 05.6	+0.3
BOSA				*e*S	Sn	15 47 03.6	-2.2
BOSA				IAML		15 47 36.2	
	comp=Z,1.4nm,0.3s						

*NEIC **20** 16:09:28.0±2.0, 23°.6S±0°.1×179°.9W±0°.2, h506km±11km,*
mb4.6/29, Error ellipse: s-maj=20.8km s-min=17.6km
az=78.0
*NOU **20** 16:09:30.9, 23°.69S×179°.96W, h537km, mb4.5/25, South*
of Fiji Islands
*IDC **20** 16:09:30.5±1.3, 23°.60S×179°.99W, h531km±13km,*
mb3.7/15, mbtmp4.5/18, Error ellipse: s-maj=15.6km
s-min=12.5km az=114.0
ISC 20 16:09:29.8±0.4, 23°.69S±0°.06×179°.96W±0°.06, h532km,
n145, σ1s58/159, mb4.5/35, 4C-2D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.21**	**342**	P	**P**	**16 11 09.7**	**0.0**
	9.2nm,0.7s,baz=156,slow=16,SNR=6.7						
MSVF				S	**S**	**16 12 31.0**	**-0.3**
	12nm,1.0s,baz=152,slow=20,SNR=1.6						
MSVF	**Nonsavu**	**6.21**	**342**	P	**P**	**16 11 06.3**	**-3.4**
DGTI	**Dogotuki**	**7.35**	**358**	P	**P**	**16 11 22.0**	**+1.3**
NIUE	**Niue**	**10.41**	**66**	P	**P**	**16 11 48.0**	**-3.8**
NIUE	**Niue**	**10.41**	**66**	S	**S**	**16 13 50.9**	**+2.4**
**MARNC

CTAO	Charters Tower	31.52 270	P		P	16 15 09.5	+1.1	
CTAO	Charters Tower	31.52 270			P	16 15 08.8	+0.3	
QLP	Quilpie	32.48 257	P		P	16 15 17.7	+1.1	
TOO	Toolangi	32.60 237	P		P	16 15 17.8	+0.2	
PMG	Port Moresby	34.46 289	P		P	16 15 34.2	+0.7	
PMG	Port Moresby	34.46 289			P	16 15 33.8	+0.4	
STKA	Stephens Creek	34.84 248	P		P	16 15 37.6	+1.2	
	comp=Z,3.6nm,0.5s,baz=93,slow=12,SNR=14							
	comp=Z,3.6nm,0.5s							
STKA	Stephens Creek	34.84 248	P		P	16 15 36.7	+0.3	
INKA	Innaminka	35.54 255			P	16 15 42.8	+0.6	
COEN	Coen	36.12 279	P		P	16 15 47.9	+0.6	
COEN			IAmb		IAmb	16 16 24.0		
	comp=Z,20nm,1.2s							
BBOO	Buckleboo	39.57 247	P		P	16 16 14.9	-0.2	
BBOO			IAmb		IAmb	16 16 51.1		
	comp=Z,23nm,1.4s							
AS31	Alice Springs	42.11 260			P	16 16 35.3	-0.3	
ASAR	Alice Springs	42.11 260	P		P	16 16 35.9	+0.3	
	comp=Z,19nm,0.7s,baz=96,slow=7.4,SNR=311							
ASAR			pP		pP	16 18 12.0	+2.3	
	comp=Z,3.1nm,1.1s,baz=87,slow=8.7,SNR=5.9							
ASAR			ScP		ScP	16 21 18.3	+0.5	
	comp=Z,3.6nm,0.9s,baz=98,slow=3.9,SNR=13							
ASAR			S		S	16 22 15.3	-1.5	
	comp=Z,1.1nm,1.1s,baz=99,slow=17,SNR=5.4							
	comp=Z,19nm,0.7s							
ASAR	Alice Springs	42.11 260			P	16 16 35.6	+0.1	
ASAR					ScP	16 21 20.5	+2.7	
WR8	Warramunga Arr	42.31 266			P	16 16 36.2	-1.0	
WR8			IAmb		IAmb	16 16 37.7		
	comp=Z,19nm,0.9s							
WB0	Warramunga Arr	42.45 266	P		P	16 16 37.6	-0.7	
WB0			IAmb		IAmb	16 16 38.9		
	comp=Z,25nm,0.9s							
WRAB	Tennant Creek	42.45 266	P		P	16 16 37.9	-0.4	
WRAB	Tennant Creek	42.45 266	P		P	16 16 37.9	-0.4	
WRAB			IAmb		IAmb	16 16 38.8		
	comp=Z,20nm,0.8s							
WRA	Warramunga Arr	42.46 266	P		P	16 16 38.0	-0.3	
	comp=Z,11nm,0.3s,baz=93,slow=8.4,SNR=742							
WRA			pP		pP	16 18 13.3	+0.6	
	comp=Z,2.1nm,0.9s,baz=98,slow=7.6,SNR=4.0							
WRA			ScP		ScP	16 21 19.5	+0.2	
	comp=Z,2.3nm,0.9s,baz=105,slow=4.0,SNR=8.4							
WRA			S		S	16 22 17.9	-4.0	
	comp=Z,1.9nm,0.8s,baz=103,slow=14,SNR=5.5							
	comp=Z,11nm,0.3s							
FORT	Forrest	46.42 249			P	16 17 07.2	-1.5	
FORT			IAmb		IAmb	16 17 09.8		
	comp=Z,10nm,0.6s							
MTN	Manton Dam	47.48 274	P		P	16 17 16.1	-0.8	
MTN			IAmb		IAmb	16 17 17.4		
	comp=Z,9.8nm,0.5s							
AUDHS	Darwin High Sc	47.90 275	P		P	16 17 19.5	-0.5	
KNRA	Kununurra	48.73 270			P	16 17 26.3	+0.1	
KNRA			IAmb		IAmb	16 17 27.3		
	comp=Z,24nm,0.8s							
SOEI	Soe	54.87 275	P		P	16 18 11.6	+1.0	
SOEI	Soe	54.87 275			P	16 18 10.5	-0.1	
PSA00	Pilbara Seismi	55.24 259			P	16 18 11.2	-1.8	
MBWA	Marble Bar	55.45 260	P		P	16 18 14.5	0.0	
MBWA	Marble Bar	55.45 260	P		P	16 18 13.1	-1.4	
MBWA			IAmb		IAmb	16 18 15.2		
	comp=Z,14nm,0.8s							
SANI	Sanana	56.50 284	P		P	16 18 21.3	-0.5	
MORW	Morawa	56.99 250	P		P	16 18 24.2	-0.8	
MMRI	Maumere	57.14 275	P		P	16 18 25.0	-1.2	
MMRI			IAmb		IAmb	16 18 27.0		
	comp=Z,31nm,1.1s							
LUWI	Luwuk	59.82 283	P		P	16 18 45.1	+0.8	
PLAI	Plampang	61.15 273	P		P	16 18 52.9	-0.2	
TOLI2	Tolitoli	62.56 284	P		P	16 19 01.5	-0.8	
TOLI2	Tolitoli	62.56 284			P	16 19 00.8	-1.5	
TOLI2			IAmb		IAmb	16 19 02.5		
	comp=Z,19nm,0.8s							
QSPA	South Pole Qui	66.40 180	P		P	16 19 27.5	+1.6	
	comp=Z,3.9nm,0.8s,baz=333,slow=0.9,SNR=20							
	comp=Z,3.9nm,0.8s							
QSPA	South Pole Qui	66.40 180	P		P	16 19 27.4	+1.6	
KKM	Kota Kinabalu	68.88 287			P	16 19 40.7	-1.2	
KKM			IAmb		IAmb	16 19 43.0		
	comp=Z,22nm,1.2s							
JOW	Kunigami	70.88 312	P		P	16 19 54.3	+0.9	
MJAR	Matsushiro Arr	71.75 326	P		P	16 19 57.9	-0.3	
	comp=Z,4.9nm,0.9s,baz=163,slow=5.8,SNR=9.3							
	comp=Z,4.9nm,0.9s							
MJAR	Matsushiro Arr	71.75 326	P		P	16 19 57.4	-0.8	
NACB	Ninganchiao	74.01 306	P		P	16 20 12.7	+1.2	
KSRS	Korea Array	78.11 320	P		P	16 20 34.5	+0.7	
	comp=Z,2.5nm,0.8s,baz=139,slow=5.9,SNR=7.6							
	comp=Z,2.5nm,0.8s							
PETK	Petropavlovsk-	78.90 346	P		P	16 20 38.1	+0.4	
	comp=Z,10.0nm,1.0s,baz=186,slow=6.3,SNR=8.6							
	comp=Z,10.0nm,1.0s							
NJ2	Nanjing	80.55 311	eP		P	16 20 47.8	+1.0	
NJ2			pmax		pmax			
	comp=Z,31nm,0.5s							
USRK	Ussuriysk Ar.	80.61 327	P		P	16 20 47.1	+0.3	
	comp=Z,5.2nm,1.0s,baz=122,slow=5.2,SNR=7.5							
	comp=Z,5.2nm,1.0s							
ELIB	Princess Elisa	83.28 187	dP		P	16 21 01.5	+1.2	
ELIB			dpP		pP	16 22 50.8	-3.9	
BNX	BinXian	84.00 326	⇑P		P	16 21 04.4	+0.4	
BNX			pmax		pmax			
	comp=Z,8.0nm,0.9s							
TIA	Tai'an	84.11 314	P		P	16 21 06.0	+1.2	
TIA			pmax		pmax			
	comp=Z,19nm,0.9s							
TROLL	Troll, Antarti	84.55 181	⇑P		P	16 21 07.2	+0.6	
NVAR	Mina Array Bea	84.57 44	P		P	16 21 08.0	+0.7	
	comp=Z,0.8nm,0.7s,baz=219,slow=7.1,SNR=6.0							
	comp=Z,0.8nm,0.7s							
VNA3	Neumayer Olymp	85.09 177	⇑P		P	16 20 57.3	-12	
	comp=Z,6.1nm,0.7s							
ENH	Enshi	86.35 305	P		P	16 21 17.0	+1.2	
MA2	Magadan	86.38 346	P		P	16 21 15.4	+0.2	
HNS	HongShan	86.39 314	⇑P		P	16 21 17.4	+1.7	
HNS			pmax		pmax			
	comp=Z,6.0nm,1.7s							
CMAR	Chiang Mai Arr	89.49 290	P		P	16 21 32.3	+1.6	
	comp=Z,3.2nm,0.9s,baz=132,slow=3.4,SNR=21							
	comp=Z,3.2nm,0.9s							
CHTO	Chiang Mai	89.64 291	P		P	16 21 33.2	+1.8	
TXAR	Lajitas Array	90.28 58	P		P	16 21 36.0	+1.7	
	comp=Z,1.2nm,0.8s,baz=207,slow=6.5,SNR=14							
	comp=Z,1.2nm,0.8s							
HHC	Hu-ho-hao-te	90.30 315	eP		P	16 21 35.3	+1.2	
HHC			pmax		pmax			
	comp=Z,8.0nm,0.7s							
HHC			pmax		pmax			
	comp=Z,110nm,6.2s							
PZH	PanZhiHua	90.62 299	P		P	16 21 36.9	+1.0	
PZH			pmax		pmax			
	comp=Z,10.0nm,0.7s							
ILAR	Eielson Array	91.81 14	P		P	16 21 39.9	-0.5	
	comp=Z,0.5nm,1.0s,baz=223,slow=7.1,SNR=4.3							
	comp=Z,0.5nm,1.0s							
PDAR	Pinedale Array	92.51 44	P		P	16 21 44.8	+0.4	
	comp=Z,0.5nm,0.7s,baz=222,slow=4.7,SNR=6.7							
	comp=Z,0.5nm,0.7s							
WMQ	Urumqi	107.63 311	Pdif		Pdif	16 22 52.0	+0.2	
WMQ			LR		LR			
	comp=Z,140nm,21.5s							
KURBB	Kurchatov Arra	115.12 316	PKP		PKPdf	16 27 08.9	-1.4	
	comp=Z,0.6nm,0.7s,baz=89,slow=1.6,SNR=3.5							
BVAR	Borovoye Array	120.31 319	PKP		PKPdf	16 27 19.7	-0.5	
	comp=Z,0.7nm,0.5s,baz=127,slow=2.1,SNR=3.0							
FINES	FINESS Array B	138.26 342	PKhKP		PKPpre	16 27 45.4		
	comp=Z,0.4nm,0.5s,baz=33,slow=3.3,SNR=4.5							
FINES			PKP		PKPdf	16 27 53.6	-0.2	
	comp=Z,1.8nm,0.8s,baz=33,slow=3.3,SNR=3.4							
NB2	NORSAR Subarra	141.88 351	PKP		PKPpre	16 27 56.1		
	comp=Z,13nm,1.2s,baz=15,slow=4.8							
NOA	NORSAR Array B	141.88 351	PKhKP		PKPpre	16 27 56.0		
	comp=Z,1.8nm,0.8s,baz=16,slow=3.1,SNR=5.8							
HFS	Hagfors	142.34 349	PKhKP		PKPpre	16 27 57.5		
	comp=Z,2.4nm,0.3s,baz=59,slow=2.4,SNR=36							
AKASG	Malin Array Be	144.81 327	PKP		PKPdf	16 28 05.7	-0.1	
	comp=Z,1.3nm,0.3s,baz=44,slow=4.3,SNR=45							
AKASG			SKPbc		SKPbc	16 30 55.1	0.0	
	comp=Z,1.6nm,0.8s,baz=58,slow=1.6,SNR=5.4							
AKBB	Malin Array Si	144.81 327	PKPdf		PKPdf	16 28 05.4	-0.5	
KIEV	Kiev	144.83 327	PKPdf		PKPdf	16 28 05.5	-0.4	
SUW	Suwalki	145.09 336	ePKP		PKPab	16 28 09.0	+1.0	
MI28	Mi28,Pidlybu	145.42 329	PKPdf		PKPdf	16 28 06.7	-0.2	
LUBAR	Lubar, Ukraine	146.04 327	PKPdf		PKPbc	16 28 09.2	-0.8	
BRTR	Keskin Array B	147.48 307	PKPbc		PKPbc	16 28 14.2	-0.1	
	comp=Z,1.0nm,0.5s,baz=151,slow=3.3,SNR=8.3							
KMPD	K-Podol'skiy	147.56 327	PKPdf		PKPdf	16 28 11.6	+1.0	
MMAI	Mount Meron Ar	147.65 295	PKPbc		PKiKP	16 28 15.9	-0.6	
	comp=Z,2.6nm,0.4s,baz=149,slow=3.0,SNR=25							
EKA	Eskdalemuir Ar	148.30 3	PKPbc		PKPbc	16 28 15.3	-0.4	
	comp=Z,0.4nm,0.3s,baz=355,slow=2.4,SNR=5.0							
KSV	Kosov	148.43 327	PKPdf		PKPbc	16 28 14.6	-1.7	
STNU	Stavnia	148.43 328	PKPdf		PKPbc	16 28 15.4	-0.9	
SHIU	Shidnytsya	148.60 330	PKPdf		PKPbc	16 28 15.9	-0.8	
MEZ	Mezhgor'ye	149.04 329	PKPdf		PKPbc	16 28 17.8	0.0	
OJC	Ojcow	149.36 335	ePKP		PKiKP	16 28 19.0	-0.3	
STHS	Stebnicka Huta	149.40 332	ePKP		PKiKP	16 28 19.1	-0.4	
NIE	Niedzica	149.79 333	ePKP		PKiKP	16 28 21.3	+1.1	
KSP	Ksiaz	150.10 339	ePKP		PKiKP	16 28 21.0	+0.2	
LANS	Liptovska Anna	150.34 334	ePKP		PKiKP	16 28 22.2	+0.8	
LANS			e			16 28 28.3		
MORC	Moravsky Berou	150.57 337	ePKP		PKiKP	16 28 21.8	-0.1	
CLL	Collm	150.66 343	i PKPbc		PKiKP	16 28 21.9	-0.1	
	comp=Z,17nm,1.1s							
CLL			i PKPab		PKPab	16 28 31.0	+0.2	
	comp=Z,6.0nm,0.6s							
JAVC	Velka Javorina	151.28 335	ePKP		PKiKP	16 28 25.6	+2.2	
KRUC	Moravsky	151.58 337	ePKP		PKiKP	16 28 23.9	0.0	
MODS	Modra-Piesok	151.83 335	ePKP		PKPab	16 28 37.1	+1.2	
MODS			e			16 58 13.7		
MODS			e			16 58 55.1		
GERES	GERESS Array B	152.67 340	PKPbc		PKPbc	16 28 26.0	-0.2	
	comp=Z,0.5nm,0.7s,baz=84,slow=3.1,SNR=3.6							
GERES			PKPab		PKPab	16 28 38.4	-1.1	
	comp=Z,0.3nm,0.4s,baz=5.0,slow=2.4,SNR=2.5							
TORD	Torodi Ar. Bea	169.40 189	PKP		PKPdf	16 28 35.2	-1.7	
	comp=Z,0.9nm,0.9s,baz=278,slow=1.0,SNR=3.8							

*IDC **20** 16:14:08.7±0.8, 8.07N×72.60W, h189km±9km, mb3.0/4, mbtmp3.6/6, Error ellipse: s-maj=24.4km s-min=9.4km az=134.0*
*RSNC **20** 16:14:08.7±0.0, 8.1°N±1.7°×73.3°W±0.5°, h165km±3km, M3.5, mb3.9, ML3.2*
*FUNV **20** 16:14:10.0, 8.25N×72.86W, h9km, MW3.5, Presumed earthquake*
ISC 20 16:14:08.7±0.8, 8.25N±0.03×72.90W±0.04, h160km±6km, n40, σ1s73/68, mb3.4/3, Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OCAC	Ocana	0.41	269	P	Pn	16 14 32.0	+1.0
OCAC				S	Sn	16 14 49.3	+1.3
PAMC	Pamplona, Colo	0.93	168	P	Pn	16 14 34.9	+0.5
PAMC				S	Sn	16 14 54.5	+0.3
BRJC	Barrancabermej	1.52	213	P	Pn	16 14 39.2	0.0
BRJC				S	Sn	16 15 02.3	-0.5
ARGC	Ariguani, Magd	2.08	320	P	Pn	16 14 47.7	+2.3
ARGC				S	Sn	16 15 14.8	+1.1
PTBC	PUERTO BERRIO,	2.29	222	P	Pn	16 14 47.5	-0.4
PTBC				S	Sn	16 15 16.3	-1.9
SDV	Santo Domingo	2.33	74	P	Pn	16 14 48.7	+0.3
	38nm,0.3s,baz=238,slow=7.5,SNR=78						
SDV				S	Sn	16 15 18.1	-1.1
	86nm,0.4s,baz=23,slow=14,SNR=14						
SDV	Santo Domingo	2.33	74	P	Pn	16 14 48.2	-0.3
SDV				S	Sn	16 15 18.0	-1.1
SDV	Santo Domingo	2.33	74	eP	Pn	16 14 48.6	+0.2
SDV				eS	Sn	16 15 15.1	-4.1
RUSC	La Rusia	2.35	184	P	Pn	16 14 48.4	-0.6
RUSC				S	Sn	16 15 18.6	-1.5
RUSC	La Rusia	2.35	184	eP	Pn	16 14 48.9	-0.1
RUSC				eS	Sn	16 15 18.9	-4.2
UREC	San Jos de Ur	2.65	259	P	Pn	16 14 51.3	-0.9
URES				S	Sn	16 15 24.3	-1.5
SJCC	San Jacinto, C	2.78	306	P	Pn	16 14 54.3	+0.5
SJCC				S	Sn	16 15 28.3	-0.5
SJCC	San Jacinto, C	2.78	306	eP	Pn	16 14 54.4	+0.6
SJCC				eS	Sn	16 15 28.3	-0.5
SPBC	San Pablo de B	2.83	204	P	Pn	16 14 53.8	-0.7
SPBC				S	Sn	16 15 28.8	-1.2
SMRC	Santa Marta, M	3.18	336	P	Pn	16 14 59.1	+0.4
SMRC				S	Sn	16 15 34.7	-2.9
NORC	Norcasia	3.31	216	P	Pn	16 15 00.6	+0.2
NORC				S	Sn	16 15 38.1	-2.5
HELC	Santa Helena	3.31	232	P	Pn	16 15 00.3	-0.5
HELC				S	Sn	16 15 38.5	-2.7
HELC	Santa Helena	3.31	232	eP	Pn	16 15 00.7	-0.1
HELC				eS	Sn	16 15 39.2	-2.0
DBBC	Dabeiba	3.50	250	P	Pn	16 15 02.5	-0.4
DBBC				S	Sn	16 15 41.1	-3.9
URIC	Uribia, Colomb	3.55	15	P	Pn	16 15 02.7	-0.7
URIC				S	Sn	16 15 43.2	-2.8
URIC	Uribia, Colomb	3.55	15	eP	Pn	16 15 02.4	-0.9
URIC				eS	Sn	16 15 43.2	-2.8
APAC	Apartado, Choc	3.66	265	P	Pn	16 15 04.8	0.0
APAC				S	Sn	16 15 45.3	-3.2
ROSC	El Rosal	3.67	203	P	Pn	16 15 07.0	+1.6
	15nm,0.4s,baz=105,slow=12,SNR=8.7						
ROSC				S	Sn	16 15 51.0	+1.6
	20nm,0.4s,baz=10,slow=9.5,SNR=6.6						
CHIC	Chingaza	3.69	193	P	Pn	16 15 05.6	0.0
GUY2C	Guyana, Caldas	3.88	219	P	Pn	16 15 08.2	+0.1
CBOC	Ciudad Bolivar	3.89	233	P	Pn	16 15 08.4	+0.4
CBOC				S	Sn	16 15 53.2	-1.0
VILC	Villavicencio,	4.18	191	P	Pn	16 15 12.2	+0.4
VILC				S	Sn	16 15 59.9	-1.1
ANIL	Santa Ana	4.49	214	P	Pn	16 15 17.4	+1.6
PLMC	San Jos del P	4.72	226	P	Pn	16 15 19.4	+0.6
PLMC				S	Sn	16 16 14.2	+0.7
ORTC	Ortega, Tolima	4.90	209	P	Pn	16 15 21.5	+0.4
ORTC				S	Sn	16 16 16.4	-1.2
PRAC	Prado	4.92	204	P	Pn	16 15 21.8	+0.5
URMC	La Uribe, Meta	5.18	197	P	Pn	16 15 24.4	-0.4
	7.7nm,0.4s						
URMC				S	Sn	16 16 21.0	-3.3
	7.7nm,0.4s						
BCIP	Isla Barro Col	6.92	278	P	Pn	16 15 47.8	+0.1
BCIP				S	Sn	16 17 02.7	-2.8
TXAR	Lajitas Array	35.70	310	P	P	16 20 51.4	-0.6
	0.6nm,0.8s,baz=128,slow=11,SNR=5.3						
	0.6nm,0.8s						
PDAR	Pinedale Array	47.07	323	P	P	16 22 24.4	-0.1
	0.2nm,0.4s,baz=129,slow=9.3,SNR=4.1						
	0.2nm,0.4s						
YKA	Yellowknife Ar	62.01	340	P	P	16 24 10.6	-1.0
	0.3nm,0.5s,baz=132,slow=6.2,SNR=8.1						
	0.3nm,0.5s						
TORD	Torodi Ar. Bea	73.24	79	P	P	16 25 18.7	-4.2
	0.2nm,0.3s,baz=282,slow=6.2,SNR=2.3						
	0.2nm,0.3s						
ASAR	Alice Springs	150.10	236	PKPbc	PKPdf	16 33 36.3	+0.1
	0.2nm,0.5s,baz=130,slow=2.7,SNR=4.1						
WRA	Warramunga Arr	151.19	243	PKPbc	PKPdf	16 33 40.4	+2.5
	0.2nm,0.3s,baz=106,slow=2.4,SNR=15						
CMAR	Chiang Mai Arr	152.27	17	PKPbc	PKPdf	16 33 44.4	+4.8
	0.3nm,0.5s,baz=317,slow=1.1,SNR=2.3						

*IDC **20** 16:18:40.8±1.9, 41.62N×81.37E, h0km, mb3.5/3, mbtmp3.4/9, ML3.0/6, Error ellipse: s-maj=24.2km s-min=18.8km az=147.0*
*SOME **20** 16:18:43.6, 41.87N×81.18E, h20km*
*NNC **20** 16:18:46.0±1.2, 41.88N×80.99E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=8.3km s-min=5.8km az=151.0*
ISC 20 16:18:38.5±1.7, 41.40N±0.05×81.03E±0.05, h2km±11km, n67, σ2s60/95, 10C-12D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	2.10	347	P	Pn	16 19 14.9	0.0
	16nm,0.2s						
KTMS				S	Sn	16 19 38.4	-3.4
	301nm,0.4s						
KTMS	Ketmen	2.10	347	eP	Pn	16 19 14.9	0.0
	16nm,0.2s						
KTMS				eS	Sn	16 19 38.4	-3.4
	301nm,0.4s						
SHLS	Shalkode	2.10	327	P	Pn	16 19 13.5	-1.5
	175nm,0.4s						
SHLS				S	Sn	16 19 36.0	-5.7
	832nm,0.3s						
SHLS	Shalkode	2.10	327	eP	Pn	16 19 13.5	-1.5
	175nm,0.4s						
SHLS				eS	Sn	16 19 35.7	-6.1
	832nm,0.3s						
PDGK	Podgornoye	2.24	330	⇑Pn	Pn	16 19 17.9	+1.1
	77nm,0.5s						
PDGK				⇑Sn	Sb	16 19 49.2	+1.2
	444nm,0.5s						
UZB	Uzynbulak	2.29	320	Pg	Pb	16 19 20.9	+0.2
	162nm,0.4s						
UZB				Lg	Lg	16 19 48.4	
	651nm,0.4s						
UZB	Uzynbulak	2.29	320	eP	Pb	16 19 20.9	+0.2
	162nm,0.4s						
UZB				eS	Sn	16 19 48.4	+1.9
	651nm,0.4s						
SATY	Saty	2.56	311	Pg	Pg	16 19 27.6	+0.1
	453nm,0.7s						
SATY				Lg	Lg	16 19 59.7	
	1µm,0.7s						
KPKS	Kokpek	2.69	321	Pg	Pb	16 19 27.3	-0.3
	0.2nm,0.1s						
KPKS				Lg	Lg	16 19 59.1	
	588nm,0.7s						
KPKS	Kokpek	2.69	321	eP	Pb	16 19 27.3	-0.3
	0.2nm,0.1s						
KPKS				eS	Sn	16 19 59.1	+2.8
	588nm,0.7s						
KURS	Kuram	2.97	316	Pg	Pb	16 19 32.9	+0.6
	32nm,0.4s						
KURS				Lg	Lg	16 20 08.4	
	274nm,0.7s						
DJR	Jarkent	3.07	343	Pg	Pb	16 19 32.4	-1.5
	16nm,0.3s						
DJR				Lg	Lg	16 20 07.8	
	242nm,0.6s						
DJR	Jarkent	3.07	343	eP	Pb	16 19 32.4	-1.5
	16nm,0.3s						
DJR				eS	Sn	16 20 07.8	+2.3
	242nm,0.6s						
KNOS	Konyrlen	3.25	336	Pg	Pb	16 19 35.7	-1.5
	19nm,0.5s						
KNOS				Lg	Lg	16 20 13.4	
	159nm,0.7s						
BLB	Baldybastay	3.28	326	Pg	Pb	16 19 37.7	+0.1
	115nm,0.3s						
BLB				Lg	Lg	16 20 16.9	
	692nm,0.5s						
KOTS	Kotyrbulak	3.43	304	Pg	Pg	16 19 43.7	-0.6
	43nm,0.3s						
KOTS				Lg	Lg	16 20 27.0	
	303nm,0.6s						
KOTS	Kotyrbulak	3.43	304	eP	Pg	16 19 43.7	-0.6
	43nm,0.3s						
KOTS				eS	Sb	16 20 27.0	+4.6
	303nm,0.6s						
MDOK	Medeo	3.44	302	Pg	Pg	16 19 43.2	-1.2
	55nm,0.5s						
MDOK				Lg	Lg	16 20 26.1	
	173nm,0.5s						
TNSS	Tian-Shan	3.44	300	Pg	Pg	16 19 44.1	-0.4
	8.6nm,0.3s						
TNSS				Lg	Lg	16 20 27.7	
	30nm,0.7s						
TNSS	Tian-Shan	3.44	300	eP	Pg	16 19 44.1	-0.4
	8.6nm,0.3s						
TNSS				eS	Sg	16 20 27.7	-1.4
	30nm,0.7s						
KNDC	Almaty	3.52	302	⇑Pn	Pb	16 19 41.3	-0.2
	56nm,0.6s						
KNDC				⇓Lg	Lg	16 20 28.8	
	289nm,0.8s						
AAA	Alma-Ata	3.54	302	Pg	Pg	16 19 46.8	+0.4
	40nm,0.1s						
AAA				Lg	Lg	16 20 32.1	
	7.4nm,0.3s						
AAA	Alma-Ata	3.54	302	eP	Pg	16 19 46.8	+0.4
	40nm,0.1s						
AAA				eS	Sg	16 20 32.1	-0.3
	7.4nm,0.3s						
IZV	Izvestkoviy	3.66	298	Pg	Pg	16 19 48.2	-0.6
	33nm,0.5s						
IZV				Lg	Lg	16 20 34.5	
	290nm,0.6s						
IZV	Izvestkoviy	3.66	298	eP	Pg	16 19 48.2	-0.6
	33nm,0.5s						
IZV				eS	Sg	16 20 34.5	-1.7
	290nm,0.6s						
ARXS	Arharly	3.67	321	Pg	Pb	16 19 44.9	+0.8
	14nm,0.3s						
ARXS				Lg	Lg	16 20 29.1	
	146nm,0.7s						
ARXS	Arharly	3.67	321	eP	Pb	16 19 44.9	+0.8
	14nm,0.3s						
ARXS				eS	Sb	16 20 29.1	0.0
	146nm,0.7s						
KTBS	Karatobe	3.95	307	Pg	Pg	16 19 53.1	-1.2
	15nm,0.3s						
KTBS				Lg	Lg	16 20 43.0	
	0.5nm,0.3s						
KTBS	Karatobe	3.95	307	eP	Pg	16 19 53.1	-1.2
	15nm,0.3s						
KTBS				eS	Sg	16 20 43.0	-2.6
	0.5nm,0.3s						
KAPS	Kapalarasan	4.07	343	Pg	Pb	16 19 50.0	-1.0
	16nm,0.3s						
KAPS				Lg	Lg	16 20 37.9	
	167nm,0.5s						
TDK	Taldyqorghan	4.08	333	Pg	Pb	16 19 51.4	+0.3
	54nm,0.1s						
TDK				Lg	Lg	16 20 40.0	
	186nm,0.3s						
TDK	Taldyqorghan	4.08	333	eP	Pb	16 19 51.4	+0.3
	54nm,0.1s						
TDK				eS	Sb	16 20 40.0	-0.8
	186nm,0.3s						
KST	Kastek	4.10	295	Pg	Pg	16 19 56.5	-0.7
	22nm,0.3s						
KST				Lg	Lg	16 20 48.8	
	148nm,0.7s						
KST	Kastek	4.10

MAKZ					⇓Lg		Lg		16 21 20.9	
	comp=Z,19nm,0.8s									
MK31	**Makanchi Array**	**5.47**	**9**		Pn		**Pn**		**16 20 02.4**	**+1.3**
	comp=Z,0.9nm,0.3s,baz=188,slow=13,SNR=139									
MK31					⇑Pg		**Pb**		**16 20 15.8**	**+1.0**
	comp=Z,2.9nm,0.5s,baz=186,slow=14,SNR=6.3									
MK31					⇓Sn		**Sn**		**16 21 03.7**	**-0.8**
	comp=Z,12nm,0.6s,baz=182,slow=24,SNR=3.7									
MK31					⇓Lg		Lg		16 21 22.5	
	comp=Z,13nm,0.5s,baz=186,slow=28,SNR=4.0									
MKAR	**Makanchi Array**	**5.47**	**9**		Pn		**Pn**		**16 20 02.4**	**+1.4**
	comp=Z,2.9nm,0.3s,baz=190,slow=13,SNR=111									
MKAR					Sn		**Sn**		**16 21 03.5**	**-1.1**
	comp=Z,5.7nm,0.3s,baz=187,slow=18,SNR=10									
MKAR					Lg		Lg		16 21 21.7	
	comp=Z,4.6nm,0.3s,baz=181,slow=27,SNR=7.6									
	comp=Z,4.1nm,0.3s									
WMQ	**Urumqi**	**5.48**	**62**		Pn		Pn		16 20 04.9	+3.6
WMQ					Sn		**Sn**		**16 21 08.4**	**+3.4**
WMQ					smax		smax			
	comp=N,50nm,1.1s									
WMQ					smax		smax			
	comp=E,63nm,1.3s									
MRKS	**Merke**	**5.96**	**286**		Pg		**Pg**		**16 20 34.1**	**+1.4**
	comp=E,23nm,0.5s									
MRKS					Lg		Lg		16 21 53.1	
	comp=E,32nm,0.7s									
MRKS	**Merke**	**5.96**	**286**	*eP*			**Pg**		**16 20 34.1**	**+1.4**
	comp=E,23nm,0.5s									
MRKS				*eS*			**Sg**		**16 21 53.1**	**+3.3**
	comp=E,32nm,0.7s									
BTLS	**Baital**	**6.26**	**308**		Pg		**Pg**		**16 20 35.5**	**-3.0**
	comp=E,6.4nm,0.5s									
BTLS					Lg		Lg		16 21 55.5	
	comp=E,31nm,0.8s									
BTLS	**Baital**	**6.26**	**308**	*eP*			**Pg**		**16 20 35.5**	**-3.0**
	comp=E,6.4nm,0.5s									
BTLS				*eS*			**Sg**		**16 21 55.5**	**-4.1**
	comp=E,31nm,0.8s									
ZSN	**Zaisan**	**6.64**	**23**		Pg		Pb		16 20 38.9	+4.1
	comp=E,4.9nm,0.4s									
ZSN					Lg		Lg		16 22 02.0	
	comp=E,30nm,1.0s									
ZSN	**Zaisan**	**6.64**	**23**	*eP*			Pb		16 20 38.9	+4.1
	comp=E,4.9nm,0.4s									
ZSN				*eS*			**Sb**		**16 22 01.9**	**+7.4**
	comp=E,30nm,1.0s									
KK31	**Karatay Array**	**7.98**	**286**		⇓Pg		**Pg**		**16 21 10.1**	**-1.3**
	comp=E,3.0nm,0.6s,baz=87,slow=17,SNR=18									
KK31					⇓Lg		Lg		16 22 57.8	
	comp=E,12nm,0.7s,baz=94,slow=26,SNR=6.2									
IUG	**luzhnay**	**8.25**	**279**		Pg		**Pg**		**16 21 16.7**	**+0.1**
	comp=E,19nm,0.8s									
IUG	**luzhnay**	**8.25**	**279**	*eP*			**Pg**		**16 21 16.7**	**+0.1**
	comp=E,19nm,0.8s									
IUG				*eS*			**Sg**		**16 23 06.0**	**+2.6**
	comp=E,52nm,1.5s									
BRLS	**Borolday**	**8.46**	**285**		Pg		**Pg**		**16 21 23.8**	**+3.2**
	comp=E,1.6nm,0.3s									
BRLS					Lg		Lg		16 23 18.4	
	comp=E,8.5nm,0.7s									
BRLS	**Borolday**	**8.46**	**285**	*eP*			**Pg**		**16 21 23.8**	**+3.2**
	comp=E,1.6nm,0.3s									
BRLS				*eS*			**Sg**		**16 23 18.4**	**+8.2**
	comp=E,8.5nm,0.7s									
KURBB	**Kurchatov Arra**	**9.38**	**350**		Pn		**Pn**		**16 20 55.7**	**+1.0**
	baz=172,slow=12,SNR=4.6									
KURBB					Sn		**Sn**		**16 22 36.7**	**-4.1**
	comp=E,0.1nm,0.3s,baz=147,slow=23,SNR=5.0									
KURBB					Lg		Lg		16 23 30.9	
	comp=E,0.2nm,0.3s,baz=170,slow=27,SNR=2.7									
	comp=E,0.1nm,0.3s									
KURBB	**Kurchatov Arra**	**9.38**	**350**	⇑	Pn		Pn		16 20 58.8	+4.1
	comp=E,2.0nm,0.8s									
KURBB					⇓Sn		**Sn**		**16 22 42.0**	**+1.2**
	comp=E,30nm,0.6s									
KURBB					⇑Lg		Lg		16 23 30.8	
	comp=E,49nm,0.7s									
KURK	**Kurchatov**	**9.46**	**351**	⇑	Pn		Pn		16 21 01.3	+5.5
	comp=E,1.1nm,0.9s									
KURK					⇓Sn		**Sn**		**16 22 44.5**	**+1.8**
	comp=E,5.0nm,0.8s									
KURK					⇓Lg		Lg		16 23 34.1	
	comp=E,9.7nm,0.9s									
GOMU	**GeErMu**	**11.94**	**111**		Pn		Pn		16 21 32.4	+2.2
GOMU					Sn		Sn		16 23 26.3	-18
GOMU					smax		smax			
	comp=N,5.0nm,0.9s									
GOMU					smax		smax			
	comp=E,3.0nm,0.7s									
ZALV	**Zalesovo Beam**	**12.81**	**10**		Pn		**Pn**		**16 21 40.9**	**-0.7**
	comp=E,0.2nm,0.3s,baz=188,slow=13,SNR=4.6									
ZALV					Sn		**Sn**		**16 23 56.6**	**-8.0**
	comp=E,0.2nm,0.3s,baz=187,slow=27,SNR=2.1									
ZALV					Lg		Lg		16 25 21.7	
	comp=E,0.1nm,0.3s,baz=195,slow=27,SNR=3.6									
	comp=E,1.2nm,0.6s									
BVAR	**Borovoye Array**	**13.67**	**332**		Pn		**Pn**		**16 21 54.3**	**+1.0**
	baz=142,slow=12,SNR=3.7									
BVAR					Lg		Lg		16 25 48.6	
	baz=140,slow=30,SNR=6.4									
	comp=E,0.3nm,0.5s									
SONM	**Songino Array**	**19.12**	**62**		P		**Pn**		**16 23 02.8**	**-0.9**
	comp=E,0.1nm,0.3s,baz=261,slow=11,SNR=11									
	comp=E,1.5nm,0.7s									
ARTI	**Arti**	**20.98**	**323**		P		**P**		**16 23 26.1**	**+3.2**
	comp=E,1.0nm,0.3s,baz=162,slow=6.4,SNR=4.0									
	comp=E,1.0nm,0.3s									
BRTR	**Keskin Array B**	**35.69**	**283**		P		P		16 25 43.4	+5.0
	comp=E,0.5nm,0.8s,baz=67,slow=8.0,SNR=2.4									
	comp=E,0.5nm,0.8s									
ILAR	**Eielson Array**	**67.72**	**20**		P		**P**		**16 29 36.2**	**-0.8**
	comp=E,0.3nm,0.8s,baz=326,slow=6.2,SNR=5.1									
	comp=E,0.3nm,0.8s									

*IDC **20** 16:27:08.2±2.5, 21.°59S×178.°74W, h581km±22km, mb3.1/7, mbtmp4.0/8, Error ellipse: s-maj=33.7km s-min=23.0km az=125.0*

ISC 20 16:27:02.4±1.4, **22.°2S**±0.°3×**178.°2W**±0.°2, **h550**km, **n15, σ1°11/14, mb3.6/7, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.68**	**321**	P	**P**	**16 28 39.7**	**+1.5**
	12nm,0.5s,baz=159,slow=6.5,SNR=11						
ASAR	**Alice Springs**	**43.94**	**258**	P	**P**	**16 34 22.4**	**+1.2**
	2.0nm,0.5s,baz=92,slow=7.8,SNR=74						
ASAR				PcP	**pP**	**16 35 57.4**	**-1.5**
	0.7nm,0.7s,baz=103,slow=4.1,SNR=7.4						
	2.0nm,0.5s						
WRA	**Warramunga Arr**	**44.17**	**264**	P	**P**	**16 34 22.7**	**-0.3**
	1.4nm,0.5s,baz=92,slow=5.7,SNR=47						
	1.4nm,0.5s						
QSPA	**South Pole Qui**	**67.85**	**180**	P	P	16 37 12.8	+6.9
	0.9nm,0.8s,baz=74,slow=13,SNR=1.9						
	0.9nm,0.8s						
MJAR	**Matsushiro Arr**	**71.47**	**324**	P	**P**	**16 37 25.4**	**-2.3**
	0.7nm,0.6s,baz=164,slow=6.0,SNR=4.8						
	0.7nm,0.6s						
USRK	**Ussuriysk Ar.**	**80.27**	**326**	P	**P**	**16 38 15.4**	**-0.7**
	1.8nm,0.8s,baz=123,slow=10,SNR=3.2						
	1.8nm,0.8s						
ILAR	**Eielson Array**	**90.04**	**13**	P	**P**	**16 39 03.5**	**+0.4**
	0.2nm,0.4s,baz=217,slow=7.4,SNR=2.6						
	0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**90.49**	**290**	P	**P**	**16 39 07.2**	**+1.0**
	0.7nm,0.8s,baz=140,slow=3.2,SNR=7.2						
	0.7nm,0.8s						
BVAR	**Borovoye Array**	**120.25**	**319**	PKP	**PKiKP**	**16 44 51.8**	**+0.7**
	0.4nm,0.4s,baz=134,slow=2.4,SNR=4.4						
ARCES	**ARCESS Array B**	**130.57**	**349**	PKP	**PKiKP**	**16 45 10.8**	**-0.3**
	2.8nm,0.9s,baz=31,slow=2.8,SNR=4.0						
HFS	**Hagfors**	**141.20**	**350**	PKhKP	PKPpre	16 45 25.9	
	7.5nm,1.2s,baz=72,slow=4.8,SNR=8.4						
AKASG	**Malin Array Be**	**144.40**	**330**	PKP	**PKPdf**	**16 45 35.6**	**-0.3**
	1.8nm,0.5s,baz=44,slow=4.2,SNR=22						
BRTR	**Keskin Array B**	**147.81**	**310**	PKPbc	**PKPbc**	**16 45 46.4**	**+0.3**
	0.8nm,0.6s,baz=140,slow=4.7,SNR=6.0						
MMAI	**Mount Meron Ar**	**148.44**	**297**	PKPbc	**PKiKP**	**16 45 49.1**	**+0.2**
	0.9nm,0.4s,baz=44,slow=7.4,SNR=5.6						
GERES	**GERESS Array B**	**151.79**	**343**	PKPbc	**PKiKP**	**16 45 55.5**	**+0.1**
	0.6nm,0.6s,baz=225,slow=1.3,SNR=4.4						

*JMA **20** 16:29:54.5±0.1, 24.°3N±0.°5×122.°0E±0.°3, h24km±1km, MV3.4/15, TAIWAN REGION*
*TAP **20** 16:29:55.2, 24.°35N×121.°96E, h21km, ML3.8, B*

*IDC **20** 16:29:56.1±1.1, 25.°06N×122.°12E, h0km, mb3.4/5, mbtmp3.5/6, ML3.4/1, MS2.7/3, Error ellipse: s-maj=42.1km s-min=20.3km az=62.0*

ISC 20 16:29:54.6±0.9, **24.°32N**±0.°01×**122.°07E**±0.°01, **h19**km±2km, **n178, σ0°97/264, mb3.5/5, 3C-5D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.18**	**57**	⇑*iP*	**Pg**	**16 30 00.3**	**+1.2**
EOS2				S	**Sg**	**16 30 05.1**	**+2.9**
EOS3	**EOS3**	**0.23**	**99**	*i* P	**Pg**	**16 30 01.2**	**+1.3**
EOS3				S	**Sg**	**16 30 06.3**	**+2.8**
EWUT	**Wuta**	**0.29**	**295**	*i* P	**Pg**	**16 30 00.4**	**-0.6**
EWUT				S	**Sg**	**16 30 04.7**	**-0.7**
EHP	**Heping Village**	**0.30**	**268**	*i* P	**Pg**	**16 30 00.4**	**-0.7**
EHP				*eS*	**Sg**	**16 30 05.3**	**-0.4**
EAHA	**Aohua**	**0.30**	**272**	⇓*iP*	**Pg**	**16 30 00.4**	**-0.8**
EAHA				*eS*	**Sg**	**16 30 04.8**	**-0.9**
EOS4	**EOS4**	**0.30**	**131**	*i* P	**Pb**	**16 30 01.7**	**+0.4**
ENA	**Nanau**	**0.32**	**290**	⇓*iP*	**Pg**	**16 30 01.2**	**-0.3**
ENA				*i* S	**Sg**	**16 30 05.4**	**-0.8**
ESAO	**Su ao**	**0.33**	**321**	*i* P	**Pg**	**16 30 01.2**	**-0.4**
ESAO				*i* S	**Sg**	**16 30 05.2**	**-1.1**
TWC	**Suao**	**0.35**	**325**	⇑*iP*	**Pg**	**16 30 01.5**	**-0.5**
TWC				*i* S	**Sg**	**16 30 05.7**	**-1.4**
ETL	**Fush Village**	**0.44**	**248**	*eP*	**Pg**	**16 30 03.0**	**-0.6**
NDS	**Dongshan**	**0.45**	**314**	*i* P	**Pg**	**16 30 03.3**	**-0.4**
NDS				S	**Sg**	**16 30 09.0**	**-0.9**
NACB	**Ninganchiao**	**0.46**	**251**	P	**Pg**	**16 30 03.0**	**-0.9**
NACB	**Ninganchiao**	**0.46**	**251**	S	**Sg**	**16 30 09.6**	**-0.6**
NACB	**Ninganchiao**	**0.46**	**251**	⇓*iP*	**Pg**	**16 30 03.0**	**-0.9**
TWD	**Chiawan**	**0.49**	**241**	*eP*	**Pb**	**16 30 04.1**	**-0.5**
ILA	**Ilan**	**0.53**	**327**	*i* P	**Pb**	**16 30 05.2**	**0.0**
ILA				S	**Sb**	**16 30 12.3**	**-0.2**
LATG	**Datong**	**0.54**	**293**	⇓*iP*	**Pb**	**16 30 04.9**	**-0.6**
LATG				*eS*	**Sb**	**16 30 12.2**	**-0.6**
TWE	**Neicheng**	**0.54**	**318**	*i* P	**Pb**	**16 30 05.0**	**-0.4**
TWE				S	**Sb**	**16 30 11.7**	**-1.1**
HWA	**Hwalien**	**0.55**	**231**	*eP*	**Pn**	**16 30 06.8**	**-0.6**
ETLH	**Xiulin Townshi**	**0.55**	**258**	*i* P	**Pb**	**16 30 04.7**	**-0.9**
ETLH				*eS*	**Sb**	**16 30 11.3**	**-1.8**
ENTT	**Nioudou**	**0.56**	**305**	*i* P	**Pb**	**16 30 05.2**	**-0.5**
ENTT				S	**Sb**	**16 30 11.3**	**-2.0**
NDT	**Datong Townshi**	**0.58**	**299**	P	**Pb**	**16 30 05.7**	**-0.3**
NDT				S	**Sb**	**16 30 12.6**	**-1.3**
FUSB	**Fushanzhiwuyua**	**0.62**	**315**	*i* P	**Pb**	**16 30 06.6**	**-0.2**
FUSB				S	**Sb**	**16 30 14.0**	**-1.1**
TEYL	**Yanliau Villag**	**0.62**	**224**	*eP*	**Pg**	**16 30 07.5**	**+0.5**
TEYL				*eS*	**Sn**	**16 30 19.0**	**+1.1**
ETM	**Tongmen**	**0.63**	**236**	*eP*	**Pb**	**16 30 06.9**	**-0.1**
ETM				S	**Sn**	**16 30 17.8**	**-0.4**
NNSB	**Datong**	**0.63**	**280**	⇓*iP*	**Pb**	**16 30 06.4**	**-0.7**
NNSB				S	**Sb**	**16 30 14.4**	**-1.2**
NNS	**Nan Shan**	**0.65**	**281**	*i* P	**Pb**	**16 30 06.7**	**-0.6**
NNS				*eS*	**Sb**	**16 30 14.9**	**-1.1**
LXIB	**Xiulin Townshi**	**0.67**	**244**	P	**Pb**	**16 30 07.6**	**-0.1**
LXIB				S	**Sn**	**16 30 19.9**	**+0.6**
TIPB	**Shuangxi**	**0.69**	**341**	*i* P	**Pb**	**16 30 07.9**	**0.0**
TIPB				*i* S	**Sb**	**16 30 16.4**	**-0.6**
NWLT	**Wulai**	**0.69**	**312**	*i* P	**Pb**	**16 30 07.8**	**-0.1**
NWLT				S	**Sb**	**16 30 16.0**	**-1.1**
TWB1	**Santiao Chiao**	**0.69**	**354**	*eP*	**Pg**	**16 30 08.0**	**-0.2**
TWB1				S	**Sb**	**16 30 16.5**	**-0.5**
SHUL	**Shoufeng**	**0.70**	**221**	*eP*	**Pg**	**16 30 09.0**	**+0.5**
SHUL				*eS*	**Sn**	**16 30 22.3**	**+2.4**
YHNB	**Yeheng**	**0.72**	**299**	P	**Pb**	**16 30 08.2**	**-0.4**
YHNB	**Yeheng**	**0.72**	**299**	S	**Sb**	**16 30 18.1**	**0.0**
YHNB	**Yeheng**	**0.72**	**299**	*i* P	**Pb**	**16 30 08.3**	**-0.3**
YHNB				S	**Sb**	**16 30 16.3**	**-1.8**
NSK	**Sanguang**	**0.74**	**299**	*i* P	**Pb**	**16 30 08.5**	**-0.4**
NSK				S	**Sb**	**16 30 17.6**	**-1.0**
WHF	**Hehuan Shan**	**0.75**	**257**	*eP*	**Pb**	**16 30 08.8**	**-0.6**
FUSS	**Fushou**	**0.76**	**265**	*eP*	**Pb**	**16 30 08.8**	**-0.5**
ESL	**Shilin**	**0.77**	**229**	*eP*	**Pb**	**16 30 09.4**	**0.0**
TEGC	**Jichi Village**	**0.78**	**219**	P	**Pg**	**16 30 10.2**	**+0.4**
SXI1	**Grass Mountain**	**0.79**	**347**	*eP*	**Pg**	**16 30 10.1**	**0.0**
SXI1				S	**Sb**	**16 30 20.3**	**+0.2**
NWF	**Wu-fen Shan**	**0.79**	**341**	*i* P	**Pg**	**16 30 10.2**	**+0.1**
NWF				*i* S	**Sb**	**16 30 20.3**	**+0.1**
TWA	**Mucha**	**0.79**	**326**	*eP*	**Pg**	**16 30 10.3**	**+0.3**
TWA				S	**Sb**	**16 30 20.0**	**-0.2**
WFSB	**Wu-fen Shan**	**0.79**	**341**	P	**Pg**	**16 30 10.1**	**+0.1**
WFSB				S	**Sb**	**16 30 20.4**	**+0.2**
JYNG	**Yonagunijimaku**	**0.81**	**81**	*eP*	**Pn**	**16 30 10.2**	**-0.8**
JYNG				*eS*	**Sn**	**16 30 21.7**	**-0.8**
TWT	**Tachien**	**0.82**	**265**	*eP*	**Pb**	**16 30 10.4**	**+0.1**
TDCB	**Techi**	**0.83**	**266**	P	**Pb**	**16 30 10.2**	**-0.3**
TDCB				*eS*	**Sb**	**16 30 21.5**	**0.0**
TATO	**Taipei**	**0.84**	**321**	P	**Pb**	**16 30 10.9**	**+0.3**
TATO	**Taipei**	**0.84**	**321**	S	**Sb**	**16 30 21.8**	**+0.3**
NHY	**Taipei**	**0.85**	**328**	P	**Pn**	**16 30 11.7**	**+0.2**
NHY				*eS*	**Sg**	**16 30 22.6**	**+0.2**
WARBT	**Fenglin Townsh**	**0.87**	**226**	*eP*	**Pb**	**16 30 10.7**	**-0.3**
TNOU	**National Taiwa**	**0.87**	**342**	*eP*	**Pg**	**16 30 11.6**	**+0.1**
TNOU				S	**Sb**	**16 30 22.1**	**-0.3**
YOJ	**Yonaguni jima**	**0.87**	**81**	P	**Pn**	**16 30 11.6**	**-0.2**
YOJ	**Yonaguni jima**	**0.87**	**81**	*eP*	**Pn**	**16 30 11.3**	**-0.6**
YOJ				*eS*	**Sn**	**16 30 24.4**	**+0.4**
YOJ	**Yonaguni jima**	**0.87**	**81**	P	**Pn**	**16 30 11.3**	**-0.6**
OWD	**Renai**	**0.89**	**246**	⇑*eP*	**Pb**	**16 30 11.4**	**-0.1**
OWD				S	**Sg**	**16 30 24.7**	**+0.8**
NFF	**Wufeng Townshi**	**0.92**	**290**	P	**Pb**	**16 30 12.0**	**+0.1**
NFF				*eS*	**Sb**	**16 30 23.5**	**-0.4**
WUSB	**Renai**	**0.93**	**250**	*eP*	**Pb**	**16 30 12.4**	**+0.2**
WUSB				*eS*	**Sg**	**16 30 25.9**	**+0.9**
KSHI	**Guanxi Townshi**	**0.93**	**299**	*eP*	**Pg**	**16 30 13.2**	**+0.5**
KSHI				*eS*	**Sn**	**16 30 26.2**	**+0.6**
YM01	**YM01**	**0.94**	**331**	*eP*	**Pg**	**16 30 13.1**	**+0.2**
ZUZH	**Zhuzihu**	**0.96**	**330**	*eP*	**Pg**	**16 30 13.5**	**+0.2**
YM08	**YM08**	**0.97**	**333**	P	**Pg**	**16 30 13.5**	**+0.1**
TWS1	**Kuangyinshan**	**0.98**	**323**	P	**Pg**	**16 30 14.5**	**+0.9**
TWS1				*eS*	**Sb**	**16 30 26.3**	**+0.9**
ANP	**Anpu**	**1.00**	**330**	*eP*	**Pg**	**16 30 14.3**	**+0.3**
NTST	**Danshui**	**1.01**	**326**	*eP*	**Pg**	**16 30 15.2**	**+1.0**
NTST				*eS*	**Sn**	**16 30 27.6**	**+0.1**
LIOB	**Emei**	**1.01**	**289**	*eP*	**Pn**	**16 30 14.5**	**+0.2**
LIOB				*eS*	**Sn**	**16 30 27.6**	**0.0**
HGSD	**Ruisui**	**1.01**	**216**	*eP*	**Pb**	**16 30 13.0**	**-0.6**
HGSD				*eS*	**Sg**	**16 30 30.4**	**+2.8**
VWDT	**VWDT**	**1.02**	**237**	*eP*	**Pb**	**16 30 13.9**	**+0.2**
VWDT				*eS*	**Sg**	**16 30 29.8**	**+2.0**
NSTT	**Nanjuang**	**1.02**	**288**	*i* P	**Pg**	**16 30 14.6**	**+0.2**
NSTT				*eS*	**Sb**	**16 30 26.7**	**0.0**
WHP	**Taichung City**	**1.02**	**268**	*eP*	**Pn**	**16 30 14.5**	**+0.4**
WHP				*eS*	**Sg**	**16 30 29.0**	**+1.0**
NCUH	**Zhongli**	**1.03**	**309**	*eP*	**Pg**	**16 30 14.9**	**+0.3**
NCUH				S	**Sg**	**16 30 28.8**	**+0.7**
EHYH	**Wanrong**	**1.06**	**219**	*eP*	**Pb**	**16 30 13.4**	**-0.9**
EHY	**Hungye**	**1.06**	**220**	*eP*	**Pb**	**16 30 13.3**	**-1.1**
WCS	**Beigang Elemen**	**1.09**	**256**	*eP*	**Pb**	**16 30 15.3**	**+0.5**
SBCB	**Hsinchu**	**1.09**	**296**	*eP*	**Pb**	**16 30 15.5**	**+0.6**
HSN	**Hsinchu**	**1.11**	**296**	*eP*	**Pg**	**16 30 16.1**	**+0.1**
HSN				*eS*	**Sg**	**16 30 31.4**	**+0.7**
ECBN	**Changbin**	**1.15**	**210**	*eP*	**Pn**	**16 30 14.4**	**-1.2**
SSLB	**Suanglung**	**1.15**	**243**	P	**Pn**	**16 30 15.5**	**-0.2**
SSLB	**Suanglung**	**1.15**	**243**	*eP*	**Pn**	**16 30 15.8**	**+0.1**
SMLT	**Sun Moon Lake**	**1.15**	**248**	*eP*	**Pn**	**16 30 15.9**	**+0.1**
YULB	**Yu-li**	**1.16**	**218**	P	**Pn**	**16 30 14.6**	**-1.3**
YULB	**Yu-li**	**1.16**	**218**	*eP*	**Pn**	**16 30 14.7**	**-1.3**
TWQ1	**Liyutan**	**1.18**	**272**	*eP*	**Pg**	**16 30 18.0**	**+0.5**
TYC	**Yuchr**	**1.18**	**250**	*eP*	**Pn**	**16 30 16.3**	**+0.2**
EYUL	**Yuli**	**1.19**	**215**	*eP*	**Pb**	**16 30 16.7**	**+0.2**
TWF1	**Yuli**	**1.20**	**216**	*eP*	**Pn**	**16 30 15.2**	**-1.2**
WHYT	**Xinyi Township**	**1.27**	**241**	P	**Pb**	**16 30 18.1**	**+0.1**
CHKH	**Chenggong**	**1.28**	**209**	*eP*	**Pn**	**16 30 16.8**	**-0.7**
TCU	**Taichung**	**1.28**	**263**	*eP*	**Pb**	**16 30 19.0**	**+0.9**
PCYT	**Pengchaiyu**	**1.30**	**0**	*eP*	**Pn**	**16 30 17.9**	**+0.1**
WDJ	**Dajia District**	**1.30**	**271**	*eP*	**Pg**	**16 30 18.5**	**-0.3**
WJS	**Zhushan**	**1.32**	**248**	*eP*	**Pg**	**16 30 19.8**	**+0.9**
WJS				*eS*	**Sg**	**16 30 39.6**	**+2.2**
FULB	**Fuli**	**1.32**	**213**	*eP*	**Pn**	**16 30 17.9**	**-0.3**
WNT	**Mingjian**	**1.34**	**251**	*eP*	**Pg**	**16 30 20.2**	**-0.2**
WNT				*eS*	**Sg**	**16 30 39.8**	**+1.8**
CHKT	**Chengkung**	**1.38**	**208**	*eP*	**Pn**	**16 30 17.2**	**-1.6**
CHKT				*eS*	**Sn**	**16 30 34.6**	**-1.9**
WCHH	**Zhanghua**	**1.40**	**260**	*eP*	**Pb**	**16 30 20.5**	**+0.4**
WCHH				*eS*	**Sg**	**16 30 41.2**	**+1.3**
EHD	**Haiduan**	**1.41**	**214**	*eP*	**Pn**	**16 30 18.3**	**-1.0**
ALS	**Alishan**	**1.41**	**235**	P	**Pb**	**16 30 20.4**	**-0.1**
WCH1	**Changhua City**	**1.41**	**260**	*eP*	**Pn**	**16 30 19.5**	**+0.2**
ECS	**Chishang**	**1.45**	**213**	*eP*	**Pn**	**16 30 19.9**	**+0.1**
CHN5	**Tsauling**	**1.46**	**241**	*eP*	**Pb**	**16 30 21.4**	**+0.2**
CHN5				*eS*	**Sg**	**16 30 43.0**	**+1.1**
ELDTW	**Lidau**	**1.48**	**221**	*eP*	**Pn**	**16 30 19.3**	**-1.1**
IRIF	**Iriomote-Funau**	**1.52**	**89**	P	**Pn**	**16 30 20.7**	**-0.1**
IRIF				S	**Sb**	**16 30 40.1**	**-0.9**
WGK	**Gukeng**	**1.52**	**246**	P	**Pb**	**16 30 22.7**	**+0.6**
WGK				*eS*	**Sg**	**16 30 44.3**	**+0.7**
WDL	**Douliou City**	**1.52**	**247**	*eP*	**Pb**	**16 30 22.7**	**+0.4**
WDL				*eS*	**Sg**	**16 30 45.4**	**+1.6**
WDLH	**Douliu**	**1.54**	**246**	*eP*	**Pb**	**16 30 23.0**	**+0.6**
WDLH				*eS*	**Sg**	**16 30 44.9**	**+0.7**
WRL	**Guolierlin Hig**	**1.60**	**255**	P	**Pb**	**16 30 23.6**	**0.0**
WRL				*eS*	**Sb**	**16 30 45.4**	**+2.0**
WCKO	**Fanlu**	**1.60**	**237**	*eP*	**Pb**	**16 30 23.7**	**+0.1**
WCKO				*eS*	**Sg**	**16 30 47.1**	**+0.7**
HATJ	**Hateruma jima**	**1.61**	**99**	P	**Pb**	**16 30 23.0**	**-0.7**
RLNB	**Erlin**	**1.62**	**255**	*eP*	**Pb**	**16 30 24.1**	**+0.3**
RLNB				*eS*	**Sg**	**16 30 46.9**	**0.0**
STYH	**Taoyuan**	**1.65**	**226**	*eP*	**Pn**	**16 30 23.1**	**+0.6**
LONT	**Longtian**	**1.65**	**212**	*eP*	**Pn**	**16 30 21.6**	**-1.0**
WTK	**Tuku**	**1.66**	**248**	*eP*	**Pb**	**16 30 25.3**	**+0.7**
WTK				*eS*	**Sg**	**16 30 48.9**	**+0.7**
TPUB	**Ta-pu**	**1.66**	**233**	P	**Pb**	**16 30 24.2**	**-0.4**
TPUB	**Ta-pu**	**1.66**	**233**	P	**Pb**	**16 30 24.2**	**-0.4**
TPUB				*eS*	**Sg**	**16 30 47.5**	**-0.8**
WTCT	**Ta-ch'eng**	**1.70**	**255**	*eP*	**Pn**	**16 30 22.0**	**-1.2**
WTCT				*eS*	**Sb**	**16 30 46.6**	**+0.5**
WTP	**Ta-pu**	**1.71**	**232**	*eP*	**Pb**	**16 30 24.7**	**-0.7**
WTP				*eS*	**Sg**	**16 30 50.0**	**+0.2**
CHY	**Chiayi**	**1.71**	**242**	*eP*	**Pb**	**16 30 25.4**	**-0.1**
CHY				*eS*	**Sg**	**16 30 49.9**	**0.0**
LDUT	**Ludao**	**1.73**	**199**	*eP*	**Pn**	**16 30 21.8**	**-1.9**
LDUT				*eS*	**Sn**	**16 30 42.4**	**-2.9**
TWGBT	**Beinan**	**1.75**	**211**	P	**Pn**	**16 30 23.3**	**-0.7**
TWGBT	**Beinan**	**1.75**	**211**	*eP*	**Pn**	**16 30 22.4**	**-1.6**
TWGBT				*eS*	**Sn**	**16 30 45.9**	**+0.1**
TWG	**Pinlang**	**1.75**	**212**	*eP*	**Pn**	**16 30 22.4**	**-1.6**
JKRS	**Kuro-shima**	**1.77**	**92**	P	**Pb**	**16 30 24.9**	**-1.6**
JKRS				S	**Sb**

1.9nm,0.5s
MSVF Nonsavu 8.68 278 P Pn 16 40 27.4 +6.2
50nm,1.6s
MSVF Nonsavu 8.68 278 Pn **Pn** **16 40 24.3 +3.1**
RAR Rarotonga 12.52 101 Pn **Pn** **16 41 12.8 -1.0**
DZM Mont Dzumac 19.51 258 P **P** **16 42 40.0 -3.1**
0.5nm,0.3s,baz=85,slow=20,SNR=6.7
19nm,0.8s
OUZ Omahuta 19.93 214 P **Pn** **16 42 49.8 +0.8**
WCZ Waipu Caves 20.10 211 P Pn 16 42 51.9 +0.7
HAZ Te Kaha 20.20 202 P Pn 16 42 53.3 +1.1
PUZ Puketiti 20.32 200 P Pn 16 42 54.9 +1.2
URZ Urewera 20.88 202 P **P** **16 42 57.9 +0.1**
5.6nm,0.4s,baz=311,slow=20,SNR=11
5.6nm,0.4s
URZ Urewera 20.88 202 P Pn 16 43 00.7 +0.4
25nm,0.9s
URZ Urewera 20.88 202 P Pn 16 42 59.5 -0.8
TOZ Tahuroa Road 21.05 206 **P** **16 42 55.2 -4.3**
TOZ IAmb IAmb 16 43 04.8
comp=Z,12nm,0.8s
BKZ Black Stump Fm 21.91 202 P **P** **16 43 10.2 +1.3**
BKZ Black Stump Fm 21.91 202 P **P** **16 43 10.0 +1.1**
HIZ Hauiti 21.98 206 P **P** **16 43 13.5 +3.9**
comp=Z,74nm,1.5s
HIZ Hauiti 21.98 206 P **P** **16 43 11.8 +2.2**
PPT2 Papeete2 22.22 90 eLR LR 16 48 14.6
comp=Z,187nm,21.2s
PPT2 eLR LR 16 48 23.9
comp=Z,172nm,22.8s
PPT Papeete 22.22 90 LR LR 16 50 24.9
comp=Z,311nm,18.3s,baz=276,slow=32
VRZ Vera Road 22.54 206 P **P** **16 43 18.8 +3.2**
TSZ Takapari Road 22.89 202 P **P** **16 43 21.4 +2.1**
BFZ Birch Farm 23.34 201 P **P** **16 43 28.3 +4.4**
comp=Z,35nm,1.5s
BFZ Birch Farm 23.34 201 P **P** **16 43 25.8 +1.9**
MRZ Mangatainoka R 23.56 202 P **P** **16 43 24.0 -2.1**
MRZ Mangatainoka R 23.56 202 P **P** **16 43 28.1 +2.0**
TCW Tory Channel 24.52 204 P **P** **16 43 32.8 -2.3**
QRZ Quartz Range 24.90 207 P **P** **16 43 42.6 +4.1**
comp=Z,57nm,2.6s
QRZ Quartz Range 24.90 207 P **P** **16 43 41.3 +2.8**
MRNZ Matariki Terra 25.28 206 P **P** **16 43 45.5 +3.5**
THZ Tophouse 25.52 205 P **P** **16 43 48.1 +3.8**
KHZ Kahutara 25.84 203 P **P** **16 43 52.8 +5.8**
DSZ Denniston Nort 25.97 207 P **P** **16 43 53.4 +5.1**
GVZ Greta Valley S 26.50 204 P **P** **16 43 57.3 +4.3**
LTZ Lake Taylor 26.64 205 P **P** **16 43 59.0 +4.7**
INZ Inchbonnie 26.93 206 P **P** **16 44 01.1 +4.2**
OXZ Oxford 27.19 204 P **P** **16 44 00.8 +1.5**
WVZ Waitaha Valley 27.51 206 P **P** **16 44 08.2 +6.1**
RPZ Rata Peaks 27.91 205 P P 16 44 12.5 +6.8
HNR Honiara 27.97 286 LR LR 16 55 16.2
comp=Z,5.1nm,18.0s,baz=221,slow=37
FOZ Fox Glacier 28.27 207 P **P** **16 44 11.7 +2.8**
TAOE Nuku Hiva Isla 33.37 77 eLR LR 16 53 20.5
comp=Z,141nm,21.7s
KRVT Keravat (AS076 37.25 289 LR LR 17 00 18.1
comp=Z,20nm,19.7s,baz=48,slow=36
CTA Charters Tower 38.38 262 LR LR 17 01 30.7
comp=Z,247nm,18.1s,baz=79,slow=37
CTAO Charters Tower 38.38 262 **P** **16 45 35.6 -1.6**
CTAO IAmb IAmb 16 45 37.8
comp=Z,17nm,0.9s
PMG Port Moresby 39.79 278 LR LR 16 59 59.2
comp=Z,86nm,18.5s,baz=122,slow=33
TOO Toolangi 40.52 234 P **P** **16 45 53.5 -1.4**
COEN Coen 42.30 270 P **P** **16 46 08.0 -1.8**
COEN IAmb IAmb 16 46 11.6
comp=Z,24nm,1.3s
STKA Stephens Creek 42.64 244 P **P** **16 46 11.5 -0.8**
comp=Z,2.5nm,0.9s,baz=101,slow=10,SNR=2.9
STKA LR LR 17 02 36.2
comp=Z,165nm,18.7s,baz=38,slow=35
comp=Z,2.5nm,0.9s
INKA Innaminka 43.13 250 P **P** **16 46 15.8 -0.5**
WR8 Warramunga Arr 49.36 260 P **P** **16 47 03.9 -1.6**
WR8 IAmb IAmb 16 47 05.9
comp=Z,5.9nm,1.0s
AS31 Alice Springs 49.46 255 **P** **16 47 05.0 -1.3**
AS31 IAmb IAmb 16 47 06.3
comp=Z,4.3nm,0.9s
ASAR Alice Springs 49.46 255 P **P** **16 47 05.3 -0.9**
comp=Z,15nm,0.8s,baz=96,slow=7.6,SNR=130
ASAR PcP **PcP** **16 48 30.8 +2.4**
comp=Z,1.4nm,0.7s,baz=98,slow=3.6,SNR=4.1
ASAR LR LR 17 07 40.8
comp=Z,143nm,18.9s,baz=116,slow=36
comp=Z,15nm,0.8s
ASAR Alice Springs 49.46 255 **P** **16 47 05.0 -1.2**
WB0 Warramunga Arr 49.49 260 P **P** **16 47 05.0 -1.5**
WB0 IAmb IAmb 16 47 16.5
comp=Z,6.5nm,0.9s
WRA Warramunga Arr 49.51 260 P **P** **16 47 05.0 -1.6**
comp=Z,2.6nm,0.6s,baz=94,slow=5.0,SNR=36
WRA PcP **PcP** **16 48 30.1 +1.5**
comp=Z,0.9nm,0.8s,baz=93,slow=3.5,SNR=1.9
comp=Z,2.6nm,0.6s
MTN Manton Dam 53.95 268 **P** **16 47 38.9 -1.0**
MTN IAmb IAmb 16 47 40.4
comp=Z,10nm,0.8s
KNRA Kununurra 55.52 264 **P** **16 47 50.1 -1.1**
RPN Rapa Nui 58.49 111 LR LR 17 09 23.7
comp=Z,108nm,18.4s,baz=234,slow=32
SOEI Soe 61.26 269 **P** **16 48 30.1 -1.4**
PSA00 Pilbara Seismi 62.61 255 P **P** **16 48 39.5 -0.9**
NWAO Narrogin (SRO) 63.20 242 LR LR 17 14 56.2
comp=Z,108nm,18.0s,baz=75,slow=35
QSPA South Pole Qui 70.88 180 P **P** **16 49 34.3 +1.8**
comp=Z,1.3nm,0.8s,baz=90,slow=6.1,SNR=6.6
comp=Z,1.3nm,0.8s
QSPA South Pole Qui 70.88 180 P **P** **16 49 32.6 +0.1**
QSPA IAmb IAmb 16 49 54.2
comp=Z,6.7nm,1.4s
MJAR Matsushiro Arr 72.12 320 P **P** **16 49 41.1 +0.9**
comp=Z,3.5nm,0.9s,baz=150,slow=5.7,SNR=6.5
MJAR LR LR 17 16 38.5
comp=Z,49nm,20.2s,baz=146,slow=32
comp=Z,3.5nm,0.9s
MJAR Matsushiro Arr 72.12 320 P **P** **16 49 40.5 +0.2**
JNU Nakatsue 74.71 314 LR LR 17 18 31.1
comp=Z,32nm,19.8s,baz=75,slow=32
NVAR Mina Array Bea 76.86 41 P P 16 50 12.9 +4.9
comp=Z,0.8nm,0.8s,baz=248,slow=5.0,SNR=3.8
comp=Z,0.8nm,0.8s
NVAR Mina Array Bea 76.86 41 P **P** **16 50 08.1 +0.1**
KSRS Korea Array 79.17 316 P **P** **16 50 21.6 +1.1**
comp=Z,1.4nm,0.9s,baz=136,slow=6.1,SNR=6.8
comp=Z,1.4nm,0.9s
ELK Elko 80.14 41 LR LR 17 21 51.1
comp=Z,100nm,18.6s,baz=204,slow=32
K15K Wolf Creek Mou 81.71 5 P **P** **16 50 33.4 -0.4**
TXAR Lajitas Array 82.36 55 P P 16 50 43.0 +5.0
comp=Z,0.1nm,0.5s,baz=181,slow=11,SNR=3.9
TXAR LR LR 17 22 06.5
comp=Z,66nm,18.3s,baz=198,slow=32
comp=Z,0.1nm,0.5s
TXAR Lajitas Array 82.36 55 P **P** **16 50 36.9 -1.1**
J20K Nowinta River 84.37 8 P **P** **16 50 51.4 +4.0**
RND Reindeer 84.46 11 P **P** **16 50 48.8 +0.8**
RND IAmb IAmb 16 50 56.5
comp=Z,5.1nm,1.0s
PDAR Pinedale Array 84.79 41 P P 16 50 55.4 +5.0
comp=Z,0.2nm,0.7s,baz=328,slow=9.4,SNR=1.7
PDAR LR LR 17 24 33.0
comp=Z,32nm,18.1s,baz=212,slow=33
comp=Z,0.2nm,0.7s
WRH Wood River Hil 85.57 11 **P** **16 50 54.9 +1.5**
WRH IAmb IAmb 16 50 60.0
comp=Z,8.1nm,1.0s
CCB Clear Creek Bu 85.78 11 **P** **16 50 55.7 +1.2**
CCB IAmb IAmb 16 51 01.9
comp=Z,3.9nm,0.8s
ILAR Eielson Array 86.06 11 P **P** **16 50 59.4 +3.5**
comp=Z,0.7nm,0.7s,baz=225,slow=5.8,SNR=14
comp=Z,0.7nm,0.7s
PLCA Paso Flores 86.65 132 P P 16 51 04.5 +4.8
comp=Z,2.3nm,1.1s,baz=252,slow=3.1,SNR=3.3
PLCA LR LR 17 24 40.4
comp=Z,52nm,18.4s,baz=180,slow=32
comp=Z,2.3nm,1.1s
F20K Avaraart Lake 86.93 7 P **P** **16 51 02.6 +2.5**
E19K Redstone River 87.17 6 **P** **16 51 04.0 +2.8**
E19K IAmb IAmb 16 51 09.5
comp=Z,6.7nm,1.0s

SNAA Sanae 89.12 177 LR LR 17 28 23.9
comp=Z,66nm,18.9s,baz=195,slow=34
F31M Tsiigehtchic 91.08 14 **P** **16 51 22.2 +2.6**
F31M IAmb IAmb 16 51 24.9
comp=Z,3.7nm,1.0s
JTS Las Juntas de 91.45 80 LR LR 17 23 34.7
comp=Z,50nm,18.9s,baz=229,slow=30
ATAH Atahualpa 91.94 98 LR LR 17 24 51.3
comp=Z,73nm,18.9s,baz=299,slow=30
CMAR Chiang Mai Arr 94.21 288 P **P** **16 51 36.1 +0.8**
comp=Z,1.5nm,1.0s,baz=106,slow=3.4,SNR=9.5
comp=Z,1.5nm,1.0s
LZDM Lanzhou Array 95.88 306 LR LR 17 31 28.2
comp=Z,34nm,21.7s,baz=65,slow=33
SONM Songino Array 97.94 318 LR LR 17 33 42.2
comp=Z,24nm,18.2s,baz=96,slow=34
LPAZ La Paz 98.10 110 LR LR 17 29 11.2
comp=Z,43nm,18.4s,baz=234,slow=31
AKASG Malin Array Be 143.98 336 PKP **PKiKP** **16 57 53.1 -1.4**
comp=Z,0.1nm,0.3s,baz=45,slow=3.4,SNR=5.6
AKASG Malin Array Be 143.98 336 PKPdf **PKiKP** **16 57 53.4 -1.2**
AK01 Malin Array Si 143.99 336 PKP PKPbc 16 57 49.8 +0.9
AK10 Malin Array Si 144.05 336 PKP **PKPdf** **16 57 50.3 -0.9**
MI28 Mi28,Pidlybu 144.37 338 PKP **PKPdf** **16 57 51.7 -0.1**
KMPD K-Podol'skiy 146.77 336 PKP **PKPab** **16 57 59.4 +0.6**
CLL Collm 147.61 353 PKPdf **PKPab** **16 58 03.1 +1.1**
CLL Collm 147.61 353 *i* PKPbc **PKPab** **16 58 03.5 +1.4**
CLL *i* x x 16 58 06.9
comp=Z,8.0nm,1.1s
CLL *ex* x 16 58 15.0
BURAR Bucovina Array 148.02 337 PKPdf **PKPdf** **16 57 58.3 +0.1**
BR131 Keskin Array S 149.30 317 PKPdf **PKPdf** **16 57 57.9 -2.7**
BRTR Keskin Array B 149.30 317 PKPbc **PKiKP** **16 58 06.5 +0.4**
comp=Z,2.3nm,0.8s,baz=126,slow=2.2,SNR=15
BRTR Keskin Array B 149.30 317 **PKPbc** **16 58 03.4 -1.6**
GERES GERESS Array B 149.94 351 PKPbc **PKiKP** **16 58 09.2 +2.1**
comp=Z,0.8nm,0.7s,baz=29,slow=3.3,SNR=6.9
CONA Conrad Observa 150.45 348 *e*PKP **PKPab** **16 58 11.3 -2.5**
comp=Z,2.6nm,1.0s
CONA *i* PKiKP **PKPab** **16 58 16.1 +2.3**
comp=Z,6.7nm,1.2s
CONA *i* PKP PKPab 16 58 22.9 +9.1
comp=Z,10.0nm,1.3s
RONA Rosalia, Austr 150.58 347 *e*PKP **PKiKP** **16 58 09.7 +1.3**
comp=Z,1.9nm,0.7s
RONA *i* PKP **PKPab** **16 58 14.4 +0.1**
comp=Z,3.4nm,1.1s
LESA Schwarzleotal 151.47 352 *e*PKP **PKPab** **16 58 15.8 -2.2**
comp=Z,4.2nm,1.3s
LESA *i* PKP **PKPab** **16 58 24.6 +6.6**
comp=Z,2.5nm,0.8s
RETA Reutte 151.62 355 *i* PKP **PKPab** **16 58 17.0 -1.6**
comp=Z,1.3nm,0.5s
WATA Walderalm 151.69 354 *i* PKP **PKiKP** **16 58 11.1 +0.3**
comp=Z,1.9nm,0.5s
WATA *i* PKP **PKPab** **16 58 17.5 -1.5**
comp=Z,5.7nm,0.9s
MOTA Moosalm 151.72 354 *e*PKP **PKiKP** **16 58 14.9 +4.0**
comp=Z,6.9nm,1.1s
WTTA Wattenberg 151.75 353 *i* PKP **PKPab** **16 58 17.5 -1.8**
comp=Z,4.8nm,0.7s
SOKA Soboth 151.81 348 *e*PKP **PKiKP** **16 58 12.5 +1.5**
comp=Z,2.1nm,1.0s
SOKA *i* PKP **PKPab** **16 58 17.1 -2.4**
comp=Z,3.6nm,1.0s
SOKA *i* PKP **PKPab** **16 58 26.2 +6.7**
comp=Z,6.4nm,1.2s
SQTA Sankt Quirin 151.84 354 *e*PKP **PKPab** **16 58 17.0 -2.6**
comp=Z,5.5nm,1.1s
DAVA Damuels 151.88 356 *i* PKP **PKPab** **16 58 17.5 -2.3**
comp=Z,5.7nm,1.1s
ABTA Abfaltersbach 152.15 352 *e*PKP **PKPab** **16 58 18.8 -2.1**
comp=Z,12nm,1.7s

WEL 20 16:48:34.6±1.5, 35°S±34'×177°8W±4'7, h12km, M3.5/3, ML3.6/7, MLv3.5/3, Error ellipse: s-maj=74.9km s-min=11.8km az=125.6, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**4.07**	**217**	P	P	Pn	16 49 38.2	+1.5
PKGZ	**Pakihiroa**	**4.28**	**220**	P	P	Pn	16 49 39.2	-0.3
PKGZ				S	S	Sn	16 50 30.4	+1.0
PUZ	**Puketiti**	**4.34**	**216**	P	P	Pn	16 49 39.6	-0.9
PUZ				S	S	Sn	16 50 30.5	-0.6
HAZ	**Te Kaha**	**4.36**	**223**	P	P	Pn	16 49 41.1	+0.4
TWGZ	**Tauwhareparae**	**4.56**	**218**	P	P	Pn	16 49 44.9	+1.3
TWGZ				S	S	Sn	16 50 38.2	+1.7
RUGZ	**Raukumara Rang**	**4.56**	**222**	P	P	Pn	16 49 43.4	-0.2
CNGZ	**Carnagh Statio**	**4.70**	**214**	P	P	Pn	16 49 44.8	-0.5
TKGZ	**Te Karaka**	**4.83**	**217**	S	S	Sn	16 50 44.4	+1.4
MWZ	**Matawai**	**4.92**	**220**	P	P	Pn	16 49 47.4	-1.0
URZ	**Urewera**	**5.09**	**223**	P	P	Pn	16 49 49.7	-1.0
RAGZ	**Rawiri**	**5.09**	**219**	P	P	Pn	16 49 50.7	-0.1
NMHZ	**Naumai**	**5.86**	**219**	P	P	Pn	16 50 01.4	+0.1

*NEIC **20** 17:09:19.3±0.8, 27°1S±0°1×178°8W±0°2, h305km±5km, mb4.1/12, Error ellipse: s-maj=24.8km s-min=16.3km az=85.0*
*IDC **20** 17:09:21.6±1.5, 27°07S×178°67W, h331km±14km, mb3.2/6, mbtmp4.1/8, Error ellipse: s-maj=22.1km s-min=18.9km az=166.0*
ISC 20 17:09:21.5±0.7, 27°37S±0°06×178°6W±0°1, h350km, n61, σ2s34/67, mb3.8/12, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.97**	**162**	P	P	**Pn**	**17 10 13.2**	**+0.7**
	879nm,0.2s,baz=86,slow=13,SNR=10							
RAO				S	S		17 10 48.5	-5.0
	307nm,0.3s,baz=84,slow=20,SNR=1.0							
RAO	**Raoul Island**	**1.97**	**162**			**Pn**	**17 10 09.9**	**-2.5**
RAO				Sn	S	**S**	**17 10 47.8**	**-5.7**
RAO	**Raoul Island**	**1.97**	**162**	P	P	**Pn**	**17 10 15.6**	**+3.1**
RAO				S	S	**S**	**17 10 51.7**	**-1.7**
MSVF	**Nonsavu**	**10.08**	**341**	P	P	**Pn**	**17 11 37.2**	**-3.4**
	3.6nm,0.4s,baz=110,slow=20,SNR=5.2							
WCZ	**Waipu Caves**	**10.44**	**213**	P	P		17 11 50.4	+4.7
MXZ	**Matakaoa Point**	**10.49**	**194**	S	S	**S**	**17 13 39.8**	**-3.3**
WMGZ	**Waiomatatini S**	**10.72**	**193**	P	P	**S**	**17 11 51.9**	**+3.2**
WMGZ				S	S	**S**	**17 13 44.2**	**-3.9**
HAZ	**Te Kaha**	**10.79**	**195**	P	P	**S**	**17 11 51.6**	**+2.1**
HAZ				S	S	**S**	**17 13 47.4**	**-2.4**
PKGZ	**Pakihiroa**	**10.83**	**194**	P	P	**S**	**17 11 50.5**	**+0.5**
PKGZ				S	S	**S**	**17 13 44.2**	**-6.5**
PUZ	**Puketiti**	**10.99**	**193**	P	P	**S**	**17 11 53.6**	**+1.8**
PUZ				S	S	**S**	**17 13 49.5**	**-4.7**
RUGZ	**Raukumara Rang**	**11.02**	**196**	P	P	**S**	**17 11 53.1**	**+0.9**
RUGZ				S	S	**S**	**17 13 53.3**	**-1.7**
TWGZ	**Tauwhareparae**	**11.15**	**194**	P	P	**S**	**17 11 53.6**	**0.0**
TWGZ				S	S	**S**	**17 13 55.8**	**-2.0**
CNGZ	**Carnagh Statio**	**11.40**	**193**	P	P	**S**	**17 11 58.2**	**+1.9**
MWZ	**Matawai**	**11.40**	**196**	P	P	**S**	**17 11 59.4**	**+2.9**
URZ	**Urewera**	**11.44**	**197**	P	P	**S**	**17 11 58.8**	**+2.1**
	7.4nm,0.3s,baz=252,slow=2.3,SNR=26							
URZ				S	S	**S**	**17 14 02.4**	**-1.7**
	15nm,0.4s,baz=65,slow=23,SNR=14							
URZ	**Urewera**	**11.44**	**197**	P	P		17 11 57.8	+1.1
NIUE	**Niue**	**11.47**	**46**	Pn	Pn		17 11 49.6	-7.5
RAGZ	**Rawiri**	**11.59**	**196**	P	P	**Pn**	**17 11 57.2**	**-1.0**
MUGZ	**Murupara**	**11.73**	**198**	P	P	**P**	**17 12 01.9**	**+1.8**
RAHZ	**Arahi**	**12.06**	**196**	P	P	**Pn**	**17 12 05.3**	**+1.5**
MTHZ	**Maungataniwha**	**12.07**	**197**	P	P	**Pn**	**17 12 05.6**	**+1.7**
MRHZ	**Matea Rd**	**12.17**	**199**	P	P	**Pn**	**17 12 07.5**	**+2.4**
NMHZ	**Naumai**	**12.31**	**197**	P	P	**Pn**	**17 12 08.6**	**+1.8**
HIZ	**Hauiti**	**12.39**	**205**	P	Pn		17 12 12.0	+4.3
BKZ	**Black Stump Fm**	**12.45**	**198**	Pn	P	**P**	**17 12 07.7**	**-0.3**
BKZ	**Black Stump Fm**	**12.45**	**198**	P	P	**Pn**	**17 12 09.2**	**+0.7**
OTVZ	**Oturere**	**12.70**	**201**	P	P	**Pn**	**17 12 13.8**	**+2.3**
KWHZ	**Kaweka Forest**	**12.71**	**198**	P	P	**Pn**	**17 12 12.6**	**+1.0**
KRHZ	**Kereru**	**12.93**	**198**	P	P	**Pn**	**17 12 14.6**	**+0.4**
KAHZ	**Kahuranaki**	**12.95**	**196**	P	P	**Pn**	**17 12 15.3**	**+1.0**
PXZ	**Pawanui**	**13.18**	**195**	P	P	**Pn**	**17 12 17.9**	**+1.0**
PNHZ	**Pukenui**	**13.23**	**198**	P	P	**Pn**	**17 12 17.4**	**-0.3**
DVHZ	**Dannevirke**	**13.60**	**197**	P	P	**Pn**	**17 12 22.0**	**0.0**
MRZ	**Mangatainoka R**	**14.10**	**198**	P	P	**P**	**17 12 25.2**	**-0.9**
KHZ	**Kahutara**	**16.32**	**201**	P	P	**P**	**17 12 50.7**	**+0.5**
EIDS	**Eidsvold**	**27.20**	**267**	P	P	**P**	**17 14 34.0**	**-0.5**
EIDS					IAmb	IAmb	17 14 38.6	
	comp=Z,13nm,1.4s							

CTA Charters Tower 32.90 275 P **P** **17 15 26.2 +1.9**
comp=Z,1.8nm,0.3s,baz=94,slow=9.7,SNR=7.7
comp=Z,1.8nm,0.3s
CTAO Charters Tower 32.90 275 P **P** **17 15 23.6 -0.7**
AS31 Alice Springs 42.82 264 P **P** **17 16 45.7 -0.8**
ASAR Alice Springs 42.82 264 P **P** **17 16 47.8 +1.3**
comp=Z,0.4nm,0.4s,baz=97,slow=7.0,SNR=40
comp=Z,0.4nm,0.4s
ASAR Alice Springs 42.82 264 P **P** **17 16 45.4 -1.0**
WR8 Warramunga Arr 43.38 269 P **P** **17 16 50.4 -0.5**
WRA Warramunga Arr 43.53 269 P **P** **17 16 52.8 +0.7**
comp=Z,1.4nm,0.6s,baz=108,slow=7.6,SNR=21
comp=Z,1.4nm,0.6s
WB0 Warramunga Arr 43.54 270 P **P** **17 16 52.5 +0.4**
WB0 IAmb IAmb 17 16 59.1
comp=Z,9.5nm,1.4s
FORT Forrest 46.38 252 P **P** **17 17 15.1 +1.0**
FORT IAmb IAmb 17 17 57.2
comp=Z,12nm,1.4s
KNRA Kununurra 50.01 272 P **P** **17 17 41.4 -0.4**
KNRA IAmb IAmb 17 17 46.7
comp=Z,13nm,1.4s
FITZ Fitzroy Crossi 51.89 268 P **P** **17 17 57.0 +1.3**
comp=Z,2.1nm,1.0s,baz=148,slow=8.8,SNR=2.1
comp=Z,2.1nm,1.0s
MORW Morawa 56.93 252 P **P** **17 18 32.5 +1.0**
MORW IAmb IAmb 17 18 52.6
comp=Z,11nm,1.1s
CASY Casey 57.58 207 P **P** **17 18 38.2 +2.9**
QSPA South Pole Qui 62.73 180 P **P** **17 19 14.7 +4.6**
comp=Z,1.5nm,1.1s,baz=319,slow=9.0,SNR=1.7
comp=Z,1.5nm,1.1s
QSPA South Pole Qui 62.73 180 P **P** **17 19 14.1 +4.0**
QSPA IAmb IAmb 17 19 15.4
comp=Z,5.7nm,1.4s
MJAR Matsushiro Arr 75.46 325 P **P** **17 20 27.9 +0.1**
MJAR IAmb IAmb 17 20 34.0
comp=Z,5.1nm,1.4s
NVAR Mina Array Bea 86.39 43 P **P** **17 21 27.3 +2.0**
comp=Z,0.5nm,0.6s,baz=264,slow=3.2,SNR=3.8
comp=Z,0.5nm,0.6s
FINES FINESS Array B 142.12 341 PKhKP PKPpre 17 28 07.6
comp=Z,1.5nm,0.8s,baz=68,slow=3.7,SNR=4.3
NB2 NORSAR Subarra145.69 352 PKP **PKiKP** **17 28 20.3 -1.9**
comp=Z,2.7nm,1.0s,baz=14,slow=2.5
NOA NORSAR Array B145.69 352 PKPbc **PKPab** **17 28 19.5 -0.6**
comp=Z,0.9nm,0.7s,baz=16,slow=2.8,SNR=3.8
HFS Hagfors 146.18 349 PKPbc **PKPab** **17 28 20.6 -1.3**
comp=Z,1.9nm,0.6s,baz=64,slow=3.4,SNR=7.6
AKASG Malin Array Be 148.55 325 PKPbc **PKiKP** **17 28 27.7 -0.7**
comp=Z,0.6nm,0.4s,baz=45,slow=3.3,SNR=8.4
MMAI Mount Meron Ar 150.16 289 PKPbc **PKPab** **17 28 34.3 -4.8**
comp=Z,0.9nm,0.4s,baz=82,slow=6.1,SNR=6.7
BRTR Keskin Array B 150.60 303 PKPbc **PKiKP** **17 28 33.7 +0.5**
comp=Z,0.5nm,0.7s,baz=107,slow=1.4,SNR=2.6
EKA Eskdalemuir Ar 151.87 6 PKPbc **PKiKP** **17 28 35.3 +0.3**
comp=Z,0.3nm,0.4s,baz=350,slow=2.3,SNR=1.7

*DJA **20** 17:14:52.0±1.1, 1°N±7°×12°2E±°, h344km±11km, M3.5/13, MLv3.5/13*
*IDC **20** 17:15:09.4±9.3, 0°13N×121°86E, h238km±95km, mb2.9/3, mbtmp3.4/3, Error ellipse: s-maj=173.1km s-min=23.1km az=61.0*
ISC 20 17:15:06.5±1.2, 0°3N±0°1×121°8E±0°1, h212km±11km, n8, σ1s05/9, mb3.3/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.19**	**33**	P	P	**Pn**	**17 15 33.8**	**-0.5**
APSI	**Ampana**	**1.23**	**189**	P	P	**Pn**	**17 15 40.1**	**+0.9**
LUWI	**Luwuk**	**1.64**	**145**	P	P	**Pn**	**17 15 42.8**	**+0.3**
MPSI	**Mapaga**	**1.94**	**271**	P	P	**Pn**	**17 15 45.0**	**-0.3**
PCI	**Palu**	**2.34**	**239**	P	P	**Pn**	**17 15 49.3**	**-0.2**
WRA	**Warramunga Arr**	**23.57**	**149**	P	P	**P**	**17 19 57.1**	**-1.0**
	0.4nm,0.5s,baz=325,slow=10,SNR=24							
	0.4nm,0.5s							
ASAR	**Alice Springs**	**26.56**	**155**	P	P	**P**	**17 20 24.6**	**-0.6**
	0.4nm,0.6s,baz=344,slow=15,SNR=17							
ASAR				PcP	**PcP**	**P**	**17 23 43.0**	**-1.0**
	0.3nm,1.0s,baz=341,slow=2.2,SNR=4.3							
	0.4nm,0.6s							
MKAR	**Makanchi Array**	**57.74**	**329**	P	P	**P**	**17 24 36.7**	**+1.4**
	0.4nm,0.5s,baz=127,slow=8.7,SNR=6.7							
	0.4nm,0.5s							

*OTT **20** 17:22:15.2±0.2, 72°45N×71°90W, h18km, MN3.3/6, 206km east from Pond Inlet, Nu Baffin Bay Seismic Zone.*
*DNK **20** 17:22:16.5±1.9, 72°62N×71°48W, h28km±16km, ML2.2, Presumed earthquake*
ISC 20 17:22:04.8±0.8, 72°39N±0°05×70°14W±0°04, h10km, n17, σ3s21/30, Baffin Bay

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
POIN	**Pond Inlet**	**2.38**	**281**	PN	**Pn**		**17 22 46.2**	**+2.5**
POIN				SN	**Sn**		**17 23 08.2**	**-4.7**
POIN				LG	Lg		17 23 12.6	
POIN				Trac			17 23 15.5	
	comp=Z,27nm,0.1s							
TULEG	**Thule**	**4.19**	**4**	*i* P	**Pb**		**17 23 16.1**	**-2.3**
TULEG				*i* S	**Sn**		**17 23 58.2**	**+0.7**
TULEG				IAML			17 24 01.1	
	comp=Z,20nm,0.3s							
UPNV	**Upernavik**	**4.23**	**78**	*i* P	**Pg**		**17 23 23.2**	**-2.4**
UPNV				*i* S	**Sb**		**17 24 11.7**	**+1.6**
UPNV				IAML			17 24 13.8	
	comp=Z,12nm,0.2s							
KULLO	**Kullorsuaq**	**4.29**	**53**	PN	**Pb**		**17 23 22.4**	**+2.2**
KULLO				SN	**Sb**		**17 24 10.0**	**-2.0**
KULLO				Trac			17 24 13.3	
	comp=Z,11nm,0.1s							
KULLO	**Kullorsuaq**	**4.29**	**53**	*i* P	**Pb**		**17 23 22.3**	**+2.1**
KULLO				*i* S	**Sb**		**17 24 09.7**	**-2.2**
KULLO				IAML			17 24 11.2	
	comp=Z,17nm,0.4s							
ILON	**Igloolik, Nuna**	**4.88**	**237**	PN	**Pn**		**17 23 22.0**	**+3.9**
ILON				SN	**Sn**		**17 24 11.3**	**-3.3**
ILON				Trac			17 24 15.9	
	comp=Z,23nm,0.1s							
NUUG	**Nuugaatsiaq**	**5.33**	**91**	*i* P	**Pb**		**17 23 39.6**	**+1.8**
NUUG				*i* S	**Sb**		**17 24 40.2**	**-1.5**
NUUG				IAML			17 24 46.3	
	comp=Z,6.2nm,0.4s							
NIAQ	**Niaqornat**	**5.46**	**99**	*i* P	**Pb**		**17 23 42.7**	**+2.7**
NIAQ				*i* S	**Sb**		**17 24 45.5**	**+0.1**
NIAQ				IAML			17 25 02.6	
	comp=Z,14nm,1.8s							
SAATT	**Saattut**	**6.06**	**96**	*i* P	**Pb**		**17 23 50.0**	**-0.2**
SAATT				*i* S	**Sb**		**17 24 57.0**	**-5.7**
SAATT				IAML			17 25 47.7	
	comp=Z,6.2nm,0.9s							
GDH	**Godhavn**	**6.30**	**112**	*i* P	**Pb**		**17 23 53.5**	**-0.9**
GDH				*i* S	**Sb**		**17 25 03.5**	**-6.1**
GDH				IAML			17 25 19.5	
	comp=Z,12nm,0.8s							
SAQQ	**Saqqaq**	**6.33**	**103**	*i* P	**Pb**		**17 23 53.6**	**-1.3**
SAQQ				*i* S	**Sb**		**17 25 03.7**	**-6.9**
SAQQ				IAML			17 25 43.0	
	comp=Z,9.2nm,0.9s							
NEEM	**North Greenlan**	**7.07**	**36**	*i* P	Pb		17 24 00.3	-7.2
NEEM				*i* S	**Sn**		**17 25 12.7**	**+3.9**
NEEM				IAML			17 25 19.2	
	comp=Z,4.5nm,0.3s							
RES	**Resolute Bay**	**7.37**	**300**	PN	**Pn**		**17 23 54.0**	**+1.8**
RES				SN	Sn		17 25 07.8	-7.8
RES				Trac			17 25 11.2	
	comp=Z,1.1nm,0.1s							
FRB	**Frobisher Bay**	**8.70**	**175**	PN	Pn		17 24 20.4	+10
FRB				SN	**Sn**		**17 25 54.2**	**+5.8**
FRB				Trac			17 25 59.4	
	comp=Z,2.5nm,0.1s							
BLKN	**Baker Lake**	**12.39**	**242**	PN	**Pn**

mbtmp3.4/5,ML4.6/1,MS2.9/4,Error ellipse: s-maj=73.5km s-min=21.2km az=75.0
MAN ***20*** *17:24:29.0,9.74N×125.42E,h7km,MS3.6*
ISC 20 17:24:30.8±0.9,9.84N±0.05×125.46E±0.05,h21km±4km, n25,σ2§17/30,mb3.3/4,MS2.8/3,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSSP	**Tandag City**	**1.08**	**137**	*i* P	**Pn**	**17 24 48.2**	**-2.4**
TSSP				*e*S	**Sb**	**17 25 01.0**	**-3.4**
LLP	**Lapu-Lapu**	**1.54**	**288**	*i* P	**Pn**	**17 24 57.0**	**0.0**
LLP				*i* S	**Sb**	**17 25 19.6**	**+1.9**
CGP	**Cagayan de Oro**	**1.57**	**209**	*i* P	**Pn**	**17 24 55.1**	**-2.2**
CGP				*i* S	**Sb**	**17 25 19.2**	**+0.7**
TBP	**Tagbilaran**	**1.58**	**265**	*i* P	**Pn**	**17 24 57.0**	**-0.4**
TBP				*e*S	**Sn**	**17 25 16.2**	**-1.1**
BIPH	**Bislig**	**1.87**	**151**	*e*P	**Pn**	**17 25 02.1**	**+0.6**
BIPH				*e*S	**Sn**	**17 25 25.6**	**+1.1**
BUKP	**Musuan**	**1.99**	**191**	*e*P	**Pn**	**17 24 59.5**	**-3.6**
BUKP				*e*S	**Sb**	**17 25 30.2**	**-0.3**
CDOP	**Cateel, Davao**	**2.26**	**155**	*e*P	**Pn**	**17 25 06.8**	**-0.1**
CDOP				*e*S	**Sn**	**17 25 36.0**	**+1.9**
DCPH	**Dipolog City**	**2.42**	**239**	*i* P	**Pn**	**17 25 08.8**	**-0.3**
DCPH				*i* S	**Sn**	**17 25 38.0**	**-0.1**
DAV	**Davao City (W)**	**2.75**	**177**	Pn	**Pb**	**17 25 19.1**	**-0.2**
	61nm,0.3s,baz=12,slow=4.9,SNR=3.6						
DAV				Sn	**Sb**	**17 25 59.9**	**+7.3**
	47nm,0.3s,baz=229,slow=21,SNR=4.4 180nm,0.4s						
KCP	**Kidapawan**	**2.84**	**187**	*e*P	**Pn**	**17 25 14.8**	**-0.1**
KCP				*i* S	**Sb**	**17 25 53.9**	**-1.1**
MMPH	**Masbate**	**3.08**	**324**	*i* P	Pb	17 25 30.2	+5.3
MMPH				*i* S	**Sn**	**17 25 56.2**	**+1.8**
RCP	**Roxas**	**3.17**	**303**	*e*P	**Pn**	**17 25 21.7**	**+2.4**
RCP				*e*S	**Sb**	**17 26 02.4**	**-2.1**
JAP	**San Jose, Anti**	**3.57**	**285**	*e*P	**Pb**	**17 25 31.4**	**-1.8**
DDMP	**Don Marcelino,**	**3.72**	**176**	*e*P	**Pb**	**17 25 36.4**	**+0.6**
DDMP				*e*S	**Sn**	**17 26 12.4**	**+2.2**
JOW	**Kunigami**	**17.11**	**9**	LR	LR	17 33 45.2	
	comp=Z,44nm,20.1s,baz=314,slow=34						
JNU	**Nakatsue**	**23.70**	**11**	LR	LR	17 37 41.9	
	comp=Z,34nm,20.4s,baz=205,slow=34						
LEM	**Lembang**	**24.29**	**228**	LR	LR	17 39 44.1	
	comp=Z,40nm,20.8s,baz=352,slow=36						
KSRS	**Korea Array**	**27.58**	**4**	LR	LR	17 40 16.2	
	comp=Z,18nm,21.7s,baz=120,slow=35						
WRA	**Warramunga Arr**	**30.86**	**164**	P	**P**	**17 30 45.2**	**-0.5**
	0.2nm,0.7s,baz=343,slow=7.5,SNR=1.5 0.2nm,0.7s						
ASAR	**Alice Springs**	**34.31**	**166**	P	**P**	**17 31 16.3**	**+0.4**
	0.3nm,0.5s,baz=351,slow=6.5,SNR=9.4 0.3nm,0.5s						
H11N1	**WAKE ISLAND Hy**	**41.15**	**71**	T	T	18 15 37.6	
	baz=265,slow=74						
H11N2	**WAKE ISLAND Hy**	**41.16**	**71**	T	T	18 15 41.0	
	baz=265						
H11N3	**WAKE ISLAND Hy**	**41.17**	**71**	T	T	18 15 47.1	
	baz=265,slow=74						
MKAR	**Makanchi Array**	**51.89**	**323**	P	**P**	**17 33 37.7**	**-0.1**
	0.2nm,0.7s,baz=121,slow=9.3,SNR=3.8 0.2nm,0.7s						
KURBB	**Kurchatov Arra**	**55.97**	**326**	P	**P**	**17 34 07.5**	**0.0**
	0.1nm,0.3s,baz=128,slow=6.9,SNR=1.8 0.1nm,0.3s						

ASRS 20 17:43:12.5±0.3,55°N±1°×9°7E±°,h9km,MLh3.9/14,Error ellipse: s-maj=3.5km s-min=2.2km az=26.4,confirmed, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MINR	**Mina**	**1.66**	**271**	Pg	Pb	17 43 43.5	+0.2
MINR				Sg	Sg	17 44 07.1	+1.2
GZLN	**Zheleznogorsk**	**2.39**	**310**	Pg	Pb	17 43 54.1	-1.7
GZLN				Sg	Sb	17 44 25.5	+0.2
GZL	**Zheleznogorsk**	**2.43**	**306**	Pg	Pb	17 43 57.5	+1.2
GZL				Sg	Sb	17 44 27.6	+1.2
TDJR	**Todzha**	**2.57**	**193**	Pg	Pb	17 43 59.5	+0.7
TDJR				Sg	Sg	17 44 34.3	-0.7
ARDR	**Aradan**	**3.18**	**224**	Pg	Pb	17 44 08.1	-1.0
ARDR				Sg	Sg	17 44 53.2	-1.3
KZLR	**Kyzyl**	**3.57**	**207**	Pg	Pb	17 44 17.3	+1.5
KZLR				Sg	Sg	17 45 04.3	-2.7
CERR	**Cheremushki**	**3.93**	**241**	Pg	Pb	17 44 23.1	+1.2
CERR				Sg	Sg	17 45 15.4	-3.2
MOY	**Mondy**	**4.00**	**142**	Pn	Pb	17 44 19.3	-3.9
MOY				Pg	Pg	17 44 24.1	-5.0
MOY				Sg	Sg	17 45 17.9	-3.0
DJO	**Djoy, Khakassi**	**4.07**	**241**	Pn	Pb	17 44 12.6	-2.3
DJO				Pg	Pg	17 44 27.6	-2.8
DJO				Sg	Sb	17 45 15.6	+2.1
KNGR	**Kungurtug, Tuv**	**4.31**	**176**	Pg	Pg	17 44 32.7	-2.3
KNGR				Sg	Sg	17 45 28.1	-2.7
VEH	**Verkhnyaya Baz**	**4.31**	**250**	Pn	Pn	17 44 22.9	+4.6
VEH				Pg	Pb	17 44 30.8	+2.4
VEH				Sg	Sg	17 45 28.1	-2.7
LUZB	**Luzhba, Kemero**	**4.95**	**259**	Pg	Pb	17 44 42.0	+2.7
LUZB				Sg	Sg	17 45 48.3	-3.1
BRCR	**Berchikul'**	**5.06**	**282**	Pg	Pb	17 44 43.3	+2.1
BRCR				Sg	Sg	17 45 50.5	-4.5
TLY	**Talaya**	**5.09**	**127**	Pg	Pb	17 44 43.7	+2.1
TLY				Sg	Sb	17 45 46.3	+3.4
KIYZ	**Kiyzas, Kuzbas**	**5.63**	**260**	Sg	Sg	17 46 09.0	-4.1
TEL	**Teeli**	**5.69**	**230**	Pn	Pn	17 44 35.7	-1.5
TEL				Pg	Pb	17 44 51.0	-0.9
TEL				Sg	Sb	17 46 05.8	+5.6
ZAK	**Zakamensk**	**5.89**	**138**	Sg	Sg	17 46 17.4	-4.1
KOTO	**Kotino, Kuzbas**	**5.96**	**267**	Sg	Sg	17 46 25.7	+2.1
YALR	**Yailyu, Altay**	**6.48**	**245**	Pg	Pg	17 45 11.5	-5.0
YALR				Sg	Sg	17 46 36.5	-3.8
ELT	**Eltsovka**	**6.59**	**260**	Pn	Pn	17 44 46.8	-2.7
ELT				Pg	Pg	17 45 12.9	-5.7
ELT				Sg	Sg	17 46 38.5	-5.3
SALR	**Pechorkino, Sa**	**6.62**	**270**	Sg	Sg	17 46 40.1	-4.7
ARTR	**Artybash**	**6.64**	**246**	Sg	Sg	17 46 43.6	-1.8
ULGR	**Ulagan, Altay**	**6.99**	**236**	Pg	Pg	17 45 21.5	-4.8
ULGR				Sg	Sg	17 46 54.8	-2.0
CUR	**Chagan-Uzun**	**7.17**	**232**	Pg	Pg	17 45 24.3	-5.4
CUR				Sg	Sg	17 47 00.0	-2.5
AKAR	**Aktash**	**7.36**	**235**	Pg	Pg	17 45 30.8	-2.5
AKAR				Sg	Sg	17 47 09.7	+1.2
CHBI	**Chibit, Altay**	**7.42**	**236**	Pg	Pg	17 45 29.0	-5.5
CHBI				Sg	Sg	17 47 09.9	-0.6
DGZ	**Jazzator, Alta**	**7.88**	**233**	Pg	Pb	17 45 36.0	+6.8
DGZ				Sg	Sg	17 47 21.0	-4.1
UKR	**Ust'-Kan**	**8.43**	**247**	Sg	Sg	17 47 44.5	+1.8

IDC ***20*** *17:43:35.8±10.0,2.94S×101.43E,h145km±95km,mb3.5/9, mbtmp4.0/10,Error ellipse: s-maj=60.8km s-min=13.1km az=61.0*
DJA ***20*** *17:43:46.1±0.4,2°S±3°×10°2E±°,h225km±4km,M3.6/24, MLv3.6/24*
ISC 20 17:43:46.3±0.7,2.12S±0.06×102.53E±0.07,h200km,n27, σ2§28/25,mb3.6/9,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASI	**Maura Aman, Be**	**1.05**	**196**	P	**Pn**	**17 44 19.0**	**+2.5**
MASI				S	**Sn**	**17 44 44.0**	**+4.0**
KRJI	**Kerinci**	**1.06**	**272**	P	**Pn**	**17 44 19.1**	**+2.5**
KRJI				S	**Sn**	**17 44 44.3**	**+4.3**
KSI	**Kapahiang**	**1.52**	**178**	P	**Pn**	**17 44 22.6**	**+2.3**
KSI				S	**Sn**	**17 44 50.1**	**+3.3**
UBSI	**University, Be**	**1.65**	**189**	P	**Pn**	**17 44 22.6**	**+1.2**
MNAI	**Manna**	**2.27**	**169**	P	**Pn**	**17 44 28.6**	**+1.0**
PDSI	**Padang**	**2.39**	**300**	P	**Pn**	**17 44 29.7**	**+0.7**
PPSI	**Pulau Pagai**	**2.59**	**256**	P	**Pn**	**17 44 32.0**	**+0.8**
DSRI	**Dabo**	**2.62**	**52**	P	**Pn**	**17 44 34.9**	**+3.4**
PPI	**Padang Panjang**	**2.70**	**308**	P	**Pn**	**17 44 33.6**	**+1.2**
PPI				S	**Sn**	**17 45 10.8**	**+2.4**
MDSI	**Maura Dua**	**2.87**	**145**	P	**Pn**	**17 44 35.5**	**+1.1**
KAPI	**Kappang**	**17.43**	**100**	P	**Pn**	**17 47 39.0**	**+1.3**
	8.8nm,0.4s,baz=240,slow=7.4,SNR=5.1						
H08S2	**Diego Garcia H**	**30.41**	**259**	T	T	18 19 45.9	
	baz=78						
H08S3	**Diego Garcia H**	**30.42**	**259**	T	T	18 19 26.7	
	baz=78						
H08S1	**Diego Carcia H**	**30.43**	**259**	T	T	18 19 33.5	
	baz=78						
WRA	**Warramunga Arr**	**35.77**	**122**	P	**P**	**17 50 24.7**	**-1.8**
	1.1nm,0.8s,baz=305,slow=8.3,SNR=17 1.1nm,0.8s						
ASAR	**Alice Springs**	**37.16**	**128**	P	**P**	**17 50 36.8**	**-1.5**
	3.1nm,0.6s,baz=301,slow=8.0,SNR=85						
ASAR				PcP	**PcP**	**17 52 51.8**	**-2.3**
	0.2nm,0.3s,baz=307,slow=2.7,SNR=5.8 3.1nm,0.6s						
STKA	**Stephens Creek**	**47.20**	**133**	P	**P**	**17 51 57.6**	**-1.6**
	0.7nm,0.3s,baz=339,slow=5.6,SNR=5.0 0.7nm,0.3s						
SONM	**Songino Array**	**49.86**	**3**	P	**P**	**17 52 20.3**	**+1.0**
	1.0nm,0.6s,baz=185,slow=9.3,SNR=7.7						
SONM				PcP	**PcP**	**17 53 34.7**	**-2.1**
	0.3nm,0.4s,baz=170,slow=2.6,SNR=2.5 1.0nm,0.6s						
MKAR	**Makanchi Array**	**51.87**	**342**	P	**P**	**17 52 33.2**	**-0.9**
	0.5nm,0.4s,baz=157,slow=8.5,SNR=12 0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**56.41**	**342**	P	**P**	**17 53 05.3**	**-1.6**
	0.6nm,0.6s,baz=159,slow=6.7,SNR=5.4 0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**57.79**	**348**	P	**P**	**17 53 15.3**	**-1.0**
	1.0nm,0.4s,baz=176,slow=5.9,SNR=5.6 1.0nm,0.4s						
BVAR	**Borovoye Array**	**61.19**	**338**	P	**P**	**17 53 38.0**	**-1.8**
	0.6nm,0.5s,baz=144,slow=8.5,SNR=3.8 0.6nm,0.5s						
H04N2	**CROZET ISLANDS**	**62.22**	**217**	T	T	18 59 29.2	
	baz=61,slow=75,SNR=5.9						
H04N1	**CROZET ISLANDS**	**62.23**	**217**	T	T	18 59 31.4	
	baz=61,slow=75,SNR=8.3						
H04N3	**CROZET ISLANDS**	**62.24**	**217**	T	T	18 59 32.7	
	baz=61,slow=75,SNR=7.0						
QSPA	**South Pole Qui**	**87.84**	**180**	P	P	17 56 03.7	-9.1
	1.1nm,0.6s,baz=23,slow=5.7,SNR=12 1.1nm,0.6s						
TXAR	**Lajitas Array**	**143.22**	**40**	PKP	PKPab	18 02 54.4	+0.8
	0.2nm,0.5s,baz=326,slow=1.6,SNR=4.7						

IDC ***20*** *18:12:43.0±4.1,15.86N×123.67E,h0km,mb3.2/3, mbtmp3.2/3,Error ellipse: s-maj=328.5km s-min=28.1km az=63.0*
MAN ***20*** *18:12:46.0,15.26N×122.27E,h1km,MS3.6*
ISC 20 18:12:46.5±1.5,15.4N±0.1×122.5E±0.1,h10km,n6, σ0§71/9,mb3.1/3,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GQP	**Guinayangan**	**1.45**	**181**	*i* P	**Pn**	**18 13 13.3**	**+0.5**
GQP				*i* S	**Sn**	**18 13 31.8**	**-0.1**
TGY	**Tagaytay City**	**1.95**	**230**	*e*P	**Pn**	**18 13 19.3**	**-0.4**
TGY				*e*S	**Sn**	**18 13 44.6**	**+0.2**
BOAC	**Boac**	**1.99**	**198**	*e*P	**Pn**	**18 13 20.9**	**+0.6**
BOAC				*e*S	**Sn**	**18 13 45.6**	**+0.4**
WRA	**Warramunga Arr**	**36.97**	**161**	P	**P**	**18 19 55.1**	**-1.1**
	0.4nm,1.1s,baz=344,slow=8.4,SNR=1.1 0.4nm,1.1s						
ASAR	**Alice Springs**	**40.37**	**164**	P	**P**	**18 20 24.1**	**-0.6**
	0.2nm,0.7s,baz=339,slow=6.9,SNR=6.8 0.2nm,0.7s						
MKAR	**Makanchi Array**	**45.76**	**322**	P	**P**	**18 21 08.9**	**+0.7**
	0.4nm,0.8s,baz=122,slow=8.3,SNR=5.1 0.4nm,0.8s						

CATAC ***20*** *18:17:04.5±0.5,13°N±3°×8°9W±°,h29km±3km,M3.6/8, MLv3.6/8,Error ellipse: s-maj=6.7km s-min=2.4km az=24.3, confirmed*
SNET ***20*** *18:17:04.5±0.8,12.79N×88.79W,h35km±2km,ML4.0, Presumed earthquake*
GCG ***20*** *18:17:06.6±0.7,13.01N×88.83W,h33km±4km,MD4.1, ML4.1,Presumed earthquake*
ISC 20 18:17:04.1±1.4,12.84N±0.06×88.79W±0.03,h31km±12km, n55,σ0§52/90,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TECO	**Alcaldia de Te**	**0.69**	**1**	P	**Pb**	**18 17 17.8**	**0.0**
TECO	**Alcaldia de Te**	**0.69**	**1**	*e*P	**Pb**	**18 17 17.9**	**0.0**
TECO				*e*S	**Sn**	**18 17 28.0**	**+0.3**
RANC	**El Ranchito**	**0.77**	**40**	P	**Pn**	**18 17 18.9**	**-0.2**
RANC				S	**Sb**	**18 17 30.2**	**+0.8**
PACA	**Pacayal**	**0.78**	**36**	P	**Pn**	**18 17 19.0**	**-0.1**
PACA				S	**Sb**	**18 17 30.0**	**+0.5**
PACA	**Pacayal**	**0.78**	**36**	*e*P	**Pn**	**18 17 19.0**	**-0.1**
SJTE	**Alcalda de S**	**0.80**	**345**	*e*P	**Pb**	**18 17 19.4**	**-0.2**
SJTE				*e*S	**Sb**	**18 17 30.9**	**+0.7**
INTP	**Intipuca**	**0.80**	**64**	*e*P	**Pn**	**18 17 19.0**	**-0.4**
PQSS	**Presa 15 de Se**	**0.81**	**16**	P	**Pn**	**18 17 19.4**	**-0.1**
PQSS				S	**Sb**	**18 17 31.4**	**+1.0**
LALI	**Alcalda de L**	**0.83**	**321**	*e*P	**Pn**	**18 17 19.7**	**0.0**
LALI				*i* S	**Sn**	**18 17 30.0**	**-0.8**
LALI	**Alcalda de L**	**0.83**	**321**	*e*P	**Pn**	**18 17 19.6**	**0.0**
LALI				*e*S	**Sb**	**18 17 31.6**	**+0.8**
PANCS	**Alcalda de**	**0.86**	**334**	P	**Pb**	**18 17 20.6**	**0.0**
PANCS				S	**Sb**	**18 17 31.2**	**-0.6**
SCLA	**Alcaldia de Sa**	**0.86**	**4**	P	**Pb**	**18 17 20.5**	**-0.2**
SCLA				S	**Sb**	**18 17 32.0**	**+0.2**
SCLA	**Alcaldia de Sa**	**0.86**	**4**	*e*P	**Pb**	**18 17 20.4**	**-0.2**
SCLA				*e*S	**Sb**	**18 17 33.1**	**+1.2**
CNRM	**Centro Naciona**	**0.88**	**44**	P	**Pb**	**18 17 20.7**	**-0.1**
CNRM				S	**Sb**	**18 17 31.9**	**-0.4**
PAVA	**Las Pavas**	**0.88**	**351**	P	**Pb**	**18 17 20.7**	**-0.3**
PAVA	**Las Pavas**	**0.88**	**351**	*e*P	**Pb**	**18 17 20.6**	**-0.3**
PAVA				*e*S	**Sb**	**18 17 33.0**	**+0.5**
LOMA	**Loma Larga**	**0.88**	**335**	*e*P	**Pn**	**18 17 20.5**	**-0.1**
UDBS	**Universidad Do**	**0.94**	**338**	P	**Pb**	**18 17 21.6**	**-0.4**
UDBS				S	**Sb**	**18 17 34.5**	**+0.4**
IGN	**Direccin Gen**	**0.94**	**337**	P	**Pn**	**18 17 21.5**	**+0.1**
IGN				S	**Sb**	**18 17 34.4**	**+0.2**
UTEC	**Universidad Te**	**0.94**	**335**	P	**Pb**	**18 17 22.0**	**-0.1**
UTEC				S	**Sb**	**18 17 34.2**	**-0.1**
LFU	**La Fuente**	**0.96**	**341**	*e*P	**Pb**	**18 17 21.7**	**-0.5**
UEES	**Universidad Ev**	**0.97**	**334**	P	**Pn**	**18 17 21.9**	**+0.1**
UEES				S	**Sb**	**18 17 35.0**	**-0.2**
LCND	**La Caada**	**0.99**	**62**	P	**Pn**	**18 17 21.7**	**-0.4**
LCND				S	**Sn**	**18 17 34.9**	**-0.1**
LCND	**La Caada**	**0.99**	**62**	*e*P	**Pn**	**18 17 21.6**	**-0.4**
PMON	**Piamonte**	**1.01**	**330**	P	**Pb**	**18 17 22.6**	**-0.5**
PMON				S	**Sb**	**18 17 35.8**	**-0.2**
PMON	**Piamonte**	**1.01**	**330**	*e*P	**Pn**	**18 17 22.5**	**+0.2**
PIC2	**El Picacho**	**1.01**	**333**	*e*P	**Pb**	**18 17 22.8**	**-0.4**
PIC2				*e*S	**Sb**	**18 17 36.8**	**+0.6**
BOQS	**Boqueron**	**1.01**	**332**	*e*P	**Pb**	**18 17 22.7**	**-0.6**
CNCH	**Conchagua**	**1.03**	**65**	P	**Pn**	**18 17 22.4**	**-0.2**
CNCH				S	**Sn**	**18 17 35.9**	**-0.2**
CNCH	**Conchagua**	**1.03**	**65**	*e*P	**Pn**	**18 17 22.2**	**-0.4**
CNCH				*e*P	**Pb**	**18 17 23.3**	**-0.2**
CNCH				*e*S	**Sb**	**18 17 37.0**	**+0.3**
JAYA	**Jayaque - finc**	**1.03**	**322**	P	**Pn**	**18 17 22.7**	**+0.1**
JAYA				S	**Sb**	**18 17 36.3**	**-0.5**
JAYA	**Jayaque - finc**	**1.03**	**322**	*i* P	**Pn**	**18 17 22.5**	**-0.2**
JAYA				IAML		18 17 39.7	
	comp=N,9μm,0.2s						
JAYA	**Jayaque - finc**	**1.03**	**322**	*e*P	**Pn**	**18 17 22.8**	**+0.1**
JAYA				*e*S	**Sb**	**18 17 37.1**	**+0.2**
P5NO	**Presa 5 de nov**	**1.14**	**2**	P	**Pn**	**18 17 24.0**	**-0.1**
P5NO				S	**Sb**	**18 17 39.1**	**-0.7**
CSGN	**Cosiguina Volc**	**1.21**	**83**	P	**Pn**	**18 17 25.2**	**+0.1**
CSGN				S	**Sn**	**18 17 40.6**	**+0.2**
POTN	**Potosi Cosigui**	**1.26**	**83**	P	**Pn**	**18 17 25.4**	**-0.3**
POTN				S	**Sn**	**18 17 42.0**	**+0.3**
CEVE	**Cerro Verde**	**1.27**	**321**	P	**Pb**	**18 17 26.8**	**-0.9**
CEVE				S	**Sb**	**18 17 42.9**	**-1.0**
CEVE	**Cerro Verde**	**1.27**	**321**	*e*P	**Pn**	**18 17 26.5**	**+0.4**
CEVE				*e*S	**Sb**	**18 17 44.1**	**+0.3**
SBLS	**San Blas**	**1.28**	**321**	*e*P	**Pn**	**18 17 26.7**	**+0.5**
SNJE	**San Jose**	**1.29**	**322**	*e*P	**Pn**	**18 17 26.7**	**+0.4**
LLGN	**La Laguna**	**1.32**	**354**	P	**Pn**	**18 17 26.5**	**-0.1**
LLGN				S	**Sb**	**18 17 43.5**	**-1.6**
UNIC	**Universidad Ca**	**1.35**	**327**	P	**Pn**	**18 17 27.5**	**+0.5**
UNIC				S	**Sb**	**18 17 44.9**	**-1.1**
NUBE	**Las Nubes**	**1.43**	**318**	P	**Pn**	**18 17 28.6**	**+0.5**
NUBE	**Las Nubes**	**1.43**	**318**	*i* P	**Pn**	**18 17 28.4**	**+0.3**
NUBE				*e*S	**Sn**	**18 17 46.0**	**0.0**
NUBE	**Las Nubes**	**1.43**	**318**	*e*P	**Sn**	**18 17 28.5**	**+0.3**
NUBE				*e*S	**Sn**	**18 17 46.5**	**+0.5**
RBDL	**Robledal**	**1.54**	**326**	*e*P	**Pn**	**18 17 30.1**	**+0.4**
MTO3	**Montecristo**	**1.65**	**340**	P	**Pn**	**18 17 31.2**	**0.0**
MTO3				S	**Sn**	**18 17 51.6**	**+0.2**
MTO3	**Montecristo**	**1.65**	**340**	*i* P	**Pn**	**18 17 31.2**	**0.0**
MTO3	**Montecristo**	**1.65**	**340**	*e*P	**Pn**	**18 17 31.1**	**0.0**
QUEN	**Al S del Volca**	**1.91**	**97**	P	**Pn**	**18 17 35.1**	**+0.5**
QUEN				S	**Sn**	**18 17 57.5**	**-0.1**
SARH	**Santa Rosa de**	**1.93**	**1**	*i* P	**Pn**	**18 17 35.3**	**+0.4**
FG16	**Alotenango, Sa**	**2.20**	**311**	*e*P	**Pb**	**18 17 45.1**	**+1.7**
APG	**El Apazote**	**2.70**	**323**	*i* P	**Pn**	**18 17 46.5**	**+0.8**
STG5	**El Palmar, Qui**	**2.93**	**302**	*e*P	**Pb**	**18 17 55.1**	**-0.7**
STG8	**El Palmar, Qui**	**2.96**	**303**	*i* P	**Pb**	**18 17 55.5**	**-0.9**
STG8				IAML		18 18 43.8	
	comp=E,422nm,0.2s						

NEIC ***20*** *18:39:36.6±1.7,4.32S±0.06×151.97E±0.05,h13km±5km, mb4.5/36,Error ellipse: s-maj=10.8km s-min=4.2km az=146.0*
IDC ***20*** *18:39:46.9±3.1,4.47S×151.63E,h84km±32km,mb3.8/11, mbtmp4.2/13,MS3.6/42,Error ellipse: s-maj=29.0km s-min=19.2km az=137.0*
ISC 20 18:39:36.0±0.4,4.33S±0.05×151.96E±0.06,h10km,n101, σ1§18/68,mb4.5/29,MS3.7/39,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**0.25**	**57**		**Pg**	**18 39 40.4**	**-0.7**
RABL					**Sg**	**18 39 44.7**	**+0.2**
MANU	**Manus Island**	**5.11**	**296**		**Pn**	**18 40 52.5**	**-0.2**
PMG	**Port Moresby**	**6.94**	**223**	P	**Pn**	**18 41 21.3**	**+3.5**
	84nm,0.6s,baz=37,slow=6.7,SNR=32						
PMG				S	**Sn**	**18 42 37.8**	**+1.0**
	34nm,0.7s,baz=256,slow=20,SNR=3.2						
PMG				LR	LR	18 44 06.3	
	comp=Z,716nm,20.6s,baz=41,slow=39						
PMG	**Port Moresby**	**6.94**	**223**		**Pn**	**18 41 19.1**	**+1.3**
HNR	**Honiara**	**9.41**	**123**	P	Pn	18 42 02.6	+11
	0.7nm,0.5s,baz=228,slow=12,SNR=2.5						
HNR				LR	LR	18 45 52.4	
	comp=Z,22nm,19.3s,baz=12,slow=38						
HNR	**Honiara**	**9.41**	**123**	Pn	**Pn**	**18 41 52.7**	**+0.8**
JAY	**Jayapura**	**11.37**	**279**	LR	LR	18 46 49.9	
	comp=Z,235nm,18.5s,baz=12,slow=38						
COEN	**Coen**	**12.90**	**222**	Pn	**Pn**	**18 42 40.5**	**+0.8**
CTA	**Charters Tower**	**16.62**	**199**	P	**P**	**18 43 31.8**	**0.0**
	7.5nm,0.8s,baz=18,slow=14,SNR=7.7						
CTA				LR	LR	18 49 29.8	
	comp=Z,229nm,18.6s,baz=22,slow=36						
CTAO	**Charters Tower**	**16.62**	**199**	P	**Pn**	**18 43 29.1**	**-0.2**
GUMO	**Guam**	**19.14**	**339**	LR	LR	18 50 35.2	
	comp=Z,47nm,18.9s,baz=112,slow=34						
FAKI	**Fak Fak**	**19.72**	**273**		**P**	**18 44 06.5**	**+0.6**
FAKI				IAmb	IAmb	18 44 35.8	
	comp=Z,51nm,1.3s						
EIDS	**Eidsvold**	**20.94**	**182**		**P**	**18 44 19.2**	**+0.2**
SIJI	**Sorong**	**20.95**	**279**	P	**P**	**18 44 19.1**	**-0.3**
	comp=Z,9.2nm,1.1s,baz=76,slow=12,SNR=8.1						
SIJI				LR	LR	18 51 32.9	
	comp=Z,298nm,18.7s,baz=65,slow=34 comp=Z,9.2nm,1.1s						
MTN	**Manton Dam**	**22.24**	**246**	P	**P**	**18 44 33.5**	**+0.3**
ONTNC	**Quen Toro**	**22.73**	**143**	P	**P**	**18 44 37.4**	**-1.0**
WB0	**Warramunga Arr**	**22.99**	**227**		**P**	**18 44 39.9**	**-1.3**
WB0				IAmb	IAmb	18 44 46.5	
	comp=Z,28nm,1.2s						
WR8	**Warramunga Arr**	**23.03**	**226**		**P**	**18 44 40.7**	**-0.9**
WR8				IAmb	IAmb	18 44 46.3	
	comp=Z,15nm,1.0s						
WRAB	**Tennant Creek**	**23.13**	**226**	P	**P**	**18 44 41.5**	**-1.0**
WRAB				IAmb	IAmb	18 44 47.8	
	comp=Z,37nm,1.4s						
WRA	**Warramunga Arr**	**23.14**	**226**	P	**P**	**18 44 42.6**	**-0.1**
	comp=Z,12nm,0.7s,baz=49,slow=10,SNR=44 comp=Z,12nm,0.7s						
WRA	**Warramunga Arr**	**23.14**	**226**		**P**	**18 44 41.2**	**-1.5**
KNRA	**Kununurra**	**25.44**	**242**	P	**P**	**18 45 04.3**	**+0.1**
KNRA				IAmb	IAmb	18 45 09.4	
	comp=Z,8.8nm,1.1s						
INKA	**Innaminka**	**25.62**	**203**		**P**	**18 45 05.2**	**-0.5**
INKA				IAmb	IAmb	18 45 12.6	
	comp=Z,12nm,1.1s						
AS31	**Alice Springs**	**25.94**	**220**		**P**	**18 45 08.0**	**-0.8**
ASAR	**Alice Springs**	**25.94**	**220**	P	**P**	**18 45 08.2**	**-0.6**
	comp=Z,12nm,0.7s,baz=55,slow=8.6,SNR=84						
ASAR				LR	LR	18 55 31.5	
	comp=Z,199nm,18.1s,baz=53,slow=37 comp=Z,12nm,0.7s						
ASAR	**Alice Springs**	**25.94**	**220**		**P**	**18 45 07.9**	**-0.9**
BATI	**

comp=Z,7.0nm,1.2s
ULN Ulaanbaatar 65.15 328 P P 18 50 17.0 -0.4
ULN IAmb IAmb 18 50 24.0
comp=Z,3.5nm,1.1s
SHL Shillong 65.34 301 P **P 18 50 18.7 -0.4**
SONM Songino Array 65.48 328 P **P 18 50 20.8 +1.3**
SONM LR LR 19 20 56.7
comp=Z,1.3nm,0.7s,baz=152,slow=7.2,SNR=8.2
comp=Z,25nm,18.1s,baz=106,slow=38
comp=Z,1.3nm,0.7s
SONM Songino Array 65.48 328 P **P 18 50 20.8 +1.3**
SONM IAmb IAmb 18 50 33.5
comp=Z,2.0nm,1.0s
YAK Yakutsk 68.35 349 P **P 18 50 38.3 +1.0**
TLY Talaya 69.25 330 LR LR 19 22 20.0
comp=Z,17nm,18.4s,baz=121,slow=37
EVN Everest 70.37 302 P **P 18 50 51.6 +0.2**
EVN IAmb IAmb 18 51 10.5
comp=Z,3.6nm,1.1s
PALK Pallekele 72.03 279 LR LR 19 26 55.5
comp=Z,26nm,18.1s,baz=116,slow=39
CHGN Chignik 72.68 26 P **P 18 51 04.8 +0.9**
BILL Bilibino 72.90 6 P **P 18 51 06.4 +1.4**
BILL IAmb IAmb 18 51 14.8
comp=Z,4.5nm,1.2s
PLK4 Peulik 4 74.37 26 P **P 18 51 13.8 -0.2**
WMQ Urumqi 74.83 318 *eP* P 18 51 22.6 +5.7
WMQ sP sP 18 51 25.8 +4.4
WMQ PcP **PcP 18 51 31.9 +1.0**
WMQ LR LR
comp=Z,120nm,24.1s
KDAK Kodiak Island 76.14 27 LR LR 19 18 34.3
comp=Z,44nm,21.1s,baz=227,slow=30
MKAR Makanchi Array 79.42 319 P **P 18 51 44.4 +1.8**
comp=Z,2.4nm,1.1s,baz=99,slow=7.5,SNR=9.5
MKAR LR LR 19 26 55.4
comp=Z,27nm,20.3s,baz=68,slow=36
comp=Z,2.4nm,1.1s
MKAR Makanchi Array 79.42 319 P **P 18 51 40.9 -1.7**
ZAAO Zalesovo Array 80.30 326 P **P 18 51 46.3 -0.8**
ZALV Zalesovo Beam 80.30 326 P **P 18 51 47.7 +0.5**
comp=Z,0.9nm,0.6s,baz=104,slow=6.3,SNR=5.5
ZALV LR LR 19 27 46.3
comp=Z,20nm,19.9s,baz=102,slow=36
comp=Z,0.9nm,0.6s
ZALV Zalesovo Beam 80.30 326 P **P 18 51 46.2 -0.9**
B20K Meade River 81.61 16 P **P 18 51 53.2 -0.6**
B20K IAmb IAmb 18 52 04.0
comp=Z,9.7nm,1.4s
ILAR Eielson Array 82.04 22 P **P 18 51 59.4 +3.2**
comp=Z,0.3nm,0.7s,baz=256,slow=6.3,SNR=2.1
ILAR LR LR 19 23 19.8
comp=Z,36nm,21.2s,baz=199,slow=32
comp=Z,0.3nm,0.7s
ILAR Eielson Array 82.04 22 P **P 18 51 55.0 -1.3**
J25K Salcha River, 82.55 23 P **P 18 51 57.6 -1.4**
J25K IAmb IAmb 18 52 21.8
comp=Z,3.4nm,1.2s
DOT Dot Lake 82.64 24 P **P 18 51 57.3 -2.1**
DOT IAmb IAmb 18 52 10.7
comp=Z,2.2nm,0.8s
KURBB Kurchatov Arra 82.91 322 P **P 18 52 01.4 +0.4**
comp=Z,1.1nm,0.9s,baz=105,slow=5.2,SNR=9.4
comp=Z,1.1nm,0.9s
NRIK Noril'sk 85.25 341 LR LR 19 28 21.2
comp=Z,31nm,20.9s,baz=128,slow=34
BBB Bella Bella 87.23 37 LR LR 19 24 09.0
comp=Z,46nm,20.7s,baz=250,slow=30
DLBC Dease Lake 87.41 31 LR LR 19 26 12.2
comp=Z,76nm,19.0s,baz=276,slow=32
INK Inuvik 88.32 21 LR LR 19 29 08.4
comp=Z,38nm,21.1s,baz=321,slow=33
BVAR Borovoye Array 88.36 323 P **P 18 52 29.3 +1.2**
comp=Z,0.3nm,0.5s,baz=116,slow=6.6,SNR=4.9
comp=Z,0.3nm,0.5s
NVAR Mina Array Bea 92.46 52 LR LR 19 31 53.7
comp=Z,57nm,18.1s,baz=262,slow=34
PFO Pinyon Flats O 93.69 57 LR LR 19 27 56.4
comp=Z,48nm,20.7s,baz=230,slow=31
NEW Newport 93.81 42 LR LR 19 31 52.4
comp=Z,38nm,18.2s,baz=246,slow=33
ELK Elko 94.92 50 LR LR 19 34 21.7
comp=Z,36nm,18.1s,baz=232,slow=34
YKA Yellowknife Ar 95.40 28 LR LR 19 32 20.4
comp=Z,50nm,19.5s,baz=348,slow=33
ARTI Arti 95.56 326 LR LR 19 37 09.0
comp=Z,17nm,19.1s,baz=88,slow=36
LPIG La Paz 98.81 66 LR LR 19 31 06.1
comp=Z,28nm,19.4s,baz=353,slow=31
TORD Torodi Ar. Bea 149.36 289 PKPbc **PKPbc 18 59 26.2 -0.2**
comp=Z,2.2nm,0.8s,baz=83,slow=0.9,SNR=12

*NEIC **20** 18:41:25.5±1.8, 17.91S±0.09×177.8W±0.1, h541km±6km, mb4.3/51, Error ellipse: s-maj=16.8km s-min=10.8km az=51.0*
*IDC **20** 18:41:28.7±1.3, 18.08S×177.95W, h569km±11km, mb3.4/12, mbtmp4.3/14, Error ellipse: s-maj=18.5km s-min=11.9km az=94.0*
ISC 20 18:41:28.4±1.1, 17.98S±0.08×178.0W±0.1, h574km±10km, n89, σ1§02/95, mb4.2/33, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.82**	**273**	P	**P**	**18 42 50.6**	**-0.1**
	48nm,0.7s,baz=111,slow=6.7,SNR=33						
MSVF				S	**S**	**18 43 59.0**	**+1.1**
	12nm,0.8s,baz=129,slow=22,SNR=5.6						
MSVF	**Nonsavu**	**3.82**	**273**	P	**P**	**18 42 51.3**	**+0.6**
MARNC	**Mare, Loyalty**	**13.65**	**253**	P	**P**	**18 44 22.3**	**-1.7**
SANVU	**Saraoutou**	**14.44**	**278**	P	**P**	**18 44 31.2**	**-0.8**
OUENC	**Ouen Island, N**	**14.94**	**250**	P	**P**	**18 44 35.6**	**-1.2**
DZM	**Mont Dzumac**	**15.22**	**252**	P	**P**	**18 44 37.6**	**-1.9**
	8.0nm,0.6s,baz=108,slow=12,SNR=3.0						
URZ	**Urewera**	**20.66**	**191**	P	**P**	**18 45 27.5**	**-1.6**
	6.2nm,0.4s,baz=239,slow=3.7,SNR=12						
URZ				S	**S**	**18 48 41.8**	**-1.7**
	3.0nm,0.7s,baz=166,slow=20,SNR=8.1						
	6.2nm,0.4s						
RTZ	**Ruatahuna**	**21.03**	**191**	P	**P**	**18 45 30.9**	**-1.6**
BKZ	**Black Stump Fm**	**21.66**	**192**	P	**P**	**18 45 36.4**	**-1.7**
PLWZ	**Palliser**	**24.22**	**192**	P	**P**	**18 45 59.2**	**-1.6**
KHZ	**Kahutara**	**25.41**	**195**		**P**	**18 46 09.0**	**-2.2**
LTZ	**Lake Taylor**	**26.08**	**197**	P	**P**	**18 46 15.3**	**-1.9**
WKZ	**Wanaka**	**28.91**	**199**	P	**P**	**18 46 41.0**	**-0.9**
EIDS	**Eidsvold**	**29.65**	**250**	P	**P**	**18 46 49.0**	**+0.4**
EIDS				IAmb	IAmb	18 47 10.5	
	comp=Z,6.5nm,1.1s						
WHZ	**Wether Hill Ro**	**30.20**	**200**	P	**P**	**18 46 52.7**	**-0.3**
ARMA	**Armidale**	**30.28**	**240**	P	**P**	**18 46 54.9**	**+0.8**
CTAO	**Charters Tower**	**33.87**	**261**	P	**P**	**18 47 24.6**	**+0.2**
CAN	**Canberra**	**34.01**	**233**	P	**P**	**18 47 25.6**	**+0.1**
TOO	**Toolangi**	**37.46**	**231**	P	**P**	**18 47 55.1**	**+1.1**
TOO				IAmb	IAmb	18 47 58.2	
	comp=Z,8.0nm,1.1s						
MANU	**Manus Island**	**37.53**	**291**	P	**P**	**18 47 53.6**	**-1.2**
COEN	**Coen**	**37.54**	**270**	P	**P**	**18 47 55.6**	**+0.7**
STKA	**Stephens Creek**	**38.98**	**241**	P	**P**	**18 48 07.6**	**+1.3**
	comp=Z,7.6nm,0.8s,baz=90,slow=9.7,SNR=9.2						
	comp=Z,7.6nm,0.8s						
STKA	**Stephens Creek**	**38.98**	**241**	P	**P**	**18 48 07.1**	**+0.8**
INKA	**Innaminka**	**39.12**	**248**	P	**P**	**18 48 09.2**	**+1.7**
BBOO	**Buckleboo**	**43.75**	**241**	P	**P**	**18 48 44.6**	**+0.6**
BBOO				IAmb	IAmb	18 49 20.6	
	comp=Z,21nm,1.4s						
WB0	**Warramunga Arr**	**45.02**	**260**	P	**P**	**18 48 53.7**	**-0.2**
WB0				IAmb	IAmb	18 49 06.1	
	comp=Z,7.4nm,1.1s						
WB0				PcP	**PcP**	**18 50 23.0**	**+0.5**
WRA	**Warramunga Arr**	**45.05**	**260**	P	**P**	**18 48 54.1**	**0.0**
	comp=Z,2.0nm,0.3s,baz=96,slow=7.8,SNR=77						
WRA				PcP	**PcP**	**18 50 23.5**	**+0.9**
	comp=Z,0.9nm,0.4s,baz=90,slow=3.8,SNR=5.8						
	comp=Z,2.0nm,0.3s						
WRA	**Warramunga Arr**	**45.05**	**260**		**P**	**18 48 53.8**	**-0.3**
AS31	**Alice Springs**	**45.19**	**254**		**P**	**18 48 55.5**	**+0.3**
AS31				IAmb	IAmb	18 48 56.6	
	comp=Z,4.3nm,0.7s						
AS31				PcP	**PcP**	**18 50 23.6**	**+0.5**
ASAR	**Alice Springs**	**45.19**	**254**	P	**P**	**18 48 55.6**	**+0.5**
	comp=Z,16nm,0.6s,baz=87,slow=8.5,SNR=132						
ASAR				PcP	**PcP**	**18 50 23.8**	**+0.7**
	comp=Z,2.0nm,0.5s,baz=105,slow=3.9,SNR=9.9						
	comp=Z,16nm,0.6s						
MTN	**Manton Dam**	**49.23**	**268**	P	**P**	**18 49 25.1**	**-0.5**
MTN				IAmb	IAmb	18 49 34.7	
	comp=Z,8.1nm,1.1s						
FORT	**Forrest**	**50.37**	**245**	P	**P**	**18 49 33.4**	**-0.3**
FORT				IAmb	IAmb	18 49 34.3	
	comp=Z,5.4nm,0.6s						
FORT				PcP	**PcP**	**18 50 41.2**	**-0.6**
KNRA	**Kununurra**	**50.92**	**264**	P	**P**	**18 49 37.5**	**-0.3**
KNRA				IAmb	IAmb	18 49 38.6	
	comp=Z,7.1nm,0.8s						
SIJI	**Sorong**	**52.68**	**283**	P	**P**	**18 49 50.7**	**+0.2**
	comp=Z,34nm,1.1s,baz=89,slow=5.4,SNR=8.8						
	comp=Z,34nm,1.1s						
SOEI	**Soe**	**56.51**	**270**	P	**P**	**18 50 18.8**	**+1.4**
SOEI				IAmb	IAmb	18 50 20.1	
	comp=Z,11nm,0.7s						
PSA00	**Pilbara Seismi**	**58.31**	**255**	P	**P**	**18 50 28.8**	**-0.6**
PSA00				IAmb	IAmb	18 50 30.3	
	comp=Z,10nm,0.8s						
PSA00	**Pilbara Seismi**	**58.31**	**255**	P	**P**	**18 50 28.9**	**-0.5**
PSA00				IAmb	IAmb	18 50 30.3	
	comp=Z,4.2nm,0.8s						
MBWA	**Marble Bar**	**58.48**	**256**	P	**P**	**18 50 30.5**	**-0.1**
MBWA				IAmb	IAmb	18 51 14.4	
	comp=Z,19nm,1.4s						
MMRI	**Maumere**	**58.73**	**271**	P	**P**	**18 50 32.4**	**0.0**
MMRI				IAmb	IAmb	18 50 40.9	
	comp=Z,15nm,1.0s						
SBA	**Scott Base**	**60.37**	**184**	P	**P**	**18 50 43.4**	**+1.2**
VNDA	**Vanda**	**60.41**	**185**	P	**P**	**18 50 43.6**	**+1.2**
MORW	**Morawa**	**60.85**	**246**	P	**P**	**18 50 46.4**	**+0.2**
MORW				IAmb	IAmb	18 51 07.1	
	comp=Z,20nm,1.4s						
TOLI2	**Tolitoli**	**63.16**	**281**	P	**P**	**18 51 02.9**	**+1.6**
CASY	**Casey**	**66.25**	**205**	P	**P**	**18 51 20.7**	**+0.8**
JAGI	**Jajag, Banyuwa**	**66.47**	**268**	P	**P**	**18 51 21.3**	**-0.9**
JAGI				IAmb	IAmb	18 51 53.2	
	comp=Z,21nm,1.2s						
MJAR	**Matsushiro Arr**	**68.23**	**323**	P	**P**	**18 51 31.7**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=154,slow=5.6,SNR=4.7						
	comp=Z,0.6nm,0.5s						
MAJO	**Matsushiro**	**68.23**	**323**	P	**P**	**18 51 31.9**	**-0.6**
MAJO				IAmb	IAmb	18 52 00.4	
	comp=Z,15nm,1.3s						
MJB9	**Matsu-Tunnel**	**68.23**	**323**	P	**P**	**18 51 32.7**	**+0.2**
MJB9				IAmb	IAmb	18 52 01.4	
	comp=Z,15nm,1.3s						
KKM	**Kota Kinabalu**	**69.18**	**284**	P	**P**	**18 51 39.0**	**+0.2**
KKM				IAmb	IAmb	18 51 50.9	
	comp=Z,16nm,1.0s						
UGM	**Wanagama**	**70.08**	**268**	P	**P**	**18 51 42.8**	**-1.3**
QSPA	**South Pole Qui**	**72.07**	**180**	P	**P**	**18 51 55.9**	**+1.0**
	comp=Z,3.5nm,0.7s,baz=303,slow=1.5,SNR=29						
	comp=Z,3.5nm,0.7s						
QSPA	**South Pole Qui**	**72.07**	**180**		**P**	**18 51 56.1**	**+1.2**
QSPA	**South Pole Qui**	**72.07**	**180**	IAmb	IAmb	18 51 57.0	
	comp=Z,4.9nm,0.6s						
SSLB	**Suanglung**	**72.64**	**303**	P	**P**	**18 51 58.1**	**-0.7**
SSLB				IAmb	IAmb	18 52 03.5	
	comp=Z,13nm,1.1s						
TPUB	**Ta-pu**	**72.67**	**302**	P	**P**	**18 51 58.4**	**-0.5**
PEA0B	**Petropavlovsk-**	**73.86**	**345**	P	**P**	**18 52 04.4**	**-0.6**
PETK	**Petropavlovsk-**	**73.86**	**345**	P	**P**	**18 52 05.0**	**0.0**
	comp=Z,6.6nm,0.9s,baz=155,slow=5.4,SNR=2.8						
	comp=Z,6.6nm,0.9s						
O15K	**Ungalikthiuk R**	**78.30**	**9**	P	**P**	**18 52 29.1**	**-0.2**
N14K	**Kuskokwak Cree**	**78.75**	**8**	P	**P**	**18 52 31.2**	**-0.4**
N14K				IAmb	IAmb	18 53 01.3	
	comp=Z,25nm,1.4s						
O16K	**Kokwok River B**	**78.98**	**10**	P	**P**	**18 52 31.9**	**-1.0**
N15K	**Kwethluk River**	**79.21**	**9**	P	**P**	**18 52 34.2**	**+0.1**
N15K				IAmb	IAmb	18 52 59.0	
	comp=Z,14nm,1.4s						
P18K	**Big Mountain,**	**79.31**	**12**	P	**P**	**18 52 34.3**	**-0.3**
P18K				IAmb	IAmb	18 53 02.3	
	comp=Z,14nm,1.4s						
RADR	**Rader Ridge**	**80.56**	**35**	P	**P**	**18 52 41.6**	**+0.1**
RADR				IAmb	IAmb	18 53 22.3	
	comp=Z,21nm,1.5s						
L16K	**Owhat River**	**80.78**	**9**	P	**P**	**18 52 43.0**	**+0.8**
PV21	**Cone Mtn., Par**	**85.57**	**47**	P	**P**	**18 53 02.8**	**-4.2**
TXAR	**Lajitas Array**	**85.67**	**57**	P	**P**	**18 53 09.7**	**+2.2**
	comp=Z,0.3nm,0.7s,baz=210,slow=7.2,SNR=4.8						
	comp=Z,0.3nm,0.7s						
TXAR	**Lajitas Array**	**85.67**	**57**	P	**P**	**18 53 08.1**	**+0.6**
ILAR	**Eielson Array**	**85.86**	**13**	P	**P**	**18 53 07.0**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=218,slow=5.4,SNR=7.5						
	comp=Z,0.3nm,0.4s						
PDAR	**Pinedale Array**	**87.11**	**43**	P	**P**	**18 53 14.9**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=256,slow=6.0,SNR=3.5						
	comp=Z,0.2nm,0.4s						
PDAR	**Pinedale Array**	**87.11**	**43**	P	**P**	**18 53 14.5**	**+0.4**
CMAR	**Chiang Mai Arr**	**89.32**	**290**	P	**P**	**18 53 26.9**	**+2.1**
	comp=Z,1.1nm,0.8s,baz=126,slow=2.9,SNR=7.4						
	comp=Z,1.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**89.32**	**290**	P	**P**	**18 53 24.6**	**-0.1**
BVAR	**Borovoye Array**	**117.18**	**321**	PKP	**PKPdf**	**18 59 08.5**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=29,slow=3.3,SNR=2.6						
BRTR	**Keskin Array B**	**145.14**	**315**	PKPbc	**PKPbc**	**19 00 02.9**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=77,slow=2.7,SNR=9.8						
BRTR	**Keskin Array B**	**145.14**	**315**		**PKPbc**	**19 00 02.4**	**-0.1**
MMAI	**Mount Meron Ar**	**146.55**	**303**	PKPbc	**PKiKP**	**19 00 07.7**	**-0.9**
	comp=Z,2.2nm,0.4s,baz=59,slow=6.9,SNR=20						
GERES	**GERESS Array B**	**147.79**	**346**	PKPbc	**PKiKP**	**19 00 10.1**	**-0.6**
	comp=Z,1.1nm,0.5s,baz=27,slow=3.3,SNR=7.9						
CONA	**Conrad Observa**	**148.07**	**342**	*i* PKP	**PKiKP**	**19 00 11.3**	**0.0**
	comp=Z,2.2nm,0.7s						
RONA	**Rosalia, Austr**	**148.15**	**342**	*i* PKP	**PKiKP**	**19 00 11.4**	**0.0**
	comp=Z,1.8nm,0.6s						
SOKA	**Soboth**	**149.44**	**342**	*i* PKP	**PKiKP**	**19 00 13.8**	**-0.4**
	comp=Z,0.6nm,0.6s						
KBA	**Koelnbreinsper**	**149.53**	**345**	*i* PKP	**PKiKP**	**19 00 14.2**	**-0.3**
	comp=Z,1.5nm,0.5s						
WATA	**Walderalm**	**149.70**	**347**	*i* PKP	**PKiKP**	**19 00 14.7**	**-0.1**
	comp=Z,1.5nm,0.4s						
WTTA	**Wattenberg**	**149.75**	**347**	*i* PKP	**PKiKP**	**19 00 15.1**	**+0.1**
	comp=Z,4.7nm,0.6s						
MOTA	**Moosalm**	**149.78**	**348**	*i* PKP	**PKiKP**	**19 00 14.9**	**-0.1**
	comp=Z,1.3nm,0.6s						
MYKA	**Terra Mystica**	**149.87**	**344**	*i* PKP	**PKPbc**	**19 00 14.4**	**0.0**
	comp=Z,2.1nm,0.6s						
SQTA	**Sankt Quirin**	**149.88**	**348**	*i* PKP	**PKiKP**	**19 00 15.3**	**+0.2**
	comp=Z,2.4nm,0.7s						
ABTA	**Abfaltersbach**	**150.04**	**346**	*i* PKP	**PKiKP**	**19 00 15.1**	**-0.4**
	comp=Z,3.1nm,0.6s						
DAVA	**Damuels**	**150.07**	**349**	*i* PKP	**PKiKP**	**19 00 16.7**	**+1.1**
	comp=Z,2.5nm,0.9s						
FETA	**Feichten**	**150.17**	**348**	*i* PKP	**PKiKP**	**19 00 16.0**	**+0.2**
	comp=Z,2.5nm,0.9s						

*IDC **20** 18:44:51.7±2.8, 4.67S×152.63E, h0km, mb3.8/7, mbtmp3.9/8, ML2.2/1, Error ellipse: s-maj=81.8km s-min=22.4km az=111.0*
*NEIC **20** 18:44:55.6±2.1, 4.33S±0.09×151.97E±0.07, h7km±6km, mb4.4/19, Error ellipse: s-maj=15.8km s-min=4.5km az=139.0*
ISC 20 18:44:55.5±0.6, 4.36S±0.07×152.04E±0.09, h10km, n35, σ1§75/38, mb4.2/15, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**0.20**	**37**		**Pg**	**18 45 00.4**	**+0.5**
RABL					**Sg**	**18 45 04.3**	**+1.5**
MANU	**Manus Island**	**5.20**	**296**		**Pn**	**18 46 12.0**	**-1.5**
PMG	**Port Moresby**	**6.97**	**224**	Pn	**Pn**	**18 46 40.2**	**+2.3**
	2.1nm,0.3s,baz=32,slow=6.6,SNR=7.3						
PMG				Sn	**Sn**	**18 48 02.2**	**+4.9**
	4.2nm,0.3s,baz=26,slow=10,SNR=11						
	29nm,0.7s						
PMG	**Port Moresby**	**6.97**	**224**		**Pn**	**18 46 37.9**	**0.0**
PMG					**Sn**	**18 47 55.8**	**-1.5**
CTAO	**Charters Tower**	**16.62**	**199**		**P**	**18 48 51.7**	**+0.4**
FAKI	**Fak Fak**	**19.80**	**273**	P	**Pn**	**18 49 32.0**	**+4.1**
FAKI				IAmb	IAmb	18 49 40.5	
	comp=Z,37nm,1.3s						
OUENC	**Ouen Island, N**	**22.97**	**143**	P	**P**	**18 49 59.4**	**-1.1**
WB0	**Warramunga Arr**	**23.03**	**227**		**P**	**18 50 00.3**	**-0.8**
WB0				IAmb	IAmb	18 50 05.2	
	comp=Z,14nm,1.3s						
MARNC	**Mare, Loyalty**	**23.04**	**139**	P	**P**	**18 50 00.2**	**-0.9**
WR8	**Warramunga Arr**	**23.07**	**226**	P	**P**	**18 50 01.0**	**-0.5**
WR8				IAmb	IAmb	18 50 02.3	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**23.18**	**227**	P	**P**	**18 50 01.1**	**-1.5**
	comp=Z,4.2nm,0.8s,baz=49,slow=10,SNR=11						
	comp=Z,4.2nm,0.8s						
INKA	**Innaminka**	**25.63**	**204**	P	**P**	**18 50 25.9**	**+0.5**
AS31	**Alice Springs**	**25.98**	**221**	P	**P**	**18 50 29.2**	**+0.6**
ASAR	**Alice Springs**	**25.98**	**221**	P	**P**	**18 50 28.0**	**-0.7**
	comp=Z,3.7nm,0.7s,baz=56,slow=8.9,SNR=15						
	comp=Z,3.7nm,0.7s						
ASAR	**Alice Springs**	**25.98**	**221**	P	**P**	**18 50 29.4**	**+0.7**
BBOO	**Buckleboo**	**32.01**	**206**	P	**P**	**18 51 19.7**	**-2.5**
FORT	**Forrest**	**34.66**	**218**	P	**P**	**18 51 46.0**	**+0.6**
FORT				IAmb	IAmb	18 52 07.9	
	comp=Z,5.4nm,0.9s						
PSA00	**Pilbara Seismi**	**35.61**	**238**	P	**P**	**18 51 51.2**	**-2.5**
PSA00	**Pilbara Seismi**	**35.61**	**238**	P	**P**	**18 51 51.2**	**-2.5**
CMAR	**Chiang Mai Arr**	**57.01**	**295**	P	**P**	**18 54 44.2**	**+2.2**
	comp=Z,0.9nm,0.8s,baz=105,slow=7.0,SNR=7.2						
	comp=Z,0.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**57.01**	**295**	P	**P**	**18 54 38.6**	**-3.4**
PEA0B	**Petropavlovsk-**	**57.45**	**4**	P	**P**	**18 54 44.6**	**+0.1**
MA2	**Magadan**	**63.74**	**359**	P	**P**	**18 55 28.1**	**+0.8**
MA2				IAmb	IAmb	18 56 01.7	
	comp=Z,6.8nm,1.5s						
ULN	**Ulaanbaatar**	**65.22**	**328**	P	**P**	**18 55 36.7**	**-0.7**
ULN				IAmb	IAmb	18 55 43.5	
	comp=Z,1.2nm,0.8s						
SONM	**Songino Array**	**65.55**	**328**	P	**P**	**18 55 40.1**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=140,slow=3.9,SNR=5.1						
	comp=Z,0.5nm,0.7s						
SONM	**Songino Array**	**65.55**	**328**	P	**P**	**18 55 39.0**	**-0.5**
PPLA	**Purkeypile**	**79.06**	**23**	P	**P**	**18 56 59.5**	**-0.5**
PPLA				IAmb	IAmb	18 57 35.6	
	comp=Z,5.8nm,1.1s						
MKAR	**Makanchi Array**	**79.50**	**319**	P	**P**	**18 57 04.4**	**+1.8**
	comp=Z,0.5nm,0.9s,baz=104,slow=6.1,SNR=3.6						
	comp=Z,0.5nm,0.9s						
MKAR	**Makanchi Array**	**79.50**	**319**	P	**P**	**18 57 03.4**	**+0.8**
GLB	**Gilahina Butte**	**81.79**	**26**	P	**P**	**18 57 14.5**	**-0.1**
GLB				IAmb	IAmb	18 57 36.5	
	comp=Z,6.9nm,1.3s						
TGL	**Tana Glacier**	**81.94**	**27**	P	**P**	**18 57 16.0**	**+0.5**
KURK	**Kurchatov**	**82.96**	**322**	P	**P**	**18 57 20.4**	**-0.4**
KURK				IAmb	IAmb	18 57 38.0	
	comp=Z,2.9nm,1.2s						
KURBB	**Kurchatov Arra**	**82.99**	**322**	P	**P**	**18 57 22.7**	**+1.8**
	comp=Z,0.4nm,1.0s,baz=108,slow=5.9,SNR=2.9						
	comp=Z,0.4nm,1.0s						
BVAR	**Borovoye Array**	**88.44**	**323**	P	**P**	**18 57 49.0**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=93,slow=7.2,SNR=1.7						
	comp=Z,0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**149.45**	**289**	PKPbc	**PKPbc**	**19 04 45.0**	**-1.1**
	comp=Z,0.8nm,0.8s,baz=73,slow=0.8,SNR=4.9						

*NEIC **20** 18:46:26.3±2.2, 4.38S±0.06×152.00E±0.08, h8km±5km, mb4.5/31, Error ellipse: s-maj=14.3km s-min=3.2km az=128.0*
*IDC **20** 18:46:26.1±0.9, 4.34S×151.98E, h0km, mb4.1/13, mbtmp4.1/14, ML4.0/1, Error ellipse: s-maj=27.7km s-min=17.3km az=100.0*
ISC 20 18:46:26.1±0.5, 4.35S±0.06×152.02E±0.07, h10km, n56, σ1§64/56, mb4.4/25, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**0.21**	**41**	Pg	**Pg**	**18 46 30.8**	**+0.3**
RABL				Sg	**Sg**	**18 46 34.8**	**+1.3**
MANU	**Manus Island**	**5.18**	**296**		**Pn**	**18 47 44.2**	**+0.4**
PMG	**Port Moresby**	**6.97**	**224**	Sn	**Sn**	**18 49 34.6**	**+6.9**
	1.5nm,0.3s,baz=80,slow=22,SNR=1.8						
PMG	**Port Moresby**	**6.97**	**224**		**Pn**	**18 48 07.7**	**-0.6**
PMG				Sn	**Sn**	**18 49 28.4**	**+0.7**
COEN	**Coen**	**12.94**	**222**	Pn	**Pn**	**18 49 29.3**	**-0.8**
CTA	**Charters Tower**	**16.62**	**199**	Pn	**P**	**18 50 21.2**	**-0.6**
	0.3nm,0.3s,baz=46,slow=17,SNR=1.6						
	5.4nm,1.1s						
CTAO	**Charters Tower**	**16.62**	**199**		**P**	**18 50 20.6**	**-1.2**
FAKI	**Fak Fak**	**19.79**	**273**	P	**P**	**18 50 56.8**	**0.0**
FAKI				IAmb	IAmb	18 51 38.2	
	comp=Z,43nm,1.4s						
EIDS	**Eidsvold**	**20.92**	**182**	P	**P**	**18 51 09.2**	**+0.2**
SIJI	**Sorong**	**21.02**	**279**	P	**P**	**18 51 11.3**	**+1.1**
	comp=Z,3.7nm,0.8s,baz=97,slow=11,SNR=4.7						
	comp=Z,3.7nm,0.8s						
DZM	**Mont Dzumac**	**22.49**	**143**	P	**P**	**18 51 27.1**	**+1.1**
	comp=Z,14nm,0.9s,baz=350,slow=19,SNR=2.8						
	comp=Z,14nm,0.9s						
WB0	**Warramunga Arr**	**23.03**	**227**		**P**	**18 51 29.1**	**-2.5**
WB0				IAmb	IAmb	18 51 36.2	
	comp=Z,28nm,1.3s						
WR8	**Warramunga Arr**	**23.07**	**226**		**P**	**18 51 29.6**	**-2.4**
WR8				IAmb	IAmb	18 51 36.6	
	comp=Z,23nm,1.3s						
WRAB	**Tennant Creek**	**23.16**	**227**	P	**P**	**18 51 30.4**	**-2.6**
WRAB				IAmb	IAmb	18 51 37.5	
	comp=Z,22nm,1.2s						
WRA	**Warramunga Arr**	**23.18**	**227**	P	**P**	**18 51 32.8**	**-0.3**
	comp=Z,9.9nm,0.8s,baz=51,slow=10.0,SNR=17						
	comp=Z,9.9nm,0.8s						
KNRA	**Kununurra**	**25.49**	**242**	P	**P**	**18 51 54.8**	**+0.1**
INKA	**Innaminka**	**25.63**	**204**	P	**P**	**18 51 55.6**	**-0.3**
AS31	**Alice Springs**	**25.97**	**221**	P	**P**	**18 51 59.2**	**+0.1**
ASAR	**Alice Springs**	**25.97**	**221**	P	**P**	**18 52 00.9**	**+1.8**
	comp=Z,9.4nm,0.7s,baz=59,slow=9.

ZALV	**Zalesovo Beam**	**80.35**	**326**	P	**P**	**18 58 37.9**	**+0.4**
ILAR	**Eielson Array**	**82.04**	**22**	P	**P**	**18 58 49.1**	**+2.9**
	comp=Z,0.2nm,0.4s,baz=260,slow=5.8,SNR=2.2						
	comp=Z,0.2nm,0.4s						
ILAR	**Eielson Array**	**82.04**	**22**	P	**P**	**18 58 47.6**	**+1.3**
KURK	**Kurchatov**	**82.94**	**322**	P	**P**	**18 58 49.8**	**-1.5**
KURK				IAmb	IAmb	18 58 56.5	
	comp=Z,2.7nm,1.1s						
KURBB	**Kurchatov Arra**	**82.97**	**322**	P	**P**	**18 58 54.0**	**+2.5**
	comp=Z,0.8nm,0.9s,baz=106,slow=5.1,SNR=6.7						
	comp=Z,0.8nm,0.9s						
TORD	**Torodi Ar. Bea**	**149.43**	**289**	PKPbc	**PKPbc**	**19 06 16.8**	**+0.2**
	comp=Z,2.0nm,0.8s,baz=58,slow=2.8,SNR=10.0						

*IDC **20** 18:52:10.5±5.2,36°.48N×71°.17E,h213km±44km,mb3.2/5, mbtmp3.8/8,Error ellipse: s-maj=54.4km s-min=36.6km az=139.0*

ISC 20 18:52:10.1±0.9,36°.60N±0°.08×70°.9E±0°.1,h188km,n16, σ2§40/23,mb3.7/4,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALCI	**Alchi Leh**	**5.67**	**113**	*e*P	**Pn**	**18 53 36.2**	**+3.0**
ALCI				*e*S	**Sn**	**18 54 32.8**	**-5.8**
TSSA	**Tissa**	**5.73**	**129**	*e*P	**Pn**	**18 53 37.0**	**+3.1**
TSSA				*e*S	**Sn**	**18 54 39.5**	**-0.4**
TSSA				IAML		18 54 42.7	
	comp=E,85nm,0.2s						
TSSA				IAML		18 54 42.7	
	comp=N,86nm,0.3s						
THN	**Thein Dam**	**5.78**	**134**	*e*P	**Pn**	**18 53 37.3**	**+3.0**
THN				*e*S	**Sn**	**18 54 41.6**	**+0.9**
THN				IAML		18 54 43.0	
	comp=N,73nm,0.3s						
THN				IAML		18 54 43.6	
	comp=E,72nm,0.5s						
DHRM	**DHARAMSHALA**	**6.23**	**133**	*e*P	**Pn**	**18 53 43.2**	**+2.8**
DHRM				*e*S	**Sn**	**18 54 51.6**	**0.0**
DHRM				IAML		18 54 53.7	
	comp=E,86nm,0.5s						
DHRM				IAML		18 54 54.2	
	comp=N,74nm,0.3s						
AAK	**Ala-Archa**	**6.64**	**24**	P	**Pn**	**18 53 48.2**	**+2.6**
	comp=N,3.6nm,0.3s,baz=198,slow=6.2,SNR=24						
AAK				S	**Sn**	**18 55 00.9**	**-0.3**
	comp=N,2.5nm,0.5s,baz=328,slow=22,SNR=9.0						
SMLA	**Simla**	**7.55**	**134**	*e*P	**Pn**	**18 53 59.5**	**+2.0**
SMLA				*e*S	**Sn**	**18 55 20.3**	**-2.3**
SMLA				IAML		18 55 23.8	
	comp=E,76nm,0.2s						
SMLA				IAML		18 55 23.9	
	comp=N,61nm,0.3s						
KLP	**Kalpa**	**7.93**	**127**	*e*P	**Pn**	**18 54 05.0**	**+2.3**
KLP				*e*S	**Sn**	**18 55 27.8**	**-4.2**
KLP				IAML		18 55 34.7	
	comp=N,96nm,0.2s						
KLP				IAML		18 55 37.3	
	comp=E,77nm,0.6s						
MKAR	**Makanchi Array**	**13.27**	**36**	P	**Pn**	**18 55 11.5**	**+0.3**
	comp=E,0.1nm,0.5s,baz=225,slow=19,SNR=2.2						
KURBB	**Kurchatov Arra**	**15.06**	**19**	P	**Pn**	**18 55 32.6**	**-0.6**
	comp=E,0.1nm,0.4s,baz=208,slow=12,SNR=2.2						
BVAR	**Borovoye Array**	**16.43**	**359**	P	**Pn**	**18 55 49.5**	**-0.4**
	comp=E,0.3nm,0.4s,baz=179,slow=7.2,SNR=3.8						
ZALV	**Zalesovo Beam**	**19.86**	**25**	P	**P**	**18 56 25.2**	**-1.3**
	comp=E,1.1nm,0.3s,baz=213,slow=11,SNR=6.9						
FINES	**FINESS Array B**	**37.35**	**326**	P	**P**	**18 59 04.5**	**+0.5**
	comp=E,0.6nm,0.4s,baz=112,slow=8.1,SNR=7.3						
	comp=E,0.6nm,0.4s						
ARCES	**ARCESS Array B**	**41.02**	**338**	P	**P**	**18 59 34.5**	**+0.1**
	comp=E,3.9nm,1.1s,baz=119,slow=8.0,SNR=4.6						
	comp=E,3.9nm,1.1s						
HFS	**Hagfors**	**42.93**	**322**	P	**P**	**18 59 49.5**	**-0.4**
	comp=E,2.6nm,0.9s,baz=84,slow=15,SNR=4.3						
	comp=E,2.6nm,0.9s						
NOA	**NORSAR Array B**	**44.25**	**323**	P	**P**	**18 59 60.0**	**-0.5**
	comp=E,0.2nm,0.5s,baz=97,slow=8.1,SNR=1.3						
	comp=E,0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**65.63**	**269**	P	**P**	**19 02 32.7**	**-1.6**
	comp=E,0.5nm,0.8s,baz=48,slow=5.7,SNR=3.6						
	comp=E,0.5nm,0.8s						

*NEIC **20** 18:53:46.6±2.2,4°.38S±0°.05×152°.06E±0°.07,h10km±1km, mb4.4/18,Error ellipse: s-maj=12.9km s-min=5.2km az=121.0*

*IDC **20** 18:54:01.6±3.5,4°.62S×151°.24E,h109km±37km,mb3.6/10, mbtmp4.0/12,MS3.4/2,Error ellipse: s-maj=35.1km s-min=21.1km az=132.0*

ISC 20 18:53:46.1±0.6,4°.38S±0°.07×152°.04E±0°.10,h10km,n49, σ1§47/46,mb4.3/18,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**0.23**	**34**		**Pg**	**18 53 50.6**	**-0.2**
RABL					**Sg**	**18 53 54.7**	**+0.7**
BULU	**Kimbe**	**2.06**	**236**	P	Pg	18 54 34.7	+8.9
MANU	**Manus Island**	**5.21**	**296**		**Pn**	**18 55 03.1**	**-1.1**
PMG	**Port Moresby**	**6.96**	**224**	P	**Pn**	**18 55 30.4**	**+2.2**
	81nm,0.7s,baz=28,slow=8.1,SNR=22						
PMG				S	**Sn**	**18 56 50.5**	**+3.0**
	27nm,0.7s,baz=99,slow=22,SNR=2.9						
PMG	**Port Moresby**	**6.96**	**224**	P	**Pn**	**18 55 31.1**	**+2.8**
	122nm,0.8s						
PMG	**Port Moresby**	**6.96**	**224**	P	**Pn**	**18 55 31.0**	**+2.8**
	122nm,0.8s						
PMG	**Port Moresby**	**6.96**	**224**		**Pn**	**18 55 29.0**	**+0.8**
PMG					**Sn**	**18 56 48.5**	**+1.0**
TATA	**Tatamba Isabel**	**8.69**	**118**	P	Pn	18 55 57.2	+5.3
	69nm,0.8s						
HNR	**Honiara**	**9.32**	**123**	P	Pn	18 56 20.9	+20
	0.9nm,0.6s,baz=181,slow=22,SNR=2.3						
COEN	**Coen**	**12.92**	**222**	Pn	**Pn**	**18 56 50.2**	**+0.2**
MTSU	**Mount Surprise**	**15.62**	**208**	P	**Pn**	**18 57 26.4**	**-0.2**
	8.7nm,1.0s						
CTA	**Charters Tower**	**16.60**	**199**	P	**P**	**18 57 43.2**	**+1.5**
	7.7nm,1.1s,baz=113,slow=19,SNR=2.2						
CTA				LR	LR	19 03 21.5	
	comp=Z,124nm,18.2s,baz=30,slow=35						
CTAO	**Charters Tower**	**16.60**	**199**	Pn	**Pn**	**18 57 39.3**	**+0.1**
CTAO				IAmb	IAmb	18 58 09.6	
	comp=Z,24nm,1.4s						
QIS	**Mount Isa**	**20.12**	**216**	P	Pn	18 58 23.1	+0.8
	comp=Z,20nm,0.8s						
EIDS	**Eidsvold**	**20.89**	**182**	P	**P**	**18 58 27.5**	**-1.2**
EIDS				IAmb	IAmb	18 58 37.0	
	comp=Z,13nm,1.2s						
SIJI	**Sorong**	**21.04**	**279**	LR	LR	19 07 32.7	
	comp=Z,129nm,19.9s,baz=76,slow=40						
OUENC	**Ouen Island, N**	**22.96**	**143**	P	**P**	**18 58 51.0**	**+0.1**
WB0	**Warramunga Arr**	**23.02**	**227**		**P**	**18 58 49.6**	**-2.0**
WB0				IAmb	IAmb	18 58 56.1	
	comp=Z,22nm,1.3s						
WR8	**Warramunga Arr**	**23.06**	**226**		**P**	**18 58 49.6**	**-2.4**
WR8				IAmb	IAmb	18 58 55.3	
	comp=Z,8.8nm,0.9s						
WRA	**Warramunga Arr**	**23.16**	**227**	P	**P**	**18 58 51.1**	**-2.0**
	comp=Z,11nm,1.0s,baz=51,slow=9.8,SNR=21						
	comp=Z,11nm,1.0s						
QLP	**Quilpie**	**23.31**	**198**	P	**P**	**18 58 56.4**	**+2.0**
	comp=Z,14nm,0.9s						
KNRA	**Kununurra**	**25.48**	**242**	P	**P**	**18 59 14.0**	**-0.8**
KNRA				IAmb	IAmb	18 59 37.6	
	comp=Z,6.8nm,1.0s						
INKA	**Innaminka**	**25.60**	**204**	P	**P**	**18 59 14.8**	**-0.9**
AS31	**Alice Springs**	**25.96**	**221**	P	**P**	**18 59 17.8**	**-1.3**
ASAR	**Alice Springs**	**25.96**	**221**	P	**P**	**18 59 17.9**	**-1.2**
	comp=Z,7.7nm,1.1s,baz=59,slow=8.8,SNR=51						
	comp=Z,8.7nm,1.1s						
ASAR	**Alice Springs**	**25.96**	**221**		**P**	**18 59 17.1**	**-2.0**
FITZ	**Fitzroy Crossi**	**29.20**	**240**	P	**P**	**18 59 47.0**	**-1.2**
	comp=Z,2.5nm,0.9s,baz=66,slow=6.4,SNR=5.2						
	comp=Z,2.5nm,0.9s						
TOLI2	**Tolitoli**	**31.70**	**279**	P	**P**	**19 00 08.7**	**-1.7**
TOLI2				IAmb	IAmb	19 00 45.7	
	comp=Z,6.3nm,1.0s						
BBOO	**Buckleboo**	**31.99**	**206**	P	**P**	**19 00 10.9**	**-1.7**
JOW	**Kunigami**	**38.61**	**325**	P	**P**	**19 01 09.4**	**-0.4**
ENH	**Enshi**	**53.31**	**313**	P	**P**	**19 03 05.2**	**-0.5**
ENH				IAmb	IAmb	19 03 11.9	
	comp=Z,7.5nm,1.0s						
CMAR	**Chiang Mai Arr**	**57.01**	**295**	P	**P**	**19 03 32.7**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=104,slow=7.5,SNR=5.4						
	comp=Z,0.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**57.01**	**295**	P	**P**	**19 03 31.7**	**-0.9**
MA2	**Magadan**	**63.76**	**359**	P	**P**	**19 04 19.3**	**+1.2**
MA2				IAmb	IAmb	19 04 22.2	
	comp=Z,4.3nm,0.9s						
ULN	**Ulaanbaatar**	**65.24**	**328**	P	**P**	**19 04 29.0**	**+0.9**
ULN				IAmb	IAmb	19 04 33.9	
	comp=Z,2.7nm,1.1s						
SONM	**Songino Array**	**65.57**	**328**	P	**P**	**19 04 33.5**	**+3.3**
	comp=Z,1.1nm,0.9s,baz=160,slow=5.5,SNR=5.8						
	comp=Z,1.1nm,0.9s						
SONM	**Songino Array**	**65.57**	**328**	P	**P**	**19 04 30.6**	**+0.4**
SONM				IAmb	IAmb	19 04 36.4	
	comp=Z,4.1nm,1.4s						
MK31	**Makanchi Array**	**79.51**	**319**	P	**P**	**19 05 53.2**	**0.0**
MKAR	**Makanchi Array**	**79.51**	**319**	P	**P**	**19 05 54.2**	**+1.0**
	comp=Z,0.9nm,1.0s,baz=105,slow=5.7,SNR=6.2						
	comp=Z,0.9nm,1.0s						
MKAR	**Makanchi Array**	**79.51**	**319**	P	**P**	**19 05 53.0**	**-0.3**
ZALV	**Zalesovo Beam**	**80.38**	**326**	P	**P**	**19 05 59.4**	**+1.6**
	comp=Z,1.2nm,0.8s,baz=90,slow=7.4,SNR=4.4						
	comp=Z,1.2nm,0.8s						
ZALV	**Zalesovo Beam**	**80.38**	**326**	P	**P**	**19 05 58.0**	**+0.3**
ILAR	**Eielson Array**	**82.06**	**22**	P	P	19 06 12.8	+6.4
	comp=Z,0.3nm,0.8s,baz=212,slow=4.5,SNR=2.4						
	comp=Z,0.3nm,0.8s						
ILAR	**Eielson Array**	**82.06**	**22**	P	**P**	**19 06 07.4**	**+0.9**
KURK	**Kurchatov**	**82.97**	**322**	P	**P**	**19 06 11.2**	**-0.2**
KURBB	**Kurchatov Arra**	**83.00**	**322**	P	**P**	**19 06 12.5**	**+0.9**
	comp=Z,0.6nm,0.9s,baz=110,slow=5.1,SNR=6.7						
	comp=Z,0.6nm,0.9s						
QSPA	**South Pole Qui**	**85.58**	**180**	P	**P**	**19 06 23.2**	**-1.4**
BVAR	**Borovoye Array**	**88.45**	**323**	P	**P**	**19 06 39.6**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=90,slow=7.2,SNR=3.5						
	comp=Z,0.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**149.45**	**288**	PKPbc	**PKPbc**	**19 13 36.6**	**-0.1**
	comp=Z,1.7nm,0.9s,baz=121,slow=1.2,SNR=8.5						

*NEIC **20** 18:55:33.0±1.2,4°.41S±0°.05×152°.06E±0°.04,h10km±1km, mb4.4/27,Error ellipse: s-maj=10.4km s-min=4.7km az=143.0*

*IDC **20** 18:55:45.9±3.0,4°.54S×151°.70E,h92km±28km,mb3.7/12, mbtmp4.1/14,MS3.6/2,Error ellipse: s-maj=24.7km s-min=19.1km az=125.0*

ISC 20 18:55:33.1±0.5,4°.36S±0°.05×152°.02E±0°.07,h10km,n52, σ1§59/55,mb4.3/23,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**0.22**	**42**		**Pg**	**18 55 37.7**	**0.0**
RABL					**Sg**	**18 55 41.5**	**+0.8**
MANU	**Manus Island**	**5.18**	**296**		**Pn**	**18 56 51.2**	**+0.4**
MANU				Sn	**Sn**	**18 57 50.1**	**-0.5**
PMG	**Port Moresby**	**6.96**	**224**	P	**Pn**	**18 57 18.7**	**+3.5**
	87nm,0.7s,baz=25,slow=12,SNR=7.4						
PMG				S	**Sn**	**18 58 37.2**	**+2.7**
	32nm,0.8s,baz=286,slow=23,SNR=2.4						
PMG	**Port Moresby**	**6.96**	**224**		**Pn**	**18 57 14.9**	**-0.3**
PMG				Sn	**Sn**	**18 58 34.6**	**+0.1**
HNR	**Honiara**	**9.35**	**123**	P	Pn	18 58 00.3	+12
	2.1nm,0.9s,baz=218,slow=1.3,SNR=4.3						
COEN	**Coen**	**12.93**	**222**	Pn	**Pn**	**18 58 35.9**	**-1.2**
CTA	**Charters Tower**	**16.61**	**199**	P	**P**	**18 59 31.0**	**+2.2**
	3.4nm,0.6s,baz=18,slow=12,SNR=5.7						
CTAO	**Charters Tower**	**16.61**	**199**		**P**	**18 59 27.9**	**-0.9**
CTAO				IAmb	IAmb	18 59 56.9	
	comp=Z,31nm,1.4s						
EIDS	**Eidsvold**	**20.91**	**182**		**P**	**19 00 16.1**	**+0.2**
SIJI	**Sorong**	**21.01**	**279**	P	**P**	**19 00 20.3**	**+3.2**
	comp=Z,5.0nm,0.9s,baz=74,slow=14,SNR=5.6						
	comp=Z,5.0nm,0.9s						
OUENC	**Ouen Island, N**	**22.99**	**143**	P	**P**	**19 00 36.5**	**-1.7**
WB0	**Warramunga Arr**	**23.02**	**227**		**P**	**19 00 37.2**	**-1.4**
WB0				IAmb	IAmb	19 00 43.8	
	comp=Z,24nm,1.3s						
WR8	**Warramunga Arr**	**23.06**	**226**		**P**	**19 00 37.4**	**-1.6**
WR8				IAmb	IAmb	19 00 41.9	
	comp=Z,9.3nm,0.8s						
WRAB	**Tennant Creek**	**23.15**	**227**	P	**P**	**19 00 38.3**	**-1.6**
WRAB				IAmb	IAmb	19 00 42.7	
	comp=Z,11nm,0.9s						
WRA	**Warramunga Arr**	**23.17**	**227**	P	**P**	**19 00 39.6**	**-0.5**
	comp=Z,15nm,1.0s,baz=47,slow=10,SNR=12						
WRA				PcP	**PcP**	**19 04 30.1**	**+1.4**
	comp=Z,0.6nm,0.8s,baz=46,slow=2.4,SNR=4.3						
	comp=Z,15nm,1.0s						
WRA	**Warramunga Arr**	**23.17**	**227**		**P**	**19 00 37.6**	**-2.5**
KNRA	**Kununurra**	**25.48**	**242**	P	**P**	**19 00 59.8**	**-1.9**
KNRA				IAmb	IAmb	19 01 30.1	
	comp=Z,10nm,1.1s						
INKA	**Innaminka**	**25.62**	**204**	P	**P**	**19 01 02.2**	**-0.7**
AS31	**Alice Springs**	**25.96**	**221**	P	**P**	**19 01 05.2**	**-0.9**
ASAR	**Alice Springs**	**25.96**	**221**	P	**P**	**19 01 07.5**	**+1.3**
	comp=Z,7.6nm,0.6s,baz=57,slow=8.7,SNR=20						
	comp=Z,7.6nm,0.6s						
ASAR	**Alice Springs**	**25.96**	**221**		**P**	**19 01 04.9**	**-1.3**
BATI	**Baumata**	**28.71**	**257**	LR	LR	19 13 58.6	
	comp=Z,115nm,18.5s,baz=102,slow=38						
STKA	**Stephens Creek**	**29.07**	**198**	P	**P**	**19 01 36.3**	**+2.4**
	comp=Z,1.0nm,0.7s,baz=42,slow=8.4,SNR=3.1						
	comp=Z,1.0nm,0.7s						
STKA	**Stephens Creek**	**29.07**	**198**	P	**P**	**19 01 33.2**	**-0.7**
FITZ	**Fitzroy Crossi**	**29.19**	**240**	P	**P**	**19 01 35.0**	**-0.1**
	comp=Z,3.6nm,0.9s,baz=83,slow=9.5,SNR=3.5						
FITZ				LR	LR	19 12 42.9	
	comp=Z,114nm,19.8s,baz=60,slow=35						
	comp=Z,3.6nm,0.9s						
LUWI	**Luwuk**	**29.39**	**276**	P	**P**	**19 01 35.5**	**-1.5**
BBOO	**Buckleboo**	**32.00**	**206**	P	**P**	**19 01 58.3**	**-1.4**
FORT	**Forrest**	**34.65**	**218**	P	**P**	**19 02 21.6**	**-1.3**
FORT				IAmb	IAmb	19 02 35.0	
	comp=Z,5.6nm,0.9s						
KHZ	**Kahutara**	**42.47**	**156**	P	**P**	**19 03 27.2**	**-1.2**
ENH	**Enshi**	**53.28**	**313**	P	**P**	**19 04 51.9**	**-0.6**
CMAR	**Chiang Mai Arr**	**56.98**	**295**	P	**P**	**19 05 20.1**	**+0.7**
	comp=Z,3.0nm,0.9s,baz=124,slow=5.3,SNR=4.8						
	comp=Z,3.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**56.98**	**295**	P	**P**	**19 05 19.1**	**-0.3**
CHTO	**Chiang Mai**	**57.09**	**296**	P	**P**	**19 05 20.1**	**-0.1**
CHTO				IAmb	IAmb	19 05 25.8	
	comp=Z,6.0nm,1.2s						
ADK	**Adak**	**62.04**	**21**	P	**P**	**19 05 53.2**	**-0.4**
MA2	**Magadan**	**63.74**	**359**	P	**P**	**19 06 03.9**	**-1.0**
MA2				IAmb	IAmb	19 06 08.4	
	comp=Z,4.9nm,0.9s						
ULN	**Ulaanbaatar**	**65.21**	**328**	P	**P**	**19 06 13.8**	**-1.1**
ULN				IAmb	IAmb	19 06 20.8	
	comp=Z,2.5nm,0.8s						
SONM	**Songino Array**	**65.54**	**328**	P	**P**	**19 06 20.2**	**+3.1**
	comp=Z,1.4nm,0.8s,baz=153,slow=6.5,SNR=7.4						
	comp=Z,1.4nm,0.9s						
SONM	**Songino Array**	**65.54**	**328**	P	**P**	**19 06 16.8**	**-0.3**
SONM				IAmb	IAmb	19 06 23.8	
	comp=Z,2.1nm,1.0s						
BRLK	**Bradley Lake**	**77.93**	**26**	P	**P**	**19 07 32.1**	**+0.8**
MK31	**Makanchi Array**	**79.48**	**319**	P	**P**	**19 07 39.5**	**-0.5**
MKAR	**Makanchi Array**	**79.48**	**319**	P	**P**	**19 07 43.3**	**+3.3**
	comp=Z,1.0nm,0.9s,baz=99,slow=7.5,SNR=7.8						
	comp=Z,1.0nm,0.9s						
MKAR	**Makanchi Array**	**79.48**	**319**	P	**P**	**19 07 39.6**	**-0.5**
ZAA0	**Zalesovo Array**	**80.35**	**326**	P	**P**	**19 07 43.3**	**-1.2**
ZALV	**Zalesovo Beam**	**80.35**	**326**	P	**P**	**19 07 46.6**	**+2.1**
	comp=Z,1.0nm,0.7s,baz=116,slow=5.4,SNR=4.8						
	comp=Z,1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**80.35**	**326**	P	**P**	**19 07 43.3**	**-1.2**
KDJ	**Kajisay**	**81.74**	**313**	P	**P**	**19 07 52.2**	**-0.3**
KDJ				IAmb	IAmb	19 08 06.8	
	comp=Z,1.6nm,0.9s						
ILAR	**Eielson Array**	**82.05**	**22**	P	**P**	**19 07 56.8**	**+3.5**
	comp=Z,0.3nm,0.7s,baz=231,slow=5.7,SNR=2.3						
	comp=Z,0.3nm,0.7s						
KURK	**Kurchatov**	**82.94**	**322**	P	**P**	**19 07 58.4**	**+0.1**
KURK				IAmb	IAmb	19 08 03.4	
	comp=Z,1.8nm,0.9s						
KURBB	**Kurchatov Arra**	**82.97**	**322**	P	**P**	**19 08 00.8**	**+2.4**
	comp=Z,1.1nm,1.0s,baz=103,slow=4.9,SNR=5.7						
	comp=Z,1.1nm,1.0s						
QSPA	**South Pole Qui**	**85.60**	**180**	P	**P**	**19 08 10.1**	**-1.6**
QSPA				IAmb	IAmb	19 08 44.5	
	comp=Z,2.7nm,1.2s						
BVAR	**Borovoye Array**	**88.42**	**323**	P	**P**	**19 08 26.1**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=90,slow=3.0,SNR=4.3						
	comp=Z,0.6nm,0.6s						
TORD	**Torodi Ar. Bea**	**149.43**	**289**	PKPbc	**PKPbc**	**19 15 23.6**	**0.0**
	comp=Z,2.0nm,0.8s,baz=89,slow=2.1,SNR=7.9						

*IDC **20** 19:02:56.3±3.1,4°.54S×152°.36E,h0km,mb3.6/6, mbtmp3.7/7,ML2.1/1,Error ellipse: s-maj=88.6km s-min=21.5km az=109.0*

ISC 20 19:03:02.8±2.6,4°.7S±0°.2×152°.5E±0°.4,h58km,n9,σ1§45/9, mb3.7/6,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**0.61**	**311**	LR	LR	19 03 06.1	
	comp=Z,22nm,21.5s,baz=128,slow=24						
PMG	**Port Moresby**	**7.05**	**228**	Pn	**Pn**	**19 04 41.0**	**-2.4**
	2.0nm,0.3s,baz=37,slow=5.4,SNR=8.8						
PMG				Sn	**Sn**	**19 06 04.1**	**+1.9**
	0.8nm,0.3s,baz=278,slow=7.6,SNR=4.3						
	7.4nm,0.8s						
WRA	**Warramunga Arr**	**23.27**	**228**	P	**P**	**19 08 06.3**	**+0.8**
	2.6nm,0.9s,baz=51,slow=9.8,SNR=8.7						
	2.6nm,0.9s						
ASAR	**Alice Springs**	**26.00**	**222**	P	**P**	**19 08 31.9**	**+1.3**
	2.0nm,0.7s,baz=56,slow=8.7,SNR=30						
	2.0nm,0.7s						
MJAR	**Matsushiro Arr**	**43.16**	**343**	P	**P**	**19 10 58.3**	**+0.5**
	0.4nm,0.6s,baz=153,slow=11,SNR=1.9						
	0.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**57.55**	**295**	P	**P**	**19 12 46.5**	**-0.4**
	0.5nm,0.4s,baz=113,slow=7.8,SNR=6.4						
	0.5nm,0.4s						
SONM	**Songino Array**	**66.08**	**328**	P	**P**	**19 13 44.2**	**+0.3**
	0.6nm,0.7s,baz=134,slow=4.8,SNR=4.5						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**80.05**	**319**	P	**P**	**19 15 05.9**	**-0.4**
	0.1nm,0.4s,baz=92,slow=7.2,SNR=1.9						
	0.1nm,0.4s						
TORD	**Torodi Ar. Bea**	**149.98**	**288**	PKPbc	**PKPbc**	**19 22 48.4**	**+0.6**
	0.4nm,0.7s,baz=111,slow=2.3,SNR=3.2						

IDC 20 19:14:25.2±1.9,28°.83S×177°.06W,h142km±7km,mb3.4/2, mbtmp3.9/3,Error ellipse: s-maj=36.7km s-min=27.8km az=101.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.86**	**241**	P	Pn	19 14 47.5	-0.5
	534nm,0.3s,baz=55,slow=18,SNR=7.3						
RAO				S	Sn	19 15 06.0	+0.7
	2μm,0.3s,baz=160,slow=22,SNR=14						
URZ	**Urewera**	**10.58**	**206**	P	Pn	19 16 51.8	-1.2
	4.9nm,0.9s,baz=348,slow=14,SNR=1.6						
URZ				S	Sn	19 18 50.4	+0.6
	2.8nm,0.3s,baz=294,slow=22,SNR=6.7						
DZM	**Mont Dzumac**	**16.34**	**291**	P	P	19 18 11.0	+4.0
	6.4nm,0.7s,baz=110,slow=15,SNR=8.1						
ASAR	**Alice Springs**	**44.04**	**265**	P	P	19 22 19.0	-0.1
	0.5nm,0.6s,baz=107,slow=7.6,SNR=8.2						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**44.89**	**270**	P	P	19 22 25.8	-0.1
	0.9nm,0.4s,baz=111,slow=7.3,SNR=44						
	0.9nm,0.4s						
NOA	**NORSAR Array B**	**147.32**	**353**	PKPbc	PKPdf	19 33 50.1	+1.2
	0.3nm,0.7s,baz=16,slow=3.0,SNR=1.3						
HFS	**Hagfors**	**147.86**	**350**	PKPbc	PKPbc	19 33 53.3	+0.4
	2.2nm,0.9s,baz=42,slow=3.4,SNR=1.5						

*NEIC **20** 19:47:39.6±1.3,30°.63N±0°.05×131°.23E±0°.08,h38km±7km, mb4.3/23,Error ellipse: s-maj=9.7km s-min=7.6km az=69.0*

*JMA **20** 19:47:39.0±0.1,30°.6N±0°.4×131°.3E±0°.9,h39km±1km, MV3.5/37,NEAR TANEGASHIMA ISLAND*

JMA Felt I J1 at NEAR TANEGASHIMA ISLAND .

*IDC **20** 19:47:40.5±1.7,30°.68N×131°.20E,h51km±16km,mb3.6/15, mbtmp3.8/21,ML3.2/6,MS2.8/8,Error ellipse: s-maj=22.9km s-min=11.2km az=78.0*

ISC 20 19:47:38.5±0.5,30°.60N±0°.04×131°.30E±0°.04,h35km±2km, n84,σ1§37/98,mb4.2/25,MS2.9/3,2D,Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTN	**Tanegashima 3**	**0.28**	**281**	*i* P	**Pn**	**19 47 46.6**	**+0.2**
JTN				S	**Sn**	**19 47 52.4**	**+0.4**
JMTN	**Minamitane**	**0.40**	**240**	*i* P	**Pn**	**19 47 48.3**	**+0.5**
JMTN				S	**Sn**	**19 47 56.0**	**+1.8**
JTSR	**Tashiro 2**	**0.65**	**330**	*i* P	**Pn**	**19 47 51.7**	**+0.3**
JTSR				S	**Sn**	**19 48 01.0**	**+0.6**
JYAK	**Yakushimahirau**	**0.77**	**242**	*i* P	**Pn**	**19 47 53.3**	**+0.4**
JYAK				S	**Sn**	**19 48 04.1**	**+0.8**
JNAR	**Kushima--Naru**	**0.92**	**358**

PET Petropavlovsk 29.97 34 P P 19 53 43.4 0.0
CHTO Chiang Mai 31.54 256 P P 19 53 56.8 -0.8
CHTO IAmb IAmb 19 53 58.1
comp=Z,3.0nm,0.6s
CM31 Chiang Mai Arr 31.71 255 P P 19 53 58.1 -1.0
CM31 IAmb IAmb 19 54 17.4
comp=Z,5.3nm,1.4s
CMAR Chiang Mai Arr 31.71 255 P P 19 53 58.5 -0.6
comp=Z,0.7nm,0.5s,baz=47,slow=7.2,SNR=6.0
CMAR LR LR 20 08 06.8
comp=Z,18nm,18.9s,baz=60,slow=39
comp=Z,0.7nm,0.5s
CMAR Chiang Mai Arr 31.71 255 P P 19 53 57.0 -2.1
MKAR Makanchi Array 40.83 308 P P 19 55 16.5 -0.2
comp=Z,0.2nm,0.5s,baz=92,slow=9.2,SNR=5.4
comp=Z,0.2nm,0.5s
MKAR Makanchi Array 40.83 308 P P 19 55 16.4 -0.4
GSI Gunungsitoli 43.25 234 P P 19 55 36.6 -0.1
KURK Kurchatov 43.67 313 P P 19 55 39.9 +0.2
KURK Kurchatov 43.67 313 IAmb IAmb 19 55 43.2
comp=Z,5.6nm,0.2s
KURBB Kurchatov Arra 43.72 313 P P 19 55 39.9 -0.2
comp=Z,0.3nm,0.4s,baz=103,slow=9.2,SNR=7.8
comp=Z,0.3nm,0.4s
KDJ Kajisay 44.40 301 P P 19 55 45.9 -0.1
KNRA Kununurra 46.08 183 P P 19 55 59.6 +0.5
BVAR Borovoye Array 48.94 316 P P 19 56 20.4 -0.7
comp=Z,0.9nm,0.3s,baz=95,slow=8.7,SNR=16
comp=Z,0.9nm,0.3s
BORK Borovoye 48.98 316 P P 19 56 20.8 -0.6
BORK IAmb IAmb 19 56 22.1
comp=Z,1.7nm,0.6s
KKAR Karatay Array 49.23 302 P P 19 56 23.2 -0.3
GAR Garm 49.96 297 P P 19 56 29.6 +0.3
GAR IAmb IAmb 19 56 30.3
comp=Z,6.8nm,1.3s
WB0 Warramunga Arr 50.17 176 P P 19 56 31.1 +0.4
WB0 IAmb IAmb 19 56 54.4
comp=Z,6.1nm,1.3s
WRA Warramunga Ar 50.34 176 P P 19 56 32.3 +0.3
comp=Z,0.9nm,0.9s,baz=355,slow=8.3,SNR=7.1
comp=Z,0.9nm,0.9s
O15K Ungalikthiuk R 53.54 37 P P 19 56 56.4 +0.9
C18K Utukok River 53.69 25 P P 19 56 57.5 +1.0
C18K IAmb IAmb 19 57 15.6
comp=Z,8.7nm,1.5s
AS31 Alice Springs 54.02 177 P P 19 56 59.6 +0.3
ASAR Alice Springs 54.02 177 P P 19 57 00.8 +1.5
comp=Z,0.7nm,0.9s,baz=10,slow=13,SNR=13
comp=Z,0.7nm,0.9s
ASAR Alice Springs 54.02 177 P P 19 56 59.7 +0.4
E19K Redstone River 55.04 26 P P 19 57 07.3 +1.1
E19K IAmb IAmb 19 57 10.9
comp=Z,3.6nm,1.2s
B20K Meade River 55.28 23 P P 19 57 08.9 +1.0
AB31 Akbulak array 55.72 311 P 19 57 10.1 -1.3
ABKAR Akbulak array 55.72 311 P P 19 57 11.0 -0.4
ARTI Arti 55.82 320 LR LR 20 23 56.6
comp=Z,29nm,20.8s,baz=75,slow=39
H21K Melozitna Rive 56.77 29 P P 19 57 21.4 +2.7
H21K IAmb IAmb 19 57 23.9
comp=Z,3.3nm,0.8s
E22K Anaktuvuk Pass 57.12 26 P P 19 57 22.6 +1.4
E22K IAmb IAmb 19 57 35.6
comp=Z,3.1nm,1.1s
D24K Happy Valley 58.18 25 P P 19 57 29.7 +1.1
E24K Your Creek 58.37 26 P P 19 57 31.4 +1.4
E24K IAmb IAmb 19 57 52.9
comp=Z,2.8nm,1.2s
STKA Stephens Creek 62.90 170 P P 19 58 02.1 +1.0
comp=Z,1.8nm,0.7s,baz=351,slow=8.0,SNR=3.7
comp=Z,1.8nm,0.7s
STKA Stephens Creek 62.90 170 P P 19 58 01.6 +0.6
SPITS Spitsbergen Ar 65.12 348 P P 19 58 15.5 +0.3
comp=Z,8.3nm,1.1s,baz=323,slow=4.3,SNR=4.6
comp=Z,8.3nm,1.1s
KBZ Khabaz 68.51 309 P P 19 58 37.4 +0.1
comp=Z,1.0nm,0.5s,baz=96,slow=14,SNR=6.7
comp=Z,1.0nm,0.5s
FINES FINESS Array B 70.40 331 P P 19 58 47.5 -1.2
comp=Z,0.8nm,0.4s,baz=50,slow=5.8,SNR=8.3
comp=Z,0.8nm,0.4s
AKASG Malin Array Be 73.97 320 P P 19 59 09.5 -0.7
comp=Z,0.6nm,0.4s,baz=58,slow=6.6,SNR=4.5
comp=Z,0.6nm,0.4s
HFS Hagfors 76.20 333 P P 19 59 22.2 -0.7
comp=Z,2.7nm,0.9s,baz=96,slow=7.2,SNR=1.8
comp=Z,2.7nm,0.9s
BRTR Keskin Array B 76.48 308 P P 19 59 25.0 -0.1
comp=Z,0.9nm,0.7s,baz=96,slow=5.5,SNR=6.5
comp=Z,0.9nm,0.7s
NOA NORSAR Array B 76.58 334 P P 19 59 23.9 -1.2
comp=Z,0.2nm,0.5s,baz=49,slow=5.5,SNR=1.6
comp=Z,0.2nm,0.5s

*GCG **20** 19:52:53.7±0.6, 14.°11N×89.°70W, h2km±9km, MD3.1, Presumed earthquake*
*SNET **20** 19:52:54.2±0.8, 14.°11N×89.°71W, h10km±2km, ML1.8, Presumed earthquake*
*CATAC **20** 19:52:54.2±0.6, 14°N±2.°×9°0W±°, h8km±4km, M2.0/6, MLv2.0/6, Error ellipse: s-maj=5.5km s-min=4.0km az=153.3, confirmed*

ISC 20 19:52:54.2±1.0, 14.°13N±0.°03×89.°72W±0.°03, h16km±6km, n20, σ0°30/29, 2C-2D, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RBDL	Robledal	0.03	112	i P	Pg	19 52 57.2	0.0
RBDL				IAML		19 52 57.5	
	comp=Z,620nm,0.2s						
RBDL				eS	Sg	19 52 58.9	-0.3
SLOZ	Alcaldia de Sa	0.12	213	i P	Pg	19 52 57.6	-0.2
SLOZ				eS	Sg	19 52 60.0	-0.2
SLOZ				IAML		19 53 01.4	
	comp=Z,215nm,0.4s						
UNIC	Universidad Ca	0.22	131	P	Pg	19 52 59.4	+0.1
UNIC	Universidad Ca	0.22	131	eP	Pg	19 52 59.3	+0.1
UNIC				eS	Sg	19 53 02.7	+0.1
NUBE	Las Nubes	0.23	195	P	Pg	19 52 59.2	-0.3
NUBE				S	Sg	19 53 02.7	-0.3
NUBE	Las Nubes	0.23	195	i P	Pg	19 52 59.6	+0.2
NUBE				i S	Sg	19 53 03.1	+0.1
NUBE	Las Nubes	0.23	195	i P	Pg	19 52 59.6	+0.2
NUBE				IAML		19 52 59.8	
	comp=Z,115nm,0.2s						
SNJE	San Jose	0.28	157	eP	Pb	19 53 00.7	-0.2
SBLS	San Blas	0.30	162	eP	Pb	19 53 01.1	-0.3
CEVE	Cerro Verde	0.31	163	P	Pb	19 53 02.1	+0.6
CEVE	Cerro Verde	0.31	163	IAML		19 53 09.5	
	comp=Z,215nm,0.2s						
FAME	Alcaldia de Sa	0.40	226	P	Pg	19 53 02.3	0.0
FAME				S	Sg	19 53 07.6	-0.3
MTO3	Montecristo	0.44	52	P	Pb	19 53 03.8	+0.1
MTO3				S	Sb	19 53 10.7	+0.5
MTO3	Montecristo	0.44	52	i P	Pb	19 53 03.8	+0.1
MTO3	Montecristo	0.44	52	i eP	Pb	19 53 03.8	+0.1
JAYA	Jayaque - finc	0.54	151	P	Pg	19 53 04.7	-0.2
JAYA				S	Sg	19 53 11.6	-0.5
JAYA	Jayaque - finc	0.54	151	eS	Sb	19 53 13.5	+0.5
PMON	Piamonte	0.57	136	P	Pg	19 53 05.0	-0.4
PMON				S	Sg	19 53 13.0	-0.1
P5NO	Presa 5 de nov	0.94	98	P	Pg	19 53 12.0	-0.5
P5NO				S	Sg	19 53 24.7	-0.1
APG	El Apazote	1.13	320	i P	Pg	19 53 16.0	-0.2

*NEIC **20** 20:03:38.9±1.1, 43.°90N±0.°05×105.°24W±0.°08, h0km±1km, ML3.5/74, Error ellipse: s-maj=9.9km s-min=9.2km az=284.0*
*IDC **20** 20:03:41.0±1.6, 43.°98N×105.°63W, h0km, mb3.8/1, mbtmp3.4/6, ML3.0/4, MS3.0/5, Error ellipse: s-maj=50.7km s-min=7.9km az=146.0*

ISC 20 20:03:39.9±0.9, 43.°86N±0.°06×105.°21W±0.°06, h0km, n87, σ0°77/82, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	0.89	72		Pn	20 03 59.0	-0.9
RSSD	Black Hills	0.89	72		Pn	20 03 59.2	-0.7
K22A	Casper	1.54	219		Pn	20 04 07.6	-1.2
K22A				IAML		20 04 34.2	
	518nm,0.3s						
K22A				IAML		20 04 36.0	
	359nm,0.3s						
LAO	LASA Array	2.92	346		Pn	20 04 26.5	-1.1
LAO				IAML		20 05 22.0	
	216nm,0.9s						
LAO				IAML		20 05 22.6	
	192nm,0.9s						
RLMT	Red Lodge	3.17	295		Pn	20 04 31.1	-0.1
RLMT				IAML		20 05 28.3	
	120nm,1.5s						
RLMT				IAML		20 05 30.1	
	78nm,0.7s						
BW06	Boulder Array	3.35	253		Pn	20 04 34.4	+0.6
BW06				IAML		20 05 30.3	
	78nm,1.6s						
PD31	Pinedale Array	3.35	253		Pn	20 04 34.1	+0.3
PDAR	Pinedale Array	3.35	253	Pn	Pn	20 04 34.5	+0.8
	4.8nm,0.3s,baz=66,slow=16,SNR=69						
PDAR				Pg	Pb	20 04 40.2	-0.1
	18nm,0.3s,baz=62,slow=17,SNR=40						
PDAR				Lg	Lg	20 05 17.9	
	8.0nm,0.3s,baz=73,slow=24,SNR=6.8						
PDAR	Pinedale Array	3.35	253		Pn	20 04 34.1	+0.3
YNE	Yellowstone No	3.62	290		Pn	20 04 37.7	+0.2
YNE				IAML		20 05 38.4	
	comp=E,101nm,0.3s						
YNE				IAML		20 05 43.4	
	comp=N,110nm,0.7s						
YMP	Mirror Lake Pl	3.66	286		Pn	20 04 38.1	+0.1
YMP				IAML		20 05 47.3	
	comp=N,117nm,0.9s						
HAYD	Hayden	3.67	205		Pn	20 04 38.1	0.0
HAYD				IAML		20 05 45.8	
	comp=N,85nm,2.1s						
HAYD				IAML		20 05 49.0	
	comp=E,69nm,1.9s						
OGNE	Ogallala	3.74	140		Pn	20 04 39.7	+0.6
OGNE				IAML		20 05 49.1	
	comp=E,105nm,1.6s						
H17A	Grant Village	3.90	280		Pn	20 04 41.5	+0.2
H17A				IAML		20 05 49.0	
	comp=E,51nm,2.1s						
LOHW	Long Hollow	3.92	268		Pn	20 04 42.4	+0.9
LOHW				IAML		20 05 46.0	
	comp=E,41nm,1.2s						
FLWY	Flagg Ranch	3.97	275		Pn	20 04 42.9	+0.6
MOOW	Moose Ponds	4.01	270		Pn	20 04 42.6	-0.1
YNR	Norris Junctio	4.02	284		Pn	20 04 44.0	+1.1
SNOW	Snow King Moun	4.04	266		Pn	20 04 43.8	+0.5
SNOW				IAML		20 06 03.9	
	comp=E,105nm,1.8s						
SNOW				IAML		20 06 08.6	
	comp=E,82nm,1.7s						
YPP	Pitchstone Pla	4.05	278		Pn	20 04 43.9	+0.5
YPP				IAML		20 06 00.8	
	comp=N,38nm,2.3s						
YPP				IAML		20 06 15.0	
	comp=E,40nm,2.0s						
ISCO	Idaho Springs	4.07	184		Pn	20 04 44.5	+0.9
ISCO				IAML		20 05 52.1	
	comp=E,42nm,2.0s						
YFT	Old Faithful	4.09	280		Pn	20 04 44.5	+0.6
YHH	Holmes Hill	4.15	285		Pn	20 04 45.2	+0.4
E28A	Huff	4.19	48		Pn	20 04 45.6	+0.5
E28A				IAML		20 06 01.9	
	comp=E,97nm,1.6s						
YMR	Madison River	4.21	283		Pn	20 04 45.8	+0.2
YMR				IAML		20 06 08.2	
	comp=N,86nm,0.9s						
YMR				IAML		20 06 25.1	
	comp=E,60nm,1.1s						
FXWY	Fox Creek	4.22	269		Pn	20 04 45.7	0.0
K30B	Basset	4.26	104		Pn	20 04 46.7	+0.7
O20A	White River Ci	4.35	212		Pn	20 04 47.1	-0.4
YHB	Horse Butte	4.39	284		Pn	20 04 48.7	+0.7
YHB				IAML		20 06 18.6	
	comp=N,34nm,1.0s						
YHL	Hebgen Lake	4.40	285		Pn	20 04 49.1	+0.9
YHL				IAML		20 06 10.8	
	comp=E,57nm,1.8s						
YHL				IAML		20 06 12.5	
	comp=N,57nm,2.0s						
AHID	Auburn Hatcher	4.43	258		Pn	20 04 49.8	+1.2
AHID				IAML		20 06 19.9	
	comp=N,58nm,1.4s						
SUSD	Miller	4.54	80		Pn	20 04 50.9	+1.0
QLMT	Earthquake Lak	4.56	284		Pn	20 04 51.1	+0.7
RDMU	Red Mountain	4.61	226		Pn	20 04 51.8	+0.7
RDMU				IAML		20 06 14.3	
	comp=N,48nm,2.1s						
RDMU				IAML		20 06 19.4	
	comp=E,50nm,1.7s						
BOZ	Bozeman (W)	4.89	293		Pn	20 04 55.4	+0.5
BOZ				IAML		20 06 14.4	
	comp=E,45nm,2.7s						
BOZ				IAML		20 06 15.3	
	comp=E,22nm,1.6s						
HWUT	Hardware Ranch	5.19	247		Pn	20 04 59.9	+0.9
HWUT				IAML		20 06 27.8	
	comp=E,47nm,1.1s						
KSCO	Kaye Shedlock'	5.22	157		Pn	20 04 59.5	+0.2
EGMT	Eagleton	5.23	324		Pn	20 05 00.0	+0.5
BSUT	Blindstream Ca	5.29	233		Pn	20 05 00.6	0.0
BSUT				IAML		20 06 38.2	
	comp=N,22nm,1.6s						
BSUT				IAML		20 06 50.7	
	comp=E,29nm,2.2s						
TCUT	Toone Canyon	5.34	241		Pn	20 05 01.2	+0.2
LRM	Limekiln Ridge	5.51	293		Pn	20 05 03.8	+0.4
MCMT	McKenzie Canyo	5.56	283		Pn	20 05 04.7	+0.5
MDND	Maddock	5.59	43		Pn	20 05 07.0	+2.7
P18A	Preston Nutter	5.66	223		Pn	20 05 05.2	-0.3
LYMT	Lyon Mountain	5.87	304		Pn	20 05 08.8	+0.4
SPUT	South Promonto	5.92	247		Pn	20 05 09.7	+0.7
HVU	Hansel Valley	5.94	252		Pn	20 05 10.3	+1.1
PV22	Blue Mesa, Par	5.96	208		Pn	20 05 10.3	+0.7
PV07	Paradox Valley	6.00	207		Pn	20 05 10.0	-0.2
P17A	Butcher Ranch,	6.03	225		Pn	20 05 10.2	-0.2
PV15	Paradox Valley	6.04	205		Pn	20 05 10.7	0.0
PV23	Carpenter Ridg	6.11	209		Pn	20 05 12.0	+0.2
PV04	Paradox Valley	6.13	208		Pn	20 05 11.8	-0.1
MPU	Maple Canyon	6.13	233		Pn	20 05 12.9	+0.9
PV14	Lion Creek, Pa	6.19	209		Pn	20 05 12.8	+0.1
PV10	Paradox Valley	6.19	209		Pn	20 05 13.7	+0.9
SRU	San Rafael Swe	6.20	222		Pn	20 05 12.1	-0.7
PV20	West Nyswonger	6.20	208		Pn	20 05 12.3	-0.5
PV11	David Mesa, Pa	6.20	208		Pn	20 05 12.5	-0.4
PV16	Nyswonger Mesa	6.21	208		Pn	20 05 13.0	0.0
S22A	4UR Ranch, Cre	6.23	192		Pn	20 05 11.9	-1.4
PV03	Paradox Valley	6.23	207		Pn	20 05 12.8	-0.6
PV02	Paradox Valley	6.24	206		Pn	20 05 13.6	+0.2
PV01	Paradox Valley	6.25	205		Pn	20 05 13.6	0.0
PV18	Skein Mesa, Pa	6.26	208		Pn	20 05 13.6	-0.1
TMUT	Trail Mountain	6.40	227		Pn	20 05 15.6	-0.1
PV05	Paradox Valley	6.48	208		Pn	20 05 15.8	-0.9
Q16A	Castle Valley	6.66	224		Pn	20 05 19.5	+0.3
DUG	Dugway, Tooele	6.74	240		Pn	20 05 19.9	-0.3
HMU	Henry Mountain	7.24	217		Pn	20 05 25.8	-1.4
JTMT	Jette	7.43	305		Pn	20 05 27.8	-2.0
RTBA	Rita Blanca	7.65	165		Pn	20 05 32.1	-0.6
PLID	Pearl Lake	7.81	283	Pn	Pn	20 05 34.3	-0.7
MTPU	Mount Pierson	7.84	225		Pn	20 05 35.6	0.0
ELK	Elko	8.05	251	Pn	Pn	20 05 39.4	+1.0
	comp=E,0.4nm,0.3s,baz=55,slow=12,SNR=7.5						
ELK				Lg	Lg	20 07 47.0	
	comp=E,0.1nm,0.3s,baz=205,slow=14,SNR=1.9						
	comp=E,0.8nm,0.3s						
PSUT	Pine Spring	8.41	234		Pn	20 05 42.4	-0.8
I10CA	LAC DU BONNET	8.92	41	I	I	20 57 50.0	
	comp=E,0.1nm,1.4s,baz=217,slow=264,SNR=1.3						
ANMO	Albuquerque	8.95	187	LR	LR	20 09 43.0	
	comp=E,40nm,19.3s,baz=29,slow=40						
ULM	Lac du Bonnet	9.02	42	Pn	Pn	20 05 52.1	+0.7
	comp=E,0.8nm,0.3s,baz=227,slow=12,SNR=7.5						
ULM				Lg	Lg	20 08 22.1	
	comp=E,0.3nm,0.3s,baz=139,slow=19,SNR=1.8						
ULM				LR	LR	20 08 47.6	
	comp=E,17nm,19.2s,baz=207,slow=34						
	comp=E,2.4nm,0.4s						
ULM	Lac du Bonnet	9.02	42		Pn	20 05 51.6	+0.2
NEW	Newport	9.38	302	Lg	Lg	20 08 20.7	
	comp=E,0.1nm,0.3s,baz=62,slow=15,SNR=2.3						
NVAR	Mina Array Bea	11.26	246	Pn	Pn	20 06 22.1	-0.1
	comp=E,0.2nm,0.3s,baz=41,slow=19,SNR=2.0						
	comp=E,0.3nm,0.3s						
TXAR	Lajitas Array	14.55	175	Lg	Lg	20 11 20.7	
	baz=359,slow=24						
TXAR				LR	LR	20 13 17.4	
	comp=E,59nm,18.9s,baz=322,slow=39						
YKA	Yellowknife Ar	19.46	347	P	P	20 08 05.8	-2.0
	comp=E,0.1nm,0.3s,baz=158,slow=12,SNR=4.1						
	comp=E,0.1nm,0.3s						
SFJD	Kangerlussuaq	36.91	32	LR	LR	20 25 58.6	
	comp=E,70nm,18.5s,baz=218,slow=36						
ARTI	Arti	79.17	9	LR	LR	20 53 55.7	
	comp=E,27nm,18.3s,baz=8.5,slow=38						
MKAR	Makanchi Array	89.49	355	P	P	20 16 39.5	+0.8
	comp=E,0.4nm,0.7s,baz=18,slow=4.8,SNR=4.5						
	comp=E,0.4nm,0.7s						

IDC 20 20:16:57.1±1.9, 3.°78N×128.°68E, h0km, mb3.1/4, mbtmp3.1/4, MS2.7/1, Error ellipse: s-maj=137.6km s-min=28.0km az=70.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	Tagaytay City	12.79	324	LR	LR	20 26 49.8	
	comp=Z,31nm,18.9s,baz=174,slow=46						
WRA	Warramunga Arr	24.23	167	P	P	20 22 15.7	-0.2
	0.3nm,0.8s,baz=346,slow=10,SNR=4.6						
	0.3nm,0.8s						
SONM	Songino Array	47.89	340	P	P	20 25 36.4	-0.8
	0.1nm,0.4s,baz=134,slow=6.2,SNR=1.5						
	0.1nm,0.4s						
MKAR	Makanchi Array	58.63	324	P	P	20 26 56.8	+0.6
	0.2nm,0.5s,baz=114,slow=8.1,SNR=5.6						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	62.75	327	P	P	20 27 24.0	-0.1
	0.1nm,0.5s,baz=130,slow=6.5,SNR=1.7						
	0.1nm,0.5s						

*IDC **20** 20:40:40.1±0.6, 22.°23N×145.°42E, h0km, mb4.2/20, mbtmp4.2/22, ML3.6/2, MS3.1/8, Error ellipse: s-maj=18.7km s-min=13.9km az=85.0*
*NEIC **20** 20:40:42.4±1.6, 22.°39N±0.°07×145.°3E±0.°1, h10km±1km, mb4.5/31, Error ellipse: s-maj=21.5km s-min=11.5km az=80.0*

ISC 20 20:40:41.9±0.4, 22.°38N±0.°05×145.°33E±0.°10, h10km, n81, σ1°14/82, mb4.4/35, MS2.9/6, North Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	5.50	329	Pn	Pn	20 42 06.9	+3.1
	11nm,0.3s,baz=292,slow=22,SNR=5.3						
JCJ				Sn	Sn	20 43 04.2	-3.0
	24nm,0.3s,baz=308,slow=23,SNR=11						
	42nm,0.4s						
JCJ	Chichijima	5.50	329		Pn	20 42 04.3	+0.4
JCJ				Sn	Sn	20 43 04.8	-2.4
GUMO	Guam	8.76	183	Pn	Pn	20 42 51.7	+3.1
	4.7nm,0.3s,baz=198,slow=15,SNR=1.8						
GUMO				Sn	Sn	20 44 28.7	+1.2
	7.1nm,0.3s,baz=232,slow=18,SNR=1.6						
GUMO				LR	LR	20 45 34.8	
	comp=Z,114nm,21.8s,baz=56,slow=34						
GUMO	Guam	8.76	183		Pn	20 42 49.1	+0.5
GUMO				Sn	Sn	20 44 27.2	-0.2
JHJ2	Mitsune	11.75	337	Pn	Pn	20 43 31.1	+1.5
JGF	Kuroka	14.90	334	Pn	Pn	20 44 13.3	+0.7
MJAR	Matsushiro Arr	15.41	338	Pn	Pn	20 44 20.5	+1.1
	baz=154,slow=10,SNR=4.5						
	1.1nm,0.6s						
MJAR	Matsushiro Arr	15.41	338		Pn	20 44 19.5	+0.1
MAJO	Matsushiro	15.41	338	Pn	Pn	20 44 17.7	-1.7
MJB9	Matsu-Tunnel	15.41	338	Pn	Pn	20 44 18.8	-0.6
JOW	Kunigami	16.13	289	LR	LR	20 49 24.8	
	comp=Z,66nm,20.0s,baz=113,slow=32						
H11S3	WAKE ISLAND Hy	20.38	97	T	T	21 06 27.0	
	baz=280						
H11S1	WAKE ISLAND Hy	20.39	97	T	T	21 06 27.9	
	baz=280						
H11S2	WAKE ISLAND Hy	20.39	97	T	T	21 06 33.7	
	baz=280						
KSRS	Korea Array	21.24	319	P	P	20 45 29.9	+1.8
	1.4nm,0.7s,baz=147,slow=9.9,SNR=13						
KSRS				LR	LR	20 54 23.6	
	comp=Z,37nm,18.4s,baz=135,slow=38						
	1.4nm,0.7s						
KLR	Kul'dur	28.88	341	LR	LR	20 59 26.1	
	comp=Z,19nm,20.8s,baz=160,slow=39						
LUWI	Luwuk	32.03	226	P	P	20 47 08.2	-0.6
PETK	Petropavlovsk-	32.10	14	LR	LR	21 00 37.6	
	comp=Z,37nm,18.9s,baz=247,slow=37						
SONM	Songino Array	40.11	319	P	P	20 48 20.0	+2.1
	1.2nm,0.7s,baz=139,slow=7.9,SNR=13						
SONM				PcP	PcP	20 50 22.1	-0.2
	0.5nm,0.8s,baz=80,slow=1.0,SNR=3.6						
SONM				LR	LR	21 06 43.4	
	comp=Z,20nm,18.2s,baz=104,slow=39						
	1.2nm,0.7s						
SONM	Songino Array	40.11	319	P	P	20 48 16.5	-1.4
KNRA	Kununurra	41.16	205		P	20 48 24.9	-1.6
WB0	Warramunga Arr	43.23	195		P	20 48 41.9	-1.6
WB0				IAmb	IAmb	20 48 45.0	
	comp=Z,16nm,1.5s						
WRAB	Tennant Creek	43.40	195	P	P	20 48 43.8	-1.1
WRAB	Tennant Creek	43.40	195	P	P	20 48 43.3	-1.6
WRAB				IAmb	IAmb	20 48 44.3	
	comp=Z,13nm,1.4s						
WRA	Warramunga Arr	43.41	195	P	P	20 48 43.6	-1.3
	comp=Z,4.2nm,0.6s,baz=18,slow=8.7,SNR=48						
	comp=Z,4.2nm,0.6s						
WRA	Warramunga Arr	43.41	195		P	20 48 43.1	-1.9
CMAR	Chiang Mai Arr	43.52	274	P	P	20 48 46.7	+0.7
	comp=Z,0.5nm,0.7s,baz=72,slow=7.9,SNR=4.0						
CMAR				LR	LR	21 05 38.8	
	comp=Z,11nm,22.0s,baz=200,slow=34						
	comp=Z,0.5nm,0.7s						
CMAR	Chiang Mai Arr	43.52	274	P	P	20 48 45.4	-0.6
FITZ	Fitzroy Crossi	44.60	207	P	P	20 48 53.4	-1.2
	comp=Z,7.7nm,0.7s,baz=22,slow=9.8,SNR=24						
	comp=Z,7.7nm,0.7s						
AS31	Alice Springs	47.10	194	P	P	20 49 12.7	-1.5
ASAR	Alice Springs	47.10	194	P	P	20 49 12.7	-1.5
	comp=Z,1.9nm,0.7s,baz=13,slow=8.1,SNR=31						
	comp=Z,1.9nm,0.7s						
ASAR	Alice Springs	47.10	194	P	P	20 49 12.4	-1.8
EVN	Everest	52.83	289		P	20 49 58.8	+0.2
EVN				IAmb	IAmb	20 50 00.9	
	comp=Z,2.7nm,0.6s						
STKA	Stephens Creek	54.07	184	P	P	20 50 06.0	-0.7
	comp=Z,1.4nm,0.2s,baz=339,slow=14,SNR=3.6						
	comp=Z,1.4nm,0.2s						
STKA	Stephens Creek	54.07	184	P	P	20 50 06.5	-0.2
ZALV	Zalesovo Beam	54.92	321	P	P	20 50 13.8	+1.0
	comp=Z,0.5nm,0.4s,baz=101,slow=8.8,SNR=4.4						
	comp=Z,0.5nm,0.4s						
ZALV	Zalesovo Beam	54.92	321	P	P	20 50 13.3	+0.5
ZALV				PcP	PcP	20 51 14.2	-0.5
ZALV	Zalesovo Beam	54.92	321	P	PcP	20 51 14.5	-0.2
	comp=Z,0.6nm,0.5s,baz=134,slow=4.2,SNR=2.4						
MKAR	Makanchi Array	55.71	312	P	P	20 50 19.8	+1.2
	comp=Z,1.6nm,0.8s,baz=93,slow=9.0,SNR=20						
MKAR				PcP	PcP	20 51 17.9	-0.1
	comp=Z,1.8nm,0.7s,baz=86,slow=5.5,SNR=14						
	comp=Z,1.6nm,0.8s						
MKAR	Makanchi Array	55.71	312	P	P	20 50 19.4	+0.7
MKAR					PcP	20 51 17.0	-0.9
KURK	Kurchatov	58.

comp=Z,3.2nm,0.9s
BVAR Borovoye Array 63.45 319 P **P** 20 51 12.9 +1.0
comp=Z,4.3nm,0.7s,baz=91,slow=7.7,SNR=5.9
comp=Z,4.3nm,0.7s
BORK Borovoye 63.49 319 **P** 20 51 11.8 -0.3
KK31 Karatay Array 64.20 308 **P** 20 51 17.6 +0.6
KK31 IAmb IAmb 20 51 19.0
comp=Z,2.6nm,0.8s
KKAR Karatay Array 64.20 308 **P** 20 51 17.0 0.0
G31M Satah River 65.87 25 P **P** 20 51 27.7 +0.3
G31M IAmb IAmb 20 51 29.5
comp=Z,3.6nm,0.8s
KBL Kabul 66.75 299 **P** 20 51 33.6 -0.3
KBL IAmb IAmb 20 51 35.8
comp=Z,3.3nm,0.9s
URZ Urewera 67.30 153 LR LR 21 20 17.4
comp=Z,79nm,18.0s,baz=45,slow=35
RAR Rarotonga 68.87 125 **P** 20 51 45.9 -1.1
AB31 Akbulak array 70.44 316 **P** 20 51 55.6 -0.9
YKA Yellowknife Ar 74.92 28 P **P** 20 52 23.1 +0.3
comp=Z,1.6nm,0.8s,baz=296,slow=6.3,SNR=17
comp=Z,1.6nm,0.8s
YKA Yellowknife Ar 74.92 28 P **P** 20 52 22.0 -0.8
YKAW1 Yellowknife Wh 74.97 28 P **P** 20 52 23.2 +0.2
YKAW1 IAmb IAmb 20 52 24.7
comp=Z,2.6nm,0.8s
LON Longmire 75.93 45 P **P** 20 52 29.0 0.0
LON IAmb IAmb 20 52 44.6
comp=Z,4.3nm,1.3s
WIFE Three Sisters- 76.75 48 P **P** 20 52 33.8 -0.1
YBH Yreka Blue Hor 76.86 50 **P** 20 52 33.9 -0.5
YBH IAmb IAmb 20 52 36.8
comp=Z,3.0nm,0.8s
PINE Pine Mountain 77.44 48 **P** 20 52 38.0 +0.2
ARCES ARCESS Array B 78.90 342 P **P** 20 52 46.3 +1.1
comp=Z,4.2nm,0.9s,baz=12,slow=4.6,SNR=1.9
comp=Z,4.2nm,0.9s
ARCES ARCESS Array B 78.90 342 P **P** 20 52 45.6 +0.4
BEKR Beckworth 79.15 51 **P** 20 52 46.9 -0.4
BEKR IAmb IAmb 20 52 48.9
comp=Z,4.8nm,0.8s
NVAR Mina Array Bea 81.16 52 P **P** 20 52 59.0 +0.8
comp=Z,3.7nm,0.8s,baz=265,slow=6.1,SNR=20
comp=Z,3.7nm,0.8s
KBZ Khabaz 83.32 315 **P** 20 53 10.4 +1.3
comp=Z,4.5nm,0.9s,baz=150,slow=2.2,SNR=12
comp=Z,4.5nm,0.9s
FINES FINESS Array B 83.42 335 P **P** 20 53 09.3 0.0
comp=Z,3.5nm,1.1s,baz=71,slow=6.7,SNR=3.6
comp=Z,3.5nm,1.1s
FINES FINESS Array B 83.42 335 P **P** 20 53 09.0 -0.2
FFC Flin Flon 84.19 33 **P** 20 53 13.9 +0.6
PDAR Pinedale Array 85.50 45 P **P** 20 53 20.6 +0.1
comp=Z,0.9nm,0.7s,baz=238,slow=1.7,SNR=12
comp=Z,0.9nm,0.7s
PDAR Pinedale Array 85.50 45 P **P** 20 53 20.2 -0.4
BRTR Keskin Array B 91.31 314 P **P** 20 53 46.9 -1.3
comp=Z,0.9nm,0.8s,baz=150,slow=2.5,SNR=5.4
comp=Z,0.9nm,0.8s
BRTR Keskin Array B 91.31 314 P **P** 20 53 46.5 -1.7
TXAR Lajitas Array 96.03 55 P **P** 20 54 10.3 +0.3
comp=Z,0.5nm,0.9s,baz=321,slow=5.4,SNR=3.7
comp=Z,0.5nm,0.9s
TXAR Lajitas Array 96.03 55 P **P** 20 54 09.5 -0.5
PLCA Paso Flores 144.68 130 PKP **PKPab** 21 00 17.4 -0.4
comp=Z,2.7nm,0.8s,baz=267,slow=2.7,SNR=7.4
LPAZ La Paz 147.89 85 PKPbc **PKPbc** 21 00 28.7 -0.2
comp=Z,1.7nm,0.5s,baz=14,slow=4.2,SNR=7.4

IDC 20 20:40:42.8±1.3, 5.95°S×128.37°E, h369km±21km, mb3.1/1, mbtmp3.6/6, Error ellipse: s-maj=31.6km s-min=15.2km az=100.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.81**	**30**	P	Pn	20 42 14.2	+1.9
	1.3nm,0.3s,baz=183,slow=22,SNR=1.5						
SIJI				S	S	20 43 25.0	0.0
	2.6nm,0.2s,baz=73,slow=23,SNR=12						
BATI	**Baumata**	**6.29**	**228**	P	Pn	20 42 15.9	-1.8
	15nm,0.4s,baz=270,slow=5.1,SNR=5.7						
FITZ	**Fitzroy Crossi**	**12.37**	**192**	P	P	20 43 27.1	-0.6
	1.0nm,0.7s,baz=74,slow=23,SNR=1.8						
FITZ				S	S	20 45 44.4	+0.1
	1.4nm,0.9s,baz=130,slow=14,SNR=1.5						
WRA	**Warramunga Arr**	**15.07**	**158**	P	P	20 43 58.2	+0.8
	1.0nm,0.7s,baz=339,slow=11,SNR=19						
WRA				S	S	20 46 37.3	-1.3
	0.4nm,1.0s,baz=353,slow=18,SNR=1.3						
ASAR	**Alice Springs**	**18.40**	**164**	P	P	20 44 33.9	+0.7
	0.3nm,0.4s,baz=342,slow=12,SNR=8.5						

*ISK **20** 20:54:41.9, 34.96°N×26.75°E, h5km, ML3.3/20*
*ATH **20** 20:54:41.7, 34.91°N×26.80°E, h8km±1km, ML3.3/7, Latitude uncertainty: 2 km; Longitude uncertainty: 0 km*
*IDC **20** 20:54:42.3±1.2, 35.01°N×26.70°E, h0km, mb3.5/7, mbtmp3.3/9, ML2.9/2, MS2.3/2, Error ellipse: s-maj=39.5km s-min=19.0km az=161.0*
*THE **20** 20:54:46.2, 35°N±13"×2"E±", h4km±24km, M3.1/10, MLh3.1/10*
*AFAD **20** 20:54:47.2, 35.19°N×26.87°E, h6km±3km, ML2.9*
*GII **20** 20:54:47.5±0.0, 34.985°N±0.009°×27.109°E±0.002, h0km, Mws3.2/1, confirmed*

ISC 20 20:54:43.5±1.1, 35.22°N±0.03°×26.78°E±0.02, h9km±8km, n88, σ1§67/120, mb3.5/6, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.45**	**44**	Pg	**Pn**	20 54 55.5	-0.7
KARP				Sg	**Sb**	20 55 06.9	+6.4
KARP	**Karpathos**	**0.45**	**44**	P	**Pn**	20 54 55.3	-0.9
KARP				S	**Sb**	20 55 04.6	+4.1
ZKR	**Zakros**	**0.47**	**257**	Pg	**Pg**	20 54 51.9	-0.8
ZKR				Sg	**Sg**	20 54 59.8	+0.9
ZKR	**Zakros**	**0.47**	**257**	P	**Pg**	20 54 51.9	-0.8
ZKR				S	**Sg**	20 54 58.8	-0.1
SIT2	**Siteia**	**0.55**	**268**	P	**Pg**	20 54 53.9	-0.3
SIT2				S	**Sg**	20 55 02.4	+1.1
STIA	**Sitia Lasithi**	**0.56**	**268**	P	**Pg**	20 54 54.5	+0.1
STIA				S	**Sg**	20 55 02.9	+1.1
NPS	**Neapolis**	**0.95**	**273**	P	**Pg**	20 55 01.4	-0.4
NPS				S	**Sg**	20 55 14.1	-0.2
NPS	**Neapolis**	**0.95**	**273**	P	**Pb**	20 55 02.2	-0.1
NPS				S	**Sb**	20 55 15.5	+0.5
ARG	**Arkhangelos**	**1.48**	**48**	P	**Pg**	20 55 14.1	+2.2
ARG				S	**Sg**	20 55 36.6	+5.6
ARG	**Arkhangelos**	**1.48**	**48**	Pn	**Pg**	20 55 13.9	+2.1
ARG	**Arkhangelos**	**1.48**	**48**	P	**Pg**	20 55 11.8	-0.1
IDI	**Anoyia**	**1.55**	**273**	P	**Pb**	20 55 12.0	-0.3
IDI				S	**Sb**	20 55 31.9	-0.2
IDI	**Anoyia**	**1.55**	**273**	P	**Pn**	20 55 10.6	-0.7
YAZI	**Mula-Dat§a-**	**1.56**	**20**	P	**Pg**	20 55 12.7	-0.6
YAZI				S	**Sg**	20 55 32.0	-1.4
THERA	**Ancient Thera,**	**1.56**	**318**	P	**Pg**	20 55 13.7	+0.3
THERA				S	**Sg**	20 55 34.3	+0.7
THERA	**Ancient Thera,**	**1.56**	**318**	P	**Pg**	20 55 13.5	+0.1
THR8	**Santorini-Mono**	**1.58**	**319**	P	**Pg**	20 55 13.7	-0.2
THR8	**Santorini-Mono**	**1.58**	**319**	P	**Pg**	20 55 14.0	+0.1
THR6	**Thira Island,**	**1.59**	**316**	P	**Pg**	20 55 14.3	+0.2
THR6	**Thira Island,**	**1.59**	**316**	P	**Pg**	20 55 13.8	-0.2
THR9	**Santorini-Faro**	**1.62**	**315**	P	**Pg**	20 55 14.5	0.0
THR9	**Santorini-Faro**	**1.62**	**315**	P	**Pg**	20 55 14.0	-0.5
SNT5	**Nea Kammeni, S**	**1.63**	**317**	P	**Pg**	20 55 14.4	-0.3
SNT5	**Nea Kammeni, S**	**1.63**	**317**	P	**Pg**	20 55 14.0	-0.7
THR3	**Thira Island,**	**1.63**	**317**	P	**Pg**	20 55 14.7	0.0
THR3	**Thira Island,**	**1.63**	**317**	P	**Pg**	20 55 14.2	-0.6
DAT	**Datca**	**1.64**	**23**	Pn	**Pg**	20 55 16.5	+1.6
DAT	**Datca**	**1.64**	**23**	P	**Pg**	20 55 15.8	+0.9
DAT				S	**Sg**	20 55 36.5	+0.4
DAT				IAML		20 55 53.0	
	comp=N,152nm,1.0s						
DAT				IAML		20 55 53.0	
	comp=E,135nm,0.8s						
THR5	**Thira Island,**	**1.67**	**316**	P	**Pg**	20 55 15.2	-0.2
THR5	**Thira Island,**	**1.67**	**316**	P	**Pb**	20 55 14.5	+0.1
SAP3	**Santorini-Thir**	**1.68**	**317**	P	**Pg**	20 55 16.0	+0.3
SAP3				S	**Sg**	20 55 37.4	-0.1
BODT	**Bodrum**	**1.89**	**13**	P	**Pg**	20 55 20.9	+1.2
BODT				S	**Sg**	20 55 46.2	+2.2
BODT	**Bodrum**	**1.89**	**13**	Pn	**Pg**	20 55 20.3	+0.7
BDRM	**Kayabasi**	**1.92**	**16**	P	**Pg**	20 55 19.4	-0.8
BDRM				S	**Sb**	20 55 40.9	-1.8
TURN	**Turunc**	**1.95**	**37**	Pn	**Pg**	20 55 20.8	-0.1
TURN	**Turunc**	**1.95**	**37**	P	**Pg**	20 55 20.8	-0.1
TURN				S	**Sg**	20 55 47.0	+0.8
VAM	**Vamos**	**2.12**	**276**	P	**Pb**	20 55 21.0	-1.1
DALY	**Dalyan (Mula)**	**2.20**	**43**	Pn	**Pg**	20 55 24.2	-1.5
MLSB	**Milas**	**2.22**	**21**	Pn	**Pg**	20 55 25.1	-0.9
YER	**Yerkesik**	**2.26**	**32**	P	**Pg**	20 55 25.1	-1.8
YER	**Yerkesik**	**2.26**	**32**	Pn	**Pg**	20 55 25.5	-1.4
IMMV	**Iera Moni Meta**	**2.30**	**277**	P	**Pb**	20 55 23.8	-1.3
IZZE	**Mula-Seydike**	**2.33**	**58**	P	**Pb**	20 55 24.3	-1.4
IZZE				IAML		20 55 59.0	
	comp=N,95nm,0.5s						
MULA	**Mugla, Merkez-**	**2.38**	**31**	P	**Pg**	20 55 29.0	-0.1
MULA				S	**Sg**	20 55 59.4	-0.6
SABU	**Mula-Dalaman**	**2.39**	**47**	P	**Pb**	20 55 25.7	-1.0
SABU				S	**Sg**	20 55 58.8	-1.4
SABU				IAML		20 56 20.0	
	comp=N,60nm,1.0s						
SABU				IAML		20 56 22.0	
	comp=E,74nm,1.0s						
GCAM	**G?zelcaml?**	**2.50**	**8**	Pn	**Pg**	20 55 29.2	-2.2
AKAS	**Kas**	**2.51**	**66**	Pn	**Pb**	20 55 27.7	-1.1
AKAS	**Kas**	**2.51**	**66**	P	**Pb**	20 55 26.6	-2.2
AKAS				S	**Sn**	20 55 55.3	-0.1
AKAS				IAML		20 56 11.0	
	comp=N,57nm,0.9s						
AYDN	**Tasoluk**	**2.59**	**20**	P	**Pb**	20 55 29.6	-0.5
CAME	**Cameli-Denizli**	**2.67**	**49**	Pn	**Pb**	20 55 30.5	-1.1
DNZT	**Denizli-Tavas-**	**2.74**	**41**	P	**Pb**	20 55 31.4	-1.3
DNZT				S	**Sb**	20 56 05.3	-1.2
KNIK	**Mula-Seydike**	**2.78**	**54**	P	**Pb**	20 55 32.0	-1.4
KNIK				S	**Sb**	20 56 05.5	-2.3
CAEL	**Denizli, Camel**	**2.80**	**47**	P	**Pb**	20 55 33.1	-0.6
DGB	**zmir**	**2.83**	**2**	P	**Pb**	20 55 34.0	-0.1
DGB				S	**Sb**	20 56 08.3	-0.4
DGB				IAML		20 56 30.0	
	comp=N,36nm,1.3s						
TAVA	**DENIZLI_Tavas**	**2.83**	**37**	P	**Pb**	20 55 33.4	-0.8
TAVA				S	**Sb**	20 56 06.4	-2.5
TAVA				IAML		20 56 33.0	
	comp=N,37nm,1.0s						
AYDB	**Zeytinkoy-Aydi**	**2.86**	**18**	Pn	**Pb**	20 55 34.5	-0.3
ESEN	**Aydn-Nazilli**	**2.86**	**26**	P	**Pb**	20 55 34.0	-0.7
ESEN				S	**Sn**	20 56 04.0	0.0
ELL	**Elmali**	**2.96**	**58**	Pn	**Pb**	20 55 34.3	-2.2
NAZL	**Nazilli-Aydin**	**2.99**	**24**	Pn	**Pb**	20 55 35.9	-1.1
DNIZ	**Denizli-Tavas-**	**3.01**	**37**	P	**Pb**	20 55 36.9	-0.5
DNIZ				S	**Sb**	20 56 11.2	-3.1
GOLH	**Golhisar**	**3.02**	**47**	P	**Pb**	20 55 35.7	-1.8
GOLH				S	**Sb**	20 56 10.2	-4.2
GOLH				IAML		20 56 35.0	
	comp=E,42nm,0.7s						
GOLH				IAML		20 56 45.0	
	comp=N,63nm,1.3s						
APMY	**Acipayam-Deniz**	**3.03**	**41**	Pn	**Pb**	20 55 35.3	-2.4
IZMR	**zmir-demi**	**3.06**	**18**	P	**Pb**	20 55 36.1	-2.0
IZMR				S	**Sb**	20 56 12.8	-2.7
URLA	**Izmir**	**3.13**	**357**	Pn	**Pb**	20 55 38.2	-1.2
BLCB	**Balcova**	**3.16**	**4**	Pn	**Pb**	20 55 38.8	-1.1
ODEM	**Odemis-Izmir**	**3.22**	**18**	Pn	**Pb**	20 55 38.4	-2.5
KIRA	**zmir-Kiraz**	**3.24**	**23**	P	**Pb**	20 55 38.4	-2.9
KIRA				S	**Sn**	20 56 12.4	-1.0
SULTU	**Buldan**	**3.25**	**29**	P	**Pb**	20 55 39.3	-2.1
SULTU				S	**Sn**	20 56 11.0	-2.6
SULTU				IAML		20 56 52.0	
	comp=N,39nm,1.3s						
SULTU				IAML		20 56 57.0	
	comp=E,26nm,1.0s						
KULA	**Kula-Manisa**	**3.62**	**24**	Pn	**Pb**	20 55 44.8	-2.8
GORD	**Gordes-Manisa**	**3.84**	**16**	Pn	**Pb**	20 55 48.3	-3.2
KYMI	**Kymi, Euboea I**	**4.02**	**329**	P	**Pn**	20 55 47.9	+2.6
CSS	**Mathiatis**	**5.38**	**91**	P	**Pn**	20 56 05.4	+1.5
BRTR	**Keskin Array B**	**7.07**	**48**	Pn	Pn	20 56 31.4	+4.1
	0.1nm,0.3s,baz=218,slow=14,SNR=2.3						
BRTR				LR	LR	20 59 31.8	
	comp=Z,19nm,20.2s,baz=222,slow=40 0.2nm,0.3s						
MMAI	**Mount Meron Ar**	**7.48**	**105**	Pn	**Pn**	20 56 32.1	-0.8
	0.6nm,0.3s,baz=294,slow=11,SNR=5.7						
MMAI				Sn	**Sn**	20 57 57.1	-0.9
	0.6nm,0.3s,baz=270,slow=39,SNR=1.4 0.2nm,0.3s						
SALP	**Salfit**	**7.69**	**112**	P	**Pn**	20 56 36.4	+0.8
KZIT	**Kziot**	**7.71**	**122**	P	**Pn**	20 56 35.7	-0.2
KZIT				S	**Sn**	20 57 59.9	-3.4
HMDT	**Nahal Hemdat**	**7.87**	**110**	P	**Pn**	20 56 38.7	+0.6
HMDT				S	**Sn**	20 58 06.0	-1.2
DSI	**Dead Sea**	**8.06**	**114**	P	**Pn**	20 56 40.5	-0.2
DSI				S	**Sn**	20 58 10.0	-2.1
MSBI	**Mazada**	**8.17**	**116**	P	**Pn**	20 56 42.2	0.0
KRMI	**Paran Flat**	**8.41**	**125**	P	**Pn**	20 56 47.4	+1.8
ASF	**Jabal al Asfar**	**8.96**	**107**	LR	LR	21 01 39.2	
	comp=Z,23nm,18.2s,baz=207,slow=46						
ESDC	**Sonseca Array**	**24.74**	**290**	P	**P**	21 00 04.7	-0.6
	0.3nm,0.5s,baz=83,slow=9.7,SNR=4.9 0.3nm,0.5s						
TORD	**Torodi Ar. Bea**	**31.56**	**232**	P	**P**	21 01 05.3	-1.0
	0.3nm,0.5s,baz=31,slow=7.0,SNR=4.8 0.3nm,0.5s						
BVAR	**Borovoye Array**	**35.35**	**46**	P	**P**	21 01 40.4	+1.3
	0.2nm,0.5s,baz=252,slow=7.4,SNR=4.0 0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**40.05**	**51**	P	**P**	21 02 20.6	+1.8
	0.8nm,0.6s,baz=277,slow=9.0,SNR=13 0.8nm,0.6s						
MKAR	**Makanchi Array**	**42.63**	**57**	P	**P**	21 02 42.0	+1.9
	0.7nm,0.6s,baz=281,slow=6.6,SNR=9.5 0.7nm,0.6s						
ZALV	**Zalesovo Beam**	**44.00**	**46**	P	**P**	21 02 52.0	+0.9
	0.8nm,0.6s,baz=255,slow=7.6,SNR=3.6 0.8nm,0.6s						
SONM	**Songino Array**	**58.42**	**51**	P	**P**	21 04 42.1	+2.5
	0.2nm,0.6s,baz=275,slow=7.1,SNR=3.7 0.2nm,0.6s						

*NEIC **20** 21:01:11.4±2.0, 11.5°S±0.1°×166.3°E±0.1°, h35km±2km, mb4.3/8, Error ellipse: s-maj=28.0km s-min=11.3km az=54.0*
*IDC **20** 21:01:12.0±4.0, 11.57°S×166.30°E, h52km±33km, mb3.7/11, mbtmp4.0/13, ML3.5/2, MS3.2/7, Error ellipse: s-maj=29.6km s-min=23.1km az=83.0*

ISC 20 21:01:12.8±0.7, 11.62°S±0.08°×166.3°E±0.1°, h59km, n36, σ1§19/27, mb4.0/13, MS3.2/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**3.92**	**166**		**Pn**	21 02 11.9	+1.5
HNR	**Honiara**	**6.57**	**289**	P	**Pn**	21 02 45.9	-0.9
	1.1nm,0.3s,baz=225,slow=2.9,SNR=9.9						
HNR				LR	LR	21 05 26.5	
	comp=Z,13nm,21.7s,baz=214,slow=39 15nm,1.1s						
HNR	**Honiara**	**6.57**	**289**		**Pn**	21 02 46.0	-0.8
DZM	**Mont Dzumac**	**10.40**	**179**	P	**Pn**	21 03 40.5	+1.2
	0.3nm,0.3s,baz=90,slow=16,SNR=2.0						
DZM				S	**Sn**	21 05 30.6	-3.8
	4.5nm,0.7s,baz=108,slow=23,SNR=1.5 12nm,1.2s						
KRVT	**Keravat (AS076**	**15.84**	**296**	LR	LR	21 10 45.7	
	comp=Z,30nm,18.4s,baz=338,slow=36						
PMG	**Port Moresby**	**18.90**	**275**	LR	LR	21 11 41.5	
	comp=Z,112nm,21.5s,baz=146,slow=33						
EIDS	**Eidsvold**	**19.82**	**224**	P	**P**	21 05 39.4	+0.6
PATS	**Pohnpei**	**19.96**	**336**	P	**P**	21 05 39.2	-1.0
CTA	**Charters Tower**	**20.98**	**244**	LR	LR	21 13 07.9	
	comp=Z,120nm,18.1s,baz=44,slow=34						
CTAO	**Charters Tower**	**20.98**	**244**	P	**P**	21 05 51.6	+0.3
CTAO				IAmb	IAmb	21 05 56.7	
	comp=Z,13nm,1.1s						
H11S2	**WAKE ISLAND Hy**	**29.92**	**1**	T	T	21 37 57.7	
	baz=182						
H11S3	**WAKE ISLAND Hy**	**29.92**	**1**	T	T	21 37 52.0	
	baz=182						
H11S1	**WAKE ISLAND Hy**	**29.94**	**1**	T	T	21 37 56.4	
	baz=182						
STKA	**Stephens Creek**	**30.38**	**225**	P	**P**	21 07 21.1	+1.8
	comp=Z,1.0nm,0.7s,baz=75,slow=10,SNR=3.1 comp=Z,1.0nm,0.7s						
STKA	**Stephens Creek**	**30.38**	**225**	P	**P**	21 07 20.6	+1.3
H11N1	**WAKE ISLAND Hy**	**31.14**	**1**	T	T	21 39 12.8	
	baz=185						
H11N3	**WAKE ISLAND Hy**	**31.14**	**1**	T	T	21 39 27.6	
	baz=185						
H11N2	**WAKE ISLAND Hy**	**31.16**	**1**	T	T	21 39 26.7	
	baz=185						
WR8	**Warramunga Arr**	**31.61**	**251**	P	**P**	21 07 30.1	-0.3
WR8				IAmb	IAmb	21 07 31.7	
	comp=Z,3.8nm,1.1s						
WB0	**Warramunga Arr**	**31.68**	**251**	P	**P**	21 07 30.1	-0.9
WB0				IAmb	IAmb	21 07 47.6	
	comp=Z,5.9nm,1.1s						
WRA	**Warramunga Arr**	**31.76**	**251**	P	**P**	21 07 31.3	-0.4
	comp=Z,0.5nm,0.7s,baz=83,slow=9.0,SNR=6.3						
WRA				PcP	**PcP**	21 10 22.6	+0.6
	comp=Z,0.3nm,0.8s,baz=89,slow=5.2,SNR=1.9 comp=Z,0.5nm,0.7s						
ASAR	**Alice Springs**	**32.99**	**244**	P	**P**	21 07 42.0	-0.4
	comp=Z,0.5nm,0.6s,baz=69,slow=9.6,SNR=15						
ASAR				PcP	**PcP**	21 10 25.4	0.0
	comp=Z,0.4nm,0.7s,baz=60,slow=3.4,SNR=3.2						
ASAR				LR	LR	21 20 04.4	
	comp=Z,49nm,19.9s,baz=108,slow=34 comp=Z,0.5nm,0.6s						
DAV	**Davao City (W)**	**44.52**	**293**	LR	LR	21 24 20.1	
	comp=Z,21nm,21.2s,baz=317,slow=31						
KAPI	**Kappang**	**46.43**	**274**	LR	LR	21 29 46.9	
	comp=Z,19nm,19.1s,baz=114,slow=37						
MA2	**Magadan**	**72.04**	**352**	LR	LR	21 38 31.6	
	comp=Z,17nm,20.6s,baz=162,slow=31						
CMAR	**Chiang Mai Arr**	**72.80**	**294**	P	**P**	21 12 36.5	+0.9
	comp=Z,0.5nm,0.3s,baz=123,slow=5.3,SNR=8.8 comp=Z,0.5nm,0.3s						
LZDM	**Lanzhou Array**	**75.56**	**312**	P	**P**	21 12 52.9	+1.1
	comp=Z,1.6nm,0.3s,baz=134,slow=5.2,SNR=2.3 comp=Z,1.6nm,0.3s						
QSPA	**South Pole Qui**	**78.39**	**180**	P	**P**	21 13 06.6	-0.3
	comp=Z,2.7nm,1.0s,baz=347,slow=2.0,SNR=4.7 comp=Z,2.7nm,1.0s						
QSPA	**South Pole Qui**	**78.39**	**180**	P	**P**	21 13 06.5	-0.5
QSPA				IAmb	IAmb	21 13 19.9	
	comp=Z,3.8nm,1.1s						
SONM	**Songino Array**	**79.42**	**324**	P	**P**	21 13 12.8	0.0
	comp=Z,0.2nm,0.3s,baz=130,slow=5.8,SNR=3.1 comp=Z,0.2nm,0.3s						
SONM	**Songino Array**	**79.42**	**324**	P	**P**	21 13 12.5	-0.3
TLY	**Talaya**	**82.87**	**326**	P	**P**	21 13 31.3	+0.4
	comp=Z,1.5nm,0.3s,baz=167,slow=14 comp=Z,1.5nm,0.3s						
ILAR	**Eielson Array**	**83.89**	**18**	P	**P**	21 13 34.1	-1.8
	comp=Z,0.4nm,0.9s,baz=232,slow=4.4,SNR=2.4 comp=Z,0.4nm,0.9s						
MKAR	**Makanchi Array**	**94.28**	**317**	P	**P**	21 14 25.2	-0.5
	comp=Z,1.3nm,0.8s,baz=106,slow=5.6,SNR=14 comp=Z,1.3nm,0.8s						
MKAR	**Makanchi Array**	**94.28**	**317**	P	**P**	21 14 25.5	-0.2
TXAR	**Lajitas Array**	**95.66**	**61**	P	**P**	21 14 33.1	+0.5
	comp=Z,0.1nm,0.6s,baz=254,slow=4.6,SNR=1.6 comp=Z,0.1nm,0.6s						

*ISK **20** 21:14:05.6, 38.19°N×44.79°E, h2km, ML2.6/6*
*AZER **20** 21:14:09.4, 38.58°N×44.63°E, h4km, ml2.6*
*AFAD **20** 21:14:10.8, 38.56°N×44.48°E, h7km±3km, ML2.2*

ISC 20 21:14:10.7±1.2, 38.60°N±0.03°×44.52°E±0.02, h5km±10km, n38, σ1§54/66, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.42**	**279**	P	**Pg**	21 14 19.0	+0.3
OZAP				S	**Sg**	21 14 24.9	+0.6
OZAP				IAML		21 14 31.0	
	comp=E,231nm,0.5s						
VMUR	**Van-Muradiye**	**0.84**	**298**	P	**Pg**	21 14 27.0	+0.2
VMUR				S	**Sb**	21 14 39.3	-0.1
VMUR				IAML		21 14 43.0	
	comp=N,150nm,0.5s						
VMUR				IAML		21 14 43.0	
	comp=E,83nm,0.3s						
TVAN	**Van**	**0.88**	**266**	P	**Pg**	21 14 27.2	-0.3
TVAN				S	**Sb**	21 14 40.0	-0.5
TVAN				IAML		21 14 51.0	
	comp=E,95nm,0.5s						
TVAN				IAML		21 14 52.0	
	comp=N,93nm,0.7s						
VANB	**Van**	**0.89**	**270**	Pn	**Pb**	21 14 28.3	-0.3
VANB				Sn	**Sn**	21 14 44.9	+1.8
NAX	**Nakhchivan**	**0.96**	**53**	P	**Pg**	21 14 29.3	+0.3
NAX				S	**Sn**	21 14 43.9	-0.9
SBZ	**Shahbuz**	**1.14**	**45**	P	**Pb**	21 14 32.5	-0.4
SBZ				S	**Sn**	21 14 49.5	+0.2
DYDN	**Diyadin**	**1.15**	**326**	P	**Pg**	21 14 32.2	-0.5
DYDN				S	**Sg**	21 14 47.0	-0.5
DYDN				IAML		21 14 54.0	
	comp=N,54nm,0.5s						
DYDN				IAML		21 14 55.0	
	comp=E,67nm,0.3s						
HYR	**Heyderabad**	**1.15**	**13**	P	**Pb**	21 14 32.8	-0.3
HYR				S	**Sn**	21 14 51.1	+1.5
GEVA	**Gevas**	**1.18**	**257**	P	**Pb**	21 14 31.5	-2.2
GEVA				S	**Sg**	21 14 46.9	-1.7
GEVA				IAML		21 14 54.0	
	comp=E,74nm,0.4s						
GEVA				IAML		21 14 56.0	
	comp=N,54nm,0.7s						
ORD	**Ordubad**	**1.20**	**74**	P	**Pb**	21 14 33.3	-0.6
ORD				S	**Sb**	21 14 49.1	-0.7
HAKT	**HAKKARI**	**1.22**	**212**	P	**Pb**	21 14 33.7	-0.6
HAKT				S	**Sg**	21 14 49.9	+0.1
HAKT				IAML		21 15 05.0	
	comp=E,53nm,0.8s						
HAKT	**HAKKARI**	**1.22**	**212**	P	**Pb**	21 14 33.7	-0.6
HAKT				S	**Sn**	21 14 55.1	+3.5
AKDM	**Akdamar-Van**	**1.24**	**258**	Pn	**Pb**	21 14 33.5	-1.1
AKDM				Sn	**Sn**	21 14 53.9	+2.0
IGDI	**IGDIR**	**1.31**	**345**	P	**

GLBA S **Sb** 21 15 42.4 -1.7

NIED ***20*** *21:19:03.0,33˙.32N×131˙.99E,h59km,MW3.7,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr1.23; Mθθ-3.27; Mφφ2.04; Mrθ1.99; Mθφ1.15; Mφr1.43; Fault plane solution: M₀3.93000×10¹⁴ NP1: φs322.00000°,δ47.00000°,λ163.00000°. NP2: φs64.00000°,δ77.00000°,λ44.00000°.*

IDC ***20*** *21:19:02.4±3.7,33˙.26N×131˙.95E,h56km±37km,mb3.2/3, mbtmp3.5/5,ML2.9/2,MS3.1/1 Error ellipse: s-maj=32.0km s-min=22.6km az=1.0*

JMA ***20*** *21:19:03.0±0.1,33˙.3N±0˙.2×132˙.0E±0˙.2,h59km,MV3.6/39, IYONADA SETONAIKAI*

JMA Felt I J1 at IYONADA SETONAIKAI .

ISC 20 21:19:02.9±0.9,33˙.30N±0˙.06×131˙.98E±0˙.04,h61km±7km, n17,σ0s97/26,mb3.6/3,6D,Kyushu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JUS	**Usuki**	**0.30**	**219**	*i*	P		**Pn**	**21 19 13.2**	**+0.2**
JUS					S		**Sn**	**21 19 20.5**	**0.0**
OIT2	**Oita 2**	**0.44**	**267**	*i*	P		**Pn**	**21 19 14.7**	**+0.4**
OIT2					S		**Sn**	**21 19 23.0**	**+0.4**
JKI	**Kunimi**	**0.47**	**314**	⇓	P		**Pn**	**21 19 14.6**	**0.0**
JKI				⇓	S		**Sn**	**21 19 22.9**	**-0.2**
JBEP	**Beppuamama**	**0.48**	**274**	⇓	P		**Pn**	**21 19 14.9**	**+0.3**
JBEP				⇓	*eS*		**Sn**	**21 19 23.8**	**+0.5**
JNA	**Nagahama**	**0.49**	**59**	*i*	P		**Pn**	**21 19 14.7**	**-0.1**
JNA					S		**Sn**	**21 19 22.8**	**-0.6**
UWA2	**Uwa jima 2**	**0.55**	**99**	*i*	P		**Pn**	**21 19 15.1**	**-0.3**
UWA2					S		**Sn**	**21 19 24.2**	**-0.4**
JTO	**Tosashimizu**	**0.82**	**122**	*i*	P		**Pn**	**21 19 18.4**	**-0.3**
JKU	**Kubokawa**	**0.91**	**89**	*i*	P		**Pn**	**21 19 19.4**	**-0.4**
JKU					S		**Sn**	**21 19 31.7**	**-0.5**
JET	**Tanbara**	**1.01**	**62**	*i*	P		**Pn**	**21 19 20.8**	**-0.3**
JET					S		**Sn**	**21 19 33.8**	**-0.8**
JIU3	**Izumi3**	**1.24**	**233**	⇓	*i*P		**Pn**	**21 19 24.1**	**+0.1**
JHT	**Toyohira**	**1.41**	**15**	⇓	*i*P		**Pn**	**21 19 26.8**	**+0.5**
KSRS	**Korea Array**	**5.30**	**322**		P		**Pn**	**21 20 20.1**	**+0.6**
	0.6nm,0.3s,baz=138,slow=15,SNR=6.1								
KSRS					S		**Sn**	**21 21 15.7**	**-3.5**
	1.5nm,0.5s,baz=89,slow=26,SNR=4.3 1.0nm,0.3s								
MJAR	**Matsushiro Arr**	**6.05**	**56**		P		**Pn**	**21 20 31.4**	**+1.7**
	0.2nm,0.3s,baz=244,slow=14,SNR=26								
MJAR					S		**Sn**	**21 21 38.2**	**+0.5**
	1.0nm,0.4s,baz=338,slow=10,SNR=4.6 4.4nm,0.5s								
SONM	**Songino Array**	**24.11**	**315**		P		**P**	**21 24 12.5**	**-0.4**
	1.9nm,0.8s,baz=128,slow=9.6,SNR=15 1.9nm,0.8s								
ZALV	**Zalesovo Beam**	**38.98**	**316**	LR			LR	21 44 11.0	
	comp=Z,23nm,18.7s,baz=39,slow=39								
WRA	**Warramunga Arr**	**52.99**	**177**		P		**P**	**21 28 12.8**	**-0.7**
	0.6nm,1.0s,baz=350,slow=8.0,SNR=3.0 0.6nm,1.0s								
ILAR	**Eielson Array**	**56.70**	**30**		P		**P**	**21 28 40.9**	**+1.1**
	0.2nm,0.6s,baz=278,slow=8.0,SNR=2.6 0.2nm,0.6s								

IDC ***20*** *21:38:27.9±0.5,39˙.30N×20˙.60E,h0km,mb4.3/25, mbtmp4.2/41,ML4.0/14,MS3.3/23,Error ellipse: s-maj=10.7km s-min=9.8km az=156.0*

MED_RC ***20*** *21:38:29.0±0.3,39˙.19N×20˙.63E,h21km,MW4.4/15, Moment Tensor Solution.Mantle waves: s15,c25; Duration: 1s0 Moment tensor: Scale 10¹⁵Nm; Mrr5.01±.39; Mθθ-2.21±.28; Mφφ-2.80±.23; Mrθ1.00±.27; Mθφ2.36±.12; Mφr0.58±.21; Best double couple: M₀5.07000×10¹⁵ NP1:φs330.00000°,δ45.00000°, λ107.00000°. NP2:φs127.00000°,δ48.00000°,λ74.00000°. Principal axes: T 5.2500, Plg78.0000°, Azm325.0000°; N -0.3600, Plg12.0000°, Azm138.0000°; P -4.8900, Plg1.0000°, Azm228.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

MOS ***20*** *21:38:29.3±1.1,39˙.31N×20˙.44E,h17km,mb4.7/23 Error ellipse: s-maj=4.6km s-min=2.9km az=78.2*

PDG ***20*** *21:38:29.6±0.5,39˙.33N×20˙.46E,h5km,ML4.5/12,Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*

ATH ***20*** *21:38:30.0,39˙.31N×20˙.57E,h15km,Mw4.2,Moment Tensor Solution. s7 Moment tensor: Mrr2.01; Mθθ-0.82; Mφφ-1.19; Mrθ0.71; Mθφ1.02; Mφr-0.41; Fault plane solution: NP1:φs133.00000°,δ56.00000°,λ82.00000°. NP2:φs328.00000°,δ35.00000°,λ102.00000°.*

NEIC ***20*** *21:38:30.3±2.8,39˙.25N±0˙.06×20˙.46E±0˙.07,h10km±1km, mb4.6/61 Error ellipse: s-maj=10.1km s-min=9.1km az=180.0*

NAO ***20*** *21:38:30.4,39˙.31N×20˙.57E,h10km,MB4.3*

THE ***20*** *21:38:31.1,39˙.3N±0˙.7×20˙.6E±1˙.0,h0km±3km,M4.1/15, MLh4.1/15*

MCSM ***20*** *21:38:36.5±0.5,39˚N±.5˚×.2˚0E±˚,h71km±6km,mb4.4, mB4.5,MLv4.7,Mw(mB)3.7*

ISC 20 21:38:30.2±0.7,39˙.30N±0˙.01×20˙.55E±0˙.02,h14km±4km, n516,σ2s00/567,mb4.5/70,MS3.7/17,53C-25D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PRGA	**Parga**	**0.12**	**262**		P		**Pb**	**21 38 34.1**	**-0.1**
PRGA					S		**Sb**	**21 38 37.5**	**+0.5**
IGT	**Igoumenitsa**	**0.29**	**323**		P		**Pb**	**21 38 37.4**	**+0.2**
IGT					S		**Sb**	**21 38 41.9**	**+0.1**
IGT	**Igoumenitsa**	**0.29**	**323**		P		**Pg**	**21 38 36.0**	**-0.3**
IGT					S		**Sg**	**21 38 40.0**	**-0.4**
IGT	**Igoumenitsa**	**0.29**	**323**		P		**Pg**	**21 38 36.1**	**-0.1**
IGT					S		**Sg**	**21 38 40.9**	**+0.5**
ARTB	**Arta**	**0.36**	**114**		P		**Pg**	**21 38 37.4**	**-0.2**
ARTB					S		**Sg**	**21 38 42.4**	**-0.1**
ART2	**Arta**	**0.38**	**114**		P		**Pg**	**21 38 37.5**	**-0.3**
ART2					S		**Sg**	**21 38 43.1**	**+0.2**
LFKM	**Lefkimmi**	**0.41**	**291**		P		**Pb**	**21 38 40.3**	**+1.1**
LFKM					S		**Sn**	**21 38 47.8**	**-1.3**
JAN	**Janina**	**0.42**	**33**		P		**Pg**	**21 38 38.8**	**+0.1**
JAN					S		**Sg**	**21 38 45.0**	**+0.6**
JAN	**Janina**	**0.42**	**33**		P		**Pg**	**21 38 38.0**	**-0.7**
JAN					S		**Sg**	**21 38 45.0**	**+0.6**
JAN	**Janina**	**0.42**	**33**		P		**Pg**	**21 38 38.3**	**-0.4**
JAN					S		**Sg**	**21 38 45.1**	**+0.6**
PRMD	**Pramanda**	**0.48**	**61**		P		**Pg**	**21 38 40.0**	**+0.3**
PRMD					S		**Sb**	**21 38 46.8**	**-0.6**
PRMD	**Pramanda**	**0.48**	**61**		P		**Pg**	**21 38 39.5**	**-0.3**
PRMD					S		**Sg**	**21 38 46.5**	**+0.4**
TSLK	**Tsoukalades, L**	**0.48**	**171**		P		**Pb**	**21 38 40.2**	**-0.3**
TSLK					S		**Sb**	**21 38 47.9**	**+0.5**
TSLK	**Tsoukalades, L**	**0.48**	**171**		P		**Pg**	**21 38 39.8**	**0.0**
TSLK					S		**Sb**	**21 38 47.2**	**-0.2**
LKD2	**Lefkada island**	**0.52**	**171**		P		**Pg**	**21 38 40.6**	**+0.2**
LKD2					S		**Sb**	**21 38 49.2**	**+0.7**
LKD2	**Lefkada island**	**0.52**	**171**		P		**Pg**	**21 38 40.2**	**-0.3**
LKD2					S		**Sg**	**21 38 47.9**	**+0.5**
TETR	**Tetrakomo, Epi**	**0.56**	**85**		P		**Pg**	**21 38 41.1**	**-0.2**
TETR	**Tetrakomo, Epi**	**0.56**	**85**		P		**Pg**	**21 38 40.3**	**-1.0**
TETR					S		**Sb**	**21 38 49.2**	**-0.6**
NYDR	**Nydri-Lefkada**	**0.60**	**169**		P		**Pg**	**21 38 41.8**	**-0.1**
NYDR					S		**Sb**	**21 38 50.4**	**-0.3**
DRAG	**Dragano-Lefkad**	**0.62**	**178**		P		**Pg**	**21 38 42.0**	**-0.3**
DRAG	**Dragano-Lefkad**	**0.62**	**178**		P		**Pg**	**21 38 41.6**	**-0.7**
DRAG					S		**Sb**	**21 38 51.7**	**+0.3**
AMPL	**Ampelaki**	**0.64**	**126**		P		**Pg**	**21 38 42.6**	**-0.1**
AMPL					S		**Sb**	**21 38 52.2**	**+0.3**
AMPL	**Ampelaki**	**0.64**	**126**		P		**Pg**	**21 38 42.2**	**-0.5**
AMPL					S		**Sb**	**21 38 51.5**	**-0.4**
EVGI	**Lefkada island**	**0.68**	**173**		P		**Pg**	**21 38 43.1**	**-0.4**
EVGI					S		**Sb**	**21 38 54.0**	**+0.7**
EVGI	**Lefkada island**	**0.68**	**173**		P		**Pg**	**21 38 42.8**	**-0.7**
EVGI					S		**Sb**	**21 38 53.9**	**+0.6**
KEK	**Kerkira**	**0.71**	**305**				**Pg**	**21 38 43.9**	**-0.3**
KEK	**Kerkira**	**0.71**	**305**		P		**Pn**	**21 38 46.4**	**+0.5**
KEK					S		**Sn**	**21 38 57.4**	**+0.7**
KEK	**Kerkira**	**0.71**	**305**	*eP*			**Pg**	**21 38 44.2**	**+0.1**
KEK				*eS*			**Sn**	**21 38 57.1**	**+0.4**
SRN	**Sarande**	**0.72**	**324**		P		**Pb**	**21 38 44.8**	**+0.3**
SRN					S		**Sn**	**21 38 56.4**	**-0.4**
FSK	**Fiskardo**	**0.84**	**180**		P		**Pn**	**21 38 48.0**	**+0.3**
FSK					S		**Sn**	**21 39 00.7**	**+1.0**
FSK	**Fiskardo**	**0.84**	**180**		P		**Pg**	**21 38 45.4**	**-1.2**
FSK					S		**Sb**	**21 38 58.3**	**+0.6**
AST1	**Astakos**	**0.87**	**151**		P		**Pb**	**21 38 47.3**	**+0.2**
VSK1	**VASILIKIADES**	**0.89**	**179**		P		**Pn**	**21 38 48.0**	**-0.3**
VSK1					S		**Sn**	**21 39 03.2**	**+2.1**
KPRO	**Kipourio**	**0.90**	**44**		P		**Pb**	**21 38 47.2**	**-0.5**
KPRO	**Kipourio**	**0.90**	**44**		P		**Pb**	**21 38 47.4**	**-0.3**
KPRO					S		**Sb**	**21 38 59.9**	**+0.2**
PENT	**Pentalofos**	**1.00**	**27**		P		**Pn**	**21 38 49.8**	**-0.2**
PENT					S		**Sn**	**21 39 04.5**	**+0.6**
PENT	**Pentalofos**	**1.00**	**27**		P		**Pb**	**21 38 48.8**	**-0.6**
PENT					S		**Sb**	**21 39 02.3**	**-0.2**
PVO	**Paravola**	**1.02**	**132**		P		**Pn**	**21 38 50.5**	**+0.4**
PVO					S		**Sn**	**21 39 06.9**	**+2.7**
PVO	**Paravola**	**1.02**	**132**		P		**Pb**	**21 38 49.5**	**-0.1**
EVR	**Evrytania**	**1.05**	**111**		P		**Pn**	**21 38 50.7**	**+0.1**
EVR					S		**Sn**	**21 39 04.8**	**-0.3**
EVR	**Evrytania**	**1.05**	**111**		P		**Pb**	**21 38 49.5**	**-0.7**
EVR					S		**Sg**	**21 39 04.2**	**0.0**
DMLN	**Damoulianata-K**	**1.07**	**188**		P		**Pg**	**21 38 51.5**	**+0.7**
DMLN	**Damoulianata-K**	**1.07**	**188**		P		**Pb**	**21 38 50.4**	**-0.1**
DMLN					S		**Sn**	**21 39 05.3**	**-0.2**
LXR1	**Lixouri, Cepha**	**1.10**	**185**		P		**Pg**	**21 38 52.5**	**+1.0**
LXR1					S		**Sn**	**21 39 08.9**	**+2.7**
VLS	**Valsamata**	**1.12**	**179**		P		**Pb**	**21 38 51.0**	**-0.4**
VLS					S		**Sb**	**21 39 06.0**	**+0.1**
VLS	**Valsamata**	**1.12**	**179**		P		**Pb**	**21 38 51.2**	**-0.2**
VLS					S		**Sn**	**21 39 06.9**	**+0.1**
KFL1	**Kefalonia,Entr**	**1.13**	**182**		P		**Pg**	**21 38 52.5**	**+0.4**
KFL1					S		**Sg**	**21 39 06.6**	**-0.2**
THL	**Klokotos Trika**	**1.16**	**76**		P		**Pb**	**21 38 52.2**	**+0.1**
THL					S		**Sg**	**21 39 11.0**	**+3.3**
THL	**Klokotos Trika**	**1.16**	**76**		P		**Pn**	**21 38 51.5**	**-0.5**
NEST	**Nestorio**	**1.18**	**19**		P		**Pg**	**21 38 52.9**	**0.0**
RTZL	**Ratzakli, Kefa**	**1.24**	**172**		P		**Pn**	**21 38 52.6**	**-0.4**
MAKR	**Makrakomi, Fth**	**1.26**	**103**		P		**Pb**	**21 38 53.7**	**0.0**
MAKR					S		**Sn**	**21 39 10.2**	**0.0**
AXS	**Araxos**	**1.28**	**150**		P		**Pb**	**21 38 53.9**	**-0.2**
ANX	**Ano Chora**	**1.28**	**123**		P		**Pg**	**21 38 54.9**	**0.0**
AGRP	**Agrapidokambos**	**1.28**	**134**		P		**Pb**	**21 38 54.4**	**+0.2**
KBN	**Korca**	**1.33**	**8**		P		**Pg**	**21 38 56.1**	**+0.2**
KBN					S		**Sg**	**21 39 14.0**	**+0.8**
TYRN	**Tyrnavos**	**1.36**	**72**		P		**Pn**	**21 38 54.6**	**-0.2**
EFP	**Efpalio**	**1.37**	**129**		P		**Pb**	**21 38 55.6**	**0.0**
KZN	**Kozani**	**1.37**	**43**		P		**Pn**	**21 38 55.0**	**-0.1**
KZN	**Kozani**	**1.37**	**43**		P		**Pb**	**21 38 55.5**	**-0.3**
AGG	**Agios Georgios**	**1.41**	**101**		P		**Pb**	**21 38 56.0**	**-0.3**
VLO	**Vlora**	**1.42**	**325**		P		**Pg**	**21 38 58.3**	**+0.7**
OHR	**Ohrid**	**1.82**	**6**		*i*P	*n*	**Pg**	**21 39 05.5**	**+0.4**
OHR						*eSn*	**Sg**	**21 39 31.0**	**+2.2**
TIR	**Tirane**	**2.11**	**346**		P		**Pb**	**21 39 08.0**	**-0.3**
THE	**Thessaloniki**	**2.28**	**54**		P		**Pb**	**21 39 09.5**	**-1.6**
ITM	**Ithomi**	**2.38**	**153**				**Pn**	**21 39 09.3**	**+0.5**
ITM	**Ithomi**	**2.38**	**153**	*eP*			**Pb**	**21 39 11.4**	**-1.4**
PHP	**Peshkopia**	**2.38**	**358**		P		**Pb**	**21 39 12.1**	**-0.8**
PHP					S		**Sg**	**21 39 45.1**	**-1.7**
VAY	**Valandovo**	**2.54**	**37**	*i*	*i*P	*n*	**Pb**	**21 39 13.4**	**-2.1**
VAY						*eSn*	**Sb**	**21 39 46.5**	**-0.1**
SOH	**Sokhos**	**2.63**	**54**		P		**Pb**	**21 39 15.1**	**-2.1**
SKO	**Skopje**	**2.75**	**14**	*i*	*i*P	*n*	**Pb**	**21 39 16.9**	**-2.3**
SKO						*eSn*	**Sb**	**21 39 50.1**	**-2.7**
ULC	**Ulcinj**	**2.84**	**340**	*eP*			**Pn**	**21 39 16.5**	**+1.3**
ULC				*i*		*Sn*	**Sn**	**21 39 51.0**	**+1.8**
TIP	**Timpagrande**	**2.95**	**269**	⇓	P		**Pn**	**21 39 18.3**	**+1.6**
TIP	**Timpagrande**	**2.95**	**269**				**Pn**	**21 39 16.6**	**-0.2**
TIP	**Timpagrande**	**2.95**	**269**		P		**Pn**	**21 39 18.3**	**+1.6**
DRME	**Dracevica, Mon**	**3.06**	**341**	*i*	*i*Pn		**Pn**	**21 39 19.7**	**+1.5**
DRME						*eSn*	**Sn**	**21 39 56.9**	**+2.2**
DRME	**Dracevica, Mon**	**3.06**	**341**	*i*	*i*Pn		**Pn**	**21 39 20.0**	**+1.8**
KKB	**Krupnik**	**3.21**	**37**		P		**Pn**	**21 39 23.4**	**+3.2**
MATE	**Matera**	**3.25**	**296**	⇓	P		**Pn**	**21 39 22.9**	**+2.2**
BUM	**Brajici-Budva**	**3.25**	**338**	*i*	*i*Pn		**Pn**	**21 39 22.1**	**+1.3**
BUM						*i* Sn	**Sn**	**21 40 01.4**	**+2.0**
PDG	**Podgorica**	**3.28**	**343**	⇑	P		**Pn**	**21 39 22.9**	**+1.8**
PDG	**Podgorica**	**3.28**	**343**				**Pn**	**21 39 21.7**	**+0.6**
PDG	**Podgorica**	**3.28**	**343**	⇓	*i*Pn		**Pn**	**21 39 22.5**	**+1.4**
PDG						*i* Sn	**Sn**	**21 40 02.4**	**+2.5**
PDG	**Podgorica**	**3.28**	**343**	*i*	*i*Pn		**Pn**	**21 39 22.8**	**+1.7**
MMB	**Musomishta**	**3.31**	**46**		P		**Pn**	**21 39 24.2**	**+2.5**
PVY	**Plav**	**3.32**	**352**	*eP*			**Pn**	**21 39 24.4**	**+2.5**
PVY						*i* Sn	**Sn**	**21 40 03.7**	**+2.5**
CEME	**Cevo**	**3.47**	**340**	⇑	*i*Pn		**Pn**	**21 39 25.1**	**+1.2**
CEME						*i* Sn	**Sn**	**21 40 07.2**	**+2.4**
HCY	**Herceg Novi**	**3.51**	**334**	⇓	*i*Pn		**Pn**	**21 39 24.9**	**+0.6**
HCY						*i* Sn	**Sn**	**21 40 07.0**	**+1.4**
HCY	**Herceg Novi**	**3.51**	**334**	⇑	*i*Pn		**Pn**	**21 39 25.0**	**+1.5**
IVA	**Berane**	**3.60**	**352**	*eP*			**Pn**	**21 39 28.3**	**+2.6**
IVA						*i* Sn	**Sn**	**21 40 10.5**	**+2.5**
KOME	**Kolasin**	**3.63**	**348**	*eP*			**Pn**	**21 39 28.3**	**+2.2**
KOME						*i* Sn	**Sn**	**21 40 11.1**	**+2.3**
KTHA	**Kythira Island**	**3.63**	**146**	*eP*			**Pn**	**21 39 28.9**	**+2.9**
NKME	**Niksic**	**3.67**	**341**	*eP*			**Pn**	**21 39 27.8**	**+1.2**
NKME						*i* Sn	**Sn**	**21 40 12.0**	**+2.4**
CUC	**Castrocucco**	**3.72**	**282**				**Pn**	**21 39 28.6**	**+1.2**
CEL	**Celeste**	**3.79**	**256**				**Pn**	**21 39 28.0**	**-0.2**
TREB	**Trebinje**	**3.80**	**335**	*i*	*i*Pn		**Pn**	**21 39 28.8**	**+0.5**
ACER	**Acerenza**	**3.84**	**294**				**Pn**	**21 39 29.2**	**+0.3**
PLNA	**Plana**	**3.85**	**34**		P		**Pn**	**21 39 32.2**	**+3.1**
TRAN	**Tran**	**3.87**	**24**		P		**Pn**	**21 39 32.2**	**+2.9**
VTS	**Vitosha**	**3.88**	**31**		P		**Pn**	**21 39 32.4**	**+2.8**
VTS	**Vitosha**	**3.88**	**31**		P		**Pn**	**21 39 31.2**	**+1.6**
BRY	**Bratogost**	**3.91**	**338**	⇓	*i*Pn		**Pn**	**21 39 30.7**	**+0.8**
BRY						*eSn*	**Sn**	**21 40 15.9**	**+0.3**
BRY	**Bratogost**	**3.91**	**338**	*eP*			**Pn**	**21 39 30.5**	**+0.6**
SJES	**Sjenica**	**3.98**	**354**	⇑	*i*Pn		**Pn**	**21 39 33.5**	**+2.6**
RZN	**Rozhen**	**3.99**	**52**		P		**Pn**	**21 39 33.5**	**+2.4**
UPM	**Unac-Piva**	**4.09**	**343**	*eP*			**Pn**	**21 39 33.6**	**+1.1**
UPM						*i* Sn	**Sn**	**21 40 22.0**	**+1.7**
UPM	**Unac-Piva**	**4.09**	**343**	*eP*			**Pn**	**21 39 34.1**	**+1.6**
BLSH	**Balsha**	**4.11**	**29**		P		**Pn**	**21 39 35.6**	**+3.0**
SIGR	**SIGRI**	**4.12**	**90**	*eP*			**Pn**	**21 39 35.4**	**+2.7**
PLE	**Pljevlja**	**4.12**	**348**	*i*	*i*Pn		**Pn**	**21 39 36.3**	**+3.5**
GADA	**Gvkgeada**	**4.21**	**76**	*eP*			**Pn**	**21 39 36.6**	**+2.6**
PGB	**Panagyurishte**	**4.22**	**39**		P		**Pn**	**21 39 37.5**	**+3.4**
RDO	**Rodhopi**	**4.24**	**63**				**Pn**	**21 39 35.6**	**+1.3**
RDO	**Rodhopi**	**4.24**	**63**	*eP*			**Pn**	**21 39 36.6**	**+2.3**
PLD	**Plovdiv**	**4.27**	**47**	*eP*			**Pn**	**21 39 35.4**	**+0.6**
PLD	**Plovdiv**	**4.27**	**47**		P		**Pn**	**21 39 37.6**	**+2.8**
KDZ	**Kurdzhali**	**4.33**	**56**	*eP*			**Pn**	**21 39 36.0**	**+0.4**
KDZ	**Kurdzhali**	**4.33**	**56**		P		**Pn**	**21 39 35.2**	**-0.4**
KDZ						S	**Sn**	**21 40 27.4**	**+1.6**
SGRT	**San Giovanni R**	**4.41**	**305**				**Pn**	**21 39 37.7**	**+1.0**
ENZZ	**Sultanice-Enez**	**4.49**	**71**	*eP*			**Pn**	**21 39 40.4**	**+2.7**
EZN	**Ezine**	**4.49**	**81**	*eP*			**Pn**	**21 39 40.9**	**+3.1**
ALN	**Alexandroupoli**	**4.50**	**68**				**Pn**	**21 39 40.2**	**+2.2**
ALN	**Alexandroupoli**	**4.50**	**68**	*eP*			**Pn**	**21 39 40.6**	**+2.6**
ALN	**Alexandroupoli**	**4.50**	**68**	P			**Pn**	**21 39 40.2**	**+2.2**
EZNE	**Ezine-Canakkal**	**4.52**	**82**	*eP*			**Pn**	**21 39 40.9**	**+2.7**
CAVK	**Edirne/Enez-Ca**	**4.53**	**70**	⇓	P		**Pn**	**21 39 41.6**	**+3.3**
ENEZ	**Enez**	**4.53**	**70**	*eP*			**Pn**	**21 39 40.9**	**+2.5**
COMU	**Canakkale**	**4.63**	**78**	*eP*			**Pn**	**21 39 42.2**	**+2.4**
BBLS	**Lazi&#263i**	**4.64**	**350**	⇑	*i*Pn		**Pn**	**21 39 41.1**	**+1.1**
GELI	**Tayfur-Gelibol**	**4.69**	**75**	*eP*			**Pn**	**21 39 43.3**	**+2.8**
MPEP	**Malo Peshtene**	**4.71**	**30**	P			**Pn**	**21 39 44.3**	**+3.5**
URLA	**Izmir**	**4.81**	**99**	*eP*			**Pn**	**21 39 45.9**	**+3.6**
PAOL	**Paolisi**	**4.90**	**293**				**Pn**	**21 39 45.6**	**+2.1**
PLVB	**Pleven**	**5.10**	**36**	⇓	P		**Pn**	**21 39 49.5**	**+3.3**
VAE	**Valguarnera**	**5.16**	**251**		Pn		**Pn**	**21 39 48.1**	**+1.0**
	5.8nm,0.6s,baz=153,slow=9.7,SNR=9.8								
VAE						Sn	**Sn**	**21 40 45.2**	**-1.2**
	12nm,0.3s,baz=153,slow=7.9,SNR=6.8								
PVL	**Pavlikeni**	**5.17**	**41**		P		**Pn**	**21 39 51.0**	**+3.9**
PVL	**Pavlikeni**	**5.17**	**41**		P		**Pn**	**21 39 50.1**	**+3.0**
IDI	**Anoyia**	**5.29**	**138**		Pn		**Pn**	**21 39 48.7**	**-0.2**
	16nm,0.8s,baz=262,slow=15,SNR=20								
IDI						Sn	**Sn**	**21 40 46.6**	**-3.1**
	15nm,0.3s,baz=217,slow=4.4,SNR=9.2								
IDI	**Anoyia**	**5.29**	**138**		Pn		**Pn**	**21 39 50.2**	**+1.3**
RAFF	**Raffo Rosso**	**5.30**	**249**				**Pn**	**21 39 48.6**	**-0.3**
ELND	**Elena**	**5.41**	**46**	⇑	P		**Pn**	**21 39 53.2**	**+2.7**
BALB	**Balikesir**	**5.68**	**84**				**Pn**	**21 39 57.9**	**+3.7**
SZH	**Strazhitsa**	**5.69**	**44**		P		**Pn**	**21 39 57.4**	**+3.1**
HERR	**Herculane**	**5.75**	**13**	⇓	P		**Pn**	**21 39 57.7**	**+2.7**
FRGS	**Fruska Gora**	**5.88**	**355**	⇑	*i*Pn		**Pn**	**21 39 57.4**	**+0.5**
BAND	**Balkesir-Ban**	**5.90**	**77**	⇑	P		**Pn**	**21 40 00.7**	**+3.5**
COPA	**Copaceanca**	**5.96**	**34**	⇓	P		**Pn**	**21 40 01.2**	**+3.3**
BLY	**Banja Luka**	**5.99**	**336**	⇑	P		**Pn**	**21 40 00.1**	**+1.7**
BLY	**Banja Luka**	**5.99**	**336**	⇑	*i*Pn		**Pn**	**21 39 59.4**	**+1.0**
HUMR	**Humele**	**6.18**	**31**	⇓	P		**Pn**	**21 40 04.1**	**+3.1**
AQU	**L'Aquila**	**6.22**	**302**		P		**Pn**	**21 40 04.5**	**+2.8**
AQU	**L'Aquila**	**6.22**	**302**		P		**Pn**	**21 40 04.1**	**+2.4**
	0.3nm668nm86nm,1.0s								
AQU	**L'Aquila**	**6.22**	**302**	⇑	*i*Pn		**Pn**	**21 40 04.0**	**+2.4**
MANT	**Manisa**	**6.30**	**95**				**Pn**	**21 40 06.5**	**+3.7**
GZR	**Gura Zlata**	**6.31**	**14**	⇑	P		**Pn**	**21 40 05.1**	**+2.3**
GZR	**Gura Zlata**	**6.31**	**14**		P		**Pn**	**21 40 05.1**	**+2.3**
SGRR	**Singureni**	**6.37**	**38**	⇓	P		**Pn**	**21 40 06.8**	**+3.2**
LOT	**Lotru**	**6.59**	**20**	⇑	P		**Pn**	**21 40 09.6**	**+2.9**
GUMA	**Gualdo di Mace**	**6.62**	**307**				**Pn**	**21 40 08.3**	**+1.3**
NRCA	**Norcia**	**6.64**	**304**				**Pn**	**21 40 09.2**	**+1.8**
ARG	**Arkhangelos**	**6.74**	**115**		Pn		Pn	21 40 13.9	+5.1
ARG	**Arkhangelos**	**6.74**	**115**		P		Pn	21 40 13.9	+5.1
ARR	**Arges**	**6.77**	**25**	⇑	P		**Pn**	**21 40 11.8**	**+2.6**
MTUR	**Matau**	**6.80**	**28**	⇑	P		**Pn**	**21 40 12.8**	**+3.2**
MTUR	**Matau**	**6.80**	**28**		P		**Pn**	**21 40 12.8**	**+3.2**
SULR		**6.85**	**36**	⇑	P		**Pn**	**21 40 14.3**	**+4.2**
CESX	**Cesi**	**6.88**	**301**				**Pn**	**21 40 12.1**	**+1.4**
VOIR		**6.97**	**27**	⇑	P		**Pn**	**21 40 15.4**	**+3.3**
VOIR		**6.97**	**27**		P		**Pn**	**21 40 15.3**	**+3.3**
VOIR		**6.97**	**27**		P		**Pn**	**21 40 14.7**	**+2.7**
	0.1nm36nm,0.5s								
VOIR						Pn	**Pn**	**21 40 15.9**	**+3.9**
	0.1nm36nm,0.5s								
MORH	**Mrgy, Hungar**	**7.05**	**349**		P		**Pn**	**21 40 13.8**	**+0.9**
	0.1nm19nm,0.8s								
MORH						Pn	**Pn**	**21 40 16.5**	**+3.6**
	0.1nm19nm,0.8s								
MORH	**Mrgy, Hungar**	**7.05**	**349**	*e*	Pn		**Pn**	**21 40 12.6**	**-0.3**
SILT	**Sile**	**7.20

BR131 Keskin Array S 10.12 83 Pn Pn 21 40 58.6 +3.3
BR131 Keskin Array S 10.12 83 P Pn 21 40 58.6 +3.3
BRTR Keskin Array B 10.12 83 Pn Pn 21 40 57.6 +2.4
comp=Z,0.5nm,0.3s,baz=271,slow=16,SNR=12
BRTR LR LR 21 45 25.8
comp=Z,119nm,20.1s,baz=283,slow=41
comp=Z,1.2nm,0.5s
BRTR Keskin Array B 10.12 83 Pn 21 40 57.8 +2.5
BRTR Keskin Array B 10.12 83 P Pn 21 40 57.8 +2.5
STHS Stebnicka Huta 10.12 3 *e*P **Pn 21 40 56.4 +1.3**
STHS Stebnicka Huta 10.12 3 *e*PN **Pn 21 40 56.4 +1.3**
KRUC Moravsky 10.20 344 *e*PN **Pn 21 40 55.6 -0.6**
WTTA Wattenberg 10.27 324 *i* Pn **Pn 21 40 58.6 +1.3**
comp=Z,12nm,0.5s,SNR=9.5
WTTA *e*Sn **Sn 21 42 47.7 -4.5**
comp=Z,18nm,0.7s
WATA Walderalm 10.35 324 *e*Pn **Pn 21 40 60.0 +1.7**
comp=Z,15nm,0.5s,SNR=11
WATA *e*Sn **Sn 21 42 49.6 -4.5**
comp=Z,29nm,0.9s
VRAC Vranov 10.40 345 Pn **Pn 21 40 59.0 +0.2**
comp=Z,0.2nm,0.3s,baz=166,slow=10,SNR=3.4
VRAC LR LR 21 45 07.1
comp=Z,95nm,21.7s,baz=170,slow=38
comp=Z,4.4nm,1.0s
VRAC Vranov 10.40 345 *e*PN **Pn 21 40 55.1 -3.7**
SQTA Sankt Quirin 10.44 322 *i* Pn **Pn 21 41 01.2 +1.7**
comp=Z,7.0nm,0.3s,SNR=9.0
SQTA *e*Sn **Sn 21 42 55.5 -0.7**
comp=Z,15nm,0.6s
KWP Kalwaria Pacla 10.44 8 *e*P **Pn 21 41 03.9 +4.4**
KWP Kalwaria Pacla 10.44 8 P **Pn 21 41 03.5 +4.1**
FUORN Ofenpass-Fuorn 10.50 317 Pn 21 41 01.7 +1.2
CKRC Cesky Krumlov 10.52 337 *e*P **Pn 21 41 01.7 +1.2**
CKRC MLR MLR
comp=Z,500nm,7.8s
CKRC Cesky Krumlov 10.52 337 *e*PN **Pn 21 41 01.7 +1.2**
CKRC AMS AMS 21 46 10.0
comp=Z,500nm,7.8s
FETA Feichten 10.53 320 *e*Pn **Pn 21 41 03.1 +2.3**
comp=Z,3.5nm,0.5s
FETA *e*Sn **Sn 21 42 54.3 -4.3**
comp=Z,7.7nm,0.8s
MOTA Moosalm 10.58 323 *e*Pn **Pn 21 41 02.9 +1.5**
comp=Z,12nm,0.4s,SNR=17
MOTA *i* Sn **Sn 21 42 57.3 -2.4**
comp=Z,25nm,0.8s
MORC Moravsky Berou 10.69 349 Pn 21 41 03.7 +0.8
MORC Moravsky Berou 10.69 349 P **Pn 21 41 03.7 +0.8**
MORC Moravsky Berou 10.69 349 *e*PN **Pn 21 41 03.8 +0.9**
GEC2 GERESS Array S 10.73 335 Pn 21 41 03.5 0.0
GERES GERESS Array B 10.73 335 Pn **Pn 21 41 02.9 -0.6**
comp=Z,0.2nm,0.3s,baz=158,slow=13,SNR=25
GERES Sn **Sn 21 42 58.0 -5.5**
comp=Z,0.1nm,0.3s,baz=150,slow=24,SNR=4.6
comp=Z,2.3nm,0.5s
DAVOX Davos/Dischmat 10.80 317 Pn **Pn 21 41 05.8 +1.2**
comp=Z,0.8nm,0.3s,baz=121,slow=16,SNR=14
DAVOX Sn **Sn 21 43 02.9 -2.5**
comp=Z,1.1nm,0.3s,baz=75,slow=14,SNR=4.7
DAVOX LR LR 21 45 43.1
comp=Z,43nm,20.7s,baz=266,slow=40
comp=Z,4.2nm,0.5s
RETA Reutte 10.84 322 *i* Pn **Pn 21 41 05.8 +0.9**
comp=Z,3.9nm,0.4s
RETA *i* Sn **Sn 21 43 03.6 -2.5**
comp=Z,22nm,0.8s
TUE Stuetta 10.90 315 Pn 21 41 06.4 +0.5
TUE Stuetta 10.90 315 P **Pn 21 41 07.2 +1.3**
comp=Z,75nm,0.8s
OJC Ojcow 10.93 357 *e*P **Pn 21 41 08.4 +2.3**
KHC Kasperske Hory 11.02 335 Pn 21 41 07.4 0.0
KHC Kasperske Hory 11.02 335 *e*P **Pn 21 41 06.9 -0.5**
KHC *e* 21 43 08.2
KHC MLR MLR
comp=Z,400nm,9.3s
KHC Kasperske Hory 11.02 335 *e*PN **Pn 21 41 06.9 -0.5**
KHC *e*SN **Sn 21 43 08.2 -2.2**
KHC AMS AMS 21 46 10.0
comp=Z,400nm,9.3s
KHC Kasperske Hory 11.02 335 P **Pn 21 41 08.0 +0.6**
comp=Z,10nm,1.1s
CSS Mathiatis 11.08 109 Pn 21 41 12.0 +3.8
KRLC Kraliky 11.10 347 *e*P **Pn 21 41 10.0 +1.5**
KRLC Kraliky 11.10 347 *e*PN **Pn 21 41 10.0 +1.5**
ZVC Zvikov 11.11 338 *e*PN **Pn 21 41 09.6 +1.1**
ZVC AMS AMS 21 46 30.0
comp=Z,500nm,13.1s
DAVA Damuels 11.13 319 *i* Pn **Pn 21 41 10.7 +1.6**
comp=Z,3.3nm,0.5s
DAVA *i* Sn **Sn 21 43 10.7 -2.7**
comp=Z,9.6nm,0.5s
DPC Dobruska-Polom 11.45 346 *e*P **Pn 21 41 14.1 +0.9**
DPC MLR MLR
comp=Z,600nm,13.6s
DPC Dobruska-Polom 11.45 346 *e*PN **Pn 21 41 14.1 +0.9**
DPC AMS AMS 21 46 20.0
comp=Z,600nm,13.6s
BNI Bardonecchia 11.78 304 Pn Pn 21 41 20.0 +2.1
BNI Bardonecchia 11.78 304 P **Pn 21 41 20.0 +2.1**
SENIN Lac Senin/Sane 12.01 310 Pn 21 41 23.0 +1.9
TOKA Tokat 12.29 80 Pn 21 41 27.1 +2.3
STU Stuttgart 12.49 323 Pn Pn 21 41 26.0 -1.5
STU Stuttgart 12.49 323 P **Pn 21 41 26.0 -1.5**
BFO Black Forest 12.61 320 Pn Pn 21 41 29.6 +0.5
BFO Black Forest 12.61 320 P **Pn 21 41 29.6 +0.5**
AKASG Malin Array Be 12.93 25 Pn Pn 21 41 33.4 -0.1
comp=Z,0.9nm,0.3s,baz=211,slow=12,SNR=9.0
AKASG LR LR 21 47 13.1
comp=Z,106nm,18.4s,baz=205,slow=41
comp=Z,0.9nm,0.4s
AKASG Malin Array Be 12.93 25 *i* P **Pn 21 41 35.2 +1.7**
AKASG pmax pmax
comp=Z,4.0nm,0.9s
AKBB Malin Array Si 12.93 25 Pn Pn 21 41 34.9 +1.4
AKBB Malin Array Si 12.93 25 P **Pn 21 41 34.9 +1.4**
MOX Moxa 12.97 334 P **Pn 21 41 34.2 +0.1**
CLL Collm 13.12 339 Pn Pn 21 41 36.7 +0.7
CLL Collm 13.12 339 P **Pn 21 41 36.7 +0.7**
CLL Collm 13.12 339 *e*P **P 21 41 42.0 -4.2**
CLL ⇓*ix* x 21 41 48.5
comp=Z,18nm,1.2s
CLL *ex* x 21 41 58.0
ECH Echery 13.14 317 Pn Pn 21 41 36.5 +0.2
ECH Echery 13.14 317 P **Pn 21 41 36.6 +0.2**
MMAI Mount Meron Ar 13.53 113 Pn Pn 21 41 41.0 -0.8
comp=Z,1.2nm,0.3s,baz=323,slow=15,SNR=9.3
comp=Z,0.5nm,0.3s
GHAJ Ghor Haditha 14.61 119 Pn 21 41 59.1 +2.5
SUW Suwalki 14.82 6 *e*P **Pn 21 42 01.4 +2.1**
SUW Suwalki 14.82 6 Pn 21 42 00.7 +1.4
SUW Suwalki 14.82 6 P **Pn 21 42 00.7 +1.4**
SOC Sochi 14.99 67 *e*P **P 21 42 04.6 -2.4**
SOC *e*S **Sn 21 44 54.1 +6.8**
SOC pmax pmax
comp=Z,7.0nm,0.8s
SOC MLR MLR
comp=Z,18nm,7.0s
ASF Jabal al Asfar 15.05 113 Pn **Pn 21 41 59.3 -3.2**
comp=Z,0.2nm,0.3s,baz=192,slow=6.7,SNR=3.6
comp=Z,1.7nm,0.8s
EIL Elat 15.26 125 Pn **Pn 21 42 03.7 -1.5**
comp=Z,0.4nm,0.3s,baz=322,slow=3.5,SNR=7.9
EIL Sn Sn 21 44 40.2 -14
comp=Z,0.3nm,0.3s,baz=55,slow=16,SNR=1.8
EIL LR LR 21 48 22.1
comp=Z,53nm,20.5s,baz=247,slow=39
comp=Z,18nm,1.1s
MEM Membach 15.26 323 *d*P **P 21 42 15.3 +5.3**
DOU Dourbes 15.62 319 *d*P **P 21 42 16.2 +2.2**
comp=Z,4.9nm,1.0s
BMRD Maredsous 15.66 320 *d*P **Pn 21 42 12.2 +1.8**
MNK Minsk 15.99 16 *i* P **P 21 42 16.5 -1.6**
comp=E,67nm,0.9s
MNK *i* P **P 21 42 16.5 -1.6**
comp=N,15nm,0.9s
MNK *i* P **P 21 42 16.5 -1.6**
comp=Z,68nm,0.8s,baz=200
MNK *i* PP **PnPn 21 42 23.4 +0.1**
MNK *i* PPP PPP 21 42 32.3
MNK *i* S **Sn 21 45 13.8 +2.2**
MNK *i* SS **S 21 45 29.1 +3.7**
MNK *i* LQ LQ 21 46 57.8
MNK *i* LR LR 21 47 56.3
MNK *i* LRM MLR 21 48 43.4
comp=N,99nm,14.3s
MNK *i* LRM MLR 21 48 54.0
comp=Z,105nm,16.5s
MNK *i* LRM MLR 21 49 02.2
comp=E,81nm,15.1s
MNK Minsk 15.99 16 *i* P **P 21 42 16.4 -1.6**
MNK *i* S **Sn 21 45 13.8 +2.2**
MNK pmax pmax
comp=Z,68nm,0.8s
MNK pmax pmax
comp=N,15nm,0.9s
MNK pmax pmax
comp=E,67nm,0.9s
MNK MLR MLR
comp=N,99nm,14.0s
MNK MLR MLR
comp=Z,105nm,17.0s
MNK MLR MLR
comp=E,81nm,15.0s
NACGM Naroch 16.16 13 *e*P **Pn 21 42 16.6 -0.1**
PABE Paberze 16.37 7 Pn **Pn 21 42 19.2 -0.2**
PABE IAmb IAmb 21 42 23.4
comp=Z,52nm,1.0s
NEUR Neytrino 17.10 69 *i* P **P 21 42 31.0 +0.4**
NEUR pmax pmax
comp=Z,7.0nm,1.1s
SHA1 Shidzhatmaz 17.12 68 *ce*P **P 21 42 30.7 -0.2**
KIV Kislovodsk 17.17 67 *e*P **P 21 42 31.2 -0.1**
KIV pmax pmax
comp=Z,15nm,1.0s
KIV MLR MLR
comp=Z,25nm,14.0s
KIV Kislovodsk 17.17 67 P Pn 21 42 20.0 -10
KBZ Khabaz 17.29 68 Pn **P 21 42 32.8 +0.2**
comp=Z,0.3nm,0.3s,baz=268,slow=8.6,SNR=19
comp=Z,7.8nm,0.8s
KBZ Khabaz 17.29 68 *ce*P **P 21 42 34.2 +1.7**
VORD Divnogorie 17.57 42 *e*P **Pn 21 42 33.7 -0.8**
VORD pmax pmax
comp=Z,10.0nm,1.0s
GOF Gofitskoye 17.61 64 *ce*P **Pn 21 42 35.4 +0.3**
VSR Storozhevoye 17.65 41 *e*P **Pn 21 42 35.5 0.0**
VSR pmax pmax
comp=Z,10.0nm,0.9s
NCK Nalchik 17.77 69 *i* P **P 21 42 39.3 +1.4**
VORR Voronezh 17.94 40 *e*P **Pn 21 42 38.4 -0.6**
VORR pmax pmax
comp=Z,33nm,0.4s
LPSR Galich'ya Gora 18.37 38 *e*P **Pn 21 42 43.6 -0.7**
LPSR pmax pmax
comp=Z,28nm,0.8s
GNI Garni 18.62 80 Pn **Pn 21 42 49.3 +1.6**
comp=Z,0.4nm,0.3s,baz=262,slow=5.7,SNR=11
GNI LR LR 21 49 21.4
comp=Z,48nm,21.4s,baz=270,slow=35
comp=Z,10nm,0.8s
GNI Garni 18.62 80 P **Pn 21 42 48.2 +0.6**
GNI Garni 18.62 80 P P 21 42 39.4 -8.0
GNI S Sn 21 46 04.0 -12
GNI Garni 18.62 80 P **Pn 21 42 49.5 +1.9**
comp=Z,19nm,1.1s
ESBB Sonseca Array 18.92 279 P **Pn 21 42 52.3 +1.1**
ESDC Sonseca Array 18.92 279 P **Pn 21 42 52.3 +1.1**
comp=Z,0.1nm,0.3s,baz=77,slow=10,SNR=15
comp=Z,2.4nm,0.9s
VRH Novokhopyorsk 18.99 44 *e*P **P 21 42 51.0 -0.2**
VRH pmax pmax
comp=Z,10.0nm,0.7s
OBN Obninsk 19.12 29 P **P 21 42 51.4 -1.1**
comp=Z,3.6nm,0.3s,baz=297,slow=4.5,SNR=3.7
OBN LR LR 21 51 32.5
comp=Z,124nm,20.5s,baz=122,slow=41
comp=Z,9.0nm,0.4s
OBN Obninsk 19.12 29 P **P 21 42 51.4 -1.1**
OBN Obninsk 19.12 29 *c i*P **P 21 42 51.6 -0.9**
OBN S **S 21 46 33.0 +4.1**
OBN pmax pmax
comp=Z,24nm,1.3s
OBN MLR MLR
comp=Z,159nm,15.0s
NAX Nakhchivan 19.31 82 P **Pn 21 42 57.6 +1.7**
VSU Vasula 19.59 10 *ce*P **Pn 21 42 59.7 +0.7**
VSU pmax pmax
comp=Z,42nm,1.3s
GANJ Ganja 19.78 78 P **Pn 21 43 03.2 +1.7**
MOS Moscow 19.99 29 *e*P **P 21 43 00.8 -1.2**
MOS *e* 21 43 17.7
MOS pmax pmax
comp=Z,31nm,0.8s
MNGR Mingechevir, A 20.34 77 P Pn 21 43 08.9 +0.8
SEKA Sheki 20.40 76 P Pn 21 43 10.0 +1.2
MAK Makhachkala 20.59 71 *c i*P **P 21 43 03.4 -5.3**
MAK *e*S **S 21 46 49.3 -9.2**
MAK pmax pmax
comp=Z,36nm,0.4s
MAK MLR MLR
comp=Z,55nm,14.0s
AKT Akhty 20.79 75 *e*P **P 21 43 11.9 +0.9**
AKT *e*PPP PPP 21 43 39.0
AKT *e*S Sn 21 47 05.6 -2.2
AKT *e* 21 47 20.2
AKT *e*SS **SnSn 21 47 27.3 +4.9**
AKT pmax pmax
comp=Z,11nm,0.8s
HFS Hagfors 21.30 351 P **P 21 43 15.8 -0.3**
comp=Z,7.7nm,0.6s,baz=154,slow=11,SNR=44
HFS LR LR 21 52 19.7
comp=Z,79nm,18.1s,baz=197,slow=39
comp=Z,7.7nm,0.6s
MDT Midelt 21.31 260 P **P 21 43 16.9 +0.3**
comp=Z,3.2nm,0.9s,baz=41,slow=6.4,SNR=3.5
comp=Z,3.2nm,0.9s
MD01 Midelt array s 21.40 260 P **P 21 43 17.9 +0.2**
MD31 MD31 21.40 260 P **P 21 43 18.0 +0.4**
KONO Kongsberg 21.52 345 P **P 21 43 18.3 -0.3**
KONO IAmb IAmb 21 43 22.0
comp=Z,16nm,0.8s
KONO Kongsberg 21.52 345 *ce*P **P 21 43 19.0 +0.5**
KONO pmax pmax
comp=Z,33nm,1.3s
LKRN Lenkeran, Azer 21.91 83 P **P 21 43 25.7 +2.8**
NC602 NORSAR Array S 22.18 348 P **P 21 43 25.2 -0.4**
NC602 IAmb IAmb 21 43 32.7
comp=Z,31nm,1.1s
NAO01 NORSAR Array S 22.39 348 P **P 21 43 27.8 -0.1**
NAO01 IAmb IAmb 21 43 30.5
comp=Z,17nm,0.8s
FINES FINESS Array B 22.43 7 P **P 21 43 26.6 -1.7**
comp=Z,9.5nm,0.5s,baz=174,slow=12,SNR=38
comp=Z,9.5nm,0.5s
FINES FINESS Array B 22.43 7 P **P 21 43 27.3 -1.0**
FINES FINESS Array B 22.43 7 P **P 21 43 27.3 -1.0**
FIA1 FINESS Array S 22.43 7 P **P 21 43 29.5 +1.2**
NC405 NORSAR Array S 22.52 349 P **P 21 43 29.1 -0.1**
NB201 NORSAR Array S 22.52 348 P **P 21 43 29.3 0.0**
NB201 IAmb IAmb 21 43 37.6
comp=Z,28nm,1.1s
NB2 NORSAR Subarra 22.52 348 P **P 21 43 29.1 -0.3**
comp=Z,11nm,0.7s,baz=161,slow=11
NOA NORSAR Array B 22.52 348 P **P 21 43 28.4 -1.0**
comp=Z,4.1nm,0.5s,baz=165,slow=11,SNR=25
comp=Z,4.1nm,0.5s
EKA Eskdalemuir Ar 22.54 323 P **P 21 43 29.4 -0.1**
comp=Z,9.4nm,0.7s,baz=123,slow=10,SNR=22
comp=Z,9.4nm,0.7s
ESK Eskdalemuir 22.55 323 P **P 21 43 29.7 +0.1**
ESK IAmb IAmb 21 43 31.0
comp=Z,24nm,0.9s
ESK Eskdalemuir 22.55 323 P **P 21 43 29.7 +0.1**
ESK pmax pmax
comp=Z,24nm,1.0s
EKB Eskdalemuir 22.55 323 P **P 21 43 29.9 +0.2**
EKB IAmb IAmb 21 43 31.1
comp=Z,38nm,1.1s
NBO00 NORSAR Array S 22.59 348 IAmb IAmb 21 43 31.8
comp=Z,31nm,1.1s
NC303 NORSAR Array S 22.68 348 P **P 21 43 30.7 -0.2**
NC303 IAmb IAmb 21 43 33.1
comp=Z,32nm,1.1s
BELG Belogornoye 22.79 46 *i* P **P 21 43 32.4 +0.2**
BELG pmax pmax
comp=Z,14nm,0.9s
NC204 NORSAR Array S 22.82 348 P **P 21 43 32.4 -0.2**
NC204 IAmb IAmb 21 43 51.4
comp=Z,18nm,1.1s
DSB Dublin 23.08 316 P **P 21 43 35.3 +0.1**
DSB IAmb IAmb 21 43 44.0
comp=Z,24nm,1.0s
KBD Kabd 24.52 106 P **P 21 43 44.5 -4.8**
KLMR Klimovskoe 24.59 22 *e*P **P 21 43 50.4 +0.8**
KLMR *e* 21 44 22.0
KLMR pmax pmax
comp=Z,24nm,1.2s
KLMR MLR MLR
comp=Z,204nm,12.0s
RAYN Ar Rayn 26.35 119 P **P 21 44 08.4 +2.5**
RAYN **pP 21 44 09.2 -1.1**
RAYN Ar Rayn 26.35 119 P **P 21 44 03.2 -2.7**
RAYN S **S 21 48 35.4 -3.3**
KIRV Kirov 26.71 34 LR LR 21 55 59.7
comp=Z,81nm,19.1s,baz=315,slow=39
KIRV Kirov 26.71 34 *ce*P **P 21 44 08.9 +0.2**
SAKB Bahrain 28.39 109 P P 21 44 19.3 -4.8
AB31 Akbulak array 29.60 57 P **P 21 44 33.8 -0.9**
ABKAR Akbulak array 29.60 57 P **P 21 44 33.6 -1.1**
ARTI Arti 30.10 43 LR LR 21 57 25.1
comp=Z,53nm,20.1s,baz=308,slow=38
ARCES ARCESS Array B 30.41 3 P **P 21 44 40.3 -1.4**
comp=Z,2.6nm,0.5s,baz=188,slow=10.0,SNR=20
ARCES LR LR 21 58 11.1
comp=Z,52nm,19.8s,baz=174,slow=39
comp=Z,2.6nm,0.5s
ARCES ARCESS Array B 30.41 3 P **P 21 44 41.3 -0.3**
ARCES ARCESS Array B 30.41 3 P **P 21 44 41.3 -0.3**
TORD Torodi Ar. Bea 30.93 218 P **P 21 44 47.7 +1.0**
comp=Z,4.4nm,0.7s,baz=19,slow=6.0,SNR=18
comp=Z,4.4nm,0.7s
SVE Sverdlovsk 31.42 43 *e*P **P 21 44 50.9 +0.2**
SVE pmax pmax
comp=Z,27nm,1.0s
MZWR Madinat Zayed 32.14 109 P **P 21 44 52.7 -4.6**
SHME Shamm 32.52 103 P P 21 44 54.9 -5.8
BANOM Banah 32.71 103 P P 21 44 57.4 -5.0
NAZ Nazwa, Dubai 32.75 105 P P 21 44 57.6 -5.1
MDH Madha 33.05 104 P P 21 45 00.3 -5.1
HATD Hatta, Dubai 33.19 105 P P 21 45 01.2 -5.4
ASHO Ashiyiah 33.22 105 P P 21 45 01.8 -5.0
ALNE Al Ain 33.35 107 P **P 21 45 03.5 -4.5**
HRA Herat 33.51 85 P **P 21 45 09.9 +0.4**
HRA IAmb IAmb 21 45 14.2
comp=Z,11nm,0.8s
UMZA Um Al Zommool 33.71 109 P **P 21 45 06.4 -4.6**
SOHO SOHO 33.89 106 P P 21 45 07.2 -5.4
HOQ Hoqain 34.79 106 P **P 21 45 15.7 -4.8**
BSY Bisya 35.19 107 P P 21 45 18.4 -5.6
SMDO Samad 35.64 106 P P 21 45 22.4 -5.5
SNR=14
JMDO Jabal Madar 36.09 107 P P 21 45 26.4 -5.2
BORK Borovoye 36.34 51 P **P 21 45 33.4 -0.1**
BORK IAmb IAmb 21 45 35.1
comp=Z,8.6nm,0.8s
BORK Borovoye 36.34 51 *ce*P **P 21 45 34.0 +0.5**
BORK pmax pmax
comp=Z,17nm,1.3s
BVAR Borovoye Array 36.38 51 P **P 21 45 33.9 0.0**
comp=Z,5.8nm,0.8s,baz=269,slow=5.9,SNR=28
comp=Z,5.8nm,0.8s
RBK Rabkut 36.40 117 P **P 21 45 30.7 -3.6**
WBK Wadi Bani Khal 36.59 106 P P 21 45 30.9 -5.1
DMTO DMTO 36.77 116 P **P 21 45 36.0 -1.4**
SNR=5.9
MHTO MHTO 36.82 109 P P 21 45 33.0 -4.9
SHAA Shahritus 36.97 77 IAmb IAmb 21 45 56.9
comp=Z,25nm,1.0s
KKAR Karatay Array 37.33 68 P 21 45 41.5 -0.5
KKAR Karatay Array 37.33 68 P **P 21 45 41.5 -0.5**
CHGR Chuyangaron 37.42 75 P **P 21 45 42.5 -0.4**
CHGR Chuyangaron 37.42 75 P **P 21 45 42.6 -0.4**
CHGR pmax pmax
comp=Z,40nm,0.7s
SCO Scoresbysund 38.15 338 P **P 21 45 49.5 +1.0**
SCO IAmb IAmb 21 46 02.5
comp=Z,25nm,1.1s
SCO Scoresbysund 38.15 338 P **P 21 45 49.5 +1.0**
SCO pmax pmax
comp=Z,25nm,1.1s
GAR Garm 38.19 74 P **P 21 45 49.8 +0.3**
KBL Kabul 38.69 81 P **P 21 45 53.2 -0.6**
KBL Kabul 38.69 81 P **P 21 45 53.2 -0.6**
KBL pmax pmax
comp=Z,4.0nm,0.8s
SPITS Spitsbergen Ar 39.03 359 P **P 21 45 56.0 +0.2**
comp=Z,4.0nm,0.8s,baz=147,slow=11,SNR=6.0
comp=Z,4.0nm,0.8s
SPITS Spitsbergen Ar 39.03 359 P **P 21 45 56.1 +0.2**
SPITS pmax pmax
comp=Z,8.0nm,1.0s
DRK Karamyk 39.16 73 IAmb IAmb 21 45 59.4
comp=Z,8.9nm,1.0s
ARSB Arslanbob 39.53 70 IAmb IAmb 21 46 06.6
comp=Z,9.2nm,1.0s
DBIC Dimbokro 39.74 222 P **P 21 46 02.4 -0.1**
comp=Z,4.3nm,0.9s,baz=57,slow=6.4,SNR=3.8
comp=Z,4.3nm,0.9s
DBIC Dimbokro 39.74 222 P **P 21 46 00.9 -1.6**
DBIC IAmb IAmb 21 46 07.0
comp=Z,9.3nm,1.1s
DBIC Dimbokro 39.74 222 P **P 21 46 00.9 -1.6**
DBIC pmax pmax
comp=Z,9.0nm,1.1s
AAK Ala-Archa 40.29 67 LR LR 22 04 33.7
comp=Z,26nm,20.3s,baz=319,slow=39
AAK Ala-Archa 40.29 67 P **P 21 46 07.2 +0.2**
AAK Ala-Archa 40.29 67 *ce*P **P 21 46 08.1 +1.1**
AAK pmax pmax
comp=Z,8.0nm,1.7s
KURBB Kurchatov Arra 41.55 55 P **P 21 46 16.4 -0.7**
comp=Z,7.9nm,0.9s,baz=282,slow=9.0,SNR=49
comp=Z,7.9nm,0.9s
KURK Kurchatov 41.59 54 *ce*P **P 21 46 17.3 -0.1**
KURK pmax pmax
comp=Z,16nm,1.3s
KSH2 Kashi 42.05 72 P **P 21 46 22.3 +0.8**
KSH2 pmax pmax
comp=Z,5.0nm,1.0s
MAKZ Makanchi 44.49 59 P **P 21 46 40.3 -0.7**
MAKZ Makanchi 44.49 59 P **P 21 46 40.3 -0.7**
MAKZ pmax pmax
comp=Z,4.0nm,1.0s
MK31 Makanchi Array 44.70 59 *ce*P **P 21 46 42.2 -0.5**
MKAR Makanchi Array 44.70 59 P **P 21 46 42.0 -0.7**
comp=Z,5.4nm,0.7s,baz=280,slow=7.0,SNR=61
comp=Z,5.4nm,0.7s
MKAR Makanchi Array 44.70 59 P **P 21 46 42.2 -0.5**
MKAR Makanchi Array 44.70 59 P **P 21 46 42.2 -0.5**
ZAA0 Zalesovo Array 44.93 49 P **P 21 46 43.8 -0.6**
ZAA0 IAmb IAmb 21 46 45.2
comp=Z,14nm,0.9s
ZALV Zalesovo Beam 44.93 49 P **P 21 46 43.5 -0.8**
comp=Z,6.3nm,0.4s,baz=277,slow=8.7,SNR=54
comp=Z,6.3nm,0.4s
ZALV Zalesovo Beam 44.93 49 P **P 21 46 43.7 -0.7**
ZALV Zalesovo Beam 44.93 49 *i* P **P 21 46 43.9 -0.4**
ZALV pmax pmax
comp=Z,10.0nm,0.6s
NRIK Noril'sk 45.78 27 P **P 21 46 52.2 +1.3**
comp=Z,19nm,0.9s,baz=253,slow=5.5,SNR=26
NRIK LR LR 22 08 28.6
comp=Z,84nm,18.2s,baz=268,slow=39
comp=Z,19nm,0.9s
NRIK Noril'sk 45.78 27 P **P 21 46 52.0 +1.1**
NRIK Noril'sk 45.78 27 P **P 21 46 52.0 +1.1**
NRIK pmax pmax
comp=Z,23nm,1.0s
DGZ Jazzator, Alta 47.34 54 *i* P **P 21 47 02.9 -0.7**
DGZ pmax pmax
comp=Z,3.0nm,0.4s
WMQ Urumqi 49.20 62 *e*P **P 21 47 21.4 +3.5**
WMQ sP sP 21 47 33.5 +9.2
WMQ pmax pmax
comp=Z,13nm,1.1s
WMQ LR LR
comp=Z,110nm,24.0s
DRLN Deer Lake 54.42 308 P **P 21 47 56.5 -0.2**
LSZ Lusaka 54.76 171 LR LR 22 11 58.7
comp=Z,60nm,19.4s,baz=188,slow=37
EVN Everest 55.22 80 P **P 21 48 02.0 -1.5**
EVN IAmb IAmb 21 48 03.3
comp=Z,5.0nm,0.9s
TLY Talaya 56.51 48 LR LR 22 14 31.2
comp=Z,53nm,18.9s,baz=325,slow=38

TLY	**Talaya**	**56.51**	**48**	*ce*P		**P**	**21 48 13.3**	**+1.6**
TLY				pmax		pmax		
	comp=Z,7.0nm,1.3s							
SCHQ	**Schefferville**	**57.66**	**317**	P		**P**	**21 48 20.0**	**+0.2**
	comp=Z,4.5nm,1.0s,baz=67,slow=7.3,SNR=5.5							
	comp=Z,4.5nm,1.0s							
TIXI	**Tiksi**	**58.59**	**21**	LR		LR	22 17 37.5	
	comp=Z,109nm,18.5s,baz=7.0,slow=40							
GTA2	**Gaotai**	**59.20**	**62**	*e*P		**P**	**21 48 30.5**	**-0.5**
GTA2				pP		pP	21 48 34.3	-1.3
GTA2				pmax		pmax		
	comp=Z,4.0nm,1.0s							
SONM	**Songino Array**	**59.73**	**51**	P		**P**	**21 48 33.9**	**-0.6**
	comp=Z,2.3nm,0.9s,baz=289,slow=8.1,SNR=17							
	comp=Z,2.3nm,0.9s							
ULN	**Ulaanbaatar**	**60.11**	**51**	P		**P**	**21 48 36.0**	**-1.2**
ULN	**Ulaanbaatar**	**60.11**	**51**	*ce*P		**P**	**21 48 37.6**	**+0.5**
ULN				pmax		pmax		
	comp=Z,4.0nm,1.7s							
SHL	**Shillong**	**60.32**	**80**	P		**P**	**21 48 36.7**	**-2.2**
SHL				IAmb		IAmb	21 48 38.8	
	comp=Z,5.9nm,1.1s							
SHL	**Shillong**	**60.32**	**80**	P		**P**	**21 48 36.7**	**-2.2**
SHL				pmax		pmax		
	comp=Z,6.0nm,1.1s							
YAK	**Yakutsk**	**64.12**	**30**	LR		LR	22 19 23.7	
	comp=Z,54nm,18.4s,baz=280,slow=38							
CD2	**Chengdu**	**66.34**	**69**	P		**P**	**21 49 18.1**	**-0.5**
CD2				pmax		pmax		
	comp=Z,10.0nm,0.8s							
HHC	**Hu-ho-hao-te**	**66.38**	**56**	*e*P		**P**	**21 49 19.0**	**+0.2**
HHC				pmax		pmax		
	comp=Z,6.0nm,0.7s							
HHC				pmax		pmax		
	comp=Z,170nm,4.0s							
PZH	**PanZhiHua**	**67.26**	**74**	P		**P**	**21 49 26.8**	**+2.2**
BOSA	**Boshof**	**67.71**	**176**	P		**P**	**21 49 28.1**	**+0.9**
	comp=Z,3.3nm,1.0s,baz=32,slow=9.5,SNR=3.0							
	comp=Z,3.3nm,1.0s							
CMAR	**Chiang Mai Arr**	**69.71**	**82**	P		**P**	**21 49 38.5**	**-1.4**
	comp=Z,1.0nm,0.3s,baz=293,slow=7.1,SNR=9.8							
	comp=Z,1.0nm,0.3s							
CMAR	**Chiang Mai Arr**	**69.71**	**82**	*i* P		**P**	**21 49 39.0**	**-0.9**
CMAR				pmax		pmax		
	comp=Z,1.0nm,0.3s							
SUR	**Sutherland**	**71.32**	**180**	LR		LR	22 25 36.3	
	comp=Z,39nm,20.6s,baz=175,slow=40							
E29M	**Blow River**	**71.42**	**352**	IAmb		IAmb	21 49 51.3	
	comp=Z,6.0nm,0.8s							
F31M	**Tsiigehtchic**	**71.80**	**350**	IAmb		IAmb	21 49 53.1	
	comp=Z,6.4nm,0.8s							
YKAW3	**Yellowknife Wh**	**72.29**	**340**	P		**P**	**21 49 53.2**	**-1.6**
YKAW3				IAmb		IAmb	21 49 56.2	
	comp=Z,4.4nm,1.1s							
YKA	**Yellowknife Ar**	**72.34**	**340**	P		**P**	**21 49 55.4**	**+0.3**
	comp=Z,1.2nm,1.0s,baz=29,slow=6.0,SNR=14							
	comp=Z,1.2nm,1.0s							
YKA	**Yellowknife Ar**	**72.34**	**340**	*i* P		**P**	**21 49 55.7**	**+0.6**
YKA				pmax		pmax		
	comp=Z,1.0nm,0.9s							
F28M	**Old Crow**	**72.38**	**352**	P		**P**	**21 49 56.1**	**+0.8**
MA2	**Magadan**	**73.26**	**24**	LR		LR	22 24 39.2	
	comp=Z,15nm,19.7s,baz=318,slow=38							
MA2	**Magadan**	**73.26**	**24**	*ce*P		**P**	**21 50 02.8**	**+2.2**
MA2				pmax		pmax		
	comp=Z,3.0nm,0.8s							
H27K	**Steamboat Moun**	**73.89**	**353**	IAmb		IAmb	21 50 06.5	
	comp=Z,3.7nm,0.8s							
I30M	**Mount Dempster**	**74.26**	**350**	IAmb		IAmb	21 50 08.4	
	comp=Z,5.3nm,0.9s							
ULM	**Lac du Bonnet**	**74.81**	**323**	P		**P**	**21 50 10.3**	**+0.4**
	comp=Z,1.7nm,0.8s,baz=26,slow=7.2,SNR=3.5							
	comp=Z,1.7nm,0.8s							
J30M	**Hart River**	**74.87**	**350**	IAmb		IAmb	21 50 12.5	
	comp=Z,6.4nm,1.0s							
TNA	**Tin City**	**75.26**	**4**			pP	21 50 16.6	-0.3
ILAR	**Eielson Array**	**75.79**	**354**	P		**P**	**21 50 16.2**	**+0.9**
	comp=Z,0.6nm,0.8s,baz=8.7,slow=2.4,SNR=6.0							
	comp=Z,0.6nm,0.8s							
NJ2	**Nanjing**	**76.23**	**60**	*e*P		**P**	**21 50 18.0**	**-0.3**
NJ2				pmax		pmax		
	comp=Z,23nm,0.5s							
DOT	**Dot Lake**	**76.66**	**353**	P		**P**	**21 50 20.1**	**-0.2**
DOT				IAmb		IAmb	21 50 22.3	
	comp=Z,3.7nm,1.0s							
BCAR	**Beaver Creek A**	**77.00**	**352**	P		**P**	**21 50 22.0**	**-0.2**
J19K	**Poorman**	**77.00**	**358**	IAmb		IAmb	21 50 24.6	
	comp=Z,3.6nm,1.1s							
M29M	**Somme Creek**	**77.20**	**350**	IAmb		IAmb	21 50 26.1	
	comp=Z,4.2nm,0.8s							
KSRS	**Korea Array**	**78.60**	**51**	P		**P**	**21 50 30.9**	**-0.5**
	comp=Z,0.9nm,0.5s,baz=316,slow=5.1,SNR=2.7							
KSRS				LR		LR	22 29 05.7	
	comp=Z,40nm,18.1s,baz=260,slow=39							
	comp=Z,0.9nm,0.5s							
CGM3	**Cape Girardeau**	**80.39**	**311**	P		**P**	**21 50 37.6**	**-3.6**
O19K	**Port Alsworth**	**80.77**	**357**				21 51 04.6	
JNU	**Nakatsue**	**83.28**	**52**	LR		LR	22 30 28.8	
	comp=Z,25nm,18.5s,baz=47,slow=38							
MJAR	**Matsushiro Arr**	**85.18**	**46**	P		**P**	**21 51 05.5**	**-0.7**
	comp=Z,3.2nm,0.9s,baz=324,slow=4.3,SNR=4.7							
	comp=Z,3.2nm,0.9s							
PDAR	**Pinedale Array**	**86.64**	**326**	P		**P**	**21 51 13.3**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=61,slow=7.6,SNR=4.5							
	comp=Z,0.5nm,0.8s							
TXAR	**Lajitas Array**	**94.22**	**314**	P		**P**	**21 51 50.5**	**+1.4**
	comp=Z,1.0nm,0.8s,baz=21,slow=7.1,SNR=4.6							
	comp=Z,1.0nm,0.8s							
TUC	**Tucson**	**95.65**	**320**			**P**	**21 51 55.8**	**+0.2**
TUC	**Tucson**	**95.65**	**320**	P		**P**	**21 51 55.8**	**+0.2**
TUC				pmax		pmax		
	comp=Z,4.0nm,0.6s							
PLCA	**Paso Flores**	**114.92**	**237**	PKP		**PKiKP**	**21 57 10.6**	**+0.2**
	comp=Z,1.1nm,1.0s,baz=79,slow=5.2,SNR=2.9							
WRA	**Warramunga Arr**	**120.55**	**92**	PKP		**PKPdf**	**21 57 19.3**	**-2.5**
	comp=Z,0.3nm,0.7s,baz=321,slow=1.6,SNR=2.1							
ASAR	**Alice Springs**	**122.26**	**95**	PKP		**PKPdf**	**21 57 23.8**	**-1.2**
	comp=Z,0.6nm,0.7s,baz=300,slow=1.5,SNR=7.8							

IDC 20 21:51:52.2±8.1, 24°.31N×46°.31W, h0^{km}, mb3.5/4, mbtmp3.5/4, MS3.4/11, Error ellipse: s-maj=314.3km s-min=36.0km az=29.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SJG	**San Juan**	**19.49**	**255**	LR		LR	22 03 47.4	
	comp=Z,37nm,19.2s,baz=108,slow=37							
SADO	**Sadowa**	**33.55**	**316**	LR		LR	22 11 26.0	
	comp=Z,41nm,18.2s,baz=334,slow=35							
TKL	**Tuckaleechee C**	**34.18**	**298**	LR		LR	22 09 53.5	
	comp=Z,50nm,20.0s,baz=128,slow=32							
DBIC	**Dimbokro**	**43.40**	**107**	LR		LR	22 15 12.6	
	comp=Z,57nm,19.1s,baz=322,slow=32							
H10N2	**ASCENSION HYDR**	**44.54**	**132**	T		T	22 47 45.4	
	baz=317,slow=74,SNR=6.0							
H10N3	**ASCENSION HYDR**	**44.54**	**132**	T		T	22 47 36.8	
	baz=317,slow=74,SNR=4.4							
H10N1	**ASCENSION HYDR**	**44.56**	**132**	T		T	22 47 36.5	
	baz=317,slow=74,SNR=7.3							
H10S3	**ASCENSION HYDR**	**45.24**	**133**	T		T	22 48 13.9	
	baz=316,slow=74,SNR=14							
H10S2	**ASCENSION HYDR**	**45.26**	**133**	T		T	22 48 15.2	
	baz=264,slow=74,SNR=15							
CMIG	**Matias Romero**	**45.82**	**271**	LR		LR	22 19 14.1	
	comp=Z,19nm,19.0s,baz=126,slow=36							
ULM	**Lac du Bonnet**	**46.08**	**317**	LR		LR	22 16 45.2	
	comp=Z,73nm,18.1s,baz=169,slow=32							
TORD	**Torodi Ar. Bea**	**46.59**	**95**	P		P	22 00 22.1	-0.3
	0.5nm,0.8s,baz=284,slow=8.0,SNR=3.6							
	0.5nm,0.8s							
ANMO	**Albuquerque**	**52.67**	**296**	LR		LR	22 20 28.3	
	comp=Z,42nm,21.6s,baz=125,slow=33							
PDAR	**Pinedale Array**	**54.60**	**306**	LR		LR	22 23 24.8	
	comp=Z,21nm,18.8s,baz=85,slow=35							
YKA	**Yellowknife Ar**	**58.72**	**330**	P		P	22 01 50.9	-0.6
	0.2nm,0.6s,baz=93,slow=6.6,SNR=3.0							
	0.2nm,0.6s							
NEW	**Newport**	**59.68**	**313**	LR		LR	22 25 47.8	
	comp=Z,32nm,20.5s,baz=90,slow=34							
INK	**Inuvik**	**66.64**	**336**	LR		LR	22 30 32.9	
	comp=Z,47nm,20.0s,baz=312,slow=35							
ILAR	**Eielson Array**	**72.66**	**334**	P		P	22 03 21.8	+0.2
	0.5nm,0.8s,baz=56,slow=5.4,SNR=5.1							
	0.5nm,0.8s							
MBAR	**Mbarara**	**78.45**	**96**	LR		LR	22 37 39.9	
	comp=Z,49nm,18.1s,baz=238,slow=35							
KURBB	**Kurchatov Arra**	**90.94**	**32**	P		P	22 04 58.4	+0.4

0.4nm,0.8s,baz=310,slow=4.6,SNR=5.0
0.4nm,0.8s

*NEIC **20** 21:57:01.0±0.7, 17°.98N±0°.04×66°.90W±0°.02, h17^{km}±1^{km}, ML3.4/35, Md3.2/4(RSPR), Error ellipse: s-maj=5.4km s-min=1.9km az=169.0*
*OSPL **20** 21:57:01.6±0.3, 17°.96N×66°.91W, h15^{km}±16^{km}, ML3.8, Presumed earthquake*
*SDD **20** 21:57:01.2±0.5, 17°.92N×66°.92W, h17^{km}±3^{km}, MD3.3, ML3.2, MW3.2, Presumed earthquake*

ISC 20 21:57:00.6±0.9, 17°.94N±0°.05×66°.91W±0°.02, h17^{km}±5^{km}, n29, σ0^{s}.47/47, 6C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.04**	**38**			**Pg**	**21 57 03.7**	**0.0**
GBPR						**Sg**	**21 57 05.4**	**-0.5**
MLPR	**Magueyes Islan**	**0.13**	**282**			**Pg**	**21 57 04.7**	**+0.1**
MLPR					Sg	**Sg**	**21 57 07.2**	**0.0**
MLPR					IAML		21 57 07.7	
	13μm,0.2s							
MLPR	**Magueyes Islan**	**0.13**	**282**	↑*e*P		**Pg**	**21 57 04.7**	**+0.1**
MLPR				↑*e*Sg		**Sg**	**21 57 07.3**	**0.0**
MLPR					IAML		21 57 07.4	
	comp=E,6μm,0.3s							
MLPR					IAML		21 57 07.7	
	comp=N,5μm,0.2s							
CRPR	**Cabo Rojo, PR**	**0.20**	**289**			**Pg**	**21 57 05.7**	**+0.2**
CRPR					Sg	**Sg**	**21 57 09.1**	**+0.1**
CRPR					IAML		21 57 09.3	
	comp=N,8μm,0.3s							
CRPR	**Cabo Rojo, PR**	**0.20**	**289**	*i* P		**Pg**	**21 57 05.8**	**+0.2**
CRPR				*e*S		**Sg**	**21 57 08.9**	**-0.1**
CRPR					IAML		21 57 09.2	
	comp=Z,13μm,0.2s							
LSP	**Las Mesas**	**0.29**	**324**			**Pg**	**21 57 07.3**	**+0.3**
LSP						**Sb**	**21 57 12.3**	**+0.4**
OBIP	**Obispado Ponce**	**0.30**	**71**			**Pg**	**21 57 07.5**	**+0.3**
OBIP					Sg	**Sg**	**21 57 12.2**	**+0.5**
OBIP	**Obispado Ponce**	**0.30**	**71**	*i* P		**Pg**	**21 57 07.5**	**+0.3**
OBIP					IAML		21 57 13.0	
	comp=Z,12μm,0.1s							
CELP	**Cerrillos**	**0.34**	**67**			**Pg**	**21 57 08.1**	**+0.3**
CELP					Sg	**Sg**	**21 57 13.4**	**+0.7**
CELP	**Cerrillos**	**0.34**	**67**	↓*e*Pg		**Pg**	**21 57 08.1**	**+0.3**
CELP				↑*e*Sg		**Sg**	**21 57 13.3**	**+0.6**
CELP					IAML		21 57 13.5	
	comp=E,584nm,0.3s							
CELP					IAML		21 57 13.7	
	comp=N,646nm,0.3s							
PRSN	**Puerto Rico Se**	**0.36**	**320**			**Pg**	**21 57 08.3**	**+0.2**
PRSN					IAML		21 57 18.6	
	comp=N,6μm,0.3s							
PRSN	**Puerto Rico Se**	**0.36**	**320**	↑*e*Pg		**Pg**	**21 57 08.3**	**+0.2**
PRSN					IAML		21 57 14.8	
	comp=E,4μm,0.2s							
PRSN					IAML		21 57 18.5	
	comp=N,4μm,0.3s							
UUPR	**Utuado, UPR, P**	**0.36**	**30**			**Pg**	**21 57 08.1**	**-0.1**
AOPR	**Arecibo Observ**	**0.43**	**20**			**Pg**	**21 57 09.4**	**0.0**
AOPR					IAML		21 57 16.7	
	comp=N,4μm,0.3s							
AOPR	**Arecibo Observ**	**0.43**	**20**	↓*e*Pg		**Pg**	**21 57 09.4**	**0.0**
AOPR				↓*e*Sg		**Sg**	**21 57 15.4**	**0.0**
AOPR					IAML		21 57 15.5	
	comp=E,12μm,0.2s							
AOPR					IAML		21 57 16.6	
	comp=N,4μm,0.2s							
AGPR	**Aguadilla, PR**	**0.56**	**340**			**Pg**	**21 57 11.7**	**-0.1**
AGPR					IAML		21 57 19.8	
	comp=N,2μm,0.4s							
AGPR					IAML		21 57 19.8	
	comp=N,2μm,0.3s							
AGPR	**Aguadilla, PR**	**0.56**	**340**	↑*e*Pg		**Pg**	**21 57 11.8**	**-0.1**
AGPR				↑*e*Sg		**Sb**	**21 57 19.6**	**0.0**
AGPR					IAML		21 57 19.7	
	comp=E,1μm,0.3s							
AGPR					IAML		21 57 19.8	
	comp=N,1μm,0.2s							
ECPR	**Experimental S**	**0.64**	**54**			**Pg**	**21 57 13.0**	**-0.3**
ECPR						**Sg**	**21 57 20.7**	**-1.1**
ECPR					IAML		21 57 23.4	
	comp=N,2μm,0.2s							
ECPR					IAML		21 57 23.8	
	comp=N,2μm,0.2s							
EMPR	**Esperanza - Ma**	**0.64**	**34**			**Pg**	**21 57 13.5**	**+0.2**
EMPR						**Sb**	**21 57 23.0**	**+1.0**
IDE	**Isla Desecheo**	**0.70**	**309**			**Pg**	**21 57 14.3**	**-0.1**
IDE						**Sb**	**21 57 24.0**	**+0.3**
SJG	**San Juan**	**0.74**	**77**			**Pb**	**21 57 14.4**	**-0.6**
SJG	**San Juan**	**0.74**	**77**	↓*e*Pg		**Pb**	**21 57 14.7**	**-0.3**
SJG				*e*Sg		**Sb**	**21 57 24.5**	**-0.3**
SJG	**San Juan**	**0.74**	**77**	*i* P		**Pb**	**21 57 14.8**	**-0.3**
SJG				*e*S		**Sb**	**21 57 24.6**	**-0.3**
SJG					IAML		21 57 25.4	
	comp=Z,15μm,0.2s							
PDPR	**Patillas Dam,**	**0.84**	**85**			**Pb**	**21 57 16.7**	**-0.2**
HUMP	**Col San Antoni**	**1.02**	**79**			**Pb**	**21 57 19.2**	**-0.7**
HUMP						**Sb**	**21 57 32.8**	**-0.2**
HUMP					IAML		21 57 37.0	
	comp=Z,934nm,0.3s							
CUPR	**Culebra, Puert**	**1.59**	**76**			**Pn**	**21 57 28.1**	**+0.2**
CUPR						**Sn**	**21 57 47.7**	**-0.3**
DR12	**Loma Pena Alta**	**2.50**	**290**			**Pn**	**21 57 41.3**	**+0.8**
HATOM	**Hato Mayor del**	**2.50**	**290**	*e*Pg		**Pb**	**21 57 43.6**	**-1.4**
HATOM					IAML		21 58 22.2	
	comp=N,52nm,0.5s							
BANI	**BANI**	**3.31**	**278**	Pn		**Pn**	**21 57 52.6**	**+0.9**

ATH 20 21:58:05.1, 39°.28N×20°.55E, h21^{km}±1^{km}, ML1.6/6, Latitude uncertainty: 0 km; Longitude uncertainty: 0 km, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IGT	**Igoumenitsa**	**0.31**	**326**	P		Pb	21 58 12.1	+0.1
IGT				S		Sb	21 58 17.1	+0.5
JAN	**Janina**	**0.44**	**31**	P		Pb	21 58 13.9	-0.3
JAN				S		Sb	21 58 20.6	+0.2
TSLK	**Tsoukalades, L**	**0.46**	**170**	P		Pb	21 58 14.9	+0.5
TSLK				S		Sn	21 58 22.4	-1.5
PRMD	**Pramanda**	**0.49**	**59**	P		Pb	21 58 14.8	-0.3
PRMD				S		Sb	21 58 22.4	+0.5
LKD2	**Lefkada island**	**0.49**	**171**	P		Pb	21 58 15.3	+0.3
TETR	**Tetrakomo, Epi**	**0.56**	**83**	P		Pb	21 58 15.7	-0.7
TETR				S		Sb	21 58 24.3	+0.2
NYDR	**Nydri-Lefkada**	**0.57**	**169**	P		Pb	21 58 16.5	0.0
NYDR				S		Sb	21 58 25.4	+1.2
DRAG	**Dragano-Lefkad**	**0.59**	**178**	P		Pb	21 58 16.8	0.0
AMPL	**Ampelaki**	**0.62**	**124**	P		Pb	21 58 17.5	+0.2
AMPL				S		Sn	21 58 26.9	-1.1
EVGI	**Lefkada island**	**0.66**	**173**	P		Pb	21 58 17.9	-0.1
KEK	**Kerkira**	**0.73**	**307**	P		Pb	21 58 19.1	0.0
FSK	**Fiskardo**	**0.82**	**180**	P		Pb	21 58 20.5	0.0
KPRO	**Kipourio**	**0.92**	**42**	P		Pb	21 58 22.5	+0.1
EVR	**Evrytania**	**1.04**	**110**	P		Pb	21 58 24.5	0.0
VLS	**Valsamata**	**1.10**	**179**	P		Pb	21 58 26.9	+1.5
NEST	**Nestorio**	**1.20**	**18**	P		Pb	21 58 27.1	0.0
ANX	**Ano Chora**	**1.27**	**122**	P		Pb	21 58 28.0	-0.3
TYRN	**Tyrnavos**	**1.37**	**71**	P		Pb	21 58 30.0	0.0

*PDG **20** 21:58:06.2±0.5, 42°.50N×13°.28E, h12^{km}, ML3.6/13, Error ellipse: s-maj=0.3km s-min=0.4km az=0.0*
*ROM **20** 21:58:06.1±0.0, 42°.487N±0°.002×13°.296E±0°.002, h11^{km}, ML3.5/399, Mw3.5, Error ellipse: s-maj=0.2km s-min=0.1km az=89.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=0.12; $M_{\theta\theta}$=0.33; $M_{\phi\phi}$=0.45; $M_{r\theta}$=1.41; $M_{\theta\phi}$=0.25; $M_{\phi r}$=1.54; Fault plane solution: M_o=2.12848×10^{14} NP1:ϕ_s=317.00000°, δ=87.00000°, λ=-100.00000°. NP2:ϕ_s=210.00000°, δ=11.00000°, λ=-16.00000°.*
*IDC **20** 21:58:07.2±1.7, 42°.71N×13°.36E, h0^{km}, mb3.4/3, mbtmp3.5/9, ML3.1/5, MS3.1/3 Error ellipse: s-maj=22.4km s-min=13.5km az=66.0*
*LDG **20** 21:58:07.8±0.1, 42°.47N×13°.41E, h2^{km}, Ml3.2/21, Error ellipse: s-maj=3.0km s-min=2.3km az=20.0*
*PRU **20** 21:58:08.5, 42°.64N×13°.54E, h1^{km}*

ISC 20 21:58:06.8±0.7, 42°.50N±0°.02×13°.30E±0°.02, h12^{km}±4^{km}, n143, σ1^{s}.64/225, 31C-8D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RM33	**Pellescritta (**	**0.06**	**280**	↑P		**Pg**	**21 58 09.1**	**-0.3**
RM33				S		**Sg**	**21 58 10.7**	**-0.6**
RM33				AML		AML		
RM33				AML		AML		
RM33				AML		AML		
RM33				AML		AML		
RM33				AML		AML		
RM33				AML		AML		
RM33				AML		AML		
RM33				AML		AML		
RM33				AML		AML		
RM33				AML		AML		
CAMP	**Campotosto**	**0.09**	**65**	↓P		**Pg**	**21 58 09.3**	**-0.3**
CAMP				S		**Sg**	**21 58 11.2**	**-0.6**
CAMP				AML		AML		
	comp=E,59050μm,0.6s							
CAMP				AML		AML		
	comp=N,87800μm,0.4s							
CAMP				AML		AML		
	comp=E,59028μm,0.6s							
CAMP				AML		AML		
	comp=N,87787μm,0.4s							
RM25	**Mosicchio (Ama**	**0.12**	**354**	↓P		**Pg**	**21 58 10.1**	**0.0**
RM25				S		**Sg**	**21 58 12.6**	**+0.1**
SMA1	**SAN MARTINO**	**0.14**	**11**	↓P		**Pg**	**21 58 10.1**	**-0.2**
SMA1				S		**Sg**	**21 58 12.7**	**0.0**
SMA1				AML		AML		
SMA1				AML		AML		
SMA1				AML		AML		
SMA1				AML		AML		
AQU	**L'Aquila**	**0.16**	**152**	↑P		**Pg**	**21 58 10.4**	**-0.2**
AQU	**L'Aquila**	**0.16**	**152**	↑*i*Pg		**Pg**	**21 58 10.4**	**-0.2**
GIGS	**Gran Sasso**	**0.20**	**103**	↑P		**Pg**	**21 58 10.9**	**-0.4**
GIGS				S		**Sg**	**21 58 13.8**	**-0.6**
GIGS				AML		AML		
	comp=N,7685μm,0.6s							
GIGS				AML		AML		
	comp=E,10740μm,1.4s							
GIGS				AML		AML		
	comp=N,7683μm,0.6s							
GIGS				AML		AML		
	comp=E,10507μm,0.3s							
LNSS	**Leonessa**	**0.22**	**299**	↑P		**Pg**	**21 58 11.4**	**-0.1**
LNSS				S		**Sg**	**21 58 15.1**	**+0.3**
LNSS				AML		AML		
	comp=N,84750μm,0.3s							
LNSS				AML		AML		
LNSS				AML		AML		
	comp=N,84700μm,0.3s							
LNSS				AML		AML		
LNSS				AML		AML		
	comp=N,92200μm,0.2s							
LNSS				AML		AML		
	comp=N,84726μm,0.3s							
LNSS				AML		AML		
LNSS				AML		AML		
	comp=N,92296μm,0.1s							
LNSS				AML		AML		
TERO	**Teramo**	**0.26**	**61**	↑P		**Pg**	**21 58 11.7**	**-0.5**
TERO				S		**Sg**	**21 58 15.5**	**-0.4**
TERO				AML		AML		
	comp=E,22050μm,1.2s							
TERO				AML		AML		
	comp=E,19050μm,0.6s							
TERO				AML		AML		
	comp=N,26000μm,0.6s							
TERO				AML		AML		
	comp=N,53100μm,1.4s							
TERO				AML		AML		
	comp=N,53104μm,1.4s							
TERO				AML		AML		
	comp=N,26025μm,0.6s							
TERO				AML		AML		
	comp=E,21080μm,0.5s							
TERO				AML		AML		
	comp=E,19053μm,0.6s							
TERO				AML		AML		
	comp=N,26025μm,1.4s							
TERO				AML		AML		
	comp=N,53104μm,0.6s							
FIAM	**Fiamignano**	**0.27**	**210**	↑P		**Pg**	**21 58 12.1**	**-0.3**
FIAM				S		**Sg**	**21 58 16.3**	**+0.2**
FIAM				AML		AML		
	comp=N,31550μm,0.5s							
FIAM				AML		AML		
	comp=E,9685μm,0.7s							
FIAM				AML		AML		
	comp=E,20300μm,0.7s							
FIAM				AML		AML		
	comp=N,15750μm,0.5s							
FIAM				AML		AML		
	comp=E,9679μm,0.7s							
FIAM				AML		AML		
	comp=N,31537μm,0.5s							
FIAM				AML		AML		
	comp=N,15719μm,0.5s							
FIAM				AML		AML		
	comp=E,20294μm,0.7s							
MTRA	**Matera**	**0.27**	**16**	↑P		**Pg**	**21 58 12.0**	**-0.4**
MTRA				S		**Sg**	**21 58 16.1**	**-0.1**
MTRA				AML		AML		
MTRA				AML		AML		
MTRA				AML		AML		
MTRA				AML		AML		
MTRA				AML		AML		
MTRA				AML		AML		
MTRA				AML		AML		
MTRA				AML		AML		
MTRA				AML		AML		
MTRA				AML		AML		
MTRA				AML		AML		
NRCA	**Norcia**	**0.36**	**338**	↓P		**Pg**	**21 58 13.7**	**-0.4**
NRCA				S		**Sg**	**21 58 19.2**	**+0.2**
NRCA				AML		AML		
	comp=E,35350μm,0.8s							
NRCA				AML		AML		
	comp=E,35200μm,0.8s							
NRCA				AML		AML		
	comp=N,29350μm,0.2s							
NRCA				AML		AML		
	comp=N,33950μm,0.2s							
NRCA				AML		AML		
	comp=E,32062μm,0.1s							
NRCA				AML		AML		
	comp=N,33942μm,0.2s							
NRCA				AML		AML		
	comp=E,32476μm,0.2s							
NRCA				AML		AML		
	comp=N,29347μm,0.1s			

T0110 AML AML
comp=E,12091µm,1.6s
T0110 AML AML
comp=N,12296µm,0.4s
MMP1 Mompeo 0.48 239 ⇑P **Pg 21 58 15.4 -0.8**
PTQR Pietraquaria 0.48 171 ⇑P **Pg 21 58 15.6 -0.7**
PTQR S **Sg 21 58 22.8 +0.1**
PTQR AML AML
comp=N,3015µm,0.3s
PTQR AML AML
comp=E,3525µm,0.3s
PTQR AML AML
comp=E,3524µm,0.3s
PTQR AML AML
comp=N,3018µm,0.3s
FEMA Monte Fema 0.50 339 P **Pg 21 58 16.2 -0.4**
FEMA S **Sg 21 58 24.0 +0.7**
FEMA AML AML
comp=E,11420µm,1.5s
FEMA AML AML
comp=N,12700µm,0.4s
FEMA AML AML
comp=E,11380µm,1.5s
FEMA AML AML
comp=N,12700µm,0.4s
FEMA AML AML
comp=E,10966µm,0.2s
MF5 Montefalcone A 0.51 14 ⇑P **Pg 21 58 16.5 -0.2**
MF5 S **Sb 21 58 24.7 -0.3**
MF5 AML AML
comp=E,22500µm,0.8s
MF5 AML AML
comp=N,32600µm,0.4s
MF5 AML AML
comp=E,22488µm,0.8s
MF5 AML AML
comp=N,32587µm,0.4s
OFFI Offida 0.52 33 ⇑P **Pg 21 58 17.2 +0.1**
OFFI S **Sb 21 58 26.5 +1.0**
OFFI AML AML
comp=E,32550µm,0.4s
OFFI AML AML
comp=N,23250µm,0.9s
OFFI AML AML
comp=E,32583µm,0.4s
OFFI AML AML
comp=N,23255µm,0.9s
CESX Cesi 0.54 282 ⇑P **Pg 21 58 16.6 -0.8**
CESX S **Sg 21 58 24.9 +0.3**
CESX AML AML
comp=E,7710µm,0.2s
CESX AML AML
comp=N,10800µm,0.3s
CESX AML AML
comp=E,7711µm,0.2s
CESX AML AML
comp=N,10781µm,0.3s
MTCL Monte Cavallo 0.54 336 P **Pg 21 58 16.9 -0.6**
MTCL S **Sg 21 58 25.2 +0.5**
TRTR Tortoreto Alta 0.55 55 ⇑P **Pg 21 58 17.9 +0.3**
TRTR AML AML
comp=E,25100µm,1.4s
TRTR AML AML
comp=N,18850µm,1.3s
TRTR AML AML
comp=E,22746µm,0.4s
TRTR AML AML
comp=N,15099µm,0.5s
FDMO Fiordimonte 0.56 344 ⇑P **Pg 21 58 17.1 -0.7**
FDMO S **Sg 21 58 25.5 +0.3**
FDMO AML AML
comp=E,5825µm,1.3s
FDMO AML AML
comp=N,7015µm,0.2s
FDMO AML AML
comp=N,7015µm,0.2s
FDMO AML AML
comp=E,5482µm,0.3s
GUMA Gualdo di Mace 0.56 3 ⇑P **Pg 21 58 17.6 -0.3**
GUMA S **Sb 21 58 26.6 -0.2**
GUMA AML AML
comp=E,34500µm,0.3s
GUMA AML AML
comp=N,50400µm,0.5s
GUMA AML AML
comp=E,48500µm,0.3s
GUMA AML AML
comp=N,44250µm,0.4s
GUMA AML AML
comp=E,48510µm,0.3s
GUMA AML AML
comp=N,44291µm,0.4s
GUMA AML AML
comp=N,50386µm,0.5s
GUMA AML AML
comp=E,34539µm,0.3s
CESI CESI - Serrava 0.58 330 ⇓P **Pg 21 58 17.6 -0.6**
CESI S **Sg 21 58 25.9 -0.1**
CESI AML AML
comp=E,4895µm,1.5s
CESI AML AML
comp=E,4885µm,1.5s
CESI AML AML
comp=N,7445µm,1.2s
CESI AML AML
comp=E,5285µm,1.5s
CESI AML AML
comp=N,7720µm,1.2s
CESI AML AML
comp=N,7474µm,0.2s
CESI AML AML
comp=E,4616µm,0.5s
CESI AML AML
comp=N,7295µm,0.2s
CESI AML AML
comp=E,4830µm,0.6s
CESI AML AML
comp=E,4616µm,1.5s
CERT Cerreto 0.60 203 ⇑P **Pg 21 58 17.6 -0.9**
CERT AML AML
comp=E,8665µm,0.5s
CERT AML AML
comp=N,6515µm,0.6s
CERT AML AML
comp=E,8654µm,0.5s
CERT AML AML
comp=N,6519µm,0.6s
CERT AML AML
comp=E,8654µm,1.5s
CSP1 Cessapalombo 0.60 353 ⇑P **Pg 21 58 17.8 -0.7**
CSP1 S **Sg 21 58 27.0 +0.6**
CSP1 AML AML
comp=E,16100µm,0.4s
CSP1 AML AML
comp=N,9665µm,0.3s
CSP1 AML AML
comp=E,16139µm,0.4s
CSP1 AML AML
comp=N,9670µm,0.3s
SAP2 Sant'Angelo in 0.60 7 P **Pg 21 58 18.3 -0.3**
SAP2 AML AML
comp=E,8675µm,0.4s
SAP2 AML AML
comp=N,49550µm,0.4s
SAP2 AML AML
comp=E,8680µm,0.4s
SAP2 AML AML
comp=N,49540µm,0.4s
SAP2 AML AML
comp=E,8678µm,0.4s
SAP2 AML AML
comp=N,49540µm,1.6s
MNTT Montottone 0.60 21 ⇑P **Pg 21 58 18.7 +0.1**
MNTT AML AML
comp=E,16400µm,0.4s
MNTT AML AML
comp=N,21500µm,0.4s
MNTT AML AML
comp=E,16383µm,0.4s
MNTT AML AML
comp=N,21472µm,0.4s
MNTT AML AML
comp=E,16383µm,1.6s
MOMA Monte Martano 0.62 300 ⇑P **Pg 21 58 18.1 -0.8**
MOMA S **Sg 21 58 27.5 +0.4**
MOMA AML AML
comp=E,15550µm,0.4s
MOMA AML AML
comp=N,9440µm,0.4s
MOMA AML AML
comp=E,16800µm,0.4s
MOMA AML AML
comp=N,10430µm,0.4s
MOMA AML AML
comp=N,9416µm,0.4s
MOMA AML AML
comp=E,14205µm,0.2s
MOMA AML AML
comp=E,13307µm,0.2s
MOMA AML AML
comp=N,10412µm,0.4s
MTCE Montecelio 0.63 221 ⇑P **Pg 21 58 18.0 -1.0**
MTCE AML AML
comp=E,4090µm,0.4s
MTCE AML AML
comp=N,3480µm,0.7s
MTCE AML AML
comp=E,4089µm,0.4s
MTCE AML AML
comp=N,3481µm,0.7s
MTCE AML AML
comp=E,4089µm,1.6s
SRES S.Oreste - Sor 0.64 246 ⇑P **Pg 21 58 18.1 -1.1**
SRES AML AML
comp=N,3370µm,0.4s
SRES AML AML
comp=E,3925µm,1.0s
SRES AML AML
comp=E,3861µm,0.2s
SRES AML AML
comp=N,3369µm,0.4s
FOPC Foligno Prot C 0.64 317 P **Pg 21 58 18.8 -0.6**
MNTP Montappone 0.65 11 P **Pg 21 58 19.3 -0.2**
MNTP AML AML
comp=E,13950µm,0.6s
MNTP AML AML
comp=N,12450µm,0.3s
MNTP AML AML
comp=E,14000µm,0.6s
MNTP AML AML
comp=E,13960µm,0.6s
MNTP AML AML
comp=E,13960µm,1.4s
MNTP AML AML
comp=N,12491µm,0.4s
VVLD Villa Vallelon 0.67 159 P **Pg 21 58 19.0 -0.8**
VVLD AML AML
comp=E,3095µm,0.5s
VVLD AML AML
comp=N,3555µm,0.6s
VVLD AML AML
comp=N,3550µm,0.6s
VVLD AML AML
comp=E,3095µm,0.5s
VVLD AML AML
comp=N,3555µm,0.6s
VVLD AML AML
comp=E,3320µm,0.5s
VVLD AML AML
comp=E,3319µm,0.5s
VVLD AML AML
comp=N,3550µm,0.6s
VVLD AML AML
comp=E,3094µm,0.5s
VVLD AML AML
comp=N,3556µm,0.6s
VVLD AML AML
comp=E,3319µm,1.5s
VVLD AML AML
comp=E,3094µm,1.5s
VVLD AML AML
comp=N,3556µm,1.4s
VVLD AML AML
comp=N,3550µm,1.4s
GUAR Guarcino 0.70 179 P **Pg 21 58 20.2 -0.3**
GUAR AML AML
comp=E,4105µm,0.6s
GUAR AML AML
comp=N,5165µm,0.5s
GUAR AML AML
comp=E,4102µm,0.6s
GUAR AML AML
comp=N,5163µm,0.5s
LPEL Lama dei Pelig 0.80 124 P **Pg 21 58 20.5 -1.7**
LPEL AML AML
comp=E,3090µm,1.0s
LPEL AML AML
comp=N,2545µm,0.4s
LPEL AML AML
comp=N,2615µm,1.3s
LPEL AML AML
comp=E,3095µm,1.0s
LPEL AML AML
comp=N,2550µm,0.4s
LPEL AML AML
comp=E,3215µm,1.0s
LPEL AML AML
comp=E,3131µm,0.5s
LPEL AML AML
comp=E,2979µm,0.5s
LPEL AML AML
comp=N,2547µm,0.4s
LPEL AML AML
comp=N,2603µm,0.4s
LPEL AML AML
comp=E,3131µm,1.6s
LPEL AML AML
comp=E,2979µm,1.6s
SNTG Esanatoglia 0.80 341 P **Pg 21 58 21.2 -1.1**
SNTG AML AML
comp=E,2430µm,0.6s
SNTG AML AML
comp=E,2430µm,0.6s
SNTG AML AML
comp=N,2720µm,0.9s
SNTG AML AML
comp=E,2465µm,0.6s
SNTG AML AML
comp=N,2845µm,0.9s
SNTG AML AML
comp=N,2745µm,0.3s
SNTG AML AML
comp=N,2507µm,0.3s
SNTG AML AML
comp=E,2465µm,0.6s
SNTG AML AML
comp=E,2431µm,0.6s
SNTG AML AML
comp=N,2507µm,1.7s
SNTG AML AML
comp=N,2745µm,1.7s
RMP Rome, Mte Porz 0.82 213 P **Pg 21 58 21.4 -1.3**
RMP AML AML
comp=E,10080µm,0.5s
RMP AML AML
comp=N,10150µm,0.3s
RMP AML AML
comp=E,10100µm,0.5s
RMP AML AML
comp=E,10100µm,1.5s
RMP AML AML
comp=N,10149µm,0.3s
POFI Posta Fibreno 0.84 158 P **Pg 21 58 22.0 -1.1**
POFI AML AML
comp=N,1825µm,0.5s
POFI AML AML
comp=E,2245µm,0.5s
POFI AML AML
comp=N,1820µm,0.5s
POFI AML AML
comp=E,1815µm,0.5s
POFI AML AML
comp=N,1485µm,0.5s
POFI AML AML
comp=E,1817µm,0.5s
POFI AML AML
comp=E,2245µm,0.5s
POFI AML AML
comp=N,1484µm,0.5s
POFI AML AML
comp=N,1822µm,0.5s
ATCC AVT- Casa Cast 0.84 325 ⇓P **Pg 21 58 22.1 -1.0**
ATCC AML AML
comp=E,4035µm,0.5s
ATCC AML AML
comp=N,5140µm,0.9s
ATCC AML AML
comp=N,5142µm,0.9s
ATCC AML AML
comp=N,5142µm,1.1s
ATCC AML AML
comp=E,4037µm,0.5s
EL6 Elcito 0.84 350 ⇑P **Pg 21 58 22.0 -1.1**
EL6 AML AML
comp=E,6960µm,0.3s
EL6 AML AML
comp=N,6690µm,1.2s
EL6 AML AML
comp=N,6695µm,1.2s
EL6 AML AML
comp=E,6956µm,0.3s
EL6 AML AML
comp=N,5893µm,0.8s
EL6 AML AML
comp=E,6956µm,1.7s
VIVA Pratoni del Vi 0.84 208 P **Pg 21 58 22.8 -0.3**
VIVA AML AML
comp=N,8420µm,0.4s
VIVA AML AML
comp=E,9995µm,0.5s
VIVA AML AML
comp=N,8416µm,0.4s
VIVA AML AML
comp=E,10006µm,0.5s
RDP Rocca di Papa 0.86 211 P **Pg 21 58 22.1 -1.2**
RDP AML AML
comp=E,7285µm,0.4s
RDP AML AML
comp=N,12200µm,0.4s
RDP AML AML
comp=E,7283µm,0.4s
RDP AML AML
comp=N,12189µm,0.4s
CMPR Campora 2.65 145 AML AML
comp=N,51µm,1.0s
CMPR AML AML
comp=E,57µm,0.5s
SKDS Skadanscina 3.09 9 *i* Pn **Pn 21 58 55.1 -0.4**
SKDS *e*Sn **Sn 21 59 30.9 -1.4**
SKDS IAML 21 59 35.4
comp=Z,30nm,0.2s
KNDS Knezji Dol 3.13 14 *i* Pn **Pn 21 58 56.2 +0.1**
KNDS *e*Sn **Sn 21 59 34.0 +0.6**
KNDS IAML 21 59 40.5
comp=Z,59nm,0.4s
PGF Pioggiola 3.18 272 *e*Pn **Pn 21 58 57.4 +0.7**
PGF *e*P **Pb 21 59 00.7 -2.6**
PGF *e*Sn **Sn 21 59 36.8 +2.2**
comp=Z,12nm,0.4s
BOJS Bojanci 3.32 24 *i* Pn **Pn 21 58 58.9 +0.4**
AJAC Base Areonaval 3.42 262 AML AML
comp=N,165µm,0.3s
AJAC AML AML
comp=E,128µm,0.7s
AJAC AML AML
comp=N,164µm,0.3s
AJAC AML AML
comp=E,126µm,0.3s
AJAC AML AML
comp=E,96µm,0.3s
VISS Visnje 3.49 18 *i* Pn **Pn 21 59 01.0 +0.1**
BLY Banja Luka 3.61 50 *e*Pn **Pn 21 59 04.3 +1.8**
CRNS Crni Vrh 3.65 11 *i* Pn **Pn 21 59 03.3 +0.2**
CRNS *e*Sn **Sn 21 59 46.7 +0.6**
CRNS IAML 21 59 51.2
comp=Z,28nm,0.3s
TREB Trebinje 3.73 85 *e*Pn **Pn 21 59 05.3 +1.0**
HCY Herceg Novi 3.84 89 *e*Pn **Pn 21 59 06.7 +0.9**
HCY *i* Sn **Sn 21 59 50.4 -0.5**
HCY Herceg Novi 3.84 89 *e*Pn **Pn 21 59 07.0 +1.2**
BRY Bratogost 3.88 82 ⇑*i* Pn **Pn 21 59 07.4 +1.0**
BRY *i* Sn **Sn 21 59 53.9 +1.9**
BRY Bratogost 3.88 82 *e*Pn **Pn 21 59 07.6 +1.2**
KLINJ Klinje 3.94 78 *e*Pn **Pn 21 59 08.4 +1.1**
CLUD Cludinico 3.97 356 AML AML
comp=N,106µm,1.0s
CLUD AML AML
comp=E,103µm,0.9s
OBKA Obir 4.11 12 *e*Pn **Pn 21 59 10.0 +0.5**
comp=E,2.9nm,0.2s,SNR=16
OBKA *i* Sn **Sn 21 59 58.2 +0.7**
comp=E,14nm,0.3s
MYKA Terra Mystica 4.14 3 *i* Pn **Pn 21 59 10.6 +0.8**
comp=E,6.2nm,0.2s,SNR=5.5
MYKA *i* Sn **Sn 21 59 59.3 +1.1**
comp=E,17nm,0.3s
BUM Brajici-Budva 4.15 91 *e*Pn **Pn 21 59 11.2 +1.2**
BUM *e*Sn **Sn 21 59 58.9 +0.4**
CEME Cevo 4.15 87 *e*Pn **Pn 21 59 11.1 +1.0**
CEME *i* Sn **Sn 22 00 00.2 +1.6**
NKME Niksic 4.18 84 *e*Pn **Pn 21 59 11.7 +1.3**
NKME *e*Sn **Sn 22 00 00.3 +1.1**
UPM Unac-Piva 4.18 78 *e*Pn **Pn 21 59 12.2 +1.6**
UPM *e*Sn **Sn 22 00 00.0 +0.5**
UPM Unac-Piva 4.18 78 *e*Pn **Pn 21 59 12.5 +1.9**
ABTA Abfaltersbach 4.29 353 *i* Pn **Pn 21 59 12.7 +0.7**
comp=E,21nm,0.5s,SNR=53
ABTA *i* Sn **Sn 22 00 03.4 +1.5**
comp=E,8.8nm,0.2s
SOKA Soboth 4.36 16 *e*Pn **Pn 21 59 13.0 +0.1**
comp=E,2.6nm,0.2s,SNR=15
SOKA *i* Sn **Sn 22 00 03.1 -0.6**
comp=E,2.8nm,0.3s
DRME Dracevica, Mon 4.37 92 ⇑*i* Pn **Pn 21 59 14.7 +1.7**
DRME *e*Sn **Sn 22 00 04.2 +0.3**
DRME Dracevica, Mon 4.37 92 *e*Pn **Pn 21 59 14.6 +1.6**
PDG Podgorica 4.41 89 *e*Pn **Pn 21 59 14.7 +1.2**
PDG *i* Sn **Sn 22 00 06.4 +1.7**
PDG Podgorica 4.41 89 *e*Pn **Pn 21 59 14.9 +1.4**
ULC Ulcinj 4.45 95 ⇑*i* Pn **Pn 21 59 14.9 +0.8**
ULC *i* Sn **Sn 22 00 04.8 -1.0**
SBF Sospel 4.50 290 *e*Pn **Pn 21 59 15.3 +0.5**
SBF *e*P **Pb** 21 59 20.7 -5.1
SBF *e*Sn **Sn 22 00 07.6 +0.5**
comp=E,10nm,0.4s
PLE Pljevlja 4.55 77 *e*Pn **Pn 21 59 16.5 +0.9**
PLE *i* Sn **Sn 22 00 09.8 +1.4**
KBA Koelnbreinsper 4.58 0 *e*Pn **Pn 21 59 16.6 +0.6**
comp=E,9.6nm,0.3s,SNR=15
KBA *i* Sn **Sn 22 00 09.0 -0.3**
comp=E,28nm,0.3s
KOME Kolasin 4.60 84 *e*Pn **Pn 21 59 17.6 +1.4**
KOME *i* Sn **Sn 22 00 11.3 +1.7**
BBLS Lazi&#263i 4.67 71 *e*Pn **Pn 21 59 18.2 +1.0**
BEHE Becsehely 4.69 31 *e*Pn **Pn 21 59 18.2 +1.5**
IVA Berane 4.88 83 ⇓*i* Pn **Pn 21 59 22.2 +2.2**
IVA *i* Sn **Sn 22 00 17.6 +1.2**
FETA Feichten 4.88 339 *i* Pn **Pn 21 59 21.8 +1.7**
comp=E,1.6nm,0.2s,SNR=15
FETA *i* Sn **Sn 22 00 18.8 +2.2**
comp=E,1.4nm,0.2s
WTTA Wattenberg 4.91 347 *i* Pn **Pn 21 59 22.5 +1.9**
comp=E,2.7nm,0.2s,SNR=14
WTTA *i* Sn **Sn 22 00 19.4 +2.0**
comp=E,38nm,0.3s
PVY Plav 4.92 87 ⇓*i* Pn **Pn 21 59 23.3 +2.6**
PVY *i* Sn **Sn 22 00 18.9 +1.3**
DAVOX Davos/Dischmat 4.93 332 Pn **Pn 21 59 22.6 +1.7**
comp=E,1.6nm,0.3s,baz=159,slow=19,SNR=31
DAVOX Sn **Sn 22 00 17.8 0.0**
comp=E,2.1nm,0.3s,baz=132,slow=17,SNR=3.7
comp=E,4.9nm,0.3s
LESA Schwarzleotal 4.95 355 *i* Pn **Pn 21 59 22.0 +1.0**
comp=E,3.3nm,0.2s
LESA *i* Sn **Sn 22 00 20.9 +2.7**
comp=E,18nm,0.4s
SQTA Sankt Quirin 4.95 343 *i* Pn **Pn 21 59 22.7 +1.6**
comp=E,4.9nm,0.2s,SNR=14
SQTA *i* Sn **Sn 22 00 20.3 +2.0**
comp=E,26nm,0.3s
SJES Sjenica 4.96 79 *e*Pn **Pn 21 59 23.1 +1.8**
WATA Walderalm 4.99 346 *i* Pn **Pn 21 59 23.6 +2.0**
comp=E,2.6nm,0.2s,SNR=19
WATA *i* Sn **Sn 22 00 21.7 +2.4**
comp=E,18nm,0.3s
ARSA Arzberg 5.01 18 *i* Pn **Pn 21 59 21.7 -0.1**
comp=E,1.9nm,0.4s,SNR=9.5
ARSA *i* Sn **Sn 22 00 18.7 -0.9**
comp=E,6.7nm,0.5s
LMR La Mourre 5.06 282 *e*Pn **Pn 21 59 22.4 0.0**

LMR *e*P Pb 21 59 27.4 -7.8
LMR *e*Sn **Sn** **22 00 19.5 -1.2**
comp=E,3.7nm,0.5s
MOTA Moosalm 5.09 343 *i* Pn **Pn** **21 59 25.5 +2.4**
comp=E,6.2nm,0.4s,SNR=15
MOTA *i* Sn **Sn** **22 00 24.2 +2.3**
comp=E,14nm,0.4s
BIOA Bad Ischl, Aus 5.20 3 *e*Pn **Pn** **21 59 24.9 +0.5**
comp=E,5.7nm,0.4s,SNR=10
BIOA *i* Sn **Sn** **22 00 24.7 +0.4**
comp=E,20nm,0.4s
MBDF Montbardon 5.24 297 *e*Pn **Pn** **21 59 26.5 +1.5**
RETA Reutte 5.30 341 *e*Pn **Pn** **21 59 28.1 +2.2**
comp=E,1.4nm,0.2s,SNR=7.1
RETA *i* Sn **Sn** **22 00 28.4 +1.5**
comp=E,12nm,0.4s
MORH Mrgy, Hungar 5.34 44 *e*Pn **Pn** **21 59 27.0 +0.7**
DAVA Damuels 5.37 334 *i* Pn **Pn** **21 59 28.9 +2.0**
comp=E,12nm,0.5s,SNR=12
DAVA *i* Sn **Sn** **22 00 30.7 +2.1**
comp=E,14nm,0.3s
MOA Molln 5.39 7 *i* Pn **Pn** **21 59 27.8 +0.7**
comp=E,1.5nm,0.2s,SNR=14
MOA *i* Sn **Sn** **22 00 29.3 +0.2**
comp=E,9.1nm,0.3s
FRGS Fruska Gora 5.41 58 *e*Pn **Pn** **21 59 27.6 +0.3**
LPG La Plagne 5.59 305 *e*Pn **Pn** **21 59 31.9 +1.8**
LPG *e*P Pb 21 59 35.3 -9.2
LPG *e*Sn **Sn** **22 00 33.1 -1.3**
comp=E,5.4nm,0.4s
LPL La Plagne 5.62 305 *e*Pn **Pn** **21 59 31.6 +1.3**
LPL *e*P Pb 21 59 37.6 -7.3
LPL *e*Sn **Sn** **22 00 34.1 -0.7**
comp=E,4.2nm,0.3s
RONA Rosalia, Austr 5.62 21 *i* Pn **Pn** **21 59 30.5 +0.3**
comp=E,2.0nm,0.3s,SNR=13
RONA *i* Sn **Sn** **22 00 32.9 -1.7**
comp=E,2.5nm,0.3s
CONA Conrad Observa 5.72 18 *i* Pn **Pn** **21 59 31.9 +0.3**
comp=E,2.9nm,0.3s,SNR=14
CONA *e*Sn **Sn** **22 00 36.6 -0.7**
comp=E,2.3nm,0.3s
OHR Ohrid 5.77 101 *e*Pn **Pn** **21 59 33.6 +1.3**
OHR *e*Sn **Sn** **22 00 32.3 -6.2**
SMRF Simiane la Rot 5.83 287 *e*Pn **Pn** **21 59 34.6 +1.5**
SMRF *e*P Pb 21 59 38.5 -10
ORIF Oris-en-Rattie 5.90 297 *e*Pn **Pn** **21 59 37.9 +3.8**
ORIF *e*Sn **Sn** **22 00 40.9 -0.7**
comp=E,3.4nm,0.5s
GERES GERESS Array B 6.36 2 Pn **Pn** **21 59 40.2 -0.1**
comp=E,0.1nm,0.3s,baz=184,slow=13,SNR=13
GERES Sn **Sn** **22 00 50.0 -2.9**
comp=E,0.3nm,0.3s,baz=172,slow=23,SNR=10
comp=E,1.2nm,0.3s
CKRC Cesky Krumlov 6.36 6 *e*PN **Pn** **21 59 39.6 -0.8**
CKRC *e*SN **Sn** **22 00 49.6 -3.3**
MODS Modra-Piesok 6.51 24 *e*PN **Pn** **21 59 44.2 +1.8**
MODS *e*SN **Sn** **22 00 52.7 -3.8**
CABF La Chapelle 6.59 311 *e*Pn **Pn** **21 59 45.3 +1.7**
CABF *e*P Pn 21 59 49.8 +6.2
CABF *e*Sn **Sn** **22 00 56.8 -1.9**
comp=E,3.3nm,0.4s
KHC Kasperske Hory 6.64 2 *e*PN **Pn** **21 59 43.2 -1.0**
KHC *e*SN **Sn** **22 00 55.4 -4.3**
VIVF Saint-Julien-l 6.68 294 *e*Pn **Pn** **21 59 46.5 +1.7**
VIVF *e*P Pn 21 59 50.5 +5.7
TREC Trest 6.97 12 *e*PN **Pn** **21 59 47.5 -1.2**
TREC *e*SN **Sn** **22 01 03.9 -3.9**
ZVC Zvikov 6.97 5 *e*PN **Pn** **21 59 48.0 -0.7**
ZVC *e*SN **Sn** **22 01 04.6 -3.3**
HINF Hinteralfeld 7.00 322 *e*Pn **Pn** **21 59 49.7 +0.5**
HINF *e*Sn **Sn** **22 01 05.8 -2.9**
comp=E,6.2nm,0.3s
VAY Valandovo 7.02 97 *e*Pn **Pn** **21 59 49.6 +0.3**
LASF Ste Croix 7.07 286 *e*Pn **Pn** **21 59 51.8 +1.7**
LASF *e*P Pn 21 59 56.9 +6.8
VRAC Vranov 7.19 17 Pn **Pn** **21 59 50.6 -1.1**
comp=E,0.2nm,0.3s,baz=202,slow=16,SNR=1.7
VRAC Sn **Sn** **22 01 09.5 -3.7**
comp=E,0.1nm,0.3s,baz=238,slow=21,SNR=1.4
comp=E,0.7nm,0.3s
CDF Champ du Feu 7.27 326 *e*Pn **Pn** **21 59 53.6 +0.7**
CDF *e*Sn **Sn** **22 01 11.0 -4.4**
comp=E,3.0nm,0.2s
HAU Haudompre 7.37 321 *e*Pn **Pn** **21 59 55.0 +0.8**
HAU *e*Sn **Sn** **22 01 11.8 -6.0**
comp=E,19nm,0.4s
KEST Kesra 7.42 206 Pn **Pn** **21 59 59.2 +4.2**
comp=E,0.5nm,0.3s,baz=38,slow=16,SNR=12
KEST LR LR 22 02 56.1
comp=E,114nm,19.1s,baz=92,slow=38
comp=E,6.6nm,0.7s
PRU Pruhonice 7.54 6 *e*PN **Pn** **21 59 57.1 +0.6**
NKC Novy Kostel 7.76 356 *e*SN **Sn** **22 01 23.3 -4.0**
SMF Signal de Mont 7.92 305 *e*Pn **Pn** **22 00 02.4 +0.6**
SMF *e*P Pn 22 00 08.2 +6.4
SMF *e*Sn **Sn** **22 01 29.2 -2.1**
comp=E,3.1nm,0.4s
LANS Liptovska Anna 7.92 31 *e*PN **Pn** **22 00 04.9 +3.1**
LANS *e*SN **Sn** **22 01 34.0 +2.6**
LANS *e*LG Lg 22 03 51.1
PAGF Fort de Pagny 8.06 321 *e*Pn **Pn** **22 00 06.1 +2.5**
PAGF *e*Sn **Sn** **22 01 31.2 -3.4**
comp=E,2.3nm,0.3s
DPC Dobruska-Polom 8.13 14 *e*PN **Pn** **22 00 04.4 -0.2**
LOR Lormes 8.22 309 *e*Pn **Pn** **22 00 06.5 +0.6**
LOR *e*P Pn 22 00 12.0 +6.1
LOR *e*Sn **Sn** **22 01 35.6 -3.1**
comp=E,2.5nm,0.3s
AVF Avril sur Loir 8.29 305 *e*Pn **Pn** **22 00 08.5 +1.7**
AVF *e*P Pn 22 00 12.9 +6.1
AVF *e*Sn **Sn** **22 01 36.7 -3.5**
comp=E,0.3nm,0.4s
CHVC Chvalec 8.31 12 *e*PN **Pn** **22 00 05.9 -1.2**
SSF Saint Saulge 8.32 307 *e*Pn **Pn** **22 00 08.8 +1.5**
SSF *e*P Pn 22 00 13.6 +6.3
SSF *e*Sn **Sn** **22 01 36.8 -4.4**
MEZF Maizieres J`vi 8.34 319 *e*Pn **Pn** **22 00 08.8 +1.3**
MEZF *e*Sn **Sn** **22 01 38.8 -2.7**
comp=E,3.8nm,0.4s
BGF Bois d'Agland 8.50 302 *e*Pn **Pn** **22 00 09.9 +0.2**
BGF *e*P Pn 22 00 15.1 +5.4
BGF *e*Sn **Sn** **22 01 43.1 -2.3**
comp=E,1.9nm,0.4s
MLR Muntele Rosu 9.59 68 Pn **Pn** **22 00 27.3 +2.6**
comp=E,2.3nm,0.8s,baz=268,slow=12
BRTR Keskin Array B 15.58 93 Pn **Pn** **22 01 48.0 +1.7**
comp=E,0.1nm,0.3s,baz=277,slow=14,SNR=3.8
comp=E,0.2nm,0.3s
FINES FINESS Array B 20.47 18 P **P** **22 02 41.9 -2.1**
comp=E,2.0nm,0.9s,baz=202,slow=7.2,SNR=4.4
comp=E,2.0nm,0.9s
KVAR Kislovodsk Arr 21.42 76 LR LR 22 12 24.2
comp=E,31nm,18.1s,baz=108,slow=40
KBZ Khabaz 21.59 77 P **P** **22 02 58.0 +1.6**
comp=E,1.8nm,0.8s,baz=264,slow=7.1,SNR=5.8
comp=E,1.8nm,0.8s
MKAR Makanchi Array 47.84 60 P **P** **22 06 44.3 0.0**
comp=E,0.3nm,0.7s,baz=293,slow=6.5,SNR=3.7
comp=E,0.3nm,0.7s
BRDH Bariadhala 66.67 80 LR LR 22 45 00.2
comp=E,19nm,18.2s,baz=217,slow=42

*IDC **20** 22:25:58.8±0.8, 10°.97S×115°.27E, h0km, mb3.9/11, mbtmp4.0/12, ML3.7/1, MS2.9/4, Error ellipse: s-maj=46.7km s-min=14.5km az=56.0*
*NEIC **20** 22:26:00.4±1.4, 11°.02S±0°.09×115°.25E±0°.10, h10km±1km, mb4.4/20, Error ellipse: s-maj=19.4km s-min=9.8km az=229.0*
*DJA **20** 22:26:06.1±0.5, 11°S±3°×11°.5E±°, h10km, M4.0/14, MLv4.0/14*
ISC 20 22:25:59.5±2.7, 11°.02S±0°.05×115°.26E±0°.05, h10km±17km, n68, σ1§61/71, mb4.3/16, MS2.9/3, South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGBI	**Denpasar**	**2.19**	**357**	P	**Pn**	**22 26 37.0**	**+1.0**
IGBI				S	**Sn**	**22 27 01.2**	**-2.0**
DNP	**Denpasar**	**2.33**	**359**	P	**Pn**	**22 26 40.3**	**-1.3**
DNP				S	**Sn**	**22 27 04.9**	**-1.7**
RTBI	**Rangdo, Negare**	**2.56**	**353**	P	**Pn**	**22 26 43.0**	**+1.8**
RTBI				S	**Sn**	**22 27 11.1**	**-1.3**
KHKI	**Kahang-Kahang**	**2.66**	**7**	P	**Pb**	**22 26 45.1**	**-2.2**
KHKI				S	**Sn**	**22 27 13.9**	**-0.9**
JAGI	**Jajag, Banyuwa**	**2.76**	**337**	P	**Pn**	**22 26 44.5**	**+0.7**
JAGI	**Jajag, Banyuwa**	**2.76**	**337**		**Pn**	**22 26 44.3**	**+0.5**
JAGI				Sn	**Sn**	**22 27 15.7**	**-1.6**
JAGI	**Jajag, Banyuwa**	**2.76**	**337**	P	**Pn**	**22 26 43.8**	**-0.1**
JAGI				S	**Sn**	**22 27 15.7**	**-1.6**
PLAI	**Plampang**	**3.30**	**49**	P	**Pn**	**22 26 53.1**	**+1.8**
PLAI	**Plampang**	**3.30**	**49**	P	**Pn**	**22 26 53.2**	**+1.9**
ABJI	**Asem Bagus**	**3.36**	**342**	P	**Pn**	**22 26 54.8**	**+2.7**
BLJI	**Banyuglugur**	**3.65**	**333**	P	**Pn**	**22 26 57.4**	**+1.4**
DBNI	**Kabupaten Domp**	**3.91**	**51**	P	**Pn**	**22 27 03.8**	**+4.1**
WBSI	**Waikabubak, Su**	**4.29**	**72**	P	**Pn**	**22 27 09.0**	**+4.1**
WBSI				S	**Sn**	**22 27 54.2**	**-0.9**
SNJI	**Sawahan-Nganju**	**4.72**	**313**	P	**Pn**	**22 27 12.6**	**+1.6**
SJI	**Sawahan**	**4.75**	**313**	P	**Pn**	**22 27 12.4**	**+1.1**
UGM	**Wanagama**	**5.60**	**303**	P	**Pn**	**22 27 24.0**	**+1.0**
UGM	**Wanagama**	**5.60**	**303**		**Pn**	**22 27 24.4**	**+1.4**
KAPI	**Kappang**	**7.44**	**37**	Sn	**Sn**	**22 29 10.1**	**-2.6**
	8.0nm,0.3s,baz=72,slow=20,SNR=4.8						
KAPI				LR	LR	22 30 41.8	
	comp=Z,64nm,20.8s,baz=205,slow=38						
BATI	**Baumata**	**8.30**	**85**	Sn	**Sn**	**22 29 32.0**	**-1.9**
	3.3nm,0.3s,baz=22,slow=22,SNR=7.7						
BBJI	**Bungbulang**	**8.30**	**295**	Pn	**Pn**	**22 27 59.9**	**-0.3**
MBWA	**Marble Bar**	**10.96**	**158**	P	**Pn**	**22 28 33.3**	**-3.2**
MBWA	**Marble Bar**	**10.96**	**158**		**Pn**	**22 28 33.6**	**-2.9**
PSA00	**Pitbara Seismi**	**11.38**	**158**	Pn	**Pn**	**22 28 39.6**	**-2.6**
FITZ	**Fitzroy Crossi**	**12.26**	**126**	Pn	**Pn**	**22 28 53.5**	**-0.8**
	0.3nm,0.3s,baz=304,slow=8.5,SNR=9.5						
FITZ				Sn	Sn	22 30 59.8	-11
	0.5nm,0.3s,baz=154,slow=21,SNR=4.0						
	3.3nm,0.8s						
MEEK	**Meekatharra**	**15.86**	**169**	P	**Pn**	**22 29 40.2**	**-2.8**
MORW	**Morawa**	**17.97**	**178**	P	**Pn**	**22 30 09.3**	**-0.3**
FAKI	**Fak Fak**	**18.67**	**66**	P	**P**	**22 30 17.6**	**-0.4**
FAKI				IAmb	IAmb	22 30 40.4	
	comp=Z,46nm,1.3s						
BLDU	**Ballidu**	**19.55**	**176**	P	**P**	**22 30 26.3**	**-1.1**
WB0	**Warramunga Arr**	**20.38**	**118**	P	**P**	**22 30 37.1**	**+0.5**
WRA	**Warramunga Arr**	**20.40**	**118**	P	Pn	22 30 39.2	+0.3
	comp=Z,3.6nm,0.9s,baz=290,slow=13,SNR=24						
WRA				S	S	22 34 15.5	-10
	comp=Z,0.4nm,0.8s,baz=272,slow=19,SNR=5.1						
	comp=Z,3.6nm,0.9s						
WRA	**Warramunga Arr**	**20.40**	**118**		**P**	**22 30 38.2**	**+1.4**
WRAB	**Tennant Creek**	**20.40**	**118**	P	**P**	**22 30 36.3**	**-0.6**
WRAB	**Tennant Creek**	**20.40**	**118**	P	**P**	**22 30 36.3**	**-0.6**
WR8	**Warramunga Arr**	**20.54**	**118**		**P**	**22 30 39.2**	**+0.9**
WR8				IAmb	IAmb	22 30 42.1	
	comp=Z,9.6nm,0.9s						
AS31	**Alice Springs**	**21.76**	**128**	P	**P**	**22 30 52.4**	**+0.9**
ASAR	**Alice Springs**	**21.76**	**128**	P	**P**	**22 30 52.4**	**+0.9**
	comp=Z,1.9nm,0.8s,baz=303,slow=9.4,SNR=17						
ASAR				S	**S**	**22 34 47.6**	**-4.8**
	comp=Z,1.4nm,0.9s,baz=305,slow=24,SNR=6.9						
	comp=Z,1.9nm,0.8s						
ASAR	**Alice Springs**	**21.76**	**128**	P	**P**	**22 30 52.5**	**+1.1**
COEN	**Coen**	**27.40**	**99**	P	**P**	**22 31 46.4**	**+0.8**
PMG	**Port Moresby**	**31.43**	**90**	P	**P**	**22 32 20.9**	**-0.4**
PMG	**Port Moresby**	**31.43**	**90**	P	**P**	**22 32 20.5**	**-0.8**
STKA	**Stephens Creek**	**31.96**	**135**	P	**P**	**22 32 27.0**	**+1.2**
	comp=Z,3.0nm,0.9s,baz=312,slow=5.5,SNR=5.8						
STKA				LR	LR	22 45 38.2	
	comp=Z,24nm,18.3s,baz=204,slow=37						
	comp=Z,3.0nm,0.9s						
STKA	**Stephens Creek**	**31.96**	**135**	P	**P**	**22 32 25.9**	**+0.1**
CMAR	**Chiang Mai Arr**	**33.42**	**331**	P	**P**	**22 32 39.9**	**+1.2**
	comp=Z,0.8nm,0.3s,baz=164,slow=8.4,SNR=4.6						
CMAR				LR	LR	22 49 34.8	
	comp=Z,15nm,18.2s,baz=205,slow=42						
	comp=Z,0.8nm,0.3s						
H08S2	**Diego Garcia H**	**42.31**	**271**	T	T	23 19 16.6	
	baz=100						
H08S3	**Diego Garcia H**	**42.32**	**271**	T	T	23 19 12.0	
	baz=100						
H08S1	**Diego Carcia H**	**42.33**	**271**	T	T	23 19 14.7	
	baz=100						
JCJ	**Chichijima**	**46.02**	**34**	LR	LR	22 56 28.4	
	comp=Z,13nm,18.1s,baz=5.0,slow=40						
SONM	**Songino Array**	**59.12**	**353**	P	**P**	**22 36 00.4**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=177,slow=11,SNR=5.3						
	comp=Z,0.6nm,0.8s						
SONM	**Songino Array**	**59.12**	**353**	P	**P**	**22 36 00.8**	**+0.5**
KBL	**Kabul**	**63.03**	**318**		**P**	**22 36 27.5**	**+0.2**
KBL				IAmb	IAmb	22 36 29.0	
	comp=Z,2.3nm,0.7s						
KDJ	**Kajisay**	**63.39**	**329**	P	**P**	**22 36 30.1**	**+0.6**
KDJ				IAmb	IAmb	22 36 32.4	
	comp=Z,1.7nm,0.8s						
BOOM	**Boomskoye usch**	**64.28**	**329**	P	**P**	**22 36 35.2**	**-0.1**
BOOM				IAmb	IAmb	22 36 37.1	
	comp=Z,2.1nm,0.7s						
DRK	**Karamyk**	**64.45**	**324**	P	**P**	**22 36 36.8**	**+0.1**
MKAR	**Makanchi Array**	**64.66**	**336**	P	**P**	**22 36 38.4**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=152,slow=7.7,SNR=9.6						
	comp=Z,0.7nm,0.7s						
MKAR	**Makanchi Array**	**64.66**	**336**	P	**P**	**22 36 37.8**	**+0.2**
GAR	**Garm**	**65.01**	**323**	P	**P**	**22 36 40.7**	**+0.5**
ARSB	**Arrabob**	**65.03**	**326**	P	**P**	**22 36 40.8**	**+0.6**
AAK	**Ala-Archa**	**65.13**	**328**		**P**	**22 36 42.0**	**+1.1**
AAK				IAmb	IAmb	22 36 43.0	
	comp=Z,3.1nm,0.8s						
BTK	**Batken**	**65.40**	**324**		**P**	**22 36 43.6**	**+1.0**
BTK				IAmb	IAmb	22 36 44.7	
	comp=Z,3.4nm,0.7s						
KURBB	**Kurchatov Arra**	**69.22**	**336**	P	**P**	**22 37 07.2**	**+0.8**
	comp=Z,1.2nm,0.7s,baz=151,slow=5.4,SNR=14						
	comp=Z,1.2nm,0.7s						
KURK	**Kurchatov**	**69.25**	**336**	P	**P**	**22 37 06.7**	**+0.1**
KURK				IAmb	IAmb	22 37 08.0	
	comp=Z,2.1nm,0.7s						
ZALV	**Zalesovo Beam**	**69.69**	**341**	P	**P**	**22 37 09.0**	**-0.2**
	comp=Z,1.4nm,0.5s,baz=162,slow=5.8,SNR=7.8						
	comp=Z,1.4nm,0.5s						
ZALV	**Zalesovo Beam**	**69.69**	**341**	P	**P**	**22 37 09.3**	**+0.1**
VNDA	**Vanda**	**70.60**	**170**	P	**P**	**22 37 15.3**	**+0.7**
	comp=Z,1.3nm,0.9s,baz=266,slow=7.2,SNR=4.2						
	comp=Z,1.3nm,0.9s						
VNDA	**Vanda**	**70.60**	**170**	P	**P**	**22 37 15.4**	**+0.8**
VNDA				IAmb	IAmb	22 37 26.6	
	comp=Z,5.9nm,1.4s						
BVAR	**Borovoye Array**	**74.40**	**334**	P	**P**	**22 37 38.8**	**+1.2**
	comp=Z,0.9nm,0.7s,baz=145,slow=8.5,SNR=4.6						
	comp=Z,0.9nm,0.7s						
QSPA	**South Pole Qui**	**78.99**	**180**	P	**P**	**22 38 05.4**	**+1.8**
	comp=Z,3.3nm,1.1s,baz=190,slow=23,SNR=3.5						
	comp=Z,3.3nm,1.1s						
TORD	**Torodi Ar. Bea**	**115.17**	**279**	PKP	**PKPdf**	**22 44 42.8**	**+0.6**
	comp=Z,0.6nm,1.0s,baz=141,slow=1.7,SNR=2.6						

*RSNC **20** 22:30:39.0±0.0, 7°.N±1°×7°.3W±°, h146km±2km, M3.2, mB4.9, mb3.6, ML2.8, Mw(mB)4.2*
*IDC **20** 22:30:41.9±6.5, 6°.78N×75°.17W, h152km±102km, mb2.9/1, mbtmp3.4/2, Error ellipse: s-maj=352.9km s-min=37.3km az=85.0*
*FUNV **20** 22:30:41.8, 7°.13N×73°.20W, h27km, MW3.3, Presumed earthquake*
ISC 20 22:30:37.1±0.9, 6°.89N±0°.03×73°.09W±0°.04, h155km±6km, n42, σ1§72/77, 1C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.31**	**197**	P	**Pn**	**22 30 59.0**	**+0.4**
BARC				S	**Sn**	**22 31 14.5**	**-0.4**
PAMC	**Pamplona, Colo**	**0.59**	**41**	P	**Pn**	**22 31 01.7**	**+1.7**
PAMC				S	**Sn**	**22 31 18.6**	**+1.1**
BRJC	**Barrancabermej**	**0.65**	**277**	P	**Pn**	**22 31 00.6**	**+0.8**
BRJC				S	**Sn**	**22 31 17.5**	**+0.4**
RUSC	**La Rusia**	**0.99**	**180**	P	**Pn**	**22 31 02.9**	**0.0**
RUSC				S	**Sn**	**22 31 20.4**	**-2.1**
RUSC	**La Rusia**	**0.99**	**180**	*e*P	**Pn**	**22 31 02.9**	**0.0**
RUSC				*e*S	**Sn**	**22 31 19.6**	**-3.0**
OCAC	**Ocana**	**1.36**	**350**	P	**Pn**	**22 31 07.0**	**+1.2**
OCAC				S	**Sn**	**22 31 28.5**	**+0.7**
PTBC	**PUERTO BERRIO,**	**1.40**	**256**	P	**Pn**	**22 31 05.6**	**-0.4**
PTBC				S	**Sn**	**22 31 26.5**	**-1.7**
SPBC	**San Pablo de B**	**1.57**	**218**	P	**Pn**	**22 31 08.0**	**+0.1**
SPBC				S	**Sn**	**22 31 30.1**	**-1.4**
NORC	**Norcasia**	**2.21**	**233**	P	**Pn**	**22 31 15.4**	**+0.4**
NORC				S	**Sn**	**22 31 43.2**	**-1.0**
CHIC	**Chingaza**	**2.34**	**196**	P	**Pn**	**22 31 17.2**	**+0.3**
CHIC				S	**Sn**	**22 31 46.2**	**-1.4**
ROSC	**El Rosal**	**2.38**	**211**	P	**Pn**	**22 31 19.0**	**+1.6**
	36nm,0.3s,baz=295,slow=23,SNR=56						
ROSC				S	**Sn**	**22 31 47.6**	**-0.9**
	152nm,0.4s,baz=97,slow=19,SNR=12						
ROSC	**El Rosal**	**2.38**	**211**	P	**Pn**	**22 31 18.9**	**+1.5**
ROSC				S	**Sn**	**22 31 48.1**	**-0.3**
HELC	**Santa Helena**	**2.52**	**254**	P	**Pn**	**22 31 19.9**	**+0.8**
HELC				S	**Sn**	**22 31 50.6**	**-0.8**
HELC	**Santa Helena**	**2.52**	**254**	*e*P	**Pn**	**22 31 19.7**	**+0.6**
HELC				*e*S	**Sn**	**22 31 48.1**	**-3.3**
UREC	**San Jos de Ur**	**2.57**	**290**	P	**Pn**	**22 31 19.1**	**-0.2**
UREC				S	**Sn**	**22 31 49.7**	**-2.2**
GUY2C	**Guyana, Caldas**	**2.81**	**234**	P	**Pn**	**22 31 23.2**	**+0.5**
GUY2C				S	**Sn**	**22 31 58.4**	**+0.5**
VILC	**Villavicencio,**	**2.83**	**192**	P	**Pn**	**22 31 22.9**	**+0.2**
VILC				S	**Sn**	**22 31 58.1**	**+0.2**
NIZA	**Niza - Manizal**	**2.99**	**233**	P	**Pn**	**22 31 25.2**	**+0.4**
NIZA				S	**Sn**	**22 32 00.8**	**-0.9**
CBOC	**Ciudad Bolivar**	**3.08**	**251**	P	**Pn**	**22 31 26.9**	**+1.1**
CBOC				S	**Sn**	**22 32 04.7**	**+1.2**
DBBC	**Dabeiba**	**3.10**	**272**	P	**Pn**	**22 31 26.6**	**+0.6**
DBBC				S	**Sn**	**22 32 03.2**	**-0.7**
SDV	**Santo Domingo**	**3.14**	**51**	P	**Pn**	**22 31 28.4**	**+1.8**
SDV				S	**Sn**	**22 32 05.2**	**+0.3**
SDV	**Santo Domingo**	**3.14**	**51**	*e*P	**Pn**	**22 31 28.3**	**+1.7**
SDV				*e*S	**Sn**	**22 32 01.6**	**-3.3**
ARGC	**Ariguani, Magd**	**3.16**	**339**	P	**Pn**	**22 31 29.7**	**+3.0**
ANIL	**Santa Ana**	**3.31**	**224**	P	**Pn**	**22 31 30.6**	**+1.6**
ANIL				S	**Sn**	**22 32 09.8**	**+0.7**
APAC	**Apartado, Choc**	**3.60**	**286**	P	**Pn**	**22 31 33.1**	**+0.7**
APAC				S	**Sn**	**22 32 15.7**	**+0.4**
PRAC	**Prado**	**3.63**	**210**	P	**Pn**	**22 31 32.8**	**0.0**
PRAC				S	**Sn**	**22 32 14.2**	**-1.8**
SJCC	**San Jacinto, C**	**3.63**	**325**	P	**Pn**	**22 31 32.8**	**0.0**
SJCC				S	**Sn**	**22 32 14.2**	**-1.8**
SJCC	**San Jacinto, C**	**3.63**	**325**	*e*P	**Pn**	**22 31 32.4**	**-0.3**
SJCC				*e*S	**Sn**	**22 32 09.9**	**-6.2**
ORTC	**Ortega, Tolima**	**3.66**	**216**	P	**Pn**	**22 31 33.3**	**+0.1**
ORTC				S	**Sn**	**22 32 16.7**	**0.0**
PLMC	**San Jos del P**	**3.74**	**238**	P	**Pn**	**22 31 34.9**	**+0.7**
PLMC				S	**Sn**	**22 32 19.2**	**+0.6**
URMC	**La Uribe, Meta**	**3.84**	**200**	P	**Pn**	**22 31 36.1**	**+0.5**
URMC				S	**Sn**	**22 32 19.8**	**-1.2**
YOTC	**Yotoco, Valle**	**4.34**	**228**	P	**Pn**	**22 31 41.8**	**-0.3**
YOTC				S	**Sn**	**22 32 31.0**	**-1.7**
SMRC	**Santa Marta, M**	**4.39**	**345**	P	**Pn**	**22 31 44.8**	**+2.2**
SMRC				S	**Sn**	**22 32 31.1**	**-2.1**
MACC	**Macarena, Meta**	**4.78**	**189**	P	**Pn**	**22 31 46.3**	**-1.4**
MACC				S	**Sn**	**22 32 38.9**	**-3.9**
URIC	**Uribia, Colomb**	**4.90**	**13**	P	**Pn**	**22 31 49.9**	**+0.6**
URIC				S	**Sn**	**22 32 44.4**	**-1.3**
URIC	**Uribia, Colomb**	**4.90**	**13**	*e*P	**Pn**	**22 31 49.5**	**+0.2**
URIC				*e*S	**Sn**	**22 32 39.2**	**-6.5**
POPC	**Popayan, Colom**	**5.61**	**220**	P	**Pn**	**22 32 01.0**	**+2.1**
	3.5nm,0.8s						
FLOC	**Florencia**	**5.86**	**206**	P	**Pn**	**22 32 02.3**	**+0.2**
	3.6nm,0.4s						
BBAC	**Balboa, Cauca**	**6.37**	**221**	P	**Pn**	**22 32 10.2**	**+1.2**
YKA	**Yellowknife Ar**	**63.21**	**340**	P	**P**	**22 40 49.6**	**+1.1**
	0.2nm,0.5s,baz=133,slow=6.2,SNR=4.7						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**149.18**	**234**	PKPbc	**PKPbc**	**22 50 08.3**	**+0.1**
	0.2nm,0.7s,baz=117,slow=3.1,SNR=1.4						
WRA	**Warramunga Arr**	**150.40**	**241**	PKPbc	**PKPbc**	**22 50 11.1**	**-0.2**
	0.1nm,0.4s,baz=110,slow=3.1,SNR=8.2						

*GCG **20** 22:41:25.7±1.3, 14°.53N×90°.68W, h3km±5km, MD3.7, ML3.4, Presumed earthquake*
*CATAC **20** 22:41:27.0±0.2, 15°.N±2°×9°.1W±°, h4km±1km, M3.0/13, MLv3.0/13, Error ellipse: s-maj=4.7km s-min=2.1km az=24.2, confirmed*
ISC 20 22:41:26.6±0.9, 14°.47N±0°.03×90°.63W±0°.03, h8km±7km, n22, σ1§52/37, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GCG4	**OSOP**	**0.15**	**40**	*i* P	**Pg**	**22 41 30.2**	**+0.3**
GCG4				*i* S	**Sg**	**22 41 33.1**	**+1.0**
GCG4				IAML		22 41 35.7	
	comp=N,9μm,0.4s						
FG8	**Yepocapa, Chim**	**0.22**	**162**	*i* P	**Pg**	**22 41 32.6**	**+1.5**
FG8				*i* S	**Sg**	**22 41 37.0**	**+2.8**
FG16	**Alotenango, Sa**	**0.23**	**150**	*i* P	**Pg**	**22 41 30.9**	**-0.4**
PCG5	**San Vicente Pa**	**0.35**	**136**	*i* P	**Pg**	**22 41 30.2**	**-3.4**
PCG5				*i* S	**Sg**	**22 41 32.7**	**-5.6**
PCG5				IAML		22 41 33.7	
	comp=E,10μm,0.5s						
APG	**El Apazote**	**0.55**	**17**	*i* P	**Pg**	**22 41 37.0**	**-0.4**
APG				*e*S	**Sg**	**22 41 44.1**	**-0.5**
STG8	**El Palmar, Qui**	**0.70**	**268**	*i* P	**Pn**	**22 41 44.2**	**+1.3**
STG5	**El Palmar, Qui**	**0.70**	**264**	*i* P	**Pn**	**22 41 43.6**	**+0.8**
STG5				*i* S	**Sn**	**22 41 56.0**	**+2.2**
SOKI	**Kika Raxquin**	**0.82**	**295**	*e*P	**Pb**	**22 41 42.0**	**-1.4**
FAME	**Alcaldia de Sa**	**0.86**	**136**	P	**Pn**	**22 41 44.6**	**-0.4**
FAME				S	**Sn**	**22 41 56.9**	**-0.9**
LOAL	**Lomas de Alarc**	**0.95**	**120**	S	**Sn**	**22 42 00.6**	**+0.6**
NUBE	**Las Nubes**	**1.00**	**124**	P	**Pn**	**22 41 47.6**	**+0.6**
NUBE				S	**Sn**	**22 42 01.8**	**+0.4**
RTAL	**Retalhuleu**	**1.03**	**273**	P	**Pb**	**22 41 46.0**	**-0.7**
RTAL				S	**Sb**	**22 41 59.8**	**-0.6**

CONA	**Conrad Observa**	**0.54**	**303**	*e*Pg	Pg	22 49 35.0	-0.1
	0.1nm,0.1s							
CONA				*e*Sg	Sg	22 49 42.4	+0.4
	0.7nm,0.2s							
WINA	**Alland / Wiene**	**0.56**	**327**	*i* Sg	Sg	22 49 43.7	+0.9
KRUC	**Moravsky**	**1.43**	**356**	*e*Pg	Pn	22 49 50.2	-1.6
	baz=356							
KRUC				*e*Sg	Sg	22 50 08.4	-2.3
	0.7nm,0.2s,baz=356							
VRAC	**Vranov**	**1.67**	**1**	*e*Sg	Sn	22 50 14.5	-2.7
	0.4nm,0.3s,baz=1.0							

*IDC **20** 23:14:05.0±1.5, 37.67N×145.09E, h0km, mb3.4/3, mbtmp3.7/6, ML3.6/3, MS1.9/1, Error ellipse: s-maj=35.6km s-min=24.1km az=128.0*
*JMA **20** 23:14:11.7±0.2, 37.7N±0.8×144.6E±1.0, h52km, MV3.7/27, FAR E OFF NORTH HONSHU*
ISC 20 23:14:10.4±1.2, 37.72N±0.06×144.84E±0.10, h35km, n21, σ1°67/30, mb3.5/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.73**	**284**	*e*P	**Pn**	**23 14 52.1**	**+0.4**
JIKH				*e*S	**Sn**	**23 15 22.4**	**-1.1**
OFUJ	**Ofunato**	**2.84**	**300**	*e*P	**Pn**	**23 14 53.9**	**+0.7**
OFUJ				S	**Sn**	**23 15 25.5**	**-0.7**
JIO	**Ouri**	**2.85**	**286**	P	**Pn**	**23 14 53.9**	**+0.6**
JIO				S	**Sn**	**23 15 25.6**	**-0.8**
JKMT	**Kesennumamotoy**	**2.87**	**293**	*e*P	**Pn**	**23 14 54.2**	**+0.6**
JKMT				*e*S	**Sn**	**23 15 25.9**	**-0.9**
JMK	**Ichinoseki**	**3.10**	**295**	*e*S	**Sn**	**23 15 32.3**	**-0.4**
JOM	**Ohasama**	**3.29**	**303**	*e*P	**Pn**	**23 15 00.5**	**+1.1**
JOTO	**OTAMA OYAMA**	**3.58**	**269**	P	**Pn**	**23 15 05.7**	**+2.2**
JOTO				S	**Sn**	**23 15 44.9**	**+0.4**
JYK	**Kaneyama**	**3.72**	**290**	*e*P	**Pn**	**23 15 06.7**	**+1.3**
JYK				*e*S	**Sn**	**23 15 48.9**	**+0.9**
BSO1	**Boso 1**	**4.37**	**227**	*e*P	**Pn**	**23 15 13.0**	**-0.8**
BSO1				*e*S	**Sn**	**23 16 02.5**	**-0.6**
JCH	**Churui**	**5.02**	**347**	*e*P	**Pn**	**23 15 23.6**	**+0.4**
JCH				*e*S	**Sn**	**23 16 17.2**	**-2.8**
JRY	**Ryogami san**	**5.05**	**252**	*e*P	**Pn**	**23 15 23.8**	**+0.1**
JRY				S	**Sn**	**23 16 18.5**	**-2.4**
MJAR	**Matsushiro Arr**	**5.43**	**260**	Pn	**Pn**	**23 15 30.5**	**+1.7**
	0.6nm,0.3s,baz=89,slow=16,SNR=18							
MJAR				Sn	**Sn**	**23 16 33.1**	**+3.1**
	baz=49,slow=25,SNR=1.2							
MJAR				LR	LR	23 16 58.3	
	comp=Z,12nm,21.2s,baz=140,slow=31 4.9nm,0.4s							
JHJ	**Hachijo jima 2**	**6.17**	**223**	Pn	**Pn**	**23 15 37.1**	**-1.9**
	12nm,0.3s,baz=84,slow=22,SNR=5.1							
JHJ				Sn	**Sn**	**23 16 43.6**	**-4.7**
	19nm,0.3s,baz=254,slow=22,SNR=2.3 140nm,0.8s							
JTKR	**Abashiri--Toko**	**6.29**	**354**	*e*P	**Pn**	**23 15 40.6**	**+0.1**
JTKR				*e*S	**Sn**	**23 16 49.0**	**-2.2**
ASAJ	**Asahikawa**	**6.62**	**346**	Pn	**Pn**	**23 15 45.0**	**0.0**
	1.1nm,0.3s,baz=82,slow=26,SNR=1.4 9.7nm,1.0s							
H11N2	**WAKE ISLAND Hy**	**26.26**	**127**	T	T	23 46 56.9	
	baz=322							
H11N1	**WAKE ISLAND Hy**	**26.27**	**127**	T	T	23 47 01.0	
	baz=322							
H11N3	**WAKE ISLAND Hy**	**26.28**	**127**	T	T	23 46 53.5	
	baz=322							
ILAR	**Eielson Array**	**47.45**	**33**	P	**P**	**23 22 39.9**	**-1.4**
	0.4nm,0.7s,baz=273,slow=7.8,SNR=5.2 0.4nm,0.7s							
KURBB	**Kurchatov Arra**	**47.73**	**308**	P	**P**	**23 22 45.1**	**+1.5**
	0.2nm,0.4s,baz=80,slow=8.2,SNR=2.1 0.2nm,0.4s							
WRA	**Warramunga Arr**	**58.20**	**192**	P	**P**	**23 24 01.3**	**+0.3**
	0.2nm,0.4s,baz=7.5,slow=7.0,SNR=3.0 0.2nm,0.4s							

*JMA **20** 23:35:52.9±0.2, 24°N±1°×122.5E±0.5, h19km±3km, MV2.3/12, NW OFF ISHIGAKIJIMA IS*
*TAP **20** 23:35:53.9, 24.16N×122.45E, h20km, ML2.8, C*
ISC 20 23:35:53.1±1.0, 24.04N±0.03×122.45E±0.02, h20km±2km, n53, σ0°55/100, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS4	**EOS4**	**0.15**	**303**	*i* P	**Pb**	**23 35 58.0**	**-0.2**
EOS4				S	**Sb**	**23 36 01.5**	**-0.4**
EOS3	**EOS3**	**0.28**	**333**	*i* P	**Pb**	**23 35 59.7**	**+0.4**
EOS3				*i* S	**Sb**	**23 36 04.3**	**+0.7**
EOS2	**EOS2**	**0.43**	**332**	P	**Pb**	**23 36 02.2**	**+0.4**
EOS2				*e*S	**Sb**	**23 36 08.8**	**+1.1**
JYNG	**Yonagunijimaku**	**0.61**	**48**	*e*P	**Pb**	**23 36 04.9**	**-0.2**
JYNG				*e*S	**Sb**	**23 36 12.8**	**-0.5**
YOJ	**Yonaguni jima**	**0.66**	**50**	*i* P	**Pb**	**23 36 05.8**	**-0.1**
YOJ				*i* S	**Sb**	**23 36 14.6**	**-0.2**
YOJ	**Yonaguni jima**	**0.66**	**50**	*e*P	**Pb**	**23 36 05.8**	**-0.1**
YOJ				*e*S	**Sb**	**23 36 14.3**	**-0.4**
EWUT	**Wuta**	**0.74**	**303**	*e*P	**Pb**	**23 36 07.1**	**-0.2**
EWUT				*e*S	**Sb**	**23 36 17.0**	**+0.2**
ENA	**Nanau**	**0.76**	**301**	*e*P	**Pb**	**23 36 08.1**	**+0.5**
ENA				*e*S	**Sb**	**23 36 18.0**	**+0.6**
ESAO	**Su ao**	**0.77**	**314**	*e*P	**Pb**	**23 36 07.5**	**-0.3**
ESAO				*e*S	**Sb**	**23 36 17.1**	**-0.7**
TWD	**Chiawan**	**0.79**	**273**	P	**Pn**	**23 36 09.4**	**+0.4**
TWD				*e*S	**Sn**	**23 36 21.1**	**+1.0**
TWC	**Suao**	**0.79**	**316**	P	**Pb**	**23 36 07.1**	**-1.0**
TWC				*e*S	**Sb**	**23 36 17.8**	**-0.6**
NACB	**Ninganchiao**	**0.80**	**280**	*e*P	**Pb**	**23 36 08.0**	**-0.2**
NACB				*e*S	**Sn**	**23 36 20.2**	**-0.2**
SHUL	**Shoufeng**	**0.85**	**253**	*e*P	**Pb**	**23 36 10.4**	**+0.5**
SHUL				*e*S	**Sn**	**23 36 21.9**	**+0.1**
NDS	**Dongshan**	**0.90**	**311**	P	**Pb**	**23 36 09.6**	**-0.4**
NDS				*e*S	**Sb**	**23 36 21.1**	**-0.4**
ETLH	**Xiulin Townshi**	**0.90**	**281**	*e*P	**Pb**	**23 36 10.5**	**+0.4**
ETLH				*e*S	**Sn**	**23 36 23.0**	**-0.2**
EGS		**0.93**	**329**	*e*P	**Pb**	**23 36 10.1**	**-0.5**
EGS				*e*S	**Sb**	**23 36 22.0**	**-0.5**
LXIB	**Xiulin Townshi**	**0.95**	**269**	*e*P	**Pb**	**23 36 10.7**	**-0.3**
LXIB				*e*S	**Sb**	**23 36 23.6**	**+0.4**
LATG	**Datong**	**0.98**	**300**	*e*P	**Pb**	**23 36 11.2**	**-0.2**
LATG				*e*S	**Sn**	**23 36 24.7**	**-0.4**
TWE	**Neicheng**	**0.99**	**314**	P	**Pb**	**23 36 11.3**	**-0.1**
TWE				*e*S	**Sb**	**23 36 23.5**	**-0.5**
ENTT	**Nioudou**	**1.01**	**307**	*e*P	**Pn**	**23 36 12.1**	**0.0**
ENTT				*e*S	**Sn**	**23 36 25.0**	**-0.6**
NDT	**Datong Townshi**	**1.02**	**303**	*e*P	**Pn**	**23 36 12.4**	**+0.1**
NDT				*e*S	**Sb**	**23 36 25.4**	**+0.3**
WARBT	**Fenglin Townsh**	**1.03**	**252**	*e*P	**Pb**	**23 36 10.8**	**-1.4**
WARBT				*e*S	**Sb**	**23 36 25.0**	**-0.2**
NNSB	**Datong**	**1.05**	**292**	*e*P	**Pb**	**23 36 12.2**	**-0.4**
NNSB				*e*S	**Sn**	**23 36 26.8**	**-0.1**
TWB1	**Santiao Chiao**	**1.05**	**336**	*e*P	**Pb**	**23 36 12.0**	**-0.6**
TWB1				*e*S	**Sb**	**23 36 24.8**	**-1.1**
NNS	**Nan Shan**	**1.06**	**292**	P	**Pb**	**23 36 12.6**	**-0.3**
NNS				*e*S	**Sn**	**23 36 27.3**	**+0.1**
FUSB	**Fushanzhiwuyua**	**1.07**	**312**	P	**Pn**	**23 36 12.8**	**-0.2**
FUSB				*e*S	**Sn**	**23 36 26.7**	**-0.5**
HGSD	**Ruisui**	**1.09**	**240**	*e*P	**Pn**	**23 36 12.3**	**-0.8**
HGSD				*e*S	**Sb**	**23 36 26.9**	**-0.1**
TIPB	**Shuangxi**	**1.09**	**328**	P	**Pn**	**23 36 12.8**	**-0.4**
TIPB				*e*S	**Sb**	**23 36 26.5**	**-0.6**
FUSS	**Fushou**	**1.12**	**281**	*e*P	**Pn**	**23 36 13.6**	**-0.2**
FUSS				*e*S	**Sn**	**23 36 29.7**	**+0.8**
NWLT	**Wulai**	**1.14**	**310**	P	**Pn**	**23 36 13.9**	**0.0**
NWLT				S	**Sn**	**23 36 28.7**	**-0.2**
EHYH	**Wanrong**	**1.15**	**242**	*e*P	**Pb**	**23 36 13.3**	**+1.0**
EHYH				*e*S	**Sn**	**23 36 30.1**	**+0.9**
EHY	**Hungye**	**1.17**	**243**	*e*P	**Pn**	**23 36 13.4**	**-0.8**
EHY				*e*S	**Sb**	**23 36 28.5**	**-0.7**
YHNB	**Yeheng**	**1.17**	**303**	*e*P	**Pn**	**23 36 14.1**	**-0.2**
YHNB				*e*S	**Sn**	**23 36 29.7**	**0.0**
OWD	**Renai**	**1.17**	**266**	*e*P	**Pn**	**23 36 13.6**	**-0.9**
OWD				*e*S	**Sb**	**23 36 29.0**	**-0.5**
SXI1	**Grass Mountain**	**1.17**	**334**	P	**Pn**	**23 36 13.8**	**-0.6**
SXI1				*e*S	**Sn**	**23 36 30.1**	**+0.2**
NSK	**Sanguang**	**1.18**	**303**	*e*P	**Pn**	**23 36 14.7**	**+0.2**
NSK				*e*S	**Sb**	**23 36 29.8**	**0.0**
NWF	**Wu-fen Shan**	**1.20**	**329**	*e*P	**Pn**	**23 36 14.4**	**-0.3**
IRIF	**Iriomote-Funau**	**1.20**	**76**	*e*P	**Pn**	**23 36 15.1**	**+0.4**
TDCB	**Techi**	**1.20**	**280**	*e*P	**Pb**	**23 36 15.4**	**+0.2**
TDCB				*e*S	**Sn**	**23 36 31.7**	**+1.0**
VWDT	**VWDT**	**1.23**	**257**	*e*P	**Pn**	**23 36 14.7**	**-0.5**
VWDT				*e*S	**Sn**	**23 36 30.7**	**-0.5**
YULB	**Yu-li**	**1.24**	**239**	*e*P	**Pn**	**23 36 14.3**	**-1.0**
YULB				*e*S	**Sn**	**23 36 30.7**	**-0.7**
TWF1	**Yuli**	**1.26**	**237**	*e*P	**Pn**	**23 36 14.8**	**-0.7**
TWF1				*e*S	**Sn**	**23 36 31.7**	**-0.2**
TATO	**Taipei**	**1.28**	**317**	*e*P	**Pb**	**23 36 16.2**	**-0.3**
TATO				*e*S	**Sb**	**23 36 33.4**	**+0.8**
NFF	**Wufeng Townshi**	**1.35**	**296**	*e*P	**Pb**	**23 36 17.7**	**-0.1**
NFF				*e*S	**Sb**	**23 36 35.4**	**+0.7**
DPDB	**Guoxing**	**1.40**	**270**	*e*P	**Pb**	**23 36 18.6**	**+0.1**
WHP	**Taichung City**	**1.40**	**280**	*e*P	**Pn**	**23 36 18.0**	**+0.5**
WHP				*e*S	**Sb**	**23 36 36.6**	**+0.7**
SMLT	**Sun Moon Lake**	**1.43**	**264**	*e*P	**Pn**	**23 36 18.7**	**+0.7**
SMLT				*e*S	**Sb**	**23 36 37.8**	**+0.9**
JKRS	**Kuro-shima**	**1.44**	**82**	*e*P	**Pn**	**23 36 18.6**	**+0.7**
LIOB	**Emei**	**1.44**	**295**	*e*P	**Pn**	**23 36 18.6**	**+0.5**
LIOB				*e*S	**Sb**	**23 36 37.7**	**+0.4**
NSTT	**Nanjuang**	**1.45**	**294**	*e*P	**Pb**	**23 36 19.1**	**-0.3**
NSTT				*e*S	**Sb**	**23 36 37.6**	**+0.2**
TYC	**Yuchr**	**1.47**	**265**	*e*P	**Pn**	**23 36 18.5**	**+0.2**
JIJ	**Ishigaki jima**	**1.58**	**78**	*e*P	**Pn**	**23 36 20.6**	**+0.8**
JIJ				*e*S	**Sn**	**23 36 40.0**	**+0.4**
JISG	**Ishigakijimahi**	**1.78**	**72**	*e*S	**Sn**	**23 36 44.8**	**+0.1**

*AZER **20** 23:42:15.2, 41.07N×44.25E, h4km, ml1.9*
*AFAD **20** 23:42:16.4, 41.26N×43.78E, h8km±3km, ML1.7*
*NORS **20** 23:42:16.5, 41.48N×43.99E, h5km, MPVA3.2*
ISC 20 23:42:13.8±1.1, 41.27N±0.02×43.99E±0.02, h3km±11km, n27, σ0°88/53, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EAK	**Akyaka**	**0.65**	**206**	P	**Pb**	**23 42 27.1**	**-0.7**
EAK				S	**Sg**	**23 42 35.1**	**+0.5**
EAK				IAML		23 42 44.0	
	comp=E,36nm,0.4s						
DIGO	**Kars**	**0.97**	**209**	P	**Pb**	**23 42 33.4**	**+0.1**
DIGO				S	**Sg**	**23 42 44.0**	**-0.9**
DIGO				IAML		23 42 54.0	
	comp=E,38nm,0.4s						
EPOS	**Posof**	**0.98**	**285**	P	**Pg**	**23 42 32.5**	**0.0**
EPOS				S	**Sg**	**23 42 44.1**	**-1.1**
EPOS				IAML		23 42 49.0	
	comp=N,21nm,0.5s						
BOZK	**Kars-Merkez-Bo**	**1.02**	**229**	P	**Pn**	**23 42 34.8**	**-0.4**
BOZK				S	**Sg**	**23 42 47.1**	**+0.5**
BOZK				IAML		23 42 51.0	
	comp=N,18nm,0.4s						
AHAN	**Ardahan-Merkez**	**1.03**	**265**	P	**Pg**	**23 42 33.6**	**+0.1**
AHAN				S	**Sb**	**23 42 47.9**	**-0.5**
AHAN				IAML		23 42 50.0	
	comp=E,32nm,0.4s						
AHAN				IAML		23 42 57.0	
	comp=N,20nm,0.6s						
QZX	**Qazax, Azerbai**	**1.07**	**101**	P	**Pb**	**23 42 34.9**	**0.0**
QZX				S	**Sb**	**23 42 49.2**	**0.0**
GOLE	**Ardahan-G¶le**	**1.13**	**248**	P	**Pn**	**23 42 36.4**	**-0.3**
GOLE				S	**Sg**	**23 42 50.0**	**-0.2**
GOLE				IAML		23 42 53.0	
	comp=N,20nm,0.4s						
GOLE				IAML		23 42 54.0	
	comp=E,19nm,0.6s						
GUDG	**Gudauri**	**1.25**	**17**	*e*Pg	**Pg**	**23 42 37.9**	**+0.1**
GUDG				*e*Sg	**Sg**	**23 42 54.4**	**+0.3**
IGDI	**IGDIR**	**1.40**	**177**	P	**Pg**	**23 42 41.0**	**+0.5**
IGDI				S	**Sb**	**23 42 58.2**	**-0.6**
IGDI				IAML		23 43 00.0	
	comp=N,16nm,0.4s						
IGDI				IAML		23 43 00.0	
	comp=E,14nm,0.2s						
IGDI	**IGDIR**	**1.40**	**177**	P	**Pg**	**23 42 41.1**	**+0.5**
IGDI				S	**Sn**	**23 42 59.9**	**+0.7**
GDB	**GEDABAY**	**1.45**	**112**	P	**Pb**	**23 42 41.0**	**-0.4**
GDB				S	**Sb**	**23 42 59.9**	**-0.4**
LACR	**Lac**	**1.58**	**8**	*e*Pg	**Pb**	**23 42 43.7**	**0.0**
LACR				*e*Sg	**Sg**	**23 43 04.7**	**+0.3**
KOTA	**Agri, Merkez-K**	**1.58**	**202**	P	**Pg**	**23 42 45.1**	**+1.1**
KOTA				S	**Sg**	**23 43 06.4**	**+2.0**
DIGR	**Digorskoe uzhe**	**1.66**	**350**	*e*Pg	**Pg**	**23 42 46.1**	**+0.5**
DIGR				*e*Sg	**Sg**	**23 43 07.5**	**+0.4**
DDEM	**Demirkent**	**1.73**	**258**	P	**Pn**	**23 42 44.3**	**-0.5**
DDEM				IAML		23 43 16.0	
	comp=E,12nm,0.3s						
DDEM				IAML		23 43 18.0	
	comp=N,14nm,0.5s						
DBAD	**Bademkaya**	**1.75**	**263**	P	**Pb**	**23 42 46.7**	**+0.1**
DBAD				S	**Sn**	**23 43 06.8**	**-1.0**
DBAD				IAML		23 43 11.0	
	comp=N,12nm,0.4s						
DBAD				IAML		23 43 12.0	
	comp=E,12nm,0.6s						
KORR	**Kora**	**1.82**	**2**	*e*Pg	**Pg**	**23 42 49.5**	**+0.8**
KORR				*e*Sg	**Sg**	**23 43 14.4**	**+2.1**
GANJ	**Ganja**	**1.88**	**109**	P	**Pb**	**23 42 48.3**	**-0.4**
GANJ				S	**Sb**	**23 43 12.8**	**+0.4**
HOMI	**Horasan**	**2.00**	**233**	P	**Pg**	**23 42 52.4**	**+0.3**
HOMI				S	**Sn**	**23 43 15.0**	**+0.8**
HOMI				IAML		23 43 29.0	
	comp=N,5.2nm,0.6s						
LSNR	**Lesken**	**2.01**	**357**	*e*Pg	**Pg**	**23 42 52.0**	**-0.3**
LSNR				*e*Sg	**Sg**	**23 43 19.0**	**+0.5**
ZKTA	**Zakatala**	**2.02**	**79**	P	**Pb**	**23 42 51.4**	**+0.4**
ZKTA				S	**Sg**	**23 43 19.0**	**+0.5**
NEUR	**Neytrino**	**2.21**	**335**	*e*Pg	**Pg**	**23 42 55.5**	**-0.6**
NEUR				*e*Sg	**Sb**	**23 43 22.9**	**+0.6**
SBZ	**Shahbuz**	**2.22**	**147**	P	**Pb**	**23 42 55.1**	**+0.6**
SBZ				S	**Sg**	**23 43 23.6**	**-1.4**
DVE	**Vedeno**	**2.32**	**43**	*e*Pg	**Pg**	**23 42 57.4**	**-0.8**
DVE				*e*Sg	**Sg**	**23 43 27.6**	**-0.8**
NAX	**Nakhchivan**	**2.39**	**151**	P	**Pb**	**23 42 57.9**	**+0.5**
NAX				S	**Sb**	**23 43 25.4**	**-1.9**
SEKA	**Sheki**	**2.42**	**90**	P	**Pb**	**23 42 57.9**	**-0.2**
SEKA				S	**Sb**	**23 43 28.3**	**0.0**
QBL	**Gabala**	**2.93**	**95**	P	**Pb**	**23 43 04.2**	**-2.4**
QBL				S	**Sn**	**23 43 39.2**	**+2.3**

*JMA **20** 23:47:53.7±0.2, 24°N±1°×122.8E±0.6, h29km±4km, MV2.9/13, NW OFF ISHIGAKIJIMA IS*
*TAP **20** 23:47:54.0, 24.07N×122.80E, h20km, ML3.5, C*
ISC 20 23:47:51.3±1.1, 23.93N±0.02×122.88E±0.02, h19km±3km, n103, σ0°69/167, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.52**	**7**	*e*P	**Pn**	**23 48 02.4**	**-1.4**
JYNG				S	**Sb**	**23 48 08.5**	**-0.6**
YOJ	**Yonaguni jima**	**0.54**	**13**	P	**Pn**	**23 48 03.0**	**-1.1**
YOJ	**Yonaguni jima**	**0.54**	**13**	S	**Sg**	**23 48 09.5**	**0.0**
YOJ	**Yonaguni jima**	**0.54**	**13**	*i* P	**Pn**	**23 48 03.3**	**-0.8**
YOJ				*i* S	**Sg**	**23 48 09.7**	**+0.1**
YOJ	**Yonaguni jima**	**0.54**	**13**	*e*P	**Pn**	**23 48 03.0**	**-1.1**
YOJ				S	**Sg**	**23 48 09.3**	**-0.3**
EOS4	**EOS4**	**0.55**	**290**	*i* P	**Pg**	**23 48 03.0**	**+0.8**
EOS4				S	**Sb**	**23 48 09.5**	**+0.2**
EOS3	**EOS3**	**0.62**	**305**	*i* P	**Pg**	**23 48 04.3**	**+0.7**
EOS3				S	**Sg**	**23 48 12.8**	**0.0**
EOS2	**EOS2**	**0.76**	**310**	*i* P	**Pn**	**23 48 07.1**	**0.0**
EOS2				S	**Sg**	**23 48 17.3**	**+0.9**
HATJ	**Hateruma jima**	**0.86**	**81**	*e*P	**Pn**	**23 48 09.8**	**+1.4**
HATJ				S	**Sn**	**23 48 22.1**	**+1.6**
IRIF	**Iriomote-Funau**	**0.88**	**63**	P	**Pn**	**23 48 09.3**	**+0.6**
IRIF				S	**Sn**	**23 48 21.8**	**+0.8**
JKRS	**Kuro-shima**	**1.08**	**73**	*e*P	**Pg**	**23 48 13.2**	**+0.9**
EAHA	**Aohua**	**1.11**	**291**	*e*P	**Pb**	**23 48 12.5**	**+0.5**
EAHA				*e*S	**Sn**	**23 48 27.7**	**+0.9**
EWUT	**Wuta**	**1.13**	**297**	*e*P	**Pb**	**23 48 12.4**	**+0.2**
EWUT				*e*S	**Sb**	**23 48 26.5**	**0.0**
ESAO	**Su ao**	**1.14**	**304**	*e*P	**Pb**	**23 48 12.9**	**+0.4**
ESAO				*e*S	**Sb**	**23 48 26.4**	**-0.6**
ENA	**Nanau**	**1.15**	**296**	*e*P	**Pg**	**23 48 13.3**	**-0.3**
ENA				*e*S	**Sb**	**23 48 27.7**	**+0.4**
TWC	**Suao**	**1.16**	**306**	*i* P	**Pb**	**23 48 12.9**	**+0.2**
TWC				*e*S	**Sb**	**23 48 26.0**	**-1.4**
ETL	**Fush Village**	**1.17**	**281**	*e*P	**Pg**	**23 48 14.2**	**+0.2**
TWD	**Chiawan**	**1.18**	**277**	*e*P	**Pb**	**23 48 13.7**	**+0.5**
NACB	**Ninganchiao**	**1.20**	**282**	P	**Pb**	**23 48 13.7**	**+0.2**
NACB	**Ninganchiao**	**1.20**	**282**	P	**Pb**	**23 48 13.7**	**+0.2**
SHUL	**Shoufeng**	**1.21**	**263**	*e*P	**Pg**	**23 48 14.5**	**-0.3**
SHUL				*e*S	**Sn**	**23 48 30.1**	**+0.8**
JIJ	**Ishigaki jima**	**1.23**	**69**	*e*P	**Pg**	**23 48 15.3**	**+0.1**
TEGC	**Jichi Village**	**1.25**	**260**	*e*P	**Pg**	**23 48 15.0**	**-0.4**
EGS		**1.25**	**317**	*e*P	**Pg**	**23 48 15.8**	**+0.3**
ETM	**Tongmen**	**1.27**	**272**	*e*P	**Pb**	**23 48 14.6**	**-0.1**
ETM				*e*S	**Sb**	**23 48 31.9**	**+1.2**
NDS	**Dongshan**	**1.27**	**304**	P	**Pb**	**23 48 15.2**	**+0.5**
NDS				*e*S	**Sn**	**23 48 30.1**	**-0.7**
ETLH	**Xiulin Townshi**	**1.30**	**282**	*e*P	**Pg**	**23 48 16.1**	**-0.5**
ETLH				*e*S	**Sb**	**23 48 33.2**	**+1.4**
ILA	**Ilan**	**1.32**	**309**	*e*S	**Sn**	**23 48 32.5**	**+0.5**
LXIB	**Xiulin Townshi**	**1.34**	**274**	*e*P	**Pb**	**23 48 16.3**	**+0.2**
LXIB				*e*S	**Sb**	**23 48 33.7**	**+0.7**
TWB1	**Santiao Chiao**	**1.34**	**323**	*e*P	**Pb**	**23 48 15.7**	**-0.2**
TWB1				*e*S	**Sn**	**23 48 32.1**	**-0.4**
TWE	**Neicheng**	**1.35**	**306**	*e*P	**Pb**	**23 48 16.8**	**+0.7**
TWE				*e*S	**Sn**	**23 48 32.8**	**0.0**
LATG	**Datong**	**1.37**	**296**	*i* P	**Pb**	**23 48 17.2**	**+0.7**
LATG				S	**Sb**	**23 48 34.5**	**+0.7**
WARBT	**Fenglin Townsh**	**1.38**	**261**	*e*P	**Pb**	**23 48 16.4**	**-0.2**
ENTT	**Nioudou**	**1.39**	**301**	P	**Pb**	**23 48 17.4**	**+0.6**
ENTT				*e*S	**Sn**	**23 48 33.8**	**+0.1**
HGSD	**Ruisui**	**1.40**	**252**	*e*P	**Pb**	**23 48 16.4**	**-0.6**
TIPB	**Shuangxi**	**1.41**	**317**	P	**Pb**	**23 48 16.9**	**-0.3**
TIPB				*e*S	**Sn**	**23 48 33.9**	**-0.3**
NDT	**Datong Townshi**	**1.41**	**298**	*e*P	**Pg**	**23 48 18.1**	**-0.5**
NDT				*e*S	**Sb**	**23 48 35.1**	**+0.3**
FUSB	**Fushanzhiwuyua**	**1.44**	**305**	P	**Pg**	**23 48 18.4**	**-0.6**
FUSB				S	**Sb**	**23 48 35.9**	**+0.4**
ECBN	**Changbin**	**1.45**	**245**	*e*P	**Pb**	**23 48 18.0**	**+0.3**
ECBN				*e*S	**Sn**	**23 48 35.2**	**+0.2**
NNSB	**Datong**	**1.45**	**290**	*i* P	**Pb**	**23 48 18.2**	**+0.3**
NNSB				S	**Sb**	**23 48 36.6**	**+0.6**
JISG	**Ishigakijimahi**	**1.46**	**63**	*e*P	**Pg**	**23 48 18.5**	**-1.0**
NNS	**Nan Shan**	**1.46**	**291**	*e*P	**Pb**	**23 48 18.6**	**+0.5**
NNS				*e*S	**Sb**	**23 48 36.9**	**+0.5**
EHYH	**Wanrong**	**1.47**	**253**	*e*P	**Pb**	**23 48 18.3**	**+0.2**
EHYH				*e*S	**Sb**	**23 48 37.0**	**+0.5**
SXI1	**Grass Mountain**	**1.47**	**322**	*e*P	**Pb**	**23 48 17.6**	**-0.6**
SXI1				*e*S	**Sn**	**23 48 36.6**	**+0.7**
EHY	**Hungye**	**1.49**	**254**	*e*P	**Pb**	**23 48 17.9**	**-0.5**
WHF	**Hehuan Shan**	**1.49**	**279**	*e*P	**Pb**	**23 48 18.9**	**+0.2**
NWLT	**Wulai**	**1.51**	**304**	*e*P	**Pg**	**23 48 19.8**	**-0.7**
NWLT				*e*S	**Sb**	**23 48 37.7**	**0.0**
NWF	**Wu-fen Shan**	**1.51**	**319**	*i* P	**Pb**	**23 48 18.4**	**-0.5**
NWF				S	**Sn**	**23 48 36.8**	**0.0**
WFSB	**Wu-fen Shan**	**1.51**	**319**	P	**Pb**	**23 48 18.4**	**-0.4**
WFSB				S	**Sn**	**23 48 36.4**	**-0.3**
FUSS	**Fushou**	**1.53**	**282**	*e*P	**Pb**	**23 48 19.8**	**+0.5**
YULB	**Yu-li**	**1.54**	**250**	P	**Pb**	**23 48 18.5**	**-0.3**
YULB	**Yu-li**	**1.54**	**250**	S	**Sb**	**23 48 38.3**	**-0.3**
YULB	**Yu-li**	**1.54**	**250**	*e*P	**Pb**	**23 48 19.0**	**-0.5**
YULB				*e*S	**Sb**	**23 48 39.2**	**+0.6**
YHNB	**Yeheng**	**1.56**	**298**	P	**Pb**	**23 48 20.1**	**+0.5**
YHNB	**Yeheng**	**1.56**	**298**	S	**Sb**	**23 48 39.3**	**+0.3**
YHNB	**Yeheng**	**1.56**	**298**	P	**Pb**	**23 48 19.8**	**+0.2**
YHNB				S	**Sb**	**23 48 39.0**	**0.0**
OWD	**Renai**	**1.56**	**271**	*e*P	**Pb**	**23 48 19.4**	**-0.3**
OWD				*e*S	**Sb**	**23 48 39.0**	**-0.2**
TWF1	**Yuli**	**1.56**	**249**	*e*P	**Pb**	**23 48 19.8**	**+0.1**
TWF1				*e*S	**Sb**	**23 48 39.6**	**+0.6**
NSK	**Sanguang**	**1.57**	**298**	*e*P	**Pb**	**23 48 20.5**	**+0.6**
NSK				*i* S	**Sn**	**23 48 39.0**	**+0.

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAI	Ambon	3.83	315	P	Pn	00 04 51.6	+3.2
KMPI	Kaimana, Papua	3.90	46	P	Pn	00 04 51.7	+2.2
KRAI	Karang Ratu	3.96	321	P	Pn	00 04 54.1	+3.8
SIJI	Sorong	5.52	4	P	Pn	00 05 12.2	+0.5
	32nm,0.3s,baz=223,slow=23,SNR=40						
SIJI				S	Sn	00 06 08.5	-5.3
	70nm,0.2s,baz=254,slow=23,SNR=17						
	76nm,0.3s						
SIJI	Sorong	5.52	4	P	Pn	00 05 12.1	+0.5
SWI	Sorong	5.53	4	P	Pn	00 05 12.5	+0.8
RKPI	Ransiki, Papua	5.86	34	P	Pn	00 05 17.6	+1.3
DRS	Darwin Rock St	5.98	180	P	Pn	00 05 19.0	+1.1
DRS	Darwin Rock St	5.98	180	S	Sn	00 06 24.7	-0.4
MWPI	Manokwari, Pap	6.28	30	P	Pn	00 05 22.5	+0.5
	0.9nm166nm,0.6s						
MTN	Manton Dam	6.39	178		Pn	00 05 23.1	-0.5
MTN				Sn	Sn	00 06 32.2	-3.0
SANI	Sanana	6.54	311	P	Pn	00 05 28.4	+2.7
	0.2nm30nm,0.8s						
SANI				S	Sn	00 06 42.8	+3.8
	0.2nm30nm,0.8s						
BAKI	Biak	7.34	45	P	Pn	00 05 37.4	+0.9
	0.3nm86nm,0.7s						
BAKI				S	Sn	00 06 58.4	0.0
	0.3nm86nm,0.7s						
SOEI	Soe	7.36	243	Pn	Pn	00 05 35.0	-2.0
SOEI	Soe	7.36	243	P	Pn	00 05 39.2	+2.2
BATI	Baumata	8.10	242	S	Sn	00 07 11.6	-5.5
	43nm,0.6s,baz=227,slow=22,SNR=8.4						
KNRA	Kununurra	9.44	193		Pn	00 06 05.0	-0.3
KAPI	Kappang	11.19	277	P	Pn	00 06 31.5	+2.3
	0.9nm,0.3s,baz=195,slow=2.4,SNR=5.3						
KAPI				LR	LR	00 10 56.0	
	comp=Z,48nm,18.3s,baz=122,slow=38						
	8.3nm,1.0s						
KAPI	Kappang	11.19	277	Pn	Pn	00 06 34.1	+4.9
FITZ	Fitzroy Crossi	12.70	203	P	Pn	00 06 47.4	-2.4
	3.9nm,0.3s,baz=36,slow=9.5,SNR=79						
FITZ				S	Sn	00 08 59.6	-10
	10.0nm,0.4s,baz=221,slow=22,SNR=5.9						
	10nm,0.5s						
WB0	Warramunga Arr	13.70	166		Pn	00 07 00.8	-2.6
WRAB	Tennant Creek	13.85	166	P	Pn	00 07 01.8	-3.6
WRAB	Tennant Creek	13.85	166	Pn	Pn	00 07 01.6	-3.8
WRA	Warramunga Arr	13.86	166	P	Pn	00 07 01.4	-4.1
	0.9nm,0.3s,baz=356,slow=14,SNR=42						
WRA				S	Sn	00 09 25.7	-12
	18nm,0.8s,baz=331,slow=25,SNR=15						
	3.2nm,0.7s						
WB1	Warramunga Ar.	13.87	166	P	Pn	00 07 01.9	-3.8
WR8	Warramunga Arr	13.91	166		Pn	00 07 03.4	-2.8
COEN	Coen	14.21	123	P	Pn	00 07 08.7	-1.4
COEN	Coen	14.21	123	Pn	Pn	00 07 09.3	-0.9
QIS	Mount Isa	16.40	150	P	Pn	00 07 35.9	-2.3
AS31	Alice Springs	17.39	171		Pn	00 07 49.8	-0.8
ASAR	Alice Springs	17.39	171	P	Pn	00 07 49.9	-0.8
	0.8nm,0.3s,baz=345,slow=10,SNR=49						
ASAR				S	Sn	00 10 51.5	-12
	5.6nm,0.6s,baz=359,slow=27,SNR=10						
	4.6nm,0.7s						
ASAR	Alice Springs	17.39	171		Pn	00 07 50.6	0.0
MBWA	Marble Bar	18.22	215	P	P	00 07 59.0	-1.2
MBWA				IAmb	IAmb	00 08 02.9	
	comp=Z,12nm,1.1s						
PSA00	Pilbara Seismi	18.48	214	P	P	00 08 03.4	+0.4
PSA00	Pilbara Seismi	18.48	214	P	P	00 08 04.0	+1.0
PSA00				IAmb	IAmb	00 08 17.9	
	comp=Z,6.3nm,0.8s						
KKM	Kota Kinabalu	19.19	310	P	P	00 08 12.1	+1.2
KKM				IAmb	IAmb	00 08 13.1	
	comp=Z,19nm,0.6s						
BBJI	Bungbulang	23.11	266	P	P	00 08 52.9	-0.1
BBJI				IAmb	IAmb	00 08 53.8	
	comp=Z,6.7nm,0.6s						
LEM	Lembang	23.14	268	LR	LR	00 19 08.9	
	comp=Z,35nm,18.0s,baz=193,slow=40						
FORT	Forrest	24.39	186	P	P	00 09 03.1	-1.3
FORT				IAmb	IAmb	00 09 16.9	
	comp=Z,7.6nm,0.7s						
STKA	Stephens Creek	27.23	160	P	P	00 09 28.6	-1.7
	comp=Z,0.5nm,0.4s,baz=324,slow=19,SNR=1.1						
	comp=Z,0.5nm,0.4s						
CMAR	Chiang Mai Arr	40.06	309	P	P	00 11 21.1	-0.4
	comp=Z,2.0nm,0.3s,baz=135,slow=7.1,SNR=16						
	comp=Z,2.0nm,0.3s						
CHTO	Chiang Mai	40.26	309		P	00 11 23.8	+0.6
CHTO				IAmb	IAmb	00 11 24.4	
	comp=Z,4.8nm,0.7s						
PZH	PanZhiHua	43.25	320	P	P	00 11 52.0	+4.4
HHC	Hu-ho-hao-te	50.28	341	eP	P	00 12 45.1	+2.8
HHC				pmax	pmax		
	comp=Z,13nm,0.5s						
HHC				pmax	pmax		
	comp=Z,120nm,3.5s						
EVN	Everest	54.57	311		P	00 13 14.8	-0.2
EVN				IAmb	IAmb	00 13 15.6	
	comp=Z,1.9nm,0.5s						
SONM	Songino Array	58.18	341	P	P	00 13 40.9	+1.2
	comp=Z,0.7nm,0.5s,baz=161,slow=7.0,SNR=6.7						
	comp=Z,0.7nm,0.5s						
MKAR	Makanchi Array	68.23	326	P	P	00 14 47.1	+1.0
	comp=Z,5.1nm,0.5s,baz=118,slow=8.3,SNR=78						
	comp=Z,5.1nm,0.5s						
MKAR	Makanchi Array	68.23	326		P	00 14 46.9	+0.7
KSH2	Kashi	68.30	316	P	P	00 14 47.9	+1.0
MAKZ	Makanchi	68.42	326		P	00 14 47.7	+0.4
KDJ	Kajisay	68.70	320	P	P	00 14 49.6	+0.3
KDJ				IAmb	IAmb	00 14 51.4	
	comp=Z,2.9nm,0.6s						
AAK	Ala-Archa	70.68	319		P	00 15 02.2	+0.7
AAK				IAmb	IAmb	00 15 03.7	
	comp=Z,1.8nm,0.8s						
ARSB	Arslanbob	71.06	318	P	P	00 15 04.1	+0.3
ZALV	Zalesovo Beam	71.46	333	P	P	00 15 05.4	-0.4
	comp=Z,0.4nm,0.3s,baz=125,slow=9.0,SNR=2.8						
	comp=Z,0.4nm,0.3s						
GAR	Garm	71.90	314		P	00 15 08.6	-0.3
BTK	Batken	71.99	316	P	P	00 15 08.9	-0.4
BTK				IAmb	IAmb	00 15 13.6	
	comp=Z,2.7nm,0.8s						
KURBB	Kurchatov Arra	72.49	328	P	P	00 15 12.6	+0.6
	comp=Z,0.8nm,0.3s,baz=124,slow=4.8,SNR=5.0						
	comp=Z,0.8nm,0.3s						
BVAR	Borovoye Array	78.05	327	P	P	00 15 44.3	+0.3
	comp=Z,1.1nm,0.7s,baz=116,slow=8.5,SNR=4.5						
	comp=Z,1.1nm,0.7s						

*ECX **21** 00:10:09.9±0.3, 29°.82N×114°.88W, h4km±4km, MD2.2, ML2.5*

*MEX **21** 00:10:12.3±0.5, 29°.82N×115°.00W, h20km±999km, MD3.6*

ISC 21 00:10:08.5±1.5**, 29°.82N**±0°.07×**114°.92W**±0°.06**, h10**km±12km**, n11, σ0s52**/22**, 2C-3D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLGB	San Luis Gonza	0.45	88	eP	Pg	00 10 17.5	+0.2
SLGB				eS	Sg	00 10 23.1	-0.1
SLGB				IAML		00 10 23.5	
	comp=N,680nm,0.2s						
SLGB				⇓e		00 10 23.5	
SLGB				IAML		00 10 24.0	
	comp=E,492nm,0.2s						
SLGB				⇓e		00 10 24.0	
SQX	San Quintin	1.12	313	eP	Pb	00 10 29.8	-0.1
SQX				eS	Sg	00 10 45.0	+0.4
SQX				IAML		00 10 47.2	
	comp=N,122nm,0.2s						
SQX				⇑e		00 10 47.2	
SFX	San Felipe	1.22	3	eP	Pn	00 10 30.9	-0.7
SFX				eS	Sb	00 10 47.4	0.0
SFX	San Felipe	1.22	3	eP	Pg	00 10 32.3	+0.4
SFX				eS	Sb	00 10 47.0	-0.4
SPIG	San Pedro Mart	1.31	339	eP	Pb	00 10 33.7	+0.2
SPIG				eS	Sn	00 10 51.5	+0.5
SPIG				⇑e		00 10 55.7	
SPIG	San Pedro Mart	1.31	339	eP	Pb	00 10 33.7	+0.2
SPIG				eS	Sb	00 10 50.4	-0.1
BAHB	Baha de los	1.47	126	eP	Pb	00 10 35.9	0.0
BAHB				eS	Sb	00 10 54.9	+0.2
ECBX	El Chinero	1.65	356	eP	Pn	00 10 37.6	0.0
ECBX				eS	Sb	00 11 00.0	0.0
ECBX				⇓e		00 11 03.7	
ECBX				IAML		00 11 03.7	
	comp=E,22nm,0.6s						
VTX	Valle De La Tr	1.74	335	eP	Pb	00 10 39.9	-0.6
VTX				eS	Sb	00 11 03.2	+0.7
SV2X	San Vicente	1.90	324	eP	Pb	00 10 42.5	-0.7
SV2X				eS	Sb	00 11 07.7	+0.8
CBX	Cerro Bola	2.90	329	eP	Pg	00 11 03.5	-0.6
CBX				eS	Sb	00 11 37.0	+0.9

HEL 21 00:21:49.8±0.2**, 67°.82N**×**20°.19E, h0**km**, ML1.1, Suspected explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LANU	Lannavaara	0.72	70	PG	Pg	00 22 02.6	-1.0
LANU				SG	Sg	00 22 12.4	-0.5
HEF	Hetta	1.43	64	eP	Pn	00 22 14.6	-2.3
HEF	Hetta	1.43	64	PG	Pn	00 22 15.4	-1.6
HEF				smax	smax	00 22 32.8	
	comp=Z,1.4nm,0.2s						
HEF				SB	Sg	00 22 34.5	-1.1
ERTU	Ertsjaerv	1.49	148	PG	Pn	00 22 16.6	-1.1
ERTU				SG	Sg	00 22 36.0	-1.6
KLF	Kolari	1.56	110	PG	Pn	00 22 17.6	-1.2
KLF				smax	smax	00 22 36.7	
	comp=Z,1.2nm,0.2s						
KLF				SG	Sn	00 22 38.6	-1.2
KTK1	Kautokeino	1.65	42	eP	Pn	00 22 18.4	-1.6
KTK1	Kautokeino	1.65	42	PG	Pn	00 22 19.1	-0.9
KTK1				SN	Sg	00 22 43.3	+0.7
TRO	Tromso	1.88	346	PG	Pn	00 22 23.6	+0.5
TRO				SG	Sb	00 22 48.6	-0.4
TOF	Tornio	2.39	135	PB	Pn	00 22 31.2	+1.2
TOF				smax	smax	00 23 00.3	
	comp=Z,0.5nm,0.2s						
TOF				SB	Sn	00 23 01.4	+1.4
RNF	Rovaniemi	2.57	115	PB	Pn	00 22 34.0	+1.4
RNF				SB	Sb	00 23 07.3	-1.5
ARA0	ARCESS Array S	2.60	46	PB	Pn	00 22 33.6	+0.6
ARA0				SB	Sn	00 23 07.2	+2.0
RAJF	Raja-Jooseppi	3.11	74	SB	Sb	00 23 22.9	-1.3
KEV	Kevo	3.15	49	SB	Sn	00 23 19.3	+0.5
RANF	Ranua	3.17	122	SG	Sb	00 23 26.1	+0.1

UPP 21 00:22:40.6±0.0**, 67°.82N**×**20°.21E, h0**km**, ML2.5, Suspected explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	Kurravaara	0.14	19	P	Pg	00 22 43.6	+0.3
KUA				S	Sg	00 22 45.7	+0.4
RATU	Laukkuluspa	0.24	272	P	Pg	00 22 45.3	+0.2
KOVU	Salmi	0.41	357	P	Pg	00 22 48.4	0.0
NIKU	Nikkaluokta	0.45	277	P	Pg	00 22 49.3	+0.1
LANU	Lannavaara	0.71	70	P	Pg	00 22 54.1	-0.1
DUNU	Dundret	0.71	169	P	Pg	00 22 53.7	-0.5
MASU	Masugnsbyn	0.77	117	P	Pg	00 22 55.5	+0.1
SALU	Saltoluokta	0.79	237	P	Pg	00 22 55.7	0.0
ERTU	Ertsjaerv	1.48	148	P	Pn	00 23 08.0	-0.5
HARU	Harads	1.69	169	P	Pn	00 23 11.2	0.0

*IDC **21** 00:22:55.2±0.7, 23°.02N×124°.30E, h0km, mb4.1/19, mbtmp4.0/22, ML4.0/4, MS3.3/11, Error ellipse: s-maj=21.2km s-min=13.9km az=73.0*

*NEIC **21** 00:22:57.2±2.1, 22°.97N±0°.05×124°.04E±0°.06, h10km±1km, mb4.6/99, Error ellipse: s-maj=9.9km s-min=8.9km az=106.0*

*NIED **21** 00:22:58.5, 22°.93N×124°.03E, h48km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr-2.86; Mθθ3.13; Mφφ-0.26; Mrθ2.57; Mθφ-0.74; Mφr-1.93; Fault plane solution: M0 4.46000×10¹⁵ NP1:φs83.00000°, δ26.00000°, λ-124.00000°. NP2:φs300.00000°, δ69.00000°, λ-75.00000°.*

*JMA **21** 00:22:58.5±0.3, 23°N±1°×12°4E±°, h48km, MD4.4/18, MV4.5/18, FAR S OFF ISHIGAKIJIMA*

*BJI **21** 00:22:58.5, 23°.03N×123°.80E, h10km, mB4.6/3, mb4.3/20, Ms3.7/5, Ms7 3.6/4*

ISC 21 00:22:57.1±3.6**, 22°.91N**±0°.04×**124°.03E**±0°.04**, h14**km±23km**, n178, σ1s16**/183**, mb4.5**/73**, MS3.2**/9**, Southeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	Hateruma jima	1.16	350	P	Pn	00 23 18.4	-0.6
HATJ				S	Sb	00 23 32.8	-1.2
JKRS	Kuro-shima	1.33	359	i P	Pn	00 23 21.3	+0.1
JKRS				A	A	00 23 21.3	
	comp=N,16nm,1.5s,comp=E,25nm,0.6s						
JKRS				S	Sn	00 23 37.5	-1.2
IRIF	Iriomote-Funau	1.45	349	i P	Pn	00 23 22.9	0.0
IRIF				A	A	00 23 22.9	
	comp=N,8.0nm,2.2s,comp=E,9.0nm,0.4s						
IRIF				S	Sn	00 23 40.3	-1.5
JIJ	Ishigaki jima	1.46	4	i P	Pn	00 23 22.4	-0.6
JIJ				S	Sn	00 23 39.5	-2.5
JISG	Ishigakijimahi	1.69	9	P	Pn	00 23 26.1	-0.2
JISG				A	A	00 23 26.1	
	comp=N,10.0nm,0.5s,comp=E,18nm,0.6s						
JISG				S	Sn	00 23 46.0	-1.8
YOJ	Yonaguni jima	1.81	329	P	Pn	00 23 28.2	+0.3
YOJ	Yonaguni jima	1.81	329		Pn	00 23 27.5	-0.4
YOJ				Sn	Sn	00 23 49.1	-1.5
YOJ	Yonaguni jima	1.81	329	eP	Pn	00 23 28.1	+0.2
YOJ				S	Sn	00 23 48.7	-2.0
JYNG	Yonagunijimaku	1.83	327	P	Pn	00 23 28.4	+0.2
JYNG				S	Sn	00 23 50.0	-1.2
JTJ	Tarama	1.83	20	P	Pn	00 23 27.9	-0.3
JTJ				A	A	00 23 27.9	
	comp=N,7.0nm,2.2s,comp=E,7.0nm,1.4s						
JTJ				S	Sn	00 23 50.6	-0.7
JMJ2	Miyako jima3	2.18	33	eP	Pn	00 23 32.7	-0.3
JMJ2				eS	Sn	00 23 57.8	-2.0
JMJ	Miyako jima 2	2.23	31	P	Pn	00 23 33.7	+0.1
JOGS	Gusukube	2.24	34	eP	Pn	00 23 34.1	+0.4
JOGS				eS	Sn	00 24 00.5	-0.7
JIKM	Ikemajima	2.30	29	eS	Sn	00 24 01.8	-0.9
YULB	Yu-li	2.56	281	P	Pn	00 23 37.0	-1.2
YULB	Yu-li	2.56	281		Pn	00 23 36.6	-1.6
YULB				Sn	Sn	00 24 07.0	-2.3
NACB	Ninganchiao	2.57	300	P	Pn	00 23 37.5	-0.8
NACB	Ninganchiao	2.57	300	Pn	Pn	00 23 36.9	-1.4
TWGBT	Beinan	2.72	269	P	Pn	00 23 39.2	-1.2
TWG	Pinlang	2.73	269	Pn	Pn	00 23 39.1	-1.4
SSLB	Suanglung	2.96	288	P	Pn	00 23 42.8	-0.9
SSLB	Suanglung	2.96	288	Pn	Pn	00 23 43.1	-0.7
YHNB	Yeheng	3.00	306	P	Pn	00 23 45.3	+1.0
YHNB	Yeheng	3.00	306	Pn	Pn	00 23 44.9	+0.6
TATO	Taipei	3.11	312	P	Pn	00 23 47.7	+2.0
TATO	Taipei	3.11	312		Pn	00 23 46.4	+0.7
TPUB	Ta-pu	3.15	278	P	Pn	00 23 46.9	+0.5
TPUB	Ta-pu	3.15	278	Pn	Pn	00 23 47.0	+0.6
TPUB				Sn	Sn	00 24 22.6	-1.3
KNMB	Chin-men Tao	5.40	288	Pn	Pn	00 24 16.5	-0.8
JOW	Kunigami	5.49	44	Pn	Pn	00 24 16.1	-2.5
	comp=E,8.2nm,0.3s,baz=139,slow=19,SNR=26						
JOW				Sn	Sn	00 25 13.3	-8.2
	comp=E,6.0nm,0.3s,baz=222,slow=5.7,SNR=3.5						
	comp=E,23nm,0.4s						
JOW	Kunigami	5.49	44	P	Pn	00 24 17.5	-1.0
JOW	Kunigami	5.49	44		Pn	00 24 17.5	-1.0
JMZ	Minamidaito 2	7.17	65	P	Pn	00 24 39.2	-2.4
JMZ	Minamidaito 2	7.17	65	Pn	Pn	00 24 39.0	-2.7
SSE	Sheshan	8.54	343	P	Pn	00 25 01.5	+1.1
SSE				S	Sn	00 26 40.8	+4.2
SSE				pmax	pmax		
	comp=E,16nm,0.7s						
SSE				pmax	pmax		
	comp=E,100nm,5.8s						
SSE				L	L		
	comp=E,110nm,12.9s						
SSE				L	L		
	comp=E,170nm,13.6s						
TGY	Tagaytay City	9.23	199	Pn	Pn	00 25 12.2	+2.2
	comp=E,11nm,0.3s,baz=74,slow=14,SNR=3.1						
TGY				LR	LR	00 28 42.3	
	comp=E,182nm,19.2s,baz=124,slow=37						
NJ2	Nanjing	10.20	334	eP	Pn	00 25 25.4	+2.3
NJ2				pmax	pmax		
	comp=E,15nm,0.5s						
QIZ	Qiongzhong	13.80	256	P	Pn	00 26 11.9	-0.5
QIZ				S	Sn	00 28 45.3	-0.3
QIZ				L	L		
	comp=E,150nm,14.8s						
QIZ				L	L		
	comp=E,140nm,14.8s						
QIZ				L	L		
	comp=E,140nm,12.1s						
KSRS	Korea Array	14.88	12	Pn	Pn	00 26 25.2	-1.9
	comp=E,0.4nm,0.3s,baz=185,slow=12,SNR=9.0						
KSRS				LR	LR	00 32 35.6	
	comp=E,167nm,18.9s,baz=210,slow=40						
	comp=E,0.4nm,0.3s						
JGF	Kuroka	17.16	40	Pn	Pn	00 26 55.9	-0.7
MAJO	Matsushiro	18.31	39		Pn	00 27 09.1	-1.7
MJAR	Matsushiro Arr	18.31	39	P	Pn	00 27 09.2	-1.5
	comp=E,0.1nm,0.3s,baz=228,slow=9.5,SNR=32						
	comp=E,1.7nm,0.6s						
MJAR	Matsushiro Arr	18.31	39		Pn	00 27 09.8	-1.0
MJB9	Matsu-Tunnel	18.31	39	P	Pn	00 27 10.3	-0.5
BJT	Baijiatuau	18.32	340	P	Pn	00 27 11.0	+0.2
MYLDM	Lahad Datu	18.41	198	P	P	00 27 12.0	-0.1
PZH	PanZhiHua	20.56	285	P	Pn	00 27 39.1	+1.2
HHC	Hu-ho-hao-te	20.75	332	eP	Pn	00 27 40.1	+0.2
HHC				pmax	pmax		
	comp=E,14nm,0.6s						
LZH	Lanzhou	21.88	311	eP	P	00 27 49.8	-0.1
LZH				sP	pwP	00 28 02.5	+2.2
LZH				pmax	pmax		
	comp=E,17nm,1.0s						
TOLI2	Tolitoli	21.89	189	P	P	00 27 50.3	+0.4
LZDM	Lanzhou Array	21.92	311	P	P	00 27 52.4	+2.0
	comp=E,2.2nm,0.5s,baz=155,slow=7.8,SNR=3.8						
	comp=E,2.2nm,0.5s						
SBUM	Sibu	23.34	211	P	P	00 28 05.1	-0.1
CHTO	Chiang Mai	23.78	265	P	P	00 28 09.8	+0.3
CMAR	Chiang Mai Arr	23.87	264	P	P	00 28 13.2	+2.8
	comp=E,1.2nm,0.3s,baz=86,slow=9.0,SNR=4.3						
CMAR				LR	LR	00 38 54.4	
	comp=E,72nm,18.2s,baz=65,slow=40						
	comp=E,1.2nm,0.3s						
JEW	Eniwo	24.59	32	P	P	00 28 17.2	+0.4
SIJI	Sorong	24.66	162	LR	LR	00 35 34.5	
	comp=E,47nm,21.5s,baz=318,slow=31						
ASAJ	Asahikawa	26.10	31	LR	LR	00 39 09.7	
	comp=E,100nm,18.7s,baz=182,slow=38						
GTA2	Gaotai	26.41	314	eP	P	00 28 34.6	+1.1
GTA2				sP	pwP	00 28 47.3	+3.1
KLR	Kul'dur	26.97	11	LR	LR	00 39 22.0	
	comp=E,106nm,19.1s,baz=190,slow=37						
KAPI	Kappang	28.06	189	LR	LR	00 39 37.1	
	comp=E,62nm,21.6s,baz=328,slow=36						
YSS	Yuzhno-Sakhali	28.34	28	P	P	00 28 49.4	-1.1
ULN	Ulaanbaatar	28.36	336	P	P	00 28 50.3	-0.6
SONM	Songino Array	28.59	335	P	P	00 28 53.2	+0.3
	comp=E,0.9nm,0.6s,baz=146,slow=7.5,SNR=8.0						
SONM				LR	LR	00 41 39.1	
	comp=E,69nm,18.3s,baz=144,slow=39						
	comp=E,0.9nm,0.6s						
SONM	Songino Array	28.59	335	P	P	00 28 52.4	-0.6
MMRI	Maumere	31.40	183	P	P	00 29 17.1	-0.8
PBA	Port Blair	31.83	255	P	P	00 29 21.5	-0.2
TLY	Talaya	32.76	336	LR	LR	00 44 14.0	
	comp=E,45nm,19.3s,baz=136,slow=39						
WMQ	Urumqi	36.42	314	eP	P	00 30 02.3	+0.9
WMQ				pmax	pmax		
	comp=E,8.0nm,0.9s						
PETK	Petropavlovsk-	39.52	32	P	P	00 30 26.5	-0.8
MKAR	Makanchi Array	41.07	316	P	P	00 30 42.1	+1.8
	comp=E,4.7nm,0.7s,baz=105,slow=9.8,SNR=57						
	comp=E,4.7nm,0.7s						
MKAR	Makanchi Array	41.07	316		P	00 30 41.7	+1.4
COEN	Coen	41.16	151	P	P	00 30 41.7	+0.5
COEN				IAmb	IAmb	00 30 43.6	
	comp=Z,17nm,1.2s						
MAKZ	Makanchi	41.27	316		P	00 30 41.7	-0.3
MAKZ				IAmb	IAmb	00 30 55.1	
	comp=Z,14nm,0.8s						
ZAA0	Zalesovo Array	42.74	327		P	00 30 53.9	+0.1
ZALV	Zalesovo Beam	42.74	327	P	P	00 30 54.2	+0.4
	comp=Z,3.7nm,0.5s,baz=116,slow=8.6,SNR=20						
	comp=Z,3.7nm,0.5s						
ZALV	Zalesovo Beam	42.74	327		P	00 30 53.9	+0.1
KDJ	Kajisay	43.30	308		P	00 30 58.2	-0.5
KDJ				IAmb	IAmb	00 31 12.6	
	comp=Z,8.5nm,1.0s						
WB0	Warramunga Arr	43.60	166	P	P	00 31 01.1	0.0
WB0				IAmb	IAmb	00 31 02.3	
	comp=Z,10.0nm,1.1s						
WRA	Warramunga Arr	43.76	166	P	P	00 31 02.7	+0.3
	comp=Z,3.7nm,1.0s,baz=346,slow=8.9,SNR=14						
	comp=Z,3.7nm,1.0s						
WRA	Warramunga Arr	43.76	166	P	P	00 31 00.8	-1.5
WR8	Warramunga Arr	43.81	166	P	P	00 31 02.7	-0.1
WR8				IAmb	IAmb	00 31 04.9	
	comp=Z,12nm,1.4s						
MBWA	Marble Bar	44.00	186	P	P	00 31 03.4	-0.8
MBWA				IAmb	IAmb	00 31 30.1	
	comp=Z,22nm,1.5s						
NRN	Naryn	44.04	306		P	00 31 05.1	+0.1
NRN				IAmb	IAmb	00 31 19.3	
	comp=Z,9.8nm,1.2s						
KSH2	Kashi	44.05	303	P	P	00 31 07.6	+2.8
KSH2				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KURK	Kurchatov	44.74	320		P	00 31 09.9	-0.1
KURK				IAmb	IAmb	00 31 22.6	
	comp=Z,10nm,0.8s						
KURBB	Kurchatov Arra	44.76	320	P	P	00 31 11.7	+1.5
	comp=Z,4.3nm,0.8s,baz=112,slow=8.2,SNR=29						
	comp=Z,4.3nm,0.8s						
NIL	Nilore	45.59	295	P	P	00 31 16.4	-0.6
NIL				IAmb	IAmb	00 31 29.8	
	comp=Z,8.6nm,0.9s						
ARSB	Arslanbob	46.27	306	P	P	00 31 21.9	-0.6
AS31	Alice Springs	47.28	168	P	P	00 31 29.7	-0.6
ASAR	Alice Springs	47.28	168	P	P	00 31 31.6	+1.4
	comp=Z,1.6nm,0.9s,baz=353,slow=6.7,SNR=13						
ASAR				LR	LR	00 55 55.0	
	comp=Z,18nm,19.0s,baz=110,slow=42						
	comp=Z,1.6nm,0.9s						
ASAR	Alice Springs	47.28	168	P	P	00 31 29.6	-0.7
CTA	Charters Tower	47.92	151	LR	LR	00 53 16.5	
	comp=Z,43nm,19.1s,baz=6.0,slow=38						
BVAR	Borovoye Array	50.31	321	P	P	00 31 53.5	+0.3
	comp=Z,0.8nm,0.5s,baz=83,slow=7.5,SNR=5.3						
	comp=Z,0.8nm,0.5s						
BORK	Borovoye	50.36	321		P	00 31 53.0	-0.5
BORK				IAmb	IAmb	00 32 06.9	
	comp=Z,4.6nm,0.9s						
NRIK	Noril'sk	51.32	344	P	P	00 32 00.4	-0.2
	comp=Z,1.8nm,0.8s,baz=118,slow=7.5,SNR=4.8						
	comp=Z,1.8nm,0.8s						
NRIK	Noril'sk	51.32	344		P	00 31 60.0	-0.6
AB31	Akbulak array	56.19	315		P	00 32 37.3	+0.7
AB31				IAmb	IAmb	00 32 49.2	
	comp=Z,4.1nm,0.7s						
ABKAR	Akbulak array	56.19	315		P	00 32 36.8	+0.2
STKA	Stephens Creek	57.01	162	P	P	00 32 43.2	+0.7
	comp=Z,1.0nm,0.3s,baz=6.7,slow=17,SNR=1.6						
	comp=Z,1.0nm,0.3s						
STKA	Stephens Creek	57.01	162	P	P	00 32 42.9	+0.4
C16K	Lisburne Hills	61.77	23		P	00 33 15.6	+0.7
C16K				IAmb	IAmb	00 33 17.2	
	comp=Z,3.7nm,1.0s						
L14K	Kuka Creek	62.17	31	P	P	00 33 19.0	+1.3
N14K	Kuskokwak Cree	62.61	33	P	P	00 33 20.0	-0.7
N15K	Kwethluk River	63.41	33	P	P	00 33 27.1	+1.1
O15K	Ungalikthiuk R	63.55	34	P	P	00 33 26.9	-0.1
J17K	VABM Dome	63.92	29	P	P	00 33 29.7	+0.4
J17K				IAmb	IAmb	00 33 32.9	
	comp=Z,5.0nm,0.9s						
C19K	Lookout Ridge	63.95	23	P	P	00 33 30.4	+0.9
C19K				IAmb	IAmb	00 33 33.0	
	comp=Z,3.1nm,0.8s						
M16K	Timber Creek	63.96	32	P	P	00 33 30.3	+0.6
B20K	Meade River	64.85	22	P	P	00 33 35.8	+0.5
J19K	Poorman	65.45	29	P	P	00 33 39.8	+0.5
J19K				IAmb	IAmb	00 33 42.6	
	comp=Z,3.8nm,1.0s						
B21K	Ikpikpuk River	65.73	22	P	P	00 33 42.6	+1.5
P18K	Big Mountain,	65.89	34	P	P	00 33 43.2	+0.8
J20K	Nowinta River	66.09	28	P	P	00 33 45.2	+1.8
J20K				IAmb	IAmb	00 33 47.1	
	comp=Z,3.5nm,0.9s						
B22K	Teshekpuk Lake	66.13	22	P	P	00 33 45.9	+2.2
H21K	Melozitna Rive	66.57	27	P	P	00 33 48.6	+2.1
H21K				IAmb	IAmb	00 33 50.1	

comp=Z,4.8nm,0.9s
E22K **Anaktuvuk Pass** **66.80 24** P **P** **00 33 48.0 0.0**
E22K IAmb IAmb 00 33 51.9
comp=Z,6.5nm,1.2s
C23K **Itkillik River** **67.12 22** P **P** **00 33 50.0 0.0**
H22K **Ishtalitna Cre** **67.14 26** **P** **00 33 50.1 -0.1**
H22K IAmb IAmb 00 33 54.7
comp=Z,4.6nm,1.0s
D23K **Nanushuk River** **67.16 23** P **P** **00 33 51.8 +1.6**
G23K **Bananza Creek** **67.60 25** **P** **00 33 54.3 +1.1**
G23K IAmb IAmb 00 33 57.1
comp=Z,5.3nm,1.2s
L22K **Petersville** **67.75 30** P **P** **00 33 54.9 +0.8**
L22K IAmb IAmb 00 33 56.4
comp=Z,6.6nm,1.1s
D24K **Happy Valley** **67.80 23** P **P** **00 33 53.6 -0.7**
D24K IAmb IAmb 00 34 22.5
comp=Z,4.0nm,0.8s
E24K **Your Creek** **68.05 24** P **P** **00 33 57.6 +1.7**
E24K IAmb IAmb 00 33 59.4
comp=Z,2.3nm,0.7s
KBZ **Khabaz** **68.31 310** P **P** **00 33 59.1 +1.2**
comp=Z,1.6nm,0.9s,baz=101,slow=6.2,SNR=4.9
comp=Z,1.6nm,0.9s
F24K **Squaw Lake** **68.34 24** P **P** **00 33 59.6 +1.8**
F24K IAmb IAmb 00 34 27.6
comp=Z,3.3nm,0.8s
KIV **Kislovodsk** **68.41 310** P **P** **00 33 59.1 +0.4**
MCK **McKinley** **68.42 29** P **P** **00 33 56.4 -1.9**
RND **Reindeer** **68.50 29** P **P** **00 33 57.6 -1.3**
RND IAmb IAmb 00 34 36.0
comp=Z,4.7nm,0.8s
D25K **Kavik River** **68.65 22** P **P** **00 34 01.1 +1.4**
D25K IAmb IAmb 00 34 02.7
comp=Z,5.8nm,1.2s
CCB **Clear Creek Bu** **68.78 27** P **P** **00 34 01.6 +1.1**
ILAR **Eielson Array** **69.15 27** P **P** **00 34 00.6 -2.2**
comp=Z,0.3nm,0.5s,baz=275,slow=8.8,SNR=4.3
comp=Z,0.3nm,0.5s
ILAR **Eielson Array** **69.15 27** P **P** **00 34 01.4 -1.4**
F25K **Christian Rive** **69.18 24** P **P** **00 34 02.7 -0.3**
F25K IAmb IAmb 00 34 06.9
comp=Z,3.1nm,0.9s
DHY **Denali Highway** **69.22 29** P **P** **00 34 04.5 +1.1**
DHY IAmb IAmb 00 34 37.2
comp=Z,7.6nm,1.4s
C27K **Jago River** **69.53 22** P **P** **00 34 06.2 +1.1**
C27K IAmb IAmb 00 34 08.5
comp=Z,6.8nm,1.2s
F26K **Sheenjek River** **69.73 24** P **P** **00 34 06.4 0.0**
F26K IAmb IAmb 00 34 10.6
comp=Z,4.5nm,1.1s
D27M **Malcolm River** **70.56 22** P **P** **00 34 12.8 +1.4**
D27M IAmb IAmb 00 34 14.7
comp=Z,3.6nm,0.9s
E27K **Coleen River** **70.57 23** P **P** **00 34 12.9 +1.3**
E28M **Babbage River** **71.21 23** P **P** **00 34 17.0 +1.6**
E28M IAmb IAmb 00 34 18.5
comp=Z,3.1nm,0.9s
SPB2 **Spitsbergen Ar** **71.28 348** P **P** **00 34 17.3 +1.7**
M26K **Nabesna, AK** **71.33 29** P **P** **00 34 17.4 +1.2**
M26K IAmb IAmb 00 34 53.2
comp=Z,9.3nm,1.4s
F28M **Old Crow** **71.34 24** **P** **00 34 16.9 +0.8**
F28M IAmb IAmb 00 34 19.3
comp=Z,3.7nm,0.9s
K27K **Chicken** **71.34 28** P **P** **00 34 15.7 -0.5**
K27K IAmb IAmb 00 34 19.3
comp=Z,5.2nm,1.2s
ARCES **ARCESS Array B** **71.69 339** P **P** **00 34 17.8 -0.4**
ARCES IAmb IAmb 00 34 32.0
comp=Z,7.6nm,1.2s
KBS **Kingsbay** **71.78 349** P **P** **00 34 17.8 -0.8**
TGL **Tana Glacier** **71.80 31** P **P** **00 34 18.3 -0.9**
TGL IAmb IAmb 00 34 32.6
comp=Z,7.8nm,1.0s
M27K **Edge Creek, AK** **71.84 29** P **P** **00 34 19.6 +0.2**
M27K IAmb IAmb 00 34 21.0
comp=Z,6.2nm,1.4s
I28M **Miner Creek** **71.88 26** P **P** **00 34 21.0 +1.4**
I28M IAmb IAmb 00 34 22.9
comp=Z,3.7nm,1.1s
BARN **Barnard Glacie** **72.28 31** P **P** **00 34 22.3 +0.2**
BARN IAmb IAmb 00 34 43.5
comp=Z,5.8nm,1.1s
CTGM **Chitina Glacie** **72.45 31** P **P** **00 34 24.4 +1.2**
CTGM IAmb IAmb 00 34 26.0
comp=Z,4.1nm,0.9s
F30M **Barrier River** **72.84 23** P **P** **00 34 26.1 +0.9**
F30M IAmb IAmb 00 34 50.8
comp=Z,5.0nm,1.1s
L29M **L29M** **73.29 28** P **P** **00 34 27.9 -0.1**
M29M **Somme Creek** **73.35 29** P **P** **00 34 29.2 +0.9**
M29M IAmb IAmb 00 35 08.0
comp=Z,4.4nm,1.2s
I30M **Mount Dempster** **73.37 26** P **P** **00 34 28.3 -0.2**
I30M IAmb IAmb 00 34 31.0
comp=Z,7.6nm,1.5s
INK **Inuvik** **73.42 22** P **P** **00 34 27.5 -1.0**
BCPM **Bancas Point** **73.55 31** P **P** **00 34 29.5 +0.1**
J30M **Hart River** **73.59 26** P **P** **00 34 30.9 +1.1**
FIA1 **FINESS Array S** **73.85 330** P **P** **00 34 31.5 +0.4**
FINES **FINESS Array B** **73.85 330** P **P** **00 34 30.9 -0.2**
comp=Z,3.1nm,0.7s,baz=80,slow=4.8,SNR=12
comp=Z,3.1nm,0.7s
FINES **FINESS Array B** **73.85 330** P **P** **00 34 31.3 +0.1**
H31M **Peel River** **73.98 25** P **P** **00 34 32.6 +0.7**
M30M **Minto, Yukon** **74.04 28** P **P** **00 34 34.2 +1.9**
A36M **Sachs Harbour** **74.56 18** **P** **00 34 36.0 +0.9**
A36M IAmb IAmb 00 34 37.4
comp=Z,3.5nm,0.8s
O30N **Mendenhall** **74.96 30** P **P** **00 34 39.2 +1.5**
O30N IAmb IAmb 00 35 08.2
comp=Z,5.2nm,1.2s
M31M **Drury Creek, Y** **75.22 28** P **P** **00 34 38.8 -0.4**
WHY **Whitehorse** **75.56 30** P **P** **00 34 41.5 +0.2**
WHY IAmb IAmb 00 34 43.9
comp=Z,5.9nm,0.8s
ILGA **Ilgaz** **75.56 309** P **P** **00 34 42.1 +0.3**
ILGA IAmb IAmb 00 35 01.6
comp=Z,8.5nm,1.3s
BRTR **Keskin Array B** **76.02 307** P **P** **00 34 45.4 +1.0**
comp=Z,0.7nm,0.8s,baz=126,slow=3.2,SNR=5.8
comp=Z,0.7nm,0.8s
BRTR **Keskin Array B** **76.02 307** P **P** **00 34 42.9 -1.5**
C36M **Paulatuk** **76.12 20** P **P** **00 34 41.2 -3.0**
MMPY **Sheldon Lake,** **76.41 27** P **P** **00 34 46.5 +0.4**
MMPY IAmb IAmb 00 35 02.8
comp=Z,5.5nm,0.9s
HFS **Hagfors** **79.94 332** P **P** **00 35 06.1 +0.6**
comp=Z,2.3nm,0.9s,baz=90,slow=7.4,SNR=4.1
comp=Z,2.3nm,0.9s
NB2 **NORSAR Subarra** **80.56 333** P **P** **00 35 09.3 +0.3**
comp=Z,0.5nm,0.6s,baz=57,slow=5.3
NOA **NORSAR Array B** **80.56 333** P **P** **00 35 09.2 +0.3**
comp=Z,1.2nm,0.8s,baz=57,slow=5.3,SNR=4.5
comp=Z,1.2nm,0.8s
YKAW3 **Yellowknife Wh** **83.07 23** **P** **00 35 22.6 +0.5**
YKAW3 IAmb IAmb 00 35 24.1
comp=Z,5.2nm,1.1s
YKA **Yellowknife Ar** **83.11 24** P **P** **00 35 21.7 -0.6**
comp=Z,1.0nm,0.8s,baz=310,slow=6.0,SNR=16
comp=Z,1.0nm,0.8s
GERES **GERESS Array B** **85.47 322** P **P** **00 35 35.3 +0.6**
comp=Z,0.5nm,0.6s,baz=49,slow=2.8,SNR=4.2
comp=Z,0.5nm,0.6s
ILON **Igloolik, Nuna** **86.11 9** **P** **00 35 36.4 -0.9**
ILON IAmb IAmb 00 35 38.4
comp=Z,4.8nm,0.9s

*HEL **21** 00:26:55.3±0.2, 67°.84N×20°.14E, h0km, ML1.8, Suspected explosion*
*UPP **21** 00:26:55.0±0.0, 67°.85N×20°.21E, h0km, ML2.3, Suspected explosion*
*IDC **21** 00:26:56.1±1.1, 67°.82N×20°.45E, h0km, mbtmp3.0/4, ML2.1/4, Error ellipse: s-maj=17.7km s-min=7.8km az=120.0*
ISC 21 00:26:55.0±0.8, **67°.84N**±0°.02×**20°.21E**±0°.03, **h0**km, **n39,** σ1**9**28/60, **Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.12**	**23**	P	**Pg**	**00 26 57.5**	**+0.2**
	baz=219						
KUA				S	**Sg**	**00 26 59.2**	**+0.3**
RATU	**Laukkuluspa**	**0.24**	**265**	P	**Pg**	**00 26 59.7**	**+0.1**
KOVU	**Salmi**	**0.38**	**357**	P	**Pg**	**00 27 02.3**	**0.0**
NIKU	**Nikkaluokta**	**0.45**	**273**	P	**Pg**	**00 27 03.6**	**0.0**
LANU	**Lannavaara**	**0.70**	**72**	P	**Pg**	**00 27 08.3**	**-0.2**
LANU	**Lannavaara**	**0.70**	**72**	PG	**Pg**	**00 27 08.0**	**-0.5**
LANU				SG	**Sg**	**00 27 18.0**	**+0.4**
DUNU	**Dundret**	**0.74**	**169**	P	**Pg**	**00 27 08.8**	**-0.3**
DUNU				S	**Sg**	**00 27 19.6**	**+0.9**
MASU	**Masugnsbyn**	**0.79**	**119**	P	**Pg**	**00 27 10.0**	**-0.1**
SALU	**Saltoluokta**	**0.80**	**235**	*eP*	**Pg**	**00 27 10.2**	**-0.2**
SALU	**Saltoluokta**	**0.80**	**235**	P	**Pg**	**00 27 10.1**	**-0.2**
HEF	**Hetta**	**1.41**	**65**	*eP*	**Pn**	**00 27 20.8**	**-1.2**
HEF	**Hetta**	**1.41**	**65**	PG	**Pn**	**00 27 21.0**	**-1.0**
	baz=250						
HEF				smax	smax	00 27 38.6	
	comp=Z,13nm,0.2s						
HEF				SG	**Sg**	**00 27 39.6**	**-0.7**
ERTU	**Ertsjaerv**	**1.51**	**148**	P	**Pn**	**00 27 22.6**	**-0.7**
ERTU	**Ertsjaerv**	**1.51**	**148**	PG	**Pn**	**00 27 22.5**	**-0.7**
ERTU				SG	**Sb**	**00 27 43.5**	**0.0**
KLF	**Kolari**	**1.57**	**111**	PG	**Pn**	**00 27 23.6**	**-0.5**
	baz=299						
KLF				smax	smax	00 27 43.0	
	comp=Z,7.3nm,0.2s						
KLF				SN	**Sb**	**00 27 45.4**	**+0.3**
KTK1	**Kautokeino**	**1.62**	**42**	PG	**Pn**	**00 27 24.4**	**-0.4**
KTK1				SN	**Sb**	**00 27 47.1**	**+0.4**
HARU	**Harads**	**1.71**	**170**	P	**Pn**	**00 27 26.1**	**0.0**
TRO	**Tromso**	**1.86**	**346**	PG	**Pn**	**00 27 28.6**	**+0.5**
TOF	**Tornio**	**2.40**	**136**	PB	**Pn**	**00 27 37.0**	**+1.5**
TOF				smax	smax	00 28 06.8	
	comp=Z,3.7nm,0.2s						
TOF				SG	**Sb**	**00 28 09.6**	**+0.5**
ARA0	**ARCESS Array S**	**2.57**	**46**	PB	**Pn**	**00 27 38.7**	**+0.8**
ARA0				SG	**Sb**	**00 28 12.8**	**-1.4**
ARCES	**ARCESS Array B**	**2.57**	**46**	Pn	**Pn**	**00 27 38.1**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=225,slow=15,SNR=25						
ARCES				Sn	**Sn**	**00 28 11.9**	**+2.1**
	comp=Z,2.4nm,0.3s,baz=229,slow=23,SNR=16						
	comp=Z,1.6nm,0.3s						
RNF	**Rovaniemi**	**2.58**	**116**	PB	**Pn**	**00 27 39.6**	**+1.6**
RNF				SB	**Sb**	**00 28 13.4**	**-0.8**
RAJF	**Raja-Jooseppi**	**3.09**	**74**	PN	**Pn**	**00 27 45.2**	**+0.2**
RAJF				SB	**Sb**	**00 28 28.7**	**-0.4**
KEV	**Kevo**	**3.13**	**49**	PN	**Pn**	**00 27 46.0**	**+0.5**
KEV				SN	**Sn**	**00 28 24.6**	**+1.1**
RANF	**Ranua**	**3.17**	**122**	PN	**Pn**	**00 27 47.3**	**+1.1**
RANF				SG	**Sb**	**00 28 33.5**	**+2.1**
BURU	**Burvik**	**3.31**	**171**	SB	**Sn**	**00 28 30.8**	**+2.8**
VRF	**Varrio**	**3.57**	**87**	PN	**Pn**	**00 27 52.1**	**+0.5**
OUL	**Oulu**	**3.59**	**138**	PG	**Pn**	**00 27 59.4**	**+0.2**
OUL				SB	**Sb**	**00 28 44.1**	**+0.8**
OBF4	**Vikkela, Lumij**	**3.63**	**145**	PG	**Pb**	**00 28 01.4**	**+1.5**
OBF8	**Ulkokalla**	**3.77**	**158**	PN	**Pn**	**00 27 53.6**	**-0.6**
KU2	**Taivalkoski**	**3.83**	**120**	PN	**Pn**	**00 27 56.5**	**+1.4**
OLKF	**Oulanka, Finla**	**3.91**	**109**	PN	**Pn**	**00 27 57.1**	**+0.9**
OLKF				SG	**Sg**	**00 28 56.7**	**-3.6**
OUF	**Merijarvi**	**3.95**	**150**	PG	**Pb**	**00 28 05.9**	**+0.5**
MSF	**Maaselka**	**3.99**	**115**	PN	**Pn**	**00 27 58.7**	**+1.4**
MSF				SN	**Sn**	**00 28 46.1**	**+1.4**
KU6	**Riekki**	**4.22**	**111**	PN	**Pn**	**00 28 01.5**	**+1.0**
KU6				SB	**Sb**	**00 28 59.5**	**-2.0**
KU1	**Kurvinen**	**4.36**	**117**	PN	**Pn**	**00 28 04.0**	**+1.6**
FINES	**FINESS Array B**	**6.90**	**156**	Pn	**Pn**	**00 28 38.2**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=348,slow=13,SNR=3.4						
FINES				Sn	**Sn**	**00 29 55.2**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=349,slow=20,SNR=5.7						
FINES				Lg	Lg	00 30 28.8	
	comp=Z,0.5nm,0.3s,baz=351,slow=27,SNR=6.5						
	comp=Z,2.8nm,1.0s						
NOA	**NORSAR Array B**	**7.85**	**214**	Pn	**Pn**	**00 28 50.2**	**-0.1**
	baz=21,slow=11,SNR=1.6						
NOA				Sn	**Sn**	**00 30 18.6**	**-1.3**
	baz=20,slow=15,SNR=1.3						
NOA				Lg	Lg	00 31 00.6	
	baz=18,slow=20,SNR=5.8						
	comp=Z,0.3nm,0.6s						
HFS	**Hagfors**	**8.25**	**203**	Pn	**Pn**	**00 28 55.7**	**0.0**
	comp=Z,0.1nm,0.3s,baz=29,slow=12,SNR=1.9						
HFS				Sn	**Sn**	**00 30 24.6**	**-4.9**
	comp=Z,0.2nm,0.3s,baz=27,slow=23,SNR=4.6						
	comp=Z,1.3nm,0.7s						

*KRNET **21** 00:36:47.7±0.1, 39°.72N×77°.70E, mb3.4*
*SOME **21** 00:36:48.7, 40°.00N×77°.57E, h10km*
*NNC **21** 00:36:51.7±1.6, 40°.14N×77°.70E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=10.8km s-min=9.1km az=167.0*
ISC 21 00:36:45.8±2.4, **39°.8N**±0°.1×**77°.71E**±0°.07, **h3**km±14km, **n32,** σ1**9**24/50, **10C-10D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**1.96**	**2**	⇓*iP*	**Pn**	**00 37 20.9**	**+0.5**
TARG				⇓*iS*	**Sn**	**00 37 45.3**	**-0.4**
JNKS	**Jany-Kuch**	**2.05**	**310**	⇑*iP*	**Pn**	**00 37 21.7**	**+0.4**
JNKS				⇑*iS*	**Sn**	**00 37 46.2**	**-1.3**
NRN	**Naryn**	**2.12**	**323**	⇓*eP*	**Pn**	**00 37 23.0**	**+0.6**
NRN				⇓*iS*	**Sn**	**00 37 48.6**	**-0.7**
KDJ	**Kajisay**	**2.40**	**351**	⇑*iP*	**Pn**	**00 37 26.8**	**+0.7**
KDJ				⇑*iS*	**Sn**	**00 37 55.3**	**-0.8**
ULHL	**Ulahol**	**2.72**	**336**	⇓*iP*	**Pn**	**00 37 31.2**	**+0.7**
ULHL				⇓*iS*	**Sn**	**00 38 02.9**	**-1.1**
BOOM	**Boomskoye usch**	**3.03**	**334**	⇑*eP*	**Pn**	**00 37 35.5**	**+0.7**
BOOM				⇑*iS*	**Sn**	**00 38 10.5**	**-1.3**
SALK	**Salom-Alik**	**3.18**	**292**	⇓*iP*	**Pn**	**00 37 37.2**	**+0.4**
SALK				⇓*iS*	**Sn**	**00 38 13.0**	**-2.3**
ARLS	**Aral**	**3.32**	**310**	⇑*iP*	**Pn**	**00 37 39.3**	**+0.6**
ARLS				⇑*iS*	**Sn**	**00 38 16.7**	**-2.0**
TNSS	**Tian-Shan**	**3.32**	**350**	Pg	**Pb**	**00 37 45.7**	**+0.1**
	0.4nm,0.3s						
TNSS				Lg	Lg	00 38 26.8	
	7.2nm,0.7s						
TNSS	**Tian-Shan**	**3.32**	**350**	*eP*	**Pb**	**00 37 45.7**	**+0.1**
	0.4nm,0.3s						
TNSS				*eS*	**Sb**	**00 38 26.8**	**+0.3**
	7.2nm,0.7s						
SATY	**Saty**	**3.33**	**9**	Pg	**Pb**	**00 37 45.7**	**+0.1**
	11nm,0.3s						
SATY				Lg	Lg	00 38 26.8	
	16nm,0.7s						
IZV	**Izvestkoviy**	**3.37**	**346**	Pg	**Pb**	**00 37 45.4**	**-0.8**
	7.1nm,0.5s						
IZV				Lg	Lg	00 38 26.1	
	19nm,0.7s						
IZV	**Izvestkoviy**	**3.37**	**346**	*eP*	**Pb**	**00 37 45.8**	**-0.5**
	7.2nm,0.5s						
IZV				*eS*	**Sb**	**00 38 26.8**	**-0.9**
	18nm,0.5s						
MDOK	**Medeo**	**3.43**	**352**	Pg	**Pb**	**00 37 47.6**	**+0.3**
	12nm,0.4s						
MDOK				Lg	Lg	00 38 31.0	
	48nm,0.6s						
KOTS	**Kotyrbulak**	**3.50**	**353**	Pg	**Pb**	**00 37 49.1**	**+0.7**
	18nm,0.3s						
KOTS				Lg	Lg	00 38 32.9	
	24nm,0.6s						
KOTS	**Kotyrbulak**	**3.50**	**353**	*eP*	**Pb**	**00 37 48.4**	**0.0**
	5.4nm,0.3s						
KOTS				*eS*	**Sb**	**00 38 31.3**	**0.0**
	29nm,0.6s						
UZB	**Uzunbulak**	**3.52**	**16**	Pg	**Pb**	**00 37 47.9**	**-1.0**
	2.1nm,0.2s						
UZB				Lg	Lg	00 38 30.7	
	12nm,0.6s						
UZB	**Uzunbulak**	**3.52**	**16**	*eP*	**Pb**	**00 37 48.8**	**0.0**
	2.3nm,0.2s						
UZB				*eS*	**Sb**	**00 38 32.1**	**+0.1**
	43nm,0.8s						
KST	**Kastek**	**3.53**	**339**	Pg	**Pb**	**00 37 49.2**	**+0.2**
	5.1nm,0.4s						
KST				Lg	Lg	00 38 33.5	
	9.9nm,0.6s						
KST	**Kastek**	**3.53**	**339**	*eP*	**Pb**	**00 37 48.9**	**0.0**
	2.7nm,0.3s						
KST				*eS*	**Sb**	**00 38 32.1**	**-0.1**
	14nm,0.5s						
SHLS	**Shalkode**	**3.64**	**21**	Pg	**Pg**	**00 37 54.7**	**-0.7**
	6.7nm,0.5s						
SHLS				Lg	Lg	00 38 42.4	
	20nm,0.8s						
SHLS	**Shalkode**	**3.64**	**21**	*eP*	**Pg**	**00 37 54.7**	**-0.7**
	6.7nm,0.5s						
SHLS				*eS*	**Sg**	**00 38 42.4**	**-0.2**
	20nm,0.8s						
AAK	**Ala-Archa**	**3.76**	**321**	⇓Pn	**Pb**	**00 37 49.2**	**-3.6**
	3.0nm,0.8s						
AAK				⇑Lg	Lg	00 38 40.2	
	2.6nm,0.5s						
DGS	**Degeres**	**3.77**	**338**	Pg	**Pb**	**00 37 53.6**	**+0.6**
	4.5nm,0.6s						
DGS				Lg	Lg	00 38 41.4	
	8.0nm,0.6s						
DGS	**Degeres**	**3.77**	**338**	*eP*	**Pb**	**00 37 53.2**	**+0.2**
	2.8nm,0.5s						
DGS				*eS*	**Sb**	**00 38 39.8**	**+0.7**
	8.3nm,0.6s						
KPKS	**Kokpek**	**3.77**	**11**	Pg	**Pb**	**00 37 53.9**	**+0.8**
	6.2nm,0.3s						
KPKS				Lg	Lg	00 38 40.9	
	7.8nm,0.6s						
KPKS	**Kokpek**	**3.77**	**11**	*eP*	**Pb**	**00 37 53.9**	**+0.8**
	6.2nm,0.3s						
KPKS				*eS*	**Sb**	**00 38 41.0**	**+1.8**
	7.8nm,0.6s						
PDGK	**Podgornoye**	**3.80**	**20**	⇑Pn	**Pn**	**00 37 46.4**	**+1.1**
	7.0nm,0.9s						
PDGK				⇓Lg	Lg	00 38 40.3	
	16nm,0.9s						
KRBS	**Karabastau**	**4.21**	**339**	Pg	**Pb**	**00 38 01.3**	**+0.8**
	2.2nm,0.5s						
KRBS				Lg	Lg	00 38 53.5	
	4.6nm,0.5s						
KRBS	**Karabastau**	**4.21**	**339**	*eP*	**Pb**	**00 38 01.3**	**+0.8**
	2.2nm,0.5s						
KRBS				*eS*	**Sb**	**00 38 53.5**	**+1.7**
	4.6nm,0.5s						
SGDS	**Sogindy**	**4.35**	**329**	Pg	**Pb**	**00 38 03.5**	**+0.6**
	4.0nm,0.8s						
SGDS				Lg	Lg	00 38 57.2	
	3.3nm,0.7s						
MRKS	**Merke**	**4.50**	**313**	*eP*	**Pb**	**00 38 07.8**	**+2.3**
	2.2nm,0.3s						
MRKS				*eS*	**Sb**	**00 39 04.6**	**+4.3**
	5.2nm,0.5s						

*IDC **21** 00:37:24.2±1.2, 10°.21S×123°.97E, h0km, mb3.7/3, mbtmp3.6/6, ML3.6/3, MS3.4/1, Error ellipse: s-maj=25.7km s-min=7.7km az=178.0*
*DJA **21** 00:37:28.6±0.9, 11°.5±6°.1×12°.4E±°, h92km±10km, M4.2/12, mB4.8/2, mb4.8/3, MLv3.9/12, Mw(mB)4.0/2*
ISC 21 00:37:24.4±0.9, **10°.3S**±0°.1×**124°.0E**±0°.1, **h10**km, **n16,** σ1**9**25/17, **mb3.8/3, Timor region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**0.35**	**284**	Pg	**Pg**	**00 37 30.7**	**-0.6**
	4μm,0.3s,baz=63,slow=0.9,SNR=2579						
BATI				Lg	Lg	00 37 33.9	
	4μm,0.3s,baz=169,slow=9.5,SNR=26						
BATI				LR	LR	00 37 47.0	
	comp=Z,1μm,19.6s,baz=112,slow=74						
BATI	**Baumata**	**0.35**	**284**	P	**Pg**	**00 37 30.2**	**-1.1**
SOEI	**Soe**	**0.59**	**26**	P	Pn	00 37 47.4	+8.4
SOEI				S	Sn	00 38 02.1	+13
MMRI	**Maumere**	**2.40**	**313**	P	**Pb**	**00 38 06.8**	**-0.9**
EDFI	**Ende, Flores**	**2.75**	**304**	P	**Pn**	**00 38 09.7**	**+1.0**
WBSI	**Waikabubak, Su**	**4.59**	**278**	P	**Pn**	**00 38 35.3**	**+1.3**
DBNI	**Kabupaten Domp**	**5.89**	**287**	P	**Pn**	**00 38 52.9**	**+1.0**
	1μm55nm,0.5s						
PLAI	**Plampang**	**6.32**	**283**	P	**Pn**	**00 38 57.6**	**0.0**
	0.2nm739nm64nm,0.6s						
TWSI	**Taliwang, Sumb**	**7.20**	**282**	P	**Pn**	**00 39 08.3**	**-1.4**
FITZ	**Fitzroy Crossi**	**7.92**	**169**	Pn	**Pn**	**00 39 21.9**	**+2.2**
	0.8nm,0.3s,baz=351,slow=10,SNR=18						
FITZ				Sn	**Sn**	**00 40 48.7**	**-0.7**
	2.1nm,0.3s,baz=97,slow=17,SNR=10.0						
	1.5nm,0.3s						
WRA	**Warramunga Arr**	**13.83**	**135**	Pn	**Pn**	**00 40 41.5**	**+0.8**
	0.2nm,0.3s,baz=305,slow=14,SNR=10						
WRA				Sn	**Sn**	**00 43 12.4**	**-2.1**
	0.5nm,0.3s,baz=313,slow=24,SNR=8.1						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**16.31**	**146**	Pn	**P**	**00 41 15.9**	**-0.8**
	0.4nm,0.3s,baz=318,slow=12,SNR=32						
ASAR				Sn	**Sn**	**00 44 14.0**	**-0.9**
	0.2nm,0.3s,baz=316,slow=19,SNR=7.1						
	1.6nm,0.5s						
STKA	**Stephens Creek**	**26.95**	**145**	LR	LR	00 55 37.6	
	comp=Z,72nm,18.1s,baz=201,slow=40						
MKAR	**Makanchi Array**	**67.93**	**330**	P	**P**	**00 48 24.3**	**+0.9**
	0.8nm,0.7s,baz=136,slow=7.8,SNR=13						
	0.8nm,0.7s						
ZALV	**Zalesovo Beam**	**72.08**	**337**	P	**P**	**00 48 49.5**	**+0.8**
	0.3nm,0.4s,baz=127,slow=3.8,SNR=3.9						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**72.38**	**332**	P	**P**	**00 48 51.1**	**+0.6**
	0.2nm,0.5s,baz=134,slow=5.5,SNR=4.1						
	0.2nm,0.5s						

*ISK **21** 00:41:25.7, 38°.16N×44°.56E, h13km, ML2.4/7*
*AZER **21** 00:41:26.8, 38°.43N×44°.56E, h9km, ml2.4*
*TEH **21** 00:41:28.3, 38°.46N×44°.50E, h6km±187km, ML2.5, Presumed earthquake*
*AFAD **21** 00:41:29.6, 38°.42N×44°.29E, h8km±2km, ML2.4*
ISC 21 00:41:28.4±1.1, **38°.44N**±0°.03×**44°.39E**±0°.02, **h12**km±10km, **n43,** σ1**9**35/70, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.38**	**306**	P	**Pb**	**00 41 36.7**	**-0.5**
OZAP				S	**Sb**	**00 41 43.0**	**-0.1**
OZAP				IAML		00 41 47.0	
	comp=N,338nm,0.6s						
OZAP				IAML		00 41 47.0	
	comp=E,342nm,0.8s						
TVAN	**Van**	**0.77**	**277**	P	**Pn**	**00 41 43.9**	**-1.4**
TVAN				S	**Sb**	**00 41 53.3**	**-1.3**
VANB	**Van**	**0.80**	**282**	Pg	**Pn**	**00 41 44.8**	**-0.8**
VANB				Sg	**Sn**	**00 41 58.8**	**+1.3**
VMUR	**Van-Muradiye**	**0.84**	**311**	P	**Pb**	**00 41 44.8**	**-0.2**
VMUR				S	**Sb**	**00 41 56.5**	**+0.1**
MAKU	**Maku**	**0.94**	**14**	Pg	**Pg**	**00 41 45.3**	**-1.3**
ERCV	**ERCIS-VAN**	**1.00**	**306**	P	**Pn**	**00 41 48.4**	**-0.1**
ERCV				IAML		00 42 07.0	
	comp=N,192nm,0.5s						
ERCV				IAML		00 42 16.0	
	comp=E,154nm,0.8s						
HAKT	**HAKKARI**	**1.03**	**212**	P	**Pn**	**00 41 48.2**	**-0.7**
HAKT				S	**Sn**	**00 42 01.4**	**-2.1**
HAKT				IAML		00 42 08.0	
	comp=E,82nm,0.4s						
HAKT	**HAKKARI**	**1.03**	**212**	P	**Pn**	**00 41 48.4**	**-0.5**
HAKT				S	**Sn**	**00 42 06.3**	**+2.9**
GEVA	**Gevas**	**1.05**	**263**	P	**Pn**	**00 41 48.1**	**-1.1**
GEVA				S	**Sn**	**00 42 03.4**	**-0.5**
IMRD	**Marand**	**1.07**	**75**	Pg	**Pg**	**00 41 47.3**	**-1.7**
AKDM	**Akdamar-Van**	**1.11**	**265**	Pn	**Pn**	**00 41 49.7**	**-0.3**
AKDM				Sn	**Sn**	**00 42 06.8**	**+1.5**
NAX	**Nakhchivan**	**1.14**	**49**	P	**Pb**	**00 41 48.9**	**-1.1**
NAX				S	**Sb**	**00 42 04.7**	**-

	comp=E,50nm,0.4s						
AGRB	**Hanur-Agry**	**1.57**	**317**	Pn	**Pg**	**00 41 58.4**	**-0.2**
DORK	**Agr/Tutak/Do**	**1.57**	**308**	P	**Pg**	**00 41 57.5**	**-1.0**
MLAZ	**Malazgirt-MUS**	**1.60**	**297**	Pn	**Pg**	**00 41 57.5**	**-1.6**
KOTA	**Agri, Merkez-K**	**1.64**	**326**	P	**Pg**	**00 42 00.2**	**+0.3**
GNI	**Garni**	**1.73**	**9**	Pn	**Pb**	**00 41 59.9**	**-0.3**
BLIS	**Bitlis-Merkez**	**1.78**	**270**	P	**Pg**	**00 42 01.9**	**-0.7**
SIRN	**Sırnak**	**1.82**	**239**	P	**Pg**	**00 42 04.3**	**+0.9**
SIRN				S	**Sg**	**00 42 29.2**	**+2.2**
SIRN				IAML		00 42 45.0	
	comp=N,34nm,0.9s						
SIRN				IAML		00 42 46.0	
	comp=E,38nm,0.8s						
GURO	**Guroymak-BITLI**	**1.85**	**274**	Pn	**Pb**	**00 42 00.5**	**-1.8**
SRTM	**Siirt_Merkez**	**1.99**	**258**	P	**Pg**	**00 42 06.2**	**-0.4**
SRTM				S	**Sg**	**00 42 32.5**	**0.0**
SRTM				IAML		00 42 43.0	
	comp=N,52nm,0.7s						
DIGO				IAML		00 42 46.0	
	comp=E,35nm,0.7s						
MUSM	**Mu-Merkez**	**2.27**	**278**	P	**Pg**	**00 42 11.2**	**-0.7**
QRD	**Qoradiz**	**2.50**	**65**	P	**Pn**	**00 42 08.5**	**-0.4**
QRD				S	**Sn**	**00 42 42.1**	**+2.6**
GDB	**GEDABAY**	**2.51**	**24**	P	**Pb**	**00 42 11.7**	**-1.9**
GDB				S	**Sb**	**00 42 45.0**	**+0.5**
SENK	**Senkaya-Erzuru**	**2.64**	**324**	Pn	**Pb**	**00 42 13.7**	**-2.1**
GANJ	**Ganja**	**2.66**	**34**	P	**Pn**	**00 42 13.6**	**+2.4**
GANJ				S	**Sb**	**00 42 48.6**	**-0.2**
AGDM	**Agdam**	**2.69**	**51**	P	**Pn**	**00 42 13.3**	**+1.7**
QZX	**Qazax, Azerbai**	**2.72**	**16**	P	**Pb**	**00 42 15.3**	**-1.7**
QZX				S	**Sb**	**00 42 51.2**	**+0.7**
BRDA	**Brd**	**2.83**	**49**	P	**Pn**	**00 42 14.9**	**+1.5**
BRDA				S	**Sn**	**00 42 47.7**	**+0.3**
YRD	**Yardimli**	**3.05**	**80**	P	**Pn**	**00 42 17.8**	**+1.1**
YRD				S	**Sn**	**00 42 51.5**	**-1.8**
LRK	**Lerik**	**3.11**	**85**	P	**Pn**	**00 42 17.8**	**+0.4**
LRK				S	**Sn**	**00 42 55.5**	**+1.0**

BJI ***21*** *00:49:46.7,39˙09N×20˙53E,h12km,mB5.7/80,mb5.3/86, Ms5.8/87,Ms7 5.5/85*

NAO ***21*** *00:49:46.8,39˙30N×20˙62E,h10km,MB5.6*

MOS ***21*** *00:49:48.9±1.1,39˙29N×20˙47E,h11km,mb5.7/106, MS5.4/78,Error ellipse: s-maj=3.8km s-min=2.3km az=83.0*

IDC ***21*** *00:49:49.1±0.4,39˙34N×20˙68E,h0km,mb5.3/34, mbtmp5.2/50,ML4.6/12,MS5.2/84,Error ellipse: s-maj=9.3km s-min=8.6km az=135.0*

PDG ***21*** *00:49:50.5±1.2,39˙32N×20˙61E,h6km±1km,MD5.7/10, ML5.6/13,Error ellipse: s-maj=0.9km s-min=1.1km az=0.0*

ATH ***21*** *00:49:50.7,39˙33N×20˙52E,h8km,Mw5.5,Moment Tensor Solution. s9 Moment tensor: Mrr2.08; Mθθ-1.10; Mφφ-0.98; Mrθ0.73; Mrφ1.22; Mθr-0.64; Fault plane solution: NP1:φs315.00000°,δ33.00000°,λ92.00000°. NP2:φs132.00000°,δ57.00000°,λ89.00000°.*

AFAD ***21*** *00:49:51.2,39˙35N×20˙61E,h8km±1km,MW5.7*

NEIC ***21*** *00:49:51.5,39˙38N×20˙64E,h10km*

MED_RC ***21*** *00:49:51.0±0.1,39˙15N×20˙57E,h14km,MW5.7/96, Moment Tensor Solution. Body waves: s13,c13;Mantle waves: s96,c211; Duration: 2s3 Moment tensor: Scale 1017Nm; Mrr4.39±.07; Mθθ-1.52±.05; Mφφ-2.86±.04; Mrθ1.99±.12; Mrφ2.38±.03; Mθr-0.06±.08; Best double couple: M04.95000×1017 NP1:φs340.00000°,δ40.00000°, λ118.00000°. NP2:φs125.00000°,δ55.00000°,λ69.00000°. Principal axes: T 5.0500, Plg71.0000°, Azm345.0000°; N -0.2000, Plg17.0000°, Azm138.0000°; P -4.8400, Plg8.0000°, Azm230.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=40s.*

IPGP ***21*** *00:49:51.0,39˙35N×20˙56E,h10km,Mw5.8,Fault plane solution: NP1:φs331.00000°,δ35.00000°,λ100.00000°. NP2:φs139.00000°,δ56.00000°,λ83.00000°.*

NEIC ***21*** *00:49:51.7,39˙35N×20˙56E,h14km*

NEIC ***21*** *00:49:51.4±1.4,39˙36N±0˙05×20˙64E±0˙05,h10km±1km, mb5.7/643,Ms_20 5.4/498,Mwb5.5/136,Mww5.7/70,Error ellipse: s-maj=8.4km s-min=6.0km az=29.0,Moment Tensor Solution. Moment tensor: Scale 1017Nm; Mrr2.42; Mθθ-0.63; Mφφ-1.79; Mrθ0.91; Mθφ0.71; Mφr-0.18; Fault plane solution: M04.47000×1017 NP1: φs139.64000°,δ53.78000°,λ73.07000°. NP2: φs346.90000°,δ39.49000°,λ111.68000°. Principal axes: T 2.6696, Plg74.0000°, Azm359.0000°; N -0.4727, Plg14.0000°, Azm150.0000°; P -2.1969, Plg7.0000°, Azm242.0000°;*

NEIC ***21*** *00:49:51.7,39˙35N×20˙56E,h14km,Moment Tensor Solution. Duration: 3s5 Moment tensor: Scale 1017Nm; Mrr3.96; Mθθ-1.68; Mφφ-2.27; Mrθ-0.71; Mθφ1.91; Mφr0.59; Fault plane solution: M04.04000×1017 NP1: φs141.50000°,δ38.56000°,λ93.37000°. NP2: φs317.19000°,δ51.52000°,λ87.32000°. Principal axes: T 4.0642, Plg83.0000°, Azm211.0000°; N -0.0497, Plg2.0000°, Azm319.0000°; P -4.0145, Plg6.0000°, Azm49.0000°;*

MCSM ***21*** *00:49:51.7±0.4,39˚N±3˚×2˚0E±˚,h11km±2km,mb5.4, mB5.8,MLv6.0,Mw(mB)5.4*

ISC-PP ***21*** *00:49:51,39˙36N×20˙64E,h5km,Mwppsm6.1,Moment Tensor Solution. s46 Moment tensor: Scale 1018Nm; Mrr0.70±.12; Mθθ-0.03±.13; Mφφ-0.65±.13; Mrθ-0.10±.10; Mθφ-0.14±.24; Mφr0.12±.11; Fault plane solution: M01.64000×1018 NP1:φs179.20000°,δ50.70000°, λ102.70000°. NP2:φs339.60000°,δ41.00000°,λ74.90000°.*

PTWC ***21*** *00:49:52,39˙30N×20˙50E,h10km,Mwp5.9/6, GREECE-ALBANIA BORDER REGION*

GII ***21*** *00:49:52.2±0.0,38˙60N×20˙55E,h0km,Md5.8/2, confirmed*

THE ***21*** *00:49:52.2,39˙3N±0˙7×20˙6E±0˙9,h7km±2km,M5.4/18, MLh5.4/18*

ROM ***21*** *00:49:53.1,39˙37N×20˙52E,h13km,mb5.4/62, Mwp5.9/61,Mwpd6.0/9,Error ellipse: s-maj=1.5km s-min=0.1km az=174.0*

GCMT ***21*** *00:49:53.4±0.1,39˙16N±0˙01×20˙56E±0˙01,h14km, MW5.7/160,Moment Tensor Solution. s140,c284; s160,c360; Duration: 198 Moment tensor: Scale 1017 Nm; Mrr4.23±.04; Mθθ-1.73±.03; Mφφ-2.50±.03; Mrθ2.43±.09; Mrφ2.23±.03; Mθr-0.04±.07; Best double couple: M04.92700×1017 NP1:φs338.00000°,δ38.00000°, λ122.00000°. NP2:φs120.00000°,δ59.00000°,λ68.00000°. Principal axes: T 5.1650, Plg68.0000°, Azm345.0000°; N -0.4760, Plg19.0000°, Azm132.0000°; P -4.6890, Plg11.0000°, Azm226.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

GFZ ***21*** *00:49:53.3,39˙36N×20˙61E,h16km,MW5.7,Moment Tensor Solution. s219 Moment tensor: Mrr3.88; Mθθ-1.76; Mφφ-2.12; Mrθ0.75; Mrφ1.77; Mθr-0.78; Fault plane solution: NP1:φs137.00000°,δ52.00000°, λ89.00000°. NP2:φs318.00000°,δ37.00000°,λ90.00000°.*

CATAC ***21*** *00:49:55.2±1.1,40˚N×20˚×2˚0E×3˚5,h17km±11km, M5.7/13,mb5.6/13,mB6.1/12,Mw(mB)5.7/12,MwMwp5.5/2, Mwp5.6/2 Error ellipse: s-maj=84.2km s-min=14.8km az=118.8,confirmed*

ISC 21 00:49:51.8±0.4,39˚30N±0˙01×20˚57E±0˙01,h15km±2km, n2572,σ1960/2689,mb5.6/553,MS5.4/417,212C-64D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGT	**Igoumenitsa**	**0.29**	**322**	P	**Pb**	**00 49 58.5**	**-0.3**
IGT				S	**Sb**	**00 50 03.0**	**-0.4**
IGT	**Igoumenitsa**	**0.29**	**322**	P	**Pg**	**00 49 57.3**	**-0.7**
IGT				S	**Sg**	**00 50 01.6**	**-0.6**
ARTB	**Arta**	**0.35**	**114**	P	**Pg**	**00 49 58.2**	**-0.7**
ARTB				S	**Sg**	**00 50 04.7**	**+0.8**
ART2	**Arta**	**0.37**	**115**	P	**Pg**	**00 49 58.2**	**-1.0**
ART2				S	**Sg**	**00 50 04.2**	**-0.2**
LFKM	**Lefkimmi**	**0.42**	**291**	P	**Pn**	**00 50 01.9**	**-1.3**
LFKM				S	**Sb**	**00 50 07.8**	**+0.9**
JAN	**Janina**	**0.42**	**32**	P	**Pg**	**00 49 59.9**	**-0.3**
JAN				S	**Sg**	**00 50 06.2**	**+0.2**
JAN	**Janina**	**0.42**	**32**	P	**Pg**	**00 49 59.2**	**-1.0**
JAN				S	**Sg**	**00 50 05.7**	**-0.2**
PRMD	**Pramanda**	**0.47**	**61**	P	**Pg**	**00 50 00.3**	**-0.9**
PRMD				S	**Sg**	**00 50 07.4**	**-0.2**
PRMD	**Pramanda**	**0.47**	**61**	P	**Pg**	**00 50 00.2**	**-0.9**
PRMD				S	**Sg**	**00 50 07.3**	**-0.2**
TSLK	**Tsoukalades, L**	**0.48**	**172**	P	**Pg**	**00 50 01.0**	**-0.3**
TSLK				S	**Sb**	**00 50 08.8**	**0.0**
TSLK	**Tsoukalades, L**	**0.48**	**172**	P	**Pg**	**00 50 00.8**	**-0.5**
TSLK				S	**Sg**	**00 50 08.2**	**+0.5**
LKD2	**Lefkada island**	**0.52**	**172**	P	**Pg**	**00 50 01.5**	**-0.5**
LKD2				S	**Sg**	**00 50 08.7**	**-0.2**
TETR	**Tetrakomo, Epi**	**0.55**	**85**	P	**Pg**	**00 50 01.1**	**-1.6**
TETR				S	**Sg**	**00 50 10.8**	**+0.7**
TETR	**Tetrakomo, Epi**	**0.55**	**85**	P	**Pg**	**00 50 01.4**	**-1.3**
TETR				S	**Sg**	**00 50 10.3**	**+0.2**
NYDR	**Nydri-Lefkada**	**0.60**	**170**	P	**Pg**	**00 50 02.6**	**-0.8**
NYDR				S	**Sg**	**00 50 11.5**	**+0.1**
NYDR	**Nydri-Lefkada**	**0.60**	**170**	P	**Pg**	**00 50 02.9**	**-0.6**
NYDR				S	**Sg**	**00 50 11.1**	**-0.2**
DRAG	**Dragano-Lefkad**	**0.62**	**179**	P	**Pg**	**00 50 02.8**	**-1.1**
DRAG				S	**Sg**	**00 50 11.6**	**-0.5**
DRAG	**Dragano-Lefkad**	**0.62**	**179**	P	**Pg**	**00 50 03.0**	**-0.9**
DRAG				S	**Sg**	**00 50 11.5**	**-0.5**
AMPL	**Ampelaki**	**0.63**	**127**	P	**Pg**	**00 50 03.4**	**-0.7**
AMPL				S	**Sg**	**00 50 12.8**	**+0.3**
AMPL	**Ampelaki**	**0.63**	**127**	P	**Pg**	**00 50 03.5**	**-0.6**
AMPL				S	**Sg**	**00 50 12.6**	**+0.1**
MSVA	**Metsovo**	**0.67**	**45**	P	**Pg**	**00 50 04.0**	**-0.9**
MSVA				S	**Sg**	**00 50 14.4**	**+0.6**
EVGl	**Lefkada island**	**0.68**	**174**	P	**Pg**	**00 50 05.1**	**0.0**
EVGl				S	**Sb**	**00 50 15.5**	**+0.8**
EVGl	**Lefkada island**	**0.68**	**174**	P	**Pg**	**00 50 04.5**	**-0.7**
EVGl				S	**Sg**	**00 50 14.3**	**+0.1**
KEK	**Kerkira**	**0.72**	**305**		**Pg**	**00 50 05.7**	**-0.2**
KEK	**Kerkira**	**0.72**	**305**	*eP*	**Pb**	**00 50 06.4**	**+0.3**
KEK	**Kerkira**	**0.72**	**305**	P	**Pg**	**00 50 05.6**	**-0.2**
KEK	**Kerkira**	**0.72**	**305**	⇑P	**Pg**	**00 50 04.4**	**-1.5**
SRN	**Sarande**	**0.72**	**323**	P	**Pg**	**00 50 04.7**	**-1.2**
SRN				S	**Sn**	**00 50 17.8**	**-0.5**
FSK	**Fiskardo**	**0.84**	**180**	P	**Pb**	**00 50 07.4**	**-0.7**
FSK				S	**Sb**	**00 50 18.7**	**-0.5**
AST1	**Astakos**	**0.86**	**151**	P	**Pb**	**00 50 08.1**	**-0.3**
AST1				S	**Sn**	**00 50 21.1**	**-0.6**
KPRO	**Kipourio**	**0.90**	**43**	P	**Pb**	**00 50 08.1**	**-1.0**
KPRO	**Kipourio**	**0.90**	**43**	P	**Pb**	**00 50 07.2**	**-1.9**
KPRO				S	**Sb**	**00 50 19.7**	**-1.2**
TRKA	**Trikala**	**0.96**	**74**	P	**Pb**	**00 50 09.1**	**-1.0**
TRKA				S	**Sb**	**00 50 22.9**	**+0.2**
PENT	**Pentalofos**	**1.00**	**26**	P	**Pb**	**00 50 10.3**	**-0.5**
PENT				S	**Sb**	**00 50 22.9**	**-0.9**
PVO	**Paravola**	**1.01**	**132**	P	**Pb**	**00 50 10.6**	**-0.4**
PVO	**Paravola**	**1.01**	**132**	P	**Pb**	**00 50 11.1**	**0.0**
PVO				S	**Sg**	**00 50 24.9**	**+0.2**
EVR	**Evrytania**	**1.04**	**111**	P	**Pb**	**00 50 10.7**	**-0.8**
EVR				S	**Sb**	**00 50 25.9**	**+0.8**
EVR	**Evrytania**	**1.04**	**111**	P	**Pb**	**00 50 11.2**	**-0.3**
EVR				S	**Sb**	**00 50 25.8**	**+0.8**
SMHA	**Samh**	**1.05**	**176**	P	**Pb**	**00 50 10.3**	**-1.3**
SMHA				S	**Sg**	**00 50 26.0**	**+0.2**
DMLN	**Damoulianata-K**	**1.07**	**188**	P	**Pg**	**00 50 12.5**	**0.0**
DMLN	**Damoulianata-K**	**1.07**	**188**	P	**Pb**	**00 50 12.0**	**-0.1**
DMLN				S	**Sn**	**00 50 27.0**	**+0.5**
LXR1	**Lixouri, Cepha**	**1.10**	**185**	P	**Pg**	**00 50 14.1**	**+1.1**
LXR1				S	**Sn**	**00 50 29.8**	**+2.2**
VLS	**Valsamata**	**1.12**	**179**	P	**Pg**	**00 50 14.0**	**+0.6**
VLS				S	**Sg**	**00 50 29.6**	**+1.5**
VLS	**Valsamata**	**1.12**	**179**	P	**Pb**	**00 50 12.6**	**-0.3**
VLS				S	**Sg**	**00 50 28.3**	**+0.2**
ARG2	**Argostoli**	**1.12**	**183**	P	**Pg**	**00 50 13.3**	**-0.1**
ARG2				S	**Sg**	**00 50 29.6**	**+1.5**
ARG2	**Argostoli**	**1.12**	**183**	P	**Pg**	**00 50 13.2**	**-0.2**
ARG2				S	**Sg**	**00 50 28.6**	**+0.6**
KFL1	**Kefalonia,Entr**	**1.13**	**183**	P	**Pb**	**00 50 12.7**	**-0.4**
KFL1				S	**Sg**	**00 50 28.4**	**-0.1**
MSL1	**Messolongi**	**1.14**	**144**	P	**Pn**	**00 50 13.0**	**-0.2**
MSL1				S	**Sg**	**00 50 29.4**	**+0.7**
THL	**Klokotos Trika**	**1.15**	**76**	P	**Pn**	**00 50 12.2**	**-1.1**
THL				S	**Sg**	**00 50 30.0**	**+1.0**
THL	**Klokotos Trika**	**1.15**	**76**	P	**Pn**	**00 50 13.2**	**-0.9**
THL				S	**Sb**	**00 50 29.0**	**+0.8**
NEST	**Nestorio**	**1.17**	**18**	P	**Pn**	**00 50 13.2**	**-0.6**
NEST	**Nestorio**	**1.17**	**18**	P	**Pn**	**00 50 14.0**	**+0.2**
SOFA	**Sofades**	**1.19**	**88**	P	**Pn**	**00 50 13.9**	**0.0**
SOFA				S	**Sn**	**00 50 30.2**	**+0.5**
RTZL	**Ratzakli, Kefa**	**1.23**	**172**	P	**Pn**	**00 50 14.4**	**-0.1**
RTZL				S	**Sg**	**00 50 33.4**	**+1.8**
RTZL	**Ratzakli, Kefa**	**1.23**	**172**	P	**Pn**	**00 50 14.0**	**-0.5**
RTZL				S	**Sg**	**00 50 31.7**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.25**	**103**	P	**Pn**	**00 50 14.6**	**-0.2**
MAKR	**Makrakomi, Fth**	**1.25**	**103**	P	**Pn**	**00 50 14.9**	**+0.2**
MAKR				S	**Sn**	**00 50 32.1**	**+0.8**
ANX	**Ano Chora**	**1.27**	**123**	P	**Pn**	**00 50 15.3**	**+0.2**
ANX	**Ano Chora**	**1.27**	**123**	P	**Pn**	**00 50 15.5**	**+0.4**
ANX				S	**Sn**	**00 50 32.8**	**+0.8**
AXS	**Araxos**	**1.27**	**150**	P	**Pn**	**00 50 14.8**	**-0.2**
AGRP	**Agrapidokambos**	**1.28**	**135**	P	**Pn**	**00 50 15.0**	**-0.1**
KBN	**Korca**	**1.33**	**7**	P	**Pn**	**00 50 16.3**	**+0.4**
KBN	**Korca**	**1.33**	**7**	P	**Pg**	**00 50 20.2**	**+2.7**
KBN				S	**Sn**	**00 50 33.5**	**0.0**
TYRN	**Tyrnavos**	**1.35**	**72**	P	**Pn**	**00 50 16.0**	**-0.1**
TYRN				S	**Sb**	**00 50 34.7**	**+0.7**
TYRN	**Tyrnavos**	**1.35**	**72**	P	**Pn**	**00 50 16.0**	**-0.1**
EFP	**Efpalio**	**1.36**	**129**	P	**Pn**	**00 50 16.8**	**+0.6**
EFP	**Efpalio**	**1.36**	**129**	P	**Pb**	**00 50 17.2**	**+0.2**
MALA	**Malamata, Dori**	**1.36**	**131**	P	**Pb**	**00 50 17.5**	**+0.5**
KZN	**Kozani**	**1.37**	**42**	P	**Pn**	**00 50 15.5**	**-0.9**
KZN	**Kozani**	**1.37**	**42**	P	**Pn**	**00 50 16.6**	**+0.2**
RIOA	**Rio**	**1.39**	**136**	P	**Pn**	**00 50 18.3**	**-0.1**
PATC	**Patra C**	**1.39**	**137**	P	**Pg**	**00 50 18.3**	**-0.2**
MG00	**Magoula, Dorid**	**1.40**	**129**	P	**Pg**	**00 50 18.5**	**-0.1**
PATG	**Patra B**	**1.40**	**139**	P	**Pb**	**00 50 18.3**	**+0.8**
AGG	**Agios Georgios**	**1.40**	**101**	P	**Pn**	**00 50 17.2**	**+0.4**
AGG				S	**Sg**	**00 50 37.3**	**+0.3**
AGG	**Agios Georgios**	**1.40**	**101**	⇓P	**Pn**	**00 50 16.3**	**-0.5**
AGG	**Agios Georgios**	**1.40**	**101**	P	**Pn**	**00 50 17.5**	**+0.6**
RLS	**Riolos of Patr**	**1.43**	**150**	P	**Pn**	**00 50 17.5**	**+0.4**
ORTH	**Orthonies,Zaky**	**1.45**	**176**	P	**Pb**	**00 50 18.8**	**+0.3**
GINA	**Giannouli**	**1.46**	**75**	P	**Pn**	**00 50 18.0**	**+0.5**
SERG	**Sergoula**	**1.46**	**127**	P	**Pg**	**00 50 19.7**	**-0.2**
LCHA	**Lechaina**	**1.47**	**158**	P	**Pb**	**00 50 19.2**	**+0.5**
ZIRI	**Ziria, Aigiali**	**1.47**	**132**	P	**Pg**	**00 50 19.7**	**-0.3**
OHR	**Ohrid**	**1.82**	**6**	*eP*	**Pn**	**00 50 26.3**	**-0.3**
OHR				*eS*	**Sg**	**00 50 58.3**	**+8.0**
ITM	**Ithomi**	**2.37**	**153**		**Pn**	**00 50 31.5**	**+1.3**
ITM	**Ithomi**	**2.37**	**153**	*eP*	**Pn**	**00 50 31.4**	**+1.2**
ITM	**Ithomi**	**2.37**	**153**	P	**Pb**	**00 50 32.4**	**-1.8**
ITM	**Ithomi**	**2.37**	**153**	⇑P	**Pn**	**00 50 31.8**	**+1.6**
PHP	**Peshkopia**	**2.38**	**358**	P	**Pn**	**00 50 31.6**	**+1.2**
PHP				S	**Sb**	**00 51 05.0**	**+1.3**
VAY	**Valandovo**	**2.53**	**37**	*eP*	**Pn**	**00 50 34.4**	**+2.1**
SKO	**Skopje**	**2.75**	**14**	*eP*	**Pn**	**00 50 37.9**	**+2.6**
ULC	**Ulcinj**	**2.84**	**340**	*iP*	**Pn**	**00 50 37.8**	**+1.1**
ULC				*i*	**Sn**	**00 51 12.5**	**+1.9**
TIP	**Timpagrande**	**2.96**	**269**	⇓P	**Pn**	**00 50 39.7**	**+1.5**
TIP	**Timpagrande**	**2.96**	**269**		**Pn**	**00 50 39.1**	**+0.8**
TIP	**Timpagrande**	**2.96**	**269**	P	**Pn**	**00 50 39.3**	**+1.0**
TIP	**Timpagrande**	**2.96**	**269**	⇓P	**Pn**	**00 50 39.1**	**+0.8**
DRME	**Dracevica, Mon**	**3.07**	**340**	*iP*	**Pn**	**00 50 40.9**	**+1.2**
DRME				*i*	**Sn**	**00 51 17.5**	**+1.4**
DRME	**Dracevica, Mon**	**3.07**	**340**	*iP*	**Pn**	**00 50 40.9**	**+1.2**
KKB	**Krupnik**	**3.20**	**37**	P	**Pn**	**00 50 44.0**	**+2.4**
BUM	**Brajici-Budva**	**3.25**	**338**	*iP*	**Pn**	**00 50 43.0**	**+0.7**
BUM				*i*	**Sn**	**00 51 22.5**	**+1.7**
MATE	**Matera**	**3.26**	**296**	⇑P	**Pn**	**00 50 43.5**	**+1.2**
MATE	**Matera**	**3.26**	**296**	*eP*	**Pn**	**00 50 44.6**	**+2.3**
MATE	**Matera**	**3.26**	**296**	*eP*	**Pn**	**00 50 45.1**	**+2.8**
MATE	**Matera**	**3.26**	**296**	⇑P	**Pn**	**00 50 42.7**	**+0.4**
PDG	**Podgorica**	**3.28**	**343**		**Pn**	**00 50 43.3**	**+0.7**
PDG	**Podgorica**	**3.28**	**343**	*eP*	**Pn**	**00 50 43.0**	**+0.4**
PDG	**Podgorica**	**3.28**	**343**	⇑P	**Pn**	**00 50 43.6**	**+1.0**
PDG	**Podgorica**	**3.28**	**343**	*iP*	**Pn**	**00 50 43.8**	**+1.2**
PDG				*i*	**Sn**	**00 51 23.3**	**+2.0**
PDG	**Podgorica**	**3.28**	**343**	*iP*	**Pn**	**00 50 43.8**	**+1.2**
MMB	**Musomishta**	**3.31**	**46**	P	**Pn**	**00 50 46.1**	**+3.1**
PVY	**Plav**	**3.32**	**352**	⇑*iP*	**Pn**	**00 50 45.6**	**+2.3**
PVY				*i*	**Sn**	**00 51 23.9**	**+1.3**
CEME	**Cevo**	**3.47**	**339**	⇑*iP*	**Pn**	**00 50 46.0**	**+0.6**
CEME				*eS*	**Sn**	**00 51 27.5**	**+1.2**
HCY	**Herceg Novi**	**3.51**	**334**	⇑*iP*	**Pn**	**00 50 46.7**	**+0.9**
HCY				*eS*	**Sn**	**00 51 28.0**	**+0.9**
HCY	**Herceg Novi**	**3.51**	**334**	*eP*	**Pn**	**00 50 46.9**	**+1.1**
IVA	**Berane**	**3.60**	**352**	⇑*iP*	**Pn**	**00 50 49.5**	**+2.3**
IVA				*i*	**Sn**	**00 51 30.4**	**+0.9**
KTHA	**Kythira Island**	**3.63**	**146**	*eP*	**Pn**	**00 50 50.1**	**+2.7**
KOME	**Kolasin**	**3.63**	**348**	⇑*iP*	**Pn**	**00 50 49.3**	**+1.7**
KOME				*i*	**Sn**	**00 51 31.4**	**+1.2**
NKME	**Niksic**	**3.67**	**341**	⇑*iP*	**Pn**	**00 50 48.9**	**+0.9**
NKME				*i*	**Sn**	**00 51 32.2**	**+1.1**
CUC	**Castrocucco**	**3.73**	**282**		**Pn**	**00 50 50.5**	**+1.6**
CUC	**Castrocucco**	**3.73**	**282**	⇑P	**Pn**	**00 50 50.9**	**+2.0**
MRVN	**Minervino Murg**	**3.78**	**299**	⇑P	**Pn**	**00 50 50.1**	**+0.6**
CEL	**Celeste**	**3.80**	**256**		**Pn**	**00 50 50.2**	**+0.4**
CEL	**Celeste**	**3.80**	**256**	P	**Pn**	**00 50 50.4**	**+0.6**
CEL	**Celeste**	**3.80**	**256**	⇓P	**Pn**	**00 50 50.2**	**+0.4**
TREB	**Trebinje**	**3.80**	**335**	⇑*iP*	**Pn**	**00 50 49.8**	**0.0**
PLNA	**Plana**	**3.84**	**33**	P	**Pn**	**00 50 53.2**	**+2.7**
ACER	**Acerenza**	**3.85**	**294**		**Pn**	**00 50 51.0**	**+0.5**
TRAN	**Tran**	**3.87**	**23**	P	**Pn**	**00 50 53.2**	**+2.5**
VTS	**Vitosha**	**3.88**	**31**	P	**Pn**	**00 50 52.8**	**+1.8**
BRY	**Bratogost**	**3.91**	**338**	⇑*iP*	**Pn**	**00 50 52.1**	**+0.6**
BRY				*i*	**Sn**	**00 51 38.3**	**+1.2**
BRY	**Bratogost**	**3.91**	**338**	*eP*	**Pn**	**00 50 52.0**	**+0.6**
RZN	**Rozhen**	**3.98**	**52**	P	**Pn**	**00 50 55.8**	**+3.4**
SJES	**Sjenica**	**3.98**	**354**	⇑*iP*	**Pn**	**00 50 54.4**	**+2.0**
SOF	**Sofia**	**3.98**	**31**	P	**Pn**	**00 50 55.4**	**+3.1**
UPM	**Unac-Piva**	**4.09**	**343**	⇑*iP*	**Pn**	**00 50 55.3**	**+1.3**
UPM				*eS*	**Sn**	**00 51 42.0**	**+0.3**
UPM	**Unac-Piva**	**4.09**	**343**	⇑*iP*	**Pn**	**00 50 55.2**	**+1.3**
BLSH	**Balsha**	**4.10**	**29**	P	**Pn**	**00 50 56.2**	**+2.2**
SIGR	**SIGRI**	**4.11**	**90**	*eP*	**Pn**	**00 50 56.1**	**+2.1**
PLE	**Pljevlja**	**4.12**	**348**	*eP*	**Pn**	**00 50 56.0**	**+1.7**
PLE				*i*	**Sn**	**00 51 43.2**	**+0.9**
GADA	**Gvkgeada**	**4.21**	**76**	*eP*	**Pn**	**00 50 57.3**	**+2.0**
GOAD	**anakkale-G¶**	**4.21**	**77**	P	**Pn**	**00 50 58.2**	**+2.8**
GOAD				S	**Sn**	**00 51 47.7**	**+3.4**
PGB	**Panagyurishte**	**4.22**	**39**	P	**Pn**	**00 50 58.3**	**+2.8**
RDO	**Rodhopi**	**4.23**	**63**	Pn	**Pn**	**00 50 56.2**	**+0.5**
RDO	**Rodhopi**	**4.23**	**63**	*eP*	**Pn**	**00 50 56.7**	**+1.1**
RDO	**Rodhopi**	**4.23**	**63**	⇓P	**Pn**	**00 50 56.5**	**+0.9**
PLD	**Plovdiv**	**4.26**	**47**	*eP*	**Pn**	**00 50 58.2**	**+2.1**
PLD	**Plovdiv**	**4.26**	**47**	P	Pn	00 51 01.3	+5.2
BOZC	**Bozcaada**	**4.28**	**81**	*eP*	Pn	00 50 50.8	-5.5
BOZC	**Bozcaada**	**4.28**	**81**	P	Pn	00 50 51.4	-4.9
BOZC				S	**Sn**	**00 51 43.3**	**-2.6**
KDZ	**Kurdzhali**	**4.32**	**56**	*eP*	**Pn**	**00 50 56.3**	**-0.6**
KOCA	**Canakkale, Ayv**	**4.32**	**86**	P	**Pn**	**00 50 59.3**	**+2.3**
ECEA	**Canakkale, Ece**	**4.39**	**78**	P	**Pn**	**00 51 00.1**	**+2.2**
ECEA				S	**Sb**	**00 52 04.5**	**+3.2**
SGRT	**San Giovanni R**	**4.42**	**305**		**Pn**	**00 50 58.5**	**+0.1**
EZN	**Ezine**	**4.48**	**81**	*eP*	**Pn**	**00 51 01.9**	**+2.8**
EZN	**Ezine**	**4.48**	**81**	P	**Pn**	**00 51 01.6**	**+2.5**
EZN	**Ezine**	**4.48**	**81**	P	**Pn**	**00 51 00.1**	**+1.0**
ALN	**Alexandroupoli**	**4.50**	**67**		**Pn**	**00 50 59.4**	**+0.1**
ALN	**Alexandroupoli**	**4.50**	**67**	*eP*	**Pn**	**00 51 00.5**	**+1.2**
ALN	**Alexandroupoli**	**4.50**	**67**	P	**Pn**	**00 50 59.4**	**+0.1**
ALN	**Alexandroupoli**	**4.50**	**67**	P	**Pn**	**00 51 00.1**	**+0.8**
ALN				S	**Sn**	**00 51 48.8**	**-2.6**
ALN	**Alexandroupoli**	**4.50**	**67**	⇓P	**Pn**	**00 51 00.3**	**+1.0**
CAVK	**Edirne/Enez-Ca

BKES Balkesir-Mer 5.71 83 P Pn 00 51 18.6 +2.5
HERR Herculane 5.74 13 ⇓P Pn 00 51 18.0 +1.5
BODT Bodrum 5.76 111 eP Pn 00 51 20.9 +4.1
BODT Bodrum 5.76 111 P Pn 00 51 20.5 +3.7
BODT S Sn 00 52 28.7 +6.0
CRLT Corlu 5.79 69 eP Pn 00 51 20.2 +3.2
SUSR Susurluk-Balik 5.84 81 eP Pn 00 51 20.4 +2.6
FRGS Fruska Gora 5.88 355 ⇑iPn Pn 00 51 18.4 0.0
BAND Balkesir-Ban 5.89 77 ⇓P Pn 00 51 21.9 +3.4
WDD Wied Dalam 5.91 236 P Pn 00 51 17.9 -1.0
WDD Wied Dalam 5.91 236 P Pn 00 51 17.8 -1.0
WDD Wied Dalam 5.91 236 ⇑P Pn 00 51 17.6 -1.2
GORD Gordes-Manisa 5.93 91 eP Pn 00 51 23.4 +4.2
COPA Copaceanca 5.95 34 ⇑P Pn 00 51 21.8 +2.5
ODEM Odemis-Izmir 5.96 98 eP Pn 00 51 22.9 +3.4
BLY Banja Luka 6.00 336 ⇑P Pn 00 51 20.5 +0.5
BLY Banja Luka 6.00 336 ⇑P Pn 00 51 20.3 +0.4
BLY Banja Luka 6.00 336 ⇑iPn Pn 00 51 20.5 +0.5
MLSB Milas 6.01 107 eP Pn 00 51 21.7 +1.5
CLTB Caltabellotta 6.02 256 P Pn 00 51 21.4 +1.0
CLTB Caltabellotta 6.02 256 ⇑P Pn 00 51 21.8 +1.4
KCTX Karacabey (Bur 6.08 78 eP Pn 00 51 20.5 -0.6
LOZB Loznitsa 6.09 46 ⇑P Pn 00 51 23.7 +2.4
BANR Banloc 6.09 4 ⇑P Pn 00 51 23.1 +1.9
ZKR Zakros 6.15 131 eP Pn 00 51 24.9 +2.9
SLVT Silivri 6.16 69 eP Pn 00 51 22.7 +0.6
RAZG Razgrad 6.17 44 ⇓P Pn 00 51 24.8 +2.5
HUMR Humele 6.17 31 ⇑P Pn 00 51 24.9 +2.6
NAZL Nazilli-Aydin 6.20 100 eP Pn 00 51 26.3 +3.6
AQU L'Aquila 6.23 302 P Pn 00 51 24.8 +1.6
AQU L'Aquila 6.23 302 P Pn 00 51 25.0 +1.8
AQU L'Aquila 6.23 302 ⇑P Pn 00 51 24.8 +1.6
AQU L'Aquila 6.23 302 ⇑iPn Pn 00 51 24.8 +1.6
MANT Manisa 6.29 95 Pn Pn 00 51 26.4 +2.2
GZR Gura Zlata 6.30 14 ⇓P Pn 00 51 25.9 +1.6
GZR Gura Zlata 6.30 14 P Pn 00 51 25.3 +1.1
BZS Buzias 6.36 7 eP Pn 00 51 25.1 +0.1
BZS Buzias 6.36 7 P Pn 00 51 25.0 +0.1
KULA Kula-Manisa 6.36 95 eP Pn 00 51 28.8 +3.7
SGRR Singureni 6.37 38 ⇓P Pn 00 51 27.4 +2.5
TIM Timisoara 6.45 4 ⇑P Pn 00 51 28.5 +2.3
TIM Timisoara 6.45 4 P Pn 00 51 28.4 +2.3
YER Yerkesik 6.45 107 eP Pn 00 51 31.7 +5.5
MDNY Mudanya-Bursa 6.49 78 eP Pn 00 51 29.4 +2.7
ARMT Armutlu 6.50 76 eP Pn 00 51 29.6 +2.7
SIMA Simav-Kutahya 6.54 89 eP Pn 00 51 33.4 +5.9
BGKT Bogazkoy 6.55 71 eP Pn 00 51 29.7 +2.1
TURN Turunc 6.56 110 eP Pn 00 51 30.8 +3.1
LOT Lotru 6.58 20 ⇑P Pn 00 51 30.2 +2.1
LOT Lotru 6.58 20 P Pn 00 51 30.9 +2.8
INCR INCERC-Sediu C 6.62 37 ⇑P Pn 00 51 31.7 +3.3
GUMA Gualdo di Mace 6.62 307 Pn Pn 00 51 28.8 +0.2
NRCA Norcia 6.64 304 Pn Pn 00 51 30.0 +1.1
ARG Arkhangelos 6.73 115 Pn Pn 00 51 31.5 +1.4
ARG Arkhangelos 6.73 115 eP Pn 00 51 24.1 -6.0
ARG Arkhangelos 6.73 115 ⇑P Pn 00 51 33.1 +3.1
ISK Istanbul-Kandi 6.74 72 eP Pn 00 51 31.9 +1.8
KAVV Kandilli-Istan 6.74 72 eP Pn 00 51 34.9 +4.8
FDMO Fiordimonte 6.76 306 Pn Pn 00 51 31.1 +0.6
ARR Arges 6.77 25 ⇓P Pn 00 51 31.9 +1.3
KLYT Kilyos 6.77 71 eP Pn 00 51 32.7 +2.2
KLYT Kilyos 6.77 71 Pn Pn 00 51 32.4 +1.9
3.2nm10µm702nm,0.9s
MTUR Matau 6.79 28 ⇓P Pn 00 51 33.9 +2.9
MTUR Matau 6.79 28 P Pn 00 51 33.9 +2.9
DEV Deva 6.80 14 ⇓P Pn 00 51 33.8 +2.8
DEV Deva 6.80 14 P Pn 00 51 33.5 +2.5
SULR 6.84 36 ⇑P Pn 00 51 35.3 +3.8
DALY Dalyan (Mula) 6.85 109 eP Pn 00 51 37.7 +6.1
GEDZ Gediz 6.88 89 eP Pn 00 51 35.2 +3.1
CESX Cesi 6.89 301 Pn Pn 00 51 33.2 +1.1
TVSB Tavsanli 6.89 86 eP Pn 00 51 36.2 +3.8
PLAR PLOIESTI 6.92 34 ⇑P Pn 00 51 36.4 +3.7
LEHL Lehliu 6.96 40 ⇑P Pn 00 51 36.1 +2.9
VOIR 6.97 27 ⇓P Pn 00 51 36.4 +2.9
VOIR 6.97 27 P Pn 00 51 36.3 +2.9
VOIR 6.97 27 Pn Pn 00 51 36.0 +2.6
2.3nm12µm372nm,0.8s
MORH Mrgy, Hungar 7.05 349 ⇑P Pn 00 51 35.2 +0.8
MORH Mrgy, Hungar 7.05 349 Pn Pn 00 51 33.7 -0.7
2.4nm6µm263nm,1.3s
MORH Mrgy, Hungar 7.05 349 ⇑iPn Pn 00 51 33.8 -0.7
APMY Acipayam-Deniz 7.10 102 eP Pn 00 51 39.1 +3.9
HRT Hereke 7.15 75 eP Pn 00 51 37.7 +1.9
ADVT Abdulvahap 7.15 78 eP Pn 00 51 33.3 -2.4
PSN Preselentsi 7.15 50 P Pn 00 51 41.9 +6.2
SILT Sile 7.19 72 ⇑P Pn 00 51 39.8 +3.5
SILT Sile 7.19 72 eP Pn 00 51 38.7 +2.4
MURB Monte Urbino 7.23 306 Pn 00 51 38.0 +1.0
FETY Fethiye 7.24 109 eP Pn 00 51 32.0 -5.0
ICOR Ion Corvin 7.24 46 ⇑P Pn 00 51 40.0 +3.0
CAME Cameli-Denizli 7.28 106 eP Pn 00 51 42.1 +4.4
ISR Istrita 7.31 35 ⇓P Pn 00 51 41.7 +3.7
ISR Istrita 7.31 35 P Pn 00 51 41.7 +3.7
MGAB Montegabbione 7.33 302 ⇑P Pn 00 51 39.6 +1.3
BOJS Bojanci 7.34 329 iPn Pn 00 51 38.5 +0.2
BOJS iSn Sn 00 53 00.4 -1.0
BOJS IAML 00 55 26.8
comp=Z,36µm,4.7s
MLR Muntele Rosu 7.36 31 Pn Pn 00 51 38.9 +0.2
comp=Z,4.7nm,0.3s,baz=246,slow=6.8,SNR=102
MLR LR LR 00 54 58.1
comp=Z,26µm,18.8s,baz=171,slow=42
comp=Z,48nm,0.6s
MLR Muntele Rosu 7.36 31 ⇑P Pn 00 51 42.2 +3.4
MLR Muntele Rosu 7.36 31 Pn 00 51 40.0 +1.3
MLR Muntele Rosu 7.36 31 eP Pn 00 51 41.9 +3.2
MLR Muntele Rosu 7.36 31 P Pn 00 51 41.9 +3.2
MDB Medias 7.39 21 ⇑P Pn 00 51 42.4 +3.3
MDB Medias 7.39 21 P Pn 00 51 42.4 +3.3
NEHR Nehoiu 7.45 33 ⇑P Pn 00 51 43.2 +3.4
TSMN Mangalia Port- 7.51 51 ⇑P Pn 00 51 44.1 +3.3
MANR Mangalia 7.52 51 ⇑P Pn 00 51 43.4 +2.6
DOPR Dopca 7.55 27 ⇑P Pn 00 51 44.0 +2.7
BASM Basmaki-Afyon 7.55 98 eP Pn 00 51 45.2 +3.8
MARR Marisel-Cluj 7.61 13 ⇑P Pn 00 51 44.0 +1.9
SAUV Serdivan-Sakar 7.63 76 eP Pn 00 51 45.2 +2.9
MFTR Murfatlar 7.63 48 ⇓P Pn 00 51 45.0 +2.6
DRGR 7.65 11 ⇓P Pn 00 51 44.5 +1.8
DRGR 7.65 11 eP Pn 00 51 46.0 +3.3
DRGR 7.65 11 P Pn 00 51 44.4 +1.8
BORA Eskisehir 7.66 83 Pn Pn 00 51 44.7 +1.9
BEHE Becsehely 7.69 340 Pn Pn 00 51 43.1 0.0
BEHE Becsehely 7.69 340 ⇑iPn Pn 00 51 43.3 +0.2
GRER 7.71 36 ⇑P Pn 00 51 47.2 +3.8
BISRR Bisoca 7.72 34 ⇑P Pn 00 51 46.8 +3.1
BISRR Bisoca 7.72 34 Pn Pn 00 51 46.1 +2.4
comp=Z,12nmcomp=Z,47µmcomp=Z,3µm,0.8s
CJR Cluj-Napoca 7.73 16 ⇓P Pn 00 51 46.5 +2.7
CJR Cluj-Napoca 7.73 16 P Pn 00 51 46.5 +2.7
GULT Gulveren 7.74 78 eP Pn 00 51 49.5 +5.6
BOSR Bodos 7.74 27 ⇑P Pn 00 51 46.6 +2.7
COVR Voineasa-Covas 7.75 31 ⇓P Pn 00 51 47.4 +3.4
TGMR Targu Mures 7.78 21 ⇓P Pn 00 51 47.7 +3.2
AKAS Kas 7.79 110 Pn 00 51 46.6 +1.9
AKAS Kas 7.79 110 eP Pn 00 51 50.5 +5.8
SRCK Saricakaya, Es 7.80 81 eP Pn 00 51 47.7 +3.0
TIRR Tirgusor 7.80 46 ⇓P Pn 00 51 47.0 +2.4
TIRR Tirgusor 7.80 46 Pn Pn 00 51 45.4 +0.8
TIRR Tirgusor 7.80 46 eP Pn 00 51 46.7 +2.1
TIRR Tirgusor 7.80 46 P Pn 00 51 45.2 +0.8
TIRR Tirgusor 7.80 46 ⇑P Pn 00 51 46.3 +1.7
TIRR Tirgusor 7.80 46 Pn Pn 00 51 46.5 +1.9
comp=Z,4.3nmcomp=Z,10µmcomp=Z,273nm,0.9s
ELL Elmali 7.80 106 Pn Pn 00 51 47.2 +2.3
ELL Elmali 7.80 106 eP Pn 00 51 48.6 +3.7
ELL Elmali 7.80 106 ⇑P Pn 00 51 49.7 +4.8
OZUR 7.80 28 ⇓P Pn 00 51 47.8 +3.1
SHUT Suhut-Afyon 7.82 92 eP Pn 00 51 49.3 +4.2
BORR Bors 7.84 6 ⇑P Pn 00 51 47.7 +2.6
PLOR Plostina 7.94 32 ⇓P Pn 00 51 50.3 +3.7
PLOR Plostina 7.94 32 P Pn 00 51 50.3 +3.7
ISP Isparta 7.94 98 Pn Pn 00 51 48.2 +1.4
ISP Isparta 7.94 98 eP Pn 00 51 52.1 +5.4
ISP Isparta 7.94 98 iP Pn 00 51 49.0 +2.3
ISP Isparta 7.94 98 eP Pn 00 51 50.6 +3.9
ISP Isparta 7.94 98 ⇑P Pn 00 51 50.4 +3.6
ISP Isparta 7.94 98 P Pn 00 51 49.7 +3.0
VRI Vrincioaia 7.98 33 ⇑P Pn 00 51 50.9 +3.7
VRI Vrincioaia 7.98 33 eP Pn 00 51 50.3 +3.1

VRI Vrincioaia 7.98 33 P Pn 00 51 50.8 +3.7
BSZH Besenyszg 8.00 359 ⇓P Pn 00 51 49.3 +2.0
MESR Meseseni 8.04 12 ⇓P Pn 00 51 50.6 +2.7
ODBI Odobesti 8.04 34 ⇑P Pn 00 51 51.6 +3.6
KORT Korkueli 8.04 104 eP Pn 00 51 53.6 +5.4
TPGR Topolog 8.06 44 ⇑P Pn 00 51 50.1 +1.9
BCK Bucak 8.09 100 eP Pn 00 51 53.5 +4.8
CASP Castiglione de 8.12 299 Pn 00 51 49.5 +0.5
SDAG Sultandagi-AFY 8.12 93 eP Pn 00 51 53.6 +4.4
CFR Carcaliu 8.12 41 ⇑P Pn 00 51 51.0 +1.9
CFR Carcaliu 8.12 41 P Pn 00 51 51.0 +1.9
TRI Trieste 8.14 324 Pn 00 51 47.6 -1.7
TRI Trieste 8.14 324 P Pn 00 51 47.6 -1.7
CIFT Cifteler, Eski 8.14 86 eP Pn 00 51 53.3 +3.9
LTVH Ltavrtes, Hu 8.14 6 ⇑P Pn 00 51 51.0 +1.7
LTVH Ltavrtes, Hu 8.14 6 ⇑P Pn 00 51 50.3 +1.0
PANC Panciu 8.16 34 ⇑P Pn 00 51 52.9 +3.3
MPLH Magyarpolny 8.17 345 Pn Pn 00 51 49.5 -0.2
comp=Z,18µmcomp=Z,2µm,0.9s
OSSC Osservatorio P 8.17 304 Pn Pn 00 51 50.2 +0.3
SCHLR Schela 8.18 39 ⇓P Pn 00 51 53.0 +3.1
TUDR 8.19 38 ⇑P Pn 00 51 53.9 +3.9
IZVR Izvoarele 8.20 38 ⇑P Pn 00 51 53.6 +3.4
ONER Baraj Valea Uz 8.23 29 ⇑P Pn 00 51 54.1 +3.5
JOSR Joseni 8.24 24 ⇓P Pn 00 51 53.7 +2.9
JURR Jurilovca 8.25 46 ⇑P Pn 00 51 53.2 +2.4
MDUB Mudurnu 8.26 78 Pn Pn 00 51 52.8 +1.7
MDUB Mudurnu 8.26 78 eP Pn 00 51 56.4 +5.3
MDUB Mudurnu 8.26 78 ⇑P Pn 00 51 53.8 +2.7
ANTB Antalya 8.31 104 eP Pn 00 51 58.2 +6.6
TATR Tatarca 8.38 39 ⇑P Pn 00 51 56.0 +3.4
SCTR Scanteiesti 8.40 38 ⇑P Pn 00 51 56.8 +3.8
SOKA Soboth 8.41 333 iPn Pn 00 51 52.7 -0.5
comp=Z,217nm,0.4s,SNR=167
SOKA eSn Sn 00 53 24.8 -3.1
comp=Z,135nm,0.6s
SABO M.te Sabotino 8.42 325 Pn Pn 00 51 52.6 -0.6
GHRR 8.43 34 ⇑P Pn 00 51 56.9 +3.7
OBKA Obir 8.45 330 ePn Pn 00 51 53.2 -0.4
comp=Z,107nm,0.4s,SNR=207
OBKA iSn Sn 00 53 27.5 -1.2
comp=Z,298nm,0.5s
TESR Tescani 8.47 30 ⇓P Pn 00 51 57.3 +3.3
TESR Tescani 8.47 30 Pn Pn 00 51 56.8 +2.9
comp=Z,7µmcomp=Z,652nm,1.4s
TLCR 8.48 43 ⇑P Pn 00 51 56.8 +2.7
TLCR 8.48 43 P Pn 00 51 56.7 +2.7
SVRH Sivrihisar-ESK 8.49 86 eP Pn 00 51 58.3 +4.0
VARL Varlezi 8.50 37 ⇑P Pn 00 51 57.4 +3.1
VLDR Vladesti 8.57 38 ⇑P Pn 00 51 58.9 +3.7
YUVA Yuva-Kibriscik 8.63 79 eP Pn 00 51 59.0 +2.9
PSZ Piszkesteto 8.63 357 ⇓P Pn 00 51 57.8 +1.6
PSZ Piszkesteto 8.63 357 Pn Pn 00 51 55.9 -0.2
PSZ Piszkesteto 8.63 357 P Pn 00 51 57.7 +1.6
PSZ Piszkesteto 8.63 357 eP Pn 00 51 58.4 +2.3
PSZ Piszkesteto 8.63 357 ⇑P Pn 00 51 55.5 -0.6
BMR Baia Mare 8.63 13 ⇓P Pn 00 51 59.5 +3.3
BMR Baia Mare 8.63 13 P Pn 00 51 59.4 +3.3
SRO Srobarova 8.66 350 eP Pn 00 51 57.1 +0.5
SRO Srobarova 8.66 350 ePN Pn 00 51 57.0 +0.5
VSL Villasalto 8.66 275 Pn Pn 00 51 56.2 -0.4
VSL Villasalto 8.66 275 ⇑P Pn 00 51 57.0 +0.4
BIR Birlad 8.68 34 ⇑P Pn 00 52 00.2 +3.5
BIR Birlad 8.68 34 P Pn 00 52 00.2 +3.5
RUZG Kolk¶y-BOLU 8.73 77 eP Pn 00 52 03.3 +5.6
ARSA Arzberg 8.75 337 Pn 00 51 56.9 -0.9
ARSA Arzberg 8.75 337 iPn Pn 00 51 57.2 -0.6
comp=Z,79nm,0.4s,SNR=115
ARSA Arzberg 8.75 337 ⇑P Pn 00 51 57.0 -0.8
ZCCA Zocca 8.76 308 Pn 00 51 58.8 +0.9
GIRR Girov 8.79 28 ⇑P Pn 00 52 01.9 +3.6
PRED Cave del Predi 8.79 327 Pn 00 51 57.6 -0.8
KIZT Kizilcal 8.81 89 eP Pn 00 52 03.6 +4.9
PTCC Patocco-Chiusa 8.85 326 ⇑P Pn 00 51 58.5 -0.7
ACOM Acomizza, Ital 8.90 327 P Pn 00 51 59.4 -0.5
MYKA Terra Mystica 8.91 328 ePn Pn 00 51 59.7 -0.3
comp=Z,88nm,0.5s,SNR=57
MYKA iSn Sn 00 53 37.6 -2.4
comp=Z,88nm,0.5s
TEOL Teolo 8.94 315 Pn 00 51 59.6 -0.7
RONA Rosalia, Austr 8.95 341 ePn Pn 00 51 59.7 -0.8
comp=Z,31nm,0.5s,SNR=96
RONA iSn Sn 00 53 41.7 +0.8
comp=Z,107nm,0.9s
BURAR Bucovina Array 8.97 21 ⇑P Pn 00 52 03.5 +2.7
BURAR Bucovina Array 8.97 21 Pn 00 52 02.0 +1.2
BURAR Bucovina Array 8.97 21 P Pn 00 52 03.5 +2.7
BUR08 Bucovina Ar. S 8.99 20 Pn 00 52 02.1 +1.0
VLC Villacollemand 9.02 306 P Pn 00 52 02.5 +1.0
VLC Villacollemand 9.02 306 P Pn 00 52 03.7 +2.2
VLC Villacollemand 9.02 306 ⇑P Pn 00 52 03.4 +1.9
STAL STALIGIAL 9.04 323 Pn 00 52 00.6 -1.1
PRAR RASCA 9.05 25 ⇑P Pn 00 52 05.1 +3.3
BERU Beregovo 9.05 9 Pn Pn 00 52 03.9 +2.0
SEYD Seydisehir-KON 9.06 99 eP Pn 00 52 07.5 +5.4
RAKU Rahkiv 9.10 15 Pn Pn 00 52 05.2 +2.7
LEOM Leova 9.12 36 eP Pn 00 52 05.9 +3.2
KECS Kecovo 9.18 360 eP Pn 00 52 05.6 +2.0
KECS e 00 53 51.7
KECS Kecovo 9.18 360 ePN Pn 00 52 05.5 +2.0
KECS eSN Sn 00 53 51.7 +5.1
BRIU Brid 9.21 10 Pn Pn 00 52 06.2 +2.3
CONA Conrad Observa 9.27 340 iPn Pn 00 52 04.4 -0.5
comp=Z,47nm,0.9s,SNR=59
MUKU Mukachevo 9.28 9 Pn Pn 00 52 06.7 +1.8
LADK Ladik-KONYA 9.29 93 eP Pn 00 52 09.6 +4.4
HOLU Holmets 9.32 7 Pn Pn 00 52 07.4 +2.0
PGF Pioggiola 9.34 294 ⇑P Pn 00 52 07.3 +1.5
MODS Modra-Piesok 9.37 346 eP Pn 00 52 06.8 +0.5
MODS MLR MLR
comp=Z,181µm,13.5s
MODS Modra-Piesok 9.37 346 ePN Pn 00 52 06.8 +0.5
MODS eL L 00 56 30.6
PRMA PARMA 9.38 309 Pn 00 52 06.4 +0.3
WINA Alland / Wiene 9.38 341 iPn Pn 00 52 06.5 +0.1
SNR=39
IASR Iasi 9.38 31 ⇓P Pn 00 52 09.6 +3.2
KBA Koelnbreinsper 9.39 328 ePn Pn 00 52 06.2 -0.5
comp=Z,168nm,0.7s,SNR=89
KBA iSn Sn 00 53 50.5 -1.4
comp=Z,92nm,0.4s
KBA Koelnbreinsper 9.39 328 ⇑P Pn 00 52 06.0 -0.7
CTI Castel Tesino 9.41 319 Pn 00 52 05.7 -1.1
CTI Castel Tesino 9.41 319 P Pn 00 52 05.7 -1.1
UZHM Uzhgorod 9.41 7 Pn Pn 00 52 08.2 +1.5
LOD Ludumlu 9.44 83 eP Pn 00 52 07.9 +0.7
SMOL Smolenice 9.48 347 eP Pn 00 52 08.7 +0.9
ABTA Abfaltersbach 9.49 324 iPn Pn 00 52 07.1 -0.8
comp=Z,46nm,0.4s,SNR=76
ABTA iSn Sn 00 53 52.2 -2.2
comp=Z,336nm,0.9s
KEST Kesra 9.60 252 Pn Pn 00 52 11.3 +1.9
comp=Z,2.9nm,0.3s,baz=92,slow=5.6,SNR=67
KEST LR LR 00 56 48.4
comp=Z,17µm,20.7s,baz=53,slow=43
comp=Z,53nm,0.7s
KEST Kesra 9.60 252 Pn 00 52 09.9 +0.4
KEST Kesra 9.60 252 P Pn 00 52 12.2 +2.8
SNR=48
KEST P Pn 00 52 12.2 +2.8
SNR=48
KEST S Sn 00 53 56.4 -0.6
KEST S Sn 00 53 56.4 -0.6
KURC Kurucasile-Bar 9.61 71 eP Pn 00 52 11.0 +1.5
CHBY Cihanbeyli 9.63 90 eP Pn 00 52 04.9 -5.0
KULU Kulu 9.66 88 eP Pn 00 52 15.0 +4.6
HDMB Hadim 9.68 100 eP Pn 00 52 15.6 +4.9
AFSR Afar-Bala (An 9.69 85 eP Pn 00 52 14.7 +4.0
MOA Molln 9.69 334 ePn Pn 00 52 10.6 0.0
comp=Z,80nm,0.3s,SNR=157
MOA iSn Sn 00 53 58.7 -0.4
comp=Z,70nm,0.6s
SALO Salr 9.74 314 Pn 00 52 09.8 -1.5
SALO Salr 9.74 314 ⇑P Pn 00 52 10.2 -1.1
CIDE Kastamonu/Cide 9.77 71 ⇓P Pn 00 52 15.5 +3.9
KIS Kishinev 9.77 35 ⇑P Pn 00 52 15.2 +3.6
KIS Kishinev 9.77 35 P Pn 00 52 15.2 +3.6
KIS Kishinev 9.77 35 Pn Pn 00 52 14.4 +2.7
comp=Z,5µmcomp=Z,323nm,0.8s
BIOA Bad Ischl, Aus 9.78 331 ePn Pn 00 52 11.6 -0.2
comp=Z,116nm,0.4s,SNR=258
BIOA iSn Sn 00 53 57.9 -3.4

comp=Z,125nm,0.6s
JAVC Velka Javorina 9.78 349 ePN Pn 00 52 12.7 +0.8
GAZI Gazipasa 9.79 105 eP Pn 00 52 14.2 +2.1
LANS Liptovska Anna 9.88 356 eP Pn 00 52 14.9 +1.7
LANS Liptovska Anna 9.88 356 ePN Pn 00 52 14.9 +1.7
BOB Bobbio (Coli) 9.91 307 ⇑P Pn 00 52 14.4 +0.8
CBOGS Bougous 9.93 259 P Pn 00 52 18.0 +4.1
PURM Purcari 9.93 40 ⇓P Pn 00 52 16.9 +3.0
PURM Purcari 9.93 40 Pn Pn 00 52 15.4 +1.5
comp=Z,10µmcomp=Z,633nm,0.9s
LESA Schwarzleotal 9.94 327 ePn Pn 00 52 14.1 +0.1
comp=Z,148nm,0.7s,SNR=134
LESA eSn Sn 00 54 02.7 -2.7
comp=Z,156nm,0.5s
BR105 Keskin Array S 10.10 84 Pn Pn 00 52 19.8 +3.5
comp=Z,823nmcomp=Z,91nm,0.9s
BR106 Keskin Array S 10.10 83 Pn Pn 00 52 19.5 +3.2
comp=Z,858nmcomp=Z,78nm,0.9s
SERE Sereflikochisa 10.11 88 eP Pn 00 52 20.2 +3.7
CANT Cankiri 10.11 78 eP Pn 00 52 22.1 +5.7
BR131 Keskin Array S 10.11 83 Pn 00 52 17.3 +0.7
BR131 Keskin Array S 10.11 83 eP Pn 00 52 20.2 +3.6
BR131 Keskin Array S 10.11 83 P Pn 00 52 17.3 +0.7
BR131 Keskin Array S 10.11 83 P Pn 00 52 20.0 +3.4
SNR=57
BR131 P Pn 00 52 20.0 +3.4
SNR=57
BRTR Keskin Array B 10.11 83 Pn Pn 00 52 19.0 +2.4
comp=Z,3.5nm,0.3s,baz=264,slow=12,SNR=103
BRTR LR LR 00 56 48.4
comp=Z,11µm,21.8s,baz=288,slow=42
comp=Z,15nm,0.6s
BRTR Keskin Array B 10.11 83 Pn 00 52 18.7 +2.2
BRTR Keskin Array B 10.11 83 P Pn 00 52 18.7 +2.2
BR104 Keskin Array S 10.12 84 Pn Pn 00 52 19.6 +3.0
comp=Z,1µmcomp=Z,79nm,0.9s
NIE Niedzica 10.12 359 eP Pn 00 52 18.9 +2.4
NIE eS Sn 00 54 50.8 +41
NIE eL L 00 56 50.1
comp=Z,53µm,13.9s
STHS Stebnicka Huta 10.13 3 eP Pn 00 52 18.1 +1.5
STHS Stebnicka Huta 10.13 3 ePN Pn 00 52 18.1 +1.5
KMPD K-Podol'skiy 10.18 23 Pn Pn 00 52 18.8 +1.5
KMPD Pn Pn 00 52 20.2 +2.9
KAMT Kaman 10.19 85 eP Pn 00 52 21.9 +4.3
KRUC Moravsky 10.21 344 ePN Pn 00 52 17.4 -0.2
KRMN Karaman 10.21 98 eP Pn 00 52 21.9 +4.0
ILGA Ilgaz 10.22 76 Pn 00 52 20.1 +2.1
MAUC Maruska 10.25 350 ePN Pn 00 52 19.5 +1.2
MAUC eSN Sn 00 54 15.7 +2.8
WTTA Wattenberg 10.28 324 ePn Pn 00 52 18.9 +0.1
comp=Z,206nm,0.6s,SNR=113
WTTA iSn Sn 00 54 10.4 -3.3
comp=Z,358nm,0.5s
WATA Walderalm 10.36 324 ePn Pn 00 52 20.1 +0.3
comp=Z,346nm,0.6s,SNR=179
WATA eSn Sn 00 54 13.6 -2.1
comp=Z,283nm,0.7s
KIRS Kirsehir-Merke 10.36 87 ⇑P Pn 00 52 24.6 +4.6
VRAC Vranov 10.40 345 Pn Pn 00 52 19.7 -0.6
comp=Z,1.5nm,0.3s,baz=177,slow=13,SNR=52
comp=Z,35nm,0.9s
VRAC Vranov 10.40 345 ePN Pn 00 52 20.3 0.0
TEKE Tekeli-Mersin 10.43 104 eP Pn 00 52 25.6 +4.9
YESY Yesilyurt 10.44 94 eP Pn 00 52 28.8 +7.9
KWP Kalwaria Pacla 10.44 8 eP Pn 00 52 23.2 +2.4
KWP eS Sn 00 54 06.7 +39
KWP eS 00 55 06.7
KWP eL L 00 55 32.6
comp=Z,14µm,25.6s
KWP Kalwaria Pacla 10.44 8 ⇑P Pn 00 52 23.6 +2.7
SQTA Sankt Quirin 10.44 322 ePn Pn 00 52 21.9 +0.8
comp=Z,63nm,0.3s,SNR=109
SQTA eSn Sn 00 54 15.3 -2.5
comp=Z,158nm,0.7s
SORM Soroca 10.47 30 ⇑P Pn 00 52 23.4 +2.2
SORM Soroca 10.47 30 P Pn 00 52 23.4 +2.2
SORM Soroca 10.47 30 Pn Pn 00 52 23.3 +2.1
comp=Z,4µmcomp=Z,128nm,1.3s
NDNU Novodnistrovsk 10.50 26 Pn Pn 00 52 23.5 +1.8
FUORN Ofenpass-Fuorn 10.51 317 Pn 00 52 21.7 -0.3
CKRC Cesky Krumlov 10.52 337 ePN Pn 00 52 21.9 -0.1
CKRC AMS AMS 00 57 40.0
comp=Z,61µm,10.6s
CKRC Cesky Krumlov 10.52 337 eP Pn 00 52 21.9 -0.1
CKRC MLR MLR
comp=Z,61µm,10.6s
FETA Feichten 10.54 320 iPn Pn 00 52 22.2 -0.1
comp=Z,105nm,0.8s,SNR=49
FETA iSn Sn 00 54 19.7 -0.4
comp=Z,141nm,0.7s
BZK Bozkurt 10.55 71 ⇑P Pn 00 52 26.5 +4.1
BZK Bozkurt 10.55 71 Pn 00 52 23.8 +1.4
BZK Bozkurt 10.55 71 eP Pn 00 52 24.2 +1.8
BZK Bozkurt 10.55 71 ⇑P Pn 00 52 25.5 +3.1
BZK Bozkurt 10.55 71 Pn Pn 00 52 25.3 +2.9
comp=Z,7µmcomp=Z,248nm,0.7s
NE56 Odesa 10.56 42 Pn Pn 00 52 24.0 +1.6
MOTA Moosalm 10.58 323 ePn Pn 00 52 23.3 +0.3
comp=Z,192nm,0.7s,SNR=202
MOTA eSn Sn 00 54 19.1 -2.2
comp=Z,348nm,0.9s
TREC Trest 10.63 342 ePN Pn 00 52 23.9 +0.4
TREC Trest 10.63 342 eP Pn 00 52 23.9 +0.4
OKC Ostrava-Krasne 10.68 352 ePN Pn 00 52 25.5 +1.5
OKC eSN Sn 00 54 25.3 +2.1
OKC AMS AMS 00 57 10.0
comp=Z,29µm,12.9s
OKC Ostrava-Krasne 10.68 352 eP Pn 00 52 25.5 +1.5
OKC e 00 54 25.3
OKC MLR MLR
comp=Z,29µm,12.9s
MORC Moravsky Berou 10.69 349 ⇓P Pn 00 52 25.6 +1.3
MORC Moravsky Berou 10.69 349 Pn 00 52 23.2 -1.2
MORC Moravsky Berou 10.69 349 P Pn 00 52 23.2 -1.2
MORC Moravsky Berou 10.69 349 ePN Pn 00 52 24.6 +0.2
MORC Moravsky Berou 10.69 349 ⇑P Pn 00 52 24.6 +0.2
GULA Gulagac 10.71 91 eP Pn 00 52 26.8 +2.1
GEC2 GERESS Array S 10.74 335 Pn 00 52 23.3 -1.7
GERES GERESS Array B 10.74 335 Pn Pn 00 52 24.5 -0.5
comp=Z,1.0nm,0.3s,baz=157,slow=14,SNR=162
GERES Sn Sn 00 54 24.8 -0.1
comp=Z,1.2nm,0.3s,baz=151,slow=22,SNR=5.7
GERES LR LR 00 56 24.4
comp=Z,4µm,21.7s,baz=144,slow=37
comp=Z,33nm,0.6s
BECE Buyukeceli-Mer 10.76 103 eP Pn 00 52 30.2 +4.9
KEBE Keben-Mersin 10.78 101 eP Pn 00 52 29.7 +4.1
DAVOX Davos/Dischmat 10.81 317 Pn Pn 00 52 26.1 0.0
comp=Z,5.0nm,0.3s,baz=65,slow=2.4,SNR=56
DAVOX LR LR 00 58 37.0
comp=Z,8µm,19.5s,baz=154,slow=49
comp=Z,23nm,0.6s
BAL3X Bal3x, Balta 10.83 34 Pn Pn 00 52 27.4 +1.3
RETA Reutte 10.85 322 ePn Pn 00 52 26.8 +0.3
comp=Z,65nm,0.6s,SNR=34
RETA eSn Sn 00 54 23.8 -3.8
comp=Z,115nm,0.6s
CRHA Rehia 10.85 255 P Pn 00 52 28.7 +2.1
CORM Corum 10.87 81 eP Pn 00 52 33.1 +6.2
TUE Stuetta 10.91 315 00 52 26.4 -1.0
TUE Stuetta 10.91 315 ⇓P Pn 00 52 27.4 -0.1
RAC Raciborz 10.91 352 eP Pn 00 52 28.3 +1.0
RAC AMS AMS 00 57 24.0
comp=Z,25nm,14.9s
RAC Raciborz 10.91 352 eP Pn 00 52 28.3 +1.0
RAC MLR MLR
comp=Z,25µm,14.9s
OJC Ojcow 10.93 357 eP Pn 00 52 28.5 +0.9
OJC eS Sn 00 54 49.7 +20
OJC eL L 00 57 20.8
comp=Z,55µm,14.7s
OJC Ojcow 10.93 357 Pn 00 52 26.3 -1.3
OJC Ojcow 10.93 357 P Pn 00 52 26.3 -1.3
OJC Ojcow 10.93 357 ⇑P Pn 00 52 28.7 +1.1
OJC Ojcow 10.93 357 Pn Pn 00 52 28.7 +1.1
comp=Z,3µmcomp=Z,114nm,1.5s
SILI Silifke-Mersin 10.96 101 eP Pn 00 52 32.3 +4.2
MONC Moncucco Torin 11.00 306 ⇑P Pn 00 52 30.6 +2.0
KHC Kasperske Hory 11.03 335 Pn 00 52 27.1 -1.8
KHC Kasperske Hory 11.03 335 ePN Pn 00 52 27.6 -1.3
KHC eSN Sn 00 54 32.1 +0.2
KHC AMS AMS 00 57 40.0
comp=Z,58µm,11.2s

KHC	**Kasperske Hory**	**11.03**	**335**	⇑P		**Pn**		**00 52 27.8**	**-1.1**
KHC	**Kasperske Hory**	**11.03**	**335**	Pn		**Pn**		**00 52 28.0**	**-0.9**
	comp=Z,3µmcomp=Z,139nm,1.4s								
CBST	**Bordj Sabath**	**11.03**	**259**	P		**Pn**		**00 52 33.2**	**+4.1**
CSS	**Mathiatis**	**11.07**	**109**			**Pn**		**00 52 29.7**	**+0.1**
CSS	**Mathiatis**	**11.07**	**109**	*e*P		**Pn**		**00 52 31.9**	**+2.3**
CSS	**Mathiatis**	**11.07**	**109**	⇑P		**Pn**		**00 52 28.7**	**-0.9**
CSS	**Mathiatis**	**11.07**	**109**	Pn		**Pn**		**00 52 31.3**	**+1.7**
	comp=Z,5µmcomp=Z,351nm,0.9s								
CSS	**Mathiatis**	**11.07**	**109**	P		**Pn**		**00 52 28.5**	**-1.0**
LFK	**Lefkose**	**11.08**	**107**	*e*P		**Pn**		**00 52 32.3**	**+2.6**
KIZK	**Mersin**	**11.09**	**100**	*e*P		**Pn**		**00 52 33.7**	**+3.9**
KOZK	**Kozakli-Nevseh**	**11.09**	**86**	*e*P		**Pn**		**00 52 34.2**	**+4.3**
KRLC	**Kraliky**	**11.10**	**347**	*e*PN		**Pn**		**00 52 30.4**	**+0.4**
KRLC					AMS	AMS		00 57 40.0	
	comp=Z,36µm,14.2s								
KRLC	**Kraliky**	**11.10**	**347**	*e*P		**Pn**		**00 52 30.4**	**+0.4**
KRLC					MLR	MLR			
	comp=Z,36µm,14.2s								
ZVC	**Zvikov**	**11.11**	**338**	*e*PN		**Pn**		**00 52 29.8**	**-0.2**
ZVC					AMS	AMS		00 57 50.0	
	comp=Z,61µm,11.4s								
DAVA	**Damuels**	**11.14**	**319**	*i* Pn		**Pn**		**00 52 30.8**	**+0.2**
	comp=Z,40nm,0.5s,SNR=46								
DAVA				*e*Sn		**Sn**		**00 54 33.7**	**-1.3**
	comp=Z,64nm,0.4s								
DAVA	**Damuels**	**11.14**	**319**	⇑P		**Pn**		**00 52 30.7**	**+0.1**
YOZ	**Yozgat**	**11.41**	**84**	*e*P		Pn		00 52 39.4	+5.0
CSGS	**Sigus**	**11.42**	**258**	P		**Pn**		**00 52 37.9**	**+3.5**
CMRD	**Camardi-Nigde**	**11.43**	**94**	*e*P		Pn		00 52 41.1	+6.6
CBBAR	**Babar**	**11.44**	**253**	P		Pn		00 52 39.9	+5.2
DPC	**Dobruska-Polom**	**11.45**	**346**	*e*PN		**Pn**		**00 52 35.1**	**+0.4**
DPC					AMS	AMS		00 57 50.0	
	comp=Z,66µm,12.9s								
DPC	**Dobruska-Polom**	**11.45**	**346**	*e*P		**Pn**		**00 52 35.1**	**+0.4**
DPC					MLR	MLR			
	comp=Z,66µm,12.9s								
DPC	**Dobruska-Polom**	**11.45**	**346**	Pn		**Pn**		**00 52 34.5**	**-0.2**
	comp=Z,2µmcomp=Z,56nm,1.1s								
EREN	**Erenkoy**	**11.45**	**105**	*e*P		**Pn**		**00 52 35.7**	**+0.9**
PRU	**Pruhonice**	**11.51**	**340**	*e*PN		**Pn**		**00 52 35.6**	**+0.1**
PRU					AMS	AMS		00 58 10.0	
	comp=Z,39µm,12.6s								
PRU	**Pruhonice**	**11.51**	**340**	*e*P		**Pn**		**00 52 35.6**	**+0.1**
PRU					MLR	MLR			
	comp=Z,39µm,12.6s								
CBOS	**Bilal Ibnou Ra**	**11.51**	**262**	P		**Pn**		**00 52 38.9**	**+3.3**
SIM	**Simferopol'**	**11.53**	**56**	*e*P		**Pn**		**00 52 36.6**	**+0.8**
SIM					pmax	pmax			
	comp=Z,1µm,3.4s								
SIM					MLR	MLR			
	comp=Z,13µm,9.3s								
CASM	**Ain Smara**	**11.54**	**259**	P		**Pn**		**00 52 39.3**	**+3.2**
PRA	**Prague**	**11.61**	**340**	*e*PN		**Pn**		**00 52 37.8**	**+0.9**
PRA	**Prague**	**11.61**	**340**	*e*P		**Pn**		**00 52 37.8**	**+0.9**
CBHR	**Beni Haroun da**	**11.61**	**261**	P		**Pn**		**00 52 41.1**	**+4.1**
UPC	**Upice**	**11.66**	**345**	*e*PN		**Pn**		**00 52 37.5**	**0.0**
UPC					AMS	AMS		00 58 00.0	
	comp=Z,59µm,12.0s								
UPC	**Upice**	**11.66**	**345**	*e*P		**Pn**		**00 52 37.5**	**0.0**
UPC					MLR	MLR			
	comp=Z,59µm,12.0s								
OSTC	**Ostas**	**11.67**	**346**	*e*PN		**Pn**		**00 52 38.1**	**+0.5**
OSTC					AMS	AMS		00 57 50.0	
	comp=Z,60µm,12.9s								
OSTC	**Ostas**	**11.67**	**346**	*e*P		**Pn**		**00 52 38.1**	**+0.5**
OSTC					MLR	MLR			
	comp=Z,60µm,12.9s								
CTEI	**Djebel Teioual**	**11.68**	**258**	P		**Pn**		**00 52 41.4**	**+3.5**
COAT	**Oued Athmania**	**11.71**	**259**	P		**Pn**		**00 52 41.8**	**+3.4**
CHVC	**Chvalec**	**11.73**	**346**	*e*PN		**Pn**		**00 52 39.1**	**+0.6**
CHVC					AMS	AMS		00 58 00.0	
	comp=Z,52µm,13.2s								
CHVC	**Chvalec**	**11.73**	**346**	*e*P		**Pn**		**00 52 39.1**	**+0.6**
CHVC					MLR	MLR			
	comp=Z,52µm,13.2s								
CTGD	**Timgad**	**11.77**	**256**	P		**Pn**		**00 52 43.4**	**+4.1**
LUBAR	**Lubar, Ukraine**	**11.78**	**23**	Pn		**Pn**		**00 52 41.9**	**+2.7**
BNI	**Bardonecchia**	**11.79**	**304**			**Pn**		**00 52 39.9**	**+0.4**
BNI	**Bardonecchia**	**11.79**	**304**	⇓P		**Pn**		**00 52 41.0**	**+1.5**
KSP	**Ksiaz**	**11.93**	**347**	*e*P		**Pn**		**00 52 41.1**	**0.0**
KSP					eL	L		00 58 02.8	
	comp=Z,46µm,16.3s								
KSP	**Ksiaz**	**11.93**	**347**	⇑P		**Pn**		**00 52 41.0**	**-0.2**
KSP	**Ksiaz**	**11.93**	**347**	Pn		**Pn**		**00 52 40.7**	**-0.5**
	comp=Z,2µmcomp=Z,95nm,2.6s								
PVCC	**Panska Ves**	**12.00**	**341**	*e*PN		**Pn**		**00 52 41.5**	**-0.6**
PVCC					AMS	AMS		00 58 30.0	
	comp=Z,32µm,11.3s								
PVCC	**Panska Ves**	**12.00**	**341**	*e*P		**Pn**		**00 52 41.5**	**-0.6**
PVCC					MLR	MLR			
	comp=Z,32µm,11.3s								
SENIN	**Lac Senin/Sane**	**12.02**	**310**			**Pn**		**00 52 42.0**	**-0.7**
KOZT	**Kozan**	**12.12**	**94**	*e*P		P		00 52 51.3	-5.2
RICC	**Richard**	**12.13**	**340**	*e*PN		**Pn**		**00 52 43.1**	**-0.9**
TOKA	**Tokat**	**12.28**	**80**			**Pn**		**00 52 47.2**	**+1.0**
GRA1	**Grafenberg Arr**	**12.33**	**330**			**Pn**		**00 52 44.0**	**-2.8**
GRF	**Grafenberg Arr**	**12.33**	**330**	P		**Pn**		**00 52 44.0**	**-2.8**
GRFO	**Grafenberg**	**12.33**	**330**			**Pn**		**00 52 44.7**	**-2.1**
GRFO	**Grafenberg**	**12.33**	**330**	P		**Pn**		**00 52 44.7**	**-2.1**
TOKT	**Tokat**	**12.33**	**80**	*e*P		Pn		00 52 52.1	+5.2
NKC	**Novy Kostel**	**12.35**	**335**	*e*PN		**Pn**		**00 52 46.9**	**-0.1**
NKC					AMS	AMS		00 58 40.0	
	comp=Z,52µm,11.8s								
NKC	**Novy Kostel**	**12.35**	**335**	*e*P		**Pn**		**00 52 46.9**	**-0.1**
NKC					MLR	MLR			
	comp=Z,52µm,11.8s								
HSKC	**Hora Svate Kat**	**12.37**	**338**	*e*PN		**Pn**		**00 52 46.9**	**-0.4**
HSKC					AMS	AMS		00 58 40.0	
	comp=Z,70µm,10.9s								
SET	**Setif**	**12.40**	**260**	P		**P**		**00 52 56.0**	**-3.8**
STU	**Stuttgart**	**12.50**	**323**			**Pn**		**00 52 46.7**	**-2.3**
STU	**Stuttgart**	**12.50**	**323**	P		**Pn**		**00 52 46.7**	**-2.3**
STU	**Stuttgart**	**12.50**	**323**	*e*P		**Pn**		**00 52 48.8**	**-0.2**
STU	**Stuttgart**	**12.50**	**323**	⇑P		**Pn**		**00 52 47.4**	**-1.7**
BEL	**Belsk**	**12.54**	**1**	*e*P		**Pn**		**00 52 51.0**	**+1.5**
BEL					eL	L		00 58 39.9	
	comp=Z,73µm,13.8s								
BEL	**Belsk**	**12.54**	**1**	⇑P		**Pn**		**00 52 51.2**	**+1.7**
MAHO	**Mahon**	**12.59**	**278**	P		**Pn**		**00 52 51.7**	**+1.4**
MAHO	**Mahon**	**12.59**	**278**			**Pn**		**00 52 50.3**	**0.0**
BFO	**Black Forest**	**12.62**	**320**			**Pn**		**00 52 49.1**	**-1.6**
BFO	**Black Forest**	**12.62**	**320**	P		**Pn**		**00 52 49.1**	**-1.6**
BFO	**Black Forest**	**12.62**	**320**	⇓P		**Pn**		**00 52 49.5**	**-1.2**
MI28	**Mi28,Pidlybu**	**12.66**	**21**	Pn		**Pn**		**00 52 51.1**	**0.0**
TAHT	**Tahtakopru-Hat**	**12.69**	**98**	*e*P		**Pn**		**00 52 54.3**	**+2.6**
SVSK	**Karacayir**	**12.69**	**82**	*e*P		**Pn**		**00 52 54.9**	**+3.2**
AK07	**Malin Array Si**	**12.79**	**26**	Pn		**Pn**		**00 52 54.6**	**+1.6**
AK13	**Malin Array Si**	**12.80**	**25**	Pn		**Pn**		**00 52 54.6**	**+1.5**
AK06	**Malin Array Si**	**12.82**	**26**	Pn		**Pn**		**00 52 54.4**	**+1.0**
AK14	**Malin Array Si**	**12.83**	**25**	Pn		**Pn**		**00 52 54.6**	**+1.1**
AK10	**Malin Array Si**	**12.85**	**26**	Pn		**Pn**		**00 52 54.9**	**+1.1**
AK05	**Malin Array Si**	**12.85**	**25**	Pn		**Pn**		**00 52 54.6**	**+0.8**
AK12	**Malin Array Si**	**12.86**	**25**	Pn		**Pn**		**00 52 54.7**	**+0.8**
AK17	**Malin Array Si**	**12.86**	**25**	Pn		**Pn**		**00 52 54.0**	**+0.1**
AK16	**Malin Array Si**	**12.86**	**25**	Pn		**Pn**		**00 52 55.4**	**+1.4**
AK09	**Malin Array Si**	**12.88**	**26**	Pn		**Pn**		**00 52 55.6**	**+1.5**
AK19	**Malin Array Si**	**12.88**	**25**	Pn		**Pn**		**00 52 55.1**	**+1.0**
AK08	**Malin Array Si**	**12.88**	**26**	Pn		**Pn**		**00 52 55.4**	**+1.2**
AK02	**Malin Array Si**	**12.89**	**25**	Pn		**Pn**		**00 52 55.0**	**+0.7**
AK01	**Malin Array Si**	**12.92**	**25**	Pn		**Pn**		**00 52 55.3**	**+0.6**
KIEV	**Kiev**	**12.92**	**25**	⇑P		**Pn**		**00 52 56.8**	**+2.0**
KIEV	**Kiev**	**12.92**	**25**			**Pn**		**00 52 54.4**	**-0.3**
KIEV	**Kiev**	**12.92**	**25**	*i* P		**Pn**		**00 52 55.6**	**+0.9**
	SNR=24								
KIEV	**Kiev**	**12.92**	**25**	P		**Pn**		**00 52 56.7**	**+2.0**
KIEV	**Kiev**	**12.92**	**25**	Pn		**Pn**		**00 52 55.0**	**+0.3**
	comp=Z,48µmcomp=Z,936nm,3.0s								
R9F13	**Warsaw-Wawer**	**12.93**	**2**	*e*P		**Pn**		**00 52 56.7**	**+1.9**
R9F13				*e*				00 55 42.8	
AKASG	**Malin Array Be**	**12.93**	**25**	Pn		**Pn**		**00 52 53.7**	**-1.1**
	comp=Z,6.6nm,0.3s,baz=214,slow=13,SNR=48								
AKASG					LR	LR		00 58 28.6	
	comp=Z,13µm,18.1s,baz=210,slow=40								
AKASG					ScP	**ScP**		**01 01 59.8**	**-1.3**
	comp=Z,1.3nm,0.8s,baz=240,slow=3.0,SNR=4.5								
	comp=Z,6.6nm,0.4s								
AKASG	**Malin Array Be**	**12.93**	**25**			**Pn**		**00 52 54.6**	**-0.2**
AKASG	**Malin Array Be**	**12.93**	**25**	*i* P		**Pn**		**00 52 55.7**	**+0.8**
AKASG					pmax	pmax			
	comp=Z,25nm,0.7s								
AKBB	**Malin Array Si**	**12.93**	**25**			**Pn**		**00 52 54.7**	**-0.1**
AKBB	**Malin Array Si**	**12.93**	**25**	*ce*P		**Pn**		**00 52 55.5**	**+0.7**
AKBB	**Malin Array Si**	**12.93**	**25**	Pn		**Pn**		**00 52 55.6**	**+0.7**
AK21	**Malin Array Si**	**12.93**	**25**	Pn		**Pn**		**00 52 55.4**	**+0.5**
KMRS	**Kahramanmaras**	**12.94**	**93**	*e*P		**P**		**00 53 01.2**	**-4.6**
AK23	**Malin Array Si**	**12.95**	**25**	Pn		**Pn**		**00 52 56.3**	**+1.2**
AK03	**Malin Array Si**	**12.95**	**25**	Pn		**Pn**		**00 52 56.3**	**+1.2**
CLL	**Collm**	**13.12**	**339**			**Pn**		**00 52 56.2**	**-1.3**
CLL	**Collm**	**13.12**	**339**	*e*P		**Pn**		**00 52 56.0**	**-1.5**
CLL					*e*S	**Sn**		**00 55 30.0**	**+6.9**
CLL	**Collm**	**13.12**	**339**	*e*P		**Pn**		**00 52 56.0**	**-1.5**
CLL					*i* x	x		00 53 09.6	
	comp=Z,327nm,1.4s								
CLL					*i* x	x		00 53 16.9	
CLL					*ex*	x		00 54 06.0	
CLL					*e*Sx	Sx		00 55 30.0	
CLL					*ex*	x		00 56 06.0	
CLL					AMS	AMS		00 59 00.0	
CLL	**Collm**	**13.12**	**339**	Pn		**Pn**		**00 52 57.0**	**-0.5**
	comp=Z,2µmcomp=Z,168nm,1.0s								
ECH	**Echery**	**13.15**	**317**			**Pn**		**00 52 56.2**	**-1.7**
ECH	**Echery**	**13.15**	**317**	P		**Pn**		**00 52 56.2**	**-1.7**
ECH	**Echery**	**13.15**	**317**	⇓P		**Pn**		**00 52 56.8**	**-1.2**
GAZ	**Gaziantep**	**13.26**	**94**			**Pn**		**00 53 00.4**	**+0.9**
GAZ	**Gaziantep**	**13.26**	**94**	*e*P		**Pn**		**00 53 01.8**	**+2.3**
GAZ	**Gaziantep**	**13.26**	**94**	⇑P		**Pn**		**00 53 02.2**	**+2.7**
BHL	**Bhannes**	**13.26**	**109**	*e*P		**Pn**		**00 52 59.4**	**-0.2**
SSB	**Saint Sauveur**	**13.27**	**302**			**Pn**		**00 52 58.8**	**-0.9**
SSB	**Saint Sauveur**	**13.27**	**302**	P		**Pn**		**00 52 58.8**	**-0.9**
SSB	**Saint Sauveur**	**13.27**	**302**	⇑P		**Pn**		**00 53 00.6**	**+0.9**
HWQ	**Hawqa**	**13.30**	**107**	*e*P		**Pn**		**00 52 59.8**	**-0.4**
HNTI	**Hanita**	**13.32**	**113**	P		**Pn**		**00 52 59.1**	**-1.3**
HNTI					S	**Sn**		**00 55 24.2**	**-4.1**
MMA0B	**Mount Meron ar**	**13.52**	**113**	P		**Pn**		**00 53 01.9**	**-1.2**
MMAI	**Mount Meron Ar**	**13.52**	**113**	Pn		**Pn**		**00 53 00.9**	**-2.3**
	comp=Z,7.6nm,0.3s,baz=327,slow=15,SNR=59								
MMAI					Sn	**Sn**		**00 55 32.6**	**-0.6**
	comp=Z,12nm,0.3s,baz=310,slow=27,SNR=6.1								
	comp=Z,10nm,0.4s								
BLGI	**Bet Lehem HaGe**	**13.52**	**114**	P		**Pn**		**00 53 01.8**	**-1.2**
GEM	**Giv'at Ha'Em**	**13.61**	**112**	⇑P		**Pn**		**00 53 01.9**	**-2.3**
GEM	**Giv'at Ha'Em**	**13.61**	**112**	P		**Pn**		**00 53 03.2**	**-1.0**
GEM					S	**Sn**		**00 55 32.6**	**-2.5**
NATI	**Neve Ativ**	**13.63**	**112**	P		**Pn**		**00 53 03.5**	**-1.0**
ANN	**Anapa**	**13.68**	**61**	*e*P		**Pn**		**00 53 05.4**	**+0.3**
ANN					*e*S	**Sn**		**00 55 38.6**	**+1.9**
ANN					pmax	pmax			
	comp=Z,28nm,0.8s								
ANN					MLR	MLR			
	comp=E,3µm,10.0s								
ANN					MLR	MLR			
	comp=N,3µm,9.0s								
ANN					MLR	MLR			
	comp=Z,7µm,11.0s								
SLTI	**Sal'it**	**13.69**	**117**	P		**Pn**		**00 53 03.6**	**-1.8**
ETOS	**Mallorca**	**13.71**	**278**	P		**Pn**		**00 53 05.4**	**-0.3**
EJON	**La Jonquera**	**13.74**	**289**	P		**Pn**		**00 53 05.8**	**-0.2**
ARPR	**Arapgir-MALATY**	**13.79**	**85**			**Pn**		**00 53 08.8**	**+1.9**
ARPR	**Arapgir-MALATY**	**13.79**	**85**	*e*P		**Pn**		**00 53 11.1**	**+4.3**
KSHT	**Keshet**	**13.83**	**112**	P		**Pn**		**00 53 06.3**	**-1.0**
MMLI	**Mount Malkishu**	**13.85**	**115**	*e*P		**Pn**		**00 53 03.5**	**-4.0**
ILIC	**ilic-Erzincan**	**13.93**	**84**	*e*P		**Pn**		**00 53 12.2**	**+3.5**
RUE	**Ruedersdorf**	**13.99**	**343**	*e*P		**Pn**		**00 53 09.8**	**+0.4**
RUE	**Ruedersdorf**	**13.99**	**343**	⇑P		**Pn**		**00 53 08.8**	**-0.6**
AMAZ	**Amatzia**	**14.03**	**119**	P		**Pn**		**00 53 06.9**	**-3.0**
HMDT	**Nahal Hemdat**	**14.03**	**115**	P		**Pn**		**00 53 07.6**	**-2.3**
KZIT	**Kziot**	**14.07**	**122**	P		**Pn**		**00 53 06.4**	**-4.2**
KZIT					S	**Sn**		**00 55 39.4**	**-7.1**
UJAP	**Al Uja**	**14.15**	**117**	*e*P		**Pn**		**00 53 10.4**	**-1.2**
GKP	**Gorka Klasztor**	**14.16**	**352**	*e*P		**Pn**		**00 53 13.6**	**+2.0**
GKP					*e*S	**S**		**00 56 17.2**	**+8.0**
GKP					*e*L	L		00 59 08.3	
	comp=Z,23µm,16.6s								
GKP	**Gorka Klasztor**	**14.16**	**352**	*e*P		**Pn**		**00 53 15.2**	**+3.6**
YTIR	**Yattir**	**14.26**	**119**	P		**Pn**		**00 53 10.8**	**-2.5**
CORI	**Orista**	**14.31**	**287**			**Pn**		**00 53 13.3**	**-0.5**
DSI	**Dead Sea**	**14.32**	**118**	P		**Pn**		**00 53 12.0**	**-2.0**
MTLF	**Montolieu**	**14.36**	**292**	⇑P		**Pn**		**00 53 16.0**	**+1.5**
LOR	**Lormes**	**14.52**	**309**	⇑P		**Pn**		**00 53 15.6**	**-1.1**
FLTG	**Flechtingen**	**14.54**	**337**	⇑P		**Pn**		**00 53 15.8**	**-1.1**
WLF	**Walferdange**	**14.57**	**320**	P		**Pn**		**00 53 17.8**	**+0.5**
WLF	**Walferdange**	**14.57**	**320**			**Pn**		**00 53 17.6**	**+0.2**
WLF	**Walferdange**	**14.57**	**320**	P		**Pn**		**00 53 17.6**	**+0.2**
WLF	**Walferdange**	**14.57**	**320**	*d*P		**Pn**		**00 53 16.6**	**-0.7**
WLF	**Walferdange**	**14.57**	**320**	⇑P		**Pn**		**00 53 18.4**	**+1.1**
GHAJ	**Ghor Haditha**	**14.61**	**119**			**Pn**		**00 53 16.4**	**-1.4**
SVRC	**Sivrice-ELAZID**	**14.64**	**88**	*e*P		**Pn**		**00 53 21.0**	**+2.5**
ERZN	**Erzincan**	**14.81**	**83**	*e*P		**P**		**00 53 24.7**	**-1.9**
SUW	**Suwalki**	**14.82**	**6**	*e*P		**Pn**		**00 53 20.0**	**-0.6**
SUW					*e*S	**Sn**		**00 56 12.1**	**+7.6**
SUW					*e*L	L		01 00 25.2	
	comp=Z,23µm,12.4s								
SUW	**Suwalki**	**14.82**	**6**			**Pn**		**00 53 20.1**	**-0.6**
SUW	**Suwalki**	**14.82**	**6**	P		**Pn**		**00 53 20.1**	**-0.6**
SUW	**Suwalki**	**14.82**	**6**	*e*P		**Pn**		**00 53 21.8**	**+1.1**
SUW	**Suwalki**	**14.82**	**6**	⇑P		**Pn**		**00 53 19.2**	**-1.5**
EIBI	**Ibiza**	**14.92**	**275**	P		**Pn**		**00 53 20.9**	**-1.2**
CEST	**Esterri de Car**	**14.96**	**289**			**Pn**		**00 53 23.1**	**+0.3**
SOC	**Sochi**	**14.98**	**67**	*ce*P		**Pn**		**00 53 22.5**	**-0.4**
SOC					*e*S	**Sn**		**00 56 11.2**	**+2.7**
SOC					pmax	pmax			
	comp=Z,57nm,0.8s								
SOC					MLR	MLR			
	comp=Z,3µm,11.0s								
ASF	**Jabal al Asfar**	**15.04**	**113**	Pn		**Pn**		**00 53 22.2**	**-1.6**
	comp=Z,1.5nm,0.3s,baz=255,slow=4.6,SNR=20								
ASF					LR	LR		00 59 34.3	
	comp=Z,5µm,19.4s,baz=280,slow=39								
	comp=Z,199nm,1.4s								
BAYT	**Aydintepe-Bayb**	**15.08**	**80**	*e*P		**Pn**		**00 53 27.2**	**+2.8**
BHOU	**Houvegnez**	**15.10**	**322**	*d*P		**Pn**		**00 53 24.4**	**0.0**
VSLR	**Vesyoloye**	**15.19**	**68**	*i* P		**Pn**		**00 53 26.3**	**+0.6**
BTNL	**Ternell**	**15.19**	**323**	*d*P		**Pn**		**00 53 26.0**	**+0.3**
	comp=Z,84nm,1.0s								
EIL	**Elat**	**15.25**	**125**	Pn		**Pn**		**00 53 20.8**	**-5.7**
	comp=Z,2.7nm,0.3s,baz=292,slow=2.8,SNR=40								
EIL					Sn	Sn		00 56 03.5	-12
	comp=Z,12nm,0.3s,baz=34,slow=12,SNR=6.2								
EIL					LR	LR		01 00 58.0	
	comp=Z,5µm,19.9s,baz=316,slow=44								
EIL	**Elat**	**15.25**	**125**	*e*P		Pn		00 53 14.4	-12
EIL	**Elat**	**15.25**	**125**	P		**Pn**		**00 53 23.2**	**-3.3**
MEM	**Membach**	**15.26**	**323**	*d*P		**Pn**		**00 53 26.0**	**-0.6**
	comp=Z,106nm,1.1s								
RCHB	**Rochefort**	**15.35**	**320**	*d*P		**Pn**		**00 53 27.2**	**-0.5**
	comp=Z,64nm,1.2s								
DYBB	**Diyarbakir**	**15.36**	**89**	*e*P		**Pn**		**00 53 30.6**	**+2.6**
KOPT	**Kop Dagi**	**15.37**	**81**			**Pn**		**00 53 29.9**	**+1.5**
EBR	**Ebro Roquetas**	**15.45**	**282**			**Pn**		**00 53 29.3**	**+0.3**
EBR	**Ebro Roquetas**	**15.45**	**282**	P		**Pn**		**00 53 29.3**	**+0.3**
BSTI	**Sart Tilman**	**15.46**	**322**	*d*P		**Pn**		**00 53 29.0**	**-0.2**
	comp=Z,26nm,1.2s								
BCLA	**Clavier**	**15.48**	**321**	*d*P		**Pn**		**00 53 30.4**	**+1.0**
	comp=Z,34nm,0.9s								
BEBN	**Eben Emael**	**15.55**	**323**	*d*P		**Pn**		**00 53 31.2**	**+0.9**
	comp=Z,72nm,1.1s								
BGES	**Gesves**	**15.56**	**320**	*d*P		**Pn**		**00 53 30.4**	**-0.1**
	comp=Z,54nm,1.1s								
BNGB	**Bingl**	**15.61**	**85**	*e*P		**Pn**		**00 53 33.7**	**+2.4**
DOU	**Dourbes**	**15.63**	**319**	*d*P		**Pn**		**00 53 31.6**	**+0.2**
	comp=Z,78nm,1.4s								
BMRD	**Maredsous**	**15.67**	**320**	*d*P		**Pn**		**00 53 31.5**	**-0.4**
CLF	**Chambon-Foret**	**15.83**	**309**			**Pn**		**00 53 35.1**	**+1.2**
KARO	**Karliova-Bingo**	**15.86**	**83**	*e*P		**P**		**00 53 37.9**	**-0.4**
LABN	**Labinsk**	**15.90**	**64**	*e*P		**Pn**		**00 53 36.4**	**+1.5**
LABN					*e*S	**Sn**		**00 56 34.5**	**+3.6**
LABN					pmax	pmax			
	comp=Z,138nm,1.2s								
LABN					MLR	MLR			
	comp=Z,4µm,12.0s								
LABN					MLR	MLR			
	comp=E,5µm,12.0s								
LABN					MLR	MLR			
	comp=N,4µm,11.0s								
MNK	**Minsk**	**15.99**	**16**	*i* P		**Pn**		**00 53 32.6**	**-3.4**
	comp=E,296nm,1.0s								
MNK					*i* P	**Pn**		**00 53 32.6**	**-3.4**
	comp=N,48nm,0.7s								
MNK					*i* P	**Pn**		**00 53 32.6**	**-3.4**
	comp=Z,239nm,0.9s,baz=201								
MNK					*i* PP	**P**		**00 53 41.5**	**+2.0**
MNK					*i* PPP	PPP		00 53 49.2	
MNK					*i* S	**Sn**		**00 56 28.5**	**-4.4**
MNK					*i* SS	**SnSn**		**00 56 43.7**	**-2.2**
MNK					*i* SSS	SSS		00 56 55.8	
MNK					*i* LQ	LQ		00 58 12.3	
MNK					*i* LQ	LQ		00 58 12.3	
MNK					*i* LR	LR		00 59 34.8	
MNK					*i* LRM	MLR		01 00 14.7	
	comp=N,12µm,15.4s								
MNK					*i* LRM	MLR		01 00 18.1	
	comp=Z,12µm,16.1s								
MNK					*i* LRM	MLR		01 00 22.4	
	comp=E,8µm,15.3s								
MNK	**Minsk**	**15.99**	**16**	*i* P		**Pn**		**00 53 32.6**	**-3.4**
MNK					*i* S	**Sn**		**00 56 28.5**	**-4.4**
MNK					pmax	pmax			
	comp=Z,239nm,0.9s								
MNK					pmax	pmax			
	comp=E,296nm,1.0s								
MNK					pmax	pmax			
	comp=N,48nm,0.7s								
MNK					MLR	MLR			
	comp=N,12µm,15.0s								
MNK					MLR	MLR			
	comp=Z,12µm,16.0s								
MNK					MLR	MLR			
	comp=E,8µm,15.0s								
ERBR	**Yeremizino-Bor**	**16.01**	**60**	*e*P		**Pn**		**00 53 37.0**	**+0.7**
ERBR					*e*S	**Sn**		**00 56 35.4**	**+2.0**
ERBR					pmax	pmax			
	comp=Z,69nm,1.0s								
ERBR					MLR	MLR			
	comp=Z,4µm,13.0s								
ERBR					MLR	MLR			
	comp=E,6µm,10.0s								
ERBR					MLR	MLR			
	comp=N,3µm,9.0s								
NACGM	**Naroch**	**16.16**	**13**	*e*P		**Pn**		**00 53 36.5**	**-1.7**
UCC	**Uccle**	**16.18**	**321**			**Pn**		**00 53 38.4**	**-0.1**
UCC	**Uccle**	**16.18**	**321**	P		**Pn**		**00 53 38.4**	**-0.1**
UCC					pmax	pmax			
	comp=Z,98nm,1.0s								
UCC	**Uccle**	**16.18**	**321**

MUD Monsted U'grnd 18.74 340 *i* P **P** **00 54 09.7 -0.1**
MUD IAmb IAmb 00 54 11.9
comp=Z,538nm,2.0s
ESBB Sonseca Array 18.93 279 P **P** **00 54 11.3 -0.7**
ESDC Sonseca Array 18.93 279 P **Pn** **00 54 12.7 0.0**
comp=Z,0.9nm,0.3s,baz=74,slow=10,SNR=88
ESDC LR LR 01 01 40.4
comp=Z,6μm,19.0s,baz=80,slow=37
comp=Z,51nm,1.0s
ESDC Sonseca Array 18.93 279 P **P** **00 54 11.6 -0.4**
EQTA Presa de Quent 18.96 271 P **Pn** **00 54 14.0 +0.8**
ONAU Onsala 18.97 345 *i* P **P** **00 54 12.3 0.0**
JSA Saint Aubin 18.99 309 *e*P **Pn** **00 54 13.4 +0.1**
JSA Saint Aubin 18.99 309 ⇑P **Pn** **00 54 13.3 +0.1**
VRH Novokhopyorsk 18.99 44 *e*P **P** **00 54 12.3 -0.2**
VRH *e*S **Sn** **00 57 43.9 -1.5**
VRH pmax pmax
comp=Z,48nm,0.5s
VRH MLR MLR
comp=Z,16μm,12.0s
BORU Boraas 19.04 347 *i* P **P** **00 54 12.5 -0.6**
WMELI Melilla 19.11 265 P **Pn** **00 54 14.6 -0.3**
OBN Obninsk 19.12 29 P **P** **00 54 12.7 -1.3**
comp=Z,101nm,0.4s,baz=220,slow=11,SNR=13
OBN LR LR 01 02 55.5
comp=Z,11μm,19.4s,baz=218,slow=41
OBN Obninsk 19.12 29 P **P** **00 54 11.7 -2.2**
OBN IAmb IAmb 00 54 19.2
comp=Z,368nm,0.6s
OBN Obninsk 19.12 29*c*e**P** **P** **00 54 11.9 -2.0**
OBN *i* S **Sn** **00 57 46.7 -1.9**
OBN pmax pmax
comp=Z,600nm,1.6s
OBN MLR MLR
comp=Z,13μm,16.0s
OBN Obninsk 19.12 29 ⇑P **P** **00 54 11.7 -2.2**
PAB San Pablo 19.24 279 P **P** **00 54 15.6 +0.1**
PAB San Pablo 19.24 279 P **P** **00 54 15.6 +0.1**
PAB pmax pmax
comp=Z,256nm,1.0s
GOET G??ttrup 19.24 341 *i* P **Pn** **00 54 15.8 -0.5**
GOET IAmb IAmb 00 54 18.0
comp=Z,362nm,1.4s
OVD Ostervraa, Den 19.26 343 *i* P **Pn** **00 54 16.7 +0.2**
OVD IAmb IAmb 00 54 20.9
comp=Z,157nm,1.0s
ROSF Rostrenen 19.36 306 ⇑P **Pn** **00 54 17.8 -0.1**
MTSE Matsula 19.54 5 *e*P **P** **00 54 18.4 -0.1**
VSU Vasula 19.59 10*c*e**P** **P** **00 54 17.7 -1.3**
VSU pmax pmax
comp=Z,359nm,0.8s
VSU MLR MLR
comp=Z,10μm,15.0s
VSU Vasula 19.59 10 *e*P **P** **00 54 17.9 -1.1**
VSU Vasula 19.59 10 ⇑P **P** **00 54 17.3 -1.7**
TJOU Tjoern 19.62 346 *i* P **P** **00 54 18.9 -0.5**
EMAL Malaga-Limoner 19.84 271 P **P** **00 54 22.2 +0.3**
MOS Moscow 19.99 29*a i*P **P** **00 54 22.2 -1.2**
MOS *e* 00 54 39.7
MOS *e*S **S** **00 58 03.8 -3.8**
MOS *e* 00 58 31.9
MOS pmax pmax
comp=Z,734nm,1.4s
MOS pmax pmax
comp=E,378nm,1.4s
MOS pmax pmax
comp=N,400nm,1.4s
MOS pmax pmax
comp=Z,3μm,3.2s
MOS pmax pmax
comp=N,3μm,3.2s
MOS pmax pmax
comp=E,3μm,3.2s
MOS MLR MLR
comp=Z,15μm,14.0s
MOS MLR MLR
comp=N,12μm,4.0s
MOS MLR MLR
comp=E,7μm,13.0s
STRD Stroud 20.12 316 *e*P Pn 00 54 26.3 -0.6
CWF Charnwood Fore 20.17 319 *e*P **P** **00 54 25.6 +0.1**
CWF IAmb IAmb 00 54 27.8
comp=Z,28nm,0.8s
ARBE Arbavere 20.45 8 *e*P **P** **00 54 27.8 -0.6**
MONM Monmouth 20.50 315 *e*P **P** **00 54 29.5 +0.4**
HOMB Homborsund 20.52 342 ⇑*i*P **P** **00 54 29.0 -0.1**
HOMB *e*pP **sP** **00 54 37.1 +1.6**
HOMB IAmb IAmb 00 54 38.4
comp=Z,242nm,1.0s
HOMB *e*S **S** **00 58 19.1 +1.0**
HOMB *e* 01 01 19.7
HOMB IAMs_20 IAMs_20 01 04 22.9
comp=Z,21μm,12.3s
HOMB Homborsund 20.52 342 *i* P **P** **00 54 28.7 -0.5**
MAK Makhachkala 20.59 71*c i*P **P** **00 54 30.9 +0.9**
MAK *e*S Sn 00 58 23.6 -0.5
MAK pmax pmax
comp=Z,1μm,0.9s
MAK MLR MLR
comp=Z,5μm,12.0s
STRU Stroemstad 20.64 346 *i* P **P** **00 54 29.5 -1.0**
MCH1 Michaelchurch 20.68 316 *e*P **P** **00 54 30.9 -0.1**
LBWR Ladybower, Pea 20.75 320 *e*P **P** **00 54 31.7 -0.1**
AKT Akhty 20.78 75⇑*i*P **P** **00 54 32.6 +0.3**
AKT *e*PPP PPP 00 54 58.4
AKT *e*S **S** **00 58 25.9 +2.1**
AKT *e*SS **SnSn** **00 58 46.3 +2.7**
AKT pmax pmax
comp=Z,442nm,1.1s
AKT MLR MLR
comp=Z,6μm,17.0s
TAM Tamanrasset 20.85 222 P Pn 00 54 34.6 -1.2
TAM IAmb IAmb 00 54 45.6
comp=Z,241nm,0.9s
TAM Tamanrasset 20.85 222 ⇑P Pn 00 54 35.3 -0.5
PBRG Braganca 20.87 286 *e*P **P** **00 54 34.2 +1.0**
PBRG *i* IAmb IAmb 00 54 39.2
comp=Z,425nm,1.7s
PBRG *e*S Sn 00 58 33.0 +2.0
HLM1 Long Mynd 20.88 317 *e*P **P** **00 54 33.4 +0.2**
HLM1 IAmb IAmb 00 54 35.5
comp=Z,37nm,0.9s
AAL Aland 20.90 359 *e*P **P** **00 54 32.4 -0.9**
SNART Snartemo 20.91 340 *e*P **P** **00 54 33.9 +0.5**
SNART IAmb IAmb 00 54 43.4
comp=Z,777nm,1.2s
SNART *e*S Sn 00 58 29.9 -1.8
SNART IAMs_20 IAMs_20 01 04 56.0
comp=Z,43μm,11.6s
SNART Snartemo 20.91 340 *i* P **P** **00 54 34.1 +0.7**
HPK Haverah Park 21.02 322 *e*P **P** **00 54 34.8 +0.2**
HPK IAmb IAmb 00 54 36.9
comp=Z,119nm,1.0s
MEF Metsahovi 21.08 5 *e*P **P** **00 54 34.7 -0.5**
MVO Moncorvo 21.12 284 *e*P **P** **00 54 37.0 +1.1**
MVO *i* IAmb IAmb 00 54 45.9
comp=Z,289nm,1.7s
MVO *e*S Sn 00 58 37.0 -0.1
MVO *i* IAMs_20 IAMs_20 01 03 57.1
comp=Z,7μm,16.0s
CNIL Conil 21.20 270 P **P** **00 54 37.1 +0.4**
SFS San Fernando 21.29 271 P **P** **00 54 37.7 0.0**
HFS Hagfors 21.30 351 P **P** **00 54 36.3 -1.3**
comp=Z,79nm,0.6s,baz=150,slow=12,SNR=181
HFS LR LR 01 03 13.6
comp=Z,6μm,19.9s,baz=168,slow=38
comp=Z,79nm,0.6s
MDT Midelt 21.32 260 P **P** **00 54 39.4 +1.2**
comp=Z,96nm,1.1s,baz=76,slow=13,SNR=24
comp=Z,96nm,1.1s
PUL Pulkovo 21.40 14*c*e**P** **P** **00 54 38.0 -0.7**
PUL pmax pmax
comp=Z,618nm,0.8s
PUL MLR MLR
comp=Z,9μm,18.0s
PUL Pulkovo 21.40 14 *e*P **P** **00 54 39.9 +1.2**
PUL Pulkovo 21.40 14 ⇑P **P** **00 54 37.4 -1.3**
MD31 MD31 21.41 260 P **P** **00 54 39.1 -0.1**
MD31 IAmb IAmb 00 54 49.5
comp=Z,311nm,1.1s
IFR Ifrane 21.43 262 P **P** **00 54 41.0 +1.5**
KONO Kongsberg 21.52 345 P **P** **00 54 38.3 -1.7**
KONO IAmb IAmb 00 54 49.0
comp=Z,338nm,1.1s
KONO Kongsberg 21.52 345⇑*i*P **P** **00 54 39.2 -0.8**
KONO IAmb IAmb 00 54 48.1
comp=Z,318nm,1.1s
KONO *e*S **S** **00 58 38.8 +0.9**
KONO *e* 01 02 13.8
KONO IAMs_20 IAMs_20 01 05 13.6
comp=Z,14μm,11.6s
KONO Kongsberg 21.52 345*c e*P **P** **00 54 39.5 -0.5**
KONO pmax pmax
comp=Z,363nm,1.7s
KONO MLR MLR
comp=Z,8μm,16.0s
PBAR Barrancos 21.53 276 *e*P **P** **00 54 40.3 0.0**
PBAR *i* IAmb IAmb 00 54 52.8
comp=Z,731nm,1.5s
PBAR *e*S **S** **00 58 37.8 -0.7**
OSL Oslo 21.57 346⇑*i*P **P** **00 54 39.4 -1.1**
OSL IAmb IAmb 00 54 49.8
comp=Z,367nm,1.1s
OSL *e*S **S** **00 58 39.9 +1.0**
OSL *e* 01 01 58.7
OSL IAMs_20 IAMs_20 01 04 24.5
comp=Z,13μm,14.2s
MTE Manteigas 21.58 282 P **P** **00 54 40.0 -0.9**
MTE Manteigas 21.58 282 *e*P **P** **00 54 40.7 -0.2**
MTE *i* IAmb IAmb 00 54 49.3
comp=Z,332nm,1.4s
MTE *e*S **S** **00 58 38.4 -1.1**
MTE *i* IAMs_20 IAMs_20 00 59 30.0
comp=Z,6μm,18.0s
MTE Manteigas 21.58 282 *e*P **P** **00 54 40.5 -0.3**
MTE Manteigas 21.58 282 ⇑P **P** **00 54 40.7 -0.2**
PMRV Marv??o 21.59 279 *e*P **P** **00 54 41.4 +0.5**
PMRV *i* IAmb IAmb 00 54 49.6
comp=Z,476nm,1.5s
PMRV *e*S **S** **00 58 38.7 -0.9**
PMRV *i* IAMs_20 IAMs_20 01 07 58.2
comp=Z,7μm,16.0s
PCBR Castelo Branco 21.59 280 *e*P **P** **00 54 40.6 -0.3**
PCBR *i* IAmb IAmb 00 55 08.0
comp=Z,285nm,1.8s
PCBR *e*S **S** **00 58 42.1 +2.4**
PVRL Vila Real 21.63 284 *e*P **P** **00 54 43.3 +1.9**
PVRL *i* IAmb IAmb 00 54 56.1
comp=Z,171nm,1.1s
POLO Lamas de Olo 21.68 285 *e*P **P** **00 54 42.8 +0.8**
POLO *i* IAmb IAmb 00 54 50.5
comp=Z,117nm,1.8s
POLO *e*S Sn 00 58 45.8 -4.8
EDMD Edmundbyers 21.69 323 *e*P **P** **00 54 41.4 -0.5**
RAF Rauma 21.76 2 *e*P **P** **00 54 39.8 -2.7**
PVIS Viseu 21.81 283 *e*P **P** **00 54 44.3 +1.0**
PVIS *e*S **S** **00 58 46.9 +2.9**
PESTR Estremoz 21.83 278 P **P** **00 54 42.9 -0.6**
PESTR Estremoz 21.83 278 *e*P **P** **00 54 43.7 +0.2**
PESTR *i* IAML 00 54 57.5
PESTR *e*S **S** **00 58 43.8 -0.6**
PESTR Estremoz 21.83 278 ⇓P **P** **00 54 43.3 -0.2**
PCAB Cabril 21.83 286 *e*P **P** **00 54 45.0 +1.5**
PCAB *i* IAmb IAmb 00 55 00.1
comp=Z,338nm,1.4s
PCAB *e*S Sn 00 58 49.5 -4.7
PGAV Gavieira, Arco 22.00 286 *e*P **P** **00 54 46.7 +1.3**
PGAV *i* IAmb IAmb 00 54 58.4
comp=Z,369nm,1.6s
PGAV *e*S **S** **00 58 47.8 0.0**
PGAV *i* IAMs_20 IAMs_20 01 06 55.7
comp=Z,5μm,16.0s
BLS5 Blasjo 22.05 341 *e*P **P** **00 54 45.6 -0.1**
BLS5 IAmb IAmb 00 54 56.4
comp=Z,167nm,1.0s
BLS5 *e*S **S** **00 58 49.7 +1.5**
BLS5 *e* 01 02 10.5
BLS5 IAMs_20 IAMs_20 01 05 24.8
comp=Z,23μm,12.8s
KESW Keswick, Cumbr 22.09 322 *e*P **P** **00 54 46.1 -0.1**
KESW IAmb IAmb 00 54 48.1
comp=Z,57nm,0.9s
PSARD Sardoal 22.15 280 *e*P **P** **00 54 48.2 +1.2**
PSARD *i* IAmb IAmb 00 54 55.9
comp=Z,481nm,1.9s
PSARD *e*S **S** **00 58 49.5 -1.0**
PARRA Arraiolos 22.18 278 *e*P **P** **00 54 46.9 -0.4**
PARRA *i* IAmb IAmb 00 55 11.1
comp=Z,421nm,1.7s
PARRA *e*S **S** **00 58 49.5 -1.7**
NC602 NORSAR Array S 22.19 348 P **P** **00 54 45.9 -1.2**
NC602 IAmb IAmb 00 54 56.0
comp=Z,306nm,0.9s
NC602 NORSAR Array S 22.19 348 *e*P **P** **00 54 46.5 -0.7**
KMY Karmoy 22.19 339⇑*i*P **P** **00 54 46.5 -0.6**
KMY IAmb IAmb 00 54 54.9
comp=Z,162nm,1.1s
KMY *e*S **S** **00 58 53.1 +2.2**
KMY IAMs_20 IAMs_20 01 05 50.1
comp=Z,17μm,11.0s
PBEJ Beja 22.20 276 *e*P **P** **00 54 47.8 +0.2**
PBEJ *i* IAmb IAmb 00 54 59.4
comp=Z,419nm,1.6s
PBEJ *e*S **S** **00 58 54.0 +2.5**
EVO Evora 22.21 277 P **P** **00 54 47.5 -0.1**
EVO Evora 22.21 277 *e*P **P** **00 54 47.6 -0.1**
EVO *i* IAmb IAmb 00 55 10.7
comp=Z,444nm,1.7s
EVO *e*S **S** **00 58 48.6 -3.1**
PVAQ Vaqueiros 22.23 274 P **P** **00 54 46.9 -0.8**
PVAQ IAmb IAmb 00 54 55.4
comp=Z,484nm,1.5s
PVAQ Vaqueiros 22.23 274 *e*P **P** **00 54 47.7 -0.1**
PVAQ *i* IAmb IAmb 00 54 55.0
comp=Z,354nm,1.4s
PVAQ *i* IAMs_20 IAMs_20 00 59 31.1
comp=Z,4μm,18.0s
PMTG Montargil 22.28 279 *e*P **P** **00 54 48.4 0.0**
PMTG *i* IAmb IAmb 00 55 11.4
comp=Z,486nm,1.5s
PMTG *e*S **S** **00 58 51.2 -1.8**
PCAS Casmilo, Conde 22.34 281 *e*P **P** **00 54 49.8 +0.8**
PCAS *i* IAmb IAmb 00 55 09.4
comp=Z,263nm,1.6s
PCAS *e*S **S** **00 58 54.3 +0.2**
NAO01 NORSAR Array S 22.40 348 P **P** **00 54 47.1 -2.2**
NAO01 IAmb IAmb 00 54 58.2
comp=Z,300nm,1.1s
PCVE Castro Verde 22.42 275 *e*P **P** **00 54 51.2 +1.3**
PCVE *i* IAML 00 55 10.3
PCVE *e*S **S** **00 58 54.3 -1.3**
ODD1 Odda 22.43 341 *e*P **P** **00 54 49.1 -0.7**
ODD1 IAmb IAmb 00 55 05.6
comp=Z,64nm,0.8s
ODD1 *e*S **S** **00 58 56.9 +1.4**
ODD1 IAMs_20 IAMs_20 01 05 44.9
comp=Z,27μm,12.3s
FINES FINESS Array B 22.43 7 P **P** **00 54 47.8 -1.9**
comp=Z,59nm,0.5s,baz=165,slow=12,SNR=107
comp=Z,59nm,0.5s
FINES FINESS Array B 22.43 7 P **P** **00 54 47.1 -2.6**
FINES FINESS Array B 22.43 7 *i* P **P** **00 54 47.7 -2.0**
FINES pmax pmax
comp=Z,58nm,0.5s
FIA1 FINESS Array S 22.43 7 P **P** **00 54 47.1 -2.6**
PBDV Barranco-do-Ve 22.43 274 *e*P **P** **00 54 50.1 0.0**
PBDV *i* IAmb IAmb 00 55 02.4
comp=Z,515nm,1.2s
PBDV *e*S **S** **00 58 55.2 -0.7**
MOE Montemor 22.48 277 *e*P **P** **00 54 49.8 -0.7**
MOE *i* IAmb IAmb 00 55 14.6
comp=Z,442nm,1.6s
MOE *e*S **S** **00 58 54.0 -2.6**
MESJ Messejana 22.52 275 *e*P **P** **00 54 49.9 -1.0**
MESJ IAMs_20 IAMs_20 01 03 10.3
comp=N,5μm,17.1s
MESJ Messejana 22.52 275 P **P** **00 54 49.9 -1.0**
MESJ IAmb IAmb 00 55 00.3
comp=Z,516nm,1.3s
MESJ Messejana 22.52 275 *e*P **P** **00 54 50.8 -0.1**
MESJ *i* IAmb IAmb 00 54 58.4
comp=Z,489nm,1.2s
MESJ *e*S **S** **00 58 55.2 -2.2**
MESJ Messejana 22.52 275 *e*P **P** **00 54 49.9 -1.0**
MESJ Messejana 22.52 275 ⇓P **P** **00 54 50.4 -0.5**
NC405 NORSAR Array S 22.52 349 P **P** **00 54 49.2 -1.5**
NB201 NORSAR Array S 22.52 348 P **P** **00 54 49.4 -1.4**
NB2 NORSAR Subarra 22.53 348 P **P** **00 54 49.3 -1.5**
comp=Z,521nm,1.7s,baz=161,slow=11
NB2 NORSAR Subarra 22.53 348 P **P** **00 54 49.3 -1.5**
NOA NORSAR Array B 22.53 348 P **P** **00 54 49.6 -1.2**
comp=Z,331nm,1.3s,baz=154,slow=10,SNR=145
NOA LR LR 01 03 50.8
comp=Z,6μm,21.1s,baz=165,slow=37
comp=Z,331nm,1.3s
EKA Eskdalemuir Ar 22.54 323 P **P** **00 54 50.7 -0.3**
comp=Z,181nm,0.9s,baz=124,slow=10,SNR=159
EKA PcP **PcP** **00 58 45.5 +1.3**
comp=Z,5.8nm,0.8s,baz=85,slow=3.2,SNR=4.0
EKA LR LR 01 05 24.9
comp=Z,5μm,20.7s,baz=126,slow=41
comp=Z,181nm,0.9s
EKA Eskdalemuir Ar 22.54 323 P **P** **00 54 50.2 -0.8**
EKA pmax pmax
comp=Z,301nm,1.0s
ESK Eskdalemuir 22.55 323 *e*P **P** **00 54 50.8 -0.3**
ESK IAmb IAmb 00 54 53.2
comp=Z,174nm,0.8s
ESK Eskdalemuir 22.55 323 P **P** **00 54 50.1 -1.0**
ESK IAmb IAmb 00 54 53.0
comp=Z,338nm,0.9s
ESK Eskdalemuir 22.55 323 P **P** **00 54 50.1 -1.0**
ESK pmax pmax
comp=Z,339nm,1.0s
ESK Eskdalemuir 22.55 323 ⇑P **P** **00 54 50.8 -0.3**
EKB Eskdalemuir 22.56 323 P **P** **00 54 50.1 -1.1**
EKB IAmb IAmb 00 54 53.0
comp=Z,359nm,1.0s
NBO00 NORSAR Array S 22.59 348 P **P** **00 54 49.5 -2.0**
IOMK Kirk Michael 22.63 320 *e*P **P** **00 54 51.6 -0.3**
IOMK IAmb IAmb 00 54 55.3
comp=Z,41nm,0.7s
PSBE So Bento 22.65 280 *e*P **P** **00 54 53.4 +1.1**
PSBE *i* IAmb IAmb 00 55 08.6
comp=Z,301nm,1.4s
PSBE *e*S **S** **00 59 00.0 +0.2**
NC303 NORSAR Array S 22.68 348 P **P** **00 54 51.2 -1.2**
NC303 IAmb IAmb 00 55 11.1
comp=Z,438nm,1.1s
SKAR Skarslia 22.73 344⇑*i*P **P** **00 54 52.6 -0.4**
SKAR IAmb IAmb 00 55 10.0
comp=Z,103nm,1.0s
SKAR *e*S **S** **00 59 03.5 +2.5**
SKAR IAMs_20 IAMs_20 01 05 52.0
comp=Z,12μm,14.6s
BELG Belogornoye 22.79 46 *i* P **P** **00 54 53.7 +0.1**
BELG pmax pmax
comp=Z,191nm,1.1s
NC204 NORSAR Array S 22.82 348 P **P** **00 54 53.2 -0.8**
NC204 IAmb IAmb 00 55 09.9
comp=Z,432nm,1.3s
EDI Edinburgh 22.90 324 *e*P **P** **00 54 54.1 -0.6**
EDI IAmb IAmb 00 54 57.8
comp=Z,70nm,0.9s
NEWG New Galloway 22.93 322 *e*P **P** **00 54 55.3 +0.3**
NEWG IAmb IAmb 00 54 57.5
comp=Z,22nm,0.6s
IWEX Carrickbyrne, 22.94 314 P **P** **00 54 52.6 -2.6**
PTEO Sao Teotonio 22.97 275 *e*P **P** **00 54 54.8 -0.8**
PTEO *i* IAmb IAmb 00 55 04.9
comp=Z,559nm,1.1s
PTEO *e*S **S** **00 59 05.4 -0.1**
MORF Marmelete 22.98 274 *e*P **P** **00 54 54.9 -0.9**
MORF *e*S **S** **00 59 06.9 +1.3**
MORF IAMs_20 IAMs_20 01 06 24.3
comp=N,8μm,16.8s
MORF Marmelete 22.98 274 P **P** **00 54 54.0 -1.7**
MORF Marmelete 22.98 274 *e*P **P** **00 54 57.4 +1.7**
MORF *i* IAmb IAmb 00 55 19.1
comp=N,263nm,1.7s
MORF *e*S **S** **00 59 04.3 -1.3**
MORF Marmelete 22.98 274 *e*P **P** **00 54 54.9 -0.9**
MORF *e*S **S** **00 59 06.9 +1.3**
GAL1 Galloway 23.02 321 *e*P **P** **00 54 55.3 -0.7**
GAL1 IAmb IAmb 00 54 57.3
comp=Z,37nm,0.9s
KEF Keuruu 23.05 5 *e*P **P** **00 54 55.3 -0.9**
LIS Lisbon 23.05 278 *e*P **P** **00 54 55.8 -0.7**
LIS *e*S **S** **00 59 07.9 +1.0**
LIS IAMs_20 IAMs_20 01 04 02.9
comp=N,16μm,14.0s
LIS Lisbon 23.05 278 *e*P **P** **00 54 59.6 +3.1**
LIS *i* IAmb IAmb 00 55 15.7
comp=N,456nm,1.3s
LIS *e*S **S** **00 59 07.4 +0.6**
LIS Lisbon 23.05 278 *e*P **P** **00 54 55.8 -0.7**
LIS *e*S **S** **00 59 07.9 +1.0**
LIS Lisbon 23.05 278 ⇑P **P** **00 54 56.2 -0.3**
DSB Dublin 23.09 316 P **P** **00 54 55.7 -1.0**
DSB Dublin 23.09 316 P **P** **00 54 55.2 -1.5**
DSB Dublin 23.09 316 ⇑P **P** **00 54 57.3 +0.6**
PMAFR Mafra 23.11 279 *e*P **P** **00 54 57.6 +0.4**
PMAFR *i* IAmb IAmb 00 55 23.1
comp=N,361nm,1.2s
PMAFR *e*S **S** **00 59 07.4 -0.5**
PFVI Vila Bisbo 23.15 274 P **P** **00 54 55.4 -2.2**
PFVI Vila Bisbo 23.15 274 *e*P **P** **00 54 59.5 +2.0**
PFVI *i* IAmb IAmb 00 55 12.9
comp=N,213nm,1.3s
PFVI *e*S **S** **00 59 02.8 -5.7**
BER Bergen 23.16 341 *e*P **P** **00 54 56.8 -0.6**
BER IAmb IAmb 00 55 10.8
comp=Z,112nm,1.1s
BER *e*S **S** **00 59 09.9 +1.7**
BER IAMs_20 IAMs_20 01 06 14.9
comp=Z,22μm,13.7s
AVE Averroes 23.28 264 P **P** **00 55 00.4 +1.6**
AVE Averroes 23.28 264 P **P** **00 54 59.2 +0.4**
AVE IAmb IAmb 00 55 08.4
comp=Z,412nm,1.3s
AVE Averroes 23.28 264 ⇑P **P** **00 55 01.9 +3.0**
ASK Askoy 23.29 341⇑*i*P **P** **00 54 57.3 -1.3**
ASK IAmb IAmb 00 55 05.5
comp=Z,1μm,2.6s
ASK *e*S **S** **00 59 11.0 +0.7**
ASK IAMs_20 IAMs_20 01 06 18.7
comp=Z,24μm,13.2s
ILTH Belurgan, Co L 23.42 318 P **P** **00 54 58.5 -1.6**
PGBU Glenifferbraes 23.43 323 *e*P **P** **00 55 00.6 +0.4**
PGBU IAmb IAmb 00 55 03.6
comp=Z,67nm,1.1s
EAB Aberfoyle 23.58 324 *e*P **P** **00 55 00.6 -1.0**
EAB IAmb IAmb 00 55 04.6
comp=Z,62nm,0.7s
INVG Invergeldie, C 23.59 325 *e*P **P** **00 55 00.9 -0.7**
INVG IAmb IAmb 00 55 04.9
comp=Z,39nm,0.7s
HYA Hoyanger 23.64 343⇑*i*P **P** **00 55 01.7 -0.4**
HYA IAmb IAmb 00 55 11.3
comp=Z,196nm,1.0s
HYA *e*S **S** **00 59 18.9 +3.0**
HYA IAMs_20 IAMs_20 01 06 30.7
comp=Z,16μm,14.2s
SUF Sumiainen 23.69 6 *e*P **P** **00 55 01.3 -1.4**
VAF Ylistaro 23.81 2 *e*P **P** **00 55 03.4 -0.3**
CLGH Cloghs, Cushen 23.82 320 *e*P **P** **00 55 03.4 -0.5**
CLGH IAmb IAmb 00 55 06.2
comp=Z,68nm,0.8s
DOMB Dombas 23.83 347 *e*P **P** **00 55 04.0 -0.1**
DOMB IAmb IAmb 00 55 13.0
comp=Z,2μm,2.1s
DOMB *e*S **S** **00 59 21.8 +2.6**
DOMB IAMs_20 IAMs_20 01 05 53.4
comp=Z,12μm,19.2s
SUE Sulen 23.89 341⇑*i*P **P** **00 55 03.6 -0.9**
SUE IAmb IAmb 00 55 13.2
comp=Z,111nm,1.1s
SUE *e*S **S** **00 59 21.6 +1.7**
SUE IAMs_20 IAMs_20 01 06 38.7
comp=Z,26μm,11.8s
MCD Coleburn Disti 23.96 328 *e*P **P** **00 55 04.0 -1.2**
LAWE Loch Awe, Argy 24.11 323 *e*P **P** **00 55 05.4 -1.3**
TIO Tiouine 24.18 258 P **P** **00 55 10.1 +2.4**
FOO Floro 24.28 342 *e*P **P** **00 55 08.1 -0.1**
FOO IAmb IAmb 00 55 23.0
comp=Z,86nm,1.1s
FOO *e*S **S** **00 59 28.8 +2.5**
FOO IAMs_20 IAMs_20 01 06 44.2
comp=Z,19μm,12.3s
AKN Aaknes 24.36 345 *e*P **P** **00 55 08.6 -0.3**
AKN *e*S **S** **00 59 30.2 +2.6**
AKN IAMs_20 IAMs_20 01 06 44.6
comp=Z,11μm,11.2s

KBD Kabd 24.52 106 P **P** **00 55 09.7 -0.9**
IDGL Inch Island, C 24.52 319 P **P** **00 55 10.2 -0.2**
JOF Joensuu 24.52 12 *e*P **P** **00 55 09.2 -1.1**
KLMR Klimovskoe 24.59 22 *e*P **P** **00 55 10.3 -0.7**
KLMR *e* 00 58 48.3
KLMR S **S** **00 59 30.1 -1.1**
KLMR pmax pmax
comp=Z,317nm,1.5s
KLMR MLR MLR
comp=Z,13µm,12.0s
MOL Molde 24.60 345 *e*P **P** **00 55 11.5 +0.4**
MOL IAmb IAmb 00 55 18.9
comp=Z,119nm,1.0s
MOL *e*S **S** **00 59 33.9 +2.5**
MOL IAMs_20 IAMs_20 01 06 51.4
comp=Z,12µm,10.2s
VAL Valentia 24.77 311 P **P** **00 55 11.9 -0.8**
VAL Valentia 24.77 311 P **P** **00 55 13.6 +0.9**
VAL Valentia 24.77 311 ⇑P **P** **00 55 13.1 +0.4**
IGLA Glengowla, Co 24.80 315 P **P** **00 55 13.8 +0.9**
IGLA Glengowla, Co 24.80 315 *e*P **P** **00 55 13.9 +0.9**
BIGH Upper Bighouse 24.81 329 *e*P **P** **00 55 12.8 -0.2**
BIGH IAmb IAmb 00 55 15.2
comp=Z,93nm,0.8s
KPL Plockton 24.84 325 *e*P **P** **00 55 11.8 -1.5**
LRW Lerwick 24.93 334 *e*P **P** **00 55 13.1 -1.0**
LRW IAmb IAmb 00 55 16.6
comp=Z,83nm,0.6s
LRW Lerwick 24.93 334 ⇓P **P** **00 55 13.3 -0.8**
LINV Loch Inver, As 25.12 327 *e*P **P** **00 55 15.9 +0.1**
LINV IAmb IAmb 00 55 17.8
comp=Z,36nm,0.9s
NSS Namsos 25.77 351 *e*P **P** **00 55 21.1 -0.5**
NSS IAmb IAmb 00 55 26.9
comp=Z,91nm,0.9s
NSS *e*S **S** **00 59 52.0 +2.0**
NSS IAMs_20 IAMs_20 01 06 54.0
comp=Z,24µm,11.9s
RAYN Ar Rayn 26.34 119 P **P** **00 55 26.8 -0.5**
RAYN Ar Rayn 26.34 119 *i* P **P** **00 55 27.2 -0.1**
SNR=71
RAYN Ar Rayn 26.34 119 P **P** **00 55 26.8 -0.5**
RAYN pmax pmax
comp=Z,66nm,0.9s
RAYN Ar Rayn 26.34 119 P **P** **00 55 27.9 +0.6**
RAYN S **S** **01 00 00.6 +0.7**
RAYN Ar Rayn 26.34 119 ⇑P **P** **00 55 27.1 -0.1**
KIRV Kirov 26.70 34 LR LR 01 07 23.7
comp=Z,4µm,19.8s,baz=3.4,slow=40
KIRV Kirov 26.70 34 *ce*P **P** **00 55 29.2 -0.9**
ADZR Andozero 26.81 17 *e*P **P** **00 55 30.8 -0.2**
ADZR S **S** **01 00 09.3 +2.9**
ADZR pmax pmax
comp=Z,133nm,1.3s
ADZR MLR MLR
comp=Z,11µm,11.0s
MOR8 Moi Rana 27.14 355 *e*P **P** **00 55 34.7 +0.6**
MOR8 IAmb IAmb 00 55 59.7
comp=Z,83nm,1.3s
MOR8 *e*S **S** **01 00 16.1 +4.4**
MOR8 IAMs_20 IAMs_20 01 07 40.9
comp=Z,28µm,12.3s
LEIR Leirfjorden 27.19 353 *e*P **P** **00 55 34.5 +0.1**
LEIR IAmb IAmb 00 55 50.8
comp=Z,192nm,1.5s
LEIR *e*S **S** **01 00 13.8 +1.4**
LEIR IAMs_20 IAMs_20 01 07 38.3
comp=Z,18µm,12.8s
STOK Stokkvaagen 27.42 353 *e*P **P** **00 55 36.3 -0.2**
STOK *e*S **S** **01 00 21.8 +5.9**
STOK IAMs_20 IAMs_20 01 07 45.7
comp=Z,16µm,12.1s
RAUS Rausandaksla 27.43 354 *e*P **P** **00 55 36.9 +0.3**
RAUS IAmb IAmb 00 56 11.1
comp=Z,431nm,2.2s
RAUS *e*S **S** **01 00 22.6 +6.3**
RAUS IAMs_20 IAMs_20 01 07 47.3
comp=Z,17µm,12.6s
VAGH Vaagaholmen 27.79 354 *e*P **P** **00 55 39.8 0.0**
VAGH IAmb IAmb 00 55 48.5
comp=Z,159nm,1.3s
VAGH *e*S **S** **01 00 24.0 +2.3**
VAGH IAMs_20 IAMs_20 01 08 16.4
comp=Z,14µm,12.5s
FAUS Fauske 28.29 356 *e*P **P** **00 55 44.9 +0.7**
FAUS IAmb IAmb 00 55 52.2
comp=Z,100nm,1.2s
FAUS *e*S **S** **01 00 32.5 +2.9**
FAUS IAMs_20 IAMs_20 01 08 22.1
comp=Z,35µm,12.9s
SAKB Bahrain 28.38 109 P **P** **00 55 45.4 -0.1**
SAKB S **S** **01 00 32.5 +0.7**
AKTO Aktyubinsk 28.49 55 LR LR 01 10 46.8
comp=Z,3µm,18.9s,baz=342,slow=44
AKTO Aktyubinsk 28.49 55 P **P** **00 55 45.1 -1.2**
SHMA Al-Shehemyia 28.76 109 P **P** **00 55 48.4 -0.4**
SNR=11
SHMA S **S** **01 00 35.9 -1.9**
STEI Steigen 28.83 356 *e*P **P** **00 55 48.7 -0.4**
STEI IAmb IAmb 00 55 48.7
comp=Z,277nm,1.8s
STEI *e*S **S** **01 00 41.8 +3.7**
STEI IAMs_20 IAMs_20 01 08 40.3
comp=Z,34µm,13.7s
LOF Lofoten 29.14 355 *e*P **P** **00 55 53.2 +1.4**
LOF *e*S **S** **01 00 41.7 -1.3**
LOF IAMs_20 IAMs_20 01 08 58.0
comp=Z,22µm,12.2s
SMRA Abu-Samra 29.31 111 P **P** **00 55 52.7 -1.1**
SMRA S **S** **01 00 45.3 -1.1**
AB31 Akbulak array 29.59 57 P **P** **00 55 54.2 -1.8**
AB31 Akbulak array 29.59 57 *e*P **P** **00 55 54.9 -1.2**
ABKAR Akbulak array 29.59 57 P **P** **00 55 54.8 -1.3**
TRNA Turayna 29.60 110 P **P** **00 55 55.6 -0.7**
TRNA S **S** **01 00 49.0 -2.0**
LVZ Lovozero 29.69 11 P **P** **00 55 55.6 -1.2**
LVZ IAmb IAmb 00 56 34.4
comp=Z,183nm,1.2s
LVZ Lovozero 29.69 11 *i* P **P** **00 55 55.5 -1.2**
LVZ pmax pmax
comp=Z,43nm,0.8s
KTK1 Kautokeino 29.80 2 *e*P **P** **00 55 57.0 -0.7**
KTK1 IAmb IAmb 00 56 08.0
comp=Z,80nm,0.8s
KTK1 *e*S **S** **01 00 54.3 +0.9**
KTK1 IAMs_20 IAMs_20 01 09 24.9
comp=Z,16µm,12.8s
ARTI Arti 30.10 43 LR LR 01 08 38.8
comp=Z,6µm,18.2s,baz=282,slow=38
JETT Jettan, Norway 30.32 360 *e*P **P** **00 56 02.5 +0.3**
JETT IAmb IAmb 00 56 07.7
comp=Z,41nm,0.8s
JETT *e*S **S** **01 01 01.8 +0.2**
JETT IAMs_20 IAMs_20 01 09 24.7
comp=Z,16µm,13.5s
TRO Tromso 30.41 359 *e*P **P** **00 56 02.8 -0.1**
TRO IAmb IAmb 00 56 10.7
comp=Z,291nm,1.9s
TRO *e*S **S** **01 01 05.9 +3.1**
TRO IAMs_20 IAMs_20 01 09 28.5
comp=Z,19µm,13.0s
ARA0 ARCESS Array S 30.41 3 *e*P **P** **00 56 02.5 -0.6**
ARA0 IAmb IAmb 00 56 11.3
comp=Z,71nm,0.8s
ARA0 *e*S **S** **01 01 04.6 +1.6**
ARA0 IAMs_20 IAMs_20 01 09 42.1
comp=Z,19µm,14.2s
ARCES ARCESS Array B 30.41 3 P **P** **00 56 01.9 -1.2**
comp=Z,15nm,0.5s,baz=189,slow=10,SNR=120
ARCES LR LR 01 10 41.9
comp=Z,7µm,18.3s,baz=185,slow=41
comp=Z,15nm,0.5s
ARCES ARCESS Array B 30.41 3 P **P** **00 56 01.4 -1.7**
ARCES ARCESS Array B 30.41 3 P **P** **00 56 01.4 -1.7**
ARCES pmax pmax
comp=Z,72nm,0.9s
KEV Kevo 30.71 4 P **P** **00 56 03.6 -2.1**
KEV IAmb IAmb 00 56 15.0
comp=Z,95nm,1.1s
KEV Kevo 30.71 4 P **P** **00 56 03.6 -2.1**
KEV pmax pmax
comp=Z,95nm,1.1s
KEV MLR MLR
comp=Z,4µm,20.0s

TOA0 Torodi Ar. Sit 30.93 218 P **P** **00 56 08.8 +0.7**
SNR=38
TORD Torodi Ar. Bea 30.93 218 P **P** **00 56 08.4 +0.2**
comp=Z,91nm,1.0s,baz=26,slow=7.0,SNR=131
TORD LR LR 01 10 16.3
comp=Z,5µm,18.7s,baz=28,slow=40
comp=Z,91nm,1.0s
TORD Torodi Ar. Bea 30.93 218 P **P** **00 56 08.5 +0.4**
TORD IAmb IAmb 00 56 17.3
comp=Z,210nm,1.3s
VADS Vadso 31.23 6 *e*P **P** **00 56 10.0 -0.2**
VADS IAmb IAmb 00 56 19.3
comp=Z,238nm,0.9s
VADS *e*S **S** **01 01 15.4 -0.3**
VADS IAMs_20 IAMs_20 01 10 02.4
comp=Z,17µm,11.4s
SVE Sverdlovsk 31.42 43 *d i* P **P** **00 56 11.7 -0.4**
SVE *e*S **S** **01 01 19.7 +0.7**
SVE pmax pmax
comp=Z,312nm,1.0s
SVE MLR MLR
comp=Z,8µm,13.0s
HAMF Hammerfest 31.45 2 *e*P **P** **00 56 11.7 -0.5**
HAMF IAmb IAmb 00 56 47.3
comp=Z,169nm,1.6s
HAMF *e*S **S** **01 01 21.7 +2.5**
HAMF IAMs_20 IAMs_20 01 10 17.1
comp=Z,19µm,13.8s
MZR Muzera 32.30 110 *i* P **P** **00 56 18.9 -1.3**
SNR=94
MZR Muzera 32.30 110 P **P** **00 56 19.1 -1.0**
SNR=13
UMQ Umm Al-Quwin 32.44 104 *i* P **P** **00 56 20.7 -0.6**
SNR=9.3
UMQ Umm Al-Quwin 32.44 104 P **P** **00 56 21.4 +0.1**
SNR=8.4
AJN Ajban 32.48 107 *i* P **P** **00 56 20.2 -1.5**
SNR=6.1
SHME Shamm 32.52 103 *i* P **P** **00 56 20.1 -1.9**
SNR=20
SHME Shamm 32.52 103 P **P** **00 56 20.2 -1.8**
SNR=17
SHME P **P** **00 56 20.2 -1.8**
SNR=17
MACI Morro de la Ar 32.52 262 P **P** **00 56 22.3 0.0**
ASUD Al Ashush, Dub 32.70 106 *i* P **P** **00 56 22.6 -1.0**
SNR=12
ASUD Al Ashush, Dub 32.70 106 P **P** **00 56 23.4 -0.3**
SNR=8.0
ASUD P **P** **00 56 23.4 -0.3**
SNR=8.0
ASUD S **S** **01 01 39.2 -0.4**
ASUD S **S** **01 01 39.2 -0.4**
BANOM Banah 32.70 103 *i* P **P** **00 56 22.3 -1.4**
SNR=19
NAZ Nazwa, Dubai 32.74 105 *i* P **P** **00 56 22.8 -1.2**
SNR=35
NAZ Nazwa, Dubai 32.74 105 P **P** **00 56 22.9 -1.1**
SNR=17
NAZ P **P** **00 56 22.9 -1.1**
SNR=17
FAQ Al Faqa, Dubai 32.83 106 *i* P **P** **00 56 23.1 -1.7**
SNR=31
FAQ Al Faqa, Dubai 32.83 106 P **P** **00 56 23.6 -1.2**
SNR=15
MASF Masafi 32.90 104 P **P** **00 56 24.5 -1.0**
SNR=14
MASF P **P** **00 56 24.5 -1.0**
SNR=14
MASF P **P** **00 56 24.5 -1.0**
SNR=14
MSFE Esma-Masafi 32.91 104 *i* P **P** **00 56 23.9 -1.6**
SNR=17
MDH Madha 33.05 104 *i* P **P** **00 56 24.9 -1.8**
SNR=10
MDH Madha 33.05 104 P **P** **00 56 25.2 -1.5**
SNR=13
UOSS Minazif 33.17 105 P **P** **00 56 25.6 -2.2**
UOSS IAmb IAmb 00 56 44.0
comp=Z,55nm,0.7s
UOSS Minazif 33.17 105 *i* P **P** **00 56 25.3 -2.5**
SNR=16
HATD Hatta, Dubai 33.19 105 *i* P **P** **00 56 25.9 -2.0**
SNR=42
HATD Hatta, Dubai 33.19 105 P **P** **00 56 26.6 -1.3**
SNR=26
HATD P **P** **00 56 26.6 -1.3**
SNR=26
ASHO Ashiyiah 33.21 105 *i* P **P** **00 56 26.3 -1.8**
SNR=67
ASHO Ashiyiah 33.21 105 P **P** **00 56 26.7 -1.4**
SNR=38
ALNE Al Ain 33.34 107 *i* P **P** **00 56 27.1 -2.1**
SNR=94
ALNE Al Ain 33.34 107 P **P** **00 56 28.3 -1.0**
SNR=39
HRA Herat 33.50 85 P **P** **00 56 30.2 -0.6**
SOHO SOHO 33.88 106 *i* P **P** **00 56 32.0 -2.0**
SNR=101
JASK Jask - Hormozg 33.92 102 P **P** **00 56 34.1 -0.2**
SNR=13
ATD Arta Tunnel 34.01 138 P **P** **00 56 35.2 +0.1**
ATD IAmb IAmb 00 56 45.0
comp=Z,110nm,1.2s
ATD Arta Tunnel 34.01 138 P **P** **00 56 37.4 +2.2**
SNR=11
ATD S **S** **01 02 02.6 +2.6**
ATD Arta Tunnel 34.01 138 ⇑P **P** **00 56 36.7 +1.5**
HOQ Hoqain 34.78 106 P **P** **00 56 40.4 -1.4**
SNR=13
HOQ P **P** **00 56 40.4 -1.4**
SNR=13
HOQ S **S** **01 02 10.4 -1.4**
HOQ S **S** **01 02 10.4 -1.4**
JMIC Jan Mayen 35.09 344 LR LR 01 10 25.8
comp=Z,1µm,20.3s,baz=110,slow=35
BORG Borgarnes 35.15 330 LR LR 01 14 01.7
comp=Z,3µm,18.1s,baz=130,slow=41
BSY Bisya 35.19 107 P **P** **00 56 44.4 -0.9**
SNR=12
BSY P **P** **00 56 44.4 -0.9**
SNR=12
BJO1 Bjornoya 35.30 359 *e*P **P** **00 56 44.8 -0.8**
DOK Doka 35.58 116 P **P** **00 56 47.8 -0.9**
SNR=7.4
SMDO Samad 35.63 106 P **P** **00 56 47.6 -1.7**
SNR=26
SMDO P **P** **00 56 47.6 -1.7**
SNR=26
ABTO Aybut 35.87 118 P **P** **00 56 50.6 -0.6**
SNR=19
WSAR Wadi Sarin 35.96 105 LR LR 01 13 42.2
comp=Z,17nm,19.8s,baz=325,slow=40
WSAR Wadi Sarin 35.96 105 P **P** **00 56 50.7 -1.3**
SNR=9.1
JMDO Jabal Madar 36.08 107 P **P** **00 56 51.6 -1.4**
SNR=16
BORK Borovoye 36.34 51 P **P** **00 56 54.4 -0.4**
BORK IAmb IAmb 00 57 02.2
comp=Z,134nm,0.9s
BORK Borovoye 36.34 51 *ce*P **P** **00 56 54.5 -0.3**
BORK pmax pmax
comp=Z,125nm,1.0s
BORK Borovoye 36.34 51 ⇑P **P** **00 56 54.5 -0.3**
BVA0 Borovoye Array 36.38 51 *i* P **P** **00 56 54.7 -0.5**
BVAR Borovoye Array 36.38 51 P **P** **00 56 54.8 -0.4**
comp=Z,39nm,0.6s,baz=281,slow=8.4,SNR=182
comp=Z,39nm,0.6s
RBK Rabkut 36.39 117 P **P** **00 56 54.8 -0.9**
SNR=9.1
WBK Wadi Bani Khal 36.58 106 P **P** **00 56 57.0 -0.3**
SNR=17
WBK P **P** **00 56 57.0 -0.3**
SNR=17
EDA Edea 36.60 198 P **P** **00 56 58.1 +0.7**
MHTO MHTO 36.81 109 P **P** **00 56 58.5 -0.7**
SNR=19
MHTO P **P** **00 56 58.5 -0.7**
SNR=19
MHTO S **S** **01 02 42.2 -0.8**
MHTO S **S** **01 02 42.2 -0.8**
CHM Chimkent 36.83 69 *e*P **P** **00 56 58.0 -1.2**
comp=Z,101nm,1.1s
CHM *e*S **S** **01 02 43.2 +0.2**
CHM LR LR 01 13 38.3
BRLS Borolday 36.85 68 *e*P **P** **00 56 57.5 -1.9**
BRLS *e*S **S** **01 02 42.9 -0.5**

SHAA Shahritus 36.96 77 P **P** **00 56 60.0 -0.5**
SHAA IAmb IAmb 00 57 48.5
comp=Z,362nm,0.8s
IUG luzhnay 37.18 69 ⇑*i*P **P** **00 57 01.2 -1.1**
comp=Z,108nm,0.9s
IUG *e*S **S** **01 02 48.6 +0.2**
JLN Jalan Bani Buh 37.18 106 P **P** **00 57 01.1 -1.2**
SNR=17
JLN P **P** **00 57 01.1 -1.2**
SNR=17
KK31 Karatay Array 37.33 68 P **P** **00 57 02.6 -0.8**
KK31 IAmb IAmb 00 57 11.8
comp=Z,90nm,0.8s
KK31 Karatay Array 37.33 68 P **P** **00 57 02.6 -0.8**
KK31 pmax pmax
comp=Z,90nm,0.8s
KKAR Karatay Array 37.33 68 P **P** **00 57 02.6 -0.8**
KKAR Karatay Array 37.33 68 P **P** **00 57 02.6 -0.8**
HOPEN Hopen 37.36 2 *e*P **P** **00 57 03.5 +0.3**
HOPEN IAmb IAmb 00 57 12.7
comp=Z,138nm,1.5s
HOPEN *e*PP **PP** **00 58 27.0 -1.3**
HOPEN *e*S **S** **01 02 52.0 +1.8**
HOPEN *e*ScS **ScS** **01 07 19.3 +3.4**
HOPEN IAMs_20 IAMs_20 01 14 23.1
comp=Z,13µm,14.5s
CHGR Chuyangaron 37.42 75 P **P** **00 57 04.0 -0.4**
CHGR Chuyangaron 37.42 75 ⇑*i*P **P** **00 57 04.3 0.0**
CHGR pmax pmax
comp=Z,617nm,0.9s
CHGR MLR MLR
comp=Z,4µm,18.0s
HSPB Hornsund (broa 37.87 358 *e*P **P** **00 57 07.9 +0.4**
HSPB *e*S **S** **01 03 04.1 +6.2**
HSPB *e*L L 01 12 32.3
comp=Z,8µm,24.0s
BRZS Berezniki 37.87 56 *e*P **P** **00 57 06.9 -1.0**
DZA Taraz 37.96 68 *e*P **P** **00 57 07.7 -1.1**
SCO Scoresbysund 38.15 338 P **P** **00 57 10.0 0.0**
SCO IAmb IAmb 00 57 21.2
comp=Z,100nm,1.0s
SCO Scoresbysund 38.15 338 P **P** **00 57 10.0 0.0**
SCO pmax pmax
comp=Z,100nm,1.0s
SCO MLR MLR
comp=Z,3µm,18.0s
SCO Scoresbysund 38.15 338 ⇓P **P** **00 57 11.8 +1.8**
SCO Scoresbysund 38.15 338 *i* P **P** **00 57 12.1 +2.1**
SCO IAmb IAmb 00 57 13.2
comp=Z,110nm,1.4s
LODK Lodwar 38.16 156 P **P** **00 57 10.9 +0.2**
LODK IAmb IAmb 00 57 17.1
comp=Z,285nm,2.0s
LODK IAMs_20 IAMs_20 01 15 13.9
comp=Z,4µm,18.0s
LODK Lodwar 38.16 156 P **P** **00 57 12.2 +1.5**
SNR=40
GAR Garm 38.18 74 **P** **00 57 10.3 -0.5**
BTK Batken 38.26 72 P **P** **00 57 10.3 -1.2**
BTK Batken 38.26 72 P **P** **00 57 10.3 -1.2**
BTK pmax pmax
comp=Z,466nm,1.4s
ACRG Accra 38.41 215 P **P** **00 57 12.2 -0.5**
KBL Kabul 38.68 81 P **P** **00 57 14.4 -0.7**
KBL IAmb IAmb 00 57 37.6
comp=Z,153nm,0.8s
KBL Kabul 38.68 81 P **P** **00 57 14.4 -0.7**
KBL pmax pmax
comp=Z,153nm,0.9s
SPB2 Spitsbergen Ar 39.02 359 P **P** **00 57 16.3 -1.0**
SPITS Spitsbergen Ar 39.03 359 P **P** **00 57 16.5 -0.8**
comp=Z,10nm,0.5s,baz=153,slow=11,SNR=32
SPITS LR LR 01 15 30.0
comp=Z,6µm,18.5s,baz=169,slow=40
comp=Z,10nm,0.5s
BTLS Baital 39.44 64 ⇑*i*P **P** **00 57 20.2 -1.0**
DBIC Dimbokro 39.75 222 P **P** **00 57 24.1 +0.1**
comp=Z,65nm,0.7s,baz=53,slow=8.8,SNR=48
DBIC LR LR 01 15 23.9
comp=Z,6µm,19.2s,baz=58,slow=38
DBIC PKP2ab P'P'ab 01 31 14.2 +8.9
comp=Z,2.2nm,0.6s,baz=260,slow=0.8,SNR=3.6
comp=Z,65nm,0.7s
DBIC Dimbokro 39.75 222 P **P** **00 57 23.9 0.0**
DBIC Dimbokro 39.75 222 P **P** **00 57 23.9 0.0**
DBIC pmax pmax
comp=Z,335nm,1.3s
EKS2 Erkin-Say 39.76 67 P **P** **00 57 23.9 -0.1**
SNR=47
KBS Kingsbay 39.89 357 P **P** **00 57 23.2 -1.3**
KBS Kingsbay 39.89 357 *e*P **P** **00 57 24.7 +0.2**
KBS IAmb IAmb 00 57 32.6
comp=Z,58nm,0.7s
KBS IAMs_20 IAMs_20 01 15 23.9
comp=Z,7µm,20.4s
KBS Kingsbay 39.89 357 *ce*P **P** **00 57 25.3 +0.8**
KBS pmax pmax
comp=Z,63nm,1.3s
KBS Kingsbay 39.89 357 *i* P **P** **00 57 23.7 -0.8**
DBG Daneborg 39.92 344 *i* P **P** **00 57 25.7 +0.9**
DBG IAmb IAmb 00 57 26.9
comp=Z,36nm,1.6s
USP Ospenovka 40.14 66 P **P** **00 57 25.8 -1.2**
SNR=26
SGDS Sogindy 40.19 66 *e*P **P** **00 57 26.3 -1.1**
SGDS *e*S **S** **01 03 33.8 0.0**
AAK Ala-Archa 40.28 67 LR LR 01 17 54.0
comp=Z,3µm,18.0s,baz=290,slow=42
AAK Ala-Archa 40.28 67 P **P** **00 57 28.2 -0.2**
SNR=50
AAK Ala-Archa 40.28 67 P **P** **00 57 27.2 -1.1**
AAK IAmb IAmb 00 57 44.9
comp=Z,291nm,1.6s
AAK Ala-Archa 40.28 67 *i* P **P** **00 57 27.9 -0.4**
SNR=76
AAK Ala-Archa 40.28 67 P **P** **00 57 27.3 -1.1**
AAK pmax pmax
comp=Z,291nm,1.6s
AAK Ala-Archa 40.28 67 P **P** **00 57 28.1 -0.2**
AAK P **P** **00 57 28.1 -0.2**
AAK S S 01 03 25.5 -10
AAK S S 01 03 25.5 -10
AAK Ala-Archa 40.28 67 ⇑P **P** **00 57 28.0 -0.4**
FRU1 Bishkek 40.34 67 P **P** **00 57 28.0 -0.7**
FRU1 IAmb IAmb 00 57 35.9
comp=Z,209nm,1.0s
FRU1 Bishkek 40.34 67 P **P** **00 57 28.0 -0.7**
FRU1 pmax pmax
comp=Z,209nm,1.0s
CHMS Chumysh 40.38 67 P **P** **00 57 28.9 -0.1**
SNR=21
UCH Uchtor 40.40 68 P **P** **00 57 29.4 -0.3**
SNR=29
KBK Karagaybulak 40.60 67 P **P** **00 57 30.6 -0.4**
SNR=19
MBAR Mbarara 40.79 164 **P** **00 57 32.6 -0.1**
MBAR Mbarara 40.79 164 *ce*P **P** **00 57 33.9 +1.1**
MBAR pmax pmax
comp=Z,103nm,1.7s
MBAR Mbarara 40.79 164 P **P** **00 57 33.5 +0.8**
MBAR S **S** **01 03 44.5 +1.2**
TKM2 Tokmak 2 41.00 67 P **P** **00 57 33.6 -0.8**
SNR=24
DAG Danmarks Havn 41.21 347 ⇑P **P** **00 57 34.0 -1.4**
DAG Danmarks Havn 41.21 347 *i* P **P** **00 57 35.1 -0.3**
DAG IAmb IAmb 00 57 39.5
comp=Z,24nm,0.6s
KUU Kurty 41.29 65 LR LR 01 16 38.7
comp=Z,1µm,12.4s
BOOM Boomskoye usch 41.35 67 P **P** **00 57 36.2 -1.0**
BOOM IAmb IAmb 00 57 45.1
comp=Z,316nm,1.9s
BOOM Boomskoye usch 41.35 67 P **P** **00 57 36.2 -1.0**
BOOM pmax pmax
comp=Z,316nm,1.9s
KURBB Kurchatov Arra 41.54 55 P **P** **00 57 37.4 -1.0**
comp=Z,102nm,1.0s,baz=282,slow=9.4,SNR=331
KURBB PP **PnPn** **00 59 17.4 -1.7**
comp=Z,14nm,0.8s,baz=283,slow=11,SNR=4.4
KURBB LR LR 01 18 33.4
comp=Z,3µm,18.2s,baz=280,slow=42
comp=Z,102nm,1.0s
KURK Kurchatov 41.59 54 P **P** **00 57 37.1 -1.7**
KURK IAmb IAmb 00 57 41.4
comp=Z,161nm,1.1s

KURK Kurchatov 41.59 54 *ce* P **P 00 57 37.7 -1.1**
KURK pmax pmax
comp=Z,141nm,1.0s
KURK MLR MLR
comp=Z,4μm,17.0s
KURK Kurchatov 41.59 54 P **P 00 57 38.2 -0.6**
KURK P **P 00 57 38.2 -0.6**
ULHL Ulahol 41.63 67 P **P 00 57 38.9 -0.7**
SNR=27
NRN Naryn 41.68 69 P **P 00 57 35.5 -4.6**
NRN IAmb IAmb 00 57 48.0
comp=Z,252nm,1.6s
NRN Naryn 41.68 69 P **P 00 57 35.5 -4.6**
AAA Alma-Ata 41.86 66 *eP* **P 00 57 39.1 -2.2**
comp=Z,130nm,1.5s
AAA LR LR 01 16 58.9
comp=Z,4μm,18.4s
TNSS Tian-Shan 41.93 66 *eP* **P 00 57 40.6 -1.6**
MDOK Medeo 41.97 66 *eP* **P 00 57 41.1 -1.1**
MDOK *eS* **S 01 04 00.4 0.0**
MDOK LR LR 01 17 04.0
KSH2 Kashi 42.04 72 P **P 00 57 42.8 -0.1**
KSH2 sP sP 00 57 49.8 +0.3
KSH2 PP **PP 00 59 24.0 +4.0**
KSH2 S **S 01 03 59.4 -2.1**
KSH2 pmax pmax
comp=Z,120nm,1.1s
KSH2 pmax pmax
comp=Z,2μm,5.7s
KSH2 L L
comp=Z,3μm,21.0s
KSH2 L L
comp=Z,3μm,15.5s
KSH2 L L
comp=Z,2μm,17.2s
KDJ Kajisay 42.34 67 P **P 00 57 44.6 -0.7**
KDJ Kajisay 42.34 67 P **P 00 57 44.6 -0.7**
KDJ pmax pmax
comp=Z,81nm,1.0s
TDK Taldyqorghan 42.47 63⇑ *iP* **P 00 57 45.2 -1.0**
comp=Z,245nm,1.7s
TDK LR LR 01 17 17.4
comp=Z,2μm,15.2s
SEM Semipalatinsk 42.66 55 LR LR 01 17 27.6
comp=Z,1μm,12.3s
TARG Taragay, Kyrgy 42.90 68 P **P 00 57 49.8 -0.3**
TARG IAmb IAmb 00 58 07.3
comp=Z,183nm,1.3s
TARG Taragay, Kyrgy 42.90 68 P **P 00 57 49.8 -0.3**
TARG pmax pmax
comp=Z,183nm,1.3s
SATY Saty 42.96 66⇑ *iP* **P 00 57 49.3 -0.9**
SATY *eS* **S 01 04 15.1 +0.2**
KPKS Kokpek 43.05 65 *eP* **P 00 57 49.7 -1.2**
KMBO Kilima Mbogo 43.05 155 LR LR 01 19 11.0
comp=Z,2μm,18.8s,baz=342,slow=41
PRZ Przheval'sk 43.11 66 P **P 00 57 51.1 -0.4**
PRZ Przheval'sk 43.11 66 P **P 00 57 51.2 -0.4**
PRZ pmax pmax
comp=Z,80nm,1.0s
SRNI Srinagar 43.27 79 *eP* **P 00 57 53.8 +0.8**
UZB Uzynbulak 43.37 65 *eP* **P 00 57 52.5 -1.1**
PDGK Podgornoye 43.65 65 P **P 00 57 54.5 -1.3**
SHLS Shalkode 43.68 65 *eP* **P 00 57 57.3 +1.2**
SUMG Summit 43.79 338 P **P 00 57 56.6 -0.3**
SUMG Summit 43.79 338 P **P 00 57 56.6 -0.3**
SUMG Summit 43.79 338 P **P 00 57 56.6 -0.3**
SUMG pmax pmax
comp=Z,83nm,1.3s
SUMG MLR MLR
comp=Z,3μm,20.0s
SUMG Summit 43.79 338⇑ P **P 00 57 57.4 +0.5**
SUMG Summit 43.79 338 *i* P **P 00 57 57.5 +0.6**
SUMG IAmb IAmb 00 57 58.9
comp=Z,94nm,1.6s
JMU Jammu 43.81 81 *eP* **P 00 57 56.8 -0.3**
SRGN SRI GANGA NAGA 44.32 85 *eP* **P 00 57 58.3 -2.9**
BHUJ Bhuj 44.36 96 *eP* **P 00 58 01.4 -0.2**
BHUJ IAmb IAmb 00 58 08.1
comp=Z,119nm,0.8s
NOR Nord 44.37 353 *i* P **P 00 58 00.6 -0.4**
NOR IAmb IAmb 00 58 06.3
comp=Z,37nm,0.8s
KIBK Kibwezi 44.45 155 P **P 00 58 03.3 +0.9**
KIBK Kibwezi 44.45 155 P **P 00 58 02.4 0.0**
KIBK IAMs_20 IAMs_20 01 19 27.9
comp=Z,3μm,18.0s
KIBK Kibwezi 44.45 155 P **P 00 58 03.8 +1.4**
SNR=26
MAKZ Makanchi 44.48 59 P **P 00 58 01.2 -1.0**
MAKZ IAmb IAmb 00 58 08.6
comp=Z,103nm,1.1s
MAKZ Makanchi 44.48 59 P **P 00 58 01.3 -1.0**
MAKZ pmax pmax
comp=Z,103nm,1.1s
THN Thein Dam 44.66 81⇑ *eP* **P 00 58 02.0 -2.0**
MK31 Makanchi Array 44.69 59 *eP* **P 00 58 03.0 -1.0**
MKAR Makanchi Array 44.69 59 P **P 00 58 03.0 -1.0**
comp=Z,66nm,0.5s,baz=276,slow=7.5,SNR=465
MKAR LR LR 01 20 57.3
comp=Z,3μm,19.0s,baz=270,slow=42
comp=Z,66nm,0.5s
MKAR Makanchi Array 44.69 59 P **P 00 58 02.6 -1.4**
MKAR Makanchi Array 44.69 59 P **P 00 58 02.6 -1.4**
TSSA Tissa 44.80 80 *eP* **P 00 58 04.1 -1.2**
ZAA0 Zalesovo Array 44.92 49 P **P 00 58 04.7 -1.0**
ZALV Zalesovo Beam 44.92 49 P **P 00 58 04.7 -1.0**
comp=Z,198nm,0.8s,baz=278,slow=8.9,SNR=468
ZALV S **S 01 04 46.4 +3.4**
comp=Z,5.5nm,1.1s,baz=293,slow=15,SNR=4.5
ZALV LR LR 01 19 34.7
comp=Z,4μm,18.2s,baz=278,slow=40
comp=Z,198nm,0.8s
TLWR Talawar 45.02 82 *eP* **P 00 58 04.1 -2.7**
DHRM DHARAMSHALA 45.16 81 *eP* **P 00 58 05.3 -2.8**
NRS Narsarsuaq 45.18 321 *i* P **P 00 58 09.8 +2.1**
NRS IAmb IAmb 00 58 14.7
comp=Z,48nm,1.1s
BHK Bhakra 45.59 82 *eP* **P 00 58 10.4 -0.9**
SACV Santiago Islan 45.59 251 P **P 00 58 11.1 -0.4**
SACV IAmb IAmb 00 58 16.4
comp=Z,155nm,1.2s
NRIK Noril'sk 45.78 27 P **P 00 58 13.2 +0.9**
comp=Z,155nm,0.9s,baz=258,slow=5.3,SNR=142
NRIK LR LR 01 20 11.6
comp=Z,6μm,19.1s,baz=264,slow=40
comp=Z,155nm,0.9s
NRIK Noril'sk 45.78 27 P **P 00 58 12.8 +0.5**
NRIK **P 00 58 13.2 +0.9**
NRIK Noril'sk 45.78 27 *c iP* **P 00 58 13.4 +1.1**
NRIK pmax pmax
comp=Z,257nm,1.0s
NRIK MLR MLR
comp=Z,5μm,18.0s
CGRH CHANDIGARH 46.19 83⇑ *eP* **P 00 58 11.7 -4.4**
ZSN Zaisan 46.24 58⇑ *iP* **P 00 58 15.3 -0.9**
comp=Z,79nm,1.2s
SMLA Simla 46.31 82 *eP* **P 00 58 15.4 -1.5**
IVI Ivigtut 46.51 322 *i* P **P 00 58 19.6 +1.5**
IVI IAmb IAmb 00 58 25.2
comp=Z,63nm,1.0s
AJM Ajmer 46.56 89 *eP* **P 00 58 18.5 -0.6**
AJM IAmb IAmb 00 58 31.1
comp=Z,63nm,0.8s
UDPR Udaipur 46.79 92 *eP* **P 00 58 18.9 -2.0**
KLP Kalpa 46.96 81⇑ *eP* **P 00 58 20.1 -2.4**
SFJD Kangerlussuaq 47.28 330 LR LR 01 19 18.0
comp=Z,4μm,19.9s,baz=88,slow=37
SFJD Kangerlussuaq 47.28 330 P **P 00 58 23.2 -0.9**
SFJD Kangerlussuaq 47.28 330 IAMs_20 IAMs_20 01 19 05.7
comp=Z,4μm,20.0s
SFJD Kangerlussuaq 47.28 330 P **P 00 58 23.2 -0.9**
SFJD pmax pmax
comp=Z,211nm,1.9s
SFJD MLR MLR
comp=Z,4μm,20.0s
SFJD Kangerlussuaq 47.28 330 *i* P **P 00 58 24.8 +0.7**
SFJD IAmb IAmb 00 58 26.2
comp=Z,131nm,1.8s
NRLA Narela 47.33 85 *eP* **P 00 58 24.2 -0.7**
DGZ Jazzator, Alta 47.34 54 *c iP* **P 00 58 24.2 -0.8**
DGZ pmax pmax
comp=Z,118nm,0.6s
DGZ MLR MLR
comp=Z,4μm,18.0s

DDI Dehra Dun 47.35 82 *eP* **P 00 58 23.7 -1.6**
ILULI Ilulissat 47.44 333 IAMs_20 IAMs_20 01 20 51.8
comp=Z,3μm,18.0s
NPLP NPLP New Delhi 47.45 85⇑ *eP* **P 00 58 24.6 -1.3**
NDI New Delhi 47.47 85⇑ *eP* **P 00 58 24.2 -1.8**
AYAN Aya Nagar 47.49 85⇑ *eP* **P 00 58 22.3 -4.0**
LDR Lodi Road 47.52 85 *eP* **P 00 58 25.9 -0.5**
JMIU JAMIA UNIVERSI 47.58 85⇑ *eP* **P 00 58 25.8 -1.1**
SAATT Saattut 47.64 335 *i* P **P 00 58 27.2 +0.4**
SAATT IAmb IAmb 00 58 27.9
comp=Z,27nm,1.1s
SAQQ Saqqaq 47.74 334 *i* P **P 00 58 28.3 +0.8**
SAQQ IAmb IAmb 00 58 29.6
comp=Z,94nm,1.6s
NEEM North Greenlan 48.01 344 *i* P **P 00 58 29.4 -0.5**
NEEM IAmb IAmb 00 58 34.9
comp=Z,13nm,0.7s
NUUG Nuugaatsiaq 48.16 336 *i* P **P 00 58 31.0 +0.2**
NUUG IAmb IAmb 00 58 35.2
comp=Z,18nm,0.9s
GDH Godhavn 48.30 333 *i* P **P 00 58 32.8 +0.9**
GDH IAmb IAmb 00 58 37.0
comp=Z,69nm,0.9s
NIAQ Niaqornat 48.31 335 *i* P **P 00 58 32.6 +0.6**
NIAQ IAmb IAmb 00 58 37.3
comp=Z,28nm,0.9s
JOSI Joshimath 48.40 81 *eP* **P 00 58 31.7 -1.8**
TKRD Thakurdwara 48.51 83 *eP* **P 00 58 31.6 -2.5**
UPNV Upernavik 49.05 337 *i* P **P 00 58 37.5 -0.2**
UPNV IAmb IAmb 00 58 44.7
comp=Z,24nm,0.7s
WMQ Urumqi 49.19 62 *eP* **P 00 58 38.8 -0.5**
WMQ PP **PP 01 00 34.1 +1.3**
WMQ S **S 01 05 40.4 -3.9**
WMQ pmax pmax
comp=Z,32nm,1.3s
WMQ pmax pmax
comp=Z,1μm,5.5s
WMQ L L
comp=Z,4μm,17.3s
WMQ L L
comp=Z,3μm,18.5s
WMQ L L
comp=Z,2μm,24.7s
KULLO Kullorsuaq 49.33 340⇓ P **P 00 58 40.1 +0.3**
KULLO Kullorsuaq 49.33 340 *i* P **P 00 58 40.4 +0.7**
KULLO IAmb IAmb 00 58 47.5
comp=Z,28nm,0.6s
LGTI Lohaghat 49.34 82⇑ *eP* **P 00 58 39.9 -0.9**
GUNA GUNA 49.57 89 *eP* **P 00 58 40.7 -1.6**
GUNA IAmb IAmb 00 58 56.5
comp=Z,87nm,0.9s
FRKB FARRUKHABAD 49.91 85 *eP* **P 00 58 42.8 -2.0**
JHNI Jhansi 50.14 88 *eP* **P 00 58 44.0 -2.6**
JHNI IAmb IAmb 00 58 49.4
comp=Z,45nm,0.7s
POO Poona 50.25 98 *eP* **P 00 58 46.7 -0.9**
POO IAmb IAmb 00 58 53.5
comp=Z,52nm,1.0s
BHPL Bhopal 50.38 91 *eP* **P 00 58 46.6 -1.9**
BHPL IAmb IAmb 00 58 52.1
comp=Z,23nm,0.9s
NRDN NARMADA NAGAR 50.46 92⇑ *eP* P 00 58 44.0 -5.1
LKN LUCKNOW 51.24 85 *eP* **P 00 58 52.2 -2.7**
BRCI Bahraich 51.40 84 *eP* P 00 58 50.4 -5.7
AKL Akola 51.45 94 *eP* **P 00 58 54.6 -2.0**
BNDA BANDA 51.46 87 *eP* P 00 58 50.4 -6.2
TULEG Thule 52.03 343 P **P 00 58 58.5 -1.6**
TULEG Thule 52.03 343 *i* P **P 00 58 58.8 -1.4**
TULEG IAmb IAmb 00 59 01.5
comp=Z,38nm,1.1s
GOA Goa 52.05 102 *eP* **P 00 58 58.8 -2.3**
ALBI Allahabad 52.69 86 *eP* **P 00 59 02.4 -3.3**
NGP Nagpur 52.77 92 *eP* P 00 59 01.3 -5.1
KNGR Kungurtug, Tuv 53.29 51 *i* P **P 00 59 09.5 -0.5**
KNGR pmax pmax
comp=Z,40nm,1.0s
KNGR MLR MLR
comp=Z,1μm,14.0s
MSEY Mahe Island 54.33 135 P **P 00 59 17.7 -0.2**
MSEY Mahe Island 54.33 135 *i* P **P 00 59 16.2 -1.7**
SNR=10
MSEY Mahe Island 54.33 135 P **P 00 59 17.7 -0.2**
MSEY pmax pmax
comp=Z,196nm,1.5s
MSEY MLR MLR
comp=Z,1μm,19.0s
MSEY Mahe Island 54.33 135 P **P 00 59 20.1 +2.3**
DRLN Deer Lake 54.43 308 P **P 00 59 17.6 -0.6**
HYB Hyderabad 54.52 96 *eP* **P 00 59 19.1 -0.2**
HYB *ePcP* **PcP 01 00 22.2 -0.3**
HYB *ePP* **PP 01 01 22.1 +0.5**
HYB *eScS* ScS 01 09 09.7 +1.2
HYB IVMs_BB IVMs_BB 01 12 19.6
comp=Z,477nm,26.2s
BLSP Bilaspur 54.69 89 *eP* **P 00 59 16.8 -3.7**
LSZ Lusaka 54.76 171 LR LR 01 23 54.9
comp=Z,3μm,18.6s,baz=2.0,slow=37
LSZ Lusaka 54.76 171 P **P 00 59 20.0 -0.9**
LSZ Lusaka 54.76 171 IAMs_20 IAMs_20 01 27 11.9
comp=Z,3μm,19.0s
LSZ Lusaka 54.76 171 P **P 00 59 20.0 -0.9**
LSZ pmax pmax
comp=Z,22nm,0.9s
LSZ MLR MLR
comp=Z,3μm,19.0s
LSZ Lusaka 54.76 171 P **P 00 59 24.8 +3.8**
LSZ P **P 00 59 24.8 +3.8**
MOY Mondy 54.98 49 *eP* **P 00 59 22.0 -0.3**
MOY pmax pmax
comp=Z,60nm,1.9s
EVN Everest 55.21 80 P **P 00 59 22.9 -2.0**
FRB Frobisher Bay 55.22 327 LR LR 01 24 24.8
comp=Z,3μm,18.6s,baz=72,slow=38
POIN Pond Inlet 55.42 339 P **P 00 59 24.7 -0.3**
POIN IAmb IAmb 00 59 40.0
comp=Z,92nm,1.5s
GAYA Gaya 55.60 85⇑ *eP* **P 00 59 22.5 -4.5**
JHSG JHARSUGUGA 56.11 89 *eP* **P 00 59 28.2 -2.5**
JMUI Jamui 56.31 84⇑ *eP* P 00 59 26.3 -5.7
TLY Talaya 56.50 48 LR LR 01 25 14.6
comp=Z,2μm,19.3s,baz=287,slow=38
TLY Talaya 56.50 48 P **P 00 59 33.1 0.0**
TLY IAmb IAmb 00 59 41.1
comp=Z,62nm,0.9s
TLY Talaya 56.50 48 *ce* P **P 00 59 33.6 +0.5**
TLY pmax pmax
comp=Z,52nm,1.0s
TLY MLR MLR
comp=Z,7μm,17.0s
TLY Talaya 56.50 48 P **P 00 59 32.6 -0.6**
IRK Irkutsk 56.65 47 *eP* **P 00 59 32.4 -1.7**
IRK *e* 01 03 04.2
IRK *eS* **S 01 07 22.2 -3.4**
IRK pmax pmax
comp=Z,112nm,1.8s
ZAK Zakamensk 56.80 49 *eP* **P 00 59 34.5 -0.8**
ZAK pmax pmax
comp=Z,57nm,1.9s
GTK Tadong 56.89 80 *eP* **P 00 59 35.1 -1.3**
GTK IAmb IAmb 00 59 40.3
comp=Z,75nm,0.9s
KSANE Kasane 56.96 175 *i* P **P 00 59 36.9 +0.2**
H10N2 ASCENSION HYDR 57.05 223 P **P 00 59 39.2 +2.3**
baz=41,slow=5.4,SNR=4.8
H10N1 ASCENSION HYDR 57.06 223 P **P 00 59 39.5 +2.5**
baz=41,slow=5.4,SNR=5.9
H10N3 ASCENSION HYDR 57.06 223 P **P 00 59 39.2 +2.1**
baz=41,slow=5.4,SNR=4.6
KUQ Kuujjuaa 57.18 321 P **P 00 59 37.1 -0.6**
HMDM Hanimaadhoo 57.20 110 P **P 00 59 37.1 -1.4**
HMDM IAMs_20 IAMs_20 01 24 56.1
comp=Z,2μm,20.0s
HMDM Hanimaadhoo 57.20 110 P **P 00 59 37.8 -0.6**
SNR=10
HMDM Hanimaadhoo 57.20 110 P **P 00 59 37.8 -0.6**
comp=Z,3μmcomp=Z,163nm,0.8s
GOMU GeErMu 57.23 68 P **P 00 59 37.6 -1.3**
GOMU S **S 01 07 33.3 -1.2**
GOMU pmax pmax
comp=Z,27nm,0.9s
GOMU L L
comp=Z,2μm,14.4s
GOMU L L
comp=Z,2μm,13.9s
GOMU L L
comp=Z,2μm,16.5s
SHBG Sahibganj 57.23 83 *eP* **P 00 59 35.5 -3.1**
JPG JALPAIGURI 57.38 81 *eP* **P 00 59 37.6 -2.0**
LSA Lhasa 57.63 76 P **P 00 59 40.5 -1.5**
LSA IAmb IAmb 00 59 45.9
comp=Z,47nm,0.8s
LSA Lhasa 57.63 76 P **P 00 59 40.6 -1.4**
LSA Lhasa 57.63 76 P **P 00 59 40.5 -1.5**
LSA pmax pmax
comp=Z,47nm,0.8s
LSA MLR MLR
comp=Z,2μm,21.0s
LSA Lhasa 57.63 76 P **P 00 59 37.9 -4.0**
LSA pmax pmax
comp=Z,56nm,0.7s
LSA L L
comp=Z,1μm,23.7s
LSA L L
comp=Z,2μm,23.3s
LSA L L
comp=Z,2μm,23.5s
SCHQ Schefferville 57.66 317 P **P 00 59 41.2 0.0**
comp=Z,19nm,0.5s,baz=76,slow=5.6,SNR=50
SCHQ LR LR 01 24 14.3
comp=Z,2μm,18.7s,baz=61,slow=36
comp=Z,19nm,0.5s
SCHQ Schefferville 57.66 317 P **P 00 59 40.6 -0.6**
SCHQ IAmb IAmb 00 59 49.9
comp=Z,69nm,1.2s
SALM Salem 57.72 102 *eP* **P 00 59 38.3 -3.9**
ILON Igloolik, Nuna 57.93 336 P **P 00 59 42.4 -0.4**
VIS Vishakhapatnam 58.04 93 *eP* **P 00 59 42.9 -1.5**
COBR COOCHBEHAR 58.08 81 *eP* **P 00 59 42.3 -2.2**
TSUM Tsumeb 58.26 183 LR LR 01 26 58.8
comp=Z,5μm,18.6s,baz=4.0,slow=38
TSUM Tsumeb 58.26 183 P **P 00 59 45.6 -0.3**
MDRS Chennai 58.44 99 *eP* **P 00 59 44.1 -3.0**
GBN Guysborough 58.46 305 P **P 00 59 45.8 -1.2**
BWNR Bhubaneshwar 58.53 89 *eP* **P 00 59 45.9 -1.9**
TIXI Tiksi 58.59 21 LR LR 01 28 33.7
comp=Z,9μm,18.5s,baz=320,slow=40
TIXI Tiksi 58.59 21 P **P 00 59 47.1 -0.3**
TIXI IAmb IAmb 01 00 01.0
comp=Z,68nm,1.1s
TIXI Tiksi 58.59 21 *ce* P **P 00 59 47.3 -0.1**
TIXI pmax pmax
comp=Z,36nm,1.3s
TIXI MLR MLR
comp=Z,10μm,17.0s
DHUB DHUBRI 58.63 81 *eP* **P 00 59 45.9 -2.5**
DHUB IAmb IAmb 00 59 52.2
comp=Z,46nm,1.0s
RES Resolute Bay 58.70 344 LR LR 01 25 28.4
comp=Z,2μm,20.1s,baz=52,slow=36
RES Resolute Bay 58.70 344 P **P 00 59 48.1 0.0**
RES Resolute Bay 58.70 344 P **P 00 59 48.1 0.0**
RES pmax pmax
comp=Z,26nm,1.2s
TRD Trivandrum 58.83 106 *eP* **P 00 59 49.2 -0.7**
TRD IAML 01 00 05.7
comp=Z,88nm,1.1s
GTA2 Gaotai 59.20 62 *eP* **P 00 59 51.0 -1.3**
GTA2 S **S 01 07 58.8 -0.8**
GTA2 pmax pmax
comp=Z,23nm,0.9s
GTA2 pmax pmax
comp=Z,720nm,7.3s
GTA2 L L
comp=Z,2μm,16.5s
GTA2 L L
comp=Z,1μm,15.2s
GTA2 L L
comp=Z,2μm,17.1s
CAL Calcutta 59.21 85 *eP* **P 00 59 49.9 -2.6**
TAWA Tawang 59.24 78 *eP* **P 00 59 51.9 -1.2**
TAWA IAmb IAmb 01 00 01.2
comp=Z,77nm,0.6s
BOD Bodaibo 59.47 38 *eP* **P 00 59 51.8 -1.9**
BOD pmax pmax
comp=Z,49nm,1.0s
SONM Songino Array 59.72 51 P **P 00 59 55.0 -0.9**
comp=Z,36nm,0.9s,baz=289,slow=8.6,SNR=80
SONM LR LR 01 27 38.1
comp=Z,2μm,19.4s,baz=296,slow=38
SONM PKPPKP **P'P'df 01 29 23.3 -6.6**
comp=Z,0.2nm,0.4s,baz=153,slow=1.3,SNR=3.5
comp=Z,36nm,0.9s
SONM Songino Array 59.72 51 P **P 00 59 54.8 -1.1**
SONM IAmb IAmb 01 00 10.6
comp=Z,109nm,1.3s
SONM Songino Array 59.72 51 P **P 00 59 54.8 -1.1**
SONM pmax pmax
comp=Z,109nm,1.3s
SOOWA Sowa 59.78 174 *i* P **P 00 59 56.9 +0.6**
GUWA GUWAHATI 59.84 80 *eP* **P 00 59 54.0 -2.8**
GUWA IAmb IAmb 01 00 01.5
comp=Z,62nm,1.4s
ULN Ulaanbaatar 60.11 51 P **P 00 59 57.4 -1.1**
ULN **P 00 59 57.6 -0.8**
ULN IAmb IAmb 01 00 05.0
comp=Z,43nm,1.0s
ULN Ulaanbaatar 60.11 51 *ce* P **P 00 59 57.7 -0.8**
ULN pmax pmax
comp=Z,39nm,1.0s
ULN MLR MLR
comp=Z,3μm,18.0s
ULN Ulaanbaatar 60.11 51 P **P 00 59 56.8 -1.7**
comp=Z,3μmcomp=Z,153nm,1.0s
HAL Halifax 60.12 305 P **P 00 59 59.0 +0.6**
HAL Halifax 60.12 305 P **P 00 59 59.0 +0.6**
HAL pmax pmax
comp=Z,165nm,1.1s
ICQ Pointe Anglais 60.16 311 P **P 00 59 58.7 +0.1**
ICQ IAmb IAmb 01 00 07.6
comp=Z,75nm,1.1s
SHEL Horse Pasture 60.22 209 P **P 01 00 00.2 +0.8**
SHEL Horse Pasture 60.22 209 P **P 01 00 00.2 +0.8**
SHEL pmax pmax
comp=Z,138nm,1.2s
SHL Shillong 60.31 80 P **P 00 59 57.2 -3.1**
SHL IAmb IAmb 01 00 07.4
comp=Z,94nm,1.0s
SHL Shillong 60.31 80 P **P 00 59 57.2 -3.1**
SHL pmax pmax
comp=Z,94nm,1.0s
SHL Shillong 60.31 80 P **P 00 59 57.7 -2.6**
SNR=58
SHL Shillong 60.31 80 *eP* **P 00 59 57.4 -2.9**
SHL IAmb IAmb 01 00 07.1
comp=Z,66nm,0.9s
GRTLG Ghanzi 60.35 179 *i* P **P 01 00 00.2 0.0**
GRTLG Ghanzi 60.35 179 P **P 01 00 00.6 +0.3**
GRTLG IAmb IAmb 01 00 12.2
comp=Z,54nm,0.9s
BROLN Tlhalogang 60.42 173 *i* P **P 01 00 00.8 +0.1**
TEZP TEZPUR 60.46 79 *eP* **P 00 59 58.4 -2.6**
TEZP IAmb IAmb 01 00 06.2
comp=Z,95nm,1.4s
AGT Agartala 60.73 82 *eP* **P 01 00 01.4 -1.4**
ZIRO ZIRO 60.78 77 *eP* **P 01 00 01.2 -2.2**
ITAN ITANAGAR 60.88 77 *eP* **P 01 00 02.8 -1.1**
ITAN IAmb IAmb 01 00 08.0
comp=Z,64nm,0.7s
KHWEE KHWEE 61.10 175 P **P 01 00 05.3 0.0**
KHWEE IAmb IAmb 01 00 09.8
comp=Z,150nm,1.8s
KAAM Kaadhehdhoo 61.41 115 P **P 01 00 06.6 -1.0**
KAAM Kaadhehdhoo 61.41 115 P **P 01 00 07.0 -0.6**
SNR=6.6
KAAM Kaadhehdhoo 61.41 115 P **P 01 00 07.3 -0.3**
comp=Z,3μmcomp=Z,125nm,1.5s
PASG PASIGHAT 61.61 76 *eP* **P 01 00 06.8 -2.0**
PASG IAmb IAmb 01 00 16.4
comp=Z,60nm,0.9s
WIN Windhoek 61.63 184 P **P 01 00 08.8 -0.2**
WIN IAmb IAmb 01 00 20.5
comp=Z,45nm,0.9s
WIN Windhoek 61.63 184 P **P 01 00 08.8 -0.2**
WIN pmax pmax
comp=Z,45nm,0.9s
WIN MLR MLR
comp=Z,5μm,20.0s
KGCAE Kacgae 61.85 178 *i* P **P 01 00 10.5 +0.1**

MOKO MOKOCHONG 61.92 78 *e*P **P 01 00 09.1 -2.0**
MOKO IAmb IAmb 01 00 18.7
comp=Z,86nm,0.9s
KOHI KOHIMA 61.93 79 *e*P **P 01 00 09.0 -2.2**
KOHI IAmb IAmb 01 00 18.5
comp=Z,76nm,1.0s
KOOLE Kule 61.97 180 *i* P **P 01 00 11.0 -0.2**
KOOLE Kule 61.97 180 P **P 01 00 11.0 -0.2**
IMP Imphal 62.28 80 *e*P **P 01 00 12.1 -1.4**
IMP IAmb IAmb 01 00 21.9
comp=Z,70nm,1.3s
D62A Allapoint, All 62.35 310 P **P 01 00 12.8 -0.7**
D62A IAmb IAmb 01 00 22.9
comp=Z,69nm,1.0s
G65A Princeton 62.35 307 IAMs_20 IAMs_20 01 25 38.3
comp=Z,2µm,19.0s
PALK Pallekele 62.44 104 P **P 01 00 13.3 -1.4**
comp=Z,20nm,0.8s,baz=303,slow=10.0,SNR=21
PALK LR LR 01 29 19.7
comp=Z,2µm,19.9s,baz=315,slow=38
comp=Z,20nm,0.8s
PALK Pallekele 62.44 104 P **P 01 00 13.2 -1.4**
PALK IAmb IAmb 01 00 36.9
comp=Z,71nm,0.9s
PALK Pallekele 62.44 104 *i* P **P 01 00 13.7 -1.0**
SNR=13
PALK Pallekele 62.44 104 P **P 01 00 13.2 -1.4**
PALK pmax pmax
comp=Z,71nm,1.0s
PALK MLR MLR
comp=Z,2µm,20.0s
PALK Pallekele 62.44 104 P **P 01 00 13.8 -0.8**
PALK S **S 01 08 40.2 -1.3**
PALK Pallekele 62.44 104 P **P 01 00 13.8 -0.8**
comp=Z,43nm,1.0s
KDWAN Kaudwane 62.47 176 *i* P **P 01 00 15.1 +0.6**
F64A Sherman 62.51 308 P **P 01 00 13.9 -0.7**
F64A IAmb IAmb 01 00 23.9
comp=Z,58nm,1.2s
F64A IAMs_20 IAMs_20 01 25 52.5
comp=Z,3µm,20.0s
EMMW East Machias 62.52 307 IAMs_20 IAMs_20 01 27 25.9
comp=Z,2µm,20.0s
LPHEP Lephephe 62.53 175 *i* P **P 01 00 15.4 +0.5**
LPHEP Lephephe 62.53 175 P **P 01 00 15.3 +0.4**
LPHEP IAmb IAmb 01 00 32.5
comp=Z,53nm,0.9s
OPO Ambohidratompo 62.72 151 LR LR 01 28 17.2
comp=Z,672nm,21.0s,baz=185,slow=37
SAIH SAIHA 62.83 82 *e*P **P 01 00 16.2 -1.1**
SAIH IAmb IAmb 01 00 24.8
comp=Z,72nm,0.8s
E62A Clayton Lake 62.86 309 P **P 01 00 16.9 0.0**
E62A IAmb IAmb 01 00 26.2
comp=Z,79nm,1.0s
LMQ La Malbaie 62.88 310 P **P 01 00 16.6 -0.5**
LMQ IAmb IAmb 01 00 26.3
comp=Z,62nm,1.1s
LKGWB Lokgwabe 63.09 179 P **P 01 00 19.4 +0.7**
LKGWB IAmb IAmb 01 00 29.9
comp=Z,53nm,0.9s
ABPO Ambohimpanom 63.15 152 P **P 01 00 19.8 +0.6**
ABPO IAmb IAmb 01 00 26.7
comp=Z,41nm,1.1s
ABPO Ambohimpanom 63.15 152 P **P 01 00 19.8 +0.6**
ABPO pmax pmax
comp=Z,41nm,1.1s
ABPO MLR MLR
comp=Z,1µm,19.0s
LDAQ Lac Daran 63.21 311 P **P 01 00 19.5 +0.1**
LDAQ IAmb IAmb 01 00 28.6
comp=Z,46nm,1.0s
PKME Peaks-Kenny Pk 63.38 308 IAMs_20 IAMs_20 01 26 18.6
comp=Z,2µm,21.0s
LZDM Lanzhou Array 63.64 64 P **P 01 00 21.1 -1.6**
comp=Z,18nm,0.7s,baz=275,slow=7.3,SNR=17
LZDM LR LR 01 32 49.6
comp=Z,1µm,18.4s,baz=350,slow=41
comp=Z,18nm,0.7s
LZH Lanzhou 63.67 64 P **P 01 00 21.8 -0.9**
LZH sP pP 01 00 27.9 +0.3
LZH PP **PP 01 02 44.4 +1.9**
LZH S **S 01 09 00.4 +3.8**
LZH pmax pmax
comp=Z,80nm,1.1s
LZH pmax pmax
comp=Z,850nm,5.0s
LZH L L
comp=Z,3µm,17.0s
LZH L L
comp=Z,2µm,16.8s
LZH L L
comp=Z,2µm,19.9s
WVL Waterville 63.96 307 IAMs_20 IAMs_20 01 30 02.9
comp=Z,2µm,18.0s
YAK Yakutsk 64.12 30 LR LR 01 31 49.0
comp=Z,5µm,18.4s,baz=298,slow=39
YAK Yakutsk 64.12 30 P **P 01 00 24.4 -0.6**
YAK Yakutsk 64.12 30 *e*P **P 01 00 24.3 -0.6**
YAK *e* 01 00 59.4
YAK *e* 01 02 43.9
YAK *e*PPP PPP 01 04 15.2
YAK *e*S **S 01 09 01.6 +0.7**
YAK *e* 01 10 17.7
YAK *e*SSS SSS 01 16 06.8
YAK pmax pmax
comp=Z,74nm,0.9s
YAK pmax pmax
comp=N,6.0nm,1.0s
YAK pmax pmax
comp=E,7.0nm,0.9s
YAK pmax pmax
comp=Z,370nm,3.7s
YAK pmax pmax
comp=E,357nm,3.3s
YAK pmax pmax
comp=N,267nm,4.0s
YAK smax smax
comp=E,483nm,4.4s
YAK smax smax
comp=N,236nm,5.8s
YAK MLR MLR
comp=Z,5µm,18.0s
YAK MLR MLR
comp=N,2µm,20.0s
YAK MLR MLR
comp=E,751nm,18.0s
LBTB Lobatse 64.15 175 LR LR 01 31 25.1
comp=E,2µm,18.2s,baz=358,slow=39
LBTB Lobatse 64.15 175 P **P 01 00 25.6 -0.1**
LBTB IAmb IAmb 01 00 30.6
comp=Z,113nm,1.7s
LBTB Lobatse 64.15 175 P **P 01 00 25.6 -0.1**
LBTB pmax pmax
comp=Z,113nm,1.7s
G62A West of Eustis 64.17 308 P **P 01 00 24.9 -0.7**
G62A IAMs_20 IAMs_20 01 26 43.2
comp=Z,2µm,20.0s
I63A Otisfield 64.79 307 IAMs_20 IAMs_20 01 29 22.9
comp=Z,2µm,18.0s
H62A Milan 64.88 308 IAMs_20 IAMs_20 01 27 14.0
comp=Z,3µm,20.0s
MAKGR Makgori 64.89 176 *i* P **P 01 00 30.3 -0.2**
BTO2 Baotou 65.34 57 *e*P **P 01 00 32.5 -1.0**
BTO2 pP **pP 01 00 37.4 -1.0**
BTO2 sP **sP 01 00 39.6 -0.7**
BTO2 S **S 01 09 15.8 -1.2**
BTO2 sS **sS 01 09 24.8 -0.5**
BTO2 SS **SS 01 13 28.9 -0.6**
BTO2 pmax pmax
comp=Z,49nm,1.0s
BTO2 pmax pmax
comp=Z,2µm,6.5s
BTO2 L L
comp=Z,4µm,12.4s
BTO2 L L
comp=Z,4µm,17.6s
BTO2 L L
comp=Z,6µm,24.7s
I62A Tamworth 65.35 307 P **P 01 00 32.3 -1.1**
I62A IAmb IAmb 01 00 43.3
comp=Z,69nm,1.1s
BLKN Baker Lake 65.38 335 P **P 01 00 32.1 -1.0**
BLKN IAmb IAmb 01 00 43.7
comp=Z,108nm,1.8s
LBNH Lisbon 65.52 308 P **P 01 00 33.8 -0.6**
LBNH IAmb IAmb 01 00 44.6
comp=Z,60nm,1.1s
LBNH IAMs_20 IAMs_20 01 27 34.1
comp=Z,2µm,21.0s
LBNH Lisbon 65.52 308 P **P 01 00 33.8 -0.6**
LBNH pmax pmax
comp=Z,60nm,1.1s
VOI Vohitsoka 65.65 153 P **P 01 00 35.4 -0.1**
VOI IAmb IAmb 01 00 42.8
comp=Z,52nm,1.0s
VOI Vohitsoka 65.65 153 P **P 01 00 36.8 +1.3**
SNR=6.6
TNCH TengChong 65.65 77 P **P 01 00 34.4 -1.4**
TNCH PP **PP 01 03 01.5 +1.4**
TNCH S **S 01 09 18.8 -2.5**
TNCH pmax pmax
comp=Z,63nm,0.9s
TNCH pmax pmax
comp=Z,790nm,4.1s
TNCH L L
comp=Z,620nm,19.1s
TNCH L L
comp=Z,470nm,17.9s
TNCH L L
comp=Z,1µm,26.8s
MNTQ Montreal, Queb 65.88 310 IAmb IAmb 01 01 11.2
comp=Z,54nm,1.4s
HNH Hanover 66.02 308 IAMs_20 IAMs_20 01 27 50.4
comp=Z,2µm,20.0s
TRQ Mont Tremblant 66.05 311 P **P 01 00 37.6 -0.3**
BCX Boston College 66.06 306 IAMs_20 IAMs_20 01 28 07.4
comp=Z,2µm,21.0s
L64A Middleborough 66.06 305 IAMs_20 IAMs_20 01 32 21.4
comp=Z,2µm,18.0s
WES Weston 66.12 306 IAmb IAmb 01 00 47.6
comp=Z,81nm,1.1s
WES IAMs_20 IAMs_20 01 29 31.2
comp=Z,2µm,20.0s
M65A Busby, Falmout 66.13 305 IAMs_20 IAMs_20 01 33 21.5
comp=Z,2µm,19.0s
M65A Busby, Falmout 66.13 305 P **P 01 00 38.8 +0.5**
baz=58
HRV Adam Dziewonsk 66.21 306 P **P 01 00 39.5 +0.6**
HRV IAmb IAmb 01 00 48.6
comp=Z,49nm,1.1s
HRV Adam Dziewonsk 66.21 306 IAMs_20 IAMs_20 01 28 12.4
comp=Z,2µm,20.0s
HRV Adam Dziewonsk 66.21 306 P **P 01 00 39.5 +0.6**
HRV pmax pmax
comp=Z,49nm,1.1s
FRNY Flat Rock 66.22 309 P **P 01 00 38.4 -0.5**
CD2 Chengdu 66.33 69 P **P 01 00 38.3 -1.6**
CD2 pP pP 01 00 42.1 -2.8
CD2 S **S 01 09 28.5 -0.7**
CD2 SKS **SKSac 01 10 33.3 -2.7**
CD2 pmax pmax
comp=Z,130nm,0.8s
CD2 pmax pmax
comp=Z,950nm,6.1s
CD2 L L
comp=Z,2µm,20.3s
CD2 L L
comp=Z,3µm,19.3s
CD2 L L
comp=Z,3µm,15.7s
HHC Hu-ho-hao-te 66.37 56 *e*P **P 01 00 39.3 -0.8**
HHC sP pP 01 00 45.3 +0.2
HHC PP **PP 01 03 06.8 +0.9**
HHC S **S 01 09 24.3 -5.3**
HHC sS pS 01 09 36.5 +0.7
HHC SS **SS 01 13 43.4 -2.1**
HHC pmax pmax
comp=Z,17nm,0.8s
HHC pmax pmax
comp=Z,690nm,5.1s
HHC L L
comp=Z,2µm,18.8s
HHC L L
comp=Z,2µm,18.6s
HHC L L
comp=Z,2µm,19.0s
J61A Chester 66.38 307 IAMs_20 IAMs_20 01 28 01.9
comp=Z,2µm,20.0s
A36M Sachs Harbour 66.43 349 P **P 01 00 40.2 +0.5**
baz=28,SNR=120
K62A Royalston 66.55 307 IAMs_20 IAMs_20 01 28 03.3
comp=Z,2µm,19.0s
VLDQ Val d'Or 66.69 314 P **P 01 00 43.3 +1.4**
VLDQ IAmb IAmb 01 00 52.1
comp=Z,55nm,1.1s
HIA Hailar 66.70 45 P **P 01 00 41.8 -0.1**
HIA IAmb IAmb 01 00 48.9
comp=Z,58nm,1.0s
HIA Hailar 66.70 45 IAMs_20 IAMs_20 01 34 25.9
comp=Z,2µm,18.0s
HIA Hailar 66.70 45 P **P 01 00 41.8 -0.1**
HIA pmax pmax
comp=Z,58nm,1.0s
HIA MLR MLR
comp=Z,2µm,18.0s
DGAR Diego Garcia 66.79 122 P **P 01 00 43.5 +0.7**
DGAR Diego Garcia 66.79 122⇑ *e*P **P 01 00 45.3 +2.4**
DGAR pmax pmax
comp=Z,405nm,2.5s
DGAR MLR MLR
comp=Z,948nm,18.0s
LONY Lake Ozonia 66.93 309 P **P 01 00 43.1 -0.4**
LONY IAmb IAmb 01 00 53.2
comp=Z,53nm,1.1s
LONY IAMs_20 IAMs_20 01 29 10.3
comp=Z,2µm,20.0s
L61B Northampton 66.94 307 IAMs_20 IAMs_20 01 30 27.7
comp=Z,2µm,21.0s
H08S3 Diego Garcia H 66.97 122 P **P 01 00 44.8 +1.0**
baz=339,slow=14,SNR=7.2
H08S1 Diego Garcia H 66.98 122 P **P 01 00 45.3 +1.5**
baz=339,slow=14,SNR=6.4
H08S2 Diego Garcia H 66.99 122 P **P 01 00 44.5 +0.7**
baz=339,slow=14,SNR=6.3
M63A Gales Ferry 67.11 305 P **P 01 00 45.1 +0.5**
M63A IAmb IAmb 01 01 00.3
comp=Z,79nm,1.2s
M63A IAMs_20 IAMs_20 01 31 48.2
comp=Z,2µm,18.0s
WBO Williamsburg 67.14 310 P **P 01 00 44.6 -0.1**
WBO IAmb IAmb 01 00 54.4
comp=Z,61nm,1.5s
PZH PanZhiHua 67.25 74 P **P 01 00 43.8 -2.2**
PZH PP **PP 01 03 18.8 +4.8**
PZH S **S 01 09 40.5 -0.1**
PZH SKS **SKSac 01 10 41.3 -2.0**
PZH pmax pmax
comp=Z,30nm,0.9s
PZH pmax pmax
comp=Z,570nm,5.9s
PZH L L
comp=Z,530nm,19.8s
PZH L L
comp=Z,950nm,23.1s
PZH L L
comp=Z,1µm,22.8s
TRY Troy 67.40 307 P **P 01 00 46.5 +0.1**
TRY IAmb IAmb 01 00 56.9
comp=Z,63nm,1.3s
TRY IAMs_20 IAMs_20 01 28 31.8
comp=Z,3µm,21.0s
J59A Piesco 67.51 308 P **P 01 00 46.0 -1.2**
J59A IAmb IAmb 01 01 02.2
comp=Z,39nm,1.0s
XLT XiLinHaoTe 67.54 51 *e*P **P 01 00 46.8 -0.7**
XLT sP pP 01 00 53.4 +0.9
XLT S **S 01 09 37.5 -6.0**
XLT sS sS 01 09 52.4 +0.6
XLT pmax pmax
comp=Z,15nm,1.0s
XLT pmax pmax
comp=Z,910nm,6.7s
XLT L L
comp=Z,290nm,19.1s
XLT L L
comp=Z,3µm,14.8s
XLT L L
comp=Z,4µm,15.5s
BOSA Boshof 67.71 176 P **P 01 00 48.0 -0.5**
comp=Z,20nm,1.0s,baz=4.5,slow=6.9,SNR=18
BOSA LR LR 01 33 23.9
comp=Z,5µm,18.1s,baz=6.5,slow=39
comp=Z,20nm,1.0s
BOSA Boshof 67.71 176 IAmb IAmb 01 00 52.9
comp=Z,122nm,1.7s
KSCT Kent School, K 67.83 306 P **P 01 00 48.9 -0.3**
KSCT IAmb IAmb 01 01 05.1
comp=Z,80nm,1.3s
ZEA Zeya 67.97 38 *e*P **P 01 00 51.8 +1.9**
ZEA *e*S **S 01 09 52.6 +4.5**
ZEA pmax pmax
comp=Z,20nm,0.8s
ZEA smax smax
comp=N,300nm,5.9s
ZEA smax smax
comp=E,500nm,5.7s
ZEA MLR MLR
comp=E,800nm,15.0s
WSPT Westport, CT 68.04 306 IAMs_20 IAMs_20 01 29 15.9
comp=Z,2µm,19.0s
N62A Caumsett State 68.26 306 IAMs_20 IAMs_20 01 32 30.8
comp=Z,2µm,18.0s
XAN Xi'an 68.29 63⇑ P **P 01 00 50.8 -1.5**
XAN pP pP 01 00 55.9 -1.3
XAN S **S 01 09 50.9 -1.7**
XAN SKS **SKiKP 01 10 45.8 -0.5**
XAN pmax pmax
comp=Z,40nm,1.0s
XAN pmax pmax
comp=Z,1µm,6.3s
XAN L L
comp=Z,3µm,20.6s
XAN L L
comp=Z,3µm,17.8s
XAN L L
comp=Z,3µm,15.3s
FCC Fort Churchill 68.30 329 P **P 01 00 51.6 -0.2**
FCC IAmb IAmb 01 01 03.1
comp=Z,61nm,1.3s
FCC Fort Churchill 68.30 329 P **P 01 00 51.6 -0.2**
FCC pmax pmax
comp=Z,61nm,1.3s
J57A Williamstown 68.45 309 P **P 01 00 53.7 +0.7**
J57A IAmb IAmb 01 01 03.0
comp=Z,50nm,1.1s
J57A IAMs_20 IAMs_20 01 29 34.5
comp=Z,2µm,20.0s
PAL Palisades 68.50 306 IAMs_20 IAMs_20 01 29 29.0
comp=Z,2µm,20.0s
FOMA Nahampoana Res 68.54 154 P **P 01 00 54.5 +0.8**
FOMA IAMs_20 IAMs_20 01 30 37.0
comp=Z,2µm,22.0s
L59A Walton 68.55 307 P **P 01 00 54.1 +0.3**
L59A IAmb IAmb 01 01 03.9
comp=Z,55nm,1.1s
L59A IAMs_20 IAMs_20 01 29 17.2
comp=Z,3µm,20.0s
C36M Paulatuk 68.57 347 P **P 01 00 53.5 +0.1**
C36M Paulatuk 68.57 347 P **P 01 00 53.6 +0.2**
baz=29,SNR=13
TIY Taiyuan 68.64 58 *e*P **P 01 00 55.3 +0.8**
TIY PP **PP 01 03 30.6 +4.9**
TIY S **S 01 09 54.3 -2.5**
TIY SS **SS 01 14 21.6 +1.0**
TIY pmax pmax
comp=Z,760nm,5.6s
TIY L L
comp=Z,2µm,15.8s
TIY L L
comp=Z,2µm,16.5s
TIY L L
comp=Z,3µm,15.8s
CPNY Central Park 68.65 306 P **P 01 00 53.7 -0.6**
RCBR Riachuelo 68.73 243 LR LR 01 31 29.1
comp=Z,927nm,20.3s,baz=52,slow=36
RCBR Riachuelo 68.73 243 P **P 01 00 56.1 +0.9**
RCBR Riachuelo 68.73 243 IAMs_20 IAMs_20 01 31 18.0
comp=Z,3µm,20.0s
RCBR Riachuelo 68.73 243 P **P 01 00 56.1 +0.9**
RCBR pmax pmax
comp=Z,143nm,1.4s
RCBR MLR MLR
comp=Z,3µm,20.0s
RCBR Riachuelo 68.73 243 P **P 01 00 57.0 +1.8**
RCBR S **S 01 09 58.7 +0.5**
RCBR Riachuelo 68.73 243 *e*P **P 01 00 57.0 +1.8**
NBPV Pedro Velho 68.73 242 *e*P **P 01 00 57.2 +2.1**
PECO Prince Edward 68.75 310 P **P 01 00 55.0 +0.1**
PECO IAmb IAmb 01 01 04.8
comp=Z,50nm,1.0s
KMI2 Kunming 68.76 74⇑ P **P 01 00 53.6 -2.0**
KMI2 PP **PP 01 03 28.5 +1.3**
KMI2 S **S 01 09 54.1 -4.8**
KMI2 pmax pmax
comp=Z,37nm,1.0s
KMI2 pmax pmax
comp=Z,610nm,6.5s
KMI2 L L
comp=Z,1µm,21.8s
KMI2 L L
comp=Z,980nm,22.0s
KMI2 L L
comp=Z,1µm,20.1s
DELO Deloro Mine 68.79 311 P **P 01 00 56.0 +0.8**
DELO IAmb IAmb 01 01 05.2
comp=Z,64nm,1.2s
PBA Port Blair 68.94 92 P **P 01 00 54.9 -1.6**
PBA Port Blair 68.94 92 P **P 01 00 55.6 -0.9**
PBA Port Blair 68.94 92 *e*P **P 01 00 54.2 -2.3**
BINY Binghamton 69.12 308 P **P 01 00 57.3 0.0**
BINY IAmb IAmb 01 01 07.3
comp=Z,84nm,1.2s
BINY IAMs_20 IAMs_20 01 29 35.4
comp=Z,2µm,21.0s
KSPA Keystone Colle 69.35 307 P **P 01 00 58.4 -0.3**
KSPA IAmb IAmb 01 01 13.7
comp=Z,48nm,1.1s
CHTO Chiang Mai 69.50 82 P **P 01 00 57.9 -2.0**
comp=Z,22nm,1.1s
CHTO Chiang Mai 69.50 82 P **P 01 00 57.5 -2.4**
CHTO IAmb IAmb 01 01 08.4
comp=Z,52nm,1.2s
CHTO Chiang Mai 69.50 82 P **P 01 00 57.5 -2.4**
CHTO pmax pmax
comp=Z,51nm,1.2s
CHTO Chiang Mai 69.50 82 P **P 01 00 58.1 -1.8**
CHTO P **P 01 00 58.1 -1.8**
CHTO S **S 01 10 01.8 -5.5**
CHTO S **S 01 10 01.8 -5.5**
CHTO Chiang Mai 69.50 82 P **P 01 00 57.6 -2.4**
comp=Z,2µmcomp=Z,1µmcomp=Z,37nm,1.1s
NBPA Parau_RN 69.51 244 *e*P **P 01 01 00.1 +0.1**
SADO Sadowa 69.54 311 LR LR 01 29 31.7
comp=Z,2µm,19.9s,baz=86,slow=34
SADO Sadowa 69.54 311 P **P 01 00 59.3 -0.5**
J55A Hilton 69.62 310 P **P 01 01 00.7 +0.3**
J55A IAMs_20 IAMs_20 01 30 41.5
comp=Z,2µm,19.0s
A21K Barrow 69.66 359 P **P 01 01 01.1 +1.0**
baz=2.3
CM31 Chiang Mai Arr 69.70 82 P **P 01 00 58.8 -2.4**
CM31 Chiang Mai Arr 69.70 82 P **P 01 00 59.6 -1.6**
SNR=18
CMAR Chiang Mai Arr 69.70 82 P **P 01 00 59.1 -2.1**
comp=Z,18nm,0.8s,baz=303,slow=7.8,SNR=57
CMAR PKPPKP **P'P'df 01 29 06.8 -3.3**
comp=Z,0.7nm,0.3s,baz=162,slow=1.9,SNR=6.0
comp=Z,18nm,0.8s
CMAR Chiang Mai Arr 69.70 82 P **P 01 00 59.6 -1.6**
CMAR Chiang Mai Arr 69.70 82 P **P 01 00 59.6 -1.6**
BJT Baijiatuau 69.77 55 P **P 01 00 59.8 -1.5**
BJT Baijiatuau 69.77 55 P **P 01 00 59.8 -1.5**
BJT pmax pmax
comp=Z,30nm,1.0s
BJT MLR MLR
comp=Z,3µm,20.0s
BJI2 Beijing 69.77 55 P **P 01 01 00.1 -1.2**
BJI2 S **S 01 10 10.4 +0.6**
BJI2 pmax pmax
comp=Z,17nm,0.9s
BJI2 pmax pmax
comp=Z,500nm,6.0s
BJI2 L L
comp=Z,1µm,16.2s
BJI2 L L
comp=Z,730nm,16.9s
BJI2 L L

comp=Z,2µm,19.7s
P61A Hammonton 69.80 305 IAMs_20 IAMs_20 01 28 57.7
comp=Z,2µm,20.0s
NBMO Morrinhos-CE 69.88 248 *e*P **P** **01 01 05.3 +3.0**
BILL Bilibino 69.92 13 P **P** **01 01 01.1 -0.7**
BILL IAmb IAmb 01 01 13.9
comp=Z,52nm,1.1s
BILL Bilibino 69.92 13 IAMs_20 IAMs_20 01 33 52.6
comp=Z,2µm,19.0s
BILL Bilibino 69.92 13*ce*P **P** **01 01 01.7 0.0**
BILL pmax pmax
comp=Z,43nm,1.3s
BILL MLR MLR
comp=Z,2µm,20.0s
A22K Sinclair Lake 69.96 358 P **P** **01 01 02.5 +0.6**
baz=3.6
MMNY Mt. Morris Dam 69.98 309 P **P** **01 01 02.1 -0.5**
MMNY IAmb IAmb 01 01 12.5
comp=Z,112nm,1.3s
L56A Greenwood 70.12 308 P **P** **01 01 04.0 +0.6**
L56A IAmb IAmb 01 01 12.9
comp=Z,88nm,1.2s
HEH HeiHe 70.16 41 *e*P **P** **01 01 02.9 -0.6**
HEH pmax pmax
comp=Z,19nm,0.8s
HEH pmax pmax
comp=Z,2µm,5.5s
HEH L L
comp=Z,5µm,18.5s
HEH L L
comp=Z,4µm,18.1s
HEH L L
comp=Z,4µm,21.1s
WUPA West Chester U 70.17 306 P **P** **01 01 03.6 -0.2**
HNS HongShan 70.31 58 ⇑P **P** **01 01 03.5 -1.2**
HNS S **S** **01 10 16.9 +0.6**
HNS pmax pmax
comp=Z,17nm,1.2s
HNS pmax pmax
comp=Z,670nm,7.9s
HNS L L
comp=Z,2µm,17.5s
HNS L L
comp=Z,2µm,14.7s
HNS L L
comp=Z,2µm,19.4s
M57A Sunshine Farm, 70.31 308 **P** **01 01 04.5 -0.2**
M57A IAmb IAmb 01 01 14.2
comp=Z,118nm,1.3s
M57A IAMs_20 IAMs_20 01 30 21.0
comp=Z,3µm,20.0s
N58A Sunbury 70.35 307 IAMs_20 IAMs_20 01 33 38.9
comp=Z,2µm,18.0s
LYN LuoYang 70.44 61 P **P** **01 01 04.1 -1.4**
LYN S **S** **01 10 15.1 -2.8**
LYN pmax pmax
comp=Z,17nm,0.7s
LYN pmax pmax
comp=Z,1µm,6.8s
LYN L L
comp=Z,2µm,15.8s
LYN L L
comp=Z,2µm,14.6s
LYN L L
comp=Z,4µm,19.3s
C26K Camden Bay 70.58 355 P **P** **01 01 07.0 +1.2**
baz=12
B22K Teshekpuk Lake 70.58 358 P **P** **01 01 05.9 +0.1**
B22K Teshekpuk Lake 70.58 358 P **P** **01 01 07.1 +1.4**
baz=4.9,SNR=5.9
MVL Millersville 70.60 306 P **P** **01 01 06.3 -0.1**
D28M Stokes Point 70.61 352 P **P** **01 01 07.1 +1.2**
baz=17
C27K Jago River 70.77 354 P **P** **01 01 07.1 +0.2**
C27K IAMs_20 IAMs_20 01 31 01.9
comp=Z,2µm,21.0s
C27K Jago River 70.77 354 P **P** **01 01 07.9 +0.9**
baz=13
ENH Enshi 70.79 66 P **P** **01 01 05.8 -2.0**
ENH IAmb IAmb 01 01 13.2
comp=Z,76nm,0.9s
A19K Wainwright 70.80 1 P **P** **01 01 08.6 +1.5**
baz=359
D27M Malcolm River 70.91 353 P **P** **01 01 07.5 -0.4**
D27M IAmb IAmb 01 01 18.8
comp=Z,50nm,1.0s
D27M Malcolm River 70.91 353 P **P** **01 01 08.9 +1.0**
baz=15,SNR=55
GYA Guiyang 70.92 71 ⇑P **P** **01 01 09.4 +0.7**
GYA sP pP 01 01 13.3 -0.4
GYA S **S** **01 10 22.3 -1.7**
GYA pmax pmax
comp=Z,50nm,1.0s
GYA pmax pmax
comp=Z,780nm,5.2s
GYA L L
comp=Z,2µm,25.0s
GYA L L
comp=Z,2µm,22.3s
GYA L L
comp=Z,2µm,22.3s
INK Inuvik 70.97 350 LR LR 01 33 45.3
comp=Z,1µm,21.2s,baz=30,slow=37
INK Inuvik 70.97 350 P **P** **01 01 07.4 -0.7**
INK Inuvik 70.97 350 P **P** **01 01 07.4 -0.7**
INK pmax pmax
comp=Z,30nm,1.0s
INK Inuvik 70.97 350 P **P** **01 01 08.0 -0.1**
baz=21,SNR=42
C23K Itkillik River 70.98 357 P **P** **01 01 09.1 +0.9**
C23K IAMs_20 IAMs_20 01 30 14.5
comp=Z,2µm,21.0s
C23K Itkillik River 70.98 357 P **P** **01 01 09.6 +1.4**
baz=7.2
B20K Meade River 70.99 359 P **P** **01 01 08.2 0.0**
B20K IAmb IAmb 01 01 19.4
comp=Z,101nm,1.1s
B20K Meade River 70.99 359 P **P** **01 01 09.3 +1.1**
baz=1.8,SNR=25
C24K Franklin Bluff 71.01 356 P **P** **01 01 10.1 +1.7**
baz=8.7
SEY Seymchan 71.08 21 LR LR 01 38 11.3
comp=Z,3µm,18.6s,baz=328,slow=41
SEY Seymchan 71.08 21*ce*P **P** **01 01 09.2 +0.3**
SEY pmax pmax
comp=Z,27nm,1.0s
SSPA Standing Stone 71.19 307 P **P** **01 01 10.2 +0.3**
SSPA IAmb IAmb 01 01 22.6
comp=Z,68nm,0.9s
SSPA Standing Stone 71.19 307 IAMs_20 IAMs_20 01 30 57.1
comp=Z,2µm,21.0s
SDMD Soldier's Deli 71.25 306 P **P** **01 01 09.9 -0.4**
D25K Kavik River 71.26 355 P **P** **01 01 10.0 0.0**
D25K IAmb IAmb 01 01 20.8
comp=Z,61nm,1.1s
D25K IAMs_20 IAMs_20 01 30 48.8
comp=Z,2µm,22.0s
D25K Kavik River 71.26 355 P **P** **01 01 10.7 +0.7**
baz=11,SNR=32
SUR Sutherland 71.32 180 LR LR 01 35 14.0
comp=Z,2µm,18.3s,baz=359,slow=38
SUR Sutherland 71.32 180 P **P** **01 01 11.6 +0.7**
SUR IAmb IAmb 01 01 22.9
comp=Z,69nm,1.1s
SUR Sutherland 71.32 180 P **P** **01 01 13.3 +2.4**
B21K Ikpikpuk River 71.33 358 P **P** **01 01 11.0 +0.7**
B21K IAmb IAmb 01 01 21.1
comp=Z,40nm,0.8s
B21K IAMs_20 IAMs_20 01 35 34.7
comp=Z,2µm,20.0s
B21K Ikpikpuk River 71.33 358 P **P** **01 01 11.5 +1.2**
baz=3.9
E28M Babbage River 71.39 352 P **P** **01 01 11.1 +0.4**
E28M IAmb IAmb 01 01 21.6
comp=Z,68nm,1.1s
E28M Babbage River 71.39 352 P **P** **01 01 11.6 +0.9**
baz=16
E29M Blow River 71.42 352 P **P** **01 01 11.5 +0.6**
E29M IAMs_20 IAMs_20 01 34 51.1
comp=Z,2µm,21.0s
E29M Blow River 71.42 352 P **P** **01 01 11.8 +0.9**
baz=17
E46A Sault Ste Mari 71.50 315 P **P** **01 01 12.2 +0.5**
E46A IAMs_20 IAMs_20 01 32 01.9
comp=Z,2µm,20.0s
D24K Happy Valley 71.58 356 P **P** **01 01 12.2 +0.4**
D24K IAmb IAmb 01 01 22.9
comp=Z,83nm,1.2s
D24K IAMs_20 IAMs_20 01 30 56.1
comp=Z,2µm,20.0s
D24K Happy Valley 71.58 356 P **P** **01 01 13.0 +1.2**
baz=8.6,SNR=15
ERPA Erie 71.59 310 P **P** **01 01 12.8 +0.4**
ERPA IAMs_20 IAMs_20 01 31 41.7
comp=Z,2µm,20.0s
NBPS Pedro II - PI 71.64 248 *e*P **P** **01 01 14.0 +0.9**
PAOC Oil Creek Stat 71.77 309 P **P** **01 01 14.1 +0.7**
PAOC IAmb IAmb 01 01 22.9
comp=Z,97nm,1.1s
C21K Knifeblade Rid 71.80 358 P **P** **01 01 14.5 +1.3**
baz=3.7
NBMA Muriti-CE 71.81 244 *e*P **P** **01 01 15.7 +1.7**
F31M Tsiigehtchic 71.81 350 P **P** **01 01 13.2 0.0**
F31M IAMs_20 IAMs_20 01 34 06.3
comp=Z,2µm,20.0s
F31M Tsiigehtchic 71.81 350 P **P** **01 01 13.6 +0.4**
baz=21,SNR=79
D23K Nanushuk River 71.86 357 P **P** **01 01 14.0 +0.5**
D23K IAmb IAmb 01 01 28.0
comp=Z,78nm,0.9s
D23K IAMs_20 IAMs_20 01 31 05.5
comp=Z,2µm,20.0s
D23K Nanushuk River 71.86 357 P **P** **01 01 14.8 +1.3**
baz=7.1
C19K Lookout Ridge 71.91 0 P **P** **01 01 13.5 -0.4**
C19K IAmb IAmb 01 01 26.1
comp=Z,157nm,1.7s
C19K Lookout Ridge 71.91 0 P **P** **01 01 15.3 +1.4**
baz=360,SNR=24
F30M Barrier River 71.92 351 **P** **01 01 12.5 -1.4**
F30M IAmb IAmb 01 01 45.9
comp=Z,58nm,1.1s
F30M Barrier River 71.92 351 P **P** **01 01 14.0 +0.1**
baz=19
P57A Homestead Farm 71.94 306 P **P** **01 01 14.8 +0.2**
P57A IAmb IAmb 01 01 24.6
comp=Z,91nm,1.3s
E27K Coleen River 72.00 353 P **P** **01 01 15.1 +0.7**
baz=14
TOLK Toolik Lake Re 72.12 356 P **P** **01 01 16.2 +1.0**
baz=8.0,SNR=11
I49A Point Hope 72.16 312 IAMs_20 IAMs_20 01 31 45.4
comp=Z,2µm,19.0s
D20K Etivluk River 72.28 359 P **P** **01 01 17.0 +0.9**
baz=2.2
YKAW3 Yelloknife Wh 72.29 340 P **P** **01 01 16.0 -0.2**
CBN Corbin Frederi 72.30 305 P **P** **01 01 17.0 +0.3**
CBN IAmb IAmb 01 01 29.4
comp=Z,84nm,0.9s
YKAW1 Yellowknife Wh 72.33 340 P **P** **01 01 16.4 0.0**
YKAW1 IAmb IAmb 01 01 26.7
comp=Z,87nm,1.2s
YKA Yellowknife Ar 72.35 340 P **P** **01 01 15.9 -0.6**
comp=Z,18nm,0.9s,baz=28,slow=5.7,SNR=24
YKA PKPPKP P'P'df 01 28 57.5 -12
comp=Z,0.1nm,0.3s,baz=197,slow=2.2,SNR=4.1
YKA LR LR 01 33 45.4
comp=Z,2µm,19.9s,baz=38,slow=36
comp=Z,18nm,0.9s
YKA Yellowknife Ar 72.35 340 P **P** **01 01 16.6 0.0**
YKA Yellowknife Ar 72.35 340*ce*P **P** **01 01 16.7 +0.2**
YKA pmax pmax
comp=Z,20nm,0.9s
C18K Utukok River 72.36 1 P **P** **01 01 16.8 +0.2**
C18K IAmb IAmb 01 01 27.5
comp=Z,86nm,0.9s
C18K Utukok River 72.36 1 P **P** **01 01 17.6 +1.0**
baz=358
G31M Satah River 72.37 350 P **P** **01 01 15.9 -0.7**
G31M IAmb IAmb 01 01 26.3
comp=Z,124nm,1.4s
G31M IAMs_20 IAMs_20 01 33 07.1
comp=Z,2µm,22.0s
G31M Satah River 72.37 350 P **P** **01 01 16.4 -0.1**
baz=20,SNR=33
F28M Old Crow 72.38 352 P **P** **01 01 16.6 -0.1**
F28M IAmb IAmb 01 01 28.8
comp=Z,60nm,0.9s
F28M IAMs_20 IAMs_20 01 35 22.4
comp=Z,2µm,22.0s
F28M Old Crow 72.38 352 P **P** **01 01 17.1 +0.4**
baz=16,SNR=82
E25K Arctic Village 72.39 355 P **P** **01 01 16.8 0.0**
E25K IAmb IAmb 01 01 27.8
comp=Z,50nm,0.9s
E25K IAMs_20 IAMs_20 01 32 01.7
comp=Z,2µm,21.0s
E25K Arctic Village 72.39 355 P **P** **01 01 17.8 +1.0**
baz=11,SNR=29
GRHM Grahamstown, E 72.41 175 P **P** **01 01 18.0 +0.8**
GRHM IAmb IAmb 01 01 22.1
comp=Z,159nm,1.6s
E21K Killik River 72.50 358 P **P** **01 01 17.1 -0.3**
E21K IAmb IAmb 01 02 59.5
comp=Z,32nm,0.5s
E21K Killik River 72.50 358 P **P** **01 01 17.8 +0.4**
baz=4.4
C17K DeLong Mountai 72.51 1 P **P** **01 01 18.4 +0.9**
baz=357
D19K Kuna River 72.52 359 P **P** **01 01 18.4 +0.9**
baz=1.0
G30M tAoh Zrail Nji 72.57 351 P **P** **01 01 17.8 -0.1**
G30M tAoh Zrail Nji 72.57 351 P **P** **01 01 17.9 +0.1**
baz=19,SNR=19
TIA Tai'an 72.58 57 P **P** **01 01 16.8 -1.6**
TIA S **S** **01 10 44.8 +2.2**
TIA pmax pmax
comp=Z,17nm,0.9s
TIA pmax pmax
comp=Z,760nm,5.8s
TIA L L
comp=Z,3µm,15.3s
TIA L L
comp=Z,2µm,21.6s
TIA L L
comp=Z,3µm,12.9s
GLMI Grayling 72.63 314 P **P** **01 01 18.2 -0.4**
GLMI IAMs_20 IAMs_20 01 32 35.7
comp=Z,3µm,20.0s
E24K Your Creek 72.63 356 P **P** **01 01 18.1 -0.1**
E24K Your Creek 72.63 356 P **P** **01 01 19.1 +0.8**
baz=8.8
C16K Lisburne Hills 72.65 2 P **P** **01 01 18.2 -0.1**
C16K IAmb IAmb 01 01 31.9
comp=Z,117nm,1.2s
C16K IAMs_20 IAMs_20 01 31 46.6
comp=Z,2µm,21.0s
C16K Lisburne Hills 72.65 2 P **P** **01 01 18.8 +0.5**
baz=355
F26K Sheenjek River 72.70 354 P **P** **01 01 18.1 -0.6**
F26K IAmb IAmb 01 01 29.9
comp=Z,77nm,1.1s
F26K Sheenjek River 72.70 354 P **P** **01 01 19.8 +1.2**
baz=12,SNR=41
E23K Chandalar 72.71 356 P **P** **01 01 18.0 -0.7**
E23K IAMs_20 IAMs_20 01 31 33.0
comp=Z,2µm,22.0s
E23K Chandalar 72.71 356 P **P** **01 01 19.7 +0.9**
baz=7.9
E22K Anaktuvuk Pass 72.73 357 IAMs_20 IAMs_20 01 36 01.7
comp=Z,2µm,19.0s
E22K Anaktuvuk Pass 72.73 357 P **P** **01 01 19.6 +0.8**
baz=6.1,SNR=40
E20K Nigu River 72.73 359 P **P** **01 01 19.7 +0.8**
baz=2.6
K50A Casco 72.75 311 P **P** **01 01 19.8 +0.5**
K50A IAmb IAmb 01 01 29.2
comp=Z,75nm,1.0s
K50A IAMs_20 IAMs_20 01 30 49.2
comp=Z,2µm,21.0s
M52A Chesterland 72.76 310 P **P** **01 01 19.6 +0.2**
R58B Mineral 72.76 305 P **P** **01 01 19.3 -0.1**
TBO Thunder Bay 72.76 319 P **P** **01 01 20.0 +0.7**
G29M Pine Creek 72.85 351 P **P** **01 01 19.9 +0.4**
baz=17
N53A Lisbon 72.89 309 P **P** **01 01 19.9 -0.3**
N53A IAMs_20 IAMs_20 01 36 38.0
comp=Z,1µm,18.0s
F25K Christian Rive 72.92 355 P **P** **01 01 20.3 +0.3**
F25K IAMs_20 IAMs_20 01 31 55.6
comp=Z,2µm,22.0s
F25K Christian Rive 72.92 355 P **P** **01 01 21.2 +1.3**
baz=11,SNR=33
RDOG Red Dog Mine 72.94 1 P **P** **01 01 20.1 +0.1**
RDOG IAmb IAmb 01 01 30.4
comp=Z,58nm,1.0s
RDOG Red Dog Mine 72.94 1 P **P** **01 01 20.6 +0.6**
baz=357,SNR=14
Q56A Snyder Ridge, 72.94 307 P **P** **01 01 19.8 -0.7**
Q56A IAmb IAmb 01 01 37.4
comp=Z,90nm,0.9s
Q56A IAMs_20 IAMs_20 01 33 31.5
comp=Z,2µm,18.0s
BNX BinXian 72.97 45 ⇑P **P** **01 01 19.3 -1.2**
BNX PcP **PcP** **01 01 34.6 -2.8**
BNX pmax pmax
comp=Z,20nm,1.3s
MCWV Mont Chateau 72.98 307 IAMs_20 IAMs_20 01 31 54.4
comp=Z,2µm,20.0s
O54A Avella 72.99 308 P **P** **01 01 21.0 +0.2**
O54A IAMs_20 IAMs_20 01 32 05.7
comp=Z,2µm,21.0s
KLR Kul'dur 72.99 40 LR LR 01 35 14.2
comp=Z,1µm,19.1s,baz=328,slow=37
KLR Kul'dur 72.99 40*ce*P **P** **01 01 20.3 -0.3**
KLR pmax pmax
comp=Z,9.0nm,1.3s
KLR MLR MLR
comp=Z,3µm,16.0s
CN2 Changchun 73.09 47 P **P** **01 01 20.0 -1.3**
CN2 PP **PP** **01 04 03.8 +0.2**
CN2 S **S** **01 10 45.8 -2.4**
CN2 pmax pmax
comp=Z,50nm,0.8s
CN2 pmax pmax
comp=Z,1µm,6.0s
CN2 L L
comp=Z,3µm,14.0s
CN2 L L
comp=Z,3µm,14.0s
CN2 L L
comp=Z,3µm,15.0s
T59A Double "B" Far 73.14 304 P **P** **01 01 21.7 0.0**
T59A IAMs_20 IAMs_20 01 32 20.1
comp=Z,2µm,20.0s
F24K Squaw Lake 73.14 355 P **P** **01 01 21.4 +0.1**
F24K IAmb IAmb 01 01 35.9
comp=Z,68nm,0.9s
F24K Squaw Lake 73.14 355 P **P** **01 01 22.8 +1.5**
baz=9.3
V61A Roper 73.21 303 IAMs_20 IAMs_20 01 36 12.0
comp=Z,2µm,18.0s
EPYK Eagle Plains 73.21 351 P **P** **01 01 20.8 -0.9**
EPYK IAmb IAmb 01 01 31.1
comp=Z,50nm,0.9s
EPYK Eagle Plains 73.21 351 P **P** **01 01 21.9 +0.2**
baz=18,SNR=30
SNY Shenyang 73.23 50 ⇓P **P** **01 01 21.0 -1.1**
SNY S **S** **01 10 47.1 -2.6**
SNY pmax pmax
comp=Z,22nm,1.0s
SNY pmax pmax
comp=Z,880nm,5.6s
SNY L L
comp=Z,3µm,17.9s
SNY L L
comp=Z,4µm,19.1s
SNY L L
comp=Z,5µm,17.3s
MA2 Magadan 73.25 24 LR LR 01 39 34.1
comp=Z,3µm,18.2s,baz=318,slow=41
MA2 Magadan 73.25 24 P **P** **01 01 22.4 +0.4**
comp=Z,84nm,0.9s
MA2 Magadan 73.25 24*ce*P **P** **01 01 22.4 +0.4**
MA2 pmax pmax
comp=Z,59nm,1.3s
MA2 MLR MLR
comp=Z,3µm,16.0s
D17K Noatak River 73.29 1 P **P** **01 01 22.8 +0.8**
baz=357,SNR=99
G27K Doyon Strip 73.34 353 P **P** **01 01 23.1 +0.7**
G27K IAmb IAmb 01 01 33.4
comp=Z,74nm,1.1s
G27K Doyon Strip 73.34 353 P **P** **01 01 23.4 +0.9**
baz=14
G26K Porcupine Rive 73.40 354 P **P** **01 01 23.0 +0.3**
G26K IAmb IAmb 01 01 34.2
comp=Z,102nm,1.1s
G26K Porcupine Rive 73.40 354 P **P** **01 01 24.1 +1.4**
baz=12
H31M Peel River 73.43 349 P **P** **01 01 23.0 0.0**
H31M IAmb IAmb 01 01 36.4
comp=Z,68nm,0.9s
H31M Peel River 73.43 349 P **P** **01 01 23.2 +0.2**
baz=20,SNR=25
O53A New Philadelph 73.45 309 P **P** **01 01 24.4 +0.9**
GDSD La Dsirade Is 73.47 278 P **P** **01 01 23.8 -0.2**
E19K Redstone River 73.55 359 P **P** **01 01 24.5 +0.9**
E19K Redstone River 73.55 359 P **P** **01 01 24.6 +0.9**
baz=1.7
H29M Whitestone 73.56 351 P **P** **01 01 23.7 0.0**
H29M IAmb IAmb 01 01 33.8
comp=Z,61nm,0.9s
H29M Whitestone 73.56 351 P **P** **01 01 24.0 +0.3**
baz=17
S57A Dark Hollow, R 73.56 305 P **P** **01 01 24.4 +0.2**
S57A IAMs_20 IAMs_20 01 33 43.1
comp=Z,1µm,19.0s
COLD Coldfoot 73.56 356 P **P** **01 01 24.6 +0.8**
COLD IAmb IAmb 01 01 34.5
comp=Z,69nm,1.0s
COLD IAMs_20 IAMs_20 01 32 09.7
comp=Z,2µm,22.0s
COLD Coldfoot 73.56 356 P **P** **01 01 24.5 +0.8**
baz=7.4,SNR=25
E18K Tukpahlearik C 73.60 0 P **P** **01 01 24.8 +0.9**
baz=359
AAM Ann Arbor 73.64 311 P **P** **01 01 25.1 +0.5**
AAM IAMs_20 IAMs_20 01 31 46.8
comp=Z,2µm,20.0s
AAM Ann Arbor 73.64 311 P **P** **01 01 25.1 +0.5**
AAM pmax pmax
comp=Z,228nm,1.9s
F21K Alatna River 73.71 358 P **P** **01 01 25.6 +1.1**
F21K IAmb IAmb 01 01 38.9
comp=Z,75nm,0.9s
F21K Alatna River 73.71 358 P **P** **01 01 25.7 +1.1**
baz=4.8,SNR=54
J47A Sunmer 73.73 313 P **P** **01 01 25.3 +0.2**
J47A IAmb IAmb 01 01 35.4
comp=Z,71nm,0.9s
G25K Bearman Lake 73.77 355 P **P** **01 01 26.3 +1.4**
baz=11
MDP Montagnes des 73.80 263 LR LR 01 31 59.5
comp=Z,565nm,19.5s,baz=54,slow=34
DL2 Dalian 73.83 53 P **P** **01 01 28.8 +3.1**
DL2 S **S** **01 11 02.8 +6.1**
DL2 pmax pmax
comp=Z,56nm,0.9s
DL2 pmax pmax
comp=Z,920nm,5.5s
DL2 L L
comp=Z,2µm,18.7s
DL2 L L
comp=Z,3µm,17.3s
DL2 L L
comp=Z,4µm,18.2s
M50A Fremont 73.84 310 IAMs_20 IAMs_20 01 34 59.1
comp=Z,2µm,18.0s
WRGLY Wrigley 73.85 344 P **P** **01 01 26.6 +1.1**
WRGLY Wrigley 73.85 344 P **P** **01 01 26.4 +1.0**
baz=28,SNR=36
H27K Steamboat Moun 73.89 353 P **P** **01 01 26.9 +1.2**
H27K IAmb IAmb 01 01 36.9
comp=Z,108nm,1.1s
H27K Steamboat Moun 73.89 353 P **P** **01 01 27.1 +1.4**
baz=14
FYU Fort Yukon 73.90 354 P **P** **01 01 27.0 +1.4**
O52A Adamsville 73.91 309 P **P** **01 01 26.6 +0.4**
O52A IAMs_20 IAMs_20 01 33 07.1
comp=Z,2µm,20.0s
G24K Hadweenzic Riv 73.93 355 P **P** **01 01 26.5 +0.6**
G24K Hadweenzic Riv 73.93 355 P **P** **01 01 27.0 +1.2**
baz=9.6
G22K Bettles 73.93 357 P **P** **01 01 26.6 +0.8**
baz=6.3
F20K Avaraart Lake 73.94 358 P **P** **01 01 25.9 0.0**
F20K IAmb IAmb 01 01 36.8
comp=Z,66nm,1.2s

F20K Avaraart Lake 73.94 358 P P 01 01 26.8 +0.9
baz=2.9,SNR=34
F42A Maple Grove Fa 73.96 316 P P 01 01 25.4 -0.9
F42A IAMs_20 IAMs_20 01 33 40.8
comp=Z,3µm,20.0s
Q54A Coxs Mills 73.99 307 P P 01 01 26.8 0.0
Q54A IAmb IAmb 01 01 41.7
comp=Z,105nm,1.3s
Q54A IAMs_20 IAMs_20 01 32 35.4
comp=Z,2µm,20.0s
I45A Fountain 74.02 314 IAMs_20 IAMs_20 01 33 28.7
comp=Z,2µm,19.0s
P53A Whipple 74.03 308 P P 01 01 26.6 -0.3
P53A IAmb IAmb 01 01 36.9
comp=Z,131nm,1.2s
P53A IAMs_20 IAMs_20 01 33 32.2
comp=Z,2µm,19.0s
CBE Ff, Capester 74.03 278 P P 01 01 26.2 -1.0
GDHS Morne Mazeau, 74.03 278 P P 01 01 26.7 -0.6
WHN Wuhan 74.05 64 P P 01 01 25.5 -1.6
WHN PP PP 01 04 12.8 +0.7
WHN S S 01 11 03.8 +4.4
WHN pmax pmax
comp=Z,44nm,0.7s
WHN pmax pmax
comp=Z,2µm,7.1s
WHN L L
comp=Z,3µm,15.6s
WHN L L
comp=Z,3µm,11.4s
WHN L L
comp=Z,4µm,12.9s
G23K Bananza Creek 74.07 356 P P 01 01 26.2 -0.5
G23K Bananza Creek 74.07 356 P P 01 01 27.7 +1.0
baz=7.5
TDBA Terre de Bas, 74.18 278 P P 01 01 27.2 -0.9
F19K Shaleruckik Mo 74.19 359 P P 01 01 26.4 -0.9
F19K IAmb IAmb 01 01 37.5
comp=Z,88nm,0.9s
F19K Shaleruckik Mo 74.19 359 P P 01 01 27.7 +0.4
baz=1.3
EPLO Experimental L 74.20 322 P P 01 01 27.1 -0.7
FFC Flin Flon 74.23 329 P P 01 01 27.3 -0.5
FFC Flin Flon 74.23 329 IAMs_20 IAMs_20 01 34 58.2
comp=Z,2µm,19.0s
FFC Flin Flon 74.23 329 P P 01 01 27.3 -0.5
FFC pmax pmax
comp=Z,36nm,1.0s
FFC MLR MLR
comp=Z,2µm,19.0s
SEUS St. Eustatius 74.23 280 P P 01 01 27.3 -1.1
I30M Mount Dempster 74.26 350 P P 01 01 27.3 -0.7
I30M Mount Dempster 74.26 350 P P 01 01 28.4 +0.4
baz=18,SNR=103
EYMN Ely 74.27 320 P P 01 01 27.5 -0.7
EYMN Ely 74.27 320 IAMs_20 IAMs_20 01 34 09.8
comp=Z,2µm,19.0s
GULI GuiLin 74.31 70 P P 01 01 28.5 -0.3
GULI S S 01 11 03.4 +0.9
GULI pmax pmax
comp=Z,42nm,1.0s
GULI pmax pmax
comp=Z,530nm,6.0s
GULI L L
comp=Z,730nm,20.6s
GULI L L
comp=Z,820nm,21.3s
GULI L L
comp=Z,530nm,21.7s
SABA Saba 74.36 280 P P 01 01 28.2 -0.9
I29M Ogilvie Camp, 74.38 351 P P 01 01 27.9 -0.6
I29M IAmb IAmb 01 01 41.9
comp=Z,125nm,1.1s
I29M Ogilvie Camp, 74.38 351 P P 01 01 28.8 +0.3
baz=17,SNR=27
G21K Allakaket 74.41 358 IAMs_20 IAMs_20 01 37 39.4
comp=Z,1µm,19.0s
G21K Allakaket 74.41 358 P P 01 01 29.4 +0.8
baz=4.7
MPOM Morne Pois Mar 74.43 276 P P 01 01 29.2 -0.3
MPOM IAmb IAmb 01 01 34.1
comp=Z,83nm,1.0s
F18K Selawik 74.43 0 P P 01 01 29.2 +0.5
baz=360,SNR=69
CNSH ChangSha 74.45 66 P P 01 01 28.0 -1.5
CNSH S S 01 11 03.6 -0.3
CNSH pmax pmax
comp=Z,31nm,0.8s
CNSH L L
comp=Z,960nm,17.9s
CNSH L L
comp=Z,840nm,17.2s
CNSH L L
comp=Z,1µm,19.0s
I28M Miner Creek 74.48 352 P P 01 01 29.2 0.0
I28M IAmb IAmb 01 01 42.2
comp=Z,127nm,1.3s
I28M Miner Creek 74.48 352 P P 01 01 29.4 +0.2
baz=16
FDFM Morne la Roset 74.48 276 P P 01 01 30.2 +0.3
FDFM IAmb IAmb 01 01 39.9
comp=Z,108nm,1.0s
I27K Kandik River 74.51 352 P P 01 01 30.3 +0.9
baz=14,SNR=28
ACSO Alum Creek Sta 74.53 309 P P 01 01 29.1 -0.7
ACSO IAmb IAmb 01 01 39.3
comp=Z,69nm,1.1s
ACSO IAMs_20 IAMs_20 01 33 31.4
comp=Z,2µm,20.0s
BIM Bigot 74.55 276 P P 01 01 30.9 +0.6
F17K Baldwin Pennin 74.58 1 P P 01 01 29.8 +0.3
F17K IAmb IAmb 01 01 39.5
comp=Z,57nm,0.8s
F17K Baldwin Pennin 74.58 1 P P 01 01 30.1 +0.5
baz=358
H43A Windswept, Lux 74.59 315 P P 01 01 29.8 -0.3
H43A IAmb IAmb 01 01 40.0
comp=Z,56nm,0.8s
H43A IAMs_20 IAMs_20 01 33 55.7
comp=Z,2µm,19.0s
BSI Banda Aceh 74.73 95 P P 01 01 30.5 -0.8
comp=Z,2µmcomp=Z,41nm,0.9s
W59A Clinton 74.80 303 P P 01 01 31.8 +0.4
H24K Noodor Dome 74.81 355 P P 01 01 30.9 -0.2
H24K Noodor Dome 74.81 355 P P 01 01 31.8 +0.7
baz=9.2
N49A Columbus Grove 74.81 311 P P 01 01 31.6 +0.1
N49A IAmb IAmb 01 01 46.4
comp=Z,168nm,1.6s
N49A IAMs_20 IAMs_20 01 35 37.8
comp=Z,2µm,18.0s
ULM Lac du Bonnet 74.82 323 P P 01 01 31.6 +0.3
comp=Z,45nm,1.1s,baz=43,slow=5.5,SNR=30
ULM LR LR 01 34 51.8
comp=Z,3µm,18.5s,baz=44,slow=36
comp=Z,45nm,1.1s
ULM Lac du Bonnet 74.82 323 P P 01 01 31.6 +0.3
ULM IAmb IAmb 01 01 42.7
comp=Z,67nm,1.0s
BLA Blacksburg 74.82 306 P P 01 01 31.1 -0.5
BLA IAMs_20 IAMs_20 01 36 21.4
comp=Z,2µm,18.0s
BLA Blacksburg 74.82 306 P P 01 01 31.1 -0.5
BLA pmax pmax
comp=Z,30nm,1.0s
BLA MLR MLR
comp=Z,2µm,18.0s
SUJ Sinuiju 74.84 50 P P 01 01 31.7 +0.1
SUJ AmB
comp=Z,560nm,3.0s
V58A Windy Hill, Pi 74.86 304 P P 01 01 31.4 -0.3
V58A IAMs_20 IAMs_20 01 33 43.4
comp=Z,2µm,21.0s
G19K Purcell Mounta 74.87 359 P P 01 01 31.7 +0.3
G19K IAmb IAmb 01 01 42.2
comp=Z,62nm,1.0s
G19K Purcell Mounta 74.87 359 P P 01 01 32.1 +0.8
baz=1.8
J30M Hart River 74.87 350 IAMs_20 IAMs_20 01 37 00.3
comp=Z,2µm,19.0s
J30M Hart River 74.87 350 P P 01 01 32.5 +1.0
baz=18,SNR=126
MDJ Mudanjiang 74.88 44 P P 01 01 31.2 -0.5
MDJ Mudanjiang 74.88 44 P P 01 01 31.5 -0.2
MDJ S S 01 11 11.5 +3.3
MDJ pmax pmax
comp=Z,21nm,2.4s
MDJ L L
comp=Z,5µm,14.5s
MDJ L L
comp=Z,6µm,18.8s
MDJ L L
comp=Z,6µm,12.6s
Q52A Bidwell 74.89 308 IAMs_20 IAMs_20 01 33 15.0
comp=Z,2µm,21.0s
H23K Yukon River 74.92 356 P P 01 01 33.0 +1.3
baz=7.9
H22K Ishtalitna Cre 74.95 357 P P 01 01 31.9 +0.1
H22K IAmb IAmb 01 01 46.0
comp=Z,121nm,1.2s
H22K IAMs_20 IAMs_20 01 33 06.3
comp=Z,2µm,21.0s
H22K Ishtalitna Cre 74.95 357 P P 01 01 33.4 +1.6
I26K Coal Creek Min 74.95 353 P P 01 01 32.8 +1.0
baz=13
PRP Porcupine Dome 74.95 354 P P 01 01 33.0 +1.1
PRP IAmb IAmb 01 01 43.0
comp=Z,88nm,1.2s
PRP Porcupine Dome 74.95 354 P P 01 01 33.1 +1.1
baz=11,SNR=20
IMAR Indian Mountai 74.95 358 P P 01 01 32.2 +0.4
S54A Dingess, Beckl 75.02 307 P P 01 01 32.9 +0.2
S54A IAmb IAmb 01 01 47.6
comp=Z,156nm,1.8s
S54A IAMs_20 IAMs_20 01 34 45.5
comp=Z,2µm,20.0s
P51A Williamsport 75.05 309 P P 01 01 32.6 -0.2
G18K Tagagawik 75.14 360 P P 01 01 33.5 +0.6
baz=0.6
E38A The Farm, Brul 75.20 319 P P 01 01 32.7 -0.9
E38A IAMs_20 IAMs_20 01 34 47.4
comp=Z,2µm,19.0s
J29N Klondike Camp 75.24 351 P P 01 01 34.6 +1.0
baz=17,SNR=7.9
F15K North Star Dit 75.25 2 P P 01 01 34.0 +0.6
F15K IAmb IAmb 01 01 44.0
comp=Z,59nm,1.0s
F15K North Star Dit 75.25 2 P P 01 01 34.1 +0.6
baz=356
H21K Melozitna Rive 75.25 357 P P 01 01 34.2 +0.6
H21K IAMs_20 IAMs_20 01 33 16.2
comp=Z,1µm,21.0s
H21K Melozitna Rive 75.25 357 P P 01 01 35.2 +1.7
baz=5.2,SNR=54
TNA Tin City 75.26 4 P P 01 01 34.3 +0.7
TNA Tin City 75.26 4 P P 01 01 33.5 0.0
baz=353,SNR=7.4
U56A King 75.33 305 P P 01 01 34.7 +0.2
U56A IAmb IAmb 01 01 44.3
comp=Z,60nm,1.0s
U56A IAMs_20 IAMs_20 01 34 45.9
comp=Z,2µm,19.0s
O49A Covington 75.37 310 P P 01 01 34.2 -0.4
O49A IAMs_20 IAMs_20 01 34 15.5
comp=Z,2µm,19.0s
G40A Rib Lake 75.38 317 P P 01 01 34.0 -0.7
G40A IAMs_20 IAMs_20 01 33 06.4
comp=Z,2µm,20.0s
F14K Arctic Creek 75.42 3 P P 01 01 35.0 +0.5
baz=354
H19K Roundabout Mou 75.48 359 P P 01 01 35.8 +1.0
baz=2.3
H20K Anotleneega Mo 75.48 358 P P 01 01 35.9 +1.0
baz=3.6,SNR=48
POKR Poker Plat Res 75.49 355 P P 01 01 35.9 +0.9
baz=9.5
Q51A Peebles 75.50 309 IAMs_20 IAMs_20 01 33 34.9
comp=Z,2µm,20.0s
G17K Kiwalik Mounta 75.53 1 P P 01 01 35.5 +0.4
baz=359
I23K Minto, Yukon-K 75.59 356 P P 01 01 35.5 0.0
I23K IAmb IAmb 01 01 46.4
comp=Z,57nm,1.0s
I23K IAMs_20 IAMs_20 01 33 26.1
comp=Z,2µm,21.0s
I23K Minto, Yukon-K 75.59 356 P P 01 01 36.4 +1.0
baz=8.0,SNR=40
I42A Draeger Farm, 75.59 315 IAMs_20 IAMs_20 01 34 08.2
comp=Z,2µm,20.0s
G16K Koyuk River 75.61 1 P P 01 01 35.9 +0.3
G16K IAmb IAmb 01 01 46.3
comp=Z,67nm,1.1s
G16K Koyuk River 75.61 1 P P 01 01 36.3 +0.7
baz=358
I21K Tanana 75.69 357 P P 01 01 36.6 +0.6
I21K IAmb IAmb 01 01 46.8
comp=Z,49nm,0.9s
I21K IAMs_20 IAMs_20 01 37 55.9
comp=Z,1µm,19.0s
I21K Tanana 75.69 357 P P 01 01 37.4 +1.4
baz=5.9,SNR=34
N47A Urbana 75.73 311 P P 01 01 36.2 -0.4
N47A IAmb IAmb 01 01 45.6
comp=Z,84nm,1.2s
K29M Barlow Dome 75.73 350 P P 01 01 36.5 +0.1
K29M IAmb IAmb 01 01 51.5
comp=Z,54nm,1.0s
K29M IAMs_20 IAMs_20 01 37 44.0
comp=Z,1µm,18.0s
K29M Barlow Dome 75.73 350 P P 01 01 37.5 +1.0
baz=17,SNR=15
MAYO Mayo, Yukon 75.74 349 P P 01 01 36.5 +0.1
MAYO Mayo, Yukon 75.74 349 P P 01 01 37.0 +0.6
baz=19
X58A Rowland 75.76 303 P P 01 01 37.1 +0.1
X58A IAmb IAmb 01 01 46.1
comp=Z,82nm,1.4s
X58A IAMs_20 IAMs_20 01 38 18.4
comp=Z,1µm,19.0s
COLA College 75.76 355 P P 01 01 37.4 +1.0
comp=Z,29nm,1.2s
COLA College 75.76 355 P P 01 01 37.5 +1.0
COLA College 75.76 355 P P 01 01 37.5 +1.0
COLA pmax pmax
comp=Z,41nm,0.9s
COLA College 75.76 355 P P 01 01 37.1 +0.7
baz=9.2
COLA College 75.76 355 P P 01 01 37.1 +0.7
COLA S S 01 11 18.4 +1.0
MLY Manley 75.78 356 P P 01 01 36.9 +0.3
MLY IAmb IAmb 01 01 47.6
comp=Z,62nm,1.0s
MLY Manley 75.78 356 P P 01 01 37.7 +1.0
baz=8.9,SNR=25
ILAR Eielson Array 75.80 354 P P 01 01 36.2 -0.5
comp=Z,11nm,0.8s,baz=2.0,slow=4.9,SNR=34
ILAR PKKPbc PKKPbc 01 20 57.7 +4.1
comp=Z,0.6nm,1.0s,baz=220,slow=3.3,SNR=4.7
ILAR PKPPKP P'P'df 01 28 55.4 -7.9
comp=Z,1.4nm,1.1s,baz=201,slow=1.9,SNR=6.4
ILAR LR LR 01 37 05.0
comp=Z,999nm,19.8s,baz=9.0,slow=37
comp=Z,11nm,0.8s
ILAR Eielson Array 75.80 354 P P 01 01 36.3 -0.4
O48B Farmland 75.81 311 P P 01 01 36.4 -0.8
O48B IAmb IAmb 01 01 46.2
comp=Z,125nm,1.4s
O48B IAMs_20 IAMs_20 01 39 15.1
comp=Z,2µm,18.0s
W57A Gilead 75.81 304 P P 01 01 37.3 0.0
W57A IAMs_20 IAMs_20 01 34 42.8
comp=Z,1µm,21.0s
J25K Salcha River, 75.83 354 P P 01 01 37.1 +0.1
J25K Salcha River, 75.83 354 P P 01 01 37.4 +0.4
baz=11,SNR=14
H18K Honhosa River 75.88 360 P P 01 01 38.2 +1.1
baz=0.8
MMPY Sheldon Lake, 75.93 347 P P 01 01 38.6 +1.1
MMPY IAmb IAmb 01 01 49.4
comp=Z,72nm,1.0s
MMPY Sheldon Lake, 75.93 347 P P 01 01 39.5 +1.9
baz=22,SNR=34
G15K Niukluk 75.98 2 P P 01 01 38.1 +0.5
baz=356,SNR=28
CCB Clear Creek Bu 75.98 355 P P 01 01 37.8 +0.1
HUMP Col San Antoni 76.03 282 P P 01 01 39.1 +0.3
K43A Burlington 76.05 314 P P 01 01 37.9 -0.6
K43A IAmb IAmb 01 01 52.1
comp=Z,54nm,1.0s
K43A IAMs_20 IAMs_20 01 34 50.3
comp=Z,2µm,20.0s
K27K Chicken 76.09 352 P P 01 01 39.0 +0.7
H17K Granite Mounta 76.10 0 P P 01 01 38.8 +0.4
baz=360
NEA2 Nenana 76.12 355 P P 01 01 38.0 -0.5
NEA2 IAmb IAmb 01 01 48.9
comp=Z,52nm,1.1s
NEA2 Nenana 76.12 355 P P 01 01 38.9 +0.3
baz=8.2
U54A Nelsons Funny 76.13 306 P P 01 01 38.9 -0.3
U54A IAmb IAmb 01 01 48.6
comp=Z,92nm,1.1s
U54A IAMs_20 IAMs_20 01 37 02.0
comp=Z,2µm,18.0s
HDA Harding Lake 76.16 354 P P 01 01 38.7 -0.1
HDA Harding Lake 76.16 354 P P 01 01 38.9 +0.2
baz=9.9,SNR=59
L44A Lake County Fo 76.16 313 IAMs_20 IAMs_20 01 34 43.2
comp=Z,2µm,20.0s
V55A Taylorsville 76.16 305 P P 01 01 40.0 +0.7
V55A IAmb IAmb 01 01 49.1
comp=Z,74nm,1.1s
V55A IAMs_20 IAMs_20 01 35 12.0
comp=Z,1µm,20.0s
I20K Naaghedeneel 76.17 358 P P 01 01 39.2 +0.4
I20K Naaghedeneel 76.17 358 P P 01 01 40.1 +1.4
baz=3.9
AGMN Agassiz Nation 76.17 322 P P 01 01 39.0 -0.1
AGMN IAmb IAmb 01 01 59.4
comp=Z,85nm,1.8s
WRH Wood River Hil 76.18 355 P P 01 01 38.9 +0.1
WRH IAmb IAmb 01 01 49.0
comp=Z,75nm,1.0s
NJ2 Nanjing 76.22 60 eP P 01 01 37.9 -1.7
NJ2 S S 01 11 24.4 +0.9
NJ2 pmax pmax
comp=Z,100nm,0.8s
NJ2 pmax pmax
comp=Z,2µm,5.8s
NJ2 L L
comp=Z,4µm,16.1s
NJ2 L L
comp=Z,4µm,17.1s
NJ2 L L
comp=Z,7µm,17.2s
PDPR Patillas Dam, 76.24 282 P P 01 01 40.0 +0.1
GCSA Galena City Sc 76.27 359 P P 01 01 40.6 +1.2
baz=2.0,SNR=6.1
SJG San Juan 76.28 282 LR LR 01 29 29.1
comp=Z,569nm,21.2s,baz=70,slow=31
SJG San Juan 76.28 282 P P 01 01 40.0 -0.1
SJG IAmb IAmb 01 01 57.1
comp=Z,80nm,0.9s
SJG San Juan 76.28 282 P P 01 01 40.0 -0.1
SJG pmax pmax
comp=Z,80nm,0.9s
ECPR Experimental S 76.31 282 P P 01 01 40.0 -0.4
SCRK Sand Creek 76.33 353 P P 01 01 40.8 +0.9
baz=12,SNR=30
MLSI Meulaboh, Aceh 76.35 96 P P 01 01 39.1 -1.5
comp=Z,119nm,0.8s
ANM Nome 76.37 3 P P 01 01 39.7 -0.2
ANM IAMs_20 IAMs_20 01 33 53.7
comp=Z,2µm,22.0s
ANM Nome 76.37 3 P P 01 01 39.7 -0.2
ANM pmax pmax
comp=Z,42nm,1.0s
ANM Nome 76.37 3 P P 01 01 40.3 +0.4
baz=355,SNR=22
Y58A Scranton 76.37 303 IAMs_20 IAMs_20 01 39 41.7
comp=Z,1µm,18.0s
H16K Elim 76.38 1 P P 01 01 40.6 +0.6
baz=358,SNR=45
TGTN Hyland Airport 76.38 345 P P 01 01 41.9 +1.7
baz=24,SNR=11
BIRD Birdtown, Kers 76.43 304 P P 01 01 39.9 -0.9
BIRD IAmb IAmb 01 01 58.8
comp=Z,64nm,1.2s
GRGR Grenville 76.44 275 P P 01 01 43.2 +2.1
comp=Z,3µmcomp=Z,227nm,1.1s
USRK Ussuriysk Ar. 76.44 44 P P 01 01 39.7 -1.0
comp=Z,27nm,0.8s,baz=297,slow=4.2,SNR=17
comp=Z,27nm,0.8s
P48A Milroy 76.48 310 P P 01 01 39.2 -1.8
P48A IAmb IAmb 01 02 02.5
comp=Z,57nm,1.2s
P48A IAMs_20 IAMs_20 01 35 53.9
comp=Z,2µm,18.0s
L29M L29M 76.52 350 P P 01 01 40.6 -0.2
L29M IAmb IAmb 01 01 51.1
comp=Z,56nm,1.1s
L29M L29M 76.52 350 P P 01 01 41.8 +0.9
baz=17
S51A Beattyville 76.53 308 P P 01 01 40.3 -1.0
S51A IAMs_20 IAMs_20 01 34 05.5
comp=Z,2µm,20.0s
R50A Paris 76.57 309 P P 01 01 41.3 -0.3
R50A IAMs_20 IAMs_20 01 34 39.5
comp=Z,3µm,20.0s
AOPR Arecibo Observ 76.59 283 P P 01 01 42.1 +0.2
UUPR Utuado, UPR, P 76.62 283 P P 01 01 42.2 +0.1
CELP Cerrillos 76.63 282 P P 01 01 42.2 +0.1
RIDG Independent Ri 76.65 353 P P 01 01 41.5 -0.1
RIDG IAmb IAmb 01 01 52.4
comp=Z,123nm,1.2s
RIDG Independent Ri 76.65 353 P P 01 01 42.5 +0.9
baz=12,SNR=36
K24K Donnelly Dome 76.66 354 P P 01 01 41.4 -0.3
K24K IAmb IAmb 01 01 52.0
comp=Z,83nm,1.2s
K24K Donnelly Dome 76.66 354 P P 01 01 41.9 +0.2
baz=11,SNR=22
OBIP Obispado Ponce 76.67 282 P P 01 01 43.0 +0.7
OBIP IAmb IAmb 01 01 52.1
comp=Z,74nm,1.1s
KMSC Kings Mountain 76.68 305 P P 01 01 42.4 +0.2
KMSC IAmb IAmb 01 01 51.9
comp=Z,64nm,1.3s
BPAW Bear Paw Mtn. 76.72 356 P P 01 01 41.9 0.0
BPAW IAmb IAmb 01 01 51.8
comp=Z,54nm,1.0s
BPAW Bear Paw Mtn. 76.72 356 P P 01 01 42.0 0.0
baz=6.7,SNR=22
KOTAN Kotaneelee Air 76.73 343 P P 01 01 43.2 +1.2
baz=27
HHU Hamhung 76.75 49 P P 01 01 45.4 +2.9
HHU AmB
comp=Z,688nm,3.7s
HHU AMS AMS
comp=Z,6µm,15.3s
SPMN Marine on St. 76.77 318 P P 01 01 41.8 -0.8
SPMN IAMs_20 IAMs_20 01 35 36.1
comp=Z,2µm,19.0s
Y57A Sumter 76.77 303 P P 01 01 42.5 -0.3
Y57A IAmb IAmb 01 01 52.6
comp=Z,105nm,1.2s
Y57A IAMs_20 IAMs_20 01 38 22.3
comp=Z,1µm,19.0s
J20K Nowinta River 76.78 358 P P 01 01 43.1 +0.9
J20K IAmb IAmb 01 01 53.0
comp=Z,66nm,1.0s
J20K Nowinta River 76.78 358 P P 01 01 43.1 +0.9
baz=4.2
GAMB Gambell 76.80 6 P P 01 01 41.8 -0.5
GAMB IAMs_20 IAMs_20 01 38 10.3
comp=Z,2µm,20.0s
GAMB Gambell 76.80 6 P P 01 01 42.3 0.0
baz=350
M31M Drury Creek, Y 76.84 348 P P 01 01 43.4 +0.7
M31M IAmb IAmb 01 01 54.0
comp=Z,132nm,1.4s
M31M IAMs_20 IAMs_20 01 39 28.4
comp=Z,2µm,18.0s
M31M Drury Creek, Y 76.84 348 P P 01 01 43.9 +1.3
baz=20,SNR=41
M30M Minto, Yukon 76.84 349 P P 01 01 42.2 -0.5
M30M Minto, Yukon 76.84 349 P P 01 01 43.2 +0.5
baz=18
SFIN Lafayette 76.86 312 IAMs_20 IAMs_20 01 33 44.0
comp=Z,2µm,20.0s
HJU Haeju 76.88 51 P P 01 01 44.8 +1.5
HJU S S 01 11 29.3 -1.3
HJU AmB
comp=Z,1µm,3.6s
TYV Tymovskoe 76.89 33 eP P 01 01 40.5 -2.6
TYV eS S 01 11 25.5 -4.7
TYV pmax pmax
comp=Z,700nm,3.2s

TYV pmax pmax
comp=Z,32nm,1.1s
TYV smax smax
comp=N,400nm,4.0s
TYV smax smax
comp=E,500nm,4.0s
PRSN Puerto Rico Se 76.97 283 P **P** **01 01 44.4 +0.3**
MCK McKinley 76.97 355 P **P** **01 01 43.3 -0.1**
MCK IAmb IAmb 01 01 53.4
comp=Z,73nm,1.0s
MCK McKinley 76.97 355 P **P** **01 01 43.3 -0.1**
MCK pmax pmax
comp=Z,73nm,1.0s
MCK MLR MLR
comp=Z,1µm,20.0s
MCK McKinley 76.97 355 P **P** **01 01 43.5 +0.1**
baz=8.3,SNR=42
JFWS Jewell Farm 76.97 315 P **P** **01 01 43.5 -0.2**
JFWS Jewell Farm 76.97 315 IAMs_20 IAMs_20 01 36 47.6
comp=Z,2µm,19.0s
JFWS Jewell Farm 76.97 315 P **P** **01 01 43.5 -0.2**
JFWS pmax pmax
comp=Z,36nm,1.0s
JFWS MLR MLR
comp=Z,2µm,19.0s
J19K Poorman 77.00 358 P **P** **01 01 43.4 -0.1**
J19K IAmb IAmb 01 01 54.5
comp=Z,119nm,1.3s
J19K Poorman 77.00 358 P **P** **01 01 44.7 +1.2**
baz=3.0
CHUM Lake Minchumin 77.00 357 P **P** **01 01 44.2 +0.7**
baz=5.6,SNR=15
L27K Beaver Creek, 77.01 352 P **P** **01 01 44.2 +0.6**
L27K IAmb IAmb 01 01 54.8
comp=Z,108nm,1.2s
L27K Beaver Creek, 77.01 352 P **P** **01 01 44.9 +1.2**
baz=14
MLPR Magueyes Islan 77.04 283 P **P** **01 01 45.3 +0.9**
CRPR Cabo Rojo, PR 77.07 283 P **P** **01 01 45.4 +0.8**
R49A Shelbyville 77.07 309 P **P** **01 01 44.2 -0.2**
R49A IAmb IAmb 01 01 53.6
comp=Z,77nm,1.3s
R49A IAMs_20 IAMs_20 01 34 14.8
comp=Z,1µm,20.0s
I17K Unalakleet 77.15 1 P **P** **01 01 44.9 +0.6**
I17K IAmb IAmb 01 01 55.2
comp=Z,80nm,1.4s
I17K Unalakleet 77.15 1 P **P** **01 01 45.0 +0.6**
baz=359
JSC Jenkinsville 77.17 304 P **P** **01 01 45.9 +0.9**
JSC Jenkinsville 77.17 304 P **P** **01 01 45.9 +0.9**
JSC pmax pmax
comp=Z,31nm,0.8s
PAULI Pauline 77.19 305 P **P** **01 01 45.9 +0.8**
PAULI IAmb IAmb 01 01 54.7
comp=Z,53nm,1.0s
TZTN Tazewell 77.19 307 P **P** **01 01 45.1 0.0**
TZTN IAmb IAmb 01 02 00.3
comp=Z,71nm,1.3s
TZTN IAMs_20 IAMs_20 01 36 25.2
comp=Z,2µm,20.0s
NHSC New Hope 77.20 302 P **P** **01 01 45.0 -0.2**
NHSC IAMs_20 IAMs_20 01 38 18.7
comp=Z,1µm,19.0s
M29M Somme Creek 77.20 350 IAMs_20 IAMs_20 01 40 43.9
comp=Z,1µm,18.0s
M29M Somme Creek 77.20 350 P **P** **01 01 46.1 +1.3**
baz=16
CSU Charleston Sou 77.20 302 P **P** **01 01 44.8 -0.4**
L26K Log Cabin Wild 77.20 353 P **P** **01 01 45.4 +0.7**
L26K Log Cabin Wild 77.20 353 P **P** **01 01 45.9 +1.2**
baz=13,SNR=16
L42A Oliver, Polo 77.26 314 P **P** **01 01 45.6 +0.3**
L42A IAmb IAmb 01 01 56.3
comp=Z,73nm,1.1s
KTH Kantishna Hill 77.26 356 P **P** **01 01 45.2 +0.1**
KTH IAMs_20 IAMs_20 01 39 33.4
comp=Z,1µm,20.0s
RND Reindeer 77.29 355 P **P** **01 01 44.8 -0.4**
RND Reindeer 77.29 355 P **P** **01 01 44.8 -0.4**
RND pmax pmax
comp=Z,32nm,0.9s
V53A Saluda 77.29 306 IAMs_20 IAMs_20 01 37 47.7
comp=Z,2µm,18.0s
BLO Bloomington 77.31 310 P **P** **01 01 45.4 -0.3**
BLO IAmb IAmb 01 01 55.6
comp=Z,64nm,0.8s
BLO Bloomington 77.31 310 P **P** **01 01 45.4 -0.3**
BLO pmax pmax
comp=Z,65nm,0.8s
MENT Mentasta 77.33 353 P **P** **01 01 46.6 +1.2**
comp=Z,50nm,0.9s
MENT Mentasta 77.33 353 P **P** **01 01 45.3 -0.1**
TRF Thorofare Moun 77.33 356 P **P** **01 01 44.9 -0.7**
TRF IAmb IAmb 01 01 55.5
comp=Z,54nm,1.0s
TRF IAMs_20 IAMs_20 01 34 31.2
comp=Z,2µm,22.0s
TRF Thorofare Moun 77.33 356 P **P** **01 01 45.6 0.0**
baz=7.2,SNR=23
P46A Rosedale 77.42 311 P **P** **01 01 45.8 -0.5**
P46A IAmb IAmb 01 01 55.3
comp=Z,62nm,0.9s
P46A IAMs_20 IAMs_20 01 33 51.9
comp=Z,2µm,20.0s
PAX Paxson 77.46 354 P **P** **01 01 45.9 -0.3**
PAX Paxson 77.46 354 P **P** **01 01 45.9 -0.3**
PAX pmax pmax
comp=Z,28nm,1.1s
PAX Paxson 77.46 354 P **P** **01 01 46.4 +0.1**
baz=11,SNR=14
DHY Denali Highway 77.51 354 P **P** **01 01 46.9 +0.3**
baz=9.5,SNR=58
BVCY Beaver Creek 77.53 351 P **P** **01 01 47.9 +1.4**
baz=15,SNR=17
J18K Innoko River 77.55 359 P **P** **01 01 47.8 +1.1**
baz=2.1
TPTI 77.59 96 P **P** **01 01 46.0 -1.6**
comp=Z,2µmcomp=Z,36nm,0.8s
K20K Telida 77.59 358 P **P** **01 01 47.2 +0.3**
K20K IAmb IAmb 01 02 00.2
comp=Z,63nm,1.0s
K20K IAMs_20 IAMs_20 01 34 49.2
comp=Z,2µm,22.0s
K20K Telida 77.59 358 P **P** **01 01 47.6 +0.7**
baz=4.2
N32M Quiet Lake 77.61 347 IAMs_20 IAMs_20 01 39 11.4
comp=Z,2µm,18.0s
N32M Quiet Lake 77.61 347 P **P** **01 01 48.1 +1.1**
baz=21
J17K VABM Dome 77.64 360 P **P** **01 01 47.8 +0.7**
J17K IAmb IAmb 01 01 58.0
comp=Z,104nm,1.2s
J17K VABM Dome 77.64 360 P **P** **01 01 47.9 +0.8**
baz=0.2
QIZ Qiongzhong 77.66 76 P **P** **01 01 46.6 -1.3**
QIZ Qiongzhong 77.66 76 P **P** **01 01 46.8 -1.2**
QIZ PcP **PcP** **01 01 57.1 -1.0**
QIZ PP **PP** **01 04 40.9 -2.0**
QIZ S **S** **01 11 38.9 -0.7**
QIZ ScS **ScS** **01 12 05.3 -1.1**
QIZ SS **SS** **01 16 38.9 -0.1**
QIZ pmax pmax
comp=Z,21nm,1.0s
QIZ pmax pmax
comp=Z,650nm,5.4s
QIZ L L
comp=Z,490nm,13.2s
QIZ L L
comp=Z,840nm,21.1s
QIZ L L
comp=Z,790nm,31.4s
GZH2 Guangzhou 77.68 70 P **P** **01 01 47.6 -0.4**
GZH2 S **S** **01 11 39.5 -0.2**
GZH2 pmax pmax
comp=Z,31nm,0.8s
GZH2 pmax pmax
comp=Z,1µm,6.8s
GZH2 L L
comp=Z,2µm,21.4s
GZH2 L L
comp=Z,2µm,20.2s
GZH2 L L
comp=Z,2µm,18.4s
T50A Nancy 77.69 308 P **P** **01 01 48.7 +0.8**
T50A IAmb IAmb 01 01 57.5
comp=Z,70nm,1.3s
T50A IAMs_20 IAMs_20 01 34 52.1
comp=Z,2µm,20.0s
M27K Edge Creek, AK 77.70 352 P **P** **01 01 48.2 +0.5**
M27K IAmb IAmb 01 01 59.0
comp=Z,111nm,1.3s
M27K Edge Creek, AK 77.70 352 P **P** **01 01 49.0 +1.3**
baz=14
N31M Braeburn, Yuko 77.73 349 IAMs_20 IAMs_20 01 40 25.0
comp=Z,2µm,18.0s
N31M Braeburn, Yuko 77.73 349 P **P** **01 01 48.3 +0.6**
baz=18,SNR=32
J16K Anvik River 77.75 1 **P** **01 01 47.3 -0.4**
J16K Anvik River 77.75 1 P **P** **01 01 48.4 +0.6**
baz=359,SNR=15
WTLY Watson Lake, Y 77.78 345 P **P** **01 01 48.2 +0.2**
WTLY IAmb IAmb 01 01 59.3
comp=Z,120nm,1.2s
WTLY Watson Lake, Y 77.78 345 P **P** **01 01 49.3 +1.3**
baz=24
M26K Nabesna, AK 77.78 352 P **P** **01 01 48.3 +0.3**
M26K IAmb IAmb 01 01 58.9
comp=Z,60nm,1.1s
M26K Nabesna, AK 77.78 352 P **P** **01 01 48.9 +0.9**
baz=13,SNR=34
WCI Wyandotte Cave 77.79 310 P **P** **01 01 47.8 -0.6**
WCI IAmb IAmb 01 01 57.9
comp=Z,86nm,1.1s
WCI Wyandotte Cave 77.79 310 IAMs_20 IAMs_20 01 35 48.6
comp=Z,2µm,19.0s
WCI Wyandotte Cave 77.79 310 P **P** **01 01 47.8 -0.6**
WCI pmax pmax
comp=Z,86nm,1.1s
WCI MLR MLR
comp=Z,2µm,19.0s
BG3 Lake Jocassee 77.79 305 P **P** **01 01 48.0 -0.5**
WAT1 Susitna Watana 77.84 355 P **P** **01 01 47.6 -0.6**
baz=8.6
HODGE Hodges 77.84 304 P **P** **01 01 48.3 -0.4**
KCSI Kotacane, Aceh 77.88 95 P **P** **01 01 45.5 -3.7**
comp=Z,49nm,1.0s
TKL Tuckaleechee C 77.90 306 LR LR 01 36 44.6
comp=Z,2µm,18.9s,baz=55,slow=36
TKL Tuckaleechee C 77.90 306 P **P** **01 01 47.9 -1.2**
TKL Tuckaleechee C 77.90 306 P **P** **01 01 47.9 -1.2**
TKL pmax pmax
comp=Z,52nm,1.2s
I37A Lemond, Waseca 77.91 318 IAMs_20 IAMs_20 01 36 37.3
comp=Z,2µm,20.0s
N30M Aishikik Lake 77.95 349 **P** **01 01 48.9 -0.1**
N30M Aishikik Lake 77.95 349 P **P** **01 01 49.8 +0.8**
baz=18,SNR=23
GRTK Grand Turk 77.96 288 P **P** **01 01 46.8 -2.8**
comp=Z,224nm,1.3s
PPLA Purkeypile 77.98 357 P **P** **01 01 48.5 -0.7**
PPLA Purkeypile 77.98 357 P **P** **01 01 49.1 -0.1**
baz=5.7,SNR=23
HDIL Hopedale 78.01 313 P **P** **01 01 49.4 -0.2**
HDIL IAmb IAmb 01 01 58.9
comp=Z,58nm,0.9s
HDIL IAMs_20 IAMs_20 01 35 13.2
comp=Z,1µm,19.0s
WAT6 Susitna Watana 78.03 354 P **P** **01 01 49.6 +0.1**
baz=9.2,SNR=26
CMC01 Camacan, BA 78.04 239 *e*P **P** **01 01 51.7 +1.8**
L40A Anamosa 78.08 315 P **P** **01 01 50.1 +0.2**
L40A IAmb IAmb 01 01 59.0
comp=Z,69nm,1.0s
L40A IAMs_20 IAMs_20 01 34 39.8
comp=Z,2µm,20.0s
YUK3 Moose Creek 78.10 351 P **P** **01 01 51.0 +1.0**
baz=15,SNR=51
F33A 5 Mile Ranch, 78.11 320 P **P** **01 01 49.6 -0.4**
J14K Nanvaranak Lak 78.24 2 P **P** **01 01 50.9 +0.5**
baz=357
MDND Maddock 78.25 324 P **P** **01 01 50.3 -0.5**
MDND IAMs_20 IAMs_20 01 35 53.8
comp=Z,2µm,21.0s
L22K Petersville 78.28 356 P **P** **01 01 49.6 -1.1**
YUK4 Talbot Arm 78.28 350 P **P** **01 01 51.3 +0.3**
baz=16,SNR=18
DR12 Loma Pena Alta 78.31 285 P **P** **01 01 51.8 +0.2**
K17K Iditarod 78.32 359 **P** **01 01 50.3 -0.6**
K17K IAmb IAmb 01 02 01.6
comp=Z,117nm,1.2s
K17K Iditarod 78.32 359 P **P** **01 01 51.7 +0.8**
baz=0.8
W52A Murphy 78.36 306 P **P** **01 01 50.7 -1.0**
W52A IAmb IAmb 01 02 00.2
comp=Z,97nm,1.6s
W52A IAMs_20 IAMs_20 01 38 49.0
comp=Z,2µm,19.0s
CUT Chulitna 78.37 356 P **P** **01 01 50.6 -0.5**
CUT IAmb IAmb 01 02 03.5
comp=Z,80nm,1.0s
CUT Chulitna 78.37 356 P **P** **01 01 50.5 -0.7**
baz=7.2,SNR=8.5
M24K Tolsona, Glenn 78.37 354 P **P** **01 01 50.4 -0.9**
M24K IAmb IAmb 01 02 01.9
comp=Z,76nm,1.1s
M24K Tolsona, Glenn 78.37 354 P **P** **01 01 51.9 +0.6**
baz=10
SSE Sheshan 78.37 59 P **P** **01 01 52.3 +0.6**
SSE S **S** **01 11 48.3 +1.4**
SSE pmax pmax
comp=Z,12nm,0.6s
SSE pmax pmax
comp=Z,110nm,4.1s
SSE L L
comp=Z,330nm,18.0s
SSE L L
comp=Z,410nm,19.2s
WHY Whitehorse 78.38 348 P **P** **01 01 50.8 -0.6**
WHY IAmb IAmb 01 02 08.8
comp=Z,53nm,1.0s
WHY Whitehorse 78.38 348 P **P** **01 01 51.7 +0.3**
baz=19,SNR=16
P33M Teslin, Yukon 78.45 347 **P** **01 01 52.0 +0.3**
P33M IAmb IAmb 01 02 02.6
comp=Z,51nm,1.0s
P33M Teslin, Yukon 78.45 347 P **P** **01 01 52.6 +0.8**
baz=21,SNR=32
O30N Mendenhall 78.46 349 P **P** **01 01 51.3 -0.5**
O30N IAmb IAmb 01 02 02.2
comp=Z,90nm,1.3s
O30N IAMs_20 IAMs_20 01 41 15.3
comp=Z,1µm,19.0s
O30N Mendenhall 78.46 349 P **P** **01 01 52.4 +0.6**
baz=18,SNR=15
257A Skidaway Islan 78.47 302 **P** **01 01 52.7 +0.5**
257A IAMs_20 IAMs_20 01 41 17.2
comp=Z,1µm,18.0s
YUK8 Steele Glacier 78.49 350 P **P** **01 01 53.0 +0.8**
baz=15
CPCT Cooper Cave 78.50 306 P **P** **01 01 52.2 -0.1**
CPCT IAmb IAmb 01 02 02.2
comp=Z,62nm,1.1s
KS19 Wonju Array Si 78.53 51 P **P** **01 01 51.6 -0.9**
KS19 IAmb IAmb 01 02 08.3
comp=Z,116nm,1.4s
OLIL Olney 78.53 311 **P** **01 01 52.5 0.0**
OLIL IAmb IAmb 01 02 02.1
comp=Z,52nm,0.8s
KSAR Wonju Array Be 78.58 51 P **P** **01 01 52.1 -0.7**
KSAR Wonju Array Be 78.58 51 P **P** **01 01 52.1 -0.7**
U49A Red Boiling Sp 78.59 308 P **P** **01 01 52.4 -0.5**
U49A IAmb IAmb 01 02 02.4
comp=Z,126nm,1.2s
U49A IAMs_20 IAMs_20 01 36 05.0
comp=Z,2µm,20.0s
KSRS Korea Array 78.59 51 P **P** **01 01 51.9 -1.0**
comp=Z,24nm,1.0s,baz=315,slow=4.7,SNR=24
KSRS LR LR 01 40 19.5
comp=Z,4µm,18.3s,baz=315,slow=39
comp=Z,24nm,1.0s
HYT Haines Junctio 78.62 349 P **P** **01 01 53.4 +0.6**
HYT IAmb IAmb 01 02 04.4
comp=Z,95nm,1.0s
HYT Haines Junctio 78.62 349 P **P** **01 01 53.8 +1.1**
baz=17,SNR=41
YUK6 Outpost Mounta 78.63 350 P **P** **01 01 54.1 +1.1**
baz=16,SNR=30
N25K Chitina, Valde 78.72 353 P **P** **01 01 52.8 -0.4**
N25K Chitina, Valde 78.72 353 P **P** **01 01 53.7 +0.5**
baz=12,SNR=20
SCM Sheep Creek Mo 78.74 354 P **P** **01 01 53.5 +0.2**
SCM IAmb IAmb 01 02 09.2
comp=Z,118nm,1.2s
SCM Sheep Creek Mo 78.74 354 P **P** **01 01 53.5 +0.2**
SCM pmax pmax
comp=Z,118nm,1.2s
SCM Sheep Creek Mo 78.74 354 P **P** **01 01 54.2 +0.9**
baz=9.5,SNR=18
K15K Wolf Creek Mou 78.74 1 P **P** **01 01 54.0 +0.8**
K15K Wolf Creek Mou 78.74 1 P **P** **01 01 54.1 +0.9**
baz=358
P43A Skaggs, Pawnee 78.75 312 P **P** **01 01 54.4 +0.7**
P43A IAmb IAmb 01 02 03.0
comp=Z,49nm,0.9s
P43A IAMs_20 IAMs_20 01 35 46.9
comp=Z,2µm,20.0s
MCARA McCarthy VSAT 78.78 352 P **P** **01 01 53.5 0.0**
MCARA IAmb IAmb 01 02 04.9
comp=Z,53nm,1.0s
MCARA McCarthy VSAT 78.78 352 P **P** **01 01 54.1 +0.7**
baz=13,SNR=14
USIN University of 78.78 310 P **P** **01 01 53.1 -0.8**
USIN IAmb IAmb 01 02 09.0
comp=Z,63nm,0.9s
N41A Harden Midland 78.79 314 P **P** **01 01 52.9 -1.0**
N41A IAmb IAmb 01 02 03.3
comp=Z,52nm,0.8s
N41A IAMs_20 IAMs_20 01 36 33.8
comp=Z,2µm,19.0s
L19K White Mountain 78.80 358 P **P** **01 01 52.8 -0.7**
L19K IAmb IAmb 01 02 04.3
comp=Z,83nm,1.0s
L19K White Mountain 78.80 358 P **P** **01 01 54.5 +0.9**
baz=3.6,SNR=39
L18K Granite Mounta 78.80 359 P **P** **01 01 54.7 +1.1**
L18K IAmb IAmb 01 02 07.9
comp=Z,73nm,1.2s
L18K Granite Mounta 78.80 359 P **P** **01 01 54.7 +1.1**
baz=2.1
GLB Gilahina Butte 78.80 352 P **P** **01 01 53.5 -0.2**
GLB IAMs_20 IAMs_20 01 36 30.2
comp=Z,2µm,22.0s
M23K Glacier View 78.81 354 P **P** **01 01 53.8 +0.2**
baz=9.2,SNR=24
SML Sawmill 78.84 355 P **P** **01 01 53.9 +0.1**
baz=8.7,SNR=15
SKT Skwentna 78.86 356 P **P** **01 01 53.7 -0.3**
SKT IAmb IAmb 01 02 03.2
comp=Z,44nm,0.8s
SKT Skwentna 78.86 356 P **P** **01 01 53.4 -0.6**
baz=6.2,SNR=36
R33M Jennings River 78.87 346 **P** **01 01 54.1 0.0**
R33M IAMs_20 IAMs_20 01 39 44.1
comp=Z,2µm,18.0s
R33M Jennings River 78.87 346 P **P** **01 01 56.1 +1.9**
baz=22
HKPS Hong Kong Po S 78.88 70 P **P** **01 01 53.7 -0.9**
L17K Donlin 78.91 359 P **P** **01 01 55.2 +1.0**
baz=0.8
SDD Santo Domingo 78.91 285 P **P** **01 01 53.9 -1.0**
GHO Glory Hole Cre 78.92 355 P **P** **01 01 54.2 -0.1**
GHO IAmb IAmb 01 02 04.5
comp=Z,78nm,0.9s
BARN Barnard Glacie 78.94 351 P **P** **01 01 54.2 -0.4**
PRPB Parauapebas 78.95 253 *e*P **P** **01 01 56.6 +1.5**
Q44A Meyer Farm, Va 78.95 311 P **P** **01 01 55.7 +0.9**
Q44A IAmb IAmb 01 02 04.0
comp=Z,78nm,1.1s
Q44A IAMs_20 IAMs_20 01 34 28.3
comp=Z,2µm,21.0s
KLU Klutina 78.96 353 P **P** **01 01 54.5 0.0**
KLU IAmb IAmb 01 02 04.9
comp=Z,71nm,1.2s
KLU Klutina 78.96 353 P **P** **01 01 55.0 +0.5**
baz=11,SNR=19
VRDI Verde Repeater 78.98 352 P **P** **01 01 55.0 +0.2**
VRDI IAMs_20 IAMs_20 01 36 34.8
comp=Z,2µm,22.0s
CTGM Chitina Glacie 79.00 351 P **P** **01 01 55.7 +0.9**
CTG Chitina Glacier 79.00 351 P **P** **01 01 55.5 +0.7**
baz=14,SNR=13
KULM Kulim 79.00 92 **P** **01 01 53.6 -1.8**
M22K Willow 79.01 356 P **P** **01 01 54.8 +0.1**
baz=7.3
K13K Kusilvak Mount 79.03 3 P **P** **01 01 54.8 +0.1**
baz=356
M20K Styx River 79.04 357 IAMs_20 IAMs_20 01 39 52.6
comp=Z,1µm,20.0s
M20K Styx River 79.04 357 P **P** **01 01 54.8 -0.1**
baz=4.9
O28M Mount Upton 79.04 351 P **P** **01 01 55.7 +0.4**
O28M IAmb IAmb 01 02 06.0
comp=Z,57nm,1.0s
O28M Mount Upton 79.04 351 P **P** **01 01 56.1 +0.8**
baz=15
M19K Big River Lodg 79.06 358 P **P** **01 01 55.9 +0.9**
baz=3.9
T47A Sharon Grove 79.09 309 IAMs_20 IAMs_20 01 36 44.0
comp=Z,1µm,19.0s
LOGN Logan Glacier 79.09 351 P **P** **01 01 55.6 +0.3**
LOGN IAmb IAmb 01 02 08.7
comp=Z,85nm,1.1s
PMR Palmer 79.11 355 P **P** **01 01 54.5 -0.6**
PMR IAmb IAmb 01 02 05.4
comp=Z,55nm,1.0s
PMR Palmer 79.11 355 P **P** **01 01 54.6 -0.6**
PMR pmax pmax
comp=Z,55nm,1.0s
PMR Palmer 79.11 355 P **P** **01 01 55.3 +0.1**
baz=8.1,SNR=17
GUA01 Guaratinga, BA 79.11 238 *e*P **P** **01 01 56.4 +0.5**
SMTB Santa Maria do 79.12 249 *e*P **P** **01 01 57.1 +1.1**
GSI Gunungsitoli 79.13 97 P **P** **01 01 55.5 -0.6**
comp=Z,72nm,0.8s
GSI Gunungsitoli 79.13 97 P **P** **01 01 54.6 -1.5**
GSI IAmb IAmb 01 01 58.2
comp=Z,54nm,0.8s
GSI Gunungsitoli 79.13 97 P **P** **01 01 55.0 -1.1**
comp=Z,71nm,0.8s
GOGA Godfrey 79.14 304 P **P** **01 01 55.9 0.0**
GOGA IAmb IAmb 01 02 05.7
comp=Z,98nm,1.5s
GOGA Godfrey 79.14 304 P **P** **01 01 55.9 0.0**
GOGA pmax pmax
comp=Z,98nm,1.5s
GOGA MLR MLR
comp=Z,1µm,18.0s
W50A Signal Mountai 79.15 307 P **P** **01 01 56.8 +0.7**
W50A IAMs_20 IAMs_20 01 37 34.0
comp=Z,2µm,18.0s
P32M Atlin 79.19 347 **P** **01 01 55.5 -0.3**
P32M Atlin 79.19 347 P **P** **01 01 56.0 +0.1**
baz=20,SNR=19
CLTN Cedars of Leba 79.20 308 P **P** **01 01 55.9 -0.4**
P30M Million Dollar 79.22 349 P **P** **01 01 57.2 +1.2**
baz=18
PSI Prapat 79.22 95 P **P** **01 01 55.0 -1.8**
PSI pmax pmax
comp=Z,52nm,1.0s
PSI MLR MLR
comp=Z,1µm,22.0s
PSI Prapat 79.22 95 P **P** **01 01 55.0 -1.8**
comp=Z,2µmcomp=Z,2µmcomp=Z,62nm,0.9s
Y52A Lilburn 79.23 305 P **P** **01 01 56.4 0.0**
Y52A IAmb IAmb 01 02 08.7
comp=Z,46nm,0.8s
Y52A IAMs_20 IAMs_20 01 38 51.2
comp=Z,1µm,18.0s
KNK Knik Glacier 79.24 355 P **P** **01 01 55.7 -0.3**
KNK IAmb IAmb 01 02 06.4
comp=Z,170nm,1.5s
KNK Knik Glacier 79.24 355 P **P** **01 01 56.3 +0.3**
baz=8.6,SNR=20
SCIA State Center 79.27 316 P **P** **01 01 56.2 -0.2**
SCIA IAMs_20 IAMs_20 01 36 43.3
comp=Z,2µm,20.0s
GRNC Granite Creek 79.27 351 P **P** **01 01 57.2 +0.7**
GRNC IAmb IAmb 01 02 07.0
comp=Z,124nm,1.1s
O29M Mount Kennedy 79.28 350 P **P** **01 01 56.9 +0.5**
O29M IAmb IAmb 01 02 06.9
comp=Z,92nm,1.2s
O29M Mount Kennedy 79.28 350 P **P** **01 01 56.9 +0.5**
baz=16,SNR=7.1
X51A Calhoun 79.28 306 P **P** **01 01 55.7 -0.9**
X51A IAMs_20 IAMs_20 01 37 16.4
comp=Z,1µm,20.0s

RPSI Rantau Prapat 79.29 95 P **P** **01 01 55.0 -2.0**
DIV Divide 79.30 353 P **P** **01 01 57.2 +0.8**
L16K Owhat River 79.34 0 P **P** **01 01 56.2 -0.2**
L16K Owhat River 79.34 0 P **P** **01 01 57.4 +0.9**
baz=360,SNR=10.0
BMRM Bremner River 79.35 353 P **P** **01 01 57.1 +0.4**
baz=12,SNR=15
L15K Ungalak Mounta 79.36 1 P **P** **01 01 57.3 +0.7**
baz=358
TGL Tana Glacier 79.37 352 P **P** **01 01 56.6 -0.3**
TGL IAmb IAmb 01 02 06.6
comp=Z,51nm,0.9s
CRQE Cirque 79.40 352 P **P** **01 01 57.5 +0.5**
baz=13,SNR=9.5
CRQM Cirque 79.40 352 P **P** **01 01 57.0 -0.1**
CRQM IAmb IAmb 01 02 06.9
comp=Z,81nm,0.8s
154A Montrose 79.42 303 P **P** **01 01 58.1 +0.7**
154A IAmb IAmb 01 02 09.1
comp=Z,148nm,1.3s
154A IAMs_20 IAMs_20 01 36 09.4
comp=Z,1µm,20.0s
M18K Stony River 79.52 358 P **P** **01 01 58.4 +1.0**
baz=2.8
Q32M Nakina River 79.52 346 P **P** **01 01 58.5 +0.6**
Q32M IAmb IAmb 01 02 11.8
comp=Z,160nm,1.5s
Q32M IAMs_20 IAMs_20 01 39 25.4
comp=Z,2µm,18.0s
Q32M Nakina River 79.52 346 P **P** **01 01 59.3 +1.5**
baz=21
SWET Sewanee 79.53 307 P **P** **01 01 58.5 +0.4**
DLBC Dease Lake 79.57 345 LR LR 01 37 49.6
comp=Z,1µm,21.7s,baz=3.0,slow=36
DLBC Dease Lake 79.57 345 P **P** **01 01 59.7 +1.8**
baz=23,SNR=12
SKAG Skagway 79.59 348 P **P** **01 01 58.8 +0.9**
SKAG Skagway 79.59 348 P **P** **01 01 58.6 +0.7**
baz=19
EDM Edmonton 79.60 334 P **P** **01 01 58.2 0.0**
EDM Edmonton 79.60 334 P **P** **01 01 58.2 0.0**
EDM pmax pmax
comp=Z,189nm,1.3s
SDDR Presa de Saban 79.62 286 P **P** **01 01 59.3 +0.5**
SDDR IAMs_20 IAMs_20 01 34 30.0
comp=Z,1µm,19.0s
SDBA SAO DESIDERIO 79.63 245 *e*P **P** **01 01 59.5 +0.7**
M17K Holitna River 79.64 359 P **P** **01 01 58.5 +0.4**
M17K IAmb IAmb 01 02 09.4
comp=Z,105nm,1.0s
M17K Holitna River 79.64 359 P **P** **01 01 59.5 +1.3**
baz=1.5
RC01 Rabbit Creek A 79.65 355 P **P** **01 01 58.2 0.0**
RC01 IAmb IAmb 01 02 08.5
comp=Z,114nm,1.2s
RC01 Rabbit Creek A 79.65 355 P **P** **01 01 58.6 +0.4**
baz=7.6,SNR=24
GLI Glacier Island 79.66 354 P **P** **01 01 57.6 -0.7**
GLI IAmb IAmb 01 02 08.6
comp=Z,95nm,1.2s
GLI Glacier Island 79.66 354 P **P** **01 01 58.6 +0.3**
baz=9.6
L14K Kuka Creek 79.67 2 P **P** **01 01 57.4 -0.9**
L14K Kuka Creek 79.67 2 P **P** **01 01 58.6 +0.3**
baz=357
N20K Mount Spurr 79.68 356 P **P** **01 01 58.1 -0.3**
baz=5.6,SNR=19
SPCR Spurr Chakacha 79.68 356 P **P** **01 01 58.1 -0.4**
baz=5.6
SPU Mount Spurr 79.69 356 **P** **01 01 57.7 -0.8**
E28A Huff 79.69 323 P **P** **01 01 59.3 +0.6**
E28A IAmb IAmb 01 02 07.6
comp=Z,111nm,0.9s
PCA Pinnacle 79.70 350 P **P** **01 01 59.5 +1.0**
PCA IAMs_20 IAMs_20 01 37 26.0
comp=Z,1µm,20.0s
PINM Pinnacle 79.70 350 P **P** **01 01 59.6 +1.0**
baz=15,SNR=19
V48A Smith Brothers 79.73 308 P **P** **01 01 59.3 +0.2**
BCPM Bancas Point 79.76 350 P **P** **01 01 59.5 +0.7**
ECSD EROS Data Cent 79.77 319 **P** **01 02 00.1 +0.9**
FPAL Fort Paine 79.77 306 P **P** **01 01 59.4 0.0**
BERG Berg Lake 79.82 352 IAMs_20 IAMs_20 01 37 11.6
comp=Z,2µm,21.0s
MESA MESA 79.83 351 P **P** **01 01 59.3 -0.2**
MESA IAmb IAmb 01 02 10.4
comp=Z,76nm,1.2s
MESA IAMs_20 IAMs_20 01 36 49.5
comp=Z,1µm,22.0s
MESA MESA 79.83 351 P **P** **01 02 00.3 +0.8**
baz=14
SLM Saint Louis 79.84 312 P **P** **01 01 59.7 +0.1**
SLM IAmb IAmb 01 02 12.0
comp=Z,86nm,1.1s
SLM Saint Louis 79.84 312 P **P** **01 01 59.7 +0.1**
SLM pmax pmax
comp=Z,86nm,1.1s
YSS Yuzhno-Sakhali 79.84 36 P **P** **01 01 58.9 -0.5**
YSS Yuzhno-Sakhali 79.84 36 *e*P **P** **01 01 57.7 -1.8**
YSS *e* 01 02 08.1
YSS *e* 01 05 00.3
YSS *e*PPP PPP 01 06 59.1
YSS *e*S **S** **01 11 55.1 -6.9**
YSS pmax pmax
comp=Z,20nm,0.9s
YSS MLR MLR
comp=N,4µm,15.0s
YSS MLR MLR
comp=Z,6µm,15.0s
SIUC Southern Illin 79.86 311 P **P** **01 01 59.5 -0.2**
SIUC IAmb IAmb 01 02 09.6
comp=Z,70nm,1.0s
EYAK Cordova Ski Ar 79.87 353 IAMs_20 IAMs_20 01 35 34.4
comp=Z,2µm,21.0s
EYAK Cordova Ski Ar 79.87 353 P **P** **01 02 00.2 +0.9**
baz=11
S44A Carbondale 79.90 311 P **P** **01 01 59.6 -0.3**
S44A IAmb IAmb 01 02 09.1
comp=Z,90nm,1.1s
S44A IAMs_20 IAMs_20 01 36 08.4
comp=Z,2µm,19.0s
456A Hilliard 79.92 301 P **P** **01 01 59.8 -0.4**
456A IAmb IAmb 01 02 10.5
comp=Z,147nm,1.4s
RAGM Ragged Mountai 79.93 353 P **P** **01 02 00.4 +0.6**
RAGM IAmb IAmb 01 02 10.5
comp=Z,84nm,1.3s
T45A Paducah 79.99 310 IAMs_20 IAMs_20 01 35 55.9
comp=Z,2µm,20.0s
M16K Timber Creek 80.03 360 P **P** **01 02 00.6 +0.3**
M16K IAmb IAmb 01 02 11.4
comp=Z,68nm,0.9s
M16K Timber Creek 80.03 360 P **P** **01 02 01.6 +1.3**
baz=0.3,SNR=21
BGLC Bering Glacier 80.04 352 P **P** **01 02 01.3 +1.0**
baz=13
N38A Joes South For 80.05 315 P **P** **01 02 00.5 -0.2**
N38A IAMs_20 IAMs_20 01 37 26.0
comp=Z,2µm,20.0s
CAPN Captain Cook N 80.05 356 P **P** **01 02 00.5 +0.2**
baz=6.5
HIN Hinchinbrook I 80.09 354 IAMs_20 IAMs_20 01 35 28.2
comp=Z,2µm,21.0s
WVT Waverly 80.09 309 IAMs_20 IAMs_20 01 36 16.6
comp=Z,2µm,18.0s
SUCK Suckling Hills 80.14 352 P **P** **01 02 01.2 +0.3**
SUCK IAmb IAmb 01 02 12.1
comp=Z,78nm,1.1s
N19K Bonanza Creek 80.16 358 P **P** **01 02 00.9 -0.2**
N19K Bonanza Creek 80.16 358 P **P** **01 02 02.0 +0.9**
baz=3.8
O22K Cooper Landing 80.25 355 P **P** **01 02 01.8 +0.4**
baz=7.6
SLKM Skilak Lake 80.26 355 P **P** **01 02 00.9 -0.7**
SLKM IAmb IAmb 01 02 11.7
comp=Z,76nm,1.1s
P40A Paris 80.26 314 P **P** **01 02 02.0 +0.1**
P40A IAMs_20 IAMs_20 01 37 28.8
comp=Z,2µm,20.0s
M14K Bethel 80.28 1 P **P** **01 02 02.4 +0.8**
M14K IAmb IAmb 01 02 12.1
comp=Z,72nm,0.9s
M14K IAMs_20 IAMs_20 01 41 42.1
comp=Z,1µm,19.0s
M14K Bethel 80.28 1 P **P** **01 02 02.2 +0.7**
baz=358,SNR=12

S34M Telegraph Cree 80.28 345 P **P** **01 02 02.2 +0.6**
S34M IAmb IAmb 01 02 13.3
comp=Z,76nm,1.2s
S34M IAMs_20 IAMs_20 01 43 23.4
comp=Z,2µm,18.0s
S34M Telegraph Cree 80.28 345 P **P** **01 02 03.4 +1.7**
baz=22,SNR=19
N18K Kilae Creek 80.33 358 **P** **01 02 02.4 +0.5**
N18K Kilae Creek 80.33 358 P **P** **01 02 03.2 +1.3**
baz=2.7,SNR=12
BESE Bessie Mountai 80.34 347 P **P** **01 02 02.6 +0.5**
BESE IAmb IAmb 01 02 13.3
comp=Z,79nm,1.1s
M15K Kasigluk River 80.35 1 P **P** **01 02 02.7 +0.7**
baz=359
KAIM Kayak Island 80.35 352 P **P** **01 02 03.6 +1.5**
baz=12
152A Waverly Hall 80.42 304 IAMs_20 IAMs_20 01 39 46.8
comp=Z,1µm,19.0s
QZH2 Quanzhou 80.44 66 P **P** **01 02 01.8 -1.3**
QZH2 PP **PP** **01 05 03.1 -2.8**
QZH2 S **S** **01 12 08.8 -0.2**
QZH2 SS **SS** **01 17 24.8 +4.6**
QZH2 pmax pmax
comp=Z,43nm,0.7s
QZH2 pmax pmax
comp=Z,830nm,6.2s
QZH2 L L
comp=Z,2µm,21.0s
QZH2 L L
comp=Z,890nm,12.4s
QZH2 L L
comp=Z,1µm,14.8s
TIGA Tifton 80.49 303 IAMs_20 IAMs_20 01 37 27.7
comp=Z,1µm,20.0s
N17K Nushagak Hills 80.51 359 P **P** **01 02 04.1 +1.3**
baz=1.7,SNR=19
M11K Mekoryuk 80.51 3 P **P** **01 02 04.1 +1.3**
baz=355
PBSI Pulau Batu 80.53 98 P **P** **01 02 03.3 -0.4**
comp=Z,3µmcomp=Z,144nm,0.8s
P23K Montague Islan 80.56 354 P **P** **01 02 03.6 +0.5**
baz=9.4
R32K Eaglecrest 80.58 347 IAMs_20 IAMs_20 01 42 58.2
comp=Z,1µm,18.0s
R32K Eaglecrest 80.58 347 P **P** **01 02 04.9 +1.6**
baz=19,SNR=6.6
N16K Nishlik Lake 80.58 360 P **P** **01 02 04.7 +1.4**
baz=5.5,SNR=13
M13K Dall Lake 80.59 2 P **P** **01 02 04.5 +1.3**
baz=357
SEW Seward 80.61 355 P **P** **01 02 03.6 +0.3**
baz=7.8
X48A Hartselle 80.72 307 IAMs_20 IAMs_20 01 38 13.5
comp=Z,2µm,19.0s
PETK Petropavlovsk- 80.77 25 P **P** **01 02 03.6 -0.8**
comp=Z,10nm,1.0s,baz=90,slow=1.8,SNR=3.7
PETK LR LR 01 42 40.2
comp=Z,2µm,18.5s,baz=318,slow=39
comp=Z,10nm,1.0s
O19K Port Alsworth 80.77 357 P **P** **01 02 04.2 0.0**
baz=4.0,SNR=6.1
CCM Cathedral Cave 80.81 312 IAMs_20 IAMs_20 01 37 01.5
comp=Z,2µm,19.0s
CCM Cathedral Cave 80.81 312 P **P** **01 02 05.3 +0.4**
N15K Kwethluk River 80.88 0 P **P** **01 02 05.9 +1.0**
baz=359
T35M Bob Quinn 80.97 344 P **P** **01 02 07.0 +1.6**
baz=22,SNR=18
MNSI Mandailing Nat 80.99 96 P **P** **01 02 04.7 -1.5**
comp=Z,3µmcomp=Z,74nm,0.9s
P38A Dawn 81.02 314 IAMs_20 IAMs_20 01 36 47.9
comp=Z,2µm,20.0s
Q23K Middleton Isla 81.03 353 P **P** **01 02 05.7 0.0**
baz=10
BRLK Bradley Lake 81.04 356 IAMs_20 IAMs_20 01 41 58.6
comp=Z,1µm,21.0s
BRSE Bradley Lake S 81.05 356 P **P** **01 02 06.0 +0.2**
baz=6.8,SNR=6.7
JANB Januaria 81.06 242 *e*P **P** **01 02 07.5 +1.1**
N14K Kuskokwak Cree 81.11 1 IAMs_20 IAMs_20 01 42 07.2
comp=Z,1µm,20.0s
N14K Kuskokwak Cree 81.11 1 P **P** **01 02 06.5 +0.5**
baz=358
O18K Kokh Hills 81.14 358 P **P** **01 02 06.7 +0.4**
baz=3.3,SNR=24
PET Petropavlovsk 81.14 24 *e*P **P** **01 02 04.4 -1.9**
PET *e* 01 05 08.6
PET *e*S **S** **01 12 10.7 -4.7**
PET pmax pmax
comp=Z,600nm,13.3s
PET pmax pmax
comp=Z,400nm,15.5s
S31K Pelican 81.16 348 IAMs_20 IAMs_20 01 43 03.7
comp=Z,1µm,18.0s
S31K Pelican 81.16 348 P **P** **01 02 07.8 +1.5**
baz=18
HOM Homer 81.19 356 P **P** **01 02 06.9 +0.5**
baz=6.0
R40A Maddies Statio 81.24 313 IAMs_20 IAMs_20 01 37 31.7
comp=Z,2µm,20.0s
O17K Koliganek Bris 81.26 359 P **P** **01 02 07.8 +0.9**
baz=1.8,SNR=15
P19K Oil Pt 81.27 357 P **P** **01 02 07.9 +1.0**
baz=4.8
CNPM China Poot 81.30 356 IAMs_20 IAMs_20 01 42 05.1
comp=Z,2µm,21.0s
N35A Tabor 81.30 316 IAMs_20 IAMs_20 01 36 48.1
comp=Z,2µm,21.0s
S32K Killisnoo 81.35 347 P **P** **01 02 08.5 +1.1**
baz=19,SNR=5.7
BSFB Barra de Sao F 81.42 237 *e*P **P** **01 02 08.9 +0.7**
O16K Kokwok River B 81.46 359 P **P** **01 02 08.5 +0.6**
baz=1.0
RIB01 Linhares ES 81.47 237 *e*P **P** **01 02 09.5 +1.0**
SJMB Sao Joao De Ma 81.55 238 *e*P **P** **01 02 08.8 -0.1**
BOAV Boa Vista 81.59 266 P **P** **01 02 11.2 +1.8**
comp=Z,2µmcomp=Z,49nm,2.4s
BOAV Boa Vista 81.59 266 *e*P **P** **01 02 10.6 +1.3**
P18K Big Mountain, 81.60 358 P **P** **01 02 09.4 +0.7**
baz=3.2,SNR=5.1
LRAL Lakeview Retre 81.63 306 IAMs_20 IAMs_20 01 39 04.5
comp=Z,1µm,18.0s
T33K Petersburg 81.67 346 P **P** **01 02 10.0 +1.0**
baz=20
O14K Tigyukauivet M 81.79 1 IAMs_20 IAMs_20 01 42 38.3
comp=Z,1µm,21.0s
O14K Tigyukauivet M 81.79 1 P **P** **01 02 10.2 +0.6**
baz=358
P17K Kvichak River 81.83 358 P **P** **01 02 10.2 +0.4**
baz=2.3
553A Crawfordville 81.85 302 IAMs_20 IAMs_20 01 39 38.8
comp=Z,2µm,19.0s
GTBY Guantanamo Bay 81.86 289 P **P** **01 02 12.8 +2.1**
comp=Z,3µmcomp=Z,88nm,1.4s
SIT Sitka 81.87 347 P **P** **01 02 11.2 +1.1**
baz=19
O15K Ungalikthiuk R 81.88 0 P **P** **01 02 10.8 +0.6**
baz=360
ASAJ Asahikawa 81.88 38 LR LR 01 42 42.4
comp=Z,3µm,18.6s,baz=246,slow=39
U35K Hyder 81.91 344 IAMs_20 IAMs_20 01 41 48.4
comp=Z,2µm,19.0s
U35K Hyder 81.91 344 P **P** **01 02 10.8 +0.5**
baz=22
WRAK Wrangell Islan 81.92 345 IAMs_20 IAMs_20 01 38 39.7
comp=Z,2µm,21.0s
WRAK Wrangell Islan 81.92 345 P **P** **01 02 10.4 0.0**
baz=21,SNR=7.9
Q19K Cape Douglas, 82.01 357 P **P** **01 02 09.6 -1.3**
baz=4.5
P16K Nushagak River 82.02 359 P **P** **01 02 11.8 +0.9**
baz=1.1
K30B Basset 82.05 320 IAMs_20 IAMs_20 01 39 07.5
comp=Z,2µm,18.0s
OXF Oxford 82.13 308 IAMs_20 IAMs_20 01 37 37.7
comp=Z,2µm,19.0s
Z47A Carrollton 82.19 307 IAMs_20 IAMs_20 01 39 08.4
comp=Z,2µm,20.0s
ITTB Itaituba 82.21 258 *e*P **P** **01 02 13.5 +0.9**
BGNE Belgrade 82.23 318 IAMs_20 IAMs_20 01 37 25.4
comp=Z,2µm,19.0s
S39A Bolivar 82.25 313 P **P** **01 02 12.6 +0.1**
S39A IAmb IAmb 01 02 22.2
comp=Z,71nm,1.0s
S39A IAMs_20 IAMs_20 01 38 22.5
comp=Z,1µm,20.0s

Q20K Shuyak Island 82.27 356 P **P** **01 02 12.4 +0.2**
baz=5.4
SYI Shuyak Island 82.27 356 IAMs_20 IAMs_20 01 37 29.8
comp=Z,1µm,22.0s
Q18K Katmai Hardscr 82.34 358 P **P** **01 02 10.7 -2.1**
baz=3.4
Q16K King Salmon 82.35 359 P **P** **01 02 12.4 -0.2**
baz=2.1
U33K Whale Pass 82.36 345 P **P** **01 02 13.3 +0.6**
U33K IAMs_20 IAMs_20 01 44 30.3
comp=Z,1µm,19.0s
U33K Whale Pass 82.36 345 P **P** **01 02 12.8 +0.2**
baz=20
PPI Padang Panjang 82.42 97 P **P** **01 02 13.0 -0.7**
comp=Z,2µmcomp=Z,2µmcomp=Z,63nm,0.7s
BKNI Bangkinang 82.42 96 P **P** **01 02 11.6 -2.1**
451A Vernon 82.43 303 IAMs_20 IAMs_20 01 40 48.9
comp=Z,1µm,18.0s
EGMT Eagleton 82.50 329 P **P** **01 02 14.5 +0.7**
YHNB Yeheng 82.56 64 P **P** **01 02 13.7 -0.7**
YHNB IAmb IAmb 01 02 23.3
comp=Z,82nm,1.1s
Y45A Yeager Farm, C 82.65 308 P **P** **01 02 14.6 0.0**
Q17K Contact Creek 82.75 358 P **P** **01 02 13.5 -1.4**
baz=2.7,SNR=13
PDSI Padang 82.75 97 P **P** **01 02 14.1 -1.4**
comp=Z,6µmcomp=Z,210nm,1.0s
V35K Ketchikan 82.79 344 IAMs_20 IAMs_20 01 45 26.8
comp=Z,1µm,20.0s
V35K Ketchikan 82.79 344 P **P** **01 02 15.5 +0.5**
baz=21
FCAR Ozark Folk Cen 82.81 311 P **P** **01 02 15.3 -0.2**
FCAR IAmb IAmb 01 02 23.7
comp=Z,41nm,0.9s
SSLB Suanglung 82.83 65 P **P** **01 02 16.4 +0.6**
SSLB IAmb IAmb 01 02 31.6
comp=Z,153nm,1.9s
BRAL Brewton 82.90 305 IAMs_20 IAMs_20 01 41 14.4
comp=Z,2µm,18.0s
DIAM Diamantina, MG 82.90 240 *e*P **P** **01 02 17.3 +1.1**
CRAG Craig 82.96 345 P **P** **01 02 16.8 +1.0**
baz=20
KSU1 Kansas State U 83.08 316 IAMs_20 IAMs_20 01 39 49.1
comp=Z,2µm,19.0s
RSSD Black Hills 83.09 323 P **P** **01 02 17.6 +0.5**
RSSD IAmb IAmb 01 02 25.9
comp=Z,40nm,0.8s
RSSD Black Hills 83.09 323 P **P** **01 02 17.6 +0.5**
RSSD pmax pmax
comp=Z,40nm,0.9s
RSSD MLR MLR
comp=Z,4µm,21.0s
RSSD Black Hills 83.09 323 P **P** **01 02 17.3 +0.2**
KDAK Kodiak Island 83.11 356 P **P** **01 02 17.0 +0.5**
baz=5.3
146A Union 83.18 307 P **P** **01 02 18.3 +0.8**
146A IAMs_20 IAMs_20 01 39 47.6
comp=Z,2µm,20.0s
JNU Nakatsue 83.28 52 LR LR 01 43 13.6
comp=Z,1µm,19.0s,baz=317,slow=38
WHAR Wooly Hollow 83.32 311 **P** **01 02 18.5 +0.4**
YULB Yu-li 83.32 65 IAMs_20 IAMs_20 01 45 07.4
comp=Z,2µm,18.0s
PLK4 Peulik 4 83.39 358 **P** **01 02 18.9 +0.7**
R17L Mt. Peulik Vol 83.40 358 P **P** **01 02 17.2 -0.9**
baz=2.3
RUBB Prince Rupert 83.43 343 P **P** **01 02 18.9 +0.7**
RUBB IAmb IAmb 01 02 29.4
comp=Z,87nm,1.4s
SPIA Saint Paul Isl 83.45 6 P **P** **01 02 18.9 +0.6**
baz=352
YUK Yuzh-Kuril'sk 83.48 36 *e*P **P** **01 02 20.9 +2.2**
YUK pmax pmax
comp=N,394nm,1.1s
YUK pmax pmax
comp=Z,1µm,1.1s
YUK pmax pmax
comp=E,898nm,1.4s
YUK pmax pmax
comp=Z,2µm,1.7s
YUK MLR MLR
comp=Z,3µm,15.0s
YUK MLR MLR
comp=N,4µm,14.0s
YUK MLR MLR
comp=E,3µm,15.0s
TWG Pinlang 83.53 66 **P** **01 02 19.4 0.0**
PPSI Pulau Pagai 83.58 99 P **P** **01 02 19.1 -0.6**
HHAR Hobbs 83.59 312 **P** **01 02 19.2 -0.3**
HHAR IAmb IAmb 01 02 28.9
comp=Z,42nm,0.9s
NPGB Novo Progresso 83.66 256 *e*P **P** **01 02 19.8 -0.3**
MYKOM Kota Tinggi 83.67 93 P **P** **01 02 19.3 -0.9**
MYKOM IAmb IAmb 01 02 22.6
comp=Z,47nm,1.1s
MYKOM Kota Tinggi 83.67 93 P **P** **01 02 19.4 -0.8**
comp=Z,1µmcomp=Z,44nm,1.1s
OHAK Old Harbor 83.70 357 P **P** **01 02 19.5 -0.1**
OHAK IAmb IAmb 01 02 30.2
comp=Z,58nm,1.0s
OHAK Old Harbor 83.70 357 P **P** **01 02 19.9 +0.2**
baz=4.7,SNR=8.5
UALR University of 83.71 310 P **P** **01 02 20.9 +0.7**
UALR IAmb IAmb 01 02 31.5
comp=Z,48nm,1.1s
U38A Gravette 83.73 313 P **P** **01 02 19.8 -0.4**
U38A IAmb IAmb 01 02 29.8
comp=Z,68nm,0.9s
U38A IAMs_20 IAMs_20 01 40 21.8
comp=Z,2µm,18.0s
BTDF Bukit Timah Da 83.88 93 P **P** **01 02 20.5 -0.8**
SNDB Serra Nova Dou 83.89 249 *e*P **P** **01 02 22.3 +1.1**
CCAR Cane Creek 83.96 309 P **P** **01 02 21.1 -0.3**
BDFB Brasilia 84.03 244 P **P** **01 02 22.7 +0.7**
comp=Z,33nm,1.0s,baz=31,slow=8.4,SNR=24
BDFB LR LR 01 41 38.4
comp=Z,1µm,19.0s,baz=63,slow=37
comp=Z,33nm,1.0s
BDFB Brasilia 84.03 244 P **P** **01 02 22.8 +0.7**
BDFB IAmb IAmb 01 02 31.7
comp=Z,61nm,1.0s
BDFB Brasilia 84.03 244 P **P** **01 02 22.8 +0.7**
BDFB pmax pmax
comp=Z,61nm,1.0s
X40A Basin Creek Fa 84.20 310 P **P** **01 02 22.9 +0.3**
X40A IAmb IAmb 01 02 32.2
comp=Z,50nm,1.1s
KRJI Kerinci 84.27 97 P **P** **01 02 22.6 -0.8**
346A Big Creek Wild 84.28 306 P **P** **01 02 23.5 +0.4**
346A IAMs_20 IAMs_20 01 39 48.8
comp=Z,1µm,20.0s
LYMT Lyon Mountain 84.36 330 **P** **01 02 23.5 -0.1**
VBMS Vicksburg 84.37 307 P **P** **01 02 23.4 -0.1**
HRY Holter Researc 84.39 329 P **P** **01 02 23.7 +0.2**
SII Sitkinak Islan 84.40 357 P **P** **01 02 23.5 +0.2**
SII Sitkinak Islan 84.40 357 P **P** **01 02 23.9 +0.6**
baz=4.0
JTMT Jette 84.48 331 P **P** **01 02 24.9 +1.0**
OGNE Ogallala 84.54 320 P **P** **01 02 25.5 +1.1**
OGNE IAMs_20 IAMs_20 01 40 55.5
comp=Z,2µm,20.0s
143A Socs Landing, 84.58 308 P **P** **01 02 24.8 +0.3**
143A IAMs_20 IAMs_20 01 39 24.5
comp=Z,2µm,19.0s
LLLB Lillooet 84.59 337 P **P** **01 02 24.2 -0.1**
T35A Sooner Cattle 84.59 314 P **P** **01 02 25.4 +0.8**
T35A IAMs_20 IAMs_20 01 40 11.4
comp=Z,1µm,20.0s
MIAR Mount Ida 84.60 311 P **P** **01 02 25.5 +0.8**
MIAR IAmb IAmb 01 02 34.8
comp=Z,76nm,1.1s
MIAR Mount Ida 84.60 311 P **P** **01 02 25.5 +0.8**
MIAR pmax pmax
comp=Z,76nm,1.1s
RLMT Red Lodge 84.63 327 **P** **01 02 24.9 +0.1**
URI Uribia 84.65 281 P **P** **01 02 26.2 +1.0**
R32A Long Quarter, 84.70 317 P **P** **01 02 25.6 +0.5**
R32A IAMs_20 IAMs_20 01 40 25.0
comp=Z,2µm,20.0s
MTDJ Mount Denham 84.71 289 P P 01 02 19.7 -5.9
comp=Z,89nm,1.5s
S14K Fog Glacier 84.78 0 P **P** **01 02 24.3 -0.9**
baz=360
BBB Bella Bella 84.89 341 LR LR 01 42 47.2
comp=Z,1µm,18.9s,baz=35,slow=37
MOBC Moresby Island 84.90 344 P **P** **01 02 26.2 +0.3**

TUL3 **Leonard** **84.91 313** P **P** **01 02 26.7 +0.5**
TUL3 IAMs_20 IAMs_20 01 39 53.9
comp=Z,2µm,19.0s
WLAR **White Oak Lake** **84.92 310** P **P** **01 02 27.3 +1.0**
PMNB **Patos De Minas** **84.94 241** *eP* **P** **01 02 28.2 +1.6**
CBKS **Cedar Bluff** **84.95 317** P **P** **01 02 26.4 -0.1**
CBKS **Cedar Bluff** **84.95 317** P **P** **01 02 26.4 -0.1**
CBKS pmax pmax
comp=Z,562nm,1.8s
CBKS MLR MLR
comp=Z,2µm,19.0s
DIB **Dawson Inlet,** **84.96 344** P **P** **01 02 26.4 +0.4**
Z41A **Richland Creek** **85.04 309** P **P** **01 02 28.9 +2.0**
NEW **Newport** **85.07 333** LR LR 01 44 37.0
comp=Z,1µm,18.3s,baz=34,slow=39
NEW **Newport** **85.07 333** IAMs_20 IAMs_20 01 43 19.6
comp=Z,2µm,19.0s
OK051 **E0350 and S346** **85.07 314** IAMs_20 IAMs_20 01 41 56.0
comp=Z,2µm,19.0s
MJAR **Matsushiro Arr** **85.18 46** P **P** **01 02 26.1 -1.4**
comp=Z,54nm,0.9s,baz=318,slow=4.4,SNR=38
MJAR LR LR 01 42 48.4
comp=Z,2µm,18.4s,baz=320,slow=37
comp=Z,54nm,0.9s
MJAR **Matsushiro Arr** **85.18 46** P **P** **01 02 27.0 -0.6**
MJAR IAmb IAmb 01 02 30.2
comp=Z,51nm,0.9s
MJAR **Matsushiro Arr** **85.18 46** P **P** **01 02 27.0 -0.6**
MJAR pmax pmax
comp=Z,51nm,0.9s
CHIR **Chirikof Islan** **85.19 358** P **P** **01 02 27.8 +0.6**
baz=2.9
MACA **Manacapuru-AM** **85.22 262** *eP* **P** **01 02 29.4 +1.4**
INU **Inuyama** **85.36 47** IAMs_20 IAMs_20 01 44 22.3
comp=Z,2µm,19.0s
SDV **Santo Domingo** **85.37 278** P **P** **01 02 30.1 +1.1**
comp=Z,1µmcomp=Z,132nm,1.2s
SDV **Santo Domingo** **85.37 278** *eP* **P** **01 02 29.3 +0.3**
SHEM **Shemya Is, Ala** **85.51 16** LR LR 01 46 42.1
comp=Z,1µm,18.3s,baz=300,slow=40
MASI **Maura Aman, Be** **85.53 98** P **P** **01 02 29.0 -0.7**
BSCB **Bom Sucesso** **85.54 238** *eP* **P** **01 02 30.7 +1.2**
DSRI **Dabo** **85.66 94** P **P** **01 02 29.5 -0.7**
comp=Z,2µmcomp=Z,38nm,1.0s
SDPT **Sand Point** **85.71 1** P **P** **01 02 29.5 -0.3**
baz=359
IPMB **Ipameri, GO** **85.77 243** *eP* **P** **01 02 31.5 +0.8**
JOW **Kunigami** **85.85 59** LR LR 01 45 26.3
comp=Z,2µm,18.1s,baz=316,slow=39
OK029 **Liberty Lake** **85.93 314** IAMs_20 IAMs_20 01 39 20.7
comp=Z,1µm,21.0s
UBSI **University, Be** **85.95 98** P **P** **01 02 31.1 -0.6**
comp=Z,4µmcomp=Z,245nm,0.9s
KSI **Kapahiang** **86.13 98** P **P** **01 02 31.9 -0.7**
OK038 **West end E0370** **86.14 315** IAMs_20 IAMs_20 01 41 24.3
comp=Z,2µm,20.0s
CHNA **Chernabura Isl** **86.24 0** P **P** **01 02 32.1 -0.3**
baz=360
Z38A **Mt. Pleasant** **86.33 311** IAMs_20 IAMs_20 01 46 43.8
comp=Z,2µm,19.0s
CLDB **Colider** **86.47 253** *eP* **P** **01 02 34.7 +0.5**
PDAR **Pinedale Array** **86.64 326** P **P** **01 02 34.7 -0.3**
comp=Z,4.5nm,0.7s,baz=49,slow=4.7,SNR=31
PDAR LR LR 01 42 34.9
comp=Z,1µm,19.7s,baz=22,slow=36
comp=Z,4.5nm,0.7s
PDAR **Pinedale Array** **86.64 326** P **P** **01 02 34.5 -0.5**
ARAG **Araguaiana, MT** **86.76 247** *eP* **P** **01 02 36.7 +1.1**
UNV **Unalaska Valle** **87.03 4** P **P** **01 02 35.5 -0.7**
baz=354
HAYD **Hayden** **87.39 323** IAMs_20 IAMs_20 01 41 22.6
comp=Z,2µm,22.0s
WMOK **Wichita Mounta** **87.44 314** IAMs_20 IAMs_20 01 44 29.8
comp=Z,2µm,20.0s
HAWA **Hanford** **87.52 334** IAMs_20 IAMs_20 01 41 43.3
comp=Z,2µm,19.0s
Q24A **Divide** **87.59 321** IAMs_20 IAMs_20 01 40 20.6
comp=Z,2µm,21.0s
Z35A **Perchaven, San** **87.60 312** IAMs_20 IAMs_20 01 47 01.2
comp=Z,1µm,18.0s
PDRB **Porto dos Gac** **87.65 253** *eP* **P** **01 02 40.2 +0.3**
NIKH **Nikolski High** **87.74 6** P **P** **01 02 40.5 +0.7**
baz=353
PARB **Paraibuna** **87.74 237** *eP* **P** **01 02 43.1 +2.9**
MDSI **Maura Dua** **87.88 97** P **P** **01 02 38.7 -2.3**
comp=Z,1µmcomp=Z,89nm,0.8s
F07A **Phinny Hill Vi** **88.08 334** **P** **01 02 42.7 +1.1**
F07A IAmb IAmb 01 02 52.7
comp=Z,40nm,1.0s
BB19B **Bebedouro** **88.10 241** *eP* **P** **01 02 43.3 +1.4**
LWLI **Liwa** **88.12 98** P **P** **01 02 41.2 -1.1**
O20A **White River Ci** **88.15 323** P **P** **01 02 41.7 -0.6**
SGC2 **Sao Gabriel da** **88.19 268** P **P** **01 02 43.9 +1.4**
comp=Z,1µmcomp=Z,54nm,1.4s
SJCC **San Jacinto, C** **88.21 281** P **P** **01 02 44.9 +2.2**
SJCC **San Jacinto, C** **88.21 281** P **P** **01 02 46.0 +3.2**
comp=Z,2µmcomp=Z,113nm,1.2s
RTBA **Rita Blanca** **88.31 318** P **P** **01 02 42.8 -0.2**
RTBA IAmb IAmb 01 02 50.6
comp=Z,28nm,0.9s
RCLB **Rio Claro- Sao** **88.36 239** *eP* **P** **01 02 44.9 +1.8**
VAO **Valinhos** **88.39 238** *eP* **P** **01 02 40.2 -3.1**
HNVL **Huntsville, TX** **88.40 309** P **P** **01 02 43.8 +0.4**
ITRB **Iturama** **88.42 243** *eP* **P** **01 02 45.5 +2.0**
KLSI **88.43 97** P **P** **01 02 41.4 -2.3**
TEFE **Tefe** **88.48 264** *eP* **P** **01 02 44.4 +0.5**
PLPT **Palo Pinto** **88.59 312** P **P** **01 02 44.5 +0.3**
KLI **Kotabumi** **88.64 97** P **P** **01 02 43.3 -1.3**
MFID **Camas Ranch** **88.70 330** P **P** **01 02 44.9 +0.2**
KASI **Kota Agung** **88.78 98** P **P** **01 02 44.0 -1.3**
comp=Z,2µmcomp=Z,197nm,0.9s
HVU **Hansel Valley** **88.83 327** P **P** **01 02 45.9 +0.5**
HVU IAmb IAmb 01 02 55.0
comp=Z,33nm,0.9s
HVU **Hansel Valley** **88.83 327** P **P** **01 02 45.9 +0.5**
HVU pmax pmax
comp=Z,33nm,0.9s
F04D **Rainier, OR** **88.95 336** P **P** **01 02 46.5 +0.9**
F04D IAmb IAmb 01 02 56.5
comp=Z,48nm,1.1s
SPB **Sao Paulo** **89.10 238** *eP* **P** **01 02 48.0 +1.4**
RUSC **La Rusia** **89.13 277** P **P** **01 02 47.9 +0.3**
HKT **Hockley** **89.20 309** P **P** **01 02 48.6 +1.6**
HKT S **S** **01 13 34.0 -1.9**
APMT **Aspermont** **89.23 314** P **P** **01 02 47.7 +0.5**
APMT IAmb IAmb 01 02 59.8
comp=Z,37nm,0.8s
SERC **Banco Serrana,** **89.31 288** P **P** **01 02 45.7 -2.1**
comp=Z,169nm,1.2s
DKNS **Dickens** **89.42 315** P **P** **01 02 48.0 -0.3**
TPI **Tanjungpandan** **89.47 94** P **P** **01 02 47.9 -0.7**
comp=Z,2µmcomp=Z,118nm,1.0s
ABTX **Abilene, Hawle** **89.48 313** P **P** **01 02 49.3 +0.8**
ABTX IAMs_20 IAMs_20 01 44 42.9
comp=Z,2µm,20.0s
C2SB **Chapadao do Su** **89.53 245** *eP* **P** **01 02 49.9 +1.2**
G04A **Mulino** **89.55 335** P **P** **01 02 50.0 +1.5**
G04A IAmb IAmb 01 02 58.6
comp=Z,39nm,0.9s
RNCC **Cayo Roncador,** **89.56 287** P **P** **01 02 47.1 -1.9**
comp=Z,225nm,1.0s
BGU **Big Grassy Mou** **89.64 327** P **P** **01 02 49.2 0.0**
BGU IAmb IAmb 01 02 59.5
comp=Z,70nm,1.3s
435B **Jarrell** **89.64 311** P **P** **01 02 49.6 +0.4**
SALV **Santo Antonio** **89.68 249** *eP* **P** **01 02 50.5 +1.1**
SBUM **Sibu** **89.75 87** P **P** **01 02 50.5 +0.7**
SBUM **Sibu** **89.75 87** P **P** **01 02 49.0 -0.9**
MPU **Maple Canyon** **89.78 325** P **P** **01 02 49.8 -0.2**
MPU IAmb IAmb 01 03 00.7
comp=Z,48nm,1.3s
UREC **San Jos de Ur** **89.84 280** P **P** **01 02 52.0 +1.7**
comp=Z,842nmcomp=Z,41nm,1.2s
PV23 **Carpenter Ridg** **89.85 323** P **P** **01 02 50.4 -0.1**
PV11 **David Mesa, Pa** **89.91 323** P **P** **01 02 50.4 -0.2**
PV14 **Lion Creek, Pa** **89.92 323** P **P** **01 02 49.9 -0.8**
PV14 IAmb IAmb 01 03 00.1
comp=Z,64nm,0.9s
PV10 **Paradox Valley** **89.93 323** P **P** **01 02 50.8 +0.1**
I05D **Terrebonne, OR** **89.93 334** P **P** **01 02 50.8 +0.4**
PV19 **Morning Glory** **89.95 323** P **P** **01 02 50.4 -0.4**
PV13 **Radium Mtn., P** **90.00 322** P **P** **01 02 51.1 +0.1**
PV13 IAmb IAmb 01 03 00.4
comp=Z,49nm,0.9s
MLDN **Muldoon** **90.06 310** **P** **01 02 51.9 +0.7**

BRDY **Brady** **90.10 312** P **P** **01 02 51.9 +0.6**
BRDY IAmb IAmb 01 03 01.6
comp=Z,57nm,0.9s
MSTX **Muleshoe** **90.20 316** P **P** **01 02 52.0 +0.1**
PP1B **Ponte de Pedra** **90.21 247** *eP* **P** **01 02 52.8 +1.0**
WIFE **Three Sisters-** **90.34 334** P **P** **01 02 53.5 +1.0**
WIFE IAmb IAmb 01 03 03.3
comp=Z,48nm,1.3s
COR **Corvallis** **90.37 335** IAMs_20 IAMs_20 01 48 27.8
comp=Z,2µm,18.0s
CGJI **Cibinong** **90.38 98** P **P** **01 02 51.3 -1.5**
SBJI **Serang** **90.41 98** P **P** **01 02 52.3 -0.6**
Q16A **Castle Valley** **90.47 324** P **P** **01 02 52.8 -0.4**
Q16A IAmb IAmb 01 03 03.8
comp=Z,97nm,1.6s
APAC **Apartado, Choc** **90.54 281** P **P** **01 02 56.0 +2.4**
comp=Z,85nm,0.7s
MVCO **Mesa Verde** **90.60 322** P **P** **01 02 54.0 +0.1**
WVOR **Wild Horse Val** **90.62 331** P **P** **01 02 54.0 +0.3**
WVOR IAmb IAmb 01 03 04.2
comp=Z,49nm,1.4s
WVOR **Wild Horse Val** **90.62 331** P **P** **01 02 54.0 +0.3**
WVOR pmax pmax
comp=Z,49nm,1.4s
WVOR MLR MLR
comp=Z,2µm,18.0s
PRVC **Isla de Provid** **90.63 288** P P 01 02 44.4 -10
comp=Z,106nm,1.1s
ELK **Elko** **90.72 328** LR LR 01 43 05.8
comp=Z,2µm,21.9s,baz=44,slow=35
ROSC **El Rosal** **90.74 277** P **P** **01 02 56.5 +1.5**
comp=Z,12nm,0.9s,baz=46,slow=5.0,SNR=6.1
ROSC LR LR 01 40 12.8
comp=Z,773nm,21.6s,baz=38,slow=33
comp=Z,12nm,0.9s
ROSC **El Rosal** **90.74 277** P **P** **01 02 55.5 +0.5**
ROSC **El Rosal** **90.74 277** P **P** **01 02 55.5 +0.5**
ROSC pmax pmax
comp=Z,27nm,1.0s
J05D **Fort Rock, OR** **90.82 333** P **P** **01 02 55.8 +1.2**
J05D IAmb IAmb 01 03 05.9
comp=Z,86nm,1.6s
HELC **Santa Helena** **90.82 279** P **P** **01 02 55.7 +0.3**
TEIG **Tepich** **91.06 297** P **P** **01 02 56.9 +1.0**
HMU **Henry Mountain** **91.07 324** P **P** **01 02 56.2 +0.1**
VILB **Vilhena** **91.09 254** *eP* **P** **01 02 56.1 0.0**
DBJI **Dramaga** **91.16 97** P **P** **01 02 55.4 -1.0**
comp=Z,191nm,1.6s
JCT **Junction City** **91.16 312** P **P** **01 02 57.4 +1.1**
JCT IAMs_20 IAMs_20 01 43 34.5
comp=Z,2µm,21.0s
JCT **Junction City** **91.16 312** P **P** **01 02 57.4 +1.1**
JCT pmax pmax
comp=Z,277nm,1.9s
JCT MLR MLR
comp=Z,2µm,21.0s
735A **Kenedy** **91.18 309** **P** **01 02 57.2 +0.9**
K05A **Summer Lake** **91.19 333** **P** **01 02 56.8 +0.4**
K05A IAmb IAmb 01 03 07.5
comp=Z,65nm,1.2s
TCRU **Three Creeks R** **91.30 325** **P** **01 02 57.2 +0.1**
ANMO **Albuquerque** **91.38 319** LR LR 01 44 25.3
comp=Z,1µm,18.9s,baz=34,slow=36
ANMO **Albuquerque** **91.38 319** P **P** **01 02 58.1 +0.6**
ANMO **Albuquerque** **91.38 319** P **P** **01 02 57.8 +0.3**
ANMO IAmb IAmb 01 03 07.7
comp=Z,16nm,1.1s
ANMO IAMs_20 IAMs_20 01 39 51.3
comp=Z,2µm,19.0s
ANMO **Albuquerque** **91.38 319** IAMs_20 IAMs_20 01 39 50.7
comp=Z,2µm,19.0s
ANMO **Albuquerque** **91.38 319** IAMs_20 IAMs_20 01 39 50.7
comp=Z,2µm,19.0s
ANMO **Albuquerque** **91.38 319***ce*P **P** **01 02 58.5 +1.0**
ANMO pmax pmax
comp=Z,21nm,2.5s
ANMO MLR MLR
comp=Z,1µm,16.0s
ABQ **Albuquerque** **91.38 319** P **P** **01 02 57.8 +0.3**
TASM **ASL Pad, Albuq** **91.38 319** P **P** **01 02 57.5 0.0**
TASM IAmb IAmb 01 03 07.8
comp=Z,18nm,1.2s
TASM **ASL Pad, Albuq** **91.38 319** P **P** **01 02 58.4 +0.9**
TASM **ASL Pad, Albuq** **91.38 319** P **P** **01 02 57.4 0.0**
TASM IAmb IAmb 01 03 07.8
comp=Z,23nm,1.3s
TASM **ASL Pad, Albuq** **91.38 319** P **P** **01 02 57.8 +0.3**
TASM IAmb IAmb 01 03 07.8
comp=Z,22nm,1.3s
CBOC **Ciudad Bolivar** **91.40 279** P **P** **01 03 00.3 +2.5**
comp=Z,843nmcomp=Z,51nm,1.2s
LDASE **Londrina, Braz** **91.43 241** *eP* **P** **01 02 59.6 +2.1**
SAIC **Isla e San And** **91.44 287** P P 01 02 49.8 -7.9
comp=Z,78nm,1.2s
ODSA **Odessa** **91.48 315** P **P** **01 02 58.8 +1.0**
ODSA IAmb IAmb 01 03 06.3
comp=Z,34nm,0.8s
HNDO **Hondo** **91.56 311** P **P** **01 02 59.2 +1.1**
HNDO IAmb IAmb 01 03 08.3
comp=Z,42nm,1.0s
OZNA **Ozona** **91.59 313** P **P** **01 02 59.8 +1.5**
BBOR **Butler Butte** **91.67 334** P **P** **01 02 58.2 -0.4**
BBOR IAmb IAmb 01 03 08.1
comp=Z,44nm,1.5s
HTMS **Hat Mesa** **91.81 316** P **P** **01 03 00.2 +0.8**
PRAC **Prado** **91.89 276** P **P** **01 02 59.3 -0.6**
PTLB **Pontes e Lacer** **91.91 252** P **P** **01 03 00.9 +1.2**
PTLB IAmb IAmb 01 03 09.0
comp=Z,45nm,1.0s
PTLB **Pontes e Lacer** **91.91 252** *eP* **P** **01 03 00.8 +1.0**
PSUT **Pine Spring** **91.98 326** P **P** **01 03 01.2 +1.0**
PSUT IAmb IAmb 01 03 11.0
comp=Z,40nm,1.0s
LEM **Lembang** **92.00 97** LR LR 01 48 24.5
comp=Z,642nm,18.9s,baz=336,slow=38
TRCB **Terra Rica** **92.07 242** P **P** **01 03 01.7 +1.3**
TRCB **Terra Rica** **92.07 242** *eP* **P** **01 03 02.6 +2.1**
CLNB **Carlsbad** **92.10 316** P **P** **01 03 00.9 +0.2**
KVTX **Kingsville** **92.18 309** IAMs_20 IAMs_20 01 44 45.9
comp=Z,2µm,20.0s
PKCU **Pink Cliffs** **92.19 324** P **P** **01 03 01.3 -0.1**
PLMC **San Jos del P** **92.21 278** P **P** **01 03 04.0 +2.5**
CRNM **Carthage** **92.30 319** P **P** **01 03 02.2 +0.5**
BMNM **Bear Mountains** **92.31 319** P **P** **01 03 01.4 -0.4**
GDL2 **Guadalupe Moun** **92.41 316** P **P** **01 03 02.2 0.0**
DRIO **Del Rio** **92.42 312** P **P** **01 03 02.6 +0.5**
SZCU **Shurtz Canyon** **92.42 325** P **P** **01 03 02.1 -0.2**
SZCU IAmb IAmb 01 03 12.8
comp=Z,41nm,1.3s
BBJI **Bungbulang** **92.42 98** P **P** **01 03 01.7 -0.6**
comp=Z,761nmcomp=Z,44nm,1.5s
833A **Chaparral WMA,** **92.51 310** P **P** **01 03 03.4 +0.8**
833A IAmb IAmb 01 03 13.8
comp=Z,31nm,0.9s
CCUT **Cedar City** **92.58 325** **P** **01 03 03.3 +0.3**
CCUT IAmb IAmb 01 03 13.8
comp=Z,40nm,1.4s
YBH **Yreka Blue Hor** **92.70 333** LR LR 01 47 10.4
comp=Z,94nm,19.0s,baz=288,slow=37
YBH **Yreka Blue Hor** **92.70 333** P **P** **01 03 03.2 -0.1**
YBH **Yreka Blue Hor** **92.70 333** P **P** **01 03 03.2 -0.1**
YBH pmax pmax
comp=Z,15nm,1.4s
PECS **Pecos** **92.78 315** P **P** **01 03 04.5 +0.6**
MYLDM **Lahad Datu** **92.87 81** P **P** **01 03 03.5 -0.9**
comp=Z,30nm,1.3s
SAND **Sanderson** **92.88 313** P **P** **01 03 04.9 +0.6**
SAND IAmb IAmb 01 03 14.5
comp=Z,37nm,1.0s
M03C **McCloud** **92.90 333** P **P** **01 03 04.6 +0.4**
M03C IAmb IAmb 01 03 14.5
comp=Z,57nm,1.3s
PTGB **Pitanga** **92.96 240** *eP* **P** **01 03 06.2 +1.6**
HBVL **Hebbronville** **93.00 309** P **P** **01 03 05.0 +0.2**
M02C **Callahan** **93.05 333** P **P** **01 03 04.9 -0.1**
M02C IAMs_20 IAMs_20 01 47 40.9
comp=Z,1µm,20.0s
HATC **Hat Creek Radi** **93.06 332** P **P** **01 03 05.9 +0.9**
HATC IAmb IAmb 01 03 26.4
comp=Z,48nm,1.4s
HATC IAMs_20 IAMs_20 01 48 18.3
comp=Z,2µm,19.0s
PAHR **Pah Rah Range** **93.25 330** P **P** **01 03 05.4 -0.6**
PAHR IAmb IAmb 01 03 16.6
comp=Z,36nm,1.5s

KVN **Kaiserville** **93.31 329** P **P** **01 03 06.1 -0.2**
KVN **Kaiserville** **93.31 329** P **P** **01 03 06.1 -0.2**
KVN pmax pmax
comp=Z,6.0nm,1.0s
KPJI **Karang Pucung** **93.33 97** P **P** **01 03 05.8 -0.6**
comp=Z,2µmcomp=Z,48nm,1.0s
MNTX **Cornudas Mount** **93.35 316** IAMs_20 IAMs_20 01 44 23.0
comp=Z,1µm,20.0s
ALPN **Alpine** **93.41 314** P **P** **01 03 07.6 +0.7**
PRN **Pahroc Range** **93.44 326** P **P** **01 03 07.4 +0.5**
S11A **Rachel** **93.54 327** P **P** **01 03 07.7 +0.4**
SIV **San Ignacio** **93.68 252** LR LR 01 48 04.2
comp=Z,1µm,18.4s,baz=83,slow=37
AMBA **Amambai (Brazi** **93.78 243** *eP* **P** **01 03 09.4 +1.1**
KHMM **Horse Mountain** **93.82 334** IAMs_20 IAMs_20 01 47 38.0
comp=Z,2µm,19.0s
FLOC **Florencia** **93.82 275** P **P** **01 03 09.4 +0.6**
KHBM **Hayfork Bally** **93.83 333** IAMs_20 IAMs_20 01 48 04.4
comp=Z,2µm,20.0s
MPK **Martis Peak** **93.86 330** P **P** **01 03 08.9 -0.1**
EPT **El Paso** **93.89 317** P **P** **01 03 09.1 +0.1**
EPT IAmb IAmb 01 03 18.8
comp=Z,35nm,0.8s
NVAR **Mina Array Bea** **93.93 329** P **P** **01 03 09.1 -0.1**
comp=Z,3.1nm,0.9s,baz=33,slow=4.0,SNR=14
NVAR PP **PP** **01 06 58.6 +4.5**
comp=Z,0.2nm,0.6s,baz=12,slow=10,SNR=1.6
NVAR PKKPbc **PKKPbc** **01 20 11.8 +0.7**
comp=Z,2.5nm,0.9s,baz=203,slow=5.0,SNR=10.0
NVAR LR LR 01 45 18.9
comp=Z,3µm,21.8s,baz=360,slow=36
comp=Z,3.1nm,0.9s
NVAR **Mina Array Bea** **93.93 329** P **P** **01 03 09.3 +0.1**
121A **Cookes Peak, D** **93.96 318** P **P** **01 03 09.9 +0.6**
JCC **Jacoby Creek,** **93.97 334** IAMs_20 IAMs_20 01 45 41.1
comp=Z,2µm,22.0s
BBSD **Serra de San D** **94.10 251** *eP* **P** **01 03 09.6 -0.3**
O02D **Mt. Diablo Mer** **94.11 333** P **P** **01 03 10.5 +0.7**
TX31 **Lajitas Ar. Si** **94.22 314** P **P** **01 03 10.5 0.0**
TX31 IAmb IAmb 01 03 20.6
comp=Z,37nm,0.9s
TXAR **Lajitas Array** **94.22 314** P **P** **01 03 11.7 +1.1**
comp=Z,15nm,0.9s,baz=64,slow=3.9,SNR=32
TXAR PP **PP** **01 07 01.3 +4.7**
comp=Z,1.8nm,1.0s,baz=49,slow=7.1,SNR=3.0
TXAR PKKPbc **PKKPbc** **01 20 09.7 -0.3**
comp=Z,1.0nm,0.8s,baz=190,slow=5.1,SNR=6.1
TXAR LR LR 01 46 29.0
comp=Z,1µm,18.8s,baz=14,slow=36
comp=Z,15nm,0.9s
TXAR **Lajitas Array** **94.22 314** P **P** **01 03 11.3 +0.7**
TXAR **Lajitas Array** **94.22 314** P **P** **01 03 11.3 +0.7**
TXAR 01 07 01.3
X16A **Lo Mia Camp, P** **94.26 322** P **P** **01 03 11.4 +0.7**
TPNV **Topopah Spring** **94.34 327** P **P** **01 03 10.8 -0.2**
TPNV **Topopah Spring** **94.34 327** P **P** **01 03 10.8 -0.2**
TPNV pmax pmax
comp=Z,17nm,1.4s
TPNV MLR MLR
comp=Z,2µm,19.0s
BOAB **BOACO BROADBAND** **94.40 290** P **P** **01 03 11.6 +0.2**
BOAB IAMs_20 IAMs_20 01 48 35.4
comp=Z,2µm,19.0s
JCJ **Chichijima** **94.41 50** LR LR 01 49 39.3
comp=Z,872nm,18.1s,baz=319,slow=38
GMN **Gold Mountain** **94.47 328** P **P** **01 03 11.1 -0.6**
TGUH **Tegucigalpa,Un** **94.50 292** P P 01 03 00.8 -11
comp=Z,641nmcomp=Z,30nm,1.0s
SUTB **Sutter Butte** **94.58 332** P **P** **01 03 11.1 -0.8**
SUTB IAmb IAmb 01 03 21.3
comp=Z,42nm,1.6s
SUTB IAMs_20 IAMs_20 01 45 05.3
comp=Z,2µm,21.0s
DUN6 **Lazy B Ranch** **94.61 319** **P** **01 03 12.6 +0.3**
DSP **Deep Springs** **94.70 328** P **P** **01 03 12.8 +0.4**
V12A **Nelson** **94.76 325** P **P** **01 03 12.8 -0.1**
V12A IAmb IAmb 01 03 23.6
comp=Z,33nm,1.3s
GRAC **Grapevine Rang** **94.77 327** P **P** **01 03 13.3 +0.4**
GRAC IAmb IAmb 01 03 23.0
comp=Z,30nm,1.1s
KCPM **Cahto Peak** **94.82 333** IAMs_20 IAMs_20 01 46 03.7
comp=Z,1µm,19.0s
W13A **Hualapai Mount** **94.84 324** P **P** **01 03 13.5 +0.1**
WELL **Weller Preserv** **94.87 330** IAMs_20 IAMs_20 01 48 17.2
comp=Z,1µm,19.0s
MDPB **Devils Postpil** **94.93 329** P **P** **01 03 13.9 0.0**
FURC **Furnace Creek,** **95.01 327** IAMs_20 IAMs_20 01 49 15.1
comp=Z,1µm,18.0s
CMB **Columbia Colle** **95.09 330** P **P** **01 03 13.7 -0.6**
CMB IAMs_20 IAMs_20 01 48 49.1
comp=Z,952nm,19.0s
CMB **Columbia Colle** **95.09 330** P **P** **01 03 13.7 -0.6**
CMB pmax pmax
comp=Z,11nm,1.2s
CMB MLR MLR
comp=Z,1µm,19.0s
MNRC **McLaughlin Min** **95.13 332** P **P** **01 03 15.3 +0.9**
MNRC IAmb IAmb 01 03 25.7
comp=Z,40nm,1.4s
GWY **Greenwater Val** **95.16 327** P **P** **01 03 15.4 +0.6**
GWY IAmb IAmb 01 03 25.0
comp=Z,21nm,0.9s
SHOC **Shoshone, Teco** **95.24 326** P **P** **01 03 15.3 +0.3**
SHOC IAmb IAmb 01 03 25.9
comp=Z,72nm,1.9s
JTS **Las Juntas de** **95.30 288** LR LR 01 42 55.3
comp=Z,348nm,18.6s,baz=39,slow=33
GDXM **Geysers** **95.32 332** P **P** **01 03 16.2 +0.8**
Y14A **Wickenburg** **95.40 323** P **P** **01 03 17.0 +1.2**
QSM **Queen of Sheba** **95.44 327** P **P** **01 03 17.3 +1.4**
QSM IAmb IAmb 01 03 26.7
comp=Z,38nm,1.7s
CWC **Cottonwood Cre** **95.54 328** P **P** **01 03 17.8 +1.3**
CWC IAmb IAmb 01 03 27.0
comp=Z,40nm,1.9s
PCJI **Pacitan** **95.60 96** P **P** **01 03 16.2 -0.6**
ESQI **Esquipulas** **95.64 294** P **P** **01 03 16.3 -0.9**
ESQI IAmb IAmb 01 03 26.8
comp=Z,39nm,1.0s
TUC **Tucson** **95.65 320** P **P** **01 03 16.8 -0.2**
TUC **Tucson** **95.65 320** P **P** **01 03 16.8 -0.2**
TUC pmax pmax
comp=Z,13nm,1.2s
TUC MLR MLR
comp=Z,3µm,18.0s
MTO3 **Montecristo** **95.76 294** P **P** **01 03 18.1 +0.2**
MTO3 IAmb IAmb 01 03 26.9
comp=Z,30nm,1.0s
CLC **China Lake** **95.87 327** P **P** **01 03 18.0 0.0**
CLC **China Lake** **95.87 327** P **P** **01 03 18.0 0.0**
CLC pmax pmax
comp=Z,7.0nm,0.9s
DANC **Danby, Needles** **95.90 325** IAMs_20 IAMs_20 01 47 55.0
comp=Z,2µm,21.0s
MCCM **Marconi Confer** **95.94 332** IAMs_20 IAMs_20 01 45 58.3
comp=Z,2µm,22.0s
GSC **Goldstone, Bar** **95.97 326** P **P** **01 03 17.6 -0.8**
GSC **Goldstone, Bar** **95.97 326** P **P** **01 03 17.6 -0.8**
GSC pmax pmax
comp=Z,13nm,1.1s
CCCA **Chr Cany lake** **96.02 327** P **P** **01 03 18.0 -0.6**
CCCA IAmb IAmb 01 03 29.2
comp=Z,30nm,1.4s
APG **El Apazote** **96.13 295** LR LR 01 43 18.4
comp=Z,43nm,20.0s,baz=87,slow=33
MHC **Mount Hamilton** **96.18 331** P **P** **01 03 19.5 +0.1**
MHC **Mount Hamilton** **96.18 331** P **P** **01 03 19.5 +0.1**
MHC pmax pmax
comp=Z,22nm,1.3s
MHC MLR MLR
comp=Z,2µm,18.0s
LRMC **Laurel Mtn Rad** **96.19 327** P **P** **01 03 19.8 +0.3**
LRMC IAMs_20 IAMs_20 01 47 29.5
comp=Z,1µm,19.0s
IRM **Iron Mountain** **96.20 324** P **P** **01 03 19.6 +0.2**
IRM IAmb IAmb 01 03 30.9
comp=Z,46nm,1.5s
BLYC **Blythe** **96.26 324** P **P** **01 03 20.5 +0.9**
BLYC IAmb IAmb 01 03 30.3
comp=Z,46nm,1.6s
CEVE **Cerro Verde** **96.33 293** P **P** **01 03 24.0 +3.5**
ISA **Isabella, Lake** **96.37 328** P **P** **01 03 20.8 +0.6**
ISA IAmb IAmb 01 03 30.6
comp=Z,21nm,1.0s

ISA				IAMs_20	IAMs_20	01 49 02.1		
	comp=Z,1μm,20.0s							
ISA	**Isabella, Lake**	**96.37**	**328**	P	**P**	**01 03 20.8**	**+0.6**	
ISA				pmax	pmax			
	comp=Z,21nm,1.0s							
ISA				MLR	MLR			
	comp=Z,1μm,20.0s							
FARB	**Farallon Islan**	**96.38**	**332**	IAMs_20	IAMs_20	01 47 23.9		
	comp=Z,1μm,21.0s							
SAO	**San Andreas Ge**	**96.61**	**330**	P	**P**	**01 03 22.4**	**+1.3**	
SAO				IAmb	IAmb	01 03 31.8		
	comp=Z,22nm,1.1s							
SAO	**San Andreas Ge**	**96.61**	**330**	P	**P**	**01 03 22.5**	**+1.3**	
SAO				pmax	pmax			
	comp=Z,22nm,1.2s							
SAO				MLR	MLR			
	comp=Z,2μm,19.0s							
BBGB	**Big Mountain B**	**96.61**	**330**	P	**P**	**01 03 21.6**	**+0.2**	
BBGB				IAmb	IAmb	01 03 32.9		
	comp=Z,25nm,1.0s							
113A	**Mohawk Valley,**	**96.72**	**323**	P	**P**	**01 03 21.8**	**+0.1**	
113A				IAmb	IAmb	01 03 31.7		
	comp=Z,53nm,1.9s							
BC3	**Big Chuckawall**	**96.76**	**324**	P	**P**	**01 03 21.4**	**-0.6**	
BC3				IAmb	IAmb	01 03 32.6		
	comp=Z,26nm,1.4s							
BC3				IAMs_20	IAMs_20	01 48 43.7		
	comp=Z,2μm,20.0s							
OTAV	**Otavalo**	**96.83**	**276**	P	**P**	**01 03 23.4**	**+0.4**	
OTAV				IAmb	IAmb	01 03 32.7		
	comp=Z,35nm,1.3s							
OTAV	**Otavalo**	**96.83**	**276**	P	**P**	**01 03 23.5**	**+0.4**	
OTAV				pmax	pmax			
	comp=Z,35nm,1.3s							
OTAV	**Otavalo**	**96.83**	**276**	*e*P	**P**	**01 03 24.0**	**+0.9**	
PMPB	**Monarch Peak**	**96.84**	**329**	P	**P**	**01 03 22.9**	**+0.6**	
PMPB				IAmb	IAmb	01 03 34.4		
	comp=Z,25nm,0.9s							
214A	**Organ Pipe Nat**	**96.93**	**322**	P	**P**	**01 03 22.8**	**0.0**	
TPO	**Tropico Hills**	**96.94**	**327**	P	**P**	**01 03 23.4**	**+0.6**	
TPO				IAmb	IAmb	01 03 34.3		
	comp=Z,28nm,1.2s							
PKD	**Bear Valley Ra**	**96.97**	**329**	P	**P**	**01 03 22.6**	**-0.3**	
PKD				IAmb	IAmb	01 03 33.5		
	comp=Z,52nm,1.7s							
GLA	**Glamis**	**96.98**	**324**	P	**P**	**01 03 22.6**	**-0.4**	
GLA				IAmb	IAmb	01 03 32.7		
	comp=Z,26nm,1.2s							
GLA	**Glamis**	**96.98**	**324**	P	**P**	**01 03 22.6**	**-0.4**	
GLA				pmax	pmax			
	comp=Z,26nm,1.2s							
GLA				MLR	MLR			
	comp=Z,2μm,19.0s							
MPSI	**Mapaga**	**97.02**	**84**	P	**P**	**01 03 22.4**	**-0.9**	
	comp=Z,19nm,1.1s							
DAV	**Davao City (W)**	**97.03**	**75**	LR	LR	01 55 26.9		
	comp=Z,360nm,18.1s,baz=320,slow=41							
PFO	**Pinyon Flats O**	**97.25**	**325**	LR	LR	01 49 07.3		
	comp=Z,2μm,20.3s,baz=22,slow=37							
PFO	**Pinyon Flats O**	**97.25**	**325**	P	**P**	**01 03 24.2**	**-0.1**	
PFO				IAmb	IAmb	01 03 34.9		
	comp=Z,25nm,1.1s							
PFO	**Pinyon Flats O**	**97.25**	**325**	P	**P**	**01 03 24.2**	**-0.1**	
PFO				pmax	pmax			
	comp=Z,25nm,1.1s							
PFO				MLR	MLR			
	comp=Z,2μm,20.0s							
DNR	**Dunn Ranch,Anz**	**97.36**	**325**	P	Pdif	01 03 25.3	+0.4	
DNR				IAmb	IAmb	01 03 34.0		
	comp=Z,23nm,1.1s							
CZSB	**Cruzeiro do Su**	**97.36**	**266**	*e*P	**P**	**01 03 24.2**	**-0.6**	
OSI	**Osito Audit: C**	**97.38**	**327**	P	Pdif	01 03 25.1	+0.3	
PASC	**Pasadena Art C**	**97.53**	**327**	IAMs_20	IAMs_20	01 48 33.8		
	comp=Z,2μm,22.0s							
CPUP	**Villa Florida**	**97.60**	**242**	P	Pdif	01 03 26.5	+0.8	
	comp=Z,0.6nm,0.6s,baz=58,slow=6.9,SNR=3.1							
CPUP				PP	**PP**	**01 07 24.3**	**+0.6**	
	comp=Z,2.2nm,1.0s,baz=26,slow=7.6,SNR=2.8							
CPUP				LR	LR	01 50 29.8		
	comp=Z,3μm,18.8s,baz=54,slow=37							
	comp=Z,0.6nm,0.6s							
CMIG	**Matias Romero**	**97.74**	**299**	LR	LR	01 45 54.2		
	comp=Z,507nm,20.7s,baz=30,slow=34							
BAR	**Barrett**	**98.13**	**325**	P	**P**	**01 03 28.1**	**-0.1**	
BAR				IAmb	IAmb	01 03 38.6		
	comp=Z,14nm,1.0s							
CPE	**Camp Elliot**	**98.15**	**325**	IAMs_20	IAMs_20	01 49 24.3		
	comp=Z,2μm,21.0s							
CBX	**Cerro Bola**	**98.44**	**324**	P	**P**	**01 03 28.3**	**-1.4**	
CBX				IAmb	IAmb	01 03 40.0		
	comp=Z,14nm,0.9s							
ZAIG	**Zacatecas**	**98.55**	**309**	P	**P**	**01 03 29.7**	**-0.8**	
UNM	**Universidad Na**	**98.97**	**304**	IAMs_20	IAMs_20	01 48 35.1		
	comp=Z,897nm,20.0s							
KHKI	**Kahang-Kahang**	**99.13**	**93**	P	**Pdif**	**01 03 32.0**	**-0.8**	
LPAZ	**La Paz**	**99.14**	**257**	P	**Pdif**	**01 03 34.0**	**+0.5**	
	comp=Z,0.8nm,0.6s,baz=109,slow=5.1,SNR=4.3							
LPAZ				PP	**PP**	**01 07 37.0**	**+0.7**	
	comp=Z,3.1nm,1.1s,baz=42,slow=10.0,SNR=3.6							
LPAZ				LR	LR	01 48 44.8		
	comp=Z,561nm,19.8s,baz=52,slow=36							
	comp=Z,0.8nm,0.6s							
PB18	**Visviri**	**100.96**	**256**	IAMs_20	IAMs_20	01 53 26.5		
	comp=Z,914nm,21.0s							
GO01	**Chusmiza**	**102.00**	**254**	IAMs_20	IAMs_20	01 49 48.4		
	comp=Z,1μm,22.0s							
SLBS	**Sierra La Lagu**	**102.12**	**315**	IAMs_20	IAMs_20	01 49 40.7		
	comp=Z,1μm,20.0s							
PB11	**IPOC Station P**	**102.41**	**255**	IAMs_20	IAMs_20	01 47 43.0		
	comp=Z,1μm,21.0s							
MSAI	**Masohi**	**106.30**	**81**	P	**Pdif**	**01 04 03.6**	**-1.1**	
AC05	**El Transito**	**108.22**	**247**	IAMs_20	IAMs_20	01 52 56.2		
	comp=Z,1μm,19.0s							
MBWA	**Marble Bar**	**109.98**	**101**	IAMs_20	IAMs_20	01 56 34.5		
	comp=Z,1μm,20.0s							
SNAA	**Sanae**	**111.91**	**188**	PP	**PP**	**01 09 11.5**	**+2.3**	
	comp=Z,13nm,1.2s,baz=56,slow=11,SNR=3.7							
PLCA	**Paso Flores**	**114.93**	**237**	PKP	PKPdf	01 08 31.7	-0.1	
	comp=Z,1.7nm,0.6s,baz=102,slow=2.5,SNR=6.7							
WRA	**Warramunga Arr**	**120.54**	**92**	PKP	**PKPdf**	**01 08 41.5**	**-1.6**	
	comp=Z,5.5nm,0.8s,baz=298,slow=2.1,SNR=21							
WRA				PP	**PP**	**01 10 11.4**	**+0.9**	
	comp=Z,2.9nm,0.9s,baz=312,slow=6.6,SNR=5.7							
WRA	**Warramunga Arr**	**120.54**	**92**		**PKPdf**	**01 08 41.7**	**-1.5**	
ASAR	**Alice Springs**	**122.25**	**95**	PKP	**PKPdf**	**01 08 44.6**	**-1.7**	
	comp=Z,12nm,0.9s,baz=325,slow=1.7,SNR=34							
ASAR				PKKPbc	**PKKPab**	**01 18 45.7**	**+3.8**	
	comp=Z,1.3nm,1.1s,baz=124,slow=3.9,SNR=6.0							
QSPA	**South Pole Qui**	**129.15**	**180**	PKP	**PKPdf**	**01 08 58.1**	**-0.2**	
	comp=Z,14nm,1.1s,baz=255,slow=0.9,SNR=17							
QSPA	**South Pole Qui**	**129.15**	**180**		**PKiKP**	**01 08 58.6**	**-0.3**	
CTA	**Charters Tower**	**129.85**	**84**	PKP	**PKPdf**	**01 09 00.7**	**-0.3**	
	comp=Z,8.1nm,0.7s,baz=6.1,slow=0.5,SNR=6.0							
STKA	**Stephens Creek**	**132.21**	**100**	PKP	**PKPdf**	**01 09 04.6**	**-0.4**	
	comp=Z,5.8nm,0.9s,baz=286,slow=1.9,SNR=7.3							
VNDA	**Vanda**	**138.37**	**168**	PKP	**PKPdf**	**01 09 15.4**	**+0.3**	
	comp=Z,4.5nm,1.1s,baz=264,slow=7.0,SNR=6.3							
TAOE	**Nuku Hiva Isla**	**145.11**	**325**	*e*PKP2	**PKPbc**	**01 09 23.3**	**-5.3**	
	comp=Z,369nm,24.4s							
TAOE				*e*PP	**PP**	**01 12 44.4**	**-2.4**	
	comp=Z,198nm,24.2s							
TAOE				*e*LR	LR	01 57 02.9		
	comp=Z,769nm,26.8s							
DZM	**Mont Dzumac**	**146.25**	**69**	PKPbc	**PKPdf**	**01 09 30.7**	**-0.2**	
	comp=Z,91nm,1.1s,baz=49,slow=8.8,SNR=12							
MSVF	**Nonsavu**	**150.94**	**49**	PKPbc	**PKPbc**	**01 09 43.2**	**-1.1**	
	comp=Z,56nm,0.9s,baz=230,slow=4.6,SNR=14							
MSVF	**Nonsavu**	**150.94**	**49**		**PKiKP**	**01 09 45.4**	**+0.4**	
AFI	**Afiamalu**	**152.47**	**27**	PKPbc	**PKiKP**	**01 09 48.7**	**+0.5**	
	comp=Z,60nm,0.9s,baz=266,slow=16,SNR=4.9							
PPT2	**Papeete2**	**156.73**	**336**	*e*PKP2	**PKPdf**	**01 09 47.1**	**+0.3**	
	comp=Z,153nm,23.2s							
PPT2				*e*PP	PP	01 13 45.2	-8.1	
	comp=Z,314nm,25.8s							
PPT2				*e*LR	LR	02 02 29.9		
	comp=Z,953nm,24.8s							
PPT2				*e*LR	LR	02 02 35.9		
	comp=Z,858nm,30.0s							
TBI	**Tubuai**	**161.98**	**329**	*e*P	**PKPdf**	**01 09 50.0**	**-2.7**	
	comp=Z,557nm,25.5s							
TBI				*e*PP	**PP**	**01 14 18.5**	**-3.3**	
	comp=Z,1μm,26.2s							
TBI				*e*SS	SS	01 34 32.3	-7.9	
	comp=Z,3μm,31.2s							
TBI				*e*LR	LR	02 04 50.8		
	comp=Z,1μm,31.8s							
TBI				*e*LR	LR	02 04 55.8		
	comp=Z,4μm,28.0s							

*IDC **21** 01:03:14.0±1.6, 10°.98S×167°.64E, h0km, mb4.2/7, mbtmp4.2/8, ML3.8/1, MS3.6/1, Error ellipse: s-maj=48.9km s-min=28.0km az=83.0*

ISC 21 01:03:19.4±1.6, 11°.1S±0°.1×167°.6E±0°.3, h35km, n9, σ1°01/8, mb4.2/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.97**	**186**	Pn	**Pn**	**01 05 53.3**	**-0.8**
	0.6nm,0.3s,baz=97,slow=17,SNR=16						
DZM				Sn	Sn	01 07 43.9	-12
	0.3nm,0.3s,baz=18,slow=15,SNR=1.9						
	7.8nm,0.9s						
MSVF	**Nonsavu**	**12.08**	**124**	LR	LR	01 10 07.1	
	comp=Z,296nm,19.5s,baz=295,slow=34						
WRA	**Warramunga Arr**	**33.19**	**251**	P	**P**	**01 09 53.2**	**+0.1**
	1.7nm,1.0s,baz=81,slow=9.1,SNR=2.3						
	1.7nm,1.0s						
ASAR	**Alice Springs**	**34.41**	**244**	P	**P**	**01 10 05.0**	**+1.3**
	1.2nm,0.7s,baz=76,slow=9.7,SNR=4.4						
	1.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**73.81**	**293**	P	**P**	**01 14 49.5**	**-1.3**
	0.9nm,0.3s,baz=122,slow=4.3,SNR=5.5						
	0.9nm,0.3s						
QSPA	**South Pole Qui**	**78.91**	**180**	P	**P**	**01 15 20.0**	**+0.8**
	5.1nm,1.0s,baz=332,slow=7.6,SNR=7.0						
	5.1nm,1.0s						
SONM	**Songino Array**	**79.79**	**323**	P	**P**	**01 15 24.7**	**+0.5**
	0.9nm,0.9s,baz=132,slow=6.0,SNR=4.1						
	0.9nm,0.9s						
ZALV	**Zalesovo Beam**	**94.67**	**324**	P	**P**	**01 16 36.4**	**-0.3**
	0.6nm,0.6s,baz=131,slow=4.5,SNR=3.9						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**94.81**	**317**	P	**P**	**01 16 37.7**	**+0.1**
	2.1nm,0.8s,baz=97,slow=6.4,SNR=22						
	2.1nm,0.8s						

*NEIC **21** 01:18:29.3±2.5, 17°.73S±0°.09×178°.4W±0°.1, h471km±6km, mb4.2/22, Error ellipse: s-maj=20.0km s-min=6.2km az=54.0*

*IDC **21** 01:18:31.1±1.7, 18°.09S×178°.36W, h509km±18km, mb3.3/9, mbtmp4.1/10, Error ellipse: s-maj=25.0km s-min=15.2km az=148.0*

ISC 21 01:18:30.7±0.5, 17°.8S±0°.1×178°.4W±0°.1, h500km, n93, σ0°87/90, mb4.0/21, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.36**	**271**	P	**P**	**01 19 46.9**	**+2.6**
	168nm,0.7s,baz=119,slow=7.5,SNR=72						
FUNA	**Funafuti**	**9.52**	**346**	P	**P**	**01 20 42.0**	**-1.1**
URZ	**Urewera**	**20.74**	**190**	P	**P**	**01 22 32.3**	**-3.5**
	10nm,0.8s,baz=303,slow=5.5,SNR=5.9						
	10nm,0.8s						
BFZ	**Birch Farm**	**23.25**	**190**	P	**P**	**01 23 00.2**	**+1.8**
CTA	**Charters Tower**	**33.45**	**260**	P	**P**	**01 24 27.9**	**+0.2**
	5.8nm,1.0s,baz=106,slow=4.9,SNR=7.9						
	5.8nm,1.0s						
BBOO	**Buckleboo**	**43.44**	**241**	P	**P**	**01 25 48.8**	**-0.1**
BBOO				IAmb	IAmb	01 25 55.8	
	comp=Z,20nm,1.4s						
WR8	**Warramunga Arr**	**44.48**	**259**	P	**P**	**01 25 56.6**	**-0.6**
WR8				IAmb	IAmb	01 26 08.1	
	comp=Z,12nm,1.4s						
WB0	**Warramunga Arr**	**44.60**	**260**	P	**P**	**01 25 56.3**	**-1.8**
WB0				IAmb	IAmb	01 26 22.9	
	comp=Z,9.6nm,1.2s						
WRA	**Warramunga Arr**	**44.63**	**259**	P	**P**	**01 25 56.8**	**-1.6**
	comp=Z,0.4nm,0.6s,baz=93,slow=6.7,SNR=7.2						
	comp=Z,0.4nm,0.6s						
ASAR	**Alice Springs**	**44.80**	**254**	P	**P**	**01 25 59.4**	**-0.3**
	comp=Z,1.9nm,0.6s,baz=88,slow=8.2,SNR=24						
	comp=Z,1.9nm,0.6s						
ASAR	**Alice Springs**	**44.80**	**254**	P	**P**	**01 25 59.5**	**-0.1**
HULI	**Fort Hunter Li**	**76.09**	**45**	P	**P**	**01 29 27.7**	**+1.1**
KMRM	**Mail Ridge**	**76.95**	**40**	P	**P**	**01 29 32.0**	**+0.6**
KMRM				IAmb	IAmb	01 29 33.4	
	comp=Z,4.9nm,0.7s						
PLK4	**Peulik 4**	**77.37**	**12**	P	**P**	**01 29 33.0**	**-0.2**
PLK4				IAmb	IAmb	01 29 34.1	
	comp=Z,9.0nm,0.8s						
OHAK	**Old Harbor**	**77.64**	**14**	P	**P**	**01 29 34.2**	**-0.3**
MDPB	**Devils Postpil**	**78.42**	**44**	P	**P**	**01 29 40.1**	**+0.5**
YBH	**Yreka Blue Hor**	**78.46**	**39**	P	**P**	**01 29 40.2**	**+0.6**
	comp=Z,0.1nm,0.8s,baz=180,slow=4.5,SNR=5.4						
BEKR	**Beckworth**	**78.83**	**42**	P	**P**	**01 29 42.2**	**+0.5**
PNTR	**Pine Nut**	**78.88**	**43**	P	**P**	**01 29 42.8**	**+0.8**
PNTR				IAmb	IAmb	01 29 43.6	
	comp=Z,5.5nm,0.9s						
O16K	**Kokwok River B**	**78.90**	**10**	P	**P**	**01 29 40.1**	**-1.1**
O16K				IAmb	IAmb	01 30 01.1	
	comp=Z,8.8nm,1.4s						
P18K	**Big Mountain,**	**79.23**	**12**	P	**P**	**01 29 42.6**	**-0.5**
P18K				IAmb	IAmb	01 29 42.9	
	comp=Z,5.1nm,0.7s						
NVAR	**Mina Array Bea**	**79.37**	**44**	P	**P**	**01 29 45.4**	**+0.8**
	comp=Z,1.9nm,0.7s,baz=229,slow=9.6,SNR=14						
	comp=Z,1.9nm,0.7s						
PINE	**Pine Mountain**	**80.73**	**38**	P	**P**	**01 29 52.0**	**+0.4**
PINE				IAmb	IAmb	01 29 52.9	
	comp=Z,4.1nm,0.9s						
G08A	**Pilot Rock**	**82.75**	**38**		**P**	**01 30 02.3**	**+0.6**
TRF	**Thorofare Moun**	**83.92**	**12**	P	**P**	**01 30 06.3**	**-0.9**
TRF				IAmb	IAmb	01 30 07.4	
	comp=Z,5.8nm,0.7s						
F10A	**Beach Ranch, E**	**84.14**	**38**	P	**P**	**01 30 08.4**	**-0.2**
RND	**Reindeer**	**84.18**	**13**	P	**P**	**01 30 08.1**	**-0.3**
Q32M	**Nakina River**	**85.30**	**22**	P	**P**	**01 30 14.8**	**+0.6**
Q32M				IAmb	IAmb	01 30 46.2	
	comp=Z,10nm,1.4s						
ILAR	**Eielson Array**	**85.80**	**13**	P	**P**	**01 30 15.2**	**-1.0**
	comp=Z,0.7nm,0.4s,baz=226,slow=5.1,SNR=11						
	comp=Z,0.7nm,0.4s						
ILAR	**Eielson Array**	**85.80**	**13**	P	**P**	**01 30 16.0**	**-0.2**
TXAR	**Lajitas Array**	**85.96**	**58**	P	**P**	**01 30 17.8**	**-0.2**
	comp=Z,2.2nm,0.8s,baz=220,slow=6.5,SNR=12						
	comp=Z,2.2nm,0.8s						
TXAR	**Lajitas Array**	**85.96**	**58**	P	**P**	**01 30 19.4**	**+1.5**
DRIO	**Del Rio**	**88.46**	**59**	IAmb	IAmb	01 30 31.1	
	comp=Z,5.3nm,1.0s						
PLCA	**Paso Flores**	**91.41**	**134**	P	**P**	**01 30 43.5**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=211,slow=5.9,SNR=4.1						
	comp=Z,0.5nm,0.6s						
YKA	**Yellowknife Ar**	**94.25**	**25**	P	**P**	**01 30 54.0**	**-1.5**
	comp=Z,0.4nm,0.7s,baz=257,slow=5.0,SNR=7.4						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**109.06**	**314**	PKiKP	**PKiKP**	**01 36 02.0**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=134,slow=1.1,SNR=2.9						
MKAR	**Makanchi Array**	**109.06**	**314**		**PKiKP**	**01 36 02.4**	**-0.8**
KURBB	**Kurchatov Arra**	**111.80**	**318**	PKiKP	**PKiKP**	**01 36 07.0**	**-1.1**
	comp=Z,0.1nm,0.5s,baz=106,slow=1.8,SNR=5.4						
BVAR	**Borovoye Array**	**116.76**	**321**	PKP	**PKPdf**	**01 36 16.6**	**-1.0**
	comp=Z,1.1nm,0.7s,baz=64,slow=3.4,SNR=4.1						
ARCES	**ARCESS Array B**	**126.22**	**350**	PKP	**PKPdf**	**01 36 34.7**	**-0.7**
	comp=Z,8.3nm,1.1s,baz=66,slow=3.0,SNR=4.5						
FINES	**FINESS Array B**	**133.09**	**344**	PKP	**PKPdf**	**01 36 48.2**	**-0.3**
	comp=Z,2.3nm,0.8s,baz=266,slow=3.1,SNR=4.9						
AKASG	**Malin Array Be**	**140.47**	**332**	PKP	**PKPdf**	**01 37 03.8**	**+1.3**
	comp=Z,0.3nm,0.4s,baz=34,slow=2.9,SNR=4.6						
ESK	**Eskdalemuir**	**142.39**	**4**	PKPdf	**PKPdf**	**01 37 05.8**	**+0.1**
ILGA	**Ilgaz**	**144.00**	**317**	PKPbc	PKPbc	01 37 09.3	+0.7
BUR08	**Bucovina Ar. S**	**144.51**	**332**		PKPbc	01 37 11.0	+1.2
BURAR	**Bucovina Array**	**144.52**	**332**	PKPab	**PKPdf**	**01 37 10.8**	**+0.9**
BRTR	**Keskin Array B**	**144.71**	**315**	PKP	**PKPdf**	**01 37 11.1**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=140,slow=4.1,SNR=13						
BRTR	**Keskin Array B**	**144.71**	**315**		**PKPdf**	**01 37 10.8**	**+0.3**
OSTC	**Ostas**	**145.30**	**344**	*e*PKP	**PKPbc**	**01 37 13.3**	**+1.3**
CLL	**Collm**	**145.37**	**347**		**PKPdf**	**01 37 11.8**	**+0.7**
CLL	**Collm**	**145.37**	**347**	*i* P	**PKPdf**	**01 37 12.3**	**+1.2**
	comp=Z,7.0nm,0.7s						
STEB	**Steborice**	**145.41**	**341**	*e*PKP	**PKPbc**	**01 37 13.0**	**+0.7**
DPC	**Dobruska-Polom**	**145.45**	**343**	*e*PKP	**PKPbc**	**01 37 13.3**	**+0.8**
KRLC	**Kraliky**	**145.57**	**343**	*e*PKP	**PKPbc**	**01 37 13.4**	**+0.5**
MORC	**Moravsky Berou**	**145.62**	**342**	*e*PKP	**PKPbc**	**01 37 13.4**	**+0.4**
PVCC	**Panska Ves**	**145.74**	**345**	*e*PKP	**PKPbc**	**01 37 14.0**	**+0.7**
HSKC	**Hora Svate Kat**	**145.94**	**346**	*e*PKP	**PKPbc**	**01 37 14.3**	**+0.5**
MMAI	**Mount Meron Ar**	**146.08**	**303**	PKPbc	**PKPbc**	**01 37 15.7**	**+0.8**
	comp=Z,1.8nm,0.6s,baz=40,slow=6.6,SNR=8.9						
PRU	**Pruhonice**	**146.25**	**345**	*e*PKP	**PKPbc**	**01 37 15.1**	**+0.4**
VRAC	**Vranov**	**146.32**	**342**	*e*PKP	**PKPbc**	**01 37 15.4**	**+0.5**
JAVC	**Velka Javorina**	**146.39**	**341**	*e*PKP	**PKPbc**	**01 37 16.6**	**+1.4**
KRUC	**Moravsky**	**146.59**	**342**	*e*PKP	**PKPbc**	**01 37 16.0**	**+0.3**
BORA	**Eskisehir**	**146.73**	**317**		**PKPbc**	**01 37 16.9**	**+0.4**
ZVC	**Zvikov**	**146.84**	**345**	*e*PKP	**PKPbc**	**01 37 16.9**	**+0.5**
KHC	**Kasperske Hory**	**147.28**	**345**	*e*PKP	**PKPbc**	**01 37 18.0**	**+0.4**
CKRC	**Cesky Krumlov**	**147.39**	**344**	*e*PKP	**PKPbc**	**01 37 18.6**	**+0.8**
GEC2	**GERESS Array S**	**147.52**	**345**		**PKPbc**	**01 37 18.6**	**+0.3**
GERES	**GERESS Array B**	**147.52**	**345**	PKPbc	**PKPbc**	**01 37 18.6**	**+0.3**
	comp=Z,2.5nm,0.6s,baz=37,slow=3.7,SNR=17						
CONA	**Conrad Observa**	**147.77**	**342**	*i* PKP	**PKPbc**	**01 37 19.8**	**+0.9**
	comp=Z,4.3nm,0.6s						
RONA	**Rosalia, Austr**	**147.84**	**341**	*i* PKP	**PKPbc**	**01 37 19.9**	**+0.8**
	comp=Z,4.2nm,0.6s						
MOA	**Molln**	**148.29**	**344**	*i* PKP	**PKPbc**	**01 37 20.6**	**+0.4**
	comp=Z,4.7nm,1.2s						
ARSA	**Arzberg**	**148.48**	**342**	*i* PKP	**PKPbc**	**01 37 20.7**	**0.0**
	comp=Z,1.4nm,0.6s						
BIOA	**Bad Ischl, Aus**	**148.60**	**344**	*i* PKP	**PKPbc**	**01 37 20.9**	**-0.1**
	comp=Z,0.5nm,0.4s						
LESA	**Schwarzleotal**	**149.09**	**345**	*i* PKP	**PKPbc**	**01 37 22.2**	**0.0**
	comp=Z,1.8nm,0.4s						
SOKA	**Soboth**	**149.14**	**342**	*i* PKP	**PKPbc**	**01 37 22.4**	**0.0**
	comp=Z,1.1nm,0.4s						
KBA	**Koelnbreinsper**	**149.25**	**344**	*i* PKP	**PKPbc**	**01 37 22.3**	**-0.4**
	comp=Z,3.3nm,0.5s,SNR=5.7						
KBA	**Koelnbreinsper**	**149.25**	**344**	*e*P	**PKPbc**	**01 37 22.3**	**-0.4**
	comp=Z,3.3nm,0.5s,SNR=5.7						
WATA	**Walderalm**	**149.43**	**347**	*i* PKP	**PKPbc**	**01 37 23.2**	**+0.1**
	comp=Z,2.7nm,0.5s						
OBKA	**Obir**	**149.44**	**342**	*i* PKP	**PKPbc**	**01 37 22.8**	**-0.4**
	comp=Z,1.6nm,0.9s						
RETA	**Reutte**	**149.46**	**348**	*i* PKP	**PKPbc**	**01 37 23.3**	**+0.2**
	comp=Z,1.7nm,0.5s						
WTTA	**Wattenberg**	**149.49**	**346**	*i* PKP	**PKPbc**	**01 37 23.7**	**+0.3**
	comp=Z,6.9nm,0.6s,SNR=9.0						
MOTA	**Moosalm**	**149.52**	**347**	*i* PKP	**PKPbc**	**01 37 23.4**	**+0.1**
	comp=Z,6.1nm,1.0s						
MYKA	**Terra Mystica**	**149.58**	**343**	*i* PKP	**PKPbc**	**01 37 23.0**	**-0.4**
	comp=Z,3.7nm,0.5s						
SQTA	**Sankt Quirin**	**149.62**	**347**	*i* PKP	**PKPbc**	**01 37 23.8**	**+0.3**
	comp=Z,3.7nm,0.5s,SNR=5.6						
ABTA	**Abfaltersbach**	**149.76**	**345**	*i* PKP	**PKPbc**	**01 37 23.6**	**-0.3**
	comp=Z,5.0nm,0.6s,SNR=8.4						
ABTA	**Abfaltersbach**	**149.76**	**345**	*e*P	**PKPbc**	**01 37 23.6**	**-0.3**
	comp=Z,5.0nm,0.6s,SNR=8.4						
CRES	**Cresnjevec Ost**	**149.78**	**341**	*i* PKPbc	**PKPbc**	**01 37 24.1**	**+0.2**
DAVA	**Damuels**	**149.82**	**349**	*i* PKP	**PKPbc**	**01 37 24.4**	**+0.3**
	comp=Z,5.4nm,0.8s						
LJU	**Ljubljana**	**149.86**	**342**	*i* PKPbc	**PKPbc**	**01 37 24.2**	**+0.1**
FETA	**Feichten**	**149.91**	**347**	*i* PKP	**PKPbc**	**01 37 24.7**	**+0.4**
	comp=Z,3.6nm,0.8s,SNR=5.0						
FUORN	**Ofenpass-Fuorn**	**150.39**	**348**		**PKPbc**	**01 37 26.1**	**+0.5**
TUE	**Stuetta**	**150.71**	**349**		**PKPbc**	**01 37 25.9**	**-0.3**
TORD	**Torodi Ar. Bea**	**175.36**	**181**	PKP	**PKPdf**	**01 37 42.5**	**-1.2**
	comp=Z,0.2nm,0.9s,baz=304,slow=4.3,SNR=3.7						

**IDC 21 01:23:57.6±2.1, 5°.01S×147°.42E, h0km, mb3.4/2, mbtmp3.5/3, ML3.8/1, Error ellipse: s-maj=147.0km s-min=31.6km az=122.0

NV11	**Mina Array Sit**	**1.40**	**119**		**Pn**	**01 34 01.1**	**-0.8**
NV11				IAML		01 34 22.5	
	comp=N,12µm,1.3s						
NV11				IAML		01 34 26.4	
	comp=E,8µm,1.1s						
ORV	**Oroville**	**1.45**	**288**	Pn	**Pn**	**01 34 01.6**	**-0.9**
ORV				IAML		01 34 24.4	
	comp=N,8µm,1.1s						
MDYM	**Dry Creek**	**1.57**	**159**		**Pn**	**01 34 04.8**	**+0.4**
MDPB	**Devils Postpil**	**1.57**	**161**		**Pn**	**01 34 04.6**	**+0.2**
MDPB				IAML		01 34 27.8	
	comp=E,8µm,0.6s						
SUTB	**Sutter Butte**	**1.62**	**274**		**Pn**	**01 34 04.6**	**-0.2**
KCC	**Kaiser Creek**	**1.83**	**170**		**Pn**	**01 34 08.2**	**+0.4**
O03E	**Paynes Creek**	**1.99**	**307**		**Pn**	**01 34 10.2**	**+0.2**
O03E				IAML		01 34 47.7	
	comp=E,10µm,1.4s						
O03E				IAML		01 34 47.7	
	comp=N,7µm,0.8s						
Q09A	**Carvers**	**1.99**	**98**		**Pn**	**01 34 09.7**	**-0.4**
MNRC	**McLaughlin Min**	**2.14**	**264**		**Pn**	**01 34 12.2**	**+0.1**
MNRC				IAML		01 34 57.5	
	comp=E,9µm,1.1s						
HATC	**Hat Creek Radi**	**2.16**	**322**		**Pn**	**01 34 12.4**	**+0.1**
HATC				IAML		01 34 48.4	
	comp=E,8µm,1.0s						
HATC				IAML		01 34 54.6	
	comp=N,6µm,1.2s						
WENL	**Wente Vineyard**	**2.20**	**228**		**Pn**	**01 34 13.6**	**+0.8**
DSP	**Deep Springs**	**2.23**	**141**		**Pn**	**01 34 13.2**	**+0.1**
CVS	**Carmenet Viney**	**2.29**	**251**		**Pn**	**01 34 13.8**	**-0.2**
CVS				IAML		01 34 48.9	
	comp=N,7µm,0.8s						
CVS				IAML		01 35 05.7	
	comp=E,7µm,1.1s						
MHC	**Mount Hamilton**	**2.34**	**221**		**Pn**	**01 34 15.5**	**+0.6**
TIN	**Tinemaha, Big**	**2.38**	**150**		**Pn**	**01 34 15.6**	**+0.3**
TIN				IAML		01 34 56.9	
	comp=N,5µm,1.2s						
TIN				IAML		01 34 56.9	
	comp=E,8µm,0.9s						
GDXM	**Geysers**	**2.43**	**263**		**Pn**	**01 34 15.9**	**0.0**
LCH	**Last Change Ra**	**2.50**	**139**		**Pn**	**01 34 17.0**	**0.0**
O02D	**Mt. Diablo Mer**	**2.60**	**295**		**Pn**	**01 34 18.3**	**0.0**
O02D				IAML		01 35 04.8	
	comp=E,3µm,1.0s						
HOPS	**Hopland Field**	**2.62**	**268**		**Pn**	**01 34 19.1**	**+0.6**
JRSC	**Jasper Ridge**	**2.63**	**230**		**Pn**	**01 34 18.5**	**-0.2**
JRSC				IAML		01 34 58.1	
	comp=E,5µm,0.9s						
JRSC				IAML		01 34 58.3	
	comp=N,4µm,1.2s						
GMN	**Gold Mountain**	**2.66**	**133**		**Pn**	**01 34 19.1**	**-0.1**
GMN				IAML		01 35 04.3	
	comp=E,3µm,0.9s						
MCCM	**Marconi Confer**	**2.67**	**249**		**Pn**	**01 34 19.4**	**+0.2**
SAO	**San Andreas Ge**	**2.73**	**211**		**Pn**	**01 34 20.5**	**+0.5**
BBGB	**Big Mountain B**	**2.75**	**203**		**Pn**	**01 34 20.9**	**+0.4**
GRAC	**Grapevine Rang**	**2.82**	**138**		**Pn**	**01 34 21.8**	**+0.5**
GRAC	**Grapevine Rang**	**2.82**	**138**	IAML		01 35 16.2	
	comp=E,3µm,2.6s						
GRAC				IAML		01 35 16.9	
	comp=N,4µm,0.8s						
M03C	**McCloud**	**2.83**	**320**		**Pn**	**01 34 22.4**	**+0.9**
M03C				IAML		01 35 20.1	
	comp=E,5µm,1.1s						
FORD	**Fort Ord Natur**	**2.94**	**215**		**Pn**	**01 34 23.2**	**+0.3**
N02D	**Trinity Center**	**2.95**	**310**		**Pn**	**01 34 23.3**	**+0.1**
N02D				IAML		01 35 12.1	
	comp=E,2µm,0.8s						
N02D				IAML		01 35 12.7	
	comp=N,2µm,0.8s						
FARB	**Farallon Islan**	**2.95**	**242**		**Pn**	**01 34 22.8**	**-0.3**
FARB				IAML		01 35 02.2	
	comp=E,3µm,0.9s						
FARB				IAML		01 35 02.2	
	comp=N,4µm,1.0s						
CWC	**Cottonwood Cre**	**2.98**	**154**		**Pn**	**01 34 24.2**	**+0.6**
PMPB	**Monarch Peak**	**3.03**	**197**		**Pn**	**01 34 24.9**	**+0.6**
KCPM	**Cahto Peak**	**3.05**	**282**		**Pn**	**01 34 25.0**	**+0.4**
KCPM				IAML		01 35 17.1	
	comp=E,2µm,1.0s						
KCPM				IAML		01 35 40.2	
	comp=N,2µm,1.4s						
KHBM	**Hayfork Bally**	**3.10**	**301**		**Pn**	**01 34 25.8**	**+0.4**
KHBM				IAML		01 35 21.6	
	comp=N,2µm,1.8s						
PKD	**Bear Valley Ra**	**3.25**	**192**		**Pn**	**01 34 27.8**	**+0.6**
PKD				IAML		01 35 29.5	
	comp=E,3µm,1.1s						
PKD				IAML		01 35 34.4	
	comp=N,2µm,1.1s						
KMRM	**Mail Ridge**	**3.27**	**291**		**Pn**	**01 34 28.3**	**+0.7**
KMRM				IAML		01 35 25.4	
	comp=N,2µm,1.7s						
KMRM				IAML		01 35 42.4	
	comp=E,2µm,1.3s						
M02C	**Callahan**	**3.30**	**314**		**Pn**	**01 34 29.1**	**+1.1**
R11B	**Troy Canyon, C**	**3.32**	**102**		**Pn**	**01 34 27.5**	**-0.8**
VES	**Vestal, Richgr**	**3.32**	**171**		**Pn**	**01 34 28.6**	**+0.4**
VES				IAML		01 35 25.1	
	comp=N,3µm,0.7s						
HULI	**Fort Hunter Li**	**3.33**	**202**		**Pn**	**01 34 28.5**	**+0.2**
HULI				IAML		01 35 29.9	
	comp=E,3µm,1.2s						
WCT	**Wildcat Mounta**	**3.37**	**133**		**Pn**	**01 34 29.2**	**+0.2**
WCT				IAML		01 35 32.2	
	comp=E,1µm,0.8s						
WVOR	**Wild Horse Val**	**3.40**	**14**		**Pn**	**01 34 30.1**	**+0.7**
S11A	**Rachel**	**3.45**	**114**		**Pn**	**01 34 29.8**	**-0.3**
YBH	**Yreka Blue Hor**	**3.47**	**320**	Pn	**Pn**	**01 34 30.8**	**+0.5**
	comp=E,0.2nm,0.3s,baz=156,slow=6.0,SNR=77						
YBH				Lg	Lg	01 35 22.2	
	comp=E,0.9nm,0.3s,baz=38,slow=10,SNR=3.9						
YBH	**Yreka Blue Hor**	**3.47**	**320**		**Pn**	**01 34 31.3**	**+1.1**
FURC	**Furnace Creek,**	**3.48**	**139**		**Pn**	**01 34 30.9**	**+0.5**
TPNV	**Topopah Spring**	**3.49**	**127**		**Pn**	**01 34 30.8**	**+0.1**
TPNV				IAML		01 35 31.8	
	comp=E,2µm,1.1s						
TPNV				IAML		01 35 32.1	
	comp=E,3µm,1.6s						
KHMM	**Horse Mountain**	**3.55**	**301**		**Pn**	**01 34 32.3**	**+0.9**
KHMM				IAML		01 35 38.2	
	comp=N,1µm,1.1s						
ISA	**Isabella, Lake**	**3.60**	**164**		**Pn**	**01 34 33.5**	**+1.5**
ISA				IAML		01 35 31.4	
	comp=N,2µm,1.1s						
KMPM	**Mount Pierce**	**3.63**	**292**		**Pn**	**01 34 32.9**	**+0.4**
KMPM				IAML		01 35 25.0	
	comp=N,1µm,0.9s						
KMPM				IAML		01 35 46.3	
	comp=E,1µm,1.0s						
SDH	**Striped Hills**	**3.64**	**132**		**Pn**	**01 34 33.2**	**+0.5**
NSP	**Numbskull Pass**	**3.66**	**130**		**Pn**	**01 34 33.5**	**+0.5**
L04D	**Klamath Falls**	**3.66**	**328**		**Pn**	**01 34 33.3**	**+0.3**
L04D				IAML		01 35 32.0	
	comp=E,1µm,1.1s						
L04D				IAML		01 35 44.9	
	comp=N,926nm,2.4s						
K05A	**Summer Lake**	**3.71**	**346**		**Pn**	**01 34 34.7**	**+1.1**
K05A				IAML		01 35 45.4	
	comp=E,950nm,1.9s						
K05A				IAML		01 35 47.2	
	comp=N,951nm,1.8s						
CLC	**China Lake**	**3.71**	**152**		**Pn**	**01 34 33.9**	**+0.4**
JCC	**Jacoby Creek,**	**3.72**	**298**		**Pn**	**01 34 34.1**	**+0.4**
ELK	**Elko**	**3.80**	**63**	Pn	**Pn**	**01 34 34.5**	**-0.5**
	comp=N,241nm,0.3s,baz=268,slow=11,SNR=1005						
ELK				Lg	Lg	01 35 33.0	
	comp=N,264nm,0.3s,baz=58,slow=12,SNR=27						
ELK	**Elko**	**3.80**	**63**		**Pn**	**01 34 35.0**	**0.0**
ELK				IAML		01 35 37.9	
	comp=N,819nm,0.5s						
GWY	**Greenwater Val**	**3.80**	**140**		**Pn**	**01 34 34.6**	**-0.4**
GWY				IAML		01 35 49.6	
	comp=E,1µm,2.8s						
GWY				IAML		01 35 49.9	
	comp=N,873nm,1.9s						
K04D	**Chiloquin, OR**	**3.82**	**337**		**Pn**	**01 34 36.0**	**+0.8**
MCY	**Mercury**	**3.85**	**129**		**Pn**	**01 34 36.3**	**+0.6**
KRPM	**Rodgers**	**3.88**	**303**		**Pn**	**01 34 36.0**	**+0.1**
KRPM				IAML		01 35 52.4	
	comp=N,2µm,1.6s						
KRPM				IAML		01 35 53.3	
	comp=E,1µm,1.7s						
QSM	**Queen of Sheba**	**3.88**	**144**		**Pn**	**01 34 35.7**	**-0.2**
QSM				IAML		01 35 52.1	
	comp=E,768nm,1.4s						
QSM				IAML		01 35 53.6	
	comp=N,831nm,1.4s						
LRMC	**Laurel Mtn Rad**	**3.98**	**155**		**Pn**	**01 34 38.0**	**+0.5**
LRMC				IAML		01 35 56.9	
	comp=E,909nm,1.0s						
LRMC				IAML		01 35 57.9	
	comp=N,873nm,1.1s						
CCCA	**Chr Cany lake**	**4.05**	**152**		**Pn**	**01 34 38.7**	**+0.4**
CCCA				IAML		01 36 07.4	
	comp=E,2µm,1.9s						
L02F	**Cave Junction**	**4.19**	**317**		**Pn**	**01 34 41.3**	**+1.2**
SHOC	**Shoshone, Teco**	**4.22**	**139**		**Pn**	**01 34 40.4**	**-0.3**
SHOC				IAML		01 36 13.1	
	comp=N,2µm,1.3s						
J08A	**Circle Bar Ran**	**4.33**	**12**		**Pn**	**01 34 43.0**	**+0.9**
J08A				IAML		01 35 56.6	
	comp=N,556nm,0.9s						
J08A				IAML		01 36 02.9	
	comp=E,519nm,1.1s						
TPO	**Tropico Hills**	**4.40**	**164**		**Pn**	**01 34 44.7**	**+1.5**
TPO				IAML		01 36 02.6	
	comp=N,1µm,1.6s						
OSI	**Osito Audit: C**	**4.57**	**170**		**Pn**	**01 34 45.3**	**-0.2**
KBO	**Bosley Butte**	**4.61**	**313**		**Pn**	**01 34 46.9**	**+0.8**
KBO				IAML		01 36 25.0	
	comp=E,570nm,1.8s						
KBO				IAML		01 36 26.1	
	comp=N,687nm,2.1s						
K02D	**Willamette Mer**	**4.66**	**321**		**Pn**	**01 34 47.4**	**+0.7**
CCUT	**Cedar City**	**5.23**	**106**		**Pn**	**01 34 53.9**	**-0.8**
CCUT				IAML		01 36 28.5	
	comp=E,297nm,2.7s						
CCUT				IAML		01 36 28.9	
	comp=N,539nm,1.3s						
DUG	**Dugway, Tooele**	**5.43**	**76**		**Pn**	**01 34 58.2**	**+0.9**
BGU	**Big Grassy Mou**	**5.43**	**69**		**Pn**	**01 34 57.5**	**+0.1**
LCMT	**Little Creek M**	**5.52**	**110**		**Pn**	**01 34 57.7**	**-0.9**
KNB	**Kanab**	**5.83**	**109**		**Pn**	**01 35 02.8**	**0.0**
HVU	**Hansel Valley**	**5.92**	**61**		**Pn**	**01 35 04.0**	**0.0**
PFO	**Pinyon Flats O**	**6.10**	**154**	Pn	**Pn**	**01 35 09.6**	**+3.1**
	comp=N,0.9nm,0.3s,baz=292,slow=6.1,SNR=37						
PFO				Lg	Lg	01 36 52.7	
	comp=N,7.6nm,0.3s,baz=55,slow=16,SNR=7.4						
	comp=N,32nm,0.8s						
SALN	**Salton City**	**6.56**	**152**		**Pn**	**01 35 11.7**	**-1.1**
AHID	**Auburn Hatcher**	**7.46**	**58**		**Pn**	**01 35 23.3**	**-1.9**
PDAR	**Pinedale Array**	**8.50**	**61**	Pn	**Pn**	**01 35 39.3**	**-0.2**
	comp=N,0.5nm,0.3s,baz=245,slow=12,SNR=34						
	comp=N,4.8nm,0.7s						
NEW	**Newport**	**9.32**	**11**	Pn	**Pn**	**01 35 50.1**	**-0.5**
	comp=N,0.1nm,0.3s,baz=187,slow=14,SNR=5.8						
NEW				Lg	Lg	01 38 28.9	
	comp=N,0.2nm,0.3s,baz=104,slow=19,SNR=6.1						
	comp=N,0.6nm,0.4s						
ANMO	**Albuquerque**	**11.38**	**107**	Pn	**Pn**	**01 36 20.8**	**+1.8**
	comp=N,0.1nm,0.3s,baz=312,slow=12,SNR=5.8						
ANMO				Lg	Lg	01 39 35.7	
	comp=N,0.2nm,0.3s,baz=157,slow=9.9,SNR=4.0						
RSSD	**Black Hills**	**12.74**	**62**		**Pn**	**01 36 38.3**	**+0.7**
MSTX	**Muleshoe**	**14.55**	**105**		**Pn**	**01 37 02.4**	**+0.1**
VHRN	**Van Horn**	**14.65**	**120**		**Pn**	**01 37 05.5**	**+1.9**
EDM	**Edmonton**	**14.76**	**15**		**Pn**	**01 37 06.1**	**+1.1**
AMTX	**Amarillo**	**15.01**	**101**		**Pn**	**01 37 09.9**	**+1.4**
PECS	**Pecos**	**15.07**	**116**		**Pn**	**01 37 10.5**	**+1.2**
CBKS	**Cedar Bluff**	**15.54**	**85**	P	**P**	**01 37 17.5**	**-2.3**
K30B	**Basset**	**15.60**	**70**		**Pn**	**01 37 17.0**	**+0.9**
K30B				IAmb	IAmb	01 37 21.8	
	comp=Z,19nm,1.0s						
E28A	**Huff**	**15.79**	**56**		**P**	**01 37 20.4**	**-2.0**
MNHN	**Monahans**	**15.86**	**114**		**Pn**	**01 37 20.8**	**+1.2**
DKNS	**Dickens**	**16.07**	**104**		**Pn**	**01 37 22.5**	**+0.2**
TX31	**Lajitas Ar. Si**	**16.45**	**122**	Pn	**Pn**	**01 37 27.4**	**+0.1**
TXAR	**Lajitas Array**	**16.45**	**122**	Pn	**P**	**01 37 29.8**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=297,slow=8.3,SNR=31						
	comp=Z,3.1nm,0.9s						
TXAR	**Lajitas Array**	**16.45**	**122**		**Pn**	**01 37 27.2**	**-0.1**
SGCY	**Sterling City**	**16.74**	**110**		**P**	**01 37 32.1**	**-1.1**
HPIG		**16.90**	**132**		**Pn**	**01 37 33.5**	**+0.4**
SAND	**Sanderson**	**17.11**	**117**		**Pn**	**01 37 36.3**	**+0.7**
WMOK	**Wichita Mounta**	**17.29**	**98**		**Pn**	**01 37 37.4**	**-0.3**
V35K	**Ketchikan**	**18.07**	**338**	P	**P**	**01 37 47.2**	**-0.3**
	baz=149						
CRAG	**Craig**	**18.65**	**336**	P	**P**	**01 37 53.2**	**-0.8**
	baz=146						
DEOK	**Depew**	**18.70**	**93**	P	**P**	**01 37 53.9**	**-0.8**
DEOK				IAmb	IAmb	01 38 00.8	
	comp=Z,42nm,1.0s						
T35M	**Bob Quinn**	**19.16**	**342**	P	**P**	**01 37 58.9**	**-0.8**
	baz=154						
U33K	**Whale Pass**	**19.19**	**337**	P	**Pn**	**01 38 00.1**	**-0.7**
	baz=147						
WRAK	**Wrangell Islan**	**19.22**	**338**	P	**P**	**01 37 58.3**	**-1.8**
	baz=149						
AGMN	**Agassiz Nation**	**19.46**	**54**	P	**Pn**	**01 38 03.5**	**-0.6**
AGMN				IAmb	IAmb	01 38 08.0	
	comp=Z,34nm,0.9s						
FFC	**Flin Flon**	**19.66**	**32**		**Pn**	**01 38 05.4**	**-1.1**
FFC				IAmb	IAmb	01 38 14.1	
	comp=Z,18nm,1.0s						
ULM	**Lac du Bonnet**	**20.18**	**49**	P	**P**	**01 38 10.8**	**+0.1**
	comp=Z,17nm,0.9s,baz=239,slow=10,SNR=19						
	comp=Z,17nm,0.9s						
ULM	**Lac du Bonnet**	**20.18**	**49**		**P**	**01 38 09.6**	**-1.1**
ULM				IAmb	IAmb	01 38 13.2	
	comp=Z,47nm,1.4s						
U38A	**Gravette**	**20.18**	**90**		**P**	**01 38 10.8**	**-0.1**
U38A				IAmb	IAmb	01 38 17.1	
	comp=Z,13nm,1.0s						
S34M	**Telegraph Cree**	**20.21**	**342**	P	**P**	**01 38 10.8**	**-0.3**
	baz=154						
SCIA	**State Center**	**20.31**	**74**	P	**P**	**01 38 10.7**	**-1.5**
DLBC	**Dease Lake**	**20.44**	**344**	P	**P**	**01 38 14.3**	**+0.6**
	comp=Z,7.9nm,0.9s,baz=148,slow=7.7,SNR=15						
DLBC	**Dease Lake**	**20.44**	**344**	P	**P**	**01 38 12.7**	**-0.9**
	baz=157						
HHAR	**Hobbs**	**20.57**	**90**	P	**P**	**01 38 13.9**	**-1.2**
HHAR				IAmb	IAmb	01 38 21.3	
	comp=Z,15nm,0.8s						
SIT	**Sitka**	**20.66**	**335**	P	**P**	**01 38 14.5**	**-1.4**
	baz=144						
S39A	**Bolivar**	**20.71**	**86**	P	**P**	**01 38 15.6**	**-1.0**
S32K	**Killisnoo**	**20.76**	**337**	P	**P**	**01 38 15.9**	**-1.1**
	baz=146						
KOTAN	**Kotaneelee Air**	**21.20**	**354**	P	**P**	**01 38 20.6**	**-1.2**
	baz=171						
EPLO	**Experimental L**	**21.25**	**52**		**P**	**01 38 19.7**	**-2.7**
EPLO				IAmb	IAmb	01 38 23.4	
	comp=Z,30nm,1.1s						
MIAR	**Mount Ida**	**21.38**	**94**		**P**	**01 38 22.3**	**-1.6**
Q32M	**Nakina River**	**21.42**	**342**	P	**P**	**01 38 21.7**	**-2.6**
	baz=152						
R32K	**Eaglecrest**	**21.42**	**338**	P	**P**	**01 38 23.0**	**-1.1**
	baz=147						
R33M	**Jennings River**	**21.52**	**344**	P	**P**	**01 38 23.8**	**-1.5**
	baz=156						
S31K	**Pelican**	**21.68**	**336**	P	**P**	**01 38 25.0**	**-1.9**
	baz=143						
P32M	**Atlin**	**22.33**	**341**	P	**P**	**01 38 33.7**	**-0.3**
P32M				IAmb	IAmb	01 38 40.9	
	comp=Z,13nm,1.1s						
P32M	**Atlin**	**22.33**	**341**	P	**P**	**01 38 32.8**	**-1.2**
	baz=150						
SKAG	**Skagway**	**22.64**	**339**	P	**P**	**01 38 35.8**	**-1.4**
	baz=147						
P33M	**Teslin, Yukon**	**22.66**	**343**	P	**P**	**01 38 36.0**	**-1.5**
	baz=153						
LCAR	**Lake Charles**	**22.79**	**89**	P	**P**	**01 38 38.1**	**-0.9**
LCAR				IAmb	IAmb	01 38 52.0	
	comp=Z,15nm,1.2s						
TGTN	**Hyland Airport**	**23.04**	**349**	P	**P**	**01 38 40.6**	**-0.8**
	baz=163						
WHY	**Whitehorse**	**23.55**	**341**	P	**P**	**01 38 43.4**	**-3.2**
	baz=149						
N32M	**Quiet Lake**	**23.56**	**344**	P	**P**	**01 38 45.5**	**-1.2**
	baz=153						
YKAW1	**Yellowknife Wh**	**23.60**	**6**		**P**	**01 38 44.6**	**-2.4**
YKAW1				IAmb	IAmb	01 38 51.9	
	comp=Z,12nm,0.9s						
YKA	**Yellowknife Ar**	**23.60**	**6**	P	**P**	**01 38 47.7**	**+0.7**
	comp=Z,3.7nm,1.0s,baz=198,slow=9.2,SNR=18						
	comp=Z,3.7nm,1.0s						
YKA	**Yellowknife Ar**	**23.60**	**6**	P	**P**	**01 38 47.5**	**+0.6**
P30M	**Million Dollar**	**23.66**	**338**	P	**P**	**01 38 46.1**	**-1.6**
	baz=145						
O30N	**Mendenhall**	**23.96**	**340**	P	**P**	**01 38 47.4**	**-3.1**
	baz=147,SNR=6.7						
WRGLY	**Wrigley**	**24.24**	**356**	P	**P**	**01 38 49.6**	**-3.5**
	baz=173						
O29M	**Mount Kennedy**	**24.28**	**337**	P	**P**	**01 38 51.7**	**-1.9**
	baz=142						
HYT	**Haines Junctio**	**24.39**	**339**	P	**P**	**01 38 52.7**	**-1.9**
	baz=145						
N31M	**Braeburn, Yuko**	**24.49**	**341**	P	**P**	**01 38 54.1**	**-1.2**
	baz=149						
MMPY	**Sheldon Lake,**	**24.55**	**347**	P	**P**	**01 38 54.8**	**-1.2**
	baz=158,SNR=9.2						
PINM	**Pinnacle**	**24.65**	**335**	P	**P**	**01 38 54.0**	**-3.0**
	baz=139						
YUK6	**Outpost Mounta**	**24.73**	**338**	P	**P**	**01 38 56.4**	**-1.5**
	baz=144						
M31M	**Drury Creek, Y**	**24.79**	**344**	P	**P**	**01 38 56.6**	**-1.4**
	baz=152						
N30M	**Aishikik Lake**	**24.80**	**340**	P	**P**	**01 38 56.7**	**-1.5**
	baz=146						
YUK4	**Talbot Arm**	**25.14**	**338**	P	**P**	**01 38 59.6**	**-1.8**
	baz=144						
O28M	**Mount Upton**	**25.15**	**336**	P	**P**	**01 39 01.4**	**-0.2**
O28M				IAmb	IAmb	01 39 07.8	
	comp=Z,13nm,1.1s						
O28M	**Mount Upton**	**25.15**	**336**	P	**P**	**01 39 00.1**	**-1.5**
	baz=140						
MESA	**MESA**	**25.28**	**334**	P	**P**	**01 39 01.3**	**-1.4**
	baz=136						
YUK8	**Steele Glacier**	**25.42**	**337**	P	**P**	**01 39 02.3**	**-1.8**
	baz=142						
FCC	**Fort Churchill**	**25.59**	**31**		**P**	**01 39 04.2**	**-1.1**
FCC				IAmb	IAmb	01 39 11.2	
	comp=Z,17nm,1.1s						
CTG	**Chitna Glacier**	**25.66**	**335**	P	**P**	**01 39 03.9**	**-2.2**
	baz=139						
M30M	**Minto, Yukon**	**25.67**	**342**	P	**P**	**01 39 04.6**	**-1.5**
	baz=148,SNR=5.0						
M29M	**Somme Creek**	**25.98**	**340**	P	**P**	**01 39 07.4**	**-1.6**
	baz=145,SNR=19						
KAIM	**Kayak Island**	**26.00**	**331**	P	**P**	**01 39 08.4**	**-0.6**
	baz=132						
YUK3	**Moose Creek**	**26.01**	**337**	P	**P**	**01 39 06.8**	**-2.6**
	baz=141						
CRQE	**Cirque**	**26.09**	**334**	P	**P**	**01 39 06.4**	**-3.6**
	baz=136						
L29M	**L29M**	**26.45**	**341**	P	**P**	**01 39 10.6**	**-2.6**
	baz=147,SNR=9.9						
MCARA	**McCarthy VSAT**	**26.52**	**335**	P	**P**	**01 39 10.9**	**-2.9**
	baz=136						
BVCY	**Beaver Creek**	**26.63**	**338**	P	**P**	**01 39 12.7**	**-2.1**
	baz=141						
BMRM	**Bremner River**	**26.77**	**333**	P	**P**	**01 39 13.6**	**-2.4**
	baz=134						
M27K	**Edge Creek, AK**	**26.89**	**337**	P	**P**	**01 39 14.4**	**-2.8**
	baz=140						
EYAK	**Cordova Ski Ar**	**26.91**	**331**	P	**P**	**01 39 15.4**	**-1.8**
	baz=131						
K29M	**Barlow Dome**	**26.92**	**343**	P	**P**	**01 39 15.9**	**-1.6**
	baz=148						
P23K	**Montague Islan**	**27.19**	**329**	P	**P**	**01 39 19.0**	**-0.8**
	baz=128						
N25K	**Chitina, Valde**	**27.21**	**334**	P	**P**	**01 39 18.2**	**-1.9**
	baz=134						
M26K	**Nabesna, AK**	**27.26**	**336**	P	**P**	**01 39 18.9**	**-1.6**
	baz=138						
J30M	**Hart River**	**27.30**	**344**	P	**P**	**01 39 20.5**	**-0.3**
J30M				IAmb	IAmb	01 39 26.5	
	comp=Z,14nm,1.2s						
J30M	**Hart River**	**27.30**	**344**	P	**P**	**01 39 19.3**	**-1.6**
	baz=151						
BCAR	**Beaver Creek A**	**27.40**	**338**	P	**P**	**01 39 20.9**	**-0.8**
L27K	**Beaver Creek,**	**27.41**	**338**	P	**P**	**01 39 20.3**	**-1.6**
	baz=141						
KLU	**Klutina**	**27.60**	**333**	P	**P**	**01 39 20.5**	**-3.1**
	baz=132						
J29N	**Klondike Camp**	**27.60**	**343**	P	**P**	**01 39 21.2**	**-2.4**
	baz=148						
GLI	**Glacier Island**	**27.62**	**331**	P	**P**	**01 39 21.8**	**-1.9**
	baz=130						
L26K	**Log Cabin Wild**	**27.84**	**337**	P	**P**	**01 39 23.5**	**-2.1**
	baz=138						
I30M	**Mount Dempster**	**27.87**	**345**	P	**P**	**01 39 22.2**	**-3.8**
	baz=152,SNR=7.2						
H31M	**Peel River**	**28.02**	**347**	P	**P**	**01 39 24.3**	**-2.8**
	baz=155						
SEW	**Seward**	**28.08**	**328**	P	**P**	**01 39 26.1**	**-1.6**
	baz=125						
M24K	**Tolsona, Glenn**	**28.10**	**334**	P	**P**	**01 39 24.7**	**-3.3**
	baz=133						
KDAK	**Kodiak Island**	**28.28**	**322**	P	**P**	**01 39 25.3**	**-4.2**
	baz=117						
SCM	**Sheep Creek Mo**	**28.33**	**332**	P	**P**	**01 39 27.0**	**-3.1**
	baz=131						
OHAK	**Old Harbor**	**28.37**	**321**	P	**P**	**01 39 27.0**	**-3.4**
	baz=115						
BRSE	**Bradley Lake S**	**28.42**	**327**	P	**P**	**01 39 28.6**	**-2.3**
	baz=123						
M23K	**Glacier View**	**28.45**	**332**	P	**P**	**01 39 28.6**	**-2.5**
	baz=130						
PAX	**Paxson**	**28.46**	**335**	P	**P**	**01 39 27.9**	**-3.3**
	baz=135						
KNK	**Knik Glacier**	**28.48**	**331**	P	**P**	**01 39 29.4**	**-1.9**
	baz=128						
SII	**Sitkinak Islan**	**28.55**	**319**	P	**P**	**01 39 29.6**	**-2.4**
	baz=113						
Q20K	**Shuyak Island**	**28.58**	**324**	P	**P**	**01 39 29.9**	**-2.3**
	baz=119						
TKL	**Tuckaleechee C**	**28.64**	**86**	LR	LR	01 52 43.7	
	comp=Z,214nm,19.1s,baz=24,slow=40						
SML	**Sawmill**	**28.68**	**332**	P	**P**	**01 39 31.4**	**-1.7**
	baz=129						
SCRK	**Sand Creek**	**28.74**	**338**	P	**P**	**01 39 32.6

HDA	Harding Lake	29.95	337	P		P	01 39 43.3	-1.1
	baz=135							
SKT	Skwentna	29.99	330	P		P	01 39 43.6	-1.2
	baz=125							
R17L	Mt. Peulik Vol	30.06	320	P		P	01 39 43.2	-2.1
	baz=112							
Q17K	Contact Creek	30.07	321	P		P	01 39 43.7	-1.9
	baz=114							
MCK	McKinley	30.13	334	P		P	01 39 44.3	-1.7
	baz=131							
ILAR	Eielson Array	30.19	337	P		P	01 39 47.7	+1.3
	comp=Z,5.6nm,0.9s,baz=152,slow=7.4,SNR=45							
ILAR				PcP		PcP	01 42 47.6	+0.4
	comp=Z,2.0nm,0.9s,baz=171,slow=2.1,SNR=9.5							
	comp=Z,5.6nm,0.9s							
ILAR	Eielson Array	30.19	337	P		P	01 39 46.4	0.0
INK	Inuvik	30.20	350	P		P	01 39 44.5	-2.0
	baz=158,SNR=5.4							
O19K	Port Alsworth	30.20	326	P		P	01 39 45.7	-0.9
	baz=119							
P18K	Big Mountain,	30.24	324	P		P	01 39 44.9	-2.1
	baz=116							
PRP	Porcupine Dome	30.33	339	P		P	01 39 45.6	-2.3
	baz=138							
G27K	Doyon Strip	30.36	343	P		P	01 39 46.8	-1.2
	baz=145							
C36M	Paulatuk	30.37	357	P		P	01 39 46.3	-1.6
	baz=173							
TRF	Thorofare Moun	30.41	333	P		P	01 39 45.1	-3.5
	baz=129							
O18K	Koktuh Hills	30.44	325	P		P	01 39 45.2	-3.5
	baz=117							
COLA	College	30.55	337	P		P	01 39 47.5	-2.1
	baz=134							
M20K	Styx River	30.57	329	P		P	01 39 48.6	-1.3
	baz=123							
N19K	Bonanza Creek	30.57	327	P		P	01 39 49.8	-0.2
	baz=119							
POKR	Poker Plat Res	30.60	337	P		P	01 39 50.2	+0.2
	baz=135							
Q16K	King Salmon	30.61	322	P		P	01 39 50.2	+0.1
	baz=113							
R16K	Pilot Point	30.65	320	P		P	01 39 50.0	-0.4
	baz=111							
F28M	Old Crow	30.66	345	P		P	01 39 50.2	-0.3
	baz=148							
P17K	Kvichak River	30.72	323	P		P	01 39 50.2	-0.9
	baz=114							
NEA2	Nenana	30.74	336	P		P	01 39 50.6	-0.7
	baz=132							
PPLA	Purkeypile	30.77	331	P		P	01 39 51.0	-0.8
	baz=125							
CHNA	Chernabura Isl	30.91	314	P		P	01 39 52.8	-0.1
	baz=104							
E29M	Blow River	30.96	347	P		P	01 39 53.7	+0.5
	baz=152							
G26K	Porcupine Rive	30.98	342	P		P	01 39 53.0	-0.3
	baz=142							
BPAW	Bear Paw Mtn.	31.06	334	P		P	01 39 53.6	-0.6
	baz=129							
M19K	Big River Lodg	31.08	329	P		P	01 39 53.7	-0.7
	baz=121							
N18K	Kilae Creek	31.12	326	P		P	01 39 53.7	-1.0
	baz=117							
I23K	Minto, Yukon-K	31.21	336	P		P	01 39 54.1	-1.3
	baz=132							
H24K	Noodor Dome	31.24	338	P		P	01 39 54.6	-1.1
	baz=135							
O17K	Koliganek Bris	31.26	324	P		P	01 39 54.4	-1.5
	baz=115							
S14K	Fog Glacier	31.27	317	P		P	01 39 53.0	-3.1
	baz=106							
P16K	Nushagak River	31.39	322	P		P	01 39 55.5	-1.5
	baz=112							
CHUM	Lake Minchumin	31.40	333	P		P	01 39 55.1	-1.9
	baz=126							
L19K	White Mountain	31.41	329	P		P	01 39 55.5	-1.8
	baz=121							
G25K	Bearman Lake	31.42	340	P		P	01 39 56.2	-1.0
	baz=138							
E28M	Babbage River	31.44	346	P		P	01 39 55.9	-1.6
	baz=150							
M18K	Stony River	31.47	327	P		P	01 39 57.2	-0.5
	baz=119							
E27K	Coleen River	31.49	345	P		P	01 39 56.3	-1.6
	baz=146							
MLY	Manley	31.57	335	P		P	01 39 57.0	-1.7
	baz=130							
N17K	Nushagak Hills	31.62	325	P		P	01 39 58.1	-1.0
	baz=116,SNR=5.2							
O16K	Kokwok River B	31.65	323	P		P	01 39 58.1	-1.3
	baz=113							
F26K	Sheenjek River	31.66	342	P		P	01 39 58.6	-0.8
	baz=142							
H23K	Yukon River	31.72	337	P		P	01 39 58.6	-1.4
	baz=133							
K20K	Telida	31.74	331	P		P	01 39 58.6	-1.5
	baz=124							
G24K	Hadweenzic Riv	31.74	339	P		P	01 39 57.9	-2.2
	baz=136							
D28M	Stokes Point	31.94	347	P		P	01 40 00.8	-0.9
	baz=151							
F25K	Christian Rive	31.94	342	P		P	01 40 00.6	-1.2
	baz=140							
I21K	Tanana	32.08	335	P		P	01 40 02.4	-0.7
	baz=129,SNR=8.3							
M17K	Holitna River	32.12	326	P		P	01 40 01.3	-2.1
	baz=116							
L18K	Granite Mounta	32.18	328	P		P	01 40 02.6	-1.3
	baz=119							
J20K	Nowinta River	32.22	332	P		P	01 40 03.7	-0.6
	baz=124							
D27M	Malcolm River	32.26	346	P		P	01 40 04.1	-0.7
	baz=148							
N16K	Nishlik Lake	32.31	324	P		P	01 40 05.2	0.0
	baz=114,SNR=6.5							
O15K	Ungalikthiuk R	32.32	322	P		P	01 40 05.4	+0.2
	baz=110							
E25K	Arctic Village	32.33	342	P		P	01 40 04.8	-0.4
	baz=141,SNR=12							
H22K	Ishtalitna Cre	32.34	336	P		P	01 40 05.2	-0.1
	baz=130,SNR=6.2							
F24K	Squaw Lake	32.45	340	P		P	01 40 06.4	0.0
	baz=137							
G23K	Bananza Creek	32.47	338	P		P	01 40 05.1	-1.5
	baz=133,SNR=7.3							
M16K	Timber Creek	32.62	325	P		P	01 40 06.5	-1.4
	baz=114							
H21K	Melozitna Rive	32.64	335	P		P	01 40 07.4	-0.6
	baz=128							
J19K	Poorman	32.66	331	P		P	01 40 08.4	+0.1
	baz=122,SNR=8.9							
I20K	Naaghedeneel	32.70	333	P		P	01 40 07.4	-1.0
	baz=125							
N15K	Kwethluk River	32.80	323	P		P	01 40 08.3	-1.2
	baz=112							
J18K	Innoko River	32.80	330	P		P	01 40 08.6	-0.9
	baz=120							
L17K	Donlin	32.81	327	P		P	01 40 08.4	-1.2
	baz=116							
COLD	Coldfoot	32.88	339	P		P	01 40 10.7	+0.7
	baz=133							
E24K	Your Creek	33.02	341	P		P	01 40 11.9	+0.6
	baz=137							
O14K	Tigyukauivet M	33.04	321	P		P	01 40 11.5	-0.1
	baz=109							
G22K	Bettles	33.05	338	P		P	01 40 12.1	+0.6
	baz=131							
A36M	Sachs Harbour	33.05	357	P		P	01 40 12.4	+0.9
	baz=172							
K17K	Iditarod	33.08	328	P		P	01 40 12.5	+0.7
	baz=117							
C27K	Jago River	33.12	345	P		P	01 40 12.1	-0.1
	baz=145							
L16K	Owhat River	33.13	326	P		P	01 40 11.8	-0.5
	baz=114,SNR=6.5							
H20K	Anotleneega Mo	33.24	334	P		P	01 40 13.6	+0.4
	baz=125,SNR=8.8							
M15K	Kasigluk River	33.27	324	P		P	01 40 13.0	-0.5
	baz=112							
E23K	Chandalar	33.30	340	P		P	01 40 13.6	-0.2
	baz=135							
G21K	Allakaket	33.40	336	P		P	01 40 14.6	-0.1
	baz=128							
D25K	Kavik River	33.45	343	P		P	01 40 13.9	-1.2
	baz=141							
N14K	Kuskokwak Cree	33.47	322	P		P	01 40 15.0	-0.2
	baz=110							
GCSA	Galena City Sc	33.53	332	P		P	01 40 15.4	-0.3
	baz=122,SNR=5.3							
C26K	Camden Bay	33.60	345	P		P	01 40 16.0	-0.3
	baz=143							
TOLK	Toolik Lake Re	33.70	341	P		P	01 40 17.5	+0.2
	baz=136							
H19K	Roundabout Mou	33.80	333	P		P	01 40 16.8	-1.2
	baz=123							
F21K	Alatna River	33.84	337	P		P	01 40 17.2	-1.2
	baz=129							
M14K	Bethel	33.88	324	P		P	01 40 17.7	-1.1
	baz=110,SNR=5.0							
D24K	Happy Valley	33.89	342	P		P	01 40 18.0	-0.9
	baz=137							
E22K	Anaktuvuk Pass	33.95	339	P		P	01 40 18.4	-1.0
	baz=132,SNR=17							
L15K	Ungalak Mounta	34.00	325	P		P	01 40 18.5	-1.4
	baz=112							
D23K	Nanushuk River	34.22	341	P		P	01 40 20.0	-1.7
	baz=135							
K15K	Wolf Creek Mou	34.25	326	P		P	01 40 20.2	-1.9
	baz=113							
J16K	Anvik River	34.27	328	P		P	01 40 20.6	-1.6
	baz=115,SNR=6.1							
H18K	Honhosa River	34.28	332	P		P	01 40 22.6	+0.3
	baz=120							
C24K	Franklin Bluff	34.28	343	P		P	01 40 22.1	-0.1
	baz=138							
G19K	Purcell Mounta	34.35	334	IAmb		IAmb	01 40 27.9	
	comp=Z,11nm,1.1s							
G19K	Purcell Mounta	34.35	334	P		P	01 40 22.8	-0.1
	baz=123,SNR=12							
L14K	Kuka Creek	34.41	324	P		P	01 40 21.2	-2.2
	baz=110							
M13K	Dall Lake	34.41	323	P		P	01 40 20.9	-2.5
	baz=108							
F20K	Avaraart Lake	34.42	336	P		P	01 40 22.0	-1.5
	baz=126							
I17K	Unalakleet	34.57	329	P		P	01 40 24.7	0.0
	baz=116							
UNV	Unalaska Valle	34.73	311	P		P	01 40 24.7	-1.5
	baz=96							
H17K	Granite Mounta	34.75	331	P		P	01 40 26.1	-0.2
	baz=118							
G18K	Tagagawik	34.77	333	P		P	01 40 26.0	-0.5
	baz=121							
F19K	Shaleruckik Mo	34.97	335	P		P	01 40 27.2	-1.0
	baz=123							
E19K	Redstone River	35.14	336	P		P	01 40 28.7	-1.0
	baz=125							
E20K	Nigu River	35.29	337	P		P	01 40 30.2	-0.8
	baz=127,SNR=10							
G17K	Kiwalik Mounta	35.29	332	P		P	01 40 28.5	-2.4
	baz=112							
J14K	Nanvaranak Lak	35.30	327	P		P	01 40 30.9	-0.1
	baz=111							
C21K	Kniferblade Rid	35.44	339	P		P	01 40 31.6	-0.7
	baz=130							
F18K	Selawik	35.48	334	P		P	01 40 31.8	-0.7
	baz=121							
K13K	Kusilvak Mount	35.50	325	P		P	01 40 31.1	-1.7
	baz=109							
H16K	Elim	35.50	330	P		P	01 40 31.2	-1.6
	baz=115,SNR=6.5							
D20K	Etivluk River	35.69	338	P		P	01 40 34.2	-0.2
	baz=127							
B21K	Ikpikpuk River	35.70	340	P		P	01 40 34.0	-0.4
	baz=130							
M11K	Mekoryuk	35.76	322	P		P	01 40 34.6	-0.4
	baz=105							
B22K	Teshekpuk Lake	35.87	341	P		P	01 40 35.8	-0.1
	baz=133							
G16K	Kyuk River	35.87	331	P		P	01 40 35.6	-0.4
	baz=116							
F17K	Baldwin Pennin	35.95	333	P		P	01 40 36.1	-0.5
	baz=119							
D19K	Kuna River	36.01	337	P		P	01 40 35.2	-1.9
	baz=125							
NIKH	Nikolski High	36.08	309	P		P	01 40 37.6	-0.3
	baz=92							
E18K	Tukpahlearik C	36.22	335	P		P	01 40 37.6	-1.3
	baz=120							
G15K	Niukluk	36.35	330	P		P	01 40 39.8	-0.3
	baz=114							
ILON	Igloolik, Nuna	36.37	22	IAmb		IAmb	01 40 44.0	
	comp=Z,9.1nm,1.0s							
B20K	Meade River	36.63	339	P		P	01 40 42.9	+0.6
	baz=128,SNR=8.6							
A22K	Sinclair Lake	36.70	342	P		P	01 40 43.2	+0.3
	baz=131							
ANM	Nome	36.72	329	P		P	01 40 43.1	-0.1
	baz=112							
C19K	Lookout Ridge	36.79	337	P		P	01 40 42.5	-1.4
	baz=124,SNR=5.6							
F15K	North Star Dit	36.87	331	P		P	01 40 44.2	-0.3
	baz=114							
C18K	Utukok River	37.04	336	P		P	01 40 45.1	-0.9
	baz=121							
D17K	Noatak River	37.18	334	P		P	01 40 47.4	+0.2
	baz=118,SNR=8.0							
RDOG	Red Dog Mine	37.29	335	P		P	01 40 48.4	+0.3
	baz=119							
A21K	Barrow	37.31	341	P		P	01 40 48.8	+0.7
	baz=130							
F14K	Arctic Creek	37.43	330	P		P	01 40 49.3	+0.1
	baz=112							
C17K	DeLong Mountai	37.58	335	P		P	01 40 49.7	-0.9
	baz=119							
A19K	Wainwright	37.83	338	P		P	01 40 52.5	-0.1
	baz=123							
TNA	Tin City	38.08	330	P		P	01 40 54.9	+0.2
	baz=110							
C16K	Lisburne Hills	38.20	335	P		P	01 40 56.2	+0.4
	baz=116							
SCHQ	Schefferville	38.35	48	P		P	01 40 57.0	-0.1
	comp=Z,9.0nm,0.9s,baz=286,slow=7.1,SNR=8.4							
SCHQ				LR		LR	01 58 56.7	
	comp=Z,372nm,18.3s,baz=32,slow=40							
	comp=Z,9.0nm,0.9s							
GAMB	Gambell	39.12	326	P		P	01 41 02.7	-0.7
	baz=104							
NEEM	North Greenlan	47.53	16	*i* P		P	01 42 12.3	+0.8
NEEM				IAmb		IAmb	01 42 13.2	
	comp=Z,14nm,1.2s							
SUMG	Summit	50.59	23	IAmb		IAmb	01 42 39.3	
	comp=Z,25nm,1.0s							
SUMG	Summit	50.59	23	*i* P		P	01 42 36.1	+0.9
SUMG				IAmb		IAmb	01 42 39.1	
	comp=Z,25nm,1.0s							
SJG	San Juan	50.68	99	LR		LR	02 05 53.9	
	comp=Z,232nm,21.0s,baz=360,slow=38							
SDV	Santo Domingo	53.14	111	LR		LR	02 09 13.8	
	comp=Z,182nm,18.1s,baz=308,slow=40							
DAG	Danmarks Havn	54.74	16	*i* P		P	01 43 05.0	-0.4
DAG				IAmb		IAmb	01 43 08.7	
	comp=Z,7.3nm,1.1s							
DBG	Daneborg	55.26	19	*i* P		P	01 43 10.7	+1.6
DBG				IAmb		IAmb	01 43 12.8	
	comp=Z,4.9nm,1.1s							
PETK	Petropavlovsk-	55.81	314	P		P	01 43 15.1	+1.6
	comp=Z,12nm,0.8s,baz=84,slow=12,SNR=6.6							
	comp=Z,12nm,0.8s							
KBS	Kingsbay	58.89	10	*i* P		P	01 43 37.2	+2.4
SPITS	Spitsbergen Ar	60.04	10	P		P	01 43 43.5	+0.7
	comp=Z,14nm,1.0s,baz=222,slow=1.9,SNR=5.6							
	comp=Z,14nm,1.0s							
NRIK	Norilsk	69.99	350	P		P	01 44 47.6	+0.1
	comp=Z,2.4nm,0.8s,baz=80,slow=4.7,SNR=5.8							
	comp=Z,2.4nm,0.8s							
NRIK	Norilsk	69.99	350	IAmb		IAmb	01 44 51.2	
	comp=Z,3.8nm,0.9s							
NOA	NORSAR Array B	72.48	23	P		P	01 45 01.4	-1.4
	comp=Z,1.0nm,0.9s,baz=319,slow=5.8,SNR=3.8							
	comp=Z,1.0nm,0.9s							
LPAZ	La Paz	73.20	128	P		P	01 45 08.4	+0.1
	comp=Z,3.8nm,0.9s,baz=2.3,slow=9.8,SNR=13							
	comp=Z,3.8nm,0.9s							
LPAZ	La Paz	73.20	128	IAmb		IAmb	01 45 09.1	
	comp=Z,4.6nm,0.9s							
HFS	Hagfors	73.94	22	P		P	01 45 11.2	-0.2
	comp=Z,4.3nm,0.8s,baz=298,slow=3.2,SNR=4.8							
	comp=Z,4.3nm,0.8s							
FINES	FINESS Array B	75.99	16	P		P	01 45 23.1	0.0
	comp=Z,5.6nm,0.8s,baz=352,slow=6.6,SNR=8.4							
	comp=Z,5.6nm,0.8s							
MJAR	Matsushiro Arr	76.03	306	P		P	01 45 25.2	+1.4
	comp=Z,1.2nm,0.3s,baz=52,slow=4.1,SNR=5.7							
	comp=Z,1.2nm,0.3s							
BNX	BinXian	76.30	318	⇓P		P	01 45 25.5	+0.3
BNX				pmax		pmax		
	comp=Z,10.0nm,1.0s							
KSRS	Korea Array	81.66	312	P		P	01 45 56.7	+1.9
	comp=Z,1.2nm,0.5s,baz=60,slow=4.9,SNR=5.1							
	comp=Z,1.2nm,0.5s							
ESDC	Sonseca Array	82.02	45	P		P	01 45 57.4	+0.6
	comp=Z,1.4nm,0.9s,baz=315,slow=4.5,SNR=6.6							
	comp=Z,1.4nm,0.9s							
RETA	Reutte	83.14	31	*e*pP		P	01 46 03.1	+0.6
	comp=Z,6.1nm,1.3s							
FETA	Feichten	83.50	32	*i* PcP		P	01 46 07.6	+3.1
	comp=Z,3.1nm,1.3s							
WATA	Walderalm	83.59	31	*i* PcP		P	01 46 07.4	+2.6
	comp=Z,8.4nm,1.8s							
WTTA	Wattenberg	83.67	31	*i* PcP		P	01 46 08.2	+2.9
	comp=Z,7.0nm,1.6s							
LESA	Schwarzleotal	83.95	30	*i* PcP		P	01 46 09.0	+2.3
	comp=Z,2.7nm,1.1s							
BIOA	Bad Ischl, Aus	84.11	30	*e*PcP		P	01 46 11.3	+4.0
	comp=Z,5.4nm,1.2s							
SONM	Songino Array	84.20	331	P		P	01 46 08.8	+0.9
	comp=Z,2.4nm,0.9s,baz=51,slow=2.4,SNR=11							
	comp=Z,2.4nm,0.9s							
KBA	Koelnbreinsper	84.50	30	*i* PcP		P	01 46 11.8	+2.3
	comp=Z,4.3nm,1.2s							
CONA	Conrad Observa	84.75	28	*e*PcP		P	01 46 13.2	+2.5
	comp=Z,4.0nm,1.4s							
MODS	Modra-Piesok	84.88	27	*e*P		P	01 46 12.7	+1.4
ZAA0	Zalesovo Array	84.91	346	P		P	01 46 11.0	-0.3
ZALV	Zalesovo Beam	84.91	346	P		P	01 46 11.6	+0.4
	comp=Z,2.2nm,0.7s,baz=42,slow=4.6,SNR=8.5							
	comp=Z,2.2nm,0.7s							
ZALV	Zalesovo Beam	84.91	346			P	01 46 10.3	-1.0
RONA	Rosalia, Austr	85.10	28	*i* PcP		P	01 46 13.6	+1.2
	comp=Z,2.5nm,0.7s							
OBKA	Obir	85.44	30	*i* PcP		P	01 46 16.0	+1.9
	comp=Z,4.7nm,0.8s							
SOKA	Soboth	85.48	29	*e*pP		P	01 46 14.9	+0.5
	comp=Z,6.3nm,1.0s							
AKASG	Malin Array Be	86.48	19	P		P	01 46 18.4	-0.6
	comp=Z,3.1nm,0.9s,baz=344,slow=4.1,SNR=14							
	comp=Z,3.1nm,0.9s							
CPUP	Villa Florida	87.34	127	P		P	01 46 23.9	+0.4
	comp=Z,2.3nm,0.8s,baz=317,slow=2.9,SNR=4.8							
	comp=Z,2.3nm,0.8s							
HHC	Hu-ho-hao-te	87.69	324	*e*P		P	01 46 22.1	-3.2
HHC				pmax		pmax		
	comp=Z,12nm,0.7s							
HHC				pmax		pmax		
	comp=Z,390nm,4.8s							
BVAR	Borovoye Array	87.80	354	P		P	01 46 26.1	+0.6
	comp=Z,3.1nm,0.8s,baz=353,slow=6.0,SNR=11							
	comp=Z,3.1nm,0.8s							
HNS	HongShan	88.87	320	⇓P		P	01 46 34.3	+3.5
HNS				pmax		pmax		
	comp=Z,9.0nm,0.8s							
KURK	Kurchatov	89.10	348			P	01 46 30.9	-0.8
KURBB	Kurchatov Arra	89.20	348	P		P	01 46 31.7	-0.4
	comp=Z,4.0nm,0.9s,baz=14,slow=4.7,SNR=20							
	comp=Z,4.0nm,0.9s							
NJ2	Nanjing	90.72	314	*e*P		P	01 46 39.3	-0.3
NJ2				pmax		pmax		
	comp=Z,25nm,0.5s							
AB31	Akbulak array	92.00	0			P	01 46 44.7	-0.4
ABKAR	Akbulak array	92.00	0			P	01 46 44.3	-0.9
MKAR	Makanchi Array	92.23	345	P		P	01 46 46.8	+0.4
	comp=Z,1.9nm,1.0s,baz=15,slow=5.0,SNR=9.9							
	comp=Z,1.9nm,1.0s							
WMQ	Urumqi	93.79	340	*e*P		P	01 46 52.8	-0.9
WMQ				pmax		pmax		
	comp=Z,11nm,0.7s							
BRTR	Keskin Array B	97.82	20	P		Pdif	01 47 12.2	0.0
	comp=Z,2.5nm,0.8s,baz=318,slow=3.5,SNR=3.8							
	comp=Z,0.5nm,0.8s							
WRA	Warramunga Arr	114.47	264	PKP		PKPdf	01 52 16.7	-0.2
	comp=Z,0.5nm,0.8s,baz=5.8,slow=1.7,SNR=4.6							
ASAR	Alice Springs	116.88	260	PKP		PKPdf	01 52 21.2	-0.2
	comp=Z,0.8nm,0.8s,baz=60,slow=2.1,SNR=7.2							
BOSA	Boshof	149.25	81	PKPbc		PKPbc	01 53 25.4	-0.1
	comp=Z,1.7nm,0.5s,baz=307,slow=4.2,SNR=7.2							

IDC ***21*** *01:34:24.6±2.2, 7.77S×128.26E, h103km±23km, mb3.7/7, mbtmp4.2/12, Error ellipse: s-maj=29.7km s-min=17.1km az=80.0*

NEIC ***21*** *01:34:25.4±2.7, 7.73S±0.09×128.43E±0.08, h95km±9km, mb4.1/10, Error ellipse: s-maj=12.6km s-min=10.4km az=154.0*

DJA ***21*** *01:34:26.9±0.2, 8.5S±2.2×12.8E±, h67km±30km, M4.3/24, mB5.3/3, mb4.3/8, MLv4.3/24, Mw(mB)4.8/3*

ISC 21 01:34:25.6±0.6, 7.83S±0.05×128.46E±0.05, h100km, n54, σ2s10/61, mb3.9/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	2.81	93	Pn	Pn	01 35 08.7	-0.1
SAUI	Saumlaki	2.81	93	P	Pn	01 35 10.7	+1.8
SAUI				S	Sn	01 35 44.7	+2.5
BNDI	Bandanaira	3.59	24	P	Pn	01 35 17.7	-1.6
BNDI	Bandanaira	3.59	24	P	Pn	01 35 17.4	-1.9
AAI	Ambon	4.13	356	P	Pn	01 35 23.9	-2.7
KRAI	Karang Ratu	4.49	359	P	Pn	01 35 29.8	-1.6
SOEI	Soe	4.57	245	P	Pn	01 35 34.5	+1.9
SOEI	Soe	4.57	245		Pn	01 35 34.4	+1.9
SOEI	Soe	4.57	245	P	Pn	01 35 34.4	+1.9
SOEI				S	Sn	01 36 26.1	+1.5
NLAI	Namlea	4.76	343	P	Pn	01 35 34.7	-0.4
DRS	Darwin Rock St	5.16	153	P	Pn	01 35 43.1	+2.6
BATI	Baumata	5.29	243	P	Pn	01 35 40.5	-1.9
	24nm,0.4s,baz=104,slow=12,SNR=1.7						
BATI				S	Sn	01 36 41.4	-0.9
	65nm,0.5s,baz=158,slow=22,SNR=7.7						
BATI	Baumata	5.29	243	P	Pn	01 35 43.8	+1.4
	0.4nm40nm,0.4s						
BATI				S	Sn	01 36 43.8	+1.6
	0.4nm40nm,0.4s						
MTN	Manton Dam	5.63	152		Pn	01 35 48.9	+2.0
FAKI	Fak Fak	6.17	38	P	Pn	01 35 53.7	-0.5
FAKI	Fak Fak	6.17	38	Pn	Pn	01 35 53.3	-1.0
FAKI	Fak Fak	6.17	38	P	Pn	01 35 53.6	-0.6
	0.1nm27nm,0.6s						
FAKI				S	Sn	01 37 02.6	-0.8
	0.1nm27nm,0.6s						
KMPI	Kaimana, Papua	6.66	52	P	Pn	01 36 00.4	-0.5
EDFI	Ende, Flores	6.76	262	P	Pn	01 36 03.3	+0.9
	0.1nm11nm,0.8s						
SIJI	Sorong	7.46	22	P	Pn	01 36 11.7	-0.2
	7.6nm,0.4s,baz=203,slow=22,SNR=6.4						
SIJI	Sorong	7.46	22	P	Pn	01 36 11.0	-0.8
	0.1nm716nm9.9nm,0.9s						
SWI	Sorong	7.46	22	P	Pn	01 36 08.4	-3.5
KNRA	Kununurra	7.80	178		Pn	01 36 17.6	+1.2
BSSI	Bau Bau, Buton	8.09	281	P	Pn	01 36 20.9	+0.5
FITZ	Fitzroy Crossi	10.57	195	P

FORT					IAmb	IAmb	01 39 43.5			
	comp=Z,4.7nm,0.8s									
BBOO	**Buckleboo**	**25.83**	**165**		P	**P**	**01 39 51.5**	**+3.8**		
STKA	**Stephens Creek**	**26.87**	**155**		P	**P**	**01 39 58.2**	**+1.1**		
	comp=Z,2.1nm,0.4s,baz=337,slow=8.0,SNR=7.0									
	comp=Z,2.1nm,0.4s									
STKA	**Stephens Creek**	**26.87**	**155**		P	**P**	**01 39 58.5**	**+1.5**		
MJAR	**Matsushiro Arr**	**45.08**	**11**		P	**P**	**01 42 30.0**	**-1.7**		
	comp=Z,2.3nm,0.6s,baz=190,slow=9.8,SNR=5.5									
	comp=Z,2.3nm,0.6s									
TIA	**Tai'an**	**45.09**	**347**		P	**P**	**01 42 36.0**	**+4.2**		
TIA					pmax	pmax				
	comp=Z,16nm,0.5s									
SONM	**Songino Array**	**58.76**	**343**		P	**P**	**01 44 11.6**	**-1.6**		
	comp=Z,0.8nm,0.5s,baz=150,slow=5.1,SNR=6.6									
	comp=Z,0.8nm,0.5s									
SONM	**Songino Array**	**58.76**	**343**		P	**P**	**01 44 14.1**	**+0.8**		
SONM					IAmb	IAmb	01 44 14.8			
	comp=Z,2.7nm,1.2s									
MKAR	**Makanchi Array**	**68.10**	**328**		P	**P**	**01 45 12.0**	**-2.8**		
	comp=Z,0.4nm,0.4s,baz=118,slow=8.4,SNR=9.8									
	comp=Z,0.4nm,0.4s									
MKAR	**Makanchi Array**	**68.10**	**328**		P	**P**	**01 45 12.8**	**-1.9**		
ZALV	**Zalesovo Beam**	**71.66**	**335**		P	**P**	**01 45 33.5**	**-2.8**		
	comp=Z,1.0nm,0.6s,baz=124,slow=4.8,SNR=5.5									
	comp=Z,1.0nm,0.6s									
ZALV	**Zalesovo Beam**	**71.66**	**335**		P	**P**	**01 45 35.2**	**-1.1**		
KURBB	**Kurchatov Arra**	**72.43**	**329**		P	**P**	**01 45 38.4**	**-2.6**		
	comp=Z,0.7nm,0.5s,baz=126,slow=5.0,SNR=16									
	comp=Z,0.7nm,0.5s									
KURK	**Kurchatov**	**72.44**	**329**		P	**P**	**01 45 39.5**	**-1.5**		
BVAR	**Borovoye Array**	**77.96**	**328**		P	**P**	**01 46 11.5**	**-1.2**		
	comp=Z,0.9nm,0.5s,baz=116,slow=6.4,SNR=6.1									
	comp=Z,0.9nm,0.5s									
QSPA	**South Pole Qui**	**82.15**	**180**		P	**P**	**01 46 37.8**	**+2.6**		
QSPA					IAmb	IAmb	01 47 06.1			
	comp=Z,3.5nm,1.3s									

CATAC ***21*** *01:39:46.9±0.8, 12°N±3°×8°9W±°, h2km±5km, M3.3/23, MLv3.3/23, Error ellipse: s-maj=7.1km s-min=3.4km az=25.5, confirmed*
GCG ***21*** *01:39:46.5±0.7, 12°29N×89°82W, h1km±16km, MD4.3, Presumed earthquake*
SNET ***21*** *01:39:47.1±11.0, 12°43N×88°39W, h18km, ML3.3, Presumed earthquake*

ISC 21 01:39:47.7±2.2, 12°30N±0°07×89°51W±0°06, h11km±11km, n48, σ0s74/73, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**1.20**	**9**	P	**Pn**	**01 40 09.8**	**-0.6**
LALI				S	**Sn**	**01 40 26.4**	**-0.1**
LALI	**Alcalda de L**	**1.20**	**9**	*i* P	**Pn**	**01 40 10.0**	**-0.3**
PANCS	**Alcalda de**	**1.34**	**14**	S	**Sb**	**01 40 30.6**	**+0.4**
JAYA	**Jayaque - finc**	**1.35**	**2**	P	**Pn**	**01 40 12.2**	**-0.4**
JAYA				S	**Sn**	**01 40 30.6**	**0.0**
JAYA	**Jayaque - finc**	**1.35**	**2**	*i* P	**Pn**	**01 40 12.0**	**-0.6**
JAYA	**Jayaque - finc**	**1.35**	**2**	*i* P	**Pb**	**01 40 12.9**	**-0.2**
JAYA				*e*S	**Sb**	**01 40 26.8**	**-3.6**
SJTE	**Alcalda de S**	**1.40**	**20**	*i* P	**Pn**	**01 40 11.9**	**-1.3**
PMON	**Piamonte**	**1.42**	**8**	P	**Pn**	**01 40 13.3**	**-0.2**
PMON				S	**Sn**	**01 40 32.1**	**-0.1**
TECO	**Alcaldia de Te**	**1.42**	**30**	P	**Pn**	**01 40 13.5**	**+0.1**
TECO				S	**Sn**	**01 40 30.6**	**-1.5**
SEMO	**Seminario San**	**1.42**	**11**	S	**Sg**	**01 40 34.0**	**+0.4**
UEES	**Universidad Ev**	**1.43**	**10**	P	**Pn**	**01 40 13.2**	**-0.5**
UEES				S	**Sb**	**01 40 33.2**	**+0.5**
BOQS	**Boqueron**	**1.45**	**9**	*i* P	**Pn**	**01 40 13.7**	**-0.3**
IGN	**Direccin Gen**	**1.45**	**13**	P	**Pn**	**01 40 13.9**	**+0.1**
IGN				S	**Sg**	**01 40 34.7**	**+0.4**
CEDA	**San Andres**	**1.50**	**4**	S	**Sb**	**01 40 34.9**	**+0.3**
PAVA	**Las Pavas**	**1.51**	**21**	P	**Pn**	**01 40 14.2**	**-0.6**
PAVA				S	**Sb**	**01 40 34.9**	**-0.2**
PAVA	**Las Pavas**	**1.51**	**21**	*i* P	**Pn**	**01 40 14.7**	**-0.1**
CEVE	**Cerro Verde**	**1.53**	**356**	P	**Pb**	**01 40 15.6**	**-0.5**
CEVE	**Cerro Verde**	**1.53**	**356**	*i* P	**Pg**	**01 40 16.9**	**-0.1**
SCLA	**Alcaldia de Sa**	**1.59**	**28**	P	**Pn**	**01 40 14.9**	**-0.9**
SCLA				S	**Sb**	**01 40 37.5**	**+0.3**
RTR	**El Retiro**	**1.60**	**355**	*i* P	**Pn**	**01 40 15.9**	**-0.1**
FAME	**Alcaldia de Sa**	**1.61**	**342**	P	**Pn**	**01 40 16.5**	**+0.4**
FAME				S	**Sn**	**01 40 36.6**	**-0.3**
NUBE	**Las Nubes**	**1.62**	**351**	P	**Pn**	**01 40 15.9**	**-0.4**
NUBE	**Las Nubes**	**1.62**	**351**	*i* P	**Pn**	**01 40 16.3**	**+0.1**
NUBE				*i* S	**Sb**	**01 40 39.0**	**+0.9**
PACA	**Pacayal**	**1.64**	**45**	P	**Pn**	**01 40 15.9**	**-0.6**
PACA				S	**Sb**	**01 40 38.8**	**+0.1**
RANC	**El Ranchito**	**1.64**	**46**	P	**Pn**	**01 40 16.1**	**-0.4**
RANC				S	**Sn**	**01 40 37.7**	**0.0**
VSM	**San Miguel**	**1.65**	**47**	*i* P	**Pn**	**01 40 17.1**	**+0.3**
UNIC	**Universidad Ca**	**1.68**	**359**	P	**Pn**	**01 40 17.5**	**+0.6**
UNIC				S	**Sb**	**01 40 40.1**	**+0.5**
LOAL	**Lomas de Alarc**	**1.71**	**351**	P	**Pb**	**01 40 19.7**	**+0.5**
LOAL				S	**Sb**	**01 40 41.3**	**+0.6**
SLOZ	**Alcaldia de Sa**	**1.74**	**351**	P	**Pb**	**01 40 18.9**	**-0.7**
CNRM	**Centro Naciona**	**1.75**	**48**	S	**Sb**	**01 40 42.7**	**+0.9**
P5NO	**Presa 5 de nov**	**1.83**	**23**	P	**Pn**	**01 40 19.2**	**+0.2**
P5NO				S	**Sb**	**01 40 43.5**	**-0.6**
CNCH	**Conchagua**	**1.90**	**59**	P	**Pn**	**01 40 20.3**	**+0.2**
CNCH				S	**Sb**	**01 40 45.2**	**-1.0**
LLGN	**La Laguna**	**1.93**	**16**	P	**Pn**	**01 40 21.2**	**+0.7**
LLGN				S	**Sb**	**01 40 47.1**	**-0.1**
CSGN	**Cosiguina Volc**	**2.02**	**70**	S	**Sn**	**01 40 47.7**	**+0.7**
POTN	**Potosi Cosigui**	**2.07**	**70**	S	**Sn**	**01 40 49.2**	**+1.0**
MTO3	**Montecristo**	**2.09**	**4**	P	**Pn**	**01 40 23.6**	**+0.8**
MTO3				S	**Sb**	**01 40 53.0**	**+1.1**
MTO3	**Montecristo**	**2.09**	**4**	*i* P	**Pn**	**01 40 23.5**	**+0.6**
ESQI	**Esquipulas**	**2.25**	**4**	P	**Pn**	**01 40 25.1**	**+0.6**
ESQI				S	**Sb**	**01 40 55.1**	**-1.3**
MARCA	**Marcala la Paz**	**2.34**	**38**	P	**Pn**	**01 40 26.9**	**+0.7**
MARCA				S	**Sn**	**01 40 56.5**	**+1.5**
MARCA	**Marcala la Paz**	**2.34**	**38**	*i* P	**Pb**	**01 40 29.3**	**-0.6**
SARH	**Santa Rosa de**	**2.57**	**16**	P	**Pn**	**01 40 30.2**	**+1.0**
HERN	**Volcan Telica**	**2.63**	**83**	P	**Pn**	**01 40 30.2**	**+0.1**
POLN	**Al Sur del Vol**	**2.65**	**82**	P	**Pn**	**01 40 30.1**	**-0.3**
POLN				S	**Sn**	**01 41 02.8**	**+0.2**
TGUH	**Tegucigalpa,Un**	**2.79**	**51**	P	**Pn**	**01 40 32.8**	**+0.4**
TGUH				S	**Sn**	**01 41 07.2**	**+1.1**
COPN	**Copaltepe**	**2.85**	**92**	P	**Pn**	**01 40 33.1**	**0.0**
MOM3	**MOM3**	**2.93**	**86**	P	**Pn**	**01 40 34.2**	**0.0**
MOM3				S	**Sn**	**01 41 09.7**	**+0.4**
YUSH	**Yuscaran**	**3.07**	**57**	P	**Pn**	**01 40 36.1**	**-0.2**
LIMN	**Finca el Limon**	**3.16**	**76**	P	**Pn**	**01 40 37.0**	**-0.4**
LIMN				S	**Sn**	**01 41 14.5**	**-0.6**

GUC ***21*** *01:44:19.7±0.7, 21°18S×68°25W, h144km±4km, ML3.0*
SCB ***21*** *01:44:23.3±1.2, 20°79S×67°77W, h162km±15km, ML2.6/1, Error ellipse: s-maj=13.3km s-min=9.6km az=0.0*

ISC 21 01:44:17.3±1.8, 21°17S±0°04×68°24W±0°05, h158km±16km, n24, σ1s24/42, 9C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**1.12**	**236**	*e*P	**Pn**	**01 44 44.9**	**+0.7**
PB09				*e*S	**Sn**	**01 45 04.3**	**-0.4**
PB01	**IPOC Station P**	**1.17**	**276**	*e*P	**Pn**	**01 44 44.6**	**+0.1**
PB01				*e*S	**Sn**	**01 45 04.0**	**-1.3**
PB01				IAML		01 45 05.9	
	comp=N,231nm,0.1s						
PB08	**IPOC Station P**	**1.33**	**320**	*e*P	**Pn**	**01 44 47.4**	**+1.1**
PB08				*e*S	**Sn**	**01 45 08.6**	**+0.1**
PB08				IAML		01 45 09.5	
	comp=N,158nm,0.4s						
PX03	**IPOC Station P**	**1.51**	**300**	*e*P	**Pn**	**01 44 48.2**	**+0.5**
PX03				IAML		01 45 13.0	
	comp=N,217nm,0.2s						
PB02	**IPOC Station P**	**1.55**	**264**	*e*P	**Pn**	**01 44 48.6**	**+0.4**
PB02				*e*S	**Sn**	**01 45 10.9**	**-1.0**
PB02				IAML		01 45 12.7	
	comp=E,354nm,0.3s						
PB07	**IPOC Station P**	**1.63**	**250**	*e*P	**Pn**	**01 44 49.5**	**+0.4**
PB07				*e*S	**Sn**	**01 45 12.5**	**-1.0**
PB07				IAML		01 45 13.1	
	comp=N,136nm,0.3s						
PB03	**IPOC Station P**	**1.66**	**238**	*e*P	**Pn**	**01 44 49.9**	**+0.5**
PB03				*e*S	**Sn**	**01 45 13.0**	**-1.0**
PB03				IAML		01 45 14.5	
	comp=E,110nm,0.4s						
GO01	**Chusmiza**	**1.74**	**329**	*e*P	**Pn**	**01 44 51.8**	**+1.2**
GO01				*e*S	**Sn**	**01 45 16.4**	**+0.3**
GO01				IAML		01 45 20.6	
	comp=N,209nm,0.3s						
PATCX	**Punta Patache**	**1.82**	**281**	*e*P	**Pn**	**01 44 51.9**	**+0.8**
PATCX				*e*S	**Sn**	**01 45 16.4**	**-0.5**
TA01	**Diego Aracena**	**1.91**	**288**	*e*P	**Pn**	**01 44 52.3**	**+0.4**
TA01				*e*S	**Sn**	**01 45 17.3**	**-1.3**
TA01				IAML		01 45 18.9	
	comp=E,246nm,0.6s						
PB11	**IPOC Station P**	**1.93**	**316**	*e*P	**Pn**	**01 44 53.2**	**+0.9**
PB11				*e*S	**Sn**	**01 45 19.1**	**-0.2**
PB11				IAML		01 45 20.2	
	comp=N,189nm,0.2s						
PB06	**IPOC Station P**	**1.97**	**219**	*e*P	**Pn**	**01 44 53.5**	**+0.7**
PB06				*e*S	**Sn**	**01 45 19.9**	**-0.3**
PB06				IAML		01 45 20.6	
	comp=E,58nm,0.5s						
TA02	**Huaiquique**	**1.98**	**296**	*e*P	**Pn**	**01 44 53.3**	**+0.5**
TA02				*e*S	**Sn**	**01 45 19.1**	**-0.9**
PSGCX	**Pisagua**	**2.36**	**311**	*e*P	**Pn**	**01 44 57.6**	**+0.4**
PSGCX				*e*S	**Sn**	**01 45 27.0**	**-1.1**
MOCB	**Mochara**	**2.43**	**92**	Pg	**Pn**	**01 45 00.2**	**+1.8**
MOCB				Sg	**Sn**	**01 45 29.1**	**-1.0**
MOCB				IAML		01 45 30.3	
	comp=E,29nm,1.2s						
PB05	**IPOC Station P**	**2.48**	**227**	*e*P	**Pn**	**01 44 59.2**	**+0.5**
PB05				*e*S	**Sn**	**01 45 30.5**	**-0.2**
PB05				IAML		01 45 36.6	
	comp=N,27nm,0.5s						
SOEO	**Opoqueri**	**2.61**	**7**	P	**Pn**	**01 45 03.2**	**+2.5**
SOEO				S	**Sn**	**01 45 32.8**	**-1.4**
PB12	**IPOC Station P**	**3.21**	**322**	*e*P	**Pn**	**01 45 08.6**	**+0.8**
PB12				*e*S	**Sn**	**01 45 46.1**	**-0.9**
PB12				IAML		01 45 52.6	
	comp=N,27nm,0.7s						
SOET	**ToroToro**	**3.80**	**37**	P	**Pn**	**01 45 15.1**	**-0.5**
AOEA	**Aiquile**	**4.11**	**44**	P	**Pn**	**01 45 19.0**	**-0.4**
AOEA	**Aiquile**	**4.11**	**44**	P	**Pn**	**01 45 19.1**	**-0.4**
SOEJ	**Jacaque**	**4.17**	**1**	P	**Pn**	**01 45 22.4**	**+1.8**
SOEJ				S	**Sn**	**01 46 05.9**	**-3.8**
BBOE	**La Paz, Chanca**	**4.34**	**3**	P	**Pn**	**01 45 24.9**	**+2.1**
BBOD	**La Paz, Gloria**	**4.52**	**356**	P	**Pn**	**01 45 27.4**	**+2.3**

FUNV ***21*** *01:50:51.9, 7°17N×73°22W, h6km, MW3.4, Presumed earthquake*
RSNC ***21*** *01:50:51.2±0.0, 7°N±1°×7°3W±°, h148km±1km, M3.3, mb3.6, ML3.0*

ISC 21 01:50:48.6±1.3, 6°82N±0°03×73°09W±0°04, h160km±8km, n38, σ1s34/68, 1C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.25**	**201**	P	**Pn**	**01 51 11.1**	**+0.5**
BARC				S	**Sn**	**01 51 27.0**	**-0.4**
PAMC	**Pamplona, Colo**	**0.64**	**37**	P	**Pn**	**01 51 13.8**	**+1.3**
PAMC				S	**Sn**	**01 51 31.1**	**+0.3**
BRJC	**Barrancabermej**	**0.66**	**283**	P	**Pn**	**01 51 12.8**	**+0.7**
BRJC				S	**Sn**	**01 51 30.1**	**+0.2**
RUSC	**La Rusia**	**0.93**	**179**	P	**Pn**	**01 51 14.8**	**+0.4**
RUSC				S	**Sn**	**01 51 33.1**	**-1.1**
RUSC	**La Rusia**	**0.93**	**179**	*i* P	**Pn**	**01 51 14.9**	**+0.4**
RUSC				*e*S	**Sn**	**01 51 32.3**	**-1.9**
PTBC	**PUERTO BERRIO,**	**1.38**	**258**	P	**Pn**	**01 51 17.4**	**-0.5**
PTBC				S	**Sn**	**01 51 39.0**	**-1.3**
OCAC	**Ocana**	**1.42**	**351**	P	**Pn**	**01 51 19.5**	**+1.1**
OCAC				S	**Sn**	**01 51 42.0**	**+0.6**
SPBC	**San Pablo de B**	**1.52**	**220**	P	**Pn**	**01 51 19.8**	**+0.5**
SPBC				S	**Sn**	**01 51 41.9**	**-1.0**
NORC	**Norcasia**	**2.17**	**235**	P	**Pn**	**01 51 26.8**	**+0.4**
NORC				S	**Sn**	**01 51 54.8**	**-0.7**
CHIC	**Chingaza**	**2.27**	**196**	P	**Pn**	**01 51 28.6**	**+0.6**
CHIC				S	**Sn**	**01 51 58.1**	**-0.3**
ROSC	**El Rosal**	**2.32**	**212**	P	**Pn**	**01 51 30.7**	**+2.2**
ROSC				S	**Sn**	**01 51 59.9**	**+0.6**
HELC	**Santa Helena**	**2.50**	**256**	P	**Pn**	**01 51 32.1**	**+1.4**
HELC				S	**Sn**	**01 52 02.2**	**-0.9**
HELC	**Santa Helena**	**2.50**	**256**	*e*P	**Pn**	**01 51 31.7**	**+1.1**
HELC				*e*S	**Sn**	**01 52 02.5**	**-0.6**
UREC	**San Jos de Ur**	**2.59**	**291**	P	**Pn**	**01 51 30.9**	**-0.5**
UREC				S	**Sn**	**01 52 02.4**	**-2.1**
VILC	**Villavicencio,**	**2.76**	**193**	P	**Pn**	**01 51 34.0**	**+0.4**
VILC				S	**Sn**	**01 52 09.0**	**+0.5**
GUY2C	**Guyana, Caldas**	**2.76**	**235**	P	**Pn**	**01 51 35.8**	**+1.8**
GUY2C				S	**Sn**	**01 52 08.4**	**-0.6**
CBOC	**Ciudad Bolivar**	**3.06**	**252**	P	**Pn**	**01 51 38.5**	**+1.2**
CBOC				S	**Sn**	**01 52 14.5**	**-0.5**
DBBC	**Dabeiba**	**3.10**	**274**	P	**Pn**	**01 51 38.4**	**+0.6**
SDV	**Santo Domingo**	**3.18**	**50**	P	**Pn**	**01 51 40.3**	**+1.4**
SDV				S	**Sn**	**01 52 17.5**	**-0.4**
SDV	**Santo Domingo**	**3.18**	**50**	*i* P	**Pn**	**01 51 40.4**	**+1.4**
SDV				*e*S	**Sn**	**01 52 16.1**	**-1.8**
ARGC	**Ariguani, Magd**	**3.22**	**339**	P	**Pn**	**01 51 42.3**	**+3.0**
ARGC				S	**Sn**	**01 52 20.4**	**+1.8**
ANIL	**Santa Ana**	**3.27**	**225**	P	**Pn**	**01 51 42.2**	**+2.1**
ANIL				S	**Sn**	**01 52 22.9**	**+2.9**
PRAC	**Prado**	**3.57**	**210**	P	**Pn**	**01 51 44.4**	**+0.7**
PRAC				S	**Sn**	**01 52 26.6**	**0.0**
ORTC	**Ortega, Tolima**	**3.60**	**217**	P	**Pn**	**01 51 44.9**	**+0.7**
ORTC				S	**Sn**	**01 52 28.2**	**+0.9**
APAC	**Apartado, Choc**	**3.62**	**287**	P	**Pn**	**01 51 44.9**	**+0.6**
APAC				S	**Sn**	**01 52 26.0**	**-1.6**
SJCC	**San Jacinto, C**	**3.69**	**326**	P	**Pn**	**01 51 45.1**	**-0.1**
SJCC				S	**Sn**	**01 52 26.4**	**-2.8**
SJCC	**San Jacinto, C**	**3.69**	**326**	*e*P	**Pn**	**01 51 44.0**	**-1.2**
SJCC				*e*S	**Sn**	**01 52 22.4**	**-6.8**
PLMC	**San Jos del P**	**3.70**	**239**	P	**Pn**	**01 51 46.4**	**+1.0**
PLMC				S	**Sn**	**01 52 29.6**	**0.0**
URMC	**La Uribe, Meta**	**3.78**	**200**	P	**Pn**	**01 51 47.3**	**+0.9**
URMC				S	**Sn**	**01 52 31.8**	**+0.4**
LCBC	**Los crdobas,**	**3.82**	**302**	P	**Pn**	**01 51 53.0**	**+6.1**
LCBC				S	**Sn**	**01 52 33.6**	**+1.3**
YOTC	**Yotoco, Valle**	**4.30**	**229**	P	**Pn**	**01 51 53.7**	**+0.5**
YOTC				S	**Sn**	**01 52 42.8**	**-0.7**
SMRC	**Santa Marta, M**	**4.46**	**346**	P	**Pn**	**01 51 55.5**	**+0.4**
SMRC				S	**Sn**	**01 52 44.3**	**-2.7**
MACC	**Macarena, Meta**	**4.71**	**189**	P	**Pn**	**01 51 56.3**	**-2.2**
MACC				S	**Sn**	**01 52 49.3**	**-3.8**
URIC	**Uribia, Colomb**	**4.97**	**13**	*e*P	**Pn**	**01 52 01.2**	**-0.6**
URIC				*e*S	Sn	01 52 52.1	-7.0
GARC	**Garzon, Huila**	**5.19**	**208**	P	**Pn**	**01 52 04.4**	**-0.7**
POPC	**Popayan, Colom**	**5.56**	**220**	P	**Pn**	**01 52 10.0**	**+0.2**
	4.7nm,0.6s						
FLOC	**Florencia**	**5.80**	**206**	P	**Pn**	**01 52 11.8**	**-1.1**
BBAC	**Balboa, Cauca**	**6.32**	**221**	P	**Pn**	**01 52 19.1**	**-0.8**

IDC 21 01:59:54.4±10.0, 31°10S×176°76W, h0km, mb3.3/2, mbtmp3.3/2, Error ellipse: s-maj=479.1km s-min=58.1km az=157.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**44.14**	**267**	P	P	02 08 05.3	+0.3
	0.2nm,0.5s,baz=109,slow=7.5,SNR=2.0						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**45.19**	**272**	P	P	02 08 12.8	-0.6
	0.3nm,0.4s,baz=113,slow=6.8,SNR=5.3						
	0.3nm,0.4s						
FINES	**FINESS Array B**	**146.16**	**340**	PKPbc	PKPdf	02 19 35.0	+0.2
	3.4nm,1.1s,baz=62,slow=3.8,SNR=8.7						

SNET ***21*** *02:00:18.8±2.3, 13°19N×89°74W, h30km, ML3.5, Presumed earthquake*
CATAC ***21*** *02:00:19.5±0.5, 13°N±3°×9°0W±°, h23km±2km, M3.6/22, MLv3.6/22, Error ellipse: s-maj=5.7km s-min=3.6km az=27.3, confirmed*
GCG ***21*** *02:00:20.7±1.4, 13°33N×89°78W, h34km±7km, MD3.9, ML3.6, Presumed earthquake*

ISC 21 02:00:20.8±1.4, 13°27N±0°05×89°68W±0°03, h26km±11km, n48, σ0s87/77, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.41**	**58**	P	**Pn**	**02 00 30.2**	**-0.8**
LALI				S	**Sn**	**02 00 38.3**	**+0.5**
LALI	**Alcalda de L**	**0.41**	**58**	*i* P	**Pb**	**02 00 29.8**	**+0.2**
JAYA	**Jayaque - finc**	**0.44**	**30**	P	**Pn**	**02 00 30.6**	**-1.0**
JAYA				S	**Sn**	**02 00 39.1**	**+0.3**
JAYA	**Jayaque - finc**	**0.44**	**30**	*i* P	**Pn**	**02 00 30.5**	**-1.1**
JAYA				IAML		02 00 43.5	
	comp=N,4μm,0.2s						
JAYA	**Jayaque - finc**	**0.44**	**30**	*i* P	**Pb**	**02 00 30.3**	**0.0**
JAYA				*e*S	**Sn**	**02 00 40.5**	**+1.6**
CEVE	**Cerro Verde**	**0.56**	**5**	P	**Pn**	**02 00 32.3**	**-1.0**
CEVE				S	**Sn**	**02 00 42.3**	**+0.5**
PMON	**Piamonte**	**0.56**	**39**	P	**Pb**	**02 00 32.1**	**-0.1**
PMON				S	**Sn**	**02 00 41.9**	**+0.1**
SBLS	**San Blas**	**0.57**	**5**	*i* P	**Pn**	**02 00 32.5**	**-1.0**
PANCS	**Alcalda de**	**0.59**	**55**	P	**Pb**	**02 00 32.3**	**-0.4**
PANCS				S	**Sb**	**02 00 41.5**	**+0.8**
PANCS	**Alcalda de**	**0.59**	**55**	*i* P	**Pb**	**02 00 31.7**	**-1.0**
PANCS				*e*S	**Sb**	**02 00 40.9**	**+0.2**
CEDA	**San Andres**	**0.59**	**27**	P	**Pn**	**02 00 32.9**	**-0.8**
CEDA	**San Andres**	**0.59**	**27**	*i* P	**Pb**	**02 00 32.5**	**-0.3**
CEDA				*e*S	**Sn**	**02 00 42.5**	**0.0**
UEES	**Universidad Ev**	**0.61**	**44**	P	**Pb**	**02 00 32.9**	**-0.2**
UEES				S	**Sn**	**02 00 43.2**	**+0.2**
SEMO	**Seminario San**	**0.61**	**46**	P	**Pb**	**02 00 32.7**	**-0.4**
SEMO				S	**Sn**	**02 00 42.8**	**-0.2**
PIC2	**El Picacho**	**0.62**	**41**	*i* P	**Pb**	**02 00 33.3**	**0.0**
UTEC	**Universidad Te**	**0.63**	**47**	P	**Pb**	**02 00 32.9**	**-0.4**
UTEC				S	**Sn**	**02 00 43.0**	**-0.4**
NUBE	**Las Nubes**	**0.64**	**351**	P	**Pb**	**02 00 32.8**	**-0.7**
NUBE	**Las Nubes**	**0.64**	**351**	*i* P	**Pb**	**02 00 32.9**	**-0.7**
NUBE				*i* S	**Sn**	**02 00 42.4**	**-1.3**
FAME	**Alcaldia de Sa**	**0.66**	**330**	P	**Pn**	**02 00 32.8**	**-1.7**
IGN	**Direccin Gen**	**0.66**	**48**	P	**Pn**	**02 00 34.0**	**-0.6**
IGN				S	**Sn**	**02 00 44.3**	**+0.2**
UDBS	**Universidad Do**	**0.67**	**49**	P	**Pb**	**02 00 33.7**	**-0.3**
UDBS				S	**Sn**	**02 00 44.4**	**0.0**
UNIC	**Universidad Ca**	**0.72**	**10**	P	**Pb**	**02 00 34.5**	**-0.3**
UNIC				S	**Sn**	**02 00 45.3**	**-0.2**
LOAL	**Lomas de Alarc**	**0.73**	**352**	P	**Pb**	**02 00 34.8**	**-0.3**
LOAL				S	**Sn**	**02 00 46.6**	**+0.7**
SJTE	**Alcalda de S**	**0.73**	**62**	*i* P	**Pn**	**02 00 34.1**	**-1.5**
SJTE				*e*S	**Sb**	**02 00 44.7**	**-0.2**
SLOZ	**Alcaldia de Sa**	**0.76**	**352**	P	**Pb**	**02 00 34.9**	**-0.6**
SLOZ				S	**Sn**	**02 00 47.0**	**+0.4**
PAVA	**Las Pavas**	**0.84**	**58**	P	**Pn**	**02 00 36.4**	**-0.8**
PAVA				S	**Sb**	**02 00 49.1**	**+1.1**
TECO	**Alcaldia de Te**	**0.91**	**73**	S	**Sn**	**02 00 49.3**	**-0.9**
SCLA	**Alcaldia de Sa**	**1.02**	**65**	P	**Pn**	**02 00 38.8**	**-0.6**
SCLA				S	**Sb**	**02 00 53.6**	**+0.8**
LLGN	**La Laguna**	**1.14**	**39**	P	**Pn**	**02 00 40.1**	**-1.0**
LLGN				S	**Sn**	**02 00 56.3**	**+0.4**
LLGN	**La Laguna**	**1.14**	**39**	*i* P	**Pn**	**02 00 40.3**	**-0.9**
P5NO	**Presa 5 de nov**	**1.14**	**51**	P	**Pn**	**02 00 39.9**	**-1.2**
P5NO				S	**Sn**	**02 00 56.2**	**+0.3**
PCG5	**San Vicente Pa**	**1.16**	**324**	*i* P	**Pb**	**02 00 43.7**	**+1.4**
MTO3	**Montecristo**	**1.16**	**15**	P	**Pn**	**02 00 40.7**	**-1.0**
MTO3				S	**Sn**	**02 00 56.6**	**-0.2**
MTO3	**Montecristo**	**1.16**	**15**	*i* P	**Pn**	**02 00 40.6**	**-1.0**
MTO3	**Montecristo**	**1.16**	**15**	*i* P	**Pn**	**02 00 40.7**	**-1.0**
FG16	**Alotenango, Sa**	**1.28**	**321**	*i* P	**Pb**	**02 00 46.6**	**+2.1**
ESQI	**Esquipulas**	**1.32**	**14**	P	**Pn**	**02 00 43.1**	**-0.6**
ESQI				S	**Sn**	**02 01 00.8**	**+0.2**
PACA	**Pacayal**	**1.33**	**81**	P	**Pn**	**02 00 42.9**	**-1.0**
PACA				S	**Sn**	**02 01 01.4**	**+0.7**
ZAFR2	**Estanzuela, Za**	**1.34**	**14**	*i* P	**Pb**	**02 00 47.9**	**+2.6**
RANC	**El Ranchito**	**1.36**	**83**	P	**Pn**	**02 00 43.4**	**-0.8**
RANC				S	**Sn**	**02 01 01.5**	**0.0**
RANC	**El Ranchito**	**1.36**	**83**	*i* P	**Pn**	**02 00 42.7**	**-1.6**
SARH	**Santa Rosa de**	**1.74**	**31**	P	**Pn**	**02 00 49.1**	**-0.3**
SARH	**Santa Rosa de**	**1.74**	**31**	*i* P

AXS	Araxos	1.26	151	P		Pg	02 03 07.5	-1.3
AXS	Araxos	1.26	151	P		Pg	02 03 08.1	-0.7
AGRP	Agrapidokambos	1.26	135	P		Pg	02 03 08.2	-0.6
KBN	Korca	1.33	6	P		Pb	02 03 10.0	+0.6
TYRN	Tyrnavos	1.33	72	P		Pg	02 03 08.4	-1.8
TYRN	Tyrnavos	1.33	72	P		Pg	02 03 09.0	-1.2
EFP	Efpalio	1.35	130	P		Pb	02 03 10.8	+1.2
EFP	Efpalio	1.35	130	P		Pn	02 03 09.4	+0.4
KZN	Kozani	1.35	42	P		Pg	02 03 09.3	-1.3
KZN	Kozani	1.35	42	P		Pg	02 03 09.7	-0.9
MG00	Magoula, Dorid	1.38	129	P		Pg	02 03 10.7	-0.4
AGG	Agios Georgios	1.38	101	P		Pn	02 03 10.3	+0.9
AGG	Agios Georgios	1.38	101	P		Pn	02 03 10.4	+0.9
RLS	Riolos of Patr	1.42	151	P		Pn	02 03 10.9	+1.0
SERG	Sergoula	1.45	127	P		Pg	02 03 12.6	+0.3
ORTH	Orthonies,Zaky	1.45	177	P		Pg	02 03 12.6	+0.2
KYPS	Kipseli, Zakin	1.49	173	P		Pn	02 03 12.0	+1.0
KALE	Kalithea	1.51	126	P		Pn	02 03 12.6	+1.3
LTHK	Lithakia	1.60	173	P		Pb	02 03 14.2	+0.3
KLV	Kalavryta, Ach	1.75	135	P		Pb	02 03 16.7	+0.2
GUR	Goura	1.93	134	P		Pb	02 03 19.3	-0.3
ULC	Ulcinj	2.85	339	⇑*i*	Pn	Pn	02 03 30.6	+0.8
ULC				*i*	Sn	Sn	02 04 06.1	+2.1
TIP	Timpagrande	2.98	269	⇑P		Pn	02 03 32.8	+1.2
DRME	Dracevica, Mon	3.08	340	⇑*i*	Pn	Pn	02 03 34.1	+1.3
DRME				*i*	Sn	Sn	02 04 12.1	+2.6
DRME	Dracevica, Mon	3.08	340	*e*	Pn	Pn	02 03 34.3	+1.5
BUM	Brajici-Budva	3.26	337	⇑*i*	Pn	Pn	02 03 36.1	+0.6
BUM				*i*	Sn	Sn	02 04 16.7	+2.5
MATE	Matera	3.28	296	⇑P		Pn	02 03 36.5	+0.9
PDG	Podgorica	3.29	342	⇑P		Pn	02 03 37.0	+1.3
PDG	Podgorica	3.29	342	⇓*i*	Pn	Pn	02 03 36.7	+1.0
PDG				*i*	Sn	Sn	02 04 16.3	+1.7
PDG	Podgorica	3.29	342	*e*	Pn	Pn	02 03 36.7	+1.0
PVY	Plav	3.33	352	⇓*i*	Pn	Pn	02 03 37.8	+1.4
PVY				*i*	Sn	Sn	02 04 19.3	+3.5
CEME	Cevo	3.48	339	⇑*i*	Pn	Pn	02 03 39.1	+0.6
CEME				*i*	Sn	Sn	02 04 21.0	+1.4
HCY	Herceg Novi	3.52	334	⇑*i*	Pn	Pn	02 03 39.0	0.0
HCY				*i*	Sn	Sn	02 04 20.9	+0.4
HCY	Herceg Novi	3.52	334	*e*	Pn	Pn	02 03 39.6	+0.6
IVA	Berane	3.61	352	⇓*i*	Pn	Pn	02 03 42.3	+2.1
IVA				*i*	Sn	Sn	02 04 24.3	+1.6
KOME	Kolasin	3.64	347	⇑*i*	Pn	Pn	02 03 42.4	+1.8
KOME				*i*	Sn	Sn	02 04 25.9	+2.4
NKME	Niksic	3.68	341	⇑*i*	Pn	Pn	02 03 42.0	+0.9
NKME				*i*	Sn	Sn	02 04 26.0	+1.6
TREB	Trebinje	3.81	334	*e*	Pn	Pn	02 03 42.3	-0.6
BRY	Bratogost	3.92	337	⇓*i*	Pn	Pn	02 03 45.0	+0.5
BRY				*i*	Sn	Sn	02 04 31.7	+1.3
BRY	Bratogost	3.92	337	*e*	Pn	Pn	02 03 44.5	0.0
SJES	Sjenica	3.98	353	*e*	Pn	Pn	02 03 47.3	+1.9
UPM	Unac-Piva	4.10	342	*e*	Pn	Pn	02 03 46.5	-0.6
BBLS	Lazi&#263i	4.65	349	*e*	Pn	Pn	02 03 54.5	0.0
PLVB	Pleven	5.08	35	⇑P		Pn	02 04 03.8	+3.4
VAE	Valguarnera	5.18	251		Sn	Sn	02 04 59.9	-1.7
	1.7nm,0.3s,baz=280,slow=7.9,SNR=5.9							
IDI	Anoyia	5.27	138		Pn	Pn	02 04 00.0	-3.0
	14nm,0.9s,baz=311,slow=10.0,SNR=2.1							
IDI					Sn	Sn	02 05 01.8	-1.9
	0.4nm,0.3s,baz=51,slow=19,SNR=1.4							
ELND	Elena	5.34	46	⇑P		Pn	02 04 08.5	+3.9
HERR	Herculane	5.74	13	⇑P		Pn	02 04 12.1	+2.7
FRGS	Fruska Gora	5.88	355	*e*	Pn	Pn	02 04 09.3	-2.1
BLY	Banja Luka	6.01	336	⇑P		Pn	02 04 14.1	+1.0
BLY	Banja Luka	6.01	336	*e*	Pn	Pn	02 04 12.9	-0.2
LOZB	Loznitsa	6.08	46	⇑P		Pn	02 04 17.8	+3.8
AQU	L'Aquila	6.25	302	*e*	Pn	Pn	02 04 17.4	+0.9
VOIR		6.96	27	⇑P		Pn	02 04 29.7	+3.4
MORH	Mrgy, Hungar	7.06	349	*e*	Pn	Pn	02 04 24.7	-2.8
MLR	Muntele Rosu	7.34	31	P		Pn	02 04 34.9	+3.3
	0.2nm,0.3s,baz=210,slow=23,SNR=4.4							
	1.6nm,0.7s							
MLR	Muntele Rosu	7.34	31	⇓P		Pn	02 04 35.2	+3.7
NEHR	Nehoiu	7.44	33	⇑P		Pn	02 04 36.5	+3.8
PLOR	Plostina	7.92	32	⇑P		Pn	02 04 43.4	+3.9
VRI	Vrincioaia	7.97	33	⇑P		Pn	02 04 43.7	+3.7
OBKA	Obir	8.46	330	*i*	Pn	Pn	02 04 47.3	+0.5
	1.0nm,0.3s							
ARSA	Arzberg	8.76	337	*i*	Pn	Pn	02 04 52.7	+1.8
	0.7nm,0.3s							
KBA	Koelnbreinsper	9.40	328	*i*	Pn	Pn	02 05 00.6	+0.8
	0.3nm,0.2s							
MOA	Molln	9.70	334	*i*	Pn	Pn	02 05 05.2	+1.5
	1.1nm,0.4s							
BIOA	Bad Ischl, Aus	9.79	331	*i*	Pn	Pn	02 05 06.9	+2.0
	1.6nm,0.3s							
BRTR	Keskin Array B	10.09	83		Pn	Pn	02 05 12.0	+2.7
	0.1nm,0.3s,baz=291,slow=18,SNR=1.8							
	0.2nm,0.6s							
GERES	GERESS Array B	10.75	335		Pn	Pn	02 05 16.8	-1.4
	baz=153,slow=12,SNR=2.5							
	0.2nm,0.4s							
HFS	Hagfors	21.30	350	P		P	02 07 30.1	-0.6
	13nm,1.3s,baz=163,slow=11,SNR=6.3							
	13nm,1.3s							
FINES	FINESS Array B	22.43	7	P		P	02 07 41.7	-1.0
	2.8nm,0.8s,baz=181,slow=11,SNR=12							
	2.8nm,0.8s							
NOA	NORSAR Array B	22.53	348	P		P	02 07 42.6	-1.3
	0.3nm,0.5s,baz=163,slow=11,SNR=3.3							
	0.3nm,0.5s							
AAK	Ala-Archa	40.26	67	P		P	02 10 21.9	+0.7
	1.3nm,0.3s,baz=268,slow=10,SNR=3.8							
	1.3nm,0.3s							
KURBB	Kurchatov Arra	41.52	55	P		P	02 10 30.3	-1.1
	0.5nm,0.9s,baz=278,slow=8.8,SNR=4.1							
	0.5nm,0.9s							
MKAR	Makanchi Array	44.67	59	P		P	02 10 56.2	-0.7
	0.2nm,0.5s,baz=281,slow=7.0,SNR=4.5							
	0.2nm,0.5s							
YKA	Yellowknife Ar	72.36	340	P		P	02 14 06.7	-3.0
	0.1nm,0.3s,baz=48,slow=7.0,SNR=4.7							
	0.1nm,0.3s							

IDC 21 02:07:15.1±2.9, 34°19S×179°05W, h0km, mb3.6/2, mbtmp3.7/3, ML3.9/1, Error ellipse: s-maj=69.7km s-min=35.4km az=121.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	5.11	216	Pn	Pn	02 08 33.3	+0.4
	4.6nm,0.3s,baz=261,slow=4.1,SNR=39						
URZ				Sn	Sn	02 09 31.3	-1.3
	2.9nm,0.3s,baz=77,slow=24,SNR=9.9						
	7.2nm,0.3s						
ASAR	Alice Springs	42.17	272	P	P	02 15 09.7	0.0
	0.4nm,0.5s,baz=117,slow=8.1,SNR=10						
	0.4nm,0.5s						
WRA	Warramunga Arr	43.51	277	P	P	02 15 20.4	0.0
	0.5nm,0.5s,baz=117,slow=7.9,SNR=8.9						
	0.5nm,0.5s						
FINES	FINESS Array B	148.34	337	PKPbc	PKPbc	02 27 01.6	-0.8
	2.0nm,0.9s,baz=42,slow=3.1,SNR=9.4						

*IDC **21** 02:23:02.0±3.4, 36°.72N×71°.47E, h64km±30km, mb3.7/22, mbtmp4.1/26, ML4.4/5, MS3.7/3, Error ellipse: s-maj=20.7km s-min=13.6km az=2.0*
*NNC **21** 02:23:04.6±3.4, 37°.29N×71°.04E, h0km, mb4.7, mpv4.7, Error ellipse: s-maj=27.8km s-min=20.3km az=10.0*
*MOS **21** 02:23:06.9±0.9, 37°.03N×71°.46E, h115km, mb4.2/16, Error ellipse: s-maj=7.6km s-min=4.7km az=84.4*
*BJI **21** 02:23:06.4, 37°.13N×71°.46E, h106km, mB4.2/3, mb4.5/21*
*NEIC **21** 02:23:08.8±1.6, 37°.08N±0°.06×71°.42E±0°.08, h111km±7km, mb4.4/35, Error ellipse: s-maj=9.5km s-min=8.1km az=98.0*

ISC 21 02:23:07.0±0.3, 36°.97N±0°.04×71°.50E±0°.04, h106km, n244, σ1°77/253, mb4.2/52, 13C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	Garm	2.24	336	Pn	Pn	02 23 43.5	+0.5
CHGR	Chuyangaron	2.51	313		Pn	02 23 46.2	-0.4
CHGR	Chuyangaron	2.51	313	*d* *i*	PN	02 23 45.8	-0.7
DRK	Karamyk	2.52	5		Pn	02 23 47.3	+0.4
DRK	Karamyk	2.52	5	PN	Pn	02 23 47.3	+0.4
SHAA	Shahritus	2.76	283		Pn	02 23 49.4	-0.4
KBL	Kabul	3.14	220		Pn	02 23 57.0	+2.0
KBL	Kabul	3.14	220	PN	Pn	02 23 57.0	+2.0
KBL	Kabul	3.14	220	P	Pn	02 23 58.1	+3.1
KBL				S	Sn	02 24 34.8	+2.9
NIL	Nilore	3.60	156		Pn	02 24 04.1	+3.1
NIL	Nilore	3.60	156	PN	Pn	02 24 04.1	+3.1
KSH2	Kashi	3.87	55	P	Pn	02 24 08.4	+3.7
KSH2				S	Sn	02 24 52.4	+3.0
KSH2				SMN			
	2μm,0.5s						
KSH2				SME			
	970nm,0.5s						
ARSB	Arslanbob	4.50	14		Pn	02 24 13.2	+0.1
ARSB	Arslanbob	4.50	14	PN	Pn	02 24 13.2	+0.1
JMU	Jammu	4.99	146	*e*P	Pn	02 24 22.4	+2.7
JMU				*e*S	Sn	02 25 15.8	-0.5
JMU				IAML		02 25 20.0	
	comp=N,399nm,0.2s						
JMU				IAML		02 25 20.0	
	comp=E,250nm,0.3s						
ALCI	Alchi Leh	5.38	119	*e*P	Pn	02 24 24.7	-0.6
ALCI				*e*S	Sn	02 25 25.2	-1.0
ALCI				IAML		02 25 27.8	
	comp=N,422nm,0.3s						
ALCI				IAML		02 25 28.3	
	comp=E,106nm,0.2s						
TSSA	Tissa	5.62	136	*e*P	Pn	02 24 28.4	0.0
TSSA				*e*S	Sn	02 25 28.1	-3.6
TSSA				IAML		02 25 32.7	
	comp=N,326nm,0.2s						
TSSA				IAML		02 25 34.3	
	comp=E,330nm,0.2s						
NRN	Naryn	5.66	37		Pn	02 24 29.0	-0.1
NRN	Naryn	5.66	37	PN	Pn	02 24 29.0	-0.1
THN	Thein Dam	5.71	141	*e*P	Pn	02 24 30.9	+1.3
THN				*e*S	Sn	02 25 32.2	-1.7
THN				IAML		02 25 35.1	
	comp=E,337nm,0.3s						
THN				IAML		02 25 36.0	
	comp=N,295nm,0.2s						
UCH	Uchtor	5.74	23	P	Pn	02 24 30.8	+0.5
	SNR=103						
EKS2	Erkin-Say	5.95	16	P	Pn	02 24 33.7	+0.9
	SNR=92						
AAK	Ala-Archa	6.11	21	P	Pn	02 24 35.1	+0.1
	comp=N,61nm,0.3s,baz=184,slow=4.0,SNR=411						
AAK				S	Sn	02 25 41.8	-1.7
	comp=N,52nm,0.5s,baz=336,slow=20,SNR=9.2						
AAK	Ala-Archa	6.11	21	P	Pn	02 24 35.9	+1.0
	SNR=338						
AAK	Ala-Archa	6.11	21		Pn	02 24 35.9	+1.0
AAK	Ala-Archa	6.11	21	⇑P	Pn	02 24 36.2	+1.2
	comp=N,13nm,0.3s						
AAK				⇑S	Sn	02 25 44.1	+0.5
	comp=N,26nm,0.5s						
AAK	Ala-Archa	6.11	21	*ce*PN	Pn	02 24 36.0	+1.0
AAK				pmax	pmax		
	comp=Z,52nm,0.4s						
AAK	Ala-Archa	6.11	21	P	Pn	02 24 35.4	+0.4
AAK				S	Sn	02 25 43.3	-0.3
DHRM	DHARAMSHALA	6.15	139	*e*P	Pn	02 24 36.1	+0.5
DHRM				*e*S	Sn	02 25 41.6	-2.9
DHRM				IAML		02 25 45.9	
	comp=N,179nm,0.2s						
DHRM				IAML		02 25 46.2	
	comp=E,195nm,0.2s						
KK31	Karatay Array	6.18	353		Pn	02 24 35.5	-0.2
KK31	Karatay Array	6.18	353	⇑P	Pn	02 24 34.3	-1.4
	comp=E,25nm,0.3s,baz=173,slow=12,SNR=776						
KK31				⇑S	Sn	02 25 40.8	-4.1
	comp=E,32nm,0.4s,baz=323,slow=46,SNR=4.5						
KK31	Karatay Array	6.18	353	PN	Pn	02 24 35.5	-0.2
KKAR	Karatay Array	6.18	353		Pn	02 24 35.7	0.0
KKAR	Karatay Array	6.18	353	PN	Pn	02 24 35.7	0.0
KBK	Karagaybulak	6.27	24	P	Pn	02 24 38.3	+1.2
	SNR=33						
FRU1	Bishkek	6.31	21		Pn	02 24 38.9	+1.3
FRU1	Bishkek	6.31	21	PN	Pn	02 24 38.9	+1.3
ULHL	Ulahol	6.42	33	P	Pn	02 24 40.2	+1.0
	SNR=66						
BOOM	Boomskoye usch	6.49	30		Pn	02 24 40.6	+0.6
BOOM	Boomskoye usch	6.49	30	PN	Pn	02 24 40.7	+0.6
CHMS	Chumysh	6.52	21	P	Pn	02 24 41.4	+1.0
	SNR=51						
USP	Ospenovka	6.70	19	P	Pn	02 24 44.1	+1.3
	SNR=34						
TKM2	Tokmak 2	6.72	27	P	Pn	02 24 44.3	+1.0
	SNR=38						
KDJ	Kajisay	6.77	39		Pn	02 24 44.5	+0.6
KDJ	Kajisay	6.77	39	PN	Pn	02 24 44.5	+0.6
TARG	Taragay, Kyrgy	6.81	44		Pn	02 24 45.6	+0.9
TARG	Taragay, Kyrgy	6.81	44	PN	Pn	02 24 45.6	+0.9
BHK	Bhakra	6.87	143	*e*P	Pn	02 24 48.3	+3.1
BHK				*e*S	Sn	02 26 03.1	+1.2
BHK				IAML		02 26 05.5	
	comp=N,320nm,0.2s						
BHK				IAML		02 26 05.8	
	comp=E,248nm,0.3s						
WUS	Wushi	7.34	52		Pn	02 24 52.5	+0.9
HNLY	HANLEY	7.42	122	*e*P	Pn	02 24 52.0	-1.2
HNLY				*e*S	Sn	02 26 12.3	-3.8
SMLA	Simla	7.48	139	*e*P	Pn	02 24 53.8	+0.3
SMLA				*e*S	Sn	02 26 12.2	-4.4
SMLA				IAML		02 26 16.4	
	comp=E,344nm,0.2s						
SMLA				IAML		02 26 16.5	
	comp=N,251nm,0.2s						
PRZ	Przheval'sk	7.65	42		Pn	02 24 57.1	+1.2
PRZ	Przheval'sk	7.65	42	PN	Pn	02 24 57.1	+1.2
KLP	Kalpa	7.78	132	*e*P	Pn	02 24 58.1	+0.3
KLP				*e*S	Sn	02 26 17.4	-7.0
KLP				IAML		02 26 23.6	
	comp=E,162nm,0.3s						
KLP				IAML		02 26 23.8	
	comp=N,165nm,0.3s						
HRA	Herat	7.96	254	Pn	Pn	02 24 59.8	-0.4
PDGK	Podgornoye	8.81	41	⇓P	Pn	02 25 11.6	0.0
	comp=N,39nm,0.8s						
PDGK				⇑S	Sn	02 26 56.2	+7.0
	comp=N,65nm,0.8s						
JOSI	Joshimath	9.26	131	*e*P	Pn	02 25 19.4	+1.6
JOSI				*e*S	Sn	02 26 53.5	-6.8
JOSI				IAML		02 26 57.7	
	comp=E,269nm,0.5s						
JOSI				IAML		02 27 00.3	
	comp=N,235nm,0.3s						
KUDL	Kundal	9.75	153	*e*P	Pn	02 25 23.9	-0.4
KUDL				*e*S	Sn	02 27 02.6	-9.3
KUDL				IAML		02 27 10.2	
	comp=E,172nm,0.3s						
KUDL				IAML		02 27 11.1	
	comp=N,138nm,0.3s						
PTH	Pithoragarh	10.35	133	*e*P	Pn	02 25 31.9	-0.7
PTH				*e*S	Sn	02 27 17.8	-9.0
LGTI	Lohaghat	10.42	134	*e*P	Pn	02 25 32.4	-1.1
LGTI				IAML		02 27 23.7	
	comp=E,196nm,0.4s						
LGTI				IAML		02 27 25.6	
	comp=N,177nm,0.3s						
AJM	Ajmer	10.84	165	*e*S	Sn	02 27 31.2	-7.3
MAKZ	Makanchi	12.54	35	Pn	Pn	02 26 00.6	-1.0
MAKZ	Makanchi	12.54	35	P	Pn	02 26 00.6	-1.0
MK31	Makanchi Array	12.68	36	P	Pn	02 26 02.8	-0.6
	comp=N,17nm,1.0s,baz=210,slow=14,SNR=83						
MK31	Makanchi Array	12.68	36	*ce*P	Pn	02 26 03.2	-0.2
MKAR	Makanchi Array	12.68	36	P	Pn	02 26 02.0	-1.3
	comp=N,0.5nm,0.3s,baz=219,slow=11,SNR=62						
MKAR				LR	LR	02 31 32.5	
	comp=N,140nm,18.0s,baz=14,slow=40						
	comp=N,10nm,0.9s						
MKAR	Makanchi Array	12.68	36	Pn	Pn	02 26 02.3	-1.1
MKAR	Makanchi Array	12.68	36	*ce*P	Pn	02 26 03.5	+0.1
MKAR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
JHNI	Jhansi	12.98	150	*e*P	Pn	02 26 05.1	-2.4
WMQ	Urumqi	14.10	56	*e*P	Pn	02 26 22.4	+0.4
WMQ				pmax	pmax		
	comp=Z,18nm,1.1s						
KURBB	Kurchatov Arra	14.55	18	P	Pn	02 26 24.4	-3.2
	comp=Z,6.8nm,0.4s,baz=204,slow=10,SNR=27						
BHPL	Bhopal	14.60	158	*e*P	P	02 26 30.8	-1.2
KURK	Kurchatov	14.66	18	Pn	Pn	02 26 27.2	-1.8
KURK	Kurchatov	14.66	18	*i* P	Pn	02 26 29.7	+0.8
KURK	Kurchatov	14.66	18	P	Pn	02 26 29.8	+0.8
AB31	Akbulak array	14.88	329	Pn	Pn	02 26 28.9	-2.9
AB31	Akbulak array	14.88	329	⇓P	Pn	02 26 29.1	-2.7
	comp=Z,3.3nm,0.4s,baz=143,slow=12,SNR=167						
AB31				⇓S	Sn	02 29 09.8	-6.1
	comp=Z,9.7nm,0.6s,baz=149,slow=24,SNR=7.3						
ABKAR	Akbulak array	14.88	329		Pn	02 26 28.6	-3.2
EVN	Everest	15.72	120	Pn	Pn	02 26 39.3	-3.9
EVN				IAmb	IAmb	02 26 49.5	
	comp=Z,9.5nm,0.7s						
JASK	Jask - Hormozg	16.04	230	P	P	02 26 49.2	+1.4
BVA0	Borovoye Array	16.08	358	P	Pn	02 26 45.9	-0.9
	comp=Z,1.4nm,0.5s,baz=166,slow=11,SNR=29						
BVAR	Borovoye Array	16.08	358	P	Pn	02 26 45.5	-1.3
	comp=Z,0.1nm,0.3s,baz=165,slow=11,SNR=20						
BVAR				S	Sn	02 29 34.1	-11
	comp=Z,0.9nm,0.5s,baz=166,slow=21,SNR=2.7						
	comp=Z,1.8nm,0.4s						
BORK	Borovoye	16.10	357		Pn	02 26 45.0	-2.0
BORK	Borovoye	16.10	357	P	Pn	02 26 45.0	-2.0
BORK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKTO	Aktyubinsk	16.59	328	P	Pn	02 26 51.7	-1.3
	comp=Z,4.7nm,0.3s,baz=136,slow=11,SNR=47						
AKTO				S	Sn	02 29 44.2	-13
	comp=Z,5.4nm,0.6s,baz=165,slow=20,SNR=5.2						
	comp=Z,18nm,0.5s						
AKTO	Aktyubinsk	16.59	328	⇑P	Pn	02 26 52.8	-0.2
	comp=Z,8.7nm,0.5s						
AKTO				⇑S	Sn	02 29 50.4	-6.6
	comp=Z,8.5nm,1.1s						
BANOM	Banah	16.99	234	P	P	02 26 59.5	+1.1
SHME	Shamm	17.01	235	P	P	02 26 58.6	0.0
	SNR=27						
DGZ	Jazzator, Alta	17.16	37	*i* P	P	02 26 58.7	-1.6
DGZ				pmax	pmax		
	comp=Z,12nm,0.3s						
MDH	Madha	17.43	232	P	Pn	02 27 04.1	+0.5
MASF	Masafi	17.47	233	P	Pn	02 27 05.4	+1.3
UOSS	Minazif	17.74	232	P	Pn	02 27 08.1	+0.8
UOSS	Minazif	17.74	232	P	Pn	02 27 08.6	+1.2
HATD	Hatta, Dubai	17.87	232	P	Pn	02 27 10.8	+1.9
ASHO	Ashiyiah	18.02	232	P	Pn	02 27 12.0	+1.3
	SNR=9.9						
ALNE	Al Ain	18.67	231	P	Pn	02 27 20.2	+1.8
GOMU	GeErMu	18.73	85	P	Pn	02 27 19.8	+0.4
GOMU				pmax	pmax		
	comp=Z,9.0nm,0.6s						
AKT	Akhty	18.94	291	*e*P	Pn	02 27 20.5	-1.1
AKT				*e*S	S	02 30 48.1	-1.3
AKT				pmax	pmax		
	comp=Z,15nm,1.4s						
ZAA0	Zalesovo Array	19.32	24	P	P	02 27 23.4	-0.2
ZAA0				IAmb	IAmb	02 27 26.3	
	comp=Z,18nm,0.9s						
ZALV	Zalesovo Beam	19.32	24	P	P	02 27 23.5	-0.2
	comp=Z,6.6nm,0.3s,baz=215,slow=10,SNR=84						
	comp=Z,15nm,0.4s						
ZALV	Zalesovo Beam	19.32	24	P	P	02 27 23.2	-0.4
SHMA	Al-Shehemyia	20.69	243	P	Pn	02 27 39.1	-2.9
	SNR=6.0						
SHL	Shillong	20.75	117	P	Pn	02 27 40.7	-2.2
SHL				IAmb	IAmb	02 27 41.1	
	comp=Z,13nm,1.2s						
SHL	Shillong	20.75	117	P	Pn	02 27 40.7	-2.2
SHL				pmax	pmax		
	comp=Z,13nm,1.2s						
MZR	Muzera	20.86	233	P	Pn	02 27 40.0	-4.0
GNI	Garni	21.14	287	P	P	02 27 41.2	-2.4
	comp=Z,0.8nm,0.3s,baz=190,slow=3.4,SNR=6.8						
	comp=Z,0.8nm,0.3s						
GNI	Garni	21.14	287	P	P	02 27 44.0	+0.5
GNI				IAmb	IAmb	02 27 53.0	
	comp=Z,25nm,1.2s						
GNI	Garni	21.14	287	*i* P	P	02 27 42.4	-1.2
GNI				pmax	pmax		
	comp=Z,23nm,1.3s						
ARTI	Arti	21.34	340	P	P	02 27 45.3	-0.1
	comp=Z,1.9nm,0.5s,baz=139,slow=5.3,SNR=4.3						
	comp=Z,1.9nm,0.5s						
NCK	Nalchik	22.22	296	*i* P	P	02 27 55.4	+0.6
NCK				pmax	pmax		
	comp=Z,11nm,0.8s						
GTA2	Gaotai	22.30	75	*e*P	P	02 27 58.1	+2.2
GTA2				pmax	pmax		
	comp=Z,15nm,0.9s						
KBZ	Khabaz	22.75	296	P	P	02 27 59.6	-0.6
	comp=Z,1.4nm,0.7s,baz=116,slow=10,SNR=7.1						
	comp=Z,1.4nm,0.7s						
KBZ	Khabaz	22.75	296	*i* P	P	02 28 00.1	-0.1
KBZ				pmax	pmax		
	comp=Z,5.0nm,1.6s						
BELG	Belogornoye	22.79	320	*i* P	P	02 28 00.7	+0.3
BELG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NEUR	Neytrino	22.84	295	*i* P	P	02 28 00.1	-1.2
NEUR				pmax	pmax		
	comp=Z,5.0nm,1.5s						
SHA1	Shidzhatmaz	22.93	296	*i* P	P	02 28 01.5	-0.7
KIV	Kislovodsk	22.93	297	P	P	02 28 02.0	-0.1
KIV				IAmb	IAmb	02 28 21.4	
	comp=Z,10nm,0.6s						
KIV	Kislovodsk	22.93	297	*e*P	P	02 28 03.8	+1.7
KIV				*e*S	S	02 32 05.6	+1.6
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV	Kislovodsk	22.93	297	P	P

AK02	**Malin Array Si**	**32.98**	**308**	P		**P**	**02 29 31.7**	**+0.2**
KIEV	**Kiev**	**32.98**	**308**	P		**P**	**02 29 31.2**	**-0.4**
KIEV				IAmb		IAmb	02 30 13.8	
	comp=Z,5.0nm,0.5s							
KIEV	**Kiev**	**32.98**	**308**	P		**P**	**02 29 31.2**	**-0.4**
KIEV				pmax		pmax		
	comp=Z,5.0nm,0.5s							
KIEV	**Kiev**	**32.98**	**308**	P		**P**	**02 29 31.9**	**+0.3**
	comp=Z,19nm,0.6s							
AK11	**Malin Array Si**	**33.00**	**308**	P		**P**	**02 29 31.9**	**+0.1**
AK12	**Malin Array Si**	**33.01**	**308**	P		**P**	**02 29 31.9**	**+0.1**
AK16	**Malin Array Si**	**33.04**	**308**	P		**P**	**02 29 32.5**	**+0.4**
AK17	**Malin Array Si**	**33.08**	**308**	P		**P**	**02 29 32.6**	**+0.2**
ELL	**Elmali**	**33.09**	**282**	P		**P**	**02 29 34.2**	**+1.3**
ELL	**Elmali**	**33.09**	**282**	P		**P**	**02 29 34.2**	**+1.3**
ELL				pmax		pmax		
	comp=Z,19nm,0.5s							
AK19	**Malin Array Si**	**33.11**	**308**	P		**P**	**02 29 32.8**	**+0.1**
SORM	**Soroca**	**33.28**	**303**	P		**P**	**02 29 34.5**	**+0.3**
	comp=Z,5.9nm,1.6s							
AKAS	**Kas**	**33.45**	**282**	P		**P**	**02 29 36.3**	**+0.3**
NRIK	**Noril'sk**	**33.59**	**10**	P		**P**	**02 29 38.2**	**+1.6**
	comp=Z,2.4nm,0.7s,baz=199,slow=5.5,SNR=4.8							
	comp=Z,2.4nm,0.7s							
NRIK	**Noril'sk**	**33.59**	**10**	P		**P**	**02 29 37.0**	**+0.4**
NRIK				IAmb		IAmb	02 29 39.4	
	comp=Z,12nm,1.4s							
NRIK	**Noril'sk**	**33.59**	**10**	P		**P**	**02 29 37.0**	**+0.4**
NRIK				pmax		pmax		
	comp=Z,12nm,1.5s							
MI29	**MI29, Kamyanyy**	**33.80**	**307**	P		**P**	**02 29 39.2**	**+0.5**
	comp=Z,5.9nm,0.8s							
NDNU	**Novodnistrovsk**	**33.97**	**304**	P		**P**	**02 29 41.5**	**+1.4**
KMPD	**K-Podol'skiy**	**34.56**	**304**	P		**P**	**02 29 45.5**	**+0.2**
MLR	**Muntele Rosu**	**34.91**	**299**	P		**P**	**02 29 49.4**	**+0.9**
MLR				IAmb		IAmb	02 29 54.4	
	comp=Z,5.0nm,0.9s							
MLR	**Muntele Rosu**	**34.91**	**299**	P		**P**	**02 29 49.4**	**+0.9**
MLR				pmax		pmax		
	comp=Z,5.0nm,0.9s							
BURAR	**Bucovina Array**	**35.37**	**302**	P		**P**	**02 29 53.3**	**+0.9**
BUR08	**Bucovina Ar. S**	**35.39**	**302**	P		**P**	**02 29 52.3**	**-0.2**
BUR08				IAmb		IAmb	02 30 29.9	
	comp=Z,5.3nm,1.4s							
FINES	**FINESS Array B**	**37.32**	**326**	P		**P**	**02 30 09.4**	**+0.8**
	comp=Z,3.3nm,0.6s,baz=111,slow=9.0,SNR=27							
	comp=Z,3.3nm,0.6s							
FINES	**FINESS Array B**	**37.32**	**326**	P		**P**	**02 30 09.2**	**+0.5**
FINES	**FINESS Array B**	**37.32**	**326**	*i* P		**P**	**02 30 09.3**	**+0.6**
FINES				pmax		pmax		
	comp=Z,3.0nm,0.6s							
IDI	**Anoyia**	**37.40**	**282**	P		**P**	**02 30 09.9**	**+0.2**
MORH	**Mrgy, Hungar**	**39.95**	**300**	P		**P**	**02 30 32.3**	**+1.5**
VADS	**Vadso**	**40.02**	**339**	*e*P		**P**	**02 30 32.0**	**+0.9**
MODS	**Modra-Piesok**	**40.67**	**304**	*e*P		P	02 30 42.8	+6.0
MODS	**Modra-Piesok**	**40.67**	**304**	*e*P		P	02 30 42.8	+6.0
ARA0	**ARCESS Array S**	**40.87**	**337**	*e*P		**P**	**02 30 39.1**	**+1.0**
ARCES	**ARCESS Array B**	**40.87**	**337**	P		**P**	**02 30 39.0**	**+0.9**
	comp=Z,3.6nm,0.7s,baz=115,slow=8.1,SNR=19							
	comp=Z,3.6nm,0.7s							
ARCES	**ARCESS Array B**	**40.87**	**337**	IAmb		IAmb	02 30 47.9	
	comp=Z,21nm,1.4s							
ARCES	**ARCESS Array B**	**40.87**	**337**	P		**P**	**02 30 39.0**	**+0.9**
KTK1	**Kautokeino**	**41.35**	**336**	*e*P		**P**	**02 30 42.7**	**+0.6**
CONA	**Conrad Observa**	**41.66**	**303**	*e*P		**P**	**02 30 46.7**	**+1.8**
	comp=Z,3.4nm,0.8s							
HAMF	**Hammerfest**	**41.94**	**338**	*e*P		**P**	**02 30 48.2**	**+1.4**
JETT	**Jettan, Norway**	**42.49**	**336**	*e*P		**P**	**02 30 52.7**	**+1.4**
OBKA	**Obir**	**42.72**	**301**	*e*P		**P**	**02 30 55.4**	**+1.8**
	comp=Z,4.7nm,1.6s							
HFS	**Hagfors**	**42.95**	**322**	P		**P**	**02 30 55.8**	**+0.7**
	comp=Z,12nm,0.5s,baz=98,slow=11,SNR=103							
	comp=Z,12nm,0.5s							
GERES	**GERESS Array B**	**42.99**	**305**	P		**P**	**02 30 55.6**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=68,slow=11,SNR=2.0							
	comp=Z,0.3nm,0.7s							
TRO	**Tromso**	**43.01**	**336**	*e*P		**P**	**02 30 56.7**	**+1.3**
CUC	**Castrocucco**	**43.10**	**292**	P		**P**	**02 30 58.6**	**+1.9**
CUC				IAmb		IAmb	02 31 00.2	
	comp=Z,5.1nm,0.6s							
SABO	**M.te Sabotino**	**43.45**	**301**	P		**P**	**02 30 59.8**	**+0.4**
SABO				IAmb		IAmb	02 31 01.8	
	comp=Z,6.3nm,0.9s							
FAUS	**Fauske**	**43.58**	**332**	*e*P		**P**	**02 31 01.1**	**+1.1**
MOR8	**Moi Rana**	**43.61**	**330**	*e*P		**P**	**02 31 00.7**	**+0.3**
STEI	**Steigen**	**43.74**	**333**	*e*P		**P**	**02 31 02.7**	**+1.3**
RAUS	**Rausandaksla**	**43.83**	**331**	*e*P		**P**	**02 31 03.3**	**+1.2**
LESA	**Schwarzleotal**	**43.86**	**303**	*e*P		**P**	**02 31 03.7**	**+1.0**
	comp=Z,2.3nm,0.4s							
NC602	**NORSAR Array S**	**44.07**	**322**	*e*P		**P**	**02 31 03.9**	**-0.2**
LEIR	**Leirfjorden**	**44.12**	**330**	*e*P		**P**	**02 31 05.0**	**+0.5**
VAGH	**Vaagaholmen**	**44.19**	**331**	*e*P		**P**	**02 31 06.3**	**+1.4**
NC303	**NORSAR Array S**	**44.19**	**323**	P		**P**	**02 31 05.6**	**+0.5**
KONS	**Konsvik**	**44.20**	**331**	*e*P		**P**	**02 31 06.2**	**+1.1**
STOK	**Stokkvaagen**	**44.21**	**330**	*e*P		**P**	**02 31 06.0**	**+0.9**
NB2	**NORSAR Subarra**	**44.25**	**323**	P		**P**	**02 31 05.8**	**+0.2**
	comp=Z,3.8nm,0.5s,baz=93,slow=7.9							
NB2	**NORSAR Subarra**	**44.25**	**323**	P		**P**	**02 31 05.8**	**+0.2**
NOA	**NORSAR Array B**	**44.25**	**323**	P		**P**	**02 31 06.0**	**+0.4**
	comp=Z,3.8nm,0.5s,baz=96,slow=7.7,SNR=38							
	comp=Z,3.8nm,0.5s							
NOA	**NORSAR Array B**	**44.25**	**323**	P		**P**	**02 31 06.0**	**+0.4**
NSS	**Namsos**	**44.32**	**328**	*e*P		**P**	**02 31 06.9**	**+0.9**
LOF	**Lofoten**	**44.41**	**333**	*e*P		**P**	**02 31 07.3**	**+0.6**
NC204	**NORSAR Array S**	**44.49**	**323**	P		**P**	**02 31 07.9**	**+0.4**
WATA	**Walderalm**	**44.61**	**303**	*i* P		**P**	**02 31 10.8**	**+2.0**
	comp=Z,2.3nm,0.7s							
MURB	**Monte Urbino**	**44.73**	**297**	P		**P**	**02 31 11.9**	**+2.2**
KONO	**Kongsberg**	**44.98**	**321**	*e*P		**P**	**02 31 12.1**	**+0.8**
TIXI	**Tiksi**	**45.19**	**22**	*ce*P		**P**	**02 31 13.7**	**+0.9**
TIXI				pmax		pmax		
	comp=Z,3.0nm,0.7s							
SKAR	**Skarsla**	**45.66**	**322**	*e*P		**P**	**02 31 18.3**	**+1.5**
DAVA	**Damuels**	**45.76**	**303**	*e*P		**P**	**02 31 19.1**	**+1.2**
	comp=Z,6.9nm,0.7s							
SNART	**Snartemo**	**46.22**	**319**	*e*P		**P**	**02 31 21.9**	**+0.9**
ODD1	**Odda**	**46.48**	**321**	*e*P		**P**	**02 31 24.4**	**+1.2**
BLS5	**Blasjo**	**46.58**	**320**	*e*P		**P**	**02 31 25.1**	**+1.2**
LODK	**Lodwar**	**47.07**	**234**	P		**P**	**02 31 28.7**	**+0.4**
LODK				IAmb		IAmb	02 31 31.1	
	comp=Z,3.9nm,1.0s							
BER	**Bergen**	**47.12**	**322**	*e*P		**P**	**02 31 29.0**	**+1.0**
SPITS	**Spitsbergen Ar**	**47.13**	**347**	P		**P**	**02 31 29.6**	**+1.6**
	comp=Z,3.5nm,0.9s,baz=144,slow=7.2,SNR=4.3							
	comp=Z,3.5nm,0.9s							
ASK	**Askoy**	**47.19**	**322**	*e*P		**P**	**02 31 29.6**	**+0.9**
SENIN	**Lac Senin/Sane**	**47.68**	**303**	P		**P**	**02 31 33.7**	**+0.8**
SENIN				IAmb		IAmb	02 31 35.0	
	comp=Z,6.1nm,0.9s							
KEST	**Kesra**	**49.27**	**288**	P		**P**	**02 31 45.1**	**0.0**
	comp=Z,1.4nm,0.4s,baz=30,slow=1.6,SNR=9.2							
	comp=Z,1.4nm,0.4s							
EKA	**Eskdalemuir Ar**	**52.23**	**316**	P		**P**	**02 32 06.9**	**0.0**
	comp=Z,0.6nm,0.4s,baz=83,slow=7.0,SNR=9.3							
	comp=Z,0.6nm,0.4s							
ESDC	**Sonseca Array**	**57.60**	**298**	P		**P**	**02 32 46.6**	**+0.7**
	comp=Z,2.2nm,0.5s,baz=55,slow=7.5,SNR=41							
	comp=Z,2.2nm,0.5s							
ESDC	**Sonseca Array**	**57.60**	**298**	IAmb		IAmb	02 32 47.8	
	comp=Z,1.0nm,0.8s							
TORD	**Torodi Ar. Bea**	**66.13**	**269**	P		**P**	**02 33 42.2**	**-1.1**
	comp=Z,1.6nm,0.5s,baz=49,slow=4.2,SNR=35							
	comp=Z,1.6nm,0.5s							
ILAR	**Eielson Array**	**74.22**	**16**	P		**P**	**02 34 32.9**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=306,slow=4.4,SNR=4.6							
	comp=Z,0.3nm,0.7s							
BOSA	**Boshof**	**78.36**	**220**	P		**P**	**02 34 55.0**	**-0.8**
	comp=Z,3.0nm,1.1s,baz=63,slow=4.5,SNR=1.4							
	comp=Z,3.0nm,1.1s							
BOSA	**Boshof**	**78.36**	**220**	IAmb		IAmb	02 34 59.8	
	comp=Z,9.1nm,1.4s							
KDAK	**Kodiak Island**	**78.61**	**22**	LR		LR	03 12 34.0	
	comp=Z,268nm,20.0s,baz=177,slow=38							
BBTS	**Babate**	**79.80**	**281**	LR		LR	03 16 47.8	
	comp=Z,15nm,20.1s,baz=265,slow=40							
YKA	**Yellowknife Ar**	**80.76**	**3**	P		**P**	**02 35 09.0**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=349,slow=5.9,SNR=6.9							
	comp=Z,0.4nm,0.6s							
YKA	**Yellowknife Ar**	**80.76**	**3**	*ce*P		**P**	**02 35 08.1**	**-0.2**
WRA	**Warramunga Arr**	**81.89**	**122**	P		**P**	**02 35 14.0**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=325,slow=4.9,SNR=9.3							
	comp=Z,0.3nm,0.3s							
WRA	**Warramunga Arr**	**81.89**	**122**	P		**P**	**02 35 13.9**	**-1.0**
WRA	**Warramunga Arr**	**81.89**	**122**	P		**P**	**02 35 13.9**	**-1.0**
WR8	**Warramunga Arr**	**82.01**	**122**	P		**P**	**02 35 14.4**	**-1.2**
WR8				IAmb		IAmb	02 35 23.0	
	comp=Z,9.1nm,1.3s							
ASAR	**Alice Springs**	**84.19**	**125**	P		**P**	**02 35 25.6**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=308,slow=4.7,SNR=4.8							
	comp=Z,0.5nm,0.7s							
ASAR	**Alice Springs**	**84.19**	**125**	P		**P**	**02 35 26.1**	**-0.5**

MOS ***21*** *02:26:43.8±0.8, 49.˚16N×156.˚74E, h48km, mb4.3/4, Error ellipse: s-maj=16.3km s-min=4.2km az=83.4*
KRSC ***21*** *02:26:50.6±1.9, 49.˚75N×157.˚27E, h41km±26km, Ml4.4*
NEIC ***21*** *02:26:52.0±1.3, 49.˚8N±0.˚1×156.˚3E±0.˚1, h69km±8km, mb4.2/27, Error ellipse: s-maj=22.7km s-min=10.0km az=153.0*
IDC ***21*** *02:26:53.2±3.1, 49.˚91N×156.˚38E, h83km±24km, mb3.7/18, mbtmp3.9/22, MS3.2/1, Error ellipse: s-maj=30.2km s-min=16.1km az=145.0*

ISC 21 02:26:51.6±1.2, 49.˚70N±0.˚09×156.˚61E±0.˚07, h76km±8km, n142, σ1s19/146, mb4.2/47, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.04**	**342**	*i*	P	**Pn**		**02 27 10.7**	**-0.2**
SKR				*i*	S	**Sn**		**02 27 24.7**	**-0.5**
SKR				pmax		pmax			
	comp=Z,2μm,0.6s								
SKR				smax		smax			
	comp=E,5μm,0.6s								
SKR				smax		smax			
	comp=N,4μm,0.4s								
SKR	**Severo-Kuril's**	**1.04**	**342**	*e*	P	**Pn**		**02 27 10.7**	**-0.2**
SKR				*e*	S	**Sn**		**02 27 24.8**	**-0.5**
PAU	**Pauzhetka**	**1.78**	**4**		PN	**Pn**		**02 27 20.4**	**0.0**
PAU	**Pauzhetka**	**1.78**	**4**	*e*	P	**Pn**		**02 27 20.4**	**0.0**
PAU				*e*	S	**Sn**		**02 27 41.8**	**-0.4**
KDTR	**Khodutka, Kamc**	**2.31**	**23**		PN	**Pn**		**02 27 26.7**	**-0.8**
KDTR	**Khodutka, Kamc**	**2.31**	**23**	*e*	P	**Pn**		**02 27 26.7**	**-0.8**
KDTR				*e*	S	**Sn**		**02 27 53.0**	**-2.0**
MIPR	**Malaya Ipel'ka**	**2.58**	**2**		PN	**Pn**		**02 27 31.7**	**+0.5**
MIPR	**Malaya Ipel'ka**	**2.58**	**2**	*e*	P	**Pn**		**02 27 31.8**	**+0.5**
MIPR				*e*	S	**Sn**		**02 28 02.3**	**+0.6**
ASAK	**Asacha**	**2.81**	**16**		PN	**Pn**		**02 27 34.5**	**+0.2**
ASAK	**Asacha**	**2.81**	**16**	*e*	P	**Pn**		**02 27 34.6**	**+0.2**
MTVR	**Mutnovka**	**2.96**	**19**		PN	**Pn**		**02 27 36.4**	**0.0**
MTVR	**Mutnovka**	**2.96**	**19**	*e*	P	**Pn**		**02 27 36.5**	**0.0**
MTVR				*e*	S	**Sn**		**02 28 08.9**	**-2.0**
RUS	**Russkaya**	**2.99**	**23**		PN	**Pn**		**02 27 35.8**	**-0.9**
RUS	**Russkaya**	**2.99**	**23**	*e*	P	**Pn**		**02 27 35.9**	**-0.9**
RUS				*e*	S	**Sn**		**02 28 08.0**	**-3.5**
GRL	**Gorelyy**	**3.00**	**17**		PN	**Pn**		**02 27 37.6**	**+0.6**
GRL	**Gorelyy**	**3.00**	**17**	*e*	P	**Pn**		**02 27 37.7**	**+0.6**
GRL				*e*	S	**Sn**		**02 28 11.0**	**-0.9**
APC	**Apacha**	**3.25**	**6**		PN	**Pn**		**02 27 41.6**	**+1.4**
APC	**Apacha**	**3.25**	**6**	*e*	P	**Pn**		**02 27 41.6**	**+1.4**
KRMR	**Karymshinskiy**	**3.28**	**16**		PN	**Pn**		**02 27 41.8**	**+1.2**
KRMR	**Karymshinskiy**	**3.28**	**16**	*e*	P	**Pn**		**02 27 41.9**	**+1.2**
PEA0B	**Petropavlovsk-**	**3.48**	**11**			**Pn**		**02 27 44.5**	**+1.1**
PEA0B	**Petropavlovsk-**	**3.48**	**11**		PN	**Pn**		**02 27 44.2**	**+0.8**
PETK	**Petropavlovsk-**	**3.48**	**11**		P	**Pn**		**02 27 44.4**	**+1.0**
	comp=N,16nm,0.5s,baz=183,slow=12,SNR=65								
PETK					S	**Sn**		**02 28 27.7**	**+4.2**
	comp=N,9.8nm,0.5s,baz=212,slow=17,SNR=4.3								
PET	**Petropavlovsk**	**3.57**	**20**		Pn	**Pn**		**02 27 44.7**	**+0.1**
PET	**Petropavlovsk**	**3.57**	**20**	*e*	PN	**Pn**		**02 27 44.3**	**-0.2**
PET	**Petropavlovsk**	**3.57**	**20**	*e*	P	**Pn**		**02 27 44.9**	**+0.3**
DALK	**Dalny**	**3.60**	**21**		PN	**Pn**		**02 27 44.7**	**-0.2**
DALK	**Dalny**	**3.60**	**21**	*e*	P	**Pn**		**02 27 44.7**	**-0.2**
DALK				*e*	S	**Sn**		**02 28 23.6**	**-2.6**
UGLR	**Uglovaya**	**3.78**	**21**		PN	**Pn**		**02 27 48.7**	**+1.2**
UGLR	**Uglovaya**	**3.78**	**21**	*e*	P	**Pn**		**02 27 48.7**	**+1.2**
AVH	**Avacha**	**3.81**	**20**		PN	**Pn**		**02 27 49.1**	**+1.2**
AVH	**Avacha**	**3.81**	**20**	*e*	P	**Pn**		**02 27 49.1**	**+1.2**
AVH				*e*	S	**Sn**		**02 28 31.1**	**-0.5**
KOK	**Koryaka**	**3.81**	**19**		PN	**Pn**		**02 27 49.4**	**+1.4**
KOK	**Koryaka**	**3.81**	**19**	*e*	P	**Pn**		**02 27 49.4**	**+1.4**
SMAR	**Somma**	**3.82**	**20**		PN	**Pn**		**02 27 49.7**	**+1.5**
SMAR	**Somma**	**3.82**	**20**	*e*	P	**Pn**		**02 27 49.7**	**+1.5**
KRER	**Koryakskii**	**3.85**	**19**		PN	**Pn**		**02 27 49.3**	**+0.8**
KRER	**Koryakskii**	**3.85**	**19**	*e*	P	**Pn**		**02 27 49.4**	**+0.8**
SDLR	**Sedlovina**	**3.86**	**21**		PN	**Pn**		**02 27 48.6**	**0.0**
SDLR	**Sedlovina**	**3.86**	**21**	*e*	P	**Pn**		**02 27 48.6**	**0.0**
NLC	**Nalytchevo**	**3.88**	**25**		PN	**Pn**		**02 27 47.4**	**-1.3**
NLC	**Nalytchevo**	**3.88**	**25**	*e*	P	**Pn**		**02 27 47.4**	**-1.3**
KRX	**Arik**	**3.88**	**18**		PN	**Pn**		**02 27 49.9**	**+0.9**
KRX	**Arik**	**3.88**	**18**	*e*	P	**Pn**		**02 27 49.9**	**+0.9**
KRX				*e*	S	**Sn**		**02 28 34.0**	**+0.7**
SPN	**Mys Shipunski**	**4.02**	**31**		PN	**Pn**		**02 27 50.3**	**-0.4**
SPN	**Mys Shipunski**	**4.02**	**31**	*e*	P	**Pn**		**02 27 50.3**	**-0.4**
SPN				*e*	S	**Sn**		**02 28 33.7**	**-2.8**
GNL	**Ganaly**	**4.09**	**11**		PN	**Pn**		**02 27 53.2**	**+1.5**
GNL	**Ganaly**	**4.09**	**11**	*e*	P	**Pn**		**02 27 53.3**	**+1.5**
MKZ	**Mys Kozlova**	**5.80**	**31**		PN	**Pn**		**02 28 13.4**	**-1.4**
MKZ	**Mys Kozlova**	**5.80**	**31**	*e*	P	**Pn**		**02 28 13.5**	**-1.4**
SEY	**Seymchan**	**13.47**	**352**		P	**Pn**		**02 29 56.8**	**-2.4**
	comp=N,0.3nm,0.3s,baz=217,slow=20,SNR=1.8								
KLR	**Kul'dur**	**16.15**	**278**		P	**Pn**		**02 30 32.0**	**-1.8**
	comp=N,0.8nm,0.8s,baz=132,slow=2.4,SNR=3.6								
KLR					LR	LR		02 36 08.1	
	comp=N,95nm,21.0s,baz=8.0,slow=35								
KLR	**Kul'dur**	**16.15**	**278**		P	**Pn**		**02 30 32.0**	**-1.8**
MJAR	**Matsushiro Arr**	**18.73**	**232**		P	**Pn**		**02 31 05.0**	**-0.4**
	comp=N,1.0nm,0.3s,baz=31,slow=9.2,SNR=5.2								
BILL	**Bilibino**	**19.02**	**11**			**Pn**		**02 31 07.8**	**-0.7**
KSRS	**Korea Array**	**23.96**	**250**		P	**P**		**02 31 57.8**	**-0.9**
	comp=N,2.2nm,0.8s,baz=54,slow=9.6,SNR=5.0								
	comp=N,2.2nm,0.8s								
TNA	**Tin City**	**24.27**	**36**	P		**P**		**02 32 03.7**	**+2.5**
C16K	**Lisburne Hills**	**26.34**	**31**	P		**P**		**02 32 20.3**	**+0.4**
C16K					IAmb	IAmb		02 32 23.6	
	comp=Z,5.9nm,1.2s								
C18K	**Utukok River**	**27.89**	**32**	P		**P**		**02 32 34.2**	**+0.2**
C18K					IAmb	IAmb		02 32 35.7	
	comp=Z,5.8nm,1.4s								
B21K	**Ikpikpuk River**	**30.43**	**31**	P		**P**		**02 32 57.5**	**+1.1**
H11N2	**WAKE ISLAND Hy**	**31.01**	**161**	T		T		03 06 04.4	
	baz=347,slow=77,SNR=17								
H11N1	**WAKE ISLAND Hy**	**31.03**	**161**	T		T		03 06 05.4	
	baz=347,slow=77,SNR=13								
H11N3	**WAKE ISLAND Hy**	**31.03**	**161**	T		T		03 06 05.6	
	baz=347,slow=77,SNR=42								
H11S1	**WAKE ISLAND Hy**	**32.16**	**162**	T		T		03 07 33.7	
	baz=347,slow=76,SNR=102								
H11S3	**WAKE ISLAND Hy**	**32.17**	**162**	T		T		03 07 31.8	
	baz=347,slow=76,SNR=190								
H11S2	**WAKE ISLAND Hy**	**32.17**	**162**	T		T		03 07 35.1	
	baz=347,slow=76,SNR=90								
ILAR	**Eielson Array**	**32.78**	**41**	P		**P**		**02 33 16.6**	**-0.4**
	comp=Z,0.6nm,0.9s,baz=252,slow=7.7,SNR=7.9								
	comp=Z,0.6nm,0.9s								
ILAR	**Eielson Array**	**32.78**	**41**	P		**P**		**02 33 17.9**	**+0.9**
ILAR	**Eielson Array**	**32.78**	**41**	P		**P**		**02 33 17.9**	**+0.9**
D25K	**Kavik River**	**33.23**	**33**	P		**P**		**02 33 22.1**	**+1.1**
D25K					IAmb	IAmb		02 33 22.7	
	comp=Z,4.1nm,0.7s								
E29M	**Blow River**	**36.28**	**35**			**P**		**02 33 49.1**	**+2.0**
E29M					IAmb	IAmb		02 33 49.4	
	comp=Z,1.5nm,0.7s								
INK	**Inuvik**	**37.90**	**35**	P		**P**		**02 34 02.4**	**+1.6**
INK					IAmb	IAmb		02 34 28.4	
	comp=Z,2.0nm,1.1s								
INK	**Inuvik**	**37.90**	**35**	P		**P**		**02 34 02.4**	**+1.6**
INK				pmax		pmax			
	comp=Z,2.0nm,1.1s								
A36M	**Sachs Harbour**	**40.16**	**28**			**P**		**02 34 21.4**	**+1.8**
A36M					IAmb	IAmb		02 34 22.4	
	comp=Z,4.1nm,0.8s								
ZAA0	**Zalesovo Array**	**42.83**	**304**	P		**P**		**02 34 40.4**	**-1.3**
ZALV	**Zalesovo Beam**	**42.83**	**304**	P		**P**		**02 34 40.6**	**-1.1**
	comp=Z,1.5nm,0.3s,baz=54,slow=7.7,SNR=11								
	comp=Z,1.5nm,0.3s								
ZALV	**Zalesovo Beam**	**42.83**	**304**	P		**P**		**02 34 40.7**	**-1.0**
ZALV	**Zalesovo Beam**	**42.83**	**304**	P		**P**		**02 34 40.7**	**-1.0**
RES	**Resolute Bay**	**47.28**	**20**	P		**P**		**02 35 18.2**	**+1.6**
RES	**Resolute Bay**	**47.28**	**20**	P		**P**		**02 35 18.2**	**+1.6**
RES				pmax		pmax			
	comp=Z,2.0nm,1.2s								
MKAR	**Makanchi Array**	**47.69**	**297**	P		**P**		**02 35 19.6**	**-0.7**
	comp=Z,0.8nm,0.4s,baz=60,slow=6.6,SNR=19								
	comp=Z,0.8nm,0.4s								
MKAR	**Makanchi Array**	**47.69**	**297**	P		**P**		**02 35 19.7**	**-0.5**
MKAR	**Makanchi Array**	**47.69**	**297**	P		**P**		**02 35 19.7**	**-0.5**
KURK	**Kurchatov**	**47.71**	**303**			**P**		**02 35 20.1**	**-0.1**
KURK					IAmb	IAmb		02 35 20.5	
	comp=Z,3.1nm,0.9s								
KURK	**Kurchatov**	**47.71**	**303**	P		**P**		**02 35 20.2**	**-0.1**
KURK				pmax		pmax			
	comp=Z,3.0nm,0.9s								
KURBB	**Kurchatov Arra**	**47.80**	**303**	P		**P**		**02 35 19.8**	**-1.2**
	comp=Z,2.1nm,0.8s,baz=53,slow=7.8,SNR=15								
	comp=Z,2.1nm,0.8s								
BVAR	**Borovoye Array**	**50.81**	**309**	P		**P**		**02 35 43.0**	**-0.9**
	comp=Z,2.1nm,0.4s,baz=56,slow=7.9,SNR=15								
	comp=Z,2.1nm,0.4s								
BVAR	**Borovoye Array**	**50.81**	**309**	P		**P**		**02 35 43.0**	**-0.9**
BORK	**Borovoye**	**50.83**	**309**	P		**P**		**02 35 43.1**	**-1.0**
BORK				IAmb		IAmb		02 35 43.7	
	comp=Z,1.8nm,0.7s								
BORK	**Borovoye**	**50.83**	**309**	P		**P**		**02 35 43.1**	**-1.0**
BORK				pmax		pmax			
	comp=Z,2.0nm,0.7s								
BLKN	**Baker Lake**	**53.13**	**31**	P		**P**		**02 36 01.9**	**+1.0**
ILON	**Igloolik, Nuna**	**53.79**	**22**	P		**P**		**02 36 06.4**	**+0.7**
ILON				IAmb		IAmb		02 36 34.1	
	comp=Z,5.4nm,1.4s								
BOOM	**Boomskoye usch**	**53.87**	**295**	P		**P**		**02 36 07.2**	**+0.3**
BOOM				IAmb		IAmb		02 36 08.6	
	comp=Z,1.6nm,0.7s								
BOOM	**Boomskoye usch**	**53.87**	**295**	P		**P**		**02 36 07.2**	**+0.3**
BOOM				pmax		pmax			
	comp=Z,2.0nm,0.7s								
CMAR	**Chiang Mai Arr**	**55.32**	**257**	P		**P**		**02 36 19.0**	**+1.5**
	comp=Z,1.0nm,0.4s,baz=35,slow=6.0,SNR=5.0								
	comp=Z,1.0nm,0.4s								
ARCES	**ARCESS Array B**	**55.82**	**341**	P		**P**		**02 36 18.5**	**-1.9**
	comp=Z,3.0nm,0.9s,baz=44,slow=7.1,SNR=6.2								
	comp=Z,3.0nm,0.9s								
ARCES	**ARCESS Array B**	**55.82**	**341**	P		**P**		**02 36 18.6**	**-1.7**
ARCES	**ARCESS Array B**	**55.82**	**341**	P		**P**		**02 36 18.7**	**-1.7**
ARCES				pmax		pmax			
	comp=Z,27nm,1.4s								
AB31	**Akbulak array**	**58.32**	**310**			**P**		**02

PRSN					IAML			02 28 29.8	
	comp=N,6µm,0.3s								
IDE	**Isla Desecheo**	**0.79**	**356**			**Pb**		**02 28 16.1**	**-0.1**
OBIP	**Obispado Ponce**	**0.89**	**60**			**Pb**		**02 28 18.2**	**+0.3**
OBIP	**Obispado Ponce**	**0.89**	**60**			**Sn**		**02 28 31.4**	**-0.7**
OBIP	**Obispado Ponce**	**0.89**	**60**	*i*	P	**Pn**		**02 28 18.4**	**-0.6**
OBIP					*e*S	**Sb**		**02 28 30.7**	**+0.7**
OBIP					IAML			02 28 32.4	
	comp=Z,7µm,0.2s								
AGPR	**Aguadilla, PR**	**0.92**	**18**			**Pg**		**02 28 17.9**	**-0.1**
AGPR					IAML			02 28 34.2	
	comp=Z,2µm,0.5s								
AGPR	**Aguadilla, PR**	**0.92**	**18**	⇑*i*	P	**Pb**		**02 28 18.4**	**0.0**
AGPR					*i* S	**Sg**		**02 28 29.9**	**-0.1**
AGPR					IAML			02 28 34.0	
	comp=N,1µm,0.5s								
CELP	**Cerrillos**	**0.93**	**59**			**Pn**		**02 28 18.8**	**-0.7**
CELP					IAML			02 28 32.8	
	comp=N,3µm,0.6s								
CELP					IAML			02 28 33.1	
	comp=N,2µm,0.3s								
CELP	**Cerrillos**	**0.93**	**59**	⇑*i*	P	**Pn**		**02 28 19.1**	**-0.5**
CELP				⇑	*i* S	**Sn**		**02 28 32.2**	**-0.8**
CELP					IAML			02 28 32.7	
	comp=N,1µm,0.4s								
UUPR	**Utuado, UPR, P**	**0.94**	**45**			**Pb**		**02 28 18.7**	**0.0**
AOPR	**Arecibo Observ**	**0.98**	**40**			**Pg**		**02 28 19.2**	**0.0**
AOPR					IAML			02 28 35.9	
	comp=N,3µm,0.3s								
AOPR	**Arecibo Observ**	**0.98**	**40**	⇑*i*	P	**Pb**		**02 28 19.4**	**-0.1**
AOPR					*i* S	**Sg**		**02 28 31.8**	**-0.2**
AOPR					IAML			02 28 35.8	
	comp=N,3µm,0.3s								
EMPR	**Esperanza - Ma**	**1.22**	**44**			**Pg**		**02 28 23.8**	**0.0**
EMPR						**Sg**		**02 28 39.8**	**+0.1**
ECPR	**Experimental S**	**1.24**	**54**			**Pb**		**02 28 23.7**	**-0.1**
ECPR					IAML			02 28 44.4	
	comp=N,2µm,0.3s								
SJG	**San Juan**	**1.31**	**67**			**Pb**		**02 28 25.1**	**0.0**
SJG					IAML			02 28 48.5	
	comp=N,892nm,0.8s								
SJG	**San Juan**	**1.31**	**67**	⇑*i*	P	**Pg**		**02 28 25.3**	**-0.2**
SJG					*i* S	**Sn**		**02 28 42.1**	**-0.3**
SJG	**San Juan**	**1.31**	**67**	*i*	P	**Pb**		**02 28 25.2**	**0.0**
SJG					*e*S	**Sg**		**02 28 42.8**	**+0.2**
PDPR	**Patillas Dam,**	**1.40**	**72**			**Pn**		**02 28 25.7**	**-0.2**
HIDR	**Higuey Centro**	**1.59**	**309**	*i*	P	**Pg**		**02 28 30.9**	**+0.2**
HIDR					*i* S	**Sg**		**02 28 51.9**	**+0.5**
HIDR					IAML			02 28 57.2	
	comp=N,495nm,0.2s								
HUMP	**Col San Antoni**	**1.59**	**70**			**Pn**		**02 28 28.5**	**-0.1**
CUPR	**Culebra, Puert**	**2.15**	**70**			**Pn**		**02 28 36.8**	**+0.5**
DR12	**Loma Pena Alta**	**2.21**	**303**			**Pn**		**02 28 38.5**	**+1.2**
HATOM	**Hato Mayor del**	**2.21**	**303**	*i*	P	**Pb**		**02 28 41.0**	**+0.5**
HATOM					*i* S	**Sb**		**02 29 07.8**	**-0.2**
HATOM					IAML			02 29 19.8	
	comp=N,200nm,0.8s								
SMDR	**Samana, DR**	**2.38**	**315**	⇑*i*	P	**Pb**		**02 28 42.8**	**-0.6**
SMDR				⇑	*i* S	**Sb**		**02 29 12.2**	**-0.7**
SMDR					IAML			02 29 21.5	
	comp=N,215nm,0.7s								
SDD	**Santo Domingo**	**2.53**	**290**	Pn		**Pn**		**02 28 43.2**	**+1.8**
BANI	**BANI**	**2.91**	**286**	⇑*i*	P	**Pb**		**02 28 52.1**	**-0.3**
BANI				⇑	*i* S	**Sn**		**02 29 24.5**	**+2.5**
BANI					IAML			02 29 37.0	
	comp=N,131nm,0.4s								
SFDR	**San Fco. de Ma**	**3.17**	**303**	⇑*i*	P	**Pb**		**02 28 54.0**	**-2.7**
SFDR				⇑	*i* S	**Sn**		**02 29 30.7**	**+2.4**
SFDR					IAML			02 29 44.8	
	comp=N,218nm,0.4s								
ABDR	**Alto Bandera**	**3.28**	**292**	⇑*i*	P	**Pb**		**02 28 56.4**	**-2.6**
ABDR					IAML			02 29 59.2	
	comp=N,0.2nm,0.6s								
SC01	**Santiago de lo**	**3.63**	**301**			**Pb**		**02 29 00.4**	**-4.3**
SC01					IAML			02 30 06.5	
	comp=N,234nm,1.2s								
PODR	**Polo**	**3.72**	**279**	*i*	P	**Pn**		**02 28 59.1**	**+0.9**
PODR					IAML			02 29 43.3	
	comp=Z,1µm,0.1s								
LOVI	**El Cajuil, Ovi**	**3.77**	**274**	*i*	P	**Pn**		**02 28 58.2**	**-0.4**
LOVI					IAML			02 29 46.1	
	comp=Z,107nm,3.0s								
SDDR	**Presa de Saban**	**3.93**	**291**			**Pn**		**02 29 03.8**	**+3.0**
SDDR					IAML			02 30 11.2	
	comp=Z,83nm,0.9s								
SDDR					IAML			02 30 16.3	
	comp=Z,94nm,0.9s								
LODU1	**El Espartillar**	**3.94**	**282**	*i*	P	**Pn**		**02 29 02.9**	**+2.0**
LODU1					IAML			02 29 54.0	
	comp=Z,62nm,0.2s								
LONE3	**El Aguacate, B**	**3.97**	**285**	*i*	P	**Pn**		**02 29 03.0**	**+1.5**
LONE3					IAML			02 29 52.7	
	comp=Z,23nm,0.9s								
SABA	**Saba**	**3.98**	**89**	Pn		**Pn**		**02 29 02.1**	**+0.6**
LOBH	**Bahia de las A**	**4.03**	**274**	*i*	P	**Pn**		**02 29 02.9**	**+0.7**
LOBH					*e*S	**Sn**		**02 29 48.0**	**-1.5**
LOBH					IAML			02 29 52.6	
	comp=Z,98nm,0.2s								
LOPP1	**Punta Rusia, P**	**4.23**	**303**	*i*	P	**Pn**		**02 29 08.1**	**+3.1**
LOPP1					IAML			02 30 01.0	
	comp=Z,80nm,2.6s								
GRTK	**Grand Turk**	**5.24**	**319**	*i*	P	**Pn**		**02 29 19.2**	**+0.3**
GRTK					*e*S	**Sn**		**02 30 16.6**	**-2.8**
GRTK					IAML			02 30 19.7	
	comp=Z,67nm,2.8s								
CBE	**Ff, Capester**	**5.77**	**104**	Pn		**Pn**		**02 29 27.3**	**+1.2**

*IDC **21** 02:29:16.3±2.4, 5°08S×128°38E, h0km, mb3.3/1, mbtmp3.4/3, ML3.3/2, Error ellipse: s-maj=178.6km s-min=31.3km az=67.0, Banda Sea*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.87**	**159**	Pn	Pn	02 32 59.9	-1.3
	0.1nm,0.3s,baz=341,slow=13,SNR=4.7 0.6nm,0.9s						
ASAR	**Alice Springs**	**19.23**	**164**	P	Pn	02 33 42.8	-0.3
	0.2nm,0.3s,baz=347,slow=10,SNR=18 1.1nm,0.6s						
MKAR	**Makanchi Array**	**65.75**	**327**	P	P	02 40 03.1	0.0
	0.2nm,0.5s,baz=116,slow=7.5,SNR=2.9 0.2nm,0.5s						

*IDC **21** 02:41:14.8±2.2, 13°95S×66°09E, h0km, mb3.6/6, mbtmp3.6/6, MS3.5/2, Error ellipse: s-maj=84.0km s-min=28.6km az=55.0*

ISC 21 02:41:16.5±2.6, 14°1S±0°4×65°9E±0°6, h15km, n16, σ0°66/8, mb3.7/6, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**9.09**	**46**	T	T	02 52 44.2	
	baz=224,slow=76,SNR=114						
H08S2	**Diego Garcia H**	**9.10**	**46**	T	T	02 52 44.3	
	baz=224,slow=76,SNR=83						
H08S3	**Diego Garcia H**	**9.11**	**46**	T	T	02 52 47.4	
	baz=224,slow=76,SNR=196						
PALK	**Pallekele**	**25.81**	**36**	LR	LR	02 54 30.5	
	comp=Z,111nm,20.6s,baz=244,slow=31						
H04N2	**CROZET ISLANDS**	**34.11**	**198**	T	T	03 23 57.3	
	baz=26,slow=75,SNR=34						
H04N1	**CROZET ISLANDS**	**34.11**	**198**	T	T	03 24 03.0	
	baz=26,slow=75,SNR=34						
H04N3	**CROZET ISLANDS**	**34.12**	**198**	T	T	03 23 59.5	
	baz=26,slow=75,SNR=34						
BRDH	**Bariadhala**	**44.40**	**35**	LR	LR	03 05 16.1	
	comp=Z,50nm,21.9s,baz=298,slow=33						
MKAR	**Makanchi Array**	**62.37**	**13**	P	**P**	**02 51 38.2**	**-0.3**
	0.2nm,0.5s,baz=191,slow=5.9,SNR=2.8 0.2nm,0.5s						
ASAR	**Alice Springs**	**64.54**	**110**	P	**P**	**02 51 53.0**	**-0.4**
	1.1nm,0.9s,baz=278,slow=6.5,SNR=7.9 1.1nm,0.9s						
WRA	**Warramunga Arr**	**65.31**	**106**	P	**P**	**02 51 58.9**	**+0.4**
	1.4nm,0.8s,baz=268,slow=5.6,SNR=7.8 1.4nm,0.8s						
KURBB	**Kurchatov Arra**	**65.38**	**9**	P	**P**	**02 51 56.9**	**-1.3**
	0.2nm,0.3s,baz=211,slow=6.9,SNR=2.0 0.2nm,0.3s						
BVAR	**Borovoye Array**	**66.95**	**3**	P	**P**	**02 52 08.3**	**+0.1**
	0.2nm,0.4s,baz=149,slow=6.7,SNR=1.8 0.2nm,0.4s						
SONM	**Songino Array**	**71.43**	**27**	P	**P**	**02 52 36.6**	**+0.3**
	0.3nm,0.6s,baz=224,slow=6.0,SNR=2.1						
ILAR	**Eielson Array**	**124.62**	**16**	PKP	**PKPdf**	**03 00 14.8**	**-0.2**
	0.3nm,0.8s,baz=316,slow=3.8,SNR=2.9						
PDAR	**Pinedale Array**	**151.16**	**353**	PKPbc	**PKiKP**	**03 01 10.6**	**+0.3**
	1.4nm,0.7s,baz=77,slow=2.6,SNR=16						

*IDC **21** 02:52:07.7±1.4, 31°41S×177°56W, h0km, mb4.2/4, mbtmp4.2/6, ML3.9/2, Error ellipse: s-maj=42.5km s-min=26.6km az=135.0*

*NEIC **21** 02:52:12.0±0.8, 31°37S±0°08×177°9W±0°2, h10km±1km, mb4.4/7, Error ellipse: s-maj=30.4km s-min=12.0km az=104.0*

ISC 21 02:52:10.3±1.0, 31°29S±0°08×177°8W±0°2, h10km, n24, σ1°32/26, mb4.2/8, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.04**	**357**	Pn	**Pn**	**02 52 45.6**	**+1.0**
	136nm,0.3s,baz=260,slow=22,SNR=3.9						
RAO				Sn	**Sn**	02 53 07.2	-2.9
	199nm,0.3s,baz=141,slow=17,SNR=5.1 269nm,0.3s						
RAO	**Raoul Island**	**2.04**	**357**	Pn	**Pn**	**02 52 47.4**	**+2.7**
URZ	**Urewera**	**8.11**	**210**	Pn	**Pn**	**02 54 07.7**	**-0.3**
	0.4nm,0.3s,baz=268,slow=4.4,SNR=2.0						
URZ				Sn	**Sn**	02 55 38.2	-1.5
	4.1nm,0.3s,baz=54,slow=16,SNR=10 5.4nm,0.9s						
RTZ	**Ruatahuna**	**8.46**	**209**	Pn	**Pn**	**02 54 12.5**	**-0.5**
BKZ	**Black Stump Fm**	**9.13**	**209**	Pn	**Pn**	**02 54 21.9**	**-0.2**
CTA	**Charters Tower**	**34.11**	**280**	P	**P**	**02 58 57.0**	**+1.7**
	5.3nm,0.8s,baz=99,slow=10,SNR=6.6 5.3nm,0.8s						
CTAO	**Charters Tower**	**34.11**	**280**	P	**P**	**02 58 57.1**	**+1.7**
CTAO				IAmb	IAmb	02 59 00.2	
	comp=Z,21nm,1.4s						
STKA	**Stephens Creek**	**34.44**	**258**	P	**P**	**02 58 58.6**	**+0.4**
	comp=Z,1.1nm,0.4s,baz=72,slow=4.3,SNR=6.2 comp=Z,1.1nm,0.4s						
STKA	**Stephens Creek**	**34.44**	**258**	P	**P**	**02 58 58.5**	**+0.3**
BBOO	**Buckleboo**	**38.89**	**255**	P	**P**	**02 59 35.6**	**-0.4**
BBOO				IAmb	IAmb	02 59 57.2	
	comp=Z,22nm,1.4s						
AS31	**Alice Springs**	**43.23**	**268**	P	**P**	**03 00 11.7**	**-0.2**
AS31				IAmb	IAmb	03 00 19.9	
	comp=Z,0.9nm,0.9s						
ASAR	**Alice Springs**	**43.23**	**268**	P	**P**	**03 00 12.2**	**+0.3**
	comp=Z,1.9nm,0.6s,baz=105,slow=7.5,SNR=33 comp=Z,1.9nm,0.6s						
ASAR	**Alice Springs**	**43.23**	**268**	P	**P**	**03 00 11.6**	**-0.4**
WR8	**Warramunga Arr**	**44.15**	**273**	P	**P**	**03 00 19.0**	**-0.4**
WR8				IAmb	IAmb	03 01 00.8	
	comp=Z,4.4nm,1.0s						
WRA	**Warramunga Arr**	**44.30**	**273**	P	**P**	**03 00 20.7**	**+0.2**
	comp=Z,1.2nm,0.4s,baz=112,slow=7.8,SNR=24 comp=Z,1.2nm,0.4s						
WRA	**Warramunga Arr**	**44.30**	**273**	P	**P**	**03 00 20.5**	**-0.1**
QSPA	**South Pole Qui**	**58.82**	**180**	P	**P**	**03 02 10.8**	**+2.0**
QSPA				IAmb	IAmb	03 02 27.8	
	comp=Z,3.8nm,0.8s						
KURBB	**Kurchatov Arra**	**121.81**	**313**	PKP	**PKPdf**	**03 11 03.3**	**-0.9**
	comp=Z,0.3nm,0.7s,baz=132,slow=1.8,SNR=2.6						
BVAR	**Borovoye Array**	**127.15**	**315**	PKP	**PKPdf**	**03 11 12.6**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=23,slow=4.7,SNR=1.9						
KIV	**Kislovodsk**	**145.86**	**303**	PKPdf	**PKPdf**	**03 11 47.1**	**-2.1**
FINES	**FINESS Array B**	**146.04**	**340**	PKPbc	**PKPdf**	**03 11 47.4**	**-1.4**
	comp=Z,3.5nm,0.9s,baz=25,slow=2.6,SNR=13						
NOA	**NORSAR Array B**	**149.66**	**351**	PKPbc	**PKPbc**	**03 11 59.7**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=13,slow=4.0,SNR=3.4						
MMAI	**Mount Meron Ar**	**151.89**	**282**	PKPbc	**PKPbc**	**03 12 05.9**	**+0.1**
	comp=Z,3.0nm,0.9s,baz=64,slow=7.5,SNR=4.1						
AKASG	**Malin Array Ba**	**152.10**	**322**	PKPbc	**PKPbc**	**03 12 05.5**	**0.0**
	comp=Z,0.8nm,0.5s,baz=62,slow=2.8,SNR=4.4						

IDC 21 03:00:31.7±10.0, 18°27S×177°67W, h627km±41km, mb2.7/3, mbtmp3.7/4, Error ellipse: s-maj=343.3km s-min=32.5km az=141.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.11**	**277**	P	P	03 01 59.9	-0.1
	12nm,0.6s,baz=135,slow=13,SNR=6.8						
WRA	**Warramunga Arr**	**45.26**	**260**	P	P	03 07 55.3	-0.3
	0.4nm,0.3s,baz=94,slow=8.1,SNR=3.5 0.4nm,0.3s						
ASAR	**Alice Springs**	**45.37**	**255**	P	P	03 07 56.5	+0.1
	1.1nm,0.6s,baz=90,slow=8.2,SNR=22 1.1nm,0.6s						
ILAR	**Eielson Array**	**86.08**	**13**	P	P	03 12 07.2	0.0
	0.1nm,0.4s,baz=218,slow=5.3,SNR=5.2 0.1nm,0.4s						

*NEIC **21** 03:01:43.6±1.7, 12°59S±0°10×167°1E±0°1, h212km±6km, mb4.3/19, Error ellipse: s-maj=19.0km s-min=10.3km az=124.0*

*IDC **21** 03:01:43.5±0.9, 12°52S×167°03E, h217km±8km, mb3.6/14, mbtmp4.1/15, Error ellipse: s-maj=17.9km s-min=12.6km az=120.0*

ISC 21 03:01:43.8±0.5, 12°55S±0°08×167°1E±0°1, h220km, n46, σ0°82/48, mb4.2/21, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**2.88**	**177**		**Pn**	**03 02 31.6**	**-1.6**
MARNC	**Mare, Loyalty**	**8.93**	**174**	Pn	**Pn**	**03 03 48.4**	**-0.5**
DZM	**Mont Dzumac**	**9.49**	**184**	P	**Pn**	**03 03 58.2**	**+1.9**
	3.5nm,0.5s,baz=352,slow=16,SNR=8.3						
EIDS	**Eidsvold**	**19.75**	**228**	P	**P**	**03 05 58.1**	**+0.9**
EIDS				IAmb	IAmb	03 06 00.8	
	comp=Z,22nm,1.4s						
CTA	**Charters Tower**	**21.32**	**247**	P	**P**	**03 06 13.6**	**-0.3**
	comp=Z,6.5nm,0.9s,baz=103,slow=13,SNR=3.8 comp=Z,6.5nm,0.9s						
CTAO	**Charters Tower**	**21.32**	**247**	P	**P**	**03 06 13.6**	**-0.3**
CTAO				IAmb	IAmb	03 06 17.1	
	comp=Z,14nm,1.1s						
ARMA	**Armidale**	**22.81**	**216**	P	**P**	**03 06 28.6**	**+0.7**
ARMA				IAmb	IAmb	03 06 58.9	
	comp=Z,21nm,1.4s						
RTZ	**Ruatahuna**	**27.41**	**163**	P	**P**	**03 07 09.6**	**+0.4**
THZ	**Tophouse**	**29.54**	**171**	P	**P**	**03 07 27.7**	**-0.3**
STKA	**Stephens Creek**	**30.30**	**226**	P	**P**	**03 07 34.8**	**0.0**
	comp=Z,1.1nm,0.3s,baz=47,slow=10,SNR=9.1 comp=Z,1.1nm,0.3s						
STKA	**Stephens Creek**	**30.30**	**226**	P	**P**	**03 07 34.9**	**+0.2**
STKA				IAmb	IAmb	03 07 35.5	
	comp=Z,13nm,0.8s						
WR8	**Warramunga Arr**	**32.08**	**252**	P	**P**	**03 07 49.0**	**-1.5**
WR8				IAmb	IAmb	03 08 31.7	
	comp=Z,7.9nm,1.4s						
WRA	**Warramunga Arr**	**32.23**	**253**	P	**P**	**03 07 50.4**	**-1.4**
	comp=Z,0.5nm,0.5s,baz=85,slow=8.4,SNR=9.9 comp=Z,0.5nm,0.5s						
WRA	**Warramunga Arr**	**32.23**	**253**	P	**P**	**03 07 50.0**	**-1.7**
ASAR	**Alice Springs**	**33.32**	**246**	P	**P**	**03 08 00.1**	**-1.1**
	comp=Z,0.7nm,0.4s,baz=77,slow=9.2,SNR=4.8						
ASAR				pP	**pP**	**03 08 45.9**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=69,slow=9.6,SNR=1.8						
ASAR				PcP	**PcP**	**03 10 37.3**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=64,slow=2.5,SNR=6.4 comp=Z,0.7nm,0.4s						
BBOO	**Buckleboo**	**34.80**	**229**	P	**P**	**03 08 13.9**	**+0.1**
BBOO				IAmb	IAmb	03 08 14.3	
	comp=Z,5.1nm,0.8s						
KNRA	**Kununurra**	**37.25**	**261**	P	**P**	**03 08 34.5**	**-0.2**
KNRA				IAmb	IAmb	03 08 58.4	
	comp=Z,10nm,1.2s						
FORT	**Forrest**	**40.28**	**237**	P	**P**	**03 08 59.6**	**-0.1**
FORT				IAmb	IAmb	03 09 00.4	
	comp=Z,6.0nm,0.7s						
JMN	**Monobe**	**55.83**	**327**	P	**P**	**03 10 59.6**	**+1.0**
MJAR	**Matsushiro Arr**	**55.90**	**332**	P	**P**	**03 10 58.5**	**-0.4**
	comp=Z,2.1nm,0.6s,baz=166,slow=8.3,SNR=7.5 comp=Z,2.1nm,0.6s						
MJAR	**Matsushiro Arr**	**55.90**	**332**	P	**P**	**03 10 58.2**	**-0.7**
VNDA	**Vanda**	**65.02**	**181**	P	**P**	**03 12 00.3**	**+0.4**
	comp=Z,1.6nm,0.9s,baz=357,slow=7.8,SNR=6.1 comp=Z,1.6nm,0.9s						
VNDA	**Vanda**	**65.02**	**181**	P	**P**	**03 12 00.2**	**+0.3**
VNDA				IAmb	IAmb	03 12 09.8	
	comp=Z,5.7nm,1.5s						
CASY	**Casey**	**65.46**	**202**	P	**P**	**03 12 02.8**	**-0.1**
CMAR	**Chiang Mai Arr**	**73.90**	**294**	P	**P**	**03 12 56.1**	**+0.8**

*IDC **21** 03:12:09.7±1.5, 39°28N×20°67E, h0km, mb3.6/8, mbtmp3.5/9, ML2.6/1, MS3.7/2, Error ellipse: s-maj=29.9km s-min=26.2km az=136.0*

*ATH **21** 03:12:11.5, 39°29N×20°60E, h18km±1km, ML3.1/13, Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

*PDG **21** 03:12:12.9±0.5, 39°24N×20°53E, h11km±1km, ML3.1/11, Error ellipse: s-maj=0.7km s-min=1.0km az=0.0*

*THE **21** 03:12:12.3, 39°3N±0°7×2°1E±°, h0km±1km, M3.0/35, ML3.0/35*

*NEIC **21** 03:12:13.1±2.3, 39°32N±0°05×20°49E±0°06, h10km±2km, mb4.3/3, Error ellipse: s-maj=10.5km s-min=4.1km az=224.0*

ISC 21 03:12:12.1±0.9, 39°28N±0°02×20°59E±0°02, h12km±7km, n124, σ1°23/170, mb3.6/9, 9C-14D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	**0.33**	**322**	P	**Pg**	**03 12 18.8**	**+0.1**
IGT				S	**Sb**	03 12 24.3	-0.8
IGT	**Igoumenitsa**	**0.33**	**322**	P	**Pg**	**03 12 18.8**	**+0.1**
IGT				S	**Sg**	03 12 23.9	+0.8
ART2	**Arta**	**0.34**	**112**	P	**Pg**	**03 12 18.6**	**-0.2**
ART2				S	**Sg**	03 12 23.7	+0.3
JAN	**Janina**	**0.43**	**28**	P	**Pg**	**03 12 20.4**	**-0.2**
JAN				S	**Sg**	03 12 26.1	-0.1
JAN	**Janina**	**0.43**	**28**	P	**Pg**	**03 12 20.1**	**-0.4**
JAN				S	**Sg**	03 12 26.2	-0.1
LFKM	**Lefkimmi**	**0.45**	**293**	P	**Pb**	**03 12 21.9**	**0.0**
LFKM				S	**Sb**	**03 12 29.7**	**+1.2**
TSLK	**Tsoukalades, L**	**0.45**	**174**	P	**Pg**	**03 12 21.3**	**+0.3**
TSLK	**Tsoukalades, L**	**0.45**	**174**	P	**Pg**	**03 12 21.1**	**+0.2**
PRMD	**Pramanda**	**0.47**	**57**	P	**Pg**	**03 12 21.1**	**-0.1**
PRMD				S	**Sg**	**03 12 28.2**	**+0.7**
PRMD	**Pramanda**	**0.47**	**57**	P	**Pg**	**03 12 21.0**	**-0.2**
PRMD				S	**Sg**	**03 12 27.5**	**+0.1**
LKD2	**Lefkada island**	**0.49**	**174**	P	**Pg**	**03 12 21.8**	**+0.2**
LKD2				S	**Sb**	**03 12 30.8**	**+1.1**
LKD2	**Lefkada island**	**0.49**	**174**	P	**Pg**	**03 12 21.6**	**0.0**
LKD2				S	**Sb**	**03 12 29.4**	**-0.3**
TETR	**Tetrakomo, Epi**	**0.53**	**82**	P	**Pg**	**03 12 22.0**	**-0.5**
TETR				S	**Sg**	**03 12 29.9**	**+0.3**
TETR	**Tetrakomo, Epi**	**0.53**	**82**	P	**Pg**	**03 12 22.0**	**-0.5**
TETR				S	**Sg**	**03 12 29.9**	**+0.3**
NYDR	**Nydri-Lefkada**	**0.57**	**172**	P	**Pg**	**03 12 22.9**	**-0.2**
NYDR				S	**Sb**	**03 12 33.0**	**+1.1**
NYDR	**Nydri-Lefkada**	**0.57**	**172**	P	**Pg**	**03 12 22.9**	**-0.2**
NYDR				S	**Sb**	**03 12 31.3**	**-0.6**
DRAG	**Dragano-Lefkad**	**0.59**	**181**	P	**Pg**	**03 12 23.3**	**-0.2**
DRAG	**Dragano-Lefkad**	**0.59**	**181**	P	**Pg**	**03 12 23.1**	**-0.5**
DRAG				S	**Sb**	**03 12 32.3**	**-0.4**
AMPL	**Ampelaki**	**0.60**	**126**	P	**Pg**	**03 12 23.7**	**0.0**
AMPL				S	**Sb**	**03 12 33.4**	**+0.5**
AMPL	**Ampelaki**	**0.60**	**126**	P	**Pg**	**03 12 23.7**	**0.0**
AMPL				S	**Sg**	**03 12 32.1**	**+0.5**
EVGI	**Lefkada island**	**0.66**	**176**	P	**Pg**	**03 12 24.3**	**-0.5**
EVGI				S	**Sb**	**03 12 36.1**	**+1.6**
EVGI	**Lefkada island**	**0.66**	**176**	P	**Pg**	**03 12 24.3**	**-0.5**
KEK	**Kerkira**	**0.75**	**306**		**Pg**	**03 12 26.0**	**-0.6**
KEK					**Sg**	**03 12 33.1**	**-3.4**
KEK	**Kerkira**	**0.75**	**306**	P	**Pg**	**03 12 26.3**	**-0.4**
KEK				S	**Sn**	**03 12 39.5**	**-0.4**
KEK	**Kerkira**	**0.75**	**306**	P	**Pg**	**03 12 26.2**	**-0.4**
SRN	**Sarande**	**0.76**	**323**	P	**Pg**	**03 12 26.5**	**-0.3**
SRN				S	**Sn**	**03 12 39.1**	**-0.9**
FSK	**Fiskardo**	**0.82**	**182**	P	**Pg**	**03 12 27.2**	**-0.6**
FSK				S	**Sn**	**03 12 40.3**	**-1.0**
FSK	**Fiskardo**	**0.82**	**182**	P	**Pg**	**03 12 27.2**	**-0.6**
AST1	**Astakos**	**0.83**	**152**	P	**Pg**	**03 12 27.8**	**-0.3**
AST1				S	**Sn**	**03 12 40.9**	**-0.8**
VSK1	**VASILIKIADES**	**0.87**	**182**	P	**Pn**	**03 12 29.8**	**-0.2**
VSK1				S	**Sn**	**03 12 43.0**	**+0.4**
KPRO	**Kipourio**	**0.90**	**41**	P	**Pg**	**03 12 28.6**	**-0.9**
KPRO				S	**Sb**	**03 12 42.4**	**+0.7**
KPRO	**Kipourio**	**0.90**	**41**	P	**Pg**	**03 12 28.5**	**-0.9**
PVO	**Paravola**	**0.98**	**132**	P	**Pg**	**03 12 31.0**	**+0.1**
PVO				S	**Sn**	**03 12 45.8**	**+0.3**
PENT	**Pentalofos**	**1.01**	**24**	P	**Pg**	**03 12 30.7**	**-0.9**
PENT				S	**Sb**	**03 12 45.4**	**+0.5**
PENT	**Pentalofos**	**1.01**	**24**	P	**Pg**	**03 12 30.9**	**-0.7**
EVR	**Evrytania**	**1.01**	**110**	P	**Pg**	**03 12 30.9**	**-0.6**
EVR				S	**Sg**	**03 12 44.7**	**0.0**
EVR	**Evrytania**	**1.01**	**110**	P	**Pg**	**03 12 30.6**	**-0.9**
DMLN	**Damoulianata-K**	**1.05**	**189**	P	**Pg**	**03 12 32.0**	**-0.3**
DMLN				S	**Sn**	**03 12 48.1**	**+0.9**
DMLN	**Damoulianata-K**	**1.05**	**189**	P	**Pg**	**03 12 31.8**	**-0.4**
LXR1	**Lixouri, Cepha**	**1.08**	**186**	P	**Pn**	**03 12 33.6**	**+0.6**
LXR1				S	**Sn**	**03 12 50.3**	**+2.4**
VLS	**Valsamata**	**1.10**	**180**	P	**Pb**	**03 12 32.6**	**-0.3**
VLS		

KLV	**Kalavryta, Ach**	**1.73**	**135**	P		**Pb**	**03 12 43.3**	**-0.5**
OHR	**Ohrid**	**1.84**	**5**	⇓*i*Pn		**Pg**	**03 12 47.4**	**0.0**
OHR				*i* Sn		**Sg**	**03 12 48.4**	**+1.1**
GUR	**Goura**	**1.92**	**134**	P		**Pb**	**03 12 46.5**	**-0.4**
AMT	**Artemida-Makis**	**1.95**	**153**	P		**Pn**	**03 12 45.5**	**+0.5**
LKR	**Lokris**	**1.98**	**108**	P		**Pn**	**03 12 46.6**	**+1.2**
ATAL	**Atalanti**	**1.98**	**106**	P		**Pn**	**03 12 46.6**	**+1.2**
NEO	**Neokhori**	**2.04**	**88**	P		**Pn**	**03 12 47.5**	**+1.2**
ITM	**Ithomi**	**2.34**	**153**			**Pb**	**03 12 52.5**	**-1.7**
VAY	**Valandovo**	**2.54**	**36**	⇓*i*Pn		**Pn**	**03 12 55.2**	**+2.1**
VAY				*i* Sn		**Sb**	**03 13 27.1**	**-1.7**
ULC	**Ulcinj**	**2.87**	**340**	⇑*i*Pn		**Pn**	**03 12 58.5**	**+0.8**
ULC				*i* Sn		**Sn**	**03 13 02.0**	**+0.9**
TIP	**Timpagrande**	**2.98**	**269**	⇓P		**Pn**	**03 12 59.5**	**+0.3**
TIP	**Timpagrande**	**2.98**	**269**			**Pn**	**03 12 59.5**	**+0.3**
DRME	**Dracevica, Mon**	**3.10**	**340**	⇑*i*Pn		**Pn**	**03 13 01.9**	**+1.1**
DRME				*e*Sn		**Sn**	**03 13 38.7**	**+1.0**
BUM	**Brajici-Budva**	**3.29**	**337**	⇓*i*Pn		**Pn**	**03 13 04.1**	**+0.7**
BUM				*i* Sn		**Sn**	**03 13 42.6**	**+0.1**
MATE	**Matera**	**3.29**	**296**	⇓P		**Pn**	**03 13 05.6**	**+2.3**
PDG	**Podgorica**	**3.31**	**343**	⇑⇑P		**Pn**	**03 13 05.3**	**+1.7**
PDG	**Podgorica**	**3.31**	**343**			**Pn**	**03 13 04.5**	**+0.8**
PDG	**Podgorica**	**3.31**	**343**	⇑*i*Pn		**Pn**	**03 13 04.8**	**+1.1**
PDG				*e*Sn		**Sn**	**03 13 44.2**	**+1.3**
PVY	**Plav**	**3.35**	**352**	⇑*i*Pn		**Pn**	**03 13 06.5**	**+2.1**
PVY				*e*Sn		**Sn**	**03 13 45.6**	**+1.5**
CEME	**Cevo**	**3.50**	**339**	⇑*i*Pn		**Pn**	**03 13 07.0**	**+0.6**
CEME				*i* Sn		**Sn**	**03 13 48.0**	**+0.1**
HCY	**Herceg Novi**	**3.55**	**334**	⇑*i*Pn		**Pn**	**03 13 07.1**	**+0.2**
HCY				*i* Sn		**Sn**	**03 13 47.9**	**-0.9**
IVA	**Berane**	**3.63**	**352**	⇓*i*Pn		**Pn**	**03 13 10.1**	**+1.9**
IVA				*i* Sn		**Sn**	**03 13 52.1**	**+1.1**
KOME	**Kolasin**	**3.66**	**347**	⇓*i*Pn		**Pn**	**03 13 10.3**	**+1.7**
KOME				*i* Sn		**Sn**	**03 13 52.9**	**+1.1**
CUC	**Castrocucco**	**3.76**	**282**			**Pn**	**03 13 11.0**	**+1.1**
CEL	**Celeste**	**3.81**	**256**			**Pn**	**03 13 10.3**	**-0.3**
ACER	**Acerenza**	**3.88**	**294**			**Pn**	**03 13 12.9**	**+1.4**
BRY	**Bratogost**	**3.94**	**337**	⇓*i*Pn		**Pn**	**03 13 12.7**	**+0.2**
BRY				*i* Sn		**Sn**	**03 13 57.6**	**-1.1**
PLE	**Pljevlja**	**4.15**	**348**	⇓*i*Pn		**Pn**	**03 13 17.7**	**+2.4**
PLE				*i* Sn		**Sn**	**03 14 04.9**	**+1.0**
RDO	**Rodhopi**	**4.22**	**62**			**Pn**	**03 13 17.9**	**+1.7**
SGRT	**San Giovanni R**	**4.45**	**305**			**Pn**	**03 13 19.7**	**+0.3**
ALN	**Alexandroupoli**	**4.49**	**67**			**Pn**	**03 13 21.7**	**+1.9**
PAOL	**Paolisi**	**4.94**	**293**			**Pn**	**03 13 27.0**	**+0.9**
RAFF	**Raffo Rosso**	**5.32**	**249**	Pn		**Pn**	**03 13 30.1**	**-1.2**
ELND	**Elena**	**5.41**	**46**	⇓P		**Pn**	**03 13 35.8**	**+3.3**
BLY	**Banja Luka**	**6.03**	**336**	⇓P		**Pn**	**03 13 42.2**	**+1.2**
NRCA	**Norcia**	**6.68**	**305**			**Pn**	**03 13 50.6**	**+0.6**
FDMO	**Fiordimonte**	**6.80**	**306**			**Pn**	**03 13 52.4**	**+0.8**
VOIR		**6.98**	**27**	⇓P		**Pn**	**03 13 57.2**	**+3.0**
MURB	**Monte Urbino**	**7.26**	**306**	Pn		**Pn**	**03 13 58.6**	**+0.5**
MLR	**Muntele Rosu**	**7.37**	**31**	⇓P		**Pn**	**03 14 02.8**	**+3.3**
MLR	**Muntele Rosu**	**7.37**	**31**			**Pn**	**03 14 01.7**	**+2.2**
NEHR	**Nehoiu**	**7.46**	**33**	⇑⇑P		**Pn**	**03 14 04.5**	**+3.9**
BORA	**Eskisehir**	**7.64**	**82**	Pn		**Pn**	**03 14 04.8**	**+1.6**
PLOR	**Plostina**	**7.95**	**32**	⇑⇑P		**Pn**	**03 14 11.3**	**+3.9**
VRI	**Vrincioaia**	**7.99**	**32**	⇓P		**Pn**	**03 14 11.7**	**+3.8**
SABO	**M.te Sabotino**	**8.45**	**325**	Pn		**Pn**	**03 14 13.9**	**-0.4**
OBKA	**Obir**	**8.48**	**330**	*i* Pn		**Pn**	**03 14 15.1**	**+0.4**
	0.6nm,0.4s							
OBKA				*e*Sn		**Sn**	**03 15 53.2**	**+2.8**
	2.9nm,0.7s							
TEOL	**Teolo**	**8.98**	**316**	Pn		**Pn**	**03 14 21.5**	**+0.1**
STAL	**STALIGIAL**	**9.07**	**323**	Pn		**Pn**	**03 14 23.8**	**+1.0**
BRTR	**Keskin Array B**	**10.10**	**83**	Pn		**Pn**	**03 14 39.3**	**+2.3**
	0.1nm,0.3s,baz=266,slow=16,SNR=2.3 0.1nm,0.5s							
TUE	**Stuetta**	**10.94**	**315**	Pn		**Pn**	**03 14 48.0**	**-0.5**
SENIN	**Lac Senin/Sane**	**12.05**	**310**	Pn		**Pn**	**03 15 02.4**	**-1.3**
HFS	**Hagfors**	**21.33**	**350**	P		**P**	**03 16 59.0**	**+0.4**
	2.0nm,0.8s,baz=181,slow=14,SNR=1.6 2.0nm,0.8s							
FINES	**FINESS Array B**	**22.45**	**7**	P		**P**	**03 17 09.4**	**-1.2**
	1.0nm,0.6s,baz=187,slow=9.8,SNR=9.3 1.0nm,0.6s							
FIA1	**FINESS Array S**	**22.45**	**7**	P		**P**	**03 17 10.5**	**-0.2**
FIA1				IAmb	IAmb		03 17 36.2	
	comp=Z,58nm,1.5s							
NC405	**NORSAR Array S**	**22.55**	**349**	P		**P**	**03 17 10.7**	**-1.0**
NC405				IAmb	IAmb		03 17 25.5	
	comp=Z,19nm,1.4s							
NOA	**NORSAR Array B**	**22.55**	**348**	P		**P**	**03 17 11.4**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=162,slow=11,SNR=2.5 comp=Z,0.7nm,0.8s							
TORD	**Torodi Ar. Bea**	**30.92**	**218**	P		**P**	**03 18 28.6**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=25,slow=7.6,SNR=2.4 comp=Z,0.4nm,0.8s							
BVAR	**Borovoye Array**	**36.38**	**51**	P		**P**	**03 19 15.1**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=280,slow=7.8,SNR=2.1 comp=Z,0.2nm,0.4s							
KURBB	**Kurchatov Array**	**41.54**	**54**	P		**P**	**03 19 57.9**	**-1.3**
	comp=Z,0.3nm,0.6s,baz=285,slow=9.0,SNR=4.3 comp=Z,0.3nm,0.6s							
KMBO	**Kilima Mbogo**	**43.02**	**155**	LR		LR	03 38 17.0	
	comp=Z,133nm,21.8s,baz=281,slow=36							
MKAR	**Makanchi Array**	**44.69**	**59**	P		**P**	**03 20 23.6**	**-1.1**
	comp=Z,0.7nm,0.4s,baz=281,slow=7.4,SNR=13 comp=Z,0.7nm,0.4s							
MKAR	**Makanchi Array**	**44.69**	**59**	P		**P**	**03 20 23.3**	**-1.5**
ZALV	**Zalesovo Beam**	**44.92**	**49**	P		**P**	**03 20 25.3**	**-1.1**
	comp=Z,1.6nm,0.4s,baz=272,slow=12,SNR=5.4 comp=Z,1.6nm,0.4s							
ILAR	**Eielson Array**	**75.82**	**355**	LR		LR	03 58 38.3	
	comp=Z,39nm,19.7s,baz=192,slow=37							

*IDC **21** 03:32:16.2±1.2,59.56S×26.68W,h0km,mb3.9/4, mbtmp3.9/5,ML4.2/1,MS2.9/1,Error ellipse: s-maj=77.0km s-min=25.8km az=95.0*

ISC 21 03:32:22.0±1.2,59.7S±0.2×26.1W±0.3,h35km,n12, σ1$95/12,mb3.9/3,4C-2D,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.25**	**154**	⇓P			**Pn**	**03 35 27.2**	**-0.1**
	comp=Z,6.1nm,0.2s								
VNA3	**Neumayer Olymp**	**13.40**	**157**	⇑P			**Pn**	**03 35 28.8**	**-0.6**
	comp=Z,6.3nm,0.2s								
VNA3				⇓S			Sn	03 37 42.6	-14
	comp=N,1.8nm,0.2s								
VNA2	**Neumayer--Watz**	**13.65**	**153**	⇑P			**Pn**	**03 35 31.5**	**-1.2**
	comp=Z,2.2nm,0.1s,baz=315,slow=13								
SNAA	**Sanae**	**15.23**	**152**	⇑P			**Pn**	**03 35 54.9**	**+0.8**
	comp=Z,53nm,0.2s								
SNAA	**Sanae**	**15.23**	**152**	Pn			**Pn**	**03 35 54.7**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=312,slow=14,SNR=7.2								
SNAA					Sn		Sn	03 38 30.9	-10
	comp=Z,0.3nm,0.3s,baz=350,slow=22,SNR=1.6								
SNAA					LR		LR	03 40 18.8	
	comp=Z,53nm,21.8s,baz=190,slow=31 comp=Z,2.2nm,0.3s								
TROLL	**Troll, Antarti**	**16.79**	**149**	⇑P			**Pn**	**03 36 14.0**	**0.0**
QSPA	**South Pole Qui**	**30.58**	**180**	P			**P**	**03 38 32.4**	**+0.3**
	comp=Z,2.4nm,1.2s,baz=155,slow=15,SNR=5.8 comp=Z,2.4nm,1.2s								
VNDA	**Vanda**	**42.98**	**183**	P			**P**	**03 40 18.5**	**+1.5**
	comp=Z,1.0nm,0.8s,baz=199,slow=7.3,SNR=6.1 comp=Z,1.0nm,0.8s								
TORD	**Torodi Ar. Bea**	**75.95**	**28**	P			**P**	**03 44 05.8**	**+0.8**
	comp=Z,0.8nm,0.8s,baz=196,slow=6.3,SNR=8.0 comp=Z,0.8nm,0.8s								
ASAR	**Alice Springs**	**95.36**	**162**	P			**P**	**03 45 41.2**	**-1.3**
	comp=Z,0.3nm,0.6s,baz=187,slow=3.3,SNR=5.6 comp=Z,0.3nm,0.6s								
SONM	**Songino Array**	**150.19**	**92**	PKPbc			**PKPbc**	**03 52 08.2**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=223,slow=3.5,SNR=3.9								
ILAR	**Eielson Array**	**152.85**	**306**	PKPbc			**PKPbc**	**03 52 12.0**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=126,slow=3.2,SNR=4.5								

*ISN **21** 03:33:26.8±0.8,35.94N×44.45E,h14km±4km,ML2.9, Presumed earthquake*

TEH 21 03:33:26.4,35.98N×44.45E,h6km,ML2.8,Presumed earthquake,Iraq

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
IKRK	**Kirkuk**	**0.59**	**189**	*e*Pg			Pg	03 33 37.0	-0.7
	baz=9.0								
IKRK				*e*Sg			Sg	03 33 45.0	-0.4
IKRK					AML		AML	03 33 46.1	
	comp=N,619nm,0.2s								
IKRK					AML		AML	03 33 51.5	
	comp=E,754nm,0.5s								
MAHB	**Mahabad**	**1.28**	**52**	Pg			Pb	03 33 52.7	+1.7
MAHB					Sg		Sn	03 34 12.8	+4.3
IAZR	**Azarshahr**	**2.09**	**35**	Pn			Pg	03 34 09.0	+2.5
IHSH	**Hashtrud**	**2.62**	**59**	Pn			Pb	03 34 12.5	-1.4
RAFI	**Al-Rafai**	**4.47**	**162**	*e*Pn			Pn	03 34 36.0	+1.3
RAFI				*e*Sn			Sn	03 35 26.0	-1.0

*SJA **21** 03:36:17.4±0.6,35.61S×73.05W,h26km±2km,ML3.2, MW3.6*

*GUC **21** 03:36:20.0±0.8,35.63S×72.99W,h22km±5km,ML3.3*

ISC 21 03:36:17.2±1.5,35.61S±0.03×73.03W±0.06,h4km±11km, n31,σ1$30/54,2D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GO05	**Hualane**	**1.08**	**56**	⇓*e*P			**Pg**	**03 36 37.9**	**0.0**
GO05				*e*S			**Sg**	**03 36 51.9**	**+0.1**
GO05					IAML			03 36 54.6	
	comp=N,951nm,0.2s								
GO05	**Hualane**	**1.08**	**56**	*e*P			**Pg**	**03 36 38.2**	**+0.3**
GO05				*e*S			**Sn**	**03 36 53.9**	**-0.6**
GO05					IAML			03 36 54.8	
	comp=Z,429nm,0.3s								
BI05	**Punta Hualpn**	**1.14**	**187**	*e*P			**Pg**	**03 36 39.2**	**+0.1**
BI05				*e*S			**Sb**	**03 36 53.7**	**-0.9**
BI05					IAML			03 36 58.4	
	comp=E,1μm,0.3s								
BI05	**Punta Hualpn**	**1.14**	**187**	*e*P			**Pn**	**03 36 39.3**	**-0.6**
BI05					IAML			03 36 57.7	
	comp=Z,431nm,0.1s								
ML02	**Panimavida**	**1.32**	**97**	*e*P			**Pn**	**03 36 42.1**	**-0.2**
ML02				*e*S			**Sb**	**03 36 58.7**	**-1.0**
ML02					IAML			03 37 01.0	
	comp=N,1μm,0.3s								
ML02	**Panimavida**	**1.32**	**97**	*e*P			**Pb**	**03 36 42.2**	**-0.2**
ML02				*e*S			**Sg**	**03 37 00.8**	**+1.3**
ML02					IAML			03 37 00.8	
	comp=Z,719nm,0.3s								
BO03	**Pichilemu**	**1.42**	**38**	*e*P			**Pn**	**03 36 43.2**	**-0.5**
BO03				*e*S			**Sn**	**03 37 02.0**	**-0.8**
BO03					IAML			03 37 08.6	
	comp=N,565nm,0.5s								
BI02	**San Fabin de**	**1.76**	**127**	⇓*i*P			**Pn**	**03 36 48.4**	**-0.2**
BI02				*e*S			**Sn**	**03 37 10.4**	**-1.1**
BI02					IAML			03 37 14.9	
	comp=N,418nm,0.4s								
BI02	**San Fabin de**	**1.76**	**127**	*e*P			**Pn**	**03 36 48.0**	**-0.6**
BI02					IAML			03 37 17.8	
	comp=Z,254nm,0.6s								
BO01	**Tunca**	**2.00**	**53**	*e*P			**Pb**	**03 36 52.9**	**-1.3**
BO01					IAML			03 37 25.8	
	comp=N,198nm,0.3s								
BO01	**Tunca**	**2.00**	**53**	*e*P			**Pb**	**03 36 53.8**	**-0.4**
BO01				*e*S			**Sn**	**03 37 17.3**	**0.0**
BO01					IAML			03 37 23.5	
	comp=Z,128nm,0.6s								
BO02	**Sierra Bellavi**	**2.01**	**67**	*e*P			**Pn**	**03 36 53.0**	**+1.0**
BO02					IAML			03 37 27.6	
	comp=N,930nm,0.2s								
BO02	**Sierra Bellavi**	**2.01**	**67**	*e*P			**Pn**	**03 36 52.9**	**+0.9**
BO02				*e*S			**Sg**	**03 37 21.5**	**-0.3**
BO02					IAML			03 37 24.5	
	comp=Z,418nm,0.2s								
MT01	**Popeta**	**2.28**	**40**	*e*P			**Pn**	**03 36 56.0**	**+0.4**
MT01	**Popeta**	**2.28**	**40**	*e*P			**Pn**	**03 36 55.9**	**+0.4**
MT01				*e*S			**Sn**	**03 37 24.8**	**+0.8**
MT01					IAML			03 37 37.4	
	comp=Z,131nm,0.5s								
MT09	**Talagante**	**2.48**	**43**	*e*P			**Pn**	**03 37 00.1**	**+1.5**
MT09					IAML			03 37 46.8	
	comp=N,193nm,0.4s								
CANA	**Caviahue**	**2.76**	**146**	*e*P			**Pn**	**03 37 03.2**	**+0.8**
CANA				*e*S			**Sb**	**03 37 39.3**	**-2.2**
MT12	**Pirque**	**2.77**	**48**	*e*P			**Pn**	**03 37 03.6**	**+1.2**
MT02	**Curacav**	**2.82**	**34**	*e*P			**Pn**	**03 37 02.8**	**-0.3**
MT02				*e*S			**Sb**	**03 37 40.4**	**-2.6**
MT02					IAML			03 37 51.5	
	comp=Z,65nm,0.5s								
MT05	**Renca**	**2.91**	**41**	*e*P			**Pn**	**03 37 04.1**	**-0.2**
MT05				*e*S			**Sb**	**03 37 46.1**	**+0.5**
MT05					IAML			03 37 58.4	
	comp=Z,102nm,0.5s								
MT13	**San Alfonso**	**2.93**	**51**	*e*P			**Pn**	**03 37 05.1**	**+0.5**
MT13				*e*S			**Sb**	**03 37 44.1**	**-2.1**
MT13					IAML			03 37 54.8	
	comp=Z,77nm,0.8s								
EDS3	**Malargue**	**2.96**	**94**	*e*P			**Pn**	**03 37 06.2**	**+1.1**
EDS3				*e*S			**Sn**	**03 37 41.8**	**+0.8**
MT03	**Universidad Ad**	**2.96**	**45**	*e*P			**Pn**	**03 37 06.8**	**+1.7**
MT03				*e*S			**Sn**	**03 37 42.6**	**+1.5**
MT03					IAML			03 37 57.5	
	comp=Z,143nm,1.2s								
PEL	**Peldehue**	**3.13**	**39**	*e*P			**Pn**	**03 37 07.8**	**+0.4**
PEL				*e*S			**Sb**	**03 37 51.8**	**-0.3**
PEL					IAML			03 38 09.9	
	comp=Z,80nm,0.5s								
MT04	**Ro Olivares**	**3.25**	**48**	*e*P			**Pn**	**03 37 10.0**	**+0.9**
MT04				*e*S			**Sb**	**03 37 52.5**	**-3.0**
MT04					IAML			03 38 09.1	
	comp=Z,51nm,0.8s								
MT08	**Bocatoma Ro**	**3.29**	**50**	*e*P			**Pn**	**03 37 10.9**	**+1.2**
MT08				*e*S			**Sg**	**03 38 02.5**	**-0.5**
MT08					IAML			03 38 03.3	
	comp=Z,37nm,1.2s								
VA03	**San Esteban**	**3.50**	**37**	*e*P			**Pn**	**03 37 13.4**	**+0.8**
VA03				*e*S			**Sb**	**03 38 06.0**	**+3.2**
VA03					IAML			03 38 16.7	
	comp=Z,67nm,0.5s								
GO06	**Curarrehue**	**4.15**	**163**	*e*P			**Pn**	**03 37 22.8**	**+1.4**
GO06				*e*S			**Sb**	**03 38 23.9**	**+2.4**
GO06					IAML			03 38 24.5	
	comp=Z,12nm,4.0s								
CO02	**Combarbal**	**4.71**	**22**	*e*P			**Pn**	**03 37 28.9**	**-0.2**
CO02				*e*S			**Sn**	**03 38 22.7**	**-1.6**
CO02					IAML			03 38 54.8	
	comp=Z,34nm,0.8s								
RTLS	**Leoncito**	**4.91**	**40**	*e*P			**Pn**	**03 37 34.0**	**+1.9**
RTLS					IAML			03 39 10.2	
	comp=Z,31nm,1.1s								
CO03	**El Pedregal**	**5.15**	**23**	*e*P			**Pn**	**03 37 35.6**	**+0.5**
CO03				*e*S			**Sn**	**03 38 37.8**	**+2.8**
CO03					IAML			03 39 14.0	
	comp=Z,15nm,1.4s								

*MOS **21** 03:37:51.4±0.8,41.49N×142.17E,h69km,mb4.4/15,Error ellipse: s-maj=9.2km s-min=7.0km az=102.4*

*NIED **21** 03:37:52.7,41.55N×142.07E,h65km,MW4.0,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr0.89; Mθθ-0.18; Mφφ-0.71; Mrθ0.40; Mθφ-0.44; Mrφ0.74; Fault plane solution: Mo1.25000×10¹⁵ NP1: ϕs210.00000°,δ24.00000°,λ91.00000°. NP2:ϕs29.00000°, δ66.00000°,λ89.00000°.*

*JMA **21** 03:37:52.7±0.1,41.6N±0.5×142.1E±0.7,h65km±2km, MV3.8/39,E OFF AOMORI PREF*

JMA Felt II J1 at E OFF AOMORI PREF .

*IDC **21** 03:37:53.1±0.7,41.53N×142.12E,h66km±5km,mb3.8/18, mbtmp4.1/22,MS3.0/6,Error ellipse: s-maj=15.0km s-min=9.2km az=102.0*

*NEIC **21** 03:37:54.2±1.3,41.54N±0.07×142.07E±0.08,h67km±6km, mb4.4/38,Error ellipse: s-maj=12.4km s-min=4.4km az=138.0*

ISC 21 03:37:53.7±0.5,41.55N±0.04×142.12E±0.04,h69km±4km, n139,σ1$41/148,mb4.3/48,7C-14D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JAHD	**Aomorihigashid**	**0.65**	**245**	⇓*i*P			**Pn**	**03 38 06.8**	**-1.2**
JAHD					⇓*e*S		**Sn**	**03 38 16.9**	**-1.5**
JARK	**Aomorirokkasho**	**0.78**	**227**	⇓*i*P			**Pn**	**03 38 07.9**	**-1.5**
JARK					⇓*e*S		**Sn**	**03 38 19.0**	**-2.1**
JOT	**Ohata**	**0.82**	**259**	⇓P			**Pn**	**03 38 08.3**	**-1.6**
JOT					⇓*e*S		**Sn**	**03 38 19.9**	**-2.0**
JNBK	**Urakawa-nobuka**	**0.87**	**33**	*e*P			**Pn**	**03 38 09.1**	**-1.4**
JKB	**Kayabe**	**0.88**	**293**	⇓P			**Pn**	**03 38 08.7**	**-1.9**
JEM	**Erimo**	**0.91**	**58**	P			**Pn**	**03 38 10.1**	**-0.9**
JEM				*e*S			**Sn**	**03 38 22.9**	**-0.9**
JIAM	**Iburiatsuma**	**1.09**	**352**	*e*P			**Pn**	**03 38 13.0**	**-0.2**
JTM	**Tenmabayashi**	**1.10**	**227**	Pn			**Pn**	**03 38 12.4**	**-1.0**
JTM					Sn		**Sn**	**03 38 26.6**	**-1.5**
JTM	**Tenmabayashi**	**1.10**	**227**	⇓*e*P			**Pn**	**03 38 12.3**	**-1.0**
JTM					⇓*e*S		**Sn**	**03 38 26.3**	**-1.8**
JNB	**Noboribetsu**	**1.23**	**319**	⇓P			**Pn**	**03 38 13.1**	**-1.8**
JNB					⇓*e*S		**Sn**	**03 38 28.6**	**-2.4**
JBT2	**Biratori 2**	**1.25**	**8**	P			**Pn**	**03 38 14.5**	**-0.7**
JANG	**Nango**	**1.26**	**202**	*e*P			**Pn**	**03 38 14.3**	**-1.2**
JANG				*e*S			**Sn**	**03 38 29.8**	**-2.0**
JSR	**Shiriuchi**	**1.28**	**270**	P			**Pn**	**03 38 14.2**	**-1.4**
JEW	**Eniwo**	**1.39**	**339**	⇓P			**Pn**	**03 38 16.2**	**-0.9**
JCH	**Churui**	**1.41**	**40**	⇓P			**Pn**	**03 38 17.4**	**0.0**
JYM2	**Yakumo 2**	**1.43**	**294**	⇓P			**Pn**	**03 38 16.7**	**-0.9**
JOMM	**Oshimamatsumae**	**1.59**	**270**	*e*P			**Pn**	**03 38 18.4**	**-1.3**
JOSM	**Okushiri--Mats**	**2.05**	**286**	*e*P			**Pn**	**03 38 24.3**	**-1.6**
ASAJ	**Asahikawa**	**2.59**	**8**	P			**Pn**	**03 38 33.9**	**+0.6**
	49nm,0.5s,baz=214,slow=10,SNR=46								
ASAJ					S		**Sn**	**03 39 03.4**	**-0.3**
	79nm,0.5s,baz=355,slow=29,SNR=7.4								
ASAJ	**Asahikawa**	**2.59**	**8**	P			**Pn**	**03 38 33.7**	**+0.4**
ASAJ								03 39 01.5	
JKA	**Kamikawa-asahi**	**2.59**	**8**				**Pn**	**03 38 33.7**	**+0.4**
JKA					Sn		**Sn**	**03 39 01.4**	**-2.3**
NMR	**Nemuro--Hokkai**	**3.23**	**54**	*e*P			**Pn**	**03 38 39.9**	**-2.1**
NMR				*i* S			**Sn**	**03 39 14.0**	**-5.3**
GLVR	**Golovnino**	**3.33**	**48**	*e*P			**Pn**	**03 38 42.5**	**-0.8**
GLVR				*i* S			**Sn**	**03 39 19.0**	**-2.7**
GLVR					pmax		pmax		
	comp=Z,356nm,0.2s								
GLVR					smax		smax		
	comp=N,1μm,0.3s								
GLVR					smax		smax		
	comp=E,577nm,0.3s								
RUSJ	**Misakicho**	**3.44**	**41**	*e*P			**Pn**	**03 38 44.7**	**-0.1**
RUSJ				*i* S			**Sn**	**03 39 23.6**	**-0.7**
YUK	**Yuzh-Kuril'sk**	**3.71**	**47**	*e*P			**Pn**	**03 38 47.8**	**-0.7**
YUK				*i* S			**Sn**	**03 39 27.4**	**-3.5**
YUK					pmax		pmax		
	comp=N,147nm,0.3s								
YUK					pmax		pmax		
	comp=Z,440nm,0.3s								
YUK					pmax		pmax		
	comp=E,159nm,0.2s								
YUK					smax		smax		
	comp=E,1μm,0.5s								
YUK					smax		smax		
	comp=N,447nm,0.2s								
TEY	**Ternei**	**5.33**	**313**	*e*P			**Pn**	**03 39 05.9**	**-4.7**
YSS	**Yuzhno-Sakhali**	**5.43**	**5**	*i* P			Pn	03 39 24.7	+13
KUR	**Kuril'sk**	**5.58**	**47**	*e*P			**Pn**	**03 39 16.9**	**+2.9**
KUR				*e*S			**Sn**	**03 40 16.1**	**-0.6**
KUR					smax		smax		
	comp=E,98nm,0.3s								
KUR					smax		smax		
	comp=N,98nm,0.2s								
MJB9	**Matsu-Tunnel**	**5.85**	**213**				**Pn**	**03 39 21.4**	**+3.6**
MAJO	**Matsushiro**	**5.85**	**213**				**Pn**	**03 39 20.8**	**+3.0**
MAJO	**Matsushiro**	**5.85**	**213**	*i* P			**Pn**	**03 39 20.2**	**+2.4**
MJAR	**Matsushiro Arr**	**5.85**	**213**	P			**Pn**	**03 39 17.4**	**-0.4**
	comp=N,1.1nm,0.4s,baz=20,slow=15,SNR=10								
MJAR					LR		LR	03 41 55.2	
	comp=N,72nm,18.2s,baz=30,slow=42								
JGF	**Kuroka**	**7.01**	**214**	Pn			**Pn**	**03 39 35.6**	**+1.9**
USRK	**Ussuriysk Ar.**	**7.90**	**293**	P			**Pn**	**03 39 45.5**	**-0.3**
	comp=N,4.0nm,0.5s,baz=95,slow=15,SNR=8.9								
KLR	**Kul'dur**	**10.59**	**320**	*ce*P			**Pn**	**03 40 23.1**	**+0.7**
KLR					pmax		pmax		
	comp=Z,3.0nm,1.0s								
KSRS	**Korea Array**	**11.70**	**254**	P			**Pn**	**03 40 39.0**	**+1.3**
	comp=Z,3.3nm,0.4s,baz=63,slow=14,SNR=9.0								
KSRS					S		**Sn**	**03 42 51.9**	**+5.3**
	comp=

KURK IAmb IAmb 03 45 56.9
comp=Z,5.6nm,0.9s
KURK Kurchatov 43.70 305 *ce*P **P 03 45 51.6 0.0**
KURK pmax pmax
comp=Z,15nm,2.5s
KURBB Kurchatov Arra 43.78 304 P **P 03 45 52.0 -0.2**
comp=Z,4.7nm,0.7s,baz=78,slow=8.7,SNR=24
comp=Z,4.7nm,0.7s
NEA2 Nenana 44.51 35 P **P 03 45 58.8 +0.9**
NEA2 IAmb IAmb 03 45 59.9
comp=Z,4.9nm,0.7s
E24K Your Creek 44.64 30 P **P 03 45 59.6 +0.7**
GHO Glory Hole Cre 44.81 39 P **P 03 46 01.0 +0.6**
GHO IAmb IAmb 03 46 22.2
comp=Z,5.7nm,1.1s
SML Sawmill 45.09 39 P **P 03 46 03.4 +0.8**
SML IAmb IAmb 03 46 11.4
comp=Z,9.0nm,1.2s
IL31 45.43 35 P **P 03 46 06.0 +0.8**
IL31 IAmb IAmb 03 46 07.3
comp=Z,5.8nm,1.2s
ILAR Eielson Array 45.43 35 P **P 03 46 06.1 +0.9**
comp=Z,2.3nm,0.9s,baz=270,slow=6.5,SNR=26
comp=Z,2.3nm,0.9s
SCM Sheep Creek Mo 45.56 39 P **P 03 46 07.1 +0.8**
SCM Sheep Creek Mo 45.56 39 P **P 03 46 07.1 +0.8**
SCM pmax pmax
comp=Z,9.0nm,1.2s
KLU Klutina 46.27 39 P **P 03 46 12.8 +0.9**
EVN Everest 46.68 271 P 03 46 16.2 -0.1
EVN IAmb IAmb 03 46 18.6
comp=Z,3.6nm,0.9s
SCRK Sand Creek 46.78 36 P 03 46 16.4 +0.5
SCRK IAmb IAmb 03 46 17.3
comp=Z,2.3nm,0.6s
KDJ Kajisay 47.31 294 P **P 03 46 20.9 +0.5**
KDJ Kajisay 47.31 294 P **P 03 46 20.9 +0.5**
KDJ pmax pmax
comp=Z,3.0nm,1.0s
BCAR Beaver Creek A 47.90 37 P **P 03 46 26.1 +1.5**
BOOM Boomskoye usch 48.02 294 P 03 46 25.7 -0.2
BOOM IAmb IAmb 03 46 27.7
comp=Z,5.2nm,1.2s
BOOM Boomskoye usch 48.02 294 P **P 03 46 25.7 -0.2**
BOOM pmax pmax
comp=Z,5.0nm,1.2s
BVAR Borovoye Array 48.03 310 P **P 03 46 26.0 +0.3**
comp=Z,2.4nm,0.4s,baz=74,slow=9.4,SNR=16
comp=Z,2.4nm,0.4s
BORK Borovoye 48.07 310 P **P 03 46 25.9 0.0**
BORK IAmb IAmb 03 46 54.4
comp=Z,3.4nm,0.7s
BORK Borovoye 48.07 310 P **P 03 46 25.9 0.0**
BORK pmax pmax
comp=Z,3.0nm,0.7s
I28M Miner Creek 48.26 33 IAmb IAmb 03 46 30.0
comp=Z,5.8nm,1.1s
AAK Ala-Archa 48.95 295 P **P 03 46 32.6 -0.4**
AAK IAmb IAmb 03 46 33.9
comp=Z,3.5nm,1.1s
AAK Ala-Archa 48.95 295 *i* P **P 03 46 31.8 -1.2**
AAK pmax pmax
comp=Z,3.0nm,1.1s
EPYK Eagle Plains 49.37 32 P **P 03 46 36.8 +1.0**
INK Inuvik 50.15 29 P **P 03 46 42.4 +0.9**
INK IAmb IAmb 03 46 42.9
comp=Z,2.6nm,0.6s
INK Inuvik 50.15 29 P **P 03 46 42.4 +0.9**
INK pmax pmax
comp=Z,3.0nm,0.6s
G31M Satah River 50.20 31 P **P 03 46 42.9 +1.0**
HYT Haines Junctio 50.40 39 P **P 03 46 45.1 +1.4**
HYT IAmb IAmb 03 47 08.2
comp=Z,6.5nm,1.3s
KK31 Karatay Array 51.44 297 P **P 03 46 51.1 -0.6**
KK31 IAmb IAmb 03 46 52.1
comp=Z,2.1nm,0.7s
KK31 Karatay Array 51.44 297 P **P 03 46 51.1 -0.6**
KK31 pmax pmax
comp=Z,2.0nm,0.7s
KKAR Karatay Array 51.44 297 P **P 03 46 51.1 -0.6**
KKAR Karatay Array 51.44 297 P **P 03 46 51.1 -0.6**
A36M Sachs Harbour 51.89 23 P 03 46 55.6 +1.1
AB31 Akbulak array 55.52 308 IAmb IAmb 03 47 31.3
comp=Z,2.7nm,0.7s
ABKAR Akbulak array 55.52 308 P **P 03 47 21.6 +0.2**
SPITS Spitsbergen Ar 56.21 348 P **P 03 47 25.7 -0.3**
comp=Z,5.4nm,1.0s,baz=81,slow=8.9,SNR=5.4
comp=Z,5.4nm,1.0s
KIRV Kirov 57.02 321 *ce*P **P 03 47 32.1 +0.2**
TULEG Thule 60.56 8 P 03 47 55.4 -0.8
WR8 Warramunga Arr 61.59 188 P **P 03 48 03.2 -0.6**
WRA Warramunga Arr 61.60 188 P **P 03 48 02.9 -1.0**
comp=Z,1.1nm,0.6s,baz=7.8,slow=7.7,SNR=9.3
comp=Z,1.1nm,0.6s
WRA Warramunga Arr 61.60 188 P **P 03 48 03.2 -0.7**
WRA Warramunga Arr 61.60 188 P **P 03 48 03.2 -0.7**
OBN Obninsk 64.84 322 *eP* **P 03 48 26.9 +2.0**
OBN *e**PP **sP 03 48 52.2 +1.8**
OBN *e* 03 49 01.4
OBN *e* 03 50 47.9
OBN pmax pmax
comp=Z,2.0nm,0.8s
FINES FINESS Array B 65.10 332 P **P 03 48 26.2 -0.3**
comp=Z,3.0nm,0.6s,baz=44,slow=7.5,SNR=22
comp=Z,3.0nm,0.6s
ASAR Alice Springs 65.33 188 P **P 03 48 27.6 -0.9**
comp=Z,0.4nm,0.6s,baz=0.9,slow=6.7,SNR=9.1
ASAR pP **pP 03 48 44.9 -1.5**
comp=Z,0.6nm,0.7s,baz=14,slow=7.9,SNR=4.2
comp=Z,0.4nm,0.6s
ASAR Alice Springs 65.33 188 P **P 03 48 28.9 +0.5**
KIV Kislovodsk 68.40 310 *eP* **P 03 48 49.4 +1.4**
KIV pmax pmax
comp=Z,5.0nm,1.1s
KBZ Khabaz 68.41 310 P **P 03 48 48.7 +0.8**
comp=Z,1.5nm,0.7s,baz=14,slow=9.4,SNR=4.5
comp=Z,1.5nm,0.7s
KBZ Khabaz 68.41 310 *ce*P **P 03 48 48.6 +0.7**
KBZ pmax pmax
comp=Z,3.0nm,0.9s
SHA1 Shidzhatmaz 68.55 310 *i* P **P 03 48 49.0 -0.1**
HFS Hagfors 70.21 335 P **P 03 48 58.5 -0.3**
comp=Z,1.5nm,0.3s,baz=34,slow=5.7,SNR=24
comp=Z,1.5nm,0.3s
NB2 NORSAR Subarra 70.25 337 P **P 03 48 59.0 0.0**
comp=Z,0.6nm,0.5s,baz=35,slow=6.5
NOA NORSAR Array B 70.25 337 P **P 03 48 58.4 -0.7**
comp=Z,0.8nm,0.6s,baz=37,slow=6.1,SNR=5.8
NOA pP **pP 03 49 17.1 0.0**
comp=Z,0.8nm,0.7s,baz=37,slow=6.2,SNR=1.9
comp=Z,0.8nm,0.6s
AKASG Malin Array Be 71.08 322 P **P 03 49 03.9 -0.4**
comp=Z,1.5nm,0.5s,baz=44,slow=6.1,SNR=5.3
comp=Z,1.5nm,0.5s
NVAR Mina Array Bea 71.89 55 P **P 03 49 09.2 -0.3**
comp=Z,0.2nm,0.5s,baz=292,slow=4.7,SNR=3.6
NVAR pP **PcP 03 49 27.4 -0.6**
comp=Z,0.8nm,0.8s,baz=282,slow=7.5,SNR=6.2
comp=Z,0.2nm,0.5s
PDAR Pinedale Array 74.14 47 P **P 03 49 23.6 +0.8**
comp=Z,0.4nm,0.6s,baz=277,slow=2.3,SNR=6.0
PDAR pP **pP 03 49 41.1 0.0**
comp=Z,0.2nm,0.4s,baz=179,slow=1.3,SNR=2.8
comp=Z,0.4nm,0.6s
BRTR Keskin Array B 76.29 311 P **P 03 49 33.8 -1.3**
comp=Z,0.5nm,0.6s,baz=100,slow=3.4,SNR=3.0
comp=Z,0.5nm,0.6s
LANS Liptovska Anna 76.56 325 *eP* **P 03 49 35.7 -0.6**
LANS Liptovska Anna 76.56 325 *eP* **P 03 49 35.6 -0.7**
TKL Tuckaleechee C 92.41 36 LR LR 04 35 47.0
comp=Z,40nm,18.8s,baz=128,slow=38
H03N2 Juan Fernandez 146.69 89 T T 06 40 53.2
baz=300,slow=77,SNR=4.9
H03N3 Juan Fernandez 146.70 90 T T 06 40 54.2
baz=300,slow=77,SNR=4.4
H03N1 Juan Fernandez 146.71 89 T T 06 40 54.5
baz=300,slow=77,SNR=4.2

NEIC ***21*** *03:52:46.1±1.2, 1°.67N±0°.09×127°.22E±0°.10, h117km±7km, mb4.5/25, Error ellipse: s-maj=15.7km s-min=10.3km az=54.0*
DJA ***21*** *03:52:46.1±0.2,2°N±2°×12°7E±°, h91km±4km, M4.7/32, mb4.9/22, mB5.2/12, MLv4.6/32, Mw(mB)4.6/12*

IDC ***21*** *03:52:48.1±8.0,1°.54N×127°.08E, h140km±74km, mb3.9/9, mbtmp4.3/11, MS2.7/1, Error ellipse: s-maj=61.9km s-min=12.7km az=59.0*
ISC 21 03:52:44.6±0.5, **1°.74N**±0°.05×**127°.21E**±0°.05, **h103**km, **n69,**
σ1ᵗ**75**/75, **mb4.5**/23, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAMI	**Galela, Maluku**	**0.58**	**81**	P	**Pn**	**03 53 02.6**	**+1.3**
GAMI				S	**Sn**	**03 53 15.6**	**+1.8**
TNTI	**Ternate**	**0.98**	**171**		**Pn**	**03 53 06.8**	**+1.8**
TNTI				Sn	**Sn**	**03 53 23.2**	**+2.9**
TNTI	**Ternate**	**0.98**	**171**	P	**Pn**	**03 53 07.3**	**+2.3**
LBMI	**Labuha**	**2.38**	**173**	P	**Pn**	**03 53 23.6**	**+1.3**
MNI	**Manado**	**2.39**	**263**	P	**Pn**	**03 53 23.4**	**+1.0**
MNI				S	**Sn**	**03 53 52.2**	**+0.8**
SGSI	**Sangihe**	**2.56**	**319**	P	**Pn**	**03 53 25.2**	**+0.6**
SGSI				S	**Sn**	**03 53 55.0**	**-0.3**
SANI	**Sanana**	**3.96**	**198**	P	**Pn**	**03 53 43.1**	**-0.3**
GTOI	**Gorontalo**	**4.34**	**255**	P	**Pn**	**03 53 50.8**	**+2.3**
GTOI				S	**Sn**	**03 54 40.4**	**+2.3**
DDMP	**Don Marcelino,**	**4.58**	**341**	*eP*	**Pn**	**03 53 51.1**	**-0.6**
DDMP				*eS*	**Sn**	**03 54 37.7**	**-6.2**
SIJI	**Sorong**	**4.81**	**123**	LR	LR	03 55 37.8	
	comp=Z,88nm,20.0s,baz=320,slow=35						
SIJI	**Sorong**	**4.81**	**123**	P	**Pn**	**03 53 56.7**	**+1.9**
NLAI	**Namlea**	**4.95**	**181**	P	**Pn**	**03 53 57.3**	**+0.6**
KRAI	**Karang Ratu**	**5.17**	**167**	P	**Pn**	**03 54 01.6**	**+2.0**
	0.5nm61nm,0.7s						
LUWI	**Luwuk**	**5.23**	**238**		**Pn**	**03 54 02.2**	**+1.7**
LUWI	**Luwuk**	**5.23**	**238**	P	**Pn**	**03 54 01.6**	**+1.1**
	2.2nm114nm,0.5s						
MRSI	**Marisa**	**5.42**	**257**	P	**Pn**	**03 54 03.4**	**+0.3**
	0.8nm2µm184nm,0.6s						
AAI	**Ambon**	**5.48**	**170**	P	**Pn**	**03 54 06.8**	**+2.9**
	0.3nm93nm,0.8s						
APSI	**Ampana**	**6.16**	**245**	P	**Pn**	**03 54 14.5**	**+1.4**
	1.0nm2µm146nm,0.6s						
BIPH	**Bislig**	**6.45**	**352**	*i* P	**Pn**	**03 54 19.9**	**+2.8**
BIPH				*i* S	Sn	03 54 40.9	-48
TOLI2	**Tolitoli**	**6.46**	**264**		**Pn**	**03 54 17.7**	**+0.5**
FAKI	**Fak Fak**	**6.84**	**133**	Pn	**Pn**	**03 54 24.3**	**+1.9**
FAKI	**Fak Fak**	**6.84**	**133**	P	**Pn**	**03 54 24.6**	**+2.2**
MPSI	**Mapaga**	**7.45**	**259**	P	**Pn**	**03 54 32.4**	**+1.8**
	0.4nm27nm,0.8s						
TTSI	**Tana Toraja**	**8.79**	**237**	P	**Pn**	**03 54 48.6**	**-0.3**
	161nm,0.7s						
MYLDM	**Lahad Datu**	**9.34**	**292**	Pn	**Pn**	**03 54 56.5**	**+0.2**
MYLDM	**Lahad Datu**	**9.34**	**292**	P	**Pn**	**03 54 58.3**	**+1.9**
	37nm,1.1s						
SPSI	**Sidrap Palu**	**9.36**	**233**	P	**Pn**	**03 54 57.1**	**+0.5**
	2µm171nm,0.7s						
KAPI	**Kappang**	**10.03**	**228**	P	**Pn**	**03 55 06.7**	**+1.0**
	29nm,0.4s,baz=33,slow=4.4,SNR=26						
KAPI				S	**Sn**	**03 56 53.9**	**-2.6**
	14nm,0.3s,baz=173,slow=22,SNR=14						
KAPI	**Kappang**	**10.03**	**228**		**Pn**	**03 55 06.9**	**+1.1**
KAPI	**Kappang**	**10.03**	**228**	P	**Pn**	**03 55 07.4**	**+1.6**
	24nm,0.6s						
MKS	**Makassar**	**10.38**	**228**	P	**Pn**	**03 55 12.5**	**+2.0**
SBUM	**Sibu**	**15.00**	**273**		**P**	**03 56 15.1**	**+0.8**
MTN	**Manton Dam**	**15.01**	**165**		**Pn**	**03 56 09.2**	**-2.2**
KNRA	**Kununurra**	**17.38**	**175**		**P**	**03 56 39.4**	**-1.1**
KNRA				IAmb	IAmb	03 56 43.1	
	comp=Z,17nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.78**	**184**	P	**P**	**03 57 05.5**	**-1.3**
	comp=Z,4.6nm,0.5s,baz=20,slow=8.9,SNR=33						
BBJI	**Bungbulang**	**21.55**	**245**	P	**P**	**03 57 26.1**	**+0.1**
BBJI				IAmb	IAmb	03 57 28.6	
	comp=Z,30nm,1.4s						
COEN	**Coen**	**22.22**	**135**	P	**P**	**03 57 31.9**	**-1.0**
COEN				IAmb	IAmb	03 57 53.8	
	comp=Z,26nm,1.4s						
WB0	**Warramunga Arr**	**22.51**	**162**	P	**P**	**03 57 34.4**	**-1.4**
WB0				IAmb	IAmb	03 57 41.9	
	comp=Z,24nm,0.8s						
WRA	**Warramunga Arr**	**22.66**	**162**	P	**P**	**03 57 36.0**	**-1.4**
	comp=Z,8.0nm,0.4s,baz=342,slow=11,SNR=100						
	comp=Z,8.0nm,0.4s						
WRA	**Warramunga Arr**	**22.66**	**162**	P	**P**	**03 57 34.8**	**-2.6**
WR8	**Warramunga Arr**	**22.72**	**162**	P	**P**	**03 57 36.6**	**-1.4**
WR8				IAmb	IAmb	03 57 37.4	
	comp=Z,14nm,0.7s						
MBWA	**Marble Bar**	**23.91**	**197**	P	**P**	**03 57 47.2**	**-1.8**
MBWA				IAmb	IAmb	03 57 49.2	
	comp=Z,7.4nm,0.7s						
PSA00	**Pilbara Seismi**	**24.27**	**197**	P	**P**	**03 57 51.5**	**-0.8**
PSA00				IAmb	IAmb	03 57 52.8	
	comp=Z,12nm,0.9s						
PSA00	**Pilbara Seismi**	**24.27**	**197**	P	**P**	**03 57 51.1**	**-1.2**
PSA00				IAmb	IAmb	03 57 52.7	
	comp=Z,7.8nm,1.1s						
AS31	**Alice Springs**	**26.08**	**166**	P	**P**	**03 58 07.3**	**-1.5**
ASAR	**Alice Springs**	**26.08**	**166**	P	**P**	**03 58 07.5**	**-1.3**
	comp=Z,2.8nm,0.5s,baz=352,slow=7.5,SNR=78						
	comp=Z,2.8nm,0.5s						
NJ2	**Nanjing**	**31.16**	**346**	*eP*	**P**	**03 58 56.8**	**+3.0**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
CMAR	**Chiang Mai Arr**	**32.32**	**303**	P	**P**	**03 59 02.6**	**-1.6**
	comp=Z,1.2nm,0.3s,baz=98,slow=7.9,SNR=2.1						
	comp=Z,1.2nm,0.3s						
FORT	**Forrest**	**32.35**	**179**	P	**P**	**03 59 02.8**	**-1.5**
FORT				IAmb	IAmb	03 59 32.5	
	comp=Z,5.3nm,1.0s						
MORW	**Morawa**	**32.45**	**198**	P	**P**	**03 59 04.3**	**-0.9**
PZH	**PanZhiHua**	**34.71**	**317**	P	**P**	**03 59 28.4**	**+3.4**
BBOO	**Buckleboo**	**35.37**	**167**	P	**P**	**03 59 28.9**	**-1.5**
BBOO				IAmb	IAmb	04 00 04.5	
	comp=Z,18nm,1.3s						
STKA	**Stephens Creek**	**36.11**	**159**	P	**P**	**03 59 34.8**	**-1.9**
	comp=Z,10nm,0.6s,baz=337,slow=9.9,SNR=30						
	comp=Z,10nm,0.6s						
STKA	**Stephens Creek**	**36.11**	**159**	P	**P**	**03 59 35.7**	**-1.0**
ARMA	**Armidale**	**39.56**	**146**	P	**P**	**04 00 06.2**	**+0.3**
HHC	**Hu-ho-hao-te**	**41.42**	**342**	*eP*	**P**	**04 00 24.3**	**+3.2**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,5.8s						
CAN	**Canberra**	**42.13**	**153**	P	**P**	**04 00 26.5**	**-0.4**
CAN				IAmb	IAmb	04 01 04.5	
	comp=Z,18nm,1.3s						
EVN	**Everest**	**46.57**	**308**		**P**	**04 01 01.9**	**-1.2**
QRZ	**Quartz Range**	**59.09**	**141**	P	**P**	**04 02 33.9**	**-0.3**
MKAR	**Makanchi Array**	**59.45**	**326**	P	**P**	**04 02 37.4**	**+0.7**
	comp=Z,2.0nm,0.5s,baz=121,slow=8.4,SNR=25						
	comp=Z,2.0nm,0.5s						
LBZ	**Lake Benmore**	**59.78**	**146**	P	**P**	**04 02 37.7**	**-1.2**
KDJ	**Kajisay**	**60.15**	**319**	P	**P**	**04 02 42.5**	**+0.8**
KDJ				IAmb	IAmb	04 02 44.3	
	comp=Z,2.1nm,0.5s						
RTZ	**Ruatahuna**	**60.86**	**137**	P	**P**	**04 02 45.4**	**-1.1**
ZALV	**Zalesovo Beam**	**62.57**	**333**	P	**P**	**04 02 57.4**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=127,slow=3.8,SNR=2.6						
	comp=Z,0.6nm,0.4s						
GAR	**Garm**	**63.62**	**313**	P	**P**	**04 03 05.8**	**+0.8**
GAR				IAmb	IAmb	04 03 06.9	
	comp=Z,4.4nm,0.7s						
KURBB	**Kurchatov Arra**	**63.66**	**328**	P	**P**	**04 03 05.0**	**+0.2**
	comp=Z,4.1nm,0.7s,baz=128,slow=6.2,SNR=38						
	comp=Z,4.1nm,0.7s						
KURK	**Kurchatov**	**63.67**	**328**	P	**P**	**04 03 05.2**	**+0.3**
KURK				IAmb	IAmb	04 03 08.0	
	comp=Z,7.2nm,0.8s						
BVAR	**Borovoye Array**	**69.24**	**327**	P	**P**	**04 03 40.6**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=138,slow=9.5,SNR=2.3						
	comp=Z,0.4nm,0.5s						
VNDA	**Vanda**	**81.41**	**173**	P	**P**	**04 04 48.3**	**-1.3**
	comp=Z,0.6nm,0.5s,baz=322,slow=8.0,SNR=6.8						
	comp=Z,0.6nm,0.5s						

SJA ***21*** *04:18:15.3±0.7, 34°.86S×71°.82W, h57km±4km, ML3.4, MW3.5*
GUC ***21*** *04:18:17.6±0.8, 34°.78S×71°.78W, h42km±1km, ML3.5*
ISC 21 04:18:17.6±1.1, **34°.77S**±0°.02×**71°.66W**±0°.03, **h17**km±7km, **n52,** σ1ᵗ**24**/**88, 1C-5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GO05	**Hualane**	**0.33**	**223**	*eP*	**Pg**	**04 18 25.4**	**+0.7**
GO05				*eS*	**Sb**	**04 18 31.4**	**+1.3**
GO05				IAML		04 18 33.6	
	comp=N,3µm,0.2s						

GO05	**Hualane**	**0.33**	**223**	*eP*	Pg	04 18 20.1	-4.6
GO05				*eP*		04 18 25.3	
GO05				*eS*	**Sb**	**04 18 32.0**	**+1.9**
GO05				IAML		04 18 33.5	
	comp=Z,2µm,0.1s						
BO03	**Pichilemu**	**0.37**	**317**	*iP*	**Pb**	**04 18 26.0**	**+0.3**
BO03				*eS*	**Sb**	**04 18 31.8**	**+0.6**
BO03				IAML		04 18 33.0	
	comp=N,6µm,0.3s						
BO01	**Tunca**	**0.60**	**52**	*iP*	**Pg**	**04 18 30.6**	**+1.0**
BO01				*eS*	**Sn**	**04 18 40.1**	**-0.6**
BO01				IAML		04 18 41.0	
	comp=N,2µm,0.2s						
BO01	**Tunca**	**0.60**	**52**	*eP*	**Pg**	**04 18 30.5**	**+0.9**
BO01				IAML		04 18 40.4	
	comp=Z,1µm,0.6s						
BO01				*eS*	**Sn**	**04 18 40.5**	**-0.2**
BO02	**Sierra Bellavi**	**0.72**	**92**	*iP*	**Pg**	**04 18 32.5**	**+0.7**
BO02				*eS*	**Sn**	**04 18 43.8**	**0.0**
BO02				IAML		04 18 45.0	
	comp=E,6µm,0.2s						
BO02	**Sierra Bellavi**	**0.72**	**92**	*eP*	**Pg**	**04 18 32.4**	**+0.7**
BO02				*eS*	**Sn**	**04 18 45.0**	**+1.2**
BO02				IAML		04 18 45.4	
	comp=Z,3µm,0.1s						
MT01	**Popeta**	**0.96**	**21**	*iP*	**Pb**	**04 18 34.8**	**-1.0**
MT01				*eS*	**Sg**	**04 18 48.8**	**-0.2**
MT01				IAML		04 18 52.4	
	comp=E,2µm,0.2s						
MT01	**Popeta**	**0.96**	**21**	*eP*	**Pb**	**04 18 34.9**	**-1.0**
MT01				*eS*	**Sn**	**04 18 49.0**	**-0.6**
MT01				IAML		04 18 50.3	
	comp=Z,1µm,0.3s						
ML02	**Panimavida**	**1.01**	**169**	*eP*	**Pb**	**04 18 35.8**	**-0.9**
ML02				*eS*	**Sb**	**04 18 49.4**	**-0.4**
ML02				IAML		04 18 54.1	
	comp=E,1µm,0.2s						
ML02	**Panimavida**	**1.01**	**169**	*eP*	Pb	04 18 30.4	-6.4
ML02				*eS*	**Sb**	**04 18 47.6**	**-2.1**
ML02				IAML		04 18 51.7	
	comp=Z,617nm,0.2s						
MT09	**Talagante**	**1.13**	**29**	*eP*	**Pb**	**04 18 38.2**	**-0.7**
MT09				*eS*	**Sg**	**04 18 54.2**	**-0.3**
MT09				IAML		04 18 56.0	
	comp=N,3µm,0.1s						
BO04	**La Punta**	**1.16**	**48**	*iP*	**Pn**	**04 18 38.5**	**-0.7**
BO04				*eS*	**Sg**	**04 18 55.0**	**-0.4**
BO04				IAML		04 18 56.7	
	comp=N,2µm,0.2s						
MT12	**Pirque**	**1.38**	**42**	*iP*	**Pn**	**04 18 41.7**	**-0.4**
MT12				*eS*	**Sb**	**04 19 00.8**	**+0.4**
MT12				IAML		04 19 04.5	
	comp=N,2µm,0.4s						
MT15	**Las Vizcachas**	**1.51**	**40**	*eP*	**Pn**	**04 18 43.4**	**-0.5**
MT15				*eS*	**Sb**	**04 19 03.6**	**-0.4**
MT15				IAML		04 19 07.7	
	comp=N,2µm,0.2s						
LMEL	**Las Melosas**	**1.51**	**53**	*eP*	**Pn**	**04 18 43.9**	**-0.2**
LMEL				*eS*	**Sb**	**04 19 04.3**	**0.0**
LMEL				IAML		04 19 06.8	
	comp=N,973nm,0.2s						
MT13	**San Alfonso**	**1.53**	**48**	*eP*	**Pn**	**04 18 44.1**	**-0.1**
MT13				*eS*	**Sb**	**04 19 04.6**	**0.0**
MT13				IAML		04 19 08.1	
	comp=E,987nm,0.2s						
MT13	**San Alfonso**	**1.53**	**48**	*eP*	**Pn**	**04 18 44.5**	**+0.2**
MT13				*eS*	**Sg**	**04 19 05.8**	**-1.1**
MT13				IAML		04 19 06.8	
	comp=Z,444nm,0.3s						
MT02	**Curacav**	**1.56**	**16**	*eP*	**Pn**	**04 18 43.4**	**-1.3**
MT02				*eS*	**Sn**	**04 19 03.5**	**-1.0**
MT02				IAML		04 19 06.8	
	comp=N,419nm,0.2s						
MT02	**Curacav**	**1.56**	**16**	*eP*	**Pn**	**04 18 43.3**	**-1.3**
MT02				*eS*	**Sb**	**04 19 05.7**	**+0.1**
MT02				IAML		04 19 12.8	
	comp=Z,327nm,0.4s						
MT05	**Renca**	**1.57**	**29**	*eP*	**Pn**	**04 18 44.5**	**-0.3**
MT05				*eS*	**Sb**	**04 19 05.1**	**-0.7**
MT05				IAML		04 19 09.6	
	comp=E,1µm,0.4s						
MT05	**Renca**	**1.57**	**29**	*eP*	**Pn**	**04 18 44.4**	**-0.3**
MT05				*eS*	**Sg**	**04 19 07.6**	**-0.7**
MT05				IAML		04 19 09.3	
	comp=Z,408nm,0.2s						
MT03	**Universidad Ad**	**1.59**	**37**	*eP*	**Pn**	**04 18 44.5**	**-0.6**
MT03				*eS*	**Sb**	**04 19 05.8**	**-0.5**
MT03				IAML		04 19 11.2	
	comp=N,1µm,0.2s						
MT03	**Universidad Ad**	**1.59**	**37**	*eP*	**Pn**	**04 18 45.0**	**0.0**
MT03				*eS*	**Sg**	**04 19 07.6**	**-1.2**
MT03				IAML		04 19 10.7	
	comp=Z,763nm,0.2s						
MT16	**CCHEN**	**1.63**	**36**	*eP*	**Pn**	**04 18 45.4**	**-0.3**
MT16				*eS*	**Sn**	**04 19 06.1**	**-0.2**
MT16				IAML		04 19 10.8	
	comp=N,370nm,0.5s						
MT14	**Cerro Cal¡n**	**1.65**	**35**	*eP*	**Pn**	**04 18 45.5**	**-0.4**
MT14				*eS*	**Sb**	**04 19 07.6**	**-0.6**
MT14				IAML		04 19 14.8	
	comp=N,1µm,0.2s						
VA01	**Torpederas**	**1.74**	**0**	*eP*	**Pn**	**04 18 45.8**	**-1.3**
VA01				IAML		04 19 14.3	
	comp=N,292nm,0.5s						
MT10	**Hacienda Santa**	**1.76**	**32**	*eP*	**Pn**	**04 18 47.0**	**-0.4**
MT10				*eS*	**Sn**	**04 19 09.8**	**+0.3**
PEL	**Peldehue**	**1.81**	**27**	*eP*	**Pn**	**04 18 47.6**	**-0.5**
PEL				IAML		04 19 15.9	
	comp=N,595nm,0.5s						
PEL	**Peldehue**	**1.81**	**27**	*eP*	**Pn**	**04 18 48.0**	**0.0**
PEL				*eS*	**Sn**	**04 19 10.1**	**-0.6**
PEL				IAML		04 19 17.2	
	comp=Z,313nm,0.4s						
MT04	**Ro Olivares**	**1.85**	**43**	*eP*	**Pn**	**04 18 48.9**	**+0.1**
MT04				*eS*	**Sn**	**04 19 12.3**	**+0.4**
MT04				IAML		04 19 18.6	
	comp=N,573nm,0.3s						
MT04	**Ro Olivares**	**1.85**	**43**	*eP*	**Pn**	**04 18 49.0**	**+0.2**
MT04				*eS*	**Sb**	**04 19 15.1**	**+0.9**
MT04				IAML		04 19 18.0	
	comp=Z,265nm,0.1s						
ROCH	**El Roble**	**1.87**	**17**	*eP*	**Pn**	**04 18 48.4**	**-0.6**
ROCH				*eS*	**Sn**	**04 19 12.1**	**-0.3**
ROCH				IAML		04 19 23.1	
	comp=N,913nm,0.4s						
MT08	**Bocatoma Ro**	**1.90**	**46**	*eP*	**Pn**	**04 18 50.1**	**+0.7**
MT08				*eS*	**Sb**	**04 19 16.6**	**+1.3**
MT08				IAML		04 19 21.6	
	comp=Z,202nm,0.5s						
BI02	**San Fabin de**	**1.92**	**171**	*eP*	**Pn**	**04 18 48.8**	**-0.8**
BI02				*eS*	**Sn**	**04 19 11.7**	**-1.7**
BI02				IAML		04 19 13.8	
	comp=N,199nm,0.3s						
BI02	**San Fabin de**	**1.92**	**171**	*eP*	**Pn**	**04 18 48.2**	**-1.4**
BI02				IAML		04 19 26.9	
	comp=Z,141nm,0.5s						
EDS3	**Malargue**	**2.10**	**119**	*eP*	**Pn**	**04 18 52.2**	**+0.1**
VA03	**San Esteban**	**2.20**	**25**	*eP*	**Pn**	**04 18 53.0**	**-0.5**
VA03				*eS*	**Sn**	**04 19 20.1**	**-0.2**
VA03

ZON	**Zonda**	**4.07**	**39**	*e*P		**Pn**	**04 19 20.0**	**+0.8**
ZON				IAML			04 20 37.4	
	comp=Z,31nm,2.5s							
ACCO	**Cerro Coronel**	**4.71**	**28**	*e*P		**Pn**	**04 19 28.0**	**-0.2**
ACCO				*e*S		**Sn**	**04 20 28.9**	**+6.4**
GO06	**Curarrehue**	**4.81**	**178**	*e*P		Pn	04 19 13.5	-16
AROD	**Rodeo**	**4.94**	**23**	*e*S		**Sb**	**04 20 43.7**	**+0.4**
ACDV	**Cuesta del Vie**	**5.06**	**26**	*e*P		**Pn**	**04 19 32.9**	**0.0**

WEL 21 04:34:05.7±1.3, 31°S±21′×18°0E±5′8, h239km±46km, M4.2/7, mB4.4/5, ML4.5/7, MLv4.6/7, Mw(mB)3.5/5, Error ellipse: s-maj=79.9km s-min=6.7km az=109.5, confirmed, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**2.43**	**59**	S	S	04 35 28.0	+0.6
MXZ	**Matakaoa Point**	**7.10**	**189**	P	Pn	04 35 47.0	-0.3
WMGZ	**Waiomatatini S**	**7.34**	**188**	P	Pn	04 35 50.7	+0.3
WMGZ				S	S	04 37 14.0	-0.4
HAZ	**Te Kaha**	**7.37**	**192**	P	Pn	04 35 50.2	-0.6
HAZ				S	S	04 37 16.5	+1.3
PKGZ	**Pakihiroa**	**7.43**	**190**	P	Pn	04 35 51.1	-0.5
PKGZ				S	S	04 37 17.9	+1.3
RUGZ	**Raukumara Rang**	**7.59**	**192**	P	Pn	04 35 52.9	-0.8
RUGZ				S	S	04 37 20.4	-0.1
PUZ	**Puketiti**	**7.61**	**189**	P	Pn	04 35 55.2	+1.4
PUZ				S	S	04 37 21.2	+0.5
TWGZ	**Tauwhareparae**	**7.75**	**190**	S	S	04 37 24.7	+0.7
MWZ	**Matawai**	**7.98**	**192**	P	Pn	04 35 57.8	-0.8
MWZ				S	S	04 37 29.4	0.0
URZ	**Urewera**	**7.99**	**195**	P	Pn	04 35 57.5	-1.1
URZ				S	S	04 37 31.1	+1.5
TKGZ	**Te Karaka**	**8.03**	**190**	P	Pn	04 35 59.8	+0.7
MUGZ	**Murupara**	**8.28**	**196**	P	Pn	04 36 03.3	+1.0
RIGZ	**Rimuhau**	**8.30**	**191**	P	Pn	04 36 03.4	+0.7
RIGZ				S	S	04 37 35.9	-1.0
MTHZ	**Maungataniwha**	**8.62**	**195**	P	Pn	04 36 07.2	+0.4
MTHZ				S	S	04 37 44.5	+0.2
BKZ	**Black Stump Fm**	**9.00**	**196**	P	Pn	04 36 09.8	-1.8
BKZ				S	S	04 37 52.1	-1.1
ETVZ	**East Tongariro**	**9.18**	**200**	P	Pn	04 36 13.3	-0.6
SNVZ	**South Ngauruho**	**9.24**	**200**	P	Pn	04 36 15.1	+0.2

*IDC **21** 04:40:07.9±1.6, 51°.18N×173°.84E, h0km, mb3.3/7, mbtmp3.5/8, ML2.9/1, Error ellipse: s-maj=31.5km s-min=21.9km az=3.0*
*NEIC **21** 04:40:09.5±1.3, 51°.14N±0°.05×174°.0E±0°.1, h10km±2km, mb3.8/6, ML3.2/6, ML3.3(AEIC), Error ellipse: s-maj=13.5km s-min=4.3km az=234.0*
*AEIC **21** 04:40:10.6±2.4, 51°.15N±0°.09×174°.1E±0°.1, h17km±7km, Error ellipse: s-maj=14.5km s-min=8.1km az=215.0*
ISC 21 04:40:09.4±1.0, 51°.13N±0°.10×173°.94E±0°.06, h10km, n37, σ0s96/53, mb3.7/8, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHEM	**Shemya Is, Ala**	**1.60**	**3**	Pn	**Pn**	**04 40 37.0**	**-0.7**
	21nm,0.3s,baz=188,slow=5.1,SNR=21						
SHEM				Sn	**Sn**	**04 40 58.5**	**0.0**
	63nm,0.3s,baz=132,slow=4.1,SNR=23						
SHEM	**Shemya Is, Ala**	**1.60**	**3**		**Pn**	**04 40 37.6**	**-0.2**
SHEM				Sn	**Sn**	**04 40 57.7**	**-0.8**
SHEM				IAML		04 40 59.5	
	comp=N,269nm,0.3s						
SHEM				IAML		04 41 00.9	
	comp=E,330nm,0.2s						
SMY	**Shemya**	**1.60**	**3**	Pn	**Pn**	**04 40 37.6**	**-0.1**
SMY				Sn	**Sn**	**04 40 58.1**	**-0.4**
SMY				IAML		04 41 01.9	
	comp=N,350nm,0.4s						
LSSA	**Little Sitkin**	**2.97**	**72**		**Pn**	**04 40 56.4**	**-0.1**
LSSA					**Sn**	**04 41 31.1**	**-1.2**
LSSE	**Little Sitkin**	**3.00**	**73**		**Pn**	**04 40 56.4**	**-0.6**
LSSE					**Sn**	**04 41 32.3**	**-0.6**
LSPA	**Little Sitkin**	**3.01**	**72**		**Pn**	**04 40 57.1**	**0.0**
LSPA					**Sn**	**04 41 32.1**	**-1.0**
AMKA	**Amchitka**	**3.38**	**84**	Pn	**Pn**	**04 41 01.1**	**-1.0**
AMKA				Sn	**Sn**	**04 41 37.4**	**-4.8**
AMKA				IAML		04 41 38.6	
	comp=E,39nm,0.5s						
CETU	**Semis' Tuman**	**3.56**	**74**		**Pn**	**04 41 04.4**	**-0.3**
CETU					**Sn**	**04 41 46.9**	**0.0**
CESW	**Semis' Southwe**	**3.59**	**75**		**Pn**	**04 41 05.0**	**-0.2**
GAKI	**Gareloi-Kavalg**	**4.56**	**82**		**Pn**	**04 41 18.6**	**+0.2**
GAKI					**Sn**	**04 42 10.3**	**-1.1**
TASE	**Tanaga Southea**	**5.06**	**79**		**Pn**	**04 41 25.9**	**+0.5**
TASE					**Sn**	**04 42 23.7**	**-0.1**
TAFP	**Tanaga Falls P**	**5.10**	**78**		**Pn**	**04 41 25.9**	**+0.1**
TAFP					**Sn**	**04 42 24.7**	**0.0**
KIMD	**Kanaga Island**	**5.55**	**80**		**Pn**	**04 41 31.8**	**-0.2**
KIMD					**Sn**	**04 42 35.3**	**-0.6**
KIKV	**Kanaga Island**	**5.60**	**79**		**Pn**	**04 41 33.5**	**+0.8**
KIKV					**Sn**	**04 42 36.8**	**-0.2**
KIWB	**Kanaga Island**	**5.61**	**79**	Pn	**Pn**	**04 41 33.4**	**+0.6**
ADK	**Adak**	**5.90**	**79**	Pn	**Pn**	**04 41 37.3**	**+0.5**
ADK	**Adak**	**5.90**	**79**		**Sn**	**04 42 43.8**	**-0.7**
ETKA	**Kagalaska Isla**	**6.07**	**79**		**Pn**	**04 41 39.9**	**+0.7**
ETKA					**Sn**	**04 42 48.4**	**-0.2**
GSMY	**Great Sitkin M**	**6.30**	**78**		**Pn**	**04 41 42.3**	**0.0**
GSMY					**Sn**	**04 42 54.1**	**-0.2**
GSIG	**Igitkin Island**	**6.38**	**78**		**Pn**	**04 41 43.5**	**+0.1**
GSIG					**Sn**	**04 42 56.4**	**+0.2**
PEA0B	**Petropavlovsk-**	**10.19**	**288**	Pn	**Pn**	**04 42 35.5**	**0.0**
PETK	**Petropavlovsk-**	**10.19**	**288**	Pn	**Pn**	**04 42 35.8**	**+0.2**
	comp=E,0.5nm,0.3s,baz=99,slow=19,SNR=5.1 comp=E,7.0nm,1.0s						
PETK	**Petropavlovsk-**	**10.19**	**288**		**Pn**	**04 42 35.5**	**-0.1**
NIKH	**Nikolski High**	**10.76**	**73**	Pn	**Pn**	**04 42 45.0**	**+1.7**
KDAK	**Kodiak Island**	**20.41**	**58**	P	**P**	**04 44 44.9**	**-1.3**
	comp=E,4.5nm,1.2s,baz=232,slow=3.3,SNR=8.9 comp=E,4.5nm,1.2s						
KDAK	**Kodiak Island**	**20.41**	**58**	P	**P**	**04 44 45.1**	**-1.0**
J20K	**Nowinta River**	**21.20**	**40**	P	**P**	**04 44 53.9**	**-0.8**
J20K				IAmb	IAmb	04 45 02.6	
	comp=E,4.3nm,1.3s						
L22K	**Petersville**	**22.11**	**45**	P	**P**	**04 45 05.2**	**+0.7**
E22K	**Anaktuvuk Pass**	**23.78**	**32**	P	**P**	**04 45 22.0**	**+0.2**
ILAR	**Eielson Array**	**24.36**	**41**	P	**P**	**04 45 27.0**	**-0.2**
	comp=Z,0.2nm,0.7s,baz=258,slow=7.4,SNR=4.6 comp=Z,0.2nm,0.7s						
K27K	**Chicken**	**26.26**	**44**	P	**P**	**04 45 45.2**	**+0.9**
K27K				IAmb	IAmb	04 46 08.0	
	comp=E,3.1nm,1.3s						
YKA	**Yellowknife Ar**	**38.67**	**45**	P	**P**	**04 47 34.4**	**+1.7**
	comp=Z,0.1nm,0.6s,baz=279,slow=7.3,SNR=1.7 comp=Z,0.1nm,0.6s						
ILON	**Igloolik, Nuna**	**47.84**	**28**	P	**P**	**04 48 46.9**	**+0.2**
PDAR	**Pinedale Array**	**50.68**	**68**	P	**P**	**04 49 10.0**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=320,slow=9.1,SNR=1.7 comp=Z,0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**50.80**	**310**	P	**P**	**04 49 08.5**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=61,slow=10,SNR=2.2 comp=Z,0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**55.89**	**310**	P	**P**	**04 49 45.8**	**-1.1**
	comp=Z,0.7nm,0.6s,baz=55,slow=6.6,SNR=5.5 comp=Z,0.7nm,0.6s						
TXAR	**Lajitas Array**	**63.17**	**76**	P	**P**	**04 50 37.7**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=312,slow=4.5,SNR=3.6 comp=Z,0.3nm,0.5s						

*IDC **21** 04:40:48.6±7.0, 19°.42S×177°.11W, h513km±45km, mb2.9/4, mbtmp3.8/5, Error ellipse: s-maj=171.0km s-min=25.0km az=145.0*
ISC 21 04:40:46.2±1.9, 19°.7S±0°.5×176°.9W±0°.2, h500km, n7, σ0s97/7, mb3.2/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.22**	**292**	P	**P**	**04 42 15.8**	**+0.4**
	12nm,0.7s,baz=125,slow=10,SNR=5.9						
ASAR	**Alice Springs**	**45.74**	**256**	P	**P**	**04 48 23.4**	**+1.0**
	4.1nm,0.6s,baz=88,slow=8.1,SNR=82 4.1nm,0.6s						
WRA	**Warramunga Arr**	**45.77**	**261**	P	**P**	**04 48 21.0**	**-1.6**
	0.6nm,0.7s,baz=93,slow=7.3,SNR=7.7 0.6nm,0.7s						
ILAR	**Eielson Array**	**87.35**	**12**	P	**P**	**04 52 38.9**	**-0.2**
	0.1nm,0.4s,baz=206,slow=5.9,SNR=5.1 0.1nm,0.4s						
PDAR	**Pinedale Array**	**87.68**	**43**	P	**P**	**04 52 41.5**	**+0.1**
	0.2nm,0.5s,baz=262,slow=8.6,SNR=2.5 0.2nm,0.5s						
BRTR	**Keskin Array B**	**147.11**	**314**	PKPbc	**PKPbc**	**04 59 33.1**	**+0.1**
	0.5nm,0.6s,baz=62,slow=3.4,SNR=5.1						
GERES	**GERESS Array B**	**149.75**	**346**	PKPbc	**PKPbc**	**04 59 39.4**	**+0.1**
	0.6nm,0.5s,baz=25,slow=3.5,SNR=3.9						

*NOU **21** 04:51:25.8, 14°.68S×172°.39E, h588km, mb4.4/17, Vanuatu Islands Region*
*IDC **21** 04:51:25.5±1.3, 14°.67S×172°.41E, h586km±15km, mb3.4/12, mbtmp4.3/14, Error ellipse: s-maj=18.4km s-min=13.1km az=142.0*
*NEIC **21** 04:51:27.0±1.8, 14°.7S±0°.1×172°.4E±0°.1, h595km±8km, mb4.2/22, Error ellipse: s-maj=20.4km s-min=18.0km az=130.0*
ISC 21 04:51:26.4±0.5, 14°.70S±0°.08×172°.35E±0°.08, h600km, n81, σ0s97/84, mb4.1/23, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**5.03**	**261**	P	**P**	**04 52 59.2**	**-0.3**
SANVU	**Saraoutou**	**5.03**	**261**		**P**	**04 52 59.1**	**-0.5**
MSVF	**Nonsavu**	**6.25**	**120**	P	**P**	**04 53 09.1**	**-0.8**
	22nm,0.5s,baz=280,slow=12,SNR=21						
MSVF	**Nonsavu**	**6.25**	**120**	P	**P**	**04 53 09.0**	**-0.8**
MARNC	**Mare, Loyalty**	**7.90**	**211**	P	**P**	**04 53 22.6**	**-2.1**
MARNC	**Mare, Loyalty**	**7.90**	**211**	P	**P**	**04 53 22.9**	**-1.8**
YATNC	**Mamie plateau,**	**8.97**	**214**	P	**P**	**04 53 33.7**	**-1.3**
DZM	**Mont Dzumac**	**9.23**	**217**	P	**P**	**04 53 38.3**	**+0.6**
	25nm,0.4s,baz=232,slow=14,SNR=66						
OUENC	**Ouen Island, N**	**9.29**	**213**	P	**P**	**04 53 38.6**	**+0.5**
ONTNC	**Ouen Toro**	**9.41**	**216**	P	**P**	**04 53 39.7**	**+0.4**
ONTNC	**Ouen Toro**	**9.41**	**216**		**P**	**04 53 40.2**	**+0.9**
SAVO	**Savo Central**	**13.45**	**293**	P	**P**	**04 54 19.2**	**-0.7**
TATA	**Tatamba Isabel**	**13.80**	**296**	P	**P**	**04 54 21.8**	**-1.6**
EIDS	**Eidsvold**	**22.60**	**239**	P	**P**	**04 55 43.6**	**+0.2**
EIDS				IAmb	IAmb	04 55 44.3	
	comp=Z,3.5nm,0.6s						
TOZ	**Tahuroa Road**	**23.11**	**174**	P	**P**	**04 55 48.2**	**+0.5**
CTA	**Charters Tower**	**25.46**	**254**	P	**P**	**04 56 09.4**	**+0.6**
CTAO	**Charters Tower**	**25.46**	**254**	P	**P**	**04 56 09.5**	**+0.8**
CTAO	**Charters Tower**	**25.46**	**254**	P	**P**	**04 56 09.4**	**+0.5**
CTAO				IAmb	IAmb	04 56 10.1	
	comp=Z,7.5nm,0.8s						
QRZ	**Quartz Range**	**26.03**	**180**	P	**P**	**04 56 15.1**	**+1.6**
BFZ	**Birch Farm**	**26.11**	**173**	P	**P**	**04 56 12.0**	**-2.2**
COEN	**Coen**	**28.27**	**268**	P	**P**	**04 56 34.7**	**+1.2**
COEN	**Coen**	**28.27**	**268**	P	**P**	**04 56 33.7**	**+0.2**
QLP	**Quilpie**	**28.78**	**241**	P	**P**	**04 56 38.0**	**+0.3**
CMSA	**Cobar Meteorol**	**29.58**	**231**	P	**P**	**04 56 45.0**	**+0.4**
QIS	**Mount Isa**	**31.71**	**255**	P	**P**	**04 57 03.4**	**+0.5**
STKA	**Stephens Creek**	**32.86**	**233**	P	**P**	**04 57 13.5**	**+1.0**
	comp=Z,6.3nm,0.4s,baz=60,slow=8.7,SNR=20 comp=Z,6.3nm,0.4s						
STKA	**Stephens Creek**	**32.86**	**233**	P	**P**	**04 57 13.4**	**+1.0**
TOO	**Toolangi**	**32.96**	**221**	P	**P**	**04 57 14.6**	**+1.3**
TOO				IAmb	IAmb	04 57 56.6	
	comp=Z,13nm,1.5s						
WR8	**Warramunga Arr**	**36.46**	**256**	P	**P**	**04 57 42.3**	**-0.2**
WR8				IAmb	IAmb	04 57 43.2	
	comp=Z,3.7nm,0.8s						
WRA	**Warramunga Arr**	**36.61**	**256**	P	**P**	**04 57 43.2**	**-0.5**
	comp=Z,6.7nm,0.7s,baz=88,slow=9.0,SNR=52						
WRA				ScP	**S**	**05 02 43.2**	**-2.2**
	comp=Z,0.4nm,1.0s,baz=86,slow=3.6,SNR=5.9 comp=Z,6.7nm,0.7s						
WRA	**Warramunga Arr**	**36.61**	**256**		**P**	**04 57 42.6**	**-1.1**
AS31	**Alice Springs**	**37.30**	**250**		**P**	**04 57 49.5**	**+0.2**
AS31				IAmb	IAmb	04 57 50.4	
	comp=Z,2.4nm,0.7s						
ASAR	**Alice Springs**	**37.30**	**250**	P	**P**	**04 57 49.3**	**0.0**
	comp=Z,5.4nm,0.5s,baz=82,slow=8.7,SNR=85						
ASAR				PcP	**PcP**	**04 59 52.9**	**+0.5**
	comp=Z,1.3nm,0.7s,baz=93,slow=3.6,SNR=10						
ASAR				ScP	**ScP**	**05 02 46.5**	**+3.2**
	comp=Z,1.4nm,0.8s,baz=100,slow=3.4,SNR=10						
ASAR				S	**S**	**05 02 54.1**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=75,slow=16,SNR=4.4 comp=Z,5.4nm,0.5s						
ASAR	**Alice Springs**	**37.30**	**250**	P	**P**	**04 57 49.0**	**-0.3**
BBOO	**Buckleboo**	**37.55**	**235**	P	**P**	**04 57 51.9**	**+0.6**
MTN	**Manton Dam**	**40.04**	**267**	P	**P**	**04 58 12.4**	**+0.9**
MTN				IAmb	IAmb	04 58 55.9	
	comp=Z,8.9nm,1.1s						
KNRA	**Kununurra**	**42.02**	**263**	P	**P**	**04 58 27.4**	**+0.3**
KNRA				IAmb	IAmb	04 58 30.9	
	comp=Z,14nm,1.5s						
FORT	**Forrest**	**43.57**	**241**	P	**P**	**04 58 39.0**	**+0.1**
FORT				IAmb	IAmb	04 58 52.8	
	comp=Z,7.0nm,1.1s						
VNDA	**Vanda**	**63.06**	**183**	P	**P**	**05 00 55.7**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=357,slow=6.6,SNR=10 comp=Z,0.8nm,0.5s						
VNDA	**Vanda**	**63.06**	**183**	P	**P**	**05 00 56.1**	**+0.4**
PETK	**Petropavlovsk-**	**68.70**	**351**	P	**P**	**05 01 31.5**	**+0.6**
	comp=Z,5.1nm,0.7s,baz=171,slow=7.0,SNR=4.1 comp=Z,5.1nm,0.7s						
QSPA	**South Pole Qui**	**75.33**	**180**	P	**P**	**05 02 09.4**	**+0.1**
	comp=Z,2.8nm,0.6s,baz=218,slow=1.6,SNR=20 comp=Z,2.8nm,0.6s						
QSPA	**South Pole Qui**	**75.33**	**180**	P	**P**	**05 02 09.4**	**+0.1**
QSPA				IAmb	IAmb	05 02 09.6	
	comp=Z,4.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**79.46**	**292**	P	**P**	**05 02 33.8**	**+1.6**
	comp=Z,0.9nm,0.3s,baz=136,slow=3.1,SNR=6.9 comp=Z,0.9nm,0.3s						
L18K	**Granite Mounta**	**80.44**	**14**	P	**P**	**05 02 37.8**	**+1.4**
K17K	**Iditarod**	**80.50**	**13**	P	**P**	**05 02 37.9**	**+1.2**
K17K				IAmb	IAmb	05 02 38.7	
	comp=Z,11nm,1.4s						
L19K	**White Mountain**	**80.85**	**15**	P	**P**	**05 02 39.8**	**+1.3**
L19K				IAmb	IAmb	05 02 40.6	
	comp=Z,8.8nm,0.8s						
VTX	**Valle De La Tr**	**82.71**	**55**	IAmb	IAmb	05 02 53.8	
	comp=Z,13nm,1.4s						
NVAR	**Mina Array Bea**	**83.57**	**48**	P	**P**	**05 02 53.0**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=230,slow=8.8,SNR=8.4 comp=Z,0.7nm,0.7s						
NVAR	**Mina Array Bea**	**83.57**	**48**	P	**P**	**05 02 53.3**	**+0.2**
ILAR	**Eielson Array**	**85.05**	**16**	P	**P**	**05 02 57.9**	**-1.5**
	comp=Z,1.2nm,0.6s,baz=234,slow=5.0,SNR=30 comp=Z,1.2nm,0.6s						
ILAR	**Eielson Array**	**85.05**	**16**	P	**P**	**05 02 58.2**	**-1.2**
PDAR	**Pinedale Array**	**91.35**	**46**	P	**P**	**05 03 29.7**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=224,slow=4.7,SNR=4.6 comp=Z,0.2nm,0.5s						
PDAR	**Pinedale Array**	**91.35**	**46**	P	**P**	**05 03 29.2**	**-0.4**
TXAR	**Lajitas Array**	**91.96**	**60**	P	**P**	**05 03 33.6**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=216,slow=5.0,SNR=7.1 comp=Z,0.6nm,0.7s						
YKA	**Yellowknife Ar**	**95.29**	**26**	P	**P**	**05 03 47.1**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=253,slow=5.1,SNR=11 comp=Z,0.4nm,0.7s						
YKA	**Yellowknife Ar**	**95.29**	**26**	P	**P**	**05 03 46.2**	**-0.5**
ARCES	**ARCESS Array B**	**121.39**	**347**	PKP	**PKiKP**	**05 09 11.4**	**-0.7**
	comp=Z,6.7nm,1.0s,baz=89,slow=2.3,SNR=12						
FINES	**FINESS Array B**	**127.43**	**340**	PKP	**PKiKP**	**05 09 23.8**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=42,slow=2.3,SNR=3.4						
HFS	**Hagfors**	**132.02**	**346**	PKP	**PKiKP**	**05 09 32.5**	**-1.0**
	comp=Z,1.8nm,0.8s,baz=25,slow=3.8,SNR=1.9						
LESA	**Schwarzleotal**	**143.25**	**337**	*i* PKP	**PKPdf**	**05 09 52.8**	**-0.6**
	comp=Z,1.6nm,0.5s						
MYKA	**Terra Mystica**	**143.52**	**335**	*i* PKP	**PKPdf**	**05 09 53.1**	**-0.8**
	comp=Z,3.2nm,0.8s						
WATA	**Walderalm**	**143.74**	**338**	*i* PKP	**PKPdf**	**05 09 53.7**	**-0.6**
	comp=Z,4.2nm,0.5s						
WTTA	**Wattenberg**	**143.78**	**338**	*i* PKP	**PKPdf**	**05 09 54.2**	**-0.3**
	comp=Z,7.3nm,0.9s,SNR=5.9						
ABTA	**Abfaltersbach**	**143.87**	**336**	*i* PKP	**PKPdf**	**05 09 53.8**	**-0.8**
	comp=Z,7.2nm,0.6s						
MOTA	**Moosalm**	**143.90**	**338**	*i* PKP	**PKPdf**	**05 09 54.4**	**-0.3**
	comp=Z,10nm,1.1s						
RETA	**Reutte**	**143.90**	**339**	*e*PKiKP	**PKPdf**	**05 09 54.6**	**0.0**
	comp=Z,3.0nm,0.5s						
PDG	**Podgorica**	**143.94**	**325**		**PKPdf**	**05 09 54.4**	**-0.2**
BFO	**Black Forest**	**143.96**	**342**		**PKPdf**	**05 09 54.8**	**+0.2**
SQTA	**Sankt Quirin**	**143.97**	**338**	*i* PKiKP	**PKPdf**	**05 09 54.7**	**0.0**
	comp=Z,7.9nm,0.6s,SNR=8.3						
SABO	**M.te Sabotino**	**144.06**	**334**		**PKPdf**	**05 09 54.9**	**+0.1**
STAL	**STALIGIAL**	**144.20**	**336**		**PKPab**	**05 09 54.6**	**-0.7**
FETA	**Feichten**	**144.31**	**338**	*i* PKiKP	**PKPab**	**05 09 56.0**	**+0.1**
	comp=Z,4.7nm,0.6s,SNR=13						
DAVA	**Damuels**	**144.38**	**339**	*i* PKiKP	**PKPab**	**05 09 56.3**	**+0.2**
	comp=Z,6.9nm,0.8s						
FUORN	**Ofenpass-Fuorn**	**144.82**	**338**		**PKPab**	**05 09 58.1**	**+0.2**
TUE	**Stuetta**	**145.27**	**339**		**PKPab**	**05 09 59.1**	**-0.5**
ITM	**Ithomi**	**145.48**	**316**	PKPbc	**PKPab**	**05 09 59.1**	**-1.4**
SENIN	**Lac Senin/Sane**	**146.03**	**341**	PKPbc	**PKPab**	**05 10 00.8**	**-1.8**
SGRT	**San Giovanni R**	**146.28**	**328**	PKPbc	**PKPbc**	**05 10 01.5**	**+0.3**
ZCCA	**Zocca**	**146.46**	**336**	PKPbc	**PKiKP**	**05 10 03.1**	**-0.5**
NRCA	**Norcia**	**146.76**	**332**		**PKiKP**	**05 10 03.0**	**-1.4**

*IDC **21** 04:57:29.8±1.8, 14°.42S×172°.35E, h576km±26km, mb3.1/7, mbtmp4.1/9, Error ellipse: s-maj=47.9km s-min=15.9km az=152.0*
*NEIC **21** 04:57:31.6±1.6, 14°.7S±0°.1×172°.40E±0°.09, h594km±8km, mb4.0/14, Error ellipse: s-maj=20.1km s-min=12.7km az=181.0*
ISC 21 04:57:31.4±0.6, 14°.7S±0°.1×172°.5E±0°.1, h600km, n42, σ0s86/43, mb3.9/15, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**5.12**	**261**	P	**P**	**04 59 04.4**	**-0.8**
MSVF	**Nonsavu**	**6.16**	**120**	P	**P**	**04 59 13.3**	**-0.8**
	31nm,0.7s,baz=287,slow=13,SNR=22						
MSVF	**Nonsavu**	**6.16**	**120**	P	**P**	**04 59 13.7**	**-0.3**
MARNC	**Mare, Loyalty**	**7.93**	**211**	P	**P**	**04 59 28.1**	**-1.9**
DZM	**Mont Dzumac**	**9.27**	**217**	P	**P**	**04 59 43.3**	**+0.3**
	10nm,0.4s,baz=225,slow=18,SNR=30						
OUENC	**Ouen Island, N**	**9.32**	**214**	P	**P**	**04 59 43.7**	**+0.3**
ONTNC	**Ouen Toro**	**9.45**	**216**	P	**P**	**04 59 45.0**	**+0.3**
STKA	**Stephens Creek**	**32.92**	**233**	P	**P**	**05 03 18.6**	**+0.6**
	3.5nm,0.4s,baz=58,slow=9.5,SNR=12 3.5nm,0.4s						
STKA	**Stephens Creek**	**32.92**	**233**	P	**P**	**05 03 18.6**	**+0.6**
TOO	**Toolangi**	**33.01**	**221**	P	**P**	**05 03 19.4**	**+0.8**
TOO				IAmb	IAmb	05 04 02.0	
	comp=Z,9.2nm,1.5s						
WR8	**Warramunga Arr**	**36.54**	**256**	P	**P**	**05 03 47.0**	**-1.2**
WRA	**Warramunga Arr**	**36.69**	**256**	P	**P**	**05 03 48.5**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=82,slow=7.7,SNR=17 comp=Z,0.4nm,0.3s						
WRA	**Warramunga Arr**	**36.69**	**256**	P	**P**	**05 03 47.6**	**-1.8**
AS31	**Alice Springs**	**37.37**	**250**	P	**P**	**05 03 54.3**	**-0.7**
AS31				IAmb	IAmb	05 03 55.8	
	comp=Z,1.6nm,0.3s						
ASAR	**Alice Springs**	**37.38**	**250**	P	**P**	**05 03 54.4**	**-0.6**
	comp=Z,1.5nm,0.4s,baz=80,slow=9.1,SNR=33						
ASAR				ScP	**ScP**	**05 08 50.5**	**+1.9**
	comp=Z,0.3nm,0.6s,baz=93,slow=3.8,SNR=5.9 comp=Z,1.5nm,0.4s						
ASAR	**Alice Springs**	**37.38**	**250**	P	**P**	**05 03 53.8**	**-1.1**
BBOO	**Buckleboo**	**37.62**	**235**	P	**P**	**05 03 56.6**	**-0.2**
FORT	**Forrest**	**43.64**	**241**	P	**P**	**05 04 44.0**	**-0.5**
FORT				IAmb	IAmb	05 05 23.4	
	comp=Z,4.6nm,0.9s						
VNDA	**Vanda**	**63.05**	**183**	P	**P**	**05 07 01.0**	**+0.4**
VNDA				IAmb	IAmb	05 07 06.2	
	comp=Z,6.1nm,1.5s						
PETK	**Petropavlovsk-**	**68.73**	**351**	P	**P**	**05 07 36.7**	**+0.7**
O16K	**Kokwok River B**	**77.81**	**15**	P	**P**	**05 08 26.2**	**-1.3**
O16K				IAmb	IAmb	05 08 51.2	
	comp=Z,9.7nm,1.4s						
CMAR	**Chiang Mai Arr**	**79.55**	**292**	P	**P**	**05 08 38.5**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=126,slow=3.1,SNR=4.5 comp=Z,0.6nm,0.3s						
L18K	**Granite Mounta**	**80.44**	**14**	P	**P**	**05 08 42.4**	**+1.1**
L18K				IAmb	IAmb	05 09 09.5	
	comp=Z,5.0nm,1.3s						
K17K	**Iditarod**	**80.50**	**13**	P	**P**	**05 08 42.8**	**+1.2**
K17K				IAmb	IAmb	05 09 09.9	
	comp=Z,6.6nm,1.4s						
L19K	**White Mountain**	**80.85**	**15**	P	**P**	**05 08 44.5**	**+1.0**
L19K				IAmb	IAmb	05 08 45.8	
	comp=Z,5.4nm,0.8s						
NVAR	**Mina Array Bea**	**83.51**	**48**	P	**P**	**05 08 57.9**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=233,slow=5.

THIG		**0.78**	**35**	*i* P		**Pb**	**05 00 36.1**	**+0.6**
SMCA	**Catarina**	**0.86**	**47**	*i* P		**Pb**	**05 00 37.5**	**+0.5**
SMCA				*i* S		**Sb**	**05 00 49.0**	**+0.7**
PATR	**El Naranjo**	**0.97**	**29**	*eP*		**Pg**	**05 00 38.8**	**-0.3**
PATR				*eS*		**Sb**	**05 00 52.4**	**+0.7**
CHUJ	**Union Juarez**	**1.02**	**36**	*eP*		**Pg**	**05 00 39.6**	**-0.4**
CHUJ				*eS*		**Sb**	**05 00 52.8**	**-0.2**
RTAL	**Retalhuleu**	**1.03**	**75**	*eP*		**Pg**	**05 00 39.8**	**-0.3**
RTAL				*eS*		**Sn**	**05 00 53.8**	**-0.6**
RTAL	**Retalhuleu**	**1.03**	**75**	P		**Pb**	**05 00 40.4**	**+0.6**
RTAL				S		**Sn**	**05 00 54.1**	**-0.3**
PAVE	**Pavencul**	**1.06**	**30**	*eP*		**Pg**	**05 00 40.2**	**-0.6**
PAVE				*eS*		**Sg**	**05 00 54.2**	**-0.6**
QUEO	**Labor Ovalle**	**1.32**	**63**	*i* P		**Pn**	**05 00 44.7**	**+0.3**
STG2	**El Palmar, Qui**	**1.32**	**82**	*i* P		**Pn**	**05 00 41.5**	**-2.8**
STG2				*i* S		**Sb**	**05 00 54.6**	**-7.0**
STG2				IAML			05 01 00.8	
	comp=E,3µm,0.3s							
STG5	**El Palmar, Qui**	**1.34**	**84**	*i* P		**Pn**	**05 00 41.7**	**-2.9**
STG8	**El Palmar, Qui**	**1.34**	**82**	*i* P		**Pn**	**05 00 42.2**	**-2.6**
SOKI	**Kika Raxquin**	**1.39**	**66**	*i* P		**Pn**	**05 00 45.8**	**+0.3**
PCIG		**1.51**	**342**	*eP*		**Pn**	**05 00 46.8**	**-0.1**
PCIG				*eS*		**Sn**	**05 01 05.8**	**-0.5**
HUEH	**Huehuetenango**	**1.58**	**48**	*eP*		**Pb**	**05 00 49.2**	**-0.1**
HUEH				*eS*		**Sb**	**05 01 09.2**	**0.0**
HUEH	**Huehuetenango**	**1.58**	**48**	P		**Pb**	**05 00 49.3**	**-0.1**
HUEH				S		**Sg**	**05 01 11.4**	**+0.2**
HUEH	**Huehuetenango**	**1.58**	**48**	*i* P		**Pb**	**05 00 49.2**	**-0.1**
CCIG	**Comitan**	**2.08**	**16**	*eP*		**Pb**	**05 00 57.4**	**-0.5**
CCIG				*eS*		**Sb**	**05 01 24.7**	**+1.0**
CCIG	**Comitan**	**2.08**	**16**	P		**Pn**	**05 00 56.8**	**+1.9**
CCIG				S		**Sb**	**05 01 23.9**	**+0.1**
CCIG	**Comitan**	**2.08**	**16**	*i* P		**Pb**	**05 00 57.4**	**-0.5**
FG8	**Yepocapa, Chim**	**2.10**	**90**	*i* P		Pn	05 00 50.0	-5.0
FG16	**Alotenango, Sa**	**2.14**	**89**	*i* P		Pn	05 00 51.1	-4.6
FG16				IAML			05 01 25.5	
	comp=E,2µm,0.2s							
CARR	**Arriaga**	**2.28**	**330**	*eP*		**Pn**	**05 00 58.5**	**+1.0**
CARR				*eS*		**Sn**	**05 01 24.6**	**-0.8**
APG	**El Apazote**	**2.31**	**71**	*i* P		**Pn**	**05 00 59.2**	**+1.2**
TGIG		**2.53**	**351**	*eP*		**Pn**	**05 01 02.4**	**+1.4**
TGIG				*eS*		**Sn**	**05 01 32.1**	**+0.6**
TGIG		**2.53**	**351**	*i* P		**Pn**	**05 01 02.5**	**+1.6**
TGIG				*i* S		**Sn**	**05 01 32.2**	**+0.6**
FAME	**Alcaldia de Sa**	**2.66**	**99**	P		**Pn**	**05 01 05.6**	**+3.0**
SLOZ	**Alcaldia de Sa**	**2.86**	**94**	P		**Pn**	**05 01 08.1**	**+2.7**
SLOZ				S		**Sn**	**05 01 41.6**	**+1.9**
NUBE	**Las Nubes**	**2.88**	**97**	P		**Pn**	**05 01 07.0**	**+1.2**
NUBE				S		**Sn**	**05 01 39.7**	**-0.6**
CEVE	**Cerro Verde**	**3.04**	**98**	P		**Pn**	**05 01 10.8**	**+2.7**
CEVE				S		**Sn**	**05 01 46.2**	**+1.8**
UNIC	**Universidad Ca**	**3.09**	**95**	P		**Pn**	**05 01 11.3**	**+2.7**
JAYA	**Jayaque - finc**	**3.23**	**100**	P		**Pn**	**05 01 13.2**	**+2.5**
JAYA	**Jayaque - finc**	**3.23**	**100**	*i* P		**Pn**	**05 01 10.9**	**+0.2**
MTO3	**Montecristo**	**3.26**	**87**	P		**Pn**	**05 01 13.5**	**+2.4**
PMON	**Piamonte**	**3.35**	**99**	P		**Pn**	**05 01 14.9**	**+2.6**
CMIG	**Matias Romero**	**3.50**	**324**	*eP*		**Pn**	**05 01 14.6**	**+0.4**
CMIG				*eS*		**Sn**	**05 01 53.7**	**-1.7**
NEUV	**Arroyo Zacate**	**4.53**	**320**	*eP*		**Pn**	**05 01 29.9**	**+1.5**
NEUV				*eS*		**Sn**	**05 02 15.1**	**-5.8**
PEIG	**Puerto Escondi**	**4.61**	**293**	*eP*		**Pn**	**05 01 30.9**	**+1.4**
PEIG				*eS*		**Sn**	**05 02 20.7**	**-2.2**
YOIG	**Yosondua**	**5.32**	**300**	*eP*		**Pn**	**05 01 43.5**	**+4.0**
YOIG				*eS*		**Sn**	**05 02 39.8**	**-0.9**
PNIG	**Pinotepa**	**5.63**	**293**	*eP*		**Pn**	**05 01 46.2**	**+2.7**
TOIG	**Toxpalan**	**5.65**	**313**	*eP*		**Pn**	**05 01 46.9**	**+3.0**
TXIG	**Tlaxiaco**	**5.70**	**302**	*eP*		**Pn**	**05 01 46.7**	**+2.0**
TXIG				*eS*		**Sn**	**05 02 46.3**	**-3.8**

*NEIC **21** 05:16:26.9±0.9, 18°.28S±0°.06×178°.2W±0°.2, h547km±11km, mb4.0/14, Error ellipse: s-maj=26.4km s-min=8.1km az=91.0*

*IDC **21** 05:16:28.3±1.6, 18°.42S×178°.32W, h554km±16km, mb3.4/8, mbtmp4.3/9, Error ellipse: s-maj=23.0km s-min=16.5km az=153.0*

ISC 21 05:16:27.8±0.8, 18°.4S±0°.1×178°.3W±0°.1, h550km, n27, σ0s89/28, mb4.1/14, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.54**	**280**	P		P		**05 17 47.3**	**+0.8**
	165nm,0.7s,baz=128,slow=8.2,SNR=86								
MSVF	**Nonsavu**	**3.54**	**280**	P		P		**05 17 46.7**	**+0.2**
URZ	**Urewera**	**20.21**	**191**	P		P		**05 20 23.7**	**-2.0**
	5.1nm,0.6s,baz=144,slow=14,SNR=2.3								
	5.1nm,0.6s								
RTZ	**Ruatahuna**	**20.58**	**191**	P		P		**05 20 29.0**	**-0.1**
MLZ	**Mavora Lakes**	**29.20**	**200**	P		P		**05 21 45.3**	**+0.1**
MLZ				IAmb		IAmb		05 22 04.2	
	comp=Z,2.4nm,0.7s								
EIDS	**Eidsvold**	**29.21**	**251**	P		P		**05 21 46.1**	**+0.5**
EIDS				IAmb		IAmb		05 21 46.5	
	comp=Z,5.0nm,0.8s								
CTAO	**Charters Tower**	**33.48**	**261**	P		P		**05 22 21.8**	**-0.3**
COEN	**Coen**	**37.22**	**271**	P		P		**05 22 52.7**	**-0.6**
COEN				IAmb		IAmb		05 23 11.6	
	comp=Z,7.1nm,1.1s								
STKA	**Stephens Creek**	**38.50**	**242**	P		P		**05 23 03.8**	**+0.3**
	comp=Z,2.2nm,0.5s,baz=98,slow=10,SNR=6.0								
	comp=Z,2.2nm,0.5s								
WR8	**Warramunga Arr**	**44.50**	**260**	P		P		**05 23 50.7**	**-0.4**
WR8				IAmb		IAmb		05 23 52.8	
	comp=Z,4.9nm,0.7s								
WRA	**Warramunga Arr**	**44.66**	**260**	P		P		**05 23 51.6**	**-0.6**
	comp=Z,3.7nm,0.7s,baz=96,slow=6.8,SNR=52								
	comp=Z,3.7nm,0.7s								
WRA	**Warramunga Arr**	**44.66**	**260**	P		P		**05 23 51.3**	**-0.9**
AS31	**Alice Springs**	**44.77**	**255**			P		**05 23 52.8**	**-0.3**
AS31				IAmb		IAmb		05 23 53.7	
	comp=Z,6.6nm,0.8s								
ASAR	**Alice Springs**	**44.77**	**255**	P		P		**05 23 53.0**	**0.0**
	comp=Z,24nm,0.6s,baz=89,slow=8.4,SNR=351								
ASAR				S		**S**		**05 29 49.7**	**-0.9**
	comp=Z,1.0nm,1.0s,baz=82,slow=16,SNR=6.6								
	comp=Z,24nm,0.6s								
ASAR	**Alice Springs**	**44.77**	**255**			P		**05 23 53.4**	**+0.3**
JYT	**Yasato**	**67.01**	**324**	P		P		**05 26 27.7**	**+1.3**
UGM	**Wanagama**	**69.74**	**268**	P		P		**05 26 43.4**	**-0.2**
QSPA	**South Pole Qui**	**71.68**	**180**	P		P		**05 26 54.7**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=298,slow=0.7,SNR=7.6								
	comp=Z,1.5nm,0.8s								
QSPA	**South Pole Qui**	**71.68**	**180**	P		P		**05 26 55.4**	**+1.2**
QSPA				IAmb		IAmb		05 27 11.7	
	comp=Z,1.5nm,1.0s								
P18K	**Big Mountain,**	**79.75**	**12**	P		P		**05 27 36.4**	**-2.2**
P18K				IAmb		IAmb		05 28 20.1	
	comp=Z,2.7nm,1.1s								
K15K	**Wolf Creek Mou**	**81.49**	**8**	P		P		**05 27 46.8**	**-0.7**
K15K				IAmb		IAmb		05 27 48.0	
	comp=Z,5.7nm,1.0s								
L18K	**Granite Mounta**	**82.13**	**10**	P		P		**05 27 49.8**	**-1.0**
TXAR	**Lajitas Array**	**86.15**	**58**	P		P		**05 28 12.0**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=207,slow=5.2,SNR=5.3								
	comp=Z,0.6nm,0.8s								
ILAR	**Eielson Array**	**86.31**	**13**	P		P		**05 28 10.2**	**-1.0**
	comp=Z,0.3nm,0.9s,baz=212,slow=4.6,SNR=4.6								
	comp=Z,0.3nm,0.9s								
CMAR	**Chiang Mai Arr**	**89.14**	**290**	P		P		**05 28 26.1**	**+0.6**
	comp=Z,0.9nm,0.3s,baz=117,slow=2.3,SNR=6.5								
	comp=Z,0.9nm,0.3s								
BRTR	**Keskin Array B**	**145.19**	**314**	PKPbc		**PKPdf**		**05 35 03.9**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=134,slow=5.3,SNR=5.2								
GERES	**GERESS Array B**	**148.09**	**345**	PKPbc		**PKPbc**		**05 35 11.1**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=27,slow=0.6,SNR=5.2								

*IDC **21** 05:27:44.9±0.8, 22°.71S×175°.31W, h0km, mb4.2/12, mbtmp4.2/13, ML3.8/1, MS3.5/5, Error ellipse: s-maj=27.1km s-min=20.2km az=122.0*

*NEIC **21** 05:27:44.5±2.2, 22°.6S±0°.2×174°.9W±0°.1, h10km±1km, mb4.5/11, Error ellipse: s-maj=27.2km s-min=16.6km az=166.0*

ISC 21 05:27:45.1±0.5, 22°.74S±0°.09×174°.92W±0°.08, h10km, n36, σ1s68/31, mb4.4/18, MS3.5/5, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.92**	**53**			**Pn**		**05 29 10.6**	**-2.4**
MSVF	**Nonsavu**	**8.27**	**306**	Pn		**Pn**		**05 29 46.9**	**+1.6**
	1.3nm,0.3s,baz=130,slow=13,SNR=9.1								
MSVF	**Nonsavu**	**8.27**	**306**			Pn		05 29 50.9	+5.6

AFI	**Afiamalu**	**9.28**	**19**	Pn		**Pn**	**05 29 58.3**	**-0.8**
	8.4nm,0.3s,baz=152,slow=9.5,SNR=4.1							
RAR	**Rarotonga**	**14.13**	**87**	Pn		**Pn**	**05 31 03.5**	**-2.0**
URZ	**Urewera**	**16.91**	**202**	Pn		**Pn**	**05 31 42.7**	**+0.8**
	0.4nm,0.3s,baz=157,slow=7.9,SNR=4.0							
URZ				Sn		Sn	05 34 32.6	-17
	0.5nm,0.3s,baz=130,slow=21,SNR=5.7							
	4.1nm,0.8s							
PPT	**Papeete**	**24.32**	**82**	LR		LR	05 40 44.6	
	comp=Z,159nm,19.2s,baz=270,slow=32							
CTAO	**Charters Tower**	**36.18**	**267**	P		**P**	**05 34 46.2**	**-1.9**
CTAO				IAmb		IAmb	05 34 47.7	
	comp=Z,10nm,0.9s							
STKA	**Stephens Creek**	**39.48**	**247**	P		**P**	**05 35 14.5**	**-1.4**
	comp=Z,1.8nm,0.8s,baz=134,slow=11,SNR=4.4							
	comp=Z,1.8nm,0.8s							
COEN	**Coen**	**40.61**	**275**	P		**P**	**05 35 24.9**	**-0.6**
COEN				IAmb		IAmb	05 35 38.3	
	comp=Z,19nm,1.5s							
AS31	**Alice Springs**	**46.84**	**258**	P		**P**	**05 36 14.2**	**-1.4**
AS31				IAmb		IAmb	05 36 16.1	
	comp=Z,2.2nm,0.8s							
ASAR	**Alice Springs**	**46.84**	**258**	P		**P**	**05 36 13.7**	**-1.9**
	comp=Z,5.5nm,0.8s,baz=93,slow=7.9,SNR=54							
ASAR				LR		LR	05 55 48.3	
	comp=Z,100nm,19.1s,baz=108,slow=36							
	comp=Z,5.5nm,0.8s							
ASAR	**Alice Springs**	**46.84**	**258**	P		**P**	**05 36 14.5**	**-1.1**
WR8	**Warramunga Arr**	**47.02**	**263**	P		**P**	**05 36 14.3**	**-2.6**
WB0	**Warramunga Arr**	**47.16**	**264**	P		**P**	**05 36 15.5**	**-2.6**
WRA	**Warramunga Arr**	**47.16**	**263**	P		**P**	**05 36 15.8**	**-2.3**
	comp=Z,4.2nm,0.7s,baz=101,slow=8.1,SNR=26							
	comp=Z,4.2nm,0.7s							
WRA	**Warramunga Arr**	**47.16**	**263**	P		**P**	**05 36 16.1**	**-2.1**
FORT	**Forrest**	**51.09**	**248**	P		**P**	**05 36 45.9**	**-2.2**
FORT				IAmb		IAmb	05 37 10.5	
	comp=Z,6.2nm,1.1s							
KNRA	**Kununurra**	**53.39**	**267**	P		**P**	**05 37 04.5**	**-0.9**
KNRA				IAmb		IAmb	05 37 07.5	
	comp=Z,5.7nm,0.9s							
VNDA	**Vanda**	**55.96**	**186**	P		**P**	**05 37 24.7**	**+1.6**
	comp=Z,1.0nm,0.8s,baz=28,slow=6.2,SNR=4.1							
	comp=Z,1.0nm,0.8s							
VNDA	**Vanda**	**55.96**	**186**	IAmb		IAmb	05 37 36.7	
	comp=Z,3.0nm,1.1s							
KAPI	**Kappang**	**65.34**	**275**	LR		LR	06 07 24.9	
	comp=Z,33nm,18.2s,baz=169,slow=37							
QSPA	**Soh Pole Qui**	**67.34**	**180**	P		**P**	**05 38 41.4**	**+1.2**
	comp=Z,1.8nm,0.9s,baz=67,slow=8.6,SNR=3.7							
	comp=Z,1.8nm,0.9s							
QSPA	**South Pole Qui**	**67.34**	**180**	P		**P**	**05 38 40.7**	**+0.5**
MJAR	**Matsushiro Arr**	**73.72**	**322**	P		**P**	**05 39 18.9**	**-0.4**
	comp=Z,1.4nm,0.5s,baz=163,slow=5.0,SNR=4.9							
	comp=Z,1.4nm,0.5s							
MAW	**Mawson**	**80.42**	**199**	P		**P**	**05 39 57.3**	**+0.7**
	comp=Z,2.6nm,0.7s,baz=138,slow=8.5,SNR=3.9							
	comp=Z,2.6nm,0.7s							
KSRS	**Korea Array**	**80.47**	**317**	LR		LR	06 11 06.4	
	comp=Z,16nm,20.4s,baz=15,slow=32							
NVAR	**Mina Array Bea**	**80.73**	**42**	P		**P**	**05 40 01.6**	**+2.7**
	comp=Z,0.6nm,0.8s,baz=215,slow=7.5,SNR=6.7							
	comp=Z,0.6nm,0.8s							
USRK	**Ussuriysk Ar.**	**82.44**	**325**	P		**P**	**05 40 07.3**	**-0.2**
	comp=Z,4.1nm,0.8s,baz=127,slow=5.0,SNR=4.2							
	comp=Z,4.1nm,0.8s							
K15K	**Wolf Creek Mou**	**85.42**	**6**	P		**P**	**05 40 23.0**	**+0.7**
K15K				IAmb		IAmb	05 40 34.8	
	comp=Z,5.6nm,1.1s							
TXAR	**Lajitas Array**	**85.88**	**56**	P		**P**	**05 40 27.6**	**+2.0**
	comp=Z,0.5nm,0.9s,baz=239,slow=5.7,SNR=2.9							
	comp=Z,0.5nm,0.9s							
STLK	**Strandline Lak**	**85.98**	**11**	P		**P**	**05 40 25.4**	**+0.2**
ILAR	**Eielson Array**	**89.89**	**12**	P		**P**	**05 40 45.9**	**+2.1**
	comp=Z,1.7nm,1.1s,baz=227,slow=4.9,SNR=7.6							
	comp=Z,1.7nm,1.1s							
CMAR	**Chiang Mai Arr**	**93.56**	**288**	P		**P**	**05 41 03.3**	**+1.4**
	comp=Z,0.9nm,0.3s,baz=122,slow=3.2,SNR=14							
CMAR				LR		LR	06 22 27.5	
	comp=Z,15nm,20.0s,baz=180,slow=35							
	comp=Z,0.9nm,0.3s							
AKASG	**Malin Array Be**	**146.34**	**332**	PKPbc		**PKPab**		**05 47 26.3**	**-0.5**
	comp=Z,7.7nm,0.6s,baz=42,slow=4.2,SNR=23								
BRTR	**Keskin Array B**	**150.47**	**312**	PKPbc		**PKiKP**		**05 47 37.5**	**-0.7**
	comp=Z,1.7nm,0.9s,baz=104,slow=4.0,SNR=8.9								

IDC 21 05:30:45.9±2.8, 7°.57S×129°.12E, h0km, mb3.3/1, mbtmp3.4/3, ML3.7/2, Error ellipse: s-maj=270.5km s-min=33.6km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.30**	**158**	Pn		Pn		05 33 55.7	-0.4
	0.5nm,0.3s,baz=335,slow=13,SNR=14								
WRA				Sn		Sn		05 36 22.1	-2.8
	1.0nm,0.3s,baz=333,slow=22,SNR=6.5								
	0.4nm,0.3s								
ASAR	**Alice Springs**	**16.65**	**165**	Pn		Pn		05 34 41.3	+0.4
	0.1nm,0.3s,baz=346,slow=14,SNR=9.0								
	0.6nm,0.5s								
MKAR	**Makanchi Array**	**68.22**	**327**	P		P		05 41 48.4	0.0
	0.2nm,0.6s,baz=114,slow=8.2,SNR=2.2								
	0.2nm,0.6s								

*JMA **21** 05:40:32.3±0.3, 40°.3N±0°.8×14°.4E±°, h19km, MV3.1/31, FAR E OFF SANRIKU*

*IDC **21** 05:40:35.9±17.0, 40°.56N×142°.89E, h0km, mb3.7/3, mbtmp3.6/4, ML2.1/1, MS2.3/1, Error ellipse: s-maj=345.1km s-min=46.1km az=101.0*

ISC 21 05:40:32.5±1.5, 40°.36N±0°.08×143°.7E±0°.1, h16km, n21, σ0s76/20, mb3.5/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.50**	**254**	P		**Pn**		**05 40 57.9**	**-0.8**
JKEN	**Kujiedanarisaw**	**1.56**	**265**	P		**Pn**		**05 40 59.1**	**-0.5**
MIYJ	**Miyakonagasawa**	**1.67**	**243**	P		**Pn**		**05 41 00.4**	**-0.7**
JANG	**Nango**	**1.70**	**271**	P		**Pn**		**05 41 00.7**	**-0.8**
JOM	**Ohasama**	**2.08**	**246**	P		**Pn**		**05 41 06.9**	**+0.2**
JTM	**Tenmabayashi**	**2.08**	**283**	*eP*		**Pn**		**05 41 07.3**	**+0.6**
JCH	**Churui**	**2.27**	**353**	P		**Pn**		**05 41 09.5**	**+0.1**
JCH				*eS*		**Sn**		**05 41 37.0**	**0.0**
JOT	**Ohata**	**2.29**	**297**	*eP*		**Pn**		**05 41 09.3**	**-0.2**
JMK	**Ichinoseki**	**2.40**	**235**	P		**Pn**		**05 41 10.5**	**-0.6**
JAK	**Akkeshi**	**2.73**	**15**	*eP*		**Pn**		**05 41 16.0**	**+0.4**
JAK				*eS*		**Sn**		**05 41 48.3**	**0.0**
JAR	**Ashorobuto**	**2.94**	**0**	*eS*		**Sn**		**05 41 52.3**	**-1.1**
JYK	**Kaneyama**	**2.98**	**242**	P		**Pn**		**05 41 19.8**	**+0.7**
NEM2	**Nemuro 2**	**3.35**	**26**	P		**Pn**		**05 41 24.1**	**-0.1**
NEM2				*eS*		**Sn**		**05 42 01.7**	**-1.9**
MJAR	**Matsushiro Arr**	**5.78**	**230**	Pn		**Pn**		**05 41 58.1**	**+0.5**
	0.1nm,0.3s,baz=41,slow=11,SNR=5.1								
	1.5nm,0.3s								
KSRS	**Korea Array**	**12.66**	**262**	LR		LR		05 46 52.5	
	comp=Z,14nm,19.9s,baz=25,slow=31								
H11N2	**WAKE ISLAND Hy**	**28.56**	**129**	T		T		06 16 12.5	
	baz=321,slow=75,SNR=5.4								
H11N1	**WAKE ISLAND Hy**	**28.57**	**129**	T		T		06 16 16.8	
	baz=321,slow=75,SNR=4.7								
H11N3	**WAKE ISLAND Hy**	**28.58**	**129**	T		T		06 16 16.1	
	baz=321,slow=75,SNR=5.2								
ZALV	**Zalesovo Beam**	**41.11**	**310**	P		**P**		**05 48 15.6**	**+0.2**
	0.6nm,0.6s,baz=97,slow=12,SNR=2.5								
	0.6nm,0.6s								
MKAR	**Makanchi Array**	**43.98**	**300**	P		**P**		**05 48 39.4**	**+0.6**
	0.5nm,0.8s,baz=80,slow=7.9,SNR=3.8								
	0.5nm,0.8s								
KURBB	**Kurchatov Arra**	**45.47**	**306**	P		**P**		**05 48 51.5**	**+0.9**
	1.0nm,0.4s,baz=80,slow=8.6,SNR=6.9								
	1.0nm,0.4s								

*IDC **21** 05:44:40.5±1.6, 18°.38N×81°.71E, h0km, mb3.7/4, mbtmp3.8/6, ML4.2/2, Error ellipse: s-maj=52.4km s-min=21.2km az=80.0*

*NDI **21** 05:44:44.2±4.1, 18°.42N×82°.10E, h8km±20km, ML4.1, Presumed earthquake*

ISC 21 05:44:42.7±0.8, 18°.70N±0°.05×82°.24E±0°.04, h10km, n25, σ2s90/34, mb3.7/4, Southern India

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAGD	**RAYAGADA**	**1.27**	**65**	*eP*		**Pg**		**05 45 08.0**	**+0.8**
RAGD				*eS*		**Sg**		**05 45 24.9**	**+1.2**
RAGD				IAML				05 45 27.2	
	comp=E,1µm,0.3s								
RAGD				IAML				05 45 27.4	
	comp=N,2µm,0.4s								
VIS	**Vishakhapatnam**	**1.42**	**133**	*eP*		**Pn**		**05 45 08.9**	**+0.3**
VIS				*eS*		**Sn**		**05 45 27.1**	**-0.3**
VIS				IAML				05 45 32.6	
	comp=N,8µm,0.2s								
VIS				IAML				05 45 33.0	
	comp=E,9µm,0.3s								
JHSG	**JHARSUGUGA**	**3.37**	**25**	*eP*		**Pb**		**05 45 41.9**	**-0.6**
JHSG				*eS*		**Sb**		**05 46 23.9**	**+0.3**
JHSG				IAML				05 46 35.0	
	comp=N,891nm,0.2s								
JHSG				IAML				05 46 38.8	
	comp=E,790nm,0.3s								
BLSP	**Bilaspur**	**3.38**	**359**	*eP*		**Pb**		**05 45 42.1**	**-0.6**
BLSP				*eS*		**Sb**		**05 46 24.3**	**+0.3**
BLSP				IAML				05 46 30.5	
	comp=N,764nm,0.2s								
BLSP				IAML				05 46 31.0	
	comp=E,881nm,0.3s								
BWNR	**Bhubaneshwar**	**3.71**	**65**	*eP*		**Pb**		**05 45 46.7**	**-1.7**
BWNR				*eS*		**Sb**		**05 46 31.5**	**-2.0**
BWNR				IAML				05 46 41.6	
	comp=E,533nm,0.7s								
BWNR				IAML				05 46 42.5	
	comp=N,467nm,0.6s								
NGP	**Nagpur**	**3.88**	**310**	*eP*		**Pn**		**05 45 44.2**	**+1.8**
NGP				*eS*		**Sn**		**05 46 29.2**	**+1.1**
NGP				IAML				05 46 30.7	
	comp=N,170nm,0.3s								
NGP				IAML				05 46 30.8	
	comp=E,198nm,0.2s								
AKL	**Akola**	**5.31**	**293**	*eP*		**Pn**		**05 46 01.6**	**-0.6**
AKL				*eS*		**Sn**		**05 46 59.5**	**-3.9**
MDRS	**Chennai**	**5.92**	**199**	*eP*		**Pn**		**05 46 10.6**	**+0.1**
MDRS				*ex*		x		05 47 17.0	
MDRS				IAML				05 47 23.7	
	comp=N,816nm,0.4s								
MDRS				IAML				05 47 24.2	
	comp=E,729nm,0.3s								
NRDN	**NARMADA NAGAR**	**6.21**	**311**	*eP*		**Pn**		**05 46 17.3**	**+2.9**
NRDN				*eS*		**Sn**		**05 47 25.9**	**+0.4**
GAYA	**Gaya**	**6.68**	**24**	*eP*		**Pn**		**05 46 24.5**	**+3.5**
KOLN	**Koldanda**	**9.11**	**8**	Pn		**Pn**		**05 46 53.9**	**-0.6**
	baz=10,slow=0.0								
KOLN				Sn		**Sn**		**05 48 32.8**	**-4.5**
	baz=10,slow=0.0								
PKI	**Pulchoki**	**9.30**	**18**	Pn		**Pn**		**05 46 58.3**	**+1.1**
	baz=20,slow=0.0								
PKI				Sn		**Sn**		**05 48 38.7**	**-3.3**
	comp=E,37nm,0.5s,baz=20,slow=0.0								
PYUN	**Piuthan**	**9.38**	**4**	Pn		**Pn**		**05 46 57.8**	**-0.4**
	baz=6.7,slow=0.0								
GKN	**Gorkha**	**9.52**	**13**	Pn		**Pn**		**05 47 00.1**	**+0.1**
	baz=15,slow=0.0								
KOD	**Kodaikanal**	**9.60**	**209**	*eP*		**Pn**		**05 46 57.9**	**-3.5**
KOD				*eS*		Sn		05 48 36.9	-13
JIRN	**Jiri**	**9.63**	**21**	Pn		**Pn**		**05 47 03.2**	**+1.5**
	baz=24,slow=0.0								
DANN	**Dangsing**	**9.71**	**8**	Pn		**Pn**		**05 47 02.8**	**+0.1**
	baz=10,slow=0.0								
GUN	**Gumba**	**9.76**	**19**	Pn		**Pn**		**05 47 04.4**	**+0.9**
	baz=22,slow=0.0								
GUN				Sn		**Sn**		**05 48 50.4**	**-3.0**
	comp=E,30nm,0.4s,baz=22,slow=0.0								
AJM	**Ajmer**	**10.41**	**319**	IAML				05 50 09.4	
	comp=N,119nm,0.4s								
AJM				IAML				05 50 09.8	
	comp=E,168nm,0.5s								
PALK	**Pallekele**	**11.46**	**188**	Pn		Pn		05

TBGR *i* Pg **Pb** **06 12 03.0 +2.9**
7.1nm,0.4s
TBGR *e*Sn **Sn** **06 12 36.0 -1.3**
19nm,0.3s
BLSR **Buluus** **4.32 167** *e*Pn **Pn** **06 11 56.5 +0.2**
BLSR *i* Pn **Pn** **06 11 56.5 +0.2**
BLSR *e*Pn **Pn** **06 11 56.5 +0.2**
BLSR *i* Pg **Pb** **06 12 09.1 +2.5**
7.4nm,0.5s
BLSR *e*Sn **Sn** **06 12 45.7 -0.9**
21nm,0.7s
Y453 **5.51 14** *i* Pn **Pn** **06 12 13.0 +0.5**
Y453 *i* Pg Pb 06 12 31.4 +4.7
33nm,0.4s
Y453 *e*Sn **Sn** **06 13 15.2 -0.6**
Y453 *e*Sn **Sn** **06 13 15.2 -0.6**
Y453 *e*Sg **Sg** **06 13 44.3 -2.9**
137nm,0.5s
Y771 **5.81 356** *e*Pn **Pb** **06 12 31.0 -0.8**
1.6nm,0.2s
Y771 *e*Sn **Sb** **06 13 46.0 +4.7**
158nm,0.4s
OLMR **Olekminsk** **5.98 213** *e*Pn **Pn** **06 12 19.1 +0.1**
OLMR *i* Pg Pb 06 12 40.4 +5.5
2.8nm,0.4s
OLMR *e*Sn **Sn** **06 13 25.2 -2.4**
5.5nm,0.2s
TIXI **Tiksi** **6.16 6** Pn **Pn** **06 12 22.1 +0.7**
3.6nm,0.3s,baz=199,slow=8.9,SNR=15
TIXI Sn **Sn** **06 13 29.5 -2.2**
47nm,0.3s,baz=284,slow=19,SNR=18
TIXI Lg Lg 06 14 04.4
7.9nm,0.3s,baz=100,slow=22,SNR=3.3
TIXI LR LR 06 15 11.0
comp=Z,60nm,18.7s,baz=354,slow=43
11nm,0.3s
TIXI **Tiksi** **6.16 6** *i* Pn **Pn** **06 12 21.9 +0.6**
0.1nm,0.7s
TIXI *e*Sn **Sn** **06 13 29.5 -2.2**
0.8nm,0.7s
DEPR **Deputatskiy** **6.28 47** *e*Pn **Pn** **06 12 25.2 +2.1**
DEPR *i* Pg Pb 06 12 45.3 +5.4
3.3nm,0.5s
DEPR *e*Sg **Sg** **06 14 06.8 -5.1**
11nm,0.9s
Y860 **6.34 7** *i* Pn **Pn** **06 12 24.9 +1.0**
26nm,0.1s
Y860 *e*Sn **Sn** **06 13 35.4 -0.8**
4.9nm,0.0s
MOMR **Moma** **6.69 75** *e*Pn **Pn** **06 12 29.6 +0.8**
1.0nm,0.9s
MOMR *e*Sn **Sn** **06 13 42.8 -2.2**
MOMR *e*Sn **Sn** **06 13 42.8 -2.2**
MOMR *e*Sg **Sg** **06 14 20.5 -4.6**
9.5nm,1.0s
YCRN **Chernyshevskiy** **6.78 255** *e*Pn **Pn** **06 12 30.6 +0.5**
YCRN *i* Pg Pb 06 12 54.6 +6.2
4.2nm,0.7s
YCRN *e*Sn **Sn** **06 13 44.6 -2.6**
YCRN *e*Sn **Sn** **06 13 44.6 -2.6**
YCRN *e*Sg **Sg** **06 14 25.9 -2.2**
6.5nm,0.3s
ALDR **Aldan** **7.02 187** *e*Pn **Pn** **06 12 35.9 +2.6**
4.3nm,0.3s
ALDR *e*Sn **Sn** **06 13 50.4 -2.7**
11nm,0.2s
CGD **Chagda** **7.05 164** *i* Pn **Pn** **06 12 34.5 +0.8**
3.7nm,0.2s
CGD *e*Sn **Sn** **06 13 52.1 -1.6**
39nm,0.5s
SEY **Seymchan** **11.34 92** Pn **Pn** **06 13 29.8 -2.6**
0.7nm,0.3s,baz=350,slow=19,SNR=4.6
SEY Sn **Sn** **06 15 34.6 -4.3**
0.2nm,0.3s,baz=4.2,slow=23,SNR=1.7
SEY Lg Lg 06 16 43.4
0.2nm,0.3s,baz=2.9,slow=13,SNR=5.0
1.8nm,0.3s
MA2 **Magadan** **12.46 108** Pn **Pn** **06 13 47.6 0.0**
0.2nm,0.3s,baz=307,slow=20,SNR=1.1
MA2 Lg Lg 06 17 22.7
0.8nm,0.3s,baz=234,slow=12,SNR=4.0
1.5nm,0.4s
NRIK **Noril'sk** **15.36 302** Pn **Pn** **06 14 28.0 +0.9**
0.6nm,0.3s,baz=108,slow=13,SNR=3.6
NRIK Sn **Sn** **06 17 10.3 -6.7**
0.6nm,0.3s,baz=74,slow=15,SNR=2.7
NRIK Lg Lg 06 18 42.3
1.6nm,0.3s,baz=0.0,slow=20,SNR=5.6
1.5nm,0.4s
KLR **Kul'dur** **16.57 169** Pn **Pn** **06 14 46.0 +3.3**
0.2nm,0.3s,baz=20,slow=11,SNR=4.2
KLR Lg Lg 06 19 24.1
0.1nm,0.3s,baz=258,slow=19,SNR=2.0
TLY **Talaya** **18.29 232** P **Pn** **06 15 05.2 +1.0**
3.1nm,0.4s,baz=43,slow=19
SONM **Songino Array** **20.86 222** P **P** **06 15 34.0 +1.5**
1.1nm,0.8s,baz=15,slow=9.8,SNR=5.4
1.1nm,0.8s
USRK **Ussuriysk Ar.** **21.59 170** P **P** **06 15 40.0 -0.2**
1.9nm,0.6s,baz=43,slow=8.7,SNR=1.2
1.9nm,0.6s
ASAJ **Asahikawa** **23.17 150** P **P** **06 15 56.8 -0.2**
2.7nm,0.5s,baz=302,slow=19,SNR=2.1
2.7nm,0.5s
ZALV **Zalesovo Beam** **23.67 261** P **P** **06 16 02.1 +0.2**
0.8nm,0.4s,baz=34,slow=6.5,SNR=5.9
ZALV S **S** **06 20 20.1 +3.8**
0.4nm,0.4s,baz=48,slow=26,SNR=3.7
0.8nm,0.4s
KURBB **Kurchatov Arra** **28.73 262** P **P** **06 16 48.1 +0.4**
1.8nm,0.6s,baz=44,slow=9.5,SNR=25
1.8nm,0.6s
MKAR **Makanchi Array** **30.22 254** P **P** **06 17 00.9 -0.1**
3.5nm,0.5s,baz=43,slow=7.5,SNR=50
3.5nm,0.5s
BVAR **Borovoye Array** **30.32 273** P **P** **06 17 01.7 -0.1**
0.4nm,0.5s,baz=67,slow=11,SNR=1.5
0.4nm,0.5s
ILAR **Eielson Array** **33.54 51** P **P** **06 17 31.0 +1.1**
0.8nm,0.9s,baz=308,slow=8.6,SNR=13
0.8nm,0.9s
ARCES **ARCESS Array B** **34.69 323** P **P** **06 17 41.4 +1.6**
6.7nm,1.1s,baz=42,slow=6.7,SNR=2.3
6.7nm,1.1s
FINES **FINESS Array B** **40.55 313** P **P** **06 18 29.9 +0.5**
0.9nm,0.5s,baz=46,slow=8.2,SNR=6.4
0.9nm,0.5s
YKA **Yellowknife Ar** **44.49 36** P **P** **06 19 00.9 -0.5**
0.1nm,0.4s,baz=335,slow=8.8,SNR=4.5
0.1nm,0.4s
NOA **NORSAR Array B** **45.05 322** P **P** **06 19 06.9 +0.9**
0.7nm,0.8s,baz=36,slow=6.6,SNR=2.6
0.7nm,0.8s
HFS **Hagfors** **45.16 320** P **P** **06 19 08.7 +1.9**
2.3nm,0.9s,baz=45,slow=6.3,SNR=4.7
2.3nm,0.9s
AKASG **Malin Array Be** **48.22 302** P **P** **06 19 31.9 +1.1**
0.5nm,0.4s,baz=35,slow=9.1,SNR=4.9
0.5nm,0.4s
KBZ **Khabaz** **48.88 287** P **P** **06 19 36.9 +0.9**
0.9nm,0.6s,baz=350,slow=9.4,SNR=4.2
0.9nm,0.6s
BBB **Bella Bella** **49.42 52** LR LR 06 42 28.3
comp=Z,103nm,18.2s,baz=296,slow=38
GERES **GERESS Array B** **54.95 312** P **P** **06 20 21.8 +0.5**
0.3nm,0.6s,baz=40,slow=6.6,SNR=1.8
0.3nm,0.6s
SCHQ **Schefferville** **59.47 9** P **P** **06 20 52.8 -0.3**
3.0nm,1.1s,baz=59,slow=3.7,SNR=1.2
3.0nm,1.1s
ESDC **Sonseca Array** **68.41 321** P **P** **06 21 53.0 +0.9**
0.4nm,0.5s,baz=27,slow=5.8,SNR=2.5
0.4nm,0.5s
WRA **Warramunga Arr** **85.42 173** P **P** **06 23 27.1 -0.8**
0.3nm,0.7s,baz=2.9,slow=5.1,SNR=2.2
0.3nm,0.7s
ASAR **Alice Springs** **89.10 174** P **P** **06 23 46.3 +0.6**
0.2nm,0.7s,baz=353,slow=7.7,SNR=1.9
0.2nm,0.7s
TORD **Torodi Ar. Bea** **91.62 307** P **P** **06 23 57.4 -0.3**
0.2nm,0.5s,baz=356,slow=4.4,SNR=2.1
0.2nm,0.5s

*IDC **21** 06:18:13.2±2.1, 12°.06S×166°.76E, h203km±18km, mb3.8/23, mbtmp4.3/24, MS3.5/1, Error ellipse: s-maj=14.4km s-min=11.5km az=103.0*
*NEIC **21** 06:18:13.4±1.1, 12°.0S±0°.1×166°.8E±0°.1, h206km±8km, mb4.4/22, Error ellipse: s-maj=19.1km s-min=14.4km az=74.0*

ISC 21 06:18:14.7±0.4, 12°.10S±0°.07×166°.77E±0°.09, h220km, n62, σ0s95/67, mb4.2/34, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**3.35**	**173**		**Pn**	**Pn**	**06 19 07.6**	**-2.0**
HNR	**Honiara**	**7.21**	**291**	P	**Pn**	**Pn**	**06 19 57.4**	**-0.4**
	2.0nm,0.6s,baz=27,slow=2.3,SNR=1.6							
HNR	**Honiara**	**7.21**	**291**	Pn	**Pn**	**Pn**	**06 19 54.5**	**-3.4**
DZM	**Mont Dzumac**	**9.92**	**182**	P	**Pn**	**Pn**	**06 20 33.9**	**+1.1**
	5.9nm,0.5s,baz=338,slow=19,SNR=11							
DZM				S		**S**	**06 22 22.5**	**-1.7**
	3.9nm,0.6s,baz=321,slow=21,SNR=1.7							
MSVF	**Nonsavu**	**12.26**	**119**	P		**P**	**06 21 05.5**	**-0.6**
	7.3nm,0.2s,baz=264,slow=10,SNR=17							
EIDS	**Eidsvold**	**19.84**	**226**			**P**	**06 22 30.2**	**+1.1**
CTA	**Charters Tower**	**21.23**	**245**	P		**P**	**06 22 43.9**	**0.0**
	15nm,0.9s,baz=67,slow=12,SNR=9.9							
	15nm,0.9s							
CTAO	**Charters Tower**	**21.23**	**245**			**P**	**06 22 43.9**	**0.0**
CTAO					IAmb	IAmb	06 22 45.5	
	comp=Z,15nm,0.8s							
ARMA	**Armidale**	**23.00**	**215**	P		**P**	**06 23 01.2**	**+0.6**
ARMA					IAmb	IAmb	06 23 04.8	
	comp=Z,5.2nm,0.8s							
STKA	**Stephens Creek**	**30.40**	**226**	P		**P**	**06 24 06.9**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=68,slow=11,SNR=2.9							
	comp=Z,0.6nm,0.4s							
WB0	**Warramunga Arr**	**32.01**	**252**	P		**P**	**06 24 19.8**	**-1.1**
WRA	**Warramunga Arr**	**32.09**	**252**	P		**P**	**06 24 20.8**	**-0.7**
	comp=Z,3.3nm,0.8s,baz=78,slow=9.6,SNR=20							
WRA					PcP	**PcP**	**06 27 05.5**	**0.0**
	comp=Z,0.6nm,0.7s,baz=70,slow=3.1,SNR=3.5							
	comp=Z,3.3nm,0.8s							
WRA	**Warramunga Arr**	**32.09**	**252**	P		**P**	**06 24 21.1**	**-0.4**
AS31	**Alice Springs**	**33.24**	**245**			**P**	**06 24 30.9**	**-0.5**
ASAR	**Alice Springs**	**33.24**	**245**	P		**P**	**06 24 30.6**	**-0.8**
	comp=Z,5.0nm,0.7s,baz=69,slow=9.8,SNR=55							
ASAR					PcP	**PcP**	**06 27 08.3**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=76,slow=2.7,SNR=2.2							
ASAR					ScP	**ScP**	**06 30 35.4**	**+3.3**
	comp=Z,1.4nm,1.1s,baz=79,slow=2.0,SNR=5.4							
	comp=Z,5.0nm,0.7s							
KNRA	**Kununurra**	**37.03**	**260**			**P**	**06 25 03.6**	**-0.2**
KNRA					IAmb	IAmb	06 25 04.7	
	comp=Z,11nm,1.1s							
FITZ	**Fitzroy Crossi**	**40.09**	**256**	P		**P**	**06 25 28.8**	**-0.4**
	comp=Z,4.4nm,0.8s,baz=115,slow=5.6,SNR=11							
FITZ					PcP	**PcP**	**06 27 30.8**	**+1.3**
	comp=Z,2.5nm,0.7s,baz=156,slow=5.6,SNR=3.5							
FITZ					LR	LR	06 41 06.5	
	comp=Z,65nm,19.1s,baz=151,slow=34							
	comp=Z,4.4nm,0.8s							
JGF	**Kuroka**	**55.00**	**331**	P		**P**	**06 27 22.7**	**-0.8**
JGF					IAmb	IAmb	06 28 05.2	
	comp=Z,26nm,1.5s							
JMN	**Monobe**	**55.29**	**327**	P		**P**	**06 27 26.2**	**+0.5**
MJAR	**Matsushiro Arr**	**55.36**	**332**	P		**P**	**06 27 25.2**	**-0.9**
	comp=Z,1.0nm,0.3s,baz=167,slow=8.4,SNR=4.4							
	comp=Z,1.0nm,0.3s							
JTM	**Tenmabayashi**	**57.75**	**337**	P		**P**	**06 27 41.9**	**-0.8**
KSRS	**Korea Array**	**61.31**	**325**	P		**P**	**06 28 06.8**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=136,slow=7.0,SNR=5.8							
	comp=Z,1.5nm,0.7s							
USRK	**Ussuriysk Ar.**	**64.33**	**333**	P		**P**	**06 28 27.5**	**+0.6**
	comp=Z,5.0nm,0.9s,baz=134,slow=11,SNR=4.7							
	comp=Z,5.0nm,0.9s							
PETK	**Petropavlovsk-**	**65.41**	**354**	P		**P**	**06 28 33.9**	**+0.2**
	comp=Z,2.8nm,0.7s,baz=134,slow=6.4,SNR=4.2							
	comp=Z,2.8nm,0.7s							
PETK	**Petropavlovsk-**	**65.41**	**354**	P		**P**	**06 28 33.1**	**-0.6**
VNDA	**Vanda**	**65.46**	**181**	P		**P**	**06 28 34.5**	**+0.8**
	comp=Z,1.5nm,0.7s,baz=357,slow=6.9,SNR=10							
	comp=Z,1.5nm,0.7s							
VNDA	**Vanda**	**65.46**	**181**	P		**P**	**06 28 34.8**	**+1.1**
CASY	**Casey**	**65.77**	**202**	P		**P**	**06 28 35.8**	**0.0**
CMAR	**Chiang Mai Arr**	**73.45**	**294**	P		**P**	**06 29 24.9**	**+1.2**
	comp=Z,1.0nm,0.3s,baz=118,slow=4.7,SNR=6.4							
	comp=Z,1.0nm,0.3s							
LZDM	**Lanzhou Array**	**76.25**	**312**	P		**P**	**06 29 41.3**	**+1.5**
	comp=Z,1.0nm,0.3s,baz=106,slow=11,SNR=1.2							
	comp=Z,1.0nm,0.3s							
P16K	**Nushagak River**	**76.42**	**18**	P		**P**	**06 29 38.4**	**-1.2**
OHAK	**Old Harbor**	**76.52**	**21**	P		**P**	**06 29 39.9**	**-0.3**
OHAK					IAmb	IAmb	06 29 56.6	
	comp=Z,12nm,1.4s							
N15K	**Kwethluk River**	**76.76**	**16**	P		**P**	**06 29 41.2**	**-0.3**
N15K					IAmb	IAmb	06 30 15.6	
	comp=Z,20nm,1.4s							
O16K	**Kokwok River B**	**76.85**	**17**	P		**P**	**06 29 40.2**	**-1.8**
O16K					IAmb	IAmb	06 30 07.2	
	comp=Z,9.0nm,1.4s							
K13K	**Kusilvak Mount**	**77.13**	**13**	P		**P**	**06 29 43.6**	**+0.1**
K13K					IAmb	IAmb	06 29 44.5	
	comp=Z,4.9nm,0.8s							
P18K	**Big Mountain,**	**77.56**	**19**	P		**P**	**06 29 45.0**	**-1.1**
P18K					IAmb	IAmb	06 29 46.1	
	comp=Z,5.4nm,0.8s							
M16K	**Timber Creek**	**77.78**	**16**	P		**P**	**06 29 47.3**	**0.0**
M16K					IAmb	IAmb	06 29 48.9	
	comp=Z,17nm,1.0s							
QSPA	**South Pole Qui**	**77.91**	**180**	P		**P**	**06 29 48.8**	**+0.6**
	comp=Z,4.5nm,0.7s,baz=324,slow=1.1,SNR=34							
	comp=Z,4.5nm,0.7s							
QSPA	**South Pole Qui**	**77.91**	**180**	P		**P**	**06 29 48.4**	**+0.2**
QSPA					IAmb	IAmb	06 29 50.6	
	comp=Z,9.8nm,1.0s							
J16K	**Anvik River**	**79.25**	**14**	P		**P**	**06 29 55.3**	**+0.1**
J16K					IAmb	IAmb	06 29 57.2	
	comp=Z,7.0nm,0.9s							
L19K	**White Mountain**	**79.88**	**17**	P		**P**	**06 29 58.2**	**-0.4**
SONM	**Songino Array**	**80.10**	**324**	P		**P**	**06 30 00.5**	**+0.2**
	comp=Z,1.0nm,0.4s,baz=159,slow=7.9,SNR=6.6							
	comp=Z,1.0nm,0.4s							
YBH	**Yreka Blue Hor**	**83.92**	**45**	P		**P**	**06 30 19.8**	**-0.4**
	comp=Z,0.1nm,0.7s,baz=198,slow=4.8,SNR=4.3							
ILAR	**Eielson Array**	**84.19**	**18**	P		**P**	**06 30 20.4**	**-0.6**
	comp=Z,5.3nm,0.6s,baz=244,slow=5.1,SNR=134							
	comp=Z,5.3nm,0.6s							
NVAR	**Mina Array Bea**	**85.94**	**49**	P		**P**	**06 30 31.1**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=236,slow=7.4,SNR=10							
	comp=Z,1.0nm,0.7s							
ELK	**Elko**	**88.90**	**48**	P		**P**	**06 30 45.1**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=268,slow=6.7,SNR=4.9							
	comp=Z,1.0nm,0.8s							
PDAR	**Pinedale Array**	**93.53**	**47**	P		**P**	**06 31 06.6**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=276,slow=6.9,SNR=2.2							
	comp=Z,0.2nm,0.6s							
MKAR	**Makanchi Array**	**94.97**	**317**	P		**P**	**06 31 12.6**	**+0.4**
	comp=Z,4.7nm,0.7s,baz=92,slow=6.4,SNR=41							
	comp=Z,4.7nm,0.7s							
MKAR	**Makanchi Array**	**94.97**	**317**			**P**	**06 31 12.3**	**0.0**
ZALV	**Zalesovo Beam**	**94.99**	**324**	P		**P**	**06 31 12.0**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=116,slow=3.4,SNR=5.1							
	comp=Z,0.9nm,0.6s							
YKA	**Yellowknife Ar**	**95.45**	**27**	P		**P**	**06 31 12.6**	**-1.4**
	comp=Z,0.3nm,0.6s,baz=267,slow=4.9,SNR=8.7							
	comp=Z,0.3nm,0.6s							
TXAR	**Lajitas Array**	**95.45**	**61**	P		**P**	**06 31 15.3**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=215,slow=4.0,SNR=4.8							
	comp=Z,0.5nm,0.8s							
KURBB	**Kurchatov Arra**	**98.13**	**320**	P		**P**	**06 31 25.6**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=95,slow=3.4,SNR=2.5							
	comp=Z,0.3nm,0.6s							
ARCES	**ARCESS Array B**	**117.60**	**346**	PKP		**PKPdf**	**06 36 33.8**	**-0.1**
	comp=Z,1.8nm,0.5s,baz=49,slow=1.8,SNR=12							
FINES	**FINESS Array B**	**123.11**	**339**	PKP		**PKPdf**	**06 36 44.6**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=35,slow=4.7,SNR=8.7							
NOA	**NORSAR Array B**	**127.97**	**345**	PKP		**PKiKP**	**06 36 54.5**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=28,slow=2.0,SNR=3.5							
HFS	**Hagfors**	**128.08**	**343**	PKP		**PKPdf**	**06 36 54.3**	**0.0**
	comp=Z,1.8nm,0.8s,baz=48,slow=2.1,SNR=1.7							
BRTR	**Keskin Array B**	**130.41**	**312**	PKP		**PKPdf**	**06 36 59.5**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=40,slow=2.5,SNR=1.7							
EKA	**Eskdalemuir Ar**	**136.15**	**352**	PKP		**PKiKP**	**06 37 11.1**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=6.0,slow=2.4,SNR=1.7							
KEST	**Kesra**	**148.86**	**323**	PKPbc		**PKPbc**	**06 37 37.4**	**+0.5**
	comp=Z,5.8nm,0.7s,baz=316,slow=5.4,SNR=4.8							
ESDC	**Sonseca Array**	**151.34**	**345**	PKPbc		**PKiKP**	**06 37 43.1**	**0.0**
	comp=Z,1.8nm,0.8s,baz=25,slow=2.8,SNR=13							
TORD	**Torodi Ar. Bea**	**165.40**	**276**	PKP		**PKPdf**	**06 37 54.5**	**+0.7**
	comp=Z,2.1nm,1.0s,baz=25,slow=3.2,SNR=7.5							

*IDC **21** 06:42:32.6±0.4, 12°.35S×44°.94E, h0km, mb4.6/32, mbtmp4.6/34, ML5.6/3, MS3.9/61, Error ellipse: s-maj=14.8km s-min=12.2km az=69.0*
*BGR **21** 06:42:32.8, 12°.655×45°.06E, h33km, mb5.0, Ms3.9*
*MOS **21** 06:42:32.8±0.8, 12°.30S×44°.87E, h14km, mb5.2/65, MS4.2/4, Error ellipse: s-maj=8.9km s-min=4.2km az=94.1*
*BJI **21** 06:42:32.7, 12°.12S×44°.79E, h7km, mb4.9/29, Ms4.3/1, Ms7 4.2/3*
*NEIC **21** 06:42:34.7±1.4, 12°.33S±0°.08×44°.88E±0°.09, h10km±1km, mb5.0/72, Error ellipse: s-maj=15.2km s-min=13.3km az=258.0*
*GCMT **21** 06:42:38.8±0.3, 12°.47S±0°.02×44°.87E±0°.02, h55km±2km, MW5.0/87, Moment Tensor Solution. s31,c37; s87,c116; Duration: 0 Moment tensor: Scale 10¹⁶Nm; M_{rr}-1.28±.16; $M_{\theta\theta}$0.64±.15; $M_{\phi\phi}$0.63±.14; $M_{r\theta}$-1.10±.09; $M_{\theta\phi}$-3.33±.10; $M_{\phi r}$-0.37±.11; Best double couple: M_o3.63500×10¹⁶ NP1:ϕ_s357.00000°, δ66.00000°, λ-17.00000°. NP2: ϕ_s94.00000°, δ75.00000°, λ-155.00000°. Principal axes: T 4.0220, Plg6.0000°, Azm224.0000°; N -0.7740, Plg61.0000°, Azm124.0000°; P -3.2480, Plg28.0000°, Azm317.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 06:42:34.0±0.3, 12°.35S±0°.04×44°.91E±0°.05, h10km, n481, σ1s20/501, mb5.0/169, MS4.0/62, 40C-50D, Northwest of Madagascar

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**6.56**	**161**	Pn		**Pn**	**06 44 12.0**	**+1.2**
	35nm,0.3s,baz=328,slow=12,SNR=1424							
OPO				Sn		**Sn**	**06 45 19.2**	**-6.6**
	97nm,0.3s,baz=278,slow=14,SNR=26							
OPO	**Ambohidratompo**	**6.56**	**161**	P		**Pn**	**06 44 12.0**	**+1.2**
OPO				S		**Sn**	**06 45 17.7**	**-8.1**
FIRM	**Firavahana**	**6.59**	**164**	P		**Pn**	**06 44 12.5**	**+1.3**
ATG	**Ambohiby**	**6.61**	**169**	P		**Pn**	**06 44 12.7**	**+1.3**
ABPO	**Ambohimpanom**	**7.00**	**162**			**Pn**	**06 44 17.6**	**+0.9**
ABPO	**Ambohimpanom**	**7.00**	**162**	P		**Pn**	**06 44 17.6**	**+0.9**
ABPO	**Ambohimpanom**	**7.00**	**162**	P		**Pn**	**06 44 17.8**	**+1.1**
MDSM	**Mandiavato**	**7.00**	**163**	P		**Pn**	**06 44 18.0**	**+1.2**
MDSM				S		**Sn**	**06 45 30.4**	**-6.3**
AVY	**Angavokely**	**7.09**	**158**	P		**Pn**	**06 44 18.6**	**+0.6**
ABM	**Ambohimiarambe**	**7.76**	**163**	P		**Pn**	**06 44 28.1**	**+0.8**
VOI	**Vohitsoka**	**9.67**	**170**			**Pn**	**06 44 53.9**	**+0.4**
VOI	**Vohitsoka**	**9.67**	**170**	P		**Pn**	**06 44 53.1**	**-0.3**
VOI				S		**Sn**	**06 46 44.3**	**+2.0**
KIBK	**Kibwezi**	**12.05**	**325**			**Pn**	**06 45 24.6**	**-1.3**
KIBK	**Kibwezi**	**12.05**	**325**	P		**Pn**	**06 45 25.7**	**-0.2**
	SNR=10							
FOMA	**Nahampoana Res**	**12.71**	**171**			**Pn**	**06 45 34.8**	**-0.1**
MSEY	**Mahe Island**	**12.94**	**55**			**Pn**	**06 45 37.1**	**-1.0**
MSEY	**Mahe Island**	**12.94**	**55**	P		**Pn**	**06 45 37.1**	**-1.0**
MSEY	**Mahe Island**	**12.94**	**55**	P		**Pn**	**06 45 36.5**	**-1.6**
KMBO	**Kilima Mbogo**	**13.49**	**325**	Pn		**Pn**	**06 45 44.7**	**-1.1**
	baz=157,slow=15							
KMBO				Sn		**Sn**	**06 48 08.2**	**-7.9**
	baz=61,slow=19							
KMBO				LR		LR	06 50 21.0	
	comp=Z,381nm,19.1s,baz=110,slow=35							
KMBO	**Kilima Mbogo**	**13.49**	**325**	*e*P		**Pn**	**06 45 46.2**	**+0.4**
LSZ	**Lusaka**	**16.50**	**258**	Pn		**Pn**	**06 46 24.4**	**-1.4**
	8.6nm,0.3s,baz=82,slow=11,SNR=28							
LSZ				Sn		Sn	06 49 15.6	-14
	3.5nm,0.3s,baz=157,slow=20,SNR=5.9							
LSZ				LR		LR	06 52 36.2	
	comp=Z,798nm,19.1s,baz=89,slow=36							
	27nm,0.5s							
LSZ	**Lusaka**	**16.50**	**258**			**Pn**	**06 46 24.6**	**-1.1**
LSZ	**Lusaka**	**16.50**	**258**	P		**Pn**	**06 46 24.7**	**-1.1**
LSZ				pmax		pmax		
	comp=Z,29nm,0.6s							
LSZ	**Lusaka**	**16.50**	**258**	P		**Pn**	**06 46 24.8**	**-1.0**
LSZ				P		**Pn**	**06 46 24.8**	**-1.0**
LSZ				S		**Sn**	**06 49 29.2**	**0.0**
LSZ				S		**Sn**	**06 49 29.2**	**0.0**
MBAR	**Mbarara**	**18.27**	**309**	P		**Pn**	**06 46 46.8**	**-1.2**
	comp=Z,3.5nm,0.3s,baz=133,slow=10,SNR=22							
MBAR				S		Sn	06 49 58.1	-14
	comp=Z,13nm,0.2s,baz=73,slow=19,SNR=4.4							
MBAR				LR		LR	06 53 44.4	
	comp=Z,407nm,18.8s,baz=136,slow=37							
	comp=Z,7.9nm,0.2s							
MBAR	**Mbarara**	**18.27**	**309**	P		**Pn**	**06 46 47.7**	**-0.2**
MBAR	**Mbarara**	**18.27**	**309**	*e*P		**P**	**06 46 49.9**	**+1.8**
MBAR				pmax		pmax		
	comp=Z,91nm,1.9s							
MBAR	**Mbarara**	**18.27**	**309**	P		**P**	**06 46 48.3**	**+0.2**
MBAR				P		**P**	**06 46 48.3**	**+0.2**
MBAR				S		**S**	**06 50 16.6**	**-0.8**
MBAR				S		**S**	**06 50 16.6**	**-0.8**
LODK	**Lodwar**	**18.32**	**328**	P		**P**	**06 46 51.5**	**+2.9**
	SNR=9.1							
LODK				S		**S**	**06 50 17.9**	**-0.3**
BROLN	**Tlhalogang**	**18.93**	**240**	*i* P		**P**	**06 46 54.1**	**-1.3**
SOOWA	**Sowa**	**19.68**	**243**	*i* P		**P**	**06 47 01.1**	**-2.5**
KSANE	**Kasane**	**19.82**	**252**	*i* P		**P**	**06 47 03.3**	**-1.7**
KHWEE	**KHWEE**	**20.88**	**240**	*i* P		**P**	**06 47 14.8**	**-1.8**
KHWEE	**KHWEE**	**20.88**	**240**	P		**P**	**06 47 15.2**	**-1.4**
LPHEP	**Lephephe**	**21.15**	**236**	*i* P		**P**	**06 47 18.7**	**-0.9**
LPHEP	**Lephephe**	**21.15**	**236**			**P**	**06 47 19.3**	**-0.2**
LPHEP				IAmb		IAmb	06 47 20.5	
	comp=Z,83nm,1.0s							
KDWAN	**Kaudwane**	**22.14**	**238**	*i* P		**P**	**06 47 28.3**	**-1.9**
LBTB	**Lobatse**	**22.17**	**233**	LR		LR	06 56 03.2	
	comp=Z,770nm,20.5s,baz=54,slow=36							
LBTB	**Lobatse**	**22.17**	**233**			**P**	**06 47 29.5**	**-1.0**
LBTB				IAmb		IAmb	06 47 32.6	
	comp=Z,68nm,1.1s							
LBTB	**Lobatse**	**22.17**	**233**	P		**P**	**06 47 29.5**	**-1.0**
LBTB				pmax		pmax		
	comp=Z,68nm,1.1s							
MAKGR	**Makgori**	**23.20**	**232**	*i* P		**P**	**06 47 39.4**	**-1.9**
ATD	**Arta Tunnel**	**23.81**	**355**	LR		LR	06 56 04.6	
	comp=Z,12nm,21.

SNR=6.6
BSY P P 06 49 45.1 +2.0
SNR=6.6
JLN Jalan Bani Buh 37.12 23 P P 06 49 45.8 +0.8
JLN P P 06 49 45.8 +0.8
ARQ Araqi 37.24 18 P P 06 49 46.6 +0.6
ARQ P P 06 49 46.6 +0.6
TRNA Turayna 37.37 9 P P 06 49 48.3 +1.3
WBK Wadi Bani Khal 37.38 22 P P 06 49 48.3 +1.1
WBK P P 06 49 48.3 +1.1
SMDO Samad 37.47 20 P P 06 49 49.0 +1.0
SMDO P P 06 49 49.0 +1.0
HOQ Hoqain 37.72 19 P P 06 49 51.0 +0.9
HOQ P P 06 49 51.0 +0.9
HOQ P P 06 49 52.0 +2.0
SNR=7.8
HOQ P P 06 49 52.0 +2.0
SNR=7.8
WSAR Wadi Sarin 37.84 21 P P 06 49 51.7 +0.7
SOHO SOHO 38.00 17 P P 06 49 53.4 +1.0
SOHO P P 06 49 53.4 +1.0
EDA Edea 38.07 293 P P 06 49 52.2 -1.0
EDA IAmb IAmb 06 49 55.1
comp=Z,29nm,0.9s
ASHO Ashiyiah 38.38 16 P P 06 49 56.7 +1.0
ASHO P P 06 49 56.7 +1.0
HATD Hatta, Dubai 38.54 16 P P 06 49 57.6 +0.7
HATD P P 06 49 57.6 +0.7
MASF Masafi 39.06 16 P P 06 50 02.4 +1.0
MASF P P 06 50 02.4 +1.0
JASK Jask - Hormozg 40.03 18 P P 06 50 10.8 +1.5
PALK Pallekele 40.57 63 LR LR 07 03 50.2
comp=Z,202nm,18.1s,baz=242,slow=32
PALK Pallekele 40.57 63 *i* P P 06 50 11.1 -3.1
EIL Elat 42.86 347 LR LR 07 07 10.4
comp=Z,123nm,20.8s,baz=218,slow=34
HYB Hyderabad 44.49 49 *eP* P 06 50 46.1 +0.2
ASF Jabal al Asfar 44.93 350 LR LR 07 09 35.3
comp=Z,114nm,18.4s,baz=179,slow=36
MMAI Mount Meron Ar 46.01 349 P P 06 50 59.5 +1.6
comp=Z,2.1nm,0.6s,baz=135,slow=7.1,SNR=3.6
MMAI LR LR 07 09 24.7
comp=Z,105nm,20.9s,baz=158,slow=35
comp=Z,2.1nm,0.6s
TORD Torodi Ar. Bea 49.78 299 P P 06 51 28.4 +1.1
comp=Z,13nm,0.9s,baz=138,slow=7.7,SNR=54
TORD PP PP 06 53 20.0 -2.1
comp=Z,2.5nm,1.1s,baz=126,slow=5.7,SNR=4.6
comp=Z,13nm,0.9s
GEVA Gevas 50.42 358 P 06 51 33.8 +1.9
GEVA IAmb IAmb 06 51 35.5
comp=Z,19nm,1.1s
KARP Karpathos 50.51 341 P P 06 51 33.2 +0.8
KARP Karpathos 50.51 341 P P 06 51 34.0 +1.5
comp=Z,77nm,1.1s
GURO Guroymak-BITLI 50.70 357 P 06 51 34.9 +0.9
ELL Elmali 50.84 344 P P 06 51 35.0 0.0
ELL Elmali 50.84 344 P P 06 51 35.0 0.0
ELL pmax pmax
comp=Z,27nm,0.8s
BNN Bunyan 51.63 351 P 06 51 41.8 +0.9
BNN IAmb IAmb 06 51 43.8
comp=Z,18nm,1.2s
KBL Kabul 51.96 25 P P 06 51 44.5 +0.9
KBL IAmb IAmb 06 52 01.7
comp=Z,19nm,1.1s
KBL Kabul 51.96 25 P P 06 51 44.5 +0.9
KBL pmax pmax
comp=Z,19nm,1.1s
KBL Kabul 51.96 25 P P 06 51 44.6 +0.9
SNR=9.4
TAM Tamanrasset 52.04 312 P 06 51 45.3 +1.0
TAM Tamanrasset 52.04 312 P P 06 51 45.3 +1.0
TAM pmax pmax
comp=Z,54nm,0.2s
GNI Garni 52.23 360 LR LR 07 14 39.1
comp=Z,240nm,21.4s,baz=172,slow=37
GNI Garni 52.23 360 ⇓ *eP* P 06 51 43.9 -1.6
GNI pmax pmax
comp=Z,29nm,1.4s
KIRS Kirsehir-Merke 52.23 349 ⇓P P 06 51 46.7 +1.3
MANT Manisa 52.84 344 P 06 51 50.6 +0.6
BR104 Keskin Array S 52.84 349 P P 06 51 50.6 +0.7
comp=Z,89nmcomp=Z,9.3nm,1.0s
BR105 Keskin Array S 52.85 349 P P 06 51 50.7 +0.6
comp=Z,126nmcomp=Z,13nm,1.0s
BR131 Keskin Array S 52.86 349 P 06 51 51.0 +0.9
BR131 IAmb IAmb 06 51 52.2
comp=Z,29nm,1.3s
BR131 Keskin Array S 52.86 349 P P 06 51 51.0 +0.9
BR131 pmax pmax
comp=Z,29nm,1.3s
BR131 Keskin Array S 52.86 349 P P 06 51 51.1 +0.9
SNR=11
BRTR Keskin Array B 52.86 349 P P 06 51 51.0 +0.9
comp=Z,10nm,0.9s,baz=170,slow=7.5,SNR=41
BRTR LR LR 07 14 18.8
comp=Z,79nm,19.8s,baz=158,slow=36
comp=Z,10nm,0.9s
BRTR Keskin Array B 52.86 349 P P 06 51 50.3 +0.2
BR106 Keskin Array S 52.87 349 P P 06 51 51.1 +0.9
comp=Z,121nmcomp=Z,13nm,0.9s
DBIC Dimbokro 52.95 288 P P 06 51 52.0 +0.9
comp=Z,13nm,1.0s,baz=114,slow=10.0,SNR=9.7
DBIC LR LR 07 14 24.4
comp=Z,119nm,19.9s,baz=139,slow=36
comp=Z,13nm,1.0s
DBIC Dimbokro 52.95 288 P P 06 51 51.8 +0.7
DBIC IAmb IAmb 06 51 52.4
comp=Z,14nm,0.9s
DBIC Dimbokro 52.95 288 P P 06 51 51.8 +0.7
DBIC pmax pmax
comp=Z,14nm,1.0s
AKT Akhty 53.62 3 *eP* P 06 51 55.3 -0.4
AKT *e* 06 53 55.5
AKT pmax pmax
comp=Z,19nm,1.1s
BORA Eskisehir 53.67 346 P 06 51 57.5 +1.5
ITM Ithomi 53.80 337 P 06 51 57.4 +0.5
MDUB Mudurnu 54.07 347 P 06 51 59.4 +0.5
ILGA Ilgaz 54.13 350 P P 06 51 59.7 +0.2
ILGA IAmb IAmb 06 52 01.1
comp=Z,16nm,1.0s
SHAA Shahritus 54.22 23 P 06 52 00.9 +0.8
SHAA IAmb IAmb 06 52 17.4
comp=Z,30nm,1.2s
BAND Balkesir-Ban 54.71 344 ⇑P P 06 52 05.0 +1.5
EZN Ezine 54.71 343 P P 06 52 04.5 +1.1
comp=Z,40nm,1.0s
MAK Makhachkala 55.09 2 *c i* P P 06 52 01.8 -4.3
MAK *eS* S 06 59 42.8 -6.0
MAK *eSS* SS 07 03 33.5 +0.4
MAK pmax pmax
comp=Z,88nm,1.1s
MAK MLR MLR
comp=Z,217nm,16.0s
KLYT Kilyos 55.31 345 P P 06 52 08.5 +0.7
comp=Z,48nm,1.0s
NEUR Neytrino 55.38 358 ⇓ *i* P P 06 52 09.0 +0.5
NEUR pmax pmax
comp=Z,12nm,1.5s
CHGR Chuyangaron 55.57 23 P 06 52 10.7 +0.8
CHGR Chuyangaron 55.57 23 *d i* P P 06 52 11.0 +1.1
CHGR pmax pmax
comp=Z,75nm,0.9s
NCK Nalchik 55.59 359 ⇓ *eP* P 06 52 09.6 -0.2
NCK pmax pmax
comp=Z,24nm,0.5s
VSLR Vesyoloye 55.72 356 ⇓ *eP* P 06 52 11.9 +1.2
VSLR pmax pmax
comp=Z,17nm,1.4s
ALN Alexandroupoli 55.78 343 P P 06 52 11.1 -0.1
ALN IAmb IAmb 06 52 13.4
comp=Z,25nm,1.1s
ALN Alexandroupoli 55.78 343 P P 06 52 11.1 -0.1
ALN pmax pmax
comp=Z,25nm,1.1s
KBZ Khabaz 55.84 358 P P 06 52 12.3 +0.8
comp=Z,7.1nm,1.0s,baz=194,slow=3.9,SNR=13
KBZ LR LR 07 17 59.0
comp=Z,123nm,19.7s,baz=159,slow=38
comp=Z,7.1nm,1.0s
KBZ Khabaz 55.84 358 *d i* P P 06 52 12.6 +1.1
KBZ pmax pmax
comp=Z,13nm,1.1s
SHA1 Shidzhatmaz 55.85 358 *d i* P P 06 52 12.8 +0.9
KIV Kislovodsk 56.07 358 *e* P P 06 52 14.5 +1.2
KIV pmax pmax
comp=Z,20nm,1.1s
KIV Kislovodsk 56.07 358 P P 06 52 14.0 +0.7
comp=Z,307nmcomp=Z,25nm,1.3s
RDO Rodhopi 56.16 342 P 06 52 14.3 +0.5
GAR Garm 56.32 24 P 06 52 15.9 +0.6
MAW Mawson 56.46 172 P P 06 52 16.1 +0.5
comp=Z,3.7nm,1.0s,baz=327,slow=9.0,SNR=2.0
MAW LR LR 07 11 25.3
comp=Z,260nm,21.6s,baz=343,slow=31
comp=Z,3.7nm,1.0s
LABN Labinsk 56.85 356 *eP* P 06 52 18.2 -0.5
LABN *e* *PP pP 06 52 21.2 +0.2
LABN *eS* S 07 00 12.6 +0.5
LABN pmax pmax
comp=Z,26nm,0.5s
EVN Everest 57.03 45 P 06 52 20.1 -1.1
EVN IAmb IAmb 06 52 37.9
comp=Z,16nm,0.8s
GOF Gofitskoye 57.16 358 *ce* P P 06 52 22.5 +1.6
VAE Valguarnera 57.24 331 LR LR 07 16 57.3
comp=Z,83nm,21.7s,baz=101,slow=36
ANN Anapa 57.28 354 *eP* P 06 52 21.3 -0.4
ANN *e* *PP pP 06 52 24.3 +0.3
ANN *eS* S 07 00 18.3 +0.5
ANN pmax pmax
comp=Z,68nm,1.4s
DRK Karamyk 57.32 25 P P 06 52 23.3 +0.7
DRK IAmb IAmb 06 52 40.0
comp=Z,23nm,1.1s
DRK Karamyk 57.32 25 P P 06 52 23.3 +0.7
DRK pmax pmax
comp=Z,23nm,1.1s
BRDH Bariadhala 57.51 53 LR LR 07 15 27.6
comp=Z,152nm,20.1s,baz=256,slow=34
TIP Timpagrande 57.59 334 ⇑P P 06 52 25.5 +1.3
TIP Timpagrande 57.59 334 P P 06 52 24.2 0.0
TIP Timpagrande 57.59 334 P P 06 52 23.8 -0.4
comp=Z,13nm,0.8s
ELND Elena 57.71 344 ⇓P P 06 52 25.5 +0.7
ERBR Yeremizino-Bor 57.93 356 *eP* P 06 52 26.7 +0.4
ERBR *e* *PP sP 06 52 29.4 0.0
ERBR *eS* S 07 00 27.8 +1.4
ERBR pmax pmax
comp=Z,66nm,1.2s
KEST Kesra 58.45 326 P P 06 52 31.9 +1.6
comp=Z,12nm,0.9s,baz=120,slow=14,SNR=5.5
KEST LR LR 07 19 58.4
comp=Z,148nm,18.5s,baz=92,slow=38
comp=Z,12nm,0.9s
KEST Kesra 58.45 326 P P 06 52 32.3 +2.0
PLVB Pleven 58.48 343 ⇓P P 06 52 30.8 +0.5
TIRR Tirgusor 58.49 346 ⇑P P 06 52 30.2 -0.1
TIRR Tirgusor 58.49 346 ⇑P P 06 52 30.2 -0.1
TIRR Tirgusor 58.49 346 P P 06 52 29.6 -0.7
comp=Z,16nm,1.0s
KSH2 Kashi 58.67 28 P P 06 52 32.8 +1.0
KSH2 pmax pmax
comp=Z,6.0nm,0.8s
MATE Matera 58.85 335 ⇑P P 06 52 34.3 +1.5
TPGR Topolog 58.87 346 ⇑P P 06 52 33.1 +0.2
CHM Chimkent 58.94 21 *eP* P 06 52 33.7 +0.1
IUG Iuzhnay 58.95 22 *eP* P 06 52 33.7 0.0
comp=Z,6.3nm,0.7s
CFR Carcaliu 59.24 346 ⇑P P 06 52 36.0 +0.6
CFR Carcaliu 59.24 346 ⇑P P 06 52 36.0 +0.6
ISR Istrita 59.57 345 ⇓P P 06 52 39.4 +1.5
ISR Istrita 59.57 345 ⇓P P 06 52 39.4 +1.5
ISR Istrita 59.57 345 P P 06 52 38.7 +0.9
comp=Z,49nm,1.2s
BRLS Borolday 59.65 21 *eP* P 06 52 36.4 -2.0
KK31 Karatay Array 59.95 21 P 06 52 40.4 -0.1
KK31 IAmb IAmb 06 52 42.2
comp=Z,26nm,1.2s
KK31 Karatay Array 59.95 21 P P 06 52 40.4 -0.1
KK31 pmax pmax
comp=Z,26nm,1.3s
KKAR Karatay Array 59.95 21 P 06 52 41.0 +0.5
KKAR Karatay Array 59.95 21 P P 06 52 41.0 +0.5
MLR Muntele Rosu 60.07 345 LR LR 07 21 09.8
comp=Z,80nm,19.1s,baz=162,slow=39
MLR Muntele Rosu 60.07 345 ⇑P P 06 52 42.1 +0.7
MLR Muntele Rosu 60.07 345 P 06 52 41.2 -0.1
MLR IAmb IAmb 06 52 44.1
comp=Z,12nm,0.9s
MLR Muntele Rosu 60.07 345 P P 06 52 41.3 -0.1
MLR pmax pmax
comp=Z,12nm,0.9s
MLR Muntele Rosu 60.07 345 P P 06 52 41.7 +0.3
comp=Z,357nmcomp=Z,20nm,1.0s
DZA Taraz 60.07 22 *eP* P 06 52 41.5 +0.2
comp=Z,5.0nm,0.6s
VRI Vrincioaia 60.22 345 ⇑P P 06 52 43.4 +1.2
VRI Vrincioaia 60.22 345 ⇑P P 06 52 43.4 +1.2
VRI Vrincioaia 60.22 345 P P 06 52 43.1 +0.8
comp=Z,39nm,1.2s
PLOR Plostina 60.23 345 ⇑P P 06 52 43.3 +1.0
PLOR Plostina 60.23 345 ⇑P P 06 52 43.3 +1.0
VOIR 60.25 344 ⇓P P 06 52 42.8 +0.2
VOIR 60.25 344 ⇓P P 06 52 42.8 +0.2
VOIR 60.25 344 P P 06 52 42.7 +0.1
comp=Z,25nm,1.0s
ARR Arges 60.30 344 ⇓P P 06 52 43.0 +0.1
COVR Voineasa-Covas 60.33 345 ⇓P P 06 52 42.6 -0.4
HERR Herculane 60.50 342 ⇓P P 06 52 44.7 +0.6
LOT Lotru 60.62 343 ⇓P P 06 52 45.0 -0.1
MDVR Moldovita 60.63 341 ⇑P P 06 52 45.2 +0.1
DOPR Dopca 60.65 344 ⇑P P 06 52 44.7 -0.5
OZUR 60.67 345 ⇑P P 06 52 45.4 0.0
NRN Naryn 60.72 26 P 06 52 46.3 +0.1
NRN Naryn 60.72 26 P P 06 52 46.3 +0.1
NRN pmax pmax
comp=Z,7.0nm,1.0s
ONER Baraj Valea Uz 60.74 345 ⇑P P 06 52 46.1 +0.3
UCH Uchtor 60.74 25 P P 06 52 47.7 +1.3
SNR=9.7
EKS2 Erkin-Say 60.81 24 P P 06 52 47.5 +1.0
SNR=5.3
GZR Gura Zlata 60.86 342 ⇓P P 06 52 47.6 +0.9
GZR Gura Zlata 60.86 342 ⇓P P 06 52 47.6 +0.9
ELIB Princess Elisa 60.97 188 *d* P P 06 52 48.1 +0.9
AAK Ala-Archa 61.08 25 LR LR 07 17 29.2
comp=Z,98nm,21.1s,baz=227,slow=34
AAK Ala-Archa 61.08 25 P P 06 52 49.5 +1.0
SNR=10
AAK Ala-Archa 61.08 25 P P 06 52 48.5 +0.1
AAK IAmb IAmb 06 52 50.5
comp=Z,9.6nm,0.9s
AAK Ala-Archa 61.08 25 *d* P P 06 52 49.3 +0.9
AAK pmax pmax
comp=Z,10.0nm,0.9s
AAK Ala-Archa 61.08 25 P P 06 52 49.4 +1.0
DEV Deva 61.26 343 ⇑P P 06 52 50.7 +1.4
DEV Deva 61.26 343 ⇑P P 06 52 50.7 +1.4
KBK Karagaybulak 61.28 25 P P 06 52 51.1 +1.3
SNR=7.5
BZS Buzias 61.41 342 ⇓P P 06 52 51.4 +1.1
BZS Buzias 61.41 342 ⇓P P 06 52 51.4 +1.1
CMAR Chiang Mai Arr 61.46 61 P P 06 52 50.6 -0.6
comp=Z,1.4nm,0.5s,baz=252,slow=8.0,SNR=15
CMAR LR LR 07 17 44.4
comp=Z,42nm,18.1s,baz=270,slow=34
comp=Z,1.4nm,0.5s
CMAR Chiang Mai Arr 61.46 61 P P 06 52 51.4 +0.2
CMAR Chiang Mai Arr 61.46 61 *i* P P 06 52 52.5 +1.3
CMAR pmax pmax
comp=Z,1.0nm,0.3s
ULHL Ulahol 61.49 26 P P 06 52 51.8 +0.6
SNR=5.1
BOOM Boomskoye usch 61.56 26 P 06 52 51.6 0.0
BOOM IAmb IAmb 06 52 53.6
comp=Z,11nm,1.0s
BOOM Boomskoye usch 61.56 26 P P 06 52 51.7 0.0
BOOM pmax pmax
comp=Z,11nm,1.0s
USP Ospenovka 61.61 24 P P 06 52 52.3 +0.5
SNR=5.2
CHTO Chiang Mai 61.61 61 P P 06 52 52.7 +0.5
CHTO IAmb IAmb 06 52 54.2
comp=Z,9.7nm,1.0s
CHTO Chiang Mai 61.61 61 P P 06 52 52.7 +0.5
CHTO pmax pmax
comp=Z,10.0nm,1.0s
CHTO Chiang Mai 61.61 61 P P 06 52 52.2 -0.1
comp=Z,11nm,1.2s
TKM2 Tokmak 2 61.77 25 P P 06 52 53.7 +0.6
SNR=11
KDJ Kajisay 61.80 27 P 06 52 53.6 +0.3
KDJ Kajisay 61.80 27 P P 06 52 53.6 +0.3
KDJ pmax pmax
comp=Z,6.0nm,1.0s
SGDS Sogindy 61.81 24 *eP* P 06 52 53.3 +0.1
NVL N'lazarevskaya 61.84 192 *eP* P 06 52 53.5 +0.5
NVL *e* 06 53 34.4
NVL *e* 06 55 09.5
NVL *e* PPP PPP 06 56 35.0
NVL *eS* S 07 01 17.5 +1.3
NVL *eSS* SS 07 05 20.6 +2.6
NVL pmax pmax
comp=Z,30nm,1.8s
NVL MLR MLR
comp=Z,622nm,21.0s
MARR Marisel-Cluj 61.92 343 ⇓P P 06 52 55.0 +1.0
LEM Lembang 61.97 91 LR LR 07 13 53.9
comp=Z,61nm,21.6s,baz=198,slow=30
SORM Soroca 61.99 348 ⇓P P 06 52 53.5 -0.7
SORM Soroca 61.99 348 ⇓P P 06 52 53.5 -0.7
SORM Soroca 61.99 348 P P 06 52 52.9 -1.3
comp=Z,2μmcomp=Z,20nm,1.2s
DRGR 62.15 343 ⇑P P 06 52 56.1 +0.7
DRGR 62.15 343 ⇑P P 06 52 56.1 +0.7
BURAR Bucovina Array 62.23 345 ⇓P P 06 52 57.0 +1.1
BURAR Bucovina Array 62.23 345 P 06 52 56.6 +0.7
BURAR IAmb IAmb 06 52 57.7
comp=Z,13nm,0.8s
BURAR Bucovina Array 62.23 345 ⇓P P 06 52 57.0 +1.1
BUR08 Bucovina Ar. S 62.26 345 P 06 52 56.3 +0.1
BUR08 IAmb IAmb 06 52 58.1
comp=Z,23nm,1.2s
TNSS Tian-Shan 62.43 26 *eP* P 06 52 57.5 -0.3
AAA Alma-Ata 62.56 26 *eP* P 06 52 58.4 +0.1
MDOK Medeo 62.58 26 *eP* P 06 52 58.6 +0.1
AB31 Akbulak array 62.76 11 P 06 52 59.0 -0.3
AB31 Akbulak array 62.76 11 *i* P P 06 52 59.0 -0.3
ABKAR Akbulak array 62.76 11 P 06 52 59.4 +0.1
KMPD K-Podol'skiy 62.81 346 P P 06 52 58.5 -1.2
KMPD P P 06 52 58.5 -1.2
RAKU Rahkiv 62.88 345 P P 06 53 00.1 -0.1
MORH Mrgy, Hungar 62.90 340 ⇑P P 06 53 00.7 +0.4
MORH Mrgy, Hungar 62.90 340 P P 06 53 00.7 +0.4
comp=Z,13nm,1.6s
KSV Kosov 62.91 345 P P 06 53 00.4 0.0
VORD Divnogorie 63.24 356 *eP* P 06 53 01.0 -1.4
VORD pmax pmax
comp=Z,20nm,1.0s
KORU Korolevo 63.27 344 P P 06 53 03.4 +0.7
VRH Novokhopyorsk 63.34 358 *eP* P 06 53 00.4 -2.7
VRH pmax pmax
comp=Z,20nm,0.9s
UZB Uzynbulak 63.43 27 *eP* P 06 53 04.2 +0.1
comp=Z,10nm,1.2s
BRIU Brid 63.47 344 P P 06 53 04.4 +0.4
BERU Beregovo 63.48 344 P P 06 53 04.5 +0.4
VSR Storozhevoye 63.49 356 *eP* P 06 53 02.3 -1.9
VSR pmax pmax
comp=Z,10.0nm,1.1s
MEZ Mezhgor'ye 63.50 344 P P 06 53 05.1 +0.8
KPKS Kokpek 63.53 27 *eP* P 06 53 04.5 -0.2
AKTO Aktyubinsk 63.56 9 LR LR 07 22 21.1
comp=Z,144nm,19.9s,baz=238,slow=38
SHLS Shalkode 63.64 28 *eP* P 06 53 07.0 +1.5
CRES Cresnjevec Ost 63.70 337 *i* P P 06 53 06.3 +0.6
HOLU Holmets 63.81 344 P P 06 53 06.7 +0.4
KOGS Kog 63.94 338 *i* P P 06 53 07.9 +0.7
VORR Voronezh 63.95 356 *eP* P 06 53 05.8 -1.3
VORR pmax pmax
comp=Z,30nm,1.0s
PSZ Piszkesteto 64.00 342 ⇑P P 06 53 07.8 +0.1
PSZ Piszkesteto 64.00 342 ⇑P P 06 53 07.8 +0.1
CEY Cerknica 64.02 337 *i* P P 06 53 07.9 +0.1
MPLH Magyarpolny 64.11 340 P P 06 53 08.2 -0.1
AK07 Malin Array Si 64.12 349 P P 06 53 07.6 -0.7
AK06 Malin Array Si 64.16 349 P P 06 53 07.9 -0.6
AK10 Malin Array Si 64.16 349 P P 06 53 07.9 -0.6
AK09 Malin Array Si 64.17 349 P P 06 53 07.9 -0.7
AK05 Malin Array Si 64.19 349 P P 06 53 08.1 -0.6
KIEV Kiev 64.26 349 ⇓P P 06 53 08.8 -0.5
KIEV Kiev 64.26 349 P P 06 53 08.7 -0.5
KIEV Kiev 64.26 349 P P 06 53 08.7 -0.5
KIEV pmax pmax
comp=Z,4.0nm,0.7s
AKASG Malin Array Be 64.26 349 P P 06 53 08.6 -0.6
comp=Z,2.0nm,0.6s,baz=175,slow=5.7,SNR=18
AKASG LR LR 07 22 27.2
comp=Z,60nm,18.6s,baz=152,slow=37
comp=Z,2.0nm,0.6s
AKBB Malin Array Si 64.26 349 P 06 53 08.3 -0.8
AKBB Malin Array Si 64.26 349 P P 06 53 08.4 -0.8
AKBB pmax pmax
comp=Z,5.0nm,0.7s
KECS Kecovo 64.32 342 *eP* P 06 53 10.0 +0.3
KECS pmax pmax
comp=Z,21nm,1.0s
KECS Kecovo 64.32 342 *eP* P 06 53 09.9 +0.3
SRO Srobarova 64.41 340 *eP* P 06 53 11.0 +0.8
SRO pmax pmax
comp=Z,33nm,1.4s
SRO Srobarova 64.41 340 *eP* P 06 53 11.0 +0.8
BELG Belogornoye 64.52 2 *d i* P P 06 53 10.2 -0.6
BELG pmax pmax
comp=Z,10.0nm,0.9s
SOKA Soboth 64.58 338 *i* P P 06 53 12.0 +0.5
comp=Z,8.4nm,0.8s
OBKA Obir 64.62 337 *i* P P 06 53 12.5 +0.8
comp=Z,13nm,0.9s,SNR=9.7
TDK Taldyqorghan 64.64 26 *eP* P 06 53 12.1 +0.2
comp=Z,13nm,1.0s
KWP Kalwaria Pacla 64.73 344 *eP* P 06 53 12.7 +0.3
ARSA Arzberg 64.88 338 P 06 53 13.6 +0.2
ARSA IAmb IAmb 06 53 15.0
comp=Z,11nm,1.0s
ARSA Arzberg 64.88 338 *i* P P 06 53 14.0 +0.6
comp=Z,9.3nm,0.8s,SNR=7.9
LPSR Galich'ya Gora 64.89 356 *eP* P 06 53 11.0 -2.3
LPSR pmax pmax
comp=Z,10.0nm,0.9s
PRED Cave del Predi 64.94 337 P P 06 53 14.3 +0.4
STHS Stebnicka Huta 64.94 343 *eP* P 06 53 13.4 -0.3
STHS pmax pmax
comp=Z,16nm,1.0s
STHS Stebnicka Huta 64.94 343 *eP* P 06 53 13.4 -0.3
RONA Rosalia, Austr 64.99 339 *i* P P 06 53 14.7 +0.5
comp=Z,17nm,0.8s,SNR=6.4
MYKA Terra Mystica 65.06 337 *i* P P 06 53 14.9 +0.2
comp=Z,5.3nm,0.9s
MDT Midelt 65.19 315 LR LR 07 23 05.3
comp=Z,119nm,18.4s,baz=103,slow=37
NIE Niedzica 65.21 343 *eP* P 06 53 16.1 +0.5
LANS Liptovska Anna 65.22 342 *eP* P 06 53 16.7 +1.1
LANS pmax pmax
comp=Z,10.0nm,1.3s
LANS Liptovska Anna 65.22 342 *eP* P 06 53 16.6 +1.0
MODS Modra-Piesok 65.24 340 *eP* P 06 53 16.0 +0.3
MODS pmax pmax
comp=Z,32nm,0.8s
MODS Modra-Piesok 65.24 340 *eP* P 06 53 16.0 +0.3
SMOL Smolenice 65.31 340 *eP* P 06 53 16.5 +0.4
CONA Conrad Observa 65.34 339 *i* P P 06 53 16.9 +0.5
comp=Z,11nm,0.9s,SNR=7.1
CTI Castel Tesino 65.38 335 P 06 53 16.9 +0.1
CTI IAmb IAmb 06 53 18.3
comp=Z,18nm,1.0s
CTI Castel Tesino 65.38 335 P P 06 53 16.9 +0.1
CTI pmax pmax
comp=Z,18nm,1.0s
JAVC Velka Javorina 65.53 341 *eP* P 06 53 18.1 +0.5
KBA Koelnbreinsper 65.55 337 *i* P P 06 53 17.8 -0.1
comp=Z,12nm,0.9s,SNR=7.3
ABTA Abfaltersbach 65.60 336 *i* P P 06 53 18.3 +0.1
comp=Z,6.4nm,0.9s
SNAA Sanae 65.83 195 LR LR 07 14 46.3
comp=Z,107nm,20.5s,baz=32,slow=29
MOA Molln 65.84 338 *i* P P 06 53 19.7 +0.1
comp=Z,16nm,0.9s,SNR=8.3
MAUC Maruska 65.92 341 *eP* P 06 53 20.9 +0.8
BIOA Bad Ischl, Aus 65.95 337 *i* P P 06 53 19.9 -0.4

comp=Z,11nm,0.9s,SNR=6.1
OJC Ojcow 66.08 343 *e*P **P 06 53 20.9 -0.2**
OJC Ojcow 66.08 343 **P 06 53 20.3 -0.8**
OJC Ojcow 66.08 343 P **P 06 53 20.3 -0.8**
LESA Schwarzleotal 66.09 337 *i* P **P 06 53 20.9 -0.4**
comp=Z,8.1nm,0.9s
KRUC Moravsky 66.13 340 *e*P **P 06 53 20.8 -0.6**
OKC Ostrava-Krasne 66.23 341 *e*P **P 06 53 22.5 +0.4**
OKC Ostrava-Krasne 66.23 341 *e*P **P 06 53 22.5 +0.4**
VRAC Vranov 66.27 340 LR LR 07 23 14.7
comp=Z,47nm,21.1s,baz=176,slow=37
VRAC Vranov 66.27 340 ⇑P **P 06 53 22.5 +0.1**
VRAC Vranov 66.27 340 ⇑P **P 06 53 22.5 +0.1**
VRAC Vranov 66.27 340 *e*P **P 06 53 22.0 -0.4**
WTTA Wattenberg 66.37 336 *i* P **P 06 53 23.0 -0.2**
comp=Z,7.3nm,0.7s
MORC Moravsky Berou 66.37 341 ⇓P **P 06 53 23.2 +0.2**
MORC Moravsky Berou 66.37 341 **P 06 53 22.9 -0.1**
MORC Moravsky Berou 66.37 341 P **P 06 53 22.9 -0.1**
MORC pmax pmax
comp=Z,27nm,0.9s
MORC Moravsky Berou 66.37 341 *e*P **P 06 53 23.0 -0.1**
STEB Steborice 66.44 341 *e*P **P 06 53 23.4 0.0**
WATA Walderalm 66.45 336 *i* P **P 06 53 23.1 -0.6**
comp=Z,5.0nm,0.7s
SQTA Sankt Quirin 66.51 336 *i* P P **06 53 23.7 -0.3**
comp=Z,6.0nm,0.7s
FETA Feichten 66.54 335 *i* P P **06 53 24.2 -0.1**
comp=Z,17nm,0.9s,SNR=12
TREC Trest 66.64 339 *e*P **P 06 53 24.1 -0.6**
TREC Trest 66.64 339 *e*P **P 06 53 24.1 -0.6**
CKRC Cesky Krumlov 66.64 339 *e*P **P 06 53 24.4 -0.4**
CKRC Cesky Krumlov 66.64 339 *e*P **P 06 53 24.4 -0.4**
MOTA Moosalm 66.65 336 *i* P **P 06 53 24.5 -0.5**
comp=Z,9.8nm,1.0s,SNR=5.1
BRZS Berezniki 66.68 19 *e*P **P 06 53 25.4 +0.4**
DAVOX Davos/Dischmat 66.70 335 LR LR 07 24 20.6
comp=Z,49nm,21.3s,baz=98,slow=38
BNI Bardonecchia 66.78 331 P **P 06 53 26.6 +0.7**
BNI Bardonecchia 66.78 331 P **P 06 53 26.6 +0.7**
BNI pmax pmax
comp=Z,9.0nm,1.2s
KRLC Kraliky 66.88 341 *e*P **P 06 53 26.1 -0.1**
KRLC Kraliky 66.88 341 *e*P **P 06 53 26.1 -0.1**
GEC2 GERESS Array S 66.89 338 **P 06 53 25.8 -0.6**
GEC2 lAmb lAmb 06 53 26.9
comp=Z,12nm,0.9s
GERES GERESS Array B 66.89 338 P **P 06 53 26.1 -0.3**
comp=Z,6.6nm,0.8s,baz=151,slow=6.1,SNR=28
comp=Z,6.6nm,0.8s
RETA Reutte 66.90 336 *i* P **P 06 53 26.1 -0.4**
comp=Z,11nm,0.8s
DAVA Damuels 67.10 335 *i* P **P 06 53 27.3 -0.5**
comp=Z,18nm,1.1s,SNR=7.9
KHC Kasperske Hory 67.17 338 **P 06 53 27.9 -0.2**
KHC lAmb lAmb 06 53 28.4
comp=Z,7.3nm,0.9s
KHC Kasperske Hory 67.17 338 *e*P **P 06 53 27.5 -0.6**
KHC Kasperske Hory 67.17 338 *de*P **P 06 53 27.1 -1.0**
KHC pmax pmax
comp=Z,8.0nm,0.9s
ZVC Zvikov 67.21 339 *e*P **P 06 53 27.5 -0.8**
DPC Dobruska-Polom 67.26 341 *e*P **P 06 53 28.6 -0.1**
DPC Dobruska-Polom 67.26 341 *e*P **P 06 53 28.6 -0.1**
PZH PanZhiHua 67.38 54 P **P 06 53 32.8 +2.8**
VNA3 Neumayer Olymp 67.40 197 ⇑P **P 06 53 30.3 +1.0**
comp=Z,1.2nm,0.6s
GOMU GeÉrMu 67.41 42 P **P 06 53 32.4 +2.0**
GOMU pmax pmax
comp=Z,11nm,0.9s
OSTC Ostas 67.47 341 *e*P **P 06 53 30.1 +0.1**
OSTC Ostas 67.47 341 *e*P **P 06 53 30.1 +0.1**
UPC Upice 67.50 340 *e*P **P 06 53 30.1 0.0**
UPC Upice 67.50 340 *e*P **P 06 53 30.1 0.0**
OBN Obninsk 67.57 355 LR LR 07 25 34.4
comp=Z,92nm,19.6s,baz=210,slow=38
OBN Obninsk 67.57 355⇓*e*P **P 06 53 30.5 +0.1**
OBN *e**PP **pwP 06 53 35.1 -1.6**
OBN *e* 06 53 57.8
OBN *e* 06 56 00.5
OBN *e*PPP PPP 06 57 37.1
OBN *e*S **S 07 02 28.3 +1.3**
OBN pmax pmax
comp=Z,49nm,1.3s
OBN MLR MLR
comp=Z,95nm,18.0s
MAKZ Makanchi 67.60 27 P **P 06 53 30.8 -0.1**
MAKZ Makanchi 67.60 27 P **P 06 53 30.8 -0.1**
MAKZ pmax pmax
comp=Z,24nm,1.1s
KSP Ksiaz 67.70 341 *e*P **P 06 53 31.9 +0.5**
MK31 Makanchi Array 67.72 27 *d*P **P 06 53 31.8 +0.1**
MKAR Makanchi Array 67.72 27 P **P 06 53 31.8 +0.1**
comp=Z,7.6nm,0.7s,baz=218,slow=6.5,SNR=72
MKAR LR LR 07 21 59.3
comp=Z,53nm,21.2s,baz=196,slow=35
comp=Z,7.6nm,0.7s
SSB Saint Sauveur 67.97 330 **P 06 53 33.0 -0.2**
SSB lAmb lAmb 06 53 34.8
comp=Z,10nm,0.9s
SSB Saint Sauveur 67.97 330 P **P 06 53 33.1 -0.2**
SSB pmax pmax
comp=Z,10.0nm,0.9s
GRB2 Grafenberg Arr 67.99 337 *e*P P 06 54 01.6 +28
baz=136,slow=6.9
MOS Moscow 68.10 356 *e*P **P 06 53 33.0 -0.8**
WMQ Urumqi 68.13 32 *e*P **P 06 53 35.9 +1.5**
WMQ PcP **PcP 06 54 00.6 +0.3**
WMQ pmax pmax
comp=Z,13nm,0.7s
MNK Minsk 68.14 349 *i* P **P 06 53 33.4 -0.7**
comp=E,17nm,1.7s
MNK *i* P **P 06 53 33.4 -0.7**
comp=N,7.0nm,0.8s
MNK *i* P **P 06 53 33.4 -0.7**
comp=Z,11nm,0.8s,baz=162
MNK *i* PP **PP 06 56 02.4 -2.2**
MNK *i* PPP PPP 06 57 39.1
MNK *i* S **S 07 02 34.4 +0.5**
MNK *i* SS **SS 07 06 57.5 +0.5**
MNK *i* SSS SSS 07 10 12.6
MNK *i* LQ LQ 07 18 38.3
MNK *i* LR LR 07 23 49.6
MNK *i* LRM MLR 07 26 22.9
MNK *i* LRM MLR 07 26 28.2
comp=Z,67nm,15.9s
MNK *i* LRM MLR 07 26 43.0
comp=N,562nm,30.8s
MNK Minsk 68.14 349 *i* P **P 06 53 33.3 -0.7**
MNK *i* 06 56 02.3
MNK *i* PPP PPP 06 57 39.1
MNK *i* S **S 07 02 34.3 +0.5**
MNK *i* SS **SS 07 06 57.4 +0.5**
MNK pmax pmax
comp=N,7.0nm,0.8s
MNK pmax pmax
comp=Z,11nm,0.8s
MNK pmax pmax
comp=E,17nm,1.7s
MNK MLR MLR
comp=Z,67nm,16.0s
BLDU Ballidu 68.24 118 P **P 06 53 35.5 +0.2**
comp=Z,26nm,1.3s
GRF Grafenberg Arr 68.50 337 *e*P **P 06 53 35.8 -0.7**
comp=Z,8.6nm,0.9s,baz=136,slow=6.9
GRF *e*L L 07 19 30.0
comp=Z,95nm,19.8s
BFO Black Forest 68.57 335 P **P 06 53 36.5 -0.4**
BFO lAmb lAmb 06 53 37.9
comp=Z,9.3nm,1.0s
BFO Black Forest 68.57 335 P **P 06 53 36.5 -0.4**
BFO pmax pmax
comp=Z,9.0nm,1.0s
SUW Suwalki 68.64 346 *e*P **P 06 53 37.2 0.0**
BORK Borovoye 68.69 16 **P 06 53 37.7 +0.2**
BORK Borovoye 68.69 16 P **P 06 53 37.7 +0.2**
BORK pmax pmax
comp=Z,36nm,1.4s
BVAR Borovoye Array 68.69 16 P **P 06 53 37.6 +0.1**
comp=Z,6.7nm,0.7s,baz=224,slow=6.2,SNR=35
BVAR LR LR 07 24 41.9
comp=Z,73nm,19.3s,baz=218,slow=37
comp=Z,6.7nm,0.7s
ESDC Sonseca Array 68.84 321 P **P 06 53 40.0 +1.1**
comp=Z,5.7nm,0.9s,baz=134,slow=6.0,SNR=35
ESDC LR LR 07 25 17.8
comp=Z,122nm,19.5s,baz=129,slow=37
comp=Z,5.7nm,0.9s
ESDC Sonseca Array 68.84 321 P **P 06 53 39.3 +0.4**
ESDC lAmb lAmb 06 53 41.1
comp=Z,8.7nm,1.1s
MOX Moxa 69.14 338 *e*L L 07 25 27.2
comp=Z,65nm,21.2s
CLL Collm 69.19 339 *i* P **P 06 53 39.6 -1.1**
CLL pmax pmax
comp=Z,15nm,1.3s
CLL Collm 69.19 339 *i* P **P 06 53 39.6 -1.1**
comp=Z,15nm,1.3s
KURBB Kurchatov Arra 69.24 22 P **P 06 53 41.3 +0.3**
comp=Z,5.1nm,0.7s,baz=223,slow=6.9,SNR=46
KURBB LR LR 07 22 29.1
comp=Z,107nm,21.6s,baz=174,slow=35
comp=Z,5.1nm,0.7s
KURK Kurchatov 69.35 22 **P 06 53 41.9 +0.2**
KURK lAmb lAmb 06 55 03.3
comp=Z,11nm,0.9s
KURK Kurchatov 69.35 22 *d* *i*P **P 06 53 41.8 +0.2**
KURK pmax pmax
comp=Z,14nm,1.1s
KURK Kurchatov 69.35 22 P **P 06 53 42.0 +0.4**
ZSN Zaisan 69.37 28 *e*P **P 06 53 42.4 +0.4**
comp=Z,9.9nm,1.4s
ARTI Arti 69.40 8 LR LR 07 26 55.2
comp=Z,72nm,20.5s,baz=216,slow=38
GKP Gorka Klasztor 69.52 343 *e*P **P 06 53 43.6 +1.0**
SVE Sverdlovsk 70.15 9 *e*P **P 06 53 46.1 -0.4**
SVE pmax pmax
comp=Z,24nm,1.2s
MTKI Muara Teweh, K 70.26 87 P **P 06 53 47.0 -1.1**
WLF Walferdange 70.51 334 *d*P **P 06 53 48.6 -0.2**
comp=Z,9.7nm,0.9s
WLF *d*PP **PP 06 56 23.0 -2.3**
TWSI Taliwang, Sumb 70.67 95 P **P 06 53 49.8 -0.8**
comp=Z,20nm,0.9s
KIRV Kirov 70.78 2 LR LR 07 26 58.4
comp=Z,104nm,20.9s,baz=194,slow=38
KIRV Kirov 70.78 2 *d* *i*P **P 06 53 50.0 -0.2**
RCHB Rochefort 71.28 334 *d*P **P 06 53 53.2 -0.3**
comp=Z,4.6nm,1.0s
MEM Membach 71.29 335 *d*P **P 06 53 53.9 +0.3**
BCLA Clavier 71.44 335 *d*P **P 06 53 54.3 -0.2**
comp=Z,9.3nm,1.1s
DOU Dourbes 71.50 334 *d*P **P 06 53 55.2 +0.4**
comp=Z,6.5nm,0.7s
BGES Geves 71.51 334 *d*P **P 06 53 55.7 +0.8**
comp=Z,7.6nm,1.0s
BMRD Maredsous 71.58 334 *d*P **P 06 53 55.9 +0.6**
comp=Z,12nm,1.0s
PSA00 Pilbara Seismi 71.70 109 P **P 06 53 57.1 +0.4**
PSA00 Pilbara Seismi 71.70 109 P **P 06 53 57.2 +0.5**
PSA00 lAmb lAmb 06 53 58.0
comp=Z,10nm,1.1s
DBNI Kabupaten Domp 72.11 95 P **P 06 53 59.4 +0.1**
comp=Z,11nm,1.1s
VSU Vasula 72.11 350 *c* *i*P **P 06 53 57.6 -0.7**
VSU pmax pmax
comp=Z,43nm,0.9s
UCC Uccle 72.12 334 *d*P **P 06 53 59.0 +0.4**
DGZ Jazzator, Alta 72.18 27 *d* *i*P **P 06 53 59.9 +0.7**
DGZ pmax pmax
comp=Z,17nm,0.7s
GTA2 Gaotai 72.50 42 *e*P **P 06 54 02.3 +1.0**
GTA2 pmax pmax
comp=Z,12nm,0.9s
PUL Pulkovo 72.83 352⇓*e*P **P 06 54 03.1 +0.5**
PUL pmax pmax
comp=Z,127nm,0.4s
KLMR Klimovskoe 73.09 357 *e*P **P 06 54 02.3 -1.8**
KLMR pmax pmax
comp=Z,37nm,1.4s
LZDM Lanzhou Array 73.35 46 P **P 06 54 07.0 +0.4**
comp=Z,1.0nm,0.3s,baz=226,slow=9.9,SNR=1.7
comp=Z,1.0nm,0.3s
LZH Lanzhou 73.51 46 *e*P **P 06 54 08.3 +0.9**
LZH sP pwP 06 54 17.3 +3.4
LZH pmax pmax
comp=Z,17nm,1.0s
LBFI Labuhan Bajo, 73.64 95 P **P 06 54 06.3 -2.1**
KAPI Kappang 74.16 92 LR LR 07 22 28.3
comp=Z,50nm,20.6s,baz=244,slow=32
ZAA0 Zalesovo Array 74.24 23 **P 06 54 10.3 -0.8**
ZAA0 lAmb lAmb 06 54 11.4
comp=Z,12nm,0.8s
ZALV Zalesovo Beam 74.24 23 P **P 06 54 10.4 -0.7**
comp=Z,9.4nm,0.7s,baz=226,slow=6.5,SNR=47
ZALV LR LR 07 25 58.5
comp=Z,36nm,21.9s,baz=347,slow=35
comp=Z,9.4nm,0.7s
ZALV Zalesovo Beam 74.24 23 *i* P **P 06 54 10.3 -0.7**
ZALV pmax pmax
comp=Z,10.0nm,0.7s
FINES FINESS Array B 75.05 351 P **P 06 54 15.4 -0.1**
comp=Z,5.6nm,0.8s,baz=139,slow=9.1,SNR=12
comp=Z,5.6nm,0.8s
FINES FINESS Array B 75.05 351 *i* P **P 06 54 15.3 -0.2**
FINES pmax pmax
comp=Z,6.0nm,0.8s
MPSI Mapaga 75.42 86 P **P 06 54 19.4 +0.7**
comp=Z,9.2nm,1.7s
HFS Hagfors 76.45 345 P **P 06 54 23.5 -0.1**
comp=Z,13nm,0.6s,baz=131,slow=6.1,SNR=30
HFS LR LR 07 31 28.8
comp=Z,38nm,18.3s,baz=142,slow=38
comp=Z,13nm,0.6s
BATI Bamata 77.00 98 LR LR 07 24 29.2
comp=Z,74nm,18.5s,baz=202,slow=33
KONO Kongsberg 77.18 342⇑*e*P **P 06 54 28.0 +0.3**
KONO pmax pmax
comp=Z,21nm,1.3s
FITZ Fitzroy Crossi 77.57 106 LR LR 07 24 44.0
comp=Z,122nm,18.8s,baz=216,slow=33
KNGR Kungurtug, Tuv 77.62 31⇓*e*P **P 06 54 31.8 +1.2**
KNGR pmax pmax
comp=Z,7.0nm,0.7s
QSPA South Pole Qui 77.74 180 P **P 06 54 31.7 +0.6**
comp=Z,2.1nm,0.8s,baz=273,slow=1.4,SNR=6.2
QSPA LR LR 07 25 16.4
comp=Z,181nm,21.4s,baz=270,slow=33
comp=Z,2.1nm,0.8s
NB201 NORSAR Array S 77.86 344 P **P 06 54 31.4 -0.1**
NB2 NORSAR Subarra 77.88 344 P **P 06 54 31.4 -0.3**
comp=Z,5.4nm,0.8s,baz=146,slow=5.6
NOA NORSAR Array B 77.88 344 P **P 06 54 31.9 +0.2**
comp=Z,3.7nm,0.8s,baz=144,slow=7.7,SNR=21
NOA LR LR 07 31 16.8
comp=Z,21nm,20.4s,baz=120,slow=38
comp=Z,3.7nm,0.8s
FORT Forrest 77.97 119 P **P 06 54 33.1 +0.2**
comp=Z,13nm,1.1s
NC204 NORSAR Array S 78.19 344 P **P 06 54 33.8 +0.3**
NC204 lAmb lAmb 06 54 34.7
comp=Z,20nm,1.1s
EKA Eskdalemuir Ar 78.54 334 P **P 06 54 35.6 +0.2**
comp=Z,5.3nm,0.6s,baz=123,slow=5.6,SNR=16
EKA LR LR 07 30 12.6
comp=Z,36nm,21.1s,baz=160,slow=36
comp=Z,5.3nm,0.6s
WRKA Warakurna 78.96 113 P **P 06 54 38.3 -0.3**
comp=Z,7.7nm,0.9s
TGY Tagaytay City 79.78 73 P **P 06 54 44.2 +1.1**
comp=Z,66nm,0.3s,baz=231,slow=6.5,SNR=1.9
APA Apatity 80.14 356⇓*e*P **P 06 54 42.9 -1.0**
APA *e* 06 54 48.6
APA pmax pmax
comp=Z,19nm,1.0s
LVZ Lovozero 80.38 356⇑*e*P **P 06 54 45.9 +0.7**
LVZ pmax pmax
comp=Z,149nm,2.3s
ZAK Zakamensk 80.52 34 *e*P **P 06 54 46.1 -0.3**
ZAK pmax pmax
comp=Z,7.0nm,1.9s
SONM Songino Array 80.95 37 P **P 06 54 50.0 +1.1**
comp=Z,4.2nm,0.8s,baz=230,slow=5.8,SNR=15
SONM LR LR 07 29 21.2
comp=Z,55nm,18.9s,baz=235,slow=35
comp=Z,4.2nm,0.8s
SONM Songino Array 80.95 37 P **P 06 54 49.6 +0.7**
SONM Songino Array 80.95 37 P **P 06 54 49.6 +0.7**
SONM pmax pmax
comp=Z,4.0nm,0.9s
HHC Hu-ho-hao-te 81.07 45 *e*P **P 06 54 50.4 +0.8**
HHC pmax pmax
comp=Z,11nm,0.8s
ULN Ulaanbaatar 81.36 37 P **P 06 54 51.7 +0.6**
ULN Ulaanbaatar 81.36 37⇑*i*P **P 06 54 52.3 +1.3**
ULN pmax pmax
comp=Z,8.0nm,1.3s
ULN Ulaanbaatar 81.36 37 P **P 06 54 50.9 -0.1**
comp=Z,24nm,3.0s
TLY Talaya 81.41 33 LR LR 07 30 34.8
comp=Z,48nm,19.7s,baz=228,slow=35
HNS HongShan 81.94 49 ⇑P **P 06 54 55.6 +1.5**
HNS pmax pmax
comp=Z,16nm,1.2s
ARCES ARCESS Array B 82.81 353 P **P 06 54 58.5 +0.5**
comp=Z,12nm,0.8s,baz=151,slow=2.8,SNR=15
ARCES LR LR 07 34 54.7
comp=Z,33nm,18.6s,baz=185,slow=38
comp=Z,12nm,0.8s
NJ2 Nanjing 83.27 55 *e*P **P 06 55 03.0 +1.8**
NJ2 pmax pmax
comp=Z,53nm,0.5s
VNDA Vanda 83.62 169 P **P 06 55 02.8 +0.6**
comp=Z,0.7nm,0.8s,baz=217,slow=5.1,SNR=2.3
VNDA LR LR 07 28 08.2
comp=Z,212nm,21.4s,baz=254,slow=33
comp=Z,0.7nm,0.8s
ASAR Alice Springs 84.23 113 P **P 06 55 06.5 +0.1**
comp=Z,7.2nm,0.8s,baz=263,slow=4.8,SNR=62
ASAR LR LR 07 26 15.9
comp=Z,196nm,21.2s,baz=280,slow=31
comp=Z,7.2nm,0.8s
AS31 Alice Springs 84.23 113 P **P 06 55 06.3 -0.1**
WRA Warramunga Arr 85.34 109 P **P 06 55 12.1 0.0**
comp=Z,8.6nm,0.9s,baz=261,slow=3.5,SNR=44
comp=Z,8.6nm,0.9s
WRA Warramunga Arr 85.34 109 P **P 06 55 11.7 -0.4**
WRA Warramunga Arr 85.34 109 P **P 06 55 11.7 -0.4**
WRA pmax pmax
comp=Z,1.0nm,1.1s
WRAB Tennant Creek 85.36 109⇑*e*P **P 06 55 11.8 -0.4**
WRAB pmax pmax
comp=Z,21nm,1.1s
WR8 Warramunga Arr 85.49 109 P **P 06 55 11.7 -1.1**
comp=Z,13nm,1.2s
NRIK Noril'sk 86.77 14 P **P 06 55 19.3 +1.3**
comp=Z,6.8nm,0.9s,baz=190,slow=3.2,SNR=7.2
NRIK LR LR 07 38 26.9
comp=Z,55nm,19.4s,baz=211,slow=39
comp=Z,6.8nm,0.9s
NRIK Noril'sk 86.77 14 *c* *i*P **P 06 55 19.2 +1.3**
NRIK pmax pmax
comp=Z,11nm,1.0s
STKA Stephens Creek 89.15 122 P **P 06 55 30.1 -0.2**
comp=Z,2.7nm,0.9s,baz=286,slow=6.3,SNR=4.8
STKA LR LR 07 30 49.4
comp=Z,71nm,20.4s,baz=207,slow=32
comp=Z,2.7nm,0.9s
STKA Stephens Creek 89.15 122⇑*e*P **P 06 55 29.3 -1.0**
BDFB Brasilia 89.49 254 P **P 06 55 33.7 +1.4**
comp=Z,2.3nm,0.8s,baz=108,slow=5.8,SNR=3.6
BDFB LR LR 07 33 16.8
comp=Z,139nm,18.6s,baz=111,slow=34
comp=Z,2.3nm,0.8s
JOW Kunigami 89.69 63 LR LR 07 36 22.1
comp=Z,42nm,18.1s,baz=8.0,slow=36
BORG Borgarnes 91.32 337 LR LR 07 42 33.4
comp=Z,30nm,18.4s,baz=147,slow=39
SPITS Spitsbergen Ar 91.77 354 P **P 06 55 40.8 -0.6**
comp=Z,3.0nm,0.7s,baz=152,slow=9.7,SNR=1.9
comp=Z,3.0nm,0.7s
KSRS Korea Array 91.96 52 P **P 06 55 42.5 -0.6**
comp=Z,0.8nm,0.4s,baz=246,slow=5.2,SNR=4.3
KSRS LR LR 07 38 02.0
comp=Z,28nm,18.8s,baz=255,slow=36
comp=Z,0.8nm,0.4s
JNU Nakatsue 93.32 57 LR LR 07 37 35.7
comp=Z,50nm,18.5s,baz=200,slow=35
CPUP Villa Florida 95.28 242 LR LR 07 31 49.6
comp=Z,95nm,21.6s,baz=148,slow=31
CTA Charters Tower 96.21 112 LR LR 07 33 47.4
comp=Z,130nm,20.0s,baz=222,slow=32
KLR Kul'dur 97.19 41 LR LR 07 38 51.8
comp=Z,68nm,21.4s,baz=275,slow=35
TIXI Tiksi 99.73 19 LR LR 07 43 52.4
comp=Z,46nm,20.5s,baz=289,slow=37
TIXI Tiksi 99.73 19⇑*e*P **Pdif 06 56 17.1 -0.6**
TIXI pmax pmax
comp=Z,5.0nm,1.0s
MJAR Matsushiro Arr 99.86 55 LR LR 07 41 24.2
comp=Z,14nm,21.0s,baz=237,slow=35
ILAR Eielson Array 127.01 6 PKP **PKPdf 07 01 36.6 -1.3**
comp=Z,0.9nm,0.7s,baz=325,slow=3.1,SNR=14
YKA Yellowknife Ar 127.82 348 PKP **PKPdf 07 01 38.6 -0.9**
comp=Z,1.0nm,0.9s,baz=5.3,slow=2.3,SNR=15
YKA PP **PP 07 03 40.5 -0.4**
comp=Z,1.2nm,1.1s,baz=12,slow=6.8,SNR=9.1
PDAR Pinedale Array 142.47 329 PKhKP PKPpre 07 02 02.9
comp=Z,0.8nm,0.9s,baz=43,slow=4.5,SNR=3.9
PDAR PKP **PKPdf 07 02 07.9 +0.2**
comp=Z,2.2nm,0.9s,baz=103,slow=3.0,SNR=11
TXAR Lajitas Array 146.27 305 PKPbc **PKPbc 07 02 15.9 +0.2**
comp=Z,7.5nm,1.0s,baz=95,slow=3.1,SNR=34
PPT Papeete 147.01 154 PKPbc **PKPbc 07 02 18.5 +0.6**
comp=Z,56nm,0.6s,baz=264,slow=10,SNR=2.4
NVAR Mina Array Bea 150.03 333 PKPbc **PKPdf 07 02 21.2 +0.6**
comp=Z,2.9nm,0.8s,baz=70,slow=1.9,SNR=12
NVAR PKPbc **PKiKP 07 02 26.4 -0.1**
comp=Z,1.3nm,0.7s,baz=60,slow=4.7,SNR=5.6

*GCG **21** 06:53:37.3±1.1, 14°.93N×92°.20W, h103km±10km, MD3.6, Presumed earthquake*
*MEX **21** 06:53:37.9±0.6, 14°.87N×92°.32W, h110km±4km, MD3.9*
ISC 21 06:53:31.9±1.8, 14°.71N±0°.07×92°.24W±0°.07, h133km±11km, n19, σ2s46/35, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
THIG		**0.20**	**354**	*e*P		**Pn**	**06 53 50.8**	**+0.7**
THIG				*e*S		**Sn**	**06 54 03.6**	**-0.4**
SMCA	**Catarina**	**0.22**	**49**	*i*P		**Pn**	**06 53 51.7**	**+1.5**
SMCA				*i*S		**Sn**	**06 54 02.6**	**-1.4**
CHUJ	**Union Juarez**	**0.40**	**19**	*e*P		**Pn**	**06 53 52.4**	**+1.3**
CHUJ				*e*S		**Sn**	**06 54 04.2**	**-1.6**
PATR	**El Naranjo**	**0.40**	**1**	*e*P		**Pn**	**06 53 52.0**	**+0.8**
PATR				*e*S		**Sn**	**06 54 03.8**	**-1.9**
PAVE	**Pavencul**	**0.48**	**8**	*e*P		**Pn**	**06 53 52.8**	**+1.2**
PAVE				*e*S		**Sn**	**06 54 04.6**	**-1.8**
RTAL	**Retalhuleu**	**0.56**	**109**	*e*P		**Pn**	**06 53 55.2**	**+3.5**
RTAL				*e*S		**Sn**	**06 54 08.9**	**+2.3**
STG2	**El Palmar, Qui**	**0.88**	**108**	*i*P		**Pn**	**06 53 54.0**	**-0.2**
STG2				*i*S		**Sn**	**06 54 08.6**	**-2.6**
STG8	**El Palmar, Qui**	**0.90**	**107**	*i*P		**Pn**	**06 53 54.7**	**+0.2**
STG5	**El Palmar, Qui**	**0.92**	**109**	*i*P		**Pn**	**06 53 54.7**	**+0.3**
STG5				*i*S		**Sn**	**06 54 08.5**	**-3.1**
HUEH	**Huehuetenango**	**0.94**	**50**	*e*P		**Pn**	**06 53 55.5**	**+0.8**
HUEH				*e*S		**Sn**	**06 54 11.4**	**-0.7**
PCIG		**1.36**	**316**	*e*P		**Pn**	**06 54 00.4**	**+1.7**
PCIG				*e*S		**Sn**	**06 54 18.8**	**-0.3**
CCIG	**Comitan**	**1.56**	**4**	*e*P		**Pn**	**06 54 03.0**	**+1.8**
CCIG				*e*S		**Sn**	**06 54 21.8**	**-1.6**
CCIG	**Comitan**	**1.56**	**4**	*i*P		**Pn**	**06 54 02.9**	**+1.8**
TGIG		**2.22**	**338**	*e*P		**Pn**	06 54 14.5	+5.7
TGIG				*e*S		**Sn**	**06 54 34.4**	**-2.8**
CMIG	**Matias Romero**	**3.47**	**313**	*e*P		**Pn**	**06 54 27.2**	**+2.5**
CMIG				*e*S		**Sn**	**06 55 04.6**	**-1.1**
HUIG	**Huatulco**	**3.88**	**286**	*e*P		**Pn**	**06 54 32.4**	**+2.3**
HUIG				*e*S		**Sn**	**06 55 10.9**	**-4.3**
NEUV	**Arroyo Zacate**	**4.54**	**312**	*e*P		**Pn**	**06 54 41.7**	**+2.8**
NEUV				*e*S		**Sn**	**06 55 26.7**	**-4.2**
PEIG	**Puerto Escondi**	**4.90**	**286**	*e*P		**Pn**	**06 54 46.6**	**+2.9**
PEIG				*e*S		**Sn**	**06 55 35.5**	**-4.1**
YOIG	**Yosondua**	**5.53**	**293**	*e*P		**Pn**	**06 54 56.4**	**+4.0**
YOIG				*e*S		**Sn**	**06 55 51.0**	**-4.2**

*ECX **21** 06:55:46.9±0.7, 31°.70N×114°.55W, h20km±3km, ML2.8*
*MEX **21** 06:55:54.2±0.6, 31°.52N×114°.71W, h20km±34km, MD3.9*
ISC 21 06:55:46.0±1.2, 31°.67N±0°.03×114°.57W±0°.03, h6km±10km, n21, σ2s05/36, 1C-6D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
EDOMX	**El Doctor, EDO**	**0.33**	**333**	*e*P		**Pg**	**06 55 53.1**	**+0.7**
EDOMX				*e*S		**Sg**	**06 55 58.0**	**+1.3**
ECBX	**El Chinero**	**0.46**	**245**⇓	*e*P		**Pg**	**06 55 56.0**	**+1.2**
ECBX				*e*S		**Sb**	**06 56 02.9**	**-0.5**

ECBX				⇓*e*			06 56 04.3	
ECBX				IAML			06 56 04.3	
	comp=N,601nm,0.6s							
RITX	**Riito Sonora**	**0.60**	**326**	*eS*		**Sg**	**06 56 05.9**	**+0.6**
SFX	**San Felipe**	**0.68**	**201**	*eP*		**Pg**	**06 55 59.7**	**+0.8**
SFX				*eS*		**Sb**	**06 56 09.5**	**-0.2**
SFX				*e*			06 56 10.4	
SFX				IAML			06 56 10.4	
	comp=N,325nm,0.3s							
SFX				IAML			06 56 10.5	
	comp=E,260nm,0.2s							
SFX				⇓*e*			06 56 10.5	
SFX	**San Felipe**	**0.68**	**201**	*eP*		**Pg**	**06 55 59.8**	**+0.8**
SFX				*eS*		**Sg**	**06 56 06.6**	**-1.1**
SFX	**San Felipe**	**0.68**	**201**	*eP*		**Pn**	**06 56 03.5**	**+1.5**
SFX				*eS*		**Sb**	**06 56 09.5**	**-0.2**
RHX	**Rio Hardy**	**0.77**	**308**	*eP*		**Pg**	**06 55 59.5**	**-1.2**
AGSX	**Ej. Aguas Cali**	**0.78**	**320**	*eP*		**Pg**	**06 56 00.3**	**-0.7**
AGSX				*eS*		**Sg**	**06 56 10.9**	**-0.2**
AGSX				⇓*e*			06 56 12.4	
AGSX				IAML			06 56 12.4	
	comp=E,406nm,0.3s							
AGSX				IAML			06 56 12.4	
	comp=N,325nm,0.2s							
AGSX				⇓*e*			06 56 12.4	
PPXB	**Puerto Peasco**	**0.87**	**112**	*eP*		**Pg**	**06 56 02.3**	**-0.4**
PPXB				⇓*e*			06 56 15.7	
PPXB				IAML			06 56 15.7	
	comp=E,176nm,0.3s							
PPXB				IAML			06 56 15.9	
	comp=N,350nm,0.2s							
PPXB				⇑*e*			06 56 15.9	
MBIG	**Mexicali**	**0.91**	**324**	*eP*		**Pn**	**06 56 05.3**	**0.0**
MBIG				*eS*		**Sg**	**06 56 12.6**	**-2.6**
MBIG	**Mexicali**	**0.91**	**324**	*eP*		**Pn**	**06 56 09.1**	**+3.8**
MBIG				*eS*		**Sn**	**06 56 25.2**	**+6.6**
PIX	**Pinacate**	**0.95**	**96**	*eP*		**Pg**	**06 56 03.2**	**-1.0**
PIX				*eS*		**Sg**	**06 56 15.3**	**-1.3**
SPIG	**San Pedro Mart**	**0.99**	**231**	*eP*		**Pn**	**06 56 04.5**	**-0.5**
SPIG	**San Pedro Mart**	**0.99**	**231**	*eP*		**Pg**	**06 56 04.7**	**-0.3**
SPIG				*eS*		**Sg**	**06 56 17.3**	**-0.5**
SPIG	**San Pedro Mart**	**0.99**	**231**	*eP*		**Pn**	**06 56 09.4**	**+2.8**
SPIG				*eS*		**Sb**	**06 56 19.1**	**+0.1**
ALAMX	**Rancho Alamar**	**1.03**	**289**	*eP*		**Pg**	**06 56 03.7**	**-2.0**
ALAMX				IAML			06 56 20.1	
	comp=N,217nm,0.3s							
VTX	**Valle De La Tr**	**1.07**	**255**	*eP*		**Pg**	**06 56 05.7**	**-0.9**
CBX	**Cerro Bola**	**1.89**	**290**	*eP*		**Pn**	**06 56 16.7**	**-2.2**
CBX				*eS*		**Sn**	**06 56 40.5**	**-2.6**
CBX	**Cerro Bola**	**1.89**	**290**	*eP*		**Pg**	**06 56 24.9**	**+2.6**
CBX				*eS*		**Sb**	**06 56 44.9**	**0.0**
TJIG	**Tijuana**	**1.94**	**294**	*eP*		**Pn**	**06 56 17.3**	**-2.2**
TJIG				*eS*		**Sn**	**06 56 39.9**	**-4.3**
TJIG	**Tijuana**	**1.94**	**294**	*eP*		**Pg**	**06 56 24.2**	**+1.0**
TJIG				*eS*		**Sb**	**06 56 45.9**	**-0.4**

IDC 21 07:07:26.6±2.3,7.02S×129.21E,h0km,mb3.4/1, mbtmp3.3/4,ML3.2/3,Error ellipse: s-maj=84.1km s-min=30.4km az=75.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.33**	**240**	Sn	Sn	07 10 07.3	-7.2
	7.9nm,0.3s,baz=61,slow=17,SNR=2.0						
FITZ	**Fitzroy Crossi**	**11.55**	**197**	Pn	Pn	07 10 11.4	-1.5
	0.1nm,0.3s,baz=18,slow=16,SNR=1.7						
FITZ				Sn	Sn	07 12 06.2	-17
	0.3nm,0.3s,baz=25,slow=19,SNR=3.3 1.4nm,0.8s						
WRA	**Warramunga Arr**	**13.78**	**159**	Pn	Pn	07 10 43.5	0.0
	0.1nm,0.3s,baz=339,slow=12,SNR=6.3						
WRA				Sn	Sn	07 13 06.7	-11
	0.4nm,0.3s,baz=339,slow=22,SNR=12 0.1nm,0.4s						
ASAR	**Alice Springs**	**17.16**	**165**	P	P	07 11 29.2	-0.5
	0.1nm,0.3s,baz=346,slow=12,SNR=9.5						
ASAR				S	Sn	07 14 24.9	-15
	0.1nm,0.4s,baz=347,slow=26,SNR=1.5 0.4nm,0.5s						
MKAR	**Makanchi Array**	**67.81**	**327**	P	P	07 18 26.6	+0.1
	0.2nm,0.4s,baz=111,slow=7.9,SNR=2.9 0.2nm,0.4s						

*IDC **21** 07:27:04.7±2.3,43.46N×126.71W,h0km,mb2.7/2, mbtmp2.9/6,ML3.1/4,MS2.9/2,Error ellipse: s-maj=37.6km s-min=15.6km az=54.0*
*NEIC **21** 07:27:04.8±2.0,43.35N±0.06×126.80W±0.03,h10km±2km, ML2.7/78,Error ellipse: s-maj=11.2km s-min=4.2km az=191.0*

ISC 21 07:27:05.3±1.6,43.34N±0.07×126.9W±0.1,h10km,n49, σ1s23/45,Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
J01E	**Myrtle Point**	**2.17**	**94**	Pn	**Pn**	**07 27 38.8**	**-2.7**
J01E				Sn	**Sn**	**07 28 06.8**	**-1.5**
J01E				IAML		07 28 12.1	
	comp=E,38nm,0.3s						
J01E				IAML		07 28 14.2	
	comp=N,34nm,0.5s						
KBO	**Bosley Butte**	**2.26**	**119**	Pn	**Pn**	**07 27 40.3**	**-2.6**
KBO				IAML		07 28 20.0	
	comp=N,39nm,3.9s						
KBO				IAML		07 28 36.1	
	comp=E,45nm,1.7s						
I02E	**Swisshome, OR**	**2.33**	**70**	Pn	**Pn**	**07 27 41.8**	**-1.9**
K02D	**Willamette Mer**	**2.45**	**104**		**Pn**	**07 27 43.2**	**-2.3**
I03D	**Drain, OR**	**2.60**	**81**		**Pn**	**07 27 45.6**	**-1.8**
I03D				IAML		07 28 18.9	
	comp=E,24nm,1.2s						
I03D				IAML		07 28 23.1	
	comp=N,23nm,0.6s						
L02F	**Cave Junction**	**2.73**	**115**	Pn	**Pn**	**07 27 47.4**	**-1.8**
COR	**Corvallis**	**2.87**	**63**		**Pn**	**07 27 49.7**	**-1.4**
COR				IAML		07 28 32.9	
	comp=N,25nm,2.1s						
COR				IAML		07 28 34.8	
	comp=N,23nm,1.8s						
BUCK	**Buck Mountain**	**2.95**	**72**		**Pn**	**07 27 51.3**	**-1.1**
BUCK				IAML		07 28 18.2	
	comp=N,21nm,3.4s						
BUCK				IAML		07 28 32.2	
	comp=E,27nm,2.1s						
BBOR	**Butler Butte**	**3.12**	**97**		**Pn**	**07 27 53.7**	**-0.9**
G03D	**McMinnville, O**	**3.20**	**53**		**Pn**	**07 27 54.5**	**-1.2**
G03D				IAML		07 28 34.6	
	comp=E,19nm,0.7s						
G03D				IAML		07 28 36.1	
	comp=N,21nm,0.6s						
H04D	**Lebanon**	**3.22**	**67**		**Pn**	**07 27 55.6**	**-0.3**
H04D				IAML		07 28 38.6	
	comp=N,23nm,0.7s						
H04D				IAML		07 28 39.2	
	comp=E,24nm,0.8s						
I04A	**Tendick Farm,**	**3.29**	**81**		**Pn**	**07 27 56.2**	**-0.6**
I04A				IAML		07 28 40.3	
	comp=E,21nm,0.2s						
YBH	**Yreka Blue Hor**	**3.48**	**116**	Pn	**Pn**	**07 27 59.5**	**-0.1**
	baz=306,slow=5.3						
YBH				Sn	**Sn**	**07 28 42.0**	**+1.0**
	baz=336,slow=18,SNR=5.7						
YBH	**Yreka Blue Hor**	**3.48**	**116**		**Pn**	**07 27 59.4**	**-0.3**
J04A	**Umpqua Nationa**	**3.49**	**90**		**Pn**	**07 27 59.3**	**-0.6**
F03A	**Seaside**	**3.51**	**41**	Pn	**Pn**	**07 27 58.6**	**-1.4**
L04D	**Klamath Falls**	**3.56**	**107**		**Pn**	**07 28 00.2**	**-0.5**
L04D				IAML		07 28 46.3	
	comp=E,13nm,2.7s						
M02C	**Callahan**	**3.57**	**122**	Pn	**Pn**	**07 28 00.1**	**-0.8**
H04A	**Detroit Lake**	**3.65**	**67**		**Pn**	**07 28 01.7**	**-0.1**
H04A				IAML		07 28 51.2	
	comp=N,15nm,0.4s						
H04A				IAML		07 28 52.9	
	comp=E,19nm,0.3s						
G04A	**Mulino**	**3.67**	**58**		**Pn**	**07 28 01.8**	**-0.4**
WIFE	**Three Sisters-**	**3.75**	**77**		**Pn**	**07 28 03.2**	**-0.2**
WIFE				IAML		07 28 51.1	
	comp=E,16nm,2.8s						
WIFE				IAML		07 29 01.5	
	comp=N,9.3nm,2.9s						
N02D	**Trinity Center**	**3.91**	**126**	Pn	**Pn**	**07 28 05.3**	**-0.2**
I05D	**Terrebonne, OR**	**4.14**	**74**		**Pn**	**07 28 08.1**	**-0.5**
I05D				IAML		07 29 04.9	
	comp=N,13nm,4.2s						
I05D				IAML		07 30 41.9	
	comp=E,13nm,4.0s						
HOOD	**Mount Hood Mea**	**4.25**	**60**		**Pn**	**07 28 10.5**	**+0.3**
HOOD				IAML		07 28 42.4	
	comp=N,14nm,0.7s						
HOOD				IAML		07 29 10.1	
	comp=E,16nm,1.3s						
PINE	**Pine Mountain**	**4.35**	**82**		**Pn**	**07 28 10.9**	**-0.7**
PINE				IAML		07 29 27.0	
	comp=N,9.7nm,5.0s						
PINE				IAML		07 29 53.0	
	comp=E,9.0nm,5.0s						
WISH	**Wishkah**	**4.37**	**29**	Pn	**Pn**	**07 28 10.7**	**-1.0**
G05A	**Wamic**	**4.43**	**63**		**Pn**	**07 28 12.6**	**0.0**
G06A	**Carlson Farm,**	**4.87**	**65**		**Pn**	**07 28 18.1**	**-0.5**
G06A				IAML		07 29 09.4	
	comp=E,6.1nm,4.5s						
G06A				IAML		07 29 40.3	
	comp=N,6.1nm,4.8s						
C03A	**Quillayute Air**	**4.88**	**19**	Pn	**Pn**	**07 28 18.0**	**-0.8**
LON	**Longmire**	**4.95**	**45**		**Pn**	**07 28 19.7**	**-0.1**
LON				IAML		07 28 58.5	
	comp=N,7.4nm,4.3s						
LON				IAML		07 30 00.2	
	comp=E,11nm,0.2s						
GNW	**Green Mountain**	**5.10**	**33**		**Pn**	**07 28 20.3**	**-1.4**
GNW				IAML		07 31 29.2	
	comp=N,6.4nm,4.4s						
GNW				IAML		07 31 40.2	
	comp=E,6.2nm,4.6s						
D05A	**Enumclaw**	**5.17**	**40**	Pn	**Pn**	**07 28 22.9**	**+0.1**
B04A	**Port Angeles**	**5.28**	**26**	Pn	**Pn**	**07 28 23.6**	**-0.6**
MXC	**Moxie City**	**5.69**	**53**		**Pn**	**07 28 29.4**	**-0.4**
CLRS	**Cowichan Lake**	**5.80**	**18**	Pn	**Pn**	**07 28 29.8**	**-1.6**
PGC	**Sidney**	**5.82**	**23**	Pn	**Pn**	**07 28 30.7**	**-0.9**
G08A	**Pilot Rock**	**6.01**	**68**		**Pn**	**07 28 33.9**	**-0.6**
NVAR	**Mina Array Bea**	**8.15**	**124**	Pn	**Pn**	**07 29 06.0**	**+2.2**
	comp=E,0.1nm,0.3s,baz=309,slow=15,SNR=1.7 comp=E,0.1nm,0.6s						
NEW	**Newport**	**8.41**	**51**	Pn	**Pn**	**07 29 07.2**	**0.0**
	comp=E,0.2nm,0.3s,baz=245,slow=14,SNR=2.0						
NEW				LR	LR	07 32 10.9	
	comp=E,120nm,18.2s,baz=262,slow=37 comp=E,0.7nm,0.3s						
PDAR	**Pinedale Array**	**12.69**	**87**	Pn	**Pn**	**07 30 08.5**	**+2.5**
	baz=292,slow=11,SNR=1.3						
PDAR				LR	LR	07 35 01.7	
	comp=E,43nm,20.6s,baz=318,slow=38 comp=E,0.2nm,0.8s						
ANMO	**Albuquerque**	**17.90**	**111**	P	**P**	**07 31 15.8**	**+0.7**
	baz=327,slow=12,SNR=3.4 comp=E,0.3nm,0.5s						
YKA	**Yellowknife Ar**	**20.49**	**16**	P	**P**	**07 31 44.3**	**+1.2**
	comp=E,0.2nm,0.7s,baz=207,slow=10,SNR=4.2 comp=E,0.2nm,0.7s						
ILAR	**Eielson Array**	**24.25**	**339**	P	**P**	**07 32 21.9**	**-0.3**
	comp=E,0.2nm,0.7s,baz=132,slow=9.8,SNR=5.2 comp=E,0.2nm,0.7s						
H11N3	**WAKE ISLAND Hy**	**59.55**	**269**	T	T	08 41 31.7	
	baz=50,slow=75,SNR=18						
H11N2	**WAKE ISLAND Hy**	**59.55**	**269**	T	T	08 41 29.7	
	baz=50,slow=75,SNR=12						
H11N1	**WAKE ISLAND Hy**	**59.57**	**269**	T	T	08 41 27.1	
	baz=50,slow=75,SNR=13						
H11S1	**WAKE ISLAND Hy**	**60.47**	**268**	T	T	08 42 36.0	
	baz=50,slow=75,SNR=73						
H11S2	**WAKE ISLAND Hy**	**60.48**	**268**	T	T	08 42 35.2	
	baz=50,slow=75,SNR=56						
H11S3	**WAKE ISLAND Hy**	**60.49**	**268**	T	T	08 42 36.7	
	baz=50,slow=75,SNR=47						

*KRSC **21** 07:29:01.1±0.7,55.64N×162.29E,h31km±16km,Ml4.2*
*IDC **21** 07:29:05.2±2.6,55.79N×162.13E,h55km±26km,mb3.5/13, mbtmp3.8/15,ML5.1/1,MS3.1/8,Error ellipse: s-maj=19.5km s-min=13.9km az=144.0*

ISC 21 07:29:01.4±1.2,55.73N±0.02×162.32E±0.03,h25km±9km, n63,σ1s49/74,mb3.7/13,MS3.4/5,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.56**	**30**	*eP*	**Pn**	**07 29 14.1**	**+0.3**
KBTR				*eS*	**Sn**	**07 29 23.9**	**+1.7**
KBG	**Krutoberegovo**	**0.57**	**22**	*eP*	**Pb**	**07 29 14.2**	**+1.4**
KBG				*eS*	**Sn**	**07 29 24.1**	**+1.6**
BZGR	**Bezymyannyi-Gr**	**0.94**	**284**	*eS*	**Sn**	**07 29 30.9**	**-0.9**
SMKR	**Semkarok**	**0.98**	**331**	*eP*	**Pn**	**07 29 20.0**	**+0.3**
SMKR				*eS*	**Sn**	**07 29 33.7**	**+0.9**
KLY	**Klyuchi**	**1.10**	**303**	*eP*	**Pn**	**07 29 20.0**	**-1.2**
KLY				*eS*	**Sn**	**07 29 33.6**	**-2.1**
KIRR	**Kirishev**	**1.14**	**282**	*eP*	**Pb**	**07 29 22.1**	**-0.3**
KIRR				*eS*	**Sb**	**07 29 37.5**	**+0.7**
KMNR	**Kamenistaya**	**1.18**	**272**	*eP*	**Pb**	**07 29 23.4**	**+0.3**
KMNR				*eS*	**Sb**	**07 29 39.0**	**+1.1**
KPT	**Kopyto**	**1.20**	**282**	*eP*	**Pb**	**07 29 23.8**	**+0.2**
KPT				*eS*	**Sb**	**07 29 39.3**	**+0.6**
TUMD	**Tumrok D**	**1.21**	**245**	*eP*	**Pb**	**07 29 23.3**	**-0.3**
TUMD				*eS*	**Sb**	**07 29 38.7**	**-0.1**
MKZ	**Mys Kozlova**	**1.22**	**196**	*eP*	**Pb**	**07 29 23.2**	**-0.5**
MKZ				*eS*	**Sb**	**07 29 38.8**	**-0.2**
KOZ	**Kozyrevsk**	**1.42**	**285**	*eP*	**Pb**	**07 29 27.0**	**-0.1**
KOZ				*eS*	**Sb**	**07 29 45.7**	**+1.0**
SRDR	**Sredinnyy**	**1.57**	**293**	*eP*	**Pb**	**07 29 29.0**	**-0.8**
SRDR				*eS*	**Sb**	**07 29 48.5**	**-0.8**
ESO	**Esso**	**2.05**	**277**	*eP*	**Pn**	**07 29 34.8**	**+0.5**
ESO				*eS*	**Sn**	**07 29 59.3**	**+0.2**
BKI	**Bering**	**2.15**	**103**	*eP*	**Pb**	**07 29 37.5**	**-2.1**
BKI				*eS*	**Sb**	**07 30 03.5**	**-2.2**
KII	**Karymskiy**	**2.37**	**226**	*eP*	**Pb**	**07 29 40.2**	**-3.2**
TIGL	**Tigil**	**2.86**	**317**	*eP*	**Pb**	**07 29 49.2**	**-2.5**
TIGL				*eS*	**Sb**	**07 30 24.9**	**-1.3**
SPN	**Mys Shipunski**	**2.96**	**208**	*eP*	**Pn**	**07 29 46.9**	**+0.1**
SPN				*eS*	**Sn**	**07 30 19.8**	**-1.6**
NLC	**Nalytchevo**	**3.09**	**215**	*eS*	**Sn**	**07 30 25.1**	**+0.3**
SDLR	**Sedlovina**	**3.17**	**221**	*eP*	**Pn**	**07 29 50.9**	**+1.2**
KRX	**Arik**	**3.19**	**223**	*eP*	**Pn**	**07 29 51.4**	**+1.2**
SMAR	**Somma**	**3.21**	**221**	*eP*	**Pn**	**07 29 52.0**	**+1.6**
AVH	**Avacha**	**3.23**	**222**	*eP*	**Pn**	**07 29 52.4**	**+1.8**
AVH				*eS*	**Sn**	**07 30 29.5**	**+1.2**
UGLR	**Uglovaya**	**3.24**	**220**	*eP*	**Pn**	**07 29 52.5**	**+1.7**
UGLR				*eS*	**Sn**	**07 30 30.3**	**+1.7**
KOK	**Koryaka**	**3.25**	**223**	*eP*	Pb	07 29 53.3	-5.1
GNL	**Ganaly**	**3.25**	**233**	*eP*	**Pn**	**07 29 52.4**	**+1.5**
DALK	**Dalny**	**3.41**	**219**	*eP*	**Pn**	**07 29 54.4**	**+1.4**
DALK				*eS*	**Sn**	**07 30 32.8**	**+0.2**
PET	**Petropavlovsk**	**3.45**	**220**	*eP*	**Pn**	**07 29 55.2**	**+1.6**
PET				*eS*	**Sn**	**07 30 34.3**	**+0.7**
OSSR	**Ossora**	**3.56**	**6**	*eP*	**Pn**	**07 29 57.2**	**+2.3**
PALN	**Palana**	**3.60**	**340**	*eP*	**Pn**	**07 30 02.5**	**-1.8**
PALN				*eS*	**Sb**	**07 30 46.9**	**-0.6**
PETK	**Petropavlovsk-**	**3.76**	**228**	P	**Pn**	**07 29 59.4**	**+1.6**
	3.4nm,0.4s,baz=58,slow=17,SNR=25						
PETK				S	**Sn**	**07 30 44.0**	**+2.7**
	8.3nm,0.4s,baz=80,slow=18,SNR=1.5						
KRMR	**Karymshinskiy**	**3.80**	**222**	*eP*	**Pn**	**07 30 01.1**	**+2.8**
KRMR				*eS*	**Sn**	**07 30 44.3**	**+2.1**
GRL	**Gorelyy**	**4.04**	**220**	*eP*	Pb	07 30 05.3	-6.6
MTVR	**Mutnovka**	**4.06**	**218**	*eP*	**Pn**	**07 30 04.1**	**+2.1**
APC	**Apacha**	**4.12**	**229**	*eP*	**Pn**	**07 30 05.3**	**+2.5**
APC				*eS*	**Sn**	**07 30 51.8**	**+1.7**
ASAK	**Asacha**	**4.24**	**220**	*eP*	**Pn**	**07 30 07.2**	**+2.7**
ASAK				*eS*	**Sn**	**07 30 54.3**	**+1.1**
TILK	**Tilichiki**	**5.15**	**22**	*eP*	**Pn**	**07 30 20.2**	**+3.4**
MA2	**Magadan**	**7.29**	**307**	LR	LR	07 33 54.7	
	comp=Z,59nm,18.2s,baz=168,slow=40						
SHEM	**Shemya Is, Ala**	**7.53**	**109**	LR	LR	07 33 36.7	
	comp=Z,76nm,20.5s,baz=309,slow=36						
ASAJ	**Asahikawa**	**17.14**	**236**	LR	LR	07 40 21.5	
	comp=Z,60nm,19.0s,baz=168,slow=40						
YAK	**Yakutsk**	**17.86**	**304**	P	**Pn**	**07 33 06.7**	**-1.1**
	4.9nm,0.3s,baz=173,slow=19,SNR=4.0 24nm,0.5s						
TIXI	**Tiksi**	**21.30**	**331**	P	**P**	**07 33 46.8**	**+1.0**
	4.2nm,0.3s,baz=121,slow=9.0,SNR=5.1 4.2nm,0.3s						
KDAK	**Kodiak Island**	**24.46**	**66**	P	**P**	**07 34 18.5**	**+0.4**
	6.8nm,0.9s,baz=332,slow=1.1,SNR=5.7 6.8nm,0.9s						
ILAR	**Eielson Array**	**26.07**	**49**	P	**P**	**07 34 32.8**	**+0.3**
	1.1nm,0.9s,baz=275,slow=8.9,SNR=14 1.1nm,0.9s						
JHJ	**Hachijo jima 2**	**27.51**	**224**	LR	LR	07 45 07.9	
	comp=Z,167nm,21.6s,baz=104,slow=35						
KSRS	**Korea Array**	**29.44**	**246**	LR	LR	07 48 43.7	
	comp=Z,17nm,19.1s,baz=260,slow=40						
TLY	**Talaya**	**34.06**	**288**	LR	LR	07 49 54.0	
	comp=Z,35nm,18.3s,baz=34,slow=37						
H11N2	**WAKE ISLAND Hy**	**36.10**	**173**	T	T	08 14 45.0	
	baz=356,slow=76,SNR=7.3						
H11N3	**WAKE ISLAND Hy**	**36.12**	**173**	T	T	08 15 07.4	
	baz=356,slow=76,SNR=7.8						
H11N1	**WAKE ISLAND Hy**	**36.12**	**173**	T	T	08 14 35.4	
	baz=356,slow=76,SNR=7.6						
YKA	**Yellowknife Ar**	**40.36**	**45**	P	**P**	**07 36 37.2**	**+0.7**
	0.3nm,0.7s,baz=304,slow=8.7,SNR=6.3 0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**47.57**	**301**	P	**P**	**07 37 32.4**	**-2.1**
	0.3nm,0.2s,baz=58,slow=7.6,SNR=2.0 0.3nm,0.2s						
MKAR	**Makanchi Array**	**48.20**	**295**	P	**P**	**07 37 40.0**	**+0.5**
	0.4nm,0.7s,baz=46,slow=6.2,SNR=2.2 0.4nm,0.7s						
BVAR	**Borovoye Array**	**49.78**	**308**	P	**P**	**07 37 51.2**	**-0.3**
	0.4nm,0.5s,baz=7.8,slow=12,SNR=2.3 0.4nm,0.5s						
ARTI	**Arti**	**52.44**	**317**	LR	LR	08 01 18.1	
	comp=Z,38nm,18.4s,baz=358,slow=37						
NVAR	**Mina Array Bea**	**53.68**	**73**	P	**P**	**07 38 22.3**	**+1.2**
	0.6nm,0.9s,baz=308,slow=8.4,SNR=4.3 0.6nm,0.9s						
PDAR	**Pinedale Array**	**55.15**	**64**	P	**P**	**07 38 32.5**	**+0.8**
	0.2nm,0.6s,baz=317,slow=6.1,SNR=3.7 0.2nm,0.6s						
FINES	**FINESS Array B**	**58.21**	**337**	P	**P**	**07 38 51.6**	**-1.3**
	2.7nm,0.9s,baz=37,slow=9.8,SNR=4.0 2.7nm,0.9s						
TXAR	**Lajitas Array**	**68.45**	**69**	P	**P**	**07 40 02.5**	**+1.2**
	1.1nm,0.9s,baz=294,slow=4.5,SNR=9.0 1.1nm,0.9s						
BATI	**Baumata**	**73.16**	**220**	LR	LR	08 13 08.9	
	comp=Z,20nm,20.4s,baz=145,slow=36						
WRA	**Warramunga Arr**	**79.02**	**207**	P	**P**	**07 41 02.5**	**-0.6**
	0.4nm,0.9s,baz=13,slow=5.9,SNR=2.4 0.4nm,0.9s						
ASAR	**Alice Springs**	**82.70**	**206**	P	**P**	**07 41 22.6**	**-0.1**
	0.5nm,0.7s,baz=13,slow=6.3,SNR=4.4 0.5nm,0.7s						
VNDA	**Vanda**	**132.99**	**180**	PKP	**PKiKP**	**07 48 12.5**	**-1.3**
	0.3nm,0.3s,baz=0.1,slow=8.7,SNR=6.8						
QSPA	**South Pole Qui**	**145.48**	**180**	PKPbc	**PKPab**	**07 48 34.6**	**-1.5**
	2.2nm,0.9s,baz=357,slow=1.5,SNR=5.7						

*IDC **21** 07:49:24.3±0.8,49.81N×126.48W,h0km,mb3.2/2, mbtmp3.4/10,ML3.0/8,MS3.3/1,Error ellipse: s-maj=19.9km s-min=5.6km az=60.0*
*PGC **21** 07:49:25.6±0.1,49.66N×126.76W,h36km,ML3.3/39, 45km west of Gold River, Bc Vancouver Island, Canada Region*

ISC 21 07:49:25.8±1.0,49.67N±0.03×126.79W±0.03,h33km±2km, n78,σ1s07/91,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NTKA	**Nootka**	**0.13**	**123**	P	**Pb**	**07 49 31.8**	**0.0**
NTKA				S	**Sb**	**07 49 35.9**	**0.0**
TAHB	**Tahsis**	**0.24**	**17**	P	**Pn**	**07 49 32.5**	**0.0**
TAHB				S	**Sb**	**07 49 37.3**	**-0.4**
EDB	**Eliza Dome**	**0.30**	**314**	P	**Pb**	**07 49 33.4**	**-0.2**
EDB				S	**Sb**	**07 49 38.9**	**0.0**
FHBB	**Fair Harbour**	**0.45**	**332**	P	**Pb**	**07 49 35.5**	**-0.2**
FHBB				S	**Sb**	**07 49 42.0**	**-0.4**
GDR	**Gold River**	**0.50**	**76**	P	**Pb**	**07 49 35.7**	**-0.7**
GDR				S	**Sb**	**07 49 42.0**	**-1.8**
WOSB	**Woss**	**0.52**	**16**	P	**Pb**	**07 49 36.1**	**-0.6**
WOSB				S	**Sb**	**07 49 43.6**	**-0.7**
MYRA	**Myra Falls**	**0.80**	**98**	P	**Pn**	**07 49 40.2**	**-0.5**
MYRA				S	**Sn**	**07 49 50.2**	**-1.3**
BPEB	**Brooks Peninsu**	**0.81**	**308**	P	**Pn**	**07 49 40.4**	**-0.5**
BPEB				S	**Sn**	**07 49 50.9**	**-0.7**
NCSB	**Newcastle Ridg**	**0.88**	**32**	P	**Pn**	**07 49 41.5**	**-0.5**
NCSB				S	**Sn**	**07 49 52.1**	**-1.4**
PACB	**Port Alice, BC**	**0.90**	**330**	P	**Pn**	**07 49 41.9**	**-0.1**
PACB				S	**Sn**	**07 49 53.0**	**-0.8**
CBB	**Campbell River**	**0.99**	**68**	P	**Pn**	**07 49 43.0**	**-0.4**
CBB				S	**Sn**	**07 49 54.1**	**-2.1**
NC89	**ODP889**	**1.00**	**182**	P	**Pn**	**07 49 42.8**	**-0.5**
NC89				S	**Sn**	**07 49 55.1**	**-0.9**
B012	**Ucluelet**	**1.10**	**132**	P	**Pn**	**07 49 44.3**	**-0.5**
B012				S	**Sn**	**07 49 57.2**	**-1.7**
PHC	**Port Hardy**	**1.12**	**339**	P	**Pn**	**07 49 45.0**	**-0.1**
PHC				S	**Sn**	**07 49 58.3**	**-1.1**
HOLB	**Holberg**	**1.30**	**319**	P	**Pn**	**07 49 47.6**	**-0.1**
HOLB				S	**Sn**	**07 50 03.0**	**-1.0**
B927	**Port Alberni**	**1.36**	**108**	P	**Pn**	**07 49 48.1**	**-0.3**
PABB	**Port Alberni**	**1.36**	**108**	P	**Pn**	**07 49 48.2**	**-0.3**
B928	**Bamfield**	**1.36**	**127**	P	**Pn**	**07 49 48.0**	**-0.4**
BFSB	**Bamfield**	**1.36**	**127**	P	**Pn**	**07 49 48.1**	**-0.4**
BFSB				S	**Sn**	**07 50 04.2**	**-1.1**
MGRB	**Mount Grey**	**1.52**	**115**	P	**Pn**	**07 49 50.3**	**-0.4**

DLBC			Lg	Lg	07 54 01.5		
	0.1nm,0.3s,baz=162,slow=20,SNR=3.6						
	0.7nm,0.7s						
ELK	**Elko**	**12.06 133**	Pn	**Pn**	**07 52 19.5**	**+4.0**	
	0.1nm,0.3s,baz=319,slow=14,SNR=11						
	1.9nm,0.7s						
NVAR	**Mina Array Bea**	**12.77 148**	Pn	Pn	07 52 30.5	+5.3	
	0.1nm,0.3s,baz=335,slow=13,SNR=9.9						
	1.0nm,0.7s						
PDAR	**Pinedale Array**	**13.76 114**	Pn	**Pn**	**07 52 41.9**	**+3.2**	
	baz=312,slow=13,SNR=11						
	1.4nm,0.9s						
ULM	**Lac du Bonnet**	**19.83 76**	P	**P**	**07 53 52.9**	**-0.6**	
	0.8nm,0.3s,baz=284,slow=12,SNR=11						
	3.1nm,0.4s						
ANMO	**Albuquerque**	**20.94 127**	P	Pn	07 54 09.0	+0.6	
	0.2nm,0.3s,baz=326,slow=8.9,SNR=2.8						
	0.2nm,0.3s						
TXAR	**Lajitas Array**	**26.84 131**	P	**P**	**07 55 04.1**	**+0.9**	
	0.7nm,0.8s,baz=322,slow=8.9,SNR=5.8						
	0.7nm,0.8s						
FRB	**Frobisher Bay**	**33.60 43**	LR	LR	08 10 50.4		
	comp=Z,46nm,19.5s,baz=294,slow=39						
H11N2	**WAKE ISLAND Hy 59.94 265**		T	T	09 04 35.9		
	baz=43,slow=75,SNR=6.1						
H11N3	**WAKE ISLAND Hy 59.94 265**		T	T	09 04 35.3		
	baz=43,slow=75,SNR=8.0						
H11N1	**WAKE ISLAND Hy 59.95 265**		T	T	09 04 37.1		
	baz=43,slow=75,SNR=4.5						

*JMA **21** 07:52:37.0±0.2,24.°N±1.°×122.°4E±0.°4, h16km±3km, MV2.4/11, NW OFF ISHIGAKIJIMA IS*
*TAP **21** 07:52:37.7, 24.°06N×122.°43E, h27km, ML2.9, C*
ISC 21 07:52:37.7±0.9, 24°00N±0.°02×122°43E±0.°02, h27km±7km, n73, σ0°72/144, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EOS4	**EOS4**	**0.16**	**321**	P		**Pb**	**07 52 42.8**	**+0.1**
EOS4				S		**Sb**	**07 52 46.5**	**+0.3**
EOS3	**EOS3**	**0.31**	**341**	*i* P		**Pb**	**07 52 44.7**	**-0.2**
EOS3				S		**Sb**	**07 52 49.8**	**0.0**
EOS2	**EOS2**	**0.46**	**337**	*e*P		**Pb**	**07 52 47.3**	**+0.1**
EOS2				*e*S		**Sn**	**07 52 54.6**	**-1.0**
JYNG	**Yonagunijimaku**	**0.66**	**46**	P		**Pb**	**07 52 49.9**	**-0.7**
JYNG				*e*S		**Sb**	**07 52 58.1**	**-1.2**
YOJ	**Yonaguni jima**	**0.71**	**49**	*i* P		**Pb**	**07 52 50.8**	**-0.6**
YOJ				S		**Sb**	**07 53 00.6**	**-0.2**
YOJ	**Yonaguni jima**	**0.71**	**49**	P		**Pb**	**07 52 50.8**	**-0.6**
EAHA	**Aohua**	**0.71**	**298**	*e*P		**Pb**	**07 52 51.1**	**-0.4**
EAHA				*e*S		**Sn**	**07 53 01.4**	**-0.6**
EWUT	**Wuta**	**0.74**	**307**	*i* P		**Pb**	**07 52 51.2**	**-0.9**
EWUT				S		**Sb**	**07 53 02.0**	**+0.1**
ETL	**Fush Village**	**0.75**	**283**	P		**Pn**	**07 52 52.5**	**-0.1**
ETL				*e*S		**Sn**	**07 53 03.5**	**+0.4**
TWD	**Chiawan**	**0.77**	**277**	P		**Pb**	**07 52 50.5**	**-1.9**
TWD				*e*S		**Sn**	**07 53 03.3**	**0.0**
NACB	**Ninganchiao**	**0.78**	**283**	*i* P		**Pb**	**07 52 52.3**	**-0.4**
NACB				S		**Sb**	**07 53 03.3**	**+0.3**
TWC	**Suao**	**0.81**	**319**	*i* P		**Pb**	**07 52 51.9**	**-1.2**
TWC				*i* S		**Sb**	**07 53 02.8**	**-0.9**
SHUL	**Shoufeng**	**0.82**	**256**	*i* P		**Pb**	**07 52 52.9**	**-0.4**
SHUL				*i* S		**Sn**	**07 53 05.2**	**+0.6**
ETM	**Tongmen**	**0.85**	**268**	P		**Pb**	**07 52 53.2**	**-0.8**
ETM				*i* S		**Sb**	**07 53 05.1**	**0.0**
ETLH	**Xiulin Townshi**	**0.89**	**284**	*i* P		**Pb**	**07 52 53.8**	**-0.8**
ETLH				*i* S		**Sb**	**07 53 06.0**	**-0.1**
NDS	**Dongshan**	**0.91**	**315**	*i* P		**Pn**	**07 52 54.5**	**-0.1**
NDS				S		**Sb**	**07 53 06.5**	**-0.1**
LXIB	**Xiulin Townshi**	**0.93**	**272**	*i* P		**Pb**	**07 52 54.4**	**-0.9**
LXIB				S		**Sb**	**07 53 06.4**	**-0.8**
EGS		**0.96**	**332**	*i* P		**Pn**	**07 52 55.4**	**0.0**
EGS				*e*S		**Sn**	**07 53 07.8**	**-0.4**
LATG	**Datong**	**0.98**	**303**	*i* P		**Pn**	**07 52 55.8**	**0.0**
LATG				S		**Sn**	**07 53 09.0**	**+0.1**
WARBT	**Fenglin Townsh**	**0.99**	**254**	*i* P		**Pb**	**07 52 54.9**	**-1.4**
WARBT				S		**Sb**	**07 53 08.3**	**-0.7**
TWE	**Neicheng**	**1.00**	**316**	*i* P		**Pb**	**07 52 55.6**	**-0.8**
TWE				S		**Sn**	**07 53 09.3**	**+0.1**
ENTT	**Nioudou**	**1.01**	**309**	*i* P		**Pb**	**07 52 56.1**	**-0.6**
ENTT				S		**Sn**	**07 53 10.3**	**+0.7**
NDT	**Datong Townshi**	**1.03**	**306**	*i* P		**Pn**	**07 52 57.2**	**+0.8**
NDT				S		**Sn**	**07 53 11.1**	**+1.1**
HGSD	**Ruisui**	**1.05**	**242**	*i* P		**Pn**	**07 52 55.7**	**-0.8**
HGSD				*e*S		**Sb**	**07 53 10.1**	**-0.4**
NNSB	**Datong**	**1.05**	**295**	*i* P		**Pb**	**07 52 56.6**	**-0.7**
NNSB				S		**Sn**	**07 53 10.6**	**+0.1**
NNS	**Nan Shan**	**1.06**	**295**	*i* P		**Pn**	**07 52 56.4**	**-0.5**
NNS				S		**Sn**	**07 53 11.6**	**+0.8**
WHF	**Hehuan Shan**	**1.07**	**278**	*i* P		**Pb**	**07 52 57.3**	**-0.6**
WHF				S		**Sn**	**07 53 11.9**	**+0.3**
FUSB	**Fushanzhiwuyua**	**1.08**	**315**	*i* P		**Pb**	**07 52 57.4**	**-0.4**
FUSB				*e*S		**Sn**	**07 53 12.1**	**+0.8**
TWB1	**Santiao Chiao**	**1.08**	**338**	*i* P		**Pn**	**07 52 56.7**	**-0.4**
TWB1				*e*S		**Sb**	**07 53 10.8**	**-0.8**
EHYH	**Wanrong**	**1.11**	**244**	*i* P		**Pn**	**07 52 56.7**	**-0.8**
EHYH				*i* S		**Sb**	**07 53 12.2**	**-0.2**
FUSS	**Fushou**	**1.11**	**283**	*i* P		**Pn**	**07 52 57.7**	**0.0**
FUSS				*e*S		**Sb**	**07 53 12.1**	**-0.5**
TIPB	**Shuangxi**	**1.12**	**331**	*i* P		**Pb**	**07 52 57.8**	**-0.6**
TIPB				*i* S		**Sb**	**07 53 11.8**	**-0.7**
EHY	**Hungye**	**1.12**	**245**	P		**Pn**	**07 52 57.8**	**+0.1**
EHY				S		**Sb**	**07 53 12.4**	**-0.3**
OWD	**Renai**	**1.15**	**268**	*i* P		**Pn**	**07 52 57.6**	**-0.5**
OWD				S		**Sb**	**07 53 12.2**	**-1.3**
NWLT	**Wulai**	**1.15**	**313**	*i* P		**Pb**	**07 52 58.5**	**-0.4**
NWLT				S		**Sn**	**07 53 13.9**	**+1.0**
YHNB	**Yeheng**	**1.17**	**305**	*i* P		**Pb**	**07 52 58.8**	**-0.5**
YHNB				S		**Sn**	**07 53 14.6**	**+1.1**
TWT	**Tachien**	**1.17**	**283**	*i* P		**Pb**	**07 52 59.3**	**-0.1**
TWT				S		**Sb**	**07 53 13.9**	**-0.4**
NSK	**Sanguang**	**1.19**	**305**	*i* P		**Pn**	**07 52 58.7**	**+0.1**
NSK				S		**Sn**	**07 53 14.7**	**+0.8**
TDCB	**Techi**	**1.19**	**283**	*i* P		**Pn**	**07 52 58.5**	**-0.1**
TDCB				S		**Sn**	**07 53 15.0**	**+1.0**
YULB	**Yu-li**	**1.20**	**240**	*e*P		**Pn**	**07 52 57.5**	**-1.1**
YULB				*e*S		**Sb**	**07 53 13.9**	**-0.9**
WUSB	**Renai**	**1.20**	**270**	*i* P		**Pn**	**07 52 59.3**	**+0.5**
WUSB				S		**Sb**	**07 53 13.6**	**-1.3**
VWDT	**VWDT**	**1.20**	**259**	*i* P		**Pn**	**07 52 58.4**	**-0.3**
VWDT				S		**Sb**	**07 53 15.1**	**+0.1**
SXI1	**Grass Mountain**	**1.20**	**335**	*i* P		**Pn**	**07 52 58.5**	**-0.4**
SXI1				S		**Sn**	**07 53 15.6**	**+1.3**
TWF1	**Yuli**	**1.22**	**239**	*i* P		**Pn**	**07 52 58.9**	**-0.1**
TWF1				*e*S		**Sn**	**07 53 14.8**	**+0.2**
NWF	**Wu-fen Shan**	**1.22**	**331**	*e*P		**Pb**	**07 52 59.4**	**-0.8**
NWF				*e*S		**Sn**	**07 53 16.0**	**+1.2**
IRIF	**Iriomote-Funau**	**1.24**	**74**	P		**Pb**	**07 52 60.0**	**-0.4**
IRIF				*e*S		**Sb**	**07 53 16.6**	**+0.7**
CHKH	**Chenggong**	**1.24**	**230**	*e*P		**Pn**	**07 52 58.0**	**-1.2**
CHKH				S		**Sn**	**07 53 13.2**	**-1.8**
HATJ	**Hateruma jima**	**1.26**	**87**	*e*S		**Sb**	**07 53 16.7**	**+0.1**
FULB	**Fuli**	**1.31**	**233**	*e*P		**Pn**	**07 52 59.6**	**-0.6**
FULB				*e*S		**Sb**	**07 53 18.8**	**+0.8**
NFF	**Wufeng Townshi**	**1.35**	**298**	*i* P		**Pn**	**07 53 02.0**	**-0.4**
NFF				S		**Sb**	**07 53 20.1**	**+0.8**
SSLB	**Suanglung**	**1.36**	**262**	P		**Pb**	**07 53 01.9**	**-0.7**
SSLB				S		**Sn**	**07 53 18.7**	**+0.5**
WHP	**Taichung City**	**1.38**	**282**	*i* P		**Pb**	**07 53 03.8**	**+0.8**
WHP				S		**Sb**	**07 53 21.4**	**+1.2**
WCS	**Beigang Elemen**	**1.39**	**273**	*i* P		**Pb**	**07 53 02.5**	**-0.5**
WCS				S		**Sb**	**07 53 20.2**	**-0.1**
YM01	**YM01**	**1.39**	**326**	*i* P		**Pb**	**07 53 02.4**	**-0.6**
YM01				*e*S		**Sb**	**07 53 21.2**	**+0.9**
EHD	**Haiduan**	**1.40**	**233**	P		**Pn**	**07 53 01.3**	**-0.2**
EHD				*e*S		**Sn**	**07 53 19.9**	**+0.8**
SMLT	**Sun Moon Lake**	**1.40**	**266**	*i* P		**Pb**	**07 53 03.6**	**+0.3**
SMLT				*e*S		**Sn**	**07 53 20.0**	**+0.8**
YM08	**YM08**	**1.41**	**327**	*e*P		**Pn**	**07 53 02.0**	**+0.4**
YM08				*e*S		**Sb**	**07 53 20.4**	**-0.6**
ZUZH	**Zhuzihu**	**1.41**	**326**	*e*P		**Pb**	**07 53 02.3**	**-1.1**
ZUZH				*e*S		**Sb**	**07 53 21.9**	**+0.8**
TYC	**Yuchr**	**1.44**	**267**	*i* P		**Pb**	**07 53 03.6**	**-0.3**
TYC				*e*S		**Sb**	**07 53 21.4**	**-0.4**
LIOB	**Emei**	**1.44**	**297**	*i* P		**Pb**	**07 53 03.3**	**-0.6**
LIOB				*e*S		**Sb**	**07 53 21.9**	**0.0**
NSTT	**Nanjuang**	**1.45**	**296**	*e*P		**Pb**	**07 53 04.0**	**+0.1**
NSTT				S		**Sb**	**07 53 22.6**	**+0.6**
ELDTW	**Lidau**	**1.52**	**238**	*i* P		**Pn**	**07 53 03.6**	**+0.3**
ELDTW				S		**Sn**	**07 53 23.1**	**+0.9**
CHN5	**Tsauling**	**1.65**	**256**	P		**Pb**	**07 53 07.1**	**-0.4**
CHN5				S		**Sb**	**07 53 27.9**	**0.0**
STYH	**Taoyuan**	**1.72**	**242**	*i* P		**Pn**	**07 53 06.5**	**+0.6**
STYH				S		**Sn**	**07 53 28.7**	**+1.7**
WCKO	**Fanlu**	**1.76**	**252**	*e*P		**Pb**	**07 53 08.8**	**-0.5**
WCKO				S		**Sb**	**07 53 31.1**	**+0.1**
TPUB	**Ta-pu**	**1.79**	**248**	*i* P		**Pb**	**07 53 09.3**	**-0.5**
TPUB				*i* S		**Sb**	**07 53 32.0**	**+0.2**
JISG	**Ishigakijimahi**	**1.82**	**71**	*e*P		**Pn**	**07 53 07.3**	**+0.2**
JISG				*e*S		**Sn**	**07 53 30.1**	**+0.8**
CHN1	**Nanshi**	**1.92**	**246**	*i* P		**Pb**	**07 53 11.5**	**-0.6**
CHN1				*i* S		**Sb**	**07 53 35.8**	**+0.2**
TWK	**Hsinying**	**1.92**	**248**	P		**Pb**	**07 53 11.5**	**-0.6**
TWK				*i* S		**Sb**	**07 53 36.1**	**+0.4**
MASBT	**Mashibuluo**	**2.15**	**231**	P		**Pn**	**07 53 12.9**	**+1.2**
MASBT				*e*S		**Sn**	**07 53 40.1**	**+2.6**
EAST	**Anshuo**	**2.17**	**222**	*i* P		**Pn**	**07 53 13.3**	**+1.3**
EAST				*e*S		**Sn**	**07 53 38.2**	**+0.2**
SLIU	**Shizi**	**2.32**	**221**	*i* P		**Pn**	**07 53 14.2**	**+0.1**
SLIU				*e*S		**Sn**	**07 53 42.1**	**+0.4**
SMST	**Manzhou Townsh**	**2.45**	**217**	P		**Pn**	**07 53 16.0**	**+0.1**
SMST				S		**Sn**	**07 53 44.9**	**-0.1**

*IDC **21** 07:58:40.8±2.6, 22.°91N×94.°59E, h128km±28km, mb3.5/6, mbtmp3.8/8, Error ellipse: s-maj=36.4km s-min=13.6km az=48.0*
*NDI **21** 07:58:42.5±3.0, 23.°20N×94.°51E, h10km, ML3.6, MW3.4, Presumed earthquake*
ISC 21 07:58:39.7±1.0, 23°09N±0.°05×94°62E±0.°07, h105km, n23, σ2°54/35, mb4.1/6, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SAIH	**SAIHA**	**1.62**	**249**	*e*P		**Pn**	**07 59 09.8**	**+1.9**
SAIH				*e*S		**Sn**	**07 59 32.4**	**+3.1**
SAIH				IAML			07 59 35.1	
	comp=E,530nm,0.2s							
SAIH				IAML			07 59 35.2	
	comp=N,228nm,0.3s							
IMP	**Imphal**	**1.84**	**341**	*e*P		**Pn**	**07 59 13.9**	**+3.3**
IMP				*e*S		**Sn**	**07 59 37.2**	**+3.1**
IMP				IAML			07 59 38.9	
	comp=N,260nm,0.1s							
IMP				IAML			07 59 40.9	
	comp=E,132nm,0.4s							
SILR	**SILCHAR**	**2.37**	**316**	*e*S		**Sn**	**07 59 47.5**	**+1.5**
SILR				IAML			07 59 53.5	
	comp=E,490nm,0.4s							
SILR				IAML			07 59 55.0	
	comp=N,466nm,0.2s							
KOHI	**KOHIMA**	**2.66**	**350**	*e*P		**Pn**	**07 59 25.1**	**+3.8**
KOHI				*e*S		**Sn**	**07 59 55.3**	**+2.1**
KOHI				IAML			07 59 57.7	
	comp=N,180nm,0.5s							
KOHI				IAML			07 59 58.2	
	comp=E,147nm,0.4s							
BRDH	**Bariadhala**	**2.78**	**262**	P		**Pn**	**07 59 24.4**	**+1.8**
	comp=E,84nm,0.3s,baz=230,slow=20,SNR=1.2							
BRDH				S		**Sn**	**07 59 57.3**	**+1.6**
	comp=E,211nm,0.3s,baz=230,slow=22,SNR=11							
BELO	**BELONIA**	**2.93**	**274**	*e*S		**Sn**	**08 00 02.7**	**+3.5**
MOKO	**MOKOCHONG**	**3.22**	**358**	*e*P		**Pn**	**07 59 32.4**	**+3.7**
MOKO				*e*S		**Sn**	**08 00 10.0**	**+3.5**
MOKO				IAML			08 00 15.2	
	comp=N,98nm,0.2s							
MOKO				IAML			08 00 22.8	
	comp=E,104nm,0.4s							
SHL	**Shillong**	**3.51**	**315**	*e*P		**Pn**	**07 59 34.7**	**+2.1**
SHL				*e*S		**Sn**	**08 00 12.7**	**-0.8**
SHL				IAML			08 00 15.3	
	comp=N,365nm,0.2s							
TEZP	**TEZPUR**	**3.88**	**335**	*e*P		**Pn**	**07 59 38.9**	**+1.4**
TEZP				*e*S		**Sn**	**08 00 21.1**	**-1.1**
TEZP				IAML			08 00 23.6	
	comp=N,787nm,0.2s							
TEZP				IAML			08 00 24.7	
	comp=E,638nm,0.1s							
GUWA	**GUWAHATI**	**4.08**	**320**	*e*P		**Pn**	**07 59 41.2**	**+1.1**
GUWA				*e*S		**Sn**	**08 00 25.6**	**-1.3**
GUWA				IAML			08 00 28.3	
	comp=N,768nm,0.2s							
GUWA				IAML			08 00 29.3	
	comp=E,636nm,0.3s							
ITAN	**ITANAGAR**	**4.12**	**349**	*e*P		**Pn**	**07 59 43.2**	**+2.6**
ITAN				*e*S		**Sn**	**08 00 28.0**	**+0.1**
ITAN				IAML			08 00 30.4	
	comp=E,554nm,0.2s							
ITAN				IAML			08 00 30.8	
	comp=N,596nm,0.2s							
ZIRO	**ZIRO**	**4.47**	**351**	*e*P		**Pn**	**07 59 47.5**	**+1.9**
ZIRO				*e*S		**Sn**	**08 00 35.2**	**-1.5**
ZIRO				IAML			08 00 38.3	
	comp=E,272nm,0.2s							
ZIRO				IAML			08 00 39.5	
	comp=N,331nm,0.2s							
DHUB	**DHUBRI**	**5.12**	**306**	*e*S		**Sn**	**08 00 50.1**	**-2.0**
DHUB				IAML			08 00 52.8	
	comp=E,266nm,0.2s							
DHUB				IAML			08 00 53.7	
	comp=N,289nm,0.2s							
TAWA	**Tawang**	**5.13**	**332**	*e*P		**Pn**	**07 59 57.7**	**+3.1**
TAWA				*e*S		**Sn**	**08 00 51.9**	**-1.0**
TAWA				IAML			08 00 55.6	
	comp=N,341nm,0.3s							
TAWA				IAML			08 00 56.3	
	comp=E,315nm,0.2s							
CMAR	**Chiang Mai Arr**	**6.13**	**138**	P		**Pn**	**08 00 06.4**	**-1.4**
	comp=E,0.7nm,0.3s,baz=313,slow=10,SNR=1.6							
GTK	**Tadong**	**6.89**	**309**	*e*S		**Sn**	**08 01 33.2**	**-2.1**
GTK				IAML			08 01 37.6	
	comp=N,49nm,0.3s							
LSA	**Lhasa**	**7.28**	**335**	Pn		**Pn**	**08 00 24.1**	**+0.2**
LSA				Sn		**Sn**	**08 01 38.3**	**-7.0**
LSA				smax		smax		
	comp=N,23nm,0.7s							
LSA				smax		smax		
	comp=E,22nm,0.5s							
MKAR	**Makanchi Array**	**25.66**	**340**	P		**P**	**08 04 00.7**	**+1.1**
	comp=E,0.9nm,0.6s,baz=148,slow=10,SNR=9.4							
	comp=E,0.9nm,0.6s							
KURBB	**Kurchatov Arra**	**30.21**	**339**	P		**P**	**08 04 40.6**	**+0.4**
	comp=E,0.1nm,0.3s,baz=147,slow=8.8,SNR=2.1							
	comp=E,0.1nm,0.3s							
WRA	**Warramunga Arr**	**57.71**	**135**	P		**P**	**08 08 17.5**	**-2.3**
	comp=E,1.0nm,0.4s,baz=321,slow=7.5,SNR=37							
	comp=E,1.0nm,0.4s							
FINES	**FINESS Array B**	**59.75**	**329**	P		**P**	**08 08 32.4**	**-0.9**
	comp=E,2.1nm,1.0s,baz=52,slow=14,SNR=1.7							
	comp=E,2.1nm,1.0s							
ASAR	**Alice Springs**	**60.14**	**138**	P		**P**	**08 08 34.8**	**-1.7**
	comp=E,0.7nm,0.4s,baz=320,slow=6.9,SNR=20							
	comp=E,0.7nm,0.4s							
HFS	**Hagfors**	**65.78**	**327**	P		**P**	**08 09 11.6**	**-1.8**
	comp=E,1.5nm,0.7s,baz=90,slow=12,SNR=4.3							
	comp=E,1.5nm,0.7s							

*GUC **21** 08:10:37.4±0.8, 21.°85S×67.°58W, h226km±9km, ML2.7*
*SCB **21** 08:10:37.1±0.3, 21.°82S×66.°80W, h225km±5km, ML2.5/1, Error ellipse: s-maj=9.9km s-min=6.9km az=1.0*
ISC 21 08:10:34.4±2.3, 21°87S±0.°08×67°29W±0.°06, h212km±20km, n16, σ1°54/28, 5C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MOCB	**Mochara**	**1.66**	**68**	P		**Pn**	**08 11 11.8**	**+0.8**
MOCB				S		**S**	**08 11 37.8**	**-1.4**
MOCB				IAML			08 11 41.5	
	26nm,4.3s							
PB09	**IPOC Station P**	**1.81**	**272**	*e*P		**Pn**	**08 11 13.4**	**+1.2**
PB09				*e*S		**S**	**08 11 42.2**	**+0.9**
PB01	**IPOC Station P**	**2.21**	**292**	*e*P		**Pn**	**08 11 16.7**	**+0.7**
PB01				*e*S		**S**	**08 11 47.0**	**-1.0**
PB01				IAML			08 11 48.1	
	comp=N,21nm,0.7s							
PB06	**IPOC Station P**	**2.27**	**248**	*e*P		**Pn**	**08 11 17.8**	**+1.1**
PB06				*e*S		**S**	**08 11 48.6**	**-0.8**
PB06				IAML			08 11 50.3	
	comp=E,23nm,0.2s							
PB03	**IPOC Station P**	**2.29**	**265**	*e*P		**Pn**	**08 11 17.9**	**+1.0**
PB03				*e*S		**S**	**08 11 48.7**	**-1.1**
PB03				IAML			08 11 49.3	
	comp=E,28nm,0.2s							
PB07	**IPOC Station P**	**2.42**	**273**	*e*P		**Pn**	**08 11 19.1**	**+0.8**
PB07				*e*S		**S**	**08 11 50.6**	**-1.6**
PB07				IAML			08 11 51.5	
	comp=N,23nm,0.4s							
PB08	**IPOC Station P**	**2.45**	**314**	*e*P		**Pn**	**08 11 20.6**	**+1.7**
PB08				*e*S		**S**	**08 11 53.8**	**+0.6**
PB02	**IPOC Station P**	**2.49**	**282**	*e*S		**S**	**08 11 51.5**	**-1.9**
PB02				IAML			08 11 53.0	
	comp=N,27nm,0.4s							
GO01	**Chusmiza**	**2.82**	**321**	*e*P		**Pn**	**08 11 24.7**	**+1.6**
GO01				*e*S		**S**	**08 12 02.0**	**+1.1**
GO01				IAML			08 12 05.9	
	comp=N,12nm,0.2s							
PATCX	**Punta Patache**	**2.87**	**291**	*e*P		**Pn**	**08 11 24.1**	**+0.9**
PATCX				*e*S		**S**	**08 11 59.4**	**-1.5**
PATCX				IAML			08 12 01.2	
	comp=N,15nm,0.2s							
PB05	**IPOC Station P**	**2.87**	**250**	*e*P		**Pn**	**08 11 24.3**	**+1.1**
PB05				*e*S		**S**	**08 11 59.2**	**-1.9**
PB05				IAML			08 12 00.3	
	comp=N,11nm,0.8s							
PB11	**IPOC Station P**	**3.05**	**313**	*e*P		**Pn**	**08 11 25.9**	**+0.5**
PB11				*e*S		**S**	**08 12 03.7**	**-1.2**
PB11				IAML			08 12 05.8	
	comp=N,15nm,0.1s							
PSGCX	**Pisagua**	**3.48**	**310**	*e*P		**Pn**	**08 11 30.5**	**0.0**
PSGCX				*e*S		**S**	**08 12 11.2**	**-2.9**
SOET	**ToroToro**	**3.99**	**21**	P		**Pn**	**08 11 38.5**	**+1.7**
AOEA	**Aiquile**	**4.15**	**28**	P		**Pn**	**08 11 39.8**	**+1.0**
SIV	**San Ignacio**	**8.29**	**46**	P		**Pn**	**08 12 30.3**	**-1.2**

*ISK **21** 08:18:12.6, 38.°32N×44.°65E, h3km, ML2.5/5*
*TEH **21** 08:18:14.2, 38.°53N×44.°38E, h10km±335km, ML2.6, Presumed earthquake*
*AFAD **21** 08:18:16.7, 38.°54N×44.°52E, h7km±2km, ML2.2*
*AZER **21** 08:18:17.9, 38.°59N×44.°63E, h42km, ml2.4*
ISC 21 08:18:16.4±1.2, 38°56N±0.°03×44°58E±0.°02, h6km±10km, n27, σ1°14/39, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**282**	P		**Pg**	**08 18 25.1**	**-0.4**
OZAP				S		**Sg**	**08 18 32.0**	**+0.3**
OZAP				IAML			08 18 33.0	
	comp=N,187nm,0.4s							
OZAP				IAML			08 18 34.0	
	comp=E,224nm,0.4s							
MAKU	**Maku**	**0.80**	**6**	Pg		**Pg**	**08 18 31.0**	**-0.7**
ISHB	**Shabestar**	**0.86**	**109**	Pg		**Pb**	**08 18 32.9**	**-1.1**
VMUR	**Van-Muradiye**	**0.89**	**299**	P		**Pg**	**08 18 33.7**	**+0.1**
VMUR				S		**Sg**	**08 18 45.8**	**+0.6**
VMUR				IAML			08 18 49.0	
	comp=N,85nm,0.4s							
VMUR				IAML			08 18 49.0	
	comp=E,59nm,0.6s							
IMRD	**Marand**	**0.90**	**80**	Pg		**Pn**	**08 18 34.6**	**-1.1**
TVAN	**Van**	**0.92**	**268**	P		**Pg**	**08 18 33.8**	**-0.3**
VANB	**Van**	**0.93**	**272**	Pg		**Pg**	**08 18 32.4**	**-1.9**
VANB				Sg		**Sg**	**08 18 46.9**	**+0.5**
NAX	**Nakhchivan**	**0.94**	**49**	P		**Pn**	**08 18 35.4**	**-0.8**
NAX				S		**Sn**	**08 18 50.1**	**+0.1**
SBZ	**Shahbuz**	**1.13**	**42**	P		**Pn**	**08 18 38.2**	**-0.3**
SBZ				S		**Sn**	**08 18 55.2**	**+0.5**
ORD	**Ordubad**	**1.17**	**71**	P		**Pn**	**08 18 39.4**	**0.0**
ORD				S		**Sn**	**08 18 56.5**	**+0.9**
HYR	**Heyderabad**	**1.17**	**10**	P		**Pb**	**08 18 39.0**	**-0.2**
HYR				S		**Sn**	**08 18 56.2**	**+0.4**
HAKT	**HAKKARI**	**1.22**	**215**	P		**Pb**	**08 18 40.0**	**+0.1**
HAKT	**HAKKARI**	**1.22**	**215**	P		**Pb**	**08 18 39.9**	**-0.1**
HAKT				S		**Sn**	**08 18 59.3**	**+2.2**
GEVA	**Gevas**	**1.22**	**259**	P		**Pn**	**08 18 37.7**	**-2.4**
AKDM	**Akdamar-Van**	**1.27**	**260**	Pn		**Pn**	**08 18 38.4**	**-2.5**
AKDM				Sn		**Sb**	**08 18 57.5**	**-0.1**
ITBZ	**Tabriz**	**1.28**	**104**	Pg		**Pg**	**08 18 42.2**	**+1.3**
IGDI	**IGDIR**	**1.36**	**344**	P		**Pn**	**08 18 42.5**	**+0.5**
IGDI				S		**Sn**	**08 19 00.9**	**+0.5**
IAZR	**Azarshahr**	**1.42**	**128**	Pg		**Pg**	**08 18 43.5**	**-0.1**
GNI	**Garni**	**1.59**	**5**	Pn		**Pn**	**08 18 45.9**

FITZ	**Fitzroy Crossi**	**52.84**	**267**	P	**P**	**08 27 28.7**	**+0.1**
	comp=Z,5.6nm,1.1s,baz=123,slow=7.5,SNR=8.0						
	comp=Z,5.6nm,1.1s						
SIJI	**Sorong**	**55.55**	**289**	P	**P**	**08 27 46.2**	**-2.1**
	comp=Z,14nm,0.6s,baz=84,slow=9.2,SNR=3.9						
	comp=Z,14nm,0.6s						
QSPA	**South Pole Qui**	**63.02**	**180**	P	**P**	**08 28 41.1**	**+1.9**
	comp=Z,1.1nm,0.7s,baz=306,slow=2.3,SNR=11						
	comp=Z,1.1nm,0.7s						
QSPA	**South Pole Qui**	**63.02**	**180**	P	**P**	**08 28 42.0**	**+2.8**
QSPA				IAmb	IAmb	08 29 09.3	
	comp=Z,9.4nm,1.1s						
KKM	**Kota Kinabalu**	**71.94**	**287**	P	**P**	**08 29 36.0**	**-0.1**
BBJI	**Bungbulang**	**73.13**	**270**	P	**P**	**08 29 43.6**	**+0.4**
BBJI				IAmb	IAmb	08 30 25.8	
	comp=Z,15nm,1.1s						
JGF	**Kuroka**	**75.49**	**323**	P	**P**	**08 29 55.8**	**-0.5**
JGF				IAmb	IAmb	08 30 31.0	
	comp=Z,16nm,1.3s						
MJAR	**Matsushiro Arr**	**75.76**	**325**	P	**P**	**08 29 56.7**	**-1.1**
	comp=Z,3.2nm,0.7s,baz=162,slow=6.0,SNR=9.0						
	comp=Z,3.2nm,0.7s						
MJAR	**Matsushiro Arr**	**75.76**	**325**	P	**P**	**08 29 57.4**	**-0.4**
JMN	**Monobe**	**76.03**	**320**	P	**P**	**08 29 59.6**	**+0.2**
KIWB	**Kanaga Island**	**78.59**	**0**	P	**P**	**08 30 12.3**	**-0.9**
JKA	**Kamikawa-asahi**	**79.69**	**332**	P	**P**	**08 30 19.9**	**+0.5**
COYC	**Coyhaique**	**81.07**	**137**	P	**P**	**08 30 27.1**	**+0.1**
COYC				IAmb	IAmb	08 30 28.5	
	comp=Z,19nm,1.4s						
H03S2	**Juan Fernandez**	**81.97**	**124**	T	T	10 01 03.3	
	baz=241,slow=74						
H03S1	**Juan Fernandez**	**81.98**	**124**	T	T	10 00 58.9	
	baz=241,slow=74						
H03S3	**Juan Fernandez**	**81.99**	**124**	T	T	10 00 54.0	
	baz=241,slow=74						
KSRS	**Korea Array**	**82.09**	**319**	P	**P**	**08 30 32.6**	**+0.4**
	comp=Z,5.0nm,0.6s,baz=132,slow=6.0,SNR=23						
	comp=Z,5.0nm,0.6s						
KSAR	**Wonju Array Be**	**82.11**	**319**	P	**P**	**08 30 33.4**	**+1.0**
PETK	**Petropavlovsk-**	**82.71**	**345**	P	**P**	**08 30 33.7**	**-1.5**
	comp=Z,3.7nm,0.7s,baz=177,slow=6.4,SNR=3.7						
	comp=Z,3.7nm,0.7s						
O02D	**Mt. Diablo Mer**	**84.07**	**39**	P	**P**	**08 30 43.6**	**+1.1**
O02D				IAmb	IAmb	08 30 44.5	
	comp=Z,4.9nm,0.8s						
PLCA	**Paso Flores**	**84.48**	**133**	P	**P**	**08 30 46.4**	**+1.5**
	comp=Z,1.1nm,0.7s,baz=224,slow=6.8,SNR=4.8						
	comp=Z,1.1nm,0.7s						
USRK	**Ussuriysk Ar.**	**84.62**	**326**	P	**P**	**08 30 45.5**	**+0.4**
	comp=Z,4.0nm,0.6s,baz=140,slow=4.4,SNR=6.5						
	comp=Z,4.0nm,0.6s						
M02C	**Callahan**	**84.86**	**38**	P	**P**	**08 30 46.9**	**+0.3**
NVAR	**Mina Array Bea**	**85.53**	**43**	P	**P**	**08 30 50.0**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=230,slow=8.4,SNR=9.8						
	comp=Z,1.0nm,0.8s						
M16K	**Timber Creek**	**89.08**	**9**	P	**P**	**08 31 06.3**	**-0.1**
M16K				IAmb	IAmb	08 31 07.3	
	comp=Z,5.6nm,1.1s						
MA2	**Magadan**	**90.20**	**344**	P	**P**	**08 31 11.0**	**-0.6**
	comp=Z,8.9nm,1.6s						
CMAR	**Chiang Mai Arr**	**92.68**	**289**	P	**P**	**08 31 23.2**	**-0.9**
	comp=Z,1.0nm,0.3s,baz=123,slow=4.7,SNR=7.2						
	comp=Z,1.0nm,0.3s						
PDAR	**Pinedale Array**	**93.45**	**43**	P	**P**	**08 31 25.4**	**-2.0**
	comp=Z,0.6nm,0.8s,baz=126,slow=2.6,SNR=6.2						
	comp=Z,0.6nm,0.8s						
ILAR	**Eielson Array**	**94.61**	**13**	P	**P**	**08 31 29.9**	**-1.9**
	comp=Z,0.6nm,0.8s,baz=222,slow=5.2,SNR=7.9						
	comp=Z,0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**115.80**	**319**	PKP	**PKPdf**	**08 36 51.8**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=35,slow=3.5,SNR=2.0						
MKAR	**Makanchi Array**	**115.92**	**311**	PKP	**PKPdf**	**08 36 52.3**	**-1.5**
	comp=Z,0.5nm,0.5s,baz=65,slow=1.3,SNR=6.0						
KURBB	**Kurchatov Arra**	**119.06**	**315**	PKP	**PKPdf**	**08 36 58.5**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=100,slow=1.8,SNR=7.7						
BVAR	**Borovoye Array**	**124.27**	**317**	PKP	**PKPdf**	**08 37 08.8**	**-0.8**
	comp=Z,1.7nm,0.6s,baz=93,slow=2.9,SNR=7.7						
SPITS	**Spitsbergen Ar**	**128.42**	**356**	PKP	**PKPdf**	**08 37 16.3**	**-0.6**
	comp=Z,3.2nm,0.8s,baz=64,slow=5.7,SNR=5.5						
ARCES	**ARCESS Array B**	**135.43**	**349**	PKP	**PKPdf**	**08 37 29.4**	**-0.9**
	comp=Z,1.3nm,0.5s,baz=46,slow=2.0,SNR=7.1						
FINES	**FINESS Array B**	**142.15**	**342**	PKPdf	PKPpre	08 37 36.5	
	comp=Z,1.5nm,0.5s,baz=25,slow=3.5,SNR=11						
NC303	**NORSAR Array S**	**145.33**	**352**		**PKPbc**	**08 37 47.7**	**-0.7**
NC405	**NORSAR Array S**	**145.40**	**352**	PKPdf	**PKPdf**	**08 37 47.8**	**-0.7**
NB201	**NORSAR Array S**	**145.51**	**352**	PKPdf	**PKPdf**	**08 37 48.5**	**-0.3**
NB2	**NORSAR Subarra**	**145.53**	**352**	PKP	**PKPdf**	**08 37 48.3**	**-0.5**
	comp=Z,6.2nm,0.7s,baz=7.6,slow=3.7						
NOA	**NORSAR Array B**	**145.53**	**352**	PKPbc	**PKPdf**	**08 37 48.0**	**-0.8**
	comp=Z,5.3nm,0.8s,baz=13,slow=2.6,SNR=20						
NAO01	**NORSAR Array S**	**145.76**	**353**	PKPdf	**PKPbc**	**08 37 49.5**	**-0.3**
HFS	**Hagfors**	**146.06**	**350**	PKPbc	**PKPdf**	**08 37 49.6**	**-0.1**
	comp=Z,6.1nm,0.6s,baz=65,slow=6.2,SNR=19						
PABE	**Paberze**	**147.59**	**337**		**PKPbc**	**08 37 54.0**	**-1.2**
AKASG	**Malin Array Be**	**148.83**	**326**	PKPbc	**PKPbc**	**08 37 57.8**	**-0.8**
	comp=Z,2.0nm,0.5s,baz=44,slow=3.9,SNR=24						
AKBB	**Malin Array Si**	**148.83**	**326**	PKPbc	**PKPbc**	**08 37 57.7**	**-0.9**
MMAI	**Mount Meron Ar**	**150.95**	**290**	PKPbc	**PKPbc**	**08 38 03.9**	**-0.5**
	comp=Z,3.1nm,0.4s,baz=82,slow=6.5,SNR=17						
BRTR	**Keskin Array B**	**151.22**	**304**	PKPbc	**PKPbc**	**08 38 04.3**	**-0.6**
	comp=Z,1.4nm,0.6s,baz=136,slow=5.5,SNR=6.9						
BRTR				PKPab	**PKPab**	**08 38 13.4**	**+0.2**
	comp=Z,6.4nm,0.7s,baz=108,slow=3.6,SNR=24						
TORD	**Torodi Ar. Bea**	**166.12**	**177**	PKP	**PKPdf**	**08 38 16.8**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=187,slow=1.4,SNR=2.5						
TORD				PKPab	**PKPab**	**08 39 17.8**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=193,slow=4.6,SNR=2.5						

*UCR **21** 08:22:15.1±0.7,10.47N×85.48W,h42km±2km, MW3.6, Presumed earthquake*
*CATAC **21** 08:22:15.3±0.3,10.N×3.×8.5W±.,h32km±5km,M3.7/18, MLv3.7/18,Error ellipse: s-maj=6.9km s-min=4.7km az=53.5,confirmed*

ISC 21 08:22:15.7±1.3,10.44N±0.03×85.47W±0.04,h45km±5km, n122,σ0.65/140,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DELF	**Filadelfia**	**0.08**	**273**	*eP*	**Pn**	**08 22 22.5**	**-0.3**
DELF				*eS*	**Sn**	**08 22 27.9**	**-0.1**
ELVJ	**El Viejo (Barb**	**0.14**	**87**	*eP*	**Pn**	**08 22 22.3**	**-0.8**
ELVJ				*eS*	**Sn**	**08 22 27.8**	**-0.6**
PLVR	**Palo Verde**	**0.15**	**129**	*eP*	**Pn**	**08 22 22.7**	**-0.8**
ALIBA	**Liberia Airpor**	**0.17**	**333**	*eP*	**Pn**	**08 22 23.3**	**0.0**
ALIBA				*eS*	**Sn**	**08 22 30.2**	**+1.5**
ERIA	**Liberia**	**0.19**	**9**	*eP*	**Pn**	**08 22 23.4**	**-0.1**
ERIA				*eS*	**Sn**	**08 22 30.0**	**+1.0**
SACU	**Santa Cruz**	**0.21**	**212**	*eP*	**Pn**	**08 22 23.0**	**-0.6**
SACU				*eS*	**Sn**	**08 22 29.6**	**+0.4**
ELI1	**Hacienda Flor**	**0.22**	**338**	*eP*	**Pn**	**08 22 23.7**	**0.0**
BAGA	**Bagaces**	**0.22**	**68**	*eP*	**Pn**	**08 22 23.3**	**-0.4**
BAGA				*eS*	**Sn**	**08 22 29.8**	**+0.4**
JUD3	**Juan Diaz 3**	**0.28**	**194**	*eP*	**Pn**	**08 22 23.7**	**-0.6**
JUD3				*eS*	**Sn**	**08 22 30.8**	**+0.3**
NICO	**Nicoya**	**0.31**	**176**	*eP*	**Pn**	**08 22 23.7**	**-0.8**
LAPC	**Finca la Perla**	**0.32**	**6**	*eP*	**Pn**	**08 22 24.1**	**-0.6**
GPS3	**Bodega del ICE**	**0.33**	**18**	*eP*	**Pn**	**08 22 26.2**	**+1.4**
GPS2	**Hotel Rincn d**	**0.33**	**21**	*eP*	**Pn**	**08 22 24.3**	**-0.5**
COLC	**Colonia**	**0.34**	**50**	*eP*	**Pn**	**08 22 24.3**	**-0.6**
GPS1	**Guardaparques**	**0.35**	**20**	*eP*	**Pn**	**08 22 24.4**	**-0.6**
VRLE	**La Escondida,**	**0.36**	**17**	*eP*	**Pn**	**08 22 24.5**	**-0.6**
CUI	**Cuipilapa**	**0.37**	**55**	*eP*	**Pn**	**08 22 24.7**	**-0.5**
CNAS	**Canas**	**0.37**	**92**	*eP*	**Pn**	**08 22 25.9**	**+0.8**
HORNC	**Hornillas**	**0.39**	**47**	*eP*	**Pn**	**08 22 24.8**	**-0.7**
VORI	**VORI**	**0.39**	**18**	*eP*	**Pn**	**08 22 25.0**	**-0.6**
MESS	**Mesas**	**0.40**	**42**	*eP*	**Pn**	**08 22 25.0**	**-0.6**
INVE	**Universidad In**	**0.40**	**85**	*eP*	**Pn**	**08 22 25.2**	**-0.3**
CMARA	**Lajas Hojancha**	**0.42**	**174**	*eP*	**Pn**	**08 22 25.2**	**-0.7**
BUAI	**Buenos Aires**	**0.45**	**17**	*eP*	**Pn**	**08 22 26.0**	**-0.1**
TIMP	**Tierras Morena**	**0.46**	**73**	*eP*	**Pn**	**08 22 26.0**	**-0.3**
PEJA	**Penjamo Buenos**	**0.47**	**19**	*eP*	**Pn**	**08 22 26.3**	**-0.1**
NYURE	**Nandayure**	**0.49**	**154**	*eP*	**Pn**	**08 22 25.6**	**-1.0**
VMAR	**Armenia, Volca**	**0.51**	**44**	*eP*	**Pn**	**08 22 26.3**	**-0.5**
JUNT	**Juntas**	**0.53**	**108**	*eP*	**Pn**	**08 22 26.4**	**-0.6**
JTS	**Las Juntas de**	**0.53**	**107**	P	**Pn**	**08 22 26.3**	**-0.7**
JTS				S	**Sn**	**08 22 36.0**	**+0.8**
JTS	**Las Juntas de**	**0.53**	**107**	*eP*	**Pn**	**08 22 26.4**	**-0.7**
TENO	**El Achiote**	**0.55**	**62**	*eP*	**Pn**	**08 22 26.1**	**-1.3**
CHIK	**Chiripa**	**0.55**	**90**	*eP*	**Pn**	**08 22 27.4**	**-0.1**
INDI	**Punta indio, G**	**0.57**	**183**	P	**Pn**	**08 22 27.4**	**-0.3**
LCRUZ	**La Cruz**	**0.65**	**346**	*eP*	**Pn**	**08 22 28.4**	**-0.3**
TABAC	**Tabacon**	**0.69**	**85**	*eP*	**Pn**	**08 22 29.1**	**-0.1**
CASO	**Castillo**	**0.72**	**91**	*eP*	**Pn**	**08 22 29.5**	**-0.2**
ARE1	**Arenal 1**	**0.74**	**89**	*eP*	**Pn**	**08 22 29.7**	**-0.1**
VARE2	**V. Arenal**	**0.74**	**89**	*eP*	**Pn**	**08 22 29.8**	**0.0**
CARN	**Rivas**	**0.74**	**356**	P	**Pn**	**08 22 29.5**	**-0.3**
CARN				S	**Sn**	**08 22 41.2**	**+1.1**
CARN	**Rivas**	**0.74**	**356**	*eP*	**Pn**	**08 22 29.5**	**-0.3**
CEDE	**Laguna Cedeo**	**0.75**	**87**	*eP*	**Pn**	**08 22 30.1**	**0.0**
REZ	**Monterrey de S**	**0.76**	**84**	*eP*	**Pn**	**08 22 30.0**	**-0.1**
ENAS	**Puntarenas**	**0.78**	**126**	*eP*	**Pn**	**08 22 29.9**	**-0.4**
VACR	**Volcan Arenal**	**0.78**	**88**	*eP*	**Pn**	**08 22 30.2**	**-0.2**
FORC	**Fortuna**	**0.79**	**88**	*eP*	**Pn**	**08 22 30.3**	**-0.2**
PAQE	**Paquera**	**0.81**	**140**	*eP*	**Pn**	**08 22 30.5**	**-0.3**
ROBF	**Roble, Puntare**	**0.85**	**123**	*eP*	**Pn**	**08 22 31.1**	**-0.3**
LCHIL	**Los Chiles**	**0.95**	**51**	*eP*	**Pn**	**08 22 31.8**	**-0.8**
QUEU	**Ciudad Quesada**	**1.02**	**97**	*eP*	**Pn**	**08 22 33.8**	**+0.1**
SRA1	**San Ramn**	**1.04**	**110**	*eP*	**Pn**	**08 22 33.9**	**-0.1**
RAMO	**San Ramon**	**1.05**	**110**	*eP*	**Pn**	**08 22 34.0**	**-0.1**
ARIN	**Rivas**	**1.07**	**340**	P	**Pn**	**08 22 33.8**	**-0.5**
OMEN	**Al SSO del Vol**	**1.07**	**352**	P	**Pn**	**08 22 33.1**	**-1.2**
OMEN				S	**Sn**	**08 22 47.9**	**-0.1**
COVE	**Coope Vega, Sa**	**1.08**	**75**	P	**Pn**	**08 22 33.6**	**-0.9**
PALD	**Palmares**	**1.09**	**111**	*eP*	**Pn**	**08 22 34.5**	**-0.1**
ZARE	**Zarcero**	**1.09**	**104**	*eP*	**Pn**	**08 22 35.0**	**+0.2**
JAPN	**Al SSO del Vol**	**1.09**	**349**	P	**Pn**	**08 22 33.9**	**-0.7**
JAPN	**Al SSO del Vol**	**1.09**	**349**	*eP*	**Pn**	**08 22 34.7**	**0.0**
VPL1	**V. Platanar**	**1.10**	**100**	*eP*	**Pn**	**08 22 34.8**	**-0.1**
MORN	**Al O del Volca**	**1.11**	**351**	P	**Pn**	**08 22 34.4**	**-0.5**
MORN				S	**Sn**	**08 22 49.4**	**+0.4**
CONN	**Concepcion**	**1.12**	**352**	P	**Pn**	**08 22 33.7**	**-1.3**
CONN				S	**Sn**	**08 22 48.9**	**-0.5**
VPL3	**V. Platanar**	**1.15**	**95**	*eP*	**Pn**	**08 22 35.2**	**-0.1**
SARCI	**Sarchi**	**1.16**	**108**	*eP*	**Pn**	**08 22 35.9**	**+0.3**
ATEO	**Atenas**	**1.17**	**113**	*eP*	**Pn**	**08 22 35.6**	**-0.1**
BITO	**Garabito Jaco**	**1.17**	**134**	*eP*	**Pn**	**08 22 35.2**	**-0.6**
ITAL	**Pital**	**1.18**	**90**	*eP*	**Pn**	**08 22 35.4**	**-0.4**
GREC	**Grecia**	**1.20**	**108**	*eP*	**Pn**	**08 22 37.3**	**+1.1**
VPS8	**V Poas**	**1.24**	**102**	*eP*	**Pn**	**08 22 37.0**	**+0.2**
ARTO	**Ro Cuarto**	**1.24**	**95**	*eP*	**Pn**	**08 22 36.3**	**-0.3**
POAS	**San Pedro de P**	**1.26**	**107**	*eP*	**Pn**	**08 22 37.2**	**+0.1**
PURI	**Puriscal**	**1.28**	**117**	*eP*	**Pn**	**08 22 37.4**	**0.0**
UELA	**Alajuela**	**1.31**	**109**	*eP*	**Pn**	**08 22 37.7**	**0.0**
BELE	**Belen**	**1.34**	**110**	*eP*	**Pn**	**08 22 37.9**	**-0.2**
SANTA	**Santa Ana**	**1.36**	**112**	*eP*	**Pn**	**08 22 38.3**	**-0.1**
HEME	**Heredia, Merce**	**1.39**	**109**	*eP*	**Pn**	**08 22 39.8**	**+1.1**
HDC	**Heredia**	**1.40**	**108**	*eP*	**Pn**	**08 22 39.1**	**+0.2**
DOMI	**Santo Domingo**	**1.43**	**109**	*eP*	**Pn**	**08 22 39.5**	**+0.1**
ACOS	**Acosta**	**1.44**	**116**	*eP*	**Pn**	**08 22 39.3**	**-0.2**
CENT	**San Jose**	**1.46**	**110**	*eP*	**Pn**	**08 22 40.9**	**+1.1**
LUJA	**Lujan**	**1.47**	**110**	*eP*	**Pn**	**08 22 39.9**	**0.0**
LUPE	**Guadalupe**	**1.48**	**109**	*eP*	**Pn**	**08 22 40.2**	**+0.2**
SJS	**Escuela Geolog**	**1.48**	**110**	*eP*	**Pn**	**08 22 40.3**	**+0.3**
ECI	**Escuela Centro**	**1.48**	**110**	*eP*	**Pn**	**08 22 39.9**	**-0.1**
SJS3	**Mercedes San J**	**1.48**	**110**	*eP*	**Pn**	**08 22 40.5**	**+0.4**
AMPA	**Desamparados**	**1.49**	**111**	*eP*	**Pn**	**08 22 40.1**	**0.0**
PICV	**PH. Pirrs**	**1.50**	**123**	*eP*	**Pn**	**08 22 40.0**	**-0.2**
CORON	**Coronado**	**1.52**	**108**	*eP*	**Pn**	**08 22 41.0**	**+0.5**
ACON	**Acoyapa**	**1.54**	**11**	P	**Pn**	**08 22 40.2**	**-0.5**
ACON				S	**Sn**	**08 22 59.1**	**-0.5**
TRIO	**Tres Rios**	**1.55**	**110**	*eP*	**Pn**	**08 22 40.8**	**-0.2**
CVIMO	**Finca Echandi**	**1.56**	**105**	*eP*	**Pn**	**08 22 41.4**	**+0.2**
NANN	**Nandasmo**	**1.62**	**337**	P	**Pn**	**08 22 42.4**	**+0.6**
NANN				S	**Sn**	**08 23 02.8**	**+1.3**
PITB	**Pirrs, San**	**1.62**	**119**	*eP*	**Pn**	**08 22 42.4**	**+0.3**
RAZU	**San Marcos de**	**1.62**	**119**	*eP*	**Pn**	**08 22 42.3**	**+0.2**
VICA	**Volcano Irazu**	**1.66**	**106**	*eP*	**Pn**	**08 22 42.8**	**0.0**
PILE	**Guapiles**	**1.67**	**98**	*eP*	**Pn**	**08 22 42.6**	**+0.1**
REPA	**Paraso**	**1.69**	**111**	*eP*	**Pn**	**08 22 43.2**	**+0.3**
CVTG	**V. Turrialba,**	**1.69**	**100**	*eP*	**Pn**	**08 22 43.0**	**+0.1**
RARA	**San Farael, Vo**	**1.70**	**106**	*eP*	**Pn**	**08 22 43.6**	**+0.3**
CARI	**Cariari**	**1.71**	**93**	*eP*	**Pn**	**08 22 42.7**	**-0.3**
PCAYA	**Pacayas**	**1.71**	**108**	*eP*	**Pn**	**08 22 43.8**	**+0.5**
CVTQ	**Turrialba Volc**	**1.73**	**104**	*eP*	**Pn**	**08 22 43.9**	**+0.2**
CVTV	**Tajo**	**1.75**	**104**	*eP*	**Pn**	**08 22 43.9**	**0.0**
VTCV	**VTCV, Calle Va**	**1.77**	**105**	*eP*	**Pn**	**08 22 44.2**	**+0.1**
ABRB	**Las Abras (San**	**1.78**	**104**	*eP*	**Pn**	**08 22 44.5**	**+0.3**
UNAN	**Cigeo UNAN**	**1.83**	**335**	P	**Pn**	**08 22 45.8**	**+1.0**
UNAN				S	**Sn**	**08 23 07.1**	**+0.3**
RESJ	**San Isidro (Tu**	**1.84**	**103**	*eP*	**Pn**	**08 22 45.2**	**+0.3**
MGAN	**Managua**	**1.86**	**336**	P	**Pn**	**08 22 44.9**	**-0.2**
MGAN				S	**Sn**	**08 23 08.0**	**+0.6**
ABCN	**Banco Central**	**1.86**	**334**	P	**Pn**	**08 22 45.4**	**+0.3**
ABCN				S	**Sn**	**08 23 07.8**	**+0.3**
TISN	**Laguna Tiscapa**	**1.86**	**335**	P	**Pn**	**08 22 42.3**	**-2.9**
EGUB	**Earth Guipi**	**1.86**	**97**	*eP*	**Pn**	**08 22 45.0**	**-0.1**
BUS1	**Rivas**	**1.91**	**117**	*eP*	**Pn**	**08 22 46.1**	**-0.2**
APQ2	**Apoyeque**	**1.94**	**334**	P	**Pn**	**08 22 45.3**	**-0.8**
SAPS	**Ciudad Sandino**	**1.94**	**332**	P	**Pn**	**08 22 46.4**	**+0.1**
IRES	**Siquirres**	**1.96**	**100**	*eP*	**Pn**	**08 22 46.8**	**+0.3**
BOAB	**BOACO BROADBAN**	**2.00**	**354**	P	**Pn**	**08 22 46.5**	**-0.6**
BOAB				S	**Sn**	**08 23 10.1**	**-0.9**
AMTN	**Mateare**	**2.02**	**332**	S	**Sn**	**08 23 11.8**	**+0.5**
COPN	**Copaltepe**	**2.05**	**328**	P	**Pn**	**08 22 48.0**	**+0.3**
OCHAL	**Ojochal**	**2.24**	**126**	P	**Pn**	**08 22 51.5**	**+1.2**
EDPE	**Pejibaye, P**	**2.27**	**124**	*eP*	**Pn**	**08 22 50.9**	**+0.2**
VERH	**Veragua Rainfo**	**2.30**	**103**	*eP*	**Pn**	**08 22 51.5**	**+0.3**
DRK0	**Durika**	**2.49**	**118**	*eP*	**Pn**	**08 22 50.9**	**-3.0**

IDC 21 08:24:53.9±2.3,2.07N×127.56E,h0km,mb3.5/3, mbtmp3.5/3,MS2.4/1,Error ellipse: s-maj=158.0km s-min=28.4km az=67.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.86**	**163**	P	P	08 29 59.5	+0.3
	0.9nm,0.5s,baz=344,slow=11,SNR=7.4						
	0.9nm,0.5s						
KRVT	**Keravat (AS076**	**25.26**	**105**	LR	LR	08 38 32.7	
	comp=Z,9.4nm,20.4s,baz=5.1,slow=32						
ASAR	**Alice Springs**	**26.32**	**167**	P	P	08 30 31.0	-0.6
	0.2nm,0.3s,baz=343,slow=7.6,SNR=5.3						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**59.38**	**325**	P	P	08 34 58.5	+0.3
	0.2nm,0.3s,baz=110,slow=8.1,SNR=2.3						
	0.2nm,0.3s						

IDC 21 08:27:29.6±64.0,12.74S×167.41E,h0km,mb3.6/3, mbtmp3.6/3,MS3.2/1,Error ellipse: s-maj=1086.0km s-min=124.0km az=63.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**28.32**	**289**	LR	LR	08 44 00.0	
	comp=Z,42nm,19.1s,baz=338,slow=35						
STKA	**Stephens Creek**	**30.41**	**227**	P	P	08 33 43.9	+0.1
	0.8nm,0.4s,baz=39,slow=13,SNR=4.1						
	0.8nm,0.4s						
WRA	**Warramunga Arr**	**32.49**	**253**	P	P	08 34 02.4	+0.1
	0.4nm,1.0s,baz=84,slow=8.9,SNR=1.9						
	0.4nm,1.0s						
ASAR	**Alice Springs**	**33.55**	**246**	P	P	08 34 11.2	-0.3
	0.4nm,0.5s,baz=74,slow=9.4,SNR=8.2						
	0.4nm,0.5s						

*KRNET **21** 08:28:29.3±0.1,39.95N×77.11E,h12km,mb3.3*
*SOME **21** 08:28:30.4,40.00N×77.08E,h10km*
*NNC **21** 08:28:36.1±2.5,40.22N×76.90E,h0km,mb3.5,mpv3.2, Error ellipse: s-maj=17.9km s-min=15.2km az=148.0*

ISC 21 08:28:30.3±3.3,39.8N±0.1×77.17E±0.07,h3km±25km,n34, σ1.921/52,16C-7D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNKS	**Jany-Kuch**	**1.69**	**316**	↑*eP*	**Pn**	**08 28 58.7**	**-2.2**
JNKS				↑*iS*	**Sn**	**08 29 20.6**	**-2.5**
NRN	**Naryn**	**1.82**	**331**	↑*iP*	**Pn**	**08 29 01.2**	**-1.6**
NRN				↑*iS*	**Sn**	**08 29 24.7**	**-1.8**
TARG	**Taragay, Kyrgy**	**1.94**	**14**	↑*iP*	**Pn**	**08 29 04.1**	**-2.5**
TARG				↑*iS*	**Sn**	**08 29 25.5**	**-2.2**
KDJ	**Kajisay**	**2.29**	**0**	↓*iP*	**Pn**	**08 29 08.9**	**-0.1**
KDJ				↓*iS*	**Sn**	**08 29 37.9**	**+0.1**
ULHL	**Ulahol**	**2.50**	**344**	↑*iP*	**Pn**	**08 29 11.8**	**-0.2**
ULHL				↑*iS*	**Sn**	**08 29 42.9**	**-0.2**
SALK	**Salom-Alik**	**2.76**	**293**	↓*iP*	**Pn**	**08 29 15.8**	**+0.3**
SALK				↓*iS*	**Sn**	**08 29 50.0**	**+0.6**
BOOM	**Boomskoye usch**	**2.80**	**341**	↑*iP*	**Pn**	**08 29 16.2**	**+0.1**
BOOM				↑*iS*	**Sn**	**08 29 50.0**	**-0.5**
ARLS	**Aral**	**2.95**	**314**	↓*iP*	**Pn**	**08 29 18.1**	**-0.1**
ARLS				↓*iS*	**Sn**	**08 29 53.6**	**-0.6**
UCH	**Uchtor**	**3.11**	**321**	↑*iP*	**Pn**	**08 29 20.8**	**+0.1**
UCH				↑*iS*	**Sn**	**08 29 58.0**	**-0.6**
TNSS	**Tian-Shan**	**3.19**	**357**	Pg	**Pb**	**08 29 26.7**	**-1.2**
	1.5nm,0.5s						
TNSS				Lg	Lg	08 30 07.9	
	13nm,0.6s						
TNSS	**Tian-Shan**	**3.19**	**357**	*e*P	**Pb**	**08 29 27.0**	**-0.9**
	1.5nm,0.5s						
TNSS				*e*S	**Sb**	**08 30 07.9**	**+0.5**
	13nm,0.6s						
IZV	**Izvestkoviy**	**3.22**	**353**	Pg	**Pn**	**08 29 23.9**	**+2.1**
	4.0nm,0.4s						
IZV				Lg	Lg	08 30 05.0	
	31nm,0.4s						
IZV	**Izvestkoviy**	**3.22**	**353**	*e*P	**Pb**	**08 29 26.3**	**-1.8**
	0.4nm,0.1s						
IZV				*e*S	**Sb**	**08 30 06.3**	**-1.4**
	27nm,0.4s						
MDOK	**Medeo**	**3.32**	**359**	Pg	**Pb**	**08 29 29.2**	**-0.6**
	5.4nm,0.5s						
MDOK				Lg	Lg	08 30 11.7	
	90nm,0.8s						
KST	**Kastek**	**3.32**	**345**	Pg	**Pb**	**08 29 28.7**	**-1.2**
	4.6nm,0.3s						
KST				Lg	Lg	08 30 12.3	
	31nm,0.5s						
KST	**Kastek**	**3.32**	**345**	*e*P	**Pb**	**08 29 28.9**	**-1.0**
	4.7nm,0.5s						
KST				*e*S	**Sb**	**08 30 10.8**	**0.0**
	32nm,0.5s						
KOTS	**Kotyrbulak**	**3.39**	**359**	Pg	**Pb**	**08 29 30.5**	**-0.6**
	5.0nm,0.3s						
KOTS				Lg	Lg	08 30 13.9	
	184nm,0.8s						
KOTS	**Kotyrbulak**	**3.39**	**359**	*e*P	**Pb**	**08 29 30.5**	**-0.6**
	5.0nm,0.3s						
KOTS				*e*S	**Sb**	**08 30 13.9**	**+1.2**
	184nm,0.8s						
AAK	**Ala-Archa**	**3.44**

JOFO Osakifurukawao 1.50 341 A A 09 03 33.2
comp=N,27nm,1.5s,comp=E,28nm,1.5s
JYS Shirataka 1.56 312 A A 09 03 33.8
comp=N,16nm,1.4s,comp=E,13nm,0.8s
JYA Atsumi 2.01 315 A A 09 03 40.4
comp=N,8.0nm,1.2s,comp=E,7.0nm,0.7s
MJAR Matsushiro Arr 2.74 257 Pn **Pn 09 03 49.6 -1.4**
comp=E,1.8nm,0.3s,baz=80,slow=16,SNR=55
MJAR Sn **Sn 09 04 24.0 0.0**
comp=E,2.9nm,0.3s,baz=76,slow=17,SNR=6.1
MJAR LR LR 09 04 32.7
comp=E,86nm,20.7s,baz=92,slow=33
comp=E,13nm,0.5s
MJAR Matsushiro Arr 2.74 257 Pn 09 03 51.7 +0.6
MAJO Matsushiro 2.74 257 Pn 09 03 51.9 +0.8
MAJO Matsushiro 2.74 257 P **Pn 09 03 51.9 +0.8**
MJB9 Matsu-Tunnel 2.75 258 Pn 09 03 53.0 +1.9
JTM Tenmabayashi 3.61 354 Pn **Pn 09 04 04.0 +1.0**
JSG Sagara 3.70 228 Pn **Pn 09 04 03.1 -1.0**
JGF Kuroka 3.72 246 Pn 09 04 06.6 +2.0
INU Inuyama 4.08 245 Pn 09 04 10.0 +0.5
JHJ2 Mitsune 4.30 200 Pn **Pn 09 04 11.5 -1.0**
JHJ Hachijo jima 2 4.30 200 Pn **Pn 09 04 11.6 -0.9**
comp=E,11nm,0.3s,baz=313,slow=23,SNR=8.6
JHJ Sn **Sn 09 05 00.7 -1.9**
comp=E,13nm,0.3s,baz=66,slow=20,SNR=1.8
comp=E,76nm,0.5s
NMR Nemuro--Hokkai 6.96 26 *e*P **Pn 09 04 46.6 -2.3**
NMR *i* S **Sn 09 06 01.0 -6.8**
ASAJ Asahikawa 6.97 6 Pn **Pn 09 04 49.5 +0.3**
comp=E,3.7nm,0.3s,baz=220,slow=10.0,SNR=14
ASAJ Sn **Sn 09 06 09.5 +1.4**
comp=E,1.5nm,0.3s,baz=22,slow=19,SNR=4.1
comp=E,8.5nm,0.3s
JKA Kamikawa-asahi 6.97 6 Pn **Pn 09 04 48.4 -0.7**
JMN Monobe 7.13 243 Pn **Pn 09 04 51.2 -0.3**
GLVR Golovnino 7.21 24 *e*P **Pn 09 04 52.0 -0.5**
GLVR *i* S **Sn 09 06 10.6 -3.5**
GLVR pmax pmax
comp=Z,109nm,0.6s
GLVR pmax pmax
comp=N,109nm,0.7s
GLVR pmax pmax
comp=E,70nm,0.4s
RUSJ Misakicho 7.46 21 *e*P **Pn 09 04 56.5 +0.6**
RUSJ *i* S **Sn 09 06 17.2 -3.1**
YUK Yuzh-Kuril'sk 7.59 24 *e*P **Pn 09 04 56.0 -1.6**
YUK *i* S **Sn 09 06 17.3 -6.1**
YUK pmax pmax
comp=Z,98nm,0.7s
YUK pmax pmax
comp=N,96nm,0.5s
YUK pmax pmax
comp=E,67nm,0.7s
TEY Ternei 8.68 336 *e*P Pn 09 05 18.7 +6.2
JNU Nakatsue 9.62 248 LR LR 09 09 25.9
comp=E,81nm,19.7s,baz=70,slow=40
YSS Yuzhno-Sakhali 9.80 5 Pn **Pn 09 05 27.2 -0.7**
USRK Ussuriysk Ar. 10.07 317 Pn **Pn 09 05 29.1 -2.6**
comp=E,0.4nm,0.3s,baz=130,slow=13,SNR=7.2
comp=E,1.0nm,0.6s
JSU Suzuyama 10.77 241 Pn **Pn 09 05 41.9 +0.7**
KSRS Korea Array 10.84 276 Pn **Pn 09 05 44.6 +2.4**
baz=86,slow=14
KSRS LR LR 09 09 18.6
comp=E,79nm,19.9s,baz=90,slow=35
KLR Kul'dur 13.98 333 Pn **Pn 09 06 26.0 +1.0**
comp=E,0.1nm,0.3s,baz=160,slow=12,SNR=2.9
comp=E,0.9nm,0.6s
KLR Kul'dur 13.98 333⇓ *e*P **Pn 09 06 27.9 +2.9**
KLR pmax pmax
comp=Z,33nm,3.5s
ZEA Zeya 19.28 334 *e*P **Pn 09 07 36.0 +3.3**
ZEA pmax pmax
comp=Z,10.0nm,0.3s
MA2 Magadan 23.18 12⇓ *i*P **P 09 08 15.9 +2.4**
MA2 pmax pmax
comp=Z,35nm,3.0s
YAK Yakutsk 25.94 347⇓ *e*P **P 09 08 39.3 +0.2**
YAK pmax pmax
comp=Z,15nm,0.7s
SEY Seymchan 26.62 11⇓ *i*P **P 09 08 47.6 +2.4**
SEY pmax pmax
comp=Z,11nm,1.1s
ULN Ulaanbaatar 27.35 304⇑ *e*P **P 09 08 53.5 +1.4**
ULN pmax pmax
comp=Z,13nm,3.7s
SMY Shemya 27.49 45 P **P 09 08 53.9 +0.8**
SMY Shemya 27.49 45 P **P 09 08 53.9 +0.8**
SMY pmax pmax
comp=Z,142nm,1.4s
SONM Songino Array 27.78 304 P **P 09 08 55.6 -0.3**
comp=Z,2.9nm,0.8s,baz=102,slow=9.6,SNR=12
comp=Z,2.9nm,0.8s
SONM Songino Array 27.78 304 P **P 09 08 55.5 -0.5**
SONM Songino Array 27.78 304 P **P 09 08 55.5 -0.5**
SONM pmax pmax
comp=Z,2.0nm,0.9s
H11N2 WAKE ISLAND Hy 28.14 121 T T 09 38 28.6
baz=314,slow=76
H11N1 WAKE ISLAND Hy 28.15 121 T T 09 38 28.4
baz=314,slow=76
H11N3 WAKE ISLAND Hy 28.16 121 T T 09 38 29.0
baz=314,slow=76
H11S1 WAKE ISLAND Hy 28.86 123 T T 09 39 18.2
baz=316,slow=76
H11S3 WAKE ISLAND Hy 28.86 123 T T 09 39 24.5
baz=316,slow=76
H11S2 WAKE ISLAND Hy 28.88 123 T T 09 39 19.2
baz=316,slow=76
TLY Talaya 30.30 311 LR LR 09 22 14.7
comp=Z,14nm,18.5s,baz=80,slow=38
BILL Bilibino 33.85 16⇓ *e*P **P 09 09 49.0 -0.1**
BILL pmax pmax
comp=Z,12nm,3.1s
KNGR Kungurtug, Tuv 33.92 307⇑ *e*P **P 09 09 51.3 +1.2**
KNGR pmax pmax
comp=Z,1.0nm,0.4s
DGZ Jazzator, Alta 40.38 306⇓ *e*P **P 09 10 45.6 +0.6**
DGZ pmax pmax
comp=Z,6.0nm,0.8s
TNA Tin City 40.67 30 P **P 09 10 48.6 +1.7**
J14K Nanvaranak Lak 41.79 34 P **P 09 10 57.1 +1.0**
J14K IAmb IAmb 09 11 18.0
comp=Z,9.9nm,1.4s
ZAA0 Zalesovo Array 41.88 312 P **P 09 10 56.0 -1.0**
ZAA0 IAmb IAmb 09 10 57.5
comp=Z,5.2nm,0.8s
ZALV Zalesovo Beam 41.88 312 P **P 09 10 56.8 -0.2**
comp=Z,3.1nm,0.6s,baz=98,slow=6.1,SNR=16
ZALV PcP **PcP 09 12 51.8 -0.8**
comp=Z,0.8nm,0.6s,baz=116,slow=3.4,SNR=2.2
comp=Z,3.1nm,0.6s
ZALV Zalesovo Beam 41.88 312 P **P 09 10 56.3 -0.7**
ZALV Zalesovo Beam 41.88 312 *i* P **P 09 10 57.2 +0.2**
ZALV pmax pmax
comp=Z,3.0nm,0.6s
KRVT Keravat (AS076 42.42 164 LR LR 09 25 35.3
comp=Z,14nm,21.6s,baz=139,slow=32
C16K Lisburne Hills 42.52 26 P **P 09 11 03.5 +1.4**
NRIK Noril'sk 43.17 335 P **P 09 11 07.2 -0.2**
comp=Z,0.9nm,0.4s,baz=127,slow=10,SNR=2.5
comp=Z,0.9nm,0.4s
NRIK Noril'sk 43.17 335 P **P 09 11 07.1 -0.2**
NRIK Noril'sk 43.17 335 P **P 09 11 07.1 -0.2**
NRIK pmax pmax
comp=Z,4.0nm,1.3s
L16K Owhat River 43.52 36 P **P 09 11 10.7 +0.4**
L16K IAmb IAmb 09 11 43.6
comp=Z,7.2nm,1.3s
F17K Baldwin Pennin 43.54 29 P **P 09 11 11.6 +1.3**
C18K Utukok River 44.10 26 P **P 09 11 16.9 +2.0**
C18K IAmb IAmb 09 11 17.6
comp=Z,8.7nm,0.7s
MK31 Makanchi Array 44.12 302⇓ *i*P **P 09 11 14.9 -0.4**
MKAR Makanchi Array 44.12 302 P **P 09 11 14.8 -0.5**
comp=Z,2.6nm,0.7s,baz=88,slow=10,SNR=23
comp=Z,2.6nm,0.7s
MKAR Makanchi Array 44.12 302 P 09 11 15.3 0.0
K17K Iditarod 44.17 35 P **P 09 11 17.0 +1.5**
K17K IAmb IAmb 09 11 51.0
comp=Z,6.2nm,1.3s
H18K Honhosa River 44.47 32 P **P 09 11 19.3 +1.5**
H18K IAmb IAmb 09 11 47.3
comp=Z,8.0nm,1.4s
C19K Lookout Ridge 44.78 26 P **P 09 11 21.9 +1.6**
C19K IAmb IAmb 09 11 23.5
comp=Z,8.2nm,0.8s
E19K Redstone River 45.29 28 P **P 09 11 25.2 +0.8**
E19K IAmb IAmb 09 11 27.5
comp=Z,4.9nm,1.1s
B20K Meade River 45.81 25 P **P 09 11 30.5 +2.1**
KURK Kurchatov 45.91 308 P **P 09 11 29.1 -0.4**
KURK IAmb IAmb 09 11 37.0
comp=Z,6.8nm,0.6s
KURK Kurchatov 45.91 308*c* *i*P **P 09 11 29.4 -0.1**
KURK pmax pmax
comp=Z,8.0nm,0.8s
KURBB Kurchatov Arra 45.98 308 P **P 09 11 29.4 -0.6**
comp=Z,3.7nm,0.6s,baz=84,slow=8.1,SNR=31
comp=Z,3.7nm,0.6s
IMAR Indian Mountai 46.47 31 P **P 09 11 35.2 +1.5**
B21K Ikpikpuk River 46.61 26 P **P 09 11 37.3 +2.6**
B22K Teshekpuk Lake 47.13 25 P **P 09 11 40.7 +1.9**
E22K Anaktuvuk Pass 47.42 28 P **P 09 11 43.4 +2.2**
E22K IAmb IAmb 09 11 44.2
comp=Z,6.7nm,1.1s
L22K Petersville 47.64 35 P **P 09 11 44.6 +1.7**
L22K IAmb IAmb 09 11 45.1
comp=Z,4.0nm,1.0s
COLA College 48.90 32⇓ *e*P **P 09 11 55.1 +2.6**
COLA pmax pmax
comp=Z,17nm,3.9s
ILAR Eielson Array 49.31 32 P **P 09 11 56.6 +0.9**
comp=Z,2.1nm,0.7s,baz=269,slow=6.4,SNR=25
comp=Z,2.1nm,0.7s
AAK Ala-Archa 50.50 298 LR LR 09 34 21.5
comp=Z,34nm,18.3s,baz=7.0,slow=37
AAK Ala-Archa 50.50 298⇓ *e*P **P 09 12 06.0 +0.8**
AAK pmax pmax
comp=Z,6.0nm,3.4s
BVAR Borovoye Array 50.54 312 P **P 09 12 04.8 -0.4**
comp=Z,1.1nm,0.5s,baz=91,slow=7.7,SNR=5.3
comp=Z,1.1nm,0.5s
BORK Borovoye 50.58 312⇑ *e*P **P 09 12 05.5 0.0**
BORK pmax pmax
comp=Z,2.0nm,0.9s
SVE Sverdlovsk 55.10 319 *e*P **P 09 12 39.1 +0.3**
SVE pmax pmax
comp=Z,13nm,0.9s
CHGR Chuyangaron 55.69 295 P 09 12 42.9 -0.6
CHGR Chuyangaron 55.69 295 P **P 09 12 42.9 -0.6**
CHGR pmax pmax
comp=Z,11nm,0.8s
A36M Sachs Harbour 56.08 22 P **P 09 12 47.8 +2.2**
A36M IAmb IAmb 09 12 48.9
comp=Z,4.2nm,0.8s
WRA Warramunga Arr 57.23 188 P **P 09 12 54.0 -0.3**
comp=Z,0.7nm,0.5s,baz=6.0,slow=7.0,SNR=15
comp=Z,0.7nm,0.5s
C36M Paulatuk 57.25 25 P **P 09 12 55.6 +1.7**
AB31 Akbulak array 57.91 310 P **P 09 12 58.5 -0.4**
AB31 IAmb IAmb 09 12 59.3
comp=Z,4.8nm,0.7s
ABKAR Akbulak array 57.91 310 P 09 12 58.6 -0.4
KIRV Kirov 60.18 323*ce* P **P 09 13 14.5 0.0**
ASAR Alice Springs 60.95 188 P **P 09 13 19.2 -0.9**
comp=Z,0.6nm,0.7s,baz=13,slow=4.9,SNR=7.3
comp=Z,0.6nm,0.7s
ASAR Alice Springs 60.95 188 P **P 09 13 19.1 -1.0**
YKAW3 Yellowknife Wh 63.59 30 P **P 09 13 38.4 +1.0**
YKAW3 IAmb IAmb 09 13 45.9
comp=Z,4.9nm,1.4s
YKA Yellowknife Ar 63.63 30 P **P 09 13 38.5 +0.8**
comp=Z,0.6nm,0.7s,baz=304,slow=7.7,SNR=16
comp=Z,0.6nm,0.7s
YKA Yellowknife Ar 63.63 30 P **P 09 13 38.3 +0.7**
YKA Yellowknife Ar 63.63 30 *i* P **P 09 13 38.7 +1.1**
YKA pmax pmax
comp=Z,1.0nm,0.6s
KLMR Klimovskoe 63.68 328 *e*P **P 09 13 35.7 -2.3**
KLMR pmax pmax
comp=Z,19nm,1.4s
BELG Belogornoye 63.75 317⇓ *i*P **P 09 13 37.9 -0.7**
BELG pmax pmax
comp=Z,2.0nm,0.8s
ARCES ARCESS Array B 63.89 339 P **P 09 13 39.1 -0.1**
comp=Z,0.8nm,0.9s,baz=60,slow=6.5,SNR=6.0
comp=Z,3.8nm,0.9s
ARCES ARCESS Array B 63.89 339 P **P 09 13 39.4 +0.1**
ARCES ARCESS Array B 63.89 339 P **P 09 13 39.4 +0.1**
ARCES pmax pmax
comp=Z,23nm,1.3s
OBN Obninsk 68.03 323 *e*P **P 09 14 06.8 +0.7**
OBN *e* 09 14 31.3
OBN *e* 09 16 36.8
OBN *e*PPP PPP 09 18 17.5
OBN pmax pmax
comp=Z,5.0nm,0.7s
FINES FINESS Array B 68.72 332 P **P 09 14 10.2 -0.2**
comp=Z,4.4nm,0.7s,baz=46,slow=11,SNR=10
comp=Z,4.4nm,0.7s
FINES FINESS Array B 68.72 332 P **P 09 14 10.0 -0.3**
FINES FINESS Array B 68.72 332 *i* P **P 09 14 10.6 +0.3**
FINES pmax pmax
comp=Z,5.0nm,0.7s
KBZ Khabaz 70.88 311 P **P 09 14 23.7 -0.2**
comp=Z,3.8nm,0.9s,baz=51,slow=2.6,SNR=10
comp=Z,3.8nm,0.9s
KBZ Khabaz 70.88 311⇑ *i*P **P 09 14 24.2 +0.3**
KBZ pmax pmax
comp=Z,6.0nm,0.9s
KIV Kislovodsk 70.88 311 *e*P **P 09 14 24.7 +0.6**
KIV pmax pmax
comp=Z,11nm,1.1s
SHA1 Shidzhatmaz 71.02 311*de*P **P 09 14 26.3 +1.2**
NEUR Neytrino 71.25 310*de*P **P 09 14 28.1 +1.7**
GNI Garni 71.69 307*ce*P **P 09 14 30.5 +1.4**
GNI pmax pmax
comp=Z,19nm,1.3s
MNK Minsk 72.42 326 *i* P **P 09 14 31.3 -1.7**
comp=E,18nm,0.9s
MNK *i* P **P 09 14 31.3 -1.7**
comp=N,36nm,0.9s
MNK *i* P **P 09 14 31.3 -1.7**
comp=Z,58nm,0.7s,baz=50
MNK *i* PP **PP 09 17 14.6 +1.1**
MNK *i* PPP PPP 09 18 57.4
MNK *i* S **S 09 23 53.5 -2.6**
MNK *i* SS **SS 09 28 32.8 -0.8**
MNK *i* SSS SSS 09 31 54.8
MNK *i* LQ LQ 09 41 31.4
MNK *i* LR LR 09 47 31.7
MNK *i* LRM MLR 09 49 33.6
comp=N,670nm,23.9s
MNK *i* LRM MLR 09 50 34.6
comp=Z,66nm,15.8s
MNK Minsk 72.42 326 *i* P **P 09 14 31.3 -1.7**
MNK *i* 09 17 14.5
MNK *i* PPP PPP 09 18 57.4
MNK *i* S **S 09 23 53.5 -2.6**
MNK *i* SS **SS 09 28 32.8 -0.8**
MNK pmax pmax
comp=N,36nm,0.9s
MNK pmax pmax
comp=E,18nm,0.9s
MNK pmax pmax
comp=Z,58nm,0.7s
MNK MLR MLR
comp=N,670nm,24.0s
MNK MLR MLR
comp=Z,66nm,16.0s
MNK MLR MLR
comp=E,756nm,20.0s
VSLR Vesyoloye 72.75 312⇓ *e*P **P 09 14 34.4 -0.8**
VSLR pmax pmax
comp=Z,6.0nm,0.5s
HFS Hagfors 73.99 336 P **P 09 14 42.4 +0.2**
comp=Z,6.7nm,1.1s,baz=96,slow=10,SNR=2.3
comp=Z,6.7nm,1.1s
NB2 NORSAR Array B 74.08 337 P **P 09 14 43.1 +0.3**
comp=Z,0.4nm,0.6s,baz=36,slow=6.2
NOA NORSAR Array B 74.08 337 P **P 09 14 42.4 -0.4**
comp=Z,2.7nm,1.0s,baz=39,slow=5.7,SNR=4.7
comp=Z,2.7nm,1.0s
AKASG Malin Array Be 74.23 322 P **P 09 14 43.5 -0.3**
comp=Z,1.2nm,0.4s,baz=48,slow=6.1,SNR=15
comp=Z,1.2nm,0.4s
AKBB Malin Array Si 74.23 322⇓ *e*P **P 09 14 43.3 -0.5**
AKBB pmax pmax
comp=Z,4.0nm,0.7s
NVAR Mina Array Bea 74.82 53 P **P 09 14 48.2 +0.5**
comp=Z,1.2nm,0.9s,baz=286,slow=5.8,SNR=7.2
comp=Z,1.2nm,0.9s
PDAR Pinedale Array 77.49 46 P **P 09 15 03.1 +0.3**
comp=Z,0.4nm,0.5s,baz=294,slow=2.8,SNR=7.0
comp=Z,0.4nm,0.5s
BR131 Keskin Array S 78.82 312⇓ *e*P **P 09 15 09.8 -0.4**
BRTR Keskin Array B 78.82 312 *i* P **P 09 15 11.1 +0.9**
GERES GERESS Array B 82.63 328 P **P 09 15 29.9 -0.5**
comp=Z,0.9nm,0.7s,baz=26,slow=6.1,SNR=3.6
comp=Z,0.9nm,0.7s
ANMO Albuquerque 84.42 50⇓ *e*P **P 09 15 41.2 +1.3**
ANMO pmax pmax
comp=Z,9.0nm,3.0s
TXAR Lajitas Array 89.95 52 P **P 09 16 08.2 +1.5**
comp=Z,0.5nm,0.5s,baz=296,slow=3.0,SNR=5.7
comp=Z,0.5nm,0.5s
LPAZ La Paz 146.53 60 PKPbc **PKPbc 09 22 50.0 +0.4**
comp=Z,1.4nm,0.5s,baz=0.0,slow=0.0,SNR=11
LPAZ La Paz 146.53 60 PKP2 **PKPab 09 22 50.8 +0.2**
LPAZ La Paz 146.53 60 PKP2 **PKPab 09 22 50.8 +0.2**
H03N2 Juan Fernandez 146.94 96 T T 12 07 04.9
baz=286
H03N3 Juan Fernandez 146.96 96 T T 12 07 01.6
baz=286,slow=74
H03N1 Juan Fernandez 146.96 96 T T 12 06 60.0
baz=286,slow=74

IDC 21 09:11:05.6±6.1, 2°.43S×150°.42E, h142km±60km, mb3.0/2, mbtmp3.6/3, Error ellipse: s-maj=153.2km s-min=32.2km az=125.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.65**	**205**	P	Pn	09 12 54.6	+0.3
	4.5nm,0.3s,baz=52,slow=12,SNR=2.1						
PMG				S	Sn	09 14 19.9	+0.2
	16nm,0.6s,baz=252,slow=12,SNR=5.2						
WRA	**Warramunga Arr**	**23.45**	**221**	P	P	09 16 03.5	+1.2
	15nm,0.4s,baz=45,slow=10,SNR=82						
ASAR	**Alice Springs**	**26.48**	**216**	P	P	09 16 28.9	-0.9
	0.5nm,0.4s,baz=50,slow=8.5,SNR=18						
	0.5nm,0.4s						
ILAR	**Eielson Array**	**80.89**	**23**	P	P	09 23 03.4	-0.2
	0.2nm,0.7s,baz=256,slow=5.7,SNR=1.6						
	0.2nm,0.7s						

*SJA **21** 09:34:24.2±0.4, 29°.13S×68°.91W, h13km, ML4.3, MW4.3*
*GUC **21** 09:34:25.6±0.9, 29°.13S×68°.95W, h18km±5km, ML4.2*
*NEIC **21** 09:34:28.6±1.8, 29°.17S±0°.04×69°.06W±0°.06, h17km±5km, mb4.2/6, ML4.2(GUC), Error ellipse: s-maj=8.0km s-min=5.5km az=83.0*
*IDC **21** 09:34:32.2±2.4, 29°.12S×68°.36W, h62km±22km, mb3.6/5, mbtmp3.8/7, ML4.0/3, MS3.3/2, Error ellipse: s-maj=30.4km s-min=16.1km az=101.0*

ISC 21 09:34:25.6±1.5, 29°.13S±0°.02×68°.92W±0°.02, h8km±10km, n119, σ1°85/160, mb3.9/5, 6C-7D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VCA	**Vinchina**	**0.74**	**58**⇓	*i*P	**Pb**	**09 34 38.8**	**-2.1**
VCA				*e*S	**Sg**	**09 34 49.8**	**+0.3**
VCA				IAML		09 34 52.5	
	comp=N,24μm,0.6s						
VCA	**Vinchina**	**0.74**	**58**	*e*P	Pb	09 34 33.0	-7.8
VCA				*e*P	**Pb**	**09 34 38.7**	**-2.1**
VCA				*e*S	**Sg**	**09 34 50.7**	**+1.2**
VCA				IAML		09 34 54.1	
	comp=Z,12μm,0.7s						
ACDV	**Cuesta del Vie**	**1.05**	**189**	*e*P	Pb	09 34 38.0	-8.2
ACDV				*e*P	**Pn**	**09 34 43.8**	**-3.2**
AROD	**Rodeo**	**1.14**	**205**	*e*P	**Pn**	**09 34 45.6**	**-2.7**
AC05	**El Transito**	**1.22**	**283**		**Pn**	**09 34 47.6**	**-1.6**
AC05				Sn	**Sb**	**09 35 03.7**	**-1.4**
AC05	**El Transito**	**1.22**	**283**⇑	*i*P	**Pn**	**09 34 47.5**	**-1.7**
AC05				*e*S	**Sb**	**09 35 03.1**	**-2.0**
AC05				IAML		09 35 04.4	
	comp=N,5μm,0.9s						
AC05	**El Transito**	**1.22**	**283**	*e*P	Pn	09 34 42.0	-7.1
AC05				*e*P	**Pn**	**09 34 47.5**	**-1.7**
AC05				*e*S	**Sb**	**09 35 04.9**	**-0.2**
CO01	**Juntas del Tor**	**1.33**	**230**		**Pn**	**09 34 49.5**	**-1.3**
CO01				Sn	**Sn**	**09 35 06.5**	**-2.3**
CO01	**Juntas del Tor**	**1.33**	**230**⇓	*i*P	**Pn**	**09 34 49.3**	**-1.5**
CO01				*e*S	**Sn**	**09 35 06.6**	**-2.3**
CO01	**Juntas del Tor**	**1.33**	**230**	*e*P	**Pn**	**09 34 49.4**	**-1.4**
CO01				*e*S	**Sn**	**09 35 08.4**	**-0.4**
ACCO	**Cerro Coronel**	**1.46**	**185**	*e*P	Pn	09 34 45.0	-7.6
ACCO				*e*P	**Pb**	**09 34 50.6**	**-2.7**
ACCO				*e*S	**Sb**	**09 35 13.8**	**+1.5**
LCO	**Las Campanas**	**1.56**	**274**		**Pn**	**09 34 53.9**	**-0.2**
LCO				Sn	**Sn**	**09 35 13.9**	**-0.7**
LCO	**Las Campanas**	**1.56**	**274**⇓	*i*P	**Pn**	**09 34 53.4**	**-0.6**
LCO				*e*S	**Sn**	**09 35 13.6**	**-1.1**
LCO				IAML		09 35 14.9	
	comp=N,13μm,0.5s						
LCO	**Las Campanas**	**1.56**	**274**	*e*P	**Pn**	**09 34 53.5**	**-0.5**
LCO				*e*S	**Sn**	**09 35 14.6**	**-0.1**
LCO				IAML		09 35 16.2	
	comp=Z,2μm,0.5s						
TINO	**Tinogasta**	**1.59**	**49**	*e*P	**Pn**	**09 34 53.3**	**-1.0**
TINO				*e*S	**Sb**	**09 35 16.1**	**+0.4**
ACLC	**CERRO LA CRUZ**	**1.74**	**100**	*e*P	**Pn**	**09 34 55.7**	**-0.7**
ACLC				*e*S	**Sn**	**09 35 19.1**	**+0.2**
ACLC				IAML		09 35 20.0	
	comp=Z,3μm,0.4s						
AANI	**Anillaco**	**1.77**	**80**	*e*P	**Pn**	**09 34 56.9**	**+0.2**
AANI				*e*S	**Sb**	**09 35 21.2**	**+0.4**
AANI				IAML		09 35 23.4	
	comp=Z,8μm,0.3s						
GO03	**Copiapo**	**1.92**	**322**		**Pn**	**09 34 59.8**	**+1.0**
GO03				Sn	**Sb**	**09 35 25.0**	**-0.1**
GO03	**Copiapo**	**1.92**	**322**⇑	*i*P	**Pn**	**09 34 59.7**	**+1.0**
GO03				*e*S	**Sb**	**09 35 24.9**	**-0.1**
GO03	**Copiapo**	**1.92**	**322**	*e*P	**Pn**	**09 34 59.0**	**+0.3**
GO03				*e*S	**Sb**	**09 35 25.9**	**+0.8**
GO03				IAML		09 35 29.5	
	comp=Z,1μm,1.1s						
GO04	**Tololo Observa**	**1.94**	**237**		**Pn**	**09 35 00.4**	**+1.1**
GO04	**Tololo Observa**	**1.94**	**237**⇓	*i*P	**Pn**	**09 35 00.3**	**+1.1**
GO04				*e*S	**Sn**	**09 35 25.4**	**+1.5**
GO04				IAML		09 35 32.2	
	comp=E,4μm,0.6s						
GO04	**Tololo Observa**	**1.94**	**237**	*e*P	**Pn**	**09 35 00.3**	**+1.1**
GO04				*e*S	**Sb**	**09 35 28.1**	**+2.2**
GO04				IAML		09 35 29.0	
	comp=Z,2μm,0.6s						
AVFE	**Valle Fertil**	**1.99**	**141**	*e*P	**Pn**	**09 34 58.6**	**-1.1**
AVFE				*e*S	**Sb**	**09 35 28.4**	**+1.3**
AVFE				IAML		09 35 29.0	
	comp=Z,3μm,0.7s						
AC04	**Llanos de Chal**	**2.10**	**295**		**Pn**	**09 35 02.9**	**+1.6**
AC04	**Llanos de Chal**	**2.10**	**295**⇑	*i*P	**Pn**	**09 35 02.8**	**+1.6**
AC04				*e*S	**Sb**	**09 35 30.5**	**+0.1**
AC04				IAML		09 35 31.4	
	comp=N,5μm,0.3s						
AC04	**Llanos de Chal**	**2.10**	**295**	*e*P	**Pn**	**09 35 02.1**	**+0.9**
AC04				*e*S	**Sb**	**09 35 30.9**	**+0.5**
AC04				IAML		09 35 32.1	
	comp=Z,2μm,0.7s						
AC06	**Mina Casimiro**	**2.17**	**324**		**Pn**	**09 35 03.7**	**+1.6**
AC06	**Mina Casimiro**	**2.17**	**324**⇑	*i*P	**Pn**	**09 35 04.0**	**+1.9**
CO05	**La Serena**	**2.17**	**248**		**Pn**	**09 35 03.7**	**+1.6**
CO05	**La Serena**	**2.17**	**248**	*e*P	**Pn**	**09 35 03.7**	**+1.6**
CO05				*e*S	**Sn**	**09 35 32.2**	**+3.0**
CO05				IAML		09 35 34.3	
	comp=E,1μm,0.2s						
RTLL	**Cerro Villicun**	**2.23**	**170**	*e*P	**Pn**	**09 35 04.1**	**+1.1**
RTLL				*e*S	**Sb**	**09 35 34.4**	**+0.4**
RTLL				IAML		09 35 39.8	
	comp=Z,1μm,0.4s						
AC02	**Maricunga**	**2.29**	**355**		**Pb**	**09 35 06.9**	**-0.6**
AC02	**Maricunga**	**2.29**	**355**⇑	*i*P	**Pb**	**09 35 06.9**	**-0.6**
AC02	**Maricunga**	**2.29**	**355**	*e*P	**Pn**	**09 35 06.4**	**+2.2**
AC02				*e*S	**Sb**	**09 35 38.0**	**+1.8**
CO03	**El Pedregal**	**2.29**	**222**		**Pn**	**09 35 06.2**	**+2.3**
CO03	**El Pedregal**	**2.29**	**222**⇓	*i*P	**Pn**	**09 35 06.3**	**+2.4**
CO03				IAML		09 35 44.3	
	comp=E,2μm,0.6s						
CO03	**El Pedregal**	**2.29**	**222**	*e*P	**Pn**	**09 35 05.7**	**+1.8**
CO03				*e*S	**Sb**	**09 35 36.6**	**+0.7**
CO03				IAML		09 35 41.0	

comp=Z,961nm,1.3s
SJA San Juan 2.41 173 *e*P **Pn** **09 35 07.3 +1.8**
SJA IAML 09 36 04.0
comp=Z,902nm,1.1s
ZON Zonda 2.42 175 **Pn** **09 35 06.9 +1.3**
ZON Zonda 2.42 175 *e*P **Pn** **09 35 07.0 +1.3**
ZON *e*S **Sb** **09 35 41.9 +2.4**
ZON IAML 09 35 45.8
comp=E,856nm,0.5s
CFA Coronel Fontan 2.54 167 P **Pn** **09 35 08.6 +1.4**
comp=Z,142nm,0.3s,baz=353,slow=16,SNR=2223
CFA S **Sn** **09 35 40.5 +2.1**
comp=Z,740nm,0.5s,baz=256,slow=18,SNR=23
CFA Coronel Fontan 2.54 167 *e*P **Pn** **09 35 08.9 +1.6**
CFA *e*S **Sn** **09 35 38.0 -0.4**
CFA IAML 09 35 44.5
comp=Z,1μm,0.7s
RTLS Leoncito 2.68 187 *e*P **Pn** **09 35 11.8 +2.4**
RTLS *e*S **Sn** **09 35 45.0 +2.7**
RTLS IAML 09 35 52.2
comp=Z,3μm,1.4s
CO02 Combarbal 2.74 221 **Pn** **09 35 13.1 +2.9**
CO02 Combarbal 2.74 221 ⇓*i*P **Pn** **09 35 12.4 +2.2**
CO02 Combarbal 2.74 221 *e*P **Pn** **09 35 12.0 +1.8**
CO02 *e*S **Sn** **09 35 47.0 +3.5**
CO02 IAML 09 35 58.9
comp=Z,1μm,0.9s
ACHE Chepes 2.81 137 *e*P **Pn** **09 35 12.5 +1.4**
CO06 Fray Jorge 2.82 236 Pn **Pn** **09 35 13.4 +2.3**
CO06 Fray Jorge 2.82 236 *e*P **Pn** **09 35 13.0 +2.0**
CO06 IAML 09 35 53.1
comp=E,974nm,0.2s
AC01 Pan de Azucar 3.32 333 **Pn** **09 35 20.1 +2.1**
AC01 Pan de Azucar 3.32 333 *e*P **Pn** **09 35 19.5 +1.6**
AC01 Pan de Azucar 3.32 333 *e*P **Pn** **09 35 19.1 +1.2**
AC01 *e*S **Sb** **09 36 03.0 -2.4**
AC01 IAML 09 36 13.1
comp=Z,676nm,0.6s
CO04 Los Peladeros 3.40 211 **Pn** **09 35 21.0 +1.6**
CO04 Los Peladeros 3.40 211 *e*P **Pn** **09 35 21.8 +2.5**
ACAN Cantantal 3.47 155 *e*P **Pn** **09 35 20.6 +0.5**
ACAN IAML 09 36 22.0
comp=Z,3μm,0.7s
ARCO CERRO ARCO 3.70 180 *e*P **Pn** **09 35 25.8 +2.4**
ARCO *e*S **Sb** **09 36 13.1 -3.5**
ARCO IAML 09 36 28.6
comp=Z,513nm,0.5s
VA03 San Esteban 3.89 201 *e*P **Pn** **09 35 28.6 +2.8**
VA03 San Esteban 3.89 201 *e*P **Pn** **09 35 28.1 +2.3**
VA03 *e*S **Sb** **09 36 21.1 -0.8**
VA03 IAML 09 36 30.6
comp=Z,738nm,0.7s
AHML Horco Molle 3.94 55 *e*P Pn 09 35 13.8 -13
AAGR Agrelo 3.95 179 *e*P **Pn** **09 35 29.3 +2.6**
AAGR *e*S **Sg** **09 36 31.6 -0.9**
AAGR IAML 09 36 38.6
comp=Z,681nm,1.3s
VA06 Catapilco 3.99 210 **Pn** **09 35 28.6 +1.5**
VA06 Catapilco 3.99 210 ⇓*e*P **Pn** **09 35 28.3 +1.2**
ROCH El Roble 4.23 205 *e*P **Pn** **09 35 31.9 +1.3**
ROCH *e*P Pb 09 35 32.0 -8.5
PEL Peldehue 4.28 200 **Pn** **09 35 33.6 +2.5**
TCA Tanti 4.34 122 ⇑*e*P **Pn** **09 35 31.3 -0.8**
TCA Tanti 4.34 122 *e*P **Pn** **09 35 31.8 -0.3**
TCA *e*S **Sb** **09 36 37.5 +2.6**
TCA IAML 09 36 48.7
comp=Z,520nm,0.6s
MT08 Bocatoma Ro 4.41 192 **Pn** **09 35 35.0 +1.9**
MT08 Bocatoma Ro 4.41 192 *e*P **Pn** **09 35 36.4 +3.3**
MT08 *e*S **Sn** **09 36 29.1 +4.3**
MT08 IAML 09 36 45.9
comp=Z,400nm,0.7s
MT05 Renca 4.53 200 **Pn** **09 35 36.7 +2.1**
MT05 Renca 4.53 200 *e*P **Pn** **09 35 37.1 +2.5**
MT05 *e*S **Sg** **09 36 50.0 -1.1**
MT05 IAML 09 37 01.8
comp=Z,494nm,1.4s
MT02 Curacav 4.54 204 **Pn** **09 35 36.0 +1.4**
MT02 Curacav 4.54 204 *e*P **Pn** **09 35 36.0 +1.4**
MT02 *e*S **Sb** **09 36 45.8 +5.4**
MT02 IAML 09 36 53.0
comp=Z,366nm,0.8s
MT03 Universidad Ad 4.56 197 *e*P **Pn** **09 35 37.5 +2.4**
MT03 *e*S **Sn** **09 36 31.6 +3.2**
MT03 IAML 09 36 55.4
comp=Z,506nm,1.6s
PB14 IPOC Station P 4.67 343 **Pn** **09 35 39.0 +2.2**
MT13 San Alfonso 4.75 194 **Pn** **09 35 39.4 +1.7**
MT13 San Alfonso 4.75 194 *e*P **Pn** **09 35 40.8 +3.1**
MT13 *e*S **Sb** **09 36 41.5 -5.1**
MT13 IAML 09 37 14.8
comp=Z,230nm,1.1s
MT09 Talagante 4.96 200 **Pn** **09 35 41.7 +1.0**
BO04 La Punta 5.06 196 **Pn** **09 35 43.8 +1.9**
MT01 Popeta 5.12 202 **Pn** **09 35 43.7 +0.9**
MT01 Popeta 5.12 202 *e*P **Pn** **09 35 44.0 +1.2**
MT01 *e*S **Sn** **09 36 47.0 +4.9**
MT01 IAML 09 37 12.8
comp=Z,181nm,0.6s
BO01 Tunca 5.56 199 **Pn** **09 35 49.3 +0.5**
BO02 Sierra Bellavi 5.87 195 **Pn** **09 35 53.4 +0.4**
GO05 Hualane 6.40 203 **Pn** **09 35 59.5 -0.7**
BI02 San Fabin de 7.77 194 **Pn** **09 36 19.8 +0.6**
PB01 IPOC Station P 8.06 356 **Pn** **09 36 23.9 +0.7**
PATCX Punta Patache 8.35 352 Pn **Pn** **09 36 29.5 +2.4**
TRQA Tornquist 10.62 149 **Pn** **09 36 56.9 -1.2**
CPUP Villa Florida 10.64 78 P Pn 09 36 53.6 -4.8
comp=Z,0.2nm,0.3s,baz=258,slow=11,SNR=6.5
CPUP Lg Lg 09 39 43.9
comp=Z,1.0nm,0.3s,baz=340,slow=14,SNR=3.0
CPUP LR LR 09 41 46.3
comp=Z,79nm,18.1s,baz=256,slow=43
comp=Z,1.5nm,0.6s
CPUP Villa Florida 10.64 78 Pn **Pn** **09 36 56.4 -2.1**
PB16 IPOC Station P 10.76 357 Pn **Pn** **09 37 02.0 +1.4**
PLCA Paso Flores 11.66 186 P **Pn** **09 37 11.3 -1.1**
comp=Z,1.4nm,0.8s,baz=7.5,slow=12,SNR=5.5
PLCA Lg Lg 09 40 36.1
comp=Z,0.2nm,0.3s,baz=3.4,slow=19,SNR=3.8
PLCA LR LR 09 42 07.6
comp=Z,282nm,21.7s,baz=4.5,slow=39
PLCA Paso Flores 11.66 186 Pn **Pn** **09 37 12.1 -0.3**
LPAZ La Paz 12.80 3 P **Pn** **09 37 27.6 -1.0**
comp=Z,0.6nm,0.5s,baz=174,slow=7.1,SNR=4.0
LPAZ La Paz 12.80 3 Pn **Pn** **09 37 28.1 -0.5**
AQDB Aquidauana 14.76 57 **Pn** **09 37 57.5 +2.6**
ITAB Concordia 14.93 87 Pn **Pn** **09 37 59.4 +2.3**
ITAB IAmb IAmb 09 38 30.2
comp=Z,15nm,1.1s
SIV San Ignacio 14.94 31 P **Pn** **09 37 57.1 -0.2**
baz=214,slow=12,SNR=10
comp=Z,0.8nm,0.9s
PTLB Pontes e Lacer 16.33 36 Pn **P** **09 38 18.7 +0.3**
NNA Nana 18.58 335 P **Pn** **09 38 44.7 +1.2**
NNA IAmb IAmb 09 39 11.1
comp=Z,18nm,1.3s
GO08 Villa O'Higgin 19.51 187 P **P** **09 38 54.6 +1.4**
GO08 IAmb IAmb 09 39 12.3
comp=Z,15nm,1.2s
CZSB Cruzeiro do Su 21.58 350 P **P** **09 39 16.0 0.0**
CZSB IAmb IAmb 09 39 22.2
comp=Z,12nm,0.8s
QSPA South Pole Qui 61.10 180 P **P** **09 44 38.9 -1.2**
comp=Z,3.9nm,0.8s,baz=135,slow=2.9,SNR=11
comp=Z,3.9nm,0.8s
QSPA South Pole Qui 61.10 180 P **P** **09 44 39.4 -0.7**
TXAR Lajitas Array 66.94 327 P **P** **09 45 20.2 +1.4**
comp=Z,0.6nm,0.8s,baz=133,slow=5.6,SNR=5.7
comp=Z,0.6nm,0.8s
TORD Torodi Ar. Bea 80.01 69 P **P** **09 46 33.6 -2.5**
comp=Z,1.0nm,0.6s,baz=250,slow=5.7,SNR=7.1
comp=Z,1.0nm,0.6s
PDAR Pinedale Array 80.72 331 P **P** **09 46 39.7 +0.1**
comp=Z,0.3nm,0.7s,baz=112,slow=2.5,SNR=7.4
comp=Z,0.3nm,0.7s
PDAR Pinedale Array 80.72 331 P **P** **09 46 39.1 -0.4**
NVAR Mina Array Bea 81.51 323 P **P** **09 46 45.3 +1.4**
comp=Z,0.7nm,0.8s,baz=163,slow=3.0,SNR=5.8
comp=Z,0.7nm,0.8s
ASAR Alice Springs 123.10 205 PKP **PKPdf** **09 53 21.8 -1.8**
comp=Z,0.2nm,0.8s,baz=194,slow=2.7,SNR=1.7
WRA Warramunga Arr 126.30 207 PKP **PKPdf** **09 53 28.3 -1.4**
comp=Z,0.2nm,0.4s,baz=161,slow=1.8,SNR=8.6
KURBB Kurchatov Arra 147.47 40 PKPbc **PKPdf** **09 54 08.0 +0.6**
comp=Z,0.9nm,0.6s,baz=304,slow=3.3,SNR=5.2
ZAA0 Zalesovo Array 148.69 30 PKPdf **PKPdf** **09 54 08.5 -0.8**
ZALV Zalesovo Beam 148.69 30 PKPbc **PKPdf** **09 54 10.1 +0.8**
comp=Z,0.8nm,0.4s,baz=300,slow=2.9,SNR=4.7
ZALV Zalesovo Beam 148.69 30 **PKPdf** **09 54 08.9 -0.4**
MKAR Makanchi Array 151.48 44 PKPbc **PKPbc** **09 54 17.8 -2.3**
comp=Z,0.9nm,0.7s,baz=287,slow=1.6,SNR=6.1
MKAR Makanchi Array 151.48 44 **PKPbc** **09 54 19.9 -0.3**
HHC Hu-ho-hao-te 168.30 358 *e*P **PKPdf** **09 54 30.3 -2.8**
PZH PanZhiHua 171.33 105 PKP **PKPdf** **09 54 35.8 +0.5**

*TAP **21** 10:01:57.7,24˚.41N×122˚.93E,h73km,ML2.9,D*
*JMA **21** 10:01:58.6±0.1,24˚.N±3˚×122˚.9E±0˚.6,h66km±1km,*
MV1.8/12,NW OFF ISHIGAKIJIMA IS
ISC 21 10:01:59.1±1.3,24˚.39N±0˚.05×122˚.91E±0˚.03,h67km±8km,
n45,σ0s56/82,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.07**	**24**	P		P	**Pn**	**10 02 08.4**	**-0.5**
JYNG						*e*S	**Sn**	**10 02 15.6**	**-0.3**
YOJ	**Yonaguni jima**	**0.12**	**49**	*i* P		P	**Pn**	**10 02 08.5**	**-0.4**
YOJ				*i* S		S	**Sn**	**10 02 16.4**	**+0.2**
YOJ	**Yonaguni jima**	**0.12**	**49**	*e*S		S	**Sn**	**10 02 15.5**	**-0.6**
EOS3	**EOS3**	**0.55**	**260**	*i* P		P	**Pn**	**10 02 12.1**	**+0.1**
EOS3				*i* S		S	**Sn**	**10 02 22.4**	**+1.0**
EOS4	**EOS4**	**0.60**	**244**	*i* P		P	**Pn**	**10 02 12.6**	**+0.3**
EOS4				*i* S		S	**Sn**	**10 02 23.6**	**+1.5**
EOS2	**EOS2**	**0.62**	**273**	*i* P		P	**Pn**	**10 02 12.7**	**-0.1**
EOS2				*i* S		S	**Sn**	**10 02 23.6**	**+0.8**
IRIF	**Iriomote-Funau**	**0.75**	**94**	*e*P		P	**Pn**	**10 02 14.1**	**-0.2**
IRIF				*e*S		S	**Sn**	**10 02 25.6**	**+0.1**
HATJ	**Hateruma jima**	**0.88**	**112**	*e*S		S	**Sn**	**10 02 29.2**	**+0.9**
TWC	**Suao**	**0.99**	**283**	P		P	**Pn**	**10 02 16.9**	**-0.4**
TWC				*e*S		S	**Sn**	**10 02 30.9**	**-0.1**
JKRS	**Kuro-shima**	**1.01**	**98**	*e*P		P	**Pn**	**10 02 18.0**	**+0.4**
JKRS				*e*S		S	**Sn**	**10 02 32.3**	**+1.0**
NDS	**Dongshan**	**1.12**	**283**	*e*P		P	**Pn**	**10 02 19.5**	**+0.5**
NDS				*e*S		S	**Sn**	**10 02 33.6**	**-0.1**
JIJ	**Ishigaki jima**	**1.12**	**91**	*e*P		P	**Pn**	**10 02 18.7**	**-0.3**
JIJ				*e*S		S	**Sn**	**10 02 33.4**	**-0.4**
TIPB	**Shuangxi**	**1.15**	**301**	*e*P		P	**Pn**	**10 02 18.9**	**-0.5**
TIPB				*e*S		S	**Sn**	**10 02 33.7**	**-0.8**
NACB	**Ninganchiao**	**1.22**	**260**	P		P	**Pn**	**10 02 19.8**	**-0.6**
NACB				*e*S		S	**Sn**	**10 02 35.7**	**-0.4**
NWF	**Wu-fen Shan**	**1.24**	**304**	*e*P		P	**Pn**	**10 02 20.1**	**-0.4**
WFSB	**Wu-fen Shan**	**1.24**	**304**	*e*P		P	**Pn**	**10 02 20.2**	**-0.3**
ENTT	**Nioudou**	**1.25**	**282**	*e*P		P	**Pn**	**10 02 21.0**	**+0.3**
ENTT				*e*S		S	**Sn**	**10 02 37.5**	**+0.6**
FUSB	**Fushanzhiwuyua**	**1.26**	**287**	*e*P		P	**Pn**	**10 02 21.0**	**+0.1**
FUSB				*e*S		S	**Sn**	**10 02 37.7**	**+0.5**
LATG	**Datong**	**1.27**	**277**	*e*P		P	**Pn**	**10 02 21.3**	**+0.2**
JISG	**Ishigakijimahi**	**1.29**	**81**	*e*P		P	**Pn**	**10 02 20.8**	**-0.3**
JISG				*e*S		S	**Sn**	**10 02 37.5**	**-0.2**
ETLH	**Xiulin Townshi**	**1.32**	**263**	*e*P		P	**Pn**	**10 02 21.6**	**-0.1**
ETLH				*e*S		S	**Sn**	**10 02 38.4**	**-0.1**
NWLT	**Wulai**	**1.34**	**287**	*e*P		P	**Pn**	**10 02 22.1**	**+0.1**
NWLT				*e*S		S	**Sn**	**10 02 38.9**	**-0.2**
SHUL	**Shoufeng**	**1.37**	**245**	*e*P		P	**Pn**	**10 02 21.9**	**-0.3**
SHUL				*e*S		S	**Sn**	**10 02 39.3**	**-0.3**
NNSB	**Datong**	**1.40**	**272**	*e*P		P	**Pn**	**10 02 22.5**	**-0.2**
LXIB	**Xiulin Townshi**	**1.42**	**255**	*e*P		P	**Pn**	**10 02 22.5**	**-0.5**
LXIB				*e*S		S	**Sn**	**10 02 40.4**	**-0.6**
YHNB	**Yeheng**	**1.43**	**282**	*e*P		P	**Pn**	**10 02 23.3**	**+0.2**
YHNB				*e*S		S	**Sn**	**10 02 41.9**	**+0.7**
NSK	**Sanguang**	**1.45**	**282**	*e*P		P	**Pn**	**10 02 23.6**	**+0.3**
ESL	**Shilin**	**1.47**	**247**	*e*P		P	**Pn**	**10 02 22.6**	**-0.9**
FUSS	**Fushou**	**1.53**	**265**	*e*P		P	**Pn**	**10 02 24.4**	**-0.2**
FUSS				*e*S		S	**Sn**	**10 02 43.5**	**-0.3**
WARBT	**Fenglin Townsh**	**1.55**	**245**	*e*P		P	**Pn**	**10 02 24.1**	**-0.6**
WARBT				*e*S		S	**Sn**	**10 02 43.2**	**-0.7**
HGSD	**Ruisui**	**1.63**	**237**	*e*P		P	**Pn**	**10 02 24.8**	**-0.9**
HGSD				*e*S		S	**Sn**	**10 02 44.6**	**-1.1**
OWD	**Renai**	**1.64**	**255**	P		P	**Pn**	**10 02 25.7**	**-0.4**
OWD				*e*S		S	**Sn**	**10 02 46.5**	**+0.1**
WUSB	**Renai**	**1.69**	**257**	*e*P		P	**Pn**	**10 02 26.4**	**-0.2**
WUSB				*e*S		S	**Sn**	**10 02 46.9**	**-0.5**
EHY	**Hungye**	**1.70**	**239**	*e*P		P	**Pn**	**10 02 26.4**	**-0.3**
EHY				*e*S		S	**Sn**	**10 02 47.2**	**-0.3**
VWDT	**VWDT**	**1.74**	**249**	*e*P		P	**Pn**	**10 02 27.1**	**-0.1**
VWDT				*e*S		S	**Sn**	**10 02 48.4**	**0.0**
YULB	**Yu-li**	**1.78**	**237**	*i* P		P	**Pn**	**10 02 27.1**	**-0.6**
YULB				*e*S		S	**Sn**	**10 02 48.5**	**-1.0**
WHP	**Taichung City**	**1.80**	**267**	*e*P		P	**Pn**	**10 02 28.6**	**+0.6**
WHP				*e*S		S	**Sn**	**10 02 50.7**	**+0.7**
TWF1	**Yuli**	**1.80**	**236**	*e*P		P	**Pn**	**10 02 27.8**	**-0.3**
TWF1				*e*S		S	**Sn**	**10 02 48.9**	**-1.1**
YUS	**Yu-Shan**	**2.00**	**244**	*e*P		P	**Pn**	**10 02 31.5**	**+0.3**
YUS				*e*S		S	**Sn**	**10 02 54.3**	**-1.3**
ALS	**Alishan**	**2.12**	**246**	*e*P		P	**Pn**	**10 02 33.2**	**+0.6**
ALS				*e*S		S	**Sn**	**10 02 58.0**	**0.0**
CHN5	**Tsauling**	**2.19**	**249**	*e*P		P	**Pn**	**10 02 34.4**	**+1.0**
CHN5				*e*S		S	**Sn**	**10 03 00.1**	**+0.6**
STYH	**Taoyuan**	**2.30**	**239**	*e*P		P	**Pn**	**10 02 35.6**	**+0.8**
STYH				*e*S		S	**Sn**	**10 03 02.4**	**+0.4**
TPUB	**Ta-pu**	**2.35**	**243**	*e*P		P	**Pn**	**10 02 35.7**	**+0.1**
TPUB				*e*S		S	**Sn**	**10 03 03.6**	**+0.2**
CHN4	**Tsaushan**	**2.36**	**245**	*e*P		P	**Pn**	**10 02 35.9**	**+0.3**
CHN4				*e*S		S	**Sn**	**10 03 04.1**	**+0.5**
WTP	**Ta-pu**	**2.39**	**242**	*e*P		P	**Pn**	**10 02 36.0**	**0.0**
WTP				*e*S		S	**Sn**	**10 03 05.0**	**+0.6**

*IDC **21** 10:03:27.2±1.2,13˚.43N×120˚.26E,h0km,mb3.6/4,*
mbtmp3.7/4,MS2.8/1,Error ellipse: s-maj=23.4km
s-min=11.2km az=128.0
*MAN **21** 10:03:27.0,13˚.56N×120˚.18E,h8km,MS3.3*
ISC 21 10:03:28.8±1.0,13˚.51N±0˚.08×120˚.27E±0˚.10,h10km,n9,
σ1s11/9,mb3.6/4,Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.88**	**48**	Pg		Pg	**Pg**	**10 03 45.2**	**-0.5**
	143nm,0.3s,baz=219,slow=4.9,SNR=8.8								
TGY				Lg		Lg	Lg	10 03 58.7	
	519nm,0.3s,baz=323,slow=20,SNR=9.8								
TGY	**Tagaytay City**	**0.88**	**48**	*e*P		P	**Pg**	**10 03 45.2**	**-0.5**
TGY				*e*S		S	**Sn**	**10 04 01.6**	**+1.4**
RCP	**Roxas**	**3.10**	**128**	*e*P		P	**Pb**	**10 04 23.4**	**-0.6**
JAP	**San Jose, Anti**	**3.20**	**149**	*e*P		P	**Pn**	**10 04 20.6**	**+1.5**
DAV	**Davao City (W)**	**8.26**	**140**	LR		LR		10 08 53.9	
	comp=Z,68nm,19.6s,baz=168,slow=40								
CMAR	**Chiang Mai Arr**	**21.08**	**286**	P		P	**P**	**10 08 14.3**	**+0.8**
	0.6nm,0.3s,baz=93,slow=12,SNR=6.9								
	0.6nm,0.3s								
WRA	**Warramunga Arr**	**36.01**	**157**	P		P	**P**	**10 10 29.3**	**-1.1**
	1.8nm,0.7s,baz=338,slow=9.3,SNR=31								
	1.8nm,0.7s								
ASAR	**Alice Springs**	**39.28**	**160**	P		P	**P**	**10 10 57.6**	**-0.4**
	1.1nm,0.6s,baz=338,slow=6.8,SNR=27								
	1.1nm,0.6s								
MKAR	**Makanchi Array**	**45.94**	**324**	P		P	**P**	**10 11 51.4**	**-0.5**
	0.3nm,0.6s,baz=133,slow=8.5,SNR=2.6								
	0.3nm,0.6s								

*OSPL **21** 10:05:58.6±0.3,17˚.82N×66˚.79W,h2km±999km,ML3.4,*
Presumed earthquake
*NEIC **21** 10:05:58.7±0.8,17˚.91N±0˚.03×66˚.789W±0˚.006,*
h10km±1km,ML3.0/35,Md3.2/15(RSPR),Error ellipse:
s-maj=5.5km s-min=2.4km az=7.0
*SDD **21** 10:05:58.8±1.3,17˚.91N×66˚.79W,h18km±9km,MD3.0,*
ML2.7,MW3.0,Presumed earthquake
ISC 21 10:05:58.8±0.9,17˚.93N±0˚.05×66˚.79W±0˚.02,h16km±4km,
n39,σ1s02/64,19C-9D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.10**	**298**				**Pb**	**10 06 01.6**	**-0.5**
GBPR							**Sb**	**10 06 03.5**	**-0.8**
OBIP	**Obispado Ponce**	**0.21**	**57**				**Pb**	**10 06 03.2**	**-1.0**
OBIP							**Sb**	**10 06 07.2**	**-0.7**
OBIP	**Obispado Ponce**	**0.21**	**57**	*i* P			**Pb**	**10 06 03.5**	**-0.8**
OBIP				*e*S			**Sb**	**10 06 07.4**	**-0.5**
OBIP				IAML				10 06 08.1	
	comp=Z,6μm,0.2s								
MLPR	**Magueyes Islan**	**0.24**	**279**				**Pg**	**10 06 03.8**	**-0.4**
MLPR				IAML				10 06 09.3	
	comp=Z,2μm,0.2s								
MLPR				IAML				10 06 10.1	
	comp=Z,1μm,0.5s								
MLPR	**Magueyes Islan**	**0.24**	**279**	⇑*e*Pg			**Pg**	**10 06 03.9**	**-0.3**
MLPR				⇓*e*Sg			**Sg**	**10 06 08.1**	**+0.2**
MLPR				IAML				10 06 10.0	
	comp=N,467nm,0.2s								
MLPR	**Magueyes Islan**	**0.24**	**279**	*e*Pg			**Pg**	**10 06 03.9**	**-0.3**
MLPR				⇑*e*Sg			**Sg**	**10 06 08.3**	**+0.4**
MLPR				IAML				10 06 10.0	
	comp=N,467nm,0.2s								
CELP	**Cerrillos**	**0.25**	**54**				**Pg**	**10 06 04.2**	**-0.1**
CELP	**Cerrillos**	**0.25**	**54**	⇑*e*Pg			**Pg**	**10 06 04.4**	**+0.1**
CELP				*e*Sg			**Sg**	**10 06 07.5**	**-0.5**
CELP				IAML				10 06 09.8	
	comp=N,392nm,0.2s								
CELP	**Cerrillos**	**0.25**	**54**	*e*Pg			**Pg**	**10 06 04.7**	**+0.5**
CELP				⇓*e*Sg			**Sb**	**10 06 08.8**	**-0.2**
CELP				IAML				10 06 09.8	
	comp=N,392nm,0.2s								
CRPR	**Cabo Rojo, PR**	**0.31**	**284**				**Pg**	**10 06 04.8**	**-0.5**
CRPR				IAML				10 06 12.5	
	comp=N,1μm,0.2s								
CRPR	**Cabo Rojo, PR**	**0.31**	**284**	*i* P			**Pg**	**10 06 05.0**	**-0.4**
CRPR				*e*S			**Sg**	**10 06 09.7**	**-0.1**
CRPR				IAML				10 06 11.8	
	comp=Z,626nm,0.2s								
UUPR	**Utuado, UPR, P**	**0.33**	**12**				**Pg**	**10 06 05.4**	**-0.2**
LSP	**Las Mesas**	**0.37**	**311**				**Pg**	**10 06 06.3**	**-0.1**
LSP							**Sg**	**10 06 12.2**	**+0.5**
AOPR	**Arecibo Observ**	**0.42**	**5**				**Pg**	**10 06 07.0**	**-0.2**
AOPR				IAML				10 06 14.1	
	comp=Z,2μm,0.2s								
AOPR	**Arecibo Observ**	**0.42**	**5**	⇓*e*Pg			**Pg**	**10 06 07.2**	**-0.1**
AOPR				⇑*e*Sg			**Sg**	**10 06 12.5**	**-0.5**
AOPR				IAML				10 06 14.0	
	comp=N,2μm,0.2s								
AOPR	**Arecibo Observ**	**0.42**	**5**	⇑*e*Pg			**Pg**	**10 06 07.0**	**-0.2**
AOPR				⇑*e*Sg			**Sg**	**10 06 12.5**	**-0.5**
AOPR				IAML				10 06 14.0	
	comp=N,2μm,0.2s								
PRSN	**Puerto Rico Se**	**0.44**	**310**	Pg			**Pg**	**10 06 07.3**	**-0.4**
PRSN	**Puerto Rico Se**	**0.44**	**310**	*e*Pg			**Pg**	**10 06 07.4**	**-0.2**
PRSN				⇑*e*Sg			**Sg**	**10 06 14.1**	**+0.4**
PRSN				IAML				10 06 16.2	
	comp=N,2μm,0.3s								
PRSN	**Puerto Rico Se**	**0.44**	**310**	⇑*e*Pg			**Pg**	**10 06 07.4**	**-0.2**
PRSN				⇑*e*Sg			**Sg**	**10 06 14.2**	**+0.4**
PRSN				IAML				10 06 16.2	
	comp=N,2μm,0.3s								
ECPR	**Experimental S**	**0.56**	**46**				**Pg**	**10 06 09.5**	**-0.4**
ECPR				IAML				10 06 18.7	
	comp=N,1μm,0.2s								
ECPR				IAML				10 06 19.4	
	comp=N,1μm,0.2s								
EMPR	**Esperanza - Ma**	**0.60**	**24**				**Pb**	**10 06 09.9**	**-0.9**
EMPR							**Sb**	**10 06 19.3**	**+0.2**
AGPR	**Aguadilla, PR**	**0.62**	**330**	Pg			**Pb**	**10 06 10.4**	**-0.8**
AGPR				IAML				10 06 23.9	
	comp=N,510nm,0.5s								
AGPR				IAML				10 06 24.0	
	comp=N,690nm,0.3s								
AGPR	**Aguadilla, PR**	**0.62**	**330**	⇑*e*Pg			**Pb**	**10 06 10.5**	**-0.8**
AGPR				⇓*e*Sg			**Sb**	**10 06 18.9**	**-0.8**
AGPR				IAML				10 06 21.2	
	comp=N,347nm,1.0s								
AGPR	**Aguadilla, PR**	**0.62**	**330**	*e*Pg			**Pb**	**10 06 10.7**	**-0.5**
AGPR				⇓*e*Sg			**Sb**	**10 06 18.8**	**-0.8**
AGPR				IAML				10 06 21.2	
	comp=N,347nm,1.0s								
SJG	**San Juan**	**0.64**	**73**	Pg			**Pb**	**10 06 10.6**	**-0.9**
SJG	**San Juan**	**0.64**	**73**	Sg			**Sb**	**10 06 19.4**	**-0.8**
SJG	**San Juan**	**0.64**	**73**	⇑*e*Pg			**Pb**	**10 06 10.8**	**-0.7**
SJG				⇓*e*Sg			**Sb**	**10 06 18.9**	**-1.3**
SJG	**San Juan**	**0.64**	**73**	⇑*e*Pg			**Pb**	**10 06 10.9**	**-0.7**
SJG				⇓*e*Sg			**Sb**	**10 06 19.0**	**-1.3**
SJG	**San Juan**	**0.64**	**73**	*i* P			**Pb**	**10 06 10.7**	**-0.7**
SJG				*e*S			**Sb**	**10 06 19.5**	**-0.6**
SJG				IAML				10 06 19.9	
	comp=Z,6μm,0.2s								
PDPR	**Patillas Dam,**	**0.74**	**83**				**Pb**	**10 06 12.5**	**-0.8**
IDE	**Isla Desecheo**	**0.79**	**305**				**Pb**	**10 06 13.7**	**-0.5**
IDE							**Sb**	**10 06 24.7**	**0.0**
HUMP	**Col San Antoni**	**0.92**	**77**				**Pb**	**10 06 15.5**	**-0.9**
HUMP				IAML				10 06 32.4	
	comp=Z,336nm,0.2s								
HUMP				IAML				10 06 33.4	
	comp=Z,246nm,0.2s								
CUPR	**Culebra, Puert**	**1.48**	**75**	Pn			**Pb**	**10 06 25.6**	**-0.4**
HIDR	**Higuey Centro**	**1.95**	**290**	*e*Pg			**Pn**	**10 06 32.4**	**+1.2**
HIDR				⇓*e*Sg			**Sb**	**10 06 57.9**	**0.0**
HIDR				IAML				10 07 01.4	
	comp=N,71nm,0.3s								
HIDR	**Higuey Centro**	**1.95**	**290**	⇑*e*Pg			**Pn**	**10 06 32.4**	**+1.2**
HIDR				⇑*e*Sg			**Sn**	**10 06 55.6**	**+0.2**
HIDR				IAML				10 07 01.4	
	comp=N,71nm,0.3s								
DR12	**Loma Pena Alta**	**2.60**	**290**	Pn			**Pn**	**10 06 41.5**	**+1.2**
HATOM	**Hato Mayor del**	**2.60**	**290**	⇑*e*Pg			**Pn**	**10 06 42.6**	**+2.3**
HATOM				⇑*e*Sg			**Sb**	**10 07 15.6**	**-1.4**
HATOM				IAML				10 07 22.7	
	comp=N,24nm,0.4s								
HATOM	**Hato Mayor del**	**2.60**	**290**	⇑

0.3nm,0.3s,baz=130,slow=8.0,SNR=4.7
0.3nm,0.3s

IDC 21 10:43:14.6±12.0, 8.42S×119.38E, h192km±148km, mb2.6/2, mbtmp3.2/4, Error ellipse: s-maj=224.8km s-min=47.3km az=44.0, Flores region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
FITZ	**Fitzroy Crossi**	**11.39**	**148**	P		Pn	10 45 52.0	0.0
	2.1nm,1.0s,baz=329,slow=12,SNR=1.9							
FITZ				S		Sn	10 47 59.3	+0.5
	1.0nm,0.7s,baz=342,slow=20,SNR=1.9							
WRA	**Warramunga Arr**	**18.47**	**130**	P		P	10 47 15.6	-0.6
	0.3nm,0.8s,baz=300,slow=12,SNR=2.3							
ASAR	**Alice Springs**	**20.58**	**139**	P		P	10 47 39.2	+0.4
	0.3nm,0.6s,baz=315,slow=9.7,SNR=4.5							
	0.3nm,0.6s							
MKAR	**Makanchi Array**	**64.11**	**333**	P		P	10 53 28.3	0.0
	0.3nm,0.7s,baz=143,slow=3.5,SNR=2.4							
	0.3nm,0.7s							

*IDC **21** 10:50:59.4±4.3, 76.71N×11.34E, h0km, mb3.4/1, mbtmp3.7/3, ML2.8/2, MS3.8/1, Error ellipse: s-maj=75.9km s-min=12.8km az=87.0*
*KOLA **21** 10:51:07.9, 77.04N×18.26E, h0km, ML3.4, Error ellipse: s-maj=16.0km s-min=6.7km az=120.0, Storfjorden zone*
*NAO **21** 10:51:08.9±0.1, 77.07N×18.52E, h10km, ML3.6*
*FCIAR **21** 10:51:10.0, 77.12N×19.16E, h10km, station ZFI2 has station magnitude of 3.60*
*BER **21** 10:51:11.3±4.1, 77.03N×18.64E, h15km, ML2.8, ML3.6(NAO), Confirmed Earthquake*

ISC 21 10:51:08.6±1.3, 77.04N±0.03×18.47E±0.04, h12km±10km, n55, σ1.8s92/74, 3D, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
HSPB	**Hornsund (broa**	**0.66**	**268**	Pb		**Pg**	**10 51 21.0**	**-0.4**
HSPB	**Hornsund (broa**	**0.66**	**268**	↓*i*P		**Pg**	**10 51 20.9**	**-0.5**
HSPB				*e*S		**Sg**	**10 51 29.4**	**-0.7**
HSPB				IAML			10 51 33.9	
	comp=Z,303nm,0.2s							
HSPB	**Hornsund (broa**	**0.66**	**268**	↓*i*P		**Pg**	**10 51 20.9**	**-0.5**
HSPB				*i* S		**Sg**	**10 51 28.8**	**-1.4**
HSPB	**Hornsund (broa**	**0.66**	**268**	P		**Pg**	**10 51 20.5**	**-0.9**
HSPB				S		**Sg**	**10 51 29.4**	**-0.7**
SPA0	**Spitsbergen Ar**	**1.23**	**339**	Pn		**Pn**	**10 51 31.8**	**+0.1**
	baz=147,slow=18							
SPA0				Sn		**Sb**	**10 51 48.4**	**+0.8**
	baz=147,slow=37							
SPA0	**Spitsbergen Ar**	**1.23**	**339**	Pn		**Pn**	**10 51 31.8**	**+0.1**
SPA0				Sn		**Sb**	**10 51 48.4**	**+0.8**
SPA0	**Spitsbergen Ar**	**1.23**	**339**	*e*P		**Pn**	**10 51 31.8**	**+0.1**
SPA0				*e*S		**Sb**	**10 51 47.1**	**-0.5**
SPITS	**Spitsbergen Ar**	**1.23**	**339**	Pn		**Pn**	**10 51 31.8**	**+0.1**
	baz=148,slow=20							
SPITS				Sn		**Sb**	**10 51 48.1**	**+0.5**
	baz=151,slow=30							
SPITS	**Spitsbergen Ar**	**1.23**	**339**	P		**Pn**	**10 51 31.6**	**-0.1**
SPITS				S		**Sb**	**10 51 48.3**	**+0.7**
BRBA	**Barentsburg A**	**1.38**	**320**	Pb		**Pn**	**10 51 34.0**	**+0.4**
BRBA				Sn		**Sn**	**10 51 53.2**	**+1.4**
BRBA	**Barentsburg A**	**1.38**	**320**	*e*P		**Pn**	**10 51 34.7**	**+1.0**
BRBA				*e*S		**Sn**	**10 51 52.4**	**+0.6**
BRBA				IAML			10 51 54.0	
	comp=Z,1μm,0.3s							
BRBB	**Barentsburg B**	**1.41**	**321**	Pb		**Pn**	**10 51 34.3**	**+0.3**
BRBB				Sn		**Sn**	**10 51 53.9**	**+1.5**
BRBB	**Barentsburg B**	**1.41**	**321**	*e*P		**Pn**	**10 51 34.2**	**+0.2**
BRBB				*e*Pg		**Pb**	**10 51 35.4**	**+0.7**
BRBB				*e*Sg		**Sn**	**10 51 53.7**	**+1.3**
BRBB	**Barentsburg B**	**1.41**	**321**	P		**Pn**	**10 51 33.9**	**-0.1**
BRBB				S		**Sn**	**10 51 52.5**	**+0.1**
HOPEN	**Hopen**	**1.60**	**106**	Pb		**Pn**	**10 51 36.5**	**-0.1**
HOPEN				Sn		**Sn**	**10 51 57.1**	**0.0**
HOPEN	**Hopen**	**1.60**	**106**	*e*P		**Pn**	**10 51 36.5**	**-0.1**
HOPEN				*e*S		**Sn**	**10 51 56.8**	**-0.3**
HOPEN				*e*Sg		**Sb**	**10 51 59.6**	**+1.5**
HOPEN				IAML			10 52 03.5	
	comp=Z,748nm,0.4s							
KBS	**Kingsbay**	**2.34**	**327**	Pn		**Pn**	**10 51 46.5**	**-0.3**
KBS				Sg		**Sb**	**10 52 21.5**	**+2.1**
KBS	**Kingsbay**	**2.34**	**327**	↓*i*P		**Pn**	**10 51 46.3**	**-0.5**
KBS				*e*Pg		**Pb**	**10 51 52.1**	**+1.6**
KBS				*e*			10 52 14.9	
KBS				*e*Sg		**Sb**	**10 52 21.4**	**+2.0**
KBS				IAML			10 52 27.8	
	comp=Z,660nm,0.3s							
KBS	**Kingsbay**	**2.34**	**327**	P		**Pn**	**10 51 46.0**	**-0.8**
KBS				S		**Sn**	**10 52 16.3**	**+0.9**
BJO1	**Bjornoya**	**2.56**	**177**	Pg		**Pn**	**10 51 54.5**	**+4.7**
BJO1				Sg		**Sb**	**10 52 28.5**	**+2.9**
BJO1	**Bjornoya**	**2.56**	**177**	*e*Pg		**Pn**	**10 51 54.3**	**+4.5**
BJO1				*e*Sg		**Sb**	**10 52 27.9**	**+2.3**
BJO1				IAML			10 52 33.0	
	comp=Z,172nm,0.5s							
BEAR	**Bear Island, N**	**2.56**	**177**	Pg		**Pn**	**10 51 54.5**	**+4.6**
	baz=2.4,slow=18							
BEAR				Sg		**Sb**	**10 52 28.0**	**+2.2**
	baz=2.4,slow=37							
HAMF	**Hammerfest**	**6.59**	**165**	Pn		Pn	10 52 42.7	-2.5
HAMF				Sn		Sn	10 53 49.7	-10
HAMF	**Hammerfest**	**6.59**	**165**	*e*P		Pn	10 52 42.2	-3.0
HAMF				*e*S		Sn	10 53 50.1	-10
HAMF				IAML			10 53 56.7	
	comp=Z,9.4nm,0.5s							
ZFI2	**Zemlya Franca-**	**6.69**	**42**	*e*P		**Pn**	**10 52 47.5**	**+1.1**
ZFI2				*e*S		**Sn**	**10 53 58.5**	**-3.9**
	comp=Z,21nm,1.9s							
TRO	**Tromso**	**7.45**	**179**	*e*S		Sn	10 54 13.7	-7.5
TRO				IAML			10 54 41.2	
	comp=Z,4.2nm,0.5s							
JETT	**Jettan, Norway**	**7.55**	**175**	Pn		**Pn**	**10 52 56.8**	**-1.5**
JETT	**Jettan, Norway**	**7.55**	**175**	Pn		**Pn**	**10 52 56.8**	**-1.5**
VADS	**Vadso**	**7.59**	**151**	Pn		**Pn**	**10 52 58.0**	**-0.8**
VADS				Sn		Sn	10 54 17.0	-7.6
VADS	**Vadso**	**7.59**	**151**	*e*P		**Pn**	**10 52 58.0**	**-0.8**
VADS				*e*S		Sn	10 54 16.9	-7.7
VADS				IAML			10 54 23.0	
	comp=Z,22nm,0.4s							
VADS	**Vadso**	**7.59**	**151**	P		**Pn**	**10 52 57.8**	**-1.0**
VADS				S		Sn	10 54 17.0	-7.6
KEV	**Kevo**	**7.71**	**157**	*e*P		**Pn**	**10 52 59.0**	**-1.5**
KEV				*e*S		Sn	10 54 18.6	-8.9
ARA0	**ARCESS Array S**	**7.80**	**161**	*e*P		**Pn**	**10 53 00.1**	**-1.7**
ARA0				Pn		**Pn**	**10 53 03.0**	**+1.2**
ARA0				*e*S		Sn	10 54 20.4	-10
ARA0				Sn		Sn	10 54 21.7	-8.2
ARA0				IAML			10 54 45.9	
	comp=Z,11nm,0.7s							
ARCES	**ARCESS Array B**	**7.80**	**161**	Pn		Pn	10 52 59.3	-2.5
	comp=Z,0.2nm,0.3s,baz=338,slow=9.1,SNR=10							
ARCES				Sn		Sn	10 54 20.5	-9.5
	comp=Z,1.3nm,0.3s,baz=353,slow=18,SNR=5.7							
ARCES				Lg		Lg	10 55 21.5	
	comp=Z,0.3nm,0.3s,baz=341,slow=27,SNR=1.5							
	comp=Z,3.7nm,0.8s							
ARCES	**ARCESS Array B**	**7.80**	**161**	P		**Pn**	**10 52 59.8**	**-2.0**
ARCES				S		**Sn**	**10 54 25.4**	**-4.5**
NOR	**Nord**	**7.80**	**321**	*e*P		**Pn**	**10 53 03.3**	**+1.6**
KTK1	**Kautokeino**	**8.19**	**168**	*e*P		**Pn**	**10 53 05.5**	**-1.5**
KTK1				*e*S		Sn	10 54 30.2	-9.2
KTK1				IAML			10 54 49.4	
	comp=Z,6.0nm,0.6s							
DAG	**Danmarks Havn**	**8.33**	**286**	*e*P		**Pn**	**10 53 11.9**	**+3.0**
DAG				*e*S		**Sn**	**10 54 38.9**	**-3.9**
HEF	**Hetta**	**8.81**	**167**	*e*P		**Pn**	**10 53 17.5**	**+1.9**
HEF				*e*S		Sn	10 54 46.4	-8.2
LOF	**Lofoten**	**9.07**	**192**	*e*P		**Pn**	**10 53 17.9**	**-1.2**
LOF				*e*S		Sn	10 54 52.6	-8.4
LOF				IAML			10 55 04.6	
	comp=Z,5.9nm,0.7s							
STEI	**Steigen**	**9.21**	**188**	*e*P		**Pn**	**10 53 20.7**	**-0.3**
STEI				*e*S		Sn	10 54 54.6	-10
STEI				IAML			10 55 05.7	
	comp=Z,2.9nm,0.7s							
SALU	**Saltoluokta**	**9.71**	**180**	*e*		Pn	10 53 35.3	+7.3
SALU				*e*			10 55 11.7	
FAUS	**Fauske**	**9.76**	**187**	*e*P		**Pn**	**10 53 28.4**	**-0.1**
FAUS				*e*S		**Sn**	**10 55 12.2**	**-5.6**
FAUS				IAML			10 56 09.3	
	comp=Z,2.2nm,0.6s							
FAUS	**Fauske**	**9.76**	**187**	P		**Pn**	**10 53 28.8**	**+0.3**
FAUS				S		**Sn**	**10 55 17.0**	**-0.8**
DBG	**Daneborg**	**9.81**	**273**	*e*P		**Pn**	**10 53 31.4**	**+2.1**
LVZ	**Lovozero**	**10.34**	**144**	S		Sn	10 55 23.1	-8.9
APA0	**Apatity Array**	**10.40**	**148**	P		Pn	10 53 34.6	-2.7
APA0				S		Sn	10 55 24.3	-9.3
STOK	**Stokkvaagen**	**10.89**	**192**	*e*P		**Pn**	**10 53 43.2**	**-0.8**
MOR8	**Moi Rana**	**10.99**	**189**	*e*P		Pn	10 53 39.9	-5.6
LEIR	**Leirfjorden**	**11.11**	**191**	*e*P		**Pn**	**10 53 45.2**	**-1.7**
LEIR				*e*S		Sn	10 55 43.1	-7.8
LEIR				IAML			10 55 44.0	
	comp=Z,2.2nm,0.9s							
KVDA	**Kovda**	**11.26**	**150**	P		Pn	10 53 46.4	-2.7
KVDA				S		Sn	10 55 46.2	-8.5
SVZ	**Severnaya Zeml**	**15.85**	**43**	P		**Pn**	**10 54 49.4**	**-1.7**
FINES	**FINESS Array B**	**15.88**	**167**	Pn		Pn	10 54 43.5	-8.0
	comp=Z,0.1nm,0.3s,baz=354,slow=8.8,SNR=2.6							
FINES				Sn		Sn	10 57 34.5	-13
	comp=Z,0.2nm,0.3s,baz=349,slow=22,SNR=1.5							
	comp=Z,4.0nm,1.0s							
MKAR	**Makanchi Array**	**39.08**	**102**	P		**P**	**10 58 38.9**	**+3.8**
	comp=Z,0.4nm,0.8s,baz=340,slow=8.1,SNR=3.7							
	comp=Z,0.4nm,0.8s							
NEW	**Newport**	**51.90**	**324**	LR		LR	11 19 53.6	
	comp=Z,80nm,18.1s,baz=284,slow=34							

NNC 21 10:54:04.5±6.1, 37.13N×70.77E, h0km, mb3.8, mpv3.5, 2C-4D, Error ellipse: s-maj=48.4km s-min=41.3km az=168.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
KK31	**Karatay Array**	**5.97**	**358**	↓P		Pn	10 55 36.1	+1.8
	7.9nm,0.4s,baz=178,slow=12,SNR=120							
KK31				↓S		Sn	10 56 45.3	+1.9
	1.4nm,0.3s,baz=186,slow=24,SNR=5.2							
AAK	**Ala-Archa**	**6.20**	**26**	↓P		Pn	10 55 37.2	-0.3
	0.5nm,0.5s							
AAK				↑S		Sn	10 56 49.3	+0.1
	1.7nm,0.6s							
AB31	**Akbulak array**	**14.45**	**330**	↑P		Pn	10 57 27.3	-3.0
	0.5nm,0.3s,baz=259,slow=31,SNR=21							
AB31				↓S		Sn	11 00 10.5	-0.6
	0.3nm,0.5s,baz=162,slow=23,SNR=2.7							

*BER **21** 11:10:32.0±1.2, 67.50N×30.84E, h0km, ML1.6, Suspected explosion*

KOLA 21 11:10:31.8, 67.54N×30.55E, h0km, ML2.0, Error ellipse: s-maj=6.4km s-min=2.6km az=40.0, Kovdor City, Mines, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
APA0	**Apatity Array**	**0.94**	**85**	P		Pg	11 10 48.4	-1.4
APA0				S		Sg	11 11 00.4	-1.5
APA	**Apatity**	**1.10**	**87**	S		Sg	11 11 06.0	-1.0
KVDA	**Kovda**	**1.25**	**132**	P		Pg	11 10 53.3	-2.4
KVDA				S		Sg	11 11 11.0	-0.8
LVZ	**Lovozero**	**1.60**	**75**	S		Sn	11 11 21.9	-0.9
VADS	**Vadso**	**2.63**	**351**	*e*P		Pn	11 11 14.3	-1.0
VADS				*e*S		Sn	11 11 46.2	-1.7
VADS				IAML			11 11 55.9	
	comp=Z,5.6nm,1.0s							
VADS	**Vadso**	**2.63**	**351**	P		Pn	11 11 14.2	-1.2
VADS				S		Sn	11 11 47.2	-0.7
ARA0	**ARCESS Array S**	**2.73**	**320**	*e*P		Pn	11 11 16.0	-0.8
ARA0				*e*S		Sn	11 11 50.1	-0.3
ARA0				IAML			11 11 58.0	
	comp=Z,4.4nm,0.2s							
ARCES	**ARCESS Array B**	**2.73**	**320**	P		Pn	11 11 15.9	-0.9
ARCES				S		Sn	11 11 49.9	-0.6
HEF	**Hetta**	**2.74**	**292**	*e*P		Pn	11 11 17.8	+0.8
HEF				*e*S		Sn	11 11 50.3	-0.4
KTK1	**Kautokeino**	**3.09**	**302**	*e*P		Pn	11 11 21.5	-0.3
KTK1				*e*S		Sn	11 11 57.8	-1.7
KTK1				IAML			11 12 05.4	
	comp=Z,6.5nm,0.6s							

*KOLA **21** 11:11:11.0±0.5, 67.52N±0.04×30.47E±0.08, h0km, M2.4(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

UPP 21 11:11:08.4±3.0, 67.51N×30.95E, h0km, ML2.1, Presumed earthquake, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
APA0	**Apatity Array**	**0.79**	**82**	P		Pn	11 11 28.9	+2.1
APA0				S		Sn	11 11 41.5	+2.2
APA	**Apatity**	**0.94**	**86**	S		Sn	11 11 46.0	+2.9
KVDA	**Kovda**	**1.12**	**137**	P		Pn	11 11 33.7	+2.5
KVDA				S		Sn	11 11 50.3	+3.1
LVZ	**Lovozero**	**1.46**	**73**	S		Sn	11 12 03.8	+7.9
VADS	**Vadso**	**2.68**	**348**	S		Sn	11 12 26.9	+1.1
ARCES	**ARCESS Array B**	**2.85**	**318**	P		Pn	11 11 56.0	+0.9
ARCES				S		Sn	11 12 29.2	-0.9
LANU	**Lannavaara**	**3.44**	**283**	P		Pn	11 12 02.6	-0.6
KALU	**Kalix**	**3.45**	**245**	P		Pn	11 12 02.9	-0.3
ERTU	**Ertsjaerv**	**3.57**	**258**	P		Pn	11 12 05.0	+0.1
ERTU				S		Sn	11 12 46.8	-0.9
KUA	**Kurravaara**	**4.07**	**281**	P		Pn	11 12 11.1	-0.6
	baz=106							
KOVU	**Salmi**	**4.14**	**285**	P		Pn	11 12 12.8	-0.1
HARU	**Harads**	**4.17**	**256**	P		Pn	11 12 12.6	-0.6
SJUU	**Sjulsmark**	**4.25**	**246**	P		Pn	11 12 13.9	-0.4
RATU	**Laukkuluspa**	**4.35**	**279**	P		Pn	11 12 15.1	-0.5
NIKU	**Nikkaluokta**	**4.56**	**280**	P		Pn	11 12 17.9	-0.6
SALU	**Saltoluokta**	**4.79**	**274**	P		Pn	11 12 21.5	-0.3
FAUS	**Fauske**	**6.03**	**276**	P		Pn	11 12 36.9	-1.7
FAUS				S		Sn	11 13 42.9	-5.4

*GUC **21** 11:11:18.6±0.4, 21.19S×67.94W, h180km±2km, ML3.5*
*IDC **21** 11:11:19.0±4.2, 21.09S×67.53W, h174km±28km, mb3.2/3, mbtmp3.7/6, Error ellipse: s-maj=60.4km s-min=25.0km az=40.0*
*SCB **21** 11:11:19.2±1.1, 21.07S×67.56W, h188km±15km, ML3.4/1, Error ellipse: s-maj=15.0km s-min=9.7km az=0.0*

ISC 21 11:11:17.5±0.8, 21.17S±0.05×67.84W±0.05, h168km±8km, n35, σ1.3s32/51, 9C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
PB09	**IPOC Station P**	**1.45**	**244**	↓*e*P		**Pn**	**11 11 49.2**	**+1.1**
PB09				*e*S		**Sn**	**11 12 12.9**	**+1.1**
PB01	**IPOC Station P**	**1.54**	**274**	↑*e*P		**Pn**	**11 11 49.4**	**+0.3**
PB01				*e*S		**Sn**	**11 12 13.3**	**0.0**
PB01				IAML			11 12 15.0	
	comp=N,402nm,0.3s							
PB08	**IPOC Station P**	**1.60**	**310**	↑*e*P		**Pn**	**11 11 51.1**	**+1.1**
PB08				*e*S		**Sn**	**11 12 15.9**	**+1.1**
PB08				IAML			11 12 16.4	
	comp=N,356nm,0.4s							
PB02	**IPOC Station P**	**1.92**	**265**	↑*e*P		**Pn**	**11 11 53.5**	**+0.5**
PB02				*e*S		**Sn**	**11 12 19.9**	**-0.6**
GO01	**Chusmiza**	**1.96**	**319**	↑*e*P		**Pn**	**11 11 54.7**	**+0.8**
GO01				*e*S		**Sn**	**11 12 23.7**	**+1.8**
GO01				IAML			11 12 27.3	
	comp=N,219nm,0.1s							
PB03	**IPOC Station P**	**1.98**	**244**	*e*P		**Pn**	**11 11 54.2**	**+0.5**
PB03				*e*S		**Sn**	**11 12 21.1**	**-0.6**
PB03				IAML			11 12 22.9	
	comp=E,209nm,0.4s							
PB07	**IPOC Station P**	**1.98**	**253**	↓*e*P		**Pn**	**11 11 54.2**	**+0.4**
PB07				*e*S		**Sn**	**11 12 21.1**	**-0.7**
PB07				IAML			11 12 22.8	
	comp=N,433nm,0.5s							
MOCB	**Mochara**	**2.06**	**93**	P		**Pn**	**11 11 55.8**	**+0.9**
MOCB				S		**Sn**	**11 12 23.4**	**-0.3**
MOCB				IAML			11 12 24.8	
	comp=N,190nm,0.7s							
PATCX	**Punta Patache**	**2.19**	**279**	↑*e*P		**Pn**	**11 11 56.3**	**+0.3**
PATCX				*e*S		**Sn**	**11 12 24.9**	**-0.8**
PB11	**IPOC Station P**	**2.21**	**309**	↑*e*P		**Pn**	**11 11 56.6**	**+0.3**
PB11				*e*S		**Sn**	**11 12 26.0**	**-0.3**
PB06	**IPOC Station P**	**2.22**	**226**	↑*e*P		**Pn**	**11 11 57.0**	**+0.6**
PB06				*e*S		**Sn**	**11 12 26.2**	**-0.3**
PB06				IAML			11 12 27.0	
	comp=E,253nm,0.3s							

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
TA01	**Diego Aracena**	**2.27**	**285**	*e*P		**Pn**	**11 11 56.6**	**-0.2**
TA01				*e*S		**Sn**	**11 12 25.9**	**-1.4**
TA01				IAML			11 12 29.3	
	comp=E,217nm,0.2s							
TA02	**Huaiquique**	**2.32**	**292**	*e*P		**Pn**	**11 11 57.4**	**-0.1**
TA02				*e*S		**Sn**	**11 12 27.0**	**-1.4**
SOEO	**Opoqueri**	**2.60**	**359**	P		**Pn**	**11 12 03.0**	**+1.7**
PSGCX	**Pisagua**	**2.65**	**306**	*e*P		**Pn**	**11 12 01.3**	**-0.3**
PSGCX				*e*S		**Sn**	**11 12 33.9**	**-1.7**
PB05	**IPOC Station P**	**2.76**	**232**	↑*e*P		**Pn**	**11 12 03.0**	**+0.2**
PB05				*e*S		**Sn**	**11 12 36.0**	**-1.9**
PB05				IAML			11 12 37.6	
	comp=N,83nm,0.4s							
AOVT	**TarijaAcel**	**2.94**	**98**	P		**Pn**	**11 12 05.6**	**+0.4**
SALTA		**3.34**	**156**	↑*e*P		**Pn**	**11 12 11.9**	**+1.6**
SOET	**ToroToro**	**3.59**	**33**	P		**Pn**	**11 12 14.0**	**+0.5**
AOEA	**Aiquile**	**3.86**	**40**	P		**Pn**	**11 12 16.8**	**0.0**
SLA	**San Lorenzo**	**4.14**	**149**	*e*P		**Pn**	**11 12 21.4**	**+1.2**
SOEJ	**Jacaque**	**4.19**	**355**	P		**Pn**	**11 12 23.9**	**+2.6**
BBOE	**La Paz, Chanca**	**4.34**	**358**	P		**Pn**	**11 12 25.6**	**+2.4**
BBOD	**La Paz, Gloria**	**4.57**	**351**	P		**Pn**	**11 12 28.1**	**+1.9**
LPAZ	**La Paz**	**4.87**	**357**	P		**Pn**	**11 12 31.5**	**+1.3**
	comp=N,14nm,0.4s,baz=197,slow=7.3,SNR=53							
LPAZ				S		**Sn**	**11 13 25.1**	**-1.8**
	comp=N,2.2nm,0.5s,baz=86,slow=19,SNR=1.2							
LPAZ	**La Paz**	**4.87**	**357**	P		**Pn**	**11 12 31.2**	**+1.0**
BBSD	**Serra de San D**	**7.90**	**61**	P		**Pn**	**11 13 07.0**	**-2.6**
SIV	**San Ignacio**	**8.23**	**52**	P		**Pn**	**11 13 11.3**	**-2.7**
	comp=N,2.8nm,0.4s,baz=246,slow=12,SNR=19							
SIV				S		Sn	11 14 37.6	-8.4
	comp=N,0.5nm,0.3s,baz=126,slow=19,SNR=2.1							
SIV	**San Ignacio**	**8.23**	**52**	P		**Pn**	**11 13 11.5**	**-2.5**
BBPS	**Puerto Suarez**	**9.62**	**79**	P		**Pn**	**11 13 30.6**	**-1.8**
CPUP	**Villa Florida**	**10.91**	**120**	P		**Pn**	**11 13 47.7**	**-1.4**
	comp=N,0.8nm,0.5s,baz=299,slow=13,SNR=3.3							
PDAR	**Pinedale Array**	**74.33**	**329**	P		**P**	**11 22 37.5**	**+0.7**
	comp=N,0.2nm,0.6s,baz=141,slow=7.4,SNR=2.4							
	comp=N,0.2nm,0.6s							
TORD	**Torodi Ar. Bea**	**76.31**	**70**	P		**P**	**11 22 47.8**	**-0.6**
	comp=N,0.3nm,0.5s,baz=252,slow=6.0,SNR=5.3							
	comp=N,0.3nm,0.5s							
YKA	**Yellowknife Ar**	**91.21**	**340**	P		**P**	**11 24 04.1**	**+1.0**
	comp=N,0.3nm,0.7s,baz=136,slow=3.9,SNR=8.1							
	comp=N,0.3nm,0.7s							
MKAR	**Makanchi Array**	**144.78**	**36**	PKP		**PKPab**	**11 30 34.5**	**+0.7**
	comp=N,0.9nm,0.7s,baz=318,slow=3.4,SNR=7.3							

*SCB **21** 11:20:26.0±1.4, 21.55S×67.75W, h143km±51km, ML2.4/1, Error ellipse: s-maj=22.9km s-min=16.8km az=0.0*
*GUC **21** 11:20:44.1±0.8, 20.07S×68.87W, h129km±4km, ML2.7*

ISC 21 11:20:44.6±1.7, 20.09S±0.04×68.92W±0.08, h123km±12km, n17, σ0.6s64/29, 6C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
PB08	**IPOC Station P**	**0.22**	**256**	↑*e*P		**Pn**	**11 21 01.9**	**-0.2**
PB08				*e*S		**Sn**	**11 21 16.0**	**+0.7**
PB08				IAML			11 21 16.9	
	comp=E,314nm,0.3s							
GO01	**Chusmiza**	**0.49**	**329**	↑*e*P		**Pn**	**11 21 03.1**	**-0.3**
GO01				*e*S		**Sn**	**11 21 18.0**	**+0.4**
PB11	**IPOC Station P**	**0.76**	**295**	↑*e*P		**Pn**	**11 21 04.6**	**-0.3**
PB11				*e*S		**Sn**	**11 21 21.0**	**+0.7**
PB11				IAML			11 21 22.1	
	comp=E,402nm,0.1s							
HMBC	**Humberstone**	**0.93**	**258**	P		**Pn**	**11 21 06.0**	**-0.3**
PB01	**IPOC Station P**	**1.09**	**209**	*e*P		**Pn**	**11 21 07.6**	**-0.2**
PB01				*e*S		**Sn**	**11 21 25.9**	**+0.4**
PB01				IAML			11 21 27.4	
	comp=N,334nm,0.2s							
TA02	**Huaiquique**	**1.15**	**261**	*e*P		**Pn**	**11 21 08.3**	**-0.1**
TA02				*e*S		**Sn**	**11 21 26.8**	**+0.5**
TA02				IAML			11 21 28.2	
PSGCX	**Pisagua**	**1.23**	**293**	↑*e*P		**Pn**	**11 21 08.8**	**-0.5**
PSGCX				*e*S		**Sn**	**11 21 27.9**	**-0.2**
TA01	**Diego Aracena**	**1.27**	**248**	↑*e*P		**Pn**	**11 21 09.1**	**-0.6**
TA01				*e*S		**Sn**	**11 21 28.4**	**-0.3**
PATCX	**Punta Patache**	**1.36**	**237**	↑*e*P		**Pn**	**11 21 10.4**	**-0.3**
PATCX				*e*S		**Sn**	**11 21 30.7**	**+0.1**
PATCX				IAML			11 21 31.6	
	comp=E,123nm,0.2s							
PB02	**IPOC Station P**	**1.53**	**216**	*e*P		**Pn**	**11 21 13.9**	**+1.3**
PB02				*e*S		**Sn**	**11 21 34.2**	**+0.2**
PB09	**IPOC Station P**	**1.73**	**190**	*e*P		**Pn**	**11 21 15.0**	**-0.1**
PB09				*e*S		**Sn**	**11 21 38.6**	**+0.3**
PB09				IAML			11 21 40.7	
	comp=E,55nm,0.5s							
SOEO	**Opoqueri**	**1.81**	**33**	P		**Pn**	**11 21 15.0**	**-1.3**
PB16	**IPOC Station P**	**

SC01				*e*S	**Sn**	**11 22 51.0**	**+0.8**
SC01				IAML		11 22 55.8	
	comp=Z,346nm,0.3s						
BRH1	**Barahona**	**1.77**	**265**	⇑*i*P	**Pn**	**11 22 25.1**	**+1.7**
BRH1				⇑*e*Sg	**Sn**	**11 22 49.2**	**-0.9**
PODR	**Polo**	**1.95**	**265**	⇑*i*P	**Pn**	**11 22 26.9**	**+1.4**
PODR				⇑*e*Sg	**Sn**	**11 22 54.1**	**+0.2**
PODR				IAML		11 22 54.9	
	comp=N,492nm,0.2s						
PODR	**Polo**	**1.95**	**265**	*i* P	**Pn**	**11 22 26.8**	**+1.4**
PODR				*e*S	**Sn**	**11 22 53.4**	**-0.5**
PODR				IAML		11 22 55.6	
	comp=Z,4μm,0.1s						
SDDR	**Presa de Saban**	**2.04**	**288**	‖*i*P	**Pn**	**11 22 27.6**	**+1.4**
SDDR				⇑*e*Sg	**Sn**	**11 22 54.5**	**-0.9**
SDDR				IAML		11 23 01.8	
	comp=N,342nm,0.3s						
SDDR	**Presa de Saban**	**2.04**	**288**	*i* P	**Pn**	**11 22 27.9**	**+1.7**
SDDR				*e*S	**Sn**	**11 22 54.1**	**-1.2**
SDDR				IAML		11 23 01.8	
	comp=Z,4μm,0.3s						
SDDR	**Presa de Saban**	**2.04**	**288**	*e*P	**Pn**	**11 22 27.8**	**+1.6**
SDDR				*e*S	**Sn**	**11 22 54.2**	**-1.2**
SDDR				IAML		11 23 01.7	
	comp=Z,180nm,0.4s						
SDDR				IAML		11 23 02.1	
	comp=Z,345nm,0.2s						
CRPR	**Cabo Rojo, PR**	**2.05**	**100**	*i* P	**Pn**	**11 22 27.1**	**+0.9**
CRPR				IAML		11 23 05.2	
	comp=Z,151nm,0.6s						
NEDR	**Neiba UASD**	**2.08**	**274**	‖*i*P	**Pn**	**11 22 28.6**	**+2.0**
NEDR				⇑*e*Sg	**Sn**	**11 22 56.2**	**+0.3**
NEDR				IAML		11 22 59.6	
	comp=N,165nm,0.2s						
LOVI	**El Cajuil, Ovi**	**2.10**	**255**	*i* P	**Pn**	**11 22 28.0**	**+1.1**
LOVI				*e*S	**Sn**	**11 22 54.7**	**-1.7**
LOVI				IAML		11 22 58.4	
	comp=Z,226nm,0.4s						
LONE3	**El Aguacate, B**	**2.12**	**277**	*i* P	**Pn**	**11 22 29.1**	**+1.8**
LONE3				*e*S	**Sn**	**11 22 57.1**	**0.0**
LONE3				IAML		11 22 59.3	
	comp=Z,98nm,0.3s						
LODU1	**El Espartillar**	**2.13**	**270**	*i* P	**Pn**	**11 22 29.3**	**+2.1**
LODU1				*e*S	**Sn**	**11 22 56.9**	**-0.1**
LODU1				IAML		11 23 03.3	
	comp=Z,345nm,0.3s						
LOBH	**Bahia de las A**	**2.34**	**258**	*i* P	**Pn**	**11 22 31.3**	**+1.8**
LOBH				*e*S	**Sn**	**11 23 01.1**	**0.0**
LOBH				IAML		11 23 03.6	
	comp=Z,61nm,2.1s						
LOPP1	**Punta Rusia, P**	**2.38**	**309**	*i* P	**Pn**	**11 22 31.2**	**+1.3**
LOPP1				*e*S	**Sn**	**11 23 01.6**	**-0.4**
LOPP1				IAML		11 23 06.7	
	comp=Z,252nm,0.2s						
OBIP	**Obispado Ponce**	**2.52**	**97**	*i* P	**Pn**	**11 22 33.0**	**+1.4**
OBIP				IAML		11 23 11.9	
	comp=Z,1μm,0.2s						
LODA1	**ITESIL, Dajabo**	**2.62**	**297**	*i* P	**Pn**	**11 22 34.2**	**+1.5**
LODA1				*e*S	**Sn**	**11 23 06.2**	**-0.8**
LODA1				IAML		11 23 08.1	
	comp=Z,2μm,2.2s						
SJG	**San Juan**	**2.94**	**94**	*i* P	**Pn**	**11 22 38.4**	**+1.8**
SJG				IAML		11 23 14.7	
	comp=Z,3μm,0.1s						
GRTK	**Grand Turk**	**3.61**	**331**	*i* P	**Pn**	**11 22 46.0**	**+1.1**
GRTK				*e*S	**Sn**	**11 23 26.8**	**-2.0**
GRTK				IAML		11 23 28.9	
	comp=Z,195nm,0.2s						
GRTK	**Grand Turk**	**3.61**	**331**	*e*P	**Pn**	**11 22 44.6**	**-0.3**
GRTK				*e*S	**Sn**	**11 23 27.0**	**-1.8**
MASC	**Masc**	**5.05**	**292**	*e*P	**Pn**	**11 23 03.0**	**-0.3**
MASC				*e*S	**Sn**	**11 23 59.1**	**-2.9**
GTBY	**Guantanamo Bay**	**5.77**	**287**	*e*P	**Pn**	**11 23 12.8**	**0.0**
GTBY				*e*S	**Sn**	**11 24 15.1**	**-3.7**
NMDO	**Nuevo Mundo**	**5.85**	**293**	*e*P	Pn	11 23 12.8	-0.9
NMDO				*e*S	Sn	11 24 16.6	-4.0
MOAC	**Moa**	**5.87**	**294**	*e*P	Pn	11 23 12.3	-1.6
MOAC				*e*S	Sn	11 24 15.9	-5.1
PINC	**Pinares de May**	**6.54**	**290**	*e*P	Pn	11 23 22.1	-0.7
PINC				*e*S	Sn	11 24 32.2	-4.7
HLGC	**Holguin**	**6.91**	**292**	*e*S	**Sn**	**11 24 44.4**	**-1.4**

*CATAC **21** 11:31:18.5±0.6, 12°N±4°×8°9W±°, h1km, M3.7/26, MLv3.7/26, Error ellipse: s-maj=11.4km s-min=3.9km az=41.2, confirmed*
*SNET **21** 11:31:22.8±2.7, 12°56N×89°05W, h20km, ML3.5, Presumed earthquake*
*GCG **21** 11:31:26.1±1.5, 12°75N×89°19W, h35km±999km, MD4.3, Presumed earthquake*
ISC 21 11:31:21.5±2.1, 12°4N±0°1×89°18W±0°08, h40km, n51, σ0s86/54, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**1.12**	**353**	P	**Pn**	**11 31 40.2**	**-0.5**
LALI	**Alcalda de L**	**1.12**	**353**	*i* P	**Pn**	**11 31 40.0**	**-0.7**
LOMA	**Loma Larga**	**1.26**	**1**	P	**Pn**	**11 31 42.3**	**-0.5**
LOMA	**Loma Larga**	**1.26**	**1**	*i* P	**Pn**	**11 31 42.7**	**-0.1**
LOMA				*e*S	**Sn**	**11 32 00.8**	**+2.1**
JAYA	**Jayaque - finc**	**1.30**	**349**	P	**Pn**	**11 31 42.4**	**-0.9**
JAYA				S	**Sn**	**11 31 59.8**	**+0.2**
JAYA	**Jayaque - finc**	**1.30**	**349**	*i* P	**Pn**	**11 31 42.6**	**-0.8**
UTEC	**Universidad Te**	**1.32**	**359**	P	**Pn**	**11 31 42.9**	**-0.7**
SEMO	**Seminario San**	**1.32**	**358**	P	**Pn**	**11 31 42.5**	**-1.1**
UDBS	**Universidad Do**	**1.33**	**1**	P	**Pn**	**11 31 43.1**	**-0.7**
UEES	**Universidad Ev**	**1.34**	**358**	P	**Pn**	**11 31 43.3**	**-0.5**
PMON	**Piamonte**	**1.34**	**355**	P	**Pn**	**11 31 43.2**	**-0.6**
PMON	**Piamonte**	**1.34**	**355**	*i* P	**Pn**	**11 31 43.1**	**-0.7**
PAVA	**Las Pavas**	**1.35**	**10**	P	**Pn**	**11 31 43.2**	**-0.8**
BOQS	**Boqueron**	**1.36**	**356**	*i* P	**Pn**	**11 31 43.7**	**-0.5**
LCY	**Lacayo**	**1.36**	**40**	*i* P	**Pn**	**11 31 43.7**	**-0.4**
RANC	**El Ranchito**	**1.37**	**40**	P	**Pn**	**11 31 44.0**	**-0.3**
PACA	**Pacayal**	**1.38**	**38**	P	**Pn**	**11 31 43.7**	**-0.7**
PQSS	**Presa 15 de Se**	**1.38**	**26**	P	**Pn**	**11 31 43.7**	**-0.7**
SCLA	**Alcaldia de Sa**	**1.39**	**19**	P	**Pn**	**11 31 43.6**	**-1.0**
CEVE	**Cerro Verde**	**1.51**	**344**	P	**Pn**	**11 31 46.2**	**-0.2**
CEVE	**Cerro Verde**	**1.51**	**344**	*i* P	**Pn**	**11 31 46.1**	**-0.2**
SBLS	**San Blas**	**1.52**	**344**	*i* P	**Pn**	**11 31 47.3**	**+0.8**
CNCH	**Conchagua**	**1.59**	**56**	P	**Pn**	**11 31 46.9**	**-0.4**
NUBE	**Las Nubes**	**1.63**	**339**	P	**Pn**	**11 31 47.4**	**-0.4**
NUBE	**Las Nubes**	**1.63**	**339**	*i* P	**Pn**	**11 31 47.2**	**-0.6**
NUBE				*i* S	**Sn**	**11 32 04.9**	**-2.7**
UNIC	**Universidad Ca**	**1.64**	**348**	P	**Pn**	**11 31 48.2**	**+0.2**
P5NO	**Presa 5 de nov**	**1.66**	**14**	P	**Pn**	**11 31 47.8**	**-0.3**
FAME	**Alcaldia de Sa**	**1.67**	**331**	P	**Pn**	**11 31 48.2**	**-0.1**
CSGN	**Cosiguina Volc**	**1.70**	**69**	P	**Pn**	**11 31 48.7**	**0.0**
LOAL	**Lomas de Alarc**	**1.72**	**340**	P	**Pn**	**11 31 49.9**	**+0.9**
SLOZ	**Alcaldia de Sa**	**1.74**	**341**	*i* P	**Pn**	**11 31 50.1**	**+0.7**
POTN	**Potosi Cosigui**	**1.75**	**69**	P	**Pn**	**11 31 49.2**	**-0.2**
MTO3	**Montecristo**	**2.02**	**355**	P	**Pn**	**11 31 53.8**	**+0.4**
MTO3	**Montecristo**	**2.02**	**355**	*i* P	**Pn**	**11 31 53.6**	**+0.3**
MARCA	**Marcala la Paz**	**2.10**	**32**	P	**Pn**	**11 31 55.1**	**+0.8**
MARCA	**Marcala la Paz**	**2.10**	**32**	*i* P	**Pn**	**11 31 54.5**	**+0.2**
CRIN	**San Cristobal**	**2.11**	**81**	P	**Pn**	**11 31 54.8**	**+0.4**
INTHN	**La Esperanza I**	**2.20**	**28**	P	**Pn**	**11 31 56.6**	**+0.9**
POLN	**Al Sur del Vol**	**2.33**	**83**	P	**Pn**	**11 31 57.6**	**+0.2**
SARH	**Santa Rosa de**	**2.42**	**10**	P	**Pn**	**11 31 59.8**	**+1.1**
SARH	**Santa Rosa de**	**2.42**	**10**	*i* P	**Pn**	**11 31 59.5**	**+0.8**
CNGN	**Cerro Negro**	**2.43**	**87**	P	**Pn**	**11 32 00.8**	**+2.0**
TGUH	**Tegucigalpa,Un**	**2.50**	**48**	P	**Pn**	**11 32 00.3**	**+0.4**
COPN	**Copaltepe**	**2.54**	**94**	P	**Pn**	**11 31 59.3**	**-1.0**
YUSH	**Yuscaran**	**2.77**	**55**	P	**Pn**	**11 32 03.6**	**+0.1**
LIMN	**Finca el Limon**	**2.83**	**76**	P	**Pn**	**11 32 04.1**	**-0.3**
APG	**El Apazote**	**2.90**	**335**	*i* P	**Pn**	**11 32 06.8**	**+1.4**
RCON	**San Juan de Ri**	**3.15**	**69**	P	**Pn**	**11 32 09.1**	**+0.3**
RCVN	**Varillal2**	**3.15**	**67**	P	**Pn**	**11 32 08.2**	**-0.7**
RCPN	**Sur Rio San Ju**	**3.22**	**69**	P	**Pn**	**11 32 10.4**	**+0.7**
MATN	**Matagalpa**	**3.23**	**80**	P	**Pn**	**11 32 08.5**	**-1.3**

*IDC **21** 11:34:56.8±1.6, 31°67S×177°74W, h0km, mb4.0/4, mbtmp4.0/5, ML3.5/1, MS3.3/1, Error ellipse: s-maj=39.8km s-min=34.1km az=56.0*
ISC 21 11:35:01.2±1.6, 31°8S±0°1×177°8W±0°2, h24km, n8, σ0s74/8, mb3.9/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.63**	**212**	Pn	**Pn**	**11 36 49.8**	**-0.9**
	0.6nm,0.3s,baz=29,slow=19,SNR=11						
URZ					**Sn**	**11 38 16.8**	**+0.4**
	4.7nm,0.3s,baz=359,slow=23,SNR=9.7						
	3.5nm,0.6s						
DZM	**Mont Dzumac**	**17.04**	**301**	LR	LR	11 44 18.1	
	comp=Z,108nm,20.9s,baz=149,slow=33						
STKA	**Stephens Creek**	**34.32**	**259**	P	**P**	**11 41 46.8**	**+0.9**
	1.0nm,0.6s,baz=98,slow=7.1,SNR=4.0						
	1.0nm,0.6s						
ASAR	**Alice Springs**	**43.19**	**268**	P	**P**	**11 43 00.0**	**-0.4**
	0.6nm,0.3s,baz=107,slow=7.5,SNR=18						
	0.6nm,0.3s						
WRA	**Warramunga Arr**	**44.31**	**274**	P	**P**	**11 43 09.2**	**-0.2**
	3.8nm,0.6s,baz=112,slow=8.0,SNR=61						
	3.8nm,0.6s						
QSPA	**South Pole Qui**	**58.27**	**180**	P	**P**	**11 44 54.3**	**+0.6**
	0.7nm,0.6s,baz=45,slow=2.9,SNR=5.8						
	0.7nm,0.6s						
FINES	**FINESS Array B**	**146.54**	**339**	PKPbc	**PKPdf**	**11 54 37.8**	**-0.4**
	2.8nm,0.6s,baz=50,slow=2.2,SNR=9.5						
MMAI	**Mount Meron Ar**	**151.98**	**281**	PKPbc	**PKPbc**	**11 54 54.4**	**-0.2**
	0.7nm,0.4s,baz=59,slow=6.9,SNR=5.2						

*CATAC **21** 11:38:53.8±0.7, 14°N±4°×9°0W±°, h43km±5km, M2.8/13, MLv2.8/13, Error ellipse: s-maj=9.3km s-min=7.7km az=42.2, confirmed*
*SNET **21** 11:38:54.8±1.2, 13°60N×90°10W, h60km, ML2.8, Presumed earthquake*
*GCG **21** 11:38:55.2±0.7, 13°62N×90°07W, h59km±6km, MD3.8, ML3.6, MW2.7, Presumed earthquake*
ISC 21 11:38:54.4±3.7, 13°5N±0°1×90°1W±0°2, h62km±13km, n31, σ0s55/45, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	**Alcaldia de Sa**	**0.32**	**19**	P	**Pn**	**11 39 04.6**	**-0.4**
NUBE	**Las Nubes**	**0.49**	**42**	P	**Pn**	**11 39 06.6**	**-0.1**
NUBE	**Las Nubes**	**0.49**	**42**	*i* P	**Pn**	**11 39 06.8**	**+0.1**
NUBE				*i* S	**Sn**	**11 39 15.5**	**-0.1**
NUBE	**Las Nubes**	**0.49**	**42**	*i* P	**Pn**	**11 39 06.3**	**-0.4**
NUBE				*e*S	**Sn**	**11 39 15.7**	**+0.1**
CEVE	**Cerro Verde**	**0.56**	**59**	P	**Pn**	**11 39 07.5**	**0.0**
CEVE				S	**Sn**	**11 39 17.7**	**+0.6**
CEVE	**Cerro Verde**	**0.56**	**59**	*i* P	**Pn**	**11 39 07.7**	**+0.2**
CEVE				*e*S	**Sn**	**11 39 16.9**	**-0.2**
LOAL	**Lomas de Alarc**	**0.57**	**36**	S	**Sn**	**11 39 17.8**	**+1.0**
RTR	**El Retiro**	**0.59**	**52**	*i* P	**Pn**	**11 39 07.5**	**-0.2**
SLOZ	**Alcaldia de Sa**	**0.59**	**34**	P	**Pn**	**11 39 07.4**	**-0.2**
SLOZ				S	**Sn**	**11 39 18.0**	**+0.8**
JAYA	**Jayaque - finc**	**0.67**	**80**	P	**Pn**	**11 39 08.5**	**-0.1**
JAYA	**Jayaque - finc**	**0.67**	**80**	*i* P	**Pn**	**11 39 08.2**	**-0.3**
JAYA				*i* S	**Sn**	**11 39 18.1**	**-0.8**
JAYA				IAML		11 39 21.2	
	comp=N,2μm,0.3s						
JAYA	**Jayaque - finc**	**0.67**	**80**	*i* P	**Pn**	**11 39 08.1**	**-0.4**
JAYA				*e*S	**Sn**	**11 39 18.9**	**0.0**
UNIC	**Universidad Ca**	**0.71**	**51**	P	**Pn**	**11 39 08.2**	**-0.8**
UNIC				S	**Sn**	**11 39 20.1**	**+0.3**
PCG5	**San Vicente Pa**	**0.72**	**340**	*i* P	Pn	11 39 12.9	+3.6
CEDA	**San Andres**	**0.76**	**69**	P	**Pn**	**11 39 09.1**	**-0.4**
CEDA				S	**Sn**	**11 39 21.0**	**+0.4**
LALI	**Alcalda de L**	**0.78**	**93**	S	**Sn**	**11 39 20.9**	**-0.2**
PMON	**Piamonte**	**0.80**	**77**	P	**Pn**	**11 39 09.9**	**-0.3**
PMON				S	**Sn**	**11 39 22.5**	**+0.7**
UEES	**Universidad Ev**	**0.88**	**78**	P	**Pn**	**11 39 11.0**	**-0.1**
UEES				S	**Sn**	**11 39 24.0**	**+0.7**
SEMO	**Seminario San**	**0.89**	**79**	S	**Sn**	**11 39 24.1**	**+0.5**
PANCS	**Alcalda de**	**0.92**	**85**	S	**Sn**	**11 39 24.1**	**-0.1**
SJTE	**Alcalda de S**	**1.09**	**86**	*e*S	**Sn**	**11 39 28.3**	**+0.1**
MTO3	**Montecristo**	**1.13**	**41**	P	**Pn**	**11 39 14.0**	**-0.5**
MTO3				S	**Sn**	**11 39 29.1**	**-0.3**
MTO3	**Montecristo**	**1.13**	**41**	*i* P	**Pn**	**11 39 14.1**	**-0.5**
LLGN	**La Laguna**	**1.30**	**61**	P	**Pn**	**11 39 15.9**	**-0.7**
LLGN				S	**Sn**	**11 39 33.8**	**+0.6**
TECO	**Alcaldia de Te**	**1.30**	**90**	P	**Pn**	**11 39 16.4**	**-0.1**
TECO				S	**Sn**	**11 39 33.4**	**+0.3**
SCLA	**Alcaldia de Sa**	**1.36**	**83**	P	**Pn**	**11 39 17.1**	**-0.3**
P5NO	**Presa 5 de nov**	**1.40**	**71**	P	**Pn**	**11 39 16.7**	**-1.1**
P5NO				S	**Sn**	**11 39 34.6**	**-0.7**
STG2	**El Palmar, Qui**	**1.51**	**307**	*i* P	Pn	11 39 25.5	+6.0
SARH	**Santa Rosa de**	**1.81**	**47**	*i* P	**Pn**	**11 39 23.7**	**+0.3**
SARH				S	**Sn**	**11 39 45.7**	**+0.4**
SARH	**Santa Rosa de**	**1.81**	**47**	*i* P	**Pn**	**11 39 23.4**	**0.0**
CNCH	**Conchagua**	**2.24**	**96**	S	**Sn**	**11 39 57.7**	**+1.8**

*IDC **21** 11:39:47.2±2.4, 23°43N×45°17W, h0km, mb3.6/8, mbtmp3.6/8, MS3.3/1, Error ellipse: s-maj=68.7km s-min=26.3km az=14.0*
ISC 21 11:39:49.5±2.3, 23°4N±0°4×45°2W±0°2, h15km, n12, σ0s66/8, mb3.5/7, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**20.30**	**259**	LR	LR	11 49 55.6	
	comp=Z,89nm,21.6s,baz=84,slow=30						
H10N2	**ASCENSION HYDR**	**43.18**	**132**	T	T	12 33 49.9	
	baz=317,slow=75,SNR=12						
H10N3	**ASCENSION HYDR**	**43.18**	**132**	T	T	12 33 48.8	
	baz=317,slow=75,SNR=17						
H10N1	**ASCENSION HYDR**	**43.20**	**132**	T	T	12 33 51.2	
	baz=317,slow=75,SNR=30						
TORD	**Torodi Ar. Bea**	**45.49**	**94**	P	**P**	**11 48 08.4**	**-0.2**
	1.1nm,0.7s,baz=293,slow=9.8,SNR=5.9						
	1.1nm,0.7s						
NOA	**NORSAR Array B**	**53.65**	**30**	P	**P**	**11 49 10.5**	**+0.3**
	0.8nm,0.8s,baz=253,slow=7.9,SNR=3.3						
	0.8nm,0.8s						
HFS	**Hagfors**	**54.56**	**32**	P	**P**	**11 49 16.8**	**0.0**
	1.9nm,0.6s,baz=258,slow=7.4,SNR=5.1						
	1.9nm,0.6s						
PDAR	**Pinedale Array**	**55.95**	**307**	P	**P**	**11 49 27.5**	**0.0**
	0.3nm,0.7s,baz=68,slow=3.2,SNR=4.3						
	0.3nm,0.7s						
YKA	**Yellowknife Ar**	**60.01**	**330**	P	**P**	**11 49 54.5**	**-0.8**
	0.3nm,0.8s,baz=89,slow=6.3,SNR=3.7						
	0.3nm,0.8s						
AKASG	**Malin Array Be**	**62.48**	**44**	P	**P**	**11 50 11.5**	**-0.7**
	0.1nm,0.3s,baz=286,slow=5.2,SNR=4.5						
	0.1nm,0.3s						
BRTR	**Keskin Array B**	**67.11**	**55**	P	**P**	**11 50 43.4**	**+0.7**
	0.5nm,0.6s,baz=266,slow=4.3,SNR=2.3						
	0.5nm,0.6s						
ILAR	**Eielson Array**	**73.91**	**334**	P	**P**	**11 51 24.4**	**+0.8**
	0.4nm,0.9s,baz=78,slow=6.2,SNR=6.3						
	0.4nm,0.9s						

*BJI **21** 11:40:20.9, 11°10N×139°11E, h22km, mB5.1/20, mb4.9/60, Ms4.4/24, Ms7 4.2/29*
*MOS **21** 11:40:21.4±0.9, 11°32N×138°73E, h9km, mb5.2/39, Error ellipse: s-maj=11.4km s-min=6.3km az=109.0*
*NEIC **21** 11:40:23.5±1.3, 11°26N±0°08×138°73E±0°09, h10km±1km, mb5.1/322, Error ellipse: s-maj=15.7km s-min=13.8km az=281.0*
*GCMT **21** 11:40:24.5±0.2, 11°08N±0°03×138°65E±0°02, h17km, MW4.9/93, Moment Tensor Solution. s29,c34; s93,c128; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 2.69±.15; Mθθ -0.68±.09; Mϕϕ -2.01±.10; Mrθ 1.12±.29; Mrϕ -0.99±.06; Mθϕ 0.43±.22; Best double couple: M0 2.86300×10^16 NP1: ϕs 196.00000°, δ37.00000°, λ68.00000°. NP2: ϕs 42.00000°, δ56.00000°, λ106.00000°. Principal axes: T 3.0320, Plg74.0000°, Azm355.0000°; N -0.3360, Plg13.0000°, Azm213.0000°; P -2.6950, Plg10.0000°, Azm121.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **21** 11:40:25.7±4.7, 11°14N×138°79E, h33km±36km, mb4.4/24, mbtmp4.6/27, ML4.4/3, MS3.9/42 Error ellipse: s-maj=17.8km s-min=11.8km az=76.0*
*DJA **21** 11:40:38.7±0.6, 11°N±3°×13°8E±°, h152km±8km, M4.7/36, mb4.6/36, mB5.2/13, MLv5.2/1, Mw(mB)4.5/13, MwMwp4.7/1, Mwp5.0/1*
ISC 21 11:40:25.2±1.0, 11°15N±0°04×138°75E±0°05, h29km±6km, n639, σ1s18/479, mb5.0/235, MS4.0/48, 22C-6D, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**6.45**	**67**	Pn	**Pn**	**11 41 59.5**	**+1.2**
	5.5nm,0.3s,baz=250,slow=15,SNR=1.7						
GUMO					**Sn**	**11 43 10.0**	**-0.9**
	6.2nm,0.3s,baz=30,slow=20,SNR=1.3						
GUMO				LR	LR	11 43 55.4	
	comp=Z,1μm,18.2s,baz=233,slow=33						
	34nm,0.4s						
GUMO	**Guam**	**6.45**	**67**	Pn	**Pn**	**11 41 58.4**	**+0.1**
GUMO	**Guam**	**6.45**	**67**	P	**Pn**	**11 41 58.4**	**+0.1**
JAY	**Jayapura**	**13.71**	**172**	Pn	**Pn**	**11 43 38.2**	**+0.4**
	5.0nm,0.3s,baz=304,slow=4.9,SNR=17						
JAY					**Sn**	**11 46 07.1**	**-2.1**
	3.2nm,0.3s,baz=114,slow=18,SNR=6.9						
JAY				LR	LR	11 47 37.2	
	comp=Z,662nm,21.8s,baz=340,slow=32						
	28nm,0.5s						
GENI	**Genyem**	**13.72**	**174**	P	**Pn**	**11 43 41.6**	**+3.7**
SIJI	**Sorong**	**14.06**	**212**	LR	LR	11 47 50.3	
	comp=Z,516nm,20.2s,baz=54,slow=32						
FAKI	**Fak Fak**	**15.40**	**205**	P	**P**	**11 44 06.4**	**+1.6**
FAKI	**Fak Fak**	**15.40**	**205**	Pn	**Pn**	**11 44 01.9**	**+1.4**
FAKI	**Fak Fak**	**15.40**	**205**	P	**P**	**11 44 05.7**	**+0.9**
	51nm,1.2s						
MANU	**Manus Island**	**15.66**	**146**		**Pn**	**11 44 04.9**	**+1.0**
JCJ	**Chichijima**	**16.19**	**11**	LR	LR	11 49 07.0	
	comp=Z,382nm,18.1s,baz=210,slow=32						
JMZ	**Minamidaito 2**	**16.24**	**335**		**P**	**11 44 13.0**	**-1.1**
JMZ				IAmb	IAmb	11 44 17.9	
	comp=Z,233nm,1.4s						
TGY	**Tagaytay City**	**17.63**	**281**	LR	LR	11 52 20.4	
	comp=Z,229nm,19.1s,baz=116,slow=40						
KRAI	**Karang Ratu**	**17.68**	**216**	P	**P**	**11 44 31.9**	**+1.7**
	comp=Z,3μmcomp=Z,43nm,1.2s						
AAI	**Ambon**	**18.09**	**216**	P	**P**	**11 44 35.7**	**+1.0**
	comp=Z,63nm,1.0s						
SANI	**Sanana**	**18.25**	**225**	P	**P**	**11 44 36.4**	**0.0**
SANI	**Sanana**	**18.25**	**225**	P	**Pn**	**11 44 35.3**	**-1.1**
	comp=Z,610nmcomp=Z,24nm,1.2s						
JOW	**Kunigami**	**18.46**	**329**	P	**Pn**	**11 44 40.2**	**+1.3**
	comp=Z,1.5nm,0.3s,baz=146,slow=18,SNR=4.4						
JOW				LR	LR	11 49 50.4	
	comp=Z,350nm,21.6s,baz=136,slow=30						
	comp=Z,23nm,0.9s						
JOW	**Kunigami**	**18.46**	**329**	P	Pn	11 44 46.9	+7.9
JOW	**Kunigami**	**18.46**	**329**	P	**P**	**11 44 38.5**	**-0.3**
JOW				IAmb	IAmb	11 44 47.6	
	comp=Z,72nm,0.7s						
GTOI	**Gorontalo**	**18.80**	**237**	P	**Pn**	**11 44 43.3**	**+0.2**
	comp=Z,566nmcomp=Z,25nm,1.1s						
MRSI	**Marisa**	**19.78**	**239**	P	**Pn**	**11 44 54.8**	**-0.1**
	comp=Z,1μmcomp=Z,66nm,1.3s						
LUWI	**Luwuk**	**19.97**	**234**	P	**P**	**11 44 54.9**	**-0.4**
KRVT	**Keravat (AS076**	**20.25**	**139**	LR	LR	11 51 23.2	
	comp=Z,48nm,20.6s,baz=215,slow=32						
RABL	**Rabaul**	**20.26**	**138**	P	**P**	**11 44 59.3**	**+0.8**
RABL				IAmb	IAmb	11 45 00.7	
	comp=Z,98nm,1.4s						
TOLI2	**Tolitoli**	**20.44**	**242**	P	**P**	**11 45 00.9**	**+0.5**
TOLI2	**Tolitoli**	**20.44**	**242**		**P**	**11 44 59.0**	**-1.4**
TWGBT	**Beinan**	**20.48**	**307**	P	Pn	11 45 07.8	+4.8
TWG	**Pinlang**	**20.48**	**307**	P	**P**	**11 45 00.7**	**-0.1**
YULB	**Yu-li**	**20.61**	**308**	P	**P**	**11 45 01.8**	**-0.5**
APSI	**Ampana**	**20.80**	**236**	P	**P**	**11 45 03.9**	**-0.4**
	comp=Z,61nm,1.6s						
MYLDM	**Lahad Datu**	**20.89**	**255**	P	Pn	11 45 07.3	-0.7
MYLDM	**Lahad Datu**	**20.89**	**255**		Pn	11 45 07.0	-1.0
MYLDM				IAmb	IAmb	11 45 19.7	
	comp=Z,121nm,1.4s						
MYLDM	**Lahad Datu**	**20.89**	**255**	P	Pn	11 45 07.1	-0.9
	comp=Z,1μmcomp=Z,62nm,1.4s						
TPUB	**Ta-pu**	**21.08**	**307**	P	**P**	**11 45 12.5**	**+5.2**
TPUB	**Ta-pu**	**21.08**	**307**		**P**	**11 45 06.6**	**-0.7**
TPUB				IAmb	IAmb	11 45 15.3	
	comp=Z,90nm,1.3s						
SSLB	**Suanglung**	**21.09**	**309**		**P**	**11 45 07.2**	**-0.2**
YHNB	**Yeheng**	**21.28**	**312**	P	**P**	**11 45 13.3**	**+3.8**
YHNB	**Yeheng**	**21.28**	**312**	P	**P**	**11 45 10.6**	**+1.1**
JSU	**Suzuyama**	**21.67**	**341**	P	**P**	**11 45 14.8**	**+1.3**
JSU	**Suzuyama**	**21.67**	**341**		**P**	**11 45 14.0**	**+0.5**
JSU				IAmb	IAmb	11 45 32.9	
	comp=Z,74nm,1.1s						
PMG	**Port Moresby**	**22.06**	**157**	LR	LR	11 53 00.3	
	comp=Z,394nm,21.0s,baz=338,slow=34						
JMN	**Monobe**	**22.92**	**350**	P	**P**	**11 45 24.

WRA PcP **PcP** **11 49 37.0 +0.3**
comp=Z,2.1nm,0.9s,baz=359,slow=3.1,SNR=6.1
comp=Z,2.0nm,0.8s
WRA Warramunga Arr 31.20 188 P **P** **11 46 40.8 -1.2**
WRA Warramunga Arr 31.20 188 *i* P **P** **11 46 44.9 +2.9**
WRA pmax pmax
comp=Z,5.0nm,0.9s
CTA Charters Tower 31.90 167 LR LR 11 58 42.0
comp=Z,222nm,19.4s,baz=24,slow=34
PSTR Posyet 32.14 349⇑ *e*P **P** **11 46 49.7 -0.4**
ASAJ Asahikawa 33.02 5 LR LR 12 01 02.9
comp=Z,166nm,19.6s,baz=160,slow=38
USRK Ussuriysk Ar. 33.45 351 P **P** **11 47 01.2 -0.4**
comp=Z,5.0nm,1.0s,baz=160,slow=9.0,SNR=4.5
comp=Z,5.0nm,1.0s
GYA Guiyang 33.85 301 ⇑P **P** **11 47 07.8 +2.3**
GYA pmax pmax
comp=Z,12nm,0.5s
HNS HongShan 33.91 324 ⇑P **P** **11 47 06.0 +0.4**
HNS S **S** **11 52 27.5 -1.0**
HNS pmax pmax
comp=Z,29nm,1.0s
HNS L L
comp=Z,190nm,13.0s
HNS L L
comp=Z,340nm,15.5s
HNS L L
comp=Z,290nm,20.7s
CN2 Changchun 34.52 343 P **P** **11 47 10.9 +0.1**
CN2 PcP **PcP** **11 49 45.3 -0.1**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 L L
comp=Z,300nm,14.0s
CN2 L L
comp=Z,400nm,14.0s
CN2 L L
comp=Z,390nm,15.0s
KPJI Karang Pucung 34.89 240 P **P** **11 47 12.2 -2.2**
AS31 Alice Springs 34.92 188 P **P** **11 47 13.1 -1.4**
ASAR Alice Springs 34.92 188 P **P** **11 47 13.9 -0.6**
comp=Z,2.9nm,0.9s,baz=19,slow=12,SNR=5.3
ASAR PcP **PcP** **11 49 47.5 +0.5**
comp=Z,1.2nm,0.8s,baz=28,slow=2.3,SNR=5.9
ASAR LR LR 12 01 05.2
comp=Z,225nm,21.3s,baz=12,slow=36
comp=Z,2.9nm,0.9s
ASAR Alice Springs 34.92 188 P **P** **11 47 13.1 -1.5**
ASAR Alice Springs 34.92 188 P **P** **11 47 13.1 -1.5**
BJI2 Beijing 35.03 329 P **P** **11 47 16.0 +0.7**
BJI2 pP **pwP** **11 47 27.1 -1.8**
BJI2 sP sP 11 47 33.0 +7.5
BJI2 pmax pmax
comp=Z,16nm,1.0s
BNX BinXian 35.81 346 ⇑P **P** **11 47 22.4 +0.5**
BNX pmax pmax
comp=Z,29nm,1.0s
YSS Yuzhno-Sakhali 35.85 5⇓ *e*P **P** **11 47 20.4 -1.8**
YSS pmax pmax
comp=Z,151nm,2.7s
BBJI Bungbulang 36.05 241 IAmb IAmb 11 47 22.9
comp=Z,27nm,0.9s
BBJI Bungbulang 36.05 241 P **P** **11 47 20.8 -3.6**
comp=Z,34nm,1.0s
KMI2 Kunming 36.80 297 P **P** **11 47 33.1 +2.1**
KMI2 pP pwP 11 47 45.8 +4.0
KMI2 pmax pmax
comp=Z,21nm,0.7s
KMI2 L L
comp=Z,98nm,17.1s
KMI2 L L
comp=Z,250nm,15.5s
KMI2 L L
comp=Z,230nm,20.8s
PSA00 Pilbara Seismi 37.44 210 **P** **11 47 34.0 -2.1**
PSA00 Pilbara Seismi 37.44 210 P **P** **11 47 34.0 -2.1**
CD2 Chengdu 37.89 307 P **P** **11 47 41.6 +1.7**
PZH PanZhiHua 38.05 299 P **P** **11 47 43.3 +1.9**
PZH pmax pmax
comp=Z,10.0nm,0.7s
HHC Hu-ho-hao-te 38.06 326 *e*P **P** **11 47 45.3 +4.0**
HHC pmax pmax
comp=Z,7.0nm,0.6s
HHC pmax pmax
comp=Z,130nm,4.0s
HHC L L
comp=Z,170nm,16.3s
HHC L L
comp=Z,160nm,16.3s
HHC L L
comp=Z,190nm,17.7s
XLT XiLinHaoTe 38.06 333 *e*P **P** **11 47 42.0 +0.7**
XLT pP sP 11 47 47.9 -3.8
XLT pmax pmax
comp=Z,23nm,1.0s
XLT pmax pmax
comp=Z,130nm,3.9s
KLR Kul'dur 38.41 353 LR LR 12 00 41.8
comp=Z,139nm,21.8s,baz=180,slow=32
KLR Kul'dur 38.41 353⇑ *i* P **P** **11 47 44.8 +0.8**
KLR pmax pmax
comp=Z,50nm,1.0s
BTO2 Baotou 38.94 324 *e*P **P** **11 47 49.5 +0.8**
BTO2 pP **pwP** **11 48 01.6 -1.0**
BTO2 pmax pmax
comp=Z,41nm,1.4s
BTO2 pmax pmax
comp=Z,170nm,7.5s
BTO2 L L
comp=Z,560nm,16.1s
BTO2 L L
comp=Z,490nm,14.8s
BTO2 L L
comp=Z,560nm,16.4s
CMAR Chiang Mai Arr 39.10 286 P **P** **11 47 51.7 +1.5**
comp=Z,8.7nm,0.8s,baz=93,slow=6.7,SNR=66
CMAR PcP **PcP** **11 49 59.9 +0.1**
comp=Z,1.3nm,0.4s,baz=104,slow=3.8,SNR=4.9
CMAR LR LR 12 02 22.8
comp=Z,58nm,21.9s,baz=110,slow=34
comp=Z,8.7nm,0.8s
CMAR Chiang Mai Arr 39.10 286 P **P** **11 47 50.4 +0.1**
CMAR Chiang Mai Arr 39.10 286 *i* P **P** **11 47 51.7 +1.5**
CMAR pmax pmax
comp=Z,10.0nm,0.8s
CHTO Chiang Mai 39.13 286 P **P** **11 47 49.7 -0.8**
TYV Tymovskoe 39.73 4 *e*P **P** **11 47 55.3 +0.3**
TYV pmax pmax
comp=Z,19nm,1.0s
TYV pmax pmax
comp=Z,600nm,2.5s
HEH HeiHe 40.10 349 *e*P **P** **11 47 57.9 -0.1**
HEH PcP **PcP** **11 50 02.1 -0.2**
HEH pmax pmax
comp=Z,30nm,0.7s
HEH pmax pmax
comp=Z,660nm,5.1s
LZH Lanzhou 40.13 314 P **P** **11 48 00.3 +1.5**
LZH pP sP 11 48 11.8 +1.5
LZH S **S** **11 54 06.3 +2.6**
LZH SS **SS** **11 57 02.0 0.0**
LZH pmax pmax
comp=Z,15nm,1.0s
LZH L L
comp=Z,230nm,16.7s
LZH L L
comp=Z,290nm,16.8s
LZH L L
comp=Z,340nm,18.5s
LZDM Lanzhou Array 40.18 314 P **P** **11 48 00.1 +0.8**
comp=Z,1.3nm,0.3s,baz=146,slow=8.0,SNR=1.4
LZDM LR LR 12 04 03.7
comp=Z,164nm,21.3s,baz=5.0,slow=35
comp=Z,1.3nm,0.3s
PSI Prapat 40.35 261 P **P** **11 47 59.5 -1.3**
PSI pmax pmax
comp=Z,14nm,0.9s
PSI Prapat 40.35 261 P **P** **11 47 59.0 -1.8**
comp=Z,16nm,0.8s
RPSI Rantau Prapat 40.37 261 P **P** **11 47 59.5 -1.3**
KCSI Kotacane, Aceh 41.30 263 P **P** **11 48 06.4 -2.1**
comp=Z,18nm,0.9s
STKA Stephens Creek 42.86 176 P **P** **11 48 20.0 -0.9**
comp=Z,3.8nm,0.8s,baz=339,slow=8.4,SNR=10
STKA LR LR 12 06 21.9
comp=Z,300nm,19.6s,baz=19,slow=36
comp=Z,3.8nm,0.8s
STKA Stephens Creek 42.86 176 P **P** **11 48 19.8 -1.1**
STKA lAmb lAmb 11 48 38.1
comp=Z,55nm,1.4s
STKA Stephens Creek 42.86 176 P **P** **11 48 19.8 -1.1**
STKA pmax pmax
comp=Z,55nm,1.4s
FORT Forrest 42.93 194 P **P** **11 48 20.8 -0.6**
FORT lAmb lAmb 11 48 22.9
comp=Z,27nm,0.9s
ZEA Zeya 43.47 350 *e*P **P** **11 48 26.1 +0.6**
ZEA pmax pmax
comp=N,10.0nm,0.7s
ZEA pmax pmax
comp=Z,20nm,0.8s
PEA0B Petropavlovsk- 44.54 16 P **P** **11 48 33.7 -0.5**
PEA0B Petropavlovsk- 44.54 16 P **P** **11 48 33.7 -0.5**
PEA0B pmax pmax
comp=Z,161nm,1.5s
PETK Petropavlovsk- 44.54 16 P **P** **11 48 34.0 -0.2**
comp=Z,5.7nm,0.9s,baz=189,slow=8.3,SNR=2.6
comp=Z,5.7nm,0.9s
PETK Petropavlovsk- 44.54 16 P **P** **11 48 34.0 -0.2**
GTA2 Gaotai 44.61 316 P **P** **11 48 36.3 +1.2**
GTA2 PcP **PP** **11 50 19.1 -0.4**
GTA2 pmax pmax
comp=Z,23nm,0.9s
GTA2 L L
comp=Z,180nm,13.6s
GTA2 L L
comp=Z,140nm,16.2s
GTA2 L L
comp=Z,210nm,15.2s
ULN Ulaanbaatar 45.23 330 P **P** **11 48 39.4 -0.6**
ULN Ulaanbaatar 45.23 330 *c i* P **P** **11 48 40.9 +0.9**
ULN pmax pmax
comp=Z,14nm,0.8s
ULN Ulaanbaatar 45.23 330 P **P** **11 48 40.5 +0.5**
SONM Songino Array 45.53 330 P **P** **11 48 43.2 +0.9**
comp=Z,8.7nm,1.0s,baz=137,slow=7.9,SNR=34
SONM PcP **PcP** **11 50 20.4 -0.4**
comp=Z,1.2nm,0.7s,baz=134,slow=4.2,SNR=3.4
SONM LR LR 12 08 28.6
comp=Z,108nm,19.4s,baz=128,slow=37
comp=Z,8.7nm,1.0s
SONM Songino Array 45.53 330 P **P** **11 48 42.9 +0.6**
SONM lAmb lAmb 11 48 44.8
comp=Z,25nm,1.4s
SONM **PcP** **11 50 20.4 -0.4**
BRDH Bariadhala 46.33 291 LR LR 12 08 23.8
comp=Z,59nm,19.9s,baz=118,slow=36
GOMU GeErMu 46.80 310 P **P** **11 48 53.5 +0.7**
GOMU pmax pmax
comp=Z,7.0nm,0.8s
MSVF Nonsavu 48.27 126 P **P** **11 49 05.2 +1.2**
comp=Z,8.5nm,0.9s,baz=288,slow=19,SNR=3.6
MSVF LR LR 12 06 33.1
comp=Z,291nm,21.2s,baz=333,slow=32
comp=Z,8.5nm,0.9s
ZAK Zakamensk 48.76 330 *e*P **P** **11 49 07.3 -0.1**
ZAK pmax pmax
comp=Z,21nm,1.4s
MA2 Magadan 49.17 8 P **P** **11 49 08.8 -1.4**
MA2 lAmb lAmb 11 49 11.6
comp=Z,19nm,1.2s
MA2 Magadan 49.17 8⇑ *e*P **P** **11 49 08.2 -2.1**
MA2 pmax pmax
comp=Z,24nm,1.5s
TLY Talaya 49.45 332 LR LR 12 10 03.3
comp=Z,153nm,20.7s,baz=110,slow=36
TLY Talaya 49.45 332 P **P** **11 49 11.6 -1.0**
TLY Talaya 49.45 332 *c i* P **P** **11 49 13.9 +1.3**
TLY pmax pmax
comp=Z,9.0nm,0.8s
MOY Mondy 50.69 330 *e*P **P** **11 49 23.2 +1.1**
MOY pmax pmax
comp=Z,25nm,2.6s
YAK Yakutsk 51.23 355 LR LR 12 11 35.7
comp=Z,74nm,18.0s,baz=158,slow=36
YAK Yakutsk 51.23 355 P **P** **11 49 25.9 +0.1**
YAK **PcP** **11 50 40.8 +0.1**
YAK Yakutsk 51.23 355 *e*P **P** **11 49 25.8 0.0**
YAK *e* 11 50 40.7
YAK *e* 11 51 22.5
YAK *e*S **S** **11 56 40.3 -1.9**
YAK *e**SS sS 11 57 03.8 +9.0
YAK *e* 11 59 09.6
YAK *e*SS **SS** **12 00 09.9 -7.9**
YAK pmax pmax
comp=Z,48nm,1.1s
YAK pmax pmax
comp=N,19nm,1.3s
YAK pmax pmax
comp=Z,301nm,4.8s
YAK smax smax
comp=N,134nm,3.7s
YAK smax smax
comp=E,101nm,4.5s
EVN Everest 51.33 297 P **P** **11 49 27.2 -0.7**
KNGR Kungurtug, Tuv 51.81 328⇓ *i* P **P** **11 49 32.1 +1.6**
KNGR pmax pmax
comp=Z,12nm,0.8s
AMKA Amchitka 51.90 31 P **P** **11 49 30.4 -0.7**
AMKA lAmb lAmb 11 49 32.8
comp=Z,33nm,0.9s
SEY Seymchan 52.62 8⇑ *i* P **P** **11 49 37.5 +1.3**
SEY pmax pmax
comp=Z,23nm,1.0s
WMQ Urumqi 54.62 316 *e*P **P** **11 49 52.3 +1.0**
WMQ pmax pmax
comp=Z,27nm,1.1s
AFI Afiamalu 55.01 116 LR LR 12 09 38.8
comp=Z,156nm,19.5s,baz=274,slow=32
DGZ Jazzator, Alta 57.02 323 *c i* P **P** **11 50 09.7 +1.2**
DGZ pmax pmax
comp=Z,14nm,1.1s
PALK Pallekele 57.36 272 LR LR 12 14 06.5
comp=Z,28nm,21.3s,baz=74,slow=35
ZSN Zaisan 57.75 320 *e*P **P** **11 50 14.5 +1.0**
comp=Z,9.7nm,1.3s
RAO Raoul Island 57.96 135 LR LR 12 12 15.0
comp=Z,123nm,18.8s,baz=93,slow=33
HYB Hyderabad 58.48 284 *e*P **P** **11 50 19.7 +0.6**
HYB *e*PcP **PcP** **11 51 10.0 +0.4**
MK31 Makanchi Array 59.20 318 P **P** **11 50 23.6 -0.1**
MK31 lAmb lAmb 11 50 25.7
comp=Z,12nm,0.9s
MK31 Makanchi Array 59.20 318 P **P** **11 50 23.6 -0.1**
MK31 pmax pmax
comp=Z,12nm,0.9s
MKAR Makanchi Array 59.20 318 P **P** **11 50 24.7 +1.0**
comp=Z,13nm,0.7s,baz=102,slow=9.1,SNR=128
MKAR LR LR 12 15 49.1
comp=Z,75nm,21.2s,baz=105,slow=36
comp=Z,13nm,0.7s
MKAR Makanchi Array 59.20 318 P **P** **11 50 23.7 +0.1**
MAKZ Makanchi 59.41 318 P **P** **11 50 24.7 -0.4**
MAKZ lAmb lAmb 11 50 27.2
comp=Z,18nm,0.9s
MAKZ Makanchi 59.41 318 P **P** **11 50 24.7 -0.4**
MAKZ pmax pmax
comp=Z,18nm,1.0s
BILL Bilibino 59.65 12 **P** **11 50 26.6 +0.3**
BILL Bilibino 59.65 12 *c i* P **P** **11 50 26.4 +0.1**
BILL pmax pmax
comp=Z,28nm,1.6s
SHLS Shalkode 60.15 314 *e*P **P** **11 50 29.3 -1.1**
comp=Z,5.6nm,0.8s
PDGK Podgornoye 60.17 314 P **P** **11 50 29.8 -0.8**
ZAA0 Zalesovo Array 60.23 327 lAmb lAmb 11 50 31.2
comp=Z,8.0nm,0.7s
ZALV Zalesovo Beam 60.23 327 P **P** **11 50 30.6 +0.1**
comp=Z,8.1nm,0.6s,baz=107,slow=6.9,SNR=35
ZALV LR LR 12 17 07.4
comp=Z,117nm,20.5s,baz=105,slow=36
comp=Z,8.1nm,0.6s
UZB Uzynbulak 60.47 313 *e*P **P** **11 50 33.3 +0.7**
comp=Z,9.5nm,1.1s
TIXI Tiksi 60.77 356 LR LR 12 16 30.6
comp=Z,111nm,20.3s,baz=192,slow=36
TIXI Tiksi 60.77 356 P **P** **11 50 33.6 -0.3**
TIXI Tiksi 60.77 356 P **P** **11 50 33.6 -0.3**
TIXI pmax pmax
comp=Z,7.0nm,1.1s
KPKS Kokpek 60.78 314 *e*P **P** **11 50 35.6 +0.9**
URZ Urewera 60.83 146 LR LR 12 14 04.1
comp=Z,104nm,19.3s,baz=326,slow=33
SATY Saty 60.89 313 *e*P **P** **11 50 36.3 +0.9**
comp=Z,8.1nm,0.7s
TDK Taldyqorghan 61.33 315 *e*P **P** **11 50 39.2 +1.0**
comp=Z,11nm,0.7s
KDJ Kajisay 61.58 312 lAmb lAmb 11 50 42.6
comp=Z,16nm,0.9s
MDOK Medeo 61.88 313 *e*P **P** **11 50 43.0 +0.8**
TNSS Tian-Shan 61.93 313 *e*P **P** **11 50 43.4 +0.6**
AAA Alma-Ata 61.98 313 *e*P **P** **11 50 43.8 +1.0**
comp=Z,5.3nm,0.4s
RPZ Rata Peaks 62.02 154 LR LR 12 17 12.7
comp=Z,93nm,18.5s,baz=188,slow=36
KSH2 Kashi 62.29 308 P **P** **11 50 46.5 +1.5**
KSH2 pP pP 11 50 50.8 -2.8
KSH2 pmax pmax
comp=Z,11nm,0.8s
NRN Naryn 62.32 311 lAmb lAmb 11 50 47.6
comp=Z,9.3nm,1.0s
KURK Kurchatov 62.68 322 **P** **11 50 47.6 +0.4**
KURK Kurchatov 62.68 322 *c i* P **P** **11 50 47.5 +0.3**
KURK pmax pmax
comp=Z,30nm,0.9s
FALS False Pass 62.69 33 P **P** **11 50 47.8 +0.7**
baz=249
KURBB Kurchatov Arra 62.71 322 P **P** **11 50 47.8 +0.4**
comp=Z,13nm,0.8s,baz=104,slow=6.9,SNR=85
comp=Z,13nm,0.8s
KURBB Kurchatov Arra 62.71 322 P **P** **11 50 47.2 -0.2**
M11K Mekoryuk 63.52 27 P **P** **11 50 53.3 +0.8**
baz=244
AAK Ala-Archa 63.63 312 LR LR 12 20 06.4
comp=Z,75nm,19.8s,baz=70,slow=37
AAK Ala-Archa 63.63 312 P **P** **11 50 53.9 0.0**
AAK Ala-Archa 63.63 312 *c i* P **P** **11 50 54.5 +0.6**
AAK pmax pmax
comp=Z,4.0nm,0.9s
CHNA Chernabura Isl 64.78 34 P **P** **11 51 01.6 +0.8**
baz=253
M13K Dall Lake 64.82 28 P **P** **11 51 02.3 +1.2**
baz=247
K13K Kusilvak Mount 64.86 26 P **P** **11 51 02.4 +1.0**
baz=245
S14K Fog Glacier 65.24 33 P **P** **11 51 03.7 -0.3**
baz=252
TNA Tin City 65.26 22 lAmb lAmb 11 51 05.9
comp=Z,10nm,1.0s
TNA Tin City 65.26 22 P **P** **11 51 04.7 +0.8**
baz=240,SNR=7.7
O14K Tigyukauivet M 65.36 29 P **P** **11 51 05.0 +0.5**
baz=249
N14K Kuskokwak Cree 65.40 29 P **P** **11 51 05.4 +0.6**
baz=248
L14K Kuka Creek 65.48 27 P **P** **11 51 06.3 +1.0**
baz=247
M14K Bethel 65.58 28 P **P** **11 51 07.0 +1.0**
baz=248
J14K Nanvaranak Lak 65.67 25 P **P** **11 51 07.5 +0.9**
baz=246
ANM Nome 65.73 23 lAmb lAmb 11 51 09.2
comp=Z,27nm,1.7s
ANM Nome 65.73 23 P **P** **11 51 08.0 +1.1**
baz=243
F14K Arctic Creek 65.80 22 P **P** **11 51 08.7 +1.4**
baz=242
CHGN Chignik 65.85 33 P **P** **11 51 08.1 +0.3**
baz=253
DZA Taraz 65.97 312 *e*P **P** **11 51 10.1 +1.1**
comp=Z,7.1nm,0.6s
O15K Ungalikthiuk R 66.03 30 lAmb lAmb 11 51 10.6
comp=Z,15nm,0.9s
O15K Ungalikthiuk R 66.03 30 P **P** **11 51 09.6 +0.7**
baz=251
M15K Kasigluk River 66.14 28 P **P** **11 51 10.1 +0.5**
baz=249
L15K Ungalak Mounta 66.14 27 P **P** **11 51 10.0 +0.4**
baz=248
BRZS Berezniki 66.19 320 *e*P **P** **11 51 11.2 +1.0**
N15K Kwethluk River 66.23 29 lAmb lAmb 11 51 12.5
comp=Z,16nm,0.9s
N15K Kwethluk River 66.23 29 P **P** **11 51 11.1 +0.8**
baz=250,SNR=5.2
K15K Wolf Creek Mou 66.36 26 lAmb lAmb 11 51 12.6
comp=Z,13nm,0.8s
K15K Wolf Creek Mou 66.36 26 P **P** **11 51 11.9 +0.9**
baz=248,SNR=5.0
G15K Niukluk 66.44 23 P **P** **11 51 12.2 +0.7**
baz=244
F15K North Star Dit 66.53 22 lAmb lAmb 11 51 14.4
comp=Z,22nm,1.1s
F15K North Star Dit 66.53 22 P **P** **11 51 13.3 +1.3**
baz=243,SNR=17
NRIK Noril'sk 66.56 342 P **P** **11 51 11.8 -0.3**
comp=Z,10.0nm,0.9s,baz=117,slow=7.5,SNR=15
NRIK LR LR 12 20 41.8
comp=Z,122nm,18.9s,baz=127,slow=36
comp=Z,10.0nm,0.9s
NRIK Noril'sk 66.56 342 lAmb lAmb 11 51 13.3
comp=Z,19nm,1.1s
NRIK Noril'sk 66.56 342 *c i* P **P** **11 51 12.1 -0.1**
NRIK pmax pmax
comp=Z,21nm,1.3s
KK31 Karatay Array 66.59 312 lAmb lAmb 11 51 15.0
comp=Z,24nm,1.6s
KK31 Karatay Array 66.59 312 *i* P **P** **11 51 13.4 +0.5**
KKAR Karatay Array 66.59 312 **P** **11 51 13.4 +0.5**
KKAR Karatay Array 66.59 312 P **P** **11 51 13.4 +0.5**
R16K Pilot Point 66.65 32 P **P** **11 51 14.0 +1.1**
baz=253
IUG Iuzhnay 66.84 311 *e*P **P** **11 51 15.6 +1.0**
comp=Z,19nm,1.1s
P16K Nushagak River 66.88 30 P **P** **11 51 15.3 +1.0**
baz=252,SNR=6.1
N16K Nishlik Lake 66.96 29 P **P** **11 51 16.0 +1.1**
baz=251
H16K Elim 66.99 24 P **P** **11 51 15.5 +0.5**
baz=246,SNR=5.7
O16K Kokwok River B 67.00 30 lAmb lAmb 11 51 16.8
comp=Z,15nm,1.0s
O16K Kokwok River B 67.00 30 P **P** **11 51 15.7 +0.6**
baz=252,SNR=5.5
L16K Owhat River 67.05 27 P **P** **11 51 15.9 +0.5**
baz=250
M16K Timber Creek 67.05 28 lAmb lAmb 11 51 17.8
comp=Z,9.8nm,1.1s
M16K Timber Creek 67.05 28 P **P** **11 51 16.3 +0.8**
baz=251
BRLS Borolday 67.08 312 *e*P **P** **11 51 17.2 +1.2**
J16K Anvik River 67.12 25 P **P** **11 51 17.0 +1.1**
baz=248
CHM Chimkent 67.17 311 *e*P **P** **11 51 17.8 +1.1**
comp=Z,6.2nm,0.6s
CHGR Chuyangaron 67.21 307 lAmb lAmb 11 51 18.7
comp=Z,20nm,1.0s
CHGR Chuyangaron 67.21 307 *c i* P **P** **11 51 17.5 +0.5**
CHGR pmax pmax
comp=Z,19nm,0.8s
G16K Koyuk River 67.25 23 P **P** **11 51 17.8 +1.1**
baz=246
R17L Mt. Peulik Vol 67.30 32 P **P** **11 51 17.5 +0.4**
baz=254
I17K Unalakleet 67.31 25 P **P** **11 51 18.1 +1.0**
baz=248
Q16K King Salmon 67.44 31 P **P** **11 51 18.3 +0.4**
baz=254
C16K Lisburne Hills 67.48 19 lAmb lAmb 11 51 19.8
comp=Z,16nm,0.9s
C16K Lisburne Hills 67.48 19 P **P** **11 51 18.8 +0.8**
baz=242
O17K Koliganek Bris 67.54 30 P **P** **11 51 19.4 +0.9**
baz=253
P17K Kvichak River 67.69 30 P **P** **11 51 19.3 -0.2**
baz=254
Q17K Contact Creek 67.71 31 P **P** **11 51 20.0 +0.2**
baz=255
L17K Donlin 67.72 27 P **P** **11 51 20.7 +1.0**
baz=251
N17K Nushagak Hills 67.72 29 P **P** **11 51 20.8 +1.1**
baz=252
J17K VABM Dome 67.81 25 P **P** **11 51 21.4 +1.2**
baz=250
M17K Holitna River 67.87 28 lAmb lAmb 11 51 23.0
comp=Z,17nm,0.8s
M17K Holitna River 67.87 28 P **P** **11 51 21.8 +1.2**
baz=252,SNR=8.9
K17K Iditarod 67.91 26 lAmb lAmb 11 51 23.3
comp=Z,22nm,1.1s
K17K Iditarod 67.91 26 P **P** **11 51 22.1 +1.3**

baz=251
G17K **Kiwalik Mounta** 67.95 23 P P 11 51 22.3 +1.2
baz=247,SNR=13
SHAA **Shahritus** 67.96 306 IAmb IAmb 11 51 23.6
comp=Z,17nm,0.8s
D17K **Noatak River** 67.97 20 P P 11 51 22.4 +1.3
baz=244
H17K **Granite Mounta** 68.02 24 IAmb IAmb 11 51 23.8
comp=Z,15nm,0.9s
H17K **Granite Mounta** 68.02 24 P P 11 51 22.9 +1.3
baz=248,SNR=12
F17K **Baldwin Pennin** 68.09 22 P P 11 51 23.2 +1.3
baz=246,SNR=14
BVA0 **Borovoye Array** 68.18 323 *i* P P 11 51 23.0 +0.2
BVAR **Borovoye Array** 68.18 323 P P 11 51 23.1 +0.4
comp=Z,13nm,0.8s,baz=101,slow=7.7,SNR=64
BVAR LR LR 12 23 54.7
comp=Z,68nm,18.1s,baz=90,slow=38
comp=Z,13nm,0.8s
SII **Sitkinak Islan** 68.18 33 P P 11 51 23.5 +0.8
baz=257
RDOG **Red Dog Mine** 68.19 20 P P 11 51 23.7 +1.2
baz=244,SNR=5.1
BORK **Borovoye** 68.23 323 P 11 51 23.5 +0.5
BORK **Borovoye** 68.23 323 *ce* P P 11 51 23.3 +0.3
BORK pmax pmax
comp=Z,24nm,0.9s
Q18K **Katmai Hardscr** 68.26 31 P P 11 51 23.6 +0.3
baz=255
C17K **DeLong Mountai** 68.28 20 P P 11 51 24.1 +0.9
baz=244,SNR=9.2
P18K **Big Mountain,** 68.34 30 P P 11 51 24.3 +0.6
baz=255
N18K **Kilae Creek** 68.37 29 IAmb IAmb 11 51 26.0
comp=Z,12nm,1.0s
N18K **Kilae Creek** 68.37 29 P P 11 51 25.0 +1.1
baz=254
RAR **Rarotonga** 68.40 118 LR LR 12 17 38.5
comp=Z,104nm,18.2s,baz=280,slow=33
L18K **Granite Mounta** 68.46 27 IAmb IAmb 11 51 26.8
comp=Z,11nm,1.1s
L18K **Granite Mounta** 68.46 27 P P 11 51 25.5 +1.2
baz=252
O18K **Koktuh Hills** 68.47 30 P P 11 51 25.5 +1.0
baz=255,SNR=7.7
M18K **Stony River** 68.64 28 P P 11 51 26.6 +1.2
baz=253
H18K **Honhosa River** 68.71 24 P P 11 51 26.9 +1.0
baz=250,SNR=8.9
E18K **Tukpahlearik C** 68.72 21 P P 11 51 27.2 +1.4
baz=247,SNR=25
F18K **Selawik** 68.75 22 P P 11 51 27.0 +1.1
baz=248,SNR=7.8
OHAK **Old Harbor** 68.81 33 P P 11 51 27.2 +0.6
baz=257
J18K **Innoko River** 68.83 26 P P 11 51 27.2 +0.6
baz=252
G18K **Tagagawik** 68.86 23 P P 11 51 27.7 +0.9
baz=249,SNR=15
O19K **Port Alsworth** 68.99 29 IAmb IAmb 11 51 29.9
comp=Z,14nm,1.0s
O19K **Port Alsworth** 68.99 29 P P 11 51 28.4 +0.7
baz=255,SNR=8.9
Q19K **Cape Douglas,** 69.02 31 P P 11 51 28.1 +0.2
baz=256
C18K **Utukok River** 69.02 20 IAmb IAmb 11 51 29.4
comp=Z,9.6nm,0.8s
C18K **Utukok River** 69.02 20 P P 11 51 28.4 +0.7
baz=246,SNR=13
N19K **Bonanza Creek** 69.08 29 IAmb IAmb 11 51 30.5
comp=Z,11nm,0.8s
N19K **Bonanza Creek** 69.08 29 P P 11 51 29.4 +1.1
baz=255
GCSA **Galena City Sc** 69.17 24 P P 11 51 29.4 +0.8
baz=251,SNR=10
L19K **White Mountain** 69.27 27 IAmb IAmb 11 51 31.5
comp=Z,12nm,1.1s
L19K **White Mountain** 69.27 27 P P 11 51 30.4 +1.0
baz=254
KDAK **Kodiak Island** 69.30 32 P P 11 51 30.0 +0.4
baz=258
P19K **Oil Pt** 69.39 30 P P 11 51 30.3 +0.1
baz=256
J19K **Poorman** 69.46 25 P P 11 51 31.3 +0.9
baz=253,SNR=12
F19K **Shaleruckik Mo** 69.53 22 P P 11 51 31.4 +0.5
baz=250
G19K **Purcell Mounta** 69.55 23 P P 11 51 32.0 +1.0
baz=250,SNR=29
Q20K **Shuyak Island** 69.58 31 P P 11 51 31.3 0.0
baz=258
H19K **Roundabout Mou** 69.60 24 P P 11 51 32.6 +1.3
baz=251
A19K **Wainwright** 69.71 18 P P 11 51 33.3 +1.4
baz=245,SNR=12
C19K **Lookout Ridge** 69.73 20 P P 11 51 33.7 +1.5
baz=247,SNR=30
K20K **Telida** 69.94 26 IAmb IAmb 11 51 36.0
comp=Z,12nm,0.9s
K20K **Telida** 69.94 26 P P 11 51 34.9 +1.4
baz=254,SNR=13
E19K **Redstone River** 69.94 22 IAmb IAmb 11 51 35.7
comp=Z,18nm,0.9s
E19K **Redstone River** 69.94 22 P P 11 51 34.6 +1.2
baz=250,SNR=27
M20K **Styx River** 69.98 28 P P 11 51 34.9 +1.1
baz=256
D19K **Kuna River** 70.00 20 P P 11 51 34.8 +1.0
baz=249,SNR=15
J20K **Nowinta River** 70.13 25 IAmb IAmb 11 51 36.7
comp=Z,12nm,0.8s
J20K **Nowinta River** 70.13 25 P P 11 51 36.0 +1.4
baz=254,SNR=19
I20K **Naaghedeneel** 70.17 25 P P 11 51 36.3 +1.5
baz=253,SNR=5.5
HOM **Homer** 70.18 30 P P 11 51 36.2 +1.2
baz=258
H20K **Anotleneega Mo** 70.21 24 P P 11 51 36.4 +1.3
baz=253,SNR=15
N20K **Mount Spurr** 70.24 29 P P 11 51 35.4 0.0
baz=257
SPCR **Spurr Chakacha** 70.24 29 P P 11 51 35.5 0.0
baz=257
F20K **Avaraart Lake** 70.36 22 P P 11 51 37.1 +1.1
baz=252
BRLK **Bradley Lake** 70.58 30 IAmb IAmb 11 51 38.1
comp=Z,10nm,0.7s
E20K **Nigu River** 70.59 21 P P 11 51 38.5 +1.0
baz=251,SNR=34
D20K **Etivluk River** 70.59 20 P P 11 51 38.4 +1.0
baz=250
BRSE **Bradley Lake S** 70.64 30 P P 11 51 37.8 0.0
baz=259,SNR=5.7
PPLA **Purkeypile** 70.65 27 IAmb IAmb 11 52 47.7
comp=Z,14nm,0.9s
PPLA **Purkeypile** 70.65 27 P P 11 51 38.7 +0.7
baz=256,SNR=5.4
SKT **Skwentna** 70.74 28 P P 11 51 38.2 -0.2
baz=257,SNR=5.7
IMAR **Indian Mountai** 70.80 24 P P 11 51 39.5 +0.8
CHUM **Lake Minchumin** 70.83 26 P P 11 51 40.1 +1.2
baz=256,SNR=6.7
B20K **Meade River** 70.86 19 P P 11 51 40.1 +1.1
baz=249
G21K **Allakaket** 71.04 23 P P 11 51 41.4 +1.2
baz=254
SLKM **Skilak Lake** 71.05 30 IAmb IAmb 11 51 41.3
comp=Z,27nm,1.2s
H21K **Melozitna River** 71.08 24 P P 11 51 41.6 +1.2
baz=255
F21K **Alatna River** 71.25 22 P P 11 51 42.0 +0.6
baz=254,SNR=12
O22K **Cooper Landing** 71.29 30 P P 11 51 41.9 +0.2
baz=259
I21K **Tanana** 71.29 25 P P 11 51 43.0 +1.3
baz=256,SNR=16
M22K **Willow** 71.34 28 P P 11 51 41.7 -0.3
baz=258,SNR=5.4
SEW **Seward** 71.35 30 P P 11 51 42.4 +0.3
baz=260
C21K **Knifeblade Rid** 71.36 20 P P 11 51 43.1 +1.1
baz=252,SNR=8.7
RC01 **Rabbit Creek A** 71.39 29 IAmb IAmb 11 51 43.3
comp=Z,16nm,1.2s
RC01 **Rabbit Creek A** 71.39 29 P P 11 51 42.4 0.0
baz=259,SNR=6.0
CUT **Chulitna** 71.41 28 P P 11 51 42.1 -0.3
baz=258,SNR=5.3

BPAW **Bear Paw Mtn.** 71.45 26 P P 11 51 43.4 +0.6
baz=257,SNR=22
A21K **Barrow** 71.50 18 P P 11 51 43.6 +0.8
baz=249
B21K **Ikpikpuk River** 71.57 20 P P 11 51 44.2 +1.0
baz=252
TRF **Thorofare Moun** 71.61 27 P 11 51 43.9 +0.1
TRF **Thorofare Moun** 71.61 27 P P 11 51 43.9 +0.1
baz=258,SNR=8.1
H22K **Ishtalitna Cre** 71.71 24 P P 11 51 45.7 +1.5
baz=256
MLY **Manley** 71.77 25 IAmb IAmb 11 51 46.7
comp=Z,28nm,1.2s
MLY **Manley** 71.77 25 P P 11 51 45.7 +1.1
baz=257,SNR=31
PMR **Palmer** 71.78 29 IAmb IAmb 11 51 45.4
comp=Z,14nm,0.9s
PMR **Palmer** 71.78 29 P P 11 51 44.4 -0.2
baz=260,SNR=6.8
F22K **John River** 71.81 22 P P 11 51 46.1 +1.3
baz=255
A22K **Sinclair Lake** 71.89 18 P P 11 51 46.4 +1.2
baz=251
GHO **Glory Hole Cre** 71.90 28 IAmb IAmb 11 51 47.0
comp=Z,13nm,0.9s
G22K **Bettles** 71.91 23 P P 11 51 46.2 +0.9
baz=256
KNK **Knik Glacier** 72.06 29 IAmb IAmb 11 51 47.9
comp=Z,18nm,1.0s
KNK **Knik Glacier** 72.06 29 P P 11 51 46.8 +0.4
baz=260,SNR=7.8
E22K **Anaktuvuk Pass** 72.11 22 P P 11 51 47.8 +1.2
baz=255
B22K **Teshekpuk Lake** 72.18 19 IAmb IAmb 11 51 48.8
comp=Z,28nm,1.1s
B22K **Teshekpuk Lake** 72.18 19 P P 11 51 47.8 +1.0
baz=253
SML **Sawmill** 72.19 28 P P 11 51 47.6 +0.4
baz=260,SNR=10.0
WAT1 **Susitna Watana** 72.27 27 P P 11 51 47.6 0.0
baz=260
P23K **Montague Islan** 72.35 30 P P 11 51 48.6 +0.5
baz=262
I23K **Minto, Yukon-K** 72.36 25 P P 11 51 49.1 +1.0
baz=258,SNR=18
G23K **Bananza Creek** 72.44 23 IAmb IAmb 11 51 51.1
comp=Z,24nm,1.2s
G23K **Bananza Creek** 72.44 23 P P 11 51 50.0 +1.4
baz=257,SNR=19
M23K **Glacier View** 72.47 29 P P 11 51 49.2 +0.3
baz=261,SNR=8.4
COLD **Coldfoot** 72.48 23 IAmb IAmb 11 51 51.3
comp=Z,24nm,1.2s
COLD **Coldfoot** 72.48 23 P P 11 51 50.2 +1.4
baz=257,SNR=24
WAT6 **Susitna Watana** 72.59 28 P P 11 51 50.0 +0.3
baz=260,SNR=17
GLI **Glacier Island** 72.63 30 IAmb IAmb 11 51 51.2
comp=Z,13nm,0.8s
GLI **Glacier Island** 72.63 30 P P 11 51 50.1 +0.4
baz=262,SNR=5.6
SCM **Sheep Creek Mo** 72.66 29 P P 11 51 50.7 +0.6
baz=261,SNR=15
D23K **Nanshuk River** 72.72 21 IAmb IAmb 11 51 53.1
comp=Z,39nm,1.6s
D23K **Nanushuk River** 72.72 21 P P 11 51 51.7 +1.5
baz=256,SNR=12
DHY **Denali Highway** 72.84 27 P P 11 51 51.9 +0.7
baz=261,SNR=12
E23K **Chandalar** 72.89 22 P P 11 51 52.9 +1.5
baz=257
COLA **College** 72.94 25 P P 11 51 51.8 +0.3
COLA **College** 72.94 25 *c* *i* P P 11 51 51.1 -0.4
COLA pmax pmax
comp=Z,14nm,1.3s
C23K **Itkillik River** 72.97 20 P P 11 51 52.7 +1.1
baz=256,SNR=17
TOLK **Toolik Lake Re** 73.04 21 P P 11 51 53.4 +1.3
baz=257,SNR=13
H24K **Noodor Dome** 73.11 24 IAmb IAmb 11 52 37.5
comp=Z,11nm,0.9s
H24K **Noodor Dome** 73.11 24 P P 11 51 53.6 +1.1
baz=259
POKR **Poker Plat Res** 73.16 25 P P 11 51 54.1 +1.2
baz=260
EYAK **Cordova Ski Ar** 73.24 30 P P 11 51 54.3 +0.9
baz=263
M24K **Tolsona, Glenn** 73.24 28 IAmb IAmb 11 52 53.1
comp=Z,16nm,0.7s
M24K **Tolsona, Glenn** 73.24 28 P P 11 51 54.5 +1.1
baz=262,SNR=5.9
KLU **Klutina** 73.28 29 IAmb IAmb 11 51 55.7
comp=Z,16nm,0.9s
KLU **Klutina** 73.28 29 P P 11 51 54.6 +0.9
baz=262,SNR=10
DIV **Divide** 73.30 29 IAmb IAmb 11 51 56.0
comp=Z,18nm,1.1s
E24K **Your Creek** 73.31 22 P P 11 51 55.0 +1.2
baz=258
ILAR **Eielson Array** 73.33 26 P P 11 51 53.2 -0.7
comp=Z,3.7nm,0.6s,baz=248,slow=5.7,SNR=97
comp=Z,3.7nm,0.6s
ILAR **Eielson Array** 73.33 26 P P 11 51 53.3 -0.5
D24K **Happy Valley** 73.42 21 P P 11 51 55.7 +1.4
baz=257
F24K **Squaw Lake** 73.42 23 P P 11 51 55.9 +1.5
baz=259,SNR=10
G24K **Hadweenzic Riv** 73.42 23 P P 11 51 55.6 +1.2
baz=259,SNR=12
C24K **Franklin Bluff** 73.58 20 P P 11 51 56.2 +0.9
baz=257
K24K **Donnelly Dome** 73.66 27 P P 11 51 56.2 +0.4
baz=262,SNR=11
PAX **Paxson** 73.68 27 IAmb IAmb 11 52 34.3
comp=Z,16nm,0.7s
PAX **Paxson** 73.68 27 P P 11 51 56.6 +0.6
baz=262,SNR=10
KAIM **Kayak Island** 73.83 31 P P 11 51 57.6 +0.7
baz=264
BMRM **Bremner River** 73.85 30 P P 11 51 57.9 +0.9
baz=264,SNR=9.0
N25K **Chitina, Valde** 73.92 29 IAmb IAmb 11 51 59.8
comp=Z,48nm,1.8s
N25K **Chitina, Valde** 73.92 29 P P 11 51 58.4 +0.9
baz=264
J25K **Salcha River,** 73.95 26 P P 11 51 57.9 +0.3
baz=262
G25K **Bearman Lake** 73.97 24 P P 11 51 58.9 +1.4
baz=261
PRP **Porcupine Dome** 74.01 25 P P 11 51 57.7 -0.4
baz=262
RIDG **Independent Ri** 74.06 27 P P 11 51 58.5 +0.3
baz=263,SNR=15
SVE **Sverdlovsk** 74.24 326 *e* P P 11 51 59.7 +0.4
SVE pmax pmax
comp=Z,14nm,0.9s
GLB **Gilahina Butte** 74.28 29 IAmb IAmb 11 52 01.5
comp=Z,19nm,1.0s
F25K **Christian Rive** 74.28 23 P P 11 52 00.9 +1.5
baz=261,SNR=9.4
D25K **Kavik River** 74.31 21 P P 11 52 00.6 +1.0
baz=260
ABKAR **Akbulak array** 74.34 318 P 11 52 00.1 0.0
E25K **Arctic Village** 74.39 22 IAmb IAmb 11 52 02.8
comp=Z,20nm,1.1s
E25K **Arctic Village** 74.39 22 P P 11 52 01.5 +1.4
baz=261,SNR=22
DOT **Dot Lake** 74.40 27 IAmb IAmb 11 52 46.4
comp=Z,14nm,0.5s
BGLC **Bering Glacier** 74.41 31 P P 11 52 00.5 +0.2
baz=265
VRDI **Verde Repeater** 74.43 29 IAmb IAmb 11 52 02.2
comp=Z,14nm,0.9s
SCRK **Sand Creek** 74.47 27 IAmb IAmb 11 52 02.2
comp=Z,18nm,1.2s
SCRK **Sand Creek** 74.47 27 P P 11 52 01.0 +0.4
baz=263,SNR=14
CRQM **Cirque** 74.54 30 IAmb IAmb 11 52 03.8
comp=Z,23nm,1.0s
CRQE **Cirque** 74.56 30 P P 11 52 02.0 +0.7
baz=265,SNR=5.8
MCARA **McCarthy VSAT** 74.65 29 IAmb IAmb 11 52 03.6
comp=Z,17nm,0.9s
MCARA **McCarthy VSAT** 74.65 29 P P 11 52 02.6 +0.9
baz=265,SNR=6.5
L26K **Log Cabin Wild** 74.65 28 IAmb IAmb 11 53 01.5
comp=Z,13nm,0.9s
L26K **Log Cabin Wild** 74.65 28 P P 11 52 02.6 +0.9

baz=264
TGL **Tana Glacier** 74.69 30 IAmb IAmb 11 52 04.0
comp=Z,17nm,1.0s
M26K **Nabesna, AK** 74.75 28 P P 11 52 03.3 +1.0
baz=265
F26K **Sheenjek River** 74.86 23 IAmb IAmb 11 52 05.5
comp=Z,18nm,1.1s
F26K **Sheenjek River** 74.86 23 P P 11 52 04.4 +1.6
baz=262,SNR=18
G26K **Porcupine Rive** 74.91 23 P P 11 52 04.4 +1.4
baz=263
C26K **Camden Bay** 74.91 20 P P 11 52 03.7 +0.7
baz=261
I26K **Coal Creek Min** 74.97 25 P P 11 52 03.2 -0.2
baz=264
MESA **MESA** 75.08 31 P P 11 52 05.6 +1.1
baz=266
GRNC **Granite Creek** 75.22 30 IAmb IAmb 11 52 07.2
comp=Z,16nm,0.8s
M27K **Edge Creek, AK** 75.27 28 IAmb IAmb 11 52 07.5
comp=Z,15nm,1.0s
M27K **Edge Creek, AK** 75.27 28 P P 11 52 06.5 +1.1
baz=266,SNR=13
BARN **Barnard Glacie** 75.28 30 IAmb IAmb 11 52 24.9
comp=Z,54nm,2.0s
C27K **Jago River** 75.28 21 IAmb IAmb 11 52 07.4
comp=Z,12nm,0.9s
C27K **Jago River** 75.28 21 P P 11 52 06.3 +1.1
baz=262
L27K **Beaver Creek,** 75.34 28 P P 11 52 06.7 +1.1
baz=266,SNR=9.7
BCAR **Beaver Creek A** 75.36 28 P 11 52 06.1 +0.3
CTG **Chitna Glacier** 75.43 30 P P 11 52 07.7 +1.4
baz=267,SNR=6.1
CTGM **Chitina Glacie** 75.44 30 IAmb IAmb 11 52 08.7
comp=Z,18nm,0.8s
ARTI **Arti** 75.47 325 LR LR 12 26 20.2
comp=Z,135nm,20.4s,baz=72,slow=36
LOGN **Logan Glacier** 75.59 30 IAmb IAmb 11 52 09.6
comp=Z,17nm,0.8s
AKTO **Aktyubinsk** 75.60 319 LR LR 12 26 53.7
comp=Z,66nm,19.2s,baz=325,slow=37
I27K **Kandik River** 75.64 25 IAmb IAmb 11 52 09.3
comp=Z,19nm,1.1s
I27K **Kandik River** 75.64 25 P P 11 52 08.2 +0.9
baz=265
G27K **Doyon Strip** 75.73 24 P P 11 52 08.9 +1.1
baz=265
H27K **Steamboat Moun** 75.73 24 IAmb IAmb 11 52 10.4
comp=Z,30nm,1.3s
H27K **Steamboat Moun** 75.73 24 P P 11 52 09.2 +1.4
baz=265
BVCY **Beaver Creek** 75.75 28 P P 11 52 09.1 +1.2
baz=267
E27K **Coleen River** 75.88 22 IAmb IAmb 11 52 11.1
comp=Z,14nm,1.1s
E27K **Coleen River** 75.88 22 P P 11 52 10.0 +1.4
baz=265,SNR=11
YUK3 **Moose Creek** 75.90 29 P P 11 52 10.4 +1.3
baz=267,SNR=14
PCA **Pinnacle** 75.93 31 IAmb IAmb 11 52 13.8
comp=Z,23nm,1.1s
PINM **Pinnacle** 75.93 31 P P 11 52 10.2 +1.1
baz=268
O28M **Mount Upton** 75.98 30 IAmb IAmb 11 52 12.2
comp=Z,17nm,0.9s
O28M **Mount Upton** 75.98 30 P P 11 52 11.1 +1.4
baz=268,SNR=9.8
D27M **Malcolm River** 76.20 21 P P 11 52 11.6 +1.1
baz=265
YUK8 **Steele Glacier** 76.21 29 P P 11 52 12.4 +1.5
baz=268
PPT **Papeete** 76.31 111 LR LR 12 23 18.4
comp=Z,216nm,19.5s,baz=314,slow=34
I28M **Miner Creek** 76.33 25 IAmb IAmb 11 52 12.9
comp=Z,8.3nm,0.8s
I28M **Miner Creek** 76.33 25 P P 11 52 12.4 +1.1
baz=267,SNR=15
F28M **Old Crow** 76.48 23 IAmb IAmb 11 52 14.4
comp=Z,23nm,1.1s
F28M **Old Crow** 76.48 23 P P 11 52 13.3 +1.2
baz=266,SNR=19
E28M **Babbage River** 76.67 22 IAmb IAmb 11 52 15.5
comp=Z,29nm,1.2s
E28M **Babbage River** 76.67 22 P P 11 52 14.5 +1.4
baz=266,SNR=16
YUK4 **Talbot Arm** 76.75 29 P P 11 52 15.7 +1.8
baz=269
O29M **Mount Kennedy** 76.77 30 IAmb IAmb 11 52 16.8
comp=Z,18nm,1.1s
O29M **Mount Kennedy** 76.77 30 P P 11 52 15.7 +1.7
baz=269,SNR=6.9
M29M **Somme Creek** 76.86 28 IAmb IAmb 11 52 17.1
comp=Z,19nm,1.1s
M29M **Somme Creek** 76.86 28 P P 11 52 16.1 +1.6
baz=269,SNR=24
YUK6 **Outpost Mounta** 76.88 30 P P 11 52 16.3 +1.5
baz=269
I29M **Ogilvie Camp,** 77.00 25 IAmb IAmb 11 52 17.1
comp=Z,15nm,1.3s
I29M **Ogilvie Camp,** 77.00 25 P P 11 52 15.9 +0.8
baz=268,SNR=6.9
H29M **Whitestone** 77.00 24 P P 11 52 16.0 +1.0
baz=268
J29N **Klondike Camp** 77.02 26 P P 11 52 16.5 +1.3
baz=269
L29M **L29M** 77.03 28 P P 11 52 17.0 +1.8
baz=269,SNR=20
G29M **Pine Creek** 77.17 24 P P 11 52 17.2 +1.3
baz=268
E29M **Blow River** 77.26 22 P P 11 52 17.0 +0.6
baz=268
HYT **Haines Junctio** 77.30 30 IAmb IAmb 11 52 20.2
comp=Z,21nm,1.0s
HYT **Haines Junctio** 77.30 30 P P 11 52 18.5 +1.6
baz=270,SNR=14
K29M **Barlow Dome** 77.31 27 IAmb IAmb 11 52 19.4
comp=Z,13nm,1.1s
K29M **Barlow Dome** 77.31 27 P P 11 52 18.3 +1.4
baz=269,SNR=15
N30M **Aishikik Lake** 77.50 29 IAmb IAmb 11 52 20.6
comp=Z,24nm,1.2s
N30M **Aishikik Lake** 77.50 29 P P 11 52 19.6 +1.6
baz=270,SNR=11
P30M **Million Dollar** 77.58 31 P P 11 52 20.0 +1.6
baz=271
M30M **Minto, Yukon** 77.64 28 IAmb IAmb 11 52 21.2
comp=Z,16nm,1.3s
M30M **Minto, Yukon** 77.64 28 P P 11 52 20.0 +1.3
baz=270,SNR=8.9
EPYK **Eagle Plains** 77.67 24 IAmb IAmb 11 52 20.9
comp=Z,24nm,1.4s
EPYK **Eagle Plains** 77.67 24 P P 11 52 19.6 +0.8
baz=270,SNR=6.2
I30M **Mount Dempster** 77.81 25 P P 11 52 20.5 +0.8
baz=270,SNR=12
J30M **Hart River** 77.83 26 IAmb IAmb 11 52 25.1
comp=Z,24nm,1.6s
J30M **Hart River** 77.83 26 P P 11 52 21.1 +1.3
baz=270,SNR=10
G30M **tAoh Zraii Nji** 77.88 24 IAmb IAmb 11 52 21.5
comp=Z,32nm,1.3s
G30M **tAoh Zraii Nji** 77.88 24 P P 11 52 20.3 +0.4
baz=270,SNR=10
O30N **Mendenhall** 78.00 30 P P 11 52 21.8 +1.1
baz=271,SNR=6.4
S31K **Pelican** 78.00 33 P P 11 52 21.4 +0.7
baz=272
MAYO **Mayo, Yukon** 78.04 27 P P 11 52 22.0 +1.2
baz=271
F30M **Barrier River** 78.05 23 P P 11 52 21.7 +0.9
baz=270,SNR=9.3
N31M **Braeburn, Yuko** 78.13 29 P P 11 52 23.0 +1.5
baz=271,SNR=12
SKAG **Skagway** 78.42 31 P P 11 52 24.2 +1.3
baz=272
SIT **Sitka** 78.53 34 P P 11 52 24.4 +0.8
baz=273
WHY **Whitehorse** 78.59 30 P P 11 52 25.5 +1.4
baz=272,SNR=12
G31M **Satah River** 78.65 24 IAmb IAmb 11 52 25.5
comp=Z,27nm,1.2s
G31M **Satah River** 78.65 24 P P 11 52 24.5 +0.5
baz=272,SNR=11
H31M **Peel River** 78.65 25 P P 11 52 24.9 +0.7
baz=272,SNR=5.4
M31M **Drury Creek, Y** 78.77 29 P P 11 52 25.8 +0.9
baz=272,SNR=9.3

F31M	Tsiigehtchic	78.83	23	P		P	11 52 25.1 0.0
	baz=272						
INK	Inuvik	78.89	22	P		P	11 52 25.5 +0.2
	baz=272,SNR=13						
R32K	Eaglecrest	78.89	33	P		P	11 52 26.9 +1.2
	baz=273						
P32M	Atlin	79.23	31	P		P	11 52 28.8 +1.2
	baz=274						
N32M	Quiet Lake	79.45	30	P		P	11 52 29.8 +1.1
	baz=274						
P33M	Teslin, Yukon	79.64	30	P		P	11 52 30.6 +0.8
	baz=274						
U33K	Whale Pass	79.80	35	P		P	11 52 30.7 +0.1
	baz=275						
CRAG	Craig	79.86	35	P		P	11 52 31.6 +0.7
	baz=275						
Q32M	Nakina River	80.02	32	P		P	11 52 33.4 +1.4
	baz=275						
WRAK	Wrangell Islan	80.21	34	P		P	11 52 34.1 +1.3
	baz=275						
KIRV	Kirov	80.24	328	LR		LR	12 31 43.2
	comp=Z,91nm,18.2s,baz=76,slow=38						
KIRV	Kirov	80.24	328	*c*	*i* P	P	11 52 33.2 +0.3
R33M	Jennings River	80.65	31	P		P	11 52 36.7 +1.4
	baz=276,SNR=8.2						
S34M	Telegraph Cree	80.72	33	IAmb		IAmb	11 52 38.2
	comp=Z,14nm,1.1s						
S34M	Telegraph Cree	80.72	33	P		P	11 52 37.0 +1.5
	baz=276,SNR=6.0						
V35K	Ketchikan	80.73	35	P		P	11 52 36.3 +0.7
	baz=276						
DLBC	Dease Lake	81.24	32	P		P	11 52 39.7 +1.3
	baz=277						
T35M	Bob Quinn	81.30	34	IAmb		IAmb	11 52 41.2
	comp=Z,15nm,1.1s						
T35M	Bob Quinn	81.30	34	P		P	11 52 40.2 +1.5
	baz=277,SNR=5.6						
A36M	Sachs Harbour	81.34	18	IAmb		IAmb	11 52 40.1
	comp=Z,19nm,0.8s						
A36M	Sachs Harbour	81.34	18	P		P	11 52 39.1 +0.6
	baz=279,SNR=20						
WTLY	Watson Lake, Y	81.65	30	IAmb		IAmb	11 52 42.9
	comp=Z,15nm,0.8s						
WTLY	Watson Lake, Y	81.65	30	P		P	11 52 41.9 +1.4
	baz=278,SNR=13						
BELG	Belogornoye	81.95	322	*c*	*i* P	P	11 52 42.2 0.0
BELG					pmax	pmax	
	comp=Z,7,0nm,1.1s						
C36M	Paulatuk	82.18	21	IAmb		IAmb	11 52 44.3
	comp=Z,14nm,1.1s						
C36M	Paulatuk	82.18	21	P		P	11 52 43.2 +0.2
	baz=281,SNR=11						
AKT	Akhty	83.48	311		*e* P	P	11 52 50.4 -0.1
AKT					*e*		11 52 54.6
AKT					pmax	pmax	
	comp=Z,14nm,1.0s						
WRGLY	Wrigley	83.63	27	P		P	11 52 51.6 +1.0
	baz=282						
KOTAN	Kotaneelee Air	83.99	30	P		P	11 52 53.6 +1.0
	baz=282						
KLMR	Klimovskoe	84.81	331		*e* P	P	11 52 56.1 -0.6
KLMR					pmax	pmax	
	comp=Z,11nm,1.1s						
NCK	Nalchik	86.13	313⇑		*e* P	P	11 53 04.5 +0.8
NCK					pmax	pmax	
	comp=Z,9.0nm,0.3s						
CLRS	Cowichan Lake	86.35	41	P		P	11 53 04.9 +0.3
CLRS				IAmb		IAmb	11 53 07.5
	comp=Z,15nm,1.1s						
KBZ	Khabaz	86.58	314	P		P	11 53 05.7 -0.1
	comp=Z,4.3nm,0.9s,baz=157,slow=2.2,SNR=11						
	comp=Z,4.3nm,0.9s						
KBZ	Khabaz	86.58	314	*c*	*e* P	P	11 53 05.9 +0.1
KBZ					pmax	pmax	
	comp=Z,6.0nm,1.0s						
KIV	Kislovodsk	86.68	314		*e* P	P	11 53 06.8 +0.3
KIV					pmax	pmax	
	comp=Z,6.0nm,1.0s						
KIV					MLR	MLR	
	comp=Z,70nm,20.0s						
SHA1	Shidzhatmaz	86.74	314⇑		*e* P	P	11 53 07.8 +0.8
NEUR	Neytrino	86.81	313⇓		*e* P	P	11 53 10.0 +2.7
NEUR					pmax	pmax	
	comp=Z,4.0nm,1.1s						
NLWA	Neilton Lookou	86.83	42	P		P	11 53 08.1 +1.0
LLLB	Lillooet	87.35	39	IAmb		IAmb	11 53 11.9
	comp=Z,12nm,1.1s						
GNW	Green Mountain	87.48	42	P		P	11 53 11.1 +0.9
ARCES	ARCESS Array B	87.50	341	P		P	11 53 09.0 -0.9
	comp=Z,4.3nm,0.8s,baz=58,slow=6.4,SNR=6.7						
	comp=Z,4.3nm,0.8s						
YKAW3	Yellowknife Wh	87.71	26	IAmb		IAmb	11 53 12.7
	comp=Z,14nm,1.0s						
YKA	Yellowknife Ar	87.73	26	P		P	11 53 11.6 +0.6
	comp=Z,6.7nm,0.9s,baz=296,slow=5.9,SNR=71						
	comp=Z,6.7nm,0.9s						
YKA	Yellowknife Ar	87.73	26	P		P	11 53 11.1 +0.1
YKA	Yellowknife Ar	87.73	26	*i*	P	P	11 53 11.6 +0.6
YKA					pmax	pmax	
	comp=Z,8.0nm,0.9s						
YKAW1	Yellowknife Wh	87.79	26	IAmb		IAmb	11 53 13.2
	comp=Z,17nm,1.1s						
OBN	Obninsk	87.81	326		*e* P	P	11 53 11.0 -0.5
OBN					*e*		11 56 37.2
OBN					pmax	pmax	
	comp=Z,12nm,0.9s						
L02F	Cave Junction	88.24	48	IAmb		IAmb	11 53 16.5
	comp=Z,16nm,1.2s						
RES	Resolute Bay	88.25	12	IAmb		IAmb	11 53 14.9
	comp=Z,11nm,1.0s						
RAYN	Ar Rayn	88.56	294	P		P	11 53 15.9 +0.1
RAYN				IAmb		IAmb	11 53 17.7
	comp=Z,9.7nm,0.8s						
RAYN	Ar Rayn	88.56	294	P		P	11 53 15.9 +0.1
RAYN					pmax	pmax	
	comp=Z,10.0nm,0.8s						
H04A	Detroit Lake	88.61	45	IAmb		IAmb	11 53 17.6
	comp=Z,16nm,1.2s						
I04A	Tendick Farm,	88.67	46	IAmb		IAmb	11 53 18.0
	comp=Z,17nm,1.2s						
BBOR	Butler Butte	88.70	47	IAmb		IAmb	11 53 18.5
	comp=Z,9.1nm,1.2s						
HOOD	Mount Hood Mea	88.82	44	IAmb		IAmb	11 53 19.0
	comp=Z,15nm,1.2s						
YBH	Yreka Blue Hor	88.95	48	IAmb		IAmb	11 53 19.9
	comp=Z,8.0nm,0.9s						
LTY	Liberty	88.98	42	IAmb		IAmb	11 53 19.2
	comp=Z,10nm,1.3s						
L04D	Klamath Falls	89.13	47	IAmb		IAmb	11 53 20.4
	comp=Z,14nm,1.1s						
N02D	Trinity Center	89.14	48	IAmb		IAmb	11 53 27.1
	comp=Z,16nm,1.4s						
O02D	Mt. Diablo Mer	89.27	49	IAmb		IAmb	11 53 21.9
	comp=Z,11nm,1.0s						
I05D	Terrebonne, OR	89.28	45	IAmb		IAmb	11 53 32.3
	comp=Z,26nm,1.6s						
MXC	Moxie City	89.41	43	IAmb		IAmb	11 53 21.8
	comp=Z,10.0nm,1.2s						
M03C	McCloud	89.49	48	IAmb		IAmb	11 53 22.2
	comp=Z,17nm,1.0s						
EPH	Ephrata	89.66	42	IAmb		IAmb	11 53 22.3
	comp=Z,12nm,1.4s						
PINE	Pine Mountain	89.70	45	IAmb		IAmb	11 53 23.5
	comp=Z,13nm,0.9s						
E07A	Sunnyside	89.70	43	IAmb		IAmb	11 53 23.2
	comp=Z,11nm,1.3s						
WAH2	Wahluke Slope	89.84	42	IAmb		IAmb	11 53 24.2
	comp=Z,22nm,1.5s						
CVS	Carmenet Viney	89.96	51	IAmb		IAmb	11 53 24.9
	comp=Z,19nm,1.1s						
HAWA	Hanford	89.96	43	IAmb		IAmb	11 53 25.0
	comp=Z,17nm,1.6s						
O03E	Paynes Creek	89.97	49	IAmb		IAmb	11 53 24.0
	comp=Z,13nm,1.1s						
K05A	Summer Lake	90.01	46	IAmb		IAmb	11 53 24.9
	comp=Z,12nm,1.0s						
E08A	Dider Farm, El	90.25	42	IAmb		IAmb	11 53 26.3
	comp=Z,11nm,1.3s						
ORV	Oroville	90.38	50	IAmb		IAmb	11 53 26.0
	comp=Z,9.7nm,1.2s						
FIA1	FINESS Array S	90.76	334	P		P	11 53 23.8 -1.5
FINES	FINESS Array B	90.77	334	P		P	11 53 23.7 -1.6
	comp=Z,5.5nm,0.7s,baz=79,slow=5.6,SNR=13						
	comp=Z,5.5nm,0.7s						
FINES	FINESS Array B	90.77	334	P		P	11 53 24.0 -1.2
FINES	FINESS Array B	90.77	334	*i*	P	P	11 53 24.1 -1.2
FINES					pmax	pmax	

	comp=Z,5.0nm,0.7s						
MHC	Mount Hamilton	90.83	52	IAmb		IAmb	11 53 28.7
	comp=Z,11nm,1.1s						
E09A	Wood Farm, Sta	90.85	42	IAmb		IAmb	11 53 29.0
	comp=Z,12nm,1.2s						
NEW	Newport	90.98	40	IAmb		IAmb	11 53 28.7
	comp=Z,30nm,2.0s						
BEKR	Beckworth	91.15	49	IAmb		IAmb	11 53 29.9
	comp=Z,9.2nm,1.0s						
J08A	Circle Bar Ran	91.54	45	IAmb		IAmb	11 53 31.7
	comp=Z,8.8nm,1.1s						
EDM	Edmonton	91.60	35	IAmb		IAmb	11 53 31.5
	comp=Z,14nm,1.1s						
CMB	Columbia Colle	91.62	51	IAmb		IAmb	11 53 32.0
	comp=Z,6.1nm,1.0s						
WVOR	Wild Horse Val	91.69	46	IAmb		IAmb	11 53 32.4
	comp=Z,8.4nm,1.0s						
BMO	Blue Mountains	91.90	44	IAmb		IAmb	11 53 33.0
	comp=Z,6.6nm,1.0s						
PKD	Bear Valley Ra	92.05	53	IAmb		IAmb	11 53 34.2
	comp=Z,7.6nm,0.8s						
MDPB	Devils Postpil	92.72	51	IAmb		IAmb	11 53 37.4
	comp=Z,6.2nm,1.0s						
POIN	Pond Inlet	92.99	10	IAmb		IAmb	11 53 36.6
	comp=Z,5.8nm,1.1s						
NVAR	Mina Array Bea	93.08	50	P		P	11 53 38.0 +1.1
	comp=Z,2.6nm,0.8s,baz=260,slow=5.8,SNR=23						
NVAR				LR		LR	12 29 55.6
	comp=Z,58nm,19.3s,baz=280,slow=32						
	comp=Z,2.8nm,0.8s						
NVAR	Mina Array Bea	93.08	50	P		P	11 53 36.7 -0.2
AKASG	Malin Array Be	93.46	323	*i* P		P	11 53 37.0 -1.0
HLID	Hailey	94.29	44	IAmb		IAmb	11 53 44.5
	comp=Z,6.3nm,1.0s						
BR131	Keskin Array S	94.30	312⇓		*e* P	P	11 53 42.1 -0.3
BRTR	Keskin Array B	94.30	312	P		P	11 53 40.5 -1.9
	comp=Z,6.6nm,0.6s,baz=93,slow=7.2,SNR=3.7						
	comp=Z,0.6nm,0.6s						
BRTR	Keskin Array B	94.30	312	P		P	11 53 41.6 -0.8
BRTR	Keskin Array B	94.30	312	*i* P		P	11 53 42.9 +0.5
BRTR				pmax		pmax	
	comp=Z,1.0nm,0.8s						
ELK	Elko	94.64	47	IAmb		IAmb	11 53 48.7
	comp=Z,24nm,2.0s						
FURC	Furnace Creek,	94.76	52	IAmb		IAmb	11 53 47.0
	comp=Z,14nm,1.3s						
ILON	Igloolik, Nuna	94.85	13	IAmb		IAmb	11 53 44.1
	comp=Z,5.6nm,0.8s						
DLMT	Dillon	94.88	42	IAmb		IAmb	11 53 47.3
	comp=Z,7.5nm,1.1s						
MMAI	Mount Meron Ar	94.94	305	LR		LR	12 41 55.7
	comp=Z,30nm,19.2s,baz=62,slow=39						
GWY	Greenwater Val	94.99	52	IAmb		IAmb	11 53 48.9
	comp=Z,12nm,1.5s						
GSC	Goldstone, Bar	95.15	53	IAmb		IAmb	11 53 49.0
	comp=Z,14nm,1.7s						
PFO	Pinyon Flats O	95.93	54	P		P	11 53 50.3 +0.4
PFO	Pinyon Flats O	95.93	54⇓	*i* P		P	11 53 50.8 +0.9
HVU	Hansel Valley	96.03	46	IAmb		IAmb	11 53 52.4
	comp=Z,5.8nm,1.2s						
FXWY	Fox Creek	96.56	43	IAmb		IAmb	11 53 59.4
	comp=Z,12nm,1.8s						
H17A	Grant Village	96.57	42	IAmb		IAmb	11 53 57.2
	comp=Z,9.9nm,1.2s						
FLWY	Flagg Ranch	96.61	43	IAmb		IAmb	11 53 55.8
	comp=Z,6.0nm,0.9s						
MOOW	Moose Ponds	96.71	43	IAmb		IAmb	11 53 55.6
	comp=Z,12nm,1.7s						
IRM	Iron Mountain	96.80	53	IAmb		IAmb	11 53 56.9
	comp=Z,6.0nm,1.3s						
HWUT	Hardware Ranch	96.94	45	IAmb		IAmb	11 54 12.8
	comp=Z,13nm,1.7s						
KNB	Kanab	97.65	50	IAmb		IAmb	11 54 00.0
	comp=Z,6.3nm,1.2s						
PDAR	Pinedale Array	97.89	44	P		P	11 53 58.6 -0.1
	comp=Z,0.6nm,0.9s,baz=197,slow=1.5,SNR=4.2						
	comp=Z,0.6nm,0.9s						
NVL	N'lazarevskaya	112.12	197	*i*	PKIKP	PKiKP	11 58 58.8 +1.6
NVL				*e*			11 59 43.2
NVL				*e*	PPP	PPP	12 02 04.8
NVL				*e*			12 06 09.7
NVL				*e*	SS	SS	12 15 22.3 +4.8
NVL					pmax	pmax	
	comp=Z,50nm,1.9s						
NVL					MLR	MLR	
	comp=Z,547nm,21.0s						
TORD	Torodi Ar. Bea	131.03	298		PKP	PKPdf	11 59 34.7 -0.4
	comp=Z,1.3nm,0.9s,baz=345,slow=2.6,SNR=7.3						
OTAV	Otavalo	141.34	75			PKPdf	11 59 54.0 -0.9
OTAV	Otavalo	141.34	75		PKIKP	PKPdf	11 59 54.0 -0.9
MT01	Popeta	144.46	134			PKPbc	11 59 58.2 +0.5
SDV	Santo Domingo	144.64	57			PKPab	11 59 58.1 -0.9
MT02	Curacav	144.86	133		PKPdf	PKPab	11 59 59.2 +0.1
MT05	Renca	145.07	134			PKPbc	11 59 59.9 0.0
MT13	San Alfonso	145.20	135			PKPdf	12 00 01.2 +0.5
CO02	Combarbal	146.01	130		PKPab	PKPbc	12 00 03.2 +0.3
PB11	IPOC Station P	151.35	111			PKPdf	12 00 09.7 -1.4

*IDC **21** 11:43:04.0±1.0, 11°.13N×138°.90E, h0km, mb3.9/10, mbtmp3.9/10, Error ellipse: s-maj=34.8km s-min=22.5km az=83.0*
*NEIC **21** 11:43:06.9±0.7, 11°.15N±0°.03×138°.7E±0°.1, h10km±1km, mb4.4/13, Error ellipse: s-maj=23.0km s-min=4.2km az=100.0*
ISC 21 11:43:09.1±0.6, 11°.08N±0°.10×138°.8E±0°.1, h31km, n28, σ0$67/28, mb4.2/16, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	6.43	67	Pn		Pn	11 44 42.0 +0.2
FAKI	Fak Fak	15.36	205			Pn	11 46 43.6 -0.1
FAKI				IAmb		IAmb	11 46 50.4
	comp=Z,12nm,0.8s						
LUWI	Luwuk	19.97	234	P		P	11 47 39.6 +0.6
MTN	Manton Dam	24.95	198	P		P	11 48 29.4 -0.6
MTN				IAmb		IAmb	11 49 08.2
	comp=Z,10nm,1.3s						
JYT	Yasato	25.07	3	P		P	11 48 30.2 -0.6
KNRA	Kununurra	28.38	201	P		P	11 48 60.0 -0.8
KNRA				IAmb		IAmb	11 49 00.3
	comp=Z,9.2nm,1.2s						
WRA	Warramunga Arr	31.14	188	P		P	11 49 24.1 -1.1
	comp=Z,0.6nm,0.9s,baz=4.2,slow=9.2,SNR=1.8						
	comp=Z,0.6nm,0.9s						
ASAR	Alice Springs	34.86	188	P		P	11 49 58.4 +0.6
	comp=Z,8.9nm,0.6s,baz=16,slow=12,SNR=5.7						
	comp=Z,0.8nm,0.6s						
CMAR	Chiang Mai Arr	39.16	286	P		P	11 50 35.0 +0.5
	comp=Z,1.1nm,0.5s,baz=98,slow=8.5,SNR=2.2						
	comp=Z,1.1nm,0.5s						
FORT	Forrest	42.88	194	P		P	11 51 05.4 +0.7
FORT				IAmb		IAmb	11 51 09.3
	comp=Z,5.0nm,0.8s						
EVN	Everest	51.40	297	P		P	11 52 12.2 0.0
EVN				IAmb		IAmb	11 52 13.2
	comp=Z,2.0nm,0.6s						
MK31	Makanchi Array	59.28	318	P		P	11 53 07.7 -0.2
MKAR	Makanchi Array	59.28	318	P		P	11 53 08.0 +0.1
	comp=Z,1.2nm,0.7s,baz=97,slow=8.2,SNR=4.7						
	comp=Z,1.2nm,0.7s						
MKAR	Makanchi Array	59.28	318	P		P	11 53 07.8 -0.1
ZALV	Zalesovo Beam	60.32	327	P		P	11 53 14.2 -0.7
	comp=Z,0.9nm,0.5s,baz=99,slow=8.9,SNR=3.8						
	comp=Z,0.9nm,0.5s						
ZALV	Zalesovo Beam	60.32	327	P		P	11 53 14.5 -0.4
KURK	Kurchatov	62.76	322	P		P	11 53 31.1 -0.4
KURK				IAmb		IAmb	11 53 31.8
	comp=Z,2.1nm,0.7s						
KURBB	Kurchatov Arra	62.79	322	P		P	11 53 31.2 -0.5
	comp=Z,1.5nm,0.8s,baz=116,slow=6.2,SNR=4.4						
	comp=Z,1.5nm,0.8s						
BVAR	Borovoye Array	68.27	323	P		P	11 54 06.9 -0.1
	comp=Z,0.9nm,0.5s,baz=119,slow=5.1,SNR=4.3						
	comp=Z,0.9nm,0.5s						
IMAR	Indian Mountai	70.84	24	P		P	11 54 23.0 +0.4
ILAR	Eielson Array	73.37	26	P		P	11 54 36.3 -1.5
	comp=Z,0.5nm,0.6s,baz=263,slow=7.3,SNR=2.9						
	comp=Z,0.5nm,0.6s						
AB31	Akbulak array	74.42	318	P		P	11 54 44.1 -0.2
ABKAR	Akbulak array	74.42	318	P		P	11 54 43.9 -0.3
CTGM	Chitina Glacie	75.47	30	P		P	11 54 51.5 +1.2
LOGN	Logan Glacier	75.62	30	P		P	11 54 52.1 +0.9
E28M	Babbage River	76.72	22	P		P	11 54 58.1 +1.0
E28M				IAmb		IAmb	11 55 04.8
	comp=Z,7.3nm,1.4s						
YKA	Yellowknife Ar	87.77	26	P		P	11 55 55.3 +0.4
	comp=Z,0.5nm,0.7s,baz=296,slow=5.9,SNR=4.4						
	comp=Z,0.5nm,0.7s						
NVAR	Mina Array Bea	93.09	50	P		P	11 56 20.1 -0.5
	comp=Z,0.3nm,0.6s,baz=293,slow=6.9,SNR=2.5						
	comp=Z,0.3nm,0.6s						

*CRAAG **21** 11:54:38.7, 35°.40N×1°.17W, Ml3.0, Algrie 02km SE Terga*
*MDD **21** 11:54:46.6±1.0, 36°.14N×1°.25W, h0km, mb_Lg2.7/9, Error ellipse: s-maj=7.5km s-min=5.2km az=149.0*
ISC 21 11:54:36.0±1.2, 35°.68N±0°.03×1°.19W±0°.03, h14km±10km, n23, σ1$64/37, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OLHC	Oulhaca	0.47	204	P		Pb	11 54 46.2 +0.1
OSBL	Sidi Abdelli	0.59	177	P		Pg	11 54 46.3 -1.4
ODJA	Bouhanifia	0.91	112	P		Pn	11 54 54.6 +0.1
OBBL	Beni Bahdel	1.00	195	P		Pb	11 54 54.4 -0.8
OFRG	Douar Fergoug	1.01	99	P		Pg	11 54 57.3 +1.8
ESMB	Sidi M'hamed B	1.44	94	P		Pg	11 55 05.6 +1.8
ENIJ	Nijar	1.53	328	Pg		Pg	11 55 07.3 +1.8
ENIJ	Nijar	1.53	328	Pg		Pg	11 55 07.3 +1.8
ENIJ				Sg		Sg	11 55 27.0 +1.6
EBER	Berja	1.84	312	Pn		Pg	11 55 11.3 0.0
EBER				Sn		Sg	11 55 35.8 +0.6
EBER	Berja	1.84	312	Pn		Pg	11 55 11.4 0.0
EBER				Sn		Sg	11 55 35.0 -0.2
EBER				*i*	lVmb_Lg		11 55 39.4
CART	Cartagena	1.91	4	Pn		Pg	11 55 12.7 0.0
CART				Sn		Sb	11 55 34.8 +0.4
EMUR	La Murta	2.16	359	Pn		Pb	11 55 15.9 +0.9
EMUR				Sn		Sb	11 55 41.9 +0.2
EMUR	La Murta	2.16	359	Pg		Pg	11 55 16.2 -1.3
EMUR				Sg		Sb	11 55 39.5 -2.1
EMUR				*i*	lVmb_Lg		11 55 44.7
ELGU	Los Guajares,	2.30	302	Pn		Pb	11 55 16.9 -0.6
ELGU				Sn		Sb	11 55 44.8 -1.0
ELGU	Los Guajares,	2.30	302	Pn		Pb	11 55 16.8 -0.6
ELGU				Sn		Sb	11 55 45.4 -0.4
EQTA	Presa de Quent	2.38	311	Pn		Pb	11 55 19.5 +0.8
EQTA				Sn		Sb	11 55 46.8 -1.1
EQES	Quesada	2.61	325	Pn		Pg	11 55 24.9 -1.1
EQES				Sn		Sn	11 55 48.5 -0.9
EQES				*i*	lVmb_Lg		11 56 01.6
ETOB	Tobarra	2.98	355	Pn		Pb	11 55 28.8 0.0
ETOB				Sn		Sb	11 56 03.3 -1.9
ETOB	Tobarra	2.98	355	Pn		Pb	11 55 28.9 0.0
ETOB				Sn		Sn	11 55 58.0 -0.5
ETOB				*i*	lVmb_Lg		11 56 11.7
EADA	Adamuz	3.68	313	Pn		Pb	11 55 39.8 -1.2
EADA				Sn		Sn	11 56 19.0 +3.2
EADA				*i*	lVmb_Lg		11 56 31.4
EIBI	Ibiza	3.90	30	Pn		Pb	11 55 40.5 -4.1
EIBI				Sn		Sn	11 56 23.8 +2.5
EIBI	Ibiza	3.90	30	Pn		Pb	11 55 40.9 -3.8
EIBI				Sn		Sn	11 56 23.4 +2.1
EIBI				*i*	lVmb_Lg		11 56 30.1
PAB	San Pablo	4.61	328	Pn		Pn	11 55 50.1 +4.7
PAB				*i*	lVmb_Lg		11 57 03.4

IDC 21 12:09:21.1±10.0, 32°.20S×177°.26W, h125km±73km, mb3.6/3, mbtmp3.9/4, Error ellipse: s-maj=78.4km s-min=30.3km az=45.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	7.60	216	P		Pn	12 11 09.4 +0.3
	1.8nm,0.5s,baz=354,slow=16,SNR=7.7						
URZ				S		Sn	12 12 34.1 +0.5
	3.4nm,0.3s,baz=63,slow=18,SNR=18						
ASAR	Alice Springs	43.67	268	P		P	12 17 13.7 +0.1
	0.3nm,0.3s,baz=108,slow=7.7,SNR=12						
	0.3nm,0.3s						
WRA	Warramunga Arr	44.82	274	P		P	12 17 22.6 -0.3
	0.5nm,0.3s,baz=115,slow=8.1,SNR=19						
	0.5nm,0.3s						
SNAA	Sanae	76.35	178	P		P	12 20 54.7 -1.3
	3.2nm,0.6s,baz=225,slow=13,SNR=3.0						
	3.2nm,0.6s						
TORD	Torodi Ar. Bea	161.01	177	PKPab		PKPab	12 29 51.8 +1.3
	0.2nm,0.5s,baz=195,slow=2.8,SNR=1.5						

IDC 21 12:25:58.4±8.4, 11°.71S×165°.71E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=247.4km s-min=58.4km az=124.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	31.23	251	P		P	12 32 20.5 +0.6
	0.4nm,0.9s,baz=83,slow=9.8,SNR=1.2						
	0.4nm,0.9s						
ASAR	Alice Springs	32.47	244	P		P	12 32 30.6 -0.3
	0.7nm,0.6s,baz=68,slow=9.8,SNR=16						
	0.7nm,0.6s						
MKAR	Makanchi Array	93.98	317	P		P	12 39 18.2 -0.3
	0.2nm,0.6s,baz=85,slow=6.1,SNR=2.9						
	0.2nm,0.6s						

*NEIC **21** 12:33:10.3±0.9, 9°.11N±0°.06×126°.8E±0°.1, h35km±6km, mb4.7/82, Error ellipse: s-maj=15.7km s-min=6.2km az=64.0*
*MAN **21** 12:33:10.0, 8°.94N×126°.61E, h21km, MS4.3*
MAN INTENSITY III - CAGWAIT SURIGAO DEL SUR; . INTENSITY II - BISLIG CITY.
*IDC **21** 12:33:15.6±1.3, 9°.02N×126°.53E, h79km±11km, mb4.1/30, mbtmp4.4/37, MS3.5/25, Error ellipse: s-maj=15.6km s-min=8.0km az=86.0*
*DJA **21** 12:33:21.8±1.6, 8°.N±14°.×12°.7E±°, h10km, M4.8/19, mb5.0/19, mB5.1/11, MLv5.2/7, Mw(mB)4.5/11*
ISC 21 12:33:10.3±0.3, 9°.02N±0°.03×126°.71E±0°.05, h35km, n403, σ1$62/380, mb4.6/74, MS3.5/22, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TSSP	Tandag City	0.51	273	*i* P		Pn	12 33 19.3 -1.8
TSSP				*e* S		Sn	12 33 25.3 -3.3
BIPH	Bislig	0.90	203	*e* P		Pn	12 33 25.0 -1.5
BIPH				*e* S		Sn	12 33 36.5 -1.7
BUTP	Butuan	1.08	268	*i* P

MNI Manado 7.75 194 P **Pn** **12 34 57.4 -3.4**
TNTI Ternate 8.22 175 **Pn** **12 35 07.8 +0.7**
TNTI Ternate 8.22 175 P **Pn** **12 35 08.8 +1.7**
0.3nm89nm,0.9s
MYLDM Lahad Datu 8.99 245 **Pn** **12 35 18.2 +0.4**
MYLDM Lahad Datu 8.99 245 P Pn 12 35 28.6 +11
37nm,1.0s
GTOI Gorontalo 9.10 204 P **Pn** **12 35 19.8 +0.5**
83nm,0.7s
MRSI Marisa 9.72 209 P **Pn** **12 35 29.1 +1.3**
801nm71nm,0.7s
TOLI2 Tolitoli 9.82 217 **Pn** **12 35 28.3 -0.9**
LUWI Luwuk 10.73 202 **Pn** **12 35 43.4 +1.7**
LUWI Luwuk 10.73 202 P **Pn** **12 35 44.0 +2.3**
100nm,1.1s
SWI Sorong 10.81 155 P **Pn** **12 35 43.9 +1.2**
36nm,0.6s
SIJI Sorong 10.82 155 P **Pn** **12 35 47.2 +4.3**
16nm,0.4s,baz=334,slow=14,SNR=19
SIJI S **Sn** **12 37 40.2 -2.6**
4.2nm,0.4s,baz=49,slow=9.3,SNR=2.0
SIJI Sorong 10.82 155 P **Pn** **12 35 44.0 +1.2**
MPSI Mapaga 10.97 219 P **Pn** **12 35 49.2 +4.3**
SANI Sanana 11.02 184 P **Pn** **12 35 45.7 +0.2**
663nm37nm,0.7s
NLAI Namlea 12.18 178 P **Pn** **12 36 02.4 +0.9**
53nm,0.7s
FAKI Fak Fak 13.08 155 P **Pn** **12 36 16.1 +2.3**
KAPI Kappang 15.57 207 P **Pn** **12 36 48.2 +0.9**
6.9nm,0.6s,baz=47,slow=18,SNR=1.9
KAPI LR LR 12 43 08.6
comp=Z,158nm,21.1s,baz=24,slow=38
SBUM Sibu 15.82 247 **Pn** **12 36 51.7 +1.1**
JOW Kunigami 17.78 5 P **P** **12 37 17.7 +2.0**
14nm,1.0s,baz=116,slow=17,SNR=1.5
JOW LR LR 12 43 51.5
comp=Z,186nm,21.0s,baz=256,slow=36
JAY Jayapura 18.05 129 P **P** **12 37 22.2 +3.4**
10nm,0.6s,baz=33,slow=14,SNR=1.7
GUMO Guam 18.37 74 LR LR 12 42 43.1
comp=Z,155nm,20.6s,baz=226,slow=31
SOEI Soe 18.81 187 P **P** **12 37 27.1 -0.1**
SOEI Soe 18.81 187 **P** **12 37 23.2 -4.0**
SOEI IAmb IAmb 12 37 54.0
comp=Z,52nm,0.7s
QIZ Qiongzhong 19.14 303 P **P** **12 37 32.0 +1.3**
QIZ S **Sn** **12 41 05.8 +0.5**
QIZ LR LR
comp=N,120nm,12.9s
QIZ LR LR
comp=E,200nm,14.9s
QIZ LR LR
comp=Z,280nm,14.4s
BATI Baumata 19.34 189 P **P** **12 37 33.7 +0.9**
comp=Z,50nm,0.5s,baz=356,slow=12,SNR=12
BATI LR LR 12 45 26.5
comp=Z,123nm,21.7s,baz=7.0,slow=38
PLAI Plampang 19.83 207 P **Pn** **12 37 41.6 +1.6**
DRS Darwin Rock St 21.71 169 P **P** **12 37 57.7 -0.8**
MTN Manton Dam 22.16 168 **P** **12 38 03.1 -0.3**
MTN IAmb IAmb 12 38 08.3
comp=Z,15nm,0.6s
NJ2 Nanjing 24.05 343 *eP* **P** **12 38 22.5 +0.2**
NJ2 pmax pmax
comp=Z,17nm,0.5s
JNU Nakatsue 24.30 9 LR LR 12 47 47.5
comp=Z,47nm,21.6s,baz=171,slow=36
KNRA Kununurra 24.62 175 **P** **12 38 27.9 +0.3**
KNRA IAmb IAmb 12 38 31.3
comp=Z,33nm,1.1s
COEN Coen 28.07 144 P **P** **12 39 00.3 +1.5**
KSRS Korea Array 28.33 2 P **P** **12 39 02.4 +1.5**
comp=Z,2.6nm,0.9s,baz=179,slow=10.0,SNR=5.4
KSRS LR LR 12 52 41.5
comp=Z,80nm,18.4s,baz=120,slow=41
comp=Z,2.6nm,0.9s
CMAR Chiang Mai Arr 28.52 292 P **P** **12 39 02.6 -0.2**
comp=Z,2.8nm,0.8s,baz=106,slow=7.1,SNR=18
CMAR PcP **PcP** **12 42 15.0 +0.9**
comp=Z,1.0nm,0.4s,baz=42,slow=1.0,SNR=5.9
comp=Z,2.8nm,0.8s
CMAR Chiang Mai Arr 28.52 292 P **P** **12 39 02.8 -0.1**
MJAR Matsushiro Arr 29.33 19 P **P** **12 39 12.1 +2.3**
comp=Z,1.0nm,0.8s,baz=190,slow=11,SNR=1.9
comp=Z,1.0nm,0.8s
PZH PanZhiHua 29.36 310 P **P** **12 39 12.5 +2.1**
WB0 Warramunga Arr 29.59 165 P **P** **12 39 11.5 -0.7**
WRAB Tennant Creek 29.73 165 P **P** **12 39 12.9 -0.7**
WRAB Tennant Creek 29.73 165 P **P** **12 39 12.9 -0.7**
WRA Warramunga Arr 29.74 165 P **P** **12 39 13.1 -0.5**
comp=Z,2.8nm,0.6s,baz=347,slow=9.3,SNR=44
WRA PcP **PcP** **12 42 17.3 +0.1**
comp=Z,1.3nm,0.7s,baz=339,slow=3.0,SNR=3.8
WRA ScP **ScP** **12 45 54.5 -2.2**
comp=Z,0.4nm,0.8s,baz=342,slow=3.5,SNR=2.2
comp=Z,2.8nm,0.6s
WR8 Warramunga Arr 29.79 165 **P** **12 39 13.6 -0.5**
WR8 IAmb IAmb 12 39 14.8
comp=Z,12nm,1.2s
MBWA Marble Bar 30.76 193 P **P** **12 39 22.8 +0.2**
PSA00 Pilbara Seismi 31.14 192 P **P** **12 39 25.3 -0.6**
PSA00 Pilbara Seismi 31.14 192 **P** **12 39 25.9 0.0**
PSA00 Pilbara Seismi 31.14 192 **P** **12 39 25.7 -0.2**
PSA00 IAmb IAmb 12 39 28.3
comp=Z,4.7nm,0.7s
QIS Mount Isa 32.01 157 P **P** **12 39 33.6 0.0**
MTSU Mount Surprise 32.09 147 P **P** **12 39 36.1 +1.7**
AS31 Alice Springs 33.23 168 **P** **12 39 44.1 -0.3**
ASAR Alice Springs 33.23 168 P **P** **12 39 44.0 -0.4**
comp=Z,1.2nm,0.3s,baz=353,slow=6.7,SNR=101
ASAR PcP **PcP** **12 42 26.4 -0.1**
comp=Z,2.0nm,0.7s,baz=344,slow=2.5,SNR=8.4
ASAR ScP **ScP** **12 46 06.3 -2.1**
comp=Z,0.3nm,0.8s,baz=346,slow=3.7,SNR=2.9
ASAR LR LR 12 55 45.0
comp=Z,55nm,18.1s,baz=339,slow=41
comp=Z,1.2nm,0.3s
LZDM Lanzhou Array 34.04 325 LR LR 12 54 26.6
comp=Z,164nm,20.9s,baz=205,slow=37
LZH Lanzhou 34.05 326 *eP* **P** **12 39 50.1 -1.4**
LZH pP pP 12 40 00.1 -0.2
LZH pmax pmax
comp=Z,11nm,1.0s
LZH LR LR
comp=N,150nm,15.8s
LZH LR LR
comp=E,210nm,15.3s
LZH LR LR
comp=Z,250nm,17.2s
HHC Hu-ho-hao-te 34.44 339 *eP* **P** **12 39 54.9 +0.2**
HHC pmax pmax
comp=Z,10.0nm,0.7s
HHC pmax pmax
comp=Z,50nm,6.3s
CTA Charters Tower 34.73 147 LR LR 12 57 03.0
comp=Z,45nm,18.0s,baz=29,slow=41
CTA Charters Tower 34.73 147 P **P** **12 39 59.0 +1.6**
CTAO Charters Tower 34.73 147 P **P** **12 39 59.0 +1.6**
USRK Ussuriysk Ar. 35.35 7 P **P** **12 40 04.3 +2.0**
comp=Z,4.4nm,0.6s,baz=186,slow=7.7,SNR=8.3
comp=Z,4.4nm,0.6s
MDJ Mudanjiang 35.55 4 P **P** **12 40 06.5 +2.3**
MDJ pmax pmax
comp=Z,12nm,1.0s
MEEK Meekatharra 36.30 192 P **P** **12 40 11.1 +0.3**
SHL Shillong 36.95 301 **P** **12 40 14.9 -1.6**
SHL IAmb IAmb 12 40 27.4
comp=Z,11nm,0.9s
ASAJ Asahikawa 37.60 19 P **P** **12 40 24.5 +2.9**
comp=Z,4.3nm,0.8s,baz=287,slow=19,SNR=1.5
comp=Z,4.3nm,0.8s
GTA2 Gaotai 38.74 326 *eP* **P** **12 40 30.1 -1.4**
GTA2 LR LR
comp=N,170nm,15.2s
GTA2 LR LR
comp=E,120nm,14.9s
GTA2 LR LR
comp=Z,130nm,14.6s
INKA Innaminka 38.99 160 P **P** **12 40 33.2 -0.3**
MORW Morawa 39.24 195 P **P** **12 40 37.0 +1.5**
FORT Forrest 39.59 178 IAmb IAmb 12 40 42.3
comp=Z,9.7nm,0.8s
H11S3 WAKE ISLAND Hy 39.88 72 T T 13 23 48.4
baz=262,slow=75,SNR=100
H11S1 WAKE ISLAND Hy 39.89 72 T T 13 23 42.4
baz=262,slow=75,SNR=57
H11S2 WAKE ISLAND Hy 39.89 72 T T 13 23 48.2
baz=262,slow=75,SNR=60
H11N1 WAKE ISLAND Hy 40.25 70 T T 13 24 24.1
baz=265,slow=75,SNR=60
H11N2 WAKE ISLAND Hy 40.26 70 T T 13 24 24.6
baz=265,slow=75,SNR=46
H11N3 WAKE ISLAND Hy 40.27 70 T T 13 24 25.4
baz=265,slow=75,SNR=43
KLR Kul'dur 40.30 5 P **P** **12 40 46.1 +1.9**
comp=Z,1.9nm,0.5s,baz=179,slow=7.1,SNR=5.9
KLR LR LR 12 58 21.6
comp=Z,43nm,18.6s,baz=178,slow=37
comp=Z,1.9nm,0.5s
BLDU Ballidu 40.56 193 P **P** **12 40 47.1 +0.6**
KLBR Kellerberrin 41.28 192 P **P** **12 40 53.0 +0.6**
MUN Mundaring 41.98 193 P **P** **12 40 59.5 +1.3**
EVN Everest 42.01 302 P **P** **12 40 58.3 -1.0**
SONM Songino Array 42.34 340 P **P** **12 40 59.9 -1.2**
comp=Z,0.4nm,0.5s,baz=165,slow=7.0,SNR=3.9
SONM LR LR 13 00 08.6
comp=Z,50nm,20.5s,baz=130,slow=38
comp=Z,0.4nm,0.5s
BBOO Buckleboo 42.54 168 P **P** **12 41 03.2 +0.5**
BBOO Buckleboo 42.54 168 P **P** **12 41 02.6 -0.1**
NWAO Narrogin (SRO) 42.68 192 P **P** **12 41 04.2 +0.4**
STKA Stephens Creek 43.08 161 P **P** **12 41 07.3 +0.2**
comp=Z,8.9nm,0.5s,baz=342,slow=8.1,SNR=50
comp=Z,8.9nm,0.5s
STKA Stephens Creek 43.08 161 P **P** **12 41 06.9 -0.2**
TLY Talaya 46.55 340 LR LR 13 02 10.3
comp=Z,37nm,19.3s,baz=120,slow=37
PETK Petropavlovsk- 50.60 24 P **P** **12 42 08.7 +3.0**
comp=Z,6.3nm,1.0s,baz=142,slow=7.4,SNR=2.3
PETK LR LR 13 03 45.4
comp=Z,38nm,19.1s,baz=155,slow=36
comp=Z,6.3nm,1.0s
YAK Yakutsk 52.96 2 LR LR 13 05 24.7
comp=Z,32nm,20.3s,baz=124,slow=36
MK31 Makanchi Array 53.28 323 P **P** **12 42 25.4 -0.4**
MK31 IAmb IAmb 12 42 26.0
comp=Z,5.2nm,0.8s
MKAR Makanchi Array 53.28 323 P **P** **12 42 25.2 -0.6**
comp=Z,6.0nm,0.7s,baz=122,slow=7.7,SNR=56
MKAR PcP **PcP** **12 43 31.6 -1.6**
comp=Z,3.1nm,0.9s,baz=93,slow=4.9,SNR=4.7
comp=Z,6.0nm,0.7s
MKAR Makanchi Array 53.28 323 **P** **12 42 25.1 -0.7**
MAKZ Makanchi 53.48 323 **P** **12 42 26.5 -0.7**
MAKZ IAmb IAmb 12 42 28.0
comp=Z,6.7nm,0.9s
MA2 Magadan 53.62 15 LR LR 13 03 31.2
comp=Z,21nm,22.0s,baz=128,slow=34
ZALV Zalesovo Beam 55.93 332 P **P** **12 42 43.6 -1.2**
comp=Z,1.1nm,0.4s,baz=116,slow=6.8,SNR=8.1
ZALV PcP **PcP** **12 43 41.0 -2.1**
comp=Z,0.8nm,0.4s,baz=116,slow=3.4,SNR=2.2
comp=Z,1.1nm,0.4s
AAK Ala-Archa 56.52 316 LR LR 13 08 50.2
comp=Z,90nm,21.1s,baz=82,slow=38
KURK Kurchatov 57.34 326 **P** **12 42 54.2 -0.7**
KURBB Kurchatov Arra 57.34 326 P **P** **12 42 54.2 -0.7**
comp=Z,6.4nm,0.7s,baz=126,slow=6.6,SNR=51
comp=Z,6.4nm,0.7s
KBL Kabul 58.40 305 P **P** **12 43 01.5 -1.4**
KBL IAmb IAmb 12 43 03.3
comp=Z,3.5nm,0.7s
GAR Garm 58.43 310 P **P** **12 43 01.7 -1.2**
KK31 Karatay Array 59.44 315 P **P** **12 43 08.6 -1.2**
KKAR Karatay Array 59.44 315 P **P** **12 43 08.2 -1.5**
TIXI Tiksi 62.59 1 P **P** **12 43 30.1 -0.5**
TIXI IAmb IAmb 12 43 47.1
comp=Z,5.7nm,0.8s
BVAR Borovoye Array 62.94 326 P **P** **12 43 32.6 -0.6**
comp=Z,3.8nm,0.7s,baz=126,slow=7.7,SNR=19
comp=Z,3.8nm,0.7s
BORK Borovoye 62.98 326 P **P** **12 43 32.6 -0.9**
BORK IAmb IAmb 12 43 34.0
comp=Z,6.0nm,0.7s
NRIK Noril'sk 65.33 346 P **P** **12 43 49.0 +0.4**
comp=Z,5.6nm,0.5s,baz=132,slow=6.2,SNR=14
NRIK LR LR 13 15 10.6
comp=Z,34nm,18.9s,baz=164,slow=38
comp=Z,5.6nm,0.5s
NRIK Noril'sk 65.33 346 P **P** **12 43 47.9 -0.7**
NRIK IAmb IAmb 12 43 49.4
comp=Z,6.6nm,0.7s
AB31 Akbulak array 68.10 320 P **P** **12 44 05.4 -1.3**
ABKAR Akbulak array 68.10 320 P **P** **12 44 05.4 -1.3**
UNV Unalaska Valle 69.14 36 P **P** **12 44 11.6 -1.4**
baz=256
GAMB Gambell 69.62 25 P **P** **12 44 15.2 -0.6**
baz=248
M11K Mekoryuk 70.97 29 P **P** **12 44 22.7 -1.4**
baz=254
FALS False Pass 71.12 35 P **P** **12 44 23.4 -1.7**
baz=258
TNA Tin City 71.77 23 P **P** **12 44 27.2 -1.6**
baz=251
K13K Kusilvak Mount 72.10 28 P **P** **12 44 29.2 -1.7**
baz=255
M13K Dall Lake 72.34 29 P **P** **12 44 31.1 -1.2**
baz=257
F14K Arctic Creek 72.37 24 P **P** **12 44 31.8 -0.7**
baz=252
ANM Nome 72.49 25 P **P** **12 44 32.8 -0.5**
baz=254
J14K Nanvaranak Lak 72.80 27 P **P** **12 44 33.8 -1.3**
baz=256
L14K Kuka Creek 72.87 28 P **P** **12 44 35.2 -0.3**
baz=257
SDPT Sand Point 72.87 35 P **P** **12 44 33.7 -2.0**
baz=261
N14K Kuskokwak Cree 73.05 30 P **P** **12 44 36.2 -0.3**
baz=258
M14K Bethel 73.09 29 P **P** **12 44 36.6 -0.2**
baz=258
F15K North Star Dit 73.11 24 P **P** **12 44 36.2 -0.7**
baz=254
G15K Niukluk 73.16 25 P **P** **12 44 36.4 -0.8**
baz=255
C16K Lisburne Hills 73.58 21 P **P** **12 44 39.5 -0.1**
baz=253
K15K Wolf Creek Mou 73.61 28 P **P** **12 44 38.9 -1.0**
baz=258
M15K Kasigluk River 73.69 29 P **P** **12 44 39.7 -0.7**
baz=259
H16K Elim 73.82 25 P **P** **12 44 40.5 -0.6**
baz=256
O15K Ungalikthiuk R 73.84 31 P **P** **12 44 39.9 -1.4**
baz=260
N15K Kwethluk River 73.88 30 P **P** **12 44 40.4 -1.1**
baz=260
G16K Koyuk River 73.95 24 P **P** **12 44 40.9 -0.9**
baz=256
CHGN Chignik 74.16 34 P **P** **12 44 42.0 -1.1**
baz=262
J16K Anvik River 74.23 27 P **P** **12 44 42.7 -0.8**
baz=258
D17K Noatak River 74.24 22 P **P** **12 44 42.0 -1.4**
baz=255,SNR=10
C17K DeLong Mountai 74.41 21 P **P** **12 44 43.9 -0.6**
baz=255,SNR=7.9
L16K Owhat River 74.45 28 P **P** **12 44 44.0 -0.8**
baz=260
M16K Timber Creek 74.58 29 P **P** **12 44 44.5 -1.1**
baz=261
N16K Nishlik Lake 74.58 30 P **P** **12 44 44.1 -1.6**
baz=261
F17K Baldwin Pennin 74.63 23 P **P** **12 44 44.2 -1.6**
baz=257
G17K Kiwalik Mounta 74.67 24 P **P** **12 44 44.9 -1.1**
baz=258
P16K Nushagak River 74.76 31 P **P** **12 44 45.5 -1.1**
baz=262
R16K Pilot Point 74.78 33 P **P** **12 44 45.3 -1.5**
baz=263
O16K Kokwok River B 74.79 31 P **P** **12 44 45.7 -1.1**
baz=262
H17K Granite Mounta 74.86 25 P **P** **12 44 45.6 -1.5**
baz=259
J17K VABM Dome 74.93 27 P **P** **12 44 46.2 -1.4**
baz=260
L17K Donlin 75.07 28 P **P** **12 44 47.1 -1.3**
baz=261
E18K Tukpahlearik C 75.10 22 IAmb IAmb 12 45 07.7
comp=Z,8.3nm,0.8s
E18K Tukpahlearik C 75.10 22 P **P** **12 44 47.3 -1.1**
baz=257,SNR=15
C18K Utukok River 75.16 21 P **P** **12 44 47.2 -1.6**
baz=256
K17K Iditarod 75.16 27 P **P** **12 44 47.1 -1.8**
baz=261
F18K Selawik 75.29 23 P **P** **12 44 48.2 -1.3**
baz=258,SNR=5.5
O17K Koliganek Bris 75.31 31 P **P** **12 44 48.0 -1.8**
baz=262
M17K Holitna River 75.36 29 P **P** **12 44 48.6 -1.5**
baz=262
N17K Nushagak Hills 75.37 30 P **P** **12 44 48.7 -1.4**
baz=262
Q16K King Salmon 75.40 32 P **P** **12 44 48.8 -1.6**
baz=263
R17L Mt. Peulik Vol 75.44 33 P **P** **12 44 49.3 -1.3**
baz=264
H18K Honhosa River 75.54 25 P **P** **12 44 49.6 -1.5**
baz=260
G18K Tagagawik 75.56 24 P **P** **12 44 49.7 -1.4**
baz=260
A19K Wainwright 75.57 20 P **P** **12 44 50.4 -0.7**
baz=256
P17K Kvichak River 75.57 31 P **P** **12 44 49.4 -1.9**
baz=263
Q17K Contact Creek 75.76 32 P **P** **12 44 51.6 -1.0**
baz=264
L18K Granite Mounta 75.83 28 P **P** **12 44 51.5 -1.3**
baz=262
C19K Lookout Ridge 75.83 21 IAmb IAmb 12 44 57.0
comp=Z,11nm,0.8s
C19K Lookout Ridge 75.83 21 P **P** **12 44 51.6 -1.1**
baz=258,SNR=17
J18K Innoko River 75.99 27 P **P** **12 44 52.0 -1.6**
baz=262
N18K Kilae Creek 76.02 30 P **P** **12 44 51.8 -2.1**
baz=263
CASY Casey 76.03 187 P **P** **12 44 54.2 +0.6**
F19K Shaleruckik Mo 76.07 23 P **P** **12 44 51.8 -2.2**
baz=260
GCSA Galena City Sc 76.10 25 P **P** **12 44 52.6 -1.6**
baz=262
M18K Stony River 76.14 29 P **P** **12 44 52.7 -1.9**
baz=263
P18K Big Mountain, 76.21 31 P **P** **12 44 52.9 -2.1**
baz=264
G19K Purcell Mounta 76.23 24 P **P** **12 44 53.1 -1.9**
baz=261
D19K Kuna River 76.24 22 IAmb IAmb 12 44 58.8
comp=Z,10.0nm,1.1s
D19K Kuna River 76.24 22 P **P** **12 44 53.7 -1.3**
baz=259,SNR=10
Q18K Katmai Hardscr 76.25 32 P **P** **12 44 53.2 -2.2**
baz=265
O18K Koktuh Hills 76.27 31 P **P** **12 44 53.7 -1.6**
baz=264
E19K Redstone River 76.38 23 P **P** **12 44 54.5 -1.3**
baz=260
H19K Roundabout Mou 76.39 25 P **P** **12 44 54.2 -1.6**
baz=262
SII Sitkinak Islan 76.53 34 P **P** **12 44 55.1 -1.7**
baz=266
J19K Poorman 76.54 26 P **P** **12 44 55.0 -1.7**
baz=263
L19K White Mountain 76.68 28 P **P** **12 44 55.5 -2.2**
baz=264
N19K Bonanza Creek 76.72 30 P **P** **12 44 56.3 -1.7**
baz=265
O19K Port Alsworth 76.75 30 P **P** **12 44 56.6 -1.3**
baz=265
D20K Etivluk River 76.82 21 P **P** **12 44 57.0 -1.3**
baz=261
B20K Meade River 76.84 20 P **P** **12 44 57.1 -1.2**
baz=260
E20K Nigu River 76.90 22 P **P** **12 44 57.2 -1.6**
baz=261,SNR=12
F20K Avaraart Lake 76.90 23 P **P** **12 44 57.4 -1.3**
baz=262
H20K Anotleneega Mo 77.04 25 P **P** **12 44 58.0 -1.6**
baz=263,SNR=7.5
OHAK Old Harbor 77.06 33 P **P** **12 44 58.1 -1.6**
baz=266
K20K Telida 77.16 27 P **P** **12 44 58.6 -1.7**
baz=264
J20K Nowinta River 77.20 26 P **P** **12 44 58.9 -1.6**
baz=264
A21K Barrow 77.25 19 P **P** **12 44 59.1 -1.5**
baz=260
M20K Styx River 77.46 29 P **P** **12 45 00.3 -1.8**
baz=266
KDAK Kodiak Island 77.47 33 LR LR 13 20 41.4
comp=Z,32nm,18.7s,baz=142,slow=37
KDAK Kodiak Island 77.47 33 P **P** **12 45 00.4 -1.6**
baz=267
C21K Knifeblade Rid 77.54 21 P **P** **12 45 00.9 -1.4**
baz=262
Q20K Shuyak Island 77.61 32 P **P** **12 45 01.4 -1.5**
baz=267
B21K Ikpikpuk River 77.66 21 P **P** **12 45 01.6 -1.3**
baz=262
G21K Allakaket 77.71 24 IAmb IAmb 12 45 23.0
comp=Z,8.1nm,0.9s
G21K Allakaket 77.71 24 P **P** **12 45 01.7 -1.6**
baz=264
A22K Sinclair Lake 77.72 19 P **P** **12 45 02.1 -1.2**
baz=262
F21K Alatna River 77.79 23 P **P** **12 45 02.1 -1.7**
baz=264
N20K Mount Spurr 77.86 29 P **P** **12 45 01.9 -2.4**
baz=266
SPCR Spurr Chakacha 77.86 29 P **P** **12 45 02.4 -1.9**
baz=266
H21K Melozitna Rive 77.91 25 P **P** **12 45 02.3 -2.2**
baz=265
PPLA Purkeypile 77.97 28 P P 12 45 02.1 -2.9
baz=266
CHUM Lake Minchumin 77.98 27 P **P** **12 45 02.4 -2.4**
baz=266
B22K Teshekpuk Lake 78.15 20 P **P** **12 45 03.3 -2.3**
baz=263
I21K Tanana 78.22 25 P **P** **12 45 04.3 -1.8**
baz=266,SNR=10.0
SKT Skwentna 78.22 29 P **P** **12 45 03.9 -2.3**
baz=267
CAPN Captain Cook N 78.35 30 P **P** **12 45 05.1 -1.8**
baz=268
RAYN Ar Rayn 78.44 292 P **P** **12 45 06.9 -1.4**
RAYN IAmb IAmb 12 45 08.7
comp=Z,6.0nm,0.6s
E22K Anaktuvuk Pass 78.51 22 P **P** **12 45 05.6 -2.2**
baz=265
BRSE Bradley Lake S 78.51 31 P **P** **12 45 05.2 -2.7**
baz=268
H22K Ishtalitna Cre 78.52 25 P **P** **12 45 06.2 -1.6**
baz=266
G22K Bettles 78.54 23 P **P** **12 45 06.4 -1.4**
baz=266
BPAW Bear Paw Mtn. 78.58 26 IAmb IAmb 12 45 27.1
comp=Z,6.6nm,0.8s
BPAW Bear Paw Mtn. 78.58 26 P **P** **12 45 06.3 -1.9**
baz=267,SNR=9.1
L22K Petersville 78.60 28 IAmb IAmb 12 45 11.2
comp=Z,4.6nm,0.8s
MLY Manley 78.74 25 IAmb IAmb 12 45 27.9
comp=Z,5.2nm,0.8s
MLY Manley 78.74 25 P **P** **12 45 07.3 -1.7**
baz=267,SNR=7.5
CUT Chulitna 78.83 28 P **P** **12 45 08.2 -1.3**
baz=268
TRF Thorofare Moun 78.86 27 P **P** **12 45 08.3 -1.7**
baz=268
M22K Willow 78.88 29 P **P** **12 45 08.7 -1.1**
baz=268
D23K Nanushuk River 78.98 21 P **P** **12 45 09.1 -1.2**
baz=266
O22K Cooper Landing 79.04 30 P **P** **12 45 09.6 -1.1**
baz=269
RC01 Rabbit Creek A 79.05 29 P **P** **12 45 09.5 -1.3**
baz=269
C23K Itkillik River 79.06 21 P **P** **12 45 08.8 -1.8**
baz=266,SNR=16
COLD Coldfoot 79.06 23 IAmb IAmb 12 45 14.9
comp=Z,6.1nm,1.0s
COLD Coldfoot 79.06 23 P **P** **12 45 10.2 -0.6**
baz=267,SNR=12
G23K Bananza Creek 79.11 24 IAmb IAmb 12 45 15.3
comp=Z,9.3nm,1.2s
G23K Bananza Creek 79.11 24 P **P** **12 45 10.1 -1.0**
baz=267,SNR=5.3

I23K	Minto, Yukon-K	79.32	25	P	P	12 45 11.4	-0.8	
	baz=268,SNR=5.8							
E23K	Chandalar	79.33	22	P	P	12 45 11.7	-0.6	
	baz=268							
PMR	Palmer	79.35	29	IAmb	IAmb	12 45 30.4		
	comp=Z,7.5nm,0.8s							
PMR	Palmer	79.35	29	P	P	12 45 11.5	-0.9	
	baz=269							
TOLK	Toolik Lake Re	79.37	22	P	P	12 45 11.9	-0.6	
	baz=267,SNR=11							
KBZ	Khabaz	79.37	313	P	P	12 45 12.1	-0.8	
	comp=Z,3.6nm,1.0s,baz=116,slow=4.1,SNR=5.0							
KBZ				LR	LR	13 24 40.3		
	comp=Z,22nm,19.9s,baz=248,slow=39							
	comp=Z,3.6nm,1.0s							
NEA2	Nenana	79.43	26	IAmb	IAmb	12 45 31.6		
	comp=Z,6.1nm,0.8s							
NEA2	Nenana	79.43	26	P	P	12 45 11.5	-1.3	
	baz=269,SNR=6.2							
MCK	McKinley	79.47	27	P	P	12 45 09.7	-3.4	
MCK				IAmb	IAmb	12 45 31.2		
	comp=Z,11nm,0.8s							
MCK	McKinley	79.47	27	P	P	12 45 11.3	-1.8	
	baz=269,SNR=9.1							
RND	Reindeer	79.51	27	IAmb	IAmb	12 45 16.7		
	comp=Z,9.2nm,1.2s							
GEVA	Gevas	79.51	307	P	P	12 45 11.2	-2.8	
GEVA				IAmb	IAmb	12 45 22.9		
	comp=Z,6.9nm,1.0s							
WAT1	Susitna Watana	79.64	28	P	P	12 45 12.5	-1.5	
	baz=269							
D24K	Happy Valley	79.66	21	P	P	12 45 12.3	-1.7	
	baz=268							
KNK	Knik Glacier	79.67	29	IAmb	IAmb	12 45 17.6		
	comp=Z,7.2nm,0.8s							
KNK	Knik Glacier	79.67	29	P	P	12 45 12.3	-1.9	
	baz=270							
C24K	Franklin Bluff	79.72	21	P	P	12 45 13.4	-0.8	
	baz=268							
SML	Sawmill	79.73	29	IAmb	IAmb	12 45 35.3		
	comp=Z,7.4nm,0.8s							
SML	Sawmill	79.73	29	P	P	12 45 13.2	-1.4	
	baz=270							
E24K	Your Creek	79.75	22	P	P	12 45 13.1	-1.4	
	baz=268							
H24K	Noodor Dome	79.95	25	P	P	12 45 14.3	-1.4	
	baz=270							
COLA	College	79.96	26	P	P	12 45 14.4	-1.2	
	baz=270							
F24K	Squaw Lake	79.97	23	IAmb	IAmb	12 45 35.1		
	comp=Z,6.5nm,0.8s							
F24K	Squaw Lake	79.97	23	P	P	12 45 14.3	-1.4	
	baz=269,SNR=11							
WAT6	Susitna Watana	80.01	28	P	P	12 45 14.3	-1.9	
	baz=270,SNR=6.6							
M23K	Glacier View	80.02	29	P	P	12 45 14.9	-1.2	
	baz=270							
G24K	Hadweenzic Riv	80.12	24	P	P	12 45 15.6	-1.0	
	baz=270							
POKR	Poker Plat Res	80.14	25	P	P	12 45 15.5	-1.1	
	baz=270							
DHY	Denali Highway	80.17	27	P	P	12 45 15.2	-1.8	
	baz=270							
P23K	Montague Islan	80.20	31	P	P	12 45 15.1	-1.9	
	baz=271							
SCM	Sheep Creek Mo	80.21	29	P	P	12 45 15.5	-1.6	
	baz=271							
GURO	Guroymak-BITLI	80.30	308	P	P	12 45 17.6	-0.7	
GLI	Glacier Island	80.34	30	P	P	12 45 16.6	-1.2	
	baz=271							
HDA	Harding Lake	80.35	26	IAmb	IAmb	12 45 34.7		
	comp=Z,4.6nm,0.7s							
HDA	Harding Lake	80.35	26	P	P	12 45 16.4	-1.4	
	baz=271							
ILAR	Eielson Array	80.37	26	P	P	12 45 18.9	+1.0	
	comp=Z,1.3nm,0.7s,baz=241,slow=4.9,SNR=34							
	comp=Z,1.3nm,0.7s							
D25K	Kavik River	80.54	21	P	P	12 45 16.9	-1.9	
	baz=270							
G25K	Bearman Lake	80.67	24	P	P	12 45 17.8	-1.6	
	baz=271							
M24K	Tolsona, Glenn	80.75	28	P	P	12 45 18.3	-1.7	
	baz=272							
F25K	Christian Rive	80.83	23	P	P	12 45 18.8	-1.6	
	baz=271							
E25K	Arctic Village	80.85	22	P	P	12 45 18.8	-1.7	
	baz=271,SNR=5.4							
K24K	Donnelly Dome	80.88	27	P	P	12 45 19.1	-1.5	
	baz=272							
KLU	Klutina	80.89	29	P	P	12 45 18.9	-1.9	
	baz=272							
PRP	Porcupine Dome	80.93	25	P	P	12 45 19.3	-1.7	
	baz=272							
EYAK	Cordova Ski Ar	81.01	30	P	P	12 45 19.7	-1.6	
	baz=272							
J25K	Salcha River,	81.03	26	P	P	12 45 19.8	-1.7	
	baz=272							
C26K	Camden Bay	81.04	20	P	P	12 45 20.0	-1.3	
	baz=272							
PAX	Paxson	81.05	28	P	P	12 45 19.9	-1.7	
	baz=272							
RIDG	Independent Ri	81.29	27	P	P	12 45 21.7	-1.2	
	baz=273,SNR=11							
F26K	Sheenjek River	81.40	23	P	P	12 45 21.8	-1.6	
	baz=273							
C27K	Jago River	81.47	21	P	P	12 45 22.7	-0.9	
	baz=273							
N25K	Chitina, Valde	81.52	29	P	P	12 45 22.7	-1.4	
	baz=273							
BMRM	Bremner River	81.55	30	P	P	12 45 23.0	-1.3	
	baz=273							
G26K	Porcupine Rive	81.58	23	P	P	12 45 23.2	-1.1	
	baz=273							
DOT	Dot Lake	81.65	27	IAmb	IAmb	12 45 29.7		
	comp=Z,7.2nm,1.2s							
SCRK	Sand Creek	81.66	26		P	12 45 24.1	-0.8	
SCRK	Sand Creek	81.66	26	P	P	12 45 23.5	-1.4	
	baz=273,SNR=6.5							
KAIM	Kayak Island	81.70	31	P	P	12 45 23.6	-1.5	
	baz=274							
MENT	Mentasta	81.84	28	IAmb	IAmb	12 45 47.3		
	comp=Z,7.4nm,1.1s							
GLB	Gilahina Butte	81.90	29	IAmb	IAmb	12 45 31.0		
	comp=Z,9.1nm,1.1s							
I26K	Coal Creek Min	81.93	25	P	P	12 45 25.0	-1.1	
	baz=274							
L26K	Log Cabin Wild	82.01	27	P	P	12 45 25.3	-1.3	
	baz=274							
M26K	Nabesna, AK	82.22	28	P	P	12 45 26.2	-1.6	
	baz=274							
BGLC	Bering Glacier	82.26	30	P	P	12 45 26.7	-1.2	
	baz=274							
MCARA	McCarthy VSAT	82.28	29	P	P	12 45 27.0	-1.1	
	baz=274							
CRQE	Cirque	82.30	30	P	P	12 45 26.8	-1.5	
	baz=275							
E27K	Coleen River	82.33	22	P	P	12 45 26.4	-1.8	
	baz=275							
G27K	Doyon Strip	82.43	24	P	P	12 45 27.8	-0.9	
	baz=275							
D27M	Malcolm River	82.46	21	P	P	12 45 27.6	-1.4	
	baz=275							
H27K	Steamboat Moun	82.53	24	P	P	12 45 27.6	-1.8	
	baz=275							
I27K	Kandik River	82.55	25	P	P	12 45 28.1	-1.3	
	baz=275,SNR=14							
L27K	Beaver Creek,	82.70	27	P	P	12 45 28.8	-1.5	
	baz=275							
BCAR	Beaver Creek A	82.72	27	P	P	12 45 29.2	-1.2	
M27K	Edge Creek, AK	82.74	28	P	P	12 45 29.2	-1.4	
	baz=275							
MESA	MESA	82.92	30	P	P	12 45 29.9	-1.8	
	baz=276							
F28M	Old Crow	83.03	23	P	P	12 45 30.6	-1.3	
F28M				IAmb	IAmb	12 45 35.8		
	comp=Z,4.9nm,0.8s							
F28M	Old Crow	83.03	23	P	P	12 45 30.3	-1.6	
	baz=276							
E28M	Babbage River	83.04	22	IAmb	IAmb	12 45 35.4		
	comp=Z,4.0nm,0.7s							
E28M	Babbage River	83.04	22	P	P	12 45 30.5	-1.4	
	baz=277							
CTG	Chitna Glacier	83.14	29	P	P	12 45 31.0	-1.7	
	baz=276							
BVCY	Beaver Creek	83.20	28	P	P	12 45 31.2	-1.7	
	baz=276							
I28M	Miner Creek	83.26	25	P	P	12 45 31.4	-1.9	
	baz=277							
YUK3	Moose Creek	83.47	29	P	P	12 45 32.5	-2.0	
	baz=277							
E29M	Blow River	83.67	22	P	P	12 45 33.7	-1.4	
	baz=278							
O28M	Mount Upton	83.72	30	P	P	12 45 34.0	-1.9	
	baz=277							
PINM	Pinnacle	83.77	30	P	P	12 45 34.3	-1.6	
	baz=277							
H29M	Whitestone	83.80	24	P	P	12 45 34.2	-1.6	
	baz=278							
G29M	Pine Creek	83.84	23	P	P	12 45 34.2	-1.9	
	baz=278							
YUK8	Steele Glacier	83.86	29	P	P	12 45 34.6	-2.0	
	baz=277							
I29M	Ogilvie Camp,	83.95	25	P	P	12 45 34.6	-2.0	
	baz=278							
J29N	Klondike Camp	84.12	26	P	P	12 45 36.2	-1.4	
	baz=278							
M29M	Somme Creek	84.31	28	P	P	12 45 36.5	-2.2	
	baz=278,SNR=7.9							
L29M	L29M	84.36	27	P	P	12 45 37.1	-1.8	
	baz=279							
YUK4	Talbot Arm	84.38	29	P	P	12 45 37.6	-1.6	
	baz=278							
EPYK	Eagle Plains	84.44	24	P	P	12 45 36.9	-2.2	
	baz=280							
K29M	Barlow Dome	84.52	26	P	P	12 45 37.4	-2.3	
	baz=279							
G30M	tAoh Zraii Nji	84.53	23	IAmb	IAmb	12 45 43.1		
	comp=Z,12nm,1.2s							
G30M	tAoh Zraii Nji	84.53	23	P	P	12 45 37.7	-1.9	
	baz=280							
O29M	Mount Kennedy	84.57	30	P	P	12 45 37.8	-2.3	
	baz=278							
YUK6	Outpost Mounta	84.58	29	P	P	12 45 38.4	-1.8	
	baz=279							
F30M	Barrier River	84.58	22	P	P	12 45 39.0	-0.8	
	baz=280							
I30M	Mount Dempster	84.77	25	P	P	12 45 39.4	-1.6	
	baz=280							
J30M	Hart River	84.91	25	IAmb	IAmb	12 46 01.6		
	comp=Z,4.0nm,0.8s							
J30M	Hart River	84.91	25	P	P	12 45 40.5	-1.2	
	baz=280							
HYT	Haines Junctio	85.01	29	IAmb	IAmb	12 46 02.3		
	comp=Z,5.7nm,1.0s							
HYT	Haines Junctio	85.01	29	P	P	12 45 40.1	-2.2	
	baz=279							
M30M	Minto, Yukon	85.05	28	IAmb	IAmb	12 46 01.6		
	comp=Z,4.1nm,0.9s							
M30M	Minto, Yukon	85.05	28	P	P	12 45 40.5	-1.8	
	baz=280							
N30M	Aishikik Lake	85.11	29	P	P	12 45 40.5	-2.2	
	baz=280							
MAYO	Mayo, Yukon	85.27	26	P	P	12 45 41.9	-1.5	
	baz=281							
INK	Inuvik	85.28	22	IAmb	IAmb	12 45 47.0		
	comp=Z,13nm,1.5s							
INK	Inuvik	85.28	22	P	P	12 45 41.7	-1.5	
	baz=282							
G31M	Satah River	85.29	23	P	P	12 45 41.7	-1.6	
	baz=282							
SPITS	Spitsbergen Ar	85.32	349	P	P	12 45 43.5	+0.2	
	comp=Z,2.0nm,0.6s,baz=94,slow=8.4,SNR=7.2							
SPITS				LR	LR	13 28 13.6		
	comp=Z,25nm,20.7s,baz=27,slow=39							
	comp=Z,2.0nm,0.6s							
F31M	Tsiigehtchic	85.39	22	IAmb	IAmb	12 45 46.7		
	comp=Z,5.6nm,0.8s							
F31M	Tsiigehtchic	85.39	22	P	P	12 45 42.2	-1.6	
	baz=282							
P30M	Million Dollar	85.40	30	P	P	12 45 42.1	-2.0	
	baz=280							
H31M	Peel River	85.50	24	P	P	12 45 42.5	-1.9	
	baz=280							
ARCES	ARCESS Array B	85.51	340	P	P	12 45 44.4	-0.1	
	comp=Z,11nm,1.1s,baz=74,slow=5.2,SNR=7.6							
	comp=Z,11nm,1.1s							
O30N	Mendenhall	85.70	29	P	P	12 45 43.7	-2.0	
	baz=281							
N31M	Braeburn, Yuko	85.72	28	P	P	12 45 43.8	-1.8	
	baz=281							
S31K	Pelican	86.16	32	P	P	12 45 45.6	-2.1	
	baz=281							
M31M	Drury Creek, Y	86.22	28	P	P	12 45 46.2	-1.9	
	baz=282							
MMAI	Mount Meron Ar	86.25	303	P	P	12 45 48.7	-0.2	
	comp=Z,1.5nm,0.8s,baz=23,slow=7.8,SNR=1.6							
	comp=Z,1.5nm,0.8s							
WHY	Whitehorse	86.31	29	P	P	12 45 47.0	-1.7	
	baz=282							
BRTR	Keskin Array B	86.66	310	P	P	12 45 49.1	-1.8	
	comp=Z,0.5nm,0.6s,baz=114,slow=5.1,SNR=2.2							
	comp=Z,0.5nm,0.6s							
SIT	Sitka	86.81	33	P	P	12 45 49.2	-1.8	
	baz=282							
FIA1	FINESS Array S	87.19	332	P	P	12 45 51.6	-1.2	
FINES	FINESS Array B	87.19	332	P	P	12 45 51.6	-1.1	
	comp=Z,1.1nm,0.4s,baz=12,slow=9.9,SNR=17							
	comp=Z,1.1nm,0.4s							
FINES	FINESS Array B	87.19	332	P	P	12 45 52.0	-0.8	
AKASG	Malin Array Be	87.80	321	P	P	12 45 54.2	-1.8	
	comp=Z,0.6nm,0.5s,baz=73,slow=4.2,SNR=1.4							
AKASG				LR	LR	13 29 35.8		
	comp=Z,31nm,18.9s,baz=258,slow=38							
	comp=Z,0.6nm,0.5s							
C36M	Paulatuk	88.27	20	P	P	12 45 56.3	-1.5	
	baz=291							
VNDA	Vanda	88.64	173	P	P	12 45 59.4	+0.1	
	comp=Z,1.4nm,0.5s,baz=313,slow=5.8,SNR=13							
	comp=Z,1.4nm,0.5s							
VNDA	Vanda	88.64	173	P	P	12 45 59.6	+0.3	
MAW	Mawson	88.68	200	P	P	12 45 59.5	-0.1	
	comp=Z,2.2nm,0.7s,baz=45,slow=7.1,SNR=2.0							
	comp=Z,2.2nm,0.7s							
MAW	Mawson	88.68	200	P	P	12 46 00.3	+0.7	
V35K	Ketchikan	89.22	34	P	P	12 46 01.1	-1.4	
	baz=285							
DLBC	Dease Lake	89.24	31	LR	LR	13 30 26.8		
	comp=Z,60nm,18.6s,baz=170,slow=38							
DLBC	Dease Lake	89.24	31	P	P	12 46 00.8	-1.9	
	baz=286							
WTLY	Watson Lake, Y	89.37	29	P	P	12 46 01.1	-2.1	
	baz=287							
KMBO	Kilima Mbogo	89.64	269	P	P	12 46 05.2	-0.5	
	baz=156,slow=9.0							
MLR	Muntele Rosu	91.10	316	LR	LR	13 30 35.8		
	comp=Z,54nm,18.9s,baz=59,slow=38							
HFS	Hagfors	93.35	333	P	P	12 46 20.7	-1.0	
	comp=Z,4.5nm,1.1s,baz=102,slow=13,SNR=1.8							
	comp=Z,4.5nm,1.1s							
NOA	NORSAR Array B	94.07	334	P	P	12 46 26.0	+1.0	
	comp=Z,0.4nm,0.7s,baz=70,slow=8.9,SNR=2.1							
NOA				LR	LR	13 31 32.9		
	comp=Z,22nm,19.0s,baz=280,slow=37							
	comp=Z,0.4nm,0.7s							
YKA	Yellowknife Ar	94.72	24	P	P	12 46 29.8	+1.9	
	comp=Z,1.3nm,0.8s,baz=303,slow=5.3,SNR=18							
	comp=Z,1.3nm,0.8s							
QSPA	South Pole Qui	98.89	180	P	P	12 46 47.6	+0.9	
	comp=Z,1.0nm,0.9s,baz=315,slow=8.6,SNR=5.6							
	comp=Z,1.0nm,0.8s							
NVAR	Mina Array Bea	103.38	47	Pdiff	Pdif	12 47 10.3	+2.7	
	comp=Z,0.1nm,0.6s,baz=303,slow=4.5,SNR=2.9							
TXAR	Lajitas Array	118.31	50	PKP	PKPdf	12 51 56.0	+1.1	
	comp=Z,0.1nm,0.5s,baz=356,slow=3.9,SNR=2.3							
TORD	Torodi Ar. Bea	121.13	291	PKP	PKPdf	12 51 59.6	-0.9	
	comp=Z,0.9nm,0.8s,baz=64,slow=0.8,SNR=5.4							
DBIC	Dimbokro	129.28	286	PKP	PKPdf	12 52 16.1	0.0	
	comp=Z,14nm,1.0s,baz=88,slow=2.6,SNR=9.5							
PLCA	Paso Flores	144.89	157	PKP	PKPab	12 52 43.8	+0.5	
	comp=Z,2.9nm,0.9s,baz=187,slow=5.0,SNR=7.3							
PLCA	Paso Flores	144.89	157	PKPdf	PKPab	12 52 42.8	-0.5	
GO06	Curarrehue	145.49	155	PKPdf	PKPdf	12 52 44.0	-1.3	

SJA 21 12:36:49.5±0.6, 22°.75S×66°.06W, h292km±6km, ML3.6, MW3.5, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HJA	Humahuaca	0.75	127	eP		12 37 28.9	+0.5
YJA	Yavi	0.76	42	eP		12 37 29.0	+0.3
YJA				eS		12 37 50.2	-9.5
SALTA		1.49	190	eP		12 37 36.0	+3.6
SALTA				eP		12 37 41.6	
AF01	San Pedro de A	1.97	264	eP		12 37 21.5	-14
AF01				IAML		12 38 27.7	
	comp=Z,125nm,0.1s						
SLA	San Lorenzo	2.03	166	eS		12 38 20.8	+7.9
PB09	IPOC Station P	3.10	287	eP		12 37 46.8	+0.8
PB09				eS		12 38 28.2	-2.7
PB09				IAML		12 38 28.6	
	comp=Z,48nm,0.4s						
PB06	IPOC Station P	3.24	270	eP		12 37 48.1	+0.7
PB06				eS		12 38 30.6	-2.9
PB06				IAML		12 38 32.3	
	comp=Z,74nm,0.1s						
FSA	Cafayete	3.35	179	eP		12 37 51.7	+3.2
FSA				eS		12 38 24.1	-11
PB03	IPOC Station P	3.49	281	eP		12 37 50.1	+0.1
PB03				eS		12 38 33.2	-5.1
PB03				IAML		12 38 34.3	
	comp=Z,150nm,0.1s						
PB01	IPOC Station P	3.61	297	eP		12 37 51.3	+0.1
PB01				eS		12 38 36.3	-4.2
PB01				IAML		12 38 38.6	
	comp=Z,75nm,0.2s						
PB07	IPOC Station P	3.69	285	eP		12 37 52.3	+0.2
PB07				eS		12 38 37.4	-4.7
PB07				IAML		12 38 39.6	
	comp=Z,105nm,0.3s						
PB05	IPOC Station P	3.83	268	eP		12 37 54.0	+0.4
PB05				eS		12 38 40.3	-4.4
PB05				IAML		12 38 43.7	
	comp=Z,29nm,0.5s						
PB02	IPOC Station P	3.83	291	eP		12 37 53.7	+0.1
PB02				eS		12 38 40.2	-4.7
PB08	IPOC Station P	3.88	311	eP		12 37 55.5	+1.0
PB08				eS		12 38 43.9	-2.4
PB08				IAML		12 38 45.2	
	comp=Z,34nm,0.4s						
PB10	IPOC Station P	4.21	259	eP		12 37 58.3	+0.6
PB10				eS		12 38 47.4	-4.8
PB10				IAML		12 38 51.9	
	comp=Z,28nm,0.3s						
GO01	Chusmiza	4.24	316	eP		12 37 59.3	+0.8
GO01				eS		12 38 52.3	-1.4
GO01				IAML		12 38 55.0	
	comp=Z,27nm,0.1s						
PATCX	Punta Patache	4.26	296	eP		12 37 58.5	+0.1
PATCX				eS		12 38 48.4	-5.1
PATCX				IAML		12 38 49.7	
	comp=Z,64nm,0.4s						
PB14	IPOC Station P	4.40	244	eP		12 38 01.2	+1.1
PB14				eS		12 38 52.6	-4.0
PB14				IAML		12 38 55.7	
	comp=Z,74nm,0.3s						
TA01	Diego Aracena	4.41	299	eP		12 38 00.1	+0.2
TA01				eS		12 38 51.0	-5.3
TA01				IAML		12 38 53.3	
	comp=Z,40nm,0.2s						
PB11	IPOC Station P	4.48	311	eP		12 38 00.8	-0.2
PB11				eS		12 38 53.0	-5.3
PB11				IAML		12 38 55.4	
	comp=Z,45nm,0.2s						
AC02	Maricunga	4.93	214	eP		12 38 08.9	+2.5
AC02				eS		12 39 11.3	+3.3
AC02				IAML		12 39 11.8	
	comp=Z,8.1nm,1.2s						
AC01	Pan de Azucar	5.34	230	eP		12 38 11.2	+0.5
AC01				eS		12 39 11.9	-4.2
AC01				IAML		12 39 20.6	
	comp=Z,15nm,0.8s						
PB16	IPOC Station P	5.45	323	eP		12 38 14.3	+1.5
PB16				eS		12 39 13.8	-5.7
PB16				IAML		12 39 25.2	
	comp=Z,9.7nm,2.4s						

*IDC **21** 13:02:32.3±1.2, 59°.64N×59°.63E, h0km, mb3.7/1, mbtmp3.5/7, ML2.8/6, MS3.4/2, Error ellipse: s-maj=63.0km s-min=11.5km az=37.0*
*MIRAS **21** 13:02:33.6, 60°.21N×59°.98E, h1km, ML3.1/8*

ISC 21 13:02:28.7±1.5, 60°.24N±0°.06×60°.18E±0°.04, h3km±9km, n17, σ1s87/42, Ural Mountains region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SVUR	Severouralsk	0.11	249	i P		**13 02 30.9**	**+0.1**
SVUR				i P		**13 02 30.9**	**+0.1**
SVUR				i P		**13 02 30.9**	**+0.1**
	302nm,0.1s						
SVUR				i S		**13 02 31.8**	**-0.5**
SVUR				i S		**13 02 31.8**	**-0.5**
	1μm,0.1s						
SVUR				i S		**13 02 31.8**	**-0.5**
SVUR				i AML	AML	13 02 33.4	
	2μm,0.1s						
PR7R	Sarany	1.84	204	i P		**13 03 03.0**	**0.0**
	76nm,0.2s						
PR7R				i S		**13 03 27.4**	**+1.0**
	296nm,0.6s						
PR7R				i S		**13 03 27.4**	**+1.0**
PR7R				i S		**13 03 27.4**	**+1.0**
PR7R				i AML	AML	13 03 51.0	
	469nm,0.5s						
PR1R	Pomanovo	2.04	240	i P		**13 03 06.3**	**0.0**
	45nm,0.4s						
PR1R				i S		**13 03 32.5**	**+0.5**
	462nm,0.3s						
PR1R				i S		**13 03 32.5**	**+0.5**
PR1R				i S		**13 03 32.5**	**+0.5**
PR1R				i AML	AML	13 03 54.3	
	395nm,0.3s						
PR0R	Verkhnechusovs	2.58	219	i P		**13 03 16.0**	**+0.5**
	54nm,0.3s						
PR0R				i S		**13 03 48.5**	**+1.0**
	338nm,0.3s						
PR0R				i S		**13 03 48.5**	**+1.0**
PR0R				i S		**13 03 48.5**	**+1.0**
PR0R				i AML	AML	13 04 13.3	
	555nm,0.2s						
PR6R	Ekimyata	2.96	227	i P		**Pn**	**13 03 17.6**	**+1.2**
	5.9nm,0.3s						
PR6R				i S		**Sn**	**13 03 54.2**	**+1.7**
PR6R				i S		**Sn**	**13 03 54.2**	**+1.7**
	48nm,0.3s						
PR6R				i S		**Sn**	**13 03 54.2**	**+1.7**
PR6R				i AML	AML	13 04 23.3	
	105nm,0.3s						
PR3R	Kungur	3.25	212	i P		**Pb**	**13 03 23.7**	**-3.3**
	13nm,0.5s						
PR3R				i S		**Sb**	**13 04 03.6**	**-3.3**
PR3R				i S		**Sb**	**13 04 03.6**	**-3.3**
PR3R				i S		**Sb**	**13 04 03.6**	**-3.3**
	26nm,0.4s						
PR3R				i AML	AML	13 04 44.3	
	86nm,0.4s						
PR4R	Vlasy	3.29	227	i P		**Pb**	**13 03 27.6**	**0.0**
	16nm,0.1s						
PR4R				i S		**Sb**	**13 04 07.8**	**-0.3**
PR4R				i S		**Sb**	**13 04 07.8**	**-0.3**
PR4R				i S		**Sb**	**13 04 07.8**	**-0.3**
	41nm,0.5s						
PR4R				i AML	AML	13 04 57.3	
	287nm,0.3s						
KAUR	Kamensk Uralsk	3.88	169	i P		**Pb**	**13 03 39.3**	**+1.6**
	4.9nm,0.5s						
KAUR				i S		**Sb**	**13 04 26.9**	**+1.8**
	8.6nm,0.3s						
KAUR				i S		**Sb**	**13 04 26.9**	**+1.8**
KAUR				i S		**Sb**	**13 04 26.9**	**+1.8**
KAUR				i AML	AML	13 04 55.3	
	42nm,0.5s						
BVAR	Borovoye Array	9.15	138	Pn		**Pn**	**13 04 42.6**	**+1.1**
	0.1nm,0.3s,baz=325,slow=17,SNR=18						
BVAR				Sn		**Sn**	**13 06 19.0**	**-5.9**
	0.2nm,0.3s,baz=320,slow=24,SNR=5.7						
	2.4nm,0.5s						
KURBB	Kurchatov Arra	14.13

MKAR	**Makanchi Array**	**18.69**	**126**	P		**Pn**	**13 06 48.6**	**+0.5**
	baz=307,slow=11,SNR=3.7								
	0.4nm,0.7s								
HFS	**Hagfors**	**22.75**	**290**	P		**P**	**13 07 35.1**	**+3.5**
	2.5nm,0.9s,baz=68,slow=12,SNR=2.1								
	2.5nm,0.9s								
TLY	**Talaya**	**25.36**	**90**	LR		LR	13 18 53.5		
	comp=Z,35nm,18.9s,baz=104,slow=38								
SCHQ	**Schefferville**	**57.78**	**327**	LR		LR	13 36 42.7		
	comp=Z,77nm,19.4s,baz=198,slow=35								

*IDC **21** 13:03:09.2±1.8,54.˝56N×163.˝42E,h0km,mb3.3/4, mbtmp3.3/5,ML2.4/1, Error ellipse: s-maj=98.4km s-min=29.5km az=152.0*
*KRSC **21** 13:03:21.2±1.0,55.˝21N×160.˝72E,h166km±11km,Ml3.7*
ISC 21 13:03:21.7±0.8,55.˚18N±0.˚06×160.˚84E±0.˚09,h170km±7km, n35,σ0≤90/45,mb3.1/4,Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TUMD	**Tumrok D**	**0.26**	**275**	*eP*	**Pn**	**13 03 44.3**	**-0.2**
TUMD				*eS*	**Sn**	**13 04 02.0**	**0.0**
KMNR	**Kamenistaya**	**0.67**	**329**	*eP*	**Pn**	**13 03 46.5**	**+0.3**
KOZ	**Kozyrevsk**	**1.04**	**328**	*eP*	**Pn**	**13 03 48.1**	**-0.5**
KLY	**Klyuchi**	**1.14**	**355**	*eP*	**Pn**	**13 03 49.5**	**+0.1**
SRDR	**Sredinnyy**	**1.30**	**331**	*eP*	**Pn**	**13 03 50.2**	**-0.8**
ESO	**Esso**	**1.43**	**302**	*eP*	Pn	13 03 51.1	-1.0
ESO				*eS*	Sn	13 04 13.4	-2.2
SMKR	**Semkarok**	**1.45**	**14**	*eP*	**Pn**	**13 03 52.9**	**+0.6**
SMKR				*eS*	**Sn**	**13 04 16.7**	**+0.6**
KBG	**Krutoberegovo**	**1.51**	**44**	*eS*	**Sn**	**13 04 16.9**	**0.0**
KBTR	**Krutoberegovo**	**1.52**	**47**	*eP*	**Pn**	**13 03 53.7**	**+0.8**
KBTR				*eS*	**Sn**	**13 04 17.5**	**+0.4**
SPN	**Mys Shipunski**	**2.14**	**193**	*eP*	**Pn**	**13 03 59.1**	**-0.6**
SPN				*eS*	**Sn**	**13 04 27.1**	**-1.9**
NLC	**Nalytchevo**	**2.20**	**204**	*eP*	**Pn**	**13 04 00.5**	**+0.3**
NLC				*eS*	**Sn**	**13 04 29.7**	**-0.4**
SDLR	**Sedlovina**	**2.23**	**212**	*eP*	**Pn**	**13 04 01.4**	**+0.7**
SDLR				*eS*	**Sn**	**13 04 31.3**	**+0.4**
KRX	**Arik**	**2.23**	**216**	*eP*	**Pn**	**13 04 02.0**	**+1.2**
KRER	**Koryakskii**	**2.25**	**214**	*eS*	**Sn**	**13 04 32.1**	**+0.7**
GNL	**Ganaly**	**2.25**	**230**	*eP*	**Pn**	**13 04 01.3**	**+0.3**
GNL				*eS*	**Sn**	**13 04 30.4**	**-1.1**
SMAR	**Somma**	**2.26**	**213**	*eP*	**Pn**	**13 04 02.4**	**+1.1**
SMAR				*eS*	**Sn**	**13 04 32.7**	**+0.8**
AVH	**Avacha**	**2.28**	**214**	*eP*	**Pn**	**13 04 02.5**	**+1.2**
AVH				*eS*	**Sn**	**13 04 33.2**	**+1.2**
KOK	**Koryaka**	**2.29**	**215**	*eP*	**Pn**	**13 04 03.0**	**+1.6**
UGLR	**Uglovaya**	**2.30**	**212**	*eP*	**Pn**	**13 04 02.4**	**+0.8**
DALK	**Dalny**	**2.48**	**211**	*eS*	**Sn**	**13 04 35.5**	**-0.5**
PET	**Petropavlovsk**	**2.52**	**212**	*eP*	**Pn**	**13 04 04.7**	**+0.8**
PET				*eS*	**Sn**	**13 04 36.3**	**-0.4**
PETK	**Petropavlovsk-**	**2.78**	**223**	Pn	**Pn**	**13 04 07.4**	**+0.3**
	1.4nm,0.3s,baz=65,slow=15,SNR=39						
PETK				Sn	**Sn**	**13 04 43.7**	**+1.3**
	1.1nm,0.3s,baz=81,slow=21,SNR=5.1						
	9.3nm,0.6s						
KRMR	**Karymshinskiy**	**2.85**	**215**	*eP*	**Pn**	**13 04 09.0**	**+1.1**
KRMR				*eS*	**Sn**	**13 04 43.2**	**-0.7**
BKI	**Bering**	**2.94**	**87**	*eP*	Pn	13 04 11.2	+2.2
BKI				*eS*	Sn	13 04 47.9	+2.1
RUS	**Russkaya**	**3.08**	**208**	*eP*	**Pn**	**13 04 10.3**	**-0.4**
RUS				*eS*	**Sn**	**13 04 47.0**	**-1.9**
MTVR	**Mutnovka**	**3.13**	**211**	*eP*	**Pn**	**13 04 12.5**	**+0.9**
MTVR				*eS*	**Sn**	**13 04 50.3**	**0.0**
APC	**Apacha**	**3.13**	**225**	*eP*	**Pn**	**13 04 12.1**	**+0.7**
ASAK	**Asacha**	**3.30**	**213**	*eP*	**Pn**	**13 04 14.1**	**+0.5**
ASAK				*eS*	**Sn**	**13 04 54.2**	**+0.2**
ILAR	**Eielson Array**	**27.06**	**48**	P	**P**	**13 08 47.8**	**0.0**
	0.2nm,0.5s,baz=262,slow=7.7,SNR=9.5						
	0.2nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**35.69**	**170**	T	T	13 47 53.5	
	baz=354,slow=76,SNR=3.4						
H11N3	**WAKE ISLAND Hy**	**35.70**	**170**	T	T	13 47 56.4	
	baz=354,slow=76,SNR=3.3						
H11N1	**WAKE ISLAND Hy**	**35.70**	**170**	T	T	13 47 56.0	
	baz=354,slow=76,SNR=4.1						
YKA	**Yellowknife Ar**	**41.34**	**44**	P	**P**	**13 10 50.1**	**0.0**
	0.1nm,0.4s,baz=301,slow=7.9,SNR=4.3						
	0.1nm,0.4s						
PDAR	**Pinedale Array**	**56.14**	**62**	P	**P**	**13 12 41.6**	**-1.8**
	0.1nm,0.4s,baz=279,slow=5.7,SNR=1.6						
	0.1nm,0.4s						
TXAR	**Lajitas Array**	**69.43**	**68**	P	**P**	**13 14 12.6**	**+1.4**
	0.2nm,0.5s,baz=296,slow=5.4,SNR=6.3						
	0.2nm,0.5s						

*SOME **21** 13:05:52.7,41.˚70N×82.˚08E,h10km*
*NNC **21** 13:05:58.4±4.1,42.˚33N×82.˚42E,h0km,mb3.1,mpv2.7, Error ellipse: s-maj=34.5km s-min=19.3km az=139.0*
ISC 21 13:05:54.3±2.6,42.˚0N±0.˚1×82.˚38E±0.˚08,h13km,n10, σ1≤87/21,7C-3D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**2.10**	**315**	*eP*	**Pb**	**13 06 32.9**	**+0.6**
	12nm,0.2s						
KTMS				*eS*	**Sg**	**13 07 02.0**	**+0.2**
	55nm,0.4s						
SHLS	**Shalkode**	**2.46**	**300**	*eP*	**Pn**	**13 06 33.3**	**-1.0**
	4.1nm,0.1s						
SHLS				*eS*	**Sn**	**13 07 02.7**	**-1.5**
	53nm,0.3s						
PDGK	**Podgornoye**	**2.53**	**303**	⇓Pn	**Pb**	**13 06 39.2**	**-0.4**
	2.1nm,0.3s						
PDGK				⇑Lg	Lg	13 07 13.9	
	11nm,0.3s						
UZB	**Uzynbulak**	**2.75**	**296**	*eP*	**Pb**	**13 06 42.7**	**-0.7**
	1.0nm,0.1s						
UZB				*eS*	**Sb**	**13 07 19.2**	**+2.2**
	11nm,0.3s						
DJR	**Jarkent**	**3.02**	**322**	*eP*	**Pb**	**13 06 49.9**	**+1.8**
	2.1nm,0.2s						
DJR				*eS*	**Sg**	**13 07 30.8**	**-0.7**
	4.4nm,0.2s						
KPKS	**Kokpek**	**3.11**	**300**	*eP*	**Pb**	**13 06 48.6**	**-0.9**
	0.4nm,0.2s						
KPKS				*eS*	**Sb**	**13 07 28.5**	**+1.2**
	8.5nm,0.3s						
ARXS	**Arharly**	**4.02**	**305**	*eP*	**Pb**	**13 07 06.1**	**+1.1**
	0.6nm,0.2s						
ARXS				*eS*	**Sg**	**13 07 58.7**	**-4.6**
	1.8nm,0.1s						
MK31	**Makanchi Array**	**4.82**	**359**	⇑Pn	**Pn**	**13 07 07.1**	**+0.5**
	0.1nm,0.2s,baz=185,slow=12,SNR=20						
MK31				⇑Pg	**Pb**	**13 07 16.0**	**-2.6**
	0.8nm,0.4s,baz=189,slow=14,SNR=3.7						
MK31				⇑Sn	**Sn**	**13 08 02.9**	**+0.7**
	0.9nm,0.5s						
MK31				⇑Lg	Lg	13 08 19.0	
	0.8nm,0.3s,baz=177,slow=26,SNR=3.8						
MAKZ	**Makanchi**	**4.84**	**357**	⇑Pn	**Pn**	**13 07 07.2**	**+0.3**
	1.1nm,0.7s						
MAKZ				⇓Pg	**Pb**	**13 07 19.8**	**+0.9**
	2.4nm,1.3s						
MAKZ				⇓Sn	**Sn**	**13 08 02.0**	**-0.8**
	1.8nm,0.6s						
MAKZ				⇑Lg	Lg	13 08 20.1	
	5.1nm,1.2s						
KST	**Kastek**	**4.86**	**285**	*eP*	**Pb**	**13 07 19.7**	**+0.2**
	1.0nm,0.2s						
KST				*eS*	**Sb**	**13 08 22.0**	**+4.1**
	2.1nm,0.4s						

*IDC **21** 13:06:53.5±2.5,18.˚71S×177.˚77W,h626km±24km,mb3.1/5, mbtmp4.0/6,Error ellipse: s-maj=41.1km s-min=31.3km az=146.0*
ISC 21 13:06:51.1±1.4,18.˚8S±0.˚2×177.˚5W±0.˚2,h600km,n6, σ1≤52/8,mb3.7/5,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.36**	**283**	P	**P**	**13 08 21.6**	**+2.4**
	12nm,0.7s,baz=131,slow=14,SNR=8.0						
STKA	**Stephens Creek**	**38.98**	**242**	P	**P**	**13 13 26.9**	**-0.5**
	0.8nm,0.3s,baz=76,slow=8.3,SNR=4.8						
	0.8nm,0.3s						
WRA	**Warramunga Arr**	**45.33**	**260**	P	**P**	**13 14 15.8**	**-1.5**
	2.3nm,0.3s,baz=98,slow=7.1,SNR=127						
WRA				PcP	**PcP**	**13 15 43.2**	**-0.6**
	0.1nm,0.3s,baz=97,slow=2.9,SNR=1.6						
	2.3nm,0.3s						

ASAR	**Alice Springs**	**45.39**	**255**	P		**P**	**13 14 16.9**	**-0.9**
	4.2nm,0.7s,baz=87,slow=8.2,SNR=80								
ASAR				PcP		**PcP**	**13 15 43.3**	**-0.8**
	0.4nm,0.8s,baz=99,slow=3.8,SNR=4.7								
	4.2nm,0.7s								
QSPA	**South Pole Qui**	**71.27**	**180**	P		**P**	**13 17 11.8**	**+1.0**
	2.5nm,1.1s,baz=22,slow=5.4,SNR=2.7								
	2.5nm,1.1s								
ILAR	**Eielson Array**	**86.55**	**13**	P		**P**	**13 18 30.5**	**-0.6**
	0.1nm,0.6s,baz=205,slow=3.4,SNR=1.3								
	0.1nm,0.6s								

*SOME **21** 13:08:17.3,42.˚43N×84.˚73E,h5km*
*IDC **21** 13:08:18.3±0.7,42.˚06N×84.˚49E,h0km,mb3.8/16, mbtmp3.8/23,ML3.1/6,MS3.1/4, Error ellipse: s-maj=15.5km s-min=10.2km az=53.0*
*MOS **21** 13:08:19.7±1.5,42.˚18N×84.˚60E,h16km,mb4.0/6,Error ellipse: s-maj=11.0km s-min=7.0km az=114.7*
*NNC **21** 13:08:23.5±2.1,42.˚25N×84.˚31E,h0km,mb4.2,mpv4.0, Error ellipse: s-maj=18.5km s-min=10.7km az=156.0*
ISC 21 13:08:20.2±0.6,42.˚21N±0.˚05×84.˚55E±0.˚04,h10km,n85, σ2≤35/94,mb3.9/16,13C-12D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**3.33**	**293**	Pg	**Pb**	**13 09 19.7**	**+0.4**
	18nm,0.3s						
KTMS				Lg	Lg	13 10 05.1	
	147nm,0.5s						
KTMS	**Ketmen**	**3.33**	**293**	*eP*	**Pb**	**13 09 19.7**	**+0.4**
	18nm,0.3s						
KTMS				*eS*	**Sg**	**13 10 05.1**	**-1.9**
	147nm,0.5s						
SHLS	**Shalkode**	**3.87**	**286**	Pg	**Pb**	**13 09 24.8**	**-3.8**
	40nm,0.1s						
SHLS				Lg	Lg	13 10 14.2	
	310nm,0.5s						
SHLS	**Shalkode**	**3.87**	**286**	P	**Pn**	**13 09 19.7**	**-0.1**
SHLS	**Shalkode**	**3.87**	**286**	*eP*	**Pb**	**13 09 24.8**	**-3.8**
	40nm,0.1s						
SHLS				*eS*	**Sb**	**13 10 14.2**	**-1.4**
	310nm,0.5s						
PDGK	**Podgornoye**	**3.89**	**288**	⇓Pn	**Pn**	**13 09 23.0**	**+2.9**
	2.8nm,0.3s						
PDGK				⇑Pg	**Pb**	**13 09 29.4**	**+0.5**
	28nm,0.5s						
PDGK				⇑Lg	Lg	13 10 22.8	
	130nm,0.6s						
PDGK	**Podgornoye**	**3.89**	**288**	P	**Pn**	**13 09 23.0**	**+2.9**
DJR	**Jarkent**	**4.07**	**303**	Pg	**Pb**	**13 09 33.0**	**+1.0**
	29nm,0.4s						
DJR				Lg	Lg	13 10 27.6	
	64nm,0.3s						
DJR	**Jarkent**	**4.07**	**303**	*eP*	**Pb**	**13 09 33.0**	**+1.0**
	29nm,0.4s						
DJR				*eS*	**Sg**	**13 10 27.6**	**-3.4**
	64nm,0.3s						
UZB	**Uzynbulak**	**4.18**	**285**	Pg	**Pb**	**13 09 35.0**	**+1.1**
	16nm,0.2s						
UZB				Lg	Lg	13 10 30.1	
	127nm,0.5s						
UZB	**Uzynbulak**	**4.18**	**285**	P	**Pn**	**13 09 26.7**	**+2.5**
UZB	**Uzynbulak**	**4.18**	**285**	*eP*	**Pb**	**13 09 35.2**	**+1.3**
	11nm,0.2s						
UZB				*eS*	**Sg**	**13 10 31.1**	**-3.3**
	119nm,0.3s						
KNOS	**Konyrlen**	**4.47**	**301**	Pg	**Pb**	**13 09 40.3**	**+1.5**
	33nm,0.5s						
KNOS				Lg	Lg	13 10 40.1	
	84nm,0.2s						
KPKS	**Kokpek**	**4.49**	**288**	Pg	**Pb**	**13 09 41.6**	**+2.4**
	0.1nm,0.1s						
KPKS				Lg	Lg	13 10 42.3	
	70nm,0.6s						
KPKS	**Kokpek**	**4.49**	**288**	*eP*	**Pb**	**13 09 41.6**	**+2.4**
	0.1nm,0.1s						
KPKS				*eS*	**Sg**	**13 10 42.2**	**-2.2**
	70nm,0.6s						
SATY	**Saty**	**4.61**	**283**	Pg	**Pg**	**13 09 46.5**	**-2.0**
	29nm,0.3s						
BLB	**Baldybastay**	**4.83**	**295**	Pg	**Pb**	**13 09 46.1**	**+1.2**
	26nm,0.2s						
KURS	**Kuram**	**4.86**	**287**	Pg	**Pb**	**13 09 48.8**	**+3.3**
	9.3nm,0.4s						
KURS				Lg	Lg	13 10 54.8	
	57nm,0.5s						
MK31	**Makanchi Array**	**4.86**	**341**	⇑Pn	**Pn**	**13 09 37.1**	**+3.7**
	0.5nm,0.2s,baz=144,slow=14,SNR=80						
MK31				Pg	**Pg**	**13 09 51.3**	**-2.0**
	17nm,0.5s,baz=163,slow=18,SNR=46						
MK31				⇓Lg	Lg	13 10 54.1	
	70nm,0.5s,baz=156,slow=29,SNR=7.7						
MK31	**Makanchi Array**	**4.86**	**341**	*d*	*i*P	**Pn**	**13 09 36.4**	**+3.0**
MKAR	**Makanchi Array**	**4.86**	**341**	Pn		**Pn**	**13 09 37.1**	**+3.7**
	1.1nm,0.3s,baz=157,slow=14,SNR=13							
MKAR				Pg		**Pg**	**13 09 50.2**	**-3.0**
	14nm,0.3s,baz=154,slow=16,SNR=36							
MKAR				Sn		**Sn**	**13 10 34.2**	**+4.5**
	8.2nm,0.3s,baz=162,slow=24,SNR=4.0							
MKAR				Lg		Lg	13 10 56.8	
	26nm,0.3s,baz=170,slow=30,SNR=10							
	1.6nm,0.3s							
MAKZ	**Makanchi**	**4.95**	**339**	⇑Pn		**Pn**	**13 09 37.9**	**+3.3**
	1.0nm,0.3s							
MAKZ				⇑Pg		**Pg**	**13 09 52.9**	**-2.1**
	31nm,0.8s							
MAKZ				⇑Lg		Lg	13 10 58.1	
	36nm,0.5s							
ZSN	**Zaisan**	**5.25**	**2**	*eP*		**Pb**	**13 09 50.1**	**-1.9**
	5.2nm,0.3s							
ZSN				*eS*		**Sb**	**13 10 56.4**	**+1.4**
	44nm,0.5s							
ARXS	**Arharly**	**5.31**	**294**	Lg		Lg	13 11 07.6	
	104nm,0.6s							
ARXS	**Arharly**	**5.31**	**294**	*eP*		**Pb**	**13 09 56.0**	**+2.9**
	11nm,0.3s							
ARXS				*eS*		**Sg**	**13 11 06.7**	**-3.8**
	110nm,0.6s							
KOTS	**Kotyrbulak**	**5.58**	**283**	Pg		**Pb**	**13 10 01.3**	**+3.6**
	9.9nm,0.1s							
KOTS				Lg		Lg	13 11 16.0	
	117nm,0.6s							
KOTS	**Kotyrbulak**	**5.58**	**283**	*eP*		**Pb**	**13 10 01.3**	**+3.6**
	9.9nm,0.1s							
KOTS				*eS*		**Sg**	**13 11 16.0**	**-3.1**
	117nm,0.6s							
MDOK	**Medeo**	**5.61**	**282**	Pg		Pb	13 10 03.2	+4.9
	5.2nm,0.4s							
KNDC	**Almaty**	**5.68**	**283**	⇓Lg		Lg	13 11 18.9	
	63nm,0.6s							
IZV	**Izvestkoviy**	**5.91**	**281**	Pg		**Pb**	**13 10 05.2**	**+1.7**
	9.5nm,0.4s							
IZV				Lg		Lg	13 11 24.2	
	68nm,0.6s							
IZV	**Izvestkoviy**	**5.91**	**281**	*eP*		**Pg**	**13 10 09.1**	**-4.3**
	5.9nm,0.2s							
IZV				*eS*		**Sg**	**13 11 29.1**	**-0.9**
	70nm,0.8s							
KTBS	**Karatobe**	**5.97**	**287**	Pg		**Pb**	**13 10 09.0**	**+4.8**
	4.6nm,0.2s							
KTBS				Lg		Lg	13 11 29.8	
	20nm,0.4s							
KTBS	**Karatobe**	**5.97**	**287**	*eP*		**Pb**	**13 10 09.0**	**+4.8**
	4.6nm,0.2s							
KTBS				*eS*		**Sg**	**13 11 29.8**	**-1.8**
	20nm,0.4s							
KST	**Kastek**	**6.39**	**280**	Pg		**Pg**	**13 10 18.4**	**-4.1**
	7.0nm,0.3s							
KST	**Kastek**	**6.39**	**280**	*eP*		**Pg**	**13 10 18.4**	**-4.1**
	7.0nm,0.3s							
KST				*eS*		**Sg**	**13 11 45.4**	**+0.1**
	39nm,1.0s							
AAK	**Ala-Archa**	**7.45**	**277**	Pn		**Pn**	**13 10 09.9**	**+0.8**
	0.5nm,0.3s,baz=96,slow=5.8,SNR=5.4							
AAK				Pg		**Pb**	**13 10 33.8**	**+4.2**
	0.6nm,0.3s,baz=167,slow=19,SNR=4.2							
AAK				Lg		Lg	13 12 14.9	
	0.7nm,0.3s,baz=138,slow=14,SNR=1.2							
	1.1nm,0.3s							
AAK	**Ala-Archa**	**7.45**	**277**	⇓Pn		**Pn**	**13 10 10.0**	**+0.8**
	0.4nm,0.4s							
AAK				⇑Lg		Lg	13 12 16.2	
	25nm,1.2s							
AAK	**Ala-Archa**	**7.45**	**277**	⇓*e*P		**Pn**	**13 10 11.0**	**+1.9**
KSH2	**Kashi**	**7.48**	**249**	P		Pn	13 10 14.5	+5.0
KSH2				pmax		pmax		
	comp=Z,5.0nm,0.4s							
DGZ	**Jazzator, Alta**	**7.76**	**14**	⇓*e*P		**Pn**	**13 10 16.8**	**+3.6**
KURBB	**Kurchatov Arra**	**9.38**	**336**	Pn		**Pn**	**13 10 37.3**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=156,slow=12,SNR=8.8							
KURBB				Sn		**Sn**	**13 12 22.9**	**+2.1**
	comp=Z,0.3nm,0.3s,baz=138,slow=30,SNR=4.3							
KURBB				Lg		Lg	13 13 18.3	
	comp=Z,0.3nm,0.3s,baz=157,slow=26,SNR=6.1							
	comp=Z,0.5nm,0.4s							
KURBB	**Kurchatov Arra**	**9.38**	**336**	⇓Pn		**Pn**	**13 10 39.3**	**+4.0**
	comp=Z,1.3nm,0.5s							
KURBB				⇓Lg		Lg	13 13 18.0	
	comp=Z,56nm,0.7s							
KURK	**Kurchatov**	**9.44**	**336**	⇓Pn		Pn	13 10 42.1	+6.0
	comp=Z,1.6nm,1.4s							
KURK				⇑Lg		Lg	13 13 20.8	
	comp=Z,17nm,0.9s							
KURK	**Kurchatov**	**9.44**	**336**	P		**Pn**	**13 10 37.3**	**+1.2**
KURK							13 12 22.9	
GOMU	**GeErMu**	**9.97**	**124**	Pn		**Pn**	**13 10 42.4**	**-1.4**
GOMU				Sn		Sn	13 12 23.9	-12
GOMU				smax		smax		
	comp=N,22nm,0.6s							
GOMU				smax		smax		
	comp=E,14nm,0.5s							
KK31	**Karatay Array**	**10.38**	**280**	⇑Lg		Lg	13 13 50.2	
	comp=E,2.2nm,0.5s,baz=81,slow=26,SNR=3.6							
ZAA0	**Zalesovo Array**	**11.75**	**1**	⇑Pn		**Pn**	**13 11 11.1**	**+3.4**
	comp=E,2.0nm,0.8s							
ZAA0				⇑Lg		Lg	13 14 34.2	
	comp=E,1.5nm,0.3s							
ZALV	**Zalesovo Beam**	**11.75**	**1**	Pn		**Pn**	**13 11 08.5**	**+0.8**
	comp=E,0.5nm,0.3s,baz=187,slow=13,SNR=8.4							
ZALV				Sn		**Sn**	**13 13 15.8**	**-3.0**
	comp=E,0.9nm,0.3s,baz=177,slow=25,SNR=5.5							
ZALV				Lg		Lg	13 14 35.4	
	baz=193,slow=25							
	comp=E,1.2nm,0.4s							
ZALV	**Zalesovo Beam**	**11.75**	**1**	*eP*		**Pn**	**13 11 09.3**	**+1.6**
ZALV				pmax		pmax		
	comp=Z,1.0nm,0.3s							
CHGR	**Chuyangaron**	**12.25**	**258**	⇓*i*P		**Pn**	**13 11 17.8**	**+3.0**
BVA0	**Borovoye Array**	**14.40**	**324**	⇑Lg		Lg	13 15 57.3	
	comp=Z,7.9nm,1.2s,baz=113,slow=24,SNR=5.3							
BVAR	**Borovoye Array**	**14.40**	**324**	Pn		**Pn**	**13 11 43.1**	**-0.8**
	baz=143,slow=8.9,SNR=2.1							
BVAR				Lg		Lg	13 15 53.9	
	baz=114,slow=21,SNR=2.8							
BVAR				LR		LR	13 17 30.5	
	comp=Z,64nm,20.9s,baz=165,slow=38							
	comp=Z,0.3nm,0.4s							
TLY	**Talaya**	**16.07**	**47**	Lg		Lg	13 16 49.6	
	baz=181,slow=17							
LZDM	**Lanzhou Array**	**16.11**	**106**	Pn		**Pn**	**13 12 05.2**	**-1.8**
	comp=Z,3.1nm,0.4s,baz=358,slow=20,SNR=1.3							
SONM	**Songino Array**	**16.42**	**63**	Pn		**P**	**13 12 12.0**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=255,slow=13,SNR=21							
SONM				Lg		Lg	13 17 03.4	
	comp=Z,0.2nm,0.3s,baz=250,slow=24,SNR=1.9							
SONM				LR		LR	13 17 59.6	
	comp=Z,18nm,19.1s,baz=142,slow=35							
	comp=Z,3.4nm,0.7s							
SONM	**Songino Array**	**16.42**	**63**	P		**P**	**13 12 12.0**	**-1.5**
ULN	**Ulaanbaatar**	**16.86**	**63**	‖*eP*		**P**	**13 12 18.5**	**+0.1**
ULN				pmax		pmax		
	comp=Z,4.0nm,0.7s							
AKTO	**Aktyubinsk**	**20.01**	**303**	P		**P**	**13 12 52.2**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=104,slow=13,SNR=3.9							
	comp=Z,1.1nm,0.6s							
CMAR	**Chiang Mai Arr**	**26.66**	**148**	P		**P**	**13 13 58.8**	**-0.4**
	comp=Z,1.4nm,0.6s,baz=325,slow=9.3,SNR=14							
	comp=Z,1.4nm,0.6s							
CMAR	**Chiang Mai Arr**	**26.66**	**148**	*eP*		**P**	**13 13 59.3**	**+0.1**
CMAR				pmax		pmax		
	comp=Z,2.0nm,0.6s							
BELG	**Belogornoye**	**26.76**	**305**	‖*eP*		**P**	**13 14 03.0**	**+3.2**
BELG				pmax		pmax		
	comp=Z,2.0nm,1.3s							
NRIK	**Noril'sk**	**27.24**	**2**	P		**P**	**13 14 03.9**	**-0.1**
	comp=Z,1.2nm,0.4s,baz=163,slow=2.9,SNR=2.3							
	comp=Z,1.2nm,0.4s							
KIRV	**Kirov**	**27.32**	**319**	LR		LR	13 25 05.5	
	comp=Z,52nm,18.9s,baz=181,slow=37							
KLR	**Kul'dur**	**33.24**	**61**	P		**P**	**13 14 57.7**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=268,slow=8.7,SNR=5.4							
	comp=Z,1.3nm,0.5s							
OBN	**Obninsk**	**33.53**	**309**	*eP*		**P**	**13 14 59.5**	**-0.2**
OBN				*e*			13 16 13.4	
OBN				*e*			13 17 41.5	
OBN				pmax		pmax		
	comp=Z,5.0nm,0.7s							
TIXI	**Tiksi**	**36.56**	**22**	LR		LR	13 31 55.2	
	comp=Z,53nm,18.1s,baz=68,slow=39							
BRTR	**Keskin Array B**	**38.06**	**284**	P		**P**	**13 15 37.2**	**-1.7**
	comp=Z,0.5nm,0.8s,baz=115,slow=14,SNR=3.7							
	comp=Z,0.5nm,0.8s							
BRTR	**Keskin Array B**	**38.06**	**284**	*eP*		**P**	**13 15 38.9**	**0.0**
BRTR				pmax		pmax		
	comp=Z,1.0nm,0.6s							
FINES	**FINESS Array B**	**39.31**	**320**	P		**P**	**13 15 49.7**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=108,slow=11,SNR=4.1							
	comp=Z,1.0nm,0.8s							
FINES	**FINESS Array B**	**39.31**	**320**	*i* P		**

TIR	**Tirane**	**0.67**	**211**	Pg	**Pg**	**13 09 02.5 -0.1**
TIR				Sg	**Sg**	**13 09 12.4 +1.1**
TIR				AML	AML	13 09 18.9
	0.2nm,0.3s					
PVY	**Plav**	**0.73**	**338**⇑	*i* Pg	**Pg**	**13 09 03.2 -0.5**
PVY				*e*Sg	**Sb**	**13 09 14.6 -0.9**
ULC	**Ulcinj**	**0.81**	**273**⇑	*i* Pg	**Pg**	**13 09 04.8 -0.5**
ULC				*e*Sg	**Sb**	**13 09 17.8 0.0**
SKO	**Skopje**	**0.83**	**86**	*i* Pg	**Pg**	**13 09 05.1 -0.6**
SKO				*i* Sg	**Sb**	**13 09 18.4 +0.1**
OHR	**Ohrid**	**0.88**	**156**	*i* Pg	**Pg**	**13 09 06.6 -0.1**
OHR				*i* Sg	**Sb**	**13 09 20.5 +0.6**
DRME	**Dracevica, Mon**	**0.89**	**288**⇑	*i* Pg	**Pg**	**13 09 06.0 -0.8**
DRME				*i* Sg	**Sb**	**13 09 20.5 +0.4**
DRME	**Dracevica, Mon**	**0.89**	**288**⇑	*i* Pg	**Pg**	**13 09 06.1 -0.8**
DRME				*e*Sg	**Sg**	**13 09 18.5 +0.1**
PDG	**Podgorica**	**0.95**	**303**	Pn	**Pg**	**13 09 06.4 -1.4**
PDG				Sn	**Sg**	**13 09 20.5 +0.4**
PDG				AMd		13 09 49.6
PDG	**Podgorica**	**0.95**	**303**	*e*Pg	**Pg**	**13 09 06.8 -1.1**
PDG				*e*Sg	**Sg**	**13 09 20.8 +0.6**
PDG	**Podgorica**	**0.95**	**303**	*e*Pg	**Pg**	**13 09 07.1 -0.8**
PDG				*i* Sg	**Sb**	**13 09 22.1 +0.5**
PDG	**Podgorica**	**0.95**	**303**	*e*Pg	**Pg**	**13 09 07.8 -0.1**
PDG				*e*Sg	**Sg**	**13 09 20.7 +0.6**
IVA	**Berane**	**1.00**	**341**⇓	*i* Pg	**Pg**	**13 09 08.3 -0.7**
IVA				*i* Sg	**Sb**	**13 09 23.6 +0.2**
KOME	**Kolasin**	**1.11**	**327**⇓	*i* Pg	**Pg**	**13 09 09.9 -1.1**
KOME				*i* Sg	**Sn**	**13 09 27.4 -0.6**
BUM	**Brajici-Budva**	**1.13**	**290**⇓	*i* Pg	**Pg**	**13 09 10.7 -0.8**
BUM				*e*Sg	**Sn**	**13 09 28.6 0.0**
CEME	**Cevo**	**1.22**	**301**⇑	*i* Pg	**Pg**	**13 09 11.5 -1.6**
CEME				*e*Sg	**Sn**	**13 09 31.6 +0.9**
KBN	**Korca**	**1.34**	**165**	Pn	**Pn**	**13 09 15.2 -0.2**
KBN				Sn	**Sb**	**13 09 31.5 -1.6**
KBN				AMd		13 10 06.0
SJES	**Sjenica**	**1.36**	**349**	*e*Pg	**Pn**	**13 09 15.7 0.0**
SJES				*e*Sg	**Sn**	**13 09 35.2 +0.8**
SJES	**Sjenica**	**1.36**	**349**	*e*Pg	**Pn**	**13 09 15.6 -0.1**
SJES				*e*Sg	**Sn**	**13 09 34.7 +0.3**
BARS	**Barje**	**1.42**	**50**	*e*Pg	**Pg**	**13 09 17.3 +0.4**
BARS				*e*Sg	**Sb**	**13 09 35.0 -0.3**
SELS	**Selova**	**1.42**	**24**	*e*Pg	**Pg**	**13 09 17.2 +0.2**
SELS				*e*Sg	**Sg**	**13 09 36.2 +0.8**
HCY	**Herceg Novi**	**1.46**	**292**⇓	*i* Pg	**Pn**	**13 09 16.9 -0.1**
HCY				*e*Sg	**Sg**	**13 09 39.7 +3.0**
HCY	**Herceg Novi**	**1.46**	**292**	*e*Pg	**Pn**	**13 09 17.2 +0.2**
HCY				*e*Sg	**Sg**	**13 09 37.0 +0.3**
PLE	**Pljevlja**	**1.57**	**334**⇑	*i* Pg	**Pn**	**13 09 18.5 -0.1**
PLE				*i* Sg	**Sg**	**13 09 41.7 +1.5**
BRY	**Bratogost**	**1.65**	**307**⇓	*i* Pn	**Pn**	**13 09 20.1 +0.4**
BRY				*e*Sn	**Sg**	**13 09 44.4 +1.7**
BRY	**Bratogost**	**1.65**	**307**	*e*Pn	**Pn**	**13 09 20.2 +0.5**
BRY				*e*Sn	**Sb**	**13 09 42.0 0.0**
UPM	**Unac-Piva**	**1.66**	**321**	*e*Pn	**Pn**	**13 09 19.4 -0.4**
UPM				*i* Sn	**Sg**	**13 09 44.6 +1.6**
UPM	**Unac-Piva**	**1.66**	**321**	*e*Pn	**Pb**	**13 09 21.0 0.0**
UPM				*e*Sn	**Sb**	**13 09 42.0 -0.3**
IVAS	**Ivanjica**	**1.66**	**356**	*e*Pn	**Pb**	**13 09 20.4 -0.5**
IVAS				*e*Sn	**Sb**	**13 09 42.4 +0.2**
TREB	**Trebinje**	**1.67**	**299**	*e*Pn	**Pb**	**13 09 21.3 +0.2**
TREB				*e*Sn	**Sb**	**13 09 42.4 -0.1**
GOCS	**Kraljevo Serbi**	**1.69**	**14**	*e*Pn	**Pn**	**13 09 20.5 +0.3**
VAY	**Valandovo**	**1.78**	**109**	*e*Pn	**Pb**	**13 09 22.6 -0.4**
VAY				*e*Sn	**Sg**	**13 09 46.7 -0.3**
RUDO	**Rudo**	**1.84**	**338**	*e*Pn	**Pb**	**13 09 23.2 -0.7**
RUDO				*e*Sn	**Sn**	**13 09 46.1 +0.2**
BBLS	**Lazi&#263i**	**2.06**	**341**	*e*Pn	**Pb**	**13 09 26.8 -1.0**
BBLS				*e*Sn	**Sb**	**13 09 52.3 -1.4**
NOCI	**Noci**	**2.71**	**246**	Sn	**Sn**	**13 10 07.7 +0.4**

*IDC **21** 13:20:52.5±2.5, 18°.91N×145°.33E, h200km±25km, mb3.0/8, mbtmp3.6/9, Error ellipse: s-maj=33.4km s-min=16.0km az=104.0*

ISC 21 13:20:53.7±0.8, 18°.85N±0°.09×145°.3E±0°.3, h214km, n9, σ1§19/10, mb3.0/8, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.25**	**185**	P	**Pn**	**13 22 12.6**	**+0.9**
	99nm,0.9s,baz=286,slow=15,SNR=1.7						
GUMO				S	**S**	**13 23 11.5**	**-1.7**
	58nm,0.8s,baz=317,slow=12,SNR=1.9						
PETK	**Petropavlovsk-**	**35.52**	**13**	P	**P**	**13 27 30.8**	**+0.8**
	2.5nm,0.9s,baz=202,slow=13,SNR=2.0						
	2.5nm,0.9s						
WRA	**Warramunga Arr**	**40.03**	**196**	P	**P**	**13 28 08.7**	**+0.5**
	1.4nm,0.5s,baz=25,slow=9.0,SNR=34						
	1.4nm,0.5s						
ASAR	**Alice Springs**	**43.71**	**195**	P	**P**	**13 28 38.6**	**+0.7**
	0.1nm,0.3s,baz=17,slow=7.5,SNR=6.8						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**58.11**	**314**	P	**P**	**13 30 25.7**	**+0.8**
	0.1nm,0.5s,baz=150,slow=6.7,SNR=3.0						
	0.1nm,0.5s						
KURBB	**Kurchatov Arra**	**60.98**	**318**	P	**P**	**13 30 42.5**	**-1.8**
	0.2nm,0.5s,baz=93,slow=7.9,SNR=2.0						
	0.2nm,0.5s						
ILAR	**Eielson Array**	**63.66**	**26**	P	**P**	**13 31 01.0**	**-0.9**
	0.2nm,1.0s,baz=261,slow=6.5,SNR=4.2						
	0.2nm,1.0s						
YKA	**Yellowknife Ar**	**78.02**	**28**	P	**P**	**13 32 28.0**	**-0.2**
	0.1nm,0.5s,baz=294,slow=5.8,SNR=2.4						
	0.1nm,0.5s						
NVAR	**Mina Array Bea**	**83.32**	**52**	P	**P**	**13 32 57.3**	**+0.2**
	0.4nm,0.6s,baz=262,slow=7.0,SNR=6.3						
	0.4nm,0.6s						

IDC 21 13:28:51.2±4.0, 20°.26S×169°.49E, h432km±21km, mb2.9/3, mbtmp3.7/5, Error ellipse: s-maj=71.6km s-min=31.1km az=47.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.37**	**237**	P	P	13 29 59.9	+0.1
	4.0nm,0.3s,baz=100,slow=19,SNR=52						
DZM				S	S	13 30 36.5	-19
	7.7nm,0.3s,baz=128,slow=19,SNR=14						
HNR	**Honiara**	**14.16**	**318**	P	P	13 31 53.0	-0.9
	1.6nm,0.6s,baz=94,slow=14,SNR=4.6						
WRA	**Warramunga Arr**	**32.97**	**264**	P	P	13 34 49.3	+0.7
	0.2nm,0.3s,baz=96,slow=8.3,SNR=23						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**33.12**	**258**	P	P	13 34 49.1	-0.8
	0.9nm,0.5s,baz=96,slow=8.1,SNR=34						
	0.9nm,0.5s						
VNDA	**Vanda**	**57.43**	**182**	P	P	13 37 56.6	+0.1
	0.9nm,1.0s,baz=18,slow=6.4,SNR=1.7						
	0.9nm,1.0s						

*IDC **21** 13:40:44.4±1.6, 2°.87N×128°.80E, h261km±16km, mb3.2/13, mbtmp3.9/15, Error ellipse: s-maj=21.3km s-min=9.5km az=78.0*

ISC 21 13:40:43.5±0.7, 2°.91N±0°.09×128°.9E±0°.2, h250km, n16, σ1§23/18, mb3.5/13, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.46**	**147**	P	**Pn**	**13 41 53.8**	**+0.9**
	3.0nm,0.3s,baz=357,slow=19,SNR=6.0						
BIPH	**Bislig**	**5.79**	**335**	*e*P	Pn	13 42 05.2	-3.9
BATI	**Baumata**	**14.02**	**202**	P	**P**	**13 43 53.4**	**+0.8**
	6.2nm,0.4s,baz=319,slow=11,SNR=2.4						
FITZ	**Fitzroy Crossi**	**21.11**	**189**	P	**P**	**13 45 08.1**	**-1.2**
	1.9nm,0.5s,baz=18,slow=8.1,SNR=12						
	1.9nm,0.5s						
WRA	**Warramunga Arr**	**23.34**	**167**	P	**P**	**13 45 28.9**	**-1.0**
	0.4nm,0.3s,baz=344,slow=9.9,SNR=37						
WRA				ScP	**ScP**	**13 52 21.6**	**-1.9**
	0.2nm,0.8s,baz=306,slow=4.9,SNR=1.8						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**26.87**	**170**	P	**P**	**13 46 02.4**	**+0.7**
	0.7nm,0.6s,baz=350,slow=7.6,SNR=35						
ASAR				ScP	**ScP**	**13 52 31.3**	**-2.2**
	0.2nm,0.8s,baz=328,slow=2.4,SNR=1.4						
	0.7nm,0.6s						
JNU	**Nakatsue**	**30.11**	**3**	P	**P**	**13 46 31.9**	**+1.7**
	4.8nm,0.9s,baz=140,slow=15,SNR=2.1						
	4.8nm,0.9s						
CMAR	**Chiang Mai Arr**	**33.11**	**300**	P	**P**	**13 46 56.3**	**-0.2**
	0.3nm,0.4s,baz=108,slow=8.0,SNR=4.1						
	0.3nm,0.4s						
HNR	**Honiara**	**33.32**	**112**	P	**P**	**13 46 56.9**	**-1.5**
	1.6nm,0.6s,baz=315,slow=13,SNR=2.4						
	1.6nm,0.6s						
KSRS	**Korea Array**	**34.39**	**359**	P	**P**	**13 47 07.8**	**+0.6**
	0.6nm,0.5s,baz=175,slow=9.8,SNR=5.3						
	0.6nm,0.5s						
MJAR	**Matsushiro Arr**	**34.56**	**13**	P	**P**	**13 47 08.5**	**-0.2**
	0.6nm,0.4s,baz=195,slow=9.3,SNR=8.2						
	0.6nm,0.4s						
STKA	**Stephens Creek**	**36.66**	**162**	P	**P**	**13 47 27.5**	**+1.0**
	0.6nm,0.4s,baz=344,slow=9.4,SNR=4.3						
	0.6nm,0.4s						
PETK	**Petropavlovsk-**	**55.41**	**21**	P	**P**	**13 49 53.2**	**+1.3**
	3.8nm,0.9s,baz=141,slow=13,SNR=1.4						
	3.8nm,0.9s						
MKAR	**Makanchi Array**	**59.44**	**325**	P	**P**	**13 50 19.9**	**-0.3**
	0.3nm,0.4s,baz=116,slow=8.2,SNR=11						
MKAR				PcP	**PcP**	**13 51 04.2**	**-0.9**
	0.3nm,0.7s,baz=134,slow=4.2,SNR=2.6						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**63.57**	**327**	P	**P**	**13 50 46.8**	**-0.7**
	0.9nm,0.6s,baz=126,slow=5.9,SNR=9.1						
	0.9nm,0.6s						
BVAR	**Borovoye Array**	**69.16**	**327**	P	**P**	**13 51 22.5**	**-0.4**
	0.6nm,0.4s,baz=87,slow=4.6,SNR=4.0						
	0.6nm,0.4s						

*BGSI **21** 13:43:59.8±1.4, 26°.16S×29°.85E, h54km±109km, ML2.6*
PRE 21 13:43:59.9±1.0, 26°.21S×28°.97E, h0km, ML2.1, Suspected explosion, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HRAO	**HartRAO**	**1.20**	**285**	*e*P	Pg	13 44 22.6	-0.2
HRAO				*e*S	Sb	13 44 39.5	-0.1
HRAO				IAML		13 44 40.0	
	comp=Z,43nm,0.5s						
WDLM	**Western Deep L**	**1.40**	**261**	*e*P	Pb	13 44 27.3	+0.2
WDLM				*e*S	Sn	13 44 46.7	+0.5
WDLM				IAML		13 44 49.2	
	comp=Z,36nm,0.3s						
SNKL	**Senekal, Free S**	**2.31**	**207**	*e*P	Pn	13 44 40.6	+1.2
SNKL				*e*S	Sn	13 45 09.4	+0.7
SNKL				IAML		13 45 15.4	
	comp=Z,31nm,0.5s						
LEPH	**Lephalale, Lim**	**2.57**	**335**	*e*P	Pn	13 44 43.3	+0.4
LEPH				*e*S	Sn	13 45 15.4	+0.4
LEPH				IAML		13 45 16.3	
	comp=Z,24nm,0.5s						
TEMBE	**Tembe Elephant**	**3.21**	**106**	*e*P	Pn	13 44 52.0	+0.5
TEMBE				*e*S	Sn	13 45 30.3	-0.2
TEMBE				IAML		13 45 41.3	
	comp=Z,13nm,0.4s						
LBTB	**Lobatse**	**3.27**	**291**	*e*P	Pn	13 44 52.9	+0.4
LBTB				*e*S	Sn	13 45 31.4	-0.8
LBTB				IAML		13 45 46.6	
	comp=Z,6.8nm,0.3s						
MAKGR	**Makgori**	**3.77**	**275**	*i* P	Pb	13 45 05.2	-2.2
MAKGR				*i* S	Sb	13 45 52.4	-1.3
MAKGR				IAML		13 46 03.8	
	comp=N,35nm,0.6s						
MUSN	**Musina, Limpop**	**3.99**	**12**	*e*P	Pn	13 45 03.4	+1.0
MUSN				*e*S	Sn	13 45 50.4	+0.4
MUSN				IAML		13 46 01.7	
	comp=Z,7.0nm,0.4s						
BOSA	**Boshof**	**4.07**	**233**	*e*P	Pn	13 45 04.8	+1.2
BOSA				*e*S	Sn	13 45 52.0	-0.1
BOSA				IAML		13 46 10.4	
	comp=Z,6.3nm,0.5s						
KDWAN	**Kaudwane**	**4.82**	**305**	*i* P	Pn	13 45 17.4	+3.5
BROLN	**Tlhalogang**	**5.30**	**343**	*i* P	Pn	13 45 16.9	-3.7
BROLN				*i* S	Sn	13 46 15.8	-6.6
BROLN				IAML		13 46 41.8	
	comp=E,8.1nm,0.7s						
FRAZ	**Fraserburg**	**8.73**	**227**	*e*P	Pn	13 46 08.3	+0.8
FRAZ				*e*S	Sn	13 47 42.1	-4.7
FRAZ				IAML		13 47 43.5	
	comp=Z,0.5nm,0.5s						

IDC 21 13:48:28.6±1.8, 2°.71S×129°.17E, h0km, mb3.2/2, mbtmp3.2/4, ML3.0/2, Error ellipse: s-maj=52.7km s-min=26.0km az=90.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**2.78**	**49**	Pn	Pn	13 49 14.1	-0.3
	2.3nm,0.3s,baz=253,slow=19,SNR=39						
SIJI				Sn	Sn	13 49 42.3	-6.4
	2.5nm,0.3s,baz=233,slow=20,SNR=6.8						
	5.9nm,0.2s						
WRA	**Warramunga Arr**	**17.86**	**164**	P	Pn	13 52 39.0	+0.3
	0.1nm,0.3s,baz=334,slow=13,SNR=8.1						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**21.33**	**168**	P	P	13 53 17.3	-0.1
	0.5nm,0.7s,baz=343,slow=10,SNR=11						
	0.5nm,0.7s						
SONM	**Songino Array**	**54.14**	**341**	P	P	13 57 55.7	0.0
	0.2nm,0.4s,baz=142,slow=7.3,SNR=2.2						
	0.2nm,0.4s						

*IDC **21** 13:48:58.8±2.1, 10°.17N×126°.46E, h0km, mb3.7/6, mbtmp3.7/6, MS3.2/1, Error ellipse: s-maj=163.0km s-min=20.5km az=70.0*
*MAN **21** 13:49:07.0, 9°.99N×126°.04E, h14km, MS3.2*
ISC 21 13:49:03.7±2.0, 10°.04N±0°.07×126°.26E±0°.08, h25km±14km, n22, σ1§61/23, mb3.5/6, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.81**	**252**	*i* P	**Pn**	**13 49 19.6**	**+0.1**
SCPH				*i* S	**Sb**	**13 49 29.1**	**-0.4**
TSSP	**Tandag City**	**0.99**	**184**	*e*P	**Pn**	**13 49 23.4**	**+1.3**
TSSP				*e*S	**Sn**	**13 49 35.0**	**-0.2**
BIPH	**Bislig**	**1.84**	**177**	*e*P	**Pb**	**13 49 36.1**	**-0.7**
BIPH				*e*S	**Sb**	**13 50 00.2**	**+0.8**
CGP	**Cagayan de Oro**	**2.21**	**225**	*e*P	**Pb**	**13 49 41.7**	**-1.3**
CGP				*e*S	**Sn**	**13 50 05.5**	**+0.2**
CDOP	**Cateel, Davao**	**2.25**	**176**	*e*P	**Pb**	**13 49 45.2**	**+1.6**
CDOP				*e*S	**Sb**	**13 50 10.1**	**-0.8**
LLP	**Lapu-Lapu**	**2.28**	**277**	*i* P	**Pb**	**13 49 42.6**	**-1.6**
LLP				*i* S	**Sn**	**13 50 06.5**	**-0.6**
TBP	**Tagbilaran**	**2.39**	**262**	*e*P	**Pn**	**13 49 43.0**	**+1.6**
TBP				*i* S	**Sn**	**13 50 12.7**	**+2.8**
DCPH	**Dipolog City**	**3.22**	**244**	*i* P	**Pn**	**13 49 54.4**	**+1.7**
DCPH				*i* S	Sn	13 50 21.5	-8.7
RCP	**Roxas**	**3.77**	**294**	*i* P	**Pn**	**13 50 03.5**	**+3.2**
RCP				*i* S	**Sn**	**13 50 46.7**	**+2.7**
TGY	**Tagaytay City**	**6.59**	**308**	LR	LR	13 53 30.1	
	comp=Z,198nm,21.4s,baz=160,slow=41						
FITZ	**Fitzroy Crossi**	**27.96**	**181**	P	**P**	**13 54 53.0**	**+0.5**
	1.6nm,1.0s,baz=13,slow=14,SNR=1.3						
	1.6nm,1.0s						
WRA	**Warramunga Arr**	**30.83**	**165**	P	**P**	**13 55 15.9**	**-2.0**
	0.3nm,0.8s,baz=341,slow=7.4,SNR=1.7						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**34.32**	**168**	P	**P**	**13 55 48.5**	**0.0**
	0.2nm,0.4s,baz=344,slow=6.9,SNR=9.1						
	0.2nm,0.4s						
H11S3	**WAKE ISLAND Hy**	**39.99**	**73**	T	T	14 39 32.2	
	baz=261,slow=75,SNR=11						
H11S1	**WAKE ISLAND Hy**	**40.01**	**73**	T	T	14 39 34.4	
	baz=261,slow=75,SNR=13						
H11S2	**WAKE ISLAND Hy**	**40.01**	**73**	T	T	14 39 33.6	
	baz=261,slow=75,SNR=14						
H11N1	**WAKE ISLAND Hy**	**40.33**	**71**	T	T	14 39 58.1	
	baz=265,slow=74,SNR=23						
H11N2	**WAKE ISLAND Hy**	**40.34**	**71**	T	T	14 39 56.2	
	baz=265,slow=74,SNR=20						
H11N3	**WAKE ISLAND Hy**	**40.35**	**71**	T	T	14 39 59.4	
	baz=265,slow=74,SNR=18						
MKAR	**Makanchi Array**	**52.21**	**323**	P	**P**	**13 58 11.7**	**-1.0**
	0.4nm,0.7s,baz=113,slow=9.3,SNR=4.9						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**56.26**	**325**	P	**P**	**13 58 41.0**	**-1.0**
	0.3nm,0.5s,baz=120,slow=6.2,SNR=2.7						
	0.3nm,0.5s						
FINES	**FINESS Array B**	**86.09**	**332**	P	**P**	**14 01 41.0**	**-1.3**
	2.5nm,1.0s,baz=64,slow=4.4,SNR=7.7						
	2.5nm,1.0s						

IDC 21 13:52:35.0±2.1, 0°.51N×126°.04E, h0km, mb3.1/4, mbtmp3.2/4, Error ellipse: s-maj=257.7km s-min=23.5km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.89**	**159**	P	P	13 57 28.9	-0.9
	0.4nm,0.6s,baz=336,slow=11,SNR=5.8						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**25.22**	**163**	P	P	13 58 03.4	+0.7
	0.2nm,0.5s,baz=344,slow=10,SNR=8.3						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**59.82**	**327**	P	P	14 02 43.3	+1.1
	0.2nm,0.6s,baz=145,slow=7.9,SNR=2.3						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**64.08**	**329**	P	P	14 03 09.7	-1.2
	0.2nm,0.5s,baz=116,slow=8.4,SNR=1.5						
	0.2nm,0.5s						

*SOME **21** 14:05:53.8, 47°.05N×81°.75E, h10km*
*NNC **21** 14:05:54.2±0.5, 47°.29N×81°.81E, h0km, mb3.8, mpv3.7, Error ellipse: s-maj=5.1km s-min=2.5km az=56.0*
*ASRS **21** 14:05:57.3±0.4, 47°.N±4°×8°.2E±°, h5km, MLh3.9/9, Error ellipse: s-maj=13.6km s-min=3.3km az=124.6, confirmed*
ISC 21 14:05:54.8±1.0, 47°.03N±0°.02×81°.55E±0°.02, h17km±8km, n61, σ1§59/88, 19C-23D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAKZ	**Makanchi**	**0.37**	**127**	⇓P	**Pn**	**14 06 04.4**	**-1.0**
	71nm,0.4s						
MAKZ				⇑S	**Sn**	**14 06 11.2**	**-1.0**
	374nm,0.5s						
MAKZ	**Makanchi**	**0.37**	**127**	Pg	**Pn**	**14 06 04.6**	**-0.8**
MAKZ				Sg	**Sn**	**14 06 11.5**	**-0.7**
MK05	**Makanchi Array**	**0.56**	**114**	⇓P	**Pg**	**14 06 05.9**	**-0.1**
MK05				⇑S	**Sb**	**14 06 14.5**	**+0.6**
MK09	**Makanchi Array**	**0.56**	**117**	⇓P	**Pg**	**14 06 06.1**	**+0.1**
MK09				⇑S	**Sg**	**14 06 14.3**	**+0.9**
MK31	**Makanchi Array**	**0.56**	**114**	⇓P	**Pg**	**14 06 05.9**	**-0.1**
	115nm,0.3s						
MK31				⇓S	**Sg**	**14 06 13.7**	**+0.3**
	66nm,0.3s						
MK04	**Makanchi Array**	**0.57**	**116**	⇑P	**Pg**	**14 06 06.2**	**0.0**
MK04				⇑S	**Sg**	**14 06 14.4**	**+0.5**
MK08	**Makanchi Array**	**0.57**	**118**	⇓P	**Pb**	**14 06 06.5**	**0.0**
MK08				⇑S	**Sb**	**14 06 15.0**	**+0.7**
MK01	**Makanchi Array**	**0.58**	**116**	⇓P	**Pg**	**14 06 06.3**	**+0.1**
MK01				⇑S	**Sg**	**14 06 14.6**	**+0.6**
MK03	**Makanchi Array**	**0.58**	**117**	⇓P	**Pg**	**14 06 06.4**	**+0.1**
MK03				⇓S	**Sg**	**14 06 14.8**	**+0.7**
MK02	**Makanchi Array**	**0.58**	**116**	⇓P	**Pg**	**14 06 06.4**	**0.0**
MK02				⇑S	**Sg**	**14 06 14.8**	**+0.6**
MK06	**Makanchi Array**	**0.58**	**115**	⇑P	**Pg**	**14 06 06.2**	**-0.1**
MK06				⇑S	**Sg**	**14 06 14.6**	**+0.5**
MK07	**Makanchi Array**	**0.59**	**117**	⇓P	**Pg**	**14 06 06.6**	**+0.1**
MK07				⇓S	**Sg**	**14 06 15.0**	**+0.5**
ZSN	**Zaisan**	**2.30**	**78**	Pg	**Pn**	**14 06 32.7**	**+0.8**
	49nm,0.2s						
ZSN				Lg	Lg	14 07 01.3	
	470nm,0.3s						
ZSN	**Zaisan**	**2.30**	**78**	*e*P	**Pn**	**14 06 32.7**	**+0.8**
	49nm,0.2s						
ZSN				*e*S	**Sn**	**14 07 01.3**	**+1.4**
	470nm,0.3s						
DJR	**Jarkent**	**2.96**	**205**	Pg	**Pg**	**14 06 49.4**	**-2.2**
	3.4nm,0.2s						
DJR				Lg	Lg	14 07 29.4	
	8.4nm,0.2s						
DJR	**Jarkent**	**2.96**	**205**	*e*P	**Pg**	**14 06 49.4**	**-2.2**
	3.4nm,0.2s						
DJR				*e*S	**Sg**	**14 07 29.4**	**-0.6**
	8.4nm,0.2s						
TDK	**Taldyqorghan**	**2.98**	**228**	Pg	**Pg**	**14 06 50.1**	**-1.9**
	11nm,0.1s						
TDK				Lg	Lg	14 07 30.3	
	35nm,0.2s						
TDK	**Taldyqorghan**	**2.98**	**228**	*e*P	**Pg**	**14 06 50.1**	**-1.9**
	11nm,0.1s						
TDK				*e*S	**Sg**	**14 07 30.3**	**-0.3**
	35nm,0.2s						
SEM	**Semipalatinsk**	**3.49**	**346**	Pg	**Pb**	**14 06 57.3**	**+1.1**
	6.7nm,0.2s						
SEM				Lg	Lg	14 07 42.9	
	61nm,0.3s						
SEM	**Semipalatinsk**	**3.49**	**346**	*e*P	**Pb**	**14 06 57.3**	**+1.1**
	6.7nm,0.2s						
SEM				*e*S	**Sg**	**14 07 43.0**	**-3.9**
	61nm,0.3s						
KTMS	**Ketmen**	**3.68**	**194**	Lg	Lg	14 07 49.7	
	9.5nm,0.4s						
KTMS	**Ketmen**	**3.68**	**194**	*e*P	**Pb**	**14 07 01.4**	**+1.9**
	0.8nm,0.1s						
KTMS				*e*S	**Sg**	**14 07 49.7**	**-3.2**
	9.5nm,0.4s						
ARXS	**Arharly**	**3.84**	**224**	Pg	**Pg**	**14 07 07.4**	**-0.9**
	4.1nm,0.2s						
ARXS	**Arharly**	**3.84**	**224**	*e*P	**Pg**	**14 07 07.4**	**-0.9**
	4.1nm,0.2s						
ARXS				*e*S	**Sg**	**14 08 00.9**	**+2.9**
	80nm,0.4s						
PDGK	**Podgornoye**	**3.98**	**202**	⇓Pn	**Pb**	**14 07 03.0**	**-1.4**
	0.8nm,0.2s						
PDGK				⇓Lg	Lg	14 08 09.3	
	40nm,0.5s			

BTLS	**Baital**	**5.59**	**252**	Pg	**Pg**	**14 07 41.1**	**-0.6**
	3.3nm,0.3s						
BTLS	**Baital**	**5.59**	**252**	*e*P	**Pg**	**14 07 41.1**	**-0.6**
	3.3nm,0.3s						
BTLS				*e*S	**Sg**	**14 08 58.2**	**+4.1**
	5.4nm,0.2s						
KST	**Kastek**	**5.62**	**227**	Pg	**Pg**	**14 07 40.6**	**-1.7**
	2.3nm,0.1s						
KST	**Kastek**	**5.62**	**227**	*e*P	**Pg**	**14 07 40.6**	**-1.7**
	2.3nm,0.1s						
KST				*e*S	**Sg**	**14 08 57.3**	**+2.3**
	13nm,0.6s						
TKM2	**Tokmak 2**	**5.89**	**228**	P	Pb	14 07 28.9	-8.2
	SNR=7.5						
ARTR	**Artybash**	**6.06**	**36**	Pn	**Pn**	**14 07 22.9**	**-0.7**
ARTR				Sg	**Sb**	**14 08 51.4**	**-0.7**
ULHL	**Ulahol**	**6.10**	**220**	P	Pb	14 07 33.7	-7.0
	SNR=7.4						
USP	**Ospenovka**	**6.24**	**236**	P	Pb	14 07 33.8	-9.2
	SNR=13						
KBK	**Karagaybulak**	**6.41**	**229**	P	Pb	14 07 36.7	-9.3
	SNR=11						
AAK	**Ala-Archa**	**6.66**	**231**	P	Pn	14 07 39.8	+7.8
	SNR=7.6						
AAK	**Ala-Archa**	**6.66**	**231**	⇓Pn	Pn	14 07 39.3	+7.2
	0.5nm,0.4s						
AAK				⇓Sn	Sb	14 08 57.5	-12
	0.7nm,0.5s						
AAK				⇓Lg	Lg	14 09 36.1	
	2.4nm,0.6s						
EKS2	**Erkin-Say**	**7.04**	**234**	P	Pn	14 07 44.8	+7.7
	SNR=7.0						
ZAA0	**Zalesovo Array**	**7.24**	**16**	⇓Pn	**Pn**	**14 07 37.3**	**-2.4**
	1.4nm,0.5s						
ZAA0				⇑Sn	Sn	14 08 51.3	-10
	4.4nm,0.6s						
ZAA0				⇓Lg	Lg	14 09 28.8	
	21nm,0.9s						
KK31	**Karatay Array**	**8.74**	**247**	Pn	Pn	14 08 05.4	+5.0
	0.9nm,0.3s,baz=64,slow=12,SNR=27						
KK31				⇑Sn	Sn	14 09 48.7	+10
	0.9nm,0.5s,baz=59,slow=22,SNR=4.5						
KK31				⇑Lg	Lg	14 10 39.0	
	1.4nm,0.4s						
BVA0	**Borovoye Array**	**9.36**	**314**	⇑Pn	**Pn**	**14 08 09.3**	**+0.6**
	baz=126,slow=16,SNR=4.3						
BVA0				⇑Sn	**Sn**	**14 09 55.9**	**+2.5**
	1.1nm,0.4s,baz=113,slow=23,SNR=5.6						
BVA0				⇓Lg	Lg	14 10 48.8	
	5.9nm,0.9s,baz=125,slow=24,SNR=3.8						

*IDC **21** 14:09:02.2±1.3, 11°.04S×114°.96E, h0km, mb3.7/9, mbtmp3.8/11, ML4.0/2, Error ellipse: s-maj=47.2km s-min=17.0km az=45.0*
*DJA **21** 14:09:03.6±0.5, 11°.5±6°×11°.5E±°, h10km, M4.3/28, mB6.3/2, mb4.3/10, MLv4.3/28, Mw(mB)6.0/2*
ISC 21 14:09:06.7±0.6, 11°.16S±0°.07×115°.19E±0°.06, h42km, n47, σ1§49/46, mb3.8/8, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGBI	**Denpasar**	**2.33**	**359**	P	**Pn**	**14 09 41.3**	**-1.2**
DNP	**Denpasar**	**2.46**	**1**	P	**Pn**	**14 09 44.1**	**-0.3**
RTBI	**Rangdo, Negare**	**2.69**	**355**	P	**Pn**	**14 09 45.6**	**-2.0**
KHKI	**Kahang-Kahang**	**2.81**	**9**	P	**Pn**	**14 09 49.7**	**+0.6**
JAGI	**Jajag, Banyuwa**	**2.86**	**339**	P	**Pn**	**14 09 48.8**	**-1.1**
JAGI	**Jajag, Banyuwa**	**2.86**	**339**	P	**Pn**	**14 09 48.5**	**-1.4**
TWSI	**Taliwang, Sumb**	**2.93**	**35**	P	**Pn**	**14 09 49.7**	**-1.1**
PLAI	**Plampang**	**3.44**	**48**	P	**Pn**	**14 09 57.3**	**-0.7**
PLAI	**Plampang**	**3.44**	**48**	P	**Pn**	**14 09 57.2**	**-0.7**
ABJI	**Asem Bagus**	**3.47**	**344**	P	**Pn**	**14 09 57.8**	**-0.5**
BLJI	**Banyuglugur**	**3.74**	**335**	P	**Pn**	**14 10 00.9**	**-1.0**
DBNI	**Kabupaten Domp**	**4.05**	**50**	P	**Pn**	**14 10 06.2**	**-0.1**
KMMI	**Kalianget**	**4.25**	**343**	P	**Pn**	**14 10 09.9**	**+0.8**
WBSI	**Waikabubak, Su**	**4.40**	**70**	P	**Pn**	**14 10 10.0**	**-1.1**
SNJI	**Sawahan-Nganju**	**4.76**	**314**	P	**Pn**	**14 10 16.5**	**+0.3**
SJI	**Sawahan**	**4.79**	**315**	P	**Pn**	**14 10 16.5**	**0.0**
PCJI	**Pacitan**	**4.93**	**306**	P	**Pn**	**14 10 16.8**	**-1.5**
WSI	**Waingapu**	**5.24**	**74**	P	**Pn**	**14 10 22.9**	**+0.3**
	0.5nm50nm,0.7s						
LBFI	**Labuhan Bajo,**	**5.34**	**61**	P	**Pn**	**14 10 24.0**	**0.0**
UGM	**Wanagama**	**5.62**	**305**	P	**Pn**	**14 10 27.3**	**-0.6**
UGM	**Wanagama**	**5.62**	**305**	P	**Pn**	**14 10 27.2**	**-0.6**
	0.4nm77nm,1.8s						
EDFI	**Ende, Flores**	**6.84**	**70**	P	**Pn**	**14 10 44.9**	**+0.2**
	0.0nm11nm,1.1s						
BSSI	**Bau Bau, Buton**	**7.23**	**47**	P	**Pn**	**14 10 50.9**	**+0.9**
	29nm,1.2s						
KPJI	**Karang Pucung**	**7.25**	**301**	P	**Pn**	**14 10 49.8**	**-0.4**
	0.1nm17nm,1.0s						
KAPI	**Kappang**	**7.59**	**37**	Pn	**Pn**	**14 10 55.9**	**+0.9**
	1.7nm,0.3s,baz=170,slow=20,SNR=1.4						
	4.8nm,0.3s						
KAPI	**Kappang**	**7.59**	**37**	P	**Pn**	**14 10 55.5**	**+0.6**
	0.1nm9.6nm,1.4s						
BATI	**Baumata**	**8.38**	**84**	Pn	**Pn**	**14 11 06.8**	**+1.0**
	2.5nm,0.3s,baz=269,slow=8.7,SNR=1.9						
BATI				Sn	**Sn**	**14 12 35.7**	**-3.5**
	2.5nm,0.3s,baz=287,slow=19,SNR=6.0						
	5.4nm,0.3s						
MBWA	**Marble Bar**	**10.86**	**157**	P	**Pn**	**14 11 38.1**	**-1.6**
PSA00	**Pilbara Seismi**	**11.28**	**157**	P	**Pn**	**14 11 44.9**	**-0.5**
FITZ	**Fitzroy Crossi**	**12.24**	**126**	Pn	**Pn**	**14 11 58.3**	**-0.2**
	0.3nm,0.3s,baz=301,slow=8.5,SNR=8.1						
FITZ				Sn	Sn	14 14 05.0	-8.7
	0.3nm,0.3s,baz=12,slow=20,SNR=2.4						
MEEK	**Meekatharra**	**15.73**	**169**	P	**Pn**	**14 12 45.2**	**-0.3**
MORW	**Morawa**	**17.84**	**178**	P	**P**	**14 13 12.7**	**+0.5**
COCO	**West Island**	**18.00**	**265**	P	**Pn**	**14 13 11.6**	**-2.4**
FAKI	**Fak Fak**	**18.79**	**65**	P	**Pn**	**14 13 24.1**	**+0.5**
BLDU	**Ballidu**	**19.41**	**176**	P	**Pn**	**14 13 30.6**	**-0.3**
WRA	**Warramunga Arr**	**20.40**	**118**	P	Pn	14 13 43.5	+0.9
	1.7nm,0.9s,baz=286,slow=9.3,SNR=12						
WRA				S	**S**	**14 17 22.7**	**-4.0**
	0.1nm,0.4s,baz=290,slow=25,SNR=1.4						
	1.7nm,0.9s						
ASAR	**Alice Springs**	**21.73**	**127**	P	**P**	**14 13 58.0**	**+3.3**
	0.9nm,0.7s,baz=304,slow=10.0,SNR=15						
ASAR				S	**S**	**14 17 50.8**	**-2.2**
	0.6nm,0.9s,baz=302,slow=23,SNR=4.0						
	0.9nm,0.7s						
STKA	**Stephens Creek**	**31.92**	**134**	P	**P**	**14 15 32.2**	**+3.8**
	1.0nm,0.6s,baz=294,slow=14,SNR=3.2						
	1.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**33.51**	**331**	P	**P**	**14 15 41.2**	**-1.3**
	0.4nm,0.3s,baz=159,slow=9.2,SNR=5.2						
	0.4nm,0.3s						
H08S2	**Diego Garcia H**	**42.24**	**271**	T	T	15 02 16.8	
	baz=96						
H08S3	**Diego Garcia H**	**42.25**	**271**	T	T	15 02 14.7	
	baz=96						
H08S1	**Diego Carcia H**	**42.26**	**271**	T	T	15 02 20.0	
	baz=96						
SONM	**Songino Array**	**59.25**	**353**	P	**P**	**14 19 04.9**	**+0.9**
	0.4nm,0.5s,baz=161,slow=10,SNR=1.8						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**64.76**	**336**	P	**P**	**14 19 40.2**	**-0.7**
	0.4nm,0.5s,baz=150,slow=7.7,SNR=7.1						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**69.31**	**336**	P	**P**	**14 20 11.3**	**+1.6**
	0.5nm,0.5s,baz=149,slow=5.5,SNR=6.2						
	0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**69.79**	**341**	P	**P**	**14 20 12.8**	**+0.2**
	0.6nm,0.4s,baz=145,slow=4.9,SNR=4.5						
	0.6nm,0.4s						
BVAR	**Borovoye Array**	**74.49**	**334**	P	**P**	**14 20 41.5**	**+0.8**
	0.5nm,0.5s,baz=126,slow=7.3,SNR=3.9						
	0.5nm,0.5s						

IDC 21 14:16:28.8±2.4, 15°.77S×173°.66W, h0km, mb3.9/5, mbtmp3.9/5, MS3.3/2, Error ellipse: s-maj=134.9km s-min=20.3km az=144.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.59**	**45**	Pn	Pn	14 17 11.1	-1.1
	baz=214,slow=3.4						
AFI				Sn	Sn	14 17 38.5	-5.9
	baz=274,slow=19						
MSVF	**Nonsavu**	**8.18**	**255**	LR	LR	14 20 53.5	
	comp=Z,173nm,21.4s,baz=62,slow=32						
DZM	**Mont Dzumac**	**19.83**	**249**	LR	LR	14 27 33.2	
	comp=Z,110nm,20.4s,baz=84,slow=34						
H11S2	**WAKE ISLAND Hy**	**39.15**	**330**	T	T	15 06 07.7	
	baz=149,slow=76,SNR=4.7						
H11S3	**WAKE ISLAND Hy**	**39.16**	**330**	T	T	15 06 08.8	
	baz=149,slow=76,SNR=3.8						
H11S1	**WAKE ISLAND Hy**	**39.17**	**330**	T	T	15 06 11.8	
	baz=149,slow=76,SNR=4.2						
H11N3	**WAKE ISLAND Hy**	**40.11**	**331**	T	T	15 06 52.4	
	baz=150,slow=76,SNR=9.2						
H11N1	**WAKE ISLAND Hy**	**40.11**	**331**	T	T	15 06 53.7	
	baz=150,slow=76,SNR=8.0						
H11N2	**WAKE ISLAND Hy**	**40.12**	**331**	T	T	15 06 52.5	
	baz=150,slow=76,SNR=10						
STKA	**Stephens Creek**	**43.64**	**240**	P	P	14 24 36.9	+1.6
	0.7nm,0.3s,baz=32,slow=15,SNR=0.9						
	0.7nm,0.3s						
WRA	**Warramunga Arr**	**49.52**	**257**	P	P	14 25 20.3	-1.4
	0.5nm,0.7s,baz=94,slow=6.6,SNR=8.3						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**49.76**	**252**	P	P	14 25 22.4	-1.2
	2.7nm,0.6s,baz=89,slow=7.3,SNR=36						
	2.7nm,0.6s						
PDAR	**Pinedale Array**	**82.70**	**42**	P	P	14 28 54.1	-0.7
	0.9nm,0.8s,baz=206,slow=3.6,SNR=9.2						
	0.9nm,0.8s						
ILAR	**Eielson Array**	**82.85**	**11**	P	P	14 28 54.9	+0.1
	0.5nm,0.6s,baz=232,slow=6.0,SNR=15						
	0.5nm,0.6s						
BRTR	**Keskin Array B**	**146.28**	**320**	PKPbc	PKPab	14 36 12.8	+0.2
	1.9nm,0.8s,baz=103,slow=2.4,SNR=12						
GERES	**GERESS Array B**	**146.47**	**351**	PKPbc	PKPbc	14 36 12.3	+0.2
	1.1nm,0.7s,baz=25,slow=3.5,SNR=3.6						
CONA	**Conrad Observa**	**146.98**	**348**	*i* PKiKP	PKPab	14 36 14.4	-0.6
	3.5nm,0.7s						
RONA	**Rosalia, Austr**	**147.11**	**348**	*i* PKiKP	PKPab	14 36 14.9	-0.6
	1.5nm,0.6s						
WTTA	**Wattenberg**	**148.29**	**353**	*i* PKP	PKPbc	14 36 17.6	+0.3
	3.1nm,0.6s						
DAVA	**Damuels**	**148.44**	**355**	*i* PKP	PKiKP	14 36 18.7	-0.6
	7.6nm,1.2s						
FETA	**Feichten**	**148.62**	**354**	*i* PKP	PKPbc	14 36 18.5	+0.3
	3.7nm,1.1s						
ABTA	**Abfaltersbach**	**148.69**	**352**	*i* PKP	PKPbc	14 36 18.0	-0.3
	2.6nm,0.7s						

*NNC **21** 14:20:28.2±0.4, 43°.23N×78°.62E, h0km, mb2.6, mpv2.8, Error ellipse: s-maj=4.7km s-min=2.1km az=178.0*
*KRNET **21** 14:20:28.4±0.1, 43°.22N×78°.60E, h15km, mb2.8*
*SOME **21** 14:20:29.4, 43°.20N×78°.57E, h10km*
ISC 21 14:20:28.5±1.0, 43°.23N±0°.02×78°.57E±0°.02, h5km±9km, n33, σ1§04/62, 10C-2D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	**Saty**	**0.21**	**215**	P	**Pg**	**14 20 33.4**	**+0.7**
	17nm,0.1s						
SATY				S	**Sg**	**14 20 36.3**	**+0.8**
	309nm,0.2s						
SATY	**Saty**	**0.21**	**215**	*e*P	**Pg**	**14 20 33.4**	**+0.7**
	17nm,0.1s						
SATY				*e*S	**Sg**	**14 20 36.3**	**+0.8**
	309nm,0.2s						
KPKS	**Kokpek**	**0.25**	**19**	P	**Pg**	**14 20 33.6**	**+0.2**
KPKS				S	**Sg**	**14 20 36.5**	**-0.1**
	11nm,0.1s						
KPKS	**Kokpek**	**0.25**	**19**	*e*P	**Pg**	**14 20 33.6**	**+0.2**
KPKS				*e*S	**Sg**	**14 20 36.5**	**-0.1**
	11nm,0.1s						
UZB	**Uzynbulak**	**0.34**	**104**	P	**Pg**	**14 20 34.8**	**-0.3**
	20nm,0.1s						
UZB				S	**Sg**	**14 20 39.1**	**-0.6**
	52nm,0.1s						
UZB	**Uzynbulak**	**0.34**	**104**	*e*P	**Pg**	**14 20 34.8**	**-0.3**
UZB				*e*S	**Sg**	**14 20 39.0**	**-0.6**
UZB	**Uzynbulak**	**0.34**	**104**	*e*P	**Pg**	**14 20 34.8**	**-0.3**
	20nm,0.1s						
UZB				*e*S	**Sg**	**14 20 39.1**	**-0.6**
	52nm,0.1s						
KURS	**Kuram**	**0.39**	**311**	P	**Pg**	**14 20 36.8**	**+0.8**
	0.7nm,0.1s						
KURS				S	**Sg**	**14 20 42.1**	**+1.0**
	6.0nm,0.2s						
SHLS	**Shalkode**	**0.66**	**96**	P	**Pn**	**14 20 46.5**	**+1.9**
	4.2nm,0.1s						
SHLS				S	**Sn**	**14 20 58.8**	**+3.4**
	8.5nm,0.1s						
SHLS	**Shalkode**	**0.66**	**96**	*e*P	**Pn**	**14 20 46.5**	**+1.9**
	4.2nm,0.1s						
SHLS				*e*S	**Sn**	**14 20 58.8**	**+3.4**
	8.5nm,0.1s						
PDGK	**Podgornoye**	**0.68**	**82**	⇑P	**Pg**	**14 20 40.7**	**-0.9**
	0.5nm,0.1s						
PDGK				⇑S	**Sg**	**14 20 49.3**	**-1.0**
	7.2nm,0.3s						
MDOK	**Medeo**	**1.12**	**267**	Pg	**Pn**	**14 20 49.9**	**-1.0**
	1.8nm,0.1s						
MDOK				Lg	Lg	14 21 04.6	
	7.6nm,0.2s						
ARXS	**Arharly**	**1.12**	**331**	P	**Pn**	**14 20 49.9**	**-1.0**
	1.0nm,0.1s						
ARXS				S	**Sb**	**14 21 04.6**	**-0.6**
	4.3nm,0.1s						
ARXS	**Arharly**	**1.12**	**331**	*e*P	**Pn**	**14 20 49.9**	**-1.0**
	1.0nm,0.1s						
ARXS				*e*S	**Sb**	**14 21 04.6**	**-0.6**
	4.3nm,0.1s						
TNSS	**Tian-Shan**	**1.21**	**261**	P	**Pb**	**14 20 51.7**	**-0.3**
TNSS				S	**Sn**	**14 21 07.7**	**-1.5**
TNSS	**Tian-Shan**	**1.21**	**261**	*e*P	**Pb**	**14 20 51.7**	**-0.3**
TNSS				*e*S	**Sn**	**14 21 07.8**	**-1.5**
KTMS	**Ketmen**	**1.32**	**80**	P	**Pb**	**14 20 52.3**	**-1.4**
KTMS				S	**Sb**	**14 21 08.8**	**-2.2**
KTMS	**Ketmen**	**1.32**	**80**	*e*P	**Pg**	**14 20 53.5**	**-0.3**
	0.6nm,0.1s						
KTMS				*e*S	**Sg**	**14 21 10.7**	**-0.1**
	5.6nm,0.1s						
DJR	**Jarkent**	**1.41**	**38**	P	**Pg**	**14 20 55.8**	**+0.2**
	2.6nm,0.1s						
DJR				S	**Sg**	**14 21 14.9**	**+1.1**
	7.2nm,0.2s						
DJR	**Jarkent**	**1.41**	**38**	*e*P	**Pg**	**14 20 55.8**	**+0.2**
	2.6nm,0.1s						
DJR				*e*S	**Sg**	**14 21 14.9**	**+1.1**
	7.2nm,0.2s						
IZV	**Izvestkoviy**	**1.45**	**263**	P	**Pb**	**14 20 56.0**	**0.0**
	1.6nm,0.1s						
IZV				S	**Sg**	**14 21 15.3**	**+0.3**
	6.6nm,0.1s						
IZV	**Izvestkoviy**	**1.45**	**263**	*e*P	**Pb**	**14 20 56.0**	**0.0**
	1.6nm,0.1s						
IZV				*e*S	**Sg**	**14 21 15.3**	**+0.3**
	6.6nm,0.1s						
KTBS	**Karatobe**	**1.46**	**290**	P	**Pb**	**14 20 56.1**	**0.0**
	1.9nm,0.1s						
KTBS				S	**Sg**	**14 21 15.4**	**+0.1**
	1.9nm,0.1s						
KTBS	**Karatobe**	**1.46**	**290**	*e*P	**Pb**	**14 20 56.1**	**0.0**
	1.9nm,0.1s						
KTBS				*e*S	**Sg**	**14 21 15.4**	**+0.1**
	1.9nm,0.1s						
KDJ	**Kajisay**	**1.51**	**223**	⇓*i*P	**Pb**	**14 20 56.5**	**-0.5**
KDJ				⇓*i*S	**Sg**	**14 21 16.5**	**-0.4**
TARG	**Taragay, Kyrgy**	**1.61**	**201**	⇑*i*P	**Pb**	**14 20 57.7**	**-1.2**
TARG				⇑*i*S	**Sb**	**14 21 19.1**	**-0.5**
ULHL	**Ulahol**	**1.98**	**241**	⇑*i*P	**Pb**	**14 21 04.9**	**-0.2**
ULHL				⇑*i*S	**Sg**	**14 21 31.3**	**-0.8**
DGS	**Degeres**	**2.04**	**271**	Pg	**Pb**	**14 21 06.7**	**+0.6**
	1.7nm,0.2s						
DGS				Lg	Lg	14 21 33.5	
	3.7nm,0.2s						
DGS	**Degeres**	**2.04**	**271**	*e*P	**Pb**	**14 21 06.7**	**+0.6**
	1.7nm,0.2s						
DGS				*e*S	**Sg**	**14 21 33.5**	**-0.7**
	3.7nm,0.2s						
BOOM	**Boomskoye usch**	**2.07**	**250**	⇑*i*P	**Pb**	**14 21 06.2**	**-0.5**
BOOM				⇑*i*S	**Sb**	**14 21 33.7**	**+0.9**
KRBS	**Karabastau**	**2.16**	**283**	Pg	**Pb**	**14 21 08.5**	**+0.4**
	0.7nm,0.2s						
KRBS				Lg	Lg	14 21 36.7	
	1.7nm,0.2s						
KRBS	**Karabastau**	**2.16**	**283**	*e*P	**Pb**	**14 21 08.5**	**+0.4**
	0.7nm,0.2s						
KRBS				*e*S	**Sg**	**14 21 36.7**	**-1.1**
	1.7nm,0.2s						
AAK	**Ala-Archa**	**3.05**	**260**	⇑Pn	**Pb**	**14 21 23.1**	**-0.3**
	1.6nm,1.3s						
AAK				⇑Lg	Lg	14 22 05.8	
	1.0nm,0.9s						

*JMA **21** 14:25:29.8±0.2, 23°.7N±0°.6×122°.2E±0°.6, h28km±4km, MV2.4/14, TAIWAN REGION*
*TAP **21** 14:25:30.6, 23°.65N×122°.18E, h24km, ML3.2, C*
ISC 21 14:25:29.9±1.1, 23°.64N±0°.02×122°.19E±0°.02, h25km±11km, n138, σ0§65/251, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS4	**EOS4**	**0.50**	**14**	*i* P	**Pb**	**14 25 40.1**	**+0.3**
EOS4				*e*S	**Sb**	**14 25 47.3**	**+0.7**
TEYL	**Yanliau Villag**	**0.59**	**293**	P	**Pb**	**14 25 41.7**	**+0.2**
TEYL				*e*S	**Sn**	**14 25 50.6**	**-0.8**
SHUL	**Shoufeng**	**0.59**	**285**	*i* P	**Pb**	**14 25 41.8**	**+0.2**
SHUL				*e*S	**Sn**	**14 25 50.8**	**-0.8**
TEGC	**Jichi Village**	**0.60**	**277**	*e*P	**Pb**	**14 25 42.0**	**+0.3**
TEGC				*e*S	**Sn**	**14 25 51.1**	**-0.6**
HWA	**Hwalien**	**0.63**	**303**	*e*P	**Pn**	**14 25 42.9**	**-0.4**
HWA				*e*S	**Sb**	**14 25 50.7**	**-0.1**
EOS3	**EOS3**	**0.66**	**11**	*i* P	**Pb**	**14 25 43.1**	**+0.5**
EOS3				S	**Sn**	**14 25 52.4**	**-0.6**
EGFH	**Guangfu**	**0.70**	**273**	*e*P	**Pn**	**14 25 43.8**	**-0.4**
EGFH				*e*S	**Sn**	**14 25 53.4**	**-0.8**
TWD	**Chiawan**	**0.70**	**309**	P	**Pb**	**14 25 42.9**	**-0.5**
TWD				*i* S	**Sb**	**14 25 52.1**	**-0.6**
ESL	**Shilin**	**0.71**	**284**	*e*P	**Pb**	**14 25 43.0**	**-0.4**
HGSD	**Ruisui**	**0.71**	**258**	*i* P	**Pb**	**14 25 43.3**	**-0.4**
HGSD				S	**Sb**	**14 25 53.2**	**+0.1**
ETL	**Fush Village**	**0.73**	**315**	P	**Pb**	**14 25 43.9**	**-0.1**
WARBT	**Fenglin Townsh**	**0.74**	**276**	*i* P	**Pb**	**14 25 43.5**	**-0.6**
ECBN	**Changbin**	**0.75**	**245**	P	**Pb**	**14 25 44.3**	**0.0**
ECBN				*e*S	**Sb**	**14 25 54.3**	**+0.2**
NACB	**Ninganchiao**	**0.76**	**315**	P	**Pb**	**14 25 43.9**	**-0.6**
NACB				S	**Sb**	**14 25 53.6**	**-0.8**
EOS2	**EOS2**	**0.78**	**3**	*e*P	**Pn**	**14 25 45.1**	**-0.1**
EHYH	**Wanrong**	**0.79**	**260**	P	**Pb**	**14 25 44.9**	**0.0**
EHYH				S	**Sn**	**14 25 55.8**	**-0.6**
EAHA	**Aohua**	**0.80**	**329**	P	**Pb**	**14 25 44.9**	**-0.3**
EAHA				*e*S	**Sn**	**14 25 56.0**	**-0.8**
EHY	**Hungye**	**0.80**	**261**	*i* P	**Pb**	**14 25 45.0**	**-0.2**
EHY				*e*S	**Sb**	**14 25 56.0**	**+0.3**
LXIB	**Xiulin Townshi**	**0.80**	**299**	*e*P	**Pb**	**14 25 44.8**	**-0.6**
LXIB				*e*S	**Sb**	**14 25 55.8**	**-0.1**
EYUL	**Yuli**	**0.85**	**250**	P	**Pb**	**14 25 46.0**	**0.0**
CHKH	**Chenggong**	**0.85**	**239**	*i* P	**Pb**	**14 25 45.4**	**-0.6**
CHKH				*i* S	**Sb**	**14 25 56.1**	**-0.9**
YULB	**Yu-li**	**0.85**	**254**	*i* P	**Pb**	**14 25 45.7**	**-0.3**
YULB				*i* S	**Sb**	**14 25 56.9**	**-0.2**
ETLH	**Xiulin Townshi**	**0.86**	**311**	*e*P	**Pn**	**14 25 46.3**	**-0.2**
ETLH				S	**Sb**	**14 25 57.5**	**+0.1**
TWF1	**Yuli**	**0.86**	**251**	P	**Pb**	**14 25 46.0**	**-0.3**
TWF1				S	**Sb**	**14 25 57.5**	**+0.1**
ENA	**Nanau**	**0.89**	**333**	*e*P	**Pb**	**14 25 46.7**	**0.0**
ENA				*e*S	**Sn**	**14 25 58.7**	**-0.2**
EWUT	**Wuta**	**0.89**	**335**	*e*P	**Pn**	**14 25 46.9**	**+0.1**
EWUT				*e*S	**Sb**	**14 25 58.1**	**0.0**
CHKT	**Chengkung**	**0.93**	**235**	*i* P	**Pn**	**14 25 46.4**	**-0.9**
CHKT				S	**Sb**	**14 25 57.9**	**-1.2**
FULB	**Fuli**	**0.93**	**242**	*i* P	**Pn**	**14 25 46.5**	**-0.9**
FULB				*i* S	**Sb**	**14 25 58.8**	**-0.5**
VWDT	**VWDT**	**0.96**	**277**	*e*P	**Pn**	**14 25 47.6**	**-0.3**
OWD	**Renai**	**0.98**	**289**	*i* P	**Pb**	**14 25 47.6**	**-0.6**
OWD				*i* S	**Sb**	**14 26 00.3**	**-0.6**
WHF	**Hehuan Shan**	**0.98**	**301**	P	**Pn**	**14 25 47.9**	**-0.6**
WHF				S	**Sb**	**14 26 00.4**	**-0.8**
ESAO	**Su ao**	**0.98**	**342**	*e*P	**Pn**	**14 25 48.1**	**-0.1**
TWC	**Suao**	**1.02**	**342**	P	**Pn**	**14 25 48.5**	**0.0**
TWC				S	**Sn**	**14 26 01.7**	**-0.3**
EHD	**Haiduan**	**1.02**	**242**	P	**Pn**	**14 25 48.2**	**-0.5**
EHD				S	**Sb**	**14 26 01.3**	**-0.7**
ECS	**Chishang**	**1.04**	**239**	*e*P	**Pn**	**14 25 48.8**	**-0.1**
ECS				*e*S	**Sn**	**14 26 03.0**	**+0.4**
WUSB	**Renai**	**1.04**	**290**	*i* P	**Pn**	**14 25 48.9**	**-0.2**
WUSB				*e*S	**Sb**	**14 26 02.2**	**-0.4**
FUSS	**Fushou**	**1.05**	**305**	*i* P	**Pn**	**14 25 49.0**	**-0.3**
FUSS				*e*S	**Sb**	**14 26 02.5**	**-0.7**
JYNG	**Yonagunijimaku**	**1.07**	**40**	*e*P	**Pn**	**14 25 49.4**	**+0.1**
JYNG				*e*S	**Sn**	**14 26 02.7**	**-0.7**
NNSB	**Datong**	**1.08**	**317**	*i* P	**Pn**	**14 25 49.4**	**-0.1**
NNSB				*i* S	**Sb**	**14 26 03.1**	**-0.6**
LATG	**Datong**	**1.08**	**326**	*e*P	**Pn**	**14 25 49.3**	**-0.3**
LATG				*e*S	**Sn**	**14 26 03.1**	**-0.7**
NDS	**Dongshan**	**1.08**	**337**	*i* P	**Pb**	**14 25 49.9**	**0.0**
NDS				S	**Sb**	**14 26 03.8**	**+0.1**
NNS	**Nan Shan**	**1.09**	**317**	*e*P	**Pn**	**14 25 49.7**	**-0.1**
NNS				*e*S	**Sn**	**14 26 03.3**	**

TWA	**Mucha**	**1.45**	**338**	*eP*	**Pb**	**14**	**25**	**55.8**	**-0.4**
TWA				*eS*	**Sb**	**14**	**26**	**14.4**	**+0.2**
KSHI	**Guanxi Townshi**	**1.46**	**321**	*eP*	**Pb**	**14**	**25**	**56.6**	**+0.2**
KSHI				*eS*	**Sb**	**14**	**26**	**15.7**	**+1.1**
WCKO	**Fanlu**	**1.47**	**263**	*eP*	**Pb**	**14**	**25**	**56.4**	**-0.1**
WCKO				*eS*	**Sb**	**14**	**26**	**13.9**	**-0.8**
LIOB	**Emei**	**1.47**	**313**	*eP*	**Pb**	**14**	**25**	**56.5**	**0.0**
LIOB				*eS*	**Sb**	**14**	**26**	**14.3**	**-0.5**
NSTT	**Nanjuang**	**1.47**	**313**	*eP*	**Pb**	**14**	**25**	**56.5**	**0.0**
NSTT				*eS*	**Sb**	**14**	**26**	**14.3**	**-0.5**
TPUB	**Ta-pu**	**1.47**	**257**	*eP*	**Pb**	**14**	**25**	**55.9**	**-0.6**
TPUB				*eS*	**Sb**	**14**	**26**	**15.0**	**+0.2**
TCU	**Taichung**	**1.47**	**290**	*eP*	**Pb**	**14**	**25**	**56.9**	**+0.3**
TCU				*eS*	**Sb**	**14**	**26**	**17.1**	**+2.2**
TWQ1	**Liyutan**	**1.47**	**299**	*eP*	**Pb**	**14**	**25**	**56.9**	**+0.3**
TWQ1				*eS*	**Sb**	**14**	**26**	**15.9**	**+0.9**
NWF	**Wu-fen Shan**	**1.48**	**346**	*eP*	**Pb**	**14**	**25**	**56.0**	**-0.8**
NWF				*eS*	**Sb**	**14**	**26**	**14.9**	**-0.1**
WFSB	**Wu-fen Shan**	**1.48**	**346**	*eP*	**Pb**	**14**	**25**	**56.3**	**-0.4**
WFSB				*eS*	**Sb**	**14**	**26**	**14.9**	**0.0**
TATO	**Taipei**	**1.48**	**335**	*eP*	**Pn**	**14**	**25**	**55.5**	**+0.5**
TATO				*eS*	**Sb**	**14**	**26**	**14.4**	**-0.6**
SXI1	**Grass Mountain**	**1.48**	**349**	*eP*	**Pn**	**14**	**25**	**55.6**	**+0.6**
NJD	**Zhudong**	**1.48**	**318**	*eP*	**Pb**	**14**	**25**	**56.6**	**-0.2**
CHN4	**Tsaushan**	**1.49**	**259**	*eP*	**Pb**	**14**	**25**	**57.0**	**+0.1**
CHN4				*eS*	**Sb**	**14**	**26**	**15.4**	**-0.1**
WTP	**Ta-pu**	**1.50**	**255**	*eP*	**Pb**	**14**	**25**	**56.6**	**-0.4**
WDLH	**Douliu**	**1.51**	**272**	*eP*	**Pb**	**14**	**25**	**57.2**	**-0.1**
NSY	**Sanyi**	**1.52**	**301**	*eP*	**Pb**	**14**	**25**	**57.9**	**+0.5**
NSY				*eS*	**Sb**	**14**	**26**	**17.4**	**+1.2**
ECL	**Taimali**	**1.54**	**228**	*eP*	**Pn**	**14**	**25**	**55.2**	**-0.5**
ECL				*eS*	**Sn**	**14**	**26**	**13.4**	**-1.5**
HATJ	**Hateruma jima**	**1.54**	**74**	P	**Pn**	**14**	**25**	**55.9**	**+0.1**
HATJ				*eS*	**Sn**	**14**	**26**	**14.4**	**-0.6**
SLGT	**Liugui**	**1.55**	**246**	*eP*	**Pb**	**14**	**25**	**57.4**	**-0.6**
SLGT				*eS*	**Sb**	**14**	**26**	**16.9**	**-0.3**
WCHH	**Zhanghua**	**1.55**	**287**	*eP*	**Pb**	**14**	**25**	**58.0**	**0.0**
WCHH				*eS*	**Sb**	**14**	**26**	**18.9**	**+1.6**
SGST	**Jiashian**	**1.57**	**250**	*eP*	**Pn**	**14**	**25**	**57.0**	**+0.7**
SGST				*eS*	**Sb**	**14**	**26**	**17.8**	**0.0**
IRIF	**Iriomote-Funau**	**1.57**	**64**	P	**Pn**	**14**	**25**	**56.8**	**+0.5**
IRIF				*eS*	**Sn**	**14**	**26**	**16.5**	**+0.7**
CHN1	**Nanshi**	**1.59**	**254**	*eP*	**Pb**	**14**	**25**	**58.3**	**-0.3**
CHN1				*eS*	**Sb**	**14**	**26**	**19.9**	**+1.7**
SBCB	**Hsinchu**	**1.59**	**317**	*eP*	**Pb**	**14**	**25**	**58.7**	**+0.1**
SBCB				*eS*	**Sb**	**14**	**26**	**19.0**	**+0.8**
TWK	**Hsinying**	**1.60**	**257**	*eP*	**Pb**	**14**	**25**	**58.5**	**-0.3**
TWK				*eS*	**Sb**	**14**	**26**	**19.0**	**+0.3**
YM01	**YM01**	**1.60**	**340**	*eP*	**Pb**	**14**	**25**	**58.2**	**-0.6**
YM01				*eS*	**Sb**	**14**	**26**	**18.5**	**-0.3**
HSN	**Hsinchu**	**1.61**	**316**	*eS*	**Sb**	**14**	**26**	**18.8**	**+0.1**
NCUH	**Zhongli**	**1.61**	**326**	*eP*	**Pb**	**14**	**25**	**58.1**	**-0.8**
NCUH				*eS*	**Sb**	**14**	**26**	**18.7**	**-0.2**
NCU	**National Centr**	**1.61**	**326**	*eS*	**Sn**	**14**	**26**	**16.9**	**+0.2**
ZUZH	**Zhuzihu**	**1.63**	**339**	P	**Pn**	**14**	**25**	**57.9**	**+0.8**
ZUZH				*eS*	**Sb**	**14**	**26**	**18.1**	**-1.3**
YM08	**YM08**	**1.64**	**341**	*eP*	**Pn**	**14**	**25**	**57.7**	**+0.5**
YM08				*eS*	**Sn**	**14**	**26**	**18.0**	**+0.5**
NTST	**Danshui**	**1.66**	**336**	*eP*	**Pb**	**14**	**25**	**58.6**	**-1.2**
WRL	**Guolierlin Hig**	**1.68**	**279**	*eP*	**Pb**	**14**	**25**	**59.9**	**-0.3**
WRL				*eS*	**Sb**	**14**	**26**	**21.2**	**+0.4**
SSD	**Sandimen**	**1.68**	**238**	*eP*	**Pn**	**14**	**25**	**59.0**	**+1.2**
RLNB	**Erlin**	**1.69**	**279**	*eP*	**Pb**	**14**	**25**	**59.3**	**-1.0**
RLNB				*eS*	**Sb**	**14**	**26**	**21.7**	**+0.5**
TWY	**Chenhua**	**1.72**	**342**	*eP*	**Pn**	**14**	**25**	**59.4**	**+1.2**
TWY				*eS*	**Sb**	**14**	**26**	**20.8**	**-1.2**
MASBT	**Mashibuluo**	**1.76**	**235**	*eP*	**Pn**	**14**	**25**	**59.2**	**+0.4**
MASBT				*eS*	**Sn**	**14**	**26**	**20.9**	**+0.5**
TAWH	**Dawu Township**	**1.76**	**223**	*eP*	**Pn**	**14**	**25**	**58.6**	**-0.2**
JKRS	**Kuro-shima**	**1.77**	**70**	P	**Pn**	**14**	**25**	**59.4**	**+0.4**
JKRS				*eS*	**Sn**	**14**	**26**	**20.7**	**0.0**
WSL	**Shuilin Townsh**	**1.80**	**267**	*eP*	**Pb**	**14**	**26**	**01.0**	**-1.2**
WSL				*eS*	**Sb**	**14**	**26**	**24.7**	**+0.4**
TWM1	**Shoushan**	**1.81**	**244**	*eP*	**Pb**	**14**	**26**	**02.9**	**+0.4**
CHN8	**Yiju**	**1.84**	**261**	*eP*	**Pn**	**14**	**26**	**01.3**	**+1.4**
CHN8				*eS*	**Sb**	**14**	**26**	**25.8**	**+0.4**
SCZT	**Fangliau**	**1.92**	**229**	*eP*	**Pn**	**14**	**26**	**02.2**	**+1.2**
SCZT				*eS*	**Sn**	**14**	**26**	**25.7**	**+1.4**
JIJ	**Ishigaki jima**	**1.93**	**68**	*eP*	**Pn**	**14**	**26**	**01.6**	**+0.4**
JIJ				*eS*	**Sn**	**14**	**26**	**24.8**	**+0.2**
TSCK	**Chigu Township**	**1.99**	**256**	*eP*	**Pb**	**14**	**26**	**04.2**	**-1.2**
TSCK				*l S*	**Sb**	**14**	**26**	**30.2**	**+0.4**
SMST	**Manzhou Townsh**	**2.03**	**218**	*eP*	**Pn**	**14**	**26**	**03.3**	**+0.7**
SMST				*eS*	**Sn**	**14**	**26**	**27.1**	**-0.1**
TSEB	**Hengchuen, Pin**	**2.10**	**215**	*eS*	**Sn**	**14**	**26**	**31.9**	**+1.9**
HEN	**Hengchun**	**2.10**	**220**	*eP*	**Pb**	**14**	**26**	**06.0**	**-1.3**
HEN				*eS*	**Sn**	**14**	**26**	**30.3**	**+1.4**
TWKBT	**Hengchun**	**2.11**	**217**	*eP*	**Pn**	**14**	**26**	**04.4**	**+0.7**
TWKBT				*eS*	**Sn**	**14**	**26**	**30.6**	**+1.5**
TWK1	**Hengchun**	**2.11**	**217**	*eP*	**Pn**	**14**	**26**	**04.6**	**+0.9**
TWK1				*eS*	**Sn**	**14**	**26**	**29.9**	**+0.8**
JISG	**Ishigakijimahi**	**2.16**	**64**	*eP*	**Pn**	**14**	**26**	**04.1**	**-0.2**
JISG				*eS*	**Sn**	**14**	**26**	**28.9**	**-1.5**
WDGT	**Dungji**	**2.35**	**261**	*eP*	**Pn**	**14**	**26**	**08.2**	**+1.3**
PHUB	**P'eng-hu**	**2.40**	**268**	*eP*	**Pn**	**14**	**26**	**09.0**	**+1.3**
PHUB				*eS*	**Sn**	**14**	**26**	**37.5**	**+1.2**
VWUC	**VWUC**	**2.84**	**299**	*eP*	**Pn**	**14**	**26**	**14.5**	**+0.9**
VWUC				*eS*	**Sn**	**14**	**26**	**46.3**	**-0.7**
PTMZ	**Houxiangcun**	**3.13**	**297**	*eP*	**Pn**	**14**	**26**	**18.7**	**+1.1**
PTMZ				*eS*	**Sn**	**14**	**26**	**54.0**	**-0.2**
MATB	**Ma-tsu**	**3.23**	**321**	*eP*	**Pn**	**14**	**26**	**19.8**	**+0.8**

*TEH **21** 14:42:49.3, 33°.43N×46°.01E, h10km±200km, ML2.8, Presumed earthquake*
*ISN **21** 14:42:49.0±1.3, 33°.44N×46°.00E, h17km±20km, ML2.8, Presumed earthquake*
ISC 21 14:42:50.1±1.1,**33'.44N**±0'.04×**45'.93E**±0'.08,**h19**km,**n6,**
σ1§01/9,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
GLG1	**Gilan-e-Gharb**	**0.67**	**358**	Pg	**Pb**	**14**	**43**	**02.2**	**-1.0**
GLG1				Sg	**Sg**	**14**	**43**	**13.2**	**+0.8**
IDHR	**Dehrash**	**1.31**	**17**	Pg	**Pg**	**14**	**43**	**14.9**	**-0.6**
RAFI	**Al-Rafai**	**1.72**	**175**	*e*Pg	**Pb**	**14**	**43**	**20.0**	**-1.0**
	baz=357								
RAFI				*e*Sg	**Sb**	**14**	**43**	**43.0**	**+0.7**
RAFI				AML	AML	14	43	48.5	
	comp=N,154nm,0.4s								
RAFI				AML	AML	14	43	49.3	
	comp=E,93nm,0.5s								
IBZA	**Bozab**	**1.90**	**57**	Pn	**Pb**	**14**	**43**	**24.1**	**-0.2**
IDOB	**Doab**	**1.91**	**79**	Pn	**Pb**	**14**	**43**	**23.6**	**-0.7**
IKRK	**Kirkuk**	**2.36**	**326**	*e*Pn	**Pn**	**14**	**43**	**29.0**	**+1.3**
IKRK				*e*Sn	**Sb**	**14**	**44**	**00.0**	**-0.6**

IDC 21 15:04:44.4±2.3,**4°.02N×122°.91E,h0km,mb3.4/3,**
mbtmp3.4/3,Error ellipse: s-maj=342.2km
s-min=26.3km az=63.0,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
WRA	**Warramunga Arr**	**26.33**	**155**	P	P	15	10	22.2	+0.1
	0.2nm,0.3s,baz=334,slow=9.4,SNR=11								
	0.2nm,0.3s								
ASAR	**Alice Springs**	**29.53**	**159**	P	P	15	10	50.8	-0.1
	0.1nm,0.3s,baz=341,slow=8.5,SNR=13								
	0.1nm,0.3s								
MKAR	**Makanchi Array**	**55.19**	**327**	P	P	15	14	18.9	-0.1
	0.2nm,0.3s,baz=116,slow=7.6,SNR=5.0								
	0.2nm,0.3s								

*IDC **21** 15:09:07.2±6.0, 4°.83S×151°.66E, h84km±46km, mb3.5/4, mbtmp3.8/5, ML1.5/1, MS2.9/3, Error ellipse: s-maj=62.1km s-min=29.7km az=107.0*
ISC 21 15:09:11.5±2.8,**5°.0S**±0°.3×**151°.6E**±0°.5,**h129**km,**n9,**
σ1§70/7,mb3.7/4,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
PMG	**Port Moresby**	**6.21**	**225**	P	**Pn**	**15**	**10**	**39.6**	**-1.2**
	0.7nm,0.3s,baz=350,slow=12,SNR=5.0								
PMG				S	**Sn**	**15**	**11**	**50.4**	**-0.1**
	14nm,1.0s,baz=206,slow=5.7,SNR=1.8								
	17nm,0.9s								
WRA	**Warramunga Arr**	**22.42**	**227**	P	**P**	**15**	**14**	**00.2**	**+0.5**
	1.2nm,0.5s,baz=50,slow=10,SNR=15								
	1.2nm,0.5s								

ASAR	**Alice Springs**	**25.20**	**221**	P	**P**	**15**	**14**	**27.1**	**+1.8**
	2.4nm,0.7s,baz=55,slow=8.8,SNR=42								
	2.4nm,0.7s								
DAV	**Davao City (W)**	**28.64**	**295**	LR	LR	15	25	59.6	
	comp=Z,28nm,19.3s,baz=281,slow=35								
KAPI	**Kappang**	**31.75**	**269**	LR	LR	15	29	15.4	
	comp=Z,13nm,21.6s,baz=214,slow=38								
ASAJ	**Asahikawa**	**49.60**	**351**	LR		15	37	46.5	
	comp=Z,19nm,19.9s,baz=136,slow=35								
CMAR	**Chiang Mai Arr**	**56.92**	**296**	P	**P**	**15**	**18**	**45.5**	**+1.8**
	0.4nm,0.3s,baz=124,slow=6.5,SNR=6.0								
	0.4nm,0.3s								
SONM	**Songino Array**	**65.91**	**328**	P	**P**	**15**	**19**	**41.9**	**-1.8**
	0.4nm,0.6s,baz=145,slow=5.3,SNR=2.8								
	0.4nm,0.6s								
TORD	**Torodi Ar. Bea**	**149.27**	**287**	PKPbc	**PKPbc**	**15**	**28**	**46.2**	**+0.1**
	0.6nm,0.9s,baz=151,slow=2.5,SNR=3.3								

*AFAD **21** 15:12:43.1, 37°.08N×39°.02E, h7km±2km, ML2.8*
*ISK **21** 15:12:45.5, 37°.13N×38°.95E, h20km, ML2.8/9*
ISC 21 15:12:44.0±1.2,**37'.13N**±0'.04×**38'.97E**±0'.04,**h3**km±8km,
n15,σ0§58/24,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
SANL	**SANLIURFA_Merk**	**0.05**	**18**	P	**Pg**	**15**	**12**	**44.6**	**-0.5**
SANL				S	**Sg**	**15**	**12**	**45.7**	**-0.1**
SANL				IAML		15	12	46.0	
	comp=N,1μm,0.4s								
SANL				IAML		15	12	46.0	
	comp=E,2μm,0.4s								
SURC	**SANLIURFA_SURC**	**0.38**	**229**	P	**Pg**	**15**	**12**	**51.2**	**0.0**
SURC				S	**Sg**	**15**	**12**	**57.1**	**+0.9**
SURC				IAML		15	13	05.0	
	comp=N,2μm,0.8s								
SURC				IAML		15	13	06.0	
	comp=E,2μm,0.6s								
HANM	**anlurfa/Hi**	**0.46**	**351**	P	**Pg**	**15**	**12**	**52.9**	**+0.1**
HANM				S	**Sg**	**15**	**12**	**59.4**	**+0.6**
HANM				IAML		15	13	05.0	
	comp=N,666nm,0.6s								
HANM				IAML		15	13	06.0	
	comp=E,255nm,0.8s								
ATAB	**Bozova**	**0.64**	**303**	P	**Pg**	**15**	**12**	**57.1**	**+0.9**
ATAB				S	**Sg**	**15**	**13**	**05.4**	**+0.9**
ATAB				IAML		15	13	13.0	
	comp=E,535nm,0.6s								
ATAB				IAML		15	13	17.0	
	comp=N,379nm,0.7s								
KAHTU	**Kahta**	**0.74**	**337**	P	**Pg**	**15**	**12**	**58.4**	**+0.3**
KAHTU				S	**Sb**	**15**	**13**	**09.5**	**-0.5**
KAHTU				IAML		15	13	15.0	
	comp=E,612nm,0.5s								
KAHTU				IAML		15	13	16.0	
	comp=N,479nm,0.7s								
NARI	**Adyaman-Kaht**	**0.77**	**348**	P	**Pg**	**15**	**12**	**59.0**	**+0.1**
NARI				S	**Sb**	**15**	**13**	**11.2**	**+0.1**
NARI				IAML		15	13	24.0	
	comp=N,195nm,1.0s								
NARI				IAML		15	13	24.0	
	comp=E,151nm,1.0s								
MDYL	**Doganyol-Malat**	**1.19**	**3**	Pn	**Pn**	**15**	**13**	**07.5**	**-0.1**
MDYL				Sn	**Sn**	**15**	**13**	**23.6**	**-0.7**
DYBB	**Diyarbakir**	**1.24**	**48**	Pn	**Pg**	**15**	**13**	**08.4**	**+0.6**
DYBB				Sn	**Sn**	**15**	**13**	**25.3**	**-0.4**
SVRC	**Sivrice-ELAZID**	**1.28**	**12**	Pn	**Pb**	**15**	**13**	**08.7**	**-0.1**
SVRC				Sn	**Sn**	**15**	**13**	**25.9**	**-0.8**
ESGZ	**Sivrice-Elazig**	**1.30**	**3**	Pn	**Pb**	**15**	**13**	**09.2**	**-0.1**
GAZ	**Gaziantep**	**1.41**	**272**	Pn	**Pn**	**15**	**13**	**10.3**	**-0.3**
KMRS	**Kahramanmaras**	**1.69**	**284**	Pn	**Pb**	**15**	**13**	**15.0**	**-0.8**
ARPR	**Arapgir-MALATY**	**2.03**	**346**	Pn	**Pn**	**15**	**13**	**19.4**	**+0.2**
BNGB	**Bingl**	**2.30**	**35**	Pn	**Pn**	**15**	**13**	**23.6**	**+0.7**
ILIC	**ilic-Erzincan**	**2.34**	**352**	Pn	**Pn**	**15**	**13**	**24.1**	**+0.5**

*IDC **21** 15:23:60.0±1.3, 10°.66S×115°.51E, h0km, mb3.6/8, mbtmp3.7/10, ML3.6/2, MS3.0/2, Error ellipse: s-maj=56.8km s-min=16.3km az=42.0*
*DJA **21** 15:24:01.8±0.6, 11°.5±7°×11°.5E±°, h10km, M4.2/25, mb4.2/7, MLv4.2/25*
ISC 21 15:24:03.1±0.7,**11°.09S**±0°.08×**115°.20E**±0°.06,**h35**km,**n43,**
σ1§44/42,mb3.7/7,South of Bali

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
IGBI	**Denpasar**	**2.26**	**359**	P	**Pn**	**15**	**24**	**36.7**	**-1.4**
DNP	**Denpasar**	**2.40**	**0**	P	**Pn**	**15**	**24**	**39.5**	**-0.5**
RTBI	**Rangdo, Negare**	**2.63**	**354**	P	**Pn**	**15**	**24**	**42.3**	**-0.9**
KHKI	**Kahang-Kahang**	**2.74**	**9**	P	**Pn**	**15**	**24**	**45.3**	**+0.6**
JAGI	**Jajag, Banyuwa**	**2.80**	**338**	P	**Pn**	**15**	**24**	**44.5**	**-1.0**
JAGI	**Jajag, Banyuwa**	**2.80**	**338**	P	**Pn**	**15**	**24**	**44.3**	**-1.2**
TWSI	**Taliwang, Sumb**	**2.87**	**35**	P	**Pn**	**15**	**24**	**45.7**	**-0.7**
PLAI	**Plampang**	**3.40**	**49**	P	**Pn**	**15**	**24**	**54.6**	**+0.9**
PLAI	**Plampang**	**3.40**	**49**	P	**Pn**	**15**	**24**	**52.8**	**-0.9**
ABJI	**Asem Bagus**	**3.41**	**344**	P	**Pn**	**15**	**24**	**53.0**	**-0.9**
BLJI	**Banyuglugur**	**3.68**	**334**	P	**Pn**	**15**	**24**	**57.7**	**+0.1**
DBNI	**Kabupaten Domp**	**4.01**	**50**	P	**Pn**	**15**	**25**	**03.5**	**+1.4**
KMMI	**Kalianget**	**4.20**	**343**	P	**Pn**	**15**	**25**	**03.5**	**-1.2**
WBSI	**Waikabubak, Su**	**4.37**	**71**	P	**Pn**	**15**	**25**	**07.4**	**+0.3**
SNJI	**Sawahan-Nganju**	**4.73**	**314**	P	**Pn**	**15**	**25**	**13.0**	**+0.9**
SJI	**Sawahan**	**4.75**	**314**	P	**Pn**	**15**	**25**	**12.5**	**+0.1**
PCJI	**Pacitan**	**4.90**	**306**	P	**Pn**	**15**	**25**	**13.2**	**-1.2**
WSI	**Waingapu**	**5.21**	**75**	P	**Pn**	**15**	**25**	**20.5**	**+1.8**
	0.3nm40nm,0.9s								
LBFI	**Labuhan Bajo,**	**5.30**	**61**	P	**Pn**	**15**	**25**	**20.6**	**+0.7**
UGM	**Wanagama**	**5.59**	**304**	P	**Pn**	**15**	**25**	**23.9**	**0.0**
UGM	**Wanagama**	**5.59**	**304**	P	**Pn**	**15**	**25**	**23.5**	**-0.4**
	80nm,1.0s								
EDFI	**Ende, Flores**	**6.81**	**71**	P	**Pn**	**15**	**25**	**42.4**	**+1.7**
	0.1nm6.6nm,1.3s								
BSSI	**Bau Bau, Buton**	**7.18**	**47**	P	**Pn**	**15**	**25**	**45.9**	**+0.1**
	0.1nm23nm,1.3s								
KPJI	**Karang Pucung**	**7.23**	**301**	P	**Pn**	**15**	**25**	**46.4**	**+0.1**
BATI	**Baumata**	**8.37**	**85**	Pn	Pn	15	25	58.0	-4.1
	1.1nm,0.3s,baz=288,slow=13,SNR=1.8								
BATI				Sn	**Sn**	**15**	**27**	**31.9**	**-3.5**
	2.3nm,0.3s,baz=5.8,slow=23,SNR=5.9								
	12nm,0.9s								
MBWA	**Marble Bar**	**10.91**	**157**	P	**Pn**	**15**	**26**	**34.3**	**-2.6**
PSA00	**Pilbara Seismi**	**11.33**	**157**	P	**Pn**	**15**	**26**	**41.3**	**-1.4**
FITZ	**Fitzroy Crossi**	**12.27**	**126**	Pn	**Pn**	**15**	**26**	**54.2**	**-1.2**
	0.2nm,0.3s,baz=303,slow=9.0,SNR=7.2								
FITZ				Sn	Sn	15	28	59.3	-12
	0.2nm,0.3s,baz=176,slow=21,SNR=2.3								
	0.6nm,0.3s								
MEEK	**Meekatharra**	**15.79**	**169**	P	**Pn**	**15**	**27**	**41.1**	**-1.9**
MORW	**Morawa**	**17.90**	**178**	P	**Pn**	**15**	**28**	**09.3**	**-0.1**
FAKI	**Fak Fak**	**18.76**	**66**	P	**Pn**	**15**	**28**	**20.5**	**+0.5**
BLDU	**Ballidu**	**19.48**	**176**	P	**P**	**15**	**28**	**27.6**	**+0.5**
WRA	**Warramunga Arr**	**20.42**	**118**	P	**P**	**15**	**28**	**38.2**	**+0.7**
	1.3nm,0.9s,baz=287,slow=9.4,SNR=8.6								
WRA				S	S	15	32	12.7	-12
	0.3nm,0.6s,baz=292,slow=26,SNR=2.6								
	1.3nm,0.9s								
WRAB	**Tennant Creek**	**20.42**	**118**	P	**P**	**15**	**28**	**38.2**	**+0.7**
DAV	**Davao City (W)**	**20.79**	**30**	LR	LR	15	36	47.9	
	comp=Z,32nm,20.6s,baz=162,slow=38								
ASAR	**Alice Springs**	**21.76**	**128**	P	**P**	**15**	**28**	**53.9**	**+1.9**
	0.5nm,0.7s,baz=303,slow=9.6,SNR=6.3								
ASAR				S	**S**	**15**	**32**	**47.0**	**-4.0**
	0.3nm,0.7s,baz=300,slow=21,SNR=4.4								
	0.5nm,0.7s								
STKA	**Stephens Creek**	**31.95**	**134**	P	**P**	**15**	**30**	**29.2**	**+3.4**
	0.7nm,0.5s,baz=307,slow=10,SNR=1.5								
	0.7nm,0.5s								
CMAR	**Chiang Mai Arr**	**33.46**	**331**	P	**P**	**15**	**30**	**39.0**	**-0.1**
	0.4nm,0.4s,baz=147,slow=8.6,SNR=1.5								
	0.4nm,0.4s								
ASAJ	**Asahikawa**	**60.33**	**22**	LR	LR	16	01	03.6	
	comp=Z,19nm,18.9s,baz=160,slow=37								
MKAR	**Makanchi Array**	**64.70**	**336**	P	**P**	**15**	**34**	**38.4**	**+0.7**
	0.2nm,0.3s,baz=144,slow=8.1,SNR=6.1								
	0.2nm,0.3s								
KURBB	**Kurchatov Arra**	**69.26**	**336**	P	**P**	**15**	**35**	**07.0**	**+0.5**
	0.6nm,0.6s,baz=152,slow=5.4,SNR=6.1								
	0.6nm,0.6s								
ZALV	**Zalesovo Beam**	**69.74**	**341**	P	**P**	**15**	**35**	**09.4**	**0.0**
	0.5nm,0.4s,baz=140,slow=4.9,SNR=2.7								
	0.5nm,0.4s								
BVAR	**Borovoye Array**	**74.44**	**334**	P	**P**	**15**	**35**	**38.4**	**+0.8**
	0.5nm,0.6s,baz=116,slow=6.8,SNR=4.1								
	0.5nm,0.6s								

*IDC **21** 15:32:34.5±1.0, 32°.60N×139°.16E, h0km, mb3.4/6, mbtmp3.4/7, ML2.6/1, Error ellipse: s-maj=21.7km s-min=15.2km az=129.0*
*JMA **21** 15:32:35.0±0.2, 33°.3N±0°.4×141°.0E±0°.9, h48km, MV3.2/32, E OFF HACHIJOJIMA ISLAND*
ISC 21 15:32:35.5±1.6,**33°.21N**±0°.05×**140°.94E**±0°.09,**h49**km±15km,
n19,σ0§62/32,mb3.4/6,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
JHJ2	**Mitsune**	**0.94**	**264**	*i* P	**Pn**	**15**	**32**	**52.6**	**+0.2**
JHJ2				S	**Sn**	**15**	**33**	**05.3**	**+0.5**
JHCJ	**Hachijojimakas**	**0.96**	**262**	P	**Pn**	**15**	**32**	**52.7**	**0.0**
JHCJ				S	**Sn**	**15**	**33**	**04.3**	**-1.1**
JHJ	**Hachijo jima 2**	**0.97**	**265**	Pn	**Pn**	**15**	**32**	**52.6**	**-0.2**
	250nm,0.3s,baz=68,slow=23,SNR=175								
JHJ				Sn	**Sn**	**15**	**33**	**05.2**	**-0.3**
	229nm,0.3s,baz=79,slow=23,SNR=9.1								
JAOM	**Aogashimamukai**	**1.24**	**233**	P	**Pn**	**15**	**32**	**57.0**	**+0.6**
JAOM				*e*S	**Sn**	**15**	**33**	**12.1**	**+0.1**
JMYK	**Miyake Tsubota**	**1.44**	**307**	P	**Pn**	**15**	**32**	**59.2**	**+0.1**
JMYK				S	**Sn**	**15**	**33**	**16.9**	**+0.2**
BSO1	**Boso 1**	**1.44**	**1**	P	**Pn**	**15**	**32**	**58.4**	**-0.3**
BSO1				*e*S	**Sn**	**15**	**33**	**16.5**	**+0.4**
BSO3	**Boso 3**	**1.63**	**348**	P	**Pn**	**15**	**33**	**01.1**	**-0.4**
BSO3				S	**Sn**	**15**	**33**	**21.0**	**0.0**
JKO	**Kozu shima**	**1.79**	**303**	P	**Pn**	**15**	**33**	**04.3**	**+0.4**
JKO				*e*S	**Sn**	**15**	**33**	**25.4**	**0.0**
BSO4	**Boso 4**	**1.84**	**345**	P	**Pn**	**15**	**33**	**04.9**	**+0.3**
BSO4				*e*S	**Sn**	**15**	**33**	**26.7**	**+0.1**
JTHY	**Toshimahigashi**	**1.90**	**314**	P	**Pn**	**15**	**33**	**05.6**	**+0.2**
JTHY				S	**Sn**	**15**	**33**	**27.8**	**-0.3**
JIZS	**Izushimoda**	**2.28**	**312**	P	**Pn**	**15**	**33**	**11.1**	**+0.5**
JIZS				S	**Sn**	**15**	**33**	**37.7**	**+0.2**
JOD2	**Odawara 2**	**2.56**	**324**	P	**Pn**	**15**	**33**	**14.4**	**0.0**
JOD2				S	**Sn**	**15**	**33**	**42.6**	**-1.7**
MJAR	**Matsushiro Arr**	**4.01**	**327**	Pn	**Pn**	**15**	**33**	**35.9**	**+1.6**
	0.4nm,0.3s,baz=174,slow=15,SNR=44								
MJAR				Sn	**Sn**	**15**	**34**	**20.6**	**+0.5**
	0.3nm,0.3s,baz=166,slow=32,SNR=12								
	3.6nm,0.5s								
SONM	**Songino Array**	**29.76**	**310**	P	**P**	**

TOLI2	**Tolitoli**	**18.10**	**66**			**P**	**15 45 01.4**	**-0.7**
MYLDM	**Lahad Datu**	**18.33**	**51**	P		**P**	**15 45 03.8**	**-0.8**
BATI	**Baumata**	**19.45**	**102**	P		**P**	**15 45 17.9**	**+0.9**
	13nm,0.3s,baz=326,slow=4.6,SNR=9.3							
BATI				S		**S**	**15 48 53.0**	**-1.3**
	14nm,0.6s,baz=83,slow=20,SNR=2.3							
	25nm,0.3s							
SOEI	**Soe**	**19.98**	**100**			**P**	**15 45 21.4**	**-1.4**
SOEI				IAmb		IAmb	15 45 24.7	
	comp=Z,36nm,0.9s							
DAV	**Davao City (W)**	**25.15**	**58**	LR		LR	15 56 35.3	
	comp=Z,52nm,18.8s,baz=64,slow=38							
CMAR	**Chiang Mai Arr**	**25.43**	**348**	P		**P**	**15 46 15.5**	**-1.9**
	comp=Z,1.1nm,0.7s,baz=181,slow=9.0,SNR=14							
CMAR				LR		LR	15 56 52.8	
	comp=Z,26nm,19.2s,baz=185,slow=38							
	comp=Z,1.1nm,0.7s							
CMAR	**Chiang Mai Arr**	**25.43**	**348**	P		**P**	**15 46 16.2**	**-1.2**
KNRA	**Kununurra**	**25.59**	**113**	P		**P**	**15 46 18.7**	**-0.2**
KNRA				IAmb		IAmb	15 46 19.4	
	comp=Z,21nm,1.5s							
BRDH	**Bariadhala**	**31.61**	**337**	LR		LR	16 01 52.9	
	comp=Z,66nm,18.3s,baz=160,slow=40							
H08S2	**Diego Garcia H**	**31.62**	**266**	T		T	16 21 03.8	
	baz=89,slow=76,SNR=36							
H08S3	**Diego Garcia H**	**31.63**	**266**	T		T	16 20 58.6	
	baz=89,slow=76,SNR=33							
H08S1	**Diego Garcia H**	**31.64**	**266**	T		T	16 20 59.9	
	baz=89,slow=76,SNR=40							
WB0	**Warramunga Arr**	**32.00**	**117**	P		**P**	**15 47 15.9**	**-0.1**
WB0				IAmb		IAmb	15 47 19.6	
	comp=Z,5.7nm,1.2s							
WRA	**Warramunga Arr**	**32.01**	**117**	P		**P**	**15 47 17.1**	**+1.0**
	comp=Z,1.2nm,0.8s,baz=304,slow=8.8,SNR=21							
WRA				PcP		**PcP**	**15 50 07.0**	**+1.8**
	comp=Z,0.3nm,0.8s,baz=292,slow=2.2,SNR=1.6							
	comp=Z,1.2nm,0.8s							
WR8	**Warramunga Arr**	**32.16**	**117**	P		**P**	**15 47 15.5**	**-1.9**
WR8				IAmb		IAmb	15 47 33.7	
	comp=Z,8.4nm,1.4s							
PZH	**PanZhiHua**	**32.97**	**356**	P		**P**	**15 47 26.4**	**+1.9**
ASAR	**Alice Springs**	**33.10**	**124**	P		**P**	**15 47 27.4**	**+1.7**
	comp=Z,0.3nm,0.5s,baz=304,slow=8.2,SNR=15							
ASAR				PcP		**PcP**	**15 50 10.3**	**+2.1**
	comp=Z,1.5nm,1.2s,baz=304,slow=2.7,SNR=4.3							
	comp=Z,0.3nm,0.5s							
ASAR	**Alice Springs**	**33.10**	**124**	P		**P**	**15 47 25.4**	**-0.3**
AS31	**Alice Springs**	**33.10**	**124**	P		**P**	**15 47 25.9**	**+0.2**
EVN	**Everest**	**38.27**	**335**	P		**P**	**15 48 08.8**	**-1.7**
EVN				IAmb		IAmb	15 48 14.2	
	comp=Z,3.7nm,0.6s							
PMG	**Port Moresby**	**42.48**	**97**	P		**P**	**15 48 40.8**	**-4.1**
STKA	**Stephens Creek**	**42.91**	**131**	P		**P**	**15 48 50.5**	**+2.4**
	comp=Z,1.6nm,0.4s,baz=308,slow=10.0,SNR=4.3							
	comp=Z,1.6nm,0.4s							
GTA2	**Gaotai**	**46.02**	**355**	*eP*		**P**	**15 49 14.3**	**+1.4**
GTA2				pmax		pmax		
	comp=Z,3.0nm,0.7s							
HHC	**Hu-ho-hao-te**	**47.65**	**7**	*eP*		**P**	**15 49 26.1**	**+0.5**
HHC				pmax		pmax		
	comp=Z,12nm,0.5s							
HHC				pmax		pmax		
	comp=Z,82nm,3.6s							
JMN	**Monobe**	**48.88**	**33**	P		**P**	**15 49 32.0**	**-3.2**
KSRS	**Korea Array**	**49.02**	**25**	P		**P**	**15 49 36.7**	**+0.7**
	comp=Z,1.6nm,0.7s,baz=223,slow=7.0,SNR=8.5							
	comp=Z,1.6nm,0.7s							
WMQ	**Urumqi**	**52.36**	**345**	*eP*		**P**	**15 50 02.5**	**+1.2**
WMQ				pmax		pmax		
	comp=Z,9.0nm,1.1s							
KSH2	**Kashi**	**52.72**	**332**	P		**P**	**15 50 04.4**	**+0.3**
KSH2				pmax		pmax		
	comp=Z,5.0nm,0.8s							
WUS	**Wushi**	**52.82**	**336**			**P**	**15 50 03.9**	**-1.0**
MJAR	**Matsushiro Arr**	**53.34**	**34**	P		**P**	**15 50 06.7**	**-1.9**
	comp=Z,1.1nm,0.6s,baz=205,slow=8.4,SNR=6.4							
	comp=Z,1.1nm,0.6s							
MJAR	**Matsushiro Arr**	**53.34**	**34**	P		**P**	**15 50 05.0**	**-3.6**
TARG	**Taragay, Kyrgy**	**53.84**	**336**	P		**P**	**15 50 10.7**	**-1.9**
TARG				IAmb		IAmb	15 50 38.9	
	comp=Z,2.1nm,0.7s							
SONM	**Songino Array**	**54.20**	**2**	P		**P**	**15 50 14.6**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=179,slow=6.9,SNR=5.2							
SONM				PcP		**PcP**	**15 51 19.8**	**+1.2**
	comp=Z,1.6nm,0.5s,baz=174,slow=3.4,SNR=8.3							
	comp=Z,0.6nm,0.4s							
SONM	**Songino Array**	**54.20**	**2**	P		**P**	**15 50 12.3**	**-2.5**
SONM				PcP		**PcP**	**15 51 19.9**	**+1.2**
BNX	**BinXian**	**56.01**	**19**	⇓P		**P**	**15 50 28.1**	**+0.4**
BNX				pmax		pmax		
	comp=Z,11nm,0.8s							
USRK	**Ussuriysk Ar.**	**56.35**	**24**	P		**P**	**15 50 29.9**	**-0.3**
	comp=Z,6.5nm,0.6s,baz=214,slow=4.9,SNR=12							
	comp=Z,6.5nm,0.6s							
MKAR	**Makanchi Array**	**56.62**	**342**	P		**P**	**15 50 32.2**	**+0.1**
	comp=Z,3.9nm,0.6s,baz=144,slow=7.9,SNR=47							
	comp=Z,3.9nm,0.6s							
MKAR	**Makanchi Array**	**56.62**	**342**			**P**	**15 50 30.9**	**-1.2**
H04N2	**CROZET ISLANDS**	**59.89**	**220**	T		T	16 56 28.5	
	baz=67,slow=75,SNR=101							
H04N1	**CROZET ISLANDS**	**59.90**	**220**	T		T	16 56 27.7	
	baz=67,slow=75,SNR=105							
H04N3	**CROZET ISLANDS**	**59.91**	**220**	T		T	16 56 26.4	
	baz=67,slow=75,SNR=98							
HEH	**HeiHe**	**60.02**	**17**	*eP*		**P**	**15 50 54.9**	**-0.8**
HEH				pmax		pmax		
	comp=Z,6.0nm,0.6s							
H04S1	**CROZET ISLANDS**	**60.10**	**219**	T		T	16 56 40.7	
	baz=65,slow=75,SNR=4.8							
H04S3	**CROZET ISLANDS**	**60.12**	**219**	T		T	16 56 39.5	
	baz=65,slow=75,SNR=3.7							
H04S2	**CROZET ISLANDS**	**60.12**	**219**	T		T	16 56 40.7	
	baz=65,slow=75,SNR=6.0							
KURBB	**Kurchatov Arra**	**61.17**	**342**	P		**P**	**15 51 03.6**	**+0.1**
	comp=Z,2.6nm,0.7s,baz=156,slow=6.2,SNR=18							
	comp=Z,2.6nm,0.7s							
KURK	**Kurchatov**	**61.23**	**342**	P		**P**	**15 51 01.8**	**-2.1**
KURK				IAmb		IAmb	15 51 04.8	
	comp=Z,3.5nm,0.8s							
ZAA0	**Zalesovo Array**	**62.49**	**347**			**P**	**15 51 11.2**	**-1.1**
ZALV	**Zalesovo Beam**	**62.49**	**347**	P		**P**	**15 51 12.2**	**-0.1**
	comp=Z,5.0nm,0.3s,baz=154,slow=5.6,SNR=42							
	comp=Z,5.0nm,0.3s							
ZALV	**Zalesovo Beam**	**62.49**	**347**			**P**	**15 51 11.7**	**-0.6**
BVAR	**Borovoye Array**	**65.97**	**338**	P		**P**	**15 51 35.3**	**+0.2**
	comp=Z,1.5nm,0.4s,baz=126,slow=7.3,SNR=10.0							
	comp=Z,1.5nm,0.4s							
AB31	**Akbulak array**	**67.71**	**330**			**P**	**15 51 45.0**	**-1.2**
AB31				IAmb		IAmb	15 51 47.7	
	comp=Z,5.7nm,0.8s							
ABKAR	**Akbulak array**	**67.71**	**330**			**P**	**15 51 46.3**	**+0.1**
AKTO	**Aktyubinsk**	**69.42**	**330**	P		**P**	**15 51 57.6**	**+0.6**
	comp=Z,1.6nm,0.4s,baz=109,slow=3.7,SNR=5.8							
	comp=Z,1.6nm,0.4s							
YAK	**Yakutsk**	**71.15**	**12**	P		**P**	**15 52 05.8**	**-1.3**
ARTI	**Arti**	**73.16**	**335**	P		**P**	**15 52 20.4**	**+1.1**
	comp=Z,5.6nm,0.6s,baz=124,slow=4.0,SNR=9.2							
	comp=Z,5.6nm,0.6s							
PETK	**Petropavlovsk-**	**74.52**	**30**	P		**P**	**15 52 26.3**	**-1.2**
KBZ	**Khabaz**	**74.57**	**319**	P		**P**	**15 52 29.6**	**+1.7**
	comp=Z,1.4nm,0.8s,baz=88,slow=5.3,SNR=3.5							
	comp=Z,1.4nm,0.8s							
NRIK	**Noril'sk**	**76.62**	**354**	P		**P**	**15 52 36.3**	**-2.8**
NRIK				IAmb		IAmb	15 52 43.7	
	comp=Z,1.6nm,0.5s							
BRTR	**Keskin Array B**	**79.58**	**312**	P		**P**	**15 52 58.0**	**+1.6**
	comp=Z,1.6nm,0.6s,baz=144,slow=6.1,SNR=13							
	comp=Z,1.6nm,0.6s							
BRTR	**Keskin Array B**	**79.58**	**312**	P		**P**	**15 52 57.2**	**+0.9**
MLR	**Muntele Rosu**	**86.57**	**316**	P		**P**	**15 53 35.4**	**+3.1**
	comp=Z,1.8nm,0.5s,baz=148,slow=9.5,SNR=3.3							
	comp=Z,1.8nm,0.5s							
FINES	**FINESS Array B**	**90.14**	**332**	P		**P**	**15 53 50.7**	**+2.0**
	comp=Z,0.6nm,0.4s,baz=108,slow=4.4,SNR=8.2							
	comp=Z,0.6nm,0.4s							
LANS	**Liptovska Anna**	**91.57**	**319**	*eP*		**P**	**15 53 59.4**	**+3.7**
PDAR	**Pinedale Array**	**133.17**	**34**	PKP		**PKiKP**	**16 00 06.4**	**+0.2**
	comp=Z,0.1nm,0.5s,baz=301,slow=1.7,SNR=1.8							
ULM	**Lac du Bonnet**	**133.28**	**18**	PKP		**PKiKP**	**16 00 07.2**	**+1.3**
	comp=Z,0.5nm,0.4s,baz=297,slow=9.0,SNR=3.5							
TXAR	**Lajitas Array**	**145.21**	**46**	PKP		**PKPdf**	**16 00 28.5**	**+1.4**
	comp=Z,1.6nm,0.6s,baz=303,slow=1.2,SNR=18							

*IDC **21** 15:42:47.5±4.5,36°.99N×71°.95E,h163^{km}±35^{km},mb3.4/11, mbtmp3.9/16,MS3.2/3,Error ellipse: s-maj=42.7km s-min=20.5km az=164.0*

ISC 21 15:42:46.7±0.6,**37°.12N**±0°.06×**71°.86E**±0°.08,**h142**^{km},**n37,** σ**23**ş**35**/45,**mb3.6**/10,**2C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JMU	**Jammu**	**4.97**	**150**	*eP*		**Pn**		**15 44 03.7**	**+4.0**
JMU				*eS*		**Sn**		**15 44 58.2**	**+1.8**
JMU				IAML				15 45 10.3	
	comp=N,128nm,0.6s								
JMU				IAML				15 45 11.8	
	comp=E,129nm,0.5s								
ALCI	**Alchi Leh**	**5.22**	**122**	*eP*		**Pn**		**15 44 05.3**	**+2.0**
ALCI				*eS*		**Sn**		**15 45 03.4**	**+0.6**
ALCI				IAML				15 45 05.1	
	comp=E,130nm,0.3s								
ALCI				IAML				15 45 07.8	
	comp=N,143nm,0.5s								
UCH	**Uchtor**	**5.50**	**21**	P		**Pn**		**15 44 08.8**	**+1.8**
	SNR=79								
TSSA	**Tissa**	**5.54**	**139**	*eP*		**Pn**		**15 44 09.5**	**+2.1**
TSSA				*eS*		**Sn**		**15 45 09.9**	**-0.3**
TSSA				IAML				15 45 12.6	
	comp=E,133nm,0.2s								
TSSA				IAML				15 45 13.7	
	comp=N,224nm,0.5s								
THN	**Thein Dam**	**5.67**	**144**	*eP*		**Pn**		**15 44 12.3**	**+3.3**
THN				*eS*		**Sn**		**15 45 13.4**	**+0.4**
THN				IAML				15 45 17.9	
	comp=N,121nm,0.5s								
THN				IAML				15 45 18.6	
	comp=E,140nm,0.4s								
EKS2	**Erkin-Say**	**5.73**	**14**	P		**Pn**		**15 44 12.2**	**+2.4**
	SNR=22								
AAK	**Ala-Archa**	**5.87**	**19**	P		**Pn**		**15 44 13.7**	**+2.0**
	comp=E,13nm,0.4s,baz=189,slow=6.9,SNR=70								
AAK				S		**Sn**		**15 45 17.2**	**-0.8**
	comp=E,11nm,0.5s,baz=29,slow=21,SNR=16								
AAK	**Ala-Archa**	**5.87**	**19**	P		**Pn**		**15 44 13.8**	**+2.0**
	SNR=42								
AAK	**Ala-Archa**	**5.87**	**19**	⇑P		**Pn**		**15 44 13.7**	**+2.0**
	comp=E,2.5nm,0.4s								
AAK				⇓S		**Sn**		**15 45 17.3**	**-0.8**
	comp=E,26nm,1.0s								
KBK	**Karagaybulak**	**6.02**	**22**	P		**Pn**		**15 44 16.5**	**+2.8**
	SNR=12								
KK31	**Karatay Array**	**6.06**	**351**	⇑P		**Pn**		**15 44 15.8**	**+1.6**
	comp=E,1.4nm,0.2s,baz=158,slow=11,SNR=59								
KK31				S		**Sn**		**15 45 20.2**	**-2.2**
	comp=E,25nm,0.3s,baz=164,slow=17,SNR=37								
DHRM	**DHARAMSHALA**	**6.08**	**142**	*eP*		**Pn**		**15 44 17.1**	**+2.5**
DHRM				*eS*		**Sn**		**15 45 22.7**	**-0.6**
DHRM				IAML				15 45 26.3	
	comp=E,143nm,0.5s								
DHRM				IAML				15 45 26.4	
	comp=N,119nm,0.2s								
CHMS	**Chumysh**	**6.28**	**20**	P		**Pn**		**15 44 18.6**	**+1.7**
	SNR=7.9								
TKM2	**Tokmak 2**	**6.46**	**25**	P		**Pn**		**15 44 21.4**	**+1.7**
	SNR=10								
BHK	**Bhakra**	**6.83**	**145**	*eS*		**Sn**		**15 45 44.7**	**+3.7**
BHK				IAML				15 45 46.6	
	comp=E,47nm,0.3s								
BHK				IAML				15 45 46.8	
	comp=N,48nm,0.4s								
SMLA	**Simla**	**7.42**	**142**	*eP*		**Pn**		**15 44 34.0**	**+1.6**
SMLA				*eS*		**Sn**		**15 45 51.5**	**-3.7**
SMLA				IAML				15 45 56.3	
	comp=E,84nm,0.3s								
SMLA				IAML				15 45 57.8	
	comp=N,54nm,0.5s								
KLP	**Kalpa**	**7.68**	**135**	*eP*		**Pn**		**15 44 37.8**	**+1.6**
KLP				*eS*		**Sn**		**15 45 59.6**	**-2.3**
KLP				IAML				15 46 04.0	
	comp=E,71nm,0.5s								
KLP				IAML				15 46 05.0	
	comp=N,58nm,0.5s								
KUDL	**Kundal**	**9.76**	**155**	*eS*		**Sn**		**15 46 45.0**	**-6.7**
KUDL				IAML				15 46 46.5	
	comp=E,20nm,0.6s								
KUDL				IAML				15 46 49.1	
	comp=N,13nm,0.5s								
LGTI	**Lohaghat**	**10.33**	**136**	*eP*		**Pn**		**15 45 12.8**	**+1.4**
LGTI				*eS*		**Sn**		**15 46 59.5**	**-6.2**
MKAR	**Makanchi Array**	**12.39**	**35**	P		**Pn**		**15 45 38.3**	**+0.2**
	comp=N,0.8nm,0.7s,baz=219,slow=14,SNR=7.7								
KURBB	**Kurchatov Arra**	**14.32**	**17**	P		**Pn**		**15 46 05.2**	**+2.4**
	comp=N,1.2nm,0.3s,baz=207,slow=11,SNR=24								
BVAR	**Borovoye Array**	**15.94**	**357**	P		**Pn**		**15 46 22.9**	**0.0**
	comp=N,0.8nm,0.4s,baz=167,slow=9.8,SNR=6.4								
ZALV	**Zalesovo Beam**	**19.07**	**24**	P		**P**		**15 46 57.5**	**-0.3**
	comp=N,7.8nm,0.4s,baz=207,slow=10,SNR=62								
KVAR	**Kislovodsk Arr**	**23.11**	**296**	LR		LR		15 59 13.9	
	comp=N,27nm,18.9s,baz=256,slow=42								
SONM	**Songino Array**	**27.42**	**56**	P		**P**		**15 48 19.0**	**-0.1**
	comp=N,0.2nm,0.4s,baz=256,slow=11,SNR=2.5								
	comp=N,0.2nm,0.4s								
BRTR	**Keskin Array B**	**29.91**	**287**	P		**P**		**15 48 42.5**	**+1.3**
	comp=N,0.4nm,0.5s,baz=98,slow=7.4,SNR=4.1								
	comp=N,0.4nm,0.5s								
AKASG	**Malin Array Be**	**33.10**	**308**	P		**P**		**15 49 09.6**	**+0.7**
	comp=N,0.2nm,0.3s,baz=100,slow=9.6,SNR=4.8								
	comp=N,0.2nm,0.3s								
NRIK	**Noril'sk**	**33.40**	**10**	P		**P**		**15 49 11.7**	**+0.5**
	comp=N,1.3nm,0.4s,baz=170,slow=11,SNR=3.1								
	comp=N,1.3nm,0.4s								
FINES	**FINESS Array B**	**37.36**	**325**	P		**P**		**15 49 44.4**	**-0.7**
	comp=N,1.8nm,0.8s,baz=114,slow=9.0,SNR=3.8								
	comp=N,1.8nm,0.8s								
ARCES	**ARCESS Array B**	**40.84**	**337**	P		**P**		**15 50 13.6**	**-0.4**
	comp=N,13nm,1.2s,baz=116,slow=8.2,SNR=3.7								
	comp=N,13nm,1.2s								
HFS	**Hagfors**	**43.01**	**321**	P		**P**		**15 50 31.3**	**-0.4**
	comp=N,2.1nm,0.4s,baz=95,slow=11,SNR=20								
	comp=N,2.1nm,0.4s								
NOA	**NORSAR Array B**	**44.30**	**323**	P		**P**		**15 50 41.1**	**-0.9**
	comp=N,0.6nm,0.6s,baz=94,slow=7.9,SNR=5.1								
	comp=N,0.6nm,0.6s								
VAE	**Valguarnera**	**45.07**	**289**	LR		LR		16 11 55.8	
	comp=N,42nm,18.8s,baz=154,slow=39								
ASAJ	**Asahikawa**	**52.64**	**59**	LR		LR		16 16 24.7	
	comp=N,30nm,18.6s,baz=159,slow=38								
ESDC	**Sonseca Array**	**57.78**	**298**	P		**P**		**15 52 22.7**	**-0.3**
	comp=N,0.7nm,0.6s,baz=54,slow=7.5,SNR=8.1								
	comp=N,0.7nm,0.6s								
TORD	**Torodi Ar. Bea**	**66.42**	**269**	P		**P**		**15 53 18.6**	**-2.3**
	comp=N,0.4nm,0.5s,baz=47,slow=4.7,SNR=5.2								
	comp=N,0.4nm,0.5s								
YKA	**Yellowknife Ar**	**80.59**	**3**	P		**P**		**15 54 41.5**	**-1.4**
	comp=N,0.1nm,0.4s,baz=351,slow=6.3,SNR=2.2								
	comp=N,0.1nm,0.4s								

*IDC **21** 15:43:37.0±5.0,39°.44N×51°.55E,h0^{km},mb3.6/3, mbtmp3.6/7,ML3.1/3,MS2.9/2,Error ellipse: s-maj=76.1km s-min=21.3km az=170.0*
*TEH **21** 15:43:43.2,40°.03N×51°.63E,h10^{km},ML3.7,Presumed earthquake*
*AZER **21** 15:43:47.6,39°.92N×51°.54E,h35^{km},ml3.3*

ISC 21 15:43:46.3±1.5,**40°.08N**±0°.05×**51°.70E**±0°.05,**h32**^{km}±12^{km}, **n53,** σ**19**ş**92**/75,**mb3.7**/3,**Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NDR	**Nardaran**	**1.40**	**292**	Pg		**Pb**		**15 44 13.4**	**+1.5**
NDR				Sn		**Sb**		**15 44 28.8**	**-0.6**
ALIB	**&Aumlli-Bayram**	**2.07**	**268**	Pg		**Pb**		**15 44 23.1**	**-0.1**
ALIB				Sg		**Sb**		**15 44 51.2**	**+2.7**
GBS	**Qobustan**	**2.16**	**283**	Pg		**Pb**		**15 44 24.6**	**-0.1**
GBS				Sg		**Sb**		**15 44 54.2**	**+3.2**
ATGJ	**Altiaghaj**	**2.25**	**291**	Pn		**Pb**		**15 44 24.1**	**-2.1**
ATGJ				Sn		**Sb**		**15 44 50.6**	**-3.1**
SIZA	**Siyzn**	**2.35**	**296**	Pn		**Pb**		**15 44 25.6**	**-2.4**
SIZA				Sg		**Sb**		**15 45 01.5**	**+4.8**
PQL	**Pirkuli**	**2.47**	**288**	Pn		**Pb**		**15 44 26.4**	**-3.8**
PQL				Sn		**Sb**		**15 44 56.6**	**-3.7**
LKRN	**Lenkeran, Azer**	**2.64**	**240**	Pn		**Pn**		**15 44 27.3**	**+0.7**
LKRN				Sn		**Sn**		**15 44 57.4**	**-0.1**
GLBA	**Clilabad**	**2.68**	**253**	Pn		**Pn**		**15 44 28.3**	**+1.1**
GLBA				Sn		**Sn**		**15 44 59.5**	**+1.0**
ASTR	**Astara**	**2.71**	**237**	Pn		**Pn**		**15 44 28.1**	**+0.5**
ASTR				Sn		**Sn**		**15 44 58.8**	**-0.5**
QUBA	**Quba, Azerbaij**	**2.75**	**299**	Pn		**Pb**		**15 44 30.5**	**-4.3**
QUBA				Sg		Sb		15 45 16.2	+8.1
GAS1	**Astara - Iran**	**2.79**	**234**	Pn		**Pn**		**15 44 28.6**	**0.0**
YRD	**Yardimli**	**2.91**	**248**	Pn		**Pn**		**15 44 30.6**	**0.0**
YRD				Sn		**Sn**		**15 45 03.1**	**-1.5**
XNQ	**Khinaliq**	**2.92**	**293**	Pn		**Pn**		**15 44 32.3**	**+1.7**
XNQ				Sg		Sb		15 45 21.3	+8.2
LRK	**Lerik**	**2.97**	**242**	Pn		**Pn**		**15 44 31.6**	**+0.3**
LRK				Sn		**Sn**		**15 45 05.2**	**-0.7**
QSAR	**Qusar**	**2.98**	**300**	Pn		**Pn**		**15 44 33.6**	**+2.4**
QSAR				Sg		Sb		15 45 23.0	+8.5
QBL	**Gabala**	**3.07**	**288**	Sn		**Sn**		**15 45 09.6**	**+1.5**
ZRD	**Zardab**	**3.08**	**275**	Pn		**Pn**		**15 44 34.3**	**+1.7**
ZRD				Sn		**Sn**		**15 45 10.5**	**+2.1**
BLQ	**Beylaqan**	**3.20**	**265**	Sn		**Sn**		**15 45 12.0**	**+0.6**
QRD	**Qoradiz**	**3.43**	**261**	Pn		**Pn**		**15 44 39.6**	**+2.1**
QRD				Sn		**Sn**		**15 45 16.6**	**-0.4**
BRDA	**Brd**	**3.47**	**275**	Pn		**Pn**		**15 44 39.6**	**+1.7**
BRDA				Sn		**Sn**		**15 45 21.1**	**+3.2**
AGDM	**Agdam**	**3.52**	**272**	Pn		**Pn**		**15 44 40.2**	**+1.5**
AGDM				Sn		**Sn**		**15 45 19.9**	**+0.6**
SEKA	**Sheki**	**3.60**	**290**	Pn		**Pn**		**15 44 40.9**	**+1.0**
SEKA				Sn		**Sn**		**15 45 23.4**	**+2.0**
MZPU	**Pul - Mazandar**	**3.63**	**182**	Pn		**Pn**		**15 44 41.1**	**+0.6**
IPRN	**Peran**	**3.86**	**172**	Pn		**Pn**		**15 44 44.2**	**+0.7**
ISRB	**Sarab**	**3.86**	**236**	Pn		**Pn**		**15 44 44.4**	**+0.8**
IGZV	**Ghazvin**	**3.86**	**198**	Pn		**Pn**		**15 44 43.9**	**+0.2**
IGLO	**Ghaloghah**	**3.94**	**154**	Pn		**Pn**		**15 44 45.4**	**+0.7**
IHRS	**Heris**	**4.02**	**246**	Pn		**Pn**		**15 44 46.2**	**+0.4**
IALA	**Alasht**	**4.08**	**167**	Pn		**Pn**		**15 44 48.0**	**+1.3**
ZNJK	**Zanjan**	**4.14**	**216**	Pn		**Pn**		**15 44 47.2**	**-0.3**
GANJ	**Ganja**	**4.15**	**280**	Pn		**Pn**		**15 44 47.7**	**+0.3**
GANJ				Sn		**Sn**		**15 45 33.0**	**-1.7**
ZKTA	**Zakatala**	**4.15**	**294**	Pn		**Pn**		**15 44 48.8**	**+1.3**
ZKTA				Sn		**Sn**		**15 45 38.7**	**+3.8**
VSHL	**Vashlovani**	**4.19**	**288**	P		**Pn**		**15 44 49.6**	**+1.6**
MRVT	**Maraveh tapeh**	**4.19**	**124**	Pn		**Pn**		**15 44 49.6**	**+1.6**
LGD	**Lagodekhi**	**4.49**	**295**	P		**Pn**		**15 44 53.2**	**+1.2**
ORD	**Ordubad**	**4.56**	**257**	Pn		**Pn**		**15 44 54.8**	**+1.7**
ORD				Sn		**Sn**		**15 45 44.6**	**-0.3**
GDB	**GEDABAY**	**4.58**	**280**	Pn		**Pn**		**15 44 54.0**	**+0.5**
GDB				Sn		**Sn**		**15 45 43.7**	**-2.0**
QABG	**Abgarm-Qazvin**	**4.67**	**202**	Pn		**Pn**		**15 44 55.9**	**+1.1**
SBZ	**Shahbuz**	**4.79**	**264**	Pn		**Pn**		**15 44 58.3**	**+2.1**
SBZ				Sn		**Sn**		**15 45 51.3**	**+0.8**
NAX	**Nakhchivan**	**4.87**	**261**	Pn		**Pn**		**15 44 59.7**	**+2.3**
NAX				Sn		**Sn**		**15 45 52.6**	**-0.1**
QZX	**Qazax, Azerbai**	**4.92**	**284**	Pn		**Pn**		**15 44 58.7**	**+0.8**
QZX				Sn		**Sn**		**15 45 53.5**	**-0.2**
GNI	**Garni**	**5.33**	**273**	LR		LR		15 47 20.7	
	comp=Z,18nm,19.4s,baz=52,slow=42								
SHTL	**Shatili**	**5.56**	**300**	P		**Pn**		**15 45 08.2**	**+1.3**
CHRG	**Chargali**	**5.58**	**296**	P		**Pn**		**15 45 07.8**	**+0.7**
ISFR	**Sfrayin**	**5.79**	**119**	Pn		**Pn**		**15 45 12.1**	**+1.9**
KBZ	**Khabaz**	**7.51**	**302**	Pn		**Pn**		**15 45 33.6**	**+0.2**
	0.1nm,0.3s,baz=123,slow=11,SNR=1.9								
KBZ				Sn		**Sn**		**15 46 50.7**	**-6.7**
	0.1nm,0.3s,baz=22,slow=5.9,SNR=1.8								
	0.4nm,0.2s								
AKTO	**Aktyubinsk**	**11.27**	**21**	Pn		**Pn**		**

AMBZ				*eS*		**Sg**	**16 09 58.4**	**+0.6**
AYRK	**Ayrk**	**2.03**	**30**	*eP*		**Pb**	**16 09 30.0**	**+0.3**
AYRK				*eS*		**Sg**	**16 09 58.0**	**-0.1**
GDB	**GEDABAY**	**2.56**	**23**	P		**Pb**	**16 09 36.4**	**-2.2**
GDB				S		**Sb**	**16 10 10.0**	**0.0**
LSVT	**Lusahovit**	**2.61**	**12**	*eP*		**Pb**	**16 09 40.1**	**+0.7**
LSVT				*eS*		**Sg**	**16 10 15.4**	**-1.2**
GANJ	**Ganja**	**2.70**	**32**	P		**Pb**	**16 09 38.7**	**-2.2**
GANJ				S		**Sb**	**16 10 12.3**	**-1.6**
SRTK	**Saratovka**	**2.70**	**358**	*eP*		**Pb**	**16 09 41.4**	**+0.4**
SRTK				*eS*		**Sg**	**16 10 17.8**	**-1.6**
QZX	**Qazax, Azerbai**	**2.78**	**15**	P		**Pb**	**16 09 41.2**	**-1.1**
QZX				S		**Sn**	**16 10 12.6**	**+2.2**
YRD	**Yardimli**	**3.02**	**78**	P		**Pn**	**16 09 40.5**	**+0.1**
YRD				S		**Sn**	**16 10 15.8**	**-0.8**
LRK	**Lerik**	**3.06**	**84**	P		**Pn**	**16 09 42.0**	**+1.0**
LRK				S		**Sn**	**16 10 17.4**	**-0.3**

IDC 21 16:32:51.0±13.0, **20°22S**×**177°91W, h474**km±160km, **mb2.8**/3,**mbtmp3.7**/4,**Error ellipse: s-maj=83.6km s-min=39.5km az=13.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**18.49**	**192**	P	P	16 36 36.5	-0.6
	1.1nm,0.3s,baz=352,slow=21,SNR=1.0						
ASAR	**Alice Springs**	**44.67**	**256**	P	P	16 40 20.9	+0.1
	0.8nm,0.7s,baz=88,slow=8.8,SNR=29						
	0.8nm,0.7s						
WRA	**Warramunga Arr**	**44.73**	**262**	P	P	16 40 21.0	-0.3
	0.3nm,0.3s,baz=95,slow=6.9,SNR=28						
	0.3nm,0.3s						
ILAR	**Eielson Array**	**88.02**	**13**	P	P	16 44 49.7	+0.3
	0.3nm,0.8s,baz=213,slow=4.5,SNR=1.8						
	0.3nm,0.8s						
AKASG	**Malin Array Be**	**142.81**	**331**	PKP	PKPdf	16 51 28.4	-1.2
	0.8nm,0.4s,baz=44,slow=4.0,SNR=7.1						

*NEIC **21** 16:36:51.1*±*1.4, 6°.67N*±*0°.07*×*126°.9E*±*0°.1, h170km*±*7km, mb4.3/21, Error ellipse: s-maj=16.1km s-min=8.9km az=106.0*

*IDC **21** 16:36:52.3*±*0.8, 6°.55N*×*126°.74E, h186km*±*6km, mb3.7/20, mbtmp4.2/22, Error ellipse: s-maj=19.4km s-min=8.4km az=74.0*

*MAN **21** 16:36:53.0, 6°.57N*×*126°.71E, h169km, MS3.9*

*DJA **21** 16:36:57.9*±*1.0, 6°.N*±*9°*×*12°.7E*±*°, h176km*±*8km, M4.3/25, mb4.4/25, mB4.8/13, MLv4.7/13, Mw(mB)4.1/13*

ISC 21 16:36:51.3±0.7, **6°.56N**±0°.05×**126°.88E**±0°.07, **h181**km±6km, **n90,σ1°24**/101, **mb4.1**/28, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.25**	**249**	*eP*	**Pn**	**16 37 21.2**	**+0.1**
DDMP				*eS*	**Sn**	**16 37 42.3**	**-1.8**
CDOP	**Cateel, Davao**	**1.29**	**340**	*i* P	**Pn**	**16 37 21.9**	**+0.4**
CDOP				*i* S	**Sn**	**16 37 42.6**	**-2.4**
DAV	**Davao City (W)**	**1.39**	**291**	P	**Pn**	**16 37 21.6**	**-0.8**
	125nm,0.3s,baz=254,slow=23,SNR=1.3						
DAV				S	**Sn**	**16 37 46.3**	**0.0**
	1µm,0.6s,baz=242,slow=22,SNR=26						
DAV	**Davao City (W)**	**1.39**	**291**	P	Pn	16 37 30.1	+7.7
DAV	**Davao City (W)**	**1.39**	**291**	Pn	**Pn**	**16 37 20.8**	**-1.5**
DMPH	**Davao City--Mi**	**1.46**	**291**	*eP*	**Pn**	**16 37 24.0**	**+1.0**
DMPH				*eS*	**Sn**	**16 37 45.0**	**-2.5**
BIPH	**Bislig**	**1.69**	**342**	*i* P	**Pn**	**16 37 25.9**	**+0.6**
BIPH				*eS*	**Sn**	**16 37 51.2**	**-0.5**
KCP	**Kidapawan**	**1.83**	**284**	*eP*	**Pn**	**16 37 27.9**	**+1.1**
KCP				*i* S	**Sn**	**16 37 52.2**	**-2.0**
BUKP	**Musuan**	**2.23**	**306**	*eP*	**Pn**	**16 37 32.5**	**+1.5**
BUKP				*eS*	**Sn**	**16 38 00.7**	**-1.3**
TSSP	**Tandag City**	**2.56**	**345**	*eP*	**Pn**	**16 37 35.9**	**+1.1**
TSSP				*eS*	Sn	16 38 00.1	-8.5
CGP	**Cagayan de Oro**	**2.87**	**311**	*eP*	**Pn**	**16 37 40.3**	**+1.8**
CGP				*eS*	**Sn**	**16 38 15.2**	**-0.1**
SCPH	**Surigao**	**3.48**	**337**	*eP*	**Pn**	**16 37 47.9**	**+1.9**
MNI	**Manado**	**5.48**	**202**	P	**Pn**	**16 38 11.1**	**-0.5**
TNTI	**Ternate**	**5.77**	**175**	P	**Pn**	**16 38 16.0**	**+0.6**
TNTI	**Ternate**	**5.77**	**175**	P	**Pn**	**16 38 16.8**	**+1.4**
	0.3nm26nm,0.7s						
GTOI	**Gorontalo**	**7.04**	**213**	P	**Pn**	**16 38 30.7**	**-1.4**
	0.3nm762nm60nm,0.7s						
MRSI	**Marisa**	**7.80**	**219**	P	**Pn**	**16 38 42.0**	**-0.1**
	0.3nm803nm89nm,0.7s						
TOLI2	**Tolitoli**	**8.14**	**229**	P	**Pn**	**16 38 46.1**	**-0.5**
TOLI2	**Tolitoli**	**8.14**	**229**		**Pn**	**16 38 45.6**	**-0.9**
MYLDM	**Lahad Datu**	**8.45**	**261**	P	**Pn**	**16 38 53.1**	**+2.5**
MYLDM	**Lahad Datu**	**8.45**	**261**		**Pn**	**16 38 51.4**	**+0.8**
MYLDM	**Lahad Datu**	**8.45**	**261**	P	**Pn**	**16 38 52.5**	**+1.9**
	22nm,1.3s						
SWI	**Sorong**	**8.57**	**149**	P	**Pn**	**16 38 54.7**	**+2.4**
	12nm,0.5s						
SIJI	**Sorong**	**8.58**	**149**	P	**Pn**	**16 38 53.9**	**+1.5**
	5.6nm,0.4s,baz=353,slow=13,SNR=11						
SIJI				S	**Sn**	**16 40 25.3**	**-3.2**
	4.1nm,0.3s,baz=237,slow=23,SNR=8.6						
SIJI	**Sorong**	**8.58**	**149**	P	**Pn**	**16 38 54.8**	**+2.4**
LUWI	**Luwuk**	**8.59**	**209**	P	**Pn**	**16 38 52.3**	**-0.2**
	1µm119nm,1.0s						
SANI	**Sanana**	**8.60**	**186**	P	**Pn**	**16 38 50.7**	**-1.9**
SANI	**Sanana**	**8.60**	**186**	S	Sn	16 40 18.9	-10
SANI	**Sanana**	**8.60**	**186**	P	**Pn**	**16 38 49.7**	**-2.9**
	814nm27nm,0.7s						
APSI	**Ampana**	**9.07**	**215**	P	**Pn**	**16 38 58.9**	**+0.1**
	67nm,1.0s						
MPSI	**Mapaga**	**9.31**	**229**	P	**Pn**	**16 39 01.7**	**-0.3**
	11nm,0.7s						
NLAI	**Namlea**	**9.74**	**179**	P	Pn	16 39 02.5	-5.0
KRAI	**Karang Ratu**	**9.93**	**171**	P	**Pn**	**16 39 10.9**	**+0.8**
PCI	**Palu**	**10.22**	**224**	P	**Pn**	**16 39 13.5**	**-0.3**
KKM	**Kota Kinabalu**	**10.61**	**268**	P	**Pn**	**16 39 22.2**	**+3.2**
SBUM	**Sibu**	**15.17**	**255**	P	**P**	**16 40 18.1**	**+0.6**
SBUM	**Sibu**	**15.17**	**255**		**P**	**16 40 17.8**	**+0.3**
SBUM				IAmb	IAmb	16 40 18.8	
	comp=Z,8.2nm,0.8s						
SBUM	**Sibu**	**15.17**	**255**	P	**P**	**16 40 17.7**	**+0.2**
SOEI	**Soe**	**16.42**	**189**	P	**Pn**	**16 40 33.7**	**+1.9**
SOEI	**Soe**	**16.42**	**189**		**Pn**	**16 40 34.6**	**+2.8**
SOEI				IAmb	IAmb	16 40 44.6	
	comp=Z,20nm,0.8s						
BATI	**Baumata**	**16.96**	**191**	P	**Pn**	**16 40 39.1**	**+0.8**
	comp=Z,37nm,0.5s,baz=317,slow=2.5,SNR=12						
BATI	**Baumata**	**16.96**	**191**	P	**Pn**	**16 40 40.0**	**+1.7**
PLAI	**Plampang**	**17.78**	**211**	P	**Pn**	**16 40 47.8**	**-0.1**
JAGI	**Jajag, Banyuwa**	**19.60**	**221**	P	**Pn**	**16 41 08.5**	**-0.9**
FITZ	**Fitzroy Crossi**	**24.53**	**183**	P	**P**	**16 41 54.6**	**+0.2**
	comp=Z,3.3nm,0.8s,baz=12,slow=9.8,SNR=11						
	comp=Z,3.3nm,0.8s						
WRA	**Warramunga Arr**	**27.34**	**165**	P	**P**	**16 42 20.2**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=343,slow=9.9,SNR=9.2						
WRA				PcP	**PcP**	**16 45 34.5**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=338,slow=2.4,SNR=2.7						
WRA				ScP	**ScP**	**16 48 57.0**	**-0.9**
	comp=Z,1.0nm,0.9s,baz=344,slow=3.2,SNR=7.0						
	comp=Z,0.3nm,0.5s						
WRA	**Warramunga Arr**	**27.34**	**165**	P	**P**	**16 42 19.5**	**-0.1**
CMAR	**Chiang Mai Arr**	**29.67**	**296**	P	**P**	**16 42 40.8**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=105,slow=7.3,SNR=8.7						
	comp=Z,0.9nm,0.6s						
KSRS	**Korea Array**	**30.76**	**2**	P	**P**	**16 42 50.8**	**+1.1**
	comp=Z,1.1nm,0.6s,baz=182,slow=9.8,SNR=8.3						
	comp=Z,1.1nm,0.6s						
AS31	**Alice Springs**	**30.82**	**167**		**P**	**16 42 51.0**	**+0.7**
ASAR	**Alice Springs**	**30.82**	**167**	P	**P**	**16 42 51.0**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=343,slow=6.8,SNR=22						
ASAR				PcP	**PcP**	**16 45 43.5**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=348,slow=2.5,SNR=11						
ASAR				ScP	**ScP**	**16 49 06.6**	**-2.3**
	comp=Z,0.3nm,0.7s,baz=353,slow=3.5,SNR=4.8						
	comp=Z,0.5nm,0.3s						
ASAR	**Alice Springs**	**30.82**	**167**	P	**P**	**16 42 51.2**	**+0.8**
MJAR	**Matsushiro Arr**	**31.59**	**18**	P	**P**	**16 42 57.0**	**+0.1**
	comp=Z,1.6nm,0.7s,baz=181,slow=9.4,SNR=8.3						
	comp=Z,1.6nm,0.7s						
MJAR	**Matsushiro Arr**	**31.59**	**18**	P	**P**	**16 42 56.8**	**-0.2**
USRK	**Ussuriysk Ar.**	**37.76**	**6**	P	**P**	**16 43 51.4**	**+1.6**
	comp=Z,4.5nm,0.4s,baz=184,slow=7.4,SNR=39						
	comp=Z,4.5nm,0.4s						
STKA	**Stephens Creek**	**40.72**	**161**	P	**P**	**16 44 16.5**	**+2.1**
	comp=Z,0.8nm,0.5s,baz=326,slow=11,SNR=4.7						
	comp=Z,0.8nm,0.5s						
STKA	**Stephens Creek**	**40.72**	**161**	P	**P**	**16 44 15.0**	**+0.5**
EVN	**Everest**	**43.48**	**304**		**P**	**16 44 37.5**	**-0.2**
ULN	**Ulaanbaatar**	**44.50**	**341**		**P**	**16 44 45.9**	**+1.0**
ULN				IAmb	IAmb	16 44 46.9	
	comp=Z,6.2nm,0.8s						
SONM	**Songino Array**	**44.69**	**340**	P	**P**	**16 44 47.4**	**+1.1**
	comp=Z,2.1nm,0.7s,baz=158,slow=7.9,SNR=11						
	comp=Z,2.1nm,0.7s						
SONM	**Songino Array**	**44.69**	**340**	P	**P**	**16 44 46.2**	**-0.1**
MKAR	**Makanchi Array**	**55.34**	**324**	P	**P**	**16 46 07.0**	**+0.5**
	comp=Z,3.2nm,0.6s,baz=115,slow=7.8,SNR=48						
MKAR				PcP	**PcP**	**16 47 04.7**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=127,slow=3.5,SNR=4.7						
	comp=Z,3.2nm,0.6s						
YAK	**Yakutsk**	**55.39**	**2**		**P**	**16 46 06.8**	**+0.4**
MAKZ	**Makanchi**	**55.54**	**324**		**P**	**16 46 08.3**	**+0.5**
MAKZ				IAmb	IAmb	16 46 09.1	
	comp=Z,3.9nm,0.9s						
NIL	**Nilore**	**56.35**	**306**	P	**P**	**16 46 13.9**	**+0.1**
NIL				IAmb	IAmb	16 46 14.7	
	comp=Z,4.8nm,0.7s						
KDJ	**Kajisay**	**56.37**	**317**		**P**	**16 46 14.7**	**+0.7**
ZAA0	**Zalesovo Array**	**58.16**	**332**	P	**P**	**16 46 25.2**	**-0.8**
ZAA0				IAmb	IAmb	16 46 26.7	
	comp=Z,3.9nm,1.0s						
ZALV	**Zalesovo Beam**	**58.16**	**332**	P	**P**	**16 46 25.9**	**-0.1**
	comp=Z,2.4nm,0.6s,baz=112,slow=6.6,SNR=12						
	comp=Z,2.4nm,0.6s						
AAK	**Ala-Archa**	**58.39**	**317**		**P**	**16 46 28.0**	**-0.1**
AAK				IAmb	IAmb	16 46 29.2	
	comp=Z,1.6nm,0.5s						
KURK	**Kurchatov**	**59.46**	**327**		**P**	**16 46 35.5**	**+0.4**
KURBB	**Kurchatov Arra**	**59.46**	**326**	P	**P**	**16 46 35.5**	**+0.4**
	comp=Z,7.4nm,0.7s,baz=125,slow=6.7,SNR=73						
	comp=Z,7.4nm,0.7s						
GAR	**Garm**	**60.15**	**311**		**P**	**16 46 40.0**	**-0.2**
KK31	**Karatay Array**	**61.29**	**316**		**P**	**16 46 46.7**	**-1.0**
KK31				IAmb	IAmb	16 46 48.4	
	comp=Z,3.9nm,0.7s						
KKAR	**Karatay Array**	**61.29**	**316**	P	**P**	**16 46 47.7**	**0.0**
BORK	**Borovoye**	**65.10**	**326**		**P**	**16 47 12.7**	**+0.2**
NRIK	**Noril'sk**	**67.73**	**346**	P	**P**	**16 47 29.3**	**+0.4**
	comp=Z,4.4nm,0.6s,baz=131,slow=6.5,SNR=19						
	comp=Z,4.4nm,0.6s						
NRIK	**Noril'sk**	**67.73**	**346**		**P**	**16 47 28.7**	**-0.2**
NRIK				IAmb	IAmb	16 47 30.1	
	comp=Z,5.2nm,0.7s						
AB31	**Akbulak array**	**70.08**	**320**	P	**P**	**16 47 43.1**	**-0.7**
AB31				IAmb	IAmb	16 47 44.2	
	comp=Z,2.4nm,0.7s						
KBZ	**Khabaz**	**81.16**	**313**	P	**P**	**16 48 46.0**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=63,slow=4.5,SNR=1.8						
	comp=Z,0.3nm,0.4s						
ILAR	**Eielson Array**	**82.50**	**26**	P	**P**	**16 48 53.8**	**+0.4**
	comp=Z,1.1nm,0.5s,baz=245,slow=5.2,SNR=33						
	comp=Z,1.1nm,0.5s						
ILAR	**Eielson Array**	**82.50**	**26**	P	**P**	**16 48 52.5**	**-0.9**
SPITS	**Spitsbergen Ar**	**87.75**	**349**	P	**P**	**16 49 18.5**	**-0.7**
	comp=Z,9.1nm,1.1s,baz=102,slow=4.7,SNR=2.1						
	comp=Z,9.1nm,1.1s						
ARCES	**ARCESS Array B**	**87.86**	**340**	P	**P**	**16 49 19.1**	**-0.9**
	comp=Z,5.7nm,0.9s,baz=82,slow=5.9,SNR=11						
ARCES	**ARCESS Array B**	**87.86**	**340**	P	**P**	**16 49 19.0**	**-0.9**
ARCES				IAmb	IAmb	16 49 20.0	
	comp=Z,1.9nm,0.8s						
BRTR	**Keskin Array B**	**88.34**	**310**	P	**P**	**16 49 22.1**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=107,slow=4.2,SNR=1.6						
	comp=Z,0.4nm,0.5s						
FINES	**FINESS Array B**	**89.42**	**332**	P	**P**	**16 49 26.7**	**-0.6**
	comp=Z,1.3nm,0.5s,baz=58,slow=3.7,SNR=9.7						
	comp=Z,1.3nm,0.5s						
FINES	**FINESS Array B**	**89.42**	**332**	P	**P**	**16 49 26.6**	**-0.8**
AKASG	**Malin Array Be**	**89.80**	**321**	P	**P**	**16 49 27.8**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=50,slow=2.9,SNR=1.6						
	comp=Z,0.1nm,0.3s						
HFS	**Hagfors**	**95.59**	**332**	P	**P**	**16 49 54.5**	**-1.4**
	comp=Z,0.5nm,0.5s,baz=111,slow=3.6,SNR=4.6						
	comp=Z,0.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**122.14**	**290**	PKP	**PKPdf**	**16 55 24.6**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=39,slow=0.2,SNR=6.0						

*NOU **21** 16:46:25.7, 23°.20S*×*174°.64W, h88km, mb4.7/11, Tonga Islands Region*

*NEIC **21** 16:46:29.1*±*1.6, 23°.7S*±*0°.1*×*175°.6W*±*0°.2, h64km*±*6km, mb4.8/19, Error ellipse: s-maj=23.6km s-min=14.3km az=67.0*

*IDC **21** 16:46:39.0*±*3.9, 23°.35S*×*176°.29W, h125km*±*32km, mb4.0/12, mbtmp4.4/14, MS3.8/21, Error ellipse: s-maj=25.1km s-min=20.3km az=123.0*

ISC 21 16:46:29.0±0.7, **23°.66S**±0°.08×**175°.9W**±0°.1, **h50**km, **n71,** σ1°**90**/52, **mb4.5**/18, **MS3.7**/22, **Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.87**	**198**	Pn	**Pn**	**16 47 54.0**	**+0.7**
MSVF	**Nonsavu**	**8.21**	**315**	P	**Pn**	**16 48 28.3**	**+2.7**
	32nm,1.0s,baz=143,slow=14,SNR=10						
MSVF				LR	LR	16 51 33.0	
	comp=Z,782nm,19.5s,baz=120,slow=38						
MSVF	**Nonsavu**	**8.21**	**315**	P	**Pn**	**16 48 28.8**	**+3.2**
MSVF	**Nonsavu**	**8.21**	**315**		**Pn**	**16 48 28.5**	**+2.9**
DGTI	**Dogotuki**	**8.42**	**330**	P	**Pn**	**16 48 28.4**	**0.0**
URZ	**Urewera**	**15.74**	**201**	P	**P**	**16 50 13.7**	**+3.2**
	7.1nm,1.0s,baz=341,slow=10.0,SNR=2.0						
URZ				S	**Sn**	**16 52 56.7**	**-4.0**
	5.3nm,0.8s,baz=163,slow=17,SNR=2.0						
ONTNC	**Quen Toro**	**16.35**	**271**		**Pn**	**16 50 18.2**	**+3.0**
KHZ	**Kahutara**	**20.68**	**203**	P	Pn	16 51 08.0	+0.6
TBI	**Tubuai**	**24.19**	**95**	*e*LR	LR	16 56 45.2	
	1µm,21.8s						
PPT2	**Papeete2**	**25.30**	**81**	*e*S	S	16 55 44.2	-30
	111nm,27.8s						
PPT2				*e*LR	LR	16 57 12.3	
	365nm,22.0s						
PPT2				*e*LR	LR	16 57 20.3	
	312nm,22.8s						
HNR	**Honiara**	**27.11**	**297**	LR	LR	17 01 31.0	
	comp=Z,6.1nm,20.1s,baz=247,slow=34						
GD1S	**Gladstone Soft**	**30.15**	**263**	P	**P**	**16 52 37.4**	**+3.0**
AULRC	**Lightning Ridg**	**32.77**	**252**	P	**P**	**16 53 01.0**	**+3.6**
CTA	**Charters Tower**	**35.28**	**268**	LR	LR	17 07 31.6	
	comp=Z,132nm,18.7s,baz=81,slow=36						
CTA	**Charters Tower**	**35.28**	**268**	P	**P**	**16 53 21.9**	**+2.6**
CTAO	**Charters Tower**	**35.28**	**268**	P	**P**	**16 53 17.9**	**-1.4**
CTAO				IAmb	IAmb	16 53 21.6	
	comp=Z,23nm,1.1s						
TOO	**Toolangi**	**35.78**	**238**	P	**P**	**16 53 24.1**	**+0.7**
TAU	**Tasmania Unive**	**35.91**	**229**	P	**P**	**16 53 23.1**	**-1.2**
TAU				IAmb	IAmb	16 53 26.8	
	comp=Z,17nm,1.1s						
KRVT	**Keravat (AS076**	**36.47**	**297**	LR	LR	17 08 09.1	
	comp=Z,9.3nm,20.2s,baz=52,slow=36						
TAOE	**Nuku Hiva Isla**	**37.17**	**73**	*e*LR	LR	17 02 39.2	
	comp=Z,185nm,22.1s						
MTSU	**Mount Surprise**	**37.53**	**271**	P	**P**	**16 53 40.0**	**+1.5**
PMG	**Port Moresby**	**38.05**	**286**	P	**P**	**16 53 42.3**	**-0.6**
	comp=Z,20nm,0.9s,baz=167,slow=7.0,SNR=5.0						
PMG				LR	LR	17 06 59.4	
	comp=Z,126nm,18.7s,baz=138,slow=32						
	comp=Z,20nm,0.9s						
PMG	**Port Moresby**	**38.05**	**286**	P	**P**	**16 53 42.2**	**-0.6**
PMG	**Port Moresby**	**38.05**	**286**	P	**P**	**16 53 41.9**	**-1.0**
STKA	**Stephens Creek**	**38.34**	**248**	P	**P**	**16 53 45.5**	**+0.4**
	comp=Z,2.5nm,0.9s,baz=125,slow=12,SNR=4.1						
STKA				LR	LR	17 08 03.7	
	comp=Z,176nm,19.5s,baz=37,slow=34						
	comp=Z,2.5nm,0.9s						
STKA	**Stephens Creek**	**38.34**	**248**	P	**P**	**16 53 45.2**	**0.0**
STKA				IAmb	IAmb	16 53 46.3	
	comp=Z,5.6nm,0.8s						
AS31	**Alice Springs**	**45.82**	**259**	P	**P**	**16 54 45.5**	**-0.8**
ASAR	**Alice Springs**	**45.82**	**259**	P	**P**	**16 54 46.3**	**0.0**
	comp=Z,3.2nm,0.9s,baz=90,slow=8.6,SNR=25						
ASAR				LR	LR	17 13 26.5	
	comp=Z,191nm,19.1s,baz=121,slow=35						
	comp=Z,3.2nm,0.9s						
ASAR	**Alice Springs**	**45.82**	**259**	P	**P**	**16 54 45.3**	**-1.0**
WB1	**Warramunga Ar.**	**46.20**	**265**	P	**P**	**16 54 49.4**	**+0.1**
WRAB	**Tennant Creek**	**46.21**	**265**	P	**P**	**16 54 52.0**	**+2.7**
WB0	**Warramunga Arr**	**46.21**	**265**		**P**	**16 54 48.5**	**-0.8**
WB0				IAmb	IAmb	16 55 05.0	
	comp=Z,7.1nm,1.0s						
WRA	**Warramunga Arr**	**46.22**	**265**	P	**P**	**16 54 48.6**	**-0.8**
	comp=Z,3.5nm,1.0s,baz=90,slow=6.0,SNR=30						
	comp=Z,3.5nm,1.0s						
WRA	**Warramunga Arr**	**46.22**	**265**		**P**	**16 54 48.9**	**-0.5**
MTN	**Manton Dam**	**51.24**	**272**	P	**P**	**16 55 26.9**	**-1.1**
MTN				IAmb	IAmb	16 55 35.8	
	comp=Z,5.2nm,0.9s						
KNRA	**Kununurra**	**52.49**	**268**		**P**	**16 55 37.2**	**-0.2**
KNRA				IAmb	IAmb	16 55 37.9	
	comp=Z,18nm,1.0s						
GUMO	**Guam**	**53.35**	**310**	LR	LR	17 15 52.2	
	comp=Z,73nm,21.0s,baz=92,slow=33						
SIJI	**Sorong**	**56.00**	**286**	LR	LR	17 18 08.5	
	comp=Z,65nm,21.6s,baz=90,slow=34						
SOEI	**Soe**	**58.62**	**273**	P	**P**	**16 56 21.6**	**+0.1**
SOEI	**Soe**	**58.62**	**273**	P	**P**	**16 56 20.2**	**-1.3**
NWAO	**Narrogin (SRO)**	**58.78**	**245**	LR	LR	17 20 31.0	
	comp=Z,52nm,20.0s,baz=234,slow=35						
BATI	**Baumata**	**59.01**	**272**	LR	LR	17 21 03.7	
	comp=Z,208nm,21.2s,baz=138,slow=35						
MBWA	**Marble Bar**	**59.15**	**259**	P	**P**	**16 56 23.2**	**-1.7**
MBWA				IAmb	IAmb	16 56 32.5	
	comp=Z,9.3nm,1.1s						
RPN	**Rapa Nui**	**59.56**	**109**	LR	LR	17 16 53.0	
	comp=Z,42nm,20.3s,baz=210,slow=30						
KAPI	**Kappang**	**64.57**	**276**	LR	LR	17 24 27.2	
	comp=Z,38nm,22.0s,baz=122,slow=35						
JCJ	**Chichijima**	**64.72**	**319**	LR	LR	17 21 53.4	
	comp=Z,40nm,20.5s,baz=125,slow=33						
DAV	**Davao City (W)**	**64.80**	**291**	LR	LR	17 23 12.1	
	comp=Z,29nm,20.1s,baz=100,slow=34						
QSPA	**South Pole Qui**	**66.42**	**180**	P	**P**	**16 57 16.4**	**+3.6**
	comp=Z,3.0nm,1.0s,baz=299,slow=3.4,SNR=3.5						
	comp=Z,3.0nm,1.0s						
QSPA	**South Pole Qui**	**66.42**	**180**		**P**	**16 57 12.6**	**-0.2**
QSPA				IAmb	IAmb	16 57 26.7	
	comp=Z,9.3nm,1.1s						
JNU	**Nakatsue**	**75.93**	**316**	LR	LR	17 26 53.8	
	comp=Z,41nm,20.2s,baz=71,slow=32						
TPUB	**Ta-pu**	**77.36**	**302**	P	**P**	**16 58 15.8**	**-3.0**
JKA	**Kamikawa-asahi**	**77.44**	**331**	P	**P**	**16 58 17.7**	**-1.1**
ASAJ	**Asahikawa**	**77.45**	**331**	P	**P**	**16 58 17.1**	**-1.7**
	comp=Z,12nm,0.9s,baz=226,slow=10,SNR=6.1						
ASAJ				LR	LR	17 26 49.2	
	comp=Z,106nm,21.1s,baz=170,slow=31						
	comp=Z,12nm,0.9s						
LPIG	**La Paz**	**79.35**	**58**	LR	LR	17 24 32.9	
	comp=Z,86nm,20.3s,baz=213,slow=29						
YSS	**Yuzhno-Sakhali**	**79.61**	**333**	P	**P**	**16 58 28.8**	**-1.8**
PFO	**Pinyon Flats O**	**80.23**	**47**	LR	LR	17 25 33.9	
	comp=Z,122nm,20.7s,baz=232,slow=29						
KSRS	**Korea Array**	**80.56**	**318**	P	**P**	**16 58 34.1**	**-1.9**
	comp=Z,1.6nm,0.8s,baz=100,slow=5.1,SNR=4.8						
KSRS				LR	LR	17 32 16.3	
	comp=Z,23nm,19.0s,baz=130,slow=34						
	comp=Z,1.6nm,0.8s						
USRK	**Ussuriysk Ar.**	**82.69**	**325**	P	**P**	**16 58 46.0**	**-1.1**
	comp=Z,7.6nm,0.9s,baz=117,slow=3.3,SNR=22						
	comp=Z,7.6nm,0.9s						
MDJ	**Mudanjiang**	**84.24**	**324**	P	**P**	**16 58 54.2**	**-0.8**
PLCA	**Paso Flores**	**85.67**	**133**	LR	LR	17 28 43.6	
	comp=Z,54nm,19.4s,baz=342,slow=29						
KLR	**Kul'dur**	**86.25**	**329**	LR	LR	17 32 32.1	
	comp=Z,90nm,20.8s,baz=116,slow=32						
TXAR	**Lajitas Array**	**87.11**	**56**	P	**P**	**16 59 13.1**	**+3.3**
	comp=Z,0.7nm,0.9s,baz=206,slow=11,SNR=4.6						
	comp=Z,0.7nm,0.9s						
GSI	**Gunungsitoli**	**87.38**	**273**		**P**	**16 59 10.3**	**-1.1**
ANMO	**Albuquerque**	**87.85**	**50**	P	**P**	**16 59 16.2**	**+2.9**
	comp=Z,0.4nm,0.3s,baz=200,slow=7.8,SNR=4.1						
	comp=Z,0.4nm,0.3s						
ENH	**

JHJ	**Hachijo jima 2**	**3.70**	**224**	Pn		**Pn**	**16 51 39.4**	**0.0**
	4.0nm,0.3s,baz=50,slow=16,SNR=7.1							
JHJ				Sn		**Sn**	**16 52 19.0**	**-2.7**
	21nm,0.3s,baz=72,slow=23,SNR=7.9							
	37nm,0.3s							
MJAR	**Matsushiro Arr**	**3.82**	**282**	Pn		**Pn**	**16 51 42.2**	**+1.1**
	0.1nm,0.3s,baz=102,slow=11,SNR=18							
MJAR				Sn		Sn	16 52 32.9	+8.1
	0.1nm,0.3s,baz=151,slow=16,SNR=2.5							
	1.3nm,0.7s							
ASAJ	**Asahikawa**	**8.29**	**359**	Pn		**Pn**	**16 52 41.1**	**-1.1**
	0.3nm,0.3s,baz=314,slow=26,SNR=2.0							
	4.8nm,0.8s							
SONM	**Songino Array**	**29.43**	**305**	LR		LR	17 07 38.5	
	comp=Z,30nm,18.2s,baz=22,slow=34							
KURBB	**Kurchatov Arra**	**47.66**	**309**	P		**P**	**16 59 18.8**	**+1.4**
	0.1nm,0.5s,baz=84,slow=8.3,SNR=1.0							
	0.1nm,0.5s							
WRA	**Warramunga Arr**	**56.04**	**190**	P		**P**	**17 00 19.9**	**-0.2**
	0.4nm,0.5s,baz=7.6,slow=7.0,SNR=5.9							
	0.4nm,0.5s							
ASAR	**Alice Springs**	**59.77**	**190**	P		**P**	**17 00 46.1**	**0.0**
	0.2nm,0.9s,baz=4.1,slow=7.6,SNR=4.3							
	0.2nm,0.9s							

*HVO **21** 16:55:01.6±0.8, 19°.33N±0°.01×155°.14W±0°.01, h1km±9km, Error ellipse: s-maj=2.3km s-min=1.0km az=149.0*

NEIC 21 16:55:02.6±1.4, 19°.33N±0°.01×155°.181W±0°.009, h3km±4km, ML3.2/38, ML3.3/39(HVO), Error ellipse: s-maj=2.2km s-min=0.8km az=153.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNHH	**Kane Nui o Ham**	**0.05**	**12**		Pg	16 55 04.0	+0.2
PUH	**Pauahi**	**0.06**	**325**		Pg	16 55 04.3	+0.4
PUH				IAML		16 55 06.8	
	comp=N,27μm,0.6s						
KAE	**Kaena**	**0.06**	**129**		Pg	16 55 03.7	-0.1
PWH	**Poliokeawe Pal**	**0.06**	**224**		Pg	16 55 04.7	+0.8
STCH	**Steam Cracks**	**0.08**	**42**		Pg	16 55 03.9	-0.4
AHA	**Ahua**	**0.09**	**301**		Pg	16 55 05.1	+0.6
AHA					Sg	16 55 07.7	+1.9
AHA	**Ahua**	**0.09**	**301**		Pg	16 55 05.0	+0.5
AHA					Sg	16 55 07.2	+1.4
JCUZ	**Jacuzzi**	**0.10**	**53**		Pg	16 55 03.9	-0.6
JCUZ					Sg	16 55 05.6	-0.2
NPOC	**North of Pu'u**	**0.10**	**46**		Pg	16 55 04.0	-0.5
NPOC					Sg	16 55 05.8	-0.1
ESR	**Escape Road**	**0.10**	**327**		Pg	16 55 05.1	+0.4
ESR					Sg	16 55 07.7	+1.6
KNH	**Kipuka Nene**	**0.10**	**275**		Pg	16 55 05.5	+0.8
KKO	**Keanakako'i**	**0.11**	**312**		Pg	16 55 05.2	+0.5
KKO					Sg	16 55 07.9	+1.7
RIM	**Rim**	**0.11**	**308**		Pg	16 55 05.3	+0.5
RIM					Sg	16 55 08.0	+1.6
BYL	**Byron's Ledge**	**0.11**	**319**		Pg	16 55 05.2	+0.4
BYL				IAML		16 55 08.1	
	comp=N,13μm,0.6s						
BYL				IAML		16 55 09.7	
	comp=E,10μm,0.5s						
OUT	**Outlet**	**0.11**	**304**		Pg	16 55 05.4	+0.5
HATHI	**Halema'uma'u T**	**0.12**	**322**		Pg	16 55 05.4	+0.3
HATHI				IAML		16 55 10.4	
	comp=N,10μm,0.5s						
HATHI				IAML		16 55 10.9	
	comp=E,10μm,0.5s						
HLP	**Hilina Pali**	**0.12**	**256**		Pg	16 55 05.9	+0.9
HLP				IAML		16 55 09.3	
	comp=E,7μm,0.2s						
HLP				IAML		16 55 10.2	
	comp=N,9μm,0.4s						
SDHHI	**Sand Hill**	**0.12**	**301**		Pg	16 55 05.5	+0.5
SDHHI					Sg	16 55 08.6	+1.8
SBLHI	**Steaming Bluff**	**0.13**	**321**		Pg	16 55 05.4	+0.2
SBLHI					Sg	16 55 08.3	+1.3
KLCH	**Kalalua Cone**	**0.13**	**54**		Pg	16 55 04.2	-1.0
OBL	**Observatory Le**	**0.13**	**313**		Pg	16 55 05.7	+0.4
OBL					Sg	16 55 09.2	+2.2
UWB	**Uwekahuna Bluf**	**0.13**	**317**		Pg	16 55 05.5	+0.3
UWB					Sg	16 55 08.5	+1.4
WRMHI	**West Rim**	**0.14**	**305**		Pg	16 55 05.7	+0.4
WRMHI					Sg	16 55 08.8	+1.6
UWE	**Uwekahuna**	**0.14**	**312**		Pg	16 55 05.8	+0.4
CPK	**Cone Peak**	**0.15**	**296**		Pg	16 55 05.9	+0.2
RSD	**Rainshed**	**0.16**	**326**		Pg	16 55 06.0	+0.1
DES	**Desert**	**0.20**	**273**		Pg	16 55 06.7	+0.3
DES	**Desert**	**0.20**	**273**		Sg	16 55 10.5	+1.5
DES	**Desert**	**0.20**	**273**	IAML		16 55 10.6	
	comp=N,4μm,0.6s						
DES				IAML		16 55 12.1	
	comp=E,6μm,0.3s						
JOKA	**Jonika Flow**	**0.20**	**57**		Pg	16 55 05.3	-1.2
JOKA				IAML		16 55 11.6	
	comp=N,8μm,0.6s						
JOKA				IAML		16 55 12.8	
	comp=E,5μm,0.7s						
HTC	**Hot Caves**	**0.22**	**247**		Pg	16 55 07.7	+0.9
MLH	**Mauna Loa**	**0.26**	**311**		Pg	16 55 07.8	+0.2
PKL	**Puu Kaliu**	**0.28**	**62**		Pg	16 55 06.6	-1.4
WOH	**Wood Valley**	**0.31**	**256**		Pg	16 55 09.1	+0.5
WOH	**Wood Valley**	**0.31**	**256**		Sg	16 55 09.2	-3.5
PPL	**Puu Pili**	**0.32**	**238**		Pg	16 55 09.1	+0.5
PLL	**Puu Ulaula**	**0.34**	**308**		Pg	16 55 08.9	-0.3
TRH	**Trail**	**0.36**	**284**		Pg	16 55 08.8	+0.2
HMH	**Humu'ula Sheep**	**0.40**	**314**		Pg	16 55 10.1	-0.1
HMH					Sg	16 55 17.1	+1.6
HMH	**Humu'ula Sheep**	**0.40**	**314**	IAML		16 55 17.8	
	comp=N,10μm,0.4s						
HMH				IAML		16 55 17.9	
	comp=E,19μm,0.3s						
HIL	**Hilo**	**0.40**	**13**		Pg	16 55 09.8	-0.4
HIL	**Hilo**	**0.40**	**13**		Sg	16 55 16.3	+0.8
HIL	**Hilo**	**0.40**	**13**	IAML		16 55 16.8	
	comp=E,6μm,0.7s						
HIL				IAML		16 55 16.9	
	comp=N,9μm,0.7s						
WIH	**Wilkes Camp**	**0.41**	**291**		Pg	16 55 10.4	-0.1
WIH					Sg	16 55 17.4	+1.6
KHU	**Kahuku**	**0.42**	**259**		Pg	16 55 10.6	-0.1
KHU					Sg	16 55 17.6	+1.5
SWH	**Southwest Rift**	**0.42**	**288**		Pg	16 55 10.4	-0.3
MWH	**Mokuaweoweo**	**0.42**	**292**		Sg	16 55 18.1	+1.6
MWH	**Mokuaweoweo**	**0.42**	**292**	Pg	Pg	16 55 10.8	0.0
MWH	**Mokuaweoweo**	**0.42**	**292**	IAML		16 55 18.9	
	comp=E,6μm,1.0s						
MWH				IAML		16 55 20.6	
	comp=N,5μm,0.6s						
HPO	**Honuapo**	**0.42**	**236**		Pg	16 55 10.7	0.0
HPO					Sg	16 55 17.7	+1.4
RCO	**Red Cone**	**0.43**	**281**		Pg	16 55 10.7	-0.2
DAH	**Dandelion**	**0.46**	**274**	Pg	Pg	16 55 11.0	-0.4
ALEP	**Alea Permanent**	**0.49**	**296**		Pg	16 55 11.6	-0.4
ALEP					Sg	16 55 19.7	+1.4
HPU	**Hale Pohaku**	**0.52**	**330**		Pg	16 55 12.3	-0.3
POHA	**Pohakuloa**	**0.54**	**322**	Pg	Pg	16 55 12.3	-0.7
POHA	**Pohakuloa**	**0.54**	**322**		Sg	16 55 19.7	-0.4
POHA	**Pohakuloa**	**0.54**	**322**	IAML		16 55 21.2	
	comp=N,3μm,0.5s						
POHA				IAML		16 55 21.5	
	comp=N,3μm,0.7s						
SPT	**South Point**	**0.58**	**234**		Pg	16 55 12.9	-0.8
SPT	**South Point**	**0.58**	**234**		Sg	16 55 20.4	-0.6
SPT	**South Point**	**0.58**	**234**	IAML		16 55 27.8	
	comp=E,1μm,0.4s						
SPT				IAML		16 55 28.3	
	comp=N,1μm,0.5s						
OVEH	**Oceanview Est**	**0.58**	**253**		Pg	16 55 12.7	-1.0
OVEH	**Oceanview Est**	**0.58**	**253**		Sg	16 55 20.4	-0.8
OVEH	**Oceanview Est**	**0.58**	**253**	IAML		16 55 27.3	
	comp=E,2μm,0.5s						
OVEH				IAML		16 55 27.4	
	comp=N,1μm,0.5s						
KUH	**Kaapuna**	**0.65**	**265**		Pg	16 55 14.5	-0.6
CPH	**Captain Cook**	**0.71**	**283**		Pg	16 55 15.2	-1.1
KHLU	**Kahalu`u**	**0.72**	**292**		Pg	16 55 14.8	-1.6
HPAH	**Hawaii Prepara**	**0.85**	**325**		Pg	16 55 16.3	-2.6
HPAH	**Hawaii Prepara**	**0.85**	**325**		Sg	16 55 28.9	-1.1
KOH	**Kohala**	**0.98**	**325**		Pg	16 55 18.2	-3.2
MHA	**Mahukona**	**1.09**	**322**		Pg	16 55 20.1	-3.5

*UUSS **21** 16:59:31.9±0.8, 40°.74N±0°.02×112°.06W±0°.02, h10km±3km,*

Error ellipse: s-maj=2.7km s-min=2.1km az=184.0
*NEIC **21** 16:59:32.0±0.6, 40°.73N±0°.01×112°.07W±0°.02, h9km±4km, ML3.4/148, ML3.4/22(UUSS), Error ellipse: s-maj=2.2km s-min=1.6km az=139.0*
*IDC **21** 16:59:33.4±0.9, 40°.87N×111°.92W, h0km, mb2.6/1, mbtmp3.1/5, ML3.2/4, MS2.1/1, Error ellipse: s-maj=15.2km s-min=6.6km az=145.0*

ISC 21 16:59:32.5±0.9, 40°.74N±0°.02×112°.08W±0°.02, h8km±6km, n94, σ1°.14/72, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOQ	**North Oquirrh**	**0.09**	**200**		Pg	**16 59 34.9**	**-0.1**
NOQ					Sg	**16 59 36.7**	**+0.1**
RPF	**Rose Park Fire**	**0.13**	**72**		Pg	**16 59 35.5**	**0.0**
SAIU	**Southern Antel**	**0.14**	**327**		Pg	**16 59 35.5**	**-0.2**
SAIU	**Southern Antel**	**0.14**	**327**		Sg	**16 59 37.6**	**-0.3**
CAPU	**Utah State Cap**	**0.15**	**74**		Pg	**16 59 35.5**	**-0.3**
EOCU	**Emergency Oper**	**0.15**	**74**		Pg	**16 59 35.5**	**-0.4**
HRU	**Hogsback Ridge**	**0.16**	**71**		Pg	**16 59 35.5**	**-0.5**
RBU	**Red Butte Cany**	**0.21**	**78**		Pg	**16 59 36.3**	**-0.6**
MHD	**Mile High Driv**	**0.23**	**110**		Pg	**16 59 36.7**	**-0.5**
CTU	**Camp Tracy**	**0.26**	**100**		Pg	**16 59 37.1**	**-0.7**
CTU				IAML		16 59 40.6	
	comp=N,5μm,0.5s						
CTU				IAML		16 59 40.8	
	comp=E,6μm,0.3s						
GMU	**Granite Mounta**	**0.29**	**124**		Pg	**16 59 37.9**	**-0.5**
CWU	**Camp Williams**	**0.29**	**183**		Pg	**16 59 38.3**	**-0.1**
WTU	**Western Traver**	**0.30**	**161**		Pg	**16 59 38.6**	**+0.1**
NAIU	**Northern Antel**	**0.30**	**338**		Pg	**16 59 38.3**	**-0.3**
NAIU	**Northern Antel**	**0.30**	**338**		Pg	**16 59 38.3**	**-0.3**
FPU	**Francis Peak**	**0.34**	**32**		Pg	**16 59 39.0**	**-0.5**
SNUT	**Stansbury Nort**	**0.36**	**295**		Pg	**16 59 39.6**	**0.0**
AAU	**Alta**	**0.37**	**113**		Pg	**16 59 39.3**	**-0.6**
TCVU	**Timpanogos Cav**	**0.41**	**136**		Pg	**16 59 40.1**	**-0.5**
RCJ	**Ross Creek**	**0.49**	**99**		Pg	**16 59 41.6**	**-0.6**
N16A	**Rees Ranch, Co**	**0.51**	**73**		Pg	**16 59 42.2**	**-0.3**
HEB	**Heber**	**0.61**	**112**		Pg	**16 59 44.2**	**-0.2**
SPUT	**South Promonto**	**0.64**	**334**		Pg	**16 59 44.6**	**-0.3**
TCUT	**Toone Canyon**	**0.64**	**53**		Pg	**16 59 44.4**	**-0.5**
TCUT	**Toone Canyon**	**0.64**	**53**		Pg	**16 59 44.5**	**-0.5**
HTU	**Hoyt Peak**	**0.66**	**95**		Pg	**16 59 44.8**	**-0.5**
WMUT	**West Mountain**	**0.69**	**164**		Pg	**16 59 45.6**	**-0.2**
DAU	**Daniels Canyon**	**0.71**	**117**		Pb	**16 59 46.1**	**-1.1**
BGU	**Big Grassy Mou**	**0.74**	**285**		Pg	**16 59 46.8**	**-0.1**
BGU				IAML		16 59 58.9	
	comp=N,1μm,0.5s						
BGU				IAML		16 59 59.9	
	comp=E,1μm,0.4s						
DUG	**Dugway, Tooele**	**0.78**	**226**		Pg	**16 59 46.9**	**-0.6**
DUG				IAML		17 00 00.8	
	comp=E,1μm,0.8s						
DUG				IAML		17 00 03.4	
	comp=E,1μm,0.8s						
NLU	**North Lily Min**	**0.78**	**180**		Pg	**16 59 47.3**	**-0.3**
NLU	**North Lily Min**	**0.78**	**180**	IAML		17 00 01.1	
	comp=N,1μm,0.5s						
NLU				IAML		17 00 04.0	
	comp=E,766nm,0.6s						
MPU	**Maple Canyon**	**0.80**	**154**		Pg	**16 59 47.3**	**-0.6**
MPU				IAML		17 00 01.9	
	comp=E,969nm,0.5s						
MPU				IAML		17 00 02.1	
	comp=N,1μm,0.3s						
LHUT	**Little Humpy P**	**0.84**	**79**		Pb	**16 59 48.5**	**-1.1**
MCU	**Monte Cristo P**	**0.84**	**31**		Pg	**16 59 47.9**	**-1.0**
LTU	**Little Mountai**	**0.86**	**352**		Pg	**16 59 48.7**	**-0.5**
SUU	**Santaquin Cany**	**0.88**	**165**		Pg	**16 59 49.0**	**-0.4**
WVUT	**Wellsville**	**0.88**	**6**		Pg	**16 59 48.8**	**-0.6**
HWUT	**Hardware Ranch**	**0.95**	**24**		Pg	**16 59 49.8**	**-1.1**
HWUT				IAML		17 00 03.9	
	comp=N,652nm,0.7s						
HWUT				IAML		17 00 06.1	
	comp=N,767nm,0.4s						
BSUT	**Blindstream Ca**	**1.02**	**101**		Pg	**16 59 51.4**	**-0.8**
BSUT				IAML		17 00 08.8	
	comp=N,1μm,0.7s						
HDU	**Hyde Park**	**1.09**	**12**		Pg	**16 59 52.4**	**-1.2**
HVU	**Hansel Valley**	**1.17**	**334**		Pg	**16 59 53.8**	**-1.2**
HVU				IAML		17 00 14.3	
	comp=N,624nm,0.4s						
HVU				IAML		17 00 18.0	
	comp=E,730nm,0.6s						
FLU	**Fool Peak**	**1.36**	**183**		Pn	**16 59 56.7**	**-1.3**
FSU	**Fish Springs**	**1.43**	**225**		Pn	**16 59 58.0**	**-0.8**
P17A	**Butcher Ranch,**	**1.63**	**140**		Pn	**17 00 01.3**	**-0.4**
P17A				IAML		17 00 26.7	
	comp=N,285nm,0.8s						
P18A	**Preston Nutter**	**1.79**	**128**		Pb	**17 00 04.7**	**-1.1**
P18A				IAML		17 00 29.4	
	comp=E,367nm,0.4s						
P18A				IAML		17 00 29.6	
	comp=N,281nm,0.3s						
RDMU	**Red Mountain**	**1.92**	**94**		Pb	**17 00 06.2**	**-1.6**
RDMU				IAML		17 00 35.2	
	comp=N,160nm,1.1s						
Q16A	**Castle Valley**	**1.95**	**159**		Pn	**17 00 05.7**	**-0.4**
SRU	**San Rafael Swe**	**2.02**	**143**		Pn	**17 00 07.1**	**+0.1**
SRU				IAML		17 00 37.8	
	comp=N,274nm,0.7s						
SRU				IAML		17 00 39.0	
	comp=E,324nm,0.5s						
TCRU	**Three Creeks R**	**2.14**	**188**		Pn	**17 00 08.9**	**+0.1**
TCRU				IAML		17 00 44.8	
	comp=N,245nm,0.8s						
TCRU				IAML		17 00 46.1	
	comp=E,322nm,0.9s						
AHID	**Auburn Hatcher**	**2.16**	**20**		Pn	**17 00 09.3**	**+0.4**
IMU	**Iron Mountain**	**2.26**	**202**		Pb	**17 00 13.7**	**0.0**
WLD	**Wild Horse Can**	**2.35**	**195**		Pb	**17 00 14.6**	**-0.6**
ELK	**Elko**	**2.40**	**271**	Pn	Pb	**17 00 14.9**	**-1.2**
	comp=E,5.4nm,0.3s,baz=91,slow=10,SNR=98						
ELK				Sn	Sg	**17 00 48.1**	**-1.6**
	comp=E,12nm,0.3s,baz=182,slow=21,SNR=10.0						
	comp=E,13nm,0.4s						
ELK	**Elko**	**2.40**	**271**		Pb	**17 00 14.3**	**-1.8**
PSUT	**Pine Spring**	**2.59**	**212**		Pn	**17 00 15.1**	**+0.2**
PSUT				IAML		17 00 56.3	
	comp=N,199nm,0.6s						
PSUT				IAML		17 00 59.3	
	comp=E,185nm,1.0s						
MTPU	**Mount Pierson**	**2.69**	**182**		Pn	**17 00 17.5**	**+1.1**
PDAR	**Pinedale Array**	**2.77**	**42**	Pg	Pb	**17 00 21.3**	**-1.1**
	comp=E,20nm,0.3s,baz=217,slow=15,SNR=280						
PDAR				Lg	Lg	17 00 56.3	
	comp=E,58nm,0.3s,baz=226,slow=29,SNR=23						
PDAR				LR	LR	17 01 01.8	
	comp=E,39nm,21.6s,baz=325,slow=34						
PDAR	**Pinedale Array**	**2.77**	**42**		Pn	**17 00 17.9**	**+0.5**
SNOW	**Snow King Moun**	**2.90**	**19**		Pn	**17 00 20.2**	**+1.0**
SNOW				IAML		17 01 12.8	
	comp=E,158nm,0.7s						
SNOW				IAML		17 01 15.1	
	comp=E,182nm,1.1s						
HMU	**Henry Mountain**	**2.98**	**159**		Pn	**17 00 21.1**	**+0.8**
HMU				IAML		17 01 10.4	
	comp=N,189nm,0.7s						
HMU				IAML		17 01 23.9	
	comp=E,162nm,0.7s						
O20A	**White River Ci**	**2.99**	**100**		Pn	**17 00 22.4**	**+2.0**
O20A				IAML		17 01 10.3	
	comp=E,271nm,0.4s						
LOHW	**Long Hollow**	**3.08**	**20**		Pn	**17 00 22.4**	**+0.8**
LOHW				IAML		17 01 10.9	
	comp=E,148nm,0.8s						
LOHW				IAML		17 01 12.1	
	comp=E,64nm,0.9s						
MOOW	**Moose Ponds**	**3.17**	**18**		Pn	**17 00 23.4**	**+0.6**
PV21	**Cone Mtn., Par**	**3.23**	**131**		Pn	**17 00 24.3**	**+0.5**
PV23	**Carpenter Ridg**	**3.29**	**133**		Pn	**17 00 24.8**	**+0.2**
PV22	**Blue Mesa, Par**	**3.36**	**130**		Pn	**17 00 25.8**	**+0.3**
PV04	**Paradox Valley**	**3.39**	**133**	IAML		17 01 26.4	
	comp=E,191nm,1.1s						
PV17	**East Wray Mesa**	**3.44**	**134**	IAML		17 01 22.6	
	comp=E,92nm,0.5s						
PV17				IAML		17 01 23.4	
	comp=N,116nm,0.5s						
PV16	**Nyswonger Mesa**	**3.44**	**134**	IAML		17 01 27.7	
	comp=N,176nm,1.2s						
PV18	**Skein Mesa, Pa**	**3.49**	**134**	IAML		17 01 24.4	
	comp=N,156nm,0.6s						
PV18				IAML		17 01 37.0	
	comp=E,158nm,0.8s						
FLWY	**Flagg Ranch**	**3.50**	**17**	IAML		17 01 33.6	
	comp=E,42nm,0.9s						
PV07	**Paradox Valley**	**3.51**	**130**	IAML		17 01 22.2	
	comp=E,167nm,0.7s						
PV07				IAML		17 01 30.7	
	comp=N,168nm,0.8s						
PV05	**Paradox Valley**	**3.52**	**138**	IAML		17 01 26.9	
	comp=N,138nm,0.6s						
PV03	**Paradox Valley**	**3.52**	**134**	IAML		17 01 26.2	
	comp=N,106nm,0.8s						
PV03				IAML		17 01 26.3	
	comp=E,122nm,0.9s						
PV13	**Radium Mtn., P**	**3.60**	**135**	IAML		17 01 28.8	
	comp=E,150nm,0.9s						
PV13				IAML		17 01 29.2	
	comp=N,141nm,0.5s						
HAYD	**Hayden**	**3.67**	**92**	IAML		17 01 28.0	
	comp=E,128nm,0.7s						
PV01	**Paradox Valley**	**3.76**	**133**	IAML		17 01 35.8	
	comp=N,73nm,0.6s						
PV01				IAML		17 01 37.7	
	comp=E,90nm,0.7s						
YMP	**Mirror Lake Pl**	**4.25**	**19**	IAML		17 02 01.1	
	comp=N,22nm,1.0s						
U15A	**North Rim**	**4.30**	**182**	IAML		17 02 01.4	
	comp=E,27nm,1.4s						
MVCO	**Mesa Verde**	**4.49**	**140**	IAML		17 02 07.2	
	comp=E,79nm,0.7s						
DLMT	**Dillon**	**4.64**	**355**	IAML		17 02 22.9	
	comp=E,16nm,2.4s						
DLMT				IAML		17 02 24.8	
	comp=E,17nm,4.5s						
SHPR	**Sheep Range**	**4.86**	**211**	IAML		17 02 12.2	
	comp=E,22nm,1.2s						
TPNV	**Topopah Spring**	**4.99**	**222**	IAML		17 02 19.6	
	comp=E,46nm,0.8s						
ISCO	**Idaho Springs**	**5.04**	**99**	IAML		17 02 18.4	
	comp=E,14nm,2.1s						
WVOR	**Wild Horse Val**	**5.20**	**291**	IAML		17 02 26.7	
	comp=E,13nm,1.6s						
WVOR				IAML		17 02 34.6	
	comp=E,11nm,2.9s						
NV11	**Mina Array Sit**	**5.23**	**246**	IAML		17 02 28.3	
	comp=N,18nm,1.3s						
NV11				IAML		17 02 33.4	
	comp=E,13nm,1.7s						
WUAZ	**Wupatki**	**5.24**	**174**	IAML		17 02 35.3	
	comp=E,29nm,0.8s						
WUAZ				IAML		17 03 12.3	
	comp=E,20nm,1.2s						
WCT	**Wildcat Mounta**	**5.30**	**224**	IAML		17 02 24.7	
	comp=E,20nm,0.7s						
WCT				IAML		17 02 26.2	
	comp=N,15nm,1.2s						
NVAR	**Mina Array Bea**	**5.33**	**246**	Pn	Pn	17 00 58.0	+5.4
	comp=N,0.7nm,0.3s,baz=60,slow=16,SNR=12						
NVAR				Lg	Lg	17 02 19.7	
	comp=N,2.7nm,0.3s,baz=61,slow=29,SNR=8.6						
	comp=N,2.1nm,0.6s						
ANMO	**Albuquerque**	**7.29**	**141**	Pn	**Pn**	**17 01 23.5**	**+4.0**
	comp=N,0.1nm,0.3s,baz=322,slow=15,SNR=2.2						
ANMO				Pg	**Pg**	**17 01 47.8**	**-4.4**
	comp=N,0.3nm,0.3s,baz=322,slow=17,SNR=3.9						
ANMO				Lg	Lg	17 03 14.9	
	comp=N,0.3nm,0.3s,baz=286,slow=14,SNR=4.0						
	comp=N,0.4nm,0.4s						
PFO	**Pinyon Flats O**	**7.92**	**208**	Lg	Lg	17 03 44.8	
	comp=N,0.1nm,0.3s,baz=286,slow=9.3,SNR=2.5						
TXAR	**Lajitas Array**	**13.29**	**146**	Pn	**Pn**	**17 02 45.5**	**+3.9**
	comp=N,0.1nm,0.3s,baz=337,slow=15,SNR=4.3						
	comp=N,0.5nm,0.7s						
YKA	**Yellowknife Ar**	**21.84**	**357**	P	**P**	**17 04 24.7**	**-0.4**
	comp=N,0.2nm,0.6s,baz=177,slow=9.5,SNR=7.2						
	comp=N,0.2nm,0.6s						

*IDC **21** 17:07:38.0±1.6, 0°.96N×126°.68E, h0km, mb3.5/4, mbtmp3.5/5, ML3.3/1, Error ellipse: s-maj=117.4km s-min=19.5km az=69.0*
*DJA **21** 17:07:43.7±0.2, 1°.1N±3°×12°.6E±°, h10km, M3.6/19, mB4.9/1, mb3.8/2, MLv3.5/19, Mw(mB)4.1/1*

ISC 21 17:07:44.9±1.0, 0°.90N±0°.09×126°.53E±0°.06, h39km, n13, σ2°.00/14, mb3.6/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.85**	**99**	P	**Pn**	**17 08 01.8**	**+1.5**
MNI	**Manado**	**1.77**	**288**	P	**Pn**	**17 08 13.9**	**+0.8**
MNI				S	**Sn**	**17 08 34.7**	**+0.3**
SANI	**Sanana**	**2.98**	**190**	P	**Pn**	**17 08 29.6**	**-0.1**
GTOI	**Gorontalo**	**3.53**	**266**	P	**Pn**	**17 08 39.7**	**+2.5**
NLAI	**Namlea**	**4.15**	**172**	P	**Pn**	**17 08 46.9**	**+1.1**
KRAI	**Karang Ratu**	**4.59**	**156**	P	**Pn**	**17 08 55.4**	**+3.6**
SIJI	**Sorong**	**5.05**	**110**	P	**Pn**	**17 08 59.9**	**+1.7**
	0.1nm1μm5.1nm,1.1s						
APSI	**Ampana**	**5.20**	**250**	P	**Pn**	**17 09 03.2**	**+3.0**
FITZ	**Fitzroy Crossi**	**18.90**	**183**	P	**P**	**17 12 00.4**	**-1.9**
	0.1nm,0.3s,baz=27,slow=4.5,SNR=1.6						
	1.5nm,0.9s						
WRA	**Warramunga Arr**	**22.09**	**160**	P	**P**	**17 12 35.7**	**-1.1**
	1.4nm,0.5s,baz=340,slow=11,SNR=44						
	1.4nm,0.5s						
ASAR	**Alice Springs**	**25.45**	**164**	P	**P**	**17 13 07.8**	**-1.5**
	0.2nm,0.3s,baz=343,slow=11,SNR=21						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**59.77**	**326**	P	**P**	**17 17 45.2**	**-0.8**
	0.2nm,0.3s,baz=120,slow=8.2,SNR=6.8						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**64.01**	**328**	P	**P**	**17 18 13.6**	**-0.8**
	0.3nm,0.5s,baz=129,slow=6.4,SNR=7.7						
	0.3nm,0.5s						

**IDC 21 17:11:39.0±370.0, 46°.61N×

s-min=28.9km az=43.0
*NEIC **21** 17:53:10.4±2.2,23°.97S±0°.09×115°.2W±0°.2, h10^{km}±1^{km}, mb4.5/54, Error ellipse: s-maj=26.4km s-min=12.4km az=290.0*

ISC 21 17:53:09.8±0.9, 24°.2S±0°.2×115°.4W±0°.2, h21^{km}, n92, σ1°.9 03/69, mb4.5/27, MS3.8/16, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**6.22**	**119**	LR		LR	17 56 25.4	
	comp=Z,1μm,18.7s,baz=319,slow=31							
PPT	**Papeete**	**32.52**	**275**	LR		LR	18 07 34.4	
	comp=Z,125nm,20.0s,baz=132,slow=27							
H03N2	**Juan Fernandez**	**33.13**	**114**	T		T	18 34 39.1	
	baz=281,slow=75,SNR=47							
H03N3	**Juan Fernandez**	**33.14**	**115**	T		T	18 34 40.3	
	baz=281,slow=75,SNR=58							
H03N1	**Juan Fernandez**	**33.15**	**114**	T		T	18 34 40.2	
	baz=281,slow=75,SNR=64							
NNA	**Nana**	**38.52**	**79**	LR		LR	18 12 25.9	
	comp=Z,156nm,18.1s,baz=240,slow=30							
GO07	**Milladeo Hill,**	**39.07**	**129**	P		**P**	**18 00 37.4**	**+2.1**
ATAH	**Atahualpa**	**39.33**	**71**	LR		LR	18 12 21.4	
	comp=Z,160nm,21.7s,baz=275,slow=29							
GO06	**Curarrehue**	**39.94**	**123**	P		**P**	**18 00 43.9**	**+1.1**
AY01	**Puyuhuapi**	**40.13**	**131**	P		**P**	**18 00 45.1**	**+1.1**
AC06	**Mina Casimiro**	**40.55**	**104**	P		**P**	**18 00 48.2**	**+0.4**
AC06				IAmb		IAmb	18 00 56.2	
	comp=Z,12nm,1.4s							
MT08	**Bocatoma Ro**	**40.57**	**114**	P		**P**	**18 00 46.8**	**-1.5**
PLCA	**Paso Flores**	**40.82**	**125**	P		**P**	**18 00 51.5**	**+1.5**
	comp=Z,2.1nm,0.8s,baz=279,slow=13,SNR=3.2							
PLCA				LR		LR	18 13 35.9	
	comp=Z,182nm,19.2s,baz=300,slow=30							
	comp=Z,2.1nm,0.8s							
RAR	**Rarotonga**	**40.88**	**265**	LR		LR	18 12 29.4	
	comp=Z,208nm,19.6s,baz=120,slow=28							
CFA	**Coronel Fontan**	**42.09**	**111**	LR		LR	18 14 19.6	
	comp=Z,188nm,18.8s,baz=255,slow=30							
OTAV	**Otavalo**	**43.31**	**61**	P		**P**	**18 01 10.0**	**-1.0**
LPAZ	**La Paz**	**44.91**	**89**	P		**P**	**18 01 24.8**	**+0.8**
	comp=Z,1.1nm,0.9s,baz=256,slow=3.8,SNR=4.8							
LPAZ				LR		LR	18 16 03.0	
	comp=Z,107nm,18.8s,baz=298,slow=31							
	comp=Z,1.1nm,0.9s							
LPAZ	**La Paz**	**44.91**	**89**	P		**P**	**18 01 23.2**	**-0.8**
CMIG	**Matias Romero**	**45.69**	**28**	LR		LR	18 16 05.8	
	comp=Z,137nm,21.7s,baz=164,slow=30							
LPIG	**La Paz**	**48.29**	**6**	LR		LR	18 17 05.7	
	comp=Z,81nm,20.8s,baz=268,slow=30							
CPUP	**Villa Florida**	**52.20**	**105**	LR		LR	18 20 03.7	
	comp=Z,94nm,21.1s,baz=254,slow=31							
SDV	**Santo Domingo**	**54.72**	**59**	LR		LR	18 23 36.1	
	comp=Z,79nm,18.4s,baz=178,slow=33							
SDV	**Santo Domingo**	**54.72**	**59**	P		**P**	**18 02 37.9**	**-0.3**
SDV				IAmb		IAmb	18 02 42.6	
	comp=Z,6.7nm,1.0s							
VTX	**Valle De La Tr**	**55.29**	**360**	P		**P**	**18 02 43.8**	**+2.0**
SAND	**Sanderson**	**55.36**	**14**	P		**P**	**18 02 43.9**	**+1.6**
YUH	**Yuha Desert**	**56.55**	**360**	P		**P**	**18 02 52.4**	**+1.7**
YUH				IAmb		IAmb	18 02 57.4	
	comp=Z,6.4nm,1.3s							
BAR	**Barrett**	**56.59**	**359**	P		**P**	**18 02 52.3**	**+1.2**
BAR				IAmb		IAmb	18 02 58.5	
	comp=Z,10nm,1.4s							
BORC	**Borrego Spring**	**57.17**	**359**	P		**P**	**18 02 56.7**	**+1.5**
BORC				IAmb		IAmb	18 03 02.0	
	comp=Z,6.3nm,1.4s							
W13A	**Hualapai Mount**	**59.01**	**1**	P		**P**	**18 03 08.3**	**0.0**
ANMO	**Albuquerque**	**59.45**	**9**	LR		LR	18 24 01.4	
	comp=Z,64nm,18.1s,baz=292,slow=31							
ISA	**Isabella, Lake**	**59.62**	**357**	P		**P**	**18 03 12.7**	**+0.4**
ISA				IAmb		IAmb	18 03 14.5	
	comp=Z,7.3nm,1.5s							
U15A	**North Rim**	**60.39**	**3**	P		**P**	**18 03 18.6**	**+0.8**
U15A				IAmb		IAmb	18 03 29.8	
	comp=Z,5.2nm,1.3s							
SHPR	**Sheep Range**	**60.39**	**0**	P		**P**	**18 03 17.9**	**+0.2**
WCT	**Wildcat Mounta**	**60.69**	**359**	P		**P**	**18 03 21.1**	**+1.5**
WCT				IAmb		IAmb	18 03 27.0	
	comp=Z,6.6nm,1.4s							
TPNV	**Topopah Spring**	**60.84**	**359**	P		**P**	**18 03 22.5**	**+1.8**
TPNV				IAmb		IAmb	18 03 28.6	
	comp=Z,4.0nm,1.2s							
PRN	**Pahroc Range**	**61.29**	**0**	P		**P**	**18 03 24.0**	**+0.3**
CCUT	**Cedar City**	**61.47**	**2**			**P**	**18 03 24.8**	**-0.2**
CCUT				IAmb		IAmb	18 03 32.4	
	comp=Z,3.7nm,1.0s							
CMB	**Columbia Colle**	**62.09**	**356**	P		**P**	**18 03 30.0**	**+1.0**
CMB				IAmb		IAmb	18 03 35.7	
	comp=Z,4.1nm,1.4s							
NV11	**Mina Array Sit**	**62.37**	**358**	P		**P**	**18 03 30.5**	**-0.5**
NVAR	**Mina Array Bea**	**62.37**	**357**	P		**P**	**18 03 31.4**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=161,slow=3.9,SNR=3.6							
	comp=Z,0.5nm,0.6s							
NVAR	**Mina Array Bea**	**62.37**	**357**	P		**P**	**18 03 30.8**	**-0.3**
PSUT	**Pine Spring**	**62.43**	**1**	P		**P**	**18 03 31.5**	**0.0**
KVN	**Kaiserville**	**62.98**	**358**	P		**P**	**18 03 34.7**	**-0.4**
PNTR	**Pine Nut**	**63.09**	**356**	P		**P**	**18 03 37.1**	**+1.2**
SRU	**San Rafael Swe**	**63.16**	**4**	P		**P**	**18 03 35.6**	**-0.7**
SRU				IAmb		IAmb	18 03 44.3	
	comp=Z,3.1nm,1.1s							
BDFB	**Brasilia**	**63.45**	**96**	LR		LR	18 28 41.5	
	comp=Z,80nm,19.0s,baz=167,slow=34							
P17A	**Butcher Ranch,**	**63.51**	**4**	P		**P**	**18 03 39.5**	**+0.9**
P17A				IAmb		IAmb	18 04 09.9	
	comp=Z,6.1nm,1.4s							
UUPR	**Utuado, UPR, P**	**63.54**	**53**	P		**P**	**18 03 38.2**	**-0.8**
152A	**Waverly Hall**	**63.71**	**29**	P		**P**	**18 03 40.4**	**+0.5**
ISCO	**Idaho Springs**	**64.34**	**8**	P		**P**	**18 03 45.4**	**+1.2**
ELK	**Elko**	**64.62**	**0**	P		**P**	**18 03 46.8**	**+0.8**
BGU	**Big Grassy Mou**	**64.84**	**2**	P		**P**	**18 03 48.7**	**+1.4**
BGU				IAmb		IAmb	18 03 53.3	
	comp=Z,6.4nm,1.4s							
VNDA	**Vanda**	**64.96**	**194**	LR		LR	18 24 55.1	
	comp=Z,104nm,21.1s,baz=334,slow=29							
VNDA	**Vanda**	**64.96**	**194**	P		P	18 03 52.3	+4.8
VNDA				IAmb		IAmb	18 03 54.2	
	comp=Z,2.2nm,0.6s							
M02C	**Callahan**	**65.63**	**354**	P		**P**	**18 03 54.7**	**+2.4**
TKL	**Tuckaleechee C**	**66.66**	**28**	LR		LR	18 29 23.1	
	comp=Z,54nm,19.5s,baz=201,slow=33							
AHID	**Auburn Hatcher**	**66.76**	**3**	P		**P**	**18 03 58.8**	**-0.9**
AHID				IAmb		IAmb	18 04 01.0	
	comp=Z,7.4nm,1.5s							
K05A	**Summer Lake**	**66.80**	**356**	P		**P**	**18 04 00.5**	**+0.6**
PD31	**Pinedale Array**	**66.87**	**5**	P		**P**	**18 03 59.2**	**-1.2**
PD31				IAmb		IAmb	18 04 07.1	
	comp=Z,4.8nm,1.4s							
PDAR	**Pinedale Array**	**66.87**	**5**	P		**P**	**18 04 01.6**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=259,slow=6.0,SNR=4.5							
PDAR				LR		LR	18 29 28.8	
	comp=Z,39nm,18.7s,baz=294,slow=33							
	comp=Z,0.4nm,0.3s							
PDAR	**Pinedale Array**	**66.87**	**5**	P		**P**	**18 03 59.5**	**-0.9**
MFID	**Camas Ranch**	**67.29**	**360**	P		**P**	**18 04 02.2**	**-0.7**
MFID				IAmb		IAmb	18 04 09.9	
	comp=Z,3.0nm,1.1s							
J04A	**Umpqua Nationa**	**67.40**	**355**	P		**P**	**18 04 04.3**	**+0.6**
HLID	**Hailey**	**67.45**	**1**	P		**P**	**18 04 03.6**	**-0.4**
LOHW	**Long Hollow**	**67.64**	**4**	P		**P**	**18 04 04.4**	**-0.9**
LOHW				IAmb		IAmb	18 04 10.9	
	comp=Z,5.4nm,1.4s							
FXWY	**Fox Creek**	**67.64**	**3**	P		**P**	**18 04 04.7**	**-0.6**
FXWY				IAmb		IAmb	18 04 12.7	
	comp=Z,5.5nm,1.4s							
YHH	**Holmes Hill**	**68.79**	**4**	P		**P**	**18 04 11.2**	**-1.3**
YHL	**Hebgen Lake**	**68.84**	**3**	P		**P**	**18 04 12.5**	**-0.3**
YHL				IAmb		IAmb	18 04 22.7	
	comp=Z,7.1nm,1.4s							
RLMT	**Red Lodge**	**69.23**	**5**	P		**P**	**18 04 16.0**	**+0.8**
RLMT				IAmb		IAmb	18 04 25.1	
	comp=Z,4.0nm,1.1s							
G08A	**Pilot Rock**	**69.24**	**357**	P		**P**	**18 04 16.0**	**+0.9**
G08A				IAmb		IAmb	18 04 22.1	
	comp=Z,2.2nm,0.8s							
LYMT	**Lyon Mountain**	**70.91**	**2**	P		**P**	**18 04 24.7**	**-0.7**
LTY	**Liberty**	**71.29**	**356**	P		**P**	**18 04 28.2**	**+0.6**
NEW	**Newport**	**72.16**	**359**	P		**P**	**18 04 33.4**	**+0.7**
N53A	**Lisbon**	**72.24**	**27**	P		**P**	**18 04 32.9**	**-0.4**
YKA	**Yellowknife Ar**	**86.41**	**0**	P		**P**	**18 05 48.2**	**-1.8**
	comp=Z,0.4nm,0.8s,baz=184,slow=4.7,SNR=12							
	comp=Z,0.4nm,0.8s							
YKA	**Yellowknife Ar**	**86.41**	**0**	P		**P**	**18 05 49.5**	**-0.5**
H11S2	**WAKE ISLAND Hy**	**86.92**	**292**	T		T	19 41 57.2	
	baz=117,slow=75,SNR=191							
H11S1	**WAKE ISLAND Hy**	**86.94**	**292**	T		T	19 41 57.9	
	baz=117,slow=75,SNR=247							
H11S3	**WAKE ISLAND Hy**	**86.94**	**292**	T		T	19 41 54.4	
	baz=117,slow=75,SNR=174							
H11N3	**WAKE ISLAND Hy**	**87.30**	**293**	T		T	19 42 18.2	
	baz=118,slow=75,SNR=44							
H11N1	**WAKE ISLAND Hy**	**87.31**	**293**	T		T	19 42 23.5	
	baz=118,slow=75,SNR=21							
H11N2	**WAKE ISLAND Hy**	**87.32**	**293**	T		T	19 42 19.5	
	baz=118,slow=75,SNR=81							
ZALV	**Zalesovo Beam**	**146.65**	**338**	PKPbc		**PKPbc**	**18 12 49.6**	**0.0**
	comp=Z,2.8nm,0.9s,baz=20,slow=4.7,SNR=10							
ZALV	**Zalesovo Beam**	**146.65**	**338**			**PKPdf**	**18 12 47.7**	**-0.2**
CMAR	**Chiang Mai Arr**	**147.53**	**267**	PKPbc		**PKPbc**	**18 12 53.5**	**+0.4**
	comp=Z,1.9nm,1.1s,baz=123,slow=1.6,SNR=6.6							
CMAR	**Chiang Mai Arr**	**147.53**	**267**			**PKPdf**	**18 12 49.9**	**-0.6**
BRTR	**Keskin Array B**	**149.73**	**52**	PKPbc		**PKPbc**	**18 12 57.0**	**-1.4**
	comp=Z,2.1nm,0.9s,baz=224,slow=6.3,SNR=13							
BRTR	**Keskin Array B**	**149.73**	**52**			**PKPdf**	**18 12 52.2**	**-1.5**
BRTR				PKPbc		**PKPbc**	**18 12 58.2**	**-0.2**
BVAR	**Borovoye Array**	**150.89**	**353**	PKPbc		**PKPbc**	**18 13 00.4**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=85,slow=4.9,SNR=7.3							
KURK	**Kurchatov**	**151.39**	**341**			**PKiKP**	**18 13 02.2**	**-0.1**
KURBB	**Kurchatov Arra**	**151.50**	**341**	PKPbc		**PKPbc**	**18 13 01.6**	**-0.4**
	comp=Z,1.5nm,0.9s,baz=24,slow=1.7,SNR=5.8							
MKAR	**Makanchi Array**	**153.37**	**332**	PKPbc		**PKPbc**	**18 13 05.0**	**-1.3**
	comp=Z,0.3nm,0.8s,baz=77,slow=1.9,SNR=2.2							

*NAO **21** 17:54:01.3±0.8, 78°.31N×7°.75E, h10^{km}, ML3.0*
*KOLA **21** 17:54:01.2, 78°.29N×8°.46E, h0^{km}, ML2.8, Error ellipse: s-maj=12.5km s-min=8.8km az=80.0, Greenland sea*
*DNK **21** 17:54:01.4±2.3, 78°.29N×7°.70E, h15^{km}, ML1.9, Presumed earthquake*
*BER **21** 17:54:03.5±2.1, 78°.28N×7°.73E, h23^{km}±9^{km}, Mw3.9, ML3.0(NAO), Confirmed Earthquake*
*FCIAR **21** 17:54:03.0, 78°.27N×8°.56E, h10^{km}, station ZFI2 has station magnitude of 3.40*

ISC 21 17:54:00.3±2.1, 78°.22N±0°.06×7°.47E±0°.04, h24^{km}±20^{km}, n39, σ2°.21/66, 6C, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.14**	**49**	Pb		**Pn**	**17 54 21.1**	**+0.4**
KBS				Sb		**Sb**	**17 54 33.1**	**-2.6**
KBS	**Kingsbay**	**1.14**	**49**	*i*P		**Pn**	**17 54 21.0**	**+0.4**
KBS				*e*S		**Sb**	**17 54 33.0**	**-2.6**
KBS				IAML			17 54 35.2	
	comp=Z,449nm,0.4s							
KBS	**Kingsbay**	**1.14**	**49**	*i*P		**Pn**	**17 54 21.1**	**+0.4**
KBS				*i*S		**Sb**	**17 54 33.1**	**-2.6**
KBS	**Kingsbay**	**1.14**	**49**	P		**Pn**	**17 54 20.5**	**-0.2**
KBS				S		**Sb**	**17 54 32.8**	**-2.9**
BRBB	**Barentsburg B**	**1.40**	**92**	Pb		**Pn**	**17 54 25.1**	**+1.0**
BRBB				Sg		**Sn**	**17 54 42.0**	**+0.2**
BRBB	**Barentsburg B**	**1.40**	**92**	*i*P		**Pn**	**17 54 25.2**	**+1.0**
BRBB				*e*S		**Sn**	**17 54 41.1**	**-0.7**
BRBB				*e*Sg		**Sb**	**17 54 44.4**	**+1.4**
BRBB	**Barentsburg B**	**1.40**	**92**	P		**Pn**	**17 54 24.9**	**+0.7**
BRBB				S		**Sn**	**17 54 41.4**	**-0.5**
BRBA	**Barentsburg A**	**1.40**	**93**	Pb		**Pn**	**17 54 25.4**	**+1.1**
BRBA				Sg		**Sn**	**17 54 42.8**	**+0.8**
BRBA	**Barentsburg A**	**1.40**	**93**	*i*P		**Pn**	**17 54 25.3**	**+1.1**
BRBA				*e*Sg		**Sn**	**17 54 44.5**	**+2.5**
BRBA				IAML			17 54 45.4	
	comp=Z,194nm,0.2s							
SPA0	**Spitsbergen Ar**	**1.83**	**87**	Pn		**Pn**	**17 54 32.5**	**+2.3**
	baz=274,slow=18							
SPA0				Sn		**Sn**	**17 54 53.1**	**+0.5**
	baz=274,slow=37							
SPA0	**Spitsbergen Ar**	**1.83**	**87**	Pn		**Pn**	**17 54 32.5**	**+2.3**
SPA0				Sn		**Sn**	**17 54 53.1**	**+0.5**
SPA0	**Spitsbergen Ar**	**1.83**	**87**	*i*P		**Pn**	**17 54 32.3**	**+2.1**
SPA0				*i*S		**Sn**	**17 54 53.0**	**+0.4**
SPITS	**Spitsbergen Ar**	**1.83**	**87**	P		**Pn**	**17 54 31.9**	**+1.7**
SPITS				S		**Sn**	**17 54 53.0**	**+0.4**
HSPB	**Hornsund (broa**	**2.12**	**121**	Pn		**Pn**	**17 54 35.5**	**+1.4**
HSPB	**Hornsund (broa**	**2.12**	**121**	*i*P		**Pn**	**17 54 35.5**	**+1.4**
HSPB				*e*S		**Sn**	**17 54 59.3**	**-0.3**
HSPB				IAML			17 55 05.1	
	comp=Z,28nm,0.4s							
HSPB	**Hornsund (broa**	**2.12**	**121**	*i*P		**Pn**	**17 54 35.5**	**+1.4**
HSPB				*i*S		**Sn**	**17 54 59.9**	**+0.2**
HSPB	**Hornsund (broa**	**2.12**	**121**	P		**Pn**	**17 54 35.2**	**+1.1**
HSPB				S		**Sn**	**17 54 59.4**	**-0.3**
HOPEN	**Hopen**	**4.21**	**105**	Pn		**Pn**	**17 55 04.0**	**+1.3**
HOPEN				Sn		**Sn**	**17 55 50.2**	**-0.8**
HOPEN	**Hopen**	**4.21**	**105**	*e*P		**Pn**	**17 55 04.1**	**+1.3**
HOPEN				*e*S		**Sn**	**17 55 49.6**	**-1.4**
HOPEN				IAML			17 55 51.3	
	comp=Z,32nm,0.6s							
BEAR	**Bear Island, N**	**4.62**	**138**	Pn		**Pn**	**17 55 10.7**	**+2.3**
	baz=330,slow=18							
NOR	**Nord**	**5.38**	**320**	Pn		**Pn**	**17 55 20.6**	**+1.7**
NOR	**Nord**	**5.38**	**320**	*i*P		**Pn**	**17 55 20.5**	**+1.7**
NOR				*i*S		**Sn**	**17 56 18.1**	**-1.9**
NOR				IAML			17 56 24.7	
	comp=Z,2.6nm,0.6s							
DAG	**Danmarks Havn**	**5.82**	**269**	*i*P		**Pn**	**17 55 26.2**	**+1.3**
DAG				*i*S		**Sn**	**17 56 27.9**	**-2.8**
DAG				IAML			17 56 30.3	
	comp=Z,8.7nm,0.3s							
DAG	**Danmarks Havn**	**5.82**	**269**	*i*P		**Pn**	**17 55 26.2**	**+1.3**
DAG				*i*S		**Sn**	**17 56 27.9**	**-2.8**
DAG				IAML			17 56 30.3	
	comp=Z,8.7nm,0.3s							
DBG	**Daneborg**	**7.59**	**253**	Pn		**Pn**	**17 55 51.2**	**+2.1**
DBG				Sn		Sn	17 57 10.1	-4.1
DBG	**Daneborg**	**7.59**	**253**	*i*P		**Pn**	**17 55 51.2**	**+2.1**
DBG				*i*S		**Sn**	**17 57 10.4**	**-3.8**
DBG				IAML			17 57 14.8	
	comp=Z,2.9nm,0.8s							
DBG	**Daneborg**	**7.59**	**253**	*i*P		**Pn**	**17 55 51.2**	**+2.1**
DBG				*i*S		**Sn**	**17 57 10.4**	**-3.8**
DBG				IAML			17 57 14.8	
	comp=Z,2.9nm,0.8s							
ZFI2	**Zemlya Franca-**	**7.62**	**51**	*e*P		**Pn**	**17 55 50.4**	**+0.9**
ZFI2				*e*S		**Sn**	**17 57 10.0**	**-4.9**
	comp=Z,11nm,3.8s							
ARA0	**ARCESS Array S**	**9.98**	**141**	Pn		**Pn**	**17 56 23.8**	**+1.9**
	baz=350,slow=11							
ARA0				Sn		**Sn**	**17 58 08.9**	**-4.1**
	baz=340,slow=16							
ARA0	**ARCESS Array S**	**9.98**	**141**	Pn		**Pn**	**17 56 23.8**	**+1.9**
ARA0				Sn		**Sn**	**17 58 08.9**	**-4.1**
ARCES	**ARCESS Array B**	**9.98**	**141**	P		**Pn**	**17 56 24.8**	**+2.8**
ARCES				S		**Sn**	**17 58 08.8**	**-4.2**
VADS	**Vadso**	**9.99**	**133**	P		**Pn**	**17 56 25.4**	**+3.4**
VADS				S		**Sn**	**17 58 07.8**	**-5.2**
NEEM	**North Greenlan**	**11.93**	**295**	*i*P		Pn	17 56 47.3	-1.4
NEEM				*i*S		Sn	17 58 49.6	-11
NEEM				IAML			17 58 56.4	
	comp=Z,2.8nm,0.4s							
NEEM	**North Greenlan**	**11.93**	**295**	*i*P		Pn	17 56 47.3	-1.4
NEEM				*i*S		Sn	17 58 49.6	-11
NEEM				IAML			17 58 56.4	
	comp=Z,2.8nm,0.4s							
SUMG	**Summit**	**12.51**	**268**	*e*P		**Pn**	**17 56 56.3**	**-0.5**
SUMG				*i*S		Sn	17 59 08.2	-7.1
SUMG				IAML			17 59 10.6	
	comp=Z,1.9nm,0.8s							
SUMG	**Summit**	**12.51**	**268**	*e*P		**Pn**	**17 56 56.3**	**-0.5**
SUMG				*i*S		Sn	17 59 08.2	-7.1
SUMG				IAML			17 59 10.6	
	comp=Z,1.9nm,0.8s							
APA0	**Apatity Array**	**12.83**	**132**	Pn		**Pn**	**17 57 04.2**	**+3.4**
	baz=328,slow=14							
APA0	**Apatity Array**	**12.83**	**132**	Pn		**Pn**	**17 57 04.2**	**+3.4**
KVDA	**Kovda**	**13.66**	**134**	P		**Pn**	**17 57 12.0**	**-0.1**

*AFAD **21** 17:55:11.6, 38°.28N×38°.81E, h7^{km}±2^{km}, ML2.6*
*ISK **21** 17:55:11.2, 38°.28N×38°.82E, h10^{km}, ML2.6/10*

ISC 21 17:55:11.6±0.9, 38°.29N±0°.03×38°.82E±0°.03, h12^{km}±7^{km}, n18, σ0°.30/28, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MDYL	**Doganyol-Malat**	**0.17**	**83**	Pg		**Pg**	**17 55 15.5**	**-0.2**
MDYL				Sg		**Sg**	**17 55 18.3**	**-0.2**
ESGZ	**Sivrice-Elazig**	**0.24**	**54**	Pg		**Pg**	**17 55 16.6**	**-0.2**
ESGZ				Sg		**Sg**	**17 55 20.2**	**-0.1**
ELZG	**Elazig**	**0.24**	**32**	P		**Pg**	**17 55 17.2**	**+0.3**
ELZG				S		**Sg**	**17 55 20.6**	**+0.1**
ELZG				IAML			17 55 21.0	
	comp=E,2μm,0.5s							
ELZG				IAML			17 55 22.0	
	comp=N,1μm,0.2s							
MAYA	**Malatya/Merkez**	**0.31**	**276**	P		**Pg**	**17 55 18.0**	**0.0**
MAYA				IAML			17 55 23.0	
	comp=N,975nm,0.5s							
MAYA				IAML			17 55 23.0	
	comp=E,841nm,0.3s							
MAYA				S		**Sb**	**17 55 23.4**	**-0.9**
SVRC	**Sivrice-ELAZID**	**0.39**	**77**	Pg		**Pg**	**17 55 19.3**	**-0.3**
SVRC				Sg		**Sg**	**17 55 25.4**	**+0.5**
NARI	**Adyaman-Kaht**	**0.41**	**186**	P		**Pg**	**17 55 19.7**	**-0.1**
NARI				S		**Sg**	**17 55 25.6**	**+0.3**
ESIJ	**Sivrice-Elazig**	**0.42**	**68**	Pg		**Pg**	**17 55 20.2**	**+0.2**
ELZ	**Elazig**	**0.50**	**37**	P		**Pg**	**17 55 21.7**	**+0.2**
ELZ				S		**Sb**	**17 55 29.3**	**-0.5**
ELZ				IAML			17 55 30.0	
	comp=N,327nm,0.2s							
ELZ				IAML			17 55 30.0	
	comp=E,428nm,0.2s							
MDNT	**Maden**	**0.69**	**81**	P		**Pn**	**17 55 27.1**	**-0.1**
MDNT				S		**Sn**	**17 55 37.7**	**-0.2**
AKCD	**Akcadag**	**0.70**	**271**	P		**Pg**	**17 55 25.3**	**-0.1**
AKCD				S		**Sb**	**17 55 35.6**	**0.0**
AKCD				IAML			17 55 36.0	
	comp=N,442nm,0.7s							
AKCD				IAML			17 55 37.0	
	comp=E,535nm,0.5s							
MCKZ	**Bingol**	**0.83**	**8**	P		**Pg**	**17 55 27.6**	**-0.2**
MCKZ				S		**Sb**	**17 55 39.8**	**+0.4**
MCKZ				IAML			17 55 40.0	
	comp=N,154nm,0.3s							
MCKZ				IAML			17 55 40.0	
	comp=E,251nm,0.3s							
KOVA	**Elazig, Kovanc**	**0.88**	**62**	P		**Pg**	**17 55 28.8**	**0.0**
ARPR	**Arapgir-MALATY**	**0.89**	**335**	Pg		**Pb**	**17 55 29.3**	**+0.3**
DYBB	**Diyarbakir**	**1.09**	**108**	Pn		**Pb**	**17 55 32.7**	**+0.2**
ILIC	**ilic-Erzincan**	**1.18**	**350**	Pn		**Pg**	**17 55 34.1**	**-0.2**
ERZN	**Erzincan**	**1.47**	**28**	Pn		**Pb**	**17 55 38.9**	**-0.1**
GAZ	**Gaziantep**	**1.69**	**229**	Pn		**Pn**	**17 55 41.2**	**+0.1**
KMRS	**Kahramanmaras**	**1.71**	**243**	Pn		**Pn**	**17 55 41.5**	**+0.3**

*CATAC **21** 17:56:49.4±0.6, 10°N±5°×8°7W±°, h13^{km}±6^{km}, M3.6/18, MLv3.6/18, Error ellipse: s-maj=11.7km s-min=3.8km az=21.9, confirmed*
*UCR **21** 17:56:58.4±1.0, 10°.31N×86°.28W, h20^{km}±13^{km}, MW4.0, Presumed earthquake*

ISC 21 17:56:50.2±2.1, 9°.92N±0°.09×86°.72W±0°.07, h20^{km}±15^{km}, n53, σ1°.19/67, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SACU	**Santa Cruz**	**1.17**	**73**	*e*P		**Pn**	**17 57 11.6**	**+0.2**
JUD3	**Juan Diaz 3**	**1.19**	**78**	*e*P		**Pb**	**17 57 12.4**	**+0.4**
INDI	**Punta indio, G**	**1.20**	**92**	S		**Sb**	**17 57 30.4**	**+3.1**
DELF	**Filadelfia**	**1.26**	**65**	*e*P		**Pn**	**17 57 12.5**	**-0.2**
DELF				*e*S		**Sn**	**17 57 23.1**	**-5.9**
NICO	**Nicoya**	**1.27**	**80**	*e*P		**Pb**	**17 57 13.8**	**+0.4**
ALIBA	**Liberia Airpor**	**1.33**	**60**	*e*P		**Pn**	**17 57 13.8**	**+0.1**
ELI1	**Hacienda Flor**	**1.36**	**58**	*e*P		**Pn**	**17 57 14.4**	**+0.4**
PLVR	**Palo Verde**	**1.41**	**72**	*e*P		**Pn**	**17 57 15.2**	**+0.3**
LAPC	**Finca la Perla**	**1.52**	**56**	*e*P		**Pn**	**17 57 15.7**	**+0.6**
BAGA	**Bagaces**	**1.56**	**67**	*e*P		**Pn**	**17 57 17.3**	**+0.6**
GPS3	**Bodega del ICE**	**1.57**	**58**	*e*P		**Pb**	**17 57 18.7**	**+0.1**
LCRUZ	**La Cruz**	**1.57**	**43**	*e*P		**Pn**	**17 57 17.0**	**+0.1

GLVR				A	A	18 02 45.4
	300nm,0.5s					
NMR	**Nemuro--Hokkai**	**2.43**	**244**	*eP*	**Pn**	**18 02 11.8 +0.6**
NMR				*eS*	**Sb**	**18 02 41.3 -4.5**
JRA	**Rausu**	**2.65**	**260**	*eP*	**Pn**	**18 02 16.0 +1.8**
JRA				*eS*	**Sn**	**18 02 46.0 +0.6**
JNSB	**Nemuroshibetsu**	**2.77**	**257**	*eP*	**Pn**	**18 02 17.8 +1.9**
JNSB				*eS*	**Sn**	**18 02 49.5 +1.1**
JKHN	**Kushirohamanak**	**2.93**	**243**	*eP*	**Pn**	**18 02 18.0 -0.1**
JKHN				*eS*	**Sn**	**18 02 50.1 -2.3**
JNK	**Nakash**	**3.02**	**254**	*eP*	**Pn**	**18 02 20.9 +1.6**
JNK				*eS*	**Sn**	**18 02 54.6 -0.1**
AKK	**Akkeshi**	**3.17**	**244**	*eP*	**Pn**	**18 02 23.1 +1.7**
JAK	**Akkeshi**	**3.27**	**245**	*eP*	**Pn**	**18 02 23.6 +0.8**
JAK				*eS*	**Sn**	**18 02 59.3 -1.5**
JTKR	**Abashiri--Toko**	**3.50**	**264**	*eP*	**Pn**	**18 02 29.6 +3.7**
JAR	**Ashorobuto**	**3.77**	**254**	*eS*	**Sn**	**18 03 14.3 +1.1**
JCH	**Churui**	**4.32**	**246**	*eP*	**Pn**	**18 02 38.8 +1.6**
JCH				*eS*	**Sn**	**18 03 25.1 -1.5**
JNBK	**Urakawa-nobuka**	**4.88**	**245**	*eP*	**Pn**	**18 02 46.0 +1.2**
JANG	**Nango**	**6.72**	**235**	*eS*	**Sn**	**18 04 21.0 -5.0**

*NEIC **21** 18:04:07.2±1.3, 4.2S±0.1×152.0E±0.1, h25km±9km, mb4.0/12, Error ellipse: s-maj=22.0km s-min=15.4km az=118.0*
*IDC **21** 18:04:13.9±8.9, 4.49S×152.01E, h74km±60km, mb3.6/6, mbtmp3.9/7, ML2.0/1, MS3.0/1, Error ellipse: s-maj=110.6km s-min=32.0km az=97.0*
ISC 21 18:04:07.5±1.0, 4.2S±0.1×152.1E±0.2, h35km, n29, σ1s49/28, mb4.0/10, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RABL	**Rabaul**	**0.05**	**41**			**Pn**	**18 04 12.2**	**-1.2**
KRVT	**Keravat (AS076**	**0.13**	**233**	LR		LR	18 04 29.3	
	comp=Z,259nm,19.3s,baz=3.1,slow=86							
PMG	**Port Moresby**	**7.13**	**224**	P		**Pn**	**18 05 52.0**	**+2.6**
	1.9nm,0.3s,baz=50,slow=8.8,SNR=12							
PMG				S		**Sn**	**18 07 09.3**	**0.0**
	12nm,0.8s,baz=313,slow=24,SNR=2.0							
	13nm,0.6s							
PMG	**Port Moresby**	**7.13**	**224**			**Pn**	**18 05 49.4**	**0.0**
PMG						**Sn**	**18 07 04.9**	**-4.4**
WR8	**Warramunga Arr**	**23.23**	**226**	P		**P**	**18 09 10.3**	**-1.5**
WR8				IAmb		IAmb	18 09 13.6	
	comp=Z,6.1nm,0.9s							
WRA	**Warramunga Arr**	**23.34**	**227**	P		**P**	**18 09 12.7**	**-0.2**
	comp=Z,4.1nm,0.8s,baz=51,slow=9.6,SNR=17							
	comp=Z,4.1nm,0.8s							
WRA	**Warramunga Arr**	**23.34**	**227**	P		**P**	**18 09 09.8**	**-3.1**
KNRA	**Kununurra**	**25.64**	**242**	P		**P**	**18 09 33.8**	**-0.3**
INKA	**Innaminka**	**25.78**	**204**	P		**P**	**18 09 36.0**	**+0.7**
INKA				IAmb		IAmb	18 09 41.7	
	comp=Z,2.4nm,0.8s							
AS31	**Alice Springs**	**26.13**	**221**	P		**P**	**18 09 37.6**	**-1.0**
ASAR	**Alice Springs**	**26.14**	**221**	P		**P**	**18 09 39.5**	**+0.9**
	comp=Z,4.5nm,0.7s,baz=57,slow=8.7,SNR=48							
	comp=Z,4.5nm,0.7s							
ASAR	**Alice Springs**	**26.14**	**221**	P		**P**	**18 09 38.5**	**0.0**
BBOO	**Buckleboo**	**32.17**	**206**	P		**P**	**18 10 32.0**	**-0.1**
FORT	**Forrest**	**34.82**	**218**	P		**P**	**18 10 55.0**	**-0.1**
TGY	**Tagaytay City**	**35.90**	**301**	LR		LR	18 25 48.8	
	comp=Z,20nm,19.4s,baz=50,slow=36							
SBUM	**Sibu**	**40.43**	**279**	P		**P**	**18 11 42.6**	**-0.4**
SBUM				IAmb		IAmb	18 11 51.2	
	comp=Z,5.3nm,1.5s							
KSAR	**Wonju Array Be**	**47.20**	**334**	P		**P**	**18 12 36.5**	**-0.4**
KS19	**Wonju Array Si**	**47.26**	**334**	P		**P**	**18 12 36.7**	**-0.7**
CMAR	**Chiang Mai Arr**	**57.03**	**295**	P		**P**	**18 13 52.8**	**+2.3**
	comp=Z,0.9nm,0.7s,baz=107,slow=6.6,SNR=6.9							
	comp=Z,0.9nm,0.7s							
CMAR	**Chiang Mai Arr**	**57.03**	**295**	P		**P**	**18 13 50.0**	**-0.4**
SONM	**Songino Array**	**65.49**	**328**	P		P	18 14 52.0	+4.7
	comp=Z,1.1nm,0.8s,baz=143,slow=4.4,SNR=3.7							
	comp=Z,1.1nm,0.8s							
SONM	**Songino Array**	**65.49**	**328**	P		**P**	**18 14 46.7**	**-0.6**
SONM				IAmb		IAmb	18 14 57.4	
	comp=Z,3.5nm,1.4s							
MKAR	**Makanchi Array**	**79.46**	**319**	P		**P**	**18 16 12.1**	**+1.6**
	comp=Z,0.3nm,0.8s,baz=101,slow=6.3,SNR=3.7							
	comp=Z,0.3nm,0.8s							
MKAR	**Makanchi Array**	**79.46**	**319**	P		**P**	**18 16 11.0**	**+0.5**
ZAA0	**Zalesovo Array**	**80.31**	**326**	P		**P**	**18 16 15.0**	**+0.1**
ZAA0				IAmb		IAmb	18 16 24.8	
	comp=Z,1.1nm,0.8s							
ZALV	**Zalesovo Beam**	**80.31**	**326**	P		**P**	**18 16 16.4**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=134,slow=8.3,SNR=2.1							
	comp=Z,0.2nm,0.3s							
ZALV	**Zalesovo Beam**	**80.31**	**326**	P		**P**	**18 16 15.8**	**+0.9**
QSPA	**South Pole Qui**	**85.73**	**180**	P		**P**	**18 16 44.1**	**+1.2**
TORD	**Torodi Ar. Bea**	**149.50**	**289**	PKPbc		**PKiKP**	**18 23 55.6**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=80,slow=2.6,SNR=3.6							

*IDC **21** 18:13:33.8±2.1, 56.24N×162.09E, h0km, mb3.4/4, mbtmp3.4/5, ML2.2/1, MS3.7/1, Error ellipse: s-maj=49.6km s-min=26.3km az=137.0*
*KRSC **21** 18:13:34.5±0.7, 55.75N×162.66E, h23km±15km, Ml3.8*
ISC 21 18:13:34.3±1.5, 55.89N±0.03×162.51E±0.04, h12km±10km, n43, σ1s95/48, mb3.3/4, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KBTR	**Krutoberegovo**	**0.36**	**28**	*eP*		**Pn**	**18 13 44.8**	**-0.5**
KBTR				*eS*		**Sb**	**18 13 52.2**	**+4.1**
KBG	**Krutoberegovo**	**0.38**	**17**	*eP*		**Pn**	**18 13 45.1**	**-0.4**
KBG				*eS*		**Sb**	**18 13 52.8**	**+4.1**
SMKR	**Semkarok**	**0.90**	**320**	*eP*		**Pn**	**18 13 53.7**	**+0.9**
SMKR				*eS*		**Sn**	**18 14 07.7**	**+2.0**
BZGR	**Bezymyannyi-Gr**	**1.02**	**273**	*eP*		**Pn**	**18 13 55.5**	**+1.0**
BZP	**Bezymyannyi-Pe**	**1.11**	**272**	*eP*		**Pn**	**18 13 56.4**	**+0.7**
KLY	**Klyuchi**	**1.12**	**293**	*eP*		**Pn**	**18 13 55.2**	**-0.6**
KLY				*eS*		**Sn**	**18 14 10.2**	**-0.9**
BZWR	**Bezymyannyi-We**	**1.14**	**274**	*eP*		**Pn**	**18 13 57.5**	**+1.4**
KIRR	**Kirishev**	**1.22**	**274**	*eP*		**Pn**	**18 13 58.0**	**+0.8**
KPT	**Kopyto**	**1.29**	**274**	*eP*		**Pg**	**18 13 58.9**	**-0.1**
KMNR	**Kamenistaya**	**1.29**	**265**	*eP*		**Pg**	**18 13 59.5**	**+0.4**
KMNR				*eS*		**Sn**	**18 14 17.9**	**+2.5**
TUMD	**Tumrok D**	**1.39**	**241**	*eP*		**Pg**	**18 14 00.2**	**-0.7**
TUMR	**Tumrok**	**1.48**	**246**	*eP*		**Pg**	**18 14 01.9**	**-0.7**
KOZ	**Kozyrevsk**	**1.49**	**277**	*eP*		**Pg**	**18 14 03.1**	**+0.2**
KOZ				*eS*		**Sg**	**18 14 24.1**	**+1.8**
SRDR	**Sredinnyy**	**1.62**	**286**	*eP*		**Pg**	**18 14 04.7**	**-0.7**
SRDR				*eS*		**Sg**	**18 14 26.7**	**+0.3**
BKI	**Bering**	**2.08**	**108**	*eS*		**Sn**	**18 14 33.5**	**-1.2**
ESO	**Esso**	**2.15**	**272**	*eP*		**Pb**	**18 14 11.8**	**-1.3**
KII	**Karymskiy**	**2.57**	**225**	*eP*		**Pn**	**18 14 17.2**	**+1.6**
TIGL	**Tigil**	**2.82**	**313**	*eP*		**Pg**	**18 14 24.2**	**-4.2**
SPN	**Mys Shipunski**	**3.16**	**208**	*eS*		**Sn**	**18 14 59.3**	**-1.8**
NLC	**Nalytchevo**	**3.29**	**215**	*eS*		**Sn**	**18 15 04.9**	**+0.4**
SDLR	**Sedlovina**	**3.37**	**220**	*eP*		**Pn**	**18 14 28.9**	**+2.2**
OSSR	**Ossora**	**3.38**	**5**	*eP*		**Pn**	**18 14 28.8**	**+2.1**
KRX	**Arik**	**3.39**	**223**	*eP*		**Pn**	**18 14 28.8**	**+1.7**
SMAR	**Somma**	**3.41**	**221**	*eP*		**Pn**	**18 14 28.5**	**+1.2**
AVH	**Avacha**	**3.43**	**221**	*eP*		**Pn**	**18 14 29.6**	**+2.0**
GNL	**Ganaly**	**3.44**	**232**	*eP*		**Pn**	**18 14 30.2**	**+2.4**
UGLR	**Uglovaya**	**3.44**	**220**	*eP*		**Pn**	**18 14 29.0**	**+1.3**
KOK	**Koryaka**	**3.45**	**222**	*eP*		**Pn**	**18 14 31.1**	**+3.3**
PALN	**Palana**	**3.49**	**338**	*eP*		**Pb**	**18 14 35.6**	**-0.2**
DALK	**Dalny**	**3.61**	**219**	*eP*		**Pn**	**18 14 31.4**	**+1.5**
DALK				*eS*		**Sn**	**18 15 12.9**	**+0.5**
PETK	**Petropavlovsk-**	**3.96**	**227**	Pn		**Pn**	**18 14 36.4**	**+1.7**
	0.7nm,0.3s,baz=50,slow=17,SNR=9.5							
PETK				Sn		**Sb**	**18 15 28.8**	**-2.9**
	0.4nm,0.3s,baz=46,slow=15,SNR=1.8							
	2.1nm,0.4s							
KRMR	**Karymshinskiy**	**4.00**	**222**	*eP*		**Pn**	**18 14 36.9**	**+1.7**
GRL	**Gorelyy**	**4.24**	**220**	*eP*		**Pn**	**18 14 42.5**	**+3.8**
MTVR	**Mutnovka**	**4.26**	**218**	*eP*		**Pn**	**18 14 40.9**	**+2.0**
ASAK	**Asacha**	**4.44**	**220**	*eP*		**Pn**	**18 14 43.8**	**+2.4**
ILAR	**Eielson Array**	**25.87**	**49**	P		**P**	**18 19 06.1**	**+0.7**
	0.4nm,0.9s,baz=268,slow=7.5,SNR=2.4							
	0.4nm,0.9s							
H11N2	**WAKE ISLAND Hy**	**36.26**	**173**	T		T	18 59 12.9	
	baz=356,slow=76,SNR=23							
H11N3	**WAKE ISLAND Hy**	**36.27**	**173**	T		T	18 59 05.8	
	baz=356,slow=76,SNR=26							
H11N1	**WAKE ISLAND Hy**	**36.27**	**173**	T		T	18 59 10.6	
	baz=356,slow=76,SNR=24							
KURBB	**Kurchatov Arra**	**47.58**	**301**	P		**P**	**18 22 07.1**	**-2.2**
	0.2nm,0.5s,baz=56,slow=8.3,SNR=4.7							
	0.2nm,0.5s							
MKAR	**Makanchi Array**	**48.23**	**295**	P		**P**	**18 22 12.5**	**-2.0**
	0.1nm,0.5s,baz=47,slow=8.6,SNR=1.4							
	0.1nm,0.5s							
FRB	**Frobisher Bay**	**54.37**	**25**	LR		LR	18 49 23.9	
	comp=Z,69nm,18.1s,baz=336,slow=40							
FINES	**FINESS Array B**	**58.10**	**337**	P		**P**	**18 23 26.4**	**-0.4**
	3.7nm,1.1s,baz=33,slow=6.8,SNR=4.5							
	3.7nm,1.1s							

*UPP **21** 18:17:30.0±0.1, 67.86N×20.16E, h0km, ML2.5, Confirmed Induced event*
*HEL **21** 18:17:31.6±0.6, 67.80N×20.34E, h0km, ML1.1, Suspected explosion*
ISC 21 18:17:29.6±0.9, 67.82N±0.03×20.27E±0.04, h0km, n23, σ0s89/32, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KUA	**Kurravaara**	**0.14**	**10**	P		**Pg**	**18 17 32.2**	**+0.1**
KUA				S		**Sg**	**18 17 34.4**	**+0.4**
RATU	**Laukkuluspa**	**0.26**	**271**	P		**Pg**	**18 17 34.1**	**-0.3**
KOVU	**Salmi**	**0.41**	**354**	P		**Pg**	**18 17 37.4**	**+0.1**
NIKU	**Nikkaluokta**	**0.47**	**276**	P		**Pg**	**18 17 38.3**	**-0.3**
LANU	**Lannavaara**	**0.69**	**70**	P		**Pb**	**18 17 43.8**	**-0.7**
LANU	**Lannavaara**	**0.69**	**70**	PG		**Pb**	**18 17 43.8**	**-0.7**
LANU				SG		**Sg**	**18 17 50.4**	**-1.3**
MASU	**Masugnsbyn**	**0.76**	**118**	P		**Pb**	**18 17 45.7**	**+0.1**
SALU	**Saltoluokta**	**0.81**	**238**	*eP*		**Pg**	**18 17 44.8**	**-0.2**
SALU	**Saltoluokta**	**0.81**	**238**	P		**Pg**	**18 17 44.9**	**-0.2**
HEF	**Hetta**	**1.40**	**64**	*eP*		**Pn**	**18 17 56.0**	**-0.3**
HEF	**Hetta**	**1.40**	**64**	PG		**Pb**	**18 17 56.4**	**-0.2**
	baz=242							
HEF				smax		smax	18 18 13.3	
	comp=Z,1.8nm,0.2s							
HEF				SG		**Sg**	**18 18 14.0**	**-0.5**
ERTU	**Ertsjaerv**	**1.48**	**149**	P		**Pb**	**18 17 58.4**	**+0.6**
ERTU	**Ertsjaerv**	**1.48**	**149**	PN		**Pb**	**18 17 57.8**	**-0.1**
ERTU				SN		**Sn**	**18 18 19.6**	**+2.3**
KLF	**Kolari**	**1.54**	**111**	PG		**Pb**	**18 17 58.6**	**-0.3**
	baz=297							
KLF				smax		smax	18 18 16.7	
	comp=Z,1.0nm,0.2s							
KLF				SN		**Sg**	**18 18 20.4**	**+1.6**
KTK1	**Kautokeino**	**1.62**	**41**	PG		**Pg**	**18 18 00.4**	**-0.3**
KTK1				SN		**Sg**	**18 18 23.3**	**+1.7**
HARU	**Harads**	**1.69**	**170**	P		**Pg**	**18 18 01.5**	**-0.3**
TRO	**Tromso**	**1.89**	**346**	SG		**Sb**	**18 18 28.7**	**-0.1**
TOF	**Tornio**	**2.37**	**136**	PG		**Pb**	**18 18 12.0**	**-1.0**
TOF				smax		smax	18 18 40.8	
	comp=Z,0.8nm,0.2s							
TOF				SG		**Sg**	**18 18 44.9**	**-0.6**
RNF	**Rovaniemi**	**2.54**	**116**	PB		**Pb**	**18 18 15.2**	**-0.8**
RNF				SG		**Sb**	**18 18 48.7**	**+0.9**
ARA0	**ARCESS Array S**	**2.57**	**46**	PB		**Pb**	**18 18 16.0**	**-0.5**
	baz=226							
ARA0				SB		**Sb**	**18 18 48.6**	**-0.1**
RAJF	**Raja-Jooseppi**	**3.08**	**74**	SB		**Sb**	**18 19 03.9**	**+0.7**
KEV	**Kevo**	**3.13**	**48**	SB		**Sb**	**18 19 04.1**	**-0.4**
RANF	**Ranua**	**3.14**	**122**	SG		**Sg**	**18 19 08.2**	**-2.2**

*IDC **21** 18:18:56.2±1.3, 14.21N×57.93E, h0km, mb3.8/10, mbtmp3.8/10, MS3.5/2, Error ellipse: s-maj=30.6km s-min=27.1km az=17.0*
*NEIC **21** 18:18:57.1±2.0, 14.51N±0.09×57.78E±0.1, h10km±1km, mb4.0/15, Error ellipse: s-maj=18.9km s-min=15.3km az=108.0*
*OMAN **21** 18:19:11.2±1.1, 15.34N×57.47E, h10km, mb3.6/15, ml3.5/5, ms2.4/3, Error ellipse: s-maj=9.4km s-min=5.2km az=147.0*
ISC 21 18:18:57.4±0.6, 14.34N±0.08×57.79E±0.07, h17km, n54, σ1s73/56, mb3.9/15, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SHAO	**Shalim**	**4.21**	**331**	P		**Pn**	**18 20 01.7**	**+0.8**
	SNR=99							
SHAO				S		Sn	18 20 39.3	-10
DMTO	**DMTO**	**4.33**	**321**	P		**Pn**	**18 20 04.0**	**+1.5**
	SNR=546							
DMTO				S		Sn	18 20 44.7	-7.9
RBK	**Rabkut**	**4.67**	**313**	P		**Pn**	**18 20 09.1**	**+1.9**
	SNR=6.4							
RBK				S		**Sn**	**18 20 55.5**	**-5.6**
WHFO	**Wadi Hawf**	**5.25**	**313**	P		**Pn**	**18 20 17.5**	**+2.3**
	SNR=7.2							
ABTO	**Aybut**	**5.26**	**305**	P		**Pn**	**18 20 17.7**	**+2.4**
ABTO				S		**Sn**	**18 21 14.6**	**-1.1**
DOK	**Doka**	**5.51**	**321**	P		**Pn**	**18 20 20.8**	**+2.0**
MHTO	**MHTO**	**6.61**	**1**	P		**Pn**	**18 20 34.8**	**+0.9**
MHTO				S		Sn	18 21 43.1	-5.8
JLN	**Jalan Bani Buh**	**7.92**	**11**	P		**Pn**	**18 20 52.0**	**+0.1**
	SNR=16							
JLN				S		Sn	18 22 12.7	-8.4
JMDO	**Jabal Madar**	**7.99**	**2**	P		**Pn**	**18 20 54.6**	**+1.7**
JMDO				S		Sn	18 22 16.6	-6.3
WBK	**Wadi Bani Khal**	**8.30**	**8**	P		**Pn**	**18 20 58.3**	**+1.2**
	SNR=8.2							
WBK				S		Sn	18 22 23.5	-7.2
BSY	**Bisya**	**8.38**	**356**	P		**Pn**	**18 20 59.9**	**+1.7**
	SNR=5.6							
BSY				S		Sn	18 22 26.4	-6.0
SMDO	**Samad**	**8.68**	**2**	P		**Pn**	**18 21 03.5**	**+1.2**
	SNR=5.9							
SMDO				S		Sn	18 22 33.1	-6.8
UMZA	**Um Al Zommool**	**8.69**	**344**	P		**Pn**	**18 21 03.8**	**+1.4**
UMZA				S		Sn	18 22 32.2	-8.0
WSAR	**Wadi Sarin**	**8.89**	**5**	P		**Pn**	**18 21 06.7**	**+1.5**
	SNR=15							
WSAR				S		Sn	18 22 39.2	-5.8
ARQ	**Araqi**	**9.03**	**353**	P		**Pn**	**18 21 09.5**	**+2.4**
	SNR=32							
ARQ				P		**Pn**	**18 21 09.5**	**+2.4**
	SNR=32							
ARQ				S		Sn	18 22 41.0	-7.5
ARQ				S		Sn	18 22 41.0	-7.5
HOQ	**Hoqain**	**9.21**	**357**	P		**Pn**	**18 21 12.0**	**+2.4**
	SNR=28							
MZR	**Muzera**	**9.53**	**335**	P		**Pn**	**18 21 14.6**	**+0.6**
MZR				P		**Pn**	**18 21 14.6**	**+0.6**
SOHO	**SOHO**	**9.82**	**353**	P		**Pn**	**18 21 19.6**	**+1.7**
ALNE	**Al Ain**	**9.86**	**349**	P		**Pn**	**18 21 20.6**	**+2.2**
ALNE				P		**Pn**	**18 21 20.6**	**+2.2**
ASHO	**Ashiyiah**	**10.42**	**351**	P		**Pn**	**18 21 27.4**	**+1.2**
	SNR=5.3							
HATD	**Hatta, Dubai**	**10.55**	**352**	P		**Pn**	**18 21 29.5**	**+1.6**
UOSS	**Minazif**	**10.66**	**352**	Pn		Pn	18 21 26.2	-3.2
MASF	**Masafi**	**11.08**	**352**	P		**Pn**	**18 21 36.9**	**+1.7**
JASK	**Jask - Hormozg**	**11.47**	**0**	P		**Pn**	**18 21 43.1**	**+2.6**
JASK				S		Sn	18 23 41.0	-7.4
RAYN	**Ar Rayn**	**14.77**	**310**			**Pn**	**18 22 24.0**	**-1.7**
MSEY	**Mahe Island**	**19.03**	**187**	P		**Pn**	**18 23 17.6**	**-2.0**
MSEY				IAmb		IAmb	18 23 57.1	
	comp=Z,7.5nm,0.9s							
KIBK	**Kibwezi**	**25.64**	**231**	P		**P**	**18 24 26.4**	**-0.1**
KIBK				IAmb		IAmb	18 24 40.1	
	comp=Z,4.4nm,0.9s							
DGAR	**Diego Garcia**	**26.05**	**145**	P		**P**	**18 24 29.2**	**-0.9**
BTK	**Batken**	**28.05**	**22**	P		**P**	**18 24 46.7**	**-1.4**
BTK				IAmb		IAmb	18 24 52.6	
	comp=Z,3.4nm,1.0s							
EVN	**Everest**	**30.18**	**59**	P		**P**	**18 25 06.2**	**-1.6**
EVN				IAmb		IAmb	18 25 11.0	
	comp=Z,2.7nm,0.7s							
MKAR	**Makanchi Array**	**38.30**	**27**	P		**P**	**18 26 19.6**	**+2.5**
	comp=Z,0.6nm,0.8s,baz=216,slow=6.0,SNR=5.1							
	comp=Z,0.6nm,0.8s							
MKAR	**Makanchi Array**	**38.30**	**27**	P		**P**	**18 26 18.5**	**+1.4**
CMAR	**Chiang Mai Arr**	**39.63**	**78**	P		**P**	**18 26 29.6**	**+1.0**
	comp=Z,1.1nm,0.3s,baz=278,slow=8.2,SNR=4.8							
	comp=Z,1.1nm,0.3s							
CMAR	**Chiang Mai Arr**	**39.63**	**78**	P		**P**	**18 26 28.0**	**-0.6**
KURBB	**Kurchatov Arra**	**39.91**	**21**	P		**P**	**18 26 32.7**	**+2.3**
	comp=Z,0.8nm,0.7s,baz=217,slow=8.3,SNR=13							
	comp=Z,0.8nm,0.7s							
KURK	**Kurchatov**	**40.02**	**21**	P		**P**	**18 26 31.0**	**-0.4**
KURK				IAmb		IAmb	18 26 38.6	
	comp=Z,2.9nm,1.3s							
MLR	**Muntele Rosu**	**41.05**	**326**	LR		LR	18 47 21.3	
	comp=Z,41nm,19.8s,baz=216,slow=41							
BURAR	**Bucovina Array**	**42.79**	**328**	P		**P**	**18 26 54.1**	**-0.2**
BURAR				IAmb		IAmb	18 27 14.6	
	comp=Z,1.7nm,1.2s							
ZAA0	**Zalesovo Array**	**44.86**	**22**	P		**P**	**18 27 10.4**	**-0.3**
ZAA0				IAmb		IAmb	18 27 13.3	
	comp=Z,1.8nm,0.7s							
ZALV	**Zalesovo Beam**	**44.86**	**22**	P		**P**	**18 27 12.3**	**+1.6**
	comp=Z,1.8nm,0.6s,baz=233,slow=7.3,SNR=12							
	comp=Z,1.8nm,0.6s							
ZALV	**Zalesovo Beam**	**44.86**	**22**	P		**P**	**18 27 11.0**	**+0.3**
SONM	**Songino Array**	**52.15**	**40**	P		**P**	**18 28 08.9**	**+1.7**
	comp=Z,0.7nm,0.7s,baz=228,slow=9.1,SNR=6.2							
	comp=Z,0.7nm,0.7s							
SONM	**Songino Array**	**52.15**	**40**	P		**P**	**18 28 06.8**	**-0.3**
KOOLE	**Kule**	**52.26**	**225**	P		**P**	**18 28 08.2**	**0.0**
FINES	**FINESS Array B**	**52.26**	**341**	P		**P**	**18 28 09.5**	**+1.9**
	comp=Z,4.6nm,1.1s,baz=145,slow=7.0,SNR=5.9							
	comp=Z,4.6nm,1.1s							
FINES	**FINESS Array B**	**52.26**	**341**	P		**P**	**18 28 07.8**	**+0.3**
TORD	**Torodi Ar. Bea**	**54.38**	**276**	P		**P**	**18 28 26.9**	**+3.0**
	comp=Z,0.7nm,0.8s,baz=98,slow=6.2,SNR=4.1							
	comp=Z,0.7nm,0.8s							
NB201	**NORSAR Array S**	**57.34**	**335**	P		**P**	**18 28 43.5**	**-0.9**
DBIC	**Dimbokro**	**61.91**	**270**	LR		LR	18 53 12.2	
	comp=Z,45nm,19.8s,baz=214,slow=33							
KSRS	**Korea Array**	**65.73**	**55**	P		**P**	**18 29 40.9**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=266,slow=6.0,SNR=2.4							
	comp=Z,0.6nm,0.7s							
WRA	**Warramunga Arr**	**82.61**	**113**	P		**P**	**18 31 21.0**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=289,slow=5.0,SNR=3.4							
	comp=Z,0.4nm,0.8s							
WR0	**Warramunga Arr**	**82.80**	**113**	P		**P**	**18 31 20.6**	**-0.7**
ASAR	**Alice Springs**	**83.40**	**116**	P		**P**	**18 31 24.9**	**+0.5**
	comp=Z,0.3nm,0.9s,baz=288,slow=5.2,SNR=2.2							
	comp=Z,0.3nm,0.9s							
C16K	**Lisburne Hills**	**92.00**	**15**	P		**P**	**18 32 04.9**	**-0.1**

*TAP **21** 18:22:36.1, 24.52N×122.57E, h12km, ML2.7, C*
*JMA **21** 18:22:36.5±0.1, 24.4N±1.1×122.6E±0.3, h23km±1km, MV2.3/13, NW OFF ISHIGAKIJIMA IS*
ISC 21 18:22:35.5±1.0, 24.53N±0.03×122.61E±0.02, h12km±9km, n81, σ0s52/129, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JYNG	**Yonagunijimaku**	**0.31**	**104**	*i P*		**Pb**	**18 22 43.6**	**+0.6**
JYNG				*eS*		**Sb**	**18 22 48.7**	**+0.6**
EOS3	**EOS3**	**0.36**	**229**	*i P*		**Pb**	**18 22 43.8**	**0.0**
EOS3				S		**Sb**	**18 22 49.8**	**+0.5**
EOS2	**EOS2**	**0.36**	**253**	*i P*		**Pb**	**18 22 43.7**	**-0.1**
EOS2				*eS*		**Sb**	**18 22 49.5**	**0.0**
YOJ	**Yonaguni jima**	**0.37**	**100**	P		**Pb**	**18 22 44.5**	**+0.5**
YOJ	**Yonaguni jima**	**0.37**	**100**	*i* P		**Pb**	**18 22 44.5**	**+0.5**
YOJ				*i* S		**Sb**	**18 22 50.6**	**+0.9**
YOJ	**Yonaguni jima**	**0.37**	**100**	P		**Pb**	**18 22 44.6**	**+0.5**
YOJ				*eS*		**Sb**	**18 22 50.4**	**+0.7**
EOS4	**EOS4**	**0.49**	**214**	*eP*		**Pb**	**18 22 46.2**	**+0.4**
EGS		**0.70**	**297**	*eP*		**Pg**	**18 22 49.0**	**0.0**
EGS				*eS*		**Sg**	**18 22 58.5**	**+0.3**
TWC	**Suao**	**0.70**	**277**	*i* P		**Pg**	**18 22 48.6**	**-0.5**
TWC				S		**Sg**	**18 22 57.7**	**-0.6**
ESAO	**Su ao**	**0.70**	**274**	*eP*		**Pg**	**18 22 49.1**	**0.0**
ESAO				*eS*		**Sg**	**18 22 57.8**	**-0.6**
TWB1	**Santiao Chiao**	**0.74**	**310**	*eP*		**Pg**	**18 22 50.2**	**+0.2**
TWB1				*eS*		**Sg**	**18 22 58.9**	**-0.8**
EWUT	**Wuta**	**0.77**	**264**

YULB eS Sn 18 23 24.9 -0.7
TWF1 Yuli 1.68 226 eP Pn 18 23 04.4 -0.4
TWF1 eS Sn 18 23 25.6 -0.7
SSLB Suanglung 1.69 244 P Pb 18 23 06.1 -0.4
SSLB Suanglung 1.69 244 eP Pb 18 23 05.8 -0.7
TWQ1 Liyutan 1.69 264 eP Pg 18 23 09.0 +1.1
SMLT Sun Moon Lake 1.69 248 eP Pb 18 23 06.1 -0.6
FULB Fuli 1.79 223 eP Pn 18 23 06.0 -0.4
WHYT Xinyi Township 1.81 243 eP Pn 18 23 06.5 -0.1
WJS Zhushan 1.86 248 eP Pb 18 23 09.0 -0.5
WNT Mingjian 1.88 250 eP Pb 18 23 10.2 +0.4
TPUB Ta-pu 2.19 237 P Pn 18 23 12.3 +0.5
TWGBT Beinan 2.21 220 P Pn 18 23 11.8 -0.2

*IDC **21** 18:29:36.5±0.6, 13˚.40S×175˚.67E, h0km, mb4.4/19, mbtmp4.4/21, ML3.0/2, MS4.2/51, Error ellipse: s-maj=19.7km s-min=14.9km az=116.0*

*NEIC **21** 18:29:38.1±1.7, 13˚.30S±0˚.03×175˚.54E±0˚.08, h10km±1km, mb4.9/119, Error ellipse: s-maj=13.9km s-min=4.8km az=84.0*

*GCMT **21** 18:29:41.1±0.1, 13˚.37S±0˚.01×175˚.75E±0˚.01, h12km, MW5.0/130, Moment Tensor Solution. s65,c91; s130,c204; Duration: 0 Moment tensor: Scale 10¹⁶Nm; M_{rr}=1.43±.10; $M_{\theta\theta}$=1.79±.09; $M_{\phi\phi}$=3.22±.09; $M_{r\theta}$=0.60±.23; $M_{\theta\phi}$=-3.69±.08; $M_{\phi r}$=0.44±.21; Best double couple: M_{o}=4.51700×10¹⁶ NP1:ϕ_s197.00000°, δ80.00000°, λ=-2.00000° NP2:ϕ_s287.00000°, δ88.00000°, λ=170.00000°. Principal axes: T 5.2430, Plg6.0000°, Azm62.0000°; N -1.4530, Plg80.0000°, Azm296.0000°; P -3.7910, Plg8.0000°, Azm153.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 18:29:38.1±0.4, **13.42S**±0.06×**175.70E**±0.07, **h10**km, **n205**, σ1.38/114, **mb4.8**/86, **MS4.3**/52, **2C-2D**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.85**	**152**	Pn	**Pn**	**18 30 51.6**	**+0.4**
	256nm,1.0s,baz=306,slow=8.7,SNR=47						
MSVF				LR	LR	18 32 25.7	
	comp=Z,5μm,18.1s,baz=325,slow=35						
MSVF	**Nonsavu**	**4.85**	**152**		**Pn**	**18 30 51.8**	**+0.6**
MSVF				Sn	**Sn**	**18 31 45.6**	**-2.0**
FUNA	**Funafuti**	**5.96**	**36**		Pn	18 31 03.1	-3.3
FUNA				Sn	Sn	18 32 00.5	-14
SANVU	**Saraoutou**	**8.47**	**255**		Pn	18 31 36.4	-4.5
AFI	**Afiamalu**	**12.19**	**94**	LR	LR	18 36 06.0	
	comp=Z,2μm,21.2s,slow=32						
DZM	**Mont Dzumac**	**12.31**	**224**	Pn	**Pn**	**18 32 34.2**	**+0.6**
	0.1nm,0.3s,baz=73,slow=18,SNR=4.0						
DZM				LR	LR	18 36 28.6	
	comp=Z,3μm,21.1s,baz=62,slow=34						
	12nm,0.9s						
HNR	**Honiara**	**15.94**	**283**	Pn	**Pn**	**18 33 23.9**	**+1.4**
	0.1nm,0.3s,baz=86,slow=6.9,SNR=8.6						
HNR				LR	LR	18 38 45.4	
	comp=Z,61nm,19.5s,baz=203,slow=34						
HNR	**Honiara**	**15.94**	**283**		**Pn**	**18 33 19.0**	**-3.6**
RAO	**Raoul Island**	**16.83**	**160**	LR	LR	18 38 37.2	
	comp=Z,1μm,20.7s,baz=350,slow=32						
TOZ	**Tahuroa Road**	**24.21**	**180**		**P**	**18 34 55.3**	**+0.4**
TOZ				IAmb	IAmb	18 35 03.7	
	comp=Z,58nm,1.3s						
URZ	**Urewera**	**24.77**	**177**	LR	LR	18 42 12.7	
	comp=Z,482nm,20.3s,baz=0.5,slow=30						
KRVT	**Keravat (AS076**	**25.05**	**289**	LR	LR	18 43 49.6	
	comp=Z,86nm,21.9s,baz=60,slow=34						
EIDS	**Eidsvold**	**26.03**	**239**		**P**	**18 35 09.6**	**-2.0**
EIDS				IAmb	IAmb	18 35 16.3	
	comp=Z,34nm,1.4s						
ARMA	**Armidale**	**27.91**	**229**	P	**P**	**18 35 27.6**	**-1.0**
PMG	**Port Moresby**	**28.24**	**275**	LR	LR	18 46 27.0	
	comp=Z,380nm,18.8s,baz=102,slow=36						
CTA	**Charters Tower**	**28.93**	**253**	LR	LR	18 45 25.4	
	comp=Z,558nm,20.8s,baz=66,slow=33						
RPZ	**Rata Peaks**	**30.45**	**187**	LR	LR	18 46 58.5	
	comp=Z,381nm,19.9s,baz=330,slow=34						
H11S2	**WAKE ISLAND Hy**	**32.93**	**344**	T	T	19 11 12.6	
	baz=164,slow=77,SNR=20						
H11S3	**WAKE ISLAND Hy**	**32.94**	**344**	T	T	19 11 12.5	
	baz=164,slow=77,SNR=15						
H11S1	**WAKE ISLAND Hy**	**32.94**	**344**	T	T	19 11 14.0	
	baz=164,slow=77,SNR=15						
PPT	**Papeete**	**33.69**	**102**	LR	LR	18 46 39.9	
	comp=Z,167nm,20.5s,baz=284,slow=30						
PPT2	**Papeete2**	**33.69**	**102**	eS	**S**	**18 41 42.4**	**-0.8**
	comp=Z,134nm,24.8s						
PPT2				eLQ	LQ	18 43 47.7	
	comp=Z,2μm,28.2s						
PPT2				eLR	LR	18 45 09.6	
	comp=Z,1μm,27.5s						
PPT2				eLR	LR	18 45 18.0	
	comp=Z,584nm,26.2s						
H11N1	**WAKE ISLAND Hy**	**34.05**	**345**	T	T	19 12 30.8	
	baz=165,slow=76,SNR=19						
H11N3	**WAKE ISLAND Hy**	**34.05**	**345**	T	T	19 12 31.4	
	baz=165,slow=76,SNR=24						
H11N2	**WAKE ISLAND Hy**	**34.06**	**345**	T	T	19 12 36.8	
	baz=165,slow=76,SNR=11						
TBI	**Tubuai**	**34.43**	**112**	eS	**S**	**18 41 55.7**	**+1.4**
	comp=Z,690nm,33.2s						
TBI				eLQ	LQ	18 44 06.6	
	comp=Z,11μm,29.0s						
TBI				eLR	LR	18 45 38.3	
	comp=Z,1μm,26.0s						
TBI				eLR	LR	18 45 39.0	
	comp=Z,4μm,27.5s						
TOO	**Toolangi**	**36.08**	**223**	P	**P**	**18 36 39.6**	**-0.5**
STKA	**Stephens Creek**	**36.22**	**234**	P	**P**	**18 36 41.7**	**+0.3**
	comp=Z,11nm,1.0s,baz=68,slow=7.1,SNR=12						
STKA				LR	LR	18 50 52.3	
	comp=Z,378nm,18.8s,baz=51,slow=35						
	comp=Z,11nm,1.0s						
STKA	**Stephens Creek**	**36.22**	**234**		**P**	**18 36 40.2**	**-1.2**
WR8	**Warramunga Arr**	**39.91**	**255**		P	18 37 10.3	-2.4
WB0	**Warramunga Arr**	**40.01**	**255**		**P**	**18 37 11.4**	**-2.0**
WB0				IAmb	IAmb	18 37 17.1	
	comp=Z,25nm,1.2s						
WRAB	**Tennant Creek**	**40.05**	**255**	P	P	18 37 11.3	-2.5
WRAB				IAmb	IAmb	18 37 16.9	
	comp=Z,26nm,1.3s						
WRA	**Warramunga Arr**	**40.06**	**255**	P	**P**	**18 37 12.6**	**-1.4**
	comp=Z,9.0nm,1.0s,baz=89,slow=8.7,SNR=21						
	comp=Z,9.0nm,1.0s						
WRA	**Warramunga Arr**	**40.06**	**255**		**P**	**18 37 12.1**	**-1.9**
GUMO	**Guam**	**40.66**	**310**	LR	LR	18 51 50.7	
	comp=Z,193nm,19.7s,baz=125,slow=33						
AS31	**Alice Springs**	**40.78**	**249**		**P**	**18 37 18.2**	**-1.6**
ASAR	**Alice Springs**	**40.78**	**249**	P	**P**	**18 37 19.0**	**-0.9**
	comp=Z,11nm,0.8s,baz=80,slow=9.2,SNR=84						
ASAR				LR	LR	18 52 30.3	
	comp=Z,780nm,21.8s,baz=82,slow=34						
	comp=Z,11nm,0.8s						
ASAR	**Alice Springs**	**40.78**	**249**		**P**	**18 37 18.0**	**-1.8**
TAOE	**Nuku Hiva Isla**	**43.52**	**89**	eS	S	18 44 02.9	-8.8
	comp=Z,96nm,25.8s						
TAOE				eLR	LR	18 49 43.9	
	comp=Z,757nm,23.7s						
SIJI	**Sorong**	**45.71**	**282**	LR	LR	18 57 08.3	
	comp=Z,440nm,21.2s,baz=124,slow=36						
KRAI	**Karang Ratu**	**47.77**	**278**	P	**P**	**18 38 19.6**	**+3.6**
FITZ	**Fitzroy Crossi**	**48.28**	**258**	LR	LR	18 58 01.6	
	comp=Z,1μm,18.0s,baz=92,slow=35						
SOEI	**Soe**	**50.44**	**268**	P	**P**	**18 38 38.9**	**+2.3**
	comp=Z,19nm,1.0s						
EDFI	**Ende, Flores**	**53.12**	**269**	P	**P**	**18 38 57.4**	**+0.8**
	comp=Z,16nm,1.3s						
PSA00	**Pilbara Seismi**	**53.65**	**253**	P	**P**	**18 38 58.5**	**-1.8**
KAPI	**Kappang**	**55.74**	**273**	LR	LR	19 02 08.7	
	comp=Z,102nm,21.6s,baz=100,slow=35						
NWAO	**Narrogin (SRO)**	**56.44**	**239**	LR	LR	19 03 38.8	
	comp=Z,264nm,18.7s,baz=113,slow=36						
PCI	**Palu**	**56.66**	**278**	P	**P**	**18 39 26.2**	**+4.1**
	comp=Z,25nm,1.1s						
MYLDM	**Lahad Datu**	**59.71**	**284**	P	**P**	**18 39 47.4**	**+4.0**
	comp=Z,16nm,1.4s						
TGY	**Tagaytay City**	**60.73**	**295**	LR	LR	19 03 26.1	
	comp=Z,54nm,20.1s,baz=262,slow=33						
MJAR	**Matsushiro Arr**	**60.98**	**326**	P	**P**	**18 39 51.7**	**0.0**
	comp=Z,3.9nm,1.0s,baz=159,slow=8.1,SNR=6.7						
	comp=Z,3.9nm,1.0s						
MJAR	**Matsushiro Arr**	**60.98**	**326**		**P**	**18 39 50.1**	**-1.6**
JOW	**Kunigami**	**61.01**	**311**	LR	LR	19 02 31.2	
	comp=Z,128nm,20.6s,baz=100,slow=32						
JNU	**Nakatsue**	**63.01**	**318**	P	**P**	**18 40 06.2**	**+0.7**
	comp=Z,24nm,1.2s,baz=117,slow=11,SNR=4.8						
	comp=Z,24nm,1.2s						
YOJ	**Yonaguni jima**	**63.73**	**306**	P	P	18 40 08.2	-2.1
VNDA	**Vanda**	**64.49**	**183**	P	**P**	**18 40 15.6**	**+1.1**
	comp=Z,5.2nm,1.2s,baz=31,slow=9.2,SNR=4.8						
VNDA				LR	LR	19 03 12.1	
	comp=Z,148nm,21.5s,baz=15,slow=31						
	comp=Z,5.2nm,1.2s						
VNDA	**Vanda**	**64.49**	**183**		**P**	**18 40 16.0**	**+1.5**
SBA	**Scott Base**	**64.59**	**182**	P	**P**	**18 40 16.1**	**+1.0**
LEM	**Lembang**	**67.17**	**268**	LR	LR	19 11 23.5	
	comp=Z,112nm,18.9s,baz=172,slow=37						
KSRS	**Korea Array**	**67.62**	**320**	LR	LR	19 05 09.7	
	comp=Z,102nm,21.5s,baz=120,slow=32						
PETK	**Petropavlovsk-**	**68.04**	**348**	P	**P**	**18 40 37.2**	**-0.3**
	comp=Z,4.8nm,0.9s,baz=142,slow=10,SNR=4.1						
PETK				LR	LR	19 06 14.9	
	comp=Z,183nm,19.2s,baz=156,slow=32						
	comp=Z,4.8nm,0.9s						
NJ2	**Nanjing**	**70.72**	**311**	eP	**P**	**18 40 52.8**	**-1.8**
NJ2				pmax	pmax		
	comp=Z,22nm,0.5s						
RPN	**Rapa Nui**	**70.76**	**114**	LR	LR	19 04 46.6	
	comp=Z,158nm,18.3s,baz=181,slow=30						
CN2	**Changchun**	**73.06**	**324**	P	**P**	**18 41 09.0**	**+0.6**
BNX	**BinXian**	**73.22**	**327**	⇓P	**P**	**18 41 09.4**	**+0.1**
BNX				pmax	pmax		
	comp=Z,7.0nm,1.6s						
KLR	**Kul'dur**	**73.44**	**332**	P	**P**	**18 41 10.8**	**+0.4**
	comp=Z,2.1nm,0.9s,baz=154,slow=7.0,SNR=5.3						
KLR				LR	LR	19 08 38.5	
	comp=Z,146nm,21.2s,baz=142,slow=32						
	comp=Z,2.1nm,0.9s						
MA2	**Magadan**	**75.49**	**347**	P	**P**	**18 41 21.3**	**-0.9**
	comp=Z,2.2nm,0.6s,baz=168,slow=9.4,SNR=4.9						
	comp=Z,2.2nm,0.6s						
MA2	**Magadan**	**75.49**	**347**	IAmb	IAmb	18 41 49.0	
	comp=Z,28nm,1.7s						
KDAK	**Kodiak Island**	**75.60**	**17**	LR	LR	19 08 49.8	
	comp=Z,162nm,20.8s,baz=202,slow=31						
M14K	**Bethel**	**76.05**	**11**		**P**	**18 41 24.2**	**-1.2**
HEH	**HeiHe**	**76.18**	**330**	eP	**P**	**18 41 27.3**	**+0.9**
HEH				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HNS	**HongShan**	**76.33**	**314**	⇑P	**P**	**18 41 29.4**	**+1.9**
HNS				S	**S**	**18 51 07.8**	**-4.7**
HNS				pmax	pmax		
	comp=Z,6.0nm,1.6s						
HNS				LR	LR		
	comp=N,170nm,15.4s						
HNS				LR	LR		
	comp=Z,210nm,17.5s						
QSPA	**South Pole Qui**	**76.60**	**180**	P	**P**	**18 41 28.2**	**-0.6**
	comp=Z,3.9nm,1.0s,baz=19,slow=3.5,SNR=9.9						
QSPA				LR	LR	19 10 33.5	
	comp=Z,74nm,20.8s,baz=32,slow=32						
	comp=Z,3.9nm,1.0s						
QSPA	**South Pole Qui**	**76.60**	**180**	P	**P**	**18 41 28.9**	**+0.1**
LYN	**LuoYang**	**76.61**	**311**	eP	**P**	**18 41 30.9**	**+1.7**
LYN				pmax	pmax		
	comp=Z,25nm,0.8s						
LYN				pmax	pmax		
	comp=Z,180nm,4.4s						
M16K	**Timber Creek**	**76.89**	**12**	P	**P**	**18 41 29.9**	**-0.2**
HOPS	**Hopland Field**	**77.27**	**44**	P	**P**	**18 41 33.0**	**+0.2**
KMRM	**Mail Ridge**	**77.44**	**43**		**P**	**18 41 34.7**	**+0.8**
K15K	**Wolf Creek Mou**	**77.56**	**11**		**P**	**18 41 34.2**	**+0.3**
KHBM	**Hayfork Bally**	**77.98**	**43**		**P**	**18 41 36.9**	**-0.1**
KHBM				IAmb	IAmb	18 41 44.1	
	comp=Z,11nm,1.1s						
O02D	**Mt. Diablo Mer**	**78.03**	**44**	P	**P**	**18 41 37.5**	**+0.3**
SEY	**Seymchan**	**78.25**	**349**	P	**P**	**18 41 37.5**	**-0.2**
	comp=Z,6.1nm,1.0s,baz=147,slow=7.1,SNR=17						
SEY				LR	LR	19 12 27.4	
	comp=Z,144nm,19.8s,baz=148,slow=33						
	comp=Z,6.1nm,1.0s						
N02D	**Trinity Center**	**78.48**	**43**	P	**P**	**18 41 40.2**	**+0.6**
N02D				IAmb	IAmb	18 41 50.6	
	comp=Z,14nm,1.2s						
M02C	**Callahan**	**78.58**	**42**	P	**P**	**18 41 40.6**	**+0.4**
M02C				IAmb	IAmb	18 41 47.6	
	comp=Z,7.8nm,0.9s						
ORV	**Oroville**	**78.61**	**45**		**P**	**18 41 39.2**	**-1.1**
ORV				IAmb	IAmb	18 41 47.5	
	comp=Z,10.0nm,1.1s						
CMB	**Columbia Colle**	**78.68**	**46**	P	**P**	**18 41 40.6**	**-0.1**
AFDM	**Forest Hills D**	**78.69**	**45**		**P**	**18 41 40.6**	**-0.1**
AFDM				IAmb	IAmb	18 41 48.0	
	comp=Z,9.8nm,1.1s						
O03E	**Paynes Creek**	**78.75**	**44**	P	**P**	**18 41 41.4**	**+0.3**
O03E				IAmb	IAmb	18 41 48.4	
	comp=Z,22nm,1.3s						
L19K	**White Mountain**	**78.83**	**14**		**P**	**18 41 40.6**	**-0.3**
L19K				IAmb	IAmb	18 41 49.4	
	comp=Z,23nm,1.3s						
YBH	**Yreka Blue Hor**	**78.84**	**42**	LR	LR	19 09 06.1	
	comp=Z,17nm,20.5s,baz=271,slow=30						
YBH	**Yreka Blue Ho**	**78.84**	**42**	P	**P**	**18 41 41.9**	**+0.3**
YBH				IAmb	IAmb	18 41 48.3	
	comp=Z,34nm,1.9s						
M03C	**McCloud**	**79.01**	**43**		**P**	**18 41 42.8**	**+0.3**
ISA	**Isabella, Lake**	**79.02**	**49**		**P**	**18 41 43.4**	**+0.7**
XAN	**Xi'an**	**79.04**	**309**	⇑P	**P**	**18 41 44.4**	**+1.6**
XAN				pP	pwP	18 41 52.8	+3.9
XAN				pmax	pmax		
	comp=Z,19nm,1.3s						
HATC	**Hat Creek Radi**	**79.23**	**43**		**P**	**18 41 44.0**	**+0.3**
MDPB	**Devils Postpil**	**79.43**	**47**	P	**P**	**18 41 44.6**	**-0.5**
BBOR	**Butler Butte**	**79.43**	**41**	P	**P**	**18 41 44.5**	**-0.4**
BBOR				IAmb	IAmb	18 41 52.4	
	comp=Z,13nm,1.4s						
BEKR	**Beckworth**	**79.53**	**45**	IAmb	IAmb	18 41 52.9	
	comp=Z,30nm,1.8s						
CWC	**Cottonwood Cre**	**79.64**	**49**	P	**P**	**18 41 44.9**	**-1.3**
PFO	**Pinyon Flats O**	**79.68**	**52**	LR	LR	19 09 40.5	
	comp=Z,193nm,20.2s,baz=250,slow=30						
TNA	**Tin City**	**79.71**	**7**	IAmb	IAmb	18 41 53.3	
	comp=Z,13nm,1.2s						
CLC	**China Lake**	**79.73**	**49**	P	**P**	**18 41 46.8**	**+0.3**
MPMC	**Manual Prospec**	**79.91**	**49**	P	**P**	**18 41 47.2**	**-0.5**
J04A	**Umpqua Nationa**	**79.97**	**41**	P	**P**	**18 41 47.2**	**-0.6**
J04A				IAmb	IAmb	18 41 54.6	
	comp=Z,11nm,0.8s						
LHV	**Little Huntoon**	**80.11**	**47**	IAmb	IAmb	18 41 56.4	
	comp=Z,21nm,1.3s						
HHC	**Hu-ho-hao-te**	**80.11**	**316**	eP	**P**	**18 41 47.1**	**-1.4**
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,87nm,4.4s						
HHC				LR	LR		
	comp=N,77nm,16.9s						
HHC				LR	LR		
	comp=E,140nm,16.3s						
HHC				LR	LR		
	comp=Z,170nm,18.8s						
F15K	**North Star Dit**	**80.27**	**8**	IAmb	IAmb	18 41 51.1	
	comp=Z,9.9nm,1.1s						
NVAR	**Mina Array Bea**	**80.33**	**47**	P	**P**	**18 41 50.3**	**+0.4**
	comp=Z,2.0nm,1.0s,baz=226,slow=8.7,SNR=8.2						
NVAR				LR	LR	19 09 46.1	
	comp=Z,361nm,20.7s,baz=262,slow=30						
	comp=Z,2.0nm,1.0s						
NVAR	**Mina Array Bea**	**80.33**	**47**	P	**P**	**18 41 49.1**	**-0.8**
GRAC	**Grapevine Rang**	**80.39**	**48**	IAmb	IAmb	18 41 57.2	
	comp=Z,11nm,0.9s						
NV11	**Mina Array Sit**	**80.43**	**47**	IAmb	IAmb	18 41 58.0	
	comp=Z,30nm,1.7s						
BC3	**Big Chuckawall**	**80.47**	**52**		**P**	**18 41 50.2**	**-0.5**
K05A	**Summer Lake**	**80.50**	**42**		**P**	**18 41 50.5**	**-0.2**
K05A				IAmb	IAmb	18 41 58.4	
	comp=Z,29nm,1.4s						
WIFE	**Three Sisters-**	**80.55**	**40**	IAmb	IAmb	18 41 54.4	
	comp=Z,12nm,1.3s						
GMN	**Gold Mountain**	**80.59**	**48**	P	P	18 41 50.0	-1.4
H04A	**Detroit Lake**	**80.62**	**40**	IAmb	IAmb	18 41 58.1	
	comp=Z,18nm,1.4s						
PINE	**Pine Mountain**	**80.98**	**41**		P	18 41 51.8	-1.5
PINE				IAmb	IAmb	18 42 00.9	
	comp=Z,24nm,1.5s						
I05D	**Terrebonne, OR**	**80.98**	**40**	P	P	18 41 51.6	-1.5
BTO2	**Baotou**	**81.20**	**315**	eP	**P**	**18 41 56.5**	**+2.1**
BTO2				pP	**sP**	**18 42 01.3**	**+3.6**
BTO2				sP	**PcP**	**18 42 03.3**	**+2.6**
BTO2				pmax	pmax		
	comp=Z,18nm,0.9s						
BTO2				pmax	pmax		
	comp=Z,240nm,6.9s						
HOOD	**Mount Hood Mea**	**81.26**	**39**	IAmb	IAmb	18 42 01.1	
	comp=Z,16nm,1.0s						
BBB	**Bella Bella**	**81.28**	**31**	LR	LR	19 13 07.5	
	comp=Z,192nm,18.5s,baz=204,slow=32						
LPIG	**La Paz**	**81.29**	**63**	LR	LR	19 10 15.2	
	comp=Z,691nm,19.6s,baz=222,slow=30						
BILL	**Bilibino**	**81.53**	**356**		P	18 41 53.4	-2.0
GNW	**Green Mountain**	**81.67**	**37**		**P**	**18 41 56.4**	**-0.2**
GNW				IAmb	IAmb	18 42 04.3	
	comp=Z,9.4nm,1.1s						
SHPR	**Sheep Range**	**81.81**	**50**		**P**	**18 41 56.6**	**-1.2**
S11A	**Rachel**	**81.83**	**48**		**P**	**18 41 57.2**	**-0.6**
CMAR	**Chiang Mai Arr**	**82.01**	**291**	P	**P**	**18 41 59.1**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=105,slow=4.0,SNR=8.2						
CMAR				LR	LR	19 15 41.6	
	comp=Z,50nm,21.5s,baz=125,slow=34						
	comp=Z,0.6nm,0.4s						
CMAR	**Chiang Mai Arr**	**82.01**	**291**		P	18 41 55.4	-3.6
PZH	**PanZhiHua**	**82.03**	**300**	P	**P**	**18 41 58.8**	**-0.3**
CHTO	**Chiang Mai**	**82.11**	**291**	P	P	18 41 56.2	-3.4
CHTO	**Chiang Mai**	**82.11**	**291**	P	P	18 42 04.7	+5.2
F19K	**Shaleruckik Mo**	**82.38**	**10**	IAmb	IAmb	18 42 06.7	
	comp=Z,9.6nm,0.9s						
IMAR	**Indian Mountai**	**82.39**	**12**	P	**P**	**18 41 59.0**	**-0.9**
C16K	**Lisburne Hills**	**82.61**	**7**	IAmb	IAmb	18 42 09.1	
	comp=Z,7.1nm,1.1s						
G08A	**Pilot Rock**	**82.93**	**40**	IAmb	IAmb	18 42 09.9	
	comp=Z,11nm,1.0s						
ILAR	**Eielson Array**	**82.94**	**15**	P	**P**	**18 42 02.5**	**-0.4**
	comp=Z,2.4nm,0.9s,baz=209,slow=5.2,SNR=4.8						
ILAR				LR	LR	19 13 40.8	
	comp=Z,161nm,20.1s,baz=207,slow=32						
	comp=Z,2.4nm,0.9s						
ILAR	**Eielson Array**	**82.94**	**15**		**P**	**18 42 01.8**	**-1.1**
E07A	**Sunnyside**	**82.95**	**39**		**P**	**18 42 02.7**	**-0.6**
E07A				IAmb	IAmb	18 42 10.5	
	comp=Z,17nm,1.3s						
HAWA	**Hanford**	**83.08**	**39**		**P**	**18 42 03.4**	**-0.6**
O30N	**Mendenhall**	**83.27**	**22**	IAmb	IAmb	18 42 11.8	
	comp=Z,13nm,1.2s						
YAK	**Yakutsk**	**83.39**	**340**	P	**P**	**18 42 03.8**	**-1.3**
	comp=Z,1.7nm,0.4s,baz=146,slow=13,SNR=5.5						
	comp=Z,1.7nm,0.4s						
YAK	**Yakutsk**	**83.39**	**340**	IAmb	IAmb	18 42 12.4	
	comp=Z,13nm,1.2s						
LCMT	**Little Creek M**	**83.42**	**50**	IAmb	IAmb	18 42 14.0	
	comp=Z,7.3nm,1.2s						
ELK	**Elko**	**83.44**	**46**	LR	LR	19 11 30.4	
	comp=Z,268nm,20.8s,baz=240,slow=30						
EPH	**Ephrata**	**83.48**	**38**	IAmb	IAmb	18 42 12.3	
	comp=Z,11nm,1.1s						
CCUT	**Cedar City**	**83.54**	**49**	IAmb	IAmb	18 42 14.2	
	comp=Z,9.1nm,1.3s						
PSUT	**Pine Spring**	**83.55**	**48**		**P**	**18 42 05.9**	**-1.0**
TUC	**Tucson**	**83.62**	**55**		P	**18 42 06.2**	**-1.1**
LZH	**Lanzhou**	**83.67**	**309**	eP	P	18 42 12.8	+5.3
LZH				sP	pwP	18 42 18.8	+5.2
LZH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
LZH				LR	LR		
	comp=N,160nm,17.0s						
LZH				LR	LR		
	comp=E,170nm,17.3s						
LZH				LR	LR		
	comp=Z,230nm,18.0s						
KNB	**Kanab**	**83.74**	**50**	IAmb	IAmb	18 42 16.0	
	comp=Z,18nm,1.5s						
D08A	**Wollman Farm,**	**83.75**	**39**		**P**	**18 42 06.4**	**-1.0**
D08A				IAmb	IAmb	18 42 13.9	
	comp=Z,10nm,1.1s						
BMO	**Blue Mountains**	**83.78**	**41**	IAmb	IAmb	18 42 14.7	
	comp=Z,12nm,1.6s						
X16A	**Lo Mia Camp, P**	**83.84**	**53**	IAmb	IAmb	18 42 16.7	
	comp=Z,13nm,1.3s						
DLBC	**Dease Lake**	**84.11**	**25**	LR	LR	19 11 05.3	
	comp=Z,165nm,21.7s,baz=276,slow=30						
MFID	**Camas Ranch**	**84.14**	**43**	IAmb	IAmb	18 42 13.6	
	comp=Z,6.2nm,1.1s						
C19K	**Lookout Ridge**	**84.16**	**9**		**P**	**18 42 07.8**	**-1.3**
COLD	**Coldfoot**	**84.19**	**13**		**P**	**18 42 08.5**	**-0.7**
WUAZ	**Wupatki**	**84.28**	**52**		**P**	**18 42 10.6**	**-0.1**
MTPU	**Mount Pierson**	**84.59**	**49**	IAmb	IAmb	18 42 20.2	
	comp=Z,11nm,1.1s						
PLID	**Pearl Lake**	**84.72**	**41**	IAmb	IAmb	18 42 19.3	
	comp=Z,6.5nm,1.1s						
DUG	**Dugway, Tooele**	**84.93**	**47**	IAmb	IAmb	18 42 21.1	
	comp=Z,9.9nm,1.3s						
NEW	**Newport**	**85.38**	**38**	LR	LR	19 17 23.1	
	comp=Z,150nm,18.0s,baz=232,slow=34						
HVU	**Hansel Valley**	**85.56**	**45**	IAmb	IAmb	18 42 24.4	
	comp=Z,10nm,1.2s						
MAW	**Mawson**	**86.08**	**201**	LR	LR	19 16 35.0	
	comp=Z,69nm,19.1s,baz=104,slow=33						
ULN	**Ulaanbaatar**	**86.09**	**321**		P	18 42 16.9	-2.5
ULN				IAmb	IAmb	18 42 21.3	
	comp=Z,14nm,1.5s						
SONM	**Songino Array**	**86.49**	**321**	P	**P**	**18 42 21.8**	**+0.5**
	comp=Z,0.8nm,0.9s,baz=124,slow=3.4,SNR=8.7						

	comp=Z,97nm,20.8s,baz=196,slow=33							
PALK	**Pallekele**	**96.49**	**276**	LR	LR	19 27 35.3		
	comp=Z,51nm,21.2s,baz=106,slow=36							
WMQ	**Urumqi**	**97.73**	**313**	*e*P	**P**	**18 43 12.8**	**-0.8**	
WMQ				pmax	pmax			
	comp=Z,4.0nm,0.7s							
WMQ				LR	LR			
	comp=Z,150nm,23.9s							
PLCA	**Paso Flores**	**98.51**	**135**	LR	LR	19 21 24.8		
	comp=Z,45nm,18.4s,baz=224,slow=32							
ULM	**Lac du Bonnet**	**99.19**	**41**	LR	LR	19 21 08.3		
	comp=Z,139nm,19.1s,baz=194,slow=31							
CONA	**Conrad Observa**	**141.72**	**338**	*i* PKP	**PKPdf**	**18 49 08.4**	**-1.7**	
	comp=Z,4.1nm,1.3s							
MOTA	**Moosalm**	**143.81**	**342**	*e*PKP	PKPab	18 49 10.8	0.0	
	comp=Z,3.6nm,1.3s							
ABTA	**Abfaltersbach**	**143.90**	**340**	*i* PKP	PKPab	18 49 12.0	+1.0	
	comp=Z,4.7nm,1.3s							
FETA	**Feichten**	**144.21**	**342**	*i* PKP	**PKPab**	**18 49 11.1**	**-1.2**	
	comp=Z,7.0nm,1.3s							
DAVA	**Damuels**	**144.21**	**343**	*e*pPKP	**PKPab**	**18 49 14.2**	**+1.8**	
	comp=Z,8.6nm,1.4s							
ESDC	**Sonseca Array**	**153.85**	**359**	PKPab	**PKPab**	**18 49 51.2**	**+0.3**	
	comp=Z,1.8nm,0.9s,baz=349,slow=2.6,SNR=4.5							
ESDC	**Sonseca Array**	**153.85**	**359**		**PKPab**	**18 49 51.9**	**+0.9**	
TORD	**Torodi Ar. Bea**	**174.15**	**268**	PKPab	**PKPab**	**18 51 20.3**	**-0.5**	
	comp=Z,0.5nm,0.8s,baz=161,slow=2.0,SNR=4.9							

*IDC **21** 18:41:38.0±1.2,34.˚36N×136.˚13E,h393km±20km,mb2.5/4, mbtmp3.5/8,Error ellipse: s-maj=35.1km s-min=19.0km az=56.0*
*JMA **21** 18:41:38.1±0.2,34˚N±1˚×136.˚0E±0.˚9,h388km±1km, MV3.5/34,NORTHERN NARA PREF*
ISC 21 18:41:37.8±0.9,34˚39N±0.˚09×136˚10E±0.˚07,h389km±7km, n24,σ0s85/31,mb2.7/4,Western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JWY	**Kouya**	**0.46**	**248**	P	**Pn**	**18 42 27.0**	**+0.6**
JWY				*e*S	**S**	**18 43 04.4**	**-1.0**
JIE	**Ise**	**0.50**	**89**	P	**Pn**	**18 42 27.1**	**+0.9**
JTNC	**Tanabenakahech**	**0.70**	**216**	P	**Pn**	**18 42 27.3**	**+0.5**
JTNC				*e*S	**S**	**18 43 05.8**	**-0.5**
TTO1	**TONANKAI O.B.S**	**0.95**	**143**	*e*P	**Pn**	**18 42 28.6**	**+1.4**
JWT	**Wachi**	**1.06**	**327**	P	**Pn**	**18 42 28.0**	**+0.2**
JWT				*e*S	**S**	**18 43 06.7**	**-1.5**
JYTA	**Yamagatataniai**	**1.31**	**23**	P	**Pn**	**18 42 29.4**	**+0.6**
JYTA				*e*S	**S**	**18 43 09.7**	**-0.3**
JAI	**Aioi**	**1.49**	**247**	P	**Pn**	**18 42 30.2**	**+0.5**
JKG	**Kaga**	**1.89**	**6**	P	**Pn**	**18 42 32.0**	**+0.1**
JMN	**Monobe**	**1.96**	**251**	*e*P	**Pn**	**18 42 32.9**	**+0.4**
JYN	**Shimob**	**2.29**	**60**	*e*P	**Pn**	**18 42 34.8**	**+0.1**
JHS	**Saijyo**	**2.53**	**285**	*e*P	**Pn**	**18 42 36.7**	**+0.3**
JOD2	**Odawara 2**	**2.61**	**70**	*e*P	**Pn**	**18 42 37.8**	**+0.9**
MAT	**Matsushiro**	**2.75**	**38**	*e*P	**Pn**	**18 42 38.0**	**0.0**
MJAR	**Matsushiro Arr**	**2.75**	**38**	P	**Pn**	**18 42 37.9**	**-0.1**
	8.1nm,0.5s,baz=212,slow=7.9,SNR=89						
MJAR				S	**S**	**18 43 28.9**	**+2.2**
	1.2nm,0.7s,baz=189,slow=23,SNR=1.5						
JRY	**Ryogami san**	**2.81**	**54**	*e*P	**Pn**	**18 42 39.0**	**+0.5**
JRY				*e*S	**S**	**18 43 27.3**	**-0.3**
JTO	**Tosashimizu**	**3.15**	**242**	*e*P	**Pn**	**18 42 41.8**	**+0.4**
BSO1	**Boso 1**	**4.03**	**85**	*e*P	**Pn**	**18 42 49.1**	**+0.3**
BSO1				*e*S	**S**	**18 43 44.7**	**-1.8**
KSRS	**Korea Array**	**7.31**	**297**	P	**P**	**18 43 25.1**	**-0.1**
	3.1nm,0.6s,baz=106,slow=14,SNR=16						
USRK	**Ussuriysk Ar.**	**10.30**	**343**	P	**P**	**18 43 58.5**	**-0.3**
	2.0nm,0.5s,baz=148,slow=9.8,SNR=5.4						
ASAJ	**Asahikawa**	**10.94**	**25**	P	**P**	**18 44 05.5**	**-0.3**
	3.8nm,0.6s,baz=272,slow=13,SNR=6.5						
SONM	**Songino Array**	**25.92**	**310**	P	**P**	**18 46 37.6**	**+1.2**
	0.4nm,0.8s,baz=120,slow=8.5,SNR=2.6						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**41.93**	**304**	P	**P**	**18 48 52.2**	**+0.2**
	0.1nm,0.4s,baz=98,slow=10,SNR=2.0						
	0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**44.28**	**310**	P	**P**	**18 49 10.1**	**-0.4**
	0.1nm,0.4s,baz=88,slow=8.5,SNR=1.3						
	0.1nm,0.4s						
WRA	**Warramunga Arr**	**54.05**	**182**	P	**P**	**18 50 23.5**	**-0.4**
	0.4nm,0.5s,baz=1.3,slow=7.5,SNR=8.4						
	0.4nm,0.5s						

*MAN **21** 18:42:22.0,15˚91N×119.˚00E,h24km,MS3.5*
*IDC **21** 18:42:34.9±1.1,16˚03N×119.˚54E,h0km,mb3.5/6, mbtmp3.5/7,Error ellipse: s-maj=59.0km s-min=19.0km az=62.0*
ISC 21 18:42:41.0±1.1,15˚9N±0.˚2×119˚3E±0.˚3,h43km,n7, σ0s86/7,mb3.5/6,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**19.64**	**280**	P	**Pn**	**18 47 08.2**	**+0.4**
	0.5nm,0.7s,baz=93,slow=9.6,SNR=6.7						
SONM	**Songino Array**	**33.57**	**344**	P	**P**	**18 49 17.7**	**+0.7**
	0.5nm,0.7s,baz=165,slow=9.1,SNR=5.1						
	0.5nm,0.7s						
WRA	**Warramunga Arr**	**38.57**	**157**	P	**P**	**18 49 59.5**	**-0.4**
	0.6nm,0.7s,baz=338,slow=9.2,SNR=6.0						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**41.84**	**160**	P	**P**	**18 50 27.4**	**+0.4**
	0.4nm,0.6s,baz=341,slow=7.0,SNR=9.3						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**43.47**	**323**	P	**P**	**18 50 38.6**	**-1.4**
	0.3nm,0.7s,baz=124,slow=8.9,SNR=3.9						
	0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**47.62**	**326**	P	**P**	**18 51 12.8**	**+0.1**
	0.5nm,0.7s,baz=122,slow=8.4,SNR=5.0						
	0.5nm,0.7s						
FINES	**FINESS Array B**	**77.71**	**331**	P	**P**	**18 54 32.9**	**-0.2**
	1.3nm,1.0s,baz=71,slow=6.4,SNR=3.5						
	1.3nm,1.0s						

*NEIC **21** 18:50:06.4±2.3,16˚44N±0.˚03×99˚25W±0.˚05,h10km±1km, mb4.0/47,Md4.5/21(MEX),Error ellipse: s-maj=8.2km s-min=4.6km az=287.0*
*IDC **21** 18:50:08.2±3.7,16˚75N×99˚30W,h0km,mb3.7/5, mbtmp3.6/7,ML3.0/3,Error ellipse: s-maj=75.1km s-min=17.4km az=17.0*
*MEX **21** 18:50:09.3±1.3,16˚55N×99˚35W,h6km±9km,MD4.3*
ISC 21 18:50:07.8±1.1,16˚56N±0.˚04×99˚30W±0.˚02,h18km±6km, n92,σ1s72/118,mb3.9/16,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIG	**Cruz Grande**	**0.24**	**42**		**Pb**	**18 50 14.7**	**+1.3**
CRIG					**Sb**	**18 50 18.4**	**+1.3**
CRIG	**Cruz Grande**	**0.24**	**42**	*i* P	**Pb**	**18 50 14.7**	**+1.3**
CRIG				*e*S	**Sg**	**18 50 18.2**	**+1.1**
DAIG	**Los Arroyos**	**0.57**	**324**		**Pg**	**18 50 19.4**	**+0.2**
DAIG	**Los Arroyos**	**0.57**	**324**	*e*P	**Pg**	**18 50 19.4**	**+0.2**
DAIG				*e*S	**Sg**	**18 50 26.6**	**-0.4**
ACP2	**Acapulco**	**0.65**	**299**		**Pg**	**18 50 21.0**	**+0.4**
ACP2					**Sg**	**18 50 29.3**	**0.0**
MGIG	**Malinaltepec**	**0.93**	**43**		**Pn**	**18 50 26.2**	**+0.2**
CAIG	**El Cayaco**	**1.05**	**298**	*e*P	**Pb**	**18 50 26.8**	**-0.6**
CAIG				*e*S	**Sb**	**18 50 38.8**	**-2.1**
PNIG	**Pinotepa**	**1.13**	**98**		**Pn**	**18 50 28.7**	**-0.1**
PNIG	**Pinotepa**	**1.13**	**98**	*e*P	**Pn**	**18 50 28.7**	**-0.1**
PNIG				*i* S	**Sn**	**18 50 42.3**	**-1.6**
TLIG	**Tlapa**	**1.22**	**35**		**Pn**	**18 50 30.6**	**+0.6**
TLIG				Sn	**Sb**	**18 50 48.0**	**+2.1**
TLIG	**Tlapa**	**1.22**	**35**	*e*P	**Pn**	**18 50 30.7**	**+0.6**
TLIG				*e*S	**Sb**	**18 50 45.6**	**-0.3**
MEIG	**Mezcala**	**1.40**	**347**		**Pn**	**18 50 33.1**	**+0.6**
MEIG	**Mezcala**	**1.40**	**347**	*e*P	**Pn**	**18 50 33.0**	**+0.6**
MEIG				*e*S	**Sn**	**18 50 48.0**	**-2.4**
TXIG	**Tlaxiaco**	**1.62**	**64**		**Pb**	**18 50 36.7**	**-0.6**
TXIG	**Tlaxiaco**	**1.62**	**64**	*e*P	**Pb**	**18 50 36.7**	**-0.6**
TXIG				*e*S	**Sn**	**18 50 57.1**	**+0.9**
YOIG	**Yosondua**	**1.70**	**80**		**Pb**	**18 50 37.7**	**-1.1**
YOIG	**Yosondua**	**1.70**	**80**	*e*P	**Pg**	**18 50 39.2**	**-1.5**
YOIG				*e*S	**Sn**	**18 50 58.6**	**+0.2**
FTIG	**Fresnillo de T**	**1.74**	**39**	*e*P	**Sn**	**18 50 38.2**	**+0.9**
FTIG				*e*S	**Sn**	**18 50 56.9**	**-2.2**
PLIG	**Platanillo**	**1.83**	**354**	*e*P	**Pn**	**18 50 39.6**	**+1.1**
PLIG				*e*S	**Sn**	**18 50 59.7**	**-1.7**
HLIG	**Huajuapan de L**	**1.91**	**48**	*i* P	**Pn**	**18 50 40.4**	**+0.8**
HLIG				*e*S	**Sn**	**18 51 01.1**	**-2.2**
ARIG	**Puente Sto Nin**	**1.98**	**330**		**Pn**	**18 50 41.8**	**+1.3**
ARIG	**Puente Sto Nin**	**1.98**	**330**	*e*P	**Pn**	**18 50 41.6**	**+1.1**
ARIG				*e*S	**Sn**	**18 51 02.6**	**-2.3**
PEIG	**Puerto Escondi**	**2.14**	**105**	*e*P	**Pg**	**18 50 47.0**	**-1.9**
PEIG				*i* S	**Sn**	**18 51 06.8**	**-1.9**
YAIG	**Yautepec**	**2.30**	**5**	*e*P	**Pn**	**18 50 47.3**	**+2.3**
YAIG				*e*S	**Sn**	**18 51 07.7**	**-5.3**
ZIIG	**Zihuatanejo**	**2.32**	**297**	*e*P	**Pn**	**18 50 47.4**	**+2.4**
ZIIG				*e*S	**Sn**	**18 51 07.0**	**-6.2**
VHO	**Vista Hermosa**	**2.51**	**78**	*e*P	**Pn**	**18 50 49.3**	**+1.5**
VHO				*e*S	**Sn**	**18 51 18.7**	**+0.6**
PPM	**Popocatepetl**	**2.58**	**14**	*e*P	**Pb**	**18 50 52.6**	**-1.2**
PPM				*e*S	**Sn**	**18 51 14.1**	**-6.1**
TPIG	**Tehuac#an**	**2.62**	**45**	*e*P	**Pn**	**18 50 48.9**	**-0.4**
TPIG				*e*S	**Sn**	**18 51 19.3**	**-1.4**
TOIG	**Toxpalan**	**2.62**	**54**	*e*P	**Pn**	**18 50 49.6**	**+0.2**
TOIG				*e*S	**Sn**	**18 51 19.1**	**-1.8**
HUIG	**Huatulco**	**3.16**	**104**	*e*P	**Pn**	**18 50 57.5**	**+0.8**
HUIG				*e*S	**Sn**	**18 51 29.4**	**-4.6**
NEUV	**Arroyo Zacate**	**3.53**	**71**	*e*P	**Pn**	**18 51 03.1**	**+1.3**
NEUV				*e*S	**Sn**	**18 51 42.5**	**-0.6**
MOIG	**Morelia**	**3.59**	**330**		**Pn**	**18 51 05.7**	**+3.0**
MOIG	**Morelia**	**3.59**	**330**	*e*P	**Pn**	**18 51 05.3**	**+2.6**
MOIG				*e*S	**Sn**	**18 51 45.7**	**+0.9**
DEIG	**Demacu**	**3.73**	**4**	*e*P	**Pb**	**18 51 11.4**	**-1.9**
DEIG				*e*S	**Sn**	**18 51 45.5**	**-2.8**
LVIG	**Laguna Verde**	**4.17**	**41**	*e*P	**Pn**	**18 51 08.0**	**-2.6**
LVIG				*e*S	**Sn**	**18 51 56.4**	**-2.5**
CMIG	**Matias Romero**	**4.26**	**82**	Pn	**Pn**	**18 51 12.3**	**+0.5**
	1.4nm,0.3s,baz=262,slow=12,SNR=11						
CMIG				Pg	**Pg**	**18 51 25.9**	**-3.5**
	12nm,0.3s,baz=275,slow=13,SNR=15						
CMIG				Sn	**Sn**	**18 51 59.8**	**-1.2**
	8.9nm,0.3s,baz=297,slow=18,SNR=5.7						
CMIG				Lg	Lg	18 52 24.3	
	54nm,0.3s,baz=295,slow=12,SNR=8.1						
	4.2nm,0.4s						
CMIG	**Matias Romero**	**4.26**	**82**	*e*P	**Pn**	**18 51 10.5**	**-1.3**
CMIG				*e*S	**Sn**	**18 52 01.0**	**-0.1**
APG	**El Apazote**	**8.64**	**99**	Pn	**Pn**	**18 52 15.3**	**+3.1**
	0.1nm,0.3s,baz=356,slow=19,SNR=2.2						
TEIG	**Tepich**	**11.08**	**69**	Pn	**Pn**	**18 52 43.6**	**-1.8**
TXAR	**Lajitas Array**	**13.34**	**343**	Pn	**Pn**	**18 53 17.3**	**+0.9**
	baz=139,slow=12,SNR=2.8						
	0.2nm,0.8s						
BRDY	**Brady**	**14.66**	**1**		**Pn**	**18 53 35.9**	**+1.4**
ABTX	**Abilene, Hawle**	**16.00**	**359**	Pn	**Pn**	**18 53 52.8**	**+0.8**
PLPT	**Palo Pinto**	**16.21**	**3**		**Pn**	**18 53 54.0**	**-0.7**
PLPT				IAmb	IAmb	18 54 01.0	
	comp=Z,21nm,1.2s						
GDL2	**Guadalupe Moun**	**16.24**	**344**	Pn	**Pn**	**18 53 56.7**	**+1.6**
SN07	**Snyder 07**	**16.52**	**355**	Pn	**Pn**	**18 53 58.2**	**-0.5**
POST	**Post**	**16.56**	**353**		**Pn**	**18 53 59.9**	**+0.8**
POST				IAmb	IAmb	18 54 12.2	
	comp=Z,14nm,1.0s						
DKNS	**Dickens**	**17.10**	**355**	P	**Pn**	**18 54 05.8**	**-0.2**
VBMS	**Vicksburg**	**17.51**	**25**	P	**Pn**	**18 54 09.7**	**-1.3**
Z41A	**Richland Creek**	**17.63**	**18**	P	**P**	**18 54 14.3**	**+0.9**
CAMR	**Camarioca**	**18.06**	**66**	P	Pn	18 54 10.4	-7.4
AMTX	**Amarillo**	**18.38**	**354**	P	**P**	**18 54 22.1**	**+0.4**
AMTX				IAmb	IAmb	18 54 27.5	
	comp=Z,6.0nm,0.8s						
SMWD	**Samnorwood**	**18.49**	**358**	P	**P**	**18 54 23.1**	**+0.1**
SMWD				IAmb	IAmb	18 54 34.5	
	comp=Z,7.5nm,0.8s						
MIAR	**Mount Ida**	**18.63**	**15**	P	**P**	**18 54 23.4**	**-1.1**
OK052	**Battle Ridge R**	**19.48**	**6**	P	**P**	**18 54 32.8**	**-1.0**
OK052				IAmb	IAmb	18 54 43.6	
	comp=Z,9.1nm,0.9s						
TUL3	**Leonard**	**19.53**	**9**	P	**P**	**18 54 33.8**	**-0.5**
TUL3				IAmb	IAmb	18 54 37.0	
	comp=Z,7.7nm,0.8s						
WHAR	**Wooly Hollow**	**19.68**	**17**	P	**P**	**18 54 36.4**	**+0.5**
WHAR				IAmb	IAmb	18 54 46.3	
	comp=Z,7.0nm,1.0s						
OXF	**Oxford**	**19.96**	**25**	P	**P**	**18 54 37.8**	**-1.1**
X16A	**Lo Mia Camp, P**	**20.86**	**331**	P	**P**	**18 54 49.2**	**+0.2**
X16A				IAmb	IAmb	18 54 57.3	
	comp=Z,6.0nm,0.8s						
X48A	**Hartselle**	**20.94**	**29**		**P**	**18 54 49.1**	**-0.5**
X48A				IAmb	IAmb	18 54 53.2	
	comp=Z,9.2nm,0.9s						
T25A	**Trinidad**	**20.99**	**349**	P	**P**	**18 54 51.2**	**+0.7**
T25A				IAmb	IAmb	18 54 58.5	
	comp=Z,5.8nm,1.1s						
PBMO	**Poplar Bluff**	**21.62**	**20**	P	**P**	**18 54 56.0**	**-1.0**
FPAL	**Fort Paine**	**21.71**	**32**	P	**P**	**18 54 57.1**	**-0.9**
FPAL				IAmb	IAmb	18 55 10.2	
	comp=Z,8.2nm,1.1s						
WUAZ	**Wupatki**	**21.74**	**333**	P	**P**	**18 54 59.9**	**+1.5**
WVT	**Waverly**	**22.00**	**25**	P	**P**	**18 55 00.0**	**-1.0**
MVCO	**Mesa Verde**	**22.12**	**340**	P	**P**	**18 55 02.4**	**-0.2**
MVCO				IAmb	IAmb	18 55 08.4	
	comp=Z,4.3nm,0.8s						
IRM	**Iron Mountain**	**22.58**	**324**	P	**P**	**18 55 08.8**	**+1.5**
W13A	**Hualapai Mount**	**22.61**	**328**		**P**	**18 55 08.6**	**+0.8**
BORC	**Borrego Spring**	**22.70**	**320**	P	**P**	**18 55 09.5**	**+0.9**
BORC				IAmb	IAmb	18 55 16.2	
	comp=Z,5.9nm,1.3s						
CPCT	**Cooper Cave**	**22.98**	**32**		**P**	**18 55 11.8**	**+0.4**
HMU	**Henry Mountain**	**23.56**	**337**		**P**	**18 55 19.1**	**+1.5**
KNB	**Kanab**	**23.63**	**332**		**P**	**18 55 19.6**	**+1.4**
KNB				IAmb	IAmb	18 55 23.6	
	comp=Z,8.1nm,1.3s						
ISCO	**Idaho Springs**	**23.80**	**348**		**P**	**18 55 19.7**	**-0.3**
ISCO				IAmb	IAmb	18 55 24.8	
	comp=Z,2.4nm,0.6s						
MTPU	**Mount Pierson**	**24.22**	**335**		**P**	**18 55 24.5**	**+0.6**
MTPU				IAmb	IAmb	18 55 29.1	
	comp=Z,3.5nm,0.8s						
QSM	**Queen of Sheba**	**24.86**	**324**	P	**P**	**18 55 31.3**	**+1.9**
QSM				IAmb	IAmb	18 55 35.7	
	comp=Z,3.5nm,0.9s						
S51A	**Beattyville**	**25.16**	**30**		**P**	**18 55 31.0**	**-1.0**
CLC	**China Lake**	**25.17**	**323**	P	**P**	**18 55 33.5**	**+1.3**
CLC				IAmb	IAmb	18 55 38.0	
	comp=Z,3.4nm,1.2s						
TPNV	**Topopah Spring**	**25.25**	**327**	P	**P**	**18 55 33.7**	**+0.6**
TPNV				IAmb	IAmb	18 55 39.6	
	comp=Z,4.3nm,1.0s						
MPMC	**Manual Prospec**	**25.28**	**324**	P	**P**	**18 55 34.2**	**+0.8**
WCT	**Wildcat Mounta**	**25.34**	**326**	P	**P**	**18 55 33.4**	**-0.3**
BSUT	**Blindstream Ca**	**25.88**	**340**	P	**P**	**18 55 40.7**	**+1.8**
BSUT				IAmb	IAmb	18 55 42.9	
	comp=Z,3.1nm,0.8s						
P51A	**Williamsport**	**26.88**	**29**	P	**P**	**18 55 46.0**	**-1.6**
N47A	**Urbana**	**26.94**	**23**		**P**	**18 55 46.1**	**-2.1**
NVAR	**Mina Array Bea**	**27.44**	**326**	P	**P**	**18 55 55.4**	**+2.4**
	comp=Z,1.3nm,0.8s,baz=160,slow=10,SNR=6.4						
	comp=Z,1.3nm,0.8s						
BW06	**Boulder Array**	**27.56**	**344**	P	**P**	**18 55 54.0**	**+0.1**
BW06				IAmb	IAmb	18 55 57.4	
	comp=Z,2.8nm,1.0s						
PD31	**Pinedale Array**	**27.56**	**344**	P	**P**	**18 55 53.5**	**-0.5**
PD31				IAmb	IAmb	18 55 57.4	
	comp=Z,2.8nm,1.0s						
PDAR	**Pinedale Array**	**27.56**	**344**	P	**P**	**18 55 55.9**	**+2.0**
	comp=Z,2.2nm,1.0s,baz=148,slow=7.8,SNR=10						
	comp=Z,2.2nm,1.0s						
ULM	**Lac du Bonnet**	**33.72**	**4**	P	**P**	**18 56 48.9**	**+1.0**
	comp=Z,2.4nm,0.8s,baz=184,slow=8.8,SNR=5.0						
	comp=Z,2.4nm,0.8s						
YKA	**Yellowknife Ar**	**47.13**	**350**	P	**P**	**18 58 39.8**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=163,slow=6.5,SNR=9.5						
	comp=Z,0.5nm,0.7s						
H03N2	**Juan Fernandez**	**53.38**	**159**	T	T	19 57 00.6	
	baz=338,slow=77,SNR=61						
H03N1	**Juan Fernandez**	**53.39**	**159**	T	T	19 57 01.7	
	baz=338,slow=77,SNR=58						
H03N3	**Juan Fernandez**	**53.40**	**159**	T	T	19 57 00.8	
	baz=338,slow=77,SNR=66						
ILAR	**Eielson Array**	**57.78**	**338**	P	**P**	**18 59 59.6**	**+1.9**
	comp=Z,0.2nm,0.8s,baz=126,slow=8.8,SNR=2.5						
	comp=Z,0.2nm,0.8s						

*NEIC **21** 18:58:30.6±2.2,35˚64N±0.˚06×25˚81E±0.˚04,h10km±1km, mb4.1/36,Error ellipse: s-maj=10.4km s-min=3.8km az=161.0*
*IDC **21** 18:58:31.5±0.7,35˚59N×25˚89E,h0km,mb3.8/15, mbtmp3.8/27,ML3.6/11,MS3.2/7,Error ellipse: s-maj=16.2km s-min=7.7km az=158.0*
*ISK **21** 18:58:33.6,35˚52N×25˚83E,h9km,ML3.9/13*
*THE **21** 18:58:34.2,36˚N±1˚×2˚6E±˚,h5km±3km,M3.6/13,*
MLh3.6/13
*ATH **21** 18:58:34.2,35˚54N×25˚89E,h10km,ML3.7/39,Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
*GII **21** 18:58:39.5±0.0,35˚168N±0˚002×26˚319E±0˚001, h0km,Mws3.9,confirmed*
*AFAD **21** 18:58:39.1,35˚89N×26˚32E,h8km±2km,MW3.7*
ISC 21 18:58:32.4±0.9,35˚51N±0˚02×25˚99E±0˚02,h17km±6km, n259,σ1s92/342,mb4.0/28,MS3.5/5,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIT2	**Siteia**	**0.32**	**163**	P	**Pn**	**18 58 42.4**	**+0.1**
SIT2				S	**Sb**	**18 58 46.8**	**+2.3**
NPS	**Neapolis**	**0.40**	**231**	P	**Pg**	**18 58 40.8**	**+0.2**
NPS				S	**Sg**	**18 58 46.1**	**-0.1**
NPS	**Neapolis**	**0.40**	**231**	P	**Pg**	**18 58 41.4**	**+0.8**
NPS				S	**Sg**	**18 58 46.7**	**+0.5**
ZKR	**Zakros**	**0.44**	**155**	Pg	**Pn**	**18 58 44.4**	**+0.5**
ZKR				Sg	**Sb**	**18 58 51.5**	**+3.6**
ZKR	**Zakros**	**0.44**	**155**	P	**Pn**	**18 58 44.4**	**+0.5**
ZKR				S	**Sb**	**18 58 50.5**	**+2.6**
IDI	**Anoyia**	**0.93**	**256**	Pg	**Pg**	**18 58 49.7**	**-0.7**
	275nm,0.3s,baz=80,slow=15,SNR=1409						
IDI				Lg	Lg	18 59 00.6	
	460nm,0.3s,baz=329,slow=20,SNR=8.1						
IDI	**Anoyia**	**0.93**	**256**		**Pg**	**18 58 49.6**	**-0.9**
IDI				Sn	**Sg**	**18 59 00.1**	**-2.6**
IDI	**Anoyia**	**0.93**	**256**	P	**Pg**	**18 58 49.8**	**-0.7**
IDI				S	**Sg**	**18 59 00.4**	**-2.3**
IDI	**Anoyia**	**0.93**	**256**	Pg	**Pg**	**18 58 49.7**	**-0.7**
IDI				Sg	**Sg**	**18 59 01.1**	**-1.6**
IDI	**Anoyia**	**0.93**	**256**	P	**Pg**	**18 58 50.7**	**+0.2**
IDI				S	**Sg**	**18 59 01.6**	**-1.1**
THERA	**Ancient Thera,**	**0.95**	**334**	P	**Pg**	**18 58 51.1**	**+0.2**
THERA				S	**Sg**	**18 59 03.4**	**0.0**
THERA	**Ancient Thera,**	**0.95**	**334**	P	**Pb**	**18 58 51.5**	**+1.1**
THERA				S	**Sg**	**18 59 04.0**	**+0.6**
KARP	**Karpathos**	**0.95**	**88**		**Pn**	**18 58 53.6**	**+2.6**
KARP				Sn	**Sn**	**18 59 06.9**	**+2.6**
KARP	**Karpathos**	**0.95**	**88**	P	**Pn**	**18 58 53.6**	**+2.6**
KARP				S	**Sn**	**18 59 07.7**	**+3.5**
KARP	**Karpathos**	**0.95**	**88**	Pn	**Pn**	**18 58 54.4**	**+3.4**
KARP				Sn	**Sn**	**18 59 10.3**	**+6.1**
KARP	**Karpathos**	**0.95**	**88**	P	**Pn**	**18 58 54.3**	**+3.2**
KARP				S	**Sn**	**18 59 08.2**	**+4.0**
THR6	**Thira Island,**	**0.97**	**330**	P	**Pg**	**18 58 51.4**	**+0.1**
THR6	**Thira Island,**	**0.97**	**330**	P	**Pg**	**18 58 51.6**	**+0.4**
THR6				S	**Sg**	**18 59 04.3**	**+0.3**
THR8	**Santorini-Mono**	**0.98**	**335**	P	**Pg**	**18 58 51.2**	**-0.3**
THR8	**Santorini-Mono**	**0.98**	**335**	P	**Pg**	**18 58 51.2**	**-0.3**
THR8				S	**Sg**	**18 59 05.3**	**+0.8**
THR9	**Santorini-Faro**	**0.99**	**329**	P	**Pg**	**18 58 51.8**	**+0.2**
THR9	**Santorini-Faro**	**0.99**	**329**	P	**Pb**	**18 58 52.6**	**+1.5**
THRA	**Thira**	**1.01**	**333**	P	**Pb**	**18 58 52.6**	**+1.2**
THRA				S	**Sg**	**18 59 05.5**	**+0.2**
SNT5	**Nea Kammeni, S**	**1.01**	**332**	P	**Pg**	**18 58 51.9**	**-0.2**
SNT5				S	**Sg**	**18 59 06.2**	**+0.8**
SNT5	**Nea Kammeni, S**	**1.01**	**332**	P	**Pg**	**18 58 52.6**	**+0.5**
SNT5				S	**Sg**	**18 59 05.5**	**+0.1**
THR3	**Thira Island,**	**1.01**	**332**	P	**Pg**	**18 58 51.9**	**-0.3**
THR3	**Thira Island,**	**1.01**	**332**	P	**Pg**	**18 58 52.6**	**+0.5**
THR2	**Thira Island,**	**1.04**	**334**	P	**Pn**	**18 58 53.2**	**+1.6**
THR5	**Thira Island,**	**1.04**	**330**	P	**Pg**	**18 58 52.6**	**-0.1**
THR5	**Thira Island,**	**1.04**	**330**	P	**Pg**	**18 58 53.1**	**+0.5**
SAP3	**Santorini-Thir**	**1.06**	**331**	P	**Pg**	**18 58 52.8**	**-0.2**
SAP3				S	**Sg**	**18 59 06.8**	**-0.1**
SAP3	**Santorini-Thir**	**1.06**	**331**	P

VLY				S	Sn	18 59 55.0	+2.1	
MET1	**Methana Town,**	**2.94**	**315**	P	Pn	18 59 20.3	+2.0	
MET1				S	Sn	18 59 54.6	+1.4	
ESEN	**Aydn-Nazilli**	**2.96**	**39**	P	Pb	18 59 24.1	-0.6	
ESEN				S	Sb	19 00 01.1	+0.4	
MET4	**Agioi Theodoro**	**2.96**	**316**	P	Pn	18 59 21.0	+2.4	
MET4				S	Sn	18 59 56.1	+2.3	
MET6	**Megalochori,Me**	**2.97**	**315**	P	Pn	18 59 19.9	+1.2	
MET6				S	Sn	18 59 55.7	+1.9	
KSL	**Kastellorizon**	**2.99**	**77**	P	Pb	18 59 23.5	-1.5	
KSL	**Kastellorizon**	**2.99**	**77**	P	Pb	18 59 23.6	-1.5	
BLCB	**Balcova**	**2.99**	**16**	P	Pn	18 59 20.7	+1.8	
MET5	**Makryloggos,Me**	**2.99**	**316**	P	Pn	18 59 20.4	+1.5	
MET5				S	Sn	18 59 55.6	+1.2	
MET2	**Kameni Chora,**	**3.00**	**315**	P	Pn	18 59 21.2	+2.1	
MET2				S	Sn	18 59 55.4	+0.8	
DNZT	**Denizli-Tavas-**	**3.02**	**53**	P	Pb	18 59 24.7	-1.0	
DNZT				S	Sb	19 00 02.4	+0.2	
AKAS	**Kas**	**3.02**	**75**		Pn	18 59 21.7	+2.2	
ATHU	**Athens Univers**	**3.02**	**325**	P	Pn	18 59 21.5	+2.0	
ATHU	**Athens Univers**	**3.02**	**325**	P	Pn	18 59 21.6	+2.2	
MET3	**Ano Fanari,Met**	**3.03**	**314**	P	Pn	18 59 21.9	+2.3	
MET3				S	Sn	18 59 58.1	+2.6	
DION	**Dionisos Attik**	**3.05**	**328**	P	Pn	18 59 21.9	+2.1	
DION	**Dionisos Attik**	**3.05**	**328**	P	Pn	18 59 21.8	+2.0	
PTL	**Penteli**	**3.05**	**327**	P	Pn	18 59 21.4	+1.5	
PTL	**Penteli**	**3.05**	**327**	P	Pn	18 59 21.9	+2.0	
TAVA	**DENIZLI_Tavas**	**3.06**	**50**	P	Pb	18 59 25.6	-0.8	
TAVA				S	Sb	19 00 04.0	+0.6	
ATH	**Athens Observa**	**3.06**	**324**	P	Pn	18 59 22.2	+2.2	
MAGU	**Magoula**	**3.24**	**323**	P	Pn	18 59 24.9	+2.5	
STFN	**Stefani**	**3.31**	**324**	P	Pn	18 59 25.6	+2.3	
ELL	**Elmali**	**3.40**	**68**		Pn	18 59 27.3	+2.5	
KYMI	**Kymi, Euboea I**	**3.46**	**335**	P	Pn	18 59 27.6	+2.1	
VIL2	**Platees**	**3.47**	**322**	P	Pn	18 59 27.0	+1.4	
LTK	**Loutraki**	**3.49**	**317**	P	Pn	18 59 27.6	+1.7	
SKY	**Skiros Island**	**3.55**	**342**	P	Pn	18 59 28.9	+2.2	
MANT	**Manisa**	**3.61**	**34**		Pn	18 59 28.0	+0.2	
ITM	**Ithomi**	**3.68**	**298**		Pn	18 59 28.2	-0.3	
ITM	**Ithomi**	**3.68**	**298**	P	Pn	18 59 30.2	+1.7	
PRK	**Paraskevi**	**3.73**	**3**	P	Pn	18 59 30.8	+1.6	
GUR	**Goura**	**3.80**	**311**	P	Pn	18 59 32.5	+2.3	
LKR	**Lokris**	**3.94**	**324**	P	Pn	18 59 34.5	+2.4	
KLV	**Kalavryta, Ach**	**3.99**	**310**	P	Pn	18 59 35.5	+2.7	
AXAR	**Agios Charalam**	**4.20**	**322**	P	Pn	18 59 37.7	+2.1	
DRO	**Drossia**	**4.21**	**307**	P	Pn	18 59 38.0	+2.2	
KALE	**Kalithea**	**4.22**	**314**	P	Pn	18 59 39.0	+3.1	
EFP	**Efpalio**	**4.38**	**313**	P	Pn	18 59 40.9	+2.9	
NEO	**Neokhori**	**4.38**	**331**	P	Pn	18 59 40.5	+2.3	
BALB	**Balikesir**	**4.38**	**19**		Pn	18 59 36.9	-1.3	
LIA	**Limnos Island**	**4.42**	**352**	P	Pn	18 59 40.4	+1.7	
RLS	**Riolos of Patr**	**4.43**	**306**	P	Pn	18 59 40.9	+2.1	
ANX	**Ano Chora**	**4.48**	**315**	P	Pn	18 59 42.6	+3.1	
AXS	**Araxos**	**4.57**	**307**	P	Pn	18 59 42.0	+1.4	
MAKR	**Makrakomi, Fth**	**4.66**	**320**	P	Pn	18 59 43.8	+1.8	
EVR	**Evrytania**	**4.76**	**317**	P	Pn	18 59 45.3	+1.9	
SMTH	**Samothraki Isl**	**4.96**	**356**	P	Pn	18 59 47.6	+1.5	
VLS	**Valsamata**	**5.08**	**303**	P	Pn	18 59 49.9	+2.1	
THL	**Klokotos Trika**	**5.13**	**323**	P	Pn	18 59 49.8	+1.4	
FSK	**Fiskardo**	**5.25**	**306**	P	Pn	18 59 52.8	+2.8	
ALN	**Alexandroupoli**	**5.38**	**0**		Pn	18 59 49.9	-1.9	
ALFC	**Alefka**	**5.41**	**92**	P	Pn	18 59 55.4	+3.1	
BORA	**Eskisehir**	**5.61**	**38**		Pn	18 59 54.9	-0.2	
RDO	**Rodhopi**	**5.64**	**357**		Pn	18 59 52.9	-2.4	
CSS	**Mathiatis**	**6.03**	**93**	Pn	Pn	19 00 02.3	+1.5	
CSS	**Mathiatis**	**6.03**	**93**	P	Pn	19 00 04.9	+4.1	
CSS				S	Sn	19 01 11.8	+2.3	
MDUB	**Mudurnu**	**6.43**	**38**	Pn	Pn	19 00 05.7	-0.7	
KEK	**Kerkira**	**6.46**	**312**		Pn	19 00 04.0	-2.6	
BR131	**Keskin Array S**	**7.38**	**53**		Pn	19 00 19.2	-0.3	
BRTR	**Keskin Array B**	**7.38**	**53**	Pn	Pn	19 00 23.4	+4.0	
	0.3nm,0.3s,baz=220,slow=14,SNR=14							
BRTR				Sn	Sn	19 01 47.2	+4.3	
	0.1nm,0.3s,baz=216,slow=23,SNR=1.3							
BRTR				LR	LR	19 02 59.3		
	comp=Z,11nm,19.0s,baz=234,slow=36							
	2.0nm,0.6s							
BRTR	**Keskin Array B**	**7.38**	**53**		Pn	19 00 19.5	+0.1	
OFRI	**`Ofer**	**8.00**	**109**	P	Pn	19 00 31.0	+3.1	
OFRI				S	Sn	19 01 58.5	+0.6	
MMA0B	**Mount Meron ar**	**8.18**	**105**	P	Pn	19 00 34.0	+3.7	
MMA0B				S	Sn	19 02 03.9	+1.5	
MMAI	**Mount Meron Ar**	**8.18**	**105**	Pn	Pn	19 00 32.8	+2.5	
	3.4nm,0.3s,baz=307,slow=11,SNR=14							
MMAI				Sn	Sn	19 02 04.2	+1.8	
	4.0nm,0.3s,baz=303,slow=31,SNR=7.8							
	1.2nm,0.3s							
SLTI	**Sal'it**	**8.20**	**111**	P	Pn	19 00 33.8	+3.2	
SLTI				S	Sn	19 02 02.9	0.0	
ILGA	**Ilgaz**	**8.21**	**45**	Pn	Pn	19 00 31.5	+0.6	
TIP	**Timpagrande**	**8.21**	**299**		Pn	19 00 28.2	-2.6	
GEM	**Giv'at Ha'Em**	**8.32**	**103**	P	Pn	19 00 35.7	+3.5	
GEM				S	Sn	19 02 06.8	+1.1	
NATI	**Neve Ativ**	**8.36**	**103**	P	Pn	19 00 36.7	+4.0	
NATI				S	Sn	19 02 08.1	+1.3	
SALP	**Salfit**	**8.39**	**112**	P	Pn	19 00 36.8	+3.5	
SALP				S	Sn	19 02 08.1	+0.5	
KZIT	**Kziot**	**8.41**	**121**	P	Pn	19 00 36.3	+2.9	
KZIT				S	Sn	19 02 07.4	-0.5	
MMLI	**Mount Malkishu**	**8.41**	**109**	P	Pn	19 00 36.6	+3.1	
MMLI				S	Sn	19 02 08.5	+0.5	
AMAZ	**Amatzia**	**8.44**	**116**	P	Pn	19 00 37.2	+3.3	
AMAZ				S	Sn	19 02 08.9	+0.2	
KSHT	**Keshet**	**8.51**	**104**	P	Pn	19 00 38.6	+3.7	
KSHT				S	Sn	19 02 12.5	+1.9	
HMDT	**Nahal Hemdat**	**8.57**	**110**	P	Pn	19 00 39.3	+3.7	
HMDT				S	Sn	19 02 12.0	+0.2	
PDG	**Podgorica**	**8.67**	**325**		Pn	19 00 33.7	-3.3	
YTIR	**Yattir**	**8.67**	**116**	P	Pn	19 00 40.7	+3.5	
YTIR				S	Sn	19 02 14.5	-0.1	
DSI	**Dead Sea**	**8.77**	**114**	P	Pn	19 00 41.5	+3.1	
DSI				S	Sn	19 02 16.6	-0.1	
MSBI	**Mazada**	**8.88**	**116**	P	Pn	19 00 42.8	+2.9	
MSBI				S	Sn	19 02 19.5	+0.2	
GHAJ	**Ghor Haditha**	**9.04**	**115**		Pn	19 00 43.7	+1.7	
GHAJ	**Ghor Haditha**	**9.04**	**115**	P	Pn	19 00 46.0	+3.9	
GHAJ				S	Sn	19 02 23.3	0.0	
IDAN	**Idan**	**9.07**	**118**	P	Pn	19 00 45.5	+3.0	
IDAN				S	Sn	19 02 23.3	-0.9	
KRMI	**Paran Flat**	**9.11**	**124**	P	Pn	19 00 46.0	+3.0	
KRMI				S	Sn	19 02 24.1	-1.0	
PRNI	**Paran**	**9.15**	**122**	P	Pn	19 00 46.5	+2.8	
PRNI				S	Sn	19 02 25.4	-0.9	
ZFRI	**Zfri**	**9.16**	**120**	P	Pn	19 00 46.7	+3.0	
ZFRI				S	Sn	19 02 25.5	-0.9	
CUC	**Castrocucco**	**9.21**	**302**		Pn	19 00 41.4	-3.1	
HRFI	**Mount Harif**	**9.37**	**123**	P	Pn	19 00 50.2	+3.6	
HRFI				S	Sn	19 02 30.2	-1.4	
ACER	**Acerenza**	**9.50**	**307**		Pn	19 00 45.6	-2.8	
VAE	**Valguarnera**	**9.53**	**285**	Pn	Pn	19 00 48.9	+0.1	
	21nm,1.1s,baz=164,slow=19,SNR=3.0							
VAE				Sn	Sn	19 02 34.5	-1.0	
	0.5nm,0.3s,baz=156,slow=19,SNR=1.9							
EIL2	**Elat**	**9.54**	**125**	P	Pn	19 00 52.2	+3.2	
EIL2				S	Sn	19 02 34.6	-1.2	
EIL	**Elat**	**9.54**	**125**	Pn	Pn	19 00 51.0	+2.1	
	0.8nm,0.3s,baz=355,slow=12,SNR=20							
EIL				Sn	Sn	19 02 35.1	-0.6	
	3.0nm,0.3s,baz=303,slow=17,SNR=6.3							
	3.1nm,0.5s							
ASF	**Jabal al Asfar**	**9.66**	**107**	Pn	Pn	19 00 54.6	+3.9	
	0.5nm,0.3s,baz=292,slow=16,SNR=6.2							
ASF				Sn	Sn	19 02 43.1	+4.2	
	0.4nm,0.3s,baz=325,slow=10.0,SNR=3.5							
	1.2nm,0.3s							
MLR	**Muntele Rosu**	**9.97**	**360**	Pn	Pn	19 00 56.5	+1.6	
	0.1nm,0.3s,baz=181,slow=13,SNR=3.2							
MLR				LR	LR	19 04 50.4		
	comp=Z,74nm,19.4s,baz=256,slow=38							
	1.4nm,0.7s							
MLR	**Muntele Rosu**	**9.97**	**360**	Pn	Pn	19 00 53.1	-1.8	
SGRT	**San Giovanni R**	**10.15**	**311**	Pn	Pn	19 00 55.4	-2.0	
SGRT				Sn	Sn	19 02 41.9	-8.8	
NRCA	**Norcia**	**12.37**	**310**		Pn	19 01 24.6	-3.1	
FDMO	**Fiordimonte**	**12.50**	**311**	Pn	Pn	19 01 27.8	-1.6	
KEST	**Kesra**	**13.55**	**276**	Pn	Pn	19 01 45.0	+1.2	
	0.1nm,0.3s,baz=107,slow=17,SNR=1.9							
	11nm,1.2s							
KEST	**Kesra**	**13.55**	**276**	Pn	Pn	19 01 43.5	-0.3	
MODS	**Modra-Piesok**	**14.38**	**336**	*e*P	P	19 02 08.3	+6.3	
ABTA	**Abfaltersbach**	**15.11**	**322**	*i* P	P	19 02 11.1	+0.9	
	2.2nm,0.7s							
KIEV	**Kiev**	**15.35**	**8**		Pn	19 02 07.8	-0.3	
KIEV				IAmb	IAmb	19 02 22.0		
	comp=Z,6.6nm,0.7s							
AKASG	**Malin Array Be**	**15.36**	**8**	Pn	Pn	19 02 09.3	+1.1	
	comp=Z,1.6nm,0.3s,baz=198,slow=11,SNR=8.3							
	comp=Z,0.1nm,0.3s							
AKBB	**Malin Array Si**	**15.36**	**8**		Pn	19 02 07.2	-1.0	
AKBB				IAmb	IAmb	19 02 22.0		
	comp=Z,7.4nm,0.7s							
KBZ	**Khabaz**	**15.38**	**53**	Pn	P	19 02 14.0	+1.0	
	comp=Z,0.1nm,0.3s,baz=244,slow=8.2,SNR=12							
	comp=Z,2.6nm,0.8s							
VRAC	**Vranov**	**15.42**	**336**	Pn	Pn	19 02 11.0	+2.0	
	comp=Z,0.1nm,0.3s,baz=145,slow=6.6,SNR=3.6							
	comp=Z,1.2nm,0.5s							
LESA	**Schwarzleotal**	**15.50**	**324**	*i* P	P	19 02 15.8	+1.3	
	comp=Z,1.5nm,0.6s							
WTTA	**Wattenberg**	**15.90**	**322**	*e*P	P	19 02 20.7	+1.7	
	comp=Z,2.6nm,0.7s							
SQTA	**Sankt Quirin**	**16.09**	**321**	*i* P	P	19 02 22.9	+1.8	
	comp=Z,2.4nm,0.6s							
GERES	**GERESS Array B**	**16.11**	**330**	Pn	Pn	19 02 19.1	+1.1	
	comp=Z,0.1nm,0.3s,baz=158,slow=22,SNR=4.6							
GERES				LR	LR	19 09 48.2		
	comp=Z,30nm,19.7s,baz=78,slow=42							
	comp=Z,1.1nm,0.6s							
FUORN	**Ofenpass-Fuorn**	**16.21**	**318**	Pn	Pn	19 02 17.0	-2.5	
FETA	**Feichten**	**16.21**	**320**	*i* P	P	19 02 24.5	+2.0	
	comp=Z,4.7nm,1.3s							
KHC	**Kasperske Hory**	**16.38**	**330**		Pn	19 02 19.6	-1.8	
DAVOX	**Davos/Dischmat**	**16.52**	**318**	Pn	Pn	19 02 24.8	+1.5	
	comp=Z,0.2nm,0.3s,baz=142,slow=16,SNR=4.4							
	comp=Z,0.3nm,0.4s							
TUE	**Stuetta**	**16.63**	**316**	Pn	Pn	19 02 21.4	-3.4	
SENIN	**Lac Senin/Sane**	**17.76**	**313**	Pn	Pn	19 02 34.7	-4.2	
PABE	**Paberze**	**20.04**	**357**	P	P	19 03 01.6	-2.7	
ESDC	**Sonseca Array**	**24.04**	**289**	P	P	19 03 46.4	-0.2	
	comp=Z,1.1nm,0.9s,baz=82,slow=9.7,SNR=6.3							
ESDC				LR	LR	19 14 01.1		
	comp=Z,33nm,18.5s,baz=240,slow=39							
	comp=Z,1.1nm,0.9s							
ESDC	**Sonseca Array**	**24.04**	**289**	P	P	19 03 43.3	-3.2	
PAB	**San Pablo**	**24.34**	**289**	P	P	19 03 44.9	-4.4	
HFS	**Hagfors**	**25.89**	**346**	P	P	19 04 03.7	+0.6	
	comp=Z,5.5nm,0.9s,baz=156,slow=14,SNR=1.9							
	comp=Z,2.5nm,0.9s							
FINES	**FINESS Array B**	**25.95**	**0**	P	P	19 04 03.6	0.0	
	comp=Z,1.2nm,0.8s,baz=198,slow=8.7,SNR=1.2							
	comp=Z,1.2nm,0.8s							
FINES	**FINESS Array B**	**25.95**	**0**	P	P	19 04 02.2	-1.4	
PESTR	**Estremoz**	**26.88**	**287**	P	P	19 04 08.4	-3.9	
NOA	**NORSAR Array B**	**27.24**	**344**	LR	LR	19 17 21.2		
	comp=Z,13nm,18.8s,baz=270,slow=42							
EKA	**Eskdalemuir Ar**	**28.15**	**324**	P	P	19 04 22.4	-1.1	
	comp=Z,1.0nm,0.6s,baz=122,slow=8.9,SNR=4.1							
	comp=Z,1.0nm,0.6s							
ABKAR	**Akbulak array**	**28.32**	**50**	P	P	19 04 23.9	-1.2	
TORD	**Torodi Ar. Bea**	**31.24**	**231**	P	P	19 04 51.4	+0.3	
	comp=Z,0.7nm,0.6s,baz=24,slow=6.6,SNR=13							
	comp=Z,0.7nm,0.6s							
CHGR	**Chuyangaron**	**34.35**	**72**		P	19 05 17.4	-1.0	
KKAR	**Karatay Array**	**34.94**	**64**	P	P	19 05 22.8	-0.4	
GAR	**Garm**	**35.19**	**71**	P	P	19 05 23.9	-1.7	
BVAR	**Borovoye Array**	**35.61**	**47**	P	P	19 05 31.7	+2.8	
	comp=Z,0.3nm,0.4s,baz=266,slow=2.3,SNR=2.1							
	comp=Z,0.3nm,0.4s							
DRK	**Karamyk**	**36.26**	**70**	P	P	19 05 33.8	-1.2	
MACI	**Morro de la Ar**	**36.59**	**271**	P	P	19 05 34.5	-3.3	
ARSB	**Arslanbob**	**36.91**	**66**	P	P	19 05 38.7	-1.7	
ARSB				IAmb	IAmb	19 05 58.8		
	comp=Z,8.0nm,1.4s							
AAK	**Ala-Archa**	**37.89**	**64**		P	19 05 47.0	-1.7	
NRN	**Naryn**	**39.15**	**66**	P	P	19 05 57.9	-1.5	
KURBB	**Kurchatov Arra**	**40.37**	**51**	P	P	19 06 11.2	+2.1	
	comp=Z,2.7nm,0.6s,baz=274,slow=8.7,SNR=36							
KURBB				LR	LR	19 27 18.3		
	comp=Z,72nm,20.6s,baz=194,slow=43							
	comp=Z,2.7nm,0.6s							
KURK	**Kurchatov**	**40.43**	**51**		P	19 06 09.4	-0.1	
KURK				IAmb	IAmb	19 06 12.3		
	comp=Z,2.2nm,0.6s							
WUS	**Wushi**	**41.58**	**66**	P	P	19 06 18.9	-0.5	
WUS				IAmb	IAmb	19 06 29.2		
	comp=Z,4.5nm,0.7s							
MAKZ	**Makanchi**	**42.80**	**57**		P	19 06 28.6	-0.4	
MAKZ				IAmb	IAmb	19 06 42.5		
	comp=Z,2.4nm,0.9s							
SPITS	**Spitsbergen Ar**	**42.97**	**357**	P	P	19 06 32.3	+2.3	
	comp=Z,7.3nm,1.0s,baz=169,slow=8.5,SNR=2.2							
	comp=Z,7.3nm,1.0s							
MK31	**Makanchi Array**	**43.01**	**57**	P	P	19 06 30.2	-0.6	
MK31				IAmb	IAmb	19 06 37.0		
	comp=Z,6.8nm,1.4s							
MKAR	**Makanchi Array**	**43.01**	**57**	P	P	19 06 33.1	+2.3	
	comp=Z,1.8nm,0.3s,baz=269,slow=8.4,SNR=27							
MKAR				LR	LR	19 26 06.2		
	comp=Z,94nm,19.6s,baz=148,slow=38							
	comp=Z,1.8nm,0.3s							
MKAR	**Makanchi Array**	**43.01**	**57**		P	19 06 30.7	-0.1	
ZAA0	**Zalesovo Array**	**44.27**	**46**	P	P	19 06 40.0	-0.7	
ZAA0				IAmb	IAmb	19 07 16.0		
	comp=Z,1.4nm,0.6s							
ZALV	**Zalesovo Beam**	**44.27**	**46**	P	P	19 06 42.1	+1.4	
	comp=Z,1.0nm,0.4s,baz=271,slow=8.3,SNR=6.7							
	comp=Z,1.0nm,0.4s							
ZALV	**Zalesovo Beam**	**44.27**	**46**	P	P	19 06 39.8	-1.0	
EVN	**Everest**	**51.57**	**80**	P	P	19 07 37.1	-1.4	
EVN				IAmb	IAmb	19 08 04.3		
	comp=Z,6.1nm,1.5s							
SFJD	**Kangerlussuaq**	**52.70**	**331**	LR	LR	19 31 48.0		
	comp=Z,185nm,21.2s,baz=300,slow=38							
SONM	**Songino Array**	**58.74**	**51**	P	P	19 08 31.5	+2.2	
	comp=Z,0.4nm,0.5s,baz=294,slow=7.7,SNR=2.6							
	comp=Z,0.4nm,0.5s							
SCHQ	**Schefferville**	**63.36**	**320**	P	P	19 08 58.9	-1.5	
CMAR	**Chiang Mai Arr**	**65.86**	**84**	P	P	19 09 19.8	+2.5	
	comp=Z,0.5nm,0.8s,baz=303,slow=8.1,SNR=2.6							
	comp=Z,0.5nm,0.8s							
BLKN	**Baker Lake**	**70.60**	**337**	P	P	19 09 44.5	-1.7	
B20K	**Meade River**	**74.76**	**1**	P	P	19 10 09.3	-1.6	
B20K				IAmb	IAmb	19 10 23.0		
	comp=Z,1.7nm,1.0s							
B21K	**Ikpikpuk River**	**75.17**	**0**	P	P	19 10 10.5	-2.7	
B21K				IAmb	IAmb	19 10 28.8		
	comp=Z,3.8nm,1.4s							
E29M	**Blow River**	**75.71**	**354**	P	P	19 10 14.0	-2.4	
E29M				IAmb	IAmb	19 10 27.8		
	comp=Z,3.8nm,1.5s							
D23K	**Nanushuk River**	**75.80**	**359**	P	P	19 10 15.9	-1.0	
D20K	**Etivluk River**	**76.07**	**1**	P	P	19 10 16.4	-2.1	
D19K	**Kuna River**	**76.26**	**2**	P	P	19 10 17.3	-2.3	
D19K				IAmb	IAmb	19 10 49.0		
	comp=Z,1.2nm,0.8s							
E24K	**Your Creek**	**76.64**	**358**	P	P	19 10 18.9	-2.9	
E24K				IAmb	IAmb	19 10 51.8		
	comp=Z,1.1nm,1.1s							
G31M	**Satah River**	**76.78**	**352**	P	P	19 10 21.0	-1.5	
G31M				IAmb	IAmb	19 10 49.2		
	comp=Z,3.8nm,1.5s							
YKA	**Yellowknife Ar**	**77.32**	**342**	P	P	19 10 25.6	0.0	
	comp=Z,0.1nm,0.5s,baz=31,slow=6.0,SNR=4.6							
	comp=Z,0.1nm,0.5s							
KSRS	**Korea Array**	**77.53**	**53**	P	P	19 10 28.6	+1.4	
	comp=Z,1.2nm,0.8s,baz=316,slow=3.8,SNR=4.4							
	comp=Z,1.2nm,0.8s							
H29M	**Whitestone**	**77.88**	**354**	P	P	19 10 25.9	-2.8	
I28M	**Miner Creek**	**78.77**	**354**	P	P	19 10 31.4	-2.4	
I28M				IAmb	IAmb	19 11 12.6		
	comp=Z,3.5nm,1.4s							
ILAR	**Eielson Array**	**79.89**	**357**	P	P	19 10 41.0	+1.3	
	comp=Z,0.2nm,0.7s,baz=353,slow=2.8,SNR=1.2							
	comp=Z,0.2nm,0.7s							

*IDC **21** 19:11:24.1±0.8,23°.67S×64°.64W,h0km,mb3.7/7, mbtmp3.7/11,ML3.6/4,MS3.1/1,Error ellipse: s-maj=21.2km s-min=16.0km az=78.0*

ISC 21 19:11:29.2±0.7,23°.66S±0°.08×64°.57W±0°.09,h35km,n13, σ0s77/15,mb3.6/6,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
CPUP	**Villa Florida**	**7.08**	**114**	Pn	**Pn**	**19 13 10.2**		**-0.2**
	1.1nm,0.3s,baz=294,slow=13,SNR=45							
CPUP				Lg	Lg	19 15 10.8		
	4.6nm,0.3s,baz=222,slow=16,SNR=3.3							
CPUP				LR	LR	19 16 24.8		
	comp=Z,124nm,18.8s,baz=274,slow=42							
	14nm,0.8s							
LPAZ	**La Paz**	**8.06**	**335**	Pn	**Pn**	**19 13 23.7**		**-0.7**
	0.2nm,0.3s,baz=172,slow=5.0,SNR=3.8							
LPAZ				Sn	**Sn**	**19 14 55.1**		**+0.5**
	0.3nm,0.3s,baz=200,slow=8.4,SNR=1.8							
	1.0nm,0.3s							
SIV	**San Ignacio**	**8.31**	**24**	Pn	**Pn**	**19 13 26.7**		**-0.5**
	0.1nm,0.3s,baz=222,slow=5.5,SNR=24							
SIV				Sn	**Sn**	**19 14 58.4**		**-1.5**
	0.2nm,0.3s,baz=269,slow=15,SNR=3.0							
SIV				Lg	Lg	19 15 48.0		
	0.2nm,0.3s,baz=311,slow=19,SNR=2.2							
	2.3nm,0.4s							
CFA	**Coronel Fontan**	**8.56**	**202**	Pn	**Pn**	**19 13 29.4**		**-1.2**
	0.2nm,0.3s,baz=31,slow=14,SNR=3.6							
CFA				Lg	Lg	19 15 53.7		
	0.4nm,0.3s,baz=131,slow=19,SNR=2.2							
	0.8nm,0.4s							
ATAH	**Atahualpa**	**21.12**	**319**	P	**P**	**19 16 11.2**		**-0.3**
	1.3nm,0.7s,baz=123,slow=17,SNR=3.8							
	1.3nm,0.7s							
TXAR	**Lajitas Array**	**64.73**	**322**	P	**P**	**19 22 03.9**		**-0.2**
	0.2nm,0.6s,baz=149,slow=6.4,SNR=2.4							
	0.2nm,0.6s							
QSPA	**South Pole Qui**	**66.55**	**180**	P	**P**	**19 22 15.9**		**+0.4**
	1.3nm,0.7s,baz=172,slow=2.6,SNR=9.2							
	1.3nm,0.7s							
TORD	**Torodi Ar. Bea**	**74.37**	**68**	P	**P**	**19 23 04.6**		**+0.8**
	0.8nm,0.6s,baz=246,slow=7.2,SNR=5.7							
	0.8nm,0.6s							
PDAR	**Pinedale Array**	**78.02**	**328**	P	**P**	**19 23 24.8**		**+0.5**
	0.2nm,0.5s,baz=120,slow=8.8,SNR=3.9							
	0.2nm,0.5s							
ESDC	**Sonseca Array**	**84.63**	**42**	P	**P**	**19 24 00.3**		**+1.1**
	0.7nm,1.0s,baz=234,slow=11,SNR=2.1							
	0.7nm,1.0s							
YKA	**Yellowknife Ar**	**94.59**	**339**	P	**P**	**19 24 45.8**		**+0.1**
	0.1nm,0.3s,baz=116,slow=5.7,SNR=2.0							
	0.1nm,0.3s							
MKAR	**Makanchi Array**	**144.83**	**41**	PKP	**PKPdf**	**19 31 02.4**		**0.0**
	1.5nm,0.9s,baz=299,slow=3.0,SNR=4.3							
SONM	**Songino Array**	**154.82**	**14**	PKPbc	**PKiKP**	**19 31 27.1**		**+0.2**
	0.3nm,0.6s,baz=320,slow=3.8,SNR=2.3							

*FUNV **21** 19:22:56.3,10°.82N×62°.37W,h24km,MW3.6,Presumed earthquake*
*TRN **21** 19:22:56.8,10°.92N×62°.28W,h79km,MD3.0,North of the Paria peninsula.*

ISC 21 19:22:57.3±4.6,10°.9N±0°.1×62°.2W±0°.4,h79km±43km,n11, σ0s60/21,Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
DMDM	**Guralp CMG5TDE**	**0.72**	**108**	*e*P	**Pn**	**19 23 13.0**		**0.0**
DMDM				*e*S	Sn	19 23 24.7		-0.1
PSQC	**Port of Spain**	**0.76**	**110**	*e*P	**Pn**	**19 23 14.2**		**+0.7**
PSQC				*e*S	Sn	19 23 25.8		+0.2
PSWS	**West Secondary**

VLS	Valsamata	1.02	179	P	Pg	19 34 21.7	-1.2
VLS				S	Sn	19 34 38.5	+1.6
VLS	Valsamata	1.02	179	P	Pg	19 34 21.7	-1.2
VLS				S	Sb	19 34 37.0	+1.4
ARG2	Argostoli	1.02	184	P	Pg	19 34 22.0	-0.9
ARG2				S	Sn	19 34 38.8	+1.9
ARG2	Argostoli	1.02	184	P	Pb	19 34 23.1	+0.6
ARG2				S	Sb	19 34 36.6	+1.0
KFL1	Kefalonia,Entr	1.03	183	P	Pb	19 34 23.2	+0.5
KFL1				S	Sb	19 34 37.4	+1.4
MSL1	Messolongi	1.06	141	P	Pg	19 34 23.0	-0.7
PENT	Pentalofos	1.09	23	P	Pg	19 34 23.6	-0.7
PENT	Pentalofos	1.09	23	P	Pg	19 34 23.8	-0.5
RTZL	Ratzakli, Kefa	1.13	172	P	Pg	19 34 23.5	-1.6
RTZL				S	Sn	19 34 41.2	+1.7
RTZL	Ratzakli, Kefa	1.13	172	P	Pg	19 34 23.4	-1.6
RTZL				S	Sn	19 34 40.8	+1.2
THL	Klokotos Trika	1.17	71	P	Pg	19 34 23.9	-2.0
THL	Klokotos Trika	1.17	71	P	Pg	19 34 24.7	-1.1
THL				S	Sb	19 34 41.4	+1.3
AXS	Araxos	1.18	148	P	Pg	19 34 24.5	-1.5
AXS	Araxos	1.18	148	P	Pg	19 34 24.7	-1.3
AXS				S	Sb	19 34 41.7	+1.5
SOFA	Sofades	1.19	83	P	Pb	19 34 25.9	+0.5
AGRP	Agrapidokambos	1.20	131	P	Pg	19 34 24.9	-1.5
AGRP				S	Sn	19 34 42.7	+1.3
ANX	Ano Chora	1.21	119	P	Pg	19 34 25.0	-1.6
ANX	Ano Chora	1.21	119	P	Pg	19 34 25.7	-0.9
MAKR	Makrakomi, Fth	1.22	98	P	Pg	19 34 25.3	-1.5
MAKR	Makrakomi, Fth	1.22	98	P	Pg	19 34 25.6	-1.2
NEST	Nestorio	1.27	17	P	Pg	19 34 26.5	-1.2
NEST	Nestorio	1.27	17	P	Pn	19 34 27.5	+1.1
EFP	Efpalio	1.29	126	P	Pn	19 34 26.5	-0.2
MALA	Malamata, Dori	1.29	128	P	Pn	19 34 27.5	+0.9
PATC	Patra C	1.31	135	P	Pn	19 34 27.5	+0.6
UPR	University Cam	1.31	134	P	Pg	19 34 29.0	+0.5
MG00	Magoula, Dorid	1.33	126	P	Pb	19 34 28.3	+0.6
RLS	Riolos of Patr	1.33	148	P	Pn	19 34 27.1	-0.1
RLS	Riolos of Patr	1.33	148	P	Pn	19 34 27.1	-0.1
ORTH	Orthonies,Zaky	1.35	176	P	Pn	19 34 27.9	+0.5
ORTH	Orthonies,Zaky	1.35	176	P	Pb	19 34 28.6	+0.5
ORTH				S	Sn	19 34 46.8	+1.8
AGG	Agios Georgios	1.38	97	P	Pn	19 34 27.6	-0.3
AGG	Agios Georgios	1.38	97	P	Pn	19 34 28.2	+0.3
AGG				S	Sn	19 34 48.1	+2.3
CLEM	Kyllini,Ilia,G	1.38	161	P	Pn	19 34 28.4	+0.7
TYRN	Tyrnavos	1.38	68	P	Pn	19 34 27.5	-0.4
TYRN	Tyrnavos	1.38	68	P	Pn	19 34 28.2	+0.4
KYPS	Kipseli, Zakin	1.39	172	P	Pn	19 34 28.4	+0.6
ZIRI	Ziria, Aigiali	1.39	129	P	Pb	19 34 29.4	+0.5
SERG	Sergoula	1.40	124	P	Pn	19 34 28.8	+0.6
SERG	Sergoula	1.40	124	P	Pg	19 34 29.7	-0.5
KBN	Korca	1.43	6	P	Pb	19 34 30.2	+0.5
TRIZ	Trizonia	1.44	125	P	Pg	19 34 30.5	-0.3
KZN	Kozani	1.44	39	P	Pb	19 34 30.4	+0.6
KALE	Kalithea	1.46	123	P	Pn	19 34 30.3	+1.2
KALE	Kalithea	1.46	123	P	Pb	19 34 30.6	+0.4
GINA	Giannouli	1.48	71	P	Pn	19 34 30.5	+1.3
AGEO	AgiosGiorgios,	1.49	128	P	Pn	19 34 30.7	+1.3
LTHK	Lithakia	1.50	172	P	Pn	19 34 29.9	+0.4
LTHK	Lithakia	1.50	172	P	Pn	19 34 30.1	+0.6
DRO	Drossia	1.53	144	P	Pn	19 34 30.1	+0.2
DRO	Drossia	1.53	144	P	Pn	19 34 30.4	+0.5
TEME	Temeni, Aigial	1.54	128	P	Pb	19 34 32.1	+0.7
AXAR	Agios Charalam	1.68	104	P	Pb	19 34 33.9	+0.1
KLV	Kalavryta, Ach	1.69	133	P	Pb	19 34 34.5	+0.5
KLV	Kalavryta, Ach	1.69	133	P	Pn	19 34 35.5	+1.4
GUR	Goura	1.87	132	P	Pn	19 34 35.9	+1.2
GUR	Goura	1.87	132	P	Pn	19 34 36.3	+1.6
AMT	Artemida-Makis	1.89	151	P	Pn	19 34 36.5	+1.7
AMT	Artemida-Makis	1.89	151	P	Pb	19 34 37.1	-0.2
OHR	Ohrid	1.92	5	*e*Pn	Pg	19 34 39.7	-0.4
OHR				*i* Sn	Sg	19 35 10.7	+5.7
LKR	Lokris	1.97	105	P	Pb	19 34 38.6	-0.1
ATAL	Atalanti	1.97	104	P	Pn	19 34 37.9	+1.9
ATAL	Atalanti	1.97	104	P	Pb	19 34 38.1	-0.6
NEO	Neokhori	2.06	86	P	Pn	19 34 39.0	+1.8
LTK	Loutraki	2.21	121	P	Pn	19 34 41.5	+2.2
ITM	Ithomi	2.28	152	P	Pb	19 34 43.2	-0.8
VLX	Vlachokerasia	2.31	142	P	Pn	19 34 42.3	+1.5
THE	Thessaloniki	2.33	51	P	Pn	19 34 42.6	+1.8
VILL	Villia	2.38	115	P	Pn	19 34 43.6	+2.0
HORT	Hortiatis	2.39	53	P	Pn	19 34 43.2	+1.3
PYL	PYLOS	2.48	158	P	Pn	19 34 44.9	+2.0
PLOP	Peshkopia	2.49	358	P	Pn	19 34 45.9	+2.8
PLG	Polygyros	2.50	61	P	Pn	19 34 44.6	+1.3
STFN	Stefani	2.54	113	P	Pn	19 34 45.9	+2.2
MAGU	Magoula	2.56	115	P	Pn	19 34 46.4	+2.4
AOS	Alonnisos	2.57	90	P	Pn	19 34 46.1	+1.9
VAY	Valandovo	2.61	35	*e*Pn	Pb	19 34 48.0	-1.6
VAY				*i* Sn	Sn	19 35 20.0	+3.8
KNT	Kendrikon	2.65	41	P	Pn	19 34 47.4	+2.0
SOH	Sokhos	2.68	52	P	Pn	19 34 48.4	+2.7
ATHU	Athens Univers	2.80	115	P	Pn	19 34 49.4	+2.0
KYMI	Kymi, Euboea I	2.81	100	P	Pn	19 34 50.2	+2.7
PTL	Penteli	2.82	113	P	Pn	19 34 49.9	+2.2
SKO	Skopje	2.85	13	*e*Pn	Pb	19 34 51.9	-1.8
SKO				*i* Sn	Sb	19 35 30.1	+1.8
DION	Dionisos Attik	2.86	112	P	Pn	19 34 50.5	+2.3
VLV	Voula,Athens	2.86	117	P	Pn	19 34 50.5	+2.3
ULC	Ulcinj	2.94	340	⇑*i*Pn	Pn	19 34 50.3	+0.9
TIP	Timpagrande	2.97	271	⇑P	Pn	19 34 51.3	+1.6
TIP				⇑S	Sn	19 35 27.9	+2.9
SRS	Serrai	3.00	49	P	Pn	19 34 52.3	+2.1
VLI	Veliai	3.10	142	P	Pn	19 34 54.0	+2.5
DRME	Dracevica, Mon	3.17	341	⇑*i*Pn	Pn	19 34 53.6	+1.2
DRME				*i* Sn	Sn	19 35 32.8	+2.9
DRME	Dracevica, Mon	3.17	341	*e*Pn	Pn	19 34 53.7	+1.3
KARY	Karystos	3.24	110	P	Pn	19 34 55.6	+2.2
KKB	Krupnik	3.28	36	P	Pn	19 34 56.2	+2.2
KKB	Krupnik	3.28	36	P	Pn	19 34 56.7	+2.7
NVR	Nevrokopi	3.31	48	P	Pn	19 34 56.8	+2.4
MATE	Matera	3.31	297	⇓P	Pn	19 34 55.3	+0.9
MATE				⇑S	Sn	19 35 33.8	+0.4
BUM	Brajici-Budva	3.35	338	⇑*i*Pn	Pn	19 34 55.7	+0.7
BUM				*e*Sn	Sn	19 35 37.1	+2.5
MMB	Musomishta	3.37	45	P	Pn	19 34 57.6	+2.3
MMB	Musomishta	3.37	45	P	Pn	19 34 58.1	+2.8
PDG	Podgorica	3.38	343	⇑P	Pn	19 34 56.4	+1.1
PDG				⇓S	Sn	19 35 37.7	+2.6
PDG	Podgorica	3.38	343	⇓*i*Pn	Pn	19 34 56.6	+1.3
PDG				*e*Sn	Sn	19 35 38.2	+3.1
PDG	Podgorica	3.38	343	*e*Pn	Pn	19 34 56.4	+1.1
PVY	Plav	3.43	352	*e*Pn	Pn	19 34 58.1	+2.0
PVY				*i* Sn	Sn	19 35 39.3	+2.8
THAS	Thassos island	3.48	65	P	Pn	19 34 58.0	+1.3
KAVA	Kavala	3.51	58	P	Pn	19 34 58.7	+1.5
KTHA	Kythira Island	3.54	145	P	Pn	19 35 00.8	+3.2
CEME	Cevo	3.57	340	⇑*i*Pn	Pn	19 34 58.7	+0.6
CEME				*i* Sn	Sn	19 35 41.4	+1.4
HCY	Herceg Novi	3.61	335	⇑*i*Pn	Pn	19 34 59.0	+0.5
HCY				*i* Sn	Sn	19 35 41.8	+1.0
HCY	Herceg Novi	3.61	335	*e*Pn	Pn	19 34 59.7	+1.2
LIA	Limnos Island	3.63	77	P	Pn	19 35 00.3	+1.6
IVA	Berane	3.71	352	⇑*i*Pn	Pn	19 35 02.3	+2.4
IVA				*e*Sn	Sn	19 35 46.5	+3.2
KOME	Kolasin	3.74	348	⇓*i*Pn	Pn	19 35 01.9	+1.6
KOME				*e*Sn	Sn	19 35 47.5	+3.4
NKME	Niksic	3.77	342	⇑*i*Pn	Pn	19 35 01.7	+0.9
NKME				*i* Sn	Sn	19 35 47.2	+2.3
TREB	Trebinje	3.90	335	*e*Pn	Pn	19 35 02.4	-0.1
PLNA	Plana	3.92	33	P	Pn	19 35 06.0	+3.1
VTS	Vitosha	3.97	30	P	Pn	19 35 05.8	+2.3
VTS	Vitosha	3.97	30	P	Pn	19 35 06.1	+2.5
ANKY	Antikythira Is	3.97	146	P	Pn	19 35 06.3	+2.9
BRY	Bratogost	4.01	338	⇓*i*Pn	Pn	19 35 04.4	+0.3
BRY	Bratogost	4.01	338	*e*Pn	Pn	19 35 04.1	0.0
SMTH	Samothraki Isl	4.02	70	P	Pn	19 35 05.8	+1.7
RZN	Rozhen	4.04	51	P	Pn	19 35 07.1	+2.6
RZN	Rozhen	4.04	51	P	Pn	19 35 07.3	+2.7
SJES	Sjenica	4.08	354	*e*Pn	Pn	19 35 06.8	+1.6
BLSH	Balsha	4.19	28	*e*P	Pn	19 35 09.4	+2.9
UPM	Unac-Piva	4.20	343	⇓*i*Pn	Pn	19 35 08.3	+1.6
UPM				*i* Sn	Sn	19 35 57.9	+2.4
UPM	Unac-Piva	4.20	343	*e*Pn	Pn	19 35 08.0	+1.3
GADA	Gvkgeada	4.22	75	P	Pn	19 35 08.6	+1.7
RDO	Rodhopi	4.27	61	P	Pn	19 35 09.6	+2.1
CHOS	Chios island	4.36	99	P	Pn	19 35 11.5	+2.6
RUDO	Rudo	4.51	349	*e*Pn	Pn	19 35 11.0	+0.1
CAVK	Edirne/Enez-Ca	4.55	69	⇑P	Pn	19 35 14.4	+3.0
BBLS	Lazi&#263i	4.75	350	*e*Pn	Pn	19 35 15.1	+0.9
VAE	Valguarnera	5.14	252	Pn	Pn	19 35 22.6	+3.0
	0.5nm,0.3s,baz=53,slow=20,SNR=1.9						
VAE				Sn	Sn	19 36 20.9	+2.3
	1.2nm,0.3s,baz=315,slow=23,SNR=1.9						
PLVB	Pleven	5.18	35	⇓P	Pn	19 35 22.6	+2.5
IDI	Anoyia	5.20	137	Pn	Pn	19 35 20.3	-0.1
	2.0nm,0.3s,baz=48,slow=1.5,SNR=1.1						
IDI				Sn	Sn	19 36 19.2	-1.0
	2.8nm,0.3s,baz=194,slow=9.1,SNR=8.6						
ELND	Elena	5.47	45	⇓P	Pn	19 35 26.8	+2.7
ELND				⇓S	Sn	19 36 27.3	+0.6
SZH	Strazhitsa	5.75	43	P	Pn	19 35 30.8	+2.9
FRGS	Fruska Gora	5.98	355	*e*Pn	Pn	19 35 31.1	0.0
BLY	Banja Luka	6.09	337	⇑P	Pn	19 35 33.2	+0.5
BLY				⇑S	Sn	19 36 39.8	-2.2
BLY	Banja Luka	6.09	337	*e*Pn	Pn	19 35 32.8	+0.2
AQU	L'Aquila	6.29	302	*e*Pn	Pn	19 35 36.1	+0.7
VOIR		7.06	27	⇓P	Pn	19 35 49.1	+3.1
MORH	Mrgy, Hungar	7.16	349	⇑P	Pn	19 35 47.0	-0.2
MORH	Mrgy, Hungar	7.16	349	*e*Pn	Pn	19 35 46.0	-1.2
MLR	Muntele Rosu	7.44	31	Pn	Pn	19 35 53.1	+1.9
	0.7nm,0.3s,baz=222,slow=14,SNR=13						
	2.7nm,0.8s						
MLR	Muntele Rosu	7.44	31	⇑P	Pn	19 35 55.0	+3.7
NEHR	Nehoiu	7.53	32	⇑P	Pn	19 35 56.4	+4.0
DOPR	Dopca	7.64	26	⇓P	Pn	19 35 56.7	+2.8
PLOR	Plostina	8.02	32	⇑P	Pn	19 36 02.7	+3.6
VRI	Vrincioaia	8.06	32	⇓P	Pn	19 36 03.1	+3.5
OBKA	Obir	8.54	331	*i* Pn	Pn	19 36 06.8	+0.5
	3.9nm,0.3s,SNR=12						
OBKA				*i* Sn	Sn	19 37 40.8	-1.5
	3.1nm,0.4s						
ARSA	Arzberg	8.85	337	*i* Pn	Pn	19 36 11.1	+0.6
	1.5nm,0.3s,SNR=6.7						
ABTA	Abfaltersbach	9.58	325	*i* Pn	Pn	19 36 20.1	-0.4
	1.3nm,0.4s						
ABTA				*i* Sn	Sn	19 38 02.5	-5.3
	1.7nm,0.4s						
MOA	Molln	9.78	334	*i* Pn	Pn	19 36 24.3	+1.1
	1.2nm,0.2s						
BIOA	Bad Ischl, Aus	9.87	332	*i* Pn	Pn	19 36 25.1	+0.7
	3.3nm,0.3s						
LESA	Serzleotal	10.03	328	*i* Pn	Pn	19 36 26.4	-0.3
	2.0nm,0.4s						
BRTR	Keskin Array B	10.12	83	Pn	Pn	19 36 30.0	+2.0
	0.1nm,0.3s,baz=263,slow=11,SNR=2.0						
	0.3nm,0.6s						
WTTA	Wattenberg	10.36	324	*i* Pn	Pn	19 36 33.0	+1.7
	1.2nm,0.3s,SNR=5.1						
WTTA				*i* Sn	Sn	19 38 23.8	-3.4
	4.9nm,0.6s						
WATA	Walderalm	10.44	324	*e*Pn	Pn	19 36 32.9	+0.5
	1.0nm,0.3s,SNR=4.3						
WATA				*i* Sn	Sn	19 38 23.8	-5.3
	2.0nm,0.4s						
SQTA	Sankt Quirin	10.53	323	*i* Pn	Pn	19 36 35.0	+1.4
	1.6nm,0.3s						
SQTA				*i* Sn	Sn	19 38 26.5	-4.7
	1.7nm,0.5s						
FETA	Feichten	10.62	321	*i* Pn	Pn	19 36 33.3	-1.5
	0.4nm,0.3s						
FETA				*i* Sn	Sn	19 38 31.5	-2.0
	0.7nm,0.4s						
MOTA	Moosalm	10.67	323	*e*Pn	Pn	19 36 36.5	+1.0
	1.6nm,0.4s,SNR=5.1						
MOTA				*i* Sn	Sn	19 38 29.7	-5.0
	1.8nm,0.5s						
GERES	GERESS Array B	10.84	335	Pn	Pn	19 36 38.2	+0.5
	baz=144,slow=14,SNR=1.8						
	0.4nm,0.3s						
KHC	Kasperske Hory	11.12	335	*e*PN	Pn	19 36 39.9	-1.7
ESDC	Sonseca Array	18.95	279	P	Pn	19 38 25.4	+1.0
	baz=85,slow=12,SNR=2.5						
	0.6nm,1.0s						
HFS	Hagfors	21.40	351	P	P	19 38 49.4	-0.7
	0.9nm,0.5s,baz=178,slow=12,SNR=7.0						
	0.9nm,0.5s						
FINES	FINESS Array B	22.53	7	P	P	19 39 00.7	-1.5
	2.5nm,0.9s,baz=193,slow=9.7,SNR=5.8						
	2.5nm,0.9s						
EKA	Eskdalemuir Ar	22.63	323	P	P	19 39 02.9	-0.4
	1.6nm,0.6s,baz=128,slow=10.0,SNR=4.4						
	1.6nm,0.6s						
NB2	NORSAR Subarra	22.63	348	P	P	19 39 03.1	-0.2
	comp=Z,0.4nm,0.5s,baz=153,slow=10						
NOA	NORSAR Array B	22.63	348	P	P	19 39 02.8	-0.5
	comp=Z,0.5nm,0.6s,baz=163,slow=11,SNR=4.4						
	comp=Z,0.5nm,0.6s						
BELG	Belogornoye	22.85	46	P	P	19 39 04.4	-1.2
	comp=Z,2.1nm,0.6s,baz=258,slow=19,SNR=3.7						
	comp=Z,2.1nm,0.6s						
ARCES	ARCESS Array B	30.51	3	P	P	19 40 13.8	-1.5
	comp=Z,5.3nm,1.0s,baz=184,slow=9.7,SNR=3.7						
	comp=Z,5.3nm,1.0s						
BVAR	Borovoye Array	36.44	51	P	P	19 41 05.9	-1.1
	comp=Z,0.4nm,0.4s,baz=242,slow=3.2,SNR=3.6						
	comp=Z,0.4nm,0.4s						
SPITS	Spitsbergen Ar	39.13	359	P	P	19 41 30.1	+0.6
	comp=Z,6.5nm,0.9s,baz=200,slow=20,SNR=1.8						
	comp=Z,6.5nm,0.9s						
KURBB	Kurchatov Arra	41.59	54	P	P	19 41 49.6	-0.6
	comp=Z,0.3nm,0.5s,baz=283,slow=9.7,SNR=4.1						
	comp=Z,0.3nm,0.5s						
MKAR	Makanchi Array	44.74	59	P	P	19 42 14.2	-1.6
	comp=Z,0.7nm,0.4s,baz=281,slow=7.3,SNR=18						
	comp=Z,0.7nm,0.4s						
ZALV	Zalesovo Beam	44.98	49	P	P	19 42 16.7	-0.8
	comp=Z,1.0nm,0.4s,baz=268,slow=9.2,SNR=6.7						
	comp=Z,1.0nm,0.4s						
CMAR	Chiang Mai Arr	69.71	82	P	P	19 45 10.9	-1.7
	comp=Z,0.3nm,0.7s,baz=292,slow=8.3,SNR=2.8						
	comp=Z,0.3nm,0.7s						

*MAN **21** 19:42:09.0,2°.98N×126°.00E,h133km,MS3.5*
IDC 21 19:41:49.9±2.2,3°.76N×126°.82E,h0km,mb3.3/3,
mbtmp3.3/3,Error ellipse: s-maj=168.1km
s-min=27.0km az=66.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.68	163	P	P	19 47 13.3	+0.5
	0.5nm,0.5s,baz=343,slow=10.0,SNR=13						
	0.5nm,0.5s						
ASAR	Alice Springs	28.12	166	P	P	19 47 43.2	-0.6
	0.2nm,0.6s,baz=341,slow=9.2,SNR=4.5						
	0.2nm,0.6s						
MKAR	Makanchi Array	57.58	325	P	P	19 51 41.5	-0.1
	0.1nm,0.3s,baz=116,slow=7.1,SNR=5.2						
	0.1nm,0.3s						

*NEIC **21** 19:46:04.5±1.4,4°.2S±0°.1×152°.00E±0°.04,h10km±2km,*
mb4.2/7,Error ellipse: s-maj=18.1km s-min=6.0km
az=165.0
*IDC **21** 19:46:14.5±5.6,4°.80S×152°.01E,h102km±45km,mb3.4/8,*
mbtmp3.8/9,MS3.2/11,Error ellipse: s-maj=48.3km
s-min=26.8km az=101.0
ISC 21 19:46:05.0±0.6,4°.19S±0°.07×151°.96E±0°.06,h10km,n41,
σ2s05/31,mb3.9/10,MS3.2/8,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	0.20	92	Pg	Pg	19 46 07.7	-1.5
RABL				Sg	Sg	19 46 11.7	-0.4
MANU	Manus Island	5.06	295		Pn	19 47 20.3	-0.7
PMG	Port Moresby	7.05	222	P	Pn	19 47 49.8	+1.5
	36nm,0.7s,baz=42,slow=12,SNR=11						
PMG				S	Sn	19 49 09.1	+0.5
	10nm,0.8s,baz=3.4,slow=14,SNR=1.4						
PMG				LR	LR	19 49 56.0	
	comp=Z,156nm,20.3s,baz=34,slow=33						
PMG	Port Moresby	7.05	222	P	Pn	19 47 50.2	+1.9
PMG	Port Moresby	7.05	222		Pn	19 47 47.8	-0.5
TATA	Tatamba Isabel	8.84	119	P	Pn	19 48 15.3	+2.4
HNR	Honiara	9.49	124	LR	LR	19 51 42.5	
	comp=Z,8.5nm,20.6s,baz=45,slow=36						
MTSU	Mount Surprise	15.75	208	P	P	19 49 50.4	-0.7
CTA	Charters Tower	16.76	199	LR	LR	19 55 36.6	
	comp=Z,99nm,20.7s,baz=40,slow=35						
CTAO	Charters Tower	16.76	199	Pn	Pn	19 49 58.4	-1.6
CTAO				IAmb	IAmb	19 50 41.5	
	comp=Z,18nm,1.2s						
GUMO	Guam	19.01	338	LR	LR	19 57 26.1	
	comp=Z,26nm,19.7s,baz=44,slow=34						
QIS	Mount Isa	20.24	215	P	Pn	19 50 43.3	+0.8
SIJI	Sorong	20.93	278	P	Pn	19 50 52.0	+1.2
	comp=Z,5.2nm,0.7s,baz=118,slow=7.0,SNR=3.5						
	comp=Z,5.2nm,0.7s						
EIDS	Eidsvold	21.08	182	P	P	19 50 50.6	+1.0
WB0	Warramunga Arr	23.09	226		P	19 51 09.4	-1.8
WB0				IAmb	IAmb	19 51 12.2	
	comp=Z,19nm,1.4s						
WRAB	Tennant Creek	23.23	226	P	P	19 51 15.7	+3.1
WRA	Warramunga Arr	23.25	226	P	P	19 51 08.7	-4.0
	comp=Z,4.8nm,0.9s,baz=49,slow=10.0,SNR=22						
	comp=Z,4.8nm,0.9s						
WRA	Warramunga Arr	23.25	226		P	19 51 10.4	-2.3
QLP	Quilpie	23.47	198	P	P	19 51 18.1	+3.2
KNRA	Kununurra	25.51	242	P	P	19 51 32.8	-1.1
KNRA				IAmb	IAmb	19 51 42.0	
	comp=Z,20nm,1.3s						
SANI	Sanana	26.02	274	P	P	19 51 42.5	+3.9
AS31	Alice Springs	26.05	220		P	19 51 37.1	-1.8
AS31				IAmb	IAmb	19 51 43.2	
	comp=Z,2.7nm,0.8s						
ASAR	Alice Springs	26.06	220	P	P	19 51 34.8	-4.1
	comp=Z,1.0nm,0.4s,baz=54,slow=9.1,SNR=22						
ASAR				LR	LR	20 01 24.7	
	comp=Z,49nm,20.5s,baz=65,slow=36						
	comp=Z,1.0nm,0.4s						
ASAR	Alice Springs	26.06	220		P	19 51 37.5	-1.4
BATI	Baumata	28.69	256	LR	LR	20 06 09.3	
	comp=Z,112nm,18.1s,baz=124,slow=42						
STKA	Stephens Creek	29.22	198	LR	LR	20 03 08.7	
	comp=Z,43nm,21.0s,baz=24,slow=35						
BBOO	Buckleboo	32.13	206	P	P	19 52 30.4	-2.3
JCJ	Chichijima	32.50	344	LR	LR	20 04 02.4	
	comp=Z,36nm,21.6s,baz=119,slow=32						
MJAR	Matsushiro Arr	42.51	344	LR	LR	20 08 18.7	
	comp=Z,30nm,21.5s,baz=151,slow=31						
KLR	Kul'dur	56.03	344	LR	LR	20 17 19.2	
	comp=Z,26nm,20.8s,baz=96,slow=33						
CMAR	Chiang Mai Arr	56.86	295	P	P	19 55 51.8	+1.4
	comp=Z,0.3nm,0.4s,baz=110,slow=5.6,SNR=5.9						
	comp=Z,0.3nm,0.4s						
CMAR	Chiang Mai Arr	56.86	295	P	P	19 55 50.0	-0.4
PETK	Petropavlovsk-	57.28	4	LR	LR	20 18 16.3	
	comp=Z,29nm,19.2s,baz=117,slow=33						
MA2	Magadan	63.57	359	LR	LR	20 24 02.0	
	comp=Z,19nm,19.2s,baz=120,slow=35						
SONM	Songino Array	65.36	328	P	P	19 56 48.1	+0.4
	comp=Z,0.7nm,0.8s,baz=146,slow=5.1,SNR=5.0						
	comp=Z,0.7nm,0.8s						
SONM	Songino Array	65.36	328	P	P	19 56 47.3	-0.5
SONM				IAmb	IAmb	19 56 53.2	
	comp=Z,1.4nm,1.0s						
MKAR	Makanchi Array	79.32	319	P	P	19 58 11.4	+0.3
	comp=Z,0.3nm,0.8s,baz=106,slow=2.6,SNR=3.9						
	comp=Z,0.3nm,0.8s						
MKAR	Makanchi Array	79.32	319	P	P	19 58 10.2	-0.9
ZALV	Zalesovo Beam	80.18	326	P	P	19 58 16.8	+1.3
	comp=Z,0.3nm,0.3s,baz=99,slow=8.9,SNR=2.4						
	comp=Z,0.3nm,0.3s						
ILAR	Eielson Array	81.91	22	P	P	19 58 26.0	+1.5
	comp=Z,0.1nm,0.8s,baz=232,slow=4.4,SNR=2.3						
	comp=Z,0.1nm,0.8s						
TORD	Torodi Ar. Bea	149.32	289	PKPbc	PKPbc	20 05 53.6	-1.7
	comp=Z,1.0nm,0.8s,baz=64,slow=1.5,SNR=5.5						

WEL 21 19:46:07.8±0.9,37°S±5°×18°0E±°,h12km,MS3.5/21,
ML3.5/24,MLv3.5/21,Error ellipse: s-maj=11.0km
s-min=6.3km az=111.4,confirmed,Off east coast of
North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.18	246	P	Pn	19 46 28.9	-1.3
MXZ				S	Sb	19 46 44.0	-1.5
WMGZ	Waiomatatini S	1.24

KARP S Sg 19 48 15.9 -2.0
KARP Karpathos 0.85 310 Pg Pg 19 48 06.6 -0.2
KARP Sg Sg 19 48 18.4 +0.5
KARP Karpathos 0.85 310 P Pg 19 48 06.1 -0.8
ARG Arkhangelos 1.21 6 P Pg 19 48 13.1 -0.8
ARG S Sn 19 48 30.7 -0.6
ARG Arkhangelos 1.21 6 Pn Pn 19 48 14.6 +0.2
ARG Sn Sn 19 48 32.6 +1.3
ARG Arkhangelos 1.21 6 P Pg 19 48 13.0 -0.8
ARG S Sg 19 48 27.4 -2.2
ZKR Zakros 1.44 275 P Pn 19 48 18.6 +1.1
ZKR Zakros 1.44 275 Pn Pn 19 48 16.7 -0.8
ZKR Zakros 1.44 275 P Pn 19 48 18.5 +1.0
ZKR S Sn 19 48 37.9 +1.1
YAZI Mula-Dat§a- 1.72 346 P Pn 19 48 21.5 +0.1
YAZI S Sg 19 48 47.8 +1.9
YAZI IAML 19 48 55.0
comp=E,74nm,1.0s
YAZI IAML 19 48 56.0
comp=N,63nm,0.7s
DAT Datca 1.75 350 Pn Pn 19 48 22.2 +0.4
DATC Datca-Mugla 1.76 352 Pn Pn 19 48 22.2 +0.2
TURN Turunc 1.78 7 Pn Pn 19 48 22.9 +0.7
TURN Turunc 1.78 7 P Pn 19 48 22.5 +0.4
TURN S Sg 19 48 52.2 +4.5
TURN IAML 19 48 56.0
comp=E,98nm,1.2s
TURN IAML 19 49 01.0
comp=N,116nm,0.7s
AKAS Kas 1.81 47 Pn Pn 19 48 23.5 +0.7
FETY Fethiye 1.86 29 P Pn 19 48 13.9 -9.4
DALY Dalyan (Mula) 1.89 17 Pn Pn 19 48 24.5 +0.8
NPS Neapolis 1.94 278 P Pb 19 48 27.2 +0.6
NPS Neapolis 1.94 278 P Pb 19 48 27.0 +0.4
NPS S Sb 19 48 51.5 +0.3
SABU Mula-Dalaman 1.99 24 P Pn 19 48 25.3 +0.2
SABU IAML 19 49 15.0
comp=E,61nm,1.4s
SABU IAML 19 49 27.0
comp=N,57nm,0.8s
BDRM Kayabasi 2.10 349 P Pn 19 48 26.1 -0.5
BDRM S Sg 19 48 56.5 -1.4
BDRM IAML 19 49 14.0
comp=E,61nm,0.7s
BODT Bodrum 2.12 346 P Pn 19 48 27.3 +0.5
BODT Bodrum 2.12 346 Pn Pn 19 48 27.5 +0.7
YER Yerkesik 2.14 7 P Pn 19 48 28.4 +1.2
YER S Sb 19 48 55.8 -1.1
YER Yerkesik 2.14 7 Pn Pn 19 48 28.3 +1.1
CAME Cameli-Denizli 2.22 29 Pn Pn 19 48 29.3 +1.0
MULA Mugla, Merkez- 2.26 7 P Pb 19 48 32.6 +0.5
MULA S Sg 19 49 04.7 +1.5
MLSB Milas 2.29 356 Pn Pn 19 48 29.9 +0.7
ELL Elmali 2.35 42 Pn Pn 19 48 31.5 +1.4
DNZT Denizli-Tavas- 2.42 20 P Pn 19 48 32.9 +1.7
DNZT S Sb 19 49 04.0 -1.2
DNZT IAML 19 49 11.0
comp=E,26nm,0.7s
DNZT IAML 19 49 36.0
comp=N,29nm,0.9s
THERA Ancient Thera, 2.44 305 P Pn 19 48 32.1 +0.9
THERA S Sn 19 49 00.7 -0.8
THERA Ancient Thera, 2.44 305 P Pn 19 48 31.9 +0.7
THR8 Santorini-Mono 2.46 305 P Pn 19 48 32.3 +0.8
THR6 Thira Island, 2.48 304 P Pn 19 48 32.7 +0.8
THR6 Thira Island, 2.48 304 P Pn 19 48 32.9 +1.0
SNT5 Nea Kammeni, S 2.51 304 P Pn 19 48 31.4 -0.8
SNT5 Nea Kammeni, S 2.51 304 P Pn 19 48 32.2 0.0
THR3 Thira Island, 2.51 305 P Pn 19 48 31.6 +0.4
THR3 Thira Island, 2.51 305 P Pn 19 48 32.8 +0.6
THR9 Santorini-Faro 2.51 303 P Pn 19 48 31.5 -0.7
THR9 Santorini-Faro 2.51 303 P Pn 19 48 32.8 +0.5
IDI Anoyia 2.53 277 Pn Pn 19 48 34.8 +2.3
16nm,0.6s,baz=98,slow=15,SNR=23
IDI Anoyia 2.53 277 P Pn 19 48 34.3 +1.6
IDI Anoyia 2.53 277 Pn Pn 19 48 32.3 -0.3
IDI Anoyia 2.53 277 P Pn 19 48 34.9 +2.3
THR5 Thira Island, 2.55 304 P Pn 19 48 32.6 -0.1
SAP3 Santorini-Thir 2.56 305 P Pn 19 48 33.9 +0.9
TAVA DENIZLI_Tavas 2.57 17 P Pn 19 48 34.1 +0.9
TAVA S Sg 19 49 11.8 -1.3
TAVA IAML 19 49 20.0
comp=N,48nm,0.7s
TAVA IAML 19 49 35.0
comp=E,45nm,0.8s
AYDN Tasoluk 2.65 359 P Pn 19 48 34.5 +0.3
AYDN IAML 19 49 35.0
comp=N,40nm,0.7s
AYDN IAML 19 49 37.0
comp=E,38nm,0.7s
APMY Acipayam-Deniz 2.69 23 Pn Pn 19 48 36.1 +1.4
ESEN Aydn-Nazilli 2.80 6 P Pn 19 48 37.4 +1.1
ESEN IAML 19 49 29.0
comp=N,22nm,0.7s
ESEN IAML 19 49 30.0
comp=E,21nm,0.7s
SMG Samos 2.84 342 P Pn 19 48 36.8 -0.1
SMG Samos 2.84 342 P Pn 19 48 36.2 -0.6
VAM Vamos 3.11 278 P Pn 19 48 41.1 +0.7
VAM Vamos 3.11 278 P Pn 19 48 42.5 +2.0
IMMV Iera Moni Meta 3.29 279 P Pn 19 48 44.3 +1.4
IMMV Iera Moni Meta 3.29 279 P Pn 19 48 44.5 +1.5
AKMS Akamas 3.59 89 P Pn 19 48 47.7 +0.6
NATA Nata 3.79 92 P Pn 19 48 51.1 +1.2
ALFC Alefka 3.81 86 P Pn 19 48 50.5 +0.4
ANKY Antikythira Is 3.90 284 P Pn 19 48 53.0 +1.7
KARY Karystos 4.14 318 P Pn 19 48 55.7 +1.0
KTHA Kythira Island 4.18 289 Pn Pn 19 48 55.4 +0.2
CSS Mathiatis 4.41 89 P Pn 19 48 59.1 +0.8
CSS Mathiatis 4.41 89 P Pn 19 49 00.4 +2.0
CSS S Sn 19 49 50.7 +0.5
VLI Veliai 4.42 294 P Pn 19 48 58.9 +0.4
DION Dionisos Attik 4.46 315 P Pn 19 48 59.6 +0.5
MVOU Mavrovouni 4.65 88 P Pn 19 49 02.6 +1.0
ITM Ithomi 5.35 296 P Pn 19 49 12.7 +1.4
GUR Goura 5.39 304 P Pn 19 49 12.2 +0.3
MMA0B Mount Meron ar 6.49 106 ⇓P Pn 19 49 28.8 +1.8
MMA0B S Sn 19 50 42.6 +1.0
MMAI Mount Meron Ar 6.49 106 Pn Pn 19 49 28.6 +1.6
1.1nm,0.3s,baz=322,slow=12,SNR=7.1
1.1nm,0.5s
BRTR Keskin Array B 6.53 42 Pn Pn 19 49 28.8 +1.2
0.1nm,0.3s,baz=228,slow=13,SNR=4.2
BRTR Sn Sn 19 50 43.0 +0.5
0.1nm,0.3s,baz=220,slow=25,SNR=4.7
0.5nm,0.7s
KZIT Kziot 6.78 125 P Pn 19 49 32.4 +1.5
KZIT S Sn 19 50 47.2 -1.4
YTIR Yattir 7.01 119 P Pn 19 49 35.6 +1.4
YTIR S Sn 19 50 53.7 -0.8
DSI Dead Sea 7.09 117 P Pn 19 49 36.7 +1.5
DSI S Sn 19 50 55.8 -0.6
MSBI Mazada 7.21 119 ⇓P Pn 19 49 38.5 +1.7
MSBI S Sn 19 50 58.1 -1.1
GHAJ Ghor Haditha 7.37 118 P Pn 19 49 40.9 +1.9
GHAJ S Sn 19 51 03.1 0.0
KRMI Paran Flat 7.51 129 P Pn 19 49 41.9 +1.0
KRMI S Sn 19 51 04.7 -1.8
PRNI Paran 7.54 126 ⇓P Pn 19 49 42.7 +1.3
PRNI S Sn 19 51 05.6 -1.7
HRFI Mount Harif 7.76 128 P Pn 19 49 45.7 +1.3
HRFI S Sn 19 51 11.8 -1.0
EIL2 Elat 7.95 130 ⇓P Pn 19 49 48.4 +1.4
EIL2 S Sn 19 51 15.6 -1.9
EIL Elat 7.95 130 Pn Pn 19 49 48.1 +1.1
0.2nm,0.3s,baz=318,slow=6.9,SNR=8.3
2.6nm,0.7s
KBZ Khabaz 14.45 48 Pn P 19 51 20.8 -2.0
baz=212,slow=8.7,SNR=6.1
1.1nm,0.7s
KEST Kesra 15.21 278 LR LR 19 58 39.4
comp=Z,120nm,20.8s,baz=5.7,slow=43
ESDC Sonseca Array 25.73 290 P P 19 53 21.0 -1.1
0.2nm,0.5s,baz=87,slow=9.2,SNR=5.2
0.2nm,0.5s
FINES FINESS Array B 26.48 358 P P 19 53 27.3 -1.4
3.2nm,1.0s,baz=189,slow=9.9,SNR=1.9
3.2nm,1.0s
HFS Hagfors 26.80 344 P P 19 53 32.4 +0.8
0.8nm,0.6s,baz=146,slow=16,SNR=1.0
0.8nm,0.6s
NOA NORSAR Array B 28.18 343 P P 19 53 45.2 +1.2
0.5nm,0.8s,baz=170,slow=16,SNR=2.6
0.5nm,0.8s
TORD Torodi Ar. Bea 32.21 234 P P 19 54 21.3 +1.3
1.4nm,0.7s,baz=29,slow=8.2,SNR=11
1.4nm,0.7s
MKAR Makanchi Array 41.94 57 P P 19 55 42.2 -0.2
0.2nm,0.5s,baz=283,slow=5.6,SNR=3.6
0.2nm,0.5s
SONM Songino Array 57.80 51 P P 19 57 44.7 +1.6
0.4nm,0.7s,baz=281,slow=8.3,SNR=3.5
0.4nm,0.7s

*NEIC **21** 19:51:37.7±1.9, 17.90N±0.03×66.785W±0.009, h10km±1km, ML3.9/35, Md3.7/14(RSPR), Error ellipse: s-maj=4.8km s-min=2.7km az=358.0*
*OSPL **21** 19:51:38.4±0.4, 18.11N×66.83W, h16km±999km, ML4.2, Presumed earthquake*
*SDD **21** 19:51:39.2±1.4, 17.97N×66.80W, h3km±9km, MD2.8, ML3.4, MW3.1, Presumed earthquake*

ISC 21 19:51:37.5±1.0, 17.94N±0.05×66.80W±0.02, h23km±6km, n37, σ1§10/52, 6C-8D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.09**	**292**		**Pb**	**19 51 41.7**	**-0.1**
OBIP	**Obispado Ponce**	**0.21**	**61**		**Pb**	**19 51 43.0**	**0.0**
OBIP					**Sb**	**19 51 46.5**	**-0.3**
OBIP	**Obispado Ponce**	**0.21**	**61**	*i* P	**Pb**	**19 51 43.1**	**+0.1**
OBIP				*e*S	**Sb**	**19 51 46.7**	**-0.1**
OBIP				IAML		19 51 46.8	
	comp=Z,41μm,0.2s						
MLPR	**Magueyes Islan**	**0.24**	**277**		**Pb**	**19 51 43.3**	**-0.1**
MLPR				Sg	**Sb**	**19 51 46.8**	**-0.7**
MLPR				IAML		19 51 47.3	
	comp=Z,11μm,0.4s						
MLPR				IAML		19 51 47.4	
	comp=Z,19μm,0.2s						
MLPR	**Magueyes Islan**	**0.24**	**277**	⇓*i* P	**Pb**	**19 51 43.3**	**-0.1**
MLPR				⇓*e*Sg	**Sb**	**19 51 47.0**	**-0.6**
MLPR				IAML		19 51 47.2	
	comp=N,4μm,0.4s						
CELP	**Cerrillos**	**0.24**	**57**		**Pb**	**19 51 43.8**	**+0.2**
CELP				Sg	**Sb**	**19 51 47.5**	**-0.2**
CELP				IAML		19 51 47.9	
	comp=N,17μm,0.3s						
CELP				IAML		19 51 48.0	
	comp=N,13μm,0.4s						
CELP	**Cerrillos**	**0.24**	**57**	⇓*i* P	**Pb**	**19 51 43.8**	**+0.2**
CELP				⇓*e*Sg	**Sb**	**19 51 47.6**	**-0.1**
CELP				IAML		19 51 47.9	
	comp=N,6μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.31**	**282**		**Pb**	**19 51 44.2**	**-0.3**
CRPR				IAML		19 51 48.9	
	comp=N,11μm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.31**	**282**	*i* P	**Pb**	**19 51 44.2**	**-0.3**
CRPR				*e*S	**Sb**	**19 51 48.1**	**-1.1**
CRPR				IAML		19 51 48.8	
	comp=Z,12μm,0.1s						
UUPR	**Utuado, UPR, P**	**0.32**	**13**		**Pb**	**19 51 44.2**	**-0.5**
LSP	**Las Mesas**	**0.36**	**310**		**Pb**	**19 51 45.0**	**-0.3**
LSP					**Sb**	**19 51 50.1**	**-0.7**
AOPR	**Arecibo Observ**	**0.40**	**6**		**Pb**	**19 51 45.6**	**-0.5**
AOPR	**Arecibo Observ**	**0.40**	**6**	⇑*i* P	**Pb**	**19 51 45.6**	**-0.5**
AOPR				⇓*e*Sg	**Sb**	**19 51 50.9**	**-1.0**
AOPR				IAML		19 51 52.4	
	comp=N,19μm,0.3s						
PRSN	**Puerto Rico Se**	**0.43**	**309**		**Pb**	**19 51 46.0**	**-0.5**
PRSN	**Puerto Rico Se**	**0.43**	**309**	⇑*i* P	**Pb**	**19 51 46.0**	**-0.5**
PRSN				⇑*e*Sg	**Sb**	**19 51 51.7**	**-0.9**
PRSN				IAML		19 51 54.3	
	comp=N,14μm,0.3s						
ECPR	**Experimental S**	**0.56**	**48**		**Pb**	**19 51 48.3**	**-0.3**
ECPR				IAML		19 51 57.0	
	comp=N,5μm,0.2s						
ECPR				IAML		19 51 57.9	
	comp=N,6μm,0.2s						
EMPR	**Esperanza - Ma**	**0.59**	**25**		**Pb**	**19 51 49.3**	**+0.1**
EMPR					**Sb**	**19 51 57.0**	**-0.1**
AGPR	**Aguadilla, PR**	**0.60**	**330**		**Pb**	**19 51 48.8**	**-0.6**
AGPR	**Aguadilla, PR**	**0.60**	**330**	⇑*i* P	**Pb**	**19 51 48.9**	**-0.6**
AGPR				⇓*e*Sg	**Sb**	**19 51 57.9**	**+0.4**
AGPR				IAML		19 52 01.2	
	comp=N,1μm,0.5s						
SJG	**San Juan**	**0.64**	**75**		**Pb**	**19 51 50.0**	**0.0**
SJG				IAML		19 52 00.8	
	comp=N,3μm,0.2s						
SJG	**San Juan**	**0.64**	**75**	⇓*i* P	**Pb**	**19 51 49.9**	**0.0**
SJG				⇑*e*Sg	**Sb**	**19 51 59.3**	**+0.8**
SJG	**San Juan**	**0.64**	**75**	*i* P	**Pb**	**19 51 50.0**	**0.0**
SJG				*e*S	**Sb**	**19 51 58.7**	**+0.2**
SJG				IAML		19 51 59.9	
	comp=Z,53μm,0.1s						
PDPR	**Patillas Dam,**	**0.74**	**84**		**Pn**	**19 51 52.8**	**+0.2**
IDE	**Isla Desecheo**	**0.78**	**304**		**Pb**	**19 51 51.8**	**-0.6**
IDE					**Sb**	**19 52 01.9**	**-0.7**
HUMP	**Col San Antoni**	**0.92**	**77**		**Pn**	**19 51 54.5**	**-0.5**
CUPR	**Culebra, Puert**	**1.48**	**76**		**Pb**	**19 52 04.1**	**-0.3**
HIDR	**Higuey Centro**	**1.94**	**290**	⇑*i* P	**Pn**	**19 52 10.5**	**+1.5**
HIDR				IAML		19 52 43.7	
	comp=N,232nm,0.2s						
DR12	**Loma Pena Alta**	**2.60**	**289**		**Pn**	**19 52 19.9**	**+1.8**
HATOM	**Hato Mayor del**	**2.60**	**289**	⇓*i* P	**Pn**	**19 52 20.6**	**+2.5**
HATOM				IAML		19 53 12.9	
	comp=N,47nm,0.8s						
SABA	**Saba**	**3.40**	**95**	Pn	**Pn**	**19 52 30.5**	**+1.4**
BANI	**BANI**	**3.42**	**278**	Pn	**Pn**	**19 52 31.1**	**+1.6**
SMRT	**St. Maarten**	**3.54**	**88**	Pn	**Pn**	**19 52 32.1**	**+1.0**
SC01	**Santiago de lo**	**4.01**	**292**		**Pn**	**19 52 40.4**	**+2.9**
SDDR	**Presa de Saban**	**4.39**	**284**	Pn	**Pn**	**19 52 46.2**	**+3.4**
DSLB	**Salisbury**	**5.72**	**115**	*e*P	**Pn**	**19 53 01.9**	**+0.8**
DSLB				*e*S		19 53 07.5	
DLPL	**La Plaine**	**5.92**	**115**	*e*S	**Sn**	**19 54 07.6**	**-3.3**
BIM	**Bigot**	**6.47**	**121**	Pn	**Pn**	**19 53 11.8**	**+0.5**

*IDC **21** 19:57:32.5±10.0, 36.17N×70.82E, h131km±99km, mb3.2/6, mbtmp3.7/8, ML3.5/2, Error ellipse: s-maj=60.2km s-min=34.7km az=3.0*

ISC 21 19:57:30.3±1.5, 36.1N±0.1×70.7E±0.2, h110km, n10, σ0§60/10, mb3.5/4, 2C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.99**	**359**	⇑P	Pn	19 59 18.0	+7.9
	0.7nm,0.2s,baz=178,slow=13,SNR=10						
KK31				⇑S	**Sn**	**20 00 27.9**	**-0.1**
	2.6nm,0.3s,baz=214,slow=26,SNR=14						
AAK	**Ala-Archa**	**7.15**	**23**	⇓P	Pn	19 59 18.6	+6.4
	0.6nm,0.6s						
AAK				⇓S	**Sn**	**20 00 32.3**	**+0.3**
	3.4nm,0.6s						
MKAR	**Makanchi Array**	**13.74**	**35**	P	**Pn**	**20 00 41.1**	**+0.7**
	0.2nm,0.3s,baz=223,slow=18,SNR=12						
	1.1nm,0.7s						
KURBB	**Kurchatov Arra**	**15.57**	**19**	P	**Pn**	**20 01 03.8**	**+0.3**
	0.2nm,0.3s,baz=238,slow=30,SNR=5.5						
	0.8nm,0.2s						
ZALV	**Zalesovo Beam**	**20.36**	**24**	P	**P**	**20 01 56.6**	**-1.2**
	1.6nm,0.4s,baz=213,slow=11,SNR=8.5						
	1.6nm,0.4s						
SONM	**Songino Array**	**28.74**	**55**	P	**P**	**20 03 17.1**	**-0.3**
	0.3nm,0.8s,baz=258,slow=7.1,SNR=2.9						
	0.3nm,0.8s						
FINES	**FINESS Array B**	**37.69**	**326**	P	**P**	**20 04 34.9**	**+0.3**
	1.7nm,0.7s,baz=126,slow=7.2,SNR=8.2						
	1.7nm,0.7s						
HFS	**Hagfors**	**43.24**	**322**	P	**P**	**20 05 20.3**	**0.0**
	0.7nm,0.4s,baz=104,slow=9.2,SNR=1.3						
	0.7nm,0.4s						
NOA	**NORSAR Array B**	**44.56**	**323**	P	**P**	**20 05 30.6**	**-0.3**
	0.2nm,0.6s,baz=98,slow=7.9,SNR=1.4						
	0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**65.49**	**269**	P	**P**	**20 08 02.3**	**+0.3**
	0.6nm,0.6s,baz=35,slow=2.7,SNR=4.3						
	0.6nm,0.6s						

DJA 21 19:58:25.3±0.4, 8°S±3°×107°E±°, h36km±6km, M3.6/25, mB5.7/2, mb4.4/3, MLv3.2/25, Mw(mB)5.2/2, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBJI	**Bungbulang**	**0.60**	**61**	P	Pn	19 58 38.3	+0.8
BBJI				S	Sn	19 58 47.8	+1.7
LEM	**Lembang**	**1.05**	**28**	P	Pn	19 58 43.9	+0.3
DBJI	**Dramaga**	**1.25**	**343**	P	Pn	19 58 46.7	+0.4
CGJI	**Cibinong**	**1.82**	**309**	P	Pn	19 58 54.7	+0.7
KPJI	**Karang Pucung**	**1.84**	**77**	P	Pn	19 58 54.8	+0.4
UGM	**Wanagama**	**3.38**	**93**	P	Pn	19 59 15.0	-0.5
KASI	**Kota Agung**	**3.42**	**310**	P	Pn	19 59 15.6	-0.6
PCJI	**Pacitan**	**4.04**	**96**	P	Pn	19 59 23.7	-0.9
MDSI	**Maura Dua**	**4.37**	**318**	P	Pn	19 59 29.6	+0.4
SNJI	**Sawahan-Nganju**	**4.60**	**91**	P	Pn	19 59 33.3	+0.9
EGSI	**Enggano, Bengk**	**5.37**	**296**	P	Pn	19 59 42.8	-0.2
	3μm17nm,0.6s						
JAGI	**Jajag, Banyuwa**	**7.00**	**96**	P	Pn	20 00 06.0	+0.7

*IDC **21** 20:06:28.6±1.1, 35.32S×104.62W, h0km, mb3.7/5, mbtmp3.7/5, MS4.1/27, Error ellipse: s-maj=48.4km s-min=31.5km az=81.0*
*GCMT **21** 20:06:34.0±0.2, 35.50S±0.01×105.00W±0.01, h15km±1km, MW5.0/124, Moment Tensor Solution. s55,c69; s124,c181; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.84±.10; Mθθ-0.74±.09; Mϕϕ1.58±.10; Mrθ-0.46±.31; Mθϕ-3.73±.09; Mϕr-1.41±.32; Best double couple: Mo4.21900×10¹⁶ NP1:ϕs100.00000°, δ68.00000°, λ-171.00000°. NP2:ϕs7.00000°, δ82.00000°, λ-22.00000°. Principal axes: T 4.4700, Plg10.0000°, Azm55.0000°; N -0.5050, Plg66.0000°, Azm168.0000°; P -3.9670, Plg22.0000°, Azm321.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 21 20:06:30.1±1.1, 35.4S±0.2×104.5W±0.3, h10km, n38, σ0§88/7, mb3.8/5, MS4.1/27, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**9.20**	**332**	LR	LR	20 11 15.8	
	comp=Z,1μm,21.6s,baz=166,slow=32						
H03N2	**Juan Fernandez**	**21.14**	**92**	T	T	20 33 32.1	
	baz=255,slow=72,SNR=6.3						
H03N3	**Juan Fernandez**	**21.14**	**92**	T	T	20 33 32.1	
	baz=255,slow=72,SNR=5.0						
H03N1	**Juan Fernandez**	**21.16**	**92**	T	T	20 33 32.6	
	baz=255,slow=72,SNR=5.2						
PLCA	**Paso Flores**	**27.13**	**112**	LR	LR	20 20 14.4	
	comp=Z,140nm,19.9s,baz=280,slow=30						
NNA	**Nana**	**34.16**	**54**	LR	LR	20 23 47.9	
	comp=Z,972nm,20.1s,baz=220,slow=30						
ATAH	**Atahualpa**	**36.90**	**47**	LR	LR	20 25 08.8	
	comp=Z,447nm,19.6s,baz=228,slow=30						
LPAZ	**La Paz**	**37.54**	**69**	LR	LR	20 26 34.5	
	comp=Z,183nm,18.4s,baz=246,slow=32						
PMSA	**Palmer Station**	**38.07**	**153**	LR	LR	20 24 57.4	
	comp=Z,527nm,21.7s,baz=311,slow=29						
CPUP	**Villa Florida**	**41.13**	**91**	LR	LR	20 29 15.4	
	comp=Z,127nm,19.2s,baz=248,slow=33						
SIV	**San Ignacio**	**43.20**	**75**	P	**P**	**20 14 31.2**	**-0.3**
	0.7nm,0.6s,baz=226,slow=8.5,SNR=1.9						
	0.7nm,0.6s						
ROSC	**El Rosal**	**49.00**	**42**	LR	LR	20 32 27.5	
	comp=Z,429nm,20.2s,baz=229,slow=32						
JTS	**Las Juntas de**	**49.01**	**26**	LR	LR	20 31 13.8	
	comp=Z,353nm,18.1s,baz=200,slow=30						
RAR	**Rarotonga**	**50.11**	**271**	LR	LR	20 30 02.5	
	comp=Z,167nm,20.9s,baz=125,slow=28						
CMIG	**Matias Romero**	**52.95**	**12**	LR	LR	20 31 51.4	
	comp=Z,114nm,20.4s,baz=174,slow=29						
BDFB	**Brasilia**	**53.87**	**84**	LR	LR	20 38 00.8	
	comp=Z,176nm,18.4s,baz=243,slow=35						
SDV	**Santo Domingo**	**54.37**	**43**	LR	LR	20 36 07.7	
	comp=Z,101nm,20.4s,baz=230,slow=33						
QSPA	**South Pole Qui**	**54.85**	**180**	P	**P**	**20 16 00.6**	**+0.3**
	0.7nm,0.8s,baz=117,slow=4.5,SNR=1.4						
	0.7nm,0.8s						
VNDA	**Vanda**	**56.57**	**195**	LR	LR	20 35 36.1	
	comp=Z,140nm,18.5s,baz=102,slow=31						
SNAA	**Sanae**	**60.37**	**159**	LR	LR	20 39 13.1	
	comp=Z,108nm,19.7s,baz=227,slow=32						
URZ	**Urewera**	**61.03**	**242**	LR	LR	20 39 50.3	
	comp=Z,145nm,18.1s,baz=140,slow=33						
RPZ	**Rata Peaks**	**63.02**	**234**	LR	LR	20 37 34.8	
	comp=Z,216nm,21.2s,baz=269,slow=30						
MDP	**Montagnes des**	**63.10**	**61**	LR	LR	20 41 45.2	
	comp=Z,489nm,19.2s,baz=236,slow=34						
AFI	**Afiamalu**	**63.66**	**271**	LR	LR	20 36 48.0	
	comp=Z,135nm,20.7s,slow=29						
TXAR	**Lajitas Array**	**64.35**	**1**	P	**P**	**20 17 07.3**	**+1.2**
	0.3nm,0.7s,baz=185,slow=6.0,SNR=3.0						
	0.3nm,0.7s						
SJG	**San Juan**	**64.41**	**41**	LR	LR	20 42 06.7	
	comp=Z,95nm,19.9s,baz=216,slow=33						
PFO	**Pinyon Flats O**	**69.53**	**349**	LR	LR	20 41 59.6	
	comp=Z,88nm,18.4s,baz=81,slow=31						
MSVF	**Nonsavu**	**69.93**	**262**	LR	LR	20 39 53.2	
	comp=Z,163nm,21.3s,baz=94,slow=29						
TKL	**Tuckaleechee C**	**73.24**	**17**	LR	LR	20 46 26.7	
	comp=Z,82nm,18.2s,baz=180,slow=33						
NVAR	**Mina Array Bea**	**74.53**	**349**	P	**P**	**20 18 08.2**	**-0.8**
	0.9nm,0.8s,baz=168,slow=4.0,SNR=6.0						
	0.9nm,0.8s						
ELK	**Elko**	**76.38**	**352**	LR	LR	20 44 10.6	
	comp=Z,84nm,18.4s,baz=260,slow=30						
PDAR	**Pinedale Array**	**77.89**	**356**	P	**P**	**20 18 27.5**	**-0.5**
	0.8nm,0.8s,baz=185,slow=3.0,SNR=7.7						
	0.8nm,0.8s						
YBH	**Vreka Blue Hor**	**78.52**	**346**	LR	LR	20 45 16.6	
	comp=Z,7.1nm,19.3s,baz=245,slow=30						
STKA	**Stephens Creek**	**88.82**	**231**	LR	LR	20 51 22.4	
	comp=Z,135nm,18.8s,baz=192,slow=30						
SUR	**Sutherland**	**95.30**	**136**	LR	LR	20 54 36.0	
	comp=Z,54nm,21.9s,baz=222,slow=30						
SCHQ	**Schefferville**	**95.47**	**21**	LR	LR	20 55 33.8	
	comp=Z,132nm,19.5s,baz=184,slow=31						
BRTR	**Keskin Array B**	**146.71**	**70**	PKPbc	**PKPab**	**20 26 13.6**	**+0.2**
	1.3nm,0.9s,baz=245,slow=1.9,SNR=7.2						
SONM	**Songino Array**	**153.96**	**308**	PKPbc	**PKPbc**	**20 26 28.8**	**-0.8**
	0.6nm,0.8s,baz=87,slow=2.0,SNR=4.5						

SJA 21 21:07:51.6±0.8, 23.60S×64.36W, h10km±4km, ML3.4, MW3.6, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HJA	**Humahuaca**	**1.04**	**292**	*e*P	Pn	21 08 12.4	-0.2
HJA				*e*S	Sn	21 08 27.6	+0.2
HJA				IAML		21 08 30.9	
	comp=Z,805nm,0.6s						
SLA	**San Lorenzo**	**1.53**	**223**	*e*P	Pg	21 08 21.0	-0.1
SLA				*e*S	Sg	21 08 41.6	+0.7
SLA				IAML		21 08 43.1	
	comp=Z,335nm,0.4s						
YJA	**Yavi**	**1.77**	**323**	*e*P	Pb	21 08 25.0	+0.5
YJA				*e*S	Sg	21 08 55.0	+6.3
YJA				IAML		21 08 57.4	
	comp=Z,220nm,0.4s						
SALTA		**1.92**	**251**	*e*P	Pb	21 08 27.1	+0.2
SALTA				*e*P	Pg	21 08 27.2	-1.2
SALTA				*e*P	Pg	21 08 27.2	-1.2
SALTA				*e*P	Pn	21 08 27.4	+2.6
SALTA				*e*S	Sg	21 08 53.4	+0.1
SALTA				IAML		21 08 56.3	
	comp=Z,954nm,0.3s						
FSA	**Cafayete**	**2.90**	**210**	*e*P	Pb	21 08 41.0	-2.6
FSA				*e*S	Sb	21 09 16.6	-2.6
AHML	**Horco Molle**	**3.29**	**195**	*e*P	Pn	21 08 34.1	-9.2
AHML				*e*S	Sn	21 09 12.6	-10
AHML				IAML		21 09 38.5	
	comp=Z,240nm,1.0s						
TINO	**Tinogasta**	**5.30**	**212**	*e*P	Pn	21 09 12.5	+1.5
TINO				IAML		21 10

s-maj=16.8km s-min=11.0km az=70.0
*DJA **21** 21:19:36.4±0.2,5˚S±2˚×14˚1E±˚,h10km,M4.9/56,*
mb4.9/56,mB5.3/25,MLv5.3/11,Mw(mB)4.8/25
ISC 21 21:19:35.3±0.4,**5˚36S**±0˙04×**141˚39E**±0˙05,**h20**km±1km,
h19km;**pP-P,n558,**σ1§**08**/555,**mb4.9**/112,**MS3.5**/23,
15C-13D,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**2.91**	**346**	Pn	**Pn**	**21 20 21.9**	**+1.2**
	167nm,0.3s,baz=187,slow=10,SNR=158						
JAY				Sn	**Sn**	**21 20 56.4**	**+1.3**
	225nm,0.3s,baz=100,slow=21,SNR=9.0						
JAY				LR	LR	21 21 53.0	
	comp=Z,836nm,20.9s,baz=92,slow=47						
	366nm,0.4s						
JAY	**Jayapura**	**2.91**	**346**	P	**Pn**	**21 20 22.2**	**+1.6**
GENI	**Genyem**	**3.01**	**336**	P	**Pb**	**21 20 25.4**	**-2.9**
GENI	**Genyem**	**3.01**	**336**	P	**Pb**	**21 20 24.7**	**-3.6**
GENI				S	**Sb**	**21 21 03.6**	**-1.0**
MMPI	**Merauke**	**3.24**	**198**	P	**Pn**	**21 20 27.9**	**+2.7**
BAKI	**Biak**	**6.70**	**308**	P	**Pn**	**21 21 16.0**	**+3.2**
	0.5nm85nm,1.0s						
MANU	**Manus Island**	**6.81**	**61**		**Pn**	**21 21 14.1**	**-0.2**
PMG	**Port Moresby**	**6.99**	**125**	Pn	**Pn**	**21 21 16.2**	**-0.5**
	6.7nm,0.3s,baz=293,slow=7.4,SNR=12						
PMG				LR	LR	21 24 07.0	
	comp=Z,303nm,18.2s,baz=350,slow=39						
PMG	**Port Moresby**	**6.99**	**125**		**Pn**	**21 21 15.6**	**-1.2**
PMG	**Port Moresby**	**6.99**	**125**	*d i*P	Pn	21 21 21.3	+4.5
PMG				pmax	pmax		
	comp=Z,52nm,1.0s						
PMG	**Port Moresby**	**6.99**	**125**	P	**Pn**	**21 21 17.8**	**+1.0**
	comp=Z,121nm,0.8s						
KMPI	**Kaimana, Papua**	**7.84**	**282**	P	**Pn**	**21 21 30.4**	**+2.0**
RKPI	**Ransiki, Papua**	**8.15**	**298**	P	**Pn**	**21 21 35.7**	**+3.1**
	comp=Z,85nm,0.7s						
MWPI	**Manokwari, Pap**	**8.55**	**301**	P	**Pn**	**21 21 42.0**	**+3.8**
	comp=Z,109nm,1.1s						
COEN	**Coen**	**8.72**	**168**	P	**Pn**	**21 21 42.7**	**+2.1**
	comp=Z,48nm,0.7s						
COEN	**Coen**	**8.72**	**168**	P	**Pn**	**21 21 42.6**	**+2.1**
COEN	**Coen**	**8.72**	**168**		**Pn**	**21 21 42.3**	**+1.8**
FAKI	**Fak Fak**	**9.43**	**285**	P	**Pn**	**21 21 51.2**	**+0.9**
FAKI	**Fak Fak**	**9.43**	**285**		**Pn**	**21 21 50.6**	**+0.3**
FAKI	**Fak Fak**	**9.43**	**285**	P	**Pn**	**21 21 51.6**	**+1.3**
	comp=Z,58nm,1.0s						
SAUI	**Saumlaki**	**10.35**	**255**	P	**Pn**	**21 22 05.9**	**+3.0**
SAUI	**Saumlaki**	**10.35**	**255**	Pn	**Pn**	**21 22 04.2**	**+1.3**
SAUI	**Saumlaki**	**10.35**	**255**	P	**Pn**	**21 22 05.7**	**+2.8**
KRVT	**Keravat (AS076**	**10.65**	**85**	LR	LR	21 26 12.8	
	comp=Z,85nm,18.6s,baz=256,slow=38						
SIJI	**Sorong**	**11.04**	**293**	Pn	**Pn**	**21 22 13.9**	**+1.6**
	comp=Z,1.9nm,0.3s,baz=68,slow=14,SNR=6.7						
SIJI				LR	LR	21 27 16.9	
	comp=Z,644nm,21.5s,baz=110,slow=41						
	comp=Z,18nm,0.7s						
SIJI	**Sorong**	**11.04**	**293**	P	**Pn**	**21 22 14.6**	**+2.2**
	comp=Z,536nmcomp=Z,34nm,1.1s						
SWI	**Sorong**	**11.05**	**294**	P	**Pn**	**21 22 13.9**	**+1.4**
	comp=Z,751nmcomp=Z,63nm,0.7s						
KDU	**Kakadu**	**11.42**	**230**	P	**Pn**	**21 22 17.0**	**-0.5**
	comp=Z,73nm,0.5s						
BNDI	**Bandanaira**	**11.47**	**274**	P	**Pn**	**21 22 19.9**	**+1.7**
DRS	**Darwin Rock St**	**12.51**	**235**	P	**Pn**	**21 22 32.4**	**-0.1**
MTN	**Manton Dam**	**12.56**	**233**	P	**Pn**	**21 22 32.2**	**-0.9**
MTN	**Manton Dam**	**12.56**	**233**		**Pn**	**21 22 32.4**	**-0.7**
MTSU	**Mount Surprise**	**13.01**	**168**	P	**Pn**	**21 22 42.4**	**+3.1**
	comp=Z,24nm,0.7s						
MTSU	**Mount Surprise**	**13.01**	**168**	P	**Pn**	**21 22 42.4**	**+3.1**
KRAI	**Karang Ratu**	**13.11**	**278**	P	**Pn**	**21 22 41.3**	**+0.6**
	comp=Z,17nm,0.8s						
AAI	**Ambon**	**13.26**	**277**	P	**Pn**	**21 22 44.6**	**+2.0**
NLAI	**Namlea**	**14.40**	**278**	P	**Pn**	**21 22 59.7**	**+1.4**
	comp=Z,22nm,0.6s						
QIS	**Mount Isa**	**15.21**	**186**	P	**Pn**	**21 23 07.4**	**-1.8**
	comp=Z,44nm,0.6s						
QIS	**Mount Isa**	**15.21**	**186**	P	**Pn**	**21 23 07.5**	**-1.6**
CTA	**Charters Tower**	**15.38**	**163**	Pn	**Pn**	**21 23 12.1**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=329,slow=5.9,SNR=1.7						
CTA				LR	LR	21 29 28.9	
	comp=Z,307nm,19.6s,baz=346,slow=38						
	comp=Z,4.4nm,0.8s						
CTA	**Charters Tower**	**15.38**	**163**	P	**Pn**	**21 23 11.5**	**0.0**
CTAO	**Charters Tower**	**15.38**	**163**	P	**Pn**	**21 23 11.5**	**0.0**
CTAO	**Charters Tower**	**15.38**	**163**	Pn	**Pn**	**21 23 11.2**	**-0.3**
CTAO	**Charters Tower**	**15.38**	**163**	P	**Pn**	**21 23 11.2**	**-0.3**
CTAO				pmax	pmax		
	comp=Z,76nm,2.0s						
SANI	**Sanana**	**15.71**	**282**	P	**Pn**	**21 23 17.6**	**+1.8**
	comp=Z,16nm,0.7s						
WRAB	**Tennant Creek**	**16.02**	**205**	P	**Pn**	**21 23 17.2**	**-2.5**
WRAB	**Tennant Creek**	**16.02**	**205**		**Pn**	**21 23 17.0**	**-2.7**
WRAB	**Tennant Creek**	**16.02**	**205**	*d i*P	**Pn**	**21 23 16.7**	**-3.0**
WRA	**Warramunga Arr**	**16.04**	**205**	Pn	**Pn**	**21 23 17.0**	**-2.9**
	comp=Z,0.8nm,0.3s,baz=24,slow=13,SNR=44						
WRA				Sn	**Sn**	**21 26 09.9**	**-7.4**
	comp=Z,2.1nm,0.3s,baz=23,slow=22,SNR=2.7						
WRA	**Warramunga Arr**	**16.04**	**205**	Pn	**Pn**	**21 23 16.1**	**-3.8**
WRA	**Warramunga Arr**	**16.04**	**205**	P	**Pn**	**21 23 16.1**	**-3.8**
WRA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
KNRA	**Kununurra**	**16.09**	**229**	P	**Pn**	**21 23 18.6**	**-2.0**
	comp=Z,149nm,0.8s						
KNRA	**Kununurra**	**16.09**	**229**		**Pn**	**21 23 18.0**	**-2.6**
KNRA				IAmb	IAmb	21 23 26.6	
	comp=Z,91nm,0.7s						
SOEI	**Soe**	**17.52**	**255**	P	**Pn**	**21 23 38.9**	**+0.1**
SOEI	**Soe**	**17.52**	**255**		**Pn**	**21 23 38.4**	**-0.4**
SOEI	**Soe**	**17.52**	**255**	P	**Pn**	**21 23 39.6**	**+0.8**
	comp=Z,1μmcomp=Z,139nm,0.8s						
MNI	**Manado**	**17.86**	**292**	P	**P**	**21 23 45.9**	**+2.4**
BATI	**Baumata**	**18.20**	**254**	P	**Pn**	**21 23 48.1**	**+0.9**
	comp=Z,17nm,0.4s,baz=66,slow=2.4,SNR=7.5						
BATI				S	**Sn**	**21 27 04.9**	**-5.2**
	comp=Z,26nm,0.8s,baz=75,slow=20,SNR=2.7						
BATI	**Baumata**	**18.20**	**254**	P	**P**	**21 23 48.6**	**+1.3**
	comp=Z,93nm,0.8s						
TATA	**Tatamba Isabel**	**18.53**	**100**	P	**Pn**	**21 23 51.8**	**+0.7**
SAVO	**Savo Central**	**18.66**	**103**	P	**Pn**	**21 23 54.3**	**+1.6**
HNR	**Honiara**	**18.84**	**103**	P	**P**	**21 23 53.2**	**-1.1**
	comp=Z,1.1nm,0.3s,baz=328,slow=1.6,SNR=19						
	comp=Z,12nm,0.6s						
HNR	**Honiara**	**18.84**	**103**	P	**Pn**	**21 23 54.7**	**-0.2**
HNR	**Honiara**	**18.84**	**103**	P	**Pn**	**21 23 54.7**	**-0.2**
HNR				pmax	pmax		
	comp=Z,245nm,0.7s						
LUWI	**Luwuk**	**19.07**	**282**	P	**P**	**21 23 57.3**	**+0.5**
LUWI	**Luwuk**	**19.07**	**282**	P	**Pn**	**21 24 00.6**	**+2.9**
	comp=Z,59nm,1.0s						
GUMO	**Guam**	**19.14**	**10**	LR	LR	21 30 49.7	
	comp=Z,110nm,18.3s,baz=143,slow=35						
MMRI	**Maumere**	**19.28**	**259**		**P**	**21 23 59.6**	**+0.5**
MMRI	**Maumere**	**19.28**	**259**	P	**Pn**	**21 24 00.9**	**+0.7**
	comp=Z,50nm,0.9s						
AS31	**Alice Springs**	**19.57**	**201**		**P**	**21 24 03.4**	**+1.1**
ASAR	**Alice Springs**	**19.58**	**201**	P	**Pn**	**21 24 04.1**	**+0.4**
	comp=Z,2.3nm,0.3s,baz=35,slow=10,SNR=123						
ASAR				S	**S**	**21 27 42.6**	**-0.1**
	comp=Z,6.2nm,0.6s,baz=16,slow=27,SNR=4.4						
ASAR				LR	LR	21 32 16.4	
	comp=Z,419nm,19.4s,baz=22,slow=39						
	comp=Z,14nm,0.7s						
ASAR	**Alice Springs**	**19.58**	**201**	P	**P**	**21 24 03.3**	**+1.0**
ASAR	**Alice Springs**	**19.58**	**201**	P	**P**	**21 24 03.3**	**+1.0**
EDFI	**Ende, Flores**	**19.83**	**259**	P	**Pn**	**21 24 07.5**	**+0.6**
	comp=Z,40nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.92**	**229**	P	**P**	**21 24 06.5**	**+0.4**
	comp=Z,9.4nm,0.4s,baz=48,slow=12,SNR=50						
FITZ				S	S	21 27 37.6	-12
	comp=Z,24nm,0.7s,baz=131,slow=8.8,SNR=4.2						
FITZ				LR	LR	21 32 31.6	
	comp=Z,674nm,19.6s,baz=42,slow=39						
	comp=Z,9.4nm,0.4s						
DAV	**Davao City (W)**	**20.03**	**308**	LR	LR	21 33 22.9	
	comp=Z,64nm,18.9s,baz=148,slow=41						
MRSI	**Marisa**	**20.27**	**286**	P	Pn	21 24 12.0	+0.1
	comp=Z,664nmcomp=Z,48nm,1.0s						
WSI	**Waingapu**	**21.34**	**257**	P	**P**	**21 24 22.7**	**+1.2**
KAPI	**Kappang**	**21.55**	**270**	P	**P**	**21 24 25.6**	**+1.9**
	comp=Z,10nm,0.9s,baz=80,slow=6.1,SNR=2.0						
KAPI				LR	LR	21 35 26.9	
	comp=Z,112nm,18.2s,baz=86,slow=44						
	comp=Z,10nm,0.9s						
TOLI2	**Tolitoli**	**21.56**	**287**	P	**P**	**21 24 23.8**	**-0.1**
TOLI2	**Tolitoli**	**21.56**	**287**	P	**P**	**21 24 23.9**	**-0.1**
SPSI	**Sidrap Palu**	**21.59**	**273**	P	**P**	**21 24 26.7**	**+2.5**
	comp=Z,28nm,0.9s						
EIDS	**Eidsvold**	**21.96**	**156**	P	**P**	**21 24 31.8**	**+3.8**
	comp=Z,22nm,1.0s						
EIDS	**Eidsvold**	**21.96**	**156**	P	**P**	**21 24 27.7**	**-0.3**
EIDS	**Eidsvold**	**21.96**	**156**	P	**P**	**21 24 28.4**	**+0.4**
PCI	**Palu**	**21.96**	**281**	P	**P**	**21 24 31.1**	**+2.9**
	comp=Z,70nm,0.9s						
MPSI	**Mapaga**	**22.19**	**284**	P	**P**	**21 24 32.1**	**+1.4**
	comp=Z,17nm,0.7s						
WBSI	**Waikabubak, Su**	**22.21**	**258**	P	**P**	**21 24 32.3**	**+1.4**
	comp=Z,61nm,0.9s						
INKA	**Innaminka**	**22.27**	**182**	P	**P**	**21 24 31.5**	**+0.2**
INKA				IAmb	IAmb	21 24 49.7	
	comp=Z,22nm,0.8s						
MMSI	**Mamuju**	**22.58**	**276**	P	**P**	**21 24 35.1**	**+0.3**
	comp=Z,36nm,0.9s						
DBNI	**Kabupaten Domp**	**23.11**	**261**	P	**P**	**21 24 44.3**	**+3.9**
WRKA	**Warakurna**	**23.25**	**211**	P	**P**	**21 24 41.6**	**-0.1**
	comp=Z,27nm,0.9s						
PLAI	**Plampang**	**23.68**	**260**	P	**P**	**21 24 44.2**	**-1.8**
PLAI	**Plampang**	**23.68**	**260**	P	**P**	**21 24 49.2**	**+3.2**
	comp=Z,24nm,0.8s						
MYLDM	**Lahad Datu**	**25.14**	**294**	P	**P**	**21 25 00.2**	**+0.8**
MYLDM	**Lahad Datu**	**25.14**	**294**	P	**P**	**21 25 01.2**	**+1.8**
PSA00	**Pilbara Seismi**	**26.37**	**230**	P	**P**	**21 25 10.3**	**-0.2**
PSA00	**Pilbara Seismi**	**26.37**	**230**	P	**P**	**21 25 10.7**	**+0.1**
PSA00				IAmb	IAmb	21 25 48.5	
	comp=Z,19nm,0.9s						
STKA	**Stephens Creek**	**26.38**	**180**	P	**P**	**21 25 11.5**	**+1.0**
	comp=Z,0.8nm,0.5s,baz=352,slow=16,SNR=7.2						
	comp=Z,0.8nm,0.5s						
STKA	**Stephens Creek**	**26.38**	**180**	P	**P**	**21 25 11.5**	**+1.0**
STKA				IAmb	IAmb	21 25 38.7	
	comp=Z,43nm,0.8s						
STKA	**Stephens Creek**	**26.38**	**180**	P	**P**	**21 25 11.5**	**+1.0**
STKA				pmax	pmax		
	comp=Z,43nm,0.8s						
JAGI	**Jajag, Banyuwa**	**27.21**	**262**	P	**P**	**21 25 17.6**	**-0.7**
KKM	**Kota Kinabalu**	**27.57**	**294**	P	**P**	**21 25 21.1**	**-0.4**
KKM				IAmb	IAmb	21 25 38.4	
	comp=Z,22nm,1.1s						
BBOO	**Buckleboo**	**27.76**	**190**	P	**P**	**21 25 23.7**	**+0.8**
BBOO				IAmb	IAmb	21 25 36.7	
	comp=Z,13nm,0.8s						
TGY	**Tagaytay City**	**28.03**	**314**	LR	LR	21 36 48.5	
	comp=Z,44nm,21.2s,baz=234,slow=37						
FORT	**Forrest**	**28.22**	**205**	P	**P**	**21 25 27.6**	**+0.5**
FORT				IAmb	IAmb	21 26 16.5	
	comp=Z,16nm,0.7s						
DZM	**Mont Dzumac**	**29.39**	**127**	LR	LR	21 37 43.5	
	comp=Z,170nm,20.0s,baz=15,slow=37						
BBJI	**Bungbulang**	**33.59**	**265**	P	**P**	**21 26 13.1**	**-1.6**
BBJI				IAmb	IAmb	21 26 23.2	
	comp=Z,12nm,1.1s						
YULB	**Yu-li**	**34.66**	**326**	P	**P**	**21 26 22.1**	**-1.8**
YULB				IAmb	IAmb	21 26 33.6	
	comp=Z,11nm,0.9s						
TPUB	**Ta-pu**	**34.97**	**325**	P	**P**	**21 26 24.9**	**-1.6**
TPUB				IAmb	IAmb	21 27 45.9	
	comp=Z,33nm,1.5s						
SSLB	**Suanglung**	**35.17**	**326**	P	**P**	**21 26 26.9**	**-1.3**
SSLB				IAmb	IAmb	21 26 30.4	
	comp=Z,10.0nm,0.7s						
NWAO	**Narrogin (SRO)**	**35.48**	**216**	LR	LR	21 41 56.0	
	comp=Z,329nm,18.4s,baz=7.0,slow=38						
JMN	**Monobe**	**39.52**	**350**	P	**P**	**21 27 03.9**	**-1.1**
JMN				IAmb	IAmb	21 28 31.7	
	comp=Z,91nm,1.9s						
JNU	**Nakatsue**	**39.55**	**346**	LR	LR	21 41 00.6	
	comp=Z,48nm,20.8s,baz=166,slow=32						
MJAR	**Matsushiro Arr**	**41.79**	**356**	P	**P**	**21 27 21.7**	**-2.0**
	comp=Z,0.7nm,0.5s,baz=180,slow=9.8,SNR=8.1						
	comp=Z,0.7nm,0.5s						
MAJO	**Matsushiro**	**41.79**	**356**	P	**P**	**21 27 22.2**	**-1.5**
MAJO	**Matsushiro**	**41.79**	**356**	P	**P**	**21 27 22.2**	**-1.5**
MAJO				pmax	pmax		
	comp=Z,13nm,1.4s						
MJB9	**Matsu-Tunnel**	**41.79**	**356**	P	**P**	**21 27 22.9**	**-0.8**
NJ2	**Nanjing**	**42.95**	**331**	*eP*	**P**	**21 27 32.8**	**-0.4**
NJ2				pP	**sP**	**21 27 43.3**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,28nm,0.5s						
WHN	**Wuhan**	**44.09**	**326**	P	**P**	**21 27 44.0**	**+1.6**
WHN				pmax	pmax		
	comp=Z,38nm,1.0s						
GSI	**Gunungsitoli**	**44.26**	**277**	P	**P**	**21 27 44.2**	**+0.2**
KSRS	**Korea Array**	**44.41**	**345**	P	**P**	**21 27 44.3**	**-0.4**
	comp=Z,1.7nm,0.4s,baz=156,slow=8.5,SNR=11						
KSRS				LR	LR	21 45 07.4	
	comp=Z,32nm,19.0s,baz=160,slow=34						
	comp=Z,1.7nm,0.4s						
MRNZ	**Matariki Terra**	**45.52**	**147**	P	**P**	**21 27 54.7**	**+1.1**
JTM	**Temnabayashi**	**45.92**	**360**	P	**P**	**21 27 56.0**	**-0.8**
URZ	**Urewera**	**46.09**	**140**	P	**P**	**21 27 57.4**	**-0.8**
	comp=Z,7.7nm,0.8s,baz=234,slow=6.8,SNR=5.6						
URZ				LR	LR	21 46 56.0	
	comp=Z,110nm,18.4s,baz=322,slow=36						
	comp=Z,7.7nm,0.8s						
MLZ	**Mavora Lakes**	**46.15**	**154**	P	**P**	**21 27 59.7**	**+1.1**
GYA	**Guiyang**	**46.17**	**315**	⇓P	**P**	**21 28 00.9**	**+1.7**
GYA				pmax	pmax		
	comp=Z,7.0nm,0.5s						
RTZ	**Ruatahuna**	**46.21**	**141**	P	**P**	**21 28 00.1**	**+0.8**
RTZ				IAmb	IAmb	21 28 01.1	
	comp=Z,20nm,0.7s						
BKZ	**Black Stump Fm**	**46.24**	**142**	P	**P**	**21 28 00.2**	**+0.7**
BKZ				IAmb	IAmb	21 28 01.6	
	comp=Z,23nm,0.9s						
RPZ	**Rata Peaks**	**46.27**	**150**	P	**P**	**21 27 59.3**	**-0.2**
	comp=Z,17nm,0.7s,baz=5.1,slow=23,SNR=4.3						
	comp=Z,17nm,0.7s						
ENH	**Enshi**	**46.79**	**321**		**P**	**21 28 03.6**	**-0.3**
ENH				IAmb	IAmb	21 28 05.2	
	comp=Z,15nm,0.7s						
TIA	**Tai'an**	**47.19**	**333**	P	**P**	**21 28 07.1**	**+0.2**
TIA				pmax	pmax		
	comp=Z,15nm,1.0s						
CM31	**Chiang Mai Arr**	**48.07**	**301**	P	**P**	**21 28 13.0**	**-1.0**
CM31				IAmb	IAmb	21 28 26.7	
	comp=Z,9.2nm,1.3s						
CMAR	**Chiang Mai Arr**	**48.07**	**301**	P	**P**	**21 28 14.2**	**+0.2**
	comp=Z,1.9nm,0.7s,baz=119,slow=6.3,SNR=17						
CMAR				PcP	**PcP**	**21 29 42.4**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=134,slow=4.0,SNR=4.3						
CMAR				LR	LR	21 50 58.3	
	comp=Z,14nm,18.1s,baz=95,slow=39						
	comp=Z,1.9nm,0.7s						
CMAR	**Chiang Mai Arr**	**48.07**	**301**	P	**P**	**21 28 13.4**	**-0.6**
CMAR	**Chiang Mai Arr**	**48.07**	**301**	*i* P	**P**	**21 28 14.8**	**+0.8**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
LYN	**LuoYang**	**48.17**	**328**	P	**P**	**21 28 14.9**	**+0.5**
LYN				pP	sP	21 28 23.9	+0.6
LYN				pmax	pmax		
	comp=Z,65nm,0.7s						
CHTO	**Chiang Mai**	**48.22**	**301**	P	**P**	**21 28 14.5**	**-0.6**
CHTO	**Chiang Mai**	**48.22**	**301**	P	**P**	**21 28 14.5**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KMI2	**Kunming**	**48.27**	**311**	P	**P**	**21 28 17.5**	**+1.8**
KMI2				pP	sP	21 28 27.0	+2.3
KMI2				pmax	pmax		
	comp=Z,9.0nm,1.1s						
PSTR	**Posyet**	**48.74**	**350**	⇓*eP*	**P**	**21 28 18.9**	**+0.2**
JKA	**Kamikawa-asahi**	**49.26**	**1**	P	**P**	**21 28 21.9**	**-0.8**
JKA				IAmb	IAmb	21 28 31.4	
	comp=Z,39nm,1.4s						
ASAJ	**Asahikawa**	**49.26**	**1**	LR	LR	21 46 16.1	
	comp=Z,26nm,21.4s,baz=186,slow=32						
ASAJ	**Asahikawa**	**49.26**	**1**	P	**P**	**21 28 21.9**	**-0.8**
ASAJ				pmax	pmax		
	comp=Z,39nm,1.4s						
HNS	**HongShan**	**49.28**	**332**	⇑P	**P**	**21 28 23.0**	**+0.1**
HNS				pP	**sP**	**21 28 32.3**	**+0.5**
HNS				pmax	pmax		
	comp=Z,19nm,1.2s						
XAN	**Xi'an**	**49.77**	**324**	⇑P	**P**	**21 28 27.0**	**+0.2**
XAN				pmax	pmax		
	comp=Z,27nm,0.8s						
PZH	**PanZhiHua**	**49.77**	**312**	P	**P**	**21 28 28.0**	**+0.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
USRK	**Ussuriysk Ar.**	**50.05**	**351**	P	**P**	**21 28 27.9**	**-0.7**
	comp=Z,1.8nm,0.6s,baz=165,slow=8.2,SNR=6.4						
	comp=Z,1.8nm,0.6s						
USRK	**Ussuriysk Ar.**	**50.05**	**351**	P	**P**	**21 28 28.0**	**-0.7**
BJI2	**Beijing**	**50.78**	**335**	P	**P**	**21 28 34.4**	**+0.1**
BJI2				pP	**sP**	**21 28 43.6**	**+0.4**
BJI2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BJT	**Baijiatuau**	**50.78**	**335**		**P**	**21 28 33.9**	**-0.4**
BJT				IAmb	IAmb	21 28 44.2	
	comp=Z,7.7nm,0.7s						
BJT	**Baijiatuau**	**50.78**	**335**	P	**P**	**21 28 33.9**	**-0.4**
BJT				pmax	pmax		
	comp=Z,8.0nm,0.7s						
CD2	**Chengdu**	**50.93**	**317**	P	**P**	**21 28 36.4**	**+0.8**
CD2				pmax	pmax		
	comp=Z,30nm,0.8s						
CN2	**Changchun**	**51.01**	**345**	P	**P**	**21 28 38.3**	**+2.4**
CN2				pP	sP	21 28 48.0	+3.1
CN2				PP	**PP**	**21 30 35.8**	**+3.1**
CN2				S	**S**	**21 35 53.1**	**+1.0**
YSS	**Yuzhno-Sakhali**	**52.10**	**1**	*eP*	P	21 28 53.3	+9.3
YSS				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BNX	**BinXian**	**52.38**	**348**	⇑P	**P**	**21 28 45.3**	**-0.9**
BNX				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC	**Hu-ho-hao-te**	**53.50**	**332**	*eP*	**P**	**21 28 57.3**	**+2.6**
HHC				pP	sP	21 29 04.8	+1.2
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,49nm,4.5s						
LZH	**Lanzhou**	**54.19**	**323**	*eP*	**P**	**21 29 01.3**	**+1.4**
LZH				pP	sP	21 29 10.3	+1.4
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
BTO2	**Baotou**	**54.22**	**331**	*eP*	**P**	**21 29 00.9**	**+0.9**
BTO2				pmax	pmax		
	comp=Z,24nm,1.0s						
BTO2				pmax	pmax		
	comp=Z,200nm,5.3s						
KLR	**Kul'dur**	**55.01**	**352**	LR	LR	21 49 00.7	
	comp=Z,34nm,21.4s,baz=148,slow=32						
KLR	**Kul'dur**	**55.01**	**352**	⇑*i* P	**P**	**21 29 05.1**	**-0.3**
HEH	**HeiHe**	**56.70**	**349**	*eP*	P	21 29 05.8	-12
HEH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SHL	**Shillong**	**57.03**	**305**	P	**P**	**21 29 20.0**	**-0.5**
SHL				IAmb	IAmb	21 29 36.3	
	comp=Z,11nm,1.1s						
SHL	**Shillong**	**57.03**	**305**	P	**P**	**21 29 20.0**	**-0.5**
SHL				pmax	pmax		
	comp=Z,111nm,1.1s						
GTA2	**Gaotai**	**58.86**	**323**	*eP*	**P**	**21 29 34.4**	**+1.4**
GTA2				pP	sP	21 29 43.1	+1.1
GTA2				pmax	pmax		
	comp=Z,14nm,0.9s						
LSA	**Lhasa**	**59.45**	**309**		**P**	**21 29 38.3**	**+0.6**
LSA				IAmb	IAmb	21 29 40.4	
	comp=Z,5.0nm,0.7s						
LSA	**Lhasa**	**59.45**	**309**	P	**P**	**21 29 38.3**	**+0.6**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LSA	**Lhasa**	**59.45**	**309**	P	**P**	**21 29 36.8**	**-0.9**
LSA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PETK	**Petropavlovsk-**	**59.86**	**11**	P	**P**	**21 29 39.5**	**0.0**
	comp=Z,20nm,1.2s,baz=166,slow=5.8,SNR=9.3						
	comp=Z,20nm,1.2s						
PETK	**Petropavlovsk-**	**59.86**	**11**	P	**P**	**21 29 39.2**	**-0.4**
PETK	**Petropavlovsk-**	**59.86**	**11**	P	**P**	**21 29 39.2**	**-0.4**
ZEA	**Zeya**	**60.07**	**350**	*eP*	**P**	**21 29 41.3**	**+0.4**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ULN	**Ulaanbaatar**	**60.99**	**334**	P	**P**	**21 29 48.2**	**+0.6**
ULN				IAmb	IAmb	21 29 49.6	
	comp=Z,15nm,0.8s						
ULN	**Ulaanbaatar**	**60.99**	**334**	*c i*P	**P**	**21 29 48.6**	**+1.1**
ULN				pmax	pmax		
	comp=Z,17nm,0.9s						
SONM	**Songino Array**	**61.25**	**334**	P	**P**	**21 29 49.9**	**+0.6**
	comp=Z,3.3nm,0.6s,baz=158,slow=7.0,SNR=33						
SONM				pP	**sP**	**21 29 58.8**	**+0.5**
	comp=Z,3.1nm,0.7s,baz=149,slow=5.4,SNR=10						
SONM				LR	LR	21 56 12.3	
	comp=Z,39nm,20.9s,baz=159,slow=36						
	comp=Z,3.3nm,0.6s						
SONM	**Songino Array**	**61.25**	**334**	P	**

VNDA Vanda 72.93 175 LR LR 22 02 08.8
comp=Z,114nm,19.4s,baz=328,slow=35
WUS Wushi 73.15 316 **P** **21 31 05.3 +0.3**
WUS IAmb IAmb 21 31 16.0
comp=Z,8.9nm,1.0s
UNV Unalaska Valle 73.29 29 P **P** **21 31 04.4 -0.9**
UNV Unalaska Valle 73.29 29 P **P** **21 31 05.2 -0.1**
baz=235
MK31 Makanchi Array 73.51 322*c* *i*P **P** **21 31 07.6 +0.8**
MKAR Makanchi Array 73.51 322 P **P** **21 31 07.3 +0.5**
comp=Z,13nm,0.8s,baz=108,slow=7.8,SNR=105
MKAR pP **sP** **21 31 16.4 +0.5**
comp=Z,16nm,0.9s,baz=108,slow=7.8,SNR=20
comp=Z,13nm,0.8s
MKAR Makanchi Array 73.51 322 **P** **21 31 06.9 +0.1**
MKAR Makanchi Array 73.51 322 *i* P **P** **21 31 07.5 +0.7**
MKAR pmax pmax
comp=Z,13nm,0.7s
SPIA Saint Paul Isl 73.59 25 P **P** **21 31 07.4 +0.3**
baz=231
MAKZ Makanchi 73.70 322 P **P** **21 31 08.5 +0.5**
MAKZ IAmb IAmb 21 31 09.7
comp=Z,24nm,0.9s
MAKZ Makanchi 73.70 322 P **P** **21 31 08.5 +0.5**
MAKZ pmax pmax
comp=Z,24nm,1.0s
SHLS Shalkode 73.76 318⇑ *i*P **P** **21 31 07.5 -1.0**
comp=Z,6.7nm,0.8s
UZB Uzynbulak 74.05 318⇑ *i*P **P** **21 31 10.1 -0.2**
comp=Z,12nm,0.8s
PRZ Przheval'sk 74.21 317 **P** **21 31 12.3 +1.0**
PRZ IAmb IAmb 21 31 14.2
comp=Z,23nm,0.9s
PRZ Przheval'sk 74.21 317 P **P** **21 31 12.3 +1.0**
PRZ pmax pmax
comp=Z,23nm,0.9s
TARG Taragay, Kyrgy 74.33 316 **P** **21 31 12.6 +0.3**
TARG IAmb IAmb 21 31 24.0
comp=Z,14nm,1.2s
TARG Taragay, Kyrgy 74.33 316 P **P** **21 31 12.6 +0.3**
TARG pmax pmax
comp=Z,14nm,1.2s
KPKS Kokpek 74.41 318 *e*P **P** **21 31 13.1 +0.8**
SATY Saty 74.43 317 *e*P **P** **21 31 13.3 +0.8**
comp=Z,9.9nm,1.0s
KSH2 Kashi 75.00 313 P **P** **21 31 16.9 +1.0**
KSH2 pP sP 21 31 26.0 +1.0
KSH2 pmax pmax
comp=Z,10.0nm,1.1s
NIL Nilore 75.04 307 P **P** **21 31 16.1 0.0**
NIL IAmb IAmb 21 31 29.6
comp=Z,18nm,0.9s
NIL Nilore 75.04 307 P **P** **21 31 16.1 0.0**
NIL pmax pmax
comp=Z,18nm,1.0s
TDK Taldygorghan 75.20 319⇑ *i*P **P** **21 31 17.6 +0.9**
comp=Z,12nm,0.7s
BILL Bilibino 75.30 9 P **P** **21 31 16.0 -0.7**
BILL Bilibino 75.30 9*d* *i*P **P** **21 31 16.6 -0.2**
BILL pmax pmax
comp=Z,6.0nm,0.8s
FALS False Pass 75.35 29 P **P** **21 31 17.1 -0.1**
baz=238
MDOK Medeo 75.39 317 *e*P **P** **21 31 18.9 +0.8**
TNSS Tian-Shan 75.41 317 *e*P **P** **21 31 18.9 +0.4**
NRN Naryn 75.48 315 **P** **21 31 18.1 -0.7**
NRN Naryn 75.48 315 P **P** **21 31 18.1 -0.7**
NRN pmax pmax
comp=Z,5.0nm,1.0s
AAA Alma-Ata 75.50 317 *e*P **P** **21 31 19.3 +0.8**
comp=Z,4.4nm,0.5s
ZAA0 Zalesovo Array 75.56 329 **P** **21 31 17.4 -1.1**
ZALV Zalesovo Beam 75.56 329 P **P** **21 31 17.9 -0.6**
comp=Z,2.9nm,0.7s,baz=103,slow=5.1,SNR=15
ZALV pP **sP** **21 31 27.1 -0.5**
comp=Z,5.6nm,1.0s,baz=116,slow=6.8,SNR=6.8
ZALV LR LR 22 04 35.1
comp=Z,25nm,20.5s,baz=52,slow=36
comp=Z,2.9nm,0.7s
ZALV Zalesovo Beam 75.56 329 **P** **21 31 17.4 -1.1**
BOOM Boomskoye usch 75.90 316 **P** **21 31 20.8 -0.2**
BOOM IAmb IAmb 21 31 23.0
comp=Z,8.5nm,0.9s
BOOM Boomskoye usch 75.90 316 P **P** **21 31 20.8 -0.2**
BOOM pmax pmax
comp=Z,9.0nm,0.9s
KUU Kurty 76.14 318 *e*P **P** **21 31 22.8 +0.7**
AAK Ala-Archa 76.96 316 **P** **21 31 26.6 -0.4**
AAK IAmb IAmb 21 31 38.4
comp=Z,13nm,1.6s
AAK Ala-Archa 76.96 316*d* *i*P **P** **21 31 28.0 +1.0**
AAK pmax pmax
comp=Z,7.0nm,1.3s
SDPT Sand Point 77.05 30 P **P** **21 31 27.0 +0.1**
baz=240
SGDS Sogindy 77.14 317 *e*P **P** **21 31 28.4 +0.6**
M11K Mekoryuk 77.23 24 P **P** **21 31 28.6 +0.8**
baz=234
CHNA Chernabura Isl 77.24 31 P **P** **21 31 28.5 +0.4**
baz=241
TIXI Tiksi 77.30 356 **P** **21 31 27.2 -0.9**
TIXI Tiksi 77.30 356⇓ *e*P **P** **21 31 26.7 -1.3**
TIXI pmax pmax
comp=Z,7.0nm,1.0s
GAMB Gambell 77.35 19 P **P** **21 31 28.2 -0.2**
GAMB IAmb IAmb 21 32 19.6
comp=Z,17nm,1.3s
GAMB Gambell 77.35 19 P **P** **21 31 28.9 +0.5**
baz=228
KURK Kurchatov 77.41 325 **P** **21 31 28.9 -0.2**
KURK IAmb IAmb 21 31 39.5
comp=Z,9.2nm,0.7s
KURK Kurchatov 77.41 325*c* *i*P **P** **21 31 29.1 0.0**
KURK pmax pmax
comp=Z,11nm,0.8s
KURBB Kurchatov Arra 77.42 324 P **P** **21 31 29.4 +0.2**
comp=Z,7.8nm,0.8s,baz=114,slow=4.6,SNR=57
KURBB pP **sP** **21 31 37.6 -0.6**
comp=Z,8.5nm,0.9s,baz=118,slow=4.9,SNR=19
comp=Z,7.8nm,0.8s
ARSB Arslanbob 77.59 314 P **P** **21 31 30.3 -0.2**
ARSB IAmb IAmb 21 31 41.2
comp=Z,7.9nm,0.9s
ARSB Arslanbob 77.59 314 P **P** **21 31 30.3 -0.2**
ARSB pmax pmax
comp=Z,8.0nm,0.9s
DRK Karamyk 77.88 312 P **P** **21 31 31.9 -0.4**
DRK IAmb IAmb 21 32 18.5
comp=Z,8.3nm,0.9s
DRK Karamyk 77.88 312 P **P** **21 31 31.9 -0.4**
DRK pmax pmax
comp=Z,8.0nm,0.9s
S14K Fog Glacier 77.97 29 P **P** **21 31 32.4 +0.2**
baz=241
BTLS Baital 78.08 318 *e*P **P** **21 31 33.9 +0.9**
M13K Dall Lake 78.41 25 P **P** **21 31 35.0 +0.6**
baz=237
CHGN Chignik 78.53 30 P **P** **21 31 35.4 +0.3**
baz=242
KBL Kabul 78.64 307 P **P** **21 31 35.6 -0.9**
KBL Kabul 78.64 307 P **P** **21 31 35.7 -0.9**
KBL pmax pmax
comp=Z,5.0nm,0.9s
O14K Tigyukauivet M 78.67 26 P **P** **21 31 35.9 0.0**
O14K IAmb IAmb 21 31 37.0
comp=Z,19nm,0.8s
O14K Tigyukauivet M 78.67 26 P **P** **21 31 36.1 +0.2**
baz=239
K13K Kusilvak Mount 78.74 23 P **P** **21 31 36.5 +0.3**
baz=235
BTK Batken 78.77 312 **P** **21 31 36.5 -0.5**
BTK Batken 78.77 312 P **P** **21 31 36.5 -0.5**
BTK pmax pmax
comp=Z,8.0nm,1.2s
GAR Garm 78.84 311 P **P** **21 31 36.5 -1.0**
GAR IAmb IAmb 21 31 38.9
comp=Z,17nm,1.0s
N14K Kuskokwak Cree 78.84 25 P **P** **21 31 36.9 +0.1**
baz=238
M14K Bethel 79.17 25 P **P** **21 31 38.9 +0.3**
baz=238,SNR=5.8
L14K Kuka Creek 79.19 24 P **P** **21 31 39.0 +0.4**
baz=237
DZA Taraz 79.24 315 *e*P **P** **21 31 40.1 +0.6**
O15K Ungalikthiuk R 79.27 27 P **P** **21 31 39.3 +0.1**
baz=240

CHGR Chuyangaron 79.62 311 P **P** **21 31 40.8 -0.9**
CHGR IAmb IAmb 21 31 51.9
comp=Z,16nm,0.8s
CHGR Chuyangaron 79.62 311⇓ *i*P **P** **21 31 41.6 -0.1**
CHGR pmax pmax
comp=Z,22nm,1.0s
J14K Nanvaranak Lak 79.62 23 P **P** **21 31 41.5 +0.5**
baz=236
N15K Kwethluk River 79.66 26 P **P** **21 31 41.4 +0.1**
baz=240
M15K Kasigluk River 79.67 25 P **P** **21 31 41.3 -0.1**
baz=239
TNA Tin City 79.74 19 **P** **21 31 41.3 -0.3**
TNA IAmb IAmb 21 31 42.5
comp=Z,8.5nm,0.9s
TNA Tin City 79.74 19 P **P** **21 31 41.6 0.0**
baz=232
L15K Ungalak Mounta 79.85 24 P **P** **21 31 42.1 -0.2**
baz=238,SNR=5.7
KK31 Karatay Array 79.88 315 **P** **21 31 42.6 -0.3**
KK31 Karatay Array 79.88 315 P **P** **21 31 42.6 -0.3**
KK31 pmax pmax
comp=Z,12nm,1.5s
KKAR Karatay Array 79.88 315 **P** **21 31 42.7 -0.2**
KKAR Karatay Array 79.88 315 P **P** **21 31 42.7 -0.2**
IUG Iuzhnay 79.94 314 *e*P **P** **21 31 43.9 +0.5**
ANM Nome 80.00 21 P **P** **21 31 43.3 +0.2**
baz=234
P16K Nushagak River 80.03 27 P **P** **21 31 43.0 -0.3**
baz=242
R17L Mt. Peulik Vol 80.15 29 P **P** **21 31 44.1 +0.1**
baz=243
K15K Wolf Creek Mou 80.16 23 P **P** **21 31 44.4 +0.4**
baz=238
F14K Arctic Creek 80.22 20 P **P** **21 31 44.6 +0.4**
baz=233
O16K Kokwok River B 80.25 27 P **P** **21 31 44.6 +0.1**
baz=242,SNR=10
CHM Chimkent 80.30 314 *e*P **P** **21 31 46.0 +0.8**
BRLS Borolday 80.33 315 *e*P **P** **21 31 45.8 +0.4**
N16K Nishlik Lake 80.38 26 P **P** **21 31 45.8 +0.6**
baz=241
M16K Timber Creek 80.57 25 P **P** **21 31 46.6 +0.4**
baz=241,SNR=10
BRZS Berezniki 80.65 322 *e*P **P** **21 31 47.6 +0.7**
Q17K Contact Creek 80.66 28 P **P** **21 31 45.8 -1.1**
baz=244
L16K Owhat River 80.69 24 P **P** **21 31 46.9 +0.1**
baz=240,SNR=8.1
G15K Niukluk 80.72 21 P **P** **21 31 46.8 -0.1**
baz=235
O17K Koliganek Bris 80.78 27 P **P** **21 31 47.6 +0.3**
baz=242,SNR=34
P17K Kvichak River 80.81 27 P **P** **21 31 47.5 0.0**
baz=243
F15K North Star Dit 80.92 20 P **P** **21 31 48.2 +0.2**
baz=235
J16K Anvik River 81.05 23 P **P** **21 31 49.3 +0.6**
baz=239,SNR=5.6
N17K Nushagak Hills 81.09 26 P **P** **21 31 49.4 +0.4**
baz=242
H16K Elim 81.16 21 P **P** **21 31 49.4 +0.1**
baz=237,SNR=12
Q18K Katmai Hardscr 81.24 28 P **P** **21 31 48.8 -1.2**
baz=244
I17K Unalakleet 81.33 22 P **P** **21 31 50.8 +0.6**
baz=239
L17K Donlin 81.39 24 P **P** **21 31 50.8 +0.3**
baz=241,SNR=5.9
M17K Holitna River 81.39 25 P **P** **21 31 51.0 +0.4**
baz=242,SNR=6.5
P18K Big Mountain, 81.46 28 P **P** **21 31 49.8 -1.2**
baz=244
OHAK Old Harbor 81.48 30 P **P** **21 31 50.6 -0.5**
OHAK Old Harbor 81.48 30 P **P** **21 31 51.1 0.0**
baz=246
G16K Koyuk River 81.53 21 P **P** **21 31 51.5 +0.3**
baz=237,SNR=17
K17K Iditarod 81.67 24 P **P** **21 31 52.6 +0.6**
baz=241
O18K Koktuh Hills 81.67 27 P **P** **21 31 52.5 +0.4**
baz=244
J17K VABM Dome 81.70 23 P **P** **21 31 52.6 +0.5**
baz=240
N18K Kilae Creek 81.73 26 P **P** **21 31 52.8 +0.4**
baz=243
Q19K Cape Duglas, 82.00 28 P **P** **21 31 53.6 -0.3**
baz=246
KDAK Kodiak Island 82.05 30 P **P** **21 31 53.7 -0.4**
KDAK Kodiak Island 82.05 30 P **P** **21 31 53.7 -0.4**
KDAK pmax pmax
comp=Z,51nm,1.4s
KDAK Kodiak Island 82.05 30 P **P** **21 31 53.9 -0.2**
baz=247
L18K Granite Mounta 82.09 25 P **P** **21 31 54.7 +0.5**
baz=242,SNR=7.1
M18K Stony River 82.12 26 P **P** **21 31 54.8 +0.4**
baz=243
H17K Granite Mounta 82.16 22 P **P** **21 31 55.1 +0.5**
baz=239,SNR=16
G17K Kiwalik Mounta 82.19 21 P **P** **21 31 55.0 +0.3**
baz=238
C16K Lisburne Hills 82.21 18 P **P** **21 31 54.6 -0.1**
baz=234
O19K Port Alsworth 82.22 27 P **P** **21 31 54.8 -0.2**
baz=245
N19K Bonanza Creek 82.41 26 P **P** **21 31 56.0 -0.1**
baz=245
Q20K Shuyak Island 82.47 29 P **P** **21 31 56.4 +0.1**
baz=247
F17K Baldwin Pennin 82.48 20 P **P** **21 31 56.4 +0.2**
baz=238
P19K Oil Pt 82.49 28 P **P** **21 31 56.2 -0.3**
baz=246
D17K Noatak River 82.57 18 P **P** **21 31 57.1 +0.4**
baz=236
J18K Innoko River 82.66 24 P **P** **21 31 57.2 -0.1**
baz=242,SNR=13
RDOG Red Dog Mine 82.83 18 **P** **21 31 57.7 -0.2**
RDOG Red Dog Mine 82.83 18 P **P** **21 31 58.1 +0.1**
baz=236
H18K Honhosa River 82.84 22 P **P** **21 31 57.6 -0.5**
baz=241
L19K White Mountain 82.84 25 P **P** **21 31 58.4 +0.2**
baz=244,SNR=7.2
M19K Big River Lodg 82.92 25 P **P** **21 31 58.7 +0.1**
baz=245
C17K DeLong Mountai 82.98 18 P **P** **21 31 58.8 0.0**
baz=236
BVAR Borovoye Array 83.00 325 P **P** **21 31 59.6 +0.4**
comp=Z,10nm,0.7s,baz=115,slow=5.6,SNR=51
BVAR pP **sP** **21 32 08.2 -0.2**
comp=Z,12nm,0.7s,baz=117,slow=5.8,SNR=16
comp=Z,10nm,0.7s
NRIK Noril'sk 83.00 343 P **P** **21 31 59.0 +0.2**
comp=Z,12nm,0.7s,baz=116,slow=5.4,SNR=19
comp=Z,12nm,0.7s
NRIK Noril'sk 83.00 343 **P** **21 31 58.6 -0.2**
NRIK IAmb IAmb 21 31 59.9
comp=Z,16nm,0.8s
NRIK Noril'sk 83.00 343*c* *i*P **P** **21 31 58.8 -0.1**
NRIK pmax pmax
comp=Z,19nm,0.9s
BORK Borovoye 83.05 325 **P** **21 31 59.5 0.0**
BORK IAmb IAmb 21 32 09.7
comp=Z,15nm,0.8s
BORK Borovoye 83.05 325*c* *i*P **P** **21 31 59.8 +0.4**
BORK pmax pmax
comp=Z,23nm,1.0s
G18K Tagagawik 83.10 21 P **P** **21 31 59.2 -0.3**
baz=240
F18K Selawik 83.11 20 P **P** **21 31 59.2 -0.2**
baz=239,SNR=6.5
GCSA Galena City Sc 83.20 22 P **P** **21 31 59.9 0.0**
baz=242,SNR=5.2
E18K Tukpahlearik C 83.22 19 P **P** **21 32 00.2 +0.2**
baz=238
HOM Homer 83.23 28 P **P** **21 31 59.4 -0.8**
baz=247
J19K Poorman 83.34 23 P **P** **21 32 00.8 +0.1**
baz=243,SNR=14
M20K Styx River 83.45 26 P **P** **21 32 01.3 -0.2**
baz=246
N20K Mount Spurr 83.58 27 P **P** **21 32 01.8 -0.3**
baz=247
SPCR Spurr Chakacha 83.58 27 P **P** **21 32 01.7 -0.4**
baz=247

BRLK Bradley Lake 83.63 28 P **P** **21 32 01.2 -1.1**
K20K Telida 83.68 24 P **P** **21 32 02.6 +0.1**
baz=245,SNR=14
C18K Utukok River 83.69 18 P **P** **21 32 02.3 -0.2**
baz=238
BRSE Bradley Lake S 83.69 28 P **P** **21 32 02.9 +0.3**
baz=248
H19K Roundabout Mou 83.72 22 P **P** **21 32 02.8 +0.2**
baz=242
G19K Purcell Mounta 83.78 21 P **P** **21 32 02.8 -0.2**
baz=242
CAPN Captain Cook N 83.89 27 P **P** **21 32 02.9 -0.7**
baz=248
J20K Nowinta River 84.00 23 P **P** **21 32 04.4 +0.3**
baz=245,SNR=9.8
HRA Herat 84.09 305 **P** **21 32 05.1 -0.4**
I20K Naaghedeneel 84.14 23 P **P** **21 32 04.0 -0.8**
baz=244
SKT Skwentna 84.19 26 P **P** **21 32 03.8 -1.3**
baz=247
SLKM Skilak Lake 84.22 28 P **P** **21 32 04.0 -1.3**
PPLA Purkeypile 84.27 25 P **P** **21 32 04.7 -1.0**
baz=246
H20K Anotleneega Mo 84.29 22 P **P** **21 32 05.6 0.0**
baz=244,SNR=11
E19K Redstone River 84.36 20 P **P** **21 32 06.0 +0.1**
baz=241
C19K Lookout Ridge 84.42 18 P **P** **21 32 06.4 +0.2**
baz=239
SEW Seward 84.43 28 P **P** **21 32 05.5 -0.8**
baz=249
O22K Cooper Landing 84.44 28 P **P** **21 32 05.5 -0.8**
baz=249
A19K Wainwright 84.56 17 P **P** **21 32 06.9 +0.1**
baz=238
D19K Kuna River 84.58 19 P **P** **21 32 06.8 -0.2**
baz=240
QSPA South Pole Qui 84.60 180 P **P** **21 32 06.9 -0.4**
comp=Z,4.0nm,0.8s,baz=324,slow=1.7,SNR=15
QSPA LR LR 22 08 56.5
comp=Z,118nm,20.7s,baz=3.5,slow=35
comp=Z,4.0nm,0.8s
QSPA South Pole Qui 84.60 180 P **P** **21 32 07.2 -0.2**
QSPA IAmb IAmb 21 32 21.6
comp=Z,5.9nm,0.7s
CHUM Lake Minchumin 84.61 24 P **P** **21 32 07.2 0.0**
baz=246,SNR=46
F20K Avaraart Lake 84.69 21 P **P** **21 32 07.6 +0.1**
baz=243
M22K Willow 84.72 26 P **P** **21 32 06.6 -1.1**
baz=248
CUT Chulitna 84.89 26 P **P** **21 32 07.1 -1.5**
baz=248
IMAR Indian Mountai 84.93 22 P **P** **21 32 08.4 -0.4**
E20K Nigu River 85.09 19 P **P** **21 32 09.6 0.0**
baz=242
PMR Palmer 85.10 27 P **P** **21 32 08.6 -1.1**
baz=249
H21K Melozitna Rive 85.14 22 P **P** **21 32 09.8 -0.1**
baz=246,SNR=5.2
D20K Etivluk River 85.17 19 P **P** **21 32 09.9 -0.1**
baz=242
BPAW Bear Paw Mtn. 85.23 24 P **P** **21 32 09.5 -0.8**
baz=248
G21K Allakaket 85.24 21 P **P** **21 32 10.1 -0.2**
baz=245
I21K Tanana 85.26 23 P **P** **21 32 10.4 0.0**
baz=246,SNR=10
TRF Thorofare Moun 85.28 25 P **P** **21 32 09.3 -1.5**
baz=248,SNR=9.0
KNK Knik Glacier 85.34 27 P **P** **21 32 10.2 -0.8**
KNK Knik Glacier 85.34 27 P **P** **21 32 10.4 -0.6**
baz=250,SNR=5.4
P23K Montague Islan 85.36 29 P **P** **21 32 10.3 -0.7**
baz=251
SML Sawmill 85.53 27 P **P** **21 32 11.1 -0.8**
baz=250,SNR=6.0
F21K Alatna River 85.55 21 P **P** **21 32 11.5 -0.3**
baz=245
B20K Meade River 85.61 18 P **P** **21 32 12.0 0.0**
baz=241
Q23K Middleton Isla 85.68 29 P **P** **21 32 13.1 +0.5**
baz=252
MLY Manley 85.69 23 P **P** **21 32 12.2 -0.5**
baz=248
H22K Ishtalitna Cre 85.78 22 P **P** **21 32 12.9 -0.1**
baz=247
GLI Glacier Island 85.79 28 P **P** **21 32 12.2 -0.9**
baz=251
WAT1 Susitna Watana 85.79 26 P **P** **21 32 12.1 -1.0**
baz=250
M23K Glacier View 85.80 27 P **P** **21 32 12.4 -0.9**
baz=251
E21K Killik River 85.91 20 P **P** **21 32 13.5 -0.1**
baz=244
MCK McKinley 85.94 25 P **P** **21 32 12.6 -1.3**
baz=249,SNR=24
C21K Knifeblade Rid 85.96 19 P **P** **21 32 14.2 +0.4**
baz=244
SCM Sheep Creek Mo 85.99 27 P **P** **21 32 13.5 -0.7**
SCM Sheep Creek Mo 85.99 27 P **P** **21 32 13.5 -0.7**
SCM pmax pmax
comp=Z,23nm,1.1s
SCM Sheep Creek Mo 85.99 27 P **P** **21 32 13.7 -0.6**
baz=251
WAT6 Susitna Watana 86.06 26 P **P** **21 32 13.5 -1.1**
baz=250
NEA2 Nenana 86.19 24 P **P** **21 32 14.0 -1.1**
baz=249
B21K Ikpikpuk River 86.22 18 P **P** **21 32 15.2 +0.1**
baz=244,SNR=31
I23K Minto, Yukon-K 86.28 23 P **P** **21 32 14.9 -0.5**
baz=249,SNR=7.8
EYAK Cordova Ski Ar 86.31 28 P **P** **21 32 15.0 -0.7**
baz=252
DHY Denali Highway 86.38 26 P **P** **21 32 15.6 -0.6**
baz=251
A21K Barrow 86.40 17 P **P** **21 32 15.8 -0.1**
baz=242
H23K Yukon River 86.45 23 P **P** **21 32 16.1 -0.3**
baz=249
E22K Anaktuvuk Pass 86.51 20 P **P** **21 32 16.9 +0.2**
baz=246,SNR=22
KLU Klutina 86.52 27 P **P** **21 32 16.4 -0.5**
KLU Klutina 86.52 27 P **P** **21 32 16.5 -0.4**
baz=252
M24K Tolsona, Glenn 86.59 27 P **P** **21 32 17.1 -0.2**
baz=252
G23K Bananza Creek 86.60 22 P **P** **21 32 17.1 0.0**
baz=248,SNR=13
COLD Coldfoot 86.72 21 P **P** **21 32 17.8 +0.2**
baz=248,SNR=8.3
A22K Sinclair Lake 86.73 17 P **P** **21 32 17.7 +0.2**
baz=243
COLA College 86.78 24 P **P** **21 32 16.6 -1.3**
COLA College 86.78 24 P **P** **21 32 16.6 -1.3**
COLA pmax pmax
comp=Z,17nm,0.9s
COLA College 86.78 24 P **P** **21 32 17.0 -1.0**
baz=250
B22K Teshekpuk Lake 86.90 18 P **P** **21 32 18.3 -0.1**
baz=245,SNR=34
BMRM Bremner River 86.97 28 P **P** **21 32 18.3 -0.7**
baz=253
POKR Poker Plat Res 87.03 24 P **P** **21 32 18.4 -0.8**
baz=251
H24K Noodor Dome 87.10 23 P **P** **21 32 18.9 -0.7**
baz=250,SNR=9.6
ILAR Eielson Array 87.14 24 P **P** **21 32 17.6 -2.1**
comp=Z,11nm,0.7s,baz=261,slow=4.6,SNR=130
ILAR pP **sP** **21 32 27.3 -1.6**
comp=Z,4.2nm,0.6s,baz=262,slow=4.8,SNR=8.4
comp=Z,11nm,0.7s
ILAR Eielson Array 87.14 24 P **P** **21 32 17.7 -2.0**
N25K Chitina, Valde 87.16 27 P **P** **21 32 19.5 -0.5**
baz=253
PAX Paxson 87.17 26 P **P** **21 32 19.2 -0.8**
baz=253
D23K Nanushuk River 87.22 20 P **P** **21 32 20.9 +0.9**
baz=248
E23K Chandalar 87.24 21 P **P** **21 32 20.5 +0.2**
baz=248
K24K Donnelly Dome 87.29 25 P **P** **21 32 20.2 -0.3**
baz=252
BGLC Bering Glacier 87.37 29 P **P** **21 32 20.7 -0.1**
baz=255
TOLK Toolik Lake Re 87.47 20 P **P** **21 32 21.9 +0.6**
baz=248,SNR=21

G24K	**Hadweenzic Riv**	**87.54**	**22**	P		**P**	**21 32 21.8**	**+0.2**
	baz=251,SNR=11							
C23K	**Itkillik River**	**87.58**	**19**	P		**P**	**21 32 22.2**	**+0.5**
	baz=248							
VRDI	**Verde Repeater**	**87.58**	**28**	P		**P**	**21 32 21.4**	**-0.8**
CRQE	**Cirque**	**87.63**	**28**	P		**P**	**21 32 21.5**	**-0.8**
	baz=255							
E24K	**Your Creek**	**87.64**	**21**	P		**P**	**21 32 22.1**	**0.0**
	baz=250							
F24K	**Squaw Lake**	**87.67**	**21**	P		**P**	**21 32 22.6**	**+0.4**
	baz=250,SNR=23							
RIDG	**Independent Ri**	**87.67**	**25**	P		**P**	**21 32 21.5**	**-0.9**
	baz=253							
J25K	**Salcha River,**	**87.71**	**24**	P		**P**	**21 32 21.4**	**-1.1**
	baz=253							
MCARA	**McCarthy VSAT**	**87.83**	**28**	P		**P**	**21 32 23.7**	**+0.6**
	baz=255							
D24K	**Happy Valley**	**87.91**	**20**	P		**P**	**21 32 24.0**	**+0.7**
	baz=249							
MESA	**MESA**	**88.03**	**29**	P		**P**	**21 32 24.1**	**-0.3**
	baz=256							
G25K	**Bearman Lake**	**88.08**	**22**	P		**P**	**21 32 24.2**	**+0.1**
	baz=252,SNR=11							
SCRK	**Sand Creek**	**88.10**	**25**	P		**P**	**21 32 23.8**	**-0.7**
	baz=254							
M26K	**Nabesna, AK**	**88.11**	**27**	P		**P**	**21 32 24.3**	**-0.2**
	baz=255							
L26K	**Log Cabin Wild**	**88.11**	**26**	P		**P**	**21 32 24.3**	**-0.2**
	baz=254,SNR=7.5							
C24K	**Franklin Bluff**	**88.15**	**19**	P		**P**	**21 32 24.7**	**+0.2**
	baz=249							
AB31	**Akbulak array**	**88.46**	**320**			**P**	**21 32 25.5**	**-0.8**
AB31				IAmb		IAmb	21 32 26.1	
	comp=Z,4.3nm,0.8s							
ABKAR	**Akbulak array**	**88.46**	**320**	P		**P**	**21 32 25.2**	**-1.2**
F25K	**Christian Rive**	**88.51**	**22**	P		**P**	**21 32 26.6**	**+0.3**
	baz=252,SNR=20							
CTG	**Chitna Glacier**	**88.51**	**28**	P		**P**	**21 32 26.3**	**-0.3**
	baz=256,SNR=5.6							
M27K	**Edge Creek, AK**	**88.60**	**27**	P		**P**	**21 32 26.9**	**-0.1**
	baz=256							
E25K	**Arctic Village**	**88.69**	**21**	P		**P**	**21 32 27.5**	**+0.3**
	baz=252,SNR=20							
D25K	**Kavik River**	**88.79**	**20**	P		**P**	**21 32 27.3**	**-0.3**
	baz=252							
L27K	**Beaver Creek,**	**88.79**	**26**	P		**P**	**21 32 27.5**	**-0.2**
	baz=256							
I26K	**Coal Creek Min**	**88.81**	**24**	P		**P**	**21 32 27.3**	**-0.4**
	baz=255							
BCAR	**Beaver Creek A**	**88.81**	**26**			**P**	**21 32 27.9**	**+0.1**
PINM	**Pinnacle**	**88.83**	**29**	P		**P**	**21 32 27.6**	**-0.4**
	baz=257							
BMAR	**Burnt Mountain**	**88.85**	**22**			**P**	**21 32 28.3**	**+0.5**
G26K	**Porcupine Rive**	**89.01**	**22**	P		**P**	**21 32 28.9**	**+0.3**
	baz=254,SNR=23							
O28M	**Mount Upton**	**89.01**	**29**	P		**P**	**21 32 28.9**	**-0.2**
	baz=257							
BVCY	**Beaver Creek**	**89.07**	**27**	P		**P**	**21 32 29.1**	**+0.1**
	baz=257,SNR=5.3							
F26K	**Sheenjek River**	**89.08**	**22**	P		**P**	**21 32 29.5**	**+0.6**
	baz=254,SNR=30							
YUK3	**Moose Creek**	**89.11**	**28**	P		**P**	**21 32 29.6**	**+0.1**
	baz=257,SNR=5.5							
YUK8	**Steele Glacier**	**89.33**	**28**	P		**P**	**21 32 30.3**	**-0.2**
	baz=258							
C26K	**Camden Bay**	**89.46**	**19**	P		**P**	**21 32 31.0**	**+0.4**
	baz=253							
I27K	**Kandik River**	**89.51**	**24**	P		**P**	**21 32 31.1**	**+0.1**
	baz=256							
H27K	**Steamboat Moun**	**89.69**	**23**	P		**P**	**21 32 32.2**	**+0.3**
	baz=256							
O29M	**Mount Kennedy**	**89.70**	**29**	P		**P**	**21 32 32.0**	**-0.1**
	baz=259							
C27K	**Jago River**	**89.78**	**20**	P		**P**	**21 32 32.3**	**+0.2**
	baz=254							
G27K	**Doyon Strip**	**89.78**	**23**	P		**P**	**21 32 32.3**	**0.0**
	baz=256							
YUK4	**Talbot Arm**	**89.87**	**28**	P		**P**	**21 32 33.4**	**+0.4**
	baz=259,SNR=5.5							
AKTO	**Aktyubinsk**	**89.88**	**321**	LR		LR	22 14 05.5	
	comp=Z,22nm,20.8s,baz=36,slow=36							
YUK6	**Outpost Mounta**	**89.92**	**29**	P		**P**	**21 32 32.6**	**-0.7**
	baz=259							
E27K	**Coleen River**	**90.14**	**21**	P		**P**	**21 32 33.9**	**-0.1**
	baz=256							
I28M	**Miner Creek**	**90.15**	**24**	P		**P**	**21 32 33.9**	**-0.1**
	baz=258							
M29M	**Somme Creek**	**90.17**	**27**	P		**P**	**21 32 34.2**	**0.0**
	baz=259,SNR=8.8							
HYT	**Haines Junctio**	**90.31**	**29**	P		**P**	**21 32 34.7**	**-0.3**
HYT				IAmb		IAmb	21 32 35.9	
	comp=Z,7.0nm,1.0s							
HYT	**Haines Junctio**	**90.31**	**29**	P		**P**	**21 32 35.0**	**0.0**
	baz=260,SNR=5.2							
L29M	**L29M**	**90.45**	**27**	P		**P**	**21 32 35.7**	**+0.3**
	baz=259,SNR=13							
P30M	**Million Dollar**	**90.46**	**30**	P		**P**	**21 32 35.3**	**-0.3**
	baz=260							
S31K	**Pelican**	**90.47**	**32**	P		**P**	**21 32 35.4**	**-0.1**
	baz=261							
D27M	**Malcolm River**	**90.62**	**20**	P		**P**	**21 32 36.3**	**+0.1**
	baz=257							
N30M	**Aishikik Lake**	**90.63**	**28**	P		**P**	**21 32 36.1**	**-0.2**
	baz=260							
F28M	**Old Crow**	**90.65**	**22**	P		**P**	**21 32 36.4**	**+0.1**
	baz=258							
J29N	**Klondike Camp**	**90.67**	**25**	P		**P**	**21 32 36.5**	**0.0**
	baz=259							
I29M	**Ogilvie Camp,**	**90.80**	**24**	P		**P**	**21 32 36.7**	**-0.3**
	baz=259							
SIT	**Sitka**	**90.81**	**33**	P		**P**	**21 32 36.9**	**-0.2**
	baz=262							
K29M	**Barlow Dome**	**90.85**	**26**	P		**P**	**21 32 37.5**	**+0.1**
	baz=260,SNR=17							
H29M	**Whitestone**	**90.94**	**24**	P		**P**	**21 32 37.6**	**0.0**
	baz=259							
M30M	**Minto, Yukon**	**90.95**	**27**	P		**P**	**21 32 37.8**	**0.0**
	baz=260							
E28M	**Babbage River**	**90.98**	**21**	P		**P**	**21 32 37.9**	**+0.1**
	baz=258							
O30N	**Mendenhall**	**90.99**	**29**	P		**P**	**21 32 37.8**	**-0.2**
	baz=261							
SKAG	**Skagway**	**91.17**	**30**	P		**P**	**21 32 38.5**	**-0.3**
	baz=262							
G29M	**Pine Creek**	**91.21**	**23**	P		**P**	**21 32 38.8**	**-0.1**
	baz=259							
N31M	**Braeburn, Yuko**	**91.25**	**28**	P		**P**	**21 32 39.2**	**0.0**
	baz=261							
S32K	**Killisnoo**	**91.27**	**33**	P		**P**	**21 32 39.0**	**-0.2**
	baz=262							
D28M	**Stokes Point**	**91.41**	**20**	P		**P**	**21 32 39.7**	**0.0**
	baz=259							
R32K	**Eaglecrest**	**91.41**	**32**	P		**P**	**21 32 39.7**	**-0.3**
	baz=262							
J30M	**Hart River**	**91.49**	**25**	P		**P**	**21 32 40.2**	**-0.2**
	baz=261,SNR=11							
E29M	**Blow River**	**91.53**	**21**	P		**P**	**21 32 40.1**	**-0.2**
	baz=259							
WHY	**Whitehorse**	**91.56**	**29**	P		**P**	**21 32 40.2**	**-0.6**
	baz=262							
I30M	**Mount Dempster**	**91.58**	**25**	P		**P**	**21 32 40.2**	**-0.5**
	baz=261,SNR=9.0							
EPYK	**Eagle Plains**	**91.62**	**24**	P		**P**	**21 32 40.4**	**-0.4**
	baz=260							
CRAG	**Craig**	**91.82**	**35**	P		**P**	**21 32 41.7**	**-0.2**
	baz=263							
U33K	**Whale Pass**	**91.89**	**34**	P		**P**	**21 32 42.2**	**+0.1**
	baz=263							
G30M	**tAoh Zraii Nji**	**91.92**	**23**	P		**P**	**21 32 42.3**	**+0.1**
	baz=261							
P32M	**Atlin**	**92.00**	**30**	P		**P**	**21 32 42.5**	**-0.3**
	baz=263							
F30M	**Barrier River**	**92.18**	**22**	P		**P**	**21 32 43.3**	**-0.1**
	baz=261							
WRAK	**Wrangell Islan**	**92.36**	**34**	P		**P**	**21 32 44.1**	**-0.2**
	baz=264							
N32M	**Quiet Lake**	**92.50**	**29**	P		**P**	**21 32 44.6**	**-0.3**
	baz=264							
H31M	**Peel River**	**92.50**	**24**	P		**P**	**21 32 45.1**	**+0.3**
	baz=263							
P33M	**Teslin, Yukon**	**92.52**	**30**	P		**P**	**21 32 45.2**	**+0.1**
	baz=264							
V35K	**Ketchikan**	**92.66**	**35**	P		**P**	**21 32 45.4**	**-0.3**
	baz=264							
G31M	**Satah River**	**92.67**	**23**	P		**P**	**21 32 45.4**	**-0.1**
	baz=263							
F31M	**Tsiigehtchic**	**92.94**	**23**	P		**P**	**21 32 46.7**	**-0.1**
	baz=263							

INK	**Inuvik**	**93.12**	**22**	P		**P**	**21 32 47.7**	**+0.1**
	baz=264							
S34M	**Telegraph Cree**	**93.16**	**32**	P		**P**	**21 32 48.0**	**0.0**
	baz=265							
ELIB	**Princess Elisa**	**93.31**	**196**	*d*P		**P**	**21 32 50.9**	**+2.2**
R33M	**Jennings River**	**93.37**	**31**	P		**P**	**21 32 48.8**	**-0.4**
	baz=265							
T35M	**Bob Quinn**	**93.56**	**33**	P		**P**	**21 32 49.2**	**-0.7**
	baz=266							
DLBC	**Dease Lake**	**93.78**	**32**	LR		LR	22 08 56.6	
	comp=Z,66nm,20.0s,baz=98,slow=32							
DLBC	**Dease Lake**	**93.78**	**32**	P		**P**	**21 32 50.4**	**-0.6**
	baz=266							
BBB	**Bella Bella**	**94.50**	**38**	LR		LR	22 15 14.7	
	comp=Z,75nm,18.1s,baz=227,slow=35							
A36M	**Sachs Harbour**	**96.11**	**18**	P		**P**	**21 33 01.4**	**+0.2**
	baz=272							
BELG	**Belogornoye**	**96.51**	**322**	*d*P		**P**	**21 33 01.9**	**-1.6**
BELG				pmax		pmax		
	comp=Z,3.0nm,1.0s							
C36M	**Paulatuk**	**96.59**	**21**	P		**P**	**21 33 03.6**	**+0.2**
	baz=272							
NVL	**N'lazarevskaya**	**97.04**	**195**	*e*P		**P**	**21 33 05.8**	**+0.2**
NVL				*e*			21 37 01.9	
NVL				*e*PPP		PPP	21 39 06.0	
NVL				*e*S		**SKSac**	**21 43 40.6**	**-0.8**
NVL				*e*SS		**SS**	**21 51 05.6**	**+2.7**
NVL				*e*SSS		SSS	21 54 51.4	
NVL				pmax		pmax		
	comp=Z,26nm,1.7s							
NVL				MLR		MLR		
	comp=Z,523nm,19.0s							
M02C	**Callahan**	**97.83**	**49**	P		**P**	**21 33 09.6**	**-0.3**
O02D	**Mt. Diablo Mer**	**97.88**	**50**			Pdif	21 33 10.1	0.0
K05A	**Summer Lake**	**99.28**	**48**			**Pdif**	**21 33 16.2**	**-0.3**
SNAA	**Sanae**	**99.64**	**191**	⇑*e*P		**Pdif**	**21 33 17.0**	**-0.4**
SNAA				pmax		pmax		
	comp=Z,35nm,3.6s							
KBZ	**Khabaz**	**99.82**	**313**	⇓*e*P		**Pdif**	**21 33 18.1**	**-0.4**
KBZ				pmax		pmax		
	comp=Z,5.0nm,1.7s							
YKA	**Yellowknife Ar**	**101.19**	**27**	P		**Pdif**	**21 33 22.3**	**-1.9**
	comp=Z,0.4nm,0.7s,baz=287,slow=5.3,SNR=5.8							
YKA	**Yellowknife Ar**	**101.19**	**27**	*i* P		**Pdif**	**21 33 23.2**	**-1.0**
OBN	**Obninsk**	**102.84**	**325**	*i* P		**Pdif**	**21 33 31.2**	**-0.5**
OBN				*e*			21 37 43.5	
OBN				*e*PPP		PPP	21 39 52.6	
OBN				pmax		pmax		
	comp=Z,3.0nm,0.9s							
TXAR	**Lajitas Array**	**114.33**	**60**	PKP		PKPdf	21 38 14.2	-0.3
	comp=Z,0.5nm,1.0s,baz=341,slow=4.1,SNR=4.4							
S39A	**Bolivar**	**120.85**	**49**			**PKPdf**	**21 38 25.6**	**-1.2**
SCHQ	**Scheffer'ville**	**125.68**	**20**	PKP		**PKPdf**	**21 38 34.0**	**-1.5**
	comp=Z,3.4nm,0.7s,baz=326,slow=7.3,SNR=4.4							
TORD	**Torodi Ar. Bea**	**139.52**	**284**	PKP		**PKPdf**	**21 39 01.9**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=103,slow=1.5,SNR=4.6							
CPUP	**Villa Florida**	**143.65**	**151**	PKP		PKPbc	21 39 08.2	+1.1
	comp=Z,0.7nm,0.4s,baz=215,slow=2.7,SNR=4.3							
LPAZ	**La Paz**	**143.73**	**127**	PKP		PKPbc	21 39 08.4	0.0
	comp=Z,2.2nm,0.8s,baz=259,slow=5.2,SNR=8.2							
ROSC	**El Rosal**	**144.43**	**89**	PKP		PKPbc	21 39 10.5	+0.1
	comp=Z,24nm,0.6s,baz=253,slow=11,SNR=14							
ROSC	**El Rosal**	**144.43**	**89**			**PKPab**	**21 39 09.5**	**-0.7**
ROSC	**El Rosal**	**144.43**	**89**	PKIKP		**PKPab**	**21 39 09.5**	**-0.7**
ITAB	**Concordia**	**145.06**	**159**	PKPbc		**PKPbc**	**21 39 11.4**	**-0.1**
DBIC	**Dimbokro**	**146.41**	**274**	PKPbc		**PKPbc**	**21 39 16.0**	**-0.1**
	comp=Z,8.3nm,0.8s,baz=85,slow=3.2,SNR=8.5							
DBIC	**Dimbokro**	**146.41**	**274**			**PKPdf**	**21 39 14.4**	**-0.4**
DBIC	**Dimbokro**	**146.41**	**274**	PKP2		**PKPdf**	**21 39 14.4**	**-0.4**
SDV	**Santo Domingo**	**148.04**	**82**			**PKPdf**	**21 39 18.5**	**+0.7**

*IDC **21** 21:28:47.2±2.0,21°.71N×143°.09E,h299km±17km, mb3.3/16,mbtmp4.0/18,Error ellipse: s-maj=17.2km s-min=15.7km az=67.0*

ISC 21 21:28:48.3±0.8,21°.8N±0°.1×143°.1E±0°.1,h311km,n20, σ0°72/22,mb3.6/15,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.39**	**351**	P	**Pn**	**21 30 09.4**	**-1.2**
	52nm,0.4s,baz=191,slow=4.2,SNR=15						
JCJ				S	**S**	**21 31 16.6**	**-0.4**
	92nm,0.5s,baz=130,slow=24,SNR=12						
MJAR	**Matsushiro Arr**	**15.34**	**345**	P	**P**	**21 32 08.3**	**-0.2**
	1.8nm,0.5s,baz=171,slow=11,SNR=14						
KSRS	**Korea Array**	**20.43**	**320**	P	**P**	**21 33 03.6**	**+0.9**
	0.9nm,0.6s,baz=146,slow=9.7,SNR=6.0						
	0.9nm,0.6s						
LZDM	**Lanzhou Array**	**37.05**	**301**	P	**P**	**21 35 29.8**	**+0.1**
	1.2nm,0.4s,baz=93,slow=6.2,SNR=1.4						
	1.2nm,0.4s						
SONM	**Songino Array**	**39.25**	**320**	P	**P**	**21 35 47.9**	**+0.4**
	0.2nm,0.4s,baz=121,slow=14,SNR=1.5						
	0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**41.50**	**274**	P	**P**	**21 36 06.3**	**+0.3**
	0.5nm,0.4s,baz=91,slow=8.1,SNR=5.1						
	0.5nm,0.4s						
WRA	**Warramunga Arr**	**42.31**	**192**	P	**P**	**21 36 11.2**	**-1.3**
	1.0nm,0.6s,baz=9.7,slow=8.6,SNR=8.0						
	1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**54.12**	**322**	P	**P**	**21 37 42.0**	**+0.3**
	0.8nm,0.6s,baz=94,slow=8.9,SNR=4.4						
ZALV				PcP	**PcP**	**21 38 41.6**	**-0.3**
	0.9nm,0.4s,baz=120,slow=4.7,SNR=4.5						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**54.61**	**313**	P	**P**	**21 37 45.1**	**-0.2**
	1.4nm,0.7s,baz=99,slow=15,SNR=5.5						
	1.4nm,0.7s						
KURBB	**Kurchatov Arra**	**57.44**	**317**	P	**P**	**21 38 05.3**	**+0.2**
	1.5nm,0.5s,baz=94,slow=7.5,SNR=20						
	1.5nm,0.5s						
ILAR	**Eielson Array**	**62.03**	**27**	P	**P**	**21 38 35.5**	**-0.4**
	0.5nm,0.7s,baz=261,slow=5.3,SNR=7.7						
	0.5nm,0.7s						
BVAR	**Borovoye Array**	**62.59**	**319**	P	**P**	**21 38 40.1**	**+0.3**
	2.9nm,0.4s,baz=97,slow=8.0,SNR=20						
	2.9nm,0.4s						
YKA	**Yellowknife Ar**	**76.44**	**28**	P	**P**	**21 40 04.2**	**+0.5**
	0.4nm,0.6s,baz=295,slow=6.3,SNR=8.7						
	0.4nm,0.6s						
ARCES	**ARCESS Array B**	**78.85**	**341**	P	**P**	**21 40 17.7**	**+0.8**
	1.8nm,0.6s,baz=79,slow=8.8,SNR=7.4						
	1.8nm,0.6s						
KBZ	**Khabaz**	**82.28**	**314**	P	**P**	**21 40 36.2**	**+0.8**
	1.5nm,0.7s,baz=71,slow=4.6,SNR=6.6						
	1.5nm,0.7s						
FINES	**FINESS Array B**	**83.10**	**334**	P	**P**	**21 40 38.6**	**-0.7**
	1.6nm,0.5s,baz=62,slow=5.1,SNR=22						
	1.6nm,0.5s						
NVAR	**Mina Array Bea**	**83.17**	**51**	P	**P**	**21 40 41.4**	**+0.9**
	0.7nm,0.7s,baz=276,slow=5.1,SNR=4.7						
	0.7nm,0.7s						
HFS	**Hagfors**	**88.65**	**337**	P	**P**	**21 41 05.1**	**-1.3**
	0.8nm,0.4s,baz=120,slow=5.8,SNR=9.4						
	0.8nm,0.4s						
PLCA	**Paso Flores**	**145.84**	**131**	PKPbc	**PKPbc**	**21 47 52.0**	**+0.5**
	1.7nm,0.6s,baz=239,slow=4.2,SNR=6.9						
LPAZ	**La Paz**	**150.01**	**85**	PKPbc	**PKiKP**	**21 48 04.9**	**+0.4**
	1.7nm,0.6s,baz=264,slow=3.0,SNR=7.3						

NNC 21 21:33:37.1±4.0,47°.38N×93°.56E,h0km,mb3.6,mpv3.3, 3C-3D,Error ellipse: s-maj=40.8km s-min=31.6km az=44.0,Mongolia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**7.71**	**270**	⇓Pn	Pn	21 35 31.0	+0.3
	1.0nm,0.8s,baz=96,slow=16,SNR=4.7						
MK31				⇓Lg	Lg	21 37 44.0	
	7.3nm,0.8s,baz=81,slow=28						
MAKZ	**Makanchi**	**7.93**	**270**	⇑Pn	Pn	21 35 33.3	-0.3
	2.7nm,1.4s						
MAKZ				⇑Lg	Lg	21 37 45.3	
	7.1nm,0.9s						
KURK	**Kurchatov**	**10.36**	**294**	⇓Lg	Lg	21 39 08.3	
	2.3nm,1.1s						
KURBB	**Kurchatov Arra**	**10.39**	**294**	⇑Lg	Lg	21 39 09.1	
	11nm,1.0s						

*NEIC **21** 21:44:01.8±1.6,6°.2S±0°.1×155°.06E±0°.10,h116km±8km, mb4.5/15,Error ellipse: s-maj=17.7km s-min=10.6km az=217.0*
*IDC **21** 21:44:02.4±2.2,6°.17S×155°.13E,h132km±20km,mb3.5/8, mbtmp4.0/10,MS2.9/1,Error ellipse: s-maj=19.6km s-min=13.9km az=10.0*

ISC 21 21:44:00.1±0.6,6°.12S±0°.08×155°.09E±0°.06,h100km,n50, σ2s17/47,mb4.2/16,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**3.48**	**303**	Pn	**Pn**	**21 44 54.4**	**+2.0**
RABL				Sn	**Sn**	**21 45 38.8**	**+6.0**
TATA	**Tatamba Isabel**	**5.20**	**116**	P	**Pn**	**21 45 15.4**	**-0.1**
TATA	**Tatamba Isabel**	**5.20**	**116**	S	**Sn**	**21 46 20.1**	**+5.8**
SAVO	**Savo Central**	**5.57**	**123**	P	**Pn**	**21 45 21.6**	**+1.0**
HNR	**Honiara**	**5.83**	**125**	P	**Pn**	**21 45 24.3**	**+0.1**
	2.3nm,0.4s,baz=323,slow=4.5,SNR=6.7						
HNR				S	**Sn**	**21 46 33.3**	**+3.5**
	5.9nm,0.8s,baz=64,slow=4.7,SNR=5.1						
HNR	**Honiara**	**5.83**	**125**	P	**Pn**	**21 45 25.8**	**+1.6**
HNR	**Honiara**	**5.83**	**125**		**Pn**	**21 45 24.7**	**+0.5**
PMG	**Port Moresby**	**8.51**	**247**	P	**Pn**	**21 46 03.1**	**+2.5**
	32nm,0.6s,baz=70,slow=8.1,SNR=14						
PMG				S	**Sn**	**21 47 37.8**	**+2.9**
	24nm,0.6s,baz=293,slow=22,SNR=9.5						
PMG	**Port Moresby**	**8.51**	**247**	P	**Pn**	**21 46 05.2**	**+4.6**
COEN	**Coen**	**14.07**	**235**		**Pn**	**21 47 17.9**	**+2.8**
CTA	**Charters Tower**	**16.32**	**211**	LR	LR	21 52 13.2	
	comp=Z,45nm,20.6s,baz=44,slow=30						
DZM	**Mont Dzumac**	**19.29**	**146**	P	**P**	**21 48 16.8**	**-0.5**
	7.9nm,0.6s,baz=344,slow=15,SNR=13						
EIDS	**Eidsvold**	**19.52**	**191**	P	**P**	**21 48 19.3**	**-0.4**
EIDS				IAmb	IAmb	21 48 20.6	
	comp=Z,6.9nm,0.6s						
QLP	**Quilpie**	**22.83**	**206**	P	**P**	**21 48 54.3**	**-0.6**
AULRC	**Lightning Ridg**	**24.14**	**195**	P	**P**	**21 49 06.7**	**-0.2**
WB0	**Warramunga Arr**	**24.26**	**234**		**P**	**21 49 07.5**	**-0.7**
WB0				IAmb	IAmb	21 49 08.8	
	comp=Z,16nm,0.7s						
ARMA	**Armidale**	**24.39**	**187**	P	**P**	**21 49 08.7**	**-0.6**
ARMA				IAmb	IAmb	21 49 10.1	
	comp=Z,8.7nm,0.8s						
WRA	**Warramunga Arr**	**24.39**	**234**	P	**P**	**21 49 08.9**	**-0.5**
	comp=Z,57nm,1.1s,baz=57,slow=10.0,SNR=110						
WRA				PcP	**PcP**	**21 52 45.1**	**-1.2**
	comp=Z,0.3nm,0.8s,baz=95,slow=2.1,SNR=1.7						
WRA	**Warramunga Arr**	**24.39**	**234**		**P**	**21 49 07.7**	**-1.7**
MTN	**Manton Dam**	**24.54**	**252**	P	**P**	**21 49 09.7**	**-0.9**
MTN				IAmb	IAmb	21 49 25.0	
	comp=Z,18nm,1.1s						
CMSA	**Cobar Meteorol**	**26.77**	**198**	P	**P**	**21 49 30.4**	**-0.3**
AS31	**Alice Springs**	**26.82**	**227**		**P**	**21 49 29.5**	**-1.8**
ASAR	**Alice Springs**	**26.82**	**227**	P	**P**	**21 49 29.9**	**-1.4**
	comp=Z,1.8nm,0.4s,baz=57,slow=9.2,SNR=41						
ASAR				PcP	**PcP**	**21 52 50.9**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=44,slow=2.5,SNR=2.4						
	comp=Z,1.8nm,0.4s						
ASAR	**Alice Springs**	**26.82**	**227**	P	**P**	**21 49 29.6**	**-1.7**
H11S3	**WAKE ISLAND Hy**	**27.00**	**25**	T	T	22 17 59.4	
	baz=201,slow=74						
H11S2	**WAKE ISLAND Hy**	**27.01**	**25**	T	T	22 17 57.0	
	baz=201						
H11S1	**WAKE ISLAND Hy**	**27.02**	**25**	T	T	22 18 05.0	
	baz=201,slow=74						
KNRA	**Kununurra**	**27.50**	**248**	P	**P**	**21 49 35.9**	**-1.6**
KNRA				IAmb	IAmb	21 49 51.5	
	comp=Z,22nm,1.4s						
FUTU	**Fugatoga**	**27.57**	**109**	P	P	21 49 24.6	-13
H11N1	**WAKE ISLAND Hy**	**28.18**	**24**	T	T	22 19 55.1	
	baz=204						
H11N3	**WAKE ISLAND Hy**	**28.19**	**24**	T	T	22 19 29.9	
	baz=204						
H11N2	**WAKE ISLAND Hy**	**28.20**	**24**	T	T	22 19 53.2	
	baz=204						
BBOO	**Buckleboo**	**31.93**	**211**	P	**P**	**21 50 14.3**	**-2.0**
BBOO				IAmb	IAmb	21 50 15.9	
	comp=Z,10nm,0.9s						
MBWA	**Marble Bar**	**37.35**	**243**	P	**P**	**21 51 01.2**	**-2.0**
MBWA				IAmb	IAmb	21 51 13.8	
	comp=Z,17nm,1.4s						
RTZ	**Ruatahuna**	**37.95**	**152**	P	**P**	**21 51 08.0**	**-0.1**
THZ	**Tophouse**	**38.88**	**159**	P	**P**	**21 51 15.5**	**-0.3**
TPUB	**Ta-pu**	**44.59**	**312**	P	**P**	**21 52 01.6**	**-1.0**
TPUB				IAmb	IAmb	21 52 01.9	
	comp=Z,21nm,1.4s						
SSLB	**Suanglung**	**44.64**	**313**	P	**P**	**21 52 03.0**	**-0.1**
CMAR	**Chiang Mai Arr**	**60.49**	**295**	P	**P**	**21 54 00.3**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=110,slow=5.2,SNR=5.8						
	comp=Z,0.4nm,0.4s						
SONM	**Songino Array**	**68.65**	**327**	P	**P**	**21 54 52.8**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=144,slow=5.5,SNR=4.1						
	comp=Z,0.5nm,0.5s						
VNDA	**Vanda**	**71.45**	**178**	P	**P**	**21 55 08.6**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=345,slow=6.6,SNR=2.4						
	comp=Z,0.7nm,0.8s						
VNDA	**Vanda**	**71.45**	**178**	P	**P**	**21 55 08.3**	**-1.0**
ILAR	**Eielson Array**	**82.53**

TWA				S		Sg	21 55 24.2	+0.8
LATG	**Datong**	**0.80**	**260**	P		Pb	21 55 13.2	0.0
LATG				*e*S		Sb	21 55 23.9	0.0
NDT	**Datong Townshi**	**0.80**	**265**	P		Pg	21 55 13.5	+0.3
NDT				S		Sb	21 55 23.8	-0.1
NWLT	**Wulai**	**0.81**	**277**	*e*P		Pb	21 55 13.2	-0.3
NWLT				*e*S		Sb	21 55 23.8	-0.4
ETL	**Fush Village**	**0.87**	**234**	*e*P		Pg	21 55 15.1	+0.6
YM01	**YM01**	**0.88**	**302**	P		Pg	21 55 14.9	+0.3
YM01				*e*S		Sg	21 55 26.5	+0.3
NACB	**Ninganchiao**	**0.88**	**235**	*i* P		Pb	21 55 14.4	-0.1
NACB				S		Sb	21 55 25.7	-0.5
YM08	**YM08**	**0.89**	**305**	P		Pg	21 55 15.2	+0.5
YM08				*e*S		Sb	21 55 26.5	+0.1
ZUZH	**Zhuzihu**	**0.91**	**302**	P		Pb	21 55 15.2	+0.2
YHNB	**Yeheng**	**0.92**	**270**	*e*P		Pg	21 55 15.7	+0.2
YHNB				*e*S		Sb	21 55 26.2	-1.2
TWY	**Chenhua**	**0.93**	**310**	*e*P		Pn	21 55 17.4	+1.3
TWY				S		Sg	21 55 28.3	+0.5
TWD	**Chiawan**	**0.94**	**231**	*e*P		Pn	21 55 16.3	+0.1
TWD				*e*S		Sn	21 55 29.0	-0.3
NSK	**Sanguang**	**0.94**	**270**	P		Pb	21 55 15.5	-0.1
NSK				*e*S		Sb	21 55 27.0	-0.9
NNSB	**Datong**	**0.95**	**255**	*e*P		Pb	21 55 15.6	-0.2
NNSB				S		Sb	21 55 28.0	-0.3
ETLH	**Xiulin Townshi**	**0.95**	**241**	*e*P		Pb	21 55 15.9	+0.1
ETLH				S		Sb	21 55 28.4	+0.2
NNS	**Nan Shan**	**0.96**	**256**	*e*P		Pg	21 55 16.3	+0.2
NNS				*e*S		Sg	21 55 28.9	+0.3
PCYT	**Pengchaiyu**	**0.99**	**343**	*e*P		Pg	21 55 17.5	+0.8
ETM	**Tongmen**	**1.08**	**229**	*e*P		Pg	21 55 19.9	+1.4
LXJB	**Xiulin Townshi**	**1.11**	**234**	*e*P		Pg	21 55 20.1	+1.2
KSHI	**Guanxi Townshi**	**1.11**	**275**	*e*P		Pg	21 55 19.5	+0.5
FUSS	**Fushou**	**1.13**	**248**	P		Pg	21 55 19.5	+0.1
FUSS				*e*S		Sg	21 55 34.7	+0.5
WHF	**Hehuan Shan**	**1.16**	**243**	*e*P		Pg	21 55 20.2	+0.3
WHF				*e*S		Sn	21 55 35.1	-0.3
NFF	**Wufeng Townshi**	**1.16**	**268**	*e*P		Pg	21 55 20.2	+0.3
NFF				*e*S		Sg	21 55 35.2	+0.1
SHUL	**Shoufeng**	**1.17**	**221**	*e*P		Pg	21 55 20.4	+0.4
TDCB	**Techi**	**1.20**	**250**	*e*P		Pg	21 55 21.3	+0.6
TDCB				*e*S		Sg	21 55 37.3	+0.9
ESL	**Shilin**	**1.23**	**226**	*e*P		Pg	21 55 21.4	+0.2
ESL				*e*S		Sg	21 55 37.5	+0.3
LIOB	**Emei**	**1.25**	**269**	*e*P		Pg	21 55 23.0	+1.3
LIOB				*e*S		Sg	21 55 38.5	+0.6
NSTT	**Nanjuang**	**1.27**	**268**	*e*P		Pg	21 55 23.0	+1.1
NSTT				*e*S		Sg	21 55 38.6	+0.2
IRIF	**Iriomote-Funau**	**1.27**	**105**	*e*P		Pn	21 55 20.0	-0.7
SBCB	**Hsinchu**	**1.28**	**275**	*e*P		Pn	21 55 21.1	+0.1
SBCB				*e*S		Sg	21 55 39.1	+0.1
OWD	**Renai**	**1.32**	**237**	*e*P		Pb	21 55 22.8	+0.6
WARBT	**Fenglin Townsh**	**1.32**	**224**	*e*P		Pg	21 55 23.6	+0.5
WUSB	**Renai**	**1.35**	**240**	P		Pg	21 55 23.5	0.0
WUSB				*e*S		Sg	21 55 40.8	-0.3
WHP	**Taichung City**	**1.38**	**253**	*e*P		Pg	21 55 24.8	+0.8
WHP				*e*S		Sg	21 55 41.5	-0.5
VWDT	**VWDT**	**1.47**	**231**	*e*P		Pb	21 55 25.0	+0.5
VWDT				*e*S		Sg	21 55 44.5	-0.3
HGSD	**Ruisui**	**1.48**	**217**	*e*P		Pb	21 55 24.8	+0.1
WCS	**Beigang Elemen**	**1.48**	**246**	*e*S		Sg	21 55 45.2	-0.2
TWQ1	**Liyutan**	**1.51**	**258**	*e*P		Pn	21 55 23.7	-0.3
TWQ1				*e*S		Sb	21 55 44.4	+0.1
JKRS	**Kuro-shima**	**1.54**	**106**	*e*P		Pn	21 55 24.4	0.0
SMLT	**Sun Moon Lake**	**1.57**	**240**	*e*P		Pn	21 55 25.6	+0.5
SMLT				*e*S		Sn	21 55 45.7	+0.5
SSLB	**Suanglung**	**1.58**	**236**	*e*P		Pb	21 55 27.5	+1.0
JIJ	**Ishigaki jima**	**1.63**	**101**	*e*P		Pn	21 55 25.6	0.0
WHYT	**Xinyi Township**	**1.71**	**235**	*e*P		Pb	21 55 29.6	+0.8
WHYT				*e*S		Sg	21 55 51.9	-0.8
FULB	**Fuli**	**1.78**	**214**	*e*P		Pb	21 55 29.6	-0.3
EHD	**Haiduan**	**1.87**	**216**	*e*P		Pb	21 55 31.0	-0.4
CHN5	**Tsauling**	**1.90**	**236**	*e*P		Pb	21 55 31.6	-0.4
WCKO	**Fanlu**	**2.05**	**233**	*e*S		Sb	21 55 58.7	-1.1
STYH	**Taoyuan**	**2.11**	**225**	*e*P		Pb	21 55 34.7	-0.8
STYH				*e*S		Sn	21 55 59.5	+1.3
TPUB	**Ta-pu**	**2.12**	**230**	*e*P		Pb	21 55 34.9	-0.7
TPUB				*e*S		Sb	21 56 02.5	+0.8

*VIE **21** 22:14:16.7±0.6, 49°.91N×18°.62E, h0km, mb2.6/4, ml2.5/4, Error ellipse: s-maj=5.0km s-min=3.7km az=29.0 27 km ENE of Ostrava Suspected Mining induced.*
*IPEC **21** 22:14:17.9±0.3, 49°.82N×18°.57E, h1km, ML2.2/7, Error ellipse: s-maj=1.8km s-min=1.2km az=75.0*
*PRU **21** 22:14:19.4, 49°.83N×18°.47E, h0km, Mining Induced Event Csm, E=7.4e+05*

ISC 21 22:14:17.2±0.8, 49°.81N±0°.03×18°.50E±0°.02, h0km, n30, σ0s83/59, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.23**	**276**	*e*PG		**Pg**	**22 14 23.5**	**+1.9**
OKC				*e*SG		**Sg**	**22 14 27.1**	**+2.5**
RAC	**Raciborz**	**0.34**	**324**	*e*PG		**Pb**	**22 14 25.4**	**-0.7**
RAC				*e*SG		**Sb**	**22 14 31.1**	**-0.9**
STEB	**Steborice**	**0.49**	**285**	*e*PG		**Pb**	**22 14 28.0**	**-0.7**
STEB				*e*SG		**Sb**	**22 14 35.0**	**-1.4**
	comp=Z,82nm,0.4s							
MORC	**Moravsky Berou**	**0.62**	**267**	*e*Pg		**Pb**	**22 14 30.8**	**-0.2**
	baz=86							
MORC				*e*Sg		**Sb**	**22 14 38.9**	**-1.4**
	50nm,0.4s,baz=86							
LOSC	**Losov**	**0.76**	**256**	*e*Pg		**Pb**	**22 14 33.2**	**-0.1**
	baz=75							
LOSC				*e*Sg		**Sb**	**22 14 43.1**	**-1.1**
	45nm,0.3s,baz=75							
ANAC	**Anensky vrch**	**0.77**	**290**	*e*Pg		**Pb**	**22 14 33.5**	**0.0**
	baz=108							
ANAC				*e*Sg		**Sb**	**22 14 43.5**	**-1.1**
	40nm,0.2s,baz=108							
LANS	**Liptovska Anna**	**0.91**	**136**	*e*PG		**Pb**	**22 14 35.6**	**-0.3**
LANS				*e*SG		**Sb**	**22 14 48.4**	**-0.2**
LANS				*e*LG		Lg	22 14 51.8	
OJC	**Ojcow**	**0.93**	**64**	*e*Pg		**Pg**	**22 14 34.8**	**-0.2**
OJC				*e*Sg		**Sb**	**22 14 48.8**	**-0.2**
JAVC	**Velka Javorina**	**1.10**	**210**	*e*Pg		**Pn**	**22 14 39.7**	**-0.2**
	baz=31							
JAVC				*e*Sg		**Sb**	**22 14 53.4**	**-0.6**
	37nm,0.5s,baz=31							
KRLC	**Kraliky**	**1.14**	**284**	*e*PG		**Pg**	**22 14 39.1**	**0.0**
KRLC				*e*SG		**Sb**	**22 14 55.7**	**+0.5**
	comp=Z,52nm,0.3s							
NIE	**Niedzica**	**1.23**	**108**	*e*Pg		**Pb**	**22 14 41.1**	**-0.3**
NIE				*e*Sg		**Sn**	**22 14 59.0**	**-0.1**
VRAC	**Vranov**	**1.34**	**249**	*e*Pg		**Pb**	**22 14 43.7**	**+0.5**
	baz=67							
VRAC				*e*Sg		**Sb**	**22 15 01.3**	**+0.4**
	42nm,0.4s,baz=67							
DPC	**Dobruska-Polom**	**1.50**	**292**	*e*PG		**Pg**	**22 14 45.9**	**-0.1**
DPC				*e*SG		**Sn**	**22 15 05.8**	**0.0**
	comp=Z,28nm,0.5s							
KRUC	**Moravsky**	**1.57**	**242**	*e*Pg		**Pb**	**22 14 47.1**	**+0.1**
	baz=61							
KRUC				*e*Sg		**Sg**	**22 15 08.3**	**+0.8**
	28nm,0.4s,baz=61							
OSTC	**Ostas**	**1.65**	**298**	*e*PG		**Pg**	**22 14 48.6**	**-0.2**
OSTC				*e*SG		**Sb**	**22 15 09.7**	**-0.1**
MODS	**Modra-Piesok**	**1.65**	**210**	*e*PG		**Pb**	**22 14 48.1**	**-0.4**
MODS				*e*SG		**Sg**	**22 15 10.7**	**+0.5**
MODS				*e*LG		Lg	22 15 12.9	
UPC	**Upice**	**1.75**	**294**	*e*PG		**Pg**	**22 14 50.3**	**-0.3**
UPC				*e*SG		**Sg**	**22 15 13.0**	**-0.3**
KSP	**Ksiaz**	**1.75**	**307**	*e*Pg		**Pg**	**22 14 51.0**	**+0.3**
KSP				*e*Sg		**Sb**	**22 15 12.2**	**-0.5**
CHVC	**Chvalec**	**1.75**	**297**	*e*PG		**Pb**	**22 14 50.3**	**0.0**
CHVC				*e*SG		**Sg**	**22 15 13.4**	**-0.1**
STHS	**Stebnicka Huta**	**1.83**	**102**	*e*PG		**Pb**	**22 14 51.7**	**+0.2**
STHS				*e*SG		**Sg**	**22 15 17.5**	**+1.7**
STHS				*e*LG		Lg	22 15 20.6	
KECS	**Kecovo**	**1.86**	**135**	*e*PN		**Pb**	**22 14 51.7**	**-0.3**
KECS				*e*SN		**Sn**	**22 15 13.4**	**-1.1**
KECS				*e*LG		Lg	22 15 17.3	
PRU	**Pruhonice**	**2.57**	**275**	*e*PG		**Pb**	**22 15 04.8**	**+0.7**
PRU				*e*SG		**Sg**	**22 15 40.1**	**+0.5**
	comp=Z,9.4nm,0.5s							
CONA	**Conrad Observa**	**2.57**	**224**	*e*Pn		**Pn**	**22 15 00.1**	**0.0**
	1.0nm,0.2s							
CONA				*e*Sn		**Sn**	**22 15 32.6**	**+0.5**
	2.2nm,0.3s							
RONA	**Rosalia, Austr**	**2.57**	**215**	*i* Pn		**Pn**	**22 15 01.0**	**+0.9**
	0.8nm,0.2s							
PVCC	**Panska Ves**	**2.63**	**287**	*e*PG		**Pg**	**22 15 06.8**	**-0.7**
CKRC	**Cesky Krumlov**	**2.92**	**252**	*e*PN		**Pn**	**22 15 06.2**	**+1.3**
CKRC				*e*PG		**Pg**	**22 15 11.9**	**-1.2**
CKRC				*e*SG		**Sg**	**22 15 50.8**	**-0.1**
	comp=Z,6.9nm,0.5s							
KHC	**Kasperske Hory**	**3.28**	**260**	*e*PN		**Pn**	**22 15 09.5**	**-0.4**
KHC				*e*PG		**Pg**	**22 15 18.7**	**-1.4**
KHC				*e*SG		**Sg**	**22 16 02.6**	**0.0**
HSKC	**Hora Svate Kat**	**3.35**	**286**	*e*SG		**Sg**	**22 16 05.5**	**+0.6**
MOA	**Molln**	**3.42**	**237**	*i* Pn		**Pn**	**22 15 11.7**	**0.0**
	0.2nm,0.1s							
MOA				*i* Sn		**Sn**	**22 15 52.8**	**-0.2**
	1.8nm,0.3s							
CLL	**Collm**	**3.81**	**295**	*e*Pg		**Pg**	**22 15 32.0**	**+1.8**
CLL				*e*Sg		**Sg**	**22 16 18.0**	**-1.6**
	comp=Z,5.0nm,0.6s							

*IDC **21** 22:20:06.6±0.9, 42°.96S×73°.96W, h0km, mb4.1/8, mbtmp4.1/9, ML3.8/1, MS3.7/8, Error ellipse: s-maj=30.1km s-min=22.9km az=89.0*
*NEIC **21** 22:20:10.8, 42°.91S×74°.33W, h24km*
*NEIC **21** 22:20:10.8±1.8, 42°.91S±0°.05×74°.33W±0°.09, h24km±3km, mb4.4/16, Mwr4.2/25, ML4.3(GUC), Error ellipse: s-maj=9.4km s-min=6.4km az=75.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr2.15; Mθθ0.77; Mϕϕ-2.92; Mrθ0.21; Mϕθ0.19; Mϕr-1.35; Fault plane solution: Mo2.96000×10¹⁵ NP1:ϕ₁172.82000°, δ59.23000°, λ84.94000°. NP2:ϕ₂2.64000°, δ31.14000°, λ98.43000°. Principal axes: T 2.4979, Plg75.0000°, Azm69.0000°; N 0.7715, Plg4.0000°, Azm175.0000°; P -3.2693, Plg14.0000°, Azm267.0000°;*
*GUC **21** 22:20:12.4±0.8, 42°.93S×74°.20W, h37km±2km, ML4.3*
*VAO **21** 22:20:35.9±3.9, 41°.63S×72°.42W, h127km±9km, mb4.5, Presumed earthquake*

ISC 21 22:20:09.1±1.3, 42°.90S±0°.03×74°.34W±0°.05, h18km±5km, n113, σ1s14/110, mb4.3/12, MS3.8/7, 4C-2D, Southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GO07	**Milladeo Hill,**	**0.54**	**114**			**Pn**	**22 20 21.4**	**-0.5**
GO07				Sg		**Sb**	**22 20 28.3**	**+1.0**
GO07	**Milladeo Hill,**	**0.54**	**114**	⇓*i*	P	**Pn**	**22 20 21.4**	**-0.5**
GO07				*i*	S	**Sb**	**22 20 28.5**	**+1.1**
GO07				IAML			22 20 29.3	
	comp=N,59μm,0.3s							
LL07	**Hotel Espejo d**	**0.63**	**85**			**Pn**	**22 20 23.2**	**+0.1**
LL07				Sg		**Sn**	**22 20 31.7**	**-1.0**
LL07	**Hotel Espejo d**	**0.63**	**85**	⇓*i*	P	**Pn**	**22 20 23.3**	**+0.1**
LL07				*i*	S	**Sg**	**22 20 30.7**	**+0.6**
LL07				IAML			22 20 33.2	
	comp=E,33μm,0.2s							
LL06	**Loncomilla**	**0.86**	**38**	*e*P		**Pn**	**22 20 27.1**	**+0.9**
LL06				*e*S		**Sn**	**22 20 38.7**	**+0.4**
RMBA	**Ra^{el} Marn B**	**1.44**	**134**	*e*P		**Pg**	**22 20 37.4**	**+0.6**
LL01	**San Ignacio de**	**1.51**	**71**			**Pg**	**22 20 37.8**	**-0.4**
LL01	**San Ignacio de**	**1.51**	**71**	*e*P		**Pg**	**22 20 37.8**	**-0.4**
LL05	**Los Muermos**	**1.62**	**24**			**Pb**	**22 20 38.0**	**-0.4**
LL05	**Los Muermos**	**1.62**	**24**	*e*P		**Pb**	**22 20 37.9**	**-0.6**
LL05				*e*S		**Sb**	**22 20 59.2**	**+0.7**
LL05				IAML			22 21 12.5	
	comp=E,5μm,0.4s							
LJUN	**La Junta**	**1.75**	**129**	⇑*i*	P	**Pn**	**22 20 39.4**	**+0.8**
LJUN				*e*S		**Sn**	**22 21 00.0**	**-0.4**
LL02	**Futaleuf**	**1.85**	**100**			**Pb**	**22 20 41.2**	**-1.1**
LL02	**Futaleuf**	**1.85**	**100**	⇑*i*	P	**Pb**	**22 20 41.3**	**-1.1**
LL02				*i*	S	**Sn**	**22 21 02.8**	**0.0**
AY01	**Puyuhuapi**	**1.96**	**142**			**Pn**	**22 20 42.6**	**+1.2**
AY01	**Puyuhuapi**	**1.96**	**142**	⇑*i*	P	**Pn**	**22 20 42.2**	**+0.9**
AY01				*e*S		**Sn**	**22 21 05.9**	**+0.5**
AY01				IAML			22 21 11.0	
	comp=N,3μm,0.3s							
MGDN	**Magdalena**	**2.02**	**150**	*e*P		**Pn**	**22 20 43.3**	**+1.1**
MGDN				*e*S		**Sn**	**22 21 06.9**	**0.0**
USPA	**Uspallante**	**2.24**	**157**	*e*P		**Pb**	**22 20 47.6**	**-1.5**
AYSN	**Puerto Aysn**	**2.75**	**155**	*e*P		**Pn**	**22 20 55.0**	**+2.7**
LR04	**Corral**	**3.09**	**13**			**Pn**	**22 20 58.0**	**+1.1**
LR04	**Corral**	**3.09**	**13**	*e*P		**Pb**	**22 21 01.2**	**-2.3**
COYC	**Coyhaique**	**3.13**	**150**			**Pn**	**22 20 58.4**	**+0.9**
LR05	**Currie**	**3.19**	**34**			**Pn**	**22 20 59.9**	**+1.6**
LR05	**Currie**	**3.19**	**34**	⇑*e*P		**Pn**	**22 21 00.1**	**+1.8**
LR05				IAML			22 22 01.5	
	comp=E,2μm,0.4s							
LR02	**Universidad Au**	**3.19**	**15**	*e*P		**Pb**	**22 21 05.7**	**+0.4**
PLCA	**Paso Flores**	**3.56**	**54**	Pn		**Pn**	**22 21 05.9**	**+2.4**
	comp=E,3.7nm,0.3s,baz=225,slow=9.1,SNR=64							
PLCA				Lg		Lg	22 21 55.1	
	comp=E,7.8nm,0.3s,baz=163,slow=21,SNR=1.9							
PLCA				LR		LR	22 22 29.8	
	comp=E,764nm,19.0s,baz=272,slow=42							
PLCA	**Paso Flores**	**3.56**	**54**			**Pn**	**22 21 05.6**	**+2.1**
PLCA	**Paso Flores**	**3.56**	**54**	*e*P		**Pn**	**22 21 05.9**	**+2.4**
GO06	**Curarrehue**	**3.95**	**34**			**Pn**	**22 21 11.1**	**+2.2**
AY03	**Cochrane**	**4.53**	**165**			**Pn**	**22 21 18.3**	**+1.6**
GO08	**Villa O'Higgin**	**5.71**	**168**	Pn		**Pn**	**22 21 34.0**	**+1.0**
BI05	**Punta Hualpn**	**6.20**	**9**	Pn		**Pn**	**22 21 40.9**	**+1.1**
BI02	**San Fabin de**	**6.65**	**22**			**Pn**	**22 21 47.2**	**+1.2**
ML02	**Panimavida**	**7.47**	**19**	Pn		**Pn**	**22 21 59.8**	**+2.6**
GO05	**Hualane**	**8.09**	**14**	Pn		**Pn**	**22 22 07.7**	**+2.0**
BO02	**Sierra Bellavi**	**8.55**	**20**	Pn		**Pn**	**22 22 12.4**	**+0.4**
BO01	**Tunca**	**8.86**	**18**	Pn		**Pn**	**22 22 15.4**	**-0.8**
MT01	**Popeta**	**9.34**	**16**	Pn		**Pn**	**22 22 22.3**	**-0.4**
BO04	**La Punta**	**9.36**	**19**	Pn		**Pn**	**22 22 22.7**	**-0.4**
MT09	**Talagante**	**9.47**	**17**	Pn		**Pn**	**22 22 22.1**	**-2.7**
MT13	**San Alfonso**	**9.67**	**20**			**Pn**	**22 22 26.3**	**-1.1**
H03S1	**Juan Fernandez**	**9.72**	**337**	T		T	22 32 13.1	
	baz=158,slow=74,SNR=39							
H03S2	**Juan Fernandez**	**9.73**	**337**	T		T	22 32 14.9	
	baz=158,slow=74,SNR=41							
H03S3	**Juan Fernandez**	**9.74**	**337**	T		T	22 32 13.7	
	baz=158,slow=74,SNR=30							
VA04	**Juan Fernndez**	**9.89**	**338**	Pn		**Pn**	**22 22 31.8**	**+1.5**
MT05	**Renca**	**9.90**	**18**	Pn		**Pn**	**22 22 30.6**	**+0.1**
MT02	**Curacav**	**9.94**	**16**			**Pn**	**22 22 30.0**	**-1.0**
PEL	**Peldehue**	**10.15**	**18**			**Pn**	**22 22 32.4**	**-1.5**
VA03	**San Esteban**	**10.54**	**18**	Pn		**Pn**	**22 22 38.8**	**-0.6**
TRQA	**Tornquist**	**10.58**	**67**			**Pn**	**22 22 41.2**	**+1.5**
CO04	**Los Peladeros**	**11.15**	**15**	Pn		**Pn**	**22 22 47.6**	**-0.3**
ZON	**Zonda**	**12.19**	**23**	Pn		**Pn**	**22 23 00.0**	**-1.8**
CFA	**Coronel Fontan**	**12.27**	**25**	Pn		**Pn**	**22 23 00.4**	**-2.5**
	comp=E,0.6nm,0.3s,baz=196,slow=10,SNR=6.9							
	comp=E,1.0nm,0.3s							
AC05	**El Transito**	**14.41**	**14**			**Pn**	**22 23 29.8**	**-2.4**
GO03	**Copiapo**	**15.63**	**14**	Pn		**Pn**	**22 23 47.5**	**-1.0**
GO03				IAmb		IAmb	22 24 07.2	
	comp=Z,40nm,1.4s							
AC06	**Mina Casimiro**	**15.84**	**13**			**Pn**	**22 23 51.4**	**+0.2**
AC06				IAmb		IAmb	22 24 09.7	
	comp=Z,37nm,1.4s							
AC02	**Maricunga**	**16.57**	**17**			**Pn**	**22 24 00.9**	**-0.1**
AF01	**San Pedro de A**	**20.54**	**16**	P		Pn	22 24 48.1	-1.0
PB03	**IPOC Station P**	**21.14**	**12**	P		**P**	**22 24 53.1**	**0.0**
PB03				IAmb		IAmb	22 25 03.5	
	comp=Z,13nm,1.0s							
CPUP	**Villa Florida**	**21.59**	**46**	P		**P**	**22 24 56.8**	**-1.0**
	comp=Z,9.3nm,0.7s,baz=217,slow=9.4,SNR=43							
CPUP				Lg		Lg	22 31 29.2	
	comp=Z,0.1nm,0.3s,baz=291,slow=14,SNR=3.4							
CPUP				LR		LR	22 34 01.6	
	comp=Z,160nm,20.5s,baz=184,slow=39							
	comp=Z,9.3nm,0.7s							
CPUP	**Villa Florida**	**21.59**	**46**	P		**P**	**22 24 57.8**	**0.0**
CPUP				IAmb		IAmb	22 25 01.0	
	comp=Z,9.3nm,0.8s							
PMSA	**Palmer Station**	**22.69**	**169**	LR		LR	22 34 12.4	
	comp=Z,130nm,19.7s,baz=316,slow=38							
PB11	**IPOC Station P**	**23.40**	**11**	P		**P**	**22 25 17.4**	**+0.2**
PB11				IAmb		IAmb	22 25 37.8	
	comp=Z,10nm,0.9s							
GO01	**Chusmiza**	**23.56**	**12**	P		**P**	**22 25 20.2**	**+1.2**
PB16	**IPOC Station P**	**24.82**	**11**	P		**P**	**22 25 31.7**	**+0.8**
PB16				IAmb		IAmb	22 25 35.8	
	comp=Z,12nm,1.1s							
MURT	**Porto Murtinho**	**25.37**	**39**	*e*P		**P**	**22 25 34.0**	**-1.2**
TRCB	**Terra Rica**	**26.95**	**49**	P		**P**	**22 25 48.8**	**-0.8**
TRCB	**Terra Rica**	**26.95**	**49**	*e*P		**P**	**22 25 49.0**	**-0.6**
LPAZ	**La Paz**	**27.04**	**13**	P		**P**	**22 25 51.0**	**0.0**
	comp=Z,1.5nm,0.6s,baz=206,slow=7.1,SNR=7.2							
	comp=Z,1.5nm,0.6s							
LPAZ	**La Paz**	**27.04**	**13**			**P**	**22 25 51.2**	**+0.1**
LPAZ	**La Paz**	**27.04**	**13**	*e*P		**P**	**22 25 52.2**	**+1.2**
AQDB	**Aquidauana**	**27.29**	**41**	P		**P**	**22 25 51.7**	**-0.8**
AQDB				IAmb		IAmb	22 25 55.9	
	comp=Z,6.9nm,0.8s							
PP1B	**Ponte de Pedra**	**30.15**	**39**	*e*P		**P**	**22 26 17.4**	**-0.7**
PTLB	**Pontes e Lacer**	**30.30**	**30**	P		**P**	**22 26 19.2**	**-0.1**
PTLB	**Pontes e Lacer**	**30.30**	**30**	*e*P		**P**	**22 26 19.3**	**0.0**
RPN	**Rapa Nui**	**32.42**	**288**	LR		LR	22 36 07.4	
	comp=Z,97nm,18.1s,baz=192,slow=29							
PDRB	**Portdos Gac**	**34.72**	**31**	*e*P		**P**	**22 26 58.1**	**0.0**
BDFB	**Brasilia**	**35.28**	**48**	P		**P**	**22 27 01.7**	**-1.3**
	comp=Z,0.9nm,0.4s,baz=224,slow=6.6,SNR=3.1							
	comp=Z,0.9nm,0.4s							
SNDB	**Serra Nova Dou**	**36.72**	**40**	*e*P		**P**	**22 27 14.7**	**-0.6**
SMTB	**Santa Maria do**	**41.21**	**42**	*e*P		**P**	**22 27 52.7**	**-0.2**
SNAA	**Sanae**	**44.18**	**154**	P		**P**	**22 28 15.7**	**-0.7**
	comp=Z,1.2nm,0.3s,baz=302,slow=17,SNR=3.8							
	comp=Z,1.2nm,0.3s							
BOAV	**Boa Vista**	**46.77**	**19**	P		**P**	**22 28 37.2**	**-0.3**
BOAV				IAmb		IAmb	22 28 38.2	
	comp=Z,3.7nm,0.8s							
QSPA	**South Pole Qui**	**47.35**	**180**	P		**P**	**22 28 42.9**	**+1.2**
NBPS	**Pedro II - PI**	**48.17**	**47**	*e*P		**P**	**22 28 49.2**	**+0.8**
NBPA	**Parau_RN**	**49.48**	**52**	*e*P		**P**	**22 28 59.5**	**+1.1**
LPIG	**La Paz**	**74.45**	**326**	LR		LR	22 58 04.4	
	comp=Z,41nm,18.6s,baz=0.5,slow=30							
TXAR	**Lajitas Array**	**76.77**	**334**	P		**P**	**22 32 01.5**	**+2.1**
	comp=Z,0.7nm,0.7s,baz=159,slow=9.2,SNR=9.4							
	comp=Z,0.7nm,0.7s							
TXAR	**Lajitas Array**	**76.77**	**334**	P		**P**	**22 32 00.2**	**+0.8**
BOSA	**Boshof**	**77.56**	**117**	P		**P**	**22 32 02.8**	**-1.4**
	comp=Z,2.9nm,0.8s,baz=231,slow=2.0,SNR=6.5							
	comp=Z,2.9nm,0.8s							
BOSA	**Boshof**	**77.56**	**117**	P		**P**	**22 32 03.7**	**-0.4**
TSUM	**Tsumeb**	**78.55**	**105**	LR		LR	23 02 08.3	
	comp=Z,46nm,18.2s,baz=165,slow=32							
TORD	**Torodi Ar. Bea**	**88.88**	**71**	P		**P**	**22 33 01.5**	**-0.9**
	comp=Z,1.4nm,0.8s,baz=232,slow=6.2,SNR=7.8							
	comp=Z,1.4nm,0.8s							
NVAR	**Mina Aray Bea**	**90.25**	**327**	LR		LR	23 06 26.5	
	comp=Z,93nm,18.3s,baz=286,slow=31							
PDAR	**Pinedale Array**	**90.96**	**335**	P		**P**	**22 33 12.9**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=123,slow=7.3,SNR=4.5							
	comp=Z,0.4nm,0.7s							
PDAR	**Pinedale Array**	**90.96**	**335**	P		**P**	**22 33 12.5**	**+0.7**
MDT	**Midelt**	**98.71**	**53**	LR		LR	23 17 12.4	
	comp=Z,71nm,18.2s,baz=230,slow=35							
GERES	**GERESS Array B**	**119.51**	**49**	PKP		**PKPdf**	**22 38 56.2**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=203,slow=1.8,SNR=1.8							
ILAR	**Eielson Array**	**121.22**	**331**	PKP		**PKiKP**	**22 39 00.3**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=196,slow=2.6,SNR=4

SJCC	**San Jacinto, C**	**3.66**	**326**	*e*P	**Pn**	**22 39 40.3**	**+0.2**
SJCC				*e*S	**Sn**	**22 40 18.8**	**-4.8**
PLMC	**San Jos del P**	**3.71**	**239**	P	**Pn**	**22 39 41.5**	**+0.8**
PLMC				S	**Sn**	**22 40 25.8**	**+1.0**
URMC	**La Uribe, Meta**	**3.80**	**200**	P	**Pn**	**22 39 42.8**	**+0.9**
URMC				S	**Sn**	**22 40 25.7**	**-1.2**
SMRC	**Santa Marta, M**	**4.43**	**346**	P	**Pn**	**22 39 51.4**	**+1.4**
SMRC				S	**Sn**	**22 40 38.7**	**-2.7**
MACC	**Macarena, Meta**	**4.73**	**189**	P	**Pn**	**22 39 53.2**	**-0.9**
MACC				S	**Sn**	**22 40 44.2**	**-4.5**
URIC	**Uribia, Colomb**	**4.94**	**13**	P	**Pn**	**22 39 56.6**	**-0.2**
	16nm,1.3s						
URIC				S	**Sn**	**22 40 50.1**	**-3.5**
	16nm,1.3s						
URIC	**Uribia, Colomb**	**4.94**	**13**	*e*S	**Sn**	**22 40 46.9**	**-6.7**
GARC	**Garzon, Huila**	**5.21**	**207**	P	**Pn**	**22 40 00.2**	**-0.4**
GARC				S	**Sn**	**22 40 57.3**	**-3.1**

*AZER **21** 22:41:30.6, 38°30N×44°37E, h25km, ml3.7*
*AFAD **21** 22:41:31.9, 38°32N×44°43E, h8km±2km, ML3.4*
*ISK **21** 22:41:31.4, 38°18N×44°45E, h5km, ML3.7/14*
*NSSP **21** 22:41:32.3, 38°33N×44°45E, h10km, Ms3.3*
*TEH **21** 22:41:33.1, 38°33N×44°35E, h6km±60km, ML3.3, Presumed earthquake*

ISC 21 22:41:32.9±1.0, 38°30N±0°02×44°40E±0°02, h12km±9km, n84, σ1s44/145, 1C-3D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.48**	**319**	P	**Pg**	**22 41 41.6**	**-0.7**
OZAP				S	**Sg**	**22 41 48.6**	**-0.2**
OZAP				IAML		22 41 53.0	
	comp=N,3μm,1.2s						
OZAP				IAML		22 41 55.0	
	comp=E,4μm,0.5s						
OZAP	**Van, Ozalp-Mer**	**0.48**	**319**	Pg	**Pg**	**22 41 41.6**	**-0.7**
TVAN	**Van**	**0.81**	**287**	P	**Pg**	**22 41 47.2**	**-1.4**
TVAN				S	**Sn**	**22 42 02.3**	**-0.2**
TVAN				IAML		22 42 07.0	
	comp=N,3μm,0.6s						
TVAN				IAML		22 42 11.0	
	comp=E,2μm,0.5s						
TVAN	**Van**	**0.81**	**287**	Pg	**Pg**	**22 41 47.2**	**-1.4**
VANB	**Van**	**0.84**	**291**	Pg	**Pg**	**22 41 48.7**	**-0.5**
VANB				Sg	**Sn**	**22 42 02.9**	**-0.2**
VANB	**Van**	**0.84**	**291**	Pg	**Pg**	**22 41 48.7**	**-0.5**
HAKT	**HAKKARI**	**0.92**	**216**	P	**Pg**	**22 41 50.2**	**-0.6**
HAKT				S	**Sb**	**22 42 04.2**	**+0.9**
HAKT				IAML		22 42 08.0	
	comp=N,1μm,0.4s						
HAKT				IAML		22 42 15.0	
	comp=E,1μm,0.6s						
HAKT	**HAKKARI**	**0.92**	**216**	Pg	**Pg**	**22 41 50.1**	**-0.6**
HAKT	**HAKKARI**	**0.92**	**216**	P	**Pg**	**22 41 50.2**	**-0.6**
HAKT				S	**Sg**	**22 42 01.9**	**-0.8**
VMUR	**Van-Muradiye**	**0.94**	**317**	P	**Pb**	**22 41 50.7**	**-0.6**
VMUR				S	**Sn**	**22 42 06.4**	**+0.7**
VMUR				IAML		22 42 08.0	
	comp=N,1μm,0.9s						
VMUR				IAML		22 42 08.0	
	comp=E,2μm,0.9s						
VMUR	**Van-Muradiye**	**0.94**	**317**	Pg	**Pb**	**22 41 50.7**	**-0.6**
ISHB	**Shabestar**	**0.96**	**91**	Pg	**Pn**	**22 41 51.5**	**-0.9**
GEVA	**Gevas**	**1.05**	**271**	P	**Pg**	**22 41 50.0**	**-3.2**
GEVA				S	**Sn**	**22 42 08.6**	**+0.3**
MAKU	**Maku**	**1.08**	**12**	Pg	**Pb**	**22 41 52.8**	**-0.8**
ERCV	**ERCIS-VAN**	**1.09**	**311**	Pn	**Pn**	**22 41 55.7**	**+1.4**
ERCV				Sn	**Sn**	**22 42 13.1**	**+3.6**
IMRD	**Marand**	**1.11**	**68**	Pg	**Pn**	**22 41 54.4**	**0.0**
NAX	**Nakhchivan**	**1.22**	**44**	P	**Pn**	**22 41 57.2**	**+1.3**
NAX				S	**Sn**	**22 42 16.0**	**+3.5**
ITBZ	**Tabriz**	**1.38**	**92**	Pg	**Pg**	**22 41 59.1**	**-0.3**
IAZR	**Azarshahr**	**1.40**	**116**	Pg	**Pg**	**22 42 00.8**	**+1.0**
ORD	**Ordubad**	**1.40**	**63**	P	**Pg**	**22 42 00.4**	**+0.6**
ORD				S	**Sg**	**22 42 21.2**	**+3.1**
ADCV	**BITLIS_Adilcev**	**1.40**	**292**	P	**Pb**	**22 41 58.7**	**-0.4**
ADCV				S	**Sg**	**22 42 20.6**	**+2.5**
ADCV				IAML		22 42 24.0	
	comp=N,717nm,0.7s						
ADCV				IAML		22 42 25.0	
	comp=E,557nm,0.6s						
SBZ	**Shahbuz**	**1.42**	**39**	P	**Pg**	**22 42 00.2**	**+0.1**
SBZ				S	**Sg**	**22 42 23.2**	**+4.6**
HYR	**Heyderabad**	**1.46**	**14**	P	**Pg**	**22 42 00.3**	**-0.7**
HYR				S	**Sg**	**22 42 23.2**	**+3.3**
IGDI	**IGDIR**	**1.58**	**351**	P	**Pg**	**22 42 02.1**	**-1.2**
IGDI				S	**Sg**	**22 42 26.1**	**+2.2**
VAYK	**Vayk**	**1.61**	**30**	⇓*e*P	**Pg**	**22 42 03.4**	**-0.4**
VAYK				⇓*e*S	**Sg**	**22 42 25.9**	**+1.2**
ALVK	**Alvank**	**1.66**	**67**	*e*P	**Pg**	**22 42 04.4**	**-0.3**
ALVK				*e*S	**Sg**	**22 42 28.1**	**+1.8**
DORK	**Agr/Tutak/Do**	**1.66**	**311**	P	**Pb**	**22 42 03.3**	**-0.3**
DORK				S	**Sg**	**22 42 28.1**	**+1.7**
DORK				IAML		22 42 32.0	
	comp=E,471nm,0.7s						
DORK				IAML		22 42 35.0	
	comp=N,469nm,0.9s						
BLIS				IAML		22 42 35.0	
	comp=E,320nm,0.6s						
BLIS				IAML		22 42 37.0	
MAHB	**Mahabad**	**1.85**	**145**	Pn	**Pg**	**22 42 08.4**	**-0.1**
VNNZ	**Vanand**	**1.85**	**346**	*e*P	**Pg**	**22 42 08.0**	**-0.5**
VNNZ				*e*S	**Sg**	**22 42 34.1**	**+1.6**
METS	**Metsamor**	**1.86**	**353**	*e*P	**Pg**	**22 42 07.3**	**-1.3**
METS				*e*S	**Sg**	**22 42 33.1**	**+0.3**
GNI	**Garni**	**1.86**	**8**	Pn	**Pg**	**22 42 07.1**	**-1.6**
GNI				Sn	**Sg**	**22 42 33.3**	**+0.4**
GNI	**Garni**	**1.86**	**8**	*e*P	**Pg**	**22 42 07.4**	**-1.3**
GNI				*e*S	**Sg**	**22 42 35.2**	**+2.3**
GNI	**Garni**	**1.86**	**8**	Pn	**Pg**	**22 42 07.0**	**-1.7**
GURO	**Guroymak-BITLI**	**1.87**	**278**	Pn	**Pb**	**22 42 06.7**	**-0.4**
GURO				Sn	**Sg**	**22 42 32.4**	**-0.7**
EGVZ	**Egvard**	**1.92**	**61**	*e*P	**Pg**	**22 42 08.6**	**-1.0**
EGVZ				*e*S	**Sg**	**22 42 35.3**	**+0.8**
GRS	**Goris**	**1.93**	**51**	⇓*i*P	**Pg**	**22 42 12.0**	**+2.1**
GRS				⇑*i*S	**Sg**	**22 42 40.0**	**+5.1**
ARUZ	**Aruch**	**1.99**	**353**	*e*P	**Pg**	**22 42 09.3**	**-1.8**
ARUZ				*e*S	**Sg**	**22 42 36.5**	**-0.5**
KAPZ	**Kaputan**	**2.03**	**7**	*e*P	**Pg**	**22 42 10.2**	**-1.7**
KAPZ				*e*S	**Sg**	**22 42 37.9**	**-0.4**
AMBZ	**Amberd**	**2.09**	**357**	*e*P	**Pg**	**22 42 10.9**	**-2.0**
AMBZ				*e*S	**Sg**	**22 42 39.1**	**-0.9**
AYRK	**Ayrk**	**2.11**	**30**	*e*P	**Pg**	**22 42 12.4**	**-1.0**
AYRK				*e*S	**Sg**	**22 42 41.9**	**+1.1**
VRTB	**Varto-Mus**	**2.45**	**291**	Pn	**Pb**	**22 42 15.4**	**-1.7**
KARS	**Kars**	**2.54**	**337**	Pn	**Pb**	**22 42 16.9**	**-1.6**
QRD	**Qoradiz**	**2.56**	**62**	P	**Pn**	**22 42 14.2**	**-0.1**
QRD				S	**Sn**	**22 42 45.5**	**+0.2**
ISRB	**Sarab**	**2.63**	**99**	Pn	**Pb**	**22 42 19.5**	**-0.6**
GDB	**GEDABAY**	**2.63**	**23**	P	**Pn**	**22 42 15.2**	**-0.2**
GDB				S	**Sn**	**22 42 47.5**	**+0.1**
LSVT	**Lusahovit**	**2.68**	**13**	*e*P	**Pb**	**22 42 19.3**	**-1.6**
LSVT				*e*S	**Sb**	**22 42 53.6**	**-0.2**
SENK	**Senkaya-Erzuru**	**2.76**	**326**	Pn	**Pb**	**22 42 20.2**	**-2.1**
SRTK	**Saratovka**	**2.76**	**359**	*e*P	**Pb**	**22 42 22.8**	**+0.5**
SRTK				*e*S	**Sg**	**22 42 59.7**	**-1.9**
AGDM	**Agdam**	**2.77**	**49**	P	**Pn**	**22 42 17.4**	**+0.2**
AGDM				S	**Sn**	**22 42 50.9**	**+0.3**
GANJ	**Ganja**	**2.78**	**32**	P	**Pn**	**22 42 16.4**	**-0.9**
GANJ				S	**Sn**	**22 42 51.1**	**+0.4**
GRMI	**Germi**	**2.79**	**78**	Pn	**Pb**	**22 42 20.4**	**-2.4**
KARO	**Karliova-Bingo**	**2.80**	**292**	Pn	**Pb**	**22 42 20.4**	**-2.6**
BLQ	**Beylaqan**	**2.84**	**59**	P	**Pn**	**22 42 17.0**	**-1.1**
BLQ				S	**Sn**	**22 42 52.3**	**0.0**
QZX	**Qazax, Azerbai**	**2.85**	**15**	P	**Pn**	**22 42 17.9**	**-0.5**
QZX				S	**Sn**	**22 42 52.5**	**-0.1**
BRDA	**Brd**	**2.92**	**47**	P	**Pn**	**22 42 18.7**	**-0.4**
BRDA				S	**Sn**	**22 42 53.9**	**-0.2**
BNGB	**Bingl**	**2.99**	**284**	Pn	**Pb**	**22 42 23.1**	**-3.1**
YRD	**Yardimli**	**3.08**	**77**	P	**Pn**	**22 42 20.4**	**-1.1**
YRD				S	**Sn**	**22 42 57.7**	**-0.7**
LRK	**Lerik**	**3.12**	**82**	P	**Pn**	**22 42 20.9**	**-1.2**
LRK				S	**Sn**	**22 42 58.8**	**-0.5**
YEDI	**Yedisu-Bingol**	**3.21**	**292**	Pn	**Pn**	**22 42 26.2**	**+2.8**
ZRD	**Zardab**	**3.23**	**51**	P	**Pn**	**22 42 22.9**	**-0.5**
ZRD				S	**Sn**	**22 43 01.8**	**+0.1**
MNGR	**Mingechevir, A**	**3.23**	**39**	P	**Pn**	**22 42 22.3**	**-1.1**
MNGR				S	**Sn**	**22 43 02.0**	**+0.2**
GLBA	**Clilabad**	**3.26**	**72**	P	**Pn**	**22 42 23.5**	**-0.4**
GLBA				S	**Sn**	**22 43 02.7**	**0.0**
DYBB	**Diyarbakir**	**3.37**	**265**	Pn	**Pn**	**22 42 27.2**	**+1.7**
ASTR	**Astara**	**3.46**	**84**	P	**Pn**	**22 42 26.0**	**-0.6**
ASTR				S	**Sn**	**22 43 07.2**	**-0.4**
LKRN	**Lenkeran, Azer**	**3.46**	**82**	P	**Pn**	**22 42 25.7**	**-0.9**
LKRN				S	**Sn**	**22 43 07.4**	**-0.2**
SAAT	**Saatly**	**3.50**	**62**	P	**Pn**	**22 42 26.0**	**-1.1**
SAAT				S	**Sn**	**22 43 08.3**	**-0.2**
KDMR	**Kurdemir**	**3.59**	**54**	P	**Pn**	**22 42 27.5**	**-0.9**
KDMR				S	**Sn**	**22 43 10.8**	**0.0**
SEKA	**Sheki**	**3.62**	**36**	P	**Pn**	**22 42 28.4**	**-0.4**
SEKA				S	**Sn**	**22 43 12.8**	**+1.2**
ZKTA	**Zakatala**	**3.75**	**26**	P	**Pn**	**22 42 29.9**	**-0.6**
ZKTA				S	**Sn**	**22 43 14.9**	**+0.3**
QBL	**Gabala**	**3.75**	**44**	P	**Pn**	**22 42 29.4**	**-1.2**
QBL				S	**Sn**	**22 43 14.8**	**+0.1**
IML	**Ismayilli**	**3.84**	**48**	P	**Pn**	**22 42 30.6**	**-1.3**
IML				S	**Sn**	**22 43 16.9**	**-0.1**
ERZN	**Erzincan**	**3.86**	**291**	Pn	**Pn**	**22 42 35.5**	**+3.2**
BAYT	**Aydıntepe-Bayb**	**3.90**	**304**	Pn	**Pn**	**22 42 36.3**	**+3.4**
ALIB	**&Aumlli-Bayram**	**3.95**	**64**	P	**Pn**	**22 42 32.1**	**-1.2**
ALIB				S	**Sn**	**22 43 19.6**	**0.0**
XNQ	**Khinaliq**	**4.07**	**44**	P	**Pn**	**22 42 34.5**	**-0.7**
XNQ				S	**Sn**	**22 43 22.8**	**0.0**
PQL	**Pirkuli**	**4.09**	**51**	P	**Pn**	**22 42 34.0**	**-1.3**
PQL				S	**Sn**	**22 43 23.2**	**0.0**
GBS	**Qobustan**	**4.17**	**56**	P	**Pn**	**22 42 35.1**	**-1.3**
GBS				S	**Sn**	**22 43 25.1**	**0.0**
ATGJ	**Altiaghaj**	**4.34**	**53**	P	**Pn**	**22 42 37.8**	**-1.0**
ATGJ				S	**Sn**	**22 43 29.2**	**-0.2**
QSAR	**Qusar**	**4.38**	**42**	P	**Pn**	**22 42 38.2**	**-1.0**
QSAR				S	**Sn**	**22 43 30.1**	**-0.1**
QUBA	**Quba, Azerbaij**	**4.39**	**45**	P	**Pn**	**22 42 38.1**	**-1.3**
QUBA				S	**Sn**	**22 43 30.8**	**+0.3**
SIZA	**Siyzn**	**4.44**	**50**	P	**Pn**	**22 42 38.5**	**-1.7**
SIZA				S	**Sn**	**22 43 31.9**	**-0.1**

*NEIC **21** 22:45:53.9±1.6, 11°17S±0°07×115°20E±0°08, h10km±1km, mb4.4/22, Error ellipse: s-maj=14.0km s-min=11.0km az=239.0*
*DJA **21** 22:46:01.4±0.9, 11°S×11°5E±°, h10km, M5.0/14, mB5.9/2, mb6.7/1, MLv4.2/14, Mw(mB)5.5/2*
*IDC **21** 22:46:05.7±5.0, 10°71S×115°66E, h99km±45km, mb3.7/15, mbtmp4.1/16, MS2.5/1, Error ellipse: s-maj=37.9km s-min=15.5km az=67.0*

ISC 21 22:45:56.4±0.5, 11°19S±0°06×115°31E±0°06, h35km, n81, σ28s02/80, mb4.2/22, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGBI	**Denpasar**	**2.36**	**356**	P	**Pn**	**22 46 31.0**	**-1.6**
DNP	**Denpasar**	**2.49**	**358**	P	**Pn**	**22 46 36.4**	**+1.9**
RTBI	**Rangdo, Negare**	**2.73**	**352**	P	**Pn**	**22 46 37.9**	**+0.1**
KHKI	**Kahang-Kahang**	**2.82**	**6**	P	**Pn**	**22 46 39.9**	**+0.9**
TWSI	**Taliwang, Sumb**	**2.88**	**33**	P	**Pn**	**22 46 40.7**	**+0.9**
JAGI	**Jajag, Banyuwa**	**2.93**	**337**	P	**Pn**	**22 46 38.9**	**-1.6**
JAGI	**Jajag, Banyuwa**	**2.93**	**337**	Pn	**Pn**	**22 46 38.7**	**-1.8**
JAGI	**Jajag, Banyuwa**	**2.93**	**337**	P	**Pn**	**22 46 37.9**	**-2.6**
PLAI	**Plampang**	**3.37**	**46**	P	**Pn**	**22 46 47.3**	**+0.7**
PLAI	**Plampang**	**3.37**	**46**	P	**Pn**	**22 46 47.2**	**+0.7**
ABJI	**Asem Bagus**	**3.53**	**342**	P	**Pn**	**22 46 48.9**	**+0.1**
BLJI	**Banyuglugur**	**3.81**	**333**	P	**Pn**	**22 46 53.5**	**+0.8**
DBNI	**Kabupaten Domp**	**3.98**	**48**	P	**Pn**	**22 46 58.0**	**+3.0**
LBFI	**Labuhan Bajo,**	**5.25**	**60**	P	**Pn**	**22 47 15.1**	**+2.7**
UGM	**Wanagama**	**5.74**	**304**	P	**Pn**	**22 47 17.8**	**-1.3**
UGM	**Wanagama**	**5.74**	**304**	Pn	**Pn**	**22 47 17.1**	**-2.0**
MMRI	**Maumere**	**7.28**	**70**	Pn	**Pn**	**22 47 40.7**	**+0.4**
KAPI	**Kappang**	**7.54**	**36**	P	**Pn**	**22 47 45.6**	**+1.7**
	12nm,0.3s,baz=226,slow=1.9,SNR=28						
KAPI				S	**Sn**	**22 49 02.5**	**-5.8**
	6.3nm,0.3s,baz=224,slow=23,SNR=8.8						
KAPI				LR	LR	22 51 12.3	
	comp=Z,38nm,21.2s,baz=203,slow=44						
KAPI	**Kappang**	**7.54**	**36**	P	**Pn**	**22 47 45.1**	**+1.2**
KAPI	**Kappang**	**7.54**	**36**	Pn	**Pn**	**22 47 45.1**	**+1.2**
BATI	**Baumata**	**8.26**	**84**	S	**Sn**	**22 49 23.4**	**-2.7**
	22nm,0.4s,baz=207,slow=22,SNR=7.2						
BBJI	**Bungbulang**	**8.42**	**295**	P	**Pn**	**22 47 54.4**	**-1.7**
BBJI	**Bungbulang**	**8.42**	**295**	Pn	**Pn**	**22 47 54.4**	**-1.7**
MBWA	**Marble Bar**	**10.79**	**157**	P	**Pn**	**22 48 26.9**	**-1.5**
MBWA	**Marble Bar**	**10.79**	**157**	Pn	**Pn**	**22 48 26.9**	**-1.5**
PSA00	**Pilbara Seismi**	**11.21**	**158**	P	**Pn**	**22 48 33.5**	**-0.7**
PSA00	**Pilbara Seismi**	**11.21**	**158**	Pn	**Pn**	**22 48 32.5**	**-1.6**
PSA00	**Pilbara Seismi**	**11.21**	**158**	Pn	**Pn**	**22 48 33.0**	**-1.2**
GIRL	**Giralia**	**11.44**	**185**	Pn	**Pn**	**22 48 36.0**	**-1.4**
FITZ	**Fitzroy Crossi**	**12.12**	**126**	P	**Pn**	**22 48 48.1**	**+1.4**
	1.1nm,0.3s,baz=311,slow=9.2,SNR=11						
FITZ				S	Sn	22 50 51.8	-8.9
	3.2nm,0.6s,baz=172,slow=20,SNR=6.4						
KNRA	**Kununurra**	**13.82**	**110**	Pn	**Pn**	**22 49 10.9**	**+1.0**
MNAI	**Manna**	**13.99**	**298**	P	**Pn**	**22 49 10.1**	**-2.2**
MNAI	**Manna**	**13.99**	**298**	Pn	**Pn**	**22 49 08.6**	**-3.7**
MTN	**Manton Dam**	**15.56**	**98**	Pn	**Pn**	**22 49 34.9**	**+1.6**
MTN				IAmb	IAmb	22 50 05.0	
	comp=Z,16nm,1.2s						
MEEK	**Meekatharra**	**15.68**	**169**	P	**Pn**	**22 49 34.1**	**-0.7**
TNTI	**Ternate**	**16.87**	**46**		**P**	**22 49 52.5**	**+0.8**
TNTI				IAmb	IAmb	22 50 17.0	
	comp=Z,17nm,0.9s						
KKM	**Kota Kinabalu**	**17.14**	**3**	Pn	**Pn**	**22 49 52.5**	**-1.0**
KKM				IAmb	IAmb	22 49 54.0	
	comp=Z,20nm,1.1s						
MORW	**Morawa**	**17.81**	**178**	P	**P**	**22 50 01.1**	**-0.9**
MORW	**Morawa**	**17.81**	**178**		**P**	**22 50 01.1**	**-0.9**
FAKI	**Fak Fak**	**18.69**	**65**	P	**P**	**22 50 12.7**	**+0.8**
FAKI	**Fak Fak**	**18.69**	**65**	P	**P**	**22 50 12.1**	**+0.2**
FAKI				IAmb	IAmb	22 50 18.5	
	comp=Z,34nm,1.3s						
WB0	**Warramunga Arr**	**20.25**	**117**	P	Pn	22 50 31.6	+0.5
WRA	**Warramunga Arr**	**20.27**	**118**	P	Pn	22 50 33.5	+2.2
	comp=Z,3.8nm,0.9s,baz=286,slow=9.4,SNR=23						
WRA				S	**S**	**22 54 06.0**	**-8.8**
	comp=Z,0.5nm,0.5s,baz=291,slow=22,SNR=3.0						
	comp=Z,3.8nm,0.9s						
WRA	**Warramunga Arr**	**20.27**	**118**		Pn	22 50 31.4	+0.1
ASAR	**Alice Springs**	**21.61**	**127**	P	**P**	**22 50 48.2**	**+4.6**
	comp=Z,2.0nm,0.8s,baz=299,slow=9.6,SNR=13						
ASAR				S	**S**	**22 54 37.4**	**-4.0**
	comp=Z,0.8nm,0.6s,baz=302,slow=24,SNR=4.0						
	comp=Z,2.0nm,0.8s						
ASAR	**Alice Springs**	**21.61**	**127**	P	**P**	**22 50 43.7**	**+0.1**
AS31	**Alice Springs**	**21.62**	**127**	P	**P**	**22 50 43.4**	**-0.2**
FORT	**Forrest**	**22.80**	**151**	P	**P**	**22 50 59.1**	**+2.9**
FORT				IAmb	IAmb	22 51 34.4	
	comp=Z,12nm,1.0s						
CMAR	**Chiang Mai Arr**	**33.59**	**331**	P	**P**	**22 52 34.1**	**+0.6**
	comp=Z,1.8nm,0.3s,baz=163,slow=7.3,SNR=6.9						
	comp=Z,1.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**33.59**	**331**	P	**P**	**22 52 33.4**	**-0.1**
PZH	**PanZhiHua**	**39.72**	**341**	P	**P**	**22 53 28.8**	**+3.0**
SHL	**Shillong**	**43.07**	**328**	P	**P**	**22 53 53.1**	**-0.3**
SHL				IAmb	IAmb	22 54 00.0	
	comp=Z,3.8nm,1.0s						
HHC	**Hu-ho-hao-te**	**51.89**	**356**	*e*P	**P**	**22 55 05.3**	**+3.7**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,71nm,4.7s						
HHC				LR	LR		
	comp=N,74nm,11.1s						
HHC				LR	LR		
	comp=E,86nm,11.1s						
HHC				LR	LR		
	comp=Z,65nm,11.4s						
MJAR	**Matsushiro Arr**	**52.14**	**23**	P	**P**	**22 55 00.9**	**-2.5**
	comp=Z,1.1nm,0.6s,baz=204,slow=8.9,SNR=4.7						
	comp=Z,1.1nm,0.6s						
USRK	**Ussuriysk Ar.**	**57.17**	**14**	P	**P**	**22 55 38.7**	**-1.0**
	comp=Z,1.3nm,0.5s,baz=210,slow=6.3,SNR=5.1						
	comp=Z,1.3nm,0.5s						
SONM	**Songino Array**	**59.29**	**353**	P	**P**	**22 55 54.2**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=200,slow=6.5,SNR=5.3						
	comp=Z,0.7nm,0.7s						
SONM	**Songino Array**	**59.29**	**353**	P	**P**	**22 55 55.1**	**+0.5**
SONM				IAmb	IAmb	22 56 00.1	

*IDC **21** 22:55:57.8±0.9, 50°17N×88°24E, h0km, mb3.6/7, mbtmp3.7/16, ML3.6/9, MS3.1/3, Error ellipse: s-maj=12.8km s-min=11.8km az=126.0*
*MOS **21** 22:56:01.0±1.5, 50°11N×87°91E, h17km, mb3.8/3, Error ellipse: s-maj=8.6km s-min=5.5km az=93.7*
*ASRS **21** 22:56:02.1±0.2, 50°N±1°×88°0E±1°0, h8km, MLh4.5/16, Error ellipse: s-maj=2.8km s-min=2.1km az=175.0, confirmed*
*NNC **21** 22:56:03.2±1.2, 50°20N×87°68E, h0km, mb4.4, mpv4.1, Error ellipse: s-maj=11.2km s-min=4.8km az=99.0*

ISC 21 22:56:02.0±0.9, 50°19N±0°03×87°94E±0°02, h16km±5km, n82, σ2s18/125, mb3.7/7, 23C-14D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKAR	**Aktash**	**0.24**	**302**	PG	**Pg**	**22 56 07.4**	**-0.1**
AKAR						22 56 11.5	
AKAR	**Aktash**	**0.24**	**302**	⇑Pg	**Pg**	**22 56 07.4**	**-0.1**
AKAR				Sg	**Sg**	**22 56 11.5**	**+0.2**
CUR	**Chagan-Uzun**	**0.28**	**109**	PG	**Pg**	**22 56 07.8**	**-0.3**
CUR						22 56 12.3	
CUR	**Chagan-Uzun**	**0.28**	**109**	⇑Pg	**Pg**	**22 56 07.8**	**-0.3**
CUR				Sg	**Sb**	**22 56 12.3**	**-0.9**
CHBI	**Chibit, Altay**	**0.31**	**294**	PG	**Pg**	**22 56 08.1**	**-0.4**
CHBI						22 56 12.8	
CHBI	**Chibit, Altay**	**0.31**	**294**	⇑Pg	**Pg**	**22 56 08.2**	**-0.4**
CHBI				Sg	**Sg**	**22 56 12.8**	**-0.2**
ULGR	**Ulagan, Altay**	**0.43**	**2**	PG	**Pb**	**22 56 11.2**	**-0.1**
ULGR						22 56 17.8	
ULGR	**Ulagan, Altay**	**0.43**	**2**	Pg	**Pb**	**22 56 11.3**	**-0.1**
ULGR				Sg	**Sb**	**22 56 17.8**	**+0.1**
TUNR	**Tungur**	**1.04**	**269**	PG	**Pg**	**22 56 20.3**	**-1.7**
TUNR						22 56 33.5	
TUNR	**Tungur**	**1.04**	**269**	Pg	**Pg**	**22 56 20.3**	**-1.7**
TUNR				Sg	**Sg**	**22 56 33.5**	**-2.2**
YALR	**Yailyu, Altay**	**1.59**	**353**	PN	**Pb**	**22 56 31.6**	**+0.6**
YALR						22 56 52.7	
YALR	**Yailyu, Altay**	**1.59**	**353**	Pg	**Pb**	**22 56 31.7**	**+0.6**
YALR				Sg	**Sg**	**22 56 52.8**	**-0.6**
TEL	**Teeli**	**1.66**	**59**	PN	**Pn**	**22 56 27.4**	**-3.1**
TEL						22 56 50.7	
TEL	**Teeli**	**1.66**	**59**	Pg	**Pn**	**22 56 27.5**	**-3.1**
TEL				Sg	**Sn**	**22 56 50.8**	**-0.8**
ARTR	**Artybash**	**1.66**	**346**	PN	**Pb**	**22 56 32.7**	**+0.5**
ARTR						22 56 54.8	
ARTR	**Artybash**	**1.66**	**346**	Pg	**Pb**	**22 56 32.8**	**+0.5**
ARTR				Sg	**Sg**	**22 56 54.9**	**-0.7**
UKR	**Ust'-Kan**	**2.15**	**292**	PN	**Pb**	**22 56 40.5**	**-0.2**
UKR						22 57 09.4	
UKR	**Ust'-Kan**	**2.15**	**292**	Pg	**Pb**	**22 56 40.5**	**-0.2**
UKR				Sg	**Sb**	**22 57 09.4**	**+2.3**
GALT	**Gorno-Altaysk,**	**2.17**	**325**	PN	**Pb**	**22 56 41.2**	**+0.3**
GALT						22 57 11.2	
GALT	**Gorno-Altaysk,**	**2.17**	**325**	Pg	**Pb**	**22 56 41.3**	**+0.3**
GALT				Sg	**Sg**	**22 57 11.3**	**-0.6**
DJO	**Djoy, Khakassi**	**3.31**	**37**	PN	**Pn**	**22 56 57.0**	**+4.0**
DJO						22 57 03.5	
DJO						22 57 48.7	
DJO	**Djoy, Khakassi**	**3.31**	**37**	Pn	**Pn**	**22 56 57.0**	**+4.0**
DJO				Pg	**Pg**	**22 57 03.6**	**-1.7**
DJO				Sg	**Sg**	**22 57 48.7**	**+0.6**
KALT3	**Kaltan 3**	**3.34**	**355**	Pn	**Pn**	**22 56 55.6**	**+2.1**
KALT3				Pg	**Pb**	**22 57 03.1**	**+2.2**
KALT3				Sg	**Sg**	**22 57 47.0**	**-2.3**
KIYZ	**Kiyzas, Kuzbas**	**3.38**	**358**	Pn	**Pn**	**22 56 57.4**	**+3.4**
KIYZ				Sg	**Sb**	**22 57 46.3**	**+4.1**
VEH	**Verkhnyaya Baz**	**3.40**	**25**	PN	**Pn**	**22 56 58.4**	**+3.9**
VEH						22 57 05.3	
VEH						22 57 48.7	
VEH	**Verkhnyaya Baz**	**3.40**	**25**	Pn	**Pn**	**22 56 58.5**	**+3.9**
VEH				Pg	**Pg**	**22 57 05.

KZLR								22 58 18.6	
KZLR	**Kyzyl**	**4.39**	**67**	Pn		**Pn**		**22 57 08.7**	**+0.7**
KZLR				Pg		**Pg**		**22 57 26.9**	**+1.0**
KZLR				Sg		**Sg**		**22 58 18.7**	**-4.1**
MK31	**Makanchi Array**	**5.07**	**230**	⇓Pn		**Pn**		**22 57 20.2**	**+2.9**
	comp=Z,21nm,0.5s,baz=60,slow=11,SNR=812								
MK31				⇓Pg		**Pb**		**22 57 32.4**	**+2.1**
	comp=Z,32nm,0.7s,baz=58,slow=12,SNR=15								
MK31				Sn		**Sn**		**22 58 19.1**	**+3.7**
	comp=Z,29nm,0.5s,baz=54,slow=25,SNR=7.4								
MK31				⇑Lg		Lg		22 58 40.5	
	comp=Z,86nm,0.6s,baz=52,slow=30,SNR=9.7								
MK31	**Makanchi Array**	**5.07**	**230**	*d* PN		**Pn**		**22 57 19.9**	**+2.6**
MK31				*e*S		**Sn**		**22 58 19.1**	**+3.7**
MKAR	**Makanchi Array**	**5.07**	**230**	Pn		**Pn**		**22 57 18.0**	**+0.7**
	comp=Z,16nm,0.3s,baz=50,slow=12,SNR=385								
MKAR				Sn		**Sn**		**22 58 18.9**	**+3.4**
	comp=Z,30nm,0.3s,baz=55,slow=25,SNR=14								
MKAR				Lg		Lg		22 58 38.7	
	comp=Z,24nm,0.3s,baz=52,slow=28,SNR=13								
	comp=Z,18nm,0.3s								
MKAR	**Makanchi Array**	**5.07**	**230**	*i* PN		**Pn**		**22 57 20.0**	**+2.7**
MKAR				pmax		pmax			
	comp=Z,23nm,0.4s								
MAKZ	**Makanchi**	**5.21**	**232**	⇓Pn		**Pn**		**22 57 22.1**	**+2.8**
	comp=Z,14nm,0.4s								
MAKZ				⇑Pg		**Pb**		**22 57 34.1**	**+1.3**
	comp=Z,30nm,0.7s								
MAKZ				⇓Sn		**Sn**		**22 58 21.3**	**+2.2**
	comp=Z,47nm,0.3s								
MAKZ				⇓Lg		Lg		22 58 43.5	
	comp=Z,131nm,1.0s								
MAKZ	**Makanchi**	**5.21**	**232**	PN		**Pn**		**22 57 21.5**	**+2.3**
MAKZ	**Makanchi**	**5.21**	**232**	Pn		**Pn**		**22 57 21.6**	**+2.3**
MAKZ				Sg		**Sg**		**22 58 44.2**	**-5.0**
BSTK	**Bystrovka, Nov**	**5.45**	**326**	PN		**Pn**		**22 57 24.6**	**+2.2**
BSTK								22 57 43.4	
BSTK	**Bystrovka, Nov**	**5.45**	**326**	Pn		**Pn**		**22 57 24.6**	**+2.2**
BSTK				Pg		**Pg**		**22 57 43.5**	**-2.8**
BSTK				Sg		**Sg**		**22 58 55.2**	**-1.5**
BRCR	**Berchikul'**	**5.46**	**2**	PN		**Pn**		**22 57 26.2**	**+3.6**
BRCR								22 57 43.3	
BRCR	**Berchikul'**	**5.46**	**2**	Pn		**Pn**		**22 57 26.3**	**+3.6**
BRCR				Pg		**Pg**		**22 57 43.3**	**-3.2**
BRCR				Sg		**Sg**		**22 58 53.9**	**-3.3**
NVSII	**Novosibirsk**	**5.47**	**330**	PN		**Pn**		**22 57 25.7**	**+3.0**
NVSII								22 57 45.2	
NVSII	**Novosibirsk**	**5.47**	**330**	Pn		**Pn**		**22 57 25.7**	**+3.0**
NVSII				Pg		**Pg**		**22 57 45.2**	**-1.5**
NVSII				Sg		**Sg**		**22 58 55.4**	**-2.1**
KURK	**Kurchatov**	**5.98**	**279**	⇑Pn		**Pn**		**22 57 31.1**	**+1.4**
	comp=Z,3.3nm,0.4s								
KURK				⇑Sn		**Sn**		**22 58 39.2**	**+1.4**
	comp=Z,7.6nm,0.4s								
KURK				⇑Lg		Lg		22 59 08.1	
	comp=Z,51nm,0.6s								
KURK	**Kurchatov**	**5.98**	**279**	*c* PN		**Pn**		**22 57 31.1**	**+1.4**
KURK				*e*S		**Sn**		**22 58 39.2**	**+1.4**
KURBB	**Kurchatov Arra**	**6.03**	**278**	Pn		**Pn**		**22 57 31.6**	**+1.1**
	comp=Z,2.8nm,0.3s,baz=90,slow=15,SNR=250								
KURBB				Sn		**Sn**		**22 58 38.2**	**-1.0**
	comp=Z,3.2nm,0.3s,baz=75,slow=20,SNR=6.1								
KURBB				Lg		Lg		22 59 08.4	
	comp=Z,3.9nm,0.3s,baz=88,slow=34,SNR=4.7								
	comp=Z,20nm,0.3s								
KURBB	**Kurchatov Arra**	**6.03**	**278**	⇑Pn		**Pn**		**22 57 32.0**	**+1.5**
	comp=Z,24nm,0.4s								
KURBB				⇓Sn		**Sn**		**22 58 40.3**	**+1.1**
	comp=Z,29nm,0.3s								
KURBB				⇑Lg		Lg		22 59 09.6	
	comp=Z,175nm,0.6s								
KNGR	**Kungurtug, Tuv**	**6.14**	**82**	⇓*e*PN		**Pn**		**22 57 33.6**	**+1.6**
KNGR	**Kungurtug, Tuv**	**6.14**	**82**	Sg		**Sg**		**22 59 20.1**	**+1.2**
PDGK	**Podgornoye**	**8.98**	**223**	⇑Pn		**Pn**		**22 58 11.3**	**+0.2**
	comp=Z,2.8nm,0.4s								
PDGK				⇑Sn		**Sn**		**22 59 53.3**	**+1.4**
	comp=Z,17nm,0.6s								
PDGK				⇑Lg		Lg		23 00 41.8	
	comp=Z,32nm,0.8s								
TLY	**Talaya**	**10.03**	**75**	Lg		Lg		23 01 06.5	
	baz=234,slow=19								
BVA0	**Borovoye Array**	**11.28**	**291**	⇓Pn		**Pn**		**22 58 39.6**	**-2.7**
	comp=Z,1.3nm,0.6s,baz=105,slow=15,SNR=12								
BVA0				⇑Sn		**Sn**		**23 00 50.0**	**+2.1**
	comp=Z,5.4nm,0.7s,baz=101,slow=22,SNR=5.3								
BVA0				⇓Lg		Lg		23 01 55.4	
	comp=Z,15nm,1.1s								
BVAR	**Borovoye Array**	**11.28**	**291**	Pn		**Pn**		**22 58 40.6**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=104,slow=14,SNR=19								
BVAR				Sn		Sn		23 00 40.4	-7.5
	comp=Z,0.2nm,0.3s,baz=100,slow=23,SNR=5.3								
BVAR				Lg		Lg		23 01 57.7	
	baz=100,slow=21								
	comp=Z,2.9nm,0.4s								
BORK	**Borovoye**	**11.32**	**291**	⇑*e*P		**Pn**		**22 58 42.1**	**-0.8**
AAK	**Ala-Archa**	**11.95**	**236**	Pn		**Pn**		**22 58 51.5**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=113,slow=5.5,SNR=6.8								
AAK				Sn		**Sn**		**23 01 00.1**	**-4.7**
	comp=Z,0.1nm,0.3s,baz=62,slow=15,SNR=2.0								
AAK				Lg		Lg		23 02 16.4	
	comp=Z,0.1nm,0.3s,baz=18,slow=23,SNR=1.6								
	comp=Z,0.9nm,0.4s								
AAK	**Ala-Archa**	**11.95**	**236**	⇑Pn		**Pn**		**22 58 53.9**	**+2.1**
	comp=Z,4.4nm,1.4s								
AAK				⇑Sn		**Sn**		**23 01 06.9**	**+2.1**
	comp=Z,2.7nm,0.7s								
AAK				⇑Lg		Lg		23 02 16.4	
	comp=Z,11nm,0.9s								
AAK	**Ala-Archa**	**11.95**	**236**	⇓*e*P		**Pn**		**22 58 52.4**	**+0.6**
SONM	**Songino Array**	**12.34**	**94**	Pn		Pn		22 58 52.8	-4.2
	comp=Z,0.1nm,0.3s,baz=301,slow=17,SNR=1.4								
SONM				Lg		Lg		23 02 23.3	
	comp=Z,0.1nm,0.3s,baz=284,slow=31,SNR=2.6								
	comp=Z,0.2nm,0.5s								
KK31	**Karatay Array**	**13.89**	**246**	⇑Pn		**Pn**		**22 59 16.5**	**-1.6**
	comp=Z,1.1nm,0.4s,baz=51,slow=14,SNR=7.4								
KK31				⇓Sn		**Sn**		**23 01 52.6**	**+0.6**
	comp=Z,6.1nm,0.7s,baz=51,slow=21,SNR=4.2								
KK31				⇑Lg		Lg		23 03 18.4	
	comp=Z,7.8nm,0.7s,baz=51,slow=23,SNR=3.7								
ARTI	**Arti**	**18.63**	**301**	P		**P**		**23 00 17.2**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=76,slow=9.0,SNR=4.0								
ARTI				S		**Sn**		**23 03 41.8**	**-4.8**
	comp=Z,1.6nm,0.5s,baz=42,slow=9.8,SNR=3.6								
	comp=Z,0.8nm,0.3s								
AKTO	**Aktyubinsk**	**19.06**	**282**	P		**P**		**23 00 23.1**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=82,slow=12,SNR=8.1								
	comp=Z,2.4nm,0.8s								
NRIK	**Noril'sk**	**19.21**	**360**	P		**P**		**23 00 24.2**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=196,slow=18,SNR=1.8								
	comp=Z,1.0nm,0.5s								
NRIK	**Noril'sk**	**19.21**	**360**	⇓*e*P		**P**		**23 00 25.3**	**+0.4**
NRIK				pmax		pmax			
	comp=Z,3.0nm,1.5s								
CMAR	**Chiang Mai Arr**	**32.86**	**161**	P		P		23 02 31.5	-3.5
	comp=Z,0.3nm,0.3s,baz=353,slow=10,SNR=4.1								
	comp=Z,0.3nm,0.3s								
CMAR	**Chiang Mai Arr**	**32.86**	**161**	*i* P		**P**		**23 02 37.2**	**+2.2**
FINES	**FINESS Array B**	**35.17**	**313**	P		**P**		**23 02 54.2**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=43,slow=12,SNR=5.4								
	comp=Z,1.4nm,0.8s								
FINES	**FINESS Array B**	**35.17**	**313**	*i* P		**P**		**23 02 55.0**	**+0.4**
FINES				pmax		pmax			
	comp=Z,1.0nm,0.8s								
AKASG	**Malin Array Be**	**36.54**	**294**	P		**P**		**23 03 05.7**	**-0.8**
	comp=Z,0.1nm,0.2s,baz=59,slow=9.0,SNR=1.4								
	comp=Z,0.1nm,0.2s								
BRTR	**Keskin Array B**	**39.02**	**276**	P		**P**		**23 03 28.9**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=90,slow=5.3,SNR=5.2								
	comp=Z,0.3nm,0.6s								
BRTR	**Keskin Array B**	**39.02**	**276**	P		**P**		**23 03 29.0**	**+1.2**
HFS	**Hagfors**	**41.36**	**313**	P		**P**		**23 03 46.3**	**-0.5**
	comp=Z,1.6nm,0.8s,baz=91,slow=8.6,SNR=1.5								
	comp=Z,1.6nm,0.8s								
MMAI	**Mount Meron Ar**	**41.94**	**266**	LR		LR		23 23 49.7	
	comp=Z,25nm,19.2s,baz=84,slow=40								
ULM	**Lac du Bonnet**	**79.89**	**2**	LR		LR		23 45 55.3	
	comp=Z,45nm,18.4s,baz=192,slow=38								
WRA	**Warramunga Arr**	**80.95**	**136**	P		**P**		**23 08 12.8**	**-2.8**
	comp=Z,0.2nm,0.5s,baz=341,slow=5.6,SNR=4.7								
	comp=Z,0.2nm,0.5s								
WRA	**Warramunga Arr**	**80.95**	**136**	*i* P		**P**		**23 08 14.8**	**-0.7**
NVAR	**Mina Array Bea**	**88.77**	**20**	P		**P**		**23 08 55.1**	**0.0**
	comp=Z,0.6nm,0.7s,baz=330,slow=6.2,SNR=4.6								
	comp=Z,0.6nm,0.7s								
CPUP	**Villa Florida**	**144.30**	**299**	PKP		**PKPab**		**23 15 34.2**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=52,slow=15,SNR=1.9								

RSNC 21 22:59:30.8±0.0, 4°N±1°×7°7°W±°, h89km±3km, M2.6, mb4.2, ML2.3, Colombia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YOTC	**Yotoco, Valle**	**0.48**	**159**	P		Pn	22 59 44.4	-1.0
YOTC				S		Sn	22 59 56.1	-0.2
PLMC	**San Jos del P**	**0.53**	**27**	P		Pn	22 59 44.9	-0.9
PLMC				S		Sn	22 59 56.6	-0.3
ARMEC	**Armenia, Quind**	**0.87**	**82**	P		Pn	22 59 48.9	-0.2
PIZC	**Pizarro, Choco**	**0.99**	**302**	P		Pn	22 59 50.6	+0.3
ANIL	**Santa Ana**	**1.11**	**87**	P		Pn	22 59 51.2	-0.9
JAMC	**Jamundi, Valle**	**1.22**	**187**	P		Pn	22 59 52.3	-0.9
JAMC				S		Sn	23 00 09.4	-0.7
NIZA	**Niza - Manizal**	**1.22**	**59**	P		Pn	22 59 53.2	-0.1
NIZA				S		Sn	23 00 10.4	+0.2
RECRC	**Villamaria, Ca**	**1.28**	**66**	P		Pn	22 59 54.1	-0.2
RECRC				S		Sn	23 00 11.7	-0.2
ORTC	**Ortega, Tolima**	**1.37**	**112**	P		Pn	22 59 54.4	-0.5
ORTC				S		Sn	23 00 12.9	-0.3
GUY2C	**Guyana, Caldas**	**1.40**	**56**	P		Pn	22 59 55.5	-0.2
GUY2C				S		Sn	23 00 14.4	0.0
CBOC	**Ciudad Bolivar**	**1.51**	**20**	P		Pn	22 59 56.9	0.0
CBOC				S		Sn	23 00 16.7	+0.2
PRAC	**Prado**	**1.78**	**114**	P		Pn	22 59 59.5	-0.6
PRAC				S		Sn	23 00 22.1	-0.3
POPC	**Popayan, Colom**	**1.88**	**185**	P		Pn	23 00 01.0	-0.7
POPC				S		Sn	23 00 25.3	+0.1
NORC	**Norcasia**	**1.99**	**56**	P		Pn	23 00 02.8	-0.2
NORC				S		Sn	23 00 28.7	+1.2
HELC	**Santa Helena**	**2.01**	**29**	P		Pn	23 00 03.0	-0.5
HELC				S		Sn	23 00 28.8	+0.5
BETC	**Betania**	**2.04**	**148**	P		Pn	23 00 03.5	-0.1
GR1C	**Gorgona, Isla**	**2.17**	**229**	P		Pn	23 00 05.6	+0.4
GR1C				S		Sn	23 00 27.8	-3.8
ROSC	**El Rosal**	**2.23**	**79**	P		Pn	23 00 07.6	+1.2
ROSC				S		Sn	23 00 37.5	+4.0
URMC	**La Uribe, Meta**	**2.44**	**119**	P		Pn	23 00 08.0	-0.9
URMC				S		Sn	23 00 36.7	-1.3
CVER	**Cruz Verde, Cu**	**2.44**	**88**	P		Pn	23 00 09.9	+0.6
CVER				S		Sn	23 00 38.7	0.0
GARC	**Garzon, Huila**	**2.45**	**155**	P		Pn	23 00 08.3	-0.9
GARC				S		Sn	23 00 37.3	-1.3
BBAC	**Balboa, Cauca**	**2.50**	**197**	P		Pn	23 00 10.0	+0.2
BBAC				S		Sn	23 00 40.3	+0.6
DBBC	**Dabeiba**	**2.59**	**7**	P		Pn	23 00 11.2	+0.3
DBBC				S		Sn	23 00 42.6	+0.9
SPBC	**San Pablo de B**	**2.72**	**63**	P		Pn	23 00 12.7	0.0
SPBC				S		Sn	23 00 43.8	-1.1
CHIC	**Chingaza**	**2.79**	**86**	P		Pn	23 00 14.6	+0.8
CHIC				S		Sn	23 00 46.3	-0.6
VILC	**Villavicencio,**	**2.84**	**96**	P		Pn	23 00 14.5	+0.3
VILC				S		Sn	23 00 47.9	+0.2
PTBC	**PUERTO BERRIO,**	**2.94**	**44**	P		Pn	23 00 15.2	-0.3
PTBC				S		Sn	23 00 49.9	0.0
FLOC	**Florencia**	**2.96**	**163**	P		Pn	23 00 14.8	-1.0
FLOC				S		Sn	23 00 48.8	-1.7
PTAC	**Punta Ardita,**	**2.99**	**335**	P		Pn	23 00 15.0	-1.2
PTAC				S		Sn	23 00 48.7	-2.4
UREC	**San Jos de Ur**	**3.44**	**17**	P		Pn	23 00 22.3	0.0
MACC	**Macarena, Meta**	**3.50**	**130**	P		Pn	23 00 22.1	-1.1
MACC				S		Sn	23 01 01.6	-2.0
BCIP	**Isla Barro Col**	**5.74**	**325**	P		Pn	23 00 53.1	-0.5
BCIP				S		Sn	23 01 57.2	-1.0

RSNC 21 23:06:10.5±0.0, 10°N±1°×7°3W±°, h122km±2km, M2.2, mb3.1, ML2.1
FUNV 21 23:06:11.7, 10.01N×73.13W, h23km, MW3.5, Presumed earthquake

ISC 21 23:06:08.6±1.8, 10.04N±0.05×73.16W±0.04, h136km±18km, n16, σ1.59/29, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ARGC	**Ariguani, Magd**	**1.09**	**261**	P		**Pn**	**23 06 33.8**	**+0.9**
ARGC				S		**Sn**	**23 06 51.5**	**+0.2**
SMRC	**Santa Marta, M**	**1.53**	**317**	P		**Pn**	**23 06 38.0**	**+0.5**
SMRC				S		**Sn**	**23 06 59.7**	**+0.1**
OCAC	**Ocana**	**1.80**	**185**	P		**Pn**	**23 06 40.9**	**+0.2**
OCAC				S		**Sn**	**23 07 04.1**	**-1.1**
SJCC	**San Jacinto, C**	**2.00**	**266**	P		**Pn**	**23 06 43.4**	**+0.5**
SJCC				S		**Sn**	**23 07 08.7**	**-0.5**
SJCC	**San Jacinto, C**	**2.00**	**266**	*e*P		**Pn**	**23 06 43.3**	**+0.5**
SJCC				*e*S		**Sn**	**23 07 08.9**	**-0.3**
URIC	**Uribia, Colomb**	**2.01**	**35**	P		**Pn**	**23 06 43.4**	**+0.4**
URIC				S		**Sn**	**23 07 08.6**	**-0.9**
URIC	**Uribia, Colomb**	**2.01**	**35**	*e*P		**Pn**	**23 06 43.9**	**+0.8**
URIC				*e*S		**Sn**	**23 07 07.2**	**-2.3**
PAMC	**Pamplona, Colo**	**2.72**	**170**	P		**Pn**	**23 06 53.3**	**+1.0**
PAMC				S		**Sn**	**23 07 25.8**	**-0.2**
SDV	**Santo Domingo**	**2.74**	**114**	P		**Pn**	**23 06 53.8**	**+1.5**
SDV				S		**Sn**	**23 07 25.6**	**-0.4**
SDV	**Santo Domingo**	**2.74**	**114**	*e*P		**Pn**	**23 06 53.9**	**+1.5**
SDV				*e*S		**Sn**	**23 07 24.3**	**-1.7**
BRJC	**Barrancabermej**	**3.10**	**191**	P		**Pn**	**23 06 59.2**	**+2.4**
BRJC				S		**Sn**	**23 07 34.0**	**0.0**
UREC	**San Jos de Ur**	**3.27**	**226**	P		**Pn**	**23 06 59.5**	**+0.6**
UREC				S		**Sn**	**23 07 34.9**	**-2.9**
RUSC	**La Rusia**	**4.12**	**179**	*e*S		**Sn**	**23 07 55.3**	**-3.3**
HELC	**Santa Helena**	**4.49**	**212**	P		**Pn**	**23 07 17.7**	**+2.4**
HELC				S		**Sn**	**23 08 04.2**	**-2.9**
NORC	**Norcasia**	**4.76**	**201**	P		**Pn**	**23 07 18.7**	**0.0**
CBOC	**Ciudad Bolivar**	**5.02**	**214**	P		**Pn**	**23 07 24.5**	**+2.3**

UPA 21 23:11:45.8±1.0, 8.54N×83.13W, h10km±3km, MW3.0, Presumed earthquake
UCR 21 23:11:46.0±0.4, 8.47N×83.13W, h9km±2km, MW3.6, Presumed earthquake

ISC 21 23:11:45.8±0.9, 8.52N±0.03×83.13W±0.03, h13km, n43, σ0.90/54, 3C-4D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NELY	**Ciudad Neily**	**0.22**	**53**	*e*P		**Pg**	**23 11 51.8**	**+1.2**
NELY				*e*S		**Sb**	**23 11 56.5**	**+0.9**
PIRO	**Carate, Puerto**	**0.24**	**242**	*e*P		**Pg**	**23 11 50.8**	**0.0**
LPPC	**Paso Canoas**	**0.28**	**86**	*e*P		**Pg**	**23 11 52.3**	**+0.6**
VITO	**San Vito**	**0.34**	**27**	*e*P		**Pb**	**23 11 54.3**	**+0.6**
PTPA	**Petro Terminal**	**0.40**	**141**	*e*P		**Pg**	**23 11 54.2**	**+0.4**
SCLRA	**Santa Clara, W**	**0.46**	**47**	*i* P		**Pb**	**23 11 55.5**	**+0.6**
SCLRA	**Santa Clara, W**	**0.46**	**47**	*e*P		**Pb**	**23 11 56.1**	**+0.8**
LMNES	**Limones**	**0.49**	**148**	⇓*i*P		**Pg**	**23 11 55.8**	**+0.4**
LMNES				*e*S		**Sb**	**23 12 04.5**	**+1.2**
LMNES	**Limones**	**0.49**	**148**	*e*P		**Pg**	**23 11 55.8**	**+0.4**
EDP2	**Potrero Grande**	**0.50**	**354**	*e*P		**Pb**	**23 11 56.9**	**+0.5**
BRU2	**Volcan**	**0.51**	**57**	⇓*i*P		**Pg**	**23 11 56.9**	**+0.9**
BRU2				*e*S		**Sb**	**23 12 05.2**	**+1.0**
BRU2	**Volcan**	**0.51**	**57**	*e*P		**Pg**	**23 11 56.8**	**+0.9**
BRU2				*e*S		**Sb**	**23 12 05.1**	**+1.0**
CLLRA	**Cordillera,**	**0.55**	**66**	⇓*i*P		**Pg**	**23 11 57.5**	**+0.7**
CLLRA				*e*S		**Sb**	**23 12 06.5**	**+1.1**
CLLRA	**Cordillera,**	**0.55**	**66**	*e*P		**Pg**	**23 11 57.4**	**+0.7**
JEFFS	**S de V. Baru**	**0.60**	**75**	⇑*i*P		**Pg**	**23 11 58.3**	**+0.7**
JEFFS				*e*S		**Sb**	**23 12 07.3**	**+0.5**
JEFFS	**S de V. Baru**	**0.60**	**75**	*e*P		**Pg**	**23 11 58.2**	**+0.6**
BURE	**Buenos Aires**	**0.69**	**342**	*e*P		**Pg**	**23 11 59.8**	**+0.6**
BQTLY	**Boquete Panama**	**0.70**	**70**	*i* P		**Pg**	**23 11 59.6**	**+0.2**
BQTLY				*e*S		**Sb**	**23 12 11.4**	**+1.9**
BQTLY	**Boquete Panama**	**0.70**	**70**	*e*P		**Pg**	**23 11 59.6**	**+0.2**
DRK0	**Durika**	**0.75**	**351**	*e*P		**Pg**	**23 11 57.7**	**-2.7**
EDPE	**Pejibaye, P**	**0.78**	**325**	*e*P		**Pg**	**23 12 00.4**	**-0.5**
BGUAL	**Bijagual, Pana**	**0.78**	**90**	⇑*i*P		**Pg**	**23 12 00.8**	**-0.2**
BGUAL				*e*S		**Sg**	**23 12 09.6**	**-1.7**
PBNVO	**Pueblo Nuevo,**	**0.99**	**68**	*i* P		**Pb**	**23 12 04.0**	**-0.9**
PBNVO				*e*S		**Sb**	**23 12 16.6**	**-1.3**
PBNVO	**Pueblo Nuevo,**	**0.99**	**68**	*e*P		**Pb**	**23 12 04.0**	**-0.9**
RBALA	**Bur**	**1.03**	**69**	⇓*i*P		**Pb**	**23 12 04.6**	**-0.8**
RBALA				*e*S		**Sb**	**23 12 17.3**	**-1.5**
RBALA	**Bur**	**1.03**	**69**	*e*P		**Pb**	**23 12 04.7**	**-0.8**
BUS1	**Rivas**	**1.20**	**329**	*e*P		**Pb**	**23 12 08.0**	**-0.7**
KKNTU	**Kakint²**	**1.34**	**76**	*e*P		**Pn**	**23 12 09.6**	**-0.7**
KKNTU				*e*S		**Sn**	**23 12 27.0**	**-0.9**
KKNTU	**Kakint²**	**1.34**	**76**	*e*P		**Pn**	**23 12 09.8**	**-0.4**
VERH	**Veragua Rainfo**	**1.41**	**357**	*e*P		**Pn**	**23 12 11.5**	**+0.4**
PICV	**PH. Pirrs**	**1.53**	**316**	*e*P		**Pn**	**23 12 13.3**	**+0.5**
VTCV	**VTCV, Calle Va**	**1.57**	**338**	*e*P		**Pn**	**23 12 14.3**	**+0.7**
RESJ	**San Isidro (Tu**	**1.59**	**341**	*e*P		**Pn**	**23 12 14.8**	**+1.0**
ABRB	**Las Abras (San**	**1.59**	**339**	*e*P		**Pn**	**23 12 14.9**	**+1.0**
CVTV	**Tajo**	**1.60**	**337**	*e*P		**Pb**	**23 12 15.6**	**+0.2**
VTR0	**Volcan Turrial**	**1.62**	**337**	*e*P		**Pb**	**23 12 15.9**	**+0.1**
CVTR	**Volcan Turrial**	**1.62**	**337**	*e*P		**Pn**	**23 12 15.4**	**+0.9**
VICA	**Volcano Irazu**	**1.62**	**334**	*e*P		**Pn**	**23 12 15.1**	**+0.6**
RVLA	**Villa Bonita**	**1.65**	**344**	*e*P		**Pb**	**23 12 15.9**	**-0.1**
CVTG	**V. Turrialba,**	**1.74**	**338**	*e*P		**Pb**	**23 12 18.1**	**+0.4**
EGUB	**Earth Gu¡pi**	**1.75**	**345**	*e*P		**Pb**	**23 12 17.5**	**-0.2**
BELE	**Belen**	**1.79**	**324**	*e*P		**Pb**	**23 12 17.7**	**+1.2**
GMAL	**Guarumal, Vera**	**2.02**	**112**	*e*P		**Pn**	**23 12 19.8**	**+0.3**

IDC 21 23:17:29.0±1.9, 9.08S×124.60E, h0km, mb3.4/1, mbtmp3.6/4, ML3.6/3, Error ellipse: s-maj=31.9km s-min=18.3km az=122.0
DJA 21 23:17:30.9±0.6, 9°S±3°×12°4E±°, h19km±8km, M3.0/7, MLv3.0/7

ISC 21 23:17:24.5±1.8, 8.7S±0.1×124.4E±0.1, h10km, n9, σ0.87/9, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SOEI	**Soe**	**1.04**	**188**	P		**Pb**	**23 17 44.6**	**-0.1**
BATI	**Baumata**	**1.65**	**207**	Pg		**Pg**	**23 17 55.9**	**-0.4**
	41nm,0.3s,baz=358,slow=1.2,SNR=38							
BATI				Lg		Lg	23 18 15.3	
	34nm,0.3s,baz=142,slow=23,SNR=27							
BATI	**Baumata**	**1.65**	**207**	P		**Pb**	**23 17 55.4**	**+0.3**
MMRI	**Maumere**	**2.16**	**272**	P		**Pb**	**23 18 03.4**	**-0.3**
MMRI				S		**Sn**	**23 18 26.0**	**-1.4**
EDFI	**Ende, Flores**	**2.69**	**269**	P		**Pn**	**23 18 09.5**	**+1.4**
FITZ	**Fitzroy Crossi**	**9.40**	**173**	Pn		**Pn**	**23 19 40.4**	**+0.3**
	1.1nm,0.3s,baz=359,slow=8.8,SNR=36							
FITZ				Sn		Sn	23 21 15.0	-11
	0.5nm,0.3s,baz=166,slow=14,SNR=9.2							
	2.9nm,0.3s							
WRA	**Warramunga Arr**	**14.72**	**140**	Pn		**Pn**	**23 20 52.6**	**-0.4**
	0.2nm,0.3s,baz=312,slow=15,SNR=12							
WRA				Sn		Sn	23 23 26.5	-10
	0.1nm,0.3s,baz=310,slow=23,SNR=2.8							
	0.2nm,0.4s							
ASAR	**Alice Springs**	**17.42**	**150**	P		**P**	**23 21 28.9**	**-0.3**
	0.1nm,0.3s,baz=318,slow=12,SNR=20							
	0.8nm,0.5s							
MKAR	**Makanchi Array**	**66.78**	**330**	P		P	23 28 24.8	+8.6
	0.4nm,1.0s,baz=125,slow=7.2,SNR=1.4							
	0.4nm,1.0s							

KRNET 21 23:20:27.6±0.1, 40.80N×77.52E, h12km, mb2.8
*SOME 21 23:20:29.0, 40.88N×77.57

KTBS					Lg	Lg	23 22 00.7	
	2.9nm,0.2s							
KTBS	**Karatobe**	**2.98**	**348**	*eP*	**Pg**	**Pg**	**23 21 22.4**	**-0.9**
	1.0nm,0.3s							
KTBS				*eS*	**Sg**	**Sg**	**23 22 00.8**	**-1.1**
	2.9nm,0.2s							
BLB	**Baldybastay**	**3.37**	**12**	Pg	**Pg**	**Pg**	**23 21 29.2**	**-1.5**
BLB					Lg	Lg	23 22 12.7	
	7.9nm,0.4s							
ARXS	**Arharly**	**3.42**	**4**	Pg	**Pg**	**Pg**	**23 21 29.5**	**-2.2**
ARXS					Lg	Lg	23 22 12.7	
ARXS	**Arharly**	**3.42**	**4**	*eP*	**Pg**	**Pg**	**23 21 30.6**	**-1.1**
	15nm,0.3s							
ARXS				*eS*	**Sg**	**Sg**	**23 22 14.5**	**-1.6**
	278nm,0.5s							
DJR	**Jarkent**	**3.91**	**25**	Pg	**Pg**	**Pg**	**23 21 39.2**	**-1.8**
	0.5nm,0.1s							
DJR					Lg	Lg	23 22 29.6	
	1.5nm,0.3s							
DJR	**Jarkent**	**3.91**	**25**	*eP*	**Pg**	**Pg**	**23 21 39.2**	**-1.8**
	0.5nm,0.1s							
DJR				*eS*	**Sg**	**Sg**	**23 22 29.6**	**-2.0**
	1.5nm,0.3s							

*IDC **21** 23:25:38.9±1.4, 4.°61S×134.°46E, h0km, mb3.8/3, mbtmp3.8/8, ML3.7/5, MS3.2/4, Error ellipse: s-maj=59.2km s-min=20.9km az=71.0*

*NEIC **21** 23:25:41.6±2.1, 4.°55S±0.°08×134.°2E±0.°1, h10km±2km, mb4.2/10, Error ellipse: s-maj=20.4km s-min=5.6km az=54.0*

*DJA **21** 23:25:44.7±0.8, 4.°S±2.°×13.°4E±.°, h23km±7km, M4.4/24, mB5.3/4, mb4.5/9, MLv4.2/24, Mw(mB)4.7/4*

ISC 21 23:25:41.7±0.7, **4.60S**±0.°05×**134.39E**±0.°06, **h22**km, **n40, σ25.50/45, mb4.0/7, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**2.71**	**308**			**Pn**	**23 26 23.4**	**-0.4**
FAKI					Sn	**Sn**	**23 26 52.0**	**-4.0**
FAKI	**Fak Fak**	**2.71**	**308**	P		**Pn**	**23 26 23.5**	**-0.4**
FAKI				S		**Sn**	**23 26 55.0**	**-1.0**
RKPI	**Ransiki, Papua**	**3.07**	**356**	P		**Pn**	**23 26 27.9**	**-1.0**
SRPI	**Serui, Papua**	**3.28**	**34**	P		**Pn**	**23 26 31.4**	**-0.4**
MWPI	**Manokwari, Pap**	**3.66**	**355**	P		**Pn**	**23 26 36.0**	**-1.0**
BAKI	**Biak**	**3.79**	**27**	P		**Pn**	**23 26 38.2**	**-0.6**
BNDI	**Bandanaira**	**4.47**	**271**	P		**Pn**	**23 26 52.8**	**+4.7**
BNDI				S		**Sn**	**23 27 42.6**	**+3.1**
SAUI	**Saumlaki**	**4.55**	**222**	P		Pn	23 26 55.5	+6.2
SIJI	**Sorong**	**4.84**	**320**	Pn		**Pn**	**23 26 52.5**	**-0.8**
	1.9nm,0.3s,baz=194,slow=21,SNR=14							
SIJI				Sn		**Sn**	**23 27 43.3**	**-5.3**
	1.5nm,0.3s,baz=126,slow=24,SNR=6.2							
SIJI				LR		LR	23 29 06.4	
	comp=Z,151nm,19.2s,baz=180,slow=42							
	8.0nm,0.6s							
SIJI	**Sorong**	**4.84**	**320**	P		**Pn**	**23 26 52.1**	**-1.1**
SWI	**Sorong**	**4.85**	**320**	P		**Pn**	**23 26 52.7**	**-0.6**
MSAI	**Masohi**	**5.58**	**283**	P		**Pn**	**23 27 06.1**	**+2.6**
	79nm,0.6s							
MSAI				S		**Sn**	**23 28 07.8**	**+0.7**
	79nm,0.6s							
KRAI	**Karang Ratu**	**6.11**	**282**	P		**Pn**	**23 27 13.8**	**+3.1**
	0.2nm4µm14nm,0.7s							
AAI	**Ambon**	**6.24**	**278**	P		**Pn**	**23 27 14.7**	**+2.2**
	0.2nm38nm,0.5s							
NLAI	**Namlea**	**7.39**	**280**	P		**Pn**	**23 27 30.6**	**+2.2**
	0.1nm2µm24nm,0.5s							
MTN	**Manton Dam**	**8.80**	**201**			**Pn**	**23 27 49.5**	**+1.8**
KNRA	**Kununurra**	**12.32**	**206**			**Pn**	**23 28 37.5**	**+1.6**
COEN	**Coen**	**12.71**	**138**	Pn		**Pn**	**23 28 42.1**	**+0.8**
MMRI	**Maumere**	**12.72**	**251**	Pn		**Pn**	**23 28 37.5**	**-3.9**
WB0	**Warramunga Arr**	**15.08**	**180**			**Pn**	**23 29 13.2**	**-0.3**
WB0					IAmb	IAmb	23 29 30.3	
	comp=Z,5.3nm,0.7s							
WRA	**Warramunga Arr**	**15.26**	**180**	Pn		**Pn**	**23 29 13.9**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=1.1,slow=12,SNR=8.6							
WRA					Sn	**Sn**	**23 32 01.4**	**-2.9**
	comp=Z,0.3nm,0.3s,baz=357,slow=24,SNR=5.2							
	comp=Z,0.3nm,0.4s							
WRA	**Warramunga Arr**	**15.26**	**180**			**Pn**	**23 29 14.1**	**-1.8**
FITZ	**Fitzroy Crossi**	**15.92**	**212**	Pn		**Pn**	**23 29 23.4**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=36,slow=12,SNR=15							
FITZ					Sn	**Sn**	**23 32 12.8**	**-7.5**
	comp=Z,0.6nm,0.3s,baz=186,slow=17,SNR=7.7							
	comp=Z,1.4nm,0.3s							
RABL	**Rabaul**	**17.73**	**89**	P		**P**	**23 29 51.6**	**+3.5**
AS31	**Alice Springs**	**18.97**	**181**			**Pn**	**23 30 02.9**	**+0.5**
ASAR	**Alice Springs**	**18.97**	**181**	P		**P**	**23 30 02.8**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=7.0,slow=11,SNR=66							
ASAR				S		**Sn**	**23 33 28.1**	**-6.3**
	comp=Z,0.4nm,0.7s,baz=2.1,slow=28,SNR=2.8							
	comp=Z,3.8nm,0.6s							
ASAR	**Alice Springs**	**18.97**	**181**	P		**P**	**23 30 01.6**	**-0.1**
CTA	**Charters Tower**	**19.25**	**144**	P		**P**	**23 30 04.2**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=322,slow=11,SNR=1.7							
CTA				LR		LR	23 38 32.5	
	comp=Z,167nm,18.1s,baz=270,slow=40							
	comp=Z,4.5nm,1.0s							
CTAO	**Charters Tower**	**19.25**	**144**	P		**Pn**	**23 30 06.4**	**+0.5**
CTAO				IAmb		IAmb	23 30 51.1	
	comp=Z,28nm,1.4s							
MBWA	**Marble Bar**	**21.76**	**220**	P		**P**	**23 30 32.0**	**0.0**
MBWA				IAmb		IAmb	23 30 50.9	
	comp=Z,15nm,1.3s							
PSA00	**Pilbara Seismi**	**22.00**	**219**	P		**P**	**23 30 34.4**	**-0.1**
PSA00				IAmb		IAmb	23 30 47.4	
	comp=Z,7.8nm,1.4s							
KSRS	**Korea Array**	**42.26**	**352**	LR		LR	23 49 04.2	
	comp=Z,14nm,20.5s,baz=190,slow=33							
MKAR	**Makanchi Array**	**68.72**	**324**	P		**P**	**23 36 45.4**	**+1.6**
	comp=Z,0.6nm,0.6s,baz=121,slow=8.0,SNR=7.2							
	comp=Z,0.6nm,0.6s							
MKAR	**Makanchi Array**	**68.72**	**324**	P		**P**	**23 36 44.4**	**+0.6**
MAKZ	**Makanchi**	**68.91**	**324**	P		**P**	**23 36 45.9**	**+1.0**
KURK	**Kurchatov**	**72.84**	**327**	P		**P**	**23 37 08.8**	**+0.1**
KURK				IAmb		IAmb	23 37 18.1	
	comp=Z,1.4nm,0.7s							
KURBB	**Kurchatov Arra**	**72.84**	**327**	P		**P**	**23 37 09.9**	**+1.2**
	comp=Z,0.7nm,0.8s,baz=122,slow=4.9,SNR=7.0							
	comp=Z,0.7nm,0.8s							
BVAR	**Borovoye Array**	**78.43**	**326**	P		**P**	**23 37 41.6**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=96,slow=5.8,SNR=3.7							
	comp=Z,0.7nm,0.8s							
BORK	**Borovoye**	**78.48**	**326**	P		**P**	**23 37 41.2**	**+0.2**
BORK				IAmb		IAmb	23 37 47.7	
	comp=Z,1.5nm,0.7s							
NRIK	**Noril'sk**	**80.35**	**345**	LR		LR	00 15 14.6	
	comp=Z,28nm,19.1s,baz=34,slow=37							

*NEIC **21** 23:36:49.7±0.6, 18.°76N±0.°05×66.°90W±0.°03, h63km±6km, ML2.7/37, Md3.1/13(RSPR), Error ellipse: s-maj=6.9km s-min=4.5km az=184.0*

*OSPL **21** 23:36:49.6±0.3, 18.°79N×66.°93W, h71km±999km, ML3.6, Presumed earthquake*

ISC 21 23:36:49.6±1.9, **18.77N**±0.°09×**66.90W**±0.°04, **h63**km±13km, **n21, σ0936/39, 1D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.36**	**214**			**Pn**	**23 37 00.3**	**-0.3**
AGPR					Sn	**Sn**	**23 37 08.0**	**-0.4**
AGPR					IAML		23 37 08.3	
	466nm,0.3s							
AGPR					IAML		23 37 08.8	
	404nm,0.1s							
AOPR	**Arecibo Observ**	**0.44**	**161**			**Pn**	**23 37 01.3**	**0.0**
AOPR					Sn	**Sn**	**23 37 09.6**	**-0.2**
EMPR	**Esperanza - Ma**	**0.45**	**129**			**Pn**	**23 37 01.8**	**+0.4**
EMPR						**Sn**	**23 37 10.8**	**+0.8**
UUPR	**Utuado, UPR, P**	**0.54**	**161**			**Pn**	**23 37 02.2**	**0.0**
UUPR					Sn	**Sn**	**23 37 11.2**	**-0.3**
PRSN	**Puerto Rico Se**	**0.59**	**203**			**Pn**	**23 37 02.5**	**-0.3**
PRSN					Sn	**Sn**	**23 37 11.7**	**-0.8**
PRSN					IAML		23 37 12.9	
	579nm,0.3s							
PRSN					IAML		23 37 14.4	
	551nm,0.2s							
LSP	**Las Mesas**	**0.61**	**197**			**Pn**	**23 37 03.2**	**+0.1**
LSP						**Sn**	**23 37 13.5**	**+0.6**
IDE	**Isla Desecheo**	**0.66**	**235**			**Pn**	**23 37 03.9**	**+0.2**
IDE						**Sn**	**23 37 14.3**	**+0.4**
ECPR	**Experimental S**	**0.68**	**131**			**Pn**	**23 37 03.7**	**-0.1**
ECPR						**Sn**	**23 37 13.6**	**-0.6**
ECPR					IAML		23 37 15.5	
	560nm,0.2s							
CELP	**Cerrillos**	**0.75**	**156**			**Pn**	**23 37 04.8**	**+0.1**
CELP					Sn	**Sn**	**23 37 15.6**	**-0.2**
CELP					IAML		23 37 16.4	
	338nm,0.2s							
OBIP	**Obispado Ponce**	**0.77**	**159**			**Pn**	**23 37 04.8**	**-0.1**
OBIP					Sn	**Sn**	**23 37 16.3**	**+0.1**
OBIP	**Obispado Ponce**	**0.77**	**159**	*iP*		**Pn**	**23 37 05.0**	**+0.1**
OBIP				*eS*		**Sn**	**23 37 16.4**	**+0.3**
OBIP					IAML		23 37 16.8	
	comp=Z,1µm,0.1s							
CRPR	**Cabo Rojo, PR**	**0.78**	**195**			**Pn**	**23 37 04.9**	**-0.1**
CRPR					Sn	**Sn**	**23 37 15.8**	**-0.6**
CRPR	**Cabo Rojo, PR**	**0.78**	**195**	*iP*		**Pn**	**23 37 04.9**	**-0.1**
CRPR				*eS*		**Sn**	**23 37 16.3**	**-0.1**
CRPR					IAML		23 37 19.7	
	comp=Z,49nm,1.2s							
GBPR	**Guanica, Bosqu**	**0.79**	**178**			**Pn**	**23 37 05.5**	**+0.4**
GBPR						**Sn**	**23 37 17.4**	**+1.0**
MLPR	**Magueyes Islan**	**0.80**	**190**	Pn		**Pn**	**23 37 05.2**	**-0.1**
MLPR				Sn		**Sn**	**23 37 16.7**	**-0.1**
SJG	**San Juan**	**0.96**	**132**			**Pn**	**23 37 07.3**	**0.0**
SJG					Sn	**Sn**	**23 37 20.4**	**0.0**
SJG					IAML		23 37 23.4	
	comp=Z,105nm,0.2s							
SJG	**San Juan**	**0.96**	**132**	*i* P		**Pn**	**23 37 07.4**	**0.0**
SJG				*eS*		**Sn**	**23 37 20.5**	**0.0**
SJG					IAML		23 37 22.9	
	comp=Z,2µm,0.1s							
PDPR	**Patillas Dam,**	**1.12**	**132**	Pn		**Pn**	**23 37 09.2**	**-0.1**
PDPR					IAML		23 37 24.9	
	comp=Z,109nm,0.1s							
PDPR					IAML		23 37 26.0	
	comp=Z,102nm,0.1s							
HUMP	**Col San Antoni**	**1.17**	**122**			**Pn**	**23 37 09.9**	**-0.2**
HUMP					Sn	**Sn**	**23 37 25.4**	**+0.1**
HUMP					IAML		23 37 27.7	
	comp=Z,66nm,0.2s							
HUMP					IAML		23 37 27.8	
	comp=Z,89nm,0.2s							
CUPR	**Culebra, Puert**	**1.60**	**106**	Pn		**Pn**	**23 37 15.5**	**-0.2**
DR12	**Loma Pena Alta**	**2.35**	**271**	Pn		**Pn**	**23 37 26.0**	**0.0**

*IDC **21** 23:37:05.5±2.0, 60.°24N×152.°82W, h92km±32km, mb3.4/5, mbtmp3.5/10, Error ellipse: s-maj=37.0km s-min=14.7km az=115.0*

*NEIC **21** 23:37:07.4±1.1, 60.°27N±0.°04×152.°60W±0.°08, h99km±4km, ML3.1/176, ML3.0(AEIC), Error ellipse: s-maj=5.7km s-min=5.0km az=111.0*

*AEIC **21** 23:37:08.3±1.0, 60.°26N±0.°03×152.°57W±0.°07, h99km±4km, Error ellipse: s-maj=5.2km s-min=5.0km az=76.0*

ISC 21 23:37:06.4±0.8, **60.25N**±0.°03×**152.54W**±0.°03, **h107**km±5km, **n171, σ0981/176, mb4.0/5, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RED	**Redoubt Volcan**	**0.21**	**326**			**Pn**	**23 37 21.5**	**-0.1**
RED					Sn	**Sn**	**23 37 32.1**	**-0.9**
RED					IAML		23 37 32.8	
	comp=N,519nm,0.7s							
RED					IAML		23 37 32.8	
	comp=E,398nm,0.5s							
RDSO	**Redoubt South**	**0.23**	**334**			**Pn**	**23 37 21.6**	**-0.1**
RDSO						**Sn**	**23 37 32.4**	**-0.9**
RDT	**Redoubt**	**0.33**	**11**			**Pn**	**23 37 22.1**	**+0.1**
RDT						**Sn**	**23 37 33.6**	**-0.2**
ILS	**Iliamna Low So**	**0.39**	**223**			**Pn**	**23 37 22.2**	**-0.2**
ILS						**Sn**	**23 37 34.4**	**0.0**
ILSW	**Iliamna Southw**	**0.40**	**229**			**Pn**	**23 37 22.2**	**-0.3**
ILSW					Sn	**Sn**	**23 37 33.5**	**-1.0**
ILSW					IAML		23 37 36.8	
	comp=E,322nm,0.8s							
P19K	**Oil Pt**	**0.69**	**211**			**Pn**	**23 37 24.9**	**+0.5**
P19K					Sn	**Sn**	**23 37 38.2**	**+0.2**
HOM	**Homer**	**0.74**	**142**			**Pn**	**23 37 25.7**	**+0.9**
HOM					Sn	**Sn**	**23 37 39.6**	**+0.9**
CAPN	**Captain Cook N**	**0.86**	**52**			**Pn**	**23 37 28.1**	**+2.2**
O19K	**Port Alsworth**	**0.89**	**267**			**Pn**	**23 37 26.2**	**0.0**
O19K	**Port Alsworth**	**0.89**	**267**			**Sn**	**23 37 40.5**	**-0.6**
BRLK	**Bradley Lake**	**0.96**	**120**			**Pn**	**23 37 27.1**	**+0.2**
BRLK					IAML		23 37 43.0	
	comp=N,513nm,0.6s							
BRLK					IAML		23 37 43.1	
	comp=E,416nm,0.3s							
BRLK	**Bradley Lake**	**0.96**	**120**			**Sn**	**23 37 42.6**	**+0.1**
SPU	**Mount Spurr**	**0.97**	**14**			**Pn**	**23 37 27.5**	**+0.5**
SPCR	**Spurr Chakacha**	**0.97**	**9**			**Pn**	**23 37 27.4**	**+0.3**
SPCR						**Sn**	**23 37 42.9**	**+0.1**
AU22	**Augustine Moun**	**0.97**	**206**			**Pn**	**23 37 27.5**	**+0.5**
AU22						**Sn**	**23 37 42.9**	**+0.3**
CNPM	**China Poot**	**0.98**	**137**			**Pn**	**23 37 27.6**	**+0.5**
CNPM	**China Poot**	**0.98**	**137**			**Sn**	**23 37 43.3**	**+0.5**
AUF	**Augustine Flow**	**0.98**	**209**			**Pn**	**23 37 27.3**	**+0.2**
AUF						**Sn**	**23 37 43.1**	**+0.4**
AUCH	**Augustine Cone**	**1.00**	**208**			**Sn**	**23 37 44.2**	**+0.9**
AUJK	**Augustine Jueg**	**1.00**	**206**			**Pn**	**23 37 27.9**	**+0.5**
SPBG	**Spurr Blockage**	**1.02**	**5**			**Pn**	**23 37 28.3**	**+0.6**
BRSE	**Bradley Lake S**	**1.04**	**119**			**Pn**	**23 37 27.9**	**+0.2**
N19K	**Bonanza Creek**	**1.12**	**301**			**Pn**	**23 37 28.8**	**+0.1**
N19K					IAML		23 37 45.3	
	comp=E,335nm,0.9s							
N19K					IAML		23 37 45.5	
	comp=N,455nm,0.8s							
N19K	**Bonanza Creek**	**1.12**	**301**			**Sn**	**23 37 44.8**	**-0.8**
SLKM	**Skilak Lake**	**1.18**	**76**			**Pn**	**23 37 29.6**	**+0.3**
SLKM					IAML		23 37 47.8	
	comp=N,328nm,0.6s							
SLKM					IAML		23 37 48.1	
	comp=E,234nm,0.4s							
STLK	**Strandline Lak**	**1.30**	**15**			**Pn**	**23 37 31.5**	**+0.7**
STLK					IAML		23 37 50.2	
	comp=N,210nm,0.7s							
O18K	**Koktuh Hills**	**1.40**	**255**			**Pn**	**23 37 31.9**	**+0.2**
O18K	**Koktuh Hills**	**1.40**	**255**			**Sn**	**23 37 50.4**	**-0.7**
O22K	**Cooper Landing**	**1.42**	**79**			**Pn**	**23 37 32.5**	**+0.5**
Q19K	**Cape Douglas,**	**1.44**	**204**			**Pn**	**23 37 32.6**	**+0.2**
Q19K					IAML		23 37 56.7	
	comp=N,234nm,0.8s							
Q19K					IAML		23 38 17.2	
	comp=E,312nm,0.9s							
SEW	**Seward**	**1.55**	**94**			**Pn**	**23 37 33.4**	**-0.2**
SEW					IAML		23 38 03.0	
	comp=E,114nm,0.9s							
P18K	**Big Mountain,**	**1.61**	**239**			**Pn**	**23 37 34.3**	**0.0**
P18K					IAML		23 37 55.7	
	comp=N,115nm,1.0s							
P18K	**Big Mountain,**	**1.61**	**239**			**Sn**	**23 37 54.6**	**-1.0**
RC01	**Rabbit Creek A**	**1.62**	**57**			**Pn**	**23 37 35.3**	**+0.9**
SYI	**Shuyak Island**	**1.65**	**177**			**Pn**	**23 37 35.6**	**+0.8**
SYI					IAML		23 37 58.5	
	comp=N,257nm,0.7s							
SYI					IAML		23 38 01.1	
	comp=E,262nm,0.7s							
M20K	**Styx River**	**1.67**	**350**			**Pn**	**23 37 35.9**	**+0.8**
N18K	**Kilae Creek**	**1.72**	**286**			**Pn**	**23 37 35.8**	**+0.1**
N18K					IAML		23 37 58.2	
	comp=N,97nm,1.2s							
N18K	**Kilae Creek**	**1.72**	**286**			**Sn**	**23 37 57.0**	**-1.0**
SKT	**Skwentna**	**1.81**	**15**			**Pn**	**23 37 37.2**	**+0.4**
M22K	**Willow**	**1.92**	**37**			**Pn**	**23 37 39.2**	**+1.1**
M18K	**Stony River**	**2.03**	**309**			**Pn**	**23 37 39.8**	**+0.2**
M18K						**Sn**	**23 38 04.8**	**-0.2**
KAHG	**Katmai Hook Gl**	**2.04**	**211**			**Pn**	**23 37 40.6**	**+0.9**
PMR	**Palmer**	**2.14**	**50**			**Pn**	**23 37 41.0**	**+0.1**
PMR					IAML		23 38 08.7	
	comp=N,186nm,0.6s							
PMR	**Palmer**	**2.14**	**50**			**Sn**	**23 38 06.4**	**-1.1**
KAWH	**Katmai**	**2.20**	**213**			**Pn**	**23 37 42.5**	**+0.6**
L19K	**White Mountain**	**2.24**	**331**			**Pn**	**23 37 43.0**	**+0.7**
L19K					IAML		23 38 11.0	
	comp=N,61nm,0.9s							
L19K					IAML		23 38 11.1	
	comp=E,73nm,0.8s							
P17K	**Kvichak River**	**2.24**	**244**			**Pn**	**23 37 42.8**	**+0.6**
KNK	**Knik Glacier**	**2.31**	**58**			**Pn**	**23 37 43.4**	**+0.1**
N17K	**Nushagak Hills**	**2.33**	**279**			**Pn**	**23 37 43.7**	**+0.3**
N17K					IAML		23 38 11.5	
	comp=N,56nm,0.6s							
N17K					IAML		23 38 11.8	
	comp=E,106nm,0.8s							
N17K	**Nushagak Hills**	**2.33**	**279**			**Sn**	**23 38 10.7**	**-1.0**
GHO	**Glory Hole Cre**	**2.33**	**47**			**Pn**	**23 37 43.9**	**+0.4**
GHO					IAML		23 38 14.5	
	comp=N,155nm,0.7s							
O17K	**Koliganek Bris**	**2.34**	**260**			**Pn**	**23 37 43.9**	**+0.4**
O17K						**Sn**	**23 38 11.2**	**-0.8**
CUT	**Chulitna**	**2.42**	**26**			**Pn**	**23 37 45.7**	**+1.1**
KABU	**Katmai Buttres**	**2.43**	**217**			**Pn**	**23 37 45.9**	**+1.0**
L22K	**Petersville**	**2.44**	**20**			**Pn**	**23 37 46.0**	**+1.1**
L22K					IAML		23 38 16.8	
	comp=E,65nm,0.5s							
L22K					IAML		23 38 22.9	
	comp=N,66nm,0.6s							
KDAK	**Kodiak Island**	**2.47**	**181**	P		**Pn**	**23 37 44.7**	**-0.6**
	comp=N,25nm,0.5s,baz=52,slow=3.3,SNR=439							
KDAK				S		**Sn**	**23 38 13.9**	**-1.3**
	comp=N,39nm,0.5s,baz=100,slow=6.5,SNR=13							
KDAK	**Kodiak Island**	**2.47**	**181**			**Pn**	**23 37 44.7**	**-0.6**
KDAK					IAML		23 38 17.6	
	comp=N,95nm,0.8s							
KDAK					IAML		23 38 24.5	
	comp=N,86nm,0.5s							
ACHA	**Angle Creek He**	**2.50**	**216**			**Pn**	**23 37 46.6**	**+0.9**
SML	**Sawmill**	**2.58**	**51**			**Pn**	**23 37 46.9**	**+0.2**
SML					IAML		23 38 28.9	
	comp=E,122nm,0.9s							
SML					IAML		23 38 31.1	
	comp=N,107nm,0.7s							
P23K	**Montague Islan**	**2.58**	**93**			**Pn**	**23 37 46.7**	**0.0**
CNTC	**Contact Creek**	**2.63**	**222**			**Pn**	**23 37 48.4**	**+0.9**
PPLA	**Purkeypile**	**2.66**	**3**			**Pn**	**23 37 49.3**	**+1.4**
M17K	**Holitna River**	**2.66**	**298**			**Pn**	**23 37 48.1**	**+0.3**
M17K					IAML		23 38 29.7	
	comp=N,74nm,0.9s							
M17K					IAML		23 38 36.1	
	comp=E,93nm,0.8s							
GLI	**Glacier Island**	**2.76**	**74**	Pn		**Pn**	**23 37 47.9**	**-1.2**
GLI					IAML		23 38 21.6	
	comp=N,84nm,0.6s							
GLI					IAML		23 38 27.9	
	comp=E,90nm,0.6s							
L18K	**Granite Mounta**	**2.82**	**316**			**Pn**	**23 37 50.2**	**+0.4**
L18K					IAML		23 38 36.9	
	comp=E,53nm,1.1s							
L18K					IAML		23 38 37.5	
	comp=N,50nm,1.1s							
O16K	**Kokwok River B**	**2.87**	**259**			**Pn**	**23 37 50.9**	**+0.4**
SCM	**Sheep Creek Mo**	**2.99**	**56**			**Pn**	**23 37 52.5**	**+0.2**
HIN	**Hinchinbrook I**	**3.01**	**85**	Pn		**Pn**	**23 37 51.3**	**-1.0**
HIN					IAML		23 38 31.3	
	comp=N,58nm,1.0s							
HIN					IAML		23 38 31.6	
	comp=E,68nm,0.7s							
P16K	**Nushagak River**	**3.02**	**249**	Pn		**Pn**	**23 37 53.5**	**+0.9**
P16K					IAML		23 38 45.9	
	comp=E,70nm,0.8s							
P16K					IAML		23 39 15.7	
	comp=N,62nm,1.0s							
OHAK	**Old Harbor**	**3.06**	**188**			**Pn**	**23 37 52.0**	**-1.0**
OHAK					IAML		23 38 30.6	
	comp=N,32nm,0.5s							
OHAK					IAML		23 38 34.4	
	comp=E,36nm,1.1s							
N16K	**Nishlik Lake**	**3.10**	**277**			**Pn**	**23 37 54.3**	**+0.6**
WAT7	**Susitna Watana**	**3.14**	**33**			**Pn**	**23 37 55.0**	**+0.9**
K20K	**Telida**	**3.20**	**348**			**Pn**	**23 37 56.1**	**+1.1**
WAT1	**Susitna Watana**	**3.22**	**35**			**Pn**	**23 37 55.9**	**+0.8**
MID	**Middleton Isla**	**3.24**	**102**	Pn		**Pn**	**23 37 56.0**	**+0.6**
MID					IAML		23 38 36.4	
	comp=E,80nm,1.2s							
M16K	**Timber Creek**	**3.26**	**287**			**Pn**	**23 37 56.1**	**+0.4**
WAT6	**Susitna Watana**	**3.29**	**43**			**Pn**	**23 37 56.8**	**+0.6**
EYAK	**Cordova Ski Ar**	**3.38**	**82**	Pn		**Pn**	**23 37 56.3**	**-1.0**
EYAK					IAML		23 38 40.0	
	comp=N,34nm,1.0s							
TRF	**Thorofare Moun**	**3.39**	**17**			**Pn**	**23 37 58.0**	**+0.5**
TRF					IAML		23 39 00.5	
	comp=N,56nm,0.9s							
TRF					IAML		23 39 01.5	
	comp=E,41nm,0.9s							
KTH	**Kantishna Hill**	**3.40**	**12**			**Pn**	**23 37 58.2**	**+0.5**
KTH					IAML		23 38 58.3	
	comp=N,37nm,0.8s							
KTH					IAML		23 39 07.4	
	comp=E,32nm,0.7s							
DIV	**Divide**	**3.44**	**72**			**Pn**	**23 37 57.5**	**-0.7**
DIV					IAML		23 38 40.4	
	comp=N,47nm,0.5s							
DIV					IAML		23 38 41.3	
	comp=E,33nm,0.7s							
KLU	**Klutina**	**3.47**	**66**			**Pn**	**23 37 58.4**	**-0.2**
M24K	**Tolsona, Glenn**	**3.60**	**56**			**Pn**	**23 38 01.0**	**+0.7**
RND	**Reindeer**	**3.62**	**27**			**Pn**	**23 38 01.5**	**+1.0**
RND					IAML		23 39 00.6	
	comp=E,32nm,1.0s							
RND					IAML		23 39 02.7	
	comp=N,36nm,1.0s							
CHUM	**Lake Minchumin**	**3.65**	**2**			**Pn**

WRH					IAML			23 39 32.9		
	comp=E,9.0nm,1.1s									
MCARA	**McCarthy VSAT**	**4.80**	**72**			**Pn**		**23 38 16.3**	**0.0**	
MCARA	**McCarthy VSAT**	**4.80**	**72**		IAML			23 39 18.7		
	comp=N,26nm,0.7s									
K15K	**Wolf Creek Mou**	**4.80**	**299**			**Pn**		**23 38 17.1**	**+0.8**	
TGL	**Tana Glacier**	**4.83**	**80**			**Pn**		**23 38 15.9**	**-1.0**	
TGL	**Tana Glacier**	**4.83**	**80**		IAML			23 39 13.8		
	comp=E,13nm,1.1s									
TGL					IAML			23 39 15.7		
	comp=N,14nm,0.9s									
MLY	**Manley**	**4.87**	**9**			**Pn**		**23 38 18.6**	**+1.2**	
J16K	**Anvik River**	**4.89**	**312**			**Pn**		**23 38 18.1**	**+0.5**	
J16K	**Anvik River**	**4.89**	**312**		IAML			23 39 16.9		
	comp=N,8.1nm,1.1s									
HDA	**Harding Lake**	**4.92**	**30**			**Pn**		**23 38 18.5**	**+0.5**	
HDA					IAML			23 39 36.2		
	comp=N,23nm,1.1s									
CCB	**Clear Creek Bu**	**4.93**	**24**			**Pn**		**23 38 18.4**	**+0.4**	
CCB					IAML			23 39 47.1		
	comp=E,8.8nm,1.1s									
BARK	**Barkley Ridge**	**5.00**	**84**			**Pn**		**23 38 19.3**	**+0.2**	
PTPK	**Patty Peak**	**5.04**	**75**			**Pn**		**23 38 19.8**	**+0.1**	
RIDG	**Independent Ri**	**5.04**	**43**			**Pn**		**23 38 20.9**	**+1.2**	
KIAG	**Kiagna River**	**5.07**	**78**			**Pn**		**23 38 19.7**	**-0.4**	
M26K	**Nabesna, AK**	**5.08**	**61**			**Pn**		**23 38 19.9**	**-0.2**	
M26K	**Nabesna, AK**	**5.08**	**61**		IAML			23 39 18.7		
	comp=N,15nm,0.6s									
M26K					IAML			23 39 18.8		
	comp=E,11nm,0.6s									
L14K	**Kuka Creek**	**5.09**	**287**			**Pn**		**23 38 21.3**	**+1.0**	
L14K	**Kuka Creek**	**5.09**	**287**		IAML			23 39 28.4		
	comp=N,8.1nm,1.2s									
L14K					IAML			23 40 16.9		
	comp=E,11nm,1.1s									
MDM	**Murphy Dome**	**5.13**	**21**			**Pn**		**23 38 21.1**	**+0.3**	
I23K	**Minto, Yukon-K**	**5.13**	**15**			**Pn**		**23 38 22.0**	**+1.2**	
I23K					IAML			23 39 52.1		
	comp=E,8.4nm,1.1s									
I23K					IAML			23 39 56.8		
	comp=N,10nm,0.8s									
ILAR	**Eielson Array**	**5.24**	**28**	P		**Pn**		**23 38 22.7**	**+0.4**	
	comp=N,3.6nm,0.6s,baz=214,slow=13,SNR=60									
ILAR				S		**Sn**		**23 39 17.7**	**-3.6**	
	comp=N,2.7nm,0.6s,baz=204,slow=18,SNR=8.5									
ILAR	**Eielson Array**	**5.24**	**28**			**Pn**		**23 38 22.6**	**+0.3**	
DOT	**Dot Lake**	**5.26**	**46**			**Pn**		**23 38 23.1**	**+0.5**	
MESA	**MESA**	**5.28**	**86**			**Pn**		**23 38 23.8**	**+0.7**	
MESA	**MESA**	**5.28**	**86**		IAML			23 41 33.4		
	comp=E,9.3nm,1.0s									
GRNC	**Granite Creek**	**5.36**	**80**			**Pn**		**23 38 23.8**	**-0.2**	
GRNC	**Granite Creek**	**5.36**	**80**		IAML			23 39 28.3		
	comp=N,15nm,1.0s									
GRNC					IAML			23 39 29.2		
	comp=E,7.8nm,0.7s									
BARN	**Barnard Glacie**	**5.41**	**77**			**Pn**		**23 38 24.9**	**+0.1**	
H21K	**Melozitna Rive**	**5.43**	**359**			**Pn**		**23 38 25.2**	**+0.3**	
SCRK	**Sand Creek**	**5.49**	**43**			**Pn**		**23 38 25.9**	**+0.2**	
J25K	**Salcha River,**	**5.50**	**34**			**Pn**		**23 38 26.9**	**+1.1**	
M27K	**Edge Creek, AK**	**5.56**	**63**			**Pn**		**23 38 27.5**	**+0.8**	
CTGM	**Chitina Glacie**	**5.57**	**78**			**Pn**		**23 38 28.1**	**+1.3**	
RKAV	**Rock Avalanche**	**5.57**	**85**			**Pn**		**23 38 28.0**	**+1.1**	
H19K	**Roundabout Mou**	**5.59**	**343**			**Pn**		**23 38 28.0**	**+1.0**	
H18K	**Honhosa River**	**5.60**	**334**			**Pn**		**23 38 28.0**	**+0.8**	
H22K	**Ishtalitna Cre**	**5.69**	**5**			**Pn**		**23 38 29.3**	**+0.9**	
LOGN	**Logan Glacier**	**5.72**	**79**			**Pn**		**23 38 29.9**	**+0.9**	
IMAR	**Indian Mountai**	**5.78**	**355**			**Pn**		**23 38 30.2**	**+0.5**	
H17K	**Granite Mounta**	**5.81**	**327**			**Pn**		**23 38 31.0**	**+1.1**	
L27K	**Beaver Creek,**	**5.83**	**56**			**Pn**		**23 38 30.7**	**+0.4**	
YUK2	**White River**	**5.89**	**70**			**Pn**		**23 38 31.3**	**+0.1**	
H24K	**Noodor Dome**	**6.00**	**19**			**Pn**		**23 38 33.3**	**+0.8**	
BVCY	**Beaver Creek**	**6.03**	**64**			**Pn**		**23 38 32.9**	**-0.1**	
YUK3	**Moose Creek**	**6.07**	**70**			**Pn**		**23 38 33.5**	**-0.2**	
O28M	**Mount Upton**	**6.12**	**80**			**Pn**		**23 38 35.9**	**+1.3**	
PCA	**Pinnacle**	**6.13**	**86**			**Pn**		**23 38 35.4**	**+0.9**	
YUK8	**Steele Glacier**	**6.34**	**75**			**Pn**		**23 38 37.7**	**+0.2**	
I26K	**Coal Creek Min**	**6.65**	**36**			**Pn**		**23 38 41.6**	**+0.3**	
F19K	**Shaleruckik Mo**	**7.01**	**343**			**Pn**		**23 38 47.2**	**+1.0**	
YUK6	**Outpost Mounta**	**7.02**	**78**			**Pn**		**23 38 47.4**	**+0.9**	
INK	**Inuvik**	**11.50**	**37**	P		**Pn**		**23 39 46.8**	**-0.2**	
	comp=E,0.5nm,0.6s,baz=250,slow=17,SNR=4.5									
INK				S		**Sn**		**23 41 50.1**	**-3.0**	
	comp=E,0.4nm,0.6s,baz=156,slow=17,SNR=1.7									
DLBC	**Dease Lake**	**11.62**	**89**	P		**Pn**		**23 39 49.2**	**+0.6**	
	comp=E,1.2nm,0.9s,baz=248,slow=7.8,SNR=8.0									
YKA	**Yellowknife Ar**	**18.14**	**66**	P		**P**		**23 41 11.9**	**+2.0**	
	comp=E,0.2nm,0.7s,baz=287,slow=13,SNR=4.3									
SONM	**Songino Array**	**54.83**	**306**	P		**P**		**23 46 25.0**	**-0.1**	
	comp=E,0.9nm,0.6s,baz=42,slow=6.0,SNR=9.6									
	comp=E,0.9nm,0.6s									
ZALV	**Zalesovo Beam**	**57.31**	**324**	P		**P**		**23 46 41.7**	**-0.8**	
	comp=E,0.8nm,0.5s,baz=34,slow=6.4,SNR=3.7									
	comp=E,0.8nm,0.5s									
BVAR	**Borovoye Array**	**61.96**	**332**	P		**P**		**23 47 14.9**	**+0.6**	
	comp=E,1.0nm,0.7s,baz=34,slow=11,SNR=5.8									
	comp=E,1.0nm,0.7s									
KURBB	**Kurchatov Arra**	**62.06**	**326**	P		**P**		**23 47 15.4**	**+0.4**	
	comp=E,0.5nm,0.6s,baz=31,slow=6.7,SNR=5.1									
	comp=E,0.5nm,0.6s									
MKAR	**Makanchi Array**	**64.38**	**321**	P		**P**		**23 47 30.4**	**0.0**	
	comp=E,0.3nm,0.7s,baz=27,slow=6.3,SNR=2.0									
	comp=E,0.3nm,0.7s									

*IDC **21** 23:38:38.8±9.5,36.°14N×71.°62E,h62km±70km,mb3.3/4, mbtmp3.6/8,ML3.2/4,MS3.0/2,Error ellipse: s-maj=113.6km s-min=35.3km az=157.0*

ISC 21 23:38:49.9±2.1,**37.°2N**±0.°2×**71.°2E**±0.°1,**h100**km,**n17**, σ1§**61**/18,**2C-2D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**5.66**	**25**	P	**Pn**	**23 40 13.4**	**+1.4**
	SNR=6.5						
EKS2	**Erkin-Say**	**5.84**	**19**	P	**Pn**	**23 40 15.1**	**+1.0**
	SNR=12						
KK31	**Karatay Array**	**5.97**	**355**	⇓P	**Pn**	**23 40 16.2**	**+0.4**
	1.1nm,0.2s,baz=181,slow=13,SNR=105						
KK31				⇑S	**Sn**	**23 41 21.1**	**-1.6**
	5.1nm,0.4s,baz=312,slow=37,SNR=4.5						
AAK	**Ala-Archa**	**6.02**	**24**	P	**Pn**	**23 40 17.8**	**+1.2**
	SNR=12						
AAK	**Ala-Archa**	**6.02**	**24**	⇑P	**Pn**	**23 40 17.7**	**+1.1**
	1.8nm,0.4s						
AAK				⇓S	**Sn**	**23 41 24.4**	**+0.2**
	2.1nm,0.6s						
CHMS	**Chumysh**	**6.43**	**24**	P	**Pn**	**23 40 22.8**	**+0.8**
	SNR=14						
USP	**Ospenovka**	**6.60**	**21**	P	**Pn**	**23 40 24.4**	**+0.1**
	SNR=10						
TKM2	**Tokmak 2**	**6.66**	**29**	P	**Pn**	**23 40 26.1**	**+0.8**
	SNR=5.2						
MKAR	**Makanchi Array**	**12.65**	**37**	P	**Pn**	**23 41 44.9**	**-1.2**
	0.3nm,0.3s,baz=225,slow=15,SNR=17						
	1.2nm,0.5s						
KURBB	**Kurchatov Arra**	**14.44**	**19**	P	**P**	**23 42 11.8**	**-1.4**
	baz=206,slow=10,SNR=5.0						
	0.4nm,0.7s						
BVAR	**Borovoye Array**	**15.88**	**358**	P	**P**	**23 42 32.1**	**+2.9**
	baz=171,slow=10,SNR=3.3						
	0.4nm,0.5s						
AKTO	**Aktyubinsk**	**16.32**	**329**	P	**P**	**23 42 35.7**	**+1.6**
	0.7nm,0.3s,baz=132,slow=12,SNR=11						
	2.6nm,0.4s						
ZALV	**Zalesovo Beam**	**19.24**	**25**	P	**Pn**	**23 43 05.8**	**-2.3**
	0.6nm,0.3s,baz=230,slow=12,SNR=4.2						
	0.6nm,0.3s						
GNI	**Garni**	**20.89**	**286**	P	**P**	**23 43 21.4**	**-2.8**
	2.8nm,0.7s,baz=222,slow=21,SNR=1.5						
	2.8nm,0.7s						
KBZ	**Khabaz**	**22.48**	**296**	P	**P**	**23 43 41.9**	**+1.0**
	0.2nm,0.3s,baz=127,slow=20,SNR=2.0						
KBZ				LR	LR	23 54 47.6	
	comp=Z,31nm,20.7s,baz=90,slow=42						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**37.05**	**326**	P	**P**	**23 45 50.8**	**+1.0**
	1.7nm,0.7s,baz=111,slow=8.5,SNR=5.8						
	1.7nm,0.7s						
KMBO	**Kilima Mbogo**	**49.41**	**227**	LR	LR	00 10 50.9	
	comp=Z,20nm,20.0s,baz=107,slow=40						

*IDC **21** 23:44:31.8±3.4,33.°60S×178.°81W,h0km,mb3.3/2, mbtmp3.4/3,ML3.7/1,Error ellipse: s-maj=77.1km s-min=37.2km az=114.0*

*WEL **21** 23:44:38.4±1.3,34.°S±8.°×17.°9W±1.°6,h12km,M4.0/6, mB4.5/4,ML3.8/7,MLv4.1/6,Mw(mB)3.7/4,Error ellipse: s-maj=21.7km s-min=9.3km az=106.6,confirmed*

ISC 21 23:44:36.1±2.0,**33.°57S**±0.°10×**178.°6W**±0.°2,**h41**km,**n18**, σ1§**38**/26,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.73**	**212**	P	**Pn**	**23 45 46.8**	**+2.0**
MXZ				S	**Sn**	**23 46 38.1**	**-0.3**
WMGZ	**Waiomatatini S**	**4.90**	**209**	P	**Pn**	**23 45 49.7**	**+2.6**
WMGZ				S	**Sn**	**23 46 43.1**	**+0.6**
PKGZ	**Pakihiroa**	**5.08**	**211**	P	**Pn**	**23 45 49.5**	**-0.2**
PKGZ				S	**Sn**	**23 46 46.5**	**-0.6**
HAZ	**Te Kaha**	**5.12**	**214**	P	**Pn**	**23 45 50.5**	**+0.2**
HAZ				S	**Sn**	**23 46 48.6**	**+0.5**
PUZ	**Puketiti**	**5.18**	**209**	P	**Pn**	**23 45 51.2**	**+0.1**
PUZ				S	**Sn**	**23 46 51.6**	**+2.1**
RUGZ	**Raukumara Rang**	**5.34**	**214**	P	**Pn**	**23 45 53.4**	**+0.1**
RUGZ				S	**Sn**	**23 46 51.7**	**-2.0**
TWGZ	**Tauwhareparae**	**5.38**	**210**	P	**Pn**	**23 45 55.4**	**+1.6**
TWGZ				S	**Sn**	**23 46 53.6**	**-0.9**
CNGZ	**Carnagh Statio**	**5.55**	**207**	P	**Pn**	**23 45 56.1**	**-0.1**
MWZ	**Matawai**	**5.71**	**212**	P	**Pn**	**23 45 57.8**	**-0.5**
URZ	**Urewera**	**5.84**	**216**	Pn	**Pn**	**23 45 58.8**	**-1.4**
	2.3nm,0.3s,baz=260,slow=4.4,SNR=20						
URZ				Sn	**Sn**	**23 47 03.1**	**-2.8**
	2.4nm,0.3s,baz=309,slow=22,SNR=7.9						
	4.3nm,0.3s						
URZ	**Urewera**	**5.84**	**216**	P	**Pn**	**23 46 00.5**	**+0.3**
WCZ	**Waipu Caves**	**6.29**	**246**	P	**Pn**	**23 46 08.5**	**+2.3**
MTHZ	**Maungataniwha**	**6.44**	**214**	P	**Pn**	**23 46 10.0**	**+1.5**
OUZ	**Omahuta**	**6.67**	**254**	P	**Pn**	**23 46 11.8**	**+0.2**
BKZ	**Black Stump Fm**	**6.86**	**214**	P	**Pn**	**23 46 15.5**	**+1.4**
ASAR	**Alice Springs**	**42.55**	**271**	P	**P**	**23 52 27.2**	**-0.8**
	0.3nm,0.8s,baz=107,slow=7.6,SNR=4.1						
	0.3nm,0.8s						
WRA	**Warramunga Arr**	**43.82**	**276**	P	**P**	**23 52 38.5**	**+0.3**
	0.3nm,0.6s,baz=118,slow=7.5,SNR=8.1						
	0.3nm,0.6s						
FINES	**FINESS Array B**	**147.91**	**338**	PKPbc	**PKiKP**	**00 04 17.1**	**-0.7**
	1.4nm,0.8s,baz=47,slow=2.8,SNR=1.6						

IDC 22 00:02:21.6±6.5,**24.°81S**×**176.°02W**,**h0**km,**mb3.9**/3, **mbtmp3.8**/3,**Error ellipse: s-maj=323.7km s-min=52.5km az=153.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**45.47**	**261**	P	P	00 10 43.0	+0.2
	1.1nm,0.9s,baz=101,slow=9.0,SNR=9.3						
	1.1nm,0.9s						
WRA	**Warramunga Arr**	**45.97**	**266**	P	P	00 10 46.0	-0.8
	0.4nm,0.5s,baz=105,slow=8.4,SNR=9.0						
	0.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**93.25**	**289**	P	P	00 15 39.5	+1.0
	0.5nm,0.3s,baz=127,slow=3.2,SNR=8.2						
	0.5nm,0.3s						
AKASG	**Malin Array Be**	**147.64**	**330**	PKPbc	PKPbc	00 22 06.6	-1.1
	0.1nm,0.2s,baz=49,slow=3.6,SNR=1.8						
BRTR	**Keskin Array B**	**151.01**	**308**	PKPbc	PKPbc	00 22 16.0	-0.7
	0.3nm,0.7s,baz=117,slow=1.9,SNR=2.6						

*OSPL **22** 00:05:00.9±0.3,17.°89N×66.°87W,h12km±3km,ML3.6, Presumed earthquake*
*SDD **22** 00:05:00.9±1.3,17.°95N×66.°88W,h12km±12km,MD2.8, ML2.6,MW2.7,Presumed earthquake*
*NEIC **22** 00:05:01.4±1.1,17.°98N±0.°03×66.°873W±0.°008, h10km±1km,ML2.9/35,Md3.2/15(RSPR),Error ellipse: s-maj=5.0km s-min=2.4km az=168.0*

ISC 22 00:05:00.4±0.9,**17.°97N**±0.°04×**66.°86W**±0.°02,**h16**km±6km, **n29**,σ0§**65**/49,**12C-1D,Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.02**	**288**		**Pg**	**00 05 03.5**	**+0.3**
GBPR					**Sg**	**00 05 05.4**	**+0.2**
MLPR	**Magueyes Islan**	**0.18**	**270**		**Pb**	**00 05 05.0**	**-0.3**
MLPR				Sg	**Sg**	**00 05 07.9**	**+0.1**
MLPR				IAML		00 05 08.4	
	2µm,0.2s						
MLPR				IAML		00 05 08.5	
	2µm,0.4s						
MLPR	**Magueyes Islan**	**0.18**	**270**	⇑*e*Pg	**Pb**	**00 05 05.0**	**-0.3**
MLPR				⇑*e*Sg	**Sg**	**00 05 06.4**	**-1.4**
MLPR				IAML		00 05 08.3	
	comp=N,817nm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.24**	**279**		**Pb**	**00 05 06.0**	**-0.4**
CRPR				Sg	**Sg**	**00 05 09.7**	**+0.1**
CRPR				IAML		00 05 09.8	
	comp=N,3µm,0.1s						
CRPR				IAML		00 05 09.9	
	comp=N,2µm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.24**	**279**	*i* P	**Pb**	**00 05 06.0**	**-0.4**
CRPR				*e*S	**Sg**	**00 05 09.5**	**-0.1**
CRPR				IAML		00 05 10.2	
	comp=Z,2µm,0.1s						
OBIP	**Obispado Ponce**	**0.25**	**73**		**Pb**	**00 05 06.3**	**-0.2**
OBIP				Sg	**Sb**	**00 05 10.3**	**-0.4**
OBIP	**Obispado Ponce**	**0.25**	**73**	*i* P	**Pb**	**00 05 06.4**	**-0.2**
OBIP				*e*S	**Sb**	**00 05 10.5**	**-0.2**
OBIP				IAML		00 05 10.7	
	comp=Z,9µm,0.2s						
CELP	**Cerrillos**	**0.29**	**68**		**Pb**	**00 05 07.0**	**-0.1**
CELP				Sg	**Sb**	**00 05 11.4**	**-0.3**
CELP				IAML		00 05 12.0	
	comp=Z,1µm,0.2s						
CELP	**Cerrillos**	**0.29**	**68**	⇓*e*Pg	**Pb**	**00 05 06.9**	**-0.2**
CELP				⇑*e*Sg	**Sb**	**00 05 11.7**	**-0.1**
CELP				IAML		00 05 12.0	
	comp=N,384nm,0.2s						
LSP	**Las Mesas**	**0.30**	**314**		**Pb**	**00 05 07.0**	**-0.3**
LSP					**Sb**	**00 05 12.2**	**+0.1**
UUPR	**Utuado, UPR, P**	**0.31**	**25**		**Pb**	**00 05 07.2**	**-0.4**
UUPR				Sg	**Sb**	**00 05 11.5**	**-0.9**
PRSN	**Puerto Rico Se**	**0.37**	**312**		**Pg**	**00 05 08.0**	**0.0**
PRSN				Sg	**Sg**	**00 05 13.5**	**+0.4**
PRSN	**Puerto Rico Se**	**0.37**	**312**	⇑*e*Pg	**Pg**	**00 05 08.0**	**0.0**
PRSN				*e*Sg	**Sg**	**00 05 12.7**	**-0.4**
PRSN				IAML		00 05 15.9	
	comp=N,2µm,0.2s						
AOPR	**Arecibo Observ**	**0.39**	**15**		**Pb**	**00 05 08.4**	**-0.5**
AOPR				Sg	**Sg**	**00 05 13.7**	**-0.1**
AOPR				IAML		00 05 16.8	
	comp=N,1µm,0.3s						
AOPR	**Arecibo Observ**	**0.39**	**15**	⇑*e*Pg	**Pb**	**00 05 08.4**	**-0.5**
AOPR				⇑*e*Sg	**Sb**	**00 05 13.9**	**-0.8**
AOPR				IAML		00 05 16.7	
	comp=N,942nm,0.2s						
AGPR	**Aguadilla, PR**	**0.55**	**334**		**Pg**	**00 05 11.2**	**-0.2**
AGPR				IAML		00 05 21.6	
	comp=N,402nm,0.3s						
AGPR				IAML		00 05 23.3	
	comp=N,352nm,0.3s						
AGPR	**Aguadilla, PR**	**0.55**	**334**	⇑*e*Pg	**Pg**	**00 05 11.2**	**-0.2**
AGPR				⇑*e*Sg	**Sg**	**00 05 18.5**	**-0.2**
AGPR				IAML		00 05 23.2	
	comp=N,263nm,0.3s						
ECPR	**Experimental S**	**0.59**	**53**		**Pb**	**00 05 11.8**	**-0.5**
ECPR				IAML		00 05 21.8	
	comp=N,814nm,0.2s						
ECPR				IAML		00 05 24.3	
	comp=N,522nm,0.2s						
EMPR	**Esperanza - Ma**	**0.59**	**32**		**Pb**	**00 05 12.8**	**+0.4**
EMPR					**Sb**	**00 05 21.8**	**+1.2**
SJG	**San Juan**	**0.69**	**78**		**Pb**	**00 05 13.6**	**-0.4**
SJG	**San Juan**	**0.69**	**78**	⇑*e*Pg	**Pb**	**00 05 13.6**	**-0.4**
SJG				⇑*e*Sg	**Sg**	**00 05 22.4**	**-0.7**
SJG	**San Juan**	**0.69**	**78**	*i* P	**Pb**	**00 05 13.6**	**-0.4**
SJG				*e*S	**Sb**	**00 05 23.2**	**-0.1**
SJG				IAML		00 05 24.9	
	comp=Z,3µm,0.1s						
IDE	**Isla Desecheo**	**0.72**	**305**		**Pg**	**00 05 14.1**	**-0.4**
IDE					**Sb**	**00 05 24.2**	**+0.1**
PDPR	**Patillas Dam,**	**0.80**	**86**		**Pb**	**00 05 15.5**	**-0.4**
HUMP	**Col San Antoni**	**0.97**	**80**		**Pb**	**00 05 18.1**	**-0.8**
CUPR	**Culebra, Puert**	**1.54**	**77**	Pn	**Pb**	**00 05 27.5**	**-1.0**
HIDR	**Higuey Centro**	**1.87**	**290**	⇑*e*Pg	**Pb**	**00 05 34.0**	**-0.1**
HIDR				IAML		00 06 04.5	
	comp=N,70nm,0.2s						
DR12	**Loma Pena Alta**	**2.53**	**289**	Pn	**Pn**	**00 05 42.6**	**+1.7**
HATOM	**Hato Mayor del**	**2.53**	**289**	⇑*e*Pg	**Pb**	**00 05 43.2**	**-2.3**
HATOM				IAML		00 06 21.6	
	comp=N,32nm,2.8s						

*PGC **22** 00:24:07.2±1.3,62.°32N×124.°54W,h16km,ML3.1/11, 116km southwest of Wrigley, Nt Nw Territories - Nunavut, Canada*
*ANF **22** 00:24:07.6±0.7,62.°33N×124.°54W,h27km±6km,Error ellipse: s-maj=3.1km s-min=2.7km az=94.0*

ISC 22 00:24:05.6±0.9,**62.°33N**±0.°03×**124.°41W**±0.°04,**h8**km,**n37**, σ1§**67**/51,**Northwest Territories**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRGLY	**Wrigley**	**1.00**	**25**	P	**Pg**	**00 24 26.0**	**+1.2**
	baz=209						
WRGLY				S	**Sb**	**00 24 40.0**	**+1.4**
	baz=209						
NAHA	**Nahanni Butte**	**1.39**	**159**	S	**Sb**	**00 24 49.8**	**+0.2**
TGTN	**Hyland Airport**	**2.00**	**248**	Pn	**Pn**	**00 24 38.9**	**-0.7**
TGTN				Sn	**Sn**	**00 25 03.2**	**-1.6**
TGTN	**Hyland Airport**	**2.00**	**248**	P	**Pn**	**00 24 38.2**	**-1.4**
	baz=64,SNR=123						
TGTN				S	**Sn**	**00 25 02.9**	**-1.9**
	baz=64						
KOTAN	**Kotaneelee Air**	**2.21**	**175**	Sn	**Sn**	**00 25 10.7**	**+0.7**
KOTAN	**Kotaneelee Air**	**2.21**	**175**	P	**Pn**	**00 24 42.7**	**+0.1**
	baz=354						
KOTAN				Sb	**Sb**	**00 25 15.0**	**+1.7**
	baz=354						
WTLY	**Watson Lake, Y**	**3.07**	**226**	P	**Pn**	**00 24 54.1**	**-0.3**
	baz=41						
WTLY				Sb	**Sb**	**00 25 38.4**	**+0.4**
	baz=41						
MMPY	**Sheldon Lake,**	**3.19**	**278**	Pn	**Pn**	**00 24 55.6**	**-0.6**
MMPY	**Sheldon Lake,**	**3.19**	**278**	P	**Pn**	**00 24 55.5**	**-0.6**
	baz=92,SNR=12						
MMPY				Sb	**Sb**	**00 25 42.1**	**+0.5**
	baz=92						
NBC6	**NorthernBC 6**	**4.05**	**157**	Sn	**Sn**	**00 25 53.3**	**-2.2**
N32M	**Quiet Lake**	**4.29**	**258**	P	**Pn**	**00 25 10.0**	**-1.1**
	baz=70,SNR=5.3						
N32M				Sb	**Sb**	**00 26 14.4**	**+1.4**
	baz=70						
R33M	**Jennings River**	**4.35**	**230**	Pn	**Pn**	**00 25 11.1**	**-0.9**
R33M				Sn	**Sn**	**00 26 00.4**	**-2.5**
R33M	**Jennings River**	**4.35**	**230**	P	**Pn**	**00 25 11.0**	**-1.1**
	baz=44						
R33M				S	**Sn**	**00 26 00.0**	**-2.9**
	baz=44						
YKAW3	**Yellowknife Wh**	**4.56**	**83**	Pn	**Pn**	**00 25 16.1**	**+1.3**
P33M	**Teslin, Yukon**	**4.58**	**246**	Pn	**Pn**	**00 25 14.0**	**-1.1**
P33M	**Teslin, Yukon**	**4.58**	**246**	P	**Pn**	**00 25 14.0**	**-1.1**
	baz=58,SNR=10						
P33M				Sb	**Sb**	**00 26 22.4**	**+1.0**
	baz=58						
M31M	**Drury Creek, Y**	**4.67**	**273**	Sb	**Sb**	**00 26 26.7**	**+2.9**
	baz=84						
DLBC	**Dease Lake**	**4.79**	**218**	Pn	**Pn**	**00 25 18.1**	**+0.1**
DLBC	**Dease Lake**	**4.79**	**218**	P	**Pn**	**00 25 17.7**	**-0.4**
	baz=32,SNR=8.1						
DLBC				Sb	**Sb**	**00 26 30.4**	**+2.8**
	baz=32						
NBC5	**NorthernBC 5**	**4.90**	**169**	Sn	**Sn**	**00 26 13.9**	**-2.5**
Q32M	**Nakina River**	**5.13**	**232**	Pn	**Pn**	**00 25 22.1**	**-0.8**
Q32M	**Nakina River**	**5.13**	**232**	P	**Pn**	**00 25 21.8**	**-1.1**
	baz=45						
WHY	**Whitehorse**	**5.29**	**256**	Sb	**Sb**	**00 26 45.5**	**+3.7**
	baz=67						
P32M	**Atlin**	**5.30**	**243**	Pn	**Pn**	**00 25 23.8**	**-1.2**
P32M	**Atlin**	**5.30**	**243**	P	**Pn**	**00 25 23.8**	**-1.2**
	baz=54,SNR=14						
P32M				Sb	**Sb**	**00 26 45.8**	**+3.7**
	baz=54						
S34M	**Telegraph Cree**	**5.56**	**220**	P	**Pn**	**00 25 27.9**	**-0.5**
	baz=34						
S34M				Sb	**Sb**	**00 26 53.5**	**+4.0**
	baz=34						
H31M	**Peel River**	**5.58**	**313**	Pn	**Pn**	**00 25 28.3**	**-0.5**
H31M	**Peel River**	**5.58**	**313**	P	**Pn**	**00 25 28.6**	**-0.2**
	baz=125						
H31M				S	**Sn**	**00 26 31.1**	**-1.9**
	baz=125						
M30M	**Minto, Yukon**	**5.75**	**278**	P	**Pn**	**00 25 30.1**	**-1.2**
	baz=87						
N30M	**Aishikik Lake**	**6.06**	**267**	Pn	**Pn**	**00 25 34.6**	**-0.8**
N30M	**Aishikik Lake**	**6.06**	**267**	P	**Pn**	**00 25 34.1**

comp=Z,0.2nm,0.3s,baz=17,slow=10,SNR=1.8
comp=Z,3.0nm,1.0s

SPITS Spitsbergen Ar 10.51 356 Pn Pn 00 30 33.9 -0.4
baz=171,slow=14
comp=Z,9.5nm,0.9s

UPP 22 00:28:09.3±0.0, 67.85N×20.21E, h0km, ML2.3, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.11**	**26**	P	Pg	00 28 11.7	+0.3
KUA				S	Sg	00 28 13.4	+0.5
RATU	**Laukkuluspa**	**0.23**	**263**	P	Pg	00 28 13.9	+0.1
KOVU	**Salmi**	**0.37**	**357**	P	Pg	00 28 16.1	-0.3
KOVU	**Salmi**	**0.37**	**357**	S	Pg	00 28 15.8	-0.6
NIKU	**Nikkaluokta**	**0.44**	**272**	P	Pg	00 28 17.8	0.0
LANU	**Lannavaara**	**0.70**	**73**	P	Pg	00 28 22.4	-0.3
DUNU	**Dundret**	**0.75**	**169**	P	Pg	00 28 23.1	-0.5
MASU	**Masugnsbyn**	**0.79**	**119**	P	Pg	00 28 24.2	-0.3
SALU	**Saltoluokta**	**0.81**	**235**	P	Pg	00 28 24.3	-0.4

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*CATAC **22** 00:41:45.9, 12.3N±0.6×86.7W±0.6, h124km, M3.3/23, MLv3.3/23, confirmed*
*SNET **22** 00:41:46.3±1.1, 12.18N×86.92W, h135km±39km, ML3.6, Presumed earthquake*
ISC 22 00:41:46.0±1.4, 12.24N±0.05×86.72W±0.04, h124km±7km, n61, σ0≡44/92, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.14**	**115**	P	Pn	**00 42 02.6**	**-0.4**
MACN	**El Madrono**	**0.23**	**12**	P	Pn	**00 42 03.2**	**-0.1**
MACN				S	Sn	**00 42 13.5**	**-0.9**
CNGA	**Al SSO del Vol**	**0.25**	**5**	P	Pn	**00 42 03.3**	**0.0**
CNGA				S	Sn	**00 42 15.9**	**-0.5**
ALEN	**Leon**	**0.26**	**326**	P	Pn	**00 42 02.8**	**-0.5**
ALEN				S	Sn	**00 42 16.5**	**+0.2**
CNGN	**Cerro Negro**	**0.26**	**5**	P	Pn	**00 42 03.2**	**-0.1**
CNGN				S	Sn	**00 42 15.9**	**-0.6**
AMTN	**Mateare**	**0.28**	**91**	P	Pn	**00 42 02.9**	**-0.5**
AMTN				S	Sn	**00 42 16.2**	**-0.1**
MOM2	**El Cardon**	**0.30**	**50**	P	Pn	**00 42 03.7**	**+0.3**
MOM2				S	Sn	**00 42 16.3**	**-0.2**
SAPS	**Ciudad Sandino**	**0.32**	**103**	P	Pn	**00 42 03.7**	**+0.2**
SAPS				S	Sn	**00 42 16.6**	**0.0**
MOM3	**MOM3**	**0.34**	**37**	P	Pn	**00 42 03.8**	**+0.2**
APQ3	**Volcan Apoyequ**	**0.35**	**85**	P	Pn	**00 42 03.7**	**+0.1**
APQ3				S	Sn	**00 42 16.7**	**-0.1**
HOYN	**Al Sur del Vol**	**0.37**	**344**	P	Pn	**00 42 04.0**	**+0.1**
HOYN				S	Sn	**00 42 16.9**	**-0.3**
QUEN	**Al S del Volca**	**0.37**	**340**	P	Pn	**00 42 04.0**	**+0.2**
QUEN				S	Sn	**00 42 17.3**	**+0.1**
TELN	**Telica**	**0.38**	**344**	P	Pn	**00 42 04.0**	**+0.2**
TELN				S	Sn	**00 42 17.0**	**-0.3**
HERN	**Volcan Telica**	**0.38**	**344**	P	Pn	**00 42 03.9**	**0.0**
HERN				S	Sn	**00 42 17.6**	**+0.3**
APQ2	**Apoyeque**	**0.39**	**96**	P	Pn	**00 42 04.3**	**+0.6**
APQ2				S	Sn	**00 42 17.3**	**+0.1**
POLN	**Al Sur del Vol**	**0.41**	**348**	P	Pn	**00 42 04.3**	**+0.4**
POLN				S	Sn	**00 42 17.7**	**+0.2**
UNAN	**Cigeo UNAN**	**0.46**	**106**	P	Pn	**00 42 04.3**	**+0.2**
UNAN				S	Sn	**00 42 18.0**	**+0.2**
MGAN	**Managua**	**0.47**	**101**	P	Pn	**00 42 04.5**	**+0.3**
MGAN				S	Sn	**00 42 18.1**	**+0.2**
CRIN	**San Cristobal**	**0.56**	**325**	P	Pn	**00 42 05.0**	**+0.2**
CRIN				S	Sn	**00 42 20.1**	**+1.1**
MAS3	**Al N del Volca**	**0.58**	**112**	P	Pn	**00 42 04.8**	**-0.1**
MAS3				S	Sn	**00 42 19.7**	**+0.6**
SABN	**Sabanita**	**0.62**	**117**	P	Pn	**00 42 05.0**	**-0.1**
NANN	**Nandasmo**	**0.66**	**117**	P	Pn	**00 42 06.5**	**+1.0**
NANN				S	Sn	**00 42 20.4**	**+0.3**
LIMN	**Finca el Limon**	**0.89**	**23**	P	Pn	**00 42 07.8**	**+0.3**
LIMN				S	Sn	**00 42 23.6**	**-0.1**
MATN	**Matagalpa**	**1.04**	**49**	P	Pn	**00 42 08.0**	**-0.9**
MATN				S	Sn	**00 42 25.5**	**-0.6**
BOAB	**BOACO BROADBAN**	**1.05**	**79**	P	Pn	**00 42 09.0**	**+0.1**
BOAB				S	Sn	**00 42 25.6**	**-0.6**
POTN	**Potosi Cosigui**	**1.07**	**315**	P	Pn	**00 42 09.0**	**-0.1**
POTN				S	Sn	**00 42 26.0**	**-0.5**
CSGN	**Cosiguina Volc**	**1.10**	**312**	P	Pn	**00 42 09.1**	**-0.3**
CSGN				S	Sn	**00 42 27.0**	**-0.1**
MORN	**Al O del Volca**	**1.26**	**123**	P	Pn	**00 42 11.2**	**+0.2**
MORN				S	Sn	**00 42 29.7**	**-0.4**
CONN	**Concepcion**	**1.27**	**122**	P	Pn	**00 42 10.5**	**-0.7**
CONN				S	Sn	**00 42 30.0**	**-0.2**
RCON	**San Juan de Ri**	**1.35**	**24**	P	Pn	**00 42 12.5**	**+0.3**
OCON	**Estacion meteo**	**1.40**	**10**	P	Pn	**00 42 13.0**	**+0.3**
RCPN	**Sur Rio San Ju**	**1.42**	**26**	P	Pn	**00 42 13.0**	**+0.1**
RCVN	**Varillal2**	**1.43**	**21**	P	Pn	**00 42 13.3**	**+0.2**
CNCH	**Conchagua**	**1.50**	**314**	P	Pn	**00 42 13.5**	**-0.2**
CNCH				S	Sn	**00 42 35.0**	**+0.1**
CNCH	**Conchagua**	**1.50**	**314**	*eP*	Pn	**00 42 13.6**	**-0.2**
CNCH				*eS*	Sn	**00 42 36.5**	**+1.6**
ACON	**Acoyapa**	**1.54**	**100**	P	Pn	**00 42 14.1**	**-0.1**
ACON				S	Sn	**00 42 35.3**	**-0.2**
LCND	**La Caada**	**1.56**	**313**	*eS*	Sn	**00 42 37.2**	**+1.3**
INTP	**Intipuca**	**1.61**	**306**	*eP*	Pn	**00 42 14.8**	**-0.1**
INTP				*eS*	Sn	**00 42 37.3**	**+0.3**
INTP				IAML		00 42 40.9	
	comp=Z,186nm,0.2s						
YUSH	**Yuscaran**	**1.71**	**356**	P	Pn	**00 42 16.6**	**+0.3**
TGUH	**Tegucigalpa,Un**	**1.88**	**344**	P	Pn	**00 42 18.6**	**+0.2**
RANC	**El Ranchito**	**1.93**	**308**	P	Pn	**00 42 19.3**	**+0.3**
PACA	**Pacayal**	**1.98**	**308**	P	Pn	**00 42 19.7**	**+0.2**
PACA	**Pacayal**	**1.98**	**308**	*eP*	Pn	**00 42 19.8**	**+0.2**
MARCA	**Marcala la Paz**	**2.29**	**326**	P	Pn	**00 42 23.8**	**+0.3**
TECO	**Alcaldia de Te**	**2.38**	**303**	P	Pn	**00 42 24.4**	**-0.1**
SIUN	**Universidad Ur**	**2.40**	**52**	P	Pn	**00 42 24.6**	**-0.1**
SCLA	**Alcaldia de Sa**	**2.44**	**307**	P	Pn	**00 42 25.1**	**-0.1**
JTS	**Las Juntas de**	**2.60**	**138**	P	Pn	**00 42 27.5**	**+0.1**
SJTE	**Alcalda de S**	**2.61**	**302**	*eP*	Pn	**00 42 26.7**	**-0.8**
P5NO	**Presa 5 de nov**	**2.63**	**311**	P	Pn	**00 42 27.3**	**-0.5**
LFRS	**El Faro**	**2.66**	**301**	*eP*	Pn	**00 42 28.2**	**0.0**
LOMA	**Loma Larga**	**2.77**	**301**	*eP*	Pn	**00 42 29.9**	**+0.4**
LOMA				IAML		00 43 04.7	
	comp=Z,276nm,0.2s						
BOQS	**Boqueron**	**2.90**	**301**	*eS*	Sn	**00 43 06.1**	**-0.2**
PMON	**Piamonte**	**2.92**	**300**	P	Pn	**00 42 31.5**	**0.0**
PMON	**Piamonte**	**2.92**	**300**	*eP*	Pn	**00 42 31.7**	**+0.2**
JAYA	**Jayaque - finc**	**3.01**	**298**	P	Pn	**00 42 32.4**	**-0.3**
JAYA	**Jayaque - finc**	**3.01**	**298**	*eP*	Pn	**00 42 32.4**	**-0.3**
JAYA				*eS*	Sn	**00 43 07.6**	**-1.1**
JAYA				IAML		00 43 12.0	
	comp=Z,414nm,0.2s						
NUBE	**Las Nubes**	**3.41**	**299**	P	Pn	**00 42 37.6**	**-0.4**
NUBE	**Las Nubes**	**3.41**	**299**	*eP*	Pn	**00 42 37.4**	**-0.5**
FAME	**Alcaldia de Sa**	**3.58**	**297**	P	Pn	**00 42 40.1**	**-0.1**
OCHAL	**Ojochal**	**4.35**	**136**	P	Pn	**00 42 51.1**	**+0.7**

IDC 22 00:45:49.6±5.1, 5.25S×147.49E, h248km±57km, mb3.1/2, mbtmp3.6/4, MS3.7/2, Error ellipse: s-maj=109.5km s-min=28.7km az=130.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.15**	**184**	P	Pn	00 46 55.9	+0.8
	5.5nm,0.3s,baz=71,slow=7.3,SNR=2.3						
PMG				S	S	00 47 47.3	+0.2
	11nm,0.4s,baz=61,slow=18,SNR=7.4						
WRA	**Warramunga Arr**	**19.42**	**220**	P	P	00 49 57.5	-0.3
	0.4nm,0.3s,baz=41,slow=10,SNR=18						
ASAR	**Alice Springs**	**22.51**	**214**	P	P	00 50 28.9	+0.3
	1.1nm,0.5s,baz=46,slow=7.8,SNR=17						
	1.1nm,0.5s						
MSVF	**Nonsavu**	**32.35**	**115**	LR	LR	01 02 34.2	
	comp=Z,97nm,21.3s,baz=355,slow=31						
RAO	**Raoul Island**	**40.49**	**130**	LR	LR	01 06 57.9	
	comp=Z,169nm,19.8s,baz=109,slow=31						
ILAR	**Eielson Array**	**84.60**	**23**	P	P	00 57 54.5	-0.4
	0.5nm,1.0s,baz=234,slow=4.0,SNR=2.5						
	0.5nm,1.0s						
TORD	**Torodi Ar. Bea**	**145.37**	**286**	PKPbc	PKPdf	01 04 58.6	-0.4
	0.4nm,0.6s,baz=77,slow=2.3,SNR=5.8						

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*IDC **22** 00:52:50.6±1.3, 48.01N×155.55E, h0km, mb3.5/3, mbtmp3.5/5, ML3.2/2, Error ellipse: s-maj=52.8km s-min=23.9km az=122.0*

*KRSC **22** 00:52:56.6±2.2, 48.61N×156.08E, h8km±45km, Ml3.9*
ISC 22 00:52:55.6±1.1, 48.3N±0.1×155.3E±0.2, h35km, n23, σ1≡80/15, mb3.5/3, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.43**	**13**	*eS*	Sn	**00 53 59.0**	**-2.2**
PAU	**Pauzhetka**	**3.31**	**17**	*eS*	Sn	**00 54 22.0**	**-0.7**
KDTR	**Khodutka, Kamc**	**3.94**	**26**	*eS*	Sn	**00 54 36.2**	**-2.1**
ASAK	**Asacha**	**4.41**	**21**	*eP*	Pn	**00 54 01.5**	**+1.6**
RUS	**Russkaya**	**4.61**	**26**	*eP*	Pn	**00 54 02.4**	**-0.3**
RUS				*eS*	Sn	**00 54 53.9**	**-1.1**
KRMR	**Karymshinskiy**	**4.87**	**21**	*eP*	Pn	**00 54 07.2**	**+1.0**
PETK	**Petropavlovsk-**	**5.04**	**17**	Pn	Pn	**00 54 10.3**	**+1.7**
	0.7nm,0.3s,baz=180,slow=12,SNR=12						
PETK				Sn	Sn	00 55 14.6	+9.1
	baz=254,slow=42						
	7.6nm,0.8s						
UGLR	**Uglovaya**	**5.39**	**23**	*eP*	Pn	**00 54 16.4**	**+2.9**
KOK	**Koryaka**	**5.42**	**22**	*eP*	Pn	**00 54 16.2**	**+2.4**
AVH	**Avacha**	**5.42**	**23**	*eP*	Pn	**00 54 16.1**	**+2.2**
ASAJ	**Asahikawa**	**9.74**	**249**	Pn	Pn	**00 55 13.0**	**0.0**
	0.5nm,0.3s,baz=68,slow=16,SNR=6.6						
	3.9nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**30.03**	**158**	T	T	01 30 41.3	
	baz=344,slow=76,SNR=12						
H11N1	**WAKE ISLAND Hy**	**30.04**	**158**	T	T	01 30 38.5	
	baz=344,slow=76,SNR=18						
H11N3	**WAKE ISLAND Hy**	**30.05**	**158**	T	T	01 30 41.0	
	baz=344,slow=76,SNR=10						
H11S1	**WAKE ISLAND Hy**	**31.15**	**159**	T	T	01 32 06.0	
	baz=345,slow=76,SNR=124						
H11S3	**WAKE ISLAND Hy**	**31.16**	**159**	T	T	01 32 06.0	
	baz=345,slow=76,SNR=120						
H11S2	**WAKE ISLAND Hy**	**31.17**	**159**	T	T	01 32 06.5	
	baz=345,slow=76,SNR=63						
WRA	**Warramunga Arr**	**70.49**	**201**	P	P	**01 04 05.0**	**-1.5**
	0.3nm,0.7s,baz=9.6,slow=6.2,SNR=2.1						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**74.17**	**200**	P	P	**01 04 28.2**	**-0.2**
	0.3nm,0.8s,baz=32,slow=10,SNR=1.7						
	0.3nm,0.8s						
TXAR	**Lajitas Array**	**75.46**	**62**	P	P	**01 04 36.4**	**+0.3**
	0.4nm,0.6s,baz=312,slow=4.0,SNR=5.1						
	0.4nm,0.6s						
H03N2	**Juan Fernandez**	**137.30**	**90**	T	T	03 45 11.1	
	baz=310,slow=77,SNR=4.1						
H03N1	**Juan Fernandez**	**137.31**	**90**	T	T	03 45 12.8	
	baz=310,slow=77,SNR=4.1						
H03N3	**Juan Fernandez**	**137.31**	**90**	T	T	03 45 14.2	
	baz=310,slow=77,SNR=5.0						

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*SOME **22** 00:54:52.9, 39.62N×75.92E, h25km*
*KRNET **22** 00:55:01.3±0.1, 40.07N×75.69E, h20km, mb3.7*
*NNC **22** 00:55:05.4±2.5, 40.24N×75.77E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=23.1km s-min=13.8km az=173.0*
ISC 22 00:55:01.6±1.6, 40.09N±0.05×75.71E±0.03, h3km±11km, n46, σ1≡51/80, 24C-35D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNKS	**Jany-Kuch**	**0.96**	**356**	*iP*	Pg	**00 55 19.8**	**-0.2**
JNKS				*iS*	Sg	**00 55 33.4**	**+0.9**
NRN	**Naryn**	**1.36**	**9**	*eP*	Pn	**00 55 26.6**	**-1.1**
NRN				*iS*	Sb	**00 55 44.7**	**-1.0**
SALK	**Salom-Alik**	**1.64**	**299**	*eP*	Pn	**00 55 31.2**	**-0.3**
SALK				*iS*	Sn	**00 55 53.1**	**-0.2**
SFK	**Sufi-Kurgan**	**1.70**	**268**	*iP*	Pn	**00 55 31.7**	**-0.6**
SFK				*iS*	Sn	**00 55 54.3**	**-0.4**
ARLS	**Aral**	**2.06**	**330**	*eP*	Pn	**00 55 37.2**	**0.0**
ARLS				*iS*	Sn	**00 56 03.6**	**+0.1**
ULHL	**Ulahol**	**2.19**	**10**	P	Pb	**00 55 42.4**	**+0.4**
	SNR=20						
ULHL	**Ulahol**	**2.19**	**10**	*eP*	Pn	**00 55 39.4**	**+0.3**
ULHL				*eS*	Sn	**00 56 07.0**	**+0.2**
TARG	**Taragay, Kyrgy**	**2.28**	**43**	*iP*	Pn	**00 55 40.7**	**+0.2**
TARG				*iS*	Sn	**00 56 09.6**	**+0.3**
UCH	**Uchtor**	**2.32**	**337**	P	Pb	**00 55 45.2**	**+0.9**
	SNR=46						
UCH	**Uchtor**	**2.32**	**337**	*eP*	Pn	**00 55 41.2**	**+0.1**
UCH				*iS*	Sn	**00 56 10.4**	**+0.1**
KDJ	**Kajisay**	**2.32**	**28**	*iP*	Pn	**00 55 41.1**	**+0.3**
KDJ				*iS*	Sn	**00 56 10.4**	**+0.4**
BOOM	**Boomskoye usch**	**2.40**	**4**	*iP*	Pn	**00 55 42.3**	**+0.3**
BOOM				*iS*	Sn	**00 56 12.4**	**+0.4**
ARSB	**Arslanbob**	**2.41**	**302**	*iP*	Pn	**00 55 42.0**	**-0.1**
ARSB				*iS*	Sn	**00 56 12.0**	**-0.2**
KBK	**Karagaybulak**	**2.62**	**348**	P	Pb	**00 55 49.2**	**-0.2**
	SNR=116						
KBK	**Karagaybulak**	**2.62**	**348**	*iP*	Pn	**00 55 45.5**	**+0.5**
KBK				*iS*	Sn	**00 56 17.4**	**-0.1**
AAK	**Ala-Archa**	**2.70**	**341**	P	Pb	**00 55 50.2**	**-0.4**
	SNR=17						
AAK	**Ala-Archa**	**2.70**	**341**	Pn	Pb	**00 55 49.9**	**-0.7**
	9.3nm,0.5s						
AAK				Lg	Lg	00 56 28.2	
	116nm,1.2s						
AAK	**Ala-Archa**	**2.70**	**341**	*iP*	Pn	**00 55 46.5**	**+0.4**
AAK				*iS*	Sn	**00 56 19.2**	**-0.2**
TKM2	**Tokmak 2**	**2.83**	**358**	P	Pb	**00 55 51.6**	**-1.3**
	SNR=31						
TKM2	**Tokmak 2**	**2.83**	**358**	*eP*	Pn	**00 55 48.3**	**+0.5**
TKM2				*iS*	Sn	**00 56 22.6**	**+0.1**
EKS2	**Erkin-Say**	**2.95**	**331**	P	Pb	**00 55 54.4**	**-0.5**
	SNR=13						
EKS2	**Erkin-Say**	**2.95**	**331**	*iP*	Pn	**00 55 49.7**	**+0.2**
EKS2				*iS*	Sn	**00 56 25.3**	**-0.2**
KST	**Kastek**	**2.95**	**4**	*eP*	Pb	**00 55 53.5**	**-1.5**
	17nm,0.7s						
KST				*eS*	Sg	**00 56 37.4**	**+0.9**
	77nm,0.3s						
CHMS	**Chumysh**	**2.99**	**346**	P	Pb	**00 55 54.0**	**-1.5**
	SNR=11						
CHMS	**Chumysh**	**2.99**	**346**	*eP*	Pn	**00 55 50.3**	**+0.4**
CHMS				*iS*	Sn	**00 56 26.2**	**-0.2**
DRK	**Karamyk**	**3.08**	**260**	*eP*	Pn	**00 55 51.1**	**-0.2**
DRK				*iS*	Sn	**00 56 27.4**	**-1.4**
TNSS	**Tian-Shan**	**3.08**	**17**	*eP*	Pb	**00 55 55.2**	**-2.1**
	7.0nm,0.5s						
TNSS				*eS*	Sg	**00 56 40.0**	**-0.7**
	14nm,0.8s						
PRZ	**Przheval'sk**	**3.13**	**39**	*eP*	Pn	**00 55 52.6**	**+0.6**
PRZ				*iS*	Sn	**00 56 30.2**	**+0.2**
DGS	**Degeres**	**3.15**	**1**	*eP*	Pb	**00 55 56.8**	**-1.4**
	12nm,0.4s						
DGS				*eS*	Sg	**00 56 42.4**	**-0.3**
	49nm,0.6s						
MRKS	**Merke**	**3.24**	**326**	*eP*	Pb	**00 55 58.4**	**-1.4**
	16nm,0.6s						
MRKS				*eS*	Sg	**00 56 46.0**	**+0.2**
	80nm,0.7s						
KNDC	**Almaty**	**3.26**	**16**	Pg	Pb	**00 55 58.9**	**-1.2**
	16nm,0.5s						
KNDC				Lg	Lg	00 56 47.5	
	107nm,0.7s						
USP	**Ospenovka**	**3.30**	**344**	P	Pb	**00 55 58.8**	**-1.9**
	SNR=20						
USP	**Ospenovka**	**3.30**	**344**	*iP*	Pn	**00 55 54.6**	**+0.4**
USP				*iS*	Sn	**00 56 33.5**	**-0.4**
KOTS	**Kotyrbulak**	**3.31**	**18**	*eP*	Pb	**00 56 00.2**	**-0.8**
	14nm,0.5s						
KOTS				*eS*	Sg	**00 56 49.1**	**+1.3**
	141nm,0.6s						
MNAS	**Manas**	**3.40**	**316**	*iP*	Pn	**00 55 56.0**	**+0.3**
MNAS				*iS*	Sn	**00 56 35.8**	**-0.8**
TRKS	**Terek-Say**	**3.75**	**294**	*eP*	Pn	**00 55 59.9**	**-0.7**
TRKS				*iS*	Sn	**00 56 42.9**	**-2.5**
BTK	**Batken**	**3.75**	**271**	*iP*	Pn	**00 56 00.4**	**-0.1**
BTK				*iS*	Sn	**00 56 43.5**	**-1.7**
UZB	**Uzynbulak**	**3.93**	**38**	*eP*	Pb	**00 56 09.6**	**-2.0**
	3.2nm,0.1s						
UZB				*eS*	Sg	**00 57 05.1**	**-2.7**
	42nm,0.9s						
SHLS	**Shalkode**	**4.16**	**41**	*eP*	Pb	**00 56 16.4**	**+0.9**
	2.1nm,0.2s						
SHLS				*eS*	Sg	**00 57 16.8**	**+1.7**
	50nm,0.9s						
PDGK	**Podgornoye**	**4.29**	**40**	Pn	Pn	**00 56 11.4**	**+3.5**
	2.6nm,0.7s						
PDGK				Pg	Pb	**00 56 19.8**	**+2.0**
	4.3nm,0.6s						
PDGK				Lg	Lg	00 57 16.8	
	49nm,1.1s						
GAR	**Garm**	**4.31**	**257**	*iP*	Pn	**00 56 08.0**	**-0.2**
GAR				*iS*	Sn	**00 56 56.9**	**-2.1**
IUG	**Iuzhnay**	**4.76**	**297**	*eP*	Pg	**00 56 29.7**	**-3.0**
	10nm,0.5s						
IUG				*eS*	Sg	**00 57 39.6**	**+5.3**
	33nm,0.8s						
KK31	**Karatay Array**	**4.92**	**309**	Pn	Pn	**00 56 19.2**	**+2.8**
	0.7nm,0.4s,baz=118,slow=13,SNR=12						
KK31				Pg	Pb	**00 56 32.5**	**+4.1**
	4.1nm,0.6s,baz=128,slow=16,SNR=16						
KK31				Lg	Lg	00 57 38.3	
	9.2nm,0.5s,baz=128,slow=28,SNR=9.3						
BRLS	**Borolday**	**5.29**	**306**	*eP*	Pb	**00 56 37.8**	**+3.0**
	4.5nm,0.8s						
BRLS				*eS*	Sg	**00 57 53.3**	**+1.7**
	13nm,0.7s						
MAKZ	**Makanchi**	**8.11**	**32**	Pn	Pn	**00 57 03.5**	**+3.2**
	0.5nm,0.6s						
MAKZ				Lg	Lg	00 59 17.0	
	2.3nm,0.8s						
MK31	**Makanchi Array**	**8.23**	**33**	Pn	Pn	**00 57 04.8**	**+2.9**
	0.4nm,0.5s,baz=203,slow=16,SNR=3.4						
MK31				Lg	Lg	00 59 23.2	
	2.7nm,1.0s,baz=216,slow=32,SNR=3.7						

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*IDC **22** 01:11:33.2±2.7, 30.39N×50.68E, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=65.2km s-min=30.5km az=154.0*
*NEIC **22** 01:11:34.4±1.4, 30.24N±0.09×50.9E±0.2, h10km±2km, mb4.3/7, Error ellipse: s-maj=25.5km s-min=15.9km az=92.0*
*TEH **22** 01:11:34.7, 30.38N×50.77E, h6km±73km, ML3.3, Presumed earthquake*
ISC 22 01:11:36.9±0.7, 30.30N±0.05×50.74E±0.06, h25km, n31, σ1≡41/31, mb4.2/9, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLNJ	**Kolanjah**	**1.02**	**46**	Pg	Pn	**01 11 54.1**	**-1.8**
KAZ2	**Kazeron-Fars-I**	**1.05**	**130**	Pg	Pb	**01 11 56.7**	**+0.2**
IBRJ	**Brojen**	**1.66**	**15**	Pg	Pn	**01 12 05.5**	**+0.8**
SHI	**Shiraz**	**1.67**	**113**	Pg	Pb	**01 12 07.0**	**-0.1**
ZNGN	**Zangian**	**1.81**	**3**	Pg	Pb	**01 12 08.4**	**-1.2**
AMIS	**Naft Sefid**	**1.85**	**318**	Pn	Pb	**01 12 08.6**	**-1.3**
JHBN	**Jahan bin**	**1.92**	**358**	Pn	Pn	**01 12 10.0**	**+1.6**
IRAM	**Ramesheh**	**2.06**	**43**	Pn	Pb	**01 12 12.2**	**-1.5**
QIR1	**Qir**	**2.71**	**132**	Pn	Pb	**01 12 22.1**	**-2.6**
IZEF	**Zefreh**	**2.92**	**27**	Pn	Pn	**01 12 24.2**	**+2.2**
TAFT	**Taft - Yazd**	**3.27**	**63**	Pn	Pn	**01 12 29.0**	**+2.3**
DOBD	**Dorbid, Yazd**	**3.64**	**62**	Pn	Pn	**01 12 34.1**	**+2.2**
ICHK	**Chekchek**	**3.69**	**57**	Pn	Pn	**01 12 34.2**	**+1.7**
QABG	**Abgarm-Qazvin**	**5.48**	**350**	Pn	Pn	**01 12 58.6**	**+1.5**
IDHR	**Dehrash**	**5.72**	**321**	Pn	Pn	**01 13 03.2**	**+2.8**
RAYN	**Ar Rayn**	**8.21**	**216**		Pn	**01 13 33.8**	**-0.7**
GNI	**Garni**	**10.98**	**335**	Pn	Pn	**01 14 13.0**	**+0.6**
MLR	**Muntele Rosu**	**24.62**	**315**	P	P	**01 16 57.0**	**+1.6**
MLR				IAmb	IAmb	01 17 24.7	
	comp=Z,9.2nm,1.4s						
BURAR	**Bucovina Array**	**26.14**	**319**	P	P	**01 17 10.0**	**+0.9**
BUR08	**Bucovina Ar. S**	**26.17**	**319**	P	P	**01 17 10.2**	**+0.9**
BUR08				IAmb	IAmb	01 17 17.8	
	comp=Z,4.7nm,1.2s						
MKAR	**Makanchi Array**	**29.41**	**47**	P	P	**01 17 39.1**	**+0.9**
	comp=Z,0.1nm,0.4s,baz=244,slow=9.7,SNR=1.9						
	comp=Z,0.1nm,0.4s						
MKAR	**Makanchi Array**	**29.41**	**47**	P	P	**01 17 38.5**	**+0.2**
NRCA	**Norcia**	**32.44**	**303**	P	P	**01 18 04.6**	**-0.5**
NRCA				IAmb	IAmb	01 18 39.2	
	comp=Z,9.6nm,1.4s						
FDMO	**Fiordimonte**	**32.50**	**304**	P	P	**01 18 05.9**	**+0.4**
ZALV	**Zalesovo Beam**	**34.07**	**36**	P	P	**01 18 17.9**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=246,slow=11,SNR=11						
	comp=Z,0.4nm,0.3s						
FINES	**FINESS Array B**	**35.12**	**340**	P	P	**01 18 27.2**	**-0.8**
	comp=Z,3.1nm,1.0s,baz=147,slow=9.4,SNR=8.6						
	comp=Z,3.1nm,1.0s						
FINES	**FINESS Array B**	**35.12**	**340**	P	P	**01 18 27.0**	**-1.0**
TORD	**Torodi Ar. Bea**	**48.27**	**260**	P	P	**01 20 15.8**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=60,slow=7.4,SNR=2.3						
	comp=Z,0.3nm,0.7s						
SPITS	**Spitsbergen Ar**	**50.32**	**351**	P	P	**01 20 30.8**	**-0.2**
	comp=Z,4.0nm,0.8s,baz=147,slow=11,SNR=4.3						
	comp=Z,4.0nm,0.8s						
A36M	**Sachs Harbour**	**77.95**	**359**	P	P	**01 23 32.2**	**-0.1**
A36M				IAmb	IAmb	01 24 09.5	
	comp=Z,4.5nm,1.3s						
D23K	**Nanushuk River**	**79.78**	**8**	P	P	**01 23 42.6**	**+0.2**
D23K				IAmb	IAmb	01 24 21.2	
	comp=Z,3.3nm,1.1s						

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*IDC **22** 01:13:20.5±0.6, 23.68S×64.57W, h0km, mb4.3/11, mbtmp4.2/18, ML3.8/7, MS3.8/23, Error ellipse: s-maj=19.0km s-min=13.0km az=66.0*
*SJA **

comp=E,2.7nm,0.3s,baz=294,slow=13,SNR=195
CPUP Lg Lg 01 17 05.6
comp=E,5.6nm,0.3s,baz=318,slow=16,SNR=3.1
CPUP LR LR 01 18 20.9
comp=E,675nm,20.3s,baz=288,slow=42
comp=E,60nm,0.9s
CPUP Villa Florida 7.06 113 Pn Pn 01 15 06.6 +0.8
CPUP Villa Florida 7.06 113 *eP* **Pn 01 15 06.3 +0.5**
AC04 Llanos de Chal 7.38 231 Pn 01 15 10.7 +0.5
BBSD Serra de San D 7.46 30 *eP* **Pn 01 15 11.8 +0.5**
PB18 Visviri 7.62 322 Pn 01 15 18.1 +4.1
BDQN Bodoquena, MS 7.93 67 *eP* **Pn 01 15 19.2 +1.5**
LPAZ La Paz 8.10 335 Pn **Pn 01 15 20.5 -0.1**
LPAZ Sn **Sn 01 16 47.4 -5.0**
comp=E,0.4nm,0.3s,baz=138,slow=15,SNR=2.0
LPAZ Lg Lg 01 17 37.5
comp=E,0.5nm,0.3s,baz=225,slow=10.0,SNR=1.0
LPAZ LR LR 01 18 59.4
comp=E,303nm,18.4s,baz=140,slow=42
comp=E,0.6nm,0.3s
LPAZ La Paz 8.10 335 Pn 01 15 21.6 +1.0
LPAZ La Paz 8.10 335 *eP* **Pn 01 15 20.7 +0.1**
SIV San Ignacio 8.34 24 Pn **Pn 01 15 23.8 +0.4**
comp=E,0.3nm,0.3s,baz=215,slow=6.9,SNR=54
SIV Sn **Sn 01 16 54.4 -3.0**
comp=E,0.4nm,0.3s,baz=259,slow=19,SNR=1.8
SIV Lg Lg 01 17 44.6
comp=E,0.4nm,0.3s,baz=272,slow=16,SNR=3.7
comp=E,7.5nm,0.5s
CFA Coronel Fontan 8.53 202 Pn **Pn 01 15 25.9 0.0**
comp=E,0.7nm,0.3s,baz=17,slow=13,SNR=6.8
CFA Sn **Sn 01 16 59.4 -2.7**
comp=E,1.0nm,0.3s,baz=43,slow=11,SNR=4.0
CFA Lg Lg 01 17 50.6
comp=E,1.1nm,0.3s,baz=81,slow=18,SNR=2.0
comp=E,2.9nm,0.5s
AQDB Aquidauana 8.82 70 Pn 01 15 32.2 +2.3
AQDB Aquidauana 8.82 70 *eP* **Pn 01 15 30.4 +0.5**
AMBA Amambai (Brazi 8.83 87 *eP* **Pn 01 15 31.0 +0.9**
PSAL Palomas, Salto 9.60 142 *eP* **Pn 01 15 41.2 +0.5**
PTLB Pontes e Lacer 9.66 33 Pn 01 15 41.9 +0.4
PTLB Pontes e Lacer 9.66 33 *eP* **Pn 01 15 44.9 +3.4**
PP1B Ponte de Pedra 10.90 58 *eP* **Pn 01 16 01.6 +3.1**
TRCB Terra Rica 11.00 88 Pn 01 15 59.9 0.0
TRCB Terra Rica 11.00 88 *eP* **Pn 01 16 00.1 +0.2**
SALV Santo Antonio 11.39 49 *eP* **Pn 01 16 05.3 +0.1**
PTGB Pitanga 11.45 98 *eP* **Pn 01 16 06.7 +0.7**
VILB Vilhena 11.46 22 Pn 01 16 06.1 0.0
VILB Vilhena 11.46 22 *eP* **Pn 01 16 06.7 +0.6**
ITAB Concordia 11.77 110 Pn 01 16 10.4 +0.2
ITAB Concordia 11.77 110 *eP* **Pn 01 16 09.8 -0.5**
CPSB Cacapava Do Su 11.95 126 *eP* **Pn 01 16 11.7 -1.1**
LDASE Londrina, Braz 12.34 91 *eP* **Pn 01 16 17.8 -0.3**
CNLB Canela 13.48 117 *eP* **Pn 01 16 34.9 +1.1**
FRTB Fartura 13.76 92 *eP* **Pn 01 16 38.7 +1.1**
PDRB Porto dos Gac 14.14 33 *eP* **Pn 01 16 43.6 +0.8**
BI02 San Fabin de 14.16 203 Pn **Pn 01 16 41.2 -1.9**
TRQA Tornquist 14.48 172 Pn 01 16 48.0 +0.6
MAJ01 Sao Joao Batis 14.51 108 *eP* **Pn 01 16 49.0 +1.2**
BB19B Bebedouro 15.06 83 *eP* **Pn 01 16 55.5 +0.2**
CLDB Colider 15.24 35 *eP* **Pn 01 16 58.8 +1.0**
IPMB Ipameri, GO 16.30 73 *eP* **Pn 01 17 10.7 -0.7**
NNA Nana 16.49 313 Pn **Pn 01 17 14.0 +0.2**
comp=E,0.6nm,0.3s,baz=155,slow=8.5,SNR=6.5
comp=E,14nm,0.8s
NNA Nana 16.49 313 P 01 17 16.6 +0.1
SNDB Serra Nova Dou 17.17 50 *eP* **Pn 01 17 24.0 +1.5**
BDFB Brasilia 17.51 66 P Pn 01 17 27.1 +0.4
comp=E,0.1nm,0.3s,baz=205,slow=24,SNR=2.1
BDFB Lg Lg 01 22 32.8
comp=E,0.2nm,0.3s,baz=144,slow=16,SNR=3.5
comp=E,1.8nm,0.8s
PLCA Paso Flores 17.72 195 P Pn 01 17 29.8 +0.6
baz=17,slow=13,SNR=3.0
PLCA Lg Lg 01 22 38.5
baz=66,slow=4.4,SNR=3.0
PLCA LR LR 01 24 17.2
comp=E,258nm,18.5s,baz=2.0,slow=37
comp=E,1.9nm,1.1s
TEFE Tefe 20.07 360 *eP* **P 01 17 55.7 -0.2**
MACA Manacapuru-AM 20.76 11 *eP* **P 01 18 03.6 +0.2**
ITTB Itaituba 21.02 25 *eP* **P 01 18 07.2 +1.0**
ATAH Atahualpa 21.16 319 P P 01 18 08.6 +0.4
comp=E,5.4nm,0.8s,baz=158,slow=6.5,SNR=8.8
ATAH LR LR 01 26 41.7
comp=E,88nm,18.9s,baz=142,slow=38
comp=E,5.4nm,0.8s
SMTB Santa Maria do 21.94 51 *eP* **P 01 18 16.7 +0.6**
PRPB Parauapebas 22.47 41 *eP* **P 01 18 23.4 +1.6**
OTAV Otavalo 27.35 328 P P 01 19 08.6 +0.4
OTAV Otavalo 27.35 328 P 01 19 09.3 +1.1
ROSC El Rosal 29.92 340 P P 01 19 31.6 +0.7
comp=E,4.5nm,0.4s,baz=302,slow=21,SNR=2.2
ROSC LR LR 01 32 32.8
comp=E,134nm,20.3s,baz=241,slow=38
comp=E,4.5nm,0.4s
ROSC El Rosal 29.92 340 P P 01 19 32.2 +1.3
ROSC IAmb IAmb 01 19 34.5
comp=E,16nm,1.4s
MDP Montagnes des 30.89 24 LR LR 01 33 12.1
comp=E,141nm,20.5s,baz=142,slow=39
SDV Santo Domingo 32.92 349 LR LR 01 35 05.3
comp=E,96nm,18.3s,baz=84,slow=40
JTS Las Juntas de 39.23 327 LR LR 01 38 25.9
comp=E,60nm,18.3s,baz=266,slow=38
SNAA Sanae 58.90 161 P **P 01 23 21.7 +0.6**
comp=E,2.8nm,0.7s,baz=334,slow=13,SNR=3.9
SNAA LR LR 01 48 45.0
comp=E,64nm,19.1s,baz=262,slow=36
comp=E,2.8nm,0.7s
HBVL Hebbronville 60.27 325 P P 01 23 31.4 +0.5
HBVL IAmb IAmb 01 24 14.6
comp=E,8.2nm,1.0s
V55A Taylorsville 61.29 345 P P 01 23 36.8 -0.9
TKL Tuckaleechee C 61.77 342 LR LR 01 51 13.3
comp=E,66nm,20.7s,baz=166,slow=37
TKL Tuckaleechee C 61.77 342 P P 01 23 39.2 -1.8
WVT Waverly 63.44 339 P P 01 23 50.2 -1.9
DBIC Dimbokro 65.59 70 LR LR 01 52 03.1
comp=E,122nm,18.1s,baz=232,slow=35
MGMO Mountain Grove 65.92 336 IAmb IAmb 01 24 13.3
comp=E,7.0nm,1.1s
QSPA South Pole Qui 66.51 180 P P 01 24 12.5 +0.5
comp=E,10nm,0.8s,baz=192,slow=1.6,SNR=26
comp=E,10nm,0.8s
QSPA South Pole Qui 66.51 180 P 01 24 12.4 +0.5
I42A Draeger Farm, 70.87 342 P P 01 24 38.0 -1.1
SDCO Great Sand Dun 72.22 327 IAmb IAmb 01 24 49.0
comp=E,12nm,1.4s
MVCO Mesa Verde 73.36 325 IAmb IAmb 01 25 21.5
comp=E,4.6nm,0.8s
ISCO Idaho Springs 73.87 328 IAmb IAmb 01 24 59.0
comp=E,9.3nm,1.3s
SUR Sutherland 74.00 119 LR LR 01 54 40.7
comp=E,54nm,18.2s,baz=225,slow=34
PV01 Paradox Valley 74.09 325 IAmb IAmb 01 25 00.5
comp=E,14nm,1.4s
TORD Torodi Ar. Bea 74.38 68 P P 01 25 01.0 +0.3
comp=E,4.6nm,0.9s,baz=245,slow=7.4,SNR=13
comp=E,4.6nm,0.9s
HMU Henry Mountain 75.10 324 IAmb IAmb 01 25 07.0
comp=E,9.1nm,0.9s
O20A White River Ci 75.42 327 IAmb IAmb 01 25 07.9
comp=E,8.8nm,1.0s
TSUM Tsumeb 75.58 105 LR LR 01 55 09.4
comp=E,80nm,19.5s,baz=284,slow=33
SRU San Rafael Swe 75.84 325 IAmb IAmb 01 25 10.0
comp=E,5.3nm,0.8s
P18A Preston Nutter 76.07 325 IAmb IAmb 01 25 11.9
comp=E,6.8nm,0.8s
P17A Butcher Ranch, 76.22 325 IAmb IAmb 01 25 12.4
comp=E,6.8nm,1.0s
CCUT Cedar City 76.27 322 IAmb IAmb 01 25 13.7
comp=E,2.2nm,0.9s
RDMU Red Mountain 76.42 326 IAmb IAmb 01 25 13.3
comp=E,5.8nm,1.0s
BSUT Blindstream Ca 77.01 326 P P 01 25 16.1 +0.4
BSUT IAmb IAmb 01 25 17.3
comp=E,8.7nm,0.9s
CCCA Chr Cany lake 77.24 318 IAmb IAmb 01 25 20.7
comp=E,9.1nm,1.2s
EPLO Experimental L 77.51 341 IAmb IAmb 01 25 17.9
comp=E,12nm,1.3s
TPNV Topopah Spring 77.52 320 P P 01 25 19.2 +0.8
TPNV IAmb IAmb 01 25 20.3
comp=E,7.0nm,1.1s
BW06 Boulder Array 78.06 328 IAmb IAmb 01 25 23.0
comp=E,6.7nm,1.4s
PDAR Pinedale Array 78.06 328 P P 01 25 21.1 -0.2
comp=E,1.2nm,0.6s,baz=124,slow=7.5,SNR=13
comp=E,1.2nm,0.6s
PDAR Pinedale Array 78.06 328 P P 01 25 21.2 -0.1
HWUT Hardware Ranch 78.20 326 IAmb IAmb 01 25 37.7
comp=E,7.0nm,1.2s
SPUT South Promonto 78.45 325 P 01 25 24.0 +0.5
SPUT IAmb IAmb 01 25 24.2
comp=E,4.0nm,0.7s
ULM Lac du Bonnet 78.68 340 P P 01 25 23.2 -1.0
comp=E,1.2nm,0.6s,baz=134,slow=3.7,SNR=3.0
ULM LR LR 02 05 12.1
comp=E,64nm,18.2s,baz=180,slow=40
comp=E,1.2nm,0.6s
AHID Auburn Hatcher 78.82 327 IAmb IAmb 01 25 26.6
comp=E,7.4nm,0.9s
BOSA Boshof 78.87 116 P P 01 25 24.6 -1.6
comp=E,2.2nm,1.0s,baz=239,slow=4.2,SNR=3.5
BOSA LR LR 01 56 49.7
comp=E,48nm,18.5s,baz=211,slow=33
comp=E,2.2nm,1.0s
MOOW Moose Ponds 79.36 328 P 01 25 28.9 +0.4
ELK Elko 79.54 323 LR LR 02 03 35.7
comp=E,82nm,18.2s,baz=210,slow=38
FLWY Flagg Ranch 79.59 328 IAmb IAmb 01 25 31.0
comp=E,5.6nm,0.8s
RLMT Red Lodge 79.69 330 P P 01 25 30.6 +0.4
NVAR Mina Array Bea 79.72 320 P P 01 25 30.3 -0.3
comp=E,0.7nm,0.7s,baz=152,slow=5.9,SNR=7.9
comp=E,0.7nm,0.7s
YNE Yellowstone No 79.95 329 IAmb IAmb 01 25 32.9
comp=E,6.9nm,0.9s
YMR Madison River 80.15 328 IAmb IAmb 01 25 41.0
comp=E,10.0nm,1.0s
LBTB Lobatse 80.46 113 LR LR 01 57 08.7
comp=E,51nm,21.0s,baz=210,slow=33
PNTR Pine Nut 80.92 320 P P 01 25 37.0 0.0
PNTR IAmb IAmb 01 25 38.6
comp=E,4.6nm,0.8s
HLID Hailey 81.07 326 IAmb IAmb 01 25 39.6
comp=E,7.8nm,0.8s
PAHR Pah Rah Range 81.19 320 IAmb IAmb 01 25 40.0
comp=E,6.7nm,0.9s
PLID Pearl Lake 82.95 326 IAmb IAmb 01 25 48.8
comp=E,7.7nm,1.1s
J08A Circle Bar Ran 83.08 324 IAmb IAmb 01 25 49.2
comp=E,4.8nm,0.8s
BMO Blue Mountains 83.47 325 IAmb IAmb 01 25 52.1
comp=E,5.6nm,1.1s
K05A Summer Lake 84.01 322 P P 01 25 53.8 +0.7
F10A Beach Ranch, E 84.19 326 IAmb IAmb 01 26 00.7
comp=E,4.0nm,1.0s
ESDC Sonseca Array 84.65 42 P P 01 25 56.5 +0.3
comp=E,2.1nm,1.1s,baz=251,slow=4.9,SNR=7.0
ESDC LR LR 02 00 43.9
comp=E,29nm,20.0s,baz=280,slow=34
comp=E,2.1nm,1.1s
ESDC Sonseca Array 84.65 42 P P 01 25 57.1 +0.9
ESDC IAmb IAmb 01 26 02.4
comp=E,6.1nm,1.2s
NEW Newport 85.70 328 LR LR 02 11 53.8
comp=E,37nm,18.3s,baz=232,slow=41
C09A Chrisman Ranch 85.95 327 IAmb IAmb 01 26 03.4
comp=E,5.2nm,0.8s
EPH Ephrata 86.32 326 IAmb IAmb 01 26 05.4
comp=E,11nm,1.3s
LSZ Lusaka 86.43 105 LR LR 02 02 40.9
comp=E,47nm,18.5s,baz=187,slow=34
LTY Liberty 86.81 326 IAmb IAmb 01 26 06.9
comp=E,4.4nm,0.9s
SFJD Kangerlussuaq 91.02 5 LR LR 02 09 34.3
comp=E,38nm,19.1s,baz=201,slow=37
MBAR Mbarara 94.61 93 LR LR 02 08 53.7
comp=E,50nm,18.0s,baz=296,slow=35
YKA Yellowknife Ar 94.62 339 P P 01 26 42.3 -0.4
comp=E,0.5nm,1.0s,baz=133,slow=5.0,SNR=5.5
comp=E,0.5nm,1.0s
AFI Afiamalu 99.67 250 LR LR 02 04 15.8
comp=E,106nm,18.1s,slow=31
ASAR Alice Springs 129.62 202 PKP **PKPdf 01 32 31.3 -1.0**
comp=E,1.2nm,0.9s,baz=103,slow=2.8,SNR=4.1
WRA Warramunga Arr 132.87 205 PKP **PKPdf 01 32 37.4 -1.0**
comp=E,0.5nm,0.8s,baz=159,slow=2.1,SNR=2.7
ZALV Zalesovo Beam 142.06 29 PKP **PKPdf 01 32 53.2 -1.0**
comp=E,0.5nm,0.3s,baz=307,slow=1.4,SNR=3.8
MKAR Makanchi Array 144.85 41 PKP **PKPab 01 32 58.0 -0.4**
comp=E,5.9nm,1.0s,baz=294,slow=3.5,SNR=19
MKAR Makanchi Array 144.85 41 PKPab 01 32 58.3 -0.2
SONM Songino Array 154.86 14 PKP **PKPdf 01 33 14.8 -0.4**
comp=E,1.1nm,1.0s,baz=27,slow=0.6,SNR=6.5
SONM PKPbc **sPKPdf 01 33 20.9 -0.6**
comp=E,0.8nm,0.8s,baz=354,slow=2.9,SNR=4.2

AEIC ***22*** *01:21:54.9±2.3, 60.45N±0.01×142.99W±0.02, h5km±7km, Error ellipse: s-maj=1.7km s-min=1.6km az=135.0*
IDC ***22*** *01:21:54.5±1.4, 60.45N×142.81W, h0km, mb3.3/2, mbtmp3.3/7, ML3.2/5, Error ellipse: s-maj=22.1km s-min=14.2km az=31.0*
NEIC ***22*** *01:21:55.2±2.6, 60.49N±0.01×142.93W±0.02, h5km±2km, ML3.3/184, ML3.2(AEIC), Error ellipse: s-maj=3.0km s-min=1.9km az=195.0*

ISC 22 01:21:55.2±0.9, 60.46N±0.02×142.95W±0.02, h19km±2km, n158, σ1953/136, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARK	**Barkley Ridge**	**0.23**	**103**		**Pb**	**01 22 00.0**	**-0.5**
BARK					**Sb**	**01 22 04.1**	**0.0**
TGL	**Tana Glacier**	**0.31**	**11**		**Pg**	**01 22 01.4**	**-0.7**
TGL				Sg	**Sg**	**01 22 06.3**	**-0.4**
TGL				IAML		01 22 07.7	
	comp=N,5μm,0.3s						
CRQM	**Cirque**	**0.32**	**343**		**Pg**	**01 22 01.4**	**-0.8**
CRQM				Sg	**Sg**	**01 22 06.4**	**-0.7**
CRQM				IAML		01 22 08.6	
	comp=N,5μm,0.6s						
BGLC	**Bering Glacier**	**0.38**	**207**		**Pg**	**01 22 03.2**	**+0.2**
BGLC					**Sb**	**01 22 09.7**	**+1.0**
BERG	**Berg Lake**	**0.38**	**261**		**Pg**	**01 22 02.4**	**-0.8**
BERG					**Sg**	**01 22 08.8**	**+0.2**
BERG	**Berg Lake**	**0.38**	**261**	IAML		01 22 11.3	
	comp=N,5μm,0.5s						
BERG				IAML		01 22 11.8	
	comp=E,4μm,0.5s						
CYK	**Cape Yakataga**	**0.44**	**148**		**Pg**	**01 22 04.1**	**-0.1**
CYK					**Sb**	**01 22 11.5**	**+1.0**
KIAG	**Kiagna River**	**0.55**	**31**		**Pb**	**01 22 05.8**	**-0.5**
KIAG					**Sb**	**01 22 13.7**	**-0.1**
SUCK	**Suckling Hills**	**0.56**	**227**		**Pg**	**01 22 07.2**	**+0.7**
SUCK				Sg	**Sn**	**01 22 16.7**	**-0.3**
SUCK				IAML		01 22 25.1	
	comp=E,2μm,0.7s						
SUCK				IAML		01 22 25.8	
	comp=N,2μm,0.9s						
MESA	**MESA**	**0.57**	**119**		**Pb**	**01 22 06.4**	**-0.2**
MESA				Sg	**Sg**	**01 22 15.1**	**+0.7**
GRNC	**Granite Creek**	**0.65**	**64**		**Pb**	**01 22 07.2**	**-0.8**
GRNC				Sg	**Sb**	**01 22 15.9**	**-0.8**
GRNC				IAML		01 22 16.9	
	comp=N,2μm,0.6s						
BALM	**Baldy**	**0.65**	**27**		**Sb**	**01 22 16.8**	**+0.1**
PTPK	**Patty Peak**	**0.77**	**18**		**Sb**	**01 22 20.7**	**+0.5**
RKAV	**Rock Avalanche**	**0.81**	**100**		**Pb**	**01 22 10.7**	**0.0**
RKAV					**Pg**	**01 22 11.0**	**-0.1**
VRDI	**Verde Repeater**	**0.81**	**343**		**Pb**	**01 22 10.3**	**-0.5**
VRDI				Sg	**Sb**	**01 22 20.7**	**-0.8**
RAGM	**Ragged Mountai**	**0.86**	**266**		**Pb**	**01 22 11.5**	**0.0**
BARN	**Barnard Glacie**	**0.88**	**46**		**Pb**	**01 22 11.2**	**-0.6**
BARN				IAML		01 22 23.9	
	comp=E,856nm,0.5s						
BARN				IAML		01 22 24.2	
	comp=N,1μm,0.6s						
BARN	**Barnard Glacie**	**0.88**	**46**		**Sb**	**01 22 23.5**	**+0.2**
KAIM	**Kayak Island**	**0.91**	**235**		**Pb**	**01 22 12.0**	**-0.3**
MCARA	**McCarthy VSAT**	**0.93**	**358**		**Pb**	**01 22 12.2**	**-0.5**
MCARA				IAML		01 22 27.7	
	comp=N,996nm,0.5s						
MCARA	**McCarthy VSAT**	**0.93**	**358**		**Sb**	**01 22 24.8**	**+0.1**
CTGM	**Chitina Glacie**	**0.94**	**57**		**Pb**	**01 22 12.2**	**-0.8**
CTGM				IAML		01 22 25.9	
	comp=N,636nm,0.6s						

BMRM Bremner River 0.96 303 Pb 01 22 12.4 -0.9
LOGN Logan Glacier 1.03 68 Sb 01 22 27.2 -0.4
LOGN Logan Glacier 1.03 68 Pb 01 22 13.7 -0.7
LOGN IAML 01 22 29.2
comp=N,933nm,0.4s
GLB Gilahina Butte 1.08 337 Pb 01 22 14.3 -0.9
GLB IAML 01 22 35.2
comp=E,595nm,0.5s
PCA Pinnacle 1.39 104 Pn 01 22 20.1 +0.6
PCA Pinnacle 1.39 104 Sg 01 22 39.6 -0.5
EYAK Cordova Ski Ar 1.39 275 Pn 01 22 19.9 +0.4
O28M Mount Upton 1.40 76 Pn 01 22 19.7 -0.2
O28M IAML 01 22 43.6
comp=E,473nm,0.6s
O28M IAML 01 22 44.1
comp=N,425nm,0.5s
N25K Chitina, Valde 1.41 326 Pn 01 22 20.0 +0.2
DIV Divide 1.54 297 Pn 01 22 22.3 +0.6
DIV **Sb 01 22 43.6 +1.4**
DIV Divide 1.54 297 IAML 01 22 45.2
comp=N,287nm,0.5s
WASW Wrangell South 1.59 339 Pn 01 22 23.1 +0.6
WASW **Pb 01 22 23.3 -0.8**
WASW **Sg 01 22 47.3 +0.7**
YUK2 White River 1.68 36 Pn 01 22 24.6 +1.0
BCPM Bancas Point 1.73 106 Pn 01 22 24.9 +0.7
HIN Hinchinbrook I 1.76 270 Pn 01 22 24.6 -0.1
HIN Hinchinbrook I 1.76 270 IAML 01 22 51.6
comp=N,347nm,0.8s
HIN IAML 01 22 52.2
comp=E,320nm,0.7s
YUK8 Steele Glacier 1.77 61 Pn 01 22 25.9 +1.0
YUK8 **Pb 01 22 26.5 -0.6**
KLU Klutina 1.79 307 Pn 01 22 26.4 +1.3
KLU Klutina 1.79 307 IAML 01 22 53.9
comp=E,322nm,0.5s
M26K Nabesna, AK 1.95 359 Pb 01 22 29.6 -0.6
M26K Nabesna, AK 1.95 359 IAML 01 23 00.2
comp=E,227nm,0.6s
M26K IAML 01 23 03.5
comp=N,206nm,0.7s
M27K Edge Creek, AK 1.98 15 Pb 01 22 30.1 -0.5
M27K Edge Creek, AK 1.98 15 IAML 01 23 01.0
comp=E,226nm,0.7s
M27K IAML 01 23 03.1
comp=N,318nm,0.7s
GLI Glacier Island 2.09 284 Pn 01 22 29.4 +0.3
O29M Mount Kennedy 2.18 92 Pn 01 22 32.0 +1.5
P23K Montague Islan 2.27 260 Pn **Pn 01 22 31.8 +0.2**
P23K IAML 01 23 16.6
comp=N,167nm,0.9s
M24K Tolsona, Glenn 2.27 318 Pn 01 22 33.9 +2.1
M24K Tolsona, Glenn 2.27 318 IAML 01 23 19.8
comp=N,205nm,0.8s
YUK7 Dusty Glacier 2.38 86 Pn 01 22 35.1 +1.8
MENT Mentasta 2.52 352 IAML 01 23 16.3
comp=E,111nm,0.8s
SCM Sheep Creek Mo 2.53 305 IAML 01 23 12.6
comp=N,181nm,0.7s
SCM IAML 01 23 17.7
comp=E,145nm,1.1s
L26K Log Cabin Wild 2.59 356 Pn 01 22 38.8 +2.8
L26K Log Cabin Wild 2.59 356 IAML 01 23 15.3
comp=N,152nm,0.4s
L26K IAML 01 23 20.3
comp=E,122nm,0.5s
L27K Beaver Creek, 2.67 11 Pn 01 22 39.3 +2.2
BCAR Beaver Creek A 2.68 11 Pn 01 22 39.4 +2.1
M23K Glacier View 2.68 302 Pn 01 22 38.5 +1.3
HYT Haines Junctio 2.71 80 Pn 01 22 39.1 +1.4
HYT IAML 01 23 21.6
comp=E,110nm,0.7s
HYT IAML 01 23 22.4
comp=N,134nm,0.8s
PAX Paxson 2.79 336 Pn 01 22 40.5 +1.6
KNK Knik Glacier 2.86 292 Pn 01 22 41.5 +1.8
KNK Knik Glacier 2.86 292 IAML 01 23 30.3
comp=E,114nm,0.6s
KNK IAML 01 23 32.1
comp=N,130nm,1.1s
M29M Somme Creek 2.94 45 Pn 01 22 43.2 +2.4
SML Sawmill 2.94 300 Pn 01 22 42.9 +2.0
SML Sawmill 2.94 300 IAML 01 23 33.0
comp=N,110nm,1.0s
P30M Million Dollar 3.00 94 Pn 01 22 43.3 +1.6
P30M Million Dollar 3.00 94 IAML 01 23 32.2
comp=N,70nm,0.8s
P30M IAML 01 23 33.2
comp=E,77nm,0.9s
N30M Aishikik Lake 3.03 68 Pn 01 22 44.0 +1.9
N30M Aishikik Lake 3.03 68 IAML 01 23 31.9
comp=N,68nm,0.8s
WAT6 Susitna Watana 3.13 315 Pn 01 22 45.7 +2.1
GHO Glory Hole Cre 3.19 297 IAML 01 23 36.3
comp=E,96nm,0.7s
GHO IAML 01 23 38.0
comp=N,98nm,0.7s
GHO Glory Hole Cre 3.19 297 Pn 01 22 46.3 +2.0
GHO Pn 01 22 47.0
PMR Palmer 3.22 293 Pn 01 22 46.6 +2.0
PMR Palmer 3.22 293 IAML 01 23 41.4
comp=N,56nm,0.8s
DOT Dot Lake 3.25 351 IAML 01 23 48.0
comp=E,59nm,1.0s
SEW Seward 3.26 267 Pn **Pn 01 22 45.5 +0.3**
O22K Cooper Landing 3.36 273 Pn 01 22 46.9 +0.4
DHY Denali Highway 3.37 323 Pn 01 22 48.7 +1.9
DHY IAML 01 23 41.1
comp=N,59nm,1.2s
DHY IAML 01 23 44.0
comp=E,66nm,1.0s
RC01 Rabbit Creek A 3.39 284 Pn 01 22 48.1 +1.1
RC01 IAML 01 23 47.0
comp=N,71nm,1.0s
RC01 IAML 01 23 57.1
comp=E,46nm,0.8s
O30N Mendenhall 3.40 82 Pn 01 22 48.4 +1.3
O30N IAML 01 23 46.0
comp=N,58nm,0.6s
O30N IAML 01 23 47.7
comp=E,47nm,0.8s
RIDG Independent Ri 3.42 346 IAML 01 23 49.2
comp=N,49nm,1.2s
RIDG IAML 01 23 51.8
comp=E,49nm,1.1s
L29M L29M 3.51 39 Pn 01 22 51.6 +2.9
L29M L29M 3.51 39 IAML 01 23 52.5
comp=E,58nm,0.7s
L29M IAML 01 23 57.1
comp=N,67nm,1.1s
SCRK Sand Creek 3.57 353 Pn 01 22 51.9 +2.3
SLKM Skilak Lake 3.60 274 Pn 01 22 50.0 +0.1
SLKM IAML 01 23 50.1
comp=N,73nm,0.9s
SLKM IAML 01 23 50.3
comp=E,46nm,0.9s
K27K Chicken 3.61 6 Pn 01 22 51.9 +1.9
K27K Chicken 3.61 6 IAML 01 23 55.2
comp=E,43nm,1.0s
K24K Donnelly Dome 3.61 340 Pn 01 22 52.7 +2.6
K24K IAML 01 23 59.3
comp=N,54nm,0.8s
M30M Minto, Yukon 3.63 52 Pn 01 22 52.3 +1.9
M30M Minto, Yukon 3.63 52 IAML 01 23 55.7
comp=N,43nm,1.0s
N31M Braeburn, Yuko 3.64 70 Pn 01 22 52.6 +2.1
N31M IAML 01 23 58.4
comp=E,70nm,1.1s
WAT7 Susitna Watana 3.69 313 Pn 01 22 53.3 +2.1
SKAG Skagway 3.96 101 Pn 01 22 55.7 +1.0
SKAG IAML 01 24 05.7
comp=E,35nm,1.0s
WHY Whitehorse 3.99 84 Pn 01 22 56.6 +1.3
CUT Chulitna 4.02 302 Pn 01 22 57.9 +2.3
BRLK Bradley Lake 4.03 264 Pn 01 22 56.1 +0.2
RND Reindeer 4.07 319 Pn 01 22 58.4 +2.1
RND Reindeer 4.07 319 IAML 01 24 04.9
comp=E,48nm,0.9s
RND IAML 01 24 12.3
comp=N,36nm,0.8s
K29M Barlow Dome 4.25 34 Pn 01 23 01.7 +2.8
K29M Barlow Dome 4.25 34 IAML 01 24 15.4
comp=N,24nm,1.1s
S31K Pelican 4.26 123 Pn **Pn 01 22 59.6 +0.7**
S31K IAML 01 24 13.7

	comp=N,32nm,0.9s							
S31K				IAML		01 24 19.4		
	comp=E,37nm,0.8s							
CNPM	**China Poot**	**4.27**	**261**	Pn	**Pn**	**01 22 58.2**	**-0.9**
L22K	**Petersville**	**4.29**	**302**		**Pn**	**01 23 01.3**	**+2.0**
L22K	**Petersville**	**4.29**	**302**	IAML		01 24 07.4		
	comp=E,38nm,0.6s							
L22K				IAML		01 24 16.9		
	comp=N,33nm,1.0s							
J25K	**Salcha River,**	**4.32**	**346**		**Pn**	**01 23 01.6**	**+1.8**
J25K					Pn	01 23 02.3		
MCK	**McKinley**	**4.33**	**322**	IAML		01 24 16.1		
	comp=E,36nm,1.0s							
MCK				IAML		01 24 22.4		
	comp=N,34nm,1.2s							
HDA	**Harding Lake**	**4.38**	**337**	IAML		01 24 23.3		
	comp=E,30nm,0.8s							
HDA				IAML		01 24 25.7		
	comp=N,22nm,1.0s							
SKT	**Skwentna**	**4.42**	**294**		**Pn**	**01 23 02.6**	**+1.4**
SKT					Pn	01 23 03.3		
SKT	**Skwentna**	**4.42**	**294**	IAML		01 24 07.5		
	comp=N,28nm,1.1s							
SKT				IAML		01 24 23.2		
	comp=E,24nm,1.1s							
M31M	**Drury Creek, Y**	**4.48**	**63**		**Pn**	**01 23 04.3**	**+2.4**
M31M	**Drury Creek, Y**	**4.48**	**63**	IAML		01 24 27.3		
	comp=N,29nm,1.2s							
M31M				IAML		01 24 32.7		
	comp=E,26nm,0.8s							
BESE	**Bessie Mountai**	**4.53**	**111**		**Pn**	**01 23 03.3**	**+0.6**
BESE	**Bessie Mountai**	**4.53**	**111**	IAML		01 24 13.1		
	comp=N,24nm,0.8s							
BESE				IAML		01 24 33.3		
	comp=E,34nm,1.0s							
SPCP	**Crater Peak Br**	**4.57**	**284**		**Pn**	**01 23 03.8**	**+0.4**
TRF	**Thorofare Moun**	**4.59**	**314**	IAML		01 24 24.4		
	comp=N,28nm,1.2s							
TRF				IAML		01 24 28.3		
	comp=E,37nm,0.9s							
RDT	**Redoubt**	**4.68**	**276**		**Pn**	**01 23 04.0**	**-0.7**
WRH	**Wood River Hil**	**4.68**	**332**		**Pn**	**01 23 07.5**	**+2.8**
WRH	**Wood River Hil**	**4.68**	**332**	IAML		01 24 24.7		
	comp=N,20nm,1.1s							
WRH				IAML		01 24 34.7		
	comp=E,19nm,0.9s							
IL31		**4.70**	**339**		**Pn**	**01 23 06.5**	**+1.6**
ILAR	**Eielson Array**	**4.70**	**339**	Pn	**Pn**	**01 23 06.4**	**+1.5**
	comp=E,0.7nm,0.3s,baz=162,slow=14,SNR=34							
ILAR				Lg	Lg	01 24 19.4		
	comp=E,0.8nm,0.3s,baz=165,slow=26,SNR=7.7							
	comp=E,2.3nm,0.5s							
P32M	**Atlin**	**4.71**	**97**		**Pn**	**01 23 05.5**	**+0.3**
P32M	**Atlin**	**4.71**	**97**	IAML		01 24 19.4		
	comp=N,28nm,0.9s							
P32M				IAML		01 24 31.9		
	comp=E,22nm,1.1s							
CCB	**Clear Creek Bu**	**4.77**	**334**		**Pn**	**01 23 07.4**	**+1.5**
CCB					Pn	01 23 07.8		
I26K	**Coal Creek Min**	**4.87**	**359**	IAML		01 24 33.2		
	comp=N,21nm,1.2s							
KTH	**Kantishna Hill**	**4.88**	**313**		**Pn**	**01 23 08.6**	**+1.2**
N32M	**Quiet Lake**	**4.88**	**78**		**Pn**	**01 23 08.7**	**+1.2**
JIS	**Juneau Island**	**4.89**	**113**		**Pn**	**01 23 08.6**	**+1.0**
COLA	**College**	**4.98**	**335**	IAML		01 24 37.3		
	comp=N,26nm,0.6s							
COLA				IAML		01 24 38.0		
	comp=N,25nm,0.7s							
P33M	**Teslin, Yukon**	**5.04**	**88**		**Pn**	**01 23 10.3**	**+0.6**
P33M	**Teslin, Yukon**	**5.04**	**88**	IAML		01 24 37.8		
	comp=N,18nm,1.1s							
MDM	**Murphy Dome**	**5.13**	**334**		**Pn**	**01 23 12.4**	**+1.5**
M20K	**Styx River**	**5.13**	**291**		**Pn**	**01 23 13.8**	**+2.8**
M20K	**Styx River**	**5.13**	**291**	IAML		01 24 40.3		
	comp=E,13nm,1.1s							
J30M	**Hart River**	**5.14**	**34**		**Pn**	**01 23 14.2**	**+3.0**
J30M	**Hart River**	**5.14**	**34**	IAML		01 24 20.8		
	comp=N,19nm,0.7s							
I28M	**Miner Creek**	**5.20**	**14**		**Pn**	**01 23 14.3**	**+2.4**
I27K	**Kandik River**	**5.20**	**6**		**Pn**	**01 23 14.4**	**+2.5**
I27K	**Kandik River**	**5.20**	**6**	IAML		01 24 19.2		
	comp=E,21nm,0.9s							
I27K				IAML		01 24 20.7		
	comp=N,22nm,0.7s							
PRP	**Porcupine Dome**	**5.21**	**348**		**Pn**	**01 23 15.5**	**+3.3**
PRP	**Porcupine Dome**	**5.21**	**348**	IAML		01 24 45.5		
	comp=N,12nm,1.1s							
BPAW	**Bear Paw Mtn.**	**5.24**	**318**		**Pn**	**01 23 13.5**	**+1.1**
BPAW	**Bear Paw Mtn.**	**5.24**	**318**	IAML		01 24 44.2		
	comp=E,12nm,0.8s							
BPAW				IAML		01 24 49.0		
	comp=N,15nm,1.1s							
S32K	**Killisnoo**	**5.27**	**121**		**Pn**	**01 23 13.7**	**+1.0**
S32K	**Killisnoo**	**5.27**	**121**	IAML		01 24 56.8		
	comp=E,11nm,0.8s							
KDAK	**Kodiak Island**	**5.64**	**246**	Pn	**Pn**	**01 23 17.9**	**0.0**
	comp=E,0.6nm,0.3s,baz=8.6,slow=3.5,SNR=15							
KDAK				Sn	**Sn**	**01 24 17.4**	**-4.6**
	comp=E,0.2nm,0.3s,baz=145,slow=1.5,SNR=1.6							
	comp=E,9.1nm,0.9s							
MMPY	**Sheldon Lake,**	**5.99**	**64**		**Pn**	**01 23 24.9**	**+2.1**
K20K	**Telida**	**6.01**	**304**		**Pn**	**01 23 24.4**	**+1.5**
R33M	**Jennings River**	**6.12**	**95**		**Pn**	**01 23 25.5**	**+0.9**
H29M	**Whitestone**	**6.14**	**18**		**Pn**	**01 23 27.2**	**+2.5**
J20K	**Nowinta River**	**6.41**	**310**		**Pn**	**01 23 30.3**	**+1.9**
H31M	**Peel River**	**6.63**	**32**		**Pn**	**01 23 34.3**	**+2.8**
G29M	**Pine Creek**	**6.84**	**17**		**Pn**	**01 23 36.7**	**+2.4**
DLBC	**Dease Lake**	**6.89**	**101**	Pn	**Pn**	**01 23 36.3**	**+1.2**
	comp=E,0.3nm,0.3s,baz=291,slow=14,SNR=6.6							
DLBC				Sn	**Sn**	**01 24 49.5**	**-3.4**
	comp=E,0.4nm,0.3s,baz=240,slow=17,SNR=3.2							
DLBC				Lg	Lg	01 25 23.1		
	comp=E,0.3nm,0.3s,baz=83,slow=14,SNR=4.1							
	comp=E,0.9nm,0.4s							
BM01	**Burnt Mountain**	**7.06**	**355**		**Pn**	**01 23 40.3**	**+3.0**
INK	**Inuvik**	**8.86**	**23**	Pn	**Pn**	**01 24 03.1**	**+1.1**
	comp=E,0.1nm,0.3s,baz=260,slow=20,SNR=3.7							
INK				Sn	**Sn**	**01 25 40.5**	**-0.6**
	comp=E,0.2nm,0.3s,baz=262,slow=18,SNR=3.2							
	comp=E,0.8nm,0.8s							
YKA	**Yellowknife Ar**	**13.64**	**69**	Pn	**Pn**	**01 25 07.1**	**-0.2**
	comp=E,0.1nm,0.3s,baz=276,slow=14,SNR=6.4							
	comp=E,0.2nm,0.4s							
RES	**Resolute Bay**	**22.28**	**31**	P	**P**	**01 26 50.9**	**+0.2**
	comp=E,0.6nm,0.8s,baz=259,slow=10,SNR=2.2							
	comp=E,0.6nm,0.8s							
ESDC	**Sonseca Array**	**74.71**	**32**	P	**P**	**01 33 35.2**	**+1.9**
	comp=E,0.5nm,0.9s,baz=344,slow=6.1,SNR=4.4							
	comp=E,0.5nm,0.9s							

IDC 22 01:32:14.2±2.8, 15°10S×175°84W, h0km, mb3.6/5, mbtmp3.6/5, MS3.5/14, Error ellipse: s-maj=176.4km s-min=25.6km az=149.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.11**	**74**	LR	LR	01 34 38.1	
	comp=Z,280nm,21.9s,slow=35						
MSVF	**Nonsavu**	**6.42**	**245**	LR	LR	01 36 09.5	
	comp=Z,468nm,21.9s,baz=4,slow=37						
DZM	**Mont Dzumac**	**18.16**	**245**	LR	LR	01 42 04.0	
	comp=Z,130nm,21.9s,baz=65,slow=32						
HNR	**Honiara**	**24.32**	**281**	LR	LR	01 44 51.8	
	comp=Z,7.3nm,18.7s,baz=186,slow=31						
PMG	**Port Moresby**	**36.57**	**275**	LR	LR	01 52 02.1	
	comp=Z,99nm,18.4s,baz=7.5,slow=32						
WRA	**Warramunga Arr**	**47.62**	**257**	P	P	01 40 52.6	+0.1
	0.6nm,1.0s,baz=89,slow=7.5,SNR=5.7						
	0.6nm,1.0s						
ASAR	**Alice Springs**	**47.97**	**252**	P	P	01 40 54.8	-0.4
	0.9nm,0.8s,baz=85,slow=7.4,SNR=9.2						
ASAR				LR	LR	01 59 16.9	
	comp=Z,76nm,20.2s,baz=110,slow=34						
	0.9nm,0.8s						
JNU	**Nakatsue**	**69.89**	**314**	LR	LR	02 07 18.9	
	comp=Z,29nm,21.6s,baz=32,slow=30						
ASAJ	**Asahikawa**	**70.07**	**329**	LR	LR	02 09 40.7	
	comp=Z,34nm,20.6s,baz=154,slow=32						
PETK	**Petropavlovsk-**	**71.66**	**344**	LR	LR	02 13 12.7	
	comp=Z,19nm,18.9s,baz=102,slow=34						
KSRS	**Korea Array**	**74.31**	**317**	LR	LR	02 14 35.2	
	comp=Z,9.6nm,18.7s,baz=40,slow=34						
PFO	**Pinyon Flats O**	**74.46**	**48**	LR	LR	02 11 13.4	
	comp=Z,54nm,18.5s,baz=266,slow=31						
LPIG	**La Paz**	**74.90**	**59**	LR	LR	02 12 38.9	
	comp=Z,62nm,18.0s,baz=206,slow=32						

NVAR	**Mina Array Bea**	**75.70**	**43**	P	P	01 44 01.6	-0.3	
	0.4nm,0.8s,baz=220,slow=11,SNR=3.5							
	0.4nm,0.8s							
KLR	**Kul'dur**	**79.01**	**328**	LR	LR	02 11 27.4		
	comp=Z,19nm,21.9s,baz=269,slow=30							
MA2	**Magadan**	**79.19**	**343**	LR	LR	02 13 12.1		
	comp=Z,23nm,21.1s,baz=152,slow=31							
ANMO	**Albuquerque**	**82.43**	**51**	LR	LR	02 18 25.5		
	comp=Z,71nm,18.4s,baz=268,slow=34							
ILAR	**Eielson Array**	**82.63**	**12**	P	P	01 44 39.0	0.0	
	0.2nm,0.6s,baz=206,slow=6.0,SNR=4.2							
	0.2nm,0.6s							
PDAR	**Pinedale Array**	**83.63**	**43**	P	P	01 44 45.4	+0.4	
	0.6nm,0.8s,baz=199,slow=2.7,SNR=6.0							
	0.6nm,0.8s							

*RSNC **22** 01:42:19.3±0.0, 8°N±1°×7°3W±°, h145km±2km, M3.1, mb3.6, ML2.7*
*FUNV **22** 01:42:20.0, 7°79N×73°16W, h5km, MW3.1, Presumed earthquake*

ISC 22 01:42:18.3±1.3, 7°66N±0°03×73°18W±0°04, h148km±8km, n36, σ1°64/71, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAMC	**Pamplona, Colo**	**0.57**	**124**	P	**Pn**	**01 42 41.0**	**+0.6**
PAMC				S	**Sn**	**01 42 57.1**	**0.0**
OCAC	**Ocana**	**0.59**	**347**	P	**Pn**	**01 42 40.8**	**+0.7**
OCAC				S	**Sn**	**01 42 57.2**	**+0.5**
BRJC	**Barrancabermej**	**0.88**	**219**	P	**Pn**	**01 42 42.2**	**+0.3**
BRJC				S	**Sn**	**01 42 59.6**	**-0.3**
BARC	**Barichara**	**1.06**	**180**	P	**Pn**	**01 42 43.6**	**-0.1**
BARC				S	**Sn**	**01 43 02.4**	**-0.6**
PTBC	**PUERTO BERRIO,**	**1.69**	**229**	P	**Pn**	**01 42 49.7**	**0.0**
PTBC				S	**Sn**	**01 43 13.1**	**-0.7**
RUSC	**La Rusia**	**1.76**	**177**	P	**Pn**	**01 42 50.8**	**-0.3**
RUSC				S	**Sn**	**01 43 14.9**	**-1.2**
RUSC	**La Rusia**	**1.76**	**177**	*e*P	**Pn**	**01 42 51.6**	**+0.5**
RUSC				*e*S	**Sn**	**01 43 16.8**	**+0.7**
SPBC	**San Pablo de B**	**2.18**	**204**	P	**Pn**	**01 42 55.9**	**+0.3**
SPBC				S	**Sn**	**01 43 24.0**	**-0.2**
UREC	**San Jos de Ur**	**2.33**	**272**	P	**Pn**	**01 42 56.6**	**-0.7**
UREC				S	**Sn**	**01 43 25.2**	**-2.1**
ARGC	**Ariguani, Magd**	**2.42**	**334**	P	**Pn**	**01 43 01.6**	**+3.2**
ARGC				S	**Sn**	**01 43 31.3**	**+2.0**
NORC	**Norcasia**	**2.67**	**219**	P	**Pn**	**01 43 01.6**	**0.0**
NORC				S	**Sn**	**01 43 34.4**	**-0.5**
SDV	**Santo Domingo**	**2.80**	**64**	P	**Pn**	**01 43 04.0**	**+0.7**
SDV				S	**Sn**	**01 43 36.8**	**-1.1**
SDV	**Santo Domingo**	**2.80**	**64**	*e*P	**Pn**	**01 43 04.0**	**+0.7**
SDV				*e*S	**Sn**	**01 43 36.4**	**-1.5**
SJCC	**San Jacinto, C**	**2.97**	**319**	P	**Pn**	**01 43 05.7**	**+0.4**
SJCC				S	**Sn**	**01 43 40.8**	**-0.9**
SJCC	**San Jacinto, C**	**2.97**	**319**	*e*P	**Pn**	**01 43 05.9**	**+0.6**
SJCC				*e*S	**Sn**	**01 43 40.3**	**-1.3**
ROSC	**El Rosal**	**3.02**	**202**	P	**Pn**	**01 43 08.0**	**+1.7**
ROSC				S	**Sn**	**01 43 44.0**	**+0.7**
CHIC	**Chingaza**	**3.06**	**190**	P	**Pn**	**01 43 07.3**	**+0.5**
CHIC				S	**Sn**	**01 43 44.2**	**0.0**
DBBC	**Dabeiba**	**3.07**	**258**	P	**Pn**	**01 43 06.9**	**+0.3**
DBBC				S	**Sn**	**01 43 42.1**	**-1.8**
CVER	**Cruz Verde, Cu**	**3.24**	**196**	P	**Pn**	**01 43 10.8**	**+1.6**
CVER				S	**Sn**	**01 43 49.9**	**+1.4**
GUY2C	**Guyana, Caldas**	**3.25**	**222**	P	**Pn**	**01 43 10.1**	**+0.8**
GUY2C				S	**Sn**	**01 43 50.1**	**+1.5**
CBOC	**Ciudad Bolivar**	**3.33**	**238**	P	**Pn**	**01 43 10.9**	**+0.9**
CBOC				S	**Sn**	**01 43 49.2**	**-0.8**
LCBC	**Los crdobas,**	**3.37**	**291**	P	**Pn**	**01 43 09.7**	**-0.6**
LCBC				S	**Sn**	**01 43 50.8**	**+0.2**
APAC	**Apartado, Choc**	**3.38**	**274**	P	**Pn**	**01 43 10.9**	**+0.5**
APAC				S	**Sn**	**01 43 50.5**	**-0.2**
NIZA	**Niza - Manizal**	**3.44**	**221**	P	**Pn**	**01 43 13.9**	**+2.3**
NIZA				S	**Sn**	**01 43 58.8**	**+6.0**
VILC	**Villavicencio,**	**3.56**	**188**	P	**Pn**	**01 43 13.4**	**+0.4**
VILC				S	**Sn**	**01 43 56.3**	**+1.0**
ANIL	**Santa Ana**	**3.85**	**215**	P	**Pn**	**01 43 18.6**	**+1.8**
ANIL				S	**Sn**	**01 44 07.9**	**+5.7**
PLMC	**San Jos del P**	**4.12**	**229**	P	**Pn**	**01 43 20.4**	**+0.2**
PLMC				S	**Sn**	**01 44 06.3**	**-2.0**
URIC	**Uribia, Colomb**	**4.18**	**16**	P	**Pn**	**01 43 20.5**	**-0.4**
URIC				S	**Sn**	**01 44 09.1**	**-0.5**
URIC	**Uribia, Colomb**	**4.18**	**16**	*e*P	**Pn**	**01 43 20.7**	**-0.2**
URIC				*e*S	**Sn**	**01 44 06.7**	**-3.0**
ORTC	**Ortega, Tolima**	**4.25**	**209**	P	**Pn**	**01 43 21.7**	**-0.2**
ORTC				S	**Sn**	**01 44 11.4**	**0.0**
PRAC	**Prado**	**4.27**	**203**	P	**Pn**	**01 43 21.8**	**-0.4**
PRAC				S	**Sn**	**01 44 11.1**	**-0.7**
URMC	**La Uribe, Meta**	**4.54**	**195**	P	**Pn**	**01 43 25.7**	**-0.1**
URMC				S	**Sn**	**01 44 17.9**	**-0.4**
YOTC	**Yotoco, Valle**	**4.82**	**221**	P	**Pn**	**01 43 28.9**	**-0.6**
YOTC				S	**Sn**	**01 44 20.5**	**-4.4**
MACC	**Macarena, Meta**	**5.52**	**187**	P	**Pn**	**01 43 37.1**	**-1.6**
	26nm,0.5s						
MACC				S	**Sn**	**01 44 37.7**	**-3.7**
	26nm,0.5s						
POPC	**Popayan, Colom**	**6.16**	**215**	P	**Pn**	**01 43 46.7**	**-0.7**
	3.4nm,1.7s						
FLOC	**Florencia**	**6.52**	**202**	P	**Pn**	**01 43 50.8**	**-1.2**
FLOC				S	**Sn**	**01 45 05.3**	**-0.1**

*IDC **22** 01:55:25.2±1.2, 60°41N×143°10W, h0km, mb3.2/1, mbtmp3.1/6, ML2.8/5, Error ellipse: s-maj=17.9km s-min=13.2km az=41.0*
*AEIC **22** 01:55:28.2±2.3, 60°47N±0°01×142°98W±0°02, h8km±6km, Error ellipse: s-maj=1.7km s-min=1.5km az=134.0*
*NEIC **22** 01:55:28.5±2.2, 60°498N±0°008×142°94W±0°02, h10km±2km, ML3.1/188, ML3.0(AEIC), Error ellipse: s-maj=3.0km s-min=2.0km az=165.0*

ISC 22 01:55:27.4±0.9, 60°44N±0°02×142°98W±0°02, h18km±2km, n143, σ2°02/148, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARK	**Barkley Ridge**	**0.24**	**97**		**Pb**	**01 55 33.0**	**-0.1**
BARK					**Sb**	**01 55 37.0**	**+0.2**
TGL	**Tana Glacier**	**0.33**	**13**		**Pg**	**01 55 34.2**	**-0.3**
TGL				Sg	**Sg**	**01 55 39.6**	**+0.2**
TGL				IAML		01 55 40.0	
	comp=E,5μm,0.3s						
TGL				IAML		01 55 40.6	
	comp=N,2μm,0.3s						
CRQM	**Cirque**	**0.33**	**346**		**Pg**	**01 55 34.4**	**-0.2**
CRQM				Sg	**Sg**	**01 55 39.0**	**-0.6**
CRQM				IAML		01 55 40.3	
	comp=E,4μm,0.6s						
CRQM				IAML		01 55 40.9	
	comp=N,3μm,0.4s						
BGLC	**Bering Glacier**	**0.35**	**206**		**Pb**	**01 55 36.0**	**+0.9**
BGLC					**Sn**	**01 55 43.0**	**-0.9**
BERG	**Berg Lake**	**0.36**	**264**		**Pg**	**01 55 35.5**	**+0.5**
BERG					**Sb**	**01 55 41.5**	**+0.9**
BERG	**Berg Lake**	**0.36**	**264**	IAML		01 55 42.0	
	comp=E,6μm,0.3s						
BERG				IAML		01 55 43.9	
	comp=N,5μm,0.3s						
CYK	**Cape Yakataga**	**0.43**	**145**		**Pb**	**01 55 37.0**	**+0.6**
CYK					**Sn**	**01 55 45.3**	**-0.6**
SUCK	**Suckling Hills**	**0.54**	**228**		**Pn**	**01 55 40.5**	**+0.4**
SUCK				Sg	**Sn**	**01 55 50.7**	**+2.1**
SUCK				IAML		01 55 58.4	
	comp=N,2μm,0.6s						
MESA	**MESA**	**0.57**	**116**		**Pg**	**01 55 39.4**	**+0.5**
MESA				Sg	**Sn**	**01 55 48.8**	**-0.9**
KIAG	**Kiagna River**	**0.58**	**32**		**Pb**	**01 55 38.7**	**-0.2**
KIAG					**Sb**	**01 55 46.6**	**-0.3**
GRNC	**Granite Creek**	**0.68**	**63**		**Pb**	**01 55 40.4**	**-0.3**
GRNC				Sg	**Sb**	**01 55 48.9**	**-0.8**
GRNC				IAML		01 55 52.1	
	comp=N,758nm,0.9s						
BALM	**Baldy**	**0.68**	**27**		**Pb**	**01 55 40.7**	**+0.1**
BALM					**Sb**	**01 55 49.5**	**-0.3**
PTPK	**Patty Peak**	**0.80**	**18**		**Pb**	**01 55 42.9**	**+0.2**
PTPK					**Sg**	**01 55 53.3**	**-0.2**
PTPK					**Sb**	**01 55 53.9**	**+0.6**
RKAV	**Rock Avalanche**	**0.82**	**99**		**Pg**	**01 55 43.6**	**+0.2**
VRDI	**Verde Repeater**	**0.83**	**344**		**Pb**	**01 55 43.4**	**+0.1**
RAGM	**Ragged Mountai**	**0.84**	**267**		**Pn**	**01 55 44.7**	**+0.4**
RAGM	**Ragged Mountai**	**0.84**	**267**		**Sn**	**01 55 57.7**	**+1.5**
GOAT	**Goat Mountain**	**0.88**	**280**		**Pg**	**01 55 44.9**	**+0.4**

KAIM	**Kayak Island**	**0.88**	**235**		**Pn**	**01 55 46.1**	**+1.3**	
KAIM				IAML		01 56 17.9		
	comp=E,423nm,0.8s							
BARN	**Barnard Glacie**	**0.90**	**45**		**Pb**	**01 55 44.3**	**-0.3**	
BARN				Sg	**Sb**	**01 55 55.8**	**-0.5**	
BARN				IAML		01 55 56.9		
	comp=E,524nm,0.7s							
BARN				IAML		01 55 57.1		
	comp=N,978nm,0.6s							
MCARA	**McCarthy VSAT**	**0.95**	**359**		**Pb**	**01 55 45.2**	**-0.1**	
MCARA				IAML		01 55 58.5		
	comp=E,728nm,0.5s							
MCARA				IAML		01 56 00.6		
	comp=N,576nm,0.5s							
MCARA	**McCarthy VSAT**	**0.95**	**359**		**Sb**	**01 55 57.2**	**-0.4**	
BMRM	**Bremner River**	**0.96**	**304**		**Pb**	**01 55 45.5**	**0.0**	
BMRM				IAML		01 56 07.5		
	comp=N,443nm,0.7s							
BMRM				IAML		01 56 07.5		
	comp=E,427nm,0.8s							
CTGM	**Chitina Glacie**	**0.97**	**56**		**Pb**	**01 55 45.3**	**-0.3**	
LOGN	**Logan Glacier**	**1.05**	**67**		**Pb**	**01 55 46.7**	**-0.3**	
LOGN				Sg	**Sb**	**01 56 00.2**	**-0.3**	
LOGN				IAML		01 56 02.1		
	comp=N,350nm,0.4s							
GLB	**Gilahina Butte**	**1.09**	**339**		**Pb**	**01 55 47.5**	**-0.2**	
GLB				Sg	**Sb**	**01 56 01.7**	**+0.2**	
GLB				IAML		01 56 08.1		
	comp=E,442nm,0.5s							
EYAK	**Cordova Ski Ar**	**1.38**	**276**		**Pb**	**01 55 53.2**	**+0.7**	
EYAK				IAML		01 56 15.3		
	comp=N,202nm,0.5s							
PCA	**Pinnacle**	**1.40**	**103**		**Pb**	**01 55 53.1**	**+0.2**	
PCA	**Pinnacle**	**1.40**	**103**		**Sg**	**01 56 12.4**	**-0.2**	
N25K	**Chitina, Valde**	**1.42**	**327**		**Pb**	**01 55 53.2**	**0.0**	
O28M	**Mount Upton**	**1.42**	**75**		**Pn**	**01 55 52.9**	**+0.5**	
DIV	**Divide**	**1.54**	**298**		**Pb**	**01 55 55.4**	**+0.1**	
DIV				IAML		01 56 17.9		
	comp=N,292nm,0.5s							
WASW	**Wrangell South**	**1.61**	**339**		**Pb**	**01 55 56.1**	**-0.5**	
WASW					**Pn**	**01 55 56.3**	**+1.3**	
WASW					**Sg**	**01 56 19.6**	**+0.4**	
WACK	**Wrangell Chich**	**1.69**	**338**		**Pb**	**01 55 57.5**	**-0.5**	
BCPM	**Bancas Point**	**1.74**	**105**		**Pb**	**01 55 58.1**	**-0.5**	
HIN	**Hinchinbrook I**	**1.75**	**270**		**Pn**	**01 55 57.9**	**+1.2**	
HIN				IAML		01 56 25.1		
	comp=E,248nm,0.7s							
HIN				IAML		01 56 29.6		
	comp=N,230nm,0.6s							
KLU	**Klutina**	**1.79**	**308**		**Pb**	**01 55 59.3**	**-0.2**	
KLU				IAML		01 56 26.8		
	comp=E,258nm,0.4s							
MID	**Middleton Isla**	**1.97**	**241**		**Pb**	**01 56 02.5**	**0.0**	
MID				IAML		01 56 36.7		
	comp=N,154nm,1.1s							
MID				IAML		01 56 44.3		
	comp=E,187nm,1.0s							
M26K	**Nabesna, AK**	**1.97**	**360**		**Pb**	**01 56 02.6**	**-0.2**	
M26K				IAML		01 56 31.7		
	comp=E,120nm,0.7s							
M26K				IAML		01 56 36.4		
	comp=N,125nm,0.7s							
M27K	**Edge Creek, AK**	**2.00**	**15**		**Pb**	**01 56 02.9**	**-0.4**	
M27K	**Edge Creek, AK**	**2.00**	**15**	IAML		01 56 34.5		
	comp=E,142nm,0.7s							
M27K				IAML		01 56 35.6		
	comp=N,205nm,0.8s							
GLI	**Glacier Island**	**2.08**	**284**		**Pn**	**01 56 02.8**	**+1.5**	
GLI				IAML		01 56 34.7		
	comp=E,131nm,0.5s							
GLI				IAML		01 56 38.9		
	comp=N,109nm,0.5s							
O29M	**Mount Kennedy**	**2.19**	**92**		**Pb**	**01 56 05.1**	**-1.4**	
BVCY	**Beaver Creek**	**2.23**	**26**		**Pb**	**01 56 06.6**	**-0.5**	
P23K	**Montague Islan**	**2.25**	**261**		**Pn**	**01 56 04.5**	**+0.9**	
P23K				IAML		01 56 49.4		
	comp=N,110nm,0.9s							
P23K				IAML		01 56 55.9		
	comp=E,101nm,0.9s							
M24K	**Tolsona, Glenn**	**2.28**	**319**		**Pb**	**01 56 07.2**	**-0.8**	
M24K	**Tolsona, Glenn**	**2.28**	**319**	IAML		01 56 48.0		
	comp=N,142nm,0.6s							
YUK7	**Dusty Glacier**	**2.40**	**86**		**Pn**	**01 56 08.1**	**+2.2**	
SCM	**Sheep Creek Mo**	**2.53**	**306**		**Pn**	**01 56 09.8**	**+2.2**	
SCM				IAML		01 56 50.5		
	comp=N,115nm,1.0s							
SCM				IAML		01 56 50.6		
	comp=E,126nm,1.1s							
L26K	**Log Cabin Wild**	**2.61**	**356**	IAML		01 56 47.2		
	comp=E,74nm,0.5s							
L26K				IAML		01 56 48.2		
	comp=N,90nm,0.4s							
M23K	**Glacier View**	**2.68**	**303**		**Pb**	**01 56 12.6**	**-2.1**	
M23K					**Pn**	**01 56 12.8**	**+3.3**	
L27K	**Beaver Creek,**	**2.69**	**11**		**Pn**	**01 56 12.2**	**+2.5**	
BCAR	**Beaver Creek A**	**2.70**	**12**		**Pn**	**01 56 11.6**	**+1.7**	
**H

WAT7	**Susitna Watana**	**3.69**	**313**		**Pn**	**01 56 26.1**	**+2.6**
WAT7					Pb	01 56 27.2	-4.8
WHY	**Whitehorse**	**4.01**	**83**		**Pn**	**01 56 29.7**	**+1.9**
WHY				IAML		01 57 39.5	
	comp=E,38nm,0.9s						
BRLK	**Bradley Lake**	**4.01**	**264**	Pn	**Pn**	**01 56 28.8**	**+0.9**
BRLK				IAML		01 57 16.4	
	comp=E,21nm,1.0s						
CUT	**Chulitna**	**4.02**	**303**		**Pn**	**01 56 31.0**	**+3.1**
RND	**Reindeer**	**4.07**	**320**		**Pn**	**01 56 31.8**	**+3.0**
RND				IAML		01 57 37.8	
	comp=E,26nm,0.9s						
RND				IAML		01 57 40.7	
	comp=N,22nm,0.8s						
CNPM	**China Poot**	**4.25**	**261**		**Pn**	**01 56 33.2**	**+2.2**
S31K	**Pelican**	**4.26**	**123**	Pn	**Pn**	**01 56 35.6**	**+4.4**
S31K				IAML		01 57 52.7	
	comp=E,15nm,0.9s						
S31K				IAML		01 58 04.0	
	comp=N,24nm,1.2s						
K29M	**Barlow Dome**	**4.27**	**34**		**Pn**	**01 56 34.5**	**+3.0**
L22K	**Petersville**	**4.28**	**303**		**Pn**	**01 56 34.4**	**+2.8**
L22K				IAML		01 57 38.3	
	comp=N,24nm,0.5s						
L22K				IAML		01 57 40.3	
	comp=E,24nm,0.6s						
MCK	**McKinley**	**4.33**	**322**		**Pn**	**01 56 35.4**	**+3.1**
MCK				IAML		01 57 45.3	
	comp=E,24nm,0.8s						
MCK				IAML		01 57 55.4	
	comp=N,23nm,1.2s						
J25K	**Salcha River,**	**4.34**	**346**		**Pn**	**01 56 35.6**	**+3.3**
HDA	**Harding Lake**	**4.39**	**337**		**Pn**	**01 56 36.0**	**+3.0**
HDA				IAML		01 57 56.2	
	comp=E,22nm,1.0s						
SKT	**Skwentna**	**4.42**	**294**		**Pn**	**01 56 36.7**	**+3.3**
SKT				IAML		01 57 48.0	
	comp=N,25nm,1.2s						
SKT				IAML		01 57 51.6	
	comp=E,18nm,1.1s						
STLK	**Strandline Lak**	**4.45**	**288**		**Pn**	**01 56 35.9**	**+2.1**
STLK				IAML		01 57 45.2	
	comp=N,13nm,0.7s						
M31M	**Drury Creek, Y**	**4.50**	**63**		**Pn**	**01 56 37.1**	**+2.6**
M31M				IAML		01 58 05.7	
	comp=E,13nm,0.9s						
SPU	**Mount Spurr**	**4.51**	**284**		**Pn**	**01 56 35.7**	**+1.1**
BESE	**Bessie Mountai**	**4.54**	**111**	Pn	**Pn**	**01 56 37.0**	**+1.9**
BESE				IAML		01 57 58.8	
	comp=E,16nm,0.7s						
BESE				IAML		01 58 20.8	
	comp=N,14nm,1.1s						
TRF	**Thorofare Moun**	**4.59**	**314**		**Pn**	**01 56 38.3**	**+2.4**
TRF				IAML		01 57 56.8	
	comp=N,16nm,0.8s						
J29N	**Klondike Camp**	**4.60**	**27**		**Pn**	**01 56 39.4**	**+3.5**
MAYO	**Mayo, Yukon**	**4.60**	**43**		**Pn**	**01 56 39.6**	**+3.6**
WRH	**Wood River Hil**	**4.69**	**332**		**Pn**	**01 56 38.0**	**+0.9**
WRH				IAML		01 58 07.6	
	comp=E,13nm,1.0s						
IL31		**4.71**	**339**		**Pn**	**01 56 39.9**	**+2.6**
ILAR	**Eielson Array**	**4.71**	**339**	Pn	**Pn**	**01 56 36.9**	**-0.5**
	comp=E,0.6nm,0.3s,baz=163,slow=11,SNR=30						
ILAR				Lg	Lg	01 57 52.3	
	comp=E,0.6nm,0.3s,baz=161,slow=24,SNR=7.3						
	comp=E,0.5nm,0.5s						
ILAR	**Eielson Array**	**4.71**	**339**		**Pn**	**01 56 39.8**	**+2.4**
P32M	**Atlin**	**4.73**	**96**		**Pn**	**01 56 38.3**	**+0.6**
P32M				IAML		01 57 52.5	
	comp=N,16nm,0.9s						
P32M				IAML		01 58 04.8	
	comp=E,11nm,1.1s						
CCB	**Clear Creek Bu**	**4.78**	**334**		**Pn**	**01 56 40.3**	**+2.0**
DFR	**Drift River**	**4.80**	**276**		**Pn**	**01 56 38.6**	**-0.1**
BWN	**Browne**	**4.82**	**324**	Pn	**Pn**	**01 56 40.4**	**+1.5**
R32K	**Eaglecrest**	**4.84**	**113**		**Pn**	**01 56 41.5**	**+2.3**
R32K				IAML		01 58 46.7	
	comp=N,9.5nm,1.0s						
KTH	**Kantishna Hill**	**4.88**	**313**		**Pn**	**01 56 42.9**	**+3.2**
KTH				IAML		01 58 05.0	
	comp=E,20nm,1.2s						
I26K	**Coal Creek Min**	**4.89**	**359**	IAML		01 58 08.8	
	comp=E,17nm,0.8s						
I26K				IAML		01 58 18.8	
	comp=N,11nm,0.9s						
N32M	**Quiet Lake**	**4.90**	**77**		**Pn**	**01 56 41.7**	**+1.6**
PPLA	**Purkeypile**	**5.03**	**303**		**Pn**	**01 56 44.7**	**+2.7**
PPLA	**Purkeypile**	**5.03**	**303**	IAML		01 58 09.3	
	comp=E,16nm,0.9s						
NEA2	**Nenana**	**5.04**	**329**		**Pn**	**01 56 43.8**	**+1.9**
NEA2				IAML		01 58 11.8	
	comp=E,8.9nm,0.9s						
P33M	**Teslin, Yukon**	**5.06**	**88**	IAML		01 58 19.7	
	comp=N,10nm,0.9s						
M20K	**Styx River**	**5.13**	**291**		**Pn**	**01 56 46.8**	**+3.6**
M20K	**Styx River**	**5.13**	**291**	IAML		01 58 11.4	
	comp=E,9.2nm,0.6s						
M20K				IAML		01 58 17.3	
	comp=N,8.1nm,0.7s						
J30M	**Hart River**	**5.17**	**34**		**Pn**	**01 56 47.2**	**+3.4**
J30M	**Hart River**	**5.17**	**34**	IAML		01 58 19.6	
	comp=N,12nm,0.8s						
P19K	**Oil Pt**	**5.20**	**266**	Pn	**Pn**	**01 56 46.9**	**+2.8**
I28M	**Miner Creek**	**5.22**	**14**		**Pn**	**01 56 47.8**	**+3.3**
I27K	**Kandik River**	**5.23**	**6**		**Pn**	**01 56 48.5**	**+4.0**
I27K	**Kandik River**	**5.23**	**6**	IAML		01 57 52.3	
	comp=E,12nm,0.9s						
I27K				IAML		01 57 53.3	
	comp=N,12nm,0.8s						
SIT	**Sitka**	**5.23**	**127**		**Pn**	**01 56 44.4**	**0.0**
SIT				IAML		01 59 38.4	
	comp=E,12nm,1.2s						
BPAW	**Bear Paw Mtn.**	**5.24**	**318**	Pn	**Pn**	**01 56 45.8**	**+1.1**
BPAW				IAML		01 58 16.9	
	comp=E,8.4nm,0.8s						
BPAW				IAML		01 58 17.1	
	comp=N,10nm,0.9s						
I29M	**Ogilvie Camp,**	**5.38**	**21**	IAML		01 57 58.0	
	comp=E,15nm,1.1s						
Q19K	**Cape Douglas,**	**5.61**	**259**		**Pn**	**01 56 52.1**	**+2.3**
KDAK	**Kodiak Island**	**5.62**	**246**	Pn	**Pn**	**01 56 47.0**	**-2.8**
	comp=E,0.5nm,0.3s,baz=356,slow=2.4,SNR=9.1						
KDAK				Sn	**Sn**	**01 57 48.5**	**-5.2**
	comp=E,0.3nm,0.3s,baz=192,slow=14,SNR=1.6						
	comp=E,13nm,1.0s						
H27K	**Steamboat Moun**	**5.86**	**6**		**Pn**	**01 56 56.9**	**+3.8**
K20K	**Telida**	**6.00**	**304**		**Pn**	**01 56 57.1**	**+2.0**
J20K	**Nowinta River**	**6.42**	**311**		**Pn**	**01 57 03.2**	**+2.4**
G29M	**Pine Creek**	**6.86**	**17**		**Pn**	**01 57 09.4**	**+2.5**
J19K	**Poorman**	**6.90**	**307**		**Pn**	**01 57 09.7**	**+2.3**
DLBC	**Dease Lake**	**6.90**	**101**	Pn	**Pn**	**01 57 08.8**	**+1.3**
	comp=E,0.2nm,0.3s,baz=256,slow=14,SNR=4.7						
DLBC				Sn	**Sn**	**01 58 22.7**	**-2.8**
	comp=E,0.2nm,0.3s,baz=245,slow=17,SNR=3.4						
DLBC				Lg	Lg	01 58 58.5	
	comp=E,0.1nm,0.3s,baz=53,slow=21,SNR=3.1						
	comp=E,0.7nm,0.5s						
BM01	**Burnt Mountain**	**7.08**	**355**		**Pn**	**01 57 12.7**	**+2.8**
INK	**Inuvik**	**8.89**	**23**	Pn	**Pn**	**01 57 34.6**	**0.0**
	baz=7.1,slow=32,SNR=1.4						
INK				Sn	**Sn**	**01 59 13.6**	**-0.5**
	comp=E,0.1nm,0.3s,baz=238,slow=19,SNR=3.5						
	comp=E,0.2nm,0.5s						
YKA	**Yellowknife Ar**	**13.67**	**69**	Pn	**Pn**	**01 58 39.6**	**-0.3**
	baz=273,slow=14,SNR=4.2						
	comp=E,0.4nm,0.8s						
NVAR	**Mina Array Bea**	**26.95**	**134**	P	**P**	**02 01 07.7**	**0.0**
	comp=E,0.2nm,0.7s,baz=325,slow=7.3,SNR=1.6						
	comp=E,0.2nm,0.7s						

IDC 22 02:12:30.0±5.6, 6°06S×147°15E, h140km±72km, mb3.3/2, mbtmp3.9/4, Error ellipse: s-maj=115.4km s-min=39.6km az=117.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.33**	**180**	P	Pn	02 13 20.8	-0.3
	9.1nm,0.3s,baz=344,slow=7.4,SNR=9.0						
PMG				S	Sn	02 14 01.6	+0.7
	27nm,0.5s,baz=139,slow=21,SNR=14						
WRA	**Warramunga Arr**	**18.59**	**221**	P	P	02 16 36.1	-0.4
	4.9nm,0.4s,baz=51,slow=12,SNR=139						
ASAR	**Alice Springs**	**21.65**	**215**	P	P	02 17 09.2	-0.4
	2.1nm,0.6s,baz=50,slow=8.6,SNR=48						
	2.1nm,0.6s						
KURBB	**Kurchatov Arra**	**81.36**	**323**	P	P	02 24 30.8	-0.1
	0.2nm,0.2s,baz=111,slow=7.0,SNR=1.5						
	0.2nm,0.2s						
TORD	**Torodi Ar. Bea**	**145.25**	**284**	PKPbc	PKPbc	02 31 52.0	0.0
	0.5nm,0.8s,baz=108,slow=1.8,SNR=3.4						

WEL ***22*** *02:27:01.4±1.2, 37°S±8°×18°0E±1°0, h12km, M3.2/14, ML3.2/17, MLv3.2/14, Error ellipse: s-maj=13.7km s-min=10.4km az=112.4, confirmed*

NOU ***22*** *02:27:02.6, 37°14S×179°53E, h6km, MLv3.9/9, Off E. Coast of N. Island, N.Z.*

ISC 22 02:27:01.2±2.9, 37°10S±0°09×179°8E±0°1, h31km, n42, σ1s21/45, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.28**	**248**	P	**Pn**	**02 27 22.3**	**-0.7**
MXZ	**Matakaoa Point**	**1.28**	**248**	S	**Sn**	**02 27 37.7**	**-1.4**
MXZ	**Matakaoa Point**	**1.28**	**248**	P	**Pn**	**02 27 22.8**	**-0.2**
MXZ				S	**Sn**	**02 27 38.5**	**-0.7**
WMGZ	**Waiomatatini S**	**1.32**	**236**	P	**Pb**	**02 27 25.2**	**-0.2**
PUZ	**Puketiti**	**1.57**	**231**	P	**Pb**	**02 27 28.7**	**-1.0**
PUZ				S	**Sb**	**02 27 49.5**	**+0.4**
PKGZ	**Pakihiroa**	**1.57**	**240**	P	**Pb**	**02 27 28.5**	**-1.2**
HAZ	**Te Kaha**	**1.74**	**247**	P	**Pn**	**02 27 29.9**	**+0.6**
TWGZ	**Tauwhareparae**	**1.81**	**233**	P	**Pb**	**02 27 32.3**	**-1.4**
TWGZ				S	**Sb**	**02 27 56.0**	**0.0**
CNGZ	**Carnagh Statio**	**1.88**	**222**	P	**Pb**	**02 27 33.8**	**-1.1**
RUGZ	**Raukumara Rang**	**1.90**	**242**	P	**Pn**	**02 27 33.0**	**+1.3**
TKGZ	**Te Karaka**	**2.05**	**229**	P	**Pn**	**02 27 35.1**	**+1.5**
MWZ	**Matawai**	**2.19**	**235**	P	**Pn**	**02 27 36.8**	**+1.2**
RIGZ	**Rimuhau**	**2.28**	**225**	P	**Pn**	**02 27 38.4**	**+1.6**
RAGZ	**Rawiri**	**2.35**	**233**	P	**Pn**	**02 27 39.0**	**+1.2**
PRGZ	**Paritu Road**	**2.37**	**219**	P	**Pn**	**02 27 39.7**	**+1.6**
URZ	**Urewera**	**2.43**	**241**	P	**Pn**	**02 27 40.0**	**+1.2**
URZ	**Urewera**	**2.43**	**241**	S	**Sn**	**02 28 08.3**	**+0.8**
URZ	**Urewera**	**2.43**	**241**	P	**Pn**	**02 27 40.1**	**+1.2**
MHGZ	**Mahia Peninsul**	**2.54**	**216**	P	**Pn**	**02 27 42.5**	**+2.2**
KNZ	**Kokohu**	**2.56**	**221**	P	**Pn**	**02 27 41.6**	**+1.1**
RTZ	**Ruatahuna**	**2.70**	**235**	P	**Pn**	**02 27 44.6**	**+1.9**
RAHZ	**Arahi**	**2.81**	**229**	P	**Pn**	**02 27 45.5**	**+1.4**
MTHZ	**Maungataniwha**	**2.93**	**232**	P	**Pn**	**02 27 47.1**	**+1.5**
ARHZ	**Aropaoanui**	**3.10**	**225**	P	**Pn**	**02 27 49.1**	**+1.2**
NMHZ	**Naumai**	**3.10**	**229**	P	**Pn**	**02 27 49.3**	**+1.3**
BKZ	**Black Stump Fm**	**3.33**	**231**	P	**Pn**	**02 27 52.4**	**+1.2**
BKZ	**Black Stump Fm**	**3.33**	**231**	P	**Sn**	**02 28 31.1**	**+1.3**
BKZ	**Black Stump Fm**	**3.33**	**231**	P	**Pn**	**02 27 52.2**	**+0.9**
MCHZ	**McNeill Hill**	**3.39**	**225**	P	**Pn**	**02 27 53.0**	**+1.0**
TOZ	**Tahuroa Road**	**3.48**	**258**	P	**Pn**	**02 27 53.9**	**+0.6**
KWHZ	**Kaweka Forest**	**3.54**	**228**	P	**Pn**	**02 27 54.5**	**+0.5**
KAHZ	**Kahuranaki**	**3.54**	**220**	P	**Pn**	**02 27 52.1**	**-2.1**
KRHZ	**Kereru**	**3.71**	**226**	P	**Pn**	**02 27 56.7**	**+0.3**
MKAZ	**Moumakai**	**3.71**	**268**	P	**Pn**	**02 27 56.5**	**+0.1**
MOVZ	**Moawhango**	**3.94**	**233**	P	**Pn**	**02 28 00.4**	**+0.8**
PRHZ	**Porangahau**	**4.02**	**217**	P	**Pn**	**02 28 00.2**	**-0.5**
HIZ	**Hauiti**	**4.17**	**249**	P	**Pn**	**02 28 04.4**	**+1.7**
HIZ	**Hauiti**	**4.17**	**249**	P	**Pn**	**02 28 04.3**	**+1.7**
MRZ	**Mangatainoka R**	**4.85**	**222**	P	**Pn**	**02 28 11.2**	**-0.9**
KHEZ	**Kahui Hut**	**5.06**	**243**	P	**Pn**	**02 28 16.0**	**+0.9**
OUZ	**Omahuta**	**5.36**	**289**	P	**Pn**	**02 28 20.2**	**+1.1**
OUZ	**Omahuta**	**5.36**	**289**	P	**Pn**	**02 28 19.9**	**+0.9**

IDC ***22*** *02:42:22.3±0.9, 32°12S×57°75E, h0km, mb4.0/9, mbtmp4.0/10, ML4.1/1, MS3.2/3, Error ellipse: s-maj=31.5km s-min=22.0km az=57.0*

NEIC ***22*** *02:42:25.1±1.0, 31°94S±0°09×57°7E±0°2, h10km±1km, mb4.1/4, Error ellipse: s-maj=27.8km s-min=14.6km az=273.0*

ISC 22 02:42:24.3±0.8, 32°1S±0°2×57°6E±0°1, h11km, n31, σ0s83/22, mb4.2/9, MS3.1/3, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FOMA	**Nahampoana Res**	**11.72**	**304**	Pn	**Pn**	**02 45 10.8**	**-0.8**
VOI	**Vohitsoka**	**13.98**	**314**	Pn	**Pn**	**02 45 41.8**	**-0.7**
H04N2	**CROZET ISLANDS**	**14.78**	**196**	T	T	03 01 04.2	
	baz=21,slow=75,SNR=2298						
H04N1	**CROZET ISLANDS**	**14.79**	**196**	T	T	03 01 05.3	
	baz=21,slow=75,SNR=2729						
H04N3	**CROZET ISLANDS**	**14.80**	**196**	T	T	03 01 14.9	
	baz=21,slow=75,SNR=2200						
ABPO	**Ambohimpanom**	**16.01**	**322**	Pn	**Pn**	**02 46 10.5**	**+0.8**
ABPO				IAmb	IAmb	02 46 13.0	
	comp=Z,8.9nm,1.2s						
OPO	**Ambohidratompo**	**16.40**	**322**	Pn	**Pn**	**02 46 14.5**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=103,slow=20,SNR=6.4						
	comp=Z,2.6nm,0.5s						
H08S1	**Diego Garcia H**	**27.95**	**33**	T	T	03 17 13.9	
	baz=207,slow=76,SNR=40						
H08S2	**Diego Garcia H**	**27.96**	**33**	T	T	03 17 14.6	
	baz=207,slow=76,SNR=32						
H08S3	**Diego Garcia H**	**27.97**	**33**	T	T	03 17 15.5	
	baz=207,slow=76,SNR=33						
BOSA	**Boshof**	**28.10**	**269**	LR	LR	02 57 29.4	
	comp=Z,42nm,18.3s,baz=146,slow=32						
LSZ	**Lusaka**	**31.59**	**295**	LR	LR	02 59 16.6	
	comp=Z,44nm,20.3s,baz=152,slow=32						
TSUM	**Tsumeb**	**38.10**	**280**	LR	LR	03 02 58.2	
	comp=Z,50nm,20.8s,baz=159,slow=32						
QSPA	**South Pole Qui**	**58.11**	**180**	P	**P**	**02 52 17.0**	**-0.6**
	comp=Z,3.0nm,0.8s,baz=270,slow=0.6,SNR=9.6						
	comp=Z,3.0nm,0.8s						
QSPA	**South Pole Qui**	**58.11**	**180**	P	**P**	**02 52 19.0**	**+1.4**
CMAR	**Chiang Mai Arr**	**63.95**	**44**	P	**P**	**02 52 57.0**	**-0.7**
	comp=Z,1.4nm,0.3s,baz=217,slow=7.1,SNR=9.7						
	comp=Z,1.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**63.95**	**44**	P	**P**	**02 52 57.2**	**-0.5**
ASAR	**Alice Springs**	**66.70**	**104**	P	**P**	**02 53 14.0**	**-1.7**
	comp=Z,1.1nm,0.8s,baz=239,slow=6.3,SNR=14						
	comp=Z,1.1nm,0.8s						
ASAR	**Alice Springs**	**66.70**	**104**	P	**P**	**02 53 14.6**	**-1.1**
WRA	**Warramunga Arr**	**68.73**	**101**	P	**P**	**02 53 28.3**	**-0.2**
	comp=Z,1.1nm,0.7s,baz=240,slow=5.5,SNR=7.7						
	comp=Z,1.1nm,0.7s						
WRA	**Warramunga Arr**	**68.73**	**101**	P	**P**	**02 53 29.0**	**+0.5**
WB0	**Warramunga Arr**	**68.86**	**101**	P	**P**	**02 53 29.0**	**-0.2**
WB0				IAmb	IAmb	02 53 29.7	
	comp=Z,2.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**69.89**	**301**	P	**P**	**02 53 36.3**	**+0.7**
	comp=Z,0.5nm,1.1s,baz=140,slow=5.6,SNR=1.9						
	comp=Z,0.5nm,1.1s						
BRTR	**Keskin Array B**	**74.81**	**341**	P	**P**	**02 54 03.8**	**-0.8**
	comp=Z,0.6nm,0.9s,baz=134,slow=4.2,SNR=4.0						
	comp=Z,0.6nm,0.9s						
KKAR	**Karatay Array**	**75.73**	**10**	P	**P**	**02 54 10.6**	**+1.0**
ABKAR	**Akbulak array**	**80.98**	**2**	P	**P**	**02 54 39.0**	**+0.5**
MKAR	**Makanchi Array**	**81.59**	**17**	P	**P**	**02 54 42.0**	**+0.2**
	comp=Z,0.5nm,0.9s,baz=211,slow=5.0,SNR=3.4						
	comp=Z,0.5nm,0.9s						
MKAR	**Makanchi Array**	**81.59**	**17**	P	**P**	**02 54 42.2**	**+0.3**
KURBB	**Kurchatov Arra**	**84.38**	**13**	P	**P**	**02 54 56.8**	**+0.6**
	comp=Z,1.6nm,0.9s,baz=205,slow=5.9,SNR=9.0						
	comp=Z,1.6nm,0.8s						
BVAR	**Bovoye Array**	**85.46**	**8**	P	**P**	**02 55 02.5**	**+0.9**
	comp=Z,2.7nm,0.8s,baz=185,slow=5.4,SNR=12						
	comp=Z,2.7nm,0.8s						
YKA	**Yellowknife Ar**	**149.15**	**353**	PKPbc	**PKPbc**	**03 02 11.5**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=358,slow=4.2,SNR=13						

ATH ***22*** *02:43:00.8, 36°44N×22°34E, h12km±1km, ML3.9/28, Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*

THE ***22*** *02:43:01.4, 36°N±1°×2°2E±°, h6km±1km, M3.8/46, MLh3.8/46*

PDG ***22*** *02:43:02.0±0.5, 36°57N×22°00E, h9km±11km, ML4.1/13, Error ellipse: s-maj=34.7km s-min=27.7km az=90.0*

IDC ***22*** *02:43:03.6±1.4, 36°56N×22°43E, h53km±14km, mb3.7/15, mbtmp3.8/25, ML3.3/6, MS3.3/13, Error ellipse: s-maj=16.9km s-min=10.0km az=38.0*

NEIC ***22*** *02:43:03.0±1.8, 36°55N±0°05×22°34E±0°08, h46km±8km, mb4.3/21, Error ellipse: s-maj=11.1km s-min=4.7km az=50.0*

NAO ***22*** *02:43:10.0, 36°44N×22°41E, h20km, MB3.9*

ISC 22 02:43:01.0±0.7, 36°43N±0°03×22°33E±0°02, h33km±5km, n273, σ2s09/330, mb4.2/21, MS3.3/7, 16C-11D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLI	**Veliai**	**0.57**	**59**	P	**Pb**	**02 43 11.5**	**-1.2**
VLI				S	**Sb**	**02 43 18.6**	**-2.1**
VLI	**Veliai**	**0.57**	**59**	P	**Pb**	**02 43 11.5**	**-1.2**
VLI				S	**Sb**	**02 43 19.4**	**-1.3**
NPS1	**Neapolis Lacon**	**0.60**	**82**	P	**Pb**	**02 43 12.1**	**-1.0**
NPS1				S	**Sb**	**02 43 20.3**	**-1.1**
KTHA	**Kythira Island**	**0.62**	**106**	P	**Pb**	**02 43 12.7**	**-0.8**
KTHA	**Kythira Island**	**0.62**	**106**	*i* P	**Pb**	**02 43 12.8**	**-0.7**
KTHA				S	**Sb**	**02 43 22.1**	**+0.1**
KTHA	**Kythira Island**	**0.62**	**106**	P	**Pb**	**02 43 12.7**	**-0.8**
MNVA	**Monemvasia**	**0.63**	**66**	P	**Pb**	**02 43 12.5**	**-1.0**
MNVA				S	**Sb**	**02 43 21.2**	**-0.9**
MTHA	**Methoni**	**0.64**	**308**	P	**Pb**	**02 43 14.1**	**+0.4**
MTHA				S	**Sb**	**02 43 22.0**	**-0.5**
PYL	**PYLOS**	**0.66**	**315**	P	**Pb**	**02 43 13.5**	**-0.7**
PYL				S	**Sb**	**02 43 23.6**	**+0.4**
PYL	**PYLOS**	**0.66**	**315**	P	**Pb**	**02 43 13.3**	**-0.8**
PYL				S	**Sb**	**02 43 22.7**	**-0.5**
PYL1	**Pylos**	**0.70**	**314**	P	**Pb**	**02 43 14.2**	**-0.6**
PYL1				S	**Sb**	**02 43 23.8**	**-0.5**
ITM	**Ithomi**	**0.81**	**337**		**Pb**	**02 43 15.5**	**-1.3**
ITM				Sn	**Sb**	**02 43 27.7**	**+0.2**
ITM	**Ithomi**	**0.81**	**337**	P	**Pb**	**02 43 16.2**	**-0.6**
ITM				S	**Sb**	**02 43 27.8**	**+0.2**
ITM	**Ithomi**	**0.81**	**337**	*eP*	**Pb**	**02 43 15.9**	**-0.9**
ITM				*eS*	**Sb**	**02 43 27.3**	**-0.2**
ITM	**Ithomi**	**0.81**	**337**	P	**Pb**	**02 43 15.9**	**-0.9**
ITM				S	**Sb**	**02 43 27.6**	**+0.2**
VLX	**Vlachokerasia**	**0.94**	**2**	P	**Pb**	**02 43 18.3**	**-0.6**
VLX				S	**Sb**	**02 43 31.9**	**+0.8**
ANKY	**Antikythira Is**	**0.97**	**125**	P	**Pn**	**02 43 19.4**	**+1.1**
ANKY				S	**Sb**	**02 43 32.4**	**+0.7**
ANKY	**Antikythira Is**	**0.97**	**125**	P	**Pn**	**02 43 19.0**	**+0.8**
ANKY				S	**Sb**	**02 43 32.2**	**+0.5**
AMT	**Artemida-Makis**	**1.21**	**336**	P	**Pn**	**02 43 22.8**	**+1.1**
AMT				S	**Sb**	**02 43 39.8**	**+1.2**
MET6	**Megalochori,Me**	**1.42**	**35**	P	**Pn**	**02 43 26.4**	**+1.8**
MET6				S	**Sb**	**02 43 44.9**	**+0.2**
MET5	**Makryloggos,Me**	**1.45**	**34**	P	**Pn**	**02 43 26.9**	**+2.0**
MET5				S	**Sb**	**02 43 45.9**	**+0.5**
MET4	**Agioi Theodoro**	**1.47**	**35**	P	**Pn**	**02 43 27.1**	**+2.0**
MET4				S	**Sb**	**02 43 46.3**	**+0.3**
GUR	**Goura**	**1.50**	**0**	P	**Pn**	**02 43 27.7**	**+1.9**
GUR				S	**Sb**	**02 43 47.4**	**+0.2**
GUR	**Goura**	**1.50**	**0**	P	**Pn**	**02 43 27.0**	**+1.2**
GUR				S	**Sb**	**02 43 48.3**	**+1.1**
DRO	**Drossia**	**1.60**	**342**	P	**Pn**	**02 43 29.5**	**+2.5**
DRO				S	**Sb**	**02 43 51.0**	**+1.2**
DRO	**Drossia**	**1.60**	**342**	P	**Pn**	**02 43 29.3**	**+2.3**
KLV	**Kalavryta, Ach**	**1.62**	**355**	P	**Pn**	**02 43 29.2**	**+1.9**
KLV				S	**Sb**	**02 43 51.6**	**+1.2**
KLV	**Kalavryta, Ach**	**1.62**	**355**	P	**Pn**	**02 43 28.9**	**+1.6**
KLV				S	**Sb**	**02 43 50.3**	**0.0**
IMMV	**Iera Moni Meta**	**1.65**	**125**	P	**Pn**	**02 43 30.2**	**+2.5**
IMMV				S	**Sn**	**02 43 51.4**	**+3.6**
IMMV	**Iera Moni Meta**	**1.65**	**125**	*eP*	**Pn**	**02 43 31.0**	**+3.3**
IMMV	**Iera Moni Meta**	**1.65**	**125**	P	**Pn**	**02 43 30.3**	**+2.6**
CHAN	**Chania**	**1.66**	**123**	P	**Pn**	**02 43 30.5**	**+2.7**
LTK	**Loutraki**	**1.67**	**18**	P	**Pn**	**02 43 30.4**	**+2.4**
LTK				S	**Sb**	**02 43 52.1**	**+0.3**
LTK	**Loutraki**	**1.67**	**18**	P	**Pn**	**02 43 30.1**	**+2.1**
MHLO	**Agia Marina, M**	**1.69**	**81**	P	**Pn**	**02 43 29.7**	**+1.5**
MHLO				S	**Sn**	**02 43 50.2**	**+1.5**
MHLO	**Agia Marina, M**	**1.69**	**81**	P	**Pn**	**02 43 29.6**	**+1.4**
LTHK	**Lithakia**	**1.75**	**317**	P	**Pn**	**02 43 30.3**	**+1.3**
LTHK				S	**Sb**	**02 43 56.3**	**+2.3**
LTHK	**Lithakia**	**1.75**	**317**	P	**Pn**	**02 43 30.4**	**+1.4**
RLS	**Riolos of Patr**	**1.77**	**337**	P	**Pn**	**02 43 32.7**	**0.0**
RLS				S	**Sb**	**02 43 56.3**	**+1.8**
RLS	**Riolos of Patr**	**1.77**	**337**	P	**Pb**	**02 43 32.8**	**0.0**
VAM	**Vamos**	**1.83**	**123**	P	**Pn**	**02 43 33.0**	**+2.8**
VAM				S	**Sn**	**02 43 56.2**	**+4.0**
VLY	**Voula,Athens**	**1.84**	**39**	P	**Pn**	**02 43 31.5**	**+1.2**
VLY				S	**Sn**	**02 43 54.6**	**+2.1**
VLY	**Voula,Athens**	**1.84**	**39**	P	**Pn**	**02 43 31.3**	**+1.0**
ATH	**Athens Observa**	**1.90**	**35**	P	**Pn**	**

KYMI	**Kymi, Euboea I**	**2.61**	**32**	P		**Pn**	**02 43 42.3**	**+1.4**
NYDR	**Nydri-Lefkada**	**2.62**	**331**	P		**Pn**	**02 43 43.5**	**+2.5**
AMPL	**Ampelaki**	**2.64**	**341**	P		**Pn**	**02 43 43.4**	**+2.0**
LKD2	**Lefkada island**	**2.70**	**331**	P		**Pn**	**02 43 45.4**	**+3.2**
TSLK	**Tsoukalades, L**	**2.73**	**331**	P		**Pn**	**02 43 44.9**	**+2.3**
NEO	**Neokhori**	**2.96**	**14**	P		**Pn**	**02 43 47.0**	**+1.3**
AOS	**Alonnisos**	**3.00**	**24**	P		**Pn**	**02 43 47.1**	**+0.9**
TETR	**Tetrakomo, Epi**	**3.03**	**344**	P		**Pn**	**02 43 49.9**	**+3.2**
ZKR	**Zakros**	**3.42**	**111**	*e*P		**Pn**	**02 43 55.7**	**+3.6**
KEK	**Kerkira**	**3.84**	**329**			**Pn**	**02 43 59.5**	**+1.7**
URLA	**Izmir**	**3.91**	**59**	*e*P		**Pn**	**02 44 00.4**	**+1.7**
KARP	**Karpathos**	**4.02**	**101**			**Pn**	**02 44 03.0**	**+2.7**
KARP	**Karpathos**	**4.02**	**101**	*e*P		**Pn**	**02 44 03.5**	**+3.2**
BODT	**Bodrum**	**4.05**	**80**	*e*P		**Pn**	**02 44 03.6**	**+2.6**
GCAM	**G?zelcaml?**	**4.12**	**71**	*e*P		**Pn**	**02 44 03.7**	**+2.1**
BLCB	**Balcova**	**4.23**	**61**	*e*P		**Pn**	**02 44 05.4**	**+2.3**
DAT	**Datca**	**4.24**	**84**	*e*P		**Pn**	**02 44 05.8**	**+2.5**
MLSB	**Milas**	**4.45**	**77**	*e*P		**Pn**	**02 44 08.9**	**+2.7**
ARG	**Arkhangelos**	**4.69**	**91**			**Pn**	**02 44 11.8**	**+2.3**
ARG	**Arkhangelos**	**4.69**	**91**	*e*P		**Pn**	**02 44 12.7**	**+3.3**
AYDB	**Zeytinkoy-Aydi**	**4.69**	**70**	*e*P		**Pn**	**02 44 11.9**	**+2.3**
TURN	**Turunc**	**4.77**	**84**	*e*P		**Pn**	**02 44 13.7**	**+3.1**
OHR	**Ohrid**	**4.83**	**346**	*e*Pn		**Pn**	**02 44 12.5**	**+1.1**
OHR				*e*Sn		**Sn**	**02 45 07.9**	**+1.8**
YER	**Yerkesik**	**4.83**	**80**	*e*P		**Pn**	**02 44 14.5**	**+3.0**
VAY	**Valandovo**	**4.89**	**2**	*e*Pn		Pn	02 44 16.9	+4.7
VAY				*e*Sn		**Sn**	**02 45 08.7**	**+1.1**
DALY	**Dalyan (Mula)**	**5.10**	**84**	*e*P		**Pn**	**02 44 18.5**	**+3.4**
TIP	**Timpagrande**	**5.19**	**304**	⇓P		**Pn**	**02 44 18.4**	**+2.0**
TIP	**Timpagrande**	**5.19**	**304**			**Pn**	**02 44 17.4**	**+1.0**
MMB	**Musomishta**	**5.23**	**12**	P		**Pn**	**02 44 20.2**	**+3.3**
ALN	**Alexandroupoli**	**5.33**	**32**			**Pn**	**02 44 19.0**	**+0.8**
RDO	**Rodhopi**	**5.33**	**27**			**Pn**	**02 44 18.2**	**-0.1**
BALB	**Balikesir**	**5.43**	**52**			**Pn**	**02 44 19.4**	**-0.2**
KKB	**Krupnik**	**5.44**	**6**	P		**Pn**	**02 44 22.8**	**+3.0**
CEL	**Celeste**	**5.44**	**292**			**Pn**	**02 44 20.8**	**+0.9**
RZN	**Rozhen**	**5.58**	**19**	*e*P		**Pn**	**02 44 24.7**	**+2.8**
AKAS	**Kas**	**5.88**	**90**	Pn		**Pn**	**02 44 26.6**	**+0.7**
PLD	**Plovdiv**	**6.01**	**17**	*e*P		Pn	02 44 32.8	+5.2
ULC	**Ulcinj**	**6.02**	**338**	*e*Pn		**Pn**	**02 44 28.1**	**+0.3**
ULC				*e*Sn		**Sn**	**02 45 32.0**	**-3.6**
MATE	**Matera**	**6.10**	**315**	⇓P		**Pn**	**02 44 29.6**	**+0.8**
PLNA	**Plana**	**6.10**	**8**	*e*P		**Pn**	**02 44 32.3**	**+3.4**
ELL	**Elmali**	**6.11**	**85**			**Pn**	**02 44 30.8**	**+1.7**
VTS	**Vitosha**	**6.22**	**6**	P		Pn	02 44 35.2	+4.6
CUC	**Castrocucco**	**6.24**	**307**			**Pn**	**02 44 32.9**	**+2.1**
DRME	**Dracevica, Mon**	**6.24**	**338**	⇑*i*Pn		**Pn**	**02 44 31.5**	**+0.7**
DRME				*e*Sn		**Sn**	**02 45 40.2**	**-0.8**
DRME	**Dracevica, Mon**	**6.24**	**338**	⇑*i*Pn		**Pn**	**02 44 31.3**	**+0.5**
PVY	**Plav**	**6.42**	**344**	⇓*i*Pn		**Pn**	**02 44 35.3**	**+1.9**
PVY				*i* Sn		**Sn**	**02 45 44.7**	**-0.9**
VAE	**Valguarnera**	**6.42**	**282**	P		**Pn**	**02 44 36.8**	**+3.5**
	6.9nm,0.4s,baz=349,slow=13,SNR=7.3							
VAE				S		**Sn**	**02 45 44.8**	**-0.8**
	59nm,0.8s,baz=344,slow=14,SNR=5.8							
BUM	**Brajici-Budva**	**6.44**	**337**	⇓*i*Pn		**Pn**	**02 44 33.6**	**+0.1**
BUM				*e*Sn		**Sn**	**02 45 43.4**	**-2.5**
RAFF	**Raffo Rosso**	**6.44**	**279**	Pn		**Pn**	**02 44 34.4**	**+0.9**
PDG	**Podgorica**	**6.45**	**339**	⇑P		**Pn**	**02 44 35.0**	**+1.4**
PDG	**Podgorica**	**6.45**	**339**			**Pn**	**02 44 33.5**	**0.0**
PDG	**Podgorica**	**6.45**	**339**	⇓*i*Pn		**Pn**	**02 44 34.2**	**+0.6**
PDG				*e*Sn		**Sn**	**02 45 45.7**	**-0.3**
PDG	**Podgorica**	**6.45**	**339**	⇑*i*Pn		**Pn**	**02 44 33.6**	**0.0**
BLSH	**Balsha**	**6.46**	**6**	P		**Pn**	**02 44 39.4**	**+5.6**
ACER	**Acerenza**	**6.63**	**313**			**Pn**	**02 44 36.8**	**+0.7**
CEME	**Cevo**	**6.65**	**338**	⇑*i*Pn		**Pn**	**02 44 36.6**	**+0.1**
CEME				*e*Sn		**Sn**	**02 45 47.9**	**-3.3**
HCY	**Herceg Novi**	**6.70**	**335**	⇑*i*Pn		**Pn**	**02 44 36.9**	**-0.2**
HCY				*e*Sn		**Sn**	**02 45 47.7**	**-4.6**
HCY	**Herceg Novi**	**6.70**	**335**	*e*Pn		**Pn**	**02 44 36.6**	**-0.5**
IVA	**Berane**	**6.70**	**344**	⇑*i*Pn		**Pn**	**02 44 38.8**	**+1.6**
IVA				*e*Sn		**Sn**	**02 45 49.3**	**-3.1**
KOME	**Kolasin**	**6.77**	**342**	⇑*i*Pn		**Pn**	**02 44 39.1**	**+1.0**
KOME				*e*Sn		**Sn**	**02 45 50.7**	**-3.4**
NKME	**Niksic**	**6.84**	**339**	⇓*i*Pn		**Pn**	**02 44 39.9**	**+0.8**
NKME				*i* Sn		**Sn**	**02 45 52.2**	**-3.6**
TREB	**Trebinje**	**6.99**	**335**	⇑*i*Pn		**Pn**	**02 44 40.8**	**-0.2**
MPEP	**Malo Peshtene**	**7.00**	**8**	*e*P		Pn	02 44 46.7	+5.5
PVL	**Pavlikeni**	**7.03**	**17**	*e*P		**Pn**	**02 44 43.9**	**+2.3**
ELND	**Elena**	**7.04**	**22**	⇑P		**Pn**	**02 44 44.8**	**+3.0**
SJES	**Sjenica**	**7.06**	**346**	⇑*i*Pn		**Pn**	**02 44 42.5**	**+0.5**
BRY	**Bratogost**	**7.09**	**337**	⇓*i*Pn		**Pn**	**02 44 43.5**	**+0.9**
BRY				*e*Sn		**Sn**	**02 45 57.6**	**-4.5**
BRY	**Bratogost**	**7.09**	**337**	⇑*i*Pn		**Pn**	**02 44 42.6**	**0.0**
PLE	**Pljevlja**	**7.25**	**343**	*e*Pn		**Pn**	**02 44 45.4**	**+0.6**
PLE				*i* Sn		**Sn**	**02 46 02.0**	**-4.0**
UPM	**Unac-Piva**	**7.26**	**340**	⇓*i*Pn		**Pn**	**02 44 45.2**	**+0.3**
UPM				*i* Sn		**Sn**	**02 46 01.8**	**-4.5**
BORA	**Eskisehir**	**7.27**	**59**	Pn		**Pn**	**02 44 46.1**	**+1.2**
SGRT	**San Giovanni R**	**7.38**	**318**			**Pn**	**02 44 46.8**	**+0.4**
RUDO	**Rudo**	**7.53**	**343**	*e*Pn		**Pn**	**02 44 46.3**	**-2.2**
PAOL	**Paolisi**	**7.61**	**309**			**Pn**	**02 44 50.5**	**+0.9**
BBLS	**Lazi&#263i**	**7.76**	**344**	*e*Pn		**Pn**	**02 44 51.2**	**-0.4**
FRGS	**Fruska Gora**	**8.93**	**348**	*e*Pn		**Pn**	**02 45 09.5**	**+1.9**
CSS	**Mathiatis**	**9.07**	**96**	Pn		**Pn**	**02 45 11.3**	**+1.6**
AQU	**L'Aquila**	**9.09**	**313**	*e*Pn		**Pn**	**02 45 13.9**	**+4.0**
BLY	**Banja Luka**	**9.18**	**336**	⇓P		**Pn**	**02 45 12.2**	**+1.1**
BLY	**Banja Luka**	**9.18**	**336**	*e*Pn		**Pn**	**02 45 10.5**	**-0.6**
VOIR		**9.22**	**12**	⇑P		**Pn**	**02 45 16.0**	**+4.2**
MLR	**Muntele Rosu**	**9.46**	**16**	P		**Pn**	**02 45 14.6**	**-0.4**
	0.8nm,0.9s,baz=188,slow=14							
MLR				LR		LR	02 49 50.5	
	comp=Z,112nm,18.8s,baz=214,slow=44							
MLR	**Muntele Rosu**	**9.46**	**16**	⇓P		**Pn**	**02 45 18.7**	**+3.7**
BR131	**Keskin Array S**	**9.51**	**66**			**Pn**	**02 45 15.7**	**0.0**
BRTR	**Keskin Array B**	**9.51**	**66**	P		**Pn**	**02 45 16.3**	**+0.6**
	0.1nm,0.3s,baz=253,slow=12,SNR=11							
	0.7nm,0.7s							
PLOR	**Plostina**	**9.96**	**18**	⇓P		**Pn**	**02 45 25.0**	**+3.2**
VRI	**Vrincioaia**	**9.99**	**18**	⇑P		Pn	02 45 27.2	+5.0
MORH	**Mrgy. Hungar**	**10.16**	**345**	⇑*i*Pn		**Pn**	**02 45 22.3**	**-2.2**
MARR	**Marisel-Cluj**	**10.26**	**3**	⇑P		Pn	02 45 31.4	+5.5
KEST	**Kesra**	**10.53**	**270**	S		**Sn**	**02 47 24.1**	**-2.5**
	4.7nm,1.1s,baz=101,slow=15,SNR=1.3							
KEST				LR		LR	02 50 08.4	
	comp=Z,84nm,20.3s,baz=41,slow=40							
GBRS	**Gornja Briga**	**10.72**	**330**	*e*Pn		**Pn**	**02 45 32.1**	**0.0**
CRES	**Cresnjevec Ost**	**10.72**	**333**	*e*Pn		**Pn**	**02 45 31.4**	**-0.7**
MMAI	**Mount Meron Ar**	**11.29**	**104**	P		**Pn**	**02 45 39.9**	**-0.1**
	0.4nm,0.3s,baz=326,slow=13,SNR=6.5							
MMAI				S		Sn	02 47 38.3	-6.7
	0.2nm,0.3s,baz=278,slow=21,SNR=1.3							
OBKA	**Obir**	**11.63**	**332**	*e*Pn		**Pn**	**02 45 45.4**	**+0.7**
	0.3nm,0.2s							
OBKA				*e*Sn		**Sn**	**02 47 48.7**	**-4.7**
	6.6nm,0.7s							
GHAJ	**Ghor Haditha**	**12.13**	**111**	Pn		**Pn**	**02 45 50.4**	**-1.1**
EIL	**Elat**	**12.55**	**119**	S		Sn	02 48 08.7	-7.1
	5.0nm,0.8s,baz=69,slow=15,SNR=2.7							
KBA	**Koelnbreinsper**	**12.57**	**331**	*i* Pn		**Pn**	**02 45 59.5**	**+2.0**
	0.7nm,0.5s							
KBA				*e*Sn		**Sn**	**02 48 10.9**	**-5.5**
	2.0nm,0.6s							
ABTA	**Abfaltersbach**	**12.65**	**328**	*e*Sn		Sn	02 48 11.2	-7.0
	7.3nm,0.8s							
ASF	**Jabal al Asfar**	**12.77**	**105**	P		**Pn**	**02 46 01.5**	**+1.1**
	0.2nm,0.3s,baz=267,slow=10,SNR=3.7							
ASF				S		**Sn**	**02 48 16.9**	**-4.5**
	1.2nm,0.8s,baz=100,slow=24,SNR=1.6							
ASF				LR		LR	02 52 41.9	
	comp=Z,60nm,20.2s,baz=228,slow=45							
	2.3nm,0.8s							
SALO	**Salr**	**12.78**	**320**			**Pn**	**02 45 59.3**	**-1.1**
MOA	**Molln**	**12.88**	**335**	*i* Pn		**Pn**	**02 46 03.0**	**+1.4**
	0.2nm,0.1s							
MOA				*e*Sn		**Sn**	**02 48 21.2**	**-2.5**
	1.2nm,0.5s							
BIOA	**Bad Ischl, Aus**	**12.96**	**333**	*e*Sn		**Sn**	**02 48 23.8**	**-2.0**
	1.7nm,0.4s							
LESA	**Schwarzleotal**	**13.11**	**330**	*i* Pn		**Pn**	**02 46 06.7**	**+1.8**
	0.2nm,0.2s							
LESA				*e*Sn		**Sn**	**02 48 24.1**	**-5.5**
	15nm,1.1s							
WTTA	**Wattenberg**	**13.43**	**327**	*e*Sn		**Sn**	**02 48 31.7**	**-5.7**
	12nm,0.7s							
WATA	**Walderalm**	**13.51**	**327**	*e*Sn		**Sn**	**02 48 33.5**	**-5.9**
	4.8nm,0.6s							
VRAC	**Vranov**	**13.54**	**344**	P		**Pn**	**02 46 12.9**	**+2.3**
	0.1nm,0.3s,baz=348,slow=18,SNR=1.4							
VRAC				LR		LR	02 52 54.5	
	comp=Z,158nm,19.3s,baz=146,slow=44							
	0.7nm,0.5s							

FUORN	**Ofenpass-Fuorn**	**13.60**	**322**	Pn		Pn	02 46 08.8	-2.9
MOTA	**Moosalm**	**13.72**	**326**	*e*Sn		**Sn**	**02 48 40.9**	**-3.7**
	11nm,0.8s							
DAVOX	**Davos/Dischmat**	**13.90**	**322**	S		Sn	02 48 41.2	-7.8
	2.8nm,0.7s,baz=272,slow=14,SNR=3.6							
GERES	**GERESS Array B**	**13.93**	**336**	P		**Pn**	**02 46 17.9**	**+1.9**
	baz=141,slow=13,SNR=1.4							
GERES				S		**Sn**	**02 48 43.0**	**-6.4**
	0.6nm,0.6s,baz=148,slow=27,SNR=1.6							
	0.2nm,0.4s							
TUE	**Stuetta**	**13.96**	**320**	Pn		**Pn**	**02 46 17.8**	**+1.1**
RETA	**Reutte**	**13.99**	**326**	*e*Sn		**Sn**	**02 48 46.8**	**-4.0**
	3.4nm,0.7s							
KHC	**Kasperske Hory**	**14.21**	**336**	*e*PN		**Pn**	**02 46 22.6**	**+2.7**
KHC				*e*SN		**Sn**	**02 48 53.5**	**-2.8**
KRLC	**Kraliky**	**14.22**	**345**	*e*PN		**P**	**02 46 28.6**	**+1.7**
DAVA	**Damuels**	**14.25**	**323**	*e*Sn		Sn	02 48 48.2	-9.3
	6.2nm,0.7s							
DPC	**Dobruska-Polom**	**14.58**	**345**	*e*PN		**P**	**02 46 31.3**	**+0.4**
OSTC	**Ostas**	**14.79**	**345**	*e*PN		**P**	**02 46 34.6**	**+1.3**
SENIN	**Lac Senin/Sane**	**15.00**	**316**			**Pn**	**02 46 32.1**	**+1.4**
AKASG	**Malin Array Be**	**15.11**	**17**	P		**Pn**	**02 46 33.0**	**+1.1**
	0.6nm,0.3s,baz=209,slow=9.6,SNR=4.1							
AKASG				LR		LR	02 52 32.6	
	comp=Z,64nm,21.8s,baz=222,slow=38							
	0.1nm,0.4s							
CLL	**Collm**	**16.30**	**339**	*e*P		**P**	**02 46 52.0**	**+2.0**
CLL				*ex*		x	02 46 59.0	
CLL				AMS		AMS	02 53 00.0	
	comp=Z,100nm,20.9s							
KBZ	**Khabaz**	**17.32**	**59**	P		**Pn**	**02 47 01.4**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=279,slow=4.1,SNR=13							
	comp=Z,3.1nm,0.8s							
SUW	**Suwalki**	**17.59**	**2**	P		**Pn**	**02 47 03.5**	**0.0**
GNI	**Garni**	**17.97**	**71**	LR		LR	02 55 19.6	
	comp=Z,100nm,19.0s,baz=282,slow=41							
PABE	**Paberze**	**19.11**	**3**	P		**P**	**02 47 19.9**	**-1.0**
PABE				IAmb		IAmb	02 47 22.0	
	comp=Z,15nm,0.8s							
ESBB	**Sonseca Array**	**20.93**	**287**	P		**P**	**02 47 41.7**	**+0.8**
ESDC	**Sonseca Array**	**20.93**	**287**	P		**P**	**02 47 42.4**	**+1.5**
	comp=Z,2.0nm,0.8s,baz=82,slow=11,SNR=8.5							
ESDC				LR		LR	02 55 52.3	
	comp=Z,52nm,18.9s,baz=82,slow=37							
	comp=Z,2.0nm,0.8s							
ESDC	**Sonseca Array**	**20.93**	**287**	P		**P**	**02 47 41.7**	**+0.8**
MDT	**Midelt**	**22.43**	**269**	LR		LR	02 58 52.2	
	comp=Z,58nm,18.1s,baz=56,slow=42							
HFS	**Hagfors**	**24.36**	**350**	P		**P**	**02 48 14.6**	**-1.1**
	comp=Z,2.0nm,0.6s,baz=156,slow=11,SNR=10.0							
HFS				LR		LR	02 59 46.4	
	comp=Z,93nm,19.4s,baz=240,slow=41							
	comp=Z,2.0nm,0.6s							
FINES	**FINESS Array B**	**25.15**	**4**	P		**P**	**02 48 22.1**	**-0.7**
	comp=Z,4.3nm,1.0s,baz=167,slow=10,SNR=8.3							
FINES				PcP		**PcP**	**02 51 55.7**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=186,slow=3.6,SNR=3.6							
FINES				LR		LR	02 58 36.2	
	comp=Z,102nm,18.3s,baz=210,slow=37							
	comp=Z,4.3nm,1.0s							
FINES	**FINESS Array B**	**25.15**	**4**	P		**P**	**02 48 21.7**	**-1.1**
NC602	**NORSAR Array S**	**25.28**	**348**	P		**P**	**02 48 24.3**	**+0.3**
NB201	**NORSAR Array S**	**25.62**	**348**	P		**P**	**02 48 25.9**	**-1.3**
NB2	**NORSAR Subarra**	**25.62**	**347**	P		**P**	**02 48 26.1**	**-1.1**
	comp=Z,2.0nm,0.8s,baz=159,slow=9.3							
NOA	**NORSAR Array B**	**25.62**	**347**	P		**P**	**02 48 27.1**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=155,slow=10,SNR=4.6							
NOA				LR		LR	02 59 57.4	
	comp=Z,54nm,19.3s,baz=165,slow=40							
	comp=Z,0.8nm,0.7s							
EKA	**Eskdalemuir Ar**	**25.68**	**325**	P		**P**	**02 48 27.6**	**-0.1**
	comp=Z,3.3nm,0.8s,baz=126,slow=8.5,SNR=4.7							
	comp=Z,3.3nm,0.8s							
TORD	**Torodi Ar. Bea**	**29.67**	**224**	P		**P**	**02 49 05.0**	**+1.2**
	comp=Z,0.2nm,0.6s,baz=39,slow=7.8,SNR=2.9							
	comp=Z,0.2nm,0.6s							
ARCES	**ARCESS Array B**	**33.21**	**2**	P		**P**	**02 49 33.7**	**-0.7**
	comp=Z,3.5nm,0.9s,baz=182,slow=8.4,SNR=3.6							
	comp=Z,3.5nm,0.9s							
ARCES	**ARCESS Array B**	**33.21**	**2**	IAmb		IAmb	02 49 35.3	
	comp=Z,22nm,1.5s							
KK31	**Karatay Array**	**37.21**	**64**	P		**P**	**02 50 08.5**	**-0.7**
KKAR	**Karatay Array**	**37.21**	**64**	P		**P**	**02 50 08.9**	**-0.3**
SPITS	**Spitsbergen Ar**	**41.93**	**358**	P		**P**	**02 50 47.7**	**-0.3**
	comp=Z,9.5nm,1.0s,baz=148,slow=12,SNR=5.3							
	comp=Z,9.5nm,1.0s							
KURBB	**Kurchatov Arra**	**42.14**	**52**	P		**P**	**02 50 48.5**	**-1.5**
	comp=Z,0.6nm,0.6s,baz=279,slow=8.4,SNR=6.8							
	comp=Z,0.6nm,0.6s							
KURK	**Kurchatov**	**42.19**	**52**	P		**P**	**02 50 48.5**	**-1.9**
KURK	**Kurchatov**	**42.19**	**52**	IAmb		IAmb	02 50 50.2	
	comp=Z,1.5nm,0.9s							
MK31	**Makanchi Array**	**45.01**	**57**	P		**P**	**02 51 12.6**	**-0.7**
MKAR	**Makanchi Array**	**45.01**	**57**	P		**P**	**02 51 12.6**	**-0.7**
	comp=Z,1.2nm,0.4s,baz=269,slow=7.7,SNR=29							
	comp=Z,1.2nm,0.4s							
ZALV	**Zalesovo Beam**	**45.81**	**47**	P		**P**	**02 51 17.2**	**-2.3**
	comp=Z,1.0nm,0.4s,baz=281,slow=8.9,SNR=7.0							
	comp=Z,1.0nm,0.4s							
EVN	**Everest**	**54.34**	**79**			**P**	**02 52 25.2**	**-0.1**
EVN				IAmb		IAmb	02 52 26.2	
	comp=Z,4.5nm,0.7s							
TLY	**Talaya**	**57.42**	**47**	P		P	02 52 42.2	-4.1
TLY				IAmb		IAmb	02 53 05.4	
	comp=Z,1.7nm,0.6s							
SONM	**Songino Array**	**60.46**	**50**	P		**P**	**02 53 07.1**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=286,slow=5.4,SNR=4.6							
	comp=Z,0.6nm,0.6s							
SCHQ	**Schefferville**	**60.72**	**318**	P		**P**	**02 53 07.0**	**-2.1**
LBTB	**Lobatse**	**61.19**	**177**	LR		LR	03 22 35.3	
	comp=Z,46nm,18.6s,baz=266,slow=39							
RES	**Resolute Bay**	**61.84**	**344**	P		**P**	**02 53 16.0**	**-0.3**
RES				IAmb		IAmb	02 53 29.6	
	comp=Z,5.9nm,1.5s							
SUR	**Sutherland**	**68.47**	**181**	LR		LR	03 28 28.0	
	comp=Z,34nm,19.0s,baz=333,slow=40							
CMAR	**Chiang Mai Arr**	**68.70**	**82**	P		**P**	**02 54 01.6**	**0.0**
	comp=Z,1.2nm,0.3s,baz=306,slow=8.6,SNR=5.0							
	comp=Z,1.2nm,0.3s							
A36M	**Sachs Harbour**	**69.51**	**350**	P		**P**	**02 54 05.8**	**+0.1**
A36M				IAmb		IAmb	02 54 49.5	
	comp=Z,2.6nm,0.9s							
E29M	**Blow River**	**74.45**	**353**	P		**P**	**02 54 36.5**	**+1.1**
E29M				IAmb		IAmb	02 54 37.4	
	comp=Z,3.6nm,1.2s							
D23K	**Nanushuk River**	**74.79**	**357**	P		**P**	**02 54 36.3**	**-1.1**
D23K				IAmb		IAmb	02 55 01.6	
	comp=Z,3.6nm,1.2s							
YKA	**Yellowknife Ar**	**75.52**	**341**	P		**P**	**02 54 41.9**	**+0.3**
	comp=Z,0.2nm,0.7s,baz=27,slow=5.2,SNR=4.0							
	comp=Z,0.2nm,0.7s							
YKA	**Yellowknife Ar**	**75.52**	**341**	P		**P**	**02 54 42.1**	**+0.4**
E19K	**Redstone River**	**76.43**	**360**	P		**P**	**02 54 45.8**	**-1.0**
E19K				IAmb		IAmb	02 55 04.4	
	comp=Z,2.0nm,0.8s							
KSAR	**Wonju Array Be**	**79.29**	**51**	P		**P**	**02 55 01.3**	**-2.0**
KSRS	**Korea Array**	**79.31**	**51**	P		**P**	**02 55 03.5**	**+0.1**
	comp=Z,2.6nm,0.7s,baz=307,slow=4.5,SNR=8.5							
	comp=Z,2.6nm,0.7s							
M29M	**Somme Creek**	**80.26**	**351**	P		**P**	**02 55 09.0**	**+0.8**
M29M				IAmb		IAmb	02 55 13.3	
	comp=Z,5.2nm,1.2s							
ASAR	**Alice Springs**	**120.53**	**98**	PKP		**PKPdf**	**03 01 49.2**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=292,slow=1.6,SNR=1.7							
QSPA	**South Pole Qui**	**126.28**	**180**	PKP		**PKPdf**	**03 02 00.2**	**+0.9**
	comp=Z,1.2nm,1.0s,baz=295,slow=22,SNR=1.9							

*IDC **22** 02:52:22.4±2.5, 10°.75N×124°.45E, h0km, mb3.5/5, mbtmp3.5/5, MS2.8/3, Error ellipse: s-maj=257.2km s-min=21.3km az=65.0*
*MAN **22** 02:52:31.0, 10°.01N×122°.51E, h26km, MS3.9*
MAN INTENSITY III - CAUAYAN NEGROS OCCIDENTAL; . INTENSITY II - BAGO CITY NEGROS OCCIDENTAL.
ISC 22 02:52:32.6±1.1, 10°.00N±0°.04×122°.52E±0°.05, h59km±12km, n21, σ1°55/27, mb3.6/5, Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAP	**San Jose, Anti**	**0.94**	**323**	*e*P	**Pn**	**02 52 48.5**	**-1.3**
SNPH	**Sibulan**	**0.96**	**132**	*i* P	**Pn**	**02 52 49.6**	**-0.5**
SNPH				*i* S	**Sn**	**02 53 03.3**	**+0.3**
TBP	**Tagbilaran**	**1.36**	**103**	*i* P	**Pn**	**02 52 55.6**	**+0.2**
TBP				*i* S	**Sn**	**02 53 13.6**	**+1.2**
LLP	**Lapu-Lapu**	**1.46**	**77**	*i* P	**Pn**	**02 52 56.3**	**-0.4**
LLP				*i* S	**Sn**	**02 53 14.6**	**-0.3**
RCP	**Roxas**	**1.57**	**8**	*e*P	**Pn**	**02 52 57.3**	**-1.0**
RCP				*i* S	**Sn**	**02 53 20.7**	**+3.2**
DCPH	**Dipolog City**	**1.62**	**150**	*i* P	**Pn**	**02 52 58.4**	**-0.6**
DCPH				*i* S	**Sn**	**02 53 19.2**	**+0.4**
MMPH	**Masbate**	**2.59**	**25**	*i* P	Pn	02 53 18.0	+5.9
MMPH				*i* S	**Sn**	**02 53 45.5**	**+3.1**
CGP	**Cagayan de Oro**	**2.63**	**125**	*e*P	**Pn**	**02 53 13.6**	**+0.8**
CGP				*e*S	**Sn**	**02 53 44.7**	**+1.1**
PLP	**Palo**	**2.68**	**64**	*e*P	**Pn**	**02 53 13.4**	**0.0**
PLP				*e*S	**Sn**	**02 53 41.3**	**-3.4**
SCPH	**Surigao**	**2.93**	**94**	*e*P	**Pn**	**02 53 16.3**	**-0.5**
ZCP	**Zamboanga City**	**3.08**	**188**	*e*p	**Pn**	**02 53 19.6**	**+0.8**
ZCP				*e*S	**Sn**	**02 53 54.7**	**+0.4**
KCP	**Kidapawan**	**3.91**	**139**	*e*P	**Pn**	**02 53 30.2**	**0.0**
KCP				*i* S	Sn	02 54 33.2	+18
DAV	**Davao City (W)**	**4.19**	**134**	LR	LR	02 54 56.0	
	comp=Z,87nm,18.4s,baz=339,slow=40						
BIPH	**Bislig**	**4.20**	**115**	*e*P	**Pn**	**02 53 35.7**	**+1.6**
BIPH				*i* S	**Sn**	**02 54 23.4**	**+1.4**
TGY	**Tagaytay City**	**4.37**	**339**	LR	LR	02 55 38.6	
	comp=Z,137nm,19.3s,baz=258,slow=41						
CMAR	**Chiang Mai Arr**	**24.33**	**293**	LR	LR	03 07 58.1	
	comp=Z,16nm,18.4s,baz=55,slow=36						
WRA	**Warramunga Arr**	**31.94**	**159**	P	**P**	**02 58 50.5**	**-2.6**
	0.3nm,0.5s,baz=341,slow=9.2,SNR=5.0						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**35.26**	**162**	P	**P**	**02 59 20.6**	**-1.2**
	0.4nm,0.5s,baz=348,slow=7.3,SNR=7.8						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**50.06**	**325**	P	**P**

ENTT	**Nioudou**	**0.30**	**26**	⇑*i*P	**Pg**	**02 55 30.8**	**+0.1**
YHNB	**Yeheng**	**0.30**	**352**	P	**Pg**	**02 55 31.1**	**+0.4**
YHNB	**Yeheng**	**0.30**	**352**	S	**Sg**	**02 55 34.9**	**+0.2**
YHNB	**Yeheng**	**0.30**	**352**	⇑*i*P	**Pg**	**02 55 31.1**	**+0.4**
YHNB				S	**Sg**	**02 55 34.7**	**-0.1**
NSK	**Sanguang**	**0.31**	**349**	⇑*i*P	**Pg**	**02 55 31.2**	**+0.3**
NSK				S	**Sg**	**02 55 35.1**	**+0.1**
TWD	**Chiawan**	**0.33**	**151**	⇓P	**Pg**	**02 55 31.7**	**+0.4**
TWD				S	**Sg**	**02 55 36.1**	**+0.4**
EWUT	**Wuta**	**0.33**	**77**	P	**Pg**	**02 55 31.2**	**-0.2**
LXIB	**Xiulin Townshi**	**0.35**	**181**	⇑*i*P	**Pg**	**02 55 32.0**	**+0.3**
LXIB				S	**Sg**	**02 55 36.6**	**+0.3**
NDS	**Dongshan**	**0.37**	**46**	⇑*i*P	**Pg**	**02 55 31.9**	**-0.2**
NFF	**Wufeng Townshi**	**0.38**	**313**	*e*P	**Pg**	**02 55 32.8**	**+0.6**
NFF				eS	**Sg**	**02 55 38.0**	**+0.7**
ETM	**Tongmen**	**0.41**	**171**	⇑*i*P	**Pg**	**02 55 33.1**	**+0.3**
ETM				S	**Sg**	**02 55 38.2**	**+0.1**
NWLT	**Wulai**	**0.41**	**10**	⇑P	**Pg**	**02 55 33.0**	**+0.2**
NWLT				eS	**Sg**	**02 55 37.8**	**-0.5**
TWE	**Neicheng**	**0.41**	**33**	⇑*i*P	**Pg**	**02 55 33.0**	**+0.2**
FUSB	**Fushanzhiwuyua**	**0.41**	**21**	⇑*i*P	**Pg**	**02 55 33.0**	**+0.1**
FUSB				eS	**Sg**	**02 55 38.3**	**-0.1**
HWA	**Hwalien**	**0.43**	**157**	*e*P	**Pb**	**02 55 34.1**	**-0.7**
HWA				eS	**Sb**	**02 55 40.3**	**-1.2**
ESAO	**Su ao**	**0.43**	**62**	*e*P	**Pg**	**02 55 32.6**	**-0.6**
WHP	**Taichung City**	**0.44**	**258**	⇑*i*P	**Pb**	**02 55 34.1**	**-1.0**
WHP				S	**Sg**	**02 55 40.2**	**+0.9**
TWC	**Suao**	**0.46**	**59**	⇑*i*P	**Pg**	**02 55 33.4**	**-0.2**
TWC				S	**Sg**	**02 55 39.3**	**-0.3**
LIOB	**Emei**	**0.46**	**306**	P	**Pb**	**02 55 34.8**	**-0.6**
LIOB				S	**Sb**	**02 55 41.1**	**-1.3**
KSHI	**Guanxi Townshi**	**0.46**	**331**	P	**Pb**	**02 55 35.2**	**-0.3**
KSHI				S	**Sb**	**02 55 41.7**	**-0.9**
NSTT	**Nanjuang**	**0.46**	**304**	⇑*i*P	**Pb**	**02 55 34.6**	**-0.8**
NSTT				*i* S	**Sg**	**02 55 40.7**	**+0.9**
WUSB	**Renai**	**0.47**	**216**	⇑*i*P	**Pg**	**02 55 33.8**	**-0.1**
WUSB				S	**Sg**	**02 55 39.8**	**-0.3**
OWD	**Renai**	**0.47**	**208**	⇑*i*P	**Pg**	**02 55 33.5**	**-0.4**
OWD				eS	**Sb**	**02 55 41.2**	**-1.7**
ILA	**Ilan**	**0.49**	**37**	*e*P	**Pg**	**02 55 34.6**	**+0.2**
TEYL	**Yanliau Villag**	**0.53**	**162**	P	**Pg**	**02 55 35.2**	**+0.2**
TEYL				S	**Sg**	**02 55 41.7**	**-0.2**
ESL	**Shilin**	**0.56**	**179**	⇑*e*P	**Pg**	**02 55 35.7**	**+0.1**
ESL				eS	**Sg**	**02 55 42.4**	**-0.4**
WCS	**Beigang Elemen**	**0.56**	**236**	*e*P	**Pg**	**02 55 36.0**	**+0.3**
TWQ1	**Liyutan**	**0.59**	**268**	⇑P	**Pb**	**02 55 37.5**	**-0.2**
TWQ1				eS	**Sb**	**02 55 45.8**	**-0.5**
HSN	**Hsinchu**	**0.59**	**316**	*e*P	**Pb**	**02 55 38.0**	**+0.3**
HSN				eS	**Sb**	**02 55 46.5**	**+0.2**
SHUL	**Shoufeng**	**0.60**	**167**	*e*P	**Pb**	**02 55 37.1**	**-0.6**
SHUL				eS	**Sb**	**02 55 45.0**	**-1.4**
NMLH	**Miaoli**	**0.60**	**286**	*e*P	**Pb**	**02 55 38.1**	**+0.4**
NMLH				eS	**Sb**	**02 55 46.1**	**-0.4**
TATO	**Taipei**	**0.60**	**6**	P	**Pb**	**02 55 37.1**	**-0.7**
TATO	**Taipei**	**0.60**	**6**	S	**Sg**	**02 55 44.6**	**+0.2**
TWA	**Mucha**	**0.62**	**14**	P	**Pg**	**02 55 37.3**	**+0.4**
TWA				eS	**Sg**	**02 55 44.6**	**-0.4**
NCUH	**Zhongli**	**0.63**	**340**	*e*P	**Pb**	**02 55 38.9**	**+0.6**
WARBT	**Fenglin Townsh**	**0.65**	**183**	⇑*i*P	**Pg**	**02 55 37.2**	**-0.1**
WARBT				eS	**Sg**	**02 55 45.5**	**-0.4**
EGS		**0.66**	**45**	*e*P	**Sg**	**02 55 37.9**	**+0.3**
EGS				eS	**Sb**	**02 55 47.6**	**-0.7**
VWDT	**VWDT**	**0.67**	**203**	⇑P	**Pg**	**02 55 37.2**	**-0.5**
VWDT				eS	**Sg**	**02 55 46.2**	**-0.2**
TAP	**Taipei**	**0.67**	**7**	eS	**Sg**	**02 55 47.2**	**+0.8**
TEGC	**Jichi Village**	**0.67**	**171**	*e*P	**Pb**	**02 55 38.4**	**-0.5**
NHY	**Taipei**	**0.68**	**11**	eS	**Sb**	**02 55 48.2**	**-0.7**
SMLT	**Sun Moon Lake**	**0.68**	**224**	⇑P	**Pg**	**02 55 38.0**	**+0.1**
TYC	**Yuchr**	**0.69**	**228**	⇑P	**Pg**	**02 55 38.2**	**0.0**
TIPB	**Shuangxi**	**0.70**	**32**	⇑P	**Pg**	**02 55 38.1**	**-0.2**
TIPB				eS	**Sg**	**02 55 46.7**	**-0.8**
WDJ	**Dajia District**	**0.71**	**268**	*e*P	**Pn**	**02 55 40.4**	**-1.1**
TCU	**Taichung**	**0.72**	**252**	*e*P	**Pn**	**02 55 40.3**	**-1.2**
SSLB	**Suanglung**	**0.72**	**216**	P	**Pg**	**02 55 37.9**	**-0.8**
SSLB	**Suanglung**	**0.72**	**216**	⇑P	**Pg**	**02 55 38.1**	**-0.6**
TWS1	**Kuangyinshan**	**0.73**	**360**	*e*P	**Pb**	**02 55 40.2**	**+0.3**
TWS1				eS	**Sb**	**02 55 50.2**	**+0.1**
EOS2	**EOS2**	**0.74**	**86**	P	**Pb**	**02 55 39.8**	**-0.2**
EOS2				S	**Sb**	**02 55 50.8**	**+0.3**
NWF	**Wu-fen Shan**	**0.77**	**25**	*e*P	**Pg**	**02 55 39.9**	**+0.3**
NWF				eS	**Sg**	**02 55 49.9**	**+0.2**
WFSB	**Wu-fen Shan**	**0.77**	**25**	P	**Pg**	**02 55 39.8**	**+0.2**
YM01	**YM01**	**0.78**	**10**	⇑P	**Pb**	**02 55 40.7**	**-0.2**
NTST	**Danshui**	**0.79**	**2**	*e*P	**Pn**	**02 55 41.5**	**-1.0**
NTST				eS	**Sb**	**02 55 52.8**	**+0.3**
ZUZH	**Zhuzihu**	**0.80**	**8**	*e*P	**Pb**	**02 55 40.9**	**-0.2**
ANP	**Anpu**	**0.82**	**6**	*e*P	**Pb**	**02 55 41.3**	**-0.2**
TWB1	**Santiao Chiao**	**0.82**	**39**	*e*P	**Pg**	**02 55 40.1**	**-0.4**
TWB1				eS	**Sg**	**02 55 50.9**	**-0.3**
EOS3	**EOS3**	**0.82**	**96**	*e*P	**Pb**	**02 55 41.7**	**+0.3**
EOS3				eS	**Sb**	**02 55 53.5**	**+0.7**
YM08	**YM08**	**0.83**	**11**	*e*P	**Pb**	**02 55 41.2**	**-0.4**
SXI1	**Grass Mountain**	**0.83**	**30**	*e*P	**Pg**	**02 55 40.8**	**0.0**
SXI1				eS	**Sg**	**02 55 51.4**	**-0.2**
WNT	**Mingjian**	**0.83**	**234**	*e*P	**Pn**	**02 55 42.1**	**-1.1**
TNOU	**National Taiwa**	**0.84**	**22**	*e*P	**Pg**	**02 55 41.2**	**+0.3**
TNOU				eS	**Sb**	**02 55 53.9**	**+0.5**
WCHH	**Zhanghua**	**0.84**	**250**	*e*P	**Pn**	**02 55 42.5**	**-0.8**
WHYT	**Xinyi Township**	**0.85**	**218**	*e*P	**Pg**	**02 55 40.7**	**-0.5**
EOS4	**EOS4**	**0.86**	**107**	*e*P	**Pb**	**02 55 42.0**	**+0.1**
EHY	**Hungye**	**0.87**	**186**	*e*P	**Pg**	**02 55 41.0**	**-0.4**
EHY				eS	**Sg**	**02 55 53.1**	**+0.3**
HGSD	**Ruisui**	**0.88**	**180**	*e*P	**Pb**	**02 55 41.9**	**-0.5**
EHYH	**Wanrong**	**0.88**	**185**	*e*P	**Pg**	**02 55 41.4**	**-0.3**
EHYH				eS	**Sb**	**02 55 53.8**	**-0.6**
YULB	**Yu-li**	**0.98**	**187**	P	**Pg**	**02 55 43.2**	**-0.5**
YULB	**Yu-li**	**0.98**	**187**	S	**Sb**	**02 55 56.7**	**-0.8**
YULB	**Yu-li**	**0.98**	**187**	*e*P	**Pg**	**02 55 43.1**	**-0.6**
YULB				eS	**Sg**	**02 55 56.2**	**-0.3**
TWF1	**Yuli**	**1.02**	**186**	⇑P	**Pg**	**02 55 44.1**	**-0.3**
TWF1				eS	**Sg**	**02 55 57.4**	**-0.3**
EYUL	**Yuli**	**1.02**	**185**	*e*P	**Pb**	**02 55 44.5**	**-0.5**
EYUL				eS	**Sg**	**02 55 57.9**	**+0.1**
ALS	**Alishan**	**1.03**	**213**	*e*P	**Pg**	**02 55 44.2**	**-0.4**
CHN5	**Tsauling**	**1.03**	**222**	⇑P	**Pb**	**02 55 45.1**	**0.0**
CHN5				eS	**Sn**	**02 56 01.0**	**+0.3**
WDL	**Douliou City**	**1.04**	**231**	*e*P	**Pn**	**02 55 46.1**	**+0.2**
WGK	**Gukeng**	**1.04**	**229**	*e*P	**Pn**	**02 55 45.8**	**-0.2**
WDLH	**Douliu**	**1.06**	**230**	*e*P	**Pn**	**02 55 46.1**	**-0.1**
WRL	**Guolierlin Hig**	**1.06**	**244**	*e*P	**Pn**	**02 55 45.8**	**-0.5**
WRL				eS	**Sn**	**02 56 01.8**	**-0.4**
RLNB	**Erlin**	**1.08**	**244**	*e*P	**Pn**	**02 55 46.8**	**+0.2**
WTCT	**Ta-ch'eng**	**1.16**	**244**	eS	**Sn**	**02 56 04.6**	**+0.9**
WTK	**Tuku**	**1.16**	**234**	*e*P	**Pn**	**02 55 47.5**	**-0.2**
WTK				eS	**Sn**	**02 56 05.0**	**+1.1**
FULB	**Fuli**	**1.17**	**186**	*e*P	**Pn**	**02 55 47.9**	**0.0**
FULB				eS	**Sn**	**02 56 04.9**	**+0.7**
CHKH	**Chenggong**	**1.18**	**181**	*e*P	**Pn**	**02 55 47.7**	**-0.1**
WCKO	**Fanlu**	**1.19**	**219**	*e*P	**Pn**	**02 55 48.2**	**+0.1**
CHN2	**Minshiung**	**1.20**	**226**	*e*P	**Pn**	**02 55 48.9**	**+0.6**
CHN2				eS	**Sn**	**02 56 07.4**	**+2.6**
EHD	**Haiduan**	**1.23**	**189**	*e*P	**Pb**	**02 55 48.0**	**-0.5**
ELDTW	**Lidau**	**1.23**	**198**	*e*P	**Pg**	**02 55 46.9**	**-1.6**
ELDTW				eS	**Sg**	**02 56 04.2**	**-0.3**
CHY	**Chiayi**	**1.26**	**227**	*e*P	**Pg**	**02 55 49.3**	**+0.2**
CHKT	**Chengkung**	**1.27**	**182**	*e*P	**Pn**	**02 55 48.5**	**-0.6**
CHKT				eS	**Sg**	**02 56 05.7**	**+0.1**
ECS	**Chishang**	**1.28**	**188**	*e*P	**Pg**	**02 55 49.5**	**0.0**
TPUB	**Ta-pu**	**1.29**	**214**	P	**Pn**	**02 55 49.1**	**-0.3**
TPUB	**Ta-pu**	**1.29**	**214**	S	**Sn**	**02 56 07.0**	**-0.1**
TPUB	**Ta-pu**	**1.29**	**214**	*e*P	**Pg**	**02 55 49.4**	**-0.2**
WSF	**Szhu**	**1.32**	**237**	*e*P	**Pg**	**02 55 49.8**	**-0.4**
WSF				eS	**Sn**	**02 56 08.3**	**+0.6**
STYH	**Taoyuan**	**1.33**	**206**	*e*P	**Pg**	**02 55 50.6**	**+0.1**
WTP	**Ta-pu**	**1.34**	**214**	*e*P	**Pg**	**02 55 50.5**	**-0.1**
WSL	**Shuilin Townsh**	**1.38**	**232**	*e*P	**Pg**	**02 55 51.1**	**-0.2**
WSL				eS	**Sg**	**02 56 11.6**	**+2.3**
PCYT	**Pengchaiyu**	**1.38**	**25**	*e*P	**Pn**	**02 55 50.6**	**-0.1**
JYNG	**Yonagunijimaku**	**1.39**	**86**	*e*P	**Pb**	**02 55 51.0**	**-0.3**
TWK	**Hsinying**	**1.39**	**218**	*e*P	**Pg**	**02 55 51.4**	**-0.2**
CHN1	**Nanshi**	**1.44**	**215**	*e*P	**Pg**	**02 55 52.7**	**+0.3**
CHN1				eS	**Sg**	**02 56 12.8**	**+1.7**
ICHU	**Yijhu**	**1.45**	**226**	*e*P	**Pg**	**02 55 53.0**	**+0.3**
ICHU				eS	**Sg**	**02 56 14.2**	**+2.7**
YOJ	**Yonaguni jima**	**1.45**	**86**	P	**Pb**	**02 55 51.8**	**-0.5**
YOJ	**Yonaguni jima**	**1.45**	**86**	S	**Sg**	**02 56 12.2**	**+0.7**
YOJ	**Yonaguni jima**	**1.45**	**86**	⇓*e*P	**Pb**	**02 55 51.9**	**-0.5**
YOJ				eS	**Sb**	**02 56 11.0**	**-0.1**
YOJ	**Yonaguni jima**	**1.45**	**86**	*e*P	**Pb**	**02 55 51.8**	**-0.5**
YOJ				eS	**Sg**	**02 56 11.5**	**0.0**
LONT	**Longtian**	**1.48**	**190**	*e*P	**Pg**	**02 55 53.0**	**-0.3**
SGST	**Jiashian**	**1.50**	**211**	*e*P	**Pb**	**02 55 52.5**	**-0.6**
SGST				eS	**Sg**	**02 56 14.4**	**+1.4**
CHN8	**Yiju**	**1.51**	**228**	*e*P	**Pg**	**02 55 53.4**	**-0.3**
CHN8				eS	**Sg**	**02 56 15.0**	**+1.7**
SLGT	**Liugui**	**1.54**	**208**	*e*P	**Pg**	**02 55 54.1**	**-0.4**
TWG	**Pinlang**	**1.58**	**192**	*e*P	**Pb**	**02 55 53.9**	**-0.5**
TWGBT	**Beinan**	**1.58**	**192**	P	**Pn**	**02 55 53.5**	**+0.1**
TWGBT	**Beinan**	**1.58**	**192**	*e*P	**Pb**	**02 55 53.8**	**-0.6**
SCLT	**Jiali**	**1.64**	**224**	*e*P	**Pg**	**02 55 55.8**	**-0.5**
SCLT				eS	**Sg**	**02 56 18.8**	**+1.3**
TSCK	**Chigu Township**	**1.73**	**225**	*e*P	**Pb**	**02 55 57.0**	**0.0**
SSD	**Sandimen**	**1.77**	**204**	*e*P	**Pb**	**02 55 58.0**	**+0.2**
SSD				eS	**Sg**	**02 56 22.6**	**+0.7**
TWM1	**Shoushan**	**1.79**	**211**	*e*P	**Pg**	**02 55 59.9**	**+0.6**
ECL	**Taimali**	**1.82**	**194**	*e*P	**Pb**	**02 55 58.5**	**-0.1**
SGLT	**Jiouru**	**1.85**	**208**	*e*P	**Pg**	**02 56 00.1**	**-0.2**
PNG	**Penghu**	**1.89**	**245**	*e*P	**Pb**	**02 55 58.9**	**-0.8**
MASBT	**Mashibuluo**	**1.90**	**203**	*e*P	**Pb**	**02 55 59.8**	**-0.1**
MASBT				eS	**Sg**	**02 56 26.2**	**+0.4**
PHUB	**P'eng-hu**	**1.90**	**244**	*e*P	**Pn**	**02 55 58.3**	**+0.6**
WDGT	**Dungji**	**1.96**	**236**	*e*P	**Pn**	**02 55 59.2**	**+0.6**
WDGT				eS	**Sb**	**02 56 24.8**	**-0.8**
EAST	**Anshuo**	**2.05**	**195**	*e*P	**Pb**	**02 56 02.9**	**+0.4**
IRIF	**Iriomote-Funau**	**2.11**	**91**	*e*P	**Pn**	**02 56 01.4**	**+0.7**
SCZT	**Fangliau**	**2.12**	**200**	*e*P	**Pb**	**02 56 03.0**	**-0.7**
VCHM	**Qimei**	**2.16**	**238**	*e*P	**Pn**	**02 56 02.3**	**+0.9**
VCHM				eS	**Sb**	**02 56 32.0**	**+0.6**
PTMZ	**Houxiangcun**	**2.20**	**288**	*e*P	**Pn**	**02 56 01.6**	**-0.3**
PTMZ				eS	**Sn**	**02 56 27.2**	**-2.1**
MATB	**Ma-tsu**	**2.22**	**323**	*e*P	**Pn**	**02 56 02.9**	**+0.7**
MATB				eS	**Sb**	**02 56 32.5**	**-0.7**
SLIU	**Shizi**	**2.22**	**195**	*e*P	**Pb**	**02 56 04.9**	**-0.5**
JKRS	**Kuro-shima**	**2.37**	**93**	*e*P	**Pn**	**02 56 04.8**	**+0.6**
JKRS				eS	**Sn**	**02 56 35.1**	**+1.5**
SMST	**Manzhou Townsh**	**2.40**	**193**	*e*P	**Pb**	**02 56 07.2**	**-1.2**
JIJ	**Ishigaki jima**	**2.48**	**90**	*e*P	**Pn**	**02 56 06.2**	**+0.4**
TWK1	**Hengchun**	**2.48**	**193**	*e*P	**Pb**	**02 56 08.3**	**-1.6**
TWKBT	**Hengchun**	**2.48**	**193**	*e*P	**Pb**	**02 56 08.2**	**-1.7**
KNMB	**Chin-men Tao**	**2.77**	**273**	*e*P	**Pn**	**02 56 09.0**	**-0.8**
ZPLA	**Ao Xicun**	**3.38**	**263**	*e*P	**Pn**	**02 56 17.7**	**-0.5**

*IDC **22** 03:10:21.9±4.1, 10°.74S×115°.33E, h0km, mb3.6/6, mbtmp3.6/6, MS2.5/1, Error ellipse: s-maj=258.2km s-min=22.4km az=46.0*
*DJA **22** 03:10:27.7±1.4, 11°S±11°×11°5E±°, h30km±25km, M4.3/14, mb4.5/4, mB5.8/3, MLv4.0/14, Mw(mB)5.4/3*

ISC 22 03:10:21.8±2.3, 10.81S±0.08×115.53E±0.07, h8km±14km, n22, σ2s14/26, mb3.8/5, South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGBI	**Denpasar**	**2.02**	**349**	P	**Pg**	**03 11 00.0**	**-0.5**
IGBI				S	**Sb**	**03 11 24.7**	**+0.8**
RTBI	**Rangdo, Negare**	**2.41**	**346**	P	**Pb**	**03 11 05.1**	**-0.3**
KHKI	**Kahang-Kahang**	**2.43**	**2**	P	**Pg**	**03 11 07.9**	**-0.5**
KHKI				S	**Sg**	**03 11 37.9**	**-2.1**
KLNI	**Mataram**	**2.44**	**13**	P	**Pg**	**03 11 08.1**	**-0.4**
KLNI				S	**Sg**	**03 11 38.9**	**-1.3**
TWSI	**Taliwang, Sumb**	**2.45**	**33**	P	**Pg**	**03 11 08.6**	**-0.2**
TWSI				S	**Sg**	**03 11 39.5**	**-1.1**
JAGI	**Jajag, Banyuwa**	**2.69**	**330**	P	**Pn**	**03 11 07.0**	**+1.5**
JAGI				S	**Sn**	**03 11 37.7**	**-0.6**
SRBI	**Singaraja**	**2.73**	**353**	P	**Pb**	**03 11 11.3**	**+0.5**
BYDI	**Banyuwangi**	**2.83**	**336**	P	**Pn**	**03 11 09.5**	**+2.2**
PLAI	**Plampang**	**2.96**	**49**	P	**Pb**	**03 11 15.6**	**+0.7**
GMJI	**Gumukmas**	**3.25**	**321**	P	**Pn**	**03 11 13.7**	**+0.5**
DBNI	**Kabupaten Domp**	**3.57**	**50**	P	**Pb**	**03 11 25.1**	**-0.2**
SNJI	**Sawahan-Nganju**	**4.79**	**309**	P	**Pn**	**03 11 35.8**	**+1.4**
PCJI	**Pacitan**	**5.02**	**301**	P	**Pn**	**03 11 34.1**	**-3.4**
UGM	**Wanagama**	**5.72**	**300**	P	**Pn**	**03 11 47.2**	**+0.1**
	0.4nm63nm,1.4s						
KAPI	**Kappang**	**7.12**	**36**	LR	LR	03 15 19.6	
	comp=Z,39nm,19.4s,baz=184,slow=42						
FITZ	**Fitzroy Cossi**	**12.18**	**128**	Pn	**Pn**	**03 13 16.4**	**+0.7**
	0.1nm,0.3s,baz=307,slow=11,SNR=1.9						
FITZ				Sn	Sn	03 15 21.9	-10
	0.2nm,0.3s,baz=165,slow=22,SNR=6.1						
WRA	**Warramunga Arr**	**20.26**	**119**	P	Pn	03 15 01.6	+1.8
	1.4nm,0.8s,baz=300,slow=11,SNR=10.0						
WRA				S	**S**	**03 18 38.0**	**-7.5**
	0.3nm,0.7s,baz=290,slow=25,SNR=1.2						
	1.4nm,0.8s						
ASAR	**Alice Springs**	**21.68**	**129**	P	**P**	**03 15 16.5**	**+3.3**
	0.9nm,0.9s,baz=296,slow=9.8,SNR=7.0						
	0.9nm,0.9s						
MKAR	**Makanchi Array**	**64.58**	**335**	P	**P**	**03 20 59.5**	**-0.1**
	0.4nm,0.6s,baz=154,slow=6.6,SNR=5.4						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**69.14**	**336**	P	**P**	**03 21 29.2**	**+0.7**
	0.6nm,0.7s,baz=153,slow=4.9,SNR=4.7						
	0.6nm,0.7s						
ZALV	**Zalesovo Beam**	**69.57**	**341**	P	**P**	**03 21 31.7**	**+0.6**
	0.6nm,0.4s,baz=156,slow=5.6,SNR=2.1						
	0.6nm,0.4s						
BVAR	**Borovoye Array**	**74.33**	**334**	P	**P**	**03 22 01.0**	**+1.2**
	0.5nm,0.5s,baz=130,slow=7.1,SNR=2.7						
	0.5nm,0.5s						

IDC 22 03:14:46.9±6.7, 18°.26S×179°.88E, h557km±17km, mb2.7/3, mbtmp3.6/3, Error ellipse: s-maj=271.9km s-min=33.3km az=143.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**1.81**	**286**	P	P	03 15 56.6	0.0
	4.9nm,0.6s,baz=112,slow=11,SNR=5.6						
WRA	**Warramunga Arr**	**42.97**	**260**	P	P	03 21 57.2	-0.5
	0.2nm,0.4s,baz=96,slow=7.5,SNR=5.5						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**43.13**	**255**	P	P	03 21 59.0	0.0
	2.3nm,0.6s,baz=88,slow=8.3,SNR=41						
	2.3nm,0.6s						
ILAR	**Eielson Array**	**86.60**	**14**	P	P	03 26 30.9	-0.1
	0.2nm,0.8s,baz=199,slow=5.2,SNR=1.5						
	0.2nm,0.8s						

*ISK **22** 03:29:31.6, 38°.08N×44°.59E, h8km, ML3.0/6*
*AFAD **22** 03:29:33.3, 38°.51N×44°.61E, h7km±1km, ML2.6*
*TEH **22** 03:29:34.5, 38°.46N×44°.50E, h6km±93km, ML2.6, Presumed earthquake*
*AZER **22** 03:29:38.3, 38°.54N×44°.64E, h44km, ml2.7*

ISC 22 03:29:34.1±1.2, 38°.46N±0°.03×44°.55E±0°.02, h4km±10km, n36, σ1s62/62, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.48**	**295**	P	**Pg**	**03 29 43.4**	**+0.1**
OZAP				S	**Sg**	**03 29 51.3**	**+1.8**
OZAP				IAML		03 29 53.0	
	comp=N,431nm,0.9s						
OZAP				IAML		03 29 56.0	
	comp=E,517nm,0.7s						
YOVA	**Hakkari_Yksek**	**0.90**	**193**	P	**Pg**	**03 29 51.7**	**+0.5**
YOVA				S	**Sg**	**03 30 05.7**	**+2.9**
YOVA				IAML		03 30 10.0	
	comp=N,200nm,0.5s						
YOVA				IAML		03 30 11.0	
	comp=E,150nm,0.3s						
TVAN	**Van**	**0.90**	**275**	P	**Pg**	**03 29 50.3**	**-1.0**
TVAN				S	**Sg**	**03 29 59.7**	**-3.3**
MAKU	**Maku**	**0.90**	**7**	Pg	**Pb**	**03 29 51.6**	**-0.8**
VANB	**Van**	**0.92**	**279**	Pg	**Pg**	**03 29 51.8**	**+0.1**
VANB				Sg	**Sb**	**03 30 06.3**	**+1.1**
IMRD	**Marand**	**0.94**	**74**	Pg	**Pn**	**03 29 53.5**	**-0.8**
NAX	**Nakhchivan**	**1.03**	**46**	P	**Pn**	**03 29 55.0**	**-0.4**
NAX				S	**Sn**	**03 30 11.2**	**+0.9**
HAKT	**HAKKARI**	**1.12**	**217**	P	**Pg**	**03 29 55.2**	**-0.3**
HAKT				IAML		03 30 13.0	
	comp=N,227nm,0.4s						
HAKT				S	**Sb**	**03 30 13.0**	**+1.9**
HAKT				IAML		03 30 14.0	
	comp=E,247nm,0.4s						
HAKT	**HAKKARI**	**1.12**	**217**	P	**Pg**	**03 29 55.2**	**-0.3**
HAKT				S	**Sb**	**03 30 13.2**	**+2.0**
GEVA	**Gevas**	**1.18**	**263**	P	**Pg**	**03 29 54.9**	**-1.7**
GEVA				S	**Sg**	**03 30 13.2**	**+1.3**
SBZ	**Shahbuz**	**1.22**	**40**	P	**Pn**	**03 29 58.4**	**+0.4**
SBZ				S	**Sn**	**03 30 18.8**	**+3.7**
ORD	**Ordubad**	**1.23**	**67**	P	**Pn**	**03 29 58.3**	**+0.2**
ORD				S	**Sn**	**03 30 17.0**	**+1.8**
AKDM	**Akdamar-Van**	**1.24**	**264**	Pn	**Pn**	**03 29 56.4**	**-1.9**
AKDM				Sn	**Sb**	**03 30 14.9**	**+0.4**
HYR	**Heyderabad**	**1.28**	**11**	P	**Pn**	**03 29 59.7**	**+0.8**
HYR				S	**Sn**	**03 30 20.0**	**+3.5**
ITBZ	**Tabriz**	**1.28**	**100**	Pg	**Pn**	**03 29 58.8**	**-0.1**
IAZR	**Azarshahr**	**1.38**	**124**	Pg	**Pg**	**03 30 01.2**	**+0.7**
IGDI	**IGDIR**	**1.45**	**346**	P	**Pg**	**03 30 01.9**	**-0.1**
IGDI				S	**Sg**	**03 30 22.6**	**+1.9**
AGRB	**Hanur-Agry**	**1.65**	**313**	Pn	**Pb**	**03 30 05.6**	**+0.5**
GNI	**Garni**	**1.69**	**5**	Pn	**Pg**	**03 30 07.7**	**+1.1**
MLAZ	**Malazgirt-MUS**	**1.70**	**294**	Pn	**Pn**	**03 30 05.6**	**+0.9**
IHRS	**Heris**	**1.97**	**93**	Pn	**Pg**	**03 30 11.7**	**-0.1**
GURO	**Guroymak-BITLI**	**1.97**	**273**	Pn	**Pn**	**03 30 07.7**	**-0.7**
QRD	**Qoradiz**	**2.38**	**64**	P	**Pb**	**03 30 15.0**	**-2.6**
QRD				S	**Sn**	**03 30 42.7**	**-0.9**
GDB	**GEDABAY**	**2.44**	**22**	P	**Pn**	**03 30 15.8**	**+0.8**
GDB				S	**Sb**	**03 30 46.7**	**-2.5**
GANJ	**Ganja**	**2.58**	**32**	P	**Pb**	**03 30 18.4**	**-2.6**
GANJ				S	**Sn**	**03 30 48.2**	**-0.2**
AGDM	**Agdam**	**2.58**	**50**	P	**Pn**	**03 30 17.2**	**+0.5**
AGDM				S	**Sn**	**03 30 47.6**	**-0.9**
GRMI	**Germi**	**2.65**	**81**	Pn	**Pb**	**03 30 20.6**	**-1.5**
BLQ	**Beylaqan**	**2.66**	**61**	P	**Pb**	**03 30 20.1**	**-2.3**
BLQ				S	**Sn**	**03 30 50.2**	**-0.3**
QZX	**Qazax, Azerbai**	**2.67**	**14**	P	**Pb**	**03 30 20.2**	**-2.3**
QZX				S	**Sn**	**03 30 49.2**	**-1.6**
YRD	**Yardimli**	**2.93**	**80**	P	**Pn**	**03 30 23.3**	**+1.7**
YRD				S	**Sn**	**03 30 57.0**	**-0.4**
LRK	**Lerik**	**2.98**	**85**	P	**Pb**	**03 30 24.3**	**-3.5**
LRK				S	**Sn**	**03 30 58.2**	**-0.4**
ZRD	**Zardab**	**3.04**	**52**	P	**Pn**	**03 30 23.9**	**+1.1**
ZRD				S	**Sn**	**03 30 59.4**	**-0.3**
ASTR	**Astara**	**3.33**	**87**	P	**Pn**	**03 30 28.5**	**+1.5**
ASTR				S	**Sn**	**03 31 06.6**	**-0.4**
QBL	**G

MMRI	Maumere	9.84 179	P		Pn		03 37 21.2	+6.3
	4µm129nm,0.9s							
SBUM	Sibu	9.89 277	P		Pn		03 37 16.6	+0.9
SBUM	Sibu	9.89 277			Pn		03 37 15.9	+0.2
SBUM	Sibu	9.89 277	P		Pn		03 37 16.7	+1.0
LBFI	Labuhan Bajo,	9.92 193	P		Pn		03 37 19.7	+3.7
EDFI	Ende, Flores	9.96 182	P		Pn		03 37 20.5	+3.9
	995nm86nm,0.6s							
RCP	Roxas	10.25 4	*i* P		Pn		03 37 21.5	+0.9
DBNI	Kabupaten Domp	10.39 201	P		Pn		03 37 25.1	+2.6
PLAI	Plampang	10.89 203	P		Pn		03 37 31.5	+2.1
PLAI	Plampang	10.89 203	P		Pn		03 37 32.1	+2.7
	4µm904nm66nm,1.1s							
WBSI	Waikabubak, Su	11.15 194	P		Pn		03 37 37.3	+4.3
	3µm2µm109nm,1.0s							
SOEI	Soe	11.17 169	Pn		Pn		03 37 37.8	+4.5
SOEI	Soe	11.17 169	P		Pn		03 37 49.1	+16
TWSI	Taliwang, Sumb	11.19 207	P		Pn		03 37 46.7	+13
KLNI	Mataram	11.31 212	P		Pn		03 37 39.1	+4.0
	3µm234nm,1.4s							
BASI	Baing, Sumba	11.50 187	P		Pn		03 37 43.2	+5.5
	4µm289nm,1.5s							
BATI	Baumata	11.51 172	Pn		Pn		03 37 36.2	-1.7
	1.7nm,0.3s,baz=172,slow=4.9,SNR=6.5							
BATI			LR		LR		03 42 55.4	
	comp=Z,2µm,19.4s,baz=331,slow=42							
	7.2nm,0.4s							
BATI	Baumata	11.51 172	P		Pn		03 37 45.7	+7.9
	4µm1µm87nm,0.6s							
KHKI	Kahang-Kahang	11.52 214	P		Pn		03 37 43.8	+5.8
KMMI	Kalianget	11.55 224	P		Pn		03 37 44.6	+6.3
	2µm2µm64nm,1.3s							
RTBI	Rangdo, Negare	11.98 216	P		Pn		03 37 49.3	+5.0
	2µm78nm,0.8s							
DNP	Denpasar	12.00 214	P		P		03 38 05.0	+7.8
IGBI	Denpasar	12.15 214	P		P		03 38 04.6	+5.7
JAGI	Jajag, Banyuwa	12.47 219			Pn		03 37 51.8	+0.8
JAGI	Jajag, Banyuwa	12.47 219	P		Pn		03 37 55.0	+4.0
	2µm1µm67nm,0.9s							
TGY	Tagaytay City	12.80 355	Pn		Pn		03 37 54.5	-1.0
	5.4nm,0.3s,baz=263,slow=8.6,SNR=3.2							
TGY			LR		LR		03 43 06.3	
	comp=Z,2µm,18.2s,baz=204,slow=38							
	44nm,0.3s							
NGJI	Ngawi	13.61 231	P		P		03 38 23.3	+8.2
SNJI	Sawahan-Nganju	13.64 229	P		P		03 38 15.9	+0.3
SMRI	Semarang	14.23 234	Pn		Pn		03 38 15.6	+0.6
SMRI	Semarang	14.23 234	P		P		03 38 34.6	+13
UGM	Wanagama	14.67 231	P		Pn		03 38 21.6	+0.5
TPI	Tanjungpandan	14.94 254	P		P		03 38 33.9	+4.0
KPJI	Karang Pucung	15.63 237	P		P		03 38 39.9	+2.3
	2µm140nm,0.8s							
LEM	Lembang	16.50 241	Pn		Pn		03 38 44.6	-0.3
	3.5nm,0.3s,baz=162,slow=23,SNR=9.6							
LEM			LR		LR		03 47 01.9	
	comp=Z,2µm,19.2s,baz=119,slow=44							
	21nm,0.8s							
MTN	Manton Dam	16.66 148	P		P		03 38 48.5	-0.5
	comp=Z,45nm,0.6s							
MTN	Manton Dam	16.66 148			P		03 38 49.2	+0.1
BBJI	Bungbulang	16.78 239	P		Pn		03 38 49.4	+0.9
BBJI	Bungbulang	16.78 239			Pn		03 38 48.1	-0.3
BBJI	Bungbulang	16.78 239	P		P		03 38 51.2	+0.8
	comp=Z,947nmcomp=Z,86nm,0.8s							
DBJI	Dramaga	17.13 243	P		P		03 39 00.4	+6.1
KDU	Kakadu	17.30 144	P		Pn		03 38 54.5	-0.3
	comp=Z,17nm,0.7s							
DSRI	Dabo	17.56 264	P		P		03 39 00.0	+1.0
	comp=Z,99nm,1.2s							
KNRA	Kununurra	18.09 159	P		P		03 39 06.2	+1.3
	comp=Z,67nm,0.7s,comp=Z,1µm							
KNRA	Kununurra	18.09 159			P		03 39 05.1	+0.2
CGJI	Cibinong	18.11 244	P		P		03 39 06.6	+1.6
	comp=Z,5µmcomp=Z,278nm,1.8s							
MYKOM	Kota Tinggi	18.20 272	P		Pn		03 39 04.0	-2.0
MYKOM	Kota Tinggi	18.20 272	P		P		03 39 10.8	+4.7
KLSI		18.29 251	P		Pn		03 39 08.6	+1.5
GENI	Genyem	18.51 102	P		Pn		03 39 23.2	+13
MDSI	Maura Dua	18.75 252	P		Pn		03 39 13.8	+1.1
	comp=Z,1µmcomp=Z,78nm,1.1s							
KASI	Kota Agung	18.78 249	P		Pn		03 39 14.9	+1.8
	comp=Z,2µmcomp=Z,206nm,0.8s							
LWLI	Liwa	19.03 251	P		Pn		03 39 18.7	+2.5
FITZ	Fitzroy Crossi	19.56 170	P		P		03 39 20.6	-0.3
	comp=Z,3.8nm,0.3s,baz=2.9,slow=7.8,SNR=204							
FITZ			LR		LR		03 47 14.2	
	comp=Z,718nm,21.6s,baz=344,slow=38							
	comp=Z,77nm,0.8s							
MNAI	Manna	19.88 254	P		P		03 39 24.0	-0.5
MNAI	Manna	19.88 254			P		03 39 23.0	-1.5
MNAI	Manna	19.88 254	P		Pn		03 39 32.8	+6.5
KSI	Kapahiang	20.05 256	P		Pn		03 39 28.5	+0.1
	comp=Z,207nm,0.8s							
MASI	Maura Aman, Be	20.28 257	P		Pn		03 39 31.3	+0.3
KRJI	Kerinci	20.85 261	P		Pn		03 39 46.4	+8.6
BKNI	Bangkinang	21.03 268	P		P		03 39 37.3	+0.3
QIZ	Qiongzhong	21.33 327	P		P		03 39 39.4	-0.7
QIZ			S		S		03 43 36.9	+1.3
QIZ			pmax		pmax			
	comp=Z,33nm,1.8s							
QIZ			pmax		pmax			
	comp=Z,280nm,4.0s							
QIZ			L		L			
	comp=Z,410nm,13.4s							
QIZ			L		L			
	comp=Z,380nm,15.2s							
QIZ			L		L			
	comp=Z,510nm,16.9s							
PDSI	Padang	21.70 264	P		P		03 39 44.8	+0.6
	comp=Z,6µmcomp=Z,102nm,1.5s							
PPI	Padang Panjang	21.72 266	P		P		03 39 45.9	+1.5
	comp=Z,45nm,0.9s							
KULM	Kulim	21.73 281			P		03 39 43.1	-1.5
KULM	Kulim	21.73 281	P		P		03 39 45.0	+0.5
TPUB	Ta-pu	21.95 357	P		P		03 39 48.2	+1.4
TPUB	Ta-pu	21.95 357			P		03 39 46.2	-0.6
TPUB			IAmb		IAmb		03 40 09.3	
	comp=Z,68nm,0.8s							
YULB	Yu-li	22.01 358			P		03 39 47.1	-0.3
MBWA	Marble Bar	22.40 186	P		P		03 39 51.1	-0.6
	comp=Z,33nm,1.0s							
MBWA	Marble Bar	22.40 186	P		P		03 39 50.9	-0.7
MBWA	Marble Bar	22.40 186			P		03 39 50.8	-0.8
SSLB	Suanglung	22.41 357	P		P		03 39 50.2	-1.5
MNSI	Mandailing Nat	22.47 269	P		P		03 39 53.3	+0.8
	comp=Z,61nm,0.8s							
PSAC1	Pilbara Seismi	22.77 185	P		P		03 39 54.9	-0.6
	comp=Z,40nm,0.7s							
PSAC2	Pilbara Seismi	22.79 185	P		P		03 39 54.6	-1.1
	comp=Z,46nm,0.9s							
PSA00	Pilbara Seismi	22.80 185	P		P		03 39 55.2	-0.6
	comp=Z,38nm,0.8s							
PSA00	Pilbara Seismi	22.80 185	P		P		03 39 55.2	-0.6
PSA00	Pilbara Seismi	22.80 185			P		03 39 54.9	-1.0
PSA00	Pilbara Seismi	22.80 185			P		03 39 55.0	-0.8
PSA00			IAmb		IAmb		03 40 05.2	
	comp=Z,26nm,0.8s							
RPSI	Rantau Prapat	23.16 274			P		03 39 58.6	-1.0
RPSI			IAmb		IAmb		03 40 01.3	
	comp=Z,62nm,1.1s							
PSI	Prapat	23.16 274	P		P		03 39 58.6	-1.2
PSI			pmax		pmax			
	comp=Z,62nm,1.1s							
PSI	Prapat	23.16 274	P		P		03 40 00.1	+0.3
YHNB	Yeheng	23.28 358	P		P		03 40 00.5	-0.3
TSI	Tuntungan	23.57 276	P		P		03 40 05.2	+1.5
	comp=Z,216nm,1.5s							
GZH2	Guangzhou	23.70 341	P		P		03 40 03.9	-0.9
GZH2			S		S		03 44 21.3	+3.3
GZH2			pmax		pmax			
	comp=Z,330nm,6.3s							
GZH2			L		L			
	comp=Z,540nm,16.8s							
GZH2			L		L			
	comp=Z,500nm,17.8s							
GZH2			L		L			
	comp=Z,1µm,17.5s							
QZH2	Quanzhou	23.78 352	P		P		03 40 04.8	-0.7
QZH2			S		S		03 44 18.0	-1.3
QZH2			pmax		pmax			
	comp=Z,490nm,2.9s							
QZH2			L		L			
	comp=Z,690nm,16.5s							
QZH2			L		L			
	comp=Z,380nm,19.9s							
QZH2			L		L			
	comp=Z,800nm,15.8s							
WB0	Warramunga Arr	24.16 151	IAmb		IAmb		03 40 14.0	
	comp=Z,44nm,0.8s							
WRAB	Tennant Creek	24.28 151	P		P		03 40 10.6	+0.3
WRAB	Tennant Creek	24.28 151	P		P		03 40 10.2	-0.1
WRAB			IAmb		IAmb		03 40 35.2	
	comp=Z,31nm,0.9s							
WRAB	Tennant Creek	24.28 151	*ce*P		P		03 40 10.2	-0.1
WRAB			pmax		pmax			
	comp=Z,21nm,0.8s							
WRA	Warramunga Arr	24.28 151	P		P		03 40 09.2	-1.1
	comp=Z,25nm,0.8s,baz=333,slow=9.5,SNR=72							
WRA			PcP		PcP		03 43 49.4	-0.7
	comp=Z,1.1nm,0.4s,baz=329,slow=2.1,SNR=5.2							
WRA			ScP		ScP		03 47 25.5	-1.3
	comp=Z,0.9nm,0.9s,baz=338,slow=2.9,SNR=4.7							
	comp=Z,25nm,0.8s							
WRA	Warramunga Arr	24.28 151			P		03 40 09.8	-0.5
WRA	Warramunga Arr	24.28 151	*ce*P		P		03 40 09.8	-0.5
WRA			pmax		pmax			
	comp=Z,34nm,0.8s							
KCSI	Kotacane, Aceh	24.36 276	P		P		03 40 10.8	-0.3
	comp=Z,1µmcomp=Z,91nm,0.8s							
WR8	Warramunga Arr	24.37 151	P		P		03 40 11.6	+0.5
GSI	Gunungsitoli	24.47 270	P		P		03 40 11.5	-0.6
GSI	Gunungsitoli	24.47 270			P		03 40 11.5	-0.6
GSI	Gunungsitoli	24.47 270	P		P		03 40 11.2	-0.9
	comp=Z,2µmcomp=Z,143nm,0.7s							
TPTI		24.93 275	P		P		03 40 16.1	-0.2
	comp=Z,2µmcomp=Z,57nm,0.9s							
GUMO	Guam	25.69 60	LR		LR		03 49 15.0	
	comp=Z,281nm,20.3s,baz=194,slow=34							
MLSI	Meulaboh, Aceh	25.79 277	P		P		03 40 28.1	+4.0
COEN	Coen	25.82 127	P		P		03 40 25.5	+1.2
	comp=Z,46nm,1.0s							
COEN	Coen	25.82 127	P		P		03 40 25.1	+0.7
COEN	Coen	25.82 127			P		03 40 24.6	+0.2
COEN			IAmb		IAmb		03 40 27.5	
	comp=Z,43nm,1.0s							
JOW	Kunigami	26.11 13	LR		LR		03 49 49.8	
	comp=Z,171nm,20.6s,baz=154,slow=34							
WRKA	Warakurna	26.84 167	P		P		03 40 33.1	-0.4
	comp=Z,27nm,0.9s							
PMG	Port Moresby	27.16 113	*e*P		P		03 40 34.1	-2.4
PMG			pmax		pmax			
	comp=Z,23nm,1.0s							
ASAR	Alice Springs	27.33 156	P		P		03 40 37.5	-0.4
	comp=Z,4.4nm,0.7s,baz=328,slow=7.2,SNR=56							
ASAR			PcP		PcP		03 43 57.0	-0.1
	comp=Z,3.8nm,0.7s,baz=346,slow=2.6,SNR=7.9							
ASAR			ScP		ScP		03 47 35.3	-0.3
	comp=Z,1.7nm,0.9s,baz=317,slow=2.5,SNR=6.6							
ASAR			LR		LR		03 52 09.9	
	comp=Z,1µm,21.5s,baz=336,slow=38							
ASAR			PKP2bc				04 15 33.4	
	comp=Z,0.6nm,0.9s,baz=81,slow=9.0,SNR=4.8							
	comp=Z,4.4nm,0.7s							
QIS	Mount Isa	27.68 143	P		P		03 40 41.3	+0.3
	comp=Z,42nm,0.7s							
QIS	Mount Isa	27.68 143	P		P		03 40 41.7	+0.7
MEEK	Meekatharra	27.94 187	P		P		03 40 42.5	-0.8
	comp=Z,67nm,1.1s							
MEEK	Meekatharra	27.94 187	P		P		03 40 42.3	-1.0
CRAI	Chiangrai	28.36 313	P		P		03 40 45.4	-1.7
CMAR	Chiang Mai Arr	28.39 308	P		P		03 40 46.8	-0.7
	comp=Z,1.2nm,0.3s,baz=137,slow=7.1,SNR=7.1							
CMAR			PcP		PcP		03 43 59.8	+0.1
	comp=Z,1.3nm,0.3s,baz=206,slow=1.6,SNR=5.0							
CMAR			LR		LR		03 54 19.0	
	comp=Z,598nm,18.6s,baz=120,slow=41							
	comp=Z,1.2nm,0.3s							
CMAR	Chiang Mai Arr	28.39 308	P		P		03 40 45.4	-2.0
CHTO	Chiang Mai	28.59 309	P		P		03 40 48.4	-0.8
CHTO	Chiang Mai	28.59 309	P		P		03 40 48.4	-0.8
CHTO			pmax		pmax			
	comp=Z,9.0nm,1.1s							
CHTO	Chiang Mai	28.59 309	P		P		03 41 01.9	+13
MTSU	Mount Surprise	29.19 132	P		P		03 40 55.6	+1.1
	comp=Z,10nm,0.9s							
SSE	Sheshan	29.68 359	P		P		03 40 59.3	+0.6
SSE			S		S		03 45 55.4	+2.8
SSE			pmax		pmax			
	comp=Z,9.0nm,0.7s							
SSE			pmax		pmax			
	comp=Z,80nm,5.4s							
SSE			L		L			
	comp=Z,310nm,18.0s							
SSE			L		L			
	comp=Z,190nm,17.5s							
WHN	Wuhan	30.02 347	P		P		03 41 03.3	+1.6
WHN			S		S		03 45 54.4	-3.6
WHN			pmax		pmax			
	comp=Z,84nm,1.8s							
WHN			pmax		pmax			
	comp=Z,470nm,4.7s							
WHN			L		L			
	comp=Z,2µm,16.2s							
WHN			L		L			
	comp=Z,1µm,17.3s							
WHN			L		L			
	comp=Z,3µm,19.2s							
MORW	Morawa	30.71 190	P		P		03 41 07.2	-0.7
	comp=Z,39nm,1.1s							
MORW	Morawa	30.71 190	P		P		03 41 07.1	-0.7
MORW	Morawa	30.71 190	IAmb		IAmb		03 41 08.2	
	comp=Z,33nm,1.2s							
NJ2	Nanjing	30.77 355	*e*P		P		03 41 09.8	+1.5
NJ2			pmax		pmax			
	comp=Z,34nm,0.9s							
ENH	Enshi	31.22 339	P		P		03 41 10.9	-1.5
PZH	PanZhiHua	31.80 324	P		P		03 41 20.5	+2.9
PZH			S		S		03 46 27.8	+1.6
PZH			pmax		pmax			
	comp=Z,10.0nm,0.5s							
PZH			L		L			
	comp=Z,280nm,17.3s							
PZH			L		L			
	comp=Z,360nm,17.3s							
PZH			L		L			
	comp=Z,340nm,16.1s							
CTA	Charters Tower	31.83 133	LR		LR		03 55 45.2	
	comp=Z,402nm,20.3s,baz=312,slow=39							
BLDU	Ballidu	32.11 189	P		P		03 41 19.0	-1.1
	comp=Z,41nm,2.2s							
BLDU	Ballidu	32.11 189	P		P		03 41 19.3	-0.8
JCJ	Chichijima	32.14 35	LR		LR		03 55 47.2	
	comp=Z,145nm,18.9s,baz=142,slow=39							
FORT	Forrest	32.38 170	P		P		03 41 22.1	-0.4
	comp=Z,40nm,0.7s							
FORT	Forrest	32.38 170			P		03 41 22.2	-0.2
FORT			IAmb		IAmb		03 41 23.0	
	comp=Z,27nm,0.7s							
KMBL	Kambalda	32.45 180	P		P		03 41 22.2	-1.0
	comp=Z,26nm,0.9s							
JNU	Nakatsue	32.76 14	LR		LR		03 55 59.3	
	comp=Z,151nm,19.4s,baz=170,slow=39							
KLBR	Kellerberrin	32.93 187	P		P		03 41 26.0	-1.4
	comp=Z,57nm,0.8s							
KLBR	Kellerberrin	32.93 187	P		P		03 41 26.6	-0.7
INKA	Innaminka	33.98 149	P		P		03 41 37.5	+1.0
CD2	Chengdu	34.20 331	P		P		03 41 38.3	-0.2
CD2			S		S		03 47 03.0	-0.4
CD2			pmax		pmax			
	comp=Z,30nm,0.6s							
CD2			pmax		pmax			
	comp=Z,150nm,5.6s							
CD2			L		L			
	comp=Z,560nm,14.1s							
CD2			L		L			
	comp=Z,540nm,16.4s							
CD2			L		L			
	comp=Z,640nm,17.1s							
LYN	LuoYang	34.30 346	P		P		03 41 39.3	+0.1
LYN			pP		pP		03 41 42.8	-4.7
LYN			S		S		03 47 05.8	+1.1
LYN			SS		SnSn		03 49 16.8	+1.2
LYN			pmax		pmax			
	comp=Z,12nm,0.9s							
LYN			pmax		pmax			
	comp=Z,160nm,7.8s							
LYN			L		L			
	comp=Z,660nm,18.5s							
LYN			L		L			
	comp=Z,610nm,18.2s							
LYN			L		L			
	comp=Z,980nm,16.8s							
NWAO	Narrogin (SRO)	34.31 187	LR		LR		03 57 02.9	
	comp=Z,343nm,19.7s,baz=22,slow=39							
NWAO	Narrogin (SRO)	34.31 187	P		P		03 41 38.7	-0.6
XAN	Xi'an	34.84 341	P		P		03 41 40.9	-3.1
XAN			S		S		03 47 14.8	+1.6
XAN			pmax		pmax			
	comp=Z,180nm,7.4s							
XAN			L		L			
	comp=Z,510nm,16.5s							
XAN			L		L			
	comp=Z,2µm,15.4s							
XAN			L		L			
	comp=Z,820nm,15.5s							
QLP	Quilpie	34.99 144	P		P		03 41 46.1	+0.8
QLP	Quilpie	34.99 144	P		P		03 41 45.8	+0.5
BBOO	Buckleboo	36.38 160	P		P		03 41 56.5	-0.7
	comp=Z,18nm,1.4s							
BBOO	Buckleboo	36.38 160	P		P		03 41 56.7	-0.5
KSAR	Wonju Array Be	36.40 8	P		P		03 41 58.3	+1.1
KSAR	Wonju Array Be	36.40 8	P		P		03 41 58.3	+1.1
BRDH	Bariadhala	36.41 308	LR		LR		04 00 10.0	
	comp=Z,551nm,18.6s,baz=148,slow=42							
KSRS	Korea Array	36.42 8	P		P		03 41 54.5	-2.9
	comp=Z,2.0nm,0.8s,baz=191,slow=10,SNR=6.6							
KSRS			LR		LR		03 57 36.3	
	comp=Z,348nm,19.6s,baz=195,slow=38							
	comp=Z,2.0nm,0.8s							
HNS	HongShan	36.59 350	⇑P		P		03 41 59.3	+0.5
HNS			S		S		03 47 41.4	+1.7
HNS			pmax		pmax			
	comp=Z,6.0nm,1.1s							
HNS			L		L			
	comp=Z,480nm,18.2s							
HNS			L		L			
	comp=Z,270nm,14.8s							
HNS			L		L			
	comp=Z,600nm,16.3s							
SHL	Shillong	37.80 312			P		03 42 08.1	-1.5
SHL	Shillong	37.80 312	P		P		03 42 08.1	-1.5
SHL			pmax		pmax			
	comp=Z,11nm,0.7s							
HTT	Hallett	38.00 157	P		P		03 42 11.7	+0.7
	comp=Z,23nm,0.7s							
HTT	Hallett	38.00 157	P		P		03 42 11.5	+0.6
MAJO	Matsushiro	38.16 21	⇓*e*P		P		03 42 10.1	-2.1
MAJO			pmax		pmax			
	comp=Z,16nm,0.9s							
MJAR	Matsushiro Arr	38.16 21	P		P		03 42 10.7	-1.5
	comp=Z,8.2nm,0.9s,baz=197,slow=8.7,SNR=6.7							
MJAR			LR		LR		03 59 28.5	
	comp=Z,266nm,18.3s,baz=192,slow=39							
	comp=Z,8.2nm,0.9s							
LZDM	Lanzhou Array	38.49 336	LR		LR		03 57 22.1	
	comp=Z,183nm,21.6s,baz=170,slow=35							
LZH	Lanzhou	38.54 336	*e*P		P		03 42 13.0	-2.6
LZH			sP		pwP		03 42 26.4	+0.1
LZH			PP		PnPn		03 43 49.8	+3.5
LZH			S		S		03 48 10.6	+0.8
LZH			pmax		pmax			
	comp=Z,250nm,4.3s							
LZH			L		L			
	comp=Z,470nm,16.7s							
LZH			L		L			
	comp=Z,460nm,16.7s							
LZH			L		L			
	comp=Z,750nm,17.7s							
CMSA	Cobar Meteorol	39.59 148	P		P		03 42 25.2	+0.9
	comp=Z,21nm,1.1s							
CMSA	Cobar Meteorol	39.59 148	P		P		03 42 24.4	+0.1
SNY	Shenyang	40.40 2	⇓P		P		03 42 30.0	-0.8
SNY			sP		sP		03 42 45.0	+2.4
SNY			S		S		03 48 33.1	-4.1
SNY			pmax		pmax			
	comp=Z,13nm,0.9s							
SNY			pmax		pmax			
	comp=Z,160nm,3.9s							
SNY			L		L			
	comp=Z,330nm,17.9s							
SNY			L		L			
	comp=Z,300nm,16.5s							
SNY			L		L			
	comp=Z,400nm,19.5s							
HHC	Hu-ho-hao-te	40.53 348	*e*P		P		03 42 33.8	+1.7
HHC			S		S		03 48 40.1	+0.7
HHC			pmax		pmax			
	comp=Z,11nm,0.8s							
HHC			pmax		pmax			
	comp=Z,81nm,5.7s							
HHC			L		L			
	comp=Z,410nm,18.3s							
HHC			L		L			
	comp=Z,160nm,11.4s							
HHC			L		L			
	comp=Z,420nm,18.1s							
BTO2	Baotou	40.82 346	*e*P		P		03 42 37.4	+3.0
BTO2			pP		pP		03 42 42.0	-0.8
BTO2			sP		pwP		03 42 44.5	-0.6
BTO2			S		S		03 48 49.3	+5.6
BTO2			sS		sS		03 48 56.6	-0.4
BTO2			SS		SS		03 51 43.1	-2.5
BTO2			pmax		pmax			
	comp=Z,21nm,0.7s							
BTO2			pmax		pmax			
	comp=Z,350nm,5.8s							
BTO2			L		L			
	comp=Z,1µm,16.0s							
BTO2			L		L			
	comp=Z,670nm,16.9s							
BTO2			L		L			
	comp=Z,1µm,16.5s							
PALK	Pallekele	41.64 279	LR		LR		04 02 27.6	
	comp=Z,434nm,18.9s,baz=101,slow=40							
PALK	Pallekele	41.64 279	P		P		03 42 42.4	+0.9
PALK	Pallekele	41.64 279	P		P		03 42 42.4	+0.9
PALK			pmax		pmax			
	comp=Z,5.0nm,0.9s							
PSTR	Posyet	41.94 10	⇑*e*P		P		03 42 44.0	+0.5
ARPS	Mount Arapiles	42.07 156	P		P		03 42 45.2	+0.5
	comp=Z,46nm,1.4s							
ARMA	Armidale	42.27 141	P		P		03 42 48.5	+2.0
	comp=Z,35nm,0.8s							
ARMA	Armidale	42.27 141	P		P		03 42 48.1	+1.6
ARMA	Armidale	42.27 141			P		03 42 48.5	+2.0
ARMA			IAmb		IAmb		03 42 49.5	
	comp=Z,24nm,0.7s							
EVN	Everest	42.90 311			P		03 42 52.6	+0.4
EVN			IAmb		IAmb		03 43 05.2	
	comp=Z,18nm,0.7s							
JTM	Tenmabayashi	42.95 21	P		P		03 42 51.1	-0.6
GTA2	Gaotai	43.13 335	*e*P		P		03 42 54.5	+1.1
GTA2			S		S		03 49 20.5	+2.5
GTA2			pmax		pmax			
	comp=Z,9.0nm,0.9s							
GTA2			L		L			
	comp=Z,250nm,16.8s							
GTA2			L		L			
	comp=Z,350nm,15.6s							
GTA2			L		L			
	comp=Z,370nm,16.2s							
USRK	Ussuriysk Ar.	43.65 10	P		P		03 42 57.4	0.0
	comp=Z,8.0nm,0.9s,baz=198,slow=8.1,SNR=11							
	comp=Z,8.0nm,0.9s							
MDJ	Mudanjiang	43.68 8	P		P		03 42 57.3	-0.3
MDJ			pmax		pmax			
	comp=Z,21nm,1.1s							
CAN	Canberra	44.26 148	P		P		03 43 03.2	+0.8
	comp=Z,41nm,0.7s							
CAN	Canberra	44.26 148	P		P		03 43 03.9	+1.5
CAN	Canberra	44.26 148			P		03 43 04.0	+1.5
CAN			IAmb		IAmb		03 43 04

comp=Z,17nm,0.9s
JKA Kamikawa-asahi 46.41 20 P P 03 43 18.8 -0.5
JKA IAmb IAmb 03 43 35.9
comp=Z,17nm,0.9s
ULN Ulaanbaatar 48.20 346 P P 03 43 33.4 0.0
ULN Ulaanbaatar 48.20 346 *d* *i* P **P 03 43 34.0 +0.6**
ULN pmax pmax
comp=Z,14nm,1.0s
ULN Ulaanbaatar 48.20 346 P P 03 43 33.9 +0.6
SONM Songino Array 48.33 346 P P 03 43 34.8 +0.5
comp=Z,10.0nm,0.9s,baz=162,slow=8.9,SNR=52
SONM LR LR 04 05 13.9
comp=Z,421nm,18.6s,baz=156,slow=38
comp=Z,10.0nm,0.9s
SONM Songino Array 48.33 346 P 03 43 34.8 +0.5
SONM IAmb IAmb 03 43 47.8
comp=Z,30nm,1.1s
KLR Kul'dur 48.50 8 LR LR 04 03 30.5
comp=Z,141nm,20.9s,baz=200,slow=35
KLR Kul'dur 48.50 8 ⇓ *i* P **P 03 43 34.4 -1.1**
KLR pmax pmax
comp=Z,18nm,1.9s
YSS Yuzhno-Sakhali 48.96 19 *e* P **P 03 43 38.5 -0.5**
YSS pmax pmax
comp=Z,20nm,1.4s
HEH HeiHe 49.02 5 *e* P **P 03 43 39.4 0.0**
HEH pmax pmax
comp=Z,21nm,0.9s
HEH L L
comp=Z,220nm,13.3s
HEH L L
comp=Z,370nm,13.8s
HEH L L
comp=Z,270nm,15.3s
ZAK Zakamensk 51.48 345 *e* P **P 03 43 57.1 -1.0**
ZAK pmax pmax
comp=Z,11nm,1.2s
WMQ Urumqi 52.23 329 *e* P **P 03 44 05.8 +2.0**
WMQ pmax pmax
comp=Z,9.0nm,0.9s
WMQ L L
comp=Z,180nm,24.1s
ZEA Zeya 52.47 4 *e* P **P 03 44 05.2 -0.2**
ZEA pmax pmax
comp=Z,10.0nm,0.9s
TLY Talaya 52.57 346 LR LR 04 07 51.9
comp=Z,252nm,19.0s,baz=142,slow=38
TLY Talaya 52.57 346 P 03 44 07.4 +1.2
TLY IAmb IAmb 03 44 20.5
comp=Z,23nm,0.8s
TLY Talaya 52.57 346 *d* *i* P **P 03 44 07.3 +1.2**
TLY pmax pmax
comp=Z,13nm,0.8s
IRK Irkutsk 52.94 346 *e* P **P 03 44 09.6 +0.7**
IRK pmax pmax
comp=Z,51nm,1.6s
MOY Mondy 53.26 344 *e* P **P 03 44 12.4 +1.0**
MOY pmax pmax
comp=Z,68nm,2.1s
KNGR Kungurtug, Tuv 53.38 341 ⇑ *i* P **P 03 44 14.6 +2.3**
KNGR pmax pmax
comp=Z,30nm,1.5s
NIL Nilore 55.85 311 P 03 44 31.1 +0.7
NIL IAmb IAmb 03 44 51.7
comp=Z,12nm,0.5s
NIL Nilore 55.85 311 P **P 03 44 31.1 +0.7**
NIL pmax pmax
comp=Z,12nm,0.5s
ZSN Zaisan 56.17 330 *e* P **P 03 44 33.0 +0.5**
SHLS Shalkode 56.39 324 *e* P **P 03 44 32.5 -1.8**
comp=Z,13nm,1.7s
PDGK Podgornoye 56.47 324 P **P 03 44 34.6 -0.2**
UZB Uzynbulak 56.64 323 *e* P **P 03 44 36.6 +0.5**
KSH2 Kashi 56.70 318 P **P 03 44 38.3 +1.8**
BOD Bodaibo 56.75 355 *e* P **P 03 44 36.3 0.0**
BOD pmax pmax
comp=Z,48nm,1.7s
KPKS Kokpek 57.03 323 *e* P **P 03 44 39.2 +0.5**
MK31 Makanchi Array 57.05 328 *d* *i* P **P 03 44 39.2 +0.5**
MKAR Makanchi Array 57.05 328 P **P 03 44 39.1 +0.4**
comp=Z,5.2nm,0.8s,baz=129,slow=8.2,SNR=58
MKAR LR LR 04 10 37.2
comp=Z,172nm,19.7s,baz=111,slow=38
comp=Z,5.2nm,0.8s
MAKZ Makanchi 57.22 328 P 03 44 40.0 +0.1
MAKZ Makanchi 57.22 328 P **P 03 44 40.0 +0.1**
MAKZ pmax pmax
comp=Z,6.0nm,0.9s
TNSS Tian-Shan 57.84 322 *e* P **P 03 44 44.8 0.0**
MDOK Medeo 57.85 322 *e* P **P 03 44 45.5 +0.9**
TDK Taldyqorghan 58.08 325 *e* P **P 03 44 46.9 +0.9**
comp=Z,9.0nm,0.6s
MSVF Nonsavu 58.25 112 LR LR 04 10 31.3
comp=Z,206nm,18.5s,baz=340,slow=37
KUU Kurty 58.68 323 *e* P **P 03 44 51.0 +0.7**
comp=Z,7.0nm,1.0s
AAK Ala-Archa 59.16 321 LR LR 04 12 05.5
comp=Z,140nm,20.2s,baz=126,slow=38
AAK Ala-Archa 59.16 321 P **P 03 44 53.9 +0.2**
AAK IAmb IAmb 03 45 07.5
comp=Z,19nm,1.2s
AAK Ala-Archa 59.16 321 ⇑ *e* P **P 03 44 52.3 -1.4**
AAK pmax pmax
comp=Z,9.0nm,1.1s
KBL Kabul 59.41 310 P 03 44 55.4 -0.3
KBL Kabul 59.41 310 P **P 03 44 55.4 -0.3**
KBL pmax pmax
comp=Z,28nm,0.9s
SGDS Sogindy 59.49 322 *e* P **P 03 44 56.5 +0.6**
PETK Petropavlovsk- 59.52 24 LR LR 04 09 02.0
comp=Z,112nm,21.8s,baz=225,slow=34
ZALV Zalesovo Beam 60.78 336 P **P 03 45 04.0 -0.4**
comp=Z,10nm,0.8s,baz=126,slow=6.5,SNR=25
ZALV LR LR 04 12 05.5
comp=Z,168nm,20.3s,baz=108,slow=37
comp=Z,10nm,0.8s
YAK Yakutsk 60.89 4 LR LR 04 10 51.1
comp=Z,120nm,21.6s,baz=180,slow=35
YAK Yakutsk 60.89 4 *e* P **P 03 45 05.1 +0.1**
YAK *e* 03 45 48.3
YAK *e*S **S 03 53 21.5 +0.8**
YAK *e**SS **sS 03 53 37.2 +2.6**
YAK *e* 03 54 53.5
YAK *e*SS **SS 03 57 27.3 +7.0**
YAK pmax pmax
comp=Z,16nm,0.8s
YAK pmax pmax
comp=N,4.0nm,0.9s
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK pmax pmax
comp=Z,124nm,3.8s
YAK pmax pmax
comp=N,60nm,3.2s
YAK pmax pmax
comp=E,79nm,3.2s
YAK smax smax
comp=N,74nm,3.5s
YAK smax smax
comp=E,60nm,3.5s
CHGR Chuyangaron 60.93 314 ⇓ *i* P **P 03 45 06.2 +0.3**
CHGR pmax pmax
comp=Z,20nm,1.0s
DZA Taraz 61.31 320 *e* P **P 03 45 08.9 +0.5**
KURBB Kurchatov Arra 61.40 330 P **P 03 45 08.7 0.0**
comp=Z,6.8nm,0.9s,baz=127,slow=6.6,SNR=22
comp=Z,6.8nm,0.9s
JCZ Jackson Bay 61.40 143 P **P 03 45 09.8 +0.8**
KURK Kurchatov 61.41 330 P 03 45 09.0 +0.2
KURK IAmb IAmb 03 45 25.1
comp=Z,18nm,0.9s
KURK Kurchatov 61.41 330 P **P 03 45 09.0 +0.2**
KURK pmax pmax
comp=Z,18nm,1.0s
IUG Iuzhnay 61.82 318 *e* P **P 03 45 12.7 +0.8**
comp=Z,8.0nm,0.9s
KK31 Karatay Array 61.94 319 P **P 03 45 12.7 +0.1**
KK31 IAmb IAmb 03 45 24.4
comp=Z,18nm,1.5s
KK31 Karatay Array 61.94 319 P **P 03 45 12.7 +0.1**
KK31 pmax pmax
comp=Z,18nm,1.5s
KKAR Karatay Array 61.94 319 P 03 45 12.7 +0.1
KKAR Karatay Array 61.94 319 P **P 03 45 12.7 +0.1**
CHM Chimkent 62.18 318 *e* P **P 03 45 14.7 +0.5**
comp=Z,6.8nm,0.7s

MA2 Magadan 62.28 16 LR LR 04 15 46.4
comp=Z,100nm,18.0s,baz=203,slow=39
MA2 Magadan 62.28 16 P 03 45 14.3 -0.2
MA2 IAmb IAmb 03 45 28.7
comp=Z,16nm,0.9s
MA2 Magadan 62.28 16 *de* P **P 03 45 14.5 0.0**
MA2 pmax pmax
comp=Z,13nm,0.9s
MA2 Magadan 62.28 16 P **P 03 45 14.3 -0.2**
comp=Z,22nm,1.1s
BRLS Borolday 62.35 319 *e* P **P 03 45 15.7 +0.4**
comp=Z,7.5nm,1.4s
RPZ Rata Peaks 62.58 142 P **P 03 45 18.1 +1.3**
RPZ Rata Peaks 62.58 142 P 03 45 18.1 +1.3
KHZ Kahutara 63.50 140 P **P 03 45 23.5 +0.7**
SNZO South Karori 63.74 138 P **P 03 45 23.7 -0.8**
BKZ Black Stump Fm 64.01 135 P **P 03 45 27.1 +0.7**
BKZ Black Stump Fm 64.01 135 P 03 45 27.5 +1.0
RTZ Ruatahuna 64.13 135 P 03 45 27.9 +0.7
SEY Seymchan 65.53 15 ⇓ *e* P **P 03 45 36.2 +0.5**
SEY pmax pmax
comp=Z,11nm,1.1s
BVA0 Borovoye Array 66.92 329 *i* P **P 03 45 44.2 -0.7**
BVAR Borovoye Array 66.92 329 P **P 03 45 44.8 -0.1**
comp=Z,7.0nm,0.9s,baz=126,slow=10,SNR=19
comp=Z,7.0nm,0.9s
BORK Borovoye 66.96 329 P 03 45 44.9 -0.3
BORK IAmb IAmb 03 45 57.5
comp=Z,12nm,0.9s
BORK Borovoye 66.96 329 *ce* P **P 03 45 44.9 -0.3**
BORK pmax pmax
comp=Z,13nm,0.9s
SHEM Shemya Is, Ala 66.96 31 LR LR 04 12 48.5
comp=Z,44nm,20.3s,baz=262,slow=34
TIXI Tiksi 70.41 2 LR LR 04 18 02.3
comp=Z,233nm,21.2s,baz=190,slow=37
TIXI Tiksi 70.41 2 P 03 46 05.2 -1.0
TIXI Tiksi 70.41 2 ⇑ *i* P **P 03 46 05.3 -1.0**
TIXI pmax pmax
comp=Z,5.0nm,0.8s
AB31 Akbulak array 71.16 322 *i* P **P 03 46 10.9 -0.4**
ABKAR Akbulak array 71.16 322 P 03 46 11.0 -0.2
NRIK Noril'sk 71.76 348 P **P 03 46 13.9 -0.6**
comp=Z,6.3nm,0.7s,baz=138,slow=6.0,SNR=11
NRIK LR LR 04 19 12.6
comp=Z,169nm,19.1s,baz=156,slow=37
comp=Z,6.3nm,0.7s
NRIK Noril'sk 71.76 348 IAmb IAmb 03 46 26.8
comp=Z,22nm,0.8s
NRIK Noril'sk 71.76 348 P P 03 46 14.0 -0.6
AKTO Aktyubinsk 72.73 323 LR LR 04 20 14.9
comp=Z,106nm,20.9s,baz=94,slow=37
AKTO Aktyubinsk 72.73 323 P P 03 46 20.3 -0.4
BILL Bilibino 73.15 16 ⇑ *e* P **P 03 46 22.1 -0.8**
BILL pmax pmax
comp=Z,15nm,2.0s
SVE Sverdlovsk 73.66 330 *e* P **P 03 46 25.3 -0.8**
ABPO Ambohimpanom 76.08 250 P 03 46 40.0 -1.1
ABPO IAmb IAmb 03 46 42.0
comp=Z,13nm,0.9s
ABPO Ambohimpanom 76.08 250 P P 03 46 40.0 -1.1
ABPO pmax pmax
comp=Z,13nm,0.9s
VOI Vohitsoka 76.81 247 P 03 46 44.5 -0.6
AKT Akhty 77.44 312 *e* P **P 03 46 47.4 -0.8**
AKT *e* 03 46 57.9
AKT pmax pmax
comp=Z,9.0nm,0.8s
UNV Unalaska Valle 78.10 35 P **P 03 46 52.5 +1.1**
baz=256
GAMB Gambell 78.55 25 P **P 03 46 55.1 +1.4**
baz=249
RAR Rarotonga 79.44 112 LR LR 04 23 54.3
comp=Z,60nm,18.4s,baz=228,slow=37
MAW Mawson 79.86 200 LR LR 04 17 55.8
comp=Z,172nm,20.2s,baz=52,slow=32
M11K Mekoryuk 79.95 29 P **P 03 47 02.4 +1.0**
baz=255
FALS False Pass 80.09 34 P **P 03 47 02.8 +0.4**
baz=258
TNA Tin City 80.67 23 P **P 03 47 06.3 +1.1**
baz=252
NCK Nalchik 80.75 314 ⇑ *e* P **P 03 47 06.6 +0.4**
NCK pmax pmax
comp=Z,3.0nm,0.8s
K13K Kusilvak Mount 81.07 27 P **P 03 47 08.8 +1.4**
baz=256
F14K Arctic Creek 81.28 24 P **P 03 47 09.6 +1.0**
baz=254
KBZ Khabaz 81.29 314 P **P 03 47 08.5 -0.5**
comp=Z,2.5nm,0.9s,baz=97,slow=2.1,SNR=6.3
comp=Z,2.5nm,0.9s
KBZ Khabaz 81.29 314 ⇓ *e* P **P 03 47 08.1 -0.9**
KBZ pmax pmax
comp=Z,4.0nm,0.9s
M13K Dall Lake 81.33 29 P **P 03 47 09.8 +1.0**
baz=257
NEUR Neytrino 81.38 313 ⇓ *e* P **P 03 47 09.2 -0.5**
NEUR pmax pmax
comp=Z,6.0nm,2.1s
GURO Guroymak-BITLI 81.40 309 IAmb IAmb 03 47 22.8
comp=Z,13nm,0.9s
ANM Nome 81.43 25 P **P 03 47 10.8 +1.5**
baz=255
KIV Kislovodsk 81.46 314 *e* P **P 03 47 09.8 -0.3**
KIV pmax pmax
comp=Z,4.0nm,1.1s
VNDA Vanda 81.62 172 P **P 03 47 10.0 -0.1**
comp=Z,7.1nm,0.7s,baz=312,slow=6.6,SNR=26
VNDA LR LR 04 23 16.1
comp=Z,168nm,19.1s,baz=340,slow=36
comp=Z,7.1nm,0.7s
VNDA Vanda 81.62 172 IAmb IAmb 03 47 10.9
comp=Z,7.2nm,0.8s
J14K Nanvaranak Lak 81.76 27 P **P 03 47 12.7 +1.6**
baz=257
SDPT Sand Point 81.84 34 P **P 03 47 12.6 +1.0**
baz=260
L14K Kuka Creek 81.85 28 P **P 03 47 13.4 +1.8**
baz=258
F15K North Star Dit 82.02 24 P **P 03 47 13.9 +1.4**
baz=255
N14K Kuskokwak Cree 82.04 30 P **P 03 47 13.6 +1.0**
baz=259
M14K Bethel 82.07 29 P **P 03 47 14.1 +1.4**
baz=258
G15K Niukluk 82.09 24 P **P 03 47 14.3 +1.5**
baz=256
O14K Tigyukauivet M 82.12 30 P **P 03 47 14.5 +1.5**
baz=259
CHNA Chernabura Isl 82.27 35 P **P 03 47 15.3 +1.4**
baz=261
C16K Lisburne Hills 82.44 21 IAmb IAmb 03 47 29.2
comp=Z,26nm,0.9s
C16K Lisburne Hills 82.44 21 P **P 03 47 15.5 +1.0**
baz=254
L15K Ungalak Mounta 82.48 28 P **P 03 47 16.2 +1.3**
baz=259
S14K Fog Glacier 82.51 33 P **P 03 47 16.3 +1.0**
baz=261
K15K Wolf Creek Mou 82.58 27 P **P 03 47 16.8 +1.4**
baz=259
M15K Kasigluk River 82.67 29 P **P 03 47 17.4 +1.5**
baz=260
H16K Elim 82.76 25 P **P 03 47 16.9 +0.7**
baz=258,SNR=6.2
O15K Ungalikthiuk R 82.83 31 P **P 03 47 17.4 +0.6**
baz=260
N15K Kwethluk River 82.87 30 IAmb IAmb 03 47 31.1
comp=Z,33nm,1.1s
N15K Kwethluk River 82.87 30 P **P 03 47 18.4 +1.4**
baz=260
G16K Koyuk River 82.87 24 IAmb IAmb 03 47 31.1
comp=Z,20nm,1.1s
G16K Koyuk River 82.87 24 P **P 03 47 18.3 +1.5**
baz=258
D17K Noatak River 83.11 22 P **P 03 47 19.3 +1.3**
baz=256,SNR=7.8
CHGN Chignik 83.14 34 P **P 03 47 19.7 +1.3**
baz=262
J16K Anvik River 83.19 26 P **P 03 47 19.8 +1.2**
J16K Anvik River 83.19 26 P **P 03 47 19.6 +1.1**
baz=259
RDOG Red Dog Mine 83.26 21 P 03 47 20.3 +1.4
RDOG IAmb IAmb 03 47 33.3
comp=Z,15nm,1.1s
RDOG Red Dog Mine 83.26 21 P **P 03 47 20.0 +1.2**

baz=257
C17K DeLong Mountai 83.26 21 P **P 03 47 20.5 +1.6**
baz=256,SNR=8.4
I17K Unalakleet 83.27 26 P **P 03 47 19.8 +0.9**
I17K Unalakleet 83.27 26 P **P 03 47 19.3 +0.4**
baz=259
L16K Owhat River 83.43 28 P 03 47 20.1 +0.3
L16K Owhat River 83.43 28 P **P 03 47 20.4 +0.6**
baz=260,SNR=6.1
F17K Baldwin Pennin 83.54 23 IAmb IAmb 03 47 34.0
comp=Z,22nm,1.1s
F17K Baldwin Pennin 83.54 23 P **P 03 47 21.5 +1.3**
baz=258
M16K Timber Creek 83.56 29 P **P 03 47 21.3 +0.8**
baz=261
N16K Nishlik Lake 83.57 29 P **P 03 47 21.4 +0.8**
baz=261
SOC Sochi 83.57 314 *e* P P 03 47 26.1 +5.2
SOC *e* PPP PPP 03 52 23.4
SOC *e*S S 03 57 48.6 +7.4
SOC *e*SS **SS 04 03 11.3 +3.6**
SOC pmax pmax
comp=Z,5.0nm,0.7s
SOC MLR MLR
comp=Z,71nm,19.0s
G17K Kiwalik Mounta 83.59 24 P **P 03 47 21.5 +1.0**
baz=259
P16K Nushagak River 83.75 31 P **P 03 47 22.3 +0.8**
baz=262
O16K Kokwok River B 83.77 30 P **P 03 47 22.9 +1.3**
O16K Kokwok River B 83.77 30 P **P 03 47 23.0 +1.4**
baz=262
H17K Granite Mounta 83.79 25 P **P 03 47 23.1 +1.4**
H17K Granite Mounta 83.79 25 P **P 03 47 23.2 +1.6**
baz=260
J17K VABM Dome 83.89 26 P **P 03 47 23.4 +1.3**
baz=261
E18K Tukpahlearik C 83.98 22 P **P 03 47 24.1 +1.5**
baz=259,SNR=18
C18K Utukok River 84.01 21 IAmb IAmb 03 47 36.2
comp=Z,28nm,1.1s
C18K Utukok River 84.01 21 P **P 03 47 24.0 +1.3**
baz=258
L17K Donlin 84.05 28 P **P 03 47 24.1 +1.2**
baz=262
KIBK Kibwezi 84.06 268 P 03 47 24.3 +0.1
KIBK IAmb IAmb 03 47 25.5
comp=Z,9.8nm,1.1s
K17K Iditarod 84.13 27 P **P 03 47 24.5 +1.1**
baz=262
F18K Selawik 84.20 23 P **P 03 47 24.9 +1.3**
baz=260
O17K Koliganek Bris 84.30 30 P **P 03 47 25.4 +1.2**
baz=263
M17K Holitna River 84.35 28 P **P 03 47 25.7 +1.2**
baz=262
N17K Nushagak Hills 84.35 29 P **P 03 47 25.7 +1.2**
baz=263
A19K Wainwright 84.38 19 P **P 03 47 25.9 +1.5**
baz=258
Q16K King Salmon 84.39 31 P **P 03 47 26.2 +1.4**
baz=263
R17L Mt. Peulik Vol 84.42 32 P **P 03 47 26.3 +1.3**
baz=264
G18K Tagagawik 84.48 24 IAmb IAmb 03 47 38.1
comp=Z,17nm,1.1s
G18K Tagagawik 84.48 24 P **P 03 47 26.2 +1.1**
baz=261
H18K Honhosa River 84.48 25 IAmb IAmb 03 47 38.3
comp=Z,30nm,1.2s
H18K Honhosa River 84.48 25 P **P 03 47 26.4 +1.3**
baz=261
CHIR Chirikof Islan 84.64 34 P **P 03 47 27.3 +1.2**
baz=264
C19K Lookout Ridge 84.67 21 P **P 03 47 27.2 +1.1**
baz=260
Q17K Contact Creek 84.75 32 P **P 03 47 27.7 +1.0**
baz=264
L18K Granite Mounta 84.81 28 P **P 03 47 27.5 +0.7**
baz=263
KMBO Kilima Mbogo 84.83 269 P **P 03 47 27.9 -0.3**
baz=112,slow=4.4
KMBO LR LR 04 23 20.6
comp=Z,215nm,20.3s,baz=100,slow=34
KMBO Kilima Mbogo 84.83 269 P **P 03 47 28.0 -0.3**
J18K Innoko River 84.95 26 IAmb IAmb 03 47 40.5
comp=Z,8.3nm,0.8s
J18K Innoko River 84.95 26 P **P 03 47 28.2 +0.6**
baz=263
F19K Shaleruckik Mo 84.97 23 P **P 03 47 28.3 +0.8**
F19K IAmb IAmb 03 47 39.9
comp=Z,18nm,1.4s
F19K Shaleruckik Mo 84.97 23 P **P 03 47 28.3 +0.8**
baz=262
N18K Kilae Creek 85.00 29 P **P 03 47 28.7 +0.8**
baz=264
GCSA Galena City Sc 85.04 25 P **P 03 47 28.9 +1.0**
baz=263
D19K Kuna River 85.10 21 P **P 03 47 29.1 +0.9**
baz=261,SNR=10
M18K Stony River 85.13 28 P **P 03 47 29.4 +1.0**
baz=264
G19K Purcell Mounta 85.15 24 IAmb IAmb 03 47 41.8
comp=Z,24nm,1.1s
G19K Purcell Mounta 85.15 24 P **P 03 47 29.6 +1.2**
baz=262,SNR=5.6
P18K Big Mountain, 85.20 31 P **P 03 47 30.1 +1.2**
baz=264
ASF Jabal al Asfar 85.22 302 P **P 03 47 29.3 -0.4**
comp=Z,3.5nm,0.8s,baz=109,slow=12,SNR=5.4
ASF LR LR 04 31 50.3
comp=Z,95nm,19.0s,baz=72,slow=40
comp=Z,3.5nm,0.8s
Q18K Katmai Hardscr 85.24 31 P **P 03 47 30.4 +1.2**
baz=265
KLMR Klimovskoe 85.25 331 *e* P **P 03 47 28.7 -0.3**
KLMR pmax pmax
comp=Z,20nm,1.0s
O18K Koktuh Hills 85.26 30 P **P 03 47 30.7 +1.5**
baz=264
E19K Redstone River 85.27 22 P **P 03 47 30.6 +1.5**
baz=262,SNR=11
H19K Roundabout Mou 85.33 24 IAmb IAmb 03 47 42.9
comp=Z,22nm,0.9s
H19K Roundabout Mou 85.33 24 P **P 03 47 30.7 +1.4**
baz=263
J19K Poorman 85.50 26 P **P 03 47 31.1 +0.8**
baz=264
L19K White Mountain 85.66 28 P **P 03 47 32.4 +1.3**
baz=265
B20K Meade River 85.66 20 P **P 03 47 32.2 +1.3**
baz=262
D20K Etivluk River 85.67 21 IAmb IAmb 03 47 45.2
comp=Z,26nm,0.9s
D20K Etivluk River 85.67 21 P **P 03 47 32.2 +1.2**
baz=262
N19K Bonanza Creek 85.70 29 P **P 03 47 32.5 +1.0**
baz=265
E20K Nigu River 85.77 22 P **P 03 47 32.9 +1.3**
baz=263,SNR=6.2
F20K Avaraart Lake 85.80 23 P **P 03 47 33.0 +1.4**
baz=263
TOKA Tokat 85.81 310 IAmb IAmb 03 47 34.9
comp=Z,8.9nm,1.0s
H20K Anotleneega Mo 85.97 25 P **P 03 47 34.2 +1.6**
baz=264
Q19K Cape Douglas, 85.97 31 P **P 03 47 34.1 +1.3**
baz=266
A21K Barrow 86.03 19 P **P 03 47 34.0 +1.4**
baz=262
OHAK Old Harbor 86.04 33 P **P 03 47 35.0 +1.9**
baz=266
K20K Telida 86.12 27 P **P 03 47 35.4 +2.1**
baz=265
J20K Nowinta River 86.16 26 P **P 03 47 35.6 +2.1**
baz=265
C21K Knifeblade Rid 86.39 21 P **P 03 47 36.7 +2.1**
baz=264,SNR=8.2
M20K Styx River 86.44 28 P **P 03 47 37.1 +2.1**
baz=266
B21K Ikpikpuk River 86.49 20 P **P 03 47 37.3 +2.3**
baz=264,SNR=11
MMAI Mount Meron Ar 86.50 303 LR LR 04 34 20.8
comp=Z,61nm,18.4s,baz=88,slow=41
A22K Sinclair Lake 86.52 19 P **P 03 47 36.7 +1.7**
baz=264
Q20K Shuyak Island 86.60 32 P **P 03 47 37.4 +1.6**
baz=267

E21K **Killik River** 86.61 22 P P 03 47 37.0 +1.3
baz=265,SNR=5.9
F21K **Alatna River** 86.69 23 P P 03 47 37.7 +1.6
baz=266
H21K **Melozitna Rive** 86.84 24 P P 03 47 38.6 +1.7
baz=266
EIL **Elat** 86.86 299 LR LR 04 31 43.5
comp=Z,146nm,18.8s,baz=68,slow=39
CHUM **Lake Minchumin** 86.94 26 P P 03 47 39.1 +1.7
baz=267
PPLA **Purkeypile** 86.94 27 P P 03 47 39.2 +1.6
baz=267
B22K **Teshekpuk Lake** 86.97 20 P P 03 47 38.9 +1.6
baz=265
I21K **Tanana** 87.16 25 P P 03 47 40.2 +1.9
baz=267
E22K **Anaktuvuk Pass** 87.39 22 P 03 47 40.8 +1.3
E22K IAmb IAmb 03 47 53.3
comp=Z,13nm,1.0s
E22K **Anaktuvuk Pass** 87.39 22 P P 03 47 41.1 +1.6
baz=267,SNR=6.0
G22K **Bettles** 87.44 23 P P 03 47 41.6 +1.9
baz=267
H22K **Ishtalitna Cre** 87.45 24 P P 03 47 40.5 +0.7
H22K **Ishtalitna Cre** 87.45 24 P P 03 47 41.2 +1.4
baz=268
BPAW **Bear Paw Mtn.** 87.54 26 P P 03 47 41.7 +1.4
baz=268
MLY **Manley** 87.68 25 P P 03 47 42.6 +1.6
baz=268
CUT **Chulitna** 87.81 28 P P 03 47 43.4 +1.8
baz=269
TRF **Thorofare Moun** 87.83 27 P P 03 47 43.1 +1.2
baz=269
D23K **Nanushuk River** 87.84 21 P 03 47 41.2 -0.5
D23K IAmb IAmb 03 47 55.3
comp=Z,14nm,1.1s
D23K **Nanushuk River** 87.84 21 P P 03 47 43.2 +1.6
baz=268
M22K **Willow** 87.86 28 P P 03 47 43.5 +1.7
baz=269
C23K **Itkillik River** 87.90 20 IAmb IAmb 03 47 55.6
comp=Z,19nm,1.0s
C23K **Itkillik River** 87.90 20 P P 03 47 43.5 +1.7
baz=268,SNR=6.5
COLD **Coldfoot** 87.97 23 IAmb IAmb 03 47 57.0
comp=Z,11nm,0.9s
COLD **Coldfoot** 87.97 23 P P 03 47 44.0 +1.8
baz=268,SNR=5.8
BR131 **Keskin Array S** 87.97 310 *d iP P 03 47 42.8 -0.3
BRTR **Keskin Array B** 87.97 310 P P 03 47 41.5 -1.6
comp=Z,1.2nm,0.8s,baz=117,slow=5.0,SNR=11
BRTR LR LR 04 34 59.6
comp=Z,29nm,18.1s,baz=100,slow=41
comp=Z,1.2nm,0.8s
BRTR **Keskin Array B** 87.97 310 P P 03 47 42.9 -0.1
BRTR **Keskin Array B** 87.97 310 *ce P P 03 47 42.2 -0.9
BRTR pmax pmax
comp=Z,1.0nm,0.8s
G23K **Bananza Creek** 88.02 23 IAmb IAmb 03 47 57.4
comp=Z,10nm,0.8s
G23K **Bananza Creek** 88.02 23 P P 03 47 43.8 +1.3
baz=269,SNR=5.8
O22K **Cooper Landing** 88.03 30 P P 03 47 44.1 +1.5
baz=269
RC01 **Rabbit Creek A** 88.03 29 P P 03 47 44.5 +1.8
baz=269
SEW **Seward** 88.16 30 P P 03 47 45.1 +1.8
baz=269
H23K **Yukon River** 88.20 24 IAmb IAmb 03 47 56.7
comp=Z,9.2nm,0.8s
H23K **Yukon River** 88.20 24 P P 03 47 45.1 +1.7
baz=269
E23K **Chandalar** 88.21 22 P P 03 47 45.1 +1.6
E23K IAmb IAmb 03 47 57.0
comp=Z,9.8nm,0.9s
E23K **Chandalar** 88.21 22 P P 03 47 45.2 +1.8
baz=269
TOLK **Toolik Lake Re** 88.24 21 P P 03 47 45.4 +1.8
baz=269,SNR=5.8
I23K **Minto, Yukon-K** 88.27 25 IAmb IAmb 03 47 56.7
comp=Z,15nm,0.9s
I23K **Minto, Yukon-K** 88.27 25 P P 03 47 45.7 +2.1
baz=269
PMR **Palmer** 88.33 29 P P 03 47 45.4 +1.3
baz=270
NEA2 **Nenana** 88.38 26 P P 03 47 45.5 +1.2
baz=270
MCK **McKinley** 88.44 26 P P 03 47 45.6 +1.0
baz=270
D24K **Happy Valley** 88.51 21 IAmb IAmb 03 47 58.2
comp=Z,9.3nm,0.8s
D24K **Happy Valley** 88.51 21 P P 03 47 46.3 +1.5
baz=270
C24K **Franklin Bluff** 88.56 20 IAmb IAmb 03 48 00.0
comp=Z,17nm,1.2s
C24K **Franklin Bluff** 88.56 20 P P 03 47 46.5 +1.6
baz=270
WAT1 **Susitna Watana** 88.61 27 P P 03 47 46.7 +1.3
baz=270
E24K **Your Creek** 88.63 22 P P 03 47 46.8 +1.3
baz=270
KNK **Knik Glacier** 88.65 29 P P 03 47 47.0 +1.4
baz=270
SML **Sawmill** 88.71 28 P P 03 47 47.2 +1.3
baz=270
PPT2 **Papeete2** 88.83 108 *e S S 03 58 47.1 +14
PPT2 *e LR LR 04 16 14.2
comp=Z,109nm,25.5s
comp=Z,141nm,28.5s
F24K **Squaw Lake** 88.86 23 P P 03 47 47.8 +1.3
baz=271
H24K **Noodor Dome** 88.88 24 IAmb IAmb 03 48 00.3
comp=Z,8.6nm,0.8s
H24K **Noodor Dome** 88.88 24 P P 03 47 47.8 +1.1
baz=271,SNR=6.6
COLA **College** 88.91 25 P P 03 47 48.1 +1.4
baz=271
WAT6 **Susitna Watana** 88.98 28 P P 03 47 48.2 +0.9
baz=271
M23K **Glacier View** 89.00 28 P P 03 47 48.5 +1.2
baz=271
G24K **Hadweenzic Riv** 89.03 23 P P 03 47 48.4 +1.1
baz=271
POKR **Poker Plat Res** 89.08 25 P P 03 47 48.6 +1.0
baz=271
DHY **Denali Highway** 89.14 27 P P 03 47 49.0 +0.9
baz=271
P23K **Montague Islan** 89.19 30 P P 03 47 49.1 +1.0
baz=271
SCM **Sheep Creek Mo** 89.19 28 P P 03 47 49.3 +1.1
baz=271
HDA **Harding Lake** 89.30 26 P P 03 47 49.8 +1.3
baz=272
ILAR **Eielson Array** 89.32 25 P P 03 47 45.5 -3.1
comp=Z,0.5nm,0.7s,baz=252,slow=3.5,SNR=8.6
comp=Z,0.5nm,0.7s
GLI **Glacier Island** 89.32 29 P P 03 47 49.9 +1.2
baz=272
D25K **Kavik River** 89.38 21 P P 03 47 50.6 +1.6
baz=272
G25K **Bearman Lake** 89.58 23 P P 03 47 51.5 +1.7
baz=272
F25K **Christian Rive** 89.72 23 P P 03 47 52.0 +1.4
baz=273
M24K **Tolsona, Glenn** 89.72 28 P P 03 47 52.2 +1.5
baz=272
E25K **Arctic Village** 89.73 22 P P 03 47 52.2 +1.7
baz=273
Q23K **Middleton Isla** 89.74 31 P P 03 47 52.3 +1.7
baz=272
K24K **Donnelly Dome** 89.84 26 P P 03 47 52.4 +1.3
baz=273
PRP **Porcupine Dome** 89.87 25 P P 03 47 52.5 +1.1
baz=273
C26K **Camden Bay** 89.87 20 P P 03 47 52.5 +1.4
baz=273
KLU **Klutina** 89.87 29 P P 03 47 52.8 +1.4
baz=272
J25K **Salcha River,** 89.98 26 P P 03 47 53.1 +1.3
baz=273
EYAK **Cordova Ski Ar** 89.99 30 P P 03 47 53.3 +1.4
baz=273
PAX **Paxson** 90.01 27 P P 03 47 53.2 +1.1
baz=273
RIDG **Independent Ri** 90.25 26 P P 03 47 54.3 +1.2
baz=273
F26K **Sheenjek River** 90.29 22 P P 03 47 54.5 +1.4
baz=274
C27K **Jago River** 90.31 20 P P 03 47 54.6 +1.5
baz=274
G26K **Porcupine Rive** 90.48 23 P P 03 47 55.7 +1.7
baz=274
N25K **Chitina, Valde** 90.50 29 P P 03 47 55.7 +1.4
baz=274
BMRM **Bremner River** 90.53 29 P P 03 47 55.4 +0.9
baz=274
SCRK **Sand Creek** 90.62 26 P P 03 47 55.8 +0.9
baz=274
KAIM **Kayak Island** 90.69 30 P P 03 47 56.1 +0.9
baz=274
AKASG **Malin Array Be** 90.83 321 P P 03 47 53.5 -2.5
comp=Z,0.2nm,0.4s,baz=69,slow=4.7,SNR=2.3
AKASG LR LR 04 33 59.3
comp=Z,67nm,20.4s,baz=56,slow=39
comp=Z,0.2nm,0.4s
I26K **Coal Creek Min** 90.87 25 IAmb IAmb 03 48 08.6
comp=Z,12nm,1.0s
I26K **Coal Creek Min** 90.87 25 P P 03 47 57.1 +1.2
baz=275
L26K **Log Cabin Wild** 90.98 27 P P 03 47 57.9 +1.4
baz=275
ARCES **ARCESS Array B** 91.12 340 LR LR 04 32 50.4
comp=Z,158nm,18.2s,baz=114,slow=38
QSPA **South Pole Qui** 91.19 180 P P 03 47 54.7 -2.8
comp=Z,7.6nm,0.8s,baz=290,slow=2.3,SNR=36
QSPA LR LR 04 29 34.7
comp=Z,112nm,19.5s,baz=329,slow=36
comp=Z,7.6nm,0.8s
QSPA **South Pole Qui** 91.19 180 P 03 47 57.4 0.0
QSPA IAmb IAmb 03 47 57.9
comp=Z,8.2nm,0.8s
M26K **Nabesna, AK** 91.19 28 P P 03 47 58.1 +0.6
baz=275
E27K **Coleen River** 91.20 22 IAmb IAmb 03 48 10.2
comp=Z,8.3nm,1.1s
E27K **Coleen River** 91.20 22 P P 03 47 58.1 +0.7
baz=276
MCARA **McCarthy VSAT** 91.27 29 P P 03 47 58.7 +0.9
baz=275
CRQE **Cirque** 91.29 29 P P 03 47 58.9 +0.8
baz=275
D27M **Malcolm River** 91.31 21 P P 03 47 59.4 +1.5
baz=277
MBAR **Mbarara** 91.33 269 LR LR 04 25 33.8
comp=Z,125nm,21.6s,baz=83,slow=33
G27K **Doyon Strip** 91.33 23 P P 03 47 59.1 +1.0
baz=276
MNK **Minsk** 91.41 324 *i P P 03 47 58.3 -0.3
comp=E,15nm,1.0s
MNK *i P P 03 47 58.3 -0.3
comp=N,11nm,0.9s
MNK *i P P 03 47 58.3 -0.3
comp=Z,7.0nm,0.7s,baz=86
MNK *i PP PP 03 51 35.7 -0.6
MNK *i PPP PPP 03 53 33.9
MNK *i S SKSac 03 58 30.3 +1.4
MNK *i PS PS 04 00 08.1 -0.2
MNK *i SS SS 04 05 04.5 +2.9
MNK *i SSS SSS 04 08 37.1
MNK *i LRM MLR 04 30 56.1
comp=N,210nm,19.6s
MNK *i LRM MLR 04 31 10.0
comp=E,344nm,20.8s
MNK **Minsk** 91.41 324 *i P P 03 47 58.3 -0.3
MNK *i 03 51 35.6
MNK *i PPP PPP 03 53 33.9
MNK *i S SKSac 03 58 30.3 +1.4
MNK *i PS PS 04 00 08.0 -0.2
MNK *i SS SS 04 05 04.4 +2.9
MNK *i SSS SSS 04 08 37.0
MNK pmax pmax
comp=N,11nm,0.9s
MNK pmax pmax
comp=Z,7.0nm,0.7s
MNK pmax pmax
comp=E,15nm,1.0s
MNK MLR MLR
comp=N,210nm,20.0s
MNK MLR MLR
comp=E,344nm,21.0s
MNK MLR MLR
comp=Z,104nm,19.0s
TGL **Tana Glacier** 91.42 29 P P 03 47 59.6 +0.9
H27K **Steamboat Moun** 91.45 24 P P 03 47 59.9 +1.3
baz=276
K27K **Chicken** 91.45 26 IAmb IAmb 03 48 12.0
comp=Z,9.4nm,1.2s
I27K **Kandik River** 91.48 24 IAmb IAmb 03 48 12.3
comp=Z,14nm,1.0s
I27K **Kandik River** 91.48 24 P P 03 47 59.7 +0.9
baz=276
L27K **Beaver Creek,** 91.66 27 P P 03 48 00.3 +0.7
baz=276
BCAR **Beaver Creek A** 91.68 27 P P 03 48 00.0 +0.3
M27K **Edge Creek, AK** 91.71 28 P P 03 48 00.8 +0.7
baz=276
FINES **FINESS Array B** 91.76 331 P P 03 47 57.5 -2.5
comp=Z,1.0nm,0.7s,baz=101,slow=7.9,SNR=1.4
comp=Z,1.0nm,0.7s
MESA **MESA** 91.90 30 P P 03 48 01.7 +0.7
baz=276
E28M **Babbage River** 91.91 21 IAmb IAmb 03 48 13.3
comp=Z,6.6nm,1.1s
E28M **Babbage River** 91.91 21 P P 03 48 01.8 +1.1
baz=278
F28M **Old Crow** 91.92 22 IAmb IAmb 03 48 13.3
comp=Z,7.8nm,1.1s
F28M **Old Crow** 91.92 22 P P 03 48 01.9 +1.2
baz=278
SPITS **Spitsbergen Ar** 91.96 349 P P 03 47 59.1 -1.7
comp=Z,5.5nm,0.7s,baz=82,slow=6.3,SNR=6.5
SPITS LR LR 04 35 05.0
comp=Z,168nm,18.1s,baz=30,slow=39
comp=Z,5.5nm,0.7s
D28M **Stokes Point** 92.08 21 P P 03 48 02.0 +0.6
baz=279
CTG **Chitna Glacier** 92.12 29 P P 03 48 02.5 +0.5
baz=276
BVCY **Beaver Creek** 92.18 28 P P 03 48 02.2 +0.1
baz=277
I28M **Miner Creek** 92.20 24 P 03 48 01.5 -0.6
I28M IAmb IAmb 03 48 16.1
comp=Z,8.9nm,0.8s
I28M **Miner Creek** 92.20 24 P P 03 48 02.4 +0.3
baz=278
YUK3 **Moose Creek** 92.44 28 P P 03 48 03.8 +0.3
baz=277
E29M **Blow River** 92.54 21 P P 03 48 04.0 +0.4
baz=280
O28M **Mount Upton** 92.70 29 P P 03 48 05.2 +0.4
baz=278
H29M **Whitestone** 92.72 24 P P 03 48 05.4 +1.0
baz=279
G29M **Pine Creek** 92.74 23 P P 03 48 04.8 +0.3
baz=280
PINM **Pinnacle** 92.76 30 P P 03 48 05.6 +0.8
baz=277
YUK8 **Steele Glacier** 92.84 29 P P 03 48 05.9 +0.5
baz=278
I29M **Ogilvie Camp,** 92.88 24 P P 03 48 06.0 +0.7
baz=279
J29N **Klondike Camp** 93.07 25 P P 03 48 06.8 +0.7
baz=279
M29M **Somme Creek** 93.28 27 P P 03 48 07.7 +0.5
baz=279
L29M **L29M** 93.33 27 IAmb IAmb 03 48 21.2
comp=Z,9.1nm,0.8s
L29M **L29M** 93.33 27 P P 03 48 08.1 +0.8
baz=279
EPYK **Eagle Plains** 93.35 23 P P 03 48 08.0 +0.6
baz=281
YUK4 **Talbot Arm** 93.36 28 P P 03 48 08.8 +1.0
baz=279
G30M **tAoh Zraii Nji** 93.43 23 P P 03 48 07.7 0.0
baz=281
F30M **Barrier River** 93.47 22 P P 03 48 07.9 +0.1
baz=282
K29M **Barlow Dome** 93.47 26 P P 03 48 09.0 +0.9
baz=280
O29M **Mount Kennedy** 93.56 29 P P 03 48 08.3 -0.3
baz=279
YUK6 **Outpost Mounta** 93.56 29 P P 03 48 08.3 -0.4
baz=279
I30M **Mount Dempster** 93.71 24 P 03 48 08.3 -0.9
I30M **Mount Dempster** 93.71 24 P P 03 48 09.1 0.0
baz=281
HYT **Haines Junctio** 94.00 29 P P 03 48 10.7 +0.2
baz=280
M30M **Minto, Yukon** 94.02 27 IAmb IAmb 03 48 23.6
comp=Z,5.9nm,0.9s
M30M **Minto, Yukon** 94.02 27 P P 03 48 11.1 +0.5
baz=281
LSZ **Lusaka** 94.06 255 LR LR 04 27 37.3
comp=Z,110nm,21.8s,baz=117,slow=34
LSZ **Lusaka** 94.06 255 P 03 48 10.6 -1.2
LSZ IAmb IAmb 03 48 12.7
comp=Z,10nm,0.8s
LSZ **Lusaka** 94.06 255 P P 03 48 10.6 -1.2
LSZ pmax pmax
comp=Z,10.0nm,0.9s
N30M **Aishikik Lake** 94.08 28 P P 03 48 11.4 +0.5
baz=280
INK **Inuvik** 94.14 21 IAmb IAmb 03 48 23.1
comp=Z,6.8nm,1.1s
INK **Inuvik** 94.14 21 P P 03 48 11.8 +0.9
baz=284
G31M **Satah River** 94.19 23 P P 03 48 12.3 +1.1
baz=283
MAYO **Mayo, Yukon** 94.23 26 P P 03 48 12.5 +1.1
baz=282
F31M **Tsiigehtchic** 94.27 22 P P 03 48 12.5 +1.0
baz=284
P30M **Million Dollar** 94.38 30 P P 03 48 12.9 +0.6
baz=280
H31M **Peel River** 94.41 24 P P 03 48 12.6 +0.3
baz=283
O30N **Mendenhall** 94.69 29 P P 03 48 13.7 0.0
baz=281
N31M **Braeburn, Yuko** 94.70 28 P P 03 48 14.2 +0.5
baz=281
S31K **Pelican** 95.14 32 P P 03 48 16.3 +0.6
baz=281
M31M **Drury Creek, Y** 95.19 27 P P 03 48 16.7 +0.8
baz=283
WHY **Whitehorse** 95.29 29 P P 03 48 17.5 +1.0
baz=282
SKAG **Skagway** 95.32 30 P P 03 48 17.6 +1.2
baz=282
A36M **Sachs Harbour** 95.69 17 P P 03 48 18.2 +0.3
A36M IAmb IAmb 03 48 30.5
comp=Z,3.5nm,0.8s
A36M **Sachs Harbour** 95.69 17 P P 03 48 18.6 +0.7
baz=292
SIT **Sitka** 95.80 32 P P 03 48 19.4 +0.7
baz=281
R32K **Eaglecrest** 95.97 31 P P 03 48 19.8 +0.3
baz=282
N32M **Quiet Lake** 96.04 28 P P 03 48 20.4 +0.5
baz=284
P32M **Atlin** 96.09 30 P P 03 48 20.9 +0.8
baz=283
S32K **Killisnoo** 96.11 32 P P 03 48 21.3 +1.1
baz=282
LPHEP **Lephephe** 96.18 247 P 03 48 20.2 -1.1
LBTB **Lobatse** 96.38 245 LR LR 04 27 49.2
comp=Z,81nm,19.4s,baz=106,slow=33
LBTB **Lobatse** 96.38 245 P P 03 48 21.5 -0.8
LBTB IAmb IAmb 03 48 22.1
comp=Z,7.8nm,1.3s
LBTB **Lobatse** 96.38 245 P P 03 48 21.5 -0.8
LBTB pmax pmax
comp=Z,8.0nm,1.3s
P33M **Teslin, Yukon** 96.39 29 P P 03 48 21.9 +0.4
baz=284
BOSA **Boshof** 96.57 242 P P 03 48 22.4 -0.6
comp=Z,4.6nm,1.1s,baz=110,slow=7.8,SNR=3.1
BOSA LR LR 04 28 22.7
comp=Z,150nm,20.2s,baz=92,slow=33
comp=Z,4.6nm,1.1s
BOSA **Boshof** 96.57 242 IAmb IAmb 03 48 28.1
comp=Z,7.6nm,1.1s
KSANE **Kasane** 96.94 252 P P 03 48 22.6 -2.3
Q32M **Nakina River** 96.97 30 P P 03 48 24.2 0.0
baz=284
C36M **Paulatuk** 97.07 19 IAmb IAmb 03 48 36.3
comp=Z,5.2nm,0.8s
C36M **Paulatuk** 97.07 19 P Pdif 03 48 25.0 +0.7
baz=293
T33K **Petersburg** 97.12 32 P Pdif 03 48 25.5 +0.7
baz=283
U33K **Whale Pass** 97.19 33 P P 03 48 25.0 0.0
baz=283
ITM **Ithomi** 97.31 308 P Pdif 03 48 26.4 +0.2
CRAG **Craig** 97.33 34 P Pdif 03 48 26.4 +0.6
baz=283
R33M **Jennings River** 97.50 30 P Pdif 03 48 27.1 +0.5
baz=286
WRAK **Wrangell Islan** 97.54 33 P Pdif 03 48 26.9 +0.2
baz=284
NVL **N'lazarevskaya** 97.77 198 *eP Pdif 03 48 28.3 +0.9
NVL *e 03 52 26.5
NVL *ePPP PPP 03 54 31.1
NVL *eS SKSac 03 59 05.8 +3.3
NVL *eSS SS 04 06 36.9 +5.6
NVL *eSSS SSS 04 10 23.4
NVL pmax pmax
comp=Z,9.0nm,1.7s
NVL MLR MLR
comp=Z,510nm,22.0s
S34M **Telegraph Cree** 97.81 31 P Pdif 03 48 28.1 +0.3
baz=285
TAOE **Nuku Hiva Isla** 97.90 99 *eLR LR 04 20 12.2
comp=Z,195nm,31.0s
HFS **Hagfors** 97.97 331 LR LR 04 37 21.7
comp=Z,150nm,18.8s,baz=73,slow=38
TGTN **Hyland Airport** 98.17 27 P Pdif 03 48 29.8 +0.3
baz=288
V35K **Ketchikan** 98.20 34 P Pdif 03 48 30.1 +0.5
baz=284
DLBC **Dease Lake** 98.23 30 LR LR 04 32 22.4
comp=Z,57nm,19.3s,baz=260,slow=35
DLBC **Dease Lake** 98.23 30 P Pdif 03 48 30.3 +0.4
baz=286
WTLY **Watson Lake, Y** 98.35 29 P P 03 48 29.2 -1.1
WTLY IAmb IAmb 03 48 32.5
comp=Z,9.6nm,1.3s
WTLY **Watson Lake, Y** 98.35 29 P Pdif 03 48 30.6 +0.3
baz=288
T35M **Bob Quinn** 98.51 32 P Pdif 03 48 31.5 +0.4
baz=286
NOA **NORSAR Array B** 98.85 333 LR LR 04 36 25.6
comp=Z,127nm,19.5s,baz=60,slow=37
VRAC **Vranov** 99.08 320 LR LR 04 36 47.5
comp=Z,107nm,21.9s,baz=66,slow=38
KGCAE **Kacgae** 99.56 247 IAmb IAmb 03 48 37.9
comp=Z,10nm,1.0s
WRGLY **Wrigley** 99.68 25 P **Pdif 03 48 36.6 +0.6**
baz=293
GRTLG **Ghanzi** 100.55 249 Pdif **Pdif 03 48 40.0 -1.1**
KOTAN **Kotaneelee Air** 100.59 28 P **Pdif 03 48 41.1 +1.0**
baz=292
CBB **Campbell River** 103.35 38 Pdif **Pdif 03 48 49.2 -3.5**
YKA **Yellowknife Ar** 103.63 24 Pdiff **Pdif 03 48 53.4 -0.3**
comp=Z,0.1nm,0.5s,baz=301,slow=5.5,SNR=1.5
YKA PKiKP **PP 03 53 10.5 +0.8**
comp=Z,0.2nm,0.8s,baz=309,slow=2.9,SNR=1.8
YKA PKKPbc **PKKPbc 04 04 50.4 +2.1**
comp=Z,0.1nm,0.7s,baz=17,slow=1.2,SNR=4.1
EKA **Eskdalemuir Ar** 108.14 331 Pdiff **Pdif 03 49 10.0 -3.9**
comp=Z,2.9nm,0.9s,baz=17,slow=8.9,SNR=3.4
NVAR **Mina Array Bea** 112.01 47 PKiKP **PKiKP 03 53 26.9 -1.7**
comp=Z,0.1nm,0.4s,baz=328,slow=1.8,SNR=1.3
NVAR PKKPbc **PKKPbc 04 04 20.4 -1.2**
comp=Z,0.6nm,0.6s,baz=128,slow=5.2,SNR=7.4
PDAR **Pinedale Array** 116.26 40 PKP **PKPdf 03 53 36.1 -0.5**
comp=Z,0.1nm,0.4s,baz=353,slow=3.8,SNR=1.7
PDAR PKKPbc **PKKPbc 04 04 04.2 -3.1**
comp=Z,2.4nm,0.8s,baz=151,slow=9.8,SNR=7.5
O20A **White River Ci** 118.40 42 **PKiKP 03 53 41.2 +0.4**
TORD **Torodi Ar. Bea** 119.16 286 PKP **PKPdf 03 53 41.0 -1.6**
comp=Z,1.7nm,0.8s,baz=50,slow=1.1,SNR=10
ULM **Lac du Bonnet** 119.31 27 PKP **PKPdf 03 53 39.0 -2.8**
comp=Z,0.9nm,0.7s,baz=0.0,slow=5.1,SNR=1.7
SCHQ **Schefferville** 123.61 6 PKP **PKPdf 03 53 48.0 -2.0**
comp=Z,3.3nm,1.1s,baz=16,slow=17,SNR=1.2
TXAR **Lajitas Array** 126.78 51 PKP **PKPdf 03 53 54.8 -2.2**
comp=Z,0.8nm,1.1s,baz=229,slow=1.2,SNR=4.0
M65A **Busby, Falmout** 135.84 14 P **PKPdf 03 54 13.9 +0.2**
baz=342
PLCA **Paso Flores** 139.09 165 PKP **PKPdf 03 54 17.8 -2.0**
comp=Z,2.2nm,1.0s,baz=292,slow=4.8,SNR=4.9
BO01 **Tunca** 144.83 161 PKPbc 03 54 29.7 +0.6

BO04	**La Punta**	**145.35**	**161**			**PKPbc**	03 54 31.1	**+0.2**
CO04	**Los Peladeros**	**147.01**	**159**			**PKPbc**	03 54 36.3	**+0.1**
CO03	**El Pedregal**	**148.20**	**159**			**PKPbc**	03 54 39.5	**+0.2**
CPUP	**Villa Florida**	**155.07**	**181**	PKP		**PKPdf**	03 54 44.1	**-2.2**
	comp=Z,2.6nm,0.9s,baz=129,slow=2.3,SNR=8.2							
CPUP				PKPab	sPKPbc		03 55 09.3	+0.9
	comp=Z,4.4nm,0.9s,baz=169,slow=3.3,SNR=8.4							
LPAZ	**La Paz**	**162.01**	**147**	PKP		**PKPdf**	03 54 55.1	**-0.6**
	comp=Z,9.7nm,1.2s,baz=296,slow=1.6,SNR=18							
LPAZ				PKPab		**PKPab**	03 55 40.0	**-1.8**
	comp=Z,2.5nm,0.7s,baz=200,slow=7.7,SNR=5.5							
LPAZ	**La Paz**	**162.01**	**147**			**PKPdf**	03 54 57.1	**+1.4**
ROSC	**El Rosal**	**162.56**	**70**	PKP		**PKPdf**	03 54 54.5	**-1.6**
	comp=Z,1.9nm,0.4s,baz=220,slow=24,SNR=1.5							
BDFB	**Brasilia**	**162.68**	**214**	PKP		**PKPdf**	03 54 54.0	**-1.8**
	comp=Z,1.3nm,0.7s,baz=21,slow=11,SNR=1.8							
BDFB				PKPab		**PKPab**	03 55 44.2	**+0.2**
	comp=Z,7.9nm,0.7s,baz=152,slow=2.2,SNR=14							

DMN ***22*** *04:26:17.4±0.5, 28°.59N×87°.36E, h2km, Ml4.3/6, Error ellipse: s-maj=7.8km s-min=4.3km az=35.0*

ISC 22 04:26:17.3±1.9, 28°.58N±0°.07×87°.37E±0°.05, h1km±15km, n10, σ0s.85/20, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIRN	**Jiri**	**1.39**	**229**	Pg	**Pg**	**04 26 43.3**	**-0.7**
	baz=228,slow=0.0						
JIRN				Sg	**Sg**	04 27 01.7	**-0.2**
	409nm,0.2s,baz=228,slow=0.0						
GUN	**Gumba**	**1.47**	**243**	Pg	**Pn**	04 26 45.2	**-0.1**
	baz=243,slow=0.0						
GUN				Sg	**Sg**	04 27 04.5	**-0.2**
	697nm,0.3s,baz=243,slow=0.0						
ODAN	**Odare**	**1.72**	**179**	Pg	**Pg**	04 26 50.6	**+0.3**
	baz=179,slow=0.0						
ODAN				Sg	**Sb**	04 27 12.3	**+0.3**
	baz=179,slow=0.0						
RAMN	**Ramite**	**1.76**	**203**	Pg	**Pn**	04 26 49.9	**+0.7**
	baz=203,slow=0.0						
RAMN				Sg	**Sb**	04 27 13.1	**-0.3**
	707nm,0.6s,baz=203,slow=0.0						
PKI	**Pulchoki**	**2.00**	**240**	Pg	**Pg**	04 26 55.9	**+0.2**
	baz=240,slow=0.0						
PKI				Sg	**Sg**	04 27 21.4	**-0.3**
	baz=240,slow=0.0						
KKN	**Kakani**	**2.00**	**247**	Pg	**Pg**	04 26 55.4	**-0.4**
	baz=247,slow=0.0						
KKN				Sg	**Sb**	04 27 20.3	**+0.1**
	690nm,0.2s,baz=247,slow=0.0						
DMN	**Daman**	**2.22**	**245**	Pg	**Pb**	04 26 58.9	**+0.5**
	baz=244,slow=0.0						
DMN				Sg	**Sg**	04 27 28.3	**-0.4**
	258nm,0.4s,baz=244,slow=0.0						
GKN	**Gorkha**	**2.47**	**257**	Pg	**Pb**	04 27 01.4	**-1.3**
	baz=257,slow=0.0						
GKN				Sg	**Sg**	04 27 36.2	**-0.7**
	247nm,0.3s,baz=257,slow=0.0						
DANN	**Dangsing**	**3.18**	**267**	Pn	**Pn**	04 27 10.1	**+1.3**
	baz=266,slow=0.0						
DANN				Pg	**Pb**	04 27 16.5	**+1.6**
	baz=266,slow=0.0						
LSA	**Lhasa**	**3.49**	**71**	Pn	**Pn**	04 27 13.9	**+0.7**
LSA				Sn	**Sn**	04 27 53.8	**-1.7**
LSA				smax	smax		
	comp=N,10.0nm,0.5s						
LSA				smax	smax		
	comp=E,8.0nm,0.5s						

IDC ***22*** *04:28:13.4±2.2, 7°.39S×129°.40E, h136km±28km, mb2.9/1, mbtmp3.7/6, Error ellipse: s-maj=27.0km s-min=19.8km az=113.0*

ISC 22 04:28:12.2±0.9, 7°.47S±0°.06×129°.56E±0°.10, h150km, n6, σ3s.75/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.43**	**245**	P	**Pn**	04 29 45.2	**+0.5**
	18nm,0.4s,baz=97,slow=6.0,SNR=2.5						
BATI				S	**Sn**	04 30 56.1	**-1.1**
	11nm,0.3s,baz=87,slow=20,SNR=1.9						
SIJI	**Sorong**	**6.77**	**15**	P	**Pn**	04 29 49.8	**+0.5**
	2.5nm,0.3s,baz=228,slow=22,SNR=10						
SIJI				S	**Sn**	04 31 00.3	**-5.1**
	4.5nm,0.3s,baz=293,slow=24,SNR=7.8						
FITZ	**Fitzroy Crossi**	**11.23**	**199**	P	**Pn**	04 30 49.1	**+0.5**
	1.4nm,0.4s,baz=28,slow=11,SNR=15						
FITZ				S	**Sn**	04 32 46.7	**-6.2**
	2.2nm,0.3s,baz=155,slow=18,SNR=6.9						
WRA	**Warramunga Arr**	**13.24**	**160**	P	**Pn**	04 31 17.5	**+3.0**
	0.6nm,0.4s,baz=340,slow=12,SNR=15						
WRA				S	**Sn**	04 33 38.0	**-3.1**
	2.4nm,0.5s,baz=339,slow=23,SNR=13						
ASAR	**Alice Springs**	**16.64**	**166**	P	**Pn**	04 32 01.8	**+4.9**
	0.8nm,0.4s,baz=342,slow=12,SNR=18						
ASAR				S	**S**	04 35 00.8	**-1.0**
	0.6nm,0.4s,baz=342,slow=25,SNR=5.5						
MKAR	**Makanchi Array**	**68.38**	**327**	P	**P**	04 38 59.3	**+1.7**
	0.1nm,0.4s,baz=148,slow=7.1,SNR=2.1						
	0.1nm,0.4s						

MEX ***22*** *04:34:46.8±0.8, 14°.11N×92°.72W, h15km, MD3.7*
GCG ***22*** *04:34:49.0±0.9, 14°.21N×92°.49W, h16km±9km, MD3.6, Presumed earthquake*

ISC 22 04:34:42.8±1.9, 14°.23N±0°.08×92°.66W±0°.05, h1km±12km, n17, σ1s.36/31, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.78**	**29**	*e*P	**Pn**	04 35 00.4	**-0.5**
THIG				*e*S	**Sn**	04 35 11.9	**-1.3**
PATR	**El Naranjo**	**0.98**	**25**	*e*P	**Pn**	04 35 04.5	**+0.7**
PATR				*e*S	**Sn**	04 35 17.1	**-1.3**
RTAL	**Retalhuleu**	**0.98**	**72**	*e*P	**Pb**	04 35 03.1	**+0.5**
RTAL				*e*S	**Sn**	04 35 17.1	**-1.1**
CHUJ	**Union Juarez**	**1.01**	**32**	*e*P	**Pn**	04 35 05.2	**+0.8**
CHUJ				*e*S	**Sn**	04 35 18.5	**-0.8**
PAVE	**Pavencul**	**1.07**	**26**	*e*P	**Pn**	04 35 06.0	**+0.9**
PAVE				*e*S	**Sn**	04 35 19.7	**-1.0**
STG2	**El Palmar, Qui**	**1.26**	**80**	*i* P	**Pg**	04 35 07.1	**+0.1**
STG2				*i* S	**Sg**	04 35 21.1	**-2.3**
QUEO	**Labor Ovalle**	**1.28**	**60**	*i* P	**Pn**	04 35 10.6	**+2.6**
QUEO				*i* S	**Sn**	04 35 26.7	**+0.7**
STG5	**El Palmar, Qui**	**1.28**	**82**	*i* P	**Pg**	04 35 07.2	**-0.2**
STG8	**El Palmar, Qui**	**1.29**	**80**	*i* P	**Pg**	04 35 07.6	**+0.1**
STG8				*i* S	**Sg**	04 35 22.3	**-1.9**
PCIG		**1.57**	**340**	*e*P	**Pn**	04 35 12.8	**+1.1**
PCIG				*e*S	**Sn**	04 35 30.7	**-1.9**
CCIG	**Comitan**	**2.10**	**14**	*e*P	**Pg**	04 35 22.7	**-0.5**
CCIG				*e*S	**Sn**	04 35 46.2	**0.0**
CCIG	**Comitan**	**2.10**	**14**	*i* P	**Pg**	04 35 24.3	**+1.2**
CCIG				*i* S	**Sg**	04 35 51.0	**+0.5**
CARR	**Arriaga**	**2.34**	**329**	*e*P	**Pn**	04 35 22.2	**-0.2**
CARR				*e*S	**Sn**	04 35 50.0	**-1.9**
TGIG		**2.58**	**350**	*e*P	**Pn**	04 35 27.9	**+2.2**
TGIG				*e*S	**Sn**	04 35 56.9	**-0.8**
TGIG		**2.58**	**350**	*i* P	**Pb**	04 35 30.1	**+0.3**
CMIG	**Matias Romero**	**3.56**	**323**	*e*P	**Pn**	04 35 41.2	**+2.0**
CMIG				*e*S	**Sn**	04 36 19.9	**-2.1**
NEUV	**Arroyo Zacate**	**4.60**	**319**	*e*P	**Pn**	04 35 54.4	**+0.9**

SNET ***22*** *04:39:01.7±1.3, 13°.27N×88°.10W, h7km, ML3.1, Presumed earthquake*
CATAC ***22*** *04:39:01.8±0.1, 13°.1±1°.1×88°.1W±0°.8, h4km, M2.8/21, MLv2.8/21, Error ellipse: s-maj=3.0km s-min=1.2km az=24.4, confirmed*

ISC 22 04:39:01.7±0.9, 13°.25N±0°.03×88°.08W±0°.02, h15km±6km, n52, σ0s.67/83, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCND	**La Caada**	**0.19**	**73**	*e*P	**Pg**	04 39 05.5	**-0.7**
LCND				*e*S	**Sg**	04 39 09.7	**+0.5**
CNCH	**Conchagua**	**0.24**	**84**	P	**Pg**	04 39 07.3	**+0.3**
CNCH				S	**Sg**	04 39 10.6	**-0.1**
CNCH	**Conchagua**	**0.24**	**84**	*e*P	**Pg**	04 39 07.1	**+0.1**
CNCH				*e*S	**Sg**	04 39 11.4	**+0.8**
CNRM	**Centro Naciona**	**0.24**	**338**	P	**Pg**	04 39 06.6	**-0.3**
CNRM	**Centro Naciona**	**0.24**	**338**	*e*P	**Pg**	04 39 06.1	**-0.9**
CNRM				*e*S	**Sg**	04 39 10.9	**+0.3**

VSM	**San Miguel**	**0.26**	**313**	*e*P		**Pg**	04 39 06.9	**-0.5**
LCY	**Lacayo**	**0.27**	**309**	*e*P		**Pb**	04 39 07.6	**-0.8**
RANC	**El Ranchito**	**0.27**	**312**	P		**Pb**	04 39 07.7	**-0.7**
RANC				S		**Sg**	04 39 12.0	**+0.3**
RANC	**El Ranchito**	**0.27**	**312**	*e*P		**Pb**	04 39 07.7	**-0.7**
RANC				*e*S		**Sb**	04 39 12.4	**-0.6**
PACA	**Pacayal**	**0.32**	**312**	P		**Pb**	04 39 08.5	**-0.7**
PACA				S		**Sg**	04 39 12.5	**-0.6**
PACA	**Pacayal**	**0.32**	**312**	*e*P		**Pb**	04 39 08.5	**-0.7**
PACA				*e*S		**Sb**	04 39 13.5	**-0.8**
TECA	**Tecapa**	**0.48**	**300**	*e*P		**Pb**	04 39 12.1	**+0.1**
CSGN	**Cosiguina Volc**	**0.58**	**118**	P		**Pb**	04 39 13.1	**-0.4**
CSGN				S		**Sb**	04 39 21.5	**-0.1**
PQSS	**Presa 15 de Se**	**0.60**	**308**	P		**Pb**	04 39 13.4	**-0.4**
PQSS				S		**Sg**	04 39 21.6	**+0.2**
PQSS	**Presa 15 de Se**	**0.60**	**308**	*e*P		**Pb**	04 39 13.4	**-0.4**
POTN	**Potosi Cosigui**	**0.61**	**114**	P		**Pb**	04 39 13.6	**-0.5**
POTN				S		**Sb**	04 39 22.4	**-0.2**
TECO	**Alcaldia de Te**	**0.74**	**293**	P		**Pb**	04 39 16.2	**-0.1**
TECO	**Alcaldia de Te**	**0.74**	**293**	*e*P		**Pb**	04 39 16.3	**0.0**
TECO				*e*S		**Sb**	04 39 26.3	**+0.1**
SCLA	**Alcaldia de Sa**	**0.78**	**305**	P		**Pg**	04 39 15.7	**-1.1**
SCLA				S		**Sb**	04 39 27.1	**-0.2**
SCLA	**Alcaldia de Sa**	**0.78**	**305**	*e*P		**Pb**	04 39 17.0	**+0.1**
MARCA	**Marcala la Paz**	**0.90**	**3**	P		**Pg**	04 39 18.6	**-0.7**
MARCA				S		**Sg**	04 39 31.0	**-0.2**
PAVA	**Las Pavas**	**0.95**	**299**	P		**Pb**	04 39 20.3	**+0.3**
PAVA				S		**Sb**	04 39 33.4	**+0.9**
P5NO	**Presa 5 de nov**	**0.98**	**318**	P		**Pg**	04 39 19.6	**-1.1**
P5NO				S		**Sb**	04 39 33.7	**+0.4**
INTHN	**La Esperanza I**	**1.06**	**359**	P		**Pg**	04 39 21.5	**-0.7**
INTHN				S		**Sg**	04 39 35.9	**-0.1**
TGUH	**Tegucigalpa,Un**	**1.12**	**44**	S		**Sg**	04 39 37.4	**-0.6**
CRIN	**San Cristobal**	**1.14**	**119**	S		**Sn**	04 39 40.4	**+1.7**
IGN	**Direccin Gen**	**1.16**	**294**	P		**Pg**	04 39 23.2	**-0.8**
IGN				S		**Sn**	04 39 39.4	**+0.4**
UTEC	**Universidad Te**	**1.18**	**292**	S		**Sn**	04 39 40.1	**+0.4**
SEMO	**Seminario San**	**1.20**	**292**	P		**Pn**	04 39 24.9	**+0.9**
SEMO				S		**Sg**	04 39 39.6	**-1.0**
UEES	**Universidad Ev**	**1.22**	**292**	S		**Sn**	04 39 41.4	**+0.8**
LLGN	**La Laguna**	**1.24**	**317**	P		**Pg**	04 39 25.3	**-0.3**
LLGN				S		**Sb**	04 39 41.1	**+0.4**
PMON	**Piamonte**	**1.29**	**291**	S		**Sn**	04 39 43.3	**+1.0**
POLN	**Al Sur del Vol**	**1.37**	**116**	S		**Sg**	04 39 45.0	**-1.0**
HERN	**Volcan Telica**	**1.37**	**118**	P		**Pb**	04 39 26.7	**-0.5**
HERN				S		**Sg**	04 39 46.2	**+0.1**
TEL3	**Telica 3**	**1.38**	**119**	P		**Pb**	04 39 26.7	**-0.5**
YUSH	**Yuscaran**	**1.39**	**60**	P		**Pn**	04 39 26.9	**+0.2**
YUSH				S		**Sg**	04 39 46.1	**-0.5**
JAYA	**Jayaque - finc**	**1.39**	**287**	P		**Pb**	04 39 27.3	**-0.2**
JAYA				S		**Sg**	04 39 46.0	**-0.6**
CNGN	**Cerro Negro**	**1.54**	**119**	S		**Sg**	04 39 50.7	**-0.6**
OCON	**Estacion meteo**	**1.60**	**76**	P		**Pb**	04 39 30.4	**-0.7**
OCON				S		**Sb**	04 39 51.7	**+0.5**
UNIC	**Universidad Ca**	**1.60**	**297**	S		**Sn**	04 39 51.2	**+1.1**
SARH	**Santa Rosa de**	**1.65**	**337**	P		**Pb**	04 39 31.7	**-0.2**
SARH				S		**Sb**	04 39 53.6	**+1.0**
LIMN	**Finca el Limon**	**1.68**	**96**	P		**Pb**	04 39 31.7	**-0.7**
LIMN				S		**Sg**	04 39 54.2	**-1.6**
MTO3	**Montecristo**	**1.69**	**313**	P		**Pb**	04 39 32.0	**-0.6**
MTO3				S		**Sb**	04 39 53.9	**+0.1**
MOM3	**MOM3**	**1.69**	**116**	P		**Pb**	04 39 31.8	**-0.7**
MOM3				S		**Sg**	04 39 54.4	**-1.8**
MOM2	**El Cardon**	**1.75**	**117**	S		**Sb**	04 39 56.2	**+0.8**
NUBE	**Las Nubes**	**1.78**	**292**	P		**Sb**	04 39 33.5	**-0.6**
NUBE				S		**Sb**	04 39 57.0	**+0.7**
LOAL	**Lomas de Alarc**	**1.81**	**294**	S		**Sb**	04 39 57.8	**+0.6**
RCON	**San Juan de Ri**	**1.89**	**83**	P		**Pn**	04 39 34.5	**+1.0**
RCON				S		**Sb**	04 39 59.4	**0.0**
RCPN	**Sur Rio San Ju**	**1.95**	**82**	P		**Pn**	04 39 34.6	**+0.2**
FAME	**Alcaldia de Sa**	**1.97**	**288**	S		**Sb**	04 40 02.0	**+0.2**
ALLN	**Telcor Managua**	**2.07**	**122**	S		**Sb**	04 40 04.6	**+0.1**
MATN	**Matagalpa**	**2.12**	**98**	P		**Pn**	04 39 37.1	**+0.4**
MATN				S		**Sb**	04 40 06.2	**0.0**

IPEC ***22*** *05:05:34.8±0.2, 51°.62N×16°.13E, h1km, ML2.5/6, Error ellipse: s-maj=1.7km s-min=1.3km az=65.0*
VIE ***22*** *05:05:34.3±0.4, 51°.61N×16°.12E, h0km, mb2.5/4, ml2.9/4, Error ellipse: s-maj=4.7km s-min=3.0km az=50.0 85 km NW of Wroclaw Suspected Mining induced.*
PRU ***22*** *05:05:37.6, 51°.52N×16°.00E, h0km*

ISC 22 05:05:33.3±0.8, 51°.68N±0°.03×16°.03E±0°.03, h0km, n38, σ0s.94/70, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.85**	**169**	*e*Pg	**Pg**	05 05 50.1	**+0.5**
KSP				*e*Sg	**Sg**	05 06 00.6	**-0.1**
CHVC	**Chvalec**	**1.09**	**179**	*e*PG	**Pb**	05 05 54.7	**-0.4**
CHVC				*e*SG	**Sg**	05 06 08.1	**-0.2**
	comp=Z,30nm,0.4s						
OSTC	**Ostas**	**1.13**	**174**	*e*PG	**Pb**	05 05 55.8	**+0.1**
OSTC				*e*SG	**Sg**	05 06 09.5	**0.0**
	comp=Z,34nm,0.3s						
UPC	**Upice**	**1.17**	**180**	*e*PG	**Pb**	05 05 56.2	**-0.2**
UPC				*e*SG	**Sg**	05 06 10.6	**-0.3**
	comp=Z,46nm,0.2s						
DPC	**Dobruska-Polom**	**1.34**	**172**	*e*PG	**Pg**	05 05 58.7	**-0.3**
DPC				*e*SG	**Sg**	05 06 15.3	**-1.1**
	comp=Z,24nm,0.3s						
PVCC	**Panska Ves**	**1.47**	**219**	*e*PG	**Pg**	05 06 01.4	**-0.1**
PVCC				*e*SG	**Sb**	05 06 20.8	**0.0**
	comp=Z,101nm,0.2s						
PIVO	**Bartosovice**	**1.53**	**167**	*e*Pg	**Pn**	05 06 01.9	**0.0**
	baz=350						
PIVO				*e*Sg	**Sg**	05 06 20.4	**-2.0**
	57nm,0.3s,baz=350						
KRLC	**Kraliky**	**1.67**	**163**	*e*PG	**Pn**	05 06 04.2	**+0.3**
KRLC				*e*SG	**Sn**	05 06 26.3	**+0.2**
	comp=Z,44nm,0.3s						
RYBC	**Sceka Rybna**	**1.87**	**179**	*e*Pn	**Pn**	05 06 06.9	**+0.3**
	baz=1.2						
RYBC				*e*Sg	**Sb**	05 06 31.8	**-0.5**
	22nm,0.1s,baz=1.2						
CLL	**Collm**	**1.93**	**260**	*e*Pn	**Pn**	05 06 07.0	**-0.3**
	comp=Z,6.0nm,0.4s						
CLL				*e*Pg	**Pg**	05 06 10.0	**-0.2**
CLL				*i* x	x	05 06 14.4	
CLL				*e*Sg	**Sg**	05 06 37.0	**+1.8**
	comp=Z,13nm,0.6s						
PRU	**Pruhonice**	**1.94**	**210**	*e*PG	**Pb**	05 06 09.4	**0.0**
PRU				*e*SG	**Sb**	05 06 33.6	**-0.5**
	comp=Z,12nm,0.2s						
HSKC	**Hora Svate Kat**	**1.96**	**238**	*e*SG	**Sb**	05 06 35.4	**+0.7**
	comp=Z,28nm,0.4s						
STEB	**Steborice**	**2.07**	**147**	*e*PG	**Pb**	05 06 12.0	**+0.3**
STEB				*e*SG	**Sg**	05 06 39.3	**-0.4**
	comp=Z,60nm,0.5s						
MORC	**Moravsky Berou**	**2.13**	**153**	*e*Pn	**Pn**	05 06 10.4	**+0.3**
	baz=334						
MORC				*e*Sg	**Sb**	05 06 39.2	**-0.6**
	comp=Z,32nm,0.7s,baz=334						
MORC	**Moravsky Berou**	**2.13**	**153**	*e*PN	**Pn**	05 06 10.5	**+0.3**
MORC				*e*SG	**Sb**	05 06 39.3	**-0.6**
OKC	**Ostrava-Krasne**	**2.28**	**143**	*e*SG	**Sb**	05 06 44.8	**+0.7**
VRAC	**Vranov**	**2.40**	**171**	*e*Pn	**Pn**	05 06 14.3	**+0.5**
	baz=353						
VRAC				*e*Sg	**Sb**	05 06 47.7	**+0.2**
	comp=Z,15nm,0.4s,baz=353						
TREC	**Trest**	**2.41**	**188**	*e*SG	**Sb**	05 06 48.7	**+0.9**
ZVC	**Zvikov**	**2.53**	**208**	*e*SG	**Sb**	05 06 52.3	**+1.1**
KRUC	**Moravsky**	**2.63**	**175**	*e*Pn	**Pn**	05 06 17.7	**+0.7**
	baz=356						
KRUC				*e*Sg	**Sb**	05 06 55.4	**+1.3**
	comp=Z,20nm,0.8s,baz=356						
NKC	**Novy Kostel**	**2.69**	**239**	*e*PN	**Pn**	05 06 18.6	**+0.8**
NKC				*e*PG	**Pg**	05 06 25.1	**+0.4**
NKC				*e*SG	**Sg**	05 06 59.7	**+0.2**
	comp=Z,24nm,0.3s						
OJC	**Ojcow**	**2.80**	**120**	*e*Pg	**Pg**	05 06 27.3	**+0.5**
OJC				*e*Sg	**Sg**	05 07 03.4	**+0.3**
KHC	**Kasperske Hory**	**2.99**	**213**	*e*PN	**Pn**	05 06 22.0	**0.0**
KHC				*e*PG	**Pb**	05 06 28.3	**+0.8**
KHC				*e*SG	**Sg**	05 07 07.4	**-2.0**
	comp=Z,7.3nm,0.3s						
JAVC	**Velka Javorina**	**3.01**	**159**	*e*Pn	**Pn**	05 06 22.5	**+0.2**
	baz=341						
CKRC	**Cesky Krumlov**	**3.07**	**202**	*e*PG	**Pb**	05 06 30.1	**+1.4**
CKRC				*e*SG	**Sg**	05 07 10.0	**-1.8**
	comp=Z,11nm,0.5s						
LANS	**Liptovska Anna**	**3.35**	**138**	*e*PG	**Pg**	05 06 37.9	**+0.4**

LANS				*e*SG	**Sg**	05 07 21.0	**+0.1**
MODS	**Modra-Piesok**	**3.41**	**166**	*e*PN	Pn	05 06 21.9	-5.7
MODS				*e*PG	**Pg**	05 06 38.4	**-0.1**
MODS				*e*SG	**Sg**	05 07 22.4	**-0.2**
BSD	**Bornholm Skovb**	**3.51**	**349**	*e*	**Pn**	05 06 28.0	**-1.0**
	baz=193,slow=6.2						
BSD				*i* P	Pb	05 06 30.3	-5.9
BSD				*e*S	**Sn**	05 07 10.3	**-0.8**
BSD				IAML		05 07 31.4	
	comp=Z,2.0nm,0.4s						
NIE	**Niedzica**	**3.54**	**128**	*e*Pg	**Sg**	05 06 41.2	**0.0**
NIE				*e*Sg	**Sg**	05 07 26.4	**-0.6**
WINA	**Alland / Wiene**	**3.58**	**180**	*e*Pn	**Pn**	05 06 31.0	**+1.0**
	comp=Z,0.9nm,0.2s						
HAMD	**Hammershus, De**	**3.68**	**349**	*i* P	**Pn**	05 06 32.5	**+1.2**
HAMD				*i* S	**Sn**	05 07 14.0	**-1.3**
HAMD				IAML		05 07 37.1	
	comp=Z,2.2nm,0.4s						
CONA	**Conrad Observa**	**3.75**	**182**	*e*Pn	**Pn**	05 06 33.3	**+0.8**
	comp=Z,0.1nm,0.1s						
MOA	**Molln**	**4.00**	**197**	*e*Pn	**Pn**	05 06 36.4	**+0.6**
	comp=Z,0.9nm,0.2s						
LUNU	**Lund**	**4.25**	**340**	*i* P	**Pn**	05 06 40.6	**+1.4**
LUNU				*i* S	**Sn**	05 07 28.4	**-1.1**
BIOA	**Bad Ischl, Aus**	**4.28**	**202**	*e*Pn	**Pn**	05 06 40.5	**+0.8**
	comp=Z,0.2nm,0.2s						
BLEU	**Blekinge**	**4.64**	**359**	*i* P	**Pn**	05 06 46.9	**+2.4**
BLEU				*i* S	**Sn**	05 07 38.6	**-0.4**
BJUU	**Bjuv**	**4.75**	**339**	*i* P	**Pn**	05 06 46.3	**+0.2**
BJUU				*e*S	**Sn**	05 07 39.9	**-1.9**
DEL	**Delary**	**4.97**	**346**	*i* P	**Pn**	05 06 49.0	**0.0**
DEL				*e*S	**Sn**	05 07 43.8	**-3.3**

CATAC ***22*** *05:17:21.9±0.7, 14°.4N×92°.2W, h30km±5km, M3.3/9, MLv3.3/9, Error ellipse: s-maj=9.5km s-min=4.9km az=22.7, confirmed*
GCG ***22*** *05:17:21.7±0.9, 14°.04N×92°.21W, h14km±9km, MD3.6, Presumed earthquake*
MEX ***22*** *05:17:21.9±0.6, 14°.21N×92°.26W, h87km±13km, MD4.0*

ISC 22 05:17:20.9±1.4, 14°.03N±0°.07×92°.28W±0°.05, h53km±20km, n32, σ2s.21/52, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.75**	**49**	*i* P	**Pn**	05 17 36.3	**+0.8**
RTAL				*e*S	**Sn**	05 17 46.6	**+0.6**
RTAL	**Retalhuleu**	**0.75**	**49**	P	**Pn**	05 17 36.2	**+0.8**
RTAL				S	**Sn**	05 17 46.3	**+0.3**
SMCA	**Catarina**	**0.84**	**13**	*i* P	**Pn**	05 17 36.3	**-0.4**
THIG		**0.87**	**1**	*e*P	**Pn**	05 17 36.5	**-0.5**
THIG				*e*S	**Sn**	05 17 48.4	**-0.5**
THIG		**0.87**	**1**	*i* P	**Pn**	05 17 36.7	**-0.3**
THIG				*i* S	**Sn**	05 17 49.4	**+0.5**
STG2	**El Palmar, Qui**	**0.96**	**65**	*i* P	**Pn**	05 17 38.3	**-0.1**
STG2				*i* S	**Sn**	05 17 51.0	**-0.2**
STG5	**El Palmar, Qui**	**0.97**	**67**	*i* P	**Pn**	05 17 38.1	**-0.3**
STG5				*i* S	**Sn**	05 17 52.0	**+0.6**
STG8	**El Palmar, Qui**	**0.99**	**65**	*i* P	**Pn**	05 17 38.8	**-0.1**
CHUJ	**Union Juarez**	**1.07**	**9**	*e*P	**Pn**	05 17 39.1	**-0.8**
CHUJ				*e*S	**Sn**	05 17 52.7	**-1.2**
PATR	**El Naranjo**	**1.08**	**2**	*e*P	**Pn**	05 17 39.1	**-0.9**
PATR				*e*S	**Sn**	05 17 52.2	**-2.0**
QUEO	**Labor Ovalle**	**1.12**	**41**	*i* P	**Pn**	05 17 41.6	**+1.0**
QUEO				*i* S	**Sn**	05 17 57.0	**+1.9**
SOKI	**Kika Raxquin**	**1.16**	**47**	*i* P	**Pn**	05 17 42.6	**+1.4**
SOKI				*i* S	**Sn**	05 17 58.7	**+2.5**
PAVE	**Pavencul**	**1.16**	**5**	*e*P	**Pn**	05 17 40.4	**-0.7**
PAVE				*e*S	**Sn**	05 17 54.9	**-1.2**
HUEH	**Huehuetenango**	**1.48**	**30**	P	**Pn**	05 17 47.1	**+1.6**
FG8	**Yepocapa, Chim**	**1.68**	**82**	*i* P

Plg2.0000°, Azm74.0000°; P -7.0078, Plg0.0000°, Azm164.0000°:
ROM ***22*** *05:24:03.9, 45˚.85N×15˚.95E, h10km, mb5.3/62, Mw5.1, Mwp5.6/55, Mwpd5.5/8 Error ellipse: s-maj=2.1km s-min=0.1km az=26.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}4.86; $M_{\theta\theta}$-5.52; $M_{\phi\phi}$0.66; $M_{r\theta}$-0.91; $M_{r\phi}$-1.38; $M_{\theta\phi}$-0.12; Fault plane solution: $M_0$5.41756×10^{16} NP1:ϕ_s259.00000°, δ50.00000°, λ91.00000°. NP2:ϕ_s77.00000°, δ40.00000°, λ88.00000°.*
GCMT ***22*** *05:24:03.7±0.1, 45˚.79N×16˚.07E, h12km, MW5.3/154, Moment Tensor Solution. s103,c179; s154,c304; Duration: 1s2 Moment tensor: Scale 10^{17}Nm; M_{rr}1.28±.01; $M_{\theta\theta}$-1.18±.01; $M_{\phi\phi}$-0.10±.01; $M_{r\theta}$-0.03±.04; $M_{\theta\phi}$-0.33±.01; $M_{r\phi}$0.48±.04; Best double couple: $M_0$1.35600×10^{17} NP1:ϕ_s271.00000°, δ45.00000°, λ116.00000°. NP2:ϕ_s57.00000°, δ50.00000°, λ66.00000°. Principal axes: T 1.4380, Plg72.0000°, Azm261.0000°; N -0.1640, Plg18.0000°, Azm73.0000°; P -1.2750, Plg2.0000°, Azm164.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
LJU ***22*** *05:24:03.4, 45˚.89N×16˚.01E, h5km, ML5.1*
PTWC ***22*** *05:24:03, 45˚.80N×15˚.90E, h10km, Mwp5.5/10, NORTHWESTERN BALKAN REGION*
KRSZO ***22*** *05:24:03.3±1.3, 45˚.82N×15˚.99E, h14km±10km, mB7.1/4, ML5.8/83, Error ellipse: s-maj=10.0km s-min=6.0km az=47.0*
PRU ***22*** *05:24:04.3, 45˚.91N×16˚.10E, h10km, M5.3, Damaging Earthquake Near Zagreb-felt In Susice*
GII ***22*** *05:24:04.3±0.0, 45˚.87N×16˚.03E, h0km, confirmed*
BGR ***22*** *05:24:04.3±0.3, 45˚.89N×16˚.12E, h10km, ML5.6/15, Error ellipse: s-maj=3.3km s-min=3.3km az=40.0*
RHSSO ***22*** *05:24:04.1±0.5, 45˚.85N×16˚.08E, h9km±3km, ML5.6/10*
BNS ***22*** *05:24:06.8±0.5, 46˚.07N×15˚.78E, h5km, ML5.6*
THE ***22*** *05:24:07.5, 46˚N±3˚×1˚6E±˚, h10km, M5.3/59, mb5.7/59, MLh5.3/59, MwMwp5.3/29, Mwp5.5/29*
ISC 22 05:24:03.5±0.5, 45°90N±0.01×16°01E±0.01, h11km±2km, n2176, σ1°30/2096, mb5.5/536, MS4.9/180, 178C-108D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PTJ	**Puntijarka**	**0.03**	**279**	Pg		**Pg**	**05 24 04.8**	**-0.8**
LOBO	**Lobor**	**0.26**	**9**	*i* Pg		**Pg**	**05 24 09.1**	**+0.3**
LOBO				Sg		**Sb**	**05 24 13.7**	**-1.0**
GCIS	**Gornji Cirnik**	**0.27**	**263**	⇑*i* Pg		**Pg**	**05 24 09.0**	**0.0**
GCIS				*i* Sg		**Sg**	**05 24 12.9**	**+0.3**
GCIS				IAML			05 24 13.8	
	comp=Z,74μm,0.3s							
GOLS	**Golise**	**0.29**	**292**	⇓*i* Pg		**Pg**	**05 24 09.7**	**+0.3**
GOLS				*e*Sg		**Sg**	**05 24 14.0**	**+0.7**
GOLS				IAML			05 24 16.9	
	comp=Z,145μm,0.5s							
KALN	**Kalnik**	**0.39**	**54**	*i* Pg		**Pg**	**05 24 10.9**	**-0.3**
KALN				Sg		**Sg**	**05 24 16.6**	**+0.2**
CESS	**Cesta pri Krsk**	**0.39**	**281**	⇓*i* Pg		**Pg**	**05 24 11.7**	**+0.5**
CESS				*e*Sg		**Sg**	**05 24 17.2**	**+0.9**
CESS				IAML			05 24 18.5	
	comp=Z,264μm,0.4s							
CRES	**Cresnjevec Ost**	**0.39**	**259**	⇑*i* Pg		**Pg**	**05 24 11.2**	**-0.1**
CRES				*i* Sg		**Sg**	**05 24 17.0**	**+0.5**
CRES				IAML			05 24 21.4	
	comp=Z,29μm,0.2s							
CRES	**Cresnjevec Ost**	**0.39**	**259**	Pg		**Pg**	**05 24 11.2**	**-0.1**
CRES				Lg		Lg	05 24 16.6	
DOBS	**Dobrina**	**0.45**	**303**	⇓*i* Pg		**Pg**	**05 24 12.8**	**+0.4**
DOBS				*i* Sg		**Sg**	**05 24 18.4**	**+0.1**
DOBS				IAML			05 24 26.5	
	comp=Z,32μm,0.3s							
OZLJ	**Ozalj**	**0.48**	**233**	*i* Pg		**Pg**	**05 24 12.9**	**+0.1**
OZLJ				Sg		**Sg**	**05 24 19.5**	**+0.4**
LEGS	**Legarje**	**0.48**	**276**	⇑*i* Pg		**Pg**	**05 24 13.1**	**+0.1**
LEGS				*e*Sg		**Sg**	**05 24 19.6**	**+0.2**
KOGS	**Kog**	**0.57**	**17**	⇓*i* Pg		**Pg**	**05 24 14.8**	**+0.2**
KOGS				*e*Sg		**Sb**	**05 24 23.4**	**-0.4**
KOGS				*e*			05 24 26.8	
KOGS				IAML			05 24 28.7	
	comp=Z,118μm,0.2s							
KOGS	**Kog**	**0.57**	**17**	Pg		**Pg**	**05 24 14.9**	**+0.3**
KOGS				Lg		Lg	05 24 23.2	
MOSL	**Moslavina**	**0.60**	**119**	*i* Pg		**Pg**	**05 24 14.3**	**-0.8**
MOSL				Sg		**Sg**	**05 24 22.0**	**-1.0**
GROS	**Grobnik**	**0.66**	**328**	⇓*i* Pg		**Pg**	**05 24 16.6**	**+0.2**
GROS				*i* Sg		**Sb**	**05 24 26.0**	**-0.4**
GROS				IAML			05 24 30.1	
	comp=Z,80μm,0.3s							
BOJS	**Bojanci**	**0.66**	**233**	⇑*i* Pg		**Pg**	**05 24 15.5**	**-0.8**
BOJS				*e*Sg		**Sg**	**05 24 24.9**	**-0.1**
BOJS				IAML			05 24 30.5	
	comp=Z,59μm,0.4s							
BOJS	**Bojanci**	**0.66**	**233**	*e*Pg		**Pg**	**05 24 16.1**	**-0.3**
BOJS				*e*Sg		**Sb**	**05 24 26.7**	**+0.3**
PDKS	**Podkum**	**0.72**	**283**	⇑*i* Pg		**Pg**	**05 24 17.6**	**+0.1**
PDKS				*i* Sg		**Sg**	**05 24 26.9**	**-0.1**
BEHE	**Becsehely**	**0.78**	**43**			**Pg**	**05 24 18.4**	**-0.1**
BEHE				Sg		**Sb**	**05 24 30.0**	**+0.3**
BEHE	**Becsehely**	**0.78**	**43**	⇓Pg		**Pg**	**05 24 18.7**	**+0.2**
BEHE				Lg		Lg	05 24 30.4	
BEHE	**Becsehely**	**0.78**	**43**	⇓*i* Pg		**Pg**	**05 24 18.7**	**+0.2**
BEHE				*e*Sg		**Sb**	**05 24 29.9**	**+0.2**
VISS	**Visnje**	**0.82**	**263**	⇑*i* Pg		**Pg**	**05 24 18.9**	**-0.5**
VISS				*e*Sg		**Sg**	**05 24 29.8**	**-0.4**
VISS				IAML			05 24 34.7	
	comp=Z,104μm,0.6s							
ZAVS	**Zavodnje**	**0.87**	**308**	⇓*i* Pg		**Pg**	**05 24 20.4**	**+0.1**
ZAVS				*i* Sg		**Sg**	**05 24 30.6**	**-0.9**
ZAVS				IAML			05 24 35.0	
	comp=Z,94μm,0.4s							
GBRS	**Gornja Briga**	**0.92**	**247**	⇑*i* Pg		**Pg**	**05 24 20.6**	**-0.6**
GBRS				*i* Sg		**Sb**	**05 24 34.2**	**+0.4**
GBRS				IAML			05 24 36.6	
	comp=Z,257μm,0.8s							
A264A	**Tarany**	**0.93**	**73**	Pn		**Pb**	**05 24 21.8**	**+0.1**
A264A				Sn		**Sn**	**05 24 35.0**	**-0.8**
VNDS	**Vrh nad Dolski**	**0.93**	**283**	*i* Pg		**Pg**	**05 24 21.3**	**-0.2**
VNDS				*e*Sg		**Sn**	**05 24 36.1**	**+0.1**
VNDS				IAML			05 24 38.0	
	comp=Z,139μm,0.7s							
PERS	**Pernice**	**0.96**	**320**	⇓*i* Pg		**Pg**	**05 24 21.9**	**-0.1**
PERS				*i* Sg		**Sb**	**05 24 35.5**	**+0.6**
PERS				IAML			05 24 38.5	
	comp=Z,142μm,0.6s							
A262A	**Szaknyer**	**1.03**	**20**	Pn		**Pb**	**05 24 23.5**	**+0.2**
A262A				Sn		**Sn**	**05 24 38.9**	**+0.6**
SOKA	**Soboth**	**1.03**	**319**			**Pg**	**05 24 23.1**	**-0.3**
SOKA						**Sn**	**05 24 38.5**	**0.0**
SOKA	**Soboth**	**1.03**	**319**	*e*Pg		**Pg**	**05 24 23.1**	**-0.3**
	comp=Z,4μm,0.3s							
SOKA				*e*Sg		**Sn**	**05 24 38.5**	**0.0**
	comp=Z,25μm,0.3s							
LJU	**Ljubljana**	**1.04**	**278**	⇑*i* Pg		**Pg**	**05 24 23.3**	**-0.3**
LJU				*i* Sg		**Sn**	**05 24 38.9**	**+0.1**
LJU				IAML			05 24 42.0	
	comp=Z,112μm,0.6s							
LJU	**Ljubljana**	**1.04**	**278**	*e*Pg		**Pg**	**05 24 23.5**	**-0.1**
PLIT	**Plitvice**	**1.06**	**195**	*i* Pg		**Pg**	**05 24 22.7**	**-1.2**
PLIT				Sg		**Sg**	**05 24 36.2**	**-1.5**
GBAS	**Gorenja Brezov**	**1.09**	**272**	⇑*i* Pg		**Pb**	**05 24 24.0**	**-0.5**
GBAS				*e*Sg		**Sn**	**05 24 39.5**	**-0.5**
GBAS				IAML			05 24 42.7	
	comp=Z,65μm,0.6s							
CEY	**Cerknica**	**1.12**	**262**	⇑*i* Pg		**Pb**	**05 24 24.2**	**-0.7**
CEY				*e*Sg		**Sn**	**05 24 40.1**	**-0.5**
CEY				IAML			05 24 42.6	
	comp=Z,166μm,0.6s							
CEY	**Cerknica**	**1.12**	**262**	*e*Pg		**Pn**	**05 24 25.3**	**+0.1**
CEY				*e*Sg		**Sn**	**05 24 41.3**	**+0.7**
MOZS	**Mozjanca**	**1.16**	**290**	*i* Pg		**Pb**	**05 24 25.6**	**0.0**
MOZS				*i* Sg		**Sn**	**05 24 42.0**	**+0.4**
MOZS				IAML			05 24 46.3	
	comp=Z,217μm,0.9s							
A263A	**Hollad**	**1.17**	**50**	Pn		**Pb**	**05 24 24.7**	**-1.1**
A010A	**Fuerstenfeld**	**1.17**	**2**	Pg		**Pb**	**05 24 25.8**	**0.0**
A010A				Lg		Lg	05 24 44.1	
OBKA	**Obir**	**1.18**	**301**			**Pb**	**05 24 25.6**	**-0.4**
OBKA						**Sn**	**05 24 42.4**	**+0.1**
OBKA	**Obir**	**1.18**	**301**	*e*Pg		**Pb**	**05 24 25.6**	**-0.4**
	comp=Z,3μm,0.4s,SNR=3773							
OBKA				Sg		**Sn**	**05 24 42.4**	**+0.1**
	comp=Z,165μm,0.8s							
OBKA	**Obir**	**1.18**	**301**	Pn		**Pb**	**05 24 25.8**	**-0.2**
OBKA				Sn		**Sn**	**05 24 42.7**	**+0.4**
OBKA	**Obir**	**1.18**	**301**	*e*Pn		**Pg**	**05 24 26.8**	**+0.6**
OBKA				*e*Sn		**Sn**	**05 24 42.3**	**+0.1**
KNDS	**Knezji Dol**	**1.20**	**252**	⇑*i* Pg		**Pb**	**05 24 25.4**	**-0.9**
KNDS				*e*Sg		**Sn**	**05 24 43.6**	**+0.8**
KNDS				IAML			05 24 48.0	
	comp=Z,139μm,0.9s							
RIY	**Rijeka**	**1.22**	**242**	*i* Pg		**Pn**	**05 24 26.1**	**-0.4**
RIY				Sg		**Sb**	**05 24 42.4**	**+0.1**
RIY	**Rijeka**	**1.22**	**242**	*e*Pg		**Pn**	**05 24 26.3**	**-0.2**
RIY				*e*Sg		**Sn**	**05 24 43.8**	**+0.8**
CRNS	**Crni Vrh**	**1.23**	**279**	⇑*i* Pg		**Pn**	**05 24 26.5**	**-0.2**
CRNS				*e*Sg		**Sn**	**05 24 43.9**	**+0.5**
CRNS				IAML			05 24 48.6	
	comp=Z,64μm,0.5s							
A273A	**Marcsa**	**1.26**	**89**	Pn		**Pn**	**05 24 25.7**	**-1.4**
A273A				Pg		**Pg**	**05 24 28.8**	**+1.1**
A261A	**Ohid**	**1.31**	**37**	Pn		**Pn**	**05 24 27.2**	**-0.6**
A265A	**Kaposfured**	**1.35**	**67**	Pn		**Pn**	**05 24 27.1**	**-1.2**
A265A				Sn		**Sb**	**05 24 45.2**	**-0.8**
JAVS	**Javornik**	**1.36**	**270**	⇑*i* Pg		**Pn**	**05 24 28.1**	**-0.5**
JAVS				*e*Sg		**Sn**	**05 24 46.6**	**0.0**
JAVS				IAML			05 24 51.7	
	comp=Z,138μm,1.0s							
UDBI	**Udbina**	**1.39**	**187**	*i* Pn		**Pn**	**05 24 28.3**	**-0.6**
UDBI				Sg		**Sb**	**05 24 46.5**	**-0.7**
ARSA	**Arzberg**	**1.39**	**346**			**Pn**	**05 24 28.8**	**-0.2**
ARSA				Sn		**Sb**	**05 24 47.5**	**+0.2**
ARSA	**Arzberg**	**1.39**	**346**	*e*Pn		**Pn**	**05 24 28.7**	**-0.2**
	comp=Z,771nm,0.4s,SNR=6346							
ARSA				Sn		**Sn**	**05 24 47.2**	**0.0**
	comp=Z,3μm,0.4s							
ARSA	**Arzberg**	**1.39**	**346**	Pn		**Pn**	**05 24 28.9**	**0.0**
ARSA				Lg			05 24 48.2	
ARSA	**Arzberg**	**1.39**	**346**	*e*Pg		**Pn**	**05 24 29.2**	**+0.2**
ARSA				*e*Sg		**Sg**	**05 24 48.5**	**+0.3**
ARSA	**Arzberg**	**1.39**	**346**	*e*Pn		**Pn**	**05 24 29.1**	**-0.2**
ARSA				*e*Sn		**Sn**	**05 24 47.3**	**0.0**
ARSA	**Arzberg**	**1.39**	**346**	⇓P		**Pn**	**05 24 28.7**	**-0.2**
BLY	**Banja Luka**	**1.42**	**144**	⇓P		**Pn**	**05 24 28.4**	**-1.0**
BLY				⇑S		**Sb**	**05 24 48.4**	**+0.3**
BLY	**Banja Luka**	**1.42**	**144**	Pn		**Pn**	**05 24 28.2**	**-1.1**
BLY	**Banja Luka**	**1.42**	**144**	Pn		**Pn**	**05 24 28.2**	**-1.1**
BLY				Lg		Lg	05 24 47.6	
BLY	**Banja Luka**	**1.42**	**144**	*e*Pg		**Pn**	**05 24 28.3**	**-1.1**
BLY				*e*Sg		**Sg**	**05 24 51.0**	**+1.8**
BLY	**Banja Luka**	**1.42**	**144**	⇓P		**Pn**	**05 24 28.0**	**-1.3**
BLY	**Banja Luka**	**1.42**	**144**	⇓*i* Pg		**Pn**	**05 24 28.2**	**-1.1**
BLY				*e*Sg		**Sn**	**05 24 47.0**	**-1.0**
RABC	**Rab**	**1.44**	**217**	*i* Pn		**Pb**	**05 24 29.9**	**-0.4**
RABC				Sg		**Sg**	**05 24 50.0**	**+0.2**
SKDS	**Skadanscina**	**1.44**	**256**	⇑*i* Pg		**Pn**	**05 24 29.1**	**-0.5**
SKDS				*e*Sg		**Sg**	**05 24 49.5**	**-0.4**
SKDS				IAML			05 24 51.9	
	comp=Z,61μm,0.6s							
SKDS	**Skadanscina**	**1.44**	**256**	*e*Pg		**Pn**	**05 24 29.6**	**0.0**
SKDS				*e*Sg		**Sg**	**05 24 49.9**	**0.0**
GORS	**Gorjuse**	**1.46**	**287**	⇑*i* Pg		**Pn**	**05 24 29.7**	**-0.2**
GORS				*e*Sg		**Sb**	**05 24 49.5**	**+0.1**
GORS				IAML			05 24 53.6	
	comp=Z,72μm,0.8s							
A260A	**Vassurany**	**1.46**	**19**	Pn		**Pn**	**05 24 29.5**	**-0.4**
A260A				Sn		**Sn**	**05 24 48.6**	**-0.4**
VOJS	**Vojsko**	**1.49**	**276**	⇑*i* Pg		**Pn**	**05 24 29.8**	**-0.6**
VOJS				*e*Sg		**Sg**	**05 24 51.9**	**+0.5**
VOJS				IAML			05 24 53.4	
	comp=Z,67μm,0.8s							
NVLJ	**Novalja**	**1.56**	**211**	*i* Pn		**Pb**	**05 24 31.9**	**-0.6**
NVLJ				Sg		**Sg**	**05 24 52.9**	**-0.9**
TRI	**Trieste**	**1.58**	**264**	Pn		**Pn**	**05 24 31.6**	**+0.1**
TRI	**Trieste**	**1.58**	**264**	⇑*e*Pn		**Pn**	**05 24 31.6**	**+0.1**
TRI	**Trieste**	**1.58**	**264**	P		**Pn**	**05 24 31.6**	**+0.1**
CADS	**Cadrg**	**1.61**	**282**	⇑*i* Pn		**Pn**	**05 24 31.6**	**-0.4**
CADS				*e*Sn		**Sb**	**05 24 54.5**	**+0.7**
CADS				IAML			05 24 58.8	
	comp=Z,41μm,0.6s							
TIH	**Tihany**	**1.64**	**52**	Pn		**Pn**	**05 24 31.3**	**-1.0**
MPLH	**Magyarpolny**	**1.65**	**39**	Pn		**Pn**	**05 24 31.6**	**-0.9**
MPLH				Lg		Lg	05 24 55.0	
DRE	**Drenchia**	**1.67**	**280**	⇑*e*Pn		**Pn**	**05 24 32.5**	**-0.4**
DRE				*e*Sn		**Sg**	**05 24 57.3**	**+0.1**
SABO	**M.te Sabotino**	**1.68**	**273**			**Pn**	**05 24 32.6**	**-0.3**
SABO	**M.te Sabotino**	**1.68**	**273**	⇑*e*Pn		**Pn**	**05 24 32.8**	**-0.1**
SABO				*e*Sn		**Sb**	**05 24 55.9**	**+0.2**
A266A	**Gyulaj**	**1.69**	**68**	Pn		**Pn**	**05 24 31.5**	**-1.5**
A266A				Pg		**Pb**	**05 24 34.9**	**+0.4**
A266A				Sn		**Sn**	**05 24 53.4**	**-1.1**
VIRC	**Vir**	**1.75**	**203**	*i* Pn		**Pb**	**05 24 34.6**	**-1.0**
VIRC				Sg		**Sb**	**05 24 58.2**	**+0.7**
EGYH	**Egyhazaskeszo**	**1.77**	**31**	Pn		**Pn**	**05 24 33.8**	**-0.3**
EGYH				Sn		**Sn**	**05 24 57.1**	**+0.6**
ROBS	**Robic**	**1.77**	**282**	⇑*i* Pn		**Pn**	**05 24 33.7**	**-0.5**
ROBS				*e*Sn		**Sg**	**05 24 59.8**	**-0.7**
ROBS				IAML			05 25 02.4	
	comp=Z,89μm,1.0s							
PRED	**Cave del Predi**	**1.78**	**289**			**Pn**	**05 24 34.1**	**-0.3**
MYKA	**Terra Mystica**	**1.80**	**295**			**Pn**	**05 24 34.8**	**+0.3**
MYKA						**Sn**	**05 24 58.1**	**+0.7**
MYKA	**Terra Mystica**	**1.80**	**295**	*e*Pn		**Pn**	**05 24 34.8**	**+0.3**
	comp=Z,2μm,0.5s,SNR=1204							
MYKA				Sn		**Sn**	**05 24 58.1**	**+0.7**
	comp=Z,3μm,0.5s							
RONA	**Rosalia, Austr**	**1.81**	**6**			**Pn**	**05 24 34.6**	**-0.1**
RONA						**Sn**	**05 24 58.2**	**+0.5**
RONA	**Rosalia, Austr**	**1.81**	**6**	*e*Pn		**Pn**	**05 24 34.6**	**-0.1**
	comp=Z,126nm,0.1s,SNR=3819							
RONA				*e*Sn		**Sn**	**05 24 58.2**	**+0.5**
	comp=Z,6μm,0.5s							
SOP	**Sopron**	**1.82**	**12**	Pn		**Pn**	**05 24 34.7**	**-0.1**
SOP				Sn		**Sn**	**05 24 56.6**	**-1.3**
SOP				Lg		Lg	05 25 03.9	
SOP	**Sopron**	**1.82**	**12**	*e*Pn		**Pn**	**05 24 34.9**	**0.0**
SOP				*e*Sn		**Sn**	**05 24 55.9**	**-2.1**
MORH	**Mrgy, Hungar**	**1.86**	**79**	⇓S		**Sb**	**05 25 01.5**	**+0.7**
MORH	**Mrgy, Hungar**	**1.86**	**79**	⇑Pn		**Pn**	**05 24 33.6**	**-1.7**
MORH				Lg		Lg	05 25 04.2	
MORH	**Mrgy, Hungar**	**1.86**	**79**	*e*Sn		**Sn**	**05 24 59.3**	**+0.4**
PTCC	**Patocco-Chiusa**	**1.91**	**286**	⇑P		**Pn**	**05 24 35.8**	**-0.3**
KIJV	**Kijevo**	**1.92**	**171**	*i* Pn		**Pn**	**05 24 36.4**	**+0.3**
KIJV				Sn		**Sn**	**05 25 01.1**	**+0.8**
A003A	**Andau**	**1.99**	**21**	Pn		**Pn**	**05 24 37.2**	**+0.1**
A003A				Sn		**Sn**	**05 25 01.7**	**-0.3**
A267A	**Kaloz**	**2.00**	**58**	Pn		**Pn**	**05 24 36.2**	**-1.1**
DUGI	**Dugi Otok**	**2.03**	**200**	*i* Pn		**Pn**	**05 24 38.5**	**+0.8**
DUGI				Sn		**Sn**	**05 25 03.4**	**+0.4**
CONA	**Conrad Observa**	**2.03**	**357**	*e*Pn		**Pn**	**05 24 37.8**	**0.0**
	comp=Z,961nm,0.4s,SNR=3744							
CONA	**Conrad Observa**	**2.03**	**357**	Pn		**Pn**	**05 24 37.7**	**0.0**
MORI	**Morici**	**2.05**	**186**	*i* Pn		**Pn**	**05 24 38.7**	**+0.7**
MORI				Sn		**Sb**	**05 25 04.8**	**-1.4**
A004A	**Ebreichsdorf**	**2.08**	**7**	Pn		**Pn**	**05 24 38.8**	**+0.4**
A004A				Lg		Lg	05 25 14.7	
CSKK	**Cskako**	**2.13**	**46**	Pn		**Pn**	**05 24 38.2**	**-0.9**
CSKK				Sn		**Sn**	**05 25 05.3**	**-0.2**
KBA	**Koelnbreinsper**	**2.18**	**304**			**Pn**	**05 24 40.1**	**+0.1**
KBA	**Koelnbreinsper**	**2.18**	**304**	*e*Pn		**Pn**	**05 24 40.1**	**+0.1**
	comp=Z,546nm,0.6s,SNR=456							
KBA	**Koelnbreinsper**	**2.18**	**304**	*e*Pn		**Pn**	**05 24 40.5**	**+0.5**
KBA	**Koelnbreinsper**	**2.18**	**304**	⇑P		**Pn**	**05 24 40.1**	**+0.1**
WINA	**Alland / Wiene** SNR=1399	**2.21**	**1**	*e*Pn		**Pn**	**05 24 40.3**	**+0.2**
A272A	**Blcske**	**2.21**	**67**	Pn		**Pn**	**05 24 38.6**	**-1.6**
A272A				Pg		**Pg**	**05 24 47.0**	**+1.0**
A339A	**Balon**	**2.23**	**30**	Pn		**Pn**	**05 24 40.4**	**0.0**
A339A				Pg		**Pg**	**05 24 47.7**	**+1.4**
A339A				Lg		Lg	05 25 20.2	
ZIRJ	**Zirje**	**2.26**	**187**	*i* Pn		**Pn**	**05 24 41.8**	**+0.9**
ZIRJ				Sn		**Sn**	**05 25 10.1**	**+1.3**
MOA	**Molln**	**2.29**	**329**			**Pn**	**05 24 42.2**	**+1.0**
MOA						**Sn**	**05 25 10.8**	**+1.4**
MOA	**Molln**	**2.29**	**329**	*e*Pn		**Pn**	**05 24 42.2**	**+1.0**
	comp=Z,517nm,0.3s,SNR=789							
MOA				Sn		**Sn**	**05 25 10.8**	**+1.4**
	comp=Z,6μm,0.3s							
MOA	**Molln**	**2.29**	**329**	*e*Pg		**Pn**	**05 24 42.7**	**+1.5**
MOA				*e*Sg		**Sb**	**05 25 11.4**	**-1.7**
MOA	**Molln**	**2.29**	**329**	*e*Pn		**Pn**	**05 24 42.2**	**+1.0**
A271A	**Ivancsa**	**2.32**	**56**	Pn		**Pn**	**05 24 40.6**	**-1.0**
STAL	**STALIGIAL**	**2.32**	**280**			**Pn**	**05 24 42.0**	**+0.3**
ZST	**Bratislava**	**2.41**	**18**	Pn		**Pn**	**05 24 42.4**	**-0.5**
ZST				Sn		**Sn**	**05 25 11.2**	**-1.3**
BIOA	**Bad Ischl, Aus**	**2.42**	**319**			**Pn**	**05 24 43.5**	**+0.5**
BIOA						**Sn**	**05 25 14.6**	**+1.9**
BIOA	**Bad Ischl, Aus**	**2.42**	**319**	*e*Pn		**Pn**	**05 24 43.5**	**+0.5**
	comp=Z,266nm,0.2s,SNR=624							
BIOA				Sn		**Sn**	**05 25 14.6**	**+1.9**
	comp=Z,3μm,0.3s							
A008A	**Tiefenfucha**	**2.48**	**354**	Pn		**Pn**	**05 24 44.3**	**+0.5**
A008A				Pg		**Pg**	**05 24 50.8**	**-0.2**
SRO	**Srobarova**	**2.48**	**39**	*e*P		**Pn**	**05 24 43.5**	**-0.4**
SRO				*e*			05 25 14.1	
SRO				pmax	pmax			
	comp=N,21μm,0.8s							
SRO	**Srobarova**	**2.48**	**39**	Pn		**Pn**	**05 24 43.6**	**-0.4**
SRO				Sn		**Sn**	**05 25 14.3**	**+0.1**
SRO	**Srobarova**	**2.48**	**39**	*e*PN		**Pn**	**05 24 43.5**	**-0.4**
SRO				*e*PG		**Pg**	**05 24 51.2**	**+0.1**
SRO				*e*SN		**Sn**	**05 25 14.1**	**-0.1**
SRO				*e*LG		Lg	05 25 39.3	
RICI	**Ricice**	**2.54**	**161**	*i* Pn		**Pn**	**05 24 45.2**	**+0.5**
RICI				Sn		**Sn**	**05 25 17.5**	**+1.9**
SUBS	**Subotica**	**2.55**	**84**	*e*Pn		**Pn**	**05 24 43.3**	**-1.5**
ABTA	**Abfaltersbach**	**2.57**	**290**			**Pn**	**05 24 45.4**	**+0.3**
ABTA	**Abfaltersbach**	**2.57**	**290**	*e*Pn		**Pn**	**05 24 45.4**	**+0.3**
	comp=N,1μm,0.5s,SNR=601							
BUD	**Budapest**	**2.61**	**52**	Pn		**Pn**	**05 24 43.7**	**-2.0**
BUD				Lg		Lg	05 25 29.0	
BUD	**Budapest**	**2.61**	**52**	*e*Pn		**Pn**	**05 24 44.1**	**-1.6**
MODS	**Modra-Piesok**	**2.62**	**19**	*e*P		**Pn**	**05 24 45.2**	**-0.6**
MODS				*e*			05 25 14.9	
MODS				pmax	pmax			
	comp=N,39μm,1.2s							
MODS	**Modra-Piesok**	**2.62**	**19**	Pn		**Pn**	**05 24 45.2**	**-0.6**
MODS	**Modra-Piesok**	**2.62**	**19**	*e*PN		**Pn**	**05 24 45.2**	**-0.6**
MODS				*e*PG		**Pg**	**05 24 54.3**	**+0.6**
MODS				*e*SN		**Sn**	**05 25 14.9**	**-2.7**
MODS				*e*LG		Lg	05 25 36.4	
A337A	**Vahovce**	**2.64**	**27**	Pn		**Pn**	**05 24 45.8**	**-0.3**
A337A				Sn		**Sn**	**05 25 17.6**	**-0.4**
A338A	**Semerovo**	**2.65**	**36**	Pn		**Pn**	**05 24 45.9**	**-0.3**
A338A				Pg		**Pg**	**05 24 56.1**	**+1.7**
A338A				Sn		**Sn**	**05 25 18.3**	**-0.1**
MAKA	**Makarska**	**2.71**	**164**	*i* Pn		**Pn**	**05 24 47.8**	**+0.7**
MAKA				Sn		**Sn**	**05 25 20.8**	**+0.9**
HVAR	**Hvar**	**2.74**	**173**	*i* Pn		**Pn**	**05 24 48.2**	**+0.8**
HVAR				Sn		**Sn**	**05 25 22.2**	**+1.6**
LESA	**Schwarzleotal**	**2.75**	**305**			**Pn**	**05 24 48.2**	**+0.4**
LESA						**Sn**	**05 25 22.9**	**+1.9**
LESA	**Schwarzleotal**	**2.75**	**305**	Pn		**Pn**	**05 24 48.2**	**+0.4**
	comp=N,2μm,0.4s,SNR=1156							
LESA				Sn		**Sn**	**05 25 22.9**	**+1.9**
	comp=N,8μm,0.7s							
**F

PLE	**Pljevlja**	**3.53**	**136**	⇑*i*	Pn	**Pn**	**05 24 57.9**	**-0.5**
PLE				*e*	Sn	**Sn**	**05 25 40.3**	**+0.1**
TRUS	**Trudelj**	**3.54**	**117**	*e*	Pn	**Pn**	**05 24 58.1**	**-0.3**
FDMO	**Fiordimonte**	**3.55**	**217**			**Pn**	**05 24 57.9**	**-0.7**
SQTA	**Sankt Quirin**	**3.56**	**293**			**Pn**	**05 24 59.7**	**+0.8**
SQTA						**Sn**	**05 25 44.6**	**+3.5**
SQTA	**Sankt Quirin**	**3.56**	**293**	P		**Pn**	**05 24 59.7**	**+0.8**
SQTA							05 25 44.6	
SQTA	**Sankt Quirin**	**3.56**	**293**	*i*	Pn	**Pn**	**05 24 59.7**	**+0.8**
	comp=Z,1µm,0.5s,SNR=616							
SQTA				*e*	Sn	**Sn**	**05 25 44.6**	**+3.5**
	comp=Z,3µm,0.8s							
SQTA	**Sankt Quirin**	**3.56**	**293**	*e*	Pn	**Pn**	**05 25 00.2**	**+1.3**
A331A	**Zubak**	**3.58**	**24**		Pn	**Pn**	**05 24 59.0**	**0.0**
A331A					Sn	**Sn**	**05 25 43.6**	**+2.3**
DBRK	**Dubrovnik**	**3.58**	**154**	*e*	Pn	**Pn**	**05 25 00.1**	**+1.1**
DBRK					Sn	**Sn**	**05 25 42.0**	**+0.7**
TREB	**Trebinje**	**3.60**	**151**	⇓*i*	Pn	**Pn**	**05 25 00.2**	**+0.9**
TREB				*e*	Sn	**Sn**	**05 25 40.5**	**-1.3**
KHC	**Kasperske Hory**	**3.62**	**334**			**Pn**	**05 25 00.8**	**+1.1**
KHC	**Kasperske Hory**	**3.62**	**334**	*e*	PN	**Pn**	**05 25 01.0**	**+1.3**
KHC				*e*	SN	**Sn**	**05 25 42.6**	**+0.1**
KHC				*e*	SG	**Sg**	**05 25 59.4**	**-0.5**
	comp=Z,7µm,0.8s							
KHC					AMS	AMS	05 26 20.0	
	comp=Z,130µm,5.3s							
KHC	**Kasperske Hory**	**3.62**	**334**	*ce*	P	**Pn**	**05 25 00.6**	**+0.9**
KHC					pmax	pmax		
	comp=Z,3µm,1.0s							
KHC	**Kasperske Hory**	**3.62**	**334**	⇓	P	**Pn**	**05 25 00.3**	**+0.7**
MURB	**Monte Urbino**	**3.63**	**225**			**Pn**	**05 24 59.7**	**-0.1**
BANR	**Banloc**	**3.63**	**96**	⇑	P	**Pn**	**05 25 00.1**	**+0.4**
BANR	**Banloc**	**3.63**	**96**		Pn	**Pn**	**05 24 59.3**	**-0.4**
TIM	**Timisoara**	**3.65**	**91**	⇓	P	**Pn**	**05 24 59.5**	**-0.4**
TIM	**Timisoara**	**3.65**	**91**		P	**Pn**	**05 24 59.9**	**0.0**
MOTA	**Moosalm**	**3.67**	**295**			**Pn**	**05 25 01.5**	**+1.1**
MOTA						**Sn**	**05 25 46.8**	**+3.0**
MOTA	**Moosalm**	**3.67**	**295**	*e*	Pn	**Pn**	**05 25 01.5**	**+1.1**
	comp=Z,360nm,0.4s,SNR=390							
MOTA				*e*	Sn	**Sn**	**05 25 46.8**	**+3.0**
	comp=Z,1µm,0.6s							
MOTA	**Moosalm**	**3.67**	**295**	*e*	Pn	**Pn**	**05 25 01.5**	**+1.1**
MAUC	**Maruska**	**3.68**	**19**	*e*	PN	**Pn**	**05 25 00.2**	**-0.2**
NRCA	**Norcia**	**3.70**	**215**			**Pn**	**05 24 60.0**	**-0.8**
ZVC	**Zvikov**	**3.75**	**342**	*e*	PN	**Pn**	**05 25 02.3**	**+1.0**
ZVC					AMS	AMS	05 26 30.0	
	comp=Z,165µm,5.9s							
NKME	**Niksic**	**3.78**	**145**	*e*	Pn	**Pn**	**05 25 01.6**	**-0.2**
NKME				*e*	Sn	**Sn**	**05 25 46.5**	**+0.2**
FETA	**Feichten**	**3.82**	**289**			**Pn**	**05 25 03.3**	**+0.9**
FETA						**Sn**	**05 25 50.6**	**+3.2**
FETA	**Feichten**	**3.82**	**289**	*e*	Pn	**Pn**	**05 25 03.3**	**+0.9**
	comp=Z,383nm,0.6s,SNR=715							
FETA				*e*	Sn	**Sn**	**05 25 50.6**	**+3.2**
	comp=Z,974nm,0.6s							
VRSS	**Vrsac**	**3.82**	**100**	*e*	Pn	**Pn**	**05 25 01.4**	**-0.9**
SALO	**Salr**	**3.85**	**268**			**Pn**	**05 25 02.8**	**+0.1**
SALO	**Salr**	**3.85**	**268**	⇑	P	**Pn**	**05 25 02.4**	**-0.3**
SJES	**Sjenica**	**3.87**	**132**	*e*	Pn	**Pn**	**05 25 03.3**	**+0.2**
SJES	**Sjenica**	**3.87**	**132**	⇓*i*	Pn	**Pn**	**05 25 03.0**	**-0.1**
SJES				*e*	Sn	**Sn**	**05 25 47.3**	**-1.4**
WET	**Wettzell**	**3.88**	**328**	*e*	Pn	**Pn**	**05 25 03.7**	**+0.6**
WET				*e*	Sn	**Sn**	**05 25 47.6**	**-1.0**
WET				*e*	Sg	**Sg**	**05 26 07.8**	**0.0**
ZCCA	**Zocca**	**3.88**	**248**			**Pn**	**05 25 03.8**	**+0.6**
HCY	**Herceg Novi**	**3.89**	**152**	*e*	Pn	**Pn**	**05 25 03.2**	**0.0**
HCY				*e*	Sn	**Sn**	**05 25 49.0**	**+0.1**
HCY	**Herceg Novi**	**3.89**	**152**	*e*	Pn	**Pn**	**05 25 03.3**	**0.0**
HCY				*e*	Sn	**Sn**	**05 25 47.3**	**-1.6**
GRUS	**Gruza**	**3.90**	**119**	*e*	Pn	**Pn**	**05 25 03.5**	**+0.1**
BZS	**Buzias**	**3.94**	**92**	P		**Pn**	**05 25 02.8**	**-1.1**
BZS	**Buzias**	**3.94**	**92**	Pn		**Pn**	**05 25 02.7**	**-1.2**
RETA	**Reutte**	**3.94**	**296**			**Pn**	**05 25 04.8**	**+0.7**
RETA	**Reutte**	**3.94**	**296**	*i*	Pn	**Pn**	**05 25 04.8**	**+0.7**
	comp=Z,223nm,0.4s,SNR=205							
RETA	**Reutte**	**3.94**	**296**	*e*	Pn	**Pn**	**05 25 05.0**	**+0.9**
FUR	**Furstenfeldbru**	**3.95**	**307**	*e*	Pn	**Pn**	**05 25 04.6**	**+0.5**
FUR				*e*	Sn	**Sn**	**05 25 49.2**	**-1.2**
FUR				*e*	Sg	**Sg**	**05 26 10.6**	**+0.4**
CEME	**Cevo**	**3.95**	**147**	⇓*i*	Pn	**Pn**	**05 25 04.3**	**+0.1**
CEME				*e*	Sn	**Sn**	**05 25 49.4**	**-1.2**
KOME	**Kolasin**	**3.95**	**139**	*e*	Pn	**Pn**	**05 25 04.1**	**-0.1**
KOME				*e*	Sn	**Sn**	**05 25 50.2**	**-0.4**
KECS	**Kecovo**	**4.00**	**48**	*e*	P	**Pn**	**05 25 04.1**	**-0.6**
KECS					pmax	pmax		
	comp=N,2µm,1.0s							
KECS	**Kecovo**	**4.00**	**48**		Pn	**Pn**	**05 25 04.3**	**-0.4**
KECS	**Kecovo**	**4.00**	**48**	*e*	PN	**Pn**	**05 25 04.1**	**-0.6**
KECS				*e*	PG	**Pg**	**05 25 19.1**	**-1.0**
KECS				*e*	LG	Lg	05 26 28.2	
LANS	**Liptovska Anna**	**4.01**	**35**	*e*	P	**Pn**	**05 25 05.1**	**+0.2**
LANS					pmax	pmax		
	comp=N,1µm,1.1s							
LANS	**Liptovska Anna**	**4.01**	**35**	*e*	PN	**Pn**	**05 25 05.1**	**+0.2**
LANS				*e*	LG	Lg	05 26 41.7	
MORC	**Moravsky Berou**	**4.01**	**14**	⇓	P	**Pn**	**05 25 05.2**	**+0.3**
MORC	**Moravsky Berou**	**4.01**	**14**			**Pn**	**05 25 04.9**	**-0.1**
MORC	**Moravsky Berou**	**4.01**	**14**	P		**Pn**	**05 25 05.3**	**+0.3**
MORC	**Moravsky Berou**	**4.01**	**14**	*e*	PN	**Pn**	**05 25 05.2**	**+0.3**
MORC	**Moravsky Berou**	**4.01**	**14**	⇓	P	**Pn**	**05 25 05.0**	**+0.1**
AQU	**L'Aquila**	**4.01**	**209**	P		**Pn**	**05 25 04.4**	**-0.5**
AQU	**L'Aquila**	**4.01**	**209**	P		**Pn**	**05 25 04.6**	**-0.4**
AQU	**L'Aquila**	**4.01**	**209**	Pn		**Pn**	**05 25 04.6**	**-0.4**
AQU	**L'Aquila**	**4.01**	**209**	⇑	P	**Pn**	**05 25 04.5**	**-0.5**
AQU	**L'Aquila**	**4.01**	**209**	⇑*i*	Pn	**Pn**	**05 25 04.5**	**-0.5**
AQU				*e*	Sn	**Sn**	**05 25 51.5**	**-0.6**
FUORN	**Ofenpass-Fuorn**	**4.05**	**282**			**Pn**	**05 25 06.5**	**+0.8**
MGAB	**Montegabbione**	**4.09**	**224**	⇑	P	**Pn**	**05 25 05.5**	**-0.6**
CESX	**Cesi**	**4.11**	**218**			**Pn**	**05 25 05.9**	**-0.4**
IVA	**Berane**	**4.12**	**136**	⇓*i*	Pn	**Pn**	**05 25 06.2**	**-0.2**
IVA				*e*	Sn	**Sn**	**05 25 54.6**	**0.0**
OSSC	**Osservatorio P**	**4.14**	**237**			**Pn**	**05 25 06.5**	**-0.3**
SGRT	**San Giovanni R**	**4.15**	**183**			**Pn**	**05 25 06.4**	**-0.6**
BUM	**Brajici-Budva**	**4.16**	**149**	⇑*i*	Pn	**Pn**	**05 25 05.7**	**+0.3**
BUM				*i*	Sn	**Sn**	**05 25 55.9**	**+0.3**
BORR	**Bors**	**4.16**	**71**	⇑	P	**Pn**	**05 25 08.3**	**+1.3**
MDVR	**Moldovita**	**4.17**	**104**	⇑	P	**Pn**	**05 25 07.0**	**-0.2**
PRMA	**PARMA**	**4.17**	**256**			**Pn**	**05 25 07.5**	**+0.4**
GOCS	**Kraljevo Serbi**	**4.18**	**122**	*e*	Pn	**Pn**	**05 25 07.0**	**-0.4**
PDG	**Podgorica**	**4.18**	**145**			**Pn**	**05 25 08.4**	**+1.1**
PDG	**Podgorica**	**4.18**	**145**	P		**Pn**	**05 25 07.8**	**+0.5**
PDG	**Podgorica**	**4.18**	**145**	⇑	P	**Pn**	**05 25 07.0**	**-0.2**
PDG	**Podgorica**	**4.18**	**145**	*e*	Pn	**Pn**	**05 25 07.1**	**-0.2**
PDG				*e*	Sn	**Sn**	**05 25 55.5**	**-0.7**
PDG	**Podgorica**	**4.18**	**145**	*e*	Pn	**Pn**	**05 25 07.3**	**0.0**
PDG				*e*	Sn	**Sn**	**05 25 54.5**	**-1.6**
OKC	**Ostrava-Krasne**	**4.19**	**19**	*e*	PN	**Pn**	**05 25 07.2**	**-0.2**
OKC	**Ostrava-Krasne**	**4.19**	**19**	*e*	P	**Pn**	**05 25 07.2**	**-0.2**
OKC	**Ostrava-Krasne**	**4.19**	**19**	Pn		**Pn**	**05 25 07.4**	**0.0**
PRU	**Pruhonice**	**4.21**	**347**	*e*	PN	**Pn**	**05 25 08.0**	**+0.4**
PRU				*e*	SG	**Sg**	**05 26 18.8**	**+0.3**
	comp=N,24µm,1.6s							
PRU					AMS	AMS	05 26 40.0	
	comp=N,92µm,5.9s							
PRU	**Pruhonice**	**4.21**	**347**	*e*	P	**Pn**	**05 25 08.0**	**+0.4**
PRU					MLR	MLR		
	comp=Z,92µm,5.9s							
KRLC	**Kraliky**	**4.21**	**7**	*e*	PN	**Pn**	**05 25 08.4**	**+0.7**
KRLC					AMS	AMS	05 26 50.0	
	comp=Z,82µm,5.2s							
KRLC	**Kraliky**	**4.21**	**7**	*e*	P	**Pn**	**05 25 08.4**	**+0.7**
KRLC					MLR	MLR		
	comp=Z,82µm,5.2s							
ABAH	**Abaujker**	**4.30**	**54**		Pn	**Pn**	**05 25 07.3**	**-1.5**
PRA	**Prague**	**4.30**	**346**	*e*	PN	**Pn**	**05 25 10.3**	**+1.4**
PRA	**Prague**	**4.30**	**346**	*e*	P	**Pn**	**05 25 10.3**	**+1.4**
LTVH	**Ltavrtes, Hu**	**4.32**	**68**	⇑	P	**Pn**	**05 25 09.5**	**+0.3**
LTVH	**Ltavrtes, Hu**	**4.32**	**68**	Pn		**Pn**	**05 25 09.4**	**+0.3**
LTVH	**Ltavrtes, Hu**	**4.32**	**68**	⇑	P	**Pn**	**05 25 09.4**	**+0.3**
DAVOX	**Davos/Dischmat**	**4.33**	**284**		Pn	**Pn**	**05 25 09.4**	**-0.1**
	comp=Z,651nm,0.5s,baz=84,slow=11,SNR=677							
DAVOX					Sn	**Sn**	**05 26 00.2**	**0.0**
	comp=Z,109nm,0.3s,baz=143,slow=19,SNR=9.1							
DAVOX					Lg	Lg	05 26 18.9	
	comp=Z,95nm,0.3s,baz=288,slow=22,SNR=4.5							
VLC	**Villacollemand**	**4.35**	**248**	P		**Pn**	**05 25 09.3**	**-0.3**
VLC					S	**Sn**	**05 26 00.6**	**+0.3**
VLC	**Villacollemand**	**4.35**	**248**	P		**Pn**	**05 25 09.7**	**+0.1**
VLC	**Villacollemand**	**4.35**	**248**	⇑	P	**Pn**	**05 25 09.5**	**-0.1**
PVY	**Plav**	**4.36**	**138**	⇑*i*	Pn	**Pn**	**05 25 09.5**	**-0.3**
PVY				*i*	Sn	**Sn**	**05 26 00.0**	**-0.7**
DRME	**Dracevica, Mon**	**4.36**	**147**	⇑*i*	Pn	**Pn**	**05 25 10.2**	**+0.4**
DRME				*i*	Sn	**Sn**	**05 26 00.3**	**-0.3**
DRME	**Dracevica, Mon**	**4.36**	**147**	*e*	Pn	**Pn**	**05 25 09.6**	**-0.2**
DRME				*e*	Sn	**Sn**	**05 25 59.2**	**-1.4**
UBR	**Ueberruh**	**4.43**	**296**	*e*	Pn	**Pn**	**05 25 11.3**	**+0.7**
UBR				*e*	Sg	**Sg**	**05 26 26.9**	**+1.4**
RAC	**Raciborz**	**4.43**	**19**	*e*	PN	**Pn**	**05 25 10.4**	**-0.3**
RAC				*e*	SG	**Sg**	**05 26 28.8**	**+3.0**
RAC					AMS	AMS	05 26 52.0	
	comp=Z,20nm,16.2s							
RAC	**Raciborz**	**4.43**	**19**	*e*	P	**Pn**	**05 25 10.4**	**-0.3**
RAC					MLR	MLR		
	comp=Z,20µm,16.2s							
DAVA	**Damuels**	**4.45**	**290**			**Pn**	**05 25 11.9**	**+0.9**
DAVA						**Sn**	**05 26 04.2**	**+1.3**
DAVA	**Damuels**	**4.45**	**290**	*i*	Pn	**Pn**	**05 25 11.9**	**+0.9**
	comp=Z,162nm,0.3s,SNR=377							
DAVA				*e*	Sn	**Sn**	**05 26 04.2**	**+1.3**
	comp=Z,2µm,0.6s							
DAVA	**Damuels**	**4.45**	**290**	*e*	Pn	**Pn**	**05 25 12.0**	**+0.9**
DAVA	**Damuels**	**4.45**	**290**	⇑	P	**Pn**	**05 25 11.7**	**+0.7**
DPC	**Dobruska-Polom**	**4.46**	**3**	*e*	PN	**Pn**	**05 25 12.1**	**+1.0**
DPC				*e*	SG	**Sg**	**05 26 26.0**	**-0.5**
	comp=Z,3µm,1.0s							
DPC					AMS	AMS	05 26 50.0	
	comp=Z,71µm,5.2s							
DPC	**Dobruska-Polom**	**4.46**	**3**	*e*	P	**Pn**	**05 25 12.1**	**+1.0**
DPC					MLR	MLR		
	comp=Z,71µm,5.2s							
SELS	**Selova**	**4.53**	**124**	*e*	Pn	**Pn**	**05 25 12.1**	**0.0**
NIE	**Niedzica**	**4.56**	**38**	*e*	P	**Pn**	**05 25 13.2**	**+0.7**
NIE				*e*	S	**Sg**	**05 26 26.0**	**-3.8**
NIE	**Niedzica**	**4.56**	**38**	Pn		**Pn**	**05 25 13.2**	**+0.7**
ULC	**Ulcinj**	**4.58**	**148**	⇓*i*	Pn	**Pn**	**05 25 12.6**	**-0.2**
ULC				*i*	Sn	**Sn**	**05 26 05.5**	**-0.5**
UPC	**Upice**	**4.61**	**0**	*e*	PN	**Pn**	**05 25 13.3**	**+0.2**
UPC	**Upice**	**4.61**	**0**	*e*	P	**Pn**	**05 25 13.3**	**+0.2**
HERR	**Herculane**	**4.63**	**100**	⇓	P	**Pn**	**05 25 12.8**	**-0.6**
ROTZ	**Rotzenmuhle**	**4.64**	**328**	*e*	Pn	**Pn**	**05 25 13.4**	**-0.1**
ROTZ				*e*	Pg	**Pg**	**05 25 30.8**	**-1.5**
ROTZ				*e*	Sn	**Sn**	**05 26 04.1**	**-3.2**
ROTZ				*e*	Sg	**Sg**	**05 26 32.0**	**-0.3**
OSTC	**Ostas**	**4.66**	**2**	*e*	PN	**Pn**	**05 25 14.0**	**+0.2**
OSTC	**Ostas**	**4.66**	**2**	*e*	P	**Pn**	**05 25 14.0**	**+0.2**
TUE	**Stuetta**	**4.66**	**279**			**Pn**	**05 25 14.2**	**+0.2**
TUE	**Stuetta**	**4.66**	**279**	P		**Pn**	**05 25 14.9**	**+0.8**
TUE	**Stuetta**	**4.66**	**279**	⇑	P	**Pn**	**05 25 14.7**	**+0.6**
CHVC	**Chvalec**	**4.69**	**0**	*e*	PN	**Pn**	**05 25 14.6**	**+0.3**
CHVC	**Chvalec**	**4.69**	**0**	*e*	P	**Pn**	**05 25 14.6**	**+0.3**
DRGR		**4.73**	**77**	⇑	P	**Pn**	**05 25 14.2**	**-0.7**
DRGR		**4.73**	**77**	P		**Pn**	**05 25 14.1**	**-0.7**
DRGR		**4.73**	**77**	Pn		**Pn**	**05 25 13.3**	**-1.5**
PVCC	**Panska Ves**	**4.73**	**349**	*e*	PN	**Pn**	**05 25 16.1**	**+1.3**
PVCC					AMS	AMS	05 27 00.0	
	comp=Z,90µm,4.8s							
PVCC	**Panska Ves**	**4.73**	**349**	*e*	P	**Pn**	**05 25 16.1**	**+1.3**
PVCC					MLR	MLR		
	comp=Z,90µm,4.8s							
DJES	**Djerdap**	**4.76**	**103**	⇑	P	**Pn**	**05 25 15.2**	**0.0**
DJES	**Djerdap**	**4.76**	**103**	Pn		**Pn**	**05 25 14.7**	**-0.5**
DJES	**Djerdap**	**4.76**	**103**	*e*	Pn	**Pn**	**05 25 14.7**	**-0.5**
BOB	**Bobbio (Coli)**	**4.76**	**259**	⇑	P	**Pn**	**05 25 15.4**	**+0.1**
GZR	**Gura Zlata**	**4.77**	**94**	⇑	P	**Pn**	**05 25 14.9**	**-0.5**
GZR	**Gura Zlata**	**4.77**	**94**	P		**Pn**	**05 25 14.9**	**-0.5**
GZR	**Gura Zlata**	**4.77**	**94**	Pn		**Pn**	**05 25 14.7**	**-0.7**
GZR					Sn	**Sn**	**05 26 07.8**	**-3.0**
CEI	**Carei**	**4.78**	**66**	⇑	P	**Pn**	**05 25 15.3**	**-0.2**
CEI	**Carei**	**4.78**	**66**	P		**Pn**	**05 25 15.2**	**-0.2**
DEV	**Deva**	**4.81**	**88**	⇓	P	**Pn**	**05 25 15.9**	**-0.1**
DEV	**Deva**	**4.81**	**88**	P		**Pn**	**05 25 16.0**	**+0.1**
DEV	**Deva**	**4.81**	**88**	Pn		**Pn**	**05 25 15.7**	**-0.3**
RICC	**Richard**	**4.82**	**345**	*e*	PN	**Pn**	**05 25 16.6**	**+0.6**
CASP	**Castiglione de**	**4.83**	**232**			**Pn**	**05 25 14.3**	**-1.8**
MRVN	**Minervino Murg**	**4.84**	**178**	⇓	P	**Pn**	**05 25 15.0**	**-1.4**
MANZ	**Manzenberg**	**4.85**	**329**	*e*	Pn	**Pn**	**05 25 16.6**	**+0.1**
MANZ				*e*	Sn	**Sn**	**05 26 09.3**	**-3.5**
MANZ				*e*	Sg	**Sg**	**05 26 37.6**	**-1.7**
RMGR	**Halanga-Turnu**	**4.88**	**102**	⇑	P	**Pn**	**05 25 17.2**	**+0.4**
ZAGS	**Zajecar**	**4.89**	**113**	*e*	Pn	**Pn**	**05 25 16.8**	**-0.2**
NKC	**Novy Kostel**	**4.95**	**332**	*e*	SN	**Sn**	**05 26 13.2**	**-1.8**
NKC				*e*	SG	**Sg**	**05 26 43.0**	**+0.8**
	comp=Z,24µm,1.3s							
NKC					AMS	AMS	05 27 00.0	
	comp=Z,65µm,7.1s							
KSP	**Ksiaz**	**4.95**	**2**	*e*	P	**Pn**	**05 25 17.9**	**+0.1**
KSP				*e*	S	**Sg**	**05 26 40.3**	**-1.9**
KSP	**Ksiaz**	**4.95**	**2**	Pn		**Pn**	**05 25 17.9**	**+0.1**
KSP	**Ksiaz**	**4.95**	**2**	⇑	P	**Pn**	**05 25 16.8**	**-0.9**
MESR	**Meseseni**	**4.95**	**73**	⇑	P	**Pn**	**05 25 17.6**	**-0.2**
GRA1	**Grafenberg Arr**	**4.98**	**321**			**Pn**	**05 25 17.8**	**-0.4**
GRF	**Grafenberg Arr**	**4.98**	**321**	P		**Pn**	**05 25 17.8**	**-0.4**
GRF	**Grafenberg Arr**	**4.98**	**321**	*e*	Pn	**Pn**	**05 25 17.9**	**-0.3**
GRF				*e*	Sn	**Sn**	**05 26 13.0**	**-2.7**
GRF				*e*	Sg	**Sg**	**05 26 41.5**	**-1.7**
GRFO	**Grafenberg**	**4.98**	**321**			**Pn**	**05 25 17.8**	**-0.4**
GRFO	**Grafenberg**	**4.98**	**321**	P		**Pn**	**05 25 17.8**	**-0.4**
GRFO	**Grafenberg**	**4.98**	**321**	P		**Pn**	**05 25 17.9**	**-0.3**
PAOL	**Paolisi**	**4.98**	**193**			**Pn**	**05 25 17.8**	**-0.5**
STHS	**Stebnicka Huta**	**4.99**	**43**	*e*	P	**Pn**	**05 25 18.4**	**+0.1**
STHS				*e*			05 26 14.2	
STHS	**Stebnicka Huta**	**4.99**	**43**	Pn		**Pn**	**05 25 18.4**	**+0.1**
STHS	**Stebnicka Huta**	**4.99**	**43**	*e*	PN	**Pn**	**05 25 18.4**	**+0.1**
STHS				*e*	SN	**Sn**	**05 26 14.2**	**-1.8**
MARR	**Marisel-Cluj**	**4.99**	**79**	⇑	P	**Pn**	**05 25 18.2**	**-0.3**
OJC	**Ojcow**	**5.01**	**29**	*e*	P	**Pn**	**05 25 18.6**	**-0.1**
OJC				*e*	S	Sg	05 26 56.0	+12
OJC	**Ojcow**	**5.01**	**29**			**Pn**	**05 25 18.3**	**-0.4**
OJC	**Ojcow**	**5.01**	**29**	P		**Pn**	**05 25 18.3**	**-0.4**
OJC	**Ojcow**	**5.01**	**29**	⇑	P	**Pn**	**05 25 18.2**	**-0.4**
HSKC	**Hora Svate Kat**	**5.01**	**341**	*e*	PN	**Pn**	**05 25 18.7**	**0.0**
TANN	**Tannenbergstha**	**5.10**	**334**	*e*	Pn	**Pn**	**05 25 20.5**	**+0.6**
TANN				*e*	Sn	**Sn**	**05 26 16.5**	**-2.3**
TANN				*e*	Sg	**Sg**	**05 26 47.1**	**-0.1**
ACER	**Acerenza**	**5.11**	**181**			**Pn**	**05 25 19.0**	**-1.1**
BRG	**Berggiesshubel**	**5.16**	**345**	*e*	Pn	**Pn**	**05 25 21.1**	**+0.4**
BARS	**Barje**	**5.18**	**124**	*e*	Pn	**Pn**	**05 25 20.8**	**-0.2**
SRE	**Strehaia**	**5.23**	**101**	⇑	P	**Pn**	**05 25 22.8**	**+1.2**
SRE	**Strehaia**	**5.23**	**101**	P		**Pn**	**05 25 22.8**	**+1.2**
PLN	**Plauen**	**5.26**	**332**	*e*	PN	**Pn**	**05 25 22.8**	**+0.7**
PLN				*e*	Sn	**Sn**	**05 26 20.6**	**-2.1**
PLN				*e*	Sg	**Sg**	**05 26 51.1**	**-1.1**
MATE	**Matera**	**5.28**	**174**	⇑	P	**Pn**	**05 25 21.4**	**-0.9**
MATE	**Matera**	**5.28**	**174**	*e*	P	**Pn**	**05 25 21.9**	**-0.4**
MATE	**Matera**	**5.28**	**174**	⇓	P	**Pn**	**05 25 20.9**	**-1.3**
PHP	**Peshkopia**	**5.30**	**141**	P		**Pn**	**05 25 24.4**	**+1.7**
CJR	**Cluj-Napoca**	**5.32**	**79**	⇑	P	**Pn**	**05 25 22.7**	**-0.3**
CJR	**Cluj-Napoca**	**5.32**	**79**	P		**Pn**	**05 25 22.7**	**-0.3**
ZAPS	**Zavoj**	**5.41**	**117**	*e*	Pn	**Pn**	**05 25 24.0**	**-0.2**
BMR	**Baia Mare**	**5.44**	**68**	⇓	P	**Pn**	**05 25 24.6**	**+0.1**
BMR	**Baia Mare**	**5.44**	**68**	P		**Pn**	**05 25 24.6**	**+0.1**
STU	**Stuttgart**	**5.45**	**304**			**Pn**	**05 25 24.1**	**-0.6**
STU	**Stuttgart**	**5.45**	**304**	P		**Pn**	**05 25 24.1**	**-0.6**
STU	**Stuttgart**	**5.45**	**304**	*e*	P	**Pn**	**05 25 25.2**	**+0.5**
STU	**Stuttgart**	**5.45**	**304**	*e*	Pn	**Pn**	**05 25 24.1**	**-0.6**
STU				*e*	Sn	**Sn**	**05 26 23.0**	**-4.3**
STU	**Stuttgart**	**5.45**	**304**	⇑	P	**Pn**	**05 25 24.1**	**-0.6**
LOT	**Lotru**	**5.46**	**92**	⇓	P	**Pn**	**05 25 24.5**	**-0.4**
MOX	**Moxa**	**5.58**	**330**	*e*	Pn	**Pn**	**05 25 26.8**	**+0.4**
MOX				*e*	Sn	**Sn**	**05 26 27.7**	**-2.8**
MOX				*e*	Sg	**Sg**	**05 27 02.6**	**+0.1**
TRAN	**Tran**	**5.66**	**120**	P		**Pn**	**05 25 28.2**	**+0.5**
VALD	**Valchedram**	**5.73**	**110**	P		**Pn**	**05 25 28.2**	**-0.3**
MONC	**Moncucco Torin**	**5.74**	**265**	⇑	P	**Pn**	**05 25 29.2**	**+0.4**
CLL	**Collm**	**5.76**	**341**			**Pn**	**05 25 29.2**	**+0.2**
CLL	**Collm**	**5.76**	**341**	*e*	P	**Pn**	**05 25 29.0**	**0.0**
CLL	**Collm**	**5.76**	**341**	*e*	Pn	**Pn**	**05 25 29.0**	**0.0**
CLL				*ex*		x	05 25 31.0	
CLL				*ex*		x	05 25 34.0	
CLL				*e*	Pg	**Pg**	**05 25 53.0**	**-0.8**
CLL				*e*	Sn	Sn	05 26 17.0	-18
CLL				*ex*		x	05 26 33.0	
CLL				*ex*		x	05 26 48.0	
CLL				*ex*		x	05 26 53.0	
CLL					AMS	AMS	05 27 00.0	
CLL				*e*	Sg	**Sg**	**05 27 07.0**	**-1.4**
	comp=Z,7µm,1.1s							
CLL	**Collm**	**5.76**	**341**	*e*	Pn	**Pn**	**05 25 28.9**	**0.0**
CLL				*e*	Sn	**Sn**	**05 26 29.8**	**-5.3**
BFO	**Black Forest**	**5.78**	**298**			**Pn**	**05 25 28.6**	**-0.5**
BFO	**Black Forest**	**5.78**	**298**	P		**Pn**	**05 25 28.7**	**-0.5**
BFO	**Black Forest**	**5.78**	**298**	*e*	Pn	**Pn**	**05 25 28.6**	**-0.6**
BFO				*e*	Sn	**Sn**	**05 26 32.5**	**-3.0**
BFO	**Black Forest**	**5.78**	**298**	⇑	P	**Pn**	**05 25 28.4**	**-0.8**
TNR	**Turnu Rosu**	**5.79**	**90**	⇑	P	**Pn**	**05 25 29.5**	**+0.2**
TNR	**Turnu Rosu**	**5.79**	**90**	P		**Pn**	**05 25 29.5**	**+0.2**
MDB	**Medias**	**5.84**	**85**	⇓	P	**Pn**	**05 25 30.8**	**+0.7**
MDB	**Medias**	**5.84**	**85**	P		**Pn**	**05 25 30.7**	**+0.7**
KWP	**Kalwaria Pacla**	**5.86**	**48**	*e*	P	**Pn**	**05 25 31.9**	**+1.6**
KWP				*e*	S	**Sb**	**05 26 51.2**	**-4.5**
KWP	**Kalwaria Pacla**	**5.86**	**48**	⇑	P	**Pn**	**05 25 31.6**	**+1.4**
CUC	**Castrococco**	**5.91**	**181**			**Pn**	**05 25 30.5**	**-0.5**
CUC	**Castrococco**	**5.91**	**181**	P		**Pn**	**05 25 30.7**	**-0.3**
CUC	**Castrococco**	**5.91**	**181**	⇑	P	**Pn**	**05 25 30.5**	**-0.5**
TGMR	**Targu Mures**	**5.94**	**81**	⇑	P	**Pn**	**05 25 32.5**	**+

VRI	Vrincioaia	7.48	86	P		Pn	05 25 52.7	+0.1
RZN	Rozhen	7.59	121	P		Pn	05 25 53.4	-0.8
	comp=Z,0.6nmcomp=Z,257nm,0.9s							
RZN	Rozhen	7.59	121	P		Pn	05 25 54.8	+0.6
SZH	Strazhitsa	7.59	107	P		Pn	05 25 52.7	-1.4
	comp=Z,1.3nmcomp=Z,348nm,0.7s							
SZH	Strazhitsa	7.59	107	P		Pn	05 25 53.3	-0.8
TETR	Tetrakomo, Epi	7.62	148	P		Pn	05 25 54.4	-0.1
WLF	Walferdange	7.63	303	P		Pn	05 25 55.6	+1.0
WLF	Walferdange	7.63	303			Pn	05 25 53.9	-0.7
WLF	Walferdange	7.63	303	P		Pn	05 25 53.9	-0.7
WLF	Walferdange	7.63	303	*d*P		Pn	05 25 55.9	+1.3
WLF	Walferdange	7.63	303	*e*Pn		Pn	05 25 54.5	-0.1
WLF	Walferdange	7.63	303	⇑P		Pn	05 25 53.9	-0.7
HILG	Hillesheim	7.63	308	*e*Pn		Pn	05 25 54.6	-0.1
HILG				*e*Sn		Sn	05 27 16.3	-4.8
	comp=Z,785nm,1.0s							
CEL	Celeste	7.64	181			Pn	05 25 53.3	-1.5
CEL	Celeste	7.64	181	P		Pn	05 25 53.6	-1.2
CEL	Celeste	7.64	181	⇑P		Pn	05 25 53.3	-1.5
ELND	Elena	7.66	109	⇑P		Pn	05 25 54.6	-0.5
HOBG	Hohbusch	7.69	315	*e*Pn		Pn	05 25 55.3	0.0
HOBG				*e*Sn		Sn	05 27 17.9	-4.5
	comp=Z,2µm,0.5s							
TYRN	Tyrnavos	7.69	141	P		Pn	05 25 54.6	-0.9
	comp=Z,0.8nmcomp=Z,12µmcomp=Z,289nm,0.9s							
STB	Steinbach	7.71	311	*e*Pn		Pn	05 25 55.4	-0.2
STB				*e*Sn		Sn	05 27 17.4	-5.6
	comp=Z,578nm,1.0s							
THL	Klokotos Trika	7.72	143	P		Pn	05 25 55.2	-0.7
	comp=Z,0.8nmcomp=Z,12µmcomp=Z,335nm,0.7s							
PLG	Polygyros	7.75	133	P		Pn	05 25 56.3	0.0
	comp=Z,0.5nmcomp=Z,463nm,0.8s							
BNS	Bensberg	7.75	314	*e*Pn		Pn	05 25 56.0	-0.3
BNS				*e*Sn		Sn	05 27 18.7	-5.3
	comp=Z,985nm,0.5s							
RAZG	Razgrad	7.83	104	⇓P		Pn	05 25 56.9	-0.5
TSLK	Tsoukalades, L	7.86	152	P		Pn	05 25 56.2	-1.6
KAVA	Kavala	7.89	125	P		Pn	05 25 58.3	+0.1
	comp=Z,1.1nmcomp=Z,854nm,0.9s							
LKD2	Lefkada island	7.90	153	P		Pn	05 25 56.6	-1.7
DIM	Dimitrovgrad	7.90	116	P		Pn	05 25 58.2	-0.1
DIM	Dimitrovgrad	7.90	116	P		Pn	05 25 59.1	+0.7
LOZB	Loznitsa	7.96	105	⇑P		Pn	05 25 59.2	0.0
AMPL	Ampelaki	7.97	149	P		Pn	05 25 58.1	-1.2
DRAG	Dragano-Lefkad	7.97	153	P		Pn	05 25 57.0	-2.2
NYDR	Nydri-Lefkada	7.98	153	P		Pn	05 25 57.5	-1.9
KDZ	Kurdzhali	7.99	119	P		Pn	05 25 57.8	-1.8
BUG	Bochum–Univer	8.01	317	*e*Pn		Pn	05 26 00.2	+0.5
KLL	Kalltalsperre	8.02	310	*e*Pn		Pn	05 25 59.4	-0.6
KLL				*e*Sn		Sn	05 27 24.8	-5.8
	comp=Z,336nm,1.3s							
BD01	Bergheim Laure	8.03	312	*e*Pn		Pn	05 26 00.2	+0.2
BD01				*e*Sn		Sn	05 27 25.3	-5.4
BHOU	Houvegnez	8.04	307	*d*P		Pn	05 26 00.4	+0.2
BHOU				*d*S		Sn	05 27 24.6	-6.4
VSL	Villasalto	8.05	220			Pn	05 26 00.2	-0.2
VSL	Villasalto	8.05	220	P		Pn	05 26 00.9	+0.5
VSL	Villasalto	8.05	220	⇓P		Pn	05 26 00.7	+0.3
EVGI	Lefkada island	8.05	153	P		Pn	05 25 58.2	-2.2
	comp=Z,0.8nmcomp=Z,420nm,0.7s							
BD08	Hambach Funkst	8.05	312	*e*Sn		Sn	05 27 26.8	-4.5
SSB	Saint Sauveur	8.07	270			Pn	05 25 59.6	-1.0
SSB	Saint Sauveur	8.07	270	P		Pn	05 25 59.6	-1.0
SSB	Saint Sauveur	8.07	270	P		Pn	05 25 59.8	-0.9
SSB	Saint Sauveur	8.07	270	⇑P		Pn	05 25 59.7	-1.0
DREG	Dreilaegerbach	8.07	310	*e*Pn		Pn	05 25 60.0	-0.7
DREG				*e*Sn		Sn	05 27 26.6	-5.3
	comp=Z,393nm,1.0s							
BD03	Millendorf	8.09	312	*e*Sn		Sn	05 27 27.6	-4.5
BTNL	Ternell	8.09	309	*d*P		Pn	05 26 00.7	-0.2
RETH	Rethem/Aller,	8.10	330	*e*Pn		Pn	05 26 01.9	+1.0
MEM	Membach	8.16	309	*d*P		Pn	05 26 01.7	-0.2
MEM				*d*S		Sn	05 27 27.3	-6.8
FSK	Fiskardo	8.17	154	P		Pn	05 25 59.6	-2.4
	comp=Z,1.2nmcomp=Z,524nm,0.8s							
EVR	Evrytania	8.19	146	P		Pn	05 26 02.0	-0.4
	comp=Z,1.1nmcomp=Z,585nm,0.7s							
BD09	Hochneukirch	8.19	313	*e*Sn		Sn	05 27 30.6	-4.2
VSK1	VASILIKIADES	8.21	154	P		Pn	05 25 59.6	-3.1
BD14	Kuckum	8.22	313	*e*Sn		Sn	05 27 29.9	-5.6
MAKR	Makrakomi, Fth	8.24	145	P		Pn	05 26 02.7	-0.3
	comp=Z,1.9nmcomp=Z,910nm,2.7s							
THAS	Thassos island	8.27	127	P		Pn	05 26 02.8	-0.6
HGN	Heimansgroeve	8.29	310	P		Pn	05 26 05.2	+1.6
JMB	Yambol	8.29	111	P		Pn	05 26 03.4	-0.3
JMB	Yambol	8.29	111	P		Pn	05 26 04.1	+0.4
AGG	Agios Georgios	8.31	144	P		Pn	05 26 03.1	-1.0
	comp=Z,0.7nmcomp=Z,13µmcomp=Z,387nm,0.6s							
AGG	Agios Georgios	8.31	144	⇑P		Pn	05 26 03.0	-1.0
DMLN	Damoulianata-K	8.32	156	P		Pn	05 26 01.6	-2.5
PVO	Paravola	8.35	149	P		Pn	05 26 02.9	-1.5
	comp=Z,583nm,0.8s							
RODG	Roetgen-Dahlhe	8.37	312	*e*Pn		Pn	05 26 05.0	+0.4
RCHB	Rochefort	8.38	304	*d*P		Pn	05 26 04.7	-0.2
RCHB				*d*S		Sn	05 27 34.7	-4.8
IBBN	Ibbenburen	8.39	323	*e*Pn		Pn	05 26 05.3	+0.4
IBBN	Ibbenburen	8.39	323	⇓P		Pn	05 26 05.5	+0.6
BSTI	Sart Tilman	8.39	308	*d*P		Pn	05 26 05.5	+0.4
BSTI				*d*S		Sn	05 27 35.1	-4.6
RDO	Rodhopi	8.40	121			Pn	05 26 05.1	+0.1
RDO	Rodhopi	8.40	121	P		Pn	05 26 05.2	+0.1
RDO	Rodhopi	8.40	121	⇑P		Pn	05 26 05.2	+0.1
VLS	Valsamata	8.44	165	P		Pn	05 26 03.1	-2.6
	comp=Z,1.2nmcomp=Z,12µmcomp=Z,583nm,0.7s							
BEBN	Eben Emael	8.44	309	*d*P		Pn	05 26 05.6	-0.1
BEBN				*d*S		Sn	05 27 35.6	-5.3
BCLA	Clavier	8.46	306	*d*P		Pn	05 26 07.1	+1.2
BCLA				*d*S		Sn	05 27 38.1	-3.3
NEF	NEVSHA	8.46	104	P		Pn	05 26 05.6	-0.5
NEO	Neokhori	8.47	139	P		Pn	05 26 05.0	-1.1
	comp=Z,0.6nmcomp=Z,510nm,0.9s							
LOR	Lormes	8.48	284	⇑P		Pn	05 26 05.1	-1.2
VAE	Valguarnera	8.50	189	Pn		Pn	05 26 05.3	-1.3
	comp=Z,24nm,0.9s,baz=101,slow=5.6,SNR=14							
VAE				Sn		Sn	05 27 42.6	0.0
	baz=282,slow=14							
VAE				Lg		Lg	05 28 28.4	
	baz=16,slow=22							
VAE				LR		LR	05 30 01.8	
	comp=Z,14µm,19.0s,baz=7.0,slow=42							
ANX	Ano Chora	8.52	147	P		Pn	05 26 06.2	-0.7
ICOR	Ion Corvin	8.54	98	⇑P		Pn	05 26 07.1	0.0
CFR	Carcaliu	8.55	91	⇓P		Pn	05 26 08.0	+0.9
CFR	Carcaliu	8.55	91	P		Pn	05 26 08.0	+0.9
BGES	Gesves	8.57	305	*d*P		Pn	05 26 07.7	+0.2
BGES				*d*S		Sn	05 27 39.3	-4.7
CLTB	Caltabellotta	8.57	195	P		Pn	05 26 06.1	-1.6
RTZL	Ratzakli, Kefa	8.59	154	P		Pn	05 26 04.8	-3.0
	comp=Z,1.1nmcomp=Z,473nm,0.9s							
PRD	Provadia	8.59	105	P		Pn	05 26 07.7	-0.1
EFP	Efpalio	8.66	148	P		Pn	05 26 07.5	-1.1
	comp=Z,1.0nmcomp=Z,489nm,0.9s							
AXAR	Agios Charalam	8.66	143	P		Pn	05 26 08.1	-0.7
AXS	Araxos	8.67	151	P		Pn	05 26 06.3	-2.6
	comp=Z,0.7nmcomp=Z,188nm,0.8s							
BMRD	Maredsous	8.71	304	*d*P		Pn	05 26 09.5	+0.1
BMRD				*d*S		Sn	05 27 46.3	-1.3
SERG	Sergoula	8.72	147	P		Pn	05 26 09.1	-0.6
	comp=Z,0.7nmcomp=Z,13µmcomp=Z,239nm,0.7s							
SORM	Soroca	8.72	71	⇓P		Pn	05 26 10.6	+1.0
SORM	Soroca	8.72	71	P		Pn	05 26 10.5	+1.0
DOU	Dourbes	8.73	303	*d*P		Pn	05 26 10.7	+1.1
DOU				*d*S		Sn	05 27 42.8	-5.1
UPR	University Cam	8.74	149	P		Pn	05 26 08.9	-1.0
ORTH	Orthonies,Zaky	8.77	155	P		Pn	05 26 08.5	-1.8
	comp=Z,1.0nmcomp=Z,441nm,0.8s							
KALE	Kalithea	8.78	147	P		Pn	05 26 09.5	-0.9
SMTH	Samothraki Isl	8.82	125	P		Pn	05 26 10.2	-0.7
RGN	Rugen	8.82	350			Pn	05 26 10.6	-0.3
RGN	Rugen	8.82	350	⇑P		Pn	05 26 11.2	+0.2
RLS	Riolos of Patr	8.83	151	P		Pn	05 26 09.1	-1.9
	comp=Z,0.7nmcomp=Z,293nm,0.8s							
BSEG	Bad Segeberg	8.84	338	*e*Pn		Pn	05 26 11.5	+0.4
ALN	Alexandroupoli	8.85	121			Pn	05 26 11.8	+0.4
ALN	Alexandroupoli	8.85	121	P		Pn	05 26 11.3	-0.1
	comp=Z,0.2nmcomp=Z,180nm,0.9s							
ALN	Alexandroupoli	8.85	121	P		Pn	05 26 11.8	+0.4
ATAL	Atalanti	8.88	142	P		Pn	05 26 10.1	-1.7
TIRR	Tirgusor	8.88	95	Pn		Pn	05 26 12.0	+0.3
TIRR	Tirgusor	8.88	95	P		Pn	05 26 12.0	+0.3
TIRR	Tirgusor	8.88	95	⇓P		Pn	05 26 12.6	+0.8
AOS	Alonnisos	8.89	136	P		Pn	05 26 10.6	-1.2
	comp=Z,0.4nmcomp=Z,7µmcomp=Z,278nm,0.9s							
LKR	Lokris	8.90	142	P		Pn	05 26 10.7	-1.4
	comp=Z,0.3nmcomp=Z,348nm,1.0s							
LTHK	Lithakia	8.94	155	P		Pn	05 26 09.9	-2.7
	comp=Z,1.1nmcomp=Z,568nm,0.8s							
DRO	Drossia	9.01	150	P		Pn	05 26 11.7	-1.8
	comp=Z,1.0nmcomp=Z,304nm,0.6s							
LIA	Limnos Island	9.02	128	P		Pn	05 26 13.6	0.0
	comp=Z,0.3nmcomp=Z,8µmcomp=Z,167nm,0.9s							
TLCR		9.02	90	⇑P		Pn	05 26 14.4	+0.8
TLCR		9.02	90	P		Pn	05 26 14.4	+0.8
CAVK	Edirne/Enez-Ca	9.05	122	⇑P		Pn	05 26 14.5	+0.4
KLV	Kalavryta, Ach	9.08	148	P		Pn	05 26 13.1	-1.6
	comp=Z,0.4nmcomp=Z,13µmcomp=Z,202nm,1.0s							
UCC	Uccle	9.17	306	*d*P		Pn	05 26 17.0	+1.3
BSD	Bornholm Skovb	9.25	356	*e*P		Pn	05 26 18.9	+2.2
BSD	Bornholm Skovb	9.25	356	⇑P		Pn	05 26 16.6	-0.1
BSD	Bornholm Skovb	9.25	356	*i*P		Pn	05 26 16.4	-0.3
BSD					IAmb	IAmb	05 26 20.2	
	comp=Z,126nm,0.8s							
GUR	Goura	9.25	147	P		Pn	05 26 14.6	-2.3
	comp=Z,0.8nmcomp=Z,14µmcomp=Z,239nm,1.0s							
SUW	Suwalki	9.34	27	*e*P		Pn	05 26 20.6	+2.6
SUW				*e*S			05 29 16.9	
SUW	Suwalki	9.34	27			Pn	05 26 19.0	+1.1
SUW	Suwalki	9.34	27	P		Pn	05 26 19.0	+1.1
SUW	Suwalki	9.34	27	*e*P		Pn	05 26 19.9	+2.0
SUW	Suwalki	9.34	27	⇑P		Pn	05 26 20.6	+2.6
AMT	Artemida-Makis	9.38	151	P		Pn	05 26 16.6	-2.0
	comp=Z,295nm,0.6s							
HAMD	Hammershus, De	9.41	356	*i*P		Pn	05 26 19.2	+0.2
HAMD					IAmb	IAmb	05 26 22.0	
	comp=Z,164nm,0.8s							
KYMI	Kymi, Euboea I	9.42	138	P		Pn	05 26 18.0	-1.1
	comp=Z,9µmcomp=Z,347nm,0.8s							
VILL	Villia	9.45	142	P		Pn	05 26 18.1	-1.5
	comp=Z,523nm,0.9s							
PURM	Purcari	9.63	81	⇓P		Pn	05 26 23.1	+1.1
CLF	Chambon-Foret	9.64	288	⇓P		Pn	05 26 21.7	-0.4
EZN	Ezine	9.70	125	P		Pn	05 26 23.0	0.0
VLX	Vlachokerasia	9.76	149	P		Pn	05 26 22.4	-1.6
ITM	Ithomi	9.78	151	P		Pn	05 26 21.9	-2.2
	comp=Z,11µmcomp=Z,232nm,0.8s							
ITM	Ithomi	9.78	151	⇑P		Pn	05 26 22.3	-1.8
ATH	Athens Observa	9.78	141	P		Pn	05 26 22.1	-2.0
PTL	Penteli	9.78	141	P		Pn	05 26 22.4	-1.8
DION	Dionisos Attik	9.79	140	P		Pn	05 26 22.4	-1.9
	comp=Z,294nm,0.8s							
HLG	Helgoland	9.79	331	⇑P		Pn	05 26 26.4	+2.2
ATHU	Athens Univers	9.82	141	P		Pn	05 26 22.7	-1.9
	comp=Z,381nm,0.9s							
LUNU	Lund	9.88	352	*i*P		Pn	05 26 24.8	-0.5
VLY	Voula,Athens	9.91	141	P		Pn	05 26 24.1	-1.8
PYL	PYLOS	9.97	152	P		Pn	05 26 23.4	-3.4
KIEV	Kiev	10.01	57	⇑P		Pn	05 26 28.2	+0.9
KIEV	Kiev	10.01	57			Pn	05 26 27.9	+0.7
KIEV	Kiev	10.01	57	*i*P		Pn	05 26 27.8	+0.6
	SNR=22							
KIEV	Kiev	10.01	57	P		Pn	05 26 28.1	+0.9
KIEV	Kiev	10.01	57	P		Pn	05 26 28.9	+1.7
AK01	Malin Array Si	10.02	57	P		Pn	05 26 28.6	+1.3
AKASG	Malin Array Be	10.03	57	Pn		Pn	05 26 27.4	0.0
	comp=Z,2.1nm,0.3s,baz=238,slow=13,SNR=21							
AKASG				Sn		Sn	05 28 17.4	-2.4
	comp=Z,3.2nm,0.3s,baz=232,slow=23,SNR=4.1							
AKASG				Lg		Lg	05 29 18.1	
	baz=242,slow=24							
AKASG				LR		LR	05 30 59.0	
	comp=Z,3µm,18.6s,baz=232,slow=41							
AKASG				PcP		PcP	05 32 37.6	-0.1
	comp=Z,5.2nm,0.7s,baz=274,slow=1.4,SNR=4.5							
	comp=Z,10nm,0.8s							
AKASG	Malin Array Be	10.03	57			Pn	05 26 28.2	+0.8
AKASG	Malin Array Be	10.03	57	*i*P		Pn	05 26 28.7	+1.3
AKASG				pmax		pmax		
	comp=Z,24nm,0.9s							
AKBB	Malin Array Si	10.03	57			Pn	05 26 27.9	+0.5
AKBB	Malin Array Si	10.03	57	*d*P		Pn	05 26 28.6	+1.2
EJON	La Jonquera	10.04	255	P		Pn	05 26 26.4	-1.2
COP	Copenhagen	10.05	348	*i*P		Pn	05 26 27.9	+0.2
COP					IAmb	IAmb	05 26 29.6	
	comp=Z,196nm,0.7s							
KARY	Karystos	10.06	138	P		Pn	05 26 26.2	-1.6
	comp=Z,214nm,0.8s							
MTLF	Montolieu	10.16	260	⇓P		Pn	05 26 28.0	-1.3
BJUU	Bjuv	10.36	351	*i*P		Pn	05 26 32.1	+0.2
SSRD	Sdr. Stenderup	10.40	339	*e*P		Pn	05 26 30.5	-2.0
BLEU	Blekinge	10.42	359	*i*P		Pn	05 26 34.1	+1.4
BAND	Balkesir-Ban	10.43	118	⇓P		Pn	05 26 33.6	+0.6
MAHO	Mahon	10.49	239	Pn		Pn	05 26 33.5	-0.3
DKL	Dikili	10.55	126	⇑P		Pn	05 26 35.7	+1.1
VLI	Veliai	10.55	148	P		Pn	05 26 31.0	-3.6
	comp=Z,191nm,0.8s							
CBRU	Bruguera	10.58	255	P		Pn	05 26 34.0	-1.2
DEL	Delary	10.67	354	*i*P		Pn	05 26 35.6	-0.6
BALB	Balikesir	10.73	121	⇓P		Pn	05 26 38.0	+0.9
CORI	Orista	10.80	254			Pn	05 26 37.9	-0.3
PABE	Paberze	10.85	25			Pn	05 26 39.5	+0.8
PABE	Paberze	10.85	25	*e*P		Pn	05 26 40.9	+2.2
SILT	Sile	10.97	111	⇓P		Pn	05 26 40.6	+0.1
CEST	Esterri de Car	11.09	258			Pn	05 26 41.0	-1.1
MFF	Saint Martin d	11.21	279	⇑P		Pn	05 26 42.1	-1.6
VSVD	Vaisvydziai	11.25	23	*e*P		Pn	05 26 45.2	+1.1
NACGM	Naroch	11.32	33	*e*P		Pn	05 26 45.9	+0.8
	comp=Z,98nm,0.8s,baz=222							
KEST	Kesra	11.34	209	Pn		Pn	05 26 44.1	-1.4
	comp=Z,4.8nm,0.3s,baz=6.7,slow=2.6,SNR=50							
KEST				LR		LR	05 31 35.7	
	comp=Z,6µm,18.9s,baz=28,slow=40							
	comp=Z,14nm,0.8s							
KEST	Kesra	11.34	209	P		Pn	05 26 46.1	+0.6
	SNR=6.7							
MUD	Monsted U'grnd	11.40	340	*i*P		Pn	05 26 46.7	+0.6
MUD					IAmb	IAmb	05 26 55.4	
	comp=Z,151nm,1.2s							
ANKY	Antikythira Is	11.44	149	P		Pn	05 26 44.5	-2.3
	comp=Z,234nm,0.7s							
ETOS	Mallorca	11.46	242	P		Pn	05 26 47.0	-0.1
MNK	Minsk	11.47	37	*i*P		Pn	05 26 46.5	-0.7
	comp=E,59nm,0.8s							
MNK				*i*P		Pn	05 26 46.5	-0.7
	comp=N,55nm,0.8s							
MNK				*i*P		Pn	05 26 46.5	-0.7
	comp=Z,199nm,0.8s,baz=226							
MNK				*i*pP			05 26 48.9	
MNK				*i*PP		PnPn	05 26 54.2	-0.6
MNK				*i*S		Sn	05 28 54.3	-1.0
MNK				*i*SS		SnSn	05 29 07.2	+0.3
MNK				*i*SSS		SSS	05 29 19.7	
MNK				*i*LQ		LQ	05 30 04.5	
MNK				*i*LR		LR	05 31 14.2	
MNK				*i*LRM		MLR	05 31 36.4	
	comp=N,2µm,10.8s							
MNK				*i*LRM		MLR	05 31 42.1	
	comp=E,2µm,13.5s							
MNK				*i*LRM		MLR	05 31 45.2	
	comp=Z,3µm,13.8s							
MNK	Minsk	11.47	37	*i*P		Pn	05 26 46.4	-0.7
MNK				*i*S		Sn	05 28 54.2	-1.0
MNK				pmax		pmax		
	comp=N,55nm,0.8s							
MNK				pmax		pmax		
	comp=Z,199nm,0.8s							
MNK				pmax		pmax		
	comp=E,59nm,0.8s							
MNK				MLR		MLR		
	comp=N,2µm,11.0s							
MNK				MLR		MLR		
	comp=E,2µm,13.0s							
MNK				MLR		MLR		
	comp=Z,3µm,14.0s							
ISAL	Salakas	11.60	30	*e*P		Pn	05 26 43.9	-5.0
ONAU	Onsala	11.79	349	*i*P		Pn	05 26 51.4	0.0
THR5	Thira Island,	11.79	140	P		Pn	05 26 49.5	-2.2
THR3	Thira Island,	11.82	140	P		Pn	05 26 49.5	-2.6
SNT5	Nea Kammeni, S	11.83	140	P		Pn	05 26 50.1	-2.0
THR9	Santorini-Faro	11.85	140	P		Pn	05 26 49.5	-2.9
THR8	Santorini-Mono	11.86	140	P		Pn	05 26 50.7	-1.9
MANT	Manisa	11.88	124			Pn	05 26 53.4	+0.2
BORU	Boraas	11.92	352	*i*P		Pn	05 26 53.6	+0.4
OVD	Ostervraa, Den	11.98	345	*i*P		Pn	05 26 54.1	+0.1
OVD					IAmb	IAmb	05 26 56.7	
	comp=Z,312nm,0.6s							
IMMV	Iera Moni Meta	12.05	147	P		Pn	05 26 51.3	-3.9
	comp=Z,10µmcomp=Z,217nm,0.8s							
BORA	Eskisehir	12.18	114			Pn	05 26 57.0	0.0
VAM	Vamos	12.18	147	P		Pn	05 26 52.6	-4.4
MDUB	Mudurnu	12.34	111			Pn	05 26 60.0	+0.8
MDUB	Mudurnu	12.34	111	⇓P		Pn	05 27 00.9	+1.7
SLIT	Slitere, Latvi	12.36	16	*e*P		Pn	05 26 58.5	-0.8
EBR	Ebro Roquetas	12.38	251			Pn	05 26 59.5	-0.1
EBR	Ebro Roquetas	12.38	251	P		Pn	05 26 59.5	-0.1
TJOU	Tjoern	12.44	349	*i*P		Pn	05 27 00.2	-0.2
IDI	Anoyia	12.56	144	Pn		Pn	05 26 58.0	-4.2
	comp=Z,2.4nm,0.3s,baz=332,slow=7.2,SNR=20							
IDI				Sn		Sn	05 29 20.8	-1.3
	comp=Z,2.0nm,0.3s,baz=272,slow=17,SNR=1.9							
IDI				LR		LR	05 33 38.0	
	comp=Z,2µm,18.6s,baz=339,slow=46							
IDI	Anoyia	12.56	144	P		Pn	05 26 58.0	-4.2
IDI	Anoyia	12.56	144			Pn	05 26 58.9	-3.3
WOL	Wolverton	12.61	302	*e*P		Pn	05 27 02.6	-0.2
JSA	Saint Aubin	12.71	292	⇓P		Pn	05 27 02.5	-1.7
SIM	Simferopol'	12.76	88	*e*P		Pn	05 27 10.1	+5.3
SIM				*e*S		Sn	05 29 33.4	+6.6
SIM				pmax		pmax		
	comp=Z,25nm,0.9s							
SIM				smax		smax		
	comp=N,167nm,14.8s							
EIBI	Ibiza	12.81	243	P		Pn	05 27 06.1	+0.5
CIDE	Kastamonu/Cide	12.86	102	⇑P		Pn	05 27 05.4	-0.7
CWF	Charnwood Fore	13.19	308	*e*P		Pn	05 27 10.2	-0.3
CWF				IAmb		IAmb	05 27 13.2	
	comp=Z,94nm,1.0s							
STBN	Sutton Boningt	13.20	308	*e*P		Pn	05 27 10.2	-0.5
HOMB	Homborsund	13.21	342	*e*P		Pn	05 27 10.2	-0.6
HOMB				IAmb		IAmb	05 27 22.6	
	comp=Z,50nm,0.8s							
HOMB				*e*			05 31 21.1	
HOMB				IAMs_20		IAMs_20	05 33 20.6	
	comp=Z,19µm,10.0s							
HOMB	Homborsund	13.21	342	*i*P		Pn	05 27 08.9	-1.9
ARG	Arkhangelos	13.30	132	⇓P		Pn	05 27 13.7	+1.5
KARP	Karpathos	13.35	137			Pn	05 27 11.8	-1.1
KARP	Karpathos	13.35	137	*e*P		Pn	05 27 12.5	-0.5
KARP	Karpathos	13.35	137	⇑P		Pn	05 27 11.8	-1.1
ROSF	Rostrenen	13.35	287	⇓P		Pn	05 27 10.6	-2.3
STRU	Stroemstad	13.47	349	*i*P		Pn	05 27 14.2	-0.3
ISP	Isparta	13.48	122			Pn	05 27 14.9	+0.1
ISP	Isparta	13.48	122	⇓*i*P		Pn	05 27 16.7	+1.9
ISP				pmax		pmax		
	comp=Z,64nm,2.5s							
ISP	Isparta	13.48	122	*e*P		Pn	05 27 16.9	+2.0
BZK	Bozkurt	13.55	100	⇑P		Pn	05 27 14.9	-0.7
BZK	Bozkurt	13.55	100			Pn	05 27 15.2	-0.4
BZK	Bozkurt	13.55	100	⇓P		Pn	05 27 15.2	-0.4
SNART	Snartemo	13.56	340	*e*P		Pn	05 27 15.1	-0.5
SNART				IAmb		IAmb	05 27 26.6	
	comp=Z,161nm,1.1s							
SNART				*e*			05 30 24.2	

CART	**Cartagena**	**15.15**	**243**	P		**Pn**	**05 27 36.7**	**-0.7**
CART	**Cartagena**	**15.15**	**243**	IAmb		IAmb	05 27 44.6	
	comp=Z,280nm,1.6s							
MEF	**Metsahovi**	**15.18**	**16**	*e*P		**Pn**	**05 27 38.2**	**+0.5**
NAO01	**NORSAR Array S**	**15.27**	**350**			**Pn**	**05 27 38.2**	**-0.7**
EKA	**Eskdalemuir Ar**	**15.35**	**315**	Pn		**Pn**	**05 27 37.5**	**-2.4**
	comp=Z,7.8nm,0.5s,baz=121,slow=13,SNR=65							
EKA				Sn		**Sn**	**05 30 23.8**	**-6.0**
	baz=115,slow=26							
EKA				Lg		Lg	05 32 08.9	
	baz=116,slow=24							
EKA				LR		LR	05 34 54.0	
	comp=Z,2μm,19.7s,baz=124,slow=42							
EKA	**Eskdalemuir Ar**	**15.35**	**315**	P		**Pn**	**05 27 38.6**	**-1.3**
EKA				pmax		pmax		
	comp=Z,47nm,1.0s							
ESK	**Eskdalemuir**	**15.36**	**315**			**Pn**	**05 27 37.5**	**-2.6**
ESK	**Eskdalemuir**	**15.36**	**315**	P		**Pn**	**05 27 37.5**	**-2.6**
ESK				pmax		pmax		
	comp=Z,111nm,1.6s							
ESK	**Eskdalemuir**	**15.36**	**315**	⇑P		**Pn**	**05 27 39.3**	**-0.9**
NB2	**NORSAR Subarra**	**15.42**	**351**	P		**Pn**	**05 27 40.5**	**-0.4**
	comp=Z,171nm,1.4s,baz=167,slow=11							
NB2	**NORSAR Subarra**	**15.42**	**351**	P		**Pn**	**05 27 40.5**	**-0.4**
NOA	**NORSAR Array B**	**15.42**	**351**	Pn		**Pn**	**05 27 39.5**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=187,slow=14,SNR=40							
NOA				Lg		Lg	05 32 10.9	
	baz=96,slow=14,SNR=3.5							
NOA				LR		LR	05 34 18.2	
	comp=Z,4μm,19.4s,baz=170,slow=40							
	comp=Z,23nm,1.0s							
NB201	**NORSAR Array S**	**15.43**	**351**			**Pn**	**05 27 40.6**	**-0.3**
SKAR	**Skarslia**	**15.49**	**346**	*e*P		**Pn**	**05 27 42.1**	**+0.3**
SKAR				IAmb		IAmb	05 27 44.4	
	comp=Z,77nm,1.1s							
SKAR				*e*			05 32 35.6	
SKAR				IAMs_20		IAMs_20	05 34 14.1	
	comp=Z,13μm,9.6s							
RAF	**Rauma**	**15.52**	**11**	*e*P		**Pn**	**05 27 40.0**	**-2.1**
EDI	**Edinburgh**	**15.67**	**317**	*e*P		**Pn**	**05 27 43.4**	**-0.6**
BER	**Bergen**	**15.82**	**340**	*e*P		**Pn**	**05 27 46.5**	**+0.4**
BER				IAmb		IAmb	05 27 55.9	
	comp=Z,286nm,1.4s							
BER				*e*			05 32 28.3	
BER				IAMs_20		IAMs_20	05 34 33.2	
	comp=Z,9μm,11.3s							
ESDC	**Sonseca Array**	**15.91**	**254**	Pn		**Pn**	**05 27 44.5**	**-2.8**
	comp=Z,0.1nm,0.3s,baz=62,slow=13,SNR=61							
ESDC				LR		LR	05 33 48.7	
	comp=Z,760nm,19.1s,baz=73,slow=37							
	comp=Z,21nm,1.2s							
ESDC	**Sonseca Array**	**15.91**	**254**			**Pn**	**05 27 45.0**	**-2.4**
GAL1	**Galloway**	**15.92**	**312**	*e*P		**Pn**	**05 27 47.1**	**-0.2**
ASK	**Askoy**	**15.94**	**340**	*e*P		**Pn**	**05 27 48.8**	**+1.2**
ASK				IAmb		IAmb	05 27 55.1	
	comp=Z,130nm,1.1s							
ASK				*e*			05 32 35.7	
ASK				IAMs_20		IAMs_20	05 34 37.0	
	comp=Z,10μm,10.0s							
OBN	**Obninsk**	**15.95**	**47**	Pn		**Pn**	**05 27 45.2**	**-2.5**
	comp=Z,3.6nm,0.3s,baz=70,slow=5.7,SNR=16							
OBN				LR		LR	05 34 03.7	
	comp=Z,3μm,21.0s,baz=238,slow=38							
OBN	**Obninsk**	**15.95**	**47**			**Pn**	**05 27 45.9**	**-1.8**
OBN	**Obninsk**	**15.95**	**47***c*	*i*P		**Pn**	**05 27 46.1**	**-1.6**
OBN				*e*S		**Sn**	**05 30 48.1**	**+3.8**
OBN				pmax		pmax		
	comp=Z,245nm,1.7s							
OBN				MLR		MLR		
	comp=Z,3μm,16.0s							
VSR	**Storozhevoye**	**16.20**	**62**	*e*P		**Pn**	**05 27 51.7**	**+0.8**
VSR				pmax		pmax		
	comp=Z,110nm,1.2s							
VSR				MLR		MLR		
	comp=Z,10μm,11.0s							
IWEX	**Carrickbyrne,**	**16.22**	**302**	P		**P**	**05 27 53.3**	**-1.0**
DSB	**Dublin**	**16.23**	**305**	P		**Pn**	**05 27 50.8**	**-0.5**
DSB	**Dublin**	**16.23**	**305**	P		**P**	**05 27 53.0**	**-1.4**
DSB	**Dublin**	**16.23**	**305**	⇑P		**Pn**	**05 27 52.0**	**+0.7**
PAB	**San Pablo**	**16.23**	**254**			**Pn**	**05 27 49.2**	**-2.4**
PAB	**San Pablo**	**16.23**	**254**	P		**Pn**	**05 27 49.2**	**-2.4**
PAB				pmax		pmax		
	comp=Z,211nm,1.3s							
VORD	**Divnogorie**	**16.23**	**63**	*e*P		**Pn**	**05 27 48.8**	**-2.6**
VORD				pmax		pmax		
	comp=Z,50nm,1.2s							
VORD				MLR		MLR		
	comp=Z,4μm,10.0s							
BNN	**Bunyan**	**16.24**	**109**	⇓P		**P**	**05 27 53.5**	**-1.3**
PUL	**Pulkovo**	**16.31**	**26**⇑	*e*P		**Pn**	**05 27 53.2**	**+0.9**
PUL				pmax		pmax		
	comp=Z,382nm,1.0s							
VORR	**Voronezh**	**16.31**	**61**	*e*P		**P**	**05 27 54.6**	**-0.7**
VORR				pmax		pmax		
	comp=Z,155nm,0.7s							
VORR				MLR		MLR		
	comp=Z,900nm,6.0s							
HYA	**Hoyanger**	**16.34**	**343**	*e*P		**Pn**	**05 27 52.5**	**-0.1**
HYA				IAmb		IAmb	05 28 01.2	
	comp=Z,131nm,1.1s							
HYA				*e*			05 33 05.8	
HYA				IAMs_20		IAMs_20	05 35 07.4	
	comp=Z,10μm,9.9s							
LPSR	**Galich'ya Gora**	**16.36**	**58**	*e*P		**Pn**	**05 27 53.4**	**+0.5**
LPSR				pmax		pmax		
	comp=Z,102nm,1.0s							
LPSR				MLR		MLR		
	comp=Z,5μm,10.0s							
EAB	**Aberfoyle**	**16.36**	**316**	*e*P		**Pn**	**05 27 52.8**	**-0.1**
ILTH	**Belurgan, Co L**	**16.46**	**308**	P		**P**	**05 27 56.2**	**-0.8**
SUE	**Sulen**	**16.55**	**341**	*e*P		**Pn**	**05 27 55.6**	**+0.3**
SUE				IAmb		IAmb	05 27 59.8	
	comp=Z,2μm,3.1s							
SUE				*e*			05 32 34.9	
SUE				IAMs_20		IAMs_20	05 35 27.6	
	comp=Z,13μm,7.8s							
FINES	**FINESS Array B**	**16.64**	**17**	Pn		**Pn**	**05 27 53.4**	**-3.0**
	comp=Z,2.5nm,0.3s,baz=203,slow=9.8,SNR=77							
FINES				Sn		Sn	05 30 49.7	-11
	comp=Z,3.4nm,0.3s,baz=189,slow=18,SNR=6.9							
FINES				LR		LR	05 35 24.0	
	comp=Z,4μm,18.4s,baz=206,slow=41							
	comp=Z,9.4nm,0.4s							
FINES	**FINESS Array B**	**16.64**	**17**			**Pn**	**05 27 55.6**	**-0.8**
FIA1	**FINESS Array S**	**16.64**	**17**			**Pn**	**05 27 55.3**	**-1.2**
FIA1				IAmb		IAmb	05 28 02.8	
	comp=Z,707nm,1.0s							
DOMB	**Dombas**	**16.66**	**349**	*e*P		**P**	**05 27 59.7**	**+0.5**
DOMB				IAmb		IAmb	05 28 05.4	
	comp=Z,178nm,1.1s							
DOMB				*e*			05 32 47.9	
DOMB				IAMs_20		IAMs_20	05 35 06.2	
	comp=Z,12μm,8.9s							
CLGH	**Cloghs, Cushen**	**16.74**	**311**	*e*P		**Pn**	**05 27 58.7**	**+0.9**
MOS	**Moscow**	**16.77**	**46**	*e*P		**Pn**	**05 27 56.5**	**-1.6**
MOS				*e*S		**Sn**	**05 31 00.2**	**-4.0**
MOS				pmax		pmax		
	comp=Z,900nm,1.8s							
MOS				pmax		pmax		
	comp=Z,470nm,1.5s							
MOS				MLR		MLR		
	comp=E,6μm,10.0s							
MOS				MLR		MLR		
	comp=Z,7μm,10.0s							
PBRG	**Braganca**	**16.90**	**264**	*e*P		**Pn**	**05 27 59.8**	**-0.2**
PBRG				*i* IAmb		IAmb	05 28 05.9	
	comp=Z,196nm,1.7s							
LAWE	**Loch Awe, Argy**	**16.91**	**316**	*e*P		**Pn**	**05 28 00.2**	**+0.3**
LAWE				IAmb		IAmb	05 28 06.8	
	comp=Z,26nm,0.9s							
FOO	**Floro**	**16.97**	**342**	*e*P		**P**	**05 28 02.0**	**-0.5**
FOO				IAmb		IAmb	05 28 02.8	
	comp=Z,86nm,1.1s							
FOO				*e*S		**S**	**05 31 21.2**	**+2.1**
FOO				*e*			05 33 04.9	
FOO				IAMs_20		IAMs_20	05 35 00.3	
	comp=Z,9μm,14.0s							
SOC	**Sochi**	**16.99**	**89***c*	*i*P		**Pn**	**05 27 59.4**	**-1.6**
SOC				*e*S		**Sn**	**05 31 14.3**	**+4.5**
SOC				pmax		pmax		
	comp=Z,105nm,1.0s							
SOC				MLR		MLR		
	comp=Z,1μm,12.0s							
ERBR	**Yeremizino-Bor**	**17.05**	**82**	*e*P		**P**	**05 28 02.9**	**-0.7**
ERBR				*e*S		**S**	**05 31 16.5**	**-4.6**
ERBR				pmax		pmax		
	comp=Z,469nm,1.3s							
ERBR				MLR		MLR		
	comp=Z,3μm,12.0s							
KEF	**Keuruu**	**17.08**	**14**	*e*P		**Pn**	**05 27 59.6**	**-2.4**
CSS	**Mathiatis**	**17.09**	**124**	⇓P		**Pn**	**05 28 01.9**	**-0.5**
VSLR	**Vesyoloye**	**17.25**	**90***d*	*i*P		**Pn**	**05 28 03.5**	**-0.8**
MVO	**Moncorvo**	**17.34**	**262**	*e*P		**Pn**	**05 28 05.6**	**0.0**
MVO				*i* IAmb		IAmb	05 28 24.2	
	comp=Z,260nm,1.8s							
MVO				*i* tx		tx	05 31 31.4	
MVO				*e*LR		LR	05 34 09.5	
MVO				*i* IAMs_20		IAMs_20	05 35 52.6	
	comp=Z,2μm,18.0s							
MOL	**Molde**	**17.39**	**347**	*e*P		**P**	**05 28 06.8**	**-0.4**
MOL				IAmb		IAmb	05 28 13.3	
	comp=Z,194nm,1.3s							
MOL				*e*			05 33 23.7	
MOL				IAMs_20		IAMs_20	05 35 32.1	
	comp=Z,9μm,8.5s							
LABN	**Labinsk**	**17.43**	**85**	*e*P		**Pn**	**05 28 06.6**	**+0.1**
LABN				*e*S		**Sn**	**05 31 24.3**	**+3.9**
LABN				pmax		pmax		
	comp=Z,62nm,0.7s							
LABN				MLR		MLR		
	comp=Z,2μm,12.0s							
BIGH	**Upper Bighouse**	**17.46**	**323**	*e*P		**Pn**	**05 28 06.2**	**-0.6**
IDGL	**Inch Island, C**	**17.48**	**310**	P		**P**	**05 28 08.3**	**+0.1**
IDGL	**Inch Island, C**	**17.48**	**310**	*e*P		**Pn**	**05 28 07.5**	**+0.4**
LRW	**Lerwick**	**17.52**	**331**	⇑P		**P**	**05 28 10.3**	**+1.6**
KPL	**Plockton**	**17.57**	**318**	*e*P		**P**	**05 28 09.2**	**0.0**
KPL				IAmb		IAmb	05 28 15.4	
	comp=Z,30nm,0.6s							
VAF	**Ylistaro**	**17.59**	**10**	*e*P		**P**	**05 28 09.2**	**-0.2**
PVRL	**Vila Real**	**17.77**	**263**	*e*P		**Pn**	**05 28 10.9**	**0.0**
PVRL				*i* IAmb		IAmb	05 28 47.9	
	comp=Z,138nm,1.8s							
VRH	**Novokhopyorsk**	**17.78**	**63**	*e*P		**Pn**	**05 28 09.4**	**-1.5**
VRH				pmax		pmax		
	comp=Z,121nm,1.3s							
VRH				MLR		MLR		
	comp=Z,6μm,9.0s							
POLO	**Lamas de Olo**	**17.79**	**264**	*e*P		**Pn**	**05 28 09.9**	**-1.2**
POLO				*i* IAmb		IAmb	05 28 16.0	
	comp=Z,75nm,1.6s							
SUF	**Sumiainen**	**17.82**	**15**	*e*P		**P**	**05 28 11.7**	**-0.2**
EMAL	**Malaga-Limoner**	**17.82**	**246**	P		**Pn**	**05 28 10.8**	**-0.6**
PCAB	**Cabril**	**17.83**	**265**	*e*P		**P**	**05 28 11.9**	**-0.3**
PCAB				*i* IAmb		IAmb	05 28 26.1	
	comp=Z,211nm,1.6s							
PGAV	**Gavieira, Arco**	**17.90**	**266**	*e*P		**Pn**	**05 28 12.0**	**-0.5**
PGAV				*i* IAmb		IAmb	05 28 16.2	
	comp=Z,160nm,1.8s							
PGAV				*e*LR		LR	05 34 40.9	
PGAV				*i* IAMs_20		IAMs_20	05 37 08.4	
	comp=Z,2μm,14.0s							
IGLA	**Glengowla, Co**	**18.00**	**304**	P		**Pn**	**05 28 13.5**	**0.0**
MTE	**Manteigas**	**18.02**	**261**	*e*P		**Pn**	**05 28 13.9**	**0.0**
MTE				*i* IAmb		IAmb	05 28 28.1	
	comp=Z,157nm,1.7s							
MTE				*i* tx		tx	05 31 44.1	
MTE				*e*LR		LR	05 34 17.9	
MTE				*i* IAMs_20		IAMs_20	05 36 13.7	
	comp=Z,1μm,18.0s							
MTE	**Manteigas**	**18.02**	**261**	*e*P		**Pn**	**05 28 13.2**	**-0.7**
MTE	**Manteigas**	**18.02**	**261**	⇓P		**Pn**	**05 28 13.9**	**0.0**
GAZ	**Gaziantep**	**18.07**	**111**	⇑P		**P**	**05 28 16.8**	**+1.8**
PVIS	**Viseu**	**18.12**	**262**	*e*P		**P**	**05 28 15.7**	**+0.1**
PVIS				*i* tx		tx	05 31 46.5	
PCBR	**Castelo Branco**	**18.22**	**259**	*e*P		**Pn**	**05 28 15.7**	**-0.6**
PCBR				*i* IAmb		IAmb	05 28 29.4	
	comp=Z,228nm,1.3s							
VAL	**Valentia**	**18.22**	**299**	P		**Pn**	**05 28 13.9**	**-2.3**
VAL	**Valentia**	**18.22**	**299**	P		**Pn**	**05 28 15.7**	**-0.5**
PMRV	**Marv??o**	**18.35**	**258**	*e*P		**P**	**05 28 18.1**	**+0.1**
PMRV				*i* IAmb		IAmb	05 28 31.0	
	comp=Z,169nm,1.8s							
PMRV				*i* tx		tx	05 31 46.5	
PMRV				*e*LR		LR	05 34 37.7	
PMRV				*i* IAMs_20		IAMs_20	05 36 57.1	
	comp=Z,1μm,18.0s							
PBAR	**Barrancos**	**18.74**	**254**	P		**P**	**05 28 21.9**	**-0.3**
PBAR	**Barrancos**	**18.74**	**254**	*e*P		**Pn**	**05 28 22.4**	**-0.2**
PBAR				*i* IAmb		IAmb	05 28 25.4	
	comp=Z,155nm,1.1s							
PBAR				*i* tx		tx	05 32 01.0	
PESTR	**Estremoz**	**18.76**	**256**	P		**P**	**05 28 22.0**	**-0.5**
PESTR	**Estremoz**	**18.76**	**256**	*e*P		**P**	**05 28 22.5**	**0.0**
PESTR				*i* IAmb		IAmb	05 28 36.1	
	comp=Z,162nm,2.4s							
PESTR				*i* tx		tx	05 32 01.0	
PESTR	**Estremoz**	**18.76**	**256**	⇑P		**P**	**05 28 22.1**	**-0.4**
PSARD	**Sardoal**	**18.80**	**259**	*e*P		**Pn**	**05 28 23.2**	**-0.1**
PSARD				*i* IAmb		IAmb	05 28 38.0	
	comp=Z,212nm,1.3s							
NSS	**Namsos**	**18.80**	**355**	*e*P		**Pn**	**05 28 23.3**	**+0.1**
NSS				IAmb		IAmb	05 28 28.3	
	comp=Z,99nm,1.0s							
NSS				*e*			05 33 50.3	
NSS				IAMs_20		IAMs_20	05 36 09.3	
	comp=Z,16μm,10.5s							
PCAS	**Casmilo, Conde**	**18.82**	**261**	*e*P		**Pn**	**05 28 24.1**	**+0.4**
PCAS				*i* IAmb		IAmb	05 28 37.6	
	comp=Z,335nm,1.7s							
PCAS				*i* tx		tx	05 32 01.7	
GOF	**Gofitskoye**	**18.95**	**83***c*	*i*P		**P**	**05 28 24.3**	**-0.2**
KIV	**Kislovodsk**	**18.96**	**86**	P		**P**	**05 28 24.9**	**+0.2**
KIV	**Kislovodsk**	**18.96**	**86**	*e*P		**Pn**	**05 28 25.4**	**0.0**
KIV				*e*S		**S**	**05 31 59.4**	**-0.6**
KIV				pmax		pmax		
	comp=Z,54nm,0.9s							
KIV				MLR		MLR		
	comp=Z,799nm,14.0s							
KIV	**Kislovodsk**	**18.96**	**86**	P		**P**	**05 28 25.0**	**+0.2**
KIV				S		**Sn**	**05 31 58.3**	**+0.6**
KVAR	**Kislovodsk Arr**	**18.97**	**86**	Pn		**Pn**	**05 28 26.6**	**+1.1**
	baz=92,slow=23							
KVAR				LR		LR	05 38 03.4	
	comp=Z,2μm,18.6s,baz=169,slow=44							
	comp=Z,5.9nm,0.6s							
SHA1	**Shidzhatmaz**	**19.00**	**87***c*	*i*P		**Pn**	**05 28 25.9**	**-0.1**
PARRA	**Arraiolos**	**19.09**	**257**	*e*P		**P**	**05 28 25.6**	**-0.5**
PARRA				*i* IAmb		IAmb	05 28 39.2	
	comp=Z,160nm,1.3s							
PARRA				*i* tx		tx	05 32 01.7	
PMTG	**Montargil**	**19.09**	**258**	*e*P		**P**	**05 28 25.8**	**-0.3**
PMTG				*i* IAmb		IAmb	05 28 39.7	
	comp=Z,143nm,1.8s							
PMTG				*i* tx		tx	05 32 06.2	
HWQ	**Hawqa**	**19.11**	**120**	*e*P		**Pn**	**05 28 26.9**	**-0.4**
JOF	**Joensuu**	**19.14**	**22**	*e*P		**P**	**05 28 26.1**	**-0.4**
NEUR	**Neytrino**	**19.16**	**88***c*	*i*P		**Pn**	**05 28 28.4**	**+0.4**
NEUR				pmax		pmax		
	comp=Z,92nm,1.1s							
KBZ	**Khabaz**	**19.17**	**87**	Pn		**Pn**	**05 28 28.2**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=298,slow=9.4,SNR=47							
KBZ				PcP		**PcP**	**05 32 51.2**	**+0.9**
	comp=Z,19nm,0.9s,baz=223,slow=3.0,SNR=5.1							
	comp=Z,38nm,0.9s							
KBZ	**Khabaz**	**19.17**	**87***c*	*i*P		**Pn**	**05 28 28.1**	**+0.3**
KBZ				pmax		pmax		
	comp=Z,170nm,1.6s							
BHL	**Bhannes**	**19.20**	**122**	*e*P		**P**	**05 28 27.0**	**-0.4**
EVO	**Evora**	**19.21**	**256**	P		**P**	**05 28 26.4**	**-1.0**
EVO	**Evora**	**19.21**	**256**	*e*P		**P**	**05 28 27.2**	**-0.2**
EVO				*i* IAmb		IAmb	05 28 29.9	
	comp=Z,165nm,1.4s							
EVO				*i* tx		tx	05 32 07.2	
PSBE	**So Bento**	**19.27**	**260**	*e*P		**P**	**05 28 28.1**	**0.0**
PSBE				*i* IAmb		IAmb	05 28 56.3	
	comp=Z,168nm,1.9s							
PBEJ	**Beja**	**19.37**	**255**	*e*P		**P**	**05 28 28.9**	**-0.3**
PBEJ				*i* IAmb		IAmb	05 28 38.7	
	comp=Z,166nm,1.6s							
MOE	**Montemor**	**19.44**	**256**	*e*P		**P**	**05 28 30.3**	**+0.3**
MOE				*i* IAmb		IAmb	05 28 40.9	
	comp=Z,150nm,1.1s							
MOE				*i* tx		tx	05 32 15.1	
HNTI	**Hanita**	**19.50**	**124**	⇑P		**Pn**	**05 28 31.4**	**-0.5**
PVAQ	**Vaqueiros**	**19.60**	**253**	P		**P**	**05 28 30.9**	**-0.8**
PVAQ	**Vaqueiros**	**19.60**	**253**	*e*P		**P**	**05 28 31.7**	**0.0**
PVAQ				*i* IAmb		IAmb	05 28 39.8	
	comp=Z,138nm,1.3s							
PVAQ				*i* tx		tx	05 32 18.9	
PVAQ				*e*LR		LR	05 35 58.7	
PVAQ				*i* IAMs_20		IAMs_20	05 37 22.1	
	comp=Z,1μm,18.0s							
PVAQ	**Vaqueiros**	**19.60**	**253**	⇑P		**P**	**05 28 31.3**	**-0.4**
MMAI	**Mount Meron Ar**	**19.68**	**124**	P		**Pn**	**05 28 34.0**	**-0.1**
	comp=Z,86nm,0.9s,baz=320,slow=9.0,SNR=48							
MMAI				LR		LR	05 36 48.1	
	comp=Z,2μm,21.8s,baz=318,slow=39							
GEM	**Giv'at Ha'Em**	**19.69**	**123**	⇑P		**Pn**	**05 28 33.6**	**-0.5**
GEM	**Giv'at Ha'Em**	**19.69**	**123**	⇑P		**P**	**05 28 33.3**	**+0.6**
PCVE	**Castro Verde**	**19.70**	**254**	P		**P**	**05 28 32.2**	**-0.5**
PCVE	**Castro Verde**	**19.70**	**254**	*e*P		**P**	**05 28 32.8**	**+0.1**
PCVE				*i* IAmb		IAmb	05 28 35.5	
	comp=Z,98nm,1.6s							
MESJ	**Messejana**	**19.71**	**254**	*e*P		**P**	**05 28 32.3**	**-0.6**
MESJ				IAmb		IAmb	05 28 40.3	
	comp=Z,171nm,1.4s							
MESJ				*e*S		**Sn**	**05 32 15.4**	**-0.1**
MESJ	**Messejana**	**19.71**	**254**	P		**P**	**05 28 32.5**	**-0.4**
MESJ	**Messejana**	**19.71**	**254**	*e*P		**P**	**05 28 33.4**	**+0.6**
MESJ				*i* IAmb		IAmb	05 28 36.7	
	comp=Z,151nm,1.7s							
MESJ				*i* tx		tx	05 32 21.7	
MESJ	**Messejana**	**19.71**	**254**	⇑P		**P**	**05 28 32.8**	**-0.1**
NCK	**Nalchik**	**19.72**	**87**⇓	*i*P		**Pn**	**05 28 35.7**	**+1.2**
NCK				pmax		pmax		
	comp=Z,178nm,1.0s							
OFRI	**`Ofer**	**19.73**	**126**	⇑P		**P**	**05 28 33.4**	**+0.2**
BLGI	**Bet Lehem HaGe**	**19.76**	**125**	⇑P		**Pn**	**05 28 34.6**	**-0.4**
PBDV	**Barranco-do-Ve**	**19.83**	**253**	P		**P**	**05 28 34.0**	**-0.3**
PBDV	**Barranco-do-Ve**	**19.83**	**253**	*e*P		**P**	**05 28 34.7**	**+0.4**
PBDV				*i* IAmb		IAmb	05 28 42.3	
	comp=Z,244nm,1.3s							
PBDV				*i* tx		tx	05 32 25.4	
PMAFR	**Mafra**	**19.87**	**259**	P		**Pn**	**05 28 36.0**	**-0.2**
PMAFR	**Mafra**	**19.87**	**259**	*e*P		**Pn**	**05 28 36.4**	**+0.2**
PMAFR				*i* IAmb		IAmb	05 29 03.4	
	comp=Z,288nm,1.9s							
LIS	**Lisbon**	**19.89**	**258**	*e*P		**P**	**05 28 34.2**	**-0.6**
LIS				IAmb		IAmb	05 28 37.5	
	comp=Z,243nm,1.1s							
LIS				*e*S		**S**	**05 32 19.0**	**+0.4**
LIS	**Lisbon**	**19.89**	**258**	*e*P		**P**	**05 28 33.7**	**-1.2**
LIS				*i* IAmb		IAmb	05 28 37.7	
	comp=Z,391nm,1.3s							
LIS	**Lisbon**	**19.89**	**258**	*e*P		**P**	**05 28 34.2**	**-0.6**
LIS				*e*S		**S**	**05 32 19.0**	**+0.4**
KSHT	**Keshet**	**19.94**	**123**	P		**Pn**	**05 28 36.7**	**-0.4**
SLTI	**Sal'it**	**20.04**	**126**	⇑P		**P**	**05 28 36.9**	**+0.3**
MMLI	**Mount Malkishu**	**20.11**	**125**	⇑P		**P**	**05 28 38.2**	**+0.8**
PTEO	**Sao Teotonio**	**20.20**	**254**	*e*P		**P**	**05 28 38.5**	**+0.3**
PTEO				*i* IAmb		IAmb	05 28 41.5	
	comp=Z,179nm,2.0s							
SALP	**Salfit**	**20.26**	**126**	⇑P		**P**	**05 28 39.7**	**+0.8**
MORF	**Marmelete**	**20.28**	**254**	*e*P		**P**	**05 28 38.6**	**-0.6**
MORF				IAmb		IAmb	05 28 44.9	
	comp=Z,147nm,1.6s							
MORF	**Marmelete**	**20.28**	**254**	P		**P**	**05 28 38.8**	**-0.4**
MORF	**Marmelete**	**20.28**	**254**	*e*P		**P**	**05 28 39.0**	**-0.2**
MORF				*i* IAmb		IAmb	05 28 45.2	
	comp=Z,97nm,1.6s							
MORF	**Marmelete**	**20.28**	**254**	P		**P**	**05 28 38.8**	**-0.4**
MORF				pmax		pmax		
	comp=Z,149nm,1.5s							
HMDT	**Nahal Hemdat**	**20.31**	**125**	⇑P		**P**	**05 28 40.2**	**+0.7**
LEIR	**Leirfjorden**	**20.32**	**357**	*e*P		Pn	05 28 40.8	-0.5
LEIR				IAmb		IAmb	05 28 45.8	
	comp=Z,297nm,1.1s							
LEIR				*e*S		Sn	05 32 30.6	+0.8
LEIR				*e*			05 35 05.2	
LEIR				IAMs_20		IAMs_20	05 37 05.1	
	comp=Z,12μm,11.2s							
MOR8	**Moi Rana**	**20.34**	**358**	*e*P		Pn	05 28 41.5	-0.1
MOR8				IAmb		IAmb	05 28 49.3	
	comp=Z,198nm,1.4s							
MOR8				*e*S		Sn	05 32 31.4	+1.2
MOR8				*e*			05 34 50.2	
MOR8				IAMs_20		IAMs_20	05 37 51.6	
	comp=Z,9μm,6.3s							
KLMR	**Klimovskoe**	**20.34**	**34**	*e*P		**P**	**05 28 40.0**	**+0.4**
KLMR				S		Sn	05 32 30.8	+0.4
KLMR				pmax		pmax		
	comp=Z,236nm,1.1s							
KLMR				MLR		MLR		
	comp=Z,4μm,12.0s							
IFR	**Ifrane**	**20.36**	**240**	P		**P**	**05 28 39.5**	**-0.7**
KARS	**Kars**	**20.36**	**95**	IAmb		IAmb	05 28 47.9	
	comp=Z,265nm,1.4s							
PFVI	**Vila Bisbo**	**20.49**	**253**	P		**P**	**05 28 39.9**	**-1.5**
PFVI	**Vila Bisbo**	**20.49**	**253**	P		**P**	**05 28 40.9**	**-0.5**
PFVI	**

HRFI	**Mount Harif**	**21.73**	**130**	P	**P**	**05 28 54.1**	**-0.7**
AVE	**Averroes**	**21.91**	**243**	P	**P**	**05 28 56.4**	**-0.3**
AVE	**Averroes**	**21.91**	**243**	P	**P**	**05 28 56.2**	**-0.4**
AVE				IAmb	IAmb	05 29 00.8	
	comp=Z,251nm,0.8s						
AVE	**Averroes**	**21.91**	**243**	⇓P	**P**	**05 28 56.3**	**-0.4**
ADZR	**Andozero**	**21.93**	**27**	*e*P	**P**	**05 28 54.8**	**-1.8**
ADZR				S	**S**	**05 32 54.9**	**-3.5**
ADZR				pmax	pmax		
	comp=Z,181nm,1.0s						
ADZR				MLR	MLR		
	comp=Z,11μm,9.0s						
EIL	**Elat**	**21.97**	**131**	P	**P**	**05 28 57.1**	**-0.3**
	comp=Z,105nm,0.8s,baz=333,slow=6.2,SNR=28						
EIL				LR	LR	05 39 50.4	
	comp=Z,724nm,18.6s,baz=332,slow=43						
	comp=Z,105nm,0.8s						
EIL	**Elat**	**21.97**	**131**	⇑P	**P**	**05 28 56.7**	**-0.7**
STEI	**Steigen**	**22.09**	**359**	*e*P	**P**	**05 29 00.6**	**+2.3**
STEI				IAmb	IAmb	05 29 07.4	
	comp=Z,116nm,1.2s						
STEI				*e*S	**S**	**05 33 04.5**	**+3.0**
STEI				IAMs_20	IAMs_20	05 38 16.3	
	comp=Z,7μm,8.9s						
LOF	**Lofoten**	**22.32**	**358**	*e*P	**P**	**05 29 01.9**	**+1.1**
LOF				IAmb	IAmb	05 29 13.7	
	comp=Z,155nm,1.2s						
LOF				*e*S	**S**	**05 33 09.8**	**+3.9**
LOF				*e*		05 35 36.9	
LOF				IAMs_20	IAMs_20	05 38 25.5	
	comp=Z,8μm,8.7s						
MAK	**Makhachkala**	**22.61**	**86**	*e*P	**P**	**05 29 03.0**	**-1.1**
MAK				*e*S	**S**	**05 33 11.1**	**-0.5**
MAK				pmax	pmax		
	comp=Z,465nm,1.4s						
MAK				MLR	MLR		
	comp=Z,5μm,13.0s						
AKT	**Akhty**	**23.27**	**90**	⇑*i*P	**P**	**05 29 11.3**	**+0.1**
AKT				*e*		05 29 37.5	
AKT				*e*PPP	PPP	05 29 44.9	
AKT				*e*		05 32 56.6	
AKT				*e*S	**S**	**05 33 24.8**	**+1.4**
AKT				*e*SS	**SnSn**	**05 34 03.9**	**+6.8**
AKT				pmax	pmax		
	comp=Z,205nm,1.3s						
KTK1	**Kautokeino**	**23.46**	**7**	*e*P	**P**	**05 29 12.9**	**+0.2**
KTK1				IAmb	IAmb	05 29 20.7	
	comp=Z,132nm,0.9s						
KTK1				*e*S	**S**	**05 33 26.5**	**+0.7**
KTK1				*e*		05 36 14.6	
KTK1				*e*ScP	**ScP**	**05 36 35.4**	**-0.7**
KTK1				IAMs_20	IAMs_20	05 40 23.6	
	comp=Z,13μm,6.3s						
TIO	**Tiouine**	**23.46**	**239**	P	**P**	**05 29 11.6**	**-1.6**
APA	**Apatity**	**23.55**	**17**	⇓*e*P	**P**	**05 29 15.6**	**+2.1**
APA				pmax	pmax		
	comp=Z,63nm,1.1s						
APA				MLR	MLR		
	comp=Z,7μm,6.1s						
KIRV	**Kirov**	**23.78**	**46**	P	**P**	**05 29 16.0**	**+0.2**
	comp=Z,89nm,0.6s,baz=263,slow=8.3,SNR=30						
KIRV				LR	LR	05 39 48.6	
	comp=Z,1μm,19.6s,baz=249,slow=40						
	comp=Z,89nm,0.6s						
KIRV	**Kirov**	**23.78**	**46***c*	*i*P	**P**	**05 29 15.3**	**-0.5**
JETT	**Jettan, Norway**	**23.82**	**4**	*e*P	**P**	**05 29 16.8**	**+0.6**
JETT				IAmb	IAmb	05 29 33.8	
	comp=Z,449nm,1.9s						
JETT				*e*S	**S**	**05 33 35.2**	**+3.6**
JETT				*e*ScP	**ScP**	**05 36 39.4**	**+2.3**
JETT				IAMs_20	IAMs_20	05 39 29.3	
	comp=Z,8μm,8.3s						
TRO	**Tromso**	**23.84**	**3**	*e*P	**P**	**05 29 16.4**	**+0.1**
TRO				IAmb	IAmb	05 29 25.7	
	comp=Z,324nm,1.4s						
TRO				*e*S	**S**	**05 33 36.5**	**+4.7**
TRO				*e*ScP	**ScP**	**05 36 37.0**	**0.0**
TRO				IAMs_20	IAMs_20	05 40 15.3	
	comp=Z,6μm,6.7s						
LVZ	**Lovozero**	**24.08**	**17**	P	**P**	**05 29 18.7**	**0.0**
LVZ				IAmb	IAmb	05 29 31.9	
	comp=Z,142nm,1.1s						
LVZ				IAMs_20	IAMs_20	05 39 02.5	
	comp=Z,4μm,21.0s						
LVZ	**Lovozero**	**24.08**	**17***c*	*i*P	**P**	**05 29 18.9**	**+0.2**
LVZ				pmax	pmax		
	comp=Z,166nm,1.1s						
ARA0	**ARCESS Array S**	**24.17**	**8**	*e*P	**P**	**05 29 19.2**	**-0.3**
ARA0				IAmb	IAmb	05 29 30.7	
	comp=Z,152nm,1.1s						
ARA0				*e*S	**S**	**05 33 39.4**	**+2.2**
ARA0				*e*ScP	**ScP**	**05 36 39.8**	**+1.8**
ARA0				IAMs_20	IAMs_20	05 39 21.8	
	comp=Z,9μm,10.2s						
ARCES	**ARCESS Array B**	**24.17**	**8**	P	**P**	**05 29 19.2**	**-0.3**
	comp=Z,55nm,0.9s,baz=178,slow=7.3,SNR=25						
ARCES				LR	LR	05 39 28.4	
	comp=Z,6μm,19.9s,baz=196,slow=38						
	comp=Z,55nm,0.9s						
ARCES	**ARCESS Array B**	**24.17**	**8**	P	**P**	**05 29 19.4**	**-0.1**
ARCES				IAmb	IAmb	05 29 31.0	
	comp=Z,133nm,1.1s						
ARCES	**ARCESS Array B**	**24.17**	**8**	P	**P**	**05 29 19.4**	**-0.1**
ARCES				pmax	pmax		
	comp=Z,133nm,1.2s						
KEV	**Kevo**	**24.54**	**9**	P	**P**	**05 29 23.2**	**+0.4**
KEV				IAmb	IAmb	05 29 27.7	
	comp=Z,408nm,1.8s						
KEV	**Kevo**	**24.54**	**9**	P	**P**	**05 29 23.2**	**+0.4**
KEV				pmax	pmax		
	comp=Z,408nm,1.8s						
KEV				MLR	MLR		
	comp=Z,11μm,18.0s						
TAM	**Tamanrasset**	**24.58**	**204**	P	**P**	**05 29 23.5**	**-0.2**
TAM	**Tamanrasset**	**24.58**	**204**	P	**P**	**05 29 23.5**	**-0.2**
TAM				pmax	pmax		
	comp=Z,57nm,0.9s						
TAM	**Tamanrasset**	**24.58**	**204**	⇑P	**P**	**05 29 23.6**	**-0.2**
VADS	**Vadso**	**25.17**	**11**	*e*P	**P**	**05 29 30.0**	**+1.5**
VADS				IAmb	IAmb	05 29 33.6	
	comp=Z,198nm,1.1s						
VADS				IAMs_20	IAMs_20	05 39 56.7	
	comp=Z,15μm,9.9s						
JMIC	**Jan Mayen**	**27.81**	**343**	LR	LR	05 40 04.1	
	comp=Z,909nm,21.9s,baz=116,slow=35						
JNW	**Jan Mayen West**	**27.83**	**343**	*e*S	**S**	**05 34 37.0**	**+1.9**
JNW				IAMs_20	IAMs_20	05 39 11.3	
	comp=Z,2μm,5.8s						
AKTO	**Aktyubinsk**	**28.10**	**65**	P	**P**	**05 29 55.4**	**+0.3**
	comp=Z,21nm,0.7s,baz=276,slow=9.2,SNR=27						
AKTO				PcP	**PcP**	**05 33 09.2**	**+0.1**
	comp=Z,15nm,0.9s,baz=243,slow=4.5,SNR=3.5						
AKTO				LR	LR	05 42 44.2	
	comp=Z,2μm,18.2s,baz=264,slow=40						
	comp=Z,21nm,0.7s						
ARTI	**Arti**	**28.14**	**53**	P	**P**	**05 29 54.9**	**-0.5**
	comp=Z,86nm,0.9s,baz=258,slow=11,SNR=60						
ARTI				LR	LR	05 41 25.3	
	comp=Z,2μm,18.4s,baz=264,slow=37						
	comp=Z,86nm,0.9s						
PMAR	**Madeira**	**28.45**	**254**	*e*P	**P**	**05 30 00.0**	**+1.4**
PMAR				*i* IAmb	IAmb	05 30 02.1	
	comp=Z,572nm,1.4s						
FUL	**Funchal**	**28.48**	**254**	*e*P	**P**	**05 29 59.8**	**+1.2**
PMOZ	**Porto Moniz, M**	**28.58**	**255**	P	**P**	**05 29 59.9**	**+0.2**
PMOZ	**Porto Moniz, M**	**28.58**	**255**	*e*P	**P**	**05 30 00.8**	**+1.1**
BJO1	**Bjornoya**	**28.72**	**2**	*e*P	**P**	**05 30 00.6**	**+0.2**
BJO1				*e*S	**S**	**05 34 51.4**	**+2.3**
BJO1				IAMs_20	IAMs_20	05 41 16.2	
	comp=Z,2μm,22.7s						
SVE	**Sverdlovsk**	**29.41**	**52***d*	*i*P	**P**	**05 30 07.2**	**+0.5**
SVE				*e*S	**S**	**05 35 01.9**	**+1.7**
SVE				pmax	pmax		
	comp=Z,150nm,1.1s						
SVE				MLR	MLR		
	comp=Z,3μm,14.0s						
AB31	**Akbulak array**	**29.51**	**67**	P	**P**	**05 30 07.8**	**+0.1**
AB31	**Akbulak array**	**29.51**	**67**	*i* P	**P**	**05 30 07.4**	**-0.3**
ABKAR	**Akbulak array**	**29.51**	**67**	P	**P**	**05 30 07.8**	**+0.1**
KBD	**Kabd**	**29.91**	**113**	P	**P**	**05 30 12.5**	**+1.1**
SCO	**Scoresbysund**	**30.77**	**336**	P	**P**	**05 30 18.7**	**+0.2**
SCO	**Scoresbysund**	**30.77**	**336**	P	**P**	**05 30 18.7**	**+0.2**
SCO				pmax	pmax		
	comp=Z,30nm,1.3s						
SCO	**Scoresbysund**	**30.77**	**336**	*i* P	**P**	**05 30 19.4**	**+0.9**
SCO				IAmb	IAmb	05 30 20.6	
	comp=Z,6.7nm,0.7s						
MACI	**Morro de la Ar**	**31.07**	**247**	P	**P**	**05 30 21.2**	**-0.7**
SPITS	**Spitsbergen Ar**	**32.39**	**0**	P	**P**	**05 30 34.3**	**+1.5**
	comp=Z,20nm,0.5s,baz=159,slow=9.4,SNR=9.7						
SPITS				LR	LR	05 44 41.6	
	comp=Z,1μm,18.8s,baz=188,slow=38						
DBG	**Daneborg**	**32.64**	**343**	⇓P	**P**	**05 30 36.2**	**+1.4**
DBG	**Daneborg**	**32.64**	**343**	*i* P	**P**	**05 30 36.3**	**+1.4**
DBG				IAmb	IAmb	05 30 40.7	
	comp=Z,9.7nm,0.9s						
RAYN	**Ar Rayn**	**32.65**	**123**	P	**P**	**05 30 35.8**	**+0.2**
RAYN				IAmb	IAmb	05 30 38.8	
	comp=Z,51nm,1.1s						
RAYN	**Ar Rayn**	**32.65**	**123**	*i* P	**P**	**05 30 36.4**	**+0.8**
	SNR=25						
RAYN	**Ar Rayn**	**32.65**	**123**	P	**P**	**05 30 35.8**	**+0.2**
RAYN				pmax	pmax		
	comp=Z,51nm,1.1s						
RAYN				MLR	MLR		
	comp=Z,1μm,21.0s						
RAYN	**Ar Rayn**	**32.65**	**123**	P	**P**	**05 30 36.4**	**+0.8**
RAYN				S	**S**	**05 35 51.7**	**+0.1**
RAYN	**Ar Rayn**	**32.65**	**123**	⇑P	**P**	**05 30 36.2**	**+0.6**
KBS	**Kingsbay**	**33.18**	**359**	*e*P	**P**	**05 30 39.9**	**+0.3**
KBS				*e*PP	**PP**	**05 31 55.3**	**+0.9**
KBS				*e*S	**S**	**05 36 04.9**	**+6.2**
KBS				*e*		05 40 28.8	
KBS				IAMs_20	IAMs_20	05 45 39.1	
	comp=Z,2μm,8.7s						
KBS	**Kingsbay**	**33.18**	**359**	*i* P	**P**	**05 30 41.4**	**+1.8**
SAKB	**Bahrain**	**33.94**	**114**	P	**P**	**05 30 47.5**	**+0.8**
SAKB				S	**S**	**05 36 11.0**	**-0.3**
DAG	**Danmarks Havn**	**34.02**	**346**	*i* P	**P**	**05 30 46.8**	**-0.2**
DAG				IAmb	IAmb	05 30 48.1	
	comp=Z,6.8nm,0.8s						
TOA0	**Torodi Ar. Sit**	**34.83**	**205**	P	**P**	**05 30 54.0**	**-0.5**
	SNR=8.0						
TORD	**Torodi Ar. Bea**	**34.83**	**205**	P	**P**	**05 30 53.6**	**-0.9**
	comp=Z,43nm,0.8s,baz=8.5,slow=6.5,SNR=149						
TORD				PcP	**PcP**	**05 33 27.2**	**-0.4**
	comp=Z,8.3nm,0.8s,baz=303,slow=1.6,SNR=5.4						
TORD				LR	LR	05 47 13.1	
	comp=Z,2μm,19.0s,baz=21,slow=40						
	comp=Z,43nm,0.8s						
SMRA	**Abu-Samra**	**34.99**	**115**	P	**P**	**05 30 55.9**	**+0.1**
SMRA				S	**S**	**05 36 26.9**	**-0.8**
TRNA	**Turayna**	**35.24**	**115**	P	**P**	**05 30 58.6**	**+0.6**
TRNA				S	**S**	**05 36 30.5**	**-1.1**
BORK	**Borovoye**	**35.26**	**58**	P	**P**	**05 30 58.8**	**+0.9**
BORK				IAmb	IAmb	05 31 02.7	
	comp=Z,72nm,0.8s						
BORK	**Borovoye**	**35.26**	**58**	IAMs_20	IAMs_20	05 45 53.9	
	comp=Z,2μm,19.0s						
BORK	**Borovoye**	**35.26**	**58**	P	**P**	**05 30 58.8**	**+0.9**
BORK				pmax	pmax		
	comp=Z,72nm,0.8s						
BORK				MLR	MLR		
	comp=Z,2μm,19.0s						
BORK	**Borovoye**	**35.26**	**58**	⇑P	**P**	**05 30 59.0**	**+1.1**
BVAR	**Borovoye Array**	**35.30**	**58**	P	**P**	**05 30 59.3**	**+1.0**
	comp=Z,46nm,0.8s,baz=282,slow=7.1,SNR=150						
BVAR				LR	LR	05 46 26.8	
	comp=Z,2μm,18.7s,baz=281,slow=38						
	comp=Z,46nm,0.8s						
SLWR	**Sila**	**36.02**	**115**	P	**P**	**05 31 05.6**	**+0.9**
SLWR				S	**S**	**05 36 42.5**	**-1.1**
JRN	**Qarnain Island**	**36.15**	**113**	P	**P**	**05 31 06.4**	**+0.6**
JRN				P	**P**	**05 31 06.4**	**+0.6**
SUMG	**Summit**	**36.41**	**336**	P	**P**	**05 31 07.1**	**-0.9**
SUMG	**Summit**	**36.41**	**336**	P	**P**	**05 31 07.1**	**-0.9**
SUMG				pmax	pmax		
	comp=Z,21nm,1.1s						
SUMG	**Summit**	**36.41**	**336**	*i* P	**P**	**05 31 07.9**	**-0.1**
SUMG				IAmb	IAmb	05 31 13.0	
	comp=Z,16nm,1.0s						
GHWR	**Ruwais**	**36.85**	**114**	P	**P**	**05 31 12.0**	**+0.1**
GHWR				S	**S**	**05 36 55.2**	**-1.0**
NOR	**Nord**	**37.40**	**352**	⇑P	**P**	**05 31 16.1**	**+0.2**
NOR	**Nord**	**37.40**	**352**	*i* P	**P**	**05 31 15.7**	**-0.1**
NOR				IAmb	IAmb	05 31 17.4	
	comp=Z,14nm,1.3s						
BRZS	**Berezniki**	**37.40**	**63**	*e*P	**P**	**05 31 16.5**	**+0.2**
SHME	**Shamm**	**37.54**	**108**	P	**P**	**05 31 16.7**	**-1.0**
SHME	**Shamm**	**37.54**	**108**	P	**P**	**05 31 17.2**	**-0.5**
MZWR	**Madinat Zayed**	**37.64**	**113**	P	**P**	**05 31 17.4**	**-1.1**
MZWR				S	**S**	**05 37 07.9**	**-0.3**
BANOM	**Banah**	**37.73**	**108**	*i* P	**P**	**05 31 19.2**	**-0.2**
	SNR=6.0						
BANOM	**Banah**	**37.73**	**108**	P	**P**	**05 31 18.9**	**-0.4**
AJN	**Ajban**	**37.80**	**111**	*i* P	**P**	**05 31 20.9**	**+1.1**
	SNR=7.1						
AJN	**Ajban**	**37.80**	**111**	P	**P**	**05 31 20.4**	**+0.6**
	SNR=5.7						
AJN				S	**S**	**05 37 10.0**	**-0.6**
BRLS	**Boroldaу**	**37.91**	**74**	*e*P	**P**	**05 31 20.8**	**+0.1**
MZR	**Muzera**	**37.93**	**114**	*i* P	**P**	**05 31 21.0**	**0.0**
	SNR=7.8						
MZR	**Muzera**	**37.93**	**114**	P	**P**	**05 31 20.7**	**-0.3**
	SNR=5.7						
MZR				S	**S**	**05 37 11.7**	**-0.9**
NAZ	**Nazwa, Dubai**	**37.95**	**110**	*i* P	**P**	**05 31 22.0**	**+0.9**
	SNR=9.1						
NAZ	**Nazwa, Dubai**	**37.95**	**110**	P	**P**	**05 31 23.0**	**+1.9**
	SNR=6.7						
NAZ				S	**S**	**05 37 13.0**	**+0.2**
ASUD	**Al Ashush, Dub**	**37.98**	**110**	*i* P	**P**	**05 31 21.8**	**+0.5**
	SNR=12						
ASUD	**Al Ashush, Dub**	**37.98**	**110**	P	**P**	**05 31 23.0**	**+1.6**
	SNR=8.9						
ASUD				S	**S**	**05 37 13.0**	**-0.3**
MASF	**Masafi**	**38.01**	**109**	P	**P**	**05 31 21.2**	**-0.5**
MASF				S	**S**	**05 37 11.8**	**-2.1**
MSFE	**Esma-Masafi**	**38.02**	**109**	P	**P**	**05 31 21.3**	**-0.5**
CHM	**Chimkent**	**38.05**	**76**	*e*P	**P**	**05 31 21.9**	**+0.1**
FAQ	**Al Faqa, Dubai**	**38.07**	**110**	*i* P	**P**	**05 31 21.7**	**-0.5**
	SNR=9.9						
FAQ	**Al Faqa, Dubai**	**38.07**	**110**	P	**P**	**05 31 23.0**	**+0.8**
	SNR=5.6						
FAQ				P	**P**	**05 31 23.0**	**+0.8**
	SNR=5.6						
FAQ				S	**S**	**05 37 13.7**	**-0.9**
FAQ				S	**S**	**05 37 13.7**	**-0.9**
MDH	**Madha**	**38.15**	**109**	P	**P**	**05 31 22.3**	**-0.6**
MDH				P	**P**	**05 31 22.7**	**-0.2**
MDH				S	**S**	**05 37 14.5**	**-1.5**
MDH				S	**S**	**05 37 14.7**	**-1.2**
UOSS	**Minazif**	**38.33**	**109**	P	**P**	**05 31 24.1**	**-0.3**
UOSS	**Minazif**	**38.33**	**109**	*i* P	**P**	**05 31 23.7**	**-0.7**
	SNR=5.8						
UOSS	**Minazif**	**38.33**	**109**	P	**P**	**05 31 24.0**	**-0.3**
KK31	**Karatay Array**	**38.34**	**74**	*i* P	**P**	**05 31 24.8**	**+0.5**
KKAR	**Karatay Array**	**38.34**	**74**	P	**P**	**05 31 24.8**	**+0.5**
KKAR	**Karatay Array**	**38.34**	**74**	P	**P**	**05 31 24.8**	**+0.5**
HATD	**Hatta, Dubai**	**38.37**	**109**	*i* P	**P**	**05 31 24.1**	**-0.6**
	SNR=15						
HATD	**Hatta, Dubai**	**38.37**	**109**	P	**P**	**05 31 24.1**	**-0.6**
	SNR=8.2						
HATD				P	**P**	**05 31 24.1**	**-0.6**
	SNR=8.2						
HATD				S	**S**	**05 37 17.4**	**-1.8**
HATD				S	**S**	**05 37 17.4**	**-1.8**
IUG	**Iuzhnay**	**38.41**	**76**	⇑*i* P	**P**	**05 31 25.1**	**+0.2**
	comp=Z,95nm,1.7s						
ASHO	**Ashiyiah**	**38.41**	**110**	*i* P	**P**	**05 31 24.4**	**-0.8**
	SNR=16						
ASHO	**Ashiyiah**	**38.41**	**110**	P	**P**	**05 31 24.5**	**-0.6**
	SNR=11						
ASHO				P	**P**	**05 31 24.5**	**-0.6**
	SNR=11						
ASHO				S	**S**	**05 37 18.1**	**-1.9**
ASHO				S	**S**	**05 37 18.1**	**-1.9**
ALNE	**Al Ain**	**38.65**	**111**	*i* P	**P**	**05 31 27.0**	**-0.1**
	SNR=48						
ALNE	**Al Ain**	**38.65**	**111**	P	**P**	**05 31 27.1**	**0.0**
	SNR=24						
ALNE				S	**S**	**05 37 20.7**	**-2.8**
JASK	**Jask - Hormozg**	**38.81**	**106**	P	**P**	**05 31 28.4**	**0.0**
JASK				S	**S**	**05 37 26.1**	**+0.1**
DZA	**Taraz**	**38.98**	**74**	*e*P	**P**	**05 31 29.8**	**+0.2**
SOHO	**SOHO**	**39.11**	**110**	*i* P	**P**	**05 31 30.4**	**-0.4**
	SNR=18						
SOHO	**SOHO**	**39.11**	**110**	P	**P**	**05 31 30.5**	**-0.4**
SOHO				P	**P**	**05 31 30.5**	**-0.4**
SHAA	**Shahritus**	**39.17**	**83**	P	**P**	**05 31 31.6**	**+0.2**
SHAA				IAmb	IAmb	05 31 52.7	
	comp=Z,91nm,1.1s						
UMZA	**Um Al Zommool**	**39.21**	**113**	P	**P**	**05 31 31.4**	**-0.4**
UMZA				P	**P**	**05 31 31.4**	**-0.4**
UMZA				S	**S**	**05 37 29.5**	**-2.5**
UMZA				S	**S**	**05 37 29.5**	**-2.5**
CHGR	**Chuyangaron**	**39.36**	**81**	IAmb	IAmb	05 31 37.6	
	comp=Z,109nm,0.8s						
CHGR	**Chuyangaron**	**39.36**	**81***c*	*i*P	**P**	**05 31 33.9**	**+0.9**
CHGR				pmax	pmax		
	comp=Z,119nm,0.8s						
ARQ	**Araqi**	**39.65**	**111**	P	**P**	**05 31 35.3**	**-0.2**
	SNR=17						
ARQ				S	**S**	**05 37 36.3**	**-2.4**
SFJD	**Kangerlussuaq**	**39.91**	**326**	LR	LR	05 47 21.2	
	comp=Z,2μm,21.8s,baz=86,slow=35						
SFJD	**Kangerlussuaq**	**39.91**	**326**	P	**P**	**05 31 36.3**	**-0.8**
SFJD	**Kangerlussuaq**	**39.91**	**326**	P	**P**	**05 31 36.3**	**-0.8**
SFJD				pmax	pmax		
	comp=Z,58nm,1.3s						
BTLS	**Baital**	**39.92**	**70**	*e*P	**P**	**05 31 37.9**	**+0.3**
GAR	**Garm**	**39.99**	**80**	P	**P**	**05 31 39.6**	**+1.3**
HOQ	**Hoqain**	**40.00**	**110**	P	**P**	**05 31 38.0**	**-0.4**
	SNR=12						
HOQ				P	**P**	**05 31 38.0**	**-0.4**
	SNR=12						
HOQ				S	**S**	**05 37 40.7**	**-3.1**
HOQ				S	**S**	**05 37 40.7**	**-3.1**
ILULI	**Ilulissat**	**40.04**	**329**	*i* P	**P**	**05 31 36.3**	**-1.8**
ILULI				IAmb	IAmb	05 31 42.2	
	comp=Z,86nm,1.4s						
SAATT	**Saattut**	**40.24**	**332**	*i* P	**P**	**05 31 39.4**	**-0.3**
SAATT				IAmb	IAmb	05 31 40.4	
	comp=Z,37nm,0.9s						
SAQQ	**Saqqaq**	**40.34**	**330**	*i* P	**P**	**05 31 40.2**	**-0.3**
SAQQ				IAmb	IAmb	05 31 41.6	
	comp=Z,37nm,0.8s						
BSY	**Bisya**	**40.51**	**111**	P	**P**	**05 31 42.0**	**-0.6**
	SNR=11						
BSY				S	**S**	**05 37 49.2**	**-2.3**
BIDO	**Bidbid**	**40.58**	**109**	P	**P**	**05 31 42.1**	**-1.0**
	SNR=9.3						
EKS2	**Erkin-Say**	**40.71**	**73**	P	**P**	**05 31 45.4**	**+1.2**
	SNR=73						
NEEM	**North Greenlan**	**40.71**	**342**	*i* P	**P**	**05 31 43.6**	**-0.4**
NEEM				IAmb	IAmb	05 31 44.7	
	comp=Z,92nm,1.3s						
ARSB	**Arslanbob**	**40.75**	**75**	IAmb	IAmb	05 31 51.9	
	comp=Z,98nm,1.1s						
KURBB	**Kurchatov Arra**	**40.80**	**60**	P	**P**	**05 31 44.8**	**+0.1**
	comp=Z,16nm,0.8s,baz=290,slow=9.5,SNR=91						
KURBB				PP	**PP**	**05 33 18.7**	**+0.3**
	comp=Z,7.0nm,0.8s,baz=289,slow=11,SNR=5.2						
KURBB				PKiKP	**PKiKP**	**05 40 52.9**	**-1.1**
	comp=Z,0.4nm,0.2s,baz=283,slow=1.7,SNR=4.5						
KURBB				LR	LR	05 50 08.4	
	comp=Z,1μm,20.6s,baz=218,slow=38						
	comp=Z,16nm,0.8s						
KURBB	**Kurchatov Arra**	**40.80**	**60**	P	**P**	**05 31 44.5**	**-0.1**
KURK	**Kurchatov**	**40.82**	**60**	P	**P**	**05 31 44.7**	**-0.1**
KURK	**Kurchatov**	**40.82**	**60**	IAMs_20	IAMs_20	05 49 32.2	
	comp=Z,2μm,20.0s						
KURK	**Kurchatov**	**40.82**	**60**	P	**P**	**05 31 44.7**	**-0.1**
KURK				pmax	pmax		
	comp=Z,58nm,1.0s						
KURK				MLR	MLR		
	comp=Z,2μm,20.0s						
KURK	**Kurchatov**	**40.82**	**60**	P	**P**	**05 31 44.1**	**-0.7**
SMDO	**Samad**	**40.85**	**109**	P	**P**	**05 31 45.1**	**-0.4**
SMDO				P	**P**	**05 31 45.1**	**-0.4**
SMDO				P	**P**	**05 31 45.1**	**-0.4**
	SNR=21						
SMDO				P	**P**	**05 31 45.1**	**-0.4**
	SNR=21						
GDH	**Godhavn**	**40.91**	**329**	*i* P	**P**	**05 31 44.7**	**-0.5**
GDH				IAML		05 31 46.1	
	comp=Z,43nm,1.0s						
NIAQ	**Niaqornat**	**40.91**	**332**	*i* P	**P**	**05 31 45.3**	**0.0**
NIAQ				IAmb	IAmb	05 31 46.6	
	comp=Z,109nm,1.1s						
USP	**Ospenovka**	**40.94**	**72**	P	**P**	**05 31 46.9**	**+1.0**
	SNR=41						
SGDS	**Segindy**	**40.95**	**72**	*e*P	**P**	**05 31 46.2**	**+0.2**
WSAR	**Wadi Sarin**	**41.11**	**109**	P	**P**	**05 31 48.2**	**+0.7**
	SNR=9.0						
WSAR				S	**S**	**05 37 59.2**	**-1.2**
ATD	**Arta Tunnel**	**41.16**	**138**	LR	LR	05 49 31.2	
	comp=Z,28nm,20.0s,baz=348,slow=37						
ATD	**Arta Tunnel**	**41.16**	**138**	P	**P**	**05 31 50.5**	**+2.4**
ATD	**Arta Tunnel**	**41.16**	**138**	P	**P**	**05 31 50.4**	**+2.4**
	SNR=13						
AAK	**Ala-Archa**	**41.20**	**73**	LR	LR	05 51 11.4	
	comp=Z,728nm,18.1s,baz=308,slow=40						
AAK	**Ala-Archa**	**41.20**	**73**	P	**P**	**05 31 49.5**	**+1.3**
	SNR=58						
AAK	**Ala-Archa**	**41.20**	**73**	P	**P**	**05 31 48.6**	**+0.4**
AAK				IAmb	IAmb	05 31 53.8	
	comp=Z,129nm,1.3s						
AAK	**Ala-Archa**	**41.20**	**73**	*i* P	**P**	**05 31 48.8**	**+0.5**
	SNR=23						
AAK	**Ala-Archa**	**41.20**	**73***c*	*i*P	**P**	**05 31 49.3**	**+1.1**
AAK				pmax	pmax		
	comp=Z,128nm,1.4s						
AAK	**Ala-Archa**	**41.20**	**73**	P	**P**	**05 31 49.3**	**+1.1**
AAK	**Ala-Archa**	**41.20**	**73**	⇑P	**P**	**05 31 49.3**	**+1.1**
CHMS	**Chumysh**	**41.22**	**72**	P	**P**	**05 31 49.7**	**+1.5**
	SNR=13						
FRU1	**Bishkek**	**41.22**	**72**	IAmb	IAmb	05 31 52.6	
	comp=Z,83nm,

MDOK **Medeo** 42.67 71 *e*P P 05 32 00.4 +0.2
DMTO **DMTO** 42.76 118 P P 05 32 00.8 -0.2
TDK **Taldyqorghan** 42.78 68 *e*P P 05 32 01.2 +0.3
comp=Z,102nm,1.6s
SHAO **Shalim** 42.95 117 P P 05 32 02.5 -0.1
DBIC **Dimbokro** 43.05 211 P P 05 32 03.0 -0.4
comp=Z,26nm,0.7s,baz=41,slow=8.4,SNR=40
DBIC PP PP 05 33 45.1 +1.7
comp=Z,17nm,1.2s,baz=34,slow=11,SNR=4.5
DBIC LR LR 05 51 35.5
comp=Z,2µm,18.8s,baz=41,slow=38
comp=Z,26nm,0.7s
DBIC **Dimbokro** 43.05 211 P P 05 32 03.1 -0.2
DBIC IAmb IAmb 05 32 04.4
comp=Z,103nm,1.3s
DBIC **Dimbokro** 43.05 211 P P 05 32 03.2 -0.2
DBIC pmax pmax
comp=Z,103nm,1.3s
ZAA0 **Zalesovo Array** 43.40 53 P P 05 32 06.4 +0.5
ZALV **Zalesovo Beam** 43.40 53 P P 05 32 06.1 +0.3
comp=Z,38nm,0.8s,baz=284,slow=8.8,SNR=99
ZALV PP PP 05 33 47.9 +1.5
comp=Z,14nm,0.9s,baz=297,slow=9.8,SNR=3.9
ZALV LR LR 05 51 01.4
comp=Z,1µm,19.1s,baz=281,slow=37
comp=Z,38nm,0.8s
KSH2 **Kashi** 43.52 77 P P 05 32 08.5 +1.3
KSH2 pmax pmax
comp=Z,49nm,1.2s
KSH2 pmax pmax
comp=Z,590nm,4.0s
KSH2 L L
comp=Z,1µm,18.2s
KSH2 L L
comp=Z,1µm,17.2s
KSH2 L L
comp=Z,1µm,18.2s
SATY **Saty** 43.61 70⇑ *i*P P 05 32 08.0 +0.1
comp=Z,69nm,1.8s
UZB **Uzynbulak** 43.97 70⇑ *i*P P 05 32 10.8 0.0
comp=Z,35nm,1.3s
PDGK **Podgornoye** 44.20 69 P P 05 32 12.9 +0.3
SHLS **Shalkode** 44.26 70 *e*P P 05 32 15.4 +2.3
comp=Z,63nm,1.0s
MAKZ **Makanchi** 44.31 64 P P 05 32 13.7 +0.4
MAKZ IAMs_20 IAMs_20 05 52 06.7
comp=Z,2µm,19.0s
MAKZ **Makanchi** 44.31 64 P P 05 32 13.7 +0.4
MK31 **Makanchi Array** 44.51 64 *c i*P P 05 32 15.1 +0.2
MKAR **Makanchi Array** 44.51 64 P P 05 32 15.3 +0.4
comp=Z,47nm,0.8s,baz=294,slow=6.1,SNR=306
MKAR PcP PP 05 33 58.6 +0.1
comp=Z,12nm,0.9s,baz=308,slow=4.1,SNR=3.6
MKAR LR LR 05 52 23.9
comp=Z,1µm,21.5s,baz=287,slow=38
comp=Z,47nm,0.8s
TULEG **Thule** 44.71 341 IAmb IAmb 05 32 17.2
comp=Z,70nm,1.2s
TULEG **Thule** 44.71 341 *i* P P 05 32 15.7 -0.4
TULEG IAmb IAmb 05 32 16.8
comp=Z,70nm,1.2s
NIL **Nilore** 44.77 85 P P 05 32 17.6 +0.5
NIL IAmb IAmb 05 32 22.8
comp=Z,206nm,1.9s
NIL **Nilore** 44.77 85 P P 05 32 17.6 +0.5
NIL pmax pmax
comp=Z,206nm,1.9s
NIL **Nilore** 44.77 85 P P 05 32 18.9 +1.8
WUS **Wushi** 44.99 72 IAmb IAmb 05 32 21.2
comp=Z,79nm,1.3s
LODK **Lodwar** 45.56 152 P P 05 32 23.9 +0.3
LODK IAmb IAmb 05 32 29.5
comp=Z,158nm,1.5s
LODK **Lodwar** 45.56 152 P P 05 32 25.1 +1.5
SNR=17
SRNI **Srinagar** 45.63 83 *e*P P 05 32 24.0 -0.1
ZSN **Zaisan** 45.84 62⇑ *i*P P 05 32 25.6 +0.2
comp=Z,78nm,1.5s
JMU **Jammu** 46.35 85⇑ *e*P P 05 32 30.2 +0.6
JASL **Jaisalmer** 47.08 94 *e*P P 05 32 35.7 +0.3
JASL IAmb IAmb 05 32 40.2
comp=Z,114nm,1.0s
ALCI **Alchi Leh** 47.19 82 *e*P P 05 32 37.8 +1.2
ALCI IAmb IAmb 05 32 41.2
comp=Z,26nm,0.8s
THN **Thein Dam** 47.19 85 *e*P P 05 32 36.6 +0.3
TSSA **Tissa** 47.24 84 *e*P P 05 32 37.1 +0.3
SRGN **SRI GANGA NAGA** 47.34 89 *e*P P 05 32 37.2 -0.2
DHRM **DHARAMSHALA** 47.67 85 *e*P P 05 32 40.6 +0.4
DHRM IAmb IAmb 05 32 46.2
comp=Z,100nm,0.9s
FRB **Frobisher Bay** 47.89 323 LR LR 05 52 06.9
comp=Z,2µm,21.2s,baz=71,slow=35
POIN **Pond Inlet** 48.04 336 P P 05 32 42.0 -0.2
MBAR **Mbarara** 48.10 160 LR LR 05 56 18.4
comp=Z,1µm,19.1s,baz=350,slow=40
MBAR **Mbarara** 48.10 160 P P 05 32 43.3 -0.2
MBAR IAmb IAmb 05 32 47.8
comp=Z,163nm,2.0s
MBAR **Mbarara** 48.10 160 *c i*P P 05 32 44.1 +0.6
MBAR pmax pmax
comp=Z,60nm,1.8s
MBAR **Mbarara** 48.10 160 P P 05 32 44.3 +0.8
MBAR P P 05 32 44.3 +0.8
BHK **Bhakra** 48.22 85 *e*P P 05 32 47.3 +3.1
CGRH **CHANDIGARH** 48.88 86 *e*P P 05 32 49.3 0.0
SMLA **Simla** 48.92 85 *e*P P 05 32 49.2 -0.3
SMLA IAmb IAmb 05 32 55.1
comp=Z,82nm,0.4s
HNLY **HANLEY** 49.23 82 *e*P P 05 32 53.5 +1.0
WMQ **Urumqi** 49.25 65 *e*P P 05 32 53.3 +1.2
WMQ sP sP 05 33 00.4 +3.6
WMQ pmax pmax
comp=Z,44nm,1.3s
WMQ pmax pmax
comp=Z,560nm,3.7s
WMQ L L
comp=Z,4µm,12.7s
WMQ L L
comp=Z,4µm,15.7s
WMQ L L
comp=Z,750nm,17.3s
KKR **Kurukshetra** 49.37 87 *e*P P 05 32 52.9 -0.1
KLP **Kalpa** 49.44 84 *e*P P 05 32 53.8 -0.2
KLP IAmb IAmb 05 33 00.1
comp=Z,115nm,1.2s
RTK **Rohtak** 49.64 88 *e*P P 05 32 55.3 +0.2
AJM **Ajmer** 49.99 92 *e*P P 05 32 57.8 -0.1
AJM IAmb IAmb 05 33 02.0
comp=Z,90nm,1.2s
DDI **Dehra Dun** 50.01 85 *e*P P 05 32 58.1 +0.1
DDI IAmb IAmb 05 33 01.5
comp=Z,73nm,0.9s
BHGR **Bahadurgarh** 50.21 88⇑ *e*P P 05 32 58.9 -0.6
KUDL **Kundal** 50.23 89 *e*P P 05 32 59.4 -0.2
NRLA **Narela** 50.26 88 *e*P P 05 32 59.9 0.0
NPLP **NPLP New Delhi** 50.40 88 *e*P P 05 33 01.0 +0.1
NPLP IAmb IAmb 05 33 05.7
comp=Z,22nm,0.9s
NDI **New Delhi** 50.41 88 *e*P P 05 33 00.6 -0.3
NDI IAmb IAmb 05 33 04.8
comp=Z,111nm,1.5s
KMBO **Kilima Mbogo** 50.45 152 P P 05 33 02.5 +0.9
baz=342,slow=8.6
KMBO LR LR 05 57 38.0
comp=Z,329nm,19.9s,baz=312,slow=40
LDR **Lodi Road** 50.47 88 *e*P P 05 33 01.0 -0.4
UDPR **Udaipur** 50.52 94 *e*P P 05 33 02.5 +0.6
UDPR IAmb IAmb 05 33 04.6
comp=Z,33nm,1.1s
ILON **Igloolik, Nuna** 50.53 333 P P 05 33 00.9 -0.4
SONA **Sohna** 50.57 88 *e*P P 05 33 00.5 -1.7
MERT **Meerut** 50.59 87 *e*P P 05 33 02.4 0.0
SCHQ **Schefferville** 50.64 312 P P 05 33 01.4 -1.0
comp=Z,19nm,0.6s,baz=65,slow=7.4,SNR=30
SCHQ LR LR 05 52 23.8
comp=Z,978nm,21.5s,baz=50,slow=34
comp=Z,19nm,0.6s
SCHQ **Schefferville** 50.64 312 P P 05 33 01.4 -1.0
ASOR **Ausora** 50.75 87⇑ *e*P P 05 33 02.6 -1.0
JOSI **Joshimath** 50.92 84 *e*P P 05 33 05.2 +0.1
JOSI IAmb IAmb 05 33 09.4
comp=Z,152nm,1.0s
RES **Resolute Bay** 51.40 341 LR LR 05 55 48.6
comp=Z,611nm,18.3s,baz=35,slow=37
KIBK **Kibwezi** 51.85 152 P P 05 33 12.1 +0.2
KIBK IAmb IAmb 05 33 16.5
comp=Z,138nm,1.9s
KIBK **Kibwezi** 51.85 152 P P 05 33 13.4 +1.5
SNR=18
KNGR **Kungurtug, Tuv** 51.88 53 *d i*P P 05 33 13.3 +1.5
KNGR pmax pmax
comp=Z,97nm,1.3s
PTH **Pithoragarh** 51.95 85 *e*P P 05 33 12.9 +0.2
PTH IAmb IAmb 05 33 24.5
comp=Z,36nm,1.1s
LGTI **Lohaghat** 51.98 85 *e*P P 05 33 12.8 -0.2
FRKB **FARRUKHABAD** 52.84 87⇑ *e*P P 05 33 18.5 -0.6
GUNA **GUNA** 53.00 92 *e*P P 05 33 19.8 -0.6
MOY **Mondy** 53.27 51 *e*P P 05 33 22.8 +0.7
MOY pmax pmax
comp=Z,51nm,2.0s
JHNI **Jhansi** 53.38 90 *e*P P 05 33 22.1 -1.1
JHNI IAmb IAmb 05 33 25.3
comp=Z,39nm,0.7s
TIXI **Tiksi** 53.63 21 LR LR 05 59 06.0
comp=Z,2µm,18.5s,baz=330,slow=39
TIXI **Tiksi** 53.63 21 P P 05 33 25.0 +0.7
TIXI IAmb IAmb 05 33 27.0
comp=Z,170nm,2.0s
TIXI **Tiksi** 53.63 21 IAMs_20 IAMs_20 05 59 46.5
comp=Z,1µm,20.0s
TIXI **Tiksi** 53.63 21⇑ *i*P P 05 33 25.5 +1.2
TIXI pmax pmax
comp=Z,78nm,2.0s
BHPL **Bhopal** 53.97 93 *e*P P 05 33 26.8 -0.8
BHPL IAmb IAmb 05 33 30.7
comp=Z,69nm,1.3s
NRDN **NARMADA NAGAR** 54.13 94 *e*P P 05 33 25.5 -3.2
NRDN IAmb IAmb 05 33 30.4
comp=Z,62nm,1.3s
LKN **LUCKNOW** 54.15 87 *e*P P 05 33 28.6 -0.2
BRCI **Bahraich** 54.15 86 *e*P P 05 33 29.1 +0.3
BNDA **BANDA** 54.57 89⇓ *e*P P 05 33 31.3 -0.5
POO **Poona** 54.64 100 *e*P P 05 33 31.6 -0.8
POO IAmb IAmb 05 33 35.5
comp=Z,40nm,0.8s
TLY **Talaya** 54.68 50 LR LR 05 59 35.9
comp=Z,987nm,19.1s,baz=308,slow=39
TLY **Talaya** 54.68 50 P P 05 33 33.0 +0.6
TLY IAmb IAmb 05 33 34.8
comp=Z,41nm,0.9s
TLY **Talaya** 54.68 50 *c i*P P 05 33 33.6 +1.2
TLY pmax pmax
comp=Z,64nm,1.1s
TLY **Talaya** 54.68 50 P P 05 33 33.5 +1.2
IRK **Irkutsk** 54.72 49 *e*P P 05 33 32.2 -0.4
IRK pmax pmax
comp=Z,132nm,1.9s
ZAK **Zakamensk** 55.17 51 *e*P P 05 33 35.5 -0.5
ZAK pmax pmax
comp=Z,33nm,1.8s
AKL **Akola** 55.36 96⇓ *e*P P 05 33 39.2 +1.6
D62A **Allapoint, All** 55.69 304 IAmb IAmb 05 33 41.1
comp=Z,62nm,1.2s
KAD **Karad** 55.71 101 *e*P P 05 33 37.1 -3.1
KAD IAmb IAmb 05 33 41.5
comp=Z,33nm,0.8s
G65A **Princeton** 55.84 302 IAmb IAmb 05 34 19.8
comp=Z,141nm,1.8s
VLK **Valmikinagar** 55.84 84 *e*P P 05 33 41.7 +0.7
E62A **Clayton Lake** 56.21 304 IAmb IAmb 05 33 44.6
comp=Z,45nm,1.3s
BOD **Bodaibo** 56.45 39 *e*P P 05 33 44.1 -0.8
BOD pmax pmax
comp=Z,50nm,1.7s
NGP **Nagpur** 56.47 94 *e*P P 05 33 44.3 -1.2
NGP IAmb IAmb 05 33 48.4
comp=Z,42nm,1.1s
STMR **SITAMARHI** 57.21 84 *e*P P 05 33 51.5 +0.7
EVN **Everest** 57.53 82 IAmb IAmb 05 33 58.5
comp=Z,30nm,0.9s
GOMU **GeErMu** 57.96 69 P P 05 33 55.3 -1.1
GOMU S S 05 41 55.3 -1.4
GOMU pmax pmax
comp=Z,49nm,0.9s
GOMU L L
comp=Z,1µm,16.1s
GOMU L L
comp=Z,1µm,14.7s
SONM **Songino Array** 58.28 52 P P 05 33 58.7 +0.6
comp=Z,32nm,0.9s,baz=290,slow=8.4,SNR=123
SONM LR LR 05 59 54.6
comp=Z,1µm,18.7s,baz=298,slow=37
comp=Z,32nm,0.9s
SONM **Songino Array** 58.28 52 P P 05 33 58.5 +0.4
SONM IAmb IAmb 05 34 04.1
comp=Z,107nm,1.4s
SONM **Songino Array** 58.28 52 P P 05 33 58.6 +0.4
SONM pmax pmax
comp=Z,107nm,1.4s
GAYA **Gaya** 58.42 86 *e*P P 05 33 58.5 -0.7
GAYA IAmb IAmb 05 34 02.5
comp=Z,107nm,1.2s
ULN **Ulaanbaatar** 58.62 52 P P 05 34 00.7 +0.1
ULN IAmb IAmb 05 34 06.7
comp=Z,45nm,1.2s
ULN **Ulaanbaatar** 58.62 52 IAMs_20 IAMs_20 05 58 32.8
comp=Z,1µm,20.0s
ULN **Ulaanbaatar** 58.62 52 *c i*P P 05 34 01.2 +0.6
ULN pmax pmax
comp=Z,52nm,1.3s
ULN **Ulaanbaatar** 58.62 52 P P 05 34 01.6 +1.0
ULN P P 05 34 01.6 +1.0
ULN **Ulaanbaatar** 58.62 52 P P 05 34 01.2 +0.6
comp=Z,2µmcomp=Z,124nm,1.3s
HYB **Hyderabad** 58.65 97 *e*P P 05 34 01.3 +0.3
I62A **Tamworth** 58.82 302 IAmb IAmb 05 34 53.7
comp=Z,39nm,1.2s
GTA2 **Gaotai** 59.19 64 P P 05 34 05.4 +0.8
GTA2 PcP PcP 05 34 54.4 +1.4
GTA2 pmax pmax
comp=Z,37nm,0.9s
GTA2 L L
comp=Z,2µm,16.8s
GTA2 L L
comp=Z,2µm,17.1s
GTA2 L L
comp=Z,950nm,16.2s
A36M **Sachs Harbour** 59.28 347 IAmb IAmb 05 34 06.4
comp=Z,58nm,0.8s
A36M IAMs_20 IAMs_20 05 58 51.0
comp=Z,1µm,22.0s
A36M **Sachs Harbour** 59.28 347 P P 05 34 05.3 +0.8
baz=31
TRQ **Mont Tremblant** 59.31 306 IAmb IAmb 05 34 54.8
comp=Z,21nm,0.8s
LSA **Lhasa** 59.42 78 IAmb IAmb 05 34 11.2
comp=Z,54nm,0.8s
LSA **Lhasa** 59.42 78 P P 05 34 05.0 -1.8
LSA S S 05 42 14.6 -1.6
LSA pmax pmax
comp=Z,41nm,0.9s
LSA L L
comp=Z,410nm,18.0s
LSA L L
comp=Z,240nm,15.8s
LSA L L
comp=Z,530nm,18.0s
BCX **Boston College** 59.62 301 IAMs_20 IAMs_20 05 53 44.9
comp=Z,1µm,18.0s
M65A **Busby, Falmout** 59.76 300 P P 05 34 08.7 +0.4
baz=54
YAK **Yakutsk** 60.06 30 LR LR 06 03 09.5
comp=Z,727nm,18.1s,baz=308,slow=39
YAK **Yakutsk** 60.06 30 P P 05 34 09.7 -0.4
YAK **Yakutsk** 60.06 30 IAMs_20 IAMs_20 06 02 30.6
comp=Z,851nm,22.0s
YAK **Yakutsk** 60.06 30 *c i*P P 05 34 09.5 -0.6
YAK *e**PP pP 05 34 12.8 -0.8
YAK *e* 05 34 55.1
YAK *e* 05 36 21.8
YAK *e*S S 05 42 23.4 +1.0
YAK *e* 05 44 00.0
YAK *e*SS SS 05 46 21.5 +3.2
YAK pmax pmax
comp=Z,37nm,1.2s
YAK pmax pmax
comp=N,17nm,1.1s
YAK pmax pmax
comp=E,18nm,0.8s
YAK pmax pmax
comp=Z,169nm,3.4s
YAK pmax pmax
comp=N,96nm,3.3s
YAK pmax pmax
comp=E,97nm,4.2s
YAK smax smax
comp=N,51nm,2.8s
YAK smax smax
comp=E,53nm,2.8s
YAK MLR MLR
comp=Z,779nm,20.0s
YAK MLR MLR
comp=N,762nm,18.0s
YAK MLR MLR
comp=E,641nm,19.0s
COBR **COOCHBEHAR** 60.40 82⇑ *e*P P 05 34 13.2 +0.2
L61B **Northampton** 60.45 302 IAmb IAmb 05 34 15.2
comp=Z,38nm,1.2s
VJD **Vijayawada** 60.71 96 *e*P P 05 34 14.9 -0.3
VJD IAmb IAmb 05 34 22.4
comp=Z,41nm,0.9s
RAGD **RAYAGADA** 60.82 92 *e*P P 05 34 15.7 -0.2
RAGD IAmb IAmb 05 34 19.3
comp=Z,59nm,1.3s
TRY **Troy** 60.87 302 IAmb IAmb 05 34 18.2
comp=Z,36nm,1.2s
J59A **Piesco** 60.91 304 IAmb IAmb 05 35 17.3
comp=Z,55nm,1.7s
DHUB **DHUBRI** 60.95 82 *i* Pg P 05 34 16.1 -0.6
DHUB IAmb IAmb 05 34 19.3
comp=Z,16nm,0.7s
TAWA **Tawang** 61.23 79 *e*P P 05 34 20.0 +0.9
TAWA IAmb IAmb 05 34 23.3
comp=Z,31nm,0.8s
MSEY **Mahe Island** 61.36 134 P P 05 34 19.4 -0.2
MSEY IAmb IAmb 05 34 20.7
comp=Z,40nm,1.1s
MSEY **Mahe Island** 61.36 134 P P 05 34 19.4 -0.2
MSEY **Mahe Island** 61.36 134 P P 05 34 19.4 -0.2
MSEY pmax pmax
comp=Z,40nm,1.1s
MSEY **Mahe Island** 61.36 134 P P 05 34 19.8 +0.3
KSCT **Kent School, K** 61.36 301 IAmb IAmb 05 34 21.3
comp=Z,86nm,1.5s
C36M **Paulatuk** 61.36 345 IAmb IAmb 05 34 19.8
comp=Z,38nm,0.8s
C36M **Paulatuk** 61.36 345 P P 05 34 19.2 +0.4
baz=31,SNR=40
BBSR **BB Station** 61.52 288 P P 05 34 20.5 0.0
BBSR IAmb IAmb 05 34 21.9
comp=Z,58nm,1.1s
VIS **Vishakhapatnam** 61.76 93 *e*P P 05 34 21.4 -0.8
VIS IAmb IAmb 05 34 25.4
comp=Z,35nm,1.0s
BWNR **Bhubaneshwar** 61.80 89 *e*P P 05 34 22.3 -0.2
J57A **Williamstown** 61.81 304 IAmb IAmb 05 34 24.0
comp=Z,63nm,1.6s
LSZ **Lusaka** 61.88 167 LR LR 06 02 58.1
comp=Z,844nm,21.1s,baz=353,slow=38
LSZ **Lusaka** 61.88 167 P P 05 34 24.0 +1.0
LSZ **Lusaka** 61.88 167 IAMs_20 IAMs_20 06 02 36.9
comp=Z,884nm,22.0s
LSZ **Lusaka** 61.88 167 P P 05 34 24.0 +1.0
LSZ pmax pmax
comp=Z,56nm,0.9s
LSZ MLR MLR
comp=Z,900nm,22.0s
LSZ **Lusaka** 61.88 167 P P 05 34 24.5 +1.4
LSZ P P 05 34 24.5 +1.4
GUWA **GUWAHATI** 62.00 80⇑ *e*P P 05 34 23.4 -0.4
CPNY **Central Park** 62.22 301 P P 05 34 24.8 -0.3
SALM **Salem** 62.40 102 *e*P P 05 34 25.6 -1.0
SALM IAmb IAmb 05 34 27.9
comp=Z,67nm,1.3s
TEZP **TEZPUR** 62.49 79 *e*P P 05 34 26.5 -0.6
TEZP IAmb IAmb 05 34 27.7
comp=Z,30nm,1.1s
SHL **Shillong** 62.54 81 IAmb IAmb 05 34 30.2
comp=Z,29nm,0.8s
SHL **Shillong** 62.54 81 P P 05 34 26.5 -1.1
SNR=16
SHL **Shillong** 62.54 81 *e*P P 05 34 26.5 -1.1
SHL IAmb IAmb 05 34 28.9
comp=Z,22nm,0.8s
BINY **Binghamton** 62.55 303 IAmb IAmb 05 34 29.2
comp=Z,37nm,1.3s
HMDM **Hanimaadhoo** 62.63 110 P P 05 34 27.1 -1.0
SNR=5.4
HMDM **Hanimaadhoo** 62.63 110 P P 05 34 27.0 -1.0
comp=Z,2µmcomp=Z,93nm,1.1s
ZIRO **ZIRO** 62.63 78 *e*P P 05 34 28.2 -0.1
ZIRO IAmb IAmb 05 34 31.2
comp=Z,66nm,0.4s
SADO **Sadowa** 62.76 307 LR LR 06 00 58.4
comp=Z,726nm,18.1s,baz=78,slow=35
SADO **Sadowa** 62.76 307 IAmb IAmb 05 34 29.4
comp=Z,83nm,1.6s
ITAN **ITANAGAR** 62.79 78 *e*P P 05 34 29.4 +0.3
ITAN IAmb IAmb 05 34 32.8
comp=Z,91nm,0.8s
MDRS **Chennai** 62.83 99 *e*P P 05 34 28.5 -1.0
KOD **Kodaikanal** 62.95 104 *e*P P 05 34 29.4 -1.2
KOD IAmb IAmb 05 34 34.0
comp=Z,74nm,0.7s
A21K **Barrow** 62.97 357 P P 05 34 31.0 +1.5
baz=5.8,SNR=17
AGT **Agartala** 63.18 83 *e*P P 05 34 31.0 -0.7
A22K **Sinclair Lake** 63.22 357 P P 05 34 32.8 +1.5
baz=7.1
PASG **PASIGHAT** 63.30 76 *e*P P 05 34 35.6 +3.1
PASG IAmb IAmb 05 34 38.1
comp=Z,15nm,0.6s
L56A **Greenwood** 63.50 304 IAmb IAmb 05 35 26.5
comp=Z,61nm,1.6s
D28M **Stokes Point** 63.58 350 P P 05 34 34.8 +1.2
baz=19
C26K **Camden Bay** 63.65 353 P P 05 34 35.6 +1.5
baz=15,SNR=24
SILR **SILCHAR** 63.68 81 *e*P P 05 34 36.4 +1.4
BELO **BELONIA** 63.74 83⇑ *e*P P 05 34 36.0 +0.6
M57A **Sunshine Farm,** 63.75 303 IAmb IAmb 05 34 37.3
comp=Z,81nm,1.4s
LZDM **Lanzhou Array** 63.81 65 P P 05 34 37.0 +0.9
comp=Z,12nm,0.6s,baz=305,slow=5.2,SNR=20
comp=Z,12nm,0.6s
B22K **Teshekpuk Lake** 63.82 356 IAmb IAmb 05 34 37.9
comp=Z,43nm,1.1s
B22K **Teshekpuk Lake** 63.82 356 P P 05 34 36.6 +1.4
baz=8.2,SNR=31
LZH **Lanzhou** 63.82 64 P P 05 34 37.1 +1.1
LZH sP sP 05 34 43.3 +2.5
LZH S S 05 43 11.6 +0.4
LZH pmax pmax
comp=Z,86nm,1.0s
LZH pmax pmax
comp=Z,690nm,4.6s
LZH L L
comp=Z,1µm,13.6s
LZH L L
comp=Z,1µm,14.9s
LZH L L
comp=Z,1µm,15.8s
N58A **Sunbury** 63.83 302 IAmb IAmb 05 34 36.6
comp=Z,71nm,1.4s
C27K **Jago River** 63.83 352 IAmb IAmb 05 34 37.8
comp=Z,49nm,1.0s
C27K **Jago River** 63.83 352 P P 05 34 36.6 +1.3
baz=16,SNR=53
INK **Inuvik** 63.85 348 LR LR 06 04 02.8
comp=Z,582nm,20.5s,baz=28,slow=38
INK **Inuvik** 63.85 348 IAmb IAmb 05 34 36.8
comp=Z,63nm,1.7s
INK **Inuvik** 63.85 348 P P 05 34 35.1 -0.3
baz=23,SNR=22
TRD **Trivandrum** 63.86 106 *e*P P 05 34 35.8 -0.5
TRD IAmb IAmb 05 34 38.6
comp=Z,65nm,1.0s
MOKO **MOKOCHONG** 63.86 78 *e*P P 05 34 36.2 -0.1
MOKO IAmb IAmb 05 34 40.3
comp=Z,80nm,1.0s
D27M **Malcolm River** 63.92 351 IAmb IAmb 05 34 37.7
comp=Z,24nm,0.9s
D27M **Malcolm River** 63.92 351 P P 05 34 37.1 +1.1
baz=18,SNR=9.2
KSANE **Kasane** 63.94 170 *i* P P 05 34 37.3 +0.6
KOHI **KOHIMA** 63.97 79 *e*P P 05 34 36.6 -0.5

KOHI IAmb IAmb 05 34 40.9
comp=Z,30nm,1.0s
MVL Millersville 64.14 301 IAmb IAmb 05 34 39.7
comp=Z,56nm,1.3s
C24K Franklin Bluff 64.15 354 IAmb IAmb 05 34 40.2
comp=Z,65nm,1.4s
C24K Franklin Bluff 64.15 354 P **P** **05 34 38.9 +1.5**
baz=12
C23K Itkillik River 64.16 355 P **P** **05 34 39.2 +1.7**
baz=10,SNR=56
A19K Wainwright 64.19 359 P **P** **05 34 39.3 +1.7**
baz=2.3,SNR=34
BILL Bilibino 64.20 12 P **P** **05 34 38.0 +0.2**
BILL IAmb IAmb 05 34 39.1
comp=Z,24nm,1.0s
BILL Bilibino 64.20 12 IAMs_20 IAMs_20 06 07 35.5
comp=Z,642nm,19.0s
BILL Bilibino 64.20 12*c i*P **P** **05 34 38.2 +0.4**
BILL pmax pmax
comp=Z,33nm,1.1s
PAGS Pennsylvania G 64.21 302 IAmb IAmb 05 34 38.9
comp=Z,86nm,1.5s
BRDH Bariadhala 64.25 83 LR LR 06 08 21.5
comp=Z,380nm,19.1s,baz=325,slow=41
B20K Meade River 64.30 357 P **P** **05 34 39.8 +1.5**
baz=5.3
D25K Kavik River 64.36 353 IAmb IAmb 05 34 40.5
comp=Z,21nm,0.9s
D25K Kavik River 64.36 353 P **P** **05 34 39.9 +1.0**
baz=14,SNR=24
E28M Babbage River 64.36 350 IAmb IAmb 05 34 44.4
comp=Z,69nm,1.6s
E28M Babbage River 64.36 350 P **P** **05 34 39.7 +0.8**
baz=19,SNR=32
E29M Blow River 64.37 350 P **P** **05 34 39.7 +0.8**
baz=20
HIA Hailar 64.39 45 IAmb IAmb 05 34 41.2
comp=Z,80nm,1.7s
HIA Hailar 64.39 45 IAMs_20 IAMs_20 06 05 14.8
comp=Z,1µm,22.0s
IMP Imphal 64.44 80 *e*P **P** **05 34 40.5 +0.5**
IMP IAmb IAmb 05 34 44.4
comp=Z,30nm,0.8s
E46A Sault Ste Mari 64.54 311 IAmb IAmb 05 34 41.0
comp=Z,22nm,0.9s
BTO2 Baotou 64.56 57 *e*P **P** **05 34 41.0 +0.3**
BTO2 pP **sP** **05 34 45.8 +0.2**
BTO2 sP **pP** **05 34 48.1 +3.8**
BTO2 S **S** **05 43 18.0 -2.1**
BTO2 SS **SS** **05 47 30.3 +0.5**
BTO2 pmax pmax
comp=Z,45nm,1.1s
BTO2 pmax pmax
comp=Z,820nm,5.1s
BTO2 L L
comp=Z,3µm,17.8s
BTO2 L L
comp=Z,3µm,14.2s
BTO2 L L
comp=Z,3µm,13.6s
B21K Ikpikpuk River 64.59 356 IAmb IAmb 05 34 42.4
comp=Z,30nm,1.0s
B21K Ikpikpuk River 64.59 356 P **P** **05 34 41.8 +1.5**
baz=7.3
SSPA Standing Stone 64.64 303 P **P** **05 34 41.0 -0.2**
SSPA IAmb IAmb 05 34 43.0
comp=Z,45nm,1.1s
F31M Tsiigehtchic 64.68 348 P **P** **05 34 41.4 +0.5**
baz=23,SNR=64
D24K Happy Valley 64.71 354 IAmb IAmb 05 34 43.0
comp=Z,32nm,1.1s
D24K Happy Valley 64.71 354 P **P** **05 34 42.4 +1.2**
baz=12
TSUM Tsumeb 64.81 178 LR LR 06 05 20.7
comp=Z,691nm,18.3s,baz=340,slow=38
TSUM Tsumeb 64.81 178 P **P** **05 34 42.3 -0.1**
TSUM IAmb IAmb 05 34 43.9
comp=Z,51nm,1.3s
TSUM Tsumeb 64.81 178 IAMs_20 IAMs_20 06 04 50.4
comp=Z,757nm,20.0s
ZEA Zeya 64.82 38 *e*P **P** **05 34 40.8 -1.2**
ZEA pmax pmax
comp=Z,10.0nm,0.7s
ZEA pmax pmax
comp=Z,100nm,7.9s
ZEA MLR MLR
comp=N,300nm,15.0s
ZEA MLR MLR
comp=E,500nm,15.0s
ZEA MLR MLR
comp=Z,800nm,15.0s
F30M Barrier River 64.82 348 P **P** **05 34 42.2 +0.3**
baz=21
YKAW3 Yellowknife Wh 64.92 337 IAmb IAmb 05 34 44.0
comp=Z,38nm,1.1s
YKAW1 Yellowknife Wh 64.96 337 IAmb IAmb 05 34 43.6
comp=Z,27nm,1.1s
YKA Yellowknife Ar 64.98 337 P **P** **05 34 42.9 0.0**
comp=Z,10.0nm,0.9s,baz=31,slow=6.5,SNR=113
YKA LR LR 06 02 02.1
YKA PKPPKP P'P'df 06 03 26.4 -8.6
comp=Z,1.0nm,0.9s,baz=236,slow=2.5,SNR=11
comp=Z,10.0nm,0.9s
E27K Coleen River 65.00 351 IAmb IAmb 05 34 45.5
comp=Z,68nm,1.5s
E27K Coleen River 65.00 351 P **P** **05 34 44.0 +1.0**
baz=17,SNR=25
D23K Nanushuk River 65.03 355 IAmb IAmb 05 34 45.9
comp=Z,58nm,0.9s
D23K Nanushuk River 65.03 355 P **P** **05 34 44.7 +1.6**
baz=10
C21K Knifeblade Rid 65.06 356 P **P** **05 34 45.1 +1.7**
baz=7.1,SNR=32
G31M Satah River 65.24 348 IAmb IAmb 05 34 45.1
comp=Z,27nm,0.8s
G31M Satah River 65.24 348 P **P** **05 34 44.3 -0.2**
baz=22,SNR=15
C19K Lookout Ridge 65.27 358 IAmb IAmb 05 34 47.1
comp=Z,38nm,1.2s
C19K Lookout Ridge 65.27 358 P **P** **05 34 46.3 +1.5**
baz=3.4,SNR=26
TOLK Toolik Lake Re 65.27 354 P **P** **05 34 46.1 +1.2**
baz=11,SNR=24
F28M Old Crow 65.35 350 P **P** **05 34 45.8 +0.5**
baz=18,SNR=28
P57A Homestead Farm 65.45 302 IAmb IAmb 05 34 48.3
comp=Z,57nm,1.3s
E25K Arctic Village 65.46 353 IAmb IAmb 05 34 51.8
comp=Z,40nm,1.4s
E25K Arctic Village 65.46 353 P **P** **05 34 47.0 +1.0**
baz=14,SNR=13
G30M tAoh Zraii Nji 65.47 348 IAmb IAmb 05 34 47.6
comp=Z,69nm,1.6s
G30M tAoh Zraii Nji 65.47 348 P **P** **05 34 46.1 0.0**
baz=21,SNR=15
HHC Hu-ho-hao-te 65.47 56⇑ *i*P **P** **05 34 47.3 +0.6**
HHC S **S** **05 43 30.6 -0.7**
HHC pmax pmax
comp=Z,28nm,1.7s
HHC pmax pmax
comp=Z,130nm,5.3s
HHC L L
comp=Z,1µm,12.3s
HHC L L
comp=Z,1µm,12.0s
HHC L L
comp=Z,2µm,12.5s
D20K Etivluk River 65.57 357 IAmb IAmb 05 34 48.6
comp=Z,27nm,0.9s
D20K Etivluk River 65.57 357 P **P** **05 34 48.0 +1.3**
baz=5.7,SNR=28
TBO Thunder Bay 65.63 315 IAmb IAmb 05 34 48.8
comp=Z,45nm,1.4s
E21K Killik River 65.73 356 P **P** **05 34 48.6 +0.8**
baz=7.7
PAMR Moraine State 65.73 304 IAmb IAmb 05 34 50.1
comp=Z,67nm,1.3s
F26K Sheenjek River 65.74 352 P **P** **05 34 49.3 +1.4**
baz=15,SNR=32
E24K Your Creek 65.75 354 P **P** **05 34 48.8 +0.9**
baz=12
C18K Utukok River 65.75 359 IAmb IAmb 05 34 50.6
comp=Z,55nm,1.0s
C18K Utukok River 65.75 359 P **P** **05 34 49.5 +1.5**
baz=2.2
G29M Pine Creek 65.78 349 IAmb IAmb 05 34 49.1
comp=Z,36nm,0.9s
G29M Pine Creek 65.78 349 P **P** **05 34 48.4 +0.3**
baz=20
D19K Kuna River 65.84 358 IAmb IAmb 05 34 51.0
comp=Z,82nm,1.5s
D19K Kuna River 65.84 358 P **P** **05 34 49.7 +1.2**
baz=4.5
E23K Chandalar 65.85 354 P **P** **05 34 49.8 +1.2**
baz=11,SNR=40
E22K Anaktuvuk Pass 65.92 355 P **P** **05 34 49.9 +0.9**
baz=9.3,SNR=19
C17K DeLong Mountai 65.94 360 P **P** **05 34 50.6 +1.5**
baz=0.7,SNR=60
F25K Christian Rive 65.98 352 P **P** **05 34 50.6 +1.2**
baz=14,SNR=16
E20K Nigu River 66.01 357 P **P** **05 34 50.6 +1.0**
baz=6.0
XLT XiLinHaoTe 66.03 51 *e*P **P** **05 34 50.9 +0.8**
XLT pP pP 05 34 54.1 +0.4
XLT pmax pmax
comp=Z,24nm,1.0s
XLT pmax pmax
comp=Z,230nm,6.2s
XLT L L
comp=Z,250nm,18.7s
XLT L L
comp=Z,2µm,18.1s
XLT L L
comp=Z,2µm,14.2s
BMAR Burnt Mountain 66.04 352 P **P** **05 34 50.2 +0.4**
SEY Seymchan 66.09 20 LR LR 06 07 51.8
comp=Z,1000nm,18.4s,baz=327,slow=40
SEY Seymchan 66.09 20⇑ *i*P **P** **05 34 51.0 +0.9**
SEY pmax pmax
comp=Z,39nm,1.0s
EPYK Eagle Plains 66.11 348 P **P** **05 34 50.5 +0.2**
baz=20
C16K Lisburne Hills 66.14 1 IAmb IAmb 05 34 52.9
comp=Z,60nm,1.1s
C16K Lisburne Hills 66.14 1 P **P** **05 34 51.6 +1.2**
baz=359
F24K Squaw Lake 66.25 353 IAmb IAmb 05 34 53.4
comp=Z,25nm,0.9s
F24K Squaw Lake 66.25 353 P **P** **05 34 52.7 +1.5**
baz=12,SNR=33
H31M Peel River 66.29 347 IAmb IAmb 05 35 22.0
comp=Z,51nm,1.6s
H31M IAMs_20 IAMs_20 06 06 00.3
comp=Z,885nm,18.0s
H31M Peel River 66.29 347 P **P** **05 34 51.6 +0.2**
baz=22,SNR=8.2
G27K Doyon Strip 66.33 351 P **P** **05 34 52.7 +1.0**
baz=17,SNR=20
R58B Mineral 66.35 301 IAMs_20 IAMs_20 06 02 55.3
comp=Z,977nm,18.0s
RDOG Red Dog Mine 66.37 360 IAmb IAmb 05 34 54.2
comp=Z,42nm,1.2s
RDOG Red Dog Mine 66.37 360 P **P** **05 34 52.8 +1.0**
baz=0.8,SNR=7.2
O54A Avella 66.39 304 IAmb IAmb 05 34 54.3
comp=Z,88nm,1.4s
G26K Porcupine Rive 66.42 351 IAmb IAmb 05 34 54.4
comp=Z,33nm,1.0s
G26K Porcupine Rive 66.42 351 P **P** **05 34 53.7 +1.5**
baz=15,SNR=30
WRGLY Wrigley 66.56 341 P **P** **05 34 54.1 +1.0**
baz=30,SNR=15
COLD Coldfoot 66.71 354 IAmb IAmb 05 34 56.2
comp=Z,26nm,1.0s
COLD Coldfoot 66.71 354 P **P** **05 34 55.0 +1.0**
baz=10,SNR=17
D17K Noatak River 66.72 360 P **P** **05 34 55.4 +1.3**
baz=0.7,SNR=65
SOOWA Sowa 66.79 170 *i*P **P** **05 34 55.8 +0.7**
T59A Double "B" Far 66.80 300 IAmb IAmb 05 34 56.6
comp=Z,66nm,1.1s
G25K Bearman Lake 66.83 352 P **P** **05 34 56.8 +2.0**
baz=14,SNR=18
E19K Redstone River 66.85 357 IAmb IAmb 05 34 56.8
comp=Z,35nm,0.8s
E19K Redstone River 66.85 357 P **P** **05 34 56.2 +1.3**
baz=5.2
AAM Ann Arbor 66.86 307 IAmb IAmb 05 34 56.9
comp=Z,56nm,1.4s
FFC Flin Flon 66.86 326 P **P** **05 34 54.9 -0.3**
FFC Flin Flon 66.86 326 P **P** **05 34 54.9 -0.3**
FFC pmax pmax
comp=Z,18nm,1.0s
H27K Steamboat Moun 66.87 350 IAmb IAmb 05 35 01.0
comp=Z,61nm,1.5s
H27K IAMs_20 IAMs_20 06 03 59.6
comp=Z,693nm,21.0s
H27K Steamboat Moun 66.87 350 P **P** **05 34 56.4 +1.3**
baz=17
J47A Sunmer 66.88 309 IAmb IAmb 05 34 56.5
comp=Z,43nm,1.0s
F21K Alatna River 66.92 356 IAmb IAmb 05 34 58.1
comp=Z,47nm,1.1s
F21K Alatna River 66.92 356 P **P** **05 34 56.8 +1.4**
baz=8.0,SNR=37
E18K Tukpahlearik C 66.98 359 IAmb IAmb 05 34 57.6
comp=Z,24nm,0.9s
E18K Tukpahlearik C 66.98 359 P **P** **05 34 57.0 +1.2**
baz=2.6,SNR=36
EPLO Experimental L 66.98 318 IAmb IAmb 05 34 57.0
comp=Z,83nm,1.7s
G24K Hadweenzic Riv 67.02 353 IAmb IAmb 05 34 59.0
comp=Z,78nm,1.7s
G24K Hadweenzic Riv 67.02 353 P **P** **05 34 57.4 +1.4**
baz=12,SNR=12
CD2 Chengdu 67.08 69 P **P** **05 34 57.8 +0.8**
CD2 S **S** **05 43 53.3 +2.4**
CD2 SKS **SKSac** **05 44 52.3 -2.1**
CD2 pmax pmax
comp=Z,120nm,0.8s
CD2 pmax pmax
comp=Z,390nm,3.3s
CD2 L L
comp=Z,1µm,14.7s
CD2 L L
comp=Z,1µm,15.0s
CD2 L L
comp=Z,1µm,13.7s
G22K Bettles 67.10 355 P **P** **05 34 57.3 +0.8**
baz=9.4
GRTLG Ghanzi 67.11 175 *i*P **P** **05 34 57.5 +0.4**
M50A Fremont 67.11 306 IAmb IAmb 05 34 58.3
comp=Z,82nm,1.3s
I30M Mount Dempster 67.14 348 IAmb IAmb 05 34 58.6
comp=Z,90nm,1.6s
I30M IAMs_20 IAMs_20 06 02 42.9
comp=Z,887nm,22.0s
I30M Mount Dempster 67.14 348 P **P** **05 34 57.3 +0.3**
baz=21,SNR=32
F20K Avaraart Lake 67.20 356 IAmb IAmb 05 34 59.0
comp=Z,24nm,1.1s
F20K Avaraart Lake 67.20 356 P **P** **05 34 58.5 +1.3**
baz=6.3
G23K Bananza Creek 67.21 354 P **P** **05 34 58.4 +1.1**
baz=11,SNR=12
KAAM Kaadhehdhoo 67.26 115 P **P** **05 34 57.3 -0.9**
KAAM Kaadhehdhoo 67.26 115 P **P** **05 34 58.1 -0.2**
SNR=10
KAAM Kaadhehdhoo 67.26 115 P **P** **05 34 57.2 -1.0**
comp=Z,2µmcomp=Z,123nm,1.3s
PALK Pallekele 67.28 104 LR LR 06 05 54.1
comp=Z,223nm,19.2s,baz=328,slow=37
PALK Pallekele 67.28 104 P **P** **05 34 57.8 -0.7**
PALK Pallekele 67.28 104 *i*P **P** **05 34 57.7 -0.7**
SNR=29
PALK Pallekele 67.28 104 P **P** **05 34 57.8 -0.7**
PALK pmax pmax
comp=Z,77nm,1.0s
PALK MLR MLR
comp=Z,300nm,21.0s
PALK Pallekele 67.28 104 P **P** **05 34 57.5 -1.0**
comp=Z,45nm,1.1s
I29M Ogilvie Camp, 67.29 349 IAmb IAmb 05 34 59.3
comp=Z,99nm,1.8s
I29M IAMs_20 IAMs_20 06 04 57.7
comp=Z,633nm,19.0s
I29M Ogilvie Camp, 67.29 349 P **P** **05 34 57.9 +0.1**
baz=19,SNR=19
HEH HeiHe 67.34 40 *e*P **P** **05 34 58.5 +0.2**
HEH pmax pmax
comp=Z,46nm,0.8s
HEH pmax pmax
comp=Z,370nm,7.7s
HEH L L
comp=Z,2µm,15.2s
HEH L L
comp=Z,2µm,16.7s
HEH L L
comp=Z,2µm,14.4s
I28M Miner Creek 67.42 349 P **P** **05 34 59.1 +0.4**
baz=18
TNCH TengChong 67.43 77 P **P** **05 35 00.3 +0.8**
TNCH pP pP 05 35 03.3 +0.3
TNCH S **S** **05 43 52.5 -3.1**
TNCH pmax pmax
comp=Z,66nm,1.5s
TNCH pmax pmax
comp=Z,640nm,3.1s
TNCH L L
comp=Z,520nm,18.1s
TNCH L L
comp=Z,380nm,13.8s
TNCH L L
comp=Z,390nm,15.3s
Q54A Coxs Mills 67.44 303 IAmb IAmb 05 35 00.7
comp=Z,55nm,1.2s
BROLN Tlhalogang 67.47 169 *i*P **P** **05 34 59.8 +0.3**
R55A Marlinton 67.48 302 IAmb IAmb 05 35 01.3
comp=Z,62nm,1.1s
I27K Kandik River 67.48 350 IAMs_20 IAMs_20 06 06 50.8
comp=Z,632nm,20.0s
I27K Kandik River 67.48 350 P **P** **05 35 00.1 +1.1**
baz=17
F19K Shaleruckik Mo 67.50 357 IAmb IAmb 05 35 00.9
comp=Z,37nm,1.2s
F19K Shaleruckik Mo 67.50 357 P **P** **05 34 59.6 +0.7**
baz=4.7
ULM Lac du Bonnet 67.56 320 P **P** **05 34 59.0 -0.6**
comp=Z,16nm,0.9s,baz=51,slow=6.8,SNR=19
ULM LR LR 06 03 36.9
comp=Z,2µm,19.4s,baz=36,slow=35
comp=Z,16nm,0.9s
ULM Lac du Bonnet 67.56 320 IAmb IAmb 05 34 59.7
comp=Z,26nm,1.0s
G21K Allakaket 67.63 355 IAmb IAmb 05 35 02.3
comp=Z,41nm,1.0s
G21K Allakaket 67.63 355 P **P** **05 35 01.1 +1.3**
baz=7.9
J30M Hart River 67.75 347 IAMs_20 IAMs_20 06 03 28.8
comp=Z,912nm,22.0s
J30M Hart River 67.75 347 P **P** **05 35 01.7 +0.9**
baz=20,SNR=39
F18K Selawik 67.78 358 P **P** **05 35 01.8 +1.0**
baz=3.3,SNR=26
H24K Noodor Dome 67.90 353 P **P** **05 35 02.8 +1.1**
baz=12,SNR=6.4
I26K Coal Creek Min 67.95 351 IAmb IAmb 05 35 07.7
comp=Z,51nm,1.7s
I26K Coal Creek Min 67.95 351 P **P** **05 35 02.8 +1.0**
baz=16
F17K Baldwin Pennin 67.97 359 P **P** **05 35 03.1 +1.1**
baz=2.1
PRP Porcupine Dome 68.00 352 IAmb IAmb 05 35 05.2
comp=Z,46nm,1.6s
PRP Porcupine Dome 68.00 352 P **P** **05 35 03.8 +1.4**
baz=14,SNR=11
TIY Taiyuan 68.03 58 *e*P **P** **05 35 02.8 -0.2**
TIY S **S** **05 44 06.9 +4.6**
TIY pmax pmax
comp=Z,310nm,4.5s
TIY L L
comp=Z,2µm,15.8s
TIY L L
comp=Z,2µm,17.9s
TIY L L
comp=Z,1µm,14.4s
H23K Yukon River 68.05 354 P **P** **05 35 03.9 +1.4**
baz=11
H22K Ishtalitna Cre 68.11 354 IAmb IAmb 05 35 06.1
comp=Z,65nm,1.4s
H22K Ishtalitna Cre 68.11 354 P **P** **05 35 04.8 +1.8**
baz=9.5
J29N Klondike Camp 68.14 348 IAmb IAmb 05 35 13.8
comp=Z,61nm,1.8s
J29N IAMs_20 IAMs_20 06 01 33.1
comp=Z,715nm,19.0s
J29N Klondike Camp 68.14 348 P **P** **05 35 04.1 +0.9**
baz=19,SNR=6.2
WIN Windhoek 68.15 179 IAmb IAmb 05 35 05.9
comp=Z,45nm,1.0s
WIN IAMs_20 IAMs_20 06 06 36.9
comp=Z,761nm,20.0s
G19K Purcell Mounta 68.16 357 IAmb IAmb 05 35 06.0
comp=Z,61nm,1.3s
G19K Purcell Mounta 68.16 357 P **P** **05 35 04.7 +1.4**
baz=5.2,SNR=28
IMAR Indian Mountai 68.17 356 P **P** **05 35 04.5 +1.2**
XAN Xi'an 68.32 63⇑ P **P** **05 35 05.3 +0.5**
XAN pP sP 05 35 09.6 -0.1
XAN S **S** **05 44 09.3 +3.5**
XAN pmax pmax
comp=Z,100nm,1.0s
XAN pmax pmax
comp=Z,820nm,4.1s
XAN L L
comp=Z,2µm,15.4s
XAN L L
comp=Z,2µm,15.4s
XAN L L
comp=Z,1µm,16.5s
G40A Rib Lake 68.33 313 IAmb IAmb 05 35 05.3
comp=Z,26nm,1.0s
BLA Blacksburg 68.37 301 IAmb IAmb 05 35 05.9
comp=Z,57nm,1.3s
P51A Williamsport 68.40 305 IAmb IAmb 05 35 06.2
comp=Z,76nm,1.4s
H21K Meloziina Rive 68.44 355 P **P** **05 35 07.0 +2.0**
baz=8.4,SNR=30
G18K Tagagawik 68.46 358 IAmb IAmb 05 35 07.7
comp=Z,42nm,1.1s
G18K Tagagawik 68.46 358 P **P** **05 35 06.3 +1.2**
baz=4.0,SNR=34
S54A Dingess, Beckl 68.51 302 IAmb IAmb 05 35 06.5
comp=Z,37nm,1.2s
V58A Windy Hill, Pi 68.52 300 IAmb IAmb 05 35 07.6
comp=Z,64nm,1.2s
MA2 Magadan 68.53 23 LR LR 06 08 54.2
comp=Z,1µm,18.0s,baz=325,slow=39
MA2 Magadan 68.53 23 P **P** **05 35 06.8 +1.1**
MA2 Magadan 68.53 23 P **P** **05 35 05.5 -0.1**
MA2 IAMs_20 IAMs_20 06 07 02.4
comp=Z,1µm,19.0s
MA2 Magadan 68.53 23*c i*P **P** **05 35 06.8 +1.1**
MA2 pmax pmax
comp=Z,77nm,1.0s
POKR Poker Plat Res 68.57 353 P **P** **05 35 06.9 +1.1**
baz=12
MAYO Mayo, Yukon 68.60 347 IAmb IAmb 05 35 08.1
comp=Z,30nm,1.0s
MAYO Mayo, Yukon 68.60 347 P **P** **05 35 06.9 +0.9**
baz=21
K29M Barlow Dome 68.61 348 IAmb IAmb 05 35 08.8
comp=Z,70nm,1.7s
K29M Barlow Dome 68.61 348 P **P** **05 35 07.2 +0.9**
baz=20,SNR=14
I42A Draeger Farm, 68.62 311 IAmb IAmb 05 35 07.1
comp=Z,23nm,1.0s
PZH PanZhiHua 68.64 74 P **P** **05 35 07.4 +0.4**
PZH S **S** **05 44 10.8 +1.0**
PZH pmax pmax
comp=Z,30nm,1.3s
PZH pmax pmax
comp=Z,450nm,3.8s
PZH L L
comp=Z,310nm,20.2s
PZH L L
comp=Z,440nm,14.7s
PZH L L
comp=Z,430nm,16.1s
KGCAE Kacgae 68.66 174 *i*P **P** **05 35 07.6 +0.7**
BJT Baijiatuau 68.66 54 IAmb IAmb 05 35 11.5
comp=Z,85nm,1.7s
BJI2 Beijing 68.66 54 P **P** **05 35 07.0 +0.2**
BJI2 S **S** **05 44 10.5 +1.0**
BJI2 pmax pmax
comp=Z,11nm,1.3s
BJI2 pmax pmax
comp=Z,170nm,6.0s
BJI2 L L
comp=Z,1µm,15.2s
BJI2 L L
comp=Z,930nm,12.6s

BJI2 L L
comp=Z,970nm,14.7s
I23K Minto, Yukon-K 68.70 353 IAmb IAmb 05 35 09.1
comp=Z,61nm,1.6s
I23K Minto, Yukon-K 68.70 353 P **P** **05 35 07.8 +1.2**
baz=11,SNR=16
H20K Anotelenega Mo 68.72 356 P **P** **05 35 08.2 +1.5**
baz=6.8,SNR=25
F15K North Star Dit 68.72 0 IAmb IAmb 05 35 08.7
comp=Z,28nm,0.9s
F15K North Star Dit 68.72 0 P **P** **05 35 08.1 +1.4**
baz=360,SNR=28
H19K Roundabout Mou 68.75 357 IAmb IAmb 05 35 09.0
comp=Z,31nm,1.1s
H19K Roundabout Mou 68.75 357 P **P** **05 35 08.4 +1.5**
baz=5.7,SNR=12
TNA Tin City 68.83 2 IAmb IAmb 05 35 09.7
comp=Z,93nm,1.8s
TNA Tin City 68.83 2 P **P** **05 35 08.3 +1.0**
baz=357,SNR=14
COLA College 68.84 353 P **P** **05 35 08.5 +1.0**
COLA College 68.84 353 P **P** **05 35 07.9 +0.4**
COLA College 68.84 353 P **P** **05 35 07.9 +0.4**
COLA pmax pmax
comp=Z,15nm,1.1s
COLA College 68.84 353 P **P** **05 35 08.1 +0.6**
baz=12
IL31 68.86 352 IAmb IAmb 05 35 08.8
comp=Z,46nm,1.7s
ILAR Eielson Array 68.86 352 P **P** **05 35 08.2 +0.6**
comp=Z,3.5nm,0.9s,baz=11,slow=6.0,SNR=42
ILAR PKPPKP P'P'df 06 03 17.6 -11
comp=Z,2.4nm,0.9s,baz=215,slow=4.3,SNR=16
ILAR LR LR 06 07 44.9
comp=Z,303nm,20.0s,baz=32,slow=38
comp=Z,3.5nm,0.9s
ILAR Eielson Array 68.86 352 P **P** **05 35 07.4 -0.2**
I21K Tanana 68.86 355 IAmb IAmb 05 35 09.9
comp=Z,28nm,1.0s
I21K Tanana 68.86 355 P **P** **05 35 09.3 +1.7**
baz=9.0,SNR=17
J25K Salcha River, 68.86 352 P **P** **05 35 08.4 +0.7**
baz=14
G17K Kiwalik Mounta 68.90 359 P **P** **05 35 09.0 +1.2**
baz=2.5,SNR=18
MLY Manley 68.92 354 IAmb IAmb 05 35 10.8
comp=Z,80nm,1.6s
MLY Manley 68.92 354 P **P** **05 35 09.4 +1.3**
baz=9.9,SNR=21
F14K Arctic Creek 68.95 1 P **P** **05 35 09.2 +1.1**
baz=358,SNR=22
G16K Koyuk River 69.03 359 IAmb IAmb 05 35 11.4
comp=Z,88nm,1.5s
G16K Koyuk River 69.03 359 P **P** **05 35 10.2 +1.5**
baz=1.2
K27K Chicken 69.06 350 IAMs_20 IAMs_20 06 07 13.3
comp=Z,669nm,19.0s
CCB Clear Creek Bu 69.06 353 P **P** **05 35 08.8 0.0**
RCBR Riachuelo 69.12 237 LR LR 06 05 28.1
comp=Z,83nm,18.5s,baz=60,slow=36
RCBR Riachuelo 69.12 237 P **P** **05 35 10.0 +0.1**
RCBR IAmb IAmb 05 35 11.7
comp=Z,41nm,0.9s
RCBR Riachuelo 69.12 237 P **P** **05 35 10.0 +0.1**
RCBR pmax pmax
comp=Z,41nm,0.9s
RCBR Riachuelo 69.12 237 *e*P **P** **05 35 11.3 +1.4**
H18K Honhosa River 69.20 357 IAmb IAmb 05 35 15.7
comp=Z,56nm,1.4s
H18K Honhosa River 69.20 357 P **P** **05 35 11.2 +1.4**
baz=4.2,SNR=20
HDA Harding Lake 69.22 352 P **P** **05 35 10.3 +0.4**
baz=13,SNR=16
NEA2 Nenana 69.22 353 P **P** **05 35 10.5 +0.6**
baz=11,SNR=6.7
NBPV Pedro Velho 69.24 236 *e*P **P** **05 35 11.7 +1.1**
SCRK Sand Creek 69.33 351 IAmb IAmb 05 35 16.4
comp=Z,58nm,1.8s
SCRK IAMs_20 IAMs_20 06 08 16.7
comp=Z,763nm,20.0s
SCRK Sand Creek 69.33 351 P **P** **05 35 11.8 +1.1**
baz=15,SNR=8.6
I20K Naaghedeneel 69.39 356 IAmb IAmb 05 35 13.9
comp=Z,61nm,1.0s
I20K Naaghedeneel 69.39 356 P **P** **05 35 12.6 +1.8**
baz=7.1
KDWAN Kaudwane 69.40 172 *i* P **P** **05 35 11.6 +0.1**
L29M L29M 69.40 348 IAmb IAmb 05 35 16.6
comp=Z,44nm,1.6s
L29M L29M 69.40 348 P **P** **05 35 11.9 +0.9**
baz=19,SNR=7.3
KOTAN Kotaneelee Air 69.41 340 P **P** **05 35 11.9 +0.8**
baz=29,SNR=7.1
G15K Niukluk 69.44 0 P **P** **05 35 12.3 +1.1**
baz=360
H17K Granite Mounta 69.45 358 P **P** **05 35 12.3 +1.1**
baz=3.1
W57A Gilead 69.48 300 IAmb IAmb 05 35 13.2
comp=Z,65nm,1.1s
X58A Rowland 69.48 299 IAmb IAmb 05 35 13.2
comp=Z,52nm,0.9s
I40A Norwalk 69.51 312 IAmb IAmb 05 35 12.7
comp=Z,25nm,0.9s
LPHEP Lephephe 69.51 170 *i* P **P** **05 35 12.7 +0.6**
GCSA Galena City Sc 69.55 357 P **P** **05 35 13.3 +1.5**
baz=5.3,SNR=7.0
HNS HongShan 69.58 57 ⇑P **P** **05 35 12.4 -0.1**
HNS S **S** **05 44 23.3 +2.9**
HNS pmax pmax
comp=Z,17nm,1.3s
HNS pmax pmax
comp=Z,350nm,5.5s
HNS L L
comp=Z,2μm,14.6s
HNS L L
comp=Z,1μm,14.5s
HNS L L
comp=Z,1μm,17.8s
NBMO Morrinhos-CE 69.62 242 *e*P **P** **05 35 13.9 +0.9**
M31M Drury Creek, Y 69.66 346 P **P** **05 35 14.1 +1.5**
baz=22,SNR=9.6
RIDG Independent Ri 69.66 351 P **P** **05 35 14.0 +1.3**
baz=14,SNR=21
DOT Dot Lake 69.66 351 IAMs_20 IAMs_20 06 06 21.3
comp=Z,731nm,22.0s
SPMN Marine on St. 69.68 314 IAmb IAmb 05 35 14.3
comp=Z,41nm,1.3s
K24K Donnelly Dome 69.69 351 IAmb IAmb 05 35 18.1
comp=Z,53nm,1.4s
K24K Donnelly Dome 69.69 351 P **P** **05 35 13.5 +0.7**
baz=14,SNR=6.1
M30M Minto, Yukon 69.70 347 IAmb IAmb 05 35 18.4
comp=Z,50nm,1.9s
M30M Minto, Yukon 69.70 347 P **P** **05 35 13.8 +0.8**
baz=20
P48A Milroy 69.76 306 IAmb IAmb 05 35 14.2
comp=Z,84nm,1.5s
NBPA Parau_RN 69.77 238 *e*P **P** **05 35 14.9 +1.0**
H16K Elim 69.79 359 P **P** **05 35 14.7 +1.4**
baz=1.3,SNR=38
LKGWB Lokgwabe 69.84 175 P **P** **05 35 14.0 -0.2**
LKGWB IAmb IAmb 05 35 16.1
comp=Z,71nm,1.1s
BPAW Bear Paw Mtn. 69.86 354 P **P** **05 35 14.3 +0.5**
baz=9.7,SNR=14
ANM Nome 69.87 1 IAmb IAmb 05 35 16.1
comp=Z,54nm,1.5s
ANM Nome 69.87 1 P **P** **05 35 14.8 +0.9**
baz=359,SNR=19
R50A Paris 69.94 304 IAmb IAmb 05 35 15.8
comp=Z,45nm,1.2s
BCAR Beaver Creek A 69.95 349 P **P** **05 35 14.9 +0.5**
S51A Beattyville 69.95 304 IAmb IAmb 05 35 15.3
comp=Z,32nm,1.2s
L27K Beaver Creek, 69.96 349 IAmb IAmb 05 35 17.4
comp=Z,103nm,2.0s
L27K Beaver Creek, 69.96 349 P **P** **05 35 15.8 +1.3**
baz=16
J20K Nowinta River 69.99 355 P **P** **05 35 15.8 +1.2**
baz=7.3,SNR=18
KLR Kul'dur 70.02 39 LR LR 06 09 15.3
comp=Z,1μm,18.6s,baz=327,slow=39
KLR Kul'dur 70.02 39 *c i* P **P** **05 35 14.8 -0.2**
KLR pmax pmax
comp=Z,25nm,1.0s
MCK McKinley 70.06 353 P **P** **05 35 15.5 +0.5**
baz=11,SNR=18

SFIN Lafayette 70.06 308 IAmb IAmb 05 35 16.3
comp=Z,93nm,1.4s
M29M Somme Creek 70.08 348 P **P** **05 35 16.6 +1.2**
baz=19,SNR=9.6
BIRD Birdtown, Kers 70.11 299 IAmb IAmb 05 35 17.3
comp=Z,59nm,1.1s
LYN LuoYang 70.17 61 P **P** **05 35 16.8 +0.6**
LYN PP **PP** **05 37 53.3 +2.3**
LYN S **S** **05 44 27.8 +0.4**
LYN pmax pmax
comp=Z,24nm,0.7s
LYN pmax pmax
comp=Z,440nm,4.0s
LYN L L
comp=Z,2μm,15.1s
LYN L L
comp=Z,2μm,15.5s
LYN L L
comp=Z,2μm,16.5s
CHUM Lake Minchumin 70.17 355 P **P** **05 35 16.7 +1.0**
baz=8.7,SNR=21
L26K Log Cabin Wild 70.18 350 IAmb IAmb 05 35 17.9
comp=Z,28nm,1.0s
L26K IAMs_20 IAMs_20 06 08 19.1
comp=Z,736nm,20.0s
L26K Log Cabin Wild 70.18 350 P **P** **05 35 17.2 +1.4**
baz=15,SNR=16
KMI2 Kunming 70.21 74 ⇑P **P** **05 35 17.1 +0.2**
KMI2 S **S** **05 44 30.5 +1.8**
KMI2 pmax pmax
comp=Z,31nm,1.4s
KMI2 pmax pmax
comp=Z,440nm,3.2s
KMI2 L L
comp=Z,280nm,16.1s
KMI2 L L
comp=Z,460nm,15.3s
KMI2 L L
comp=Z,510nm,17.0s
J19K Poorman 70.25 356 P **P** **05 35 17.7 +1.5**
baz=6.2,SNR=12
MENT Mentasta 70.31 350 P **P** **05 35 18.2 +1.6**
L42A Oliver, Polo 70.33 310 IAmb IAmb 05 35 18.1
comp=Z,45nm,0.9s
RND Reindeer 70.38 353 IAmb IAmb 05 35 21.5
comp=Z,65nm,1.6s
KTH Kantishna Hill 70.40 354 IAmb IAmb 05 35 19.2
comp=Z,126nm,1.9s
N32M Quiet Lake 70.40 345 IAMs_20 IAMs_20 05 59 17.9
comp=Z,660nm,20.0s
N32M Quiet Lake 70.40 345 P **P** **05 35 18.2 +0.9**
baz=22
R49A Shelbyville 70.42 305 IAmb IAmb 05 35 18.7
comp=Z,76nm,1.4s
BVCY Beaver Creek 70.45 349 P **P** **05 35 18.9 +1.4**
baz=17,SNR=7.2
TRF Thorofare Moun 70.45 354 P **P** **05 35 17.7 +0.1**
baz=10,SNR=5.6
PAX Paxson 70.47 351 P **P** **05 35 18.3 +0.6**
baz=14
GAMB Gambell 70.50 4 P **P** **05 35 18.3 +0.6**
baz=354
WTLY Watson Lake, Y 70.50 342 IAmb IAmb 05 35 20.3
comp=Z,35nm,1.2s
WTLY Watson Lake, Y 70.50 342 P **P** **05 35 19.0 +1.2**
baz=25,SNR=17
I17K Unalakleet 70.53 358 P **P** **05 35 19.4 +1.6**
baz=2.5
N31M Braeburn, Yuko 70.56 346 IAmb IAmb 05 35 22.0
comp=Z,47nm,1.4s
N31M Braeburn, Yuko 70.56 346 P **P** **05 35 18.9 +0.7**
baz=20,SNR=7.9
DHY Denali Highway 70.57 352 P **P** **05 35 19.1 +0.7**
baz=12,SNR=24
BNX BinXian 70.58 44 ⇑P **P** **05 35 18.3 -0.2**
BNX pmax pmax
comp=Z,36nm,0.9s
BLO Bloomington 70.58 306 IAmb IAmb 05 35 19.6
comp=Z,81nm,1.3s
M27K Edge Creek, AK 70.64 349 IAmb IAmb 05 35 24.9
comp=Z,105nm,1.7s
M27K Edge Creek, AK 70.64 349 P **P** **05 35 20.2 +1.4**
baz=16,SNR=12
P46A Rosedale 70.65 307 IAmb IAmb 05 35 19.8
comp=Z,64nm,1.2s
TZTN Tazewell 70.67 303 IAmb IAmb 05 35 20.7
comp=Z,90nm,1.3s
M26K Nabesna, AK 70.74 350 IAMs_20 IAMs_20 06 04 46.9
comp=Z,670nm,22.0s
M26K Nabesna, AK 70.74 350 P **P** **05 35 20.6 +1.3**
baz=15,SNR=7.6
K20K Telida 70.80 355 P **P** **05 35 20.7 +1.1**
baz=7.3,SNR=17
N30M Aishikik Lake 70.80 347 IAmb IAmb 05 35 22.1
comp=Z,51nm,1.6s
N30M Aishikik Lake 70.80 347 P **P** **05 35 20.7 +1.0**
baz=20,SNR=8.6
J18K Innoko River 70.83 357 IAmb IAmb 05 35 22.7
comp=Z,111nm,1.7s
J18K Innoko River 70.83 357 P **P** **05 35 21.2 +1.4**
baz=5.4,SNR=14
V53A Saluda 70.83 302 IAmb IAmb 05 35 20.8
comp=Z,48nm,1.3s
I37A Lemond, Waseca 70.84 314 IAmb IAmb 05 35 20.8
comp=Z,102nm,1.4s
JSC Jenkinsville 70.84 300 IAmb IAmb 05 35 21.3
comp=Z,55nm,1.0s
WAT1 Susitna Watana 70.92 353 P **P** **05 35 20.4 +0.1**
baz=11
F33A 5 Mile Ranch, 70.94 317 IAmb IAmb 05 35 21.6
comp=Z,56nm,1.2s
J17K VABM Dome 70.98 358 IAmb IAmb 05 35 23.5
comp=Z,94nm,1.4s
J17K VABM Dome 70.98 358 P **P** **05 35 22.2 +1.6**
baz=3.6
MDND Maddock 70.99 320 IAmb IAmb 05 35 21.9
comp=Z,104nm,1.5s
CN2 Changchun 71.01 46 ⇑ *i* P **P** **05 35 21.4 +0.3**
CN2 sP sP 05 35 28.4 +2.4
CN2 PcP **PcP** **05 35 42.3 +0.8**
CN2 pmax pmax
comp=Z,40nm,0.8s
CN2 pmax pmax
comp=Z,300nm,5.0s
CN2 L L
comp=Z,2μm,14.0s
CN2 L L
comp=Z,2μm,14.0s
CN2 L L
comp=Z,2μm,14.0s
YUK3 Moose Creek 71.01 348 P **P** **05 35 22.4 +1.3**
baz=17,SNR=11
WAT6 Susitna Watana 71.09 352 P **P** **05 35 21.8 +0.3**
baz=12,SNR=10
T50A Nancy 71.10 304 IAmb IAmb 05 35 22.4
comp=Z,47nm,1.2s
WCI Wyandotte Cave 71.10 306 P **P** **05 35 21.2 -0.6**
WCI IAmb IAmb 05 35 23.0
comp=Z,105nm,1.5s
WCI Wyandotte Cave 71.10 306 P **P** **05 35 21.2 -0.6**
WCI pmax pmax
comp=Z,105nm,1.5s
L40A Anamosa 71.11 311 IAmb IAmb 05 35 22.4
comp=Z,44nm,1.0s
LBTB Lobatse 71.11 171 LR LR 06 10 07.7
comp=Z,448nm,18.5s,baz=346,slow=39
LBTB Lobatse 71.11 171 P **P** **05 35 22.1 +0.2**
LBTB Lobatse 71.11 171 P **P** **05 35 22.1 +0.2**
LBTB pmax pmax
comp=Z,81nm,0.9s
RGRS Roger Stewart 71.12 298 IAmb IAmb 05 35 23.9
comp=Z,128nm,1.1s
J16K Arvik River 71.13 358 P **P** **05 35 21.8 +0.2**
baz=2.5
PPLA Purkeypile 71.14 354 IAmb IAmb 05 35 23.5
comp=Z,130nm,1.8s
PPLA Purkeypile 71.14 354 P **P** **05 35 21.4 -0.4**
baz=8.7,SNR=6.5
YUK4 Talbot Arm 71.16 347 P **P** **05 35 22.3 +0.3**
baz=18,SNR=5.8
WHY Whitehorse 71.18 345 IAmb IAmb 05 35 23.2
comp=Z,71nm,1.6s
WHY Whitehorse 71.18 345 P **P** **05 35 22.8 +0.7**
baz=21,SNR=5.4
ENH Enshi 71.19 66 IAmb IAmb 05 35 23.8
comp=Z,49nm,0.8s
ENH IAMs_20 IAMs_20 06 09 55.4
comp=Z,708nm,20.0s

P33M Teslin, Yukon 71.22 344 IAmb IAmb 05 35 24.7
comp=Z,60nm,1.7s
P33M Teslin, Yukon 71.22 344 P **P** **05 35 23.2 +0.9**
baz=22,SNR=8.6
O30N Mendenhall 71.29 346 IAmb IAmb 05 35 24.6
comp=Z,67nm,1.7s
O30N Mendenhall 71.29 346 P **P** **05 35 23.2 +0.6**
baz=20,SNR=6.1
NBPS Pedro II - PI 71.33 243 *e*P **P** **05 35 23.7 +0.1**
BG3 Lake Jocassee 71.36 301 IAmb IAmb 05 35 24.8
comp=Z,64nm,1.2s
YUK8 Steele Glacier 71.38 348 P **P** **05 35 24.1 +0.7**
baz=18
M24K Tolsona, Glenn 71.39 351 P **P** **05 35 23.4 +0.1**
baz=13
L22K Petersville 71.40 354 IAMs_20 IAMs_20 06 09 33.4
comp=Z,575nm,20.0s
TKL Tuckaleechee C 71.41 302 LR LR 06 05 31.8
comp=Z,841nm,19.1s,baz=61,slow=35
TKL Tuckaleechee C 71.41 302 IAmb IAmb 05 35 24.8
comp=Z,79nm,1.2s
SNY Shenyang 71.45 49 ⇓P **P** **05 35 22.8 -1.1**
SNY S **S** **05 44 44.5 +2.4**
SNY pmax pmax
comp=Z,24nm,0.8s
SNY pmax pmax
comp=Z,250nm,4.4s
SNY L L
comp=Z,1μm,17.8s
SNY L L
comp=Z,1μm,18.0s
SNY L L
comp=Z,2μm,14.2s
HYT Haines Junctio 71.47 347 IAmb IAmb 05 35 26.3
comp=Z,63nm,1.9s
HYT Haines Junctio 71.47 347 P **P** **05 35 24.8 +1.0**
baz=19,SNR=5.7
HODGE Hodges 71.48 300 IAmb IAmb 05 35 24.9
comp=Z,35nm,0.9s
CUT Chulitna 71.48 353 IAmb IAmb 05 36 02.6
comp=Z,51nm,1.3s
CUT Chulitna 71.48 353 P **P** **05 35 23.1 -0.5**
baz=10
YUK6 Outpost Mounta 71.50 347 P **P** **05 35 25.3 +1.2**
baz=19,SNR=9.9
MDP Montagnes des 71.55 258 LR LR 06 05 17.5
comp=Z,206nm,18.5s,baz=62,slow=35
DGPR DIGLIPUR 71.58 90 IAmb IAmb 05 35 01.2
comp=Z,72nm,1.1s
R33M Jennings River 71.61 343 IAmb IAmb 05 35 27.9
comp=Z,52nm,1.4s
R33M Jennings River 71.61 343 P **P** **05 35 26.4 +1.7**
baz=24
K17K Iditarod 71.64 357 IAmb IAmb 05 35 27.4
comp=Z,67nm,1.5s
K17K Iditarod 71.64 357 P **P** **05 35 25.9 +1.3**
baz=4.2,SNR=12
J14K Nanvaranak Lak 71.70 360 P **P** **05 35 25.9 +1.0**
baz=0.3
N25K Chitina, Valde 71.71 350 IAMs_20 IAMs_20 06 08 47.4
comp=Z,549nm,18.0s
N25K Chitina, Valde 71.71 350 P **P** **05 35 25.8 +0.6**
baz=14,SNR=5.6
MCARA McCarthy VSAT 71.73 350 IAMs_20 IAMs_20 06 07 49.1
comp=Z,728nm,22.0s
MCARA McCarthy VSAT 71.73 350 P **P** **05 35 26.6 +1.3**
baz=15
OLIL Olney 71.76 307 IAmb IAmb 05 35 26.5
comp=Z,85nm,1.2s
GLB Gilahina Butte 71.77 350 IAMs_20 IAMs_20 06 08 17.2
comp=Z,607nm,18.0s
SCM Sheep Creek Mo 71.78 352 IAmb IAmb 05 35 28.2
comp=Z,77nm,1.0s
SCM Sheep Creek Mo 71.78 352 P **P** **05 35 26.7 +1.1**
baz=12,SNR=10
PDPR Patillas Dam, 71.81 277 IAmb IAmb 05 35 27.3
comp=Z,39nm,1.0s
TIA Tai'an 71.81 57 P **P** **05 35 25.8 -0.3**
TIA pmax pmax
comp=Z,20nm,0.8s
MAKGR Makgori 71.82 172 *i* P **P** **05 35 26.4 +0.2**
SJG San Juan 71.83 277 LR LR 06 04 46.0
comp=Z,93nm,19.7s,baz=58,slow=34
M23K Glacier View 71.86 352 P **P** **05 35 26.8 +0.7**
baz=12,SNR=8.3
W52A Murphy 71.89 302 IAmb IAmb 05 35 27.6
comp=Z,39nm,1.0s
CHTO Chiang Mai 71.89 82 P **P** **05 35 26.7 -0.2**
CHTO Chiang Mai 71.89 82 P **P** **05 35 26.6 -0.2**
CHTO IAmb IAmb 05 35 30.5
comp=Z,33nm,0.9s
CHTO Chiang Mai 71.89 82 P **P** **05 35 26.6 -0.3**
CHTO pmax pmax
comp=Z,33nm,1.0s
CHTO Chiang Mai 71.89 82 P **P** **05 35 26.6 -0.3**
comp=Z,925nmcomp=Z,43nm,1.3s
SML Sawmill 71.90 352 IAmb IAmb 05 35 28.1
comp=Z,44nm,0.9s
SML Sawmill 71.90 352 P **P** **05 35 26.9 +0.5**
baz=11,SNR=9.3
CTG Chitna Glacier 71.91 349 P **P** **05 35 27.6 +1.1**
baz=16
O28M Mount Upton 71.93 348 P **P** **05 35 27.6 +0.8**
baz=17
VRDI Verde Repeater 71.94 350 IAMs_20 IAMs_20 06 05 10.5
comp=Z,630nm,22.0s
GYA Guiyang 71.94 71 ⇑P **P** **05 35 27.4 +0.2**
GYA pmax pmax
comp=Z,43nm,1.0s
GYA pmax pmax
comp=Z,610nm,3.3s
GYA L L
comp=Z,320nm,13.9s
GYA L L
comp=Z,960nm,15.4s
GYA L L
comp=Z,470nm,14.8s
KLU Klutina 71.97 351 IAMs_20 IAMs_20 06 06 35.3
comp=Z,670nm,22.0s
KLU Klutina 71.97 351 P **P** **05 35 27.6 +0.9**
baz=13
P32M Atlin 71.97 344 P **P** **05 35 27.0 +0.2**
baz=22
GHO Glory Hole Cre 71.99 353 IAmb IAmb 05 35 31.9
comp=Z,98nm,1.8s
U49A Red Boiling Sp 71.99 304 IAmb IAmb 05 35 28.2
comp=Z,74nm,1.3s
CPCT Cooper Cave 71.99 302 IAmb IAmb 05 35 28.7
comp=Z,65nm,1.3s
LOGN Logan Glacier 72.00 348 IAmb IAmb 05 35 32.7
comp=Z,50nm,1.5s
LOGN IAMs_20 IAMs_20 06 09 46.2
comp=Z,743nm,19.0s
SKT Skwentna 72.00 354 IAmb IAmb 05 35 28.8
comp=Z,33nm,1.1s
SKT Skwentna 72.00 354 P **P** **05 35 26.4 -0.5**
baz=9.1,SNR=9.5
L19K White Mountain 72.02 356 IAmb IAmb 05 35 29.4
comp=Z,36nm,1.0s
L19K White Mountain 72.02 356 P **P** **05 35 28.0 +1.0**
baz=6.7,SNR=18
NBMA Muriti-CE 72.04 238 *e*P **P** **05 35 28.5 +0.7**
P30M Million Dollar 72.05 346 P **P** **05 35 28.4 +1.1**
baz=20
L18K Granite Mounta 72.07 356 IAmb IAmb 05 35 29.5
comp=Z,29nm,0.9s
L18K Granite Mounta 72.07 356 P **P** **05 35 28.7 +1.5**
baz=5.4
M22K Willow 72.11 353 IAmb IAmb 05 35 28.9
comp=Z,65nm,0.9s
M22K Willow 72.11 353 P **P** **05 35 27.7 +0.3**
baz=10
CM31 Chiang Mai Arr 72.13 82 P **P** **05 35 28.6 +0.3**
SNR=12
CMAR Chiang Mai Arr 72.13 82 P **P** **05 35 28.4 0.0**
comp=Z,12nm,0.8s,baz=305,slow=7.4,SNR=87
CMAR LR LR 06 14 28.0
comp=Z,173nm,18.1s,baz=110,slow=42
comp=Z,12nm,0.8s
CMAR Chiang Mai Arr 72.13 82 P **P** **05 35 27.9 -0.4**
CMAR Chiang Mai Arr 72.13 82 *i* P **P** **05 35 28.3 0.0**
CMAR pmax pmax
comp=Z,11nm,0.7s
K15K Wolf Creek Mou 72.14 359 P **P** **05 35 28.9 +1.3**
baz=1.8
O29M Mount Kennedy 72.14 347 IAmb IAmb 05 35 30.3
comp=Z,85nm,2.0s
O29M IAMs_20 IAMs_20 06 04 49.9

comp=Z,622nm,20.0s
O29M Mount Kennedy 72.14 347 P **P** 05 35 28.5 +0.6
baz=18
PMR Palmer 72.19 353 P **P** 05 35 28.8 +0.9
PMR Palmer 72.19 353 P **P** 05 35 28.3 +0.4
baz=11,SNR=5.4
GRNC Granite Creek 72.19 349 IAmb IAmb 05 35 30.4
comp=Z,84nm,1.5s
EDM Edmonton 72.20 331 IAmb IAmb 05 35 29.5
comp=Z,78nm,1.5s
M20K Styx River 72.21 355 IAMs_20 IAMs_20 06 10 24.8
comp=Z,767nm,22.0s
M20K Styx River 72.21 355 P **P** 05 35 28.2 0.0
baz=8.0
L17K Donlin 72.22 357 P **P** 05 35 29.6 +1.5
baz=4.2
Q32M Nakina River 72.28 343 IAmb IAmb 05 35 31.0
comp=Z,52nm,1.7s
Q32M IAMs_20 IAMs_20 06 09 30.5
comp=Z,669nm,19.0s
Q32M Nakina River 72.28 343 P **P** 05 35 30.1 +1.3
baz=23
DLBC Dease Lake 72.29 342 LR LR 06 08 21.1
comp=Z,399nm,18.5s,baz=10,slow=37
DLBC Dease Lake 72.29 342 P **P** 05 35 30.2 +1.5
baz=24
KNK Knik Glacier 72.30 352 IAmb IAmb 05 35 30.2
comp=Z,30nm,1.0s
KNK Knik Glacier 72.30 352 P **P** 05 35 29.6 +0.9
baz=11
DIV Divide 72.30 351 IAMs_20 IAMs_20 06 07 43.2
comp=Z,582nm,20.0s
TGL Tana Glacier 72.31 349 IAmb IAmb 05 35 36.4
comp=Z,98nm,1.6s
BMRM Bremner River 72.33 350 IAMs_20 IAMs_20 06 09 05.9
comp=Z,684nm,21.0s
BMRM Bremner River 72.33 350 P **P** 05 35 29.4 +0.6
baz=14,SNR=5.6
CRQE Cirque 72.35 349 P **P** 05 35 29.9 +0.8
baz=15,SNR=7.4
CRQM Cirque 72.35 349 IAmb IAmb 05 35 31.4
comp=Z,88nm,1.2s
CRQM IAMs_20 IAMs_20 06 08 20.4
comp=Z,674nm,20.0s
SKAG Skagway 72.39 345 P **P** 05 35 29.9 +0.7
baz=21
MDJ Mudanjiang 72.45 43 IAMs_20 IAMs_20 06 07 32.1
comp=Z,1μm,21.0s
MDJ Mudanjiang 72.45 43 P **P** 05 35 29.1 -0.7
MDJ pmax pmax
comp=Z,9.0nm,1.2s
DL2 Dalian 72.48 52 P **P** 05 35 29.5 -0.6
DL2 S **S** 05 44 53.5 -0.5
DL2 pmax pmax
comp=Z,24nm,0.9s
DL2 pmax pmax
comp=Z,290nm,5.9s
DL2 L L
comp=Z,2μm,17.8s
DL2 L L
comp=Z,3μm,18.8s
DL2 L L
comp=Z,3μm,14.0s
PBA Port Blair 72.50 91 IAmb IAmb 05 35 31.6
comp=Z,43nm,1.0s
PBA Port Blair 72.50 91 P **P** 05 35 30.8 +0.3
SNR=8.5
PBA Port Blair 72.50 91 *e*P **P** 05 35 29.9 -0.6
K13K Kusilvak Mount 72.52 0 P **P** 05 35 30.4 +0.5
baz=360
PINM Pinnacle 72.59 348 P **P** 05 35 31.5 +1.0
baz=17
CLTN Cedars of Leba 72.61 304 IAmb IAmb 05 35 32.0
comp=Z,64nm,1.4s
W50A Signal Mountai 72.63 303 IAmb IAmb 05 35 32.5
comp=Z,82nm,1.1s
ECSD EROS Data Cent 72.64 315 IAmb IAmb 05 35 32.2
comp=Z,67nm,1.2s
L16K Owhat River 72.68 358 P **P** 05 35 32.2 +1.3
baz=3.3,SNR=11
GLI Glacier Island 72.69 351 P **P** 05 35 31.5 +0.5
baz=12
RC01 Rabbit Creek A 72.74 353 IAmb IAmb 05 35 32.6
comp=Z,45nm,0.9s
RC01 Rabbit Creek A 72.74 353 P **P** 05 35 31.8 +0.6
baz=10,SNR=11
MESA MESA 72.75 349 P **P** 05 35 32.1 +0.5
baz=16
L15K Ungalak Mounta 72.75 359 P **P** 05 35 32.5 +1.1
baz=1.9
M18K Stony River 72.76 356 P **P** 05 35 32.6 +1.2
baz=6.0
GOGA Godfrey 72.77 300 IAmb IAmb 05 35 33.3
comp=Z,65nm,1.1s
X51A Calhoun 72.80 302 IAmb IAmb 05 35 33.4
comp=Z,77nm,1.1s
Y52A Lilburn 72.82 301 IAmb IAmb 05 35 33.5
comp=Z,76nm,1.0s
SPCR Spurr Chakacha 72.83 354 P **P** 05 35 31.4 -0.5
baz=8.6
N20K Mount Spurr 72.83 354 P **P** 05 35 31.8 -0.1
baz=8.6
EYAK Cordova Ski Ar 72.87 351 IAMs_20 IAMs_20 06 05 56.2
comp=Z,823nm,20.0s
EYAK Cordova Ski Ar 72.87 351 P **P** 05 35 32.1 +0.1
baz=13
M17K Holitna River 72.92 357 IAmb IAmb 05 35 35.3
comp=Z,46nm,0.9s
M17K Holitna River 72.92 357 P **P** 05 35 33.3 +1.0
baz=4.8
SWET Sewanee 72.98 303 IAmb IAmb 05 35 33.9
comp=Z,38nm,1.3s
BGLC Bering Glacier 72.99 349 P **P** 05 35 32.5 -0.2
baz=15
S34M Telegraph Cree 73.01 342 P **P** 05 35 34.4 +1.5
baz=23
SLM Saint Louis 73.02 308 IAmb IAmb 05 35 34.1
comp=Z,68nm,0.9s
VOI Vohitsoka 73.05 150 IAmb IAmb 05 35 35.5
comp=Z,144nm,2.0s
VOI Vohitsoka 73.05 150 P **P** 05 35 34.3 +0.7
N38A Joes South For 73.07 311 IAmb IAmb 05 35 34.1
comp=Z,40nm,1.0s
L14K Kuka Creek 73.11 359 P **P** 05 35 34.2 +0.9
baz=1.0
S44A Carbondale 73.14 307 IAmb IAmb 05 35 34.8
comp=Z,88nm,1.1s
TYV Tymovskoe 73.17 32 *e*P **P** 05 35 34.3 +0.4
TYV *e*S **S** 05 45 02.4 +1.0
TYV pmax pmax
comp=Z,14nm,1.3s
TYV pmax pmax
comp=Z,400nm,6.7s
TYV smax smax
comp=N,400nm,6.5s
TYV smax smax
comp=E,400nm,6.5s
CAPN Captain Cook N 73.17 353 P **P** 05 35 33.6 -0.2
baz=9.3
KAIM Kayak Island 73.32 350 P **P** 05 35 34.2 -0.5
baz=14
O22K Cooper Landing 73.34 353 P **P** 05 35 35.4 +0.6
baz=10
M16K Timber Creek 73.35 357 P **P** 05 35 36.3 +1.4
baz=3.7
R32K Eaglecrest 73.35 344 P **P** 05 35 36.2 +1.3
baz=21
SLKM Skilak Lake 73.35 353 IAmb IAmb 05 35 36.0
comp=Z,30nm,1.0s
P40A Paris 73.36 310 IAmb IAmb 05 35 35.6
comp=Z,38nm,0.8s
N19K Bonanza Creek 73.36 355 P **P** 05 35 35.7 +0.7
baz=6.9,SNR=9.2
WVT Waverly 73.44 305 P **P** 05 35 34.6 -1.2
WVT IAmb IAmb 05 35 36.1
comp=Z,95nm,1.3s
WVT Waverly 73.44 305 P **P** 05 35 34.7 -1.2
WVT pmax pmax
comp=Z,95nm,1.3s
N18K Kilae Creek 73.57 356 P **P** 05 35 37.4 +1.2
baz=5.9,SNR=7.4
FVM French Village 73.58 308 IAmb IAmb 05 35 37.0
comp=Z,40nm,0.8s
P23K Montague Islan 73.59 351 P **P** 05 35 37.0 +0.7
baz=12
CGM3 Cape Girardeau 73.65 307 IAmb IAmb 05 35 37.7
comp=Z,80nm,1.2s
T35M Bob Quinn 73.67 342 P **P** 05 35 37.8 +0.9
baz=24
SEW Seward 73.68 352 P **P** 05 35 37.3 +0.5
baz=10
M14K Bethel 73.69 359 IAmb IAmb 05 35 39.0
comp=Z,35nm,0.9s
M14K Bethel 73.69 359 P **P** 05 35 37.9 +1.1
baz=1.5
M15K Kasigluk River 73.72 358 P **P** 05 35 38.2 +1.1
baz=2.4
456A Hilliard 73.75 297 IAmb IAmb 05 35 39.1
comp=Z,81nm,1.0s
N17K Nushagak Hills 73.78 357 P **P** 05 35 38.5 +1.1
baz=5.0
N16K Nishlik Lake 73.89 357 P **P** 05 35 39.8 +1.7
baz=3.8
USRK Ussuriysk Ar. 73.90 42 P **P** 05 35 38.5 +0.2
comp=Z,19nm,0.8s,baz=295,slow=5.0,SNR=21
comp=Z,19nm,0.8s
S31K Pelican 73.96 345 P **P** 05 35 39.7 +1.3
baz=20
O19K Port Alsworth 73.97 355 IAMs_20 IAMs_20 06 07 54.2
comp=Z,534nm,20.0s
O19K Port Alsworth 73.97 355 P **P** 05 35 38.6 +0.2
baz=7.0
CCM Cathedral Cave 73.98 308 P **P** 05 35 38.3 -0.7
CCM IAmb IAmb 05 35 39.5
comp=Z,41nm,0.7s
CCM Cathedral Cave 73.98 308 IAMs_20 IAMs_20 06 03 55.9
comp=Z,1μm,22.0s
CCM Cathedral Cave 73.98 308 P **P** 05 35 38.3 -0.7
CCM pmax pmax
comp=Z,41nm,0.7s
Q23K Middleton Isla 74.03 351 P **P** 05 35 40.2 +1.4
baz=13
M13K Dall Lake 74.04 360 P **P** 05 35 40.3 +1.4
baz=25
152A Waverly Hall 74.04 300 IAmb IAmb 05 35 40.9
comp=Z,114nm,1.3s
M11K Mekoryuk 74.06 1 P **P** 05 35 40.2 +1.2
baz=358
WHN Wuhan 74.06 63 P **P** 05 35 39.3 -0.2
WHN S **S** 05 45 13.4 +1.2
WHN pmax pmax
comp=Z,59nm,1.2s
WHN pmax pmax
comp=Z,840nm,3.7s
WHN L L
comp=Z,1μm,9.1s
WHN L L
comp=Z,1μm,11.5s
WHN L L
comp=Z,2μm,12.5s
P38A Dawn 74.08 311 IAmb IAmb 05 35 40.4
comp=Z,87nm,1.2s
S32K Killisnoo 74.12 344 P **P** 05 35 40.3 +0.9
baz=21
BRLK Bradley Lake 74.15 353 IAmb IAmb 05 36 04.0
comp=Z,140nm,1.8s
BRSE Bradley Lake S 74.16 353 P **P** 05 35 40.1 +0.4
baz=9.6
Y49A Blount Mountai 74.22 302 IAmb IAmb 05 35 41.2
comp=Z,50nm,1.1s
N15K Kwethluk River 74.24 358 P **P** 05 35 41.4 +1.3
baz=2.9
N35A Tabor 74.27 313 IAmb IAmb 05 35 41.6
comp=Z,81nm,1.5s
HOM Homer 74.31 354 P **P** 05 35 41.0 +0.5
baz=8.9
O18K Koktuh Hills 74.36 355 IAmb IAmb 05 35 42.9
comp=Z,45nm,0.9s
O18K Koktuh Hills 74.36 355 P **P** 05 35 41.8 +1.0
baz=6.4
R40A Maddies Statio 74.37 309 IAmb IAmb 05 35 41.5
comp=Z,42nm,0.9s
T33K Petersburg 74.41 343 P **P** 05 35 42.2 +1.2
baz=22
PBMO Poplar Bluff 74.45 307 IAmb IAmb 05 35 42.7
comp=Z,104nm,1.2s
N14K Kuskokwak Cree 74.52 359 P **P** 05 35 42.4 +0.8
baz=1.7
O17K Koliganek Bris 74.53 356 P **P** 05 35 43.0 +1.2
baz=5.0
U35K Hyder 74.60 341 P **P** 05 35 43.1 +0.9
baz=24
BOSA Boshof 74.64 172 P **P** 05 35 42.8 0.0
comp=Z,46nm,0.9s,baz=354,slow=6.2,SNR=69
BOSA LR LR 06 12 23.9
comp=Z,676nm,18.2s,baz=357,slow=39
comp=Z,46nm,0.9s
BOSA Boshof 74.64 172 P **P** 05 35 42.9 0.0
BOSA IAmb IAmb 05 35 44.6
comp=Z,82nm,1.1s
BOSA Boshof 74.64 172 P **P** 05 35 42.9 +0.1
BOSA pmax pmax
comp=Z,82nm,1.1s
T42A Van Buren 74.64 308 IAmb IAmb 05 35 43.7
comp=Z,141nm,1.5s
T42A IAMs_20 IAMs_20 06 03 35.2
comp=Z,1μm,19.0s
WRAK Wrangell Islan 74.65 342 P **P** 05 35 43.1 +0.6
baz=22
SIT Sitka 74.65 344 P **P** 05 35 43.3 +0.8
baz=20
O16K Kokwok River B 74.75 357 P **P** 05 35 43.7 +0.6
baz=4.3
SDDR Presa de Saban 74.78 282 IAmb IAmb 05 35 45.9
comp=Z,54nm,0.8s
CNSH ChangSha 74.81 65 P **P** 05 35 44.8 +0.9
P18K Big Mountain, 74.82 355 P **P** 05 35 43.3 -0.2
baz=6.3
352A Blakely 75.00 300 IAmb IAmb 05 35 46.3
comp=Z,88nm,1.1s
656A Willston 75.01 297 IAmb IAmb 05 35 46.4
comp=Z,64nm,0.8s
P17K Kvichak River 75.08 356 P **P** 05 35 45.3 +0.4
baz=5.5
U33K Whale Pass 75.09 343 P **P** 05 35 45.2 +0.1
baz=22
GULI GuiLin 75.16 69 P **P** 05 35 48.0 +2.0
GULI sP **PcP** 05 36 02.6 +3.1
GULI S **S** 05 45 26.4 +1.7
GULI pmax pmax
comp=Z,28nm,1.7s
GULI L L
comp=Z,500nm,16.5s
GULI L L
comp=Z,680nm,15.7s
GULI L L
comp=Z,560nm,13.8s
O14K Tigyukauivet M 75.18 359 P **P** 05 35 45.6 +0.1
baz=2.0
Q19K Cape Douglas, 75.18 354 P **P** 05 35 45.2 -0.4
baz=7.5
DWPF Disney Wildern 75.19 295 P **P** 05 35 45.9 -0.2
DWPF IAmb IAmb 05 35 48.1
comp=Z,106nm,1.6s
DWPF Disney Wildern 75.19 295 IAMs_20 IAMs_20 06 07 10.5
comp=Z,612nm,19.0s
O15K Ungalikthiuk R 75.23 358 P **P** 05 35 45.8 -0.1
baz=3.0
P16K Nushagak River 75.31 357 P **P** 05 35 46.7 +0.5
baz=4.3
LCAR Lake Charles 75.36 307 IAmb IAmb 05 35 48.2
comp=Z,79nm,1.4s
S39A Bolivar 75.38 309 IAmb IAmb 05 35 47.6
comp=Z,43nm,0.9s
Q20K Shuyak Island 75.41 354 P **P** 05 35 46.5 -0.3
baz=8.3
V35K Ketchikan 75.50 342 P **P** 05 35 46.9 -0.5
baz=23
Q18K Katmai Hardscr 75.55 355 P **P** 05 35 47.4 -0.4
baz=6.5
Z47A Carrollton 75.66 303 IAmb IAmb 05 35 49.3
comp=Z,64nm,1.1s
CRAG Craig 75.69 342 P **P** 05 35 49.0 +0.5
baz=22
NJ2 Nanjing 75.75 59 ⇑P **P** 05 35 49.1 -0.2
NJ2 pmax pmax
comp=Z,89nm,0.8s
NJ2 L L
comp=Z,2μm,18.9s
NJ2 L L
comp=Z,2μm,19.9s
NJ2 L L
comp=Z,9μm,22.7s
RSSD Black Hills 75.83 320 P **P** 05 35 49.5 -0.4
RSSD Black Hills 75.83 320 P **P** 05 35 49.5 -0.4
RSSD pmax pmax
comp=Z,26nm,1.2s
Q17K Contact Creek 75.98 356 P **P** 05 35 49.6 -0.7
baz=5.8
PEA0B Petropavlovsk- 76.07 23 *de*P **P** 05 35 50.8 0.0
PETK Petropavlovsk- 76.07 23 P **P** 05 35 50.3 -0.4
comp=Z,23nm,0.9s,baz=6.8,slow=3.5,SNR=11
PETK LR LR 06 13 06.2
comp=Z,845nm,19.0s,baz=330,slow=39
comp=Z,23nm,0.9s
NMDO Nuevo Mundo 76.20 285 IAmb IAmb 05 35 53.5
comp=Z,96nm,1.5s
INCN Inchon 76.23 50 IAMs_20 IAMs_20 06 12 27.5
comp=Z,922nm,20.0s
KDAK Kodiak Island 76.25 354 LR LR 06 11 04.5
comp=Z,226nm,21.7s,baz=22,slow=37
KDAK Kodiak Island 76.25 354 P **P** 05 35 52.3 +0.7
baz=8.2
YSS Yuzhno-Sakhali 76.39 34 P **P** 05 35 53.3 +0.6
YSS Yuzhno-Sakhali 76.39 34 P **P** 05 35 52.7 +0.1
YSS IAMs_20 IAMs_20 06 13 14.7
comp=Z,1μm,19.0s
YSS Yuzhno-Sakhali 76.39 34⇑ *e*P **P** 05 35 53.0 +0.3
YSS *e* 05 38 45.2
YSS *e*S **S** 05 45 34.5 -3.0
YSS *e*SSS SSS 05 53 55.6
YSS pmax pmax
comp=Z,80nm,1.0s
YSS pmax pmax
comp=Z,600nm,3.9s
YSS pmax pmax
comp=E,300nm,3.2s
YSS MLR MLR
comp=Z,900nm,14.0s
YSS MLR MLR
comp=E,1μm,15.0s
PET Petropavlovsk 76.40 22 *e*P P 05 35 57.8 +5.2
PET *e*S **S** 05 45 37.4 0.0
PET pmax pmax
comp=Z,62nm,1.2s
PET pmax pmax
comp=Z,500nm,5.7s
PET MLR MLR
comp=Z,1μm,17.0s
R17L Mt. Peulik Vol 76.64 356 P **P** 05 35 53.4 -0.5
baz=5.5
HHAR Hobbs 76.75 309 IAmb IAmb 05 35 55.2
comp=Z,35nm,0.9s
R16K Pilot Point 76.76 356 P **P** 05 35 54.4 -0.2
baz=4.6
OHAK Old Harbor 76.85 354 P **P** 05 35 54.9 -0.2
baz=7.7
U38A Gravette 76.87 309 IAmb IAmb 05 35 56.6
comp=Z,58nm,0.9s
KSAR Wonju Array Be 76.92 49 P **P** 05 35 55.1 -0.7
KSAR Wonju Array Be 76.92 49 P **P** 05 35 55.1 -0.7
KSRS Korea Array 76.94 49 P **P** 05 35 55.9 0.0
comp=Z,13nm,0.8s,baz=325,slow=5.2,SNR=30
comp=Z,13nm,0.8s
SPIA Saint Paul Isl 77.16 3 P **P** 05 35 57.1 +0.3
baz=356
OGNE Ogallala 77.37 317 IAmb IAmb 05 36 00.4
comp=Z,62nm,1.2s
RLO Rose Lookout 77.42 309 IAmb IAmb 05 35 59.8
comp=Z,54nm,1.0s
BBB Bella Bella 77.54 338 LR LR 06 09 53.7
comp=Z,451nm,21.9s,baz=32,slow=36
NEW Newport 77.67 330 LR LR 06 10 57.1
comp=Z,574nm,19.5s,baz=28,slow=36
YNE Yellowstone No 77.69 324 IAmb IAmb 05 36 02.5
comp=Z,38nm,1.1s
SSE Sheshan 77.82 58 P **P** 05 35 57.9 -3.1
SSE S **S** 05 45 50.4 -3.2
SSE pmax pmax
comp=Z,10.0nm,0.8s
SSE pmax pmax
comp=Z,70nm,4.7s
SSE L L
comp=Z,470nm,18.1s
SSE L L
comp=Z,410nm,18.6s
YMP Mirror Lake Pl 77.97 324 IAmb IAmb 05 36 04.5
comp=Z,51nm,1.4s
PRPB Parauapebas 78.00 248 *e*P **P** 05 36 02.7 +0.6
TUL3 Leonard 78.03 310 IAMs_20 IAMs_20 06 04 41.8
comp=Z,609nm,18.0s
SUR Sutherland 78.04 176 LR LR 06 12 48.4
comp=Z,571nm,20.9s,baz=360,slow=38
SUR Sutherland 78.04 176 P **P** 05 36 02.3 +0.2
SUR IAmb IAmb 05 36 06.6
comp=Z,60nm,1.2s
SUR Sutherland 78.04 176 P **P** 05 36 03.4 +1.3
CHGN Chignik 78.06 357 P **P** 05 36 02.3 +0.5
baz=4.0
K22A Casper 78.10 321 IAmb IAmb 05 36 03.5
comp=Z,57nm,1.0s
S14K Fog Glacier 78.11 357 P **P** 05 36 02.8 +0.4
baz=3.2
YMR Madison River 78.36 324 IAmb IAmb 05 36 06.8
comp=Z,43nm,1.3s
YHB Horse Butte 78.38 325 IAmb IAmb 05 36 06.8
comp=Z,41nm,1.3s
CHIR Chirikof Islan 78.40 355 P **P** 05 36 04.4 +0.6
baz=6.0
H17A Grant Village 78.42 324 IAmb IAmb 05 36 08.1
comp=Z,39nm,1.1s
DLMT Dillon 78.43 326 IAmb IAmb 05 36 06.5
comp=Z,73nm,1.2s
C09A Chrisman Ranch 78.46 330 IAmb IAmb 05 36 06.0
comp=Z,64nm,1.4s
BSI Banda Aceh 78.62 94 P **P** 05 36 03.7 -1.9
comp=Z,2μmcomp=Z,86nm,1.7s
SMTB Santa Maria do 78.62 245 *e*P **P** 05 36 06.2 +0.6
ASAJ Asahikawa 78.65 36 LR LR 06 13 15.1
comp=Z,618nm,18.1s,baz=331,slow=38
JKA Kamikawa-asahi 78.65 36 IAmb IAmb 05 36 15.8
comp=Z,53nm,1.4s
FLWY Flagg Ranch 78.73 324 IAmb IAmb 05 36 13.2
comp=Z,66nm,1.3s
CBB Campbell River 78.74 336 IAmb IAmb 05 36 08.1
comp=Z,42nm,1.2s
CROK Carrier 78.74 311 IAmb IAmb 05 36 07.6
comp=Z,73nm,1.1s
UBPT Khong Chiam 78.83 80 P **P** 05 36 06.4 -0.3
CMC01 Camacan, BA 78.88 234 *e*P **P** 05 36 08.5 +1.6
BOAV Boa Vista 78.92 262 *e*P **P** 05 36 07.9 +0.7
OK029 Liberty Lake 79.00 311 IAmb IAmb 05 36 09.4
comp=Z,78nm,1.0s
MOOW Moose Ponds 79.02 324 IAmb IAmb 05 36 10.4
comp=Z,35nm,1.1s
SDPT Sand Point 79.08 358 P **P** 05 36 08.2 +0.7
baz=2.5
NOKA Waynoka 79.14 312 IAmb IAmb 05 36 09.9
comp=Z,47nm,0.8s
QIZ Qiongzhong 79.17 74 IAMs_20 IAMs_20 06 15 15.3
comp=Z,505nm,21.0s
QIZ Qiongzhong 79.17 74 P **P** 05 36 08.3 -0.3
QIZ S **S** 05 46 08.6 +0.1
QIZ ScS **SKKSac** 05 46 28.3 +2.1
QIZ pmax pmax
comp=Z,360nm,3.5s
QIZ L L
comp=Z,170nm,13.1s
QIZ L L
comp=Z,140nm,14.1s
QIZ L L
comp=Z,170nm,15.9s
FXWY Fox Creek 79.23 324 IAmb IAmb 05 36 11.8
comp=Z,62nm,1.4s
EPH Ephrata 79.30 331 IAmb IAmb 05 36 10.9
comp=Z,68nm,1.5s
PDAR Pinedale Array 79.33 322 P **P** 05 36 09.3 -0.1
comp=Z,9.7nm,0.8s,baz=59,slow=4.7,SNR=82
PDAR PKKPbc **PKKPbc** 05 54 58.2 +0.6
comp=Z,0.2nm,0.7s,baz=156,slow=4.0,SNR=3.7
PDAR LR LR 06 10 37.1
comp=Z,662nm,21.1s,baz=24,slow=35
comp=Z,9.7nm,0.8s
PDAR Pinedale Array 79.33 322 P **P** 05 36 08.8 -0.6
D08A Wollman Farm, 79.33 330 IAmb IAmb 05 36 14.2
comp=Z,57nm,1.7s
GRHM Grahamstown, E 79.37 171 IAmb IAmb 05 36 15.3
comp=Z,66nm,1.3s
FNO Franklin 79.38 310 IAmb IAmb 05 36 10.8
comp=Z,56nm,1.0s
PGC Sidney 79.41 334 IAmb IAmb 05 36 10.9
comp=Z,47nm,1.2s
E09A Wood Farm, Sta 79.53 330 IAmb IAmb 05 36 11.6

CHNA **Chernabura Isl** 79.57 357 P P 05 36 10.4 +0.3
baz=3.1
FALS **False Pass** 79.61 360 IAms_20 IAms_20 06 15 26.6
comp=Z,610nm,20.0s
FALS **False Pass** 79.61 360 P P 05 36 09.7 -0.7
baz=0.4
SDBA **SAO DESIDERIO** 79.70 240 eP P 05 36 11.4 -0.1
HKPS **Hong Kong Po S** 79.73 69 P P 05 36 12.9 +1.3
HKPS **Hong Kong Po S** 79.73 69 IAms_20 IAms_20 06 14 08.6
comp=Z,631nm,19.0s
ELIS **Ellis County** 79.83 312 IAmb IAmb 05 36 14.0
comp=Z,97nm,1.0s
ISCO **Idaho Springs** 79.96 318 IAmb IAmb 05 36 15.3
comp=Z,40nm,1.1s
SHEM **Shemya Is, Ala** 79.97 13 LR LR 06 17 13.6
comp=Z,312nm,18.1s,baz=328,slow=40
GUA01 **Guaratinga, BA** 80.03 234 eP P 05 36 14.0 +0.9
HAYD **Hayden** 80.14 320 IAmb IAmb 05 36 16.5
comp=Z,82nm,1.2s
MLSI **Meulaboh, Aceh** 80.27 94 P P 05 36 13.1 -1.5
comp=Z,199nm,1.0s
Q24A **Divide** 80.41 317 IAmb IAmb 05 36 17.4
comp=Z,69nm,1.2s
WMOK **Wichita Mounta** 80.51 311 IAmb IAmb 05 36 17.7
comp=Z,70nm,1.1s
ITTB **Itaituba** 80.56 254 eP P 05 36 16.3 +0.1
UNV **Unalaska Valle** 80.61 2 P P 05 36 16.4 +0.6
baz=358
BMO **Blue Mountains** 80.65 328 IAmb IAmb 05 36 17.5
comp=Z,87nm,1.2s
QZH2 **Quanzhou** 80.67 64 P P 05 36 16.3 -0.4
QZH2 S S 05 46 25.1 +1.0
QZH2 L L
comp=Z,690nm,16.5s
QZH2 L L
comp=Z,1μm,16.5s
QZH2 L L
comp=Z,700nm,16.8s
F07A **Phinny Hill Vi** 80.68 331 IAmb IAmb 05 36 19.1
comp=Z,79nm,1.3s
WISH **Wishkah** 80.87 333 IAmb IAmb 05 36 30.3
comp=Z,51nm,1.2s
KNMB **Chin-men Tao** 80.89 64 IAms_20 IAms_20 06 17 50.0
comp=Z,455nm,18.0s
O20A **White River Ci** 80.89 320 IAmb IAmb 05 36 19.7
comp=Z,63nm,0.9s
SMWD **Samnorwood** 80.99 312 IAmb IAmb 05 36 20.4
comp=Z,35nm,0.9s
HWUT **Hardware Ranch** 81.13 323 IAmb IAmb 05 36 21.0
comp=Z,74nm,0.9s
FW06 **Azle** 81.20 309 IAmb IAmb 05 36 20.6
comp=Z,48nm,0.9s
RTBA **Rita Blanca** 81.23 314 IAmb IAmb 05 36 22.2
comp=Z,49nm,0.9s
MFID **Camas Ranch** 81.33 327 IAmb IAmb 05 36 21.8
comp=Z,41nm,1.3s
SDV **Santo Domingo** 81.36 274 LR LR 06 05 56.1
comp=Z,61nm,21.9s,baz=54,slow=31
SDV **Santo Domingo** 81.36 274 eP P 05 36 20.9 +0.2
JANB **Januaria** 81.42 238 eP P 05 36 21.7 +1.1
TCUT **Toone Canyon** 81.47 323 IAmb IAmb 05 36 22.8
comp=Z,47nm,1.1s
G06A **Carlson Farm,** 81.50 331 IAmb IAmb 05 36 23.3
comp=Z,56nm,1.2s
T25A **Trinidad** 81.50 316 IAmb IAmb 05 36 23.3
comp=Z,35nm,0.9s
FW13 **Cleburne** 81.60 308 IAmb IAmb 05 36 23.3
comp=Z,41nm,0.9s
BSUT **Blindstream Ca** 81.67 322 IAmb IAmb 05 36 24.2
comp=Z,62nm,1.3s
KCSI **Kotacane, Aceh** 81.75 93 P P 05 36 20.5 -2.0
comp=Z,2μmcomp=Z,1μmcomp=Z,56nm,0.9s
JNU **Nakatsue** 81.79 50 LR LR 06 16 15.5
comp=Z,898nm,18.5s,baz=308,slow=38
WHTX **Lake Whitney,** 81.89 308 IAmb IAmb 05 36 24.9
comp=Z,58nm,1.2s
G04A **Mulino** 82.15 332 IAmb IAmb 05 36 26.6
comp=Z,32nm,0.9s
P18A **Preston Nutter** 82.19 321 IAmb IAmb 05 36 26.6
comp=Z,57nm,1.2s
APMT **Aspermont** 82.30 311 IAmb IAmb 05 36 26.5
comp=Z,47nm,0.9s
BGU **Big Grassy Mou** 82.31 324 IAmb IAmb 05 36 27.6
comp=Z,72nm,1.3s
G03D **McMinnville, O** 82.40 332 IAmb IAmb 05 36 28.0
comp=Z,55nm,1.0s
BSFB **Barra de Sao F** 82.42 233 eP P 05 36 26.7 +0.9
PV22 **Blue Mesa, Par** 82.44 319 IAmb IAmb 05 36 28.0
comp=Z,73nm,1.1s
PV15 **Paradox Valley** 82.46 319 IAmb IAmb 05 36 28.1
comp=Z,73nm,1.2s
DKNS **Dickens** 82.46 311 IAmb IAmb 05 36 28.0
comp=Z,25nm,0.8s
MPU **Maple Canyon** 82.48 322 IAmb IAmb 05 36 28.3
comp=Z,49nm,1.3s
PV21 **Cone Mtn., Par** 82.50 320 IAmb IAmb 05 36 28.4
comp=Z,70nm,1.0s
KULM **Kulim** 82.50 90 P P 05 36 26.8 +0.3
KULM **Kulim** 82.50 90 IAmb IAmb 05 36 26.9
comp=Z,39nm,1.1s
KULM **Kulim** 82.50 90 P P 05 36 26.1 -0.4
comp=Z,825nmcomp=Z,47nm,1.2s
SJMB **Sao Joao De Ma** 82.50 233 eP P 05 36 27.4 +1.2
RIB01 **Linhares ES** 82.56 232 eP P 05 36 27.6 +1.1
YHNB **Yeheng** 82.60 62 IAms_20 IAms_20 06 07 54.2
comp=Z,565nm,20.0s
PV01 **Paradox Valley** 82.67 319 IAmb IAmb 05 36 29.2
comp=Z,39nm,1.1s
PV14 **Lion Creek, Pa** 82.68 320 IAmb IAmb 05 36 29.4
comp=Z,77nm,1.1s
SRU **San Rafael Swe** 82.74 321 IAmb IAmb 05 36 28.9
comp=Z,62nm,0.9s
PV13 **Radium Mtn., P** 82.76 319 IAmb IAmb 05 36 29.8
comp=Z,42nm,1.0s
MAJO **Matsushiro** 82.84 43⇑ eP P 05 36 26.2 -1.7
MAJO pmax pmax
comp=Z,27nm,1.2s
MJAR **Matsushiro Arr** 82.84 43 P P 05 36 27.3 -0.7
comp=Z,13nm,0.9s,baz=317,slow=4.5,SNR=21
MJAR LR LR 06 17 07.7
comp=Z,792nm,18.2s,baz=316,slow=38
comp=Z,13nm,0.9s
MJAR **Matsushiro Arr** 82.84 43 P P 05 36 26.7 -1.2
MJAR **Matsushiro Arr** 82.84 43 P P 05 36 26.7 -1.2
MJAR pmax pmax
comp=Z,15nm,1.1s
SN07 **Snyder 07** 82.89 311 IAmb IAmb 05 36 30.3
comp=Z,34nm,0.8s
JMN **Monobe** 82.90 48 P P 05 36 28.9 +0.5
PV05 **Paradox Valley** 82.95 319 IAmb IAmb 05 36 29.5
comp=Z,41nm,1.0s
SSLB **Suanglung** 82.98 63 IAMs_20 IAMs_20 06 19 06.4
comp=Z,70nm,18.0s
MACA **Manacapuru-AM** 83.03 258 IAmb IAmb 05 36 30.7
comp=Z,33nm,0.9s
MACA **Manacapuru-AM** 83.03 258 eP P 05 36 30.0 +0.8
PSI **Prapat** 83.06 93 P P 05 36 29.0 -0.5
PSI **Prapat** 83.06 93 P P 05 36 28.8 -0.7
comp=Z,1μmcomp=Z,87nm,1.1s
NACB **Ninganchiao** 83.10 62 IAMs_20 IAMs_20 06 15 28.4
comp=Z,464nm,19.0s
TPUB **Ta-pu** 83.14 64 IAMs_20 IAMs_20 06 15 33.5
comp=Z,653nm,20.0s
Q16A **Castle Valley** 83.19 321 IAmb IAmb 05 36 31.5
comp=Z,35nm,1.0s
GSI **Gunungsitoli** 83.19 95 P P 05 36 30.6 +0.6
GSI **Gunungsitoli** 83.19 95 P P 05 36 30.2 +0.2
comp=Z,83nm,1.2s
BUCK **Buck Mountain** 83.21 332 IAmb IAmb 05 36 31.4
comp=Z,33nm,1.1s
POST **Post** 83.23 311 IAmb IAmb 05 36 32.1
comp=Z,48nm,0.8s
SNDB **Serra Nova Dou** 83.33 245 eP P 05 36 31.2 +0.5
ELK **Elko** 83.36 325 LR LR 06 13 56.4
comp=Z,1μm,19.9s,baz=34,slow=36
ELK **Elko** 83.36 325 IAmb IAmb 05 36 33.6
comp=Z,34nm,1.1s
I04A **Tendick Farm,** 83.37 331 IAmb IAmb 05 36 33.4
comp=Z,35nm,1.6s
MVCO **Mesa Verde** 83.38 319 IAmb IAmb 05 36 33.1
comp=Z,46nm,1.1s
YULB **Yu-li** 83.49 63 IAMs_20 IAMs_20 06 16 27.8
comp=Z,781nm,19.0s
DIAM **Diamantina, MG** 83.60 236 eP P 05 36 33.6 +1.5
J04A **Umpqua Nationa** 83.76 331 IAmb IAmb 05 36 38.1
comp=Z,51nm,1.5s

129A **Stewart Farms,** 83.76 311 IAmb IAmb 05 36 37.7
comp=Z,30nm,1.5s
TWG **Pinlang** 83.77 64 IAMs_20 IAMs_20 06 19 32.3
comp=Z,542nm,19.0s
I03D **Drain, OR** 83.77 332 IAmb IAmb 05 36 38.3
comp=Z,48nm,1.4s
K05A **Summer Lake** 83.79 330 IAmb IAmb 05 36 35.0
comp=Z,34nm,1.2s
TCRU **Three Creeks R** 84.00 322 IAmb IAmb 05 36 36.5
comp=Z,51nm,1.0s
128A **Castleberry Fa** 84.09 312 IAmb IAmb 05 36 36.5
comp=Z,78nm,1.2s
BDFB **Brasilia** 84.09 241 P P 05 36 35.8 +1.2
comp=Z,25nm,0.7s,baz=53,slow=5.4,SNR=60
comp=Z,25nm,0.7s
BDFB **Brasilia** 84.09 241 IAmb IAmb 05 36 36.5
comp=Z,40nm,0.9s
ANMO **Albuquerque** 84.25 316 LR LR 06 13 41.2
comp=Z,1μm,18.6s,baz=40,slow=35
ANMO **Albuquerque** 84.25 316 P P 05 36 35.8 +0.4
ANMO IAmb IAmb 05 36 37.6
comp=Z,37nm,0.9s
ANMO **Albuquerque** 84.25 316 P P 05 36 35.8 +0.4
ANMO pmax pmax
comp=Z,37nm,1.0s
229A **Bryant Ranch,** 84.25 311 IAmb IAmb 05 36 37.3
comp=Z,69nm,1.0s
MTPU **Mount Pierson** 84.36 321 IAmb IAmb 05 36 38.6
comp=Z,37nm,0.9s
J01E **Myrtle Point** 84.44 332 IAmb IAmb 05 36 38.5
comp=Z,54nm,1.0s
K02D **Willamette Mer** 84.77 331 IAmb IAmb 05 36 40.0
comp=Z,51nm,1.2s
EF02 **Christine** 84.94 307 IAmb IAmb 05 36 41.9
comp=Z,354nm,1.3s
SZCU **Shurtz Canyon** 85.12 322 IAmb IAmb 05 36 42.1
comp=Z,29nm,1.0s
JOW **Kunigami** 85.13 56 LR LR 06 17 44.5
comp=Z,846nm,18.9s,baz=297,slow=38
TEIG **Tepich** 85.17 294 IAMs_20 IAMs_20 06 17 58.9
comp=Z,740nm,18.0s
TPB06 **Permian Basin** 85.24 312 IAmb IAmb 05 36 42.6
comp=Z,216nm,1.7s
L02F **Cave Junction** 85.25 331 IAmb IAmb 05 36 42.3
comp=Z,37nm,1.1s
CAM01 **Campos-RJ** 85.27 232 eP P 05 36 41.2 +1.0
CCUT **Cedar City** 85.28 322 IAmb IAmb 05 36 43.1
comp=Z,31nm,0.9s
YBH **Yreka Blue Hor** 85.30 330 LR LR 06 15 24.6
comp=Z,30nm,19.1s,baz=36,slow=36
Y22A **Socorro** 85.31 316 IAmb IAmb 05 36 43.0
comp=Z,54nm,1.0s
PMNB **Patos De Minas** 85.40 238 eP P 05 36 42.3 +1.1
CLDB **Colider** 85.41 249 eP P 05 36 41.7 +0.5
M02C **Callahan** 85.65 330 IAmb IAmb 05 36 51.7
comp=Z,23nm,1.0s
HATC **Hat Creek Radi** 85.67 329 IAmb IAmb 05 36 44.5
comp=Z,52nm,0.9s
U15A **North Rim** 85.75 321 IAmb IAmb 05 36 44.7
comp=Z,29nm,0.9s
DUB01 **Friburgo-RJ** 85.87 232 eP P 05 36 45.0 +1.6
PAHR **Pah Rah Range** 85.87 327 IAmb IAmb 05 36 45.8
comp=Z,52nm,1.1s
N02D **Trinity Center** 85.97 330 IAmb IAmb 05 36 44.9
comp=Z,26nm,1.0s
SAND **Sanderson** 85.99 310 IAmb IAmb 05 36 46.5
comp=Z,48nm,1.0s
TEFE **Tefe** 86.00 261 eP P 05 36 44.4 +0.2
IPMB **Ipameri, GO** 86.02 239 eP P 05 36 45.0 +0.8
TPB01 **Permian Basin** 86.09 312 IAmb IAmb 05 36 47.0
comp=Z,28nm,1.0s
WUAZ **Wupatki** 86.09 319 IAmb IAmb 05 36 47.0
comp=Z,74nm,1.7s
BEKR **Beckworth** 86.10 328 IAmb IAmb 05 36 46.5
comp=Z,38nm,1.3s
S11A **Rachel** 86.20 324 IAmb IAmb 05 37 33.9
comp=Z,32nm,1.4s
O03E **Paynes Creek** 86.25 329 IAmb IAmb 05 36 54.7
comp=Z,34nm,1.1s
MNTX **Cornudas Mount** 86.31 313 IAmb IAmb 05 36 47.2
comp=Z,30nm,0.9s
BSCB **Bom Sucesso** 86.36 235 eP P 05 36 46.9 +1.0
PPI **Padang Panjang** 86.41 94 P P 05 36 45.3 -0.9
comp=Z,1μmcomp=Z,39nm,1.0s
KHBM **Hayfork Bally** 86.43 330 IAmb IAmb 05 36 48.5
comp=Z,67nm,1.1s
ALPN **Alpine** 86.47 311 IAmb IAmb 05 36 48.9
comp=Z,37nm,0.9s
ARAG **Araguaiana, MT** 86.48 243 eP P 05 36 47.6 +1.1
NVAR **Mina Array Bea** 86.56 326 P P 05 36 47.3 +0.3
comp=Z,6.7nm,1.0s,baz=48,slow=4.2,SNR=37
NVAR PKKPbc PKKPbc 05 54 41.1 +0.1
comp=Z,1.4nm,0.7s,baz=206,slow=4.3,SNR=12
NVAR PKPPKP P'P'df 06 02 50.3 -5.6
comp=Z,0.2nm,0.7s,baz=254,slow=4.7,SNR=4.0
NVAR LR LR 06 16 17.6
comp=Z,1μm,20.2s,baz=30,slow=36
comp=Z,6.7nm,1.0s
NVAR **Mina Array Bea** 86.56 326 P P 05 36 46.8 -0.2
PDRB **Porto dos Gac** 86.57 250 eP P 05 36 47.9 +0.9
PDSI **Padang** 86.78 95 P P 05 36 47.5 -0.6
comp=Z,6μmcomp=Z,62nm,1.0s
ROSC **El Rosal** 86.79 274 LR LR 06 11 26.1
comp=Z,169nm,21.2s,baz=21,slow=33
ORV **Oroville** 86.79 328 IAmb IAmb 05 36 49.2
comp=Z,34nm,1.2s
ORV IAMs_20 IAMs_20 06 16 30.0
comp=Z,962nm,19.0s
LHV **Little Huntoon** 86.80 326 IAmb IAmb 05 36 50.5
comp=Z,56nm,1.3s
EPT **El Paso** 86.83 314 IAmb IAmb 05 36 50.6
comp=Z,28nm,1.2s
121A **Cookes Peak, D** 86.84 315 IAmb IAmb 05 36 50.7
comp=Z,25nm,0.9s
KMPM **Mont Pierce** 86.95 331 IAmb IAmb 05 36 51.3
comp=Z,48nm,1.1s
AFDM **Forest Hills D** 87.13 328 IAmb IAmb 05 36 51.0
comp=Z,37nm,1.5s
SUTB **Sutter Butte** 87.18 329 IAmb IAmb 05 36 50.9
comp=Z,30nm,1.1s
SUTB IAMs_20 IAMs_20 06 16 41.3
comp=Z,677nm,18.0s
MYKOM **Kota Tinggi** 87.22 90 P P 05 36 51.0 +0.8
MYKOM **Kota Tinggi** 87.22 90 IAmb IAmb 05 36 51.6
comp=Z,42nm,1.3s
MYKOM **Kota Tinggi** 87.22 90 P P 05 36 49.8 -0.4
comp=Z,771nmcomp=Z,31nm,1.3s
TX31 **Lajitas Ar. Si** 87.31 311 IAmb IAmb 05 36 52.1
comp=Z,38nm,1.1s
TXAR **Lajitas Array** 87.31 311 P P 05 36 51.3 +0.7
comp=Z,19nm,0.8s,baz=64,slow=4.4,SNR=130
TXAR LR LR 06 15 39.0
comp=Z,889nm,18.3s,baz=48,slow=36
comp=Z,19nm,0.8s
TXAR **Lajitas Array** 87.31 311 P P 05 36 50.6 +0.1
TXAR **Lajitas Array** 87.31 311 P P 05 36 50.7 +0.1
KCPM **Cahto Peak** 87.42 330 IAmb IAmb 05 36 53.7
comp=Z,28nm,1.1s
WELL **Weller Preserv** 87.49 327 IAMs_20 IAMs_20 06 13 22.3
comp=Z,803nm,22.0s
SIUN **Universidad Ur** 87.61 287 IAmb IAmb 05 36 54.1
comp=Z,42nm,1.2s
FURC **Furnace Creek,** 87.67 324 IAMs_20 IAMs_20 06 15 02.4
comp=Z,966nm,21.0s
CMB **Columbia Colle** 87.71 327 IAMs_20 IAMs_20 06 15 39.3
comp=Z,895nm,21.0s
GWY **Greenwater Val** 87.83 323 IAmb IAmb 05 36 55.2
comp=Z,25nm,0.8s
HOPS **Hopland Field** 87.86 329 IAmb IAmb 05 36 55.0
comp=Z,50nm,1.4s
SHOC **Shoshone, Teco** 87.91 323 IAmb IAmb 05 36 55.5
comp=Z,22nm,1.1s
CVS **Carmenet Viney** 88.21 329 IAmb IAmb 05 36 56.8
comp=Z,15nm,0.9s
TPRI **Tanjung Pinang** 88.31 90 P P 05 36 56.4 +1.0
KRJI **Kerinci** 88.32 95 P P 05 36 57.4 +1.8
TUC **Tucson** 88.47 317 P P 05 36 55.9 -0.2
TUC IAmb IAmb 05 36 57.9
comp=Z,20nm,1.0s
TUC **Tucson** 88.47 317 P P 05 36 55.9 -0.2
TUC pmax pmax
comp=Z,20nm,1.0s
TUC MLR MLR
comp=Z,1μm,18.0s
319A **Douglas** 88.52 316 IAmb IAmb 05 36 58.4
comp=Z,64nm,1.6s
BB19B **Bebedouro** 88.59 238 eP P 05 36 58.5 +2.0

ITRB **Iturama** 88.64 240 eP P 05 36 58.7 +1.9
PARB **Paraibuna** 88.68 234 eP P 05 36 59.2 +2.3
CCCA **Chr Cany lake** 88.69 324 IAmb IAmb 05 36 59.1
comp=Z,19nm,1.0s
LRMC **Laurel Mtn Rad** 88.86 324 IAMs_20 IAMs_20 06 14 26.8
comp=Z,869nm,21.0s
JRSC **Jasper Ridge** 88.96 328 IAmb IAmb 05 37 01.2
comp=Z,62nm,1.5s
ISA **Isabella, Lake** 89.02 324 IAmb IAmb 05 37 00.6
comp=Z,24nm,1.1s
RCLB **Rio Claro- Sao** 89.06 236 eP P 05 37 00.5 +1.8
SALV **Santo Antonio** 89.08 246 eP P 05 36 59.4 +0.5
VAO **Valinhos** 89.18 235 IAmb IAmb 05 37 02.2
comp=Z,52nm,1.3s
VAO **Valinhos** 89.18 235 eP P 05 37 01.0 +1.6
SAO **San Andreas Ge** 89.23 327 IAmb IAmb 05 37 01.6
comp=Z,19nm,1.0s
BBGB **Big Mountain B** 89.24 327 IAmb IAmb 05 37 03.2
comp=Z,34nm,1.0s
DSRI **Dabo** 89.34 91 P P 05 37 04.3 +4.0
C2SB **Chapadao do Su** 89.44 242 eP P 05 37 02.2 +1.7
PMPB **Monarch Peak** 89.46 326 IAmb IAmb 05 37 06.6
comp=Z,25nm,0.9s
PKD **Bear Valley Ra** 89.60 326 IAmb IAmb 05 37 03.4
comp=Z,34nm,1.4s
TPO **Tropico Hills** 89.60 324 IAmb IAmb 05 37 03.6
comp=Z,43nm,1.5s
MASI **Maura Aman, Be** 89.61 95 P P 05 37 02.0 +0.4
GLA **Glamis** 89.71 321 IAmb IAmb 05 37 03.9
comp=Z,63nm,1.9s
HULI **Fort Hunter Li** 89.80 327 IAmb IAmb 05 37 04.5
comp=Z,36nm,1.1s
PP1B **Ponte de Pedra** 89.83 244 eP P 05 37 03.4 +1.0
VILB **Vilhena** 89.84 251 IAmb IAmb 05 37 04.8
comp=Z,61nm,1.3s
VILB **Vilhena** 89.84 251 eP P 05 37 03.6 +1.1
SPB **Sao Paulo** 89.91 235 eP P 05 37 04.4 +1.8
PFO **Pinyon Flats O** 89.94 322 LR LR 06 18 50.9
comp=Z,990nm,18.7s,baz=28,slow=37
PFO **Pinyon Flats O** 89.94 322 P P 05 37 02.8 -0.3
PFO **Pinyon Flats O** 89.94 322 P P 05 37 02.8 -0.3
PFO pmax pmax
comp=Z,15nm,1.0s
PFO MLR MLR
comp=Z,1μm,19.0s
DNR **Dunn Ranch,Anz** 90.06 322 IAmb IAmb 05 37 05.7
comp=Z,24nm,1.1s
UBSI **University, Be** 90.07 95 P P 05 37 04.9 +1.2
JTS **Las Juntas de** 90.21 285 LR LR 06 14 31.8
comp=Z,112nm,21.5s,baz=36,slow=34
KSI **Kapahiang** 90.22 95 P P 05 37 04.3 -0.1
PIX **Pinacate** 90.35 319 IAmb IAmb 05 37 06.0
comp=Z,24nm,0.9s
PET01 **Itanhaem-SP** 90.36 235 eP P 05 37 05.9 +1.2
APG **El Apazote** 90.41 292 LR LR 06 18 38.6
comp=Z,22nm,18.4s,baz=53,slow=36
BAR **Barrett** 90.83 322 IAmb IAmb 05 37 08.9
comp=Z,19nm,1.1s
FRTB **Fartura** 90.95 237 eP P 05 37 09.2 +1.6
PTLB **Pontes e Lacer** 90.97 249 IAmb IAmb 05 37 09.5
comp=Z,44nm,1.2s
PTLB **Pontes e Lacer** 90.97 249 eP P 05 37 08.2 +0.5
ESJX **Sierra Juarez** 91.09 321 IAmb IAmb 05 37 10.3
comp=Z,43nm,1.9s
CBX **Cerro Bola** 91.14 321 IAmb IAmb 05 37 10.4
comp=Z,17nm,0.9s
CMIG **Matias Romero** 91.67 297 LR LR 06 18 10.7
comp=Z,424nm,19.3s,baz=30,slow=35
ZAIG **Zacatecas** 91.88 306 IAmb IAmb 05 37 15.4
comp=Z,52nm,1.3s
LDASE **Londrina, Braz** 91.90 238 eP P 05 37 13.9 +2.0
MDSI **Maura Dua** 91.91 94 P P 05 37 10.2 -2.0
comp=Z,34nm,1.2s
LWLI **Liwa** 92.21 95 P P 05 37 13.0 -0.7
TRCB **Terra Rica** 92.35 239 IAmb IAmb 05 37 16.8
comp=Z,23nm,1.0s
TRCB **Terra Rica** 92.35 239 eP P 05 37 15.4 +1.3
KLSI 92.44 94 P P 05 37 13.0 -1.7
JCJ **Chichijima** 92.47 46 LR LR 06 21 34.4
comp=Z,468nm,19.9s,baz=292,slow=37
AQDB **Aquidauana** 92.49 243 eP P 05 37 15.8 +1.1
SBUM **Sibu** 92.58 84 P P 05 37 16.1 +0.7
SBUM **Sibu** 92.58 84 P P 05 37 16.1 +0.7
OTAV **Otavalo** 92.94 273 P P 05 37 16.3 -1.3
OTAV IAmb IAmb 05 37 20.5
comp=Z,75nm,2.0s
OTAV **Otavalo** 92.94 273 P P 05 37 16.3 -1.3
OTAV pmax pmax
comp=Z,75nm,2.0s
TPI **Tanjungpandan** 93.11 91 P P 05 37 18.8 +1.0
comp=Z,430nmcomp=Z,16nm,1.3s
BDQN **Bodoquena, MS** 93.12 244 eP P 05 37 18.4 +0.8
BBSD **Serra de San D** 93.20 249 eP P 05 37 18.0 -0.1
PTGB **Pitanga** 93.47 238 eP P 05 37 21.1 +1.9
TLIG **Tlapa** 93.58 300 IAmb IAmb 05 37 22.6
comp=Z,36nm,1.2s
SLOR **San Lorenzo -** 93.66 273 IAmb IAmb 05 37 27.3
comp=Z,21nm,1.4s
AMBA **Amambai (Brazi** 93.88 241 eP P 05 37 22.4 +1.4
MURT **Porto Murtinho** 94.56 244 eP P 05 37 24.4 +0.2
CZSB **Cruzeiro do Su** 94.59 264 eP P 05 37 24.3 -0.2
MYLDM **Lahad Datu** 94.95 77 P P 05 37 27.8 +1.6
MYLDM **Lahad Datu** 94.95 77 P P 05 37 30.4 +4.2
LPIG **La Paz** 95.00 312 LR LR 06 20 38.4
comp=Z,557nm,19.3s,baz=42,slow=36
LPAZ **La Paz** 97.53 255 P P 05 37 36.5 -2.1
comp=Z,1.6nm,0.7s,baz=57,slow=1.2,SNR=6.1
LPAZ PP PP 05 41 30.1 -6.0
comp=Z,2.2nm,1.0s,baz=39,slow=9.8,SNR=4.5
LPAZ PKKPbc PKKPbc 05 54 15.0 +1.2
comp=Z,1.7nm,1.0s,baz=165,slow=3.1,SNR=6.9
LPAZ LR LR 06 21 17.7
comp=Z,158nm,18.6s,baz=50,slow=35
comp=Z,1.6nm,0.7s
LPAZ **La Paz** 97.53 255 eP P 05 37 36.7 -1.9
CPUP **Villa Florida** 97.82 240 P P 05 37 36.9 -2.0
comp=Z,0.6nm,0.8s,baz=14,slow=11,SNR=3.5
comp=Z,0.6nm,0.8s
CPUP **Villa Florida** 97.82 240 IAmb IAmb 05 40 48.5
comp=Z,18nm,2.0s
ATAH **Atahualpa** 98.14 268 PKKP 05 54 14.7
comp=Z,2.8nm,0.8s,baz=228,slow=1.2,SNR=7.0
PLCA **Paso Flores** 115.69 237 PKP PKPdf 05 42 44.5 -1.0
comp=Z,2.7nm,0.9s,baz=105,slow=4.7,SNR=5.3
NVL **N'lazarevskaya** 116.40 182 i PKIKP PKPdf 05 42 43.2 -2.6
NVL e 05 43 49.3
NVL e 05 49 55.3
NVL eSS SS 05 59 55.1 -2.1
NVL eSSS SSS 06 04 13.7
NVL pmax pmax
comp=Z,24nm,1.6s
NVL MLR MLR
comp=Z,643nm,20.0s
ELIB **Princess Elisa** 117.66 177 dPKPdf PKiKP 05 42 48.8 +0.4
ELIB dPP PP 05 44 00.8 -1.4
VNA2 **Neumayer--Watz** 117.73 188 ⇑P PKPdf 05 42 47.8 -0.6
comp=Z,4.4nm,0.8s,baz=24,slow=3.9
TROLL **Troll, Antarti** 117.99 185 P PKiKP 05 42 49.2 +0.1
SNAA **Sanae** 118.03 187 PKP PKPdf 05 42 47.7 -1.4
comp=Z,3.2nm,0.9s,baz=89,slow=7.0,SNR=4.4
MAW **Mawson** 118.57 161 PKP PKPdf 05 42 49.6 -0.4
comp=Z,10.0nm,0.9s,baz=336,slow=4.9,SNR=4.8
WRA **Warramunga Arr** 123.67 84 PKP PKPdf 05 43 00.6 -0.8
comp=Z,2.5nm,0.9s,baz=306,slow=2.2,SNR=67
WRA PP PP 05 44 43.6 -0.3
comp=Z,1.8nm,1.0s,baz=322,slow=6.4,SNR=5.2
WRA PKPbc PKKPab 05 52 48.3 -0.4
comp=Z,0.7nm,1.1s,baz=129,slow=3.8,SNR=7.1
ASAR **Alice Springs** 125.82 88 PKP PKPdf 05 43 05.1 -0.4
comp=Z,16nm,0.9s,baz=336,slow=2.0,SNR=100
ASAR PP PP 05 44 57.6 -0.8
comp=Z,2.6nm,1.1s,baz=307,slow=5.2,SNR=4.8
BELA **Belgrano 2** 127.30 192 PKiKP 05 43 07.1 0.0
CTAO **Charters Tower** 131.95 75 PKPdf 05 43 17.5 +0.3
CTAO **Charters Tower** 131.95 75 PKIKP PKPdf 05 43 17.5 +0.3
QSPA **South Pole Qui** 135.76 180 PKP PKPdf 05 43 21.3 -1.6
comp=Z,11nm,0.8s,baz=272,slow=2.9,SNR=19
QSPA PP PP 05 45 59.8 -2.1
comp=Z,2.8nm,1.0s,baz=256,slow=5.0,SNR=4.2
TAOE **Nuku Hiva Isla** 137.79 324 eLR LR 06 27 50.9
comp=Z,671nm,26.0s
VNDA **Vanda** 145.53 168 PKPbc PKPab 05 43 40.7 +0.1
comp=Z,34nm,0.9s,baz=268,slow=5.3,SNR=99
VNDA PP PP 05 47 01.4 +0.2
comp=Z,3.9nm,0.9s,baz=255,slow=7.5,SNR=4.2
PPT2 **Papeete2** 149.32 332 eLR LR 06 33 08.2

	comp=Z,356nm,24.8s						
PPT2				*e*LR	LR	06 33 17.3	
	comp=Z,308nm,38.0s						
TBI	**Tubuai**	**154.60**	**327**	*e*LR	LR	06 35 44.0	
	comp=Z,2µm,24.0s						

VIE ***22*** *05:29:35.7±0.5, 45°.91N×15°.99E, h11km±3km, ml3.4/5, Error ellipse: s-maj=3.7km s-min=1.8km az=105.0 12 km N of Zagreb*
LJU ***22*** *05:29:35.5, 45°.88N×16°.01E, h6km, ML3.0*
KRSZO ***22*** *05:29:35.4±1.1, 45°.87N×16°.02E, h4km±8km, ML4.2/31, Error ellipse: s-maj=9.6km s-min=4.7km az=157.0*
BEO ***22*** *05:29:35.9±0.4, 45°.90N×16°.05E, h11km±7km, ML3.4/5*

ISC 22 05:29:35.3±0.8, 45°.89N±0°.02×16°.03E±0°.02, h7km±5km, n82, σ0s69/128, 2C-2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTJ	**Puntijarka**	**0.05**	**289**	*i* Pg	**Pg**	**05 29 36.8**	**-0.1**
PTJ				Sg	**Sg**	**05 29 37.8**	**-0.3**
PTJ	**Puntijarka**	**0.05**	**289**	⇑Pg	**Pg**	**05 29 36.8**	**-0.1**
PTJ				Lg	Lg	05 29 37.9	
ZAG	**Zagreb**	**0.07**	**205**	*e*Pg	**Pg**	**05 29 37.3**	**+0.2**
ZAG				Sg	**Sg**	**05 29 38.4**	**0.0**
LOBO	**Lobor**	**0.27**	**6**	*i* Pg	**Pg**	**05 29 41.1**	**+0.5**
LOBO				Sg	**Sg**	**05 29 45.3**	**+1.3**
GCIS	**Gornji Cirnik**	**0.28**	**265**	⇑*i* Pg	**Pg**	**05 29 41.0**	**+0.2**
GCIS				*i* Sg	**Sg**	**05 29 44.8**	**+0.2**
GCIS				IAML		05 29 45.4	
	comp=Z,688nm,0.1s						
GOLS	**Golise**	**0.31**	**293**	*i* Pg	**Pg**	**05 29 41.6**	**+0.3**
GOLS				*i* Sg	**Sg**	**05 29 46.0**	**+0.6**
GOLS				IAML		05 29 48.2	
	comp=Z,644nm,0.1s						
KALN	**Kalnik**	**0.38**	**51**	*i* Pg	**Pg**	**05 29 42.8**	**+0.1**
KALN				Sg	**Sg**	**05 29 48.5**	**+0.7**
CESS	**Cesta pri Krsk**	**0.40**	**282**	*i* Pg	**Pg**	**05 29 43.9**	**+0.7**
CESS				*e*Sg	**Sg**	**05 29 49.2**	**+0.8**
CESS				IAML		05 29 50.9	
	comp=Z,1µm,0.2s						
CRES	**Cresnjevec Ost**	**0.41**	**261**	*i* Pg	**Pg**	**05 29 43.2**	**0.0**
CRES				*e*Sg	**Sg**	**05 29 48.8**	**+0.3**
CRES				IAML		05 29 51.3	
	comp=Z,492nm,0.2s						
CRES	**Cresnjevec Ost**	**0.41**	**261**	Pg	**Pg**	**05 29 43.7**	**+0.5**
CRES				Lg	Lg	05 29 49.2	
DOBS	**Dobrina**	**0.47**	**304**	⇓*i* Pg	**Pg**	**05 29 44.8**	**+0.5**
DOBS				*i* Sg	**Sg**	**05 29 51.4**	**+1.0**
DOBS				IAML		05 29 52.9	
	comp=Z,446nm,0.1s						
OZLJ	**Ozalj**	**0.48**	**235**	*e*Pg	**Pg**	**05 29 44.5**	**0.0**
OZLJ				Sg	**Sg**	**05 29 50.8**	**-0.1**
LEGS	**Legarje**	**0.50**	**277**	*i* Pg	**Pg**	**05 29 45.2**	**+0.2**
LEGS				*i* Sg	**Sg**	**05 29 51.6**	**+0.1**
KOGS	**Kog**	**0.58**	**15**	*i* Pg	**Pg**	**05 29 47.3**	**+0.9**
KOGS				*i* Sg	**Sb**	**05 29 55.7**	**-0.4**
KOGS				*i*		05 29 58.7	
KOGS				IAML		05 29 60.0	
	comp=Z,2µm,0.2s						
KOGS	**Kog**	**0.58**	**15**	Pg	**Pg**	**05 29 47.3**	**+0.9**
KOGS				Lg	Lg	05 29 55.6	
MOSL	**Moslavina**	**0.58**	**118**	*e*Pg	**Pg**	**05 29 46.3**	**-0.1**
MOSL				Sg	**Sg**	**05 29 54.0**	**0.0**
BOJS	**Bojanci**	**0.67**	**235**	*e*Pg	**Pg**	**05 29 47.8**	**-0.4**
BOJS				IAML		05 30 01.7	
	comp=Z,248nm,0.2s						
BOJS	**Bojanci**	**0.67**	**235**	*e*Pg	**Pg**	**05 29 48.1**	**0.0**
BOJS				*e*Sg	**Sg**	**05 29 57.4**	**+0.6**
GROS	**Grobnik**	**0.68**	**327**	⇓*i* Pg	**Pg**	**05 29 48.7**	**+0.3**
GROS				IAML		05 29 58.6	
	comp=Z,437nm,0.2s						
PDKS	**Podkum**	**0.74**	**284**	*i* Pg	**Pg**	**05 29 49.6**	**+0.1**
PDKS				IAML		05 30 03.9	
	comp=Z,215nm,0.2s						
BEHE	**Becsehely**	**0.78**	**42**	Pg	**Pb**	**05 29 51.6**	**+0.5**
BEHE				Lg	Lg	05 30 03.3	
VISS	**Visnje**	**0.84**	**264**	*i* Pg	**Pg**	**05 29 51.3**	**-0.1**
VISS				*i* Sg	**Sn**	**05 30 04.9**	**-1.1**
VISS				IAML		05 30 08.3	
	comp=Z,276nm,0.3s						
ZAVS	**Zavodnje**	**0.89**	**308**	*i* Pg	**Pg**	**05 29 52.5**	**+0.2**
ZAVS				*e*Sg	**Sg**	**05 30 04.2**	**+0.4**
ZAVS				IAML		05 30 08.5	
	comp=Z,249nm,0.1s						
A264A	**Tarany**	**0.92**	**73**	Pg	**Pb**	**05 29 54.1**	**+0.6**
A264A				Lg	Lg	05 30 07.1	
VNDS	**Vrh nad Dolski**	**0.95**	**283**	*i* Pg	**Pg**	**05 29 53.4**	**-0.1**
VNDS				*i* Sg	**Sn**	**05 30 08.0**	**-0.9**
VNDS				IAML		05 30 11.0	
	comp=Z,391nm,0.2s						
PERS	**Pernice**	**0.98**	**320**	*i* Pg	**Pg**	**05 29 54.0**	**-0.1**
A262A	**Szaknyer**	**1.03**	**19**	Pg	**Pn**	**05 29 56.0**	**-0.2**
SOKA	**Soboth**	**1.05**	**319**	*e*Pg	**Pg**	**05 29 55.1**	**-0.2**
	comp=Z,25nm,0.3s						
SOKA				Sg	**Sg**	**05 30 08.9**	**-0.1**
	comp=Z,0.2nm,0.1s						
PLIT	**Plitvice**	**1.05**	**196**	*i* Pg	**Pg**	**05 29 54.5**	**-1.0**
PLIT				Sg	**Sg**	**05 30 08.4**	**-0.8**
LJU	**Ljubljana**	**1.06**	**279**	*i* Pg	**Pg**	**05 29 55.4**	**-0.2**
LJU				*i* Sg	**Sn**	**05 30 11.2**	**-0.3**
LJU				IAML		05 30 13.9	
	comp=Z,141nm,0.0s						
LJU	**Ljubljana**	**1.06**	**279**	*e*Pg	**Pn**	**05 29 56.5**	**-0.1**
LJU				*e*Sg	**Sn**	**05 30 10.5**	**-1.1**
CEY	**Cerknica**	**1.13**	**263**	*e*Pg	**Pn**	**05 29 57.5**	**-0.1**
CEY				*e*Sg	**Sn**	**05 30 12.6**	**-0.8**
A263A	**Hollad**	**1.16**	**49**	Pn	**Pb**	**05 29 57.4**	**-0.3**
A010A	**Fuerstenfeld**	**1.18**	**2**	Pn	**Pg**	**05 29 58.4**	**+0.5**
A010A				Sn	**Sn**	**05 30 14.6**	**0.0**
OBKA	**Obir**	**1.20**	**302**	*e*Pg	**Pb**	**05 29 58.4**	**-0.1**
	comp=Z,6.7nm,0.1s						
OBKA				Sg	**Sg**	**05 30 14.2**	**+0.4**
	comp=Z,241nm,0.4s						
OBKA	**Obir**	**1.20**	**302**	Pg	**Pb**	**05 29 58.3**	**-0.1**
OBKA				Lg	Lg	05 30 14.6	
KNDS	**Knezji Dol**	**1.21**	**253**	*i* Sg	**Sn**	**05 30 15.6**	**+0.2**
RIY	**Rijeka**	**1.23**	**243**	*e*Pg	**Pn**	**05 29 58.3**	**-0.5**
RIY				Sg	**Sb**	**05 30 14.1**	**-0.6**
RIY	**Rijeka**	**1.23**	**243**	*e*Pg	**Pn**	**05 29 58.6**	**-0.2**
RIY				*e*Sg	**Sn**	**05 30 15.7**	**+0.1**
A273A	**Marcsa**	**1.25**	**88**	Pn	**Pn**	**05 29 57.9**	**-1.2**
A261A	**Ohid**	**1.31**	**36**	Pn	**Pn**	**05 29 59.6**	**-0.5**
A265A	**Kaposfured**	**1.34**	**66**	Pn	**Pn**	**05 29 59.4**	**-0.9**
UDBI	**Udbina**	**1.38**	**188**	*e*Pg	**Pn**	**05 30 00.0**	**-0.9**
UDBI				Sg	**Sb**	**05 30 18.6**	**-0.6**
ARSA	**Arzberg**	**1.40**	**346**	*e*Pn	**Pn**	**05 30 01.0**	**-0.3**
	comp=Z,4.1nm,0.2s						
ARSA	**Arzberg**	**1.40**	**346**	Pn	**Pn**	**05 30 01.1**	**-0.3**
ARSA				Sn	**Sg**	**05 30 20.6**	**+0.2**
ARSA	**Arzberg**	**1.40**	**346**	*e*Pg	**Pg**	**05 30 02.3**	**+0.1**
ARSA				*e*Sg	**Sn**	**05 30 19.1**	**-1.0**
BLY	**Banja Luka**	**1.40**	**144**	Pn	**Pn**	**05 30 00.3**	**-0.9**
BLY				Sn	**Sn**	**05 30 19.6**	**-0.4**
BLY	**Banja Luka**	**1.40**	**144**	*e*Pg	**Pn**	**05 30 00.8**	**-0.5**
BLY				*e*Sg	**Sn**	**05 30 19.3**	**-0.7**
RABC	**Rab**	**1.44**	**218**	*e*Pg	**Pn**	**05 30 01.7**	**0.0**
RABC				Sg	**Sg**	**05 30 21.5**	**-0.1**
SKDS	**Skadanscina**	**1.45**	**257**	*e*Pg	**Pb**	**05 30 02.3**	**-0.4**
SKDS				*e*Sg	**Sb**	**05 30 21.6**	**+0.2**
A260A	**Vassurany**	**1.47**	**18**	Pn	**Pb**	**05 30 03.0**	**0.0**
NVLJ	**Novalja**	**1.56**	**212**	*e*Pg	**Pn**	**05 30 03.6**	**+0.2**
NVLJ				Sg	**Sb**	**05 30 24.0**	**-0.4**
TIH	**Tihany**	**1.64**	**51**	Pn	**Pn**	**05 30 05.0**	**+0.5**
MPLH	**Magyarpolny**	**1.65**	**39**	Pn	**Pn**	**05 30 04.2**	**-0.4**
A266A	**Gyulaj**	**1.68**	**67**	Pn	**Pn**	**05 30 03.9**	**-1.1**
VIRC	**Vír**	**1.74**	**204**	*e*Pn	**Pn**	**05 30 06.5**	**+0.6**
VIRC				Sg	**Sb**	**05 30 30.0**	**+0.4**
MYKA	**Terra Mystica**	**1.81**	**295**	*e*Pn	**Pn**	**05 30 07.1**	**+0.1**
	comp=Z,0.4nm,0.1s						
RONA	**Rosalia, Austr**	**1.82**	**6**	*e*Pn	**Pn**	**05 30 06.9**	**-0.2**
	comp=Z,1.0nm,0.1s						
SOP	**Sopron**	**1.83**	**11**	Pn	**Pn**	**05 30 06.9**	**-0.2**
MORH	**Mrgy, Hungar**	**1.85**	**79**	Pn	**Pn**	**05 30 05.9**	**-1.5**
DUGI	**Dugi Otok**	**2.02**	**200**	*e*Pn	**Pn**	**05 30 10.4**	**+0.6**
DUGI				Sn	**Sn**	**05 30 35.8**	**+0.5**
MORI	**Morici**	**2.04**	**187**	*e*Pn	**Pn**	**05 30 10.8**	**+0.8**
MORI				Sn	**Sn**	**05 30 35.9**	**+0.2**
CONA	**Conrad Observa**	**2.04**	**357**	*e*Pn	**Pn**	**05 30 09.9**	**-0.3**
	comp=Z,0.2nm,0.1s						
CONA	**Conrad Observa**	**2.04**	**357**	Pn	**Pn**	**05 30 10.7**	**+0.6**
A272A	**Blcske**	**2.21**	**66**	Pn	**Pn**	**05 30 10.8**	**-1.5**
ZIRJ	**Zirje**	**2.25**	**187**	*i* Pn	**Pn**	**05 30 13.8**	**+0.9**
ZIRJ				Sn	**Sn**	**05 30 41.8**	**+0.8**
ZST	**Bratislava**	**2.42**	**17**	Pn	**Pn**	**05 30 15.2**	**-0.1**
A008A	**Tiefenfucha**	**2.49**	**354**	Pn	**Pn**	**05 30 17.1**	**+0.9**
RICI	**Ricice**	**2.52**	**161**	*i* Pn	**Pn**	**05 30 17.4**	**+0.7**
RICI				Sn	**Sn**	**05 30 49.3**	**+1.6**
MODS	**Modra-Piesok**	**2.62**	**18**	Pn	**Pn**	**05 30 17.4**	**-0.7**
MAKA	**Makarska**	**2.70**	**164**	*i* Pn	**Pn**	**05 30 19.9**	**+0.8**
MAKA				Sn	**Sn**	**05 30 53.6**	**+1.7**
HVAR	**Hvar**	**2.73**	**174**	*e*Pn	**Pn**	**05 30 20.2**	**+0.7**
HVAR				Sn	**Sn**	**05 30 52.8**	**+0.1**
TEKS	**Tekeris**	**2.81**	**117**	*e*Pn	**Pn**	**05 30 20.0**	**-0.7**
A001A	**Falkenstein**	**2.86**	**7**	Pn	**Pn**	**05 30 22.2**	**+0.8**
CKRC	**Cesky Krumlov**	**3.15**	**339**	*e*SN	**Sn**	**05 31 01.3**	**-2.0**
LSTV	**Lastovo**	**3.18**	**168**	*e*Pn	**Sn**	**05 30 26.2**	**+0.5**
LSTV				Sn	**Sn**	**05 31 03.5**	**-0.4**
STON	**Ston**	**3.25**	**158**	*i* Pn	**Sn**	**05 30 27.6**	**+1.0**
STON				Sn	**Sn**	**05 31 06.6**	**+1.1**
DBRK	**Dubrovnik**	**3.56**	**154**	*e*Pn	**Sn**	**05 30 32.2**	**+1.3**
DBRK				Sn	**Sn**	**05 31 14.1**	**+0.8**
KHC	**Kasperske Hory**	**3.64**	**334**	*e*PN	**Pn**	**05 30 32.6**	**+0.5**
KHC				*e*SN	**Sn**	**05 31 14.0**	**-1.3**
ZVC	**Zvikov**	**3.76**	**341**	*e*PN	**Pn**	**05 30 35.0**	**+1.3**
ZVC				*e*SN	**Sn**	**05 31 16.1**	**-2.1**
BZS	**Buzias**	**3.92**	**92**	Pn	**Pn**	**05 30 35.1**	**-0.8**
GZR	**Gura Zlata**	**4.76**	**94**	Pn	**Pn**	**05 30 47.3**	**-0.1**

RSNC ***22*** *05:35:00.1±0.0, 7°.N±2°×7°.3W±°, h7km±3km, M2.9, mB4.5, mb3.1, ML2.6, Mw(mB)3.7*
FUNV ***22*** *05:35:03.6, 6°.64N×73°.09W, h5km, MW3.3, Presumed earthquake*

ISC 22 05:34:59.0±1.1, 6°.81N±0°.02×73°.05W±0°.03, h8km±10km, n30, σ1s94/55, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.25**	**211**	P	**Pg**	**05 35 05.1**	**+1.0**
BARC				S	**Sg**	**05 35 08.0**	**+0.5**
PAMC	**Pamplona, Colo**	**0.63**	**34**	P	**Pn**	**05 35 13.7**	**-1.1**
PAMC				S	**Sb**	**05 35 22.8**	**+0.9**
BRJC	**Barrancabermej**	**0.70**	**284**	P	**Pn**	**05 35 14.7**	**-0.6**
BRJC				S	**Sb**	**05 35 24.6**	**+1.1**
RUSC	**La Rusia**	**0.91**	**182**	P	**Pg**	**05 35 16.9**	**+0.3**
RUSC				S	**Sb**	**05 35 28.5**	**-1.3**
RUSC	**La Rusia**	**0.91**	**182**	*e*P	**Pg**	**05 35 17.0**	**+0.4**
RUSC				*e*S	**Sb**	**05 35 27.7**	**-2.1**
PTBC	**PUERTO BERRIO,**	**1.42**	**259**	P	**Pg**	**05 35 26.6**	**+0.3**
PTBC				S	**Sg**	**05 35 45.1**	**+0.4**
OCAC	**Ocana**	**1.45**	**350**	P	**Pg**	**05 35 28.1**	**+1.3**
OCAC				S	**Sg**	**05 35 48.0**	**+2.4**
SPBC	**San Pablo de B**	**1.53**	**221**	P	**Pb**	**05 35 27.7**	**0.0**
SPBC				S	**Sg**	**05 35 50.3**	**+2.0**
CHIC	**Chingaza**	**2.27**	**197**	P	**Pg**	**05 35 41.6**	**-1.0**
CHIC				S	**Sg**	**05 36 11.4**	**-0.6**
ROSC	**El Rosal**	**2.33**	**213**	P	**Pg**	**05 35 43.1**	**-0.6**
ROSC				S	**Sg**	**05 36 15.9**	**+2.0**
CVER	**Cruz Verde, Cu**	**2.49**	**204**	P	**Pg**	**05 35 46.5**	**-0.3**
CVER				S	**Sg**	**05 36 20.2**	**+1.1**
UREC	**San Jos de Ur**	**2.63**	**291**	P	**Pb**	**05 35 46.2**	**-0.3**
UREC				S	**Sb**	**05 36 19.5**	**+0.5**
GUY2C	**Guyana, Caldas**	**2.79**	**236**	P	**Pb**	**05 35 48.4**	**-1.0**
GUY2C				S	**Sb**	**05 36 22.8**	**-1.1**
RECRC	**Villamaria, Ca**	**2.93**	**231**	P	**Pb**	**05 35 51.0**	**-0.9**
RECRC				S	**Sb**	**05 36 28.2**	**0.0**
NIZA	**Niza - Manizal**	**2.97**	**234**	P	**Pb**	**05 35 51.8**	**-0.6**
NIZA				S	**Sb**	**05 36 29.9**	**+1.0**
CBOC	**Ciudad Bolivar**	**3.09**	**252**	P	**Pb**	**05 35 52.6**	**-1.7**
CBOC				S	**Sb**	**05 36 33.8**	**+1.6**
DBBC	**Dabeiba**	**3.14**	**274**	P	**Pb**	**05 35 54.4**	**-0.8**
DBBC				S	**Sb**	**05 36 34.6**	**+0.9**
SDV	**Santo Domingo**	**3.16**	**49**	P	**Pb**	**05 35 55.1**	**-0.6**
SDV	**Santo Domingo**	**3.16**	**49**	*e*P	**Pb**	**05 35 55.2**	**-0.5**
SDV				*e*S	**Sb**	**05 36 33.3**	**-1.2**
ARGC	**Ariguani, Magd**	**3.25**	**339**	P	**Pb**	**05 35 56.5**	**-0.6**
ARGC				S	**Sg**	**05 36 41.4**	**-2.2**
ANIL	**Santa Ana**	**3.28**	**226**	P	**Pb**	**05 35 55.9**	**-1.8**
ANIL				S	**Sb**	**05 36 36.5**	**-1.5**
PRAC	**Prado**	**3.58**	**211**	P	**Pb**	**05 35 58.3**	**-4.3**
PRAC				S	**Sb**	**05 36 43.9**	**-2.3**
APAC	**Apartado, Choc**	**3.66**	**287**	P	**Pb**	**05 36 01.0**	**-3.0**
APAC				S	**Sb**	**05 36 45.1**	**-3.6**
SJCC	**San Jacinto, C**	**3.72**	**326**	P	**Pb**	**05 36 01.6**	**-3.5**
SJCC				S	**Sb**	**05 36 48.7**	**-1.7**
SJCC	**San Jacinto, C**	**3.72**	**326**	*e*P	**Pb**	**05 36 01.8**	**-3.3**
SJCC				*e*S	**Sb**	**05 36 46.0**	**-4.4**
PLMC	**San Jos del P**	**3.73**	**240**	P	**Pb**	**05 36 02.7**	**-2.5**
PLMC				S	**Sb**	**05 36 52.5**	**+1.9**
URMC	**La Uribe, Meta**	**3.78**	**201**	P	**Pb**	**05 36 03.1**	**-2.9**
URMC				S	**Sb**	**05 36 51.5**	**-0.5**
YOTC	**Yotoco, Valle**	**4.31**	**230**	P	Pn	05 36 09.3	+4.2
URIC	**Uribia, Colomb**	**4.97**	**12**	*e*S	**Sn**	**05 37 16.0**	**+4.2**
FLOC	**Florencia**	**5.80**	**207**	P	**Pn**	**05 36 28.7**	**+3.2**

RHSSO ***22*** *05:40:09.9±0.8, 45°.81N×15°.98E, h8km±3km, ML2.7/5*
KRSZO ***22*** *05:40:09.9±0.9, 45°.86N×16°.00E, h5km±6km, ML3.1/29, Error ellipse: s-maj=8.5km s-min=8.2km az=4.0*
PRU ***22*** *05:40:10.9, 45°.93N×16°.04E, h10km*
LJU ***22*** *05:40:10.2, 45°.89N×16°.00E, h6km, ML2.5*
VIE ***22*** *05:40:10.7±0.3, 45°.96N×15°.99E, h7km±2km, mb2.3/7, ml2.6/16, Error ellipse: s-maj=2.5km s-min=2.0km az=41.0 17 km N of Zagreb*

ISC 22 05:40:10.0±0.8, 45°.89N±0°.01×16°.04E±0°.02, h7km±5km, n99, σ0s96/154, 5C-4D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTJ	**Puntijarka**	**0.06**	**291**	*i* Pg	**Pg**	**05 40 11.3**	**-0.4**
PTJ				Sg	**Sg**	**05 40 12.2**	**-0.8**
PTJ	**Puntijarka**	**0.06**	**291**	Pg	**Pg**	**05 40 11.4**	**-0.4**
PTJ				Lg	Lg	05 40 12.4	
ZAG	**Zagreb**	**0.07**	**213**	*i* Pg	**Pg**	**05 40 11.9**	**+0.1**
ZAG				Sg	**Sg**	**05 40 12.8**	**-0.4**
ZAG	**Zagreb**	**0.07**	**213**	⇑Pg	**Pg**	**05 40 12.0**	**+0.1**
ZAG				Lg	Lg	05 40 13.0	
LOBO	**Lobor**	**0.27**	**4**	*i* Pg	**Pg**	**05 40 15.6**	**+0.3**
LOBO				Sg	**Sg**	**05 40 19.5**	**+0.6**
GCIS	**Gornji Cirnik**	**0.29**	**266**	⇑*i* Pg	**Pg**	**05 40 15.6**	**-0.1**
GCIS				*i* Sg	**Sg**	**05 40 19.4**	**-0.2**
GCIS				IAML		05 40 21.6	
	comp=Z,321nm,0.1s						
GOLS	**Golise**	**0.32**	**293**	*i* Pg	**Pg**	**05 40 16.2**	**0.0**
GOLS				IAML		05 40 22.1	
	comp=Z,235nm,0.1s						
KALN	**Kalnik**	**0.38**	**50**	*i* Pg	**Pg**	**05 40 17.6**	**+0.2**
KALN				Sg	**Sg**	**05 40 23.0**	**+0.7**
CESS	**Cesta pri Krsk**	**0.41**	**282**	*i* Pg	**Pg**	**05 40 18.3**	**+0.3**
CESS				*i*		05 40 18.7	
CESS				*i* Sg	**Sg**	**05 40 23.8**	**+0.3**
CESS				IAML		05 40 25.5	
	comp=Z,393nm,0.2s						
CRES	**Cresnjevec Ost**	**0.41**	**262**	*i* Pg	**Pg**	**05 40 17.8**	**-0.2**
CRES				*i* Sg	**Sg**	**05 40 23.9**	**+0.4**
CRES				IAML		05 40 26.6	
	comp=Z,93nm,0.1s						
DOBS	**Dobrina**	**0.48**	**303**	⇓*i* Pg	**Pg**	**05 40 19.3**	**+0.1**
DOBS				*i* Sg	**Sg**	**05 40 26.1**	**+0.6**
DOBS				IAML		05 40 27.9	
	comp=Z,187nm,0.1s						
OZLJ	**Ozalj**	**0.49**	**236**	*e*Pg	**Pg**	**05 40 19.2**	**-0.1**
OZLJ				Sg	**Sg**	**05 40 25.1**	**-0.6**
LEGS	**Legarje**	**0.51**	**277**	⇑*i* Pg	**Pg**	**05 40 19.8**	**0.0**
LEGS				*i* Sg	**Sg**	**05 40 26.7**	**+0.2**
MOSL	**Moslavina**	**0.57**	**119**	*i* Pg	**Pg**	**05 40 21.0**	**+0.1**
MOSL				Sg	**Sg**	**05 40 28.5**	**+0.2**
KOGS	**Kog**	**0.58**	**14**	⇑*i* Pg	**Pg**	**05 40 21.8**	**+0.6**
KOGS				*i* Sg	**Sg**	**05 40 29.7**	**+1.0**
KOGS				*i*		05 40 33.8	
KOGS				IAML		05 40 35.3	
	comp=Z,339nm,0.2s						
BOJS	**Bojanci**	**0.67**	**236**	*i* Pg	**Pg**	**05 40 22.4**	**-0.5**
BOJS				*i*		05 40 23.3	
BOJS				*i* Sg	**Sb**	**05 40 32.3**	**-1.2**
BOJS				IAML		05 40 35.1	
	comp=Z,49nm,0.1s						
GROS	**Grobnik**	**0.69**	**327**	⇓*i* Pg	**Pg**	**05 40 23.2**	**0.0**
PDKS	**Podkum**	**0.75**	**284**	⇑*i* Pg	**Pg**	**05 40 24.3**	**-0.1**
PDKS				IAML		05 40 37.7	
	comp=Z,115nm,0.2s						
BEHE	**Becsehely**	**0.77**	**41**	Pg	**Pb**	**05 40 26.5**	**+0.8**
BEHE				Lg	Lg	05 40 37.2	
BEHE	**Becsehely**	**0.77**	**41**	*e*Pg	**Pg**	**05 40 25.6**	**+0.8**
BEHE				*e*Sg	**Sb**	**05 40 37.4**	**+1.0**
VISS	**Visnje**	**0.85**	**265**	*i* Pg	**Pg**	**05 40 25.7**	**-0.5**
VISS				*e*Sg	**Sb**	**05 40 38.7**	**+0.2**
VISS				IAML		05 40 40.3	
	comp=Z,75nm,0.2s						
ZAVS	**Zavodnje**	**0.90**	**308**	*i* Pg	**Pg**	**05 40 27.0**	**-0.1**
ZAVS				*i* Sg	**Sg**	**05 40 38.8**	**0.0**
ZAVS				IAML		05 40 42.8	
	comp=Z,63nm,0.2s						
A264A	**Tarany**	**0.91**	**72**	Pn	**Pb**	**05 40 29.1**	**+1.0**
GBRS	**Gornja Briga**	**0.94**	**248**	*i* Pg	**Pg**	**05 40 27.3**	**-0.6**
VNDS	**Vrh nad Dolski**	**0.96**	**283**	*i* Pg	**Pg**	**05 40 27.9**	**-0.5**
VNDS				*i*		05 40 29.1	
VNDS				*i* Sg	**Sb**	**05 40 41.4**	**-0.4**
VNDS				*i*		05 40 43.3	
PERS	**Pernice**	**0.99**	**320**	⇓*i* Pg	**Pg**	**05 40 28.5**	**-0.4**
PERS				*e*Sg	**Sg**	**05 40 41.3**	**-0.4**
PERS				IAML		05 40 45.7	
	comp=Z,116nm,0.2s						
PLIT	**Plitvice**	**1.05**	**197**	*i* Pg	**Pg**	**05 40 29.4**	**-0.8**
PLIT				Sg	**Sg**	**05 40 43.5**	**-0.3**
SOKA	**Soboth**	**1.06**	**319**	Pg	**Pg**	**05 40 29.7**	**-0.6**
	comp=Z,2.8nm,0.2s,SNR=11						
SOKA				Sg	**Sg**	**05 40 43.4**	**-0.6**
	comp=Z,4.4nm,0.1s						
A263A	**Hollad**	**1.16**	**49**	Pn	**Pg**	**05 40 32.0**	**-0.3**
A010A	**Fuerstenfeld**	**1.19**	**1**	Pn	**Pn**	**05 40 34.0**	**+1.1**
OBKA	**Obir**	**1.21**	**301**	*e*Pg	**Pg**	**05 40 32.8**	**-0.4**
	comp=Z,0.7nm,0.1s,SNR=28						
OBKA				*e*Sg	**Sn**	**05 40 49.7**	**-0.3**
	comp=Z,4.0nm,0.1s						
OBKA	**Obir**	**1.21**	**301**	Pg	**Pg**	**05 40 32.8**	**-0.4**
OBKA				Lg	Lg	05 40 48.7	
RIY	**Rijeka**	**1.23**	**243**	*i* Pg	**Pg**	**05 40 33.3**	**-0.3**
RIY				Sg	**Sn**	**05 40 49.9**	**-0.5**
A261A	**Ohid**	**1.31**	**35**	Pn	**Pn**	**05 40 34.0**	**-0.6**
A265A	**Kaposfured**	**1.33**	**66**	Pn	**Pn**	**05 40 33.9**	**-1.1**
UDBI	**Udbina**	**1.37**	**188**	*e*Pn	**Pn**	**05 40 35.0**	**-0.5**
UDBI				Sg	**Sg**	**05 40 54.3**	**+0.2**
BLY	**Banja Luka**	**1.39**	**144**	Pn	**Pn**	**05 40 35.1**	**-0.7**
BLY				Lg	Lg	05 40 55.6	
BLY	**Banja Luka**	**1.39**	**144**	⇓*i* Pg	**Pn**	**05 40 34.6**	**-1.2**
BLY				*e*Sg	**Sb**	**05 40 52.8**	**-1.5**
ARSA	**Arzberg**	**1.41**	**345**	*e*Pn	**Pn**	**05 40 35.5**	**-0.5**
	comp=Z,0.8nm,0.1s,SNR=29						
ARSA				Sn	**Sb**	**05 40 54.1**	**-0.7**
ARSA	**Arzberg**	**1.41**	**345**	Pn	**Pn**	**05 40 35.5**	**-0.5**
ARSA				Lg	Lg	05 40 55.4	
RABC	**Rab**	**1.44**	**218**	*e*Pn	**Pn**	**05 40 36.4**	**-0.1**
RABC				Sg	**Sn**	**05 40 55.7**	**+0.1**
NVLJ	**Novalja**	**1.56**	**212**	*e*Pn	**Pn**	**05 40 38.5**	**+0.4**
NVLJ				Sg	**Sg**	**05 40 59.8**	**-0.3**
MPLH	**Magyarpolny**	**1.65**	**38**	Pn	**Pn**	**05 40 38.3**	**-1.0**
A266A	**Gyulaj**	**1.67**	**67**	Pn	**Pn**	**05 40 38.2**	**-1.3**
VIRC	**Vír**	**1.74**	**204**	*e*Pn	**Pn**	**05 40 41.3**	**+0.8**
VIRC				Sn	**Sn**	**05 41 03.1**	**+0.2**
EGYH	**Egyhazaskeszo**	**1.77**	**30**	Pn

IDC 22 05:48:41.0±1.7, 5°95S×130°22E, h0km, mb3.6/1, mbtmp3.6/5, ML3.6/4, MS4.3/2, Error ellipse: s-maj=73.4km s-min=24.6km az=86.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.15**	**12**	Pn	Pn	05 50 00.0	+0.5
	1.9nm,0.3s,baz=197,slow=20,SNR=36						
SIJI				Sn	Sn	05 50 50.3	-9.5
	2.8nm,0.3s,baz=272,slow=24,SNR=12						
	5.4nm,0.3s						
JAY	**Jayapura**	**11.00**	**72**	LR	LR	05 56 31.6	
	comp=Z,2μm,19.1s,baz=296,slow=43						
FITZ	**Fitzroy Crossi**	**12.88**	**200**	Pn	Pn	05 51 47.0	+1.6
	0.3nm,0.3s,baz=11,slow=16,SNR=8.4						
FITZ				Sn	Sn	05 54 09.7	+0.1
	0.3nm,0.3s,baz=87,slow=23,SNR=6.7						
	1.1nm,0.9s						
WRA	**Warramunga Arr**	**14.48**	**164**	Pn	Pn	05 52 06.2	-1.2
	0.2nm,0.3s,baz=339,slow=14,SNR=10						
WRA				Sn	Sn	05 54 41.5	-7.3
	0.3nm,0.3s,baz=333,slow=22,SNR=5.9						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**17.97**	**169**	P	Pn	05 52 52.3	-0.2
	0.2nm,0.3s,baz=346,slow=8.4,SNR=8.6						
	0.3nm,0.3s						
HNR	**Honiara**	**29.66**	**99**	LR	LR	06 09 16.9	
	comp=Z,16nm,19.1s,baz=5.5,slow=42						
MKAR	**Makanchi Array**	**67.47**	**326**	P	P	05 59 38.6	-0.2
	0.3nm,0.4s,baz=122,slow=7.8,SNR=6.3						
	0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**70.74**	**334**	LR	LR	06 33 19.7	
	comp=Z,139nm,21.1s,baz=120,slow=38						

*SNET **22** 05:49:55.8±0.9, 12°.99N×89°.43W, h36km, ML3.0, Presumed earthquake*

*CATAC **22** 05:49:55.8±0.4, 13°.N±2°×8°.9W±°, h25km±2km, M3.0/25, MLv3.0/25, Error ellipse: s-maj=5.0km s-min=2.8km az=36.4, confirmed*

*GCG **22** 05:49:56.1±0.8, 13°.01N×89°.46W, h50km±13km, MD3.6, Presumed earthquake*

ISC 22 05:49:54.6±1.7, 13°.01N±0°.06×89°.43W±0°.04, h15km±10km, n51, σ0°38/86, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.48**	**12**	S	**Sn**	**05 50 15.5**	**+0.4**
LALI	**Alcalda de L**	**0.48**	**12**	*i* P	**Pn**	**05 50 07.2**	**+0.3**
JAYA	**Jayaque - finc**	**0.64**	**358**	P	**Pn**	**05 50 09.2**	**-0.1**
JAYA	**Jayaque - finc**	**0.64**	**358**	*i* P	**Pn**	**05 50 09.1**	**-0.1**
JAYA				*i* S	**Sn**	**05 50 19.1**	**-0.2**
JAYA	**Jayaque - finc**	**0.64**	**358**	*e*P	**Pn**	**05 50 09.2**	**-0.1**
JAYA				*e*S	**Sb**	**05 50 17.2**	**+0.9**
PANCS	**Alcalda de**	**0.64**	**22**	P	**Pn**	**05 50 08.8**	**-0.4**
PANCS				S	**Sn**	**05 50 18.7**	**-0.4**
LOMA	**Loma Larga**	**0.68**	**21**	*e*P	**Pn**	**05 50 09.9**	**+0.1**
LOMA				*e*S	**Sn**	**05 50 20.2**	**+0.1**
PMON	**Piamonte**	**0.70**	**9**	P	**Pn**	**05 50 10.0**	**-0.1**
PMON	**Piamonte**	**0.70**	**9**	*e*P	**Pn**	**05 50 10.1**	**-0.1**
PMON				*e*S	**Sn**	**05 50 20.9**	**+0.1**
SEMO	**Seminario San**	**0.71**	**16**	P	**Pn**	**05 50 10.5**	**+0.3**
SEMO				S	**Sn**	**05 50 20.7**	**-0.3**
UTEC	**Universidad Te**	**0.72**	**18**	S	**Sn**	**05 50 20.6**	**-0.4**
SJTE	**Alcalda de S**	**0.72**	**34**	*e*P	**Pn**	**05 50 10.0**	**-0.3**
SJTE				*e*S	**Sn**	**05 50 21.1**	**-0.1**
UEES	**Universidad Ev**	**0.72**	**14**	P	**Pn**	**05 50 10.2**	**-0.1**
UEES				S	**Sn**	**05 50 20.9**	**-0.3**
BOQS	**Boqueron**	**0.73**	**11**	*e*P	**Pn**	**05 50 10.6**	**0.0**
IGN	**Direccin Gen**	**0.74**	**20**	P	**Pn**	**05 50 10.5**	**-0.1**
IGN				S	**Sn**	**05 50 21.7**	**+0.1**
CEDA	**San Andres**	**0.79**	**2**	P	**Pn**	**05 50 11.0**	**-0.2**
CEDA				S	**Sn**	**05 50 22.6**	**-0.1**
TECO	**Alcaldia de Te**	**0.82**	**50**	P	**Pb**	**05 50 11.1**	**+0.6**
TECO				S	**Sn**	**05 50 23.1**	**-0.3**
CEVE	**Cerro Verde**	**0.83**	**347**	S	**Sn**	**05 50 23.7**	**-0.5**
PAVA	**Las Pavas**	**0.84**	**34**	P	**Pn**	**05 50 11.9**	**-0.1**
PAVA				S	**Sn**	**05 50 23.9**	**-0.3**
PAVA	**Las Pavas**	**0.84**	**34**	*e*P	**Pn**	**05 50 11.9**	**-0.1**
PAVA				*e*S	**Sn**	**05 50 24.2**	**0.0**
NUBE	**Las Nubes**	**0.95**	**339**	P	**Pn**	**05 50 13.2**	**-0.3**
NUBE				S	**Sn**	**05 50 25.9**	**-1.0**
NUBE	**Las Nubes**	**0.95**	**339**	*i* P	**Pn**	**05 50 13.4**	**-0.1**
NUBE				*i* S	**Sn**	**05 50 26.3**	**-0.6**
SCLA	**Alcaldia de Sa**	**0.96**	**45**	P	**Pn**	**05 50 13.7**	**+0.1**
SCLA	**Alcaldia de Sa**	**0.96**	**45**	*e*P	**Pg**	**05 50 13.5**	**+0.3**
SCLA				*e*S	**Sn**	**05 50 27.3**	**+0.2**
UNIC	**Universidad Ca**	**0.97**	**353**	P	**Pn**	**05 50 14.3**	**+0.5**
UNIC				S	**Sn**	**05 50 26.9**	**-0.4**
FAME	**Alcaldia de Sa**	**1.01**	**325**	P	**Pb**	**05 50 13.6**	**-0.1**
FAME				S	**Sg**	**05 50 27.0**	**-0.2**
PQSS	**Presa 15 de Se**	**1.04**	**54**	P	**Pb**	**05 50 14.2**	**-0.1**
PQSS				S	**Sg**	**05 50 28.1**	**-0.2**
LOAL	**Lomas de Alarc**	**1.04**	**341**	P	**Pn**	**05 50 15.4**	**+0.7**
LOAL				S	**Sn**	**05 50 29.6**	**+0.6**
SLOZ	**Alcaldia de Sa**	**1.07**	**341**	P	**Pn**	**05 50 15.5**	**+0.4**
SLOZ				S	**Sn**	**05 50 30.5**	**+0.8**
P5NO	**Presa 5 de nov**	**1.17**	**34**	P	**Pb**	**05 50 16.4**	**-0.1**
P5NO	**Presa 5 de nov**	**1.17**	**34**	*e*P	**Pb**	**05 50 16.3**	**-0.1**
P5NO				*e*S	**Sg**	**05 50 31.9**	**-0.4**
PACA	**Pacayal**	**1.17**	**67**	P	**Pb**	**05 50 14.4**	**-0.1**
PACA				S	**Sg**	**05 50 32.4**	**+0.1**
PACA	**Pacayal**	**1.17**	**67**	*e*P	**Pb**	**05 50 16.5**	**0.0**
RANC	**El Ranchito**	**1.18**	**69**	P	**Pn**	**05 50 16.6**	**-0.1**
LLGN	**La Laguna**	**1.23**	**22**	P	**Pb**	**05 50 17.7**	**0.0**
LLGN				S	**Sg**	**05 50 34.0**	**-0.6**
CNRM	**Centro Naciona**	**1.30**	**69**	P	**Pn**	**05 50 18.6**	**+0.3**
CNRM				S	**Sb**	**05 50 35.5**	**+0.1**
MTO3	**Montecristo**	**1.38**	**3**	P	**Pn**	**05 50 19.2**	**-0.3**
MTO3				S	**Sn**	**05 50 37.5**	**-0.1**
MTO3	**Montecristo**	**1.38**	**3**	*i* P	**Pn**	**05 50 19.5**	**0.0**
ESQI	**Esquipulas**	**1.54**	**3**	P	**Pn**	**05 50 22.1**	**+0.4**
ESQI				S	**Sb**	**05 50 41.6**	**-0.7**
CNCH	**Conchagua**	**1.57**	**80**	P	**Pn**	**05 50 21.7**	**-0.3**
CNCH				S	**Sn**	**05 50 42.1**	**-0.1**
CNCH	**Conchagua**	**1.57**	**80**	*e*P	**Pn**	**05 50 21.6**	**-0.4**
MARCA	**Marcala la Paz**	**1.77**	**50**	P	**Pn**	**05 50 25.0**	**+0.3**
MARCA				S	**Sn**	**05 50 46.9**	**-0.2**
MARCA	**Marcala la Paz**	**1.77**	**50**	*i* P	**Pn**	**05 50 24.8**	**0.0**
CSGN	**Cosiguina Volc**	**1.82**	**91**	P	**Pn**	**05 50 25.5**	**+0.1**
CSGN				S	**Sn**	**05 50 48.9**	**+0.6**
SARH	**Santa Rosa de**	**1.87**	**20**	P	**Pn**	**05 50 26.7**	**+0.6**
SARH	**Santa Rosa de**	**1.87**	**20**	*i* P	**Pn**	**05 50 26.7**	**+0.6**
SARH				*i* S	**Sn**	**05 50 49.2**	**-0.3**
POTN	**Potosi Cosigui**	**1.87**	**90**	P	**Pn**	**05 50 25.7**	**-0.4**
POTN				S	**Sn**	**05 50 50.2**	**+0.8**
TGUH	**Tegucigalpa,Un**	**2.34**	**63**	P	**Pn**	**05 50 32.9**	**+0.4**
YUSH	**Yuscaran**	**2.68**	**69**	P	**Pn**	**05 50 37.2**	**-0.1**
YUSH				S	**Sn**	**05 51 09.6**	**0.0**
MOM3	**MOM3**	**2.88**	**100**	P	**Pn**	**05 50 39.7**	**-0.2**
MOM3				S	**Sn**	**05 51 14.3**	**-0.1**
LIMN	**Finca el Limon**	**2.98**	**89**	P	**Pn**	**05 50 41.1**	**-0.3**
LIMN				S	**Sn**	**05 51 16.2**	**-0.8**

*LJU **22** 05:50:49.5, 45°.89N×16°.02E, h8km, ML1.9*

*KRSZO **22** 05:50:49.4±1.2, 45°.85N×15°.96E, h5km±5km, ML2.5/16, Error ellipse: s-maj=11.4km s-min=9.0km az=40.0*

*VIE **22** 05:50:50.2±0.5, 45°.95N×15°.96E, h10km, mb2.0/6, ml2.1/6, Error ellipse: s-maj=4.1km s-min=2.6km az=122.0 17 km N of Zagreb*

*PRU **22** 05:50:51.6, 46°.05N×16°.11E, h10km*

ISC 22 05:50:48.9±0.8, 45°.92N±0°.02×16°.05E±0°.02, h7km±5km, n59, σ0°87/95, 1C-3D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PTJ	**Puntijarka**	**0.06**	**257**	*i* Pg	**Pg**	**05 50 50.7**	**+0.1**
PTJ				Sg	**Sg**	**05 50 51.8**	**-0.1**
PTJ	**Puntijarka**	**0.06**	**257**	Pg	**Pg**	**05 50 50.7**	**+0.1**
PTJ				Lg	Lg	05 50 51.7	
ZAG	**Zagreb**	**0.10**	**204**	*i* Pg	**Pg**	**05 50 51.3**	**+0.2**
ZAG				Sg	**Sg**	**05 50 52.4**	**-0.3**
ZAG	**Zagreb**	**0.10**	**204**	Pg	**Pg**	**05 50 51.4**	**+0.2**
ZAG				Lg	Lg	05 50 53.0	
GCIS	**Gornji Cirnik**	**0.30**	**260**	*i* Pg	**Pg**	**05 50 55.0**	**+0.3**
GCIS				*i* Sg	**Sg**	**05 50 59.6**	**+1.0**
GCIS				IAML		05 51 00.5	
	comp=Z,73nm,0.1s						
GOLS	**Golise**	**0.31**	**287**	*i* Pg	**Pg**	**05 50 55.7**	**+0.7**
GOLS				*i* Sg	**Sg**	**05 51 00.1**	**+1.1**
GOLS				IAML		05 51 01.5	
	comp=Z,45nm,0.1s						
KALN	**Kalnik**	**0.35**	**53**	*e*Pg	**Pb**	**05 50 56.8**	**-0.8**
KALN				Sg	**Sb**	**05 51 02.2**	**-1.2**
CESS	**Cesta pri Krsk**	**0.41**	**278**	*i* Pg	**Pb**	**05 50 57.7**	**-0.8**
CESS				*i* Sg	**Sg**	**05 51 03.3**	**+1.1**
CESS				IAML		05 51 05.4	
	comp=Z,169nm,0.3s						
CRES	**Cresnjevec Ost**	**0.42**	**257**	*i* Pg	**Pg**	**05 50 57.2**	**+0.1**
CRES				*i* Sg	**Sg**	**05 51 03.6**	**+1.0**
CRES				IAML		05 51 05.4	
	comp=Z,20nm,0.1s						
DOBS	**Dobrina**	**0.46**	**300**	*i* Pg	**Pb**	**05 50 58.8**	**-0.6**
DOBS				*i* Sg	**Sb**	**05 51 05.5**	**-1.0**
DOBS				IAML		05 51 06.0	
	comp=Z,25nm,0.1s						
OZLJ	**Ozalj**	**0.51**	**233**	*i* Pg	**Pg**	**05 50 58.8**	**+0.2**
OZLJ				Sg	**Sg**	**05 51 05.3**	**0.0**
LEGS	**Legarje**	**0.51**	**274**	*i* Pg	**Pg**	**05 50 59.3**	**+0.6**
LEGS				*i* Sg	**Sg**	**05 51 04.9**	**-0.4**
KOGS	**Kog**	**0.55**	**15**	*i* Pg	**Pb**	**05 51 01.1**	**+0.3**
KOGS				*i* Sg	**Sb**	**05 51 09.5**	**+0.6**
KOGS				*i*		05 51 13.1	
KOGS				IAML		05 51 14.2	
	comp=Z,102nm,0.1s						
MOSL	**Moslavina**	**0.58**	**121**	*e*Pg	**Pg**	**05 51 00.3**	**+0.2**
MOSL				Sg	**Sg**	**05 51 08.0**	**+0.3**
GROS	**Grobnik**	**0.66**	**325**	*i* Pg	**Pb**	**05 51 02.6**	**-0.2**
GROS				IAML		05 51 12.4	
	comp=Z,15nm,0.1s						
BOJS	**Bojanci**	**0.69**	**234**	*i* Pg	**Pg**	**05 51 01.9**	**-0.3**
BOJS				*i* Sg	**Sg**	**05 51 11.7**	**+0.4**
BOJS				IAML		05 51 13.9	
	comp=Z,24nm,0.1s						
PDKS	**Podkum**	**0.74**	**281**	*i* Pg	**Pb**	**05 51 03.7**	**-0.5**
PDKS				*e*Sg	**Sg**	**05 51 13.0**	**+0.1**
PDKS				IAML		05 51 17.9	
	comp=Z,22nm,0.1s						
BEHE	**Becsehely**	**0.75**	**42**	Pg	**Pn**	**05 51 06.2**	**+0.3**
BEHE				Lg	Lg	05 51 17.6	
VISS	**Visnje**	**0.85**	**263**	*i* Pg	**Pg**	**05 51 05.1**	**-0.2**
VISS				*i* Sg	**Sb**	**05 51 18.1**	**+0.5**
VISS				IAML		05 51 21.9	
	comp=Z,9.9nm,0.1s						
ZAVS	**Zavodnje**	**0.88**	**306**	*i* Pg	**Pb**	**05 51 06.4**	**-0.1**
ZAVS				IAML		05 51 22.1	
	comp=Z,13nm,0.1s						
A264A	**Tarany**	**0.90**	**74**	Pn	**Pn**	**05 51 08.9**	**+1.0**
GBRS	**Gornja Briga**	**0.95**	**246**	*i* Pg	**Pg**	**05 51 06.8**	**-0.3**
VNDS	**Vrh nad Dolski**	**0.95**	**281**	*i* Sg	**Sb**	**05 51 21.2**	**+0.5**
VNDS				IAML		05 51 24.9	
	comp=Z,14nm,0.1s						
A262A	**Szaknyer**	**1.00**	**19**	Pn	**Pn**	**05 51 11.2**	**+1.8**
SOKA	**Soboth**	**1.03**	**318**	*e*Pg	**Pg**	**05 51 08.4**	**-0.3**
	comp=Z,1.6nm,0.1s,SNR=4.5						
SOKA				*e*Sg	**Sb**	**05 51 22.6**	**-0.4**
	comp=Z,0.6nm,0.1s						
PLIT	**Plitvice**	**1.08**	**196**	*e*Pg	**Pg**	**05 51 08.7**	**-1.0**
PLIT				Sg	**Sg**	**05 51 22.4**	**-1.3**
A010A	**Fuerstenfeld**	**1.15**	**1**	Pg	**Pn**	**05 51 12.1**	**+0.7**
A010A				Sn	**Sn**	**05 51 30.3**	**+2.8**
OBKA	**Obir**	**1.20**	**300**	*e*Pg	**Pn**	**05 51 12.4**	**+0.2**
	comp=Z,0.3nm,0.1s,SNR=7.5						
OBKA				*e*Sg	**Sn**	**05 51 28.2**	**-0.5**
	comp=Z,1.0nm,0.2s						
OBKA	**Obir**	**1.20**	**300**	Pg	**Pn**	**05 51 12.2**	**+0.1**
OBKA				Sn	**Sn**	**05 51 29.0**	**+0.3**
RIY	**Rijeka**	**1.25**	**242**	Sg	**Sn**	**05 51 29.9**	**+0.1**
A265A	**Kaposfured**	**1.32**	**67**	Pg	**Pg**	**05 51 16.2**	**+2.1**
A265A				Lg	Lg	05 51 35.0	
ARSA	**Arzberg**	**1.38**	**345**	*e*Pn	**Pg**	**05 51 15.0**	**-0.3**
	comp=Z,0.2nm,0.1s,SNR=8.9						
ARSA	**Arzberg**	**1.38**	**345**	Pn	**Pg**	**05 51 14.9**	**-0.5**
ARSA				Lg	Lg	05 51 35.0	
UDBI	**Udbina**	**1.41**	**188**	*i* Pg	**Pn**	**05 51 14.7**	**-0.3**
UDBI				Sg	**Sn**	**05 51 32.9**	**-0.9**
BLY	**Banja Luka**	**1.42**	**145**	Pn	**Pn**	**05 51 14.3**	**-0.8**
BLY				Lg	Lg	05 51 34.8	
RABC	**Rab**	**1.47**	**218**	*e*Pg	**Pn**	**05 51 15.6**	**-0.1**
RABC				Sg	**Sb**	**05 51 35.7**	**+0.3**
NVLJ	**Novalja**	**1.59**	**212**	*e*Pg	**Pn**	**05 51 18.1**	**+0.6**
NVLJ				Sg	**Sn**	**05 51 38.7**	**+0.5**
MPLH	**Magyarpolny**	**1.62**	**39**	Pn	**Pg**	**05 51 19.3**	**-0.7**
VIRC	**Vir**	**1.77**	**204**	*i* Pn	**Pn**	**05 51 19.9**	**0.0**
VIRC				Sn	**Sb**	**05 51 43.8**	**-0.3**
RONA	**Rosalia, Austr**	**1.79**	**5**	*e*Pn	**Pb**	**05 51 21.1**	**-0.9**
	comp=Z,1.4nm,0.1s						
SOP	**Sopron**	**1.80**	**11**	Pn	**Pb**	**05 51 20.9**	**-1.2**
MORH	**Mrgy, Hungar**	**1.83**	**80**	Pn	**Pn**	**05 51 19.8**	**-0.9**
CONA	**Conrad Observa**	**2.01**	**356**	*i* Pn	**Pn**	**05 51 23.8**	**+0.4**
	comp=Z,0.2nm,0.2s						
CONA	**Conrad Observa**	**2.01**	**356**	Pn	**Pb**	**05 51 24.5**	**-1.3**
DUGI	**Dugi Otok**	**2.05**	**200**	*e*Pn	**Pn**	**05 51 23.5**	**-0.3**
DUGI				Sn	**Sn**	**05 51 50.9**	**+1.3**
MORI	**Morici**	**2.07**	**187**	*e*Pn	**Pn**	**05 51 24.8**	**+0.8**
MORI				Sn	**Sn**	**05 51 50.8**	**+0.7**
WINA	**Alland / Wiene**	**2.19**	**0**	*e*Pn	**Pb**	**05 51 26.9**	**-1.9**
	SNR=4.4						
ZIRJ	**Zirje**	**2.28**	**187**	*e*Pn	**Pn**	**05 51 27.3**	**+0.3**
ZIRJ				Sn	**Sn**	**05 51 55.6**	**+0.3**
RICI	**Ricice**	**2.55**	**162**	*e*Pn	**Pn**	**05 51 31.4**	**+0.8**
RICI				Sn	**Sn**	**05 52 03.5**	**+1.7**
MODS	**Modra-Piesok**	**2.59**	**18**	*e*PN	**Pn**	**05 51 32.5**	**+1.2**
MODS				*e*SN	**Sn**	**05 52 01.3**	**-1.8**
MAKA	**Makarska**	**2.72**	**165**	*e*Pn	**Pn**	**05 51 34.0**	**+1.1**
MAKA				Sn	**Sn**	**05 52 06.9**	**+0.8**
HVAR	**Hvar**	**2.76**	**174**	*i* Pn	**Pn**	**05 51 34.2**	**+0.7**
HVAR				Sn	**Sn**	**05 52 08.0**	**+1.0**
CKRC	**Cesky Krumlov**	**3.13**	**338**	*e*PN	**Pn**	**05 51 39.2**	**+0.5**
CKRC				*e*SN	**Sn**	**05 52 14.8**	**-1.6**
KRUC	**Moravsky**	**3.15**	**4**	*e*PN	**Pn**	**05 51 39.2**	**+0.3**
LSTV	**Lastovo**	**3.21**	**169**	*e*Pn	**Pn**	**05 51 39.9**	**+0.2**
LSTV				Sn	**Sn**	**05 52 19.3**	**+1.1**
STON	**Ston**	**3.27**	**158**	*i* Pn	**Pn**	**05 51 41.0**	**+0.5**
STON				Sn	**Sn**	**05 52 19.9**	**+0.2**
VRAC	**Vranov**	**3.41**	**6**	*e*PN	**Pn**	**05 51 43.0**	**+0.5**
KHC	**Kasperske Hory**	**3.62**	**333**	*e*PN	**Pn**	**05 51 46.1**	**+0.7**
KHC				*e*SN	**Sn**	**05 52 28.2**	**-0.3**
ZVC	**Zvikov**	**3.74**	**341**	*e*PN	**Pn**	**05 51 48.6**	**+1.6**
ZVC				*e*SN	**Sn**	**05 52 29.7**	**-1.5**

*BJI **22** 05:51:42.8, 3°.25S×136°.09E, h34km, mB5.2/11, mb5.1/62, Ms4.8/12, Ms7 4.5/15*

*IDC **22** 05:51:42.7±0.4, 2°.96S×135°.59E, h0km, mb4.9/21, mbtmp4.9/28, ML4.8/6, MS4.2/22, Error ellipse: s-maj=18.4km s-min=9.6km az=65.0*

*MOS **22** 05:51:45.5±0.8, 3°.04S×135°.65E, h33km, mb5.4/31, Error ellipse: s-maj=10.3km s-min=5.9km az=120.0*

*NEIC **22** 05:51:47.8±1.4, 3°.11S±0°.07×135°.63E±0°.07, h31km±4km, mb5.1/155, Error ellipse: s-maj=11.1km s-min=9.9km az=57.0*

*GFZ **22** 05:51:47.4, 3°.10S×135°.66E, h30km, MW4.9, Moment Tensor Solution. s23 Moment tensor: Mrr1.53; Mθθ-2.77; Mφφ 1.24; Mrθ 1.11; Mrφ 0.47; Mθφ 0.71; Fault plane solution: NP1:φs66.00000°, δ66.00000°, λ50.00000°. NP2:φs311.00000°, δ44.00000°, λ145.00000°. Principal axes: T 2.3800, Plg51.0000°, Azm290.0000°; N 0.6900, Plg35.0000°, Azm84.0000°; P -3.0600, Plg12.0000°, Azm184.0000°;*

*DJA **22** 05:51:49.5±0.1, 3°.S±2°×13°.6E±°, h46km±2km, M5.2/70, mB5.6/42, mb5.1/70, MLv5.3/24, Mw4.8/12, Mw(mB)5.1/42, MwMwp4.8/1, Mwp5.1/1*

*GCMT **22** 05:51:50.8±0.2, 3°.00S±0°.01×135°.66E±0°.02, h35km, MW5.0/89, Moment Tensor Solution. s51,c69; s89,c120; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr3.58±.21; Mθθ-4.76±.12; Mφφ 1.18±.15; Mrθ 1.88±.14; Mθφ 0.95±.10; Mrφ 0.41±.18; Best double couple: M0 4.69400×10^16 NP1:φs294.00000°, δ35.00000°, λ113.00000°. NP2: φs86.00000°, δ58.00000°, λ74.00000°. Principal axes: T 4.1130, Plg72.0000°, Azm317.0000°; N 1.1630, Plg13.0000°, Azm95.0000°; P -5.2750, Plg12.0000°, Azm188.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 05:51:46.7±0.4, 3°.08S±0°.03×135°.66E±0°.03, h27km±2km, h27km:pP-P, n623, σ1s22/588, mb5.1/159, MS4.4/25,

11C-9D, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRPI	**Serui, Papua**	**1.33**	**26**	P	**Pn**	**05 52 08.6**	**-0.9**
SRPI				S	**Sn**	**05 52 24.1**	**-2.2**
BAKI	**Biak**	**1.92**	**13**	P	**Pb**	**05 52 18.7**	**-2.5**
BAKI				S	**Sn**	**05 52 40.5**	**-0.5**
KMPI	**Kaimana, Papua**	**2.04**	**253**	P	**Pb**	**05 52 22.1**	**-1.1**
RKPI	**Ransiki, Papua**	**2.15**	**316**	P	**Pn**	**05 52 20.6**	**-0.2**
RKPI				S	**Sn**	**05 52 46.2**	**-0.4**
MWPI	**Manokwari, Pap**	**2.68**	**323**	P	**Pn**	**05 52 28.9**	**+0.8**
SMPI	**Sarmi**	**3.23**	**71**	P	**Pn**	**05 52 36.5**	**+0.8**
FAKI	**Fak Fak**	**3.41**	**273**	P	**Pn**	**05 52 39.7**	**+1.5**
FAKI	**Fak Fak**	**3.41**	**273**		**Pn**	**05 52 39.4**	**+1.2**
FAKI	**Fak Fak**	**3.41**	**273**	P	**Pn**	**05 52 40.0**	**+1.8**
GENI	**Genyem**	**4.52**	**84**	P	**Pn**	**05 52 57.7**	**+4.2**
GENI	**Genyem**	**4.52**	**84**	P	**Pn**	**05 52 56.1**	**+2.6**
SIJI	**Sorong**	**4.91**	**296**	Pn	**Pn**	**05 52 58.1**	**-0.7**
	80nm,0.3s,baz=98,slow=8.7,SNR=209						
SIJI				Sn	**Sn**	**05 53 50.8**	**-4.0**
	65nm,0.3s,baz=246,slow=23,SNR=13						
SIJI				LR	LR	05 55 13.0	
	comp=Z,2μm,20.9s,baz=137,slow=44						
	317nm,0.4s						
SIJI	**Sorong**	**4.91**	**296**	P	**Pn**	**05 52 59.1**	**+0.3**
SWI	**Sorong**	**4.92**	**296**	P	**Pn**	**05 52 59.3**	**+0.4**
JAY	**Jayapura**	**5.07**	**84**	Pn	**Pn**	**05 53 01.3**	**+0.3**
	17nm,0.3s,baz=226,slow=12,SNR=19						
JAY				Sn	**Sn**	**05 53 54.6**	**-4.1**
	7.7nm,0.3s,baz=184,slow=5.0,SNR=3.6						
	43nm,0.3s						
JAY	**Jayapura**	**5.07**	**84**	P	**Pn**	**05 53 02.3**	**+1.3**
	106nm,0.7s						
BNDI	**Bandanaira**	**5.92**	**256**	P	**Pn**	**05 53 14.5**	**+1.8**
BNDI	**Bandanaira**	**5.92**	**256**	P	**Pn**	**05 53 14.0**	**+1.3**
	422nm,1.1s						
SAUI	**Saumlaki**	**6.53**	**222**		**Pn**	**05 53 20.7**	**-0.4**
SAUI	**Saumlaki**	**6.53**	**222**	P	**Pn**	**05 53 24.8**	**+3.7**
	2.0nm550nm,0.9s						
MSAI	**Masohi**	**6.73**	**268**	P	Pn	05 53 31.9	+8.1
MMPI	**Merauke**	**7.12**	**139**	P	**Pn**	**05 53 32.9**	**+3.7**
KRAI	**Karang Ratu**	**7.26**	**268**	P	Pn	05 53 36.1	+4.9
	0.4nm4μm68nm,0.8s						
AAI	**Ambon**	**7.48**	**265**	P	**Pn**	**05 53 36.4**	**+2.2**
	0.5nm3μm109nm,0.5s						
NLAI	**Namlea**	**8.55**	**269**	P	**Pn**	**05 53 50.7**	**+1.8**
	1μm103nm,0.7s						
SANI	**Sanana**	**9.72**	**276**	P	**Pn**	**05 54 06.3**	**+1.4**
SANI	**Sanana**	**9.72**	**276**	P	**Pn**	**05 54 05.8**	**+0.9**
	72nm,0.9s						
KDU	**Kakadu**	**10.06**	**198**	P	**Pn**	**05 54 10.2**	**+0.7**
DRS	**Darwin Rock St**	**10.42**	**207**	P	**Pn**	**05 54 15.7**	**+1.2**
MTN	**Manton Dam**	**10.69**	**205**	P	**Pn**	**05 54 18.6**	**+0.4**
	comp=Z,446nm,0.4s,comp=Z,7μm						
MTN	**Manton Dam**	**10.69**	**205**		**Pn**	**05 54 18.7**	**+0.5**
MANU	**Manus Island**	**11.73**	**85**		**Pn**	**05 54 34.1**	**+1.6**
PMG	**Port Moresby**	**13.04**	**119**	Pn	**Pn**	**05 54 51.5**	**+1.2**
	comp=Z,22nm,0.4s,baz=39,slow=1.0,SNR=15						
PMG				Sn	**Sn**	**05 57 07.8**	**-6.8**
	comp=Z,2.5nm,0.3s,baz=183,slow=19,SNR=2.5						
PMG				LR	LR	06 01 59.3	
	comp=Z,636nm,19.4s,baz=310,slow=47						
PMG	**Port Moresby**	**13.04**	**119**	P	**Pn**	**05 54 53.4**	**+3.1**
PMG	**Port Moresby**	**13.04**	**119**		**Pn**	**05 54 50.8**	**+0.4**
PMG	**Port Moresby**	**13.04**	**119**	P	**Pn**	**05 54 54.6**	**+4.3**
	comp=Z,83nm,1.1s						
LUWI	**Luwuk**	**13.04**	**279**		**Pn**	**05 54 49.8**	**-0.5**
LUWI	**Luwuk**	**13.04**	**279**	P	**Pn**	**05 54 50.1**	**-0.3**
	comp=Z,2μmcomp=Z,85nm,1.2s						
COEN	**Coen**	**13.11**	**146**	P	**Pn**	**05 54 51.4**	**0.0**
	comp=Z,47nm,0.6s						
COEN	**Coen**	**13.11**	**146**	P	**Pn**	**05 54 51.8**	**+0.5**
**COEN

CTAO	**Charters Tower**	**19.82**	**149**	P	**P**	**05 56 15.1**	**-0.3**	
CTAO				pmax	pmax			
	comp=Z,36nm,0.8s							
AS31	**Alice Springs**	**20.54**	**185**	P	**P**	**05 56 25.0**	**+1.7**	
AS31				IAmb	IAmb	05 56 26.8		
	comp=Z,96nm,0.7s							
ASAR	**Alice Springs**	**20.54**	**185**	P	**P**	**05 56 24.1**	**+0.8**	
	comp=Z,194nm,0.6s,baz=9.9,slow=12,SNR=640							
ASAR				S	**S**	**06 00 06.7**	**-5.2**	
	comp=Z,7.2nm,0.8s,baz=2.5,slow=24,SNR=4.9							
ASAR				LR	LR	06 05 02.7		
	comp=Z,2µm,21.1s,baz=6.5,slow=39							
	comp=Z,194nm,0.6s							
ASAR	**Alice Springs**	**20.54**	**185**		**P**	**05 56 24.4**	**+1.1**	
KHKI	**Kahang-Kahang**	**20.63**	**254**	P	Pn	05 56 38.4	+12	
BBKI	**Banjar Baru**	**20.79**	**268**	P	Pn	05 56 29.5	+0.9	
	comp=Z,3µmcomp=Z,189nm,1.2s							
RTBI	**Rangdo, Negare**	**21.29**	**255**	P	P	05 56 54.7	+23	
KKM	**Kota Kinabalu**	**21.43**	**295**	P	**P**	**05 56 32.8**	**-0.3**	
KKM	**Kota Kinabalu**	**21.43**	**295**	P	**P**	**05 56 32.8**	**-0.3**	
	comp=Z,30nm,0.8s							
KMMI	**Kalianget**	**21.97**	**259**	P	**P**	**05 56 41.9**	**+3.2**	
	comp=Z,76nm,1.2s							
JAGI	**Jajag, Banyuwa**	**22.06**	**255**	P	**P**	**05 56 39.8**	**+0.1**	
JAGI	**Jajag, Banyuwa**	**22.06**	**255**	P	P	05 56 54.7	+15	
TGY	**Tagaytay City**	**22.46**	**320**	P	**P**	**05 56 42.5**	**-1.6**	
	comp=Z,38nm,0.3s,baz=96,slow=2.9,SNR=3.8							
TGY				LR	LR	06 06 07.1		
	comp=Z,148nm,20.6s,baz=115,slow=39							
	comp=Z,38nm,0.3s							
WRKA	**Warakurna**	**22.96**	**197**	P	**P**	**05 56 49.2**	**0.0**	
	comp=Z,47nm,1.3s							
MBWA	**Marble Bar**	**23.74**	**220**	P	**P**	**05 56 57.6**	**+0.7**	
	comp=Z,68nm,2.0s,comp=Z,1µm							
MBWA	**Marble Bar**	**23.74**	**220**	P	**P**	**05 56 56.8**	**-0.1**	
MBWA				IAmb	IAmb	05 57 20.9		
	comp=Z,121nm,1.5s							
PSAC2	**Pilbara Seismi**	**23.93**	**219**	P	**P**	**05 56 59.7**	**+1.0**	
	comp=Z,66nm,1.8s							
PSA00	**Pilbara Seismi**	**23.97**	**219**	P	**P**	**05 56 59.9**	**+0.8**	
	comp=Z,67nm,1.4s							
PSA00	**Pilbara Seismi**	**23.97**	**219**	P	**P**	**05 56 58.4**	**-0.7**	
PSA00				IAmb	IAmb	05 57 14.6		
	comp=Z,62nm,1.1s							
PSA00	**Pilbara Seismi**	**23.97**	**219**	P	**P**	**05 56 58.8**	**-0.3**	
PSA00				IAmb	IAmb	05 57 14.6		
	comp=Z,54nm,1.2s							
SBUM	**Sibu**	**24.07**	**283**	P	**P**	**05 57 00.9**	**+0.8**	
SBUM	**Sibu**	**24.07**	**283**	P	**P**	**05 57 01.4**	**+1.3**	
SNJI	**Sawahan-Nganju**	**24.25**	**258**	P	**P**	**05 57 02.8**	**+0.9**	
QLP	**Quilpie**	**24.78**	**161**	P	**P**	**05 57 08.7**	**+2.3**	
	comp=Z,482nm,0.8s,comp=Z,4µm							
UGM	**Wanagama**	**25.48**	**258**	P	**P**	**05 57 13.1**	**+0.2**	
UGM				IAmb	IAmb	05 57 29.9		
	comp=Z,99nm,1.4s							
TPI	**Tanjungpandan**	**27.98**	**270**	P	**P**	**05 57 36.9**	**+1.4**	
	comp=Z,24nm,1.2s							
LEM	**Lembang**	**28.18**	**261**	LR	LR	06 10 16.6		
	comp=Z,134nm,21.9s,baz=63,slow=40							
BBJI	**Bungbulang**	**28.23**	**260**	P	**P**	**05 57 37.3**	**-0.5**	
GIRL	**Giralia**	**28.46**	**225**	P	**P**	**05 57 39.7**	**0.0**	
GIRL				IAmb	IAmb	05 57 46.5		
	comp=Z,79nm,1.4s							
FORT	**Forrest**	**28.48**	**194**	P	**P**	**05 57 40.0**	**+0.3**	
	comp=Z,53nm,1.1s							
FORT	**Forrest**	**28.48**	**194**	P	**P**	**05 57 40.0**	**+0.3**	
FORT				IAmb	IAmb	05 58 08.5		
	comp=Z,32nm,0.8s							
BBOO	**Buckleboo**	**29.58**	**179**	P	**P**	**05 57 49.6**	**0.0**	
	comp=Z,53nm,1.3s							
BBOO	**Buckleboo**	**29.58**	**179**	P	**P**	**05 57 49.5**	**0.0**	
BBOO				IAmb	IAmb	05 57 50.5		
	comp=Z,38nm,1.0s							
YOJ	**Yonaguni jima**	**30.01**	**336**		**P**	**05 57 54.5**	**+1.2**	
YOJ	**Yonaguni jima**	**30.01**	**336**	P	**P**	**05 57 54.5**	**+1.2**	
YOJ				pmax	pmax			
	comp=Z,176nm,1.5s							
HTT	**Hallett**	**30.35**	**175**	P	**P**	**05 57 57.4**	**+1.0**	
	comp=Z,7.5nm,1.2s							
ARMA	**Armidale**	**31.11**	**153**	P	**P**	**05 58 04.5**	**+1.3**	
MDSI	**Maura Dua**	**31.45**	**266**	P	**P**	**05 58 06.8**	**+0.6**	
	comp=Z,595nmcomp=Z,22nm,1.1s							
MYKOM	**Kota Tinggi**	**32.17**	**278**	P	**P**	**05 58 13.4**	**+0.8**	
MYKOM				IAmb	IAmb	05 58 14.6		
	comp=Z,40nm,1.0s							
MYKOM	**Kota Tinggi**	**32.17**	**278**	P	**P**	**05 58 13.6**	**+1.0**	
	comp=Z,515nmcomp=Z,46nm,1.0s							
QIZ	**Qiongzhong**	**33.58**	**312**	P	**P**	**05 58 24.3**	**-0.6**	
QIZ				S	**S**	**06 03 46.0**	**+0.1**	
QIZ				L	L			
	comp=Z,340nm,13.4s							
QIZ				L	L			
	comp=Z,970nm,14.7s							
QIZ				L	L			
	comp=Z,380nm,16.5s							
QIZ	**Qiongzhong**	**33.58**	**312**	P	**P**	**05 58 24.4**	**-0.4**	
QIZ				pP	**sP**	**05 58 33.7**	**-2.6**	
ARPS	**Mount Arapiles**	**34.01**	**171**	P	**P**	**05 58 29.7**	**+1.3**	
	comp=Z,16nm,0.8s							
NWAO	**Narrogin (SRO)**	**34.35**	**208**	LR	LR	06 13 44.8		
	comp=Z,880nm,20.2s,baz=42,slow=38							
PDSI	**Padang**	**35.24**	**273**	P	**P**	**05 58 38.9**	**-0.5**	
	comp=Z,51nm,0.8s							
MNSI	**Mandailing Nat**	**36.27**	**276**	P	**P**	**05 58 48.9**	**+0.7**	
RPSI	**Rantau Prapat**	**37.17**	**278**		**P**	**05 58 55.3**	**-0.6**	
RPSI				IAmb	IAmb	05 58 57.2		
	comp=Z,37nm,1.0s							
PSI	**Prapat**	**37.19**	**279**	P	**P**	**05 58 55.3**	**-0.8**	
PSI				pmax	pmax			
	comp=Z,37nm,1.0s							
PSI	**Prapat**	**37.19**	**279**	P	**P**	**05 58 55.5**	**-0.6**	
	comp=Z,44nm,1.1s							
GSI	**Gunungsitoli**	**38.32**	**276**		**P**	**05 59 04.5**	**-1.1**	
GSI				IAmb	IAmb	05 59 06.0		
	comp=Z,44nm,0.9s							
GSI	**Gunungsitoli**	**38.32**	**276**	P	**P**	**05 59 04.3**	**-1.3**	
	comp=Z,59nm,1.3s							
NJ2	**Nanjing**	**38.41**	**337**	*e*P	**P**	**05 59 09.3**	**+3.3**	
NJ2				pmax	pmax			
	comp=Z,29nm,0.9s							
KCSI	**Kotacane, Aceh**	**38.43**	**280**	P	**P**	**05 59 05.4**	**-1.2**	
	comp=Z,1µmcomp=Z,22nm,1.5s							
WHN	**Wuhan**	**39.14**	**330**	P	**P**	**05 59 13.3**	**+1.2**	
WHN				pmax	pmax			
	comp=Z,100nm,0.9s							
MJAR	**Matsushiro Arr**	**39.48**	**3**	P	**P**	**05 59 13.7**	**-1.3**	
	comp=Z,2.1nm,0.9s,baz=185,slow=7.8,SNR=4.7							
	comp=Z,2.1nm,0.9s							
COCO	**West Island**	**39.49**	**255**	P	**P**	**05 59 16.0**	**+0.7**	
COCO				PcP	**PcP**	**06 01 20.7**	**-2.2**	
LHMI	**Lhok Sumawe**	**39.55**	**282**	P	**P**	**05 59 15.6**	**-0.2**	
LHMI	**Lhok Sumawe**	**39.55**	**282**	P	**P**	**05 59 16.3**	**+0.5**	
MLSI	**Meulaboh, Aceh**	**39.90**	**280**	P	**P**	**05 59 18.2**	**-0.6**	
GYA	**Guiyang**	**40.60**	**318**	⇓P	**P**	**05 59 24.9**	**+0.4**	
GYA				S	**S**	**06 05 32.4**	**-0.3**	
GYA				SS	**SS**	**06 08 33.0**	**-0.4**	
GYA				pmax	pmax			
	comp=Z,24nm,0.5s							
GYA				L	L			
	comp=Z,520nm,14.2s							
KSRS	**Korea Array**	**40.96**	**351**	P	**P**	**05 59 26.0**	**-1.1**	
	comp=Z,1.9nm,0.8s,baz=169,slow=9.0,SNR=4.4							
	comp=Z,1.9nm,0.8s							
BSI	**Banda Aceh**	**41.21**	**282**	P	**P**	**05 59 28.0**	**-1.7**	
	comp=Z,30nm,1.3s							
CM31	**Chiang Mai Arr**	**42.02**	**302**	P	**P**	**05 59 35.8**	**-0.3**	
CMAR	**Chiang Mai Arr**	**42.02**	**302**	P	**P**	**05 59 34.6**	**-1.5**	
	comp=Z,7.7nm,0.7s,baz=125,slow=6.8,SNR=58							
	comp=Z,7.7nm,0.7s							
CMAR	**Chiang Mai Arr**	**42.02**	**302**	P	**P**	**05 59 35.1**	**-1.0**	
CMAR	**Chiang Mai Arr**	**42.02**	**302**	*i* P	**P**	**05 59 36.5**	**+0.3**	
CMAR				pmax	pmax			
	comp=Z,9.0nm,0.8s							
CHTO	**Chiang Mai**	**42.17**	**302**	P	**P**	**05 59 37.1**	**-0.4**	
CHTO	**Chiang Mai**	**42.17**	**302**	P	**P**	**05 59 37.1**	**-0.4**	
CHTO				pmax	pmax			
	comp=Z,14nm,0.8s							
CHTO	**Chiang Mai**	**42.17**	**302**	P	**P**	**05 59 36.6**	**-0.9**	
	comp=Z,320nmcomp=Z,23nm,1.0s							
CHTO	**Chiang Mai**	**42.17**	**302**	P	**P**	**05 59 36.8**	**-0.6**	
CHTO				sP	**sP**	**05 59 49.9**	**+1.0**	
KMI2	**Kunming**	**42.51**	**313**	⇑P	**P**	**05 59 40.6**	**+0.3**	
KMI2				sP	sP	05 59 57.0	+5.2	
KMI2				pmax	pmax			
	comp=Z,32nm,1.2s							
LYN	**LuoYang**	**43.32**	**332**	P	**P**	**05 59 46.6**	**+0.1**	
LYN				pmax	pmax			
	comp=Z,36nm,1.0s							
LYN				pmax	pmax			
	comp=Z,190nm,8.4s							
LYN				L	L			
	comp=Z,570nm,14.1s							
LYN				L	L			
	comp=Z,720nm,16.1s							
LYN				L	L			
	comp=Z,490nm,12.0s							
MSVF	**Nonsavu**	**44.02**	**112**	LR	LR	06 19 06.2		
	comp=Z,293nm,19.2s,baz=302,slow=37							
PZH	**PanZhiHua**	**44.04**	**314**	P	**P**	**05 59 52.4**	**-0.2**	
PZH				S	**S**	**06 06 23.1**	**-0.4**	
PZH				pmax	pmax			
	comp=Z,20nm,1.0s							
PZH				L	L			
	comp=Z,280nm,15.3s							
PZH				L	L			
	comp=Z,470nm,18.8s							
PZH				L	L			
	comp=Z,420nm,19.1s							
XAN	**Xi'an**	**44.70**	**328**	⇓P	**P**	**05 59 56.8**	**-0.8**	
XAN				pP	pP	06 00 02.8	-3.1	
XAN				pmax	pmax			
	comp=Z,28nm,1.5s							
HNS	**HongShan**	**44.73**	**336**	⇑P	**P**	**05 59 56.9**	**-0.8**	
HNS				pmax	pmax			
	comp=Z,20nm,1.1s							
HNS				L	L			
	comp=Z,620nm,17.9s							
HNS				L	L			
	comp=Z,230nm,11.4s							
HNS				L	L			
	comp=Z,720nm,19.0s							
BJI2	**Beijing**	**46.47**	**339**	P	**P**	**06 00 11.1**	**-0.4**	
BJI2				pmax	pmax			
	comp=Z,7.0nm,0.8s							
BJT	**Baijiatuan**	**46.47**	**339**	P	**P**	**06 00 10.0**	**-1.5**	
BJT	**Baijiatuan**	**46.47**	**339**	P	**P**	**06 00 10.0**	**-1.5**	
BJT				pmax	pmax			
	comp=Z,11nm,0.8s							
USRK	**Ussuriysk Ar.**	**47.18**	**356**	P	**P**	**06 00 15.3**	**-1.6**	
	comp=Z,3.3nm,0.7s,baz=175,slow=8.0,SNR=5.7							
	comp=Z,3.3nm,0.7s							
ASAJ	**Asahikawa**	**47.39**	**7**	P	**P**	**06 00 18.2**	**-0.4**	
ASAJ				pmax	pmax			
	comp=Z,12nm,1.1s							
JKA	**Kamikawa-asahi**	**47.39**	**7**	P	**P**	**06 00 18.1**	**-0.4**	
CN2	**Changchun**	**47.56**	**350**	P	**P**	**06 00 19.4**	**-0.5**	
CN2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
MDJ	**Mudanjiang**	**47.79**	**354**	P	**P**	**06 00 20.8**	**-0.9**	
MDJ				IAmb	IAmb	06 00 38.7		
	comp=Z,19nm,1.1s							
MDJ	**Mudanjiang**	**47.79**	**354**	P	**P**	**06 00 21.1**	**-0.6**	
MDJ				sP	sP	06 00 36.1	+2.8	
MDJ				S	**S**	**06 07 23.1**	**+6.4**	
MDJ				pmax	pmax			
	comp=Z,14nm,1.0s							
MDJ				L	L			
	comp=Z,3µm,14.1s							
MDJ				L	L			
	comp=Z,2µm,13.4s							
MDJ				L	L			
	comp=Z,3µm,15.6s							
HHC	**Hu-ho-hao-te**	**48.95**	**336**	⇓*i*P	**P**	**06 00 31.3**	**+0.5**	
HHC				sP	sP	06 00 47.9	+5.5	
HHC				pmax	pmax			
	comp=Z,15nm,0.7s							
HHC				pmax	pmax			
	comp=Z,200nm,6.6s							
LZDM	**Lanzhou Array**	**48.99**	**325**	P	**P**	**06 00 30.9**	**-0.7**	
	comp=Z,1.1nm,0.3s,baz=141,slow=7.6,SNR=5.3							
	comp=Z,1.1nm,0.3s							
LZH	**Lanzhou**	**49.00**	**326**	*e*P	**P**	**06 00 32.1**	**+0.7**	
LZH				pP	sP	06 00 39.8	-3.2	
LZH				pmax	pmax			
	comp=Z,43nm,1.1s							
BNX	**BinXian**	**49.15**	**352**	⇓P	**P**	**06 00 31.1**	**-1.1**	
BNX				pmax	pmax			
	comp=Z,18nm,1.0s							
BTO2	**Baotou**	**49.57**	**334**	*e*P	**P**	**06 00 35.3**	**-0.3**	
BTO2				pP	**pP**	**06 00 39.6**	**-4.3**	
BTO2				pmax	pmax			
	comp=Z,14nm,0.8s							
BTO2				pmax	pmax			
	comp=Z,560nm,7.9s							
YSS	**Yuzhno-Sakhali**	**50.21**	**6**	*ce*P	**P**	**06 00 41.4**	**+1.2**	
YSS				pmax	pmax			
	comp=Z,9.0nm,0.9s							
SHL	**Shillong**	**51.08**	**307**	P	**P**	**06 00 47.1**	**-0.3**	
SHL				IAmb	IAmb	06 00 47.9		
	comp=Z,24nm,0.9s							
SHL	**Shillong**	**51.08**	**307**	P	**P**	**06 00 47.1**	**-0.3**	
SHL				pmax	pmax			
	comp=Z,24nm,0.9s							
RPZ	**Rata Peaks**	**51.17**	**147**	LR	LR	06 21 13.6		
	comp=Z,402nm,20.7s,baz=44,slow=34							
URZ	**Urewera**	**51.53**	**138**	LR	LR	06 21 45.1		
	comp=Z,557nm,21.5s,baz=306,slow=35							
KLR	**Kul'dur**	**52.21**	**357**	LR	LR	06 20 45.7		
	comp=Z,386nm,20.1s,baz=308,slow=34							
KLR	**Kul'dur**	**52.21**	**357**	*ce*P	**P**	**06 00 54.9**	**-0.2**	
KLR				pmax	pmax			
	comp=Z,8.0nm,2.5s							
GTA2	**Gaotai**	**53.69**	**326**	*e*P	**P**	**06 01 07.4**	**+0.9**	
GTA2				sP	sP	06 01 21.4	+3.3	
GTA2				pmax	pmax			
	comp=Z,28nm,0.8s							
GOMU	**GeErMu**	**54.58**	**320**	P	**P**	**06 01 12.6**	**-0.7**	
GOMU				pmax	pmax			
	comp=Z,7.0nm,0.9s							
PALK	**Pallekele**	**55.80**	**281**	P	**P**	**06 01 21.6**	**-0.5**	
PALK				IAmb	IAmb	06 01 23.1		
	comp=Z,18nm,1.2s							
PALK	**Pallekele**	**55.80**	**281**	P	**P**	**06 01 21.6**	**-0.5**	
PALK				pmax	pmax			
	comp=Z,18nm,1.2s							
PALK	**Pallekele**	**55.80**	**281**	P	**P**	**06 01 22.2**	**+0.1**	
	comp=Z,7.8nm,1.1s							
EVN	**Everest**	**56.19**	**307**	P	**P**	**06 01 25.6**	**+0.3**	
ULN	**Ulaanbaatar**	**56.57**	**337**	P	**P**	**06 01 27.1**	**0.0**	
ULN	**Ulaanbaatar**	**56.57**	**337**	*ce*P	**P**	**06 01 27.9**	**+0.7**	
ULN				pmax	pmax			
	comp=Z,13nm,1.7s							
ULN	**Ulaanbaatar**	**56.57**	**337**	P	**P**	**06 01 27.2**	**0.0**	
	comp=Z,32nm,2.2s							
SONM	**Songino Array**	**56.80**	**337**	P	**P**	**06 01 28.1**	**-0.7**	
	comp=Z,1.6nm,0.6s,baz=152,slow=7.1,SNR=13							
SONM				PcP	**PcP**	**06 02 23.8**	**-0.6**	
	comp=Z,1.4nm,0.6s,baz=148,slow=4.8,SNR=4.3							
SONM				LR	LR	06 24 27.1		
	comp=Z,285nm,21.7s,baz=160,slow=35							
	comp=Z,1.6nm,0.6s							
SONM	**Songino Array**	**56.80**	**337**	P	**P**	**06 01 28.4**	**-0.4**	
SONM	**Songino Array**	**56.80**	**337**	P	**P**	**06 01 28.4**	**-0.4**	
SONM				pmax	pmax			
	comp=Z,3.0nm,0.8s							
ZEA	**Zeya**	**57.05**	**354**	*e*P	**P**	**06 01 29.7**	**-0.5**	
ZEA				*e*		06 01 46.9		
ZEA				pmax	pmax			
	comp=Z,10.0nm,1.3s							
PETK	**Petropavlovsk-**	**58.97**	**15**	P	**P**	**06 01 44.1**	**+0.4**	
	comp=Z,12nm,0.7s,baz=184,slow=4.1,SNR=14							
	comp=Z,12nm,0.7s							
PETK	**Petropavlovsk-**	**58.97**	**15**	P	**P**	**06 01 44.7**	**+1.0**	
HYB	**Hyderabad**	**59.88**	**292**	*e*P	**P**	**06 01 50.5**	**-0.2**	
HYB				*es*P	**sP**	**06 02 04.1**	**+1.7**	
ZAK	**Zakamensk**	**60.07**	**337**	*e*P	**P**	**06 01 50.9**	**-0.6**	
ZAK				pmax	pmax			
	comp=Z,24nm,1.9s							
TLY	**Talaya**	**60.96**	**338**	LR	LR	06 27 24.4		
	comp=Z,220nm,21.9s,baz=150,slow=35							
TLY	**Talaya**	**60.96**	**338**	P	**P**	**06 01 57.7**	**+0.3**	
TLY	**Talaya**	**60.96**	**338**	*ce*P	**P**	**06 01 58.4**	**+1.0**	
TLY				pmax	pmax			
	comp=Z,9.0nm,1.7s							
IRK	**Irkutsk**	**61.18**	**339**	*e*P	**P**	**06 01 58.0**	**-0.9**	
IRK				pmax	pmax			
	comp=Z,36nm,2.1s							
WMQ	**Urumqi**	**63.44**	**323**	*e*P	**P**	**06 02 15.4**	**+1.1**	
WMQ				sP	sP	06 02 33.6	+7.6	
WMQ				pmax	pmax			
	comp=Z,69nm,0.9s							
WMQ				pmax	pmax			
	comp=Z,250nm,3.7s							
WMQ				L	L			
	comp=Z,150nm,16.7s							
MA2	**Magadan**	**63.59**	**9**	P	**P**	**06 02 15.5**	**+0.7**	
MA2	**Magadan**	**63.59**	**9**	*de*P	**P**	**06 02 15.4**	**+0.5**	
MA2				pmax	pmax			
	comp=Z,18nm,0.9s							
MA2	**Magadan**	**63.59**	**9**	P	**P**	**06 02 15.2**	**+0.4**	
MA2				pP	**sP**	**06 02 25.4**	**-1.3**	
MA2				sP	**pP**	**06 02 29.3**	**+6.0**	
MA2				PcP	**PcP**	**06 02 51.9**	**+0.8**	
YAK	**Yakutsk**	**65.09**	**357**	*de*P	**P**	**06 02 24.4**	**-0.2**	
YAK				*e*		06 02 57.0		
YAK				*e*		06 04 47.1		
YAK				*e*PPP	PPP	06 06 19.4		
YAK				*e*S	**S**	**06 11 07.4**	**+2.2**	
YAK				*e**SS	**sS**	**06 11 23.3**	**+4.1**	
YAK				*e*SS	**SS**	**06 15 20.6**	**+2.7**	
YAK				pmax	pmax			
	comp=Z,48nm,1.0s							
YAK				pmax	pmax			
	comp=N,18nm,1.2s							
YAK				pmax	pmax			
	comp=Z,1µm,10.9s							
YAK				pmax	pmax			
	comp=N,966nm,11.9s							
YAK				pmax	pmax			
	comp=E,562nm,9.1s							
YAK				smax	smax			
	comp=E,157nm,4.8s							
YAK				smax	smax			
	comp=N,123nm,4.3s							
SEY	**Seymchan**	**67.04**	**8**	*de*P	**P**	**06 02 38.0**	**+0.9**	
SEY				pmax	pmax			
	comp=Z,49nm,1.0s							
ZSN	**Zaisan**	**67.09**	**325**	*e*P	**P**	**06 02 38.2**	**+0.3**	
	comp=Z,13nm,1.2s							
WUS	**Wushi**	**67.57**	**317**	P	**P**	**06 02 41.5**	**+0.4**	
KIWB	**Kanaga Island**	**67.72**	**29**	P	**P**	**06 02 42.6**	**+0.9**	
ADK	**Adak**	**67.97**	**30**	P	**P**	**06 02 43.2**	**0.0**	
ADK	**Adak**	**67.97**	**30**	P	**P**	**06 02 43.2**	**0.0**	
ADK				pmax	pmax			
	comp=Z,43nm,1.1s							
ADK	**Adak**	**67.97**	**30**	P	**P**	**06 02 43.7**	**+0.5**	
ADK				pP	**sP**	**06 02 53.5**	**-1.5**	
MK31	**Makanchi Array**	**68.25**	**324**	*ce*P	**P**	**06 02 45.1**	**-0.1**	
MKAR	**Makanchi Array**	**68.25**	**324**	P	**P**	**06 02 45.3**	**+0.1**	
	comp=Z,25nm,0.6s,baz=114,slow=8.1,SNR=324							
	comp=Z,25nm,0.6s							
MKAR	**Makanchi Array**	**68.25**	**324**	P	**P**	**06 02 45.5**	**+0.3**	
SHLS	**Shalkode**	**68.28**	**319**	*e*P	**P**	**06 02 44.1**	**-1.5**	
	comp=Z,10nm,0.9s							
PDGK	**Podgornoye**	**68.33**	**319**	P	**P**	**06 02 45.8**	**-0.1**	
MAKZ	**Makanchi**	**68.44**	**323**	P	**P**	**06 02 46.5**	**+0.1**	
MAKZ				x	x	06 02 59.1		
MAKZ				x	x	06 03 00.8		
UZB	**Uzynbulak**	**68.56**	**319**	*e*P	**P**	**06 02 47.5**	**+0.2**	
	comp=Z,22nm,0.9s							
KPKS	**Kokpek**	**68.92**	**319**	*e*P	**P**	**06 02 49.6**	**+0.1**	
SATY	**Saty**	**68.92**	**319**	*e*P	**P**	**06 02 49.6**	**0.0**	
	comp=Z,19nm,1.2s							
NIL	**Nilore**	**69.12**	**308**		**P**	**06 02 50.8**	**-0.1**	
NIL	**Nilore**	**69.12**	**308**	P	**P**	**06 02 50.8**	**-0.1**	
NIL				pmax	pmax			
	comp=Z,27nm,0.8s							
KSH2	**Kashi**	**69.29**	**314**	P	**P**	**06 02 52.1**	**+0.1**	
KSH2				pmax	pmax			
	comp=Z,30nm,1.0s							
TDK	**Taldyqorghan**	**69.78**	**321**	*e*P	**P**	**06 02 55.1**	**+0.3**	
	comp=Z,23nm,1.1s							
MDOK	**Medeo**	**69.87**	**318**	*e*P	**P**	**06 02 55.7**	**+0.2**	
NRN	**Naryn**	**69.87**	**316**	IAmb	IAmb	06 02 57.2		
	comp=Z,17nm,0.9s							
TNSS	**Tian-Shan**	**69.88**	**318**	*e*P	**P**	**06 02 55.7**	**-0.2**	
TKM2	**Tokmak 2**	**70.74**	**318**	P	**P**	**06 03 02.0**	**+1.1**	
	SNR=8.6							
ZALV	**Zalesovo Beam**	**70.75**	**331**	P	**P**	**06 03 00.0**	**-0.4**	
	comp=Z,20nm,0.9s,baz=102,slow=6.2,SNR=60							
	comp=Z,20nm,0.9s							
KBK	**Karagaybulak**	**71.08**	**317**	P	**P**	**06 03 04.1**	**+1.2**	
	SNR=6.3							
UCH	**Uchtor**	**71.21**	**317**	P	**P**	**06 03 05.5**	**+1.5**	
	SNR=31							
CHMS	**Chumysh**	**71.34**	**317**	P	**P**	**06 03 05.0**	**+0.7**	
	SNR=7.7							
AAK	**Ala-Archa**	**71.38**	**317**	LR	LR	06 36 28.5		
	comp=Z,95nm,19.3s,baz=60,slow=38							
AAK	**Ala-Archa**	**71.38**	**317**	P	**P**	**06 03 05.9**	**+1.2**	
	SNR=14							
AAK	**Ala-Archa**	**71.38**	**317**	P	**P**	**06 03 05.1**	**+0.4**	
AAK				IAmb	IAmb	06 03 06.6		
	comp=Z,36nm,1.4s							
AAK	**Ala-Archa**	**71.38**	**317**	*ce*P	**P**	**06 03 02.6**	**-2.1**	
AAK				pmax	pmax			
	comp=Z,32nm,1.4s							
AAK	**Ala-Archa**	**71.38**	**317**	P	**P**	**06 03 05.5**	**+0.8**	
SGDS	**Sogindy**	**71.60**	**318**	*e*P	**P**	**06 03 06.1**	**+0.2**	
USP	**Ospenovka**	**71.61**	**318**	P	**P**	**06 03 06.3**	**+0.3**	
	SNR=35							
EKS2	**Erkin-Say**	**71.87**	**317**	P	**P**	**06 03 09.1**	**+1.4**	
	SNR=14							
KURK	**Kurchatov**	**72.29**	**326**	P	**P**	**06 03 09.7**	**-0.1**	
KURK	**Kurchatov**	**72.29**	**326**	P	**P**	**06 03 09.7**	**-0.1**	
KURK				pmax	pmax			
	comp=Z,36nm,0.9s							
KURK	**Kurchatov**	**72.29**	**326**	P	**P**	**06 03 09.4**	**-0.4**	
KURBB	**Kurchatov Arra**	**72.30**	**326**	P	**P**	**06 03 09.5**	**-0.3**	
	comp=Z,34nm,1.0s,baz=118,slow=5.5,SNR=174							
	comp=Z,34nm,1.0s							
BTLS

BRZS Berezniki 75.40 324 eP P 06 03 28.5 +0.5
VNDA Vanda 75.70 174 P P 06 03 30.2 +1.0
comp=Z,5.2nm,1.1s,baz=328,slow=6.7,SNR=13
comp=Z,5.2nm,1.1s
VNDA Vanda 75.70 174 P 06 03 29.9 +0.6
VNDA Vanda 75.70 174 P P 06 03 29.9 +0.6
VNDA pmax pmax
comp=Z,7.0nm,1.1s
FALS False Pass 76.28 31 P P 06 03 34.2 +1.3
baz=244
SBA Scott Base 76.51 174 P P 06 03 34.2 +0.3
SBA Scott Base 76.51 174 P P 06 03 34.2 +0.3
SBA pmax pmax
comp=Z,8.0nm,1.0s
GAMB Gambell 77.20 21 P P 06 03 38.6 +0.7
baz=234
M11K Mekoryuk 77.55 26 P P 06 03 40.9 +1.0
baz=240
BVAR Borovoye Array 77.89 326 P P 06 03 41.7 -0.3
comp=Z,38nm,0.8s,baz=114,slow=6.6,SNR=102
comp=Z,38nm,0.8s
BORK Borovoye 77.94 326 i P P 06 03 42.3 0.0
BORK Borovoye 77.94 326 P P 06 03 42.2 0.0
SDPT Sand Point 78.02 32 P P 06 03 43.1 +0.5
baz=246
HRA Herat 78.13 306 IAmb IAmb 06 03 44.9
comp=Z,15nm,0.8s
CHNA Chernabura Isl 78.29 32 P P 06 03 45.2 +1.0
baz=247
M13K Dall Lake 78.81 26 P P 06 03 47.8 +1.0
baz=243
S14K Fog Glacier 78.87 31 P P 06 03 48.4 +0.9
baz=247
K13K Kusilvak Mount 78.96 25 IAmb IAmb 06 03 49.8
comp=Z,26nm,1.1s
K13K Kusilvak Mount 78.96 25 P P 06 03 48.7 +1.0
baz=241
NRIK Noril'sk 79.23 344 P P 06 03 48.9 -0.2
comp=Z,25nm,0.9s,baz=127,slow=5.4,SNR=29
comp=Z,25nm,0.9s
NRIK Noril'sk 79.23 344 P P 06 03 48.7 -0.3
NRIK Noril'sk 79.23 344 d iP P 06 03 48.8 -0.3
NRIK pmax pmax
comp=Z,45nm,1.0s
O14K Tigyukauivet M 79.25 28 P P 06 03 50.4 +1.1
baz=245
N14K Kuskokwak Cree 79.34 27 P P 06 03 50.8 +1.0
baz=244
CHGN Chignik 79.47 31 P P 06 03 51.2 +0.6
baz=248
L14K Kuka Creek 79.52 26 IAmb IAmb 06 03 52.6
comp=Z,29nm,1.1s
L14K Kuka Creek 79.52 26 P P 06 03 51.4 +0.6
baz=243
TNA Tin City 79.55 21 P P 06 03 51.1 +0.2
baz=238
M14K Bethel 79.58 26 P P 06 03 51.5 +0.5
baz=244
J14K Nanvaranak Lak 79.80 24 P P 06 03 53.0 +0.7
baz=242
O15K Ungalikthiuk R 79.89 28 P P 06 03 53.0 +0.1
baz=246
ANM Nome 79.96 22 P P 06 03 53.5 +0.4
baz=240
F14K Arctic Creek 80.07 21 P P 06 03 54.2 +0.5
baz=239
M15K Kasigluk River 80.11 27 P P 06 03 54.3 +0.3
baz=245
N15K Kwethluk River 80.17 27 IAmb IAmb 06 03 56.1
comp=Z,22nm,1.2s
N15K Kwethluk River 80.17 27 P P 06 03 54.8 +0.5
baz=246
L15K Ungalak Mounta 80.19 26 P P 06 03 54.8 +0.4
baz=244
R16K Pilot Point 80.36 30 P P 06 03 55.9 +0.5
baz=248
K15K Wolf Creek Mou 80.43 25 P P 06 03 56.2 +0.4
baz=244
MAW Mawson 80.65 202 P P 06 03 57.2 +0.4
comp=Z,3.3nm,0.8s,baz=45,slow=15,SNR=1.6
comp=Z,3.3nm,0.8s
MAW Mawson 80.65 202 P P 06 03 56.3 -0.5
MAW Mawson 80.65 202 P P 06 03 56.3 -0.5
MAW pmax pmax
comp=Z,2.0nm,1.2s
G15K Niukluk 80.67 22 P P 06 03 57.1 +0.2
baz=242
P16K Nushagak River 80.70 29 P P 06 03 57.5 +0.2
baz=248
CHIR Chirikof Islan 80.76 32 P P 06 03 58.1 +0.5
baz=250
F15K North Star Dit 80.80 21 P P 06 03 57.8 +0.2
F15K IAmb IAmb 06 03 59.4
comp=Z,33nm,1.4s
F15K North Star Dit 80.80 21 P P 06 03 58.1 +0.4
baz=241
O16K Kokwok River B 80.87 28 P P 06 03 58.7 +0.6
baz=248
N16K Nishlik Lake 80.89 27 P P 06 03 58.7 +0.5
baz=247
R17L Mt. Peulik Vol 81.00 30 P P 06 03 59.3 +0.5
baz=250
M16K Timber Creek 81.02 27 P P 06 03 59.4 +0.5
baz=247
L16K Owhat River 81.07 26 P P 06 03 59.5 +0.4
baz=246
H16K Elim 81.19 23 P P 06 04 00.1 +0.3
baz=243
J16K Anvik River 81.25 24 P P 06 04 00.9 +0.8
baz=245
O17K Koliganek Bris 81.40 28 P P 06 04 01.5 +0.6
baz=249
Q17K Contact Creek 81.45 30 P P 06 04 01.7 +0.3
baz=250
I17K Unalakleet 81.47 24 P P 06 04 02.1 +0.9
baz=245
G16K Koyuk River 81.49 22 IAmb IAmb 06 04 02.9
comp=Z,21nm,1.2s
G16K Koyuk River 81.49 22 P P 06 04 01.9 +0.6
baz=243
N17K Nushagak Hills 81.64 27 P P 06 04 03.0 +0.8
baz=248
L17K Donlin 81.75 26 P P 06 04 03.8 +1.0
baz=247
C16K Lisburne Hills 81.83 19 IAmb IAmb 06 04 04.5
comp=Z,25nm,1.4s
C16K Lisburne Hills 81.83 19 P P 06 04 03.8 +0.7
baz=240
M17K Holitna River 81.85 27 P P 06 04 04.3 +1.0
baz=248
J17K VABM Dome 81.92 24 IAmb IAmb 06 04 05.6
comp=Z,27nm,1.3s
J17K VABM Dome 81.92 24 P P 06 04 04.7 +1.1
baz=246
K17K Iditarod 81.97 25 IAmb IAmb 06 04 05.4
comp=Z,31nm,1.2s
K17K Iditarod 81.97 25 P P 06 04 04.7 +0.8
baz=247
Q18K Katmai Hardscr 82.02 30 P P 06 04 04.7 +0.3
baz=251
P18K Big Mountain, 82.16 29 P P 06 04 05.9 +0.9
baz=250
G17K Kiwalik Mounta 82.17 22 P P 06 04 05.6 +0.7
baz=245
H17K Granite Mounta 82.22 23 IAmb IAmb 06 04 07.0
comp=Z,20nm,1.2s
H17K Granite Mounta 82.22 23 P P 06 04 05.7 +0.5
baz=245
N18K Kilae Creek 82.29 28 P P 06 04 06.3 +0.7
baz=250
D17K Noatak River 82.30 20 P P 06 04 06.2 +0.7
baz=242,SNR=26
O18K Koktuh Hills 82.33 28 P P 06 04 06.7 +0.9
baz=250
F17K Baldwin Pennin 82.36 21 P P 06 04 06.6 +0.7
baz=244
L18K Granite Mounta 82.48 26 P P 06 04 07.5 +0.9
baz=249
RDOG Red Dog Mine 82.52 19 P P 06 04 07.3 +0.6
baz=242,SNR=8.5
M18K Stony River 82.60 27 P P 06 04 07.9 +0.7
baz=250
C17K DeLong Mountai 82.63 19 P P 06 04 07.8 +0.5
baz=242,SNR=17
Q19K Cape Douglas, 82.78 30 P P 06 04 08.8 +0.6
baz=252
H18K Honhosa River 82.91 23 P P 06 04 08.9 +0.2
baz=247

J18K Innoko River 82.93 25 IAmb IAmb 06 04 10.2
comp=Z,15nm,1.1s
J18K Innoko River 82.93 25 P P 06 04 09.4 +0.5
baz=248
KDAK Kodiak Island 82.96 31 P P 06 04 09.8 +0.7
baz=253
N19K Bonanza Creek 82.98 28 IAmb IAmb 06 04 11.8
comp=Z,14nm,1.0s
N19K Bonanza Creek 82.98 28 P P 06 04 09.6 +0.2
baz=251
F18K Selawik 83.01 21 P P 06 04 09.5 +0.3
baz=245,SNR=5.2
E18K Tukpahlearik C 83.02 20 P P 06 04 09.9 +0.6
baz=244,SNR=22
AB31 Akbulak array 83.04 320 P 06 04 09.4 -0.4
AB31 IAmb IAmb 06 04 11.4
comp=Z,14nm,1.0s
ABKAR Akbulak array 83.04 320 P 06 04 09.1 -0.7
G18K Tagagawik 83.09 22 IAmb IAmb 06 04 10.4
comp=Z,23nm,1.3s
G18K Tagagawik 83.09 22 P P 06 04 09.9 +0.2
baz=246
P19K Oil Pt 83.21 29 P P 06 04 10.7 +0.3
baz=252
L19K White Mountain 83.27 26 IAmb IAmb 06 04 12.3
comp=Z,17nm,1.1s
L19K White Mountain 83.27 26 P P 06 04 11.2 +0.5
baz=250
Q20K Shuyak Island 83.30 30 P P 06 04 11.4 +0.5
baz=253
GCSA Galena City Sc 83.33 24 P P 06 04 11.1 +0.2
baz=248
C18K Utukok River 83.36 19 IAmb IAmb 06 04 11.7
comp=Z,16nm,1.4s
C18K Utukok River 83.36 19 P P 06 04 11.4 +0.3
baz=244
J19K Poorman 83.57 24 IAmb IAmb 06 04 13.8
comp=Z,12nm,1.0s
J19K Poorman 83.57 24 P P 06 04 12.5 +0.3
baz=249
G19K Purcell Mounta 83.78 22 P P 06 04 13.5 +0.3
baz=248,SNR=17
F19K Shaleruckik Mo 83.79 21 IAmb IAmb 06 04 14.4
comp=Z,18nm,1.4s
F19K Shaleruckik Mo 83.79 21 P P 06 04 13.1 -0.1
baz=247
H19K Roundabout Mou 83.79 23 P P 06 04 13.6 +0.4
baz=248
M20K Styx River 83.94 27 IAmb IAmb 06 04 15.0
comp=Z,16nm,1.3s
M20K Styx River 83.94 27 P P 06 04 14.4 +0.1
baz=252
HOM Homer 83.98 29 P P 06 04 14.5 +0.2
baz=254
K20K Telida 84.00 25 IAmb IAmb 06 04 16.1
comp=Z,14nm,0.9s
K20K Telida 84.00 25 P P 06 04 14.8 +0.4
baz=251
C19K Lookout Ridge 84.08 19 IAmb IAmb 06 04 34.7
comp=Z,22nm,1.1s
C19K Lookout Ridge 84.08 19 P P 06 04 15.2 +0.4
baz=245
A19K Wainwright 84.09 18 P P 06 04 15.4 +0.7
baz=244
N20K Mount Spurr 84.16 28 P P 06 04 16.0 +0.6
baz=253
SPCR Spurr Chakacha 84.16 28 P P 06 04 16.0 +0.7
baz=253
E19K Redstone River 84.22 21 P P 06 04 16.0 +0.5
baz=248,SNR=15
J20K Nowinta River 84.24 24 IAmb IAmb 06 04 16.8
comp=Z,17nm,1.2s
J20K Nowinta River 84.24 24 P P 06 04 16.2 +0.6
baz=251
I20K Naaghedeneel 84.31 24 P P 06 04 16.4 +0.5
baz=250
D19K Kuna River 84.32 20 IAmb IAmb 06 04 42.2
comp=Z,19nm,0.9s
D19K Kuna River 84.32 20 P P 06 04 16.2 +0.2
baz=247
H20K Anotleneega Mo 84.39 23 P P 06 04 16.7 +0.3
baz=250,SNR=8.2
SVE Sverdlovsk 84.42 328 de P P 06 04 16.3 -0.3
SVE pmax pmax
comp=Z,82nm,1.4s
BRSE Bradley Lake S 84.44 29 P P 06 04 17.0 +0.3
baz=254
AKTO Aktyubinsk 84.51 321 P P 06 04 15.8 -1.5
CAPN Captain Cook N 84.53 28 P P 06 04 17.3 +0.2
baz=254
F20K Avaraart Lake 84.62 22 P P 06 04 17.9 +0.5
baz=249
PPLA Puevpile 84.67 26 P P 06 04 17.7 -0.3
baz=253
SKT Skwentna 84.70 27 P P 06 04 18.0 0.0
baz=253
E20K Nigu River 84.89 20 P P 06 04 19.2 +0.3
baz=248
CHUM Lake Minchumin 84.92 25 P P 06 04 19.2 +0.2
baz=252,SNR=19
D20K Etivluk River 84.92 20 IAmb IAmb 06 04 38.4
comp=Z,19nm,1.1s
D20K Etivluk River 84.92 20 P P 06 04 19.2 +0.3
baz=248
IMAR Indian Mountai 85.00 23 P P 06 04 20.0 +0.6
O22K Cooper Landing 85.13 29 P P 06 04 20.6 +0.5
baz=255
SEW Seward 85.16 29 P P 06 04 21.1 +0.8
baz=255
L22K Petersville 85.19 27 P P 06 04 20.2 -0.3
B20K Meade River 85.23 19 P P 06 04 20.4 -0.1
baz=248
H21K Melozitna River 85.26 23 IAmb IAmb 06 04 22.3
comp=Z,16nm,1.1s
H21K Melozitna River 85.26 23 P P 06 04 21.0 +0.2
baz=252
G21K Allakaket 85.26 22 IAmb IAmb 06 04 21.6
comp=Z,21nm,1.5s
G21K Allakaket 85.26 22 P P 06 04 20.8 0.0
baz=251
M22K Wiow 85.28 27 P P 06 04 20.8 0.0
baz=255
RC01 Rabbit Creek A 85.28 28 P P 06 04 20.9 0.0
baz=255
CUT Chulitna 85.38 27 P P 06 04 22.0 +0.6
baz=254
I21K Tanana 85.44 24 IAmb IAmb 06 04 23.3
comp=Z,18nm,1.2s
I21K Tanana 85.44 24 P P 06 04 21.9 +0.3
baz=253,SNR=7.1
F21K Alatna River 85.50 22 P P 06 04 22.0 0.0
baz=251
ARTI Arti 85.53 327 LR LR 06 43 49.3
comp=Z,85nm,21.9s,baz=54,slow=37
BPAW Bear Paw Mtn. 85.54 25 IAmb IAmb 06 04 23.4
comp=Z,17nm,1.4s
BPAW Bear Paw Mtn. 85.54 25 P P 06 04 21.9 -0.3
baz=254
TRF Thorofare Moun 85.66 26 P P 06 04 22.9 -0.1
baz=254
PMR Palmer 85.69 28 P P 06 04 22.4 -0.5
baz=256
C21K Knifeblade Rid 85.69 20 P P 06 04 22.9 +0.1
baz=250
E21K Killik River 85.73 20 P P 06 04 23.1 0.0
baz=251
H22K Ishtalitna Cre 85.89 23 IAmb IAmb 06 04 25.5
comp=Z,17nm,1.3s
H22K Ishtalitna Cre 85.89 23 P P 06 04 24.4 +0.5
baz=253,SNR=6.1
A21K Barrow 85.90 17 P P 06 04 24.3 +0.6
baz=248
MLY Manley 85.90 24 IAmb IAmb 06 04 25.7
comp=Z,10nm,0.6s
MLY Manley 85.90 24 P P 06 04 24.1 +0.1
baz=254
B21K Ikpikpuk River 85.91 19 P P 06 04 24.0 +0.2
baz=250
KNK Knik Glacier 85.96 28 P P 06 04 24.2 -0.1
baz=256
SML Sawmill 86.11 28 P P 06 04 24.8 -0.3
baz=256
P23K Montague Islan 86.14 29 P P 06 04 25.1 -0.1
baz=257
G22K Bettles 86.14 22 P P 06 04 25.2 +0.1
baz=253
WAT1 Susitna Watana 86.26 26 P P 06 04 25.2 -0.6
baz=256

A22K Sinclair Lake 86.28 18 P P 06 04 25.3 -0.3
baz=250
MCK McKinley 86.32 26 P P 06 04 25.0 -1.0
baz=256,SNR=8.1
M23K Glacier View 86.39 28 P P 06 04 26.0 -0.4
baz=257
E22K Anaktuvuk Pass 86.39 21 P P 06 04 26.3 0.0
baz=253
NEA2 Nenana 86.48 25 IAmb IAmb 06 04 28.8
comp=Z,14nm,1.4s
NEA2 Nenana 86.48 25 P P 06 04 26.2 -0.6
baz=255
GLI Glacier Island 86.48 29 P P 06 04 26.4 -0.5
baz=257
I23K Minto, Yukon-K 86.50 24 P P 06 04 26.7 -0.1
baz=255,SNR=19
Q23K Middleton Isla 86.54 30 P P 06 04 26.7 -0.4
baz=258
B22K Teshekpuk Lake 86.54 19 P P 06 04 27.1 +0.2
baz=251
WAT6 Susitna Watana 86.56 27 P P 06 04 26.8 -0.6
baz=257
SCM Sheep Creek Mo 86.58 28 P P 06 04 27.2 -0.3
baz=257
H23K Yukon River 86.60 23 IAmb IAmb 06 04 28.9
comp=Z,12nm,0.8s
H23K Yukon River 86.60 23 P P 06 04 27.6 +0.2
baz=255
G23K Bananza Creek 86.65 23 IAmb IAmb 06 04 29.4
comp=Z,12nm,1.0s
G23K Bananza Creek 86.65 23 P P 06 04 28.2 +0.6
baz=254,SNR=9.8
COLD Coldfoot 86.72 22 P P 06 04 28.5 +0.6
baz=254,SNR=6.0
DHY Denali Highway 86.84 26 P P 06 04 28.5 -0.2
baz=257,SNR=11
QSPA South Pole Qui 86.87 180 P P 06 04 28.8 0.0
comp=Z,9.2nm,1.0s,baz=298,slow=1.5,SNR=21
QSPA LR LR 06 43 18.3
comp=Z,520nm,19.7s,baz=301,slow=36
comp=Z,9.2nm,1.0s
QSPA South Pole Qui 86.87 180 P 06 04 29.4 +0.6
QSPA IAmb IAmb 06 04 31.5
comp=Z,11nm,1.0s
CCB Clear Creek Bu 87.02 25 P 06 04 28.5 -0.9
D23K Nanushuk River 87.03 20 IAmb IAmb 06 04 32.8
comp=Z,22nm,1.4s
D23K Nanushuk River 87.03 20 P P 06 04 30.0 +0.5
baz=254
COLA College 87.05 25 P P 06 04 29.9 +0.3
baz=256
EYAK Cordova Ski Ar 87.06 29 P P 06 04 30.4 +0.8
baz=259
E23K Chandalar 87.16 21 IAmb IAmb 06 04 51.1
comp=Z,22nm,1.3s
E23K Chandalar 87.16 21 P P 06 04 30.2 0.0
baz=255
KLU Klutina 87.17 28 P P 06 04 30.4 +0.1
baz=258
M24K Tolsona, Glenn 87.17 27 P P 06 04 30.3 0.0
baz=258
H24K Noodor Dome 87.27 24 IAmb IAmb 06 04 32.0
comp=Z,18nm,1.1s
H24K Noodor Dome 87.27 24 P P 06 04 30.6 0.0
baz=256
POKR Poker Plat Res 87.28 24 P P 06 04 30.8 +0.1
baz=257
C23K Itkillik River 87.30 19 IAmb IAmb 06 04 33.5
comp=Z,14nm,1.2s
C23K Itkillik River 87.30 19 P P 06 04 30.9 +0.3
baz=254
HDA Harding Lake 87.32 25 IAmb IAmb 06 04 31.9
comp=Z,19nm,0.8s
HDA Harding Lake 87.32 25 P P 06 04 30.6 -0.3
baz=257,SNR=10
TOLK Toolik Lake Re 87.33 21 P P 06 04 31.2 +0.3
baz=255
IL31 87.43 25 IAmb IAmb 06 04 31.2
comp=Z,8.7nm,0.8s
ILAR Eielson Array 87.43 25 P P 06 04 29.9 -1.6
comp=Z,9.7nm,0.9s,baz=265,slow=4.5,SNR=62
ILAR PP PP 06 07 55.4 -0.7
comp=Z,1.3nm,1.1s,baz=235,slow=7.6,SNR=4.2
comp=Z,9.7nm,0.9s
ILAR Eielson Array 87.43 25 P 06 04 30.2 -1.2
E24K Your Creek 87.58 21 P P 06 04 32.3 +0.2
baz=256
KAIM Kayak Island 87.59 30 P P 06 04 32.6 +0.3
baz=260
G24K Hadweenzic Riv 87.63 23 IAmb IAmb 06 04 34.1
comp=Z,15nm,1.2s
G24K Hadweenzic Riv 87.63 23 P P 06 04 32.8 +0.4
baz=257
F24K Squaw Lake 87.66 22 P P 06 04 32.3 -0.2
baz=256,SNR=8.0
PAX Paxson 87.67 27 P P 06 04 32.4 -0.4
baz=259
BMRM Bremner River 87.69 29 P P 06 04 32.6 -0.2
baz=260
K24K Donnelly Dome 87.70 26 IAmb IAmb 06 04 52.0
comp=Z,8.4nm,0.9s
K24K Donnelly Dome 87.70 26 P P 06 04 32.7 0.0
baz=258
D24K Happy Valley 87.73 20 IAmb IAmb 06 04 36.1
comp=Z,16nm,1.3s
D24K Happy Valley 87.73 20 P P 06 04 32.9 +0.1
baz=255
N25K Chitina, Valde 87.81 28 IAmb IAmb 06 04 34.0
comp=Z,11nm,1.1s
N25K Chitina, Valde 87.81 28 P P 06 04 33.3 -0.1
baz=260
C24K Franklin Bluff 87.91 20 P P 06 04 33.8 +0.3
baz=256
J25K Salcha River, 88.03 25 IAmb IAmb 06 04 50.1
comp=Z,11nm,1.3s
J25K Salcha River, 88.03 25 P P 06 04 34.7 +0.3
baz=259
RIDG Independent Ri 88.09 26 IAmb IAmb 06 04 53.8
comp=Z,8.6nm,0.9s
RIDG Independent Ri 88.09 26 P P 06 04 34.8 +0.1
baz=259
PRP Porcupine Dome 88.15 24 P P 06 04 35.5 +0.5
baz=259
G25K Bearman Lake 88.17 23 P P 06 04 35.7 +0.9
baz=258
BGLC Bering Glacier 88.19 30 P P 06 04 35.6 +0.5
baz=261
CRQE Cirque 88.38 29 P P 06 04 36.4 +0.2
baz=261
SCRK Sand Creek 88.51 26 P P 06 04 37.1 +0.4
baz=260
MCARA McCarthy VSAT 88.52 28 P P 06 04 37.0 +0.4
baz=261
F25K Christian Rive 88.52 22 P P 06 04 37.0 +0.4
baz=258
D25K Kavik River 88.62 20 P P 06 04 37.6 +0.5
baz=258
E25K Arctic Village 88.65 22 IAmb IAmb 06 04 42.5
comp=Z,14nm,1.5s
E25K Arctic Village 88.65 22 P P 06 04 37.6 +0.4
baz=258
M26K Nabesna, AK 88.69 27 P P 06 04 37.9 +0.3
baz=261
MESA MESA 88.86 30 P P 06 04 38.7 +0.2
baz=262
BMAR Burnt Mountain 88.89 22 P P 06 04 38.6 +0.3
GRNC Granite Creek 89.03 29 P P 06 04 39.4 +0.1
I26K Coal Creek Min 89.09 25 P P 06 04 39.8 +0.5
baz=261
F26K Sheenjek River 89.10 22 P P 06 04 39.7 +0.4
baz=260
G26K Porcupine Rive 89.11 23 IAmb IAmb 06 05 00.8
comp=Z,10nm,1.1s
G26K Porcupine Rive 89.11 23 P P 06 04 39.9 +0.6
baz=260
M27K Edge Creek, AK 89.20 28 IAmb IAmb 06 04 42.6
comp=Z,7.9nm,0.8s
M27K Edge Creek, AK 89.20 28 P P 06 04 40.8 +0.8
baz=262,SNR=6.1
C26K Camden Bay 89.24 20 P P 06 04 40.6 +0.7
baz=259
CTG Chitna Glacier 89.26 29 P P 06 04 40.8 +0.5
baz=262,SNR=6.9
L27K Beaver Creek, 89.32 27 P P 06 04 40.9 +0.4
baz=262
BCAR Beaver Creek A 89.34 27 P 06 04 40.7 +0.1
K27K Chicken 89.35 26 IAmb IAmb 06 04 42.7
comp=Z,9.6nm,1.0s

C27K	**Jago River**	**89.60**	**20**	P	**P**	**06 04 42.4**	**+0.9**
	baz=260						
BVCY	**Beaver Creek**	**89.68**	**28**	P	**P**	**06 04 42.4**	**+0.3**
	baz=263						
PINM	**Pinnacle**	**89.69**	**30**	P	**P**	**06 04 42.3**	**0.0**
	baz=263						
I27K	**Kandik River**	**89.77**	**24**	IAmb	IAmb	06 04 44.4	
	comp=Z,12nm,1.1s						
I27K	**Kandik River**	**89.77**	**24**	P	**P**	**06 04 42.9**	**+0.4**
	baz=262						
YUK3	**Moose Creek**	**89.78**	**28**	P	**P**	**06 04 43.0**	**+0.1**
	baz=263,SNR=6.7						
O28M	**Mount Upton**	**89.80**	**29**	IAmb	IAmb	06 04 48.5	
	comp=Z,20nm,1.4s						
O28M	**Mount Upton**	**89.80**	**29**	P	**P**	**06 04 43.0**	**-0.1**
	baz=263						
H27K	**Steamboat Moun**	**89.89**	**24**	P	**P**	**06 04 43.3**	**+0.2**
	baz=262						
G27K	**Doyon Strip**	**89.92**	**23**	P	**P**	**06 04 43.4**	**+0.3**
	baz=262						
YUK8	**Steele Glacier**	**90.06**	**29**	P	**P**	**06 04 44.1**	**-0.2**
	baz=264						
E27K	**Coleen River**	**90.13**	**22**	P	**P**	**06 04 44.7**	**+0.6**
	baz=262						
AKT	**Akhty**	**90.47**	**311**	*e*P	**P**	**06 04 45.3**	**-1.1**
AKT				pmax	pmax		
	comp=Z,13nm,1.3s						
D27M	**Malcolm River**	**90.50**	**21**	P	**P**	**06 04 46.4**	**+0.6**
	baz=263						
O29M	**Mount Kennedy**	**90.54**	**30**	P	**P**	**06 04 46.7**	**+0.3**
	baz=265						
YUK4	**Talbot Arm**	**90.60**	**29**	P	**P**	**06 04 47.1**	**+0.4**
	baz=265						
YUK6	**Outpost Mounta**	**90.70**	**29**	P	**P**	**06 04 47.4**	**+0.2**
	baz=265						
F28M	**Old Crow**	**90.71**	**22**	P	**P**	**06 04 47.5**	**+0.7**
	baz=264						
M29M	**Somme Creek**	**90.79**	**28**	P	**P**	**06 04 47.9**	**+0.5**
	baz=265						
E28M	**Babbage River**	**90.94**	**21**	P	**P**	**06 04 48.8**	**+0.9**
	baz=264						
L29M	**L29M**	**91.00**	**27**	P	**P**	**06 04 48.9**	**+0.6**
	baz=265						
J29N	**Klondike Camp**	**91.07**	**26**	P	**P**	**06 04 49.0**	**+0.4**
	baz=265						
I29M	**Ogilvie Camp,**	**91.11**	**25**	P	**P**	**06 04 49.3**	**+0.6**
	baz=265						
HYT	**Haines Junctio**	**91.11**	**29**	P	**P**	**06 04 49.2**	**+0.2**
HYT				IAmb	IAmb	06 04 51.2	
	comp=Z,6.2nm,0.9s						
HYT	**Haines Junctio**	**91.11**	**29**	P	**P**	**06 04 49.0**	**+0.1**
	baz=266						
H29M	**Whitestone**	**91.16**	**24**	P	**P**	**06 04 49.4**	**+0.4**
	baz=265						
BELG	**Belogornoye**	**91.21**	**322**	P	**P**	**06 04 47.9**	**-1.6**
	comp=Z,25nm,0.9s,baz=126,slow=0.4,SNR=7.3						
	comp=Z,25nm,0.9s						
BELG	**Belogornoye**	**91.21**	**322**	*i* P	**P**	**06 04 47.8**	**-1.6**
BELG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
D28M	**Stokes Point**	**91.30**	**21**	P	**P**	**06 04 50.1**	**+0.7**
	baz=265						
K29M	**Barlow Dome**	**91.33**	**26**	P	**P**	**06 04 50.1**	**+0.2**
	baz=266						
P30M	**Million Dollar**	**91.33**	**30**	P	**P**	**06 04 49.9**	**0.0**
	baz=266						
G29M	**Pine Creek**	**91.36**	**23**	P	**P**	**06 04 50.3**	**+0.4**
	baz=265						
N30M	**Aishikik Lake**	**91.36**	**29**	P	**P**	**06 04 50.1**	**0.0**
	baz=266						
RAYN	**Ar Rayn**	**91.36**	**293**		**P**	**06 04 49.7**	**-1.1**
RAYN	**Ar Rayn**	**91.36**	**293**	P	**P**	**06 04 49.7**	**-1.1**
RAYN				pmax	pmax		
	comp=Z,26nm,1.4s						
E29M	**Blow River**	**91.52**	**22**	P	**P**	**06 04 51.0**	**+0.4**
	baz=266						
M30M	**Minto, Yukon**	**91.57**	**28**	P	**P**	**06 04 51.0**	**0.0**
	baz=266						
S31K	**Pelican**	**91.58**	**32**	P	**P**	**06 04 51.3**	**+0.3**
	baz=267						
EPYK	**Eagle Plains**	**91.84**	**24**	P	**P**	**06 04 51.9**	**-0.2**
	baz=267						
R31K	**City Hall, Gus**	**91.86**	**32**	P	**P**	**06 04 52.4**	**+0.1**
	baz=267						
J30M	**Hart River**	**91.89**	**26**	P	**P**	**06 04 52.5**	**0.0**
	baz=267						
I30M	**Mount Dempster**	**91.91**	**25**	P	**P**	**06 04 52.7**	**+0.1**
	baz=267						
N31M	**Braeburn, Yuko**	**91.99**	**29**	P	**P**	**06 04 53.1**	**+0.2**
	baz=267						
SIT	**Sitka**	**92.02**	**33**	P	**P**	**06 04 53.3**	**+0.3**
	baz=268						
MAYO	**Mayo, Yukon**	**92.04**	**27**	P	**P**	**06 04 53.2**	**+0.1**
	baz=267						
G30M	**tAoh Zraii Nji**	**92.07**	**23**	P	**P**	**06 04 53.5**	**+0.4**
	baz=267						
SKAG	**Skagway**	**92.12**	**31**	P	**P**	**06 04 53.6**	**+0.1**
	baz=268						
F30M	**Barrier River**	**92.27**	**23**	P	**P**	**06 04 54.3**	**+0.3**
	baz=268						
WHY	**Whitehorse**	**92.39**	**30**	IAmb	IAmb	06 04 57.5	
	comp=Z,9.3nm,0.9s						
WHY	**Whitehorse**	**92.39**	**30**	P	**P**	**06 04 54.9**	**0.0**
	baz=268						
S32K	**Killisnoo**	**92.44**	**33**	P	**P**	**06 04 54.9**	**0.0**
	baz=268						
R32K	**Eaglecrest**	**92.50**	**32**	P	**P**	**06 04 55.2**	**-0.1**
	baz=268						
M31M	**Drury Creek, Y**	**92.67**	**28**	P	**P**	**06 04 56.2**	**+0.2**
	baz=268						
H31M	**Peel River**	**92.78**	**24**	P	**P**	**06 04 56.7**	**+0.2**
	baz=269						
G31M	**Satah River**	**92.83**	**23**	P	**P**	**06 04 57.3**	**+0.7**
	baz=269						
P32M	**Atlin**	**92.95**	**31**	P	**P**	**06 04 57.7**	**+0.3**
	baz=269						
F31M	**Tsiigehtchic**	**93.05**	**23**	P	**P**	**06 04 58.1**	**+0.6**
	baz=269						
INK	**Inuvik**	**93.14**	**22**	P	**P**	**06 04 58.3**	**+0.3**
	baz=270						
CRAG	**Craig**	**93.20**	**35**	P	**P**	**06 04 58.9**	**+0.3**
	baz=269						
U33K	**Whale Pass**	**93.21**	**34**	P	**P**	**06 04 58.6**	**+0.1**
	baz=269						
N32M	**Quiet Lake**	**93.28**	**29**	P	**P**	**06 04 59.0**	**+0.1**
	baz=270						
P33M	**Teslin, Yukon**	**93.41**	**30**	P	**P**	**06 04 59.8**	**+0.3**
	baz=270						
WRAK	**Wrangell Islan**	**93.64**	**34**	P	**P**	**06 05 00.8**	**+0.2**
	baz=270						
Q32M	**Nakina River**	**93.68**	**31**	P	**P**	**06 05 00.8**	**-0.2**
	baz=270						
V35K	**Ketchikan**	**94.06**	**35**	P	**P**	**06 05 02.6**	**+0.1**
	baz=270						
KBZ	**Khabaz**	**94.11**	**313**	*i* P	**P**	**06 05 00.8**	**-2.2**
KBZ				pmax	pmax		
	comp=Z,8.0nm,3.3s						
KIV	**Kislovodsk**	**94.26**	**314**	*e*P	**P**	**06 05 02.9**	**-1.0**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SHA1	**Shidzhatmaz**	**94.28**	**313**	*i* P	**P**	**06 05 04.5**	**+0.4**
S34M	**Telegraph Cree**	**94.29**	**32**	P	**P**	**06 05 03.6**	**+0.1**
	baz=271						
R33M	**Jennings River**	**94.35**	**31**	P	**P**	**06 05 03.6**	**-0.3**
	baz=271						
DLBC	**Dease Lake**	**94.86**	**32**	LR	LR	06 42 45.1	
	comp=Z,72nm,20.2s,baz=340,slow=32						
DLBC	**Dease Lake**	**94.86**	**32**	P	**P**	**06 05 06.2**	**0.0**
	baz=272						
U35K	**Hyder**	**94.95**	**34**	P	**P**	**06 05 06.7**	**+0.2**
	baz=272						
WTLY	**Watson Lake, Y**	**95.42**	**30**	P	**P**	**06 05 08.7**	**0.0**
	baz=273						
KLMR	**Klimovskoe**	**95.67**	**331**	*e*P	**P**	**06 05 07.3**	**-2.5**
KLMR				pmax	pmax		
	comp=Z,36nm,1.5s						
A36M	**Sachs Harbour**	**95.72**	**18**	P	**P**	**06 05 10.0**	**+0.3**
	baz=278						
VORR	**Voronezh**	**96.41**	**321**	*e*P	**P**	**06 05 09.1**	**-4.2**
VORR				pmax	pmax		
	comp=Z,53nm,1.1s						
SOC	**Sochi**	**96.42**	**313**	*e*P	**P**	**06 05 18.1**	**+4.5**
SOC				*e*PPP	PPP	06 11 15.0	
SOC				*e*S	**SKSac**	**06 15 48.9**	**+0.2**
SOC				*e*SS	**SS**	**06 23 04.4**	**-1.4**
SOC				*e*SSS	SSS	06 26 52.3	
SOC				pmax	pmax		
	comp=Z,47nm,1.3s						

VSR	**Storozhevoye**	**96.46**	**321**	*e*P	P	06 05 03.0	-11
VSR				pmax	pmax		
	comp=Z,20nm,1.0s						
C36M	**Paulatuk**	**96.49**	**21**	P	**P**	**06 05 13.6**	**+0.3**
	baz=279						
LPSR	**Galich'ya Gora**	**96.53**	**322**	*e*P	P	06 05 09.0	-4.8
LPSR				pmax	pmax		
	comp=Z,30nm,1.0s						
WRGLY	**Wrigley**	**97.64**	**27**	P	**P**	**06 05 18.7**	**+0.1**
	baz=276						
NVL	**N'lazarevskaya**	**97.70**	**196**	*e*P	**P**	**06 05 18.3**	**-0.5**
NVL				*e*		06 09 16.2	
NVL				*e*PPP	PPP	06 11 20.7	
NVL				*e*S	**SKSac**	**06 15 55.7**	**+1.5**
NVL				*e*SS	**SS**	**06 23 25.9**	**+3.9**
NVL				*e*SSS	SSS	06 27 12.3	
NVL				pmax	pmax		
	comp=Z,18nm,1.7s						
NVL				MLR	MLR		
	comp=Z,429nm,19.0s						
OBN	**Obninsk**	**97.72**	**325**	*e*P	**P**	**06 05 19.0**	**-0.1**
OBN				*e*		06 09 21.7	
OBN				pmax	pmax		
	comp=Z,20nm,1.1s						
KOTAN	**Kotaneelee Air**	**97.78**	**30**	P	**P**	**06 05 19.2**	**-0.1**
	baz=277						
SPITS	**Spitsbergen Ar**	**98.80**	**350**	P	**P**	**06 05 23.1**	**-0.5**
	comp=Z,15nm,1.0s,baz=191,slow=13,SNR=2.9						
SPITS				LR	LR	06 53 50.0	
	comp=Z,35nm,19.9s,baz=28,slow=38						
	comp=Z,15nm,1.0s						
ARCES	**ARCESS Array B**	**99.84**	**340**	P	**Pdif**	**06 05 27.6**	**-0.8**
	comp=Z,4.1nm,0.7s,baz=73,slow=6.1,SNR=14						
ARCES				LR	LR	06 52 15.4	
	comp=Z,117nm,21.8s,baz=79,slow=36						
	comp=Z,4.1nm,0.7s						
YKA	**Yellowknife Ar**	**101.75**	**27**	P	**Pdif**	**06 05 36.1**	**-0.9**
	comp=Z,0.6nm,1.0s,baz=288,slow=5.2,SNR=4.0						
YKA				PP	**PP**	**06 09 46.5**	**-1.1**
	comp=Z,0.3nm,0.8s,baz=289,slow=8.5,SNR=5.6						
MNK	**Minsk**	**102.78**	**325**	*i* P	**Pdif**	**06 05 41.8**	**0.0**
	comp=E,37nm,0.8s						
MNK				*i* P	**Pdif**	**06 05 41.8**	**0.0**
	comp=N,29nm,0.9s						
MNK				*i* P	**Pdif**	**06 05 41.8**	**0.0**
	comp=Z,11nm,0.8s,baz=77						
MNK				*i* PP	**PP**	**06 09 56.0**	**+0.6**
MNK				*i* PPP	PPP	06 12 06.7	
MNK				*i* S	**SKSac**	**06 16 18.8**	**-0.8**
MNK				*i* PS	**PS**	**06 19 05.2**	**+1.6**
MNK				*i* SS	**SS**	**06 24 36.1**	**+2.2**
MNK				*i* SSS	SSS	06 28 30.8	
MNK				*i* LRM	MLR	06 53 08.8	
	comp=Z,194nm,18.3s						
MNK				*i* LRM	MLR	06 54 03.2	
	comp=N,991nm,17.2s						
MNK				*i* LRM	MLR	06 54 09.6	
	comp=E,2μm,20.9s						
MNK	**Minsk**	**102.78**	**325**	*i* P	**Pdif**	**06 05 41.7**	**0.0**
MNK				*i*		06 09 56.0	
MNK				*i* PPP	PPP	06 12 06.6	
MNK				*i* S	**SKSac**	**06 16 18.8**	**-0.8**
MNK				*i* PS	**PS**	**06 19 05.1**	**+1.6**
MNK				*i* SS	**SS**	**06 24 36.0**	**+2.2**
MNK				*i* SSS	SSS	06 28 30.8	
MNK				pmax	pmax		
	comp=E,37nm,0.8s						
MNK				pmax	pmax		
	comp=Z,11nm,0.8s						
MNK				pmax	pmax		
	comp=N,29nm,0.9s						
MNK				MLR	MLR		
	comp=Z,194nm,18.0s						
MNK				MLR	MLR		
	comp=N,991nm,17.0s						
MNK				MLR	MLR		
	comp=E,2μm,21.0s						
NVAR	**Mina Array Bea**	**104.45**	**51**	Pdiff	**Pdif**	**06 05 47.4**	**-2.5**
	comp=E,0.4nm,0.7s,baz=251,slow=4.5,SNR=4.6						
PLCA	**Paso Flores**	**130.25**	**154**	PKP	**PKPdf**	**06 10 55.7**	**+0.7**
	comp=E,3.6nm,1.1s,baz=241,slow=3.0,SNR=5.5						
TORD	**Torodi Ar. Bea**	**133.42**	**285**	PKP	**PKPdf**	**06 11 00.9**	**-0.7**
	comp=E,3.7nm,0.8s,baz=190,slow=1.6,SNR=6.7						
NNA	**Nana**	**144.39**	**115**		PKPbc	06 11 20.8	+0.7
NNA	**Nana**	**144.39**	**115**	PKIKP	PKPbc	06 11 20.8	+0.7
PB16	**IPOC Station P**	**147.33**	**132**		**PKPdf**	**06 11 28.8**	**+1.6**
PB18	**Visviri**	**147.80**	**130**		**PKPbc**	**06 11 31.1**	**+0.3**
CPUP	**Villa Florida**	**148.18**	**158**	PKP	**PKPdf**	**06 11 28.7**	**+1.0**
	comp=E,14nm,1.0s,baz=232,slow=2.6,SNR=32						
CPUP				PKPbc	**PKPbc**	**06 11 31.8**	**+0.8**
	comp=E,3.3nm,0.8s,baz=212,slow=5.3,SNR=3.2						
CPUP	**Villa Florida**	**148.18**	**158**		**PKPbc**	**06 11 31.5**	**+0.6**
ITAB	**Concordia**	**148.94**	**166**		**PKPbc**	**06 11 33.9**	**+1.0**
LPAZ	**La Paz**	**149.61**	**130**	PKP	**PKPdf**	**06 11 31.8**	**+0.7**
	comp=E,19nm,0.9s,baz=305,slow=2.1,SNR=9.3						
LPAZ				PKPbc	**PKPbc**	**06 11 36.3**	**+0.6**
	comp=E,19nm,0.9s,baz=245,slow=0.5,SNR=37						
ROSC	**El Rosal**	**150.04**	**86**	PKPbc	**PKPbc**	**06 11 36.2**	**-0.3**
	comp=E,10.0nm,0.5s,baz=343,slow=20,SNR=11						
BDFB	**Brasilia**	**161.05**	**169**	PKP	**PKPdf**	**06 11 45.6**	**-0.2**
	comp=E,3.1nm,1.0s,baz=73,slow=3.6,SNR=4.2						

NAO ***22*** *06:01:14.5,45.87N×16.02E,h10km,MB4.3*
BJI ***22*** *06:01:17.8,46.22N×15.68E,h12km,mB5.4/9,mb5.0/55, Ms4.8/4,Ms7 4.4/4*
IDC ***22*** *06:01:18.9±0.4,45.91N×15.94E,h0km,mb4.6/31, mbtmp4.6/48,ML4.2/13,MS4.1/53,Error ellipse: s-maj=6.9km s-min=6.2km az=38.0*
MOS ***22*** *06:01:19.0±0.7,45.93N×16.02E,h10km,mb5.1/17,Error ellipse: s-maj=4.2km s-min=3.3km az=79.7*
BEO ***22*** *06:01:20.4±0.4,45.92N×16.07E,h12km±4km,ML4.9/16*
NEIC ***22*** *06:01:20.7±0.9,45.91N±0.04×15.98E±0.06,h10km±1km, mb5.0/428,Mwr4.6/49,ML5.0/30(VIE),Error ellipse: s-maj=7.3km s-min=5.7km az=55.0,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; Mrr10.07; Mθθ-7.82; Mϕϕ-2.25; Mrθ0.04; Mθϕ-3.70; Mrϕ0.62; Fault plane solution: Ms9.8900×10^{15} NP1:ϕs60.5800°, δ45.99000°, λ85.97000°. NP2:ϕs246.37000°, δ44.16000°, λ94.16000°. Principal axes: T 10.1005, Plg87.0000°, Azm261.0000°; N -0.4350, Plg3.0000°, Azm63.0000°; P -9.6656, Plg1.0000°, Azm153.0000°;*
ROM ***22*** *06:01:20.8,45.88N×15.97E,h10km,mb4.9/26, Mwp5.0/20 Error ellipse: s-maj=2.0km s-min=1.6km az=221.0*
MED_RC ***22*** *06:01:20.0±0.1,45.83N×15.99E,h11km,MW4.8/65, Moment Tensor Solution.Mantle waves: s65,c94; Duration: 1s3 Moment tensor: Scale 10^{16}Nm; Mrr1.75±.08; Mθθ-1.50±.05; Mϕϕ-0.25±.05; Mrθ-0.33±.14; Mθϕ-0.66±.03; Mrϕ0.56±.19; Best double couple: Mo1.88000×10^{16} NP1:ϕs49.00000°,δ47.00000°, λ64.00000°. NP2:ϕs264.00000°,δ49.00000°,λ115.00000°. Principal axes: T 1.9700, Plg71.0000°, Azm243.0000°; N -0.1800, Plg19.0000°, Azm68.0000°; P -1.7900, Plg1.0000°, Azm337.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
PDG ***22*** *06:01:20.1±0.8,45.87N×16.02E,h10km±1km,MD5.1/9, ML5.0/13 Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
GCMT ***22*** *06:01:20.7±0.2,45.80N±0.02×16.03E±0.03,h18km, MW4.9/102,Moment Tensor Solution. s28,c30; s102,c144; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr2.77±.13; Mθθ-1.94±.09; Mϕϕ-0.83±.08; Mrθ-0.44±.19; Mθϕ-1.06±.06; Mrϕ0.80±.21; Best double couple: Mo2.80500×10^{16} NP1:ϕs254.00000°,δ47.00000°, λ112.00000°. NP2:ϕs43.00000°,δ47.00000°,λ68.00000°. Principal axes: T 3.0280, Plg74.0000°, Azm240.0000°; N -0.4490, Plg16.0000°, Azm59.0000°; P -2.5830, Plg0.0000°, Azm149.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
LJU ***22*** *06:01:20.0,45.88N×16.02E,h5km,ML4.5*
PTWC ***22*** *06:01:20,45.90N×16.00E,h10km,Mwp4.7/4, NORTHWESTERN BALKAN REGION*
KRSZO ***22*** *06:01:20.5±1.6,45.83N×15.96E,h10km±10km,ML5.2/82, Error ellipse: s-maj=9.2km s-min=5.3km az=42.0*
MCSM ***22*** *06:01:20.7±0.5,46°N±2.°×1°6E±°,h10km±3km,mb4.8, mB5.0,MLv5.3,Mw(mB)4.4*

VIE ***22*** *06:01:20.7±0.4,45.93N×15.96E,h8km±1km,mb4.3/31, ml5.0/30,Error ellipse: s-maj=2.8km s-min=1.4km az=102.0 15 km NNW of Zagreb*
BGR ***22*** *06:01:21.1±0.5,45.89N×16.13E,h10km,ML5.0/10,Error ellipse: s-maj=5.6km s-min=3.3km az=1.0*
NEIC ***22*** *06:01:21,45.90N×15.95E,h10km*
GFZ ***22*** *06:01:21.1,45.89N×15.98E,h10km,MW4.8,Moment Tensor Solution. s107 Moment tensor: Mrr1.63; Mθθ-1.37; Mϕϕ-0.26; Mrθ-0.61; Mθϕ-0.58; Mrϕ-0.05; Fault plane solution: NP1:ϕs60.00000°,δ35.00000°, λ79.00000°. NP2:ϕs252.00000°,δ55.00000°,λ97.00000°. Principal axes: T 1.7500, Plg78.0000°, Azm188.0000°; N -0.0300, Plg5.0000°, Azm68.0000°; P -1.7200, Plg9.0000°, Azm337.0000°;*
RHSSO ***22*** *06:01:21.0±0.5,45.82N×16.03E,h7km±3km,ML5.1/10*
PRU ***22*** *06:01:22.0,45.98N×16.05E,h10km,M5.0*
BNS ***22*** *06:01:25.7±0.4,45.91N×15.39E,h5km,ML5.1*
THE ***22*** *06:01:25.4,46°N±3°×1°6E±°,h10km,M4.9/57,mb5.1/48, MLh4.7/57,MwMwp4.7/3,Mwp5.0/3*

ISC 22 06:01:20.7±0.5, 45°39'N±0'.01×16°01'E±0'.01, h12km±3km, n1344,σ1°39'/1402, mb5.0/238, MS4.1/42, 73C-76D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PTJ	**Puntijarka**	**0.04**	**299**	*i* Pg	**Pg**	**06 01 21.1**	**-2.0**
PTJ	**Puntijarka**	**0.04**	**299**	Pg	**Pg**	**06 01 21.2**	**-1.9**
ZAG	**Zagreb**	**0.07**	**195**	*i* Pg	**Pg**	**06 01 21.9**	**-1.3**
ZAG	**Zagreb**	**0.07**	**195**	Pg	**Pg**	**06 01 22.0**	**-1.1**
LOBO	**Lobor**	**0.27**	**9**	*i* Pg	**Pg**	**06 01 25.5**	**-0.8**
LOBO				Sg	**Sg**	**06 01 29.4**	**-0.6**
GCIS	**Gornji Cirnik**	**0.27**	**265**	*i* Pg	**Pg**	**06 01 25.5**	**-0.8**
GCIS				*i* Sg	**Sg**	**06 01 29.8**	**-0.3**
GCIS				IAML		06 01 31.3	
	comp=Z,41μm,0.2s						
GOLS	**Golise**	**0.30**	**294**	*i* Pg	**Pg**	**06 01 26.1**	**-0.7**
GOLS				*i* Sg	**Sg**	**06 01 30.7**	**-0.2**
GOLS				IAML		06 01 33.3	
	comp=Z,19μm,0.2s						
CESS	**Cesta pri Krsk**	**0.39**	**283**	*i* Pg	**Pg**	**06 01 28.0**	**-0.6**
CESS				*i* Sg	**Sg**	**06 01 33.8**	**0.0**
CESS				IAML		06 01 35.1	
	comp=Z,82μm,0.3s						
CRES	**Cresnjevec Ost**	**0.39**	**261**	*i* Pg	**Pg**	**06 01 27.8**	**-0.8**
CRES				*i* Sg	**Sg**	**06 01 33.0**	**-0.8**
CRES				IAML		06 01 38.2	
	comp=Z,12μm,0.1s						
CRES	**Cresnjevec Ost**	**0.39**	**261**	Pg	**Pg**	**06 01 27.8**	**-0.8**
CRES				Lg	Lg	06 01 33.5	
KALN	**Kalnik**	**0.39**	**52**	*i* Pg	**Pg**	**06 01 27.7**	**-0.9**
KALN				Sg	**Sg**	**06 01 33.0**	**-0.9**
DOBS	**Dobrina**	**0.46**	**305**	*i* Pg	**Pg**	**06 01 29.2**	**-0.5**
DOBS				*i* Sg	**Sg**	**06 01 36.2**	**+0.3**
DOBS				IAML		06 01 38.6	
	comp=Z,16μm,0.2s						
OZLJ	**Ozalj**	**0.47**	**234**	*i* Pg	**Pg**	**06 01 29.3**	**-0.6**
OZLJ				Sg	**Sg**	**06 01 35.5**	**-0.6**
LEGS	**Legarje**	**0.49**	**277**	*i* Pg	**Pg**	**06 01 29.7**	**-0.6**
LEGS				*e*Sg	**Sg**	**06 01 36.2**	**-0.6**
KOGS	**Kog**	**0.58**	**16**	*i* Pg	**Pg**	**06 01 31.5**	**-0.6**
KOGS				*i* Sg	**Sg**	**06 01 40.0**	**+0.2**
KOGS				*i*		06 01 43.8	
KOGS				IAML		06 01 45.0	
	comp=Z,46μm,0.2s						
KOGS	**Kog**	**0.58**	**16**	Pg	**Pg**	**06 01 31.5**	**-0.6**
KOGS				Lg	Lg	06 01 39.8	
MOSL	**Moslavina**	**0.59**	**118**	*i* Pg	**Pg**	**06 01 31.0**	**-1.2**
MOSL				Sg	**Sg**	**06 01 39.0**	**-1.0**
BOJS	**Bojanci**	**0.66**	**234**	*i* Pg	**Pg**	**06 01 32.4**	**-1.1**
BOJS				*i* Sg	**Sg**	**06 01 41.2**	**-0.9**
BOJS				IAML		06 01 44.8	
	comp=Z,4μm,0.1s						
BOJS	**Bojanci**	**0.66**	**234**	*e*Pg	**Pg**	**06 01 32.8**	**-0.7**
BOJS				*e*Sg	**Sb**	**06 01 43.0**	**-0.2**
GROS	**Grobnik**	**0.67**	**328**	*i* Pg	**Pg**	**06 01 33.0**	**-0.7**
GROS				*i* Sg	**Sg**	**06 01 42.7**	**+0.1**
GROS				IAML		06 01 43.4	
	comp=Z,30μm,0.4s						
PDKS	**Podkum**	**0.73**	**284**	*i* Pg	**Pg**	**06 01 34.1**	**-0.7**
PDKS				*i* Sg	**Sg**	**06 01 43.7**	**-0.7**
PDKS				IAML		06 01 48.9	
	comp=Z,7μm,0.2s						
BEHE	**Becsehely**	**0.79**	**42**		**Pg**	**06 01 35.6**	**-0.3**
BEHE	**Becsehely**	**0.79**	**42**	Pg	**Pg**	**06 01 35.4**	**-0.6**
BEHE	**Becsehely**	**0.79**	**42**	*i* Pg	**Pg**	**06 01 35.3**	**-0.6**
BEHE				*e*Sg	**Sb**	**06 01 47.7**	**+0.8**
VISS	**Visnje**	**0.82**	**264**	*i* Pg	**Pg**	**06 01 35.7**	**-0.9**
VISS				*e*Sg	**Sg**	**06 01 45.8**	**-1.6**
VISS				IAML		06 01 51.4	
	comp=Z,23μm,0.5s						
ZAVS	**Zavodnje**	**0.88**	**309**	*i* Pg	**Pg**	**06 01 36.9**	**-0.8**
ZAVS				*i* Sg	**Sg**	**06 01 48.8**	**-0.3**
ZAVS				IAML		06 01 52.1	
	comp=Z,23μm,0.4s						
GBRS	**Gornja Briga**	**0.92**	**247**	*i* Pg	**Pg**	**06 01 37.4**	**-0.9**
GBRS				*e*Sg	**Sb**	**06 01 50.9**	**+0.2**
GBRS				IAML		06 01 53.5	
	comp=Z,18μm,0.5s						
A264A	**Tarany**	**0.93**	**73**	Pn	**Pg**	**06 01 38.4**	**-0.3**
A264A				Sn	**Sb**	**06 01 52.0**	**+1.0**
VNDS	**Vrh nad Dolski**	**0.94**	**284**	*i* Pg	**Pg**	**06 01 37.9**	**-0.9**
VNDS				*i* Sg	**Sn**	**06 01 52.7**	**-0.3**
VNDS				IAML		06 01 55.3	
	comp=Z,19μm,0.4s						
PERS	**Pernice**	**0.97**	**321**	*i* Pg	**Pg**	**06 01 38.4**	**-1.1**
PERS				*i* Sg	**Sg**	**06 01 51.5**	**-0.6**
PERS				IAML		06 01 55.2	
	comp=Z,45μm,0.7s						
A262A	**Szaknyer**	**1.04**	**20**	Pn	**Pg**	**06 01 40.1**	**-0.6**
A262A				Sn	**Sn**	**06 01 55.3**	**-0.2**
SOKA	**Soboth**	**1.04**	**320**		**Pg**	**06 01 39.6**	**-1.2**
SOKA					**Sg**	**06 01 53.4**	**-0.9**
SOKA	**Soboth**	**1.04**	**320**	*e*Pg	**Pg**	**06 01 39.6**	**-1.2**
	comp=Z,2μm,0.3s,SNR=2610						
SOKA				*e*Sg	**Sg**	**06 01 53.7**	**-0.6**
	comp=Z,4μm,0.3s						
LJU	**Ljubljana**	**1.05**	**279**	*i* Pg	**Pg**	**06 01 39.9**	**-1.0**
LJU				*i* Sg	**Sn**	**06 01 55.3**	**-0.4**
LJU				IAML		06 01 57.1	
	comp=Z,17μm,0.4s						
LJU	**Ljubljana**	**1.05**	**279**	*e*Pg	**Pg**	**06 01

CRNS					*e*Sg	**Sb**	**06 01 59.9**	**+0.1**
CRNS					IAML		06 02 05.4	
	comp=Z,16µm,0.5s							
A273A	**Marcsa**	**1.26**	**88**		Pn	**Pn**	**06 01 42.6**	**-1.5**
A273A					Pg	**Pg**	**06 01 45.1**	**+0.2**
A273A					Lg	Lg	06 02 02.1	
A261A	**Ohid**	**1.32**	**36**		Pg	**Pn**	**06 01 44.0**	**-0.9**
A265A	**Kaposfured**	**1.35**	**66**		Pn	**Pn**	**06 01 43.8**	**-1.5**
A265A					Lg	Lg	06 02 02.0	
JAVS	**Javornik**	**1.36**	**271**	⇑	*i* Pg	**Pn**	**06 01 44.9**	**-0.7**
JAVS					*e*Sg	**Sn**	**06 02 03.8**	**+0.2**
JAVS					IAML		06 02 06.2	
	comp=Z,12µm,0.4s							
UDBI	**Udbina**	**1.37**	**187**	*i*	Pg	**Pn**	**06 01 45.8**	**0.0**
UDBI					Sg	**Sb**	**06 02 03.5**	**-0.3**
ARSA	**Arzberg**	**1.40**	**346**			**Pn**	**06 01 45.7**	**-0.4**
ARSA	**Arzberg**	**1.40**	**346**	*e*	Pn	**Pn**	**06 01 45.6**	**-0.4**
	comp=Z,284nm,0.4s,SNR=1670							
ARSA				*i*	Sn	**Sn**	**06 02 05.0**	**+0.5**
	comp=Z,4µm,0.4s							
ARSA	**Arzberg**	**1.40**	**346**		Pn	**Pn**	**06 01 45.4**	**-0.7**
ARSA					Lg	Lg	06 02 05.6	
ARSA	**Arzberg**	**1.40**	**346**	*e*	Pg	**Pn**	**06 01 46.0**	**-0.1**
ARSA	**Arzberg**	**1.40**	**346**	*e*	Pn	**Pn**	**06 01 46.4**	**+0.3**
ARSA					*e*Sn	**Sb**	**06 02 03.2**	**-1.4**
ARSA	**Arzberg**	**1.40**	**346**	⇓	P	**Pn**	**06 01 45.4**	**-0.7**
BLY	**Banja Luka**	**1.41**	**144**	⇑	P	**Pn**	**06 01 45.5**	**-0.6**
BLY				⇑	S	**Sn**	**06 02 05.1**	**+0.4**
BLY	**Banja Luka**	**1.41**	**144**		Pn	**Pn**	**06 01 44.9**	**-1.2**
BLY					Lg	Lg	06 02 04.3	
BLY	**Banja Luka**	**1.41**	**144**	*e*	Pg	**Pn**	**06 01 45.3**	**-0.8**
BLY				*e*	Sg	**Sn**	**06 02 05.0**	**+0.4**
BLY	**Banja Luka**	**1.41**	**144**	⇑	P	**Pn**	**06 01 44.8**	**-1.3**
BLY	**Banja Luka**	**1.41**	**144**	⇓	*i* Pg	**Pn**	**06 01 44.9**	**-1.2**
BLY				*e*	Sg	**Sn**	**06 02 03.6**	**-1.0**
RABC	**Rab**	**1.43**	**218**	*e*	Pg	**Pn**	**06 01 45.9**	**-0.6**
RABC				*e*	Sg	**Sn**	**06 02 05.5**	**+0.4**
SKDS	**Skadanscina**	**1.44**	**257**	⇑	*i* Pg	**Pn**	**06 01 46.0**	**-0.6**
SKDS				*e*	Sg	**Sg**	**06 02 07.2**	**+0.1**
SKDS					IAML		06 02 08.7	
	comp=Z,12µm,0.5s							
SKDS	**Skadanscina**	**1.44**	**257**	*e*	Pg	**Pn**	**06 01 46.2**	**-0.4**
SKDS				*e*	Sg	**Sg**	**06 02 07.5**	**+0.4**
GORS	**Gorjuse**	**1.47**	**288**	⇑	*i* Pg	**Pn**	**06 01 46.5**	**-0.5**
GORS				*e*	Sg	**Sb**	**06 02 06.8**	**+0.2**
GORS					IAML		06 02 10.2	
	comp=Z,11µm,0.6s							
A260A	**Vassurany**	**1.47**	**19**		Pn	**Pn**	**06 01 46.5**	**-0.6**
VOJS	**Vojsko**	**1.49**	**276**	⇑	*i* Pg	**Pn**	**06 01 46.6**	**-0.7**
VOJS					*e*Sg	**Sg**	**06 02 08.6**	**-0.1**
VOJS					IAML		06 02 12.7	
	comp=Z,9µm,0.6s							
NVLJ	**Novalja**	**1.55**	**212**	*e*	Pn	**Pn**	**06 01 47.7**	**-0.4**
NVLJ					Sg	**Sb**	**06 02 09.7**	**+0.8**
TRI	**Trieste**	**1.58**	**264**			**Pn**	**06 01 48.2**	**-0.2**
TRI	**Trieste**	**1.58**	**264**		P	**Pn**	**06 01 48.3**	**-0.2**
CADS	**Cadrg**	**1.62**	**283**	*e*	Pn	**Pn**	**06 01 48.5**	**-0.5**
CADS				*i*			06 01 50.4	
CADS					*e*Sn	**Sb**	**06 02 11.5**	**+0.6**
CADS					IAML		06 02 15.3	
	comp=Z,6µm,0.3s							
TIH	**Tihany**	**1.65**	**52**		Pn	**Pn**	**06 01 48.2**	**-1.3**
MPLH	**Magyarpolny**	**1.66**	**39**		Pn	**Pn**	**06 01 48.2**	**-1.4**
MPLH					Sn	**Sn**	**06 02 10.4**	**-0.4**
SABO	**M.te Sabotino**	**1.69**	**274**			**Pn**	**06 01 49.5**	**-0.5**
A266A	**Gyulaj**	**1.69**	**67**		Pn	**Pn**	**06 01 48.3**	**-1.7**
A266A					Sn	**Sn**	**06 02 10.1**	**-1.4**
VIRC	**Vir**	**1.73**	**203**	*e*	Pn	**Pn**	**06 01 50.7**	**+0.1**
VIRC					Sn	**Sb**	**06 02 14.4**	**+0.3**
EGYH	**Egyhazaskeszo**	**1.78**	**30**		Pn	**Pn**	**06 01 50.7**	**-0.5**
EGYH					Sn	**Sn**	**06 02 14.0**	**-0.2**
ROBS	**Robic**	**1.78**	**282**	⇑	*i* Pn	**Pn**	**06 01 50.6**	**-0.6**
ROBS					*e*Sn	**Sg**	**06 02 16.9**	**-0.9**
ROBS					IAML		06 02 19.1	
	comp=Z,13µm,0.9s							
PRED	**Cave del Predi**	**1.79**	**289**			**Pn**	**06 01 51.0**	**-0.5**
MYKA	**Terra Mystica**	**1.80**	**295**			**Pn**	**06 01 51.6**	**0.0**
MYKA						**Sn**	**06 02 14.4**	**0.0**
MYKA	**Terra Mystica**	**1.80**	**295**	*e*	Pn	**Pn**	**06 01 51.6**	**0.0**
	comp=Z,315nm,0.7s,SNR=458							
MYKA					Sn	**Sn**	**06 02 14.4**	**0.0**
	comp=Z,935nm,0.5s							
RONA	**Rosalia, Austr**	**1.82**	**6**			**Pn**	**06 01 51.4**	**-0.5**
RONA	**Rosalia, Austr**	**1.82**	**6**	*e*	Pn	**Pn**	**06 01 51.4**	**-0.5**
	comp=Z,21nm,0.1s,SNR=909							
SOP	**Sopron**	**1.83**	**12**		Pn	**Pn**	**06 01 51.4**	**-0.5**
SOP					Sn	**Sn**	**06 02 14.5**	**-0.5**
SOP					Lg	Lg	06 02 19.6	
SOP	**Sopron**	**1.83**	**12**	*e*	Pn	**Pn**	**06 01 51.8**	**-0.2**
SOP				*e*	Sn	**Sn**	**06 02 12.9**	**-2.2**
ACOM	**Acomizza, Ital**	**1.85**	**292**		P	**Pn**	**06 01 52.6**	**+0.1**
MORH	**Mrgy, Hungar**	**1.86**	**79**		Pn	**Pn**	**06 01 50.6**	**-1.7**
MORH					Lg	Lg	06 02 19.9	
MORH	**Mrgy, Hungar**	**1.86**	**79**	*e*	Pn	**Pn**	**06 01 53.5**	**+1.2**
MORH				*e*	Sn	**Sn**	**06 02 17.0**	**+1.2**
KIJV	**Kijevo**	**1.91**	**171**	*e*	Pn	**Pn**	**06 01 52.6**	**-0.4**
KIJV					Sn	**Sn**	**06 02 17.8**	**+0.9**
A003A	**Andau**	**2.00**	**21**		Pn	**Pn**	**06 01 54.1**	**-0.2**
A267A	**Kaloz**	**2.01**	**57**		Pn	**Pn**	**06 01 53.0**	**-1.4**
A267A					Lg	Lg	06 02 28.2	
DUGI	**Dugi Otok**	**2.02**	**200**	*i*	Pn	**Pn**	**06 01 54.2**	**-0.3**
DUGI					Sn	**Sn**	**06 02 21.0**	**+1.4**
MORI	**Morici**	**2.04**	**186**	*e*	Pn	**Pn**	**06 01 54.9**	**+0.1**
MORI					Sn	**Sn**	**06 02 20.3**	**+0.3**
CONA	**Conrad Observa**	**2.04**	**357**	*e*	Pn	**Pn**	**06 01 54.5**	**-0.4**
	comp=Z,122nm,0.3s,SNR=934							
CONA					Sn	**Sn**	**06 02 20.1**	**-0.3**
	comp=Z,1µm,0.4s							
CONA	**Conrad Observa**	**2.04**	**357**		Pn	**Pn**	**06 01 54.6**	**-0.3**
CONA					Pg	**Pg**	**06 02 00.2**	**+0.4**
CONA					Lg	Lg	06 02 28.2	
A004A	**Ebreichsdorf**	**2.09**	**7**		Pn	**Pn**	**06 01 55.9**	**+0.4**
CSKK	**Cskako**	**2.14**	**46**		Pn	**Pn**	**06 01 55.1**	**-1.1**
KBA	**Koelnbreinsper**	**2.19**	**304**			**Pn**	**06 01 56.9**	**-0.2**
KBA	**Koelnbreinsper**	**2.19**	**304**	*e*	Pn	**Pn**	**06 01 56.9**	**-0.2**
	comp=Z,47nm,0.5s,SNR=386							
KBA	**Koelnbreinsper**	**2.19**	**304**	*e*	Pn	**Pn**	**06 01 57.5**	**+0.4**
KBA	**Koelnbreinsper**	**2.19**	**304**	⇑	P	**Pn**	**06 01 56.9**	**-0.2**
A272A	**Blcske**	**2.22**	**66**		Pn	**Pn**	**06 01 55.5**	**-1.8**
A272A					Pg	**Pg**	**06 02 04.3**	**+1.1**
A272A					Lg	Lg	06 02 32.8	
WINA	**Alland / Wiene**	**2.22**	**1**	*e*	Pn	**Pn**	**06 01 56.9**	**-0.4**
	SNR=1105							
A339A	**Balon**	**2.24**	**30**		Pn	**Pn**	**06 01 57.4**	**-0.2**
A339A					Pg	**Pg**	**06 02 05.5**	**+1.8**
ZIRJ	**Zirje**	**2.25**	**187**	*i*	Pn	**Pn**	**06 01 58.1**	**+0.4**
ZIRJ					Sn	**Sn**	**06 02 26.0**	**+0.7**
MOA	**Molln**	**2.30**	**329**			**Pn**	**06 01 58.7**	**+0.3**
MOA						**Sn**	**06 02 26.5**	**-0.1**
MOA	**Molln**	**2.30**	**329**	*e*	Pn	**Pn**	**06 01 58.7**	**+0.3**
	comp=Z,18nm,0.2s,SNR=259							
MOA					Sn	**Sn**	**06 02 26.5**	**-0.1**
	comp=Z,1µm,0.4s							
MOA	**Molln**	**2.30**	**329**	*e*	Pn	**Pn**	**06 01 59.1**	**+0.7**
MOA	**Molln**	**2.30**	**329**	*e*	Pn	**Pn**	**06 01 59.1**	**+0.7**
MOA				*e*	Sn	**Sn**	**06 02 26.5**	**-0.1**
A271A	**Ivancsa**	**2.32**	**56**		Pn	**Pn**	**06 01 57.4**	**-1.3**
STAL	**STALIGIAL**	**2.33**	**280**			**Pn**	**06 01 58.9**	**+0.1**
ZST	**Bratislava**	**2.42**	**18**		Pn	**Pn**	**06 01 59.5**	**-0.6**
BIOA	**Bad Ischl, Aus**	**2.43**	**319**			**Pn**	**06 02 00.3**	**+0.1**
BIOA	**Bad Ischl, Aus**	**2.43**	**319**	*i*	Pn	**Pn**	**06 02 00.3**	**+0.1**
	comp=Z,20nm,0.3s,SNR=233							
SRO	**Srobarova**	**2.49**	**39**	*e*	P	**Pn**	**06 02 00.6**	**-0.4**
SRO				*e*			06 02 29.9	
SRO					pmax	pmax		
	comp=N,7µm,0.7s							
SRO	**Srobarova**	**2.49**	**39**		Pn	**Pn**	**06 02 00.6**	**-0.4**
SRO	**Srobarova**	**2.49**	**39**	*e*	PN	**Pn**	**06 02 00.6**	**-0.4**
SRO				*e*	PG	**Pg**	**06 02 08.4**	**0.0**
SRO				*e*	SN	**Sn**	**06 02 29.9**	**-1.4**
SRO				*e*	LG	Lg	06 02 56.1	
A008A	**Tiefenfucha**	**2.49**	**354**		Pn	**Pn**	**06 02 01.2**	**+0.2**
A008A					Pg	**Pg**	**06 02 07.6**	**-0.9**
RICI	**Ricice**	**2.52**	**161**	*e*	Pn	**Pn**	**06 02 01.6**	**+0.1**
RICI					Sn	**Sn**	**06 02 33.2**	**+1.0**
SUBS	**Subotica**	**2.55**	**84**	*e*	Pn	**Pn**	**06 02 00.4**	**-1.4**
ABTA	**Abfaltersbach**	**2.57**	**291**			**Pn**	**06 02 02.1**	**-0.2**
ABTA	**Abfaltersbach**	**2.57**	**291**	*e*	Pn	**Pn**	**06 02 02.1**	**-0.2**
	comp=N,90nm,0.3s,SNR=142							
BUD	**Budapest**	**2.62**	**51**		Pn	**Pn**	**06 02 00.6**	**-2.1**
BUD	**Budapest**	**2.62**	**51**	*e*	Pn	**Pn**	**06 02 00.4**	**-2.4**
MODS	**Modra-Piesok**	**2.63**	**19**	*e*	P	**Pn**	**06 02 02.1**	**-0.8**
MODS				*e*			06 02 31.9	
MODS					pmax	pmax		
	comp=N,9µm,0.9s							
MODS	**Modra-Piesok**	**2.63**	**19**		Pn	**Pn**	**06 02 02.2**	**-0.8**
MODS	**Modra-Piesok**	**2.63**	**19**	*e*	PN	**Pn**	**06 02 02.1**	**-0.8**
MODS				*e*	PG	**Pg**	**06 02 12.4**	**+1.3**
MODS				*e*	SN	**Sn**	**06 02 31.9**	**-2.9**
MODS				*e*	LG	Lg	06 02 54.6	
A337A	**Vahovce**	**2.65**	**27**		Pn	**Pn**	**06 02 02.9**	**-0.3**
A337A					Sn	**Sn**	**06 02 34.4**	**-0.8**
A338A	**Semerovo**	**2.66**	**36**		Pn	**Pn**	**06 02 02.1**	**-0.6**
A338A					Pg	**Pg**	**06 02 12.1**	**+0.4**
A338A					Sn	**Sn**	**06 02 35.3**	**-0.2**
MAKA	**Makarska**	**2.70**	**164**	*e*	Pn	**Pn**	**06 02 04.1**	**+0.3**
MAKA					Sn	**Sn**	**06 02 37.4**	**+0.9**
HVAR	**Hvar**	**2.73**	**173**	*i*	Pn	**Pn**	**06 02 05.0**	**+0.8**
HVAR					Sn	**Sn**	**06 02 38.8**	**+1.6**
LESA	**Schwarzleotal**	**2.76**	**305**			**Pn**	**06 02 05.0**	**+0.2**
LESA						**Sn**	**06 02 39.8**	**+1.7**
LESA	**Schwarzleotal**	**2.76**	**305**	*e*	Pn	**Pn**	**06 02 05.0**	**+0.2**
	comp=N,182nm,0.5s,SNR=222							
LESA					Sn	**Sn**	**06 02 39.8**	**+1.7**
	comp=N,440nm,0.4s							
FRGS	**Fruska Gora**	**2.77**	**104**		Pn	**Pn**	**06 02 04.0**	**-0.8**
FRGS	**Fruska Gora**	**2.77**	**104**	*e*	Pn	**Pn**	**06 02 03.9**	**-1.8**
FRGS				*e*	Sn	**Sn**	**06 02 36.4**	**-1.8**
FRGS	**Fruska Gora**	**2.77**	**104**	*e*	Pn	**Pn**	**06 02 05.4**	**+0.5**
FRGS				*e*	Sn	**Sn**	**06 02 38.7**	**+0.5**
SMOL	**Smolenice**	**2.80**	**20**	*e*	P	**Pn**	**06 02 04.7**	**-0.5**
SMOL				*e*			06 02 36.2	
SMOL					pmax	pmax		
	comp=N,963nm,0.6s							
TEKS	**Tekeris**	**2.82**	**117**	*e*	Pn	**Pn**	**06 02 04.7**	**-0.9**
A001A	**Falkenstein**	**2.87**	**8**		Pn	**Pn**	**06 02 06.2**	**0.0**
A001A					Pg	**Pg**	**06 02 14.3**	**-1.3**
A001A					Lg	Lg	06 02 55.0	
A334A	**Sterusy**	**2.94**	**22**		Pn	**Pn**	**06 02 06.7**	**-0.6**
A335A	**Lovce**	**3.01**	**31**		Pn	**Pn**	**06 02 07.3**	**-0.8**
A335A					Pg	**Pg**	**06 02 17.7**	**-0.7**
A335A					Sn	**Sn**	**06 02 42.1**	**-2.0**
CTI	**Castel Tesino**	**3.05**	**275**			**Pn**	**06 02 08.6**	**-0.2**
CTI	**Castel Tesino**	**3.05**	**275**		P	**Pn**	**06 02 08.6**	**-0.2**
TEOL	**Teolo**	**3.09**	**262**			**Pn**	**06 02 08.7**	**-0.6**
BBLS	**Lazi&#263i**	**3.15**	**129**		Pn	**Pn**	**06 02 09.8**	**-0.4**
BBLS	**Lazi&#263i**	**3.15**	**129**	*e*	Pn	**Pn**	**06 02 09.9**	**-0.2**
BBLS	**Lazi&#263i**	**3.15**	**129**	*e*	Pn	**Pn**	**06 02 09.7**	**-0.4**
BBLS					Sn	**Sn**	**06 02 46.9**	**-0.7**
CKRC	**Cesky Krumlov**	**3.15**	**339**	*e*	PN	**Pn**	**06 02 11.1**	**+1.0**
CKRC				*e*	SN	**Sn**	**06 02 46.7**	**-0.9**
	comp=N,3µm,0.7s							
CKRC				*e*	SG	**Sg**	**06 03 00.0**	**-1.9**
CKRC	**Cesky Krumlov**	**3.15**	**339**	*e*	P	**Pn**	**06 02 11.1**	**+1.0**
CKRC				*e*			06 02 46.7	
CKRC	**Cesky Krumlov**	**3.15**	**339**		Pn	**Pn**	**06 02 10.8**	**+0.7**
JAVC	**Velka Javorina**	**3.18**	**20**		Pn	**Pn**	**06 02 10.4**	**-0.1**
JAVC	**Velka Javorina**	**3.18**	**20**	*e*	PN	**Pn**	**06 02 10.5**	**-0.1**
KRUC	**Moravsky**	**3.18**	**5**		Pn	**Pn**	**06 02 09.9**	**-0.7**
KRUC	**Moravsky**	**3.18**	**5**	*e*	PN	**Pn**	**06 02 10.0**	**-0.6**
KRUC				*e*	SN	**Sn**	**06 02 47.3**	**-1.1**
KRUC				*e*	SG	**Sg**	**06 03 00.1**	**-2.8**
LSTV	**Lastovo**	**3.18**	**168**	*e*	Pn	**Pn**	**06 02 10.6**	**+0.1**
LSTV					Sn	**Sn**	**06 02 48.2**	**-0.1**
STON	**Ston**	**3.25**	**158**	*e*	Pn	**Pn**	**06 02 11.5**	**+0.1**
STON					Sn	**Sn**	**06 02 51.2**	**+1.2**
STON	**Ston**	**3.25**	**158**	*e*	Pn	**Pn**	**06 02 12.5**	**+1.1**
BSZH	**Besenyszg**	**3.25**	**63**		Sn	**Sn**	**06 02 48.6**	**-1.6**
BSZH					Lg	Lg	06 03 05.6	
RUDO	**Rudo**	**3.30**	**132**	*e*	Pn	**Pn**	**06 02 12.2**	**+0.1**
RUDO				*e*	Sn	**Sn**	**06 02 50.9**	**-0.4**
WTTA	**Wattenberg**	**3.32**	**296**			**Pn**	**06 02 13.3**	**+0.8**
WTTA						**Sn**	**06 02 54.4**	**+2.4**
WTTA	**Wattenberg**	**3.32**	**296**		P	**Pn**	**06 02 13.3**	**+0.8**
WTTA							06 02 54.4	
WTTA	**Wattenberg**	**3.32**	**296**	*i*	Pn	**Pn**	**06 02 13.3**	**+0.8**
	comp=N,28nm,0.2s,SNR=93							
WTTA				*e*	Sn	**Sn**	**06 02 54.4**	**+2.4**
	comp=N,737nm,0.7s							
BEO	**Beograd**	**3.33**	**107**		Pn	**Pn**	**06 02 11.1**	**-1.3**
BEO					Lg	Lg	06 03 06.5	
BEO	**Beograd**	**3.33**	**107**	*e*	Pn	**Pn**	**06 02 10.7**	**-1.8**
DIVS	**Divibare**	**3.34**	**121**	*e*	Pn	**Pn**	**06 02 12.1**	**-0.7**
GEC2	**GERESS Array S**	**3.35**	**333**			**Pn**	**06 02 13.2**	**+0.3**
GEC2	**GERESS Array S**	**3.35**	**333**	*e*	Pn	**Pn**	**06 02 13.4**	**+0.6**
GEC2				*e*	Sn	**Sn**	**06 02 50.1**	**-2.5**
GERES	**GERESS Array B**	**3.35**	**333**		Pn	**Pn**	**06 02 12.7**	**-0.2**
	comp=N,18nm,0.3s,baz=154,slow=14,SNR=2255							
GERES					Sn	**Sn**	**06 02 51.4**	**-1.2**
	comp=N,35nm,0.3s,baz=156,slow=23,SNR=9.8							
GERES					Lg	Lg	06 03 04.1	
	comp=N,24nm,0.3s,baz=145,slow=31,SNR=10							
GERES					LR	LR	06 03 51.1	
	comp=N,6µm,18.3s,baz=142,slow=46							
	comp=N,304nm,0.4s							
PSZ	**Piszkesteto**	**3.35**	**51**			**Pn**	**06 02 10.9**	**-2.0**
PSZ	**Piszkesteto**	**3.35**	**51**		P	**Pn**	**06 02 10.9**	**-2.0**
PSZ	**Piszkesteto**	**3.35**	**51**		Pn	**Pn**	**06 02 10.9**	**-2.0**
PSZ					Sn	**Sn**	**06 02 52.5**	**-0.2**
PSZ	**Piszkesteto**	**3.35**	**51**	*e*	Pn	**Pn**	**06 02 11.3**	**-1.6**
PSZ				*e*	Sn	**Sn**	**06 02 48.3**	**-4.2**
PSZ	**Piszkesteto**	**3.35**	**51**	⇑	P	**Pn**	**06 02 10.9**	**-2.0**
I26DE	**FREYUNG INFRAS**	**3.35**	**333**		I	I	06 22 00.0	
	baz=152,slow=336,SNR=1.1							
A332A	**Rudnianska**	**3.36**	**29**		Pn	**Pn**	**06 02 12.3**	**-0.7**
A332A					Pg	**Pb**	**06 02 21.5**	**+1.4**
A332A					Sn	**Sn**	**06 02 52.0**	**-0.7**
WATA	**Walderalm**	**3.38**	**297**			**Pn**	**06 02 14.3**	**+0.9**
WATA						**Sn**	**06 02 55.5**	**+2.0**
WATA	**Walderalm**	**3.38**	**297**		P	**Pn**	**06 02 14.3**	**+0.9**
WATA							06 02 55.5	
WATA	**Walderalm**	**3.38**	**297**	*i*	Pn	**Pn**	**06 02 14.3**	**+0.9**
	comp=N,39nm,0.3s,SNR=95							
WATA				*e*	Sn	**Sn**	**06 02 55.5**	**+2.0**
	comp=N,396nm,0.5s							
UPM	**Unac-Piva**	**3.39**	**141**	⇑	*i* Pn	**Pn**	**06 02 13.0**	**-0.6**
UPM				*e*	Sn	**Sn**	**06 02 52.1**	**-1.7**
UPM	**Unac-Piva**	**3.39**	**141**	*e*	Pn	**Pn**	**06 02 13.7**	**+0.1**
UPM				*e*	Sn	**Sn**	**06 02 53.6**	**-0.2**
AVAS	**Avala Beograd**	**3.39**	**109**	*e*	Pn	**Pn**	**06 02 12.1**	**-1.3**
AVAS				*e*	Sn	**Sn**	**06 02 51.3**	**-2.3**
GUMA	**Gualdo di Mace**	**3.41**	**215**			**Pn**	**06 02 13.4**	**-0.4**
TREC	**Trest**	**3.42**	**354**	*e*	PN	**Pn**	**06 02 14.2**	**+0.3**
TREC	**Trest**	**3.42**	**354**	*e*	P	**Pn**	**06 02 14.2**	**+0.3**
TREC	**Trest**	**3.42**	**354**		Pn	**Pn**	**06 02 14.0**	**+0.1**
TREC					Pg	**Pb**	**06 02 23.6**	**+2.3**
VRAC	**Vranov**	**3.44**	**6**		Pn	**Pn**	**06 02 13.6**	**-0.5**
	comp=N,428nm,0.5s,baz=190,slow=13,SNR=433							
VRAC					Sn	**Sn**	**06 02 52.1**	**-2.7**
	comp=N,69nm,0.3s,baz=183,slow=17,SNR=4.1							
VRAC					Lg	Lg	06 03 07.8	
	comp=N,98nm,0.3s,baz=238,slow=19,SNR=5.5							
VRAC	**Vranov**	**3.44**	**6**	⇓	P	**Pn**	**06 02 13.6**	**-0.5**
VRAC	**Vranov**	**3.44**	**6**		Pn	**Pn**	**06 02 13.7**	**-0.4**
VRAC	**Vranov**	**3.44**	**6**	*e*	PN	**Pn**	**06 02 13.5**	**-0.5**
VRAC				*e*	SN	**Sn**	**06 02 52.9**	**-1.9**
VRAC				*e*	SG	**Sg**	**06 03 09.3**	**-1.9**
BRY	**Bratogost**	**3.49**	**148**	*e*	Pn	**Pn**	**06 02 14.2**	**-0.7**
BRY				*i*	Sn	**Sn**	**06 02 54.8**	**-1.5**
BRY	**Bratogost**	**3.49**	**148**	*e*	Pn	**Pn**	**06 02 14.9**	**0.0**
BRY				*e*	Sn	**Sn**	**06 02 55.0**	**-1.3**
PLE	**Pljevlja**	**3.52**	**136**	*e*	Pn	**Pn**	**06 02 15.0**	**-0.2**
PLE				*e*	Sn	**Sn**	**06 02 56.5**	**-0.3**
TRUS	**Trudelj**	**3.53**	**117**	*e*	Pn	**Pn**	**06 02 14.6**	**-0.7**
FDMO	**Fiordimonte**	**3.54**	**217**			**Pn**	**06 02 14.6**	**-0.8**
DBRK	**Dubrovnik**	**3.57**	**154**	*e*	Pn	**Pn**	**06 02 16.4**	**+0.6**
DBRK					Sn	**Sn**	**06 02 58.2**	**+0.3**
SQTA	**Sankt Quirin**	**3.57**	**294**			**Pn**	**06 02 17.3**	**+1.3**
SQTA						**Sn**	**06 03 00.6**	**+2.5**
SQTA	**Sankt Quirin**	**3.57**	**294**	*i*	Pn	**Pn**	**06 02 17.3**	**+1.3**
	comp=N,54nm,0.3s,SNR=121							
SQTA				*e*	Sn	**Sn**	**06 03 00.6**	**+2.5**
	comp=N,1µm,0.8s							
A331A	**Zubak**	**3.59**	**24**		Pn	**Pn**	**06 02 15.9**	**-0.2**
TREB	**Trebinje**	**3.59**	**151**	*e*	Pn	**Pn**	**06 02 16.8**	**+0.7**
TREB				*e*	Sn	**Sn**	**06 02 57.2**	**-1.2**
MURB	**Monte Urbino**	**3.62**	**225**			**Pn**	**06 02 16.6**	**0.0**
BANR	**Banloc**	**3.63**	**96**		Pn	**Pn**	**06 02 16.4**	**-0.2**
BANR					Pg	**Pg**	**06 02 29.8**	**-0.5**
KHC	**Kasperske Hory**	**3.64**	**334**			**Pn**	**06 02 17.4**	**+0.6**
KHC	**Kasperske Hory**	**3.64**	**334**	*e*	PN	**Pn**	**06 02 17.4**	**+0.6**
KHC				*e*	SN	**Sn**	**06 02 58.9**	**-0.8**
KHC					AMS	AMS	06 03 40.0	
	comp=N,18µm,6.0s							
KHC	**Kasperske Hory**	**3.64**	**334**	*e*	P	**Pn**	**06 02 17.3**	**+0.5**
KHC					pmax	pmax		
	comp=Z,1µm,1.0s							
KHC	**Kasperske Hory**	**3.64**	**334**	⇑	P	**Pn**	**06 02 17.0**	**+0.2**
KHC	**Kasperske Hory**	**3.64**	**334**		S	**Sn**	**06 02 59.5**	**-0.2**
MOTA	**Moosalm**	**3.68**	**295**			**Pn**	**06 02 18.3**	**+0.8**
MOTA						**Sn**	**06 03 03.1**	**+2.2**
MOTA	**Moosalm**	**3.68**	**295**	P		**Pn**	**06 02 18.3**	**+0.8**
MOTA							06 03 03.1	
MOTA	**Moosalm**	**3.68**	**295**	*i*	Pn	**Pn**	**06 02 18.3**	**+0.8**
	comp=Z,17nm,0.2s,SNR=70							
MOTA				*e*	Sn	**Sn**	**06 03 03.1**	**+2.2**
	comp=Z,339nm,0.6s							
MOTA	**Moosalm**	**3.68**	**295**	*e*	Pn	**Pn**	**06 02 18.5**	**+0.9**
MAUC	**Maruska**	**3.69**	**19**	*e*	PN	**Pn**	**06 02 17.4**	**-0.1**
MAUC				*e*	SN	**Sn**	**06 02 59.4**	**-1.5**
NRCA	**Norcia**	**3.69**	**215**			**Pn**	**06 02 17.1**	**-0.6**
IVAS	**Ivanjica**	**3.75**	**127**	*e*	Pn	**Pn**	**06 02 17.5**	**-0.9**
ZVC	**Zvikov**	**3.76**	**342**	*e*	PN	**Pn**	**06 02 19.4**	**+1.0**
ZVC				*e*	SN	**Sn**	**06 03 01.0**	**-1.6**
NKME	**Niksic**	**3.77**	**145**	*e*	Pn	**Pn**	**06 02 18.6**	**0.0**
NKME				*i*	Sn	**Sn**	**06 03 01.7**	**-1.2**
VRSS	**Vrsac**	**3.81**	**100**	*e*	Pn	**Pn**	**06 02 18.2**	**-1.0**
FETA	**Feichten**	**3.82**	**289**			**Pn**	**06 02 21.1**	**+1.6**
FETA						**Sn**	**06 03 07.2**	**+2.8**
FETA	**Feichten**	**3.82**	**289**	*i*	Pn	**Pn**	**06 02 21.1**	**+1.6**
	comp=Z,129nm,0.8s,SNR=112							
FETA				*e*	Sn	**Sn**	**06 03 07.2**	**+2.8**
	comp=Z,437nm,0.8s							
SALO	**Salr**	**3.85**	**268**			**Pn**	**06 02 19.9**	**+0.2**
SALO	**Salr**	**3.85**	**268**	⇑	P	**Pn**	**06

HERR Herculane 4.62 100 ⇓P Pn **06 02 30.0 -0.3**
ROTZ Rotzenmuhle 4.65 328 *e*Pn Pn **06 02 30.2 -0.5**
ROTZ *e*Sn Sn **06 03 21.2 -3.4**
TUE Stuetta 4.67 280 Pn Pn **06 02 31.0 -0.1**
TUE Stuetta 4.67 280 P Pn **06 02 32.2 +1.1**
TUE Stuetta 4.67 280 ⇑P Pn **06 02 31.6 +0.5**
OSTC Ostas 4.67 2 *e*Pn Pn **06 02 31.2 +0.2**
OSTC Ostas 4.67 2 *e*P Pn **06 02 31.2 +0.2**
CHVC Chvalec 4.70 0 *e*PN Pn **06 02 31.6 +0.2**
CHVC Chvalec 4.70 0 *e*P Pn **06 02 31.6 +0.2**
DRGR 4.73 77 Pn Pn **06 02 30.4 -1.4**
DRGR 4.73 77 *e*Pn Pn **06 02 30.2 -1.6**
PVCC Panska Ves 4.74 349 *e*PN Pn **06 02 32.5 +0.6**
PVC Panska Ves 4.74 349 *e*P Pn **06 02 32.5 +0.6**
DJES Djerdap 4.75 103 *e*Pn Pn **06 02 31.0 -1.1**
BOB Bobbio (Coli) 4.76 259 ⇑P Pn **06 02 32.3 0.0**
GZR Gura Zlata 4.77 94 ⇑P Pn **06 02 32.3 -0.2**
GZR Gura Zlata 4.77 94 P Pn **06 02 32.2 -0.2**
GZR Gura Zlata 4.77 94 Pn Pn **06 02 31.8 -0.7**
GZR Pg **Pg** **06 02 49.5 -2.5**
GZR Gura Zlata 4.77 94 *e*Pn Pn **06 02 31.7 -0.7**
GZR *e*Sn Sn **06 03 24.3 -3.3**
DEV Deva 4.81 88 ⇑P Pn **06 02 33.0 0.0**
DEV Deva 4.81 88 P Pn **06 02 32.9 0.0**
CASP Castiglione de 4.82 232 Pn **06 02 31.9 -1.1**
MRVN Minervino Murg 4.83 178 ⇑P Pn **06 02 32.1 -1.1**
RICC Richard 4.83 345 *e*PN Pn **06 02 33.2 +0.1**
MANZ Manzenberg 4.87 329 *e*Pn Pn **06 02 33.3 -0.4**
MANZ *e*Sn Sn **06 03 26.1 -3.8**
ZAGS Zajecar 4.89 113 *e*Pn Pn **06 02 33.3 -0.6**
NKC Novy Kostel 4.96 332 *e*PN Pn **06 02 35.6 +0.7**
NKC *e*SG Sg **06 03 58.1 -1.7**
NKC Novy Kostel 4.96 332 *e*P Pn **06 02 35.6 +0.7**
KSP Ksiaz 4.96 2 *e*P Pn **06 02 35.0 0.0**
KSP *e*S Sg **06 04 05.6 +5.8**
KSP Ksiaz 4.96 2 Pn Pn **06 02 34.9 0.0**
KSP Ksiaz 4.96 2 ⇑P Pn **06 02 34.9 0.0**
KSP Ksiaz 4.96 2 P Pn **06 02 35.0 0.0**
PAOL Paolisi 4.97 193 Pn **06 02 34.9 -0.2**
GRA1 Grafenberg Arr 4.99 321 Pn **06 02 35.1 -0.3**
GRF Grafenberg Arr 4.99 321 P Pn **06 02 35.1 -0.3**
GRF Grafenberg Arr 4.99 321 *e*Pn Pn **06 02 35.0 -0.3**
GRF *e*Sn Sn **06 03 29.8 -3.1**
GRFO Grafenberg 4.99 321 Pn **06 02 35.4 0.0**
GRFO Grafenberg 4.99 321 P Pn **06 02 35.4 0.0**
GRFO Grafenberg 4.99 321 P Pn **06 02 35.1 -0.2**
STHS Stebnicka Huta 4.99 43 *e*P Pn **06 02 35.5 +0.1**
STHS *e* 06 03 31.7
STHS Stebnicka Huta 4.99 43 *e*Pn Pn **06 02 35.6 +0.1**
STHS Stebnicka Huta 4.99 43 *e*PN Pn **06 02 35.5 +0.1**
STHS *e*PG Pg 06 03 31.7 +35
OJC Ojcow 5.02 29 *e*P Pn **06 02 35.7 0.0**
OJC *e*S Sg 06 04 13.7 +12
OJC Ojcow 5.02 29 Pn **06 02 36.1 +0.3**
OJC Ojcow 5.02 29 P Pn **06 02 36.1 +0.3**
OJC Ojcow 5.02 29 ⇑P Pn **06 02 35.5 -0.3**
OJC Ojcow 5.02 29 P Pn **06 02 36.1 +0.3**
comp=Z,1.7nmcomp=Z,2µmcomp=Z,156nm,0.9s
OJC S **Sn** **06 03 34.9 +1.2**
comp=Z,1.7nmcomp=Z,2µmcomp=Z,156nm,0.9s
HSKC Hora Svate Kat 5.03 341 *e*PN Pn **06 02 35.7 -0.2**
ACER Acerenza 5.10 181 Pn **06 02 36.1 -0.8**
TANN Tannenbergstha 5.11 334 *e*Pn Pn **06 02 37.3 +0.2**
TANN *e*Sn Sn **06 03 32.3 -3.7**
BARS Barje 5.17 124 *e*Pn Pn **06 02 37.6 -0.3**
BRG Berggiesshubel 5.17 345 *e*Pn Pn **06 02 37.6 -0.2**
MATE Matera 5.26 174 ⇓P Pn **06 02 38.3 -0.8**
MATE Matera 5.26 174 ⇑P Pn **06 02 38.4 -0.8**
PLN Plauen 5.27 332 *e*Sn Sn **06 03 36.6 -3.2**
PHP Peshkopia 5.29 141 P Pn **06 02 41.3 +1.8**
CJR Cluj-Napoca 5.32 78 ⇓P Pn **06 02 40.8 +0.8**
CJR Cluj-Napoca 5.32 78 P Pn **06 02 40.8 +0.8**
ZAPS Zavoj 5.41 117 *e*Pn Pn **06 02 40.5 -0.6**
LOT Lotru 5.46 92 ⇓P Pn **06 02 42.4 +0.5**
STU Stuttgart 5.46 304 Pn **06 02 40.8 -1.0**
STU Stuttgart 5.46 304 P Pn **06 02 40.8 -1.0**
STU Stuttgart 5.46 304 *e*Pn Pn **06 02 41.3 -0.4**
STU Stuttgart 5.46 304 ⇑P Pn **06 02 40.9 -0.9**
VALD Valchedram 5.72 110 P Pn **06 02 45.5 +0.1**
MONC Moncucco Torin 5.74 265 ⇑P Pn **06 02 46.2 +0.4**
MEZ Mezhgor'ye 5.75 60 P Pn **06 02 46.2 +0.8**
BOSS Bosilegrad 5.76 124 *e*Pn Pn **06 02 45.4 -0.5**
CLL Collm 5.78 341 *e*P Pn **06 02 46.0 -0.1**
CLL Collm 5.78 341 *e*Pn Pn **06 02 46.0 -0.1**
CLL *ex* x 06 02 49.0
CLL *ex* x 06 02 57.0
CLL *e*Pg **Pg** **06 03 09.0 -2.3**
CLL *ex* x 06 03 18.0
CLL *e*Sn Sn 06 03 38.0 -14
CLL *ex* x 06 03 49.0
CLL AMS AMS 06 04 00.0
comp=N,2µm,21.3s
CLL AMS AMS 06 04 00.0
comp=E,1µm,20.5s
CLL AMS AMS 06 04 00.0
comp=Z,3µm,19.6s
CLL *ex* x 06 04 13.0
CLL *e*Sg **Sg** **06 04 25.0 -1.0**
comp=Z,2µm,1.1s
CLL AMS AMS 06 05 00.0
CLL Collm 5.78 341 *e*Pn Pn **06 02 45.8 -0.3**
CLL Collm 5.78 341 P Pn **06 02 45.8 -0.3**
comp=Z,9.3nmcomp=Z,3µmcomp=Z,217nm,0.6s
BFO Black Forest 5.78 298 Pn **06 02 45.1 -1.1**
BFO Black Forest 5.78 298 P Pn **06 02 45.5 -0.8**
BFO Black Forest 5.78 298 *e*Pn Pn **06 02 45.7 -0.6**
BFO Black Forest 5.78 298 ⇑P Pn **06 02 45.3 -1.0**
MDB Medias 5.83 85 ⇓P Pn **06 02 48.3 +1.4**
MDB Medias 5.83 85 P Pn **06 02 48.3 +1.4**
KWP Kalwaria Pacla 5.86 48 *e*P Pn **06 02 51.2 +3.9**
KWP *e*S Sg 06 04 47.0 +18
KWP Kalwaria Pacla 5.86 48 ⇓P Pn **06 02 48.4 +1.1**
CUC Castrocucco 5.90 181 P Pn **06 02 48.0 +0.1**
CUC Castrocucco 5.90 181 ⇑P Pn **06 02 47.7 -0.2**
RAKU Rahkiv 5.98 66 P Pn **06 02 49.9 +1.0**
BLSH Balsha 6.03 118 P Pn **06 02 50.1 +0.4**
MPEP Malo Peshtene 6.07 112 P Pn **06 02 50.2 0.0**
ARR Arges 6.07 92 ⇓P Pn **06 02 51.5 +1.3**
SENIN Lac Senin/Sane 6.08 278 Pn **06 02 51.3 +0.8**
VTS Vitosha 6.13 120 P Pn **06 02 50.7 -0.4**
comp=Z,0.3nmcomp=Z,95nm,0.9s
VTS Vitosha 6.13 120 P Pn **06 02 50.8 -0.4**
VTS Vitosha 6.13 120 *e*Pn Pn **06 02 50.2 -1.0**
KBN Korca 6.31 145 P Pn **06 02 54.6 +1.0**
PLNA Plana 6.33 120 P Pn **06 02 55.2 +1.3**
VOIR 6.35 91 ⇑P Pn **06 02 55.7 +1.5**
VOIR 6.35 91 P Pn **06 02 55.6 +1.5**
VOIR 6.35 91 P Pn **06 02 55.1 +1.0**
comp=Z,0.8nmcomp=Z,1µmcomp=Z,72nm,0.8s
ECH Echery 6.48 294 Pn **06 02 55.0 -0.9**
ECH Echery 6.48 294 P Pn **06 02 55.0 -0.9**
ECH Echery 6.48 294 P Pn **06 02 54.8 -1.0**
HUMR Humele 6.48 99 ⇓P Pn **06 02 55.8 -0.1**
DOPR Dopca 6.54 86 ⇑P Pn **06 02 57.3 +0.6**
KKB Krupnik 6.54 126 P Pn **06 02 57.0 +0.2**
comp=Z,0.4nmcomp=Z,207nm,0.9s
KKB Krupnik 6.54 126 P Pn **06 02 57.1 +0.4**
BUR08 Bucovina Ar. S 6.55 71 Pn **06 02 56.8 -0.1**
BURAR Bucovina Array 6.56 71 ⇓P Pn **06 02 57.3 +0.3**
BURAR Bucovina Array 6.56 71 P **06 02 56.8 -0.1**
BURAR Bucovina Array 6.56 71 P Pn **06 02 57.2 +0.3**
NEST Nestorio 6.59 144 P Pn **06 02 58.2 +0.7**
BNI Bardonecchia 6.62 266 P Pn **06 02 58.4 +0.6**
PLVB Pleven 6.63 109 ⇑P Pn **06 02 57.3 -0.6**
TNS Taunus Mts 6.67 313 *e*Pn Pn **06 02 58.5 0.0**
SRN Sarande 6.68 153 P Pn **06 02 57.5 -1.1**
TIP Timpagrande 6.73 175 ⇑P Pn **06 02 58.8 -0.5**
TIP Timpagrande 6.73 175 P Pn **06 02 59.6 +0.3**
TIP Timpagrande 6.73 175 P Pn **06 02 59.2 -0.1**
comp=Z,1.0nmcomp=Z,1µmcomp=Z,94nm,0.9s
BEL Belsk 6.73 26 *e*P Pn **06 03 01.9 +2.6**
COPA Copaceanca 6.76 102 ⇑P Pn **06 02 59.8 +0.2**
PGB Panagyurishte 6.77 117 P Pn **06 03 00.3 +0.5**
KEK Kerkira 6.77 154 P Pn **06 02 58.7 -1.1**
comp=Z,0.4nmcomp=Z,114nm,0.9s
KEK Kerkira 6.77 154 P Pn **06 02 58.9 -0.9**
OZUR 6.81 85 ⇓P Pn **06 03 02.0 +1.5**
PENT Pentalofos 6.82 145 P Pn **06 03 01.4 +0.8**
comp=Z,149nm,0.7s
KNT Kendrikon 6.88 131 P Pn **06 03 01.0 -0.3**
comp=Z,0.2nmcomp=Z,154nm,1.1s

NAST IGS Nastaetten 6.96 311 *e*Pn Pn **06 03 02.3 -0.1**
NAST *e*Sn Sn **06 04 16.2 -5.1**
comp=Z,329nm,1.2s
MLR Muntele Rosu 6.97 90 Pn Pn **06 03 03.7 +1.1**
comp=Z,4.4nm,0.3s,baz=284,slow=18,SNR=33
MLR Sn **Sn** **06 04 22.3 +0.4**
comp=Z,1.5nm,0.3s,baz=270,slow=20,SNR=3.6
MLR Lg Lg 06 05 01.0
comp=Z,1.0nm,0.3s,baz=260,slow=17,SNR=3.7
MLR LR LR 06 06 22.1
comp=Z,1µm,18.1s,baz=262,slow=43
comp=Z,21nm,0.5s
MLR Muntele Rosu 6.97 90 ⇑P Pn **06 03 03.5 +0.8**
MLR Muntele Rosu 6.97 90 Pn **06 03 03.0 +0.3**
MLR Muntele Rosu 6.97 90 *e*Pn Pn **06 03 02.8 +0.1**
MLR Muntele Rosu 6.97 90 P Pn **06 03 04.2 +1.5**
comp=Z,1.0nmcomp=Z,1µmcomp=Z,43nm,0.7s
KZN Kozani 6.99 141 P Pn **06 03 03.4 +0.5**
comp=Z,0.3nmcomp=Z,3µmcomp=Z,99nm,0.7s
MMB Musomishta 7.09 125 P Pn **06 03 04.3 +0.1**
comp=Z,0.2nmcomp=Z,110nm,0.8s
MMB S Sn **06 04 19.6 -5.1**
comp=Z,0.2nmcomp=Z,110nm,0.8s
MMB Musomishta 7.09 125 *e*P Pn **06 03 04.4 +0.1**
LFKM Lefkimmi 7.10 154 S Sn **06 04 21.7 -3.1**
IGT Igoumenitsa 7.11 152 P Pn **06 03 03.5 -0.9**
comp=Z,0.3nmcomp=Z,93nm,0.7s
IGT S Sn **06 04 21.7 -3.3**
comp=Z,0.3nmcomp=Z,93nm,0.7s
IGT Igoumenitsa 7.11 152 *e*Pn Pn **06 03 03.3 -1.1**
KPRO Kipourio 7.11 145 P Pn **06 03 05.0 +0.4**
comp=Z,0.4nmcomp=Z,123nm,1.4s
KPRO S Sn **06 04 22.0 -3.3**
comp=Z,0.4nmcomp=Z,123nm,1.4s
KOE Koeppel 7.16 312 *e*Pn Pn **06 03 05.5 +0.4**
KOE *e*Sn Sn **06 04 21.7 -4.6**
comp=Z,418nm,1.2s
FLTG Flechtingen 7.17 336 ⇑P Pn **06 03 06.0 +0.9**
JAN Janina 7.17 149 P Pn **06 03 05.0 -0.4**
comp=Z,0.4nmcomp=Z,132nm,0.8s
JAN S Sn **06 04 23.6 -3.2**
comp=Z,0.4nmcomp=Z,132nm,0.8s
R9F13 Warsaw-Wawer 7.17 26 *e*P Pn 06 02 50.8 -14
R9F13 *e*Sn Sn 06 04 10.6 -16
PRAR RASCA 7.19 75 ⇓P Pn **06 03 06.8 +1.3**
NEHR Nehoiu 7.22 90 ⇑P Pn **06 03 07.4 +1.4**
ONER Baraj Valea Uz 7.23 83 ⇑P Pn **06 03 07.6 +1.4**
BGG Burgeitz 7.24 310 *e*Pn Pn **06 03 06.6 +0.4**
BGG *e*Sn Sn **06 04 22.5 -5.8**
comp=Z,167nm,0.8s
NVR Nevrokopi 7.28 126 P Pn **06 03 07.0 +0.1**
comp=Z,0.2nmcomp=Z,99nm,0.7s
NVR S Sn **06 04 24.9 -4.5**
comp=Z,0.2nmcomp=Z,99nm,0.7s
SRS Serrai 7.29 128 P Pn **06 03 07.2 +0.2**
comp=Z,0.2nmcomp=Z,82nm,0.9s
SRS S Sn **06 04 25.6 -3.9**
comp=Z,0.2nmcomp=Z,82nm,0.9s
THE Thessaloniki 7.30 134 P Pn **06 03 07.5 +0.4**
comp=Z,74nm,0.8s
KASTN Kahler Asten 7.32 319 *e*Pn Pn **06 03 07.3 -0.1**
PLD Plovdiv 7.32 118 P Pn **06 03 08.0 +0.6**
PLD S Sn **06 04 27.0 -3.4**
PLD Plovdiv 7.32 118 *e*P Pn **06 03 08.3 +0.9**
SOH Sokhos 7.37 131 P Pn **06 03 08.3 +0.2**
comp=Z,0.2nmcomp=Z,81nm,0.7s
PRMD Pramanda 7.38 148 P Pn **06 03 08.1 -0.1**
comp=Z,0.4nmcomp=Z,185nm,0.8s
PRMD S Sn **06 04 30.0 -1.8**
comp=Z,0.4nmcomp=Z,185nm,0.8s
HORT Hortiatis 7.40 133 P Pn **06 03 08.3 -0.2**
PLOR Plostina 7.43 86 ⇑P Pn **06 03 10.1 +1.2**
PLOR Plostina 7.43 86 P Pn **06 03 10.1 +1.2**
GKP Gorka Klasztor 7.43 6 *e*P Pn **06 03 10.3 +1.5**
GKP *e*S Sg 06 05 31.9 +13
RZN Rozhen 7.58 120 P Pn **06 03 10.9 -0.1**
comp=Z,0.2nmcomp=Z,56nm,0.8s
RZN S Sn **06 04 31.5 -5.4**
comp=Z,0.2nmcomp=Z,56nm,0.8s
RZN Rozhen 7.58 120 *e*P Pn **06 03 11.3 +0.2**
SZH Strazhitsa 7.58 107 P Pn **06 03 09.6 -1.4**
comp=Z,0.4nmcomp=Z,105nm,0.7s
SZH S Sn **06 04 30.0 -6.8**
comp=Z,0.4nmcomp=Z,105nm,0.7s
SZH Strazhitsa 7.58 107 P Pn **06 03 10.9 -0.1**
TETR Tetrakomo, Epi 7.60 147 P Pn **06 03 11.5 +0.1**
TETR S Sn **06 04 36.3 -1.1**
CEL Celeste 7.63 181 P Pn **06 03 11.1 -0.5**
CEL Celeste 7.63 181 ⇑P Pn **06 03 10.7 -0.9**
WLF Walferdange 7.64 303 P Pn **06 03 11.6 -0.1**
WLF Walferdange 7.64 303 *d*P Pn **06 03 12.3 +0.6**
WLF Walferdange 7.64 303 *e*Pn Pn **06 03 12.8 +1.1**
WLF Walferdange 7.64 303 ⇓P Pn **06 03 12.8 +1.1**
HILG Hillesheim 7.64 309 *e*Pn Pn **06 03 12.0 +0.2**
HILG *e*Sn Sn **06 04 32.1 -6.2**
comp=Z,229nm,0.8s
ELND Elena 7.66 109 ⇓P Pn **06 03 11.7 -0.3**
TYRN Tyrnavos 7.68 141 P Pn **06 03 11.4 -0.9**
comp=Z,0.2nmcomp=Z,102nm,0.8s
HOBG Hohbusch 7.70 315 *e*Pn Pn **06 03 12.7 +0.2**
HOBG *e*Sn Sn **06 04 34.4 -5.2**
THL Klokotos Trika 7.71 143 P Pn **06 03 12.4 -0.3**
comp=Z,0.2nmcomp=Z,134nm,0.8s
THL S Sn **06 04 37.8 -2.1**
comp=Z,0.2nmcomp=Z,134nm,0.8s
STB Steinbach 7.72 311 *e*Pn Pn **06 03 12.8 0.0**
STB *e*Sn Sn **06 04 34.3 -5.8**
comp=Z,201nm,0.4s
PLG Polygyros 7.74 133 P Pn **06 03 13.6 +0.4**
BNS Bensberg 7.76 314 *e*Pn Pn **06 03 13.7 +0.4**
BNS *e*Sn Sn **06 04 36.1 -5.0**
comp=Z,419nm,0.4s
RAZG Razgrad 7.83 104 ⇑P Pn **06 03 13.9 -0.5**
TSLK Tsoukalades, L 7.85 152 P Pn **06 03 13.4 -1.2**
TSLK S Sn **06 04 39.5 -3.9**
KAVA Kavala 7.88 125 P Pn **06 03 15.4 +0.3**
KAVA S Sn **06 04 39.7 -4.5**
LKD2 Lefkada island 7.88 153 P Pn **06 03 13.6 -1.5**
comp=Z,0.3nmcomp=Z,155nm,0.7s
LKD2 S Sn **06 04 40.1 -4.2**
comp=Z,0.3nmcomp=Z,155nm,0.7s
DIM Dimitrovgrad 7.90 116 P Pn **06 03 15.1 -0.1**
DIM S Sn **06 04 39.2 -5.3**
DIM Dimitrovgrad 7.90 116 *e*P Pn **06 03 15.6 +0.3**
AMPL Ampelaki 7.95 149 P Pn **06 03 15.1 -1.0**
comp=Z,0.3nmcomp=Z,126nm,0.8s
AMPL S Sn **06 04 42.7 -3.2**
comp=Z,0.3nmcomp=Z,126nm,0.8s
DRAG Dragano-Lefkad 7.95 153 P Pn **06 03 14.1 -2.0**
NYDR Nydri-Lefkada 7.97 153 P Pn **06 03 14.4 -1.8**
NYDR S Sn **06 04 40.3 -5.9**
KDZ Kurdzhali 7.98 119 P Pn **06 03 15.7 -0.7**
comp=Z,0.1nmcomp=Z,54nm,0.8s
KDZ S Sn **06 04 40.3 -6.3**
comp=Z,0.1nmcomp=Z,54nm,0.8s
EVGI Lefkada island 8.04 153 P Pn **06 03 15.2 -2.0**
comp=Z,0.2nmcomp=Z,87nm,0.8s
EVGI S Sn **06 04 42.7 -5.3**
comp=Z,0.2nmcomp=Z,87nm,0.8s
VSL Villasalto 8.04 220 P Pn **06 03 17.7 +0.4**
VSL Villasalto 8.04 220 ⇑P Pn **06 03 17.6 +0.4**
BHOU Houvegnez 8.05 307 *d*P Pn **06 03 17.4 +0.1**
BHOU *d*S Sn **06 04 40.1 -8.0**
SSB Saint Sauveur 8.07 270 P Pn **06 03 16.8 -0.9**
SSB Saint Sauveur 8.07 270 ⇑P Pn **06 03 16.5 -1.2**
DREG Dreilaegerbach 8.08 310 *e*Pn Pn **06 03 17.8 0.0**
DREG *e*Sn Sn **06 04 42.9 -6.1**
comp=Z,132nm,1.2s
BTNL Ternell 8.10 309 *d*P Pn **06 03 19.1 +1.1**
BTNL *d*S Sn **06 04 46.0 -3.4**
FSK Fiskardo 8.16 154 P Pn **06 03 16.6 -2.2**
comp=Z,0.3nmcomp=Z,127nm,0.8s
MEM Membach 8.17 309 *d*P Pn **06 03 19.7 +0.7**
MEM *d*S Sn **06 04 43.0 -8.3**
EVR Evrytania 8.18 146 P Pn **06 03 19.5 +0.3**
comp=Z,0.3nmcomp=Z,161nm,0.8s
MAKR Makrakomi, Fth 8.22 145 P Pn **06 03 19.7 -0.1**
MAKR S Sn **06 04 50.4 -2.3**
THAS Thassos island 8.26 127 P Pn **06 03 19.2 -1.0**
THAS S Sn **06 04 47.7 -5.8**
JMB Yambol 8.29 110 P Pn **06 03 20.4 -0.2**
JMB S Sn **06 04 47.2 -6.8**
JMB Yambol 8.29 110 *e*P Pn **06 03 20.2 -0.4**
HGN Heimansgroeve 8.30 310 P Pn **06 03 22.0 +1.3**

AGG Agios Georgios 8.30 144 P Pn **06 03 20.1 -0.8**
comp=Z,0.2nmcomp=Z,113nm,0.7s
AGG S Sn **06 04 51.8 -2.6**
comp=Z,0.2nmcomp=Z,113nm,0.7s
AGG Agios Georgios 8.30 144 ⇓P Pn **06 03 20.0 -0.8**
DMLN Damoulianata-K 8.30 156 P Pn **06 03 18.8 -2.1**
PVO Paravola 8.34 149 P Pn **06 03 20.5 -0.8**
comp=Z,0.3nmcomp=Z,157nm,0.9s
PVO S Sn **06 04 53.7 -1.7**
comp=Z,0.3nmcomp=Z,157nm,0.9s
RDO Rodhopi 8.39 121 Pn **06 03 22.2 +0.3**
RDO Rodhopi 8.39 121 ⇓P Pn **06 03 22.4 +0.4**
RCHB Rochefort 8.39 304 *d*P Pn **06 03 22.8 +0.7**
RCHB *d*S Sn **06 04 51.2 -5.4**
IBBN Ibbenburen 8.40 323 ⇑P Pn **06 03 22.8 +0.7**
BSTI Sart Tilman 8.40 308 *d*S Sn **06 04 52.1 -4.7**
VLS Valsamata 8.42 155 P Pn **06 03 20.4 -2.2**
comp=Z,0.2nmcomp=Z,101nm,1.1s
VLS S Sn **06 04 52.3 -5.2**
comp=Z,0.2nmcomp=Z,101nm,1.1s
BEBN Eben Emael 8.45 309 *d*P Pn **06 03 24.0 +1.2**
BEBN *d*S Sn **06 04 52.5 -5.5**
BCLA Clavier 8.47 306 *d*P Pn **06 03 24.0 +0.9**
BCLA *d*S Sn **06 04 52.2 -6.3**
LOR Lormes 8.49 284 ⇓P Pn **06 03 22.2 -1.1**
VAE Valguarnera 8.49 189 Pn Pn **06 03 25.5 +2.1**
comp=Z,29nm,0.9s,baz=8.8,slow=18,SNR=8.5
VAE LR LR 06 07 08.8
comp=Z,3µm,18.8s,baz=352,slow=41
ANX Ano Chora 8.51 147 P Pn **06 03 23.4 -0.3**
comp=Z,0.3nmcomp=Z,162nm,1.0s
ICOR Ion Corvin 8.54 98 ⇑P Pn **06 03 24.5 +0.4**
CFR Carcaliu 8.54 90 ⇓P Pn **06 03 25.0 +0.9**
CFR Carcaliu 8.54 90 P Pn **06 03 25.0 +0.9**
CLTB Caltabellotta 8.56 195 P Pn 06 03 29.5 +5.0
RTZL Ratzakli, Kefa 8.57 154 P Pn **06 03 22.3 -2.3**
comp=Z,0.2nmcomp=Z,108nm,0.7s
BGES Gesves 8.58 306 *d*P Pn **06 03 25.5 +0.9**
BGES *d*S Sn **06 04 57.4 -3.8**
EFP Efpalio 8.64 148 P Pn **06 03 25.3 -0.2**
comp=Z,0.2nmcomp=Z,125nm,0.8s
AXS Araxos 8.66 151 P Pn **06 03 24.1 -1.6**
SERG Sergoula 8.71 147 P Pn **06 03 26.6 +0.1**
comp=Z,0.2nmcomp=Z,110nm,0.8s
BMRD Maredsous 8.72 304 *d*P Pn **06 03 27.6 +1.1**
BMRD *d*S Sn **06 05 01.1 -3.6**
SORM Soroca 8.73 71 ⇑P Pn **06 03 28.1 +1.5**
SORM Soroca 8.73 71 P Pn **06 03 28.1 +1.5**
DOU Dourbes 8.73 303 *d*P Pn **06 03 27.1 +0.3**
DOU *d*S Sn **06 05 00.8 -4.2**
TPGR Topolog 8.80 92 ⇑P Pn **06 03 28.9 +1.3**
SMTH Samothraki Isl 8.81 125 P Pn **06 03 27.8 0.0**
RLS Riolos of Patr 8.81 151 P Pn **06 03 26.5 -1.3**
comp=Z,0.1nmcomp=Z,3µmcomp=Z,66nm,1.1s
ALN Alexandroupoli 8.84 121 Pn **06 03 28.5 +0.3**
ALN Alexandroupoli 8.84 121 P Pn **06 03 28.5 +0.3**
comp=Z,0.1nmcomp=Z,54nm,0.8s
ALN Alexandroupoli 8.84 121 P Pn **06 03 28.5 +0.3**
ATAL Atalanti 8.87 142 P Pn **06 03 27.9 -0.7**
comp=Z,0.1nmcomp=Z,131nm,1.3s
AOS Alonnisos 8.88 136 P Pn **06 03 27.3 -1.4**
comp=Z,0.1nmcomp=Z,77nm,0.8s
LKR Lokris 8.89 142 P Pn **06 03 28.5 -0.4**
comp=Z,0.1nmcomp=Z,102nm,1.2s
LTHK Lithakia 8.93 155 P Pn **06 03 27.6 -1.9**
comp=Z,0.2nmcomp=Z,88nm,0.8s
DRO Drossia 8.99 150 P Pn **06 03 29.2 -1.1**
comp=Z,0.2nmcomp=Z,48nm,0.7s
KLV Kalavryta, Ach 9.07 148 P Pn **06 03 30.5 -1.0**
comp=Z,0.1nmcomp=Z,55nm,1.1s
GUR Goura 9.24 147 P Pn **06 03 32.2 -1.6**
comp=Z,0.2nmcomp=Z,79nm,0.8s
BSD Bornholm Skovb 9.26 356 *i* P Pn **06 03 34.6 +0.7**
BSD IAmb IAmb 06 03 37.4
comp=Z,44nm,0.7s
SUW Suwalki 9.35 27 Pn **06 03 35.3 +0.2**
SUW Suwalki 9.35 27 P Pn **06 03 35.3 +0.2**
AMT Artemida-Makis 9.37 151 P Pn **06 03 34.2 -1.3**
comp=Z,0.2nmcomp=Z,117nm,1.0s
KYMI Kymi, Euboea I 9.40 138 P Pn **06 03 35.1 -0.8**
comp=Z,0.1nmcomp=Z,113nm,0.9s
LTK Loutraki 9.41 144 P Pn **06 03 34.3 -1.8**
HAMD Hammershus, De 9.43 356 *i* P Pn **06 03 36.3 +0.2**
HAMD IAmb IAmb 06 03 38.6
comp=Z,58nm,0.8s
VILL Villia 9.44 142 P Pn **06 03 35.1 -1.3**
STFN Stefani 9.53 141 P Pn **06 03 36.7 -0.9**
CLF Chambon-Foret 9.64 288 ⇑P Pn **06 03 39.2 0.0**
VLX Vlachokerasia 9.75 149 P Pn **06 03 40.6 -0.2**
ITM Ithomi 9.76 151 Pn **06 03 40.7 -0.2**
ITM Ithomi 9.76 151 P Pn **06 03 39.5 -1.4**
comp=Z,2µmcomp=Z,63nm,1.2s
ITM Ithomi 9.76 151 ⇑P Pn **06 03 39.6 -1.3**
PTL Penteli 9.77 141 P Pn **06 03 39.8 -1.2**
DION Dionisos Attik 9.78 140 P Pn **06 03 40.2 -0.9**
comp=Z,97nm,0.8s
ATHU Athens Univers 9.80 141 P Pn **06 03 39.9 -1.5**
comp=Z,80nm,0.9s
LUNU Lund 9.89 352 *i* P Pn **06 03 41.9 -0.6**
VLY Voula,Athens 9.90 141 P Pn **06 03 41.3 -1.5**
AK20 Malin Array Si 9.92 56 P Pn **06 03 43.8 +0.8**
AK18 Malin Array Si 9.95 56 P Pn **06 03 44.0 +0.7**
AK16 Malin Array Si 9.95 57 P Pn **06 03 43.9 +0.6**
PYL PYLOS 9.96 152 P Pn **06 03 41.0 -2.6**
AK22 Malin Array Si 9.97 56 P Pn **06 03 44.7 +1.1**
AK15 Malin Array Si 9.97 56 P Pn **06 03 44.4 +0.8**
AK04 Malin Array Si 10.01 56 P Pn **06 03 45.2 +1.1**
KIEV Kiev 10.02 57 ⇓P Pn **06 03 45.1 +0.7**
KIEV Kiev 10.02 57 Pn **06 03 44.7 +0.4**
KIEV Kiev 10.02 57 P Pn **06 03 45.0 +0.7**
KIEV Kiev 10.02 57 P Pn **06 03 45.3 +1.0**
AKASG Malin Array Be 10.03 57 Pn Pn **06 03 45.0 +0.5**
comp=Z,0.7nm,0.3s,baz=242,slow=13,SNR=13
AKASG Sn **Sn** **06 05 33.7 -3.1**
comp=Z,1.4nm,0.3s,baz=253,slow=25,SNR=4.8
AKASG Lg Lg 06 06 37.8
baz=246,slow=27
AKASG LR LR 06 08 03.0
comp=Z,180nm,21.0s,baz=247,slow=40
AKASG PcP **PcP** **06 09 53.9 -0.7**
comp=Z,0.2nm,0.3s,baz=264,slow=1.7,SNR=4.2
comp=Z,4.1nm,0.7s
AKBB Malin Array Si 10.03 57 Pn **06 03 44.4 -0.1**
AKBB Malin Array Si 10.03 57 *ce*P Pn **06 03 46.5 +2.0**
AKBB pmax pmax
comp=Z,13nm,0.9s
EJON La Jonquera 10.04 255 P Pn **06 03 43.8 -0.8**
MTLF Montolieu 10.16 260 ⇓P Pn **06 03 46.0 -0.3**
BJUU Bjuv 10.37 351 *i* P Pn **06 03 50.0 +1.0**
MAHO Mahon 10.49 239 P Pn **06 03 50.3 -0.4**
KLYT Kilyos 10.53 111 P Pn **06 03 52.7 +1.4**
comp=Z,1µmcomp=Z,90nm,0.6s
VLI Veliai 10.54 148 P Pn **06 03 48.8 -2.7**
CBRU Bruguera 10.58 255 P Pn **06 03 52.7 +0.5**
DEL Delary 10.68 354 *i* P Pn **06 03 53.5 +0.2**
BALB Balikesir 10.72 121 Pn **06 03 55.0 +1.0**
BALB Balikesir 10.72 121 ⇓P Pn **06 03 55.0 +1.0**
CORI Orista 10.80 254 Pn **06 03 54.8 -0.3**
PABE Paberze 10.86 25 Pn **06 03 56.2 +0.4**
KTHA Kythira Island 10.99 149 P Pn **06 03 56.6 -1.1**
comp=Z,62nm,0.9s
CEST Esterri de Car 11.09 258 Pn **06 03 58.6 -0.5**
MFF Saint Martin d 11.22 279 ⇓P Pn **06 03 59.3 -1.4**
KEST Kesra 11.33 209 Pn Pn **06 04 02.4 0.0**
comp=Z,0.5nm,0.3s,baz=30,slow=16,SNR=16
KEST LR LR 06 08 52.8
comp=Z,699nm,19.7s,baz=43,slow=40
comp=Z,6.8nm,1.0s
KEST Kesra 11.33 209 Pn **06 04 02.0 -0.3**
KEST Kesra 11.33 209 P Pn **06 04 06.5 +4.1**
NACGM Naroch 11.33 33 *eP* Pn **06 04 05.2 +2.9**
comp=Z,27nm,0.8s,baz=222
MUD Monsted U'grnd 11.41 340 *eP* Pn **06 04 04.9 +1.7**
ANKY Antikythira Is 11.43 149 P Pn **06 04 03.4 -0.2**
ETOS Mallorca 11.45 242 P Pn **06 04 01.8 -2.2**
MNK Minsk 11.48 37 *i* P Pn **06 04 03.5 -0.9**
comp=E,32nm,0.8s
MNK *i* P Pn **06 04 03.5 -0.9**
comp=N,27nm,0.8s
MNK *i* P Pn **06 04 03.5 -0.9**
comp=Z,43nm,0.7s,baz=226
MNK *i* PP PnPn **06 04 11.2 -0.7**
MNK *i* PPP PPP 06 04 18.9
MNK *i* S Sn **06 06 11.7 -0.7**

MNK *i* SS **SnSn** **06 06 24.7 +0.6**
MNK *i* SSS SSS 06 06 37.1
MNK *i* LQ LQ 06 07 34.1
MNK *i* LR LR 06 08 26.1
MNK *i* LRM MLR 06 08 52.1
comp=N,611nm,14.2s
MNK *i* LRM MLR 06 08 57.2
comp=Z,217nm,10.4s
MNK *i* LRM MLR 06 09 00.1
comp=E,1μm,19.2s
MNK Minsk 11.48 37 *i* P **Pn** **06 04 03.4 -0.9**
MNK *i* S **Sn** **06 06 11.6 -0.7**
MNK pmax pmax
comp=N,27nm,0.8s
MNK pmax pmax
comp=E,32nm,0.8s
MNK pmax pmax
comp=Z,43nm,0.7s
MNK MLR MLR
comp=N,611nm,14.0s
MNK MLR MLR
comp=Z,217nm,10.0s
MNK MLR MLR
comp=E,1μm,19.0s
ONAU Onsala 11.80 349 *i* P **Pn** **06 04 08.7 +0.1**
MANT Manisa 11.88 124 **Pn** **06 04 10.5 +0.5**
BORU Boraas 11.93 352 *i* P **Pn** **06 04 10.8 +0.4**
BORA Eskisehir 12.17 114 **Pn** **06 04 13.4 -0.5**
TJOU Tjoern 12.45 349 *i* P **Pn** **06 04 18.3 +0.8**
IDI Anoyia 12.55 144 Pn **Pn** **06 04 16.2 -2.8**
comp=E,1.1nm,0.3s,baz=331,slow=10.0,SNR=8.9
IDI Sn **Sn** **06 06 37.5 -1.2**
comp=E,0.4nm,0.3s,baz=193,slow=23,SNR=2.2
IDI Lg Lg 06 08 00.0
baz=257,slow=8.9
IDI LR LR 06 10 54.9
comp=E,540nm,18.5s,baz=332,slow=46
IDI Anoyia 12.55 144 P **Pn** **06 04 14.8 -4.2**
SIM Simferopol' 12.76 88 *eP* **Pn** **06 04 23.9 +2.1**
SIM *eS* **Sn** **06 06 47.7 +4.0**
SIM pmax pmax
comp=Z,24nm,0.6s
EIBI Ibiza 12.81 243 P **Pn** **06 04 21.9 -0.6**
HOMB Homborsund 13.22 342 *i* P **Pn** **06 04 27.7 -0.2**
KARP Karpathos 13.34 137 **Pn** **06 04 29.5 -0.3**
KARP Karpathos 13.34 137 ⇓P **Pn** **06 04 29.9 +0.1**
ISP Isparta 13.47 122 *ceP* **Pn** **06 04 34.5 +2.8**
ISP pmax pmax
comp=Z,12nm,1.7s
STRU Stroemstad 13.49 349 *i* P **Pn** **06 04 31.6 0.0**
MCH1 Michaelchurch 13.89 303 ⇑P **Pn** **06 04 38.4 +1.3**
VSU Vasula 14.18 24 *ceP* **Pn** **06 04 41.5 +0.4**
VSU pmax pmax
comp=Z,41nm,1.0s
VSU Vasula 14.18 24 ⇓P **Pn** **06 04 41.0 0.0**
BR106 Keskin Array S 14.30 109 P **Pn** **06 04 44.0 +1.0**
comp=Z,135nmcomp=Z,16nm,1.2s
KONO Kongsberg 14.31 347 **Pn** **06 04 42.5 -0.4**
KONO Kongsberg 14.31 347 *ceP* **Pn** **06 04 43.6 +0.7**
KONO pmax pmax
comp=Z,41nm,1.7s
BR131 Keskin Array S 14.32 109 **Pn** **06 04 43.9 +0.6**
BR131 Keskin Array S 14.32 109 P **Pn** **06 04 43.9 +0.6**
BR131 Keskin Array S 14.32 109 P **Pn** **06 04 45.7 +2.4**
BRTR Keskin Array B 14.32 109 Pn **Pn** **06 04 44.6 +1.4**
comp=Z,3.7nm,0.9s,baz=300,slow=9.9,SNR=17
BRTR Lg Lg 06 08 55.5
comp=Z,0.1nm,0.3s,baz=21,slow=34,SNR=1.5
BRTR PcP **PcP** **06 09 59.6 -0.4**
comp=Z,1.7nm,0.7s,baz=284,slow=0.9,SNR=6.3
BRTR LR LR 06 10 16.5
comp=Z,416nm,19.0s,baz=293,slow=37
BRTR Keskin Array B 14.32 109 **Pn** **06 04 43.3 0.0**
BR104 Keskin Array S 14.33 109 P **Pn** **06 04 44.7 +1.3**
comp=Z,121nmcomp=Z,16nm,1.5s
HFS Hagfors 14.34 355 Pn **Pn** **06 04 40.7 -2.5**
comp=Z,0.5nm,0.3s,baz=167,slow=9.1,SNR=21
HFS Sn **Sn** **06 07 15.0 -6.9**
comp=Z,0.3nm,0.3s,baz=160,slow=26,SNR=1.5
HFS Lg Lg 06 08 51.1
comp=Z,0.2nm,0.3s,baz=171,slow=28,SNR=1.1
HFS LR LR 06 10 32.5
comp=Z,1μm,18.2s,baz=178,slow=39
comp=Z,2.2nm,0.9s
ETOB Tobarra 14.86 247 P **Pn** **06 04 50.0 -0.6**
ANN Anapa 15.10 86 *eP* **Pn** **06 04 53.2 -0.5**
ANN *eS* **Sn** **06 07 41.3 +0.6**
ANN pmax pmax
comp=Z,61nm,1.0s
NC602 NORSAR Array S 15.11 352 **Pn** **06 04 52.0 -1.6**
NORES NORESS Array B 15.11 352 *eP* **Pn** **06 04 53.6 -0.1**
UCM Universidad Co 15.12 255 P **Pn** **06 04 51.8 -2.2**
NAO01 NORSAR Array S 15.28 350 IAmb IAmb 06 05 00.8
comp=Z,93nm,1.4s
EKA Eskdalemuir Ar 15.36 315 Pn **Pn** **06 04 56.4 -0.6**
baz=128,slow=13
EKA Sn **Sn** **06 07 42.7 -4.3**
baz=114,slow=25
EKA LR LR 06 11 51.5
comp=Z,915nm,18.5s,baz=126,slow=41
comp=Z,5.0nm,0.6s
EKA Eskdalemuir Ar 15.36 315 P **Pn** **06 04 56.6 -0.5**
EKA pmax pmax
comp=Z,26nm,1.2s
ESK Eskdalemuir 15.37 315 Pn **Pn** **06 04 56.8 -0.5**
ESK IAmb IAmb 06 05 14.8
comp=Z,92nm,1.4s
ESK Eskdalemuir 15.37 315 P **Pn** **06 04 56.8 -0.5**
ESK pmax pmax
comp=Z,92nm,1.5s
NB2 NORSAR Subarra 15.44 351 P **Pn** **06 04 57.5 -0.6**
comp=Z,15nm,0.9s,baz=167,slow=11
NOA NORSAR Array B 15.44 351 Pn **Pn** **06 04 55.2 -2.9**
comp=Z,4.7nm,0.9s,baz=169,slow=12,SNR=15
NOA Lg Lg 06 09 27.6
baz=212,slow=16
NOA LR LR 06 11 24.6
comp=Z,766nm,19.4s,baz=170,slow=39
NB201 NORSAR Array S 15.44 351 **Pn** **06 04 57.5 -0.6**
NBO00 NORSAR Array S 15.48 350 IAmb IAmb 06 05 08.9
comp=Z,77nm,1.2s
NC204 NORSAR Array S 15.72 351 P **Pn** **06 05 01.0 -0.8**
ESDC Sonseca Array 15.91 254 Pn **Pn** **06 05 01.9 -2.5**
comp=Z,0.2nm,0.3s,baz=60,slow=9.0,SNR=17
comp=Z,4.6nm,1.1s
ESDC Sonseca Array 15.91 254 **Pn** **06 05 04.2 -0.2**
OBN Obninsk 15.95 47 Pn **Pn** **06 05 00.6 -4.1**
comp=Z,4.7nm,0.3s,baz=231,slow=12,SNR=12
OBN LR LR 06 11 51.4
comp=Z,471nm,18.3s,baz=207,slow=40
comp=Z,22nm,0.7s
OBN Obninsk 15.95 47 **Pn** **06 05 01.9 -2.8**
OBN IAmb IAmb 06 05 11.1
comp=Z,117nm,1.3s
OBN Obninsk 15.95 47 *deP* **Pn** **06 05 03.3 -1.4**
OBN pmax pmax
comp=Z,92nm,1.3s
OBN MLR MLR
comp=Z,421nm,17.0s
OBN Obninsk 15.95 47 pP **P** **06 05 08.1 -0.2**
comp=Z,59nm,1.4s
IWEX Carrickbyrne, 16.23 302 P **Pn** **06 05 09.9 +1.7**
PAB San Pablo 16.23 254 **Pn** **06 05 08.0 -0.5**
PAB San Pablo 16.23 254 P **Pn** **06 05 08.0 -0.5**
PAB pmax pmax
comp=Z,34nm,1.1s
BNN Bunyan 16.23 109 IAmb IAmb 06 05 18.4
comp=Z,126nm,1.3s
DSB Dublin 16.24 305 P **Pn** **06 05 10.0 +1.6**
VORD Divnogorie 16.24 63 *eP* **Pn** **06 05 04.0 -4.4**
VORD pmax pmax
comp=Z,10.0nm,1.0s
VORR Voronezh 16.31 61 *eP* **Pn** **06 05 08.1 -1.3**
VORR pmax pmax
comp=Z,50nm,1.2s
LPSR Galich'ya Gora 16.36 57 *eP* **Pn** **06 05 09.6 -0.4**
LPSR pmax pmax
comp=Z,46nm,1.2s
ILTH Belurgan, Co L 16.47 308 P **P** **06 05 12.9 -1.1**
FINES FINESS Array B 16.65 17 Pn **Pn** **06 05 10.8 -2.8**
comp=Z,1.4nm,0.3s,baz=190,slow=9.7,SNR=32
FINES Sn Sn 06 08 05.0 -13
comp=Z,0.6nm,0.3s,baz=192,slow=18,SNR=4.3
FINES LR LR 06 11 50.2
comp=Z,559nm,20.6s,baz=204,slow=38
comp=Z,6.1nm,0.5s

FINES FINESS Array B 16.65 17 **Pn** **06 05 12.6 -1.0**
FIA1 FINESS Array S 16.65 17 **Pn** **06 05 12.3 -1.3**
FIA1 IAmb IAmb 06 05 18.4
comp=Z,136nm,0.8s
MOS Moscow 16.77 46 *eP* **Pn** **06 05 13.1 -2.1**
MOS *eS* **Sn** **06 08 26.5 +5.3**
MOS pmax pmax
comp=Z,179nm,1.8s
MOS pmax pmax
comp=Z,500nm,2.2s
MOS MLR MLR
comp=Z,500nm,8.0s
PBRG Braganca 16.90 264 *eP* **Pn** **06 05 17.5 +0.6**
PBRG *i* IAmb IAmb 06 05 22.4
comp=Z,46nm,1.9s
ERBR Yeremizino-Bor 17.05 82 *eP* **P** **06 05 20.3 -0.3**
ERBR pmax pmax
comp=Z,201nm,1.1s
MVO Moncorvo 17.34 262 *eP* **Pn** **06 05 23.2 +0.7**
MVO *i* IAmb IAmb 06 05 38.9
comp=Z,68nm,1.8s
LABN Labinsk 17.43 85 *eP* **Pn** **06 05 24.4 +0.9**
LABN pmax pmax
comp=Z,47nm,0.8s
IDGL Inch Island, C 17.49 310 P **P** **06 05 25.8 +0.5**
PVRL Vila Real 17.77 263 *eP* **Pn** **06 05 27.6 -0.3**
PVRL *i* IAmb IAmb 06 05 46.7
comp=Z,43nm,1.5s
VRH Novokhopyorsk 17.79 63 *eP* **Pn** **06 05 23.3 -4.6**
VRH pmax pmax
comp=Z,30nm,1.0s
POLO Lamas de Olo 17.79 264 *eP* **Pn** **06 05 28.3 +0.2**
POLO *i* IAmb IAmb 06 06 04.6
comp=Z,20nm,1.6s
PCAB Cabril 17.83 265 *eP* **P** **06 05 32.0 +2.8**
PCAB *i* IAmb IAmb 06 05 32.9
comp=Z,74nm,1.8s
PGAV Gavieira, Arco 17.90 266 *eP* **P** **06 05 32.0 +1.9**
PGAV *i* IAmb IAmb 06 06 19.8
comp=Z,54nm,1.6s
PGAV *e*LR LR 06 12 09.9
PGAV *i* IAMs_20 IAMs_20 06 14 02.1
comp=Z,352nm,16.0s
IGLA Glengowla, Co 18.01 304 P **P** **06 05 32.6 +1.5**
MTE Manteigas 18.02 261 *eP* **Pn** **06 05 31.1 +0.3**
MTE *i* IAmb IAmb 06 05 44.9
comp=Z,68nm,1.7s
MTE *e*LR LR 06 12 20.8
MTE *i* IAMs_20 IAMs_20 06 13 31.1
comp=Z,330nm,20.0s
PVIS Viseu 18.12 262 *eP* **P** **06 05 32.9 +0.4**
PCBR Castelo Branco 18.22 259 *eP* **P** **06 05 33.8 +0.3**
PCBR *i* IAmb IAmb 06 05 46.7
comp=Z,63nm,1.8s
VAL Valentia 18.23 299 P **P** **06 05 35.2 +1.7**
PMRV Marv??o 18.35 258 *eP* **P** **06 05 37.9 +3.0**
PMRV *i* IAmb IAmb 06 05 40.9
comp=Z,57nm,1.5s
PMRV *e*LR LR 06 12 39.5
PMRV *i* IAMs_20 IAMs_20 06 14 18.6
comp=Z,170nm,16.0s
PBAR Barrancos 18.73 254 *eP* **P** **06 05 39.6 +0.4**
PBAR *i* IAmb IAmb 06 05 47.6
comp=Z,51nm,1.3s
PESTR Estremoz 18.76 256 *eP* **P** **06 05 39.8 +0.4**
PESTR *i* IAmb IAmb 06 05 53.1
comp=Z,55nm,1.5s
PSARD Sardoal 18.80 259 *eP* **Pn** **06 05 40.5 +0.1**
PSARD *i* IAmb IAmb 06 05 53.5
comp=Z,68nm,1.6s
PCAS Casmilo, Conde 18.82 261 *eP* **Pn** **06 05 41.6 +0.9**
PCAS *i* IAmb IAmb 06 05 46.4
comp=Z,93nm,1.7s
GOF Gofitskoye 18.95 83 *ceP* **P** **06 05 42.1 +0.6**
KIV Kislovodsk 18.96 86 P **P** **06 05 41.7 -0.1**
KIV Kislovodsk 18.96 86 *eP* **P** **06 05 42.3 +0.6**
KIV pmax pmax
comp=Z,32nm,1.1s
KIV MLR MLR
comp=Z,86nm,14.0s
KVAR Kislovodsk Arr 18.97 86 P **Pn** **06 05 43.1 +0.6**
baz=324,slow=8.7
KVAR LR LR 06 13 00.3
comp=Z,420nm,21.4s,baz=102,slow=37
comp=Z,2.5nm,0.4s
SHA1 Shidzhatmaz 19.00 87 *ceP* **Pn** **06 05 43.6 +0.6**
PARRA Arraiolos 19.09 257 *eP* **Pn** **06 05 44.0 +0.1**
PARRA *i* IAmb IAmb 06 05 48.2
comp=Z,40nm,1.8s
PMTG Montargil 19.09 258 *eP* **Pn** **06 05 44.2 +0.3**
PMTG *i* IAmb IAmb 06 05 51.5
comp=Z,54nm,1.5s
KBZ Khabaz 19.17 87 P **Pn** **06 05 45.7 +1.0**
comp=Z,0.3nm,0.3s,baz=290,slow=7.2,SNR=25
KBZ PcP **PcP** **06 10 08.0 +0.8**
comp=Z,5.1nm,0.8s,baz=292,slow=2.9,SNR=6.4
KBZ LR LR 06 14 56.3
comp=Z,182nm,18.8s,baz=282,slow=42
comp=Z,20nm,1.0s
EVO Evora 19.21 256 P **P** **06 05 43.8 -0.5**
EVO Evora 19.21 256 *eP* **Pn** **06 05 45.7 +0.3**
EVO *i* IAmb IAmb 06 05 46.5
comp=Z,39nm,1.3s
PBEJ Beja 19.37 255 *eP* **P** **06 05 46.2 +0.1**
PBEJ *i* IAmb IAmb 06 05 48.4
comp=Z,41nm,1.7s
MOE Montemor 19.44 256 *eP* **Pn** **06 05 48.2 +0.1**
MOE *i* IAmb IAmb 06 05 53.6
comp=Z,56nm,1.5s
PVAQ Vaqueiros 19.60 253 *eP* **Pn** **06 05 50.0 0.0**
PVAQ *i* IAmb IAmb 06 05 56.6
comp=Z,74nm,1.6s
MMAI Mount Meron Ar 19.67 124 P **Pn** **06 05 51.1 +0.1**
comp=Z,1.1nm,0.3s,baz=349,slow=16,SNR=18
MMAI LR LR 06 14 03.6
comp=Z,302nm,21.7s,baz=318,slow=39
comp=Z,74nm,1.2s
MESJ Messejana 19.70 255 *eP* **P** **06 05 49.8 0.0**
MESJ IAmb IAmb 06 05 57.8
comp=Z,61nm,1.5s
MESJ Messejana 19.70 255 *eP* **Pn** **06 05 55.4 +4.2**
MESJ Messejana 19.70 255 *eP* **P** **06 05 49.8 0.0**
SALP Salfit 20.25 126 ⇓P Pn 06 05 57.5 -0.2
KLMR Klimovskoe 20.35 34 *eP* **P** **06 05 57.5 +0.9**
KLMR pmax pmax
comp=Z,98nm,1.5s
IFR Ifrane 20.35 240 P **P** **06 05 55.9 -1.2**
MDT Midelt 20.53 238 P **P** **06 05 59.3 +0.4**
comp=Z,15nm,0.9s,baz=63,slow=9.6,SNR=16
comp=Z,15nm,0.9s
MD01 Midelt array s 20.59 238 P **P** **06 06 00.0 +0.5**
MD31 MD31 20.59 238 P **P** **06 06 00.1 +0.5**
KZIT Kziot 20.70 130 ⇓P **P** **06 06 01.3 +0.7**
MSBI Mazada 20.91 127 ⇓P **P** **06 06 04.4 +1.6**
GHAJ Ghor Haditha 21.03 127 P **P** **06 06 04.8 +0.6**
ASF Jabal al Asfar 21.15 123 P **P** **06 06 07.5 +1.8**
comp=Z,108nm,1.2s,baz=292,slow=5.3,SNR=37
ASF LR LR 06 14 36.8
comp=Z,306nm,20.4s,baz=319,slow=38
comp=Z,108nm,1.2s
BELG Belogornoye 21.56 61 P **P** **06 06 11.0 +1.3**
comp=Z,58nm,0.6s,baz=301,slow=2.5,SNR=29
BELG PcP **PcP** **06 10 11.2 -0.3**
comp=Z,16nm,0.8s,baz=270,slow=2.0,SNR=2.7
comp=Z,58nm,0.6s
BELG Belogornoye 21.56 61 *dP* **P** **06 06 10.6 +0.9**
BELG pmax pmax
comp=Z,23nm,1.2s
GNI Garni 21.71 95 P **P** **06 06 13.0 +1.4**
comp=Z,25nm,1.0s,baz=302,slow=4.5,SNR=17
GNI LR LR 06 16 48.7
comp=Z,154nm,18.7s,baz=289,slow=43
comp=Z,25nm,1.0s
GNI Garni 21.71 95 *ceP* **P** **06 06 11.7 +0.1**
GNI pmax pmax
comp=Z,85nm,1.5s
GNI Garni 21.71 95 P **P** **06 06 14.8 +3.1**
GNI S Sn 06 10 18.1 -2.6
AVE Averroes 21.91 243 P **P** **06 06 12.7 -1.0**
EIL Elat 21.96 131 P **P** **06 06 14.2 0.0**
comp=Z,26nm,0.9s,baz=338,slow=4.4,SNR=13
EIL LR LR 06 16 19.0
comp=Z,150nm,18.3s,baz=282,slow=41
comp=Z,26nm,0.9s
EIL Elat 21.96 131 ⇓P **P** **06 06 14.8 +0.6**
MAK Makhachkala 22.61 86 *eP* **P** **06 06 18.0 -3.0**

MAK *e*S **S** **06 10 25.2 -3.1**
MAK pmax pmax
comp=Z,334nm,1.4s
MAK MLR MLR
comp=Z,516nm,13.0s
AKT Akhty 23.27 90 *eP* **P** **06 06 29.3 +1.2**
AKT *e*PPP PPP 06 07 03.0
AKT *e* 06 10 16.1
AKT pmax pmax
comp=Z,71nm,1.8s
AKT MLR MLR
comp=Z,260nm,15.0s
TIO Tiouine 23.46 239 P **P** **06 06 26.7 -3.3**
APA Apatity 23.56 17 ⇓*eP* **P** **06 06 33.5 +2.9**
APA pmax pmax
comp=Z,24nm,1.0s
APA MLR MLR
comp=Z,1μm,4.6s
KIRV Kirov 23.79 46 LR LR 06 17 03.9
comp=Z,198nm,20.2s,baz=249,slow=40
KIRV Kirov 23.79 46 *ceP* **P** **06 06 33.2 +0.3**
ARCES ARCESS Array B 24.19 8 P **P** **06 06 36.1 -0.4**
comp=Z,8.4nm,0.8s,baz=192,slow=11,SNR=12
ARCES LR LR 06 16 43.9
comp=Z,1μm,18.1s,baz=194,slow=38
comp=Z,8.4nm,0.8s
ARCES ARCESS Array B 24.19 8 P **P** **06 06 36.6 +0.1**
ARCES IAmb IAmb 06 06 52.4
comp=Z,49nm,1.3s
ARCES ARCESS Array B 24.19 8 P **P** **06 06 36.6 +0.1**
ARCES pmax pmax
comp=Z,49nm,1.3s
BORG Borgarnes 27.79 326 LR LR 06 20 08.3
comp=Z,340nm,18.4s,baz=126,slow=41
JMIC Jan Mayen 27.82 343 LR LR 06 17 30.0
comp=Z,160nm,19.3s,baz=104,slow=35
AKTO Aktyubinsk 28.10 65 LR LR 06 19 50.8
comp=Z,253nm,21.7s,baz=88,slow=40
AKTO Aktyubinsk 28.10 65 P **P** **06 07 11.6 -0.5**
ARTI Arti 28.15 53 LR LR 06 18 40.8
comp=Z,250nm,18.1s,baz=272,slow=37
SVE Sverdlovsk 29.41 52 *eP* **P** **06 07 24.0 +0.3**
SVE pmax pmax
comp=Z,51nm,1.2s
SVE MLR MLR
comp=Z,505nm,12.0s
AB31 Akbulak array 29.52 67 P **P** **06 07 25.1 +0.5**
AB31 Akbulak array 29.52 67 *i* P **P** **06 07 25.0 +0.4**
ABKAR Akbulak array 29.52 67 P **P** **06 07 25.3 +0.6**
SPITS Spitsbergen Ar 32.40 0 P **P** **06 07 49.9 +0.1**
comp=Z,8.6nm,0.9s,baz=164,slow=10,SNR=4.9
SPITS LR LR 06 22 06.9
comp=Z,257nm,18.2s,baz=187,slow=38
comp=Z,8.6nm,0.9s
RAYN Ar Rayn 32.64 123 P **P** **06 07 52.8 +0.3**
RAYN IAmb IAmb 06 07 56.7
comp=Z,20nm,1.1s
RAYN Ar Rayn 32.64 123 P **P** **06 07 52.8 +0.3**
RAYN pmax pmax
comp=Z,20nm,1.1s
RAYN Ar Rayn 32.64 123 P **P** **06 07 53.5 +1.0**
DAG Danmarks Havn 34.03 346 *i* P **P** **06 08 03.9 -0.1**
DAG IAmb IAmb 06 08 05.0
comp=Z,4.7nm,1.1s
TORD Torodi Ar. Bea 34.82 205 P **P** **06 08 11.2 -0.2**
comp=Z,11nm,1.0s,baz=4.7,slow=7.2,SNR=35
TORD PcP **PcP** **06 10 44.1 -0.4**
comp=Z,2.4nm,0.9s,baz=289,slow=3.0,SNR=3.8
TORD LR LR 06 23 58.7
comp=Z,282nm,18.5s,baz=12,slow=39
comp=Z,11nm,1.0s
TRNA Turayna 35.24 115 P **P** **06 08 15.2 +0.3**
BORK Borovoye 35.26 58 P **P** **06 08 15.9 +1.0**
BORK IAmb IAmb 06 08 18.5
comp=Z,29nm,0.9s
BORK Borovoye 35.26 58 P **P** **06 08 15.9 +1.0**
BORK pmax pmax
comp=Z,29nm,0.9s
BORK Borovoye 35.26 58 ⇓P **P** **06 08 16.2 +1.4**
BVAR Borovoye Array 35.31 58 P **P** **06 08 16.0 +0.7**
comp=Z,13nm,0.7s,baz=268,slow=9.0,SNR=31
BVAR LR LR 06 23 42.5
comp=Z,188nm,20.3s,baz=298,slow=38
comp=Z,13nm,0.7s
SUMG Summit 36.42 336 *i* P **P** **06 08 25.1 +0.1**
NOR Nord 37.41 352 *i* P **P** **06 08 32.6 -0.3**
NOR IAmb IAmb 06 08 34.5
comp=Z,18nm,1.3s
BANOM Banah 37.73 108 P **P** **06 08 34.6 -1.6**
ASUD Al Ashush, Dub 37.97 110 P **P** **06 08 37.7 -0.5**
MASF Masafi 38.01 109 P **P** **06 08 38.6 0.0**
KK31 Karatay Array 38.34 74 *i* P **P** **06 08 41.7 +0.4**
KKAR Karatay Array 38.34 74 P **P** **06 08 41.5 +0.3**
KKAR Karatay Array 38.34 74 P **P** **06 08 41.5 +0.3**
HATD Hatta, Dubai 38.36 109 P **P** **06 08 41.1 -0.5**
ASHO Ashiyiah 38.41 110 P **P** **06 08 41.2 -0.8**
ALNE Al Ain 38.64 111 P **P** **06 08 44.2 +0.3**
SOHO SOHO 39.10 110 P **P** **06 08 46.9 -0.8**
SHAA Shahritus 39.17 83 IAmb IAmb 06 08 52.4
comp=Z,55nm,1.4s
CHGR Chuyangaron 39.36 81 P **P** **06 08 50.7 +0.8**
CHGR IAmb IAmb 06 08 53.5
comp=Z,31nm,0.8s
CHGR Chuyangaron 39.36 81 *i* P **P** **06 08 50.9 +1.0**
CHGR pmax pmax
comp=Z,38nm,0.9s
ARQ Araqi 39.65 111 P **P** **06 08 52.6 +0.2**
BTK Batken 39.85 78 P **P** **06 08 54.4 +0.4**
BTK Batken 39.85 78 P **P** **06 08 54.4 +0.4**
BTK pmax pmax
comp=Z,11nm,1.0s
SFJD Kangerlussuaq 39.92 326 LR LR 06 24 58.3
comp=Z,298nm,20.7s,baz=83,slow=36
HOQ Hoqain 39.99 110 P **P** **06 08 54.1 -1.2**
GAR Garm 39.99 80 IAmb IAmb 06 08 59.6
comp=Z,76nm,1.4s
BSY Bisya 40.51 111 P **P** **06 08 59.4 -0.1**
BIDO Bidbid 40.57 109 P **P** **06 08 57.6 -2.4**
NEEM North Greenlan 40.73 342 *i* P **P** **06 09 01.1 0.0**
NEEM IAmb IAmb 06 09 03.9
comp=Z,19nm,0.9s
KURBB Kurchatov Arra 40.80 60 P **P** **06 09 01.6 0.0**
comp=Z,8.5nm,1.0s,baz=294,slow=10,SNR=25
KURBB PP **PP** **06 10 35.6 +0.2**
comp=Z,5.0nm,1.2s,baz=290,slow=12,SNR=5.8
comp=Z,8.5nm,1.0s
KURBB Kurchatov Arra 40.80 60 P **P** **06 09 01.1 -0.5**
KURK Kurchatov 40.83 60 P **P** **06 09 01.8 0.0**
KURK Kurchatov 40.83 60 *ceP* **P** **06 09 02.1 +0.3**
KURK pmax pmax
comp=Z,33nm,1.3s
SMDO Samad 40.84 109 P **P** **06 09 03.0 +0.6**
SNR=7.6
NIAQ Niaqornat 40.92 332 *i* P **P** **06 09 02.2 -0.1**
NIAQ IAmb IAmb 06 09 03.3
comp=Z,134nm,1.4s
WSAR Wadi Sarin 41.10 109 P **P** **06 09 04.1 -0.3**
ATD Arta Tunnel 41.15 138 LR LR 06 26 08.2
comp=Z,5.2nm,21.8s,baz=2.5,slow=36
AAK Ala-Archa 41.20 73 P **P** **06 09 05.9 +0.7**
AAK IAmb IAmb 06 09 09.1
comp=Z,29nm,1.1s
AAK Ala-Archa 41.20 73 *ceP* **P** **06 09 06.3 +1.1**
AAK pmax pmax
comp=Z,32nm,1.3s
AAK Ala-Archa 41.20 73 ⇑P **P** **06 09 06.3 +1.1**
JMDO Jabal Madar 41.36 110 P **P** **06 09 06.7 +0.2**
SNR=6.9
DOK Doka 41.56 118 P **P** **06 09 08.4 +0.2**
NRIK Noril'sk 41.62 30 P **P** **06 09 08.8 +0.7**
comp=Z,15nm,0.9s,baz=270,slow=6.4,SNR=16
NRIK LR LR 06 26 48.0
comp=Z,209nm,18.7s,baz=272,slow=37
comp=Z,15nm,0.9s
NRIK Noril'sk 41.62 30 P **P** **06 09 09.2 +1.1**
NRIK IAmb IAmb 06 09 11.2
comp=Z,26nm,1.1s
NRIK Noril'sk 41.62 30 *i* P **P** **06 09 08.8 +0.7**
NRIK pmax pmax
comp=Z,28nm,1.1s
WBK Wadi Bani Khal 41.76 109 P **P** **06 09 10.5 +0.7**
WHFO Wadi Hawf 41.88 119 P **P** **06 09 09.7 -1.1**
KULLO Kullorsuaq 41.97 337 *i* P **P** **06 09 10.2 -0.7**
KULLO IAmb IAmb 06 09 14.1
comp=Z,19nm,0.9s

BOOM Boomskoye usch 42.23 72 P **P** **06 09 13.3 -0.3**
BOOM IAmb IAmb 06 09 17.0
comp=Z,39nm,1.0s
BOOM Boomskoye usch 42.23 72 P **P** **06 09 13.4 -0.3**
BOOM pmax pmax
comp=Z,39nm,1.0s
MHTO MHTO 42.25 112 P **P** **06 09 13.8 0.0**
EDA Edea 42.26 189 P **P** **06 09 14.2 +0.4**
DBIC Dimbokro 43.04 211 P **P** **06 09 20.4 +0.2**
comp=Z,9.5nm,1.0s,baz=40,slow=9.2,SNR=6.0
DBIC PcP **PcP** **06 11 08.4 -1.9**
comp=Z,6.5nm,1.1s,baz=70,slow=3.5,SNR=2.9
DBIC LR LR 06 27 58.3
comp=Z,266nm,18.9s,baz=48,slow=37
comp=Z,9.5nm,1.0s
DBIC Dimbokro 43.04 211 P **P** **06 09 20.2 0.0**
DBIC Dimbokro 43.04 211 P **P** **06 09 20.2 0.0**
DBIC pmax pmax
comp=Z,23nm,1.3s
DBIC Dimbokro 43.04 211 ⇑P **P** **06 09 20.8 +0.6**
ZAA0 Zalesovo Array 43.41 53 P **P** **06 09 22.8 0.0**
ZALV Zalesovo Beam 43.41 53 P **P** **06 09 23.2 +0.4**
comp=Z,8.5nm,0.6s,baz=283,slow=9.3,SNR=34
comp=Z,8.5nm,0.6s
KSH2 Kashi 43.52 77 P **P** **06 09 25.3 +1.2**
KSH2 pP sP 06 09 31.1 +1.5
KSH2 pmax pmax
comp=Z,22nm,0.9s
PDGK Podgornoye 44.20 69 P **P** **06 09 30.1 +0.6**
MAKZ Makanchi 44.31 64 P **P** **06 09 30.7 +0.4**
MAKZ IAmb IAmb 06 09 33.5
comp=Z,21nm,1.2s
MAKZ Makanchi 44.31 64 P **P** **06 09 30.7 +0.4**
MAKZ pmax pmax
comp=Z,21nm,1.2s
MAKZ Makanchi 44.31 64 ⇓P **P** **06 09 30.0 -0.3**
MK31 Makanchi Array 44.52 64 *ce*P **P** **06 09 32.3 +0.4**
MKAR Makanchi Array 44.52 64 P **P** **06 09 32.1 +0.3**
comp=Z,12nm,0.7s,baz=289,slow=6.5,SNR=62
comp=Z,12nm,0.7s
MKAR Makanchi Array 44.52 64 P **P** **06 09 32.5 +0.6**
MKAR Makanchi Array 44.52 64 P **P** **06 09 32.5 +0.6**
TULEG Thule 44.73 341 ⇓P **P** **06 09 33.0 -0.1**
TULEG Thule 44.73 341 *i* P **P** **06 09 33.1 0.0**
TULEG IAmb IAmb 06 09 36.5
comp=Z,54nm,1.8s
NIL Nilore 44.77 85 P **P** **06 09 34.0 -0.1**
NIL Nilore 44.77 85 P **P** **06 09 34.0 -0.1**
NIL pmax pmax
comp=Z,10.0nm,1.2s
WUS Wushi 44.99 72 P **P** **06 09 36.3 +0.4**
WUS IAmb IAmb 06 09 39.7
comp=Z,35nm,1.3s
LODK Lodwar 45.55 152 P **P** **06 09 40.8 +0.3**
LODK IAmb IAmb 06 09 46.6
comp=Z,20nm,1.3s
DRLN Deer Lake 47.89 302 P **P** **06 09 58.2 -0.1**
FRB Frobisher Bay 47.90 323 LR LR 06 29 54.7
comp=Z,392nm,19.2s,baz=71,slow=36
POIN Pond Inlet 48.06 336 P **P** **06 09 59.5 +0.2**
MBAR Mbarara 48.09 160 LR LR 06 33 34.9
comp=Z,220nm,18.8s,baz=350,slow=40
WMQ Urumqi 49.26 65 *eP* **P** **06 10 10.3 +1.3**
WMQ pP sP 06 10 16.4 +1.9
WMQ sP pP 06 10 22.6 +10
WMQ pmax pmax
comp=Z,18nm,1.1s
WMQ pmax pmax
comp=Z,170nm,3.6s
WMQ L L
comp=Z,490nm,14.5s
WMQ L L
comp=Z,150nm,23.9s
ILON Igloolik, Nuna 50.55 333 P **P** **06 10 18.0 -0.3**
SCHQ Schefferville 50.65 312 P **P** **06 10 18.2 -1.2**
comp=Z,4.5nm,0.8s,baz=87,slow=2.6,SNR=8.6
SCHQ LR LR 06 30 15.3
comp=Z,184nm,18.0s,baz=14,slow=34
comp=Z,4.5nm,0.8s
SCHQ Schefferville 50.65 312 P **P** **06 10 18.4 -1.0**
RES Resolute Bay 51.41 341 LR LR 06 32 22.3
comp=Z,118nm,18.3s,baz=34,slow=36
KIBK Kibwezi 51.84 152 P **P** **06 10 29.9 +1.1**
KIBK Kibwezi 51.84 152 P **P** **06 10 24.9 -3.9**
TIXI Tiksi 53.64 21 P **P** **06 10 41.9 +0.6**
TIXI IAmb IAmb 06 10 45.9
comp=Z,15nm,1.1s
TLY Talaya 54.69 50 P **P** **06 10 49.4 0.0**
TLY IAmb IAmb 06 10 53.3
comp=Z,20nm,1.0s
TLY Talaya 54.69 50 P **P** **06 10 50.6 +1.3**
EVN Everest 57.53 82 P **P** **06 11 09.7 -1.0**
GOMU GeErMu 57.96 69 P **P** **06 11 13.9 +0.6**
GOMU pmax pmax
comp=Z,15nm,0.9s
SONM Songino Array 58.28 52 P **P** **06 11 15.2 +0.1**
comp=Z,17nm,1.1s,baz=290,slow=8.2,SNR=51
comp=Z,17nm,1.1s
SONM Songino Array 58.28 52 P **P** **06 11 15.5 +0.4**
SONM IAmb IAmb 06 11 18.5
comp=Z,21nm,1.1s
ULN Ulaanbaatar 58.63 52 P **P** **06 11 17.4 -0.2**
ULN IAmb IAmb 06 11 21.1
comp=Z,12nm,1.1s
ULN Ulaanbaatar 58.63 52 P **P** **06 11 18.2 +0.6**
ULN Ulaanbaatar 58.63 52 P **P** **06 11 18.0 +0.4**
comp=Z,53nm,1.3s
HYB Hyderabad 58.64 97 *eP* **P** **06 11 18.5 +0.7**
HYB *ePcP* **PcP** **06 12 08.7 +0.8**
HYB *ePP* **PP** **06 13 26.9 -0.6**
GTA2 Gaotai 59.19 64 *eP* **P** **06 11 22.3 +0.7**
GTA2 pmax pmax
comp=Z,13nm,0.7s
A36M Sachs Harbour 59.29 347 P **P** **06 11 21.9 +0.4**
A36M Sachs Harbour 59.29 347 P **P** **06 11 22.2 +0.6**
baz=31
YAK Yakutsk 60.07 30 P **P** **06 11 27.1 0.0**
MSEY Mahe Island 61.35 134 P **P** **06 11 36.9 +0.5**
C36M Paulatuk 61.38 345 P **P** **06 11 36.2 +0.3**
C36M IAmb IAmb 06 11 36.6
comp=Z,12nm,0.9s
C36M Paulatuk 61.38 345 P **P** **06 11 36.1 +0.3**
baz=31,SNR=18
LSZ Lusaka 61.87 167 LR LR 06 40 14.8
comp=Z,126nm,20.4s,baz=334,slow=38
LSZ Lusaka 61.87 167 P **P** **06 11 40.2 +0.3**
LSZ IAmb IAmb 06 11 42.3
comp=Z,14nm,0.9s
SHL Shillong 62.54 81 P **P** **06 11 43.8 -0.8**
SHL IAmb IAmb 06 11 45.8
comp=Z,7.5nm,0.7s
SHL Shillong 62.54 81 P **P** **06 11 42.1 -2.5**
SNR=6.7
SADO Sadowa 62.77 307 LR LR 06 37 15.1
comp=Z,184nm,20.3s,baz=59,slow=34
A21K Barrow 62.98 357 P **P** **06 11 47.5 +1.0**
baz=5.8
A22K Sinclair Lake 63.24 357 P **P** **06 11 49.4 +1.2**
baz=7.1
D28M Stokes Point 63.59 350 P **P** **06 11 51.3 +0.7**
baz=19
C26K Camden Bay 63.66 353 P **P** **06 11 52.4 +1.2**
baz=15,SNR=10.0
LZDM Lanzhou Array 63.81 65 P **P** **06 11 53.8 +0.7**
comp=Z,3.6nm,0.5s,baz=305,slow=5.2,SNR=8.0
comp=Z,3.6nm,0.5s
LZH Lanzhou 63.83 64 *eP* **P** **06 11 53.9 +0.9**
LZH sP sP 06 11 59.4 +0.9
LZH pmax pmax
comp=Z,51nm,1.1s
B22K Teshekpuk Lake 63.83 356 IAmb IAmb 06 11 56.1
comp=Z,22nm,1.3s
B22K Teshekpuk Lake 63.83 356 P **P** **06 11 53.1 +0.9**
baz=8.2
C27K Jago River 63.84 352 IAmb IAmb 06 11 54.5
comp=Z,18nm,1.1s
C27K Jago River 63.84 352 P **P** **06 11 53.2 +0.9**
baz=16
INK Inuvik 63.86 348 LR LR 06 43 17.3
comp=Z,136nm,18.2s,baz=326,slow=40
INK Inuvik 63.86 348 P **P** **06 11 51.7 -0.7**
INK IAmb IAmb 06 12 31.3
comp=Z,12nm,1.4s
INK Inuvik 63.86 348 P **P** **06 11 52.4 0.0**
baz=23,SNR=7.8
KSANE Kasane 63.93 170 P **P** **06 11 53.7 +0.2**

D27M Malcolm River 63.93 351 IAmb IAmb 06 11 56.6
comp=Z,11nm,1.1s
D27M Malcolm River 63.93 351 P **P** **06 11 53.7 +0.7**
baz=18,SNR=5.3
C24K Franklin Bluff 64.16 354 IAmb IAmb 06 11 59.9
comp=Z,20nm,1.4s
C24K Franklin Bluff 64.16 354 P **P** **06 11 55.6 +1.2**
baz=12
C23K Itkillik River 64.17 355 P **P** **06 11 55.8 +1.3**
baz=10,SNR=19
A19K Wainwright 64.20 359 P **P** **06 11 56.1 +1.5**
baz=2.3
BILL Bilibino 64.22 12 P **P** **06 11 55.2 +0.4**
BILL IAmb IAmb 06 11 56.4
comp=Z,8.8nm,1.0s
B20K Meade River 64.31 357 IAmb IAmb 06 11 57.8
comp=Z,16nm,1.0s
B20K Meade River 64.31 357 P **P** **06 11 56.5 +1.2**
baz=5.3
D25K Kavik River 64.37 353 IAmb IAmb 06 11 57.8
comp=Z,12nm,1.3s
D25K Kavik River 64.37 353 P **P** **06 11 56.7 +0.8**
baz=14
E28M Babbage River 64.38 350 IAmb IAmb 06 11 59.4
comp=Z,9.7nm,1.1s
E28M Babbage River 64.38 350 P **P** **06 11 56.6 +0.8**
baz=19
E29M Blow River 64.38 350 P **P** **06 11 56.6 +0.7**
baz=20
HIA Hailar 64.40 45 P **P** **06 11 57.7 +1.4**
BTO2 Baotou 64.56 57 *e*P **P** **06 11 57.8 +0.1**
BTO2 pP **sP** **06 12 02.6 -0.6**
BTO2 sP **pP** **06 12 04.8 +3.1**
BTO2 pmax pmax
comp=Z,21nm,0.9s
BTO2 pmax pmax
comp=Z,1μm,9.3s
B21K Ikpikpuk River 64.60 356 IAmb IAmb 06 12 01.3
comp=Z,19nm,1.3s
B21K Ikpikpuk River 64.60 356 P **P** **06 11 58.1 +0.8**
baz=7.3
F31M Tsiigehtchic 64.69 348 P **P** **06 11 58.1 +0.3**
baz=23,SNR=18
D24K Happy Valley 64.73 354 IAmb IAmb 06 12 01.9
comp=Z,16nm,1.3s
D24K Happy Valley 64.73 354 P **P** **06 11 58.9 +0.8**
baz=12
TSUM Tsumeb 64.80 178 LR LR 06 42 38.4
comp=Z,133nm,18.1s,baz=335,slow=38
TSUM Tsumeb 64.80 178 P **P** **06 11 59.4 +0.1**
TSUM IAmb IAmb 06 12 02.5
comp=Z,18nm,1.2s
F30M Barrier River 64.83 348 IAmb IAmb 06 12 12.8
comp=Z,12nm,1.3s
F30M Barrier River 64.83 348 P **P** **06 11 58.9 0.0**
baz=21
YKAW3 Yellowknife Wh 64.94 337 IAmb IAmb 06 12 03.3
comp=Z,14nm,1.2s
YKAW1 Yellowknife Wh 64.97 337 P **P** **06 11 59.5 -0.3**
YKA Yellowknife Ar 64.99 337 P **P** **06 11 59.7 -0.2**
comp=Z,3.0nm,0.9s,baz=32,slow=6.6,SNR=37
YKA PKPPKP **P'P'df** **06 40 45.2 -6.5**
comp=Z,0.6nm,1.1s,baz=231,slow=3.3,SNR=5.0
comp=Z,3.0nm,0.9s
E27K Coleen River 65.01 351 IAmb IAmb 06 12 03.6
comp=Z,18nm,1.4s
E27K Coleen River 65.01 351 P **P** **06 12 00.7 +0.7**
baz=17,SNR=9.9
D23K Nanushuk River 65.04 355 P **P** **06 12 01.1 +0.9**
baz=10
C21K Knifeblade Rid 65.07 356 P **P** **06 12 01.5 +1.1**
baz=7.1
G31M Satah River 65.25 348 IAmb IAmb 06 12 01.8
comp=Z,6.3nm,0.8s
G31M Satah River 65.25 348 P **P** **06 12 01.6 0.0**
baz=22,SNR=6.6
C19K Lookout Ridge 65.28 358 P **P** **06 12 02.8 +1.0**
baz=3.4
TOLK Toolik Lake Re 65.28 354 P **P** **06 12 02.7 +0.9**
baz=11,SNR=6.4
F28M Old Crow 65.36 350 P **P** **06 12 02.4 +0.1**
baz=18,SNR=10
E25K Arctic Village 65.47 353 P **P** **06 12 03.5 +0.5**
baz=14
HHC Hu-ho-hao-te 65.48 56 *e*P **P** **06 12 03.0 -0.6**
HHC pmax pmax
comp=Z,8.0nm,0.7s
G30M tAoh Zrail Nji 65.48 348 IAmb IAmb 06 12 10.9
comp=Z,13nm,1.4s
G30M tAoh Zrail Nji 65.48 348 P **P** **06 12 03.5 +0.3**
baz=21
D20K Etivluk River 65.59 357 IAmb IAmb 06 12 05.9
comp=Z,8.6nm,0.9s
D20K Etivluk River 65.59 357 P **P** **06 12 04.5 +0.8**
baz=5.7
E21K Killik River 65.75 356 P **P** **06 12 05.3 +0.5**
baz=7.7
F26K Sheenjek River 65.75 352 P **P** **06 12 05.6 +0.8**
baz=15,SNR=9.7
E24K Your Creek 65.76 354 P **P** **06 12 05.5 +0.6**
baz=12
C18K Utukok River 65.77 359 P **P** **06 12 05.8 +0.8**
baz=2.2
G29M Pine Creek 65.80 349 P **P** **06 12 05.2 0.0**
baz=20
D19K Kuna River 65.86 358 IAmb IAmb 06 12 07.7
comp=Z,18nm,1.2s
D19K Kuna River 65.86 358 P **P** **06 12 05.9 +0.4**
baz=4.5,SNR=11
E23K Chandalar 65.86 354 IAmb IAmb 06 12 11.5
comp=Z,11nm,1.0s
E23K Chandalar 65.86 354 P **P** **06 12 06.3 +0.7**
baz=11,SNR=14
E22K Anaktuvuk Pass 65.93 355 IAmb IAmb 06 12 09.5
comp=Z,10nm,1.3s
E22K Anaktuvuk Pass 65.93 355 P **P** **06 12 06.7 +0.7**
baz=9.3
C17K DeLong Mountai 65.96 360 P **P** **06 12 07.4 +1.2**
baz=0.7,SNR=18
F25K Christian Rive 65.99 352 IAmb IAmb 06 12 10.5
comp=Z,11nm,1.4s
F25K Christian Rive 65.99 352 P **P** **06 12 07.3 +0.9**
baz=14
E20K Nigu River 66.03 357 P **P** **06 12 07.3 +0.7**
baz=6.0
BMAR Burnt Mountain 66.05 352 P **P** **06 12 06.8 0.0**
EPYK Eagle Plains 66.13 348 P **P** **06 12 07.3 +0.1**
baz=20
C16K Lisburne Hills 66.16 1 P **P** **06 12 08.4 +1.1**
baz=359,SNR=17
F24K Squaw Lake 66.26 353 IAmb IAmb 06 12 13.1
comp=Z,19nm,1.4s
F24K Squaw Lake 66.26 353 P **P** **06 12 09.4 +1.2**
baz=12,SNR=7.9
H31M Peel River 66.30 347 P **P** **06 12 09.2 +0.8**
baz=22
G27K Doyon Strip 66.34 351 P **P** **06 12 09.3 +0.7**
baz=17,SNR=7.0
R58B Mineral 66.36 301 IAmb IAmb 06 12 10.2
comp=Z,18nm,1.2s
RDOG Red Dog Mine 66.38 360 P **P** **06 12 09.4 +0.6**
baz=0.8
G26K Porcupine Rive 66.44 351 IAmb IAmb 06 12 14.1
comp=Z,20nm,1.4s
G26K Porcupine Rive 66.44 351 P **P** **06 12 09.9 +0.8**
baz=15,SNR=9.4
Q56A Snyder Ridge, 66.44 302 P **P** **06 12 09.5 -0.2**
H29M Whitestone 66.50 349 IAmb IAmb 06 12 12.5
comp=Z,15nm,1.2s
H29M Whitestone 66.50 349 P **P** **06 12 09.9 +0.3**
baz=19,SNR=9.1
WRGLY Wrigley 66.57 341 IAmb IAmb 06 12 14.4
comp=Z,23nm,1.4s
WRGLY Wrigley 66.57 341 P **P** **06 12 10.7 +0.6**
baz=30
COLD Coldfoot 66.72 354 IAmb IAmb 06 12 12.9
comp=Z,9.4nm,1.0s
COLD Coldfoot 66.72 354 P **P** **06 12 11.6 +0.5**
baz=10,SNR=10
D17K Noatak River 66.74 360 P **P** **06 12 12.0 +1.0**
baz=0.7,SNR=26
O53A New Philadelph 66.84 304 IAmb IAmb 06 12 13.2
comp=Z,18nm,1.1s
G25K Bearman Lake 66.84 352 P **P** **06 12 13.0 +1.2**
baz=14
E19K Redstone River 66.86 357 IAmb IAmb 06 12 14.1
comp=Z,11nm,0.8s
E19K Redstone River 66.86 357 P **P** **06 12 13.0 +1.1**
baz=5.2,SNR=15
FFC Flin Flon 66.87 326 P **P** **06 12 11.8 -0.3**
FFC IAmb IAmb 06 12 14.0
comp=Z,10nm,1.2s
H27K Steamboat Moun 66.88 350 P **P** **06 12 12.9 +0.8**
baz=17
F21K Alatna River 66.93 356 IAmb IAmb 06 12 17.1
comp=Z,17nm,1.3s
F21K Alatna River 66.93 356 P **P** **06 12 13.4 +1.0**
baz=8.0,SNR=15
E18K Tukpahlearik C 66.99 359 IAmb IAmb 06 12 16.5
comp=Z,20nm,1.4s
E18K Tukpahlearik C 66.99 359 P **P** **06 12 13.7 +1.0**
baz=2.6,SNR=10
G24K Hadweenzic Riv 67.03 353 P **P** **06 12 14.0 +1.0**
baz=12
CD2 Chengdu 67.08 69 P **P** **06 12 13.8 -0.2**
CD2 pmax pmax
comp=Z,50nm,0.6s
G22K Bettles 67.12 355 P **P** **06 12 14.2 +0.7**
baz=9.4
I30M Mount Dempster 67.16 348 IAmb IAmb 06 12 17.6
comp=Z,18nm,1.3s
I30M Mount Dempster 67.16 348 P **P** **06 12 14.2 +0.2**
baz=21,SNR=12
F20K Avaraart Lake 67.22 356 P **P** **06 12 14.9 +0.8**
baz=6.3,SNR=6.4
G23K Bananza Creek 67.22 354 P **P** **06 12 14.6 +0.3**
baz=11
KAAM Kaadhehdhoo 67.25 115 P **P** **06 12 14.4 -0.6**
KAAM Kaadhehdhoo 67.25 115 P **P** **06 12 14.8 -0.3**
comp=Z,41nm,1.9s
PALK Pallekele 67.28 104 P **P** **06 12 14.6 -0.8**
PALK IAmb IAmb 06 12 15.8
comp=Z,16nm,0.9s
PALK Pallekele 67.28 104 P **P** **06 12 14.8 -0.6**
PALK Pallekele 67.28 104 P **P** **06 12 14.6 -0.8**
I29M Ogilvie Camp, 67.30 349 IAmb IAmb 06 12 18.3
comp=Z,18nm,1.5s
I29M Ogilvie Camp, 67.30 349 P **P** **06 12 14.9 +0.1**
baz=19,SNR=6.6
HEH HeiHe 67.35 40 *e*P **P** **06 12 15.5 +0.2**
HEH pmax pmax
comp=Z,19nm,1.0s
I28M Miner Creek 67.44 349 IAmb IAmb 06 12 19.3
comp=Z,12nm,1.5s
I28M Miner Creek 67.44 349 P **P** **06 12 15.5 -0.2**
baz=18
I27K Kandik River 67.50 350 P **P** **06 12 16.5 +0.4**
baz=17
F19K Shaleruckik Mo 67.51 357 IAmb IAmb 06 12 17.6
comp=Z,14nm,1.2s
F19K Shaleruckik Mo 67.51 357 P **P** **06 12 16.4 +0.4**
baz=4.7,SNR=9.5
ULM Lac du Bonnet 67.57 320 P **P** **06 12 15.1 -1.6**
comp=Z,3.3nm,0.7s,baz=95,slow=3.1,SNR=6.1
ULM LR LR 06 40 52.8
comp=Z,375nm,19.2s,baz=9.0,slow=35
comp=Z,3.3nm,0.7s
ULM Lac du Bonnet 67.57 320 IAmb IAmb 06 12 18.6
comp=Z,9.0nm,1.1s
G21K Allakaket 67.64 355 IAmb IAmb 06 12 19.0
comp=Z,14nm,1.1s
G21K Allakaket 67.64 355 P **P** **06 12 17.8 +0.9**
baz=7.9,SNR=8.1
J30M Hart River 67.76 347 IAmb IAmb 06 12 19.7
comp=Z,24nm,1.4s
J30M Hart River 67.76 347 P **P** **06 12 18.3 +0.5**
baz=20,SNR=8.7
F18K Selawik 67.79 358 P **P** **06 12 18.4 +0.6**
baz=3.3,SNR=5.7
H24K Noodor Dome 67.91 353 P **P** **06 12 19.1 +0.5**
baz=12
I26K Coal Creek Min 67.96 351 P **P** **06 12 19.9 +1.0**
baz=16
F17K Baldwin Pennin 67.98 359 IAmb IAmb 06 12 20.9
comp=Z,16nm,1.4s
F17K Baldwin Pennin 67.98 359 P **P** **06 12 19.8 +0.8**
baz=2.1,SNR=5.2
PRP Porcupine Dome 68.01 352 P **P** **06 12 19.8 +0.5**
baz=14
KHWEE KHWEE 68.05 171 P **P** **06 12 20.9 +0.9**
H23K Yukon River 68.06 354 IAmb IAmb 06 12 23.7
comp=Z,13nm,1.1s
H23K Yukon River 68.06 354 P **P** **06 12 20.6 +1.0**
baz=11
H22K Ishtalitna Cre 68.13 354 IAmb IAmb 06 12 24.5
comp=Z,14nm,1.2s
H22K Ishtalitna Cre 68.13 354 P **P** **06 12 20.8 +0.8**
baz=9.5,SNR=8.4
J29N Klondike Camp 68.15 348 P **P** **06 12 21.2 +1.0**
baz=19
G19K Purcell Mounta 68.17 357 IAmb IAmb 06 12 22.8
comp=Z,21nm,1.2s
G19K Purcell Mounta 68.17 357 P **P** **06 12 21.2 +1.0**
baz=5.2,SNR=7.6
IMAR Indian Mountai 68.18 356 P **P** **06 12 20.8 +0.5**
XAN Xi'an 68.33 63 ⇑P **P** **06 12 22.1 +0.3**
XAN pP sP 06 12 27.3 0.0
XAN pmax pmax
comp=Z,37nm,0.7s
H21K Melozitna Rive 68.45 355 P **P** **06 12 23.5 +1.5**
baz=8.4,SNR=8.9
G18K Tagagawik 68.47 358 IAmb IAmb 06 12 24.4
comp=Z,14nm,1.1s
G18K Tagagawik 68.47 358 P **P** **06 12 23.0 +0.9**
baz=4.0
MA2 Magadan 68.55 23 P **P** **06 12 24.6 +2.0**
MA2 Magadan 68.55 23 P **P** **06 12 23.1 +0.5**
POKR Poker Plat Res 68.58 353 P **P** **06 12 23.8 +1.0**
baz=12
MAYO Mayo, Yukon 68.61 347 P **P** **06 12 23.8 +0.8**
baz=21
K29M Barlow Dome 68.63 348 P **P** **06 12 23.8 +0.5**
baz=20
PZH PanZhiHua 68.64 74 P **P** **06 12 24.1 +0.2**
PZH pmax pmax
comp=Z,10.0nm,0.8s
I23K Minto, Yukon-K 68.71 353 P **P** **06 12 24.6 +1.0**
baz=11
H20K Anotleneega Mo 68.73 356 P **P** **06 12 24.8 +1.0**
baz=6.8,SNR=7.3
F15K North Star Dit 68.74 0 IAmb IAmb 06 12 25.5
comp=Z,6.8nm,0.8s
F15K North Star Dit 68.74 0 P **P** **06 12 24.8 +1.0**
baz=360,SNR=7.2
H19K Roundabout Mou 68.77 357 IAmb IAmb 06 12 27.9
comp=Z,22nm,1.4s
H19K Roundabout Mou 68.77 357 P **P** **06 12 25.1 +1.2**
baz=5.7
TNA Tin City 68.84 2 P **P** **06 12 25.1 +0.7**
baz=357,SNR=6.2
COLA College 68.86 353 P **P** **06 12 24.9 +0.5**
baz=12
ILAR Eielson Array 68.87 352 P **P** **06 12 24.5 -0.1**
comp=Z,1.3nm,0.9s,baz=8.6,slow=6.2,SNR=17
ILAR PKP2bc P'P'bc 06 40 34.5 -11
comp=Z,0.6nm,0.9s,baz=195,slow=3.6,SNR=5.1
comp=Z,1.3nm,0.9s
ILAR Eielson Array 68.87 352 P **P** **06 12 24.9 +0.3**
I21K Tanana 68.87 355 IAmb IAmb 06 12 27.2
comp=Z,13nm,1.2s
I21K Tanana 68.87 355 P **P** **06 12 25.7 +1.1**
baz=9.0,SNR=5.5
J25K Salcha River, 68.87 352 P **P** **06 12 25.2 +0.5**
baz=14
Q51A Peebles 68.88 305 P **P** **06 12 24.9 -0.2**
G17K Kiwalik Mounta 68.92 359 P **P** **06 12 25.7 +0.9**
baz=2.5
MLY Manley 68.94 354 IAmb IAmb 06 12 28.9
comp=Z,26nm,1.5s
MLY Manley 68.94 354 P **P** **06 12 25.9 +0.8**
baz=9.9
F14K Arctic Creek 68.96 1 P **P** **06 12 26.1 +0.9**
baz=358
G16K Koyuk River 69.05 359 IAmb IAmb 06 12 30.4
comp=Z,22nm,1.2s
G16K Koyuk River 69.05 359 P **P** **06 12 26.6 +1.0**
baz=1.2
K27K Chicken 69.07 350 IAmb IAmb 06 12 30.6
comp=Z,22nm,1.4s
RCBR Riachuelo 69.12 237 *eP* **P** **06 12 28.3 +1.5**
H18K Honhosa River 69.21 357 IAmb IAmb 06 12 29.3
comp=Z,18nm,1.5s
H18K Honhosa River 69.21 357 P **P** **06 12 27.8 +1.1**
baz=4.2
HDA Harding Lake 69.23 352 P **P** **06 12 27.9 +1.1**
baz=13

NBPV **Pedro Velho** 69.24 236 *e*P P 06 12 29.0 +1.5
NEA2 **Nenana** 69.24 353 P P 06 12 27.7 +0.8
baz=11
SCRK **Sand Creek** 69.34 351 P P 06 12 28.2 +0.5
baz=15
I20K **Naaghedeneel** 69.40 356 P P 06 12 28.9 +1.0
baz=7.1
L29M **L29M** 69.41 348 P P 06 12 28.5 +0.4
baz=19
KOTAN **Kotaneelee Air** 69.42 340 P P 06 12 28.8 +0.8
baz=29
G15K **Niukluk** 69.46 0 P P 06 12 29.1 +0.9
baz=360
H17K **Granite Mounta** 69.47 358 P P 06 12 29.1 +0.8
baz=3.1
GCSA **Galena City Sc** 69.56 357 P P 06 12 29.6 +0.8
baz=5.3
NBMO **Morrinhos-CE** 69.61 242 *e*P P 06 12 30.7 +0.8
M31M **Drury Creek, Y** 69.67 346 P P 06 12 29.9 +0.3
baz=22
RIDG **Independent Ri** 69.67 351 P P 06 12 30.6 +1.0
baz=14,SNR=6.8
K24K **Donnelly Dome** 69.71 351 P P 06 12 30.4 +0.6
baz=14
M30M **Minto, Yukon** 69.72 347 P P 06 12 30.4 +0.5
baz=20
NBPA **Parau_RN** 69.77 238 *e*P P 06 12 32.3 +1.5
H16K **Elim** 69.81 359 P P 06 12 31.3 +0.9
baz=1.3,SNR=12
LKGWB **Lokgwabe** 69.83 175 IAmb IAmb 06 12 32.9
comp=Z,22nm,1.1s
BPAW **Bear Paw Mtn.** 69.88 354 IAmb IAmb 06 12 34.0
comp=Z,17nm,1.5s
BPAW **Bear Paw Mtn.** 69.88 354 P P 06 12 31.2 +0.4
baz=9.7
ANM **Nome** 69.88 1 P P 06 12 31.3 +0.5
baz=359
L27K **Beaver Creek,** 69.97 349 P P 06 12 31.8 +0.4
baz=16
J20K **Nowinta River** 70.00 355 P P 06 12 32.0 +0.4
baz=7.3
MCK **McKinley** 70.07 353 P P 06 12 32.6 +0.5
baz=11,SNR=6.8
M29M **Somme Creek** 70.10 348 P P 06 12 32.9 +0.6
baz=19
CHUM **Lake Minchumin** 70.18 355 P P 06 12 33.5 +0.8
baz=8.7,SNR=9.3
L26K **Log Cabin Wild** 70.19 350 IAmb IAmb 06 12 37.5
comp=Z,19nm,1.3s
L26K **Log Cabin Wild** 70.19 350 P P 06 12 33.1 +0.3
baz=15
KMI2 **Kunming** 70.21 74 P P 06 12 36.6 +2.8
KMI2 pmax pmax
comp=Z,17nm,0.7s
J19K **Poorman** 70.26 356 IAmb IAmb 06 12 35.5
comp=Z,18nm,1.4s
J19K **Poorman** 70.26 356 P P 06 12 33.7 +0.6
baz=6.2
L42A **Oliver, Polo** 70.34 310 IAmb IAmb 06 12 34.8
comp=Z,15nm,1.0s
N32M **Quiet Lake** 70.41 345 P P 06 12 34.6 +0.4
baz=22
TRF **Thorofare Moun** 70.46 354 P P 06 12 34.8 +0.2
baz=10
BVCY **Beaver Creek** 70.47 349 P P 06 12 35.1 +0.6
baz=17
PAX **Paxson** 70.49 351 P P 06 12 34.9 +0.2
baz=14
GAMB **Gambell** 70.51 4 P P 06 12 35.1 +0.4
baz=354
WTLY **Watson Lake, Y** 70.51 342 IAmb IAmb 06 12 39.4
comp=Z,12nm,1.3s
WTLY **Watson Lake, Y** 70.51 342 P P 06 12 35.4 +0.6
baz=25
I17K **Unalakleet** 70.54 358 P P 06 12 34.7 -0.1
baz=2.5
N31M **Braeburn, Yuko** 70.58 346 P P 06 12 35.4 +0.2
baz=20
DHY **Denali Highway** 70.58 352 IAmb IAmb 06 12 36.5
comp=Z,12nm,0.8s
DHY **Denali Highway** 70.58 352 P P 06 12 35.9 +0.6
baz=12,SNR=7.9
BNX **BinXian** 70.58 44 ⇓P P 06 12 35.4 0.0
BNX pmax pmax
comp=Z,11nm,0.8s
M27K **Edge Creek, AK** 70.66 349 P P 06 12 36.3 +0.5
baz=16
M26K **Nabesna, AK** 70.75 350 P P 06 12 37.0 +0.7
baz=15
K20K **Telida** 70.81 355 P P 06 12 37.5 +0.9
baz=7.3
N30M **Aishikik Lake** 70.82 347 P P 06 12 37.2 +0.5
baz=20
J18K **Innoko River** 70.84 357 IAmb IAmb 06 12 41.7
comp=Z,19nm,1.4s
J18K **Innoko River** 70.84 357 P P 06 12 37.4 +0.7
baz=5.4
WAT1 **Susitna Watana** 70.93 353 P P 06 12 37.4 +0.1
baz=11
J17K **VABM Dome** 70.99 358 IAmb IAmb 06 12 42.5
comp=Z,29nm,1.4s
J17K **VABM Dome** 70.99 358 P P 06 12 38.1 +0.5
baz=3.6
CN2 **Changchun** 71.01 46 P P 06 12 38.1 0.0
CN2 pmax pmax
comp=Z,10.0nm,0.8s
YUK3 **Moose Creek** 71.02 348 P P 06 12 38.3 +0.1
baz=17
WAT6 **Susitna Watana** 71.10 352 P P 06 12 38.3 -0.2
baz=12
LBTB **Lobatse** 71.10 171 LR LR 06 46 23.8
comp=Z,65nm,19.4s,baz=1.0,slow=38
WCI **Wyandotte Cave** 71.11 306 P P 06 12 38.7 -0.1
WCI IAmb IAmb 06 12 39.2
comp=Z,8.6nm,0.9s
J16K **Anvik River** 71.14 358 P P 06 12 39.5 +1.0
baz=2.5
PPLA **Purkeypile** 71.15 354 P P 06 12 39.2 +0.4
baz=8.7
YUK4 **Talbot Arm** 71.17 347 P P 06 12 38.5 -0.5
baz=18
ENH **Enshi** 71.20 66 P P 06 12 40.0 +0.5
WHY **Whitehorse** 71.20 345 P P 06 12 39.3 +0.2
baz=21
P33M **Teslin, Yukon** 71.24 344 P P 06 12 39.4 +0.1
baz=22
O30N **Mendenhall** 71.30 346 P P 06 12 40.0 +0.4
baz=20
NBPS **Pedro II - PI** 71.33 243 *e*P P 06 12 40.6 +0.1
YUK8 **Steele Glacier** 71.39 348 P P 06 12 40.2 -0.2
baz=18
M24K **Tolsona, Glenn** 71.41 351 P P 06 12 40.8 +0.5
baz=13
TKL **Tuckaleechee C** 71.42 302 LR LR 06 42 58.0
comp=Z,197nm,19.4s,baz=20,slow=35
TKL **Tuckaleechee C** 71.42 302 IAmb IAmb 06 12 41.5
comp=Z,23nm,1.2s
HYT **Haines Junctio** 71.48 347 P P 06 12 41.0 +0.2
baz=19
CUT **Chulitna** 71.50 353 P P 06 12 41.3 +0.6
baz=10
YUK6 **Outpost Mounta** 71.51 347 P P 06 12 41.7 +0.6
baz=19
R33M **Jennings River** 71.62 343 IAmb IAmb 06 12 47.0
comp=Z,18nm,1.4s
R33M **Jennings River** 71.62 343 P P 06 12 42.3 +0.6
baz=24
K17K **Iditarod** 71.65 357 P P 06 12 42.3 +0.7
baz=4.2
J14K **Nanvaranak Lak** 71.71 360 P P 06 12 42.6 +0.7
baz=0.3
N25K **Chitina, Valde** 71.72 350 P P 06 12 42.5 +0.4
baz=14
MCARA **McCarthy VSAT** 71.74 350 P P 06 12 42.5 +0.3
baz=15
OLIL **Olney** 71.77 307 IAmb IAmb 06 12 43.2
comp=Z,15nm,1.1s
SCM **Sheep Creek Mo** 71.79 352 P P 06 12 43.2 +0.5
baz=12
M23K **Glacier View** 71.87 352 P P 06 12 43.5 +0.5
baz=12
CHTO **Chiang Mai** 71.89 82 P P 06 12 44.0 +0.2
CHTO **Chiang Mai** 71.89 82 P P 06 12 43.7 -0.1
CHTO **Chiang Mai** 71.89 82 P P 06 12 43.7 -0.1
CHTO **Chiang Mai** 71.89 82 P P 06 12 43.3 -0.5
comp=Z,12nm,0.9s
SML **Sawmill** 71.92 352 IAmb IAmb 06 12 48.3
comp=Z,23nm,1.2s
SML **Sawmill** 71.92 352 P P 06 12 43.6 +0.3
baz=11
CTG **Chitna Glacier** 71.92 349 P P 06 12 44.0 +0.5
baz=16
KLU **Klutina** 71.98 351 P P 06 12 44.2 +0.4
baz=13
SKT **Skwentna** 72.02 354 IAmb IAmb 06 12 48.6
comp=Z,26nm,1.5s
SKT **Skwentna** 72.02 354 P P 06 12 43.6 -0.3
baz=9.1
L19K **White Mountain** 72.03 356 IAmb IAmb 06 12 47.8
comp=Z,18nm,1.2s
L19K **White Mountain** 72.03 356 P P 06 12 44.5 +0.6
baz=6.7,SNR=6.6
NBMA **Muriti-CE** 72.03 238 *e*P P 06 12 46.0 +1.4
P30M **Million Dollar** 72.06 346 P P 06 12 44.5 +0.3
baz=20
L18K **Granite Mounta** 72.08 356 IAmb IAmb 06 12 46.3
comp=Z,10nm,1.0s
L18K **Granite Mounta** 72.08 356 P P 06 12 45.2 +0.9
baz=5.4
CMAR **Chiang Mai Arr** 72.13 82 P P 06 12 45.1 -0.1
comp=Z,3.6nm,0.7s,baz=309,slow=7.5,SNR=23
comp=Z,3.6nm,0.7s
K15K **Wolf Creek Mou** 72.15 359 P P 06 12 44.6 0.0
baz=1.8
O29M **Mount Kennedy** 72.15 347 P P 06 12 44.7 -0.1
baz=18
PMR **Palmer** 72.20 353 P P 06 12 45.0 +0.1
baz=11
M20K **Styx River** 72.22 355 IAmb IAmb 06 12 53.4
comp=Z,15nm,1.4s
M20K **Styx River** 72.22 355 P P 06 12 45.0 -0.2
baz=8.0
L17K **Donlin** 72.23 357 P P 06 12 46.1 +1.0
baz=4.2
Q32M **Nakina River** 72.29 343 P P 06 12 46.4 +0.6
baz=23
KNK **Knik Glacier** 72.31 352 P P 06 12 46.2 +0.6
baz=11
BMRM **Bremner River** 72.34 350 P P 06 12 45.9 +0.1
baz=14
CRQE **Cirque** 72.36 349 P P 06 12 46.5 +0.4
baz=15
SKAG **Skagway** 72.40 345 P P 06 12 46.3 +0.2
baz=21
MDJ **Mudanjiang** 72.46 43 P P 06 12 46.1 -0.7
MDJ pmax pmax
comp=Z,11nm,1.6s
K13K **Kusilvak Mount** 72.53 0 P P 06 12 47.2 +0.3
baz=360
PINM **Pinnacle** 72.60 348 P P 06 12 47.7 +0.2
baz=17
CLTN **Cedars of Leba** 72.61 304 IAmb IAmb 06 12 48.6
comp=Z,14nm,1.3s
W50A **Signal Mountai** 72.64 303 IAmb IAmb 06 12 49.2
comp=Z,25nm,1.2s
L16K **Owhat River** 72.69 358 P P 06 12 48.3 +0.4
baz=3.3
GLI **Glacier Island** 72.70 351 P P 06 12 47.9 0.0
baz=12
RC01 **Rabbit Creek A** 72.75 353 P P 06 12 48.4 +0.1
baz=10
L15K **Unalak Mounta** 72.77 359 P P 06 12 48.9 +0.6
baz=1.9
MESA **MESA** 72.77 349 P P 06 12 48.6 0.0
baz=16
M18K **Stony River** 72.77 356 P P 06 12 48.9 +0.6
baz=6.0
GOGA **Godfrey** 72.78 300 IAmb IAmb 06 12 49.6
comp=Z,13nm,1.1s
Y52A **Lilburn** 72.83 301 IAmb IAmb 06 12 50.3
comp=Z,18nm,1.0s
N20K **Mount Spurr** 72.84 354 P P 06 12 49.5 +0.6
baz=8.6
SPCR **Spurr Chakacha** 72.84 354 P P 06 12 49.3 +0.4
baz=8.6
EYAK **Cordova Ski Ar** 72.88 351 P P 06 12 49.6 +0.6
baz=13
M17K **Holitna River** 72.93 357 IAmb IAmb 06 12 54.3
comp=Z,26nm,1.2s
M17K **Holitna River** 72.93 357 P P 06 12 49.7 +0.4
baz=4.8
BGLC **Bering Glacier** 73.00 349 P P 06 12 50.2 +0.5
baz=15
S34M **Telegraph Cree** 73.02 342 P P 06 12 50.9 +1.0
baz=23
SIUC **Southern Illin** 73.11 307 IAmb IAmb 06 12 51.3
comp=Z,22nm,1.2s
L14K **Kuka Creek** 73.12 359 P P 06 12 51.1 +0.8
baz=1.0
S44A **Carbondale** 73.15 307 IAmb IAmb 06 12 52.1
comp=Z,16nm,1.0s
KAIM **Kayak Island** 73.33 350 P P 06 12 52.2 +0.5
baz=14
O22K **Cooper Landing** 73.35 353 P P 06 12 52.2 +0.5
baz=10
M16K **Timber Creek** 73.36 357 P P 06 12 53.0 +1.1
baz=3.7
N19K **Bonanza Creek** 73.37 355 P P 06 12 52.9 +0.8
baz=6.9
WVT **Waverly** 73.45 305 P P 06 12 52.2 -0.6
N18K **Kilae Creek** 73.58 356 P P 06 12 53.5 +0.3
baz=5.9
FVM **French Village** 73.59 308 IAmb IAmb 06 12 54.3
comp=Z,11nm,0.9s
CGM3 **Cape Girardeau** 73.66 307 IAmb IAmb 06 12 54.5
comp=Z,18nm,1.1s
SEW **Seward** 73.70 352 P P 06 12 54.0 +0.2
baz=10
M14K **Bethel** 73.70 359 P P 06 12 54.4 +0.6
baz=1.5
M15K **Kasigluk River** 73.74 358 P P 06 12 54.1 0.0
baz=2.4
N16K **Nishlik Lake** 73.91 357 P P 06 12 55.6 +0.5
baz=3.8
USRK **Ussuriysk Ar.** 73.91 42 P P 06 12 55.5 +0.1
comp=Z,6.6nm,0.8s,baz=309,slow=4.9,SNR=6.9
comp=Z,6.6nm,0.8s
S31K **Pelican** 73.98 345 P P 06 12 55.9 +0.4
baz=20
CCM **Cathedral Cave** 73.99 308 P P 06 12 55.2 -0.7
CCM IAmb IAmb 06 12 56.3
comp=Z,10nm,0.7s
Q23K **Middleton Isla** 74.04 351 P P 06 12 56.4 +0.6
baz=13
152A **Waverly Hall** 74.05 300 IAmb IAmb 06 13 08.0
comp=Z,10nm,0.6s
M13K **Dall Lake** 74.05 360 P P 06 12 56.6 +0.8
baz=0.5
M11K **Mekoryuk** 74.07 1 P P 06 12 56.5 +0.5
baz=358
P38A **Dawn** 74.09 311 IAmb IAmb 06 12 57.2
comp=Z,25nm,1.2s
TIGA **Tifton** 74.22 299 IAmb IAmb 06 12 58.7
comp=Z,22nm,1.0s
N15K **Kwethluk River** 74.25 358 P P 06 12 57.5 +0.4
baz=2.9
O18K **Koktuh Hills** 74.37 355 P P 06 12 58.4 +0.6
baz=6.4
R40A **Maddies Statio** 74.38 309 IAmb IAmb 06 12 58.8
comp=Z,23nm,1.3s
P19K **Oil Pt** 74.45 354 P P 06 12 58.5 +0.2
baz=7.8
N14K **Kuskokwak Cree** 74.53 359 P P 06 12 58.9 +0.2
baz=1.7
O17K **Koliganek Bris** 74.55 356 P P 06 12 58.9 +0.1
baz=5.0
BOSA **Boshof** 74.62 172 P P 06 13 00.3 +0.7
comp=Z,14nm,1.0s,baz=6.7,slow=7.3,SNR=16
BOSA LR LR 06 48 13.8
comp=Z,128nm,19.8s,baz=23,slow=38
comp=Z,14nm,1.0s
BOSA **Boshof** 74.62 172 IAmb IAmb 06 13 01.5
comp=Z,20nm,1.1s
T42A **Van Buren** 74.65 308 IAmb IAmb 06 13 00.4
comp=Z,16nm,1.2s
WRAK **Wrangell Islan** 74.66 342 P P 06 12 59.5 0.0
baz=22
SIT **Sitka** 74.66 344 P P 06 12 58.9 -0.5
baz=20
O16K **Kokwok River B** 74.77 357 P P 06 13 00.3 +0.2
baz=4.3
P18K **Big Mountain,** 74.83 355 P P 06 13 00.3 -0.2
baz=6.3
352A **Blakely** 75.01 300 IAmb IAmb 06 13 03.1
comp=Z,22nm,1.0s
P17K **Kvichak River** 75.09 356 P P 06 13 02.2 +0.3
baz=5.5
U33K **Whale Pass** 75.10 343 P P 06 13 02.1 +0.1
baz=22
O14K **Tigyukauivet M** 75.19 359 P P 06 13 02.2 -0.3
baz=2.0
Q19K **Cape Douglas,** 75.20 354 P P 06 13 02.3 -0.3
baz=7.5
O15K **Ungalikthiuk R** 75.24 358 P P 06 13 02.4 -0.4
baz=3.0
P16K **Nushagak River** 75.32 357 P P 06 13 02.9 -0.3
baz=4.3
LCAR **Lake Charles** 75.37 307 IAmb IAmb 06 13 05.2
comp=Z,19nm,1.4s
S39A **Bolivar** 75.39 309 IAmb IAmb 06 13 04.4
comp=Z,16nm,1.0s
Q20K **Shuyak Island** 75.42 354 P P 06 13 03.7 -0.2
baz=8.3
V35K **Ketchikan** 75.51 342 P P 06 13 04.2 -0.2
baz=23
Q18K **Katmai Hardscr** 75.56 355 P P 06 13 04.5 -0.3
baz=6.5
CRAG **Craig** 75.70 342 P P 06 13 05.3 -0.2
baz=22
NJ2 **Nanjing** 75.75 59 *e*P P 06 13 05.8 -0.4
NJ2 pmax pmax
comp=Z,44nm,1.2s
RSSD **Black Hills** 75.84 320 P P 06 13 06.6 -0.2
Q17K **Contact Creek** 75.99 356 P P 06 13 07.2 -0.1
baz=5.8
FCAR **Ozark Folk Cen** 76.05 307 P P 06 13 07.3 -0.5
PETK **Petropavlovsk-** 76.08 23 P P 06 13 07.4 -0.3
comp=Z,11nm,1.0s,baz=58,slow=3.7,SNR=4.2
comp=Z,11nm,1.0s
PETK **Petropavlovsk-** 76.08 23 P P 06 13 07.7 0.0
KDAK **Kodiak Island** 76.26 354 P P 06 13 08.7 +0.1
baz=8.2
YSS **Yuzhno-Sakhali** 76.40 34 P P 06 13 10.7 +1.1
YSS **Yuzhno-Sakhali** 76.40 34 P P 06 13 09.9 +0.2
R17L **Mt. Peulik Vol** 76.65 356 P P 06 13 10.8 -0.1
baz=5.5
HHAR **Hobbs** 76.76 309 IAmb IAmb 06 13 12.6
comp=Z,13nm,1.1s
R16K **Pilot Point** 76.77 356 P P 06 13 11.8 +0.3
baz=4.6
U38A **Gravette** 76.88 309 IAmb IAmb 06 13 13.3
comp=Z,15nm,0.9s
KSRS **Korea Array** 76.94 49 P P 06 13 12.7 -0.2
comp=Z,4.2nm,0.7s,baz=317,slow=5.9,SNR=11
comp=Z,4.2nm,0.7s
UALR **University of** 76.98 307 IAmb IAmb 06 13 14.3
comp=Z,19nm,0.8s
SPIA **Saint Paul Isl** 77.17 3 P P 06 13 13.8 0.0
baz=356
X40A **Basin Creek Fa** 77.47 307 IAmb IAmb 06 13 19.4
comp=Z,14nm,1.1s
BBB **Bella Bella** 77.56 338 LR LR 06 52 43.3
comp=Z,109nm,18.3s,baz=355,slow=40
T35A **Sooner Cattle** 77.67 311 IAmb IAmb 06 13 18.0
comp=Z,21nm,1.0s
SUR **Sutherland** 78.03 176 LR LR 06 53 54.7
comp=Z,69nm,18.3s,baz=10.0,slow=40
K22A **Casper** 78.11 321 IAmb IAmb 06 13 20.3
comp=Z,14nm,1.0s
S14K **Fog Glacier** 78.13 357 P P 06 13 19.4 +0.1
baz=3.2
WLAR **White Oak Lake** 78.21 306 IAmb IAmb 06 13 21.2
comp=Z,9.7nm,0.8s
CHIR **Chirikof Islan** 78.41 355 P P 06 13 21.6 +0.9
baz=6.0
DLMT **Dillon** 78.45 326 IAmb IAmb 06 13 23.2
comp=Z,29nm,1.4s
DEOK **Depew** 78.47 310 IAmb IAmb 06 13 22.9
comp=Z,20nm,1.0s
SMTB **Santa Maria do** 78.62 245 *e*P P 06 13 23.1 +0.7
YPP **Pitchstone Pla** 78.63 324 IAmb IAmb 06 13 30.7
comp=Z,15nm,1.3s
ASAJ **Asahikawa** 78.66 36 LR LR 06 52 29.5
comp=Z,115nm,18.4s,baz=159,slow=39
FLWY **Flagg Ranch** 78.74 324 IAmb IAmb 06 13 30.5
comp=Z,14nm,1.1s
CMC01 **Camacan, BA** 78.87 234 *e*P P 06 13 26.0 +2.3
SDPT **Sand Point** 79.09 358 P P 06 13 25.2 +0.7
baz=2.5
W35A **Tecumseh** 79.19 310 IAmb IAmb 06 13 27.1
comp=Z,24nm,1.2s
FXWY **Fox Creek** 79.24 324 IAmb IAmb 06 13 28.5
comp=Z,19nm,1.4s
EPH **Ephrata** 79.31 331 IAmb IAmb 06 13 35.2
comp=Z,8.2nm,1.4s
PDAR **Pinedale Array** 79.34 322 P P 06 13 26.4 0.0
comp=Z,3.1nm,0.9s,baz=61,slow=4.4,SNR=20
PDAR LR LR 06 48 01.6
comp=Z,167nm,19.1s,baz=0.5,slow=35
comp=Z,3.1nm,0.9s
PDAR **Pinedale Array** 79.34 322 P P 06 13 26.0 -0.4
FNO **Franklin** 79.39 310 IAmb IAmb 06 13 27.6
comp=Z,15nm,1.0s
E09A **Wood Farm, Sta** 79.54 330 IAmb IAmb 06 13 28.3
comp=Z,22nm,1.5s
CHNA **Chernabura Isl** 79.58 357 P P 06 13 27.5 +0.3
baz=3.1
FALS **False Pass** 79.63 360 P P 06 13 27.8 +0.4
baz=0.4
ELIS **Ellis County** 79.84 312 IAmb IAmb 06 13 30.8
comp=Z,33nm,1.2s
GUA01 **Guaratinga, BA** 80.02 234 *e*P P 06 13 31.6 +1.7
HAYD **Hayden** 80.15 320 IAmb IAmb 06 13 33.2
comp=Z,22nm,1.2s
GNW **Green Mountain** 80.19 333 IAmb IAmb 06 13 35.1
comp=Z,15nm,1.1s
Q24A **Divide** 80.42 317 IAmb IAmb 06 13 34.8
comp=Z,14nm,1.1s
WMOK **Wichita Mounta** 80.52 311 IAmb IAmb 06 13 34.5
comp=Z,17nm,1.1s
ITTB **Itaituba** 80.56 254 *e*P P 06 13 34.2 +1.1
UNV **Unalaska Valle** 80.62 2 P P 06 13 33.7 +1.0
baz=358
BMO **Blue Mountains** 80.66 328 IAmb IAmb 06 13 34.2
comp=Z,23nm,1.2s
NLWA **Neilton Lookou** 80.67 334 IAmb IAmb 06 13 37.6
comp=Z,25nm,1.4s
O20A **White River Ci** 80.90 320 IAmb IAmb 06 13 36.5
comp=Z,19nm,1.0s
WTFS **Witchita Falls** 81.09 310 IAmb IAmb 06 13 37.5
comp=Z,24nm,1.1s
HWUT **Hardware Ranch** 81.14 323 IAmb IAmb 06 13 37.8
comp=Z,21nm,1.0s
RTBA **Rita Blanca** 81.24 314 IAmb IAmb 06 13 39.0
comp=Z,18nm,0.9s
SDV **Santo Domingo** 81.36 274 P P 06 13 37.5 -0.1
SDV IAmb IAmb 06 13 39.2
comp=Z,21nm,1.0s
SDV **Santo Domingo** 81.36 274 *e*P P 06 13 38.8 +1.2
TCUT **Toone Canyon** 81.48 323 IAmb IAmb 06 13 43.1
comp=Z,16nm,1.1s
T25A **Trinidad** 81.51 316 IAmb IAmb 06 13 40.1
comp=Z,12nm,1.0s
BSUT **Blindstream Ca** 81.68 322 IAmb IAmb 06 13 42.6
comp=Z,15nm,1.3s
KCSI **Kotacane, Aceh** 81.75 93 P P 06 13 37.6 -1.8
comp=Z,620nmcomp=Z,18nm,1.3s
HOOD **Mount Hood Mea** 81.78 331 IAmb IAmb 06 13 42.5
comp=Z,17nm,1.1s
P18A **Preston Nutter** 82.21 321 IAmb IAmb 06 13 43.3
comp=Z,14nm,1.1s
APMT **Aspermont** 82.31 311 IAmb IAmb 06 13 43.8
comp=Z,15nm,1.0s
BGU **Big Grassy Mou** 82.32 324 IAmb IAmb 06 13 44.4
comp=Z,16nm,1.2s
PV22 **Blue Mesa, Par** 82.45 319 IAmb IAmb 06 13 44.7
comp=Z,17nm,1.1s
PV07 **Paradox Valley** 82.46 319 IAmb IAmb 06 13 47.1
comp=Z,29nm,1.4s
PV15 **Paradox Valley** 82.47 319 IAmb IAmb 06 13 44.8
comp=Z,16nm,1.1s
DKNS **Dickens** 82.47 311 IAmb IAmb 06 13 44.8
comp=Z,7.7nm,0.9s
PV21 **Cone Mtn., Par** 82.51 320 IAmb IAmb 06 13 45.2
comp=Z,18nm,1.0s
PV04 **Paradox Valley** 82.62 319 IAmb IAmb 06 13 45.8
comp=Z,16nm,1.0s
PV01 **Paradox Valley** 82.68 319 IAmb IAmb 06 13 46.0
comp=Z,9.2nm,1.1s
SRU **San Rafael Swe** 82.75 321 IAmb IAmb 06 13 45.7
comp=Z,15nm,0.9s
PV13 **Radium Mtn., P** 82.77 319 IAmb IAmb 06 13 46.5
comp=Z,14nm,1.1s
MJAR **Matsushiro Arr** 82.84 43 P P 06 13 44.1 -0.8

	comp=Z,4.7nm,1.0s,baz=310,slow=4.6,SNR=7.5							
	comp=Z,4.7nm,1.0s							
MJAR	**Matsushiro Arr**	**82.84**	**43**	P		**P**	**06 13 44.9**	**0.0**
435B	**Jarrell**	**82.89**	**307**	IAmb		IAmb	06 13 48.2	
	comp=Z,13nm,0.7s							
SN07	**Snyder 07**	**82.90**	**311**	IAmb		IAmb	06 13 47.1	
	comp=Z,6.3nm,0.7s							
PV05	**Paradox Valley**	**82.96**	**319**	IAmb		IAmb	06 13 46.9	
	comp=Z,9.3nm,1.0s							
PSI	**Prapat**	**83.06**	**93**	P		**P**	**06 13 46.5**	**+0.1**
PSI	**Prapat**	**83.06**	**93**	P		**P**	**06 13 46.3**	**-0.1**
	comp=Z,369nmcomp=Z,24nm,1.2s							
GSI	**Gunungsitoli**	**83.19**	**95**	P		**P**	**06 13 48.1**	**+1.2**
Q16A	**Castle Valley**	**83.20**	**321**	IAmb		IAmb	06 13 48.2	
	comp=Z,8.6nm,1.0s							
POST	**Post**	**83.24**	**311**	IAmb		IAmb	06 13 48.9	
	comp=Z,10nm,0.8s							
MVCO	**Mesa Verde**	**83.39**	**319**	IAmb		IAmb	06 13 49.8	
	comp=Z,11nm,1.1s							
BDFB	**Brasilia**	**84.09**	**241**	P		**P**	**06 13 52.1**	**+0.6**
	comp=Z,5.5nm,0.7s,baz=41,slow=5.3,SNR=11							
	comp=Z,5.5nm,0.7s							
BDFB	**Brasilia**	**84.09**	**241**	IAmb		IAmb	06 13 53.8	
	comp=Z,9.0nm,0.9s							
128A	**Castleberry Fa**	**84.10**	**312**	IAmb		IAmb	06 13 53.2	
	comp=Z,20nm,1.2s							
ANMO	**Albuquerque**	**84.26**	**316**	LR		LR	06 50 48.5	
	comp=Z,267nm,19.8s,baz=353,slow=35							
ANMO	**Albuquerque**	**84.26**	**316**	P		**P**	**06 13 52.5**	**+0.1**
ANMO				IAmb		IAmb	06 13 54.4	
	comp=Z,9.7nm,0.9s							
BBOR	**Butler Butte**	**84.28**	**331**	P		**P**	**06 13 52.1**	**-0.3**
BBOR				IAmb		IAmb	06 13 53.3	
	comp=Z,10nm,1.1s							
MTPU	**Mount Pierson**	**84.37**	**321**	IAmb		IAmb	06 13 55.3	
	comp=Z,9.4nm,0.9s							
PKCU	**Pink Cliffs**	**84.92**	**321**	IAmb		IAmb	06 13 57.7	
	comp=Z,13nm,0.8s							
TPB06	**Permian Basin**	**85.25**	**312**	IAmb		IAmb	06 14 02.8	
	comp=Z,8.0nm,0.9s							
CCUT	**Cedar City**	**85.29**	**322**	IAmb		IAmb	06 13 59.9	
	comp=Z,9.8nm,1.0s							
Y22A	**Socorro**	**85.32**	**316**	IAmb		IAmb	06 13 59.8	
	comp=Z,15nm,1.1s							
PMNB	**Patos De Minas**	**85.39**	**238**	*e*P		**P**	**06 13 59.3**	**+1.2**
U15A	**North Rim**	**85.76**	**321**	IAmb		IAmb	06 14 01.4	
	comp=Z,7.5nm,0.9s							
PAHR	**Pah Rah Range**	**85.88**	**327**	IAmb		IAmb	06 14 02.6	
	comp=Z,15nm,1.1s							
SAND	**Sanderson**	**86.00**	**310**	IAmb		IAmb	06 14 03.3	
	comp=Z,11nm,0.9s							
BEKR	**Beckworth**	**86.11**	**328**	IAmb		IAmb	06 14 03.2	
	comp=Z,12nm,1.3s							
MNTX	**Cornudas Mount**	**86.33**	**313**	IAmb		IAmb	06 14 04.0	
	comp=Z,7.2nm,0.9s							
KHBM	**Hayfork Bally**	**86.44**	**330**	IAmb		IAmb	06 14 05.8	
	comp=Z,16nm,1.1s							
ALPN	**Alpine**	**86.48**	**311**	IAmb		IAmb	06 14 05.6	
	comp=Z,8.2nm,0.9s							
ARAG	**Araguaiana, MT**	**86.48**	**243**	*e*P		**P**	**06 14 04.4**	**+1.1**
PDRB	**Porto dos Gac**	**86.57**	**250**	*e*P		**P**	**06 14 05.2**	**+1.3**
NVAR	**Mina Array Bea**	**86.57**	**326**	P		**P**	**06 14 04.5**	**+0.5**
	comp=Z,1.8nm,0.9s,baz=51,slow=5.8,SNR=10							
NVAR				LR		LR	06 53 42.5	
	comp=Z,231nm,18.1s,baz=354,slow=36							
	comp=Z,1.8nm,0.9s							
NVAR	**Mina Array Bea**	**86.57**	**326**	P		**P**	**06 14 03.8**	**-0.2**
ROSC	**El Rosal**	**86.79**	**274**	P		**P**	**06 14 06.0**	**+0.5**
	comp=Z,5.9nm,0.7s,baz=259,slow=12,SNR=3.3							
	comp=Z,5.9nm,0.7s							
ROSC	**El Rosal**	**86.79**	**274**	IAmb		IAmb	06 14 06.6	
	comp=Z,12nm,1.1s							
ORV	**Oroville**	**86.81**	**328**	IAmb		IAmb	06 14 08.4	
	comp=Z,9.7nm,1.2s							
TX31	**Lajitas Ar. Si**	**87.31**	**311**	IAmb		IAmb	06 14 08.9	
	comp=Z,9.2nm,1.1s							
TXAR	**Lajitas Array**	**87.31**	**311**	P		**P**	**06 14 08.5**	**+1.0**
	comp=Z,6.8nm,0.9s,baz=69,slow=4.1,SNR=34							
TXAR				LR		LR	06 53 04.2	
	comp=Z,181nm,18.8s,baz=354,slow=36							
	comp=Z,6.8nm,0.9s							
TXAR	**Lajitas Array**	**87.31**	**311**	P		**P**	**06 14 07.5**	**0.0**
TUC	**Tucson**	**88.48**	**317**	P		**P**	**06 14 12.9**	**-0.2**
TUC				IAmb		IAmb	06 14 14.8	
	comp=Z,7.5nm,1.1s							
MHC	**Mount Hamilton**	**88.81**	**328**	IAmb		IAmb	06 14 17.5	
	comp=Z,7.3nm,1.1s							
ISA	**Isabella, Lake**	**89.03**	**324**	IAmb		IAmb	06 14 18.9	
	comp=Z,7.9nm,1.2s							
SAO	**San Andreas Ge**	**89.24**	**327**	IAmb		IAmb	06 14 19.3	
	comp=Z,11nm,1.3s							
PP1B	**Ponte de Pedra**	**89.83**	**244**	*e*P		**P**	**06 14 20.9**	**+1.6**
VILB	**Vilhena**	**89.83**	**251**	*e*P		**P**	**06 14 21.4**	**+2.0**
PFO	**Pinyon Flats O**	**89.96**	**322**	LR		LR	06 55 27.0	
	comp=Z,270nm,18.9s,baz=359,slow=36							
PFO	**Pinyon Flats O**	**89.96**	**322**	P		**P**	**06 14 20.0**	**0.0**
JTS	**Las Juntas de**	**90.21**	**285**	LR		LR	06 48 15.4	
	comp=Z,35nm,20.4s,baz=356,slow=31							
PTLB	**Pontes e Lacer**	**90.96**	**249**	IAmb		IAmb	06 14 25.8	
	comp=Z,6.1nm,1.0s							
PTLB	**Pontes e Lacer**	**90.96**	**249**	*e*P		**P**	**06 14 25.3**	**+0.7**
MDSI	**Maura Dua**	**91.91**	**94**	P		**P**	**06 14 28.2**	**-0.9**
	comp=Z,13nm,1.1s							
SBUM	**Sibu**	**92.58**	**84**	P		**P**	**06 14 33.5**	**+1.2**
SBUM	**Sibu**	**92.58**	**84**	P		**P**	**06 14 32.4**	**+0.1**
BBSD	**Serra de San D**	**93.19**	**249**	*e*P		**P**	**06 14 35.2**	**+0.2**
LPIG	**La Paz**	**95.02**	**312**	LR		LR	06 58 28.4	
	comp=Z,147nm,18.2s,baz=6.5,slow=36							
WRA	**Warramunga Arr**	**123.67**	**84**	PKP		**PKPdf**	**06 20 17.8**	**-0.5**
	comp=Z,3.9nm,0.9s,baz=303,slow=2.2,SNR=21							
WRA	**Warramunga Arr**	**123.67**	**84**			**PKPdf**	**06 20 18.1**	**-0.2**
WRAB	**Tennant Creek**	**123.67**	**84**	P		**PKPdf**	**06 20 18.2**	**-0.1**
WR8	**Warramunga Arr**	**123.79**	**84**	PKPdf		**PKPdf**	**06 20 18.3**	**-0.3**
ASAR	**Alice Springs**	**125.82**	**88**	PKP		**PKPdf**	**06 20 22.0**	**-0.4**
	comp=Z,4.4nm,0.9s,baz=329,slow=1.8,SNR=34							
ASAR				PP		**PP**	**06 22 15.1**	**-0.2**
	comp=Z,0.7nm,1.0s,baz=327,slow=6.7,SNR=5.6							
ASAR	**Alice Springs**	**125.82**	**88**			**PKPdf**	**06 20 22.8**	**+0.4**
BELA	**Belgrano 2**	**127.29**	**192**			**PKPdf**	**06 20 24.0**	**+0.5**
QSPA	**South Pole Qui**	**135.74**	**180**	PKP		**PKPdf**	**06 20 39.6**	**-0.2**
	comp=Z,3.4nm,0.8s,baz=226,slow=1.1,SNR=8.2							
TAU	**Tasmania Unive**	**145.51**	**103**	P		**PKPab**	**06 20 59.7**	**+1.2**
VNDA	**Vanda**	**145.51**	**168**	PKPbc		**PKPbc**	**06 20 57.6**	**+0.4**
	comp=Z,14nm,1.1s,baz=274,slow=4.8,SNR=26							
VNDA	**Vanda**	**145.51**	**168**			**PKPdf**	**06 20 57.1**	**+0.1**
SBA	**Scott Base**	**145.94**	**169**			**PKPab**	**06 21 00.5**	**+1.4**

*LJU **22** 06:09:38.8, 45°.89N×15°.99E, h4km, ML1.4*
*KRSZO **22** 06:09:38.7±0.9, 45°.89N×15°.97E, h3km, ML2.5/8, Error ellipse: s-maj=7.3km s-min=4.6km az=111.0*

ISC 22 06:09:40.3±0.8, 45°.88N±0°.02×16°.05E±0°.03, h8km±5km, n26, σ3s08/36, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PTJ	**Puntijarka**	**0.07**	**299**	*i* Pg		**Pg**	**06 09 39.5**	**-2.8**
PTJ				Sg		**Sg**	**06 09 40.7**	**-3.0**
PTJ	**Puntijarka**	**0.07**	**299**	*i* Pg		Pg	06 09 48.2	+5.9
PTJ				Sg		**Sg**	**06 09 49.1**	**+5.4**
PTJ	**Puntijarka**	**0.07**	**299**	Pg		**Pg**	**06 09 39.5**	**-2.8**
PTJ				Lg		Lg	06 09 40.5	
ZAG	**Zagreb**	**0.07**	**223**	*i* Pg		**Pg**	**06 09 40.0**	**-2.1**
ZAG				Sg		**Sg**	**06 09 41.7**	**-1.9**
ZAG	**Zagreb**	**0.07**	**223**	*e*Pg		Pg	06 09 48.8	+6.6
ZAG				Sg		**Sg**	**06 09 50.5**	**+6.9**
ZAG	**Zagreb**	**0.07**	**223**	Pg		**Pg**	**06 09 40.1**	**-2.0**
ZAG				Lg		Lg	06 09 41.8	
LOBO	**Lobor**	**0.28**	**3**	*i* Pg		**Pg**	**06 09 44.0**	**-1.8**
LOBO				Sg		**Sg**	**06 09 47.3**	**-2.3**
LOBO	**Lobor**	**0.28**	**3**	*e*Pg		**Pn**	**06 09 52.6**	**+1.9**
LOBO				Sg		**Sb**	**06 09 56.1**	**+3.6**
GCIS	**Gornji Cirnik**	**0.30**	**269**	*i* Pg		**Pg**	**06 09 43.7**	**-2.5**
GCIS				*i* Sg		**Sg**	**06 09 47.4**	**-2.6**
GCIS				IAML			06 09 48.0	
	comp=Z,41nm,0.1s							
GOLS	**Golise**	**0.33**	**295**	*i* Sg		**Sg**	**06 09 48.5**	**-2.5**
GOLS				IAML			06 09 50.8	
	comp=Z,14nm,0.1s							
KALN	**Kalnik**	**0.38**	**48**	*e*Pg		**Pg**	**06 09 45.7**	**-2.1**
KALN				Sg		**Sg**	**06 09 51.4**	**-1.4**
KALN	**Kalnik**	**0.38**	**48**	Sg		**Sb**	**06 09 59.4**	**+4.0**
CRES	**Cresnjevec Ost**	**0.42**	**263**	*i* Pg		**Pg**	**06 09 46.0**	**-2.4**
CRES	**Cresnjevec Ost**	**0.42**	**263**	Pg		**Pg**	**06 09 45.9**	**-2.5**
CESS	**Cesta pri Krsk**	**0.42**	**284**	*i* Pg		**Pg**	**06 09 46.7**	**-1.8**
CESS				*i* Sg		**Sg**	**06 09 52.0**	**-2.1**
CESS				IAML			06 09 53.7	
	comp=Z,23nm,0.2s							
OZLJ	**Ozalj**	**0.48**	**238**	*i* Pg		**Pg**	**06 09 47.6**	**-2.0**
OZLJ				Sg		**Sg**	**06 09 53.8**	**-2.2**
OZLJ	**Ozalj**	**0.48**	**238**	Sg		**Sb**	**06 10 03.6**	**+5.4**
DOBS	**Dobrina**	**0.49**	**304**	*i* Pg		**Pg**	**06 09 47.5**	**-2.2**
MOSL	**Moslavina**	**0.56**	**118**	*i* Pg		**Pg**	**06 09 49.3**	**-1.8**
MOSL				Sg		**Sg**	**06 09 56.7**	**-1.7**
MOSL	**Moslavina**	**0.56**	**118**	Sg		**Sn**	**06 10 04.9**	**+1.0**
KOGS	**Kog**	**0.59**	**14**	Pg		**Pg**	**06 09 50.0**	**-1.7**
KOGS				Lg		Lg	06 09 58.7	
BEHE	**Becsehely**	**0.78**	**40**	Pg		**Pb**	**06 09 55.1**	**-1.0**
BEHE				Lg		Lg	06 10 06.2	
PLIT	**Plitvice**	**1.04**	**197**	*e*Pg		**Pg**	**06 09 57.5**	**-2.7**
PLIT				Sg		**Sg**	**06 10 12.2**	**-1.6**
PLIT	**Plitvice**	**1.04**	**197**	Sg		**Sn**	**06 10 21.4**	**+5.5**
OBKA	**Obir**	**1.22**	**302**	Pn		**Pn**	**06 10 02.5**	**-1.2**
BLY	**Banja Luka**	**1.38**	**144**	Pn		**Pn**	**06 10 03.1**	**-2.7**

*BEO **22** 06:41:05.8±0.3, 45°.93N×16°.07E, h9km±3km, ML3.4/14*
*PDG **22** 06:41:06.1±0.7, 45°.89N×16°.01E, h7km±1km, ML3.5/11, Error ellipse: s-maj=0.8km s-min=1.1km az=0.0*
*VIE **22** 06:41:06.3±0.2, 45°.94N×15°.98E, h10km±1km, mb3.0/21, ml3.3/20, Error ellipse: s-maj=1.8km s-min=1.2km az=116.0 15 km N of Zagreb*
*NEIC **22** 06:41:06.1±2.0, 45°.90N±0°.02×15°.99E±0°.05, h10km±2km, ML3.4/54, Error ellipse: s-maj=6.3km s-min=3.0km az=68.0*
*RHSSO **22** 06:41:06.2±0.5, 45°.85N×15°.95E, h8km±3km, ML3.5/10*
*LJU **22** 06:41:06.0, 45°.89N×16°.00E, h5km, ML3.2*
*IDC **22** 06:41:08.0±2.4, 46°.15N×16°.02E, h0km, mbtmp3.6/6, ML3.5/6, Error ellipse: s-maj=22.9km s-min=16.6km az=137.0*
*PRU **22** 06:41:07.4, 45°.98N×16°.13E, h10km*

ISC 22 06:41:05.2±0.8, 45°.92N±0°.01×16°.07E±0°.01, h8km±5km, n220, σ1s03/335, 21C-22D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PTJ	**Puntijarka**	**0.07**	**260**	*i* Pg		**Pg**	**06 41 07.0**	**-0.3**
PTJ				Sg		**Sg**	**06 41 08.0**	**-0.8**
ZAG	**Zagreb**	**0.11**	**213**	*i* Pg		**Pg**	**06 41 07.7**	**+0.1**
ZAG				Sg		**Sg**	**06 41 08.7**	**-0.7**
LOBO	**Lobor**	**0.24**	**359**	*i* Pg		**Pg**	**06 41 11.2**	**+1.3**
LOBO				Sg		**Sg**	**06 41 14.8**	**+1.6**
GCIS	**Gornji Cirnik**	**0.32**	**261**	⇓*i* Pg		**Pg**	**06 41 11.4**	**0.0**
GCIS				*i* Sg		**Sg**	**06 41 15.3**	**-0.3**
GCIS				IAML			06 41 15.8	
	comp=Z,3μm,0.1s							
GOLS	**Golise**	**0.33**	**286**	⇑*i* Pg		**Pg**	**06 41 11.9**	**+0.3**
GOLS				*i* Sg		**Sg**	**06 41 16.6**	**+0.7**
GOLS				IAML			06 41 19.0	
	comp=Z,770nm,0.1s							
KALN	**Kalnik**	**0.34**	**51**	*i* Pg		**Pb**	**06 41 13.0**	**-0.5**
KALN				Sg		**Sb**	**06 41 18.0**	**-1.2**
CESS	**Cesta pri Krsk**	**0.43**	**277**	*i* Pg		**Pg**	**06 41 13.8**	**+0.3**
CESS				*i* Sg		**Sg**	**06 41 19.5**	**+0.4**
CESS				IAML			06 41 21.9	
	comp=Z,3μm,0.2s							
CRES	**Cresnjevec Ost**	**0.44**	**258**	⇓*i* Pg		**Pg**	**06 41 13.6**	**-0.2**
CRES				*i* Sg		**Sg**	**06 41 19.1**	**-0.4**
CRES				IAML			06 41 20.9	
	comp=Z,1μm,0.1s							
DOBS	**Dobrina**	**0.48**	**299**	⇑*i* Pg		**Pg**	**06 41 15.1**	**+0.6**
DOBS				*i* Sg		**Sg**	**06 41 21.7**	**+0.9**
DOBS				IAML			06 41 24.7	
	comp=Z,718nm,0.2s							
OZLJ	**Ozalj**	**0.52**	**235**	*i* Pg		**Pg**	**06 41 15.0**	**-0.3**
OZLJ				Sg		**Sg**	**06 41 21.5**	**-0.5**
LEGS	**Legarje**	**0.53**	**273**	*i* Pg		**Pg**	**06 41 15.6**	**+0.2**
LEGS				*i* Sg		**Sg**	**06 41 22.1**	**-0.1**
KOGS	**Kog**	**0.54**	**13**	⇓*i* Pg		**Pb**	**06 41 17.3**	**+0.3**
KOGS				*e*Sg		**Sb**	**06 41 25.4**	**+0.4**
KOGS				*i*			06 41 28.8	
KOGS				IAML			06 41 30.2	
	comp=Z,3μm,0.2s							
MOSL	**Moslavina**	**0.57**	**122**	*e*Pg		**Pg**	**06 41 16.7**	**+0.6**
MOSL				Sg		**Sg**	**06 41 23.7**	**+0.2**
GROS	**Grobnik**	**0.67**	**324**	*i* Pg		**Pb**	**06 41 18.9**	**-0.3**
GROS				*i*			06 41 20.0	
GROS				*i* Sg		**Sg**	**06 41 27.6**	**+0.7**
GROS				IAML			06 41 28.9	
	comp=Z,746nm,0.2s							
BOJS	**Bojanci**	**0.71**	**234**	⇓*i* Pg		**Pg**	**06 41 18.0**	**-0.8**
BOJS				*i* Sg		**Sg**	**06 41 26.2**	**-1.8**
BOJS				IAML			06 41 34.1	
	comp=Z,311nm,0.1s							
BOJS	**Bojanci**	**0.71**	**234**	*e*Pg		**Pg**	**06 41 18.0**	**-0.8**
BOJS				*e*Sg		**Sg**	**06 41 28.1**	**+0.1**
BEHE	**Becsehely**	**0.74**	**41**			**Pn**	**06 41 21.4**	**-0.6**
BEHE				Sg		**Sn**	**06 41 32.4**	**-1.0**
BEHE	**Becsehely**	**0.74**	**41**	⇓*i* Pg		**Pb**	**06 41 20.9**	**+0.6**
BEHE				*e*Sg		**Sn**	**06 41 33.4**	**+0.1**
PDKS	**Podkum**	**0.76**	**281**	⇑*i* Pg		**Pg**	**06 41 20.0**	**+0.2**
PDKS				*i* Sg		**Sg**	**06 41 29.4**	**-0.3**
PDKS				IAML			06 41 34.1	
	comp=Z,426nm,0.2s							
VISS	**Visnje**	**0.87**	**263**	*i* Pg		**Pg**	**06 41 21.3**	**-0.6**
VISS				*i* Sg		**Sg**	**06 41 32.1**	**-1.1**
VISS				IAML			06 41 37.2	
	comp=Z,1μm,0.3s							
ZAVS	**Zavodnje**	**0.89**	**306**	⇑*i* Pg		**Pg**	**06 41 22.7**	**+0.4**
ZAVS				*i* Sg		**Sb**	**06 41 34.8**	**-0.3**
ZAVS				IAML			06 41 37.1	
	comp=Z,542nm,0.3s							
GBRS	**Gornja Briga**	**0.97**	**247**	*i* Pg		**Pg**	**06 41 23.0**	**-0.7**
GBRS				*i* Sg		**Sg**	**06 41 36.8**	**+0.6**
GBRS				IAML			06 41 38.5	
	comp=Z,600nm,0.3s							
VNDS	**Vrh nad Dolski**	**0.97**	**281**	⇑*i* Pg		**Pg**	**06 41 23.7**	**-0.2**
VNDS				*e*Sg		**Sb**	**06 41 37.7**	**+0.4**
VNDS				IAML			06 41 40.0	
	comp=Z,1μm,0.4s							
PERS	**Pernice**	**0.98**	**318**	⇑*i* Pg		**Pb**	**06 41 24.3**	**-0.1**
PERS				*e*Sg		**Sg**	**06 41 37.0**	**+0.4**
PERS				IAML			06 41 41.9	
	comp=Z,468nm,0.2s							
SOKA	**Soboth**	**1.05**	**317**	*i* Pg		**Pg**	**06 41 25.4**	**+0.1**
	comp=Z,36nm,0.3s,SNR=106							
SOKA				*e*Sg		**Sg**	**06 41 39.2**	**+0.4**
	comp=Z,130nm,0.4s							
LJU	**Ljubljana**	**1.08**	**277**	*i* Pg		**Pg**	**06 41 25.6**	**-0.4**
LJU				*i* Sg		**Sb**	**06 41 41.4**	**+0.8**
LJU				IAML			06 41 43.2	
	comp=Z,466nm,0.2s							
LJU	**Ljubljana**	**1.08**	**277**	*e*Pg		**Pg**	**06 41 25.6**	**-0.4**
LJU				*e*Sg		**Sg**	**06 41 40.2**	**+0.1**
PLIT	**Plitvice**	**1.09**	**197**	*i* Pg		**Pg**	**06 41 25.0**	**-1.1**
PLIT				Sg		**Sg**	**06 41 39.9**	**-0.2**
GBAS	**Gorenja Brezov**	**1.14**	**271**	⇓*i* Pg		**Pg**	**06 41 26.3**	**-0.7**
GBAS				*i* Sg		**Sg**	**06 41 42.1**	**+0.4**
GBAS				IAML			06 41 45.1	
	comp=Z,458nm,0.2s							
CEY	**Cerknica**	**1.17**	**262**	*e*Pg		**Pg**	**06 41 26.8**	**-0.8**
CEY				*i* Sg		**Sg**	**06 41 43.1**	**+0.5**
CEY				IAML			06 41 45.0	
	comp=Z,677nm,0.4s							
CEY	**Cerknica**	**1.17**	**262**	*e*Pg		**Pg**	**06 41 27.2**	**-0.3**
CEY				*e*Sg		**Sg**	**06 41 43.1**	**+0.5**
MOZS	**Mozjanca**	**1.19**	**289**	⇑*i* Pg		**Pg**	**06 41 27.9**	**-0.2**
MOZS				*e*Sg		**Sn**	**06 41 45.4**	**+0.8**
MOZS				IAML			06 41 46.2	
	comp=Z,953nm,0.4s							
OBKA	**Obir**	**1.21**	**300**	*e*Pg		**Pg**	**06 41 28.4**	**0.0**
	comp=Z,49nm,0.3s,SNR=45							
OBKA				Sg		**Sb**	**06 41 44.4**	**+0.1**
	comp=Z,558nm,0.6s							
KNDS	**Knezji Dol**	**1.25**	**252**	*i* Pg		**Pg**	**06 41 29.1**	**0.0**
KNDS				*e*Sg		**Sg**	**06 41 45.7**	**+0.4**
KNDS				IAML			06 41 49.8	
	comp=Z,800nm,0.3s							
RIY	**Rijeka**	**1.26**	**243**	*e*Pg		**Pg**	**06 41 28.6**	**-0.9**
RIY				Sg		**Sg**	**06 41 45.1**	**-0.7**
RIY	**Rijeka**	**1.26**	**243**	*e*Pg		**Pg**	**06 41 28.5**	**-0.9**
CRNS	**Crni Vrh**	**1.27**	**278**	*i* Pg		**Pg**	**06 41 28.9**	**-0.6**
CRNS				*i* Sg		**Sg**	**06 41 46.0**	**-0.1**
CRNS				IAML			06 41 49.9	
	comp=Z,498nm,0.3s							

ARSA	**Arzberg**	**1.39**	**344**			**Pn**	**06 41 31.2**	**+0.3**
ARSA	**Arzberg**	**1.39**	**344**	*e*Pn		**Pn**	**06 41 31.2**	**+0.3**
	comp=Z,15nm,0.4s,SNR=80							
ARSA	**Arzberg**	**1.39**	**344**	*e*Pg		**Pb**	**06 41 31.3**	**0.0**
JAVS	**Javornik**	**1.40**	**270**	*i* Pg		**Pn**	**06 41 31.0**	**-0.2**
JAVS				*e*Sg		**Sb**	**06 41 50.0**	**+0.3**
JAVS				IAML			06 41 51.7	
	comp=Z,515nm,0.3s							
UDBI	**Udbina**	**1.41**	**189**	*i* Pn		**Pn**	**06 41 30.8**	**-0.4**
UDBI				Sg		**Sb**	**06 41 49.9**	**0.0**
BLY	**Banja Luka**	**1.41**	**146**	⇓P		**Pn**	**06 41 30.8**	**+0.3**
BLY	**Banja Luka**	**1.41**	**146**	*e*Pn		**Pn**	**06 41 30.9**	**-0.3**
BLY				*e*Sg		**Sg**	**06 41 51.2**	**+0.8**
BLY	**Banja Luka**	**1.41**	**146**	⇓*i* Pg		**Pn**	**06 41 30.8**	**-0.3**
BLY				*e*Sg		**Sg**	**06 41 51.0**	**+0.6**
RABC	**Rab**	**1.48**	**218**	*i* Pn		**Pn**	**06 41 32.2**	**+0.1**
RABC				Sg		**Sn**	**06 41 52.6**	**+0.9**
SKDS	**Skadanscina**	**1.49**	**256**	*i* Pg		**Pn**	**06 41 32.2**	**-0.1**
SKDS				*e*Sg		**Sn**	**06 41 51.8**	**-0.1**
SKDS				IAML			06 41 54.5	
	comp=Z,761nm,0.4s							
SKDS	**Skadanscina**	**1.49**	**256**	*e*Pg		**Pn**	**06 41 32.2**	**-0.1**
SKDS				*e*Sg		**Sn**	**06 41 51.5**	**-0.4**
GORS	**Gorjuse**	**1.50**	**286**	*i* Pg		**Pn**	**06 41 32.3**	**-0.2**
GORS				*e*Sg		**Sn**	**06 41 51.8**	**-0.5**
GORS				IAML			06 41 54.9	
	comp=Z,356nm,0.3s							
VOJS	**Vojsko**	**1.53**	**275**	*i* Pg		**Pn**	**06 41 33.1**	**+0.2**
VOJS				*e*Sg		**Sb**	**06 41 54.3**	**+0.8**
VOJS				IAML			06 41 58.7	
	comp=Z,277nm,0.3s							
NVLJ	**Novalja**	**1.60**	**212**	*e*Pn		**Pn**	**06 41 34.2**	**+0.5**
NVLJ				Sn		**Sn**	**06 41 54.5**	**-0.1**
TRI	**Trieste**	**1.63**	**263**	Pn		**Pn**	**06 41 34.7**	**+0.6**
CADS	**Cadrg**	**1.66**	**282**	*e*Pn		**Pn**	**06 41 34.8**	**+0.2**
CADS				*i* Sn		**Sg**	**06 41 58.1**	**-0.3**
CADS				IAML			06 42 01.1	
	comp=Z,340nm,0.2s							
SABO	**M.te Sabotino**	**1.73**	**273**	Pn		**Pn**	**06 41 35.9**	**+0.4**
VIRC	**Vir**	**1.78**	**204**	*i* Pn		**Pn**	**06 41 37.0**	**+0.8**
VIRC				Sn		**Sn**	**06 41 59.9**	**+0.9**
RONA	**Rosalia, Austr**	**1.79**	**5**	*e*Pn		**Pn**	**06 41 37.0**	**+0.5**
	comp=Z,34nm,0.2s,SNR=52							
RONA				*e*Sn		**Sb**	**06 42 00.3**	**-0.5**
	comp=Z,22nm,0.2s							
ROBS	**Robic**	**1.81**	**281**	*i* Pn		**Pn**	**06 41 36.7**	**0.0**
ROBS				*i*			06 41 38.4	
ROBS				*i* Sn		**Sg**	**06 42 02.9**	**-0.5**
ROBS				IAML			06 42 04.5	
	comp=Z,231nm,0.4s							
MORH	**Mrgy, Hungar**	**1.81**	**80**	⇑P		**Pn**	**06 41 36.2**	**-0.5**
MORH	**Mrgy, Hungar**	**1.81**	**80**	*e*Pn		**Pg**	**06 41 39.4**	**-0.5**
MORH				*e*Sn		**Sg**	**06 42 03.8**	**+0.3**
PRED	**Cave del Predi**	**1.82**	**288**	Pn		**Pn**	**06 41 36.9**	**0.0**
MYKA	**Terra Mystica**	**1.83**	**294**	*e*Pn		**Pn**	**06 41 37.3**	**+0.3**
	comp=Z,15nm,0.5s,SNR=9.1							
MYKA				Sg		**Sg**	**06 42 04.6**	**+0.7**
	comp=Z,68nm,0.5s							
KIJV	**Kijevo**	**1.93**	**173**	*i* Pn		**Pn**	**06 41 38

comp=N,4.0nm,0.2s
VRAC Vranov 3.41 6 Pn **Pn** **06 41 59.2 +0.5**
comp=N,8.1nm,0.3s,baz=191,slow=13,SNR=30
VRAC Sn **Sn** **06 42 37.1 -2.2**
comp=N,2.8nm,0.3s,baz=96,slow=19,SNR=4.2
VRAC Lg Lg 06 42 49.6
comp=N,6.6nm,0.3s,baz=105,slow=20,SNR=5.3
comp=N,21nm,0.4s
VRAC Vranov 3.41 6 ⇑P **Pn** **06 41 59.2 +0.5**
VRAC Vranov 3.41 6 *e*PN **Pn** **06 41 59.2 +0.5**
VRAC *e*SN **Sn** **06 42 38.4 -0.9**
VRAC *e*SG **Sg** **06 42 52.2 -2.4**
GUMA Gualdo di Mace 3.46 215 Pn **Pn** **06 41 58.7 -0.7**
BRY Bratogost 3.50 149 *e*Pn **Pn** **06 42 02.0 +2.0**
BRY *e*Sn **Sn** **06 42 43.0 +1.4**
BRY Bratogost 3.50 149 *e*Pn **Pn** **06 42 01.4 +1.4**
BRY *e*Sn **Sn** **06 42 41.5 -0.1**
DBRK Dubrovnik 3.57 155 *e*Pn **Pn** **06 42 01.8 +0.9**
DBRK Sn **Sn** **06 42 44.4 +1.0**
FDMO Fiordimonte 3.59 218 Pn **Pn** **06 42 00.4 -0.8**
FDMO IAML 06 43 08.4
comp=E,41nm,0.8s
FDMO IAML 06 43 10.9
comp=N,41nm,0.8s
TREB Trebinje 3.59 152 *e*Pn **Pn** **06 42 02.4 +1.3**
TREB Trebinje 3.59 152 *e*Pn **Pn** **06 42 02.5 +1.3**
TREB *e*Sn **Sn** **06 42 43.7 -0.1**
SQTA Sankt Quirin 3.60 293 *i* Pn **Pn** **06 42 01.6 +0.2**
comp=N,3.2nm,0.2s,SNR=5.7
SQTA *e*Sn **Sn** **06 42 45.6 +1.5**
comp=N,33nm,0.5s
KHC Kasperske Hory 3.63 333 Pn **Pn** **06 42 02.4 +0.6**
KHC Kasperske Hory 3.63 333 *e*PN **Pn** **06 42 03.0 +1.3**
KHC *e*SN **Sn** **06 42 45.1 +0.3**
KHC *e*SG **Sg** **06 43 00.8 -0.9**
comp=N,76nm,0.8s
MAUC Maruska 3.65 18 *e*SN **Sn** **06 42 44.5 -0.7**
MURB Monte Urbino 3.67 225 Pn **Pn** **06 42 03.2 +0.9**
MURB IAML 06 43 15.8
comp=N,113nm,0.7s
MOTA Moosalm 3.71 294 *i* Pn **Pn** **06 42 03.2 +0.3**
comp=N,2.9nm,0.2s
MOTA *e*Sn **Sn** **06 42 49.5 +2.6**
comp=N,16nm,0.4s
IVAS Ivanjica 3.73 127 *e*PN **Pn** **06 42 03.4 +0.2**
NRCA Norcia 3.74 216 Pn **Pn** **06 42 02.0 -1.4**
NRCA IAML 06 43 18.9
comp=E,36nm,1.1s
NRCA IAML 06 43 47.5
comp=N,67nm,0.2s
ZVC Zvikov 3.74 341 *e*PN **Pn** **06 42 04.7 +1.5**
ZVC *e*SN **Sn** **06 42 46.4 -1.1**
NKME Niksic 3.77 146 *e*Pn **Pn** **06 42 05.0 +1.4**
NKME *e*Sn **Sn** **06 42 49.5 +1.3**
VRSS Vrsac 3.78 100 *e*Pn **Pn** **06 42 03.5 -0.2**
SJES Sjenica 3.85 132 *e*Pn **Pn** **06 42 05.7 +0.9**
SJES Sjenica 3.85 132 *e*Pn **Pn** **06 42 05.9 +1.1**
SJES *e*Sn **Sn** **06 42 50.0 -0.3**
FETA Feichten 3.85 289 *i* Pn **Pn** **06 42 06.7 +1.8**
comp=N,2.3nm,0.3s
GRUS Gruza 3.87 120 *e*Pn **Pn** **06 42 05.8 +0.8**
HCY Herceg Novi 3.88 152 *e*Pn **Pn** **06 42 06.6 +1.4**
HCY *i* Sn **Sn** **06 42 51.3 +0.3**
HCY Herceg Novi 3.88 152 *e*Pn **Pn** **06 42 06.2 +1.0**
BZS Buzias 3.89 92 ⇓P **Pn** **06 42 05.5 +0.2**
BZS Buzias 3.89 92 *e*Pn **Pn** **06 42 05.1 -0.2**
SALO Salr 3.89 268 Pn **Pn** **06 42 06.4 +1.0**
ZCCA Zocca 3.93 248 Pn **Pn** **06 42 07.3 +1.4**
ZCCA IAML 06 44 04.0
comp=N,54nm,2.1s
ZCCA IAML 06 44 12.5
comp=E,50nm,3.1s
KOME Kolasin 3.94 140 ⇓*i* Pn **Pn** **06 42 08.0 +2.0**
KOME *i* Sn **Sn** **06 42 52.4 0.0**
CEME Cevo 3.94 148 *e*Pn **Pn** **06 42 07.2 +1.2**
CEME *i* Sn **Sn** **06 42 53.2 +0.7**
KECS Kecovo 3.95 48 *e*PN **Pn** **06 42 07.8 +1.7**
KECS *e*PG **Pg** **06 42 22.9 +2.0**
KECS *e*SN **Sn** **06 42 52.1 -0.6**
KECS *e*LG Lg 06 43 27.7
LANS Liptovska Anna 3.97 34 *e*PN **Pn** **06 42 08.7 +2.3**
LANS *e*SN **Sn** **06 42 54.1 +1.0**
RETA Reutte 3.98 295 *i* Pn **Pn** **06 42 07.4 +0.9**
comp=E,1.4nm,0.2s
MORC Moravsky Berou 3.98 14 ⇓P **Pn** **06 42 07.8 +1.2**
MORC Moravsky Berou 3.98 14 Pn **Pn** **06 42 06.6 0.0**
MORC Moravsky Berou 3.98 14 *e*PN **Pn** **06 42 07.5 +0.9**
AQU L'Aquila 4.05 209 ⇑*i*Pn **Pn** **06 42 07.1 -0.4**
AQU *e*Sn **Sn** **06 42 52.1 -3.0**
FUORN Ofenpass-Fuorn 4.09 282 Pn **Pn** **06 42 09.4 +1.2**
FUORN IAML 06 43 26.0
comp=E,32nm,0.7s
IVA Berane 4.10 137 *e*Pn **Pn** **06 42 09.1 +0.9**
IVA *i* Sn **Sn** **06 42 57.1 +0.8**
MDVR Moldovita 4.14 104 ⇑P **Pn** **06 42 08.5 -0.2**
MDVR Moldovita 4.14 104 *e*Pn **Pn** **06 42 09.6 +0.9**
BUM Brajici-Budva 4.15 150 *e*Pn **Pn** **06 42 10.9 +2.0**
BUM *i* Sn **Sn** **06 42 57.6 0.0**
CESX Cesi 4.15 218 Pn **Pn** **06 42 08.7 -0.2**
CESX IAML 06 43 35.4
comp=E,41nm,0.8s
CESX IAML 06 43 42.0
comp=N,42nm,0.7s
GOCS Kraljevo Serbi 4.15 123 *e*PN **Pn** **06 42 09.4 +0.4**
OKC Ostrava-Krasne 4.16 19 *e*PN **Pn** **06 42 10.2 +1.2**
OKC *e*SN **Sn** **06 42 56.3 -1.5**
SGRT San Giovanni R 4.17 183 Pn **Pn** **06 42 09.0 -0.1**
SGRT IAML 06 43 30.0
comp=N,53nm,0.9s
SGRT IAML 06 43 31.9
comp=E,50nm,0.6s
PDG Podgorica 4.17 146 ⇑P **Pn** **06 42 10.5 +1.4**
PDG Podgorica 4.17 146 Pn **Pn** **06 42 12.4 +3.2**
PDG Podgorica 4.17 146 *e*Pn **Pn** **06 42 10.8 +1.7**
PDG *e*Sn **Sn** **06 42 58.0 0.0**
PDG Podgorica 4.17 146 *e*Pn **Pn** **06 42 09.1 0.0**
PDG *e*Sn **Sn** **06 42 57.4 -0.6**
KRLC Kraliky 4.19 6 *e*PN **Pn** **06 42 10.6 +1.2**
OSSC Osservatorio P 4.19 237 Pn **Pn** **06 42 08.9 -0.5**
OSSC IAML 06 43 28.7
comp=E,37nm,1.0s
OSSC IAML 06 43 34.8
comp=N,36nm,1.2s
PRU Pruhonice 4.20 346 *e*PN **Pn** **06 42 10.7 +1.2**
KUBS Kucevo 4.24 109 *e*Pn **Pn** **06 42 09.1 -1.0**
PRA Prague 4.30 346 *e*PN **Pn** **06 42 12.4 +1.6**
DRME Dracevica, Mon 4.35 148 *e*Pn **Pn** **06 42 12.9 +1.3**
DRME *e*Sn **Sn** **06 43 03.7 +1.2**
DRME Dracevica, Mon 4.35 148 ⇑*i*Pn **Pn** **06 42 13.1 +1.5**
DAVOX Davos/Dischmat 4.37 284 Pn **Pn** **06 42 14.8 +2.7**
comp=N,3.0nm,0.3s,baz=94,slow=16,SNR=52
DAVOX Sn **Sn** **06 43 05.3 +2.0**
comp=N,1.1nm,0.3s,baz=132,slow=19,SNR=3.7
comp=N,6.8nm,0.3s
DPC Dobruska-Polom 4.44 2 *e*PN **Pn** **06 42 13.4 +0.6**
DAVA Damuels 4.48 290 *i* Pn **Pn** **06 42 14.4 +0.8**
comp=N,3.1nm,0.3s
SELS Selova 4.50 125 *e*Pn **Pn** **06 42 14.5 +0.8**
ULC Ulcinj 4.57 149 *e*Pn **Pn** **06 42 16.2 +1.6**
ULC *i* Sn **Sn** **06 43 07.8 -0.1**
HERR Herculane 4.59 101 ⇑P **Pn** **06 42 14.8 -0.1**
UPC Upice 4.59 360 *e*PN **Pn** **06 42 15.9 +1.0**
OSTC Ostas 4.64 1 *e*PN **Pn** **06 42 16.5 +0.9**
CHVC Chvalec 4.67 360 *e*PN **Pn** **06 42 16.5 +0.5**
DRGR 4.68 77 ⇑P **Pn** **06 42 15.7 -0.5**
DRGR 4.68 77 *e*Pn **Pn** **06 42 16.2 0.0**
DRGR *e*Sn **Sn** **06 43 08.0 -2.7**
TUE Stuetta 4.70 279 Pn **Pn** **06 42 17.6 +1.0**
TUE IAML 06 43 42.6
comp=E,18nm,0.9s
TUE IAML 06 43 46.4
comp=N,19nm,0.6s
PVCC Panska Ves 4.72 348 *e*PN **Pn** **06 42 17.7 +1.1**
GZR Gura Zlata 4.73 94 ⇑P **Pn** **06 42 16.8 -0.1**
RICC Richard 4.81 345 *e*PN **Pn** **06 42 18.7 +0.8**
ZAGS Zajecar 4.86 113 *e*Pn **Pn** **06 42 19.3 +0.7**
MARR Marisel-Cluj 4.94 79 ⇓P **Pn** **06 42 19.1 -0.7**
STHS Stebnicka Huta 4.94 43 *e*PN **Pn** **06 42 20.9 +1.2**
STHS *e*SN **Sn** **06 43 16.5 -0.6**
NKC Novy Kostel 4.95 332 *e*PN **Pn** **06 42 20.5 +0.6**
NKC *e*SG **Sg** **06 43 44.4 +0.3**
comp=N,76nm,0.8s
OJC Ojcow 4.97 29 Pn **Pn** **06 42 21.1 +1.0**

GRA1 Grafenberg Arr 4.99 321 Pn **Pn** **06 42 19.8 -0.6**
GRA1 IAML 06 43 58.7
comp=E,46nm,1.8s
GRA1 IAML 06 44 11.2
comp=N,38nm,1.4s
GRFO Grafenberg 4.99 321 Pn **Pn** **06 42 20.0 -0.3**
GRFO IAML 06 43 58.6
comp=N,25nm,0.9s
GRFO IAML 06 44 11.1
comp=N,20nm,1.0s
PAOL Paolisi 5.01 193 Pn **Pn** **06 42 20.0 -0.7**
PAOL IAML 06 43 29.5
comp=N,17nm,0.7s
HSKC Hora Svate Kat 5.01 340 *e*PN **Pn** **06 42 21.2 +0.5**
ACER Acerenza 5.13 181 Pn **Pn** **06 42 22.0 -0.3**
BARS Barje 5.15 125 *e*Pn **Pn** **06 42 23.7 +1.1**
MATE Matera 5.29 175 ⇑P **Pn** **06 42 26.7 +2.3**
ZAPS Zavoj 5.38 117 *e*Pn **Pn** **06 42 26.7 +0.9**
BOSS Bosilegrad 5.74 124 *e*Pn **Pn** **06 42 31.5 +0.8**
CLL Collm 5.76 340 Pn **Pn** **06 42 31.5 +0.6**
CLL Collm 5.76 340 *e*Pn **Pn** **06 42 31.0 0.0**
CLL *e*Pg **Pg** **06 42 55.0 -0.5**
CLL *ex* x 06 43 33.0
CLL *ex* x 06 43 42.0
CLL *ex* x 06 43 56.0
CLL *e*Sg **Sg** **06 44 07.0 -3.1**
comp=Z,39nm,1.0s
BFO Black Forest 5.81 297 Pn **Pn** **06 42 30.4 -1.2**
CUC Castrocucco 5.93 182 Pn **Pn** **06 42 32.5 -0.7**
ARR Arges 6.03 92 ⇓P **Pn** **06 42 33.8 -0.8**
SENIN Lac Senin/Sane 6.11 277 Pn **Pn** **06 42 37.5 +1.5**
VOIR 6.31 91 ⇓P **Pn** **06 42 38.0 -0.5**
DOPR Dopca 6.50 86 ⇓P **Pn** **06 42 40.4 -0.7**
BUR08 Bucovina Ar. S 6.50 71 Pn **Pn** **06 42 41.9 +0.7**
BURAR Bucovina Array 6.51 72 ⇑P **Pn** **06 42 40.9 -0.3**
BURAR Bucovina Array 6.51 72 Pn **Pn** **06 42 42.6 +1.3**
ECH Echery 6.51 294 Pn **Pn** **06 42 40.4 -0.8**
PLVB Pleven 6.60 110 ⇑P **Pn** **06 42 42.2 -0.3**
BNI Bardonecchia 6.66 256 Pn **Pn** **06 42 43.7 +0.2**
TIP Timpagrande 6.76 175 ⇑P **Pn** **06 42 46.3 +1.6**
TIP Timpagrande 6.76 175 Pn **Pn** **06 42 45.2 +0.5**
KEK Kerkira 6.78 155 Pn **Pn** **06 42 47.0 +2.1**
BTNL Ternell 8.11 309 *d*P **Pn** **06 43 04.6 +1.4**
MEM Membach 8.19 309 *d*P **Pn** **06 43 05.6 +1.4**
RCHB Rochefort 8.41 304 *d*P **Pn** **06 43 08.5 +1.2**
comp=Z,12nm,0.5s
BCLA Clavier 8.49 306 *d*P **Pn** **06 43 09.6 +1.3**
BGES Gesves 8.59 305 *d*P **Pn** **06 43 11.1 +1.3**
BMRD Maredsous 8.74 304 *d*P **Pn** **06 43 11.0 -0.8**
DOU Dourbes 8.75 303 *d*P **Pn** **06 43 13.6 +1.7**
EKA Eskdalemuir Ar 15.37 315 Pn **Pn** **06 44 43.0 +0.9**
baz=120,slow=13
comp=Z,0.7nm,0.4s
ESDC Sonseca Array 15.96 254 Pn **P** **06 44 53.6 0.0**
baz=48,slow=11,SNR=4.4
comp=Z,0.5nm,0.9s
FINES FINESS Array B 16.61 17 Pn **Pn** **06 44 54.7 -3.5**
comp=Z,0.1nm,0.3s,baz=195,slow=12,SNR=3.5
comp=Z,1.2nm,0.8s

*BJI **22** 06:48:41.0, 11°.20S×115°.20E, h10km, mB5.1/29, mb5.0/71, Ms4.6/32, Ms7 4.3/36*
*IDC **22** 06:48:42.7±0.3, 10°.83S×115°.32E, h0km, mb5.1/35, mbtmp5.2/39, ML5.2/4, MS3.9/50, Error ellipse: s-maj=13.4km s-min=10.2km az=81.0*
*MOS **22** 06:48:42.2±1.1, 10°.91S×115°.27E, h13km, mb5.3/54, Error ellipse: s-maj=9.0km s-min=5.4km az=116.0*
*NEIC **22** 06:48:43.4, 11°.02S×115°.16E, h10km*
*GFZ **22** 06:48:43.8, 11°.04S×115°.19E, h10km, MW4.9, Moment Tensor Solution. s52 Moment tensor: Mrr=2.65; Mθθ2.63; Mϕϕ 0.02; Mrθ 1.12; Mrϕ -0.31; Mθϕ 0.01; Fault plane solution: NP1:ϕ=99.00000°, δ33.00000°, λ-85.00000°. NP2:ϕ=273.00000°, δ56.00000°, λ-93.00000°. Principal axes: T 2.8900, Plg11.0000°, Azm6.0000°; N 0.0000, Plg2.0000°, Azm275.0000°; P -2.8800, Plg78.0000°, Azm172.0000°;*
*NEIC **22** 06:48:43.5±1.9, 11°.01S±0°.06×115°.16E±0°.07, h10km±1km, mb5.3/126, Mww4.9/11 Error ellipse: s-maj=11.4km s-min=8.8km az=58.0*
*DJA **22** 06:48:44.1±0.1, 11°.S±2°×11°.5E±°, h10km, M5.1/131, mB5.6/86, mb5.3/131, MLv5.6/48, Mw5.0/61, Mw(mB)5.1/86, MwMwp4.8/8, Mwp5.1/8*
*GCMT **22** 06:48:46.4±0.2, 11°.12S±0°.01×115°.19E±0°.02, h12km, MW4.9/112, Moment Tensor Solution. s45,c55; s112,c159; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-3.10±.06; Mθθ2.82±.05; Mϕϕ0.28±.06; Mrθ1.00±.19; Mθϕ-0.24±.05; Mϕr0.15±.26; Best double couple: Mo3.13600×10¹⁶ NP1:ϕ=99.00000°, δ36.00000°, λ-84.00000°. NP2:ϕ=271.00000°, δ54.00000°, λ-95.00000°. Principal axes: T 3.0000, Plg9.0000°; Azm5.0000°; N 0.2750, Plg4.0000°, Azm274.0000°; P -3.2730, Plg80.0000°, Azm162.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **22** 06:48:47.9, 11°.02S×115°.16E, h12km, Moment Tensor Solution. Duration: 1±5 Moment tensor: Scale 10¹⁶Nm; Mrr-2.74; Mθθ2.73; Mϕϕ0.01; Mrθ-0.96; Mθϕ-0.25; Mϕr-0.30; Fault plane solution: Mo2.92000×10¹⁶ NP1: ϕ±282.46000°, δ36.14000°, λ-77.96000°. NP2:ϕ±87.67000°, δ54.78000°, λ-98.66000°. Principal axes: T 2.9059, Plg9.0000°, Azm184.0000°; N 0.0351, Plg7.0000°, Azm93.0000°; P -2.9410, Plg78.0000°, Azm326.0000°;*
ISC 22 06:48:43.8±0.5, 11°.04S±0°.03×115°.26E±0°.04, h15km±2km, h15km:pP-P,n561,σ1°72/541,mb5.2/171,MS4.2/61, 28C-14D,South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
IGBI	**Denpasar**	**2.21**	**357**	P	**Pn**		**06 49 19.6**	**-0.4**
DNP	**Denpasar**	**2.34**	**359**	P	**Pn**		**06 49 22.4**	**+0.5**
RTBI	**Rangdo, Negare**	**2.58**	**353**	P	**Pn**		**06 49 24.8**	**-0.4**
KHKI	**Kahang-Kahang**	**2.68**	**7**	P	**Pn**		**06 49 28.1**	**+1.6**
JAGI	**Jajag, Banyuwa**	**2.77**	**337**	P	**Pn**		**06 49 27.6**	**-0.2**
JAGI	**Jajag, Banyuwa**	**2.77**	**337**		**Pn**		**06 49 27.1**	**-0.7**
JAGI	**Jajag, Banyuwa**	**2.77**	**337**	P	**Pn**		**06 49 27.1**	**-0.7**
TWSI	**Taliwang, Sumb**	**2.79**	**35**	P	**Pn**		**06 49 28.5**	**+0.5**
SRBI	**Singaraja**	**2.93**	**359**	P	**Pn**		**06 49 30.7**	**+0.7**
BYJI	**Banyuwangi**	**2.94**	**342**	P	**Pn**		**06 49 29.8**	**-0.3**
GMJI	**Gumukmas**	**3.28**	**327**	P	**Pn**		**06 49 33.6**	**-1.1**
PLAI	**Plampang**	**3.31**	**49**	P	**Pn**		**06 49 36.2**	**+1.0**
PLAI	**Plampang**	**3.31**	**49**	P	**Pn**		**06 49 35.6**	**+0.4**
ABJI	**Asem Bagus**	**3.38**	**342**	P	**Pn**		**06 49 36.9**	**+0.8**
BLJI	**Banyuglugur**	**3.66**	**333**	P	**Pn**		**06 49 40.2**	**+0.2**
DBNI	**Kabupaten Domp**	**3.92**	**50**	P	**Pn**		**06 49 45.0**	**+1.4**
KMMI	**Kalianget**	**4.16**	**342**	P	**Pn**		**06 49 48.0**	**+1.1**
WBSI	**Waikabubak, Su**	**4.29**	**72**	P	**Pn**		**06 49 48.0**	**-0.8**
SNJI	**Sawahan-Nganju**	**4.73**	**313**	P	**Pn**		**06 49 56.0**	**+1.1**
SJI	**Sawahan**	**4.76**	**313**	P	**Pn**		**06 49 56.1**	**+0.9**
PCJI	**Pacitan**	**4.92**	**305**	P	**Pn**		**06 49 56.5**	**-0.8**
WSI	**Wainggapu** 14µm380nm,0.7s	**5.14**	**75**	P	**Pn**		**06 50 00.5**	**+0.2**
LBFI	**Labuhan Bajo,**	**5.22**	**61**	P	**Pn**		**06 50 02.2**	**+0.7**
NGJI	**Ngawi** 5.8nm10µm565nm,1.0s	**5.23**	**314**	P	**Pn**		**06 50 03.1**	**+1.5**
BASI	**Baing, Sumba** 4.6nm10µm311nm,1.1s	**5.29**	**82**	P	**Pn**		**06 50 05.9**	**+3.5**
TBJI	**Tambak Boyo** 5µm4µm345nm,0.7s	**5.38**	**321**	P	**Pn**		**06 50 05.3**	**+1.7**
UGM	**Wanagama**	**5.61**	**303**	P	**Pn**		**06 50 05.5**	**-1.4**
UGM	**Wanagama**	**5.61**	**303**		**Pn**		**06 50 06.5**	**-0.3**
UGM				Sn	**Sn**		**06 51 04.5**	**-6.6**
UGM	**Wanagama**	**5.61**	**303**	P	**Pn**		**06 50 07.3**	**+0.4**
YOGI	**Yogyakarta**	**5.85**	**303**	P	**Pn**		**06 50 08.6**	**-1.6**
SMRI	**Semarang**	**6.19**	**309**	P	**Pn**		**06 50 13.9**	**-1.0**
SMRI	**Semarang**	**6.19**	**309**		**Pn**		**06 50 14.3**	**-0.6**
SMRI	**Semarang** 1.7nm6µm157nm,0.7s	**6.19**	**309**	P	**Pn**		**06 50 17.8**	**+2.9**
EDFI	**Ende, Flores** 3µm91nm,0.6s	**6.73**	**71**	P	**Pn**		**06 50 21.9**	**-0.4**
SCJI	**Gunung Srandil**	**6.87**	**298**	P	**Pn**		**06 50 24.4**	**+0.2**
BSSI	**Bau Bau, Buton** 1.7nm4µm314nm,0.8s	**7.10**	**47**	P	**Pn**		**06 50 29.6**	**+2.3**
MKS	**Makassar** 1.0nm2µm169nm,0.8s	**7.12**	**36**	P	**Pn**		**06 50 29.9**	**+2.2**
CTJI	**Waduk Cacaban** 1.0nm3µm106nm,0.7s	**7.21**	**303**	P	**Pn**		**06 50 29.5**	**+0.6**

KPJI Karang Pucung 7.25 300 P **Pn** **06 50 29.6 +0.2**
4µm195nm,0.6s
MMRI Maumere 7.28 71 P **Pn** **06 50 31.7 +1.9**
MMRI Maumere 7.28 71 **Pn** **06 50 31.4 +1.7**
MMRI Maumere 7.28 71 P **Pn** **06 50 31.3 +1.5**
2.2nm2µm5µm300nm,0.9s
KAPI Kappang 7.45 37 Pn **Pn** **06 50 32.1 0.0**
41nm,0.3s,baz=207,slow=6.8,SNR=34
KAPI Sn **Sn** **06 51 52.3 -4.2**
20nm,0.3s,baz=43,slow=23,SNR=13
KAPI LR LR 06 54 01.0
comp=Z,1µm,19.2s,baz=200,slow=44
87nm,0.3s
KAPI Kappang 7.45 37 P **Pn** **06 50 34.1 +1.9**
KAPI Kappang 7.45 37 **Pn** **06 50 34.4 +2.2**
KAPI Kappang 7.45 37 P **Pn** **06 50 34.3 +2.2**
BBKI Banjar Baru 7.54 357 P **Pn** **06 50 37.7 +4.4**
0.8nm4µm191nm,0.9s
BATI Baumata 8.30 85 Pn **Pn** **06 50 43.5 -0.3**
40nm,0.3s,baz=28,slow=0.3,SNR=14
BATI Sn **Sn** **06 52 12.8 -4.7**
52nm,0.3s,baz=357,slow=20,SNR=14
128nm,0.4s
BBJI Bungbulang 8.31 295 P **Pn** **06 50 42.4 -1.6**
BBJI Bungbulang 8.31 295 **Pn** **06 50 42.9 -1.1**
BBJI Bungbulang 8.31 295 P **Pn** **06 50 43.1 -0.9**
106nm,0.6s
PMSI Majene 8.32 26 P **Pn** **06 50 46.6 +2.5**
4µm381nm,0.8s
SPSI Sidrap Palu 8.33 33 P **Pn** **06 50 48.1 +4.0**
108nm,0.7s
LEM Lembang 8.63 298 Pn **Pn** **06 50 49.2 +0.7**
12nm,0.3s,baz=115,slow=11,SNR=11
LEM LR LR 06 54 47.5
comp=Z,990nm,18.2s,baz=116,slow=42
56nm,0.7s
SOEI Soe 8.95 83 P **Pn** **06 50 53.8 +1.0**
SOEI Soe 8.95 83 **Pn** **06 50 53.5 +0.7**
SOEI Soe 8.95 83 P **Pn** **06 50 54.8 +2.0**
2µm207nm,0.7s
MMSI Mamuju 9.05 24 P **Pn** **06 50 57.9 +3.8**
95nm,0.7s
TTSI Tana Toraja 9.14 30 P **Pn** **06 50 59.9 +4.6**
XMI Christmas Isla 9.42 273 P **Pn** **06 50 56.0 -3.2**
DBJI Dramaga 9.52 297 P **Pn** **06 51 04.4 +3.9**
125nm,0.6s
CGJI Cibinong 10.43 294 P **Pn** **06 51 11.7 -1.2**
MBWA Marble Bar 10.94 157 P Pn 06 51 15.4 -4.6
comp=Z,363nm,0.4s,comp=Z,9µm
MBWA Marble Bar 10.94 157 P **Pn** **06 51 16.8 -3.2**
MBWA Marble Bar 10.94 157 **Pn** **06 51 16.2 -3.8**
PCI Palu 11.04 25 P Pn 06 51 31.6 +10
TPI Tanjungpandan 11.16 317 P **Pn** **06 51 25.7 +2.6**
PSAC1 Pilbara Seismi 11.31 158 P **Pn** **06 51 21.0 -4.1**
PSA00 Pilbara Seismi 11.36 158 P **Pn** **06 51 21.6 -4.2**
comp=Z,136nm,0.5s,comp=Z,3µm
PSA00 Pilbara Seismi 11.36 158 P **Pn** **06 51 22.2 -3.6**
PSA00 Pilbara Seismi 11.36 158 **Pn** **06 51 21.9 -3.8**
PSA00 Pilbara Seismi 11.36 158 Pn **Pn** **06 51 21.9 -3.8**
GIRL Giralia 11.59 185 P **Pn** **06 51 25.5 -3.3**
GIRL Giralia 11.59 185 **Pn** **06 51 25.8 -3.0**
APSI Ampana 11.89 33 P Pn 06 51 43.8 +11
KASI Kota Agung 11.97 296 P **Pn** **06 51 34.2 0.0**
comp=Z,2µmcomp=Z,127nm,0.7s
KLSI 12.19 300 P **Pn** **06 51 38.0 +0.9**
MPSI Mapaga 12.20 22 P Pn 06 51 42.0 +4.7
FITZ Fitzroy Crossi 12.25 126 Pn **Pn** **06 51 36.0 -2.0**
comp=Z,2.7nm,0.3s,baz=303,slow=8.7,SNR=61
FITZ Sn Sn 06 53 42.7 -12
comp=Z,4.3nm,0.3s,baz=16,slow=20,SNR=11
FITZ LR LR 06 56 02.5
comp=Z,561nm,21.9s,baz=302,slow=36
LUWI Luwuk 12.42 37 P **Pn** **06 51 42.5 +2.2**
LUWI Luwuk 12.42 37 P **Pn** **06 51 43.0 +2.7**
comp=Z,2µmcomp=Z,115nm,1.1s
LWLI Liwa 12.60 297 P **Pn** **06 51 43.8 +1.0**
comp=Z,215nm,0.7s
MDSI Maura Dua 12.76 300 P **Pn** **06 51 44.7 -0.2**
comp=Z,55nm,0.8s
MRSI Marisa 13.23 31 P **P** **06 51 58.7 -2.5**
comp=Z,951nmcomp=Z,44nm,0.8s
TOLI2 Tolitoli 13.26 25 P **Pn** **06 51 53.0 +1.3**
TOLI2 Tolitoli 13.26 25 **Pn** **06 51 53.7 +2.0**
SBUM Sibu 13.73 347 P **Pn** **06 51 58.4 +0.2**
SBUM Sibu 13.73 347 **Pn** **06 51 59.4 +1.2**
MNAI Manna 13.88 298 P **Pn** **06 51 58.4 -1.7**
MNAI Manna 13.88 298 **Pn** **06 51 57.7 -2.4**
MNAI Manna 13.88 298 P **Pn** **06 51 58.5 -1.7**
SANI Sanana 13.89 51 P **Pn** **06 52 01.2 +0.8**
SANI Sanana 13.89 51 P **P** **06 52 08.8 +0.2**
GTOI Gorontalo 13.92 34 P **Pn** **06 52 04.2 +3.4**
comp=Z,1µmcomp=Z,119nm,0.6s
KNRA Kununurra 13.92 111 P **Pn** **06 51 59.2 -1.6**
comp=Z,42nm,0.8s
KNRA Kununurra 13.92 111 **Pn** **06 51 59.4 -1.4**
KSI Kapahiang 14.54 299 P **Pn** **06 52 07.9 -1.5**
AAI Ambon 14.75 61 P **P** **06 52 21.4 +3.2**
MASI Maura Aman, Be 15.11 300 P **Pn** **06 52 14.4 -2.6**
comp=Z,4µmcomp=Z,199nm,0.8s
KRAI Karang Ratu 15.11 60 P **Pn** **06 52 19.3 +2.3**
DRS Darwin Rock St 15.38 97 P **Pn** **06 52 21.5 +1.0**
MTN Manton Dam 15.63 98 P **Pn** **06 52 23.7 -0.2**
comp=Z,67nm,1.0s,comp=Z,1µm
MTN Manton Dam 15.63 98 **Pn** **06 52 24.0 +0.1**
MEEK Meekatharra 15.84 169 P **Pn** **06 52 22.7 -3.7**
comp=Z,81nm,0.4s,comp=Z,2µm
MEEK Meekatharra 15.84 169 P **Pn** **06 52 23.9 -2.6**
BNDI Bandanaira 15.88 67 P **Pn** **06 52 28.7 +1.7**
BNDI Bandanaira 15.88 67 P **P** **06 52 32.5 +1.8**
SAUI Saumlaki 16.11 81 Pn **Pn** **06 52 31.2 +1.2**
SAUI IAmb IAmb 06 52 55.3
comp=Z,318nm,1.0s
MYLDM Lahad Datu 16.43 11 P **Pn** **06 52 35.7 +1.6**
MYLDM Lahad Datu 16.43 11 P **P** **06 52 40.3 +3.5**
comp=Z,2µmcomp=Z,127nm,1.9s
TNTI Ternate 16.81 46 P **Pn** **06 52 40.4 +1.5**
TNTI Ternate 16.81 46 P **P** **06 52 48.1 +7.1**
KDU Kakadu 16.93 97 P **Pn** **06 52 39.8 -0.5**
comp=Z,16nm,0.6s
KKM Kota Kinabalu 16.99 3 P **Pn** **06 52 42.1 +0.8**
KKM Kota Kinabalu 16.99 3 P **Pn** **06 52 41.1 -0.2**
KKM Kota Kinabalu 16.99 3 P **P** **06 52 42.7 -0.5**
MYKOM Kota Tinggi 17.06 318 P **Pn** **06 52 40.5 -1.6**
PPSI Pulau Enggai 17.22 297 P **Pn** **06 52 41.4 -2.6**
comp=Z,376nm,1.2s
PDSI Padang 17.81 303 P **Pn** **06 52 47.4 -4.1**
MORW Morawa 17.96 178 P **Pn** **06 52 50.3 -2.8**
comp=Z,72nm,0.8s
MORW Morawa 17.96 178 P **Pn** **06 52 50.8 -2.3**
MORW Morawa 17.96 178 **Pn** **06 52 50.8 -2.3**
BKNI Bangkinang 18.09 308 P **Pn** **06 52 51.0 -3.8**
PPI Padang Panjang 18.13 304 P **Pn** **06 52 54.4 -0.9**
comp=Z,78nm,0.9s
WRKA Warakurna 18.62 140 P **P** **06 52 59.7 -1.3**
comp=Z,23nm,0.7s,comp=Z,716nm
FAKI Fak Fak 18.68 66 P **P** **06 53 01.1 -0.6**
FAKI Fak Fak 18.68 66 P **P** **06 52 59.8 -1.9**
FAKI IAmb IAmb 06 53 02.4
comp=Z,78nm,0.5s
FAKI Fak Fak 18.68 66 P **P** **06 53 00.3 -1.4**
comp=Z,76nm,0.7s
SISI Saibi 18.73 300 P **P** **06 52 58.7 -3.6**
comp=Z,1µmcomp=Z,93nm,0.9s
SWI Sorong 18.83 59 P **P** **06 53 03.2 -0.2**
comp=Z,2µmcomp=Z,201nm,0.7s
SIJI Sorong 18.84 59 P **P** **06 53 02.7 -0.7**
comp=Z,13nm,0.3s,baz=286,slow=7.0,SNR=29
SIJI S **Sn** **06 56 26.1 -8.7**
comp=Z,21nm,0.9s,baz=173,slow=20,SNR=7.1
SIJI LR LR 07 01 38.0
comp=Z,196nm,19.6s,baz=243,slow=42
comp=Z,87nm,0.6s
SIJI Sorong 18.84 59 P **P** **06 53 03.3 -0.1**
comp=Z,2µmcomp=Z,124nm,0.8s
MNSI Mandailing Nat 19.52 306 P P 06 52 59.1 -12
BLDU Ballidu 19.53 176 P **P** **06 53 10.7 -0.2**
comp=Z,232nm,0.6s,comp=Z,2µm
BLDU Ballidu 19.53 176 P **P** **06 53 09.5 -1.4**
WB0 Warramunga Arr 20.37 118 P **P** **06 53 20.7 +0.5**
WB0 IAmb IAmb 06 53 22.9
comp=Z,78nm,0.7s
WRA Warramunga Arr 20.39 118 P **P

comp=Z,68nm,0.9s
WRA Warramunga Arr 20.39 118 P **P** **06 53 21.1 +0.7**
WRA Warramunga Arr 20.39 118 P **P** **06 53 21.1 +0.7**
WRA pmax pmax
comp=Z,5.0nm,1.0s
WRAB Tennant Creek 20.39 118 P **P** **06 53 20.7 +0.2**
WRAB Tennant Creek 20.39 118 P **P** **06 53 21.4 +0.9**
WRAB IAmb IAmb 06 53 27.4
comp=Z,62nm,0.7s
WRAB Tennant Creek 20.39 118 *de*P **P** **06 53 22.1 +1.6**
WRAB pmax pmax
comp=Z,64nm,0.6s
WR8 Warramunga Arr 20.53 118 P **P** **06 53 23.4 +1.5**
WR8 Warramunga Arr 20.53 118 P **P** **06 53 23.9 +1.9**
WR8 IAmb IAmb 06 53 24.9
comp=Z,152nm,0.7s
KLBR Kellerberrin 20.59 174 P Pn 06 53 24.1 -0.5
comp=Z,261nm,0.6s
KLBR Kellerberrin 20.59 174 P **P** **06 53 21.1 -1.3**
MTKN Mount Kenneth 20.80 179 P **P** **06 53 23.2 -1.5**
MUN Mundaring 20.86 178 P **P** **06 53 23.9 -1.5**
RKPI Ransiki, Papua 21.03 65 P P 06 53 41.3 +14
KMBL Kambalda 21.14 164 P **P** **06 53 29.2 +0.7**
comp=Z,34nm,1.0s
MWPI Manokwari, Pap 21.18 63 P **P** **06 53 34.9 +5.9**
comp=Z,242nm,0.8s
RPSI Rantau Prapat 21.22 309 P **P** **06 53 27.9 -1.4**
PSI Prapat 21.29 309 P **P** **06 53 27.9 -2.3**
PSI pmax pmax
comp=Z,43nm,1.2s
PSI Prapat 21.29 309 P **P** **06 53 32.8 +2.6**
GSI Gunungsitoli 21.44 304 P **P** **06 53 30.0 -1.7**
GSI Gunungsitoli 21.44 304 P **P** **06 53 38.2 +6.5**
AS31 Alice Springs 21.75 128 P **P** **06 53 36.5 +1.4**
ASAR Alice Springs 21.75 128 P **P** **06 53 36.7 +1.7**
comp=Z,36nm,0.8s,baz=303,slow=9.9,SNR=241
ASAR S **S** **06 57 30.1 -5.4**
comp=Z,25nm,1.0s,baz=301,slow=22,SNR=10
ASAR LR LR 07 02 24.5
comp=Z,252nm,21.1s,baz=300,slow=38
comp=Z,36nm,0.8s
ASAR Alice Springs 21.75 128 P **P** **06 53 36.9 +1.8**
ASAR Alice Springs 21.75 128 P **P** **06 53 36.9 +1.8**
KULM Kulim 21.78 317 P **P** **06 53 34.5 -0.9**
KULM Kulim 21.78 317 P **P** **06 53 34.2 -1.3**
KULM Kulim 21.78 317 P **P** **06 53 36.0 +0.6**
comp=Z,61nm,1.1s
NWAO Narrogin (SRO) 21.86 176 LR LR 07 01 47.8
comp=Z,531nm,20.7s,baz=273,slow=36
NWAO Narrogin (SRO) 21.86 176 P **P** **06 53 39.7 +3.5**
NWAO Narrogin (SRO) 21.86 176 P **P** **06 53 34.7 -1.4**
NWAO Narrogin (SRO) 21.86 176 P **P** **06 53 35.9 -0.2**
NWAO IAmb IAmb 06 53 44.1
comp=Z,92nm,1.2s
NWAO Narrogin (SRO) 21.86 176 P **P** **06 53 35.9 -0.2**
NWAO pmax pmax
comp=Z,92nm,1.2s
TSI Tuntungan 22.01 310 P **P** **06 53 40.2 +2.3**
comp=Z,272nm,1.1s
KCSI Kotacane, Aceh 22.63 309 P **P** **06 53 44.5 0.0**
comp=Z,64nm,1.0s
FORT Forrest 22.96 151 P **P** **06 53 49.0 +1.2**
comp=Z,94nm,0.8s
FORT Forrest 22.96 151 P **P** **06 53 47.7 -0.1**
FORT IAmb IAmb 06 54 16.2
comp=Z,69nm,0.8s
MLSI Meulaboh, Aceh 24.15 308 P **P** **06 54 01.4 +1.7**
comp=Z,82nm,0.5s
WAMI Wamena 24.30 75 P P 06 54 14.1 +13
LHMI Lhok Sumawe 24.36 311 P **P** **06 54 01.4 -0.2**
QIS Mount Isa 25.23 115 P **P** **06 54 10.6 +1.0**
comp=Z,64nm,1.3s
QIS Mount Isa 25.23 115 P **P** **06 54 09.9 +0.4**
TGY Tagaytay City 25.60 13 P **P** **06 54 12.6 -0.3**
comp=Z,51nm,0.3s,baz=187,slow=6.5,SNR=5.3
TGY LR LR 07 06 30.8
comp=Z,197nm,18.3s,baz=66,slow=42
comp=Z,51nm,0.3s
BSI Banda Aceh 25.78 309 P **P** **06 54 21.5 +7.0**
GENI Genyem 26.09 73 P **P** **06 54 22.7 +5.4**
comp=Z,3µmcomp=Z,49nm,0.7s
COEN Coen 27.40 99 P **P** **06 54 29.4 +0.3**
comp=Z,15nm,0.7s
COEN Coen 27.40 99 P **P** **06 54 29.5 +0.3**
COEN Coen 27.40 99 P **P** **06 54 29.3 +0.2**
BBOO Buckleboo 28.90 142 P **P** **06 54 41.4 -1.0**
comp=Z,39nm,1.1s
BBOO Buckleboo 28.90 142 P **P** **06 54 42.0 -0.4**
BBOO Buckleboo 28.90 142 P **P** **06 54 43.2 +0.8**
MTSU Mount Surprise 28.96 108 P **P** **06 54 45.5 +2.4**
comp=Z,22nm,1.0s
QIZ Qiongzhong 30.35 350 P **P** **06 54 54.6 -0.6**
QIZ S **S** **06 59 54.9 -0.4**
QIZ sS **sS** **07 00 04.5 +3.9**
QIZ pmax pmax
comp=Z,24nm,1.1s
QIZ L L
comp=Z,220nm,14.4s
QIZ L L
comp=Z,170nm,12.4s
QIZ L L
comp=Z,290nm,16.5s
HTT Hallett 31.10 139 P **P** **06 55 02.1 +0.2**
comp=Z,11nm,1.1s
HTT Hallett 31.10 139 P **P** **06 55 01.6 -0.3**
CTA Charters Tower 31.14 111 LR LR 07 08 04.1
comp=Z,188nm,22.0s,baz=262,slow=37
CTAO Charters Tower 31.14 111 P **P** **06 55 03.6 +1.3**
CTAO Charters Tower 31.14 111 P **P** **06 55 03.6 +1.3**
CTAO pmax pmax
comp=Z,27nm,1.4s
QLP Quilpie 31.38 124 P **P** **06 55 06.0 +1.6**
comp=Z,74nm,1.1s
QLP Quilpie 31.38 124 P **P** **06 55 04.4 +0.1**
PMG Port Moresby 31.43 90 P **P** **06 55 05.9 +1.0**
comp=Z,5.4nm,0.5s,baz=281,slow=10,SNR=3.5
comp=Z,5.4nm,0.5s
PBA Port Blair 31.76 315 P **P** **06 55 06.3 -1.4**
PBA IAmb IAmb 06 55 09.5
comp=Z,28nm,0.7s
MANU Manus Island 33.09 77 P **P** **06 55 19.8 +0.2**
MANU IAmb IAmb 06 55 22.8
comp=Z,28nm,0.9s
CMAR Chiang Mai Arr 33.44 331 P **P** **06 55 23.5 +1.1**
comp=Z,29nm,0.9s,baz=162,slow=7.8,SNR=72
CMAR PcP **PcP** **06 58 05.6 +1.9**
comp=Z,3.8nm,0.6s,baz=188,slow=2.9,SNR=7.0
comp=Z,29nm,0.9s
CMAR Chiang Mai Arr 33.44 331 P **P** **06 55 21.5 -1.0**
CHTO Chiang Mai 33.74 331 P **P** **06 55 24.0 -1.1**
CHTO Chiang Mai 33.74 331 P **P** **06 55 24.0 -1.1**
CHTO pmax pmax
comp=Z,16nm,0.8s
CHTO Chiang Mai 33.74 331 P **P** **06 55 26.0 +0.9**
comp=Z,22nm,0.9s
TPUB Ta-pu 34.53 9 P **P** **06 55 32.7 +0.8**
YULB Yu-li 34.72 10 P **P** **06 55 34.1 +0.6**
YULB Yu-li 34.72 10 P **P** **06 55 32.1 -1.5**
CMSA Cobar Meteorol 34.74 131 P **P** **06 55 36.5 +2.9**
CMSA Cobar Meteorol 34.74 131 P **P** **06 55 33.6 0.0**
ARPS Mount Arapiles 35.08 141 P **P** **06 55 34.5 -2.1**
comp=Z,19nm,2.7s
YOJ Yonaguni jima 36.08 12 P **P** **06 55 45.5 +0.3**
EIDS Eidsvold 36.76 118 P **P** **06 55 50.4 -0.7**
TOO Toolangi 37.87 139 P **P** **06 56 03.6 +3.2**
TOO Toolangi 37.87 139 P **P** **06 56 00.5 +0.1**
TOO Toolangi 37.87 139 P **P** **06 56 00.5 +0.1**
TOO pmax pmax
comp=Z,8.0nm,1.1s
KMI2 Kunming 37.98 341 ⇑P **P** **06 56 03.4 +1.8**
KMI2 S **S** **07 01 53.5 0.0**
KMI2 pmax pmax
comp=Z,38nm,0.9s
KMI2 pmax pmax
comp=Z,150nm,3.2s
KMI2 L L
comp=Z,280nm,20.0s
KMI2 L L
comp=Z,350nm,18.2s
KMI2 L L
comp=Z,310nm,13.8s
YNG Young 38.07 133 P **P** **06 56 04.6 +2.4**
comp=Z,44nm,1.1s
GYA Guiyang 38.20 347 ⇑P **P** **06 56 05.1 +1.8**
GYA pmax pmax
comp=Z,30nm,0.7s
GYA L L
comp=Z,400nm,22.6s
GUMO Guam 38.23 51 LR LR 07 13 12.1
comp=Z,34nm,18.2s,baz=114,slow=39
ARMA Armidale 38.86 125 P **P** **06 56 11.9 +3.0**
ARMA Armidale 38.86 125 P **P** **06 56 08.7 -0.2**
ARMA Armidale 38.86 125 P **P** **06 56 08.0 -0.9**
PALK Pallekele 38.91 296 P **P** **06 56 07.9 -1.5**
PALK Pallekele 38.91 296 P **P** **06 56 07.9 -1.5**
PALK pmax pmax
comp=Z,17nm,1.2s
PALK Pallekele 38.91 296 P **P** **06 56 10.6 +1.2**
PZH PanZhiHua 39.56 341 P **P** **06 56 14.8 +0.1**
PZH S **S** **07 02 14.8 -2.4**
PZH pmax pmax
comp=Z,20nm,0.9s
PZH pmax pmax
comp=Z,150nm,6.7s
PZH L L
comp=Z,280nm,22.8s
PZH L L
comp=Z,190nm,12.7s
PZH L L
comp=Z,380nm,21.7s
JOW Kunigami 39.71 18 LR LR 07 13 59.4
comp=Z,115nm,20.7s,baz=306,slow=38
BRDH Bariadhala 40.72 325 LR LR 07 15 21.9
comp=Z,224nm,18.9s,baz=154,slow=39
WHN Wuhan 41.35 359 P **P** **06 56 29.1 -0.2**
WHN S **S** **07 02 44.1 +0.6**
WHN pmax pmax
comp=Z,190nm,1.8s
WHN L L
comp=Z,740nm,27.4s
ENH Enshi 41.44 352 P **P** **06 56 29.4 -0.8**
ENH IAmb IAmb 06 56 41.8
comp=Z,32nm,0.8s
H08S2 Diego Garcia H 42.31 271 T T 07 41 50.9
baz=97,slow=75,SNR=11
H08S3 Diego Garcia H 42.32 271 T T 07 41 50.9
baz=97,slow=75,SNR=11
H08S1 Diego Garcia H 42.33 271 T T 07 41 50.7
baz=97,slow=75,SNR=13
SHL Shillong 42.92 328 P **P** **06 56 42.0 -0.5**
SHL IAmb IAmb 06 56 45.6
comp=Z,42nm,0.7s
SHL Shillong 42.92 328 P **P** **06 56 42.0 -0.5**
SHL pmax pmax
comp=Z,42nm,0.7s
NJ2 Nanjing 42.98 4 *e*P **P** **06 56 43.8 +1.2**
NJ2 pmax pmax
comp=Z,35nm,0.6s
CD2 Chengdu 43.14 345 P **P** **06 56 44.0 0.0**
CD2 pP sP 06 56 48.0 -0.5
CD2 S **S** **07 03 11.0 +0.9**
CD2 L L
comp=Z,350nm,14.6s
CD2 L L
comp=Z,450nm,12.9s
CD2 L L
comp=Z,320nm,11.8s
KAAM Kaadhehdhoo 43.54 283 P **P** **06 56 46.7 -0.9**
KAAM IAmb IAmb 06 56 50.1
comp=Z,33nm,0.8s
KAAM Kaadhehdhoo 43.54 283 P **P** **06 56 49.3 +1.8**
comp=Z,55nm,1.1s
TATA Tatamba Isabel 43.95 91 P **P** **06 56 51.1 +0.3**
XAN Xi'an 45.23 353 ⇑P **P** **06 56 59.8 -0.9**
XAN pP sP 06 57 02.8 -2.4
XAN pmax pmax
comp=Z,36nm,0.7s
LYN LuoYang 45.41 357 P **P** **06 57 01.8 -0.3**
LYN sP pwP 06 57 08.5 -2.5
LYN pmax pmax
comp=Z,31nm,0.7s
LYN L L
comp=Z,280nm,15.1s
LYN L L
comp=Z,190nm,13.7s
LYN L L
comp=Z,270nm,15.1s
JCJ Chichijima 46.04 34 P **P** **06 57 05.2 -2.0**
comp=Z,26nm,0.4s,baz=87,slow=23,SNR=2.2
JCJ LR LR 07 15 42.1
comp=Z,42nm,20.1s,baz=98,slow=35
comp=Z,26nm,0.4s
JNU Nakatsue 46.37 18 P **P** **06 57 08.6 -1.1**
comp=Z,7.3nm,0.6s,baz=135,slow=8.6,SNR=6.0
JNU LR LR 07 16 51.2
comp=Z,109nm,21.9s,baz=190,slow=37
comp=Z,7.3nm,0.6s
TIA Tai'an 47.02 2 P **P** **06 57 14.3 -0.5**
TIA pmax pmax
comp=Z,11nm,0.4s
JTU Tsushima 47.26 16 P **P** **06 57 17.3 +0.7**
EVN Everest 47.55 325 P **P** **06 57 19.1 -0.7**
JMN Monobe 47.91 21 P **P** **06 57 22.1 +0.3**
JMN Monobe 47.91 21 P **P** **06 57 21.1 -0.7**
JMN IAmb IAmb 06 57 41.1
comp=Z,34nm,1.0s
LZDM Lanzhou Array 48.00 347 P **P** **06 57 22.8 +0.1**
comp=Z,35nm,0.9s,baz=42,slow=21,SNR=4.5
LZDM LR LR 07 19 02.0
comp=Z,161nm,21.0s,baz=210,slow=38
comp=Z,35nm,0.9s
LZH Lanzhou 48.09 348 P **P** **06 57 23.8 +0.5**
LZH pP sP 06 57 27.0 -0.7
LZH S **S** **07 04 20.6 -1.0**
LZH pmax pmax
comp=Z,43nm,1.1s
LZH L L
comp=Z,290nm,16.1s
LZH L L
comp=Z,310nm,15.6s
LZH L L
comp=Z,190nm,16.3s
HNS HongShan 48.18 359 ⇑P **P** **06 57 22.4 -1.3**
HNS S **S** **07 04 16.8 -5.6**
HNS pmax pmax
comp=Z,13nm,0.9s
HNS L L
comp=Z,200nm,15.5s
HNS L L
comp=Z,200nm,15.2s
HNS L L
comp=Z,180nm,17.7s
KSAR Wonju Array Be 49.66 13 P **P** **06 57 33.9 -1.1**
KSAR Wonju Array Be 49.66 13 P **P** **06 57 33.9 -1.1**
KSRS Korea Array 49.68 13 P **P** **06 57 34.5 -0.6**
comp=Z,18nm,0.9s,baz=196,slow=8.6,SNR=27
KSRS LR LR 07 22 33.5
comp=Z,46nm,18.3s,baz=195,slow=41
comp=Z,18nm,0.9s
KS19 Wonju Array Si 49.71 13 P **P** **06 57 34.5 -1.0**
KS19 IAmb IAmb 06 57 39.0
comp=Z,28nm,1.2s
DL2 Dalian 50.04 6 P **P** **06 57 37.1 -0.8**
DL2 *e*S **S** **07 04 45.9 -2.5**
DL2 pmax pmax
comp=Z,26nm,0.6s
DL2 L L
comp=Z,380nm,17.4s
DL2 L L
comp=Z,330nm,15.2s
DL2 L L
comp=Z,290nm,17.9s
DZM Mont Dzumac 50.07 110 LR LR 07 19 44.2
comp=Z,158nm,18.4s,baz=222,slow=37
YATNC Mamie plateau, 50.48 109 P **P** **06 57 41.7 0.0**
INU Inuyama 50.52 23 P **P** **06 57 40.1 -1.5**
SANVU Saraoutou 50.66 101 P **P** **06 57 43.4 +0.3**
GOMU GeErMu 50.78 339 P **P** **06 57 43.4 -0.7**
GOMU pmax pmax
comp=Z,9.0nm,1.0s
BJT Baijiatuau 50.80 1 P **P** **06 57 42.8 -0.9**
BJT Baijiatuau 50.80 1 P **P** **06 57 42.8 -0.9**
BJT pmax pmax
comp=Z,8.0nm,0.7s
BJI2 Beijing 50.80 1 P **P** **06 57 42.8 -0.9**
BJI2 pmax pmax
comp=Z,6.0nm,1.0s
JGF Kuroka 50.87 23 P **P** **06 57 44.8 +0.5**
JGF Kuroka 50.87 23 P **P** **06 57 43.2 -1.2**
HHC Hu-ho-hao-te 51.74 356 *e*P **P** **06 57 53.9 +3.1**
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,110nm,6.6s
BTO2 Baotou 51.76 355 *e*P **P** **06 57 50.4 -0.6**
BTO2 pP **sP** **06 57 54.9 -0.6**
BTO2 sP **pwP** **06 57 57.5 -2.5**
BTO2 S **S** **07 05 12.1 -0.5**
BTO2 pmax pmax
comp=Z,70nm,1.2s
BTO2 pmax pmax
comp=Z,240nm,5.1s
BTO2 L L
comp=Z,330nm,14.2s
BTO2 L L
comp=Z,510nm,13.6s
BTO2 L L
comp=Z,390nm,13.3s
MAJO Matsushiro 52.02 23 P **P** **06 57 53.7 +0.7**
MAJO Matsushiro 52.02 23 P **P** **06 57 50.8 -2.2**
MAJO IAmb IAmb 06 57 52.6
comp=Z,24nm,0.8s
MAJO Matsushiro 52.02 23 P **P** **06 57 50.8 -2.2**
MAJO pmax pmax
comp=Z,25nm,0.9s
MJAR Matsushiro Arr 52.02 23 P **P** **06 57 51.1 -1.9**
comp=Z,18nm,0.9s,baz=198,slow=7.8,SNR=40
MJAR LR LR 07 21 07.5
comp=Z,64nm,20.5s,baz=193,slow=38
comp=Z,18nm,0.9s
MJAR Matsushiro Arr 52.02 23 P **P** **06 57 50.9 -2.1**
MJAR Matsushiro Arr 52.02 23 P **P** **06 57 50.9 -2.1**
MJAR pmax pmax
comp=Z,15nm,0.9s
MJB9 Matsu-Tunnel 52.03 23 P **P** **06 57 51.6 -1.4**
MJB9 IAmb IAmb 06 57 53.6
comp=Z,23nm,0.8s
GTA2 Gaotai 52.29 345 *e*P **P** **06 57 55.3 +0.3**
GTA2 PcP **PcP** **06 59 08.3 +2.1**
GTA2 pmax pmax
comp=Z,9.0nm,1.3s
GTA2 L L
comp=Z,200nm,16.2s
GTA2 L L
comp=Z,140nm,16.2s
GTA2 L L
comp=Z,210nm,18.4s
XLT XiLinHaoTe 54.68 1 *e*P **P** **06 58 11.3 -1.1**
XLT pP sP 06 58 15.8 -1.1
XLT pmax pmax
comp=Z,10.0nm,0.9s
XLT pmax pmax
comp=Z,100nm,6.4s
CN2 Changchun 55.36 9 P **P** **06 58 15.3 -1.9**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
JCZ Jackson Bay 56.46 136 P **P** **06 58 25.1 -0.3**
JTM Tenmabayashi 56.81 23 P **P** **06 58 28.4 +0.7**
WKZ Wanaka 56.86 137 P **P** **06 58 28.8 +0.6**
MDJ Mudanjiang 56.89 12 P **P** **06 58 27.3 -0.9**
MDJ IAmb IAmb 06 58 42.1
comp=Z,18nm,0.7s
MDJ Mudanjiang 56.89 12 P **P** **06 58 27.3 -0.9**
MDJ pmax pmax
comp=Z,23nm,1.1s
USRK Ussuriysk Ar. 57.04 14 P **P** **06 58 28.1 -1.0**
comp=Z,6.9nm,0.5s,baz=190,slow=6.1,SNR=18
comp=Z,6.9nm,0.5s
BNX BinXian 57.56 10 ⇓P **P** **06 58 31.5 -1.4**
BNX pmax pmax
comp=Z,8.0nm,1.2s
RPZ Rata Peaks 57.91 135 LR LR 07 21 41.8
comp=Z,461nm,21.8s,baz=26,slow=34
JEM Erimo 58.69 24 P **P** **06 58 41.4 +0.6**
ULN Ulaanbaatar 59.09 354 P **P** **06 58 43.7 -0.1**
ULN IAmb IAmb 06 58 56.8
comp=Z,13nm,0.8s
ULN Ulaanbaatar 59.09 354 *ce*P **P** **06 58 43.5 -0.2**
ULN pmax pmax
comp=Z,15nm,1.0s
ULN Ulaanbaatar 59.09 354 P **P** **06 58 43.5 -0.2**
comp=Z,66nm,0.9s
SONM Songino Array 59.14 353 P **P** **06 58 43.7 -0.4**
comp=Z,15nm,0.8s,baz=176,slow=9.6,SNR=41
SONM PcP **PcP** **06 59 33.7 +1.2**
comp=Z,1.5nm,0.5s,baz=182,slow=5.2,SNR=5.5
SONM LR LR 07 25 55.3
comp=Z,201nm,21.2s,baz=162,slow=38
comp=Z,15nm,0.8s
SONM Songino Array 59.14 353 P **P** **06 58 43.6 -0.4**
SONM IAmb IAmb 06 58 57.1
comp=Z,20nm,0.9s
SONM Songino Array 59.14 353 P **P** **06 58 43.6 -0.4**
SONM pmax pmax
comp=Z,20nm,0.9s
NIL Nilore 59.76 320 P **P** **06 58 47.7 -0.8**
NIL Nilore 59.76 320 P **P** **06 58 47.7 -0.8**
NIL pmax pmax
comp=Z,80nm,1.2s
WMQ Urumqi 60.09 337 *e*P **P** **06 58 51.3 +0.7**
WMQ pmax pmax
comp=Z,20nm,1.3s
WMQ pmax pmax
comp=Z,83nm,3.6s
WMQ L L
comp=Z,150nm,24.7s
JKA Kamikawa-asahi 60.25 22 **P** **06 58 51.4 -0.2**
JKA IAmb IAmb 06 58 53.0
comp=Z,20nm,0.5s
BKZ Black Stump Fm 60.86 129 P **P** **06 58 57.6 +1.5**
BKZ IAmb IAmb 06 59 15.0
comp=Z,19nm,1.1s
MSVF Nonsavu 60.96 104 LR LR 07 25 22.1
comp=Z,152nm,19.4s,baz=275,slow=36
KLR Kul'dur 61.74 12 LR LR 07 28 30.3
comp=Z,69nm,20.2s,baz=238,slow=39
KLR Kul'dur 61.74 12 *ce*P **P** **06 59 01.5 -0.1**
KLR pmax pmax
comp=Z,3.0nm,1.7s
HEH HeiHe 61.95 9 *e*P **P** **06 59 01.8 -1.2**
HEH pmax pmax
comp=Z,15nm,0.5s
HEH pmax pmax
comp=Z,260nm,5.8s
ZAK Zakamensk 62.05 351 *e*P **P** **06 59 01.5 -2.3**
ZAK pmax pmax
comp=Z,11nm,1.8s
KSH2 Kashi 62.10 326 P **P** **06 59 04.3 -0.2**
KSH2 pmax pmax
comp=Z,56nm,0.8s
YSS Yuzhno-Sakhali 62.74 21 *ce*P **P** **06 59 08.8 +0.5**
YSS pmax pmax
comp=Z,59nm,2.5s
KBL Kabul 63.04 318 P **P** **06 59 09.9 -1.0**
KBL Kabul 63.04 318 P **P** **06 59 09.9 -1.0**
KBL pmax pmax
comp=Z,44nm,0.8s
SHLS Shalkode 63.06 331 *e*P **P** **06 59 09.8 -0.9**
comp=Z,12nm,0.7s
PDGK Podgornoye 63.18 331 P **P** **06 59 11.5 -0.1**
UZB Uzynbulak 63.26 331 ⇓*i*P **P** **06 59 12.4 +0.3**
comp=Z,14nm,1.0s
TLY Talaya 63.26 352 LR LR 07 28 42.3
comp=Z,157nm,20.7s,baz=156,slow=38
TLY Talaya 63.26 352 *ce*P **P** **06 59 12.0 +0.2**
TLY pmax pmax
comp=Z,17nm,1.8s
KNGR Kungurtug, Tuv 63.30 347 *i* P **P** **06 59 12.6 +0.4**
KNGR pmax pmax
comp=Z,7.0nm,1.0s
SATY Saty 63.49 331 ⇓*i*P **P** **06 59 14.0 +0.4**
comp=Z,19nm,1.2s
NRN Naryn 63.50 328 IAmb IAmb 06 59 15.1
comp=Z,40nm,1.1s
MOY Mondy 63.66 350 *e*P **P** **06 59 14.4 -0.1**
MOY pmax pmax
comp=Z,22nm,2.0s
KPKS Kokpek 63.66 331 *e*P **P** **06 59 15.0 +0.3**
IRK Irkutsk 63.73 352 *e*P **P** **06 59 10.7 -4.1**
IRK pmax pmax
comp=Z,33nm,3.6s
TNSS Tian-Shan 64.19 330 *e*P **P** **06 59 18.5 0.0**
ZSN Zaisan 64.21 338 *e*P **P** **06 59 18.8 +0.6**
comp=Z,12nm,1.3s
MDOK Medeo 64.23 330 *e*P **P** **06 59 18.8 +0.3**
MK31 Makanchi Array 64.68 336 *ce*P **P** **06 59 21.3 +0.1**
MKAR Makanchi Array 64.68 336 P **P** **06 59 21.0 -0.2**

comp=Z,9,8nm,0.5s,baz=148,slow=6.7,SNR=148
MKAR LR LR 07 30 41.5
comp=Z,156nm,20.1s,baz=126,slow=39
comp=Z,9,8nm,0.5s
MKAR Makanchi Array 64.68 336 P **P 06 59 21.4 +0.3**
MKAR Makanchi Array 64.68 336 P **P 06 59 21.5 +0.3**
TKM2 Tokmak 2 64.78 329 P **P 06 59 22.4 +0.2**
SNR=52
MAKZ Makanchi 64.82 335 P **P 06 59 21.8 -0.3**
MAKZ IAmb IAmb 06 59 23.7
comp=Z,22nm,1.1s
MAKZ Makanchi 64.82 335 P **P 06 59 21.8 -0.3**
MAKZ pmax pmax
comp=Z,23nm,1.1s
UCH Uchtor 64.84 328 P **P 06 59 23.3 +0.4**
SNR=31
KBK Karagaybulak 64.92 328 P **P 06 59 24.0 +0.9**
SNR=66
TDK Taldyqorghan 64.96 332 *eP* **P 06 59 23.5 +0.4**
GAR Garm 65.02 323 P **P 06 59 23.5 -0.3**
ARSB Arslanbob 65.04 326 P **P 06 59 24.7 +0.8**
ARSB Arslanbob 65.04 326 P **P 06 59 24.7 +0.8**
ARSB pmax pmax
comp=Z,127nm,0.8s
AAK Ala-Archa 65.14 328 LR LR 07 33 18.7
comp=Z,147nm,18.6s,baz=134,slow=41
AAK Ala-Archa 65.14 328 P **P 06 59 25.2 +0.7**
SNR=61
AAK Ala-Archa 65.14 328 P **P 06 59 24.7 +0.2**
AAK Ala-Archa 65.14 328 *de*P **P 06 59 25.3 +0.7**
AAK pmax pmax
comp=Z,95nm,1.0s
CHMS Chumysh 65.27 328 P **P 06 59 25.6 +0.5**
SNR=8.7
ZEA Zeya 65.32 8 *eP* **P 06 59 25.0 -0.2**
ZEA pmax pmax
comp=E,10.0nm,0.9s
ZEA pmax pmax
comp=N,10.0nm,0.6s
ZEA pmax pmax
comp=Z,10.0nm,0.5s
SHAA Shahritus 65.47 320 P **P 06 59 24.4 -2.2**
SHAA IAmb IAmb 06 59 25.6
comp=Z,89nm,1.2s
CHGR Chuyangaron 65.50 322 P **P 06 59 25.6 -1.2**
CHGR Chuyangaron 65.50 322 *d i*P **P 06 59 25.8 -1.0**
CHGR pmax pmax
comp=Z,134nm,1.2s
EKS2 Erkin-Say 65.54 328 P **P 06 59 28.0 +1.0**
SNR=81
USP Ospenovka 65.59 328 P **P 06 59 27.9 +0.6**
SNR=7.5
SGDS Sogindy 65.65 329 *eP* **P 06 59 27.9 +0.2**
comp=Z,12nm,1.1s
ABPO Ambohimpanom 65.86 254 P **P 06 59 29.3 -0.4**
ABPO IAmb IAmb 06 59 32.1
comp=Z,20nm,0.8s
ABPO Ambohimpanom 65.86 254 P **P 06 59 29.3 -0.4**
ABPO pmax pmax
comp=Z,20nm,0.8s
MAW Mawson 66.09 199 P **P 06 59 31.5 +1.5**
comp=Z,28nm,0.9s,baz=45,slow=6.5,SNR=8.6
MAW LR LR 07 22 00.2
comp=Z,197nm,19.2s,baz=90,slow=30
comp=Z,28nm,0.9s
MAW Mawson 66.09 199 P **P 06 59 31.9 +1.8**
comp=Z,8.5nm,2.3s
VOI Vohitsoka 66.10 251 P **P 06 59 30.4 -0.7**
VOI IAmb IAmb 06 59 33.1
comp=Z,17nm,0.8s
DZA Taraz 67.01 326 *eP* **P 06 59 36.8 +0.4**
comp=Z,12nm,0.8s
IUG Iuzhnay 67.23 325 ⇓ *i*P **P 06 59 38.3 +0.4**
CHM Chimkent 67.58 325 *eP* **P 06 59 40.6 +0.6**
comp=Z,28nm,1.2s
KK31 Karatay Array 67.59 326 P **P 06 59 39.7 -0.3**
KK31 IAmb IAmb 07 00 06.5
comp=Z,14nm,0.8s
KK31 Karatay Array 67.59 326 P **P 06 59 39.7 -0.3**
KK31 pmax pmax
comp=Z,14nm,0.8s
KKAR Karatay Array 67.59 326 P **P 06 59 39.6 -0.4**
KKAR Karatay Array 67.59 326 P **P 06 59 39.6 -0.4**
BRLS Boroldaу 67.92 326 *eP* **P 06 59 41.8 -0.3**
comp=Z,13nm,1.0s
KURBB Kurchatov Arra 69.23 336 P **P 06 59 50.1 +0.1**
KURBB comp=Z,52nm,1.0s,baz=150,slow=5.3,SNR=246
LR LR 07 33 43.4
comp=Z,117nm,20.3s,baz=174,slow=39
comp=Z,52nm,1.0s
KURBB Kurchatov Arra 69.23 336 P **P 06 59 49.9 -0.2**
KURK Kurchatov 69.27 336 P **P 06 59 49.6 -0.7**
KURK Kurchatov 69.27 336 *de*P **P 06 59 50.3 0.0**
KURK pmax pmax
comp=Z,50nm,0.9s
ZAA0 Zalesovo Array 69.70 341 P **P 06 59 51.7 -1.2**
ZAA0 IAmb IAmb 06 59 53.2
comp=Z,34nm,0.9s
ZALV Zalesovo Beam 69.70 341 P **P 06 59 52.4 -0.5**
comp=Z,21nm,0.4s,baz=152,slow=4.7,SNR=80
ZALV LR LR 07 32 39.0
comp=Z,64nm,18.7s,baz=0.5,slow=38
comp=Z,21nm,0.4s
ZALV Zalesovo Beam 69.70 341 P **P 06 59 51.9 -1.0**
VNDA Vanda 70.59 170 P **P 07 00 00.3 +2.2**
comp=Z,13nm,1.0s,baz=304,slow=5.8,SNR=35
VNDA LR LR 07 28 22.7
comp=Z,239nm,20.4s,baz=343,slow=34
comp=Z,13nm,1.0s
VNDA Vanda 70.59 170 P **P 06 59 58.7 +0.6**
VNDA IAmb IAmb 07 00 01.1
comp=Z,19nm,1.1s
VNDA Vanda 70.59 170 P **P 06 59 58.7 +0.6**
VNDA pmax pmax
comp=Z,19nm,1.1s
BRZS Berezniki 71.25 333 *eP* **P 07 00 03.1 +0.6**
PETK Petropavlovsk- 73.44 25 P **P 07 00 15.6 +0.1**
comp=Z,15nm,1.0s,baz=182,slow=1.9,SNR=18
PETK LR LR 07 31 26.0
comp=Z,38nm,22.0s,baz=210,slow=35
comp=Z,15nm,1.0s
YAK Yakutsk 73.71 7 LR LR 07 34 23.8
comp=Z,62nm,21.3s,baz=202,slow=37
YAK Yakutsk 73.71 7 P **P 07 00 16.5 -0.3**
YAK Yakutsk 73.71 7 *ce*P **P 07 00 17.4 +0.6**
YAK pmax pmax
comp=Z,48nm,1.7s
BVAR Borovoye Array 74.41 334 P **P 07 00 21.5 +0.3**
comp=Z,22nm,0.7s,baz=142,slow=7.5,SNR=89
BVAR LR LR 07 36 34.5
comp=Z,150nm,21.1s,baz=124,slow=39
comp=Z,22nm,0.7s
BORK Borovoye 74.46 334 P **P 07 00 21.3 -0.1**
BORK IAmb IAmb 07 00 22.6
comp=Z,24nm,0.8s
BORK Borovoye 74.46 334 *de*P **P 07 00 21.6 +0.2**
BORK pmax pmax
comp=Z,32nm,1.0s
MA2 Magadan 75.94 18 LR LR 07 38 06.0
comp=Z,34nm,18.8s,baz=256,slow=39
MA2 Magadan 75.94 18 *ce*P **P 07 00 31.0 +1.2**
MA2 pmax pmax
comp=Z,13nm,1.0s
RAYN Ar Rayn 76.33 298 P **P 07 00 32.2 -0.7**
RAYN IAmb IAmb 07 00 33.9
comp=Z,15nm,0.8s
RAYN Ar Rayn 76.33 298 P **P 07 00 32.2 -0.7**
RAYN pmax pmax
comp=Z,15nm,0.8s
KIBK Kibwezi 77.01 270 IAmb IAmb 07 00 39.9
comp=Z,19nm,1.1s
AB31 Akbulak array 77.15 326 P **P 07 00 36.8 -0.1**
AB31 IAmb IAmb 07 00 38.3
comp=Z,33nm,1.1s
AB31 Akbulak array 77.15 326 *i* P **P 07 00 37.3 +0.4**
ABKAR Akbulak array 77.15 326 P **P 07 00 36.8 -0.1**
KMBO Kilima Mbogo 78.02 271 P **P 07 00 43.9 +1.0**
AKTO Aktyubinsk 78.84 327 P **P 07 00 46.0 -0.4**
comp=Z,21nm,1.1s,baz=110,slow=3.7,SNR=24
AKTO LR LR 07 39 58.9
comp=Z,123nm,20.1s,baz=308,slow=39
comp=Z,21nm,1.1s
AKTO Aktyubinsk 78.84 327 P **P 07 00 46.4 +0.1**
QSPA South Pole Qui 78.97 180 P **P 07 00 49.0 +2.0**
comp=Z,24nm,0.9s,baz=313,slow=2.2,SNR=42
QSPA LR LR 07 31 25.6
comp=Z,148nm,21.8s,baz=343,slow=32
comp=Z,24nm,0.9s
QSPA South Pole Qui 78.97 180 P **P 07 00 47.8 +0.8**
QSPA IAmb IAmb 07 00 49.8
comp=Z,40nm,1.1s
SEY Seymchan 79.11 16 *ce*P **P 07 00 48.1 +0.7**
SEY pmax pmax
comp=Z,44nm,1.7s
AKT Akhty 81.00 315 *eP* **P 07 00 59.7 +1.3**
SVE Sverdlovsk 81.17 333 *eP* **P 07 00 59.4 +0.7**
SVE pmax pmax
comp=Z,42nm,1.3s
ARTI Arti 81.94 332 LR LR 07 41 16.7
comp=Z,128nm,21.5s,baz=98,slow=39
NRIK Noril'sk 82.49 350 P **P 07 01 05.8 +0.3**
comp=Z,7.7nm,0.7s,baz=146,slow=4.5,SNR=19
NRIK LR LR 07 40 17.8
comp=Z,73nm,18.9s,baz=150,slow=38
comp=Z,7.7nm,0.7s
NRIK Noril'sk 82.49 350 P **P 07 01 05.2 -0.2**
NRIK IAmb IAmb 07 01 07.5
comp=Z,23nm,1.1s
NRIK Noril'sk 82.49 350 *d i*P **P 07 01 05.6 +0.2**
NRIK pmax pmax
comp=Z,35nm,1.5s
GNI Garni 82.60 313 P **P 07 01 07.4 +0.5**
comp=Z,4.6nm,0.4s,baz=168,slow=5.2,SNR=7.0
GNI LR LR 07 44 36.0
comp=Z,32nm,18.2s,baz=94,slow=41
comp=Z,4.6nm,0.4s
GNI Garni 82.60 313 P **P 07 01 06.1 -0.8**
GNI IAmb IAmb 07 01 19.2
comp=Z,14nm,0.8s
GNI Garni 82.60 313 *ce*P **P 07 01 08.0 +1.1**
GNI pmax pmax
comp=Z,28nm,1.4s
TIXI Tiksi 83.00 4 LR LR 07 40 13.0
comp=Z,43nm,21.4s,baz=210,slow=37
TIXI Tiksi 83.00 4 P **P 07 01 06.8 -1.2**
TIXI IAmb IAmb 07 01 08.1
comp=Z,20nm,0.8s
TIXI Tiksi 83.00 4 *ce*P **P 07 01 07.3 -0.7**
TIXI pmax pmax
comp=Z,49nm,1.7s
AMKA Amchitka 83.04 35 P **P 07 01 09.1 +0.4**
GRHM Grahamstown, E 83.11 238 P **P 07 01 09.2 -0.5**
GRHM IAmb IAmb 07 01 12.6
comp=Z,22nm,0.8s
NVL N'lazarevskaya 84.04 199 *eP* **P 07 01 12.5 -1.0**
NVL *e* 07 01 18.4
NVL *e* 07 04 26.5
NVL *i* 07 06 29.3
NVL *eS* **SKSac 07 11 35.5 -0.6**
NVL *eSS* **SS 07 17 05.8 +0.8**
NVL *eSSS* SSS 07 20 35.3
NVL pmax pmax
comp=Z,32nm,1.2s
NVL MLR MLR
comp=Z,388nm,20.0s
LSZ Lusaka 84.36 256 P **P 07 01 15.2 -1.3**
LSZ IAmb IAmb 07 01 18.8
comp=Z,11nm,0.8s
LSZ Lusaka 84.36 256 P **P 07 01 15.2 -1.3**
LSZ pmax pmax
comp=Z,11nm,0.8s
MBAR Mbarara 84.51 270 *i* P **P 07 01 17.0 -0.3**
MBAR pmax pmax
comp=Z,12nm,0.9s
BOSA Boshof 84.81 242 P **P 07 01 20.0 +1.5**
comp=Z,23nm,0.8s,baz=104,slow=4.7,SNR=44
BOSA LR LR 07 31 35.0
comp=Z,116nm,21.9s,baz=138,slow=30
comp=Z,23nm,0.8s
BOSA Boshof 84.81 242 P **P 07 01 16.8 -1.7**
BOSA IAmb IAmb 07 01 20.6
comp=Z,28nm,0.8s
BOSA Boshof 84.81 242 P **P 07 01 16.8 -1.7**
BOSA pmax pmax
comp=Z,28nm,0.9s
LBTB Lobatse 85.11 246 LR LR 07 30 57.0
comp=Z,44nm,21.7s,baz=144,slow=30
LBTB Lobatse 85.11 246 P **P 07 01 18.4 -1.6**
LBTB IAmb IAmb 07 01 21.9
comp=Z,16nm,1.1s
LBTB Lobatse 85.11 246 P **P 07 01 18.5 -1.6**
LBTB pmax pmax
comp=Z,16nm,1.1s
NEUR Neytrino 85.12 316 *d i*P **P 07 01 20.4 +0.7**
NEUR pmax pmax
comp=Z,18nm,1.5s
KBZ Khabaz 85.14 316 P **P 07 01 20.7 +1.1**
comp=Z,111nm,0.9s,baz=88,slow=3.4,SNR=27
comp=Z,111nm,0.9s
KBZ Khabaz 85.14 316 *ce*P **P 07 01 19.9 +0.3**
KBZ pmax pmax
comp=Z,24nm,1.2s
LPHEP Lephephe 85.16 247 IAmb IAmb 07 01 22.9
comp=Z,13nm,0.9s
SHA1 Shidzhatmaz 85.31 316 *de*P **P 07 01 21.8 +1.1**
KIV Kislovodsk 85.37 316 P **P 07 01 22.2 +1.4**
KIV IAmb IAmb 07 01 24.6
comp=Z,18nm,0.9s
KIV Kislovodsk 85.37 316 *eP* **P 07 01 21.1 +0.3**
KIV pmax pmax
comp=Z,12nm,1.0s
BELG Belogornoye 85.49 325 P **P 07 01 21.9 +0.8**
comp=Z,50nm,0.8s,baz=34,slow=0.3,SNR=22
comp=Z,50nm,0.8s
BELG Belogornoye 85.49 325 *d i*P **P 07 01 21.5 +0.4**
BELG pmax pmax
comp=Z,11nm,1.0s
GOF Gofitskoye 85.51 317 *ce*P **P 07 01 22.5 +1.1**
ADK Adak 85.52 35 P **P 07 01 22.2 +1.0**
ADK Adak 85.52 35 P **P 07 01 22.2 +1.0**
ADK pmax pmax
comp=Z,42nm,1.1s
ASF Jabal al Asfar 86.15 304 P **P 07 01 26.9 +2.0**
comp=Z,7.4nm,0.8s,baz=103,slow=2.5,SNR=9.9
ASF LR LR 07 44 05.7
comp=Z,63nm,18.1s,baz=56,slow=39
comp=Z,7.4nm,0.8s
ASF Jabal al Asfar 86.15 304 P **P 07 01 27.0 +2.0**
TROLL Troll, Antarti 86.39 197 P **P 07 01 27.7 +2.2**
KSANE Kasane 86.78 253 IAmb IAmb 07 01 31.1
comp=Z,21nm,0.9s
BILL Bilibino 86.78 17 *i* P **P 07 01 27.4 +0.2**
BILL pmax pmax
comp=Z,2.0nm,0.9s
VSLR Vesyoloye 87.03 315 *i* P **P 07 01 29.4 +0.5**
VSLR pmax pmax
comp=Z,70nm,1.0s
EIL Elat 87.12 301 P **P 07 01 31.6 +1.9**
comp=Z,9.6nm,0.7s,baz=181,slow=0.6,SNR=7.4
comp=Z,9.6nm,0.7s
KIRV Kirov 87.22 331 LR LR 07 44 53.5
comp=Z,131nm,19.1s,baz=106,slow=39
KIRV Kirov 87.22 331 *ce*P **P 07 01 30.1 +0.7**
MMAI Mount Meron Ar 87.59 304 P **P 07 01 34.3 +2.3**
comp=Z,7.9nm,0.7s,baz=77,slow=7.2,SNR=10.0
comp=Z,7.9nm,0.7s
SUR Sutherland 87.88 238 LR LR 07 33 46.0
comp=Z,96nm,21.1s,baz=148,slow=31
SNAA Sanae 88.05 196 ⇑ P **P 07 01 35.9 +2.4**
comp=Z,819nm,0.7s
SNAA Sanae 88.05 196 P **P 07 01 36.0 +2.5**
comp=Z,36nm,0.8s,baz=126,slow=3.9,SNR=44
SNAA LR LR 07 34 31.6
comp=Z,285nm,20.3s,baz=152,slow=31
comp=Z,36nm,0.8s
SNAA Sanae 88.05 196 *ce*P **P 07 01 35.6 +2.2**
SNAA pmax pmax
comp=Z,71nm,1.3s
VRH Novokhopyorsk 88.44 323 *eP* **P 07 01 35.3 -0.2**
VRH pmax pmax
comp=Z,64nm,0.8s
TOKA Tokat 88.66 311 IAmb IAmb 07 01 39.4
comp=Z,28nm,1.0s
BNN Bunyan 88.74 310 IAmb IAmb 07 01 39.7
comp=Z,20nm,1.2s
LKGWB Lokgwabe 89.20 246 IAmb IAmb 07 01 40.4
comp=Z,24nm,1.1s
BELA Belgrano 2 89.64 186 **P 07 01 41.6 +0.8**
VNA2 Neumayer--Watz 89.69 196 ⇑ P **P 07 01 43.6 +2.5**
comp=Z,22nm,0.7s,baz=111,slow=4.6
GRTLG Ghanzi 89.75 248 IAmb IAmb 07 01 45.3
comp=Z,22nm,1.1s
VORD Divnogorie 89.82 322 *eP* **P 07 01 41.0 -0.9**
VORD pmax pmax
comp=Z,10.0nm,1.0s
VSR Storozhevoye 89.97 322 *eP* **P 07 01 41.4 -1.2**
VSR pmax pmax
comp=Z,10.0nm,0.8s
VNA1 Neumayer--Stat 90.08 196 ⇑ P **P 07 01 45.6 +2.7**
comp=Z,28nm,1.1s
VNA3 Neumayer Olymp 90.11 195 ⇑ P **P 07 01 45.3 +2.2**
comp=Z,24nm,0.8s
LPSR Galich'ya Gora 90.53 324 *eP* **P 07 01 45.5 +0.3**
LPSR pmax pmax
comp=Z,18nm,0.9s
BR104 Keskin Array S 90.61 310 P **P 07 01 46.5 +0.4**
comp=Z,60nmcomp=Z,8.4nm,0.9s
BRTR Keskin Array B 90.61 310 P **P 07 01 46.8 +0.6**
comp=Z,4.2nm,0.7s,baz=137,slow=6.6,SNR=31
BRTR LR LR 07 44 54.6
comp=Z,39nm,21.7s,baz=93,slow=37
comp=Z,4.2nm,0.7s
BRTR Keskin Array B 90.61 310 P **P 07 01 45.3 -0.8**
BR131 Keskin Array S 90.62 310 IAmb IAmb 07 01 47.5
comp=Z,8.1nm,0.8s
BR131 Keskin Array S 90.62 310 *d i*P **P 07 01 46.3 +0.1**
BR105 Keskin Array S 90.63 310 P **P 07 01 46.6 +0.4**
comp=Z,71nmcomp=Z,8.9nm,0.9s
BR106 Keskin Array S 90.63 310 P **P 07 01 46.6 +0.4**
comp=Z,57nmcomp=Z,8.4nm,0.9s
GAMB Gambell 92.47 25 IAmb IAmb 07 01 56.4
comp=Z,18nm,1.0s
OBN Obninsk 92.58 326 LR LR 07 48 33.1
comp=Z,63nm,18.5s,baz=18,slow=39
OBN Obninsk 92.58 326 ⇑ *eP* **P 07 01 55.4 +0.7**
OBN *e* 07 05 39.3
OBN *e*PPP PPP 07 07 34.8
OBN *i* S **SKSac 07 12 22.6 -5.1**
OBN pmax pmax
comp=Z,15nm,1.4s
KLMR Klimovskoe 92.72 332 *eP* **P 07 01 54.1 -1.1**
KLMR pmax pmax
comp=Z,25nm,1.2s
K13K Kusilvak Mount 95.03 28 IAmb IAmb 07 02 12.0
comp=Z,21nm,1.5s
AK09 Malin Array Si 95.89 320 P **P 07 02 09.7 -0.3**
AK10 Malin Array Si 95.91 320 P **P 07 02 09.6 -0.5**
F15K North Star Dit 95.93 24 P **P 07 02 10.0 +0.2**
AKASG Malin Array Be 95.95 320 P **P 07 02 09.6 -0.6**
AKASG comp=Z,3.3nm,0.7s,baz=85,slow=4.5,SNR=15
LR LR 07 53 35.3
comp=Z,32nm,18.4s,baz=64,slow=41
comp=Z,3.3nm,0.7s
AKASG Malin Array Be 95.95 320 P **P 07 02 08.7 -1.6**
AKASG Malin Array Be 95.95 320 P **P 07 02 08.7 -1.6**
AKASG pmax pmax
comp=Z,7.0nm,1.3s
AKBB Malin Array Si 95.95 320 *ce*P **P 07 02 10.4 +0.2**
AKBB pmax pmax
comp=Z,7.0nm,0.9s
AK02 Malin Array Si 95.95 320 P **P 07 02 09.8 -0.5**
C16K Lisburne Hills 96.27 22 IAmb IAmb 07 02 13.6
comp=Z,11nm,1.0s
LUBAR Lubar, Ukraine 96.75 319 P **P 07 02 13.4 -0.5**
G16K Koyuk River 96.79 25 IAmb IAmb 07 02 15.8
comp=Z,6.8nm,0.8s
NDNU Novodnistrovsk 96.79 318 P **P 07 02 14.1 0.0**
APA Apatity 97.02 337 *eP* **P 07 02 17.7 +3.0**
APA pmax pmax
comp=Z,7.0nm,1.2s
APA MLR MLR
comp=Z,1μm,6.4s
MLR Muntele Rosu 97.29 315 P Pdif 07 02 16.9 +0.2
comp=Z,6.7nm,1.2s,baz=153,slow=8.7,SNR=3.0
MLR LR LR 07 54 55.3
comp=Z,54nm,18.4s,baz=73,slow=41
comp=Z,6.7nm,1.2s
MLR Muntele Rosu 97.29 315 IAmb IAmb 07 02 24.1
comp=Z,10nm,1.2s
MNK Minsk 97.37 324 *i* P Pdif 07 02 16.9 +0.2
comp=E,50nm,1.0s
MNK *i* P Pdif 07 02 16.9 +0.2
comp=N,10.0nm,0.7s
MNK *i* P Pdif 07 02 16.9 +0.2
comp=Z,12nm,0.7s,baz=99
MNK *i* PP **PP 07 06 13.5 -0.1**
MNK *i* PPP PPP 07 08 17.6
MNK *i* S **SKSac 07 12 54.1 +0.6**
MNK *i* PS **PS 07 15 04.9 +0.6**
MNK *i* SS **SS 07 20 20.6 +1.7**
MNK *i* SSS SSS 07 24 06.5
MNK *i* LRM MLR 07 47 04.5
comp=N,1μm,19.7s
MNK *i* LRM MLR 07 47 07.0
comp=E,2μm,21.7s
MNK *i* LRM MLR 07 47 14.6
comp=Z,136nm,19.0s
MNK Minsk 97.37 324 *i* P **P 07 02 16.8 +0.2**
MNK *i* 07 06 13.4
MNK *i* PPP PPP 07 08 17.6
MNK *i* S **SKSac 07 12 54.0 +0.6**
MNK *i* PS **PS 07 15 04.9 +0.6**
MNK *i* SS **SS 07 20 20.6 +1.7**
MNK *i* SSS SSS 07 24 06.4
MNK pmax pmax
comp=Z,12nm,0.7s
MNK pmax pmax
comp=N,10.0nm,0.7s
MNK pmax pmax
comp=E,50nm,1.0s
MNK MLR MLR
comp=N,1μm,20.0s
MNK MLR MLR
comp=E,2μm,22.0s
MNK MLR MLR
comp=Z,136nm,19.0s
H17K Granite Mounta 97.72 25 IAmb IAmb 07 02 20.3
comp=Z,6.6nm,0.9s
C18K Utukok River 97.85 22 IAmb IAmb 07 02 20.6
comp=Z,4.7nm,0.9s
E18K Tukpahlearik C 97.86 23 IAmb IAmb 07 02 20.9
comp=Z,6.7nm,1.0s
C19K Lookout Ridge 98.50 21 IAmb IAmb 07 02 24.2
comp=Z,11nm,1.1s
VSU Vasula 98.54 328 *ce*P **P 07 02 21.8 +0.1**
VSU pmax pmax
comp=Z,18nm,1.0s
J18K Innoko River 98.90 27 IAmb IAmb 07 02 24.6
comp=Z,3.8nm,0.8s
D19K Kuna River 98.94 22 IAmb IAmb 07 02 25.6
comp=Z,7.2nm,1.0s
G19K Purcell Mounta 99.06 24 IAmb IAmb 07 02 26.6
comp=Z,6.6nm,0.7s
E19K Redstone River 99.15 23 IAmb IAmb 07 02 27.9
comp=Z,5.3nm,0.7s
FINES FINESS Array B 99.21 331 P **Pdif 07 02 24.9 +0.3**
comp=Z,4.6nm,0.8s,baz=125,slow=6.5,SNR=12
FINES PKiKP **PKiKP 07 06 55.9 +1.2**
comp=Z,2.4nm,0.9s,baz=132,slow=2.8,SNR=5.0
FINES LR LR 07 52 12.4
comp=Z,90nm,18.7s,baz=108,slow=38
comp=Z,4.6nm,0.8s
FINES FINESS Array B 99.21 331 P **Pdif 07 02 24.7 0.0**
FINES FINESS Array B 99.21 331 P **Pdif 07 02 25.0 +0.3**
D20K Etivluk River 99.52 22 IAmb IAmb 07 02 27.7
comp=Z,6.7nm,1.0s
ARCES ARCESS Array B 100.17 339 P **Pdif 07 02 27.8 -1.1**
comp=Z,6.1nm,0.9s,baz=99,slow=5.4,SNR=10
ARCES LR LR 07 52 38.0
comp=Z,98nm,18.7s,baz=128,slow=38
comp=Z,6.1nm,0.9s
SPITS Spitsbergen Ar 102.56 348 P **Pdif 07 02 39.3 0.0**
comp=Z,5.3nm,0.8s,baz=114,slow=8.3,SNR=8.5
ILAR Eielson Array 103.26 26 Pdiff **Pdif 07 02 43.0 +0.3**
comp=Z,0.3nm,0.5s,baz=252,slow=4.4,SNR=5.8
HFS Hagfors 105.26 329 Pdiff **Pdif 07 02 52.6 +0.9**
comp=Z,4.8nm,1.0s,baz=110,slow=3.9,SNR=5.7
EKA Eskdalemuir Ar 115.03 326 PKP PKPdf 07 07 25.9 +1.6
comp=Z,1.7nm,0.9s,baz=46,slow=4.8,SNR=3.7
TORD Torodi Ar. Bea 115.17 279 PKP **PKiKP 07 07 26.6 +0.9**
comp=Z,5.0nm,0.7s,baz=144,slow=0.8,SNR=26
YKAW3 Yellowknife Wh 117.49 24 **PKiKP 07 07 30.0 +1.2**
YKA Yellowknife Ar 117.53 24 PKP **PKiKP 07 07 29.6 +0.7**
comp=Z,3.8nm,0.7s,baz=319,slow=2.6,SNR=91
YKA PKKPbc **PKKPab 07 17 54.9 +0.5**
comp=Z,0.2nm,0.9s,baz=112,slow=4.0,SNR=4.0
YKA Yellowknife Ar 117.53 24 *c i*PKIKP **PKiKP 07 07 29.7 +0.8**
YKA pmax pmax
comp=Z,4.0nm,0.7s
ESDC Sonseca Array 119.40 309 PKP **PKiKP 07 07 34.7 +1.4**

comp=Z,2.2nm,1.0s,baz=24,slow=2.6,SNR=12

PAB	**San Pablo**	**119.71**	**309**		**PKPdf**	07 07 33.4	**-0.5**
PAB	**San Pablo**	**119.71**	**309**	PKIKP	**PKPdf**	07 07 33.4	**-0.5**
DBIC	**Dimbokro**	**120.75**	**271**	PKP	**PKiKP**	07 07 37.6	**+1.1**
	comp=Z,8.0nm,0.5s,baz=126,slow=2.0,SNR=24						
POLO	**Lamas de Olo**	**121.89**	**312**	*e*PKPdf	**PKiKP**	07 07 39.9	**+1.6**
MTE	**Manteigas**	**121.94**	**311**	*e*PKPdf	**PKiKP**	07 07 39.6	**+1.3**
PCBR	**Castelo Branco**	**122.02**	**310**	*e*PKPdf	**PKiKP**	07 07 40.1	**+1.7**
PGAV	**Gavieira, Arco**	**122.08**	**313**	*e*PKPdf	**PKiKP**	07 07 40.0	**+1.4**
PVIS	**Viseu**	**122.12**	**311**	*e*PKPdf	**PKiKP**	07 07 40.4	**+1.5**
PSARD	**Sardoal**	**122.58**	**310**	*e*PKPdf	**PKiKP**	07 07 39.8	**+0.3**
PVAQ	**Vaqueiros**	**122.72**	**307**	*e*PKPdf	**PKiKP**	07 07 41.1	**+1.3**
PCAS	**Casmilo, Conde**	**122.73**	**311**	*e*PKPdf	**PKiKP**	07 07 41.4	**+1.6**
PBDV	**Barranco-do-Ve**	**122.92**	**307**	*e*PKPdf	**PKiKP**	07 07 40.8	**+0.6**
MORF	**Marmelete**	**123.47**	**308**	*e*PKPdf	**PKiKP**	07 07 43.5	**+2.1**
NVAR	**Mina Array Bea**	**125.15**	**51**	PKP	**PKiKP**	07 07 46.5	**+1.6**
	comp=Z,2.8nm,0.7s,baz=244,slow=1.9,SNR=30						
PLCA	**Paso Flores**	**128.21**	**174**	PKP	**PKiKP**	07 07 52.4	**+1.5**
	comp=Z,2.9nm,0.9s,baz=224,slow=4.0,SNR=5.7						
PDAR	**Pinedale Array**	**129.90**	**43**	PKP	**PKiKP**	07 07 55.0	**+0.7**
	comp=Z,0.6nm,0.4s,baz=167,slow=2.0,SNR=10						
PDAR				PP	**PP**	07 10 03.4	**-1.6**
	comp=Z,0.5nm,0.8s,baz=249,slow=4.1,SNR=4.1						
ULM	**Lac du Bonnet**	**133.26**	**27**	PKP	**PKPdf**	07 07 59.8	**+0.4**
	comp=Z,3.2nm,0.6s,baz=358,slow=3.1,SNR=7.6						
ANMO	**Albuquerque**	**135.27**	**51***c*	*i*PKIKP	**PKiKP**	07 08 05.6	**+0.2**
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SCHQ	**Schefferville**	**136.28**	**2**	PKP	**PKPdf**	07 08 05.8	**+0.9**
	comp=Z,3.4nm,0.5s,baz=312,slow=0.4,SNR=10						
PSAL	**Palomas, Salto**	**137.57**	**189**	*e*P	**PKPdf**	07 08 08.9	**+0.9**
TXAR	**Lajitas Array**	**139.43**	**58**	PKhKP	PKPpre	07 08 04.3	
	comp=Z,1.3nm,0.8s,baz=237,slow=3.0,SNR=10						
TXAR				PP	**PP**	07 11 09.4	**+3.7**
	comp=Z,0.5nm,0.8s,baz=319,slow=5.5,SNR=3.5						
AC05	**El Transito**	**140.00**	**172**		**PKPdf**	07 08 11.4	**-1.3**
BSFB	**Barra de Sao F**	**142.10**	**219**	*e*P	**PKPdf**	07 08 15.2	**-1.3**
CPUP	**Villa Florida**	**142.17**	**191**	PKhKP	PKPpre	07 08 11.5	
	comp=Z,0.9nm,0.6s,baz=334,slow=4.9,SNR=5.6						
CPUP				PKP	pPKPdf	07 08 17.8	-1.9
	comp=Z,2.3nm,0.6s,baz=180,slow=2.7,SNR=12						
CPUP	**Villa Florida**	**142.17**	**191**	*e*P	**PKPdf**	07 08 12.4	**-4.1**
PTGB	**Pitanga**	**142.37**	**199**	*e*P	**PKPdf**	07 08 18.1	**+1.1**
LDASE	**Londrina, Braz**	**143.28**	**201**	*e*P	**PKPdf**	07 08 17.9	**-0.7**
CMC01	**Camacan, BA**	**143.78**	**224**	*e*P	**PKPdf**	07 08 19.2	**-0.4**
PMNB	**Patos De Minas**	**145.51**	**212**	*e*P	**PKPbc**	07 08 21.5	**-1.2**
NBPV	**Pedro Velho**	**145.94**	**241**	*e*P	**PKPdf**	07 08 22.4	**-1.0**
ITRB	**Iturama**	**146.33**	**205**	*e*P	**PKPdf**	07 08 22.9	**-1.0**
MURT	**Porto Murtinho**	**146.76**	**192**	*e*P	**PKPdf**	07 08 23.2	**-1.4**
RCBR	**Riachuelo**	**146.76**	**241**	*e*P	**PKPdf**	07 08 23.7	**-1.1**
IPMB	**Ipameri, GO**	**146.87**	**210**	*e*P	**PKPdf**	07 08 23.7	**-1.2**
JANB	**Januaria**	**147.11**	**218**	*e*P	**PKPdf**	07 08 23.6	**-1.8**
AQDB	**Aquidauana**	**147.45**	**196**	*e*P	**PKPdf**	07 08 24.5	**-1.2**
BDQN	**Bodoquena, MS**	**147.74**	**194**	*e*P	**PKPdf**	07 08 25.2	**-1.0**
NBPA	**Parau_RN**	**147.84**	**240**	*e*P	**PKPdf**	07 08 25.5	**-1.1**
C2SB	**Chapadao do Su**	**148.14**	**202**	*e*P	**PKPdf**	07 08 27.4	**+0.4**
NBMA	**Muriti-CE**	**148.34**	**236**	*e*P	**PKPdf**	07 08 26.2	**-1.2**
BDFB	**Brasilia**	**148.75**	**212**	PKP	**PKPdf**	07 08 28.4	**+0.2**
	comp=Z,3.4nm,0.8s,baz=67,slow=4.2,SNR=6.0						
BDFB				PKPbc	**pPKPbc**	07 08 34.0	**-1.1**
	comp=Z,4.7nm,0.6s,baz=140,slow=3.6,SNR=6.4						
SDBA	**SAO DESIDERIO**	**149.50**	**221**	*e*P	**PKPdf**	07 08 27.9	**-1.4**
PP1B	**Ponte de Pedra**	**149.93**	**199**	*e*P	**PKPdf**	07 08 29.1	**-0.7**
ARAG	**Araguaiana, MT**	**150.51**	**206**	*e*P	**PKPdf**	07 08 30.5	**-0.3**
BBSD	**Serra de San D**	**151.66**	**188**	*e*P	**PKPdf**	07 08 31.5	**-1.1**
SALV	**Santo Antonio**	**151.78**	**199**	*e*P	**PKPdf**	07 08 32.0	**-0.8**
NBPS	**Pedro II - PI**	**152.21**	**238**	*e*P	**PKPdf**	07 08 32.9	**-0.7**
LPAZ	**La Paz**	**152.65**	**173**	PKP	**PKPdf**	07 08 36.4	**+1.6**
	comp=Z,3.4nm,1.1s,baz=142,slow=1.8,SNR=6.6						
LPAZ				PKPbc	**pPKPbc**	07 08 43.9	**-1.1**
	comp=Z,9.9nm,0.8s,baz=181,slow=1.1,SNR=33						
LPAZ				PKPab	**pPKPab**	07 08 53.6	**-1.7**
	comp=Z,11nm,0.7s,baz=25,slow=2.1,SNR=16						
LPAZ	**La Paz**	**152.65**	**173**	*e*P	**PKPdf**	07 08 32.6	**-2.2**
PTLB	**Pontes e Lacer**	**153.11**	**192**	*e*P	**PKPdf**	07 08 33.3	**-1.3**
SNDB	**Serra Nova Dou**	**153.53**	**211**	*e*P	**PKPdf**	07 08 34.0	**-1.3**
SMTB	**Santa Maria do**	**153.89**	**221**	*e*P	**PKPdf**	07 08 36.8	**+0.9**
NNA	**Nana**	**154.16**	**152**	PKPbc	**PKiKP**	07 08 46.5	**+2.0**
	comp=Z,4.9nm,0.4s,baz=247,slow=4.2,SNR=4.5						
NNA	**Nana**	**154.16**	**152***c*	*i*PKIKP	**PKiKP**	07 08 46.1	**+1.6**
NNA				pmax	pmax		
	comp=Z,27nm,1.3s						
ATAH	**Atahualpa**	**157.41**	**142**	PKP	**PKPdf**	07 08 42.3	**+1.1**
	comp=Z,2.9nm,1.0s,baz=22,slow=1.1,SNR=6.7						
ATAH				PKPab	**sPKPab**	07 09 14.9	**-1.7**
	comp=Z,3.0nm,0.9s,baz=145,slow=7.5,SNR=4.6						
CZSB	**Cruzeiro do Su**	**159.74**	**157**	*e*P	**PKPdf**	07 08 41.9	**-1.5**

RSNC 22 06:59:14.7±0.0, 6°N±1°×7°8W±°, h12km±2km, M2.7, mB3.5, mb3.7, ML2.4, Mw(mB)2.3, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PIZC	**Pizarro, Choco**	**0.74**	**140**	P		Pg	06 59 29.2	0.0
PIZC				S		Sg	06 59 39.0	+0.1
SOLC	**Bahia Solano**	**0.81**	**32**	P		Pg	06 59 29.5	-0.8
SOLC				S		Sg	06 59 39.1	-1.8
PTAC	**Punta Ardita,**	**1.60**	**1**	P		Pn	06 59 40.9	-1.9
PTAC				S		Sn	06 59 58.0	-5.4
PLMC	**San Jos del P**	**1.67**	**112**	P		Pn	06 59 42.5	-1.4
PLMC				S		Sn	07 00 01.9	-3.5
CBOC	**Ciudad Bolivar**	**1.85**	**80**	P		Pn	06 59 44.7	-1.7
CBOC				S		Sn	07 00 05.1	-4.7
YOTC	**Yotoco, Valle**	**2.15**	**136**	P		Pn	06 59 49.0	-1.5
YOTC				S		Sn	07 00 14.5	-2.6
DBBC	**Dabeiba**	**2.19**	**48**	P		Pn	06 59 49.6	-1.4
DBBC				S		Sn	07 00 17.3	-0.8
ARMEC	**Armenia, Quind**	**2.38**	**114**	P		Pn	06 59 53.7	-0.1
ARMEC				S		Sn	07 00 21.4	-1.6
GUY2C	**Guyana, Caldas**	**2.48**	**97**	P		Pn	06 59 55.1	-0.3
GUY2C				S		Sn	07 00 24.6	-1.3
JAMC	**Jamundi, Valle**	**2.59**	**153**	P		Pn	06 59 55.5	-1.1
JAMC				S		Sn	07 00 26.6	-1.5
ANIL	**Santa Ana**	**2.64**	**113**	P		Pn	06 59 57.4	0.0
ANIL				S		Sn	07 00 30.4	+0.8
APAC	**Apartado, Choc**	**2.66**	**28**	P		Pn	06 59 58.5	+1.1
APAC				S		Sn	07 00 31.5	+1.9
UREC	**San Jos de Ur**	**3.17**	**46**	P		Pn	07 00 05.3	+0.8
UREC				S		Sn	07 00 42.4	0.0
POPC	**Popayan, Colom**	**3.20**	**159**	P		Pn	07 00 04.6	-0.5
POPC				S		Sn	07 00 41.8	-1.5
PRAC	**Prado**	**3.46**	**122**	P		Pn	07 00 09.7	+1.2
PRAC				S		Sn	07 00 48.7	-0.7
PTBC	**PUERTO BERRIO,**	**3.51**	**73**	P		Pn	07 00 11.3	+2.2
BBAC	**Balboa, Cauca**	**3.54**	**170**	P		Pn	07 00 08.6	-1.2
GARC	**Garzon, Huila**	**4.07**	**145**	P		Pn	07 00 18.5	+1.4
GARC				S		Sn	07 01 05.2	+0.4
BCIP	**Isla Barro Col**	**4.11**	**331**	P		Pn	07 00 15.8	-1.6
BCIP				S		Sn	07 01 04.3	-1.2
URMC	**La Uribe, Meta**	**4.13**	**123**	P		Pn	07 00 19.1	+1.3
URMC				S		Sn	07 01 06.0	-0.2
FLOC	**Florencia**	**4.50**	**151**	P		Pn	07 00 24.1	+1.4
FLOC				S		Sn	07 01 16.1	+1.1
RUSC	**La Rusia**	**4.75**	**86**	P		Pn	07 00 27.8	+1.2
SJCC	**San Jacinto, C**	**5.07**	**31**	P		Pn	07 00 30.8	+0.2
	15nm,1.1s							
MACC	**Macarena, Meta**	**5.22**	**130**	P		Pn	07 00 33.5	+0.8
	5.6nm,0.5s							
MACC				S		Sn	07 01 32.4	-0.5
	5.6nm,0.5s							
PAMC	**Pamplona, Colo**	**5.41**	**70**	P		Pn	07 00 35.8	+0.1

IDC 22 07:17:57.4±0.8, 32°96N×136°94E, h397km±8km, mb3.0/14, mbtmp3.8/21, Error ellipse: s-maj=15.3km s-min=11.0km az=96.0
JMA 22 07:17:57.6±0.2, 33°N±2°×13°7E±°, h406km, MV3.0/21, FAR S OFF TOKAI DISTRICT

ISC 22 07:17:57.4±0.7, 32°92N±0°08×137°03E±0°08, h400km, n26, σ0°96/29, mb3.3/14, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JTNC	**Tanabenakahech**	**1.49**	**308**	P		Pn	**07 18 51.7**	**+1.2**
JTNC				*e*S		**S**	**07 19 34.4**	**+1.0**
JIE	**Ise**	**1.50**	**350**	P		**Pn**	**07 18 52.0**	**+1.5**
JWY	**Kouya**	**1.77**	**318**	*e*P		**Pn**	**07 18 53.5**	**+1.4**
JHMK	**Hamakita**	**1.99**	**18**	P		**Pn**	**07 18 54.4**	**+1.4**
JHJ	**Hachijo jima 2**	**2.32**	**84**	P		**Pn**	**07 18 56.1**	**+0.6**
	66nm,0.3s,baz=285,slow=24,SNR=8.1							
MJAR	**Matsushiro Arr**	**3.74**	**15**	P		**Pn**	**07 19 07.2**	**+0.2**
	19nm,0.5s,baz=180,slow=9.1,SNR=107							
MJAR				S		**S**	**07 20 02.3**	**-1.3**
	10nm,0.8s,baz=190,slow=16,SNR=8.1							
JNU	**Nakatsue**	**5.17**	**274**	P		**Pn**	**07 19 21.3**	**+0.1**
	3.4nm,0.6s,baz=176,slow=6.0,SNR=2.0							
JCJ	**Chichijima**	**7.32**	**141**	P		**Pn**	**07 19 42.7**	**-2.1**
	31nm,0.4s,baz=279,slow=23,SNR=6.1							
JCJ				S		S	07 21 05.8	-6.7
	52nm,0.3s,baz=131,slow=23,SNR=14							
KSRS	**Korea Array**	**8.72**	**304**	P		**P**	**07 20 00.0**	**-0.6**
	0.6nm,0.4s,baz=112,slow=12,SNR=2.5							
USRK	**Ussuriysk Ar.**	**11.93**	**342**	P		**P**	**07 20 34.7**	**-1.5**
	5.3nm,0.6s,baz=142,slow=9.8,SNR=7.5							
ASAJ	**Asahikawa**	**12.00**	**20**	P		**P**	**07 20 37.8**	**+0.9**
	4.0nm,0.4s,baz=202,slow=14,SNR=14							
ASAJ				S		**S**	**07 22 47.7**	**-1.0**
	6.9nm,0.7s,baz=238,slow=20,SNR=5.7							
KLR	**Kul'dur**	**16.77**	**348**	P		**P**	**07 21 27.9**	**-0.7**
	4.0nm,0.3s,baz=164,slow=9.2,SNR=27							
CMAR	**Chiang Mai Arr**	**37.00**	**257**	P		**P**	**07 24 30.7**	**-0.4**
	0.8nm,0.3s,baz=50,slow=8.4,SNR=4.4							
	0.8nm,0.3s							
MKAR	**Makanchi Array**	**43.40**	**305**	P		**P**	**07 25 21.7**	**-0.8**
	0.4nm,0.6s,baz=92,slow=8.2,SNR=4.8							
	0.4nm,0.6s							
KURBB	**Kurchatov Arra**	**45.82**	**311**	P		**P**	**07 25 40.5**	**-0.7**
	0.4nm,0.4s,baz=100,slow=6.0,SNR=6.0							
	0.4nm,0.4s							
WRA	**Warramunga Arr**	**52.62**	**183**	P		**P**	**07 26 32.2**	**-0.1**
	0.6nm,0.4s,baz=358,slow=7.6,SNR=14							
	0.6nm,0.4s							
ILAR	**Eielson Array**	**54.88**	**31**	P		**P**	**07 26 48.0**	**+0.2**
	0.5nm,0.9s,baz=254,slow=5.6,SNR=7.0							
	0.5nm,0.9s							
ASAR	**Alice Springs**	**56.35**	**183**	P		**P**	**07 26 59.2**	**+0.6**
	0.2nm,0.3s,baz=356,slow=5.2,SNR=12							
	0.2nm,0.3s							
ARCES	**ARCESS Array B**	**66.56**	**339**	P		**P**	**07 28 05.7**	**+0.2**
	3.7nm,0.9s,baz=53,slow=6.9,SNR=1.3							
	3.7nm,0.9s							
YKA	**Yellowknife Ar**	**69.15**	**28**	P		**P**	**07 28 22.0**	**+0.4**
	0.1nm,0.4s,baz=306,slow=6.5,SNR=6.0							
	0.1nm,0.4s							
FINES	**FINESS Array B**	**70.74**	**332**	P		**P**	**07 28 30.9**	**-0.2**
	0.8nm,0.5s,baz=36,slow=7.1,SNR=7.4							
	0.8nm,0.5s							
KBZ	**Khabaz**	**70.81**	**310**	P		**P**	**07 28 32.5**	**+0.6**
	1.1nm,0.8s,baz=12,slow=5.9,SNR=3.6							
	1.1nm,0.8s							
HFS	**Hagfors**	**76.30**	**335**	P		**P**	**07 29 02.8**	**-0.3**
	3.1nm,1.0s,baz=57,slow=5.3,SNR=5.6							
	3.1nm,1.0s							
NOA	**NORSAR Array B**	**76.53**	**336**	P		**P**	**07 29 03.9**	**-0.6**
	0.9nm,0.8s,baz=55,slow=6.5,SNR=1.5							
	0.9nm,0.8s							
NVAR	**Mina Array Bea**	**80.36**	**50**	P		**P**	**07 29 26.7**	**+0.9**
	0.5nm,0.8s,baz=299,slow=7.2,SNR=4.2							
	0.5nm,0.8s							
PDAR	**Pinedale Array**	**83.12**	**43**	P		**P**	**07 29 40.6**	**+0.6**
	0.2nm,0.7s,baz=287,slow=9.0,SNR=2.3							
	0.2nm,0.7s							

RHSSO 22 07:21:40.6±0.8, 41°98N×20°68E, h4km±3km, ML2.6/6
TIR 22 07:21:40.7, 42°11N×20°57E, h12km±1km, Ml2.2/3
PDG 22 07:21:40.2±0.1, 42°02N×20°64E, h0km±11km, ML2.5/12, Error ellipse: s-maj=0.3km s-min=0.6km az=0.0
BEO 22 07:21:42.4±0.4, 42°05N×20°56E, h6km±2km, ML2.2/13

ISC 22 07:21:41.1±1.1, 42°08N±0°02×20°61E±0°02, h1km±10km, n44, σ1°17/82, 6C-4D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PHP	**Peshkopia**	**0.41**	**198**	P		**Pg**	**07 21 48.6**	**-0.4**
PHP				Sg		**Sg**	**07 21 53.6**	**-0.6**
PHP				AML		AML	07 21 55.5	
	2.2nm,0.2s							
PVY	**Plav**	**0.71**	**317**	↓*i*Pg		**Pg**	**07 21 54.1**	**-0.5**
PVY				*i* Sg		**Sb**	**07 22 06.6**	**0.0**
SDA	**Shkodra**	**0.83**	**269**	Pg		**Pg**	**07 21 56.8**	**-0.1**
SDA				Sg		**Sg**	**07 22 08.4**	**+0.8**
SDA				AML		AML	07 22 12.6	
	0.4nm,0.5s							
TIR	**Tirane**	**0.92**	**218**	Pg		**Pb**	**07 21 59.3**	**-0.4**
TIR				Sg		**Sb**	**07 22 12.1**	**-0.4**
TIR				AML		AML	07 22 14.5	
	0.2nm,0.5s							
IVA	**Berane**	**0.95**	**327**	↑*i*Pg		**Pg**	**07 21 59.0**	**-0.4**
IVA				*e*Sg		**Sb**	**07 22 14.7**	**+1.0**
ULC	**Ulcinj**	**1.02**	**264**	↑*i*Pg		**Pg**	**07 21 59.5**	**-1.2**
ULC				*e*Sg		**Sb**	**07 22 15.5**	**0.0**
DRME	**Dracevica, Mon**	**1.06**	**276**	↓*i*Pg		**Pg**	**07 22 00.4**	**-1.0**
DRME				*e*Sg		**Sn**	**07 22 17.8**	**-0.8**
DRME	**Dracevica, Mon**	**1.06**	**276**	*e*Pg		**Pg**	**07 22 00.5**	**-1.0**
DRME				*e*Sg		**Sb**	**07 22 17.0**	**+0.3**
PDG	**Podgorica**	**1.06**	**290**	Pg		**Pg**	**07 22 00.5**	**-0.9**
PDG				Sg		**Sg**	**07 22 14.9**	**-0.3**
PDG	**Podgorica**	**1.06**	**290**	*e*Pg		**Pg**	**07 22 00.1**	**-1.4**
PDG				*e*Sg		**Sb**	**07 22 16.4**	**-0.3**
PDG	**Podgorica**	**1.06**	**290**	↑*i*Pg		**Pg**	**07 22 16.8**	**-1.2**
PDG				*i* Sg		**Sn**	**07 22 17.8**	**-0.8**
PDG	**Podgorica**	**1.06**	**290**	*e*Pg		**Pg**	**07 22 00.3**	**-1.2**
PDG				*e*Sg		**Sb**	**07 22 16.8**	**+0.1**
KOME	**Kolasin**	**1.12**	**314**	↑*i*Pg		**Pg**	**07 22 01.8**	**-0.7**
KOME				*e*Sg		**Sn**	**07 22 20.2**	**+0.1**
BARS	**Barje**	**1.16**	**50**	*e*Pg		**Pn**	**07 22 05.2**	**+0.7**
BARS				*e*Sg		**Sn**	**07 22 21.8**	**+0.8**
SELS	**Selova**	**1.20**	**18**	*e*Pg		**Pn**	**07 22 05.4**	**+0.3**
SELS				*e*Sg		**Sn**	**07 22 23.5**	**+1.4**
SJES	**Sjenica**	**1.27**	**339**	*e*Pg		**Pn**	**07 22 05.3**	**-0.8**
SJES				*e*Sg		**Sn**	**07 22 24.0**	**+0.1**
SJES	**Sjenica**	**1.27**	**339**	↑*i*Pg		**Pn**	**07 22 05.7**	**-0.4**
SJES				*e*Sg		**Sn**	**07 22 24.8**	**+0.9**
BUM	**Brajici-Budva**	**1.29**	**281**	*e*Pg		**Pn**	**07 22 04.8**	**-1.6**
BUM				*e*Sg		**Sn**	**07 22 25.9**	**+1.6**
CEME	**Cevo**	**1.34**	**291**	↑*i*Pg		**Pn**	**07 22 05.4**	**-1.6**
CEME				*i* Sg		**Sn**	**07 22 27.3**	**+1.8**
NKME	**Niksic**	**1.41**	**300**	↓*i*Pg		**Pn**	**07 22 07.1**	**-0.8**
NKME				*e*Sg		**Sg**	**07 22 29.6**	**+3.4**
BOSS	**Bosilegrad**	**1.45**	**73**	*e*Pg		**Pg**	**07 22 09.5**	**+0.6**
BOSS				*e*Sg		**Sg**	**07 22 28.8**	**+1.1**
KBN	**Korca**	**1.46**	**175**	Pg		**Pg**	**07 22 10.0**	**+1.0**
KBN				Sg		**Sg**	**07 22 30.2**	**+2.3**
GOCS	**Kraljevo Serbi**	**1.50**	**7**	*e*Sg		**Sg**	**07 22 30.2**	**+1.0**
IVAS	**Ivanjica**	**1.54**	**348**	*e*Pg		**Pn**	**07 22 09.6**	**-0.1**
IVAS				*e*Sg		**Sg**	**07 22 31.3**	**+0.9**
HCY	**Herceg Novi**	**1.61**	**284**	↓*i*Pn		**Pn**	**07 22 10.7**	**+0.1**
HCY				*e*Sn		**Sg**	**07 22 36.1**	**+3.3**
HCY	**Herceg Novi**	**1.61**	**284**	*e*Pn		**Pn**	**07 22 10.8**	**+0.1**
HCY				*e*Sn		**Sb**	**07 22 32.6**	**+0.1**
UPM	**Unac-Piva**	**1.69**	**312**	*e*Pn		**Pb**	**07 22 12.6**	**-0.4**
UPM				*e*Sn		**Sg**	**07 22 38.6**	**+3.3**
UPM	**Unac-Piva**	**1.69**	**312**	*e*Pn		**Pn**	**07 22 12.0**	**+0.1**
UPM				*e*Sn		**Sg**	**07 22 35.9**	**+0.6**
BRY	**Bratogost**	**1.74**	**299**	*e*Pn		**Pb**	**07 22 13.2**	**-0.7**
BRY				*i* Sn		**Sg**	**07 22 39.9**	**+3.0**
BRY	**Bratogost**	**1.74**	**299**	*e*Pn		**Pn**	**07 22 12.3**	**-0.2**
BRY				*e*Sn		**Sb**	**07 22 36.8**	**+0.5**
RUDO	**Rudo**	**1.79**	**330**	*e*Pn		**Pn**	**07 22 13.4**	**+0.3**
RUDO				*e*Sn		**Sb**	**07 22 37.8**	**+0.2**
TREB	**Trebinje**	**1.79**	**292**	*e*Pn		**Pb**	**07 22 14.3**	**-0.4**
TREB	**Trebinje**	**1.79**	**292**	*e*Pn		**Pb**	**07 22 14.1**	**-0.6**
TREB				*e*Sn		**Sb**	**07 22 37.7**	**+0.1**
GRUS	**Gruza**	**1.81**	**2**	*e*Pn		**Pn**	**07 22 13.5**	**+0.1**
ZAPS	**Zavoj**	**1.91**	**51**	*e*Pn		**Pb**	**07 22 15.4**	**-1.4**
ZAPS				*e*Sn		**Sb**	**07 22 40.9**	**-0.3**
BBLS	**Lazi&#263i**	**1.99**	**334**	*e*Pn		**Pb**	**07 22 17.3**	**-0.9**
BBLS				*e*Sn		**Sn**	**07 22 42.4**	**+0.8**
BBLS	**Lazi&#263i**	**1.99**	**334**	*e*Pn		**Pn**	**07 22 16.5**	**+0.5**
BBLS				*e*Sn		**Sn**	**07 22 42.5**	**+0.8**
VTS	**Vitosha**	**2.02**	**74**	*e*Pn		**Pb**	**07 22 17.7**	**-1.0**
DIVS	**Divibare**	**2.07**	**348**	*e*Pn		**Pn**	**07 22 17.0**	**-0.1**
DIVS				*e*Sn		**Sb**	**07 22 44.5**	**-1.3**
ZAGS	**Zajecar**	**2.10**	**34**	*e*Sn		**Sb**	**07 22 44.8**	**-1.9**
SRN	**Sarande**	**2.24**	**192**	Pn		**Pb**	**07 22 21.7**	**-0.7**
SRN				Sn		**Sg**	**07 22 52.5**	**-0.6**
STON	**Ston**	**2.29**	**291**	*e*Pn		**Pb**	**07 22 21.9**	**-1.3**
KUBS	**Kucevo**	**2.46**	**18**	*e*Pn		**Pb**	**07 22 23.7**	**-2.4**
KUBS				*e*Sn		**Sb**	**07 22 55.3**	**-1.6**
MORH	**Mrgy, Hungar**	**4.37**	**342**	*e*Pn		**Pn**	**07 22 48.9**	**+0.3**
MORH				*e*Sn		**Sn**	**07 23 40.3**	**+0.2**

CATAC 22 07:23:09.6±0.4, 13°N±2°×8°9W±°, h18km±2km, M3.2/24, MLv3.2/24, Error ellipse: s-maj=4.5km s-min=2.7km az=35.5, confirmed
GCG 22 07:23:10.4±0.9, 12°87N×89°38W, h32km±5km, MD3.5, Presumed earthquake
SNET 22 07:23:10.5±1.0, 12°87N×89°33W, h26km±2km, ML3.2, Presumed earthquake

ISC 22 07:23:09.5±1.8, 12°84N±0°07×89°32W±0°04, h23km±14km, n55, σ0°46/93, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LALI	**Alcalda de L**	**0.65**	**0**	P		**Pb**	**07 23 22.6**	**+0.5**
LALI				S		**Sb**	**07 23 31.0**	**+0.3**
LALI	**Alcalda de L**	**0.65**	**0**	*i* P		**Pb**	**07 23 22.7**	**+0.6**
LALI				*i* S		**Sb**	**07 23 30.9**	**+0.2**
PANCS	**Alcalda de**	**0.78**	**10**	P		**Pb**	**07 23 24.5**	**+0.1**
PANCS				S		**Sb**	**07 23 34.2**	**-0.4**
LOMA	**Loma Larga**	**0.81**	**10**	*e*P		**Pb**	**07 23 24.8**	**-0.3**
LOMA				*e*S		**Sb**	**07 23 35.9**	**+0.3**
JAYA	**Jayaque - finc**	**0.82**	**351**	P		**Pb**	**07 23 25.1**	**0.0**
JAYA				S		**Sb**	**07 23 35.9**	**0.0**
JAYA	**Jayaque - finc**	**0.82**	**351**	*i* P		**Pb**	**07 23 25.2**	**0.0**
JAYA				*i* S		**Sb**	**07 23 36.2**	**+0.4**
JAYA	**Jayaque - finc**	**0.82**	**351**	*e*P		**Pb**	**07 23 25.2**	**0.0**
JAYA				*e*S		**Sb**	**07 23 36.4**	**+0.6**
SJTE	**Alcalda de S**	**0.83**	**22**	*e*P		**Pb**	**07 23 25.0**	**-0.3**
SJTE				*e*S		**Sb**	**07 23 36.1**	**0.0**
SEMO	**Seminario San**	**0.86**	**6**	P		**Pb**	**07 23 25.8**	**-0.1**
SEMO				S		**Sb**	**07 23 37.2**	**+0.2**
SEMO	**Seminario San**	**0.86**	**6**	*e*P		**Pb**	**07 23 25.4**	**-0.5**
UTEC	**Universidad Te**	**0.86**	**8**	P		**Pb**	**07 23 25.8**	**-0.1**
UTEC	**Universidad Te**	**0.86**	**8**	*e*P		**Pb**	**07 23 25.5**	**-0.4**
UTEC				*e*S		**Sb**	**07 23 37.2**	**+0.1**
PMON	**Piamonte**	**0.87**

SDDR				⇑eSg	Sb	07 41 24.2	+1.5		
SDDR				IAML		07 41 24.2			
	comp=N,18nm,0.3s								
SDDR	**Presa de Saban**	**0.41**	**34**	*i* P	**Pg**	**07 41 15.6**	**-0.7**		
SDDR				*e*S	**Sb**	**07 41 22.8**	**+0.1**		
SDDR				IAML		07 41 27.0			
	comp=Z,314nm,0.1s								
PODR	**Polo**	**0.53**	**154**	⇑*e*Pg	**Pg**	**07 41 17.8**	**-0.7**		
PODR				⇑*e*Sg	**Sg**	**07 41 26.3**	**+0.6**		
PODR				IAML		07 41 26.4			
	comp=N,127nm,0.1s								
PODR	**Polo**	**0.53**	**154**	*i* P	**Pg**	**07 41 17.8**	**-0.7**		
PODR				*e*S	**Sg**	**07 41 26.3**	**+0.6**		
REDR	**Restauracion**	**0.54**	**14**	*e*Pg	**Pb**	**07 41 19.8**	**+0.9**		
REDR				⇑*e*Sg	**Sn**	**07 41 28.5**	**-1.0**		
REDR				IAML		07 41 30.3			
	comp=N,89nm,0.1s								
BANI	**BANI**	**1.14**	**102**	⇑*e*Pg	**Pn**	**07 41 28.8**	**-0.4**		
BANI				IAML		07 41 44.9			
	comp=N,169nm,1.5s								
HATOM	**Hato Mayor del**	**2.04**	**86**	⇑*e*Pg	**Pn**	**07 41 41.5**	**0.0**		
HATOM				⇑*e*Sg	**Sb**	**07 42 09.3**	**-0.4**		
HATOM				IAML		07 42 40.6			
	comp=N,21nm,1.8s								

*IDC **22** 07:42:09.7±1.4, 12°.96N×146°.67E, h0km, mb3.9/6, mbtmp3.9/6, MS3.3/2, Error ellipse: s-maj=35.1km s-min=30.3km az=95.0*
*NEIC **22** 07:42:12.9±1.2, 13°.2N±0°.2×146°.55E±0°.09, h10km±1km, mb4.0/3, Error ellipse: s-maj=30.4km s-min=12.4km az=18.0*
ISC 22 07:42:15.0±0.8, 13°.1N±0°.2×146°.55E±0°.10, h31km, n16, σ0s74/16, mb4.1/8, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.72**	**288**	Pn	**Pn**	**07 42 43.4**	**+0.6**
	213nm,0.3s,baz=126,slow=14,SNR=104						
GUMO				Sn	**Sn**	**07 43 03.4**	**-0.3**
	140nm,0.3s,baz=162,slow=20,SNR=11						
GUMO	**Guam**	**1.72**	**288**		**Pn**	**07 42 43.0**	**+0.2**
GUMO				Sn	**Sn**	**07 43 03.5**	**-0.3**
PATS	**Pohnpei**	**13.13**	**117**	Pn	**Pn**	**07 45 19.6**	**+0.2**
MTN	**Manton Dam**	**29.93**	**211**	P	**P**	**07 48 21.3**	**+0.9**
MTN				IAmb	IAmb	07 48 50.0	
	comp=Z,5.6nm,1.0s						
WRA	**Warramunga Arr**	**34.92**	**200**	P	**P**	**07 49 03.0**	**-1.1**
	comp=Z,0.4nm,0.7s,baz=18,slow=8.4,SNR=5.1						
	comp=Z,0.4nm,0.7s						
WRA	**Warramunga Arr**	**34.92**	**200**	P	**P**	**07 49 03.9**	**-0.3**
WRA				IAmb	IAmb	07 49 24.6	
	comp=Z,0.2nm,1.1s						
ASAR	**Alice Springs**	**38.54**	**199**	LR	LR	08 05 31.3	
	comp=Z,42nm,19.2s,baz=142,slow=36						
MKAR	**Makanchi Array**	**63.01**	**316**	P	**P**	**07 52 40.1**	**+1.0**
	comp=Z,0.7nm,0.5s,baz=91,slow=8.3,SNR=14						
	comp=Z,0.7nm,0.5s						
MKAR	**Makanchi Array**	**63.01**	**316**	P	**P**	**07 52 39.0**	**0.0**
ZALV	**Zalesovo Beam**	**63.01**	**324**	LR	LR	08 21 07.2	
	comp=Z,21nm,18.2s,baz=52,slow=37						
KURK	**Kurchatov**	**66.05**	**320**	P	**P**	**07 52 59.0**	**+0.3**
KURK				IAmb	IAmb	07 52 59.7	
	comp=Z,1.2nm,0.8s						
KURBB	**Kurchatov Arra**	**66.09**	**320**	P	**P**	**07 52 59.2**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=100,slow=6.9,SNR=11						
	comp=Z,1.0nm,0.5s						
ILAR	**Eielson Array**	**68.35**	**25**	P	**P**	**07 53 13.4**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=256,slow=5.3,SNR=6.0						
	comp=Z,0.3nm,0.5s						
BVAR	**Borovoye Array**	**71.36**	**322**	P	**P**	**07 53 32.6**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=101,slow=6.9,SNR=6.8						
	comp=Z,1.1nm,0.5s						
FINES	**FINESS Array B**	**92.33**	**336**	P	**P**	**07 55 20.8**	**-1.3**
	comp=Z,1.9nm,0.9s,baz=67,slow=5.0,SNR=4.1						
	comp=Z,1.9nm,0.9s						
FINES	**FINESS Array B**	**92.33**	**336**	P	**P**	**07 55 21.1**	**-1.0**

*IDC **22** 07:47:01.7±1.5, 17°.55S×178°.84W, h564km±16km, mb3.5/3, mbtmp4.5/5, Error ellipse: s-maj=38.6km s-min=23.2km az=172.0*
*NEIC **22** 07:47:02.1±0.7, 17°.7S±0°.2×178°.72W±0°.10, h571km±12km, mb4.0/19, Error ellipse: s-maj=25.7km s-min=13.8km az=180.0*
ISC 22 07:47:00.7±0.7, 17°.7S±0°.1×178°.8W±0°.1, h550km, n31, σ1s07/33, mb4.0/14, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.05**	**269**	P	**P**	**07 48 18.3**	**+2.2**
	4.7nm,0.6s,baz=95,slow=4.5,SNR=4.5						
MSVF	**Nonsavu**	**3.05**	**269**	P	**P**	**07 48 19.1**	**+2.9**
AFI	**Afiamalu**	**7.71**	**62**	P	**P**	**07 48 56.9**	**+1.2**
	23nm,0.5s,baz=291,slow=17,SNR=2.1						
FUNA	**Funafuti**	**9.36**	**347**	P	**P**	**07 49 13.0**	**+0.8**
DZM	**Mont Dzumac**	**14.58**	**250**	P	**P**	**07 50 05.8**	**-0.2**
	8.8nm,0.6s,baz=80,slow=18,SNR=6.5						
EIDS	**Eidsvold**	**29.03**	**250**	P	**P**	**07 52 16.8**	**0.0**
EIDS				IAmb	IAmb	07 52 18.6	
	comp=Z,5.5nm,1.1s						
ARMA	**Armidale**	**29.75**	**239**	P	**P**	**07 52 24.0**	**+0.8**
ARMA				IAmb	IAmb	07 52 24.6	
	comp=Z,4.1nm,0.6s						
WHZ	**Wether Hill Ro**	**30.19**	**199**	P	**P**	**07 52 27.0**	**+0.4**
COEN	**Coen**	**36.78**	**270**		**P**	**07 53 22.9**	**+0.4**
COEN				IAmb	IAmb	07 53 31.8	
	comp=Z,5.8nm,1.0s						
TOO	**Toolangi**	**37.04**	**230**	P	**P**	**07 53 24.7**	**+0.4**
TOO				IAmb	IAmb	07 53 26.2	
	comp=Z,3.5nm,0.8s						
TAOE	**Nuku Hiva Isla**	**38.52**	**82**	P	**P**	**07 53 35.5**	**-1.3**
BBOO	**Buckleboo**	**43.21**	**241**	P	**P**	**07 54 13.7**	**0.0**
WR8	**Warramunga Arr**	**44.20**	**259**	P	**P**	**07 54 20.9**	**-0.6**
WR8				IAmb	IAmb	07 54 43.5	
	comp=Z,4.9nm,1.1s						
WB0	**Warramunga Arr**	**44.31**	**260**	P	**P**	**07 54 21.5**	**-0.9**
WB2	**Warramunga Arr**	**44.34**	**259**	P	**P**	**07 54 21.4**	**-1.2**
WRA	**Warramunga Arr**	**44.35**	**259**	P	**P**	**07 54 22.1**	**-0.6**
	comp=Z,1.7nm,0.6s,baz=95,slow=7.3,SNR=32						
WRA				PcP	**PcP**	**07 55 54.6**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=92,slow=3.2,SNR=2.5						
	comp=Z,1.7nm,0.6s						
WRA	**Warramunga Arr**	**44.35**	**259**	P	**P**	**07 54 21.6**	**-1.1**
AS31	**Alice Springs**	**44.53**	**254**	P	**P**	**07 54 23.8**	**-0.3**
AS31				IAmb	IAmb	07 54 24.3	
	comp=Z,5.0nm,0.6s						
ASAR	**Alice Springs**	**44.53**	**254**	P	**P**	**07 54 23.8**	**-0.3**
	comp=Z,18nm,0.6s,baz=88,slow=8.1,SNR=399						
ASAR				PcP	**PcP**	**07 55 54.9**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=98,slow=3.4,SNR=5.7						
	comp=Z,18nm,0.6s						
ASAR	**Alice Springs**	**44.53**	**254**	P	**P**	**07 54 24.0**	**-0.1**
FORT	**Forrest**	**49.79**	**244**	P	**P**	**07 55 03.1**	**-0.4**
KNRA	**Kununurra**	**50.19**	**264**	P	**P**	**07 55 06.2**	**-0.3**
KNRA				IAmb	IAmb	07 55 07.0	
	comp=Z,4.2nm,0.7s						
SOEI	**Soe**	**55.75**	**270**	P	**P**	**07 55 44.9**	**-1.5**
SOEI				IAmb	IAmb	07 55 56.8	
	comp=Z,8.4nm,0.9s						
PSA00	**Pilbara Seismi**	**57.64**	**255**	P	**P**	**07 55 58.4**	**-0.7**
PSA00	**Pilbara Seismi**	**57.64**	**255**	P	**P**	**07 55 58.7**	**-0.4**
PSA00				IAmb	IAmb	07 56 05.9	
	comp=Z,5.7nm,0.9s						
MBWA	**Marble Bar**	**57.80**	**256**	P	**P**	**07 55 59.6**	**-0.6**
MBWA				IAmb	IAmb	07 56 10.6	
	comp=Z,6.6nm,1.1s						
MORW	**Morawa**	**60.26**	**246**	P	**P**	**07 56 16.3**	**-0.3**
MORW				IAmb	IAmb	07 56 31.5	
	comp=Z,5.7nm,0.9s						
QSPA	**South Pole Qui**	**72.33**	**180**	P	**P**	**07 57 31.6**	**+0.9**
	comp=Z,0.9nm,0.5s,baz=135,slow=8.6,SNR=6.7						
	comp=Z,0.9nm,0.5s						
QSPA	**South Pole Qui**	**72.33**	**180**	P	**P**	**07 57 31.1**	**+0.3**
BRTR	**Keskin Array B**	**144.42**	**315**	PKP	**PKPab**	**08 05 34.0**	**-1.4**
	comp=Z,0.6nm,0.6s,baz=127,slow=4.3,SNR=3.6						
MMAI	**Mount Meron Ar**	**145.77**	**303**	PKPbc	**PKPbc**	**08 05 36.8**	**-2.3**
	comp=Z,1.5nm,0.4s,baz=100,slow=3.2,SNR=2.3						

IDC 22 08:01:15.9±2.1, 2°.77N×126°.51E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=123.3km s-min=26.7km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**3.41**	**347**	*e*P	Pn	08 02 12.8	+2.3
DDMP				*e*S	Sn	08 02 49.4	-2.2
FITZ	**Fitzroy Crossi**	**20.75**	**182**	P	P	08 05 58.4	0.0
	1.4nm,0.7s,baz=16,slow=9.7,SNR=2.3						
	1.4nm,0.7s						
WRA	**Warramunga Arr**	**23.84**	**162**	P	P	08 06 31.1	+0.1
	1.7nm,0.6s,baz=340,slow=10,SNR=26						
	1.7nm,0.6s						
ASAR	**Alice Springs**	**27.24**	**165**	P	P	08 07 02.0	0.0
	0.4nm,0.5s,baz=345,slow=8.2,SNR=8.8						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**58.22**	**326**	P	P	08 11 11.9	-0.2
	0.1nm,0.5s,baz=126,slow=7.0,SNR=1.9						
	0.1nm,0.5s						

*JMA **22** 08:06:29.8±0.2, 24°.N±2°×122°.6E±0°.6, h89km±1km, MV1.9/13, NW OFF ISHIGAKIJIMA IS*
*TAP **22** 08:06:29.4, 24°.50N×122°.62E, h97km±1km, ML3.1, B*
ISC 22 08:06:29.6±1.4, 24°.49N±0°.04×122°.67E±0°.03, h95km±8km, n91, σ0s74/150, 3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.26**	**98**	*e*P	**Pn**	**08 06 43.3**	**0.0**
JYNG				*e*S	**Sn**	**08 06 52.6**	**-1.1**
YOJ	**Yonaguni jima**	**0.32**	**94**	⇓*i*P	**Pn**	**08 06 43.7**	**0.0**
YOJ				*i* S	**Sn**	**08 06 55.0**	**+0.8**
YOJ	**Yonaguni jima**	**0.32**	**94**	*e*P	**Pn**	**08 06 43.7**	**0.0**
YOJ				*e*S	**Sn**	**08 06 53.7**	**-0.4**
EOS3	**EOS3**	**0.37**	**238**	⇓*i*P	**Pn**	**08 06 44.6**	**+0.8**
EOS3				S	**Sn**	**08 06 56.3**	**+1.9**
EOS2	**EOS2**	**0.40**	**261**	*e*P	**Pn**	**08 06 44.4**	**+0.4**
EOS2				*i* S	**Sn**	**08 06 55.9**	**+1.2**
EOS4	**EOS4**	**0.48**	**221**	*e*P	**Pn**	**08 06 44.5**	**+0.2**
EOS4				S	**Sn**	**08 06 56.4**	**+1.1**
TWC	**Suao**	**0.75**	**280**	⇓*i*P	**Pn**	**08 06 46.6**	**-0.4**
TWC				*i* S	**Sn**	**08 06 59.1**	**-1.0**
EGS		**0.76**	**298**	*i* P	**Pn**	**08 06 47.2**	**+0.1**
EGS				*i* S	**Sn**	**08 06 58.9**	**-1.2**
TWB1	**Santiao Chiao**	**0.81**	**310**	*e*P	**Pn**	**08 06 48.0**	**+0.4**
TWB1				*e*S	**Sn**	**08 07 00.2**	**-0.8**
EWUT	**Wuta**	**0.81**	**267**	*e*P	**Pn**	**08 06 47.9**	**+0.3**
EWUT				S	**Sn**	**08 07 00.5**	**-0.5**
EAHA	**Aohua**	**0.86**	**260**	*e*P	**Pn**	**08 06 48.3**	**+0.2**
EAHA				S	**Sn**	**08 07 02.7**	**+0.7**
NDS	**Dongshan**	**0.88**	**280**	*e*P	**Pn**	**08 06 48.9**	**+0.6**
NDS				*e*S	**Sn**	**08 07 02.5**	**+0.1**
ILA	**Ilan**	**0.88**	**289**	*i* P	**Pn**	**08 06 48.1**	**-0.2**
ILA				*e*S	**Sn**	**08 07 02.5**	**+0.2**
TIPB	**Shuangxi**	**0.90**	**303**	*e*P	**Pn**	**08 06 48.7**	**+0.1**
TIPB				*i* S	**Sn**	**08 07 01.9**	**-1.0**
TWE	**Neicheng**	**0.94**	**285**	*i* P	**Pn**	**08 06 49.1**	**+0.2**
TWE				*e*S	**Sn**	**08 07 02.9**	**-0.6**
SXI1	**Grass Mountain**	**0.94**	**310**	*e*P	**Pn**	**08 06 49.5**	**+0.5**
SXI1				*e*S	**Sn**	**08 07 03.1**	**-0.6**
IRIF	**Iriomote-Funau**	**0.98**	**99**	*e*P	**Pn**	**08 06 49.1**	**-0.3**
IRIF				*e*S	**Sn**	**08 07 03.9**	**-0.5**
NWF	**Wu-fen Shan**	**0.99**	**306**	*i* P	**Pn**	**08 06 49.6**	**-0.1**
NWF				*i* S	**Sn**	**08 07 04.0**	**-0.7**
WFSB	**Wu-fen Shan**	**0.99**	**306**	P	**Pn**	**08 06 49.3**	**-0.3**
WFSB				*e*S	**Sn**	**08 07 05.3**	**+0.8**
ETL	**Fush Village**	**1.00**	**251**	*e*P	**Pn**	**08 06 49.4**	**-0.3**
ETL				S	**Sn**	**08 07 04.3**	**-0.5**
ENTT	**Nioudou**	**1.01**	**279**	*i* P	**Pn**	**08 06 50.2**	**+0.4**
ENTT				S	**Sn**	**08 07 05.4**	**+0.4**
FUSB	**Fushanzhiwuyua**	**1.02**	**286**	*e*P	**Pn**	**08 06 50.5**	**+0.6**
FUSB				*i* S	**Sn**	**08 07 04.6**	**-0.6**
NACB	**Ninganchiao**	**1.02**	**253**	P	**Pn**	**08 06 49.5**	**-0.4**
NACB	**Ninganchiao**	**1.02**	**253**	S	**Sn**	**08 07 04.6**	**-0.6**
NACB	**Ninganchiao**	**1.02**	**253**	P	**Pn**	**08 06 49.3**	**-0.6**
NACB				*e*S	**Sn**	**08 07 04.2**	**-1.0**
LATG	**Datong**	**1.04**	**273**	P	**Pn**	**08 06 50.3**	**+0.1**
LATG				S	**Sn**	**08 07 05.3**	**-0.3**
NDT	**Datong Townshi**	**1.06**	**277**	P	**Pn**	**08 06 50.5**	**+0.3**
NDT				S	**Sn**	**08 07 05.7**	**-0.2**
TWD	**Chiawan**	**1.06**	**248**	*i* P	**Pn**	**08 06 49.9**	**-0.4**
TWD				*e*S	**Sn**	**08 07 05.0**	**-0.7**
HWA	**Hwalien**	**1.09**	**243**	*e*P	**Pn**	**08 06 50.6**	**0.0**
NWLT	**Wulai**	**1.10**	**286**	*e*P	**Pn**	**08 06 51.2**	**+0.4**
NWLT				S	**Sn**	**08 07 06.0**	**-0.7**
TWA	**Mucha**	**1.10**	**297**	P	**Pn**	**08 06 51.7**	**+0.3**
TWA				S	**Sn**	**08 07 05.5**	**-1.2**
ETLH	**Xiulin Townshi**	**1.11**	**256**	*e*P	**Pn**	**08 06 50.8**	**-0.3**
ETLH				*i* S	**Sn**	**08 07 06.3**	**-0.8**
HATJ	**Hateruma jima**	**1.12**	**112**	*e*S	**Sn**	**08 07 06.5**	**-0.7**
TEYL	**Yanliau Villag**	**1.15**	**238**	*e*P	**Pn**	**08 06 51.0**	**-0.3**
NNSB	**Datong**	**1.17**	**267**	*e*P	**Pn**	**08 06 51.7**	**0.0**
NNSB				*e*S	**Sn**	**08 07 08.0**	**-0.4**
NNS	**Nan Shan**	**1.18**	**268**	*e*P	**Pn**	**08 06 51.9**	**+0.1**
NNS				S	**Sn**	**08 07 07.7**	**-0.8**
YHNB	**Yeheng**	**1.19**	**279**	P	**Pn**	**08 06 52.4**	**+0.5**
YHNB	**Yeheng**	**1.19**	**279**	S	**Sn**	**08 07 08.3**	**-0.4**
YHNB	**Yeheng**	**1.19**	**279**	*i* P	**Pn**	**08 06 52.3**	**+0.4**
YHNB				S	**Sn**	**08 07 08.5**	**-0.2**
ETM	**Tongmen**	**1.19**	**244**	*e*P	**Pn**	**08 06 51.4**	**-0.4**
ETM				*e*S	**Sn**	**08 07 07.3**	**-1.3**
YM01	**YM01**	**1.19**	**304**	*e*P	**Pn**	**08 06 51.5**	**-0.4**
YM01				*i* S	**Sn**	**08 07 08.0**	**-0.7**
YM08	**YM08**	**1.20**	**306**	*e*S	**Sn**	**08 07 07.8**	**-1.1**
NSK	**Sanguang**	**1.21**	**279**	*i* P	**Pn**	**08 06 52.3**	**+0.3**
NSK				*e*S	**Sn**	**08 07 08.6**	**-0.4**
ZUZH	**Zhuzihu**	**1.22**	**304**	*e*S	**Sn**	**08 07 08.3**	**-1.0**
SHUL	**Shoufeng**	**1.22**	**236**	*e*P	**Pn**	**08 06 52.0**	**-0.2**
SHUL				*e*S	**Sn**	**08 07 09.8**	**+0.5**
LXIB	**Xiulin Townshi**	**1.23**	**248**	P	**Pn**	**08 06 51.8**	**-0.7**
LXIB				*i* S	**Sn**	**08 07 09.3**	**-0.5**
JKRS	**Kuro-shima**	**1.25**	**101**	*e*P	**Pn**	**08 06 53.4**	**+0.9**
JKRS				*e*S	**Sn**	**08 07 10.0**	**+0.2**
PCYT	**Pengchaiyu**	**1.26**	**335**	*e*P	**Pn**	**08 06 53.0**	**+0.4**
TEGC	**Jichi Village**	**1.29**	**233**	*e*P	**Pn**	**08 06 53.0**	**0.0**
TWS1	**Kuangyinshan**	**1.29**	**299**	*i* P	**Pn**	**08 06 52.5**	**-0.5**
TWS1				S	**Sn**	**08 07 09.8**	**-0.9**
ESL	**Shilin**	**1.31**	**240**	*i* P	**Pn**	**08 06 53.0**	**-0.3**
ESL				S	**Sn**	**08 07 09.6**	**-1.5**
FUSS	**Fushou**	**1.32**	**260**	*e*P	**Pn**	**08 06 53.9**	**+0.3**
FUSS				S	**Sn**	**08 07 11.2**	**-0.5**
WHF	**Hehuan Shan**	**1.32**	**255**	*i* P	**Pn**	**08 06 53.5**	**-0.3**
WHF				*i* S	**Sn**	**08 07 11.2**	**-0.8**
JIJ	**Ishigaki jima**	**1.35**	**95**	P	**Pn**	**08 06 54.0**	**+0.2**
JIJ				*e*S	**Sn**	**08 07 11.2**	**-0.9**
TWT	**Tachien**	**1.38**	**261**	*i* P	**Pn**	**08 06 54.4**	**+0.1**
TWT				*i* S	**Sn**	**08 07 12.9**	**+0.1**
KSHI	**Guanxi Townshi**	**1.39**	**282**	*e*P	**Pn**	**08 06 54.4**	**+0.2**
KSHI				*e*S	**Sn**	**08 07 13.7**	**+0.9**
TDCB	**Techi**	**1.39**	**261**	*i* P	**Pn**	**08 06 55.1**	**+0.7**
TDCB				S	**Sn**	**08 07 12.7**	**-0.4**
WARBT	**Fenglin Townsh**	**1.40**	**237**	*i* P	**Pn**	**08 06 53.8**	**-0.6**
WARBT				S	**Sn**	**08 07 11.7**	**-1.3**
NFF	**Wufeng Townshi**	**1.42**	**276**	*i* P	**Pn**	**08 06 55.2**	**+0.6**
NFF				*i* S	**Sn**	**08 07 13.6**	**0.0**
OWD	**Renai**	**1.46**	**249**	P	**Pn**	**08 06 55.2**	**0.0**
OWD				S	**Sn**	**08 07 13.6**	**-1.0**
WUSB	**Renai**	**1.50**	**251**	*i* P	**Pn**	**08 06 56.1**	**+0.5**
WUSB				*i* S	**Sn**	**08 07 15.7**	**+0.3**
JISG	**Ishigakijimahi**	**1.50**	**86**	*e*P	**Pn**	**08 06 55.7**	**+0.1**
JISG				*e*S	**Sn**	**08 07 14.8**	**-0.5**
HGSD	**Ruisui**	**1.50**	**229**	P	**Pn**	**08 06 55.2**	**-0.4**
LIOB	**Emei**	**1.51**	**276**	*e*P	**Pn**	**08 06 56.4**	**+0.6**
LIOB				S	**Sn**	**08 07 15.6**	**+0.1**
NSTT	**Nanjuang**	**1.52**	**276**	*i* P	**Pn**	**08 06 55.8**	**0.0**
NSTT				*i* S	**Sn**	**08 07 15.8**	**0.0**
EHYH	**Wanrong**	**1.56**	**231**	*e*P	**Pn**	**08 06 56.0**	**-0.4**
EHYH				*e*S	**Sn**	**08 07 15.6**	**-1.1**
EHY	**Hungye**	**1.57**	**232**	*i* P	**Pn**	**08 06 55.9**	**-0.6**
VWDT	**VWDT**	**1.57**	**243**	P	**Pn**	**08 06 56.8**	**+0.3**
WHP	**Taichung City**	**1.58**	**263**	*e*P	**Pn**	**08 06 57.7**	**+1.0**
WCS	**Beigang Elemen**	**1.66**	**255**	*e*P	**Pn**	**08 06 58.2**	**+0.7**
YULB	**Yu-li**	**1.66**	**229**	P	**Pn**	**08 06 57.4**	**-0.2**
YULB	**Yu-li**	**1.66**	**229**	S	**Sn**	**08 07 18.8**	**-0.1**
YULB	**Yu-li**	**1.66**	**229**	P	**Pn**	**08 06 57.1**	**-0.6**
YULB				S	**Sn**	**08 07 17.7**	**-1.1**
TWF1	**Yuli**	**1.69**	**228**	*i* P	**Pn**	**08 06 57.3**	**-0.6**
SSLB	**Suanglung**	**1.71**	**246**	P	**Pn**	**08 06 58.8**	**+0.5**
SSLB	**Suanglung**	**1.71**	**246**	*e*P	**Pn**	**08 06 59.2**	**+0.9**
SMLT	**Sun Moon Lake**	**1.72**	**250**	*i* P	**Pn**	**08 06 59.3**	**+0.8**
CHKH	**Chenggong**	**1.73**	**222**	*e*P	**Pn**	**08 06 57.9**	**-0.7**
CHKH				S	**Sn**	**08 07 18.8**	**-1.7**
TYC	**Yuchr**	**1.75**	**251**	P	**Pn**	**08 07 00.5**	**+1.8**
FULB	**Fuli**	**1.79**	**225**	*e*P	**Pn**	**08 06 59.2**	**-0.1**
FULB				*e*S	**Sn**	**08 07 21.9**	**0.0**
WHYT	**Xinyi Township**	**1.83**	**245**	P	**Pn**	**08 07 01.1**	**+1.2**
JTJ	**Tarama**	**1.86**	**85**	*e*P	**Pn**	**08 07 00.7**	**+0.5**
JTJ				*e*S	**Sn**	**08 07 23.4**	**-0.1**
EHD	**Haiduan**	**1.89**	**225**	*e*P	**Pn**	**08 07 00.3**	**-0.2**
ALS	**Alishan**	**1.96**	**241**	*e*P	**Pn**	**08 07 02.9**	**+1.1**
ELDTW	**Lidau**	**1.98**	**230**	*e*P	**Pn**	**08 07 01.7**	**-0.2**
ELDTW				*i* S	**Sn**	**08 07 24.8**	**-1.7**
CHN5	**Tsauling**	**2.02**	**244**	P	**Pn**	**08 07 03.8**	**+1.5**
WCKO	**Fanlu**	**2.15**	**241**	*e*P	**Pn**	**08 07 05.4**	**+1.4**
STYH	**Taoyuan**	**2.17**	**233**	*e*P	**Pn**	**08 07 05.5**	**+1.3**
TPUB	**Ta-pu**	**2.21**	**238**	P	**Pn**	**08 07 06.4**	**+1.7**
TPUB	**Ta-pu**	**2.21**	**238**	S	**Sn**	**08 07 33.7**	**+2.2**
TPUB	**Ta-pu**	**2.21**	**238**	P	**Pn**	**08 07 06.4**	**+1.7**

*DJA **22** 08:15:50.7±0.3, 1°.N±3°×12°.3E±°, h10km, M4.5/13, MLv4.5/13*
*IDC **22** 08:15:51.6±1.6, 0°.84N×123°.55E, h0km, mb3.3/3, mbtmp3.6/5, ML4.1/2, MS2.7/2, Error ellipse: s-maj=44.1km s-min=24.4km az=73.0*
*NEIC **22** 08:15:51.7±1.0, 1°.34N±0°.07×123°.18E±0°.03, h42km±19km, mb4.1/8, Error ellipse: s-maj=10.1km s-min=3.5km az=168.0*
ISC 22 08:15:51.9±0.8, 1°.21N±0°.05×123°.22E±0°.05, h35km, n29, σ1s83/33, mb4.0/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GTOI	**Gorontalo**	**0.61**	**200**	P	**Pn**	**08 16 02.4**	**-1.7**
GTOI				S	**Sn**	**08 16 09.6**	**-3.1**
MRSI	**Marisa**	**1.47**	**240**	P	**Pn**	**08 16 16.9**	**+1.0**
MRSI				S	**Sn**	**08 16 35.4**	**+1.4**
MNI	**Manado**	**1.64**	**82**	P	**Pn**	**08 16 18.6**	**+0.3**
MNI				S	**Sn**	**08 16 39.0**	**+0.9**
LUWI	**Luwuk**	**2.28**	**191**		**Pn**	**08 16 28.6**	**+1.5**
LUWI	**Luwuk**	**2.28**	**191**	P	**Pn**	**08 16 29.1**	**+2.0**
TOLI2	**Tolitoli**	**2.44**	**268**		**Pn**	**08 16 29.3**	**+0.1**
APSI	**Ampana**	**2.63**	**217**	P	**Pn**	**08 16 34.9**	**+3.0**
MPSI	**Mapaga**	**3.43**	**255**	P	**Pn**	**08 16 45.8**	**+2.9**
DDMP	**Don Marcelino,**	**5.46**	**27**	*e*P	**Pn**	**08 17 14.5**	**+3.7**
DDMP				*e*S	**Sn**	**08 18 11.7**	**-0.7**
MMSI	**Mamuju**	**5.79**	**228**	P	**Pn**	**08 17 19.2**	**+3.7**
MYLDM	**Lahad Datu**	**6.14**	**310**		**Pn**	**08 17 17.5**	**-2.7**
DAV	**Davao City (W)**	**6.28**	**22**		**Pn**	**08 17 20.7**	**-1.4**
KAPI	**Kappang**	**7.09**	**209**	Pn	**Pn**	**08 17 34.6**	**+1.3**
	5.5nm,0.3s,baz=26,slow=7.5,SNR=13						
KAPI				Sn	**Sn**	**08 18 55.2**	**+2.6**
	2.4nm,0.3s,baz=198,slow=23,SNR=9.8						
KAPI				LR	LR	08 20 43.3	
	comp=Z,100nm,22.0s,baz=42,slow=42						
	17nm,0.4s						
KAPI	**Kappang**	**7.09**	**209**		**Pn**	**08 17 33.2**	**0.0**
KAPI				Sn	**Sn**	**08 18 53.5**	**+0.8**
KKM	**Kota Kinabalu**	**8.48**	**305**	Pn	**Pn**	**08 17 50.1**	**-2.3**
FAKI	**Fak Fak**	**9.92**	**114**	Pn	**Pn**	**08 18 12.4**	**+0.4**
KNRA	**Kununurra**	**17.65**	**162**	P	**P**	**08 19 56.3**	**+0.4**
KNRA				IAmb	IAmb	08 20 17.1	
	comp=Z,6.1nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.34**	**173**	P	**P**	**08 20 13.8**	**-0.6**
	com

KOK	**Koryaka**	**3.27**	**22**	PN		**Pn**	**08 33 09.5**	**+2.3**
KOK	**Koryaka**	**3.27**	**22**	*e*P		**Pn**	**08 33 09.5**	**+2.3**
KOK				*e*S		**Sn**	**08 33 45.9**	**+1.0**
SMAR	**Somma**	**3.28**	**24**	PN		**Pn**	**08 33 09.2**	**+1.8**
SMAR	**Somma**	**3.28**	**24**	*e*P		**Pn**	**08 33 09.3**	**+1.8**
SMAR				*e*S		**Sn**	**08 33 46.9**	**+1.5**
KRER	**Koryakskii**	**3.31**	**23**	PN		**Pn**	**08 33 08.5**	**+0.7**
KRER	**Koryakskii**	**3.31**	**23**	*e*P		**Pn**	**08 33 08.6**	**+0.7**
KRER				*e*S		**Sn**	**08 33 46.5**	**+0.5**
SDLR	**Sedlovina**	**3.32**	**24**	PN		**Pn**	**08 33 09.0**	**+1.2**
SDLR	**Sedlovina**	**3.32**	**24**	*e*P		**Pn**	**08 33 09.1**	**+1.2**
SDLR				*e*S		**Sn**	**08 33 48.3**	**+2.1**
KRX	**Arik**	**3.33**	**21**	PN		**Pn**	**08 33 09.9**	**+1.8**
KRX	**Arik**	**3.33**	**21**	*e*P		**Pn**	**08 33 10.0**	**+1.8**
KRX				*e*S		**Sn**	**08 33 48.0**	**+1.5**
NLC	**Nalytchevo**	**3.36**	**29**	PN		**Pn**	**08 33 07.9**	**-0.3**
NLC	**Nalytchevo**	**3.36**	**29**	*e*P		**Pn**	**08 33 07.9**	**-0.3**
GNL	**Ganaly**	**3.52**	**13**	PN		**Pn**	**08 33 12.3**	**+1.7**
GNL	**Ganaly**	**3.52**	**13**	*e*P		**Pn**	**08 33 12.4**	**+1.7**
GNL				*e*S		**Sn**	**08 33 53.4**	**+2.3**
SPN	**Mys Shipunski**	**3.53**	**36**	PN		**Pn**	**08 33 10.6**	**0.0**
SPN	**Mys Shipunski**	**3.53**	**36**	*e*P		**Pn**	**08 33 10.7**	**0.0**
SPN				*e*S		**Sn**	**08 33 49.4**	**-1.7**
KBTR	**Krutoberegovo**	**7.01**	**30**	PN		**Pn**	**08 33 59.9**	**+1.8**
KBTR	**Krutoberegovo**	**7.01**	**30**	*e*P		**Pn**	**08 33 59.9**	**+1.8**
MA2	**Magadan**	**9.90**	**342**	P		**Pn**	**08 34 38.5**	**+0.8**
	comp=Z,3.7nm,0.3s,baz=162,slow=20,SNR=6.2							
ASAJ	**Asahikawa**	**11.35**	**242**	P		**Pn**	**08 34 59.4**	**+1.9**
	comp=Z,0.4nm,0.3s,baz=70,slow=12,SNR=4.8							
	comp=Z,2.2nm,0.6s							
SEY	**Seymchan**	**12.90**	**351**	P		**Pn**	**08 35 21.0**	**+2.6**
	comp=Z,0.1nm,0.3s,baz=148,slow=7.5,SNR=4.1							
	comp=Z,0.5nm,0.4s							
BILL	**Bilibino**	**18.45**	**11**	*i* P		**Pn**	**08 36 29.2**	**+0.2**
BILL				pmax	pmax			
	comp=E,1.0nm,0.2s							
YAK	**Yakutsk**	**18.90**	**319**	*i* P		**P**	**08 36 28.9**	**-4.2**
YAK				pmax	pmax			
	comp=Z,3.0nm,0.7s							
H11N2	**WAKE ISLAND Hy**	**31.56**	**161**	T		T	09 12 07.8	
	baz=348,slow=76,SNR=8.5							
H11N3	**WAKE ISLAND Hy**	**31.57**	**161**	T		T	09 12 11.5	
	baz=348,slow=76,SNR=11							
H11N1	**WAKE ISLAND Hy**	**31.57**	**161**	T		T	09 12 10.0	
	baz=348,slow=76,SNR=8.5							
ILAR	**Eielson Array**	**32.35**	**42**	P		**P**	**08 38 41.0**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=271,slow=7.4,SNR=5.8							
	comp=Z,0.3nm,0.8s							
ILAR	**Eielson Array**	**32.35**	**42**	*e*P		**P**	**08 38 40.7**	**-0.2**
H11S1	**WAKE ISLAND Hy**	**32.71**	**162**	T		T	09 13 06.6	
	baz=347,slow=76,SNR=23							
H11S3	**WAKE ISLAND Hy**	**32.72**	**162**	T		T	09 13 08.0	
	baz=347,slow=76,SNR=28							
H11S2	**WAKE ISLAND Hy**	**32.72**	**162**	T		T	09 13 12.9	
	baz=347,slow=76,SNR=20							
YKA	**Yellowknife Ar**	**46.71**	**40**	P		**P**	**08 40 41.3**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=301,slow=8.2,SNR=8.8							
	comp=Z,0.3nm,0.6s							
PDAR	**Pinedale Array**	**60.83**	**57**	P		**P**	**08 42 25.5**	**+1.7**
	comp=Z,0.4nm,0.7s,baz=312,slow=6.7,SNR=5.0							
	comp=Z,0.4nm,0.7s							
BELG	**Belogornoye**	**61.44**	**319**	*i* P		**P**	**08 42 24.3**	**-3.0**
BELG				pmax	pmax			
	comp=Z,2.0nm,1.0s							
KIV	**Kislovodsk**	**69.97**	**315**	*e*P		**P**	**08 43 20.4**	**-2.1**
KIV				pmax	pmax			
	comp=Z,3.0nm,1.0s							
WRA	**Warramunga Arr**	**72.63**	**202**	P		**P**	**08 43 39.5**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=14,slow=6.1,SNR=2.1							
	comp=Z,0.3nm,0.7s							
ASAR	**Alice Springs**	**76.32**	**201**	P		**P**	**08 44 00.9**	**+0.9**
	comp=Z,0.2nm,0.8s,baz=12,slow=6.4,SNR=1.4							
	comp=Z,0.2nm,0.8s							
H03N2	**Juan Fernandez**	**136.40**	**89**	T		T	11 22 44.5	
	baz=314,slow=77							
H03N1	**Juan Fernandez**	**136.41**	**89**	T		T	11 22 46.3	
	baz=314,slow=77							
H03N3	**Juan Fernandez**	**136.42**	**89**	T		T	11 22 46.9	
	baz=314,slow=77							

*ISK **22** 08:37:14.9, 38.°03N×38.°22E, h2km, ML2.7/9*
*AFAD **22** 08:37:15.9, 38.°03N×38.°23E, h7km±2km, ML2.8*
ISC 22 08:37:15.9±1.1, 38.°03N±0.°03×38.°20E±0.°03, h5km±10km, n19, σ1°§24/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AZEY	**Adyaman-Merk**	**0.22**	**170**	P	**Pg**	**08 37 21.0**	**+0.6**
AZEY				S	**Sg**	**08 37 24.6**	**+1.3**
AZEY				IAML		08 37 25.0	
	comp=E,2μm,0.2s						
AZEY				IAML		08 37 26.0	
	comp=N,1μm,0.8s						
MAYA	**Malatya/Merkez**	**0.34**	**31**	P	**Pg**	**08 37 22.5**	**-0.1**
MAYA				S	**Sg**	**08 37 27.4**	**+0.2**
MAYA				IAML		08 37 28.0	
	comp=N,2μm,0.1s						
MAYA				IAML		08 37 28.0	
	comp=E,1μm,0.3s						
KAHTU	**Kahta**	**0.40**	**125**	P	**Pg**	**08 37 23.4**	**-0.2**
KAHTU				S	**Sb**	**08 37 29.4**	**-2.5**
KAHTU				IAML		08 37 30.0	
	comp=N,851nm,0.7s						
KAHTU				IAML		08 37 30.0	
	comp=E,824nm,0.2s						
AKCA	**Adyaman/G¶ll**	**0.47**	**240**	P	**Pb**	**08 37 26.1**	**-0.7**
AKCA				S	**Sb**	**08 37 33.3**	**-0.7**
AKCA				IAML		08 37 36.0	
	comp=N,1μm,0.5s						
AKCA				IAML		08 37 38.0	
	comp=E,897nm,0.5s						
ATAB	**Bozova**	**0.57**	**172**	P	**Pb**	**08 37 27.4**	**-1.0**
ATAB				S	**Sg**	**08 37 34.8**	**+0.6**
ATAB				IAML		08 37 39.0	
	comp=E,582nm,0.6s						
MDYL	**Doganyol-Malat**	**0.72**	**67**	Pg	**Pg**	**08 37 29.2**	**-0.6**
ESGZ	**Sivrice-Elazig**	**0.79**	**59**	Pg	**Pg**	**08 37 30.3**	**-0.8**
CNGT	**ngs**	**0.89**	**78**	P	**Pb**	**08 37 32.5**	**-1.4**
CNGT				S	**Sn**	**08 37 48.3**	**-0.2**
SVRC	**Sivrice-ELAZID**	**0.94**	**68**	Pg	**Pg**	**08 37 33.1**	**-0.9**
SVRC				Sg	**Sb**	**08 37 47.2**	**-0.5**
KHMN	**Narli-Kahraman**	**1.04**	**233**	Pg	**Pb**	**08 37 36.2**	**-0.4**
ARPR	**Arapgir-MALATY**	**1.07**	**6**	Pg	**Pg**	**08 37 35.9**	**-0.5**
ARPR				Sg	**Sb**	**08 37 51.5**	**+0.1**
KMRS	**Kahramanmaras**	**1.16**	**243**	Pn	**Pb**	**08 37 38.2**	**-0.2**
KMRS				Sn	**Sn**	**08 37 55.0**	**-0.1**
GAZ	**Gaziantep**	**1.16**	**223**	Pn	**Pn**	**08 37 38.6**	**-0.4**
GAZ				Sn	**Sn**	**08 37 55.0**	**-0.3**
MDNT	**Maden**	**1.22**	**72**	P	**Pn**	**08 37 42.6**	**+2.7**
MDNT				S	**Sn**	**08 38 00.7**	**+3.8**
ILIC	**ilic-Erzincan**	**1.45**	**11**	Pn	**Pb**	**08 37 42.8**	**-0.7**
SARI	**SarD1z-Kayseri**	**1.45**	**286**	Pn	**Pg**	**08 37 43.6**	**-0.2**
DYBB	**Diyarbakir**	**1.54**	**92**	Pn	**Pb**	**08 37 43.9**	**-1.1**
ERZN	**Erzincan**	**1.96**	**37**	Pn	**Pn**	**08 37 49.9**	**-0.1**
SVSK	**Karacayir**	**2.10**	**334**	Pn	**Pn**	**08 37 52.7**	**+0.9**

*SNET **22** 08:50:19.9±4.6, 14.°06N×91.°77W, h31km±45km, ML3.6, Presumed earthquake*
*CATAC **22** 08:50:20.0±0.4, 14.°N±3.°×9.°2W±.°, h33km±5km, M3.5/22, MLv3.5/22, Error ellipse: s-maj=6.9km s-min=2.4km az=35.0, confirmed*
*GCG **22** 08:50:20.3±0.6, 14.°00N×91.°70W, h31km±2km, MD3.4, Presumed earthquake*
ISC 22 08:50:21.6±1.8, 13.°99N±0.°08×91.°69W±0.°07, h34km±3km, n45, σ1°§69/76, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG5	**El Palmar, Qui**	**0.53**	**39**	*i* P	**Pb**	**08 50 34.0**	**+1.1**
STG5				*i* S	**Sn**	**08 50 44.4**	**+3.8**
RTAL	**Retalhuleu**	**0.54**	**360**	P	**Pb**	**08 50 32.7**	**-0.2**
RTAL				S	**Sn**	**08 50 42.6**	**+2.0**
RTAL	**Retalhuleu**	**0.54**	**360**	*e*P	**Pb**	**08 50 32.7**	**-0.2**
RTAL				*e*S	**Sn**	**08 50 42.0**	**+1.4**
STG2	**El Palmar, Qui**	**0.54**	**34**	*i* P	**Pb**	**08 50 34.6**	**+1.5**
STG2				*i* S	**Sn**	**08 50 45.1**	**+4.2**
STG8	**El Palmar, Qui**	**0.57**	**35**	*i* P	**Pb**	**08 50 34.9**	**+1.4**
QUEO	**Labor Ovalle**	**0.90**	**11**	*i* P	**Pn**	**08 50 37.2**	**-0.8**
SMCA	**Catarina**	**0.94**	**337**	*i* P	**Pn**	**08 50 37.1**	**-1.3**
SMCA				*i* S	**Sn**	**08 50 50.0**	**-0.7**
THIG		**1.07**	**329**	*i* P	**Pn**	**08 50 39.0**	**-1.2**
THIG				*i* S	**Sb**	**08 50 53.5**	**-2.0**
FG8	**Yepocapa, Chim**	**1.13**	**76**	*i* P	**Pn**	**08 50 36.7**	**-4.3**
FG8				*i* S	**Sn**	**08 50 49.6**	**-5.8**
FG16	**Alotenango, Sa**	**1.18**	**76**	*i* P	**Pn**	**08 50 37.9**	**-3.9**
FG16				*i* S	**Sn**	**08 50 51.8**	**-5.0**
PCG5	**San Vicente Pa**	**1.29**	**80**	*i* P	**Pn**	**08 50 40.2**	**-3.2**
HUEH	**Huehuetenango**	**1.34**	**8**	P	**Pn**	**08 50 43.7**	**-0.3**
HUEH				S	**Sn**	**08 51 00.8**	**+0.1**
HUEH	**Huehuetenango**	**1.34**	**8**	*i* P	**Pn**	**08 50 43.5**	**-0.5**
HUEH				*i* S	**Sn**	**08 51 01.4**	**+0.7**
HUEH	**Huehuetenango**	**1.34**	**8**	*e*P	**Pn**	**08 50 43.6**	**-0.4**
HUEH				*e*S	**Sn**	**08 51 01.4**	**+0.7**
FAME	**Alcaldia de Sa**	**1.63**	**95**	P	**Pn**	**08 50 47.3**	**-0.6**
FAME				S	**Sn**	**08 51 08.1**	**+0.4**
SLOZ	**Alcaldia de Sa**	**1.85**	**89**	P	**Pn**	**08 50 50.9**	**0.0**
SLOZ				S	**Sn**	**08 51 15.1**	**+1.9**
SLOZ	**Alcaldia de Sa**	**1.85**	**89**	*e*P	**Pn**	**08 50 50.8**	**-0.2**
LOAL	**Lomas de Alarc**	**1.85**	**89**	P	**Pn**	**08 50 51.3**	**+0.3**
LOAL				S	**Sn**	**08 51 15.2**	**+1.9**
NUBE	**Las Nubes**	**1.86**	**92**	P	**Pn**	**08 50 50.9**	**-0.2**
NUBE	**Las Nubes**	**1.86**	**92**	*i* P	**Pn**	**08 50 50.9**	**-0.2**
NUBE				*i* S	**Sn**	**08 51 14.3**	**+0.8**
NUBE	**Las Nubes**	**1.86**	**92**	*e*P	**Pn**	**08 50 50.9**	**-0.2**
NUBE				*e*S	**Sn**	**08 51 13.3**	**-0.2**
CEVE	**Cerro Verde**	**2.01**	**94**	P	**Pn**	**08 50 53.6**	**+0.2**
CEVE				S	**Sn**	**08 51 19.0**	**+1.6**
SBLS	**San Blas**	**2.01**	**94**	*e*P	**Pn**	**08 50 53.8**	**+0.4**
SBLS				*e*S	**Sn**	**08 51 18.8**	**+1.4**
UNIC	**Universidad Ca**	**2.08**	**90**	P	**Pn**	**08 50 53.8**	**-0.2**
UNIC				S	**Sn**	**08 51 20.0**	**+1.2**
JAYA	**Jayaque - finc**	**2.20**	**98**	P	**Pn**	**08 50 55.9**	**0.0**
JAYA	**Jayaque - finc**	**2.20**	**98**	*e*P	**Pn**	**08 50 55.8**	**0.0**
JAYA				*e*S	**Sn**	**08 51 22.7**	**+0.7**
CEDA	**San Andres**	**2.24**	**94**	P	**Pn**	**08 50 55.2**	**-1.1**
CEDA				S	**Sn**	**08 51 23.8**	**+1.1**
MTO3	**Montecristo**	**2.30**	**79**	P	**Pn**	**08 50 56.2**	**-1.0**
CCIG	**Comitan**	**2.32**	**349**	P	**Pn**	**08 50 57.2**	**-0.3**
CCIG				S	**Sn**	**08 51 26.2**	**+1.2**
CCIG	**Comitan**	**2.32**	**349**	*i* P	**Pn**	**08 50 57.2**	**-0.3**
PMON	**Piamonte**	**2.32**	**96**	P	**Pn**	**08 50 58.0**	**+0.5**
PMON				S	**Sn**	**08 51 25.8**	**+0.9**
PMON	**Piamonte**	**2.32**	**96**	*e*P	**Pn**	**08 50 58.1**	**+0.6**
PMON				*e*S	**Sn**	**08 51 26.1**	**+1.2**
ZAFR2	**Estanzuela, Za**	**2.34**	**75**	*i* P	**Pn**	**08 50 55.5**	**-2.1**
ESQI	**Esquipulas**	**2.35**	**76**	P	**Pn**	**08 50 57.0**	**-0.8**
ESQI				S	**Sn**	**08 51 27.7**	**+2.2**
UEES	**Universidad Ev**	**2.40**	**96**	P	**Pn**	**08 50 58.9**	**+0.5**
UEES				S	**Sn**	**08 51 28.2**	**+1.5**
SEMO	**Seminario San**	**2.41**	**96**	P	**Pn**	**08 50 58.5**	**-0.2**
SEMO				S	**Sn**	**08 51 28.2**	**+1.1**
UTEC	**Universidad Te**	**2.43**	**96**	S	**Sn**	**08 51 29.0**	**+1.4**
IGN	**Direccin Gen**	**2.46**	**96**	P	**Pn**	**08 50 59.2**	**-0.2**
IGN				S	**Sn**	**08 51 30.1**	**+1.7**
PANCS	**Alcalda de**	**2.47**	**98**	S	**Sn**	**08 51 28.8**	**+0.4**
SJTE	**Alcalda de S**	**2.63**	**98**	*e*P	**Pn**	**08 51 02.3**	**+0.5**
SJTE				*e*S	**Sn**	**08 51 33.2**	**+0.7**
PAVA	**Las Pavas**	**2.69**	**95**	S	**Sn**	**08 51 34.8**	**+0.8**
P5NO	**Presa 5 de nov**	**2.85**	**90**	P	**Pn**	**08 51 03.3**	**-1.2**
P5NO				S	**Sn**	**08 51 39.0**	**+1.3**
TECO	**Alcaldia de Te**	**2.86**	**99**	S	**Sn**	**08 51 38.4**	**+0.3**
SCLA	**Alcaldia de Sa**	**2.89**	**95**	P	**Pn**	**08 51 04.9**	**-0.4**
SCLA				S	**Sn**	**08 51 40.0**	**+1.1**
SARH	**Santa Rosa de**	**2.95**	**74**	P	**Pn**	**08 51 05.2**	**-0.8**

*FCIAR **22** 09:11:11.0, 79.°84N×20.°13E, h10km, station ZFI2 has station magnitude of 2.70*
*NAO **22** 09:11:12.6±1.6, 79.°87N×20.°49E, h10km, ML2.5*
*BER **22** 09:11:13.9±2.6, 80.°00N×19.°82E, h16km±12km, ML1.7, ML2.5(NAO), Confirmed Earthquake*
ISC 22 09:11:09.8±1.7, 79.°95N±0.°06×20.°07E±0.°05, h6km±11km, n11, σ1°§05/27, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.82**	**240**	Pn	**Pg**	**09 11 44.3**	**-0.2**
KBS				Sn	**Sb**	**09 12 07.2**	**+0.9**
KBS	**Kingsbay**	**1.82**	**240**	*e*P	**Pb**	**09 11 42.7**	**-0.7**
KBS				*e*Sg	**Sb**	**09 12 07.2**	**+0.9**
KBS				IAML		09 12 08.5	
	comp=Z,16nm,0.3s						
SPA0	**Spitsbergen Ar**	**1.92**	**203**	Pn	**Pb**	**09 11 44.2**	**-0.9**
	baz=22,slow=18						
SPA0				Pg	**Pg**	**09 11 47.6**	**+1.2**
	baz=22,slow=18						
SPA0				Sn	**Sn**	**09 12 07.2**	**-0.1**
	baz=24,slow=28						
SPA0				Sg	**Sg**	**09 12 11.4**	**+0.1**
	baz=34,slow=28						
SPA0	**Spitsbergen Ar**	**1.92**	**203**	Pn	**Pb**	**09 11 44.2**	**-0.9**
SPA0				Pg	**Pg**	**09 11 47.6**	**+1.2**
SPA0				Sn	**Sn**	**09 12 07.2**	**-0.1**
SPA0				Sg	**Sg**	**09 12 11.4**	**+0.1**
SPA0	**Spitsbergen Ar**	**1.92**	**203**	*e*P	**Pb**	**09 11 44.0**	**-1.1**
SPA0				*e*S	**Sn**	**09 12 07.2**	**-0.1**
BRBB	**Barentsburg B**	**2.18**	**214**	Pn	**Pb**	**09 11 48.0**	**-1.6**
BRBB				Sn	**Sn**	**09 12 13.2**	**-0.4**
BRBB	**Barentsburg B**	**2.18**	**214**	*e*P	**Pb**	**09 11 47.9**	**-1.6**
BRBB				*e*S	**Sn**	**09 12 13.2**	**-0.4**
BRBA	**Barentsburg A**	**2.21**	**213**	*e*P	**Pb**	**09 11 48.5**	**-1.4**
BRBA				*e*S	**Sn**	**09 12 14.3**	**0.0**
BRBA				IAML		09 12 27.8	
	comp=Z,6.2nm,0.3s						
HSPB	**Hornsund (broa**	**3.10**	**199**	P	**Pn**	**09 11 59.0**	**-0.1**
HSPB				*e*S	**Sn**	**09 12 35.3**	**-1.1**
HOPEN	**Hopen**	**3.60**	**161**	*e*P	**Pn**	**09 12 07.9**	**+1.9**
HOPEN				*e*S	**Sn**	**09 12 48.5**	**-0.2**
HOPEN				*e*Sg	**Sg**	**09 13 03.4**	**-1.9**
HOPEN				IAML		09 13 14.0	
	comp=Z,4.9nm,0.4s						
ZFI2	**Zemlya Franca-**	**4.67**	**66**	P	**Pn**	**09 12 21.6**	**+0.9**
ZFI2				*e*S	**Sn**	**09 13 14.2**	**-0.9**
	comp=Z,5.5nm,3.6s						

*ISK **22** 09:17:52.6, 38.°10N×38.°21E, h5km, ML2.5/11*
*AFAD **22** 09:17:54.1, 38.°03N×38.°24E, h7km±2km, ML2.6*
ISC 22 09:17:53.6±1.1, 38.°07N±0.°03×38.°22E±0.°03, h7km±10km, n23, σ0°§74/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AZEY	**Adyaman-Merk**	**0.26**	**175**	P	**Pg**	**09 17 59.1**	**+0.3**
AZEY				S	**Sg**	**09 18 02.5**	**+0.2**
AZEY				IAML		09 18 04.0	
	comp=E,1μm,0.2s						
MAYA	**Malatya/Merkez**	**0.30**	**32**	P	**Pb**	**09 18 00.7**	**-0.8**
MAYA				S	**Sb**	**09 18 05.5**	**-1.2**
MAYA				IAML		09 18 06.0	
	comp=N,1μm,0.2s						
MAYA				IAML		09 18 06.0	
	comp=E,939nm,0.4s						
KAHTU	**Kahta**	**0.41**	**130**	P	**Pb**	**09 18 02.1**	**-1.1**
KAHTU				S	**Sg**	**09 18 07.7**	**+0.8**
KAHTU				IAML		09 18 11.0	
	comp=N,509nm,0.6s						
KAHTU				IAML		09 18 16.0	
	comp=E,478nm,0.8s						
NARI	**Adyaman-Kaht**	**0.47**	**113**	P	**Pb**	**09 18 03.2**	**-1.0**
NARI				S	**Sg**	**09 18 09.2**	**+0.4**
AKCA	**Adyaman/G¶ll**	**0.50**	**237**	P	**Pb**	**09 18 04.3**	**-0.5**
AKCA				S	**Sb**	**09 18 11.6**	**-0.7**
AKCA				IAML		09 18 12.0	
	comp=N,964nm,0.5s						
AKCA				IAML		09 18 16.0	
	comp=E,541nm,0.5s						
ATAB	**Bozova**	**0.60**	**174**	P	**Pg**	**09 18 05.2**	**-0.1**
ATAB				S	**Sg**	**09 18 13.0**	**-0.1**
ATAB				IAML		09 18 16.0	
	comp=N,230nm,0.4s						
ATAB				IAML		09 18 17.0	
	comp=E,306nm,0.6s						
MDYL	**Doganyol-Malat**	**0.69**	**69**	Pg	**Pg**	**09 18 06.9**	**0.0**
HANM	**anlurfa/Hi**	**0.72**	**133**	P	**Pb**	**09 18 07.9**	**-0.6**
HANM				S	**Sg**	**09 18 17.1**	**+0.4**
ELZG	**Elazig**	**0.74**	**54**	P	**Pb**	**09 18 08.4**	**-0.5**
ELZG				S	**Sb**	**09 18 18.5**	**-0.8**
ELZG				IAML		09 18 21.0	
	comp=E,167nm,0.5s						
ELZG				IAML		09 18 26.0	
	comp=N,126nm,0.4s						
ESGZ	**Sivrice-Elazig**	**0.76**	**61**	Pg	**Pg**	**09 18 08.1**	**-0.1**
ESGZ				Sg	**Sb**	**09 18 19.5**	**-0.3**
CNGT	**ngs**	**0.86**	**80**	P	**Pb**	**09 18 10.5**	**-0.5**
CNGT				S	**Sn**	**09 18 27.4**	**+2.2**
SVRC	**Sivrice-ELAZID**	**0.91**	**70**	Pg	**Pg**	**09 18 11.0**	**-0.1**
SVRC				Sg	**Sn**	**09 18 25.3**	**-1.1**
ARPR	**Arapgir-MALATY**	**1.03**	**5**	Pg	**Pg**	**09 18 12.6**	**-0.8**
ARPR				Sg	**Sb**	**09 18 27.8**	**+0.3**
KHMN	**Narli-Kahraman**	**1.08**	**232**	Pn	**Pn**	**09 18 15.0**	**-0.2**
SANL	**SANLIURFA_Merk**	**1.09**	**145**	P	**Pn**	**09 18 15.1**	**-0.1**
SANL				S	**Sg**	**09 18 28.1**	**-0.4**
SANL				IAML		09 18 32.0	
	comp=E,263nm,0.4s						
SANL				IAML		09 18 33.0	
	comp=N,226nm,0.7s						
KMRS	**Kahramanmaras**	**1.19**	**242**	Pn	**Pn**	**09 18 16.7**	**+0.1**
KMRS				Sn	**Sn**	**09 18 34.1**	**+1.1**
GAZ	**Gaziantep**	**1.20**	**222**	Pn	**Pn**	**09 18 16.8**	**-0.1**
SURC	**SANLIURFA_SURC**	**1.23**	**165**	P	**Pn**	**09 18 18.6**	**+1.4**
SURC				S	**Sn**	**09 18 33.9**	**-0.1**
SURC				IAML		09 18 37.0	
	comp=E,111nm,0.7s						
SURC				IAML		09 18 39.0	
	comp=N,173nm,0.3s						
ILIC	**ilic-Erzincan**	**1.41**	**11**	Pn	**Pb**	**09 18 20.2**	**-0.1**
SARI	**SarD1z-Kayseri**	**1.46**	**284**	Pn	**Pb**	**09 18 21.0**	**-0.2**
DYBB	**Diyarbakir**	**1.52**	**94**	Pn	**Pb**	**09 18 22.1**	**-0.1**
DYBB				Sn	**Sg**	**09 18 43.4**	**+0.8**
ERZN	**Erzincan**	**1.92**	**37**	Pn	**Pn**	**09 18 27.4**	**+0.6**
SVSK	**Karacayir**	**2.08**	**333**	Pn	**Pn**	**09 18 29.6**	**+0.8**

*MDD **22** 09:20:39.7±0.7, 36.°56N×12.°23W, h19km±18km, Mb4.2/25, M_mb3.6/26, Error ellipse: s-maj=20.6km s-min=4.6km az=54.0*
*INMG **22** 09:20:41.9±1.4, 36.°49N×12.°14W, h26km, ML2.4, Error ellipse: s-maj=6.0km s-min=4.3km az=85.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe*
*IGIL **22** 09:20:41.4, 36.°55N×11.°91W, h1km, ML1.9*
*CNRM **22** 09:20:45.5, 36.°02N×11.°38W, h59km*
ISC 22 09:20:33.7±2.4, 36.°37N±0.°06×12.°2W±0.°1, h10km, n82, σ3°§01/137, 18C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**2.82**	**73**	Pn	**Pn**	**09 21 21.6**	**+2.8**
PFVI				Sn	**Sn**	**09 21 51.8**	**-1.0**
PFVI	**Vila Bisbo**	**2.82**	**73**	*e*P	**Pn**	**09 21 21.6**	**+2.8**
PFVI				*e*S	**Sn**	**09 21 52.1**	**-0.8**
PFVI				*i* IAML		09 21 54.3	
PFVI				*i* IAML		09 21 54.9	
PFVI				*i* IAML		09 21 55.5	
PFVI	**Vila Bisbo**	**2.82**	**73**	P	**Pn**	**09 21 20.2**	**+1.3**
PFVI				S	**Sn**	**09 21 50.2**	**-2.7**
MORF	**Marmelete**	**3.00**	**71**	*e*P	**Pn**	**09 21 24.4**	**+3.1**
MORF	**Marmelete**	**3.00**	**71**	*e*P	**Pn**	**09 21 24.5**	**+3.1**
MORF				*e*S	**Sn**	**09 21 57.8**	**+0.4**
MORF				*i* IAML		09 21 59.0	
MORF				*i* IAML		09 21 59.1	
MORF				*i* IAML		09 22 00.9	
PTEO	**Sao Teotonio**	**3.02**	**66**	*e*P	**Pn**	**09 21 25.1**	**+3.4**
PTEO				*e*S	**Sn**	**09 21 57.4**	**-0.6**
PTEO				*i* IAML		09 21 59.9	
PTEO				*i* IAML		09 22 01.5	
PTEO				*i* IAML		09 22 07.3	
PMAFR	**Mafra**	**3.47**	**41**	Pn	**Pn**	**09 21 30.3**	**+2.7**
PMAFR				Sn	**Sn**	**09 22 07.3**	**-1.6**
PMAFR	**Mafra**	**3.47**	**41**	*e*P	**Pn**	**09 21 30.8**	**+3.0**
PMAFR				*e*S	**Sn**	**09 22 07.5**	**-1.5**
PMAFR				*i* IAML		09 22 09.9	
PMAFR				*i* IAML		09 22 10.0	
PMAFR				*i* IAML		09 22 10.1	
MESJ	**Messejana**	**3.51**	**64**	*e*P	**Pn**	**09 21 31.2**	**+2.9**
MESJ				*e*S	**Sn**	**09 22 07.6**	**-2.3**
MESJ				IAML		09 22 11.7	
	comp=N,3.7nm,0.3s						
MESJ	**Messejana**	**3.51**	**64**	*e*P	**Pn**	**09 21 32.4**	**+4.1**
MESJ				*e*S	**Sn**	**09 22 08.9**	**-1.0**
MESJ				*i* IAML		09 22 13.5	
MESJ				*i* IAML		09 22 14.1	
MESJ				*i* IAML		09 22 16.6	
PBDV	**Barranco-do-Ve**	**3.54**	**74**	Pn	**Pn**	**09 21 32.0**	**+3.2**
PBDV				Sn	**Sn**	**09 22 10.3**	**-0.

PSARD				*i* IAML			09 22 36.4	
EMIN	**Mina Concepcio**	**4.64**	**71**	Pn		**Pn**	**09 21 47.0**	**+3.1**
EMIN				Sn		**Sn**	**09 22 35.4**	**-2.4**
EMIN	**Mina Concepcio**	**4.64**	**71**	Pn		**Pn**	**09 21 47.4**	**+3.5**
EMIN				⇑*i*VmB_VC			09 21 50.7	
	comp=N,89nm,SNR=1.3							
EMIN				Sn		**Sn**	**09 22 35.7**	**-2.0**
PCAS	**Casmilo, Conde**	**4.69**	**37**	*e*P		**Pn**	**09 21 47.5**	**+2.9**
PCAS				*e*S		**Sn**	**09 22 36.5**	**-2.6**
PCAS				*i* IAML			09 22 38.5	
PCAS				*i* IAML			09 22 38.5	
PCAS				*i* IAML			09 22 54.4	
PMRV	**Marv??o**	**4.88**	**50**	*e*P		**Pn**	**09 21 49.4**	**+2.2**
PMRV				*e*S		**Sn**	**09 22 40.3**	**-3.4**
PMRV				*i* IAML			09 22 43.4	
PMRV				*i* IAML			09 22 43.6	
PMRV				*i* IAML			09 22 44.8	
AVE	**Averroes**	**4.99**	**126**	Sn		**Sn**	**09 22 43.6**	**-2.9**
PCBR	**Castelo Branco**	**5.09**	**46**	*e*P		**Pn**	**09 21 52.8**	**+2.8**
PCBR				*e*S		**Sn**	**09 22 46.0**	**-2.8**
PCBR				*i* IAML			09 22 49.0	
PCBR				*i* IAML			09 22 50.3	
PCBR				*i* IAML			09 22 51.7	
ESPR	**Espera**	**5.13**	**83**	Pn		**Pn**	**09 21 53.5**	**+2.8**
ESPR				Sn		**Sn**	**09 22 47.2**	**-2.7**
ESPR	**Espera**	**5.13**	**83**	Pn		**Pn**	**09 21 53.4**	**+2.8**
ESPR				⇑*i*VmB_VC			09 21 57.6	
	comp=N,134nm,SNR=1.1							
ESPR				Sn		**Sn**	**09 22 47.6**	**-2.3**
SRHM	**Skhour des Reh**	**5.27**	**136**	P		**Pn**	**09 21 53.8**	**+1.1**
SRHM				S		**Sn**	**09 22 46.4**	**-7.1**
ZHG	**ZHG**	**5.42**	**121**	P		**Pn**	**09 21 53.5**	**-1.3**
ZHG				S		Sn	09 22 46.6	-11
EJIF	**Jimena Fronter**	**5.43**	**87**	Pn		**Pn**	**09 21 57.9**	**+3.1**
MTE	**Manteigas**	**5.44**	**41**	*e*S		**Sn**	**09 22 54.9**	**-2.7**
MTE				*i* IAML			09 22 57.1	
MTE				*i* IAML			09 22 57.4	
MTE				*i* IAML			09 22 59.9	
PVIS	**Viseu**	**5.50**	**37**	*e*P		**Pn**	**09 21 58.2**	**+2.5**
PVIS				*e*S		**Sn**	**09 22 55.4**	**-3.7**
E1302	**La Puebla de C**	**5.64**	**80**	Pn		**Pn**	**09 22 01.5**	**+3.8**
E1302				⇑*i*VmB_VC			09 22 04.1	
	comp=N,212nm,SNR=1.9							
E1302				Sn		**Sn**	**09 23 01.9**	**-0.6**
ECAB	**El Cabril**	**5.68**	**71**	Pn		**Pn**	**09 22 01.0**	**+2.8**
ECAB				Sn		**Sn**	**09 23 01.6**	**-1.8**
ECAB	**El Cabril**	**5.68**	**71**	Pn		**Pn**	**09 22 00.9**	**+2.8**
ECAB				⇑*i*VmB_VC			09 22 01.4	
	comp=N,77nm,SNR=1.5							
ECAB				Sn		**Sn**	**09 23 00.6**	**-2.8**
PVRL	**Vila Real**	**6.02**	**34**	*e*S		**Sn**	**09 23 08.0**	**-3.9**
PVRL				*i* IAML			09 23 09.8	
PVRL				*i* IAML			09 23 10.6	
PVRL				*i* IAML			09 23 14.6	
POLO	**Lamas de Olo**	**6.07**	**33**	*e*P		**Pn**	**09 22 05.0**	**+1.4**
POLO				*e*S		**Sn**	**09 23 08.3**	**-4.8**
POLO				*i* IAML			09 23 11.1	
POLO				*i* IAML			09 23 11.2	
POLO				*i* IAML			09 23 11.4	
EPLA	**Plasencia**	**6.07**	**51**	Pn		**Pn**	**09 22 06.2**	**+2.6**
EPLA				⇑*i*VmB_VC			09 22 07.6	
	comp=N,111nm,SNR=1.3							
EPLA				Sn		**Sn**	**09 23 08.9**	**-4.2**
PCAB	**Cabril**	**6.24**	**30**	*e*S		**Sn**	**09 23 13.2**	**-4.2**
MVO	**Moncorvo**	**6.26**	**39**	*e*P		**Pn**	**09 22 09.1**	**+2.8**
MVO				*e*S		**Sn**	**09 23 13.4**	**-4.6**
MVO				*i* IAML			09 23 15.4	
MVO				*i* IAML			09 23 16.1	
MVO				*i* IAML			09 23 16.5	
EADA	**Adamuz**	**6.34**	**71**	Pn		**Pn**	**09 22 10.4**	**+3.1**
EADA				Sn		**Sn**	**09 23 17.8**	**-2.0**
EADA	**Adamuz**	**6.34**	**71**	Pn		**Pn**	**09 22 10.1**	**+2.8**
EADA				⇑*i*VmB_VC			09 22 15.8	
	comp=N,77nm,SNR=1.2							
EADA				Sn		**Sn**	**09 23 17.0**	**-2.8**
ELOB	**Lobios**	**6.36**	**29**	Pn		**Pn**	**09 22 10.5**	**+2.9**
ELOB				⇑*i*VmB_VC			09 22 13.3	
	comp=N,118nm,SNR=1.1							
ELOB				Sn		**Sn**	**09 23 15.7**	**-4.7**
PGAV	**Gavieira, Arco**	**6.37**	**27**	*e*P		**Pn**	**09 22 11.2**	**+3.5**
PGAV				*e*S		**Sn**	**09 23 15.6**	**-4.9**
PGAV				*i* IAML			09 23 18.1	
PGAV				*i* IAML			09 23 19.0	
PGAV				*i* IAML			09 23 22.0	
EZAM	**Zamans**	**6.38**	**24**	⇑*i*VmB_VC			09 22 13.9	
	comp=N,246nm,SNR=1.5							
EZAM				Sn		**Sn**	**09 23 14.7**	**-6.0**
IFR	**Ifrane**	**6.47**	**114**	Sn		Sn	09 23 15.7	-7.6
EGOR	**Sierra Gorda,**	**6.54**	**81**	Pn		**Pn**	**09 22 14.7**	**+4.5**
EGOR				⇑*i*VmB_VC			09 22 18.0	
	comp=N,64nm,SNR=1.6							
EGOR				Sn		**Sn**	**09 23 25.2**	**+0.3**
TISM	**Timmit**	**6.66**	**132**	P		**Pn**	**09 22 11.1**	**-0.6**
TISM				S		Sn	09 23 17.8	-10
TIO	**Tiouine**	**6.82**	**141**	Pn		**Pn**	**09 22 15.5**	**+1.6**
TIO				Sn		**Sn**	**09 23 25.7**	**-6.0**
TIO	**Tiouine**	**6.82**	**141**	P		**Pn**	**09 22 14.7**	**+0.8**
TIO				S		**Sn**	**09 23 24.0**	**-7.7**
EJUZ	**Juzbado, Salam**	**6.82**	**44**	Sn		**Sn**	**09 23 27.5**	**-4.1**
PBRG	**Braganca**	**6.89**	**36**	*e*S		**Sn**	**09 23 28.3**	**-5.0**
PBRG				*i* IAML			09 23 32.3	
PBRG				*i* IAML			09 23 32.6	
PBRG				*i* IAML			09 23 34.2	
ELQU	**Los Guajares,**	**6.92**	**83**	Sn		**Sn**	**09 23 33.0**	**-1.0**
PAB	**San Pablo**	**6.97**	**61**	Pn		**Pn**	**09 22 19.1**	**+3.1**
PAB				Sn		**Sn**	**09 23 32.5**	**-2.8**
ECAL	**Calabor**	**7.00**	**36**	⇑*i*VmB_VC			09 22 25.3	
	comp=N,219nm,SNR=1.3							
ECAL				Sn		**Sn**	**09 23 31.1**	**-4.9**
EMAZ	**Mazaricos**	**7.03**	**20**	⇑*i*VmB_VC			09 22 19.3	
	comp=N,183nm,SNR=1.0							
EMAZ				Sn		Sn	09 23 29.5	-7.1
AKLM	**AKL**	**7.06**	**103**	P		**Pn**	**09 22 15.8**	**-1.4**
AKLM				S		Sn	09 23 23.5	-14
MD31	**MD31**	**7.06**	**118**	P		**Pn**	**09 22 14.7**	**-2.5**
MD31				S		Sn	09 23 28.4	-9.3
OUZM	**OUZ**	**7.09**	**139**	P		**Pn**	**09 22 14.0**	**+0.3**
OUZM				S		Sn	09 23 29.5	-8.9
PSIM	**Granatula de C**	**7.14**	**67**	Pn		**Pn**	**09 22 21.4**	**+3.1**
PSIM				Sn		**Sn**	**09 23 36.8**	**-2.6**
EAGO	**Agolada(Pontev**	**7.17**	**25**	Pn		**Pn**	**09 22 21.6**	**+3.0**
EAGO				⇑*i*VmB_VC			09 22 24.6	
	comp=N,153nm,SNR=1.3							
EAGO				Sn		Sn	09 23 33.3	-6.8
MDT	**Midelt**	**7.20**	**117**	P		**Pn**	**09 22 18.9**	**-0.3**
MDT				S		Sn	09 23 30.8	-10
ESDC	**Sonseca Array**	**7.29**	**61**	Pn		**Pn**	**09 22 22.9**	**+2.5**
ESDC				⇑*i*VmB_VC			09 22 25.7	
	comp=N,109nm,SNR=1.7							
ESDC				Sn		**Sn**	**09 23 39.5**	**-3.7**
ESBB	**Sonseca Array**	**7.29**	**61**	Pn		**Pn**	**09 22 24.0**	**+3.6**
EQES	**Quesada**	**7.44**	**76**	Pn		**Pn**	**09 22 25.8**	**+3.4**
EQES				⇑*i*VmB_VC			09 22 29.5	
	comp=N,83nm,SNR=1.5							
EQES				Sn		**Sn**	**09 23 44.3**	**-2.6**
EPON	**Pontenova**	**7.96**	**28**	Pn		**Pn**	**09 22 32.5**	**+3.0**
EPON				⇑*i*VmB_VC			09 22 34.5	
	comp=N,208nm,SNR=1.4							
EPON				Sn		Sn	09 23 52.3	-7.3
ELOR	**Lorca, Murcia**	**8.46**	**78**	Sn		**Sn**	**09 24 12.5**	**+0.5**
EARI	**Arriondas**	**8.76**	**36**	Sn		**Sn**	**09 24 15.9**	**-3.5**
ETOB	**Tobarra**	**8.77**	**72**	⇑*i*VmB_VC			09 22 47.0	
	comp=N,135nm,SNR=0.9							
ETOB				Sn		**Sn**	**09 24 17.8**	**-1.7**
ETOR	**Torete**	**9.10**	**58**	Pn		**Pn**	**09 22 47.9**	**+2.7**
ETOR				⇑*i*VmB_VC			09 22 49.2	
	comp=N,111nm,SNR=1.7							
ETOR				Sn		**Sn**	**09 24 22.5**	**-5.2**

IDC 22 09:28:00.3±3.0, 6°96S×129°15E, h121km±42km, mb2.7/1, mbtmp3.4/5, Error ellipse: s-maj=68.0km s-min=21.8km az=91.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.41**	**19**	P	Pn	09 29 32.4	0.0
	2.7nm,0.3s,baz=169,slow=10,SNR=24						
SIJI				S	Sn	09 30 36.6	-7.5
	4.7nm,0.6s,baz=230,slow=23,SNR=2.0						
FITZ	**Fitzroy Crossi**	**11.59**	**197**	P	Pn	09 30 42.5	+0.4
	0.9nm,0.8s,baz=23,slow=12,SNR=11						
FITZ				S	Sn	09 32 40.5	-9.3
	2.3nm,1.1s,baz=311,slow=19,SNR=1.3						
WRA	**Warramunga Arr**	**13.85**	**159**	P	Pn	09 31 10.3	-1.3
	0.3nm,0.3s,baz=340,slow=13,SNR=15						
WRA				S	Sn	09 33 31.8	-13
	0.3nm,0.3s,baz=342,slow=21,SNR=7.7						
ASAR	**Alice Springs**	**17.23**	**165**	P	Pn	09 31 54.1	+0.4
	0.5nm,0.5s,baz=342,slow=11,SNR=7.7						
ASAR				S	Sn	09 34 59.2	-6.7
	0.6nm,1.0s,baz=0.4,slow=28,SNR=1.8						
MKAR	**Makanchi Array**	**67.73**	**327**	P	P	09 38 44.8	-0.1
	0.1nm,0.6s,baz=112,slow=6.5,SNR=2.0						
	0.1nm,0.6s						

KRSC 22 09:28:58.8±1.6, 55°07N×164°89E, h52km±18km, Ml4.2, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.64**	**77**	*e*P	Pn	09 29 12.0	+0.3
BKI				*e*S	Sn	09 29 19.9	-1.3
KBTR	**Krutoberegovo**	**1.64**	**315**	*e*P	Pn	09 29 26.6	+1.5
KBTR				*e*S	Sn	09 29 45.9	+0.9
KBG	**Krutoberegovo**	**1.72**	**315**	*e*S	Sn	09 29 48.6	+1.7
SMKR	**Semkarok**	**2.45**	**310**	*e*P	Pn	09 29 39.8	+3.4
SMKR				*e*S	Sn	09 30 09.1	+3.9
BDR	**Baidarnaya**	**2.56**	**307**	*e*S	Sn	09 30 12.0	+4.2
TUMD	**Tumrok D**	**2.58**	**275**	*e*P	Pn	09 29 42.7	+4.7
TUMD				*e*S	Sn	09 30 12.7	+4.5
KLY	**Klyuchi**	**2.70**	**299**	*e*P	Pn	09 29 42.6	+3.0
KLY				*e*S	Sn	09 30 13.4	+2.3
KMNR	**Kamenistaya**	**2.74**	**286**	*e*P	Pn	09 29 44.9	+4.7
KMNR				*e*S	Sn	09 30 14.8	+2.7
KOZ	**Kozyrevsk**	**3.02**	**291**	*e*P	Pn	09 29 48.3	+4.4
SRDR	**Sredinnyy**	**3.18**	**295**	*e*P	Pn	09 29 51.6	+5.3
KII	**Karymskiy**	**3.33**	**254**	*e*P	Pn	09 29 53.1	+4.8
KII				*e*S	Sn	09 30 30.5	+3.8
SPN	**Mys Shipunski**	**3.48**	**237**	*e*P	Pn	09 29 53.6	+3.3
SPN				*e*S	Sn	09 30 31.5	+1.3
ESO	**Esso**	**3.62**	**286**	*e*P	Pn	09 29 57.3	+5.0
NLC	**Nalytchevo**	**3.77**	**242**	*e*P	Pn	09 29 58.3	+4.0
NLC				*e*S	Sn	09 30 40.6	+3.2
SDLR	**Sedlovina**	**3.96**	**246**	*e*P	Pn	09 30 01.5	+4.6
SDLR				*e*S	Sn	09 30 45.1	+3.0
SMAR	**Somma**	**4.01**	**246**	*e*P	Pn	09 30 02.8	+5.0
SMAR				*e*S	Sn	09 30 47.2	+3.7
KRER	**Koryakskii**	**4.01**	**246**	*e*P	Pn	09 30 03.1	+5.3
KRER				*e*S	Sn	09 30 47.7	+4.0
UGLR	**Uglovaya**	**4.02**	**245**	*e*P	Pn	09 30 02.7	+4.8
UGLR				*e*S	Sn	09 30 46.3	+2.6
AVH	**Avacha**	**4.04**	**246**	*e*P	Pn	09 30 03.1	+5.0
AVH				*e*S	Sn	09 30 48.4	+4.3
KRX	**Arik**	**4.04**	**247**	*e*P	Pn	09 30 03.0	+4.9
KRX				*e*S	Sn	09 30 48.0	+3.7
KOK	**Koryaka**	**4.08**	**247**	*e*P	Pn	09 30 03.8	+5.1
KOK				*e*S	Sn	09 30 48.9	+3.8
DALK	**Dalny**	**4.15**	**243**	*e*P	Pn	09 30 03.4	+3.9
DALK				*e*S	Sn	09 30 49.4	+2.7
PET	**Petropavlovsk**	**4.21**	**243**	*e*P	Pn	09 30 04.9	+4.7
PET				*e*S	Sn	09 30 51.4	+3.4
GNL	**Ganaly**	**4.29**	**254**	*e*P	Pn	09 30 06.6	+5.2
OSSR	**Ossora**	**4.31**	**347**	*e*P	Pn	09 30 05.1	+3.5
OSSR				*e*S	Sn	09 30 51.5	+0.9
KRMR	**Karymshinskiy**	**4.58**	**243**	*e*P	Pn	09 30 09.6	+4.2
KRMR				*e*S	Sn	09 31 00.6	+3.4
RUS	**Russkaya**	**4.61**	**238**	*e*P	Pn	09 30 09.3	+3.5
RUS				*e*S	Sn	09 30 59.8	+1.8
MTVR	**Mutnovka**	**4.74**	**240**	*e*P	Pn	09 30 12.4	+4.6
MTVR				*e*S	Sn	09 31 03.6	+2.1
GRL	**Gorelyy**	**4.76**	**241**	*e*P	Pn	09 30 13.1	+5.2
GRL				*e*S	Sn	09 31 03.7	+1.9
ASAK	**Asacha**	**4.94**	**240**	*e*P	Pn	09 30 15.7	+5.3
ASAK				*e*S	Sn	09 31 10.1	+3.8
APC	**Apacha**	**5.04**	**248**	*e*P	Pn	09 30 17.2	+5.5
KDTR	**Khodutka, Kamc**	**5.22**	**234**	*e*S	Sn	09 31 12.5	-0.4
MIPR	**Malaya Ipel'ka**	**5.58**	**243**	*e*P	Pn	09 30 24.7	+5.6
KMSK	**Kamenskaya**	**7.45**	**5**	*e*P	Pn	09 30 49.2	+4.5

*BGSI **22** 10:20:27.3±0.7, 27°17S×26°89E, h134km±53km, ML2.3*
PRE 22 10:20:24.5±1.0, 26°92S×26°76E, h2km, ML2.1, Presumed earthquake, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRYS	**Parys**	**0.54**	**90**	*e*P	Pg	10 20 35.5	+0.6
PRYS				*e*S	Sg	10 20 41.9	0.0
PRYS				IAML		10 20 45.9	
	comp=Z,103nm,0.6s						
WDLM	**Western Deep L**	**0.78**	**50**	*e*P	Pg	10 20 39.9	+0.5
WDLM				IAML		10 20 49.4	
	comp=Z,212nm,0.2s						
HRAO	**HartRAO**	**1.32**	**39**	*e*P	Pb	10 20 50.3	+0.1
HRAO				*e*S	Sn	10 21 08.1	-0.3
HRAO				IAML		10 21 08.9	
	comp=Z,34nm,0.5s						
SNKL	**Senekal, Frees**	**1.62**	**146**	*e*P	Pb	10 20 54.9	-0.4
SNKL				*e*S	Sg	10 21 17.4	+0.8
SNKL				IAML		10 21 21.7	
	comp=Z,30nm,0.4s						
MAKGR	**Makgori**	**2.07**	**302**	*i* P	Pg	10 21 04.0	-0.3
MAKGR				*i* S	Sg	10 21 30.8	-0.3
MAKGR				IAML		10 21 32.1	
	comp=N,224nm,0.6s						
BOSA	**Boshof**	**2.15**	**218**	*e*P	Pb	10 21 02.9	-1.3
BOSA				*e*S	Sb	10 21 30.2	-1.1
BOSA				IAML		10 21 38.3	
	comp=Z,12nm,0.2s						
LBTB	**Lobatse**	**2.17**	**331**	*e*P	Pn	10 21 02.6	+0.9
LBTB				*e*S	Sn	10 21 29.8	+0.6
LBTB				IAML		10 21 33.9	
	comp=Z,27nm,0.5s						
LEPH	**Lephalale, Lim**	**3.19**	**17**	*e*P	Pn	10 21 17.2	+1.3
LEPH				*e*S	Sn	10 21 54.2	-0.4
LEPH				IAML		10 22 05.8	
	comp=Z,7.9nm,0.8s						
LPHEP	**Lephephe**	**3.63**	**347**	*i* P	Pn	10 21 24.4	+2.4
LPHEP				*i* S	Sn	10 22 05.8	+0.3
LPHEP				IAML		10 22 21.3	
	comp=N,4.3nm,0.1s						
KDWAN	**Kaudwane**	**4.00**	**331**	*i* P	Pn	10 21 28.6	+1.6
KDWAN				IAML		10 22 33.7	
	comp=N,18nm,0.6s						
GRAF	**Camdeboo Natio**	**5.69**	**200**	*e*P	Pn	10 21 51.4	+1.2
GRAF				*e*S	Sn	10 22 54.0	-2.1
GRAF				IAML		10 23 29.6	
	comp=Z,2.4nm,0.6s						
BROLN	**Tlhalogang**	**5.82**	**5**	*i* P	Pn	10 21 51.4	-0.6
BROLN				IAML		10 23 29.2	
	comp=N,1.9nm,0.3s						
BRAK	**Brakfontein**	**5.90**	**214**	*e*P	Pn	10 21 54.9	+1.8
BRAK				*e*S	Sn	10 22 58.7	-2.6
BRAK				IAML		10 23 47.7	
	comp=Z,2.0nm,0.4s						
ROOI	**Rooidraai Farm**	**6.21**	**206**	*e*P	Pn	10 21 58.4	+1.1
ROOI				*e*S	Sn	10 23 06.0	-3.0
ROOI				IAML		10 23 45.8	
	comp=Z,2.4nm,0.7s						
GRAN	**Grantham**	**6.68**	**216**	*e*P	Pn	10 22 05.2	+1.5
GRAN				*e*S	Sn	10 23 18.1	-2.4
GRAN				IAML		10 23 59.4	
	comp=Z,1.6nm,0.5s						
FRAZ	**Fraserburg**	**6.83**	**222**	*e*P	Pn	10 22 06.7	+0.9
FRAZ				*e*S	Sn	10 23 21.1	-3.2
FRAZ				IAML		10 23 57.8	
	comp=Z,1.5nm,0.6s						
MERW	**Merweville**	**7.31**	**217**	*e*P	Pn	10 22 12.8	+0.3
MERW				*e*S	Sn	10 23 32.7	-3.5
MERW				IAML		10 24 21.6	
	comp=Z,1.6nm,0.5s						
SUR	**Sutherland**	**7.50**	**222**	*e*P	Pn	10 22 16.5	+1.3
SUR				*e*S	Sn	10 23 37.7	-3.2
SUR				IAML		10 24 27.4	
	comp=Z,1.7nm,0.8s						

*IDC **22** 10:29:56.2±0.7, 33°94N×137°15E, h338km±10km, mb2.9/7, mbtmp3.5/12, Error ellipse: s-maj=23.7km s-min=10.8km az=65.0*
*JMA **22** 10:29:57.0±0.2, 34°N±1°×13°7E±°, h354km±1km, MV3.0/41, SE OFF KII PENINSULA*

ISC 22 10:29:57.2±0.8, 34°01N±0°09×137°25E±0°08, h350km±6km, n26, σ878/30, mb3.0/7, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTO1	**TONANKAI O.B.S**	**0.55**	**225**	*e*P	Pn	**10 30 42.4**	**+1.1**
JIE	**Ise**	**0.59**	**310**	P	Pn	**10 30 42.4**	**+0.8**
JIE				*e*S	S	**10 31 17.3**	**+0.2**
JKN2	**Miekihoku**	**0.84**	**286**	P	Pn	**10 30 42.9**	**+0.6**
JKN2				S	S	**10 31 18.1**	**-0.4**
JHMK	**Hamakita**	**0.91**	**27**	*e*P	Pn	**10 30 43.0**	**+0.6**
JAO	**Obara**	**1.25**	**0**	P	Pn	**10 30 44.8**	**+0.8**
JEG	**Eigenji**	**1.33**	**328**	P	Pn	**10 30 45.1**	**+0.8**
JTNC	**Tanabenakahech**	**1.38**	**262**	P	Pn	**10 30 45.0**	**+0.3**
JWY	**Kouya**	**1.39**	**279**	P	Pn	**10 30 45.4**	**+0.5**
JNY	**Yasuok**	**1.43**	**20**	*e*P	Pn	**10 30 45.5**	**+0.6**
JNY				*e*S	S	**10 31 23.2**	**-0.1**
JYTA	**Yamagatataniai**	**1.63**	**345**	P	Pn	**10 30 46.5**	**+0.5**
JOD2	**Odawara 2**	**1.96**	**50**	P	Pn	**10 30 48.8**	**+0.6**
JWT	**Wachi**	**1.98**	**310**	P	Pn	**10 30 48.6**	**+0.3**
JHJ	**Hachijo jima 2**	**2.29**	**112**	P	Pn	**10 30 50.3**	**-0.3**
	36nm,0.3s,baz=305,slow=19,SNR=1.5						
JHJ				S	S	**10 31 32.2**	**-1.4**
	54nm,0.5s,baz=262,slow=23,SNR=1.4						
JAI	**Aioi**	**2.34**	**265**	P	Pn	**10 30 51.0**	**+0.1**
MJAR	**Matsushiro Arr**	**2.64**	**17**	P	Pn	**10 30 53.0**	**-0.4**
	3.7nm,0.7s,baz=191,slow=6.6,SNR=16						
MJAR				S	S	**10 31 36.9**	**-1.7**
	8.5nm,0.8s,baz=192,slow=15,SNR=11						
JCJ	**Chichijima**	**9.10**	**147**	S	S	10 33 16.6	-10
	18nm,0.4s,baz=308,slow=19,SNR=7.0						
KSRS	**Korea Array**	**8.33**	**297**	P	Pn	**10 31 54.6**	**-0.4**
	1.8nm,0.8s,baz=113,slow=12,SNR=5.2						
USRK	**Ussuriysk Ar.**	**10.96**	**340**	P	P	**10 32 27.3**	**+0.2**
	1.0nm,0.5s,baz=152,slow=13,SNR=4.8						
KLR	**Kul'dur**	**15.74**	**347**	P	P	**10 33 19.2**	**-0.5**
	0.5nm,0.4s,baz=186,slow=21,SNR=2.3						
SONM	**Songino Array**	**26.89**	**310**	P	P	**10 35 06.9**	**-0.4**
	0.4nm,0.8s,baz=115,slow=9.7,SNR=1.9						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**42.93**	**304**	P	P	**10 37 22.6**	**0.0**
	0.7nm,0.5s,baz=88,slow=9.8,SNR=9.8						
	0.7nm,0.5s						
KURBB	**Kurchatov Arra**	**45.26**	**310**	P	P	**10 37 40.0**	**-0.8**
	0.2nm,0.5s,baz=96,slow=10,SNR=2.1						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**53.73**	**183**	P	P	**10 38 43.8**	**-0.6**
	0.7nm,0.3s,baz=1.9,slow=7.3,SNR=36						
	0.7nm,0.3s						
ASAR	**Alice Springs**	**57.45**	**184**	P	P	**10 39 09.7**	**-0.9**
	0.3nm,0.6s,baz=3.1,slow=6.7,SNR=12						
	0.3nm,0.6s						
NVAR	**Mina Array Bea**	**79.52**	**51**	P	P	**10 41 27.8**	**+1.6**
	0.1nm,0.5s,baz=308,slow=0.9,SNR=1.8						
	0.1nm,0.5s						
TXAR	**Lajitas Array**	**94.66**	**50**	P	P	**10 42 39.9**	**+0.5**
	0.3nm,0.8s,baz=317,slow=3.0,SNR=3.8						
	0.3nm,0.8s						

*RSNC **22** 10:37:24.2±0.0, 7°N±1°×7°3W±°, h148km±2km, M2.8, mB5.0, mb3.1, ML2.5, Mw(mB)4.3*
*FUNV **22** 10:37:26.4, 7°13N×73°19W, h5km, MW3.2, Presumed earthquake*
ISC 22 10:37:22.5±1.3, 6°88N±0°03×73°16W±0°04, h155km±8km, n29, σ1°21/52, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.29**	**184**	P	Pn	**10 37 44.2**	**+0.2**
BARC				S	Sn	**10 37 59.5**	**-0.8**
BRJC	**Barrancabermej**	**0.58**	**279**	P	Pn	**10 37 45.8**	**+0.9**
BRJC				S	Sn	**10 38 02.9**	**+1.0**
PAMC	**Pamplona, Colo**	**0.65**	**45**	P	Pn	**10 37 47.1**	**+1.3**
PAMC				S	Sn	**10 38 04.1**	**+0.5**
RUSC	**La Rusia**	**0.98**	**175**	P	Pn	**10 37 48.2**	**0.0**
RUSC				S	Sn	**10 38 07.1**	**-0.8**
RUSC	**La Rusia**	**0.98**	**175**	*e*P	Pn	**10 37 48.6**	**+0.3**
RUSC				*e*S	Sn	**10 38 05.8**	**-2.1**
PTBC	**PUERTO BERRIO,**	**1.33**	**255**	P	Pn	**10 37 50.6**	**-0.1**
PTBC				S	Sn	**10 38 12.0**	**-0.4**
OCAC	**Ocana**	**1.36**	**354**	P	Pn	**10 37 52.4**	**+1.2**
OCAC				S	Sn	**10 38 14.0**	**+0.7**
SPBC	**San Pablo de B**	**1.52**	**217**	P	Pn	**10 37 53.0**	**+0.2**
SPBC				S	Sn	**10 38 14.7**	**-1.3**
CHIC	**Chingaza**	**2.31**	**194**	P	Pn	**10 38 02.3**	**+0.3**
CHIC				S	Sn	**10 38 31.7**	**-0.7**
ROSC	**El Rosal**	**2.33**	**210**	P	Pn	**10 38 04.0**	**+1.8**
ROSC				S	Sn	**10 38 34.3**	**+1.4**
UREC	**San Jos de Ur**	**2.50**	**290**	P	Pn	**10 38 03.8**	**-0.1**
UREC				S	Sn	**10 38 34.6**	**-1.3**
**CV

	comp=N,2μm,0.7s							
ESQI				IAML		11 23 17.3		
	comp=E,785nm,0.9s							
ESQI	**Esquipulas**	**1.77**	**237**	P	**Pb**	**11 22 33.7**	**-0.4**	
ESQI				S	**Sg**	**11 22 57.4**	**-0.4**	
P5NO	**Presa 5 de nov**	**1.79**	**211**	P	**Pb**	**11 22 33.9**	**-0.4**	
P5NO				S	**Sb**	**11 22 56.2**	**-1.0**	
YUSH	**Yuscaran**	**1.82**	**149**	P	**Pb**	**11 22 34.1**	**-0.8**	
YUSH				S	**Sb**	**11 22 57.3**	**-0.8**	
MTO3	**Montecristo**	**1.88**	**234**	Pn	**Pb**	**11 22 35.6**	**-0.4**	
MTO3				IAML		11 23 02.3		
	comp=E,657nm,0.3s							
MTO3	**Montecristo**	**1.88**	**234**	P	**Pg**	**11 22 36.4**	**-0.4**	
MTO3	**Montecristo**	**1.88**	**234**	*i* P	**Pg**	**11 22 37.8**	**+1.0**	
SCLA	**Alcaldia de Sa**	**2.02**	**206**	P	**Pb**	**11 22 37.7**	**-0.6**	
SCLA				S	**Sg**	**11 23 05.0**	**-0.9**	
PQSS	**Presa 15 de Se**	**2.03**	**201**	P	**Pb**	**11 22 37.8**	**-0.6**	
CNRM	**Centro Naciona**	**2.07**	**190**	P	**Pb**	**11 22 39.3**	**+0.2**	
CNRM				S	**Sb**	**11 23 05.2**	**-0.1**	
PACA	**Pacayal**	**2.11**	**194**	P	**Pb**	**11 22 39.1**	**-0.7**	
PACA				S	**Sb**	**11 23 06.5**	**+0.1**	
PAVA	**Las Pavas**	**2.11**	**212**	P	**Pb**	**11 22 40.0**	**+0.1**	
PAVA				S	**Sb**	**11 23 07.3**	**+0.7**	
TECO	**Alcaldia de Te**	**2.19**	**206**	P	**Pb**	**11 22 40.1**	**-1.1**	
TECO				S	**Sb**	**11 23 09.1**	**+0.2**	
CNCH	**Conchagua**	**2.24**	**181**	P	**Pb**	**11 22 40.8**	**-1.3**	
CNCH				S	**Sb**	**11 23 10.0**	**-0.2**	
UEES	**Universidad Ev**	**2.28**	**218**	P	**Pg**	**11 22 43.5**	**-1.0**	
UEES				S	**Sb**	**11 23 10.9**	**-0.4**	
SEMO	**Seminario San**	**2.28**	**217**	S	**Sb**	**11 23 11.3**	**0.0**	
OCON	**Estacion meteo**	**2.28**	**146**	P	**Pb**	**11 22 41.4**	**-1.3**	
OCON				S	**Sb**	**11 23 11.7**	**+0.4**	
UNIC	**Universidad Ca**	**2.29**	**228**	P	**Pb**	**11 22 42.7**	**-0.1**	
UNIC				S	**Sb**	**11 23 11.8**	**+0.3**	
PETF	**Flores**	**2.42**	**305**	Pn	**Pn**	**11 22 41.0**	**-0.3**	
PETF				IAML		11 23 25.9		
	comp=E,825nm,0.6s							
PETF				IAML		11 23 27.8		
	comp=N,863nm,0.6s							
PETF	**Flores**	**2.42**	**305**	P	**Pb**	**11 22 43.0**	**-2.0**	
PETF				S	**Sb**	**11 23 13.8**	**-1.6**	
PETF	**Flores**	**2.42**	**305**	*i* P	**Pb**	**11 22 43.1**	**-2.0**	
SLOZ	**Alcaldia de Sa**	**2.43**	**232**	P	**Pb**	**11 22 44.8**	**-0.4**	
JAYA	**Jayaque - finc**	**2.45**	**221**	P	**Pb**	**11 22 44.4**	**-1.3**	
JAYA				S	**Sb**	**11 23 17.4**	**+1.0**	
RCVN	**Varillal2**	**2.48**	**141**	P	**Pb**	**11 22 45.0**	**-1.2**	
RCVN				S	**Sb**	**11 23 17.9**	**+0.7**	
NUBE	**Las Nubes**	**2.50**	**230**	P	**Pg**	**11 22 47.9**	**-0.9**	
NUBE				S	**Sb**	**11 23 18.7**	**+0.7**	
NUBE	**Las Nubes**	**2.50**	**230**	*i* S	**Sb**	**11 23 19.3**	**+1.3**	
AVCB	**Coban**	**2.51**	**269**	*i* P	**Pb**	**11 22 45.2**	**-1.5**	
POTN	**Potosi Cosigui**	**2.53**	**173**	P	**Pb**	**11 22 46.1**	**-0.8**	
POTN				S	**Sb**	**11 23 18.5**	**+0.1**	
RCON	**San Juan de Ri**	**2.58**	**142**	P	**Pb**	**11 22 46.7**	**-1.2**	
RCPN	**Sur Rio San Ju**	**2.58**	**140**	P	**Pb**	**11 22 46.9**	**-1.1**	
FAME	**Alcaldia de Sa**	**2.72**	**232**	P	**Pg**	**11 22 53.9**	**+1.0**	
LIMN	**Finca el Limon**	**2.82**	**150**	P	**Pb**	**11 22 50.8**	**-1.1**	
LIMN				S	**Sb**	**11 23 27.3**	**+0.3**	
CRIN	**San Cristobal**	**2.90**	**165**	Pn	**Pn**	**11 22 48.3**	**+0.2**	
POLN	**Al Sur del Vol**	**3.02**	**161**	P	**Pb**	**11 22 54.5**	**-0.8**	
POLN				S	**Sb**	**11 23 32.9**	**+0.4**	
HERN	**Volcan Telica**	**3.05**	**162**	Pn	**Pn**	**11 22 51.1**	**+1.0**	
HERN				IAML		11 24 21.5		
	comp=E,575nm,0.3s							
HERN	**Volcan Telica**	**3.05**	**162**	P	**Pb**	**11 22 54.0**	**-1.8**	
MATN	**Matagalpa**	**3.16**	**145**	P	**Pb**	**11 22 55.1**	**-2.6**	
MATN				S	**Sb**	**11 23 36.4**	**-0.3**	
CNGN	**Cerro Negro**	**3.19**	**160**	Pn	**Pn**	**11 22 52.4**	**+0.3**	
MOM3	**MOM3**	**3.25**	**157**	P	**Pb**	**11 22 57.3**	**-1.9**	
SIUN	**Universidad Ur**	**3.44**	**121**	Pn	**Pn**	**11 22 55.4**	**0.0**	
COPN	**Copaltepe**	**3.53**	**160**	P	**Pb**	**11 23 01.3**	**-2.6**	
HUEH	**Huehuetenango**	**3.58**	**267**	Pn	**Pn**	**11 22 58.4**	**+0.9**	
STG5	**El Palmar, Qui**	**3.61**	**252**	*i* P	**Pb**	**11 23 02.5**	**-2.9**	
MGAN	**Managua**	**3.68**	**156**	Pn	**Pn**	**11 23 00.2**	**+1.5**	
BOAB	**BOACO BROADBAN**	**3.69**	**146**	Pn	**Pn**	**11 23 00.6**	**+1.7**	
BOAB				IAML		11 24 03.4		
	comp=N,343nm,0.6s							
BOAB				IAML		11 24 04.0		
	comp=E,323nm,1.1s							
CCIG	**Comitan**	**4.24**	**281**	Pn	**Pn**	**11 23 08.4**	**+1.8**	
BILN	**Bilwi Airport**	**4.53**	**108**	Pn	**Pn**	**11 23 11.3**	**+0.9**	
TEIG	**Tepich**	**4.70**	**355**	Pn	**Pn**	**11 23 13.7**	**+1.0**	
TEIG	**Tepich**	**4.70**	**355**	IAML		11 24 10.6		
	comp=E,83nm,0.4s							
TEIG				IAML		11 24 49.7		
	comp=E,66nm,0.9s							
SOR	**Soroa**	**8.53**	**31**	Pn	**Pn**	**11 24 07.3**	**+2.0**	
656A	**Willston**	**14.61**	**19**	Pn	**Pn**	**11 25 29.8**	**+1.2**	
553A	**Crawfordville**	**14.92**	**11**	Pn	**Pn**	**11 25 33.3**	**+0.5**	
TXAR	**Lajitas Array**	**20.07**	**316**	P	Pn	11 26 41.4	+4.1	
	comp=E,0.5nm,0.8s,baz=133,slow=11,SNR=5.1							
	comp=E,0.5nm,0.8s							
YKA	**Yellowknife Ar**	**50.57**	**344**	P	**P**	**11 31 01.9**	**+1.3**	
	comp=E,0.3nm,0.9s,baz=144,slow=6.7,SNR=4.4							
	comp=E,0.3nm,0.9s							
ILAR	**Eielson Array**	**63.09**	**336**	P	**P**	**11 32 31.9**	**+2.4**	
	comp=E,0.5nm,1.1s,baz=96,slow=8.3,SNR=2.8							
	comp=E,0.5nm,1.1s							
HHC	**Hu-ho-hao-te**	**121.10**	**343**	*e*P	**PKPdf**	**11 40 50.9**	**-4.8**	

*GCG **22** 11:27:58.6±1.0, 14°.77N×92°.46W, h81km±7km, MD3.5, Presumed earthquake*
*CATAC **22** 11:27:59.8±0.5, 15°N±4°×9°.2W±°, h62km±4km, M3.2/9, MLv3.2/9, Error ellipse: s-maj=10.9km s-min=3.4km az=39.4, confirmed*
*MEX **22** 11:27:59.0±0.9, 14°.73N×92°.50W, h85km±5km, MD4.0*
ISC 22 11:27:58.0±1.3, **14°.73N**±0°.05×**92°.51W**±0°.03, **h80**km±7km, **n35**, σ2§**07**/62, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**0.29**	**54**	*e*P	**Pn**	**11 28 10.4**	**+0.2**
THIG				*e*S	**Sn**	**11 28 19.0**	**-0.3**
THIG		**0.29**	**54**	*i* P	**Pn**	**11 28 10.6**	**+0.4**
THIG				*i* S	**Sn**	**11 28 20.8**	**+1.6**
SMCA	**Catarina**	**0.44**	**74**	*i* P	**Pn**	**11 28 11.4**	**+0.1**
SMCA				*i* S	**Sn**	**11 28 21.4**	**+0.3**
PATR	**El Naranjo**	**0.46**	**35**	*e*P	**Pn**	**11 28 11.2**	**-0.5**
PATR				*e*S	**Sn**	**11 28 21.1**	**-0.8**
CHUJ	**Union Juarez**	**0.53**	**47**	*e*P	**Pn**	**11 28 12.0**	**-0.3**
CHUJ				*e*S	**Sn**	**11 28 22.3**	**-0.5**
PAVE	**Pavencul**	**0.56**	**35**	*e*P	**Pn**	**11 28 12.2**	**-0.3**
PAVE				*e*S	**Sn**	**11 28 23.0**	**-0.3**
RTAL	**Retalhuleu**	**0.81**	**105**	*e*P	**Pn**	**11 28 15.0**	**+0.1**
RTAL				*e*S	**Sn**	**11 28 27.5**	**0.0**
RTAL	**Retalhuleu**	**0.81**	**105**	P	**Pn**	**11 28 15.5**	**+0.6**
RTAL				S	**Sn**	**11 28 29.1**	**+1.8**
QUEO	**Labor Ovalle**	**0.97**	**82**	*i* P	**Pn**	**11 28 18.2**	**+1.2**
QUEO				*i* S	**Sn**	**11 28 33.8**	**+2.6**
HUEH	**Huehuetenango**	**1.13**	**59**	*e*P	**Pn**	**11 28 18.9**	**0.0**
HUEH				*e*S	**Sn**	**11 28 34.8**	**+0.3**
HUEH	**Huehuetenango**	**1.13**	**59**	P	**Pn**	**11 28 19.4**	**+0.5**
HUEH	**Huehuetenango**	**1.13**	**59**	*i* P	**Pn**	**11 28 19.7**	**+0.8**
HUEH				*i* S	**Sn**	**11 28 36.0**	**+1.5**
STG2	**El Palmar, Qui**	**1.14**	**105**	*i* P	**Pn**	**11 28 15.7**	**-3.2**
STG2				*i* S	**Sn**	**11 28 29.2**	**-5.2**
STG8	**El Palmar, Qui**	**1.16**	**104**	*i* P	**Pn**	**11 28 16.2**	**-3.0**
STG8				*i* S	**Sn**	**11 28 30.6**	**-4.5**
STG5	**El Palmar, Qui**	**1.17**	**106**	*i* P	**Pn**	**11 28 16.2**	**-3.0**
STG5				*i* S	**Sn**	**11 28 31.0**	**-4.1**
PCIG		**1.18**	**325**	*e*P	**Pn**	**11 28 19.7**	**+0.4**
PCIG				*e*S	**Sn**	**11 28 35.7**	**+0.4**
CCIG	**Comitan**	**1.58**	**13**	*e*P	**Pn**	**11 28 25.4**	**+0.9**
CCIG				*e*S	**Sn**	**11 28 43.9**	**-0.7**
CCIG	**Comitan**	**1.58**	**13**	P	**Pn**	**11 28 25.3**	**+0.9**
CCIG				S	**Sn**	**11 28 44.4**	**-0.1**
CCIG	**Comitan**	**1.58**	**13**	*i* P	**Pn**	**11 28 25.5**	**+0.9**
CCIG				*i* S	**Sn**	**11 28 45.3**	**+0.7**
APG	**El Apazote**	**2.00**	**82**	*i* P	**Pn**	**11 28 31.0**	**+1.0**
CARR	**Arriaga**	**2.02**	**318**	*e*P	**Pn**	**11 28 31.7**	**+1.5**
CARR				*e*S	**Sn**	**11 28 56.4**	**+1.6**
TGIG		**2.12**	**344**	*e*P	**Pn**	**11 28 30.9**	**-0.6**
TGIG				*e*S	**Sn**	**11 28 54.4**	**-2.7**
FAME	**Alcaldia de Sa**	**2.58**	**110**	P	**Pn**	**11 28 39.2**	**+1.6**
FAME				S	**Sn**	**11 29 08.6**	**+0.6**
NUBE	**Las Nubes**	**2.77**	**107**	P	**Pn**	**11 28 43.3**	**+2.9**
NUBE				S	**Sn**	**11 29 15.0**	**+2.0**
JAYA	**Jayaque - finc**	**3.16**	**110**	S	**Sn**	**11 29 23.8**	**+1.5**
PMON	**Piamonte**	**3.26**	**108**	S	**Sn**	**11 29 26.9**	**+2.2**
CMIG	**Matias Romero**	**3.27**	**316**	*e*P	**Pn**	**11 28 47.9**	**+0.8**
CMIG				*e*S	**Sn**	**11 29 25.2**	**+0.3**
PETF	**Flores**	**3.34**	**49**	*e*P	**Pn**	**11 28 47.3**	**-0.7**
PETF				*e*S	**Sn**	**11 29 23.1**	**-3.5**
PETF	**Flores**	**3.34**	**49**	P	**Pn**	**11 28 48.5**	**+0.5**
PETF	**Flores**	**3.34**	**49**	*i* P	**Pn**	**11 28 48.5**	**+0.5**
PETF				*i* S	**Sn**	**11 29 24.3**	**-2.3**
NEUV	**Arroyo Zacate**	**4.33**	**314**	*e*P	**Pn**	**11 29 02.5**	**+1.0**
NEUV				*e*S	**Sn**	**11 29 48.0**	**-2.8**
PEIG	**Puerto Escondi**	**4.65**	**286**	*e*P	**Pn**	**11 29 06.5**	**+0.7**
PEIG				*e*S	Sn	11 29 46.4	-12
YOIG	**Yosondua**	**5.29**	**294**	*e*P	**Pn**	**11 29 17.0**	**+2.2**
YOIG				*e*S	**Sn**	**11 30 13.2**	**-1.3**
TXIG	**Tlaxiaco**	**5.64**	**297**	*e*P	**Pn**	**11 29 22.7**	**+3.1**
TXIG				*e*S	**Sn**	**11 30 16.0**	**-7.2**
JAUV	**Jalcomulco**	**6.17**	**319**	*e*P	Pn	11 29 17.6	-9.0
JAUV				*e*S	Sn	11 30 25.2	-11

*TIF **22** 11:31:54.1, 42°.41N×42°.56E, h17km*
*ISK **22** 11:31:54.9, 42°.42N×42°.65E, h5km, ML2.9/5*
*MOS **22** 11:31:55.0, 42°.48N×42°.61E, h22km, MPVA3.8*
*NORS **22** 11:31:55.0, 42°.46N×42°.61E, h2km, MPVA3.7*
*AFAD **22** 11:31:55.0, 42°.41N×42°.57E, h6km±4km, ML3.1*
ISC 22 11:31:54.2±1.1, **42°.40N**±0°.01×**42°.54E**±0°.02, **h6**km±10km, **n48**, σ0§**86**/90, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALIG	**Mtskhetisjvari**	**0.87**	**109**	P	**Pg**	**11 32 10.2**	**-0.7**
ALIG				S	**Sg**	**11 32 21.8**	**-0.5**
NEUR	**Neytrino**	**0.88**	**8**	*e*Pg	**Pg**	**11 32 10.7**	**-0.3**
NEUR				*e*Sg	**Sg**	**11 32 22.4**	**0.0**
EPOS	**Posof**	**0.90**	**171**	P	**Pg**	**11 32 11.8**	**+0.3**
EPOS				S	**Sb**	**11 32 24.0**	**-0.6**
DIGR	**Digorskoe uzhe**	**0.92**	**56**	*e*Pg	**Pg**	**11 32 11.6**	**-0.3**
DIGR				*e*Sg	**Sg**	**11 32 23.4**	**-0.4**
DOMR	**Dombai**	**1.12**	**323**	*e*Pg	**Pn**	**11 32 16.6**	**0.0**
DOMR				*e*Sg	**Sg**	**11 32 30.7**	**+0.4**
AKH	**Akhalkalaki**	**1.22**	**144**	P	**Pb**	**11 32 17.0**	**-0.6**
AKH				S	**Sn**	**11 32 34.2**	**-0.5**
AHAN	**Ardahan-Merkez**	**1.23**	**177**	P	**Pg**	**11 32 18.1**	**+0.3**
AHAN				S	**Sn**	**11 32 35.1**	**-0.1**
DBOC	**Borcka**	**1.23**	**212**	P	**Pn**	**11 32 17.8**	**-0.2**
DBOC				S	**Sn**	**11 32 34.9**	**-0.1**
LSNR	**Lesken**	**1.29**	**47**	*e*Pg	**Pg**	**11 32 19.2**	**+0.2**
LSNR				*e*Sg	**Sg**	**11 32 35.5**	**-0.3**
KORR	**Kora**	**1.32**	**58**	*e*Pg	**Pg**	**11 32 19.6**	**+0.1**
KORR				*e*Sg	**Sg**	**11 32 36.6**	**-0.1**
SHA1	**Shidzhatmaz**	**1.35**	**4**	*e*Pg	**Pg**	**11 32 20.3**	**+0.3**
SHA1				*e*Sg	**Sg**	**11 32 37.7**	**+0.2**
KBZ	**Khabaz**	**1.36**	**11**	*i* Pg	**Pg**	**11 32 20.1**	**+0.1**
KBZ				*e*Sg	**Sg**	**11 32 38.1**	**+0.2**
LACR	**Lac**	**1.37**	**71**	*e*Pg	**Pb**	**11 32 19.9**	**-0.4**
LACR				*e*Sg	**Sn**	**11 32 37.3**	**-1.1**
BGD	**Bogdanovka**	**1.38**	**145**	P	**Pn**	**11 32 19.8**	**-0.3**
BGD				S	**Sg**	**11 32 38.9**	**+0.4**
GUDG	**Gudauri**	**1.44**	**87**	P	**Pg**	**11 32 21.6**	**-0.2**
GUDG				S	**Sg**	**11 32 42.1**	**+1.7**
GUDG	**Gudauri**	**1.44**	**87**	*e*Pg	**Pg**	**11 32 21.5**	**-0.2**
GUDG				*e*Sg	**Sg**	**11 32 40.8**	**+0.4**
TRLG	**Trialeti**	**1.45**	**126**	P	**Pn**	**11 32 20.8**	**-0.2**
TRLG				S	**Sg**	**11 32 41.0**	**+0.3**
STDR	**Stavd-Durt**	**1.48**	**49**	*e*Pg	**Pg**	**11 32 23.4**	**+0.8**
STDR				*e*Sg	**Sg**	**11 32 42.3**	**+0.4**
ARNR	**Ardon**	**1.51**	**58**	*e*Pg	**Pg**	**11 32 23.7**	**+0.6**
ARNR				*e*Sg	**Sg**	**11 32 43.8**	**+1.2**
DBAD	**Bademkaya**	**1.51**	**205**	P	**Pb**	**11 32 22.9**	**+0.2**
DBAD				S	**Sn**	**11 32 41.4**	**-0.5**
DBAD				IAML		11 32 46.0	
	comp=E,434nm,0.4s						
GOLE	**Ardahan-Gℸjle**	**1.56**	**178**	P	**Pg**	**11 32 24.0**	**-0.1**
GOLE				S	**Sg**	**11 32 45.6**	**+1.4**
KIV	**Kislovodsk**	**1.56**	**4**	Pn	**Pb**	**11 32 23.9**	**+0.3**
KIV				Sn	**Sg**	**11 32 44.2**	**-0.3**
KIV	**Kislovodsk**	**1.56**	**4**	*e*Pg	**Pb**	**11 32 23.3**	**-0.3**
KIV				*e*Sg	**Sg**	**11 32 44.2**	**-0.3**
DDEM	**Demirkent**	**1.61**	**202**	P	**Pb**	**11 32 24.3**	**-0.1**
DDEM				S	**Sg**	**11 32 45.8**	**-0.2**
BEYR	**Belyy Ugol+**	**1.63**	**7**	*e*Pg	**Pb**	**11 32 24.8**	**+0.1**
BEYR				*e*Sg	**Sb**	**11 32 45.5**	**0.0**
TBLG	**Delisi**	**1.77**	**111**	Pn	**Pb**	**11 32 25.8**	**-1.2**
TBLG				Sn	**Sb**	**11 32 48.8**	**-0.6**
CHRG	**Chargali**	**1.77**	**91**	P	**Pb**	**11 32 25.9**	**-1.2**
CHRG				S	**Sb**	**11 32 49.4**	**-0.2**
SENK	**Senkaya-Erzuru**	**1.84**	**184**	Pn	**Pb**	**11 32 28.3**	**0.0**
EOLT	**Oltu**	**1.90**	**193**	P	**Pb**	**11 32 29.2**	**0.0**
EOLT				S	**Sg**	**11 32 55.3**	**+0.2**
EOLT				IAML		11 32 56.0	
	comp=E,104nm,0.2s						
EOLT				IAML		11 32 57.0	
	comp=N,174nm,0.4s						
SHTL	**Shatili**	**1.95**	**81**	P	**Pb**	**11 32 28.9**	**-1.3**
GRYR	**Gornoye**	**2.02**	**329**	*e*Pg	**Pb**	**11 32 30.3**	**-1.0**
GRYR				*e*Sg	**Sb**	**11 32 57.8**	**+1.1**
RPOR	**Krasnaya Polya**	**2.12**	**309**	*e*Pg	**Pn**	**11 32 31.0**	**+0.9**
RPOR				*e*Sg	**Sg**	**11 33 01.4**	**-0.8**
VSLR	**Vesyoloye**	**2.13**	**301**	*e*Pg	**Pn**	**11 32 31.3**	**+1.1**
VSLR				*e*Sg	**Sb**	**11 32 58.8**	**-1.0**
IZDR	**Rize**	**2.19**	**223**	P	**Pn**	**11 32 30.6**	**-0.5**
IZDR				IAML		11 33 04.0	
	comp=N,124nm,0.3s						
IZDR				IAML		11 33 04.0	
	comp=E,153nm,0.3s						
DGRG	**David-gareji**	**2.32**	**113**	P	**Pb**	**11 32 34.8**	**-1.6**
ALER	**Alexandrovskoy**	**2.38**	**6**	*e*Pn	**Pg**	**11 32 39.2**	**-0.7**
ALER				*e*Sn	**Sb**	**11 33 08.0**	**+0.9**
GUZR	**Guzeripl'**	**2.39**	**313**	*i* Pn	**Pn**	**11 32 35.8**	**+1.2**
GUZR				*e*Sn	**Sb**	**11 33 05.7**	**-1.6**
KRIK	**Erzurum-spir**	**2.39**	**211**	P	**Pb**	**11 32 36.5**	**-1.2**
KRIK				S	**Sb**	**11 33 07.2**	**-0.2**
KRIK				IAML		11 33 11.0	
	comp=E,68nm,0.6s						
SOC	**Sochi**	**2.39**	**301**	*e*Pn	**Pn**	**11 32 35.2**	**+1.5**
SOC				*e*Sn	**Sb**	**11 33 06.5**	**-0.7**
HOMI	**Horasan**	**2.40**	**192**	P	**Pb**	**11 32 38.4**	**+0.6**
HOMI				S	**Sg**	**11 33 09.6**	**-1.5**
HOMI				IAML		11 33 14.0	
	comp=E,114nm,0.6s						
HOMI				IAML		11 33 18.0	
	comp=N,102nm,0.7s						
EMRE	**Erzurum,Aziziy**	**2.64**	**207**	P	**Pg**	**11 32 44.3**	**-0.5**
EMRE				S	**Sb**	**11 33 17.1**	**+2.4**
ERZM	**Erzurum**	**2.64**	**200**	P	**Pg**	**11 32 44.0**	**-0.8**
ERZM				S	**Sg**	**11 33 19.5**	**+0.5**
MRNR	**Maryino**	**2.72**	**306**	*e*Pn	**Pn**	**11 32 40.3**	**+1.9**
MRNR				*e*Sn	**Sb**	**11 33 15.4**	**-1.4**
BAYB	**BAYBURT**	**2.74**	**220**	P	**Pb**	**11 32 44.1**	**+0.4**
BAYB				S	**Sb**	**11 33 17.4**	**-0.1**
GNI	**Garni**	**2.79**	**143**	Pn	**Pn**	**11 32 41.1**	**+1.6**
GNI	**Garni**	**2.79**	**143**	*e*Pn	**Pb**	**11 32 45.7**	**+1.2**
GNI				*e*Sn	**Sg**	**11 33 22.0**	**-1.8**
LGD	**Lagodekhi**	**2.81**	**100**	P	**Pb**	**11 32 45.0**	**+0.2**
LGD				S	**Sb**	**11 33 20.6**	**+1.1**
AGRB	**Hanur-Agry**	**2.84**	**173**	Pn	**Pn**	**11 32 42.3**	**+2.1**

*IDC **22** 11:44:50.5±1.7, 7°.17S×128°.94E, h152km±24km, mb2.9/1, mbtmp3.4/6, Error ellipse: s-maj=27.3km s-min=14.3km az=117.0*
ISC 22 11:44:50.6±1.0, **7°.18S**±0°.09×**129°.0E**±0°.1, **h156**km, **n6**, σ1§**13**/8, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.04**	**240**	P	**Pn**	**11 46 17.2**	**-0.8**
	11nm,0.4s,baz=53,slow=5.1,SNR=2.0						
BATI				S	**Sn**	**11 47 27.0**	**+0.6**
	9.9nm,0.4s,baz=58,slow=15,SNR=1.7						
SIJI	**Sorong**	**6.68**	**20**	P	**Pn**	**11 46 27.3**	**+0.8**
	2.7nm,0.7s,baz=209,slow=19,SNR=1.5						
SIJI				S	**Sn**	**11 47 41.3**	**-0.4**
	2.2nm,0.5s,baz=210,slow=20,SNR=1.6						
FITZ	**Fitzroy Crossi**	**11.32**	**196**	P	**Pn**	**11 47 27.7**	**-0.2**
	1.3nm,0.8s,baz=20,slow=11,SNR=8.2						
FITZ				S	Sn	11 49 24.3	-9.0
	0.6nm,0.3s,baz=0.0,slow=9.1,SNR=3.6						
WRA	**Warramunga Arr**	**13.71**	**158**	P	**Pn**	**11 47 57.4**	**-1.4**
	0.4nm,0.4s,baz=340,slow=13,SNR=17						
WRA				S	Sn	11 50 23.0	-7.8
	0.3nm,0.4s,baz=335,slow=22,SNR=8.3						
ASAR	**Alice Springs**	**17.06**	**164**	P	**Pn**	**11 48 41.6**	**+1.6**
	0.3nm,0.8s,baz=346,slow=9.7,SNR=9.1						
ASAR				S	S	11 51 35.7	-14
	0.2nm,0.8s,baz=338,slow=19,SNR=1.4						
MKAR	**Makanchi Array**	**67.82**	**327**	P	**P**	**11 55 31.8**	**-0.1**
	0.1nm,0.4s,baz=126,slow=7.3,SNR=2.1						
	0.1nm,0.4s						

*JMA **22** 11:49:49.1±0.4, 25°N±1°×122°.2E±0°.6, h96km±3km, MV2.1/12, TAIWAN REGION*
*TAP **22** 11:49:49.2, 24°.80N×122°.24E, h95km, ML3.3, C*
ISC 22 11:49:49.5±1.4, **24°.80N**±0°.04×**122°.24E**±0°.03, **h95**km±7km, **n112**, σ0§**85**/191, **3C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGS		**0.28**	**279**	*e*P	**Pn**	**11 50 03.6**	**+0.2**
TWB1	**Santiao Chiao**	**0.31**	**312**	*i* P	**Pn**	**11 50 03.5**	**-0.1**
TWB1				*i* S	**Sn**	**11 50 13.7**	**-0.3**
EOS2	**EOS2**	**0.38**	**181**	*e*P	**Pn**	**11 50 04.6**	**+0.8**
EOS2				*e*S	**Sn**	**11 50 15.5**	**+1.1**
TWC	**Suao**	**0.40**	**242**	*e*P	**Pn**	**11 50 03.9**	**-0.2**
TWC				S	**Sn**	**11 50 14.2**	**-0.7**
TIPB	**Shuangxi**	**0.41**	**295**	*i* P	**Pn**	**11 50 04.2**	**+0.1**
TIPB				*i* S	**Sn**	**11 50 14.7**	**-0.4**
ESAO	**Su ao**	**0.42**	**238**	*e*P	**Pn**	**11 50 04.1**	**-0.1**
SXI1	**Grass Mountain**	**0.44**	**312**	*i* P	**Pn**	**11 50 04.3**	**-0.2**
SXI1				*e*S	**Sn**	**11 50 15.0**	**-0.5**
ILA	**Ilan**	**0.45**	**266**	*i* P	**Pn**	**11 50 04.5**	**+0.2**
ILA				*i* S	**Sn**	**11 50 15.5**	**0.0**
NWF	**Wu-fen Shan**	**0.49**	**303**	*i* P	**Pn**	**11 50 04.8**	**0.0**
NWF				*i* S	**Sn**	**11 50 15.9**	**-0.3**
WFSB	**Wu-fen Shan**	**0.49**	**303**	P	**Pn**	**11 50 04.8**	**+0.1**
WFSB				S	**Sn**	**11 50 15.9**	**-0.2**
NDS	**Dongshan**	**0.50**	**251**	*i* P	**Pn**	**11 50 05.0**	**+0.2**
NDS				*e*S	**Sn**	**11 50 15.7**	**-0.5**
EOS3	**EOS3**	**0.52**	**172**	*e*P	**Pn**	**11 50 05.7**	**+1.0**
EOS3				*e*S	**Sn**	**11 50 17.8**	**+1.7**
TWE	**Neicheng**	**0.53**	**262**	*i* P	**Pn**	**11 50 05.0**	**+0.1**
TWE				S	**Sn**	**11 50 15.8**	**-0.7**
TNOU	**National Taiwa**	**0.55**	**310**	*e*P	**Pn**	**11 50 04.8**	**-0.3**
EWUT	**Wuta**	**0.55**	**230**	P	**Pn**	**11 50 05.4**	**+0.3**
EWUT				*i* S	**Sn**	**11 50 16.8**	**+0.1**
FUSB	**Fushanzhiwuyua**	**0.59**	**266**	P	**Pn**	**11 50 05.5**	**-0.1**
FUSB				*e*S	**Sn**	**11 50 16.5**	**-1.1**
TWA	**Mucha**	**0.62**	**287**	*e*P	**Pn**	**11 50 05.6**	**-0.1**
ENTT	**Nioudou**	**0.63**	**256**	*i* P	**Pn**	**11 50 06.2**	**+0.3**
ENTT				*e*S	**Sn**	**11 50 19.1**	**+1.0**
EAHA	**Aohua**	**0.65**	**224**	*e*P	**Pn**	**11 50 06.2**	**+0.2**
EAHA				*e*S	**Sn**	**11 50 18.8**	**+0.4**
NWLT	**Wulai**	**0.67**	**268**	P	**Pn**	**11 50 06.1**	**-0.1**
EOS4	**EOS4**	**0.68**	**174**	*e*P	**Pn**	**11 50 06.1**	**+0.2**
EOS4				*e*S	**Sn**	**11 50 18.9**	**+0.8**
NDT	**Datong Townshi**	**0.69**	**254**

JKRS	**Kuro-shima**	**1.71**	**109**	*eP*	**Pn**	**11 50 18.5**	**+0.4**
JKRS				*eS*	**Sn**	**11 50 40.3**	**+0.4**
CHKH	**Chenggong**	**1.78**	**206**	*eP*	**Pn**	**11 50 18.4**	**-0.6**
CHKH				*eS*	**Sn**	**11 50 39.1**	**-2.3**
JIJ	**Ishigaki jima**	**1.79**	**104**	*eS*	**Sn**	**11 50 41.2**	**-0.5**
FULB	**Fuli**	**1.81**	**209**	*eP*	**Pn**	**11 50 19.2**	**-0.3**
FULB				*eS*	**Sn**	**11 50 41.7**	**-0.6**
ALS	**Alishan**	**1.83**	**226**	*eP*	**Pn**	**11 50 21.1**	**+1.0**
ALS				*eS*	**Sn**	**11 50 45.0**	**+1.7**
CHN5	**Tsauling**	**1.86**	**230**	*eP*	**Pn**	**11 50 21.2**	**+1.0**
CHN5				*eS*	**Sn**	**11 50 44.9**	**+1.3**
CHKT	**Chengkung**	**1.87**	**205**	P	**Pn**	**11 50 19.5**	**-0.8**
CHKT				*eS*	**Sn**	**11 50 41.1**	**-2.5**
EHD	**Haiduan**	**1.90**	**210**	*eP*	**Pn**	**11 50 20.5**	**-0.1**
EHD				*eS*	**Sn**	**11 50 43.4**	**-0.8**
JISG	**Ishigakijimahi**	**1.90**	**96**	*eP*	**Pn**	**11 50 21.4**	**+0.9**
JISG				*eS*	**Sn**	**11 50 44.2**	**+0.1**
WRL	**Guolierlin Hig**	**1.92**	**243**	P	**Pn**	**11 50 20.9**	**+0.1**
WRL				*eS*	**Sn**	**11 50 44.1**	**-0.6**
RLNB	**Erlin**	**1.94**	**243**	*eP*	**Pn**	**11 50 21.1**	**0.0**
ELDTW	**Lidau**	**1.95**	**215**	*eP*	**Pn**	**11 50 21.3**	**-0.2**
ELDTW				*eS*	**Sn**	**11 50 44.5**	**-1.2**
WCKO	**Fanlu**	**2.02**	**228**	*eP*	**Pn**	**11 50 23.5**	**+1.3**
WCKO				*eS*	**Sn**	**11 50 48.7**	**+1.7**
TPUB	**Ta-pu**	**2.10**	**225**	P	**Pn**	**11 50 24.6**	**+1.4**
TPUB	**Ta-pu**	**2.10**	**225**	S	**Sn**	**11 50 49.4**	**+0.5**
TPUB	**Ta-pu**	**2.10**	**225**	*eP*	**Pn**	**11 50 23.8**	**+0.6**
TPUB				*eS*	**Sn**	**11 50 50.5**	**+1.6**
STYH	**Taoyuan**	**2.10**	**220**	P	**Pn**	**11 50 24.3**	**+1.1**
STYH				*eS*	**Sn**	**11 50 50.3**	**+1.3**
CHY	**Chiayi**	**2.10**	**232**	*eP*	**Pn**	**11 50 23.7**	**+0.4**
CHY				*eS*	**Sn**	**11 50 49.4**	**+0.4**
WTP	**Ta-pu**	**2.14**	**224**	*eP*	**Pn**	**11 50 23.8**	**0.0**
WTP				*eS*	**Sn**	**11 50 51.0**	**+1.0**
TWK	**Hsinying**	**2.21**	**227**	*eP*	**Pn**	**11 50 25.7**	**+0.9**
WSL	**Shuilin Townsh**	**2.23**	**236**	*eP*	**Pn**	**11 50 25.1**	**+0.2**
TWGBT	**Beinan**	**2.24**	**208**	*eP*	**Pn**	**11 50 24.5**	**-0.6**
TWGBT				*eS*	**Sn**	**11 50 49.5**	**-2.8**
TWG	**Pinlang**	**2.24**	**209**	*eP*	**Pn**	**11 50 24.8**	**-0.3**
CHN1	**Nanshi**	**2.24**	**225**	*eP*	**Pn**	**11 50 25.5**	**+0.4**
CHN1				*eS*	**Sn**	**11 50 53.4**	**+1.1**
VWUC	**VWUC**	**2.54**	**275**	*eP*	**Pn**	**11 50 28.1**	**-0.9**
MASBT	**Mashibuluo**	**2.63**	**214**	*eP*	**Pn**	**11 50 31.8**	**+1.6**
MASBT				*eS*	**Sn**	**11 51 02.9**	**+1.5**
EAST	**Anshuo**	**2.72**	**208**	*eP*	**Pn**	**11 50 32.8**	**+1.3**
PHUB	**P'eng-hu**	**2.75**	**243**	*eP*	**Pn**	**11 50 30.5**	**-1.3**
PHUB				*eS*	**Sn**	**11 51 02.1**	**-2.3**

IDC ***22*** *11:52:10.9±1.7, 33°.92N×135°.17E, h0km, mb3.5/2, mbtmp3.2/4, ML2.3/2, Error ellipse: s-maj=43.5km s-min=31.7km az=97.0*

JMA ***22*** *11:52:12.2±0.0, 34°.1N±0°.1×135°.1E±0°.2, h6km, MV3.1/20, NW WAKAYAMA PREF*

JMA Felt II J1 at NW WAKAYAMA PREF .

ISC 22 11:52:12.1±1.0, 34°.04N±0°.03×135°.13E±0°.03, h12km±9km, n12, σ0§89/21, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JWM	**Minabe**	**0.26**	**135**	*i* P		**Pg**	**11 52 17.7**	**+0.2**
JWM				S		**Sg**	**11 52 21.5**	**+0.4**
JWY	**Kouya**	**0.42**	**64**	*i* P		**Pg**	**11 52 20.3**	**-0.2**
JWY				*eS*		**Sg**	**11 52 26.7**	**+0.7**
JTNC	**Tanabenakahech**	**0.45**	**119**	*i* P		**Pb**	**11 52 21.4**	**-0.6**
JTNC				S		**Sb**	**11 52 27.5**	**-1.3**
JAWN	**Awajishima-nag**	**0.49**	**337**	*i* P		**Pg**	**11 52 21.5**	**-0.1**
JAWN				S		**Sg**	**11 52 28.0**	**-0.1**
JAI	**Aioi**	**0.62**	**247**	*i* P		**Pg**	**11 52 23.8**	**-0.3**
JAI				S		**Sg**	**11 52 31.4**	**-0.8**
JHE	**Heguri**	**0.77**	**36**	P		**Pg**	**11 52 26.9**	**0.0**
JHE				S		**Sg**	**11 52 37.4**	**+0.4**
JKN2	**Miekihoku**	**0.97**	**78**	*i* P		**Pg**	**11 52 30.1**	**-0.6**
JKN2				S		**Sb**	**11 52 43.8**	**+0.3**
JKS	**Kasai**	**0.97**	**346**	*eP*		**Pg**	**11 52 30.3**	**-0.6**
JKS				*eS*		**Sg**	**11 52 43.0**	**-0.6**
MJAR	**Matsushiro Arr**	**3.55**	**44**	Pn		**Pn**	**11 53 08.3**	**+1.3**
	0.1nm,0.3s,baz=229,slow=13,SNR=5.7							
MJAR				Sn		**Sg**	**11 54 04.1**	**-1.9**
	0.1nm,0.3s,baz=220,slow=21,SNR=5.2							
	0.9nm,0.6s							
KSRS	**Korea Array**	**6.78**	**302**	Pn		**Pn**	**11 53 53.2**	**+1.8**
	0.1nm,0.3s,baz=116,slow=15,SNR=1.7							
	0.8nm,0.6s							
WRA	**Warramunga Arr**	**53.68**	**181**	P		**P**	**12 01 33.6**	**-0.2**
	0.7nm,0.9s,baz=0.3,slow=7.5,SNR=8.2							
	0.7nm,0.9s							
ASAR	**Alice Springs**	**57.40**	**181**	P		**P**	**12 02 00.3**	**-0.2**
	0.3nm,0.8s,baz=1.6,slow=7.1,SNR=5.3							
	0.3nm,0.8s							

SFS ***22*** *11:54:24.9, 36°.67N×9°.70W, h24km, ML2.7/8, ML2.5/8, MLv2.4/8*

MDD ***22*** *11:54:24.6±1.4, 36°.67N×9°.67W, h19km±4km, mb_Lg2.4/6, Error ellipse: s-maj=9.9km s-min=7.7km az=20.0*

CNRM ***22*** *11:54:25.1, 36°.47N×9°.20W, h10km*

IGIL ***22*** *11:54:25.3, 36°.69N×9°.68W, h17km, ML1.4*

INMG ***22*** *11:54:25.4±0.9, 36°.67N×9°.68W, h21km±3km, ML1.5, Error ellipse: s-maj=4.1km s-min=3.3km az=45.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Cabo S.Vicente*

ISC 22 11:54:20.0±2.2, 36°.56N±0°.05×9°.77W±0°.08, h19km±5km, n44, σ1§47/79, 1C-2D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**0.94**	**53**	Pg		**Pn**	**11 54 40.3**	**+2.0**
PFVI				Sg		**Sn**	**11 54 51.6**	**+0.2**
PFVI	**Vila Bisbo**	**0.94**	**53**	⇓*eP*		**Pn**	**11 54 40.3**	**+2.0**
PFVI				*eS*		**Sn**	**11 54 51.7**	**+0.3**
PFVI				*i* IAML			11 54 52.0	
PFVI				*i* IAML			11 54 52.2	
PFVI				*i* IAML			11 54 52.9	
PFVI	**Vila Bisbo**	**0.94**	**53**	P		**Pg**	**11 54 38.6**	**+0.1**
PFVI				S		**Sg**	**11 54 49.1**	**-1.9**
MORF	**Marmelete**	**1.16**	**50**	*eP*		**Pg**	**11 54 43.3**	**+0.8**
MORF				*eS*		**Sn**	**11 54 56.6**	**-0.2**
MORF				IAML			11 54 57.2	
	comp=N,12nm,0.1s							
MORF	**Marmelete**	**1.16**	**50**	⇓*eP*		**Pg**	**11 54 43.3**	**+0.8**
MORF				*eS*		**Sn**	**11 54 56.8**	**+0.1**
MORF				*i* IAML			11 54 59.1	
MORF				*i* IAML			11 54 59.3	
MORF				*i* IAML			11 54 59.7	
PTEO	**Sao Teotonio**	**1.29**	**40**	*eP*		**Pg**	**11 54 44.9**	**0.0**
PTEO				*eS*		**Sg**	**11 54 59.7**	**-2.1**
PTEO				*i* IAML			11 55 00.2	
PTEO				*i* IAML			11 55 01.3	
PTEO				*i* IAML			11 55 01.4	
PBDV	**Barranco-do-Ve**	**1.62**	**65**	Pn		**Pb**	**11 54 49.8**	**+0.4**
PBDV				Sn		**Sn**	**11 55 07.8**	**-0.3**
PBDV	**Barranco-do-Ve**	**1.62**	**65**	*eP*		**Pb**	**11 54 50.0**	**+0.6**
PBDV				*eS*		**Sn**	**11 55 08.1**	**0.0**
PBDV				*i* IAML			11 55 09.5	
PBDV				*i* IAML			11 55 10.5	
PBDV				*i* IAML			11 55 16.2	
PCVE	**Castro Verde**	**1.75**	**52**	Pn		**Pb**	**11 54 51.6**	**+0.1**
PCVE				Sn		**Sn**	**11 55 10.3**	**-0.8**
PCVE	**Castro Verde**	**1.75**	**52**	*eP*		**Pb**	**11 54 51.6**	**+0.1**
PCVE				*eS*		**Sn**	**11 55 11.1**	**0.0**
PCVE				*i* IAML			11 55 12.1	
PCVE				*i* IAML			11 55 12.5	
PCVE				*i* IAML			11 55 13.3	
MESJ	**Messejana**	**1.77**	**44**	*eP*		**Pb**	**11 54 51.6**	**-0.4**
MESJ				*eS*		**Sn**	**11 55 11.0**	**-0.9**
MESJ				IAML			11 55 12.1	
	comp=E,1.8nm,0.1s							
MESJ	**Messejana**	**1.77**	**44**	*eP*		**Pb**	**11 54 51.6**	**-0.4**
MESJ				*eS*		**Sn**	**11 55 11.4**	**-0.5**
MESJ				*i* IAML			11 55 12.7	
MESJ				*i* IAML			11 55 14.3	
MESJ				*i* IAML			11 55 14.4	
PVAQ	**Vaqueiros**	**1.84**	**62**	*eP*		**Pb**	**11 54 52.9**	**-0.3**
PVAQ				*eS*		**Sn**	**11 55 13.3**	**-0.3**
PVAQ				*i* IAML			11 55 14.7	
PVAQ				*i* IAML			11 55 14.7	
PVAQ				*i* IAML			11 55 14.8	
PVAQ	**Vaqueiros**	**1.84**	**62**	P		**Pn**	**11 54 52.4**	**+1.6**
PVAQ				S		**Sn**	**11 55 13.8**	**+0.2**
EGRO	**El Granado**	**2.07**	**61**	Pn		**Pn**	**11 54 55.9**	**+2.1**
EGRO				Sn		**Sn**	**11 55 18.6**	**-0.5**
EGRO				*i* IVmb_Lg			11 55 22.1	
PBEJ	**Beja**	**2.11**	**46**	*eS*		**Sn**	**11 55 19.1**	**-0.9**
MOE	**Montemor**	**2.26**	**30**	*eP*		**Pn**	**11 54 58.3**	**+1.9**
MOE				*eS*		**Sn**	**11 55 22.7**	**-1.1**
EVO	**Evora**	**2.41**	**35**	Pn		**Pn**	**11 54 59.8**	**+1.4**
EVO				Sn		**Sn**	**11 55 25.7**	**-1.8**
EVO	**Evora**	**2.41**	**35**	*eP*		**Pn**	**11 54 59.9**	**+1.4**
EVO				*eS*		**Sn**	**11 55 26.0**	**-1.5**
PMAFR	**Mafra**	**2.42**	**9**	Pn		**Pn**	**11 54 59.9**	**+1.3**
PMAFR				Sn		**Sn**	**11 55 27.6**	**-0.2**
PMAFR	**Mafra**	**2.42**	**9**	*eP*		**Pn**	**11 55 00.2**	**+1.6**
PMAFR				*eS*		**Sn**	**11 55 27.6**	**-0.2**
PARRA	**Arraiolos**	**2.63**	**31**	*eP*		**Pn**	**11 55 02.9**	**+1.4**
PARRA				*eS*		**Sn**	**11 55 31.9**	**-1.1**
PARRA				*i* IAML			11 55 33.1	
PARRA				*i* IAML			11 55 34.9	
PARRA				*i* IAML			11 55 35.5	
PBAR	**Barrancos**	**2.71**	**53**	Pn		**Pn**	**11 55 04.4**	**+1.8**
PBAR				Sn		**Sn**	**11 55 34.2**	**-0.6**
PBAR	**Barrancos**	**2.71**	**53**	*eP*		**Pn**	**11 55 04.5**	**+2.0**
PBAR				*eS*		**Sn**	**11 55 33.9**	**-0.9**
PBAR				*i* IAML			11 55 34.9	
PBAR				*i* IAML			11 55 35.7	
PBAR				*i* IAML			11 55 49.6	
EMIN	**Mina Concepcio**	**2.75**	**63**	Pn		**Pn**	**11 55 05.3**	**+2.1**
EMIN				Sn		**Sn**	**11 55 35.2**	**-0.7**
EMIN	**Mina Concepcio**	**2.75**	**63**	Sn		**Sn**	**11 55 34.8**	**-1.1**
EMIN				*i* IVmb_Lg			11 55 38.0	
PMTG	**Montargil**	**2.78**	**26**	⇑*eP*		**Pn**	**11 55 05.4**	**+1.8**
PMTG				*eS*		**Sn**	**11 55 35.3**	**-1.4**
PMTG				*i* IAML			11 55 36.9	
PMTG				*i* IAML			11 55 37.3	
PMTG				*i* IAML			11 55 37.4	
PESTR	**Estremoz**	**2.88**	**36**	Pn		**Pn**	**11 55 06.2**	**+1.3**
PESTR				Sn		**Sn**	**11 55 37.7**	**-1.3**
PESTR	**Estremoz**	**2.88**	**36**	*eS*		**Sn**	**11 55 36.4**	**-2.7**
PSBE	**So Bento**	**3.04**	**14**	*eS*		**Sn**	**11 55 43.2**	**0.0**
ESPR	**Espera**	**3.16**	**83**	Sn		**Sn**	**11 55 45.7**	**-0.3**
ESPR	**Espera**	**3.16**	**83**	Sn		**Sn**	**11 55 45.6**	**-0.3**
ESPR				*i* IVmb_Lg			11 55 46.5	
PSARD	**Sardoal**	**3.29**	**22**	*eP*		**Pn**	**11 55 12.2**	**+1.6**
PSARD				*eS*		**Sn**	**11 55 47.0**	**-2.1**
PSARD				*i* IAML			11 55 51.6	
PSARD				*i* IAML			11 55 58.6	
PSARD				*i* IAML			11 55 58.9	
PMRV	**Marv??o**	**3.42**	**33**	*eP*		**Pn**	**11 55 13.8**	**+1.3**
PMRV				*eS*		**Sn**	**11 55 50.4**	**-2.1**
PMRV				*i* IAML			11 55 51.5	
PMRV				*i* IAML			11 55 51.6	
PCAS	**Casmilo, Conde**	**3.62**	**16**	*eP*		**Pn**	**11 55 16.6**	**+1.4**
PCAS				*eS*		**Sn**	**11 55 55.9**	**-1.6**
ECAB	**El Cabril**	**3.78**	**65**	Pn		**Pn**	**11 55 19.1**	**+1.7**
ECAB				Sn		**Sn**	**11 55 59.4**	**-2.0**
ECAB	**El Cabril**	**3.78**	**65**	Pn		**Pn**	**11 55 19.4**	**+2.0**
ECAB				Sn		**Sn**	**11 55 59.0**	**-2.4**
ECAB				*i* IVmb_Lg			11 56 03.7	
EADA	**Adamuz**	**4.43**	**67**	Pn		**Pn**	**11 55 28.9**	**+2.5**
EADA				Sn		**Sn**	**11 56 15.5**	**-2.0**
EADA	**Adamuz**	**4.43**	**67**	Pn		**Pn**	**11 55 28.8**	**+2.4**
EADA				Sn		**Sn**	**11 56 15.4**	**-2.0**
EADA				*i* IVmb_Lg			11 56 27.6	
EPLA	**Plasencia**	**4.54**	**39**	*i* IVmb_Lg			11 56 16.3	
EPLA				Sn		**Sn**	**11 56 18.3**	**-1.9**
MVO	**Moncorvo**	**5.07**	**24**	*eP*		**Pn**	**11 55 36.2**	**+1.1**
PGV	**Gavieira, Arco**	**5.52**	**12**	*eP*		**Pn**	**11 55 42.1**	**+1.3**
MD31	**MD31**	**5.53**	**130**	P		**Pn**	**11 55 42.6**	**+1.1**
MD31				S		**Sn**	**11 56 41.1**	**-3.6**
MDT	**Midelt**	**5.66**	**130**	P		**Pn**	**11 55 44.4**	**+1.1**
MDT				S		**Sn**	**11 56 45.7**	**-2.2**

NNC 22 12:21:43.3±3.0, 43°.72N×88°.47E, h26km±17km, mb3.7, mpv3.5, 9C-5D, Error ellipse: s-maj=27.5km s-min=17.4km az=49.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**5.33**	**307**	⇓Pn		Pn	12 23 02.7	+1.4
	2.5nm,0.5s,baz=120,slow=12,SNR=84							
MK31				⇑Sn		Sn	12 24 03.2	+1.3
	2.8nm,0.5s,baz=124,slow=25,SNR=6.0							
MK31				⇑Lg		Lg	12 24 33.7	
	2.1nm,0.4s,baz=117,slow=29,SNR=5.6							
MAKZ	**Makanchi**	**5.52**	**306**	⇑Pn		Pn	12 23 04.8	+1.0
	3.6nm,0.4s							
MAKZ				⇓Sn		Sn	12 24 06.9	+0.4
	3.8nm,0.6s							
MAKZ				⇑Lg		Lg	12 24 40.1	
	3.9nm,0.6s							
PDGK	**Podgornoye**	**6.54**	**270**	⇑Pn		Pn	12 23 16.5	-1.4
	2.8nm,0.8s							
PDGK				⇓Lg		Lg	12 25 10.0	
	5.8nm,0.6s							
KURBB	**Kurchatov Arra**	**9.66**	**319**	⇑Pn		Pn	12 23 59.7	-0.8
	1.3nm,0.6s							
KURBB				⇓Sn		Sn	12 25 49.4	+1.3
	1.3nm,0.4s							
KURBB				⇓Lg		Lg	12 26 47.1	
	4.6nm,0.7s							
KURK	**Kurchatov**	**9.68**	**320**	⇑Pn		Pn	12 23 59.2	-1.6
	0.1nm,0.3s							
KURK				⇑Sn		Sn	12 25 46.9	-1.7
	0.6nm,0.5s							
KURK				⇑Lg		Lg	12 26 47.8	
	2.5nm,0.9s							

THE ***22*** *12:28:22.6, 41°.N±2°.×2°.0E±°, h0km±2km, M2.3/14, MLh2.3/14*

TIR ***22*** *12:28:22.3, 41°.05N×20°.40E, h11km±1km, Ml2.6/6*

ATH ***22*** *12:28:23.8±0.5, 40°.99N×20°.21E, h10km, ML2.5/15, Latitude uncertainty: 3 km; Longitude uncertainty: 2 km*

PDG ***22*** *12:28:24.2±0.6, 41°.02N×20°.06E, h7km±1km, ML2.8/11, Error ellipse: s-maj=1.8km s-min=3.4km az=0.0*

BEO ***22*** *12:28:24.0±0.3, 41°.06N×20°.32E, h0km, ML2.3/6*

ISC 22 12:28:22.7±1.1, 41°.03N±0°.02×20°.31E±0°.02, h5km±10km, n79, σ1§02/117, 2C-6D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.46**	**313**	Pg		**Pg**	**12 28 31.2**	**-0.5**
TIR				Sg		**Sb**	**12 28 39.7**	**-0.8**
TIR				AML		AML	12 28 40.1	
	1.6nm,0.3s							
KBN	**Korca**	**0.54**	**138**	Pg		**Pg**	**12 28 32.1**	**-1.0**
KBN				S		**Sg**	**12 28 40.3**	**+0.1**
KBN	**Korca**	**0.54**	**138**	P		**Pg**	**12 28 32.1**	**-1.0**
KBN				S		**Sg**	**12 28 40.6**	**+0.4**
PHP	**Peshkopia**	**0.66**	**8**	Pg		**Pg**	**12 28 34.6**	**-0.8**
PHP				Sg		**Sg**	**12 28 44.4**	**+0.4**
PHP				AML	AML		12 28 46.9	
	1.9nm,0.2s							
PHP	**Peshkopia**	**0.66**	**8**	P		**Pg**	**12 28 34.4**	**-1.0**
PHP				S		**Sg**	**12 28 45.5**	**+1.5**
NEST	**Nestorio**	**0.83**	**138**	Pg		**Pg**	**12 28 37.5**	**-1.1**
NEST				Sg		**Sg**	**12 28 49.6**	**+0.2**
NEST				AML	AML		12 28 53.2	
	0.7nm,0.4s							
NEST	**Nestorio**	**0.83**	**138**	P		**Pg**	**12 28 37.6**	**-1.1**
NEST				S		**Sg**	**12 28 49.7**	**+0.3**
NEST	**Nestorio**	**0.83**	**138**	P		**Pg**	**12 28 39.1**	**+0.5**
VLO	**Vlora**	**0.84**	**228**	Pg		**Pn**	**12 28 40.7**	**-0.4**
VLO				Sg		**Sn**	**12 28 51.9**	**-1.9**
VLO				AML	AML		12 28 57.0	
	1.6nm,0.3s							
PENT	**Pentalofos**	**1.04**	**143**	P		**Pg**	**12 28 42.2**	**-0.5**
PENT	**Pentalofos**	**1.04**	**143**	P		**Pn**	**12 28 43.5**	**-0.6**
PENT				S		**Sn**	**12 28 59.4**	**+0.3**
SRN	**Sarande**	**1.17**	**192**	Pg		**Pg**	**12 28 45.7**	**+0.5**
SRN				S		**Sn**	**12 29 03.8**	**+1.7**
SRN	**Sarande**	**1.17**	**192**	P		**Pb**	**12 28 44.8**	**-0.7**
SRN				S		**Sn**	**12 29 02.6**	**+0.5**
SDA	**Shkodra**	**1.19**	**329**	Pg		**Pb**	**12 28 45.1**	**-0.6**
SDA				Sg		**Sn**	**12 29 04.0**	**+1.5**
SDA				AML	AML		12 29 07.3	
	0.5nm,0.2s							
ULC	**Ulcinj**	**1.23**	**320**	⇓*i*Pg		**Pn**	**12 28 44.8**	**-1.8**
ULC				*i* Sg		**Sn**	**12 29 03.9**	**+0.3**
KZN	**Kozani**	**1.32**	**123**	P		**Pn**	**12 28 47.1**	**-0.8**
KZN				S		**Sg**	**12 29 05.9**	**+0.7**
KZN	**Kozani**	**1.32**	**123**	P		**Pg**	**12 28 49.2**	**+1.1**
KZN				S		**Sg**	**12 29 07.3**	**+2.1**
KPRO	**Kipourio**	**1.34**	**143**	P		**Pb**	**12 28 47.9**	**-0.4**
KPRO				S		**Sg**	**12 29 07.4**	**+1.7**
KPRO	**Kipourio**	**1.34**	**143**	P		**Pg**	**12 28 48.5**	**+0.1**
KPRO				S		**Sg**	**12 29 06.6**	**+0.8**
KEK	**Kerkira**	**1.37**	**197**	P		**Pn**	**12 28 47.9**	**-0.5**
KEK	**Kerkira**	**1.37**	**197**	P		**Pn**	**12 28 48.0**	**-0.5**
KEK				S		**Sb**	**12 29 06.0**	**-0.7**
JAN	**Janina**	**1.43**	**163**	P		**Pb**	**12 28 49.4**	**-0.5**
JAN				S		**Sg**	**12 29 10.8**	**+2.1**
JAN	**Janina**	**1.43**	**163**	P		**Pb**	**12 28 49.5**	**-0.3**
DRME	**Dracevica, Mon**	**1.43**	**324**	⇓*i*Pg		**Pn**	**12 28 48.7**	**-0.6**
DRME				*i* Sg		**Sg**	**12 29 10.0**	**+1.3**
IGT	**Igoumenitsa**	**1.50**	**179**	P		**Pn**	**12 28 50.1**	**-0.1**
IGT				S		**Sg**	**12 29 12.1**	**+1.3**
IGT	**Igoumenitsa**	**1.50**	**179**	*eP*		**Pb**	**12 28 50.6**	**-0.3**
IGT				*eS*		**Sg**	**12 29 13.7**	**+2.9**
IGT	**Igoumenitsa**	**1.50**	**179**	P		**Pn**	**12 28 49.9**	**-0.3**
PDG	**Podgorica**	**1.61**	**331**	*eP*		**Pn**	**12 28 51.9**	**+0.2**
PDG				*eS*		**Sg**	**12 29 15.3**	**+1.0**
PDG	**Podgorica**	**1.61**	**331**	*eP*		**Pb**	**12 28 52.3**	**-0.5**
PDG				*i* Sg		**Sg**	**12 29 16.0**	**+1.7**
PRMD	**Pramanda**	**1.61**	**158**	S		**Sg**	**12 29 14.9**	**+0.4**
PRMD	**Pramanda**	**1.61**	**158**	P		**Pb**	**12 28 52.1**	**-0.9**
BUM	**Brajici-Budva**	**1.66**	**320**	⇑*i*Pg		**Pn**	**12 28 52.7**	**+0.2**
BUM				*i* Sg		**Sg**	**12 29 16.6**	**+0.7**
TETR	**Tetrakomo, Epi**	**1.84**	**156**	P		**Pn**	**12 28 54.6**	**-0.4**
TETR	**Tetrakomo, Epi**	**1.84**	**156**	P		**Pb**	**12 28 55.8**	**-1.0**
CEME	**Cevo**	**1.84**	**326**	⇓*i*Pn		**Pn**	**12 28 55.6**	**+0.6**
CEME				*i*Sn		**Sb**	**12 29 21.2**	**+1.0**
IVA	**Berane**	**1.87**	**350**	⇓*i*Pn		**Pb**	**12 28 57.3**	**0.0**
IVA				*i*Sn		**Sg**	**12 29 23.2**	**+0.5**
KOME	**Kolasin**	**1.91**	**342**	⇑*i*Pn		**Pb**	**12 28 57.5**	**-0.6**
KOME				*i*Sn		**Sg**	**12 29 24.2**	**0.0**
MESG	**Mesagne**	**1.92**	**258**	P		**Pn**	**12 28 55.1**	**-0.9**
KNT	**Kendrikon**	**1.96**	**85**	P		**Pn**	**12 28 56.0**	**-0.6**
KNT	**Kendrikon**	**1.96**	**85**	P		**Pb**	**12 28 58.8**	**0.0**
THL	**Klokotos Trika**	**1.96**	**138**	P		**Pn**	**12 28 57.0**	**+0.5**
THL				S		**Sb**	**12 29 22.6**	**-0.9**
THL	**Klokotos Trika**	**1.96**	**138**	P		**Pb**	**12 28 57.6**	**-1.2**
HCY	**Herceg Novi**	**1.96**	**317**	*ePn*		**Pn**	**12 28 57.3**	**+0.7**
HCY				*i* Sn		**Sb**	**12 29 23.6**	**-0.1**
TYRN	**Tyrnavos**	**1.97**	**131**	P		**Pn**	**12 28 57.5**	**+0.7**
TYRN				S		**Sn**	**12 29 21.7**	**-0.1**
TYRN	**Tyrnavos**	**1.97**	**131**	P		**Pb**	**12 28 58.3**	**-0.8**
NKME	**Niksic**	**2.01**	**330**	⇓*i*Pn		**Pn**	**12 28 58.3**	**+1.0**
NKME				*eSn*		**Sb**	**12 29 25.6**	**+0.5**
BARS	**Barje**	**2.11**	**32**	*ePn*		**Pb**	**12 29 00.4**	**-1.0**
BARS				*eSn*		**Sb**	**12 29 27.2**	**-0.6**
HORT	**Hortiatis**	**2.16**	**101**	P		**Pn**	**12 29 00.5**	**+1.2**
BOSS	**Bosilegrad**	**2.18**	**47**	*ePn*		**Pb**	**12 29 01.3**	**-1.4**
AMPL	**Ampelaki**	**2.22**	**162**	P		**Pn**	**12 29 00.8**	**+0.7**
AMPL	**Ampelaki**	**2.22**	**162**	P		**Pn**	**12 29 00.9**	**+0.9**
TSLK	**Tsoukalades, L**	**2.22**	**173**	P		**Pn**	**12 29 00.2**	**+0.1**
TREB	**Trebinje**	**2.23**	**320**	*ePn*		**Pn**	**12 29 01.9**	**+1.6**
SJES	**Sjenica**	**2.24**	**354**	*ePn*		**Pn**	**12 29 02.2**	**+1.6**
SJES				*eSn*		**Sb**	**12 29 30.3**	**-1.6**
LKD2	**Lefkada island**	**2.25**	**173**	P		**Pn**	**12 29 00.9**	**+0.3**
LKD2	**Lefkada island**	**2.25**	**173**	P		**Pn**	**12 29 00.7**	**+0.1**
SELS	**Selova**	**2.27**	**15**	*ePn*		**Pb**	**12 29 02.8**	**-1.3**
SELS				*eSn*		**Sb**	**12 29 31.0**	**-1.5**
BRY	**Bratogost**	**2.29**	**325**	*ePn*		**Pn**	**12 29 02.0**	**+0.7**
BRY				*i* Sn		**Sb**	**12 29 32.1**	**-1.2**
SOH	**Sokhos**	**2.31**	**94**	P		**Pb**	**12 29 03.3**	**-

NIUE	**Niue**	**7.92**	**70**	P	**P**	**13 20 28.7**	**-0.2**
NIUE				S	**S**	**13 21 56.9**	**-4.0**
MARNC	**Mare, Loyalty**	**13.18**	**269**	P	P	13 21 20.9	-7.1
MARNC	**Mare, Loyalty**	**13.18**	**269**	P	**P**	**13 21 28.6**	**+0.5**
DZM	**Mont Dzumac**	**14.61**	**267**	P	**P**	**13 21 42.6**	**-1.3**
	4.5nm,0.7s,baz=41,slow=20,SNR=1.8						
OUZ	**Omahuta**	**15.20**	**208**	P	**Pn**	**13 21 52.5**	**-0.3**
WCZ	**Waipu Caves**	**15.52**	**204**	P	**Pn**	**13 21 55.4**	**-1.0**
MXZ	**Matakaoa Point**	**15.90**	**191**	P	**P**	**13 21 58.7**	**+1.1**
WMGZ	**Waiomatatini S**	**16.14**	**191**	P	**Pn**	**13 22 02.2**	**-1.3**
WMGZ				S	S	**13 24 52.0**	**+1.5**
HAZ	**Te Kaha**	**16.19**	**193**	P	**P**	**13 22 00.9**	**+0.3**
HAZ				S	**S**	**13 24 52.9**	**+1.2**
PKGZ	**Pakihiroa**	**16.24**	**192**	P	**P**	**13 22 03.0**	**+1.7**
MKAZ	**Moumakai**	**16.27**	**200**	P	**P**	**13 22 03.0**	**+1.4**
PUZ	**Puketiti**	**16.41**	**191**	P	**Pn**	**13 22 05.0**	**-1.7**
PUZ				S	**S**	**13 24 56.1**	**+0.1**
RUGZ	**Raukumara Rang**	**16.42**	**193**	P	**P**	**13 22 04.4**	**+1.2**
TWGZ	**Tauwhareparae**	**16.56**	**192**	P	**P**	**13 22 05.6**	**+0.9**
TOZ	**Tahuroa Road**	**16.74**	**199**		**P**	**13 22 07.1**	**+0.5**
TOZ	**Tahuroa Road**	**16.74**	**199**	P	**P**	**13 22 08.1**	**+1.5**
MWZ	**Matawai**	**16.80**	**193**	P	**P**	**13 22 07.6**	**+0.3**
MWZ				S	**S**	**13 25 05.2**	**+1.5**
URZ	**Urewera**	**16.82**	**194**	P	**P**	**13 22 05.4**	**-2.0**
	11nm,0.4s,baz=23,slow=7.7,SNR=16						
URZ				S	**S**	**13 25 06.8**	**+2.9**
	21nm,0.6s,baz=350,slow=18,SNR=13						
URZ	**Urewera**	**16.82**	**194**	P	**P**	**13 22 05.8**	**-1.6**
MUGZ	**Murupara**	**17.11**	**195**	P	**P**	**13 22 10.9**	**+0.4**
TLZ	**Tolley Road**	**17.29**	**198**	P	**P**	**13 22 13.2**	**+0.7**
TMVZ	**Te Maari**	**17.98**	**197**	P	**P**	**13 22 22.0**	**+2.1**
ETVZ	**East Tongariro**	**18.00**	**197**	P	**P**	**13 22 22.1**	**+2.0**
TWVZ	**Taurewa**	**18.01**	**197**	P	**P**	**13 22 22.8**	**+2.6**
WTVZ	**West Tongariro**	**18.01**	**197**	P	**P**	**13 22 23.0**	**+2.7**
MCHZ	**McNeill Hill**	**18.05**	**194**	P	**P**	**13 22 22.8**	**+2.3**
NGZ	**Ngauruhoe**	**18.06**	**197**	P	**P**	**13 22 23.5**	**+2.7**
MOVZ	**Moawhango**	**18.24**	**196**	P	**P**	**13 22 24.0**	**+1.4**
VRZ	**Vera Road**	**18.25**	**199**	P	**P**	**13 22 25.7**	**+3.0**
KRHZ	**Kereru**	**18.31**	**194**	P	**P**	**13 22 24.4**	**+1.0**
KAHZ	**Kahuranaki**	**18.34**	**193**	P	**P**	**13 22 24.6**	**+0.9**
PXZ	**Pawanui**	**18.57**	**193**	P	**P**	**13 22 26.4**	**+0.3**
PNHZ	**Pukenui**	**18.61**	**195**	P	**P**	**13 22 26.6**	**+0.1**
LREZ	**Lake Rotokare**	**18.67**	**199**	P	**P**	**13 22 31.9**	**+4.8**
PRHZ	**Porangahau**	**18.85**	**193**	P	**P**	**13 22 30.3**	**+1.3**
BFZ	**Birch Farm**	**19.33**	**194**	P	**P**	**13 22 33.4**	**-0.6**
MRZ	**Mangatainoka R**	**19.47**	**195**	P	**P**	**13 22 34.6**	**-0.8**
HOWZ	**Holdsworth Sta**	**19.70**	**195**	P	**P**	**13 22 36.5**	**-1.3**
OGWZ	**Otaki Gorge**	**19.71**	**196**	P	**P**	**13 22 35.9**	**-1.9**
TMWZ	**Te Maipa**	**19.82**	**194**	P	**P**	**13 22 38.0**	**-0.8**
TRWZ	**Traveller**	**20.14**	**194**	P	**P**	**13 22 41.7**	**-0.1**
MSWZ	**Moikau Station**	**20.26**	**195**	P	**P**	**13 22 42.0**	**-1.0**
TCW	**Tory Channel**	**20.32**	**197**	P	**P**	**13 22 42.2**	**-1.3**
BHW	**Baring Head**	**20.35**	**196**	P	**P**	**13 22 38.9**	**-4.8**
PLWZ	**Palliser**	**20.40**	**195**	P	**P**	**13 22 44.1**	**-0.2**
QRZ	**Quartz Range**	**20.51**	**201**	P	**P**	**13 22 45.9**	**+0.6**
TKNZ	**Takaka Hill**	**20.55**	**200**	P	**P**	**13 22 45.2**	**-0.4**
TKNZ	**Takaka Hill**	**20.55**	**200**	P	**P**	**13 22 46.5**	**+0.8**
NNZ	**Nelson**	**20.59**	**199**	P	**P**	**13 22 46.1**	**+0.2**
TUWZ	**Tuamarina**	**20.62**	**198**	P	**P**	**13 22 46.0**	**-0.2**
MRNZ	**Matariki Terra**	**20.95**	**200**	P	**P**	**13 22 49.9**	**+0.7**
LTZ	**Lake Taylor**	**22.36**	**199**		**P**	**13 23 00.9**	**-1.1**
LTZ	**Lake Taylor**	**22.36**	**199**	P	**P**	**13 23 01.0**	**-1.0**
INZ	**Inchbonnie**	**22.57**	**201**		**P**	**13 23 03.2**	**-0.6**
WKZ	**Wanaka**	**25.25**	**202**	P	**P**	**13 23 27.9**	**-0.2**
WKZ				IAmb	IAmb	13 23 57.3	
	comp=Z,22nm,1.2s						
EIDS	**Eidsvold**	**28.67**	**257**	P	**P**	**13 23 58.1**	**-0.4**
CTA	**Charters Tower**	**33.56**	**266**	P	**P**	**13 24 40.8**	**-0.3**
	comp=Z,3.7nm,0.6s,baz=68,slow=13,SNR=4.0						
	comp=Z,3.7nm,0.6s						
CTAO	**Charters Tower**	**33.56**	**266**	P	**P**	**13 24 40.7**	**-0.3**
CTAO				IAmb	IAmb	13 25 15.0	
	comp=Z,20nm,1.3s						
RABL	**Rabaul**	**34.05**	**297**	P	**P**	**13 24 44.7**	**-0.6**
RABL				IAmb	IAmb	13 25 03.7	
	comp=Z,15nm,0.8s						
TOO	**Toolangi**	**35.20**	**235**	P	**P**	**13 24 54.9**	**0.0**
TAU	**Tasmania Unive**	**35.73**	**226**	P	**P**	**13 24 59.7**	**+0.6**
INKA	**Innaminka**	**37.92**	**253**	P	**P**	**13 25 18.7**	**+1.1**
TAOE	**Nuku Hiva Isla**	**38.45**	**76**	P	**P**	**13 25 23.9**	**+1.7**
BBOO	**Buckleboo**	**42.08**	**245**	P	**P**	**13 25 51.0**	**-0.4**
BBOO				IAmb	IAmb	13 26 00.8	
	comp=Z,26nm,1.4s						
AS31	**Alice Springs**	**44.38**	**258**		**P**	**13 26 09.5**	**-0.2**
ASAR	**Alice Springs**	**44.38**	**258**	P	**P**	**13 26 09.7**	**-0.1**
	comp=Z,7.3nm,0.8s,baz=97,slow=8.2,SNR=72						
	comp=Z,7.3nm,0.8s						
ASAR	**Alice Springs**	**44.38**	**258**	P	**P**	**13 26 09.2**	**-0.5**
WR8	**Warramunga Arr**	**44.45**	**263**	P	**P**	**13 26 09.8**	**-0.4**
WB0	**Warramunga Arr**	**44.59**	**264**	P	**P**	**13 26 10.9**	**-0.4**
WRA	**Warramunga Arr**	**44.60**	**263**	P	**P**	**13 26 10.6**	**-0.8**
	comp=Z,2.1nm,0.8s,baz=90,slow=6.0,SNR=35						
	comp=Z,2.1nm,0.8s						
FORT	**Forrest**	**48.90**	**248**	P	**P**	**13 26 43.6**	**-0.6**
FORT				IAmb	IAmb	13 27 13.3	
	comp=Z,12nm,1.0s						
KNRA	**Kununurra**	**50.76**	**267**	P	**P**	**13 26 58.0**	**-0.2**
KNRA				IAmb	IAmb	13 27 01.3	
	comp=Z,14nm,1.4s						
VNDA	**Vanda**	**56.48**	**185**	P	**P**	**13 27 41.1**	**+2.8**
	comp=Z,0.6nm,0.7s,baz=353,slow=13,SNR=3.2						
	comp=Z,0.6nm,0.7s						
VNDA	**Vanda**	**56.48**	**185**	P	**P**	**13 27 39.9**	**+1.6**
MBWA	**Marble Bar**	**57.73**	**258**	P	**P**	**13 27 47.3**	**-0.6**
MBWA				IAmb	IAmb	13 28 13.9	
	comp=Z,11nm,1.2s						
GIRL	**Giralia**	**62.35**	**255**	P	**P**	**13 28 18.0**	**-0.9**
QSPA	**South Pole Qui**	**68.11**	**180**	P	**P**	**13 28 57.4**	**+2.5**
	comp=Z,3.0nm,0.9s,baz=106,slow=2.1,SNR=7.1						
	comp=Z,3.0nm,0.9s						
QSPA	**South Pole Qui**	**68.11**	**180**	P	**P**	**13 28 56.3**	**+1.4**
MJAR	**Matsushiro Arr**	**71.50**	**324**	P	**P**	**13 29 15.5**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=155,slow=5.8,SNR=5.2						
	comp=Z,0.9nm,0.6s						
MJAR	**Matsushiro Arr**	**71.50**	**324**	P	**P**	**13 29 14.9**	**-0.6**
PKD	**Bear Valley Ra**	**79.04**	**44**	P	**P**	**13 30 00.2**	**+2.0**
PKD				IAmb	IAmb	13 30 00.6	
	comp=Z,11nm,1.2s						
HOPS	**Hopland Field**	**79.36**	**40**	P	**P**	**13 30 02.0**	**+2.2**
M02C	**Callahan**	**81.01**	**39**	P	**P**	**13 30 10.6**	**+2.0**
M02C				IAmb	IAmb	13 30 27.2	
	comp=Z,12nm,1.4s						
YBH	**Yreka Blue Hor**	**81.31**	**38**	P	**P**	**13 30 11.8**	**+1.6**
YBH				IAmb	IAmb	13 30 13.5	
	comp=Z,4.5nm,0.7s						
PNTR	**Pine Nut**	**81.54**	**42**	P	**P**	**13 30 13.4**	**+1.9**
PNTR				IAmb	IAmb	13 30 14.5	
	comp=Z,7.1nm,0.8s						
L04D	**Klamath Falls**	**81.86**	**38**	P	**P**	**13 30 14.8**	**+1.8**
NVAR	**Mina Array Bea**	**81.96**	**43**	P	**P**	**13 30 15.8**	**+2.1**
	comp=Z,2.3nm,0.9s,baz=224,slow=9.4,SNR=13						
	comp=Z,2.3nm,0.9s						
NVAR	**Mina Array Bea**	**81.96**	**43**	P	**P**	**13 30 14.9**	**+1.2**
PAHR	**Pah Rah Range**	**82.04**	**42**	P	**P**	**13 30 15.3**	**+1.3**
H04A	**Detroit Lake**	**83.49**	**36**	P	**P**	**13 30 22.6**	**+1.5**
H04A				IAmb	IAmb	13 30 23.4	
	comp=Z,7.4nm,0.9s						
PINE	**Pine Mountain**	**83.62**	**38**	IAmb	IAmb	13 30 25.3	
	comp=Z,8.0nm,0.9s						
TUC	**Tucson**	**83.73**	**52**		**P**	**13 30 24.3**	**+1.5**
TUC				IAmb	IAmb	13 30 26.5	
	comp=Z,3.9nm,0.9s						
L14K	**Kuka Creek**	**83.90**	**7**	P	**P**	**13 30 23.7**	**+1.0**
L14K				IAmb	IAmb	13 30 26.0	
	comp=Z,3.1nm,0.8s						
WVOR	**Wild Horse Val**	**84.13**	**40**	P	**P**	**13 30 25.9**	**+1.4**
WVOR				IAmb	IAmb	13 30 27.2	
	comp=Z,6.2nm,1.2s						
319A	**Douglas**	**84.37**	**53**	IAmb	IAmb	13 30 29.8	
	comp=Z,6.8nm,0.9s						
U15A	**North Rim**	**84.81**	**47**	P	**P**	**13 30 29.1**	**+0.9**
U15A				IAmb	IAmb	13 30 31.9	
	comp=Z,3.3nm,0.8s						
G08A	**Pilot Rock**	**85.66**	**37**		**P**	**13 30 33.5**	**+1.5**
G08A				IAmb	IAmb	13 30 34.6	
	comp=Z,2.8nm,0.9s						
MTPU	**Mount Pierson**	**85.73**	**46**	P	**P**	**13 30 34.1**	**+1.3**
F10A	**Beach Ranch, E**	**87.05**	**37**	P	**P**	**13 30 40.0**	**+1.4**
PLID	**Pearl Lake**	**87.23**	**39**	P	**P**	**13 30 41.0**	**+1.3**
VHRN	**Van Horn**	**87.33**	**55**	IAmb	IAmb	13 30 43.2	
	comp=Z,2.4nm,0.6s						
SRU	**San Rafael Swe**	**87.40**	**46**	IAmb	IAmb	13 30 43.0	
	comp=Z,2.8nm,0.8s						
MNTX	**Cornudas Mount**	**87.45**	**54**	IAmb	IAmb	13 30 44.0	
	comp=Z,2.4nm,0.8s						
TXAR	**Lajitas Array**	**87.69**	**57**	P	**P**	**13 30 44.2**	**+2.2**
	comp=Z,0.9nm,0.7s,baz=219,slow=6.5,SNR=14						
	comp=Z,0.9nm,0.7s						
TXAR	**Lajitas Array**	**87.69**	**57**	P	**P**	**13 30 43.5**	**+1.5**
LOGN	**Logan Glacier**	**87.70**	**17**	P	**P**	**13 30 42.4**	**+1.0**
RND	**Reindeer**	**88.08**	**13**	IAmb	IAmb	13 30 46.0	
	comp=Z,6.6nm,0.6s						
TPB01	**Permian Basin**	**88.32**	**56**	IAmb	IAmb	13 30 47.9	
	comp=Z,2.6nm,0.8s						
M27K	**Edge Creek, AK**	**88.76**	**16**	P	**P**	**13 30 47.5**	**+1.3**
M27K				IAmb	IAmb	13 31 00.1	
	comp=Z,8.0nm,1.2s						
O30N	**Mendenhall**	**89.08**	**19**	P	**P**	**13 30 49.1**	**+1.4**
G19K	**Purcell Mounta**	**89.23**	**8**	P	**P**	**13 30 48.7**	**+0.5**
BCAR	**Beaver Creek A**	**89.38**	**16**	P	**P**	**13 30 49.8**	**+0.7**
IL31		**89.69**	**13**	IAmb	IAmb	13 31 24.7	
	comp=Z,7.8nm,1.5s						
ILAR	**Eielson Array**	**89.69**	**13**	P	**P**	**13 30 50.1**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=218,slow=5.2,SNR=19						
	comp=Z,1.2nm,0.5s						
ILAR	**Eielson Array**	**89.69**	**13**	P	**P**	**13 30 50.6**	**+0.2**
H22K	**Ishtalitna Cre**	**89.86**	**11**	IAmb	IAmb	13 30 53.9	
	comp=Z,2.8nm,0.6s						
PDAR	**Pinedale Array**	**89.90**	**43**	P	**P**	**13 30 53.2**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=212,slow=3.3,SNR=10						
	comp=Z,0.9nm,0.7s						
PDAR	**Pinedale Array**	**89.90**	**43**	P	**P**	**13 30 53.1**	**+0.9**
YHL	**Hebgen Lake**	**89.96**	**41**	IAmb	IAmb	13 30 57.3	
	comp=Z,6.0nm,1.2s						
BOZ	**Bozeman (W)**	**90.09**	**40**	IAmb	IAmb	13 30 55.7	
	comp=Z,2.1nm,0.7s						
DRIO	**Del Rio**	**90.12**	**58**	IAmb	IAmb	13 30 55.8	
	comp=Z,3.9nm,1.0s						
E19K	**Redstone River**	**90.46**	**8**	IAmb	IAmb	13 30 57.6	
	comp=Z,3.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**90.78**	**289**	P	**P**	**13 30 55.7**	**-0.8**
	comp=Z,1.2nm,0.3s,baz=49,slow=3.6,SNR=5.0						
	comp=Z,1.2nm,0.3s						
COLD	**Coldfoot**	**91.28**	**10**	IAmb	IAmb	13 31 01.5	
	comp=Z,2.6nm,0.9s						
YKA	**Yellowknife Ar**	**97.76**	**25**	P	Pdif	13 31 28.0	+0.7
	comp=Z,0.4nm,1.1s,baz=225,slow=6.1,SNR=2.5						
	comp=Z,0.4nm,1.1s						
BVAR	**Borovoye Array**	**120.31**	**319**	PKP	**PKPdf**	**13 36 40.8**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=130,slow=2.1,SNR=2.6						
SPITS	**Spitsbergen Ar**	**123.33**	**357**	PKP	**PKPdf**	**13 36 46.3**	**-0.3**
	comp=Z,13nm,1.0s,baz=338,slow=11,SNR=4.1						
ARCES	**ARCESS Array B**	**130.39**	**349**	PKP	**PKPdf**	**13 37 00.1**	**-0.2**
	comp=Z,3.2nm,0.8s,baz=316,slow=3.3,SNR=6.2						
FINES	**FINESS Array B**	**137.22**	**343**	PKhKP	PKPpre	13 37 03.9	
	comp=Z,0.8nm,0.8s,baz=1.8,slow=5.5,SNR=0.9						
FINES				PKP	**PKPdf**	**13 37 13.2**	**0.0**
	comp=Z,1.2nm,0.9s,baz=343,slow=2.0,SNR=4.5						
HFS	**Hagfors**	**141.01**	**351**	PKhKP	PKPpre	13 37 13.2	
	comp=Z,2.3nm,0.8s,baz=70,slow=4.9,SNR=10						
AKASG	**Malin Array Be**	**144.38**	**330**	PKP	PKPbc	13 37 25.0	-0.8
	comp=Z,1.3nm,0.4s,baz=43,slow=4.2,SNR=14						
EKA	**Eskdalemuir Ar**	**146.44**	**6**	PKPbc	**PKPbc**	**13 37 31.7**	**-0.1**
	comp=Z,2.1nm,0.7s,baz=344,slow=2.1,SNR=5.7						
BRTR	**Keskin Array B**	**147.94**	**311**	PKPbc	**PKPbc**	**13 37 35.4**	**-1.2**
	comp=Z,0.4nm,0.4s,baz=77,slow=3.4,SNR=2.8						
MMAI	**Mount Meron Ar**	**148.68**	**298**	PKPbc	**PKPbc**	**13 37 39.0**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=98,slow=7.4,SNR=1.4						
GERES	**GERESS Array B**	**151.65**	**344**	PKPbc	**PKPbc**	**13 37 44.2**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=55,slow=5.2,SNR=3.5						

*BER **22** 13:26:17.9±1.1, 78°.30N×3°.38E, h12km±9km, Mw2.6, Confirmed Earthquake*
ISC 22 13:26:16.4±1.2, 78°.42N±0°.10×3°.21E±0°.04, h10km, n6, σ2s 48/11, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**1.80**	**69**	*e*P	**Pn**	**13 26 46.4**	**-1.0**
KBS				*e*S	**Sn**	**13 27 08.7**	**-1.5**
KBS				IAML		13 27 16.9	
	comp=Z,3.6nm,0.8s						
SPA0	**Spitsbergen Ar**	**2.69**	**89**	*e*Pg	**Pn**	**13 27 03.1**	**+3.4**
SPA0				IAML		13 27 36.4	
	comp=Z,2.2nm,0.8s						
SPA0				*e*Sg	**Sb**	**13 27 37.5**	**-0.1**
NOR	**Nord**	**4.68**	**322**	*e*P	**Pn**	**13 27 27.6**	**+0.7**
NOR				*e*S	**Sn**	**13 28 19.8**	**-1.4**
DAG	**Danmarks Havn**	**4.97**	**262**	*e*P	**Pn**	**13 27 29.9**	**-1.1**
DAG				*e*S	**Sn**	**13 28 24.9**	**-3.5**
DAG	**Danmarks Havn**	**4.97**	**262**	*i* P	**Pn**	**13 27 30.6**	**-0.4**
DAG				*i* S	Sn	13 28 21.0	-7.4
DBG	**Daneborg**	**6.85**	**245**	*i* P	**Pn**	**13 28 00.8**	**+4.1**
DBG				*i* S	**Sn**	**13 29 15.9**	**+1.4**

*MAN **22** 13:31:48.0, 5°.10N×125°.35E, h27km, MS4.3*
*DJA **22** 13:31:50.8±0.4, 5°.1N±4°×12°.5E±°, h10km, M4.5/16, mb4.5/14, mB5.1/5, MLv4.5/16, Mw(mB)4.5/5*
*NEIC **22** 13:31:52.5±2.6, 5°.13N±0°.06×125°.20E±0°.07, h47km±7km, mb4.5/26, Error ellipse: s-maj=10.9km s-min=8.4km az=75.0*
*IDC **22** 13:31:55.5±1.3, 5°.21N×125°.51E, h91km±11km, mb3.5/10, mbtmp3.9/12, MS3.0/2, Error ellipse: s-maj=22.5km s-min=9.3km az=75.0*
ISC 22 13:31:51.4±0.4, 5°.13N±0°.04×125°.37E±0°.06, h35km, n89, σ2s 10/86, mb4.5/31, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.03**	**19**	*i* P	**Pn**	**13 32 06.5**	**-2.9**
DDMP				*i* S	**Sn**	**13 32 20.3**	**-2.3**
SGSI	**Sangihe**	**1.44**	**174**	P	**Pn**	**13 32 15.0**	**0.0**
KCP	**Kidapawan**	**1.89**	**352**	*e*P	**Pn**	**13 32 21.1**	**-0.2**
KCP				*i* S	**Sn**	**13 32 46.2**	**+2.2**
DAV	**Davao City (W)**	**1.94**	**6**	P	**Pn**	**13 32 25.5**	**+3.5**
	230nm,0.5s,baz=262,slow=14,SNR=6.4						
DAV				S	**Sn**	**13 32 49.6**	**+4.5**
	291nm,0.4s,baz=152,slow=17,SNR=6.1						
DAV	**Davao City (W)**	**1.94**	**6**		**Pn**	**13 32 23.2**	**+1.2**
DAV	**Davao City (W)**	**1.94**	**6**	P	**Pn**	**13 32 24.7**	**+2.7**
DMPH	**Davao City--Mi**	**1.95**	**4**	*e*P	**Pn**	**13 32 23.1**	**+1.1**
DMPH				*i* S	Sn	13 32 54.1	+8.8
BIPH	**Bislig**	**3.19**	**18**	*e*P	**Pn**	**13 32 42.3**	**+3.1**
BIPH				*e*S	**Sn**	**13 33 17.4**	**+1.4**
CGP	**Cagayan de Oro**	**3.38**	**349**	*e*P	**Pn**	**13 32 45.7**	**+4.0**
CGP				*e*S	Sn	13 33 45.6	+25
MNI	**Manado**	**3.69**	**188**	P	**Pn**	**13 32 47.1**	**+1.0**
SCPH	**Surigao**	**4.63**	**1**	*e*P	**Pn**	**13 33 01.7**	**+2.8**
TNTI	**Ternate**	**4.76**	**155**	Pn	**Pn**	**13 33 02.0**	**+1.3**
GTOI	**Gorontalo**	**5.04**	**208**	P	**Pn**	**13 33 04.6**	**0.0**
MRSI	**Marisa**	**5.75**	**217**	P	**Pn**	**13 33 14.5**	**+0.2**
	0.2nm30nm,0.5s						
TOLI2	**Tolitoli**	**6.07**	**229**		**Pn**	**13 33 16.6**	**-2.1**
LUWI	**Luwuk**	**6.65**	**203**	P	Pn	13 33 40.7	+14
MYLDM	**Lahad Datu**	**6.84**	**271**	Pn	**Pn**	**13 33 27.4**	**-1.9**
MYLDM	**Lahad Datu**	**6.84**	**271**	P	**Pn**	**13 33 30.2**	**+0.9**
APSI	**Ampana**	**7.05**	**212**	P	**Pn**	**13 33 34.3**	**+2.1**
	0.2nm44nm,0.7s						
SANI	**Sanana**	**7.15**	**175**	P	**Pn**	**13 33 33.1**	**-0.5**
	0.1nm18nm,0.6s						
MPSI	**Mapaga**	**7.24**	**229**	P	**Pn**	**13 33 34.2**	**-0.6**
SIJI	**Sorong**	**8.38**	**135**	P	**Pn**	**13 33 51.8**	**+1.4**
	4.0nm,0.3s,baz=337,slow=20,SNR=6.2						
SIJI				S	**Sn**	**13 35 27.1**	**+3.3**
	2.7nm,0.5s,baz=219,slow=22,SNR=1.8						
SIJI	**Sorong**	**8.38**	**135**	P	**Pn**	**13 33 52.6**	**+2.2**
	9.1nm,0.5s						
NLAI	**Namlea**	**8.49**	**168**	P	**Pn**	**13 33 52.4**	**+0.5**
	888nm41nm,0.5s						
KRAI	**Karang Ratu**	**8.91**	**160**	P	**Pn**	**13 34 00.7**	**+2.9**
	1µm13nm,0.7s						
FAKI	**Fak Fak**	**10.54**	**139**	Pn	**Pn**	**13 34 22.9**	**+2.8**
KAPI	**Kappang**	**11.53**	**209**	P	Pn	13 34 39.2	+5.6
	8.4nm,1.0s,baz=32,slow=9.7,SNR=5.5						
KAPI				LR	LR	13 39 25.0	
	comp=Z,37nm,19.7s,baz=65,slow=38						
SBUM	**Sibu**	**13.39**	**259**	P	**P**	**13 35 12.3**	**+4.3**
BATI	**Baumata**	**15.32**	**186**	P	**P**	**13 35 28.8**	**-0.9**
	49nm,0.8s,baz=76,slow=4.2,SNR=7.1						
BATI	**Baumata**	**15.32**	**186**	P	**P**	**13 35 32.9**	**+3.3**
JAY	**Jayapura**	**17.10**	**116**	LR	LR	13 42 31.1	
	comp=Z,95nm,19.3s,baz=268,slow=37						
MTN	**Manton Dam**	**18.75**	**162**	P	**P**	**13 36 05.3**	**-2.1**
TPI	**Tanjungpandan**	**19.35**	**247**	P	Pn	13 36 24.0	+8.6
KNRA	**Kununurra**	**20.94**	**171**		**P**	**13 36 31.1**	**-0.2**
KNRA				IAmb	IAmb	13 36 40.7	
	comp=Z,11nm,0.7s						
MDSI	**Maura Dua**	**23.22**	**246**	P	**P**	**13 36 57.5**	**+1.9**
	comp=Z,16nm,1.3s						
PDSI	**Padang**	**25.59**	**257**	P	**P**	**13 37 21.3**	**+3.7**
	comp=Z,37nm,0.9s						
COEN	**Coen**	**25.92**	**137**	P	**P**	**13 37 20.9**	**+0.4**
COEN				IAmb	IAmb	13 37 24.4	
	comp=Z,30nm,1.5s						
WB0	**Warramunga Arr**	**26.28**	**161**		**P**	**13 37 22.3**	**-1.4**
WB0				IAmb	IAmb	13 37 33.2	
	comp=Z,15nm,1.1s						
WRAB	**Tennant Creek**	**26.42**	**161**	P	**P**	**13 37 23.2**	**-1.8**
WRAB				IAmb	IAmb	13 37 35.3	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	**26.43**	**161**	P	**P**	**13 37 24.2**	**-0.8**
	comp=Z,2.6nm,0.5s,baz=342,slow=10.0,SNR=39						
WRA				PcP	**PcP**	**13 40 46.6**	**-3.5**
	comp=Z,0.1nm,0.4s,baz=284,slow=3.4,SNR=0.8						
WRA				S	**S**	**13 41 53.8**	**-2.8**
	comp=Z,0.4nm,0.9s,baz=327,slow=10.0,SNR=1.9						
	comp=Z,2.6nm,0.5s						
WRA	**Warramunga Arr**	**26.43**	**161**	P	**P**	**13 37 23.5**	**-1.6**
WR8	**Warramunga Arr**	**26.49**	**160**	P	**P**	**13 37 24.1**	**-1.5**
MBWA	**Marble Bar**	**26.70**	**192**	P	**P**	**13 37 26.9**	**-0.6**
MBWA				IAmb	IAmb	13 37 29.6	
	comp=Z,11nm,0.8s						
PSA00	**Pilbara Seismi**	**27.08**	**191**		**P**	**13 37 30.3**	**-0.7**
PSA00				IAmb	IAmb	13 37 31.3	
	comp=Z,17nm,0.7s						
NJ2	**Nanjing**	**27.47**	**348**	*e*P	**P**	**13 37 35.8**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,23nm,0.8s						
KCSI	**Kotacane, Aceh**	**27.57**	**268**	P	**P**	**13 37 38.8**	**+3.4**
GYA	**Guiyang**	**27.74**	**322**	P	**P**	**13 37 37.5**	**+0.5**
GYA				pmax	pmax		
	comp=Z,22nm,0.5s						
CMAR	**Chiang Mai Arr**	**29.00**	**299**	P	**P**	**13 37 47.9**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=126,slow=6.3,SNR=4.2						
	comp=Z,0.4nm,0.3s						
AS31	**Alice Springs**	**29.80**	**164**		**P**	**13 37 54.1**	**-1.1**
ASAR	**Alice Springs**	**29.80**	**164**	P	**P**	**13 37 54.9**	**-0.4**
	comp=Z,1.3nm,0.5s,baz=337,slow=7.0,SNR=56						
ASAR				PcP	**PcP**	**13 40 57.0**	**-1.4**
	comp=Z,0.3nm,0.4s,baz=340,slow=2.7,SNR=4.2						
	comp=Z,1.3nm,0.5s						
ASAR	**Alice Springs**	**29.80**	**164**	P	**P**	**13 37 54.5**	**-0.7**
PZH	**PanZhiHua**	**31.00**	**316**	P	**P**	**13 38 05.9**	**-0.1**
INU	**Inuyama**	**31.94**	**18**	P	**P**	**13 38 15.2**	**+1.3**
INU				IAmb	IAmb	13 38 16.3	
	comp=Z,20nm,1.3s						
KSRS	**Korea Array**	**32.26**	**4**	P	**P**	**13 38 14.0**	**-2.7**
	comp=Z,0.7nm,0.8s,baz=158,slow=10,SNR=2.2						
	comp=Z,0.7nm,0.8s						

PB09				Sg	Sn	13 47 42.7	+0.9	
MOCB	**Mochara**	**1.91**	**59**	P	Pn	13 47 17.7	+0.6	
MOCB				S	Sn	13 47 44.8	-0.2	
MOCB				IAML		13 47 46.0		
	104nm,0.3s							
PB06	**IPOC Station P**	**2.06**	**257**	P	Pn	13 47 19.1	+0.7	
PB01	**IPOC Station P**	**2.28**	**301**	P	Pn	13 47 21.4	+0.6	
PB01				S	Sn	13 47 51.9	+0.1	
PB01				IAML		13 47 52.8		
	149nm,0.2s							
PB02	**IPOC Station P**	**2.50**	**291**	P	Pn	13 47 23.4	+0.1	
PB02				S	Sn	13 47 55.6	-0.7	
PB02				IAML		13 47 57.0		
	91nm,0.2s							
AOVT	**TarijaAcel**	**2.60**	**75**	P	Pn	13 47 24.7	+0.1	
PB08	**IPOC Station P**	**2.66**	**322**	P	Pn	13 47 26.9	+1.4	
GO01	**Chusmiza**	**3.07**	**326**	P	Pn	13 47 31.2	+0.7	
PB11	**IPOC Station P**	**3.25**	**319**	P	Pn	13 47 32.5	0.0	
PB11				S	Sn	13 48 11.5	-1.3	
PB11				IAML		13 48 14.4		
	82nm,0.3s							
PB14	**IPOC Station P**	**3.64**	**229**	P	Pn	13 47 37.4	-0.1	
SOEO	**Opoqueri**	**3.69**	**353**	P	Pn	13 47 39.7	+1.3	
PB16	**IPOC Station P**	**4.37**	**333**	P	Pn	13 47 47.7	+0.6	
SOET	**ToroToro**	**4.37**	**20**	P	Pn	13 47 46.8	-0.1	
AOEA	**Aiquile**	**4.53**	**27**	P	Pn	13 47 48.6	-0.3	
BBOE	**La Paz, Chanca**	**5.43**	**354**	P	Pn	13 48 01.7	+0.8	
BBOD	**La Paz, Gloria**	**5.69**	**348**	P	Pn	13 48 04.8	+0.5	
LPAZ	**La Paz**	**5.97**	**353**	P	Pn	13 48 08.0	0.0	

*DJA **22** 13:48:04.4±0.5, 10°S×6°×11°E, h10km, M4.0/16, mB4.6/1, mb4.2/5, MLv3.8/16, Mw(mB)3.8/1, MwMwp4.4/1, Mwp4.8/1*
*IDC **22** 13:48:08.4±3.8, 10°34S×119°16E, h56km±39km, mb3.4/1, mbtmp3.5/6, ML3.3/5, Error ellipse: s-maj=34.4km s-min=14.8km az=60.0*
ISC 22 13:48:05.7±1.0, 10°52S±0°07×119°02E±0°05, h41km, n19, σ1§71/23, Sumba region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.94**	**23**	P		**Pn**		**13 48 21.1**	**-1.5**
WSI	**Waingapu**	**1.51**	**56**	P		**Pn**		**13 48 31.2**	**+0.8**
WSI				S		**Sn**		**13 48 50.5**	**+1.6**
BASI	**Baing, Sumba**	**1.56**	**79**	P		**Pn**		**13 48 31.5**	**+0.5**
PLAI	**Plampang**	**2.08**	**324**	P		**Pn**		**13 48 38.8**	**+0.7**
DBNI	**Kabupaten Domp**	**2.12**	**341**	P		**Pn**		**13 48 39.6**	**+0.9**
LBFI	**Labuhan Bajo,**	**2.20**	**23**	P		**Pn**		**13 48 39.9**	**+0.1**
EDFI	**Ende, Flores**	**3.16**	**57**	P		**Pn**		**13 48 53.1**	**-0.1**
MMRI	**Maumere**	**3.68**	**60**	P		**Pn**		**13 49 00.9**	**+0.7**
KHKI	**Kahang-Kahang**	**3.99**	**302**	P		**Pn**		**13 49 06.2**	**+1.8**
IGBI	**Denpasar**	**4.18**	**294**	P		**Pn**		**13 49 06.4**	**-0.6**
BATI	**Baumata**	**4.58**	**87**	P		**Pn**		**13 49 14.3**	**+1.8**
	4.1nm,0.3s,baz=260,slow=8.2,SNR=4.1								
BATI				S		**Sn**		**13 50 04.0**	**-0.6**
	24nm,0.3s,baz=267,slow=19,SNR=6.5 11nm,0.3s								
BATI	**Baumata**	**4.58**	**87**	P		**Pn**		**13 49 13.6**	**+1.1**
BSSI	**Bau Bau, Buton**	**4.58**	**19**	P		**Pn**		**13 49 12.9**	**+0.3**
MKS	**Makassar**	**5.28**	**5**	P		**Pn**		**13 49 22.7**	**+0.5**
	0.2nm43nm,0.8s								
KAPI	**Kappang**	**5.51**	**8**	P		**Pn**		**13 49 27.0**	**+1.6**
	2.2nm,0.3s,baz=142,slow=12,SNR=1.7								
KAPI				S		**Sn**		**13 50 25.4**	**-2.1**
	16nm,0.4s,baz=196,slow=19,SNR=7.4 10nm,0.3s								
FITZ	**Fitzroy Crossi**	**9.89**	**140**	P		**Pn**		**13 50 27.8**	**+2.3**
	0.2nm,0.3s,baz=327,slow=12,SNR=7.0								
FITZ				S		**Sn**		**13 52 10.2**	**-5.1**
	2.1nm,0.6s,baz=249,slow=12,SNR=7.6 1.7nm,0.7s								
WRA	**Warramunga Arr**	**17.49**	**124**	P		**Pn**		**13 52 06.7**	**+0.1**
	0.1nm,0.3s,baz=298,slow=14,SNR=2.5 0.4nm,1.0s								
ASAR	**Alice Springs**	**19.30**	**135**	P		**Pn**		**13 52 30.5**	**+1.8**
	0.1nm,0.3s,baz=310,slow=11,SNR=4.8 0.3nm,0.7s								
SONM	**Songino Array**	**59.17**	**350**	P		**P**		**13 58 02.3**	**-0.2**
	0.4nm,0.5s,baz=175,slow=8.1,SNR=2.9 0.4nm,0.5s								

*IDC **22** 13:50:15.7±3.1, 11°30S×114°76E, h0km, mb3.7/8, mbtmp3.7/9, ML3.4/1, Error ellipse: s-maj=169.4km s-min=18.6km az=46.0*
ISC 22 13:50:20.9±2.9, 11°3S±0°7×114°9E±0°7, h35km, n9, σ1§16/10, mb3.7/7, South of Bali

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.37**	**124**	Pn		**Pn**		**13 53 15.0**	**+0.3**
	0.2nm,0.3s,baz=229,slow=19,SNR=1.9								
FITZ				Sn		Sn		13 55 18.8	-13
	0.2nm,0.3s,baz=228,slow=13,SNR=1.9 1.1nm,0.4s								
WRA	**Warramunga Arr**	**20.56**	**117**	P		**P**		**13 54 58.0**	**+1.1**
	2.1nm,0.9s,baz=287,slow=9.3,SNR=15								
WRA				S		S		13 58 36.2	-8.8
	0.2nm,0.5s,baz=283,slow=25,SNR=1.2 2.1nm,0.9s								
ASAR	**Alice Springs**	**21.85**	**127**	P		**P**		**13 55 11.7**	**+0.9**
	1.5nm,0.8s,baz=304,slow=9.2,SNR=13								
ASAR				S		**S**		**13 59 08.5**	**-2.0**
	0.5nm,0.7s,baz=307,slow=23,SNR=1.7 1.5nm,0.8s								
CMAR	**Chiang Mai Arr**	**33.50**	**332**	P		**P**		**13 56 57.8**	**+0.5**
	0.9nm,0.8s,baz=157,slow=8.7,SNR=7.0 0.9nm,0.8s								
SONM	**Songino Array**	**59.34**	**353**	P		**P**		**14 00 19.7**	**+0.1**
	0.4nm,0.6s,baz=153,slow=9.7,SNR=2.0 0.4nm,0.6s								
MKAR	**Makanchi Array**	**64.77**	**336**	P		**P**		**14 00 56.0**	**+0.1**
	0.3nm,0.4s,baz=158,slow=6.7,SNR=6.8 0.3nm,0.4s								
KURBB	**Kurchatov Arra**	**69.33**	**336**	P		**P**		**14 01 23.7**	**-1.1**
	0.4nm,0.5s,baz=147,slow=5.1,SNR=6.8 0.4nm,0.5s								
ZALV	**Zalesovo Beam**	**69.83**	**342**	P		**P**		**14 01 26.5**	**-1.3**
	0.6nm,0.3s,baz=136,slow=4.7,SNR=1.9 0.6nm,0.3s								
BVAR	**Borovoye Array**	**74.49**	**334**	P		**P**		**14 01 55.9**	**+0.2**
	0.6nm,0.6s,baz=126,slow=7.3,SNR=2.6 0.6nm,0.6s								

*LJU **22** 14:04:29.5, 45°88N×16°02E, h10km, ML1.9*
*KRSZO **22** 14:04:29.8±1.0, 45°87N×16°03E, h1km, ML2.5/17, Error ellipse: s-maj=8.5km s-min=4.3km az=145.0*
*PRU **22** 14:04:30.8, 45°97N×16°15E, h10km*
*VIE **22** 14:04:30.3±0.5, 45°93N×15°98E, h9km±5km, mb2.0/4, ml2.0/6, Error ellipse: s-maj=3.5km s-min=1.5km az=98.0 14 km N of Zagreb*
ISC 22 14:04:29.6±0.8, 45°89N±0°02×16°01E±0°02, h7km±4km, n55, σ0§80/84, 2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PTJ	**Puntijarka**	**0.04**	**306**	*i* Pg		**Pg**		**14 04 30.9**	**-0.1**
PTJ				Sg		**Sg**		**14 04 32.0**	**-0.1**
PTJ	**Puntijarka**	**0.04**	**306**	Pg		**Pg**		**14 04 31.0**	**-0.1**
PTJ				Lg		Lg		14 04 32.0	
ZAG	**Zagreb**	**0.06**	**194**	*i* Pg		**Pg**		**14 04 31.6**	**+0.4**
ZAG				Sg		**Sg**		**14 04 33.1**	**+0.7**
ZAG	**Zagreb**	**0.06**	**194**	Pg		**Pg**		**14 04 31.6**	**+0.4**
ZAG				Lg		Lg		14 04 32.5	
GCIS	**Gornji Cirnik**	**0.27**	**266**	⇓*i* Pg		**Pg**		**14 04 35.2**	**+0.4**
GCIS				*i* Sg		**Sg**		**14 04 39.1**	**+0.7**
GCIS				IAML				14 04 39.5	
	comp=Z,69nm,0.1s								
LOBO	**Lobor**	**0.27**	**9**	*i* Pg		**Pg**		**14 04 35.5**	**+0.5**
LOBO				Sg		**Sg**		**14 04 39.7**	**+1.1**
GOLS	**Golise**	**0.29**	**295**	*i* Pg		**Pg**		**14 04 35.8**	**+0.4**
CESS	**Cesta pri Krsk**	**0.39**	**283**	*i* Pg		**Pb**		**14 04 38.4**	**-0.5**
CESS				*i* Sg		**Sb**		**14 04 43.9**	**-1.2**
CRES	**Cresnjevec Ost**	**0.39**	**261**	*i* Pg		**Pg**		**14 04 37.4**	**+0.2**
CRES				*i* Sg		**Sg**		**14 04 43.6**	**+1.3**
CRES				IAML				14 04 44.3	
	comp=Z,19nm,0.1s								
CRES	**Cresnjevec Ost**	**0.39**	**261**	Pg		**Pg**		**14 04 37.5**	**+0.3**
CRES				Lg		Lg		14 04 43.6	
KALN	**Kalnik**	**0.40**	**52**	*i* Pg		**Pg**		**14 04 37.3**	**0.0**
KALN				Sg		**Sg**		**14 04 43.0**	**+0.4**
DOBS	**Dobrina**	**0.46**	**305**	⇓*i* Pg		**Pg**		**14 04 39.1**	**+0.6**
OZLJ	**Ozalj**	**0.47**	**235**	*e* Pg		**Pg**		**14 04 38.9**	**+0.3**
OZLJ				Sg		**Sg**		**14 04 45.3**	**+0.7**
LEGS	**Legarje**	**0.49**	**278**	*i* Pg		**Pg**		**14 04 39.4**	**+0.4**
KOGS	**Kog**	**0.59**	**17**	*i* Pg		**Pg**		**14 04 41.5**	**+0.6**
KOGS				IAML				14 04 54.1	
	comp=Z,38nm,0.1s								
KOGS	**Kog**	**0.59**	**17**	Pg		**Pg**		**14 04 41.6**	**+0.6**
KOGS				Lg		Lg		14 04 49.8	
MOSL	**Moslavina**	**0.59**	**117**	*e* Pg		**Pg**		**14 04 40.9**	**-0.1**
MOSL				Sg		**Sg**		**14 04 48.6**	**0.0**
BOJS	**Bojanci**	**0.65**	**234**	*i* Pg		**Pg**		**14 04 42.3**	**+0.2**
GROS	**Grobnik**	**0.67**	**329**	*i* Pg		**Pg**		**14 04 42.9**	**+0.3**
PDKS	**Podkum**	**0.73**	**284**	*i* Pg		**Pg**		**14 04 43.9**	**+0.4**
BEHE	**Becsehely**	**0.79**	**42**	Pg		**Pb**		**14 04 45.5**	**-0.2**
VISS	**Visnje**	**0.82**	**265**	*i* Pg		**Pg**		**14 04 45.3**	**-0.1**
VISS				*e*Sg		**Sn**		**14 04 59.1**	**-1.0**
VISS				IAML				14 05 00.6	
	comp=Z,27nm,0.3s								
SOKA	**Soboth**	**1.04**	**320**	*e* Pg		**Pg**		**14 04 49.1**	**-0.5**
	comp=Z,2.1nm,0.2s								
SOKA				*e*Sg		**Sg**		**14 05 03.3**	**+0.2**
	comp=Z,2.3nm,0.2s								
PLIT	**Plitvice**	**1.04**	**195**	*i* Pg		**Pg**		**14 04 49.1**	**-0.5**
PLIT				Sg		**Sb**		**14 05 03.8**	**-0.2**
A263A	**Hollad**	**1.18**	**50**	Pn		**Pg**		**14 04 52.7**	**+0.4**
A010A	**Fuerstenfeld**	**1.19**	**2**	Pg		**Pg**		**14 04 53.0**	**+0.4**
OBKA	**Obir**	**1.19**	**302**	*e* Pg		**Pg**		**14 04 52.7**	**+0.3**
	comp=Z,1.9nm,0.3s,SNR=6.0								
OBKA				*e*Sg		**Sg**		**14 05 08.4**	**+0.5**
	comp=Z,7.6nm,0.4s								
OBKA	**Obir**	**1.19**	**302**	Pg		**Pg**		**14 04 53.2**	**+0.8**
OBKA				Lg		Lg		14 05 09.4	
RIY	**Rijeka**	**1.21**	**243**	*e* Pg		**Pg**		**14 04 53.1**	**+0.3**
RIY				Sg		**Sn**		**14 05 09.0**	**-0.5**
UDBI	**Udbina**	**1.37**	**187**	*e* Pg		**Pn**		**14 04 55.1**	**-0.1**
UDBI				Sg		**Sg**		**14 05 14.1**	**+0.5**
ARSA	**Arzberg**	**1.41**	**346**	*e* Pn		**Pn**		**14 04 55.4**	**-0.3**
	comp=Z,1.0nm,0.2s,SNR=8.1								
ARSA				*e*Sg		**Sg**		**14 05 15.0**	**+0.2**
	comp=Z,1.2nm,0.2s								
ARSA	**Arzberg**	**1.41**	**346**	Pn		**Pb**		**14 04 56.5**	**+0.3**
ARSA				Lg		Lg		14 05 14.7	
BLY	**Banja Luka**	**1.41**	**143**	Pn		**Pn**		**14 04 55.0**	**-0.7**
BLY				Lg		Lg		14 05 14.6	
RABC	**Rab**	**1.43**	**218**	Sg		**Sg**		**14 05 16.0**	**+0.5**
NVLJ	**Novalja**	**1.55**	**212**	*e* Pn		**Pb**		**14 04 58.1**	**-0.5**
NVLJ				Sg		**Sg**		**14 05 19.2**	**-0.1**
TIH	**Tihany**	**1.65**	**51**	Pn		**Pb**		**14 04 59.9**	**-0.5**
MPLH	**Magyarpolny**	**1.66**	**39**	Pn		**Pn**		**14 04 59.5**	**+0.3**
A266A	**Gyulaj**	**1.69**	**67**	Pn		**Pn**		**14 04 59.9**	**+0.3**
VIRC	**Vir**	**1.73**	**203**	*e* Pn		**Pb**		**14 05 00.9**	**-0.8**
VIRC				Sn		**Sb**		**14 05 23.9**	**+0.3**
RONA	**Rosalia, Austr**	**1.82**	**6**	*e* Pn		**Pn**		**14 05 01.2**	**-0.3**
	comp=Z,0.4nm,0.1s								
MORH	**Mrgy, Hungar**	**1.86**	**79**	Pg		**Pg**		**14 05 05.4**	**+0.1**
DUGI	**Dugi Otok**	**2.01**	**200**	*e* Pn		**Pn**		**14 05 04.4**	**+0.4**
DUGI				Sn		**Sb**		**14 05 31.5**	**-0.3**
MORI	**Morici**	**2.03**	**186**	*e* Pn		**Pn**		**14 05 05.2**	**+0.9**
MORI				Sn		**Sb**		**14 05 32.2**	**-0.1**
CONA	**Conrad Observa**	**2.04**	**357**	*e* Pn		**Pn**		**14 05 04.9**	**+0.4**
	comp=Z,0.3nm,0.1s								
CONA	**Conrad Observa**	**2.04**	**357**	Pn		**Pn**		**14 05 05.0**	**+0.4**
CONA				Pg		**Pg**		**14 05 09.9**	**+1.1**
ZIRJ	**Zirje**	**2.25**	**187**	*e* Pn		**Pn**		**14 05 08.2**	**+1.0**
ZIRJ				Sn		**Sb**		**14 05 37.9**	**-0.5**
MOA	**Molln**	**2.30**	**329**	*e* Pn		**Pn**		**14 05 08.1**	**+0.2**
	comp=Z,0.4nm,0.2s								
RICI	**Ricice**	**2.52**	**161**	*e* Pn		**Pn**		**14 05 11.7**	**+0.7**
RICI				Sn		**Sb**		**14 05 43.9**	**-2.6**
MAKA	**Makarska**	**2.70**	**164**	*i* Pn		**Pn**		**14 05 14.3**	**+1.0**
MAKA				Sn		**Sn**		**14 05 48.3**	**+2.0**
HVAR	**Hvar**	**2.73**	**173**	*i* Pn		**Pn**		**14 05 13.5**	**-0.3**
HVAR				Sn		**Sb**		**14 05 49.6**	**-2.7**
LSTV	**Lastovo**	**3.18**	**168**	*e* Pn		**Pn**		**14 05 20.5**	**+0.4**
LSTV				Sn		**Sn**		**14 06 00.5**	**+2.3**
KRUC	**Moravsky**	**3.19**	**5**	*e* PN		**Pn**		**14 05 19.6**	**-0.6**
STON	**Ston**	**3.25**	**157**	*e* Pn		**Pn**		**14 05 21.7**	**+0.8**
STON				Sn		**Sn**		**14 06 01.1**	**+1.2**
KHC	**Kasperske Hory**	**3.64**	**334**	*e* PN		**Pn**		**14 05 26.9**	**+0.5**
KHC				*e*SN		**Sn**		**14 06 08.1**	**-1.5**
ZVC	**Zvikov**	**3.76**	**342**	*e* PN		**Pn**		**14 05 28.5**	**+0.5**
ZVC				*e*SN		**Sn**		**14 06 11.2**	**-1.3**

RSNC 22 14:11:53.3±0.0, 7°N±1°×77°W±°, h149km±3km, M2.8, mB4.6, mb3.0, ML2.6, Mw(mB)3.9, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.25**	**211**	P		P	Pn	14 12 13.8	-0.1
BARC				S		S	Sn	14 12 30.1	-0.5
SPBC	**San Pablo de B**	**1.54**	**222**	P		P	Pn	14 12 22.7	-0.6
SPBC				S		S	Sn	14 12 44.6	-1.6
NORC	**Norcasia**	**2.19**	**236**	P		P	Pn	14 12 29.7	-1.0
NORC				S		S	Sn	14 12 58.2	-1.3
CHIC	**Chingaza**	**2.27**	**197**	P		P	Pn	14 12 32.1	+0.1
CHIC				S		S	Sn	14 13 01.7	-0.1
ROSC	**El Rosal**	**2.33**	**213**	P		P	Pn	14 12 33.6	+0.9
ROSC				S		S	Sn	14 13 03.2	+0.2
CVER	**Cruz Verde, Cu**	**2.49**	**204**	P		P	Pn	14 12 34.9	+0.1
CVER				S		S	Sn	14 13 07.3	+0.6
HELC	**Santa Helena**	**2.54**	**256**	P		P	Pn	14 12 34.0	-1.2
HELC				S		S	Sn	14 13 07.5	0.0
UREC	**San Jos de Ur**	**2.63**	**291**	P		P	Pn	14 12 33.6	-2.5
UREC				S		S	Sn	14 13 04.5	-4.5
PTGC	**Puerto Gaitan,**	**2.75**	**161**	P		P	Pn	14 12 36.8	-0.7
PTGC				S		S	Sn	14 13 10.6	-1.1
VILC	**Villavicencio,**	**2.76**	**193**	P		P	Pn	14 12 37.2	-0.6
VILC				S		S	Sn	14 13 12.0	0.0
GUY2C	**Guyana, Caldas**	**2.79**	**236**	P		P	Pn	14 12 38.4	-0.1
GUY2C				S		S	Sn	14 13 11.2	-2.0
CBOC	**Ciudad Bolivar**	**3.09**	**252**	P		P	Pn	14 12 41.4	-0.6
CBOC				S		S	Sn	14 13 17.9	-1.7
DBBC	**Dabeiba**	**3.14**	**274**	P		P	Pn	14 12 41.3	-1.3
DBBC				S		S	Sn	14 13 17.6	-3.0
SDV	**Santo Domingo**	**3.16**	**49**	P		P	Pn	14 12 43.5	+0.6
SDV				S		S	Sn	14 13 19.9	-1.3
ARGC	**Ariguani, Magd**	**3.25**	**339**	P		P	Pn	14 12 44.7	+0.8
ARGC				S		S	Sn	14 13 23.2	+0.1
ANIL	**Santa Ana**	**3.29**	**226**	P		P	Pn	14 12 45.3	+0.7
ANIL				S		S	Sn	14 13 25.3	+1.1
PRAC	**Prado**	**3.58**	**211**	P		P	Pn	14 12 47.5	-0.6
PRAC				S		S	Sn	14 13 29.5	-1.2
ORTC	**Ortega, Tolima**	**3.62**	**217**	P		P	Pn	14 12 48.0	-0.6
ORTC				S		S	Sn	14 13 31.9	+0.3
APAC	**Apartado, Choc**	**3.67**	**287**	P		P	Pn	14 12 47.7	-1.5
APAC				S		S	Sn	14 13 30.3	-2.2
SJCC	**San Jacinto, C**	**3.72**	**326**	P		P	Pn	14 12 47.9	-2.1
SJCC				S		S	Sn	14 13 29.0	-5.0
PLMC	**San Jos del P**	**3.73**	**240**	P		P	Pn	14 12 49.2	-0.9
PLMC				S		S	Sn	14 13 30.5	-3.7
URMC	**La Uribe, Meta**	**3.78**	**201**	P		P	Pn	14 12 50.6	-0.2
URMC				S		S	Sn	14 13 35.4	0.0
YOTC	**Yotoco, Valle**	**4.32**	**230**	P		P	Pn	14 12 56.6	-1.3
URIC	**Uribia, Colomb**	**4.97**	**12**	P		P	Pn	14 13 04.5	-1.9
URIC				S		S	Sn	14 14 02.7	-0.6
GARC	**Garzon, Huila**	**5.20**	**208**	P		P	Pn	14 13 08.1	-1.5
GARC				S		S	Sn	14 14 09.3	+0.2
FLOC	**Florencia**	**5.80**	**207**	P		P	Pn	14 13 16.6	-0.9
BBAC	**Balboa, Cauca**	**6.33**	**222**	P		P	Pn	14 13 25.0	+0.3

*JMA **22** 14:15:25.8±0.1, 24°N±1°×122°6E±0°6, h0km, MV2.6/12, NW OFF ISHIGAKIJIMA IS*
*TAP **22** 14:15:26.3, 24°41N×122°55E, h14km, ML2.5, C*
ISC 22 14:15:26.0±1.0, 24°35N±0°03×122°57E±0°02, h17km±5km, n40, σ0§91/63, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EOS3	**EOS3**	**0.24**	**254**	*i* P		**Pg**		**14 15 32.3**	**+0.9**
EOS3				S		**Sg**		**14 15 36.8**	**+1.9**
EOS2	**EOS2**	**0.31**	**283**	P		**Pb**		**14 15 32.7**	**-0.4**
EOS2				S		**Sb**		**14 15 38.2**	**+0.3**
EOS4	**EOS4**	**0.32**	**225**	*i* P		**Pn**		**14 15 34.5**	**-1.2**
EOS4				S		**Sb**		**14 15 40.1**	**+2.2**
JYNG	**Yonagunijimaku**	**0.36**	**74**	P		**Pb**		**14 15 34.1**	**+0.1**
JYNG				S		**Sb**		**14 15 40.0**	**+0.7**
YOJ	**Yonaguni jima**	**0.42**	**75**	*i* P		**Pb**		**14 15 35.2**	**+0.2**
YOJ				S		**Sb**		**14 15 42.6**	**+1.5**
YOJ	**Yonaguni jima**	**0.42**	**75**	P		**Pb**		**14 15 35.2**	**+0.2**
YOJ				*e*S		**Sb**		**14 15 41.8**	**+0.7**
NDS	**Dongshan**	**0.82**	**290**	*e*P		**Pb**		**14 15 42.3**	**+0.3**
NDS				*i* S		**Sb**		**14 15 53.4**	**+0.6**
TWB1	**Santiao Chiao**	**0.84**	**321**	P		**Pg**		**14 15 41.9**	**-0.5**
TWB1				*e*S		**Sg**		**14 15 51.9**	**-1.6**
TWE	**Neicheng**	**0.90**	**294**	*e*P		**Pb**		**14 15 43.3**	**+0.1**
TWE				*e*S		**Sg**		**14 15 54.8**	**-0.6**
NACB	**Ninganchiao**	**0.91**	**259**	*e*P		**Pn**		**14 15 43.7**	**-0.3**
TIPB	**Shuangxi**	**0.92**	**313**	*e*P		**Pg**		**14 15 43.0**	**-0.9**
TIPB				S		**Sg**		**14 15 55.1**	**-0.8**
ENTT	**Nioudou**	**0.96**	**288**	*e*P		**Pn**		**14 15 45.0**	**+0.2**
ENTT				S		**Sb**		**14 15 57.4**	**+0.8**
LATG	**Datong**	**0.97**	**281**	*e*P		**Pn**		**14 15 44.8**	**-0.1**
LATG				*e*S		**Sb**		**14 15 57.3**	**+0.4**
SXI1	**Grass Mountain**	**0.97**	**320**	*e*P		**Pb**		**14 15 44.4**	**-0.1**
SXI1				*e*S		**Sg**		**14 15 56.9**	**-0.8**
FUSB	**Fushanzhiwuyua**	**0.98**	**295**	*e*P		**Pn**		**14 15 45.2**	**+0.2**
FUSB				*e*S		**Sb**		**14 15 57.5**	**+0.2**
ETLH	**Xiulin Townshi**	**1.00**	**262**	*e*P		**Pn**		**14 15 45.6**	**+0.3**
NWLT	**Wulai**	**1.06**	**294**	*e*P		**Pb**		**14 15 46.2**	**+0.3**
NWLT				*e*S		**Sg**		**14 15 59.6**	**-0.8**
IRIF	**Iriomote-Funau**	**1.06**	**91**	P		**Pn**		**14 15 46.3**	**+0.2**
IRIF				S		**Sn**		**14 16 01.0**	**+0.5**
NNSB	**Datong**	**1.08**	**274**	*e*P		**Pn**		**14 15 46.7**	**+0.1**
LXIB	**Xiulin Townshi**	**1.10**	**253**	*e*P		**Pb**		**14 15 46.4**	**-0.3**
YHNB	**Yeheng**	**1.13**	**287**	*e*P		**Pn**		**14 15 47.8**	**+0.6**
YHNB				*e*S		**Sg**		**14 16 01.6**	**-1.2**
NSK	**Sanguang**	**1.15**	**287**	P		**Pn**		**14 15 48.3**	**+0.9**
NSK				*e*S		**Sg**		**14 16 01.9**	**-1.4**
ESL	**Shilin**	**1.17**	**243**	*e*P		**Pn**		**14 15 47.7**	**+0.1**
HATJ	**Hateruma jima**	**1.17**	**104**	P		**Pn**		**14 15 48.6**	**+1.0**
HATJ				S		**Sn**		**14 16 05.2**	**+2.1**
YM01	**YM01**	**1.20**	**311**	*e*P		**Pn**		**14 15 49.0**	**+0.8**
FUSS	**Fushou**	**1.21**	**265**	*e*P		**Pn**		**14 15 49.5**	**+1.1**
WARBT	**Fenglin Townsh**	**1.25**	**240**	*e*P		**Pg**		**14 15 48.5**	**-1.7**
JKRS	**Kuro-shima**	**1.32**	**95**	P		**Pg**		**14 15 50.6**	**-0.9**
JKRS				S		**Sn**		**14 16 08.3**	**+1.4**
WUSB	**Renai**	**1.37**	**255**	*e*P		**Pg**		**14 15 52.4**	**-0.1**
VWDT	**VWDT**	**1.43**	**246**	*e*P		**Pg**		**14 15 52.7**	**-0.9**
JIJ	**Ishigaki jima**	**1.44**	**89**	P		**Pn**		**14 15 51.6**	**+0.3**
JIJ				S		**Sb**		**14 16 09.2**	**-1.1**
LIOB	**Emei**	**1.44**	**282**	*e*P		**Pg**		**14 15 53.9**	**0.0**
NSTT	**Nanjuang**	**1.45**	**281**	*e*P		**Pg**		**14 15 53.1**	**-0.9**
WHP	**Taichung City**	**1.48**	**268**	*e*P		**Pg**		**14 15 54.9**	**+0.3**
YULB	**Yu-li**	**1.50**	**231**	*e*P		**Pg**		**14 15 53.6**	**-1.4**
SSLB	**Suanglung**	**1.58**	**250**	*e*P		**Pg**		**14 15 57.2**	**+0.8**
JISG	**Ishigakijimahi**	**1.61**	**81**	*e*P		**Pn**		**14 15 53.9**	**+0.3**
JISG				S		**Sn**		**14 16 13.8**	**-0.2**
FULB	**Fuli**	**1.64**	**226**	*e*P		**Pn**		**14 15 54.6**	**-1.1**
JTJ	**Tarama**	**1.97**	**81**	P		**Pb**		**14 16 00.2**	**-1.2**
JTJ				S		**Sn**		**14 16 23.4**	**+0.6**
TPUB	**Ta-pu**	**2.06**	**240**	*e*P		**Pb**		**14 16 02.8**	**-0.2**

*ISN **22** 14:26:44.5±1.3, 32°79N×46°65E, h6km±22km, ML3.1, Presumed earthquake*
*TEH **22** 14:26:45.4, 32°80

0.2nm,0.4s

IDC 22 14:43:15.8±1.3,26°91N×102°68E,h0km,mb3.2/5, mbtmp3.3/5,MS3.0/3,Error ellipse: s-maj=82.3km s-min=22.1km az=62.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**9.09**	**203**	LR	LR	14 49 29.3	
	comp=Z,30nm,18.2s,baz=160,slow=41						
SONM	**Songino Array**	**21.09**	**7**	P	P	14 48 01.7	-0.2
	0.3nm,0.5s,baz=208,slow=9.5,SNR=2.5						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**25.56**	**326**	P	P	14 48 46.5	+0.2
	0.3nm,0.6s,baz=116,slow=8.2,SNR=5.3						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**30.00**	**329**	P	P	14 49 25.9	-0.1
	0.4nm,0.7s,baz=133,slow=9.6,SNR=4.3						
	0.4nm,0.7s						
MJAR	**Matsushiro Arr**	**31.56**	**63**	LR	LR	15 03 37.0	
	comp=Z,39nm,18.1s,baz=20,slow=39						
NRIK	**Noril'sk**	**43.38**	**352**	LR	LR	15 10 00.6	
	comp=Z,38nm,18.4s,baz=318,slow=37						
WRA	**Warramunga Arr**	**55.78**	**143**	P	P	14 52 53.4	-1.4
	0.2nm,0.6s,baz=332,slow=8.0,SNR=2.1						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**58.64**	**146**	P	P	14 53 15.9	+1.0
	0.3nm,0.8s,baz=316,slow=6.7,SNR=4.8						
	0.3nm,0.8s						

GCG 22 14:47:24.2±1.9, 13°89N×93°53W,h0km±415km,MD3.8, Presumed earthquake
MEX 22 14:47:34.9±0.5, 14°83N×92°98W,h118km±8km,MD3.9

ISC 22 14:47:29.9±2.1,14°27N±0°09×93°27W±0°06,h30km±14km, n18,σ1°79/31,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.16**	**57**	*e*P	**Pb**	**14 47 52.4**	**+1.0**
THIG				*e*S	**Sb**	**14 48 06.2**	**+0.2**
THIG		**1.16**	**57**	*i* P	**Pb**	**14 47 52.5**	**+1.1**
PATR	**El Naranjo**	**1.31**	**50**	*e*P	**Pb**	**14 47 53.9**	**-0.2**
PATR				*e*S	**Sn**	**14 48 08.1**	**-0.9**
CHUJ	**Union Juarez**	**1.39**	**54**	*e*P	**Pn**	**14 47 54.5**	**+0.9**
CHUJ				*e*S	**Sn**	**14 48 10.7**	**-0.4**
PAVE	**Pavencul**	**1.40**	**49**	*e*P	**Pn**	**14 47 54.5**	**+0.8**
PAVE				*e*S	**Sn**	**14 48 08.9**	**-2.3**
PCIG		**1.43**	**2**	*e*P	**Pn**	**14 47 54.7**	**+0.9**
PCIG				*e*S	**Sn**	**14 48 09.3**	**-2.3**
RTAL	**Retalhuleu**	**1.54**	**80**	*e*P	**Pb**	**14 47 58.3**	**+0.4**
RTAL				*e*S	**Sb**	**14 48 16.5**	**-0.6**
STG2	**El Palmar, Qui**	**1.84**	**84**	*i* P	**Pn**	**14 47 59.4**	**-0.3**
STG5	**El Palmar, Qui**	**1.86**	**86**	*i* P	**Pn**	**14 48 00.3**	**+0.4**
STG8	**El Palmar, Qui**	**1.87**	**84**	*i* P	**Pn**	**14 47 59.7**	**-0.4**
STG8				*i* S	**Sn**	**14 48 19.0**	**-3.8**
HUEH	**Huehuetenango**	**2.00**	**58**	*e*P	**Pn**	**14 48 03.9**	**+2.0**
HUEH				*e*S	**Sb**	**14 48 30.2**	**-0.2**
CCIG	**Comitan**	**2.28**	**28**	*e*P	**Pn**	**14 48 05.7**	**-0.1**
CCIG				*e*S	**Sn**	**14 48 33.0**	**0.0**
CCIG	**Comitan**	**2.28**	**28**	*e*P	**Pb**	**14 48 10.7**	**+0.1**
TGIG		**2.50**	**3**	*e*P	**Pb**	**14 48 11.5**	**-2.7**
TGIG				*e*S	**Sn**	**14 48 40.5**	**+2.3**
TGIG		**2.50**	**3**	*i* P	**Pb**	**14 48 11.4**	**-2.7**
TGIG				*i* S	**Sn**	**14 48 40.3**	**+2.1**
APG	**El Apazote**	**2.81**	**75**	*i* P	**Pn**	**14 48 16.3**	**+3.3**
CMIG	**Matias Romero**	**3.21**	**331**	*e*P	**Pn**	**14 48 20.8**	**+2.5**
CMIG				*e*S	**Sn**	**14 48 58.4**	**+2.7**
NEUV	**Arroyo Zacate**	**4.21**	**325**	*e*P	**Pn**	**14 48 30.8**	**-1.2**
NEUV				*e*S	**Sn**	**14 49 19.9**	**-0.3**

IDC 22 14:59:09.8±4.9, 11°02S×115°23E,h0km,mb3.1/4, mbtmp3.3/5,ML3.2/1,Error ellipse: s-maj=304.9km s-min=22.9km az=45.0

ISC 22 14:59:14.3±1.5,11°45S±0°2×115°45E±0°1,h35km,n6, σ3°63/7,mb3.3/3,South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**8.24**	**83**	Sn	**Sn**	**15 02 43.2**	**-0.2**
	0.6nm,0.3s,baz=330,slow=20,SNR=0.9						
FITZ	**Fitzroy Crossi**	**11.97**	**125**	Pn	**Pn**	**15 02 04.3**	**+1.8**
	0.1nm,0.3s,baz=302,slow=9.5,SNR=2.0						
FITZ				Sn	**Sn**	**15 04 09.9**	**-5.0**
	0.1nm,0.3s,baz=360,slow=19,SNR=5.6						
	1.4nm,0.7s						
WRA	**Warramunga Arr**	**20.14**	**117**	P	Pn	15 03 48.9	+1.3
	0.6nm,0.7s,baz=288,slow=9.5,SNR=6.9						
WRA				S	**S**	**15 07 28.9**	**-1.2**
	0.3nm,0.9s,baz=335,slow=22,SNR=1.8						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**21.46**	**127**	P	**P**	**15 04 04.2**	**+4.3**
	0.5nm,0.8s,baz=305,slow=10,SNR=8.5						
	0.5nm,0.8s						
MKAR	**Makanchi Array**	**65.04**	**336**	P	**P**	**15 09 49.4**	**-1.6**
	0.1nm,0.3s,baz=160,slow=6.8,SNR=4.1						
	0.1nm,0.3s						
KURBB	**Kurchatov Arra**	**69.59**	**336**	P	**P**	**15 10 18.3**	**-1.4**
	0.2nm,0.7s,baz=148,slow=5.9,SNR=2.8						
	0.2nm,0.7s						

IDC 22 15:29:32.5±5.4, 5°37S×154°16E,h187km±43km,mb3.4/10, mbtmp4.0/11,Error ellipse: s-maj=41.3km s-min=19.3km az=88.0

ISC 22 15:29:34.0±1.0, 5°45S±0°2×154°51E±0°2,h200km,n12, σ0°74/16,mb3.6/10,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.96**	**240**	P	**Pn**	**15 31 26.8**	**0.0**
	12nm,0.7s,baz=48,slow=7.8,SNR=7.1						
PMG				S	**Sn**	**15 32 55.9**	**-0.6**
	6.4nm,0.6s,baz=328,slow=9.8,SNR=1.9						
WRA	**Warramunga Arr**	**24.06**	**231**	P	**P**	**15 34 31.2**	**0.0**
	1.3nm,0.7s,baz=53,slow=9.6,SNR=22						
WRA				PcP	**PcP**	**15 38 07.8**	**+0.5**
	0.3nm,0.9s,baz=56,slow=2.6,SNR=1.3						
	1.3nm,0.7s						
ASAR	**Alice Springs**	**26.62**	**225**	P	**P**	**15 34 54.2**	**0.0**
	0.2nm,0.4s,baz=55,slow=9.4,SNR=11						
ASAR				PcP	**PcP**	**15 38 13.5**	**+0.4**
	0.8nm,1.1s,baz=62,slow=3.1,SNR=0.7						
	0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**59.31**	**295**	P	**P**	**15 39 16.5**	**+1.2**
	0.6nm,0.4s,baz=108,slow=7.8,SNR=1.6						
	0.6nm,0.4s						
LZDM	**Lanzhou Array**	**62.60**	**315**	P	**P**	**15 39 37.8**	**+0.2**
	5.0nm,0.5s,baz=114,slow=6.5,SNR=1.8						
	5.0nm,0.5s						
SONM	**Songino Array**	**67.53**	**327**	P	**P**	**15 40 09.3**	**+0.5**
	0.4nm,0.4s,baz=135,slow=5.0,SNR=5.9						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**81.63**	**319**	P	**P**	**15 41 30.2**	**+0.4**
	0.8nm,0.7s,baz=101,slow=5.8,SNR=11						
	0.8nm,0.7s						
ILAR	**Eielson Array**	**82.22**	**22**	P	**P**	**15 41 31.8**	**-0.7**
	0.5nm,0.7s,baz=240,slow=4.9,SNR=1.5						
	0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**82.37**	**326**	P	**P**	**15 41 32.2**	**-1.3**
	0.6nm,0.4s,baz=111,slow=7.9,SNR=2.2						
	0.6nm,0.4s						
QSPA	**South Pole Qui**	**84.57**	**180**	P	**P**	**15 41 45.2**	**+0.6**
	2.0nm,0.7s,baz=334,slow=1.0,SNR=11						
	2.0nm,0.7s						
KURBB	**Kurchatov Arra**	**85.07**	**322**	P	**P**	**15 41 47.0**	**-0.2**
	0.2nm,0.4s,baz=92,slow=5.8,SNR=2.4						
	0.2nm,0.4s						
TORD	**Torodi Ar. Bea**	**151.73**	**288**	PKPbc	**PKPbc**	**15 49 04.8**	**-1.1**
	0.2nm,0.4s,baz=18,slow=2.4,SNR=1.6						
TORD				PKPab	**PKPab**	**15 49 14.5**	**-1.0**
	0.7nm,0.5s,baz=88,slow=3.3,SNR=4.2						

IDC 22 15:32:20.4±0.5, 15°87S×173°84W,h0km,mb4.5/17, mbtmp4.5/19,ML4.0/2,MS3.3/21,Error ellipse: s-maj=18.3km s-min=14.6km az=147.0
NOU 22 15:32:26.4, 16°09S×172°88W,h83km,mb5.2/30,Samoa Islands Region
NEIC 22 15:32:27.1±1.5, 16°10S±0°10×173°73W±0°08,h48km±4km, mb4.9/110,Error ellipse: s-maj=14.8km s-min=10.2km az=162.0

GCMT 22 15:32:36.1±0.3,16°02S±0°03×173°59W±0°02,h30km±2km, MW5.0/69,Moment Tensor Solution. s13,c16; s69,c93; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr0.99±.18; Mθθ-0.89±.14; Mϕϕ-0.09±.10; Mrθ-1.93±.26; Mrϕ-0.33±.10; Mθϕ-3.38±.39; Best double couple: Mo4.00600×10¹⁶ NP1:ϕs83.00000°,δ89.00000°,λ141.00000°. NP2: ϕs212.00000°,δ84.00000°,λ83.00000°. Principal axes: T 4.2000, Plg50.0000°, Azm113.0000°; N -0.3880, Plg7.0000°, Azm212.0000°; P -3.8110, Plg39.0000°, Azm308.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 22 15:32:28.6±0.4,15°94S±0°05×173°71W±0°05,h65km±3km, h66km:pP-P,n588,σ1°18/539,mb4.9/109,22C-16D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.75**	**43**	Pn	**Pn**	**15 33 10.7**	**+0.2**
	164nm,0.3s,baz=205,slow=2.7,SNR=191						
AFI				Sn	**Sn**	**15 33 38.9**	**-3.8**
	409nm,0.3s,baz=216,slow=19,SNR=6.6						
FUTU	**Fugatoga**	**4.56**	**290**	P	Pn	15 33 43.6	+8.5
FUTU	**Fugatoga**	**4.56**	**290**	Pn	**Pn**	**15 33 32.5**	**-2.6**
NIUE	**Niue**	**4.77**	**131**	P	**Pn**	**15 33 39.1**	**+1.1**
NIUE				S	**Sn**	**15 34 27.9**	**-4.1**
NIUE	**Niue**	**4.77**	**131**	Pn	**Pn**	**15 33 39.1**	**+1.1**
NIUE	**Niue**	**4.77**	**131**	P	**Pn**	**15 33 39.0**	**+1.1**
NIUE				S	**Sn**	**15 34 27.8**	**-4.2**
LKBA	**Tubou, Lakemba**	**5.38**	**244**	P	Pn	15 33 54.0	+7.6
TAVE	**Taveuni**	**6.00**	**262**	P	Pn	15 34 03.2	+8.5
DGTI	**Dogotuki**	**6.31**	**266**	P	Pn	15 34 07.4	+8.4
MSVF	**Nonsavu**	**8.09**	**256**	Pn	Pn	15 34 30.8	+7.3
	1.0nm,0.3s,baz=118,slow=8.4,SNR=36						
MSVF				LR	LR	15 36 11.1	
	comp=Z,58nm,19.6s,baz=43,slow=29						
MSVF	**Nonsavu**	**8.09**	**256**	P	Pn	15 34 31.3	+7.9
RAR	**Rarotonga**	**14.21**	**114**	Pn	**Pn**	**15 35 46.4**	**-0.3**
	3.1nm,0.3s,baz=276,slow=8.2,SNR=6.9						
RAR				Sn	Sn	15 38 13.0	-10
	1.2nm,0.3s,baz=322,slow=22,SNR=2.0						
RAR				LR	LR	15 40 21.8	
	comp=Z,141nm,18.7s,baz=278,slow=34						
	15nm,0.6s						
RAR	**Rarotonga**	**14.21**	**114**	Pn	**Pn**	**15 35 43.4**	**-3.2**
RAR	**Rarotonga**	**14.21**	**114**	P	**Pn**	**15 35 48.6**	**+1.9**
RAR				S	Sn	15 38 12.9	-10
MARNC	**Mare, Loyalty**	**18.14**	**250**	P	**Pn**	**15 36 39.5**	**+3.4**
MARNC	**Mare, Loyalty**	**18.14**	**250**	P	**P**	**15 36 33.2**	**-2.5**
OUENC	**Ouen Island, N**	**19.45**	**248**	P	**Pn**	**15 36 54.3**	**+2.5**
OUENC	**Ouen Island, N**	**19.45**	**248**	Pn	**P**	**15 36 49.9**	**-0.2**
OUENC				IAmb	IAmb	15 36 57.0	
	comp=Z,73nm,1.1s						
DZM	**Mont Dzumac**	**19.72**	**249**	P	**P**	**15 36 52.4**	**-0.7**
	comp=Z,1.0nm,0.3s,baz=92,slow=17,SNR=8.8						
DZM				LR	LR	15 43 18.6	
	comp=Z,294nm,19.9s,baz=66,slow=34						
	comp=Z,10nm,0.9s						
NFK	**Norfolk Island**	**21.35**	**229**	P	**P**	**15 37 08.6**	**-1.8**
OUZ	**Omahuta**	**22.31**	**208**	P	**P**	**15 37 21.9**	**+1.1**
WCZ	**Waipu Caves**	**22.59**	**206**	P	**P**	**15 37 24.1**	**+0.4**
WMGZ	**Waiomatatini S**	**22.87**	**196**	P	**P**	**15 37 28.1**	**+1.4**
HAZ	**Te Kaha**	**22.99**	**197**	P	**P**	**15 37 30.3**	**+2.5**
PKGZ	**Pakihiroa**	**23.01**	**197**	P	**P**	**15 37 29.8**	**+1.8**
PUZ	**Puketiti**	**23.15**	**196**	P	**P**	**15 37 30.3**	**+0.8**
PPT	**Papeete**	**23.17**	**97**	LR	LR	15 44 58.9	
	comp=Z,81nm,18.1s,baz=289,slow=33						
ETAZ	**East Tamaki Re**	**23.23**	**204**	P	**P**	**15 37 31.3**	**+1.1**
MKAZ	**Moumakai**	**23.27**	**203**	P	**P**	**15 37 31.8**	**+1.2**
CNGZ	**Carnagh Statio**	**23.55**	**196**	P	**P**	**15 37 34.9**	**+1.8**
MWZ	**Matawai**	**23.60**	**197**	P	**P**	**15 37 34.5**	**+0.8**
URZ	**Urewera**	**23.66**	**198**	P	**P**	**15 37 34.2**	**+0.1**
RIGZ	**Rimuhau**	**23.88**	**197**	P	**P**	**15 37 37.0**	**+0.8**
TLZ	**Tolley Road**	**24.23**	**201**	P	**P**	**15 37 40.1**	**+0.8**
RAHZ	**Arahi**	**24.27**	**198**	P	**P**	**15 37 40.6**	**+0.9**
MTHZ	**Maungataniwha**	**24.28**	**198**	P	**P**	**15 37 40.7**	**+0.9**
HIZ	**Hauiti**	**24.63**	**202**	P	**P**	**15 37 40.0**	**-2.9**
BKZ	**Black Stump Fm**	**24.68**	**198**	P	**P**	**15 37 39.7**	**-3.7**
BKZ				IAmb	IAmb	15 37 47.3	
	comp=Z,48nm,1.7s						
BKZ	**Black Stump Fm**	**24.68**	**198**	P	**P**	**15 37 43.0**	**-0.5**
MCHZ	**McNeill Hill**	**24.87**	**198**	P	**P**	**15 37 47.2**	**+2.1**
TMVZ	**Te Maari**	**24.88**	**200**	P	**P**	**15 37 45.0**	**-0.4**
ETVZ	**East Tongariro**	**24.90**	**200**	P	**P**	**15 37 44.9**	**-0.6**
KAHZ	**Kahuranaki**	**25.14**	**197**	P	**P**	**15 37 51.8**	**+4.1**
VRZ	**Vera Road**	**25.21**	**201**	P	**P**	**15 37 50.7**	**+2.5**
PXZ	**Pawanui**	**25.37**	**197**	P	**P**	**15 37 55.0**	**+5.3**
PNHZ	**Pukenui**	**25.45**	**198**	P	**P**	**15 37 50.8**	**+0.3**
HNR	**Hoara**	**26.48**	**281**	LR	LR	15 47 02.3	
	comp=Z,9.5nm,18.0s,baz=209,slow=34						
GVZ	**Greta Valley S**	**29.22**	**200**	P	**P**	**15 38 23.6**	**-0.6**
LTZ	**Lake Taylor**	**29.32**	**201**	P	**P**	**15 38 22.4**	**-2.6**
LTZ				IAmb	IAmb	15 38 48.4	
	comp=Z,56nm,1.5s						
TW1H	**Toowoomba 1 Ha**	**33.79**	**244**	P	**P**	**15 39 05.8**	**+1.2**
EIDS	**Eidsvold**	**34.16**	**248**	P	**P**	**15 39 05.8**	**-2.0**
ARMA	**Armidale**	**34.81**	**239**	P	**P**	**15 39 12.4**	**-1.0**
AUPHS	**Peel High Scho**	**35.61**	**239**	P	**P**	**15 39 21.3**	**+1.1**
CTA	**Charters Tower**	**38.23**	**258**	P	**P**	**15 39 41.2**	**-1.3**
	comp=Z,3.8nm,0.6s,baz=84,slow=7.9,SNR=8.3						
CTA				LR	LR	15 52 55.7	
	comp=Z,56nm,18.6s,baz=82,slow=32						
	comp=Z,3.8nm,0.6s						
CTAO	**Charters Tower**	**38.23**	**258**	P	**P**	**15 39 40.9**	**-1.7**
CTAO				IAmb	IAmb	15 40 09.7	
	comp=Z,12nm,1.1s						
CAN	**Canberra**	**38.46**	**233**	P	**P**	**15 39 44.3**	**-0.1**
	comp=Z,29nm,1.9s						
PMG	**Port Moresby**	**38.68**	**275**	LR	LR	15 54 03.2	
	comp=Z,42nm,19.4s,baz=36,slow=34						
PMG	**Port Moresby**	**38.68**	**275**	P	**P**	**15 39 47.1**	**+0.8**
PMG				IAmb	IAmb	15 39 51.2	
	comp=Z,28nm,1.1s						
PMG	**Port Moresby**	**38.68**	**275**	P	**P**	**15 39 46.2**	**-0.1**
	comp=Z,26nm,1.0s						
H11S2	**WAKE ISLAND Hy**	**39.27**	**330**	T	T	16 23 13.4	
	baz=144,slow=76,SNR=32						
H11S3	**WAKE ISLAND Hy**	**39.29**	**330**	T	T	16 23 12.9	
	baz=144,slow=76,SNR=27						
H11S1	**WAKE ISLAND Hy**	**39.29**	**330**	T	T	16 23 15.1	
	baz=144,slow=76,SNR=19						
CMSA	**Cobar Meteorol**	**40.02**	**240**	P	**P**	**15 39 55.7**	**-1.6**
	comp=Z,40nm,0.7s						
CMSA	**Cobar Meteorol**	**40.02**	**240**	P	**P**	**15 39 58.2**	**+0.8**
MTSU	**Mount Surprise**	**40.13**	**261**	P	**P**	**15 39 57.0**	**-1.4**
	comp=Z,9.4nm,0.8s						
MTSU	**Mount Surprise**	**40.13**	**261**	P	**P**	**15 40 00.9**	**+2.5**
H11N3	**WAKE ISLAND Hy**	**40.23**	**331**	T	T	16 24 18.8	
	baz=145,slow=76,SNR=16						
H11N1	**WAKE ISLAND Hy**	**40.24**	**331**	T	T	16 24 19.3	
	baz=145,slow=76,SNR=27						
H11N2	**WAKE ISLAND Hy**	**40.25**	**331**	T	T	16 24 20.1	
	baz=145,slow=76,SNR=16						
QLP	**Quilpie**	**40.43**	**248**	P	**P**	**15 39 59.4**	**-1.5**
	comp=Z,23nm,1.3s						
QLP	**Quilpie**	**40.43**	**248**	P	**P**	**15 40 02.2**	**+1.4**
COEN	**Coen**	**41.65**	**267**	P	**P**	**15 40 11.4**	**+0.4**
	comp=Z,30nm,1.3s						
COEN	**Coen**	**41.65**	**267**	P	**P**	**15 40 13.5**	**+2.5**
COEN	**Coen**	**41.65**	**267**	P	**P**	**15 40 11.3**	**+0.4**
COEN				IAmb	IAmb	15 40 12.8	
	comp=Z,23nm,0.9s						
INKA	**Innaminka**	**43.65**	**246**		**P**	**15 40 26.4**	**-0.5**
QIS	**Mount Isa**	**44.46**	**257**	P	**P**	**15 40 31.5**	**-2.2**
HTT	**Hallett**	**46.01**	**239**	P	**P**	**15 40 44.8**	**-1.0**
	comp=Z,10nm,1.5s						
HTT	**Hallett**	**46.01**	**239**	P	**P**	**15 40 46.4**	**+0.6**
JAY	**Jayapura**	**46.80**	**282**	P	**P**	**15 40 52.6**	**+0.4**
	comp=Z,18nm,0.8s,baz=166,slow=6.7,SNR=4.5						
	comp=Z,18nm,0.8s						
WR0	**Warramunga Arr**	**49.24**	**257**	P	**P**	**15 41 09.4**	**-1.6**
WR8	**Warramunga Arr**	**49.28**	**257**		**P**	**15 41 09.5**	**-1.7**
WR8				IAmb	IAmb	15 41 13.4	
	comp=Z,20nm,1.3s						
WB0	**Warramunga Arr**	**49.39**	**257**		**P**	**15 41 10.6**	**-1.6**
WB9	**Warramunga Arr**	**49.40**	**257**	P	**P**	**15 41 10.5**	**-1.7**
	comp=Z,28nm,0.9s						
WB2	**Warramunga Arr**	**49.42**	**257**	P	**P**	**15 41 10.9**	**-1.4**
WRAB	**Tennant Creek**	**49.42**	**257**	P	**P**	**15 41 14.1**	**+1.8**
WRAB	**Tennant Creek**	**49.42**	**257**	P	**P**	**15 41 10.8**	**-1.5**
WRAB				IAmb	IAmb	15 41 12.7	
	comp=Z,18nm,1.0s						
WRAB	**Tennant Creek**	**49.42**	**257**	P	**P**	**15 41 10.6**	**-1.7**
WRAB				pP	**pP**	**15 41 23.8**	**-4.8**
WRAB				sP	sP	15 41 28.6	-7.3
WB1	**Warramunga Ar.**	**49.42**	**257**	P	**P**	**15 41 13.3**	**+0.9**
WR1	**Warramunga Arr**	**49.43**	**257**	P	**P**	**15 41 10.9**	**-1.5**
WRA	**Warramunga Arr**	**49.43**	**257**	P	**P**	**15 41 10.9**	**-1.5**
	comp=Z,12nm,0.8s,baz=91,slow=7.0,SNR=107						
WRA				PcP	**PcP**	**15 42 34.6**	**+0.7**
	comp=Z,1.7nm,0.5s,baz=88,slow=3.7,SNR=4.8						
	comp=Z,12nm,0.8s						
WRA	**Warramunga Arr**	**49.43**	**257**	P	**P**	**15 41 10.7**	**-1.7**
AS31	**Alice Springs**	**49.66**	**252**		**P**	**15 41 12.4**	**-1.8**
AS31				IAmb	IAmb	15 41 15.3	
	comp=Z,11nm,0.7s						
ASAR	**Alice Springs**	**49.66**	**252**	P	**P**	**15 41 12.7**	**-1.5**
	comp=Z,35nm,0.6s,baz=88,slow=7.9,SNR=1049						
ASAR				PcP	**PcP**	**15 42 34.8**	**+0.1**
	comp=Z,2.8nm,0.9s,baz=92,slow=5.0,SNR=1.4						
ASAR				LR	LR	16 00 21.6	
	comp=Z,70nm,21.3s,baz=90,slow=34						
	comp=Z,35nm,0.6s						
ASAR	**Alice Springs**	**49.66**	**252**		**P**	**15 41 12.1**	**-2.0**
GUMO	**Guam**	**50.38**	**303**	LR	LR	15 59 11.3	
	comp=Z,17nm,20.3s,baz=124,slow=32						
KDU	**Kakadu**	**52.13**	**266**	P	**P**	**15 41 32.3**	**-0.5**
	comp=Z,8.6nm,0.8s						
MTN	**Manton Dam**	**53.39**	**266**	P	**P**	**15 41 41.1**	**-0.9**
	comp=Z,25nm,0.8s						
MTN	**Manton Dam**	**53.39**	**266**		**P**	**15 41 41.5**	**-0.5**
AUDHS	**Darwin High Sc**	**53.75**	**266**	P	**P**	**15 41 46.1**	**+1.4**
WRKA	**Warakurna**	**54.73**	**250**	P	**P**	**15 41 50.4**	**-1.4**
	comp=Z,11nm,0.7s						
KNRA	**Kununurra**	**55.19**	**262**	P	**P**	**15 41 54.5**	**-0.6**
	comp=Z,29nm,0.9s						
KNRA	**Kununurra**	**55.19**	**262**		**P**	**15 41 54.3**	**-0.8**
SIJI	**Sorong**	**56.25**	**280**	P	**P**	**15 42 02.9**	**+0.1**
	comp=Z,78nm,0.7s,baz=89,slow=5.6,SNR=70						
SIJI				LR	LR	16 05 33.3	
	comp=Z,36nm,18.9s,baz=14,slow=36						
SIJI	**Sorong**	**56.25**	**280**	P	**P**	**15 42 02.7**	**-0.1**
SIJI	**Sorong**	**56.25**	**280**	P	**P**	**15 42 02.6**	**-0.2**
SIJI				pP	**sP**	**15 42 28.3**	**+1.8**
SWI	**Sorong**	**56.26**	**280**	P	**P**	**15 42 02.8**	**0.0**
SWI	**Sorong**	**56.26**	**280**	P	**P**	**15 42 02.4**	**-0.4**
SWI				pP	**sP**	**15 42 27.8**	**+1.3**
DRV	**Dumont d'Urvil**	**58.98**	**200**	P	**P**	**15 42 20.9**	**-0.2**
TNTI	**Ternate**	**60.47**	**280**	P	**P**	**15 42 31.9**	**-0.3**
	comp=Z,22nm,0.9s						
SOEI	**Soe**	**60.60**	**268**	P	**P**	**15 42 34.7**	**+1.4**
SOEI	**Soe**	**60.60**	**268**		**P**	**15 42 34.1**	**+0.8**
SOEI	**Soe**	**60.60**	**268**	P	**P**	**15 42 33.3**	**0.0**
	comp=Z,51nm,0.7s						
SANI	**Sanana**	**60.92**	**277**	P	**P**	**15 42 34.2**	**-1.1**
	comp=Z,28nm,1.3s						
BATI	**Baumata**	**61.09**	**267**	LR	LR	16 07 51.6	
	comp=Z,32nm,19.3s,baz=132,slow=35						
PSAC2	**Pilbara Seismi**	**62.71**	**254**	P	**P**	**15 42 46.2**	**-1.0**
	comp=Z,81nm,0.7s						
PSAB3	**Pilbara Seismi**	**62.75**	**254**	P	**P**	**15 42 46.6**	**-0.9**
	comp=Z,89nm,0.7s						
PSA00	**Pilbara Seismi**	**62.76**	**254**	P	**P**	**15 42 46.7**	**-0.9**
	comp=Z,86nm,0.7s						
PSA00	**Pilbara Seismi**	**62.76**	**254**	P	**P**	**15 42 48.1**	**+0.5**
PSA00	**Pilbara Seismi**	**62.76**	**254**		**P**	**15 42 46.8**	**-0.8**
PSA00	**Pilbara Seismi**	**62.76**	**254**	P	**P**	**15 42 46.7**	**-0.8**
PSA00				IAmb	IAmb	15 42 47.5	
	comp=Z,59nm,0.6s						
PSAC1	**Pilbara Seismi**	**62.80**	**254**	P	**P**	**15 42 46.9**	**-1.0**
	comp=Z,82nm,0.7s						
MMRI	**Maumere**	**62.81**	**268**	P	**P**	**15 42 47.0**	**-1.0**
	comp=Z,34nm,1.2s						
VNDA	**Vanda**	**62.81**	**186**	P	**P**	**15 42 48.6**	**+1.8**
	comp=Z,4.0nm,0.8s,baz=6.7,slow=6.3,SNR=14						
	comp=Z,4.0nm,0.8s						
VNDA	**Vanda**	**62.81**	**186**		**P**	**15 42 46.7**	**-0.2**
MBWA	**Marble Bar**	**62.92**	**254**	P	**P**	**15 42 47.6**	**-0.9**
	comp=Z,46nm,0.8s						
MBWA	**Marble Bar**	**62.92**	**254**	P	**P**	**15 42 49.1**	**+0.5**
MBWA	**Marble Bar**	**62.92**	**254**		**P**	**15 42 47.7**	**-0.9**
MBWA	**Marble Bar**	**62.92**	**254**	P	**P**	**15 42 47.4**	**-1.2**
EDFI	**Ende, Flores**	**63.31**	**268**	P	**P**	**15 42 49.9**	**-1.5**
	comp=Z,48nm,0.7s						
MEEK	**Meekatharra**	**63.33**	**248**	P	**P**	**15 42 50.0**	**-1.3**
	comp=Z,33nm,0.8s						
MEEK	**Meekatharra**	**63.33**	**248**	P	**P**	**15 42 51

UGM	Wanagama	74.23	266	P	P	15 43 59.5	+0.2
	comp=Z,49nm,1.4s						
R16K	Pilot Point	74.45	9	P	P	15 44 00.4	+0.9
	baz=196						
R17L	Mt. Peulik Vol	74.70	10	P	P	15 44 01.7	+0.7
	baz=197						
OHAK	Old Harbor	74.85	11	P	P	15 44 02.3	+0.5
	baz=200						
NVAR	Mina Array Bea	74.93	42	P	P	15 44 05.0	+2.0
	comp=Z,1.0nm,0.7s,baz=230,slow=9.4,SNR=6.1						
	comp=Z,1.0nm,0.7s						
TPUB	Ta-pu	75.10	300	P	P	15 44 02.5	-1.6
Q17K	Contact Creek	75.38	10	P	P	15 44 05.2	+0.2
	baz=198						
SBUM	Sibu	75.39	277	P	P	15 44 05.0	-0.9
KVN	Kaiserville	75.42	42	P	P	15 44 06.2	+0.4
KDAK	Kodiak Island	75.51	12	P	P	15 44 06.1	+0.5
	baz=201						
O14K	Tigyukauivet M	75.61	7	P	P	15 44 06.8	+0.7
	baz=192						
Q16K	King Salmon	75.66	9	P	P	15 44 06.8	+0.5
	baz=197						
O15K	Ungalikthiuk R	75.71	7	P	P	15 44 07.5	+0.8
	baz=194						
P16K	Nushagak River	75.81	8	P	P	15 44 07.4	+0.1
	baz=196						
K05A	Summer Lake	75.89	37	P	P	15 44 08.9	+0.6
K05A				IAmb	IAmb	15 44 37.3	
	comp=Z,20nm,1.2s						
Q18K	Katmai Hardscr	75.89	10	P	P	15 44 07.6	-0.3
	baz=198						
KPJI	Karang Pucung	75.91	266	P	P	15 44 08.0	-0.9
	comp=Z,24nm,0.8s						
P17K	Kvichak River	76.19	9	P	P	15 44 09.6	+0.2
	baz=197						
N14K	Kuskokwak Cree	76.23	6	P	P	15 44 10.2	+0.6
	baz=192						
M11K	Mekoryuk	76.30	4	P	P	15 44 10.0	-0.1
	baz=187						
Q20K	Shuyak Island	76.32	11	P	P	15 44 10.1	-0.1
	baz=201						
KSRS	Korea Array	76.33	316	P	P	15 44 11.8	+1.1
	comp=Z,3.1nm,1.1s,baz=120,slow=7.4,SNR=5.8						
KSRS				LR	LR	16 11 48.0	
	comp=Z,8.3nm,20.6s,baz=165,slow=31						
	comp=Z,3.1nm,1.1s						
O16K	Kokwok River B	76.33	8	P	P	15 44 10.1	-0.1
	baz=195						
Q19K	Cape Douglas,	76.39	11	P	P	15 44 10.5	-0.1
	baz=200						
M13K	Dall Lake	76.55	5	P	P	15 44 11.8	+0.4
	baz=190						
P18K	Big Mountain,	76.57	10	IAmb	IAmb	15 44 12.7	
	comp=Z,16nm,0.9s						
P18K	Big Mountain,	76.57	10	P	P	15 44 11.8	+0.2
	baz=198						
N15K	Kwethluk River	76.64	7	P	P	15 44 12.5	+0.5
	baz=193						
O17K	Koliganek Bris	76.65	9	P	P	15 44 12.5	+0.5
	baz=196						
O18K	Koktuh Hills	77.01	9	P	P	15 44 14.4	+0.3
	baz=198						
M14K	Bethel	77.01	6	P	P	15 44 15.4	+1.4
M14K	Bethel	77.01	6	P	P	15 44 14.4	+0.4
	baz=192						
M15K	Kasigluk River	77.09	7	P	P	15 44 14.9	+0.4
	baz=193						
N16K	Nishlik Lake	77.10	8	P	P	15 44 15.4	+0.8
	baz=195						
BBJI	Bungbulang	77.10	266	P	P	15 44 15.9	+0.2
BBJI	Bungbulang	77.10	266	P	P	15 44 15.7	0.0
	comp=Z,27nm,1.0s						
N17K	Nushagak Hills	77.36	8	P	P	15 44 16.6	+0.6
	baz=196						
HOM	Homer	77.44	11	P	P	15 44 17.2	+0.7
	baz=202						
ILSW	Iliamna Southw	77.47	10	P	P	15 44 17.5	+0.7
O19K	Port Alsworth	77.48	10	P	P	15 44 17.7	+1.1
	baz=199						
L14K	Kuka Creek	77.52	5	IAmb	IAmb	15 44 21.2	
	comp=Z,7.7nm,0.8s						
L14K	Kuka Creek	77.52	5	P	P	15 44 17.9	+1.0
	baz=191						
M16K	Timber Creek	77.61	7	P	P	15 44 18.7	+1.3
	baz=194						
BRSE	Bradley Lake S	77.69	12	P	P	15 44 18.4	+0.5
	baz=202						
N18K	Kilae Creek	77.69	9	P	P	15 44 18.3	+0.4
	baz=198						
K13K	Kusilvak Mount	77.95	4	P	P	15 44 20.0	+0.8
	baz=189						
L15K	Ungalak Mounta	77.97	6	P	P	15 44 20.2	+0.9
	baz=192						
N19K	Bonanza Creek	78.04	9	P	P	15 44 20.8	+0.9
	baz=199						
M17K	Holitna River	78.17	8	P	P	15 44 21.6	+1.1
	baz=196						
L16K	Owhat River	78.22	7	P	P	15 44 22.6	+1.9
L16K				IAmb	IAmb	15 45 10.8	
	comp=Z,35nm,1.8s						
L16K	Owhat River	78.22	7	P	P	15 44 21.9	+1.2
	baz=194						
SEW	Seward	78.28	12	P	P	15 44 22.1	+1.0
	baz=204						
TPI	Tanjungpandan	78.32	270	P	P	15 44 23.5	+1.1
Q23K	Middleton Isla	78.34	14	P	P	15 44 22.5	+1.1
	baz=207						
M18K	Stony River	78.48	9	P	P	15 44 23.2	+1.1
	baz=198						
CAPN	Captain Cook N	78.57	11	P	P	15 44 23.6	+0.9
	baz=202						
K15K	Wolf Creek Mou	78.57	6	P	P	15 44 24.1	+1.4
	baz=192						
O22K	Cooper Landing	78.57	12	P	P	15 44 23.8	+1.1
	baz=203						
P23K	Montague Islan	78.62	13	P	P	15 44 24.0	+1.1
	baz=206						
L17K	Donlin	78.77	7	P	P	15 44 25.0	+1.3
	baz=195						
N20K	Mount Spurr	78.78	10	P	P	15 44 25.0	+1.0
	baz=201						
SPCR	Spurr Chakacha	78.78	10	P	P	15 44 25.2	+1.2
	baz=201						
J14K	Nanvaranak Lak	78.84	5	P	P	15 44 25.7	+1.6
	baz=190						
L18K	Granite Mounta	79.06	8	IAmb	IAmb	15 44 28.6	
	comp=Z,11nm,1.2s						
L18K	Granite Mounta	79.06	8	P	P	15 44 26.6	+1.2
	baz=197						
RC01	Rabbit Creek A	79.13	12	P	P	15 44 27.0	+1.2
	baz=203						
CGJI	Cibinong	79.20	266	P	P	15 44 26.3	-0.9
KAIM	Kayak Island	79.24	15	P	P	15 44 27.3	+0.9
	baz=208						
M20K	Styx River	79.27	10	P	P	15 44 27.5	+0.9
	baz=200						
L19K	White Mountain	79.28	9	P	P	15 44 27.6	+0.9
	baz=198						
K17K	Iditarod	79.33	7	P	P	15 44 27.6	+0.8
	baz=195						
V35K	Ketchikan	79.40	23	P	P	15 44 28.1	+0.8
	baz=221						
SIT	Sitka	79.43	20	P	P	15 44 27.6	+0.1
	baz=217						
U33K	Whale Pass	79.45	22	P	P	15 44 28.5	+0.9
	baz=219						
EYAK	Cordova Ski Ar	79.48	14	P	P	15 44 28.5	+0.8
	baz=207						
GLI	Glacier Island	79.48	13	P	P	15 44 28.6	+0.9
	baz=206						
GAMB	Gambell	79.48	1	P	P	15 44 28.8	+1.2
	baz=182						
SKT	Skwentna	79.63	10	P	P	15 44 29.8	+1.3
	baz=202						
J16K	Anvik River	79.63	6	P	P	15 44 30.4	+2.0
J16K	Anvik River	79.63	6	P	P	15 44 29.8	+1.4
	baz=193						
M22K	Willow	79.67	11	P	P	15 44 29.8	+1.1
	baz=203						
KNK	Knik Glacier	79.68	12	P	P	15 44 29.8	+1.0
	baz=205						
BGLC	Bering Glacier	79.69	15	P	P	15 44 29.9	+1.1
	baz=210						
PMR	Palmer	79.71	12	P	P	15 44 29.7	+0.9
	baz=204						
S31K	Pelican	79.86	19	P	P	15 44 30.3	+0.5
	baz=216						
WRAK	Wrangell Islan	79.97	22	P	P	15 44 31.5	+1.2
	baz=220						
S32K	Killisnoo	80.01	20	P	P	15 44 31.3	+0.8
	baz=218						
SML	Sawmill	80.06	12	P	P	15 44 32.0	+1.1
	baz=205						
MESA	MESA	80.07	15	P	P	15 44 32.2	+1.0
	baz=211						
BMRM	Bremner River	80.11	14	P	P	15 44 32.0	+0.8
	baz=208						
M23K	Glacier View	80.17	12	P	P	15 44 32.1	+0.6
	baz=205						
I17K	Unalakleet	80.21	6	P	P	15 44 32.6	+1.0
	baz=193						
NJ2	Nanjing	80.25	307	*e*P	P	15 44 34.8	+2.3
NJ2				pmax	pmax		
	comp=Z,30nm,0.6s						
J18K	Innoko River	80.25	8	P	P	15 44 32.7	+0.8
	baz=196						
L22K	Petersville	80.27	11	IAmb	IAmb	15 44 32.9	
	comp=Z,15nm,1.1s						
CRQM	Cirque	80.28	15	P	P	15 44 33.0	+0.8
KLU	Klutina	80.28	13	P	P	15 44 32.6	+0.4
	baz=207						
CRQE	Cirque	80.28	15	P	P	15 44 32.6	+0.4
	baz=210						
SCM	Sheep Creek Mo	80.29	12	P	P	15 44 32.8	+0.7
SCM	Sheep Creek Mo	80.29	12	P	P	15 44 32.6	+0.4
	baz=206						
PPLA	Purkeypile	80.37	10	P	P	15 44 33.7	+1.0
	baz=201						
R31K	City Hall, Gus	80.38	19	P	P	15 44 33.3	+0.8
	baz=217						
U35K	Hyder	80.44	23	P	P	15 44 33.8	+0.9
	baz=222						
PINM	Pinnacle	80.45	16	P	P	15 44 33.6	+0.6
	baz=212						
ANM	Nome	80.51	4	P	P	15 44 34.3	+1.2
	baz=188						
K20K	Telida	80.51	9	P	P	15 44 33.9	+0.7
	baz=199						
MA2	Magadan	80.59	343	LR	LR	16 12 53.3	
	comp=Z,19nm,21.4s,baz=94,slow=30						
R32K	Eaglecrest	80.67	20	P	P	15 44 34.6	+0.4
	baz=218						
N25K	Chitina, Valde	80.68	14	P	P	15 44 34.8	+0.5
	baz=206						
M24K	Tolsona, Glenn	80.78	13	P	P	15 44 35.1	+0.3
	baz=207						
KLR	Kul'dur	80.81	327	LR	LR	16 14 44.8	
	comp=Z,22nm,21.1s,baz=84,slow=32						
H16K	Elim	80.81	5	P	P	15 44 35.4	+0.7
	baz=191						
MCARA	McCarthy VSAT	80.85	14	P	P	15 44 35.8	+0.7
	baz=210						
WAT6	Susitna Watana	80.89	12	P	P	15 44 35.6	+0.2
	baz=205						
J19K	Poorman	80.90	8	P	P	15 44 36.2	+0.9
	baz=198						
CTG	Chitna Glacier	80.91	15	P	P	15 44 36.4	+0.8
	baz=211						
WAT1	Susitna Watana	80.95	11	P	P	15 44 36.1	+0.5
	baz=204						
G15K	Niukluk	81.03	4	P	P	15 44 36.9	+1.0
	baz=189						
O28M	Mount Upton	81.04	16	P	P	15 44 36.6	+0.2
	baz=212						
O29M	Mount Kennedy	81.08	17	P	P	15 44 36.8	+0.3
	baz=214						
T35M	Bob Quinn	81.15	22	P	P	15 44 37.1	+0.3
	baz=222						
TX31	Lajitas Ar. Si	81.16	56		P	15 44 37.5	-0.1
TXAR	Lajitas Array	81.16	56	P	P	15 44 39.5	+1.9
	comp=Z,1.0nm,0.8s,baz=218,slow=8.7,SNR=11						
	comp=Z,1.0nm,0.8s						
BNX	BinXian	81.18	323	⇑P	P	15 44 37.3	+0.1
BNX				pmax	pmax		
	comp=Z,11nm,0.8s						
TRF	Thorofare Moun	81.21	10	P	P	15 44 37.8	+0.7
	baz=203						
CHUM	Lake Minchumin	81.28	9	P	P	15 44 38.0	+0.7
	baz=201						
J20K	Nowinta River	81.28	9	IAmb	IAmb	15 44 39.3	
	comp=Z,12nm,1.0s						
J20K	Nowinta River	81.28	9	P	P	15 44 38.4	+1.2
	baz=199						
H17K	Granite Mounta	81.32	6	P	P	15 44 38.5	+1.0
	baz=193						
SKAG	Skagway	81.35	19	P	P	15 44 38.1	+0.4
	baz=217						
F14K	Arctic Creek	81.36	3	P	P	15 44 38.5	+0.8
	baz=187						
TNA	Tin City	81.38	2		P	15 44 39.0	+1.3
TNA				IAmb	IAmb	15 44 41.3	
	comp=Z,8.9nm,0.8s						
TNA	Tin City	81.38	2	P	P	15 44 38.7	+1.0
	baz=186						
P30M	Million Dollar	81.40	18	P	P	15 44 38.6	+0.5
	baz=216						
DHY	Denali Highway	81.41	12	P	P	15 44 39.1	+0.9
	baz=206						
RND	Reindeer	81.43	11	IAmb	IAmb	15 44 40.3	
	comp=Z,25nm,1.2s						
S34M	Telegraph Cree	81.53	21	P	P	15 44 39.6	+0.8
	baz=221						
G16K	Koyuk River	81.55	5	P	P	15 44 40.0	+1.4
	baz=191						
YUK8	Steele Glacier	81.58	16	P	P	15 44 40.2	+0.9
	baz=213						
YUK6	Outpost Mounta	81.67	17	P	P	15 44 40.4	+0.7
	baz=214						
H18K	Honitosa River	81.69	6	P	P	15 44 40.6	+1.1
	baz=195						
F15K	North Star Dit	81.69	4	P	P	15 44 40.3	+0.8
	baz=189						
BPAW	Bear Paw Mtn.	81.69	10	P	P	15 44 40.6	+1.1
	baz=202						
PAX	Paxson	81.70	13	P	P	15 44 40.5	+0.8
	baz=207						
MCK	McKinley	81.71	11	P	P	15 44 40.3	+0.7
	baz=204,SNR=13						
M26K	Nabesna, AK	81.74	14	IAmb	IAmb	15 44 43.2	
	comp=Z,7.9nm,0.9s						
M26K	Nabesna, AK	81.74	14	P	P	15 44 40.8	+0.9
	baz=210						
G17K	Kiwalik Mounta	81.80	5	P	P	15 44 41.5	+1.5
	baz=193						
HYT	Haines Junctio	81.81	17	P	P	15 44 41.2	+0.9
	baz=215						
YUK3	Moose Creek	81.82	15	P	P	15 44 41.1	+0.6
	baz=212						
I20K	Naaghedeneel	81.82	8	P	P	15 44 41.1	+1.0
	baz=199						
YUK4	Talbot Arm	81.93	16	P	P	15 44 42.5	+1.5
	baz=214						
Q32M	Nakina River	81.94	20	P	P	15 44 41.5	+0.4
	baz=220						
P32M	Atlin	81.96	19	P	P	15 44 41.4	+0.4
	baz=218						
M27K	Edge Creek, AK	81.97	14	P	P	15 44 41.5	+0.4
	baz=211						
MENT	Mentasta	82.05	13	IAmb	IAmb	15 44 43.3	
	comp=Z,13nm,1.2s						
TPB05	Hovey Rd	82.07	55	IAmb	IAmb	15 45 11.5	
	comp=Z,7.6nm,1.2s						
O30N	Mendenhall	82.17	18	P	P	15 44 43.4	+1.2
	baz=216						
L26K	Log Cabin Wild	82.21	13	P	P	15 44 43.7	+1.5
	baz=209						
BVCY	Beaver Creek	82.26	15	P	P	15 44 43.5	+0.9
	baz=212						
H19K	Roundabout Mou	82.27	7	IAmb	IAmb	15 44 44.8	
	comp=Z,5.9nm,0.8s						
H19K	Roundabout Mou	82.27	7	P	P	15 44 43.6	+1.2
	baz=197						
DLBC	Dease Lake	82.31	22	P	P	15 44 43.9	+0.9
	baz=222						
G18K	Tagagawik	82.38	6	P	P	15 44 43.9	+0.9
	baz=195						
K24K	Donnelly Dome	82.38	12	IAmb	IAmb	15 44 44.9	
	comp=Z,14nm,1.0s						
K24K	Donnelly Dome	82.38	12	P	P	15 44 44.0	+0.9
	baz=207						
H20K	Anotleneega Mo	82.43	8	P	P	15 44 44.3	+1.0
	baz=198,SNR=8.2						
WHY	Whitehorse	82.44	18	P	P	15 44 44.5	+0.9
	baz=217						
N30M	Aishikik Lake	82.45	17	P	P	15 44 44.3	+0.7
	baz=215						
NEA2	Nenana	82.48	10	P	P	15 44 44.9	+1.3
	baz=204						
RIDG	Independent Ri	82.51	13	P	P	15 44 45.1	+1.3
	baz=208						
WRH	Wood River Hil	82.54	11	IAmb	IAmb	15 44 45.3	
	comp=Z,13nm,0.9s						
I21K	Tanana	82.55	9	P	P	15 44 45.0	+1.1
	baz=201						
L27K	Beaver Creek,	82.59	14	P	P	15 44 45.4	+1.2
	baz=211						
MLY	Manley	82.60	10	P	P	15 44 45.6	+1.4
	baz=202						
F17K	Baldwin Pennin	82.67	5	IAmb	IAmb	15 44 46.7	
	comp=Z,7.9nm,0.9s						
F17K	Baldwin Pennin	82.67	5	P	P	15 44 45.9	+1.4
	baz=192						
HDA	Harding Lake	82.69	11	IAmb	IAmb	15 44 46.0	
	comp=Z,8.7nm,0.8s						
HDA	Harding Lake	82.69	11	P	P	15 44 45.6	+0.9
	baz=206,SNR=6.7						
R33M	Jennings River	82.71	20	P	P	15 44 46.4	+1.3
	baz=221						
P33M	Teslin, Yukon	82.73	19	P	P	15 44 45.8	+0.7
	baz=219						
CCB	Clear Creek Bu	82.75	11	IAmb	IAmb	15 44 46.1	
	comp=Z,12nm,0.7s						
G19K	Purcell Mounta	82.79	7	IAmb	IAmb	15 44 47.3	
	comp=Z,7.9nm,0.8s						
G19K	Purcell Mounta	82.79	7	P	P	15 44 46.5	+1.3
	baz=196,SNR=10.0						
N31M	Braeburn, Yuko	82.84	17	P	P	15 44 46.7	+1.1
	baz=216						
PDAR	Pinedale Array	82.87	42	P	P	15 44 47.8	+1.3
	comp=Z,1.5nm,0.7s,baz=219,slow=3.0,SNR=19						
	comp=Z,1.5nm,0.7s						
PDAR	Pinedale Array	82.87	42		P	15 44 46.8	+0.4
H21K	Melozitna Rive	82.87	9	P	P	15 44 46.6	+1.0
	baz=200						
YHL	Hebgen Lake	82.89	39	IAmb	IAmb	15 45 16.1	
	comp=Z,14nm,1.2s						
M29M	Somme Creek	82.89	16	P	P	15 44 46.9	+0.9
	baz=214						
SCRK	Sand Creek	82.90	13	P	P	15 44 47.0	+1.0
	baz=209,SNR=6.5						
I23K	Minto, Yukon-K	82.94	10	IAmb	IAmb	15 44 51.5	
	comp=Z,25nm,1.8s						
I23K	Minto, Yukon-K	82.94	10	P	P	15 44 46.4	+0.5
	baz=204						
COLA	College	82.95	11	P	P	15 44 41.5	-4.5
COLA	College	82.95	11	P	P	15 44 46.8	+0.9
	baz=205						
COLA	College	82.95	11	P	P	15 44 46.0	+0.1
COLA				PcP	PcP	15 44 50.7	+0.2
COLA				pP	pP	15 44 59.1	-4.5
COLA				sP	sP	15 45 05.2	-5.5
F18K	Selawik	82.97	6	P	P	15 44 47.1	+1.1
	baz=194,SNR=6.3						
IL31		83.03	11	IAmb	IAmb	15 44 47.6	
	comp=Z,22nm,1.6s						
ILAR	Eielson Array	83.03	11	P	P	15 44 46.5	+0.1
	comp=Z,2.1nm,0.5s,baz=231,slow=6.2,SNR=53						
	comp=Z,2.1nm,0.5s						
ILAR	Eielson Array	83.03	11		P	15 44 46.9	+0.5
IMAR	Indian Mountai	83.05	8	P	P	15 44 47.6	+1.1
J25K	Salcha River,	83.18	12	IAmb	IAmb	15 44 48.8	
	comp=Z,5.8nm,0.8s						
J25K	Salcha River,	83.18	12	P	P	15 44 48.1	+0.8
	baz=207						
POKR	Poker Plat Res	83.25	11	P	P	15 44 48.1	+0.6
	baz=205						
H22K	Ishtalitna Cre	83.31	9	P	P	15 44 49.0	+1.1
	baz=202						
N32M	Quiet Lake	83.38	19	P	P	15 44 49.1	+0.8
	baz=219						
F19K	Shaleruckik Mo	83.38	6	IAmb	IAmb	15 44 50.0	
	comp=Z,10nm,0.8s						
F19K	Shaleruckik Mo	83.38	6	P	P	15 44 49.2	+1.0
	baz=195						
M30M	Minto, Yukon	83.45	16	P	P	15 44 50.1	+1.4
	baz=216						
H23K	Yukon River	83.53	10	P	P	15 44 50.5	+1.5
	baz=203						
L29M	L29M	83.53	15	IAmb	IAmb	15 44 51.4	
	comp=Z,9.0nm,0.9s						
L29M	L29M	83.53	15	P	P	15 44 50.6	+1.4
	baz=214						
G21K	Allakaket	83.59	8	IAmb	IAmb	15 44 51.4	
	comp=Z,10nm,0.9s						
G21K	Allakaket	83.59	8	P	P	15 44 50.8	+1.6
	baz=200,SNR=8.6						
E18K	Tukpahlearik C	83.69	5	IAmb	IAmb	15 44 51.9	
	comp=Z,13nm,0.8s						
E18K	Tukpahlearik C	83.69	5	P	P	15 44 51.0	+1.2
	baz=193,SNR=22						
HEH	HeiHe	83.69	326	*e*P	P	15 44 49.8	-0.3
HEH				pmax	pmax		
	comp=Z,4.0nm,0.9s						
D17K	Noatak River	83.77	4	P	P	15 44 51.5	+1.4
	baz=190,SNR=9.0						
M31M	Drury Creek, Y	83.81	17	P	P	15 44 51.5	+0.9
	baz=218						
F20K	Avaraart Lake	83.82	7	P	P	15 44 51.2	+0.8
	baz=197						
H24K	Noodor Dome	83.82	10	P	P	15 44 51.5	+0.9
	baz=205						
PRP	Porcupine Dome	83.96	11	IAmb	IAmb	15 44 53.0	
	comp=Z,13nm,0.8s						
PRP	Porcupine Dome	83.96	11	P	P	15 44 52.0	+0.6
	baz=207,SNR=9.3						
WTLY	Watson Lake, Y	83.98	21	P	P	15 44 52.3	+0.8
	baz=223						
E19K	Redstone River	84.04	6	P	P	15 44 52.4	+0.8
	baz=196,SNR=18						
RDOG	Red Dog Mine	84.13	4	IAmb	IAmb	15 44 54.1	
	comp=Z,8.1nm,1.0s						
RDOG	Red Dog Mine	84.13	4	P	P	15 44 53.0	+1.0
	baz=190						
C16K	Lisburne Hills	84.20	3	P	P	15 44 52.9	+0.6
	baz=188						
I26K	Coal Creek Min	84.25	12	P	P	15 44 53.4	+0.7
	baz=209						
G22K	Bettles	84.25	9	P	P	15 44 53.6	+1.1
	baz=201,SNR=5.1						
F21K	Alatna River	84.26	8	IAmb	IAmb	15 44 54.5	
	comp=Z,7.2nm,0.8s						
F21K	Alatna River	84.26	8	P	P	15 44 53.4	+0.7
	baz=200,SNR=9.1						
G23K	Bananza Creek	84.27	9	IAmb	IAmb	15 44 54.7	
	comp=Z,9.2nm,0.9s						
G23K	Bananza Creek	84.27	9	P	P	15 44 53.9	+1.1
	baz=203,SNR=6.0						
K29M	Barlow Dome	84.30	15	P	P	15 44 53.5	+0.4
	baz=215						
MAYO	Mayo, Yukon	84.52	16	P	P	15 44 54.5	+0.4
	baz=216						
C17K	DeLong Mountai	84.53	4	P	P	15 44 54.9	+0.8
	baz=190						
J29N	Klondike Camp	84.63	15	IAmb	IAmb	15 45 26.3	
	comp=Z,7.2nm,0.9s						
J29N	Klondike Camp	84.63	15	P	P	15 44 54.9	+0.2
	baz=214						
G24K	Hadweenzic Riv	84.68	10	P	P	15 44 55.8	+1.0
	baz=205						
COLD	Coldfoot	84.72	9	IAmb	IAmb	15 44 57.5	
	comp=Z,11nm,1.0s						
COLD	Coldfoot	84.72	9	P	P	15 44 56.0	+1.0
	baz=203,SNR=7.2						
I27K	Kandik River	84.83	13	P	P	15 44 56.4	+0.8
	baz=211						
C18K	Utukok River	84.84	5	P	P	15 44 55.7	+0.1
	baz=192						
E20K	Nigu River	84.92	6	P	P	15 44 56.7	+0.6
	baz=197						
D19K	Kuna River	84.96	6	P	P	15 44 56.5	+0.3
	baz=195						
G25K	Bearman Lake	84.97	11	P	P	15 44 57.5	+1.3
	baz=206						
I28M	Miner Creek	85.06	13	P	P	15 44 57.9	+1.1
I28M	Miner Creek	85.06	13	P	P	15 44 58.1	+1.2
	baz=212						
H03S2	Juan Fernandez	85.15	124	T	T	17 19 08.9	
	baz=250						
H03S1	Juan Fernandez	85.17	124	T	T	17 18 52.6	
	baz=250						
H03S3	Juan Fernandez	85.17	124	T	T	17 19 03.5	
	baz=250						
J30M	Hart River	85.20	15	P	P	15 44 58.4	+0.8
	baz=216						

H03N2	**Juan Fernandez** baz=255	**85.26**	**123**	T		T		17 18 55.5
H03N3	**Juan Fernandez** baz=255	**85.26**	**123**	T		T		17 18 58.7
H03N1	**Juan Fernandez** baz=255	**85.27**	**123**	T		T		17 19 04.8
D20K	**Etivluk River** baz=196,SNR=10	**85.32**	**6**	P		**P**		**15 44 58.6 +0.6**
E22K	**Anaktuvuk Pass**	**85.34**	**8**			**P**		**15 44 59.7 +1.6**
E22K	**Anaktuvuk Pass** baz=201,SNR=8.7	**85.34**	**8**	P		**P**		**15 44 58.9 +0.7**
F24K	**Squaw Lake** baz=205	**85.35**	**10**	P		**P**		**15 44 58.9 +0.7**
E21K	**Killik River** baz=199	**85.35**	**7**	P		**P**		**15 44 59.3 +1.1**
I29M	**Ogilvie Camp,** baz=214	**85.36**	**14**	P		**P**		**15 44 58.8 +0.5**
H27K	**Steamboat Moun** baz=211	**85.39**	**13**	P		**P**		**15 44 59.4 +1.0**
C19K	**Lookout Ridge**	**85.42**	**5**	P		**P**		**15 45 00.2 +1.7**
C19K	**Lookout Ridge** baz=194,SNR=8.5	**85.42**	**5**	P		**P**		**15 44 59.1 +0.6**
G26K	**Porcupine Rive** baz=209	**85.56**	**11**	P		**P**		**15 45 00.1 +1.0**
E23K	**Chandalar** baz=203	**85.58**	**9**	P		**P**		**15 45 00.4 +1.0**
HNS	**HongShan**	**85.58**	**311**	⇑P		**P**		**15 44 59.1 -0.9**
HNS	comp=Z,6.0nm,1.2s			pmax		pmax		
KOTAN	**Kotaneelee Air** baz=227	**85.68**	**22**	P		**P**		**15 45 00.4 +0.5**
I30M	**Mount Dempster** comp=Z,4.7nm,0.8s	**85.71**	**15**	IAmb		IAmb		15 45 05.7
I30M	**Mount Dempster** baz=216	**85.71**	**15**	P		**P**		**15 45 00.8 +0.7**
E24K	**Your Creek** baz=204	**85.77**	**9**	P		**P**		**15 45 01.2 +0.9**
F25K	**Christian Rive** baz=207	**85.80**	**10**	P		**P**		**15 45 01.6 +1.2**
G27K	**Doyon Strip** baz=211	**85.86**	**12**	P		**P**		**15 45 01.5 +0.7**
C21K	**Knifeblade Rid** baz=198,SNR=5.1	**85.94**	**7**	P		**P**		**15 45 02.0 +1.0**
H29M	**Whitestone** baz=214	**86.06**	**14**	P		**P**		**15 45 02.5 +0.7**
TOLK	**Toolik Lake Re** baz=203	**86.12**	**9**	P		**P**		**15 45 02.8 +0.8**
F26K	**Sheenjek River** baz=208	**86.15**	**11**	P		**P**		**15 45 03.4 +1.2**
D23K	**Nanushuk River** baz=202	**86.27**	**8**	P		**P**		**15 45 03.9 +1.2**
E25K	**Arctic Village** baz=207	**86.28**	**10**	P		**P**		**15 45 03.4 +0.6**
A19K	**Wainwright** baz=192	**86.38**	**4**	P		**P**		**15 45 04.0 +0.8**
B21K	**Ikpikpuk River** baz=198	**86.40**	**7**	P		**P**		**15 45 04.2 +0.9**
B20K	**Meade River** baz=196	**86.51**	**6**	P		**P**		**15 45 04.5 +0.7**
EPYK	**Eagle Plains** baz=215	**86.57**	**14**	P		**P**		**15 45 04.6 +0.3**
H31M	**Peel River** baz=218	**86.69**	**15**	P		**P**		**15 45 04.6 -0.3**
D24K	**Happy Valley** baz=204	**86.70**	**9**	P		**P**		**15 45 05.2 +0.4**
G29M	**Pine Creek** baz=214	**86.72**	**13**	P		**P**		**15 45 05.3 +0.4**
F28M	**Old Crow** baz=212	**86.91**	**12**	P		**P**		**15 45 06.0 +0.1**
ENH	**Enshi**	**86.95**	**302**	P		**P**		**15 45 06.2 -0.8**
ENH	**Enshi** comp=Z,8.2nm,0.7s	**86.95**	**302**	IAmb		IAmb		15 45 08.2
ENH	**Enshi**	**86.95**	**302**	P		**P**		**15 45 07.2 +0.2**
ENH				pP		**pP**		**15 45 20.4 -4.5**
E27K	**Coleen River** baz=211	**87.06**	**11**	P		**P**		**15 45 07.3 +0.7**
C23K	**Itkillik River** baz=202	**87.09**	**8**	P		**P**		**15 45 06.4 -0.2**
G30M	**tAoh Zraii Nji** comp=Z,11nm,1.2s	**87.18**	**14**	IAmb		IAmb		15 45 08.7
G30M	**tAoh Zraii Nji** baz=216	**87.18**	**14**	P		**P**		**15 45 07.5 +0.3**
MAW	**Mawson** comp=Z,8.2nm,0.9s,baz=117,slow=4.5,SNR=2.5 comp=Z,8.2nm,0.9s	**87.18**	**199**	P		**P**		**15 45 07.9 +0.6**
B22K	**Teshekpuk Lake** baz=200	**87.22**	**7**	P		**P**		**15 45 08.2 +1.0**
D25K	**Kavik River** baz=206	**87.23**	**9**	P		**P**		**15 45 08.0 +0.6**
C24K	**Franklin Bluff** baz=204	**87.24**	**8**	P		**P**		**15 45 08.1 +0.7**
G31M	**Satah River** baz=218	**87.59**	**15**	P		**P**		**15 45 09.9 +0.8**
A22K	**Sinclair Lake** baz=198	**87.68**	**6**	P		**P**		**15 45 10.1 +0.6**
F30M	**Barrier River** baz=216	**87.79**	**14**	P		**P**		**15 45 10.5 +0.4**
E28M	**Babbage River** baz=213	**87.82**	**12**	P		**P**		**15 45 10.8 +0.6**
A21K	**Barrow** baz=196	**87.83**	**5**	P		**P**		**15 45 10.9 +0.8**
C27K	**Jago River** baz=209	**87.93**	**10**	P		**P**		**15 45 11.5 +0.7**
E29M	**Blow River** baz=214	**87.97**	**13**	P		**P**		**15 45 12.3 +1.4**
WRGLY	**Wrigley** baz=228	**87.98**	**20**	P		**P**		**15 45 12.2 +1.1**
C26K	**Camden Bay** baz=208	**87.99**	**10**	P		**P**		**15 45 12.3 +1.3**
GYA	**Guiyang**	**88.03**	**298**	⇑P		**P**		**15 45 13.4 +1.1**
GYA	comp=Z,11nm,1.0s			pmax		pmax		
F31M	**Tsiigehtchic** comp=Z,7.7nm,0.9s	**88.13**	**14**	IAmb		IAmb		15 45 13.9
F31M	**Tsiigehtchic** baz=218	**88.13**	**14**	P		**P**		**15 45 12.4 +0.8**
D28M	**Stokes Point** baz=213	**88.58**	**12**	P		**P**		**15 45 14.6 +0.8**
INK	**Inuvik** baz=218	**88.86**	**14**	P		**P**		**15 45 16.5 +1.4**
HHC	**Hu-ho-hao-te**	**89.17**	**313**	*e*P		**P**		**15 45 19.6 +2.2**
HHC	comp=Z,13nm,0.6s			pmax		pmax		
PLCA	**Paso Flores** comp=Z,31nm,18.5s,baz=150,slow=31	**89.37**	**132**	LR		LR		16 17 59.4
YKA	**Yellowknife Ar** comp=Z,0.3nm,0.7s,baz=250,slow=4.9,SNR=4.5 comp=Z,0.3nm,0.7s	**90.71**	**23**	P		**P**		**15 45 24.8 +0.9**
C36M	**Paulatuk** baz=227	**91.96**	**16**	P		**P**		**15 45 30.1 +0.7**
PZH	**PanZhiHua**	**92.25**	**297**	P		**P**		**15 45 33.3 +1.3**
VNA3	**Neumayer Olymp**	**92.34**	**175**	⇑PcP		P		15 45 24.6 -6.9
CMAR	**Chiang Mai Arr** comp=Z,2.1nm,0.4s,baz=88,slow=2.6,SNR=19	**92.50**	**288**	P		**P**		**15 45 33.7 +0.5**
CMAR	comp=Z,3.8nm,20.3s,baz=340,slow=33 comp=Z,2.1nm,0.4s			LR		LR		16 22 47.8
CMAR	**Chiang Mai Arr**	**92.50**	**288**			**P**		**15 45 32.8 -0.4**
CHTO	**Chiang Mai**	**92.59**	**289**	P		**P**		**15 45 33.3 -0.3**
CHTO	**Chiang Mai**	**92.59**	**289**			**P**		**15 45 33.2 -0.4**
CHTO	comp=Z,3.8nm,0.8s			IAmb		IAmb		15 45 35.2
VNA2	**Neumayer--Watz**	**92.84**	**176**	⇑PcP		P		15 45 25.0 -8.8
VNA1	**Neumayer--Stat**	**93.04**	**175**	⇓PcP		P		15 45 28.0 -6.6
LZH	**Lanzhou**	**93.30**	**306**	*e*P		**P**		**15 45 34.0 -2.7**
LZH	comp=Z,17nm,1.1s			pP		PcP		15 45 43.4 +6.1
LZH				pmax		pmax		
A36M	**Sachs Harbour** baz=226	**93.50**	**13**	P		**P**		**15 45 37.4 +0.9**
SONM	**Songino Array** comp=Z,0.6nm,0.7s,baz=90,slow=4.4,SNR=4.3 comp=Z,0.6nm,0.7s	**95.05**	**318**	P		**P**		**15 45 44.0 -0.4**
SONM	**Songino Array** comp=Z,5.2nm,1.7s	**95.05**	**318**	IAmb		IAmb		15 46 02.1
TLY	**Talaya** comp=Z,22nm,19.4s,baz=29,slow=33	**97.87**	**321**	LR		LR		16 25 39.2
BVAR	**Borovoye Array** comp=Z,1.2nm,0.8s,baz=4.4,slow=1.9,SNR=3.5	**118.12**	**322**	PKP		**PKPdf**		**15 51 07.5 -0.6**
ARCES	**ARCESS Array B** comp=Z,3.2nm,0.9s,baz=19,slow=1.9,SNR=4.2	**125.10**	**352**	PKP		**PKPdf**		**15 51 20.4 -0.6**
FINES	**FINESS Array B** comp=Z,3.1nm,1.1s,baz=340,slow=10,SNR=3.7	**132.40**	**347**	PKhKP		PKPpre		15 51 24.8
FINES	comp=Z,1.7nm,0.9s,baz=29,slow=4.4,SNR=3.9			PKP		**PKPdf**		**15 51 34.5 -0.5**
OJC	**Ojcow**	**144.10**	**345**	*e*PKP		PKPbc		15 51 55.3 +0.3
KSP	**Ksiaz**	**144.27**	**349**	*e*PKP		**PKPdf**		**15 51 56.3 -0.8**
CLL	**Collm**	**144.31**	**353**			**PKPdf**		**15 51 56.2 -0.9**
OSTC	**Ostas**	**144.56**	**349**	*e*PKP		**PKPdf**		**15 51 57.8 +0.1**
OSTC				*ep*PKP		**sPKPdf**		**15 52 24.9 +1.6**
NIE	**Niedzica**	**144.72**	**344**	*e*PKP		**PKPdf**		**15 51 57.9 0.0**
NIE	**Niedzica**	**144.72**	**344**	PKP		PKPbc		15 51 57.2 +0.2
DPC	**Dobruska-Polom**	**144.73**	**349**	*e*PKP		**PKPdf**		**15 51 57.7 -0.3**
DPC				*ep*PKP		**sPKPdf**		**15 52 25.2 +1.6**
DPC	**Dobruska-Polom**	**144.73**	**349**	PKP		**PKPdf**		**15 51 57.5 -0.5**
BURAR	**Bucovina Array**	**144.76**	**338**	⇓P		**PKPdf**		**15 51 58.0 -0.2**
BURAR	**Bucovina Array**	**144.76**	**338**			**PKPdf**		**15 51 57.7 -0.5**
STEB	**Steborice**	**144.84**	**347**	*e*PKP		**PKPdf**		**15 51 57.8 -0.3**
STEB				*ep*PKP		**sPKPdf**		**15 52 25.1 +1.4**
BRIU	**Brid**	**144.89**	**340**	PKP		**PKPdf**		**15 51 57.7 -0.5**
MUKU	**Mukachevo**	**144.89**	**341**	PKP		**PKPab**		**15 51 57.3 -0.1**
KRLC	**Kraliky**	**144.91**	**348**	*e*PKP		**PKPdf**		**15 51 58.0 -0.3**
KRLC				*ep*PKP		**sPKPdf**		**15 52 25.5 +1.6**
HSKC	**Hora Svate Kat**	**144.95**	**352**	*e*PKP		**PKPdf**		**15 51 58.1 -0.2**
KMBO	**Kilima Mbogo** baz=109,slow=1.9	**145.03**	**244**	PKP		**PKPdf**		**15 51 59.9 0.0**
MORC	**Moravsky Berou**	**145.04**	**347**	⇓P		**PKPdf**		**15 51 59.1 +0.6**
MORC	**Moravsky Berou**	**145.04**	**347**	*e*PKP		**PKPab**		**15 51 57.9 -0.1**
MORC				*e*				15 52 20.4
TESR	**Tescani**	**145.12**	**335**	⇓P		**PKPdf**		**15 51 58.5 -0.2**
LANS	**Liptovska Anna**	**145.18**	**345**	*e*PKP		**PKPdf**		**15 51 59.9 +1.1**
TLCR		**145.23**	**332**	⇑P		**PKPab**		**15 51 58.8 0.0**
ONER	**Baraj Valea Uz**	**145.36**	**335**	⇑P		**PKPab**		**15 51 59.8 +0.5**
MAUC	**Maruska**	**145.36**	**347**	*e*PKP		**PKPab**		**15 51 59.9 +0.7**
MAUC				*ep*PKP		**sPKPdf**		**15 52 27.4 +2.7**
PRU	**Pruhonice**	**145.39**	**351**	*e*PKP		**PKPab**		**15 51 59.0 -0.3**
PANC	**Panciu**	**145.42**	**334**	⇑P		**PKPab**		**15 52 01.1 +1.6**
NKC	**Novy Kostel**	**145.44**	**353**	*e*PKP		**PKPab**		**15 51 59.8 +0.3**
BTNL	**Ternell**	**145.44**	**0**	*d*PKP		**PKPab**		**15 52 01.1 +1.6**
KECS	**Kecovo**	**145.52**	**343**	*e*PKP		**PKPab**		**15 52 00.2 +0.4**
CFR	**Carcaliu**	**145.54**	**332**	⇓P		**PKPbc**		**15 51 59.3 -0.3**
BCLA	**Clavier**	**145.60**	**1**	*d*PKP		**PKPab**		**15 52 00.1 0.0**
VRI	**Vrincioaia**	**145.60**	**334**	⇑P		**PKPdf**		**15 51 59.2 -0.4**
PLOR	**Plostina**	**145.65**	**334**	⇑P		**PKPab**		**15 52 00.3 -0.2**
TPGR	**Topolog**	**145.66**	**332**	⇑P		**PKPab**		**15 52 00.8 +0.3**
VRAC	**Vranov**	**145.68**	**348**	⇓P		**PKPab**		**15 52 01.2 +0.8**
VRAC	**Vranov**	**145.68**	**348**	*e*PKP		**PKPab**		**15 52 00.4 0.0**
VRAC				*e*				15 52 27.6
OZUR		**145.80**	**336**	⇑P		**PKPab**		**15 52 01.8 +0.8**
COVR	**Voineasa-Covas**	**145.84**	**335**	⇓P		**PKPab**		**15 52 01.1 0.0**
JAVC	**Velka Javorina**	**145.88**	**347**	*e*PKP		**PKPab**		**15 52 02.0 +0.8**
KRUC	**Moravsky**	**145.95**	**348**	*e*PKP		**PKPab**		**15 52 01.0 -0.4**
ZVC	**Zvikov**	**145.98**	**351**	*e*PKP		**PKPab**		**15 52 02.2 +0.7**
ZVC				*ep*PKP		**sPKPdf**		**15 52 29.1 +3.4**
DOPR	**Dopca**	**146.06**	**336**	⇑P		**PKPab**		**15 52 02.5 +0.6**
NEHR	**Nehoiu**	**146.14**	**334**	⇑P		**PKPab**		**15 52 01.9 -0.4**
PSZ	**Piszkesteto**	**146.20**	**343**	⇓P		**PKPab**		**15 52 02.8 +0.3**
MLR	**Muntele Rosu**	**146.23**	**335**	⇑P		**PKPab**		**15 52 02.5 -0.3**
MLR	**Muntele Rosu**	**146.23**	**335**			**PKPbc**		**15 52 02.0 0.0**
MARR	**Marisel-Cluj**	**146.30**	**339**	⇑P		**PKPab**		**15 52 02.5 -0.5**
WLF	**Walferdange**	**146.37**	**0**	*d*PKP		**PKiKP**		**15 52 04.2 -0.9**
KHC	**Kasperske Hory**	**146.37**	**351**	*e*PKP		**PKPab**		**15 52 02.7 -0.3**
KHC				*ep*PKP		**sPKPdf**		**15 52 31.3 +4.9**
BRTR	**Keskin Array B** comp=Z,13nm,0.9s,baz=111,slow=1.6,SNR=54	**146.38**	**320**	PKPbc		**PKPbc**		**15 52 02.4 -0.3**
BRTR	**Keskin Array B**	**146.38**	**320**	PKPdf		**PKPdf**		**15 52 01.2 -0.1**
MODS	**Modra-Piesok**	**146.42**	**347**	*e*PKP		**PKiKP**		**15 52 04.5 -0.8**
KIRS	**Kirsehir-Merke**	**146.56**	**319**	⇑P		**PKPbc**		**15 52 03.3 +0.2**
GERES	**GERESS Array B** comp=Z,1.4nm,0.7s,baz=318,slow=1.8,SNR=7.9	**146.63**	**351**	PKPbc		**PKPbc**		**15 52 03.2 +0.2**
VOIR		**146.64**	**336**	⇓P		**PKPab**		**15 52 03.9 -0.4**
TNR	**Turnu Rosu**	**146.76**	**337**	⇑P		**PKPab**		**15 52 03.8 -0.8**
ARR	**Arges**	**146.86**	**336**	⇓P		**PKPab**		**15 52 04.9 -0.3**
CONA	**Conrad Observa** comp=Z,1.6nm,0.5s	**147.14**	**348**	*i* PKP		**PKPbc**		**15 52 04.4 -0.1**
RONA	**Rosalia, Austr** comp=Z,2.3nm,0.5s	**147.27**	**347**	*i* PKP		**PKPbc**		**15 52 05.4 +0.6**
MOA	**Molln** comp=Z,1.1nm,0.4s	**147.51**	**350**	*e*PKP		**PKPbc**		**15 52 05.8 +0.4**
BZS	**Buzias**	**147.74**	**340**	⇑P		**PKPbc**		**15 52 06.4 +0.3**
BIOA	**Bad Ischl, Aus** comp=Z,1.0nm,0.3s	**147.76**	**351**	*e*PKP		**PKPbc**		**15 52 06.1 0.0**
MORH	**Mrgy, Hungar**	**148.10**	**344**	⇓P		**PKiKP**		**15 52 07.6 -1.1**
ELND	**Elena**	**148.31**	**332**	⇓P		**PKPbc**		**15 52 06.9 -0.7**
RETA	**Reutte** comp=Z,0.6nm,0.3s	**148.33**	**354**	*e*PKP		**PKPbc**		**15 52 07.3 -0.3**
KBA	**Koelnbreinsper** comp=Z,0.9nm,0.5s	**148.41**	**351**	*i* PKP		**PKPbc**		**15 52 07.9 -0.1**
MOTA	**Moosalm** comp=Z,0.9nm,0.5s	**148.44**	**354**	*e*PKP		**PKPbc**		**15 52 07.3 -0.7**
MDVR	**Moldovita**	**148.44**	**339**	⇑P		**PKPab**		**15 52 11.4 0.0**
WTTA	**Wattenberg** comp=Z,4.4nm,0.4s	**148.46**	**353**	*i* PKP		**PKPbc**		**15 52 07.9 -0.2**
PLVB	**Pleven**	**148.50**	**334**	⇓P		**PKiKP**		**15 52 09.4 -0.3**
SOKA	**Soboth** comp=Z,3.4nm,1.1s	**148.50**	**348**	*i* PKP		**PKPbc**		**15 52 07.3 -0.9**
DAVA	**Damuels** comp=Z,2.9nm,0.6s	**148.60**	**355**	*e*PKP		**PKPbc**		**15 52 07.9 -0.6**
MMAI	**Mount Meron Ar** comp=Z,4.4nm,0.6s,baz=50,slow=2.6,SNR=9.3	**148.67**	**308**	PKPbc		**PKiKP**		**15 52 09.6 -0.8**
FETA	**Feichten** comp=Z,4.6nm,1.0s	**148.79**	**354**	*i* PKP		**PKPbc**		**15 52 08.4 -0.6**
MYKA	**Terra Mystica** comp=Z,1.0nm,0.3s	**148.80**	**350**	*i* PKP		**PKPbc**		**15 52 08.5 -0.4**
ABTA	**Abfaltersbach** comp=Z,2.8nm,0.8s	**148.85**	**352**	*e*PKP		**PKPbc**		**15 52 08.7 -0.3**
BLY	**Banja Luka**	**149.84**	**344**	⇑P		**PKiKP**		**15 52 13.1 +0.7**
PDG	**Podgorica**	**151.35**	**340**	⇑P		**PKiKP**		**15 52 15.1 -0.4**
ESDC	**Sonseca Array** comp=Z,0.3nm,0.4s,baz=62,slow=3.0,SNR=3.0	**154.72**	**19**	PKP		**PKPdf**		**15 52 14.2 +0.1**
ESDC	comp=Z,0.9nm,1.1s,baz=334,slow=4.5,SNR=4.1			PKPbc		**PKiKP**		**15 52 22.9 +0.2**
ESDC	comp=Z,0.5nm,0.8s,baz=325,slow=5.1,SNR=4.5			PKPab		**PKPab**		**15 52 38.4 +0.7**
TORD	**Torodi Ar. Bea** comp=Z,0.4nm,0.8s,baz=300,slow=2.8,SNR=2.2	**174.76**	**121**	PKP		**PKPdf**		**15 52 31.7 -0.3**
TORD	comp=Z,0.4nm,0.6s,baz=243,slow=5.8,SNR=5.1			PKPab		**PKPab**		**15 54 05.8 -0.5**

*AEIC **22** 15:36:55.1±1.1,70°.04N±0°.05×142°.8W±0°.1,h12km±7km, Error ellipse: s-maj=7.8km s-min=5.7km az=143.0*

NEIC 22 15:36:55.3±0.9,70°.02N±0°.05×142°.85W±0°.03,h10km±2km, ML2.6/40,ML2.5(AEIC),Error ellipse: s-maj=8.1km s-min=3.0km az=177.0,Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
C27K	**Jago River**	**0.49**	**218**		Pg	15 37 05.0	+0.1
D25K	**Kavik River**	**1.42**	**242**		Pn	15 37 21.0	-0.1
D25K	comp=E,48nm,0.8s			IAML		15 38 11.0	
E28M	**Babbage River**	**1.84**	**139**		Pn	15 37 27.6	+0.7
E27K	**Coleen River**	**1.89**	**166**	Pn	Pn	15 37 27.6	-0.1
C24K	**Franklin Bluff**	**2.05**	**264**		Pn	15 37 29.3	-0.3
C24K	comp=N,30nm,0.8s			IAML		15 38 44.9	
C24K	comp=E,30nm,0.6s			IAML		15 38 45.2	
E25K	**Arctic Village**	**2.14**	**208**	Pn	Pn	15 37 30.9	-0.1
E25K	comp=E,47nm,1.1s			IAML		15 38 52.5	
D24K	**Happy Valley**	**2.27**	**250**	Pn	Pn	15 37 33.1	+0.4
D24K	comp=E,40nm,1.0s			IAML		15 38 31.7	
D24K	comp=N,34nm,0.8s			IAML		15 38 34.2	
F26K	**Sheenjek River**	**2.38**	**192**	Pn	Pn	15 37 32.7	-1.6
F26K	comp=E,34nm,0.8s			IAML		15 39 06.6	
F26K	comp=N,26nm,0.8s			IAML		15 39 06.9	
E29M	**Blow River**	**2.41**	**130**	Pn	Pn	15 37 34.5	-0.2
E29M	comp=E,26nm,0.8s			IAML		15 39 03.4	
E29M	comp=N,38nm,0.7s			IAML		15 39 07.2	
F25K	**Christian Rive**	**2.64**	**204**	Pn	Pn	15 37 37.5	-0.3
F28M	**Old Crow**	**2.65**	**154**	Pn	Pn	15 37 37.5	-0.5
F28M	comp=E,42nm,0.8s			IAML		15 39 07.9	
F28M	comp=N,27nm,0.6s			IAML		15 39 10.5	
D23K	**Nanushuk River**	**2.95**	**253**	Pn	Pn	15 37 42.7	+0.5
D23K	comp=N,25nm,0.6s			IAML		15 39 33.0	
D23K	comp=E,29nm,0.7s			IAML		15 39 34.1	
F24K	**Squaw Lake**	**3.11**	**219**	Pn	Pn	15 37 43.6	-0.7
F24K	comp=N,17nm,0.7s			IAML		15 39 27.2	
G29M	**Pine Creek**	**3.59**	**148**	Pn	Pn	15 37 51.8	+0.9
G29M					Sb	15 38 40.4	-1.9
B22K	**Teshekpuk Lake**	**3.62**	**280**	Pn	Pn	15 37 51.3	+0.1
INK	**Inuvik**	**3.75**	**113**	Pn	Pn	15 37 53.0	0.0
H27K	**Steamboat Moun**	**3.84**	**172**	Pn	Pn	15 37 54.3	0.0
H27K	comp=N,10nm,0.6s			IAML		15 39 58.6	
B21K	**Ikpikpuk River**	**4.10**	**270**		Sn	15 38 47.0	+1.4
H29M	**Whitestone**	**4.17**	**154**	Pn	Pn	15 38 00.2	+1.4
H29M					Sn	15 38 49.1	+1.6
H29M	comp=N,13nm,0.8s			IAML		15 40 01.8	
E21K	**Killik River**	**4.26**	**254**		Sn	15 38 48.5	-1.4
EPYK	**Eagle Plains**	**4.32**	**145**		Sn	15 38 52.1	+0.9
I29M	**Ogilvie Camp,**	**4.99**	**158**		Pb	15 38 21.9	-0.6
I29M	comp=E,6.9nm,1.1s			IAML		15 40 32.1	
D20K	**Etivluk River**	**5.04**	**261**	Pn	Pn	15 38 11.2	+0.3

DJA 22 15:37:21.0±0.8,11°.5E±°,h10km,M3.5/13, mb3.0/1,MLv3.7/13,South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGBI	**Denpasar**	**2.11**	**0**	P	Pn	15 37 56.2	-0.2
DNP	**Denpasar**	**2.25**	**2**	P	Pn	15 37 57.3	-1.0
RTBI	**Rangdo, Negare**	**2.47**	**355**	P	Pn	15 38 00.6	-0.8
KHKI	**Kahang-Kahang**	**2.60**	**10**	P	Pn	15 38 03.4	+0.3
KHKI				S	Sn	15 38 37.1	+2.3
JAGI	**Jajag, Banyuwa**	**2.64**	**338**	P	Pn	15 38 03.5	-0.2
JAGI				S	Sn	15 38 35.2	-0.6
PLAI	**Plampang**	**3.34**	**51**	P	Pn	15 38 12.9	-0.4
BLJI	**Banyuglugur**	**3.52**	**334**	P	Pn	15 38 16.3	+0.5
DBNI	**Kabupaten Domp**	**3.96**	**53**	P	Pn	15 38 22.3	+0.5
KMMI	**Kalianget**	**4.04**	**343**	P	Pn	15 38 23.8	+0.9
WBSI	**Waikabubak, Su**	**4.38**	**73**	P	Pn	15 38 26.0	-1.7
SNJI	**Sawahan-Nganju**	**4.58**	**313**	P	Pn	15 38 30.6	+0.1
LBFI	**Labuhan Bajo,**	**5.28**	**63**	P	Pn	15 38 39.6	-0.5

*NNC **22** 16:03:55.3±2.5,37°.83N×71°.77E,h164km±35km,mb2.8, mpv3.5,Error ellipse: s-maj=24.4km s-min=14.6km az=28.0*

ISC 22 16:03:47.2±0.9,37°.35N±0°.07×72°.0E±0°.1,h150km,n14, σ3.941/26,2C-6D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMU	**Jammu**	**5.12**	**152**	*e*P	**Pn**	**16 05 05.1**	**+2.7**
JMU				*e*S	**Sn**	**16 06 00.6**	**-0.3**
JMU	comp=E,482nm,0.5s			IAML		16 06 07.5	
JMU	comp=N,484nm,0.5s			IAML		16 06 13.3	
ALCI	**Alchi Leh**	**5.26**	**125**	*e*P	**Pn**	**16 05 06.2**	**+1.7**
ALCI				*e*S	**Sn**	**16 06 03.9**	**-0.8**
ALCI	comp=E,51nm,0.4s			IAML		16 06 07.5	
ALCI	comp=N,47nm,0.3s			IAML		16 06 08.2	
AAK	**Ala-Archa** comp=N,1.7nm,0.5s	**5.62**	**19**	⇑P	**Pn**	**16 05 11.5**	**+2.6**
AAK	comp=N,4.4nm,0.7s			⇓S	**Sn**	**16 06 12.9**	**+0.1**
TSSA	**Tissa**	**5.65**	**142**	*e*P	**Pn**	**16 05 11.3**	**+1.8**
TSSA				*e*S	**Sn**	**16 06 11.7**	**-2.1**
TSSA	comp=E,67nm,0.4s			IAML		16 06 15.6	
TSSA	comp=N,74nm,0.5s			IAML		16 06 17.7	
THN	**Thein Dam**	**5.80**	**147**	*e*P	**Pn**	**16 05 14.5**	**+3.2**
THN				*e*S	**Sn**	**16 06 15.6**	**-1.4**
THN	comp=E,55nm,0.5s			IAML		16 06 19.5	
THN	comp=N,54nm,0.3s			IAML		16 06 19.9	
KK31	**Karatay Array** comp=N,5.9nm,0.4s,baz=166,slow=12,SNR=64	**5.85**	**349**	⇓P	**Pn**	**16 05 13.6**	**+1.7**
KK31	comp=N,7.9nm,0.3s,baz=169,slow=16,SNR=17			⇑S	**Sn**	**16 06 15.3**	**-2.8**
DHRM	**DHARAMSHALA**	**6.21**	**144**	*e*P	**Pn**	**16 05 19.1**	**+2.2**
DHRM				*e*S	**Sn**	**16 06 24.6**	**-2.4**
DHRM	comp=E,1μm,0.6s			IAML		16 06 29.5	
DHRM	comp=N,719nm,0.6s			IAML		16 06 29.8	
BHK	**Bhakra**	**6.97**	**147**	*e*P	**Pn**	**16 05 31.1**	**+4.2**
BHK				*e*S	**Sn**	**16 06 46.1**	**+1.1**
BHK	comp=N,324nm,0.2s			IAML		16 06 47.1	
BHK	comp=E,295nm,0.2s			IAML		16 06 49.5	
SMLA	**Simla**	**7.55**	**144**	*e*P	**Pn**	**16 05 35.9**	**+1.4**
SMLA				*e*S	**Sn**	**16 06 53.5**	**-5.3**
SMLA	comp=N,324nm,0.3s			IAML		16 07 01.2	
SMLA	comp=E,274nm,0.4s			IAML		16 07 03.4	
KLP	**Kalpa**	**7.78**	**136**	*e*P	**Pn**	**16 05 39.6**	**+1.7**
KLP				*e*S	**Sn**	**16 07 01.3**	**-3.6**
KLP	comp=E,40nm,0.2s			IAML		16 07 05.4	
KLP	comp=N,38nm,0.6s			IAML		16 07 07.1	
KUDL	**Kundal**	**9.93**	**156**	*e*S	**Sn**	**16 07 49.7**	**-6.6**
LGTI	**Lohaghat**	**10.43**	**137**	*e*S	**Sn**	**16 08 01.6**	**-7.0**
AB31	**Akbulak array** comp=N,0.3nm,0.3s,baz=266,slow=31,SNR=24	**14.75**	**328**	⇓P	**Pn**	**16 07 09.7**	**+1.3**
AB31	comp=N,2.4nm,0.7s,baz=159,slow=21,SNR=7.3			⇓S	**Sn**	**16 09 48.4**	**-3.6**
AKTO	**Aktyubinsk** comp=N,4.1nm,0.9s	**16.46**	**327**	⇓P	**P**	**16 07 32.5**

KLF				smax	smax	16 06 06.8	
	comp=Z,1.7nm,0.2s						
KLF				SG	Sn	16 06 08.6	0.0
TOF	**Tornio**	**2.42**	**136**	PG	Pn	16 06 00.7	+1.6
TOF				smax	smax	16 06 30.7	
	comp=Z,1.3nm,0.2s						
TOF				SB	Sb	16 06 31.8	-1.1
ARA0	**ARCESS Array S**	**2.57**	**47**	SB	Sb	16 06 36.0	-1.2
RNF	**Rovaniemi**	**2.59**	**116**	PG	Pb	16 06 03.8	-1.9
RNF				SG	Sb	16 06 38.2	+0.3
RAJF	**Raja-Jooseppi**	**3.10**	**75**	SG	Sb	16 06 54.9	+2.4
KEV	**Kevo**	**3.12**	**49**	SN	Sn	16 06 48.3	+1.7
OUL	**Oulu**	**3.61**	**138**	SG	Sb	16 07 08.3	+1.2
KU6	**Riekki**	**4.24**	**111**	PG	Pb	16 06 35.6	+1.9

IDC ***22*** *16:06:13.5±2.5,6˚.92S×129˚.43E,h154km×34km,mb3.3/2, mbtmp3.7/6,Error ellipse: s-maj=62.0km s-min=15.7km az=93.0*

ISC 22 16:06:12.1±0.9,7˚.09S±0˚.06×129˚.5E±0˚.2,h139km,n6, σ2.87/10,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.42**	**16**	P	**Pn**	**16 07 46.0**	**+1.5**
	4.0nm,0.2s,baz=119,slow=6.0,SNR=20						
SIJI				S	**Sn**	**16 08 54.1**	**-2.5**
	2.8nm,0.4s,baz=254,slow=23,SNR=6.7						
FITZ	**Fitzroy Crossi**	**11.57**	**199**	P	**Pn**	**16 08 55.9**	**+2.7**
	0.8nm,0.3s,baz=3.9,slow=8.2,SNR=17						
FITZ				S	**Sn**	**16 10 57.0**	**-3.9**
	1.1nm,0.4s,baz=283,slow=17,SNR=5.6						
WRA	**Warramunga Arr**	**13.61**	**160**	P	**Pn**	**16 09 20.9**	**+1.4**
	0.3nm,0.7s,baz=339,slow=11,SNR=21						
WRA				S	**Sn**	**16 11 47.4**	**-2.6**
	0.3nm,0.3s,baz=319,slow=28,SNR=5.1						
ASAR	**Alice Springs**	**17.01**	**166**	P	**Pn**	**16 10 04.9**	**+3.1**
	3.1nm,0.7s,baz=340,slow=9.4,SNR=51						
ASAR				S	**S**	**16 13 09.6**	**-2.1**
	0.3nm,0.5s,baz=346,slow=26,SNR=6.5						
MKAR	**Makanchi Array**	**68.04**	**327**	P	**P**	**16 16 55.6**	**-0.9**
	0.5nm,0.5s,baz=122,slow=7.7,SNR=7.1						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**72.33**	**329**	P	**P**	**16 17 20.9**	**-1.7**
	0.3nm,0.4s,baz=124,slow=4.8,SNR=5.5						
	0.3nm,0.4s						

KOLA ***22*** *16:06:46.8,67˚.67N×33˚.72E,h0km,ML1.7,Error ellipse: s-maj=6.7km s-min=4.0km az=120.0,Khibiny, mines Kirovsk, Yukspor*

HEL 22 16:06:45.2±0.9,67˚.69N×33˚.97E,h0km,ML1.4, Suspected explosion,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA	**Apatity**	**0.25**	**240**	P	Pg	16 06 49.5	-0.4
APA0	**Apatity Array**	**0.38**	**257**	P	Pg	16 06 51.8	-0.7
APA0				S	Sg	16 06 55.9	-1.6
VRF	**Varrio**	**1.66**	**274**	PG	Pn	16 07 15.2	-0.3
VRF				smax	smax	16 07 35.0	
	comp=Z,3.7nm,0.2s						
VRF				SG	Sn	16 07 35.0	-2.6
OLKF	**Oulanka, Finla**	**2.26**	**235**	PB	Pn	16 07 23.7	-0.1
OLKF				smax	smax	16 07 52.1	
	comp=Z,1.7nm,0.2s						
OLKF				SG	Sb	16 07 54.8	-0.6
RAJF	**Raja-Jooseppi**	**2.26**	**293**	PG	Pn	16 07 25.1	+1.3
RAJF				SB	Sn	16 07 51.8	-0.6
KU6	**Riekki**	**2.32**	**226**	PG	Pb	16 07 26.4	-1.5
	baz=46						
KU6				smax	smax	16 07 53.9	
	comp=Z,0.7nm,0.2s						
MSF	**Maaselka**	**2.65**	**230**	PG	Pb	16 07 32.5	-0.9
MSF				SG	Sb	16 08 07.0	+0.5
VADS	**Vadso**	**2.95**	**328**	S	Sn	16 08 09.2	-0.2
KEV	**Kevo**	**3.28**	**312**	PN	Pn	16 07 39.1	+1.4
KEV				SN	Sn	16 08 16.8	-0.5
ARA0	**ARCESS Array S**	**3.61**	**305**	PN	Pn	16 07 43.0	+0.7
ARA0				SN	Sn	16 08 24.8	-0.8
ARCES	**ARCESS Array B**	**3.61**	**305**	P	Pn	16 07 42.7	+0.4
ARCES				S	Sn	16 08 23.9	-1.7
RMF	**Romuvaara**	**3.86**	**207**	PN	Pn	16 07 46.1	+0.3
HEF	**Hetta**	**3.94**	**285**	SN	Sn	16 08 28.3	-5.3
KTK1	**Kautokeino**	**4.19**	**293**	SG	Sb	16 08 54.1	+3.3
ERTU	**Ertsjaerv**	**4.74**	**262**	SN	Sn	16 08 51.4	-1.9

IDC ***22*** *16:21:15.9±1.1,0˚.97N×123˚.40E,h0km,mb3.4/5, mbtmp3.4/5,MS2.6/1,Error ellipse: s-maj=179.1km s-min=20.0km az=65.0*

DJA ***22*** *16:21:44.0±0.5,1˚.N±5˚×12˚.4E±˚,h257km±8km,M3.8/21, mb3.6/1,MLv3.9/21*

ISC 22 16:21:42.5±1.0,0˚.8N±0˚.1×123˚.80E±0˚.07,h250km,n14, σ1.89/13,mb3.1/5,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTOI	**Gorontalo**	**0.81**	**259**	P	**Pn**	**16 22 19.9**	**+3.3**
LUWI	**Luwuk**	**2.10**	**209**	P	**Pn**	**16 22 26.5**	**+0.6**
APSI	**Ampana**	**2.74**	**232**	P	**Pn**	**16 22 33.7**	**+1.4**
TNTI	**Ternate**	**3.56**	**90**	P	**Pn**	**16 22 43.4**	**+2.1**
SANI	**Sanana**	**3.57**	**142**	P	**Pn**	**16 22 41.2**	**-0.2**
MPSI	**Mapaga**	**3.93**	**263**	P	**Pn**	**16 22 47.2**	**+1.6**
PCI	**Palu**	**4.31**	**247**	P	**Pn**	**16 22 51.6**	**+1.5**
NLAI	**Namlea**	**5.19**	**141**	P	**Pn**	**16 23 02.9**	**+2.2**
SIJI	**Sorong**	**7.64**	**102**	LR	LR	16 26 22.5	
	comp=Z,45nm,21.2s,baz=242,slow=38						
WRA	**Warramunga Arr**	**23.05**	**154**	P	**P**	**16 26 25.3**	**-1.0**
	1.1nm,0.5s,baz=331,slow=9.7,SNR=21						
	1.1nm,0.5s						
ASAR	**Alice Springs**	**26.22**	**159**	P	**P**	**16 26 56.2**	**+1.3**
	0.2nm,0.8s,baz=336,slow=8.8,SNR=6.0						
	0.2nm,0.8s						
SONM	**Songino Array**	**49.23**	**345**	P	**P**	**16 30 04.4**	**-1.5**
	0.5nm,0.7s,baz=156,slow=7.9,SNR=3.3						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**58.37**	**328**	P	**P**	**16 31 11.5**	**-0.4**
	0.3nm,0.4s,baz=121,slow=8.4,SNR=7.3						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**62.69**	**329**	P	**P**	**16 31 39.1**	**-1.8**
	0.1nm,0.2s,baz=134,slow=6.6,SNR=2.8						
	0.1nm,0.2s						

NEIC ***22*** *16:27:34.3±1.2,40˚.39N±0˚.05×125˚.074W±0˚.009, h10km±1km,mb4.9/232,ML4.5/118,Mwr4.8/7(NCEDC), Error ellipse: s-maj=7.9km s-min=2.9km az=184.0*

IDC ***22*** *16:27:37.8±0.5,40˚.54N×124˚.44W,h0km,mb4.1/23, mbtmp4.2/31,ML4.1/8,MS3.9/52,Error ellipse: s-maj=8.8km s-min=8.0km az=174.0*

NEIC ***22*** *16:27:38.1,40˚.43N×124˚.82W,h12km*

NEIC ***22*** *16:27:38.1,40˚.43N×124˚.82W,h14km,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=0.02; Mθθ-1.84; Mφφ 1.81; Mrθ-0.15; Mrφ-0.15; Mθφ 0.10; Fault plane solution: M₀1.84000×10¹⁶ NP1:φs132.63000°, δ89.18000°, λ-174.61000°. NP2:φs42.55000°, δ84.61000°, λ-0.82000°. Principal axes: T 1.8261, Plg3.0000°, Azm267.0000°; N 0.0275, Plg85.0000°, Azm141.0000°; P -1.8536, Plg4.0000°, Azm358.0000°;*

NCEDC ***22*** *16:27:38.1±2.1,40˚.43N±0˚.04×124˚.83W±0˚.05,h12km±4km Error ellipse: s-maj=5.3km s-min=4.8km az=219.0*

GFZ ***22*** *16:27:39.4,40˚.55N×124˚.60W,h15km,MW4.8,Moment Tensor Solution. s13 Moment tensor: Mrr-0.37; Mθθ-1.53; Mφφ 1.90; Mrθ-0.48; Mrφ-0.02; Mθφ-0.81; Fault plane solution: NP1:φs134.00000°, δ60.00000°, λ-176.00000°. NP2:φs42.00000°, δ87.00000°, λ-29.00000°. Principal axes: T 2.1600, Plg18.0000°, Azm92.0000°; N -0.4300, Plg60.0000°, Azm217.0000°; P -1.7300, Plg22.0000°, Azm354.0000°;*

GCMT ***22*** *16:27:41.3±0.3,40˚.39N±0˚.02×124˚.85W±0˚.02,h22km±1km, MW4.9/96,Moment Tensor Solution. s30,c37; s96,c140; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.06±.12; Mθθ-2.62±.09; Mφφ 2.68±.10; Mrθ 0.06±.17; Mrφ 0.13±.07; Mθφ 0.49±.14; Best double couple: M₀2.69600×10¹⁶ NP1:φs316.00000°, δ82.00000°, λ174.00000°. NP2: φs47.00000°, δ84.00000°, λ8.00000°. Principal axes: T 2.7670, Plg10.0000°, Azm272.0000°; N -0.1420,*

Plg80.0000°, Azm85.0000°; P -2.6240, Plg1.0000°, Azm181.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 22 16:27:40.1±0.4,40˚.46N±0˚.04×124˚.70W±0˚.05,h25km, n563,σ1.25/411,mb4.9/136,MS4.0/46,Near coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCTM	**Capetown**	**0.28**	**86**		**Pb**	**16 27 47.1**	**+0.3**
KCTM					**Sn**	**16 27 53.5**	**-0.5**
PETL	**Petrolia**	**0.32**	**122**		**Pb**	**16 27 46.9**	**-0.5**
PETL					**Sb**	**16 27 52.8**	**+0.4**
FER	**Ferndale**	**0.35**	**70**		**Pb**	**16 27 48.3**	**+0.4**
FER					**Sn**	**16 27 55.7**	**-0.1**
KMPM	**Mount Pierce**	**0.44**	**95**		**Pb**	**16 27 49.2**	**-0.3**
KMPM	**Mount Pierce**	**0.44**	**95**		**Sn**	**16 27 57.0**	**-1.2**
JCC	**Jacoby Creek,**	**0.62**	**54**		**Pb**	**16 27 51.5**	**-0.9**
KCRM	**Chalk Rock**	**0.67**	**92**		**Pb**	**16 27 52.7**	**-0.5**
BRIC	**Briceland Vine**	**0.70**	**119**		**Pb**	**16 27 52.9**	**-0.8**
KMRM	**Mail Ridge**	**0.79**	**107**		**Pb**	**16 27 54.7**	**-0.6**
DMOR	**Dinsmores, CA**	**0.80**	**71**		**Pb**	**16 27 54.7**	**-0.7**
KHMM	**Horse Mountain**	**0.84**	**60**		**Pb**	**16 27 55.3**	**-0.9**
KRPM	**Rodgers**	**0.87**	**36**		**Pb**	**16 27 55.1**	**-1.4**
KIPM	**Iron Peak**	**1.14**	**124**		**Pn**	**16 27 59.4**	**-1.1**
KHBM	**Hayfork Bally**	**1.14**	**79**		**Pn**	**16 27 59.4**	**-1.4**
KHBM				IAML		16 28 18.1	
	comp=E,10μm,0.8s						
KHBM				IAML		16 28 29.5	
	comp=N,11μm,0.8s						
KCPM	**Cahto Peak**	**1.15**	**132**		**Pn**	**16 27 58.7**	**-2.0**
RVIT	**Round Valley I**	**1.15**	**118**		**Pn**	**16 27 59.4**	**-1.3**
KOMM	**Orleans Mounta**	**1.25**	**49**		**Pn**	**16 28 00.9**	**-1.2**
KFPM	**Farley Peak**	**1.27**	**130**		**Pn**	**16 28 00.5**	**-1.8**
KBNM	**Bluenose Ridge**	**1.28**	**116**		**Pn**	**16 28 01.5**	**-1.0**
WEAV	**Weaverville**	**1.33**	**77**		**Pn**	**16 28 02.0**	**-1.3**
MNDO	**Woodland Fire**	**1.36**	**147**		**Pn**	**16 28 01.2**	**-2.2**
KRKM	**Rackout Spring**	**1.47**	**127**		**Pn**	**16 28 03.5**	**-1.6**
O02D	**Mt. Diablo Mer**	**1.48**	**100**		**Pn**	**16 28 04.1**	**-1.2**
O02D				IAML		16 28 25.2	
	comp=N,4μm,0.6s						
O02D				IAML		16 28 29.9	
	comp=E,3μm,1.1s						
GNAM	**Navarro Ridge**	**1.50**	**147**		**Pn**	**16 28 03.1**	**-2.3**
N02D	**Trinity Center**	**1.60**	**71**		**Pn**	**16 28 05.8**	**-1.0**
GROM	**Round Mountain**	**1.64**	**109**		**Pn**	**16 28 06.6**	**-0.9**
GWRM	**Wonder Ranch**	**1.65**	**139**		**Pn**	**16 28 05.6**	**-1.9**
LBKM	**Bonanza King**	**1.66**	**67**		**Pn**	**16 28 06.9**	**-0.9**
GHOM	**Hamilton Openi**	**1.67**	**147**		**Pn**	**16 28 05.5**	**-2.3**
M02C	**Callahan**	**1.68**	**56**		**Pn**	**16 28 07.0**	**-1.0**
M02C				IAML		16 28 28.7	
	comp=E,6μm,0.9s						
M02C				IAML		16 28 31.2	
	comp=N,6μm,0.7s						
GVV	**Valley View**	**1.69**	**113**		**Pn**	**16 28 07.1**	**-1.1**
KBO	**Bosley Butte**	**1.79**	**11**		**Pn**	**16 28 07.2**	**-2.3**
KBO				IAML		16 28 30.9	
	comp=N,3μm,0.5s						
KBO				IAML		16 28 33.2	
	comp=E,3μm,1.0s						
BONV	**Boonville, CA**	**1.80**	**144**		**Pn**	**16 28 07.4**	**-2.2**
L02F	**Cave Junction**	**1.87**	**27**		**Pn**	**16 28 08.9**	**-1.6**
L02F				IAML		16 28 35.8	
	comp=N,5μm,0.7s						
L02F				IAML		16 28 38.2	
	comp=E,6μm,0.8s						
GSNM	**Snow Mountain**	**1.91**	**142**		**Pn**	**16 28 09.2**	**-1.9**
HOPS	**Hopland Field**	**1.93**	**139**		**Pn**	**16 28 08.9**	**-2.4**
HOPS				IAML		16 28 41.8	
	comp=E,2μm,1.1s						
HOPS				IAML		16 28 43.5	
	comp=N,2μm,1.5s						
GHGM	**Hogback Ridge**	**1.96**	**132**		**Pn**	**16 28 10.2**	**-1.7**
GCK	**Clark Valley**	**1.96**	**117**		**Pn**	**16 28 11.9**	**+0.2**
YBH	**Yreka Blue Hor**	**1.97**	**49**	Pg	**Pn**	**16 28 11.2**	**-0.8**
	comp=N,4.4nm,0.3s,baz=278,slow=5.8,SNR=695						
YBH				Lg	Lg	16 28 32.5	
	comp=N,20nm,0.3s,baz=347,slow=14,SNR=9.5						
YBH				LR	LR	16 28 42.4	
	comp=N,27nm,19.8s,baz=252,slow=36						
YBH	**Yreka Blue Hor**	**1.97**	**49**		**Pn**	**16 28 11.0**	**-0.9**
YBH				IAML		16 28 37.6	
	comp=N,4μm,0.8s						
LTCM	**Tuscan Springs**	**1.98**	**96**		**Pn**	**16 28 11.3**	**-0.8**
LCSM	**College of the**	**1.99**	**60**		**Pn**	**16 28 11.9**	**-0.4**
LSHM	**Sage Hen Hill**	**2.05**	**80**		**Pn**	**16 28 12.5**	**-0.5**
LGBM	**Grgs Butte**	**2.09**	**64**		**Pn**	**16 28 13.9**	**+0.1**
GPMM	**Pine Mountain**	**2.10**	**139**		**Pn**	**16 28 12.2**	**-1.6**
M03C	**McCloud**	**2.12**	**66**		**Pn**	**16 28 13.8**	**-0.2**
LMPM	**Military Pass**	**2.18**	**61**		**Pn**	**16 28 15.4**	**+0.5**
GRTM	**Round Top Moun**	**2.18**	**133**		**Pn**	**16 28 13.3**	**-1.4**
B040	**Montague**	**2.20**	**51**		**Pn**	**16 28 14.8**	**-0.2**
GDXM	**Geysers**	**2.21**	**138**		**Pn**	**16 28 12.8**	**-2.5**
GSGM	**Seigler Mounta**	**2.21**	**135**		**Pn**	**16 28 14.1**	**-1.1**
LHEM	**Herd Peak**	**2.21**	**57**		**Pn**	**16 28 15.3**	**-0.1**
GGPM	**Geyser Peak**	**2.21**	**139**		**Pn**	**16 28 13.5**	**-1.9**
O03E	**Paynes Creek**	**2.22**	**93**		**Pn**	**16 28 14.3**	**-1.1**
O03E				IAML		16 28 41.9	
	comp=E,3μm,0.7s						
O03E				IAML		16 28 57.4	
	comp=N,2μm,1.1s						
LDBM	**Digger Butte**	**2.22**	**90**		**Pn**	**16 28 14.2**	**-1.2**
GBGM	**Boggs Mountain**	**2.26**	**136**		**Pn**	**16 28 15.2**	**-0.8**
LBFM	**Black Fox Moun**	**2.31**	**66**		**Pn**	**16 28 16.6**	**-0.1**
OCHM	**Cohasset Ridge**	**2.32**	**104**		**Pn**	**16 28 15.5**	**-1.2**
MNRC	**McLaughlin Min**	**2.35**	**131**		**Pn**	**16 28 15.3**	**-1.8**
K02D	**Willamette Mer**	**2.37**	**19**		**Pn**	**16 28 15.7**	**-1.7**
K02D				IAML		16 28 48.0	
	comp=N,4μm,0.7s						
LMEM	**Manzanita Entr**	**2.38**	**87**		**Pn**	**16 28 17.1**	**-0.7**
NMTM	**Middletown**	**2.40**	**133**		**Pn**	**16 28 17.3**	**-0.4**
LAS	**Mount Lassen**	**2.43**	**89**		**Pn**	**16 28 17.7**	**-0.9**
NWRM	**Wright Ranch**	**2.44**	**144**		**Pn**	**16 28 16.0**	**-2.3**
LGMM	**Garner Mountai**	**2.45**	**61**		**Pn**	**16 28 18.6**	**0.0**
LRDM	**Redding Peak**	**2.47**	**89**		**Pn**	**16 28 18.4**	**-0.5**
HAYC	**Hat Creek Radi**	**2.49**	**81**		**Pn**	**16 28 18.8**	**-0.3**
OSUM	**Sutter Buttes**	**2.49**	**118**		**Pn**	**16 28 17.2**	**-1.8**
SIFF	**Sifford Mounta**	**2.50**	**90**		**Pn**	**16 28 18.7**	**-0.6**
OGOM	**Van Goodin Ran**	**2.50**	**108**		**Pn**	**16 28 17.6**	**-1.5**
M04C	**Macdoel**	**2.53**	**58**		**Pn**	**16 28 19.7**	**-0.1**
LTIM	**Timbered Crate**	**2.54**	**73**		**Pn**	**16 28 19.3**	**-0.5**
SUTB	**Sutter Butte**	**2.55**	**118**		**Pn**	**16 28 17.8**	**-2.1**
SUTB				IAML		16 28 53.1	
	comp=N,1μm,0.7s						
SUTB				IAML		16 29 02.1	
	comp=E,1μm,0.4s						
LBCM	**Butte Creek Ri**	**2.57**	**80**		**Pn**	**16 28 19.9**	**-0.4**
NTYM	**Taylor**	**2.60**	**142**		**Pn**	**16 28 19.1**	**-1.4**
OBHM	**Bloomer Hill**	**2.61**	**107**		**Pn**	**16 28 19.8**	**-1.0**
ORV	**Oroville**	**2.62**	**109**		**Pn**	**16 28 19.2**	**-1.6**
MCCM	**Marconi Confer**	**2.71**	**148**	IAML		16 28 52.7	
	comp=E,2μm,0.7s						
MCCM				IAML		16 28 54.0	
	comp=N,1μm,0.8s						
CVS	**Carmenet Viney**	**2.73**	**140**		**Pn**	**16 28 20.1**	**-2.3**
J01E	**Myrtle Point**	**2.76**	**12**	IAML		16 29 04.9	
	comp=N,1μm,0.8s						
J01E				IAML		16 29 11.5	
	comp=E,1μm,0.7s						
FARB	**Farallon Islan**	**3.06**	**154**		**Pn**	**16 28 23.8**	**-2.9**
FARB				IAML		16 29 00.9	
	comp=N,989nm,0.5s						
FARB				IAML		16 29 01.5	
	comp=E,1μm,0.5s						
BEKR	**Beckworth**	**3.38**	**99**	IAML		16 29 14.9	
	comp=N,1μm,0.7s						
BEKR				IAML		16 29 15.8	
	comp=E,896nm,0.7s						
JRSC	**Jasper Ridge**	**3.60**	**147**	IAML		16 29 15.4	
	comp=E,675nm,0.6s						
K05A	**Summer Lake**	**3.64**	**50**		**Pn**	**16 28 34.5**	**-0.5**
K05A				IAML		16 29 23.2	
	comp=N,810nm,0.8s						
K05A				IAML		16 29 35.4	
	comp=E,637nm,1.1s						
I04A	**Tendick Farm,**	**3.74**	**26**	IAML		16 29 20.7	
	comp=E,695nm,0.9s						
MPK	**Martis Peak**	**3.77**	**106**	IAML		16 29 28.3	
	comp=E,1μm,0.8s						
MPK				IAML		16 29 57.4	
	comp=N,1μm,1.4s						
J05D	**Fort Rock, OR**	**3.83**	**41**	IAML		16 29 40.2	
	comp=N,808nm,1.3s						
J05D				IAML		16 29 41.6	
	comp=E,515nm,0.9s						
MHC	**Mount Hamilton**	**3.92**	**142**	IAML		16 29 24.8	
	comp=N,362nm,0.5s						
MHC				IAML		16 29 25.2	
	comp=E,408nm,0.6s						
BUCK	**Buck Mountain**	**3.95**	**18**	IAML		16 29 47.9	
	comp=N,703nm,1.1s						
BUCK				IAML		16 29 50.0	
	comp=E,567nm,1.6s						
PNTR	**Pine Nut**	**4.16**	**108**	IAML		16 29 47.9	
	comp=E,722nm,1.1s						
PNTR				IAML		16 30 08.5	
	comp=N,579nm,1.3s						
WIFE	**Three Sisters-**	**4.18**	**30**	IAML		16 29 42.8	
	comp=N,306nm,0.8s						
WIFE				IAML		16 29 53.4	
	comp=E,356nm,1.6s						
COR	**Corvallis**	**4.25**	**14**		**Pn**	**16 28 41.2**	**-2.0**
COR				IAML		16 29 34.5	
	comp=E,298nm,0.7s						
COR				IAML		16 30 00.3	
	comp=E,344nm,1.3s						
H04D	**Lebanon**	**4.31**	**19**	IAML		16 29 37.2	
	comp=N,558nm,0.9s						
H04D				IAML		16 29 43.6	
	comp=E,516nm,1.1s						
FORD	**Fort Ord Natur**	**4.40**	**148**	IAML		16 29 37.7	
	comp=E,780nm,0.6s						
WVOR	**Wild Horse Val**	**4.96**	**65**	IAML		16 30 31.1	
	comp=E,173nm,1.8s						
WVOR				IAML		16 30 43.4	
	comp=E,151nm,2.0s						
NVAR	**Mina Array Bea**	**5.35**	**110**	Pn	**Pn**	**16 28 59.2**	**+0.7**
	comp=E,13nm,0.3s,baz=290,slow=14,SNR=327						
NVAR				LR	LR	16 31 20.0	
	comp=E,1μm,20.3s,baz=300,slow=42						
	comp=E,74nm,0.7s						
ELK	**Elko**	**7.20**	**85**	Pn	**Pn**	**16 29 23.9**	**-0.1**
	comp=E,1.6nm,0.3s,baz=283,slow=15,SNR=54						
ELK				LR	LR	16 32 27.7	
	comp=E,2μm,20.6s,baz=273,slow=41						
	comp=E,15nm,0.6s						
PFO	**Pinyon Flats O**	**9.48**	**133**	Pn	**Pn**	**16 29 55.9**	**+0.7**
	comp=E,3.7nm,0.3s,baz=320,slow=10,SNR=61						
PFO				LR	LR	16 34 02.0	
	comp=E,447nm,19.4s,baz=314,slow=41						
	comp=E,10nm,0.3s						
NEW	**Newport**	**9.50**	**32**	Pn	**Pn**	**16 29 56.6**	**+1.3**
	comp=E,0.3nm,0.3s,baz=206,slow=15,SNR=9.1						
NEW				LR	LR	16 34 01.1	
	comp=E,493nm,20.8s,baz=221,slow=41						
	comp=E,6.0nm,0.8s						
PDAR	**Pinedale Array**	**11.57**	**74**	Pn	**Pn**	**16 30 25.9**	**+2.1**
	comp=E,0.2nm,0.3s,baz=270,slow=13,SNR=33						
PDAR				LR	LR	16 35 23.2	
	comp=E,454nm,21.9s,baz=248,slow=41						
	comp=E,7.9nm,0.8s						
BBB	**Bella Bella**	**11.96**	**350**	Pn	**Pn**	**16 30 30.0**	**+1.1**
	comp=E,0.7nm,0.3s,baz=172,slow=9.5,SNR=11						
	comp=E,96nm,1.0s						
LAO	**LASA Array**	**14.75**	**59**		**Pn**	**16 31 06.3**	**-0.8**
DUN6	**Lazy B Ranch**	**14.81**	**117**	IAmb	IAmb	16 31 12.8	
	comp=Z,39nm,1.3s						
EDM	**Edmonton**	**14.92**	**27**		**Pn**	**16 31 07.6**	**-1.6**
SBM	**South Baldy**	**15.37**	**109**	P	**P**	**16 31 18.4**	**-1.8**
319A	**Douglas**	**15.41**	**121**	P	**P**	**16 31 18.5**	**-1.8**
LENM	**Lemitar**	**15.43**	**108**		**Pn**	**16 31 14.8**	**-1.5**
ANMO	**Albuquerque**	**15.44**	**105**	Pn	**Pn**	**16 31 16.4**	**0.0**
	comp=Z,0.3nm,0.3s,baz=299,slow=12,SNR=29						
ANMO				LR	LR	16 37 27.6	
	comp=Z,503nm,19.1s,baz=294,slow=39						
	comp=Z,8.4nm,0.8s						
ANMO	**Albuquerque**	**15.44**	**105**	Pn	**Pn**	**16 31 15.6**	**-0.8**
ANMO	**Albuquerque**	**15.44**	**105**	IAmb	IAmb	16 31 19.9	
	comp=Z,17nm,1.0s						
V35K	**Ketchikan**	**15.57**	**345**	P	**Pn**	**16 31 16.5**	**-1.3**
	baz=160						
RSSD	**Black Hills**	**15.71**	**70**		**Pn**	**16 31 17.7**	**-2.2**
U35K	**Hyder**	**15.86**	**349**	P	**Pn**	**16 31 20.4**	**-1.1**
	baz=165						
CRAG	**Craig**	**16.03**	**342**	P	**Pn**	**16 31 22.0**	**-1.6**
	baz=156						
U33K	**Whale Pass**	**16.62**	**343**	P	**Pn**	**16 31 30.0**	**-1.2**
	baz=157						
WRAK	**Wrangell Islan**	**16.74**	**345**	P	**Pn**	**16 31 31.5**	**-1.2**
	baz=160						
OGNE	**Ogallala**	**17.19**	**81**	IAmb	IAmb	16 31 42.2	
	comp=Z,94nm,0.8s						
T33K	**Petersburg**	**17.23**	**345**	P	**Pn**	**16 31 38.2**	**-0.7**
	baz=159						
S34M	**Telegraph Cree**	**17.95**	**349**	P	**Pn**	**16 31 47.0**	**-0.8**
	baz=164						
SIT	**Sitka**	**17.99**	**341**	P	**Pn**	**16 31 46.9**	**-1.3**
	baz=153						
S32K	**Killisnoo**	**18.18**	**343**	P	**Pn**	**16 31 49.6**	**-0.9**
	baz=156						
DLBC	**Dease Lake**	**18.32**	**351**	P	**Pn**	**16 31 53.2**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=143,slow=8.5,SNR=7.4						
	comp=Z,13nm,1.2s						
DLBC	**Dease Lake**	**18.32**	**351**	P	**P**	**16 31 51.6**	**-0.7**
	baz=167,SNR=6.4						
R32K	**Eaglecrest**	**18.91**	**344**	P	**P**	**16 31 57.9**	**-0.8**
	baz=157						
S31K	**Pelican**	**19.02**	**341**	P	**P**	**16 31 59.3**	**-0.6**
	baz=152						
Q32M	**Nakina River**	**19.14**	**348**	P	**P**	**16 32 00.8**	**-0.6**
	baz=162						
R33M	**Jennings River**	**19.37**	**350**	Pn	**P**	**16 32

O29M	Mount Kennedy	21.66	341	P	P	16 32 28.1	-0.6	
	baz=151,SNR=5.9							
HYT	Haines Junctio	21.87	343	P	P	16 32 30.0	-0.9	
	baz=153							
OK029	Liberty Lake	21.89	94	P	P	16 32 29.3	-1.9	
PINM	Pinnacle	21.92	339	P	P	16 32 30.0	-1.4	
	baz=147							
AGMN	Agassiz Nation	21.95	59	IAmb	IAmb	16 32 43.0		
	comp=Z,28nm,0.7s							
N31M	Braeburn, Yuko	22.12	346	P	P	16 32 32.7	-0.8	
	baz=157,SNR=5.7							
FNO	Franklin	22.12	95	IAmb	IAmb	16 32 38.3		
	comp=Z,46nm,1.0s							
YUK6	Outpost Mounta	22.17	342	P	P	16 32 32.6	-1.6	
	baz=152							
QUOK	Quay	22.33	92	IAmb	IAmb	16 32 39.6		
	comp=Z,48nm,0.8s							
N30M	Aishikik Lake	22.35	344	P	P	16 32 34.8	-1.2	
	baz=155,SNR=5.2							
ULM	Lac du Bonnet	22.37	54	P	P	16 32 34.4	-1.9	
	comp=Z,11nm,0.7s,baz=259,slow=9.5,SNR=21							
ULM				LR	LR	16 41 44.9		
	comp=Z,516nm,18.6s,baz=252,slow=38							
	comp=Z,11nm,0.7s							
ULM	Lac du Bonnet	22.37	54	P	P	16 32 34.3	-1.9	
MESA	MESA	22.48	337	P	P	16 32 36.3	-1.2	
	baz=144							
O28M	Mount Upton	22.48	340	P	P	16 32 36.5	-1.1	
	baz=148							
JCT	Junction City	22.52	108	IAmb	IAmb	16 32 42.5		
	comp=Z,24nm,0.8s							
DRIO	Del Rio	22.53	112	IAmb	IAmb	16 32 41.6		
	comp=Z,35nm,0.8s							
MMPY	Sheldon Lake,	22.54	352	P	P	16 32 37.7	-0.3	
	baz=167,SNR=8.3							
M31M	Drury Creek, Y	22.55	348	P	P	16 32 36.4	-1.7	
	baz=161							
W35A	Tecumseh	22.56	95	IAmb	IAmb	16 32 42.0		
	comp=Z,33nm,1.1s							
YUK4	Talbot Arm	22.59	342	P	P	16 32 37.3	-1.4	
	baz=152							
DEOK	Depew	22.60	93	IAmb	IAmb	16 32 42.4		
	comp=Z,80nm,1.4s							
BRDY	Brady	22.68	106	IAmb	IAmb	16 32 42.9		
	comp=Z,56nm,1.0s							
YUK8	Steele Glacier	22.81	341	P	P	16 32 39.3	-1.7	
	baz=150,SNR=6.9							
WRGLY	Wrigley	22.82	1	P	P	16 32 40.2	-0.6	
	baz=183,SNR=12							
BGLC	Bering Glacier	22.84	336	P	P	16 32 39.9	-1.1	
	baz=142							
YKA	Yellowknife Ar	22.89	12	P	P	16 32 41.7	+0.1	
	comp=Z,6.6nm,0.9s,baz=203,slow=9.9,SNR=46							
YKA				LR	LR	16 42 40.6		
	comp=Z,454nm,19.1s,baz=150,slow=40							
	comp=Z,6.6nm,0.9s							
CTG	Chitna Glacier	22.95	339	P	P	16 32 40.8	-1.5	
	baz=146							
Z35A	Perchaven, San	23.01	99	IAmb	IAmb	16 32 46.0		
	comp=Z,24nm,0.8s							
KAIM	Kayak Island	23.05	334	P	P	16 32 42.0	-1.3	
	baz=139							
TUL3	Leonard	23.12	92	IAmb	IAmb	16 32 51.0		
	comp=Z,27nm,0.7s							
CRQE	Cirque	23.28	337	P	P	16 32 44.5	-1.2	
	baz=143							
M30M	Minto, Yukon	23.31	346	P	P	16 32 45.2	-0.8	
	baz=156							
Q23K	Middleton Isla	23.36	332	P	P	16 32 45.3	-1.0	
	baz=135							
YUK3	Moose Creek	23.40	341	P	P	16 32 46.3	-0.7	
	baz=149							
WHTX	Lake Whitney,	23.47	102	IAmb	IAmb	16 32 50.0		
	comp=Z,40nm,1.3s							
M29M	Somme Creek	23.53	344	P	P	16 32 47.7	-0.4	
	baz=153							
EPLO	Experimental L	23.59	57	IAmb	IAmb	16 32 49.7		
	comp=Z,42nm,1.4s							
MCARA	McCarthy VSAT	23.76	338	P	P	16 32 49.7	-0.6	
	baz=144							
SPMN	Marine on St.	23.77	68	IAmb	IAmb	16 32 51.5		
	comp=Z,25nm,0.5s							
P38A	Dawn	23.82	82	IAmb	IAmb	16 33 11.0		
	comp=Z,22nm,0.7s							
BMRM	Bremner River	23.91	336	P	P	16 32 51.1	-0.6	
	baz=140							
EYAK	Cordova Ski Ar	23.96	334	P	P	16 32 51.6	-0.5	
	baz=138							
U38A	Gravette	24.01	90	IAmb	IAmb	16 32 53.8		
	comp=Z,27nm,0.7s							
BVCY	Beaver Creek	24.05	341	P	P	16 32 52.9	-0.1	
	baz=149							
L29M	L29M	24.06	345	P	P	16 32 52.5	-0.6	
	baz=154							
MAYO	Mayo, Yukon	24.10	348	P	P	16 32 53.4	0.0	
	baz=159							
P23K	Montague Islan	24.14	332	P	P	16 32 53.2	-0.6	
	baz=134							
M27K	Edge Creek, AK	24.25	340	P	P	16 32 54.8	-0.2	
	baz=147							
N25K	Chitina, Valde	24.40	337	P	P	16 32 55.8	-0.5	
	baz=141							
HHAR	Hobbs	24.41	90	IAmb	IAmb	16 32 55.7		
	comp=Z,15nm,0.6s							
S39A	Bolivar	24.45	86	IAmb	IAmb	16 32 57.6		
	comp=Z,12nm,0.6s							
M26K	Nabesna, AK	24.58	339	P	P	16 32 58.0	+0.1	
	baz=145							
K29M	Barlow Dome	24.61	346	P	P	16 32 58.5	+0.3	
	baz=156,SNR=14							
GLI	Glacier Island	24.66	333	P	P	16 32 58.9	+0.3	
	baz=136							
E38A	The Farm, Brul	24.68	65	IAmb	IAmb	16 33 08.4		
	comp=Z,33nm,1.2s							
237A	Washetta, Mont	24.70	101	IAmb	IAmb	16 33 02.0		
	comp=Z,65nm,1.5s							
KLU	Klutina	24.72	335	P	P	16 32 59.2	-0.1	
	baz=139							
L27K	Beaver Creek,	24.83	341	P	P	16 33 00.2	0.0	
	baz=148							
KDAK	Kodiak Island	24.90	323	P	P	16 33 00.4	-0.3	
	baz=122							
OHAK	Old Harbor	24.93	322	P	P	16 33 00.6	-0.4	
	baz=120							
SEW	Seward	24.97	330	P	P	16 33 01.2	-0.1	
	baz=131							
R40A	Maddies Statio	25.09	84	IAmb	IAmb	16 33 03.9		
	comp=Z,16nm,0.6s							
J30M	Hart River	25.09	348	P	P	16 33 03.0	+0.4	
	baz=159,SNR=14							
L40A	Anamosa	25.13	75	IAmb	IAmb	16 33 05.0		
	comp=Z,28nm,0.6s							
L26K	Log Cabin Wild	25.19	340	P	P	16 33 03.5	+0.1	
	baz=145							
BRSE	Bradley Lake S	25.24	329	P	P	16 33 03.3	-0.6	
	baz=128							
Q20K	Shuyak Island	25.26	325	P	P	16 33 03.7	-0.3	
	baz=124							
M24K	Tolsona, Glenn	25.27	336	P	P	16 33 03.5	-0.6	
	baz=139							
J29N	Klondike Camp	25.29	346	P	P	16 33 04.7	+0.3	
	baz=156							
MGMO	Mountain Grove	25.41	87	IAmb	IAmb	16 33 06.9		
	comp=Z,22nm,0.6s							
SCM	Sheep Creek Mo	25.43	335	P	P	16 33 05.4	-0.2	
	baz=137							
KNK	Knik Glacier	25.50	333	P	P	16 33 06.3	+0.1	
	baz=135							
M23K	Glacier View	25.53	334	P	P	16 33 06.3	-0.1	
	baz=136							
HOM	Homer	25.55	328	P	P	16 33 06.8	+0.1	
	baz=127							
G40A	Rib Lake	25.61	68	IAmb	IAmb	16 33 08.2		
	comp=Z,22nm,1.1s							
I30M	Mount Dempster	25.70	349	P	P	16 33 07.8	-0.3	
	baz=159,SNR=6.2							
PAX	Paxson	25.72	338	P	P	16 33 07.6	-0.7	
	baz=142							
RC01	Rabbit Creek A	25.73	332	P	P	16 33 08.7	+0.4	
	baz=132							
SML	Sawmill	25.74	334	P	P	16 33 07.3	-1.1	
	baz=136							
PMR	Palmer	25.86	333	P	P	16 33 08.7	-0.7	
	baz=134							
FCAR	Ozark Folk Cen	25.92	90	IAmb	IAmb	16 33 11.8		
	comp=Z,9.7nm,0.5s							
CCM	Cathedral Cave	25.93	84		P	16 33 08.7	-1.6	
CCM				IAmb	IAmb	16 33 11.7		
	comp=Z,11nm,0.6s							
H31M	Peel River	25.98	351	P	P	16 33 10.3	-0.2	
	baz=163,SNR=13							
Q19K	Cape Douglas,	25.98	325	P	P	16 33 09.8	-0.8	
	baz=123							
WHAR	Wooly Hollow	26.01	91	IAmb	IAmb	16 33 11.9		
	comp=Z,28nm,0.6s							
CAPN	Captain Cook N	26.05	330	P	P	16 33 10.4	-0.6	
	baz=130							
WAT6	Susitna Watana	26.11	336	P	P	16 33 11.2	-0.6	
	baz=138							
SCRK	Sand Creek	26.13	341	P	P	16 33 11.2	-0.8	
	baz=145							
I29M	Ogilvie Camp,	26.14	347	P	P	16 33 11.5	-0.4	
	baz=156,SNR=6.6							
RIDG	Independent Ri	26.16	340	P	P	16 33 11.7	-0.5	
	baz=144							
P19K	Oil Pt	26.21	327	P	P	16 33 12.2	-0.5	
	baz=125							
M22K	Willow	26.31	333	P	P	16 33 13.1	-0.3	
	baz=133							
DHY	Denali Highway	26.36	337	P	P	16 33 13.9	-0.2	
	baz=139,SNR=5.7							
Q18K	Katmai Hardscr	26.44	324	P	P	16 33 14.4	-0.4	
	baz=120							
K24K	Donnelly Dome	26.47	339	P	P	16 33 14.9	-0.1	
	baz=142							
I28M	Miner Creek	26.51	346	P	P	16 33 15.1	-0.3	
	baz=154							
FVM	French Village	26.57	84	IAmb	IAmb	16 33 31.2		
	comp=Z,12nm,0.8s							
R17L	Mt. Peulik Vol	26.59	321	P	P	16 33 15.5	-0.6	
	baz=117							
LCAR	Lake Charles	26.60	89	IAmb	IAmb	16 33 18.3		
	comp=Z,17nm,0.7s							
FCC	Fort Churchill	26.63	36	P	P	16 33 14.4	-2.0	
Q17K	Contact Creek	26.66	322	P	P	16 33 15.7	-1.1	
	baz=118							
CUT	Chulitna	26.81	334	P	P	16 33 17.5	-0.5	
	baz=133							
HDIL	Hopedale	26.81	78	IAmb	IAmb	16 33 19.4		
	comp=Z,30nm,0.8s							
EPYK	Eagle Plains	26.83	349	P	P	16 33 18.2	+0.1	
	baz=160							
P43A	Skaggs, Pawnee	26.83	80	IAmb	IAmb	16 33 19.7		
	comp=Z,13nm,0.8s							
P18K	Big Mountain,	26.92	325	P	P	16 33 19.0	-0.1	
	baz=121							
H29M	Whitestone	26.94	348	P	P	16 33 18.7	-0.4	
	baz=157							
O19K	Port Alsworth	26.96	327	P	P	16 33 18.5	-0.8	
	baz=124							
SKT	Skwentna	26.97	332	P	P	16 33 18.3	-1.1	
	baz=131							
I27K	Kandik River	26.98	345	P	P	16 33 19.6	0.0	
	baz=151							
J25K	Salcha River,	27.00	340	P	P	16 33 20.0	+0.2	
	baz=144,SNR=5.9							
G31M	Satah River	27.05	352	P	P	16 33 20.1	+0.1	
	baz=164,SNR=12							
I26K	Coal Creek Min	27.05	343	P	P	16 33 19.4	-0.7	
	baz=148							
CHGN	Chignik	27.08	317	P	P	16 33 19.4	-1.0	
	baz=112							
R16K	Pilot Point	27.15	320	P	P	16 33 19.7	-1.4	
	baz=115							
O18K	Koktuh Hills	27.15	326	P	P	16 33 20.0	-1.2	
	baz=122							
Q16K	King Salmon	27.21	323	P	P	16 33 20.5	-1.1	
	baz=118							
CHNA	Chernabura Isl	27.22	314	P	P	16 33 20.3	-1.4	
	baz=108							
HDA	Harding Lake	27.26	339	P	P	16 33 21.5	-0.5	
	baz=141							
MCK	McKinley	27.32	337	P	P	16 33 22.3	-0.3	
	baz=137,SNR=6.3							
G30M	tAoh Zraii Nji	27.34	350	P	P	16 33 22.4	-0.4	
	baz=161							
P17K	Kvichak River	27.36	324	P	P	16 33 22.4	-0.5	
	baz=119							
N19K	Bonanza Creek	27.38	328	P	P	16 33 22.7	-0.5	
	baz=125							
M20K	Styx River	27.49	331	P	P	16 33 23.2	-1.0	
	baz=128							
F31M	Tsiigehtchic	27.50	352	P	P	16 33 23.9	-0.1	
	baz=165,SNR=6.9							
H27K	Steamboat Moun	27.51	345	P	P	16 33 24.4	+0.1	
	baz=152							
G29M	Pine Creek	27.53	349	P	P	16 33 24.8	+0.4	
	baz=158							
ILAR	Eielson Array	27.53	339	P	P	16 33 26.1	+1.6	
	comp=Z,3.3nm,0.8s,baz=156,slow=8.0,SNR=34							
	comp=Z,3.3nm,0.8s							
ILAR	Eielson Array	27.53	339	P	P	16 33 26.7	+2.3	
S44A	Carbondale	27.54	84	IAmb	IAmb	16 34 09.3		
	comp=Z,11nm,0.8s							
TRF	Thorofare Moun	27.54	335	P	P	16 33 24.4	-0.3	
	baz=135							
SIUC	Southern Illin	27.56	84	IAmb	IAmb	16 33 28.8		
	comp=Z,17nm,1.0s							
PRP	Porcupine Dome	27.78	341	P	P	16 33 26.9	+0.1	
	baz=145							
PPLA	Purkeypile	27.80	333	P	P	16 33 26.3	-0.7	
	baz=131							
F30M	Barrier River	27.88	351	P	P	16 33 28.0	+0.5	
	baz=162							
O17K	Koliganek Bris	27.93	325	P	P	16 33 27.1	-0.9	
	baz=120							
POKR	Poker Plat Res	27.95	340	P	P	16 33 28.0	-0.2	
	baz=121							
P16K	Nushagak River	27.99	323	P	P	16 33 28.3	-0.3	
	baz=117							
NEA2	Nenana	28.00	338	P	P	16 33 29.1	+0.5	
	baz=138							
G27K	Doyon Strip	28.05	346	P	P	16 33 29.7	+0.6	
	baz=152							
BPAW	Bear Paw Mtn.	28.22	336	P	P	16 33 31.2	+0.5	
	baz=135							
M18K	Stony River	28.30	328	P	P	16 33 31.6	+0.3	
	baz=124							
INK	Inuvik	28.32	353	P	P	16 33 31.9	+0.5	
	baz=166,SNR=9.2							
L19K	White Mountain	28.32	330		pwP	16 33 43.9	+2.8	
L19K	White Mountain	28.32	330	P	P	16 33 31.2	-0.3	
	baz=126							
N17K	Nushagak Hills	28.35	326	P	P	16 33 31.4	-0.4	
	baz=121							
F28M	Old Crow	28.46	348	P	P	16 33 33.1	+0.4	
	baz=155,SNR=6.9							
SFIN	Lafayette	28.49	78	IAmb	IAmb	16 33 34.8		
	comp=Z,42nm,1.2s							
OXF	Oxford	28.49	91	IAmb	IAmb	16 33 38.0		
	comp=Z,24nm,0.7s							
I23K	Minto, Yukon-K	28.50	338	P	P	16 33 33.5	+0.5	
	baz=138							
CHUM	Lake Minchumin	28.50	335	P	P	16 33 33.3	+0.2	
	baz=132							
G26K	Porcupine Rive	28.59	344	P	P	16 33 33.9	+0.1	
	baz=149							
H24K	Noodor Dome	28.62	340	P	P	16 33 34.1	-0.1	
	baz=141							
K20K	Telida	28.75	333	P	P	16 33 35.3	0.0	
	baz=129							
MLY	Manley	28.81	337	P	P	16 33 36.1	+0.2	
	baz=136,SNR=5.4							
E29M	Blow River	28.89	350	P	P	16 33 36.3	-0.1	
	baz=159							
M17K	Holitna River	28.90	327	P	P	16 33 36.8	+0.1	
	baz=122							
G25K	Bearman Lake	28.94	343	P	P	16 33 37.4	+0.5	
	baz=145							
N16K	Nishlik Lake	29.01	325	P	P	16 33 37.6	-0.1	
	baz=118							
L18K	Granite Mounta	29.05	329	P	P	16 33 38.0	0.0	
	baz=124							
H23K	Yukon River	29.06	339	P	P	16 33 38.5	+0.5	
	baz=139							
WVT	Waverly	29.12	87	P	P	16 33 37.6	-1.3	
G24K	Hadweenzic Riv	29.21	342	P	P	16 33 39.7	+0.3	
	baz=143,SNR=6.8							
E27K	Coleen River	29.26	347	P	P	16 33 40.4	+0.5	
	baz=153,SNR=11							
I21K	Tanana	29.29	337	P	P	16 33 40.0	0.0	
	baz=135,SNR=12							
J20K	Nowinta River	29.30	334	P	P	16 33 40.5	+0.3	
	baz=130,SNR=8.6							
F26K	Sheenjek River	29.30	345	P	P	16 33 40.2	0.0	
	baz=149,SNR=7.6							
E28M	Babbage River	29.32	349		P	16 33 37.1	-3.2	
E28M	Babbage River	29.32	349	P	P	16 33 40.6	+0.3	
	baz=157							
M16K	Timber Creek	29.35	326	P	P	16 33 40.7	+0.1	
	baz=119							
FALS	False Pass	29.36	312	P	P	16 33 40.8	0.0	
	baz=103							
N47A	Urbana	29.42	76	IAmb	IAmb	16 33 42.4		
	comp=Z,24nm,0.8s							
N15K	Kwethluk River	29.45	324	P	P	16 33 42.1	+0.5	
	baz=116							
F25K	Christian Rive	29.52	344	P	P	16 33 43.0	+0.8	
	baz=147,SNR=5.5							
O14K	Tigyukauivet M	29.61	322	P	P	16 33 41.8	-1.2	
	baz=113							
H22K	Ishtalitna Cre	29.62	338	P	P	16 33 42.9	-0.1	
	baz=136							
WCI	Wyandotte Cove	29.63	82	P	P	16 33 41.3	-2.1	
WCI				IAmb	IAmb	16 33 45.0		
	comp=Z,18nm,0.8s							
L17K	Donlin	29.64	328	P	P	16 33 43.0	-0.2	
	baz=122							
E46A	Sault Ste Mari	29.69	65	IAmb	IAmb	16 33 46.0		
	comp=Z,20nm,0.7s							
J19K	Poorman	29.69	333	P	P	16 33 43.9	+0.2	
	baz=128							
J18K	Innoko River	29.77	331	P	P	16 33 44.4	+0.1	
	baz=126							
I20K	Naaghedeneel	29.81	335	P	P	16 33 44.6	0.0	
	baz=131							
G23K	Bananza Creek	29.85	340	P	P	16 33 45.0	-0.1	
	baz=139,SNR=6.1							
H21K	Melozitna Rive	29.87	337	P	P	16 33 41.3	-3.9	
H21K	Melozitna Rive	29.87	337	P	P	16 33 45.3	+0.1	
	baz=134							
D28M	Stokes Point	29.88	350	P	P	16 33 45.8	+0.6	
	baz=158							
L16K	Owhat River	29.90	327	P	P	16 33 45.4	-0.1	
	baz=119,SNR=5.8							
K17K	Iditarod	29.95	329		P	16 33 48.8	+2.9	
K17K				IAmb	IAmb	16 33 58.2		
	comp=Z,15nm,1.1s							
K17K	Iditarod	29.95	329	P	P	16 33 45.1	-0.8	
	baz=122							
E25K	Arctic Village	29.95	344	P	P	16 33 46.2	+0.2	
	baz=147							
M15K	Kasigluk River	29.95	325	P	P	16 33 45.5	-0.4	
	baz=116							
P48A	Milroy	29.95	79	IAmb	IAmb	16 33 47.7		
	comp=Z,27nm,1.1s							
F24K	Squaw Lake	29.96	342	P	P	16 33 46.0	-0.1	
	baz=143							
O48B	Farmland	29.96	77	IAmb	IAmb	16 33 47.8		
	comp=Z,30nm,0.9s							
Z47A	Carrollton	30.04	92	IAmb	IAmb	16 33 48.8		
	comp=Z,13nm,0.8s							
N14K	Kuskokwak Cree	30.08	323	P	P	16 33 46.8	-0.2	
	baz=114							
D27M	Malcolm River	30.12	349	P	P	16 33 47.9	+0.5	
	baz=155							
COLD	Coldfoot	30.29	341	P	P	16 33 49.1	+0.2	
	baz=140							
X48A	Hartselle	30.32	89	IAmb	IAmb	16 33 52.3		
	comp=Z,14nm,1.2s							
H20K	Anotteneega Mo	30.39	336	P	P	16 33 50.2	+0.4	
	baz=131,SNR=12							
G22K	Bettles	30.40	339	P	P	16 33 50.2	+0.3	
	baz=137							
N49A	Columbus Grove	30.53	76	IAmb	IAmb	16 33 52.4		
	comp=Z,22nm,0.9s							
E24K	Your Creek	30.54	343	P	P	16 33 51.0	-0.2	
	baz=143							
GCSA	Galena City Sc	30.58	333	P	P	16 33 51.4	-0.1	
	baz=127,SNR=5.6							
G21K	Allakaket	30.67	338	P	P	16 33 51.9	-0.4	
	baz=134							
L15K	Ungalak Mounta	30.74	326	P	P	16 33 52.9	0.0	
	baz=117							
E23K	Chandalar	30.79	342	P	P	16 33 53.2	-0.3	
	baz=141							
C27K	Jago River	30.90	347	P	P	16 33 54.8	+0.5	
	baz=151							
H19K	Roundabout Mou	30.92	335	P	P	16 33 54.2	-0.3	
	baz=129							
LRAL	Lakeview Retre	30.92	92	IAmb	IAmb	16 33 57.7		
	comp=Z,45nm,1.9s							
UNV	Unalaska Valle	30.94	310	P	P	16 33 54.0	-0.8	
	baz=99,SNR=6.2							
M13K	Dall Lake	31.03	323	P	P	16 33 55.0	-0.5	
	baz=113							
K15K	Wolf Creek Mou	31.04	327	P	P	16 33 55.2	-0.3	
	baz=118							
T50A	Nancy	31.10	83	IAmb	IAmb	16 33 58.0		
	comp=Z,52nm,1.9s							
L14K	Kuka Creek	31.11	325	P	P	16 33 55.7	-0.4	
	baz=115							
D25K	Kavik River	31.12	345	P	P	16 33 56.4	+0.1	
	baz=147,SNR=8.6							
J16K	Anvik River	31.14	329	P	P	16 33 55.6	-0.8	
	baz=120							
F21K	Alatna River	31.16	339	P	P	16 33 56.7	+0.1	
	baz=135							
TOLK	Toolik Lake Re	31.24	343	P	P	16 33 56.7	-0.7	
	baz=142,SNR=8.9							
H18K	Honhosa River	31.33	333	P	P	16 33 56.4	-1.8	
	baz=126							
W50A	Signal Mountai	31.36	87	IAmb	IAmb	16 34 02.5		
	comp=Z,12nm,0.7s							
C26K	Camden Bay	31.36	347	P	P	16 33 58.4	+0.1	
	baz=150							
FPAL	Fort Paine	31.38	88	IAmb	IAmb	16 34 00.0		
	comp=Z,20nm,1.6s							
E22K	Anaktuvuk Pass	31.38	341	P	P	16 33 59.2	+0.6	
	baz=138,SNR=13							
D24K	Happy Valley	31.48	344	P	P	16 33 58.9	-0.5	
	baz=144							
I17K	Unalakleet	31.48	330	P	P	16 33 59.7	+0.2	
	baz=121							
G19K	Purcell Mounta	31.51	335	P	P	16 33 59.3	-0.3	
	baz=129							
A36M	Sachs Harbour	31.61	360	P	P	16 34 00.7	+0.3	
	baz=179,SNR=6.6							
Q51A	Peebles	31.62	79	IAmb	IAmb	16 34 03.2		
	comp=Z,10.0nm,0.7s							
F20K	Avaraart Lake	31.68	337	P	P	16 34 00.6	-0.5	
	baz=132							
D23K	Nanushuk River	31.75	343	P	P	16 34 01.9	+0.1	
	baz=141							
H17K	Granite Mounta	31.75	332	P	P	16 34 01.4	-0.4	
	baz=124							
S51A	Beattyville	31.84	82	IAmb	IAmb	16 34 04.4		
	comp=Z,16nm,0.8s							
G18K	Tagagawik	31.87	334	P	P	16 34 02.8	-0.1	
	baz=126							
CPCT	Cooper Cave	31.87	86	IAmb	IAmb	16 34 06.8		
	comp=Z,12nm,0.8s							
C24K	Franklin Bluff	31.91	344	P	P	16 34 03.4	+0.2	
	baz=144							
J14K	Nanvaranak Lak	32.08	327	P	P	16 34 04.5	-0.2	
	baz=116							
E21K	Killik River	32.16	340	P	P	16 34 05.3	-0.1	
	baz=136							
F19K	Shaleruckik Mo	32.16	336	P	P	16 34 04.6	-0.8	
	baz=129							
K13K	Kusilvak Mount	32.21	325	P	P	16 34 05.7	-0.2	
	baz=113							
G17K	Kiwalik Mounta	32.32	333	P	P	16 34 06.4	-0.4	
	baz=123							
M11K	Mekoryuk	32.35	322	P	P	16 34 06.8	-0.2	
	baz=109							
TKL	Tuckaleechee C	32.37	85	LR	LR	16 47 59.8		
	comp=Z,516nm,20.5s,baz=286,slow=38							
TKL	Tuckaleechee C	32.37	85	IAmb	IAmb	16 34 09.9		
	comp=Z,9.7nm,0.7s							
E19K	Redstone River	32.39	337	P	P	16 34 07.3	-0.1	

G16K	**Koyuk River**	**32.87**	**332**	P		**P**	**16 34 11.6**	**0.0**	
	baz=121								
C21K	**Knifeblade Rid**	**32.88**	**341**	P		**P**	**16 34 11.9**	**+0.3**	
	baz=135,SNR=5.4								
O53A	**New Philadelph**	**32.89**	**76**	P		**P**	**16 34 11.2**	**-0.9**	
P53A	**Whipple**	**32.96**	**77**	IAmb		IAmb	16 34 14.2		
	comp=Z,20nm,0.9s								
D20K	**Etivluk River**	**33.05**	**339**	P		**P**	**16 34 13.1**	**0.0**	
	baz=132,SNR=11								
F17K	**Baldwin Pennin**	**33.05**	**334**	P		**P**	**16 34 12.9**	**-0.2**	
	baz=124,SNR=9.6								
V53A	**Saluda**	**33.09**	**85**	IAmb		IAmb	16 34 17.0		
	comp=Z,31nm,1.2s								
B21K	**Ikpikpuk River**	**33.17**	**341**	P		**P**	**16 34 14.3**	**+0.2**	
	baz=136,SNR=6.5								
BUKO	**Buck Lake**	**33.19**	**66**	IAmb		IAmb	16 34 16.5		
	comp=Z,20nm,0.8s								
G15K	**Niukluk**	**33.29**	**331**	P		**P**	**16 34 15.1**	**-0.2**	
	baz=118								
D19K	**Kuna River**	**33.32**	**338**	P		**P**	**16 34 15.7**	**+0.2**	
	baz=130								
E18K	**Tukpahlearik C**	**33.40**	**336**	P		**P**	**16 34 15.9**	**-0.3**	
	baz=126,SNR=5.2								
B22K	**Teshekpuk Lake**	**33.42**	**343**	P		**P**	**16 34 16.2**	**-0.1**	
	baz=138,SNR=6.5								
GOGA	**Godfrey**	**33.46**	**89**	IAmb		IAmb	16 34 19.8		
	comp=Z,17nm,1.2s								
SADO	**Sadowa**	**33.46**	**67**	LR		LR	16 47 00.7		
	comp=Z,450nm,19.7s,baz=314,slow=35								
ANM	**Nome**	**33.60**	**329**	P		**P**	**16 34 17.4**	**-0.6**	
	baz=116								
MWH	**Mokuaweoweo**	**33.70**	**241**	P		P	16 34 14.3	-5.5	
PAOC	**Oil Creek Stat**	**33.71**	**73**	P		**P**	**16 34 18.2**	**-1.0**	
PAOC				IAmb		IAmb	16 34 25.5		
	comp=Z,40nm,1.5s								
F15K	**North Star Dit**	**33.86**	**332**			**P**	**16 34 23.6**	**+3.4**	
F15K				IAmb		IAmb	16 34 34.0		
	comp=Z,36nm,2.0s								
F15K	**North Star Dit**	**33.86**	**332**	P		**P**	**16 34 19.3**	**-0.9**	
	baz=119								
B20K	**Meade River**	**34.07**	**341**	P		**P**	**16 34 21.7**	**-0.3**	
	baz=133								
C19K	**Lookout Ridge**	**34.12**	**339**			**P**	**16 34 25.0**	**+2.5**	
C19K				IAmb		IAmb	16 34 26.1		
	comp=Z,10.0nm,0.9s								
C19K	**Lookout Ridge**	**34.12**	**339**	P		**P**	**16 34 22.5**	**0.0**	
	baz=129								
VLDQ	**Val d'Or**	**34.22**	**61**	IAmb		IAmb	16 34 23.5		
	comp=Z,23nm,1.2s								
V55A	**Taylorsville**	**34.24**	**83**	IAmb		IAmb	16 34 25.7		
	comp=Z,28nm,1.0s								
A22K	**Sinclair Lake**	**34.26**	**343**	P		**P**	**16 34 23.9**	**+0.3**	
	baz=137,SNR=8.3								
C18K	**Utukok River**	**34.30**	**337**	P		**P**	**16 34 23.9**	**-0.2**	
	baz=127								
D17K	**Noatak River**	**34.34**	**335**	P		**P**	**16 34 24.5**	**+0.1**	
	baz=123								
F14K	**Arctic Creek**	**34.37**	**331**	P		**P**	**16 34 25.1**	**+0.4**	
	baz=116								
BLA	**Blacksburg**	**34.37**	**81**	IAmb		IAmb	16 34 27.2		
	comp=Z,22nm,0.8s								
RDOG	**Red Dog Mine**	**34.48**	**336**	P		**P**	**16 34 25.3**	**-0.3**	
	baz=124								
DELO	**Deloro Mine**	**34.58**	**67**	IAmb		IAmb	16 34 28.5		
	comp=Z,24nm,1.1s								
CMIG	**Matias Romero**	**34.72**	**123**	LR		LR	16 49 51.2		
	comp=Z,168nm,19.0s,baz=242,slow=38								
Q56A	**Snyder Ridge,**	**34.72**	**77**	IAmb		IAmb	16 34 29.8		
	comp=Z,22nm,0.8s								
C17K	**DeLong Mountai**	**34.80**	**336**	P		**P**	**16 34 28.3**	**0.0**	
	baz=124,SNR=15								
A21K	**Barrow**	**34.86**	**343**	P		**P**	**16 34 28.6**	**-0.2**	
	baz=135								
TNA	**Tin City**	**35.01**	**330**	P		**P**	**16 34 29.9**	**-0.2**	
	baz=115								
A19K	**Wainwright**	**35.22**	**339**	P		**P**	**16 34 31.6**	**-0.2**	
	baz=128								
SSPA	**Standing Stone**	**35.24**	**74**	P		**P**	**16 34 31.0**	**-1.4**	
SSPA				IAmb		IAmb	16 34 33.8		
	comp=Z,23nm,1.1s								
C16K	**Lisburne Hills**	**35.37**	**335**			**P**	**16 34 36.1**	**+2.9**	
C16K	**Lisburne Hills**	**35.37**	**335**	P		**P**	**16 34 33.0**	**-0.3**	
	baz=121								
P57A	**Homestead Farm**	**35.47**	**76**	IAmb		IAmb	16 34 36.4		
	comp=Z,24nm,0.9s								
K57A	**Scipio Center**	**35.72**	**70**	IAmb		IAmb	16 34 38.1		
	comp=Z,34nm,1.1s								
V58A	**Windy Hill, Pi**	**35.85**	**82**	IAmb		IAmb	16 34 40.0		
	comp=Z,30nm,1.0s								
GAMB	**Gambell**	**35.88**	**326**	P		**P**	**16 34 36.9**	**-0.7**	
	baz=108								
J57A	**Williamstown**	**35.94**	**69**	IAmb		IAmb	16 34 39.8		
	comp=Z,11nm,0.8s								
BINY	**Binghamton**	**36.23**	**71**	IAmb		IAmb	16 34 42.6		
	comp=Z,34nm,1.1s								
TRQ	**Mont Tremblant**	**36.42**	**64**	IAmb		IAmb	16 34 44.3		
	comp=Z,17nm,0.8s								
L59A	**Walton**	**36.91**	**71**	IAmb		IAmb	16 34 48.0		
	comp=Z,35nm,1.1s								
RES	**Resolute Bay**	**36.96**	**13**	LR		LR	16 50 19.8		
	comp=Z,217nm,18.5s,baz=240,slow=37								
RES	**Resolute Bay**	**36.96**	**13**	P		**P**	**16 34 43.6**	**-3.1**	
RES				IAmb		IAmb	16 34 59.1		
	comp=Z,26nm,1.8s								
TEIG	**Tepich**	**36.99**	**112**	P		**P**	**16 34 50.1**	**+2.5**	
	comp=Z,16µmcomp=Z,90nm,1.0s								
J59A	**Piesco**	**36.99**	**68**	IAmb		IAmb	16 34 49.7		
	comp=Z,9.1nm,0.7s								
TRY	**Troy**	**37.76**	**69**	IAmb		IAmb	16 34 55.9		
	comp=Z,28nm,0.9s								
LMQ	**La Malbaie**	**39.05**	**61**	IAmb		IAmb	16 35 06.9		
	comp=Z,25nm,1.2s								
H62A	**Milan**	**39.09**	**66**	IAmb		IAmb	16 35 07.8		
	comp=Z,19nm,0.9s								
FRB	**Frobisher Bay**	**39.83**	**35**	LR		LR	16 52 20.7		
	comp=Z,346nm,21.0s,baz=272,slow=37								
SCHQ	**Schefferville**	**40.36**	**49**	P		**P**	**16 35 16.7**	**+1.2**	
	comp=Z,6.9nm,0.9s,baz=257,slow=12,SNR=10								
SCHQ				LR		LR	16 50 31.8		
	comp=Z,294nm,18.9s,baz=298,slow=34								
	comp=Z,6.9nm,0.9s								
SCHQ	**Schefferville**	**40.36**	**49**	IAmb		IAmb	16 36 40.5		
	comp=Z,34nm,1.7s								
SHEM	**Shemya Is, Ala**	**42.56**	**308**	LR		LR	16 49 03.8		
	comp=Z,66nm,21.0s,baz=90,slow=30								
JTS	**Las Juntas de**	**46.20**	**119**	LR		LR	16 57 29.0		
	comp=Z,110nm,18.6s,baz=331,slow=39								
NEEM	**North Greenlan**	**47.33**	**17**	*i* P		**P**	**16 36 12.5**	**+0.9**	
SUMG	**Summit**	**50.85**	**23**	*i* P		**P**	**16 36 39.4**	**+0.7**	
SUMG				IAmb		IAmb	16 36 40.7		
	comp=Z,14nm,1.1s								
PETK	**Petropavlovsk-**	**52.09**	**312**	P		**P**	**16 36 51.2**	**+3.5**	
	comp=Z,5.2nm,1.0s,baz=77,slow=11,SNR=8.8								
	comp=Z,5.2nm,1.0s								
MA2	**Magadan**	**53.60**	**321**	LR		LR	16 59 01.4		
	comp=Z,67nm,18.0s,baz=101,slow=35								
APAC	**Apartado, Choc**	**53.64**	**114**	P		**P**	**16 36 58.7**	**-0.9**	
DAG	**Danmarks Havn**	**54.52**	**16**	*i* P		**P**	**16 37 05.7**	**+0.4**	
DAG				IAmb		IAmb	16 37 06.5		
	comp=Z,2.8nm,0.7s								
SJG	**San Juan**	**54.66**	**96**	LR		LR	17 04 32.3		
	comp=Z,119nm,19.6s,baz=150,slow=41								
SJG	**San Juan**	**54.66**	**96**	P		**P**	**16 37 10.5**	**+3.4**	
	comp=Z,17nm,1.1s								
DBG	**Daneborg**	**55.25**	**19**	*i* P		**P**	**16 37 12.4**	**+1.9**	
DBG				IAmb		IAmb	16 37 13.6		
	comp=Z,21nm,1.4s								
HELC	**Santa Helena**	**55.58**	**114**	P		P	16 37 18.9	+4.8	
	comp=Z,18nm,0.7s								
PTBC	**PUERTO BERRIO,**	**56.08**	**113**	P		**P**	**16 37 21.2**	**+3.9**	
	comp=Z,28nm,1.0s								
BRJC	**Barrancabermej**	**56.28**	**112**	P		**P**	**16 37 22.8**	**+4.1**	
	comp=Z,44nm,0.7s								
GUY2C	**Guyana, Caldas**	**56.38**	**115**	P		**P**	**16 37 20.7**	**+0.7**	
NORC	**Norcasia**	**56.48**	**114**	P		**P**	**16 37 21.3**	**+1.1**	
YOTC	**Yotoco, Valle**	**56.60**	**117**	P		**P**	**16 37 22.5**	**+1.3**	
PAMC	**Pamplona, Colo**	**56.77**	**111**	P		**P**	**16 37 27.0**	**+4.2**	
	comp=Z,231nmcomp=Z,25nm,0.8s								
JAMC	**Jamundi, Valle**	**56.94**	**118**	P		P	16 37 29.0	+5.3	
	comp=Z,15nm,0.8s								
BARC	**Barichara**	**56.94**	**112**	P		P	16 37 28.2	+4.5	
	comp=Z,647nmcomp=Z,38nm,0.7s								
SPBC	**San Pablo de B**	**56.98**	**113**	P		**P**	**16 37 27.9**	**+4.1**	
	comp=Z,1µmcomp=Z,14nm,0.8s								
TIXI	**Tiksi**	**57.00**	**339**	LR		LR	17 03 18.2		
	comp=Z,78nm,18.5s,baz=94,slow=38								
SDV	**Santo Domingo**	**57.20**	**108**	LR		LR	17 04 36.7		
	comp=Z,82nm,18.6s,baz=263,slow=39								
SDV	**Santo Domingo**	**57.20**	**108**	P		**P**	**16 37 29.8**	**+4.3**	
	comp=Z,15nm,0.8s								
ORTC	**Ortega, Tolima**	**57.41**	**116**	P		**P**	**16 37 31.1**	**+4.3**	
	comp=Z,18nm,0.8s								
RUSC	**La Rusia**	**57.50**	**112**	P		**P**	**16 37 32.0**	**+4.0**	
	comp=Z,479nmcomp=Z,23nm,0.8s								
CVER	**Cruz Verde, Cu**	**57.78**	**114**	P		P	16 37 35.6	+5.7	
PRAC	**Prado**	**57.79**	**116**	P		P	16 37 34.4	+4.9	
	comp=Z,16nm,0.7s								
GCUF	**Volcan Galeras**	**57.95**	**120**	P		P	16 37 37.6	+6.4	
	comp=Z,13nm,1.4s								
URMC	**La Uribe, Meta**	**58.48**	**116**	P		P	16 37 39.0	+4.7	
	comp=Z,14nm,0.9s								
FLOC	**Florencia**	**58.82**	**118**	P		P	16 37 42.1	+5.4	
JMIC	**Jan Mayen**	**59.98**	**20**	LR		LR	17 01 51.8		
	comp=Z,110nm,20.1s,baz=280,slow=34								
H11N3	**WAKE ISLAND Hy**	**61.22**	**272**	T		T	17 44 32.1		
	baz=53,slow=75,SNR=173								
H11N2	**WAKE ISLAND Hy**	**61.22**	**272**	T		T	17 44 26.0		
	baz=53,slow=75,SNR=183								
H11N1	**WAKE ISLAND Hy**	**61.24**	**272**	T		T	17 44 33.4		
	baz=53,slow=75,SNR=101								
YAK	**Yakutsk**	**61.76**	**329**	LR		LR	17 03 47.0		
	comp=Z,72nm,20.4s,baz=58,slow=35								
NRIK	**Noril'sk**	**67.96**	**348**	P		**P**	**16 38 37.2**	**+0.8**	
	comp=Z,0.6nm,0.3s,baz=38,slow=6.0,SNR=4.6								
NRIK				LR		LR	17 10 30.8		
	comp=Z,34nm,18.7s,baz=360,slow=38								
	comp=Z,0.6nm,0.3s								
ARCES	**ARCESS Array B**	**68.15**	**11**	LR		LR	17 09 19.1		
	comp=Z,95nm,18.7s,baz=328,slow=37								
KLR	**Kul'dur**	**68.23**	**317**	LR		LR	17 05 51.6		
	comp=Z,32nm,20.9s,baz=60,slow=34								
USRK	**Ussuriysk Ar.**	**71.18**	**312**	P		**P**	**16 38 59.5**	**+2.9**	
	comp=Z,1.1nm,0.8s,baz=46,slow=8.3,SNR=4.6								
	comp=Z,1.1nm,0.8s								
MJAR	**Matsushiro Arr**	**72.11**	**303**	P		**P**	**16 39 06.2**	**+3.9**	
	comp=Z,1.3nm,0.9s,baz=48,slow=4.1,SNR=2.6								
MJAR				LR		LR	17 08 01.4		
	comp=Z,20nm,19.3s,baz=68,slow=34								
	comp=Z,1.3nm,0.9s								
MJAR	**Matsushiro Arr**	**72.11**	**303**	IAmb		IAmb	16 39 17.3		
	comp=Z,13nm,1.6s								
EKA	**Eskdalemuir Ar**	**72.40**	**31**	LR		LR	17 11 22.0		
	comp=Z,210nm,17.7s,baz=346,slow=36								
NB2	**NORSAR Subarra**	**72.67**	**21**	P		P	16 39 16.5	+11	
	comp=Z,22nm,1.7s,baz=325,slow=6.2								
MDP	**Montagnes des**	**73.06**	**98**	LR		LR	17 15 57.4		
	comp=Z,54nm,18.1s,baz=310,slow=40								
HFS	**Hagfors**	**74.09**	**20**	P		**P**	**16 39 15.2**	**+1.5**	
	comp=Z,2.5nm,0.9s,baz=347,slow=5.9,SNR=9.3								
HFS				LR		LR	17 11 05.6		
	comp=Z,130nm,18.5s,baz=328,slow=35								
	comp=Z,2.5nm,0.9s								
FINES	**FINESS Array B**	**75.71**	**14**	P		**P**	**16 39 24.0**	**+1.1**	
	comp=Z,3.2nm,1.0s,baz=7.6,slow=4.2,SNR=2.1								
FINES				LR		LR	17 11 51.1		
	comp=Z,130nm,19.7s,baz=321,slow=35								
	comp=Z,3.2nm,1.0s								
FINES	**FINESS Array B**	**75.71**	**14**	P		**P**	**16 39 21.0**	**-1.9**	
LPAZ	**La Paz**	**77.08**	**125**	P		**P**	**16 39 32.5**	**+0.4**	
	comp=Z,1.2nm,0.8s,baz=322,slow=9.0,SNR=6.2								
	comp=Z,1.2nm,0.8s								
LPAZ	**La Paz**	**77.08**	**125**	P		**P**	**16 39 29.2**	**-2.8**	
KSRS	**Korea Array**	**77.88**	**309**	P		**P**	**16 39 38.6**	**+3.0**	
	comp=Z,0.3nm,0.6s,baz=52,slow=5.4,SNR=1.4								
KSRS				LR		LR	17 10 56.3		
	comp=Z,17nm,20.6s,baz=50,slow=33								
	comp=Z,0.3nm,0.6s								
JNU	**Nakatsue**	**78.93**	**304**	LR		LR	17 08 22.5		
	comp=Z,28nm,20.9s,baz=44,slow=31								
TLY	**Talaya**	**79.05**	**332**	LR		LR	17 14 12.0		
	comp=Z,46nm,18.5s,baz=25,slow=35								
SONM	**Songino Array**	**81.10**	**328**	P		**P**	**16 39 54.9**	**+1.7**	
	comp=Z,0.6nm,0.8s,baz=72,slow=4.8,SNR=5.5								
SONM				LR		LR	17 15 55.8		
	comp=Z,90nm,18.3s,baz=36,slow=36								
	comp=Z,0.6nm,0.8s								
GUMO	**Guam**	**81.65**	**281**	LR		LR	17 07 37.4		
	comp=Z,38nm,21.9s,baz=94,slow=29								
ZALV	**Zalesovo Beam**	**82.60**	**343**	P		**P**	**16 40 01.7**	**+0.9**	
	comp=Z,0.5nm,0.4s,baz=39,slow=5.7,SNR=5.7								
ZALV				LR		LR	17 18 05.0		
	comp=Z,50nm,20.7s,baz=12,slow=37								
	comp=Z,0.5nm,0.4s								
ZALV	**Zalesovo Beam**	**82.60**	**343**	P		**P**	**16 40 02.2**	**+1.5**	
ARTI	**Arti**	**83.49**	**358**	LR		LR	17 20 31.9		
	comp=Z,51nm,18.9s,baz=348,slow=38								
ESDC	**Sonseca Array**	**83.68**	**42**	P		**P**	**16 40 07.5**	**+0.7**	
	comp=Z,0.6nm,0.9s,baz=329,slow=5.6,SNR=4.4								
ESDC				LR		LR	17 14 58.2		
	comp=Z,103nm,18.6s,baz=315,slow=34								
	comp=Z,0.6nm,0.9s								
ESDC	**Sonseca Array**	**83.68**	**42**	P		**P**	**16 40 04.0**	**-2.7**	
GERES	**GERESS Array B**	**83.78**	**26**	P		**P**	**16 40 06.7**	**-0.4**	
	comp=Z,0.1nm,0.3s,baz=356,slow=6.6,SNR=1.5								
	comp=Z,0.1nm,0.3s								
DAVOX	**Davos/Dischmat**	**84.17**	**29**	LR		LR	17 19 55.1		
	comp=Z,104nm,19.3s,baz=312,slow=37								
HHC	**Hu-ho-hao-te**	**84.28**	**321**	*e*P		**P**	**16 40 09.1**	**-0.7**	
HHC				pmax		pmax			
	comp=Z,8.0nm,0.6s								
FETA	**Feichten**	**84.29**	**29**	*e*pP		pP	16 40 22.1	+4.3	
	comp=Z,3.2nm,0.9s								
VRAC	**Vranov**	**84.32**	**24**	LR		LR	17 21 25.5		
	comp=Z,92nm,18.8s,baz=326,slow=38								
WATA	**Walderalm**	**84.33**	**28**	*e*pP		pP	16 40 22.0	+3.9	
	comp=Z,1.0nm,0.4s								
WTTA	**Wattenberg**	**84.41**	**28**	*e*pP		pP	16 40 22.4	+3.9	
	comp=Z,2.1nm,0.5s								
LESA	**Schwarzleotal**	**84.65**	**28**	*e*pP		pP	16 40 23.6	+4.0	
	comp=Z,1.4nm,0.6s								
JOW	**Kunigami**	**84.81**	**301**	LR		LR	17 17 21.6		
	comp=Z,12nm,18.6s,baz=58,slow=35								
ABTA	**Abfaltersbach**	**85.17**	**28**	*e*pP		pP	16 40 26.6	+4.4	
	comp=Z,3.0nm,0.8s								
KBA	**Koenbreinsper**	**85.18**	**27**	*i* pP		pP	16 40 25.9	+3.5	
	comp=Z,2.9nm,0.7s								
CONA	**Conrad Observa**	**85.29**	**25**	*e*pP		pP	16 40 26.8	+4.0	
	comp=Z,3.5nm,0.8s								
RONA	**Rosalia, Austr**	**85.64**	**25**	*i* pP		pP	16 40 28.9	+4.4	
	comp=Z,0.6nm,0.3s								
ARSA	**Arzberg**	**85.77**	**26**	*e*pP		pP	16 40 28.7	+3.5	
	comp=Z,0.4nm,0.2s								
BVAR	**Borovoye Array**	**85.98**	**351**	P		**P**	**16 40 18.8**	**+0.8**	
	comp=Z,1.3nm,0.8s,baz=20,slow=4.6,SNR=6.4								
BVAR				LR		LR	17 21 10.9		
	comp=Z,55nm,20.3s,baz=351,slow=37								
	comp=Z,1.3nm,0.8s								
OBKA	**Obir**	**86.09**	**27**	*e*pP		pP	16 40 30.8	+4.0	
	comp=Z,6.2nm,0.7s								
SOKA	**Soboth**	**86.11**	**26**	*e*pP		pP	16 40 30.1	+3.2	
	comp=Z,1.9nm,0.6s								
AKASG	**Malin Array Be**	**86.39**	**16**	P		**P**	**16 40 19.9**	**-0.1**	
	comp=Z,0.1nm,0.3s,baz=340,slow=3.8,SNR=2.3								
AKASG				LR		LR	17 17 59.4		
	comp=Z,80nm,20.6s,baz=348,slow=35								
	comp=Z,0.1nm,0.3s								
KURK	**Kurchatov**	**86.94**	**345**	P		**P**	**16 40 23.7**	**+1.0**	
KURK				IAmb		IAmb	16 40 35.3		
	comp=Z,6.0nm,1.1s								
KURBB	**Kurchatov Arra**	**87.04**	**345**	P		**P**	**16 40 24.2**	**+1.0**	
	comp=Z,3.3nm,0.8s,baz=17,slow=4.7,SNR=31								
	comp=Z,3.3nm,0.8s								
AKTO	**Aktyubinsk**	**89.45**	**358**	LR		LR	17 22 43.9		
	comp=Z,67nm,20.5s,baz=328,slow=37								
MKAR	**Makanchi Array**	**89.86**	**342**	P		**P**	**16 40 37.5**	**+0.8**	
	comp=Z,0.6nm,0.9s,baz=36,slow=2.3,SNR=5.5								
MKAR				LR		LR	17 24 08.5		
	comp=Z,49nm,18.5s,baz=5.0,slow=38								
	comp=Z,0.6nm,0.9s								
MKAR	**Makanchi Array**	**89.86**	**342**	P		**P**	**16 40 33.3**	**-3.4**	
BDFB	**Brasilia**	**90.22**	**110**	P		**P**	**16 40 37.9**	**-0.9**	
	comp=Z,0.8nm,0.4s,baz=198,slow=3.2,SNR=1.7								
BDFB				LR		LR	17 24 16.3		
	comp=Z,102nm,20.7s,baz=1.8,slow=38								
	comp=Z,0.8nm,0.4s								
MLR	**Muntele Rosu**	**90.48**	**20**	LR		LR	17 21 42.4		
	comp=Z,187nm,18.6s,baz=331,slow=36								
WHN	**Wuhan**	**90.67**	**312**	P		**P**	**16 40 38.6**	**-2.1**	
WMQ	**Urumqi**	**91.17**	**337**	*e*P		**P**	**16 40 43.6**	**+0.7**	
WMQ				pP		pP	16 40 48.8	-2.0	
WMQ				pmax		pmax			
	comp=Z,9.0nm,0.7s								
CPUP	**Villa Florida**	**91.24**	**124**	P		**P**	**16 40 43.1**	**0.0**	
	comp=Z,0.2nm,0.4s,baz=319,slow=6.7,SNR=3.8								
	comp=Z,0.2nm,0.4s								
CPUP	**Villa Florida**	**91.24**	**124**	IAmb		IAmb	16 42 08.6		
	comp=Z,7.2nm,1.6s								
KEST	**Kesra**	**93.20**	**36**	LR		LR	17 21 54.7		
	comp=Z,112nm,19.0s,baz=2.2,slow=35								
AAK	**Ala-Archa**	**95.48**	**346**	LR		LR	17 28 52.3		
	comp=Z,36nm,19.7s,baz=360,slow=38								
BRTR	**Keskin Array B**	**97.78**	**17**	LR		LR	17 26 44.2		
	comp=Z,43nm,18.2s,baz=302,slow=36								
GNI	**Garni**	**99.20**	**8**	LR		LR	17 29 16.3		
	comp=Z,31nm,18.3s,baz=344,slow=37								
PZH	**PanZhiHua**	**100.62**	**319**	P		**Pdif**	**16 41 25.3**	**-0.9**	
QSPA	**South Pole Qui**	**130.27**	**180**	PKP		**PKiKP**	**16 46 48.0**	**+0.2**	
	comp=Z,3.2nm,0.9s,baz=338,slow=5.4,SNR=8.4								
BOSA	**Boshof**	**152.70**	**74**	PKPbc		**PKiKP**	**16 47 36.4**	**+1.4**	
	comp=Z,1.6nm,0.8s,baz=276,slow=2.9,SNR=6.0								

TIR ***22*** *16:28:09.8, 41.53N×19.42E, h33km±1km, Md2.8/4, Ml2.4/6*
PDG ***22*** *16:28:11.5±0.1, 41.55N×19.49E, h16km, ML2.5/10, Error ellipse: s-maj=0.2km s-min=0.5km az=0.0*
BEO ***22*** *16:28:12.7±0.6, 41.55N×19.51E, h5km±3km, ML2.2/10*
RHSSO ***22*** *16:28:12.3±1.0, 41.53N×19.49E, h5km±3km, ML2.4/5*
ATH ***22*** *16:28:13.7±0.3, 41.63N×19.41E, h10km, ML2.3/4, Latitude uncertainty: 2 km; Longitude uncertainty: 3 km*

ISC 22 16:28:11.2±1.1, 41.53N±0.02×19.45E±0.02, h3km±10km, n51, σ0.884/84, 5C-5D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TIR	**Tirane**	**0.36**	**121**	Pg		**Pb**	**16 28 19.5**	**-0.7**
TIR				Sg		**Sg**	**16 28 23.7**	**+0.9**
TIR				AML		AML	16 28 25.9	
	1.6nm,0.3s							
ULC	**Ulcinj**	**0.46**	**340**	↑*i* Pg		**Pg**	**16 28 20.3**	**+0.3**
ULC				*i* Sg		**Sb**	**16 28 27.7**	**-1.4**
SDA	**Shkodra**	**0.52**	**4**	Pg		**Pg**	**16 28 20.8**	**-0.3**
SDA				Sg		**Sg**	**16 28 28.7**	**+0.7**
SDA				AML		AML	16 28 31.4	
	0.8nm,0.2s							
SDA				AMd			16 29 13.4	
DRME	**Dracevica, Mon**	**0.68**	**343**	↓*i* Pg		**Pg**	**16 28 24.3**	**0.0**
DRME				*i* Sg		**Sb**	**16 28 35.3**	**-0.3**
DRME	**Dracevica, Mon**	**0.68**	**343**	*e*Pg		**Pg**	**16 28 24.4**	**+0.1**
DRME				*e*Sg		**Sb**	**16 28 34.6**	**-1.0**
PHP	**Peshkopia**	**0.76**	**78**	Pg		**Pg**	**16 28 24.8**	**-0.9**
PHP				Sg		**Sg**	**16 28 36.1**	**+0.7**
PHP				AML		AML	16 28 40.0	
	0.7nm,0.3s							
PHP				AMd			16 29 14.4	
BUM	**Brajici-Budva**	**0.87**	**332**	↓*i* Pg		**Pg**	**16 28 27.9**	**0.0**
BUM				*i* Sg		**Sb**	**16 28 41.9**	**+0.8**
PDG	**Podgorica**	**0.91**	**351**	Pg		**Pg**	**16 28 27.5**	**-1.1**
PDG				Sn		**Sg**	**16 28 40.9**	**+0.5**
PDG				AMd			16 29 15.5	
PDG	**Podgorica**	**0.91**	**351**	*e*Pg		**Pg**	**16 28 28.0**	**-0.7**
PDG				*e*Sg		**Sb**	**16 28 41.0**	**-0.3**
PDG	**Podgorica**	**0.91**	**351**	P		**Pb**	**16 28 29.4**	**-0.1**
PDG				S		**Sg**	**16 28 40.9**	**+0.5**
PDG	**Podgorica**	**0.91**	**351**	↓*i* Pg		**Pg**	**16 28 28.3**	**-0.3**
PDG				*i* Sg		**Sb**	**16 28 42.7**	**+0.6**
PDG	**Podgorica**	**0.91**	**351**	*e*Pg		**Pg**	**16 28 27.9**	**-0.7**
PDG				*e*Sg		**Sb**	**16 28 41.8**	**-0.3**
VLO	**Vlora**	**1.06**	**178**	Sg		**Sb**	**16 28 46.3**	**-0.1**
CEME	**Cevo**	**1.09**	**339**	↑*i* Pg		**Pg**	**16 28 31.8**	**-0.3**
CEME				*i* Sg		**Sn**	**16 28 48.7**	**-0.3**
HCY	**Herceg Novi**	**1.16**	**322**	↓*i* Pg		**Pg**	**16 28 33.1**	**-0.3**
HCY				*i* Sg		**Sn**	**16 28 51.9**	**+1.2**
HCY	**Herceg Novi**	**1.16**	**322**	*e*Pg		**Pn**	**16 28 34.0

RND				IAML		16 34 16.5		
	comp=E,678nm,0.1s							
RND				IAML		16 34 16.6		
	comp=N,532nm,0.1s							
RND	**Reindeer**	**0.38**	**24**		Sn	16 34 16.1	0.0	
TRF	**Thorofare Moun**	**0.63**	**309**		Sn	16 34 19.9	+0.1	
TRF	**Thorofare Moun**	**0.63**	**309**		Pn	16 34 08.6	0.0	
MCK	**McKinley**	**0.68**	**10**		Sn	16 34 20.6	0.0	
MCK	**McKinley**	**0.68**	**10**		Pn	16 34 09.0	0.0	
CUT	**Chulitna**	**0.82**	**217**		Sn	16 34 23.2	+0.2	
CUT	**Chulitna**	**0.82**	**217**		Pn	16 34 10.2	-0.1	
CUT				IAML		16 34 28.3		
	comp=N,408nm,0.3s							
WAT6	**Susitna Watana**	**0.83**	**125**		Pn	16 34 10.5	-0.1	
WAT6					Sn	16 34 23.1	-0.4	
DHY	**Denali Highway**	**0.83**	**88**		Sn	16 34 24.0	+0.4	
DHY	**Denali Highway**	**0.83**	**88**		Pn	16 34 10.4	-0.3	
DHY				IAML		16 34 24.5		
	comp=N,162nm,0.5s							
DHY				IAML		16 34 24.9		
	comp=E,177nm,0.2s							
L22K	**Petersville**	**0.90**	**234**		Pn	16 34 11.1	-0.2	
L22K				IAML		16 34 25.0		
	comp=E,409nm,0.3s							
KTH	**Kantishna Hill**	**0.92**	**303**		Pn	16 34 11.2	-0.4	
BWN	**Browne**	**1.12**	**354**		Pn	16 34 13.7	-0.2	
BWN					Sn	16 34 29.1	-0.2	
BWN	**Browne**	**1.12**	**354**	IAML		16 34 29.7		
	comp=E,223nm,1.2s							
BWN				IAML		16 34 29.8		
	comp=N,306nm,0.8s							
GHO	**Glory Hole Cre**	**1.30**	**174**		Pn	16 34 16.4	+0.2	
GHO				IAML		16 34 38.4		
	comp=N,190nm,0.5s							
GHO				IAML		16 34 39.1		
	comp=E,116nm,0.4s							
BPAW	**Bear Paw Mtn.**	**1.31**	**323**		Pn	16 34 15.8	-0.5	
BPAW				IAML		16 34 32.4		
	comp=N,92nm,0.3s							
BPAW				IAML		16 34 33.2		
	comp=E,102nm,0.5s							
SML	**Sawmill**	**1.32**	**162**		Pn	16 34 16.6	+0.2	
SML				IAML		16 34 38.4		
	comp=N,108nm,0.5s							
PPLA	**Purkeypile**	**1.38**	**264**		Sn	16 34 35.9	+0.7	
PPLA	**Purkeypile**	**1.38**	**264**		Pn	16 34 17.3	+0.1	
PPLA				IAML		16 34 36.8		
	comp=N,138nm,0.9s							
M22K	**Willow**	**1.38**	**198**		Pn	16 34 17.6	+0.5	
M23K	**Glacier View**	**1.45**	**151**		Pn	16 34 18.5	+0.6	
PMR	**Palmer**	**1.48**	**179**		Sn	16 34 38.8	+1.7	
PMR	**Palmer**	**1.48**	**179**		Pn	16 34 18.8	+0.5	
PMR				IAML		16 34 41.3		
	comp=E,126nm,0.2s							
WRH	**Wood River Hil**	**1.50**	**19**		Sn	16 34 36.5	-1.3	
WRH	**Wood River Hil**	**1.50**	**19**		Pn	16 34 18.1	-0.5	
WRH				IAML		16 34 37.1		
	comp=E,146nm,0.3s							
WRH				IAML		16 34 37.1		
	comp=N,138nm,0.2s							
SCM	**Sheep Creek Mo**	**1.51**	**144**		Pn	16 34 19.3	+0.4	
SCM				IAML		16 34 44.0		
	comp=N,134nm,0.3s							
SCM				IAML		16 34 45.4		
	comp=E,164nm,0.3s							
SKT	**Skwentna**	**1.53**	**226**		Pn	16 34 19.1	0.0	
NEA2	**Nenana**	**1.54**	**2**		Pn	16 34 18.6	-0.6	
NEA2				IAML		16 34 37.7		
	comp=E,89nm,0.2s							
NEA2				IAML		16 34 38.2		
	comp=N,125nm,0.7s							
CHUM	**Lake Minchumin**	**1.62**	**302**		Pn	16 34 20.2	0.0	
HDA	**Harding Lake**	**1.68**	**36**		Pn	16 34 20.7	-0.3	
KNK	**Knik Glacier**	**1.69**	**168**		Pn	16 34 21.8	+0.6	
KNK				IAML		16 34 52.7		
	comp=N,94nm,0.4s							
M24K	**Tolsona, Glenn**	**1.70**	**123**		Pn	16 34 22.6	+1.4	
PAX	**Paxson**	**1.70**	**91**		Pn	16 34 22.1	+0.8	
PAX				IAML		16 34 46.5		
	comp=N,104nm,0.2s							
PAX				IAML		16 34 48.7		
	comp=E,102nm,0.4s							
CCB	**Clear Creek Bu**	**1.71**	**21**		Pn	16 34 20.7	-0.6	
CCB				IAML		16 34 41.7		
	comp=N,66nm,0.5s							
CCB				IAML		16 34 42.1		
	comp=E,88nm,0.2s							
K24K	**Donnelly Dome**	**1.71**	**63**		Pn	16 34 21.7	+0.3	
K24K				IAML		16 34 49.4		
	comp=E,166nm,0.4s							
K24K				IAML		16 34 49.6		
	comp=N,163nm,0.3s							
COLA	**College**	**1.92**	**18**		Pn	16 34 23.6	-0.4	
STLK	**Strandline Lak**	**1.99**	**219**		Pn	16 34 25.7	+0.5	
STLK				IAML		16 34 54.1		
	comp=E,75nm,0.4s							
STLK				IAML		16 34 54.1		
	comp=N,92nm,0.3s							
RC01	**Rabbit Creek A**	**2.00**	**187**		Pn	16 34 26.5	+1.4	
RC01	**Rabbit Creek A**	**2.00**	**187**	IAML		16 34 56.3		
	comp=E,117nm,0.2s							
IL31		**2.00**	**30**		Pn	16 34 24.7	-0.4	
ILAR	**Eielson Array**	**2.00**	**30**		Pn	16 34 24.6	-0.5	
RIDG	**Independent Ri**	**2.08**	**69**		Pn	16 34 26.9	+0.7	
RIDG	**Independent Ri**	**2.08**	**69**	IAML		16 34 56.0		
	comp=N,50nm,0.7s							
RIDG				IAML		16 34 57.7		
	comp=E,71nm,0.5s							
KLU	**Klutina**	**2.20**	**134**	IAML		16 35 00.9		
	comp=N,98nm,0.3s							
KLU				IAML		16 35 01.1		
	comp=E,102nm,0.3s							
SPCG	**Spurr Capps Gl**	**2.21**	**218**		Pn	16 34 29.1	+0.9	
J25K	**Salcha River,**	**2.30**	**46**	IAML		16 34 58.3		
	comp=N,101nm,0.3s							
SPNN	**North Nagishla**	**2.36**	**225**		Pn	16 34 31.0	+0.8	
CKL	**Chakachamna La**	**2.38**	**220**		Pn	16 34 31.0	+0.6	
SPWE	**Spurr West**	**2.39**	**223**		Pn	16 34 31.3	+0.8	
DOT	**Dot Lake**	**2.39**	**73**		Pn	16 34 30.9	+0.5	
DOT	**Dot Lake**	**2.39**	**73**	IAML		16 35 00.8		
	comp=N,49nm,0.5s							
J20K	**Nowinta River**	**2.48**	**299**		Pn	16 34 31.1	-0.5	
MENT	**Mentasta**	**2.50**	**90**	IAML		16 35 10.8		
	comp=E,58nm,0.5s							
MENT				IAML		16 35 12.8		
	comp=N,60nm,0.5s							
SCRK	**Sand Creek**	**2.51**	**66**		Pn	16 34 32.0	-0.2	
N25K	**Chitina, Valde**	**2.60**	**122**		Pn	16 34 34.3	+1.1	
N25K	**Chitina, Valde**	**2.60**	**122**	IAML		16 35 12.7		
	comp=E,36nm,0.8s							
N25K				IAML		16 35 13.4		
	comp=N,40nm,0.7s							
O22K	**Cooper Landing**	**2.60**	**186**		Pn	16 34 34.4	+1.1	
SLKM	**Skilak Lake**	**2.61**	**191**		Pn	16 34 34.7	+1.4	
SLKM	**Skilak Lake**	**2.61**	**191**	IAML		16 35 13.6		
	comp=N,52nm,0.5s							
SLKM				IAML		16 35 15.7		
	comp=E,63nm,0.3s							
L26K	**Log Cabin Wild**	**2.67**	**88**	IAML		16 35 16.2		
	comp=E,51nm,0.4s							
L26K				IAML		16 35 21.8		
	comp=N,49nm,0.4s							
M26K	**Nabesna, AK**	**2.93**	**100**	IAML		16 35 28.2		
	comp=N,24nm,0.6s							
PRP	**Porcupine Dome**	**2.94**	**31**		Pn	16 34 37.6	-0.3	
PRP	**Porcupine Dome**	**2.94**	**31**	IAML		16 35 13.1		
	comp=E,27nm,0.6s							
PRP				IAML		16 35 14.3		
	comp=N,39nm,0.5s							
GLB	**Gilahina Butte**	**3.00**	**120**	IAML		16 35 26.1		
	comp=N,33nm,0.6s							
GLB				IAML		16 35 26.6		
	comp=E,25nm,1.0s							
J19K	**Poorman**	**3.02**	**291**	IAML		16 35 14.7		
	comp=N,18nm,0.5s							
BRLK	**Bradley Lake**	**3.41**	**195**		Pn	16 34 45.1	+0.9	
BRLK	**Bradley Lake**	**3.41**	**195**	IAML		16 35 36.2		
	comp=N,27nm,0.6s							
BRLK				IAML		16 35 37.6		
	comp=E,29nm,0.6s							
G23K	**Bananza Creek**	**3.68**	**355**	IAML		16 36 48.3		
	comp=N,18nm,1.2s							
G23K				IAML		16 36 53.8		
	comp=E,17nm,1.1s							
I28M	**Miner Creek**	**4.70**	**55**		Pn	16 35 02.2	+0.5	
	comp=E,13nm,0.8s							
I28M				IAML		16 37 10.9		
	comp=N,11nm,0.9s							
I17K	**Unalakleet**	**5.22**	**284**		Pn	16 35 08.9	+0.2	
I17K	**Unalakleet**	**5.22**	**284**	IAML		16 36 16.6		
	comp=E,4.5nm,1.0s							
I17K				IAML		16 36 57.4		
	comp=N,4.2nm,1.1s							

*DJA **22** 16:34:45.4±2.9, 7°N±24′×12°E±′, h89km±25km, M4.7/9, mB5.1/6, mb4.7/7, MLv4.8/9, Mw(mB)4.5/6*
*IDC **22** 16:34:48.0±1.1, 6°.55N×125°.14E, h0km, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=28.6km s-min=9.1km az=120.0*
*MAN **22** 16:34:50.0, 6°.73N×125°.18E, h16km, MS4.0*
MAN INTENSITY IV - MAGSAYSAY DAVAL DEL SUR; . INTENSITY III - KORONADAL CITY AND TUPI SOUTH COTABATO.

ISC 22 16:34:50.1±1.6, 6°.72N±0′.04×125°.16E±0′.05, h10km±11km, n24, σ1°.73/31, mb3.5/6, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**0.29**	**347**	*i*	P	**Pb**		**16 34 57.3**	**-0.2**
KCP					*i* S	**Sb**		**16 35 02.3**	**-0.3**
DMPH	**Davao City--Mi**	**0.50**	**44**	*i*	P	**Pb**		**16 35 00.9**	**-0.1**
DMPH					*i* S	**Sb**		**16 35 08.9**	**+0.6**
DAV	**Davao City (W)**	**0.54**	**50**	Pg		**Pb**		**16 35 02.1**	**+0.4**
	435nm,0.3s,baz=260,slow=7.5,SNR=26								
DAV				Lg		Lg		16 35 09.5	
	2µm,0.3s,baz=141,slow=24,SNR=26								
DAV	**Davao City (W)**	**0.54**	**50**	P		**Pb**		**16 35 02.2**	**+0.4**
DDMP	**Don Marcelino,**	**0.82**	**138**	*i*	P	**Pg**		**16 35 06.4**	**+0.5**
DDMP					*e* S	**Sb**		**16 35 18.4**	**+0.8**
CGP	**Cagayan de Oro**	**1.78**	**345**	*i*	P	**Pn**		**16 35 21.2**	**+0.2**
CGP					*i* S	**Sn**		**16 35 44.1**	**+0.3**
BIPH	**Bislig**	**1.88**	**39**	*i*	P	**Pn**		**16 35 22.6**	**+0.3**
BIPH					*i* S	**Sn**		**16 35 45.7**	**-0.5**
SGSI	**Sangihe**	**3.04**	**173**		P	**Pn**		**16 35 40.1**	**+1.8**
SCPH	**Surigao**	**3.06**	**6**	*e*	P	**Pb**		**16 35 42.0**	**-2.7**
TBP	**Tagbilaran**	**3.22**	**337**	*e*	P	**Pb**		**16 35 44.0**	**-3.4**
SNPH	**Sibulan**	**3.23**	**324**	*e*	P	**Pb**		**16 35 48.2**	**+0.7**
LLP	**Lapu-Lapu**	**3.76**	**342**	*i*	P	**Pg**		**16 36 02.2**	**0.0**
LLP					*i* S	**Sb**		**16 36 44.5**	**+2.1**
PLP	**Palo**	**4.42**	**358**	*e*	P	**Pn**		**16 35 59.3**	**+2.0**
PLP					*e* S	**Sn**		**16 36 52.3**	**+3.4**
MNI	**Manado**	**5.25**	**183**		P	**Pn**		**16 36 09.0**	**+0.3**
	0.8nm167nm,0.6s								
GTOI	**Gorontalo**	**6.41**	**200**		P	**Pn**		**16 36 24.5**	**-0.2**
	0.6nm2µm142nm,0.6s								
MYLDM	**Lahad Datu**	**6.80**	**257**		P	**Pn**		**16 36 33.3**	**+3.3**
MRSI	**Marisa**	**6.98**	**208**		P	**Pn**		**16 36 29.9**	**-2.6**
SANI	**Sanana**	**8.75**	**175**		P	**Pn**		**16 36 56.6**	**-0.2**
FITZ	**Fitzroy Crossi**	**24.66**	**179**		P	**P**		**16 40 09.4**	**-1.8**
	1.2nm,0.5s,baz=13,slow=8.5,SNR=7.3 1.2nm,0.5s								
NJ2	**Nanjing**	**25.88**	**348**	*e*	P	**P**		**16 40 21.8**	**-0.4**
NJ2					pmax	pmax			
	comp=Z,27nm,0.8s								
WRA	**Warramunga Arr**	**27.99**	**161**		P	**P**		**16 40 38.8**	**-2.5**
	comp=Z,0.6nm,0.8s,baz=331,slow=10,SNR=9.5 comp=Z,0.6nm,0.8s								
ASAR	**Alice Springs**	**31.39**	**164**		P	**P**		**16 41 09.2**	**-2.2**
	comp=Z,0.3nm,0.5s,baz=341,slow=8.6,SNR=11 comp=Z,0.3nm,0.5s								
USRK	**Ussuriysk Ar.**	**37.81**	**8**		P	**P**		**16 42 08.4**	**+1.7**
	comp=Z,0.9nm,0.7s,baz=182,slow=8.2,SNR=6.5 comp=Z,0.9nm,0.7s								
MKAR	**Makanchi Array**	**54.23**	**325**		P	**P**		**16 44 15.7**	**-0.4**
	comp=Z,0.1nm,0.5s,baz=115,slow=8.3,SNR=1.4 comp=Z,0.1nm,0.5s								

*KRSC **22** 16:59:14.3±1.5, 49°.45N×156°.69E, h16km±19km, Ml4.2*
*MOS **22** 16:59:18.1±0.9, 49°.63N×155°.95E, h76km, mb4.0/3, Error ellipse: s-maj=15.2km s-min=4.3km az=73.3*
*IDC **22** 16:59:21.2±2.7, 49°.77N×155°.80E, h78km±23km, mb3.4/13, mbtmp3.7/17, MS2.6/1, Error ellipse: s-maj=32.2km s-min=15.8km az=146.0*

ISC 22 16:59:17.2±0.8, 49°.44N±0′.09×156°.20E±0′.09, h54km, n82, σ1°.44/105, mb3.7/14, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.25**	**358**	*i*	P	**Pn**		**16 59 36.9**	**-1.5**
SKR					*e* S	**Sn**		**16 59 53.5**	**-0.6**
SKR					pmax	pmax			
	comp=Z,209nm,0.3s								
SKR					smax	smax			
	comp=N,3µm,0.2s								
SKR					smax	smax			
	comp=E,3µm,0.2s								
SKR	**Severo-Kuril's**	**1.25**	**358**	*e*	P	**Pn**		**16 59 36.8**	**-1.5**
SKR					*e* S	**Sn**		**16 59 52.8**	**-1.3**
PAU	**Pauzhetka**	**2.07**	**11**		PN	**Pn**		**16 59 49.0**	**-0.5**
PAU					S	**Sn**		**17 00 13.8**	**-0.3**
PAU	**Pauzhetka**	**2.07**	**11**	*e*	P	**Pn**		**16 59 49.1**	**-0.5**
PAU					*e* S	**Sn**		**17 00 13.9**	**-0.3**
KDTR	**Khodutka, Kamc**	**2.66**	**26**		PN	**Pn**		**16 59 56.7**	**-0.8**
KDTR					S	**Sn**		**17 00 27.4**	**-1.1**
KDTR	**Khodutka, Kamc**	**2.66**	**26**	*e*	P	**Pn**		**16 59 56.7**	**-0.8**
KDTR					*e* S	**Sn**		**17 00 27.5**	**-1.1**
MIPR	**Malaya Ipel'ka**	**2.87**	**7**		PN	**Pn**		**17 00 00.3**	**-0.1**
MIPR	**Malaya Ipel'ka**	**2.87**	**7**	*e*	P	**Pn**		**17 00 00.3**	**-0.1**
ASAK	**Asacha**	**3.14**	**19**		PN	**Pn**		**17 00 04.6**	**+0.4**
ASAK	**Asacha**	**3.14**	**19**	*e*	P	**Pn**		**17 00 04.7**	**+0.4**
MTVR	**Mutnovka**	**3.30**	**22**		PN	**Pn**		**17 00 06.5**	**+0.1**
MTVR					S	**Sn**		**17 00 45.3**	**+0.9**
MTVR	**Mutnovka**	**3.30**	**22**	*e*	P	**Pn**		**17 00 06.5**	**+0.1**
MTVR					*e* S	**Sn**		**17 00 45.3**	**+0.9**
GRL	**Gorelyy**	**3.34**	**20**		PN	**Pn**		**17 00 07.2**	**+0.3**
GRL					S	**Sn**		**17 00 46.1**	**+0.7**
GRL	**Gorelyy**	**3.34**	**20**	*e*	P	**Pn**		**17 00 07.3**	**+0.3**
GRL					*e* S	**Sn**		**17 00 46.1**	**+0.7**
RUS	**Russkaya**	**3.34**	**25**		PN	**Pn**		**17 00 06.5**	**-0.3**
RUS					S	**Sn**		**17 00 44.4**	**-0.8**
RUS	**Russkaya**	**3.34**	**25**	*e*	P	**Pn**		**17 00 06.6**	**-0.3**
RUS					*e* S	**Sn**		**17 00 44.4**	**-0.8**
APC	**Apacha**	**3.55**	**9**		PN	**Pn**		**17 00 10.8**	**+1.2**
APC	**Apacha**	**3.55**	**9**	*e*	P	**Pn**		**17 00 10.8**	**+1.2**
KRMR	**Karymshinskiy**	**3.61**	**19**		PN	**Pn**		**17 00 11.5**	**+1.0**
KRMR					S	**Sn**		**17 00 52.3**	**+0.5**
KRMR	**Karymshinskiy**	**3.61**	**19**	*e*	P	**Pn**		**17 00 11.6**	**+1.0**
KRMR					*e* S	**Sn**		**17 00 52.4**	**+0.5**
PEA0B	**Petropavlovsk-**	**3.80**	**14**	*i*	PN	**Pn**		**17 00 12.6**	**-0.5**
PETK	**Petropavlovsk-**	**3.80**	**14**		P	**Pn**		**17 00 14.2**	**+1.0**
	comp=E,8.5nm,0.5s,baz=194,slow=12,SNR=66								
PETK					LR	LR		17 01 51.9	
	comp=E,94nm,19.5s,baz=152,slow=42								
PET	**Petropavlovsk**	**3.91**	**22**	*e*	PN	**Pn**		**17 00 16.3**	**+1.7**
PET					*e* S	**Sn**		**17 01 01.1**	**+1.9**
PET					smax	smax			
	comp=E,124nm,1.0s								
PET					smax	smax			
	comp=N,162nm,1.3s								
PET	**Petropavlovsk**	**3.91**	**22**	*e*	P	**Pn**		**17 00 15.8**	**+1.2**
PET					*e* S	**Sn**		**17 00 59.5**	**+0.3**
INSR	**Institute**	**3.94**	**22**	*e*	S	**Sn**		**17 01 01.8**	**+1.9**
DALK	**Dalny**	**3.94**	**23**		PN	**Pn**		**17 00 15.6**	**+0.5**
DALK					S	**Sn**		**17 01 00.9**	**+0.9**
DALK	**Dalny**	**3.94**	**23**	*e*	P	**Pn**		**17 00 15.6**	**+0.5**
DALK					*e* S	**Sn**		**17 01 00.9**	**+0.9**
UGLR	**Uglovaya**	**4.12**	**23**		PN	**Pn**		**17 00 18.9**	**+1.2**
UGLR					S	**Sn**		**17 01 07.1**	**+2.5**
UGLR	**Uglovaya**	**4.12**	**23**	*e*	P	**Pn**		**17 00 18.9**	**+1.2**
UGLR					*e* S	**Sn**		**17 01 07.1**	**+2.5**
AVH	**Avacha**	**4.15**	**22**		PN	**Pn**		**17 00 20.1**	**+2.0**
AVH					S	**Sn**		**17 01 07.4**	**+2.1**
AVH	**Avacha**	**4.15**	**22**	*e*	P	**Pn**		**17 00 20.1**	**+2.0**
AVH					*e* S	**Sn**		**17 01 07.4**	**+2.1**
KOK	**Koryaka**	**4.15**	**21**		PN	**Pn**		**17 00 20.3**	**+2.3**
KOK					S	**Sn**		**17 01 07.0**	**+1.7**
KOK	**Koryaka**	**4.15**	**21**	*e*	P	**Pn**		**17 00 20.4**	**+2.3**
KOK					*e* S	**Sn**		**17 01 07.0**	**+1.7**
SMAR	**Somma**	**4.17**	**22**		PN	**Pn**		**17 00 20.1**	**+1.8**
SMAR	**Somma**	**4.17**	**22**	*e*	P	**Pn**		**17 00 20.2**	**+1.8**
KRER	**Koryakskii**	**4.19**	**21**		PN	**Pn**		**17 00 21.0**	**+2.4**
KRER					S	**Sn**		**17 01 08.7**	**+2.3**
KRER	**Koryakskii**	**4.19**	**21**	*e*	P	**Pn**		**17 00 21.1**	**+2.4**
KRER					*e* S	**Sn**		**17 01 08.8**	**+2.3**
SDLR	**Sedlovina**	**4.20**	**23**		PN	**Pn**		**17 00 20.9**	**+2.2**
SDLR					S	**Sn**		**17 01 07.6**	**+1.1**
SDLR	**Sedlovina**	**4.20**	**23**	*e*	P	**Pn**		**17 00 21.0**	**+2.2**
SDLR					*e* S	**Sn**		**17 01 07.6**	**+1.1**
KRX	**Arik**	**4.22**	**20**		PN	**Pn**		**17 00 21.0**	**+2.0**
KRX	**Arik**	**4.22**	**20**	*e*	P	**Pn**		**17 00 21.1**	**+2.0**
SPN	**Mys Shipunski**	**4.38**	**32**		PN	**Pn**		**17 00 22.3**	**+1.2**
SPN					S	**Sn**		**17 01 11.1**	**+0.3**
SPN	**Mys Shipunski**	**4.38**	**32**	*e*	P	**Pn**		**17 00 22.4**	**+1.2**
SPN					*e* S	**Sn**		**17 01 11.2**	**+0.3**
GNL	**Ganaly**	**4.40**	**14**		PN	**Pn**		**17 00 23.7**	**+2.2**
GNL	**Ganaly**	**4.40**	**14**	*e*	P	**Pn**		**17 00 23.7**	**+2.2**
KUR	**Kuril'sk**	**7.05**	**237**	*e*	PN	**Pn**		**17 00 59.5**	**+1.8**
KUR					S	**Sn**		**17 02 19.1**	**+2.8**
KBTR	**Krutoberegovo**	**7.88**	**28**		PN	**Pn**		**17 01 08.7**	**-0.2**
KBTR	**Krutoberegovo**	**7.88**	**28**	*e*	P	**Pn**		**17 01 08.8**	**-0.2**
YUK	**Yuzh-Kuril'sk**	**8.92**	**237**	*i*	PN	**Pn**		**17 01 21.6**	**-1.6**
YSS	**Yuzhno-Sakhali**	**9.32**	**260**	*e*	PN	**Pn**		**17 01 31.3**	**+2.6**
YSS					pmax	pmax			
	comp=Z,10.0nm,1.1s								
ASAJ	**Asahikawa**	**10.73**	**245**		P	**Pn**		**17 01 49.3**	**+1.3**
	comp=Z,8.6nm,0.8s,baz=102,slow=18,SNR=8.7								
USRK	**Ussuriysk Ar.**	**17.34**	**262**		P	**P**		**17 03 16.5**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=78,slow=13,SNR=4.7								
MJA0	**Matsu Arr-Jizo**	**18.34**	**232**	*e*	P	**Pn**		**17 03 28.0**	**+0.5**
MJA0					pmax	pmax			
	comp=Z,1.0nm,0.6s								
MJAR	**Matsushiro Arr**	**18.36**	**232**		P	**Pn**		**17 03 28.7**	**+1.0**
	comp=Z,1.0nm,0.7s,baz=39,slow=8.1,SNR=4.9								
BILL	**Bilibino**	**19.33**	**11**	*i*	P	**P**		**17 03 37.3**	**-0.3**
KSRS	**Korea Array**	**23.62**	**250**		P	**P**		**17 04 25.3**	**+2.2**
	comp=Z,0.6nm,0.6s,baz=48,slow=10.0,SNR=3.0 comp=Z,0.6nm,0.6s								
H11N2	**WAKE ISLAND Hy**	**30.85**	**160**		T	T		17 38 21.3	
	baz=347,slow=76,SNR=24								
H11N1	**WAKE ISLAND Hy**	**30.87**	**160**		T	T		17 38 14.6	
	baz=347,slow=76,SNR=20								
H11N3	**WAKE ISLAND Hy**	**30.87**	**160**		T	T		17 38 26.0	
	baz=347,slow=76,SNR=25								
H11S1	**WAKE ISLAND Hy**	**31.99**	**161**		T	T		17 39 46.0	
	baz=347,slow=76,SNR=198								
H11S3	**WAKE ISLAND Hy**	**32.00**	**161**		T	T		17 39 37.9	
	baz=347,slow=76,SNR=255								
H11S2	**WAKE ISLAND Hy**	**32.01**	**161**		T	T		17 39 44.1	
	baz=347,slow=76,SNR=232								
ILAR	**Eielson Array**	**33.16**	**41**	*e*	P	**P**		**17 05 47.6**	**-0.4**
YKA	**Yellowknife Ar**	**47.53**	**39**		P	**P**		**17 07 48.3**	**+1.7**
	comp=Z,0.2nm,0.7s,baz=299,slow=8.7,SNR=3.8 comp=Z,0.2nm,0.7s								
MKAR	**Makanchi Array**	**47.56**	**297**		P	**P**		**17 07 46.0**	**-1.1**
	comp=Z,0.2nm,0.7s,baz=63,slow=6.6,SNR=2.5 comp=Z,0.2nm,0.7s								
MKAR	**Makanchi Array**	**47.56**	**297**		P	**P**		**17 07 46.0**	**-1.1**
KURK	**Kurchatov**	**47.62**	**303**		P	**P**		**17 07 47.3**	**-0.1**
KURBB	**Kurchatov Arra**	**47.72**	**303**		P	**P**		**17 07 47.3**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=63,slow=7.7,SNR=2.5 comp=Z,0.2nm,0.5s								
BVAR	**Borovoye Array**	**50.76**	**309**		P	**P**		**17 08 09.6**	**-1.8**
	comp=Z,0.5nm,0.3s,baz=60,slow=7.9,SNR=8.1								
BVAR					PcP	**PcP**		**17 09 27.4**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=64,slow=3.4,SNR=2.8 comp=Z,0.5nm,0.3s								
BORK	**Borovoye**	**50.79**	**309**	*i*	P	**P**		**17 08 08.6**	**-3.0**
BORK					pmax	pmax			
	comp=Z,1.0nm,0.9s								
CMAR	**Chiang Mai Arr**	**55.00**	**257**		P	**P**		**17 08 43.3**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=32,slow=7.8,SNR=6.4 comp=Z,0.7nm,0.6s								
FINES	**FINESS Array B**	**62.47**	**336**		P	**P**		**17 09 32.3**	**-2.0**
	comp=Z,2.1nm,1.0s,baz=35,slow=5.1,SNR=3.7 comp=Z,2.1nm,1.0s								
FINES	**FINESS Array B**	**62.47**	**336**	*i*	P	**P**		**17 09 33.5**	**-0.8**
FINES					pmax	pmax			
	comp=Z,2.0nm,0.9s								
HFS	**Hagfors**	**66.64**	**341**		P	**P**		**17 10 00.4**	**-1.1**
	comp=Z,2.0nm,0.8s,baz=43,slow=2.6,SNR=1.9 comp=Z,2.0nm,0.8s								
SCHQ	**Schefferville**	**70.02**	**25**		P	**P**		**17 10 23.2**	**+0.4**
	comp=Z,3.0nm,0.9s,baz=281,slow=10,SNR=1.9 comp=Z,3.0nm,0.9s								
AKASG	**Malin Array Be**	**70.43**	**327**		P	**P**		**17 10 22.4**	**-2.9**
	comp=Z,0.2nm,0.4s,baz=33,slow=6.0,SNR=2.4 comp=Z,0.2nm,0.

comp=Z,72nm,18.9s,baz=104,slow=35
5.1nm,0.7s
WRA **Warramunga Arr 43.21 277** P **P** **17 10 37.0 -1.6**
1.5nm,0.4s,baz=118,slow=7.8,SNR=10
WRA pP **pP** **17 10 53.5 +1.8**
4.9nm,0.5s,baz=118,slow=7.5,SNR=9.8
WRA ScP **ScP** **17 16 07.8 -6.2**
0.5nm,0.9s,baz=117,slow=3.4,SNR=2.7
1.5nm,0.4s
VNDA **Vanda 44.39 186** P **P** **17 10 48.5 +1.2**
0.7nm,0.7s,baz=38,slow=5.8,SNR=4.1
0.7nm,0.7s
FITZ **Fitzroy Crossi 51.29 273** P **P** **17 11 39.8 -1.6**
1.7nm,0.6s,baz=110,slow=2.1,SNR=6.5
FITZ pP **pP** **17 11 55.9 +1.1**
2.5nm,0.5s,baz=141,slow=6.3,SNR=3.3
1.7nm,0.6s
QSPA **South Pole Qui 56.10 180** P **P** **17 12 18.0 +1.9**
3.6nm,0.5s,baz=347,slow=0.9,SNR=34
3.6nm,0.5s
SIJI **Sorong 56.68 295** LR LR 17 36 54.5
comp=Z,37nm,18.5s,baz=54,slow=36
RPN **Rapa Nui 59.66 104** LR LR 17 32 31.2
comp=Z,22nm,19.9s,baz=232,slow=30
KAPI **Kappang 63.18 283** LR LR 17 40 57.3
comp=Z,18nm,18.3s,baz=82,slow=36
MAW **Mawson 68.52 201** P **P** **17 13 39.2 +0.3**
11nm,0.3s,baz=136,slow=14,SNR=41
TROLL **Troll, Antarti 74.25 181** P **P** **17 14 16.4 +2.8**
SNAA **Sanae 74.57 179** P **P** **17 14 16.3 +0.9**
2.3nm,0.5s,baz=196,slow=14,SNR=2.3
2.3nm,0.5s
VNA3 **Neumayer Olymp 74.78 177** ⇓P **P** **17 14 17.6 +1.1**
comp=Z,8.1nm,0.7s
VNA2 **Neumayer--Watz 75.19 177** ⇓P **P** **17 14 20.3 +1.4**
comp=Z,7.7nm,0.6s,baz=164,slow=4.5
H03S2 **Juan Fernandez 79.44 124** T T 18 43 00.9
baz=234,slow=74,SNR=21
H03S1 **Juan Fernandez 79.45 124** T T 18 43 02.2
baz=234,slow=74,SNR=21
H03S3 **Juan Fernandez 79.46 124** T T 18 43 02.3
baz=234,slow=74,SNR=23
H03N3 **Juan Fernandez 79.66 123** T T 18 43 17.4
baz=238,slow=72,SNR=112
H03N2 **Juan Fernandez 79.66 123** T T 18 43 17.1
baz=238,slow=72,SNR=41
H03N1 **Juan Fernandez 79.67 123** T T 18 43 10.5
baz=238,slow=72,SNR=50
PLCA **Paso Flores 80.89 133** P **P** **17 14 52.4 +1.2**
comp=Z,1.4nm,0.9s,baz=273,slow=5.2,SNR=5.4
comp=Z,1.4nm,0.9s
PETK **Petropavlovsk- 89.03 346** P **P** **17 15 31.1 -0.1**
comp=Z,4.0nm,1.0s,baz=162,slow=5.2,SNR=4.7
PETK LR LR 17 48 47.0
comp=Z,29nm,21.7s,baz=37,slow=31
comp=Z,4.0nm,1.0s
NVAR **Mina Array Bea 91.68 43** P **P** **17 15 45.3 +1.1**
comp=Z,0.6nm,0.7s,baz=233,slow=6.3,SNR=2.7
comp=Z,0.6nm,0.7s
CMAR **Chiang Mai Arr 93.50 290** pP **pP** **17 16 10.1 +2.9**
comp=Z,0.6nm,0.8s,baz=153,slow=3.4,SNR=2.6
CMAR LR LR 17 59 57.4
comp=Z,6.9nm,19.0s,baz=150,slow=37
MKAR **Makanchi Array 119.16 309** PKP **PKPdf** **17 21 24.3 -0.9**
comp=Z,0.2nm,0.5s,baz=77,slow=3.6,SNR=2.0
MKAR pPKP **pPKPdf** **17 21 40.4 +0.3**
comp=Z,0.5nm,0.6s,baz=82,slow=0.5,SNR=5.5
ZALV **Zalesovo Beam 119.92 317** PKP **PKPdf** **17 21 24.8 -1.6**
comp=Z,0.4nm,0.5s,baz=124,slow=3.0,SNR=1.9
KURBB **Kurchatov Arra 122.69 312** PKP **PKPdf** **17 21 31.9 +0.1**
comp=Z,0.5nm,0.5s,baz=113,slow=2.0,SNR=8.5
KURBB pPKP **pPKPdf** **17 21 47.8 +1.2**
comp=Z,2.1nm,0.6s,baz=117,slow=1.8,SNR=14
BVAR **Borovoye Array 128.12 314** PKP **PKPdf** **17 21 41.0 -1.2**
comp=Z,0.5nm,0.4s,baz=99,slow=1.5,SNR=6.5
BVAR pPKP **pPKPdf** **17 21 59.1 +2.1**
comp=Z,1.6nm,0.6s,baz=30,slow=0.3,SNR=11
SPITS **Spitsbergen Ar 135.22 355** PKP **PKPdf** **17 21 55.6 +0.7**
comp=Z,26nm,1.3s,baz=117,slow=12,SNR=1.1
ARCES **ARCESS Array B 141.84 346** PKP **PKPdf** **17 22 04.2 -3.0**
comp=Z,5.1nm,1.0s,baz=12,slow=1.8,SNR=3.8
KBZ **Khabaz 146.01 299** PKPbc **PKPdf** **17 22 14.7 -0.5**
comp=Z,1.3nm,0.9s,baz=27,slow=6.8,SNR=2.7
KBZ pPKPbc pPKPab 17 22 31.9 +0.6
comp=Z,4.8nm,1.0s,baz=89,slow=2.2,SNR=7.7
FINES **FINESS Array B 148.07 337** PKPbc **PKPbc** **17 22 21.0 -0.3**
comp=Z,3.4nm,0.7s,baz=28,slow=3.9,SNR=15
FINES pPKPbc **pPKPbc** **17 22 38.0 +1.8**
comp=Z,6.2nm,0.7s,baz=38,slow=3.4,SNR=5.0
MMAI **Mount Meron Ar 151.06 278** PKPbc **PKPbc** **17 22 30.3 +0.5**
comp=Z,1.6nm,0.5s,baz=52,slow=5.9,SNR=4.5
MMAI pPKPbc **pPKPbc** **17 22 47.1 +2.6**
comp=Z,6.6nm,0.5s,baz=46,slow=8.3,SNR=13
NB2 **NORSAR Subarra152.11 349** PKP **PKPbc** **17 22 31.6 +0.4**
comp=Z,10nm,1.2s,baz=16,slow=4.1
NOA **NORSAR Array B 152.11 349** PKPbc **PKPbc** **17 22 31.4 +0.2**
comp=Z,0.9nm,0.8s,baz=14,slow=4.0,SNR=3.4
DBIC **Dimbokro 152.32 168** PKPbc **PKPbc** **17 22 32.0 -1.1**
comp=Z,1.8nm,0.5s,baz=313,slow=2.3,SNR=4.3
HFS **Hagfors 152.51 346** PKPbc **PKPbc** **17 22 32.0 -0.1**
comp=Z,1.2nm,0.4s,baz=78,slow=7.5,SNR=5.5
BRTR **Keskin Array B 153.07 292** PKPbc **PKPbc** **17 22 32.5 -1.7**
comp=Z,0.4nm,0.5s,baz=125,slow=3.3,SNR=5.3
BRTR pPKPbc **pPKPbc** **17 22 50.8 +1.7**
comp=Z,2.8nm,0.5s,baz=125,slow=3.3,SNR=18
AKASG **Malin Array Be 153.32 317** PKPbc **PKPbc** **17 22 31.5 -2.6**
comp=Z,0.4nm,0.3s,baz=49,slow=2.8,SNR=6.9
AKASG pPKPbc **pPKPbc** **17 22 50.6 +1.6**
comp=Z,2.9nm,0.6s,baz=63,slow=2.2,SNR=5.8
TORD **Torodi Ar. Bea 159.20 183** pPKP **pPKPdf** **17 22 54.1 +3.9**
comp=Z,1.5nm,0.9s,baz=269,slow=0.7,SNR=4.5
TORD PKPab **PKPab** **17 23 13.6 +1.3**
comp=Z,3.3nm,0.8s,baz=184,slow=4.5,SNR=9.8

*DJA **22** 17:05:09.7±0.2, 1°N±3°×12°6E±°, h10km, M4.0/18, mB4.7/1, mb4.2/2, MLv4.0/18, Mw(mB)4.0/1*
*IDC **22** 17:05:14.3±2.5, 0.61N×126.13E, h63km±25km, mb3.6/12, mbtmp3.9/15, ML3.6/3, MS2.8/1, Error ellipse: s-maj=20.7km s-min=11.3km az=76.0*
ISC 22 17:05:12.8±0.7, **0.73N**±0.06×**126.19E**±0.06, **h44**km, **n24**, σ1§**28**/27, **mb3.9**/12, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.18**	**88**	P		**Pn**	**17 05 30.7**	**-2.1**
TNTI				S		**Sn**	**17 05 46.1**	**-1.5**
MNI	**Manado**	**1.53**	**298**	P		**Pn**	**17 05 35.9**	**-1.7**
SANI	**Sanana**	**2.77**	**184**	P		**Pn**	**17 05 54.4**	**-0.3**
GTOI	**Gorontalo**	**3.18**	**268**	P		**Pn**	**17 06 02.1**	**+1.8**
LUWI	**Luwuk**	**3.85**	**243**	P		**Pn**	**17 06 09.2**	**-0.3**
NLAI	**Namlea**	**4.04**	**167**	P		**Pn**	**17 06 12.5**	**+0.3**
MRSI	**Marisa**	**4.26**	**267**	P		**Pn**	**17 06 14.9**	**-0.2**
KRAI	**Karang Ratu**	**4.58**	**151**	P		**Pn**	**17 06 21.6**	**+2.0**
APSI	**Ampana**	**4.83**	**250**	P		**Pn**	**17 06 24.2**	**+1.3**
SIJI	**Sorong**	**5.32**	**107**	P		**Pn**	**17 06 29.7**	**0.0**
SIJI	1.1nm,0.3s,baz=186,slow=22,SNR=7.6							
	comp=Z,87nm,19.1s,baz=168,slow=41				LR	LR	17 08 53.7	
	3.2nm,0.4s							
KAPI	**Kappang**	**8.60**	**228**	P		**Pn**	**17 07 13.9**	**-0.8**
KAPI	1.3nm,0.3s,baz=224,slow=1.0,SNR=7.1				S	**Sn**	**17 08 50.3**	**-0.2**
	2.4nm,0.4s,baz=142,slow=21,SNR=1.3							
	3.6nm,0.4s							
FITZ	**Fitzroy Crossi**	**18.72**	**182**	P		**P**	**17 09 27.2**	**-0.6**
	0.2nm,0.3s,baz=38,slow=12,SNR=6.3							
	2.9nm,0.9s							
WRA	**Warramunga Arr**	**22.04**	**159**	P		**P**	**17 10 02.5**	**-1.4**
	5.4nm,0.5s,baz=338,slow=11,SNR=69							
WRA				S		**S**	**17 14 01.7**	**-3.0**
	0.5nm,0.8s,baz=328,slow=18,SNR=3.0							
	5.4nm,0.5s							
ASAR	**Alice Springs**	**25.38**	**163**	P		**P**	**17 10 36.6**	**+0.5**
	2.0nm,0.5s,baz=345,slow=11,SNR=14							
	2.0nm,0.5s							
KSRS	**Korea Array**	**36.58**	**2**	P		**P**	**17 12 16.7**	**+2.2**
	0.6nm,0.6s,baz=178,slow=9.7,SNR=5.3							
	0.6nm,0.6s							
MJAR	**Matsushiro Arr**	**37.33**	**16**	P		**P**	**17 12 21.3**	**+0.3**
	0.8nm,0.6s,baz=185,slow=8.6,SNR=4.4							
	0.8nm,0.6s							
USRK	**Ussuriysk Ar.**	**43.59**	**6**	P		**P**	**17 13 13.8**	**+1.2**
	1.3nm,0.6s,baz=187,slow=5.7,SNR=2.2							
	1.3nm,0.6s							
SONM	**Songino Array**	**49.97**	**343**	P		**P**	**17 14 02.7**	**+0.1**
	0.2nm,0.6s,baz=138,slow=8.9,SNR=0.9							
	0.2nm,0.6s							
PETK	**Petropavlovsk-**	**58.40**	**22**	P		**P**	**17 15 04.8**	**+1.1**
	2.1nm,0.8s,baz=212,slow=7.0,SNR=5.5							
	2.1nm,0.8s							
MKAR	**Makanchi Array**	**59.72**	**327**	P		**P**	**17 15 12.6**	**-0.4**
	0.8nm,0.4s,baz=120,slow=7.4,SNR=16							
	0.8nm,0.4s							
ZALV	**Zalesovo Beam**	**63.02**	**334**	P		**P**	**17 15 34.2**	**-1.0**
	0.5nm,0.5s,baz=115,slow=6.5,SNR=2.3							
	0.5nm,0.5s							
KURBB	**Kurchatov Arra**	**63.98**	**328**	P		**P**	**17 15 41.3**	**-0.2**
	1.0nm,0.6s,baz=126,slow=6.0,SNR=9.4							
	1.0nm,0.6s							
BVAR	**Borovoye Array**	**69.54**	**328**	P		**P**	**17 16 16.6**	**-0.4**
	2.1nm,0.9s,baz=123,slow=5.3,SNR=8.5							
	2.1nm,0.9s							
NRIK	**Noril'sk**	**73.20**	**347**	P		**P**	**17 16 38.6**	**-0.1**
	1.1nm,0.7s,baz=136,slow=9.7,SNR=4.4							
	1.1nm,0.7s							

*SOME **22** 17:07:56.2, 42°.28N×84°.27E, h10km*
*NNC **22** 17:07:57.2±4.2, 42°.24N×84°.46E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=36.1km s-min=20.1km az=121.0*
ISC 22 17:07:56.6±4.0, **41°.9N**±0°.2×**84°.2E**±0°.1, **h10**km, **n5**, σ1§**26**/8, **5C-2D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**3.24**	**300**	*eP*		**Pb**	**17 08 52.8**	**-1.6**
	1.0nm,0.2s							
KTMS				*eS*		**Sb**	**17 09 33.9**	**0.0**
	6.5nm,0.1s							
PDGK	**Podgornoye**	**3.77**	**294**	⇓Pn		**Pn**	**17 08 56.5**	**+1.6**
	0.3nm,0.4s							
PDGK				⇑Pg		**Pg**	**17 09 08.7**	**-0.1**
	2.8nm,0.9s							
PDGK				⇑Lg		Lg	17 09 56.9	
	8.6nm,0.5s							
MK31	**Makanchi Array**	**5.09**	**345**	⇑Pg		**Pb**	**17 09 25.3**	**-0.4**
	1.1nm,0.5s,baz=151,slow=15,SNR=22							
MK31				⇑Lg		Lg	17 10 29.4	
	9.7nm,0.7s,baz=157,slow=28,SNR=7.5							
MAKZ	**Makanchi**	**5.17**	**343**	⇓Pg		**Pb**	**17 09 26.6**	**-0.5**
	1.5nm,0.6s							
MAKZ				⇑Lg		Lg	17 10 33.1	
	3.7nm,0.8s							
ZSN	**Zaisan**	**5.58**	**5**	*eP*		**Pb**	**17 09 32.4**	**-1.5**
	1.0nm,0.1s							
ZSN				*eS*		**Sb**	**17 10 41.5**	**+0.6**
	4.2nm,0.3s							

*MAN **22** 17:30:25.0, 21°.08N×121°.35E, h29km, MS3.0*
*TAP **22** 17:30:25.1, 21°.19N×121°.24E, h78km, ML3.8, D*
*JMA **22** 17:30:25.9±0.6, 21°N±2°×12°1E±°, h12km, MV4.2/15, TAIWAN REGION*
ISC 22 17:30:25.2±1.2, **21°.12N**±0°.03×**121°.12E**±0°.04, **h76**km±10km, **n139**, σ1§**55**/217, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.80**	**345**	P		**Pn**	**17 30 42.1**	**+0.4**
TSEB				S		**Sn**	**17 30 55.0**	**+1.0**
TWKBT	**Hengchun**	**0.87**	**341**	P		**Pn**	**17 30 42.7**	**+0.2**
TWKBT				*i* S		**Sn**	**17 30 55.5**	**+0.3**
TWK1	**Hengchun**	**0.87**	**340**	P		**Pn**	**17 30 42.9**	**+0.4**
TWK1				S		**Sn**	**17 30 55.6**	**+0.3**
SMST	**Manzhou Townsh**	**0.94**	**343**	P		**Pn**	**17 30 43.5**	**+0.2**
SMST				S		**Sn**	**17 30 56.4**	**-0.3**
HEN	**Hengchun**	**0.95**	**338**	*eP*		**Pn**	**17 30 44.7**	**+1.3**
HEN				*eS*		**Sn**	**17 30 58.4**	**+1.4**
LYUB	**Lan-yu**	**0.98**	**26**	*i* P		**Pn**	**17 30 42.6**	**-1.2**
LYUB				S		**Sn**	**17 30 55.5**	**-2.1**
LAY	**Lan-yu**	**1.00**	**23**	P		**Pn**	**17 30 42.9**	**-1.2**
LAY				S		**Sn**	**17 30 56.2**	**-1.9**
SLIU	**Shizi**	**1.13**	**345**	*eP*		**Pn**	**17 30 45.9**	**+0.2**
SLIU				*eS*		**Sn**	**17 30 60.0**	**-1.0**
TAW	**Tawu**	**1.25**	**350**	P		**Pn**	**17 30 46.7**	**-0.5**
TAW				S		**Sn**	**17 31 02.4**	**-1.2**
EAST	**Anshuo**	**1.28**	**349**	*eP*		**Pn**	**17 30 47.5**	**-0.1**
SCZT	**Fangliau**	**1.33**	**340**	*eP*		**Pn**	**17 30 49.8**	**+1.6**
SCZT				*eS*		**Sn**	**17 31 05.3**	**-0.2**
WLCH	**Liuqiu**	**1.41**	**331**	*eS*		**Sn**	**17 31 10.2**	**+3.0**
TWP	**Hsiaoliuchiu**	**1.41**	**330**	*eS*		**Sn**	**17 31 09.9**	**+2.6**
ECL	**Taimali**	**1.48**	**354**	*eP*		**Pn**	**17 30 49.0**	**-1.1**
ECL				*eS*		**Sn**	**17 31 06.3**	**-2.5**
MASBT	**Mashibuluo**	**1.55**	**343**	*eP*		**Pn**	**17 30 52.3**	**+1.2**
LDUT	**Ludao**	**1.58**	**12**	*eP*		**Pn**	**17 30 50.5**	**-0.9**
LDUT				*eS*		**Sn**	**17 31 11.2**	**-0.1**
TTN	**Taitung**	**1.63**	**1**	*eP*		**Pn**	**17 30 52.5**	**+0.5**
TTN				*eS*		**Sn**	**17 31 13.2**	**+0.9**
TSMG	**Majia**	**1.64**	**344**	*eP*		**Pn**	**17 30 53.1**	**+0.9**
TSMG				*eS*		**Sn**	**17 31 12.0**	**-0.6**
SSD	**Sandimen**	**1.68**	**344**	*eP*		**Pn**	**17 30 53.4**	**+0.6**
SSD				*eS*		**Sn**	**17 31 12.7**	**-1.0**
TWGBT	**Beinan**	**1.69**	**359**	P		**Pn**	**17 30 53.3**	**+0.4**
TWGBT	**Beinan**	**1.69**	**359**	S		**Sn**	**17 31 16.3**	**+2.4**
TWGBT	**Beinan**	**1.69**	**359**	*eP*		**Pn**	**17 30 52.2**	**-0.7**
TWGBT				*eS*		**Sn**	**17 31 11.2**	**-2.7**
TWG	**Pinlang**	**1.69**	**358**	*eP*		**Pn**	**17 30 52.6**	**-0.4**
TWG				*eS*		**Sn**	**17 31 11.7**	**-2.3**
WSSB	**Gushan**	**1.71**	**332**	*eP*		**Pn**	**17 30 54.7**	**+1.5**
WSSB				*eS*		**Sn**	**17 31 15.9**	**+1.5**
LONT	**Longtian**	**1.78**	**0**	*eP*		**Pn**	**17 30 53.5**	**-0.6**
LONT				*eS*		**Sn**	**17 31 15.2**	**-0.7**
TWM1	**Shoushan**	**1.82**	**339**	*eP*		**Pn**	**17 30 57.9**	**+3.3**
SCST	**Cishan**	**1.85**	**342**	*eP*		**Pn**	**17 30 56.3**	**+1.2**
SLGT	**Liugui**	**1.92**	**347**	*eP*		**Pn**	**17 30 56.8**	**+0.9**
SLGT				*eS*		**Sn**	**17 31 19.4**	**+0.2**
ECS	**Chishang**	**1.97**	**3**	*eP*		**Pn**	**17 30 56.6**	**0.0**
ECS				*eS*		**Sn**	**17 31 20.9**	**+0.4**
CHKT	**Chengkung**	**1.98**	**6**	*eP*		**Pn**	**17 30 57.2**	**+0.5**
CHKT				*eS*		**Sn**	**17 31 19.5**	**-1.2**
SGST	**Jiashian**	**2.02**	**346**	*eP*		**Pn**	**17 30 60.0**	**+2.7**
EHD	**Haiduan**	**2.02**	**2**	*eP*		**Pn**	**17 30 56.6**	**-0.7**
EHD				*eS*		**Sn**	**17 31 19.5**	**-2.2**
ELDTW	**Lidau**	**2.06**	**357**	*eP*		**Pn**	**17 30 57.4**	**-0.5**
ELDTW				*eS*		**Sn**	**17 31 19.6**	**-3.3**
STYH	**Taoyuan**	**2.07**	**351**	*eP*		**Pn**	**17 30 59.0**	**+1.1**
STYH				*eS*		**Sn**	**17 31 25.0**	**+2.2**
FULB	**Fuli**	**2.08**	**4**	*eP*		**Pn**	**17 30 58.1**	**0.0**
FULB				*eS*		**Sn**	**17 31 23.8**	**+0.7**
CHKH	**Chenggong**	**2.08**	**7**	*eP*		**Pn**	**17 30 58.8**	**+0.8**
CHKH				*eS*		**Sn**	**17 31 22.2**	**-0.8**
CHN1	**Nanshi**	**2.13**	**345**	*eP*		**Pn**	**17 31 00.6**	**+1.8**
SSHA	**Shanhua**	**2.15**	**339**	*eS*		**Sn**	**17 31 25.2**	**+0.4**
WTP	**Ta-pu**	**2.17**	**348**	*eP*		**Pn**	**17 31 00.2**	**+0.8**
WTP				*eS*		**Sn**	**17 31 25.8**	**+0.5**
ECBN	**Changbin**	**2.21**	**8**	*eP*		**Pn**	**17 31 01.6**	**+1.8**
ECBN				*eS*		**Sn**	**17 31 26.8**	**+0.6**
TWK	**Hsinying**	**2.22**	**345**	*eP*		**Pn**	**17 31 01.6**	**+1.6**
TPUB	**Ta-pu**	**2.22**	**348**	P		**Pn**	**17 31 02.8**	**+2.8**
TPUB	**Ta-pu**	**2.22**	**348**	*eP*		**Pn**	**17 31 01.3**	**+1.3**
TPUB				*eS*		**Sn**	**17 31 24.8**	**-1.7**
TWF1	**Yuli**	**2.23**	**4**	*eP*		**Pn**	**17 31 01.9**	**+1.8**
TWF1				*eS*		**Sn**	**17 31 23.8**	**-2.9**
TSCK	**Chigu Township**	**2.23**	**335**	*eP*		**Pn**	**17 31 00.2**	**+0.1**
TSCK				*eS*		**Sn**	**17 31 25.9**	**-0.9**
YULB	**Yu-li**	**2.27**	**4**	P		**Pn**	**17 31 01.8**	**+1.2**
YULB	**Yu-li**	**2.27**	**4**	*eP*		**Pn**	**17 30 59.0**	**-1.7**
YULB				*eS*		**Sn**	**17 31 25.2**	**-2.4**
WCKO	**Fanlu**	**2.36**	**348**	*eP*		**Pn**	**17 31 03.6**	**+1.7**
WCKO				*eS*		**Sn**	**17 30 30.5**	**+0.6**
ICHU	**Yijhu**	**2.36**	**341**	*eS*		**Sn**	**17 31 29.8**	**-0.2**
CHN8	**Yiju**	**2.37**	**339**	*eS*		**Sn**	**17 31 30.4**	**+0.2**
EHYH	**Wanrong**	**2.37**	**5**	*eP*		**Pn**	**17 31 01.8**	**-0.2**
EHYH				*eS*		**Sn**	**17 31 30.0**	**-0.2**
HGSD	**Ruisui**	**2.38**	**7**	*eP*		**Pn**	**17 31 04.3**	**+2.2**
HGSD				*eS*		**Sn**	**17 31 31.9**	**+1.6**
EHY	**Hungye**	**2.38**	**4**	*eP*		**Pn**	**17 31 02.4**	**+0.2**
EHY				*eS*		**Sn**	**17 31 27.3**	**-3.1**
ALS	**Alishan**	**2.40**	**353**	*eP*		**Pn**	**17 31 03.8**	**+1.2**
CHY	**Chiayi**	**2.45**	**345**	*eS*		**Sn**	**17 31 31.3**	**-0.8**
CHN5	**Tsauling**	**2.50**	**351**	*eP*		**Pn**	**17 31 04.8**	**+1.0**
CHN5				*eS*		**Sn**	**17 31 35.0**	**+1.6**
WDGT	**Dungji**	**2.52**	**328**	P		**Pn**	**17 31 04.1**	**+0.1**
WDGT				*eS*		**Sn**	**17 31 31.4**	**-2.4**
WSL	**Shuilin Townsh**	**2.53**	**341**	*eP*		**Pn**	**17 31 04.8**	**+0.7**
WSL				*eS*		**Sn**	**17 31 33.1**	**-0.9**
WHYT	**Xinyi Township**	**2.58**	**354**	*eP*		**Pn**	**17 31 06.1**	**+1.3**
WARBT	**Fenglin Townsh**	**2.60**	**5**	*eP*		**Pn**	**17 31 05.7**	**+0.6**
WARBT				*eS*		**Sn**	**17 31 35.0**	**-0.7**
TEGC	**Jichi Village**	**2.60**	**8**	*eS*		**Sn**	**17 31 38.0**	**+2.2**
VCHM	**Qimei**	**2.60**	**323**	P		**Pn**	**17 31 04.7**	**-0.5**
VCHM				S		**Sn**	**17 31 34.3**	**-1.5**
WDLH	**Douliu**	**2.61**	**348**	*eP*		**Pn**	**17 31 06.0**	**+0.8**
WDLH				*eS*		**Sn**	**17 31 33.2**	**-2.8**
VWDT	**VWDT**	**2.62**	**0**	*eP*		**Pn**	**17 31 07.5**	**+2.2**
VWDT				*eS*		**Sn**	**17 31 34.4**	**-1.8**
WSF	**Szhu**	**2.64**	**342**	*eS*		**Sn**	**17 31 35.8**	**-0.9**
WTK	**Tuku**	**2.65**	**345**	*eS*		**Sn**	**17 31 36.9**	**+0.1**
SSLB	**Suanglung**	**2.66**	**357**	P		**Pn**	**17 31 08.7**	**+2.8**
SSLB	**Suanglung**	**2.66**	**357**	*eP*		**Pn**	**17 31 06.9**	**+0.9**
SSLB				S		**Sn**	**17 31 36.1**	**-1.1**
SHUL	**Shoufeng**	**2.69**	**9**	*eP*		**Pn**	**17 31 07.9**	**+1.7**
SHUL				*eS*		**Sn**	**17 31 36.7**	**-1.1**
ESL	**Shilin**	**2.70**	**6**	*eP*		**Pn**	**17 31 08.5**	**+2.1**
ESL				*eS*		**Sn**	**17 31 36.0**	**-2.0**
WJS	**Zhushan**	**2.71**	**352**	*eP*		**Pn**	**17 31 08.0**	**+1.4**
WJS				*eS*		**Sn**	**17 31 39.6**	**+1.2**
SMLT	**Sun Moon Lake**	**2.76**	**356**	*eP*		**Pn**	**17 31 08.8**	**+1.5**
SMLT				*eS*		**Sn**	**17 31 39.0**	**-0.7**
TEYL	**Yanliau Villag**	**2.77**	**9**	*eS*		**Sn**	**17 31 40.8**	**+1.0**
WNT	**Mingjian**	**2.77**	**352**	*eP*		**Pn**	**17 31 08.3**	**+0.9**
WNT				*eS*		**Sn**	**17 31 39.4**	**-0.5**
PHUB	**P'eng-hu**	**2.78**	**329**	*eP*		**Pn**	**17 31 07.3**	**-0.3**
PHUB				*eS*		**Sn**	**17 31 37.8**	**-2.3**
PIP	**Pasuquin**	**2.82**	**190**	*eP*		**Pn**	**17 31 08.4**	**+0.3**
PIP				*eS*		**Sn**	**17 31 38.5**	**-2.6**
OWD	**Renai**	**2.82**	**1**	*eP*		**Pn**	**17 31 10.2**	**+2.0**
PNG	**Penghu**	**2.84**	**329**	*eP*		**Pn**	**17 31 08.5**	**+0.3**
PNG				*eS*		**Sn**	**17 31 40.3**	**-1.1**
WTCT	**Ta-ch'eng**	**2.84**	**344**	*eS*		**Sn**	**17 31 40.7**	**-0.8**
RLNB	**Erlin**	**2.85**	**346**	*eS*		**Sn**	**17 31 42.3**	**+0.7**
ETM	**Tongmen**	**2.85**	**7**	*eP*		**Pn**	**17 31 09.8**	**+1.3**
WRL	**Guolierlin Hig**	**2.85**	**346**	*eP*		**Pn**	**17 31 08.4**	**-0.1**
WRL				*eS*		**Sn**	**17 31 40.5**	**-1.3**
WUSB	**Renai**	**2.86**	**360**	*eP*		**Pn**	**17 31 10.0**	**+1.2**
WUSB				*eS*		**Sn**	**17 31 43.5**	**+1.3**
LXIB	**Xiulin Townshi**	**2.90**	**5**	*eP*		**Pn**	**17 31 11.2**	**+1.9**
LXIB				*eS*		**Sn**	**17 31 41.2**	**-2.0**
WCS	**Beigang Elemen**	**2.93**	**356**	*eP*		**Pn**	**17 31 10.9**	**+1.3**
WCS				*eS*		**Sn**	**17 31 43.5**	**-0.2**
WHF	**Hehuan Shan**	**3.01**	**2**	*eS*		**Sn**	**17 31 47.1**	**+0.7**
TCU	**Taichung**	**3.04**	**352**	*eP*		**Pn**	**17 31 13.0**	**+1.9**
NACB	**Ninganchiao**	**3.07**	**8**	P		**Pn**	**17 31 13.2**	**+1.7**
NACB	**Ninganchiao**	**3.07**	**8**	*eP*		**Pn**	**17 31 13.2**	**+1.7**
ETLH	**Xiulin Townshi**	**3.09**	**6**	*eP*		**Pn**	**17 31 14.4**	**+2.6**
FUSS	**Fushou**	**3.12**	**2**	*eP*		**Pn**	**17 31 13.8**	**+1.5**
WHP	**Taichung City**	**3.15**	**357**	*eP*		**Pn**	**17 31 13.6**	**+1.0**
EOS4	**EOS4**	**3.18**	**20**	*eP*		**Pn**	**17 31 14.4**	**+1.8**
SIPP	**Brgy, Tapao**	**3.24**	**191**	*eP*		**Pn**	**17 31 15.2**	**+1.4**
SIPP				*eS*		**Sn**	**17 31 51.7**	**+0.4**
NNSB	**Datong**	**3.30**	**4**	*eP*		**Pn**	**17 31 16.9**	**+2.2**
NNSB				*eS*		**Sn**	**17 31 50.9**	**-2.1**
NNS	**Nan Shan**	**3.31**	**4**	*eP*		**Pn**	**17 31 16.4**	**+1.5**
NNS				*eS*		**Sn**	**17 31 51.5**	**-1.7**
EOS3	**EOS3**	**3.34**	**19**	*eP*		**Pn**	**17 31 14.3**	**-0.7**
EOS3				*eS*		**Sn**	**17 31 53.9**	**+0.5**
EWUT	**Wuta**	**3.37**	**10**	*eP*		**Pn**	**17 31 17.9**	**+2.4**
LATG	**Datong**	**3.42**	**6**	*eP*		**Pn**	**17 31 18.0**	**+1.7**
NFF	**Wufeng Townshi**	**3.50**	**360**	*eP*		**Pn**	**17 31 19.4**	**+2.1**
NSTT	**Nanjuang**	**3.50**	**358**	*eP*		**Pn**	**17 31 17.7**	**+0.5**
LIOB	**Emei**	**3.51**	**358**	*eP*		**Pn**	**17 31 20.0**	**+2.5**
ENTT	**Nioudou**	**3.53**	**7**	*eP*		**Pn**	**17 31 18.1**	**+0.4**
NDS	**Dongshan**	**3.54**	**9**	*eP*		**Pn**	**17 31 20.3**	**+2.5**

ASF LR LR 17 38 50.2
comp=Z,84nm,18.1s,baz=25,slow=45
4.1nm,0.4s
MMAI Mount Meron Ar 11.23 280 Pn **Pn 17 34 02.4 +0.9**
1.0nm,0.3s,baz=90,slow=16,SNR=5.0
MMAI Sn **Sn 17 36 04.4 -2.7**
1.0nm,0.3s,baz=288,slow=41,SNR=1.6
MMAI Lg Lg 17 37 27.8
0.7nm,0.3s,baz=89,slow=31,SNR=2.2
MMAI LR LR 17 39 31.1
comp=Z,80nm,19.2s,baz=76,slow=44
0.4nm,0.4s
EIL Elat 11.96 263 Pn **Pn 17 34 10.7 -0.6**
0.4nm,0.3s,baz=106,slow=18,SNR=1.5
EIL Lg Lg 17 37 53.1
0.5nm,0.3s,baz=152,slow=19,SNR=4.2
EIL LR LR 17 38 41.2
comp=Z,43nm,18.7s,baz=76,slow=37
1.1nm,0.4s
KBZ Khabaz 12.70 341 Pn **Pn 17 34 25.9 +4.5**
baz=152,slow=5.5,SNR=3.2
1.7nm,1.0s
BRTR Keskin Array B 14.47 307 Pn **Pn 17 34 50.4 +4.6**
0.1nm,0.3s,baz=133,slow=11,SNR=5.4
0.6nm,0.8s
AKTO Aktyubinsk 19.85 18 P **P 17 35 50.6 -1.2**
0.5nm,0.3s,baz=203,slow=15,SNR=6.1
1.1nm,0.5s
IDI Anoyia 20.06 286 P **P 17 35 54.8 +0.5**
3.9nm,0.5s,baz=93,slow=12,SNR=4.1
3.9nm,0.5s
CFR Carcaliu 20.77 316 ⇓P **P 17 36 03.2 +1.5**
VRI Vrincioaia 21.97 316 ⇑P **P 17 36 13.0 -1.7**
PLOR Plostina 22.01 316 ⇑P **P 17 36 17.2 +2.0**
MLR Muntele Rosu 22.25 314 ⇓P **P 17 36 19.9 +2.0**
TESR Tescani 22.37 317 ⇓P **P 17 36 20.9 +2.0**
ONER Baraj Valea Uz 22.42 317 ⇓P **P 17 36 21.4 +1.9**
VOIR 22.77 313 ⇓P **P 17 36 25.6 +2.2**
KSH2 Kashi 23.06 64 P **P 17 36 29.6 +3.1**
KSH2 pmax pmax
comp=Z,8.0nm,1.0s
AAK Ala-Archa 23.16 55 LR LR 17 46 27.5
comp=Z,73nm,18.7s,baz=292,slow=39
AKASG Malin Array Be 23.70 328 P **P 17 36 32.1 -0.5**
comp=Z,0.8nm,0.6s,baz=136,slow=9.2,SNR=7.7
comp=Z,0.8nm,0.6s
BURAR Bucovina Array 23.79 318 ⇓P **P 17 36 35.1 +1.5**
MARR Marisel-Cluj 24.54 314 ⇓P **P 17 36 41.8 +1.1**
BVAR Borovoye Array 26.38 30 P **P 17 36 56.5 -0.6**
comp=Z,2.7nm,0.5s,baz=226,slow=8.0,SNR=28
BVAR PcP **PcP 17 40 21.9 -0.6**
comp=Z,0.4nm,0.6s,baz=255,slow=4.3,SNR=2.7
comp=Z,2.7nm,0.5s
KURBB Kurchatov Arra 29.00 41 P **P 17 37 20.8 +0.3**
comp=Z,1.5nm,0.2s,baz=245,slow=9.2,SNR=6.8
comp=Z,1.5nm,0.2s
MKAR Makanchi Array 29.76 50 P **P 17 37 26.7 -0.6**
comp=Z,0.9nm,0.9s,baz=243,slow=8.0,SNR=8.3
MKAR PcP **PcP 17 40 29.9 -1.0**
comp=Z,0.3nm,0.8s,baz=264,slow=4.5,SNR=2.1
comp=Z,0.9nm,0.9s
WTTA Wattenberg 32.07 309 *eP* **P 17 37 47.8 -0.1**
comp=Z,1.6nm,0.5s
WATA Walderalm 32.13 310 *eP* **P 17 37 48.5 +0.2**
comp=Z,0.2nm,0.2s
SQTA Sankt Quirin 32.34 309 *eP* **P 17 37 50.2 0.0**
comp=Z,1.3nm,0.3s
MOTA Moosalm 32.44 309 *eP* **P 17 37 51.2 +0.1**
comp=Z,1.3nm,0.3s
FETA Feichten 32.60 309 *eP* **P 17 37 52.8 +0.2**
comp=Z,3.0nm,0.8s
FINES FINESS Array B 33.06 340 P **P 17 37 55.6 -0.6**
comp=Z,0.7nm,0.4s,baz=136,slow=7.8,SNR=9.7
comp=Z,0.7nm,0.4s
DAVA Damuels 33.23 309 *eP* **P 17 37 57.9 -0.2**
comp=Z,1.9nm,0.4s
ZALV Zalesovo Beam 33.96 39 P **P 17 38 03.5 -0.7**
comp=Z,1.0nm,0.5s,baz=238,slow=7.7,SNR=7.5
comp=Z,1.0nm,0.5s
HFS Hagfors 36.51 331 P **P 17 38 25.3 -0.7**
comp=Z,1.1nm,0.3s,baz=133,slow=9.8,SNR=12
comp=Z,1.1nm,0.3s
NOA NORSAR Array B 38.03 331 P P 17 38 37.2 -1.8
comp=Z,1.8nm,1.1s,baz=134,slow=5.6,SNR=1.3
comp=Z,1.8nm,1.1s
ARCES ARCESS Array B 39.94 348 P **P 17 38 53.9 -0.9**
comp=Z,4.2nm,1.1s,baz=162,slow=8.4,SNR=1.9
comp=Z,4.2nm,1.1s
EKA Eskdalemuir Ar 42.97 319 P P 17 39 17.7 -2.1
comp=Z,0.5nm,0.5s,baz=106,slow=8.5,SNR=4.3
comp=Z,0.5nm,0.5s
SONM Songino Array 46.07 52 P **P 17 39 43.3 -1.6**
comp=Z,0.3nm,0.6s,baz=278,slow=6.5,SNR=2.6
comp=Z,0.3nm,0.6s
TORD Torodi Ar. Bea 46.77 258 P **P 17 39 51.4 +0.8**
comp=Z,1.0nm,0.4s,baz=50,slow=6.3,SNR=9.0
comp=Z,1.0nm,0.4s
CMAR Chiang Mai Arr 47.08 94 P **P 17 39 52.4 -0.6**
comp=Z,0.9nm,0.8s,baz=294,slow=8.5,SNR=8.9
comp=Z,0.9nm,0.8s
SPITS Spitsbergen Ar 48.54 352 P **P 17 40 02.6 -1.0**
comp=Z,10nm,1.0s,baz=148,slow=12,SNR=5.7
comp=Z,10nm,1.0s
KSRS Korea Array 63.66 61 P **P 17 41 50.9 -1.4**
comp=Z,1.2nm,0.7s,baz=278,slow=6.7,SNR=4.9
comp=Z,1.2nm,0.7s
SEY Seymchan 68.03 29 P **P 17 42 19.4 -0.5**
comp=Z,1.0nm,0.5s,baz=276,slow=5.2,SNR=4.8
comp=Z,1.0nm,0.5s
MJAR Matsushiro Arr 71.57 58 P P 17 42 40.0 -2.3
comp=Z,0.6nm,0.6s,baz=292,slow=5.7,SNR=1.9
comp=Z,0.6nm,0.6s
ILAR Eielson Array 82.94 7 P **P 17 43 43.9 -1.6**
comp=Z,0.5nm,0.9s,baz=321,slow=1.2,SNR=4.9
comp=Z,0.5nm,0.9s

IDC 22 17:43:50.1±1.2, 24°44N×46°27W, h0km, mb3.6/5, mbtmp3.6/5, MS3.4/16, Error ellipse: s-maj=34.8km s-min=32.8km az=27.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**19.55**	**255**	LR	LR	17 54 15.0	
	comp=Z,74nm,21.8s,baz=94,slow=32						
SDV	**Santo Domingo**	**27.92**	**241**	LR	LR	17 59 27.3	
	comp=Z,52nm,19.9s,baz=72,slow=34						
ROSC	**El Rosal**	**33.27**	**239**	LR	LR	18 03 08.1	
	comp=Z,91nm,19.9s,baz=71,slow=35						
SADO	**Sadowa**	**33.48**	**316**	LR	LR	18 02 14.9	
	comp=Z,62nm,18.6s,baz=160,slow=33						
TKL	**Tuckaleechee C**	**34.15**	**298**	LR	LR	18 01 42.3	
	comp=Z,69nm,21.1s,baz=92,slow=31						
MDT	**Midelt**	**37.32**	**67**	LR	LR	18 02 49.4	
	comp=Z,50nm,19.5s,baz=224,slow=30						
DBIC	**Dimbokro**	**43.41**	**107**	LR	LR	18 07 06.0	
	comp=Z,72nm,18.4s,baz=330,slow=32						
H10N2	**ASCENSION HYDR**	**44.60**	**132**	T	T	18 39 23.5	
	baz=317,slow=75,SNR=5.7						
H10N3	**ASCENSION HYDR**	**44.60**	**132**	T	T	18 39 25.4	
	baz=317,slow=75,SNR=5.4						
H10N1	**ASCENSION HYDR**	**44.62**	**132**	T	T	18 39 27.3	
	baz=317,slow=75,SNR=8.4						
H10S3	**ASCENSION HYDR**	**45.31**	**133**	T	T	18 40 16.7	
	baz=315,slow=74,SNR=8.1						
H10S2	**ASCENSION HYDR**	**45.32**	**133**	T	T	18 40 18.5	
	baz=265,slow=74,SNR=6.8						
LPAZ	**La Paz**	**45.75**	**210**	P	P	17 52 13.9	-0.3
	0.4nm,0.4s,baz=5.7,slow=8.9,SNR=2.4						
LPAZ				LR	LR	18 09 46.0	
	comp=Z,49nm,20.3s,baz=75,slow=34						
	0.4nm,0.4s						
CMIG	**Matias Romero**	**45.85**	**270**	LR	LR	18 09 33.5	
	comp=Z,38nm,19.5s,baz=8.0,slow=34						
TORD	**Torodi Ar. Bea**	**46.57**	**95**	P	P	17 52 20.1	+0.1
	0.7nm,0.7s,baz=292,slow=8.2,SNR=5.0						
	0.7nm,0.7s						
ANMO	**Albuquerque**	**52.64**	**296**	LR	LR	18 15 32.5	
	comp=Z,19nm,18.7s,baz=65,slow=36						
PDAR	**Pinedale Array**	**54.55**	**306**	LR	LR	18 16 17.2	
	comp=Z,40nm,18.0s,baz=32,slow=36						
YKA	**Yellowknife Ar**	**58.63**	**330**	P	P	17 53 48.0	-0.8
	0.2nm,0.7s,baz=94,slow=7.0,SNR=4.8						
	0.2nm,0.7s						
NEW	**Newport**	**59.61**	**313**	LR	LR	18 17 29.3	
	comp=Z,81nm,19.4s,baz=32,slow=34						
PFO	**Pinyon Flats O**	**61.02**	**296**	LR	LR	18 18 10.3	
	comp=Z,50nm,21.5s,baz=83,slow=34						
NVAR	**Mina Array Bea**	**61.61**	**302**	LR	LR	18 18 27.1	
	comp=Z,65nm,21.4s,baz=89,slow=34						
AKASG	**Malin Array Be**	**62.44**	**44**	P	P	17 54 14.7	-0.3
	0.6nm,0.7s,baz=263,slow=6.8,SNR=4.3						
	0.6nm,0.7s						
YBH	**Yreka Blue Hor**	**64.36**	**306**	LR	LR	18 21 35.1	
	comp=Z,4.4nm,18.0s,baz=61,slow=35						
ILAR	**Eielson Array**	**72.56**	**334**	P	P	17 55 19.6	+0.9
	0.5nm,0.8s,baz=77,slow=4.6,SNR=4.9						
	0.5nm,0.8s						
MBAR	**Mbarara**	**78.43**	**96**	LR	LR	18 27 47.4	
	comp=Z,34nm,20.5s,baz=272,slow=34						

WEL 22 17:46:29.3±1.2, 34°S±19°×17°9E±4°, h375km±18km, M3.7/3, ML3.6/4, MLv3.7/3, Error ellipse: s-maj=62.9km s-min=6.5km az=112.5, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.75**	**193**	P	Pn	17 47 37.1	-0.2
WMGZ	**Waiomatatini S**	**3.98**	**191**	P	Pn	17 47 39.3	-0.2
WMGZ				S	S	17 48 36.6	+0.2
HAZ	**Te Kaha**	**4.05**	**198**	P	Pn	17 47 41.1	+0.9
HAZ				S	S	17 48 38.7	+1.1
PKGZ	**Pakihiroa**	**4.09**	**194**	P	Pn	17 47 42.0	+1.4
PKGZ				S	S	17 48 38.4	0.0
PUZ	**Puketiti**	**4.25**	**192**	P	Pn	17 47 41.3	-1.0
PUZ				S	S	17 48 40.3	-1.1
RUGZ	**Raukumara Rang**	**4.28**	**198**	P	Pn	17 47 42.2	-0.4
RUGZ				S	S	17 48 42.0	0.0
TWGZ	**Tauwhareparae**	**4.41**	**194**	P	Pn	17 47 44.4	+0.5
TWGZ				S	S	17 48 45.6	+1.3
MWZ	**Matawai**	**4.66**	**198**	P	Pn	17 47 47.1	+0.6
MWZ				S	S	17 48 49.3	+0.2
CNGZ	**Carnagh Statio**	**4.67**	**191**	P	Pn	17 47 49.3	+2.8
URZ	**Urewera**	**4.71**	**202**	P	Pn	17 47 43.8	-3.1
URZ				S	S	17 48 51.6	+1.7
RIGZ	**Rimuhau**	**4.96**	**194**	P	Pn	17 47 48.9	-0.8
RIGZ				S	S	17 48 55.0	+0.1
RIZ	**Raoul Island**	**5.19**	**27**	S	S	17 49 00.0	+0.5

KRSC 22 17:49:29.7±1.4, 48°16N×155°43E, h61km±30km, Ml3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.56**	**10**	*eP*	Pn	17 50 11.1	+2.4
SKR				*eS*	Sn	17 50 41.7	+3.0
PAU	**Pauzhetka**	**3.43**	**15**	*eP*	Pn	17 50 23.3	+2.7
KDTR	**Khodutka, Kamc**	**4.03**	**24**	*eS*	Sn	17 51 17.3	+2.6
ASAK	**Asacha**	**4.51**	**20**	*eP*	Pn	17 50 38.8	+3.3
MTVR	**Mutnovka**	**4.67**	**21**	*eP*	Pn	17 50 41.1	+3.4
GRL	**Gorelyy**	**4.71**	**20**	*eP*	Pn	17 50 42.0	+3.8
GRL				*eS*	Sn	17 51 35.9	+4.3
UGLR	**Uglovaya**	**5.50**	**22**	*eP*	Pn	17 50 53.0	+4.1
AVH	**Avacha**	**5.53**	**21**	*eP*	Pn	17 50 53.8	+4.4
KOK	**Koryaka**	**5.53**	**20**	*eP*	Pn	17 50 53.7	+4.3
SDLR	**Sedlovina**	**5.57**	**22**	*eP*	Pn	17 50 53.1	+3.1

IDC 22 17:50:48.6±1.0, 38°71N×97°08W, h0km, mb3.3/1, mbtmp3.4/5, ML3.3/4, Error ellipse: s-maj=11.5km s-min=10.6km az=105.0
NEIC 22 17:50:50.5±1.0, 38°70N±0°02×97°10W±0°04, h5km±1km, mb_Lg3.1/106, ML3.1/6, Error ellipse: s-maj=5.2km s-min=3.8km az=59.0
ISC 22 17:50:49.1±0.8, 38°84N±0°06×97°03W±0°05, h10km, n58, σ1s93/20, Kansas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSU1	**Kansas State U**	**0.42**	**52**	Pg	**Pg**	**17 50 58.9**	**+1.6**
KSU1	**Kansas State U**	**0.42**	**52**	IAML		17 51 10.8	
	921nm,0.5s						
R32A	**Long Quarter,**	**1.38**	**253**		**Pn**	**17 51 14.3**	**-0.2**
R32A					**Sn**	**17 51 32.5**	**-0.4**
R32A				IAML		17 51 35.2	
	328nm,0.3s						
R32A				IAML		17 51 37.3	
	356nm,0.5s						
KAN01	**Argonia South**	**1.78**	**199**		**Pn**	**17 51 19.6**	**-0.4**
T35A	**Sooner Cattle**	**1.97**	**168**		**Pn**	**17 51 22.1**	**-0.5**
BLOK	**Blackwell**	**2.08**	**184**		**Pn**	**17 51 23.4**	**-0.7**
CBKS	**Cedar Bluff**	**2.11**	**270**		**Pn**	**17 51 26.1**	**+1.5**
CBKS					**Sn**	**17 51 52.3**	**+1.4**
CBKS				IAmb_Lg		17 52 01.1	
	comp=Z,92nm,0.7s						
N35A	**Tabor**	**2.28**	**27**		**Pb**	**17 51 30.8**	**+0.4**
OK051	**E0350 and S346**	**2.34**	**176**		**Pn**	**17 51 27.4**	**-0.3**
OK051				IAmb_Lg		17 52 04.8	
	comp=Z,74nm,0.7s						
OK048	**Pawnee Station**	**2.42**	**178**		**Pn**	**17 51 28.4**	**-0.4**
OK048				IAmb_Lg		17 52 07.1	
	comp=Z,97nm,0.9s						
CROK	**Carrier**	**2.45**	**198**		**Pn**	**17 51 28.6**	**-0.6**
NOKA	**Waynoka**	**2.67**	**215**		**Pn**	**17 51 32.0**	**-0.3**
NOKA				IAmb_Lg		17 52 09.8	
	comp=Z,48nm,0.9s						
QUOK	**Quay**	**2.68**	**174**	IAmb_Lg		17 52 15.5	
	comp=Z,63nm,1.0s						
P38A	**Dawn**	**2.83**	**73**	IAmb_Lg		17 52 28.9	
	comp=Z,70nm,0.9s						
DEOK	**Depew**	**3.02**	**172**	IAmb_Lg		17 52 25.5	
	comp=Z,45nm,0.8s						
L34A	**Svendsen Farm,**	**3.16**	**9**	IAmb_Lg		17 52 33.6	
	comp=Z,75nm,0.8s						
FNO	**Franklin**	**3.59**	**185**	IAmb_Lg		17 52 47.9	
	comp=Z,45nm,0.8s						
R40A	**Maddies Statio**	**3.77**	**97**	IAmb_Lg		17 52 50.3	
	comp=Z,64nm,0.8s						
MGMO	**Mountain Grove**	**4.12**	**113**	IAmb_Lg		17 53 03.6	
	comp=Z,27nm,0.7s						
K30B	**Basset**	**4.30**	**334**	IAmb_Lg		17 53 18.2	
	comp=Z,29nm,0.8s						
WMOK	**Wichita Mounta**	**4.33**	**199**	IAmb_Lg		17 53 03.2	
	comp=Z,26nm,0.7s						
OGNE	**Ogallala**	**4.38**	**300**	IAmb_Lg		17 53 12.3	
	comp=Z,30nm,0.8s						
CCM	**Cathedral Cave**	**4.61**	**98**	IAmb_Lg		17 53 20.5	
	comp=Z,36nm,0.9s						
T42A	**Van Buren**	**5.03**	**109**	IAmb_Lg		17 53 27.6	
	comp=Z,25nm,0.9s						
WHAR	**Wooly Hollow**	**5.19**	**132**	IAmb_Lg		17 53 34.3	
	comp=Z,32nm,0.8s						
PH02	**Texas Public H**	**5.22**	**230**	IAmb_Lg		17 53 42.9	
	comp=Z,40nm,1.0s						
FVM	**French Village**	**5.26**	**97**	IAmb_Lg		17 53 37.3	
	comp=Z,26nm,1.0s						
SLM	**Saint Louis**	**5.32**	**90**	IAmb_Lg		17 53 39.8	
	comp=Z,27nm,0.8s						
AMTX	**Amarillo**	**5.43**	**225**	IAmb_Lg		17 53 46.5	
	comp=Z,40nm,1.1s						
X40A	**Basin Creek Fa**	**5.50**	**141**	IAmb_Lg		17 53 44.7	
	comp=Z,27nm,0.7s						
SUSD	**Miller**	**5.78**	**346**	IAmb_Lg		17 54 07.2	
	comp=Z,25nm,0.7s						
Z38A	**Mt. Pleasant**	**5.81**	**163**	IAmb_Lg		17 53 58.2	
	comp=Z,33nm,0.8s						
I37A	**Lemond, Waseca**	**5.84**	**27**	IAmb_Lg		17 54 13.5	
	comp=Z,40nm,1.1s						
CGM3	**Cape Girardeau**	**6.02**	**103**	IAmb_Lg		17 54 02.0	
	comp=Z,21nm,0.8s						
WLAR	**White Oak Lake**	**6.04**	**147**	IAmb_Lg		17 54 00.6	
	comp=Z,26nm,0.8s						
DKNS	**Dickens**	**6.05**	**213**	IAmb_Lg		17 54 07.2	
	comp=Z,19nm,0.7s						
T25A	**Trinidad**	**6.07**	**256**	IAmb_Lg		17 54 10.0	
	comp=Z,26nm,0.7s						
TREL	**Terrell**	**6.15**	**173**	IAmb_Lg		17 54 06.5	
	comp=Z,24nm,1.0s						
S44A	**Carbondale**	**6.22**	**98**	IAmb_Lg		17 54 05.6	
	comp=Z,28nm,0.7s						
SIUC	**Southern Illin**	**6.25**	**98**	IAmb_Lg		17 54 09.4	
	comp=Z,32nm,0.7s						
CCAR	**Cane Creek**	**6.49**	**138**	IAmb_Lg		17 54 21.2	
	comp=Z,25nm,0.7s						
SN07	**Snyder 07**	**6.54**	**210**	IAmb_Lg		17 54 23.8	
	comp=Z,20nm,0.7s						
JFWS	**Jewell Farm**	**6.55**	**49**	IAmb_Lg		17 54 37.5	
	comp=Z,22nm,0.8s						
MSTX	**Muleshoe**	**6.71**	**225**	IAmb_Lg		17 54 23.8	
	comp=Z,19nm,1.1s						
POST	**Post**	**6.81**	**214**	IAmb_Lg		17 54 33.7	
	comp=Z,18nm,1.0s						
F33A	**5 Mile Ranch,**	**7.01**	**4**	IAmb_Lg		17 54 36.6	
	comp=Z,14nm,1.0s						
129A	**Stewart Farms,**	**7.34**	**214**	IAmb_Lg		17 54 48.4	
	comp=Z,6.4nm,1.1s						
SGCY	**Sterling City**	**7.68**	**207**	IAmb_Lg		17 55 09.0	
	comp=Z,20nm,0.9s						
I42A	**Draeger Farm,**	**7.92**	**48**	IAmb_Lg		17 55 06.7	
	comp=Z,20nm,1.0s						
435B	**Jarrell**	**8.05**	**183**	IAmb_Lg		17 55 19.9	
	comp=Z,15nm,1.0s						
T47A	**Sharon Grove**	**8.06**	**100**	IAmb_Lg		17 55 03.2	
	comp=Z,26nm,0.8s						
ANMO	**Albuquerque**	**8.49**	**246**	Pg	Pb	17 53 20.9	+4.5
	comp=Z,0.4nm,0.3s,baz=52,slow=16,SNR=9.6						
ANMO				Lg	Lg	17 55 12.2	
	comp=Z,0.7nm,0.3s,baz=5.2,slow=23,SNR=6.1						
JCT	**Junction City**	**8.65**	**196**	IAmb_Lg		17 55 30.9	
	comp=Z,23nm,1.0s						
PDAR	**Pinedale Array**	**10.27**	**296**	Pn	**Pn**	**17 53 18.3**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=107,slow=14,SNR=3.9						
PDAR				Sn	**Sn**	**17 55 10.5**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=101,slow=31,SNR=2.9						
PDAR				Lg	Lg	17 56 12.4	
	comp=Z,0.1nm,0.3s,baz=111,slow=26,SNR=2.4						
	comp=Z,0.2nm,0.3s						
TXAR	**Lajitas Array**	**10.96**	**212**	Pn	**Pn**	**17 53 22.9**	**-3.2**
	comp=Z,0.2nm,0.3s,baz=34,slow=12,SNR=11						
TXAR				Lg	Lg	17 56 23.0	
	comp=Z,0.2nm,0.3s,baz=10,slow=28,SNR=5.1						
	comp=Z,0.2nm,0.3s						
TKL	**Tuckaleechee C**	**11.03**	**103**	Pn	**Pn**	**17 53 27.2**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=3.9,slow=7.4,SNR=2.5						
TKL				Lg	Lg	17 56 28.5	
	comp=Z,0.8nm,0.3s,baz=22,slow=19,SNR=5.9						
	comp=Z,2.1nm,0.7s						
ULM	**Lac du Bonnet**	**11.44**	**4**	Pn	**Pn**	**17 53 31.7**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=185,slow=12,SNR=7.2						
ULM				Sn	**Sn**	**17 55 34.5**	**-5.7**
	comp=Z,0.5nm,0.3s,baz=78,slow=19,SNR=4.4						
ULM				Lg	Lg	17 56 45.0	
	comp=Z,0.3nm,0.3s,baz=245,slow=17,SNR=5.7						
	comp=Z,1.0nm,0.3s						
ILAR	**Eielson Array**	**38.73**	**328**	P	**P**	**17 58 15.8**	**+2.7**
	comp=Z,0.5nm,0.9s,baz=110,slow=7.7,SNR=4.3						
	comp=Z,0.5nm,0.9s						

HEL 22 17:58:54.7±0.4, 67°17N×20°48E, h0km, ML1.1, Suspected explosion
UPP 22 17:58:55.5±0.1, 67°19N×20°68E, h0km, ML2.7, Confirmed Induced event
ISC 22 17:58:54.7±1.0, 67°20N±0°02×20°80E±0°03, h0km, n24, σ0s80/33, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.12**	**230**	P	**Pg**	**17 58 57.4**	**+0.5**
DUNU				S	**Sg**	**17 58 58.6**	**+0.3**
MASU	**Masugnsbyn**	**0.53**	**60**	P	**Pb**	**17 59 06.6**	**-0.3**
KUA	**Kurravaara**	**0.78**	**347**	P	**Pg**	**17 59 10.0**	**+0.4**
RATU	**Laukkuluspa**	**0.78**	**324**	P	**Pg**	**17 59 09.9**	**+0.2**
ERTU	**Ertsjaerv**	**0.85**	**139**	P	**Pg**	**17 59 11.5**	**+0.6**
ERTU	**Ertsjaerv**	**0.85**	**139**	PG	**Pg**	**17 59 11.5**	**+0.6**
ERTU				SB	**Sb**	**17 59 23.8**	**-0.3**
SALU	**Saltoluokta**	**0.91**	**283**	*eP*	**Pg**	**17 59 11.9**	**-0.1**
SALU	**Saltoluokta**	**0.91**	**283**	P	**Pg**	**17 59 11.8**	**-0.3**
NIKU	**Nikkaluokta**	**0.96**	**316**	P	**Pg**	**17 59 12.8**	**-0.1**
LANU	**Lannavaara**	**0.97**	**28**	PG	**Pg**	**17 59 13.3**	**0.0**
LANU				SB	**Sb**	**17 59 28.4**	**+0.7**
HARU	**Harads**	**1.04**	**176**	P	**Pg**	**17 59 14.6**	**0.0**
KOVU	**Salmi**	**1.06**	**347**	P	**Pg**	**17 59 15.4**	**+0.4**
KLF	**Kolari**	**1.23**	**87**	PG	**Pb**	**17 59 18.9**	**+0.1**
KLF				smax	smax	17 59 35.7	
	comp=Z,1.0nm,0.2s						
KLF				SG	**Sn**	**17 59 36.5**	**+0.1**
HEF	**Hetta**	**1.63**	**40**	*eP*	**Pb**	**17 59 25.5**	**-0.1**
HEF	**Hetta**	**1.63**	**40**	PG	**Pg**	**17 59 26.2**	**+0.3**
HEF				smax	smax	17 59 46.5	
	comp=Z,1.0nm,0.2s						
TOF	**Tornio**	**1.80**	**127**	PG	**Pb**	**17 59 28.6**	**+0.2**
TOF				smax	smax	17 59 50.9	
	comp=Z,1.2nm,0.2s						
TOF				SG	**Sg**	**17 59 53.6**	**+1.3**
KTK1	**Kautokeino**	**2.04**	**26**	PG	**Pb**	**17 59 32.9**	**+0.3**
KTK1				SG	**Sg**	**18 00 00.9**	**+0.8**
RNF	**Rovaniemi**	**2.14**	**104**	PG	**Pb**	**17 59 34.2**	**0.0**
	baz=291						
RNF				SG	**Sg**	**18 00 04.8**	**+1.5**
RANF	**Ranua**	**2.67**	**114**	PG	**Pb**	**17 59 43.9**	**+0.7**
RANF				SG	**Sg**	**18 00 18.9**	**-1.4**
ARA0	**ARCESS Array S**	**2.93**	**34**	SG	**Sg**	**18 00 26.6**	**-2.0**
OUL	**Oulu**	**2.96**	**133**	SG	**Sg**	**18 00 29.7**	**-0.1**
MSF	**Maaselka**	**3.54**	**108**	SG	**Sg**	**18 00 47.1**	**-1.1**
KU6	**Riekki**	**3.81**	**104**	PG	**Pg**	**18 00 06.6**	**-1.1**
KU6				SG	**Sg**	**18 00 57.2**	**+0.3**
VAF	**Ylistaro**	**4.25**	**168**	SG	**Sg**	**18 01 08.8**	**-2.0**

IDC 22 18:03:36.5±2.6, 0°91N×98°21E, h0km, mb3.4/6, mbtmp3.4/7, ML3.6/1, Error ellipse: s-maj=110.6km s-min=21.6km az=58.0
DJA 22 18:03:49.8±0.3, 1°N±3°×9°9E±°, h77km±8km, M3.6/28, mb3.7/2, MLv3.5/28
ISC 22 18:03:49.8±0.9, 1°24N±0°06×98°88E±0°08, h100km, n21, σ1s10/18, mb3.4/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**0.83**	**122**	P	**Pn**	**18 04 06.9**	**-1.6**
GSI	**Gunungsitoli**	**1.30**	**273**	P	**Pn**	**18 04 13.2**	**-0.5**
PBSI	**Pulau Batu**	**1.42**	**205**	P	**Pn**	**18 04 14.1**	**-1.0**
PSI	**Prapat**	**1.56**	**2**	P	**Pn**	**18 04 15.0**	**-1.9**
PPI	**Padang Panjang**	**2.27**	**138**	P	**Pn**	**18 04 26.1**	**+0.2**
TSI	**Tuntungan**	**2.27**	**352**	P	**Pn**	**18 04 26.5**	**+0.5**
KCSI	**Kotacane, Aceh**	**2.52**	**334**	P	**Pn**	**18 04 28.7**	**-0.6**
TPTI		**2.63**	**320**	P	**Pn**	**18 04 30.0**	**-0.7**
PDSI	**Padang**	**2.66**	**143**	P	**Pn**	**18 04 29.8**	**-1.3**
PPSI	**Pulau Pagai**	**4.13**	**164**	P	**Pn**	**18 04 49.8**	**-1.1**
BSI	**Banda Aceh**	**5.54**	**320**	P	**Pn**	**18 05 08.3**	**-1.6**
CMAR	**Chiang Mai Arr**	**17.11**	**0**	P	**P**	**18 07 43.2**	**+0.1**
	0.1nm,0.3s,baz=184,slow=12,SNR=4.9						
	0.4nm,0.4s						
H08S2	**Diego Garcia H**	**27.75**	**251**	T	T	18 37 04.1	
	baz=73,slow=75,SNR=4.9

CATAC ***22*** *18:35:30.2±0.3,19˚N±3˚×8˚1W±˚,h1km,M5.0/7,mb5.2/3, mB5.9/1,MLv4.9/7,Mw(mB)5.5/1,Error ellipse: s-maj=7.7km s-min=3.4km az=143.3,confirmed*

RSNC ***22*** *18:35:30.1±0.5,19˚N±5˚×8˚1W±˚,h0km,M4.9,mB5.4, mb4.8,ML3.9,Mw(mB)4.9*

NEIC ***22*** *18:35:31.8,18˚94N×80˚83W,h10km*

NEIC ***22*** *18:35:31.8±2.2,18˚94N±0˚06×80˚84W±0˚06,h10km±1km, mb4.6/136,Mwr4.5/14,Error ellipse: s-maj=11.1km s-min=9.3km az=228.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr0.92; Mθθ-5.03; Mϕϕ4.11; Mrθ-2.75; Mθϕ6.17; Mϕr1.83; Fault plane solution: M₀8.40000×10¹⁵ NP1:ϕs70.15000°,δ74.50000°, λ-10.08000°. NP2:ϕs162.87000°,δ80.29000°, λ-164.27000°. Principal axes: T 7.2438, Plg4.0000°, Azm296.0000°; N 1.9577, Plg72.0000°, Azm194.0000°; P -9.2014, Plg18.0000°, Azm27.0000°;*

IDC ***22*** *18:35:31.4±0.6,18˚94N×80˚87W,h0km,mb4.0/16, mbtmp4.1/22,ML3.7/6,MS3.8/38 Error ellipse: s-maj=17.5km s-min=15.8km az=18.0*

JSN ***22*** *18:35:32.1±1.3,18˚51N×80˚87W,h4km±102km,MD4.5, Presumed earthquake*

SSNC ***22*** *18:35:34.4±1.0,18˚94N×80˚78W,h23km±14km,MD4.6, ML4.1,Presumed earthquake*

GCMT ***22*** *18:35:37.8±0.3,19.08N±0.01×80.91W±0.02,h17km±1km, MW4.8/98,Moment Tensor Solution. s12,c15; s98,c122; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.01±.07; Mθθ-0.62±.07; Mϕϕ0.64±.07; Mrθ0.01±.20; Mθϕ1.82±.07; Mϕr0.60±.18; Best double couple: M₀2.01600×10¹⁶ NP1:ϕs81.00000°,δ73.00000°,λ2.00000°. NP2: ϕs350.00000°,δ88.00000°,λ163.00000°. Principal axes: T 2.0520, Plg14.0000°, Azm304.0000°; N -0.0720, Plg73.0000°, Azm162.0000°; P -1.9800, Plg10.0000°, Azm37.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 18:35:31.1±0.4, 18˚96N±0˚03×80.76W±0˚04, h10km, n212, σ2ˢ06/163, mb4.6/60, MS3.8/34, 3C-1D, North of Honduras

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LCCY	**Blossom Villag**	**0.95**	**42**	*eP*			**Pn**	**18 35 51.0**	**+0.5**
LCCY				*eS*			**Sg**	**18 35 58.0**	**-3.8**
LCCY				IAML				18 36 10.8	
	comp=N,4μm,0.2s								
LCCY				IAML				18 36 14.8	
	comp=E,8μm,0.8s								
CBCY	**The Bluff, Cay**	**1.22**	**51**	P			**Pb**	**18 35 54.2**	**-0.1**
CBCY				S			**Sb**	**18 36 09.3**	**-0.9**
CBCY	**The Bluff, Cay**	**1.22**	**51**	*eP*			**Pb**	**18 35 54.2**	**-0.1**
CBCY				*eS*			**Sb**	**18 36 03.9**	**-6.3**
CBCY				IAML				18 36 10.4	
	comp=E,4μm,0.4s								
CBCY				IAML				18 36 12.1	
	comp=N,4μm,0.2s								
MTDJ	**Mount Denham**	**3.15**	**103**				**Pn**	**18 36 21.6**	**+0.7**
MTDJ					Sn		**Sn**	**18 36 58.1**	**-0.4**
MTDJ	**Mount Denham**	**3.15**	**103**	P			**Pn**	**18 36 21.5**	**+0.7**
MTDJ				S			**Sn**	**18 36 58.7**	**+0.1**
MTDJ	**Mount Denham**	**3.15**	**103**	P			**Pn**	**18 36 21.5**	**+0.7**
MTDJ				S			**Sn**	**18 36 55.2**	**-3.4**
MTDJ	**Mount Denham**	**3.15**	**103**	*iP*			**Pn**	**18 36 21.6**	**+0.7**
MTDJ	**Mount Denham**	**3.15**	**103**	*eP*			**Pn**	**18 36 21.5**	**+0.7**
MTDJ				*eS*			**Sn**	**18 36 53.0**	**-5.6**
MGV	**Manicaragua**	**3.22**	**13**	*eP*			**Pn**	**18 36 22.0**	**+0.3**
CCCC	**Cccc**	**3.59**	**51**	*eP*			**Pb**	**18 36 32.8**	**-1.9**
LMGC	**Las Mercedes**	**3.71**	**72**	*eP*			**Pn**	**18 36 29.8**	**+1.3**
LMGC				*eS*			**Sn**	**18 37 10.0**	**-2.3**
LMGC				*eSg*			Sb	18 37 12.5	-9.3
CAIB	**Caibarien**	**3.71**	**19**				**Pn**	**18 36 29.2**	**+0.7**
CAIB					Sn		**Sn**	**18 37 13.9**	**+1.5**
CAIB	**Caibarien**	**3.71**	**19**	P			**Pn**	**18 36 29.9**	**+1.4**
CAIB	**Caibarien**	**3.71**	**19**	*eP*			**Pn**	**18 36 29.2**	**+0.7**
STH	**Stony Hill**	**3.85**	**103**	*iP*			**Pn**	**18 36 31.5**	**+1.0**
HOJ	**Hope**	**3.93**	**103**	*iP*			**Pn**	**18 36 32.9**	**+1.4**
GWJ	**Greenwich**	**3.93**	**102**	*iP*			**Pn**	**18 36 32.7**	**+1.1**
CAMR	**Camaricoa**	**4.12**	**352**	*eP*			**Pn**	**18 36 36.6**	**+2.5**
CHIV	**Chivirico**	**4.22**	**75**				**Pn**	**18 36 37.1**	**+1.5**
CHIV	**Chivirico**	**4.22**	**75**	P			**Pn**	**18 36 36.4**	**+0.9**
CHIV				S			**Sn**	**18 37 27.4**	**+2.4**
CHIV	**Chivirico**	**4.22**	**75**	*eP*			**Pn**	**18 36 35.9**	**+0.3**
SOR	**Soroa**	**4.35**	**332**				**Pn**	**18 36 37.6**	**+0.3**
SOR	**Soroa**	**4.35**	**332**	*eP*			**Pn**	**18 36 38.1**	**+0.8**
YAR	**Yar**	**4.38**	**71**	*eP*			**Pn**	**18 36 39.6**	**+1.9**
SERC	**Banco Serrana,**	**4.67**	**175**	S			**Sn**	**18 37 32.7**	**-3.2**
MARVS	**Santiago de Cu**	**4.70**	**77**	*eP*			**Pn**	**18 36 42.2**	**0.0**
HLGC	**Holguin**	**4.82**	**66**	*eP*			**Pn**	**18 36 45.6**	**+1.8**
RNCC	**Cayo Roncador,**	**5.39**	**173**	S			**Sn**	**18 37 51.9**	**-2.0**
GTBY	**Guantanamo Bay**	**5.42**	**79**	P			**Pn**	**18 36 54.7**	**+2.7**
	comp=N,230nm,0.6s								
GTBY				S			**Sn**	**18 37 54.2**	**-0.3**
	comp=N,230nm,0.6s								
GTBY	**Guantanamo Bay**	**5.42**	**79**	*i* P			**Pn**	**18 36 56.2**	**+4.2**
GTBY	**Guantanamo Bay**	**5.42**	**79**	*eP*			**Pn**	**18 36 53.1**	**+1.1**
BILN	**Bilwi Airport**	**5.49**	**208**				**Pn**	**18 36 52.9**	**-0.1**
PRVC	**Isla de Provid**	**5.58**	**186**	P			**Pn**	**18 36 54.9**	**+0.6**
PRVC				S			**Sn**	**18 37 57.0**	**-1.6**
PRVC	**Isla de Provid**	**5.58**	**186**	P			**Pn**	**18 36 55.9**	**+1.6**
	comp=N,135nm,1.6s								
PRVC				S			**Sn**	**18 37 55.4**	**-3.2**
	comp=N,135nm,1.6s								
NMDO	**Nuevo Mundo**	**5.67**	**73**				**Pn**	**18 36 56.8**	**+1.4**
NMDO	**Nuevo Mundo**	**5.67**	**73**	*eP*			**Pn**	**18 36 56.9**	**+1.4**
MOAC	**Moa**	**5.72**	**72**	*eP*			**Pn**	**18 36 58.7**	**+2.6**
QMBU	**Quimbuelo**	**5.74**	**77**	*eP*			**Pn**	**18 36 57.0**	**+0.5**
MASC	**Masc**	**6.28**	**78**	*eP*			**Pn**	**18 37 03.5**	**-0.3**
SIUN	**Universidad Ur**	**6.48**	**217**				**Pn**	**18 37 06.5**	**-0.2**
SIUN	**Universidad Ur**	**6.48**	**217**	P			**Pn**	**18 37 07.7**	**+1.0**
SIUN				S			**Sn**	**18 38 17.7**	**-3.1**
061Z	**Ochoppi**	**6.87**	**359**	*eP*			**Pn**	**18 37 13.0**	**+1.1**
TEIG	**Tepich**	**7.19**	**281**				**Pn**	**18 37 15.2**	**-1.2**
TEIG	**Tepich**	**7.19**	**281**	P			**Pn**	**18 37 15.3**	**-1.1**
TEIG	**Tepich**	**7.19**	**281**	P			**Pn**	**18 37 14.8**	**-1.6**
	comp=N,95μmcomp=N,2μm,0.5s								
TEIG				S			Sn	18 38 26.2	-12
	comp=N,95μmcomp=N,2μm,0.5s								
YUSH	**Yuscaran**	**7.67**	**230**	P			**Pn**	**18 37 23.8**	**+0.8**
YUSH				S			**Sn**	**18 38 51.4**	**+1.3**
TGUH	**Tegucigalpa,Un**	**7.92**	**233**	S			**Sn**	**18 38 55.7**	**-0.6**
BOAB	**BOACO BROADBAN**	**8.01**	**217**				**Pn**	**18 37 28.3**	**+0.6**
060A	**Indiantown**	**8.04**	**3**	*eP*			**Pn**	**18 37 30.4**	**+2.3**
SDDR	**Presa de Saban**	**8.97**	**88**				**Pn**	**18 37 41.9**	**+1.1**
SDDR	**Presa de Saban**	**8.97**	**88**	P			**Pn**	**18 37 42.6**	**+1.8**
	comp=N,69nm,0.7s								
SDDR	**Presa de Saban**	**8.97**	**88**	*eP*			**Pn**	**18 37 42.1**	**+1.3**
MTO3	**Montecristo**	**9.40**	**242**				**Pn**	**18 37 47.6**	**+0.7**
JTS	**Las Juntas de**	**9.53**	**206**	Pn			**Pn**	**18 37 49.4**	**+1.0**
	comp=N,1.9nm,0.3s,baz=3.5,slow=16,SNR=6.7								
JTS					LR		LR	18 41 29.1	
	comp=N,680nm,19.6s,baz=42,slow=38 comp=N,4.7nm,0.3s								
JTS	**Las Juntas de**	**9.53**	**206**				**Pn**	**18 37 48.0**	**-0.5**
JTS	**Las Juntas de**	**9.53**	**206**	P			**Pn**	**18 37 47.1**	**-1.4**
	comp=N,18nm,1.1s								
BCIP	**Isla Barro Col**	**9.78**	**175**	P			**Pn**	**18 37 52.1**	**+0.2**
	comp=N,43nm,1.3s								
BANI	**BANI**	**9.88**	**92**				**Pn**	**18 37 54.0**	**+0.6**
SMRC	**Santa Marta, M**	**10.00**	**140**	P			**Pn**	**18 37 55.3**	**+0.4**
	comp=N,62nm,1.0s								
APG	**El Apazote**	**10.08**	**248**	Pn			**Pn**	**18 37 56.7**	**+0.5**
	comp=N,0.1nm,0.3s,baz=88,slow=16,SNR=13								
APG					Sn		**Sn**	**18 39 47.0**	**-2.6**
	comp=N,0.1nm,0.3s,baz=181,slow=11,SNR=7.5 comp=N,1.0nm,0.6s								
SJCC	**San Jacinto, C**	**10.51**	**148**	P			**Pn**	**18 38 02.8**	**+0.8**
	comp=N,49nm,0.8s								
DR12	**Loma Pena Alta**	**10.78**	**89**				**Pn**	**18 38 05.4**	**-0.2**
LCBC	**Los crdobas,**	**10.91**	**156**	P			**Pn**	**18 38 10.8**	**+3.4**
	comp=N,134nm,1.4s								
URIC	**Uribia, Colomb**	**11.12**	**129**	P			**Pn**	**18 38 11.3**	**+1.0**
	comp=N,1μmcomp=N,71nm,0.8s								
553A	**Crawfordville**	**11.66**	**344**				**Pn**	**18 38 17.7**	**0.0**
APAC	**Apartado, Choc**	**11.72**	**159**	P			**Pn**	**18 38 20.8**	**+2.2**
	comp=N,51nm,0.6s								
451A	**Vernon**	**12.45**	**340**				**Pn**	**18 38 27.2**	**-1.2**
TIGA	**Tifton**	**12.68**	**349**				**Pn**	**18 38 30.1**	**-1.5**
OCAC	**Ocana**	**12.88**	**145**	P			**Pn**	**18 38 35.1**	**+0.6**
	comp=N,807nmcomp=N,82nm,0.6s								
OBIP	**Obispado Ponce**	**13.46**	**92**	Pn			**Pn**	**18 38 40.6**	**-1.7**
CMIG	**Matias Romero**	**13.56**	**264**	Pn			**Pn**	**18 38 42.5**	**-1.1**
	comp=N,0.7nm,0.3s,baz=28,slow=9.1,SNR=5.2								
CMIG					Sn		Sn	18 41 04.9	-10
	comp=N,0.5nm,0.3s,baz=48,slow=7.9,SNR=6.4 comp=N,1.9nm,0.3s								
HELC	**Santa Helena**	**13.68**	**157**	P			**Pn**	**18 38 48.2**	**+2.6**
	comp=N,3.9nm,0.6s								
PTBC	**PUERTO BERRIO,**	**13.79**	**153**	P			**Pn**	**18 38 46.7**	**-0.1**
	comp=N,29nm,0.7s								
CBOC	**Ciudad Bolivar**	**13.82**	**160**	P			**Pn**	**18 38 50.1**	**+2.7**
	comp=N,9.2nm,0.7s								
SJG	**San Juan**	**13.89**	**91**	Pn			**Pn**	**18 38 50.4**	**+2.4**
	comp=N,2.2nm,0.3s,baz=268,slow=17,SNR=1.9								
SJG					LR		LR	18 43 38.5	
	comp=N,320nm,20.6s,baz=266,slow=35 comp=N,3.8nm,0.3s								
PAMC	**Pamplona, Colo**	**13.96**	**145**	P			**Pn**	**18 38 50.7**	**+1.1**
	comp=N,326nmcomp=N,36nm,0.7s								
PDPR	**Patillas Dam,**	**14.02**	**91**	Pn			**Pn**	**18 38 48.0**	**-1.8**
SDV	**Santo Domingo**	**14.03**	**134**	Pn			**Pn**	**18 38 49.4**	**-0.8**
	comp=N,1.3nm,0.3s,baz=333,slow=4.3,SNR=24								
SDV					Sn		**Sn**	**18 41 19.1**	**-7.1**
	comp=N,0.3nm,0.3s,baz=197,slow=23,SNR=1.1								
SDV					LR		LR	18 44 33.0	
	comp=N,542nm,19.9s,baz=304,slow=38								
SDV	**Santo Domingo**	**14.03**	**134**				**Pn**	**18 38 48.1**	**-2.1**
SDV	**Santo Domingo**	**14.03**	**134**	P			**Pn**	**18 38 49.4**	**-0.8**
	comp=N,32nm,1.0s								
152A	**Waverly Hall**	**14.10**	**346**				**Pn**	**18 38 49.2**	**-1.8**
BARC	**Barichara**	**14.34**	**148**	P			**Pn**	**18 38 58.0**	**+3.4**
	comp=N,23nm,0.8s								
NORC	**Norcasia**	**14.51**	**156**	P			**Pn**	**18 38 59.9**	**+3.2**
	comp=N,8.7nm,0.8s								
GOGA	**Godfrey**	**14.59**	**351**				**Pn**	**18 38 56.3**	**-1.4**
GUY2C	**Guyana, Caldas**	**14.63**	**158**	P			**Pn**	**18 39 02.2**	**+3.4**
	comp=N,11nm,0.6s								
SPBC	**San Pablo de B**	**14.75**	**153**	P			**Pn**	**18 39 02.6**	**+2.6**
	comp=N,9.9nm,0.9s								
RUSC	**La Rusia**	**14.99**	**149**	P			**P**	**18 39 07.2**	**-2.0**
ROSC	**El Rosal**	**15.38**	**155**	Pn			**Pn**	**18 39 09.6**	**+0.9**
	comp=N,0.8nm,0.3s,baz=122,slow=23,SNR=3.8								
ROSC					LR		LR	18 45 16.0	
	comp=N,454nm,19.0s,baz=339,slow=38 comp=N,6.1nm,0.7s								
ROSC	**El Rosal**	**15.38**	**155**				**Pn**	**18 39 06.7**	**-2.0**
Z47A	**Carrollton**	**15.61**	**337**				**Pn**	**18 39 10.5**	**-0.9**
Z47A					IAmb		IAmb	18 39 46.2	
	comp=Z,46nm,1.2s								
441A	**DeRidder**	**16.26**	**319**	P			**Pn**	**18 39 17.7**	**-2.0**
W52A	**Murphy**	**16.31**	**351**	P			**Pn**	**18 39 21.0**	**+0.7**
W52A					IAmb		IAmb	18 39 41.5	
	comp=Z,32nm,0.8s								
CPCT	**Cooper Cave**	**16.76**	**349**	Pn			**Pn**	**18 39 26.3**	**+0.4**
TKL	**Tuckaleechee C**	**16.84**	**352**	Pn			**Pn**	**18 39 26.6**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=171,slow=13,SNR=15								
TKL					Sn		**Sn**	**18 42 26.1**	**-8.2**
	comp=Z,0.4nm,0.3s,baz=144,slow=1.9,SNR=3.6								
TKL					LR		LR	18 45 55.5	
	comp=Z,354nm,19.7s,baz=172,slow=37 comp=Z,4.9nm,0.5s								
TKL	**Tuckaleechee C**	**16.84**	**352**				**Pn**	**18 39 26.4**	**-0.7**
HKT	**Hockley**	**17.53**	**311**				**Pn**	**18 39 30.4**	**-5.2**
Z41A	**Richland Creek**	**17.85**	**325**	Pn			**Pn**	**18 39 37.9**	**-1.8**
WVT	**Waverly**	**18.20**	**341**	Pn			**Pn**	**18 39 42.0**	**-2.0**
735A	**Kenedy**	**18.41**	**306**	Pn			**P**	**18 39 43.9**	**-2.6**
735A					IAmb		IAmb	18 40 02.0	
	comp=Z,40nm,1.1s								
237A	**Washetta, Mont**	**18.76**	**317**	P			**P**	**18 39 48.0**	**-2.3**
237A					IAmb		IAmb	18 40 21.2	
	comp=Z,28nm,0.9s								
Z38A	**Mt. Pleasant**	**19.10**	**321**	IAmb			IAmb	18 40 08.7	
	comp=Z,64nm,1.3s								
WHAR	**Wooly Hollow**	**19.20**	**330**	P			**Pn**	**18 39 57.4**	**+1.3**
MIAR	**Mount Ida**	**19.25**	**326**	IAmb			IAmb	18 40 09.8	
	comp=Z,36nm,1.2s								
TREL	**Terrell**	**19.41**	**318**	IAmb			IAmb	18 40 25.2	
	comp=Z,30nm,0.9s								
WHTX	**Lake Whitney,**	**19.85**	**314**	IAmb			IAmb	18 40 08.8	
	comp=Z,23nm,0.8s								
FW13	**Cleburne**	**20.05**	**315**	P			**P**	**18 40 03.4**	**-1.1**
FW13					IAmb		IAmb	18 40 33.8	
	comp=Z,20nm,0.7s								
T42A	**Van Buren**	**20.15**	**335**	P			Pn	18 40 06.4	-1.0
BRDY	**Brady**	**20.54**	**310**	P			**P**	**18 40 08.3**	**-1.5**
BRDY					IAmb		IAmb	18 40 26.4	
	comp=Z,23nm,1.0s								
Z35A	**Perchaven, San**	**20.55**	**317**	P			**P**	**18 40 07.7**	**-2.2**
Z35A					IAmb		IAmb	18 40 46.5	
	comp=Z,32nm,1.1s								
JCT	**Junction City**	**20.72**	**307**	IAmb			IAmb	18 40 27.9	
	comp=Z,27nm,1.0s								
DRIO	**Del Rio**	**20.86**	**304**	P			**P**	**18 40 11.0**	**-2.3**
DRIO					IAmb		IAmb	18 40 25.7	
	comp=Z,23nm,1.0s								
CCM	**Cathedral Cave**	**21.11**	**336**	P			**P**	**18 40 15.8**	**0.0**
CCM					IAmb		IAmb	18 40 48.5	
	comp=Z,31nm,1.4s								
R40A	**Maddies Statio**	**21.71**	**335**				**P**	**18 40 21.9**	**-0.4**
R40A					IAmb		IAmb	18 40 43.9	
	comp=Z,16nm,0.8s								
ABTX	**Abilene, Hawle**	**21.73**	**312**	IAmb			IAmb	18 40 38.3	
	comp=Z,30nm,0.8s								
OZNA	**Ozona**	**21.93**	**307**	IAmb			IAmb	18 40 37.2	
	comp=Z,20nm,0.9s								
OK052	**Battle Ridge R**	**22.09**	**323**	IAmb			IAmb	18 40 41.3	
	comp=Z,31nm,0.9s								
SGCY	**Sterling City**	**22.41**	**309**	IAmb			IAmb	18 40 48.2	
	comp=Z,20nm,0.8s								
APMT	**Aspermont**	**22.45**	**313**	IAmb			IAmb	18 40 44.5	
	comp=Z,22nm,1.0s								
T35A	**Sooner Cattle**	**22.60**	**326**	IAmb			IAmb	18 41 11.8	
	comp=Z,15nm,0.9s								
229A	**Bryant Ranch,**	**22.94**	**308**	IAmb			IAmb	18 40 49.3	
	comp=Z,16nm,0.8s								
DKNS	**Dickens**	**23.20**	**313**	IAmb			IAmb	18 41 22.5	
	comp=Z,16nm,0.8s								
TXAR	**Lajitas Array**	**23.27**	**301**	P			**P**	**18 40 39.7**	**+0.6**
	comp=Z,4.4nm,0.8s,baz=116,slow=8.4,SNR=33								
TXAR					LR		LR	18 51 52.1	
	comp=Z,71nm,18.6s,baz=105,slow=42 comp=Z,4.4nm,0.8s								
TX31	**Lajitas Ar. Si**	**23.27**	**301**	IAmb			IAmb	18 40 51.6	
	comp=Z,16nm,1.1s								
129A	**Stewart Farms,**	**23.31**	**310**	IAmb			IAmb	18 40 52.6	
	comp=Z,27nm,0.9s								
P38A	**Dawn**	**23.36**	**334**	IAmb			IAmb	18 41 17.6	
	comp=Z,20nm,1.0s								
TPB05	**Hovey Rd**	**23.62**	**305**	IAmb			IAmb	18 41 20.8	
	comp=Z,9.5nm,0.8s								
ALPN	**Alpine**	**23.64**	**303**	IAmb			IAmb	18 41 02.1	
	comp=Z,23nm,1.3s								
128A	**Castleberry Fa**	**23.76**	**309**	IAmb			IAmb	18 40 57.0	
	comp=Z,28nm,1.2s								
TPB06	**Permian Basin**	**23.85**	**306**	IAmb			IAmb	18 40 58.5	
	comp=Z,16nm,0.8s								
TPB01	**Permian Basin**	**23.98**	**304**	IAmb			IAmb	18 40 58.6	
	comp=Z,41nm,1.0s								
PECS	**Pecos**	**24.23**	**305**	IAmb			IAmb	18 41 01.6	
	comp=Z,25nm,1.2s								
KSU1	**Kansas State U**	**24.31**	**329**	IAmb			IAmb	18 41 02.2	
	comp=Z,16nm,0.9s								
AMTX	**Amarillo**	**24.40**	**315**	IAmb			IAmb	18 41 33.0	
	comp=Z,21nm,0.9s								
VHRN	**Van Horn**	**24.87**	**303**	IAmb			IAmb	18 41 08.1	
	comp=Z,19nm,1.2s								
BOAV	**Boa Vista**	**25.76**	**127**	P			**P**	**18 41 04.8**	**+2.6**
BOAV					IAmb		IAmb	18 41 33.5	
	comp=Z,19nm,1.3s								
SADO	**Sadowa**	**25.77**	**3**	LR			LR	18 50 46.3	
	comp=Z,233nm,21.0s,baz=293,slow=36								
ATAH	**Atahualpa**	**26.04**	**175**	LR			LR	18 51 50.0	
	comp=Z,238nm,19.1s,baz=6.1,slow=38								
ANMO	**Albuquerque**	**27.78**	**310**	LR			LR	18 53 38.4	
	comp=Z,154nm,21.6s,baz=120,slow=39								
LPIG	**La Paz**	**27.93**	**286**	LR			LR	18 53 17.4	
	comp=Z,198nm,19.4s,baz=35,slow=38								
MDP	**Montagnes des**	**30.69**	**113**	LR			LR	18 56 03.5	
	comp=Z,78nm,19.4s,baz=294,slow=40								
PV13	**Radium Mtn., P**	**31.01**	**314**	P			**P**	**18 41 49.7**	**+0.5**
U15A	**North Rim**	**32.69**	**309**	IAmb			IAmb	18 42 18.0	
	comp=Z,8.2nm,1.1s								
P18A	**Preston Nutter**	**32.71**	**315**	IAmb			IAmb	18 42 18.1	
	comp=Z,8.3nm,0.9s								
MTPU	**Mount Pierson**	**33.29**	**311**	IAmb			IAmb	18 42 23.5	
	comp=Z,14nm,1.1s								
W13A	**Hualapai Mount**	**33.40**	**306**	IAmb			IAmb	18 42 24.8	
	comp=Z,7.0nm,1.0s								
ULM	**Lac du Bonnet**	**33.47**	**342**	P			**P**	**18 42 09.0**	**-1.3**
	comp=Z,0.6nm,0.4s,baz=162,slow=3.2,SNR=1.8								
ULM					LR		LR	18 55 14.9	
	comp=Z,308nm,19.1s,baz=160,slow=35								
CCUT	**Cedar City**	**33.93**	**310**	IAmb			IAmb	18 42 29.2	
	comp=Z,8.4nm,1.0s								
PD31	**Pinedale Array**	**33.98**	**321**	IAmb			IAmb	18 42 38.3	
	comp=Z,7.8nm,1.4s								
PDAR	**Pinedale Array**	**33.98**	**321**	P			**P**	**18 42 16.1**	**+1.0**
	comp=Z,1.1nm,0.8s,baz=124,slow=10,SNR=10								
PDAR					LR		LR	18 57 25.0	
	comp=Z,70nm,20.0s,baz=88,slow=39 comp=Z,1.1nm,0.8s								
PDAR	**Pinedale Array**	**33.98**	**321**	P			**P**	**18 42 16.0**	**+0.8**
IRM	**Iron Mountain**	**34.09**	**303**	P			**P**	**18 42 16.2**	**+0.2**
IRM					IAmb		IAmb	18 42 30.3	
	comp=Z,8.5nm,1.2s								
ESJX	**Sierra Juarez**	**34.16**	**299**	IAmb			IAmb	18 42 30.5	
	comp=Z,13nm,1.5s								
V12A	**Nelson**	**34.36**	**306**	IAmb			IAmb	18 42 32.7	
	comp=Z,12nm,1.0s								
HWUT	**Hardware Ranch**	**34.59**	**317**	IAmb			IAmb	18 42 33.9	
	comp=Z,8.9nm,1.1s								
DUG	**Dugway, Tooele**	**34.71**	**314**	IAmb			IAmb	18 42 35.4	
	comp=Z,7.2nm,1.0s								
SPUT	**South Promonto**	**35.00**	**316**	IAmb			IAmb	18 42 32.3	
	comp=Z,15nm,1.1s								
BGU	**Big Grassy Mou**	**35.20**	**315**	IAmb			IAmb	18 42 40.1	
	comp=Z,6.9nm,1.1s								
TPNV	**Topopah Spring**	**35.84**	**307**	IAmb			IAmb	18 42 46.3	
	comp=Z,9.5nm,1.1s								
GWY	**Greenwater Val**	**35.90**	**306**	IAmb			IAmb	18 42 49.8	
	comp=Z,7.6nm,0.9s								
WCT	**Wildcat Mounta**	**36.07**	**307**	IAmb			IAmb	18 42 47.9	
	comp=Z,7.3nm,1.1s								
ELK	**Elko**	**36.60**	**314**	LR			LR	18 59 23.5	
	comp=Z,125nm,18.1s,baz=134,slow=39								
LPAZ	**La Paz**	**37.17**	**160**	LR			LR	18 58 52.5	
	comp=Z,147nm,21.7s,baz=320,slow=38								
SCHQ	**Schefferville**	**37.35**	**13**	LR			LR	18 57 42.2	
	comp=Z,193nm,21.3s,baz=192,slow=36								
HLID	**Hailey**	**37.39**	**318**	IAmb			IAmb	18 42 58.0	
	comp=Z,7.5nm,0.9s								
NVAR	**Mina Array Bea**	**37.88**	**309**	P			**P**	**18 42 51.3**	**+2.7**
	comp=Z,1.6nm,0.8s,baz=121,slow=7.1,SNR=6.3 comp=Z,1.6nm,0.8s								
LHV	**Little Huntoon**	**37.97**	**308**	IAmb			IAmb	18 43 03.6	
	comp=Z,18nm,1.4s								
SIV	**San Ignacio**	**39.77**	**150**	LR			LR	19 01 10.6	
	comp=Z,176nm,18.3s,baz=304,slow=39								
PB11	**IPOC Station P**	**40.00**	**164**	P			**P**	**18 43 04.8**	**-1.6**
PB11					IAmb		IAmb	18 43 19.8	
	comp=Z,15nm,0.8s								
I07A	**Izee**	**40.90**	**316**	P			**P**	**18 43 11.9**	**-1.7**
NEW	**Newport**	**41.45**	**323**	LR			LR	19 02 09.3	
	comp=Z,104nm,18.4s,baz=92,slow=39								
PINE	**Pine Mountain**	**41.72**	**315**	P			**P**	**18 43 20.4**	**-0.2**
PINE					IAmb		IAmb	18 43 34.5	
	comp=Z,9.3nm,0.8s								
YBH	**Yreka Blue Hor**	**42.18**	**312**	LR			LR	19 04 13.8	
	comp=Z,8.8

AFAD ***22*** *18:47:22.6, 38.46N×39.22E, h17km±1km, MW3.5*
ISK ***22*** *18:47:22.4, 38.47N×39.24E, h6km, ML3.5/16*
ISC 22 18:47:22.8±0.8, **38.46N**±0.03×**39.25E**±0.02, **h9**km±6km, **n27**, **σ**=**65**/41, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESIJ	**Sivrice-Elazig**	**0.05**	**103**	Pg	**Pg**	**18 47 24.8**	**0.0**
ESIJ				Sg	**Sg**	**18 47 25.9**	**-0.3**
SVRC	**Sivrice-ELAZID**	**0.09**	**151**	Pg	**Pg**	**18 47 24.9**	**-0.4**
SVRC				Sg	**Sg**	**18 47 26.4**	**-0.7**
ESGZ	**Sivrice-Elazig**	**0.15**	**259**	Pg	**Pg**	**18 47 26.3**	**+0.1**
ELZG	**Elazig**	**0.21**	**280**	P	**Pg**	**18 47 27.6**	**+0.4**
ELZG				S	**Sg**	**18 47 30.9**	**+0.7**
MDYL	**Doganyol-Malat**	**0.22**	**229**	Pg	**Pg**	**18 47 27.4**	**0.0**
MDYL				Sg	**Sg**	**18 47 31.1**	**+0.7**
ELZ	**Elazig**	**0.23**	**352**	P	**Pg**	**18 47 28.2**	**+0.6**
ELZ				S	**Sg**	**18 47 32.1**	**+1.3**
MDNT	**Maden**	**0.35**	**101**	P	**Pb**	**18 47 31.8**	**+0.5**
MDNT				S	**Sb**	**18 47 37.8**	**+0.9**
KOVA	**Elazig, Kovanc**	**0.51**	**61**	P	**Pb**	**18 47 33.0**	**-1.0**
KOVA				S	**Sb**	**18 47 40.7**	**-0.9**
MAYA	**Malatya/Merkez**	**0.66**	**259**	P	**Pg**	**18 47 35.3**	**-0.3**
MAYA				S	**Sg**	**18 47 44.6**	**+0.3**
NARI	**Adyaman-Kaht**	**0.69**	**214**	P	**Pb**	**18 47 36.5**	**-0.6**
MCKZ	**Bingol**	**0.69**	**342**	P	**Pg**	**18 47 36.0**	**-0.2**
MCKZ				S	**Sb**	**18 47 45.8**	**-1.2**
KAHTU	**Kahta**	**0.82**	**218**	P	**Pb**	**18 47 39.0**	**-0.4**
KAHTU				S	**Sb**	**18 47 50.4**	**-0.2**
DYBB	**Diyarbakir**	**0.86**	**126**	Pg	**Pb**	**18 47 39.7**	**-0.4**
DYBB				Sg	**Sb**	**18 47 52.3**	**+0.5**
ARPR	**Arapgir-MALATY**	**0.95**	**312**	Pg	**Pg**	**18 47 40.8**	**-0.4**
AZEY	**Adyaman-Merk**	**1.02**	**231**	P	**Pn**	**18 47 43.0**	**-0.5**
AZEY				S	**Sb**	**18 47 57.0**	**+0.7**
AKCD	**Akcadag**	**1.05**	**261**	P	**Pg**	**18 47 42.3**	**-0.8**
AKCD				S	**Sb**	**18 47 57.2**	**-0.2**
HEKM	**Malatya_Hekimh**	**1.09**	**293**	P	**Pg**	**18 47 43.2**	**-0.6**
HEKM				S	**Sb**	**18 47 58.6**	**0.0**
ILIC	**ilic-Erzincan**	**1.12**	**332**	Pn	**Pg**	**18 47 43.6**	**-0.9**
ERZN	**Erzincan**	**1.18**	**18**	Pn	**Pb**	**18 47 46.5**	**-0.3**
BNGB	**Bingl**	**1.24**	**64**	Pn	**Pg**	**18 47 46.7**	**+0.2**
YEDI	**Yedisu-Bingol**	**1.41**	**46**	Pn	**Pg**	**18 47 49.3**	**-0.5**
KARO	**Karliova-Bingo**	**1.64**	**58**	Pn	**Pb**	**18 47 52.8**	**-0.6**
VRTB	**Varto-Mus**	**1.86**	**67**	Pn	**Pn**	**18 47 55.9**	**+0.8**
BAYT	**Aydıntepe-Bayb**	**2.05**	**19**	Pn	**Pn**	**18 47 58.5**	**+0.8**
GAZ	**Gaziantep**	**2.06**	**232**	Pn	**Pn**	**18 47 58.4**	**+0.6**
KMRS	**Kahramanmaras**	**2.09**	**244**	Pn	**Pn**	**18 47 58.9**	**+0.8**
GURO	**Guroymak-BITLI**	**2.19**	**87**	Pn	**Pn**	**18 48 00.3**	**+0.8**

SOME ***22*** *19:21:38.7, 41.62N×81.02E, h20km*
IDC ***22*** *19:21:39.9±0.4, 41.75N×81.10E, h0km, mb4.6/42, mbtmp4.7/51, ML4.4/7, MS4.1/77, Error ellipse: s-maj=9.8km s-min=6.9km az=35.0*
BJI ***22*** *19:21:39.4, 41.75N×81.10E, h10km, mB5.0/36, mb4.8/66, ML4.9/10, Ms5.0/51, Ms7 4.7/35*
MOS ***22*** *19:21:40.1±0.9, 41.71N×81.18E, h14km, mb5.1/48, MS4.3/16, Error ellipse: s-maj=5.3km s-min=4.0km az=127.4*
NNC ***22*** *19:21:41.2±1.7, 41.75N×81.16E, h0km, mb5.5, mpv5.3, Error ellipse: s-maj=11.9km s-min=9.8km az=144.0*
NEIC ***22*** *19:21:41.5±2.0, 41.72N±0.06×81.15E±0.06, h10km±1km, mb5.1/197, Error ellipse: s-maj=12.0km s-min=4.8km az=144.0*
GCMT ***22*** *19:21:42.5±0.2, 41.88N±0.01×81.19E±0.02, h18km±1km, MW4.8/101, Moment Tensor Solution. s20,c21; s101,c153; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr0.22±.07; Mθθ-1.49±.07; Mϕϕ 1.27±.06; Mrθ-0.63±.17; Mθϕ 1.24±.05; Mϕr-0.13±.13; Best double couple: Mo1.96000×10¹⁶ NP1:ϕs156.00000°, δ71.00000°, λ-180.00000°. NP2:ϕs66.00000°, δ90.00000°, λ-19.00000°. Principal axes: T 1.8250, Plg13.0000°, Azm113.0000°; N 0.2690, Plg71.0000°, Azm245.0000°; P -2.0950, Plg13.0000°, Azm20.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BGR ***22*** *19:21:42.2, 41.66N×81.97E, h33km, mb5.2, Ms4.4*
ISC 22 19:21:41.8±0.4, **41.76N**±0.03×**81.12E**±0.02, **h13**km±2km, **h13**km:**pP-P, n913,** σ**1**:**81**/884, **mb5.0**/243, **MS4.2**/98, **62C-48D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WUS	**Wushi**	**1.53**	**249**		**Pn**	**19 22 08.1**	**-1.0**
KTMS	**Ketmen**	**1.78**	**342**	P	**Pn**	**19 22 12.7**	**+0.3**
	241nm,0.4s						
KTMS				S	**Sb**	**19 22 36.4**	**-0.1**
	2μm,0.5s						
KTMS	**Ketmen**	**1.78**	**342**	*e*P	**Pn**	**19 22 12.7**	**+0.3**
	241nm,0.4s						
KTMS				*e*S	**Sb**	**19 22 36.4**	**-0.1**
	2μm,0.5s						
SHLS	**Shalkode**	**1.86**	**319**	P	**Pn**	**19 22 11.3**	**-2.2**
	4μm,0.5s						
SHLS				S	**Sn**	**19 22 34.3**	**-2.6**
	55μm,0.6s						
SHLS	**Shalkode**	**1.86**	**319**	*e*P	**Pn**	**19 22 11.3**	**-2.2**
SHLS				*e*S	**Sn**	**19 22 34.0**	**-2.9**
SHLS	**Shalkode**	**1.86**	**319**	*e*P	**Pn**	**19 22 11.3**	**-2.2**
	4μm,0.5s						
SHLS				*e*S	**Sn**	**19 22 34.3**	**-2.6**
	55μm,0.6s						
PDGK	**Podgornoye**	**1.98**	**323**	⇑Pn	**Pn**	**19 22 16.0**	**+0.9**
	3μm,0.5s						
PDGK				⇓Sn	**Sg**	**19 22 46.2**	**+0.9**
	31μm,0.7s						
PDGK	**Podgornoye**	**1.98**	**323**	PN	**Pn**	**19 22 16.0**	**+0.9**
PDGK						19 22 46.2	
UZB	**Uzynbulak**	**2.08**	**312**	Pg	**Pb**	**19 22 18.5**	**-1.0**
	4μm,0.4s						
UZB				Lg	Lg	19 22 47.8	
	18μm,0.6s						
UZB	**Uzynbulak**	**2.08**	**312**	*e*P	**Pn**	**19 22 17.8**	**+1.3**
UZB				*e*S	**Sb**	**19 22 45.4**	**+0.1**
UZB	**Uzynbulak**	**2.08**	**312**	*e*P	**Pn**	**19 22 17.9**	**+1.3**
	4μm,0.4s						
UZB				*e*S	**Sb**	**19 22 45.8**	**+0.5**
	18μm,0.6s						
SATY	**Saty**	**2.39**	**304**	Pg	**Pb**	**19 22 24.1**	**-0.7**
	14μm,0.5s						
SATY				Lg	Lg	19 22 57.3	
	27μm,0.5s						
SATY	**Saty**	**2.39**	**304**	*e*P	**Pb**	**19 22 23.3**	**-1.4**
SATY				*e*S	**Sb**	**19 22 54.4**	**+0.2**
KPKS	**Kokpek**	**2.48**	**314**	Pg	**Pb**	**19 22 24.9**	**-1.3**
	3.6nm,0.4s						
KPKS				Lg	Lg	19 22 57.8	
	15μm,0.5s						
KPKS	**Kokpek**	**2.48**	**314**	*e*P	**Pb**	**19 22 24.6**	**-1.6**
KPKS				*e*S	**Sb**	**19 22 56.4**	**-0.3**
KPKS	**Kokpek**	**2.48**	**314**	*e*P	**Pb**	**19 22 24.9**	**-1.3**
	3.6nm,0.4s						
KPKS				*e*S	**Sb**	**19 22 57.8**	**+1.1**
	15μm,0.5s						
TARG	**Taragay, Kyrgy**	**2.48**	**270**		**Pn**	**19 22 24.5**	**+2.2**
TARG	**Taragay, Kyrgy**	**2.48**	**270**	PN	**Pn**	**19 22 24.5**	**+2.2**
DJR	**Jarkent**	**2.75**	**340**	Pg	**Pb**	**19 22 29.7**	**-1.2**
	382nm,0.6s						
DJR				Lg	Lg	19 23 05.8	
	7μm,0.6s						
DJR	**Jarkent**	**2.75**	**340**	*e*P	**Pb**	**19 22 29.7**	**-1.2**
	382nm,0.6s						
DJR				*e*S	**Sb**	**19 23 05.8**	**+1.3**
	7μm,0.6s						
KDJ	**Kajisay**	**2.96**	**278**		**Pn**	**19 22 31.2**	**+2.5**
KDJ	**Kajisay**	**2.96**	**278**	PN	**Pn**	**19 22 31.2**	**+2.5**
KNOS	**Konyrlen**	**2.96**	**332**	Pg	**Pb**	**19 22 32.9**	**-1.6**
	868nm,0.7s						
KNOS				Lg	Lg	19 23 11.2	
	5μm,0.6s						
BLB	**Baldybastay**	**3.03**	**321**	Pg	**Pb**	**19 22 34.4**	**-1.4**
	1μm,0.5s						
BLB				Lg	Lg	19 23 14.5	
	12μm,0.6s						
KOTS	**Kotyrbulak**	**3.31**	**298**	Pg	**Pn**	**19 22 37.1**	**+3.6**
	799nm,0.6s						
KOTS				Lg	Lg	19 23 18.4	
	9μm,0.7s						
KOTS	**Kotyrbulak**	**3.31**	**298**	*e*P	**Pn**	**19 22 37.1**	**+3.6**
	799nm,0.6s						
KOTS				*e*S	**Sb**	**19 23 18.4**	**-2.3**
	9μm,0.7s						
MDOK	**Medeo**	**3.32**	**296**	Pg	**Pn**	**19 22 37.3**	**+3.6**
	928nm,0.5s						
MDOK				Lg	Lg	19 23 18.5	
	5μm,0.7s						
MDOK	**Medeo**	**3.32**	**296**	*e*P	**Pn**	**19 22 36.4**	**+2.8**
MDOK				*e*S	**Sb**	**19 23 17.8**	**-3.3**
TNSS	**Tian-Shan**	**3.34**	**294**	Pg	**Pb**	**19 22 41.3**	**+0.1**
	336nm,0.5s						
TNSS				Lg	Lg	19 23 26.5	
	899nm,0.6s						
TNSS	**Tian-Shan**	**3.34**	**294**	*e*P	**Pn**	**19 22 36.6**	**+2.4**
TNSS				*e*S	**Sb**	**19 23 18.1**	**-3.8**
TNSS				*e*LQ	LQ	19 23 32.0	
TNSS	**Tian-Shan**	**3.34**	**294**	*e*P	**Pb**	**19 22 39.8**	**-1.4**
	336nm,0.5s						
TNSS				*e*S	**Sb**	**19 23 23.4**	**+1.5**
	899nm,0.6s						
KNDC	**Almaty**	**3.40**	**297**	⇑Pn	**Pn**	**19 22 38.3**	**+3.6**
	2μm,0.6s						
KNDC				⇓Lg	Lg	19 23 31.3	
	13μm,0.9s						
KNDC	**Almaty**	**3.40**	**297**	PN	**Pn**	**19 22 38.2**	**+3.6**
AAA	**Alma-Ata**	**3.43**	**296**	Pg	**Pn**	**19 22 38.7**	**+3.7**
	965nm,0.5s						
AAA				Lg	Lg	19 23 23.3	
	241nm,0.7s						
AAA	**Alma-Ata**	**3.43**	**296**	*e*P	**Pn**	**19 22 38.3**	**+3.3**
AAA	**Alma-Ata**	**3.43**	**296**	*e*P	**Pb**	**19 22 39.7**	**-2.8**
	965nm,0.5s						
AAA				*e*S	**Sb**	**19 23 23.3**	**-0.8**
	241nm,0.7s						
ARXS	**Arharly**	**3.44**	**317**	Pg	**Pb**	**19 22 42.4**	**-0.3**
	716nm,0.5s						
ARXS				Lg	Lg	19 23 27.3	
	5μm,0.8s						
ARXS	**Arharly**	**3.44**	**317**	*e*P	**Pb**	**19 22 42.4**	**-0.3**
	716nm,0.5s						
ARXS				*e*S	**Sb**	**19 23 27.3**	**+2.9**
	5μm,0.8s						
IZV	**Izvestkoviy**	**3.57**	**292**	Pg	**Pb**	**19 22 42.7**	**-2.3**
	289nm,0.5s						
IZV				Lg	Lg	19 23 28.5	
	2μm,0.5s						
IZV	**Izvestkoviy**	**3.57**	**292**	*e*P	**Pb**	**19 22 42.7**	**-2.3**
	289nm,0.5s						
IZV				*e*S	**Sb**	**19 23 28.5**	**+0.2**
	2μm,0.5s						
ULHL	**Ulahol**	**3.67**	**279**	P	**Pn**	**19 22 40.5**	**+2.1**
	SNR=143						
KAPS	**Kapalarasan**	**3.75**	**341**	Pg	**Pb**	**19 22 48.6**	**+0.7**
	527nm,0.6s						
KAPS				Lg	Lg	19 23 38.0	
	3μm,0.5s						
TDK	**Taldyqorghan**	**3.79**	**330**	Pg	**Pb**	**19 22 48.4**	**-0.3**
	1μm,0.7s						
TDK				Lg	Lg	19 23 38.3	
	6μm,0.8s						
TDK	**Taldyqorghan**	**3.79**	**330**	*e*P	**Pn**	**19 22 42.4**	**+2.4**
TDK				*e*S	**Sn**	**19 23 28.6**	**+4.1**
TDK				*e*LQ	LQ	19 23 45.5	
TDK	**Taldyqorghan**	**3.79**	**330**	*e*P	**Pb**	**19 22 48.4**	**-0.3**
	1μm,0.7s						
TDK				*e*S	**Sb**	**19 23 38.3**	**+3.8**
	6μm,0.8s						
KTBS	**Karatobe**	**3.81**	**302**	Pg	**Pb**	**19 22 48.6**	**-0.3**
	546nm,0.5s						
KTBS				Lg	Lg	19 23 38.1	
	2.8nm,0.4s						
KTBS	**Karatobe**	**3.81**	**302**	*e*P	**Pb**	**19 22 48.6**	**-0.3**
	546nm,0.5s						
KTBS				*e*S	**Sb**	**19 23 38.1**	**+3.2**
	2.8nm,0.4s						
NRN	**Naryn**	**3.85**	**267**		**Pn**	**19 22 42.3**	**+1.2**
NRN	**Naryn**	**3.85**	**267**	PN	**Pn**	**19 22 42.3**	**+1.2**
KST	**Kastek**	**4.03**	**290**	Pg	**Pb**	**19 22 51.4**	**-1.3**
	750nm,0.6s						
KST				Lg	Lg	19 23 44.5	
	5μm,0.7s						
KST	**Kastek**	**4.03**	**290**	*e*P	**Pb**	**19 22 51.3**	**-1.4**
	750nm,0.6s						
KST				*e*S	**Sb**	**19 23 42.8**	**+1.5**
	5μm,0.7s						
DGS	**Degeres**	**4.22**	**292**	Pg	**Pb**	**19 22 52.7**	**-3.2**
	258nm,0.5s						
DGS				Lg	Lg	19 23 45.0	
	2.2nm,0.6s						
DGS	**Degeres**	**4.22**	**292**	*e*P	**Pb**	**19 22 56.1**	**+0.2**
	258nm,0.5s						
DGS				*e*S	**Sb**	**19 23 51.3**	**+4.5**
	549nm,0.6s						
TKM2	**Tokmak 2**	**4.25**	**288**	P	**Pn**	**19 22 49.0**	**+2.5**
	SNR=458						
KBK	**Karagaybulak**	**4.67**	**283**	P	**Pn**	**19 22 54.7**	**+2.5**
	SNR=110						
CHMS	**Chumysh**	**4.88**	**287**	P	**Pn**	**19 22 57.3**	**+2.5**
	SNR=8.1						
FRU1	**Bishkek**	**4.93**	**284**		**Pn**	**19 22 55.7**	**+0.1**
FRU1	**Bishkek**	**4.93**	**284**	PN	**Pn**	**19 22 55.7**	**+0.1**
UCH	**Uchtor**	**4.94**	**278**	P	**Pn**	**19 22 58.3**	**+2.1**
	SNR=42						
KSH2	**Kashi**	**4.98**	**240**	Pn	**Pn**	**19 22 58.4**	**+2.0**
KSH2				L	L		
	comp=N,19μm,9.7s						
KSH2				L	L		
	comp=E,14μm,9.7s						
KSH2				L	L		
	comp=Z,10μm,10.0s						
AAK	**Ala-Archa**	**5.00**	**282**	Pn	**Pn**	**19 22 59.4**	**+2.7**
	8.0nm,0.3s,baz=116,slow=8.7,SNR=136						
AAK				Pg	**Pb**	**19 23 13.4**	**+4.2**
	79nm,0.3s,baz=119,slow=9.3,SNR=32						
AAK				Lg	Lg	19 24 17.5	
	32nm,0.3s,baz=18,slow=20,SNR=6.7						
AAK				LR	LR	19 24 45.9	
	comp=Z,961nm,18.4s,baz=92,slow=37						
	45nm,0.5s						
AAK	**Ala-Archa**	**5.00**	**282**	P	**Pn**	**19 22 59.0**	**+2.3**
	SNR=87						
AAK	**Ala-Archa**	**5.00**	**282**		**Pn**	**19 22 58.8**	**+2.1**
AAK	**Ala-Archa**	**5.00**	**282**	⇑Pn	**Pn**	**19 22 59.3**	**+2.6**
	80nm,0.8s						
AAK				⇑Pg	**Pg**	**19 23 14.0**	**-3.5**
	405nm,0.7s						
AAK				⇑Lg	Lg	19 24 25.0	
	3μm,1.1s						
AAK	**Ala-Archa**	**5.00**	**282**	*ce*PN	**Pn**	**19 22 58.7**	**+2.1**
AAK				pmax	pmax		
	comp=Z,83nm,0.8s						
AAK	**Ala-Archa**	**5.00**	**282**	P	**Pn**	**19 22 59.9**	**+3.2**
AAK				S	**Sn**	**19 23 57.5**	**+3.1**
SGDS	**Sogindy**	**5.08**	**292**	*e*P	**Pn**	**19 22 59.7**	**+2.0**
SGDS				*e*LQ	LQ	19 24 26.4	
MAKZ	**Makanchi**	**5.08**	**7**		**Pn**	**19 22 59.6**	**+1.9**
MAKZ	**Makanchi**	**5.08**	**7**	⇓Pn	**Pn**	**19 22 59.9**	**+2.2**
	comp=Z,168nm,0.6s						
MAKZ				⇓Sn	**Sn**	**19 23 59.3**	**+3.1**
	comp=Z,624nm,0.8s						
MAKZ				⇑Lg	Lg	19 24 22.8	
	comp=Z,927nm,0.9s						
MAKZ	**Makanchi**	**5.08**	**7**	PN	**Pn**	**19 22 59.6**	**+1.9**
MK31	**Makanchi Array**	**5.10**	**9**	⇑Pn	**Pn**	**19 23 00.0**	**+2.0**
	comp=Z,68nm,0.5s						
MK31				⇓Sn	**Sn**	**19 24 00.9**	**+4.1**
	comp=Z,174nm,0.5s						
MK31				⇑Lg	Lg	19 24 22.4	
	comp=Z,543nm,0.7s						
MK31	**Makanchi Array**	**5.10**	**9**	*ce*PN	**Pn**	**19 22 59.6**	**+1.6**
MKAR	**Makanchi Array**	**5.10**	**9**	Pn	**Pn**	**19 23 00.2**	**+2.2**
	comp=Z,48nm,0.3s,baz=190,slow=13,SNR=666						
MKAR				Pg	**Pb**	**19 23 13.4**	**+2.5**
	comp=Z,45nm,0.3s,baz=196,slow=14,SNR=11						
MKAR				Sn	**Sn**	**19 23 59.8**	**+3.0**
	comp=Z,80nm,0.3s,baz=194,slow=25,SNR=8.3						
MKAR				Lg	Lg	19 24 18.6	
	comp=Z,87nm,0.3s,baz=182,slow=24,SNR=6.1						
	comp=Z,70nm,0.3s						
MKAR	**Makanchi Array**	**5.10**	**9**		**Pn**	**19 22 59.5**	**+1.6**
MKAR	**Makanchi Array**	**5.10**	**9**	*i* PN	**Pn**	**19 23 00.0**	**+2.0**
MKAR				pmax	pmax		
	comp=Z,70nm,0.3s						
USP	**Ospenovka**	**5.12**	**289**	P	**Pn**	**19 23 00.3**	**+2.1**
	SNR=22						
WMQ	**Urumqi**	**5.26**	**65**	Pn	**Pn**	**19 23 01.8**	**+1.6**
WMQ				Sn	**Sn**	**19 24 03.0**	**+2.3**
WMQ				SMN			
	comp=Z,1μm,1.7s						
WMQ				SME			
	comp=Z,1μm,1.9s						
EKS2	**Erkin-Say**	**5.53**	**282**	P	**Pn**	**19 23 05.9**	**+2.0**
	SNR=67						
BTLS	**Baital**	**6.11**	**305**	*e*P	**Pn**	**19 23 13.8**	**+2.1**
ZSN	**Zaisan**	**6.29**	**24**	Pg	**Pg**	**19 23 38.2**	**-3.9**
	comp=Z,205nm,0.7s						
ZSN				Lg	Lg	19 25 03.2	
	comp=Z,2μm,0.8s						
ZSN	**Zaisan**	**6.29**	**24**	*e*P	**Pn**	**19 23 15.4**	**+1.2**
ZSN	**Zaisan**	**6.29**	**24**	*e*P	**Pg**	**19 23 38.2**	**-3.9**
	comp=Z,205nm,0.7s						
ZSN				*e*S	**Sg**	**19 25 03.6**	**+0.2**
	comp=Z,2μm,0.8s						
DZA	**Taraz**	**7.34**	**282**	*e*P	**Pn**	**19 23 31.3**	**+2.6**
KK31	**Karatay Array**	**7.96**	**283**		**Pn**	**19 23 38.1**	**+0.9**
KK31	**Karatay Array**	**7.96**	**283**	⇓Pn	**Pn**	**19 23 38.8**	**+1.6**
	comp=Z,14nm,0.7s,baz=96,slow=13,SNR=88						
KK31				⇑Pg	Pg	19 24 08.0	-6.1
	comp=Z,245nm,0.8s,baz=91,slow=16,SNR=20						
KK31				⇓Lg	Lg	19 25 57.7	
	comp=Z,243nm,0.7s,baz=97,slow=26,SNR=4.8						
KK31	**Karatay Array**	**7.96**	**283**	P	**Pn**	**19 23 38.1**	**+0.9**
KKAR	**Karatay Array**	**7.96**	**283**		**Pn**	**19 23 37.9**	**+0.7**
KKAR	**Karatay Array**	**7.96**	**283**	P	**Pn**	**19 23 37.9**	**+0.7**
IUG	**Iuzhnay**	**8.27**	**276**	*e*P	**Pn**	**19 23 43.6**	**+2.0**
BRLS	**Borolday**	**8.45**	**282**	*e*P	**Pn**	**19 23 46.9**	**+3.0**
KURBB	**Kurchatov Arra**	**9.04**	**349**	Pn	**Pn**	**19 23 52.1**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=176,slow=11,SNR=41						
KURBB				Sn	**Sn**	**19 25 32.9**	**-0.7**
	comp=Z,2.1nm,0.3s,baz=152,slow=18,SNR=5.6						
KURBB				LR	LR	19 27 47.2	
	comp=Z,865nm,20.1s,baz=200,slow=41						
	comp=Z,4.2nm,0.7s						
KURBB	**Kurchatov Arra**	**9.04**	**349**	⇓Pn	**Pn**	**19 23 55.0**	**+3.0**
	comp=Z,48nm,0.8s						
KURBB				⇓Sn	**Sn**	**19 25 38.7**	**+5.1**
	comp=Z,978nm,0.8s						
KURBB				⇓Lg	Lg	19 26 29.8	
	comp=Z,2μm,0.8s						
KURBB	**Kurchatov Arra**	**9.04**	**349**	P	**Pn**	**19 23 53.0**	**+1.0**
KURK	**Kurchatov**	**9.12**	**350**		**Pn**	**19 23 54.1**	**+1.1**
KURK	**Kurchatov**	**9.12**	**350**	⇑Pn	**Pn**	**19 23 54.5**	**+1.5**
	comp=Z,28nm,0.7s						
KURK				⇑Sn	**Sn**	**19 25 39.8**	**+4.3**
	comp=Z,163nm,0.6s						
KURK				⇑Lg	Lg	19 26 34.4	
	comp=Z,688nm,1.1s						
KURK	**Kurchatov**	**9.12**	**350**	*ce*P	**Pn**	**19 23 53.8**	**+0.8**
KURK				pmax	pmax		
	comp=Z,36nm,1.3s						
KURK	**Kurchatov**	**9.12**	**350**	P	**Pn**	**19 23 52.3**	**-0.8**
KURK				P	**Pn**	**19 23 52.3**	**-0.8**
KURK				S	**Sn**	**19 25 37.9**	**+2.4**
KURK				S	**Sn**	**19 25 37.9**	**+2.4**
NIL	**Nilore**	**10.21**	**220**		**Pn**	**19 24 08.4**	**+0.3**
NIL	**Nilore**	**10.21**	**220**	P	**Pn**	**19 24 08.4**	**+0.3**
KBL	**Kabul**	**11.92**	**237**		**Pn**	**19 24 31.6**	**-0.1**
KBL	**Kabul**	**11.92**	**237**	P	**Pn**	**19 24 31.6**	**-0.1**
KBL	**Kabul**	**11.92**	**237**	P	**Pn**	**19 24 31.8**	**+0.2**
	SNR=31						
KBL				S	**Sn**	**19 26 44.7**	**+0.1**
GOMU	**GeErMu**	**12.01**	**113**	P	**Pn**	**19 24 29.3**	**-3.8**
GOMU				S	**Sn**	**19 26 48.6**	**+1.5**
GOMU				pmax	pmax		
	comp=Z,120nm,0.8s						
GOMU				LR	LR		
	comp=N,870nm,8.0s						
GOMU				LR	LR		
	comp=E,1μm,7.5s						
GOMU				LR	LR		
	comp=Z,72μm,7.1s						
ZAA0	**Zalesovo Array**	**12.44**	**10**		**Pn**	**19 24 37.3**	**-1.2**
ZAA0	**Zalesovo Array**	**12.44**	**10**	⇓Pn	**Pn**	**19 24 37.5**	**-1.0**
	comp=Z,33nm,0.7s						
ZAA0				⇑Sn	**Sn**	**19 27 03.6**	**+6.7**
	comp=Z,75nm,0.8s						
ZAA0				⇓Lg	Lg	19 28 15.9	
	comp=Z,311nm,1.4s						
ZALV	**Zalesovo Beam**	**12.44**	**10**	Pn	**Pn**	**19 24 37.9**	**-0.6**
	comp=Z,4.3nm,0.3s,baz=190,slow=14,SNR=113						
ZALV				Sn	**Sn**	**19 26 56.4**	**-0.4**
	comp=Z,3.9nm,0.3s,baz=192,slow=26,SNR=6.3						
ZALV				Lg	Lg	19 28 12.6	
	comp=Z,1.1nm,0.3s,baz=204,slow=28,SNR=1.9						
ZALV				LR	LR	19 29 34.9	
	comp=Z,1μm,20.2s,baz=196,slow=38						
	comp=Z,25nm,0.5s						
ZALV	**Zalesovo Beam**	**12.44**	**10**		**Pn**	**19 24 36.7**	**-1.8**
ZALV	**Zalesovo Beam**	**12.44**	**10**	*i* P	**Pn**	**19 24 37.2**	**-1.3**
ZALV				pmax	pmax		
	comp=Z,25nm,0.5s						
BVA0	**Borovoye Array**	**13.39**	**331**	⇓Pn	**Pn**	**19 24 51.8**	**+0.3**
	comp=Z,25nm,0.8s,baz=138,slow=14,SNR=82						
BVA0				⇓Sn	**Sn**	**19 27 22.5**	**+2.5**
	comp=Z,49nm,1.1s,baz=273,slow=61,SNR=7.0						
BVA0				⇑Lg	Lg	19 28 49.5	
	comp=Z,183nm,1.0s,baz=137,slow=29,SNR=4.9						
BVAR	**Borovoye Array**	**13.39**	**331**	Pn	**Pn**	**19 24 50.3**	**-1.1**
	comp=Z,8.9nm,0.8s,baz=134,slow=13,SNR=28						
BVAR				Sn	**Sn**	**19 27 17.6**	**-2.4**
	comp=Z,0.2nm,0.3s,baz=132,slow=24,SNR=8.1						
BVAR				Lg	Lg	19 28 40.4	
	comp=Z,0.3nm,0.3s,baz=105,slow=22,SNR=4.6						
BVAR				LR	LR	19 30 03.6	
	comp=Z,904nm,19.2s,baz=141,slow=38						
BORK	**Borovoye**	**13.43**	**331**		**Pn**	**19 24 49.8**	**-2.2**
BORK	**Borov

comp=Z,80nm,1.2s
SONM Songino Array 18.89 63 P P 19 26 01.4 -0.6
comp=Z,2.9nm,0.3s,baz=259,slow=11,SNR=158
SONM Lg Lg 19 31 39.1
comp=Z,0.1nm,0.3s,baz=265,slow=27,SNR=1.6
comp=Z,55nm,0.8s
SONM Songino Array 18.89 63 P P 19 26 00.9 -1.1
SONM Songino Array 18.89 63 P P 19 26 00.9 -1.1
SONM pmax pmax
comp=Z,53nm,0.8s
ULN Ulaanbaatar 19.34 63 P P 19 26 06.3 -0.6
ULN Ulaanbaatar 19.34 63 P P 19 26 06.3 -0.6
ULN pmax pmax
comp=Z,29nm,0.7s
ULN Ulaanbaatar 19.34 63 P P 19 26 06.5 -0.4
ULN Ulaanbaatar 19.34 63 P P 19 26 06.5 -0.4
SVE Sverdlovsk 20.02 326 *e*P **P 19 26 14.4 +0.3**
SVE *e*S **S 19 29 55.8 -3.0**
SVE pmax pmax
comp=Z,78nm,1.6s
SVE MLR MLR
comp=Z,978nm,14.0s
ARTI Arti 20.74 323 P P 19 26 21.6 -0.3
comp=Z,63nm,0.8s,baz=131,slow=5.2,SNR=36
ARTI S Sn 19 30 15.9 -2.1
comp=Z,8.8nm,0.9s,baz=216,slow=19,SNR=1.8
ARTI Lg Lg 19 32 39.3
comp=Z,0.3nm,0.3s,baz=270,slow=18,SNR=3.5
ARTI LR LR 19 34 46.5
comp=Z,922nm,21.3s,baz=125,slow=38
comp=Z,63nm,0.8s
BRDH Bariadhala 20.98 152 P P 19 26 24.7 0.0
comp=Z,117nm,0.3s,baz=20,slow=12,SNR=3.8
BRDH LR LR 19 37 39.5
comp=Z,321nm,18.1s,baz=90,slow=46
CD2 Chengdu 21.15 114 P P 19 26 27.0 +0.4
CD2 S **S 19 30 23.3 +1.6**
CD2 PcP **PcP 19 30 32.5 +0.2**
CD2 pmax pmax
comp=Z,60nm,0.7s
CD2 pmax pmax
comp=Z,220nm,6.3s
CD2 L L
comp=Z,820nm,8.1s
CD2 L L
comp=Z,1μm,9.9s
CD2 L L
comp=Z,1μm,8.2s
BTO2 Baotou 21.61 83 *e*P **P 19 26 31.3 -0.3**
BTO2 pP **pP 19 26 35.6 -0.1**
BTO2 sP **sP 19 26 37.9 +0.2**
BTO2 PP **PnPn 19 26 55.3 +3.2**
BTO2 S **S 19 30 25.9 -4.8**
BTO2 pmax pmax
comp=Z,69nm,1.5s
BTO2 pmax pmax
comp=Z,370nm,4.7s
BTO2 L L
comp=Z,3μm,9.0s
BTO2 L L
comp=Z,1μm,10.0s
BTO2 L L
comp=Z,2μm,9.5s
TNCH TengChong 22.06 134 ⇓P **P 19 26 37.5 +1.0**
TNCH pP pP 19 26 41.0 +0.4
TNCH sP sP 19 26 43.1 +0.6
TNCH PP **PnPn 19 27 04.9 +6.5**
TNCH S **S 19 30 29.3 -10**
TNCH sS sS 19 30 39.0 -7.3
TNCH SS **SnSn 19 31 15.9 +10**
TNCH pmax pmax
comp=Z,86nm,1.5s
TNCH L L
comp=Z,690nm,7.2s
TNCH L L
comp=Z,620nm,8.8s
PZH PanZhiHua 22.79 125 P P 19 26 44.1 -0.2
PZH S **S 19 30 50.5 -2.6**
PZH pmax pmax
comp=Z,30nm,1.5s
PZH pmax pmax
comp=Z,140nm,4.3s
HHC Hu-ho-hao-te 22.84 82⇑ *i*P **P 19 26 45.1 +0.4**
HHC S **S 19 30 49.8 -4.0**
HHC pmax pmax
comp=Z,21nm,1.5s
HHC pmax pmax
comp=Z,170nm,6.6s
HHC L L
comp=Z,660nm,12.4s
HHC L L
comp=Z,730nm,9.2s
HHC L L
comp=Z,740nm,10.3s
XAN Xi'an 23.18 100 ⇓P **P 19 26 47.0 -1.3**
XAN pP pP 19 26 51.8 -0.6
XAN pmax pmax
comp=Z,11nm,0.9s
XAN pmax pmax
comp=Z,280nm,4.0s
XAN L L
comp=Z,4μm,15.1s
XAN L L
comp=Z,3μm,15.6s
XAN L L
comp=Z,2μm,13.0s
CIT Chita 24.23 54 *e*P **P 19 26 57.6 -0.7**
CIT *e* 19 27 34.8
CIT *e* 19 27 45.6
CIT *e* 19 30 36.6
CIT *e* 19 31 06.6
CIT *e* 19 32 21.2
CIT pmax pmax
comp=Z,77nm,2.6s
TIY Taiyuan 24.35 89 *e*P **P 19 27 00.0 +0.5**
TIY S **S 19 31 19.0 +0.6**
TIY pmax pmax
comp=Z,65nm,0.5s
TIY pmax pmax
comp=Z,140nm,3.5s
TIY L L
comp=Z,2μm,13.1s
TIY L L
comp=Z,840nm,11.0s
HYB Hyderabad 24.36 186 *e*P **P 19 26 59.0 -0.6**
KMI2 Kunming 24.39 126 P **P 19 27 00.8 +0.7**
KMI2 S **S 19 31 21.3 +1.7**
KMI2 pmax pmax
comp=Z,38nm,0.7s
MAK Makhachkala 24.78 284 *e*P **P 19 27 00.0 -3.2**
MAK *e*S **S 19 31 22.5 -2.6**
MAK pmax pmax
comp=Z,221nm,1.2s
MAK MLR MLR
comp=Z,731nm,12.0s
AKT Akhty 24.88 281 *e*P **P 19 27 04.5 +0.2**
AKT *e*PPP PPP 19 27 45.4
AKT *e* 19 30 38.7
AKT *e*S **S 19 31 29.0 +2.0**
AKT *e*SS **SnSn 19 32 23.7 +9.3**
AKT pmax pmax
comp=Z,47nm,1.4s
AKT MLR MLR
comp=Z,902nm,16.0s
BELG Belogornoye 24.95 307 P **P 19 27 05.0 +0.4**
comp=Z,66nm,0.8s,baz=117,slow=2.3,SNR=12
BELG LR LR 19 37 21.8
comp=Z,515nm,18.5s,baz=161,slow=38
comp=Z,66nm,0.8s
BELG Belogornoye 24.95 307 P **P 19 27 05.0 +0.4**
ENH Enshi 25.54 108 P **P 19 27 10.5 +0.3**
ENH Enshi 25.54 108 P **P 19 27 09.7 -0.5**
ENH IAmb IAmb 19 27 23.8
comp=Z,46nm,0.9s
LYN LuoYang 25.58 96 P **P 19 27 13.0 +2.4**
LYN sS sS 19 31 49.0 +3.5
LYN pmax pmax
comp=Z,72nm,0.8s
LYN pmax pmax
comp=Z,190nm,10.5s
LYN L L
comp=Z,2μm,16.2s
LYN L L
comp=Z,2μm,14.8s
XLT XiLinHaoTe 25.62 73 *e*P **P 19 27 12.4 +1.5**
XLT pmax pmax
comp=Z,14nm,1.1s
XLT pmax pmax
comp=Z,130nm,8.5s
GYA Guiyang 25.95 118 ⇓P **P 19 27 14.6 +0.5**
GYA pmax pmax
comp=Z,42nm,1.1s
GYA L L
comp=Z,910nm,12.4s
KIRV Kirov 26.02 321 P **P 19 27 14.6 +0.3**
comp=Z,29nm,0.7s,baz=99,slow=2.0,SNR=8.1
KIRV LR LR 19 38 02.2
comp=Z,681nm,20.0s,baz=118,slow=38
comp=Z,29nm,0.7s
KIRV Kirov 26.02 321 *ce*P **P 19 27 15.0 +0.7**
HNS HongShan 26.15 88 ⇓P **P 19 27 16.5 +0.8**
HNS S S 19 31 36.1 -11
HNS pmax pmax
comp=Z,12nm,1.0s
HNS L L
comp=Z,2μm,13.8s
HNS L L
comp=Z,540nm,13.5s
HNS L L
comp=Z,1μm,20.2s
BOD Bodaibo 26.27 41 *e*P **P 19 27 17.3 +0.7**
BOD pmax pmax
comp=Z,40nm,1.6s
BJT Baijiatuau 26.45 82 P **P 19 27 21.0 +2.6**
BJI2 Beijing 26.45 82 P **P 19 27 19.8 +1.4**
BJI2 pmax pmax
comp=Z,4.0nm,1.0s
JLN Jalan Bani Buh 26.73 230 P **P 19 27 22.7 +1.6**
ASHO Ashiyiah 26.86 239 P **P 19 27 24.4 +2.1**
GNI Garni 27.39 279 LR LR 19 39 57.2
comp=Z,514nm,20.6s,baz=92,slow=40
GNI Garni 27.39 279 *i* P **P 19 27 28.7 +1.6**
GNI pmax pmax
comp=Z,17nm,1.1s
CHTO Chiang Mai 27.46 141 P **P 19 27 28.9 +1.3**
CHTO Chiang Mai 27.46 141 P **P 19 27 27.3 -0.3**
CHTO Chiang Mai 27.46 141 P **P 19 27 27.3 -0.3**
CHTO pmax pmax
comp=Z,7.0nm,0.8s
CHTO Chiang Mai 27.46 141 P **P 19 27 30.0 +2.4**
CHTO Chiang Mai 27.46 141 P **P 19 27 29.2 +1.6**
comp=Z,11nm,0.9s
ALNE Al Ain 27.51 238 P **P 19 27 30.1 +2.1**
ARQ Araqi 27.55 236 P **P 19 27 31.0 +2.6**
ARQ P **P 19 27 31.0 +2.6**
GOF Gofitskoye 27.69 290 *ce*P **P 19 27 32.9 +3.4**
CM31 Chiang Mai Arr 27.77 141 P **P 19 27 31.8 +1.4**
SNR=7.7
CMAR Chiang Mai Arr 27.77 141 P **P 19 27 31.3 +0.9**
comp=Z,4.9nm,0.9s,baz=322,slow=9.0,SNR=24
CMAR LR LR 19 40 25.2
comp=Z,144nm,20.1s,baz=325,slow=40
comp=Z,4.9nm,0.9s
CMAR Chiang Mai Arr 27.77 141 P **P 19 27 29.0 -1.4**
CMAR Chiang Mai Arr 27.77 141 *i* P **P 19 27 31.5 +1.1**
CMAR pmax pmax
comp=Z,5.0nm,0.9s
NRIK Noril'sk 27.85 5 P **P 19 27 30.8 +0.2**
comp=Z,21nm,0.6s,baz=175,slow=5.4,SNR=16
NRIK LR LR 19 39 28.0
comp=Z,482nm,19.2s,baz=193,slow=38
comp=Z,21nm,0.6s
NRIK Noril'sk 27.85 5 P **P 19 27 30.4 -0.2**
NRIK IAmb IAmb 19 27 46.0
comp=Z,31nm,0.9s
NRIK Noril'sk 27.85 5 *i* P **P 19 27 31.6 +1.0**
NRIK pmax pmax
comp=Z,34nm,1.0s
KBZ Khabaz 27.98 287 P **P 19 27 32.4 +0.3**
comp=Z,2.6nm,0.8s,baz=115,slow=7.6,SNR=9.3
KBZ LR LR 19 40 40.5
comp=Z,386nm,18.0s,baz=97,slow=41
comp=Z,2.6nm,0.8s
KBZ Khabaz 27.98 287 *ce*P **P 19 27 31.6 -0.4**
KVAR Kislovodsk Arr 28.08 288 LR LR 19 40 19.1
comp=Z,485nm,18.5s,baz=196,slow=40
KIV Kislovodsk 28.09 288 *e*P **P 19 27 34.7 +1.5**
KIV pmax pmax
comp=Z,8.0nm,1.1s
KIV MLR MLR
comp=Z,310nm,15.0s
KIV Kislovodsk 28.09 288 P **P 19 27 35.3 +2.1**
SHA1 Shidzhatmaz 28.15 287 *ce*P **P 19 27 34.2 +0.3**
NEUR Neytrino 28.20 286 *i* P **P 19 27 35.5 +1.2**
NEUR pmax pmax
comp=Z,6.0nm,1.2s
TIA Tai'an 28.39 89 P **P 19 27 37.4 +1.6**
TIA pmax pmax
comp=Z,8.0nm,0.5s
TIA L L
comp=Z,2μm,14.4s
TIA L L
comp=Z,560nm,14.4s
TIA L L
comp=Z,1μm,14.1s
VRH Novokhopyorsk 28.42 303 *e*P **P 19 27 36.3 +0.4**
VRH pmax pmax
comp=Z,27nm,1.0s
MHTO MHTO 28.47 230 P **P 19 27 37.8 +1.2**
MHTO P **P 19 27 37.8 +1.2**
UMZA Um Al Zommool 28.85 237 P **P 19 27 41.0 +1.0**
UMZA P **P 19 27 41.0 +1.0**
WHN Wuhan 28.91 102 P **P 19 27 40.8 +0.4**
WHN pmax pmax
comp=Z,26nm,0.7s
WHN L L
comp=Z,3μm,12.5s
WHN L L
comp=Z,5μm,18.4s
WHN L L
comp=Z,3μm,13.8s
GULI GuiLin 29.21 115 P **P 19 27 46.3 +3.1**
GULI S **S 19 32 42.6 +7.1**
LABN Labinsk 29.38 289 *e*P **P 19 27 46.4 +1.9**
LABN pmax pmax
comp=Z,20nm,0.8s
ERBR Yeremizino-Bor 29.40 292 *e*P **P 19 27 44.9 +0.2**
ERBR pmax pmax
comp=Z,24nm,0.9s
ERBR MLR MLR
comp=Z,588nm,16.0s
KBD Kabd 29.79 256 P **P 19 27 48.9 +0.6**
VORD Divnogorie 29.94 302 *e*P **P 19 27 49.9 +0.5**
VORD pmax pmax
comp=Z,20nm,1.0s
VORR Voronezh 30.02 304 *e*P **P 19 27 50.5 +0.4**
VORR pmax pmax
comp=Z,20nm,1.1s
VSR Storozhevoye 30.02 303 *e*P **P 19 27 50.3 +0.1**
VSR pmax pmax
comp=Z,10.0nm,1.0s
LPSR Galich'ya Gora 30.24 306 *e*P **P 19 27 52.5 +0.5**
LPSR pmax pmax
comp=Z,30nm,0.9s
SOC Sochi 30.27 288 *e*P **P 19 27 52.4 -0.1**
SOC *e* 19 28 48.7
SOC *e*S **S 19 32 54.9 +3.1**
SOC *e*SS **SnSn 19 34 29.9 +4.0**
SOC pmax pmax
comp=Z,6.0nm,0.7s
SOC MLR MLR
comp=Z,339nm,14.0s
DL2 Dalian 30.81 82 P **P 19 27 56.3 -1.0**
DL2 *e*S **S 19 33 01.1 +0.7**
DL2 pmax pmax
comp=Z,36nm,1.2s
DL2 pmax pmax
comp=Z,210nm,5.3s
MOS Moscow 31.33 312 *e*P **P 19 28 02.4 +0.8**
MOS pmax pmax
comp=Z,58nm,1.1s
MOS MLR MLR
comp=Z,700nm,17.0s
NJ2 Nanjing 31.48 96 *e*P **P 19 28 01.8 -1.4**
NJ2 pmax pmax
comp=Z,24nm,0.8s
NJ2 L L
comp=Z,4μm,14.2s
NJ2 L L
comp=Z,2μm,13.7s
NJ2 L L
comp=Z,2μm,15.6s
KLMR Klimovskoe 31.52 322 *e*P **P 19 28 02.9 -0.3**
KLMR *e* 19 30 54.7
KLMR pmax pmax
comp=Z,41nm,1.2s
KLMR MLR MLR
comp=Z,594nm,11.0s
ANN Anapa 31.66 290 *e*P **P 19 28 07.5 +2.8**
ANN *e*S S 19 33 23.7 +10
ANN pmax pmax
comp=Z,47nm,0.8s
ANN MLR MLR
comp=Z,430nm,9.0s
OBN Obninsk 31.85 310 LR LR 19 41 33.6
comp=Z,362nm,19.5s,baz=68,slow=38
OBN Obninsk 31.85 310 *de*P **P 19 28 07.8 +1.6**
OBN *e* 19 29 12.4
OBN pmax pmax
comp=Z,28nm,1.3s
OBN MLR MLR
comp=Z,425nm,18.0s
DOK Doka 32.57 233 P **P 19 28 12.7 -0.1**
DOK P **P 19 28 12.7 -0.1**
ZEA Zeya 32.67 52 *e*P **P 19 28 14.6 +1.1**
ZEA pmax pmax
comp=E,10.0nm,0.8s
ZEA pmax pmax
comp=N,10.0nm,1.0s
ZEA pmax pmax
comp=Z,20nm,0.9s
ZEA MLR MLR
comp=Z,600nm,15.0s
DMTO DMTO 32.79 231 P **P 19 28 14.6 -0.2**
HEH HeiHe 32.80 59 *e*P **P 19 28 14.8 +0.2**
HEH sP **sP 19 28 22.1 +1.2**
HEH S **S 19 33 32.8 +1.7**
HEH pmax pmax
comp=Z,21nm,1.0s
HEH L L
comp=Z,450nm,10.1s
HEH L L
comp=Z,610nm,9.8s
HEH L L
comp=Z,930nm,13.8s
BNX BinXian 33.31 67 ⇓P **P 19 28 18.8 -0.3**
BNX S **S 19 33 37.3 -1.9**
BNX pmax pmax
comp=Z,8.0nm,0.8s
BNX pmax pmax
comp=Z,270nm,5.0s
BNX L L
comp=Z,2μm,12.9s
BNX L L
comp=Z,450nm,14.4s
BNX L L
comp=Z,1μm,13.4s
QIZ Qiongzhong 33.31 124 P **P 19 28 18.0 -1.3**
QIZ S **S 19 33 41.8 +2.2**
QIZ pmax pmax
comp=Z,20nm,1.7s
WHFO Wadi Hawf 33.32 233 P **P 19 28 19.1 -0.4**
WHFO P **P 19 28 19.1 -0.4**
RBK Rabkut 33.39 232 P **P 19 28 20.0 -0.1**
SSE Sheshan 33.68 95 P **P 19 28 20.0 -2.5**
SSE S **S 19 33 44.3 -0.9**
SSE pmax pmax
comp=Z,9.0nm,2.1s
SSE pmax pmax
comp=Z,70nm,3.0s
UBPT Khong Chiam 33.74 134 P **P 19 28 23.2 +0.1**
SIM Simferopol' 33.95 292 *e*P **P 19 28 24.6 -0.1**
SIM *e*S **S 19 33 45.7 -3.5**
SIM pmax pmax
comp=Z,66nm,1.3s
SIM smax smax
comp=E,86nm,13.9s
ABTO Aybut 34.04 233 P **P 19 28 25.8 0.0**
ABTO P **P 19 28 25.8 0.0**
PALK Pallekele 34.35 181 LR LR 19 43 58.7
comp=E,1μm,18.7s,baz=0.5,slow=39
PALK Pallekele 34.35 181 P **P 19 28 28.5 +0.1**
PALK P **P 19 28 28.5 +0.1**
RAYN Ar Rayn 34.76 250 P **P 19 28 31.4 -0.5**
RAYN Ar Rayn 34.76 250 P **P 19 28 31.4 -0.5**
RAYN pmax pmax
comp=Z,23nm,1.3s
RAYN Ar Rayn 34.76 250 P **P 19 28 31.7 -0.2**
MDJ Mudanjiang 35.05 69 P **P 19 28 34.8 +0.6**
MDJ Mudanjiang 35.05 69 P **P 19 28 34.8 +0.6**
MDJ pmax pmax
comp=Z,5.0nm,0.8s
YAK Yakutsk 35.06 38 LR LR 19 43 23.2
comp=Z,327nm,21.9s,baz=248,slow=37
YAK Yakutsk 35.06 38 *e*P **P 19 28 33.5 -0.5**
YAK *e**PP **sP 19 28 42.6 +2.3**
YAK *e* 19 29 46.0
YAK *e* 19 31 05.1
YAK *e*S **S 19 34 06.5 +0.7**
YAK *e**SS **sS 19 34 13.6 +0.5**
YAK *e*SS **SnSn 19 36 23.3 +1.8**
YAK *e* 19 38 54.6
YAK pmax pmax
comp=Z,12nm,0.7s
YAK pmax pmax
comp=N,6.0nm,1.9s
YAK pmax pmax
comp=E,9.0nm,1.3s
YAK pmax pmax
comp=Z,33nm,2.0s
YAK pmax pmax
comp=N,27nm,2.0s
YAK pmax pmax
comp=E,18nm,1.8s
YAK smax smax
comp=N,52nm,2.6s
YAK smax smax
comp=E,31nm,1.6s
ILGA Ilgaz 35.21 285 P **P 19 28 37.1 +1.2**
KIRS Kirsehir-Merke 35.67 282 ⇑P **P 19 28 40.5 +0.7**
BR131 Keskin Array S 35.67 283 IAmb IAmb 19 28 41.6
comp=Z,18nm,0.7s
BR131 Keskin Array S 35.67 283 *i* P **P 19 28 40.6 +0.8**
BR131 Keskin Array S 35.67 283 P **P 19 28 40.6 +0.8**
SNR=12
BRTR Keskin Array B 35.67 283 P **P 19 28 40.5 +0.6**
comp=Z,14nm,0.7s,baz=96,slow=8.8,SNR=108
BRTR LR LR 19 45 33.3
comp=Z,123nm,19.6s,baz=86,slow=40
comp=Z,14nm,0.7s
BRTR Keskin Array B 35.67 283 P **P 19 28 39.5 -0.4**
BRTR Keskin Array B 35.67 283 P **P 19 28 39.5 -0.4**
BR104 Keskin Array S 35.68 283 P **P 19 28 40.5 +0.6**
comp=Z,140nmcomp=Z,21nm,0.8s
BR106 Keskin Array S 35.69 283 P **P 19 28 40.8 +0.9**
comp=Z,132nmcomp=Z,20nm,0.8s
BR105 Keskin Array S 35.69 283 P **P 19 28 40.1 +0.1**
comp=Z,166nmcomp=Z,25nm,0.8s
KLR Kul'dur 35.69 60 LR LR 19 43 58.3
comp=Z,440nm,18.2s,baz=282,slow=38
KLR Kul'dur 35.69 60 *ce*P **P 19 28 39.5 -0.2**
KLR pmax pmax
comp=Z,4.0nm,1.0s
KSRS Korea Array 35.97 81 P **P 19 28 41.5 -0.7**
comp=Z,2.0nm,0.6s,baz=285,slow=7.3,SNR=7.4
KSRS LR LR 19 45 03.6
comp=Z,302nm,18.8s,baz=280,slow=39
comp=Z,2.0nm,0.6s
ASF Jabal al Asfar 36.26 269 LR LR 19 45 01.9
comp=Z,149nm,18.3s,baz=53,slow=39
AK09 Malin Array Si 36.29 302 P **P 19 28 45.3 +0.5**
AK09 pP **pP 19 28 48.7 -0.7**
AK08 Malin Array Si 36.31 302 P **P 19 28 45.2 +0.2**
AK08 pP **pP 19 28 48.4 -1.1**
AK10 Malin Array Si 36.32 302 P **P 19 28 45.4 +0.4**
AK03 Malin Array Si 36.32 302 P **P 19 28 45.3 +0.3**
AKASG Malin Array Be 36.32 302 P **P 19 28 45.0 -0.1**
comp=Z,8.2nm,0.9s,baz=72,slow=8.5,SNR=16
AKASG LR LR 19 46 24.3
comp=Z,446nm,19.5s,baz=80,slow=41
comp=Z,8.2nm,0.9s
AKASG Malin Array Be 36.32 302 *i* P **P 19 28 45.2 +0.1**
AKASG pmax pmax
comp=Z,6.0nm,0.7s
AKBB Malin Array Si 36.32 302 IAmb IAmb 19 28 48.2
comp=Z,20nm,0.9s
AKBB Malin Array Si 36.32 302 *ce*P **P 19 28 46.6 +1.5**

AKBB pmax pmax
comp=Z,23nm,1.0s
AK01 Malin Array Si 36.33 302 P **P** **19 28 45.8 +0.7**
AK05 Malin Array Si 36.34 302 P **P** **19 28 46.3 +1.0**
AK06 Malin Array Si 36.35 302 P **P** **19 28 45.8 +0.5**
AK04 Malin Array Si 36.36 302 P **P** **19 28 46.0 +0.6**
AK15 Malin Array Si 36.39 302 P **P** **19 28 45.6 0.0**
AK14 Malin Array Si 36.41 302 P **P** **19 28 45.9 +0.1**
AK20 Malin Array Si 36.45 302 P **P** **19 28 47.0 +0.8**
PURM Purcari 36.55 295 ⇓P **P** **19 28 47.9 +0.9**
USRK Ussuriysk Ar. 36.81 69 P **P** **19 28 50.5 +1.2**
comp=Z,4.6nm,0.8s,baz=316,slow=6.0,SNR=5.1
comp=Z,4.6nm,0.8s
MNK Minsk 36.85 309 *i* P **P** **19 28 50.9 +1.3**
comp=E,12nm,0.7s
MNK *i* P **P** **19 28 50.9 +1.3**
comp=N,14nm,0.8s
MNK *i* P **P** **19 28 50.9 +1.3**
comp=Z,26nm,0.8s,baz=88
MNK *i* PP **PnPn** **19 30 15.2 +1.8**
MNK *i* PPP PPP 19 30 30.6
MNK *i* S **S** **19 34 37.1 +3.5**
MNK *i* SS **SS** **19 37 11.3 -3.1**
MNK *i* SSS SSS 19 37 28.1
MNK *i* LQ LQ 19 41 16.5
MNK *i* LR LR 19 43 11.8
MNK *i* LRM MLR 19 44 25.6
comp=N,297nm,17.7s
MNK *i* LRM MLR 19 44 34.6
comp=E,49nm,8.9s
MNK *i* LRM MLR 19 44 39.1
comp=Z,334nm,16.1s
MNK Minsk 36.85 309 *i* P **P** **19 28 50.8 +1.3**
MNK *i* 19 30 15.1
MNK *i* PPP PPP 19 30 30.6
MNK *i* 19 31 11.6
MNK *i* S **S** **19 34 37.0 +3.5**
MNK *i* SSS SSS 19 37 28.0
MNK *i* 19 39 06.0
MNK pmax pmax
comp=N,14nm,0.8s
MNK pmax pmax
comp=E,12nm,0.7s
MNK pmax pmax
comp=Z,26nm,0.8s
MNK MLR MLR
comp=N,297nm,18.0s
MNK MLR MLR
comp=E,49nm,9.0s
MNK MLR MLR
comp=Z,334nm,16.0s
MMAI Mount Meron Ar 36.99 272 P **P** **19 28 51.9 +0.8**
comp=Z,0.9nm,0.5s,baz=47,slow=14,SNR=4.5
MMAI LR LR 19 46 30.3
comp=Z,185nm,18.8s,baz=57,slow=40
comp=Z,0.9nm,0.5s
SORM Soroca 37.26 298 ⇑P **P** **19 28 53.3 +0.3**
SORM Soroca 37.26 298 ⇑P **P** **19 28 53.3 +0.3**
LUBAR Lubar, Ukraine 37.36 301 P **P** **19 28 54.6 +0.7**
NACGM Naroch 37.48 310 *eP* **P** **19 28 55.4 +0.6**
comp=Z,19nm,0.8s,baz=87
VSU Vasula 37.49 315*ceP* **P** **19 28 55.9 +1.1**
VSU pmax pmax
comp=Z,45nm,1.7s
VSU Vasula 37.49 315 *eP* **P** **19 28 54.8 -0.1**
TLCR 37.56 293 ⇑P **P** **19 28 56.0 +0.3**
TLCR 37.56 293 ⇑P **P** **19 28 56.0 +0.3**
ISAL Salakas 37.82 311 *eP* **P** **19 28 58.8 +1.0**
NDNU Novodnistrovsk 37.82 299 P **P** **19 28 58.0 +0.1**
ARBE Arbavere 37.92 317 *eP* **P** **19 28 59.5 +1.0**
TIXI Tiksi 37.94 22 LR LR 19 44 04.6
comp=Z,218nm,19.4s,baz=270,slow=35
TIXI Tiksi 37.94 22 P **P** **19 28 58.6 +0.1**
TIXI IAmb IAmb 19 29 00.1
comp=Z,26nm,0.8s
TIXI Tiksi 37.94 22*ceP* **P** **19 28 58.2 -0.3**
TIXI pmax pmax
comp=Z,34nm,1.0s
FINES FINESS Array B 38.01 320 P **P** **19 28 59.4 +0.2**
comp=Z,4.9nm,0.5s,baz=97,slow=7.0,SNR=22
FINES LR LR 19 45 14.0
comp=Z,764nm,18.0s,baz=92,slow=37
comp=Z,4.9nm,0.5s
FINES FINESS Array B 38.01 320 P **P** **19 28 59.1 -0.1**
CFR Carcaliu 38.03 294 ⇑P **P** **19 28 59.9 +0.3**
CFR Carcaliu 38.03 294 ⇑P **P** **19 28 59.9 +0.3**
SUF Sumiainen 38.11 322 *eP* **P** **19 29 01.0 +0.9**
TWGBT Beinan 38.28 107 P **P** **19 29 04.1 +2.1**
GRNR Gornyy 38.46 57 ⇓*iP* **P** **19 29 03.7 +0.5**
GRNR pmax pmax
comp=Z,7.0nm,1.2s
GRNR MLR MLR
comp=E,620nm,13.0s
GRNR MLR MLR
comp=Z,820nm,13.0s
ICOR Ion Corvin 38.54 292 ⇓P **P** **19 29 05.3 +1.4**
VADS Vadso 38.56 334 *eP* **P** **19 29 04.5 +0.7**
ISP Isparta 38.62 281*ceP* **P** **19 29 05.6 +0.7**
ISP pmax pmax
comp=Z,20nm,0.8s
TESR Tescani 38.73 296 ⇓P **P** **19 29 06.3 +0.8**
PRAR RASCA 38.82 297 ⇓P **P** **19 29 06.8 +0.6**
VRI Vrincioaia 38.83 295 ⇓P **P** **19 29 07.2 +0.8**
VRI Vrincioaia 38.83 295 ⇓P **P** **19 29 07.2 +0.8**
PLOR Plostina 38.88 295 ⇑P **P** **19 29 07.9 +1.0**
PLOR Plostina 38.88 295 ⇑P **P** **19 29 07.9 +1.0**
ONER Baraj Valea Uz 38.94 296 ⇑P **P** **19 29 07.8 +0.5**
EIL Elat 38.95 267 LR LR 19 48 07.3
comp=Z,337nm,19.0s,baz=76,slow=41
MTSE Matsula 39.02 316 *eP* **P** **19 29 08.4 +0.7**
VSVD Vaisvydziai 39.04 311 *eP* **P** **19 29 09.0 +1.1**
PABE Paberze 39.05 311 IAmb IAmb 19 29 10.7
comp=Z,28nm,0.7s
PABE Paberze 39.05 311 *eP* **P** **19 29 08.8 +0.8**
ISR Istrita 39.14 294 ⇑P **P** **19 29 09.4 +0.4**
ISR Istrita 39.14 294 ⇑P **P** **19 29 09.4 +0.4**
COVR Voineasa-Covas 39.19 295 ⇓P **P** **19 29 10.7 +1.3**
NEHR Nehoiu 39.23 294 ⇑P **P** **19 29 10.6 +0.8**
BURAR Bucovina Array 39.43 298 ⇑P **P** **19 29 12.1 +0.6**
BURAR Bucovina Array 39.43 298 P **P** **19 29 12.2 +0.6**
BURAR Bucovina Array 39.43 298 ⇑P **P** **19 29 12.1 +0.6**
MLR Muntele Rosu 39.45 295 LR LR 19 48 04.3
comp=Z,443nm,20.3s,baz=63,slow=40
MLR Muntele Rosu 39.45 295 ⇑P **P** **19 29 12.9 +1.2**
MLR Muntele Rosu 39.45 295 ⇑P **P** **19 29 12.9 +1.2**
SUW Suwalki 39.64 308 *eP* **P** **19 29 15.0 +2.0**
SUW Suwalki 39.64 308 *eP* **P** **19 29 13.9 +0.9**
STNU Staruna 39.67 300 P **P** **19 29 13.4 +0.1**
ARA0 ARCESS Array S 39.67 333 *eP* **P** **19 29 14.0 +0.9**
ARCES ARCESS Array B 39.67 333 P **P** **19 29 13.8 +0.7**
comp=Z,13nm,0.6s,baz=94,slow=6.8,SNR=33
comp=Z,13nm,0.6s
ARCES ARCESS Array B 39.67 333 P **P** **19 29 13.1 0.0**
ARCES IAmb IAmb 19 29 32.4
comp=Z,88nm,1.6s
ARCES ARCESS Array B 39.67 333 P **P** **19 29 13.1 0.0**
ARCES pmax pmax
comp=Z,88nm,1.6s
DOPR Dopca 39.71 296 ⇑P **P** **19 29 15.2 +1.5**
VAF Ylistaro 39.73 323 *eP* **P** **19 29 14.7 +1.1**
SLIT Slitere, Latvi 39.85 314 *eP* **P** **19 29 15.6 +0.9**
JNU Nakatsue 39.97 86 LR LR 19 45 40.9
comp=Z,313nm,18.9s,baz=290,slow=36
VOIR 40.07 295 ⇓P **P** **19 29 17.8 +1.0**
VOIR 40.07 295 ⇓P **P** **19 29 17.8 +1.0**
ELND Elena 40.22 291 ⇑P **P** **19 29 19.2 +1.2**
KTK1 Kautokeino 40.33 332 *eP* **P** **19 29 19.4 +0.8**
HUMR Humele 40.37 294 ⇑P **P** **19 29 20.4 +1.2**
ARR Arges 40.37 295 ⇑P **P** **19 29 20.5 +1.1**
HAMF Hammerfest 40.55 334 *eP* **P** **19 29 21.0 +0.7**
KWP Kalwaria Pacla 40.63 302 *eP* **P** **19 29 22.5 +1.2**
LOT Lotru 40.94 295 ⇓P **P** **19 29 25.1 +1.0**
MARR Marisel-Cluj 41.05 297 ⇓P **P** **19 29 25.8 +0.9**
JETT Jettan, Norway 41.42 332 *eP* **P** **19 29 29.1 +1.4**
STHS Stebnicka Huta 41.61 302 *eP* **P** **19 29 30.1 +0.7**
STHS pmax pmax
comp=Z,9.0nm,0.8s
STHS Stebnicka Huta 41.61 302 *eP* **P** **19 29 30.1 +0.7**
GZR Gura Zlata 41.62 295 ⇑P **P** **19 29 30.1 +0.5**
GZR Gura Zlata 41.62 295 ⇑P **P** **19 29 30.1 +0.5**
KAAM Kaadhehdhoo 41.73 192 P **P** **19 29 29.7 -0.9**
KAAM Kaadhehdhoo 41.73 192 P **P** **19 29 31.1 +0.5**
KAAM Kaadhehdhoo 41.73 192 P **P** **19 29 31.5 +0.9**
comp=Z,29nm,1.1s

HERR Herculane 42.02 295 ⇓P **P** **19 29 33.3 +0.5**
NIE Niedzica 42.21 302 *eP* **P** **19 29 35.6 +1.4**
NIE Niedzica 42.21 302 P **P** **19 29 35.1 +0.8**
comp=Z,14nm,0.8s
BAG Baguio City 42.21 115 ⇓P P 19 29 25.2 -10
KECS Kecovo 42.31 301 *eP* **P** **19 29 38.2 +3.1**
KECS pmax pmax
comp=Z,19nm,1.0s
KECS Kecovo 42.31 301 *eP* **P** **19 29 38.2 +3.1**
TYV Tymovskoe 42.33 56 *eP* **P** **19 29 36.9 +1.7**
TYV *eS* **S** **19 35 58.7 +2.9**
TYV pmax pmax
comp=Z,11nm,1.0s
TYV pmax pmax
comp=Z,200nm,4.8s
TYV smax smax
comp=N,200nm,6.2s
TYV smax smax
comp=E,300nm,6.2s
OJC Ojcow 42.34 303 *eP* **P** **19 29 35.6 +0.3**
OJC Ojcow 42.34 303 P **P** **19 29 35.5 +0.2**
comp=E,31nm,1.2s
BZS Buzias 42.34 296 ⇑P **P** **19 29 36.5 +1.1**
BZS Buzias 42.34 296 ⇑P **P** **19 29 36.5 +1.1**
MDVR Moldovita 42.52 295 ⇓P **P** **19 29 38.1 +1.1**
LANS Liptovska Anna 42.80 302 *eP* **P** **19 29 42.2 +3.1**
LANS pmax pmax
comp=Z,3.0nm,0.9s
LANS Liptovska Anna 42.80 302 *eP* **P** **19 29 42.2 +3.1**
GSI Gunungsitoli 42.92 155 P **P** **19 29 40.9 +0.6**
GSI Gunungsitoli 42.92 155 P **P** **19 29 41.1 +0.8**
comp=Z,23nm,0.9s
FAUS Fauske 43.08 329 *eP* **P** **19 29 41.8 +0.7**
STEI Steigen 43.12 330 *eP* **P** **19 29 41.8 +0.4**
GKP Gorka Klasztor 43.25 308 *eP* **P** **19 29 43.9 +1.2**
GKP Gorka Klasztor 43.25 308 *eP* **P** **19 29 44.8 +2.2**
YSS Yuzhno-Sakhali 43.38 61 *eP* **P** **19 29 43.7 0.0**
YSS *eS* **S** **19 36 10.8 -0.4**
YSS pmax pmax
comp=Z,10.0nm,0.9s
YSS MLR MLR
comp=Z,500nm,14.0s
YSS MLR MLR
comp=E,400nm,15.0s
MOR8 Moi Rana 43.39 327 *eP* **P** **19 29 42.9 -0.8**
BLEU Blekinge 43.52 313 *i* P **P** **19 29 44.6 -0.1**
RAUS Rausandaksla 43.56 327 *eP* **P** **19 29 45.6 +0.7**
STEB Steborice 43.67 303 *eP* **P** **19 29 46.9 +0.8**
LOF Lofoten 43.77 330 *eP* **P** **19 29 46.4 -0.2**
MAUC Maruska 43.78 302 *eP* **P** **19 29 48.1 +1.0**
IDI Anoyia 43.79 281 P **P** **19 29 46.1 -1.3**
IDI IAmb IAmb 19 30 05.6
comp=Z,26nm,0.9s
MORC Moravsky Berou 43.86 303 *eP* **P** **19 29 48.5 +0.8**
VAGH Vaagaholmen 43.86 328 *eP* **P** **19 29 48.7 +1.3**
MJAR Matsushiro Arr 43.89 77 P **P** **19 29 47.0 -1.0**
comp=Z,1.9nm,0.7s,baz=298,slow=8.4,SNR=6.7
MJAR LR LR 19 47 28.0
comp=Z,180nm,18.4s,baz=304,slow=35
comp=Z,1.9nm,0.7s
MJAR Matsushiro Arr 43.89 77 P **P** **19 29 47.0 -1.0**
SRO Srobarova 43.89 300 *eP* **P** **19 29 49.4 +1.5**
SRO Srobarova 43.89 300 *eP* **P** **19 29 49.4 +1.5**
KONS Konsvik 43.93 328 *eP* **P** **19 29 48.0 +0.1**
LEIR Leirfjorden 43.93 327 *eP* **P** **19 29 48.6 +0.7**
STOK Stokkvaagen 43.97 327 *eP* **P** **19 29 48.5 +0.3**
JAVC Velka Javorina 44.02 302 *eP* **P** **19 29 51.1 +2.1**
MNSI Mandailing Nat 44.05 153 P **P** **19 29 48.4 -1.0**
HFS Hagfors 44.09 318 P **P** **19 29 49.5 +0.2**
comp=Z,14nm,0.7s,baz=79,slow=9.5,SNR=19
HFS PP **PP** **19 31 32.0 +0.1**
comp=Z,9.0nm,0.9s,baz=95,slow=10,SNR=3.7
HFS LR LR 19 50 40.7
comp=Z,238nm,18.8s,baz=80,slow=40
comp=Z,14nm,0.7s
ASAJ Asahikawa 44.14 65 LR LR 19 47 27.2
comp=Z,289nm,19.4s,baz=290,slow=35
MORH Mrgy, Hungar 44.15 298 ⇑P **P** **19 29 50.4 +0.4**
BSD Bornholm Skovb 44.23 311 *i* P **P** **19 29 50.7 +0.2**
KRLC Kraliky 44.26 304 *eP* **P** **19 29 51.8 +0.9**
KRLC epP **sP** **19 29 57.8 +0.6**
KRLC Kraliky 44.26 304 *eP* **P** **19 29 51.8 +0.9**
KRLC *e*'PP **sP** **19 29 57.8 +0.6**
HAMD Hammershus, De 44.28 311 *i* P **P** **19 29 50.6 -0.3**
HAMD IAmb IAmb 19 29 55.9
comp=Z,41nm,1.2s
SPA0 Spitsbergen Ar 44.35 345 *eP* **P** **19 29 51.6 +0.4**
SPITS Spitsbergen Ar 44.35 345 P **P** **19 29 51.6 +0.4**
comp=Z,6.9nm,0.8s,baz=111,slow=7.9,SNR=5.5
SPITS LR LR 19 50 30.5
comp=Z,232nm,19.0s,baz=160,slow=39
comp=Z,6.9nm,0.8s
KSP Ksiaz 44.36 305 *eP* **P** **19 29 52.2 +0.6**
KSP Ksiaz 44.36 305 P **P** **19 29 52.5 +0.9**
comp=Z,880nmcomp=Z,17nm,1.1s
MODS Modra-Piesok 44.40 301 *eP* **P** **19 29 55.2 +3.2**
MODS pmax pmax
comp=Z,23nm,1.1s
MODS Modra-Piesok 44.40 301 *eP* **P** **19 29 55.2 +3.2**
DPC Dobruska-Polom 44.47 304 *eP* **P** **19 29 53.8 +1.2**
DPC Dobruska-Polom 44.47 304 *eP* **P** **19 29 53.8 +1.2**
DPC Dobruska-Polom 44.47 304 P **P** **19 29 54.0 +1.4**
comp=Z,26nm,1.1s
NSS Namsos 44.48 325 *eP* **P** **19 29 52.9 +0.5**
OSTC Ostas 44.48 304 *eP* **P** **19 29 53.8 +1.2**
OSTC Ostas 44.48 304 *eP* **P** **19 29 53.8 +1.2**
DEL Delary 44.56 313 *i* P **P** **19 29 53.5 +0.5**
CHVC Chvalec 44.58 305 *eP* **P** **19 29 54.5 +1.1**
CHVC Chvalec 44.58 305 *eP* **P** **19 29 54.5 +1.1**
VRAC Vranov 44.58 303 LR LR 19 52 08.1
comp=Z,411nm,18.7s,baz=100,slow=41
VRAC Vranov 44.58 303 ⇑P **P** **19 29 54.6 +1.2**
VRAC Vranov 44.58 303 ⇑P **P** **19 29 54.6 +1.2**
VRAC Vranov 44.58 303 *eP* **P** **19 29 54.0 +0.6**
UPC Upice 44.62 304 *eP* **P** **19 29 54.8 +1.1**
UPC Upice 44.62 304 *eP* **P** **19 29 54.8 +1.1**
KRUC Moravsky 44.77 302 *eP* **P** **19 29 55.4 +0.5**
NC405 NORSAR Array S 44.94 320 P **P** **19 29 56.4 +0.3**
BORU Boraas 44.94 315 *i* P **P** **19 29 57.9 +1.7**
ATD Arta Tunnel 44.97 239 LR LR 19 52 56.3
comp=Z,7.1nm,18.7s,baz=28,slow=42
ATD Arta Tunnel 44.97 239 P **P** **19 29 58.5 +1.5**
PDG Podgorica 44.99 293 ⇓P **P** **19 29 57.4 +0.7**
NC602 NORSAR Array S 45.07 319 IAmb IAmb 19 30 00.3
comp=Z,26nm,0.9s
NC602 NORSAR Array S 45.07 319 *eP* **P** **19 29 57.4 +0.2**
NC303 NORSAR Array S 45.09 320 P **P** **19 29 57.6 +0.3**
BJUU Bjuv 45.10 313 *i* P **P** **19 29 59.3 +1.9**
ITM Ithomi 45.15 285 IAmb IAmb 19 29 59.6
comp=Z,30nm,1.1s
NB2 NORSAR Subarra 45.19 320 P **P** **19 29 58.0 -0.1**
comp=Z,7.1nm,0.6s,baz=82,slow=8.6
NB2 NORSAR Subarra 45.19 320 P **P** **19 29 58.0 -0.1**
NOA NORSAR Array B 45.19 320 P **P** **19 29 58.1 0.0**
comp=Z,13nm,0.7s,baz=82,slow=7.9,SNR=40
NOA PP **PP** **19 31 46.5 +3.0**
comp=Z,6.0nm,0.9s,baz=83,slow=11,SNR=3.4
NOA LR LR 19 49 35.5
comp=Z,552nm,18.8s,baz=80,slow=37
comp=Z,13nm,0.7s
RONA Rosalia, Austr 45.23 301 *eP* **P** **19 29 59.4 +0.7**
comp=Z,8.0nm,0.9s
TREC Trest 45.28 303 AMS AMS 19 52 20.0
comp=Z,500nm,14.6s
MA2 Magadan 45.28 42 LR LR 19 50 21.6
comp=Z,195nm,19.8s,baz=301,slow=38
ONAU Onsala 45.44 315 *i* P **P** **19 30 01.0 +1.0**
CONA Conrad Observa 45.44 301 *i* pP **P** **19 30 01.3 +0.9**
comp=Z,3.2nm,0.7s,SNR=8.6
CONA Conrad Observa 45.44 301 *eP* **P** **19 30 01.3 +0.9**
comp=Z,3.2nm,0.7s,SNR=8.6
PVCC Panska Ves 45.51 305 *eP* **P** **19 30 02.2 +1.5**
PVCC Panska Ves 45.51 305 *eP* **P** **19 30 02.2 +1.5**
STRU Stroemstad 45.52 317 *i* P **P** **19 30 00.6 -0.1**
SEY Seymchan 45.58 37 LR LR 19 49 29.8
comp=Z,284nm,19.6s,baz=140,slow=37
SEY Seymchan 45.58 37*ceP* **P** **19 30 02.2 +1.1**
SEY pmax pmax
comp=Z,4.0nm,0.8s
PRU Pruhonice 45.67 304 *eP* **P** **19 30 03.0 +1.0**
PRU Pruhonice 45.67 304 *eP* **P** **19 30 03.0 +1.0**
ARSA Arzberg 45.87 300 *eP* **P** **19 30 04.1 +0.4**
comp=Z,4.2nm,1.0s
PDSI Padang 45.95 153 P **P** **19 30 04.2 -0.4**

comp=Z,23nm,0.8s
ZVC Zvikov 46.05 303 *eP* **P** **19 30 06.1 +1.1**
DOMB Dombas 46.06 321 *eP* **P** **19 30 05.1 +0.1**
CKRC Cesky Krumlov 46.16 303 *eP* **P** **19 30 07.2 +1.3**
CKRC Cesky Krumlov 46.16 303 *eP* **P** **19 30 07.2 +1.3**
KONO Kongsberg 46.21 318 *eP* **P** **19 30 07.4 +1.3**
KONO Kongsberg 46.21 318*ceP* **P** **19 30 07.7 +1.6**
KONO pmax pmax
comp=Z,27nm,1.0s
CLL Collm 46.24 306 IAmb IAmb 19 30 09.0
comp=Z,18nm,0.8s
CLL Collm 46.24 306 *i* P **P** **19 30 06.7 +0.2**
CLL pmax pmax
comp=Z,31nm,1.3s
CLL MLR MLR
comp=Z,400nm,18.8s
CLL Collm 46.24 306 *i* P **P** **19 30 06.7 +0.2**
comp=Z,31nm,1.3s
CLL *e*PP **PP** **19 31 56.0 +1.1**
CLL *e*SS SS 19 40 18.0 +0.3
CLL AMS AMS 19 46 00.0
comp=N,500nm,19.2s
CLL AMS AMS 19 46 00.0
comp=E,200nm,18.4s
CLL AMS AMS 19 52 00.0
comp=Z,400nm,18.8s
CLL Collm 46.24 306 P **P** **19 30 06.8 +0.2**
comp=Z,26nm,0.8s
SOKA Soboth 46.37 300 *eP* **P** **19 30 08.0 +0.3**
comp=Z,1.9nm,0.5s
MOA Molln 46.48 301 *eP* **P** **19 30 08.8 +0.3**
comp=Z,2.3nm,0.6s
KHC Kasperske Hory 46.52 303 *eP* **P** **19 30 09.5 +0.7**
KHC Kasperske Hory 46.52 303*ceP* **P** **19 30 10.4 +1.6**
KHC pmax pmax
comp=Z,11nm,1.3s
KHC Kasperske Hory 46.52 303 P **P** **19 30 09.3 +0.5**
comp=Z,8.3nm,0.9s
GERES GERESS Array B 46.53 303 P **P** **19 30 10.1 +1.1**
comp=Z,3.7nm,0.8s,baz=69,slow=7.3,SNR=11
GERES PKKP **PKKPdf** **19 53 01.2 -4.9**
comp=Z,0.5nm,0.6s,baz=0.0,slow=2.7,SNR=3.8
comp=Z,3.7nm,0.8s
JHJ Hachijo jima 2 46.58 81 LR LR 19 50 12.5
comp=Z,151nm,18.6s,baz=139,slow=37
SKAR Skarslia 46.65 320 *eP* **P** **19 30 10.7 +1.0**
MOL Molde 46.68 322 *eP* **P** **19 30 10.5 +0.7**
OBKA Obir 46.74 300 *eP* **P** **19 30 10.6 0.0**
comp=Z,3.2nm,0.7s
BIOA Bad Ischl, Aus 46.94 301 *eP* **P** **19 30 12.6 +0.5**
comp=Z,2.1nm,0.5s
MUD Monsted U'grnd 47.11 314 *i* P **P** **19 30 13.9 +0.7**
MUD IAmb IAmb 19 30 16.1
comp=Z,21nm,0.8s
MOX Moxa 47.28 306 *eL* L 19 53 28.6
comp=Z,346nm,18.2s
KBA Koelnbreinsper 47.33 301 *eP* **P** **19 30 15.5 +0.2**
comp=Z,1.3nm,0.3s
LESA Schwarzleotal 47.64 301 *i* P **P** **19 30 18.1 +0.5**
comp=Z,4.5nm,0.5s,SNR=7.0
SNART Snartemo 47.69 317 *eP* **P** **19 30 18.4 +0.6**
GRF Grafenberg Arr 47.81 305 *eP* **P** **19 30 20.0 +1.2**
comp=Z,22nm,1.0s,baz=75,slow=6.6
GRF *eL* L 19 53 43.8
comp=Z,365nm,18.4s
GRFO Grafenberg 47.81 305 P **P** **19 30 17.9 -0.9**
GRFO Grafenberg 47.81 305 P **P** **19 30 17.9 -0.9**
GRFO pmax pmax
comp=Z,22nm,0.8s
TIP Timpagrande 48.00 289 IAmb IAmb 19 30 24.1
comp=Z,30nm,1.2s
TIP Timpagrande 48.00 289 P **P** **19 30 20.9 +0.4**
SBUM Sibu 48.07 136 P **P** **19 30 22.6 +1.4**
SBUM Sibu 48.07 136 **P** **19 30 21.9 +0.7**
SBUM Sibu 48.07 136 P **P** **19 30 21.1 -0.1**
BER Bergen 48.15 320 *eP* **P** **19 30 21.8 +0.6**
ASK Askoy 48.20 320 *eP* **P** **19 30 22.3 +0.7**
WTTA Wattenberg 48.36 301 *i* P **P** **19 30 23.5 +0.2**
comp=Z,9.4nm,0.9s,SNR=8.9
WATA Walderalm 48.37 302 *eP* **P** **19 30 23.5 +0.1**
comp=Z,11nm,0.9s
SQTA Sankt Quirin 48.65 301 *i* P **P** **19 30 25.4 0.0**
comp=Z,7nm,0.5s,SNR=10.0
MOTA Moosalm 48.67 302 *i* P **P** **19 30 25.7 +0.1**
comp=Z,6.1nm,0.6s,SNR=12
RETA Reutte 48.84 302 *eP* **P** **19 30 27.3 +0.4**
comp=Z,9.5nm,0.6s
FETA Feichten 49.02 301 *eP* **P** **19 30 28.3 -0.1**
comp=Z,4.1nm,0.7s
DAVA Damuels 49.47 302 *epP* **P** **19 30 32.4 +0.6**
comp=Z,14nm,1.2s
DAVOX Davos/Dischmat 49.66 301 LR LR 19 54 44.7
comp=Z,417nm,18.2s,baz=72,slow=40
NOR Nord 50.10 349 *i* P **P** **19 30 36.6 +0.7**
NOR IAmb IAmb 19 30 39.7
comp=Z,7.7nm,0.8s
BILL Bilibino 50.31 29 P **P** **19 30 37.8 +0.1**
BILL Bilibino 50.31 29*ceP* **P** **19 30 38.7 +1.0**
BILL pmax pmax
comp=Z,9.0nm,1.0s
VAE Valguarnera 50.40 289 LR LR 19 59 26.0
comp=Z,76nm,18.5s,baz=60,slow=45
TPI Tanjunpandan 50.44 145 P **P** **19 30 40.9 +1.7**
comp=Z,14nm,0.9s
BTNL Ternell 50.60 307 *dP* **P** **19 30 40.7 +0.5**
comp=Z,7.3nm,1.3s
PETK Petropavlovsk- 50.65 49 P **P** **19 30 41.4 +0.9**
comp=Z,5.5nm,0.9s,baz=311,slow=9.0,SNR=4.1
PETK LR LR 19 51 43.1
comp=Z,297nm,20.8s,baz=286,slow=36
comp=Z,5.5nm,0.9s
MEM Membach 50.66 307 *dP* **P** **19 30 40.6 0.0**
BHOU Houvegnez 50.75 307 *dP* **P** **19 30 42.3 +1.0**
WLF Walferdange 50.91 306 *dP* **P** **19 30 44.2 +1.7**
comp=Z,17nm,1.0s
BSTI Sart Tilman 50.93 307 *dP* **P** **19 30 44.2 +1.6**
comp=Z,2.6nm,1.1s
BGES Gesves 51.29 307 *dP* **P** **19 30 47.6 +2.3**
RCHB Rochefort 51.29 307 *dP* **P** **19 30 44.2 -1.1**
comp=Z,7.4nm,1.0s
JCJ Chichijima 51.44 86 LR LR 19 52 56.5
comp=Z,380nm,19.7s,baz=94,slow=36
BMRD Maredsous 51.51 307 *dP* **P** **19 30 47.8 +0.8**
comp=Z,8.1nm,1.1s
DOU Dourbes 51.69 307 *dP* **P** **19 30 49.9 +1.6**
comp=Z,11nm,1.1s
DAG Danmarks Havn 51.94 343 *i* P **P** **19 30 49.9 +0.1**
DAG IAmb IAmb 19 30 51.9
comp=Z,15nm,0.8s
DAV Davao City (W) 52.33 119 LR LR 19 56 41.9
comp=Z,296nm,18.7s,baz=329,slow=40
BNI Bardonecchia 52.39 300 P **P** **19 30 53.9 +0.1**
BNI IAmb IAmb 19 30 57.3
comp=Z,28nm,1.1s
BNI Bardonecchia 52.39 300 P **P** **19 30 53.9 +0.1**
BNI pmax pmax
comp=Z,28nm,1.2s
DBG Daneborg 53.24 341 *i* P **P** **19 31 00.5 +1.1**
DBG IAmb IAmb 19 31 02.0
comp=Z,5.0nm,0.7s
SSB Saint Sauveur 53.66 302 IAmb IAmb 19 31 47.0
comp=Z,32nm,1.8s
EKA Eskdalemuir Ar 54.04 315 P **P** **19 31 05.6 0.0**
comp=Z,9.0nm,0.8s,baz=81,slow=8.6,SNR=14
EKA LR LR 19 55 10.5
comp=Z,321nm,19.7s,baz=70,slow=37
comp=Z,9.0nm,0.8s
MPSI Mapaga 54.05 129 P **P** **19 31 08.7 +2.6**
LEM Lembang 54.09 147 LR LR 19 57 48.7
comp=Z,160nm,19.7s,baz=320,slow=40
KEST Kesra 54.82 289 P **P** **19 31 11.9 +0.2**
comp=Z,9.5nm,1.3s,baz=78,slow=9.3,SNR=4.8
KEST LR LR 19 59 33.2
comp=Z,74nm,18.2s,baz=279,slow=42
comp=Z,9.5nm,1.3s
LODK Lodwar 55.92 240 **P** **19 31 19.0 -0.7**
LODK Lodwar 55.92 240 P **P** **19 31 20.4 +0.6**
MMSI Mamuju 55.97 132 P **P** **19 31 22.9 +2.9**
NEEM North Greenlan 57.48 349 *i* P **P** **19 31 30.9 +0.5**
NEEM IAmb IAmb 19 31 32.9
comp=Z,24nm,0.6s
BORG Borgarnes 57.98 330 LR LR 19 55 47.6
comp=Z,173nm,19.4s,baz=38,slow=35
KMBO Kilima Mbogo 58.24 235 P **P** **19 31 36.5 +0.2**
baz=44,slow=13
KMBO Kilima Mbogo 58.24 235 *i* P **P** **19 31 36.4 0.0**

KAPI **Kappang** 58.36 133 LR LR 20 00 22.7
comp=Z,111nm,19.2s,baz=303,slow=40
SUMG **Summit** 58.57 342 *i* P P 19 31 38.8 +0.7
KIBK **Kibwezi** 58.72 233 P 19 31 39.4 -0.2
KIBK **Kibwezi** 58.72 233 P P 19 31 39.9 +0.3
A19K **Wainwright** 59.67 20 P P 19 31 44.3 -1.0
baz=310,SNR=13
C16K **Lisburne Hills** 59.70 23 P P 19 31 45.8 +0.3
C16K IAmb IAmb 19 31 47.7
comp=Z,18nm,0.8s
C16K **Lisburne Hills** 59.70 23 P P 19 31 44.2 -1.3
baz=307
SHEM **Shemya Is, Ala** 59.80 45 LR LR 19 58 41.1
comp=Z,153nm,19.3s,baz=282,slow=37
A21K **Barrow** 60.03 18 P P 19 31 46.7 -1.0
baz=313
C17K **DeLong Mountai** 60.20 23 P P 19 31 47.9 -1.1
baz=309
GAMB **Gambell** 60.24 29 P P 19 31 48.1 -1.2
baz=305
TNA **Tin City** 60.52 27 IAmb IAmb 19 31 53.9
comp=Z,13nm,1.0s
TNA **Tin City** 60.52 27 P P 19 31 49.8 -1.3
baz=307,SNR=9.3
RDOG **Red Dog Mine** 60.55 23 P P 19 31 49.1 -2.3
baz=309
A22K **Sinclair Lake** 60.64 18 P P 19 31 50.5 -1.4
baz=314
C18K **Utukok River** 60.65 22 P P 19 31 50.9 -1.3
baz=310
D17K **Noatak River** 60.72 23 P P 19 31 50.8 -1.8
baz=309,SNR=10.0
C19K **Lookout Ridge** 60.79 21 P P 19 31 52.0 -1.1
baz=312,SNR=6.1
B20K **Meade River** 60.81 20 P P 19 31 52.0 -1.0
baz=313,SNR=12
F14K **Arctic Creek** 61.11 26 P P 19 31 54.1 -1.0
baz=308
B22K **Teshekpuk Lake** 61.48 18 P P 19 31 56.9 -0.7
baz=316,SNR=14
F15K **North Star Dit** 61.51 25 P P 19 31 57.0 -0.9
baz=309
GUMO **Guam** 61.53 97 LR LR 20 00 25.9
comp=Z,113nm,19.4s,baz=328,slow=38
D19K **Kuna River** 61.60 21 P P 19 31 57.5 -1.0
baz=313
E18K **Tukpahlearik C** 61.63 23 IAmb IAmb 19 32 00.8
comp=Z,9.5nm,0.7s
E18K **Tukpahlearik C** 61.63 23 P P 19 31 57.3 -1.4
baz=312,SNR=6.5
B21K **Ikpikpuk River** 61.71 19 P P 19 31 58.0 -1.1
baz=315,SNR=13
D20K **Etivluk River** 61.84 20 P P 19 31 58.7 -1.4
baz=314
ESDC **Sonseca Array** 61.87 299 P P 19 32 00.7 -0.2
comp=Z,2.9nm,0.9s,baz=52,slow=6.8,SNR=15
ESDC LR LR 20 02 14.5
comp=Z,225nm,20.7s,baz=51,slow=39
comp=Z,2.9nm,0.9s
ESDC **Sonseca Array** 61.87 299 P P 19 32 00.7 -0.2
MBAR **Mbarara** 61.96 241 LR LR 20 01 13.9
comp=Z,168nm,21.1s,baz=36,slow=38
MBAR **Mbarara** 61.96 241 P P 19 32 00.9 -0.9
MBAR **Mbarara** 61.96 241 *i* P P 19 32 01.6 -0.3
MBAR pmax pmax
comp=Z,13nm,0.9s
MBAR **Mbarara** 61.96 241 P P 19 32 01.5 -0.3
UPNV **Upernavik** 61.98 347 *i* P P 19 32 02.7 +1.8
UPNV IAmb IAmb 19 32 03.2
comp=Z,14nm,0.7s
ANM **Nome** 61.99 27 IAmb IAmb 19 32 04.2
comp=Z,16nm,1.0s
ANM **Nome** 61.99 27 P P 19 31 59.4 -1.7
baz=309,SNR=11
C21K **Knifeblade Rid** 62.00 20 P P 19 31 59.4 -1.8
baz=315,SNR=6.3
SIJI **Sorong** 62.01 120 P P 19 32 02.2 +0.2
comp=Z,3.3nm,0.6s,baz=337,slow=4.8,SNR=4.3
comp=Z,3.3nm,0.6s
F17K **Baldwin Pennin** 62.09 24 P P 19 32 00.4 -1.4
baz=311
G15K **Niukluk** 62.16 26 P P 19 32 00.1 -2.2
baz=310,SNR=8.0
E20K **Nigu River** 62.28 21 P P 19 32 01.3 -1.9
baz=315
G16K **Koyuk River** 62.44 25 IAmb IAmb 19 32 06.9
comp=Z,17nm,0.9s
G16K **Koyuk River** 62.44 25 P P 19 32 02.4 -1.7
baz=311
F18K **Selawik** 62.46 23 P P 19 32 02.7 -1.6
baz=313,SNR=12
C23K **Itkillik River** 62.50 18 IAmb IAmb 19 32 07.0
comp=Z,16nm,1.0s
C23K **Itkillik River** 62.50 18 P P 19 32 02.9 -1.6
baz=318
E19K **Redstone River** 62.56 22 P P 19 32 03.0 -1.9
baz=314
E21K **Killik River** 62.72 20 P P 19 32 04.3 -1.7
baz=316
F19K **Shaleruckik Mo** 62.84 22 P P 19 32 05.0 -1.8
baz=314
G17K **Kiwalik Mounta** 62.90 24 P P 19 32 05.5 -1.7
baz=312,SNR=8.8
H16K **Elim** 62.98 26 P P 19 32 06.1 -1.6
baz=311,SNR=13
C24K **Franklin Bluff** 63.02 17 IAmb IAmb 19 32 10.3
comp=Z,20nm,1.1s
C24K **Franklin Bluff** 63.02 17 P P 19 32 05.8 -2.2
baz=320
D23K **Nanushuk River** 63.14 19 IAmb IAmb 19 32 11.0
comp=Z,12nm,0.9s
D23K **Nanushuk River** 63.14 19 P P 19 32 07.0 -1.8
baz=319
G18K **Tagagawik** 63.24 23 P P 19 32 07.1 -2.4
baz=314
F20K **Avaraart Lake** 63.26 22 P P 19 32 08.0 -1.6
baz=315
SAQQ **Saqqaq** 63.42 344 *i* P P 19 32 12.4 +1.8
SAQQ IAmb IAmb 19 32 13.4
comp=Z,13nm,0.9s
D24K **Happy Valley** 63.44 18 P P 19 32 09.0 -1.8
baz=320
E22K **Anaktuvuk Pass** 63.49 20 IAmb IAmb 19 32 13.0
comp=Z,12nm,0.8s
E22K **Anaktuvuk Pass** 63.49 20 P P 19 32 09.4 -1.8
baz=318,SNR=13
H17K **Granite Mounta** 63.51 25 P P 19 32 09.8 -1.6
baz=313
G19K **Purcell Mounta** 63.52 23 P P 19 32 09.3 -2.1
baz=315
TOLK **Toolik Lake Re** 63.66 18 P P 19 32 10.4 -1.9
baz=320,SNR=14
C26K **Camden Bay** 63.69 16 P P 19 32 11.1 -1.3
baz=323
F21K **Alatna River** 63.74 21 IAmb IAmb 19 32 14.5
comp=Z,11nm,0.9s
F21K **Alatna River** 63.74 21 P P 19 32 11.2 -1.7
baz=317,SNR=11
J14K **Nanvaranak Lak** 63.79 28 IAmb IAmb 19 32 15.8
comp=Z,11nm,1.1s
J14K **Nanvaranak Lak** 63.79 28 P P 19 32 11.0 -2.1
baz=311
RES **Resolute Bay** 63.81 359 P P 19 32 13.6 +0.5
comp=Z,3.7nm,0.9s,baz=30,slow=12,SNR=12
RES LR LR 20 01 14.7
comp=Z,150nm,19.2s,baz=17,slow=37
comp=Z,3.7nm,0.9s
RES **Resolute Bay** 63.81 359 P 19 32 13.4 +0.3
RES **Resolute Bay** 63.81 359 P P 19 32 13.4 +0.3
RES pmax pmax
comp=Z,6.0nm,1.1s
H18K **Honhosa River** 63.84 24 IAmb IAmb 19 32 15.7
comp=Z,9.9nm,0.8s
H18K **Honhosa River** 63.84 24 P P 19 32 12.0 -1.5
baz=314
D25K **Kavik River** 63.85 17 IAmb IAmb 19 33 45.5
comp=Z,8.5nm,0.9s
D25K **Kavik River** 63.85 17 P P 19 32 11.2 -2.3
baz=322
ILULI **Ilulissat** 63.88 343 *i* P P 19 32 14.8 +1.2
ILULI IAmb IAmb 19 32 15.4
comp=Z,27nm,0.9s
K13K **Kusilvak Mount** 63.93 29 P P 19 32 12.3 -1.8
baz=311
I17K **Unalakleet** 63.98 26 P P 19 32 12.4 -1.9
baz=313
E23K **Chandalar** 64.09 19 IAmb IAmb 19 32 17.1
comp=Z,13nm,0.7s
E23K **Chandalar** 64.09 19 P P 19 32 13.3 -1.9
baz=320
H19K **Roundabout Mou** 64.15 23 IAmb IAmb 19 32 17.4
comp=Z,15nm,1.1s
H19K **Roundabout Mou** 64.15 23 P P 19 32 13.7 -1.7
baz=315
C27K **Jago River** 64.17 16 IAmb IAmb 19 32 18.2
comp=Z,15nm,0.9s
C27K **Jago River** 64.17 16 P P 19 32 14.4 -1.2
baz=324,SNR=15
G21K **Allakaket** 64.26 21 IAmb IAmb 19 32 17.8
comp=Z,8.9nm,0.8s
G21K **Allakaket** 64.26 21 P P 19 32 14.0 -2.2
baz=317
E24K **Your Creek** 64.35 18 IAmb IAmb 19 32 18.8
comp=Z,11nm,0.7s
E24K **Your Creek** 64.35 18 P P 19 32 15.1 -1.8
baz=321
M11K **Mekoryuk** 64.37 31 P P 19 32 15.4 -1.5
baz=310
J16K **Anvik River** 64.42 26 P P 19 32 15.1 -2.2
baz=313,SNR=8.2
G22K **Bettles** 64.48 20 P P 19 32 15.6 -2.0
baz=319
GCSA **Galena City Sc** 64.58 24 P P 19 32 16.5 -1.8
baz=315,SNR=7.1
IMAR **Indian Mountai** 64.58 22 P P 19 32 17.9 -0.5
COLD **Coldfoot** 64.58 20 P P 19 32 16.6 -1.7
baz=320,SNR=25
H20K **Anotleneega Mo** 64.62 23 P P 19 32 16.7 -1.9
baz=317,SNR=13
K15K **Wolf Creek Mou** 64.79 27 IAmb IAmb 19 32 23.0
comp=Z,16nm,0.9s
K15K **Wolf Creek Mou** 64.79 27 P P 19 32 17.4 -2.3
baz=313,SNR=8.7
BATI **Baumata** 64.80 133 P P 19 32 21.1 +0.7
comp=Z,3nm,1.1s,baz=304,slow=3.6,SNR=4.6
comp=Z,23nm,1.1s
BATI **Baumata** 64.80 133 P P 19 32 22.2 +1.8
comp=Z,16nm,1.1s
J17K **VABM Dome** 64.84 26 P P 19 32 17.8 -2.2
baz=314
POIN **Pond Inlet** 64.91 353 P 19 32 21.0 +0.7
POIN IAmb IAmb 19 32 22.6
comp=Z,13nm,0.9s
F24K **Squaw Lake** 64.93 19 IAmb IAmb 19 32 22.6
comp=Z,7.5nm,0.8s
F24K **Squaw Lake** 64.93 19 P P 19 32 18.6 -2.0
baz=321,SNR=11
E25K **Arctic Village** 64.99 18 P P 19 32 18.7 -2.3
baz=323
G23K **Bananza Creek** 65.03 20 P P 19 32 18.6 -2.7
baz=320
L14K **Kuka Creek** 65.03 28 P P 19 32 19.1 -2.2
baz=312
A36M **Sachs Harbour** 65.03 9 P P 19 32 19.4 -1.8
baz=338,SNR=18
D27M **Malcolm River** 65.04 15 IAmb IAmb 19 32 23.8
comp=Z,8.3nm,0.8s
D27M **Malcolm River** 65.04 15 P P 19 32 19.2 -2.2
baz=326
H21K **Melozitna Rive** 65.09 22 P P 19 32 19.4 -2.2
baz=318
L15K **Unalk Mounta** 65.22 28 P P 19 32 20.1 -2.4
baz=313
I20K **Naaghedeneel** 65.25 23 P P 19 32 20.7 -1.9
baz=317
H22K **Ishtalitna Cre** 65.30 21 P P 19 32 21.1 -1.9
baz=319
D28M **Stokes Point** 65.39 14 P P 19 32 21.6 -1.9
baz=328
F25K **Christian Rive** 65.39 18 P P 19 32 21.6 -2.1
baz=323,SNR=28
M13K **Dall Lake** 65.42 30 P P 19 32 21.7 -2.1
baz=312
J19K **Poorman** 65.50 24 IAmb IAmb 19 32 27.1
comp=Z,17nm,1.0s
J19K **Poorman** 65.50 24 P P 19 32 22.6 -1.7
baz=317,SNR=11
SFJD **Kangerlussuaq** 65.52 341 LR LR 20 06 01.9
comp=Z,214nm,18.1s,baz=82,slow=41
J18K **Innoko River** 65.55 25 IAmb IAmb 19 32 27.2
comp=Z,17nm,1.4s
J18K **Innoko River** 65.55 25 P P 19 32 22.9 -1.8
baz=316
K17K **Iditarod** 65.58 26 P P 19 32 23.1 -1.7
baz=315
F26K **Sheenjek River** 65.65 17 IAmb IAmb 19 32 27.4
comp=Z,7.1nm,0.7s
F26K **Sheenjek River** 65.65 17 P P 19 32 23.4 -1.9
baz=323,SNR=12
G24K **Hadweenzic Riv** 65.67 19 P P 19 32 23.9 -1.6
baz=322,SNR=15
I21K **Tanana** 65.67 22 IAmb IAmb 19 32 27.7
comp=Z,14nm,1.0s
I21K **Tanana** 65.67 22 P P 19 32 23.8 -1.6
baz=319,SNR=5.4
M14K **Bethel** 65.69 29 P P 19 32 24.1 -1.5
baz=313,SNR=11
BMAR **Burnt Mountain** 65.77 18 P 19 32 26.4 +0.4
E27K **Coleen River** 65.80 16 IAmb IAmb 19 32 28.4
comp=Z,17nm,0.9s
E27K **Coleen River** 65.80 16 P P 19 32 25.0 -1.2
baz=326
J20K **Nowinta River** 65.81 23 IAmb IAmb 19 32 28.9
comp=Z,15nm,0.9s
J20K **Nowinta River** 65.81 23 P P 19 32 24.9 -1.4
baz=318
H23K **Yukon River** 65.84 20 IAmb IAmb 19 32 29.1
comp=Z,17nm,1.0s
H23K **Yukon River** 65.84 20 P P 19 32 25.2 -1.3
baz=321
E28M **Babbage River** 65.86 15 IAmb IAmb 19 32 28.9
comp=Z,9.3nm,0.8s
E28M **Babbage River** 65.86 15 P P 19 32 25.3 -1.2
baz=328
L16K **Owhat River** 65.90 27 P P 19 32 25.9 -1.0
baz=314,SNR=15
G25K **Bearman Lake** 65.95 19 P P 19 32 26.1 -1.0
baz=323
L17K **Donlin** 65.99 26 P P 19 32 26.4 -1.1
baz=315,SNR=12
MDT **Midelt** 66.12 293 LR LR 20 03 09.4
comp=Z,95nm,21.4s,baz=43,slow=38
MLY **Manley** 66.13 21 IAmb IAmb 19 32 30.6
comp=Z,10nm,0.8s
MLY **Manley** 66.13 21 P P 19 32 27.1 -1.3
baz=326,SNR=6.8
M15K **Kasigluk River** 66.18 28 P P 19 32 26.9 -1.9
baz=314
H24K **Noodor Dome** 66.25 20 P P 19 32 27.7 -1.5
baz=322
G26K **Porcupine Rive** 66.34 18 IAmb IAmb 19 32 32.3
comp=Z,13nm,1.0s
G26K **Porcupine Rive** 66.34 18 P P 19 32 28.0 -1.7
baz=325,SNR=8.5
N14K **Kuskokwak Cree** 66.36 29 P P 19 32 27.9 -1.9
baz=313
E29M **Blow River** 66.36 15 IAmb IAmb 19 32 32.3
comp=Z,15nm,0.8s
E29M **Blow River** 66.36 15 P P 19 32 28.4 -1.4
baz=329
I23K **Minto, Yukon-K** 66.41 21 IAmb IAmb 19 32 32.5
comp=Z,9.9nm,0.9s
I23K **Minto, Yukon-K** 66.41 21 P P 19 32 28.7 -1.4
baz=321,SNR=6.5
K20K **Telida** 66.44 24 P P 19 32 29.2 -1.2
baz=318
L18K **Granite Mounta** 66.46 26 IAmb IAmb 19 32 33.2
comp=Z,9.4nm,0.8s
L18K **Granite Mounta** 66.46 26 P P 19 32 29.5 -1.0
baz=316,SNR=6.7
M16K **Timber Creek** 66.56 27 IAmb IAmb 19 32 34.4
comp=Z,12nm,0.8s
M16K **Timber Creek** 66.56 27 P P 19 32 29.4 -1.8
baz=315
CHUM **Lake Minchumin** 66.56 23 P P 19 32 29.3 -1.8
baz=319
F28M **Old Crow** 66.63 16 IAmb IAmb 19 32 33.8
comp=Z,12nm,1.0s
F28M **Old Crow** 66.63 16 P P 19 32 29.7 -1.8
baz=328,SNR=13
N15K **Kwethluk River** 66.76 28 IAmb IAmb 19 32 35.9
comp=Z,14nm,0.9s
N15K **Kwethluk River** 66.76 28 P P 19 32 31.2 -1.3
baz=314,SNR=5.2
BPAW **Bear Paw Mtn.** 66.78 22 IAmb IAmb 19 32 34.4
comp=Z,12nm,0.8s
BPAW **Bear Paw Mtn.** 66.78 22 P P 19 32 30.7 -1.8
baz=320
M17K **Holitna River** 66.80 27 P P 19 32 30.9 -1.8
baz=316
NEA2 **Nenana** 66.92 21 IAmb IAmb 19 32 35.3
comp=Z,11nm,0.9s
NEA2 **Nenana** 66.92 21 P P 19 32 31.7 -1.8
baz=321
G27K **Doyon Strip** 66.93 17 IAmb IAmb 19 32 35.9
comp=Z,8.2nm,0.8s
G27K **Doyon Strip** 66.93 17 P P 19 32 32.2 -1.3
baz=326,SNR=15
POKR **Poker Plat Res** 66.94 20 P P 19 32 32.4 -1.2
baz=322
O14K **Tigyukauivet M** 66.98 30 P P 19 32 32.6 -1.2
baz=314
N16K **Nishlik Lake** 67.01 28 P P 19 32 32.7 -1.5
baz=315
COLA **College** 67.03 20 *i* P P 19 32 35.0 +1.0
COLA pmax pmax
comp=Z,17nm,0.9s
COLA **College** 67.03 20 P P 19 32 33.0 -1.1
baz=322
L19K **White Mountain** 67.07 25 IAmb IAmb 19 32 37.2
comp=Z,10nm,0.9s
L19K **White Mountain** 67.07 25 P P 19 32 33.2 -1.3
baz=318
PRP **Porcupine Dome** 67.10 19 IAmb IAmb 19 32 37.1
comp=Z,8.7nm,0.8s
PRP **Porcupine Dome** 67.10 19 P P 19 32 33.3 -1.4
baz=324,SNR=9.0
INK **Inuvik** 67.22 13 P P 19 32 34.9 -0.4
comp=Z,6.0nm,0.8s,baz=358,slow=6.6,SNR=13
INK LR LR 20 05 17.5
comp=Z,89nm,21.3s,baz=322,slow=39
comp=Z,6.0nm,0.8s
INK **Inuvik** 67.22 13 IAmb IAmb 19 32 37.3
comp=Z,11nm,1.1s
INK **Inuvik** 67.22 13 P P 19 32 33.6 -1.7
baz=332,SNR=9.7
M18K **Stony River** 67.27 26 P P 19 32 33.6 -2.1
baz=317
PPLA **Purkeypile** 67.35 23 P P 19 32 35.0 -1.4
baz=319,SNR=6.0
IL31 67.36 20 IAmb IAmb 19 32 37.5
comp=Z,13nm,0.8s
ILAR **Eielson Array** 67.36 20 P P 19 32 35.5 -0.7
comp=Z,12nm,0.8s,baz=316,slow=4.6,SNR=79
ILAR LR LR 20 03 56.6
comp=Z,184nm,19.4s,baz=304,slow=38
comp=Z,12nm,0.8s
ILAR **Eielson Array** 67.36 20 P 19 32 35.9 -0.3
ILAR **Eielson Array** 67.36 20 P P 19 32 35.9 -0.3
F30M **Barrier River** 67.44 14 IAmb IAmb 19 32 39.2
comp=Z,16nm,0.9s
F30M **Barrier River** 67.44 14 P P 19 32 35.2 -1.4
baz=331
H27K **Steamboat Moun** 67.45 17 P P 19 32 35.0 -1.8
baz=327
TRF **Thorofare Moun** 67.48 22 IAmb IAmb 19 32 39.6
comp=Z,8.0nm,0.8s
TRF **Thorofare Moun** 67.48 22 P P 19 32 35.5 -1.7
baz=321
N17K **Nushagak Hills** 67.52 27 IAmb IAmb 19 32 40.8
comp=Z,13nm,0.9s
N17K **Nushagak Hills** 67.52 27 P P 19 32 35.9 -1.4
baz=316
O15K **Ungalikthiuk R** 67.56 29 IAmb IAmb 19 32 40.3
comp=Z,14nm,0.9s
O15K **Ungalikthiuk R** 67.56 29 P P 19 32 36.0 -1.5
baz=315
G29M **Pine Creek** 67.61 16 IAmb IAmb 19 32 40.0
comp=Z,11nm,1.0s
G29M **Pine Creek** 67.61 16 P P 19 32 36.0 -1.8
baz=329
HDA **Harding Lake** 67.63 20 P P 19 32 36.1 -1.9
baz=323
MCK **McKinley** 67.64 22 P P 19 32 36.1 -1.9
baz=322
C36M **Paulatuk** 67.66 9 P P 19 32 36.5 -1.4
baz=340,SNR=20
M20K **Styx River** 67.83 25 P P 19 32 37.3 -2.1
baz=319
I26K **Coal Creek Min** 67.84 18 P P 19 32 37.6 -1.6
baz=326,SNR=17
N18K **Kilae Creek** 67.85 26 P P 19 32 37.6 -1.7
baz=317
J25K **Salcha River,** 67.87 20 P P 19 32 38.1 -1.5
baz=324
O16K **Kokwok River B** 67.88 28 P P 19 32 38.1 -1.5
baz=316
G30M **tAoh Zraii Nji** 67.91 15 IAmb IAmb 19 32 41.4
comp=Z,21nm,1.3s
G30M **tAoh Zraii Nji** 67.91 15 P P 19 32 37.9 -1.8
baz=331,SNR=7.6
I27K **Kandik River** 67.95 18 IAmb IAmb 19 33 02.0
comp=Z,26nm,1.6s
I27K **Kandik River** 67.95 18 P P 19 32 38.1 -1.9
baz=327
F31M **Tsiigehtchic** 67.96 14 IAmb IAmb 19 32 41.5
comp=Z,8.5nm,0.8s
F31M **Tsiigehtchic** 67.96 14 P P 19 32 37.9 -2.0
baz=332,SNR=5.8
L22K **Petersville** 68.06 23 IAmb IAmb 19 32 50.6
comp=Z,13nm,1.2s
NIKH **Nikolski High** 68.07 38 P P 19 32 39.1 -1.7
baz=311
O17K **Koliganek Bris** 68.10 28 P P 19 32 39.3 -1.6
baz=317
H29M **Whitestone** 68.14 16 IAmb IAmb 19 32 43.1
comp=Z,9.7nm,0.7s
H29M **Whitestone** 68.14 16 P P 19 32 39.6 -1.5
baz=329
SKT **Skwentna** 68.25 24 IAmb IAmb 19 32 43.5
comp=Z,21nm,1.1s
SKT **Skwentna** 68.25 24 P P 19 32 40.3 -1.6
baz=320,SNR=8.1
CUT **Chulitna** 68.30 23 P P 19 32 39.8 -2.3
baz=321
P16K **Nushagak River** 68.33 29 P P 19 32 39.8 -2.5
baz=316
EPYK **Eagle Plains** 68.34 15 IAmb IAmb 19 32 43.8
comp=Z,11nm,1.0s
EPYK **Eagle Plains** 68.34 15 P P 19 32 41.1 -1.3
baz=330
K24K **Donnelly Dome** 68.43 20 P P 19 32 42.0 -1.0
baz=324,SNR=6.3
WAT1 **Susitna Watana** 68.46 22 P P 19 32 41.9 -1.3
baz=322
I28M **Miner Creek** 68.46 17 IAmb IAmb 19 32 45.1
comp=Z,12nm,0.8s
I28M **Miner Creek** 68.46 17 P P 19 32 41.5 -1.8
baz=328,SNR=16
DHY **Denali Highway** 68.59 21 P P 19 32 42.2 -2.0
baz=323,SNR=8.8
N20K **Mount Spurr** 68.64 25 P P 19 32 42.9 -1.5
baz=320
SPCR **Spurr Chakacha** 68.64 25 P P 19 32 43.0 -1.4
baz=320
O18K **Koktuh Hills** 68.69 27 P P 19 32 43.3 -1.4
baz=318,SNR=7.5
RIDG **Independent Ri** 68.72 20 P P 19 32 43.6 -1.3
baz=325,SNR=11
O19K **Port Alsworth** 68.73 26 IAmb IAmb 19 32 48.2
comp=Z,18nm,0.9s
O19K **Port Alsworth** 68.73 26 P P 19 32 43.4 -1.4
baz=319
SCRK **Sand Creek** 68.74 20 IAmb IAmb 19 32 46.7
comp=Z,14nm,0.8s
SCRK **Sand Creek** 68.74 20 P P 19 32 43.5 -1.6
baz=325,SNR=16
P17K **Kvichak River** 68.75 28 P P 19 32 43.7 -1.3
baz=317
M22K **Willow** 68.85 23 P P 19 32 44.2 -1.4
baz=321
WAT6 **Susitna Watana** 68.88 22 P P 19 32 44.1 -1.9
baz=323
I29M **Ogilvie Camp,** 68.89 17 IAmb IAmb 19 32 47.1
comp=Z,12nm,1.0s
I29M **Ogilvie Camp,** 68.89 17 P P 19 32 44.3 -1.5
baz=329,SNR=6.5
P18K **Big Mountain,** 69.03 27 P P 19 32 44.9 -1.9
baz=318
Q16K **King Salmon** 69.06 28 P P 19 32 45.3 -1.6
baz=317
K27K **Chicken** 69.17 19 IAmb IAmb 19 32 49.9
comp=Z,11nm,0.9s
FALS **False Pass** 69.18 34 P P 19 32 45.3 -2.5

baz=314
PAX Paxson 69.19 21 IAmb IAmb 19 32 50.7
comp=Z,11nm,0.9s
PAX Paxson 69.19 21 P P 19 32 45.5 -2.3
baz=324,SNR=7.7
PMR Palmer 69.27 23 P P 19 32 46.0 -2.1
baz=322
H31M Peel River 69.30 15 IAmb IAmb 19 32 49.9
comp=Z,9.5nm,0.9s
H31M Peel River 69.30 15 P P 19 32 46.6 -1.8
baz=332,SNR=6.6
CAPN Captain Cook N 69.31 25 P P 19 32 46.3 -2.0
baz=321
SML Sawmill 69.33 23 P P 19 32 45.9 -2.7
baz=323,SNR=5.9
I30M Mount Dempster 69.42 16 P P 19 32 47.2 -2.0
baz=331,SNR=24
RC01 Rabbit Creek A 69.49 24 IAmb IAmb 19 32 51.9
comp=Z,17nm,1.0s
RC01 Rabbit Creek A 69.49 24 P P 19 32 47.5 -2.1
baz=322
P19K Oil Pt 69.50 26 P P 19 32 47.5 -2.1
baz=320
M23K Glacier View 69.52 22 P P 19 32 48.2 -1.5
baz=323,SNR=7.5
R16K Pilot Point 69.55 29 P P 19 32 48.5 -1.4
baz=317
SCM Sheep Creek Mo 69.60 22 P P 19 32 48.3 -2.0
baz=323,SNR=5.4
KNK Knik Glacier 69.61 23 P P 19 32 48.3 -2.0
baz=323
Q17K Contact Creek 69.64 28 P P 19 32 48.7 -2.0
baz=318
Q18K Katmai Hardscr 69.66 28 P P 19 32 49.4 -1.4
baz=318
L26K Log Cabin Wild 69.69 20 P P 19 32 49.6 -1.3
baz=326
J29N Klondike Camp 69.70 17 P P 19 32 49.7 -1.2
baz=330
M24K Tolsona, Glenn 69.70 22 P P 19 32 49.2 -1.7
baz=324
S14K Fog Glacier 69.73 31 P P 19 32 49.3 -2.0
baz=316
Q19K Cape Douglas, 69.91 27 P P 19 32 50.5 -1.8
baz=319
R17L Mt. Peulik Vol 69.94 29 P P 19 32 51.1 -1.4
baz=318
O22K Cooper Landing 69.97 24 P P 19 32 51.0 -1.5
baz=322
J30M Hart River 69.99 16 P P 19 32 51.0 -1.7
baz=331,SNR=7.1
SDPT Sand Point 70.04 32 P P 19 32 51.2 -1.8
baz=316
L27K Beaver Creek, 70.04 19 IAmb IAmb 19 32 56.0
comp=Z,15nm,0.9s
L27K Beaver Creek, 70.04 19 P P 19 32 51.3 -1.7
baz=327
BCAR Beaver Creek A 70.05 19 P 19 32 53.4 +0.3
BRSE Bradley Lake S 70.23 25 P P 19 32 52.4 -1.8
baz=321
KLU Klutina 70.27 22 P P 19 32 52.7 -1.8
baz=324
M26K Nabesna, AK 70.30 20 IAmb IAmb 19 32 57.0
comp=Z,13nm,0.8s
M26K Nabesna, AK 70.30 20 P P 19 32 53.1 -1.6
baz=326
SEW Seward 70.35 24 P P 19 32 52.7 -2.2
baz=322
K29M Barlow Dome 70.38 17 IAmb IAmb 19 32 58.0
comp=Z,11nm,0.8s
K29M Barlow Dome 70.38 17 P P 19 32 52.9 -2.2
baz=330,SNR=13
GLI Glacier Island 70.44 23 P P 19 32 52.8 -2.6
baz=324
N25K Chitina, Valde 70.54 21 IAmb IAmb 19 32 58.7
comp=Z,21nm,1.1s
N25K Chitina, Valde 70.54 21 P P 19 32 54.4 -1.7
baz=325,SNR=5.4
Q20K Shuyak Island 70.58 27 P P 19 32 53.5 -2.8
baz=320
M27K Edge Creek, AK 70.63 20 IAmb IAmb 19 32 59.3
comp=Z,13nm,0.8s
M27K Edge Creek, AK 70.63 20 P P 19 32 54.7 -2.0
baz=327,SNR=8.6
CHNA Chernabura Isl 70.77 32 P P 19 32 55.3 -2.2
baz=316
BVCY Beaver Creek 70.83 19 P P 19 32 55.9 -1.9
baz=328
VOI Vohitsoka 70.87 214 P P 19 32 58.6 0.0
L29M L29M 70.88 18 IAmb IAmb 19 33 00.4
comp=Z,18nm,1.1s
L29M L29M 70.88 18 P P 19 32 56.5 -1.7
baz=330,SNR=11
MAYO Mayo, Yukon 70.95 17 P P 19 32 56.5 -2.0
baz=332
P23K Montague Islan 71.06 23 P P 19 32 57.2 -1.9
baz=324
BMRM Bremner River 71.07 22 P P 19 32 56.2 -3.1
baz=326
EYAK Cordova Ski Ar 71.09 22 P P 19 32 56.8 -2.6
baz=325
MCARA McCarthy VSAT 71.15 21 P P 19 32 57.0 -2.8
baz=327
KDAK Kodiak Island 71.15 27 LR LR 20 07 10.8
comp=Z,169nm,18.7s,baz=327,slow=38
KDAK Kodiak Island 71.15 27 P P 19 32 56.5 -3.2
baz=320
VRDI Verde Repeater 71.17 21 IAmb IAmb 19 33 02.6
comp=Z,19nm,0.8s
OHAK Old Harbor 71.34 28 P P 19 32 58.2 -2.8
baz=320
M29M Somme Creek 71.38 18 IAmb IAmb 19 33 04.5
comp=Z,11nm,0.8s
M29M Somme Creek 71.38 18 P P 19 32 58.6 -2.7
baz=330,SNR=7.9
YUK3 Moose Creek 71.48 19 P P 19 32 59.1 -2.9
baz=328
M30M Minto, Yukon 71.65 17 P P 19 33 00.1 -2.7
baz=331
CRQE Cirque 71.66 21 P P 19 33 00.4 -2.5
baz=327
Q23K Middleton Isla 71.83 23 P P 19 33 01.0 -2.8
baz=324
CTG Chitna Glacier 71.94 20 P P 19 33 02.2 -2.5
baz=328
CTGM Chitina Glacie 71.94 20 IAmb IAmb 19 33 07.7
comp=Z,16nm,0.9s
KAIM Kayak Island 71.98 22 P P 19 33 02.3 -2.5
baz=326
GRNC Granite Creek 72.03 21 IAmb IAmb 19 33 19.7
comp=Z,27nm,1.3s
YUK8 Steele Glacier 72.07 19 P P 19 33 02.8 -2.8
baz=329
FRB Frobisher Bay 72.11 346 P P 19 33 05.7 +0.2
comp=Z,4.9nm,0.8s,baz=48,slow=8.8,SNR=5.9
FRB LR LR 20 07 21.7
comp=Z,192nm,18.6s,baz=49,slow=38
comp=Z,4.9nm,0.8s
YUK4 Talbot Arm 72.29 19 P P 19 33 04.0 -2.9
baz=330,SNR=6.8
FITZ Fitzroy Crossi 72.39 136 P P 19 33 07.7 0.0
comp=Z,4.2nm,0.7s,baz=315,slow=5.4,SNR=6.3
comp=Z,4.2nm,0.7s
O28M Mount Upton 72.40 20 P P 19 33 04.5 -3.1
baz=329
MESA MESA 72.45 21 P P 19 33 05.2 -2.6
baz=328
M31M Drury Creek, Y 72.51 17 P P 19 33 05.9 -2.0
baz=333,SNR=5.4
N30M Aishikik Lake 72.56 18 IAmb IAmb 19 34 25.0
comp=Z,36nm,1.9s
N30M Aishikik Lake 72.56 18 P P 19 33 05.9 -2.4
baz=331
YUK6 Outpost Mounta 72.71 19 P P 19 33 06.9 -2.5
baz=330
MMPY Sheldon Lake, 72.77 15 P P 19 33 07.2 -2.3
baz=335
N31M Braeburn, Yuko 72.84 18 IAmb IAmb 19 33 12.0
comp=Z,18nm,0.8s
N31M Braeburn, Yuko 72.84 18 P P 19 33 07.8 -2.1
baz=332,SNR=7.5
PINM Pinnacle 72.97 20 P P 19 33 08.5 -2.2
baz=329
HYT Haines Junctio 73.02 19 IAmb IAmb 19 33 13.5
comp=Z,18nm,0.9s
HYT Haines Junctio 73.02 19 P P 19 33 08.3 -2.8
baz=331,SNR=9.9
O29M Mount Kennedy 73.22 19 P P 19 33 09.6 -2.7
baz=330

O30N Mendenhall 73.40 18 IAmb IAmb 19 33 16.7
comp=Z,13nm,0.9s
O30N Mendenhall 73.40 18 P P 19 33 10.9 -2.4
baz=332,SNR=5.9
TORD Torodi Ar. Bea 73.52 273 P P 19 33 13.8 -0.8
comp=Z,6.3nm,0.5s,baz=44,slow=3.5,SNR=99
comp=Z,6.3nm,0.5s
WRGLY Wrigley 73.53 11 P P 19 33 11.7 -2.1
baz=341,SNR=8.6
N32M Quiet Lake 73.73 16 P P 19 33 12.6 -2.6
baz=334
P30M Million Dollar 73.77 19 P P 19 33 12.8 -2.6
baz=331
WHY Whitehorse 73.78 18 P P 19 33 13.1 -2.4
baz=333
TGTN Hyland Airport 74.34 14 P P 19 33 16.6 -2.1
baz=338
P33M Teslin, Yukon 74.64 17 P P 19 33 18.3 -2.2
baz=334,SNR=6.3
SKAG Skagway 74.74 18 P P 19 33 18.3 -2.7
baz=333
LSZ Lusaka 74.84 233 LR LR 20 06 45.8
comp=Z,98nm,19.1s,baz=24,slow=36
P32M Atlin 75.00 18 P P 19 33 19.8 -2.8
baz=334
YKA Yellowknife Ar 75.33 7 P P 19 33 23.9 -0.5
comp=Z,6.1nm,0.9s,baz=342,slow=6.1,SNR=23
YKA LR LR 20 07 58.2
comp=Z,108nm,20.9s,baz=358,slow=37
comp=Z,6.1nm,0.9s
WTLY Watson Lake, Y 75.55 15 P P 19 33 23.2 -2.6
baz=337
R33M Jennings River 75.77 16 P P 19 33 24.4 -2.8
baz=336,SNR=5.4
S31K Pelican 75.85 19 P P 19 33 24.7 -2.7
baz=332
Q32M Nakina River 75.89 17 P P 19 33 25.0 -2.9
baz=335
R32K Eaglecrest 75.99 18 P P 19 33 25.2 -3.1
baz=333
KOTAN Kotaneelee Air 76.38 13 P P 19 33 27.7 -2.7
baz=341
S32K Killisnoo 76.70 19 P P 19 33 29.6 -2.6
baz=333
DLBC Dease Lake 76.85 16 P P 19 33 32.8 -0.4
comp=Z,3.4nm,0.9s,baz=350,slow=6.1,SNR=4.9
DLBC LR LR 20 10 18.3
comp=Z,107nm,19.8s,baz=299,slow=38
comp=Z,3.4nm,0.9s
DLBC Dease Lake 76.85 16 P P 19 33 30.2 -3.0
baz=337
SIT Sitka 76.89 19 P P 19 33 30.5 -2.8
baz=333
S34M Telegraph Cree 77.09 17 P P 19 33 32.0 -2.5
baz=336
T33K Petersburg 77.68 18 P P 19 33 35.3 -2.5
baz=335
T35M Bob Quinn 78.14 17 P P 19 33 37.9 -2.5
baz=336
WRAK Wrangell Islan 78.18 18 P P 19 33 37.9 -2.7
baz=335
U33K Whale Pass 78.27 19 P P 19 33 38.6 -2.5
baz=334
WB0 Warramunga Arr 78.56 130 P 19 33 43.5 +0.4
WB0 IAmb IAmb 19 33 44.9
comp=Z,33nm,1.8s
WRAB Tennant Creek 78.67 130 *ce*P P 19 33 43.6 -0.1
WRAB pmax pmax
comp=Z,4.0nm,0.7s
WRA Warramunga Arr 78.67 130 P P 19 33 43.8 +0.1
comp=Z,4.2nm,0.9s,baz=328,slow=5.3,SNR=18
WRA PKKPbc PKKPbc 19 52 39.3 +1.0
comp=Z,0.3nm,0.8s,baz=146,slow=2.2,SNR=5.3
comp=Z,4.2nm,0.9s
WR8 Warramunga Arr 78.78 130 P 19 33 41.1 -3.2
WR8 IAmb IAmb 19 33 46.6
comp=Z,18nm,1.2s
CRAG Craig 78.86 19 P P 19 33 41.7 -2.6
baz=335
V35K Ketchikan 79.35 18 P P 19 33 44.1 -2.9
baz=336
COEN Coen 79.55 119 P P 19 33 56.0 +7.3
comp=Z,20nm,1.5s
FCC Fort Churchill 79.76 357 P 19 33 50.1 +1.0
FCC Fort Churchill 79.76 357 P P 19 33 50.1 +1.0
FCC pmax pmax
comp=Z,9.0nm,0.9s
SCHQ Schefferville 79.96 342 P P 19 33 50.5 +0.2
comp=Z,7.1nm,1.1s,baz=68,slow=10,SNR=3.6
SCHQ LR LR 20 14 23.2
comp=Z,84nm,18.5s,baz=12,slow=40
comp=Z,7.1nm,1.1s
ASAR Alice Springs 81.37 132 P P 19 33 58.1 -0.2
comp=Z,2.3nm,0.8s,baz=322,slow=5.3,SNR=20
ASAR LR LR 20 14 19.6
comp=Z,41nm,18.3s,baz=308,slow=39
comp=Z,2.3nm,0.8s
ASAR Alice Springs 81.37 132 P 19 33 57.1 -1.1
DBIC Dimbokro 82.60 272 P P 19 34 04.5 -0.5
comp=Z,12nm,0.8s,baz=58,slow=7.4,SNR=14
DBIC LR LR 20 15 30.1
comp=Z,90nm,20.2s,baz=50,slow=39
comp=Z,12nm,0.8s
BBB Bella Bella 83.06 18 LR LR 20 14 59.8
comp=Z,89nm,18.0s,baz=150,slow=38
FFC Flin Flon 83.85 2 P 19 34 10.1 -0.7
FFC IAmb IAmb 19 34 12.2
comp=Z,15nm,0.9s
FFC Flin Flon 83.85 2 P P 19 34 10.1 -0.7
FFC pmax pmax
comp=Z,15nm,1.0s
LBTB Lobatse 83.96 229 LR LR 20 15 00.4
comp=Z,35nm,19.4s,baz=30,slow=38
TSUM Tsumeb 84.37 238 LR LR 20 13 37.8
comp=Z,126nm,18.2s,baz=36,slow=37
EDM Edmonton 84.57 9 IAmb IAmb 19 34 15.9
comp=Z,9.9nm,0.8s
CTA Charters Tower 86.04 121 LR LR 20 16 00.4
comp=Z,45nm,20.7s,baz=242,slow=38
BOSA Boshof 86.96 227 P P 19 34 26.3 -0.4
comp=Z,4.3nm,0.9s,baz=69,slow=6.9,SNR=4.9
BOSA LR LR 20 13 56.3
comp=Z,48nm,20.4s,baz=14,slow=36
comp=Z,4.3nm,0.9s
ULM Lac du Bonnet 88.33 358 P P 19 34 32.8 -0.2
comp=Z,7.0nm,1.0s,baz=332,slow=3.1,SNR=8.3
ULM LR LR 20 18 57.0
comp=Z,138nm,18.1s,baz=10,slow=39
comp=Z,7.0nm,1.0s
NEW Newport 88.92 12 P P 19 34 36.3 +0.4
comp=Z,3.5nm,0.9s,baz=335,slow=2.1,SNR=6.9
comp=Z,3.5nm,0.9s
SADO Sadowa 92.06 346 LR LR 20 19 05.7
comp=Z,118nm,18.1s,baz=318,slow=37
SUR Sutherland 92.30 227 LR LR 20 18 01.9
comp=Z,44nm,19.0s,baz=25,slow=37
M65A Busby, Falmout 93.22 339 P P 19 34 53.4 -2.5
baz=21
FLWY Flagg Ranch 93.88 9 IAmb IAmb 19 35 03.3
comp=Z,5.9nm,0.8s
YBH Yreka Blue Hor 94.14 18 LR LR 20 24 58.6
comp=Z,6.8nm,20.1s,baz=353,slow=40
PDAR Pinedale Array 95.31 8 P P 19 35 05.7 -0.1
comp=Z,1.1nm,0.8s,baz=31,slow=3.5,SNR=8.7
PDAR LR LR 20 22 36.8
comp=Z,63nm,18.2s,baz=356,slow=38
comp=Z,1.1nm,0.8s
ELK Elko 96.55 12 P P 19 35 12.5 +1.0
comp=Z,1.2nm,0.7s,baz=305,slow=4.2,SNR=6.3
ELK LR LR 20 23 18.2
comp=Z,92nm,20.5s,baz=1.5,slow=38
comp=Z,1.2nm,0.7s
NVAR Mina Array Bea 98.25 15 P Pdif 19 35 20.1 +0.9
comp=Z,0.9nm,0.7s,baz=327,slow=1.9,SNR=5.1
NVAR LR LR 20 26 26.7
comp=Z,69nm,18.0s,baz=48,slow=40
comp=Z,0.9nm,0.7s
NVL N'lazarevskaya 122.57 202 *e*PKIKP PKPdf 19 40 31.0 -4.7
NVL pmax pmax
comp=Z,21nm,1.5s
TROLL Troll, Antarti 125.78 202 PKPdf PKiKP 19 40 42.4 -0.1
VNA2 Neumayer--Watz 128.34 205 ||PKPdf PKPdf 19 40 47.1 +0.3
comp=Z,3.9nm,0.4s,baz=32,slow=4.4
VNA3 Neumayer Olymp 129.14 205 ||PKPdf PKPdf 19 40 47.9 -0.5
comp=Z,2.8nm,0.7s
PPT2 Papeete2 130.64 77 *e*LR LR 20 22 12.0
comp=Z,117nm,31.5s
PPT2 *e*LR LR 20 22 27.9
comp=Z,61nm,22.8s

QSPA South Pole Qui 131.54 180 PKP PKPdf 19 40 52.5 -0.5
comp=Z,2.0nm,0.8s,baz=307,slow=0.7,SNR=4.1
CPUP Villa Florida 142.67 281 PKP PKPdf 19 41 13.8 -1.0
comp=Z,0.5nm,0.5s,baz=95,slow=4.6,SNR=3.0
LPAZ La Paz 143.36 305 PKP PKPdf 19 41 16.0 -1.1
comp=Z,1.2nm,0.8s,baz=48,slow=4.7,SNR=4.2

IDC ***22*** *19:26:04.0±5.6, 4°.59S×151°.94E, h71km±47km, mb3.7/6, mbtmp4.1/7, ML2.2/1, MS3.1/2, Error ellipse: s-maj=37.5km s-min=24.5km az=27.0*

ISC 22 19:26:00.7±1.4, **4°.4S**±0°.1×**152°.0E**±0°.2, **h35**km, **n10**, σ**2s35/9, mb3.9/6, New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.90**	**224**	P	**Pn**	**19 27 39.7**	**+0.4**
	2.9nm,0.3s,baz=35,slow=6.1,SNR=20						
PMG				S	**Sn**	**19 28 58.8**	**+2.2**
	15nm,0.8s,baz=23,slow=15,SNR=2.0						
	59nm,0.8s						
HNR	**Honiara**	**9.32**	**123**	LR	LR	19 31 32.3	
	comp=Z,7.8nm,21.3s,baz=0.5,slow=35						
CTA	**Charters Tower**	**16.54**	**199**	LR	LR	19 35 06.4	
	comp=Z,62nm,21.0s,baz=45,slow=33						
SIJI	**Sorong**	**21.01**	**279**	P	**P**	**19 30 41.3**	**-0.2**
	7.4nm,1.1s,baz=36,slow=23,SNR=1.9						
	7.4nm,1.1s						
DZM	**Mont Dzumac**	**22.44**	**143**	P	**P**	**19 30 56.8**	**0.0**
	5.0nm,0.6s,baz=260,slow=5.0,SNR=8.0						
	5.0nm,0.6s						
WRA	**Warramunga Arr**	**23.11**	**227**	P	**P**	**19 31 01.0**	**-2.8**
	8.4nm,1.1s,baz=42,slow=9.1,SNR=17						
	8.4nm,1.1s						
ASAR	**Alice Springs**	**25.90**	**221**	P	**P**	**19 31 27.4**	**-2.2**
	1.7nm,0.5s,baz=57,slow=9.0,SNR=43						
ASAR				LR	LR	19 41 20.4	
	comp=Z,46nm,18.8s,baz=52,slow=36						
	1.7nm,0.5s						
FITZ	**Fitzroy Crossi**	**29.14**	**240**	P	**P**	**19 31 58.0**	**-0.8**
	1.2nm,0.8s,baz=46,slow=9.0,SNR=1.9						
	1.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**57.00**	**295**	P	**P**	**19 35 43.0**	**-0.4**
	1.1nm,0.9s,baz=103,slow=5.8,SNR=7.3						
	1.1nm,0.9s						
TORD	**Torodi Ar. Bea**	**149.43**	**288**	PKPbc	**PKPdf**	**19 45 46.6**	**+3.8**
	0.7nm,1.0s,baz=79,slow=1.2,SNR=3.9						

IDC ***22*** *19:32:32.0±1.7, 6°.84S×129°.33E, h145km±20km, mb3.2/2, mbtmp3.6/7, MS2.5/1, Error ellipse: s-maj=34.9km s-min=14.7km az=104.0*

ISC 22 19:32:30.7±0.9, **7°.04S**±0°.06×**129°.43E**±0°.10, **h139**km, **n7**, σ**3s23/12, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.39**	**17**	P	**Pn**	**19 34 03.3**	**+0.7**
	1.9nm,0.3s,baz=210,slow=20,SNR=24						
SIJI				S	**Sn**	**19 35 11.2**	**-3.3**
	3.8nm,0.3s,baz=216,slow=19,SNR=8.4						
SIJI				LR	LR	19 37 09.9	
	comp=Z,47nm,21.6s,baz=184,slow=44						
BATI	**Baumata**	**6.51**	**241**	P	**Pn**	**19 34 07.2**	**+2.9**
	15nm,0.5s,baz=145,slow=3.0,SNR=13						
BATI				S	**Sn**	**19 35 15.2**	**-2.2**
	15nm,0.4s,baz=63,slow=11,SNR=12						
FITZ	**Fitzroy Crossi**	**11.60**	**198**	P	**Pn**	**19 35 13.4**	**+1.3**
	0.8nm,0.4s,baz=22,slow=11,SNR=12						
FITZ				S	**Sn**	**19 37 13.8**	**-6.3**
	2.3nm,0.5s,baz=98,slow=19,SNR=3.5						
WRA	**Warramunga Arr**	**13.69**	**160**	P	**Pn**	**19 35 41.2**	**+2.1**
	0.5nm,0.3s,baz=334,slow=12,SNR=11						
WRA				S	**Sn**	**19 38 09.1**	**-1.5**
	0.8nm,0.6s,baz=328,slow=25,SNR=6.9						
ASAR	**Alice Springs**	**17.09**	**166**	P	**Pn**	**19 36 25.5**	**+4.2**
	0.6nm,0.7s,baz=338,slow=9.3,SNR=4.5						
ASAR				S	**S**	**19 39 30.5**	**-1.4**
	0.2nm,0.4s,baz=322,slow=23,SNR=5.0						
MKAR	**Makanchi Array**	**67.94**	**327**	P	**P**	**19 43 13.9**	**-0.7**
	0.3nm,0.4s,baz=118,slow=7.5,SNR=10						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**72.24**	**329**	P	**P**	**19 43 40.0**	**-0.6**
	0.2nm,0.5s,baz=129,slow=5.2,SNR=4.5						
	0.2nm,0.5s						

SOME ***22*** *19:35:28.9, 42°.02N×79°.10E, h5km*
NNC ***22*** *19:35:29.1±0.9, 42°.03N×79°.17E, h0km, mb3.4, mpv3.2, Error ellipse: s-maj=5.7km s-min=3.4km az=156.0*
KRNET ***22*** *19:35:29.1±0.1, 42°.02N×79°.13E, mb2.6*

ISC 22 19:35:28.9±1.9, **42°.04N**±0°.06×**79°.13E**±0°.06, **h2**km±11km, **n26**, σ**0°76/44, 6C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**1.04**	**253**	⇑*i*P	**Pg**	**19 35 48.3**	**-0.5**
TARG				⇑*i*S	**Sg**	**19 36 02.5**	**+0.3**
UZB	**Uzynbulak**	**1.11**	**356**	P	**Pg**	**19 35 49.9**	**-0.3**
	5.6nm,0.2s						
UZB				S	**Sb**	**19 36 05.4**	**-0.6**
	7.5nm,0.2s						
UZB	**Uzynbulak**	**1.11**	**356**	*e*P	**Pg**	**19 35 50.0**	**-0.3**
	5.3nm,0.2s						
UZB				*e*S	**Sb**	**19 36 05.4**	**-0.6**
	2.7nm,0.1s						
SHLS	**Shalkode**	**1.15**	**12**	P	**Pn**	**19 35 52.7**	**+0.5**
	8.4nm,0.1s						
SHLS				S	**Sn**	**19 36 09.9**	**+1.4**
	23nm,0.3s						
SHLS	**Shalkode**	**1.15**	**12**	*e*P	**Pn**	**19 35 52.7**	**+0.5**
	8.4nm,0.1s						
SHLS				*e*S	**Sn**	**19 36 09.9**	**+1.4**
	23nm,0.3s						
SATY	**Saty**	**1.16**	**333**	P	**Pb**	**19 35 51.0**	**-0.7**
	4.7nm,0.2s						
SATY				S	**Sn**	**19 36 07.6**	**-1.1**
	24nm,0.1s						
SATY	**Saty**	**1.16**	**333**	*e*P	**Pb**	**19 35 51.2**	**-0.4**
	4.6nm,0.1s						
SATY				*e*S	**Sn**	**19 36 07.6**	**-1.1**
	24nm,0.1s						
KDJ	**Kajisay**	**1.46**	**274**	⇓*i*P	**Pn**	**19 35 55.6**	**-0.8**
KDJ				⇓*i*S	**Sn**	**19 36 14.8**	**-1.4**
KPKS	**Kokpek**	**1.47**	**347**	P	**Pb**	**19 35 56.6**	**-0.4**
	0.2nm,0.2s						
KPKS				S	**Sg**	**19 36 17.4**	**+1.4**
	10nm,0.2s						
KPKS	**Kokpek**	**1.47**	**347**	*e*P	**Pb**	**19 35 57.1**	**+0.1**
	0.1nm,0.1s						
KPKS				*e*S	**Sg**	**19 36 17.4**	**+1.4**
	4.6nm,0.1s						
TNSS	**Tian-Shan**	**1.90**	**303**	Pg	**Pb**	**19 36 04.7**	**+0.1**
	1.2nm,0.2s						
TNSS				Lg	Lg	19 36 30.5	
	2.7nm,0.3s						
TNSS	**Tian-Shan**	**1.90**	**303**	*e*P	**Pb**	**19 36 04.7**	**+0.1**
	1.2nm,0.2s						
TNSS				*e*S	**Sg**	**19 36 30.5**	**+0.5**
	4.0nm,0.2s						
MDOK	**Medeo**	**1.91**	**307**	Pg	**Pb**	**19 36 04.2**	**-0.3**
	3.8nm,0.2s						
MDOK				Lg	Lg	19 36 29.7	
	22nm,0.4s						
KOTS	**Kotyrbulak**	**1.91**	**309**	Pg	**Pb**	**19 36 05.1**	**+0.5**
	4.3nm,0.3s						
KOTS				Lg	Lg	19 36 31.0	
	18nm,0.2s						
KOTS	**Kotyrbulak**	**1.91**	**309**	*e*P	**Pb**	**19 36 05.1**	**+0.5**
	6.2nm,0.2s						
KOTS				*e*S	**Sg**	**19 36 31.0**	**+0.7**
	18nm,0.2s						
IZV	**Izvestkoviy**	**2.11**	**299**	Pg	**Pb**	**19 36 08.5**	**+0.5**
	8.6nm,0.2s						
IZV				Lg	Lg	19 36 36.1	
	22nm,0.3s						
IZV	**Izvestkoviy**	**2.11**	**299**	*e*P	**Pb**	**19 36 08.5**	**+0.5**
	8.6nm,0.2s						
IZV				*e*S	**Sg**	**19 36 37.0**	**+0.2**
	22nm,0.3s						
BLB	**Baldybastay**	**2.12**	**347**	Pg	**Pb**	**19 36 08.5**	**+0.4**
	25nm,0.3s						
BLB				Lg	Lg	19 36 37.7	
	29nm,0.3s						
ULHL	**Ulahol**	**2.16**	**277**	⇓*i*P	**Pn**	**19 36 06.6**	**+0.5**
ULHL				⇓*i*S	**Sn**	**19 36 33.8**	**+0.2**
KNOS	**Konyrlen**	**2.32**	**1**	Pg	**Pb**	**19 36 11.6**	**0.0**

	5.9nm,0.1s								
KNOS					Lg		Lg		19 36 43.2
	9.2nm,0.2s								
DJR	**Jarkent**	**2.34**	**12**		Pg		**Pb**	**19 36 11.6**	**-0.3**
	7.0nm,0.2s								
DJR					Lg		Lg		19 36 42.6
	7.8nm,0.3s								
DJR	**Jarkent**	**2.34**	**12**		*eP*		**Pb**	**19 36 11.6**	**-0.3**
	5.7nm,0.2s								
DJR					*eS*		**Sg**	**19 36 42.6**	**-1.7**
	7.8nm,0.3s								
BOOM	**Boomskoye usch**	**2.41**	**282**	⇑	*iP*		**Pn**	**19 36 10.0**	**+0.4**
BOOM				⇑	*iS*		**Sn**	**19 36 39.9**	**+0.1**
NRN	**Naryn**	**2.42**	**257**	⇑	*iP*		**Pn**	**19 36 10.3**	**+0.5**
NRN				⇑	*iS*		**Sn**	**19 36 40.4**	**+0.2**
KST	**Kastek**	**2.55**	**294**		Pg		**Pb**	**19 36 16.4**	**+0.9**
	3.2nm,0.3s								
KST					Lg		Lg		19 36 50.6
	20nm,0.4s								
KST	**Kastek**	**2.55**	**294**		*eP*		**Pb**	**19 36 16.4**	**+0.9**
	3.3nm,0.4s								
KST					*eS*		**Sg**	**19 36 50.5**	**-0.2**
	20nm,0.4s								

*IDC **22** 20:14:38.7±2.2,6°.63S×129°.97E,h124km±29km,mb2.8/1, mbtmp3.5/5,MS2.9/1,Error ellipse: s-maj=40.9km s-min=20.9km az=96.0*

ISC 22 20:14:37.7±0.9,6°.67S±0°.06×130°.1E±0°.1,h146km,n7, σ3ᵖ54/11,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.87**	**11**	P	**Pn**	**20 16 03.3**	**+0.5**
	2.5nm,0.4s,baz=166,slow=5.4,SNR=18						
SIJI				S	**Sn**	**20 17 03.9**	**-5.3**
	10nm,0.2s,baz=210,slow=21,SNR=15						
BATI	**Baumata**	**7.29**	**241**	P	**Pn**	**20 16 22.1**	**+0.4**
	2.7nm,0.3s,baz=58,slow=19,SNR=2.0						
BATI				S	**Sn**	**20 17 42.3**	**-1.0**
	9.6nm,0.4s,baz=90,slow=20,SNR=8.0						
FITZ	**Fitzroy Crossi**	**12.17**	**201**	P	**Pn**	**20 17 27.3**	**+0.8**
	0.8nm,0.4s,baz=21,slow=12,SNR=12						
FITZ				S	**Sn**	**20 19 34.6**	**-6.3**
	1.4nm,0.3s,baz=339,slow=22,SNR=9.6						
WRA	**Warramunga Arr**	**13.82**	**163**	P	**Pn**	**20 17 49.1**	**+1.5**
	0.2nm,0.3s,baz=338,slow=13,SNR=14						
WRA				S	**Sn**	**20 20 18.7**	**-2.0**
	0.4nm,0.3s,baz=339,slow=21,SNR=7.0						
ASAR	**Alice Springs**	**17.29**	**168**	P	**Pn**	**20 18 34.3**	**+3.9**
	0.6nm,0.6s,baz=353,slow=12,SNR=12						
ASAR				S	**S**	**20 21 41.5**	**-0.9**
	0.1nm,0.4s,baz=359,slow=28,SNR=1.0						
GUMO	**Guam**	**24.89**	**36**	LR	LR	20 31 57.8	
	comp=Z,22nm,18.1s,baz=152,slow=42						
MKAR	**Makanchi Array**	**68.01**	**327**	P	**P**	**20 25 23.9**	**+2.7**
	0.2nm,0.8s,baz=110,slow=7.8,SNR=2.6						
	0.2nm,0.8s						

*MOS **22** 20:20:29.3±0.7,48°.12N×155°.38E,h18km,mb4.1/8,Error ellipse: s-maj=14.1km s-min=4.4km az=74.6*
*SKHL **22** 20:20:31.9±0.6,48°.30N×155°.20E,h26km±3km,mb4.6/4*
*KRSC **22** 20:20:34.5±1.5,48°.52N×156°.14E,h16km±31km,Ml4.4*
*IDC **22** 20:20:36.8±2.7,48°.34N×154°.90E,h66km±25km,mb3.5/12, mbtmp3.8/14,MS3.0/3,Error ellipse: s-maj=22.5km s-min=12.5km az=138.0*

ISC 22 20:20:33.8±0.7,48°.30N±0°.08×155°.21E±0°.07,h35km,n100, σ1ᵖ54/101,mb3.8/17,1C,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.45**	**14**	*e*PN	**Pn**	**20 21 14.7**	**+3.5**
SKR				pmax	pmax		
	comp=Z,52nm,0.5s						
SKR	**Severo-Kuril's**	**2.45**	**14**	*eP*	**Pn**	**20 21 10.3**	**-1.0**
SKR				*eS*	**Sn**	**20 21 38.0**	**-2.0**
SKR	**Severo-Kuril's**	**2.45**	**14**	*eP*	**Pn**	**20 21 10.5**	**-0.7**
SKR				AMB	AMB	20 21 16.9	
	comp=Z,80nm,0.4s						
SKR				*eS*	**Sn**	**20 21 39.0**	**-1.0**
SKR				A	A	20 21 43.9	
	comp=Z,270nm,0.4s						
SKR				A	A	20 21 43.9	
	comp=Z,230nm,0.4s						
PAU	**Pauzhetka**	**3.33**	**18**	PN	**Pn**	**20 21 23.4**	**+0.1**
PAU	**Pauzhetka**	**3.33**	**18**	*eP*	**Pn**	**20 21 23.4**	**+0.1**
PAU				*eS*	**Sn**	**20 22 00.9**	**-0.7**
PAU	**Pauzhetka**	**3.33**	**18**	*eP*	**Pn**	**20 21 23.6**	**+0.3**
PAU				AMB	AMB	20 21 38.3	
	comp=Z,90nm,0.5s						
PAU				*eS*	**Sn**	**20 22 02.2**	**+0.6**
PAU				A	A	20 22 13.4	
	comp=Z,320nm,0.6s						
PAU				A	A	20 22 13.4	
	comp=Z,330nm,0.6s						
KDTR	**Khodutka, Kamc**	**3.96**	**27**	PN	**Pn**	**20 21 32.2**	**+0.2**
KDTR	**Khodutka, Kamc**	**3.96**	**27**	*eP*	**Pn**	**20 21 32.3**	**+0.2**
KDTR				*eS*	**Sn**	**20 22 14.0**	**-3.2**
KDTR	**Khodutka, Kamc**	**3.96**	**27**	*eP*	**Pn**	**20 21 32.2**	**+0.2**
MIPR	**Malaya Ipel'ka**	**4.10**	**13**	PN	**Pn**	**20 21 35.1**	**+1.3**
MIPR	**Malaya Ipel'ka**	**4.10**	**13**	*eP*	**Pn**	**20 21 35.2**	**+1.3**
ASAK	**Asacha**	**4.43**	**22**	PN	**Pn**	**20 21 39.4**	**+0.9**
ASAK	**Asacha**	**4.43**	**22**	*eP*	**Pn**	**20 21 39.5**	**+0.9**
MTVR	**Mutnovka**	**4.59**	**23**	PN	**Pn**	**20 21 41.5**	**+0.7**
MTVR	**Mutnovka**	**4.59**	**23**	*eP*	**Pn**	**20 21 41.6**	**+0.7**
GRL	**Gorelyy**	**4.63**	**22**	PN	**Pn**	**20 21 42.1**	**+0.8**
GRL	**Gorelyy**	**4.63**	**22**	*eP*	**Pn**	**20 21 42.1**	**+0.8**
RUS	**Russkaya**	**4.64**	**26**	PN	**Pn**	**20 21 40.8**	**-0.5**
RUS	**Russkaya**	**4.64**	**26**	*eP*	**Pn**	**20 21 40.8**	**-0.5**
APC	**Apacha**	**4.79**	**14**	PN	**Pn**	**20 21 46.0**	**+2.7**
APC	**Apacha**	**4.79**	**14**	*eP*	**Pn**	**20 21 46.0**	**+2.7**
KRMR	**Karymshinskiy**	**4.90**	**21**	PN	**Pn**	**20 21 45.6**	**+0.8**
KRMR	**Karymshinskiy**	**4.90**	**21**	*eP*	**Pn**	**20 21 45.6**	**+0.8**
KRMR	**Karymshinskiy**	**4.90**	**21**	*eP*	**Pn**	**20 21 45.6**	**+0.8**
PEA0B	**Petropavlovsk-**	**5.06**	**17**	*i*P	**Pn**	**20 21 47.4**	**+0.3**
PETK	**Petropavlovsk-**	**5.06**	**17**	P	**Pn**	**20 21 48.8**	**+1.7**
	comp=Z,13nm,0.7s,baz=166,slow=14,SNR=23						
PETK				S	**Sn**	**20 22 49.8**	**+5.4**
	comp=Z,7.2nm,0.8s,baz=168,slow=16,SNR=0.8						
PETK				LR	LR	20 24 02.5	
	comp=Z,139nm,19.3s,baz=154,slow=40						
PET	**Petropavlovsk**	**5.21**	**24**	*e*PN	**Pn**	**20 21 51.7**	**+2.6**
PET				pmax	pmax		
	comp=Z,20nm,0.6s						
PET	**Petropavlovsk**	**5.21**	**24**	*eP*	**Pn**	**20 21 49.5**	**+0.4**
PET				AMB	AMB	20 21 56.6	
	comp=Z,20nm,0.4s						
PET				*eS*	**Sn**	**20 22 48.2**	**+0.4**
PET				A	A	20 23 06.9	
	comp=Z,70nm,0.5s						
PET				A	A	20 23 06.9	
	comp=Z,40nm,0.5s						
DALK	**Dalny**	**5.24**	**24**	PN	**Pn**	**20 21 50.1**	**+0.6**
DALK	**Dalny**	**5.24**	**24**	*eP*	**Pn**	**20 21 50.2**	**+0.6**
DALK				*eS*	**Sn**	**20 22 45.6**	**-3.0**
UGLR	**Uglovaya**	**5.42**	**24**	PN	**Pn**	**20 21 53.3**	**+1.2**
UGLR	**Uglovaya**	**5.42**	**24**	*eP*	**Pn**	**20 21 53.4**	**+1.2**
KOK	**Koryaka**	**5.45**	**22**	PN	**Pn**	**20 21 54.2**	**+1.8**
KOK	**Koryaka**	**5.45**	**22**	*eP*	**Pn**	**20 21 54.2**	**+1.8**
KOK	**Koryaka**	**5.45**	**22**	*eP*	**Pn**	**20 21 54.2**	**+1.8**
AVH	**Avacha**	**5.45**	**23**	PN	**Pn**	**20 21 54.0**	**+1.6**
AVH	**Avacha**	**5.45**	**23**	*eP*	**Pn**	**20 21 54.0**	**+1.6**
AVH	**Avacha**	**5.45**	**23**	*eP*	**Pn**	**20 21 54.0**	**+1.6**
SMAR	**Somma**	**5.46**	**23**	PN	**Pn**	**20 21 54.2**	**+1.5**
SMAR	**Somma**	**5.46**	**23**	*eP*	**Pn**	**20 21 54.3**	**+1.5**
KRER	**Koryakskii**	**5.49**	**23**	PN	**Pn**	**20 21 53.9**	**+0.9**
KRER	**Koryakskii**	**5.49**	**23**	*eP*	**Pn**	**20 21 54.0**	**+0.9**
SDLR	**Sedlovina**	**5.50**	**24**	PN	**Pn**	**20 21 54.2**	**+1.1**
SDLR	**Sedlovina**	**5.50**	**24**	*eP*	**Pn**	**20 21 54.3**	**+1.1**
KRX	**Arik**	**5.51**	**22**	PN	**Pn**	**20 21 54.9**	**+1.6**
KRX	**Arik**	**5.51**	**22**	*eP*	**Pn**	**20 21 54.9**	**+1.6**
SPN	**Mys Shipunski**	**5.69**	**31**	*eS*	**Sn**	**20 22 56.7**	**-3.0**
KUR	**Kuril'sk**	**5.91**	**241**	PN	**Pn**	**20 21 59.2**	**+0.5**
KUR				pmax	pmax		
	comp=Z,59nm,0.4s						
KUR	**Kuril'sk**	**5.91**	**241**	*eP*	**Pn**	**20 21 59.2**	**+0.5**
KUR				AMB	AMB	20 21 59.4	
	comp=Z,50nm,0.4s						
KUR				*eS*	**Sn**	**20 23 04.3**	**-0.8**
KUR				A	A	20 23 07.5	
	comp=Z,80nm,0.5s						
KUR				A	A	20 23 07.5	
	comp=Z,50nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**7.77**	**240**	*i* PN	**Pn**	**20 22 25.3**	**+1.1**
YUK	**Yuzh-Kuril'sk**	**7.77**	**240**	*e*P	**Pn**	**20 22 25.3**	**+1.1**
YSS	**Yuzhno-Sakhali**	**8.52**	**266**	*e*PN	**Pn**	**20 22 34.8**	**+0.2**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YSS				MLR	MLR		
	comp=Z,200nm,13.0s						
YSS	**Yuzhno-Sakhali**	**8.52**	**266**	*eP*	**Pn**	**20 22 35.0**	**+0.4**
YSS				*eS*	**Sn**	**20 24 07.9**	**-1.5**
YYV	**Tymovskoe**	**8.55**	**292**	*eP*	**Pn**	**20 22 36.1**	**+1.2**
KBTR	**Krutoberegovo**	**9.18**	**28**	PN	**Pn**	**20 22 43.3**	**-0.2**
KBTR	**Krutoberegovo**	**9.18**	**28**	*eP*	**Pn**	**20 22 43.4**	**-0.2**
JKA	**Kamikawa-asahi**	**9.69**	**249**	*eP*	**Pn**	**20 22 51.2**	**+0.6**
ASAJ	**Asahikawa**	**9.69**	**249**	P	**Pn**	**20 22 51.2**	**+0.5**
	comp=Z,11nm,0.9s,baz=89,slow=20,SNR=8.9						
NKL	**Nikolayevsk**	**10.40**	**303**	*eP*	**Pn**	**20 23 01.8**	**+1.5**
MA2	**Magadan**	**11.59**	**349**	LR	LR	20 27 00.2	
	comp=Z,76nm,21.8s,baz=164,slow=33						
KLR	**Kul'dur**	**15.49**	**282**	P	**P**	**20 24 11.8**	**-1.6**
	comp=Z,1.7nm,0.6s,baz=90,slow=10,SNR=7.6						
KLR				LR	LR	20 29 37.9	
	comp=Z,60nm,20.9s,baz=84,slow=35						
KLR	**Kul'dur**	**15.49**	**282**	*i* P	**Pn**	**20 24 11.3**	**+1.9**
USRK	**Ussuriysk Ar.**	**16.56**	**264**	P	**P**	**20 24 25.2**	**-0.1**
	comp=Z,2.4nm,0.5s,baz=69,slow=15,SNR=4.3						
HEH	**HeiHe**	**18.20**	**287**	*eP*	**P**	**20 24 43.5**	**+0.1**
HEH				pmax	pmax		
	comp=Z,7.0nm,1.1s						
YAK	**Yakutsk**	**19.85**	**323**	*i* P	**P**	**20 25 00.6**	**-0.7**
YAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BILL	**Bilibino**	**20.57**	**12**	*i* P	**P**	**20 25 08.7**	**-0.4**
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KSRS	**Korea Array**	**22.63**	**251**	P	**P**	**20 25 31.4**	**0.0**
	comp=Z,1.9nm,0.7s,baz=49,slow=10,SNR=8.9						
	comp=Z,1.9nm,0.7s						
KSRS	**Korea Array**	**22.63**	**251**	*eP*	**P**	**20 25 31.8**	**+0.3**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KSRS	**Korea Array**	**22.63**	**251**	*eP*	**P**	**20 25 31.8**	**+0.3**
H11N2	**WAKE ISLAND Hy**	**30.03**	**158**	T	T	20 58 25.2	
	baz=345,slow=76,SNR=45						
H11N1	**WAKE ISLAND Hy**	**30.05**	**158**	T	T	20 58 20.0	
	baz=345,slow=76,SNR=81						
H11N3	**WAKE ISLAND Hy**	**30.05**	**158**	T	T	20 58 22.9	
	baz=345,slow=76,SNR=42						
H11S1	**WAKE ISLAND Hy**	**31.16**	**159**	T	T	20 59 46.8	
	baz=345,slow=76,SNR=767						
H11S3	**WAKE ISLAND Hy**	**31.17**	**159**	T	T	20 59 47.3	
	baz=345,slow=76,SNR=750						
H11S2	**WAKE ISLAND Hy**	**31.18**	**159**	T	T	20 59 44.6	
	baz=345,slow=76,SNR=582						
ILAR	**Eielson Array**	**34.45**	**40**	P	**P**	**20 27 17.6**	**0.0**
	comp=Z,0.5nm,0.8s,baz=275,slow=7.3,SNR=3.0						
	comp=Z,0.5nm,0.8s						
NRIK	**Noril'sk**	**38.18**	**328**	*i* P	**P**	**20 27 51.2**	**+1.8**
NRIK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MKAR	**Makanchi Array**	**47.49**	**297**	P	**P**	**20 29 01.8**	**-3.3**
	comp=Z,0.4nm,0.5s,baz=61,slow=6.8,SNR=7.7						
	comp=Z,0.4nm,0.5s						
KURK	**Kurchatov**	**47.69**	**303**	*i* P	**P**	**20 29 07.4**	**+0.9**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURK	**Kurchatov**	**47.69**	**303**	*eP*	**P**	**20 29 07.4**	**+0.9**
KURBB	**Kurchatov Arra**	**47.79**	**303**	P	**P**	**20 29 04.6**	**-2.7**
	comp=Z,0.5nm,0.6s,baz=67,slow=8.4,SNR=5.5						
	comp=Z,0.5nm,0.6s						
YKA	**Yellowknife Ar**	**48.83**	**38**	P	**P**	**20 29 15.5**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=298,slow=7.5,SNR=5.4						
	comp=Z,0.3nm,0.5s						
YKA	**Yellowknife Ar**	**48.83**	**38**	*eP*	**P**	**20 29 16.2**	**+1.1**
BVAR	**Borovoye Array**	**50.97**	**309**	P	**P**	**20 29 29.4**	**-2.1**
	comp=Z,0.5nm,0.5s,baz=56,slow=8.8,SNR=5.3						
	comp=Z,0.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**54.11**	**257**	P	**P**	**20 29 55.1**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=46,slow=7.0,SNR=4.9						
	comp=Z,0.5nm,0.4s						
CMAR	**Chiang Mai Arr**	**54.11**	**257**	*i* P	**P**	**20 29 56.7**	**+1.5**
PDAR	**Pinedale Array**	**62.69**	**56**	P	**P**	**20 30 56.1**	**+1.0**
	comp=Z,0.9nm,0.8s,baz=318,slow=2.0,SNR=7.0						
	comp=Z,0.9nm,0.8s						
FINES	**FINESS Array B**	**63.23**	**335**	P	**P**	**20 30 58.4**	**+0.4**
	comp=Z,4.2nm,1.2s,baz=20,slow=6.1,SNR=5.0						
	comp=Z,4.2nm,1.2s						
FINES	**FINESS Array B**	**63.23**	**335**	*eP*	**P**	**20 31 00.2**	**+2.2**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
OBN	**Obninsk**	**64.82**	**326**	⇑ *e*P	**P**	**20 31 07.6**	**-0.9**
OBN				*e*		20 31 44.3	
OBN				*e*		20 33 34.5	
OBN				*e*S	**S**	**20 39 41.2**	**-5.4**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,162nm,18.0s						
WRA	**Warramunga Arr**	**70.46**	**201**	P	**P**	**20 31 43.2**	**-1.2**
	comp=Z,1.4nm,0.7s,baz=15,slow=6.3,SNR=17						
	comp=Z,1.4nm,0.7s						
KIV	**Kislovodsk**	**70.72**	**315**	*eP*	**P**	**20 31 45.9**	**-0.1**
KIV				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KIV	**Kislovodsk**	**70.72**	**315**	*eP*	**P**	**20 31 45.9**	**-0.1**
KBZ	**Khabaz**	**70.79**	**315**	*i* P	**P**	**20 31 46.8**	**+0.5**
KBZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KBZ	**Khabaz**	**70.79**	**315**	*eP*	**P**	**20 31 46.8**	**+0.5**
ASAR	**Alice Springs**	**74.15**	**200**	P	**P**	**20 32 06.0**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=18,slow=5.7,SNR=8.8						
	comp=Z,0.7nm,0.7s						
TXAR	**Lajitas Array**	**75.50**	**62**	P	**P**	**20 32 15.2**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=306,slow=4.5,SNR=16						
	comp=Z,0.9nm,0.7s						
H03N2	**Juan Fernandez**	**137.34**	**90**	T	T	23 12 56.9	
	baz=309,slow=77,SNR=24						
H03N1	**Juan Fernandez**	**137.35**	**90**	T	T	23 12 59.5	
	baz=309,slow=77,SNR=26						
H03N3	**Juan Fernandez**	**137.35**	**90**	T	T	23 12 57.7	
	baz=309,slow=77,SNR=25						

*TRN **22** 20:26:11.2,10°.89N×62°.15W,h90km,MD3.9,North of the Paria peninsula.*
*FUNV **22** 20:26:12.1,10°.94N×61°.72W,h113km,MW3.3,Presumed earthquake*

ISC 22 20:26:14.3±3.3,11°.00N±0°.10×61°.7W±0°.2,h92km±20km, n17,σ1ᵖ19/31,Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DMDM	**Guralp CMG5TDE**	**0.32**	**160**	*eP*	**Pn**	**20 26 27.3**	**-0.8**
DMDM				*eS*	**Sn**	**20 26 38.0**	**-0.4**
PSMG	**Mucurapo Girls**	**0.35**	**158**	*eP*	**Pn**	**20 26 27.6**	**-0.7**
PSMG				*eS*	**Sn**	**20 26 39.0**	**+0.3**
TRN	**Trinidad (W)**	**0.44**	**144**	*eP*	**Pn**	**20 26 28.6**	**-0.2**
TRN				*eS*	**Sn**	**20 26 40.6**	**+1.0**
TRN	**Trinidad (W)**	**0.44**	**144**	*eP*	**Pn**	**20 26 28.9**	**+0.1**
TRN				*eS*	**Sn**	**20 26 41.2**	**+1.6**
GRFF	**Grenada Fort F**	**1.04**	**356**	*eP*	**Pn**	**20 26 33.1**	**-1.7**
GRFF				*eS*	**Sn**	**20 26 49.2**	**-0.8**
GRGR	**Grenville**	**1.12**	**1**	*eP*	**Pn**	**20 26 34.6**	**-1.0**
GRGR				*eS*	**Sn**	**20 26 52.0**	**+0.3**
GRGR	**Grenville**	**1.12**	**1**	*eP*	**Pn**	**20 26 34.8**	**-0.8**
GRGR				*eS*	**Sn**	**20 26 51.9**	**+0.3**
GRW	**Mount Saint Ca**	**1.15**	**0**	*eP*	**Pn**	**20 26 36.3**	**+0.2**
GRW				*eS*	**Sn**	**20 26 54.1**	**+1.8**
GRSS	**Sisters**	**1.29**	**2**	*eP*	**Pn**	**20 26 37.1**	**-0.5**
GRSS				*eS*	**Sn**	**20 26 56.5**	**+1.4**
SVB	**Belmont**	**2.29**	**10**	*eP*	**Pn**	**20 26 49.5**	**-1.0**
SVB				*eS*	**Sn**	**20 27 16.7**	**-1.5**
SVB	**Belmont**	**2.29**	**10**	*eP*	**Pn**	**20 26 50.1**	**-0.4**
SVB				*eS*	**Sn**	**20 27 19.6**	**+1.4**
MCLT	**Moule a Chique**	**2.78**	**15**	*eP*	**Pn**	**20 26 57.7**	**+0.6**
MCLT				*eS*	**Sn**	**20 27 32.5**	**+2.7**
BBGH	**Gun Hill**	**2.96**	**44**	*eP*	**Pn**	**20 26 57.5**	**-1.9**
SLAC	**Saint Lucia, A**	**2.97**	**15**	*eP*	**Pn**	**20 27 00.3**	**+0.7**
SLBI	**Saint Lucia, B**	**3.08**	**13**	*eP*	**Pn**	**20 26 58.9**	**-2.1**
SLBI				*eS*	**Sn**	**20 27 37.6**	**+0.7**
BIM	**Bigot**	**3.54**	**9**	*eP*	**Pn**	**20 27 07.8**	**+0.5**
BIM				*eS*	**Sn**	**20 27 47.8**	**-0.4**
DSLB	**Salisbury**	**4.42**	**3**	x	**Pn**	**20 27 19.2**	**+0.1**

DJA 22 20:27:05.2±0.3,7°S±6°×10°7E±°,h91km±4km,M3.8/32, mB5.5/1,mb4.4/4,MLv3.5/32,Mw(mB)5.0/1,Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBJI	**Bungbulang**	**0.68**	**94**	P	**Pn**	**20 27 22.7**	**+1.1**
LEM	**Lembang**	**0.86**	**48**	P	**Pn**	**20 27 24.8**	**+1.1**
DBJI	**Dramaga**	**0.88**	**346**	P	**Pn**	**20 27 24.3**	**+0.6**
CGJI	**Cibinong**	**1.49**	**302**	P	**Pn**	**20 27 31.9**	**+1.0**
SBJI	**Serang**	**1.53**	**327**	P	**Pn**	**20 27 31.7**	**+0.3**
KPJI	**Karang Pucung**	**1.95**	**88**	P	**Pn**	**20 27 37.5**	**+0.8**
KASI	**Kota Agung**	**3.09**	**307**	P	**Pn**	**20 27 51.4**	**-0.6**
KLSI		**3.50**	**320**	P	**Pn**	**20 27 57.4**	**-0.2**
UGM	**Wanagama**	**3.56**	**98**	P	**Pn**	**20 27 58.1**	**-0.2**
LWLI	**Liwa**	**3.75**	**309**	P	**Pn**	**20 28 01.2**	**+0.3**
MDSI	**Maura Dua**	**4.02**	**316**	P	**Pn**	**20 28 04.4**	**-0.1**
PCJI	**Pacitan**	**4.24**	**101**	P	**Pn**	**20 28 07.5**	**0.0**
MNAI	**Manna**	**5.01**	**307**	P	**Pn**	**20 28 17.8**	**-0.3**
	162nm,1.0s						
EGSI	**Enggano, Bengk**	**5.09**	**293**	P	**Pn**	**20 28 18.9**	**-0.2**
	6µm93nm,0.7s						
JAGI	**Jajag, Banyuwa**	**7.19**	**99**	P	**Pn**	**20 28 47.6**	**-0.1**

*IDC **22** 20:27:51.8±23.0,16°.27N×146°.26E,h455km±183km, mb3.3/12,mbtmp4.1/12,Error ellipse: s-maj=213.5km s-min=27.9km az=172.0*

ISC 22 20:27:50.6±3.5,16°.1N±0°.6×146°.2E±0°.3,h450km,n12, σ0ᵖ60/13,mb3.7/12,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNU	**Nakatsue**	**21.89**	**323**	P	**P**	**20 32 08.8**	**-0.4**
	3.0nm,0.7s,baz=122,slow=10,SNR=1.3						
	3.0nm,0.7s						
KSRS	**Korea Array**	**26.70**	**326**	P	**P**	**20 32 52.0**	**+0.1**
	1.3nm,0.9s,baz=148,slow=11,SNR=3.4						
	1.3nm,0.9s						
SONM	**Songino Array**	**45.47**	**323**	P	**P**	**20 35 28.1**	**0.0**
	0.5nm,0.6s,baz=134,slow=8.3,SNR=6.2						
SONM				PcP	**PcP**	**20 36 57.7**	**-0.3**
	0.1nm,0.5s,baz=145,slow=2.0,SNR=1.5						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**60.36**	**323**	P	**P**	**20 37 16.1**	**+1.4**
	0.5nm,0.5s,baz=106,slow=8.6,SNR=2.5						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**60.62**	**315**	P	**P**	**20 37 16.5**	**-0.1**
	0.6nm,0.4s,baz=93,slow=7.9,SNR=21						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**63.57**	**319**	P	**P**	**20 37 36.1**	**+0.4**
	2.3nm,0.7s,baz=97,slow=6.7,SNR=25						
	2.3nm,0.7s						
NRIK	**Noril'sk**	**64.19**	**340**	P	**P**	**20 37 38.6**	**-0.7**
	1.5nm,0.5s,baz=127,slow=5.6,SNR=3.8						
	1.5nm,0.5s						
ILAR	**Eielson Array**	**65.72**	**26**	P	**P**	**20 37 49.1**	**0.0**
	0.8nm,0.5s,baz=253,slow=5.7,SNR=13						
	0.8nm,0.5s						
BVAR	**Borovoye Array**	**68.78**	**321**	P	**P**	**20 38 09.0**	**+0.7**
	5.2nm,0.6s,baz=98,slow=6.8,SNR=4.0						
	5.2nm,0.6s						
YKA	**Yellowknife Ar**	**80.01**	**28**	P	**P**	**20 39 12.0**	**+0.3**
	0.3nm,0.5s,baz=286,slow=4.9,SNR=4.1						
	0.3nm,0.5s						
FINES	**FINESS Array B**	**89.42**	**335**	P	**P**	**20 39 57.6**	**-0.4**
	1.0nm,0.6s,baz=67,slow=6.1,SNR=5.1						
	1.0nm,0.6s						
HFS	**Hagfors**	**94.94**	**338**	P	**P**	**20 40 23.4**	**-0.1**
	2.1nm,0.7s,baz=45,slow=6.3,SNR=1.7						
	2.1nm,0.7s						

*AFAD **22** 20:28:41.5,38°.40N×39°.17E,h7km±4km,ML2.3*
*ISK **22** 20:28:41.3,38°.38N×39°.18E,h3km,ML2.5/6*

ISC 22 20:28:41.7±1.0,38°.40N±0°.03×39°.17E±0°.03,h9km±7km, n13,σ0ᵖ68/22,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESGZ	**Sivrice-Elazig**	**0.09**	**288**	Pg	**Pg**	**20 28 44.0**	**-0.1**
ESGZ				Sg	**Sg**	**20 28 46.1**	**+0.2**
SVRC	**Sivrice-ELAZID**	**0.11**	**103**	Pg	**Pg**	**20 28 43.8**	**-0.6**
SVRC				Sg	**Sg**	**

PAU					*e*S	**Sn**	**20 31 10.8 -0.3**	
PAU					A	A	20 31 14.3	
	comp=N,210nm,0.4s							
PAU					A	A	20 31 14.3	
	comp=N,140nm,0.4s							
PEA0B	**Petropavlovsk-**	**6.44**	**21**		Pn	**Pn**	**20 30 41.8 +0.8**	
PEA0B	**Petropavlovsk-**	**6.44**	**21**	*i*	PN	**Pn**	**20 30 40.8 -0.3**	
PETK	**Petropavlovsk-**	**6.44**	**21**		P	**Pn**	**20 30 42.8 +1.7**	
	comp=N,1.2nm,0.3s,baz=172,slow=11,SNR=22							
PETK					S	**Sn**	**20 31 57.2 +3.6**	
	comp=N,3.3nm,0.6s,baz=196,slow=14,SNR=1.8							
PETK					LR	LR	20 33 50.8	
	comp=N,98nm,19.5s,baz=303,slow=43							
	comp=N,10nm,0.6s							
PETK	**Petropavlovsk-**	**6.44**	**21**			**Pn**	**20 30 41.9 +0.8**	
YUK	**Yuzh-Kuril'sk**	**6.46**	**244**	*i*	PN	**Pn**	**20 30 44.9 +3.5**	
YUK	**Yuzh-Kuril'sk**	**6.46**	**244**	*e*	P	**Pn**	**20 30 44.9 +3.5**	
PET	**Petropavlovsk**	**6.62**	**26**		Pn	**Pn**	**20 30 44.6 +1.1**	
PET	**Petropavlovsk**	**6.62**	**26**	*e*	Pn	**Pn**	**20 30 46.1 +2.6**	
PET	**Petropavlovsk**	**6.62**	**26**	*e*	P	**Pn**	**20 30 45.3 +1.8**	
PET					*e*S	**Sn**	**20 31 57.1 -0.9**	
YSS	**Yuzhno-Sakhali**	**7.64**	**273**		Pn	**Pn**	**20 30 57.8 +0.3**	
YSS	**Yuzhno-Sakhali**	**7.64**	**273**	*e*	PN	**Pn**	**20 30 59.6 +2.1**	
YSS	**Yuzhno-Sakhali**	**7.64**	**273**	*e*	P	**Pn**	**20 30 59.3 +1.8**	
TYV	**Tymovskoe**	**8.29**	**301**	*e*	PN	**Pn**	**20 31 11.1 +4.7**	
TYV					*e*S	**Sn**	**20 32 41.2 +2.1**	
TYV					pmax	pmax		
	comp=Z,6.0nm,1.1s							
TYV					pmax	pmax		
	comp=Z,100nm,3.7s							
TYV					smax	smax		
	comp=E,300nm,7.0s							
TYV					smax	smax		
	comp=N,5.0nm,0.7s							
TYV					smax	smax		
	comp=E,6.0nm,0.7s							
TYV	**Tymovskoe**	**8.29**	**301**	*e*	P	**Pn**	**20 31 07.1 +0.7**	
TYV				*e*	S	**Sn**	**20 32 35.4 -3.7**	
JKA	**Kamikawa-asahi**	**8.50**	**253**			**Pn**	**20 31 10.6 +1.2**	
ASAJ	**Asahikawa**	**8.50**	**253**		P	**Pn**	**20 31 11.7 +2.3**	
	comp=E,0.9nm,0.3s,baz=57,slow=12,SNR=19							
ASAJ					S	**Sn**	**20 32 50.9 +6.5**	
	comp=E,6.1nm,0.9s,baz=156,slow=20,SNR=1.8							
ASAJ					LR	LR	20 34 04.8	
	comp=E,174nm,21.4s,baz=56,slow=35							
	comp=E,38nm,1.0s							
OKH	**Okha**	**9.50**	**316**	*e*	P	**Pn**	**20 31 23.9 +0.9**	
NKL	**Nikolayevsk**	**10.40**	**310**	*e*	P	**Pn**	**20 31 36.2 +0.9**	
MA2	**Magadan**	**12.59**	**353**		LR	LR	20 36 35.7	
	comp=E,95nm,20.9s,baz=116,slow=36							
SHEM	**Shemya Is, Ala**	**14.12**	**59**		LR	LR	20 39 34.6	
	comp=E,41nm,18.1s,baz=188,slow=44							
KLR	**Kul'dur**	**14.93**	**286**		P	**P**	**20 32 41.5 -1.1**	
	comp=E,2.2nm,0.8s,baz=93,slow=11,SNR=8.8							
KLR					LR	LR	20 38 23.8	
	comp=E,100nm,20.2s,baz=90,slow=37							
KLR	**Kul'dur**	**14.93**	**286**	*ce*	P	**Pn**	**20 32 38.1 +0.9**	
KLR					pmax	pmax		
	comp=Z,3.0nm,2.5s							
KLR	**Kul'dur**	**14.93**	**286**	*e*	P	**Pn**	**20 32 38.1 +0.9**	
USRK	**Ussuriysk Ar.**	**15.61**	**267**		P	**P**	**20 32 49.1 -1.0**	
	comp=Z,2.7nm,0.6s,baz=61,slow=12,SNR=4.5							
MJAR	**Matsushiro Arr**	**15.77**	**233**		P	**P**	**20 32 51.6 -0.3**	
	comp=Z,2.9nm,0.9s,baz=30,slow=9.0,SNR=7.2							
MAJO	**Matsushiro**	**15.77**	**233**	*i*	P	**Pn**	**20 32 48.6 +0.4**	
SEY	**Seymchan**	**15.84**	**357**		P	**Pn**	**20 32 51.0 +2.1**	
	baz=160,slow=12,SNR=1.4							
SEY	**Seymchan**	**15.84**	**357**	*i*	P	**Pn**	**20 32 48.9 -0.1**	
SEY	**Seymchan**	**15.84**	**357**	*e*	P	**Pn**	**20 32 48.9 -0.1**	
HEH	**HeiHe**	**17.74**	**290**	*e*	P	**P**	**20 33 15.1 +1.5**	
HEH					pmax	pmax		
	comp=Z,7.0nm,1.2s							
YAK	**Yakutsk**	**20.29**	**326**		P	**P**	**20 33 41.0 -0.4**	
YAK	**Yakutsk**	**20.29**	**326**	*ce*	P	**P**	**20 33 41.5 0.0**	
YAK					pmax	pmax		
	comp=Z,4.0nm,0.7s							
YAK	**Yakutsk**	**20.29**	**326**	*e*	P	**P**	**20 33 41.5 0.0**	
KSRS	**Korea Array**	**21.45**	**253**		P	**P**	**20 33 54.5 +0.3**	
	comp=Z,2.2nm,0.9s,baz=53,slow=9.7,SNR=6.9							
	comp=Z,2.2nm,0.9s							
BILL	**Bilibino**	**21.88**	**12**	*ce*	P	**P**	**20 34 00.5 +2.0**	
BILL					pmax	pmax		
	comp=Z,8.0nm,1.7s							
JNU	**Nakatsue**	**22.40**	**240**		LR	LR	20 42 19.0	
	comp=Z,47nm,20.7s,baz=31,slow=35							
L14K	**Kuka Creek**	**28.43**	**44**		P	**P**	**20 35 01.8 +1.7**	
L14K					IAmb	IAmb	20 35 37.4	
	comp=Z,14nm,1.4s							
H11N2	**WAKE ISLAND Hy**	**29.33**	**154**		T	T	21 06 42.4	
	baz=341,slow=76,SNR=73							
H11N1	**WAKE ISLAND Hy**	**29.34**	**154**		T	T	21 07 08.0	
	baz=341,slow=76,SNR=57							
H11N3	**WAKE ISLAND Hy**	**29.34**	**154**		T	T	21 07 12.4	
	baz=341,slow=76,SNR=55							
M16K	**Timber Creek**	**30.17**	**45**		P	**P**	**20 35 15.9 +0.3**	
M16K					IAmb	IAmb	20 35 40.4	
	comp=Z,20nm,1.5s							
H11S1	**WAKE ISLAND Hy**	**30.43**	**156**		T	T	21 07 45.0	
	baz=343,slow=76,SNR=231							
H11S3	**WAKE ISLAND Hy**	**30.44**	**156**		T	T	21 07 45.3	
	baz=343,slow=76,SNR=207							
H11S2	**WAKE ISLAND Hy**	**30.45**	**156**		T	T	21 07 47.3	
	baz=343,slow=76,SNR=195							
K17K	**Iditarod**	**30.68**	**42**			**P**	**20 35 19.5 -0.6**	
K17K					IAmb	IAmb	20 35 22.5	
	comp=Z,6.3nm,0.8s							
M17K	**Holitna River**	**30.94**	**45**		P	**P**	**20 35 22.2 -0.1**	
M17K					IAmb	IAmb	20 35 24.9	
	comp=Z,11nm,0.9s							
G18K	**Tagagawik**	**31.12**	**36**		P	**P**	**20 35 23.6 -0.4**	
SONM	**Songino Array**	**31.73**	**289**		LR	LR	20 49 16.6	
	comp=Z,79nm,18.5s,baz=46,slow=38							
SONM	**Songino Array**	**31.73**	**289**	*e*	P	**P**	**20 35 28.9 -0.8**	
SONM					pmax	pmax		
	comp=Z,1.0nm,0.6s							
H19K	**Roundabout Mou**	**31.94**	**37**		P	**P**	**20 35 31.3 +0.2**	
D19K	**Kuna River**	**32.02**	**31**		P	**P**	**20 35 31.6 -0.2**	
J19K	**Poorman**	**32.05**	**40**		P	**P**	**20 35 32.5 +0.4**	
J19K					IAmb	IAmb	20 35 33.6	
	comp=Z,4.7nm,0.7s							
E19K	**Redstone River**	**32.05**	**33**		P	**P**	**20 35 32.8 +0.7**	
TLY	**Talaya**	**32.49**	**297**		LR	LR	20 49 25.9	
	comp=Z,93nm,18.1s,baz=46,slow=38							
D20K	**Etivluk River**	**32.61**	**31**		P	**P**	**20 35 37.4 +0.4**	
D20K					IAmb	IAmb	20 35 38.8	
	comp=Z,12nm,1.4s							
J20K	**Nowinta River**	**32.72**	**40**		P	**P**	**20 35 37.7 -0.3**	
J20K					IAmb	IAmb	20 35 40.6	
	comp=Z,8.6nm,1.3s							
B20K	**Meade River**	**32.80**	**29**			**P**	**20 35 39.4 +0.8**	
G21K	**Allakaket**	**33.30**	**35**		IAmb	IAmb	20 35 45.1	
	comp=Z,5.7nm,1.0s							
KDAK	**Kodiak Island**	**33.42**	**51**		LR	LR	20 49 10.1	
	comp=Z,49nm,21.9s,baz=229,slow=36							
H21K	**Melozitna Rive**	**33.45**	**37**		P	**P**	**20 35 43.2 -1.2**	
H21K					IAmb	IAmb	20 35 46.5	
	comp=Z,6.5nm,0.9s							
B21K	**Ikpikpuk River**	**33.54**	**30**		P	**P**	**20 35 45.4 +0.3**	
B21K					IAmb	IAmb	20 35 47.9	
	comp=Z,9.1nm,1.1s							
STLK	**Strandline Lak**	**33.63**	**45**		P	**P**	**20 35 46.9 +0.8**	
STLK					IAmb	IAmb	20 35 48.4	
	comp=Z,7.5nm,0.9s							
I21K	**Tanana**	**33.74**	**38**		P	**P**	**20 35 47.2 +0.3**	
I21K					IAmb	IAmb	20 35 49.2	
	comp=Z,4.2nm,0.8s							
H22K	**Ishtalitna Cre**	**34.07**	**37**			**P**	**20 35 50.6 +0.8**	
H22K					IAmb	IAmb	20 35 52.6	
	comp=Z,6.7nm,1.2s							
E22K	**Anaktuvuk Pass**	**34.21**	**33**			**P**	**20 35 51.6 +0.6**	
E23K	**Chandalar**	**35.01**	**33**		IAmb	IAmb	20 36 00.2	
	comp=Z,7.3nm,1.1s							
RND	**Reindeer**	**35.02**	**41**		IAmb	IAmb	20 35 59.3	
	comp=Z,7.9nm,0.9s							
E24K	**Your Creek**	**35.44**	**33**			**P**	**20 36 02.9 +1.3**	
COLA	**College**	**35.48**	**39**	*i*	P	**P**	**20 36 03.4 +1.6**	
COLA					pmax	pmax		
	comp=Z,10.0nm,0.9s							
H24K	**Noodor Dome**	**35.50**	**37**			**P**	**20 36 03.1 +0.9**	
H24K					IAmb	IAmb	20 36 04.5	
	comp=Z,3.6nm,0.8s							
ILAR	**Eielson Array**	**35.89**	**39**		P	**P**	**20 36 06.0 +0.5**	
	comp=Z,2.5nm,0.9s,baz=254,slow=6.7,SNR=21							
	comp=Z,2.5nm,0.9s							
ILAR	**Eielson Array**	**35.89**	**39**		P	**P**	**20 36 05.3 -0.1**	
ILAR	**Eielson Array**	**35.89**	**39**	*e*	P	**P**	**20 36 05.9 +0.5**	
ILAR					pmax	pmax		
	comp=Z,2.0nm,0.8s							
D25K	**Kavik River**	**36.34**	**31**		IAmb	IAmb	20 36 11.8	
	comp=Z,5.0nm,0.7s							
PRP	**Porcupine Dome**	**36.47**	**38**			**P**	**20 36 11.0 +0.5**	
PRP					IAmb	IAmb	20 36 13.0	
	comp=Z,5.2nm,0.8s							
J25K	**Salcha River,**	**36.54**	**39**		IAmb	IAmb	20 36 12.5	
	comp=Z,4.1nm,0.8s							
BMAR	**Burnt Mountain**	**36.87**	**34**			**P**	**20 36 14.8 +0.9**	
H27K	**Steamboat Moun**	**38.09**	**36**			**P**	**20 36 25.9 +1.7**	
H27K					IAmb	IAmb	20 36 27.0	
	comp=Z,7.1nm,0.9s							
L27K	**Beaver Creek,**	**38.21**	**42**		IAmb	IAmb	20 36 28.6	
	comp=Z,6.6nm,0.9s							
F28M	**Old Crow**	**38.68**	**34**			**P**	**20 36 30.1 +1.0**	
F28M					IAmb	IAmb	20 36 31.8	
	comp=Z,4.3nm,0.8s							
NRIK	**Noril'sk**	**38.71**	**329**	*i*	P	**P**	**20 36 27.0 -2.2**	
NRIK					pmax	pmax		
	comp=Z,1.0nm,0.9s							
I28M	**Miner Creek**	**38.80**	**38**		IAmb	IAmb	20 36 32.2	
	comp=Z,7.4nm,1.1s							
E29M	**Blow River**	**39.39**	**33**			**P**	**20 36 34.4 -0.6**	
G29M	**Pine Creek**	**39.45**	**35**		IAmb	IAmb	20 36 38.5	
	comp=Z,8.7nm,0.9s							
L29M	**L29M**	**39.87**	**41**		IAmb	IAmb	20 36 42.0	
	comp=Z,6.9nm,0.8s							
I30M	**Mount Dempster**	**40.31**	**38**		IAmb	IAmb	20 36 44.9	
	comp=Z,7.4nm,0.9s							
INK	**Inuvik**	**41.01**	**33**			**P**	**20 36 49.1 +0.8**	
INK	**Inuvik**	**41.01**	**33**		P	**P**	**20 36 49.1 +0.8**	
INK					pmax	pmax		
	comp=Z,4.0nm,0.7s							
M31M	**Drury Creek, Y**	**41.74**	**42**		P	**P**	**20 36 55.3 +0.8**	
ZALV	**Zalesovo Beam**	**42.83**	**306**		P	**P**	**20 37 01.1 -2.3**	
	comp=Z,0.3nm,0.3s,baz=61,slow=13,SNR=2.0							
	comp=Z,0.3nm,0.3s							
MK31	**Makanchi Array**	**47.25**	**297**	*i*	P	**P**	**20 37 36.9 -1.8**	
MKAR	**Makanchi Array**	**47.25**	**297**		P	**P**	**20 37 36.4 -2.3**	
	comp=Z,0.5nm,0.8s,baz=70,slow=8.3,SNR=2.9							
MKAR					PcP	**PcP**	**20 39 08.4 -1.1**	
	comp=Z,0.3nm,0.6s,baz=56,slow=4.6,SNR=2.9							
	comp=Z,0.5nm,0.8s							
KURK	**Kurchatov**	**47.61**	**304**	*i*	P	P	20 37 36.2 -5.1	
KURK					pmax	pmax		
	comp=Z,4.0nm,0.9s							
YKAW3	**Yellowknife Wh**	**50.23**	**37**			**P**	**20 38 00.6 -0.7**	
YKA	**Yellowknife Ar**	**50.27**	**37**		P	**P**	**20 38 02.5 +0.9**	
	comp=Z,2.9nm,0.7s,baz=300,slow=7.8,SNR=36							
	comp=Z,2.6nm,0.7s							
YKA	**Yellowknife Ar**	**50.27**	**37**		P	**P**	**20 38 00.7 -0.9**	
YKA	**Yellowknife Ar**	**50.27**	**37**		P	**P**	**20 38 00.7 -0.9**	
BORK	**Borovoye**	**51.06**	**310**	*ce*	P	**P**	**20 38 08.0 +0.3**	
BORK					pmax	pmax		
	comp=Z,9.0nm,1.7s							
CMAR	**Chiang Mai Arr**	**53.01**	**257**		P	**P**	**20 38 21.9 -0.6**	
	comp=Z,1.2nm,0.9s,baz=35,slow=6.9,SNR=6.7							
	comp=Z,1.2nm,0.9s							
CMAR	**Chiang Mai Arr**	**53.01**	**257**	*e*	P	**P**	**20 38 23.5 +0.9**	
CMAR					pmax	pmax		
	comp=Z,1.0nm,1.0s							
AAK	**Ala-Archa**	**54.16**	**297**	*i*	P	**P**	**20 38 29.4 -1.5**	
AAK					pmax	pmax		
	comp=Z,1.0nm,1.1s							
AAK	**Ala-Archa**	**54.16**	**297**	*e*	P	**P**	**20 38 29.4 -1.5**	
BLKN	**Baker Lake**	**56.24**	**29**			**P**	**20 38 45.1 -0.3**	
ILON	**Igloolik, Nuna**	**56.82**	**20**			**P**	**20 38 49.9 +0.5**	
NVAR	**Mina Array Bea**	**61.75**	**63**		P	**P**	**20 39 25.7 +1.3**	
	comp=Z,0.2nm,0.4s,baz=297,slow=4.4,SNR=2.5							
	comp=Z,0.2nm,0.4s							
FINES	**FINESS Array B**	**63.91**	**335**		P	**P**	**20 39 36.8 -1.2**	
	comp=Z,4.6nm,0.9s,baz=32,slow=7.2,SNR=8.7							
	comp=Z,4.6nm,0.9s							
FINES	**FINESS Array B**	**63.91**	**335**		P	**P**	**20 39 35.9 -2.1**	
FINES	**FINESS Array B**	**63.91**	**335**	*e*	P	**P**	**20 39 35.4 -2.6**	
FINES					pmax	pmax		
	comp=Z,5.0nm,0.9s							
PDAR	**Pinedale Array**	**64.06**	**54**		P	**P**	**20 39 40.5 +0.9**	
	comp=Z,0.3nm,0.6s,baz=316,slow=4.1,SNR=4.3							
	comp=Z,0.3nm,0.6s							
NB2	**NORSAR Subarra**	**68.03**	**341**		P	**P**	**20 40 03.5 -1.0**	
	comp=Z,1.3nm,0.7s,baz=26,slow=6.5							
NOA	**NORSAR Array B**	**68.03**	**341**		P	**P**	**20 40 03.6 -1.0**	
	comp=Z,4.7nm,1.0s,baz=27,slow=6.4,SNR=6.2							
	comp=Z,4.7nm,1.0s							
HFS	**Hagfors**	**68.28**	**340**		P	**P**	**20 40 04.9 -1.2**	
	comp=Z,3.0nm,0.8s,baz=29,slow=3.6,SNR=10							
	comp=Z,6.3nm,0.8s							
WRA	**Warramunga Arr**	**69.08**	**200**		P	**P**	**20 40 10.0 -1.5**	
	comp=Z,0.6nm,0.7s,baz=14,slow=5.9,SNR=4.7							
	comp=Z,0.6nm,0.7s							
WRA	**Warramunga Arr**	**69.08**	**200**	*e*	P	**P**	**20 40 12.5 +1.0**	
KIV	**Kislovodsk**	**70.92**	**315**	*e*	P	**P**	**20 40 22.3 -0.5**	
KIV					pmax	pmax		
	comp=Z,3.0nm,1.1s							
KIV	**Kislovodsk**	**70.92**	**315**	*e*	P	**P**	**20 40 22.3 -0.5**	
KBZ	**Khabaz**	**70.98**	**314**		P	**P**	**20 40 21.8 -1.2**	
	comp=Z,2.9nm,1.1s,baz=36,slow=8.7,SNR=4.7							
	comp=Z,2.9nm,1.1s							
KBZ	**Khabaz**	**70.98**	**314**	*i*	P	**P**	**20 40 21.9 -1.1**	
KBZ					pmax	pmax		
	comp=Z,3.0nm,1.1s							
KBZ	**Khabaz**	**70.98**	**314**	*e*	P	**P**	**20 40 21.9 -1.1**	
NEUR	**Neytrino**	**71.42**	**314**	*i*	P	**P**	**20 40 27.1 +1.1**	
NEUR					pmax	pmax		
	comp=Z,1.0nm,1.3s							
AKASG	**Malin Array Be**	**71.52**	**327**		P	**P**	**20 40 24.4 -1.7**	
	comp=Z,1.4nm,0.6s,baz=35,slow=6.3,SNR=9.2							
	comp=Z,1.4nm,0.6s							
AKASG	**Malin Array Be**	**71.52**	**327**	*i*	P	**P**	**20 40 24.2 -2.0**	
AKASG					pmax	pmax		
	comp=Z,2.0nm,0.7s							
ASAR	**Alice Springs**	**72.77**	**199**		P	**P**	**20 40 33.8 -0.1**	
	comp=Z,1.3nm,0.7s,baz=11,slow=5.7,SNR=14							
	comp=Z,1.3nm,0.7s							
ASAR	**Alice Springs**	**72.77**	**199**		P	**P**	**20 40 32.5 -1.4**	
ASAR	**Alice Springs**	**72.77**	**199**		P	**P**	**20 40 32.5 -1.4**	
BUR08	**Bucovina Ar. S**	**75.54**	**327**		P	**P**	**20 40 48.6 -1.4**	
BUR08					IAmb	IAmb	20 41 01.2	
	comp=Z,7.3nm,1.3s							
EKA	**Eskdalemuir Ar**	**76.08**	**347**		P	**P**	**20 40 53.5 +0.7**	
	comp=Z,1.6nm,0.8s,baz=14,slow=6.0,SNR=3.5							
	comp=Z,1.6nm,0.8s							
ESK	**Eskdalemuir**	**76.10**	**347**	*ce*	P	**P**	**20 40 54.1 +1.2**	
CLL	**Collm**	**76.33**	**336**	*e*	P	**P**	**20 40 53.0 -1.3**	
CLL	**Collm**	**76.33**	**336**	*e*	P	**P**	**20 40 53.0 -1.3**	
TXAR	**Lajitas Array**	**76.81**	**61**		P	**P**	**20 40 58.0 +0.5**	
	comp=Z,0.8nm,0.7s,baz=301,slow=4.8,SNR=12							
	comp=Z,0.8nm,0.7s							
TXAR	**Lajitas Array**	**76.81**	**61**		P	**P**	**20 40 57.5 0.0**	
TXAR	**Lajitas Array**	**76.81**	**61**		P	**P**	**20 40 57.5 0.0**	
BNN	**Bunyan**	**78.13**	**315**		P	**P**	**20 41 03.5 -1.3**	
BNN					IAmb	IAmb	20 41 05.1	
	comp=Z,3.3nm,0.8s							
GERES	**GERESS Array B**	**78.34**	**334**		P	**P**	**20 41 04.2 -1.6**	
	comp=Z,0.2nm,0.4s,baz=20,slow=5.0,SNR=1.5							
	comp=Z,0.2nm,0.4s							
BR131	**Keskin Array S**	**78.48**	**317**	*i*	P	**P**	**20 41 05.1 -1.6**	
BRTR	**Keskin Array B**	**78.48**	**317**		P	**P**	**20 41 06.3 -0.4**	
	comp=Z,1.9nm,0.9s,baz=42,slow=2.3,SNR=11							
	comp=Z,1.9nm,0.9s							
MMAI	**Mount Meron Ar**	**82.97**	**312**		P	**P**	**20 41 30.6 -0.2**	
	comp=Z,1.1nm,0.6s,baz=19,slow=9.2,SNR=4.3							
	comp=Z,1.1nm,0.6s							
MT13	**San Alfonso**	**144.26**	**84**		PKPdf	**PKPab**	**20 48 39.5 +0.1**	
MT08	**Bocatoma Ro**	**144.27**	**84**		PKPdf	**PKPab**	**20 48 39.2 -0.3**	
CFA	**Coronel Fontan**	**144.37**	**79**		PKP	**PKPab**	**20 48 39.2 -0.4**	
	comp=Z,2.4nm,0.6s,baz=318,slow=3.3,SNR=11							
BI02	**San Fabin de**	**145.21**	**89**			**PKPbc**	**20 48 42.0 -0.6**	
PLCA	**Paso Flores**	**147.69**	**95**		PKPbc	**PKPbc**	**20 48 49.0 -0.7**	
	comp=Z,3.4nm,0.8s,baz=249,slow=2.6,SNR=8.5							
PLCA	**Paso Flores**	**147.69**	**95**	*e*	PKP2	**PKPdf**	**20 48 48.6 +1.7**	
PLCA					pmax	pmax		
	comp=Z,3.0nm,0.8s							

IDC ***22*** *20:42:39.8±0.9, 0.°54S×21.°45W, h0km, mb3.9/10, mbtmp3.9/11, ML4.2/1, Error ellipse: s-maj=40.1km s-min=18.8km az=146.0*

ISC 22 20:42:41.2±0.9, 0.°6S±0.°2×21.°5W±0.°2, h10km, n13, σ0°87/13, mb3.9/9, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCBR	**Riachuelo**	**15.31**	**250**	Pn	**Pn**	**20 46 15.8**	**-1.9**
	1.0nm,0.3s,baz=88,slow=19,SNR=19						
RCBR					Sn	Sn	20 48 51.7	-16
	3.1nm,0.3s,baz=108,slow=20,SNR=7.6						
	2.9nm,0.4s						
TORD	**Torodi Ar. Bea**	**26.71**	**59**		P	**P**	**20 48 21.4 +0.3**
	2.2nm,0.9s,baz=230,slow=9.0,SNR=9.3						
	2.2nm,0.9s						
CPUP	**Villa Florida**	**42.97**	**230**		P	**P**	**20 50 41.1 +0.2**
	0.6nm,0.5s,baz=65,slow=10,SNR=3.7						
	0.6nm,0.5s						
ESDC	**Sonseca Array**	**43.13**	**20**		P	**P**	**20 50 42.0 0.0**
	0.7nm,0.7s,baz=204,slow=8.6,SNR=6.8						
	0.7nm,0.7s						
LPAZ	**La Paz**	**48.55**	**249**		P	**P**	**20 51 26.6 +0.7**
	0.7nm,0.4s,baz=50,slow=6.9,SNR=3.6						
	0.7nm,0.4s						
ROSC	**El Rosal**	**53.05**	**276**		P	**P**	**20 52 00.9 +1.2**
	2.3nm,0.3s,baz=110,slow=21,SNR=0.9						
	2.3nm,0.3s						
AKASG	**Malin Array Be**	**66.72**	**32**		P	**P**	**20 53 31.4 -1.1**
	0.2nm,0.4s,baz=244,slow=5.6,SNR=3.2						
	0.2nm,0.4s						
FINES	**FINESS Array B**	**71.60**	**22**		P	**P**	**20 54 02.6 +0.1**
	1.7nm,0.7s,baz=258,slow=7.0,SNR=1.9						
	1.7nm,0.7s						
TXAR	**Lajitas Array**	**83.46**	**299**		P	**P**	**20 55 09.9 +0.2**
	0.5nm,0.9s,baz=95,slow=5.3,SNR=4.4						
	0.5nm,0.9s						
YKA	**Yellowknife Ar**	**91.95**	**332**		P	**P**	**20 55 49.5 -0.4**
	0.5nm,0.9s,baz=88,slow=5.1,SNR=5.8						
	0.5nm,0.9s						
KURBB	**Kurchatov Array**	**96.79**	**39**		P	**P**	**20 56 12.8 +0.5**
	0.2nm,0.5s,baz=263,slow=7.4,SNR=4.1						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**146.06**	**137**		PKPbc	**PKPdf**	**21 02 21.1 -0.5**
	0.3nm,0.7s,baz=202,slow=1.0,SNR=2.8						
WRA	**Warramunga Arr**	**148.75**	**132**		PKPbc	**PKPbc**	**21 02 30.0 +0.1**
	0.5nm,1.0s,baz=257,slow=4.0,SNR=3.0						

BGR ***22*** *20:43:03.9, 1.°12S×21.°87W, h20km, mb5.6, Ms4.7*

IDC ***22*** *20:43:06.4±0.5, 0.°70S×21.°25W, h0km, mb4.7/29, mbtmp4.7/31, ML5.1/2, MS5.1/26, Error ellipse: s-maj=17.1km s-min=9.7km az=145.0*

MOS ***22*** *20:43:06.6±1.0, 0.°66S×21.°11W, h10km, mb5.5/52, MS4.9/19, Error ellipse: s-maj=12.2km s-min=4.6km az=56.1*

NEIC ***22*** *20:43:08.5, 0.°73S×21.°08W, h10km*

NEIC ***22*** *20:43:08.1±1.6, 0.°7S±0.°1×21.°18W±0.°09, h10km±1km, mb5.4/273, Ms_20 5.2/158, Mwb5.7/93, Mww5.6/22, Error ellipse: s-maj=17.4km s-min=15.4km az=187.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.13; Mθθ0.83; Mϕϕ-0.96; Mrθ-0.11; Mrϕ-3.84; Mθr-0.17; Fault plane solution: Mo3.95000×10¹⁷ NP1: ϕs353.38000°, δ88.20000°, λ-2.19000°. NP2:ϕs83.45000°, δ87.81000°, λ-178.20000°. Principal axes: T 3.8765, Plg0.0000°, Azm38.0000°; N 0.1368, Plg87.0000°, Azm134.0000°; P -4.0133, Plg3.0000°, Azm308.0000°;*

NEIC ***22*** *20:43:08.2, 0.°69S×21.°19W, h10km*

INMG ***22*** *20:43:09.0±3.4, 0.°78S×21.°23W, h10km, mb5.3, Ms4.6, MW5.4, #DIST_RANGE: DISTANT*

GFZ ***22*** *20:43:09.4, 0.°69S×21.°14W, h13km, MW5.5, Moment Tensor Solution. s42 Moment tensor: Mrr-0.49; Mθθ0.71; Mϕϕ-0.22; Mrθ-0.10; Mθϕ-1.86; Mϕr-0.47; Fault plane solution: NP1:ϕs351.00000°, δ80.00000°, λ-16.00000°. NP2:ϕs84.00000°, δ73.00000°, λ-169.00000°. Principal axes: T 2.1800, Plg4.0000°, Azm38.0000°; N -0.3600, Plg71.0000°, Azm141.0000°; P -1.8200, Plg18.0000°, Azm306.0000°;*

NEIC ***22*** *20:43:11.6, 0.°59S×21.°09W, h22km, Moment Tensor Solution. Duration: 3ᵗ2 Moment tensor: Scale 10¹⁷Nm; Mrr-0.03; Mθθ0.58; Mϕϕ-0.55; Mrθ0.37; Mθϕ-2.97; Mϕr0.40; Fault plane solution: Mo3.07000×10

EDA Edea 31.56 82 P P 20 49 31.4 +0.8
EDA IAmb IAmb 20 49 46.6
comp=Z,67nm,1.5s
VAO Valinhos 33.45 227 P P 20 49 45.9 -1.2
VAO IAmb IAmb 20 49 48.8
comp=Z,65nm,1.6s
ARAG Araguaiana, MT 33.73 242 *e*P **P 20 49 50.2 +0.6**
TIO Tiouine 34.18 21 P **P 20 49 54.2 +0.7**
NPGB Novo Progresso 34.72 259 *e*P **P 20 49 57.8 -0.4**
ITTB Itaituba 34.77 264 *e*P **P 20 49 58.8 +0.1**
TAM Tamanrasset 34.95 46 P 20 49 59.3 -1.0
TAM Tamanrasset 34.95 46 P **P 20 49 59.3 -1.0**
TAM pmax pmax
comp=Z,296nm,0.8s
TAM MLR MLR
comp=Z,2µm,18.0s
FRTB Fartura 35.58 229 *e*P **P 20 50 06.5 +1.0**
CLDB Colider 35.89 252 *e*P **P 20 50 08.8 +0.4**
AVE Averroes 36.28 20 P **P 20 50 12.6 +1.3**
AVE Averroes 36.28 20 P 20 50 09.4 -1.9
LDASE Londrina, Braz 36.79 230 *e*P **P 20 50 16.8 +0.9**
MD31 MD31 36.86 23 P **P 20 50 14.8 -1.6**
MD31 IAmb IAmb 20 50 20.1
comp=Z,76nm,1.1s
MD01 Midelt array s 36.86 23 P 20 50 11.6 -4.9
MDT Midelt 36.87 23 P **P 20 50 17.8 +1.3**
comp=Z,46nm,1.1s,baz=231,slow=9.0,SNR=31
MDT PP **PP 20 51 39.8 -0.9**
comp=Z,21nm,1.1s,baz=231,slow=10,SNR=3.9
MDT LR LR 21 05 07.1
comp=Z,3µm,18.3s,baz=230,slow=36
comp=Z,46nm,1.1s
PDRB Porto dos Gac 36.96 252 *e*P **P 20 50 17.9 +0.4**
H09W1 TRISTAN DA CUN 37.02 168 T T 21 29 29.6
SNR=4.6
IFR Ifrane 37.29 22 P **P 20 50 22.1 +1.9**
MAJ01 Sao Joao Batis 37.64 223 *e*P **P 20 50 23.7 +0.7**
PTGB Pitanga 38.24 229 *e*P **P 20 50 28.6 +0.4**
AQDB Aquidauana 39.06 238 P **P 20 50 34.6 -0.4**
PFVI Vila Bisbo 39.41 16 *e*PP PP 20 52 13.7 +5.3
BOAV Boa Vista 39.54 275 P 20 50 39.4 +0.2
AMBA Amambai (Brazi 39.60 234 *e*P **P 20 50 40.4 +0.8**
MORF Marmelete 39.62 16 *e*P **P 20 50 40.8 +1.3**
MORF IAmb IAmb 20 50 42.3
comp=Z,79nm,1.2s
MORF Marmelete 39.62 16 *e*P **P 20 50 41.1 +1.6**
MORF *i* IAmb IAmb 20 50 43.1
comp=Z,124nm,1.6s
MORF *e*PP **PnPn 20 52 14.8 +1.1**
MORF Marmelete 39.62 16 *e*P **P 20 50 40.8 +1.3**
MACA Manacapuru-AM 39.63 266 *e*P **P 20 50 39.9 -0.1**
WMELI Melilla 39.72 23 P **P 20 50 41.3 +0.9**
ITAB Concordia 39.73 226 P 20 50 39.2 -1.3
ITAB IAmb IAmb 20 50 43.6
comp=Z,79nm,1.2s
ITAB Concordia 39.73 226 *e*P **P 20 50 41.7 +1.2**
PBDV Barranco-do-Ve 39.76 17 P **P 20 50 41.8 +1.1**
PBDV Barranco-do-Ve 39.76 17 *e*P **P 20 50 42.6 +1.9**
PBDV *i* IAmb IAmb 20 50 44.6
comp=Z,123nm,1.7s
PBDV *e*PP **PnPn 20 52 18.0 +2.6**
PTEO Sao Teotonio 39.83 15 *e*P **P 20 50 43.1 +1.9**
PTEO *i* IAmb IAmb 20 50 50.0
comp=Z,135nm,1.4s
PTEO *e*PP **PnPn 20 52 15.5 -0.6**
PVAQ Vaqueiros 39.97 17 *e*P **P 20 50 44.2 +1.8**
PVAQ *i* IAmb IAmb 20 50 45.6
comp=Z,135nm,1.5s
PVAQ *e*PP **PnPn 20 52 18.3 +0.4**
PVAQ *e*S **S 20 56 49.0 +1.7**
PVAQ *e*LR LR 21 02 17.6
PVAQ *i* IAMs_20 IAMs_20 21 06 16.1
comp=Z,878nm,18.0s
ESPR Espera 40.05 19 P P 20 50 44.1 +1.0
PCVE Castro Verde 40.09 16 P P 20 50 44.5 +1.0
PCVE Castro Verde 40.09 16 *e*P **P 20 50 45.4 +2.0**
PCVE *i* IAmb IAmb 20 50 46.6
comp=Z,104nm,1.3s
PCVE *e*PP **PnPn 20 52 19.5 +0.1**
CNLB Canela 40.11 222 *e*P **P 20 50 44.8 +1.0**
EGRO El Granado 40.16 17 P P 20 50 45.2 +1.2
MESJ Messejana 40.24 16 *e*P **P 20 50 46.1 +1.5**
MESJ IAmb IAmb 20 50 48.0
comp=Z,56nm,0.9s
MESJ *e*S **S 20 56 53.6 +2.3**
MESJ Messejana 40.24 16 P P 20 50 40.6 -4.0
MESJ IAmb IAmb 20 50 47.8
comp=Z,83nm,1.1s
MESJ Messejana 40.24 16 *e*P **P 20 50 46.8 +2.1**
MESJ *i* IAmb IAmb 20 50 48.5
comp=Z,102nm,1.5s
MESJ *e*PP **PnPn 20 52 21.2 +0.1**
MESJ Messejana 40.24 16 P P 20 50 40.6 -4.0
MESJ pmax pmax
comp=Z,83nm,1.1s
PTLB Pontes e Lacer 40.26 247 P P 20 50 44.2 -0.9
PTLB Pontes e Lacer 40.26 247 *e*P **P 20 50 46.0 +0.9**
EMAL Malaga-Limoner 40.44 21 P P 20 50 47.0 +0.7
PBEJ Beja 40.51 16 *e*P **P 20 50 49.0 +2.1**
PBEJ *i* IAmb IAmb 20 50 50.7
comp=Z,74nm,1.8s
VILB Vilhena 40.58 251 *e*P **P 20 50 48.6 +0.8**
EMIN Mina Concepcio 40.62 18 P P 20 50 48.4 +0.6
LIS Lisbon 40.83 14 *e*P **P 20 50 51.0 +1.6**
LIS IAmb IAmb 20 50 52.7
comp=Z,98nm,0.9s
LIS Lisbon 40.83 14 *e*P **P 20 50 50.7 +1.3**
LIS *i* IAmb IAmb 20 50 52.9
comp=Z,149nm,1.7s
LIS *e*PP **PnPn 20 52 29.6 +1.7**
LIS Lisbon 40.83 14 *e*P **P 20 50 51.0 +1.6**
MOE Montemor 40.85 15 *e*P **P 20 50 51.6 +1.9**
MOE *i* IAmb IAmb 20 50 57.4
comp=Z,54nm,1.6s
MOE *e*PP **PnPn 20 52 34.5 +6.3**
PBAR Barrancos 40.89 17 *e*P **P 20 50 51.8 +1.8**
PBAR *i* IAmb IAmb 20 50 53.1
comp=Z,64nm,1.4s
PBAR *e*PP **PP 20 52 26.2 +1.8**
EVO Evora 40.95 16 *e*P **P 20 50 52.2 +1.7**
EVO *i* IAmb IAmb 20 50 54.5
comp=Z,110nm,1.5s
EVO *e*PP **PnPn 20 52 32.6 +3.3**
PMAFR Mafra 41.02 14 *e*P **P 20 50 52.9 +1.8**
PMAFR *i* IAmb IAmb 20 50 54.3
comp=Z,145nm,1.2s
PMAFR *e*PP **PP 20 52 27.6 +1.7**
MURT Porto Murtinho 41.18 237 *e*P **P 20 50 53.5 +0.8**
PARRA Arraiolos 41.20 16 *e*P **P 20 50 54.5 +1.9**
PARRA *i* IAmb IAmb 20 50 56.7
comp=Z,75nm,1.7s
PARRA *e*PP **PnPn 20 52 36.8 +4.4**
PESTR Estremoz 41.37 16 P **P 20 50 50.8 -3.2**
PESTR IAmb IAmb 20 50 57.3
comp=Z,61nm,1.2s
PESTR Estremoz 41.37 16 *e*P **P 20 50 56.1 +2.1**
PESTR *i* IAmb IAmb 20 50 58.0
comp=Z,72nm,1.8s
PESTR *e*PP **PnPn 20 52 36.5 +2.1**
PMTG Montargil 41.39 15 *e*P **P 20 50 56.2 +2.1**
PMTG *i* IAmb IAmb 20 50 57.4
comp=Z,78nm,1.4s
PMTG *e*PP **PnPn 20 52 39.2 +4.6**
PSBE So Bento 41.67 14 *e*P **P 20 50 58.2 +1.8**
PSBE *i* IAmb IAmb 20 51 05.2
comp=Z,78nm,1.7s
PSARD Sardoal 41.91 15 *e*P **P 20 51 00.6 +2.2**
PSARD *i* IAmb IAmb 20 51 01.8
comp=Z,136nm,1.4s
PMRV Marv??o 41.95 16 *e*P **P 20 51 00.8 +2.1**
PMRV *i* IAmb IAmb 20 51 02.3
comp=Z,118nm,1.3s
TSUM Tsumeb 42.09 118 LR LR 21 04 30.3
comp=Z,3µm,21.7s,baz=290,slow=30
TSUM Tsumeb 42.09 118 P **P 20 50 58.5 -1.8**
TSUM Tsumeb 42.09 118 IAMs_20 IAMs_20 21 04 18.1
comp=Z,3µm,21.0s
H05S1 Guadeloupe/Mar 42.13 293 T T 21 36 03.5
SNR=15
BBSD Serra de San D 42.15 245 *e*P **P 20 51 00.8 +0.1**
SIV San Ignacio 42.20 247 LR LR 21 07 47.4
comp=Z,2µm,18.7s,baz=94,slow=35
PCAS Casmilo, Conde 42.25 14 *e*P **P 20 51 03.1 +2.0**
PCAS *i* IAmb IAmb 20 51 05.0
comp=Z,110nm,1.8s
PCBR Castelo Branco 42.31 16 *e*P **P 20 51 03.7 +2.0**
PCBR *i* IAmb IAmb 20 51 04.7
comp=Z,54nm,1.3s
CART Cartagena 42.47 24 P **P 20 50 58.6 -4.3**
CART IAmb IAmb 20 51 05.0
comp=Z,84nm,0.9s
CPSB Cacapava Do Su 42.54 223 *e*P **P 20 51 04.6 +0.9**
MTE Manteigas 42.82 15 P **P 20 51 06.2 +0.4**
MTE IAmb IAmb 20 51 08.8
comp=Z,66nm,1.1s
MTE Manteigas 42.82 15 *e*P **P 20 51 07.7 +1.8**
MTE *i* IAmb IAmb 20 51 08.8
comp=Z,80nm,1.3s
MTE *e*PP **PcP 20 52 57.4 +0.4**
MTE *e*S **S 20 57 35.3 +5.7**
MTE *e*LR LR 21 03 32.7
MTE *i* IAMs_20 IAMs_20 21 11 32.8
comp=Z,825nm,16.0s
H05N1 Guadeloupe/Mar 42.93 295 T T 21 37 04.6
SNR=7.9
PAB San Pablo 42.98 19 P **P 20 51 05.7 -1.5**
PAB IAmb IAmb 20 51 10.3
comp=Z,94nm,1.6s
PAB San Pablo 42.98 19 P **P 20 51 05.7 -1.5**
PAB pmax pmax
comp=Z,94nm,1.7s
WIN Windhoek 42.98 123 P **P 20 51 03.5 -4.1**
WIN IAmb IAmb 20 51 10.9
comp=Z,76nm,1.6s
WIN IAMs_20 IAMs_20 21 04 52.7
comp=Z,2µm,20.0s
WIN Windhoek 42.98 123 P P 20 51 03.5 -4.1
WIN pmax pmax
comp=Z,76nm,1.6s
WIN MLR MLR
comp=Z,2µm,20.0s
PVIS Viseu 43.03 15 *e*P **P 20 51 08.7 +1.2**
CPUP Villa Florida 43.12 231 P **P 20 51 09.2 +0.8**
comp=Z,7.4nm,1.0s,baz=67,slow=9.1,SNR=14
comp=Z,7.4nm,1.0s
CPUP Villa Florida 43.12 231 P **P 20 51 05.8 -2.7**
CPUP Villa Florida 43.12 231 P **P 20 51 05.8 -2.7**
CPUP pmax pmax
comp=Z,27nm,1.3s
ESDC Sonseca Array 43.22 19 P **P 20 51 09.9 +0.8**
comp=Z,43nm,1.1s,baz=205,slow=8.6,SNR=121
ESDC PP **PcP 20 52 55.4 -2.9**
comp=Z,14nm,1.1s,baz=198,slow=11,SNR=5.2
ESDC LR LR 21 08 53.6
comp=Z,682nm,18.3s,baz=218,slow=36
comp=Z,43nm,1.1s
ESBB Sonseca Array 43.22 19 IAmb IAmb 20 51 12.4
comp=Z,148nm,1.6s
TEFE Tefe 43.58 266 *e*P **P 20 51 12.9 +0.5**
PVRL Vila Real 43.60 15 *e*P **P 20 51 13.4 +1.3**
PVRL *i* IAmb IAmb 20 51 14.6
comp=Z,46nm,1.4s
POLO Lamas de Olo 43.67 15 *e*P **P 20 51 14.1 +1.3**
MVO Moncorvo 43.67 15 *e*P **P 20 51 14.6 +1.8**
MVO *i* IAmb IAmb 20 51 20.9
comp=Z,87nm,1.5s
MVO *e*S **S 20 57 50.8 +8.7**
MVO *e*LR LR 21 03 53.9
MVO *i* IAMs_20 IAMs_20 21 06 45.0
comp=Z,548nm,20.0s
PCAB Cabril 43.93 14 *e*P **P 20 51 15.6 +0.9**
PCAB *i* IAmb IAmb 20 51 17.1
comp=Z,59nm,1.8s
PGAV Gavieira, Arco 44.11 14 *e*S **S 20 57 56.1 +7.5**
PGAV *e*LR LR 21 03 30.9
PGAV *i* IAMs_20 IAMs_20 21 07 54.9
comp=Z,862nm,18.0s
PBRG Braganca 44.35 15 *e*P **P 20 51 20.0 +1.9**
PBRG *i* IAmb IAmb 20 51 21.2
comp=Z,62nm,1.7s
KOOLE Kule 45.77 122 *i* P **P 20 51 31.1 +1.2**
KOOLE Kule 45.77 122 P **P 20 51 27.4 -2.4**
KOOLE IAmb IAmb 20 51 51.4
comp=Z,40nm,0.9s
PSAL Palomas, Salto 45.85 225 *e*P **P 20 51 31.1 +1.0**
GRTLG Ghanzi 46.04 119 *i* P **P 20 51 32.8 +0.9**
GRTLG Ghanzi 46.04 119 P 20 51 32.9 +0.9
GRTLG IAmb IAmb 20 51 35.7
comp=Z,32nm,1.0s
KEST Kesra 46.10 35 P **P 20 51 32.4 +0.2**
comp=Z,46nm,0.9s,baz=238,slow=5.4,SNR=35
KEST PP **PP 20 53 17.8 -2.7**
comp=Z,45nm,1.0s,baz=231,slow=14,SNR=3.9
KEST LR LR 21 12 19.2
comp=Z,3µm,18.3s,baz=221,slow=38
comp=Z,46nm,0.9s
KEST Kesra 46.10 35 P **P 20 51 31.9 -0.3**
KGCAE Kacgae 47.43 121 *i* P **P 20 51 42.8 -0.1**
CORI Oriste 47.43 23 P 20 51 41.5 -0.9
CEST Esterri de Car 47.66 22 P 20 51 42.3 -2.0
LPAZ La Paz 48.83 249 P **P 20 51 53.8 -0.5**
comp=Z,2.9nm,0.7s,baz=48,slow=7.9,SNR=7.1
LPAZ LR LR 21 12 10.9
comp=Z,3µm,18.1s,baz=84,slow=36
comp=Z,2.9nm,0.7s
LPAZ La Paz 48.83 249 *e*P **P 20 51 54.1 -0.2**
WDD Wied Dalam 49.27 39 IAMs_20 IAMs_20 21 13 51.7
comp=Z,2µm,20.0s
KDWAN Kaudwane 49.73 120 *i* P **P 20 52 01.2 +0.7**
KHWEE KHWEE 49.94 118 *i* P **P 20 52 02.4 +0.2**
SOOWA Sowa 50.21 116 *i* P **P 20 52 04.5 +0.2**
VAE Valguarnera 50.27 37 LR LR 21 12 31.9
comp=Z,2µm,20.9s,baz=176,slow=35
SDV Santo Domingo 50.27 282 P 20 52 01.8 -3.1
SDV Santo Domingo 50.27 282 *e*P **P 20 52 04.5 -0.4**
SUR Sutherland 50.44 133 LR LR 21 10 10.3
comp=Z,2µm,18.0s,baz=300,slow=32
SUR Sutherland 50.44 133 IAMs_20 IAMs_20 21 10 03.2
comp=Z,2µm,20.0s
PB16 IPOC Station P 50.60 247 IAMs_20 IAMs_20 21 12 24.1
comp=Z,3µm,20.0s
GO01 Chusmiza 50.66 245 IAMs_20 IAMs_20 21 10 19.8
comp=Z,2µm,22.0s
MAKGR Makgori 50.72 123 *i* P **P 20 52 08.8 +0.8**
LSZ Lusaka 50.73 109 P 20 52 04.5 -3.8
LSZ Lusaka 50.73 109 P **P 20 52 04.5 -3.8**
LSZ pmax pmax
comp=Z,32nm,1.2s
LSZ MLR MLR
comp=Z,900nm,21.0s
PB08 IPOC Station P 50.75 244 IAMs_20 IAMs_20 21 12 38.3
comp=Z,2µm,21.0s
LPHEP Lephephe 50.76 120 *i* P **P 20 52 08.6 +0.2**
LBTB Lobatse 51.10 122 P 20 52 11.6 +0.7
LBTB IAmb IAmb 20 52 14.3
comp=Z,39nm,1.0s
LBTB Lobatse 51.10 122 P **P 20 52 11.6 +0.7**
LBTB pmax pmax
comp=Z,39nm,1.0s
PB01 IPOC Station P 51.31 243 IAMs_20 IAMs_20 21 14 05.0
comp=Z,2µm,20.0s
PB09 IPOC Station P 51.31 242 IAMs_20 IAMs_20 21 14 05.0
comp=Z,3µm,20.0s
BROLN Tlhalogang 51.36 117 *i* P **P 20 52 11.5 -1.5**
PB12 IPOC Station P 51.42 247 IAMs_20 IAMs_20 21 12 60.0
comp=Z,2µm,18.0s
CEL Celeste 51.67 37 P 20 52 13.9 -0.9
CEL IAMs_20 IAMs_20 21 17 05.9
comp=Z,2µm,18.0s
PB02 IPOC Station P 51.75 243 IAMs_20 IAMs_20 21 11 34.8
comp=Z,2µm,18.0s
MBAR Mbarara 51.83 90 LR LR 21 12 19.5
comp=Z,3µm,18.9s,baz=267,slow=34
MBAR Mbarara 51.83 90 P **P 20 52 14.3 -2.4**
MBAR Mbarara 51.83 90 *i* P **P 20 52 18.4 +1.7**
MBAR pmax pmax
comp=Z,21nm,1.1s
PB03 IPOC Station P 51.84 242 IAMs_20 IAMs_20 21 14 27.0
comp=Z,2µm,19.0s
BNI Bardonecchia 51.87 25 P 20 52 14.4 -2.0
BNI Bardonecchia 51.87 25 P **P 20 52 14.4 -2.0**
BNI pmax pmax
comp=Z,122nm,1.1s
BNI MLR MLR
comp=Z,1µm,19.0s
PB06 IPOC Station P 51.87 241 IAMs_20 IAMs_20 21 15 35.0
comp=Z,2µm,19.0s
CASP Castiglione de 52.04 30 P 20 52 14.7 -2.8
CASP IAmb IAmb 20 52 19.6
comp=Z,58nm,0.9s
BOSA Boshof 52.17 126 P **P 20 52 20.2 +1.3**
comp=Z,18nm,0.8s,baz=300,slow=7.6,SNR=29
comp=Z,18nm,0.8s
BOSA Boshof 52.17 126 P 20 52 17.2 -1.7
BOSA IAmb IAmb 20 52 22.1
comp=Z,31nm,1.0s
BOSA Boshof 52.17 126 P **P 20 52 17.2 -1.7**
BOSA pmax pmax
comp=Z,31nm,1.0s
PB05 IPOC Station P 52.47 242 IAMs_20 IAMs_20 21 14 12.9
comp=Z,2µm,18.0s
CUC Castrocucco 52.74 35 P 20 52 19.7 -3.1
TRQA Tornquist 52.76 220 P **P 20 52 19.7 -3.2**
TRQA Tornquist 52.76 220 P **P 20 52 19.7 -3.2**
TRQA pmax pmax
comp=Z,26nm,1.4s
TIP Timpagrande 52.77 37 ⇑P **P 20 52 23.7 +0.5**
TIP Timpagrande 52.77 37 IAMs_20 IAMs_20 21 14 50.2
comp=Z,2µm,21.0s
TIP Timpagrande 52.77 37 P **P 20 52 23.6 +0.5**
comp=Z,61nm,1.4s
AC02 Maricunga 52.87 236 IAMs_20 IAMs_20 21 12 40.5
comp=Z,2µm,21.0s
SENIN Lac Senin/Sane 53.19 24 P 20 52 26.1 -0.1
SENIN IAmb IAmb 20 52 28.8
comp=Z,60nm,0.9s
SENIN IAMs_20 IAMs_20 21 14 40.5
comp=Z,2µm,19.0s
PB14 IPOC Station P 53.20 240 P P 20 52 34.5 +7.7
NRCA Norcia 53.20 31 IAmb IAmb 20 52 30.6
comp=Z,74nm,1.2s
ACER Acerenza 53.34 35 IAmb IAmb 20 52 28.9
comp=Z,61nm,1.2s
ROSC El Rosal 53.46 277 P **P 20 52 28.2 -0.8**
comp=Z,7.0nm,0.4s,baz=85,slow=5.1,SNR=11
ROSC LR LR 21 13 41.9
comp=Z,3µm,19.6s,baz=120,slow=34
comp=Z,7.0nm,0.4s
ROSC El Rosal 53.46 277 P 20 52 28.2 -0.8
MATE Matera 53.69 35 ⇑P **P 20 52 29.9 +0.3**
SALO Salr 54.00 27 P **P 20 52 32.1 +0.1**
TUE Stuetta 54.14 26 IAmb IAmb 20 52 40.5
comp=Z,55nm,1.1s
TUE Stuetta 54.14 26 P **P 20 52 33.6 +0.5**
comp=Z,205nm,2.1s
AC05 El Transito 54.54 235 P 20 52 36.2 -0.1
AC05 IAmb IAmb 20 53 23.8
comp=Z,36nm,1.2s
AC05 IAMs_20 IAMs_20 21 16 10.7
comp=Z,3µm,20.0s
FUORN Ofenpass-Fuorn 54.65 26 IAmb IAmb 20 52 38.8
comp=Z,73nm,1.2s
KEK Kerkira 54.95 38 IAmb IAmb 20 52 50.5
comp=Z,22nm,0.9s
DAVA Damuels 55.00 25 *i* P **P 20 52 40.2 +0.9**
comp=Z,220nm,1.1s,SNR=43
FETA Feichten 55.16 26 *i* P **P 20 52 40.9 +0.3**
comp=Z,119nm,1.1s,SNR=48
BFO Black Forest 55.18 24 P 20 52 40.7 +0.2
BFO Black Forest 55.18 24 P **P 20 52 40.7 +0.2**
BFO pmax pmax
comp=Z,102nm,1.1s
BFO MLR MLR
comp=Z,1µm,21.0s
DOU Dourbes 55.26 20 *d*P **P 20 52 41.7 +0.8**
comp=Z,33nm,1.1s
WLF Walferdange 55.45 21 IAmb IAmb 20 52 44.9
comp=Z,56nm,1.2s
WLF IAMs_20 IAMs_20 21 16 02.2
comp=Z,1µm,19.0s
WLF Walferdange 55.45 21 *d*P **P 20 52 42.2 -0.1**
comp=Z,18nm,1.3s
BMRD Maredsous 55.50 20 *d*P **P 20 52 43.3 +0.7**
comp=Z,13nm,1.1s
SQTA Sankt Quirin 55.53 26 *i* P **P 20 52 43.6 +0.4**
comp=Z,152nm,1.1s,SNR=44
RCHB Rochefort 55.53 20 *d*P **P 20 52 43.5 +0.6**
comp=Z,32nm,1.0s
RETA Reute 55.54 26 *i* P **P 20 52 43.7 +0.6**
comp=Z,101nm,1.2s,SNR=21
MOTA Moosalm 55.58 26 *i* P **P 20 52 43.7 +0.2**
comp=Z,76nm,1.2s,SNR=25
CO03 El Pedregal 55.63 233 P 20 52 44.7 +0.5
BGES Gesves 55.68 20 *d*P **P 20 52 44.4 +0.4**
comp=Z,14nm,1.0s
WTTA Wattenberg 55.75 26 *i* P **P 20 52 45.4 +0.6**
comp=Z,96nm,1.2s,SNR=20
ABTA Abfaltersbach 55.76 27 *i* P **P 20 52 45.9 +1.1**
comp=Z,120nm,1.1s,SNR=16
WATA Walderalm 55.78 26 *i* P **P 20 52 45.2 +0.3**
comp=Z,91nm,1.4s,SNR=21
BCLA Clavier 55.78 20 *d*P **P 20 52 46.1 +1.5**
comp=Z,25nm,1.1s
UCC Uccle 55.78 19 IAmb IAmb 20 52 51.8
comp=Z,36nm,1.2s
UCC Uccle 55.78 19 *d*P **P 20 52 45.4 +0.7**
comp=Z,13nm,1.2s
ROBS Robic 55.86 28 *e*P **P 20 52 46.4 +1.0**
IDI Anoyia 55.91 45 LR LR 21 18 55.5
comp=Z,595nm,18.1s,baz=250,slow=38
IDI Anoyia 55.91 45 P 20 52 46.3 +0.3
BHOU Houvegnez 55.97 21 *d*P **P 20 52 47.5 +1.4**
comp=Z,17nm,1.2s
BSTI Sart Tilman 56.01 20 *d*P **P 20 52 47.3 +0.9**
comp=Z,4.5nm,1.1s
MT08 Bocatoma Ro 56.16 229 IAmb IAmb 20 52 56.1
comp=Z,30nm,1.2s
BOJS Bojanci 56.18 30 *e*P **P 20 52 49.3 +1.6**
MEM Membach 56.18 20 *d*P **P 20 52 47.3 -0.3**
comp=Z,37nm,1.2s
MYKA Terra Mystica 56.20 28 *i* pP pP 20 52 49.8 -1.3
comp=Z,79nm,1.2s,SNR=15
LJU Ljubljana 56.20 29 *e*P **P 20 52 49.0 +1.2**
BTNL Ternell 56.21 21 *d*P **P 20 52 48.2 +0.4**
comp=Z,38nm,1.2s
BEBN Eben Emael 56.23 20 *d*P **P 20 52 47.5 -0.4**
comp=Z,41nm,1.0s
VA03 San Esteban 56.28 230 IAMs_20 IAMs_20 21 16 17.0
comp=Z,2µm,19.0s
PDG Podgorica 56.30 35 ⇓P **P 20 52 49.2 +0.7**
LESA Schwarzleotal 56.34 27 *e*P **P 20 52 49.5 +0.6**
comp=Z,74nm,0.9s,SNR=25
NNA Nana 56.39 256 LR LR 21 16 24.1
comp=Z,2µm,18.4s,baz=70,slow=36
NNA Nana 56.39 256 IAMs_20 IAMs_20 21 16 04.4
comp=Z,2µm,20.0s
KBA Koelnbreinsper 56.39 28 *i* P **P 20 52 50.5 +1.1**
comp=Z,21nm,1.0s
MT16 CCHEN 56.53 230 IAMs_20 IAMs_20 21 16 26.7
comp=Z,2µm,20.0s
OBKA Obir 56.55 29 *i* P **P 20 52 51.8 +1.4**
comp=Z,21nm,1.0s
MT03 Universidad Ad 56.55 230 P **P 20 52 50.3 -0.4**
MT03 IAmb IAmb 20 53 05.0
comp=Z,38nm,1.1s
MT03 IAMs_20 IAMs_20 21 16 19.1
comp=Z,2µm,20.0s
LODK Lodwar 56.59 85 P 20 52 52.4 +1.2
LODK IAmb IAmb 20 53 09.1
comp=Z,28nm,1.2s
BLY Banja Luka 56.66 32 IAMs_20 IAMs_20 21 17 42.7
comp=Z,2µm,20.0s
GOLS Golise 56.72 30 *e*P **P 20 52 52.8 +1.3**
BO04 La Punta 56.83 229 P 20 52 52.3 -0.3
BO04 IAMs_20 IAMs_20 21 19 14.6
comp=Z,2µm,18.0s
SOKA Soboth 56.90 29 *i* P **P 20 52 53.6 +0.7**
comp=Z,49nm,1.0s,SNR=17
BIOA Bad Ischl, Aus 56.97 27 *i* P **P 20 52 53.3 0.0**
comp=Z,32nm,1.2s,SNR=15
MT09 Talagante 57.03 229 IAmb IAmb 20 53 03.4
comp=Z,20nm,0.8s
MT09 IAMs_20 IAMs_20 21 16 34.8
comp=Z,2µm,21.0s
VA01 Torpederas 57.23 230 IAMs_20 IAMs_20 21 16 12.9
comp=Z,2µm,19.0s
MT01 Popeta 57.27 229 IAMs_20 IAMs_20 21 16 50.0
comp=Z,2µm,18.0s
BO02 Sierra Bellavi 57.30 228 IAMs_20 IAMs_20 21 16 09.0
comp=Z,2µm,19.0s
BO01 Tunca 57.36 229 P 20 52 56.1 -0.2
BO01 IAmb IAmb 20 53 04.7
comp=Z,51nm,1.6s
BO01 IAMs_20 IAMs_20 21 15 58.6
comp=Z,2µm,18.0s
MOA Molln 57.38 28 *i* P **P 20 52 56.3 +0.2**
comp=Z,70nm,1.7s,SNR=20

GRA1 Grafenberg Arr 57.43 24 P 20 52 54.2 -2.3
GRF Grafenberg Arr 57.43 24 P **P 20 52 54.2 -2.3**
GRF pmax pmax
comp=Z,77nm,1.1s
GRF Grafenberg Arr 57.43 24 *e*P **P 20 52 56.8 +0.3**
comp=Z,69nm,1.1s,baz=217,slow=7.3
GRF *e*pP **sP 20 53 02.5 +1.6**
baz=216,slow=7.2
GRF *e*L L 21 01 04.0
comp=Z,637nm,21.8s
ATAH Atahualpa 57.46 262 LR LR 21 17 33.8
comp=Z,2µm,18.2s,baz=91,slow=36
ARSA Arzberg 57.54 29 IAmb IAmb 20 52 59.4
comp=Z,44nm,1.2s
ARSA Arzberg 57.54 29 *i* P **P 20 52 58.3 +1.0**
comp=Z,38nm,1.2s,SNR=12
KARP Karpathos 57.66 46 P 20 52 56.8 -1.7
KARP Karpathos 57.66 46 P **P 20 52 58.9 +0.5**
comp=Z,2µmcomp=Z,195nm,1.2s
EKA Eskdalemuir Ar 57.84 12 P **P 20 52 59.0 -0.2**
comp=Z,3.1nm,0.7s,baz=203,slow=6.1,SNR=6.6
comp=Z,3.1nm,0.7s
GEC2 GERESS Array S 57.85 26 IAmb IAmb 20 53 01.6
comp=Z,63nm,1.1s
GERES GERESS Array B 57.85 26 P **P 20 52 60.0 +0.4**
comp=Z,19nm,0.9s,baz=212,slow=7.3,SNR=50
GERES PP **PP 20 55 08.3 +0.4**
comp=Z,12nm,1.0s,baz=211,slow=9.2,SNR=5.7
comp=Z,19nm,0.9s
KHC Kasperske Hory 58.01 26 IAmb IAmb 20 53 02.6
comp=Z,49nm,1.1s
KHC Kasperske Hory 58.01 26 *e*P **P 20 53 01.4 +0.8**
KHC *e*S **S 21 01 02.9 +2.3**
KHC AMS AMS 21 17 00.0
comp=Z,1µm,19.1s
KHC Kasperske Hory 58.01 26 *ce*P **P 20 53 01.1 +0.5**
KHC pmax pmax
comp=Z,61nm,1.3s
KHC Kasperske Hory 58.01 26 P **P 20 53 00.9 +0.3**
comp=Z,48nm,1.4s
CKRC Cesky Krumlov 58.11 27 *e*P **P 20 53 02.2 +0.9**
CKRC *e*pP **sP 20 53 06.9 0.0**
CKRC *e*S **S 21 01 04.1 +2.3**
CKRC Cesky Krumlov 58.11 27 *e*P **P 20 53 02.2 +0.9**
CKRC *e**PP **sP 20 53 06.9 0.0**
CKRC *e*S **S 21 01 04.1 +2.3**
CONA Conrad Observa 58.19 28 *i* P **P 20 53 02.8 +0.9**
comp=Z,39nm,1.3s,SNR=16
RONA Rosalia, Austr 58.23 29 *i* P **P 20 53 03.4 +1.2**
comp=Z,123nm,1.5s,SNR=23
GO05 Hualane 58.25 228 IAMs_20 IAMs_20 21 16 49.1
comp=Z,2µm,19.0s
KKB Krupnik 58.25 38 *i* P **P 20 53 03.7 +1.3**
MOX Moxa 58.33 24 *e*L L 21 15 16.0
comp=Z,606nm,21.7s
KMBO Kilima Mbogo 58.34 91 LR LR 21 16 22.6
comp=Z,2µm,18.4s,baz=272,slow=34
KMBO Kilima Mbogo 58.34 91 *i* P **P 20 53 04.8 +0.9**
MORH Mrgy, Hungar 58.40 31 ⇑P **P 20 53 04.1 +0.7**
MORH Mrgy, Hungar 58.40 31 P **P 20 53 03.8 +0.5**
comp=Z,17nm,1.7s
WINA Alland / Wiene 58.41 28 *i* P **P 20 53 04.5 +1.1**
SNR=17
BI02 San Fabin de 58.46 226 IAMs_20 IAMs_20 21 15 17.8
comp=Z,2µm,19.0s
MMB Musomishta 58.46 38 *i* P **P 20 53 05.5 +1.6**
ZVC Zvikov 58.51 26 *e*P **P 20 53 04.9 +0.9**
ZVC *e*pP **sP 20 53 09.6 -0.1**
ZVC AMS AMS 21 17 30.0
comp=Z,1µm,19.4s
VTS Vitosha 58.76 37 *i* P **P 20 53 07.3 +1.2**
TREC Trest 58.98 27 *e*P **P 20 53 08.2 +0.8**
TREC Trest 58.98 27 *e*P **P 20 53 08.2 +0.8**
HSKC Hora Svate Kat 59.05 25 *e*P **P 20 53 09.3 +1.5**
HSKC *e*pP **sP 20 53 14.0 +0.6**
PRU Pruhonice 59.07 26 *e*P **P 20 53 09.6 +1.7**
PRU *e*pP **pwP 20 53 14.9 -4.0**
PRU *e*S **S 21 01 18.3 +4.1**
PRU AMS AMS 21 18 00.0
comp=Z,2µm,19.2s
PRU Pruhonice 59.07 26 *e*P **P 20 53 09.6 +1.7**
PRU *e**PP **pwP 20 53 14.9 -4.0**
PRU *e*S **S 21 01 18.3 +4.1**
PRU MLR MLR
comp=Z,2µm,19.2s
KIBK Kibwezi 59.14 92 IAMs_20 IAMs_20 21 15 45.6
comp=Z,2µm,20.0s
MDVR Moldovita 59.15 34 ⇑P **P 20 53 10.1 +1.5**
RZN Rozhen 59.16 39 *i* P **P 20 53 09.5 +0.5**
MODS Modra-Piesok 59.17 29 *e*P **P 20 53 09.6 +0.9**
MODS pmax pmax
comp=Z,239nm,1.4s
MODS Modra-Piesok 59.17 29 *e*P **P 20 53 09.6 +0.9**
MODS *e*PP **PP 20 55 17.5 -2.1**
KRUC Moravsky 59.24 28 *e*P **P 20 53 09.2 +0.1**
PGB Panagyurishte 59.27 38 *i* P **P 20 53 11.2 +1.7**
RICC Richard 59.28 25 *e*P **P 20 53 10.6 +1.2**
SRO Srobarova 59.30 30 *e*P **P 20 53 10.8 +1.3**
SRO pmax pmax
comp=Z,67nm,1.3s
SRO Srobarova 59.30 30 *e*P **P 20 53 10.8 +1.3**
SMOL Smolenice 59.34 29 *e*P **P 20 53 10.7 +0.8**
SMOL pmax pmax
comp=Z,20nm,0.9s
RDO Rodhopi 59.37 40 IAmb IAmb 20 53 12.5
comp=Z,43nm,1.4s
CLL Collm 59.40 24 IAmb IAmb 20 53 12.5
comp=Z,32nm,1.1s
CLL Collm 59.40 24 *i* P **P 20 53 10.9 +0.8**
CLL *e*S **S 21 01 24.0 +5.5**
CLL pmax pmax
comp=Z,52nm,1.3s
CLL Collm 59.40 24 *i* P **P 20 53 10.9 +0.8**
comp=Z,52nm,1.3s
CLL *i* x x 20 54 24.4
CLL *e*PP **PP 20 55 20.0 -1.5**
CLL *e*PPP PPP 20 56 48.0
CLL *e*S **S 21 01 24.0 +5.5**
comp=N,2µm,25.5s
CLL *e*S **S 21 01 24.0 +5.5**
comp=E,1µm,23.5s
CLL *e*SS **SS 21 05 12.0 -1.7**
CLL *e*SSS SSS 21 08 00.0
CLL Collm 59.40 24 P **P 20 53 11.0 +0.8**
comp=E,28nm,1.6s
PVCC Panska Ves 59.48 26 *e*P **P 20 53 12.1 +1.4**
PVCC Panska Ves 59.48 26 *e*P **P 20 53 12.1 +1.4**
MPEP Malo Peshtene 59.48 37 P **P 20 53 11.9 +1.0**
VALD Valchedram 59.50 36 P **P 20 53 12.1 +1.1**
VRAC Vranov 59.50 28 ⇓P **P 20 53 11.6 +0.7**
VRAC Vranov 59.50 28 P **P 20 53 11.5 +0.5**
VRAC Vranov 59.50 28 *e*P **P 20 53 11.0 0.0**
VRAC *e* 20 55 19.5
HERR Herculane 59.61 35 ⇑P **P 20 53 13.4 +1.7**
BZS Buzias 59.61 34 ⇑P **P 20 53 12.7 +0.9**
BZS Buzias 59.61 34 P **P 20 53 12.6 +0.9**
JAVC Velka Javorina 59.70 29 *e*P **P 20 53 13.6 +1.2**
AKAS Kas 59.74 46 P 20 53 13.3 +0.3
PLCA Paso Flores 59.81 222 P **P 20 53 13.3 0.0**
comp=E,4.4nm,1.1s,baz=358,slow=5.0,SNR=5.1
comp=E,4.4nm,1.1s
PLCA Paso Flores 59.81 222 *e*P **P 20 53 14.3 +1.0**
PLCA pmax pmax
comp=Z,4.0nm,1.1s
DIM Dimitrovgrad 59.88 39 P **P 20 53 13.9 +0.2**
BI05 Punta Hualpn 59.89 227 IAMs_20 IAMs_20 21 15 06.7
comp=Z,2µm,19.0s
PLVB Pleven 60.03 37 ⇓P **P 20 53 16.1 +1.4**
MANT Manisa 60.04 44 IAmb IAmb 20 53 30.9
comp=Z,56nm,1.2s
UPC Upice 60.09 26 *e*P **P 20 53 16.1 +1.1**
UPC Upice 60.09 26 *e*P **P 20 53 16.1 +1.1**
DPC Dobruska-Polom 60.12 27 *e*P **P 20 53 16.2 +1.0**
DPC *e*pP **sP 20 53 21.3 +0.5**
DPC *e*S **S 21 01 34.5 +6.6**
DPC AMS AMS 21 20 20.0
comp=Z,900nm,17.7s
DPC Dobruska-Polom 60.12 27 *e*P **P 20 53 16.2 +1.0**
DPC *e**PP **sP 20 53 21.3 +0.5**
DPC *e*S **S 21 01 34.5 +6.6**
DPC MLR MLR
comp=Z,900nm,17.7s
DPC Dobruska-Polom 60.12 27 P **P 20 53 15.8 +0.6**
comp=Z,38nm,1.6s

MAUC Maruska 60.12 28 *e*P **P 20 53 16.6 +1.3**
GZR Gura Zlata 60.12 34 ⇓P **P 20 53 16.5 +1.1**
GZR Gura Zlata 60.12 34 P **P 20 53 16.5 +1.1**
KRLC Kraliky 60.13 27 *e*P **P 20 53 16.7 +1.4**
KRLC AMS AMS 21 24 50.0
comp=Z,1µm,16.0s
KRLC Kraliky 60.13 27 *e*P **P 20 53 16.7 +1.4**
KRLC MLR MLR
comp=Z,1µm,16.0s
PSZ Piszkesteto 60.16 31 ⇓P **P 20 53 16.7 +1.1**
PSZ Piszkesteto 60.16 31 P **P 20 53 13.7 -1.9**
PSZ Piszkesteto 60.16 31 P **P 20 53 13.7 -1.9**
PSZ pmax pmax
comp=Z,65nm,1.2s
PSZ MLR MLR
comp=Z,900nm,21.0s
CHVC Chvalec 60.17 26 *e*P **P 20 53 16.7 +1.2**
CHVC Chvalec 60.17 26 *e*P **P 20 53 16.7 +1.2**
ELL Elmali 60.19 46 P 20 53 17.0 +0.9
ELL Elmali 60.19 46 P **P 20 53 17.0 +0.9**
ELL pmax pmax
comp=Z,119nm,1.2s
OSTC Ostas 60.22 26 *e*P **P 20 53 16.9 +1.0**
OSTC *e*pP **sP 20 53 22.3 +0.8**
OSTC Ostas 60.22 26 *e*P **P 20 53 16.9 +1.0**
OSTC *e**PP **sP 20 53 22.3 +0.8**
VLAD Vladila 60.25 36 ⇓P **P 20 53 17.3 +1.2**
MORC Moravsky Berou 60.27 28 P **P 20 53 17.3 +1.0**
MORC Moravsky Berou 60.27 28 *e*P **P 20 53 17.0 +0.7**
KSP Ksiaz 60.46 26 *e*P **P 20 53 18.9 +1.4**
KSP Ksiaz 60.46 26 P **P 20 53 18.2 +0.7**
comp=Z,33nm,1.4s
DEV Deva 60.49 34 ⇓P **P 20 53 18.9 +1.1**
DEV Deva 60.49 34 P **P 20 53 18.9 +1.1**
STEB Steborice 60.49 28 *e*P **P 20 53 19.0 +1.3**
ELND Elena 60.54 38 ⇑P **P 20 53 18.5 +0.3**
JMB Yambol 60.71 39 P **P 20 53 19.2 -0.2**
LANS Liptovska Anna 60.77 29 *e*P **P 20 53 21.1 +1.4**
LANS pmax pmax
comp=Z,26nm,1.7s
LANS Liptovska Anna 60.77 29 *e*P **P 20 53 21.1 +1.4**
SZH Strazhitsa 60.79 38 *i* P **P 20 53 20.1 +0.2**
KECS Kecovo 60.83 30 *e*P **P 20 53 21.7 +1.6**
KECS pmax pmax
comp=Z,36nm,1.3s
KECS Kecovo 60.83 30 *e*P **P 20 53 21.7 +1.6**
HUMR Humele 60.89 36 ⇑P **P 20 53 21.2 +0.7**
DRGR 60.93 33 ⇑P **P 20 53 21.8 +0.8**
DRGR 60.93 33 P **P 20 53 21.7 +0.8**
MARR Marisel-Cluj 61.09 33 ⇓P **P 20 53 23.0 +1.0**
ISP Isparta 61.10 45 **P 20 53 21.7 -0.6**
ISP IAmb IAmb 20 53 38.2
comp=Z,51nm,1.4s
ISP Isparta 61.10 45 *ce*P **P 20 53 20.8 -1.5**
ISP pmax pmax
comp=Z,36nm,1.7s
TNR Turnu Rosu 61.12 35 ⇑P **P 20 53 22.5 +0.4**
TNR Turnu Rosu 61.12 35 P **P 20 53 22.5 +0.4**
ARR Arges 61.17 35 ⇓P **P 20 53 24.0 +1.5**
LOZB Loznitsa 61.22 38 ⇑P **P 20 53 23.0 +0.1**
RAZG Razgrad 61.27 38 ⇓P **P 20 53 23.8 +0.6**
MESR Meseseni 61.28 33 ⇑P **P 20 53 24.3 +1.1**
MTUR Matau 61.33 36 ⇓P **P 20 53 24.7 +1.0**
MTUR Matau 61.33 36 P **P 20 53 24.6 +1.0**
CEI Carei 61.35 32 ⇑P **P 20 53 24.8 +1.2**
CEI Carei 61.35 32 P **P 20 53 24.7 +1.2**
NIE Niedzica 61.35 29 *e*P **P 20 53 25.6 +2.0**
NIE Niedzica 61.35 29 P **P 20 53 24.6 +1.0**
comp=Z,16nm,1.4s
EIL Elat 61.37 55 LR LR 21 21 25.5
comp=Z,2µm,18.2s,baz=246,slow=37
VOIR 61.45 35 ⇑P **P 20 53 25.0 +0.5**
VOIR 61.45 35 P **P 20 53 24.9 +0.5**
VOIR 61.45 35 P **P 20 53 24.7 +0.3**
comp=Z,795nmcomp=Z,51nm,1.2s
MDB Medias 61.47 34 ⇓P **P 20 53 24.7 +0.2**
MDB Medias 61.47 34 P **P 20 53 24.6 +0.2**
OJC Ojcow 61.64 29 *e*P **P 20 53 26.8 +1.2**
OJC Ojcow 61.64 29 P **P 20 53 26.3 +0.8**
comp=Z,50nm,1.6s
TGMR Targu Mures 61.78 34 ⇑P **P 20 53 28.0 +1.4**
BERU Beregovo 61.79 32 P **P 20 53 26.8 +0.3**
STHS Stebnicka Huta 61.82 30 *e*P **P 20 53 29.0 +2.2**
STHS Stebnicka Huta 61.82 30 *e*P **P 20 53 29.0 +2.2**
UZHM Uzhgorod 61.85 31 P **P 20 53 28.2 +1.3**
BMR Baia Mare 61.90 33 ⇓P **P 20 53 28.6 +1.3**
BMR Baia Mare 61.90 33 P **P 20 53 28.3 +1.0**
DOPR Dopca 61.94 35 ⇓P **P 20 53 28.3 +0.6**
MUKU Mukachevo 61.95 31 P **P 20 53 28.1 +0.5**
CSS Mathiatis 61.97 49 P **P 20 53 28.3 +0.2**
comp=Z,544nmcomp=Z,33nm,1.2s
BORA Eskisehir 61.99 43 IAmb IAmb 20 53 43.8
comp=Z,52nm,1.4s
MLR Muntele Rosu 62.00 36 ⇓P **P 20 53 28.5 +0.4**
MLR Muntele Rosu 62.00 36 **P 20 53 27.7 -0.5**
MLR IAMs_20 IAMs_20 21 19 11.2
comp=Z,1µm,21.0s
MLR Muntele Rosu 62.00 36 P **P 20 53 27.7 -0.5**
MLR pmax pmax
comp=Z,71nm,1.2s
MLR MLR MLR
comp=Z,1µm,21.0s
MLR Muntele Rosu 62.00 36 P **P 20 53 28.6 +0.4**
comp=Z,44nm,1.2s
BRIU Brid 62.05 32 P **P 20 53 28.9 +0.6**
NEHR Nehoiu 62.16 36 ⇓P **P 20 53 30.3 +1.1**
COVR Voineasa-Covas 62.34 35 ⇑P **P 20 53 30.8 +0.4**
GHAJ Ghor Haditha 62.40 54 IAMs_20 IAMs_20 21 23 45.2
comp=Z,1µm,19.0s
GKP Gorka Klasztor 62.61 25 *e*P **P 20 53 33.9 +2.0**
PLOR Plostina 62.61 36 ⇑P **P 20 53 32.6 +0.5**
PLOR Plostina 62.61 36 P **P 20 53 32.6 +0.5**
VRI Vrincioaia 62.66 36 ⇓P **P 20 53 32.4 -0.1**
VRI Vrincioaia 62.66 36 P **P 20 53 32.4 -0.1**
KWP Kalwaria Pacla 62.69 30 *e*P **P 20 53 33.9 +1.3**
ONER Baraj Valea Uz 62.73 35 ⇓P **P 20 53 34.1 +1.2**
BURAR Bucovina Array 62.80 33 ⇓P **P 20 53 35.2 +1.8**
BURAR Bucovina Array 62.80 33 P **P 20 53 33.6 +0.1**
BURAR Bucovina Array 62.80 33 P **P 20 53 35.2 +1.8**
ODBI Odobesti 62.80 36 ⇑P **P 20 53 33.4 +0.1**
BUR08 Bucovina Ar. S 62.80 33 IAmb IAmb 20 53 36.1
comp=Z,62nm,1.6s
MMAI Mount Meron Ar 62.86 52 P **P 20 53 35.0 +0.8**
comp=Z,4.9nm,0.8s,baz=342,slow=4.5,SNR=11
MMAI PP **PP 20 55 52.7 +0.2**
comp=Z,5.1nm,1.1s,baz=300,slow=9.8,SNR=3.6
comp=Z,4.9nm,0.8s
TIRR Tirgusor 62.91 38 IAMs_20 IAMs_20 21 20 57.6
comp=Z,1µm,22.0s
TESR Tescani 62.97 35 ⇓P **P 20 53 35.0 +0.4**
CFR Carcaliu 63.12 37 ⇓P **P 20 53 35.8 +0.3**
CFR Carcaliu 63.12 37 P **P 20 53 35.8 +0.3**
TPGR Topolog 63.12 37 ⇓P **P 20 53 36.0 +0.4**
BEL Belsk 63.18 28 *e*P **P 20 53 37.7 +1.9**
PRAR RASCA 63.21 34 ⇑P **P 20 53 37.4 +1.2**
060A Indiantown 63.28 301 IAMs_20 IAMs_20 21 13 15.5
comp=Z,1µm,19.0s
BHL Bhannes 63.37 51 *e*P **P 20 53 36.8 -0.7**
LVV L'vov 63.48 31 P **P 20 53 38.4 +0.6**
TLCR 63.54 37 ⇓P **P 20 53 39.0 +0.7**
TLCR 63.54 37 P **P 20 53 38.9 +0.7**
J61A Chester 63.57 320 IAmb IAmb 20 53 40.3
comp=Z,31nm,1.2s
HNH Hanover 63.57 321 IAmb IAmb 20 54 39.4
comp=Z,41nm,1.4s
HWQ Hawqa 63.72 51 *e*P **P 20 53 37.5 -2.4**
KIRS Kirsehir-Merke 64.07 45 ⇑P **P 20 53 42.7 +0.7**
BR106 Keskin Array S 64.11 44 P **P 20 53 42.9 +0.5**
comp=Z,177nmcomp=Z,12nm,0.9s
BR104 Keskin Array S 64.12 44 P **P 20 53 42.7 +0.3**
comp=Z,217nmcomp=Z,23nm,1.2s
BR131 Keskin Array S 64.12 44 P **P 20 53 39.7 -2.7**
BR131 Keskin Array S 64.12 44 P **P 20 53 39.7 -2.7**
BR131 pmax pmax
comp=Z,114nm,1.7s
BRTR Keskin Array B 64.12 44 P **P 20 53 42.9 +0.5**
comp=Z,7.7nm,0.8s,baz=237,slow=6.4,SNR=38
BRTR PP PP 20 55 55.4 -8.2
comp=Z,8.7nm,1.0s,baz=234,slow=6.4,SNR=4.0
comp=Z,7.7nm,0.8s
BRTR Keskin Array B 64.12 44 **P 20 53 42.6 +0.2**
BRTR Keskin Array B 64.12 44 *e*P **P 20 53 43.1 +0.7**
BRTR pmax pmax

comp=Z,8.0nm,0.8s
T59A Double "B" Far 64.26 312 IAMs_20 IAMs_20 21 15 53.0
comp=Z,2µm,20.0s
SORM Soroca 64.83 34 ⇑P **P 20 53 46.3 -0.5**
SORM Soroca 64.83 34 P **P 20 53 46.2 -0.5**
PURM Purcari 64.86 36 ⇓P **P 20 53 47.3 +0.4**
LDAQ Lac Daran 65.13 325 **P 20 53 48.0 -0.8**
LDAQ IAmb IAmb 20 53 49.6
comp=Z,25nm,0.9s
LONY Lake Ozonia 65.46 321 IAMs_20 IAMs_20 21 19 11.1
comp=Z,1µm,20.0s
S57A Dark Hollow, R 65.59 313 IAMs_20 IAMs_20 21 16 20.7
comp=Z,2µm,19.0s
SUW Suwalki 65.71 27 *e*P **P 20 53 52.5 +0.3**
J57A Williamstown 65.82 319 IAmb IAmb 20 53 54.4
comp=Z,18nm,0.9s
TRQ Mont Tremblant 66.20 322 **P 20 53 54.9 -0.9**
TRQ IAmb IAmb 20 53 56.7
comp=Z,38nm,1.2s
Q56A Snyder Ridge, 66.23 314 IAmb IAmb 20 53 57.9
comp=Z,35nm,1.1s
L56A Greenwood 66.31 317 IAmb IAmb 20 54 11.3
comp=Z,30nm,1.2s
NB2 NORSAR Subarra 66.47 16 P **P 20 53 57.6 +0.5**
comp=Z,77nm,1.7s,baz=215,slow=6.5
NB2 NORSAR Subarra 66.47 16 P **P 20 53 57.6 +0.5**
NOA NORSAR Array B 66.47 16 P **P 20 53 57.0 -0.1**
comp=Z,5.2nm,0.8s,baz=213,slow=6.6,SNR=12
comp=Z,5.2nm,0.8s
NOA NORSAR Array B 66.47 16 *e*P **P 20 53 57.8 +0.7**
NOA pmax pmax
comp=Z,5.0nm,0.8s
HFS Hagfors 66.48 18 P **P 20 53 57.7 +0.6**
comp=Z,11nm,0.8s,baz=190,slow=7.5,SNR=14
comp=Z,11nm,0.8s
AK12 Malin Array Si 66.64 32 P **P 20 53 58.4 +0.1**
NC303 NORSAR Array S 66.66 16 IAmb IAmb 20 54 05.8
comp=Z,45nm,1.1s
KIEV Kiev 66.70 32 **P 20 53 58.5 -0.2**
KIEV Kiev 66.70 32 P **P 20 53 58.5 -0.2**
KIEV pmax pmax
comp=Z,64nm,1.0s
SIM Simferopol' 66.71 39 *e*P **P 20 53 59.7 +0.8**
SIM *e*S **S 21 02 48.8 -1.5**
SIM pmax pmax
comp=Z,29nm,1.2s
SIM MLR MLR
comp=Z,75nm,12.3s
AKASG Malin Array Be 66.71 32 P **P 20 53 58.8 0.0**
comp=Z,25nm,0.9s,baz=238,slow=6.9,SNR=40
AKASG PP **PP 20 56 26.4 +0.5**
comp=Z,12nm,1.0s,baz=236,slow=9.3,SNR=5.0
comp=Z,25nm,0.9s
AKASG Malin Array Be 66.71 32 P **P 20 53 58.3 -0.4**
AKBB Malin Array Si 66.71 32 *ce*P **P 20 53 58.3 -0.5**
AKBB pmax pmax
comp=Z,59nm,1.0s
SCHQ Schefferville 66.88 333 P **P 20 53 59.1 -0.7**
comp=Z,8.4nm,0.8s,baz=121,slow=6.3,SNR=10
SCHQ LR LR 21 18 12.7
comp=Z,1µm,21.5s,baz=132,slow=32
comp=Z,8.4nm,0.8s
HODGE Hodges 66.92 308 IAmb IAmb 20 54 02.3
comp=Z,29nm,1.3s
TGUH Tegucigalpa,Un 67.13 286 IAmb IAmb 20 54 29.4
comp=Z,46nm,1.1s
ARPR Arapgir-MALATY 67.23 47 IAmb IAmb 20 54 04.7
comp=Z,40nm,1.1s
DELO Deloro Mine 67.36 320 IAmb IAmb 20 54 04.2
comp=Z,19nm,1.0s
N53A Lisbon 68.06 315 IAmb IAmb 20 54 09.2
comp=Z,30nm,1.1s
O53A New Philadelph 68.13 314 IAmb IAmb 20 54 16.1
comp=Z,26nm,1.1s
MNK Minsk 68.19 28 *i* P **P 20 54 08.6 +0.6**
comp=E,34nm,0.9s
MNK *i* P **P 20 54 08.6 +0.6**
comp=N,9.0nm,0.6s
MNK *i* P **P 20 54 08.6 +0.6**
comp=Z,66nm,0.8s,baz=234
MNK *i* PP **PP 20 56 38.3 -0.3**
MNK *i* PPP PPP 20 58 16.0
MNK *i* S **S 21 03 08.2 +0.6**
MNK *i* SS **SS 21 07 31.2 +0.5**
MNK *i* SSS SSS 21 10 46.5
MNK *i* LQ LQ 21 19 24.4
MNK *i* LR LR 21 23 11.6
MNK *i* LRM MLR 21 25 44.9
comp=E,388nm,16.2s
MNK *i* LRM MLR 21 25 59.0
comp=Z,638nm,18.5s
MNK *i* LRM MLR 21 26 11.2
comp=N,456nm,17.2s
MNK Minsk 68.19 28 *i* P **P 20 54 08.6 +0.6**
MNK *i* 20 56 38.2
MNK *i* PPP PPP 20 58 16.0
MNK *i* S **S 21 03 08.2 +0.6**
MNK *i* SS **SS 21 07 31.1 +0.5**
MNK pmax pmax
comp=Z,66nm,0.8s
MNK pmax pmax
comp=N,9.0nm,0.6s
MNK pmax pmax
comp=E,34nm,0.9s
MNK MLR MLR
comp=E,388nm,16.0s
MNK MLR MLR
comp=Z,638nm,18.0s
MNK MLR MLR
comp=N,456nm,17.0s
Y52A Lilburn 68.25 307 IAmb IAmb 20 54 10.8
comp=Z,58nm,1.5s
SADO Sadowa 68.45 319 IAmb IAmb 20 54 10.8
comp=Z,20nm,1.1s
ANN Anapa 68.78 41 *e*P **P 20 54 10.6 -1.3**
ANN *e*S **S 21 03 09.3 -5.7**
ANN pmax pmax
comp=Z,91nm,1.3s
ANN MLR MLR
comp=Z,644nm,20.0s
BUKO Buck Lake 68.89 320 IAmb IAmb 20 54 13.7
comp=Z,45nm,1.5s
RAYN Ar Rayn 68.96 64 **P 20 54 15.1 +1.5**
RAYN IAmb IAmb 20 54 16.4
comp=Z,18nm,0.9s
RAYN Ar Rayn 68.96 64 P **P 20 54 15.1 +1.5**
RAYN pmax pmax
comp=Z,18nm,1.0s
RAYN MLR MLR
comp=Z,500nm,19.0s
VOI Vohitsoka 69.23 113 IAMs_20 IAMs_20 21 20 23.3
comp=Z,1µm,22.0s
ACSO Alum Creek Sta 69.39 314 IAmb IAmb 20 54 17.3
comp=Z,36nm,1.1s
W50A Signal Mountai 69.61 308 IAmb IAmb 20 54 19.0
comp=Z,23nm,1.0s
T50A Nancy 69.77 310 IAmb IAmb 20 54 19.5
comp=Z,48nm,1.5s
FOMA Nahampoana Res 69.84 116 IAMs_20 IAMs_20 21 20 43.5
comp=Z,1µm,20.0s
VSU Vasula 70.05 24 *ce*P **P 20 54 19.5 0.0**
VSU pmax pmax
comp=Z,89nm,1.3s
U49A Red Boiling Sp 70.34 309 IAmb IAmb 20 54 23.4
comp=Z,24nm,0.9s
GEVA Gevas 70.46 49 IAmb IAmb 20 54 25.3
comp=Z,35nm,1.1s
VNA2 Neumayer--Watz 70.59 175 ⇓P P 20 54 30.7 +8.0
comp=Z,7.5nm,0.7s,baz=336,slow=5.2
VNA3 Neumayer Olymp 70.73 176 ⇓P P 20 54 33.3 +10
comp=Z,4.3nm,0.8s
X48A Hartselle 70.79 307 IAmb IAmb 20 54 48.6
comp=Z,64nm,1.6s
LABN Labinsk 70.89 42 *e*P **P 20 54 24.5 -0.5**
LABN *e*S **S 21 03 41.8 +1.9**
LABN pmax pmax
comp=Z,83nm,1.4s
P48A Milroy 70.93 312 IAMs_20 IAMs_20 21 19 50.2
comp=Z,1µm,21.0s
V48A Smith Brothers 70.94 308 IAmb IAmb 20 54 26.7
comp=Z,19nm,0.9s
O48B Farmland 70.98 313 IAmb IAmb 20 54 60.0
comp=Z,31nm,1.1s
ERBR Yeremizino-Bor 71.12 41 *e*P **P 20 54 25.1 -1.2**
ERBR *e*S **S 21 03 41.4 -1.1**
ERBR pmax pmax
comp=Z,69nm,1.3s

Z47A Carrollton 71.31 305 IAmb IAmb 20 54 52.5
comp=Z,45nm,1.2s
T47A Sharon Grove 71.50 310 IAmb IAmb 20 54 29.9
comp=Z,26nm,1.1s
N47A Urbana 71.56 314 IAmb IAmb 20 54 30.1
comp=Z,38nm,1.0s
FINES FINESS Array B 71.67 22 P P **20 54 30.3 +1.0**
comp=Z,24nm,0.8s,baz=191,slow=2.9,SNR=45
comp=Z,24nm,0.8s
FINES FINESS Array B 71.67 22 P P **20 54 30.2 +0.9**
FINES FINESS Array B 71.67 22 *e*P P **20 54 30.7 +1.4**
FINES pmax pmax
comp=Z,24nm,0.8s
SNAA Sanae 71.73 174 *i* P P **20 54 32.8 +3.2**
SNAA pmax pmax
comp=Z,3.0nm,1.0s
NEUR Neytrino 71.75 44 *i* P P **20 54 30.6 +0.1**
NEUR pmax pmax
comp=Z,8.0nm,1.2s
SHA1 Shidzhatmaz 71.88 43 *ce*P P **20 54 30.0 -1.3**
KIV Kislovodsk 71.97 43 P P **20 54 31.3 -0.4**
KIV Kislovodsk 71.97 43 *e*P P **20 54 30.5 -1.1**
KIV *e*PPP PPP 20 58 52.3
KIV *e*S S **21 03 49.6 -3.0**
KIV *e*SS SS **21 08 28.9 -0.7**
KIV pmax pmax
comp=Z,35nm,3.0s
KIV pmax pmax
comp=Z,38nm,1.1s
KIV Kislovodsk 71.97 43 P P **20 54 32.2 +0.6**
comp=Z,35nm,1.5s
KVAR Kislovodsk Arr 71.98 43 LR LR 21 29 01.0
comp=Z,140nm,18.3s,baz=112,slow=38
KBZ Khabaz 72.04 43 P P **20 54 33.1 +1.2**
comp=Z,14nm,1.0s,baz=238,slow=4.9,SNR=23
comp=Z,14nm,1.0s
KBZ Khabaz 72.04 43 *c i*P P **20 54 32.4 +0.5**
KBZ pmax pmax
comp=Z,17nm,1.0s
KBZ pmax pmax
comp=Z,14nm,1.0s
GNI Garni 72.25 47 P **20 54 32.3 -1.2**
GNI Garni 72.25 47 *ce*P P **20 54 34.1 +0.6**
GNI pmax pmax
comp=Z,80nm,1.7s
GNI Garni 72.25 47 P P **20 54 34.4 +0.9**
VORD Divnogorie 72.44 35 *e*P P **20 54 32.4 -1.7**
VORD pmax pmax
comp=Z,60nm,1.0s
VSR Storozhevoye 72.47 35 *e*P P **20 54 32.0 -2.3**
VSR pmax pmax
comp=Z,50nm,1.0s
GOF Gofitskoye 72.58 42 *ce*P P **20 54 35.7 +0.6**
TROLL Troll, Antarti 72.68 173 P P **20 54 38.2 +2.8**
VORR Voronezh 72.68 35 *e*P P **20 54 33.2 -2.4**
VORR pmax pmax
comp=Z,50nm,1.0s
OXF Oxford 72.70 307 IAmb IAmb 20 54 59.5
comp=Z,44nm,1.2s
OBN Obninsk 72.78 31 *de*P P **20 54 36.6 +0.5**
OBN *e* 20 54 56.0
OBN *e* 20 57 19.2
OBN *e*S S **21 03 54.4 -6.8**
OBN pmax pmax
comp=Z,81nm,1.3s
OBN MLR MLR
comp=Z,426nm,15.0s
LPSR Galich'ya Gora 72.91 34 *e*P P **20 54 34.0 -2.9**
LPSR pmax pmax
comp=Z,40nm,1.0s
NVL N'lazarevskaya 73.08 169 *e*P P **20 54 39.6 +2.0**
NVL *e* 20 54 57.8
NVL *e* 20 57 20.8
NVL *e*PPP PPP 20 59 05.4
NVL pmax pmax
comp=Z,34nm,1.9s
SIUC Southern Illin 73.31 310 IAmb IAmb 20 55 13.3
comp=Z,35nm,1.3s
S44A Carbondale 73.33 310 IAmb IAmb 20 54 39.9
comp=Z,24nm,1.1s
MOS Moscow 73.60 30 *e*P P **20 54 40.6 -0.3**
MOS *e* 20 57 19.6
MOS pmax pmax
comp=Z,151nm,1.2s
VRH Novokhopyorsk 73.94 36 *e*P P **20 54 39.7 -3.3**
VRH pmax pmax
comp=Z,20nm,1.0s
SUMG Summit 74.07 355 IAmb IAmb 20 54 56.6
comp=Z,73nm,1.4s
SUMG Summit 74.07 355 *i* P P **20 54 45.3 +1.4**
SUMG IAmb IAmb 20 54 57.1
comp=Z,71nm,1.4s
FVM French Village 74.30 310 IAmb IAmb 20 55 28.5
comp=Z,57nm,1.9s
I42A Draeger Farm, 74.72 316 IAmb IAmb 20 54 48.4
comp=Z,31nm,1.0s
AKT Akhty 74.79 47 *e*P P **20 54 48.5 +0.1**
AKT *e* 20 55 02.9
AKT *e* 20 57 36.5
AKT *e*S S **21 04 25.0 +0.2**
AKT *e*SS SS **21 09 08.3 -4.5**
AKT pmax pmax
comp=Z,27nm,1.3s
AKT MLR MLR
comp=Z,163nm,7.0s
CCM Cathedral Cave 74.95 310 P **20 54 46.2 -3.0**
CCM Cathedral Cave 74.95 310 IAMs_20 IAMs_20 21 18 22.1
comp=Z,927nm,22.0s
CCM Cathedral Cave 74.95 310 P P **20 54 46.2 -3.0**
CCM pmax pmax
comp=Z,26nm,1.2s
CCM MLR MLR
comp=Z,900nm,22.0s
DBG Daneborg 74.99 0 *e*P P **20 54 51.4 +2.7**
DBG IAmb IAmb 20 54 56.6
comp=Z,20nm,1.4s
MAK Makhachkala 75.02 45 *e*P P **20 54 45.2 -4.3**
MAK *e* 20 57 33.2
MAK *e*S S **21 04 20.8 -6.1**
MAK *e*SS SS **21 09 15.8 -0.1**
MAK pmax pmax
comp=Z,177nm,1.3s
WHAR Wooly Hollow 75.17 307 IAmb IAmb 20 54 50.9
comp=Z,40nm,1.5s
WLAR White Oak Lake 75.53 305 IAmb IAmb 20 55 08.2
comp=Z,59nm,1.3s
MGMO Mountain Grove 75.55 309 IAmb IAmb 20 55 07.0
comp=Z,98nm,1.8s
I40A Norwalk 75.91 316 IAMs_20 IAMs_20 21 26 35.8
comp=Z,1µm,20.0s
ELIB Princess Elisa 76.37 167 *d*P P **20 54 57.4 +0.5**
comp=Z,13nm,1.4s
MSEY Mahe Island 76.56 95 IAMs_20 IAMs_20 21 26 37.4
comp=Z,765nm,19.0s
ARCES ARCESS Array B 76.78 15 P P **20 54 58.4 -0.6**
comp=Z,3.6nm,0.8s,baz=27,slow=8.2,SNR=4.8
comp=Z,3.6nm,0.8s
KLMR Klimovskoe 76.81 26 *e*P P **20 54 58.4 -0.9**
KLMR *e* 20 57 51.2
KLMR S S **21 04 44.0 -2.0**
KLMR pmax pmax
comp=Z,70nm,1.3s
P38A Dawn 77.03 311 IAmb IAmb 20 55 01.6
comp=Z,38nm,1.2s
HKT Hockley 77.19 301 P P **20 55 02.0 -0.1**
HKT Hockley 77.19 301 *i* P P **20 55 02.1 +0.1**
HKT pmax pmax
comp=Z,9.0nm,1.1s
BELA Belgrano 2 77.35 183 P **20 55 03.2 +1.1**
BELA IAmb IAmb 20 55 27.4
comp=Z,26nm,1.3s
DAG Danmarks Havn 77.48 1 *i* P P **20 55 04.0 +1.2**
APA Apatity 77.87 19 *e*P P 20 55 10.0 +4.9
APA *e* 20 55 16.3
APA pmax pmax
comp=Z,14nm,0.9s
APA MLR MLR
comp=Z,2µm,5.5s
I37A Lemond, Waseca 77.89 315 IAmb IAmb 20 55 19.6
comp=Z,52nm,1.2s
T35A Sooner Cattle 78.84 308 IAmb IAmb 20 55 35.7
comp=Z,29nm,1.0s
W35A Tecumseh 78.84 306 IAmb IAmb 20 55 12.1
comp=Z,35nm,1.2s
N35A Tabor 78.86 312 IAmb IAmb 20 55 25.2
comp=Z,44nm,1.2s

Z35A Perchaven, San 78.88 304 IAmb IAmb 20 55 12.3
comp=Z,58nm,1.5s
OK048 Pawnee Station 79.10 307 IAmb IAmb 20 55 36.9
comp=Z,35nm,1.3s
NEEM North Greenlan 79.86 354 *i* P P **20 55 17.8 +1.5**
NEEM IAmb IAmb 20 55 18.7
comp=Z,14nm,0.9s
KAN01 Argonia South 79.86 308 IAmb IAmb 20 55 17.6
comp=Z,55nm,1.4s
WTFS Witchita Falls 79.94 304 IAmb IAmb 20 55 18.0
comp=Z,81nm,1.7s
ECSD EROS Data Cent 80.11 315 IAmb IAmb 20 55 18.5
comp=Z,48nm,1.4s
HNDO Hondo 80.11 300 P P **20 55 16.9 -1.4**
HNDO IAmb IAmb 20 55 50.8
comp=Z,58nm,1.8s
OK038 West end E0370 80.54 307 IAMs_20 IAMs_20 21 24 18.2
comp=Z,1µm,20.0s
KIRV Kirov 80.62 30 *ce*P P **20 55 20.6 +0.3**
ABTX Abilene, Hawle 80.78 303 IAmb IAmb 20 55 23.0
comp=Z,50nm,1.5s
ULM Lac du Bonnet 80.91 321 P P **20 55 21.2 -0.8**
comp=Z,6.7nm,0.9s,baz=99,slow=4.6,SNR=8.8
ULM LR LR 21 26 23.0
comp=Z,709nm,20.4s,baz=99,slow=32
comp=Z,6.7nm,0.9s
ULM Lac du Bonnet 80.91 321 *e*P P **20 55 21.4 -0.7**
ULM pmax pmax
comp=Z,7.0nm,0.9s
APMT Aspermont 81.26 304 IAmb IAmb 20 55 55.9
comp=Z,66nm,1.8s
SPITS Spitsbergen Ar 81.36 7 PP PP **20 58 27.7 -2.1**
comp=Z,33nm,1.1s,baz=198,slow=5.2,SNR=4.1
SMWD Samnorwood 81.57 306 IAmb IAmb 20 55 50.0
comp=Z,26nm,1.1s
CBKS Cedar Bluff 81.64 309 IAmb IAmb 20 55 27.5
comp=Z,52nm,1.4s
TULEG Thule 81.71 350 *i* P P **20 55 26.8 +1.0**
TULEG IAmb IAmb 20 55 27.4
comp=Z,6.0nm,0.8s
OZNA Ozona 81.85 301 IAmb IAmb 20 55 28.1
comp=Z,25nm,1.2s
SUSD Miller 81.89 315 IAmb IAmb 20 55 40.8
comp=Z,41nm,1.1s
FCC Fort Churchill 81.91 330 IAmb IAmb 20 55 28.1
comp=Z,22nm,1.0s
DKNS Dickens 81.97 304 IAmb IAmb 20 55 29.5
comp=Z,64nm,1.7s
K30B Basset 82.09 313 IAmb IAmb 20 56 02.9
comp=Z,70nm,1.4s
NOR Nord 82.36 1 *i* P P **20 55 30.3 +1.1**
NOR IAmb IAmb 20 55 31.0
comp=Z,16nm,1.3s
MSTX Muleshoe 83.53 304 IAmb IAmb 20 56 08.6
comp=Z,64nm,1.6s
RTBA Rita Blanca 83.73 307 IAmb IAmb 20 55 38.6
comp=Z,69nm,1.9s
TXAR Lajitas Array 83.90 299 P P **20 55 38.8 +0.5**
comp=Z,2.8nm,0.7s,baz=86,slow=5.1,SNR=6.2
comp=Z,2.8nm,0.7s
BLKN Baker Lake 84.20 335 IAmb IAmb 20 55 40.1
comp=Z,19nm,1.1s
HRA Herat 84.94 56 IAmb IAmb 20 55 58.8
comp=Z,29nm,1.2s
VHRN Van Horn 85.14 301 IAmb IAmb 20 56 16.4
comp=Z,29nm,1.2s
FFC Flin Flon 85.37 325 P **20 55 43.7 -1.3**
FFC Flin Flon 85.37 325 IAMs_20 IAMs_20 21 34 10.9
comp=Z,975nm,19.0s
FFC Flin Flon 85.37 325 P P **20 55 43.7 -1.3**
FFC pmax pmax
comp=Z,16nm,1.4s
FFC MLR MLR
comp=Z,1µm,19.0s
SVE Sverdlovsk 86.13 33 *e*P P **20 55 50.6 +1.9**
SVE pmax pmax
comp=Z,32nm,1.6s
ISCO Idaho Springs 86.28 310 P P **20 55 49.2 -1.1**
ISCO Idaho Springs 86.28 310 P P **20 55 49.2 -1.1**
ISCO pmax pmax
comp=Z,19nm,1.6s
RES Resolute Bay 86.51 345 P P **20 55 49.8 -0.5**
comp=Z,2.1nm,1.0s,baz=114,slow=4.2,SNR=4.5
comp=Z,2.1nm,1.0s
ANMO Albuquerque 86.64 305 LR LR 21 30 46.6
comp=Z,596nm,18.5s,baz=98,slow=33
ANMO Albuquerque 86.64 305 P P **20 55 51.2 -0.8**
ANMO Albuquerque 86.64 305 *ce*P P **20 55 52.4 +0.4**
ANMO pmax pmax
comp=Z,13nm,1.7s
MAW Mawson 86.97 158 LR LR 21 27 51.2
comp=Z,657nm,18.5s,baz=290,slow=31
K22A Casper 87.16 313 IAmb IAmb 20 56 28.7
comp=Z,43nm,1.6s
LAO LASA Array 87.22 317 IAmb IAmb 20 56 13.9
comp=Z,24nm,0.9s
O20A White River Ci 88.31 310 IAmb IAmb 20 56 30.3
comp=Z,15nm,1.0s
MVCO Mesa Verde 88.40 307 IAmb IAmb 20 56 38.8
comp=Z,14nm,1.1s
PV02 Paradox Valley 88.62 308 IAmb IAmb 20 56 39.8
comp=Z,27nm,1.0s
PV13 Radium Mtn., P 88.69 308 IAmb IAmb 20 56 40.5
comp=Z,18nm,0.9s
PV03 Paradox Valley 88.71 308 IAmb IAmb 20 56 33.7
comp=Z,36nm,1.6s
PV18 Skein Mesa, Pa 88.76 308 IAmb IAmb 20 56 40.3
comp=Z,32nm,1.1s
PV04 Paradox Valley 88.76 308 IAmb IAmb 20 56 30.5
comp=Z,16nm,1.1s
PV16 Nyswonger Mesa 88.77 308 IAmb IAmb 20 56 40.3
comp=Z,23nm,1.1s
PV20 West Nyswonger 88.81 308 IAmb IAmb 20 56 18.8
comp=Z,20nm,0.9s
PV21 Cone Mtn., Par 88.82 308 IAmb IAmb 20 56 40.5
comp=Z,16nm,1.1s
PV23 Carpenter Ridg 88.85 308 IAmb IAmb 20 56 51.0
comp=Z,34nm,1.2s
PV14 Lion Creek, Pa 88.85 308 IAmb IAmb 20 56 31.0
comp=Z,17nm,1.1s
PV10 Paradox Valley 88.87 308 IAmb IAmb 20 56 41.3
comp=Z,23nm,0.9s
PV05 Paradox Valley 88.90 308 IAmb IAmb 20 56 39.9
comp=Z,21nm,1.2s
QSPA South Pole Qui 89.28 180 P P **20 56 04.9 +1.0**
comp=Z,4.6nm,0.9s,baz=6.0,slow=1.0,SNR=13
comp=Z,4.6nm,0.9s
PDAR Pinedale Array 89.40 313 P P **20 56 04.2 -0.9**
comp=Z,0.5nm,0.6s,baz=94,slow=4.5,SNR=6.2
comp=Z,0.5nm,0.6s
PDAR Pinedale Array 89.40 313 P P **20 56 03.7 -1.4**
FLWY Flagg Ranch 90.26 314 IAMs_20 IAMs_20 21 30 36.5
comp=Z,862nm,20.0s
KBL Kabul 90.56 56 P **20 56 10.9 +0.2**
KBL IAmb IAmb 20 56 27.3
comp=Z,15nm,1.1s
KBL Kabul 90.56 56 P P **20 56 10.9 +0.2**
KBL pmax pmax
comp=Z,15nm,1.1s
CHM Chimkent 91.05 48 *e*P P **20 56 13.5 +1.0**
comp=Z,14nm,1.2s
BRLS Borold'ay 91.22 47 *e*P P **20 56 13.5 +0.2**
IUG Iuzhnay 91.37 48 *e*P P **20 56 15.0 +0.9**
comp=Z,7.6nm,1.1s
BORK Borovoye 91.48 37 *i* P P **20 56 14.9 +0.7**
BORK pmax pmax
comp=Z,2.0nm,1.0s
BVAR Borovoye Array 91.53 37 P P **20 56 14.8 +0.3**
comp=Z,0.7nm,0.7s,baz=120,slow=5.8,SNR=3.9
BVAR PP PP **20 59 52.5 0.0**
comp=Z,4.1nm,0.9s,baz=267,slow=7.4,SNR=5.5
comp=Z,0.7nm,0.7s
DZA Taraz 92.32 47 *e*P P **20 56 19.4 +1.0**
comp=Z,3.7nm,0.7s
YKAW3 Yellowknife Wh 92.32 332 IAmb IAmb 20 57 02.5
comp=Z,26nm,1.6s
YKA Yellowknife Ar 92.32 332 P P **20 56 17.3 -0.6**
comp=Z,4.0nm,1.0s,baz=86,slow=4.5,SNR=14
YKA LR LR 21 35 46.2
comp=Z,1µm,18.4s,baz=84,slow=34
comp=Z,4.0nm,1.0s
YKA Yellowknife Ar 92.32 332 P P **20 56 17.1 -0.8**
YKA Yellowknife Ar 92.32 332 *ce*P P **20 56 17.8 -0.1**
YKA pmax pmax
comp=Z,3.0nm,0.9s
HLID Hailey 92.95 313 IAmb IAmb 20 56 41.6
comp=Z,19nm,1.9s
HLID IAMs_20 IAMs_20 21 31 54.8
comp=Z,1µm,20.0s
BRZS Berezniki 93.04 40 *e*P P **20 56 22.7 +1.2**
ELK Elko 93.66 311 LR LR 21 34 34.0
comp=Z,596nm,19.2s,baz=92,slow=33
NEW Newport 94.61 318 LR LR 21 37 32.7
comp=Z,544nm,18.5s,baz=80,slow=35
AAK Ala-Archa 94.66 47 P **20 56 29.1 -0.3**
AAK IAmb IAmb 20 56 45.8
comp=Z,12nm,1.1s
AAK Ala-Archa 94.66 47 *ce*P P **20 56 30.4 +1.0**
AAK pmax pmax
comp=Z,6.0nm,1.0s
SGDS Sogindy 94.71 47 *e*P P **20 56 30.2 +0.7**
PFO Pinyon Flats O 94.91 303 IAMs_20 IAMs_20 21 30 05.7
comp=Z,603nm,21.0s
KSH2 Kashi 95.67 51 P P **20 56 35.6 +1.5**
KSH2 pP sP 20 56 39.6 +0.1
KSH2 pmax pmax
comp=Z,15nm,1.0s
KSH2 L L
comp=Z,1µm,21.0s
KSH2 L L
comp=Z,690nm,19.9s
KSH2 L L
comp=Z,660nm,27.5s
NRN Naryn 95.85 49 P **20 56 34.5 -0.6**
NRN IAmb IAmb 20 56 51.2
comp=Z,12nm,1.1s
NRN Naryn 95.85 49 P P **20 56 34.5 -0.6**
NRN pmax pmax
comp=Z,12nm,1.1s
AAA Alma-Ata 96.39 47 *e*P P **20 56 37.1 0.0**
comp=Z,4.6nm,0.4s
TNSS Tian-Shan 96.43 47 *e*P P **20 56 38.1 +0.4**
MDOK Medeo 96.49 47 *e*P P **20 56 38.4 +0.7**
KURBB Kurchatov Arra 96.73 39 P P **20 56 38.7 +0.3**
comp=Z,0.4nm,0.7s,baz=271,slow=5.9,SNR=4.1
KURBB PP PP **21 00 31.1 -2.0**
comp=Z,4.0nm,1.1s,baz=287,slow=7.6,SNR=4.2
comp=Z,0.4nm,0.7s
KURK Kurchatov 96.77 39 P P **20 56 38.7 +0.2**
NRIK Noril'sk 96.77 20 *i* P Pdif 20 56 40.7 +0.3
NRIK pmax pmax
comp=Z,3.0nm,1.1s
TDK Taldyqorghan 97.29 45 *e*P Pdif 20 56 41.9 +0.7
SATY Saty 97.49 47 *e*P Pdif 20 56 42.7 +0.5
KPKS Kokpek 97.65 46 *e*P Pdif 20 56 43.4 +0.5
UZB Uzynbulak 97.93 47 *e*P Pdif 20 56 44.8 +0.5
SHLS Shalkode 98.25 47 *e*P Pdif 20 56 47.9 +2.3
SUTB Sutter Butte 98.78 309 IAMs_20 IAMs_20 21 36 56.9
comp=Z,667nm,22.0s
MK31 Makanchi Array 99.73 43 *i* P **Pdif** **20 56 51.9 -0.1**
MKAR Makanchi Array 99.73 43 P **Pdif** **20 56 53.4 +1.3**
comp=Z,0.2nm,0.7s,baz=298,slow=3.1,SNR=1.8
MKAR PP **PP** **21 00 53.9 -2.4**
comp=Z,2.4nm,0.8s,baz=286,slow=5.9,SNR=5.1
comp=Z,0.2nm,0.7s
ZALV Zalesovo Beam 99.97 35 PP **PP** **21 00 58.0 +0.3**
comp=Z,4.8nm,1.0s,baz=286,slow=7.4,SNR=6.9
ZSN Zaisan 101.35 42 *e*P **Pdif** **20 57 00.3 +1.2**
PALK Pallekele 101.81 83 IAMs_20 IAMs_20 21 37 58.1
comp=Z,777nm,21.0s
BARN Barnard Glacie 105.03 334 IAMs_20 IAMs_20 21 38 19.1
comp=Z,992nm,22.0s
RIDG Independent Ri 105.03 337 IAMs_20 IAMs_20 21 37 21.9
comp=Z,804nm,20.0s
VRDI Verde Repeater 105.72 335 IAMs_20 IAMs_20 21 44 54.3
comp=Z,727nm,19.0s
G21K Allakaket 106.43 342 IAMs_20 IAMs_20 21 41 40.6
comp=Z,390nm,18.0s
H21K Melozitna Rive 106.75 341 IAMs_20 IAMs_20 21 47 10.3
comp=Z,458nm,19.0s
I21K Tanana 106.78 341 IAMs_20 IAMs_20 21 49 21.9
comp=Z,605nm,18.0s
C18K Utukok River 107.08 346 IAMs_20 IAMs_20 21 41 52.7
comp=Z,499nm,22.0s
GHO Glory Hole Cre 107.67 337 IAMs_20 IAMs_20 21 43 52.0
comp=Z,930nm,22.0s
M22K Willow 108.15 337 IAMs_20 IAMs_20 21 47 50.4
comp=Z,515nm,20.0s
J18K Innoko River 109.46 341 IAMs_20 IAMs_20 21 45 20.0
comp=Z,717nm,20.0s
L19K White Mountain 109.67 339 IAMs_20 IAMs_20 21 47 19.4
comp=Z,778nm,20.0s
P18K Big Mountain, 111.59 337 IAMs_20 IAMs_20 21 44 17.6
comp=Z,763nm,21.0s
N17K Nushagak Hills 111.60 338 IAMs_20 IAMs_20 21 48 37.5
comp=Z,739nm,18.0s
J14K Nanvaranak Lak 112.16 342 IAMs_20 IAMs_20 21 51 15.0
comp=Z,518nm,19.0s
MORE Moreh 113.40 64 IAMs_20 IAMs_20 21 48 33.7
comp=Z,485nm,22.0s
SONM Songino Array 114.85 36 PKP PKPdf 21 01 50.0 +1.1
comp=Z,1.0nm,1.0s,baz=266,slow=1.6,SNR=2.7
YAK Yakutsk 115.06 15 *i* PKIKP **PKPdf** **21 01 49.2 +0.5**
ULN Ulaanbaatar 115.22 36 IAMs_20 IAMs_20 21 53 43.7
comp=Z,596nm,22.0s
ULN Ulaanbaatar 115.22 36 *i* PKIKP **PKiKP** **21 01 49.1 -0.6**
TAOE Nuku Hiva Isla 118.53 260 *e*LR LR 21 38 06.1
comp=Z,342nm,26.0s
CMAR Chiang Mai Arr 118.65 69 PKP **PKiKP** **21 01 57.3 +0.4**
comp=Z,0.7nm,0.7s,baz=273,slow=3.5,SNR=5.3
CMAR PP **PP** **21 03 14.0 -0.6**
comp=Z,0.4nm,0.6s,baz=278,slow=8.7,SNR=4.1
PZH PanZhiHua 119.47 60 PKP **PKPdf** **21 01 56.1 -2.3**
BTO2 Baotou 120.47 42 *e*PKP **PKiKP** **21 02 07.3 +7.3**
BTO2 PP PP 21 03 36.3 +10
BTO2 Baotou 120.47 42 SS SS 21 20 02.8 +8.0
BTO2 pmax pmax
comp=Z,11nm,0.8s
BTO2 pmax pmax
comp=Z,140nm,5.2s
BTO2 LR LR
comp=N,830nm,16.7s
BTO2 LR LR
comp=E,1µm,20.8s
BTO2 LR LR
comp=Z,1µm,22.3s
HIA Hailar 121.22 29 IAMs_20 IAMs_20 21 53 42.6
comp=Z,480nm,22.0s
HHC Hu-ho-hao-te 121.53 41 *e*PKP **PKPdf** **21 01 57.1 -4.9**
HHC LR LR
comp=N,350nm,17.4s
HHC LR LR
comp=E,250nm,16.1s
HHC LR LR
comp=Z,380nm,18.9s
BKNI Bangkinang 122.14 90 IAMs_20 IAMs_20 21 50 39.4
comp=Z,423nm,20.0s
TBI Tubuai 124.40 241 *e*SS SS 21 20 43.4 -2.4
comp=Z,3µm,30.0s
TBI *e*LR LR 21 40 41.9
comp=Z,3µm,29.0s
TBI *e*LR LR 21 40 58.3
comp=Z,1µm,26.5s
BJT Baijiatuau 124.95 39 IAMs_20 IAMs_20 21 54 38.9
comp=Z,399nm,22.0s
MDSI Maura Dua 125.08 96 PKP **PKiKP** **21 02 15.8 +6.1**
MDSI PKP **sPKPdf** **21 02 22.1 +7.9**
PMBI Palembang 125.77 94 IAMs_20 IAMs_20 21 49 11.6
comp=Z,468nm,22.0s
PPT2 Papeete2 126.11 248 *e*SS SS 21 21 02.1 -5.8
comp=Z,381nm,34.5s
PPT2 *e*LR LR 21 41 36.1
comp=Z,332nm,27.2s
PPT2 *e*LR LR 21 41 39.6
comp=Z,500nm,25.8s
KLR Kul'dur 126.41 22 *i* PKIKP **PKPdf** **21 02 10.3 -0.6**
BNX BinXian 127.36 27 PKP **PKiKP** **21 02 13.6 +0.2**
QIZ Qiongzhong 128.63 66 PKP **PKPdf** **21 02 13.0 -3.0**
QIZ PP **PP** **21 04 22.3 +0.6**
QIZ SS SS 21 21 39.6 +0.5
QIZ L L
comp=Z,160nm,8.3s
QIZ L L
comp=Z,270nm,15.7s
QIZ L L
comp=Z,440nm,20.6s
MDJ Mudanjiang 129.22 27 PKP **PKPdf** **21 02 14.3 -2.1**
NJ2 Nanjing 131.09 46 *e*PKP **PKPdf** **21 02 18.6 -1.7**
KSRS Korea Array 133.67 34 PP **PP** **21 04 54.2 +1.2**
comp=Z,1.9nm,0.9s,baz=333,slow=7.0,SNR=5.0
KKM Kota Kinabalu 137.09 82 IAMs_20 IAMs_20 22 00 26.2
comp=Z,309nm,20.0s
TWG Pinlang 137.22 56 IAMs_20 IAMs_20 22 04 17.8
comp=Z,448nm,22.0s
MJAR Matsushiro Arr 139.59 26 PKP **PKiKP** **21 02 37.7 -0.8**

comp=Z,0.5nm,0.4s,baz=278,slow=3.6,SNR=2.4
MJAR PP **PP** **21 05 30.6 +0.7**
comp=Z,3.1nm,1.0s,baz=327,slow=7.3,SNR=5.6
SPSI Sidrap Palu 140.61 97 PKP PKiKP 21 02 51.1 +10
MPSI Mapaga 141.00 90 PKP **PKiKP** **21 02 49.3 +7.4**
FITZ Fitzroy Crossi 142.28 121 PKP **PKPdf** **21 02 42.8 +1.5**
comp=Z,6.3nm,1.0s,baz=266,slow=7.5,SNR=4.3
BATI Baumata 143.28 108 PKP **PKPdf** **21 02 44.4 +1.1**
comp=Z,5.2nm,0.5s,baz=256,slow=4.2,SNR=1.3
ASAR Alice Springs 145.63 137 PKPbc **PKPab** **21 02 48.2 +0.5**
comp=Z,6.5nm,0.7s,baz=212,slow=2.5,SNR=16
MNI Manado 145.94 89 PKP **PKiKP** **21 02 57.0 +4.9**
NLAI Namlea 147.96 97 PKP **PKPab** **21 03 00.1 +3.1**
WRA Warramunga Arr 148.31 132 PKPbc **PKPbc** **21 02 55.1 0.0**
comp=Z,2.6nm,0.7s,baz=238,slow=2.6,SNR=12
WRA Warramunga Arr 148.31 132 PKPbc **PKPab** **21 02 58.7 +0.6**
WRA Warramunga Arr 148.31 132 PKP2 **PKPab** **21 02 58.7 +0.6**
WRAB Tennant Creek 148.32 132 *i* PKiKP **PKPdf** **21 02 51.0 -0.7**
TNTI Ternate 148.47 90 PKP **PKPab** **21 03 01.1 +2.1**
TNTI Ternate 148.47 90 PKP **PKPab** **21 03 00.0 +1.0**
KRAI Karang Ratu 149.24 98 PKP **PKPab** **21 03 02.8 +0.7**

*IDC **22** 20:46:13.8±1.3, 13°.1N×146°.62E, h0km, mb3.8/10, mbtmp3.8/10, Error ellipse: s-maj=32.6km s-min=26.6km az=158.0*
ISC 22 20:46:18.7±1.1, 13°.1N±0°.2×146°.5E±0°.1, h31km, n11, σ0s88/12, mb3.9/10, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.65**	**286**	Pn	**Pn**	**20 46 44.5**	**-1.0**
	46nm,0.3s,baz=141,slow=8.9,SNR=17						
GUMO				Sn	**Sn**	**20 47 05.6**	**0.0**
	64nm,0.3s,baz=165,slow=20,SNR=9.5						
WRA	**Warramunga Arr**	**34.98**	**200**	P	**P**	**20 53 08.3**	**-0.1**
	0.2nm,0.7s,baz=348,slow=9.9,SNR=1.5						
	0.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**45.96**	**283**	P	**P**	**20 54 40.3**	**+1.0**
	0.3nm,0.5s,baz=98,slow=7.9,SNR=1.8						
	0.3nm,0.5s						
SONM	**Songino Array**	**48.02**	**324**	P	**P**	**20 54 55.3**	**+0.2**
	0.3nm,0.5s,baz=134,slow=6.2,SNR=2.6						
	0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**62.91**	**324**	P	**P**	**20 56 43.2**	**+1.3**
	0.4nm,0.4s,baz=109,slow=8.8,SNR=2.5						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**62.91**	**316**	P	**P**	**20 56 43.0**	**+0.9**
	0.5nm,0.6s,baz=102,slow=5.4,SNR=11						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**65.99**	**320**	P	**P**	**20 57 02.7**	**+0.5**
	1.8nm,0.7s,baz=100,slow=6.5,SNR=16						
	1.8nm,0.7s						
ILAR	**Eielson Array**	**68.30**	**25**	P	**P**	**20 57 15.8**	**-0.8**
	0.9nm,0.7s,baz=248,slow=6.0,SNR=11						
	0.9nm,0.7s						
BVAR	**Borovoye Array**	**71.26**	**322**	P	**P**	**20 57 35.5**	**+0.5**
	2.8nm,0.6s,baz=101,slow=6.7,SNR=12						
	2.8nm,0.6s						
YKA	**Yellowknife Ar**	**82.53**	**28**	P	**P**	**20 58 38.5**	**+0.3**
	0.2nm,0.4s,baz=285,slow=5.4,SNR=3.9						
	0.2nm,0.4s						
FINES	**FINESS Array B**	**92.23**	**336**	P	**P**	**20 59 24.2**	**-1.1**
	2.0nm,1.0s,baz=37,slow=6.4,SNR=4.2						
	2.0nm,1.0s						

*MEX **22** 20:50:38.5±0.5, 16°.87N×91°.17W, h96km±11km, MD3.8*
*GCG **22** 20:50:39.1±0.6, 16°.70N×91°.14W, h35km±999km, MD3.5, Presumed earthquake*
ISC 22 20:50:36.2±1.8, 16°.84N±0°.04×91°.15W±0°.04, h15km±14km, n16, σ1s10/29, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CCIG	**Comitan**	**1.10**	**240**	*e*P	**Pn**	**20 50 58.4**	**+1.1**
CCIG				*e*S	**Sn**	**20 51 13.7**	**+1.4**
CCIG	**Comitan**	**1.10**	**240**	*i* P	**Pn**	**20 50 57.8**	**+0.5**
PETF	**Flores**	**1.23**	**86**	*e*P	**Pg**	**20 50 59.9**	**-0.1**
PETF				*e*S	**Sn**	**20 51 17.8**	**+2.5**
PETF	**Flores**	**1.23**	**86**	*i* P	**Pg**	**20 50 59.8**	**-0.2**
PETF				*i* S	**Sn**	**20 51 16.1**	**+0.9**
AVCB	**Coban**	**1.54**	**152**	*i* S	**Sn**	**20 51 22.8**	**-0.3**
QUIS	**Sacapulas**	**1.54**	**178**	*i* P	**Pn**	**20 51 02.7**	**-0.7**
QUIS				*i* S	**Sn**	**20 51 20.7**	**-2.5**
HUEH	**Huehuetenango**	**1.55**	**193**	*e*P	**Pn**	**20 51 04.0**	**+0.5**
HUEH				*e*S	**Sn**	**20 51 23.7**	**+0.1**
HUEH	**Huehuetenango**	**1.55**	**193**	*i* P	**Pn**	**20 51 03.7**	**+0.1**
TGIG		**1.89**	**268**	*e*P	**Pn**	**20 51 09.1**	**+1.0**
TGIG				*e*S	**Sb**	**20 51 34.9**	**+0.9**
PAVE	**Pavencul**	**1.92**	**211**	*e*P	**Pn**	**20 51 09.1**	**+0.5**
PAVE				*e*S	**Sn**	**20 51 32.9**	**+0.4**
APG	**El Apazote**	**1.94**	**160**	*i* P	**Pn**	**20 51 08.7**	**-0.2**
APG				*i* S	**Sn**	**20 51 31.4**	**-1.8**
CHUJ	**Union Juarez**	**1.97**	**208**	*e*P	**Pn**	**20 51 09.7**	**+0.4**
CHUJ				*e*S	**Sn**	**20 51 33.8**	**-0.1**
PATR	**El Naranjo**	**2.01**	**211**	*e*P	**Pn**	**20 51 10.3**	**+0.5**
PATR				*e*S	**Sn**	**20 51 35.1**	**+0.2**
SCIG	**Sabancuy**	**2.11**	**359**	*e*P	**Pn**	**20 51 10.6**	**-0.4**
SCIG				*e*S	**Sn**	**20 51 36.2**	**-0.9**
PCIG		**2.29**	**241**	*e*P	**Pn**	**20 51 13.9**	**+0.4**
PCIG				*e*S	**Sn**	**20 51 40.8**	**-0.6**
CMIG	**Matias Romero**	**3.58**	**274**	*e*P	**Pn**	**20 51 30.3**	**-1.0**
CMIG				*e*S	**Sn**	**20 52 11.4**	**-2.0**

*IDC **22** 20:51:30.9±1.4, 3°.10S×136°.01E, h0km, mb3.6/2, mbtmp3.7/6, ML3.5/4, MS3.2/1, Error ellipse: s-maj=27.6km s-min=25.3km az=58.0*
*DJA **22** 20:51:35.1±0.7, 3°.5±3°×13°.6E±°, h16km±6km, M4.0/14, mB5.0/2, mb4.1/5, MLv4.0/14, Mw(mB)4.3/2*
ISC 22 20:51:35.1±1.0, 3°.05S±0°.08×136°.00E±0°.06, h33km, n16, σ1s27/16, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRPI	**Serui, Papua**	**1.20**	**12**	P	**Pn**	**20 51 53.9**	**-1.7**
BAKI	**Biak**	**1.85**	**3**	P	**Pn**	**20 52 06.0**	**+1.5**
KMPI	**Kaimana, Papua**	**2.37**	**255**	P	**Pn**	**20 52 12.9**	**+1.3**
RKPI	**Ransiki, Papua**	**2.37**	**310**	P	**Pn**	**20 52 11.7**	**0.0**
MWPI	**Manokwari, Pap**	**2.87**	**317**	P	**Pn**	**20 52 19.0**	**+0.4**
FAKI	**Fak Fak**	**3.74**	**272**	P	**Pn**	**20 52 30.6**	**0.0**
JAY	**Jayapura**	**4.73**	**84**	Pn	**Pn**	**20 52 44.0**	**-0.3**
	1.1nm,0.3s,baz=222,slow=12,SNR=5.0						
JAY				Sn	**Sn**	**20 53 39.2**	**+1.1**
	1.0nm,0.3s,baz=158,slow=19,SNR=2.0						
	9.6nm,0.9s						
SIJI	**Sorong**	**5.20**	**295**	Pn	**Pn**	**20 52 50.6**	**0.0**
	4.3nm,0.3s,baz=99,slow=19,SNR=25						
SIJI				Sn	**Sn**	**20 53 48.8**	**-0.7**
	4.2nm,0.3s,baz=65,slow=23,SNR=7.7						
	9.2nm,0.3s						
SIJI	**Sorong**	**5.20**	**295**	P	**Pn**	**20 52 50.5**	**-0.1**
	0.2nm3µm15nm,0.8s						
SWI	**Sorong**	**5.21**	**295**	P	**Pn**	**20 52 50.5**	**-0.2**
PMG	**Port Moresby**	**12.77**	**120**	LR	LR	21 00 25.7	
	comp=Z,102nm,20.4s,baz=202,slow=42						
WRA	**Warramunga Arr**	**16.87**	**185**	Pn	**Pn**	**20 55 26.3**	**-2.5**
	0.1nm,0.3s,baz=11,slow=13,SNR=9.3						
WRA				Sn	Sn	20 58 22.8	-13
	0.2nm,0.3s,baz=0.5,slow=23,SNR=6.5						
	0.3nm,0.3s						
FITZ	**Fitzroy Crossi**	**18.07**	**213**	P	**Pn**	**20 55 41.9**	**-1.9**
	0.1nm,0.3s,baz=27,slow=11,SNR=2.1						
FITZ				S	Sn	20 58 53.8	-11
	1.4nm,0.6s,baz=90,slow=20,SNR=4.1						
	2.1nm,0.8s						
ASAR	**Alice Springs**	**20.60**	**185**	P	**P**	**20 56 12.6**	**+1.0**
	1.8nm,0.7s,baz=10,slow=11,SNR=19						
	1.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**42.28**	**302**	LR	LR	21 19 15.8	
	comp=Z,15nm,18.5s,baz=265,slow=39						
MKAR	**Makanchi Array**	**68.42**	**323**	P	**P**	**21 02 35.0**	**+1.2**
	0.5nm,0.5s,baz=113,slow=7.2,SNR=10						
	0.5nm,0.5s						

IDC 22 20:56:14.0±1.3, 2°.39S×28°.80E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=33.1km s-min=25.1km az=160.0, Lake Tanganyika region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMBO	**Kilima Mbogo**	**8.54**	**82**	Pn	Pn	20 58 19.8	+0.5
	baz=285,slow=12						
KMBO				Sn	Sn	20 59 53.9	-2.8
	baz=232,slow=17						
KMBO				Lg	Lg	21 00 43.0	
	baz=266,slow=15						
BOSA	**Boshof**	**26.30**	**187**	P	P	21 01 51.6	0.0
	2.5nm,0.9s,baz=18,slow=6.4,SNR=4.5						
	2.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**31.01**	**301**	P	P	21 02 33.0	-0.6
	0.7nm,0.8s,baz=126,slow=7.1,SNR=2.6						
	0.7nm,0.8s						
KURBB	**Kurchatov Arra**	**67.70**	**32**	P	P	21 07 13.6	+0.5
	0.3nm,0.8s,baz=242,slow=6.6,SNR=2.3						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	**67.77**	**37**	P	P	21 07 13.8	+0.1
	0.3nm,0.6s,baz=234,slow=5.3,SNR=3.8						
	0.3nm,0.6s						

*AEIC **22** 20:57:55.0±0.7, 70°.10N±0°.03×142°.77W±0°.05, h7km±5km, Error ellipse: s-maj=4.0km s-min=2.5km az=198.0*
*IDC **22** 20:57:54.6±1.0, 70°.18N×142°.52W, h0km, mb3.5/6, mbtmp3.5/10, ML3.3/4, MS4.4/1, Error ellipse: s-maj=21.6km s-min=17.4km az=39.0*
*NEIC **22** 20:57:55.6±0.7, 70°.09N±0°.02×142°.76W±0°.05, h10km±1km, ML3.4/96, ML3.4(AEIC), Error ellipse: s-maj=4.8km s-min=2.9km az=18.0*
ISC 22 20:57:54.2±1.5, 70°.10N±0°.04×142°.65W±0°.03, h4km±10km, n125, σ0s76/112, mb3.7/6, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
C27K	**Jago River**	**0.60**	**218**		**Pg**	**20 58 06.4**	**+0.6**
C27K					**Sg**	**20 58 14.3**	**+0.7**
C26K	**Camden Bay**	**0.80**	**258**		**Pg**	**20 58 09.6**	**+0.1**
C26K					**Sg**	**20 58 20.1**	**+0.3**
D27M	**Malcolm River**	**1.04**	**145**		**Pg**	**20 58 14.7**	**+0.5**
D27M					**Sb**	**20 58 29.6**	**+0.7**
D25K	**Kavik River**	**1.52**	**241**		**Pn**	**20 58 21.9**	**-0.3**
D25K					**Sn**	**20 58 41.4**	**-0.9**
D25K	**Kavik River**	**1.52**	**241**	IAML		20 58 55.2	
	comp=E,400nm,0.8s						
D28M	**Stokes Point**	**1.57**	**118**		**Pn**	**20 58 23.8**	**+1.0**
D28M					**Sb**	**20 58 45.0**	**+1.1**
D28M	**Stokes Point**	**1.57**	**118**	IAML		20 58 54.0	
	comp=N,298nm,0.9s						
D28M				IAML		20 59 00.8	
	comp=E,321nm,1.1s						
E28M	**Babbage River**	**1.87**	**142**		**Pn**	**20 58 28.2**	**+1.3**
E28M					**Sn**	**20 58 50.2**	**-0.6**
E28M	**Babbage River**	**1.87**	**142**	IAML		20 58 54.1	
	comp=E,304nm,1.0s						
E27K	**Coleen River**	**1.96**	**168**		**Pn**	**20 58 28.9**	**+0.7**
E27K					**Sb**	**20 58 54.8**	**-0.4**
E27K					**Sg**	**20 58 56.8**	**-0.4**
E27K	**Coleen River**	**1.96**	**168**	IAML		20 58 58.8	
	comp=E,200nm,0.8s						
C24K	**Franklin Bluff**	**2.12**	**262**		**Pn**	**20 58 30.3**	**-0.1**
C24K					**Sn**	**20 58 57.5**	**+0.3**
C24K	**Franklin Bluff**	**2.12**	**262**	IAML		20 59 14.5	
	comp=N,300nm,0.7s						
E25K	**Arctic Village**	**2.25**	**209**		**Pn**	**20 58 31.9**	**-0.3**
E25K	**Arctic Village**	**2.25**	**209**		**Sn**	**20 59 01.2**	**+0.9**
E25K	**Arctic Village**	**2.25**	**209**	IAML		20 59 13.2	
	comp=N,243nm,1.2s						
E25K				IAML		20 59 19.4	
	comp=E,170nm,1.0s						
D24K	**Happy Valley**	**2.36**	**249**		**Pn**	**20 58 33.9**	**+0.3**
D24K					**Sn**	**20 59 03.7**	**+0.7**
E29M	**Blow River**	**2.42**	**133**		**Pn**	**20 58 35.3**	**+0.9**
F26K	**Sheenjek River**	**2.48**	**193**		**Pn**	**20 58 35.7**	**+0.4**
F26K	**Sheenjek River**	**2.48**	**193**	IAML		20 59 19.1	
	comp=E,151nm,1.1s						
F28M	**Old Crow**	**2.70**	**157**		**Pn**	**20 58 38.9**	**+0.6**
F28M				IAML		20 59 20.9	
	comp=E,110nm,0.8s						
F25K	**Christian Rive**	**2.74**	**205**		**Pn**	**20 58 39.4**	**+0.4**
F25K	**Christian Rive**	**2.74**	**205**	IAML		20 59 21.6	
	comp=E,210nm,1.2s						
F25K				IAML		20 59 27.9	
	comp=N,172nm,1.0s						
BM01	**Burnt Mountain**	**2.75**	**195**		**Pn**	**20 58 39.4**	**+0.4**
C23K	**Itkillik River**	**2.75**	**268**		**Pn**	**20 58 39.4**	**+0.3**
BMAR	**Burnt Mountain**	**2.78**	**196**		**Pn**	**20 58 39.8**	**+0.3**
TOLK	**Toolik Lake Re**	**2.86**	**242**		**Pn**	**20 58 40.5**	**0.0**
TOLK	**Toolik Lake Re**	**2.86**	**242**		**Pn**	**20 58 40.7**	**+0.2**
E24K	**Your Creek**	**2.92**	**229**		**Pn**	**20 58 41.7**	**+0.3**
E24K	**Your Creek**	**2.92**	**229**	IAML		20 59 38.8	
	comp=E,131nm,1.1s						
E24K				IAML		20 59 45.2	
	comp=N,85nm,1.0s						
D23K	**Nanushuk River**	**3.04**	**252**		**Pn**	**20 58 43.7**	**+0.7**
D23K				IAML		20 59 46.9	
	comp=E,130nm,0.8s						
D23K				IAML		20 59 48.8	
	comp=N,138nm,0.8s						
G26K	**Porcupine Rive**	**3.19**	**188**		**Pn**	**20 58 45.5**	**+0.4**
G26K	**Porcupine Rive**	**3.19**	**188**	IAML		20 59 50.6	
	comp=N,128nm,0.9s						
F24K	**Squaw Lake**	**3.22**	**219**		**Pn**	**20 58 44.9**	**-0.6**
F24K	**Squaw Lake**	**3.22**	**219**	IAML		20 59 38.5	
	comp=E,74nm,1.1s						
F24K				IAML		20 59 41.5	
	comp=N,60nm,1.0s						
E23K	**Chandalar**	**3.23**	**234**		**Pn**	**20 58 45.8**	**0.0**
E23K	**Chandalar**	**3.23**	**234**	IAML		20 59 39.0	
	comp=N,88nm,1.1s						
E23K				IAML		20 59 44.0	
	comp=E,126nm,1.2s						
G27K	**Doyon Strip**	**3.33**	**173**		**Pn**	**20 58 47.0**	**0.0**
F30M	**Barrier River**	**3.53**	**132**		**Pn**	**20 58 50.4**	**+0.7**
F30M	**Barrier River**	**3.53**	**132**	IAML		20 59 51.8	
	comp=N,50nm,0.9s						
F30M				IAML		20 59 52.8	
	comp=E,78nm,1.2s						
G25K	**Bearman Lake**	**3.59**	**202**		**Pn**	**20 58 50.9**	**+0.4**
G29M	**Pine Creek**	**3.63**	**150**		**Pn**	**20 58 51.7**	**+0.6**
G29M	**Pine Creek**	**3.63**	**150**	IAML		20 59 55.8	
	comp=N,95nm,1.2s						
B22K	**Teshekpuk Lake**	**3.67**	**279**		**Pn**	**20 58 51.9**	**+0.3**
FYU	**Fort Yukon**	**3.68**	**196**		**Pn**	**20 58 52.8**	**+1.0**
INK	**Inuvik**	**3.72**	**115**	Pn	**Pn**	**20 58 52.5**	**+0.2**
	comp=N,1.7nm,0.3s,baz=314,slow=11,SNR=33						
INK				Sn	**Sn**	**20 59 36.8**	**+0.4**
	comp=N,1.4nm,0.3s,baz=45,slow=20,SNR=6.8						
INK				LR	LR	21 00 45.0	
	comp=N,108nm,21.6s,baz=314,slow=46						
	comp=N,4.3nm,0.4s						
INK	**Inuvik**	**3.72**	**115**		**Pn**	**20 58 52.5**	**+0.2**
E22K	**Anaktuvuk Pass**	**3.83**	**243**		**Pn**	**20 58 53.6**	**-0.2**
E22K				IAML		20 59 39.5	
	comp=N,61nm,0.7s						
E22K				IAML		21 00 04.9	
	comp=E,80nm,1.1s						
G24K	**Hadweenzic Riv**	**3.85**	**210**		**Pn**	**20 58 53.8**	**-0.4**
G24K	**Hadweenzic Riv**	**3.85**	**210**	IAML		21 00 04.1	
	comp=E,70nm,1.0s						
H27K	**Steamboat Moun**	**3.91**	**173**		**Pn**	**20 58 55.8**	**+0.7**
H27K	**Steamboat Moun**	**3.91**	**173**	IAML		21 00 14.7	
	comp=E,50nm,0.9s						
G30M	**tAoh Zraii Nji**	**3.92**	**140**		**Pn**	**20 58 55.8**	**+0.6**
G30M	**tAoh Zraii Nji**	**3.92**	**140**	IAML		21 00 03.3	
	comp=N,39nm,1.2s						
COLD	**Coldfoot**	**3.99**	**227**		**Pn**	**20 58 56.2**	**+0.1**
COLD				IAML		21 00 08.3	
	comp=E,49nm,1.1s						
B21K	**Ikpikpuk River**	**4.16**	**269**		**Pn**	**20 58 59.5**	**+1.1**
F31M	**Tsiigehtchic**	**4.20**	**125**		**Pn**	**20 58 58.8**	**-0.1**
H29M	**Whitestone**	**4.21**	**156**		**Pn**	**20 59 00.0**	**+0.9**
H29M	**Whitestone**	**4.21**	**156**	IAML		21 00 19.4	
	comp=N,39nm,0.8s						
H29M				IAML		21 00 21.2	
	comp=E,49nm,1.1s						
A22K	**Sinclair Lake**	**4.22**	**288**		**Pn**	**20 58 59.4**	**+0.3**
C21K	**Knifeblade Rid**	**4.34**	**263**		**Pn**	**20 59 01.6**	**+0.7**
E21K	**Killik River**	**4.35**	**253**		**Pn**	**20 59 01.1**	**+0.1**
G23K	**Bananza Creek**	**4.36**	**222**		**Pn**	**20 59 00.3**	**-0.8**
G23K	**Bananza Creek**	**4.36**	**222**	IAML		21 00 17.8	
	comp=E,42nm,0.9s						
G23K				IAML		21 00 27.4	
	comp=N,47nm,0.9s						
I27K	**Kandik River**	**4.54**	**175**		**Pn**	**20 59 04.9**	**+1.3**
I27K				IAML		21 00 36.4	
	comp=N,44nm,1.1s						
I27K				IAML		21 00 38.8	
	comp=E,46nm,0.9s						
H24K	**Noodor Dome**	**4.71**	**207**		**Pn**	**20 59 05.9**	**-0.1**
H24K				IAML		21 00 33.9	
	comp=N,36nm,1.1s						
H24K				IAML		21 00 36.6	
	comp=E,42nm,1.2s						
PRP	**Porcupine Dome**	**4.73**	**195**		**Pn**	**20 59 07.0**	**+0.6**
I28M	**Miner Creek**	**4.79**	**166**		**Pn**	**20 59 09.6**	**+2.5**
I28M				IAML		21 00 35.1	
	comp=N,26nm,1.1s						
I28M				IAML		21 00 35.1	
	comp=E,31nm,0.9s						
A21K	**Barrow**	**4.79**	**291**		**Pn**	**20 59 07.5**	**+0.6**
I26K	**Coal Creek Min**	**4.82**	**183**	IAML		21 00 44.2	
	comp=N,39nm,1.0s						
I26K				IAML		21 00 44.8	
	comp=E,39nm,1.0s						
F21K	**Alatna River**	**4.90**	**239**		**Pn**	**20 59 08.6**	**+0.1**
F21K	**Alatna River**	**4.90**	**239**	IAML		21 00 35.0	
	comp=N,36nm,1.1s						
B20K	**Meade River**	**4.97**	**276**		**Pn**	**20 59 10.0**	**+0.6**
H23K	**Yukon River**	**5.02**	**214**		**Pn**	**20 59 10.0**	**-0.1**
H23K	**Yukon River**	**5.02**	**214**	IAML		21 00 41.8	
	comp=N,33nm,1.1s						
D20K	**Etivluk River**	**5.12**	**261**		**Pn**	**20 59 12.4**	**+0.8**
E20K	**Nigu River**	**5.17**	**255**		**Pn**	**20 59 12.8**	**+0.5**
H31M	**Peel River**	**5.33**	**140**		**Pn**	**20 59 14.8**	**+0.3**
H31M	**Peel River**	**5.33**	**140**	IAML		21 00 54.2	
	comp=N,16nm,0.9s						
H31M				IAML		21 01 21.4	
	comp=E,12nm,1.1s						
H22K	**Ishtalitna Cre**	**5.35**	**222**	IAML		21 00 55.4	
	comp=N,18nm,1.0s						
H22K				IAML		21 01 09.2	
	comp=E,22nm,1.2s						
G21K	**Allakaket**	**5.40**	**233**		**Pn**	**20 59 14.8**	**-0.6**
I30M	**Mount Dempster**	**5.45**	**151**		**Pn**	**20 59 17.0**	**+0.8**
ILAR	**Eielson Array**	**5.60**	**199**	Pn	**Pn**	**20 59 18.9**	**+0.8**
	comp=E,0.3nm,0.3s,baz=11,slow=14,SNR=20						
ILAR				Sn	**Sn**	**21 00 21.6**	**-1.1**
	comp=E,0.8nm,0.3s,baz=3.8,slow=31,SNR=4.6						
	comp=E,2.0nm,0.6s						
F20K	**Avaraart Lake**	**5.68**	**244**		**Pn**	**20 59 19.4**	**+0.2**
D19K	**Kuna River**	**5.71**	**261**		**Pn**	**20 59 19.9**	**+0.2**
CCB	**Clear Creek Bu**	**5.83**	**202**		**Pn**	**20 59 21.4**	**+0.2**
IMAR	**Indian Mountai**	**5.86**	**230**		**Pn**	**20 59 22.2**	**+0.5**
H21K	**Melozitna Rive**	**5.88**	**226**		**Pn**	**20 59 21.9**	**-0.1**
E19K	**Redstone River**	**5.92**	**250**		**Pn**	**20 59 22.4**	**-0.1**
A36M	**Sachs Harbour**	**5.97**	**63**		**Pn**	**20 59 22.8**	**-0.4**
C19K	**Lookout Ridge**	**6.00**	**268**		**Pn**	**20 59 24.2**	**+0.5**
WRH	**Wood River Hil**	**6.03**	**203**		**Pn**	**20 59 24.8**	**+0.7**
I21K	**Tanana**	**6.08**	**220**		**Pn**	**20 59 24.7**	**-0.1**
A19K	**Wainwright**	**6.27**	**280**		**Pn**	**20 59 27.0**	**-0.2**
F19K	**Shaleruckik Mo**	**6.45**	**247**		**Pn**	**20 59 28.7**	**-1.1**
C36M	**Paulatuk**	**6.50**	**88**		**Pn**	**20 59 29.2**	**-1.2**
H20K	**Anoteeega Mo**	**6.54**	**231**		**Pn**	**20 59 30.9**	**-0.1**
G19K	**Purcell Mounta**	**6.69**	**241**		**Pn**	**20 59 32.1**	**-1.0**
C18K	**Utukok River**	**6.70**	**266**		**Pn**	**20 59 32.9**	**-0.4**
MCK	**McKinley**	**6.85**	**204**		**Pn**	**20 59 35.9**	**+0.5**
H19K	**Roundabout Mou**	**6.94**	**235**		**Pn**	**20 59 36.1**	**-0.4**
E18K	**Tukpahlearik C**	**7.04**	**256**		**Pn**	**20 59 37.3**	**-0.6**
F18K	**Selawik**	**7.19**	**249**		**Pn**	**20 59 39.1**	**-0.8**
G18K	**Tagagawik**	**7.33**	**243**		**Pn**	**20 59 40.8**	**-1.0**
KTH	**Kantishna Hill**	**7.33**	**210**	Pn	**Pn**	**20 59 42.2**	**+0.3**
C17K	**DeLong Mountai**	**7.44**	**267**		**Pn**	**20 59 42.7**	**-0.7**
RDOG	**Red Dog Mine**	**7.52**	**264**		**Pn**	**20 59 43.8**	**-0.6**
D17K	**Noatak River**	**7.74**	**262**		**Pn**	**20 59 46.5**	**-0.9**
H18K	**Honhosa River**	**7.76**	**238**		**Pn**	**20 59 47.4**	**-0.4**
F17K	**Baldwin Pennin**	**7.80**	**251**		**Pn**	**20 59 47.1**	**-1.1**
PPLA	**Purkeypile**	**8.16**	**212**	Pn	**Pn**	**20 59 53.4**	**-0.1**
G17K	**Kiwalik Mounta**	**8.21**	**245**		**Pn**	**20 59 53.0**	**-0.8**
C16K	**Lisburne Hills**	**8.26**	**268**		**Pn**	**20 59 54.1**	**-0.5**
H17K	**Granite Mounta**	**8.38**	**240**		**Pn**	**20 59 55.5**	**-0.3**
MMPY	**Sheldon Lake,**	**8.78**	**143**		**Pn**	**21 00 02.6**	**+0.9**
G16K	**Koyuk River**	**8.81**	**247**		**Pn**	**21 00 00.8**	**-1.4**
YKA	**Yellowknife Ar**	**13.48**	**111**	Pn	**Pn**	**21 01 03.0**	**-2.9**
	comp=E,0.2nm,0.3s,baz=319,slow=12,SNR=9.5						
YKA				Sn	Sn	21 03 23.9	-12
	comp=E,0.1nm,0.3s,baz=321,slow=23,SNR=5.0						
	comp=E,0.5nm,0.5s						
RES	**Resolute Bay**	**14.77**	**50**	Pn	**Pn**	**21 01 21.7**	**-1.8**
	comp=E,0.4nm,0.3s,baz=266,slow=14,SNR=10.0						
RES				Sn	Sn	21 03 52.5	-15
	comp=E,0.3nm,0.3s,baz=281,slow=16,SNR=9.8						
	comp=E,1.0nm,0.4s						
SEY	**Seymchan**	**25.61**	**286**	P	**P**	**21 03 24.9**	**+0.9**
	comp=E,0.8nm,0.5s,baz=61,slow=12,SNR=5.6						
	comp=E,0.8nm,0.5s						
SFJD	**Kangerlussuaq**	**30.77**	**50**	LR	LR	21 17 53.6	
	comp=E,743nm,21.3s,baz=164,slow=39						

	comp=Z,3.0nm,0.6s						
N18K	**Kilae Creek**	**63.09**	**28**	P	**P**	**21 26 45.6**	**+0.4**
N18K				IAmb	IAmb	21 26 49.0	
	comp=Z,9.5nm,1.3s						
O18K	**Koktuh Hills**	**63.09**	**29**	P	**P**	**21 26 45.7**	**+0.3**
C16K	**Lisburne Hills**	**63.20**	**18**	P	**P**	**21 26 45.6**	**-0.2**
H17K	**Granite Mounta**	**63.26**	**23**	P	**P**	**21 26 47.2**	**+0.9**
H17K				IAmb	IAmb	21 26 47.8	
	comp=Z,3.1nm,0.9s						
Q19K	**Cape Douglas,**	**63.52**	**30**	P	**P**	**21 26 48.2**	**0.0**
F17K	**Baldwin Pennin**	**63.53**	**21**	P	**P**	**21 26 48.9**	**+0.9**
F17K				IAmb	IAmb	21 26 49.3	
	comp=Z,3.2nm,0.8s						
N19K	**Bonanza Creek**	**63.78**	**28**	P	**P**	**21 26 50.9**	**+0.9**
H18K	**Honhosa River**	**63.95**	**23**	P	**P**	**21 26 51.0**	**+0.1**
H18K				IAmb	IAmb	21 26 55.9	
	comp=Z,4.6nm,1.2s						
P19K	**Oil Pt**	**63.96**	**29**	P	**P**	**21 26 50.9**	**-0.2**
L19K	**White Mountain**	**64.12**	**26**	P	**P**	**21 26 52.9**	**+0.8**
L19K				IAmb	IAmb	21 26 54.9	
	comp=Z,7.2nm,1.3s						
G18K	**Tagagawik**	**64.18**	**22**	P	**P**	**21 26 52.9**	**+0.5**
E18K	**Tukpahlearik C**	**64.24**	**20**	P	**P**	**21 26 53.2**	**+0.5**
J19K	**Poorman**	**64.52**	**24**	P	**P**	**21 26 55.0**	**+0.4**
J19K				IAmb	IAmb	21 26 56.4	
	comp=Z,3.6nm,0.9s						
G19K	**Purcell Mounta**	**64.86**	**22**		**P**	**21 26 57.1**	**+0.2**
G19K				IAmb	IAmb	21 26 58.4	
	comp=Z,3.3nm,0.8s						
C19K	**Lookout Ridge**	**65.42**	**19**		**P**	**21 27 00.5**	**+0.1**
C19K				IAmb	IAmb	21 27 02.2	
	comp=Z,4.0nm,1.0s						
KURK	**Kurchatov**	**65.91**	**320**		**P**	**21 27 04.5**	**+0.7**
KURBB	**Kurchatov Arra**	**65.95**	**320**	P	**P**	**21 27 04.6**	**+0.5**
	comp=Z,5.5nm,0.7s,baz=99,slow=6.5,SNR=55						
	comp=Z,5.5nm,0.7s						
NRIK	**Noril'sk**	**67.07**	**341**	P	**P**	**21 27 10.2**	**-0.7**
	comp=Z,1.5nm,0.6s,baz=111,slow=10,SNR=3.6						
	comp=Z,1.5nm,0.6s						
NRIK	**Noril'sk**	**67.07**	**341**	P	**P**	**21 27 10.9**	**0.0**
NRIK				IAmb	IAmb	21 27 11.1	
	comp=Z,2.0nm,0.7s						
D23K	**Nanushuk River**	**68.25**	**20**		**P**	**21 27 19.1**	**+0.6**
D23K				IAmb	IAmb	21 27 20.8	
	comp=Z,5.0nm,0.9s						
E23K	**Chandalar**	**68.30**	**21**	P	**P**	**21 27 19.4**	**+0.6**
E23K				IAmb	IAmb	21 27 21.1	
	comp=Z,4.6nm,1.0s						
ILAR	**Eielson Array**	**68.35**	**25**	P	**P**	**21 27 18.1**	**-1.0**
	comp=Z,1.9nm,0.7s,baz=251,slow=6.0,SNR=26						
	comp=Z,1.9nm,0.7s						
ILAR	**Eielson Array**	**68.35**	**25**	P	**P**	**21 27 18.0**	**-1.2**
NIL	**Nilore**	**68.91**	**301**	P	**P**	**21 27 23.5**	**+0.2**
D24K	**Happy Valley**	**68.94**	**20**	P	**P**	**21 27 23.5**	**+0.8**
C24K	**Franklin Bluff**	**69.17**	**20**	P	**P**	**21 27 24.8**	**+0.7**
C24K				IAmb	IAmb	21 27 25.7	
	comp=Z,3.8nm,0.6s						
H27K	**Steamboat Moun**	**70.86**	**24**	P	**P**	**21 27 35.3**	**+0.7**
H27K				IAmb	IAmb	21 27 36.9	
	comp=Z,3.5nm,0.9s						
BVAR	**Borovoye Array**	**71.22**	**322**	P	**P**	**21 27 37.9**	**+0.9**
	comp=Z,8.8nm,0.6s,baz=105,slow=7.2,SNR=34						
	comp=Z,8.8nm,0.6s						
BORK	**Borovoye**	**71.27**	**322**		**P**	**21 27 38.2**	**+0.9**
INK	**Inuvik**	**74.22**	**22**	P	**P**	**21 27 54.8**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=258,slow=9.2,SNR=6.5						
	comp=Z,1.4nm,0.7s						
INK	**Inuvik**	**74.22**	**22**	P	**P**	**21 27 54.8**	**+0.3**
DLBC	**Dease Lake**	**75.56**	**33**	P	**P**	**21 28 02.8**	**+0.2**
	comp=Z,1.8nm,0.7s,baz=276,slow=7.3,SNR=3.2						
	comp=Z,1.8nm,0.7s						
A36M	**Sachs Harbour**	**77.11**	**19**		**P**	**21 28 11.4**	**+0.4**
A36M				IAmb	IAmb	21 28 12.1	
	comp=Z,4.3nm,0.8s						
AB31	**Akbulak array**	**77.90**	**318**	P	**P**	**21 28 16.3**	**+0.5**
YKA	**Yellowknife Ar**	**82.58**	**28**	P	**P**	**21 28 41.0**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=290,slow=6.1,SNR=11						
	comp=Z,1.2nm,0.8s						
RES	**Resolute Bay**	**84.66**	**14**	P	**P**	**21 28 51.4**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=350,slow=6.3,SNR=3.8						
	comp=Z,0.8nm,0.7s						
RES	**Resolute Bay**	**84.66**	**14**	P	**P**	**21 28 51.2**	**0.0**
SPITS	**Spitsbergen Ar**	**84.75**	**351**	P	**P**	**21 28 50.7**	**-1.0**
	comp=Z,7.6nm,0.9s,baz=70,slow=17,SNR=1.5						
	comp=Z,7.6nm,0.9s						
FINES	**FINESS Array B**	**92.22**	**335**	P	**P**	**21 29 26.5**	**-1.0**
	comp=Z,1.0nm,0.5s,baz=69,slow=4.8,SNR=12						
	comp=Z,1.0nm,0.5s						
CRNM	**Carthage**	**96.28**	**53**	P	**P**	**21 29 46.0**	**-1.0**
DBIC	**Dimbokro**	**145.34**	**303**	PKPbc	**PKPdf**	**21 35 57.1**	**+0.3**
	comp=Z,3.5nm,0.8s,baz=46,slow=3.4,SNR=3.1						
DBIC	**Dimbokro**	**145.34**	**303**		**PKPab**	**21 35 56.7**	**-0.1**
LPAZ	**La Paz**	**146.46**	**100**	PKPbc	**PKPbc**	**21 36 00.9**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=288,slow=3.2,SNR=2.2						
LPAZ	**La Paz**	**146.46**	**100**		**PKPbc**	**21 36 00.6**	**-0.2**

*IDC **22** 21:17:49.4±1.1,4.°15S×151.°52E, h0km, mb3.9/12, mbtmp3.9/13, ML1.8/1, MS3.8/5, Error ellipse: s-maj=39.4km s-min=17.4km az=114.0*

ISC 22 21:17:52.8±1.1,4.°1S±0.°1×151.°5E±0.°2, h21km, n18, σ1°13/16, mb4.0/12, MS3.7/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.80**	**219**	Pn	**Pn**	**21 19 30.0**	**-1.4**
	1.1nm,0.3s,baz=36,slow=11,SNR=6.9						
PMG				Sn	**Sn**	**21 20 50.2**	**+1.9**
	baz=302,slow=12						
	19nm,0.8s						
SIJI	**Sorong**	**20.49**	**279**	LR	LR	21 29 19.5	
	comp=Z,98nm,19.5s,baz=358,slow=34						
WRA	**Warramunga Arr**	**22.97**	**225**	P	**P**	**21 22 54.4**	**-1.8**
	4.5nm,1.1s,baz=50,slow=10,SNR=14						
	4.5nm,1.1s						
ASAR	**Alice Springs**	**25.82**	**220**	P	**P**	**21 23 22.1**	**-0.8**
	3.6nm,0.9s,baz=54,slow=9.0,SNR=24						
	3.6nm,0.9s						
FITZ	**Fitzroy Crossi**	**28.88**	**239**	LR	LR	21 36 17.3	
	comp=Z,172nm,19.1s,baz=69,slow=38						
MSVF	**Nonsavu**	**29.29**	**120**	LR	LR	21 34 55.9	
	comp=Z,152nm,18.2s,baz=301,slow=35						
CMAR	**Chiang Mai Arr**	**56.44**	**295**	P	**P**	**21 27 34.0**	**+0.5**
	0.6nm,0.8s,baz=108,slow=5.1,SNR=5.2						
CMAR				LR	LR	21 54 10.5	
	comp=Z,82nm,18.1s,baz=275,slow=39						
	0.6nm,0.8s						
PETK	**Petropavlovsk-**	**57.26**	**4**	P	**P**	**21 27 38.9**	**+0.1**
	2.1nm,0.6s,baz=148,slow=5.8,SNR=4.6						
	2.1nm,0.6s						
PPT	**Papeete**	**59.14**	**108**	LR	LR	21 50 57.9	
	comp=Z,162nm,19.5s,baz=96,slow=34						
SONM	**Songino Array**	**65.08**	**328**	P	**P**	**21 28 32.6**	**+0.5**
	0.1nm,0.4s,baz=131,slow=6.3,SNR=1.7						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**78.99**	**319**	P	**P**	**21 29 55.9**	**+0.6**
	0.5nm,0.8s,baz=94,slow=8.5,SNR=4.6						
	0.5nm,0.8s						
ZALV	**Zalesovo Beam**	**79.89**	**327**	P	**P**	**21 29 59.7**	**-0.3**
	0.6nm,0.6s,baz=126,slow=7.5,SNR=3.6						
	0.6nm,0.6s						
ILAR	**Eielson Array**	**82.03**	**22**	P	**P**	**21 30 10.7**	**-0.5**
	1.2nm,0.7s,baz=245,slow=5.6,SNR=8.6						
	1.2nm,0.7s						
KURBB	**Kurchatov Arra**	**82.49**	**322**	P	**P**	**21 30 14.5**	**+0.6**
	0.3nm,0.6s,baz=102,slow=5.1,SNR=3.3						
	0.3nm,0.6s						
QSPA	**South Pole Qui**	**85.83**	**180**	P	**P**	**21 30 32.4**	**+1.7**
	1.7nm,0.8s,baz=16,slow=6.1,SNR=5.5						
	1.7nm,0.8s						
BVAR	**Borovoye Array**	**87.94**	**323**	P	**P**	**21 30 41.2**	**0.0**
	0.6nm,0.6s,baz=92,slow=3.6,SNR=3.8						
	0.6nm,0.6s						
INK	**Inuvik**	**88.29**	**21**	P	**P**	**21 30 41.6**	**-0.8**
	1.2nm,1.0s,baz=201,slow=6.0,SNR=3.9						
	1.2nm,1.0s						
TORD	**Torodi Ar. Bea**	**148.89**	**289**	PKPbc	**PKPbc**	**21 37 39.1**	**-1.0**
	0.8nm,0.9s,baz=76,slow=1.4,SNR=3.8						

*IDC **22** 21:24:24.3±0.9,6.°50S×142.°95E, h0km, mb4.0/11, mbtmp4.1/15, ML4.0/3, Error ellipse: s-maj=23.4km s-min=10.4km az=108.0*

*DJA **22** 21:24:29.0±0.4,7.°S±4.°×14.°3E±.°, h10km, M4.7/17, mb4.3/17, mB5.5/5, MLv4.7/7, Mw(mB)5.0/5*

ISC 22 21:24:29.4±0.7,6.°51S±0.°06×143.°09E±0.°08, h35km, n28, σ1°74/30, mb4.2/13, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPI	**Merauke**	**3.31**	**234**	P	**Pn**	**21 25 20.0**	**+1.1**
JAY	**Jayapura**	**4.63**	**329**	Pn	**Pn**	**21 25 35.4**	**-1.6**
	2.1nm,0.3s,baz=165,slow=13,SNR=7.1						
JAY				Sn	**Sn**	**21 26 27.7**	**-1.8**
	0.9nm,0.3s,baz=232,slow=18,SNR=2.1						
	7.4nm,0.5s						
JAY	**Jayapura**	**4.63**	**329**	P	Pn	21 25 41.7	+4.7
GENI	**Genyem**	**4.86**	**323**	P	**Pn**	**21 25 42.3**	**+2.1**
PMG	**Port Moresby**	**4.95**	**126**	Pn	**Pn**	**21 25 42.0**	**+0.6**
	22nm,0.7s,baz=318,slow=12,SNR=7.0						
PMG				Sn	**Sn**	**21 26 37.1**	**-0.3**
	2.0nm,0.3s,baz=342,slow=20,SNR=3.1						
PMG	**Port Moresby**	**4.95**	**126**	P	**Pn**	**21 25 42.0**	**+0.6**
SAUI	**Saumlaki**	**11.79**	**262**	P	**Pn**	**21 27 14.3**	**-0.9**
CTA	**Charters Tower**	**13.84**	**167**	Lg	Lg	21 31 49.4	
	0.5nm,0.3s,baz=22,slow=16,SNR=2.0						
WRA	**Warramunga Arr**	**15.83**	**212**	Pn	**Pn**	**21 28 08.0**	**-1.8**
	0.7nm,0.3s,baz=32,slow=12,SNR=29						
WRA				Sn	**Sn**	**21 30 59.5**	**-4.8**
	0.1nm,0.3s,baz=18,slow=22,SNR=3.6						
WRA				Lg	Lg	21 32 43.3	
	0.2nm,0.3s,baz=33,slow=29,SNR=4.9						
	1.4nm,0.4s						
SOEI	**Soe**	**18.91**	**259**	P	**Pn**	**21 28 49.1**	**+0.8**
	31nm,1.4s						
ASAR	**Alice Springs**	**19.21**	**206**	P	**P**	**21 28 51.2**	**+0.6**
	1.1nm,0.3s,baz=32,slow=9.8,SNR=115						
ASAR				S	**Sn**	**21 32 24.7**	**-1.5**
	1.2nm,0.9s,baz=27,slow=21,SNR=4.1						
ASAR				Lg	Lg	21 34 30.8	
	0.1nm,0.3s,baz=48,slow=17,SNR=4.0						
	18nm,0.8s						
BATI	**Baumata**	**19.57**	**258**	P	**P**	**21 28 55.5**	**+1.0**
	3.5nm,0.3s,baz=90,slow=20,SNR=1.5						
FITZ	**Fitzroy Crossi**	**20.55**	**234**	P	**P**	**21 29 04.8**	**-0.3**
	9.6nm,0.7s,baz=71,slow=8.0,SNR=17						
FITZ				S	**S**	**21 32 55.4**	**+2.1**
	2.0nm,0.7s,baz=29,slow=10,SNR=2.0						
FITZ				Lg	Lg	21 35 14.5	
	0.1nm,0.3s,baz=77,slow=17,SNR=5.2						
	9.6nm,0.7s						
GTOI	**Gorontalo**	**21.26**	**289**	P	**P**	**21 29 16.2**	**+3.3**
	28nm,1.4s						
EDFI	**Ende, Flores**	**21.33**	**263**	P	**P**	**21 29 16.0**	**+2.3**
KAPI	**Kappang**	**23.27**	**272**	P	**P**	**21 29 36.9**	**+2.7**
	12nm,1.2s						
SPSI	**Sidrap Palu**	**23.36**	**275**	P	**P**	**21 29 36.9**	**+1.8**
	14nm,1.5s						
PPI	**Padang Panjang**	**43.02**	**276**	P	P	21 32 36.5	+10
MJAR	**Matsushiro Arr**	**43.07**	**354**	P	**P**	**21 32 25.7**	**-0.4**
	1.4nm,0.9s,baz=205,slow=6.5,SNR=2.6						
	1.4nm,0.9s						
KSRS	**Korea Array**	**45.98**	**343**	P	**P**	**21 32 48.5**	**-0.7**
	0.9nm,0.7s,baz=158,slow=10.0,SNR=2.0						
	0.9nm,0.7s						
CMAR	**Chiang Mai Arr**	**50.11**	**300**	P	**P**	**21 33 21.7**	**+0.1**
	0.6nm,0.3s,baz=112,slow=6.9,SNR=1.5						
	0.6nm,0.3s						
SONM	**Songino Array**	**63.03**	**333**	P	**P**	**21 34 51.3**	**-1.8**
	0.5nm,1.0s,baz=123,slow=5.3,SNR=2.2						
	0.5nm,1.0s						
MKAR	**Makanchi Array**	**75.45**	**322**	P	**P**	**21 36 09.6**	**-0.4**
	2.7nm,1.0s,baz=108,slow=6.5,SNR=13						
	2.7nm,1.0s						
ZALV	**Zalesovo Beam**	**77.41**	**329**	P	**P**	**21 36 20.3**	**-0.5**
	0.8nm,0.9s,baz=101,slow=7.5,SNR=2.2						
	0.8nm,0.9s						
KURBB	**Kurchatov Arra**	**79.34**	**324**	P	**P**	**21 36 30.9**	**-0.7**
	1.5nm,1.0s,baz=114,slow=4.9,SNR=7.5						
	1.5nm,1.0s						
QSPA	**South Pole Qui**	**83.46**	**180**	P	**P**	**21 36 54.7**	**+1.3**
	2.6nm,1.0s,baz=0.3,slow=1.3,SNR=7.1						
	2.6nm,1.0s						
NRIK	**Noril'sk**	**84.59**	**343**	P	**P**	**21 36 59.0**	**+0.2**
	2.4nm,0.8s,baz=129,slow=3.0,SNR=4.1						
	2.4nm,0.8s						
BVAR	**Borovoye Array**	**84.91**	**325**	P	**P**	**21 37 00.9**	**+0.1**
	3.6nm,0.9s,baz=115,slow=6.7,SNR=13						
	3.6nm,0.9s						

*IDC **22** 21:28:33.1±4.8, 13.°62N×146.°43E, h0km, mb3.5/6, mbtmp3.5/6, Error ellipse: s-maj=126.9km s-min=24.6km az=166.0*

ISC 22 21:28:37.0±3.6, 13.°6N±0.°7×146.°4E±0.°2, h26km, n7, σ0°92/8, mb3.5/6, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.45**	**270**	Pn	**Pn**	**21 29 01.5**	**-0.1**
	19nm,0.3s,baz=180,slow=13,SNR=2.5						
GUMO				Sn	**Sb**	**21 29 21.1**	**-0.5**
	29nm,0.3s,baz=350,slow=20,SNR=6.1						
GUMO				LR	LR	21 29 26.5	
	comp=Z,120nm,18.0s,baz=204,slow=35						
SONM	**Songino Array**	**47.57**	**324**	P	**P**	**21 37 10.0**	**-0.7**
	0.2nm,0.6s,baz=120,slow=8.5,SNR=1.9						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**62.50**	**316**	P	**P**	**21 38 59.7**	**+1.3**
	0.3nm,0.7s,baz=98,slow=6.1,SNR=4.0						
	0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**65.56**	**320**	P	**P**	**21 39 18.8**	**+0.4**
	0.5nm,0.6s,baz=100,slow=6.8,SNR=4.4						
	0.5nm,0.6s						
ILAR	**Eielson Array**	**67.94**	**25**	P	**P**	**21 39 32.5**	**-0.9**
	0.2nm,0.6s,baz=261,slow=6.2,SNR=1.9						
	0.2nm,0.6s						
BVAR	**Borovoye Array**	**70.82**	**322**	P	**P**	**21 39 52.4**	**+0.9**
	0.7nm,0.5s,baz=108,slow=6.0,SNR=5.5						
	0.7nm,0.5s						
YKA	**Yellowknife Ar**	**82.18**	**28**	P	**P**	**21 40 55.3**	**-0.3**
	0.1nm,0.5s,baz=283,slow=5.9,SNR=2.2						
	0.1nm,0.5s						

*ISK **22** 21:32:32.9, 38.°11N×44.°59E, h12km, ML2.5/4*
*AZER **22** 21:32:34.7, 38.°53N×44.°40E, h3km, ml2.2*
*AFAD **22** 21:32:36.4, 38.°41N×44.°38E, h7km±2km, ML2.0*

ISC 22 21:32:38.8±1.2, 38.°48N±0.°03×44.°31E±0.°04, h12km±9km, n21, σ1°55/39, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.31**	**306**	P	**Pg**	**21 32 44.0**	**-1.1**
OZAP				S	**Sg**	**21 32 50.3**	**+0.8**
OZAP				IAML		21 32 56.0	
	comp=N,212nm,0.9s						
OZAP				IAML		21 32 57.0	
	comp=E,354nm,0.6s						
TVAN	**Van**	**0.71**	**274**	P	**Pb**	**21 32 51.7**	**-1.5**
TVAN				S	**Sg**	**21 33 02.8**	**+0.8**
TVAN				IAML		21 33 15.0	
	comp=N,59nm,0.5s						
TVAN				IAML		21 33 15.0	
	comp=E,70nm,0.5s						
VMUR	**Van-Muradiye**	**0.77**	**311**	P	**Pb**	**21 32 53.1**	**-1.1**
VMUR				S	**Sn**	**21 33 05.6**	**-1.6**
VMUR				IAML		21 33 11.0	
	comp=N,40nm,0.4s						
GEVA	**Gevas**	**1.00**	**261**	P	**Pb**	**21 32 56.1**	**-2.0**
GEVA				S	**Sn**	**21 33 11.7**	**-1.1**
GEVA				IAML		21 33 15.0	
	comp=N,49nm,0.4s						
GEVA				IAML		21 33 21.0	
	comp=E,35nm,0.5s						
HAKT	**HAKKARI**	**1.04**	**208**	P	**Pn**	**21 32 58.7**	**-0.6**
HAKT				S	**Sn**	**21 33 15.3**	**+1.4**
HAKT	**HAKKARI**	**1.04**	**208**	P	**Pg**	**21 32 59.2**	**+0.4**
HAKT				S	**Sn**	**21 33 16.8**	**+2.9**
AKDM	**Akdamar-Van**	**1.06**	**262**	Pn	**Pb**	**21 32 57.4**	**-1.7**
AKDM				Sn	**Sn**	**21 33 15.2**	**+0.9**
NAX	**Nakhchivan**	**1.15**	**53**	P	**Pn**	**21 32 58.0**	**-2.8**
NAX				S	**Sb**	**21 33 15.7**	**0.0**
ADCV	**BITLIS_Adilcev**	**1.29**	**285**	P	**Pg**	**21 33 04.2**	**+0.7**
ADCV				S	**Sg**	**21 33 23.4**	**+3.2**
ADCV				IAML		21 33 27.0	
	comp=N,24nm,0.7s						
ADCV				IAML		21 33 27.0	
	comp=E,24nm,0.6s						
HYR	**Heyderabad**	**1.30**	**19**	P	**Pn**	**21 33 01.2**	**-1.7**
HYR				S	**Sb**	**21 33 20.6**	**+0.6**
SBZ	**Shahbuz**	**1.33**	**46**	P	**Pn**	**21 33 02.1**	**-1.1**
SBZ				S	**Sb**	**21 33 21.2**	**+0.5**
ORD	**Ordubad**	**1.39**	**71**	P	**Pn**	**21 33 02.0**	**-2.0**
ORD				S	**Sn**	**21 33 21.0**	**-1.4**
IGDI	**IGDIR**	**1.40**	**353**	P	**Pn**	**21 33 03.5**	**-0.6**
IGDI				S	**Sg**	**21 33 25.5**	**+1.8**
AGRB	**Hanur-Agry**	**1.50**	**317**	Pn	**Pb**	**21 33 06.4**	**-0.3**
MLAZ	**Malazgirt-MUS**	**1.53**	**296**	Pn	**Pb**	**21 33 06.1**	**-1.0**
GNI	**Garni**	**1.70**	**11**	Pn	**Pn**	**21 33 08.0**	**-0.4**
GDB	**GEDABAY**	**2.50**	**26**	P	**Pn**	**21 33 20.6**	**+1.3**
GDB				S	**Sn**	**21 33 51.3**	**+1.5**
QRD	**Qoradiz**	**2.54**	**66**	P	**Pn**	**21 33 19.4**	**-0.4**
QRD				S	**Sn**	**21 33 52.9**	**+2.2**
GANJ	**Ganja**	**2.66**	**35**	P	**Pn**	**21 33 21.8**	**+0.3**
GANJ				S	**Sb**	**21 33 56.7**	**-2.3**
QZX	**Qazax, Azerbai**	**2.70**	**17**	P	**Pn**	**21 33 22.9**	**+1.0**
QZX				S	**Sn**	**21 33 56.8**	**+2.2**
YRD	**Yardimli**	**3.10**	**81**	P	**Pn**	**21 33 27.7**	**0.0**
YRD				S	**Sn**	**21 34 06.2**	**+1.3**

IDC 22 21:34:08.4±2.2, 3.°93S×151.°01E, h0km, mb3.5/3, mbtmp3.6/4, ML1.9/1, Error ellipse: s-maj=178.6km s-min=29.1km az=124.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.65**	**215**	Pn	Pn	21 35 45.7	-1.7
	1.6nm,0.3s,baz=41,slow=11,SNR=5.3						
	3.9nm,0.3s						
WRA	**Warramunga Arr**	**22.75**	**224**	P	P	21 39 12.9	+0.4
	1.0nm,1.0s,baz=48,slow=10,SNR=3.6						
	1.0nm,1.0s						
ASAR	**Alice Springs**	**25.65**	**219**	P	P	21 39 40.3	+0.2
	1.3nm,0.9s,baz=58,slow=8.8,SNR=8.1						
	1.3nm,0.9s						
ILAR	**Eielson Array**	**82.04**	**22**	P	P	21 46 30.3	0.0
	0.4nm,0.8s,baz=252,slow=5.2,SNR=2.0						
	0.4nm,0.8s						

*IDC **22** 21:34:04.5±4.5, 13.°08N×146.°61E, h0km, mb3.7/7, mbtmp3.7/7, Error ellipse: s-maj=110.7km s-min=35.4km az=173.0*

ISC 22 21:34:09.8±3.4, 13.°2N±0.°6×146.°5E±0.°1, h31km, n8, σ0°96/9, mb3.7/7, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.62**	**285**	Pn	**Pn**	**21 34 36.0**	**-0.2**
	28nm,0.3s,baz=143,slow=15,SNR=4.8						
GUMO				Sn	**Sn**	**21 34 55.7**	**-0.3**
	36nm,0.3s,baz=24,slow=20,SNR=6.1						
MJAR	**Matsushiro Arr**	**24.43**	**344**	P	**P**	**21 39 25.9**	**+0.1**
	0.6nm,0.6s,baz=176,slow=9.7,SNR=1.4						
	0.6nm,0.6s						
SONM	**Songino Array**	**47.98**	**324**	P	**P**	**21 42 45.4**	**-0.5**
	0.3nm,0.8s,baz=131,slow=8.2,SNR=2.1						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	**62.88**	**316**	P	**P**	**21 44 34.4**	**+1.3**
	0.4nm,0.6s,baz=91,slow=8.5,SNR=5.2						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**65.95**	**320**	P	**P**	**21 44 53.8**	**+0.8**
	0.5nm,0.5s,baz=96,slow=6.2,SNR=7.1						
	0.5nm,0.5s						
ILAR	**Eielson Array**	**68.28**	**25**	P	**P**	**21 45 07.2**	**-0.3**
	0.3nm,0.6s,baz=253,slow=5.1,SNR=5.7						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**71.22**	**322**	P	**P**	**21 45 26.9**	**+1.0**
	1.5nm,0.7s,baz=103,slow=6.1,SNR=10						
	1.5nm,0.7s						
FINES	**FINESS Array B**	**92.19**	**335**	P	**P**	**21 47 15.0**	**-1.3**
	2.2nm,1.0s,baz=353,slow=17,SNR=1.6						
	2.2nm,1.0s						

*IDC **22** 21:36:14.9±0.8, 13.°83N×145.°06E, h135km±4km, mb3.2/8, mbtmp3.6/8, Error ellipse: s-maj=35.9km s-min=16.3km az=95.0*
*NEIC **22** 21:36:15.3±0.9, 13.°9N±0.°1×145.°1E±0.°2, h140km±2km, mb4.1/16, Error ellipse: s-maj=26.2km s-min=12.0km az=113.0*

ISC 22 21:36:14.1±0.8, 14.°0N±0.°1×145.°2E±0.°2, h125km, n35, σ1°72/31, mb3.9/16, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.54**	**221**	P	**Pn**	**21 36 35.8**	**+2.9**
	372nm,0.3s,baz=33,slow=3.8,SNR=19						
GUMO				S	**Sn**	**21 36 49.1**	**+2.1**
	2µm,0.3s,baz=41,slow=19,SNR=25						
GUMO	**Guam**	**0.54**	**221**		**Pn**	**21 36 35.4**	**+2.5**
GUMO					**Sn**	**21 36 49.4**	**+2.4**
H11S3	**WAKE ISLAND Hy**	**21.07**	**75**	T	T	22 03 58.2	
	baz=259,slow=75,SNR=4.5						
H11S1	**WAKE ISLAND Hy**	**21.09**	**75**	T	T	22 03 59.4	
	baz=259,slow=75,SNR=4.1						
H11S2	**WAKE ISLAND Hy**	**21.09**	**75**	T	T	22 03 59.3	
	baz=259,slow=75,SNR=3.8						
H11N1	**WAKE ISLAND Hy**	**21.48**	**72**	T	T	22 04 31.5	
	baz=257,slow=75,SNR=4.9						
H11N2	**WAKE ISLAND Hy**	**21.49**	**72**	T	T	22 04 12.6	
	baz=257,slow=75,SNR=3.2						
H11N3	**WAKE ISLAND Hy**	**21.50**	**72**	T	T	22 04 32.9	

s-min=24.5km az=119.0
ISC 22 21:55:27.7±2.2,5.4S±0.3×152.8E±0.4,h37km,n7,σ2.9°09/6, mb3.6/5,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.37**	**324**	LR	LR	21 56 12.7	
	comp=Z,87nm,19.4s,baz=23,slow=40						
PMG	**Port Moresby**	**6.88**	**235**	Pn	**Pn**	**21 57 04.7**	**-1.4**
	0.7nm,0.3s,baz=33,slow=14,SNR=5.0						
	17nm,0.9s						
WRA	**Warramunga Arr**	**23.07**	**230**	P	**P**	**22 00 30.9**	**+0.7**
	0.8nm,1.0s,baz=52,slow=9.7,SNR=6.1						
	0.8nm,1.0s						
ASAR	**Alice Springs**	**25.72**	**223**	P	**P**	**22 00 56.9**	**+2.1**
	1.5nm,0.8s,baz=58,slow=8.9,SNR=15						
	1.5nm,0.8s						
SONM	**Songino Array**	**66.87**	**328**	P	**P**	**22 06 15.4**	**-0.7**
	0.5nm,1.0s,baz=145,slow=5.3,SNR=2.5						
	0.5nm,1.0s						
MKAR	**Makanchi Array**	**80.82**	**319**	P	**P**	**22 07 39.8**	**+2.0**
	0.4nm,1.0s,baz=98,slow=4.4,SNR=2.9						
	0.4nm,1.0s						
ILAR	**Eielson Array**	**82.72**	**22**	P	**P**	**22 07 46.0**	**-1.3**
	0.4nm,0.7s,baz=258,slow=5.4,SNR=2.7						
	0.4nm,0.7s						

*MDD **22** 22:02:19.7±1.2,35.53N×9.78W,h41km,mb_Lg2.7/7, Error ellipse: s-maj=10.6km s-min=5.9km az=83.0*
*INMG **22** 22:02:21.9±1.3,35.63N×9.70W,h25km,ML1.6,Error ellipse: s-maj=8.2km s-min=5.1km az=93.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Mar de Marrocos*
*SFS **22** 22:02:21.7,35.86N×9.60W,h0km,ML2.7/6,ML2.1/8, MLv1.8/8*
*IGIL **22** 22:02:21.7,35.68N×9.70W,h23km,ML1.9*
*CNRM **22** 22:02:25.1,35.62N×8.55W,h10km*
ISC 22 22:02:18.1±2.0,35.48N±0.05×9.6W±0.1,h35km,n39, σ19.83/65,1D,West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.77**	**21**	Pn	**Pn**	**22 02 46.5**	**+0.1**
PFVI				Sn	**Sn**	**22 03 06.1**	**-1.6**
PFVI	**Vila Bisbo**	**1.77**	**21**	*e*P	**Pn**	**22 02 47.4**	**+1.1**
PFVI				*e*S	**Sn**	**22 03 06.8**	**-0.9**
PFVI				*i* IAML		22 03 08.0	
PFVI				*i* IAML		22 03 08.9	
PFVI				*i* IAML		22 03 15.4	
MORF	**Marmelete**	**1.98**	**23**	*e*P	**Pn**	**22 02 50.4**	**+1.2**
MORF				*e*S	**Sn**	**22 03 11.5**	**-1.5**
MORF				IAML		22 03 13.4	
	comp=E,10nm,0.1s						
MORF	**Marmelete**	**1.98**	**23**	*e*P	**Pn**	**22 02 50.5**	**+1.2**
MORF				*e*S	**Sn**	**22 03 11.8**	**-1.1**
MORF				*i* IAML		22 03 13.4	
MORF				*i* IAML		22 03 13.8	
MORF				*i* IAML		22 03 14.3	
PTEO	**Sao Teotonio**	**2.19**	**19**	*e*S	**Sn**	**22 03 17.1**	**-0.8**
PTEO				*i* IAML		22 03 18.6	
PTEO				*i* IAML		22 03 18.7	
PBDV	**Barranco-do-Ve**	**2.23**	**37**	Pn	**Pn**	**22 02 54.3**	**+1.7**
PBDV				Sn	**Sn**	**22 03 18.3**	**-0.7**
PBDV	**Barranco-do-Ve**	**2.23**	**37**	*e*P	**Pn**	**22 02 54.6**	**+2.0**
PBDV				*e*S	**Sn**	**22 03 19.1**	**+0.1**
PBDV				*i* IAML		22 03 20.2	
PBDV				*i* IAML		22 03 20.5	
PBDV				*i* IAML		22 03 31.5	
PVAQ	**Vaqueiros**	**2.46**	**38**	*e*P	**Pn**	**22 02 57.7**	**+1.9**
PVAQ				*e*S	**Sn**	**22 03 24.6**	**0.0**
PVAQ				*i* IAML		22 03 25.4	
PVAQ				*i* IAML		22 03 27.0	
PVAQ				*i* IAML		22 03 28.2	
PVAQ	**Vaqueiros**	**2.46**	**38**	P	**Pn**	**22 02 56.9**	**+1.1**
PVAQ				S	**Sn**	**22 03 23.2**	**-1.5**
PCVE	**Castro Verde**	**2.50**	**30**	Pn	**Pn**	**22 02 58.0**	**+1.7**
PCVE				Sn	**Sn**	**22 03 24.6**	**-1.1**
PCVE	**Castro Verde**	**2.50**	**30**	*e*P	**Pn**	**22 02 58.3**	**+2.0**
PCVE				*e*S	**Sn**	**22 03 25.3**	**-0.3**
PCVE				*i* IAML		22 03 28.7	
PCVE				*i* IAML		22 03 30.6	
MESJ	**Messejana**	**2.62**	**25**	*e*P	**Pn**	**22 02 59.3**	**+1.5**
MESJ	**Messejana**	**2.62**	**25**	*e*P	**Pn**	**22 02 59.6**	**+1.8**
MESJ				*e*S	**Sn**	**22 03 27.3**	**-1.1**
MESJ				*i* IAML		22 03 29.2	
MESJ				*i* IAML		22 03 29.5	
MESJ				*i* IAML		22 03 30.2	
EGRO	**El Granado**	**2.68**	**40**	Pn	**Pn**	**22 03 00.7**	**+1.8**
EGRO				Sn	**Sn**	**22 03 29.7**	**-0.4**
EGRO	**El Granado**	**2.68**	**40**	Pn	**Pn**	**22 03 00.5**	**+1.7**
EGRO				Pn	Pn	22 03 30.2	+1.7
EGRO				Sn	**Sn**	**22 03 30.0**	**-0.1**
EGRO				Sn	Sn	22 03 30.1	+0.1
EGRO				*i* IVmb_Lg		22 04 42.1	
PBEJ	**Beja**	**2.91**	**29**	*e*S	**Sn**	**22 03 34.6**	**-1.1**
ZHG	**ZHG**	**3.19**	**129**	P	**Pn**	**22 03 08.1**	**+2.2**
ZHG				S	**Sn**	**22 03 44.2**	**+1.4**
MOE	**Montemor**	**3.21**	**18**	*e*P	**Pn**	**22 03 08.2**	**+2.2**
MOE				*e*S	**Sn**	**22 03 41.0**	**-2.0**
MOE				*i* IAML		22 03 42.8	
MOE				*i* IAML		22 03 44.4	
MOE				*i* IAML		22 03 44.7	
EMIN	**Mina Concepcio**	**3.30**	**45**	Pn	**Pn**	**22 03 09.7**	**+2.4**
EVO	**Evora**	**3.31**	**23**	Sn	**Sn**	**22 03 43.4**	**-2.2**
EVO	**Evora**	**3.31**	**23**	*e*S	**Sn**	**22 03 43.8**	**-1.8**
EVO				*i* IAML		22 03 45.5	
EVO				*i* IAML		22 03 45.5	
EVO				*i* IAML		22 03 46.0	
ESPR	**Espera**	**3.35**	**64**	Pn	**Pn**	**22 03 09.8**	**+1.8**
ESPR				*i* IVmb_Lg		22 03 42.4	
PBAR	**Barrancos**	**3.40**	**37**	Pn	**Pn**	**22 03 10.5**	**+1.9**
PBAR				Sn	**Sn**	**22 03 46.9**	**-0.9**
PBAR	**Barrancos**	**3.40**	**37**	*e*P	**Pn**	**22 03 10.6**	**+1.9**
PBAR				*e*S	**Sn**	**22 03 47.6**	**-0.2**
PBAR				*i* IAML		22 03 49.1	
PBAR				*i* IAML		22 03 49.9	
PBAR				*i* IAML		22 03 50.1	
PARRA	**Arraiolos**	**3.56**	**20**	*e*P	**Pn**	**22 03 11.8**	**+0.8**
PARRA				*e*S	**Sn**	**22 03 49.6**	**-2.2**
PARRA				*i* IAML		22 03 52.0	
PARRA				*i* IAML		22 03 52.0	
PARRA				*i* IAML		22 03 52.4	
PESTR	**Estremoz**	**3.75**	**25**	Sn	**Sn**	**22 03 54.4**	**-2.2**
PESTR	**Estremoz**	**3.75**	**25**	*e*S	**Sn**	**22 03 55.2**	**-1.3**
PMTG	**Montargil**	**3.75**	**17**	*e*P	**Pn**	**22 03 15.2**	**+1.7**
PMTG				*e*S	**Sn**	**22 03 54.0**	**-2.5**
PMTG				*i* IAML		22 03 56.8	
PMTG				*i* IAML		22 03 56.9	
PMTG				*i* IAML		22 04 00.3	
ECAB	**El Cabril**	**4.26**	**51**	Pn	**Pn**	**22 03 22.3**	**+1.8**
ECAB				Sn	**Sn**	**22 04 07.3**	**-1.7**
ECAB				*i* IVmb_Lg		22 05 36.5	
PSARD	**Sardoal**	**4.28**	**15**	*e*S	**Sn**	**22 04 06.6**	**-2.8**
PSARD				*i* IAML		22 04 10.0	
PSARD				*i* IAML		22 04 10.3	
PMRV	**Marv??o**	**4.33**	**24**	*e*P	**Pn**	**22 03 22.5**	**+1.0**
PMRV				*e*S	**Sn**	**22 04 08.2**	**-2.4**
PMRV				*i* IAML		22 04 10.4	
PMRV				*i* IAML		22 04 10.9	
PCAS	**Casmilo, Conde**	**4.65**	**11**	*e*S	**Sn**	**22 04 18.4**	**-0.3**
PCBR	**Castelo Branco**	**4.68**	**21**	*e*S	**Sn**	**22 04 17.6**	**-1.6**
MD31	**MD31**	**4.80**	**121**	P	**Pn**	**22 03 29.6**	**+1.5**
MD31				S	**Sn**	**22 04 17.6**	**-4.9**
EADA	**Adamuz**	**4.86**	**55**	Pn	**Pn**	**22 03 30.2**	**+1.4**
EADA				Sn	**Sn**	**22 04 22.9**	**-1.0**
EADA				*i* IVmb_Lg		22 05 21.9	
MDT	**Midelt**	**4.94**	**121**	P	**Pn**	**22 03 31.0**	**+1.0**
MDT				S	**Sn**	**22 04 21.8**	**-4.1**
EPLA	**Plasencia**	**5.37**	**31**	Sn	**Sn**	**22 04 33.7**	**-2.7**
EPLA				*i* IVmb_Lg		22 05 35.1	
PSIM	**Granatula de C**	**5.76**	**53**	Pn	**Pn**	**22 03 42.9**	**+1.8**
PSIM				Sn	**Sn**	**22 04 44.4**	**-1.5**
PAB	**San Pablo**	**5.84**	**44**	Pn	**Pn**	**22 03 44.0**	**+1.7**
PAB				Sn	**Sn**	**22 04 44.8**	**-3.3**
PAB				*i* IVmb_Lg		22 05 51.2	

*IDC **22** 22:25:51.3±8.9,35.94N×71.26E,h173km±77km,mb3.3/7, mbtmp3.7/8,MS3.3/1,Error ellipse: s-maj=50.4km s-min=29.0km az=11.0*
ISC 22 22:25:54.3±1.4,36.1N±0.2×71.3E±0.2,h200km,n16, σ0.51/15,mb3.8/6,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**6.65**	**21**	P	**Pn**	**22 27 30.1**	**-0.2**
	SNR=7.3						
EKS2	**Erkin-Say**	**6.87**	**16**	P	**Pn**	**22 27 32.2**	**-0.6**
	SNR=6.4						
AAK	**Ala-Archa**	**7.03**	**20**	P	**Pn**	**22 27 34.6**	**-0.4**
	SNR=9.4						
KBK	**Karagaybulak**	**7.18**	**22**	P	**Pn**	**22 27 36.9**	**0.0**
	SNR=10						
ULHL	**Ulahol**	**7.28**	**30**	P	**Pn**	**22 27 38.5**	**+0.2**
	SNR=8.4						
TKM2	**Tokmak 2**	**7.62**	**25**	P	**Pn**	**22 27 42.4**	**-0.3**
	SNR=8.9						
MKAR	**Makanchi Array**	**13.52**	**34**	P	**Pn**	**22 28 58.0**	**-0.1**
	0.2nm,0.3s,baz=213,slow=11,SNR=8.3						
ZALV	**Zalesovo Beam**	**20.23**	**24**	P	**P**	**22 30 13.8**	**-0.1**
	0.5nm,0.3s,baz=217,slow=9.3,SNR=3.5						
	0.5nm,0.3s						
TLY	**Talaya**	**27.78**	**46**	LR	LR	22 42 43.0	
	comp=Z,52nm,18.0s,baz=80,slow=36						
FINES	**FINESS Array B**	**37.98**	**326**	P	**P**	**22 32 52.5**	**0.0**
	2.5nm,0.9s,baz=112,slow=8.6,SNR=6.8						
	2.5nm,0.9s						
ARCES	**ARCESS Array B**	**41.64**	**338**	P	**P**	**22 33 22.4**	**-0.2**
	8.7nm,1.3s,baz=117,slow=8.6,SNR=3.9						
	8.7nm,1.3s						
HFS	**Hagfors**	**43.56**	**322**	P	**P**	**22 33 38.3**	**+0.2**
	1.3nm,0.5s,baz=103,slow=6.4,SNR=8.1						
	1.3nm,0.5s						
NOA	**NORSAR Array B**	**44.87**	**323**	P	**P**	**22 33 48.1**	**-0.4**
	0.8nm,0.7s,baz=99,slow=8.1,SNR=1.8						
	0.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**65.94**	**269**	P	**P**	**22 36 19.2**	**-0.1**
	0.3nm,0.5s,baz=57,slow=4.4,SNR=2.3						
	0.3nm,0.5s						
YKA	**Yellowknife Ar**	**81.68**	**3**	P	**P**	**22 37 51.1**	**+1.3**
	0.1nm,0.5s,baz=353,slow=5.6,SNR=3.3						
	0.1nm,0.5s						
HNR	**Honiara**	**94.40**	**98**	P	**P**	**22 38 51.1**	**-0.6**
	2.3nm,0.4s,baz=270,slow=3.0,SNR=2.0						

*NEIC **22** 22:34:14.5±1.2,16.80S±0.09×175.45W±0.08, h314km±5km,mb5.0/364,Error ellipse: s-maj=12.6km s-min=10.3km az=162.0*
*MOS **22** 22:34:15.0±1.3,16.79S×175.48W,h331km,mb4.7/19, Error ellipse: s-maj=9.7km s-min=8.0km az=145.1*
*IDC **22** 22:34:16.2±0.7,16.76S×175.57W,h332km±6km,mb4.0/18, mbtmp4.7/22,Error ellipse: s-maj=12.9km s-min=9.6km az=158.0*
*NOU **22** 22:34:17.7,16.79S×175.47W,h355km,mb4.8/37,Tonga Islands*
ISC 22 22:34:15.2±0.4,16.79S±0.05×175.54W±0.04, h327km±4km,h327km:pP-P,n801,σ0.96/713,mb5.0/174, 34C-47D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**3.44**	**245**	P	Pn	22 35 22.2	+5.1
FUTU	**Fugatoga**	**3.50**	**314**	Pn	**Pn**	**22 35 20.5**	**+2.7**
TAVE	**Taveuni**	**4.18**	**270**	P	Pn	22 35 29.7	+4.9
AFI	**Afiamalu**	**4.62**	**52**	P	**Pn**	**22 35 29.8**	**0.0**
	834nm,0.5s,baz=243,slow=4.5,SNR=181						
AFI				S	**S**	**22 36 26.1**	**-3.7**
	763nm,0.9s,baz=210,slow=20,SNR=6.8						
NIUE	**Niue**	**5.81**	**114**	P	**Pn**	**22 35 45.8**	**+2.7**
NIUE	**Niue**	**5.81**	**114**	S	**S**	**22 36 57.8**	**+3.7**
NIUE	**Niue**	**5.81**	**114**		**Pn**	**22 35 41.2**	**-1.9**
NIUE	**Niue**	**5.81**	**114**	P	**Pn**	**22 35 45.1**	**+2.0**
NIUE				S	**S**	**22 36 58.6**	**+4.5**
MSVF	**Nonsavu**	**6.19**	**260**	P	**Pn**	**22 35 49.4**	**+1.7**
	18nm,0.3s,baz=114,slow=13,SNR=16						
MSVF				S	**S**	**22 37 04.5**	**+2.0**
	6.5nm,0.3s,baz=138,slow=20,SNR=5.6						
MSVF	**Nonsavu**	**6.19**	**260**	P	**Pn**	**22 35 52.2**	**+4.5**
MSVF	**Nonsavu**	**6.19**	**260**		**Pn**	**22 35 50.1**	**+2.4**
MSVF	**Nonsavu**	**6.19**	**260**	*i* P	**Pn**	**22 35 49.2**	**+1.5**
RAO	**Raoul Island**	**12.60**	**190**	P	**P**	**22 37 04.7**	**+0.2**
	178nm,0.2s,baz=72,slow=20,SNR=1.5						
RAO				S	**S**	**22 39 18.4**	**-5.4**
	422nm,0.4s,baz=49,slow=19,SNR=5.8						
RAO	**Raoul Island**	**12.60**	**190**	P	**Pn**	**22 37 04.2**	**-0.1**
RAO	**Raoul Island**	**12.60**	**190**	P	**Pn**	**22 37 04.3**	**-0.1**
GLKZ	**Green Lake**	**12.61**	**190**	P	**Pn**	**22 37 03.2**	**-1.3**
GLKZ				S	**S**	**22 39 18.1**	**-5.9**
RAR	**Rarotonga**	**15.55**	**109**	P	**Pn**	**22 37 39.1**	**-0.2**
	27nm,1.0s,baz=350,slow=5.1,SNR=3.4						
RAR	**Rarotonga**	**15.55**	**109**	P	**P**	**22 37 35.6**	**-1.4**
RAR	**Rarotonga**	**15.55**	**109**	P	**P**	**22 37 35.6**	**-1.4**
MARNC	**Mare, Loyalty**	**16.20**	**251**	P	**Pn**	**22 37 45.9**	**-1.0**
MARNC	**Mare, Loyalty**	**16.20**	**251**	P	**P**	**22 37 43.4**	**-0.7**
YATNC	**Mamie plateau,**	**17.37**	**250**	P	**Pn**	**22 37 58.8**	**-1.6**
DZM	**Mont Dzumac**	**17.78**	**250**	P	**P**	**22 38 00.9**	**-0.3**
	12nm,1.7s,baz=73,slow=18,SNR=5.1						
ONTNC	**Ouon Toro**	**17.83**	**249**	P	**P**	**22 38 02.3**	**+0.7**
OUZ	**Omahuta**	**20.76**	**206**	P	**P**	**22 38 32.6**	**+0.8**
OUZ	**Omahuta**	**20.76**	**206**	P	**P**	**22 38 32.1**	**+0.3**
WCZ	**Waipu Caves**	**21.09**	**203**	P	**P**	**22 38 37.0**	**+2.2**
MXZ	**Matakaoa Point**	**21.40**	**193**	P	**P**	**22 38 38.1**	**+0.5**
MXZ	**Matakaoa Point**	**21.40**	**193**	P	**P**	**22 38 37.4**	**-0.2**
WMGZ	**Waiomatatini S**	**21.62**	**193**	P	**P**	**22 38 41.9**	**+2.3**
PKGZ	**Pakihiroa**	**21.74**	**194**	P	**P**	**22 38 42.8**	**+2.1**
RUGZ	**Raukumara Rang**	**21.93**	**194**	P	**P**	**22 38 44.7**	**+2.1**
TWGZ	**Tauwhareparae**	**22.06**	**194**	P	**P**	**22 38 45.4**	**+1.8**
OPRZ	**Ohinepanea**	**22.10**	**197**	P	**P**	**22 38 49.3**	**+5.3**
CNGZ	**Carnagh Statio**	**22.30**	**193**	P	**P**	**22 38 46.2**	**+0.4**
TOZ	**Tahuroa Road**	**22.31**	**199**		**P**	**22 38 46.4**	**+0.6**
TOZ	**Tahuroa Road**	**22.31**	**199**	P	**P**	**22 38 48.0**	**+2.1**
TKGZ	**Te Karaka**	**22.34**	**194**	P	**P**	**22 38 48.8**	**+2.7**
URZ	**Urewera**	**22.34**	**195**	P	**P**	**22 38 47.1**	**+0.9**
RAGZ	**Rawiri**	**22.49**	**195**	P	**P**	**22 38 54.8**	**+7.1**
RIGZ	**Rimuhau**	**22.61**	**194**	P	**P**	**22 38 50.3**	**+1.6**
MUGZ	**Murupara**	**22.64**	**196**	P	**P**	**22 38 49.5**	**+0.6**
ALRZ	**Allen Road**	**22.83**	**197**	P	P	22 38 58.3	+7.7
KNZ	**Kokohu**	**22.93**	**194**	P	P	22 38 59.0	+7.5
MTHZ	**Maungataniwha**	**22.97**	**195**	P	**P**	**22 38 55.3**	**+3.3**
RAHZ	**Arahi**	**22.97**	**195**	P	**P**	**22 38 53.5**	**+1.6**
NMHZ	**Naumai**	**23.21**	**195**	P	**P**	**22 38 55.6**	**+1.4**
HIZ	**Hauiti**	**23.23**	**199**	P	**P**	**22 38 54.9**	**+0.7**
HIZ	**Hauiti**	**23.23**	**199**	P	**P**	**22 38 56.5**	**+2.2**
RATZ	**Rangitukua**	**23.27**	**197**	P	**P**	**22 38 56.0**	**+1.3**
ARHZ	**Aropaoanui**	**23.32**	**195**	P	P	22 39 03.2	+8.1
BKZ	**Black Stump Fm**	**23.36**	**196**	P	**P**	**22 38 56.3**	**+0.8**
BKZ	**Black Stump Fm**	**23.36**	**196**		**P**	**22 38 54.6**	**-0.9**
BKZ	**Black Stump Fm**	**23.36**	**196**	P	**P**	**22 38 54.6**	**-0.9**
TMVZ	**Te Maari**	**23.53**	**197**	P	**P**	**22 38 56.3**	**-0.8**
ETVZ	**East Tongariro**	**23.54**	**197**	P	**P**	**22 38 57.2**	**0.0**
WTVZ	**West Tongariro**	**23.56**	**197**	P	**P**	**22 38 55.5**	**-1.9**
TWVZ	**Taurewa**	**23.56**	**198**	P	**P**	**22 38 57.0**	**-0.4**
MCHZ	**McNeill Hill**	**23.57**	**195**	P	**P**	**22 38 57.8**	**+0.5**
CKHZ	**Cape Kidnapper**	**23.68**	**194**	P	P	22 39 07.5	+9.2
TRVZ	**Turoa**	**23.74**	**197**	P	**P**	**22 38 54.5**	**-4.6**
MOVZ	**Moawhango**	**23.78**	**197**	P	**P**	**22 38 59.0**	**-0.4**
KRHZ	**Kereru**	**23.84**	**196**	P	**P**	**22 39 01.3**	**+1.5**
KAHZ	**Kahuranaki**	**23.86**	**195**	P	P	**22 39 02.1**	**+2.1**
PXZ	**Pawanui**	**24.08**	**194**	P	P	22 39 10.2	+8.3
PNHZ	**Pukenui**	**24.14**	**196**	P	**P**	**22 39 02.4**	**-0.2**
TSZ	**Takapari Road**	**24.34**	**196**	P	**P**	**22 39 04.4**	**+0.2**
PRHZ	**Porangahau**	**24.36**	**195**	P	**P**	**22 39 05.2**	**+0.7**
DVHZ	**Dannevirke**	**24.51**	**195**	P	**P**	**22 39 05.9**	**0.0**
ANWZ	**Angora Road**	**24.58**	**195**	P	**P**	**22 39 08.2**	**+1.8**
PPT	**Papeete**	**24.82**	**96**	P	**P**	**22 39 07.9**	**-1.0**
	21nm,0.6s,baz=291,slow=17,SNR=3.3						
	21nm,0.6s						
PPTF	**Pamatai, Papee**	**24.83**	**96**	P	**P**	**22 39 07.5**	**-1.5**
BFZ	**Birch Farm**	**24.85**	**195**	P	**P**	**22 39 09.6**	**+0.7**
BFZ	**Birch Farm**	**24.85**	**195**	P	**P**	**22 39 08.3**	**-0.6**
BFZ				IAmb	IAmb	22 39 10.2	
	comp=Z,53nm,0.8s						
BFZ	**Birch Farm**	**24.85**	**195**	P	**P**	**22 39 09.8**	**+0.9**
HNR	**Honiara**	**24.95**	**284**	P	**P**	**22 39 09.1**	**-0.9**
	comp=Z,1.8nm,0.3s,baz=30,slow=20,SNR=1.6						
HNR	**Honiara**	**24.95**	**284**	P	**P**	**22 39 10.0**	**0.0**
HNR	**Honiara**	**24.95**	**284**	P	**P**	**22 39 10.0**	**0.0**
HNR				pmax	pmax		
	comp=Z,267nm,1.6s						
MRZ	**Mangatainoka R**	**25.00**	**196**	P	**P**	**22 39 08.9**	**-1.3**
HOWZ	**Holdsworth Sta**	**25.24**	**196**	P	**P**	**22 39 12.0**	**-0.4**
OGWZ	**Otaki Gorge**	**25.26**	**197**	P	**P**	**22 39 11.6**	**-0.9**
DUWZ	**D'Urville Isla**	**25.61**	**199**	P	**P**	**22 39 15.2**	**-0.4**
TRWZ	**Traveller**	**25.66**	**195**	P	**P**	**22 39 17.0**	**+0.9**
MSWZ	**Moikau Station**	**25.80**	**196**	P	**P**	**22 39 17.9**	**+0.6**
TCW	**Tory Channel**	**25.88**	**198**	P	**P**	**22 39 17.8**	**-0.2**
BHW	**Baring Head**	**25.89**	**197**	P	**P**	**22 39 18.1**	**0.0**
BHW				IAmb	IAmb	22 39 18.7	
	comp=Z,40nm,0.8s						
QRZ	**Quartz Range**	**26.08**	**201**	P	**P**	**22 39 20.3**	**+0.5**
QRZ	**Quartz Range**	**26.08**	**201**	P	**P**	**22 39 20.6**	**+0.7**
TKNZ	**Takaka Hill**	**26.12**	**200**	P	**P**	**22 39 20.4**	**+0.2**
NNZ	**Nelson**	**26.16**	**199**	P	**P**	**22 39 21.0**	**+0.5**
TUWZ	**Tuamarina**	**26.18**	**198**	P	**P**	**22 39 21.2**	**+0.5**
MRNZ	**Matariki Terra**	**26.52**	**200**	P	**P**	**22 39 23.6**	**-0.2**
THZ	**Tophouse**	**26.80**	**199**	P	**P**	**22 39 26.1**	**-0.2**
THZ				IAmb	IAmb	22 39 27.3	
	comp=Z,32nm,0.6s						
THZ	**Tophouse**	**26.80**	**199**	P	**P**	**22 39 26.1**	**-0.2**
KHZ	**Kahutara**	**27.20**	**198**	P	**P**	**22 39 29.9**	**+0.2**
LTZ	**Lake Taylor**	**27.92**	**199**		**P**	**22 39 35.0**	**-1.2**
LTZ				IAmb	IAmb	22 39 36.0	
	comp=Z,51nm,1.0s						
RPZ	**Rata Peaks**	**29.15**	**200**	P	**P**	**22 39 47.3**	**+0.3**
JCZ	**Jackson Bay**	**30.26**	**203**	P	**P**	**22 39 57.2**	**+0.4**
ODZ	**Otahua Downs**	**30.47**	**199**	P	**P**	**22 39 59.0**	**+0.5**
SYZ	**Scrubby Hill**	**32.28**	**200**	P	**P**	**22 40 14.7**	**+0.5**
ARMA	**Armidale**	**32.87**	**240**		**P**	**22 40 20.0**	**+0.3**
ARMA				IAmb	IAmb	22 40 21.3	
	comp=Z,33nm,0.8s						
CNB	**Canberra Magne**	**36.28**	**233**	P	**P**	**22 40 49.1**	**+0.5**
CTAO	**Charters Tower**	**36.34**	**259**	P	**P**	**22 40 48.6**	**-0.6**
CTAO	**Charters Tower**	**36.34**	**259**	P	**P**	**22 40 48.6**	**-0.6**
CTAO				pmax	pmax		
	comp=Z,53nm,1.7s						
CAN	**Canberra**	**36.56**	**233**	P	**P**	**22 40 51.4**	**+0.6**
CAN	**Canberra**	**36.56**	**233**	P	**P**	**22 40 51.5**	**+0.6**
CAN	**Canberra**	**36.56**	**233**	P	**P**	**22 40 51.5**	**+0.6**
CAN				pmax	pmax		
	comp=Z,29nm,0.7s						
CAN	**Canberra**	**36.56**	**233**	P	**P**	**22 40 51.5**	**+0.6**
CAN				sP	**sP**	**22 42 28.7**	**-2.4**
PMG	**Port Moresby**	**37.01**	**277**	P	**P**	**22 40 55.8**	**+0.9**
	comp=Z,7.7nm,0.5s,baz=114,slow=8.3,SNR=3.8						
	comp=Z,7.7nm,0.5s						
PMG	**Port Moresby**	**37.01**	**277**	P	**P**	**22 40 55.3**	**+0.4**
PMG	**Port Moresby**	**37.01**	**277**	*i* P	**P**	**22 40 55.8**	**+0.9**
PMG				pmax	pmax		
	comp=Z,11nm,0.8s						
CMSA	**Cobar Meteorol**	**38.08**	**240**	P	**P**	**22 41 04.1**	**+0.5**
COEN	**Coen**	**39.85**	**268**	P	**P**	**22 41 19.0**	**+0.6**
COEN	**Coen**	**39.85**	**268**	P	**P**	**22 41 19.3**	**+0.9**
TOO	**Toolangi**	**40.00**	**231**		**P**	**22 41 19.6**	**+0.3**
TOO	**Toolangi**	**40.00**	**231**	P	**P**	**22 41 19.6**	**+0.3**
TOO				pmax	pmax		
	comp=Z,16nm,0.8s						
TAU	**Tasmania Unive**	**40.91**	**223**	P	**P**	**22 41 27.0**	**+0.5**
TAU	**Tasmania Unive**	**40.91**	**223**	P	**P**	**22 41 27.0**	**+0.5**
TAU				pmax	pmax		
	comp=Z,92nm,1.5s						
INKA	**Innaminka**	**41.70**	**247**		**P**	**22 41 34.1**	**+1.0**
HTT	**Hallett**	**44.07**	**239**	P	**P**	**22 41 52.4**	**+0.4**
GENI	**Genyem**	**45.74**	**283**	P	**P**	**22 42 05.8**	**+0.5**
BBOO	**Buckleboo**	**46.34**	**241**	P	**P**	**22 42 10.0**	**+0.3**
BBOO	**Buckleboo**	**46.34**	**241**	P	**P**	**22 42 09.7**	**+0.1**
WR8	**Warramunga Arr**	**47.38**	**258**		**P**	**22 42 17.1**	**-0.8**
WB0	**Warramunga Arr**	**47.50**	**258**		**P**	**22 42 18.1**	**-0.7**
WRAB	**Tennant Creek**	**47.52**	**258**	P	**P**	**22 42 18.9**	**0.0**
WRAB	**Tennant Creek**	**47.52**	**258**	P	**P**	**22 42 18.1**	**-0.8**
WRAB	**Tennant Creek**	**47.52**	**258**	*ce*P	**P**	**22 42 17.9**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,17nm,1.7s						
WRAB	**Tennant Creek**	**47.52**	**258**	P	**P**	**22 42 17.9**	**-1.0**
WRA	**Warramunga Arr**	**47.53**	**258**	P	**P**	**22 42 18.1**	**-1.0**
	comp=Z,4.3nm,0.5s,baz=81,slow=5.9,SNR=80						
WRA				pP	**pP**	**22 43 26.3**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=92,slow=6.8,SNR=1.2						
WRA				PcP	**PcP**	**22 43 43.3**	**-0.1**
	comp=Z,3.0nm,0.8s,baz=87,slow=4.3,SNR=6.2						
WRA				ScP	**ScP**	**22 47 06.8**	**+1.0**
	comp=Z,1.1nm,1.0s,baz=99,slow=3.5,SNR=4.5						
WRA				S	**S**	**22 48 42.4**	**-6.5**
	comp=Z,0.4nm,0.8s,baz=92,slow=14,SNR=1.9						
	comp=Z,4.3nm,0.5s						
WRA	**Warramunga Arr**

UGM	Wanagama	72.43	267	P		P		22 45 07.5	+0.3	
UGM	Wanagama	72.43	267	P		P		22 45 07.0	-0.2	
QSPA	South Pole Qui	73.27	180	P		P		22 45 12.2	+1.0	
	comp=Z,4.2nm,0.8s,baz=32,slow=0.9,SNR=16									
	comp=Z,4.2nm,0.8s									
QSPA	South Pole Qui	73.27	180			P		22 45 11.7	+0.5	
QSPA	South Pole Qui	73.27	180	P		P		22 45 12.2	+1.0	
QSPA				pP		pP		22 46 23.4	-0.9	
PEA0B	Petropavlovsk-	73.34	344	P		P		22 45 11.4	-0.2	
PEA0B	Petropavlovsk-	73.34	344	P		P		22 45 11.4	-0.2	
PEA0B				pmax		pmax				
	comp=Z,103nm,1.6s									
PETK	Petropavlovsk-	73.34	344	P		P		22 45 11.1	-0.5	
	comp=Z,8.9nm,0.7s,baz=127,slow=8.4,SNR=9.0									
	comp=Z,8.9nm,0.7s									
PETK	Petropavlovsk-	73.34	344	P		P		22 45 11.2	-0.3	
HULI	Fort Hunter Li	73.44	43	P		P		22 45 11.5	-1.0	
YSS	Yuzhno-Sakhali	73.69	332	eP		P		22 45 14.2	+0.5	
YSS				pmax		pmax				
	comp=Z,20nm,1.1s									
SAO	San Andreas Ge	73.74	43			P		22 45 14.2	0.0	
SAO	San Andreas Ge	73.74	43	P		P		22 45 14.2	0.0	
SAO				pmax		pmax				
	comp=Z,55nm,1.4s									
MHC	Mount Hamilton	73.95	42			P		22 45 15.6	0.0	
MHC	Mount Hamilton	73.95	42	P		P		22 45 15.6	0.0	
MHC				pmax		pmax				
	comp=Z,65nm,1.4s									
TPUB	Ta-pu	74.00	301	P		P		22 45 15.4	-0.7	
S14K	Fog Glacier	74.02	9	P		P		22 45 14.6	-0.9	
	baz=196									
CVS	Carmenet Viney	74.03	41	P		P		22 45 15.5	-0.3	
HOPS	Hopland Field	74.05	40	P		P		22 45 15.9	-0.1	
KCPM	Cahto Peak	74.16	39	P		P		22 45 15.9	-0.9	
KCPM				IAmb		IAmb		22 46 46.3		
	comp=Z,62nm,1.4s									
KMPM	Mount Pierce	74.30	38	P		P		22 45 17.7	+0.2	
MNRC	McLaughlin Min	74.37	40			P		22 45 18.5	+0.7	
MNRC				IAmb		IAmb		22 45 20.2		
	comp=Z,31nm,0.9s									
KMRM	Mail Ridge	74.42	39			P		22 45 18.6	+0.5	
MWC	Mount Wilson	74.58	46	P		P		22 45 19.0	-0.3	
MWC				IAmb		IAmb		22 45 58.7		
	comp=Z,36nm,1.1s									
MWC	Mount Wilson	74.58	46	P		P		22 45 19.0	-0.3	
MWC				pmax		pmax				
	comp=Z,36nm,1.1s									
ELS	Elsinore Mount	74.71	47	P		P		22 45 19.8	-0.1	
ELS				IAmb		IAmb		22 46 07.0		
	comp=Z,49nm,1.6s									
KHMM	Horse Mountain	74.81	38	P		P		22 45 20.9	+0.4	
TPO	Tropico Hills	74.82	46	P		P		22 45 20.6	+0.1	
O02D	Mt. Diablo Mer	74.94	39			P		22 45 21.2	0.0	
O02D				IAmb		IAmb		22 45 23.5		
	comp=Z,20nm,0.8s									
KHBM	Hayfork Bally	74.98	39			P		22 45 21.5	0.0	
ISA	Isabella, Lake	75.08	45			P		22 45 21.8	-0.2	
ISA				IAmb		IAmb		22 46 10.7		
	comp=Z,34nm,1.2s									
ISA	Isabella, Lake	75.08	45	P		P		22 45 21.8	-0.2	
ISA				pmax		pmax				
	comp=Z,34nm,1.2s									
CMB	Columbia Colle	75.16	42	P		P		22 45 22.2	-0.2	
CMB	Columbia Colle	75.16	42	P		P		22 45 22.2	-0.2	
CMB				pmax		pmax				
	comp=Z,19nm,1.1s									
BORC	Borrego Spring	75.22	48	P		P		22 45 22.7	-0.1	
YUH	Yuha Desert	75.25	49	P		P		22 45 23.0	+0.1	
AFDM	Forest Hills D	75.33	41			P		22 45 23.8	+0.6	
AFDM				IAmb		IAmb		22 46 55.5		
	comp=Z,43nm,1.4s									
ORV	Oroville	75.36	40			P		22 45 23.4	0.0	
ORV	Oroville	75.36	40	P		P		22 45 23.4	0.0	
ORV				pmax		pmax				
	comp=Z,102nm,1.6s									
KBO	Bosley Butte	75.37	37	P		P		22 45 23.8	+0.3	
PFO	Pinyon Flats O	75.37	48	P		P		22 45 23.6	-0.2	
PFO				IAmb		IAmb		22 45 50.0		
	comp=Z,37nm,1.2s									
PFO	Pinyon Flats O	75.37	48	iP		P		22 45 24.1	+0.3	
PFO				pmax		pmax				
	comp=Z,8.0nm,1.1s									
N02D	Trinity Center	75.48	39			P		22 45 24.9	+0.7	
R16K	Pilot Point	75.57	10	P		P		22 45 23.2	-0.9	
	baz=198									
O03E	Paynes Creek	75.61	40	P		P		22 45 25.2	+0.3	
M02C	Callahan	75.65	38			P		22 45 25.5	+0.3	
L02F	Cave Junction	75.69	37	P		P		22 45 25.8	+0.6	
L02F				IAmb		IAmb		22 47 20.8		
	comp=Z,60nm,1.5s									
KSRS	Korea Array	75.72	317	P		P		22 45 26.8	+1.3	
	comp=Z,2.8nm,0.8s,baz=130,slow=6.5,SNR=10.0									
	comp=Z,2.8nm,0.8s									
KSRS	Korea Array	75.72	317	eP		P		22 45 27.0	+1.5	
KSRS				pmax		pmax				
	comp=Z,2.0nm,0.5s									
CLC	China Lake	75.76	45			P		22 45 25.7	-0.2	
CLC				IAmb		IAmb		22 46 24.3		
	comp=Z,70nm,1.8s									
CLC	China Lake	75.76	45	P		P		22 45 25.7	-0.2	
CLC				pmax		pmax				
	comp=Z,70nm,1.8s									
CCCA	Chr Cany lake	75.76	46	P		P		22 45 26.5	+0.6	
CWC	Cottonwood Cre	75.78	45			P		22 45 25.9	-0.1	
CWC				IAmb		IAmb		22 46 08.8		
	comp=Z,33nm,1.5s									
MDPB	Devils Postpil	75.78	43	P		P		22 45 26.1	-0.1	
MDPB				IAmb		IAmb		22 46 44.1		
	comp=Z,42nm,1.6s									
R17L	Mt. Peulik Vol	75.83	11	P		P		22 45 24.6	-1.1	
	baz=199									
PLK4	Peulik 4	75.83	11	P		P		22 45 26.4	+0.6	
PLK4				IAmb		IAmb		22 45 26.5		
	comp=Z,30nm,0.8s									
YBH	Yreka Blue Hor	75.95	38			P		22 45 26.5	-0.3	
YBH				IAmb		IAmb		22 45 28.9		
	comp=Z,22nm,0.9s									
YBH	Yreka Blue Hor	75.95	38	P		P		22 45 26.5	-0.3	
YBH				pmax		pmax				
	comp=Z,22nm,0.9s									
MPMC	Manual Prospec	75.97	45	P		P		22 45 27.0	-0.1	
MPMC				IAmb		IAmb		22 46 35.6		
	comp=Z,50nm,1.4s									
M03C	McCloud	76.02	39			P		22 45 27.4	+0.2	
M03C				IAmb		IAmb		22 47 11.5		
	comp=Z,51nm,1.1s									
GSC	Goldstone, Bar	76.03	46	P		P		22 45 27.2	-0.2	
GSC				IAmb		IAmb		22 45 57.9		
	comp=Z,33nm,1.0s									
GSC	Goldstone, Bar	76.03	46	P		P		22 45 27.2	-0.2	
GSC				pmax		pmax				
	comp=Z,33nm,1.0s									
OHAK	Old Harbor	76.03	12	P		P		22 45 25.9	-0.8	
	baz=202									
BC3	Big Chuckawall	76.11	48			P		22 45 27.4	-0.5	
BC3				IAmb		IAmb		22 45 41.2		
	comp=Z,42nm,1.3s									
MPK	Martis Peak	76.12	41	P		P		22 45 27.4	-0.7	
HATC	Hat Creek Radi	76.14	39	P		P		22 45 27.5	-0.3	
GLA	Glamis	76.25	49	pmax		pmax				
	comp=Z,66nm,1.4s									
BEKR	Beckworth	76.25	41			P		22 45 28.9	+0.2	
BEKR				IAmb		IAmb		22 47 02.2		
	comp=Z,49nm,1.7s									
DSP	Deep Springs	76.36	44	IAmb		IAmb		22 48 22.7		
	comp=Z,40nm,1.5s									
Q17K	Contact Creek	76.52	11	P		P		22 45 28.2	-1.4	
	baz=199									
IRM	Iron Mountain	76.59	48	IAmb		IAmb		22 45 41.9		
	comp=Z,42nm,1.3s									
O14K	Tigyukauivet M	76.66	7	P		P		22 45 29.1	-1.1	
	baz=194									
KDAK	Kodiak Island	76.69	12	P		P		22 45 29.7	-0.7	
	baz=202									
NVAR	Mina Array Bea	76.73	43	P		P		22 45 32.1	+0.7	
	comp=Z,6.2nm,0.7s,baz=227,slow=8.6,SNR=27									
	comp=Z,6.2nm,0.7s									
NVAR	Mina Array Bea	76.73	43	P		P		22 45 31.3	-0.2	
O15K	Ungalikthiuk R	76.78	8	P		P		22 45 29.7	-1.2	
	baz=195									
Q16K	King Salmon	76.78	10	P		P		22 45 29.9	-0.9	
	baz=198									
P16K	Nushagak River	76.90	9	P		P		22 45 30.7	-0.8	
	baz=197,SNR=6.8									
MTPC	Mountain Pass	76.99	46	IAmb		IAmb		22 46 23.1		
	comp=Z,33nm,1.3s									
Q18K	Katmai Hardscr	77.03	11	P		P		22 45 31.6	-0.8	
	baz=200									
N14K	Kuskokwak Cree	77.26	7	IAmb		IAmb		22 45 34.8		
	comp=Z,17nm,0.8s									
N14K	Kuskokwak Cree	77.26	7	P		P		22 45 33.0	-0.5	
	baz=193									
M11K	Mekoryuk	77.27	5	P		P		22 45 32.6	-0.9	
	baz=189									
USRK	Ussuriysk Ar.	77.27	324	P		P		22 45 35.1	+1.2	
	comp=Z,2.2nm,0.8s,baz=153,slow=1.3,SNR=5.8									
	comp=Z,2.2nm,0.8s									
P17K	Kvichak River	77.31	10	P		P		22 45 32.8	-1.0	
	baz=199									
O16K	Kokwok River B	77.42	9	P		P		22 45 33.2	-1.2	
	baz=197									
Q20K	Shuyak Island	77.50	12	P		P		22 45 33.3	-1.5	
	baz=202									
Q19K	Cape Douglas,	77.55	11	P		P		22 45 33.8	-1.4	
	baz=201									
M13K	Dall Lake	77.56	6	P		P		22 45 34.2	-0.9	
	baz=192									
H04D	Lebanon	77.66	36	IAmb		IAmb		22 47 49.4		
	comp=Z,52nm,1.1s									
P18K	Big Mountain,	77.70	10	IAmb		IAmb		22 45 36.5		
	comp=Z,36nm,0.8s									
P18K	Big Mountain,	77.70	10	P		P		22 45 34.7	-1.3	
	baz=200,SNR=8.0									
N15K	Kwethluk River	77.70	8	P		P		22 45 35.2	-0.8	
	baz=195									
O17K	Koliganek Bris	77.75	9	P		P		22 45 35.2	-1.0	
	baz=198									
SHPR	Sheep Range	77.80	46	IAmb		IAmb		22 46 04.3		
	comp=Z,27nm,1.2s									
W13A	Hualapai Mount	77.96	48	IAmb		IAmb		22 45 51.1		
	comp=Z,28nm,1.2s									
M14K	Bethel	78.04	7	IAmb		IAmb		22 45 39.4		
	comp=Z,18nm,0.8s									
M14K	Bethel	78.04	7	P		P		22 45 37.5	-0.2	
	baz=193,SNR=8.2									
H04A	Detroit Lake	78.07	36			P		22 45 38.0	-0.5	
H04A				IAmb		IAmb		22 47 29.4		
	comp=Z,40nm,1.1s									
M15K	Kasigluk River	78.13	7	P		P		22 45 38.2	0.0	
	baz=194,SNR=13									
O18K	Koktuh Hills	78.14	10	IAmb		IAmb		22 45 39.2		
	comp=Z,35nm,1.0s									
O18K	Koktuh Hills	78.14	10	P		P		22 45 37.8	-0.6	
	baz=200,SNR=5.9									
N16K	Nishlik Lake	78.17	8	P		P		22 45 38.4	-0.1	
	baz=196									
P19K	Oil Pt	78.30	11	P		P		22 45 38.2	-1.1	
	baz=202									
N17K	Nushagak Hills	78.45	9	P		P		22 45 39.6	-0.5	
	baz=198									
L14K	Kuka Creek	78.54	6	P		P		22 45 40.1	-0.3	
	baz=192									
O19K	Port Alsworth	78.61	11	P		P		22 45 40.0	-0.9	
	baz=200,SNR=8.4									
HOM	Homer	78.62	12	P		P		22 45 40.3	-0.7	
	baz=203									
M16K	Timber Creek	78.67	8	IAmb		IAmb		22 45 43.4		
	comp=Z,38nm,1.1s									
M16K	Timber Creek	78.67	8	P		P		22 45 41.1	-0.1	
	baz=196									
N18K	Kilae Creek	78.80	10	P		P		22 45 41.5	-0.5	
	baz=199									
BRSE	Bradley Lake S	78.88	13	P		P		22 45 42.0	-0.4	
	baz=204									
MDJ	Mudanjiang	78.88	323	P		P		22 45 43.4	+0.7	
MDJ				pmax		pmax				
	comp=Z,11nm,1.4s									
K13K	Kusilvak Mount	78.93	5	P		P		22 45 42.0	-0.6	
	baz=190									
L15K	Ungalak Mounta	79.00	7	P		P		22 45 42.5	-0.4	
	baz=194,SNR=6.4									
RED	Redoubt Volcan	79.10	11	IAmb		IAmb		22 45 43.9		
	comp=Z,19nm,0.8s									
N19K	Bonanza Creek	79.16	10	P		P		22 45 43.2	-0.8	
	baz=200									
M17K	Holitna River	79.25	9	IAmb		IAmb		22 45 46.4		
	comp=Z,18nm,0.8s									
M17K	Holitna River	79.25	9	P		P		22 45 44.2	-0.1	
	baz=198									
L16K	Owhat River	79.27	8	P		P		22 45 44.5	0.0	
	baz=196									
NJ2	Nanjing	79.37	308	eP		P		22 45 48.3	+2.6	
NJ2				pmax		pmax				
	comp=Z,13nm,0.7s									
SEW	Seward	79.48	13	P		P		22 45 45.5	-0.1	
	baz=205									
GNW	Green Mountain	79.53	33	IAmb		IAmb		22 48 09.0		
	comp=Z,18nm,1.1s									
CCUT	Cedar City	79.56	46	IAmb		IAmb		22 46 11.5		
	comp=Z,31nm,1.2s									
M18K	Stony River	79.58	9	P		P		22 45 46.6	+0.5	
	baz=199									
Q23K	Middleton Isla	79.59	15	P		P		22 45 46.7	+0.5	
	baz=208									
K15K	Wolf Creek Mou	79.59	7	IAmb		IAmb		22 45 48.4		
	comp=Z,36nm,1.0s									
K15K	Wolf Creek Mou	79.59	7	P		P		22 45 47.2	+1.0	
	baz=194									
SLKM	Skilak Lake	79.69	12	IAmb		IAmb		22 45 47.5		
	comp=Z,29nm,0.8s									
CAPN	Captain Cook N	79.74	12	P		P		22 45 47.9	+0.9	
	baz=204									
O22K	Cooper Landing	79.77	13	P		P		22 45 48.0	+0.9	
	baz=205									
J14K	Nanwanak Lak	79.83	6	P		P		22 45 48.3	+0.9	
	baz=192									
L17K	Donlin	79.83	8	P		P		22 45 48.4	+0.9	
	baz=197									
CBB	Campbell River	79.85	30	IAmb		IAmb		22 45 50.1		
	comp=Z,27nm,1.1s									
SPCR	Spurr Chakacha	79.93	11	P		P		22 45 48.8	+0.7	
	baz=202									
SPU	Mount Spurr	79.94	11	IAmb		IAmb		22 47 40.0		
	comp=Z,17nm,0.9s									
L18K	Granite Mounta	80.14	9	IAmb		IAmb		22 45 51.1		
	comp=Z,17nm,1.0s									
L18K	Granite Mounta	80.14	9	P		P		22 45 50.1	+1.0	
	baz=198									
RC01	Rabbit Creek A	80.32	12	P		P		22 45 50.2	+0.2	
	baz=205									
GAMB	Gambell	80.36	2	P		P		22 45 50.7	+0.6	
	baz=184									
L19K	White Mountain	80.39	10	P		P		22 45 51.0	+0.5	
	baz=200									
K17K	Iditarod	80.39	8	IAmb		IAmb		22 45 52.5		
	comp=Z,43nm,1.5s									
K17K	Iditarod	80.39	8	P		P		22 45 51.0	+0.6	
	baz=197									
M20K	Styx River	80.40	11	P		P		22 45 50.8	+0.2	
	baz=202									
CRAG	Craig	80.40	23	P		P		22 45 50.4	-0.2	
	baz=201									
KAIM	Kayak Island	80.50	15	P		P		22 45 51.1	+0.1	
	baz=210									
E07A	Sunnyside	80.51	35	IAmb		IAmb		22 45 53.1		
	comp=Z,23nm,0.9s									
KLR	Kul'dur	80.58	328	ceP		P		22 45 51.6	-0.1	
KLR				pmax		pmax				
	comp=Z,3.0nm,1.2s									
MTPU	Mount Pierson	80.62	46	IAmb		IAmb		22 46 38.6		
	comp=Z,59nm,1.5s									
J16K	Anvik River	80.66	7	P		P		22 45 52.5	+0.7	
	baz=194									
GLI	Glacier Island	80.70	14	P		P		22 45 52.3	+0.2	
	baz=207									
EYAK	Cordova Ski Ar	80.72	14	P		P		22 45 51.7	-0.4	
	baz=209									
SKT	Skwentna	80.78	11	P		P		22 45 51.7	-0.7	
	baz=203									
BNX	BinXian	80.79	323	⇓P		P		22 45 53.3	+0.4	
BNX				pmax		pmax				
	comp=Z,10.0nm,0.9s									
SIT	Sitka	80.84	21	P		P		22 45 52.2	-0.6	
	baz=219									
CN2	Changchun	80.84	321	P		P		22 45 53.8	+0.6	
CN2				pmax		pmax				
	comp=Z,10.0nm,0.7s									
M22K	Willow	80.84	12	P		P		22 45 52.9	+0.1	
	baz=204									
V35K	Ketchikan	80.87	24	P		P		22 45 52.6	-0.4	
	baz=222									
KNK	Knik Glacier	80.88	13	P		P		22 45 52.6	-0.4	
	baz=206									
U33K	Whale Pass	80.89	22	P		P		22 45 52.3	-0.8	
	baz=221									
PMR	Palmer	80.90	12	P		P		22 45 53.0	0.0	
	baz=205									
J17K	VABM Dome	80.95	7	IAmb		IAmb		22 45 55.3		
	comp=Z,45nm,1.6s									
J17K	VABM Dome	80.95	7	P		P		22 45 53.5	+0.2	
	baz=196									
BGLC	Bering Glacier	80.96	16	P		P		22 45 53.4	+0.1	
	baz=211									
GHO	Glory Hole Cre	81.10	12	IAmb		IAmb		22 45 54.9		
	comp=Z,16nm,0.8s									
I17K	Unalakleet	81.23	7	P		P		22 45 55.2	+0.4	
	baz=194									
S31K	Pelican	81.24	20	P		P		22 45 54.5	-0.4	
	baz=218									
SML	Sawmill	81.26	13	P		P		22 45 54.9	-0.1	
	baz=206									
J18K	Innoko River	81.33	8	P		P		22 45 55.5	+0.2	
	baz=198									
BMRM	Bremner River	81.36	15	IAmb		IAmb		22 45 56.5		
	comp=Z,40nm,1.1s									
BMRM	Bremner River	81.36	15	P		P		22 45 54.9	-0.7	
	baz=210,SNR=5.1									
MESA	MESA	81.36	16	P		P		22 45 55.1	-0.7	
	baz=212									
M23K	Glacier View	81.37	13	P		P		22 45 55.4	-0.3	
	baz=207									
WRAK	Wrangell Islan	81.41	23	P		P		22 45 54.8	-1.0	
	baz=221									
CUT	Chulitna	81.41	12	IAmb		IAmb		22 45 56.2		
	comp=Z,33nm,1.0s									
CUT	Chulitna	81.41	12	P		P		22 45 55.2	-0.5	
	baz=204									
S32K	Kilisnoo	81.41	21	P		P		22 45 54.9	-0.9	
	baz=219									
L22K	Petersville	81.42	11	IAmb		IAmb		22 45 56.0		
	comp=Z,16nm,0.9s									
ANM	Nome	81.47	4	P		P		22 45 55.7	-0.3	
	baz=190									
SCM	Sheep Creek Mo	81.50	13	P		P		22 45 55.5	-0.8	
	baz=207,SNR=5.7									
KLU	Klutina	81.51	14	IAmb		IAmb		22 45 58.9		
	comp=Z,31nm,1.5s									
KLU	Klutina	81.51	14	P		P		22 45 55.8	-0.5	
	baz=208									
PPLA	Purkeypile	81.51	11	P		P		22 45 55.7	-0.7	
	baz=202									
CRQM	Cirque	81.54	15	IAmb		IAmb		22 45 57.7		
	comp=Z,30nm,0.9s									
TGL	Tana Glacier	81.62	16	IAmb		IAmb		22 45 58.0		
	comp=Z,20nm,0.9s									
K20K	Telida	81.62	10	P		P		22 45 56.8	0.0	
	baz=201,SNR=7.4									
Q16A	Castle Valley	81.74	45	IAmb		IAmb		22 46 22.6		
	comp=Z,21nm,0.7s									
H16K	Elim	81.81	6	P		P		22 45 58.1	+0.3	
	baz=193,SNR=14									
GRNC	Granite Creek	81.88	16	IAmb		IAmb		22 46 00.1		
	comp=Z,42nm,1.4s									
TMUT	Trail Mountain	81.90	45	IAmb		IAmb		22 46 01.5		
	comp=Z,22nm,0.8s									
N25K	Chitina, Valde	81.92	14	IAmb		IAmb		22 45 59.4		
	comp=Z,27nm,0.7s									
N25K	Chitina, Valde	81.92	14	P		P		22 45 58.3	-0.2	
	baz=210,SNR=10									
GLB	Gilahina Butte	81.96	15	IAmb		IAmb		22 45 59.5		
	comp=Z,19nm,0.8s									
J19K	Poorman	81.99	9	P		P		22 45 58.7	0.0	
	baz=199									
M24K	Tolsona, Glenn	81.99	13	P		P		22 45 58.7	-0.1	
	baz=208									
G15K	Niukluk	82.00	5	P		P		22 45 59.2	+0.4	
	baz=191									
HLID	Hailey	82.00	40	IAmb		IAmb		22 47 08.7		
	comp=Z,22nm,0.9s									
WAT6	Susitna Watana	82.08	13	P		P		22 45 59.1	-0.3	
	baz=207,SNR=5.6									
MCARA	McCarthy VSAT	82.11	15	P		P		22 45 59.1	-0.3	
	baz=211									
WAT1	Susitna Watana	82.13	12	P		P		22 45 59.3	-0.3	
	baz=206									
LOGN	Logan Glacier	82.16	16	IAmb		IAmb		22 46 00.9		
	comp=Z,18nm,1.0s									
BARN	Barnard Glacie	82.18	16	IAmb		IAmb		22 46 01.1		
	comp=Z,24nm,0.9s									
CTG	Chitna Glacier	82.19	16	P		P		22 46 00.1	+0.1	
	baz=213,SNR=6.1									
TNA	Tin City	82.30	3	IAmb		IAmb		22 46 01.9		
	comp=Z,22nm,1.0s									
TNA	Tin City	82.30	3	P		P		22 46 00.5	+0.2	
	baz=187,SNR=16									
F14K	Arctic Creek	82.31	4	P		P		22 46 00.6	+0.3	
	baz=189									
O28M	Mount Upton	82.33	17	P		P		22 46 00.2	-0.7	
	baz=214									
H17K	Granite Mounta	82.34	7	P		P		22 46 00.3	-0.2	
	baz=195									
TRF	Thorofare Moun	82.36	11	IAmb		IAmb		22 46 01.0		
	comp=Z,15nm,0.8s									
TRF	Thorofare Moun	82.36	11	P		P		22 46 00.3	-0.6	
	baz=204,SNR=5.5									
J20K	Nowinta River	82.38	9	IAmb		IAmb		22 46 02.1		
	comp=Z,35nm,1.4s									
J20K	Nowinta River	82.38	9	P		P		22 46 00.6	-0.1	
	baz=200,SNR=12									
CHUM	Lake Minchumin	82.40	10	P		P		22 46 00.7	-0.1	
	baz=202,SNR=5.8									
O29M	Mount Kennedy	82.40	18	P		P		22 46 00.5	-0.6	
	baz=215									
GCSA	Galena City Sc	82.53	8	P		P		22 46 01.7	+0.3	
	baz=198,SNR=5.5									
G16K	Koyuk River	82.54	6	P		P		22 46 01.6	+0.1	
	baz=193,SNR=7.6									
DHY	Denali Highway	82.59	13	P		P		22 46 01.7	-0.3	
	baz=207									
RND	Reindeer	82.59

HYT	Haines Junctio	83.14	18	IAmb	IAmb	22 49 21.5			
	comp=Z,39nm,1.4s								
HYT	Haines Junctio	83.14	18	P	P	22 46 05.3	+0.5		
	baz=216,SNR=6.0								
PV22	Blue Mesa, Par	83.20	47	IAmb	IAmb	22 46 07.4			
	comp=Z,25nm,0.9s								
M27K	Edge Creek, AK	83.23	15	IAmb	IAmb	22 46 06.9			
	comp=Z,29nm,1.0s								
M27K	Edge Creek, AK	83.23	15	P	P	22 46 05.7	+0.4		
	baz=212,SNR=15								
YUK4	Talbot Arm	83.24	17	P	P	22 46 05.9	+0.5		
	baz=215								
ANMO	Albuquerque	83.27	51	*i* P	P	22 46 05.6	-0.6		
ANMO				pmax	pmax				
	comp=Z,22nm,1.1s								
H19K	Roundabout Mou	83.33	8	IAmb	IAmb	22 46 07.2			
	comp=Z,35nm,1.4s								
H19K	Roundabout Mou	83.33	8	P	P	22 46 06.2	+0.7		
	baz=198								
SEY	Seymchan	83.33	346	*ce*P	P	22 46 05.3	-0.3		
SEY				pmax	pmax				
	comp=Z,38nm,1.7s								
P32M	Atlin	83.34	20	P	P	22 46 06.1	+0.3		
	baz=220								
Q32M	Nakina River	83.34	21	P	P	22 46 06.2	+0.2		
	baz=221								
G18K	Tagagawik	83.41	7	P	P	22 46 06.2	+0.2		
	baz=196								
HEH	HeiHe	83.43	327	*e*P	P	22 46 06.1	-0.3		
HEH				pmax	pmax				
	comp=Z,6.0nm,1.2s								
L26K	Log Cabin Wild	83.44	14	P	P	22 46 06.2	0.0		
	baz=211								
H20K	Anotleneega Mo	83.51	9	P	P	22 46 06.8	+0.4		
	baz=200								
O30N	Mendenhall	83.51	18	P	P	22 46 06.6	0.0		
	baz=218,SNR=6.5								
BVCY	Beaver Creek	83.53	15	P	P	22 46 06.8	+0.2		
	baz=213,SNR=6.2								
K24K	Donnelly Dome	83.58	13	IAmb	IAmb	22 46 08.1			
	comp=Z,35nm,0.9s								
K24K	Donnelly Dome	83.58	13	P	P	22 46 06.9	0.0		
	baz=208,SNR=12								
RDMU	Red Mountain	83.62	44	IAmb	IAmb	22 46 29.1			
	comp=Z,37nm,1.2s								
NEA2	Nenana	83.63	11	P	P	22 46 06.4	-0.7		
	baz=205								
I21K	Tanana	83.66	10	IAmb	IAmb	22 46 08.1			
	comp=Z,18nm,1.0s								
I21K	Tanana	83.66	10	P	P	22 46 07.2	0.0		
	baz=202,SNR=11								
F17K	Baldwin Pennin	83.67	6	P	P	22 46 07.4	+0.2		
	baz=194								
WRH	Wood River Hil	83.70	12	IAmb	IAmb	22 46 08.1			
	comp=Z,36nm,1.0s								
RIDG	Independent Ri	83.72	13	IAmb	IAmb	22 46 08.6			
	comp=Z,22nm,1.1s								
RIDG	Independent Ri	83.72	13	P	P	22 46 07.4	-0.3		
	baz=209,SNR=7.0								
MLY	Manley	83.73	10	IAmb	IAmb	22 46 07.9			
	comp=Z,20nm,1.1s								
MLY	Manley	83.73	10	P	P	22 46 06.8	-0.9		
	baz=204,SNR=14								
DLBC	Dease Lake	83.75	22	P	P	22 46 07.6	-0.3		
	baz=223								
N30M	Aishikik Lake	83.77	17	P	P	22 46 07.8	-0.1		
	baz=217								
WHY	Whitehorse	83.80	19	P	P	22 46 08.2	0.0		
	baz=219								
DOT	Dot Lake	83.82	14	IAmb	IAmb	22 46 09.0			
	comp=Z,21nm,0.8s								
G19K	Purcell Mounta	83.84	7	P	P	22 46 08.4	+0.3		
	baz=198								
L27K	Beaver Creek,	83.84	15	P	P	22 46 08.4	+0.2		
	baz=212								
BCAR	Beaver Creek A	83.85	15		P	22 46 08.5	+0.2		
HDA	Harding Lake	83.87	12	P	P	22 46 07.9	-0.4		
	baz=207,SNR=21								
H21K	Melozitna Rive	83.97	9	IAmb	IAmb	22 46 11.0			
	comp=Z,33nm,1.3s								
H21K	Melozitna Rive	83.97	9	P	P	22 46 08.9	+0.1		
	baz=202,SNR=15								
F18K	Selawik	83.98	6	P	P	22 46 08.5	-0.3		
	baz=195,SNR=12								
I23K	Minto, Yukon-K	84.08	11	P	P	22 46 08.7	-0.5		
	baz=205,SNR=9.6								
P33M	Teslin, Yukon	84.11	20	P	P	22 46 09.1	-0.6		
	baz=221								
COLA	College	84.11	12	P	P	22 46 09.4	0.0		
COLA	College	84.11	12	P	P	22 46 10.0	+0.5		
COLA	College	84.11	12	*i* P	P	22 46 08.7	-0.7		
COLA				pmax	pmax				
	comp=Z,49nm,0.9s								
COLA	College	84.11	12	P	P	22 46 09.1	-0.4		
	baz=206								
COLA	College	84.11	12	P	P	22 46 08.9	-0.5		
COLA				PcP	PcP	22 46 13.1	+0.5		
R33M	Jennings River	84.12	21	P	P	22 46 09.6	-0.2		
	baz=222								
SCRK	Sand Creek	84.12	13	P	P	22 46 09.8	+0.1		
	baz=210,SNR=12								
IMAR	Indian Mountai	84.14	9	P	P	22 46 09.9	+0.3		
N31M	Braeburn, Yuko	84.17	18	P	P	22 46 10.4	+0.4		
	baz=218								
M29M	Somme Creek	84.19	16	P	P	22 46 10.2	+0.1		
	baz=215								
IL31		84.21	12	IAmb	IAmb	22 46 10.6			
	comp=Z,50nm,1.5s								
ILAR	Eielson Array	84.21	12	P	P	22 46 09.3	-0.7		
	comp=Z,6.5nm,0.5s,baz=224,slow=5.9,SNR=114								
	comp=Z,6.5nm,0.5s								
ILAR	Eielson Array	84.21	12		P	22 46 09.5	-0.4		
ILAR	Eielson Array	84.21	12	*e*P	P	22 46 09.3	-0.7		
ILAR				pmax	pmax				
	comp=Z,8.0nm,0.6s								
J25K	Salcha River,	84.38	13	IAmb	IAmb	22 46 11.7			
	comp=Z,22nm,0.8s								
J25K	Salcha River,	84.38	13	P	P	22 46 10.9	0.0		
	baz=209								
POKR	Poker Plat Res	84.41	12	P	P	22 46 10.5	-0.5		
	baz=207								
F19K	Shaleruckik Mo	84.42	7	IAmb	IAmb	22 46 12.0			
	comp=Z,14nm,0.8s								
F19K	Shaleruckik Mo	84.42	7	P	P	22 46 11.0	+0.1		
	baz=197								
H22K	Ishtalitna Cre	84.42	10	IAmb	IAmb	22 46 12.1			
	comp=Z,33nm,1.1s								
H22K	Ishtalitna Cre	84.42	10	P	P	22 46 11.1	+0.1		
	baz=203,SNR=27								
H23K	Yukon River	84.66	10	P	P	22 46 12.1	-0.2		
	baz=205								
PDAR	Pinedale Array	84.67	42	P	P	22 46 13.0	-0.1		
	comp=Z,4.8nm,0.8s,baz=215,slow=3.2,SNR=33								
	comp=Z,4.8nm,0.8s								
PDAR	Pinedale Array	84.67	42		P	22 46 13.0	-0.1		
G21K	Allakaket	84.67	9	P	P	22 46 12.6	+0.3		
	baz=201								
E18K	Tukpahlearik C	84.68	6	P	P	22 46 12.6	+0.3		
	baz=194								
N32M	Quiet Lake	84.74	19	P	P	22 46 12.7	0.0		
	baz=220								
D17K	Noatak River	84.74	5	P	P	22 46 12.9	+0.3		
	baz=192,SNR=7.4								
M30M	Minto, Yukon	84.75	17	P	P	22 46 12.8	0.0		
	baz=217,SNR=9.0								
HNS	HongShan	84.81	311	⇓P	P	22 46 14.9	+1.3		
HNS				pmax	pmax				
	comp=Z,8.0nm,1.2s								
L29M	L29M	84.82	16	IAmb	IAmb	22 46 14.8			
	comp=Z,35nm,0.9s								
L29M	L29M	84.82	16	P	P	22 46 13.5	+0.4		
	baz=216								
F20K	Avaraart Lake	84.87	8	P	P	22 46 13.2	0.0		
	baz=199								
H24K	Noodor Dome	84.97	11	P	P	22 46 13.7	-0.1		
	baz=206								
E19K	Redstone River	85.08	7	IAmb	IAmb	22 46 15.6			
	comp=Z,13nm,0.8s								
E19K	Redstone River	85.08	7	P	P	22 46 14.4	+0.2		
	baz=197								
RDOG	Red Dog Mine	85.10	5	P	P	22 46 14.6	+0.3		
	baz=192								
PRP	Porcupine Dome	85.14	12	IAmb	IAmb	22 46 15.7			
	comp=Z,28nm,1.1s								
PRP	Porcupine Dome	85.14	12	P	P	22 46 14.4	-0.4		
	baz=209,SNR=16								
C16K	Lisburne Hills	85.15	4	P	P	22 46 14.8	+0.3		
	baz=190								
M31M	Drury Creek, Y	85.15	18	IAmb	IAmb	22 49 24.8			
	comp=Z,34nm,1.4s								
M31M	Drury Creek, Y	85.15	18	P	P	22 46 14.7	0.0		
	baz=219								
HAYD	Hayden	85.16	45	IAmb	IAmb	22 46 29.3			
	comp=Z,52nm,1.5s								
F21K	Alatna River	85.34	8	P	P	22 46 15.7	+0.1		
	baz=201								
G22K	Bettles	85.35	9	P	P	22 46 15.8	+0.2		
	baz=203								
G23K	Bananza Creek	85.39	10	P	P	22 46 15.9	+0.1		
	baz=204								
WTLY	Watson Lake, Y	85.39	21	P	P	22 46 16.0	0.0		
	baz=224								
I26K	Coal Creek Min	85.45	13	IAmb	IAmb	22 46 17.5			
	comp=Z,18nm,1.1s								
I26K	Coal Creek Min	85.45	13	P	P	22 46 16.4	+0.3		
	baz=211								
C17K	DeLong Mountai	85.50	5	P	P	22 46 16.9	+0.6		
	baz=192								
ZEA	Zeya	85.56	330	*e*P	P	22 46 17.3	+0.4		
ZEA				pmax	pmax				
	comp=Z,10.0nm,0.7s								
K29M	Barlow Dome	85.57	16	IAmb	IAmb	22 46 18.4			
	comp=Z,22nm,0.9s								
K29M	Barlow Dome	85.57	16	P	P	22 46 17.3	+0.4		
	baz=216								
BILL	Bilibino	85.62	353		P	22 46 17.0	+0.2		
BILL				IAmb	IAmb	22 46 17.7			
	comp=Z,18nm,0.9s								
BILL	Bilibino	85.62	353	*ce*P	P	22 46 16.1	-0.8		
BILL				pmax	pmax				
	comp=Z,27nm,1.3s								
BILL	Bilibino	85.62	353	P	P	22 46 16.8	-0.1		
G24K	Hadweenzic Riv	85.82	11	P	P	22 46 17.9	0.0		
	baz=207								
C18K	Utukok River	85.83	5	P	P	22 46 18.2	+0.2		
	baz=194								
COLD	Coldfoot	85.83	10		P	22 46 18.8	+0.8		
COLD	Coldfoot	85.83	10	P	P	22 46 18.5	+0.6		
	baz=204,SNR=7.9								
J29N	Klondike Camp	85.89	15	P	P	22 46 19.3	+1.0		
J29N				IAmb	IAmb	22 46 20.1			
	comp=Z,25nm,0.8s								
J29N	Klondike Camp	85.89	15	P	P	22 46 18.7	+0.3		
	baz=215								
ENH	Enshi	85.93	303	IAmb	IAmb	22 46 21.4			
	comp=Z,36nm,1.6s								
E20K	Nigu River	85.96	7	P	P	22 46 18.5	-0.1		
	baz=198								
D19K	Kuna River	85.97	6	P	P	22 46 18.7	0.0		
	baz=197								
RLMT	Red Lodge	85.98	41		P	22 46 18.9	-0.5		
I27K	Kandik River	86.04	13	P	P	22 46 19.0	0.0		
	baz=212								
G25K	Bearman Lake	86.13	11	P	P	22 46 19.8	+0.5		
	baz=208								
I28M	Miner Creek	86.29	14	P	P	22 46 20.2	-0.1		
	baz=214								
D20K	Etivluk River	86.35	7	P	P	22 46 20.6	+0.1		
	baz=198								
MMPY	Sheldon Lake,	86.41	19	P	P	22 46 21.2	+0.3		
MMPY				IAmb	IAmb	22 49 35.4			
	comp=Z,27nm,1.2s								
MMPY	Sheldon Lake,	86.41	19	P	P	22 46 20.9	0.0		
	baz=222								
E21K	Killik River	86.41	8	P	P	22 46 20.9	+0.1		
	baz=200								
C19K	Lookout Ridge	86.42	6	IAmb	IAmb	22 46 22.2			
	comp=Z,30nm,1.9s								
C19K	Lookout Ridge	86.42	6	P	P	22 46 21.0	+0.2		
	baz=195								
E22K	Anaktuvuk Pass	86.42	9	IAmb	IAmb	22 46 22.0			
	comp=Z,21nm,1.3s								
E22K	Anaktuvuk Pass	86.42	9	P	P	22 46 21.0	+0.2		
	baz=203								
J30M	Hart River	86.47	16	IAmb	IAmb	22 49 40.0			
	comp=Z,24nm,1.5s								
J30M	Hart River	86.47	16	P	P	22 46 21.4	+0.2		
	baz=217								
F24K	Squaw Lake	86.48	10	P	P	22 46 21.4	+0.3		
	baz=206								
TGTN	Hyland Airport	86.58	21	P	P	22 46 21.9	+0.1		
	baz=225								
H27K	Steamboat Moun	86.59	13	P	P	22 46 22.2	+0.5		
	baz=212								
I29M	Ogilvie Camp,	86.61	15	IAmb	IAmb	22 49 46.0			
	comp=Z,23nm,1.1s								
I29M	Ogilvie Camp,	86.61	15	P	P	22 46 22.0	+0.3		
	baz=215								
E23K	Chandalar	86.69	9	P	P	22 46 22.5	+0.3		
	baz=205								
HNDO	Hondo	86.70	58	IAmb	IAmb	22 46 25.5			
	comp=Z,27nm,1.0s								
G26K	Porcupine Rive	86.74	12	P	P	22 46 22.8	+0.5		
	baz=210								
GYA	Guiyang	86.88	299	⇓P	P	22 46 30.8	+6.7		
GYA				pmax	pmax				
	comp=Z,22nm,0.6s								
GYA				pmax	pmax				
	comp=Z,51nm,3.2s								
GYA				LR	LR				
	comp=N,610nm,20.4s								
GYA				LR	LR				
	comp=E,680nm,21.0s								
GYA				LR	LR				
	comp=Z,820nm,19.1s								
E24K	Your Creek	86.88	10	P	P	22 46 23.1	+0.1		
	baz=206								
F25K	Christian Rive	86.95	11	P	P	22 46 23.8	+0.4		
	baz=208								
I30M	Mount Dempster	86.98	15	IAmb	IAmb	22 46 24.7			
	comp=Z,11nm,0.8s								
I30M	Mount Dempster	86.98	15	P	P	22 46 23.8	+0.1		
	baz=217								
C21K	Knifeblade Rid	86.99	7	P	P	22 46 23.8	+0.3		
	baz=200,SNR=11								
BMAR	Burnt Mountain	87.00	11		P	22 46 24.4	+0.8		
G27K	Doyon Strip	87.06	13	P	P	22 46 23.9	+0.1		
	baz=212								
KOTAN	Kotaneelee Air	87.13	23	P	P	22 46 24.1	-0.2		
	baz=228								
TOLK	Tolik Lake Re	87.22	9	P	P	22 46 24.6	-0.1		
	baz=205								
H29M	Whitestone	87.30	14	P	P	22 46 25.4	+0.4		
	baz=215								
F26K	Sheenjek River	87.31	11	P	P	22 46 25.5	+0.4		
	baz=210								
A19K	Wainwright	87.36	5	P	P	22 46 25.3	+0.2		
	baz=194								
D23K	Nanushuk River	87.36	9	P	P	22 46 25.5	+0.3		
	baz=204								
E25K	Arctic Village	87.42	11	P	P	22 46 25.7	+0.1		
	baz=208								
B21K	Ikpikpuk River	87.44	7	P	P	22 46 25.4	-0.1		
	baz=200,SNR=5.7								
B20K	Meade River	87.53	6	P	P	22 46 26.0	0.0		
	baz=197								
D24K	Happy Valley	87.81	9	P	P	22 46 27.5	+0.2		
	baz=205								
EPYK	Eagle Plains	87.81	15	P	P	22 46 26.6	-0.8		
EPYK	Eagle Plains	87.81	15	P	P	22 46 27.6	+0.1		
	baz=217								
G29M	Pine Creek	87.94	14	P	P	22 46 28.1	0.0		
	baz=216								
H31M	Peel River	87.96	16	P	P	22 46 28.2	+0.1		
	baz=219								
F28M	Old Crow	88.11	13	P	P	22 46 29.0	+0.2		
	baz=214,SNR=8.7								
C23K	Itkillik River	88.17	8	IAmb	IAmb	22 46 30.2			
	comp=Z,12nm,0.8s								
C23K	Itkillik River	88.17	8	P	P	22 46 29.4	+0.4		
	baz=204,SNR=10								
E27K	Coleen River	88.24	12	IAmb	IAmb	22 50 01.3			
	comp=Z,26nm,1.5s								
E27K	Coleen River	88.24	12	P	P	22 46 29.4	0.0		
	baz=212,SNR=5.7								
B22K	Teshekpuk Lake	88.27	7	P	P	22 46 29.5	+0.1		
	baz=201,SNR=10.0								
C24K	Franklin Bluff	88.34	9	IAmb	IAmb	22 46 31.0			
	comp=Z,15nm,1.1s								
C24K	Franklin Bluff	88.34	9	P	P	22 46 29.9	+0.1		
	baz=206								
D25K	Kavik River	88.35	10	P	P	22 46 29.7	-0.3		
	baz=208,SNR=5.6								
G30M	tAoh Zraii Nji	88.42	14	IAmb	IAmb	22 46 32.2			
	comp=Z,13nm,1.0s								
G30M	tAoh Zraii Nji	88.42	14	P	P	22 46 30.2	-0.1		
	baz=217,SNR=8.7								
HHC	Hu-ho-hao-te	88.47	314	*e*P	P	22 46 34.3	+3.1		
HHC				pmax	pmax				
	comp=Z,9.0nm,0.6s								
A22K	Sinclair Lake	88.71	7	P	P	22 46 31.3	-0.2		
	baz=200								
RSSD	Black Hills	88.87	43		P	22 46 31.9	-1.3		
RSSD	Black Hills	88.87	43	P	P	22 46 31.9	-1.3		
RSSD				pmax	pmax				
	comp=Z,57nm,1.2s								
RSSD	Black Hills	88.87	43	P	P	22 46 33.0	-0.2		
RSSD				pP	pP	22 47 47.5	-2.1		
RSSD				x	x	22 47 52.0			
E28M	Babbage River	89.01	12	P	P	22 46 32.9	0.0		
	baz=214								
F30M	Barrier River	89.03	14	P	P	22 46 33.5	+0.5		
	baz=218								
C27K	Jago River	89.07	11	IAmb	IAmb	22 50 08.8			
	comp=Z,21nm,1.4s								
C27K	Jago River	89.07	11	P	P	22 46 33.3	+0.1		
	baz=210								
C26K	Camden Bay	89.12	10	P	P	22 46 33.8	+0.4		
	baz=209								
E29M	Blow River	89.18	13	P	P	22 46 33.9	+0.2		
	baz=216								
D27M	Malcolm River	89.25	12	P	P	22 46 34.4	+0.2		
	baz=213								
F31M	Tsiigehtchic	89.39	15	IAmb	IAmb	22 46 36.5			
	comp=Z,26nm,1.1s								
F31M	Tsiigehtchic	89.39	15	P	P	22 46 34.8	+0.1		
	baz=220								
WRGLY	Wrigley	89.39	21	P	P	22 46 35.1	+0.3		
	baz=229								
D28M	Stokes Point	89.77	12	P	P	22 46 36.7	+0.2		
	baz=215								
KMI2	Kunming	89.78	296	P	P	22 46 39.9	+2.1		
KMI2				pmax	pmax				
	comp=Z,9.0nm,0.8s								
INK	Inuvik	90.11	14	P	P	22 46 38.3	+0.3		
	baz=220								
ELIB	Princess Elisa	90.56	186	*d*P	P	22 46 40.5	0.0		
	comp=Z,3.4nm,0.8s								
PZH	PanZhiHua	91.06	297	P	P	22 46 44.8	+1.2		
PZH				pmax	pmax				
	comp=Z,10.0nm,0.7s								
CMAR	Chiang Mai Arr	91.10	289	P	P	22 46 45.5	+1.7		
	comp=Z,2.7nm,0.9s,baz=102,slow=2.8,SNR=16								
	comp=Z,2.7nm,0.9s								
CMAR	Chiang Mai Arr	91.10	289		P	22 46 44.8	+1.0		
CMAR	Chiang Mai Arr	91.10	289	*e*P	P	22 46 45.5	+1.7		
CMAR				pmax	pmax				
	comp=Z,2.0nm,0.7s								
CHTO	Chiang Mai	91.20	289	P	P	22 46 45.0	+0.8		
CHTO	Chiang Mai	91.20	289	P	P	22 46 45.1	+0.8		
CHTO				pmax	pmax				
	comp=Z,4.0nm,0.7s								
TROLL	Troll, Antarti	91.42	179	P	P	22 46 45.8	+1.4		
SNAA	Sanae	91.62	178	P	P	22 46 46.5	+1.1		
SNAA				IAmb	IAmb	22 47 21.9			
	comp=Z,28nm,1.7s								
SNAA	Sanae	91.62	178	P	P	22 46 46.5	+1.1		
SNAA				pmax	pmax				
	comp=Z,28nm,1.7s								
VNA3	Neumayer Olymp	91.66	175	⇓P	P	22 46 46.6	+1.2		
	comp=Z,5.2nm,0.7s								
YKA	Yellowknife Ar	92.19	24	P	P	22 46 47.9	+0.1		
	comp=Z,2.0nm,0.7s,baz=253,slow=4.8,SNR=38								
	comp=Z,2.0nm,0.7s								
LZH	Lanzhou	92.39	307	*e*P	P	22 46 50.8	+1.2		
LZH				pmax	pmax				
	comp=Z,13nm,1.0s								
LZDM	Lanzhou Array	92.46	307	P	P	22 46 50.4	+0.2		
	comp=Z,0.7nm,0.3s,baz=151,slow=4.5,SNR=3.6								
	comp=Z,0.7nm,0.3s								
C36M	Paulatuk	93.25	16	P	P	22 46 52.6	+0.1		
	baz=228								
ULN	Ulaanbaatar	94.10	319	*ce*P	P	22 46 58.2	+1.0		
ULN				pmax	pmax				
	comp=Z,5.0nm,1.7s								
SONM	Songino Array	94.51	319	*e*P	P	22 47 00.0	+1.0		
F33A	5 Mile Ranch,	94.61	44	IAmb	IAmb	22 46 59.9			
	comp=Z,16nm,1.1s								
A36M	Sachs Harbour	94.73	14	P	P	22 46 59.3	0.0		
	baz=228								
TIXI	Tiksi	95.78	345	P	P	22 47 03.5	-0.6		
TIXI	Tiksi	95.78	345	*ce*P	P	22 47 03.3	-0.8		
TIXI				pmax	pmax				
	comp=Z,4.0nm,1.3s								
ULM	Lac du Bonnet	96.30	39	P	P	22 47 07.2	+0.2		
	comp=Z,1.8nm,0.7s,baz=232,slow=2.5,SNR=3.2								
	comp=Z,1.8nm,0.7s								
E38A	The Farm, Brul	97.97	44		Pdif	22 47 15.1	+0.5		
KNGR	Kungurtug, Tuv	100.87	320	*i* P	Pdif	22 47 27.2	-0.3		
KNGR				pmax	pmax				
	comp=Z,2.0nm,0.7s								
WMQ	Urumqi	106.24	312	Pdif	Pdif	22 47 53.8	+2.3		
WMQ				LR	LR				
	comp=E,990nm,24.1s								
WMQ				LR	LR				
	comp=Z,870nm,23.9s								
ZALV	Zalesovo Beam	109.04	322	PKiKP	PKiKP	22 52 04.5	-1.5		
	comp=Z,0.5nm,0.5s,baz=151,slow=3.3,SNR=2.6								
MKAR	Makanchi Array	110.32	314	PKiKP	PKiKP	22 52 07.7	-1.1		
	comp=Z,1.5nm,0.7s,baz=111,slow=0.3,SNR=14								
MKAR				PKKPbc	PKKPbc	23 03 10.5	-1.2		
	comp=Z,0.6nm,0.8s,baz=259,slow=2.9,SNR=4.2								
KURBB	Kurchatov Arra	112.87	318	PKiKP	PKiKP	22 52 12.2	-1.2		
	comp=Z,1.0nm,0.6s,baz=91,slow=1.8,SNR=9.4								
AAK	Ala-Archa	115.79	310	*i* PKiKP	PKPdf	22 52 19.1	-0.4		
BVAR	Borovoye Array	117.69	321	PKP	PKPdf	22 52 21.8	-0.8		
	comp=Z,3.5nm,0.7s,baz=53,slow=0.4,SNR=23								
BORK	Borovoye	117.73	322		PKPdf	22 52 22.3	-0.4		
BORK	Borovoye	117.73	322	*c i* PKiKP	PKPdf	22 52 21.4	-1.2		
BORK				pmax	pmax				
	comp=Z,7.0nm,1.7s								
KBL	Kabul	120.09	300		PKPdf	22 52 27.4	-0.6		
KBL	Kabul	120.09	300	PKiKP	PKPdf	22 52 27.5	-0.6		
ARCES	ARCESS Array B	125.67	351	PKP	PKPdf	22 52 36.6	-0.9		
	comp=Z,2.5nm,0.7s,baz=352,slow=2.5,SNR=7.2								
ARCES	ARCESS Array B	125.67	351	*e*PKiKP	PKPdf	22 52 36.0	-1.5		
ARCES				pmax	pmax				
	comp=Z,3.0nm,0.7s								
FINES	FINESS Array B	132.81	346	PKPbc	PKPpre	22 52 42.2			
	comp=Z,3.4nm,1.1s,baz=322,slow=10,SNR=3.7								
FINES				PKP	PKPdf	22 52 50.5	-0.7		

comp=Z,38nm,0.9s
RAKU Rahkiv 144.90 337 PKP **PKPdf** 22 53 13.7 +0.1
NIE Niedzica 145.00 342 *e*PKP **PKPab** 22 53 14.6 +0.4
NIE Niedzica 145.00 342 PKP **PKPab** 22 53 14.4 +0.1
OSTC Ostas 145.01 347 *e*PKP **PKPab** 22 53 14.3 +0.1
OSTC Ostas 145.01 347 *e*PKP2 **PKPab** 22 53 14.3 +0.1
OSTC MLR MLR
comp=Z,3μm,23.4s
BRIU Brid 145.05 338 PKP **PKPab** 22 53 14.5 +0.1
MUKU Mukachevo 145.07 339 PKP **PKPab** 22 53 14.4 -0.1
TLCR 145.09 329 ⇓P **PKPab** 22 53 14.4 -0.2
TLCR 145.09 329 ⇓PKP2 **PKPab** 22 53 14.4 -0.2
TESR Tescani 145.10 333 ⇑P **PKPbc** 22 53 14.2 0.0
TESR Tescani 145.10 333 PKP **PKPdf** 22 53 13.9 -0.1
UPC Upice 145.10 347 *e*PKP **PKPab** 22 53 14.5 -0.1
UPC Upice 145.10 347 *e*PKP2 **PKPab** 22 53 14.5 -0.1
GHRR 145.11 332 ⇓P **PKPab** 22 53 15.6 +0.9
GHRR 145.11 332 PKP **PKPab** 22 53 14.6 -0.1
HOLU Holmets 145.11 339 PKP **PKPab** 22 53 14.6 0.0
DPC Dobruska-Polom 145.18 347 *e*PKP **PKPab** 22 53 14.8 -0.1
DPC Dobruska-Polom 145.18 347 *e*PKP2 **PKPab** 22 53 14.8 -0.1
DPC MLR MLR
comp=Z,3μm,20.8s
KRLC Kraliky 145.33 346 *e*PKP **PKPab** 22 53 15.3 -0.2
KRLC Kraliky 145.33 346 *e*PKP2 **PKPab** 22 53 15.3 -0.2
ONER Baraj Valea Uz 145.35 333 ⇓P **PKPab** 22 53 15.9 +0.3
PVCC Panska Ves 145.37 349 *e*PKP **PKPbc** 22 53 15.2 +0.3
PVCC Panska Ves 145.37 349 *e*PKP2 **PKPbc** 22 53 15.2 +0.3
CFR Carcaliu 145.43 330 ⇑P **PKPab** 22 53 15.7 -0.3
CFR Carcaliu 145.43 330 ⇑PKP2 **PKPab** 22 53 15.7 -0.3
MORC Moravsky Berou 145.43 345 ⇓P **PKPdf** 22 53 13.9 -0.6
MORC Moravsky Berou 145.43 345 ⇓PKIKP **PKPdf** 22 53 13.9 -0.6
MORC Moravsky Berou 145.43 345 *e*PKP **PKPdf** 22 53 14.8 +0.3
BMR Baia Mare 145.44 337 ⇓P **PKPab** 22 53 15.7 -0.3
RICC Richard 145.44 349 *e*PKP **PKPab** 22 53 15.6 -0.2
LANS Liptovska Anna 145.49 343 *e*PKP2 **PKPab** 22 53 16.3 +0.2
LANS Liptovska Anna 145.49 343 *e*PKP **PKPab** 22 53 16.3 +0.2
HSKC Hora Svate Kat 145.50 350 *e*PKP **PKPbc** 22 53 15.2 -0.2
TPGR Topolog 145.52 329 ⇑P **PKPab** 22 53 16.6 +0.2
PLOR Plostina 145.61 332 ⇓P **PKPbc** 22 53 16.1 +0.2
PLOR Plostina 145.61 332 ⇓PKP2 **PKPbc** 22 53 16.1 +0.2
MAUC Maruska 145.74 344 *e*PKP **PKPbc** 22 53 16.4 +0.3
KECS Kecovo 145.78 341 *e*PKP2 **PKPab** 22 53 17.4 +0.2
KECS Kecovo 145.78 341 *e*PKP **PKPab** 22 53 17.4 +0.2
COVR Voinesasa-Covas 145.81 333 ⇑P **PKPbc** 22 53 16.2 -0.2
BRTR Keskin Array B 145.86 318 PKPbc **PKPbc** 22 53 17.1 +0.1
comp=Z,11nm,0.8s,baz=144,slow=3.5,SNR=66
BRTR pPKPbc **pPKPdf** 22 54 39.5 +2.7
comp=Z,2.1nm,1.0s,baz=92,slow=1.2,SNR=4.9
BRTR Keskin Array B 145.86 318 PKPdf **PKPdf** 22 53 15.2 -0.5
BRTR Keskin Array B 145.86 318 *e*PKIKP **PKPdf** 22 53 15.7 0.0
BRTR pmax pmax
comp=Z,11nm,0.8s
PRU Pruhonice 145.89 348 *e*PKP **PKPbc** 22 53 16.7 +0.2
PRU Pruhonice 145.89 348 *e*PKP2 **PKPbc** 22 53 16.7 +0.2
PRU MLR MLR
comp=Z,3μm,19.8s
KIRS Kirsehir-Merke 146.01 317 ⇑P **PKPbc** 22 53 17.4 +0.1
BEBN Eben Emael 146.06 359 *d*PKP **PKPbc** 22 53 16.7 -0.2
DOPR Dopca 146.07 333 ⇑P **PKPab** 22 53 18.2 -0.3
UCC Uccle 146.07 0 **PKPdf** 22 53 16.1 +0.6
UCC Uccle 146.07 0 PKIKP **PKPdf** 22 53 16.1 +0.6
UCC Uccle 146.07 0 *d*PKPdf **PKPdf** 22 53 16.0 +0.5
MESR Meseseni 146.08 337 ⇓P **PKPbc** 22 53 17.5 +0.4
VRAC Vranov 146.09 346 PKPbc **PKPbc** 22 53 17.0 -0.2
comp=Z,8.3nm,0.9s,baz=24,slow=3.6,SNR=11
VRAC Vranov 146.09 346 ⇓P **PKPbc** 22 53 17.6 +0.5
VRAC Vranov 146.09 346 ⇓PKP2 **PKPbc** 22 53 17.6 +0.5
VRAC Vranov 146.09 346 *e*PKP **PKPbc** 22 53 17.2 0.0
CJR Cluj-Napoca 146.20 336 ⇓P **PKPbc** 22 53 18.1 +0.5
CJR Cluj-Napoca 146.20 336 ⇓PKP2 **PKPbc** 22 53 18.1 +0.5
MLR Muntele Rosu 146.20 332 PKPbc **PKPbc** 22 53 17.4 -0.3
comp=Z,7.8nm,0.9s,baz=354,slow=9.7,SNR=18
MLR Muntele Rosu 146.20 332 ⇓P **PKPbc** 22 53 17.8 0.0
MLR Muntele Rosu 146.20 332 ⇓PKP2 **PKPbc** 22 53 17.8 0.0
ISR Istrita 146.22 331 ⇑P **PKiKP** 22 53 20.3 -0.1
ISR Istrita 146.22 331 ⇑P **PKiKP** 22 53 20.3 -0.1
MEM Membach 146.24 358 *d*PKP **PKPbc** 22 53 17.2 -0.3
JAVC Velka Javorina 146.24 344 *e*PKP **PKPab** 22 53 18.7 -0.4
BTNL Ternell 146.25 358 *d*PKP **PKPbc** 22 53 17.3 -0.2
BSTI Sart Tilman 146.27 359 *d*PKP **PKPbc** 22 53 17.8 +0.2
MDB Medias 146.35 335 ⇓P **PKPab** 22 53 18.8 -0.7
MDB Medias 146.35 335 ⇓PKP2 **PKPab** 22 53 18.8 -0.7
KRUC Moravsky 146.37 346 *e*PKP **PKPbc** 22 53 17.6 -0.3
MARR Marisel-Cluj 146.41 337 ⇑P **PKPbc** 22 53 18.2 -0.1
BCA Clavier 146.44 359 *d*PKP **PKPab** 22 53 18.8 0.0
PSZ Piszkesteto 146.46 341 ⇓P **PKPdf** 22 53 16.5 +0.1
PSZ Piszkesteto 146.46 341 ⇓PKIKP **PKPdf** 22 53 16.5 +0.1
DRGR 146.47 337 ⇓P **PKPbc** 22 53 18.7 +0.3
DRGR 146.47 337 ⇓PKP2 **PKPbc** 22 53 18.7 +0.3
BGES Gesves 146.48 359 *d*PKP **PKPab** 22 53 19.4 -0.4
ZVC Zvikov 146.48 348 *e*PKP **PKPbc** 22 53 18.6 +0.4
BHOU Houvegnez 146.49 358 *d*PKP **PKPbc** 22 53 18.2 0.0
BMRD Maredsous 146.56 360 *d*PKP **PKPbc** 22 53 18.3 -0.1
VOIR 146.63 333 ⇓P **PKPdf** 22 53 17.3 +0.6
VOIR 146.63 333 ⇓PKIKP **PKPdf** 22 53 17.3 +0.6
RCHB Rochefort 146.71 359 *d*PcP **PKPbc** 22 53 19.8 +1.0
GRF Grafenberg Arr 146.72 352 *e*PKPbc **PKPbc** 22 53 19.0 0.0
baz=356,slow=2.1
DOU Dourbes 146.77 360 *d*PKP **PKPbc** 22 53 19.0 0.0
MODS Modra-Piesok 146.79 344 *e*PKP2 **PKPbc** 22 53 19.7 +0.5
MODS Modra-Piesok 146.79 344 *e*PKP **PKPbc** 22 53 19.7 +0.5
TNR Turnu Rosu 146.79 334 ⇑P **PKPbc** 22 53 19.5 +0.2
ARR Arges 146.87 334 ⇑P **PKPab** 22 53 20.8 -0.9
LODK Lodwar 146.88 250 PKPdf **PKPdf** 22 53 17.2 -0.9
KHC Kasperske Hory 146.90 349 *e*PKP **PKPbc** 22 53 19.6 +0.2
KHC Kasperske Hory 146.90 349 *c* PKP2 **PKPbc** 22 53 20.1 +0.7
KHC pmax pmax
comp=Z,23nm,1.7s
SRO Srobarova 147.02 343 *e*PKP2 **PKPab** 22 53 22.6 +0.5
SRO Srobarova 147.02 343 *e*PKP **PKPab** 22 53 22.6 +0.5
CKRC Cesky Krumlov 147.05 348 *e*PKP **PKPbc** 22 53 20.0 +0.1
CKRC Cesky Krumlov 147.05 348 *e*PKP2 **PKPbc** 22 53 20.0 +0.1
CKRC MLR MLR
comp=Z,3μm,21.7s
GERES GERESS Array B 147.15 349 PKPbc **PKPbc** 22 53 20.2 0.0
comp=Z,6.4nm,0.9s,baz=90,slow=4.0,SNR=25
GERES GERESS Array B 147.15 349 *e*PKIKP **PKPdf** 22 53 18.5 +1.0
GERES pmax pmax
comp=Z,6.0nm,0.9s
DEV Deva 147.16 336 ⇓P **PKiKP** 22 53 21.5 -0.7
DEV Deva 147.16 336 ⇓P **PKiKP** 22 53 21.5 -0.7
WLF Walferdange 147.18 358 *d*PKP **PKPbc** 22 53 20.5 +0.4
HUMR Humele 147.38 332 ⇓P **PKPbc** 22 53 21.3 +0.5
LOZB Loznitsa 147.51 329 ⇑P **PKPbc** 22 53 21.1 -0.1
CONA Conrad Observa 147.56 346 *i* PKP **PKPbc** 22 53 21.5 +0.1
comp=Z,11nm,0.7s,SNR=7.3
RONA Rosalia, Austr 147.66 345 *i* PKP **PKPbc** 22 53 22.0 +0.4
comp=Z,17nm,0.8s,SNR=5.0
MMAI Mount Meron Ar 147.77 306 PKPbc **PKPbc** 22 53 22.9 +0.5
comp=Z,11nm,0.6s,baz=40,slow=7.0,SNR=36
BZS Buzias 147.87 337 ⇑P **PKPbc** 22 53 22.3 +0.2
BZS Buzias 147.87 337 ⇑P **PKPbc** 22 53 22.3 +0.2
MOA Molln 147.99 347 *i* PKP **PKPbc** 22 53 22.3 -0.1
comp=Z,14nm,1.2s
VLAD Vladila 148.05 332 ⇑P **PKPbc** 22 53 22.9 +0.3
HERR Herculane 148.18 335 ⇓P **PKPbc** 22 53 22.9 0.0
ELND Elena 148.19 329 ⇑P **PKPbc** 22 53 22.9 -0.1
BIOA Bad Ischl, Aus 148.26 348 *i* PKP **PKPbc** 22 53 22.7 -0.4
comp=Z,10nm,1.0s
ARSA Arzberg 148.27 346 *i* PKP **PKPbc** 22 53 23.4 +0.2
comp=Z,9.7nm,1.1s
MORH Mrgy, Hungar 148.37 341 ⇓P **PKPbc** 22 53 23.4 +0.1
BFO Black Forest 148.38 355 **PKPbc** 22 53 23.3 -0.1
BFO Black Forest 148.38 355 PKP2 **PKPbc** 22 53 23.3 -0.1
CSS Mathiatis 148.50 311 **PKPbc** 22 53 23.8 -0.4
MDVR Moldovita 148.54 336 ⇑P **PKPbc** 22 53 23.9 0.0
LESA Schwarzleotal 148.70 349 *i* PKP **PKPbc** 22 53 24.1 -0.1
comp=Z,1.4nm,0.4s
MBAR Mbarara 148.85 239 *c* iPKP2 **PKiKP** 22 53 27.0 0.0
MBAR pmax pmax
comp=Z,8.0nm,1.3s
KBA Koelnbreinsper 148.91 348 *i* PKP **PKPbc** 22 53 24.3 -0.6
comp=Z,11nm,0.6s
SOKA Soboth 148.93 346 *i* PKP **PKPbc** 22 53 24.3 -0.5
comp=Z,21nm,1.6s
RETA Reutte 148.94 352 *i* PKP **PKPbc** 22 53 24.8 0.0
comp=Z,14nm,1.0s,SNR=6.2
PERS Pernice 148.95 346 *i* P **PKPbc** 22 53 24.2 -0.7
ISP Isparta 148.95 318 *c* iPKHKP PKPpre 22 53 24.8
ISP pmax pmax
comp=Z,6.0nm,0.6s
WATA Walderalm 148.97 351 *i* PKP **PKPbc** 22 53 24.7 -0.3
comp=Z,7.5nm,0.6s,SNR=5.8
WTTA Wattenberg 149.03 350 *i* PKP **PKPbc** 22 53 25.1 -0.2
comp=Z,13nm,0.5s,SNR=7.5
MOTA Moosalm 149.03 351 *i* PKP **PKPbc** 22 53 24.9 -0.3
comp=Z,20nm,1.1s,SNR=6.3
SQTA Sankt Quirin 149.14 351 *i* PKP **PKPbc** 22 53 25.1 -0.3
comp=Z,15nm,1.0s
OBKA Obir 149.20 346 *i* PKP **PKPbc** 22 53 26.0 +0.4
comp=Z,12nm,1.2s
DAVA Damuels 149.26 353 *i* PKP **PKPbc** 22 53 26.0 +0.3
comp=Z,22nm,0.8s,SNR=7.6
MYKA Terra Mystica 149.28 348 *i* PKP **PKPbc** 22 53 25.0 -0.7
comp=Z,14nm,0.6s
DOBS Dobrina 149.32 345 *i* P **PKPbc** 22 53 25.3 -0.5
ABTA Abfaltersbach 149.38 349 *i* PKP **PKPbc** 22 53 25.5 -0.5
comp=Z,24nm,0.7s,SNR=8.7
FETA Feichten 149.41 352 *i* PKP **PKPbc** 22 53 26.3 +0.2
comp=Z,23nm,1.0s,SNR=5.9
CRNS Crni Vrh 149.67 346 *e*P **PKPbc** 22 53 26.1 -0.6
DAVOX Davos/Dischmat 149.75 353 PKP **PKPdf** 22 53 22.2 +0.3
comp=Z,25nm,0.9s,baz=354,slow=10,SNR=4.7
DAVOX PKPbc **PKPbc** 22 53 27.3 +0.2
comp=Z,31nm,0.7s,baz=346,slow=4.2,SNR=73
FUORN Ofenpass-Fuorn 149.86 352 **PKPbc** 22 53 27.2 -0.2
BOJS Bojanci 149.97 345 *e*P **PKPbc** 22 53 27.5 +0.2
BLY Banja Luka 150.13 342 ⇓P **PKPbc** 22 53 27.1 -0.6
SSB Saint Sauveur 151.59 360 **PKPbc** 22 53 30.9 -0.2
SSB Saint Sauveur 151.59 360 PKIKP **PKPbc** 22 53 30.9 -0.2
ESDC Sonseca Array 156.04 16 PKPab **PKPab** 22 54 00.5 +0.1
TORD Torodi Ar. Bea 175.51 143 PKP **PKPdf** 22 53 45.9 -1.3
comp=Z,2.4nm,0.9s,baz=257,slow=1.5,SNR=11
TORD PKPab **PKPab** 22 55 27.4 +1.0
comp=Z,1.9nm,0.7s,baz=254,slow=6.4,SNR=8.8

NEIC ***22*** *22:35:51.9±1.2, 6.°5S±0.°1×154.°2E±0.°2, h10km±2km, mb4.3/12, Error ellipse: s-maj=29.3km s-min=14.7km az=126.0*
IDC ***22*** *22:36:03.7±10.0, 6.°63S×153.°71E, h97km±70km, mb3.4/7, mbtmp3.8/8, ML2.1/1, Error ellipse: s-maj=87.5km s-min=30.4km az=102.0*
ISC 22 22:35:57.0±1.1, 6.°6S±0.°1×154.°1E±0.°2, h48km, n25, σ1.9 05/26, mb3.9/12, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.38**	**247**	P	**Pn**	**22 37 44.5**	**+2.2**
	1.9nm,0.3s,baz=72,slow=13,SNR=3.4						
PMG				S	**Sn**	**22 39 02.6**	**-2.2**
	8.1nm,0.6s,baz=78,slow=20,SNR=1.7						
	7.3nm,0.4s						
PMG	**Port Moresby**	**7.38**	**247**		**Pn**	**22 37 41.9**	**-0.4**
EIDS	**Eidsvold**	**18.90**	**188**	P	P	**22 40 13.8**	**0.0**
EIDS				IAmb	IAmb	22 40 14.4	
	comp=Z,17nm,0.9s						
WB0	**Warramunga Arr**	**23.16**	**234**	P	**P**	**22 40 59.5**	**-0.1**
WB0				IAmb	IAmb	22 40 59.8	
	comp=Z,13nm,1.4s						
WR8	**Warramunga Arr**	**23.18**	**233**	P	**P**	**22 40 59.5**	**-0.3**
WB2	**Warramunga Arr**	**23.29**	**233**	P	**P**	**22 41 01.4**	**+0.6**
WB2				IAmb	IAmb	22 41 02.7	
	comp=Z,6.2nm,0.8s						
WRA	**Warramunga Arr**	**23.30**	**233**	P	**P**	**22 41 00.2**	**-0.8**
	comp=Z,1.7nm,0.8s,baz=52,slow=9.1,SNR=15						
	comp=Z,1.7nm,0.9s						
WRA	**Warramunga Arr**	**23.30**	**233**	P	**P**	**22 40 59.5**	**-1.4**
MTN	**Manton Dam**	**23.42**	**253**	P	**P**	**22 41 02.8**	**+0.6**
MTN				IAmb	IAmb	22 41 12.1	
	comp=Z,5.4nm,1.1s						
ASAR	**Alice Springs**	**25.76**	**227**	P	**P**	**22 41 24.0**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=57,slow=9.3,SNR=4.8						
	comp=Z,0.4nm,0.4s						
ASAR	**Alice Springs**	**25.76**	**227**	P	**P**	**22 41 24.5**	**+0.9**
KNRA	**Kununurra**	**26.38**	**248**	P	**P**	**22 41 29.6**	**+0.4**
KNRA				IAmb	IAmb	22 41 38.2	
	comp=Z,9.8nm,1.3s						
MBWA	**Marble Bar**	**36.23**	**243**	P	**P**	**22 42 55.8**	**+0.1**
GIRL	**Giralia**	**41.54**	**243**	P	**P**	**22 43 40.4**	**+0.2**
MORW	**Morawa**	**42.25**	**233**	P	**P**	**22 43 45.7**	**-0.2**
MORW				IAmb	IAmb	22 43 49.9	
	comp=Z,18nm,1.4s						
PEA0B	**Petropavlovsk-**	**59.54**	**3**	P	**P**	**22 45 53.8**	**-1.6**
LZDM	**Lanzhou Array**	**63.40**	**316**	P	**P**	**22 46 23.5**	**+1.3**
	comp=Z,0.9nm,0.3s,baz=136,slow=9.3,SNR=1.5						
	comp=Z,0.9nm,0.3s						
SONM	**Songino Array**	**68.48**	**328**	P	**P**	**22 46 55.4**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=130,slow=5.1,SNR=3.8						
	comp=Z,0.5nm,0.7s						
SONM	**Songino Array**	**68.48**	**328**	P	**P**	**22 46 55.1**	**+0.7**
MKAR	**Makanchi Array**	**82.47**	**319**	P	**P**	**22 48 15.0**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=98,slow=6.4,SNR=7.5						
	comp=Z,0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**83.31**	**326**	P	**P**	**22 48 17.4**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=106,slow=7.7,SNR=2.3						
	comp=Z,0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**83.31**	**326**	P	**P**	**22 48 18.3**	**-0.4**
BVAR	**Borovoye Array**	**91.40**	**323**	P	**P**	**22 48 56.4**	**-1.5**
	comp=Z,0.2nm,0.5s,baz=62,slow=3.4,SNR=2.3						
	comp=Z,0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**152.01**	**286**	PKPbc	**PKPbc**	**22 55 47.2**	**-0.9**
	comp=Z,0.8nm,0.8s,baz=60,slow=0.6,SNR=2.8						
TORD	**Torodi Ar. Bea**	**152.01**	**286**		**PKPdf**	**22 55 41.8**	**+0.3**

IDC ***22*** *22:38:02.6±0.5, 4.°55S×104.°99W, h0km, mb4.9/16, mbtmp4.9/16, MS5.9/54, Error ellipse: s-maj=22.8km s-min=13.3km az=64.0*
MOS ***22*** *22:38:03.7±1.1, 4.°54S×104.°78W, h10km, mb5.3/38, MS5.9/20, Error ellipse: s-maj=10.6km s-min=7.1km az=92.9*
NEIC ***22*** *22:38:04.8±1.4, 4.°67S±0.°09×105.°0W±0.°1, h10km±1km, mb5.4/769, Ms_20 5.9/741, Mwb6.0/119, Mww6.1/64, Error ellipse: s-maj=18.7km s-min=15.4km az=101.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=0.07; Mθθ=0.55; Mϕϕ=-0.62; Mrθ=-0.25; Mθϕ=1.33; Mϕr=0.10; Fault plane solution: M0 1.48000×10¹⁸ NP1: ϕs=101.87000°, δ=89.09000°, λ=-10.32000°. NP2: ϕs=192.03000°, δ=79.68000°, λ=-179.07000°. Principal axes: T 1.4319, Plg7.0000°, Azm147.0000°; N 0.0877, Plg80.0000°, Azm277.0000°; P -1.5196, Plg8.0000°, Azm56.0000°;*
IPGP ***22*** *22:38:05.0, 4.°69S×105.°06W, h14km, Mw6.1, Fault plane solution: NP1:ϕs=281.00000°, δ=85.00000°, λ=14.00000°. NP2:ϕs=189.00000°, δ=76.00000°, λ=175.00000°.*
GFZ ***22*** *22:38:05.5, 4.°65S×104.°95W, h14km, MW6.1, Moment Tensor Solution. s120 Moment tensor: Mrr=0.14; Mθθ=0.40; Mϕϕ=-0.26; Mrθ=0.13; Mθϕ=1.56; Mϕr=0.09; Fault plane solution: NP1:ϕs=275.00000°, δ=86.00000°, λ=-5.00000°. NP2:ϕs=6.00000°, δ=84.00000°, λ=-176.00000°. Principal axes: T 1.6600, Plg1.0000°, Azm321.0000°; N -0.1200, Plg83.0000°, Azm63.0000°; P -1.5400, Plg6.0000°, Azm230.0000°;*
PTWC ***22*** *22:38:06, 4.°60S×104.°70W, h10km, Mwp6.2/14*
NEIC ***22*** *22:38:06.1, 4.°63S×104.°91W, h10km*
NEIC ***22*** *22:38:06.2, 4.°61S×104.°59W, h24km, Moment Tensor Solution. Duration: 5s6 Moment tensor: Scale 10¹⁸Nm; Mrr=0.07; Mθθ=0.27; Mϕϕ=-0.21; Mrθ=-0.10; Mθϕ=1.59; Mϕr=-0.30; Fault plane solution: M0 1.64000×10¹⁸ NP1: ϕs=274.49000°, δ=79.35000°, λ=1.85000°. NP2:ϕs=184.15000°, δ=88.18000°, λ=169.35000°. Principal axes: T 1.6830, Plg9.0000°, Azm139.0000°; N -0.0916, Plg79.0000°, Azm355.0000°; P -1.5914, Plg6.0000°, Azm230.0000°;*
NEIC ***22*** *22:38:06.2, 4.°61S×104.°89W, h24km*
GCMT ***22*** *22:38:08.8±0.1, 4.°48S×104.°79W, h12km, MW6.1/167, Moment Tensor Solution. s164,c359; s167,c600; Duration: 2s7 Moment tensor: Scale 10¹⁸Nm; Mrr=0.07±.01; Mθθ=0.46±.01; Mϕϕ=-0.39±.01; Mrθ=0.04±.02; Mθϕ=1.60±.01; Mϕr=0.23±.02; Best double couple: M0 1.67200×10¹⁸ NP1:ϕs=97.00000°, δ=82.00000°, λ=0.00000°. NP2:ϕs=7.00000°, δ=90.00000°, λ=172.00000°. Principal axes: T 1.7070, Plg6.0000°, Azm322.0000°; N -0.0700, Plg82.0000°, Azm187.0000°; P -1.6370, Plg6.0000°, Azm53.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 22 22:38:03.7±1.2, 4.°65S±0.°06×104.°93W±0.°06, h6km±6km, n1348, σ1.9 14/752, mb5.4/427, MS5.9/459, 4C-2D, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**21.96**	**18**	P	**P**	**22 42 58.0**	**-0.5**
RPN	**Rapa Nui**	**22.74**	**190**	LR	LR	22 49 39.9	
	comp=Z,18μm,19.4s,baz=4.0,slow=30						
TLIG	**Tlapa**	**22.95**	**16**	P	**P**	**22 43 09.6**	**+0.5**
TLIG				IAmb	IAmb	22 43 18.5	
	comp=Z,228nm,1.6s						
TLIG	**Tlapa**	**22.95**	**16**	P	**P**	**22 43 12.2**	**+3.1**
RTAL	**Retalhuleu**	**23.14**	**34**	P	**P**	**22 43 11.6**	**+0.7**
PCIG		**23.31**	**30**	P	**P**	**22 43 12.6**	**-0.1**
CMIG	**Matias Romero**	**23.77**	**24**	LR	LR	22 50 36.6	
	comp=Z,21μm,18.4s,baz=204,slow=32						
HUEH	**Huehuetenango**	**23.89**	**34**	P	**P**	**22 43 18.9**	**+0.3**
HUEH	**Huehuetenango**	**23.89**	**34**	P	**P**	**22 43 19.5**	**+0.9**
H06S1	**SOCORRO T**	**23.98**	**346**	T	T	23 08 26.0	
	SNR=17						
TPIG	**Tehuac#an**	**24.11**	**18**	P	**P**	**22 43 23.8**	**+3.2**
APG	**El Apazote**	**24.23**	**36**	LR	LR	22 50 47.0	
	comp=Z,4μm,19.5s,baz=264,slow=32						
TGIG		**24.28**	**28**	P	**P**	**22 43 23.9**	**+1.8**
PPLP	**Puerto Lpez**	**24.32**	**83**	P	**P**	**22 43 23.2**	**+0.7**
	comp=Z,64nm,1.2s						
CCIG	**Comitan**	**24.35**	**31**	P	**P**	**22 43 23.0**	**+0.2**
MTO3	**Montecristo**	**24.43**	**39**	P	**P**	**22 43 24.0**	**+0.3**
MTO3	**Montecristo**	**24.43**	**39**	P	**P**	**22 43 24.3**	**+0.6**
MOIG	**Morelia**	**24.45**	**9**	P	**P**	**22 43 23.9**	**0.0**
MOIG				IAmb	IAmb	22 43 35.3	
	comp=Z,84nm,1.0s						
ESQI	**Esquipulas**	**24.56**	**39**	P	**P**	**22 43 25.9**	**+1.1**
CRIN	**San Cristobal**	**24.76**	**46**	P	**P**	**22 43 26.4**	**-0.1**
CRIN	**San Cristobal**	**24.76**	**46**	P	**P**	**22 43 30.0**	**+3.5**
JTS	**Las Juntas de**	**24.82**	**53**	LR	LR	22 50 34.3	
	comp=Z,80μm,20.3s,baz=253,slow=30						
JTS	**Las Juntas de**	**24.82**	**53**	P	**P**	**22 43 27.6**	**+0.6**
JTS	**Las Juntas de**	**24.82**	**53**	*i* P	**P**	**22 43 26.8**	**-0.3**
JTS				pmax	pmax		
	comp=Z,42nm,1.0s						
JTS	**Las Juntas de**	**24.82**	**53**	P	**P**	**22 43 26.3**	**-0.8**
MAPC	**Malpelo**	**24.84**	**70**	P	**P**	**22 43 27.2**	**0.0**
MAPC	**Malpelo**	**24.84**	**70**	P	**P**	**22 43 29.8**	**+2.6**
	comp=Z,6μmcomp=Z,48nm,1.9s						
CNGN	**Cerro Negro**	**24.87**	**47**	P	**P**	**22 43 27.4**	**-0.1**
CNGN	**Cerro Negro**	**24.87**	**47**	P	**P**	**22 43 27.7**	**+0.2**
CNGN	**Cerro Negro**	**24.87**	**47**	P	**P**	**22 43 29.5**	**+2.0**
	comp=Z,67μmcomp=Z,2μm,1.8s						
MCRA	**Macar, Loja**	**24.90**	**90**	P	**P**	**22 43 28.3**	**+0.5**
	comp=Z,10μmcomp=Z,3μmcomp=Z,78nm,1.2s						
MGAN	**Managua**	**24.97**	**48**	P	**P**	**22 43 29.8**	**+1.5**
	comp=Z,780μmcomp=Z,14μmcomp=Z,173nm,1.2s						
HDC	**Heredia**	**25.34**	**55**	P	**P**	**22 43 33.1**	**+1.3**
HDC	**Heredia**	**25.34**	**55**	*e*P	**P**	**22 43 34.3**	**+2.5**
TGUH	**Tegucigalpa,Un**	**25.54**	**43**	P	**P**	**22 43 33.9**	**+0.2**
TGUH	**Tegucigalpa,Un**	**25.54**	**43**	P	**P**	**22 43 34.0**	**+0.3**
TGUH	**Tegucigalpa,Un**	**25.54**	**43**	P	**P**	**22 43 34.8**	**+1.1**
	comp=Z,16μmcomp=Z,5μmcomp=Z,150nm,1.0s						
BOAB	**BOACO BROADBAN**	**25.60**	**48**	P	**P**	**22 43 33.6**	**-0.5**
BOAB	**BOACO BROADBAN**	**25.60**	**48**	P	**P**	**22 43 34.4**	**+0.4**
LVIG	**Laguna Verde**	**25.63**	**19**	P	**P**	**22 43 35.4**	**+1.2**
COHC	**Cochancay**	**25.72**	**86**	P	**P**	**22 43 32.8**	**-2.4**
BRU2	**Volcan**	**25.89**	**59**	P	**P**	**22 43 37.3**	**+0.5**
PETF	**Flores**	**26.09**	**34**	P	**P**	**22 43 39.1**	**+0.6**
PETF	**Flores**	**26.09**	**34**	P	**P**	**22 43 38.5**	**0.0**
ATAH	**Atahualpa**	**26.51**	**97**	LR	LR	22 51 43.6	
	comp=Z,29μm,19.2s,baz=273,slow=31						
SLOR	**San Lorenzo -**	**26.69**	**82**	P	**P**	**22 43 46.4**	**+1.9**
SLOR				IAmb	IAmb	22 44 00.1	
	comp=Z,140nm,1.2s						
OTAV	**Otavalo**	**26.90**	**80**	P	**P**	**22 43 46.6**	**+0.3**
OTAV				IAmb	IAmb	22 43 53.2	
	comp=Z,101nm,1.3s						
OTAV	**Otavalo**	**26.90**	**80**	P	**P**	**22 43 46.6**	**+0.3**
OTAV				pmax	pmax		
	comp=Z,101nm,1.3s						
OTAV				MLR	MLR		
	comp=Z,20μm,18.0s						
CUSE	**Cuicocha Este**	**26.96**	**80**	P	**P**	**22 43 49.0**	**+2.1**
	comp=Z,6μmcomp=Z,91nm,1.7s						
SIUN	**Universidad Ur**	**27.08**	**47**	P	**P**	**22 43 47.3**	**-0.1**
ZAIG	**Zacatecas**	**27.35**	**5**	P	**P**	**22 43 50.9**	**+0.8**
ZAIG	**Zacatecas**	**27.35**	**5**	P	**P**	**22 43 51.4**	**+1.3**
TULM	**Tulcn-Chalpat**	**27.64**	**80**	P	**P**	**22 43 53.6**	**+0.5**
	comp=Z,6μmcomp=Z,75nm,1.0s						
CMBC	**Cumbal**	**27.65**	**79**	P	**P**	**22 43 54.1**	**+1.0**
GR1C	**Gorgona, Isla**	**27.80**	**75**	P	**P**	**22 43 52.9**	**-1.1**
BONI	**La Bonita**	**27.84**	**80**	P	**P**	**22 43 54.6**	**0.0**
	comp=Z,12μmcomp=Z,2μmcomp=Z,43nm,0.9s						
CASC	**Dorado de Casc**	**27.97**	**81**	P	**P**	**22 43 55.8**	**+0.2**
	comp=Z,2μmcomp=Z,94nm,1.7s						
GCUF	**Volcan Galeras**

HBVL Hebbronville 32.10 11 P **P** **22 44 35.0 +3.1**
CVER Cruz Verde, Cu 32.15 74 P **P** **22 44 34.6 +1.6**
CZSB Cruzeiro do Su 32.18 97 P **P** **22 44 32.8 0.0**
CZSB Cruzeiro do Su 32.18 97 P **P** **22 44 34.7 +1.9**
comp=Z,2µmcomp=Z,207nm,1.1s
CZSB Cruzeiro do Su 32.18 97 *e*P **P** **22 44 33.9 +1.1**
PTBC PUERTO BERRIO, 32.39 70 P **P** **22 44 35.1 +0.5**
comp=Z,9µmcomp=Z,1µmcomp=Z,28nm,1.3s
VILC Villavicencio, 32.40 75 P **P** **22 44 36.3 +1.4**
comp=Z,3µmcomp=Z,40nm,1.1s
SPBC San Pablo de B 32.47 72 P **P** **22 44 35.8 +0.4**
comp=Z,8µmcomp=Z,2µmcomp=Z,48nm,1.1s
CHIC Chingaza 32.50 74 P **P** **22 44 38.1 +2.0**
comp=Z,7µmcomp=Z,1µmcomp=Z,34nm,1.3s
SJCC San Jacinto, C 32.98 64 P **P** **22 44 38.6 -1.2**
comp=Z,8µmcomp=Z,2µmcomp=Z,48nm,1.1s
BRJC Barrancabermej 33.20 70 P **P** **22 44 43.1 +1.4**
comp=Z,8µmcomp=Z,2µmcomp=Z,49nm,1.0s
833A Chaparral WMA, 33.21 9 P **P** **22 44 42.1 +0.5**
833A IAmb IAmb 22 44 45.5
comp=Z,67nm,1.4s
RUSC La Rusia 33.48 72 P **P** **22 44 45.1 +0.4**
RUSC La Rusia 33.48 72 P **P** **22 44 44.0 -0.7**
comp=Z,9µmcomp=Z,2µmcomp=Z,72nm,1.2s
BARC Barichara 33.60 71 P **P** **22 44 46.7 +1.2**
comp=Z,93nm,1.3s
TX31 Lajitas Ar. Si 33.81 2 **P** **22 44 46.4 -0.5**
TX31 Lajitas Ar. Si 33.81 2 P **P** **22 44 48.0 +1.1**
TXAR Lajitas Array 33.81 2 P **P** **22 44 46.4 -0.6**
comp=Z,7.0nm,1.1s,baz=186,slow=10,SNR=23
TXAR PcP **PcP** **22 47 26.4 +0.2**
comp=Z,1.4nm,0.8s,baz=178,slow=2.2,SNR=4.2
TXAR LR LR 22 56 11.7
comp=Z,18µm,21.8s,baz=178,slow=32
comp=Z,7.0nm,1.1s
TXAR Lajitas Array 33.81 2 P **P** **22 44 47.3 +0.4**
TXAR **PcP** **22 47 25.6 -0.6**
TXAR Lajitas Array 33.81 2 P **P** **22 44 47.3 +0.4**
TXAR 22 47 25.6
OCAC Ocana 34.03 68 P **P** **22 44 49.3 +0.2**
comp=Z,8µmcomp=Z,2µmcomp=Z,95nm,0.9s
DRIO Del Rio 34.13 7 P **P** **22 44 49.7 +0.1**
PAMC Pamplona, Colo 34.30 70 P **P** **22 44 51.0 -0.8**
comp=Z,198nmcomp=Z,26nm,1.2s
SMRC Santa Marta, M 34.36 63 P **P** **22 44 52.2 +0.4**
comp=Z,120nm,1.2s
HNDO Hondo 34.41 9 P **P** **22 44 52.3 +0.2**
HNDO IAmb IAmb 22 45 16.3
comp=Z,84nm,1.6s
SAND Sanderson 34.51 4 P **P** **22 44 53.1 +0.2**
SOR Soroa 34.68 37 **P** **22 44 54.7 +0.2**
SOR IAmb IAmb 22 45 06.1
comp=Z,110nm,1.5s
SOR Soroa 34.68 37 P **P** **22 44 54.7 +0.2**
SOR pmax pmax
comp=Z,110nm,1.5s
ALPN Alpine 34.85 2 P **P** **22 44 56.5 +0.6**
ALPN IAmb IAmb 22 45 05.0
comp=Z,39nm,1.1s
VHRN Van Horn 35.24 360 **P** **22 44 59.1 -0.1**
JCT Junction City 35.27 8 P **P** **22 44 59.8 +0.3**
JCT Junction City 35.27 8 P **P** **22 44 59.8 +0.3**
JCT pmax pmax
comp=Z,19nm,0.9s
JCT MLR MLR
comp=Z,6µm,21.0s
MTDJ Mount Denham 35.31 49 IAMs_20 IAMs_20 22 57 42.5
comp=Z,21µm,18.0s
HKT Hockley 35.49 14 P **P** **22 45 03.0 +1.8**
HKT IAmb IAmb 22 45 27.1
comp=Z,106nm,1.9s
HKT Hockley 35.49 14 *i* P **P** **22 45 03.2 +2.0**
HKT pmax pmax
comp=Z,22nm,1.5s
OZNA Ozona 35.56 6 P **P** **22 45 02.4 +0.4**
PECS Pecos 35.83 2 P **P** **22 45 04.8 +0.5**
MNHN Monahans 35.85 3 P **P** **22 45 04.1 -0.3**
435B Jarrell 35.93 11 P **P** **22 45 04.4 -0.6**
MNTX Cornudas Mount 36.15 359 P **P** **22 45 06.5 -0.4**
BRDY Brady 36.18 9 **P** **22 45 07.1 -0.1**
HNVL Huntsville, TX 36.35 14 P **P** **22 45 09.8 +1.2**
AP01 Chacalluta 36.44 115 IAMs_20 IAMs_20 22 55 51.1
comp=Z,17µm,21.0s
PB12 IPOC Station P 36.53 115 P **P** **22 45 11.3 +0.8**
PB12 IAmb IAmb 22 45 13.6
comp=Z,43nm,1.0s
229A Bryant Ranch, 36.53 4 IAmb IAmb 22 45 14.0
comp=Z,18nm,0.9s
SGCY Sterling City 36.54 5 **P** **22 45 09.8 -0.6**
SGCY IAmb IAmb 22 45 18.1
comp=Z,51nm,0.8s
URIC Uribia, Colomb 36.57 63 P **P** **22 45 09.5 -1.3**
comp=Z,7µmcomp=Z,2µmcomp=Z,73nm,1.1s
CAIB Caibarien 36.71 42 P **P** **22 45 11.5 -0.4**
SDV Santo Domingo 36.74 69 LR LR 22 57 39.0
comp=Z,28µm,20.9s,baz=246,slow=32
SDV Santo Domingo 36.74 69 **P** **22 45 11.6 -0.9**
SDV IAmb IAmb 22 45 14.3
comp=Z,73nm,0.8s
SDV IAMs_20 IAMs_20 22 57 16.7
comp=Z,27µm,21.0s
SDV Santo Domingo 36.74 69 P **P** **22 45 11.7 -0.9**
comp=Z,10µmcomp=Z,2µmcomp=Z,93nm,1.2s
SDV Santo Domingo 36.74 69 *e*P **P** **22 45 11.8 -0.8**
PIX Pinacate 36.91 348 P **P** **22 45 13.7 +0.3**
PB18 Visviri 37.00 113 P **P** **22 45 14.5 -0.5**
PB18 IAmb IAmb 22 45 19.9
comp=Z,98nm,1.1s
PB18 IAMs_20 IAMs_20 22 56 17.0
comp=Z,23µm,22.0s
PSGCX Pisagua 37.02 117 IAMs_20 IAMs_20 22 56 03.1
comp=Z,21µm,20.0s
121A Cookes Peak, D 37.08 356 P **P** **22 45 14.5 -0.6**
WHTX Lake Whitney, 37.13 11 **P** **22 45 14.1 -1.2**
128A Castleberry Fa 37.14 3 IAmb IAmb 22 45 18.6
comp=Z,36nm,1.2s
TUC Tucson 37.17 352 P **P** **22 45 15.6 -0.2**
TUC Tucson 37.17 352 IAMs_20 IAMs_20 22 57 09.8
comp=Z,19µm,20.0s
TUC Tucson 37.17 352 P **P** **22 45 15.6 -0.2**
TUC pmax pmax
comp=Z,34nm,1.6s
TUC MLR MLR
comp=Z,19µm,20.0s
PB16 IPOC Station P 37.19 114 P **P** **22 45 15.8 -0.9**
PB16 IAmb IAmb 22 45 20.6
comp=Z,57nm,0.9s
PB16 IAMs_20 IAMs_20 22 56 25.9
comp=Z,21µm,20.0s
129A Stewart Farms, 37.19 4 IAmb IAmb 22 45 23.7
comp=Z,16nm,1.0s
TA01 Diego Aracena 37.30 118 IAMs_20 IAMs_20 22 56 27.7
comp=Z,24µm,19.0s
ABTX Abilene, Hawle 37.41 7 IAmb IAmb 22 45 21.5
comp=Z,84nm,1.5s
PATCX Punta Patache 37.41 119 IAMs_20 IAMs_20 22 56 01.7
comp=Z,31µm,21.0s
FW13 Cleburne 37.48 10 IAmb IAmb 22 45 25.7
comp=Z,135nm,1.9s
PB11 IPOC Station P 37.49 117 **P** **22 45 18.1 -0.7**
PB11 IAMs_20 IAMs_20 22 56 37.9
comp=Z,21µm,19.0s
NATX Nacogdoches 37.51 14 P **P** **22 45 18.0 -0.5**
NATX IAmb IAmb 22 45 30.0
comp=Z,87nm,1.2s
H03N2 Juan Fernandez 37.51 143 T T 23 25 05.7
baz=317,slow=77
H03N1 Juan Fernandez 37.52 143 T T 23 25 07.0
baz=317,slow=77
H03N3 Juan Fernandez 37.53 143 T T 23 25 06.7
baz=317,slow=77
POST Post 37.65 5 P **P** **22 45 18.9 -0.9**
POST IAmb IAmb 22 45 23.6
comp=Z,99nm,1.6s
SN07 Snyder 07 37.73 6 P **P** **22 45 20.2 -0.2**
PLPT Palo Pinto 37.78 9 **P** **22 45 20.3 -0.5**
GO01 Chusmiza 37.87 116 P **P** **22 45 21.4 -1.1**
GO01 IAMs_20 IAMs_20 22 56 50.1
comp=Z,20µm,20.0s
LPAZ La Paz 37.92 111 P **P** **22 45 23.9 +1.0**
comp=Z,12nm,1.1s,baz=291,slow=6.8,SNR=26
LPAZ LR LR 22 58 35.2
comp=Z,11µm,18.5s,baz=271,slow=32
comp=Z,12nm,1.1s
LPAZ La Paz 37.92 111 **P** **22 45 22.6 -0.4**
LPAZ La Paz 37.92 111 *e*P **P** **22 45 24.9 +2.0**
LPAZ pmax pmax
comp=Z,20nm,1.1s
LPAZ La Paz 37.92 111 P **P** **22 45 23.1 +0.2**
comp=Z,4µmcomp=Z,25nm,1.5s
LPAZ La Paz 37.92 111 *e*P **P** **22 45 23.1 +0.2**
ESJX Sierra Juarez 37.93 345 P **P** **22 45 21.7 -0.6**
PB07 IPOC Station P 37.97 120 P **P** **22 45 22.4 -0.4**
PB07 IAmb IAmb 22 45 27.5
comp=Z,168nm,1.9s
PB07 IAMs_20 IAMs_20 22 56 28.4
comp=Z,21µm,19.0s
PB08 IPOC Station P 38.06 117 P **P** **22 45 23.1 -0.8**
PB08 IAMs_20 IAMs_20 22 56 44.0
comp=Z,22µm,20.0s
FW06 Azle 38.06 10 P **P** **22 45 23.1 -0.1**
PB01 IPOC Station P 38.07 119 P **P** **22 45 22.6 -1.0**
PB01 IAMs_20 IAMs_20 22 57 09.2
comp=Z,23µm,20.0s
PB10 IPOC Station P 38.09 123 P **P** **22 45 23.8 +0.2**
PB10 IAmb IAmb 22 45 27.2
comp=Z,89nm,1.1s
TREL Terrell 38.11 12 P **P** **22 45 23.3 -0.3**
TREL IAmb IAmb 22 45 34.0
comp=Z,107nm,1.3s
PB05 IPOC Station P 38.12 122 IAMs_20 IAMs_20 22 56 42.4
comp=Z,21µm,18.0s
GTBY Guantanamo Bay 38.16 49 IAMs_20 IAMs_20 22 58 31.9
comp=Z,22µm,20.0s
SGC2 Sao Gabriel da 38.17 84 P **P** **22 45 24.8 +0.3**
comp=Z,5µmcomp=Z,1µmcomp=Z,24nm,1.7s
PB03 IPOC Station P 38.20 120 P **P** **22 45 23.7 -1.1**
PB03 IAmb IAmb 22 45 29.4
comp=Z,134nm,1.7s
PB03 IAMs_20 IAMs_20 22 56 53.6
comp=Z,18µm,19.0s
DKNS Dickens 38.30 5 P **P** **22 45 24.5 -0.8**
CBX Cerro Bola 38.41 344 P **P** **22 45 25.9 -0.4**
Y22A Socorro 38.42 357 **P** **22 45 26.9 +0.4**
Y22A IAmb IAmb 22 45 55.0
comp=Z,65nm,1.2s
CRNM Carthage 38.43 358 P **P** **22 45 25.7 -0.8**
MSTX Muleshoe 38.46 3 **P** **22 45 25.6 -1.1**
Z35A Perchaven, San 38.47 10 IAmb IAmb 22 45 30.3
comp=Z,63nm,1.1s
PB09 IPOC Station P 38.55 120 P **P** **22 45 26.9 -0.8**
PB09 IAmb IAmb 22 45 40.1
comp=Z,69nm,1.1s
PB06 IPOC Station P 38.60 121 P **P** **22 45 27.8 -0.4**
PB06 IAmb IAmb 22 45 32.7
comp=Z,128nm,1.6s
PB06 IAMs_20 IAMs_20 22 56 49.2
comp=Z,18µm,18.0s
NMDO Nuevo Mundo 38.63 49 IAmb IAmb 22 45 30.6
comp=Z,117nm,1.3s
GLA Glamis 38.65 347 P **P** **22 45 28.6 +0.4**
GLA Glamis 38.65 347 P **P** **22 45 28.6 +0.4**
PB14 IPOC Station P 38.67 124 P **P** **22 45 28.4 -0.5**
PB14 IAmb IAmb 22 45 32.5
comp=Z,101nm,1.2s
BAR Barrett 38.76 344 **P** **22 45 29.0 -0.1**
BAR IAMs_20 IAMs_20 22 57 11.7
comp=Z,25µm,22.0s
Z38A Mt. Pleasant 38.86 13 IAmb IAmb 22 45 41.0
comp=Z,177nm,1.7s
CPE Camp Elliot 39.08 344 IAMs_20 IAMs_20 22 57 18.0
comp=Z,18µm,20.0s
143A Socs Landing, 39.31 18 P **P** **22 45 33.4 -0.3**
143A IAmb IAmb 22 45 41.5
comp=Z,188nm,1.7s
ANMO Albuquerque 39.41 358 LR LR 22 59 05.9
comp=Z,5µm,19.8s,baz=180,slow=32
ANMO Albuquerque 39.41 358 **P** **22 45 34.3 -0.4**
ANMO Albuquerque 39.41 358 IAMs_20 IAMs_20 22 58 43.9
comp=Z,5µm,19.0s
ANMO Albuquerque 39.41 358 IAMs_20 IAMs_20 22 58 44.1
comp=Z,6µm,19.0s
ANMO Albuquerque 39.41 358 *i* P **P** **22 45 34.8 +0.1**
ANMO pmax pmax
comp=Z,22nm,1.3s
Z41A Richland Creek 39.41 16 IAmb IAmb 22 45 38.9
comp=Z,84nm,1.2s
AMTX Amarillo 39.44 4 **P** **22 45 34.0 -0.9**
AMTX IAMs_20 IAMs_20 22 59 47.1
comp=Z,25µm,22.0s
BRAL Brewton 39.50 24 P **P** **22 45 34.3 -0.9**
451A Vernon 39.58 26 IAmb IAmb 22 45 42.6
comp=Z,72nm,1.0s
PFO Pinyon Flats O 39.59 345 LR LR 22 58 00.9
comp=Z,29µm,21.1s,baz=153,slow=30
PFO Pinyon Flats O 39.59 345 **P** **22 45 35.6 -0.5**
PFO Pinyon Flats O 39.59 345 *i* P **P** **22 45 37.5 +1.4**
PFO pmax pmax
comp=Z,45nm,1.2s
WMOK Wichita Mounta 39.60 8 P **P** **22 45 35.9 -0.2**
WMOK Wichita Mounta 39.60 8 P **P** **22 45 35.9 -0.2**
WMOK pmax pmax
comp=Z,22nm,1.5s
WMOK MLR MLR
comp=Z,4µm,20.0s
DWPF Disney Wildern 39.67 33 IAMs_20 IAMs_20 22 59 19.8
comp=Z,21µm,22.0s
WLAR White Oak Lake 39.73 15 P **P** **22 45 37.1 -0.1**
WLAR IAmb IAmb 22 45 47.7
comp=Z,94nm,1.1s
AC04 Llanos de Chal 39.79 130 **P** **22 45 37.4 -0.5**
553A Crawfordville 39.82 28 IAmb IAmb 22 45 42.5
comp=Z,117nm,1.0s
AF01 San Pedro de A 39.88 121 P **P** **22 45 39.2 +0.1**
AF01 IAmb IAmb 22 46 20.1
comp=Z,74nm,0.9s
AF01 IAMs_20 IAMs_20 22 57 31.2
comp=Z,18µm,21.0s
AC06 Mina Casimiro 39.94 128 P **P** **22 45 38.6 -0.5**
AC06 IAmb IAmb 22 45 43.3
comp=Z,83nm,1.1s
146A Union 40.03 21 P **P** **22 45 39.9 +0.2**
146A IAmb IAmb 22 45 46.7
comp=Z,143nm,1.2s
656A Willston 40.08 31 P **P** **22 45 40.1 0.0**
656A IAmb IAmb 22 45 43.4
comp=Z,78nm,1.2s
GO03 Copiapo 40.15 128 **P** **22 45 39.5 -1.4**
GO03 IAmb IAmb 22 45 44.9
comp=Z,108nm,1.2s
TEFE Tefe 40.21 90 *e*P **P** **22 45 42.0 +0.6**
DANC Danby, Needles 40.30 347 IAmb IAmb 22 45 49.7
comp=Z,61nm,1.2s
DANC IAMs_20 IAMs_20 22 58 40.4
comp=Z,30µm,19.0s
W35A Tecumseh 40.31 10 IAmb IAmb 22 45 45.8
comp=Z,90nm,1.1s
CCAR Cane Creek 40.33 17 P **P** **22 45 42.7 +0.6**
WUAZ Wupatki 40.41 352 IAmb IAmb 22 45 52.3
comp=Z,60nm,1.1s
WUAZ IAMs_20 IAMs_20 22 59 29.4
comp=Z,14µm,18.0s
MIAR Mount Ida 40.43 15 IAmb IAmb 22 45 50.5
comp=Z,141nm,1.6s
OKCSW OKLAHOMA CITY 40.46 9 IAmb IAmb 22 45 50.1
comp=Z,93nm,1.0s
LCO Las Campanas 40.48 131 P **P** **22 45 43.6 -0.2**
LCO Las Campanas 40.48 131 P **P** **22 45 43.6 -0.2**
LCO pmax pmax
comp=Z,164nm,1.4s
LCO MLR MLR
comp=Z,48µm,22.0s
X40A Basin Creek Fa 40.56 15 IAmb IAmb 22 46 21.1
comp=Z,98nm,1.8s
PASC Pasadena Art C 40.59 343 P **P** **22 45 43.6 -0.7**
PASC IAMs_20 IAMs_20 22 58 26.0
comp=Z,17µm,19.0s
MWC Mount Wilson 40.60 343 P **P** **22 45 44.3 -0.4**
MWC IAMs_20 IAMs_20 22 58 27.4
comp=Z,16µm,19.0s
MWC Mount Wilson 40.60 343 P **P** **22 45 44.3 -0.4**
MWC pmax pmax
comp=Z,36nm,1.1s
MWC MLR MLR
comp=Z,16µm,19.0s
SDDR Presa de Saban 40.61 54 P **P** **22 45 43.8 -1.0**
SDDR Presa de Saban 40.61 54 P **P** **22 45 44.6 -0.2**
comp=Z,7µmcomp=Z,36nm,1.1s
CO06 Fray Jorge 40.65 133 IAmb IAmb 22 45 48.5
comp=Z,65nm,1.0s
AC02 Maricunga 40.67 127 **P** **22 45 44.5 -1.2**
AC02 IAmb IAmb 22 45 50.1
comp=Z,72nm,1.1s
Z47A Carrollton 40.90 22 IAmb IAmb 22 45 53.5
comp=Z,76nm,1.2s
GO04 Tololo Observa 41.00 132 P **P** **22 45 47.3 -0.8**
GO04 IAmb IAmb 22 45 53.5
comp=Z,62nm,1.0s
GO04 IAMs_20 IAMs_20 22 57 47.3
comp=Z,17µm,21.0s
OK052 Battle Ridge R 41.14 10 P **P** **22 45 49.2 +0.4**
MTPC Mountain Pass 41.15 347 P **P** **22 45 48.3 -0.8**
OSI Osito Audit: C 41.16 343 IAMs_20 IAMs_20 22 58 15.2
comp=Z,22µm,21.0s
TIGA Tifton 41.26 28 P **P** **22 45 49.8 -0.1**
TPO Tropico Hills 41.26 343 IAmb IAmb 22 46 03.8
comp=Z,76nm,1.3s
SC01 Santiago de lo 41.29 54 P **P** **22 45 49.5 -0.8**
CO02 Combarbal 41.40 134 P **P** **22 45 50.6 -0.7**
CO02 IAmb IAmb 22 45 55.6
comp=Z,102nm,1.4s
CO01 Juntas del Tor 41.42 131 IAmb IAmb 22 45 56.1
comp=Z,97nm,1.6s
CO03 El Pedregal 41.43 133 **P** **22 45 51.1 -0.4**
NOKA Waynoka 41.45 7 P **P** **22 45 51.4 0.0**
NOKA IAmb IAmb 22 45 55.5
comp=Z,74nm,1.2s
WHAR Wooly Hollow 41.47 16 IAmb IAmb 22 45 58.4
comp=Z,76nm,1.2s
OK048 Pawnee Station 41.53 10 IAmb IAmb 22 45 58.4
comp=Z,55nm,1.1s
T25A Trinidad 41.58 1 IAmb IAmb 22 46 29.4
comp=Z,125nm,2.0s
OXF Oxford 41.61 19 IAmb IAmb 22 45 59.7
comp=Z,82nm,1.3s
CCCA Chr Cany lake 41.63 345 P **P** **22 45 53.3 +0.4**
CCCA IAmb IAmb 22 46 03.3
comp=Z,92nm,1.3s
LRMC Laurel Mtn Rad 41.67 344 IAMs_20 IAMs_20 22 59 46.8
comp=Z,15µm,18.0s
SHOC Shoshone, Teco 41.72 346 IAmb IAmb 22 46 06.8
comp=Z,37nm,0.9s
SHOC IAMs_20 IAMs_20 22 59 20.9
comp=Z,25µm,19.0s
MVCO Mesa Verde 41.78 356 **P** **22 45 53.3 -1.0**
MVCO IAmb IAmb 22 46 27.3
comp=Z,58nm,1.1s
152A Waverly Hall 41.78 26 IAmb IAmb 22 45 57.1
comp=Z,60nm,1.1s
CO04 Los Peladeros 41.87 135 **P** **22 45 54.7 -0.6**
CO04 IAmb IAmb 22 45 58.5
comp=Z,62nm,1.0s
QSM Queen of Sheba 41.92 345 IAmb IAmb 22 46 03.1
comp=Z,52nm,1.0s
ISA Isabella, Lake 42.07 343 IAMs_20 IAMs_20 22 59 41.1
comp=Z,19µm,18.0s
GWY Greenwater Val 42.08 346 IAmb IAmb 22 46 04.5
comp=Z,47nm,1.1s
KNB Kanab 42.10 351 IAmb IAmb 22 46 26.5
comp=Z,120nm,1.5s
KAN01 Argonia South 42.12 9 IAmb IAmb 22 46 04.0
comp=Z,161nm,1.7s
MPMC Manual Prospec 42.17 345 IAMs_20 IAMs_20 22 59 08.9
comp=Z,12µm,20.0s
SDCO Great Sand Dun 42.18 359 P **P** **22 45 57.4 -0.3**
FURC Furnace Creek, 42.40 346 IAmb IAmb 22 46 11.2
comp=Z,52nm,1.1s
FURC IAMs_20 IAMs_20 22 59 21.0
comp=Z,23µm,22.0s
VES Vestal, Richgr 42.41 343 IAmb IAmb 22 46 13.2
comp=Z,117nm,1.4s
VES IAMs_20 IAMs_20 22 59 42.2
comp=Z,16µm,20.0s
MT02 Curacav 42.44 136 P **P** **22 45 58.1 -1.5**
LCAR Lake Charles 42.51 17 IAmb IAmb 22 46 06.5
comp=Z,102nm,1.4s
VA03 San Esteban 42.57 135 IAmb IAmb 22 46 04.1
comp=Z,66nm,1.0s
WCT Wildcat Mounta 42.65 346 IAmb IAmb 22 46 09.5
comp=Z,48nm,1.1s
CWC Cottonwood Cre 42.69 344 IAMs_20 IAMs_20 23 00 28.6
comp=Z,15µm,18.0s
PV05 Paradox Valley 42.69 355 IAmb IAmb 22 46 05.8
comp=Z,48nm,1.0s
MT01 Popeta 42.71 137 IAmb IAmb 22 46 05.8
comp=Z,108nm,1.1s
TPNV Topopah Spring 42.71 347 IAmb IAmb 22 46 10.2
comp=Z,48nm,1.2s
TPNV IAMs_20 IAMs_20 22 59 55.3
comp=Z,32µm,20.0s
HMU Henry Mountain 42.71 353 IAmb IAmb 22 46 07.3
comp=Z,64nm,1.3s
PV02 Paradox Valley 42.78 356 IAmb IAmb 22 46 09.6
comp=Z,124nm,1.4s
MT09 Talagante 42.84 137 IAmb IAmb 22 46 07.1
comp=Z,87nm,1.2s
PV17 East Wray Mesa 42.87 355 P **P** **22 46 02.9 -0.4**
GO05 Hualane 42.93 139 P **P** **22 46 02.8 -0.8**
MT16 CCHEN 42.96 136 IAmb IAmb 22 46 08.1
comp=Z,106nm,1.1s
GOGA Godfrey 42.97 27 P **P** **22 46 03.0 -0.7**
GOGA Godfrey 42.97 27 P **P** **22 46 03.1 -0.7**
GOGA pmax pmax
comp=Z,40nm,1.3s
GOGA MLR MLR
comp=Z,9µm,20.0s
GRAC Grapevine Rang 43.02 345 IAmb IAmb 22 46 19.5
comp=Z,115nm,1.4s
BO04 La Punta 43.22 137 IAmb IAmb 22 46 10.1
comp=Z,86nm,1.2s
MGMO Mountain Grove 43.23 15 IAmb IAmb 22 46 13.4
comp=Z,102nm,1.6s
R32A Long Quarter, 43.24 7 IAMs_20 IAMs_20 23 02 22.7
comp=Z,17µm,19.0s
S11A Rachel 43.26 347 IAmb IAmb 22 46 16.9
comp=Z,131nm,1.5s
ZON Zonda 43.27 133 IAmb IAmb 22 46 10.1
comp=Z,80nm,1.2s
GMN Gold Mountain 43.29 346 IAmb IAmb 22 46 20.8
comp=Z,25nm,1.2s
MT13 San Alfonso 43.30 136 IAmb IAmb 22 46 13.5
comp=Z,97nm,1.1s
TIN Tinemaha, Big 43.30 344 IAMs_20 IAMs_20 22 59 44.9
comp=Z,13µm,21.0s
MT08 Bocatoma Ro 43.32 136 IAmb IAmb 22 46 11.3
comp=Z,52nm,0.9s
X51A Calhoun 43.35 24 IAmb IAmb 22 46 13.1
comp=Z,81nm,1.0s
Q24A Divide 43.40 360 IAmb IAmb 22 46 16.6
comp=Z,102nm,1.8s
PARMO Parma 43.48 18 IAmb IAmb 22 46 14.4
comp=Z,91nm,1.1s
S39A Bolivar 43.49 13 IAmb IAmb 22 46 11.4
comp=Z,67nm,1.1s
KSCO Kaye Shedlock' 43.49 3 IAmb IAmb 22 46 12.4
comp=Z,68nm,1.3s
KSCO IAMs_20 IAMs_20 23 02 19.3
comp=Z,13µm,19.0s
CBKS Cedar Bluff 43.51 6 IAmb IAmb 22 46 11.9
comp=Z,68nm,1.1s
WVT Waverly 43.62 20 **P** **22 46 08.6 -0.4**
WVT IAmb IAmb 22 46 11.5
comp=Z,54nm,1.1s
WVT Waverly 43.62 20 P **P** **22 46 08.6 -0.4**
WVT pmax pmax
comp=Z,54nm,1.2s
CFA Coronel Fontan 43.62 132 LR LR 22 59 54.0
comp=Z,14µm,20.5s,baz=312,slow=30
V48A Smith Brothers 43.62 22 IAmb IAmb 22 46 15.3
comp=Z,90nm,1.4s
BBGB Big Mountain B 43.69 341 IAmb IAmb 22 46 24.1
comp=Z,56nm,1.0s
W50A Signal Mountai 43.72 23 IAmb IAmb 22 46 16.1
comp=Z,64nm,1.3s
PSUT Pine Spring 43.75 350 IAmb IAmb 22 46 34.6
comp=Z,30nm,1.1s
SRU San Rafael Swe 43.85 354 IAmb IAmb 22 46 20.6
comp=Z,83nm,1.4s
SAO San Andreas Ge 43.99 341 IAmb IAmb 22 46 40.5
comp=Z,54nm,1.4s
UUPR Utuado, UPR, P 44.01 58 P **P** **22 46 11.5 -1.0**
OBIP Obispado Ponce 44.01 58 P **P** **22 46 11.6 -0.9**
AOPR Arecibo Observ 44.03 58 IAmb IAmb 22 46 13.1
comp=Z,70nm,0.9s
CELP Cerrillos 44.05 58 P **P** **22 46 11.9 -0.9**
CELP IAmb IAmb 22 46 12.7
comp=Z,76nm,1.0s
MDPB Devils Postpil 44.08 344 P **P** **22 46 13.0 0.0**
CGM3 Cape Girardeau 44.09 18 P **P** **22 46 11.9 -0.9**

CGM3 IAmb IAmb 22 46 19.7
comp=Z,91nm,1.2s
TMUT Trail Mountain 44.11 353 IAmb IAmb 22 46 22.4
comp=Z,84nm,1.7s
MACA Manacapuru-AM 44.17 90 P **P 22 46 12.8 -1.0**
MACA Manacapuru-AM 44.17 90 *eP* **P 22 46 12.4 -1.4**
W52A Murphy 44.20 25 IAmb IAmb 22 46 17.1
comp=Z,77nm,1.1s
HODGE Hodges 44.20 27 IAmb IAmb 22 46 16.6
comp=Z,49nm,1.2s
KSU1 Kansas State U 44.21 9 IAmb IAmb 22 46 17.4
comp=Z,50nm,1.0s
P17A Butcher Ranch, 44.23 354 IAmb IAmb 22 46 23.6
comp=Z,80nm,1.4s
ISCO Idaho Springs 44.23 359 **P 22 46 13.7 -0.6**
ISCO Idaho Springs 44.23 359 P **P 22 46 13.7 -0.6**
ISCO pmax pmax
comp=Z,30nm,1.1s
ISCO MLR MLR
comp=Z,9µm,20.0s
CPCT Cooper Cave 44.26 24 IAmb IAmb 22 46 17.1
comp=Z,53nm,1.1s
R40A Maddies Statio 44.31 14 IAmb IAmb 22 46 20.8
comp=Z,46nm,1.0s
ECPR Experimental S 44.34 58 P **P 22 46 13.7 -1.4**
CCM Cathedral Cave 44.35 16 **P 22 46 14.1 -0.8**
CCM IAmb IAmb 22 46 21.1
comp=Z,66nm,1.1s
CCM Cathedral Cave 44.35 16 P **P 22 46 14.1 -0.8**
CCM pmax pmax
comp=Z,66nm,1.1s
SJG San Juan 44.43 58 LR LR 23 01 15.9
comp=Z,11µm,20.8s,baz=227,slow=31
SJG San Juan 44.43 58 P **P 22 46 15.0 -0.8**
SJG San Juan 44.43 58 IAms_20 IAms_20 23 00 54.3
comp=Z,13µm,22.0s
SJG San Juan 44.43 58 P **P 22 46 15.0 -0.8**
SJG pmax pmax
comp=Z,112nm,1.3s
SJG MLR MLR
comp=Z,13µm,22.0s
SJG San Juan 44.43 58 P **P 22 46 12.7 -3.1**
comp=Z,2µmcomp=Z,752nmcomp=Z,32nm,1.3s
PDPR Patillas Dam, 44.50 59 P **P 22 46 15.5 -0.9**
PDPR IAmb IAmb 22 46 16.5
comp=Z,92nm,1.3s
SIV San Ignacio 44.50 108 LR LR 23 02 14.4
comp=Z,29µm,21.7s,baz=296,slow=33
LHV Little Huntoon 44.50 345 IAmb IAmb 22 46 29.0
comp=Z,27nm,1.0s
FVM French Village 44.51 16 IAmb IAmb 22 46 19.4
comp=Z,38nm,0.9s
BG3 Lake Jocassee 44.54 26 IAmb IAmb 22 46 19.7
comp=Z,58nm,1.0s
S44A Carbondale 44.58 18 IAmb IAmb 22 46 23.0
comp=Z,68nm,1.2s
MHC Mount Hamilton 44.58 341 IAmb IAmb 22 46 41.7
comp=Z,65nm,1.4s
MHC IAMs_20 IAMs_20 23 00 04.7
comp=Z,18µm,19.0s
SIUC Southern Illin 44.61 18 IAmb IAmb 22 46 23.2
comp=Z,62nm,1.1s
NVAR Mina Array Bea 44.62 345 P **P 22 46 17.8 +0.5**
comp=Z,5.4nm,1.0s,baz=168,slow=8.8,SNR=12
NVAR PcP **PP 22 48 01.2 -0.3**
comp=Z,4.5nm,1.1s,baz=179,slow=3.0,SNR=1.9
NVAR LR LR 23 01 08.3
comp=Z,14µm,18.6s,baz=162,slow=31
comp=Z,5.4nm,1.0s
NVAR Mina Array Bea 44.62 345 P **P 22 46 17.4 +0.1**
NVAR **PcP 22 48 00.3 +0.1**
U49A Red Boiling Sp 44.70 22 IAmb IAmb 22 46 23.6
comp=Z,48nm,1.2s
HUMP Col San Antoni 44.70 58 P **P 22 46 17.1 -0.9**
HUMP IAmb IAmb 22 46 20.1
comp=Z,82nm,1.4s
JSC Jenkinsville 44.70 28 IAmb IAmb 22 46 21.3
comp=Z,56nm,1.0s
TKL Tuckaleechee C 44.74 25 LR LR 23 05 03.0
comp=Z,5µm,19.0s,baz=218,slow=36
TKL Tuckaleechee C 44.74 25 IAmb IAmb 22 46 20.8
comp=Z,46nm,1.1s
JRSC Jasper Ridge 44.84 340 IAMs_20 IAMs_20 22 59 58.4
comp=Z,23µm,21.0s
MPU Maple Canyon 44.87 353 IAmb IAmb 22 46 28.9
comp=Z,95nm,1.4s
PAULI Pauline 44.89 27 IAmb IAmb 22 46 25.6
comp=Z,62nm,1.1s
VILB Vilhena 44.91 104 **P 22 46 19.4 -0.3**
VILB Vilhena 44.91 104 *eP* **P 22 46 19.5 -0.3**
BOAV Boa Vista 44.92 82 **P 22 46 19.2 -0.6**
BOAV IAmb IAmb 22 46 39.7
comp=Z,101nm,2.0s
BOAV Boa Vista 44.92 82 P **P 22 46 20.0 +0.1**
BOAV Boa Vista 44.92 82 *eP* **P 22 46 19.8 0.0**
BBSD Serra de San D 45.15 110 *eP* **P 22 46 20.2 -1.4**
KVN Kaiserville 45.15 346 **P 22 46 21.6 +0.1**
KVN Kaiserville 45.15 346 P **P 22 46 21.6 +0.1**
KVN pmax pmax
comp=Z,29nm,1.5s
V53A Saluda 45.16 26 IAmb IAmb 22 46 27.8
comp=Z,63nm,1.0s
SLM Saint Louis 45.17 16 IAmb IAmb 22 46 25.0
comp=Z,52nm,1.0s
DUG Dugway, Tooele 45.21 351 IAmb IAmb 22 46 26.2
comp=Z,62nm,1.4s
DUG IAMs_20 IAMs_20 23 01 52.5
comp=Z,9µm,21.0s
P38A Dawn 45.29 12 IAmb IAmb 22 46 28.2
comp=Z,45nm,1.2s
FARB Farallon Islan 45.36 340 IAMs_20 IAMs_20 23 00 10.3
comp=Z,18µm,21.0s
KMSC Kings Mountain 45.38 27 IAmb IAmb 22 46 38.0
comp=Z,42nm,1.2s
KMSC IAMs_20 IAMs_20 23 04 21.8
comp=Z,12µm,19.0s
OGNE Ogallala 45.45 3 **P 22 46 22.6 -1.1**
OGNE IAmb IAmb 22 46 33.6
comp=Z,73nm,1.2s
OGNE IAMs_20 IAMs_20 23 03 41.1
comp=Z,15µm,19.0s
PPT Papeete 45.52 250 LR LR 23 00 19.3
comp=Z,10µm,20.0s,baz=74,slow=29
CTU Camp Tracy 45.55 353 IAmb IAmb 22 46 39.9
comp=Z,32nm,1.1s
TZTN Tazewell 45.60 24 IAmb IAmb 22 46 31.1
comp=Z,53nm,1.0s
MCCM Marconi Confer 45.72 340 IAMs_20 IAMs_20 23 00 21.8
comp=Z,22µm,21.0s
CVS Carmenet Viney 45.76 341 IAmb IAmb 22 46 39.3
comp=Z,63nm,1.1s
CVS IAMs_20 IAMs_20 23 00 26.9
comp=Z,21µm,21.0s
TCUT Toone Canyon 45.93 353 IAmb IAmb 22 46 36.5
comp=Z,54nm,1.1s
BGU Big Grassy Mou 45.96 351 IAmb IAmb 22 47 04.9
comp=Z,36nm,1.2s
Y60A Bolivia 45.99 31 IAMs_20 IAMs_20 23 03 17.7
comp=Z,20µm,22.0s
W57A Gilead 46.02 29 IAmb IAmb 22 46 30.4
comp=Z,56nm,1.3s
W57A IAMs_20 IAMs_20 23 03 57.4
comp=Z,21µm,21.0s
V55A Taylorsville 46.02 27 IAMs_20 IAMs_20 23 04 34.5
comp=Z,11µm,19.0s
WCI Wyandotte Cave 46.04 20 P **P 22 46 27.9 -0.3**
WCI IAmb IAmb 22 46 37.3
comp=Z,58nm,1.3s
WCI Wyandotte Cave 46.04 20 P **P 22 46 27.9 -0.3**
WCI pmax pmax
comp=Z,58nm,1.3s
GO06 Curarrehue 46.08 144 IAmb IAmb 22 46 33.3
comp=Z,63nm,1.2s
PAHR Pah Rah Range 46.10 345 IAmb IAmb 22 46 58.1
comp=Z,58nm,1.4s
ELK Elko 46.15 349 LR LR 23 03 01.1
comp=Z,20µm,18.1s,baz=168,slow=32
ELK Elko 46.15 349 IAmb IAmb 22 46 40.7
comp=Z,22nm,1.2s
ELK IAMs_20 IAMs_20 23 02 50.0
comp=Z,20µm,18.0s
MNRC McLaughlin Min 46.24 341 IAMs_20 IAMs_20 23 00 55.5
comp=Z,13µm,20.0s
SPUT South Promonto 46.25 352 IAmb IAmb 22 46 44.0
comp=Z,82nm,1.5s
BGNE Belgrade 46.25 7 IAMs_20 IAMs_20 23 04 16.6
comp=Z,18µm,19.0s

PTLB Pontes e Lacer 46.25 107 *eP* **P 22 46 29.1 -1.2**
P43A Skaggs, Pawnee 46.30 16 IAmb IAmb 22 46 35.9
comp=Z,49nm,1.0s
U54A Nelsons Funny 46.31 26 IAmb IAmb 22 47 04.2
comp=Z,48nm,1.3s
SUTB Sutter Butte 46.35 342 IAmb IAmb 22 46 43.9
comp=Z,30nm,1.1s
HWUT Hardware Ranch 46.43 353 IAmb IAmb 22 46 40.0
comp=Z,51nm,1.2s
HWUT IAMs_20 IAMs_20 23 03 26.4
comp=Z,15µm,18.0s
S51A Beattyville 46.52 23 IAmb IAmb 22 48 20.1
comp=Z,36nm,1.2s
SABA Saba 46.72 61 IAMs_20 IAMs_20 23 02 11.4
comp=Z,13µm,21.0s
HVU Hansel Valley 46.76 352 IAmb IAmb 22 46 47.5
comp=Z,45nm,1.2s
BLO Bloomington 46.80 20 IAmb IAmb 22 46 39.2
comp=Z,42nm,1.1s
U56A King 46.81 27 IAmb IAmb 22 46 36.9
comp=Z,50nm,1.3s
U56A IAMs_20 IAMs_20 23 04 47.3
comp=Z,14µm,20.0s
SEUS St. Eustatius 46.89 61 IAMs_20 IAMs_20 23 02 27.1
comp=Z,10µm,20.0s
V58A Windy Hill, Pi 46.95 29 IAmb IAmb 22 46 38.4
comp=Z,24nm,1.0s
V58A IAMs_20 IAMs_20 23 04 45.3
comp=Z,20µm,20.0s
L34A Svendsen Farm, 47.05 9 IAmb IAmb 22 47 12.0
comp=Z,38nm,1.1s
K22A Casper 47.10 358 IAMs_20 IAMs_20 23 03 48.0
comp=Z,13µm,20.0s
KCPM Cahto Peak 47.35 340 IAMs_20 IAMs_20 23 01 55.8
comp=Z,18µm,19.0s
K30B Basset 47.35 5 IAMs_20 IAMs_20 23 04 37.5
comp=Z,19µm,21.0s
PLCA Paso Flores 47.35 144 P **P 22 46 39.0 +0.3**
comp=Z,20nm,0.9s,baz=300,slow=8.0,SNR=23
PLCA LR LR 23 02 09.7
comp=Z,34µm,18.0s,baz=322,slow=30
comp=Z,20nm,0.9s
PLCA Paso Flores 47.35 144 *eP* **P 22 46 39.0 +0.3**
PLCA Paso Flores 47.35 144 *eP* **P 22 46 38.9 +0.2**
PLCA pmax pmax
comp=Z,21nm,0.9s
PLCA Paso Flores 47.35 144 *eP* **P 22 46 39.0 +0.3**
BW06 Boulder Array 47.38 355 IAmb IAmb 22 47 06.3
comp=Z,81nm,1.5s
BW06 IAMs_20 IAMs_20 23 04 05.4
comp=Z,12µm,18.0s
PDAR Pinedale Array 47.38 355 P **P 22 46 37.2 -1.8**
comp=Z,9.5nm,0.9s,baz=163,slow=7.8,SNR=16
PDAR PcP **PcP 22 48 09.3 -0.5**
comp=Z,2.5nm,1.0s,baz=182,slow=3.9,SNR=1.2
PDAR LR LR 23 04 15.7
comp=Z,8µm,18.4s,baz=172,slow=33
comp=Z,9.5nm,0.9s
PDAR Pinedale Array 47.38 355 **P 22 46 38.1 -0.9**
PDAR **PcP 22 48 08.3 -1.4**
P48A Milroy 47.44 21 IAmb IAmb 22 46 44.1
comp=Z,50nm,1.1s
BLA Blacksburg 47.50 27 IAMs_20 IAMs_20 23 05 39.7
comp=Z,12µm,20.0s
AHID Auburn Hatcher 47.52 354 IAmb IAmb 22 46 46.2
comp=Z,19nm,0.9s
AHID IAMs_20 IAMs_20 23 03 46.2
comp=Z,13µm,20.0s
SCIA State Center 47.55 12 IAmb IAmb 22 46 45.8
comp=Z,61nm,1.4s
S54A Dingess, Beckl 47.60 25 IAmb IAmb 22 46 43.0
comp=Z,49nm,1.1s
MPOM Morne Pois Mar 47.64 66 IAMs_20 IAMs_20 23 04 08.0
comp=Z,13µm,22.0s
MAGL Barre de l'ile 47.79 64 IAMs_20 IAMs_20 23 05 58.0
comp=Z,10µm,18.0s
Q51A Peebles 47.82 23 IAmb IAmb 22 46 44.0
comp=Z,29nm,1.2s
L40A Anamosa 48.14 14 IAmb IAmb 22 46 47.2
comp=Z,49nm,1.2s
PDRB Porto dos Gac 48.16 101 *eP* **P 22 46 43.5 -1.8**
SNOW Snow King Moun 48.18 354 IAMs_20 IAMs_20 23 04 18.5
comp=Z,10µm,20.0s
KMPM Mont Pierce 48.18 340 IAMs_20 IAMs_20 23 02 02.9
comp=Z,12µm,20.0s
V61A Roper 48.22 31 IAMs_20 IAMs_20 23 04 45.8
comp=Z,15µm,22.0s
N02D Trinity Center 48.23 342 IAmb IAmb 22 47 10.7
comp=Z,38nm,1.2s
N02D IAMs_20 IAMs_20 23 02 12.2
comp=Z,17µm,20.0s
LOHW Long Hollow 48.31 354 IAmb IAmb 22 46 54.8
comp=Z,72nm,1.5s
LOHW IAMs_20 IAMs_20 23 04 24.1
comp=Z,11µm,19.0s
P51A Williamsport 48.33 23 IAmb IAmb 22 46 48.4
comp=Z,46nm,1.2s
FXWY Fox Creek 48.38 354 IAmb IAmb 22 46 55.5
comp=Z,45nm,1.1s
FXWY IAMs_20 IAMs_20 23 04 32.9
comp=Z,11µm,19.0s
MOOW Moose Ponds 48.46 354 IAmb IAmb 22 46 55.7
comp=Z,73nm,1.6s
MOOW IAMs_20 IAMs_20 23 04 19.0
comp=Z,11µm,19.0s
KHMM Horse Mountain 48.47 341 IAmb IAmb 22 47 06.3
comp=Z,61nm,1.3s
WVOR Wild Horse Val 48.49 346 IAmb IAmb 22 47 16.0
comp=Z,112nm,1.9s
WVOR IAMs_20 IAMs_20 23 04 13.9
comp=Z,15µm,18.0s
JCC Jacoby Creek, 48.51 341 IAMs_20 IAMs_20 23 02 31.6
comp=Z,13µm,21.0s
R55A Marlinton 48.52 26 IAMs_20 IAMs_20 23 06 13.7
comp=Z,9µm,19.0s
RSSD Black Hills 48.55 1 P **P 22 46 48.0 -0.1**
RSSD IAmb IAmb 22 46 51.9
comp=Z,56nm,1.2s
RSSD Black Hills 48.55 1 P **P 22 46 48.0 -0.1**
RSSD pmax pmax
comp=Z,57nm,1.2s
RSSD MLR MLR
comp=Z,6µm,19.0s
S57A Dark Hollow, R 48.62 28 IAMs_20 IAMs_20 23 06 00.3
comp=Z,19µm,20.0s
T59A Double "B" Far 48.65 29 IAmb IAmb 22 46 54.3
comp=Z,37nm,1.2s
ECSD EROS Data Cent 48.74 8 IAmb IAmb 22 46 55.9
comp=Z,51nm,1.3s
ECSD EROS Data Cent 48.74 8 IAMs_20 IAMs_20 23 05 47.5
comp=Z,11µm,18.0s
HLID Hailey 48.75 351 **P 22 46 49.8 +0.2**
HLID IAMs_20 IAMs_20 23 04 17.7
comp=Z,13µm,19.0s
FLWY Flagg Ranch 48.79 354 IAmb IAmb 22 47 14.2
comp=Z,157nm,1.4s
FLWY IAMs_20 IAMs_20 23 04 39.7
comp=Z,12µm,20.0s
KRPM Rodgers 48.82 341 IAMs_20 IAMs_20 23 02 39.7
comp=Z,14µm,21.0s
MFID Camas Ranch 48.84 349 IAmb IAmb 22 46 57.4
comp=Z,62nm,1.1s
MFID IAMs_20 IAMs_20 23 04 28.3
comp=Z,22µm,18.0s
MURT Porto Murtinho 48.85 115 *eP* **P 22 46 49.9 -0.6**
YBH Yreka Blue Hor 48.93 342 LR LR 23 03 00.5
comp=Z,893nm,21.6s,baz=162,slow=31
YPP Pitchstone Pla 48.98 354 IAmb IAmb 22 47 25.1
comp=Z,52nm,1.4s
ACSO Alum Creek Sta 49.01 22 IAmb IAmb 22 46 52.8
comp=Z,44nm,1.2s
CLDB Colider 49.03 100 *eP* **P 22 46 51.5 -0.5**
ITTB Itaituba 49.04 92 *eP* **P 22 46 50.5 -1.6**
H17A Grant Village 49.08 355 IAmb IAmb 22 47 18.8
comp=Z,85nm,1.5s
YFT Old Faithful 49.16 354 IAmb IAmb 22 47 30.7
comp=Z,45nm,1.2s
N49A Columbus Grove 49.17 21 IAmb IAmb 22 46 54.5
comp=Z,28nm,1.0s
JFWS Jewell Farm 49.18 14 IAmb IAmb 22 46 55.2
comp=Z,22nm,0.8s
R58B Mineral 49.28 28 IAMs_20 IAMs_20 23 06 07.0
comp=Z,17µm,20.0s
J08A Circle Bar Ran 49.33 347 IAmb IAmb 22 47 27.4
comp=Z,54nm,1.4s
NPGB Novo Progresso 49.36 95 *eP* **P 22 46 52.3 -2.3**
BDQN Bodoquena, MS 49.37 113 *eP* **P 22 46 53.8 -0.7**
YMR Madison River 49.39 354 IAmb IAmb 22 47 19.3
comp=Z,103nm,1.4s
K43A Burlington 49.48 16 IAmb IAmb 22 47 00.2
comp=Z,52nm,1.0s
YHB Horse Butte 49.50 354 IAmb IAmb 22 47 03.8
comp=Z,46nm,1.1s
Q56A Snyder Ridge, 49.56 26 IAmb IAmb 22 47 17.3
comp=Z,41nm,1.3s
Q56A IAMs_20 IAMs_20 23 06 36.2
comp=Z,14µm,19.0s
YHL Hebgen Lake 49.59 354 IAmb IAmb 22 47 20.9
comp=Z,110nm,1.3s
SALV Santo Antonio 49.60 107 *eP* **P 22 46 55.4 -0.9**
YNE Yellowstone No 49.64 355 IAmb IAmb 22 47 04.7
comp=Z,30nm,1.1s
RLMT Red Lodge 49.70 356 IAmb IAmb 22 47 04.5
comp=Z,36nm,1.1s
MCWV Mont Chateau 49.78 25 IAmb IAmb 22 47 00.3
comp=Z,60nm,1.2s
COYC Coyhaique 49.80 150 IAmb IAmb 22 47 01.7
comp=Z,59nm,1.0s
KBO Bosley Butte 49.83 341 IAMs_20 IAMs_20 23 03 12.6
comp=Z,14µm,20.0s
J05D Fort Rock, OR 49.94 344 IAmb IAmb 22 47 12.7
comp=Z,56nm,1.2s
O54A Avella 50.00 25 IAmb IAmb 22 47 07.5
comp=Z,40nm,0.9s
M50A Fremont 50.01 21 IAmb IAmb 22 47 01.0
comp=Z,53nm,1.0s
I40A Norwalk 50.01 13 IAmb IAmb 22 47 04.4
comp=Z,39nm,1.2s
K02D Willamette Mer 50.09 342 IAmb IAmb 22 47 28.4
comp=Z,98nm,1.6s
S61A Accomac 50.14 30 IAMs_20 IAMs_20 23 06 18.6
comp=Z,16µm,21.0s
I07A Izee 50.25 346 IAmb IAmb 22 47 08.7
comp=Z,63nm,1.1s
DLMT Dillon 50.26 353 IAMs_20 IAMs_20 23 05 05.6
comp=Z,9µm,20.0s
CPUP Villa Florida 50.31 121 P **P 22 47 01.5 0.0**
comp=Z,18nm,0.9s,baz=289,slow=9.6,SNR=28
CPUP LR LR 23 04 56.1
comp=Z,10µm,20.4s,baz=286,slow=32
comp=Z,18nm,0.9s
CPUP Villa Florida 50.31 121 IAmb IAmb 22 47 04.5
comp=Z,42nm,1.1s
CPUP Villa Florida 50.31 121 *eP* **P 22 47 01.0 -0.6**
PINE Pine Mountain 50.33 345 IAmb IAmb 22 47 22.6
comp=Z,49nm,1.2s
AQDB Aquidauana 50.34 113 **P 22 47 00.7 -1.2**
AQDB IAmb IAmb 22 47 04.0
comp=Z,55nm,1.3s
AQDB Aquidauana 50.34 113 *eP* **P 22 47 01.2 -0.7**
BOZ Bozeman (W) 50.38 354 IAmb IAmb 22 47 26.0
comp=Z,54nm,1.6s
BOZ IAMs_20 IAMs_20 23 05 35.8
comp=Z,4µm,21.0s
I42A Draeger Farm, 50.43 15 IAmb IAmb 22 47 03.9
comp=Z,46nm,1.4s
P57A Homestead Farm 50.45 27 IAmb IAmb 22 47 22.9
comp=Z,93nm,1.5s
P57A IAMs_20 IAMs_20 23 06 48.7
comp=Z,13µm,19.0s
PLID Pearl Lake 50.49 350 IAmb IAmb 22 47 08.8
comp=Z,22nm,1.1s
PLID IAMs_20 IAMs_20 23 05 13.0
comp=Z,17µm,19.0s
PP1B Ponte de Pedra 50.61 109 *eP* **P 22 47 03.5 -0.5**
I04A Tendick Farm, 50.73 344 IAmb IAmb 22 47 37.5
comp=Z,55nm,1.4s
AY03 Cochrane 50.76 152 IAmb IAmb 22 47 09.4
comp=Z,89nm,1.4s
R61A Willards 50.81 30 IAMs_20 IAMs_20 23 06 50.3
comp=Z,17µm,20.0s
SPMN Marine on St. 50.82 11 IAmb IAmb 22 47 10.7
comp=Z,35nm,0.9s
F33A 5 Mile Ranch, 50.85 8 IAMs_20 IAMs_20 23 07 00.3
comp=Z,14µm,18.0s
LAO LASA Array 51.13 359 IAmb IAmb 22 47 15.8
comp=Z,266nm,2.0s
LAO IAMs_20 IAMs_20 23 06 24.6
comp=Z,10µm,20.0s
E28A Huff 51.14 4 IAMs_20 IAMs_20 23 07 18.9
comp=Z,15µm,18.0s
G08A Pilot Rock 51.27 347 IAmb IAmb 22 47 16.0
comp=Z,53nm,1.4s
TRQA Tornquist 51.30 136 P **P 22 47 07.6 -1.3**
TRQA IAmb IAmb 22 47 12.0
comp=Z,85nm,1.6s
TRQA Tornquist 51.30 136 P **P 22 47 07.6 -1.3**
TRQA pmax pmax
comp=Z,85nm,1.7s
TRQA MLR MLR
comp=Z,23µm,19.0s
PAOC Oil Creek Stat 51.40 24 IAmb IAmb 22 47 15.2
comp=Z,71nm,1.2s
G40A Rib Lake 51.41 13 IAmb IAmb 22 47 12.3
comp=Z,50nm,1.2s
SSPA Standing Stone 51.44 26 P **P 22 47 10.6 +0.8**
SSPA IAmb IAmb 22 47 21.0
comp=Z,48nm,1.2s
SSPA Standing Stone 51.44 26 IAMs_20 IAMs_20 23 07 42.0
comp=Z,13µm,19.0s
AMBA Amambai (Brazi 51.50 116 *eP* **P 22 47 10.5 -0.1**
F10A Beach Ranch, E 51.58 349 IAmb IAmb 22 47 28.6
comp=Z,25nm,1.0s
G06A Carlson Farm, 51.61 346 IAmb IAmb 22 47 36.0
comp=Z,132nm,1.7s
PSAL Palomas, Salto 51.61 126 *eP* **P 22 47 10.3 -1.0**
PAGS Pennsylvania G 51.63 27 IAmb IAmb 22 47 26.8
comp=Z,43nm,1.0s
GO08 Villa O'Higgin 51.66 153 IAmb IAmb 22 47 31.0
comp=Z,58nm,1.3s
LNOR Lincton Mounta 51.69 348 IAmb IAmb 22 47 39.2
comp=Z,28nm,1.2s
G05A Wamic 51.78 345 IAmb IAmb 22 47 33.0
comp=Z,46nm,1.0s
MSO Missoula 51.87 352 IAmb IAmb 22 47 39.9
comp=Z,53nm,1.6s
MSO IAMs_20 IAMs_20 23 06 49.4
comp=Z,8µm,18.0s
HOOD Mount Hood Mea 51.94 345 IAmb IAmb 22 47 27.1
comp=Z,66nm,1.2s
G04A Mulino 52.05 344 IAmb IAmb 22 47 37.7
comp=Z,96nm,1.1s
F07A Phinny Hill Vi 52.06 347 IAmb IAmb 22 47 28.1
comp=Z,71nm,1.5s
N58A Sunbury 52.13 27 IAmb IAmb 22 47 20.0
comp=Z,71nm,1.5s
N58A IAMs_20 IAMs_20 23 07 59.2
comp=Z,14µm,19.0s
M57A Sunshine Farm, 52.34 26 IAmb IAmb 22 47 22.4
comp=Z,35nm,1.1s
M57A IAMs_20 IAMs_20 23 07 58.9
comp=Z,14µm,20.0s
F42A Maple Grove Fa 52.37 15 IAmb IAmb 22 47 25.2
comp=Z,109nm,1.6s
HAWA Hanford 52.45 347 IAmb IAmb 22 47 24.4
comp=Z,37nm,1.2s
HAWA IAMs_20 IAMs_20 23 06 05.6
comp=Z,9µm,21.0s
MDND Maddock 52.48 5 IAmb IAmb 22 48 34.2
comp=Z,38nm,1.0s
EGMT Eagleton 52.62 356 IAmb IAmb 22 47 42.3
comp=Z,62nm,1.4s
EGMT IAMs_20 IAMs_20 23 07 07.2
comp=Z,8µm,21.0s
E07A Sunnyside 52.67 347 IAmb IAmb 22 47 28.5
comp=Z,63nm,1.6s
C2SB Chapadao do Su 52.70 110 *eP* **P 22 47 22.0 +2.3**
WAH2 Wahluke Slope 52.80 347 IAmb IAmb 22 47 26.8
comp=Z,27nm,1.1s
L56A Greenwood 52.80 25 IAmb IAmb 22 47 25.8
comp=Z,65nm,1.1s
L56A IAMs_20 IAMs_20 23 08 29.1
comp=Z,12µm,19.0s
D08A Wollman Farm, 52.95 348 IAmb IAmb 22 47 27.5
comp=Z,31nm,1.1s
MDP Montagnes des 53.12 80 LR LR 23 08 16.3
comp=Z,10µm,18.5s,baz=268,slow=34
MMNY Mt. Morris Dam 53.15 25 IAmb IAmb 22 47 31.4
comp=Z,64nm,1.0s
ARAG Araguaiana, MT 53.29 106 *eP* **P 22 47 23.4 -0.5**
LON Longmire 53.31 346 IAmb IAmb 22 47 49.2
comp=Z,19nm,1.0s
AGMN Agassiz Nation 53.32 8 IAmb IAmb 22 47 31.3
comp=Z,57nm,1.1s
EPH Ephrata 53.37 348 IAmb IAmb 22 47 48.5
comp=Z,62nm,1.5s

SNDB Serra Nova Dou 53.50 101 *eP* **P 22 47 24.6 -0.9**
LTY Liberty 53.52 347 IAmb IAmb 22 47 49.4
comp=Z,83nm,1.7s
C09A Chrisman Ranch 53.53 349 IAmb IAmb 22 47 31.9
comp=Z,34nm,1.1s
BINY Binghamton 53.54 27 IAmb IAmb 22 47 30.7
comp=Z,36nm,1.1s
BINY IAMs_20 IAMs_20 23 08 53.7
comp=Z,12µm,20.0s
TRCB Terra Rica 53.59 115 **P** **22 47 25.2 -1.0**
TRCB IAmb IAmb 22 47 28.7
comp=Z,45nm,1.1s
TRCB Terra Rica 53.59 115 *eP* **P 22 47 27.3 +1.1**
J55A Hilton 53.62 24 IAMs_20 IAMs_20 23 09 36.8
comp=Z,10µm,19.0s
EYMN Ely 53.69 11 IAmb IAmb 22 47 29.3
comp=Z,62nm,1.2s
N62A Caumsett State 53.73 29 IAMs_20 IAMs_20 23 08 05.6
comp=Z,15µm,22.0s
K57A Scipio Center 53.74 26 IAMs_20 IAMs_20 23 09 03.8
comp=Z,14µm,20.0s
NEW Newport 53.77 350 LR LR 23 07 34.1
comp=Z,19µm,18.4s,baz=178,slow=33
NEW Newport 53.77 350 IAmb IAmb 22 47 34.5
comp=Z,36nm,1.1s
D05A Enumclaw 53.77 346 IAmb IAmb 22 47 33.8
comp=Z,88nm,1.2s
L59A Walton 53.96 27 IAMs_20 IAMs_20 23 09 03.7
comp=Z,14µm,20.0s
WSPT Westport, CT 53.98 29 IAMs_20 IAMs_20 23 08 25.3
comp=Z,14µm,21.0s
E46A Sault Ste Mari 53.99 18 IAmb IAmb 22 47 34.5
comp=Z,45nm,1.2s
B08A Colville Reser 54.27 348 IAmb IAmb 22 47 36.6
comp=Z,24nm,1.1s
SADO Sadowa 54.35 22 LR LR 23 11 04.5
comp=Z,10µm,18.5s,baz=229,slow=36
SADO Sadowa 54.35 22 IAmb IAmb 22 47 36.6
comp=Z,60nm,1.2s
NLWA Neilton Lookou 54.44 344 IAMs_20 IAMs_20 23 06 13.5
comp=Z,13µm,22.0s
PTGB Pitanga 54.50 117 *eP* **P 22 47 33.9 +1.0**
J57A Williamstown 54.51 26 IAMs_20 IAMs_20 23 09 38.2
comp=Z,11µm,19.0s
PECO Prince Edward 54.51 25 IAmb IAmb 22 47 37.6
comp=Z,24nm,0.9s
DELO Deloro Mine 54.74 24 IAmb IAmb 22 47 36.0
comp=Z,46nm,1.2s
CPSB Cacapava Do Su 54.78 124 *eP* **P 22 47 33.4 -1.4**
PRPB Parauapebas 54.88 94 *eP* **P 22 47 35.2 -0.4**
UCCT U. Connecticut 54.99 30 IAmb IAmb 22 47 46.4
comp=Z,65nm,1.3s
TRY Troy 55.02 28 IAMs_20 IAMs_20 23 09 12.7
comp=Z,13µm,21.0s
ITAB Concordia 55.03 120 **P** **22 47 36.0 -0.5**
ITAB IAmb IAmb 22 47 38.8
comp=Z,63nm,1.4s
ITAB Concordia 55.03 120 *eP* **P 22 47 38.2 +1.7**
LDASE Londrina, Braz 55.08 115 *eP* **P 22 47 36.6 -0.4**
ITRB Iturama 55.16 111 *eP* **P 22 47 38.4 +0.8**
J59A Piesco 55.21 27 IAmb IAmb 22 47 39.4
comp=Z,42nm,1.3s
J59A IAMs_20 IAMs_20 23 09 53.8
comp=Z,14µm,20.0s
ULM Lac du Bonnet 55.24 7 P **P 22 47 35.6 -1.9**
comp=Z,45nm,1.1s,baz=197,slow=6.7,SNR=19
ULM LR LR 23 09 51.0
comp=Z,14µm,19.4s,baz=188,slow=35
comp=Z,45nm,1.1s
ULM Lac du Bonnet 55.24 7 IAmb IAmb 22 47 40.3
ULM Lac du Bonnet 55.24 7 *eP* **P 22 47 36.6 -0.9**
ULM pmax pmax
comp=Z,45nm,1.1s
L61B Northampton 55.27 29 IAMs_20 IAMs_20 23 09 45.4
comp=Z,11µm,20.0s
POHA Pohakuloa 55.33 298 IAMs_20 IAMs_20 23 05 27.2
comp=Z,8µm,18.0s
M65A Busby, Falmout 55.61 31 P **P 22 47 41.8 +1.4**
baz=223
RAR Rarotonga 55.63 248 LR LR 23 05 17.8
comp=Z,4µm,21.4s,baz=90,slow=29
K62A Royalston 55.65 29 IAMs_20 IAMs_20 23 10 51.3
comp=Z,9µm,19.0s
NCB Newcomb 55.73 26 IAmb IAmb 22 47 51.1
comp=Z,75nm,1.7s
HRV Adam Dziewonsk 55.85 29 IAMs_20 IAMs_20 23 09 40.9
comp=Z,15µm,21.0s
J61A Chester 56.01 28 IAMs_20 IAMs_20 23 10 30.0
comp=Z,15µm,20.0s
LONY Lake Ozonia 56.09 26 IAMs_20 IAMs_20 23 10 16.0
comp=Z,13µm,20.0s
HNH Hanover 56.41 28 IAMs_20 IAMs_20 23 10 32.6
comp=Z,13µm,20.0s
FRTB Fartura 56.47 115 *eP* **P 22 47 48.9 +1.8**
CNLB Canela 56.64 122 *eP* **P 22 47 48.3 +0.1**
FRNY Flat Rock 56.69 26 IAmb IAmb 22 47 50.3
comp=Z,55nm,1.4s
BDFB Brasilia 56.93 106 P **P 22 47 49.2 -1.2**
comp=Z,33nm,1.2s,baz=290,slow=10,SNR=20
BDFB LR LR 23 10 19.8
comp=Z,16µm,18.3s,baz=274,slow=34
comp=Z,33nm,1.2s
LLLB Lillooet 56.95 347 IAmb IAmb 22 48 14.0
comp=Z,106nm,2.0s
IPMB Ipameri, GO 56.96 108 *eP* **P 22 47 50.3 -0.3**
I62A Tamworth 56.99 29 IAMs_20 IAMs_20 23 11 59.9
comp=Z,9µm,19.0s
LBNH Lisbon 56.99 28 IAMs_20 IAMs_20 23 11 09.9
comp=Z,12µm,20.0s
BB19B Bebedouro 57.05 112 *eP* **P 22 47 52.9 +1.7**
SMTB Santa Maria do 57.06 98 *eP* **P 22 47 50.9 -0.4**
MNTQ Montreal, Queb 57.20 26 IAmb IAmb 22 47 53.8
comp=Z,42nm,1.2s
CBB Campbell River 57.26 344 IAmb IAmb 22 48 30.6
comp=Z,41nm,1.3s
TRQ Mont Tremblant 57.38 25 IAmb IAmb 22 47 58.6
comp=Z,40nm,1.2s
I63A Otisfield 57.48 29 IAMs_20 IAMs_20 23 10 32.9
comp=Z,11µm,21.0s
H62A Milan 57.60 28 IAmb IAmb 22 47 56.8
comp=Z,48nm,1.4s
H62A IAMs_20 IAMs_20 23 10 28.1
comp=Z,8µm,21.0s
MAJ01 Sao Joao Batis 57.76 119 *eP* **P 22 47 58.0 +1.9**
USHA Ushuaia 58.05 156 LR LR 23 07 40.6
comp=Z,20µm,18.6s,baz=306,slow=31
KIP Kipapa 58.09 299 IAMs_20 IAMs_20 23 05 25.1
comp=Z,9µm,22.0s
EDM Edmonton 58.09 354 IAmb IAmb 22 48 06.2
comp=Z,194nm,1.4s
RCLB Rio Claro- Sao 58.17 113 *eP* **P 22 47 59.4 +0.3**
WVL Waterville 58.31 29 IAmb IAmb 22 48 10.5
comp=Z,52nm,1.3s
G62A West of Eustis 58.38 28 IAMs_20 IAMs_20 23 10 51.6
comp=Z,9µm,22.0s
SPB Sao Paulo 58.44 115 IAMs_20 IAMs_20 23 10 59.7
comp=Z,13µm,21.0s
SPB Sao Paulo 58.44 115 *eP* **P 22 48 02.0 +1.1**
PMNB Patos De Minas 58.69 109 *eP* **P 22 48 02.8 -0.1**
PET01 Itanhaem-SP 58.70 116 *eP* **P 22 48 04.2 +1.5**
VAO Valinhos 58.77 114 P **P 22 48 02.6 -0.7**
VAO IAmb IAmb 22 48 06.6
comp=Z,49nm,1.3s
VAO Valinhos 58.77 114 *eP* **P 22 48 04.2 +0.9**
PKME Peaks-Kenny Pk 59.00 29 IAMs_20 IAMs_20 23 11 28.1
comp=Z,13µm,21.0s
FFC Flin Flon 59.21 2 P **P 22 48 04.9 -0.7**
FFC IAmb IAmb 22 48 12.1
comp=Z,32nm,1.4s
FFC Flin Flon 59.21 2 P **P 22 48 04.9 -0.7**
FFC pmax pmax
comp=Z,32nm,1.4s
FFC MLR MLR
comp=Z,16µm,18.0s
SDBA SAO DESIDERIO 59.76 102 *eP* **P 22 48 10.7 +0.5**
F64A Sherman 59.89 29 IAMs_20 IAMs_20 23 11 53.6
comp=Z,10µm,20.0s
E62A Clayton Lake 59.89 27 IAmb IAmb 22 48 13.0
comp=Z,56nm,1.3s
E62A IAMs_20 IAMs_20 23 13 41.7
comp=Z,10µm,18.0s
BBB Bella Bella 59.95 344 LR LR 23 10 57.1
comp=Z,7µm,18.7s,baz=158,slow=33
PARB Paraibuna 60.05 114 *eP* **P 22 48 13.8 +1.8**
LDAQ Lac Daran 60.15 25 P **P 22 48 12.2 -0.1**
LDAQ IAmb IAmb 22 48 20.1
comp=Z,52nm,1.6s
LMQ La Malbaie 60.23 26 P **P 22 48 12.7 0.0**
JANB Januaria 60.45 105 *eP* **P 22 48 14.8 -0.1**
D62A Allapoint, All 60.45 27 P **P 22 48 15.0 +0.7**
D62A IAmb IAmb 22 48 25.9
comp=Z,40nm,1.2s
D62A IAMs_20 IAMs_20 23 12 38.6
comp=Z,12µm,21.0s
BSCB Bom Sucesso 60.52 111 *eP* **P 22 48 16.6 +1.2**
EFI East Falkland 60.84 149 *i* P **P 22 48 18.0 +1.2**
EFI pmax pmax
comp=Z,44nm,0.9s
DIAM Diamantina, MG 61.28 108 *eP* **P 22 48 21.2 +0.5**
NBPS Pedro II - PI 63.27 93 *eP* **P 22 48 33.2 -0.8**
CAM01 Campos-RJ 63.50 112 *eP* **P 22 48 37.4 +2.1**
SJMB Sao Joao De Ma 63.67 108 *eP* **P 22 48 37.4 +0.9**
V35K Ketchikan 63.71 343 P **P 22 48 36.9 +0.9**
baz=150
U35K Hyder 63.79 345 IAMs_20 IAMs_20 23 13 38.7
comp=Z,8µm,18.0s
U35K Hyder 63.79 345 P **P 22 48 37.7 +1.3**
baz=152
FCC Fort Churchill 63.80 6 IAmb IAmb 22 48 45.9
comp=Z,26nm,0.9s
CRAG Craig 64.27 343 P **P 22 48 40.4 +0.8**
baz=149
RIB01 Linhares ES 64.46 109 *eP* **P 22 48 42.5 +0.8**
NBMO Morrinhos-CE 64.73 91 *eP* **P 22 48 42.5 -1.1**
T35M Bob Quinn 64.79 345 P **P 22 48 44.1 +1.0**
baz=152
U33K Whale Pass 64.83 343 IAMs_20 IAMs_20 23 13 45.1
comp=Z,6µm,18.0s
U33K Whale Pass 64.83 343 P **P 22 48 44.1 +0.9**
baz=149
GUA01 Guaratinga, BA 64.86 106 *eP* **P 22 48 45.3 +1.0**
WRAK Wrangell Islan 64.86 344 IAMs_20 IAMs_20 23 12 54.2
comp=Z,6µm,18.0s
WRAK Wrangell Islan 64.86 344 P **P 22 48 44.4 +0.9**
baz=150
CMC01 Camacan, BA 65.08 105 *eP* **P 22 48 47.3 +1.5**
T33K Petersburg 65.38 343 P **P 22 48 47.9 +1.1**
baz=145
NBMA Muriti-CE 65.81 96 *eP* **P 22 48 49.6 -1.0**
S34M Telegraph Cree 65.84 345 IAMs_20 IAMs_20 23 13 40.9
comp=Z,7µm,19.0s
S34M Telegraph Cree 65.84 345 P **P 22 48 50.7 +0.9**
baz=151
DLBC Dease Lake 66.03 346 LR LR 23 14 28.1
comp=Z,7µm,20.6s,baz=131,slow=33
DLBC Dease Lake 66.03 346 P **P 22 48 52.4 +1.3**
baz=152
SIT Sitka 66.28 342 P **P 22 48 53.9 +1.3**
baz=147
KOTAN Kotaneelee Air 66.31 350 P **P 22 48 54.0 +1.1**
baz=159,SNR=10
S32K Killisnoo 66.40 343 IAMs_20 IAMs_20 23 14 31.8
comp=Z,7µm,18.0s
S32K Killisnoo 66.40 343 P **P 22 48 54.1 +0.7**
baz=148
AFI Afiamalu 66.43 257 LR LR 23 09 55.6
comp=Z,4µm,21.3s,baz=89,slow=29
PMSA Palmer Station 66.69 162 LR LR 23 10 43.3
comp=Z,21µm,19.7s,baz=314,slow=29
PMSA Palmer Station 66.69 162 *eP* **P 22 48 58.2 +3.0**
Q32M Nakina River 67.05 345 IAMs_20 IAMs_20 23 14 07.5
comp=Z,7µm,20.0s
Q32M Nakina River 67.05 345 P **P 22 48 58.8 +0.9**
baz=150
R32K Eaglecrest 67.07 344 IAMs_20 IAMs_20 23 15 04.4
comp=Z,7µm,19.0s
R32K Eaglecrest 67.07 344 P **P 22 48 59.1 +1.4**
baz=148
R33M Jennings River 67.10 346 IAmb IAmb 22 49 23.0
comp=Z,54nm,1.4s
R33M IAMs_20 IAMs_20 23 15 01.1
comp=Z,7µm,20.0s
R33M Jennings River 67.10 346 P **P 22 48 59.1 +1.1**
baz=152
SCHQ Schefferville 67.16 23 P **P 22 48 57.0 -1.3**
comp=Z,15nm,1.0s,baz=256,slow=2.5,SNR=7.6
SCHQ LR LR 23 17 35.2
comp=Z,12µm,19.4s,baz=216,slow=35
comp=Z,15nm,1.0s
SCHQ Schefferville 67.16 23 IAmb IAmb 22 49 00.8
comp=Z,28nm,1.1s
WTLY Watson Lake, Y 67.24 347 P **P 22 49 00.2 +1.3**
baz=154
S31K Pelican 67.30 343 P **P 22 49 00.3 +1.2**
baz=146
YKAW1 Yellowknife Wh 67.34 355 IAmb IAmb 22 49 23.7
comp=Z,82nm,1.9s
YKA Yellowknife Ar 67.36 355 P **P 22 48 58.0 -1.5**
comp=Z,11nm,1.1s,baz=173,slow=5.5,SNR=57
YKA LR LR 23 16 09.8
comp=Z,7µm,21.2s,baz=176,slow=34
comp=Z,11nm,1.1s
YKA Yellowknife Ar 67.36 355 P **P 22 48 59.5 0.0**
YKA Yellowknife Ar 67.36 355 *eP* **P 22 48 59.1 -0.4**
YKA pmax pmax
comp=Z,11nm,1.1s
BESE Bessie Mountai 67.42 344 IAmb IAmb 22 49 13.8
comp=Z,40nm,1.1s
BESE IAMs_20 IAMs_20 23 15 13.7
comp=Z,7µm,19.0s
YKAW3 Yellowknife Wh 67.43 355 IAmb IAmb 22 49 24.4
comp=Z,88nm,1.9s
NBPA Parau_RN 67.52 94 *eP* **P 22 49 00.7 -0.7**
R31K City Hall, Gus 67.53 343 P **P 22 49 01.5 +1.0**
baz=146
P32M Atlin 67.97 345 IAMs_20 IAMs_20 23 15 50.4
comp=Z,7µm,19.0s
P32M Atlin 67.97 345 P **P 22 49 04.7 +1.2**
baz=149
P33M Teslin, Yukon 68.28 345 IAmb IAmb 22 49 33.4
comp=Z,57nm,1.8s
P33M Teslin, Yukon 68.28 345 P **P 22 49 06.5 +1.1**
baz=150
SKAG Skagway 68.30 344 P **P 22 49 06.5 +1.1**
baz=147
TGTN Hyland Airport 68.41 348 P **P 22 49 07.4 +1.2**
baz=155
RCBR Riachuelo 68.72 94 LR LR 23 17 39.4
comp=Z,5µm,20.5s,baz=275,slow=35
RCBR Riachuelo 68.72 94 P **P 22 49 08.0 -1.1**
RCBR Riachuelo 68.72 94 P **P 22 49 08.0 -1.1**
RCBR pmax pmax
comp=Z,100nm,1.6s
RCBR MLR MLR
comp=Z,13µm,20.0s
RCBR Riachuelo 68.72 94 *eP* **P 22 49 08.8 -0.2**
BLKN Baker Lake 69.11 4 IAmb IAmb 22 49 17.1
comp=Z,39nm,1.3s
WRGLY Wrigley 69.13 351 IAmb IAmb 22 49 42.8
comp=Z,48nm,1.4s
WRGLY Wrigley 69.13 351 P **P 22 49 11.5 +0.9**
baz=160
N32M Quiet Lake 69.16 346 IAmb IAmb 22 49 35.3
comp=Z,26nm,1.1s
N32M IAMs_20 IAMs_20 23 16 11.8
comp=Z,6µm,20.0s
N32M Quiet Lake 69.16 346 P **P 22 49 11.6 +0.8**
baz=150
WHY Whitehorse 69.19 345 P **P 22 49 12.1 +1.0**
baz=148
NBPV Pedro Velho 69.30 95 *eP* **P 22 49 13.1 +0.5**
P30M Million Dollar 69.31 344 P **P 22 49 12.4 +0.6**
baz=146
O30N Mendenhall 69.60 344 IAMs_20 IAMs_20 23 16 51.7
comp=Z,7µm,19.0s
O30N Mendenhall 69.60 344 P **P 22 49 14.7 +1.1**
baz=147
O29M Mount Kennedy 69.92 343 IAMs_20 IAMs_20 23 12 43.0
comp=Z,6µm,22.0s
O29M Mount Kennedy 69.92 343 P **P 22 49 15.7 0.0**
baz=144
BCPM Bancas Point 69.95 342 IAMs_20 IAMs_20 23 12 07.0
comp=Z,6µm,22.0s
MMPY Sheldon Lake, 70.02 347 P **P 22 49 17.0 +0.8**
baz=152,SNR=8.8
HYT Haines Junctio 70.04 344 P **P 22 49 17.3 +0.9**
baz=145
N31M Braeburn, Yuko 70.12 345 IAmb IAmb 22 49 58.7
comp=Z,52nm,1.2s
N31M IAMs_20 IAMs_20 23 16 47.4
comp=Z,6µm,20.0s
N31M Braeburn, Yuko 70.12 345 P **P 22 49 17.7 +0.9**
baz=147,SNR=7.2
PINM Pinnacle 70.25 342 P **P 22 49 18.5 +0.8**
baz=142
PCA Pinnacle 70.26 342 IAMs_20 IAMs_20 23 12 43.9
comp=Z,6µm,22.0s
YUK6 Outpost Mounta 70.38 343 P **P 22 49 19.7 +1.1**
baz=144,SNR=8.8
M31M Drury Creek, Y 70.38 346 IAmb IAmb 22 49 43.2
comp=Z,53nm,1.7s
M31M Drury Creek, Y 70.38 346 P **P 22 49 19.5 +1.1**
baz=149,SNR=9.1
N30M Aishikik Lake 70.45 344 IAmb IAmb 22 49 52.5
comp=Z,37nm,1.4s
N30M IAMs_20 IAMs_20 23 17 18.6
comp=Z,7µm,19.0s
N30M Aishikik Lake 70.45 344 P **P 22 49 20.1 +1.2**
baz=146
O28M Mount Upton 70.77 343 IAmb IAmb 22 49 35.1
comp=Z,33nm,1.2s
O28M Mount Upton 70.77 343 P **P 22 49 22.0 +0.9**
baz=142
YUK4 Talbot Arm 70.78 344 P **P 22 49 22.5 +1.4**
baz=144,SNR=7.3
MESA MESA 70.85 341 IAMs_20 IAMs_20 23 12 53.7
comp=Z,6µm,21.0s
MESA MESA 70.85 341 P **P 22 49 22.2 +0.8**
baz=141
YUK8 Steele Glacier 71.06 343 P **P 22 49 23.6 +0.8**
baz=143
LOGN Logan Glacier 71.06 342 IAmb IAmb 22 50 00.4
comp=Z,45nm,1.2s
LOGN IAMs_20 IAMs_20 23 13 56.2
comp=Z,6µm,19.0s
GRNC Granite Creek 71.22 342 IAMs_20 IAMs_20 23 12 59.4
comp=Z,6µm,20.0s
BGLC Bering Glacier 71.23 341 P **P 22 49 24.5 +1.0**
baz=139
CTGM Chitina Glacie 71.27 342 IAmb IAmb 22 49 50.0
comp=Z,37nm,1.3s
CTGM IAMs_20 IAMs_20 23 14 01.9
comp=Z,5µm,20.0s
CTG Chitna Glacier 71.27 342 P **P 22 49 24.9 +1.0**
baz=141
M30M Minto, Yukon 71.30 345 IAmb IAmb 22 49 57.1
comp=Z,60nm,1.6s
M30M IAMs_20 IAMs_20 23 17 21.5
comp=Z,7µm,19.0s
M30M Minto, Yukon 71.30 345 P **P 22 49 24.7 +0.7**
baz=146,SNR=6.4
SUCK Suckling Hills 71.36 341 IAMs_20 IAMs_20 23 13 19.2
comp=Z,7µm,20.0s
BARN Barnard Glacie 71.44 342 IAmb IAmb 22 49 49.8
comp=Z,42nm,1.4s
BARN IAMs_20 IAMs_20 23 14 07.4
comp=Z,6µm,20.0s
KAIM Kayak Island 71.47 340 IAMs_20 IAMs_20 23 13 01.0
comp=Z,6µm,20.0s
KAIM Kayak Island 71.47 340 P **P 22 49 26.0 +1.1**
baz=138
BERG Berg Lake 71.58 341 IAMs_20 IAMs_20 23 13 28.5
comp=Z,8µm,20.0s
M29M Somme Creek 71.63 344 IAmb IAmb 22 49 50.0
comp=Z,37nm,1.4s
M29M IAMs_20 IAMs_20 23 17 56.2
comp=Z,9µm,19.0s
M29M Somme Creek 71.63 344 P **P 22 49 27.0 +0.9**
baz=145
YUK3 Moose Creek 71.65 343 P **P 22 49 26.9 +0.7**
baz=142,SNR=9.0
CRQE Cirque 71.65 341 P **P 22 49 27.0 +0.8**
baz=140
CRQM Cirque 71.67 341 IAMs_20 IAMs_20 23 13 18.0
comp=Z,6µm,22.0s
MID Middleton Isla 71.76 339 IAMs_20 IAMs_20 23 13 47.0
comp=Z,5µm,20.0s
Q23K Middleton Isla 71.77 339 P **P 22 49 27.4 +0.7**
baz=136
RAGM Ragged Mountai 71.89 340 IAMs_20 IAMs_20 23 13 35.4
comp=Z,8µm,20.0s
L29M L29M 72.09 345 IAMs_20 IAMs_20 23 17 35.9
comp=Z,8µm,19.0s
L29M L29M 72.09 345 P **P 22 49 29.5 +0.8**
baz=145
MCARA McCarthy VSAT 72.11 342 IAmb IAmb 22 50 17.6
comp=Z,47nm,1.2s
MCARA McCarthy VSAT 72.11 342 P **P 22 49 29.9 +1.1**
baz=140
BVCY Beaver Creek 72.27 343 P **P 22 49 30.7 +0.9**
baz=142
BMRM Bremner River 72.30 341 IAMs_20 IAMs_20 23 14 02.2
comp=Z,7µm,20.0s
BMRM Bremner River 72.30 341 P **P 22 49 30.9 +0.9**
baz=138
EYAK Cordova Ski Ar 72.37 340 IAMs_20 IAMs_20 23 13 48.0
comp=Z,9µm,20.0s
EYAK Cordova Ski Ar 72.37 340 P **P 22 49 31.4 +1.1**
baz=137
HIN Hinchinbrook I 72.52 340 IAMs_20 IAMs_20 23 13 57.9
comp=Z,9µm,19.0s
M27K Edge Creek, AK 72.52 343 IAmb IAmb 22 49 45.0
comp=Z,41nm,1.2s
M27K IAMs_20 IAMs_20 23 14 02.3
comp=Z,7µm,21.0s
M27K Edge Creek, AK 72.52 343 P **P 22 49 32.1 +0.7**
baz=141
K29M Barlow Dome 72.54 346 IAMs_20 IAMs_20 23 17 26.2
comp=Z,5µm,21.0s
K29M Barlow Dome 72.54 346 P **P 22 49 32.4 +0.9**
baz=146
P23K Montague Islan 72.55 339 IAMs_20 IAMs_20 23 14 13.7
comp=Z,7µm,19.0s
P23K Montague Islan 72.55 339 P **P 22 49 32.3 +0.9**
baz=135
N25K Chitina, Valde 72.78 341 IAmb IAmb 22 50 16.3
comp=Z,37nm,1.4s
N25K Chitina, Valde 72.78 341 P **P 22 49 33.7 +0.8**
baz=138
DIV Divide 72.81 341 IAMs_20 IAMs_20 23 14 16.5
comp=Z,8µm,21.0s
J30M Hart River 72.86 346 IAmb IAmb 22 49 57.7
comp=Z,57nm,1.8s
J30M Hart River 72.86 346 P **P 22 49 34.5 +1.1**
baz=147
M26K Nabesna, AK 72.89 343 IAmb IAmb 22 49 58.0
comp=Z,51nm,1.4s
M26K IAMs_20 IAMs_20 23 15 04.5
comp=Z,5µm,20.0s
M26K Nabesna, AK 72.89 343 P **P 22 49 34.6 +1.1**
baz=140
RAO Raoul Island 72.90 241 LR LR 23 13 41.4
comp=Z,3µm,21.4s,baz=78,slow=29
OHAK Old Harbor 72.98 335 P **P 22 49 34.4 +0.4**
baz=129
KDAK Kodiak Island 73.04 336 LR LR 23 14 39.5
comp=Z,14µm,18.3s,baz=119,slow=30
KDAK Kodiak Island 73.04 336 P **P 22 49 34.6 +0.2**
baz=130
BCAR Beaver Creek A 73.05 343 P **P 22 49 35.1 +0.6**
L27K Beaver Creek, 73.06 343 IAmb IAmb 22 50 24.4
comp=Z,38nm,1.4s
L27K IAMs_20 IAMs_20 23 14 33.6
comp=Z,7µm,22.0s
L27K Beaver Creek, 73.06 343 P **P 22 49 34.9 +0.4**
baz=141
GLI Glacier Island 73.07 340 IAMs_20 IAMs_20 23 14 15.6
comp=Z,6µm,20.0s
GLI Glacier Island 73.07 340 P **P 22 49 35.2 +0.7**
baz=136
KLU Klutina 73.12 341 IAMs_20 IAMs_20 23 14 26.8
comp=Z,7µm,21.0s
KLU Klutina 73.12 341 P **P 22 49 35.6 +0.7**
baz=137
J29N Klondike Camp 73.22 346 IAmb IAmb 22 49 54.9
comp=Z,23nm,1.0s
J29N IAMs_20 IAMs_20 23 16 31.1
comp=Z,7µm,22.0s
J29N Klondike Camp 73.22 346 P **P 22 49 36.5 +1.1**
baz=145
SEW Seward 73.36 338 IAMs_20 IAMs_20 23 15 35.2
comp=Z,5µm,18.0s
SEW Seward 73.36 338 P **P 22 49 36.5 +0.3**
baz=133
I30M Mount Dempster 73.42 347 IAmb IAmb 22 50 05.6
comp=Z,46nm,1.4s
I30M Mount Dempster 73.42 347 P **P 22 49 37.5 +0.8**
baz=147
FRB Frobisher Bay 73.46 16 LR LR 23 23 08.6
comp=Z,4µm,18.7s,baz=212,slow=37
H31M Peel River 73.47 348 IAmb IAmb 22 49 49.8

	comp=Z,48nm,1.1s						
H31M	**Peel River**	**73.47 348**	P	**P**	**22 49 37.5**	**+0.6**	
	baz=149						
L26K	**Log Cabin Wild**	**73.47 343**	IAMs_20	IAMs_20	23 14 42.0		
	comp=Z,6µm,21.0s						
L26K	**Log Cabin Wild**	**73.47 343**	P	**P**	**22 49 37.3**	**+0.4**	
	baz=140						
Q20K	**Shuyak Island**	**73.49 336**	P	**P**	**22 49 37.6**	**+0.6**	
	baz=130						
MENT	**Mentasta**	**73.52 343**	IAmb	IAmb	22 50 20.2		
	comp=Z,51nm,1.6s						
BRSE	**Bradley Lake S**	**73.59 338**	P	**P**	**22 49 38.4**	**+0.8**	
	baz=132						
CNPM	**China Poot**	**73.64 337**	IAMs_20	IAMs_20	23 14 16.6		
	comp=Z,8µm,21.0s						
M24K	**Tolsona, Glenn**	**73.66 341**	IAMs_20	IAMs_20	23 14 56.9		
	comp=Z,5µm,20.0s						
M24K	**Tolsona, Glenn**	**73.66 341**	P	**P**	**22 49 38.9**	**+0.9**	
	baz=137						
BRLK	**Bradley Lake**	**73.66 338**	IAMs_20	IAMs_20	23 13 56.2		
	comp=Z,6µm,21.0s						
O22K	**Cooper Landing**	**73.72 339**	IAMs_20	IAMs_20	23 15 47.6		
	comp=Z,5µm,18.0s						
O22K	**Cooper Landing**	**73.72 339**	P	**P**	**22 49 39.0**	**+0.7**	
	baz=133						
SCM	**Sheep Creek Mo**	**73.83 341**	IAMs_20	IAMs_20	23 14 45.6		
	comp=Z,7µm,22.0s						
SCM	**Sheep Creek Mo**	**73.83 341**	P	**P**	**22 49 39.7**	**+0.6**	
	baz=136						
HOM	**Homer**	**73.88 337**	IAMs_20	IAMs_20	23 14 24.1		
	comp=Z,8µm,21.0s						
HOM	**Homer**	**73.88 337**	P	**P**	**22 49 39.6**	**+0.3**	
	baz=131						
K27K	**Chicken**	**73.89 344**	IAmb	IAmb	22 49 46.4		
	comp=Z,41nm,1.1s						
K27K			IAMs_20	IAMs_20	23 19 26.7		
	comp=Z,7µm,19.0s						
SLKM	**Skilak Lake**	**73.92 339**	IAmb	IAmb	22 50 12.2		
	comp=Z,46nm,1.2s						
SLKM			IAMs_20	IAMs_20	23 16 03.0		
	comp=Z,5µm,19.0s						
KNK	**Knik Glacier**	**73.92 340**	IAmb	IAmb	22 49 56.0		
	comp=Z,48nm,1.1s						
KNK			IAMs_20	IAMs_20	23 14 59.9		
	comp=Z,5µm,20.0s						
KNK	**Knik Glacier**	**73.92 340**	P	**P**	**22 49 39.7**	**+0.2**	
	baz=134						
M23K	**Glacier View**	**73.94 340**	P	**P**	**22 49 39.8**	**+0.2**	
	baz=135,SNR=5.4						
I29M	**Ogilvie Camp,**	**73.99 346**	IAmb	IAmb	22 50 08.6		
	comp=Z,32nm,1.2s						
I29M			IAMs_20	IAMs_20	23 17 07.5		
	comp=Z,6µm,22.0s						
I29M	**Ogilvie Camp,**	**73.99 346**	P	**P**	**22 49 40.8**	**+0.9**	
	baz=145,SNR=7.3						
PAX	**Paxson**	**74.07 342**	IAmb	IAmb	22 49 46.7		
	comp=Z,60nm,1.7s						
PAX	**Paxson**	**74.07 342**	P	**P**	**22 49 40.7**	**+0.3**	
	baz=138,SNR=6.2						
RC01	**Rabbit Creek A**	**74.14 339**	IAMs_20	IAMs_20	23 16 12.8		
	comp=Z,6µm,19.0s						
RC01	**Rabbit Creek A**	**74.14 339**	P	**P**	**22 49 41.1**	**+0.3**	
	baz=133						
SML	**Sawmill**	**74.15 340**	IAmb	IAmb	22 50 05.0		
	comp=Z,69nm,1.4s						
SML			IAMs_20	IAMs_20	23 15 21.0		
	comp=Z,5µm,19.0s						
SML	**Sawmill**	**74.15 340**	P	**P**	**22 49 40.8**	**-0.1**	
	baz=135						
DOT	**Dot Lake**	**74.16 343**	IAMs_20	IAMs_20	23 15 03.1		
	comp=Z,7µm,22.0s						
Q19K	**Cape Douglas,**	**74.20 336**	P	**P**	**22 49 41.4**	**+0.1**	
	baz=129						
PMR	**Palmer**	**74.27 340**	IAmb	IAmb	22 49 50.5		
	comp=Z,57nm,1.4s						
PMR	**Palmer**	**74.27 340**	P	**P**	**22 49 42.1**	**+0.6**	
	baz=134						
GHO	**Glory Hole Cre**	**74.33 340**	IAmb	IAmb	22 49 46.5		
	comp=Z,36nm,1.3s						
SCRK	**Sand Creek**	**74.38 343**	IAmb	IAmb	22 50 07.9		
	comp=Z,51nm,1.6s						
SCRK			IAMs_20	IAMs_20	23 15 23.1		
	comp=Z,6µm,20.0s						
SCRK	**Sand Creek**	**74.38 343**	P	**P**	**22 49 43.2**	**+0.8**	
	baz=139,SNR=8.6						
CAPN	**Captain Cook N**	**74.43 338**	P	**P**	**22 49 43.1**	**+0.7**	
	baz=132						
I28M	**Miner Creek**	**74.45 346**	IAmb	IAmb	22 50 16.5		
	comp=Z,78nm,1.6s						
I28M			IAMs_20	IAMs_20	23 19 20.5		
	comp=Z,5µm,19.0s						
I28M	**Miner Creek**	**74.45 346**	P	**P**	**22 49 42.7**	**0.0**	
	baz=144						
RIDG	**Independent Ri**	**74.46 343**	IAmb	IAmb	22 50 04.7		
	comp=Z,56nm,1.1s						
RIDG			IAMs_20	IAMs_20	23 15 55.0		
	comp=Z,6µm,20.0s						
RIDG	**Independent Ri**	**74.46 343**	P	**P**	**22 49 42.9**	**+0.3**	
	baz=138,SNR=15						
CHNA	**Chernabura Isl**	**74.46 331**	P	**P**	**22 49 43.0**	**+0.2**	
	baz=122						
EPYK	**Eagle Plains**	**74.46 347**	P	**P**	**22 49 43.1**	**+0.5**	
	baz=147,SNR=18						
P19K	**Oil Pt**	**74.49 337**	IAMs_20	IAMs_20	23 14 21.2		
	comp=Z,8µm,21.0s						
P19K	**Oil Pt**	**74.49 337**	P	**P**	**22 49 42.6**	**-0.3**	
	baz=130						
WAT6	**Susitna Watana**	**74.50 341**	P	**P**	**22 49 43.2**	**+0.1**	
	baz=135,SNR=7.9						
R17L	**Mt. Peulik Vol**	**74.55 334**	P	**P**	**22 49 43.3**	**+0.1**	
	baz=126						
Q18K	**Katmai Hardscr**	**74.58 335**	P	**P**	**22 49 43.6**	**0.0**	
	baz=128						
CHGN	**Chignik**	**74.70 332**	P	**P**	**22 49 44.2**	**+0.1**	
	baz=124						
H29M	**Whitestone**	**74.71 347**	IAMs_20	IAMs_20	23 19 08.2		
	comp=Z,5µm,21.0s						
H29M	**Whitestone**	**74.71 347**	P	**P**	**22 49 44.0**	**-0.1**	
	baz=145						
Q17K	**Contact Creek**	**74.72 335**	P	**P**	**22 49 44.0**	**-0.4**	
	baz=127						
M22K	**Willow**	**74.73 340**	P	**P**	**22 49 44.2**	**0.0**	
	baz=133						
DHY	**Denali Highway**	**74.74 341**	IAmb	IAmb	22 50 12.7		
	comp=Z,40nm,1.2s						
DHY			IAMs_20	IAMs_20	23 15 31.6		
	comp=Z,5µm,19.0s						
DHY	**Denali Highway**	**74.74 341**	P	**P**	**22 49 44.8**	**+0.4**	
	baz=136						
F31M	**Tsiigehtchic**	**74.77 349**	IAmb	IAmb	22 50 08.4		
	comp=Z,89nm,1.9s						
F31M	**Tsiigehtchic**	**74.77 349**	P	**P**	**22 49 44.8**	**+0.5**	
	baz=150,SNR=13						
K24K	**Donnelly Dome**	**74.78 342**	IAMs_20	IAMs_20	23 19 28.6		
	comp=Z,5µm,19.0s						
K24K	**Donnelly Dome**	**74.78 342**	P	**P**	**22 49 45.3**	**+0.8**	
	baz=138						
RED	**Redoubt Volcan**	**74.81 338**	IAmb	IAmb	22 49 58.0		
	comp=Z,53nm,1.0s						
G30M	**tAoh Zraii Nji**	**74.87 348**	IAmb	IAmb	22 50 09.1		
	comp=Z,47nm,1.5s						
G30M	**tAoh Zraii Nji**	**74.87 348**	P	**P**	**22 49 45.2**	**+0.1**	
	baz=148						
WAT1	**Susitna Watana**	**74.94 341**	P	**P**	**22 49 45.5**	**0.0**	
	baz=135						
C36M	**Paulatuk**	**75.00 353**	IAmb	IAmb	22 50 15.0		
	comp=Z,43nm,1.7s						
C36M			IAMs_20	IAMs_20	23 20 48.1		
	comp=Z,12µm,19.0s						
C36M	**Paulatuk**	**75.00 353**	P	**P**	**22 49 46.2**	**+0.6**	
	baz=160						
I27K	**Kandik River**	**75.00 345**	IAmb	IAmb	22 50 01.6		
	comp=Z,72nm,1.4s						
I27K	**Kandik River**	**75.00 345**	P	**P**	**22 49 46.0**	**+0.2**	
	baz=142						
R16K	**Pilot Point**	**75.04 334**	P	**P**	**22 49 46.0**	**-0.1**	
	baz=125						
N20K	**Mount Spurr**	**75.11 338**	P	**P**	**22 49 47.0**	**+0.5**	
	baz=131						
SPCR	**Spurr Chakacha**	**75.11 338**	P	**P**	**22 49 46.8**	**+0.3**	
	baz=131						
P18K	**Big Mountain,**	**75.13 336**	IAMs_20	IAMs_20	23 15 55.0		
	comp=Z,8µm,19.0s						
P18K	**Big Mountain,**	**75.13 336**	P	**P**	**22 49 46.7**	**+0.1**	
	baz=128						
SDPT	**Sand Point**	**75.17 331**	P	**P**	**22 49 46.8**	**0.0**	
	baz=122						
I26K	**Coal Creek Min**	**75.17 344**	IAmb	IAmb	22 50 15.0		
	comp=Z,52nm,1.5s						
I26K			IAMs_20	IAMs_20	23 20 24.3		
	comp=Z,6µm,20.0s						
I26K	**Coal Creek Min**	**75.17 344**	P	**P**	**22 49 46.9**	**+0.2**	
	baz=140						
G29M	**Pine Creek**	**75.20 347**	P	**P**	**22 49 47.2**	**+0.3**	
	baz=146						
CUT	**Chulitna**	**75.22 340**	IAMs_20	IAMs_20	23 17 09.4		
	comp=Z,4µm,18.0s						
CUT	**Chulitna**	**75.22 340**	P	**P**	**22 49 47.1**	**+0.1**	
	baz=133						
S14K	**Fog Glacier**	**75.23 332**	P	**P**	**22 49 47.1**	**-0.2**	
	baz=123						
J25K	**Salcha River,**	**75.26 343**	IAmb	IAmb	22 50 15.9		
	comp=Z,52nm,1.4s						
J25K			IAMs_20	IAMs_20	23 19 32.3		
	comp=Z,6µm,20.0s						
J25K	**Salcha River,**	**75.26 343**	P	**P**	**22 49 47.2**	**-0.1**	
	baz=138						
O19K	**Port Alsworth**	**75.26 337**	IAMs_20	IAMs_20	23 14 56.5		
	comp=Z,9µm,20.0s						
O19K	**Port Alsworth**	**75.26 337**	P	**P**	**22 49 47.6**	**+0.3**	
	baz=129						
Q16K	**King Salmon**	**75.29 335**	P	**P**	**22 49 47.0**	**-0.5**	
	baz=126						
F30M	**Barrier River**	**75.32 348**	IAmb	IAmb	22 50 17.0		
	comp=Z,54nm,1.4s						
F30M			IAMs_20	IAMs_20	23 19 04.2		
	comp=Z,7µm,22.0s						
F30M	**Barrier River**	**75.32 348**	P	**P**	**22 49 48.3**	**+0.8**	
	baz=148						
SKT	**Skwentna**	**75.38 339**	IAmb	IAmb	22 50 01.6		
	comp=Z,34nm,1.2s						
SKT			IAMs_20	IAMs_20	23 16 54.5		
	comp=Z,6µm,18.0s						
SKT	**Skwentna**	**75.38 339**	P	**P**	**22 49 48.5**	**+0.5**	
	baz=132,SNR=7.9						
O18K	**Koktuh Hills**	**75.40 336**	IAmb	IAmb	22 50 01.0		
	comp=Z,28nm,0.9s						
O18K			IAMs_20	IAMs_20	23 14 48.3		
	comp=Z,10µm,22.0s						
O18K	**Koktuh Hills**	**75.40 336**	P	**P**	**22 49 48.4**	**+0.2**	
	baz=128						
RND	**Reindeer**	**75.45 341**	IAMs_20	IAMs_20	23 15 51.3		
	comp=Z,8µm,20.0s						
H27K	**Steamboat Moun**	**75.48 346**	IAmb	IAmb	22 50 01.6		
	comp=Z,41nm,1.2s						
H27K			IAMs_20	IAMs_20	23 21 17.4		
	comp=Z,6µm,18.0s						
H27K	**Steamboat Moun**	**75.48 346**	P	**P**	**22 49 48.9**	**+0.4**	
	baz=142						
L22K	**Petersville**	**75.48 340**	IAMs_20	IAMs_20	23 17 01.1		
	comp=Z,4µm,18.0s						
INK	**Inuvik**	**75.48 349**	LR	LR	23 20 53.3		
	comp=Z,12µm,18.9s,baz=147,slow=34						
INK	**Inuvik**	**75.48 349**	IAmb	IAmb	22 50 16.8		
	comp=Z,36nm,1.2s						
INK	**Inuvik**	**75.48 349**	P	**P**	**22 49 49.0**	**+0.6**	
	baz=150,SNR=17						
P17K	**Kvichak River**	**75.51 335**	P	**P**	**22 49 48.8**	**+0.1**	
	baz=126						
HDA	**Harding Lake**	**75.58 343**	IAmb	IAmb	22 50 22.3		
	comp=Z,86nm,2.0s						
HDA	**Harding Lake**	**75.58 343**	P	**P**	**22 49 49.4**	**+0.4**	
	baz=136						
MCK	**McKinley**	**75.70 341**	IAmb	IAmb	22 50 19.1		
	comp=Z,67nm,1.4s						
MCK			IAMs_20	IAMs_20	23 16 10.0		
	comp=Z,7µm,20.0s						
MCK	**McKinley**	**75.70 341**	P	**P**	**22 49 49.9**	**+0.1**	
	baz=134,SNR=10						
N19K	**Bonanza Creek**	**75.71 337**	IAMs_20	IAMs_20	23 15 01.4		
	comp=Z,9µm,22.0s						
N19K	**Bonanza Creek**	**75.71 337**	P	**P**	**22 49 50.1**	**+0.1**	
	baz=129						
IL31		**75.82 343**	IAmb	IAmb	22 50 14.2		
	comp=Z,39nm,1.2s						
ILAR	**Eielson Array**	**75.82 343**	P	**P**	**22 49 48.4**	**-2.0**	
	comp=Z,12nm,1.1s,baz=157,slow=5.6,SNR=30						
	comp=Z,12nm,1.1s						
ILAR	**Eielson Array**	**75.82 343**	P	**P**	**22 49 50.0**	**-0.4**	
ILAR	**Eielson Array**	**75.82 343**	*e*P	**P**	**22 49 48.8**	**-1.7**	
ILAR			pmax	pmax			
	comp=Z,13nm,1.1s						
M20K	**Styx River**	**75.89 339**	IAmb	IAmb	22 50 06.3		
	comp=Z,43nm,1.2s						
M20K	**Styx River**	**75.89 339**	P	**P**	**22 49 51.2**	**+0.2**	
	baz=130						
TRF	**Thorofare Moun**	**75.95 341**	IAMs_20	IAMs_20	23 15 53.5		
	comp=Z,5µm,21.0s						
TRF	**Thorofare Moun**	**75.95 341**	P	**P**	**22 49 51.4**	**0.0**	
	baz=133						
G27K	**Doyon Strip**	**75.97 346**	P	**P**	**22 49 51.5**	**+0.2**	
	baz=142						
PRP	**Porcupine Dome**	**75.98 344**	IAmb	IAmb	22 49 58.0		
	comp=Z,33nm,1.0s						
PRP			IAMs_20	IAMs_20	23 20 40.3		
	comp=Z,8µm,19.0s						
PRP	**Porcupine Dome**	**75.98 344**	P	**P**	**22 49 51.9**	**+0.4**	
	baz=138,SNR=22						
CCB	**Clear Creek Bu**	**76.00 342**	IAmb	IAmb	22 50 15.2		
	comp=Z,8µm,2.0s						
P16K	**Nushagak River**	**76.06 335**	IAMs_20	IAMs_20	23 16 23.8		
	comp=Z,8µm,19.0s						
P16K	**Nushagak River**	**76.06 335**	P	**P**	**22 49 52.3**	**+0.4**	
	baz=125						
O17K	**Koliganek Bris**	**76.12 336**	P	**P**	**22 49 52.4**	**+0.2**	
	baz=126						
N18K	**Kilae Creek**	**76.18 337**	IAmb	IAmb	22 50 12.4		
	comp=Z,42nm,1.3s						
N18K			IAMs_20	IAMs_20	23 15 44.8		
	comp=Z,8µm,20.0s						
N18K	**Kilae Creek**	**76.18 337**	P	**P**	**22 49 52.8**	**+0.2**	
	baz=127						
BWN	**Browne**	**76.18 342**	IAMs_20	IAMs_20	23 16 35.2		
	comp=Z,6µm,20.0s						
COLA	**College**	**76.18 343**	*i* P	**P**	**22 49 54.5**	**+2.1**	
COLA			pmax	pmax			
	comp=Z,18nm,1.4s						
COLA	**College**	**76.18 343**	P	**P**	**22 49 53.1**	**+0.6**	
	baz=136						
F28M	**Old Crow**	**76.19 347**	P	**P**	**22 49 52.7**	**+0.1**	
	baz=144,SNR=11						
PPLA	**Purkeypile**	**76.21 340**	IAmb	IAmb	22 50 09.2		
	comp=Z,57nm,1.3s						
PPLA			IAMs_20	IAMs_20	23 17 42.6		
	comp=Z,6µm,18.0s						
PPLA	**Purkeypile**	**76.21 340**	P	**P**	**22 49 53.1**	**+0.2**	
	baz=136,SNR=7.1						
POKR	**Poker Plat Res**	**76.23 343**	P	**P**	**22 49 53.2**	**+0.3**	
	baz=136						
MSVF	**Nonsavu**	**76.24 253**	LR	LR	23 15 38.0		
	comp=Z,2µm,19.7s,baz=78,slow=30						
MSVF	**Nonsavu**	**76.24 253**	*i* P	**P**	**22 49 55.1**	**+1.2**	
MSVF			pmax	pmax			
	comp=Z,9.0nm,1.0s						
NEA2	**Nenana**	**76.35 342**	IAmb	IAmb	22 50 17.6		
	comp=Z,50nm,1.4s						
NEA2			IAMs_20	IAMs_20	23 16 35.1		
	comp=Z,5µm,20.0s						
NEA2	**Nenana**	**76.35 342**	P	**P**	**22 49 53.7**	**+0.3**	
	baz=134						
FALS	**False Pass**	**76.37 330**	IAMs_20	IAMs_20	23 14 42.3		
	comp=Z,8µm,22.0s						
FALS	**False Pass**	**76.37 330**	P	**P**	**22 49 53.6**	**-0.1**	
	baz=119						
E29M	**Blow River**	**76.41 348**	IAmb	IAmb	22 50 21.7		
	comp=Z,33nm,1.4s						
E29M			IAMs_20	IAMs_20	23 20 03.0		
	comp=Z,5µm,21.0s						
E29M	**Blow River**	**76.41 348**	P	**P**	**22 49 54.1**	**+0.4**	
	baz=146						
O16K	**Kokwok River B**	**76.43 335**	IAmb	IAmb	22 50 18.2		
	comp=Z,47nm,1.2s						
O16K	**Kokwok River B**	**76.43 335**	P	**P**	**22 49 54.2**	**+0.2**	
	baz=125						
N17K	**Nushagak Hills**	**76.60 336**	IAmb	IAmb	22 50 08.9		
	comp=Z,38nm,1.3s						
N17K			IAMs_20	IAMs_20	23 15 35.9		
	comp=Z,8µm,21.0s						
N17K	**Nushagak Hills**	**76.60 336**	P	**P**	**22 49 55.1**	**+0.1**	
	baz=126						
G26K	**Porcupine Rive**	**76.61 345**	P	**P**	**22 49 55.1**	**+0.3**	
	baz=140						
BPAW	**Bear Paw Mtn.**	**76.62 341**	IAMs_20	IAMs_20	23 16 35.2		
	comp=Z,6µm,20.0s						
BPAW	**Bear Paw Mtn.**	**76.62 341**	P	**P**	**22 49 55.2**	**+0.1**	
	baz=132						
M18K	**Stony River**	**76.64 338**	P	**P**	**22 49 55.2**	**+0.1**	
	baz=127						
FYU	**Fort Yukon**	**76.69 345**	IAMs_20	IAMs_20	23 18 30.9		
	comp=Z,6µm,21.0s						
L19K	**White Mountain**	**76.70 338**	IAmb	IAmb	22 50 10.8		
	comp=Z,29nm,1.2s						
L19K	**White Mountain**	**76.70 338**	P	**P**	**22 49 55.7**	**+0.1**	
	baz=128,SNR=9.7						
I23K	**Minto, Yukon-K**	**76.83 342**	IAmb	IAmb	22 50 09.5		
	comp=Z,55nm,1.2s						
I23K			IAMs_20	IAMs_20	23 17 03.7		
	comp=Z,5µm,20.0s						
I23K	**Minto, Yukon-K**	**76.83 342**	P	**P**	**22 49 56.8**	**+0.6**	
	baz=134,SNR=25						
MIDW	**Midway**	**76.85 300**	IAMs_20	IAMs_20	23 13 15.3		
	comp=Z,5µm,19.0s						
H24K	**Noodor Dome**	**76.88 343**	IAmb	IAmb	22 50 09.6		
	comp=Z,46nm,1.1s						
H24K			IAMs_20	IAMs_20	23 21 11.1		
	comp=Z,7µm,20.0s						
H24K	**Noodor Dome**	**76.88 343**	P	**P**	**22 49 56.7**	**+0.2**	
	baz=136,SNR=25						
CHUM	**Lake Minchumin**	**76.91 340**	P	**P**	**22 49 56.7**	**+0.1**	
	baz=131						
O15K	**Ungalikthiuk R**	**76.93 334**	IAmb	IAmb	22 50 09.4		
	comp=Z,28nm,1.0s						
O15K	**Ungalikthiuk R**	**76.93 334**	P	**P**	**22 49 56.3**	**-0.6**	
	baz=123						
E28M	**Babbage River**	**76.93 348**	IAmb	IAmb	22 50 21.3		
	comp=Z,63nm,1.9s						
E28M	**Babbage River**	**76.93 348**	P	**P**	**22 49 56.5**	**-0.2**	
	baz=144,SNR=11						
E27K	**Coleen River**	**77.05 347**	P	**P**	**22 49 57.7**	**+0.3**	
E27K			IAmb	IAmb	22 50 25.9		
	comp=Z,53nm,1.4s						
E27K			IAMs_20	IAMs_20	23 18 54.3		
	comp=Z,3µm,20.0s						
E27K	**Coleen River**	**77.05 347**	P	**P**	**22 49 57.6**	**+0.2**	
	baz=142						
G25K	**Bearman Lake**	**77.07 344**	P	**P**	**22 49 57.9**	**+0.4**	
	baz=138						
K20K	**Telida**	**77.17 340**	IAmb	IAmb	22 50 23.1		
	comp=Z,55nm,1.4s						
K20K			IAMs_20	IAMs_20	23 18 20.0		
	comp=Z,5µm,18.0s						
K20K	**Telida**	**77.17 340**	P	**P**	**22 49 58.2**	**+0.1**	
	baz=129,SNR=9.4						
MLY	**Manley**	**77.17 342**	IAmb	IAmb	22 50 03.9		
	comp=Z,45nm,1.2s						
MLY			IAMs_20	IAMs_20	23 17 07.8		
	comp=Z,5µm,20.0s						
MLY	**Manley**	**77.17 342**	P	**P**	**22 49 58.3**	**+0.2**	
	baz=133,SNR=18						
BMAR	**Burnt Mountain**	**77.17 345**	P	**P**	**22 49 58.7**	**+0.5**	
N16K	**Nishlik Lake**	**77.21 336**	P	**P**	**22 49 58.3**	**-0.1**	
	baz=124						
M17K	**Holitna River**	**77.21 337**	IAmb	IAmb	22 50 46.3		
	comp=Z,40nm,1.4s						
M17K			IAMs_20	IAMs_20	23 16 17.2		
	comp=Z,7µm,21.0s						
M17K	**Holitna River**	**77.21 337**	P	**P**	**22 49 58.3**	**-0.1**	
	baz=126						
F26K	**Sheenjek River**	**77.27 346**	IAmb	IAmb	22 50 27.6		
	comp=Z,46nm,1.4s						
F26K			IAMs_20	IAMs_20	23 23 02.8		
	comp=Z,5µm,18.0s						
F26K	**Sheenjek River**	**77.27 346**	P	**P**	**22 49 59.4**	**+0.7**	
	baz=140						
H23K	**Yukon River**	**77.36 343**	IAMs_20	IAMs_20	23 21 08.3		
	comp=Z,6µm,20.0s						
H23K	**Yukon River**	**77.36 343**	P	**P**	**22 49 59.2**	**+0.1**	
	baz=134						
D28M	**Stokes Point**	**77.36 348**	P	**P**	**22 49 59.6**	**+0.5**	
	baz=145						
G24K	**Hadweenzic Riv**	**77.39 344**	IAMs_20	IAMs_20	23 21 25.2		
	comp=Z,6µm,18.0s						
G24K	**Hadweenzic Riv**	**77.39 344**	P	**P**	**22 49 60.0**	**+0.6**	
	baz=136						
L18K	**Granite Mounta**	**77.41 338**	IAMs_20	IAMs_20	23 16 39.3		
	comp=Z,6µm,20.0s						
L18K	**Granite Mounta**	**77.41 338**	P	**P**	**22 49 59.9**	**+0.4**	
	baz=127						
UNV	**Unalaska Valle**	**77.51 328**	IAMs_20	IAMs_20	23 16 13.3		
	comp=Z,8µm,20.0s						
UNV	**Unalaska Valle**	**77.51 328**	P	**P**	**22 50 00.2**	**+0.1**	
	baz=116						
F25K	**Christian Rive**	**77.57 345**	IAMs_20	IAMs_20	23 17 45.7		
	comp=Z,7µm,22.0s						
F25K	**Christian Rive**	**77.57 345**	P	**P**	**22 50 01.0**	**+0.7**	
	baz=138						
N15K	**Kwethluk River**	**77.59 335**	P	**P**	**22 50 01.0**	**+0.4**	
	baz=123						
O14K	**Tigyukauivet M**	**77.59 334**	P	**P**	**22 50 00.8**	**+0.3**	
	baz=122						
M16K	**Timber Creek**	**77.60 336**	P	**P**	**22 50 00.9**	**+0.3**	
	baz=124						
A36M	**Sachs Harbour**	**77.63 354**	IAmb	IAmb	22 50 07.8		
	comp=Z,19nm,0.9s						
A36M			IAMs_20	IAMs_20	23 22 48.5		
	comp=Z,16µm,18.0s						
A36M	**Sachs Harbour**	**77.63 354**	P	**P**	**22 50 01.0**	**+0.5**	
	baz=159,SNR=12						
I21K	**Tanana**	**77.66 342**	IAmb	IAmb	22 50 34.5		
	comp=Z,56nm,1.4s						
I21K			IAMs_20	IAMs_20	23 17 49.1		
	comp=Z,6µm,19.0s						
I21K	**Tanana**	**77.66 342**	P	**P**	**22 50 01.3**	**+0.5**	
	baz=132,SNR=11						
URZ	**Urewera**	**77.68 232**	LR	LR	23 18 52.8		
	comp=Z,7µm,18.2s,baz=98,slow=32						
J20K	**Nowinta River**	**77.71 340**	IAmb	IAmb	22 50 24.9		
	comp=Z,30nm,1.2s						
J20K			IAMs_20	IAMs_20	23 18 49.5		
	comp=Z,4µm,19.0s						
J20K	**Nowinta River**	**77.71 340**	P	**P**	**22 50 01.6**	**+0.5**	
	baz=130,SNR=12						
D27M	**Malcolm River**	**77.75 348**	IAmb	IAmb	22 50 30.8		
	comp=Z,64nm,1.8s						
D27M			IAMs_20	IAMs_20	23 19 53.5		
	comp=Z,7µm,21.0s						
D27M	**Malcolm River**	**77.75 348**	P	**P**	**22 50 01.7**	**+0.4**	
	baz=143						
E25K	**Arctic Village**	**77.94 346**	IAmb	IAmb	22 50 31.6		
	comp=Z,45nm,1.4s						
E25K			IAMs_20	IAMs_20	23 18 11.1		
	comp=Z,7µm,22.0s						
E25K	**Arctic Village**	**77.94 346**	P	**P**	**22 50 03.1**	**+0.7**	
	baz=138,SNR=14						
H22K	**Ishtalitna Cre**	**77.95 342**	IAmb	IAmb	22 50 08.7		
	comp=Z,31nm,1.2s						
H22K			IAMs_20	IAMs_20	23 17 36.

baz=129
H21K Melozitna Rive 78.24 342 IAmb IAmb 22 50 37.5
comp=Z,61nm,1.6s
H21K IAMs_20 IAMs_20 23 18 08.3
comp=Z,5µm,20.0s
H21K Melozitna Rive 78.24 342 P **P** **22 50 04.2 +0.1**
baz=131,SNR=13
K17K Iditarod 78.31 338 IAmb IAmb 22 50 32.9
comp=Z,33nm,1.3s
K17K IAMs_20 IAMs_20 23 16 54.2
comp=Z,7µm,22.0s
K17K Iditarod 78.31 338 P **P** **22 50 04.6 +0.1**
baz=125
NIKH Nikolski High 78.41 326 IAMs_20 IAMs_20 23 16 04.3
comp=Z,9µm,21.0s
NIKH Nikolski High 78.41 326 P **P** **22 50 04.8 -0.4**
baz=114
BFZ Birch Farm 78.51 230 IAMs_20 IAMs_20 23 16 26.9
comp=Z,7µm,21.0s
COLD Coldfoot 78.53 344 IAMs_20 IAMs_20 23 21 51.6
comp=Z,6µm,20.0s
COLD Coldfoot 78.53 344 P **P** **22 50 06.6 +1.0**
baz=134,SNR=31
C27K Jago River 78.66 347 IAMs_20 IAMs_20 23 20 09.4
comp=Z,5µm,22.0s
C27K Jago River 78.66 347 P **P** **22 50 07.1 +0.9**
baz=140
E24K Your Creek 78.66 345 IAmb IAmb 22 50 31.7
comp=Z,41nm,1.5s
E24K IAMs_20 IAMs_20 23 18 16.4
comp=Z,7µm,22.0s
E24K Your Creek 78.66 345 P **P** **22 50 07.0 +0.6**
baz=136,SNR=11
M14K Bethel 78.68 335 P **P** **22 50 06.8 +0.3**
baz=122,SNR=10
G22K Bettles 78.69 343 P **P** **22 50 07.2 +0.7**
baz=132
IMAR Indian Mountai 78.75 342 P **P** **22 50 06.4 -0.4**
H20K Anotleneega Mo 78.79 341 P **P** **22 50 07.6 +0.5**
baz=129
TOZ Tahuroa Road 78.92 233 IAMs_20 IAMs_20 23 16 59.0
comp=Z,8µm,21.0s
E23K Chandalar 78.95 344 IAMs_20 IAMs_20 23 23 03.0
comp=Z,6µm,20.0s
E23K Chandalar 78.95 344 P **P** **22 50 08.9 +0.9**
baz=134
L15K Ungalak Mounta 78.98 336 P **P** **22 50 08.4 +0.3**
baz=122,SNR=13
J17K VABM Dome 78.99 338 IAmb IAmb 22 50 26.9
comp=Z,45nm,1.4s
J17K IAMs_20 IAMs_20 23 17 28.8
comp=Z,6µm,21.0s
J17K VABM Dome 78.99 338 P **P** **22 50 08.5 +0.3**
baz=125
GCSA Galena City Sc 79.00 340 P **P** **22 50 09.1 +0.9**
baz=127
MRZ Mangatainoka R 79.01 230 IAMs_20 IAMs_20 23 17 34.3
comp=Z,7µm,19.0s
G21K Allakaket 79.02 342 IAmb IAmb 22 50 37.1
comp=Z,36nm,1.2s
G21K IAMs_20 IAMs_20 23 17 55.6
comp=Z,5µm,21.0s
G21K Allakaket 79.02 342 P **P** **22 50 09.4 +1.0**
baz=130
D25K Kavik River 79.04 346 IAMs_20 IAMs_20 23 19 12.0
comp=Z,7µm,22.0s
D25K Kavik River 79.04 346 P **P** **22 50 09.3 +0.9**
baz=138,SNR=18
M13K Dall Lake 79.10 334 P **P** **22 50 09.5 +0.7**
baz=120
POIN Pond Inlet 79.11 8 IAmb IAmb 22 50 15.5
comp=Z,55nm,1.6s
C26K Camden Bay 79.15 347 P **P** **22 50 09.9 +1.0**
baz=139
L14K Kuka Creek 79.29 335 P **P** **22 50 10.2 +0.4**
baz=121
K15K Wolf Creek Mou 79.32 337 P **P** **22 50 10.7 +0.6**
baz=122
H19K Roundabout Mou 79.33 341 P **P** **22 50 10.4 +0.4**
baz=128
TOLK Toolik Lake Re 79.34 345 P **P** **22 50 10.5 +0.4**
baz=135,SNR=7.9
RES Resolute Bay 79.44 3 LR LR 23 23 53.3
comp=Z,5µm,18.9s,baz=184,slow=35
RES Resolute Bay 79.44 3 IAmb IAmb 22 50 20.7
comp=Z,88nm,1.9s
HIZ Hauiti 79.46 232 IAMs_20 IAMs_20 23 17 09.3
comp=Z,6µm,21.0s
F21K Alatna River 79.47 343 P **P** **22 50 11.5 +0.7**
F21K IAmb IAmb 22 50 36.0
comp=Z,86nm,1.6s
F21K IAMs_20 IAMs_20 23 22 25.1
comp=Z,6µm,19.0s
F21K Alatna River 79.47 343 P **P** **22 50 11.1 +0.3**
baz=131
J16K Anvik River 79.50 338 P **P** **22 50 11.8 +0.8**
J16K IAmb IAmb 22 50 18.3
comp=Z,37nm,1.3s
J16K IAMs_20 IAMs_20 23 17 31.1
comp=Z,5µm,22.0s
J16K Anvik River 79.50 338 P **P** **22 50 11.4 +0.5**
baz=123
D24K Happy Valley 79.52 345 IAmb IAmb 22 51 13.9
comp=Z,61nm,1.8s
D24K IAMs_20 IAMs_20 23 18 58.4
comp=Z,7µm,22.0s
D24K Happy Valley 79.52 345 P **P** **22 50 11.6 +0.6**
baz=135
E22K Anaktuvuk Pass 79.60 344 IAmb IAmb 22 50 25.1
comp=Z,46nm,1.2s
E22K IAMs_20 IAMs_20 23 19 12.8
comp=Z,5µm,21.0s
E22K Anaktuvuk Pass 79.60 344 P **P** **22 50 11.8 +0.3**
baz=132,SNR=27
SNZO South Karori 79.71 229 IAMs_20 IAMs_20 23 16 22.7
comp=Z,7µm,22.0s
H18K Honhosa River 79.75 340 IAmb IAmb 22 50 26.8
comp=Z,38nm,1.1s
H18K IAMs_20 IAMs_20 23 20 02.8
comp=Z,5µm,18.0s
H18K Honhosa River 79.75 340 P **P** **22 50 12.7 +0.4**
baz=126
D23K Nanushuk River 79.86 345 IAMs_20 IAMs_20 23 19 04.8
comp=Z,6µm,22.0s
D23K Nanushuk River 79.86 345 P **P** **22 50 13.4 +0.5**
baz=134
I17K Unalakleet 79.86 338 IAMs_20 IAMs_20 23 17 44.1
comp=Z,6µm,22.0s
I17K Unalakleet 79.86 338 P **P** **22 50 13.3 +0.4**
baz=123
C24K Franklin Bluff 79.89 346 IAmb IAmb 22 50 46.9
comp=Z,69nm,1.5s
C24K IAMs_20 IAMs_20 23 21 35.6
comp=Z,5µm,20.0s
C24K Franklin Bluff 79.89 346 P **P** **22 50 13.9 +1.0**
baz=136
G19K Purcell Mounta 79.91 341 P **P** **22 50 13.7 +0.5**
G19K IAMs_20 IAMs_20 23 18 55.9
comp=Z,5µm,20.0s
G19K Purcell Mounta 79.91 341 P **P** **22 50 13.8 +0.6**
baz=127
F20K Avaraart Lake 80.03 342 IAmb IAmb 22 50 40.4
comp=Z,85nm,1.7s
F20K IAMs_20 IAMs_20 23 23 15.8
comp=Z,5µm,19.0s
F20K Avaraart Lake 80.03 342 P **P** **22 50 14.6 +0.8**
baz=128
H17K Granite Mounta 80.17 339 IAMs_20 IAMs_20 23 20 04.7
comp=Z,5µm,19.0s
H17K Granite Mounta 80.17 339 P **P** **22 50 15.3 +0.7**
baz=124
G18K Tagagawik 80.28 340 P **P** **22 50 15.7 +0.5**
baz=126
M11K Mekoryuk 80.32 334 P **P** **22 50 15.8 +0.3**
baz=118
J14K Nanvaranak Lak 80.36 337 IAmb IAmb 22 50 23.2
comp=Z,34nm,1.1s
J14K IAMs_20 IAMs_20 23 17 56.4
comp=Z,9µm,22.0s
J14K Nanvaranak Lak 80.36 337 P **P** **22 50 15.8 +0.1**
baz=120
OUZ Omahuta 80.37 235 IAMs_20 IAMs_20 23 18 06.6
comp=Z,5µm,20.0s
K13K Kusilvak Mount 80.40 336 IAmb IAmb 22 51 04.8
comp=Z,42nm,1.6s
K13K Kusilvak Mount 80.40 336 P **P** **22 50 16.0 +0.1**
baz=119
E21K Killik River 80.41 344 P **P** **22 50 15.7 -0.1**
E21K IAMs_20 IAMs_20 23 19 34.8
comp=Z,6µm,22.0s
E21K Killik River 80.41 344 P **P** **22 50 16.1 +0.3**
baz=130,SNR=20
C23K Itkillik River 80.45 345 IAmb IAmb 22 50 22.0
comp=Z,64nm,1.8s
C23K IAMs_20 IAMs_20 23 19 28.2
comp=Z,6µm,22.0s
C23K Itkillik River 80.45 345 P **P** **22 50 16.5 +0.5**
baz=134,SNR=9.4
F19K Shaleruckik Mo 80.55 341 P **P** **22 50 16.9 +0.3**
F19K IAMs_20 IAMs_20 23 19 17.8
comp=Z,5µm,21.0s
F19K Shaleruckik Mo 80.55 341 P **P** **22 50 17.0 +0.4**
baz=126
KHZ Kahutara 80.63 228 IAMs_20 IAMs_20 23 19 37.9
comp=Z,6µm,19.0s
G17K Kiwalik Mounta 80.74 340 P **P** **22 50 18.2 +0.6**
baz=124
E19K Redstone River 80.75 342 IAMs_20 IAMs_20 23 20 13.4
comp=Z,5µm,20.0s
E19K Redstone River 80.75 342 P **P** **22 50 18.3 +0.6**
baz=127
H16K Elim 80.84 338 P **P** **22 50 18.6 +0.4**
baz=122
SPIA Saint Paul Isl 80.84 330 P **P** **22 50 18.4 +0.1**
baz=114
E20K Nigu River 80.93 343 P **P** **22 50 19.2 +0.5**
baz=128
F18K Selawik 81.02 341 P **P** **22 50 20.0 +0.9**
baz=125,SNR=14
GVZ Greta Valley S 81.02 227 IAMs_20 IAMs_20 23 18 36.3
comp=Z,7µm,20.0s
THZ Tophouse 81.08 229 IAMs_20 IAMs_20 23 18 28.9
comp=Z,8µm,20.0s
C21K Knifeblade Rid 81.09 344 P **P** **22 50 20.0 +0.5**
baz=130,SNR=19
SFJD Kangerlussuaq 81.11 19 LR LR 23 25 38.1
comp=Z,8µm,20.9s,baz=236,slow=35
G16K Koyuk River 81.28 339 IAMs_20 IAMs_20 23 19 35.0
comp=Z,5µm,21.0s
G16K Koyuk River 81.28 339 P **P** **22 50 21.4 +0.8**
baz=122
D20K Etivluk River 81.33 343 IAmb IAmb 22 50 55.2
comp=Z,41nm,1.4s
D20K IAMs_20 IAMs_20 23 24 04.5
comp=Z,6µm,18.0s
D20K Etivluk River 81.33 343 P **P** **22 50 21.6 +0.8**
baz=128
QRZ Quartz Range 81.33 230 IAMs_20 IAMs_20 23 19 09.7
comp=Z,4µm,20.0s
B21K Ikpikpuk River 81.34 344 P **P** **22 50 20.9 +0.1**
B21K IAmb IAmb 22 50 43.7
comp=Z,40nm,1.2s
B21K IAMs_20 IAMs_20 23 21 08.0
comp=Z,5µm,20.0s
B21K Ikpikpuk River 81.34 344 P **P** **22 50 21.4 +0.6**
baz=130,SNR=18
BELA Belgrano 2 81.39 168 P **P** **22 50 21.4 +0.4**
BELA IAmb IAmb 22 50 23.2
comp=Z,30nm,1.1s
F17K Baldwin Pennin 81.46 340 IAmb IAmb 22 50 40.5
comp=Z,38nm,1.2s
F17K IAMs_20 IAMs_20 23 20 58.9
comp=Z,4µm,18.0s
F17K Baldwin Pennin 81.46 340 P **P** **22 50 22.3 +0.9**
baz=123
B22K Teshekpuk Lake 81.50 345 IAmb IAmb 22 50 46.1
comp=Z,91nm,1.9s
B22K IAMs_20 IAMs_20 23 22 26.0
comp=Z,6µm,20.0s
B22K Teshekpuk Lake 81.50 345 P **P** **22 50 22.7 +1.1**
baz=131
LTZ Lake Taylor 81.58 228 IAMs_20 IAMs_20 23 17 28.0
comp=Z,6µm,21.0s
D19K Kuna River 81.64 343 IAmb IAmb 22 50 48.8
comp=Z,65nm,1.7s
D19K IAMs_20 IAMs_20 23 24 26.9
comp=Z,6µm,20.0s
D19K Kuna River 81.64 343 P **P** **22 50 23.3 +0.8**
baz=126
G15K Niukluk 81.68 338 P **P** **22 50 23.8 +1.1**
baz=120
E18K Tukpahlearik C 81.79 341 IAmb IAmb 22 50 49.8
comp=Z,81nm,1.8s
E18K IAMs_20 IAMs_20 23 20 06.7
comp=Z,4µm,21.0s
E18K Tukpahlearik C 81.79 341 P **P** **22 50 24.3 +1.1**
baz=124
DSZ Denniston Nort 81.90 229 IAMs_20 IAMs_20 23 20 22.6
comp=Z,7µm,19.0s
ANM Nome 81.97 338 IAMs_20 IAMs_20 23 19 10.7
comp=Z,5µm,20.0s
ANM Nome 81.97 338 P **P** **22 50 25.2 +1.0**
baz=119
INZ Inchbonnie 82.18 228 IAMs_20 IAMs_20 23 18 45.1
comp=Z,7µm,21.0s
ILULI Ilulissat 82.25 17 P **P** **22 50 26.0 +0.4**
ILULI Ilulissat 82.25 17 P **P** **22 50 26.0 +0.4**
ILULI pmax pmax
comp=Z,73nm,1.4s
ILULI Ilulissat 82.25 17 *i* P **P** **22 50 26.2 +0.6**
ILULI IAmb IAmb 22 50 33.2
comp=Z,189nm,1.7s
F15K North Star Dit 82.26 339 IAmb IAmb 22 51 00.8
comp=Z,74nm,1.9s
F15K IAMs_20 IAMs_20 23 21 21.7
comp=Z,4µm,19.0s
F15K North Star Dit 82.26 339 P **P** **22 50 26.9 +1.2**
baz=120
B20K Meade River 82.28 344 IAMs_20 IAMs_20 23 21 00.7
comp=Z,5µm,20.0s
B20K Meade River 82.28 344 P **P** **22 50 27.1 +1.4**
baz=127,SNR=12
A22K Sinclair Lake 82.33 345 P **P** **22 50 27.2 +1.3**
baz=130
C19K Lookout Ridge 82.43 343 IAmb IAmb 22 50 53.5
comp=Z,66nm,1.6s
C19K IAMs_20 IAMs_20 23 21 44.2
comp=Z,6µm,20.0s
C19K Lookout Ridge 82.43 343 P **P** **22 50 27.8 +1.2**
baz=125,SNR=17
RPZ Rata Peaks 82.48 227 LR LR 23 20 38.9
comp=Z,8µm,19.2s,baz=8.5,slow=31
SAQQ Saqqaq 82.49 16 *i* P **P** **22 50 28.2 +1.4**
SAQQ IAmb IAmb 22 50 29.9
comp=Z,26nm,0.9s
C18K Utukok River 82.66 342 P **P** **22 50 27.5 -0.3**
C18K IAmb IAmb 22 50 47.3
comp=Z,18nm,0.9s
C18K IAMs_20 IAMs_20 23 21 37.1
comp=Z,6µm,21.0s
C18K Utukok River 82.66 342 P **P** **22 50 28.8 +1.0**
baz=123
D17K Noatak River 82.74 341 P **P** **22 50 29.3 +1.1**
baz=122,SNR=13
F14K Arctic Creek 82.76 338 P **P** **22 50 29.5 +1.2**
baz=118
RDOG Red Dog Mine 82.87 341 P **P** **22 50 29.3 +0.4**
RDOG IAmb IAmb 22 50 43.1
comp=Z,28nm,1.1s
RDOG IAMs_20 IAMs_20 23 20 53.5
comp=Z,5µm,20.0s
RDOG Red Dog Mine 82.87 341 P **P** **22 50 30.0 +1.1**
baz=122
A21K Barrow 82.94 345 P **P** **22 50 30.1 +1.0**
baz=128
SAATT Saattut 83.05 15 *i* P **P** **22 50 30.5 +0.8**
SAATT IAmb IAmb 22 50 34.5
comp=Z,55nm,1.2s
NUUG Nuugaatsiaq 83.09 15 *i* P **P** **22 50 30.5 +0.6**
NUUG IAmb IAmb 22 50 34.8
comp=Z,28nm,1.1s
C17K DeLong Mountai 83.18 342 P **P** **22 50 31.5 +1.0**
baz=122
UPNV Upernavik 83.18 13 *i* P **P** **22 50 30.9 +0.5**
UPNV IAmb IAmb 22 50 33.9
comp=Z,20nm,0.9s
TNA Tin City 83.39 338 P **P** **22 50 32.6 +1.1**
TNA IAmb IAmb 22 50 38.9
comp=Z,21nm,1.3s
TNA IAMs_20 IAMs_20 23 20 05.3
comp=Z,5µm,21.0s
TNA Tin City 83.39 338 P **P** **22 50 32.4 +0.8**
baz=117
A19K Wainwright 83.48 343 P **P** **22 50 33.1 +1.2**
baz=124
TULEG Thule 83.66 8 P **P** **22 50 34.0 +1.2**
TULEG Thule 83.66 8 *i* P **P** **22 50 35.6 +2.9**
TULEG IAmb IAmb 22 50 39.4
comp=Z,29nm,1.5s
C16K Lisburne Hills 83.77 341 P **P** **22 50 34.1 +0.6**
C16K IAMs_20 IAMs_20 23 21 45.9
comp=Z,4µm,22.0s
C16K Lisburne Hills 83.77 341 P **P** **22 50 34.4 +1.0**
baz=119
GAMB Gambell 84.11 336 P **P** **22 50 35.9 +0.6**
baz=113
KULLO Kullorsuaq 84.15 11 *i* P **P** **22 50 37.4 +2.1**
KULLO IAmb IAmb 22 50 38.2
comp=Z,23nm,1.0s
WHZ Wether Hill Ro 84.69 224 IAMs_20 IAMs_20 23 21 23.2
comp=Z,7µm,21.0s
ANGG Ammassalik, Gr 85.04 23 *i* P **P** **22 50 38.4 -1.5**
DCZ Deep Cove 85.25 225 IAMs_20 IAMs_20 23 19 39.2
comp=Z,8µm,22.0s
QSPA South Pole Qui 85.41 180 P **P** **22 50 42.9 +0.8**
comp=Z,20nm,1.1s,baz=124,slow=3.8,SNR=21
QSPA LR LR 23 22 27.1
comp=Z,8µm,19.5s,baz=116,slow=31
comp=Z,20nm,1.1s
QSPA South Pole Qui 85.41 180 P **P** **22 50 42.1 0.0**
PYZ Puysegur Point 85.56 224 IAMs_20 IAMs_20 23 23 29.3
comp=Z,4µm,20.0s
VNDA Vanda 86.19 193 P **P** **22 50 46.1 +0.6**
comp=Z,4.3nm,1.2s,baz=124,slow=3.6,SNR=6.0
VNDA LR LR 23 21 15.0
comp=Z,2µm,20.3s,baz=96,slow=30
comp=Z,4.3nm,1.2s
VNDA Vanda 86.19 193 P **P** **22 50 46.4 +0.8**
VNDA Vanda 86.19 193 P **P** **22 50 46.4 +0.8**
VNDA pmax pmax
comp=Z,17nm,1.4s
DZM Mont Dzumac 87.00 248 LR LR 23 21 12.2
comp=Z,2µm,21.5s,baz=120,slow=30
NEEM North Greenlan 87.13 10 *i* P **P** **22 50 50.8 +0.2**
NEEM IAmb IAmb 22 50 55.5
comp=Z,30nm,0.9s
VNA3 Neumayer Olymp 87.33 161 ⇓P **P** **22 50 51.9 +0.6**
comp=Z,8.9nm,0.7s
SUMG Summit 87.53 16 *i* P **P** **22 50 52.0 -0.6**
VNA2 Neumayer--Watz 88.11 161 ⇑P **P** **22 50 55.6 +0.6**
comp=Z,5.7nm,0.9s,baz=288,slow=4.5
SHEM Shemya Is, Ala 88.21 323 LR LR 23 21 39.3
comp=Z,10µm,21.5s,baz=112,slow=30
SNAA Sanae 89.41 162 P **P** **22 51 02.4 +1.2**
comp=Z,4.7nm,0.8s,baz=228,slow=6.0,SNR=4.3
SNAA LR LR 23 23 54.0
comp=Z,7µm,20.8s,baz=258,slow=31
comp=Z,4.7nm,0.8s
SNAA Sanae 89.41 162 IAMs_20 IAMs_20 23 22 19.2
comp=Z,7µm,22.0s
SNAA Sanae 89.41 162 *i* P **P** **22 51 02.7 +1.5**
SNAA pmax pmax
comp=Z,8.0nm,1.1s
H11N3 WAKE ISLAND Hy 89.82 290 T T 00 30 31.4
baz=96,slow=74,SNR=2071
H11N2 WAKE ISLAND Hy 89.83 290 T T 00 30 32.4
baz=96,slow=74,SNR=2600
H11N1 WAKE ISLAND Hy 89.83 290 T T 00 30 37.0
baz=96,slow=74,SNR=1104
H11S2 WAKE ISLAND Hy 89.90 288 T T 00 30 41.1
baz=95,slow=75,SNR=2513
H11S1 WAKE ISLAND Hy 89.91 288 T T 00 30 46.8
baz=95,slow=75,SNR=1447
H11S3 WAKE ISLAND Hy 89.92 288 T T 00 30 51.1
baz=95,slow=75,SNR=898
PMOZ Porto Moniz, M 90.59 57 *e* LR LR 23 21 08.7
PMOZ *i* IAMs_20 IAMs_20 23 23 48.1
comp=Z,2µm,24.0s
DAG Danmarks Havn 93.64 13 *i* P **P** **22 51 20.0 -0.5**
BILL Bilibino 93.83 338 P **P** **22 51 22.2 +0.6**
BILL Bilibino 93.83 338 *i* P **P** **22 51 22.7 +1.1**
BILL pmax pmax
comp=Z,8.0nm,1.2s
NVL N'lazarevskaya 94.17 163 *e* P **P** **22 51 24.0 +0.8**
NVL *e* 22 51 24.3
NVL *e* 22 55 10.2
NVL *e* PPP PPP 22 57 11.0
NVL *e* S **SKSac** **23 01 58.7 +0.2**
NVL *e* SS **SS** **23 08 56.7 +2.4**
NVL *e* SSS SSS 23 12 38.0
NVL pmax pmax
comp=Z,18nm,1.1s
NVL MLR MLR
comp=Z,4µm,16.0s
HNR Honiara 94.28 260 LR LR 23 24 19.2
comp=Z,149nm,21.5s,baz=165,slow=30
HNR Honiara 94.28 260 P **P** **22 51 22.4 -2.5**
HNR Honiara 94.28 260 P **P** **22 51 22.4 -2.5**
HNR pmax pmax
comp=Z,122nm,0.5s
JMIC Jan Mayen 96.47 19 LR LR 23 34 09.5
comp=Z,4µm,20.4s,baz=267,slow=35
ELIB Princess Elisa 96.66 166 *d* P **P** **22 51 33.0 -1.7**
SHEL Horse Pasture 97.53 107 IAMs_20 IAMs_20 23 29 59.0
comp=Z,4µm,20.0s
PET Petropavlovsk 97.55 323 IAMs_20 IAMs_20 23 26 22.4
comp=Z,6µm,21.0s
PSBE So Bento 97.67 51 *e* PP **PP** **22 55 36.3 -1.2**
PTEO Sao Teotonio 97.73 53 *e* PP **PP** **22 55 39.8 +1.8**
PCAS Casmilo, Conde 97.89 50 *e* PP **PP** **22 55 43.3 +4.0**
PGAV Gavieira, Arco 98.04 48 *e* PP **PP** **22 55 37.8 -2.7**
PGAV *e* SKS 23 04 39.3
PGAV *i* tx tx 23 09 59.3
PGAV *e* LQ LQ 23 19 01.2
PGAV *e* LR LR 23 24 00.0
PGAV *i* IAMs_20 IAMs_20 23 30 12.6
comp=Z,3µm,20.0s
PMTG Montargil 98.12 51 *e* PP **PP** **22 55 40.7 -0.2**
PETK Petropavlovsk- 98.12 323 P **P** **22 51 41.2 -0.3**
comp=Z,3.1nm,0.9s,baz=68,slow=12,SNR=2.1
PETK LR LR 23 27 24.4
comp=Z,6µm,21.3s,baz=86,slow=30
comp=Z,3.1nm,0.9s
PETK Petropavlovsk- 98.12 323 P **P** **22 51 40.2 -1.2**
PETK Petropavlovsk- 98.12 323 P **P** **22 51 40.2 -1.2**
PVAQ Vaqueiros 98.53 53 *e* PP **PP** **22 55 42.1 -2.1**
PVAQ *e* SKS 23 04 42.2
PVAQ *i* tx tx 23 10 03.7
PVAQ *e* LR LR 23 24 20.6
PVAQ *i* IAMs_20 IAMs_20 23 29 17.6
comp=Z,3µm,20.0s
MTE Manteigas 98.62 50 IAMs_20 IAMs_20 23 27 56.0
comp=Z,3µm,22.0s
MTE Manteigas 98.62 50 *e* PP **PP** **22 55 45.4 +0.5**
MTE *e* SKS 23 04 37.7
MTE *i* tx tx 23 09 57.7
MTE *e* LR LR 23 24 42.5
MTE *i* IAMs_20 IAMs_20 23 28 14.7
comp=Z,3µm,22.0s
PMRV Marv??o 98.76 51 *e* SKS 23 04 37.5
PMRV *i* tx tx 23 10 06.2
PMRV *e* LQ LQ 23 19 50.2
PMRV *e* LR LR 23 24 25.8
PMRV *i* IAMs_20 IAMs_20 23 28 28.8
comp=Z,5µm,22.0s
AVE Averroes 98.81 57 IAMs_20 IAMs_20 23 30 35.8
comp=Z,4µm,20.0s
MVO Moncorvo 98.99 49 *e* PP **PP** **22 55 52.2 +4.5**
MVO *e* SKS 23 04 45.6
MVO *i* tx tx 23 10 07.5
MVO *e* LR LR 23 24 20.6
MVO *i* IAMs_20 IAMs_20 23 30 57.4
comp=Z,2µm,20.0s
TAU Tasmania Unive 99.71 225 IAMs_20 IAMs_20 23 26 56.6
comp=Z,6µm,22.0s
SEY Seymchan 99.89 333 LR LR 23 32 12.5
comp=Z,4µm,18.2s,baz=78,slow=33
SEY Seymchan 99.89 333 *i* P **Pdif** **22 51 50.8 +1.7**
SEY pmax pmax
comp=Z,2.0nm,1.1s
CAN Canberra 100.33 233 IAMs_20 IAMs_20 23 27 58.8
comp=Z,5µm,22.0s
PAB San Pablo 101.11 51 IAMs_20 IAMs_20 23 29 07.9
comp=Z,6µm,22.0s
MA2 Magadan 101.22 330 IAMs_20 IAMs_20 23 33 21.0
comp=Z,3µm,18.0s
MA2 Magadan 101.22 330 *i* P **Pdif** **22 51 56.7 +1.6**
MA2 pmax pmax
comp=Z,9.0nm,0.8s
CLF Chambon-Foret 104.92 42 IAMs_20 IAMs_20 23 32 11.0
comp=Z,4µm,22.0s
PMG Port Moresby 106.82 259 IAMs_20 IAMs_20 23 30 39.7

comp=Z,4μm,22.0s
SSB Saint Sauveur 106.96 44 IAMs_20 IAMs_20 23 35 36.1
comp=Z,3μm,21.0s
WLF Walferdange 107.11 39 IAMs_20 IAMs_20 23 34 20.0
comp=Z,4μm,22.0s
MAHO Mahon 107.67 50 IAMs_20 IAMs_20 23 33 22.7
comp=Z,3μm,22.0s
ECH Echery 108.09 41 IAMs_20 IAMs_20 23 39 12.2
comp=Z,3μm,20.0s
YSS Yuzhno-Sakhali 108.53 318 IAMs_20 IAMs_20 23 31 22.0
comp=Z,5μm,22.0s
SENIN Lac Senin/Sane 108.62 43 IAMs_20 IAMs_20 23 37 01.9
comp=Z,3μm,20.0s
BFO Black Forest 108.82 40 IAMs_20 IAMs_20 23 35 53.5
comp=Z,3μm,21.0s
RGN Rugen 109.90 33 IAMs_20 IAMs_20 23 41 01.2
comp=Z,3μm,21.0s
TUE Stuetta 109.97 42 IAMs_20 IAMs_20 23 39 16.6
comp=Z,3μm,21.0s
MOX Moxa 110.23 37 *e*L L 23 38 38.4
comp=Z,3μm,22.0s
GRA1 Grafenberg Arr 110.28 38 IAMs_20 IAMs_20 23 36 50.7
comp=Z,3μm,21.0s
GRF Grafenberg Arr 110.28 38 *e*L L 23 36 50.4
comp=Z,3μm,21.4s
GRFO Grafenberg 110.28 38 IAMs_20 IAMs_20 23 36 49.7
comp=Z,3μm,21.0s
FUORN Ofenpass-Fuorn 110.54 42 IAMs_20 IAMs_20 23 40 57.6
comp=Z,3μm,20.0s
NKC Novy Kostel 110.86 38 AMS AMS 23 42 20.0
comp=Z,2μm,17.9s
LVZ Lovozero 111.21 15 IAMs_20 IAMs_20 23 41 29.2
comp=Z,4μm,22.0s
HSKC Hora Svate Kat 111.33 37 AMS AMS 23 38 50.0
comp=Z,3μm,19.7s
VSL Villasalto 111.62 49 IAMs_20 IAMs_20 23 35 19.2
comp=Z,3μm,21.0s
RICC Richard 111.75 37 AMS AMS 23 39 10.0
comp=Z,2μm,20.8s
KHC Kasperske Hory 111.92 38 IAMs_20 IAMs_20 23 37 48.1
comp=Z,3μm,21.0s
KHC Kasperske Hory 111.92 38 *e*SP SP 23 07 02.0 +7.4
KHC AMS AMS 23 37 20.0
comp=Z,3μm,20.9s
ZVC Zvikov 112.19 38 AMS AMS 23 45 10.0
comp=Z,3μm,18.0s
PRU Pruhonice 112.21 37 *e*SP SP 23 07 00.2 +2.9
PRU AMS AMS 23 43 20.0
comp=Z,3μm,19.8s
CKRC Cesky Krumlov 112.47 39 *e*SP SP 23 07 01.3 +1.5
CKRC AMS AMS 23 37 00.0
comp=Z,3μm,21.7s
CHVC Chvalec 112.90 36 *e*SP SP 23 07 04.6 +1.0
CHVC AMS AMS 23 38 10.0
comp=Z,3μm,22.9s
UPC Upice 112.91 36 AMS AMS 23 39 50.0
comp=Z,3μm,22.3s
OSTC Ostas 113.01 36 *e*SP SP 23 07 06.1 +1.6
OSTC AMS AMS 23 38 00.0
comp=Z,3μm,23.4s
TREC Trest 113.03 38 AMS AMS 23 43 50.0
comp=Z,3μm,18.5s
DPC Dobruska-Polom 113.15 37 *e*SP SP 23 07 04.6 -1.3
DPC AMS AMS 23 39 50.0
comp=Z,3μm,20.8s
KRLC Kraliky 113.53 37 AMS AMS 23 40 20.0
comp=Z,2μm,21.4s
OKC Ostrava-Krasne 114.43 37 AMS AMS 23 40 40.0
comp=Z,2μm,19.1s
KLR Kul'dur 114.81 323 *i* PKIKP **PKiKP 22 56 45.5 0.0**
PABE Paberze 114.98 29 IAMs_20 IAMs_20 23 43 30.0
comp=Z,3μm,20.0s
SUW Suwalki 115.35 31 IAMs_20 IAMs_20 23 41 28.7
comp=Z,3μm,22.0s
INU Inuyama 115.44 307 IAMs_20 IAMs_20 23 38 25.3
comp=Z,4μm,20.0s
BLY Banja Luka 115.73 42 IAMs_20 IAMs_20 23 43 14.0
comp=Z,4μm,21.0s
ASAR Alice Springs 116.15 241 PKP **PKPdf 22 56 46.4 -2.5**
comp=Z,0.7nm,0.6s,baz=134,slow=2.8,SNR=4.5
ASAR Alice Springs 116.15 241 **PKPdf 22 56 47.8 -1.1**
ASAR Alice Springs 116.15 241 PKIKP **PKPdf 22 56 47.8 -1.1**
CUC Castrocucco 116.30 47 IAMs_20 IAMs_20 23 41 24.7
comp=Z,2μm,20.0s
WRAB Tennant Creek 116.85 245 IAMs_20 IAMs_20 23 39 38.8
comp=Z,3μm,20.0s
CEL Celeste 116.86 49 IAMs_20 IAMs_20 23 37 06.7
comp=Z,3μm,22.0s
WRA Warramunga Arr 116.86 245 PKP **PKPdf 22 56 48.7 -1.6**
comp=Z,1.4nm,0.8s,baz=104,slow=1.4,SNR=9.6
WRA Warramunga Arr 116.86 245 **PKPdf 22 56 48.9 -1.4**
WRA Warramunga Arr 116.86 245 *e*PKIKP **PKiKP 22 56 50.5 +0.2**
WRA pmax pmax
comp=Z,1.0nm,0.8s
HEH HeiHe 116.91 325 PKP **PKiKP 22 56 50.8 +1.3**
HEH PP **PP 22 58 00.8 +2.8**
HEH PPMZ
comp=Z,310nm,6.7s
HEH L L
comp=Z,2μm,20.6s
HEH L L
comp=Z,3μm,22.4s
HEH L L
comp=Z,4μm,19.3s
TIP Timpagrande 117.24 48 IAMs_20 IAMs_20 23 43 22.6
comp=Z,2μm,21.0s
UZHM Uzhgorod 117.41 37 PKP **Pdif 22 53 14.3 +7.0**
MNK Minsk 117.42 29 *i* P **Pdif 22 53 09.2 +1.9**
comp=E,15nm,1.0s
MNK *i* P **Pdif 22 53 09.2 +1.9**
comp=N,8.0nm,0.9s
MNK *i* P **Pdif 22 53 09.2 +1.9**
comp=Z,4.0nm,0.9s,baz=304
MNK *i* PKP **sPKPdf 22 56 52.7 +1.1**
MNK *i* PP **PP 22 58 03.6 +2.2**
MNK *i* PPP PPP 23 00 32.2
MNK *i* SKS **SKSdf 23 04 04.8 +1.9**
MNK *i* SS **SS 23 14 15.1 +3.0**
MNK *i* SSS SSS 23 18 35.5
MNK *i* LQ LQ 23 38 42.6
MNK *i* LRM MLR 23 45 08.9
comp=N,1μm,20.1s
MNK *i* LRM MLR 23 45 13.3
comp=E,897nm,20.1s
MNK Minsk 117.42 29 *i* P **Pdif 22 53 09.1 +1.9**
MNK *i* 22 58 03.5
MNK *i* PPP PPP 23 00 32.2
MNK *i* 23 04 04.8
MNK *i* SS SS 23 14 15.0 +3.0
MNK *i* SSS SSS 23 18 35.5
MNK pmax pmax
comp=N,8.0nm,0.9s
MNK pmax pmax
comp=Z,4.0nm,0.9s
MNK pmax pmax
comp=E,15nm,1.0s
MNK MLR MLR
comp=Z,2μm,19.0s
MNK MLR MLR
comp=N,1μm,20.0s
MNK MLR MLR
comp=E,897nm,20.0s
KLMR Klimovskoe 117.85 19 *e*PKIKP **PKiKP 22 56 52.6 +1.6**
KLMR pmax pmax
comp=Z,27nm,1.6s
KLMR MLR MLR
comp=Z,3μm,20.0s
PDG Podgorica 117.96 44 IAMs_20 IAMs_20 23 40 19.3
comp=Z,3μm,22.0s
MDJ Mudanjiang 118.00 319 IAMs_20 IAMs_20 23 39 31.0
comp=Z,4μm,20.0s
BNX BinXian 118.95 321 PKP **PKPdf 22 56 53.6 +0.1**
BNX PP **PP 22 58 13.1 +0.8**
BNX SS SS 23 14 33.3 +0.8
BNX PPMZ
comp=Z,190nm,4.2s
BNX L L
comp=Z,2μm,19.4s
BNX L L
comp=Z,4μm,20.8s
BNX L L
comp=Z,5μm,20.4s
KIEV Kiev 120.24 32 IAMs_20 IAMs_20 23 42 47.5
comp=Z,2μm,21.0s
AKASG Malin Array Be 120.25 32 PKP **PKPdf 22 56 55.7 -0.2**
comp=Z,0.6nm,0.5s,baz=284,slow=2.9,SNR=5.1
AKASG Malin Array Be 120.25 32 **PKPdf 22 56 54.5 -1.4**
AKASG Malin Array Be 120.25 32 PKIKP **PKPdf 22 56 54.5 -1.4**
OBN Obninsk 120.94 25 IAMs_20 IAMs_20 23 49 36.1
comp=Z,3μm,21.0s
OBN Obninsk 120.94 25⇑ *e*PKIKP **PKiKP 22 56 59.5 +2.3**
OBN *e* 22 58 27.0
OBN *e*SS SS 23 14 58.8 +1.7
OBN pmax pmax
comp=Z,6.0nm,1.0s
OBN MLR MLR
comp=Z,2μm,19.0s
CN2 Changchun 121.05 319 PKP **PKPdf 22 56 54.8 -2.9**
CN2 PP **PP 22 58 28.8 +2.0**
CN2 L L
comp=Z,2μm,20.0s
CN2 L L
comp=Z,3μm,20.0s
CN2 L L
comp=Z,4μm,20.0s
MLR Muntele Rosu 121.07 38 IAMs_20 IAMs_20 23 44 50.0
comp=Z,3μm,21.0s
PLVB Pleven 121.19 41 ⇑P **Pdif 22 53 23.6 -0.7**
ISR Istrita 121.62 39 PKP **PKiKP 22 56 59.7 +0.8**
KSRS Korea Array 121.85 312 PKP **PKPdf 22 56 58.6 -0.8**
comp=Z,1.2nm,0.5s,baz=343,slow=1.3,SNR=5.1
INCN Inchon 122.80 312 IAMs_20 IAMs_20 23 38 25.9
comp=Z,4μm,22.0s
TIRR Tirgusor 123.10 38 IAMs_20 IAMs_20 23 46 15.8
comp=Z,3μm,21.0s
DL2 Dalian 125.81 316 *e*PKP **PKiKP 22 57 09.3 +2.0**
DL2 SS SS 23 16 01.5 +1.3
DL2 PPMZ
comp=Z,390nm,5.3s
DL2 L L
comp=Z,2μm,18.0s
DL2 L L
comp=Z,2μm,19.8s
DL2 L L
comp=Z,3μm,19.7s
IRK Irkutsk 126.76 338 *e*PKIKP **PKiKP 22 57 10.3 +1.4**
IRK pmax pmax
comp=Z,29nm,2.2s
ZAK Zakamensk 128.62 337 *e*PKIKP **PKiKP 22 57 12.5 -0.3**
ZAK pmax pmax
comp=Z,7.0nm,1.7s
BR105 Keskin Array S 128.87 41 PKP **PKiKP 22 57 13.7 +0.1**
BR131 Keskin Array S 128.88 41 **PKPdf 22 57 12.3 -0.7**
BR131 Keskin Array S 128.88 41 PKIKP **PKPdf 22 57 12.3 -0.7**
BRTR Keskin Array B 128.88 41 PKP **PKPdf 22 57 12.9 -0.1**
comp=Z,2.2nm,0.8s,baz=225,slow=1.4,SNR=12
BRTR Keskin Array B 128.88 41 **PKPdf 22 57 13.1 +0.1**
BRTR Keskin Array B 128.88 41 *e*PKIKP **PKiKP 22 57 13.8 +0.1**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
BR104 Keskin Array S 128.89 41 PKP **PKiKP 22 57 13.5 -0.2**
BJT Baijiatuan 128.93 320 IAMs_20 IAMs_20 23 43 39.2
comp=Z,4μm,22.0s
SOEI Soe 128.94 254 IAMs_20 IAMs_20 23 52 28.0
comp=Z,3μm,19.0s
ULN Ulaanbaatar 128.96 333 IAMs_20 IAMs_20 23 49 05.2
comp=Z,3μm,21.0s
MBWA Marble Bar 129.26 238 IAMs_20 IAMs_20 23 45 25.9
comp=Z,4μm,22.0s
SONM Songino Array 129.28 333 PKP **PKPdf 22 57 13.6 +0.1**
comp=Z,5.5nm,1.2s,baz=323,slow=1.8,SNR=9.1
SONM Songino Array 129.28 333 **PKPdf 22 57 12.2 -1.3**
SONM Songino Array 129.28 333 *e*PKIKP **PKiKP 22 57 14.5 +0.3**
SONM pmax pmax
comp=Z,6.0nm,1.2s
SSE Sheshan 129.35 307 PKP **PKiKP 22 57 15.3 +0.7**
SSE PP **PP 22 59 30.4 +7.7**
SSE SS SS 23 16 49.0 +4.1
SSE PPMZ
comp=Z,70nm,12.2s
SSE L L
comp=Z,920nm,23.4s
SSE L L
comp=Z,1μm,23.8s
ZALV Zalesovo Beam 130.21 352 PKP **PKPdf 22 57 14.8 0.0**
comp=Z,1.7nm,0.8s,baz=17,slow=1.5,SNR=6.1
ZALV PP **PP 22 59 24.8 -2.1**
comp=Z,0.3nm,0.4s,baz=51,slow=4.6,SNR=1.8
KNGR Kungurtug, Tuv 130.47 341 *i* PKIKP **PKiKP 22 57 16.5 0.0**
BNN Bunyan 130.79 41 **PKPdf 22 57 15.3 -1.4**
NJ2 Nanjing 130.81 309 *e*PKP **PKPdf 22 57 15.8 -0.9**
NJ2 L L
comp=Z,5μm,19.0s
NJ2 L L
comp=Z,7μm,20.8s
NJ2 L L
comp=Z,12μm,22.7s
TATO Taipei 131.10 299 IAMs_20 IAMs_20 23 51 28.1
comp=Z,3μm,20.0s
NACB Ninganchiao 131.23 298 IAMs_20 IAMs_20 23 45 49.9
comp=Z,2μm,22.0s
YHNB Yeheng 131.29 299 IAMs_20 IAMs_20 23 51 26.2
comp=Z,2μm,20.0s
HNS HongShan 131.30 317 ⇑PKP **PKiKP 22 57 20.5 +2.1**
HNS SS SS 23 17 05.3 -2.7
HNS L L
comp=Z,1μm,20.9s
HNS L L
comp=Z,4μm,19.9s
HNS L L
comp=Z,4μm,19.8s
HHC Hu-ho-hao-te 131.32 323 *e*PKP **PKPdf 22 57 13.9 -3.7**
HHC L L
comp=Z,1μm,19.3s
HHC L L
comp=Z,2μm,19.0s
HHC L L
comp=Z,2μm,20.2s
KIV Kislovodsk 131.58 31 *i* PKIKP **PKiKP 22 57 18.5 -0.4**
KIV *e* 22 59 37.8
KIV *e*PS **PS 23 09 49.9 -1.6**
KIV *e*SS SS 23 17 11.4 +0.5
KIV pmax pmax
comp=Z,3.0nm,1.0s
KIV MLR MLR
comp=Z,1μm,23.0s
BORK Borovoye 131.60 4 **PKPdf 22 57 17.9 +0.3**
BORK Borovoye 131.60 4 IAMs_20 IAMs_20 23 56 53.1
comp=Z,4μm,21.0s
BORK Borovoye 131.60 4 PKIKP **PKPdf 22 57 17.9 +0.3**
BORK MLR MLR
comp=Z,4μm,21.0s
BVAR Borovoye Array 131.62 4 PKP **PKiKP 22 57 18.2 -0.3**
comp=Z,1.0nm,0.6s,baz=352,slow=3.1,SNR=6.9
BVAR PP **PP 22 59 32.9 -3.1**
comp=Z,0.8nm,0.8s,baz=328,slow=5.1,SNR=2.5
SHA1 Shidzhatmaz 131.71 31 *i* PKIKP **PKPdf 22 57 18.8 +0.4**
KBZ Khabaz 131.84 31 PKP **PKiKP 22 57 19.7 +0.5**
comp=Z,4.1nm,1.1s,baz=308,slow=7.6,SNR=4.2
KBZ Khabaz 131.84 31 *i* PKIKP **PKiKP 22 57 19.0 -0.3**
SSLB Suanglung 131.90 298 IAMs_20 IAMs_20 23 45 59.6
comp=Z,3μm,22.0s
MMAI Mount Meron Ar 133.50 48 PKP **PKPdf 22 57 22.2 +0.4**
comp=Z,0.2nm,0.3s,baz=357,slow=12,SNR=2.0
KNMB Chin-men Tao 133.94 300 IAMs_20 IAMs_20 23 54 56.5
comp=Z,2μm,19.0s
KURK Kurchatov 133.99 357 PKPdf **PKPdf 22 57 21.6 -0.5**
KURK Kurchatov 133.99 357 PKIKP **PKPdf 22 57 21.6 -0.5**
KURK MLR MLR
comp=Z,5μm,20.0s
KURBB Kurchatov Arra 134.09 357 PKhKP PKPpre 22 57 13.2
comp=Z,0.2nm,0.5s,baz=323,slow=2.3,SNR=1.7
KURBB PKP pPKPdf 22 57 22.9 -0.4
comp=Z,0.9nm,0.8s,baz=13,slow=2.3,SNR=4.6
KURBB PP **PP 22 59 48.8 -3.0**
comp=Z,1.1nm,0.8s,baz=2.8,slow=6.3,SNR=4.1
MAK Makhachkala 134.70 29 *e*P **Pdif 22 54 21.1 -3.3**
MAK *e* 22 59 53.2
MAK *e* 23 04 29.8
MAK *e* 23 11 53.8
MAK pmax pmax
comp=Z,126nm,1.3s
MYLDM Lahad Datu 136.73 273 IAMs_20 IAMs_20 23 53 59.4
comp=Z,2μm,19.0s
MKAR Makanchi Array 137.55 353 PKhKP PKPpre 22 57 17.3
comp=Z,0.7nm,0.9s,baz=357,slow=2.4,SNR=4.8
MKAR PKP **PKPdf 22 57 28.8 -0.1**
comp=Z,1.6nm,0.9s,baz=358,slow=1.5,SNR=9.0
MKAR PP **PP 23 00 08.7 -5.0**
comp=Z,4.0nm,1.2s,baz=23,slow=6.6,SNR=4.7
MAKZ Makanchi 137.58 353 **PKPdf 22 57 27.0 -2.0**
MAKZ IAMs_20 IAMs_20 23 57 17.9
comp=Z,3μm,21.0s
MAKZ Makanchi 137.58 353 PKIKP **PKPdf 22 57 27.0 -2.0**
MAKZ MLR MLR
comp=Z,2μm,21.0s
BKB Balikpapan 137.80 263 IAMs_20 IAMs_20 00 03 24.8
comp=Z,2μm,18.0s
HKPS Hong Kong Po S 138.34 299 IAMs_20 IAMs_20 23 50 06.7
comp=Z,2μm,21.0s
ENH Enshi 138.74 312 IAMs_20 IAMs_20 23 48 05.0
comp=Z,4μm,22.0s
GTA2 Gaotai 138.75 331 *e*PKP **PKiKP 22 57 33.3 -0.4**
GTA2 PP **PP 23 00 26.1 +4.4**
GTA2 L L
comp=Z,2μm,22.9s
GTA2 L L
comp=Z,2μm,24.4s
GTA2 L L
comp=Z,4μm,23.5s
LZH Lanzhou 139.01 324 *e*PKP **PKiKP 22 57 34.8 +0.5**
LZH L L
comp=Z,3μm,19.8s
LZH L L
comp=Z,3μm,18.9s
LZH L L
comp=Z,5μm,20.4s
LZDM Lanzhou Array 139.19 324 PKP **PKPdf 22 57 31.2 -1.5**
comp=Z,0.9nm,0.3s,baz=70,slow=1.7,SNR=1.4
WMQ Urumqi 139.43 346 *e*PKP **PKPdf 22 57 32.8 +0.3**
WMQ L L
comp=Z,3μm,19.5s
WMQ L L
comp=Z,1μm,15.5s
WMQ L L
comp=Z,4μm,21.1s
AAK Ala-Archa 142.17 1 **PKPdf 22 57 36.7 -0.9**
AAK Ala-Archa 142.17 1 IAMs_20 IAMs_20 00 04 29.0
comp=Z,3μm,20.0s
AAK Ala-Archa 142.17 1 PKIKP **PKPdf 22 57 36.7 -0.9**
UGM Wanagama 142.49 251 IAMs_20 IAMs_20 23 59 02.0
comp=Z,2μm,20.0s
KDJ Kajisay 142.63 357 **PKPdf 22 57 38.2 -0.3**
KDJ Kajisay 142.63 357 PKIKP **PKPdf 22 57 38.2 -0.3**
GYA Guiyang 142.82 309 PKP **PKiKP 22 57 41.6 -0.7**
SMRI Semarang 142.83 252 IAMs_20 IAMs_20 23 59 21.1
comp=Z,2μm,19.0s
QIZ Qiongzhong 143.19 296 IAMs_20 IAMs_20 23 54 19.0
comp=Z,2μm,21.0s
QIZ Qiongzhong 143.19 296 PKP PKPbc 22 57 36.3 -0.4
QIZ SS SS 23 19 30.9 -0.2
QIZ L L
comp=Z,840nm,19.6s
QIZ L L
comp=Z,660nm,20.6s
QIZ L L
comp=Z,2μm,19.2s
NRN Naryn 143.37 359 PKPbc 22 57 38.2 +1.2
NRN Naryn 143.37 359 PKIKP PKPbc 22 57 38.2 +1.2
WUS Wushi 143.42 355 PKPbc 22 57 38.0 +1.1
WUS Wushi 143.42 355 IAMs_20 IAMs_20 00 01 20.0
comp=Z,3μm,20.0s
GOMU GeErMu 143.72 332 PKP **PKPdf 22 57 40.0 -0.8**
BTK Batken 144.54 6 **PKPab 22 57 39.7 -0.4**
BTK Batken 144.54 6 PKIKP **PKPab 22 57 39.7 -0.4**
DRK Karamyk 145.20 4 PKPbc **PKPbc 22 57 41.0 -1.7**
DRK Karamyk 145.20 4 PKP2 **PKPbc 22 57 41.0 -1.7**
BBJI Bungbulang 145.33 250 PKPbc **PKPbc 22 57 40.7 -2.9**
KSH2 Kashi 145.66 359 PKPbc **PKPab 22 57 44.3 0.0**
KSH2 SS SS 23 19 59.3 +3.2
KSH2 L L
comp=Z,3μm,19.2s
KSH2 L L
comp=Z,3μm,19.6s
KSH2 L L
comp=Z,6μm,22.0s
RAYN Ar Rayn 145.87 54 PKPdf **PKPdf 22 57 43.4 -1.1**
RAYN Ar Rayn 145.87 54 IAMs_20 IAMs_20 00 17 52.6
comp=Z,2μm,19.0s
RAYN Ar Rayn 145.87 54 PKIKP **PKPdf 22 57 43.4 -1.1**
PZH PanZhiHua 146.50 313 PKPbc **PKPdf 22 57 45.6 0.0**
PZH SS SS 23 20 07.1 -0.9
PZH PPMZ
comp=Z,670nm,9.2s
PZH L L
comp=Z,740nm,19.8s
PZH L L
comp=Z,2μm,18.2s
PZH L L
comp=Z,2μm,22.2s
KMI2 Kunming 146.51 310 PKPbc **PKPdf 22 57 46.4 +0.6**
KMI2 L L
comp=Z,2μm,23.2s
KMI2 L L
comp=Z,3μm,25.0s
KMI2 L L
comp=Z,5μm,24.5s
ATD Arta Tunnel 147.40 76 IAMs_20 IAMs_20 00 07 55.2
comp=Z,3μm,20.0s
HRA Herat 148.11 20 PKPdf **PKPdf 22 57 47.1 -1.1**
PMBI Palembang 149.38 256 IAMs_20 IAMs_20 00 00 39.1
comp=Z,3μm,20.0s
MNAI Manna 150.74 253 IAMs_20 IAMs_20 00 13 42.7
comp=Z,2μm,20.0s
LSA Lhasa 150.81 330 IAMs_20 IAMs_20 00 03 32.2
comp=Z,3μm,20.0s
LSA Lhasa 150.81 330 PKPbc **PKPdf 22 57 52.3 -0.6**
COCO West Island 152.65 232 IAMs_20 IAMs_20 23 56 05.8
comp=Z,3μm,21.0s
CHTO Chiang Mai 152.77 303 **PKPdf 22 57 53.6 -2.0**
CHTO IAMs_20 IAMs_20 00 22 02.5
comp=Z,2μm,21.0s
CHTO Chiang Mai 152.77 303 PKIKP **PKPdf 22 57 53.6 -2.0**
CMAR Chiang Mai Arr 152.93 302 PKP **PKPdf 22 57 56.1 +0.3**
comp=Z,1.0nm,0.3s,baz=330,slow=0.7,SNR=18
CMAR PKPab **PKPab 22 58 11.6 -2.5**
comp=Z,3.6nm,0.4s,baz=66,slow=2.9,SNR=7.0
CMAR PP **PP 23 01 47.7 +0.7**
comp=Z,0.5nm,0.3s,baz=41,slow=6.1,SNR=1.2
CMAR Chiang Mai Arr 152.93 302 **PKPdf 22 57 53.4 -2.4**
CMAR **PKPab 22 58 12.1 -2.0**
CMAR **PP 23 01 45.3 -1.7**
BKNI Bangkinang 153.71 261 IAMs_20 IAMs_20 00 07 20.0
comp=Z,2μm,20.0s
EVN Everest 154.26 335 PKPdf **PKPdf 22 57 55.5 -2.8**
KULM Kulim 154.50 273 IAMs_20 IAMs_20 00 12 31.6
comp=Z,2μm,22.0s
RPSI Rantau Prapat 156.11 266 PKPdf **PKPdf 22 57 58.4 -2.0**
PSI Prapat 156.12 266 PKIKP **PKPdf 22 57 58.4 -2.1**
LHMI Lhok Sumawe 158.19 272 IAMs_20 IAMs_20 00 10 27.3
comp=Z,2μm,20.0s
HYB Hyderabad 166.86 345 *e*PKPdf **PKPdf 22 58 10.4 -1.1**
HYB *e*PP **PP 23 03 04.3 +3.6**

*NOU **22** 23:06:32.3, 39°.10S × 175°.98E, h74km, MLv3.6/12, North Island, New Zealand*
*WEL **22** 23:06:33.7±0.9, 39°.5±4°. × 17°.6E±°, h61km±8km, M3.1/51, ML3.2/19, MLv3.1/51, Error ellipse: s-maj=6.2km s-min=4.8km az=136.5, confirmed*
ISC 22 23:06:32.2±1.5, 39.01S±0.04 × 175.93E±0.03, h88km±8km, n81, σ0.60/90, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RITZ	**Rihia Road**	**0.06**	**299**	P	**Pn**	**23 06 44.8**	**+0.1**
KATZ	**Kakaramea**	**0.18**	**280**	P	**Pn**	**23 06 44.9**	**-0.1**
RATZ	**Rangitukua**	**0.19**	**319**	P	**Pn**	**23 06 44.7**	**-0.3**
TMVZ	**Te Maari**	**0.21**	**238**	P	**Pn**	**23 06 45.3**	**+0.2**
ETVZ	**East Tongariro**	**0.21**	**233**	P	**Pn**	**23 06 45.4**	**+0.2**
NTVZ	**North Tongarir**	**0.22**	**245**	P	**Pn**	**23 06 45.2**	**+0.1**
KRVZ	**Karewarewa**	**0.24**	**249**	P	**Pn**	**23 06 45.1**	**-0.1**
OTVZ	**Oturere**	**0.26**	**233**	P	**Pn**	**23 06 45.7**	**+0.3**
WTVZ	**West Tongariro**	**0.28**	**248**	P	**Pn**	**23 06 45.4**	**-0.1**
SNVZ	**South Ngauruho**	**0.29**	**231**	P	**Pn**	**23 06 45.7**	**+0.1**
NGZ	**Ngauruhoe**	**0.30**	**237**	P	**Pn**	**23 06 45.7**	**0.0**
TUVZ	**Tukino**	**0.34**	**219**	P	**Pn**	**23 06 46.2**	**+0.4**
WATZ	**Wairara**	**0.34**	**333**	P	**Pn**	**23 06 45.5**	**-0.2**
WHTZ	**Whakaora**	**0.34**	**4**	P	**Pn**	**23 06 45.8**	**+0.1**
COVZ	**Chateau Observ**	**0.36**	**237**	P	**Pn**	**23 06 45.7**	**-0.1**
WHVZ	**Whangaehu Hut**	**0.38**	**224**	P	**Pn**	**23 06 46.4**	**+0.2**
FWVZ	**Far West T-bar**	**0.38**	**230**	P	**Pn**	**23 06 46.2**	**0.0**
MAVZ	**Matarangi**	**0.39**	**228**	P	**Pn**	**23 06 46.4**	**+0.1**
MAVZ				S	**Sn**	**23 06 56.2**	**-0.6**
TWVZ	**Taurewa**	**0.39**	**260**	P	**Pn**	**23 06 46.0**	**0.0**
WNVZ	**Wahianoa**	**0.41**	**219**	P	**Pn**	**23 06 46.6**	**+0.3**
TRVZ	**Turoa**	**0.41**	**225**	P	**Pn**	**23 06 46.7**	**+0.3**

MRHZ	**Matea Rd**	**0.42**	**66**	P		**Pn**	**23 06 45.9**	**-0.3**
MOVZ	**Moawhango**	**0.42**	**199**	P		**Pn**	**23 06 46.3**	**0.0**
MOVZ				S		**Sn**	**23 06 55.9**	**-0.8**
BKZ	**Black Stump Fm**	**0.47**	**110**	P		**Pn**	**23 06 46.4**	**-0.1**
BKZ	**Black Stump Fm**	**0.47**	**110**	S		**Sn**	**23 06 56.5**	**-0.7**
BKZ	**Black Stump Fm**	**0.47**	**110**	P		**Pn**	**23 06 46.6**	**+0.1**
BKZ				S		**Sn**	**23 06 56.8**	**-0.4**
MTVZ	**Mangateitei**	**0.52**	**223**	P		**Pn**	**23 06 47.4**	**+0.5**
MTVZ				S		**Sn**	**23 06 58.4**	**+0.5**
WPRZ	**Whakapapatarin**	**0.52**	**21**	P		**Pn**	**23 06 46.8**	**-0.1**
KUTZ	**Kaahu Road**	**0.52**	**351**	P		**Pn**	**23 06 47.0**	**+0.1**
PKVZ	**Pokaka**	**0.53**	**238**	P		**Pn**	**23 06 47.4**	**+0.3**
PKVZ				S		**Sn**	**23 06 58.6**	**+0.4**
ALRZ	**Allen Road**	**0.55**	**36**	P		**Pn**	**23 06 46.9**	**-0.3**
ALRZ				S		**Sn**	**23 06 57.9**	**-0.4**
KWHZ	**Kaweka Forest**	**0.57**	**137**	P		**Pn**	**23 06 47.7**	**+0.4**
PRRZ	**Plateau Road**	**0.62**	**36**	P		**Pn**	**23 06 47.5**	**-0.3**
HRRZ	**Handcock Road**	**0.68**	**24**	P		**Pn**	**23 06 48.5**	**+0.2**
NMHZ	**Naumai**	**0.69**	**98**	P		**Pn**	**23 06 49.5**	**+1.0**
KRHZ	**Kereru**	**0.72**	**152**	P		**Pn**	**23 06 49.4**	**+0.6**
KRHZ				S		**Sn**	**23 07 02.2**	**+1.0**
MTHZ	**Maungataniwha**	**0.73**	**78**	P		**Pn**	**23 06 48.9**	**0.0**
MTHZ				S		**Sn**	**23 07 01.4**	**+0.2**
HSRZ	**Hossack Road**	**0.74**	**20**	P		**Pn**	**23 06 49.0**	**+0.1**
MCHZ	**McNeill Hill**	**0.74**	**126**	P		**Pn**	**23 06 50.0**	**+1.1**
TLZ	**Tolley Road**	**0.74**	**336**	P		**Pn**	**23 06 49.2**	**+0.1**
RRRZ	**Republican Roa**	**0.81**	**35**	P		**Pn**	**23 06 49.6**	**0.0**
HLRZ	**Highlands Stat**	**0.82**	**24**	P		**Pn**	**23 06 50.4**	**+0.6**
MUGZ	**Mūrupara**	**0.84**	**51**	P		**Pn**	**23 06 49.9**	**-0.1**
UTU	**Utuhina**	**0.85**	**14**	P		**Pn**	**23 06 50.5**	**+0.3**
ARHZ	**Aropaoanui**	**0.87**	**107**	P		**Pn**	**23 06 50.9**	**+0.7**
TARZ	**Mount Tarawera**	**0.89**	**31**	P		**Pn**	**23 06 51.0**	**+0.4**
RAHZ	**Arahi**	**0.91**	**85**	P		**Pn**	**23 06 51.5**	**+0.8**
RAHZ				S		**Sn**	**23 07 05.9**	**+1.3**
RTZ	**Ruatahuna**	**0.91**	**65**	P		**Pn**	**23 06 50.8**	**0.0**
VRZ	**Vera Road**	**0.92**	**262**	P		**Pn**	**23 06 51.5**	**+0.7**
NGRZ	**Ngongotaha**	**0.93**	**13**	P		**Pn**	**23 06 51.3**	**+0.3**
PNHZ	**Pukenui**	**0.93**	**167**	P		**Pn**	**23 06 51.5**	**+0.5**
OMRZ	**Omania**	**0.96**	**21**	P		**Pn**	**23 06 51.5**	**+0.2**
MKRZ	**Makatiti**	**0.96**	**26**	P		**Pn**	**23 06 52.1**	**+0.6**
HIZ	**Hauiti**	**0.97**	**300**	P		**Pn**	**23 06 51.7**	**+0.3**
HIZ	**Hauiti**	**0.97**	**300**	S		**Sn**	**23 07 06.6**	**+0.8**
HIZ	**Hauiti**	**0.97**	**300**	P		**Pn**	**23 06 51.9**	**+0.4**
KARZ	**Kaharoa**	**1.02**	**14**	P		**Pn**	**23 06 52.1**	**+0.2**
WAZ	**Wanganui**	**1.04**	**224**	P		**Pn**	**23 06 53.5**	**+1.2**
TSZ	**Takapari Road**	**1.05**	**179**	P		**Pn**	**23 06 53.0**	**+0.6**
KAHZ	**Kahuranaki**	**1.08**	**137**	P		**Pn**	**23 06 53.3**	**+0.6**
CKHZ	**Cape Kidnapper**	**1.10**	**126**	P		**Pn**	**23 06 53.9**	**+1.0**
WPHZ	**Waipukurau**	**1.13**	**160**	P		**Pn**	**23 06 53.7**	**+0.5**
KMRZ	**Kaimai**	**1.16**	**1**	P		**Pn**	**23 06 54.0**	**+0.3**
URZ	**Urewera**	**1.19**	**51**	P		**Pn**	**23 06 53.9**	**-0.1**
URZ	**Urewera**	**1.19**	**51**	S		**Sn**	**23 07 09.9**	**-0.4**
URZ	**Urewera**	**1.19**	**51**	P		**Pn**	**23 06 53.9**	**-0.1**
PXZ	**Pawanui**	**1.25**	**145**	P		**Pn**	**23 06 55.0**	**+0.3**
MHEZ	**Mangahewa**	**1.25**	**266**	P		**Pn**	**23 06 56.2**	**+1.5**
OPRZ	**Ohinepanea**	**1.26**	**23**	P		**Pn**	**23 06 55.2**	**+0.3**
RAGZ	**Rawiri**	**1.27**	**67**	P		**Pn**	**23 06 55.3**	**+0.3**
OHWZ	**Ohakea**	**1.29**	**201**	P		**Pn**	**23 06 56.8**	**+1.7**
DVHZ	**Dannevirke**	**1.30**	**172**	P		**Pn**	**23 06 55.4**	**+0.1**
POWZ	**Post Office Ro**	**1.39**	**185**	P		**Pn**	**23 06 56.9**	**+0.5**
MWZ	**Matawai**	**1.42**	**62**	P		**Pn**	**23 06 56.9**	**0.0**
RIGZ	**Rimuhau**	**1.46**	**79**	P		**Pn**	**23 06 58.1**	**+0.7**
KHEZ	**Kahui Hut**	**1.52**	**259**	P		**Pn**	**23 06 58.9**	**+0.8**
BFZ	**Birch Farm**	**1.69**	**172**	P		**Pn**	**23 06 59.6**	**-0.7**
MXZ	**Matakaoa Point**	**2.36**	**53**	P		**Pn**	**23 07 09.4**	**+0.3**
QRZ	**Quartz Range**	**3.18**	**234**	P		**Pn**	**23 07 19.0**	**-1.1**
KHZ	**Kahutara**	**3.86**	**207**	P		**Pn**	**23 07 26.9**	**-2.3**
CTZ	**Chatham Island**	**7.33**	**133**	P		**Pn**	**23 08 15.7**	**-0.7**

*IDC **22** 23:10:57.0±0.8, 27°.18N×103°.14E, h0km, mb3.6/12, mbtmp3.6/14, ML4.2/2, Error ellipse: s-maj=25.0km s-min=15.2km az=75.0*

ISC 22 23:10:58.9±0.8, 27°.19N±0°.09×103°.2E±0°.2, h10km, n14, σ1♀14, mb3.6/10, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZDM	**Lanzhou Array**	**8.75**	**3**	Pn	**Pn**	**23 13 06.8**	**+1.0**
	baz=169,slow=16 0.9nm,0.3s						
CMAR	**Chiang Mai Arr**	**9.52**	**205**	Pn	**Pn**	**23 13 16.9**	**+0.8**
	0.8nm,0.3s,baz=20,slow=13,SNR=3.1						
CMAR				Pg		23 13 50.9	
	0.6nm,0.3s,baz=15,slow=17,SNR=5.1						
CMAR				Lg	Lg	23 16 00.1	
	2.0nm,0.3s,baz=19,slow=29,SNR=4.8 1.6nm,0.3s						
SONM	**Songino Array**	**20.76**	**6**	P	**P**	**23 15 39.9**	**-0.1**
	0.8nm,0.7s,baz=189,slow=10,SNR=7.1 0.8nm,0.7s						
KSRS	**Korea Array**	**23.23**	**58**	P	**P**	**23 16 05.6**	**-0.6**
	0.5nm,0.3s,baz=251,slow=7.6,SNR=1.7 0.5nm,0.3s						
MKAR	**Makanchi Array**	**25.56**	**325**	P	**P**	**23 16 26.9**	**-1.0**
	1.0nm,0.7s,baz=132,slow=9.0,SNR=9.0 1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**29.96**	**338**	P	**P**	**23 17 06.5**	**-0.7**
	0.2nm,0.3s,baz=146,slow=10,SNR=1.9 0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**29.99**	**328**	P	**P**	**23 17 06.5**	**-0.9**
	0.6nm,0.3s,baz=138,slow=9.1,SNR=5.1 0.6nm,0.3s						
BVAR	**Borovoye Array**	**35.45**	**326**	P	**P**	**23 17 53.7**	**-1.5**
	0.1nm,0.3s,baz=153,slow=12,SNR=1.8 0.1nm,0.3s						
WRA	**Warramunga Arr**	**55.75**	**144**	P	**P**	**23 20 34.2**	**-1.9**
	0.9nm,0.7s,baz=331,slow=8.0,SNR=11 0.9nm,0.7s						
ASAR	**Alice Springs**	**58.63**	**147**	P	**P**	**23 20 56.8**	**+0.4**
	0.6nm,0.6s,baz=326,slow=6.5,SNR=5.9 0.6nm,0.6s						
AKASG	**Malin Array Be**	**59.50**	**315**	P	**P**	**23 21 01.4**	**-0.7**
	0.2nm,0.4s,baz=76,slow=6.1,SNR=3.4 0.2nm,0.4s						
FINES	**FINESS Array B**	**60.38**	**327**	P	**P**	**23 21 08.2**	**+0.3**
	3.0nm,1.1s,baz=2.2,slow=9.9,SNR=3.4 3.0nm,1.1s						
YKA	**Yellowknife Ar**	**85.66**	**17**	P	**P**	**23 23 39.4**	**+1.8**
	0.3nm,1.0s,baz=333,slow=5.0,SNR=3.3 0.3nm,1.0s						
TORD	**Torodi Ar. Bea**	**94.00**	**287**	P	**P**	**23 24 18.0**	**+0.2**
	0.3nm,0.9s,baz=53,slow=6.7,SNR=1.9 0.3nm,0.9s						

*SJA **22** 23:55:41.5±0.6, 23°.98S×66°.87W, h222km±5km, ML3.5, MW3.5*

*IDC **22** 23:55:41.6±1.9, 23°.99S×66°.55W, h188km±20km, mb2.8/4, mbtmp3.3/9, Error ellipse: s-maj=24.2km s-min=22.1km az=81.0*

ISC 22 23:55:40.8±0.7, 23°.99S±0°.05×66°.80W±0°.05, h181km, n35, σ2♀48/50, mb3.0/3, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALTA		**0.48**	**119**	*eP*	**Pn**	**23 56 06.3**	**0.0**
SALTA				*eP*		23 56 06.6	
SALTA				*eP*		23 56 11.9	
SLA	**San Lorenzo**	**1.39**	**122**	*eP*	Pn	23 56 17.6	+5.6
SLA				*eS*	**Sn**	**23 56 44.5**	**+8.4**
HJA	**Humahuaca**	**1.49**	**59**	*eP*	Pn	23 56 18.5	+5.2
AF01	**San Pedro de A**	**1.64**	**309**	*eP*	Pn	23 56 08.3	-6.3
AF01				*eS*	**Sn**	**23 56 43.9**	**+3.2**
FSA	**Cafayete**	**2.24**	**161**	*eP*	Pn	23 56 25.3	+4.6
PB06	**IPOC Station P**	**2.85**	**296**	*eP*	**Pn**	**23 56 30.6**	**+2.7**
PB06				*eS*	**Sn**	**23 57 06.7**	**+2.2**
PB06				IAML		23 57 08.8	
	comp=Z,150nm,0.2s						
AHML	**Horco Molle**	**3.08**	**155**	*eP*	Pn	23 56 21.6	-8.9
AHML				*eS*	Sn	23 56 59.8	-10
PB09	**IPOC Station P**	**3.14**	**314**	*eP*	**Pn**	**23 56 34.4**	**+3.0**
PB09				*eS*	**Sn**	**23 57 14.2**	**+3.3**
PB09				IAML		23 57 16.1	
	comp=Z,64nm,0.5s						
PB05	**IPOC Station P**	**3.33**	**289**	*eP*	**Pn**	**23 56 36.2**	**+2.6**
PB05				*eS*	**Sn**	**23 57 16.2**	**+1.3**
PB05				IAML		23 57 19.0	
	comp=Z,55nm,0.7s						
PB03	**IPOC Station P**	**3.34**	**305**	*eP*	**Pn**	**23 56 36.5**	**+2.7**
PB03				*eS*	**Sn**	**23 57 16.4**	**+1.2**
PB03				IAML		23 57 17.8	
	comp=Z,116nm,0.3s						
PB14	**IPOC Station P**	**3.35**	**258**	*eP*	**Pn**	**23 56 36.8**	**+2.7**
PB14				*eS*	**Sn**	**23 57 17.5**	**+1.8**
PB14				IAML		23 57 18.9	
	comp=Z,133nm,0.4s						
PB10	**IPOC Station P**	**3.47**	**277**	*eP*	**Pn**	**23 56 37.6**	**+2.3**
PB10				*eS*	**Sn**	**23 57 19.3**	**+1.4**
PB10				IAML		23 57 23.7	
	comp=Z,84nm,0.5s						
AC02	**Maricunga**	**3.53**	**216**	*eP*	**Pn**	**23 56 39.6**	**+3.1**
AC02				*eS*	**Sn**	**23 57 22.1**	**+2.1**
PB07	**IPOC Station P**	**3.63**	**308**	*eP*	**Pn**	**23 56 39.9**	**+2.3**
PB07				*eS*	**Sn**	**23 57 22.6**	**+0.8**
PB07				IAML		23 57 23.4	
	comp=Z,61nm,0.2s						
PB01	**IPOC Station P**	**3.85**	**319**	*eP*	**Pn**	**23 56 42.6**	**+2.4**
PB01				*eS*	**Sn**	**23 57 28.4**	**+1.9**
PB01				IAML		23 57 30.8	
	comp=Z,41nm,0.2s						
PB02	**IPOC Station P**	**3.91**	**312**	*eP*	**Pn**	**23 56 43.1**	**+2.2**
PB02				*eS*	**Sn**	**23 57 28.5**	**+0.6**
PB02				IAML		23 57 37.4	
	comp=Z,116nm,0.4s						
AC01	**Pan de Azucar**	**4.06**	**237**	*eP*	**Pn**	**23 56 44.6**	**+1.9**
AC01				*eS*	**Sn**	**23 57 30.4**	**-0.8**
AC01				IAML		23 57 32.3	
	comp=Z,66nm,0.8s						
TINO	**Tinogasta**	**4.11**	**190**	*eP*	Pn	23 56 47.9	+4.4
PB08	**IPOC Station P**	**4.41**	**330**	*eP*	**Pn**	**23 56 50.1**	**+2.5**
PB08				*eS*	**Sn**	**23 57 41.5**	**+1.6**
PB08				IAML		23 57 44.6	
	comp=Z,27nm,0.6s						
PATCX	**Punta Patache**	**4.43**	**315**	*eP*	**Pn**	**23 56 49.1**	**+1.6**
PATCX				*eS*	**Sn**	**23 57 40.3**	**+0.5**
PATCX				IAML		23 57 48.9	
	comp=Z,19nm,0.4s						
TA01	**Diego Aracena**	**4.63**	**317**	*eP*	**Pn**	**23 56 51.5**	**+1.4**
TA01				*eS*	**Sn**	**23 57 44.3**	**-0.1**
TA01				IAML		23 57 50.0	
	comp=Z,14nm,0.3s						
GO03	**Copiapo**	**4.74**	**220**	*eP*	**Pn**	**23 56 53.3**	**+1.8**
GO03				*eS*	**Sn**	**23 57 47.5**	**+0.6**
GO03				IAML		23 57 53.2	
	comp=Z,38nm,0.2s						
GO01	**Chusmiza**	**4.84**	**332**	*eP*	**Pn**	**23 56 55.2**	**+1.9**
GO01				*eS*	**Sn**	**23 57 52.5**	**+2.3**
GO01				IAML		23 57 55.0	
	comp=Z,16nm,0.2s						
VCA	**Vinchina**	**4.89**	**195**	*eP*	Pn	23 56 57.8	+4.3
VCA				*eS*	**Sn**	**23 57 55.9**	**+5.2**
PB11	**IPOC Station P**	**4.98**	**327**	*eP*	**Pn**	**23 56 55.7**	**+1.0**
PB11				*eS*	**Sn**	**23 57 51.2**	**-1.5**
PB11				IAML		23 57 54.2	
	comp=Z,37nm,0.3s						
CFA	**Coronel Fontan**	**7.69**	**189**	P	**Pn**	**23 57 31.5**	**+1.5**
	comp=Z,0.8nm,0.3s,baz=46,slow=16,SNR=19						
CFA				S	**Sn**	**23 58 52.0**	**-4.5**
	comp=Z,1.8nm,0.3s,baz=330,slow=14,SNR=14						
LPAZ	**La Paz**	**7.77**	**350**	P	**Pn**	**23 57 34.0**	**+2.3**
	comp=Z,0.5nm,0.5s,baz=159,slow=9.2,SNR=2.3						
LPAZ				S	**Sn**	**23 58 58.6**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=198,slow=15,SNR=2.3						
CPUP	**Villa Florida**	**8.89**	**107**	P	**Pn**	**23 57 43.1**	**-2.7**
	comp=Z,0.9nm,0.6s,baz=282,slow=15,SNR=3.2						
SIV	**San Ignacio**	**9.61**	**35**	P	**Pn**	**23 57 54.1**	**-1.2**
	comp=Z,0.5nm,0.5s,baz=189,slow=13,SNR=3.7						
BDFB	**Brasilia**	**19.51**	**68**	P	**P**	**23 59 52.7**	**-1.9**
	comp=Z,1.2nm,0.6s,baz=207,slow=11,SNR=3.2						
TXAR	**Lajitas Array**	**63.78**	**324**	P	**P**	**00 05 53.5**	**-0.2**
	comp=Z,0.1nm,0.5s,baz=121,slow=3.9,SNR=1.4 comp=Z,0.1nm,0.5s						
TORD	**Torodi Ar. Bea**	**76.39**	**69**	P	**P**	**00 07 08.6**	**-2.0**
	comp=Z,0.2nm,0.5s,baz=255,slow=6.1,SNR=1.9 comp=Z,0.2nm,0.5s						
PDAR	**Pinedale Array**	**77.24**	**329**	P	**P**	**00 07 15.7**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=82,slow=5.0,SNR=1.9 comp=Z,0.2nm,0.6s						
YKA	**Yellowknife Ar**	**94.18**	**340**	P	**P**	**00 08 39.0**	**+0.5**
	comp=Z,0.1nm,0.6s,baz=146,slow=6.0,SNR=3.9 comp=Z,0.1nm,0.6s						
MKAR	**Makanchi Array**	**146.40**	**40**	PKPbc	**PKPab**	**00 15 01.1**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=319,slow=2.6,SNR=5.2						

*IDC **23** 00:08:28.0±2.2, 36°.39N×70°.98E, h213km±20km, mb3.6/16, mbtmp4.1/21, Error ellipse: s-maj=13.8km s-min=13.0km az=133.0*

*NEIC **23** 00:08:29.2±1.5, 36°.52N±0°.07×70°.9E±0°.1, h213km±7km, mb4.1/49, Error ellipse: s-maj=12.4km s-min=9.1km az=117.0*

*NNC **23** 00:08:34.4±2.7, 37°.01N×70°.75E, h233km±21km, mb3.2, mpv4.4, Error ellipse: s-maj=25.1km s-min=16.4km az=11.0*

ISC 23 00:08:27.4±0.4, 36°.46N±0°.04×70°.91E±0°.05, h200km, n128, σ1♀74/153, mb4.0/36, 8C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.44**	**219**		**Pn**	**00 09 13.2**	**+2.3**
KBL				Sn	**Sn**	**00 09 46.2**	**+1.4**
DRK	**Karamyk**	**3.10**	**13**	Sn	**Sn**	**00 09 58.5**	**-0.1**
BTK	**Batken**	**3.60**	**359**		**Pn**	**00 09 26.2**	**+2.0**
BTK				Sn	**Sn**	**00 10 08.9**	**-0.2**
SRNI	**Srinagar**	**3.99**	**126**	*eP*	**Pn**	**00 09 32.0**	**+2.7**
SRNI				*eS*	**Sn**	**00 10 21.3**	**+3.5**
SRNI				IAML		00 10 22.8	
	comp=E,149nm,0.2s						
SRNI				IAML		00 10 23.0	
	comp=N,146nm,0.2s						
JMU	**Jammu**	**4.89**	**137**	*eP*	**Pn**	**00 09 43.4**	**+3.0**
JMU				*eS*	**Sn**	**00 10 40.1**	**+2.2**
JMU				IAML		00 10 43.4	
	comp=N,193nm,0.4s						
JMU				IAML		00 10 44.5	
	comp=E,161nm,0.3s						
ALCI	**Alchi Leh**	**5.60**	**112**	*eP*	**Pn**	**00 09 52.1**	**+2.3**
ALCI				*eS*	**Sn**	**00 10 55.8**	**+1.0**
ALCI				IAML		00 10 58.5	
	comp=N,108nm,0.2s						
ALCI				IAML		00 10 59.6	
	comp=E,151nm,0.3s						
TSSA	**Tissa**	**5.63**	**128**	*eP*	**Pn**	**00 09 52.3**	**+2.2**
TSSA				IAML		00 10 56.9	
	comp=E,198nm,0.3s						
TSSA				IAML		00 10 57.8	
	comp=N,178nm,0.2s						
THN	**Thein Dam**	**5.66**	**134**	*eP*	**Pn**	**00 09 53.2**	**+2.7**
THN				IAML		00 10 59.4	
	comp=E,126nm,0.2s						
THN				IAML		00 10 59.9	
	comp=N,104nm,0.4s						
IUG	**Iuzhnay**	**5.72**	**353**	Pg	**Pn**	**00 09 52.2**	**+1.1**
	comp=N,131nm,0.3s						
IUG				Lg	Lg	00 10 53.6	
	comp=N,164nm,0.4s						
DHRM	**DHARAMSHALA**	**6.12**	**132**	*eP*	**Pn**	**00 09 58.9**	**+2.4**
DHRM				*eS*	**Sn**	**00 11 07.1**	**+0.2**
DHRM				IAML		00 11 08.6	
	comp=E,110nm,0.3s						
DHRM				IAML		00 11 09.5	
	comp=N,192nm,0.3s						
NRN	**Naryn**	**6.36**	**37**		**Pn**	**00 10 00.0**	**+0.4**
NRN				Sn	**Sn**	**00 11 09.2**	**-3.4**
UCH	**Uchtor**	**6.41**	**25**	P	**Pn**	**00 10 01.6**	**+1.3**
	SNR=37						
DZA	**Taraz**	**6.44**	**3**	Pg	**Pn**	**00 10 01.2**	**+0.9**
	comp=N,76nm,0.3s						
DZA				Lg	Lg	00 11 09.7	
	comp=N,245nm,0.3s						
MRKS	**Merke**	**6.53**	**15**	Pg	**Pn**	**00 10 02.5**	**+0.9**
	comp=N,27nm,0.4s						
MRKS				Lg	Lg	00 11 12.2	
	comp=N,80nm,0.4s						
EKS2	**Erkin-Say**	**6.58**	**19**	P	**Pn**	**00 10 03.5**	**+1.3**
	SNR=14						
KK31	**Karatay Array**	**6.65**	**357**		**Pn**	**00 10 03.5**	**+0.5**
KK31				Sn	**Sn**	**00 11 14.8**	**-4.1**
KK31	**Karatay Array**	**6.65**	**357**	⇑P	**Pn**	**00 10 03.2**	**+0.2**
	comp=N,4.2nm,0.2s,baz=188,slow=13,SNR=166						
KK31				⇑S	**Sn**	**00 11 13.9**	**-5.0**
	comp=N,34nm,0.6s,baz=190,slow=22,SNR=12						
AAK	**Ala-Archa**	**6.77**	**23**	P	**Pn**	**00 10 05.6**	**+1.0**
	comp=N,7.7nm,0.3s,baz=194,slow=6.7,SNR=76						
AAK				S	**Sn**	**00 11 20.7**	**-1.2**
	comp=N,12nm,0.4s,baz=138,slow=20,SNR=14						
AAK	**Ala-Archa**	**6.77**	**23**	P	**Pn**	**00 10 06.1**	**+1.4**
	SNR=23						
AAK	**Ala-Archa**	**6.77**	**23**		**Pn**	**00 10 06.0**	**+1.4**
AAK				Sn	**Sn**	**00 11 21.0**	**-0.9**
AAK	**Ala-Archa**	**6.77**	**23**	⇑P	**Pn**	**00 10 05.8**	**+1.1**
	comp=N,3.3nm,0.5s						
AAK				⇑S	**Sn**	**00 11 20.7**	**-1.2**
	comp=N,6.6nm,0.5s						
BHK	**Bhakra**	**6.79**	**136**	*eP*	**Pn**	**00 10 09.0**	**+4.0**
BHK				IAML		00 11 25.3	
	comp=E,105nm,0.3s						
BHK				*eS*	**Sn**	**00 11 26.7**	**+4.3**
BHK				IAML		00 11 28.4	
	comp=N,103nm,0.2s						
KBK	**Karagaybulak**	**6.94**	**25**	P	**Pn**	**00 10 08.5**	**+1.7**
	SNR=13						
FRU1	**Bishkek**	**6.97**	**23**	Pn	**Pn**	**00 10 08.1**	**+0.9**
ULHL	**Ulahol**	**7.11**	**34**	P	**Pn**	**00 10 11.2**	**+2.1**
	SNR=10						
CHMS	**Chumysh**	**7.17**	**23**	P	**Pn**	**00 10 11.5**	**+1.7**
	SNR=8.0						
USP	**Ospenovka**	**7.34**	**21**	P	**Pn**	**00 10 13.3**	**+1.2**
	SNR=9.6						
HRA	**Herat**	**7.37**	**256**		**Pn**	**00 10 13.6**	**+0.9**
TKM2	**Tokmak 2**	**7.40**	**28**	P	**Pn**	**00 10 14.3**	**+1.3**
	SNR=20						
SMLA	**Simla**	**7.44**	**134**	*eP*	**Pn**	**00 10 15.2**	**+1.8**
SMLA				*eS*	**Sn**	**00 11 36.1**	**-1.5**
SMLA				IAML		00 11 39.3	
	comp=E,124nm,0.4s						
SMLA				IAML		00 11 41.7	
	comp=N,175nm,0.3s						
KDJ	**Kajisay**	**7.47**	**39**	Pn	**Pn**	**00 10 14.5**	**+0.7**
TARG	**Taragay, Kyrgy**	**7.51**	**43**	Pn	**Pn**	**00 10 16.9**	**+2.2**
SGDS	**Sogindy**	**7.55**	**21**	Pg	**Pn**	**00 10 15.0**	**+0.2**
	comp=N,2.4nm,0.6s						
SGDS				Lg	Lg	00 11 34.6	
	comp=N,8.8nm,0.7s						
KST	**Kastek**	**7.64**	**29**	Pg	**Pn**	**00 10 17.3**	**+1.3**
	comp=N,4.9nm,0.4s						
KST				Lg	Lg	00 11 38.6	
	comp=N,12nm,0.9s						
DGS	**Degeres**	**7.74**	**27**	P	**Pn**	**00 10 19.9**	**+2.6**
KLP	**Kalpa**	**7.83**	**127**	*eP*	**Pn**	**00 10 20.5**	**+1.7**
KLP				*eS*	**Sn**	**00 11 44.9**	**-2.3**
KLP				IAML		00 11 49.9	
	comp=E,192nm,0.4s						
KLP				IAML		00 11 54.3	
	comp=N,123nm,0.7s						
JOSI	**Joshimath**	**9.31**	**127**	*eP*	**Pn**	**00 10 39.5**	**+1.5**
JOSI				*eS*	**Sn**	**00 12 19.5**	**-2.9**
JOSI				IAML		00 12 22.6	
	comp=E,71nm,0.5s						
JOSI				IAML		00 12 26.3	
	comp=N,52nm,0.5s						
NDI	**New Delhi**	**9.40**	**144**	*eP*	**Pn**	**00 10 39.5**	**+0.6**
NDI				*eS*	**Sn**	**00 12 19.5**	**-4.6**
NDI				IAML		00 12 24.4	
	comp=N,129nm,0.4s						
NPLP	**NPLP New Delhi**	**9.41**	**144**	*eP*	**Pn**	**00 10 39.8**	**+0.7**
NPLP				*eS*	**Sn**	**00 12 19.7**	**-4.9**
NPLP				IAML		00 12 24.5	
	comp=N,134nm,0.4s						
LDR	**Lodi Road**	**9.48**	**144**	*eP*	**Pn**	**00 10 41.4**	**+1.5**
LDR				*eS*	**Sn**	**00 12 21.1**	**-5.0**
LDR				IAML		00 12 30.6	
	comp=N,105nm,0.5s						
LDR				IAML		00 12 30.7	
	comp=E,120nm,0.7s						
KUDL	**Kundal**	**9.54**	**149**	*eP*	**Pn**	**00 10 41.1**	**+0.4**
KUDL				*eS*	Sn	00 12 21.5	-5.9
KUDL				IAML		00 12 25.5	
	comp=E,24nm,0.5s						
KUDL				IAML		00 12 26.9	
	comp=N,20nm,0.7s						
SONA	**Sohna**	**9.70**	**146**	*eP*	**Pn**	**00 10 43.5**	**+0.7**
PTH	**Pithoragarh**	**10.38**	**129**	*eP*	**Pn**	**00 10 52.1**	**+0.3**
AJM	**Ajmer**	**10.49**	**161**	*eP*	**Pn**	**00 10 53.4**	**+0.3**
AJM				*eS*	**Sn**	**00 12 45.0**	**-5.3**
JHNI	**Jhansi**	**12.80**	**147**	*eP*	**Pn**	**00 11 24.1**	**+1.7**
JHNI				*eS*	S	00 13 37.4	-7.8
GUNA	**GUNA**	**13.00**	**153**	*eP*	**Pn**	**00 11 25.5**	**+0.5**
GUNA				*eS*	S	00 13 43.9	-6.1
MAKZ	**Makanchi**	**13.23**	**35**	⇑P	**Pn**	**00 11 27.5**	**-0.2**
	comp=N,5.0nm,0.6s						
MK31	**Makanchi Array**	**13.37**	**36**	P	**Pn**	**00 11 30.1**	**+0.7**
	comp=N,1.8nm,0.6s,baz=221,slow=16,SNR=31						
MKAR	**Makanchi Array**	**13.37**	**36**	P	**Pn**	**00 11 30.1**	**+0.6**
	comp=N,1.3nm,0.3s,baz=214,slow=12,SNR=22						
MKAR				S	**Sn**	**00 14 01.4**	**+2.8**
	comp=N,0.2nm,0.6s,baz=263,slow=16,SNR=1.5						
BHPL	**B

comp=Z,1.0nm,0.6s,baz=50,slow=4.3,SNR=11
comp=Z,1.0nm,0.6s

G19K	**Purcell Mounta**	**71.28**	**19**	P	**P**	**00 19 28.2**	**+3.7**
F21K	**Alatna River**	**71.30**	**17**	P	**P**	**00 19 23.9**	**-0.8**
F21K				IAmb	IAmb	00 19 30.2	
	comp=Z,4.4nm,1.4s						
E24K	**Your Creek**	**71.68**	**15**	P	**P**	**00 19 27.0**	**0.0**
E24K				IAmb	IAmb	00 20 09.0	
	comp=Z,3.3nm,1.3s						
K13K	**Kusilvak Mount**	**72.20**	**24**	P	**P**	**00 19 29.5**	**-0.6**
K13K				IAmb	IAmb	00 20 01.4	
	comp=Z,5.1nm,1.4s						
E25K	**Arctic Village**	**72.21**	**14**	P	**P**	**00 19 30.4**	**+0.2**
IMAR	**Indian Mountai**	**72.24**	**18**	P	**P**	**00 19 30.1**	**-0.2**
J16K	**Anvik River**	**72.49**	**22**	P	**P**	**00 19 32.3**	**+0.5**
H21K	**Melozitna River**	**72.73**	**17**	P	**P**	**00 19 34.4**	**+1.2**
H21K				IAmb	IAmb	00 19 34.9	
	comp=Z,3.5nm,1.3s						
E28M	**Babbage River**	**72.83**	**11**	P	**P**	**00 19 34.7**	**+1.0**
E28M				IAmb	IAmb	00 19 42.7	
	comp=Z,4.4nm,1.5s						
K15K	**Wolf Creek Mou**	**72.94**	**23**	P	**P**	**00 19 35.3**	**+0.8**
BMAR	**Burnt Mountain**	**73.00**	**14**	P	**P**	**00 19 35.8**	**+1.0**
L14K	**Kuka Creek**	**73.28**	**24**	P	**P**	**00 19 37.7**	**+1.2**
L14K				IAmb	IAmb	00 20 11.7	
	comp=Z,3.6nm,1.1s						
J19K	**Poorman**	**73.35**	**20**	P	**P**	**00 19 37.0**	**+0.1**
J19K				IAmb	IAmb	00 19 39.2	
	comp=Z,4.7nm,1.3s						
H23K	**Yukon River**	**73.35**	**16**	P	**P**	**00 19 37.5**	**+0.7**
H23K				IAmb	IAmb	00 20 07.1	
	comp=Z,5.1nm,1.5s						
J18K	**Innoko River**	**73.47**	**20**	P	**P**	**00 19 37.5**	**-0.1**
J18K				IAmb	IAmb	00 20 14.5	
	comp=Z,5.5nm,1.5s						
J20K	**Nowinta River**	**73.60**	**19**	P	**P**	**00 19 38.2**	**-0.1**
K17K	**Iditarod**	**73.60**	**21**	P	**P**	**00 19 38.5**	**+0.1**
K17K				IAmb	IAmb	00 19 42.2	
	comp=Z,9.3nm,1.4s						
M14K	**Bethel**	**73.96**	**24**	P	**P**	**00 19 41.2**	**+0.9**
M14K				IAmb	IAmb	00 19 42.6	
	comp=Z,5.6nm,0.9s						
INK	**Inuvik**	**73.96**	**9**	P	**P**	**00 19 40.9**	**+0.7**
INK				IAmb	IAmb	00 20 12.0	
	comp=Z,4.3nm,1.4s						
L16K	**Owhat River**	**74.02**	**22**	P	**P**	**00 19 41.6**	**+0.9**
L16K				IAmb	IAmb	00 20 24.0	
	comp=Z,8.7nm,1.4s						
G27K	**Doyon Strip**	**74.09**	**13**	P	**P**	**00 19 41.9**	**+0.8**
K20K	**Telida**	**74.28**	**19**	P	**P**	**00 19 42.6**	**+0.3**
K20K				IAmb	IAmb	00 20 10.3	
	comp=Z,5.5nm,1.4s						
F30M	**Barrier River**	**74.30**	**10**	P	**P**	**00 19 43.0**	**+0.7**
L18K	**Granite Mounta**	**74.46**	**21**	P	**P**	**00 19 44.1**	**+0.8**
LBTB	**Lobatse**	**74.59**	**222**	P	**P**	**00 19 44.9**	**+0.3**
LBTB				IAmb	IAmb	00 20 04.7	
	comp=Z,4.4nm,1.2s						
H27K	**Steamboat Moun**	**74.63**	**13**	P	**P**	**00 19 45.1**	**+0.8**
H27K				IAmb	IAmb	00 20 15.8	
	comp=Z,4.4nm,1.4s						
N14K	**Kuskokwak Cree**	**74.67**	**25**	P	**P**	**00 19 45.1**	**+0.6**
G30M	**tAoh Zraii Nji**	**74.83**	**11**	P	**P**	**00 19 44.7**	**-0.7**
G30M				IAmb	IAmb	00 20 28.8	
	comp=Z,5.8nm,1.4s						
I26K	**Coal Creek Min**	**75.15**	**14**	P	**P**	**00 19 47.6**	**+0.4**
PPLA	**Purkeypile**	**75.15**	**19**	P	**P**	**00 19 47.2**	**-0.2**
KNRA	**Kununurra**	**75.27**	**123**	P	**P**	**00 19 48.7**	**+0.2**
J25K	**Salcha River,**	**75.31**	**15**	P	**P**	**00 19 48.1**	**-0.1**
I28M	**Miner Creek**	**75.62**	**13**	P	**P**	**00 19 50.5**	**+0.5**
K24K	**Donnelly Dome**	**75.93**	**16**	P	**P**	**00 19 50.9**	**-0.8**
RIDG	**Independent Ri**	**76.19**	**16**	P	**P**	**00 19 52.4**	**-0.7**
RIDG				IAmb	IAmb	00 20 03.4	
	comp=Z,7.8nm,1.4s						
H31M	**Peel River**	**76.20**	**10**	P	**P**	**00 19 53.0**	**-0.2**
H31M				IAmb	IAmb	00 19 57.0	
	comp=Z,8.2nm,1.5s						
I30M	**Mount Dempster**	**76.44**	**11**	P	**P**	**00 19 55.3**	**+0.6**
I30M				IAmb	IAmb	00 20 05.0	
	comp=Z,3.8nm,1.4s						
SCM	**Sheep Creek Mo**	**77.28**	**18**	P	**P**	**00 19 58.8**	**-0.5**
KNK	**Knik Glacier**	**77.36**	**18**	P	**P**	**00 19 59.6**	**-0.1**
BOSA	**Boshof**	**77.66**	**220**	P	**P**	**00 20 01.4**	**-0.5**
	comp=Z,3.3nm,0.9s,baz=22,slow=3.5,SNR=3.2						
	comp=Z,3.3nm,0.9s						
BOSA	**Boshof**	**77.66**	**220**	P	**P**	**00 20 01.6**	**-0.3**
BOSA				IAmb	IAmb	00 20 37.4	
	comp=Z,8.4nm,1.2s						
OHAK	**Old Harbor**	**79.51**	**23**	P	**P**	**00 20 11.3**	**-0.2**
YKAW3	**Yellowknife Wh**	**81.22**	**3**	P	**P**	**00 20 20.2**	**-0.4**
YKA	**Yellowknife Ar**	**81.29**	**3**	P	**P**	**00 20 20.8**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=353,slow=5.9,SNR=11						
	comp=Z,0.4nm,0.4s						
WRA	**Warramunga Ar**	**82.03**	**122**	P	**P**	**00 20 23.9**	**-1.4**
	comp=Z,0.6nm,0.5s,baz=324,slow=4.9,SNR=18						
	comp=Z,0.6nm,0.5s						
WRA	**Warramunga Arr**	**82.03**	**122**	P	**P**	**00 20 24.1**	**-1.3**
WR8	**Warramunga Arr**	**82.15**	**122**	P	**P**	**00 20 24.7**	**-1.3**
WR8				IAmb	IAmb	00 20 46.5	
	comp=Z,7.9nm,1.4s						
ASAR	**Alice Springs**	**84.29**	**125**	P	**P**	**00 20 36.0**	**-0.9**
	comp=Z,0.7nm,0.5s,baz=306,slow=4.9,SNR=8.0						
	comp=Z,0.7nm,0.5s						

IDC 23 00:26:13.1±2.2, 17°40S×178°87W, h601km±19km, mb3.1/5, mbtmp4.0/6, Error ellipse: s-maj=108.8km s-min=19.6km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.96**	**263**	P	P	00 27 32.2	0.0
	25nm,0.6s,baz=127,slow=3.3,SNR=22						
WRA	**Warramunga Arr**	**44.30**	**259**	P	P	00 33 31.1	-0.2
	1.1nm,0.5s,baz=90,slow=7.8,SNR=41						
	1.1nm,0.5s						
ASAR	**Alice Springs**	**44.51**	**254**	P	P	00 33 33.0	0.0
	6.9nm,0.6s,baz=88,slow=8.5,SNR=76						
	6.9nm,0.6s						
ILAR	**Eielson Array**	**85.50**	**13**	P	P	00 37 48.1	0.0
	0.3nm,0.5s,baz=225,slow=5.0,SNR=7.1						
	0.3nm,0.5s						
TXAR	**Lajitas Array**	**86.10**	**58**	P	P	00 37 52.0	0.0
	0.6nm,0.7s,baz=221,slow=6.3,SNR=9.9						
	0.6nm,0.7s						
PDAR	**Pinedale Array**	**87.29**	**44**	P	P	00 37 57.2	-0.2
	0.5nm,0.7s,baz=205,slow=3.1,SNR=5.2						
	0.5nm,0.7s						

IDC 23 00:40:05.2±5.5, 4°13S×151°23E, h62km±50km, mb3.5/4, mbtmp3.9/5, ML2.1/1, Error ellipse: s-maj=72.4km s-min=29.4km az=120.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.82**	**102**	LR	LR	00 40 46.3	
	comp=Z,173nm,18.6s,baz=320,slow=50						
PMG	**Port Moresby**	**6.62**	**217**	P	Pn	00 41 40.5	+0.7
	2.3nm,0.3s,baz=38,slow=12,SNR=11						
	35nm,0.8s						
WRA	**Warramunga Arr**	**22.76**	**225**	P	P	00 45 01.9	-0.7
	4.3nm,1.1s,baz=49,slow=10,SNR=13						
	4.3nm,1.1s						
ASAR	**Alice Springs**	**25.63**	**219**	P	P	00 45 29.6	+0.5
	5.0nm,0.8s,baz=53,slow=8.7,SNR=34						
	5.0nm,0.8s						
SONM	**Songino Array**	**64.93**	**328**	P	P	00 50 39.2	+0.7
	0.2nm,0.7s,baz=123,slow=5.3,SNR=2.2						
	0.2nm,0.7s						
ILAR	**Eielson Array**	**82.14**	**22**	P	P	00 52 17.9	-1.1
	0.5nm,0.7s,baz=237,slow=4.9,SNR=4.9						
	0.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**148.61**	**289**	PKPbc	PKPbc	00 59 46.2	-0.2
	1.0nm,1.0s,baz=73,slow=1.0,SNR=3.9						

IDC 23 00:42:02.6±1.7, 4°57S×104°91W, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=227.9km s-min=34.1km az=88.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**33.73**	**2**	P	P	00 48 46.0	-0.1
	0.3nm,1.0s,baz=187,slow=8.5,SNR=2.6						
	0.3nm,1.0s						
H03N2	**Juan Fernandez**	**37.56**	**143**	T	T	01 28 52.5	
	baz=317,slow=77,SNR=60						
H03N1	**Juan Fernandez**	**37.57**	**143**	T	T	01 28 53.9	
	baz=317,slow=77,SNR=56						
H03N3	**Juan Fernandez**	**37.57**	**143**	T	T	01 28 53.2	
	baz=317,slow=77,SNR=60						
PDAR	**Pinedale Array**	**47.30**	**355**	P	P	00 50 38.3	0.0
	0.5nm,0.9s,baz=195,slow=2.0,SNR=3.0						
	0.5nm,0.9s						
YKA	**Yellowknife Ar**	**67.29**	**355**	P	P	00 52 58.7	-0.2
	0.3nm,0.8s,baz=172,slow=5.9,SNR=7.4						
	0.3nm,0.8s						
ILAR	**Eielson Array**	**75.75**	**343**	P	P	00 53 50.2	+0.2
	0.7nm,0.9s,baz=147,slow=5.4,SNR=5.6						
	0.7nm,0.9s						
QSPA	**South Pole Qui**	**85.48**	**180**	P	P	00 54 42.3	0.0
	2.7nm,1.1s,baz=127,slow=3.9,SNR=3.6						
	2.7nm,1.1s						
H11N3	**WAKE ISLAND Hy**	**89.81**	**290**	T	T	02 34 41.4	
	baz=96,slow=74,SNR=22						
H11N2	**WAKE ISLAND Hy**	**89.83**	**290**	T	T	02 34 43.0	
	baz=96,slow=74,SNR=28						
H11N1	**WAKE ISLAND Hy**	**89.83**	**290**	T	T	02 34 42.7	
	baz=96,slow=74,SNR=21						
H11S2	**WAKE ISLAND Hy**	**89.90**	**288**	T	T	02 34 44.1	
	baz=95,slow=75,SNR=19						
H11S1	**WAKE ISLAND Hy**	**89.91**	**288**	T	T	02 34 43.8	
	baz=95,slow=75,SNR=19						
H11S3	**WAKE ISLAND Hy**	**89.92**	**288**	T	T	02 34 49.9	
	baz=95,slow=75,SNR=20						

ASRS ***23*** *00:46:20.1±0.4,51°N±1°×8°5E±°, h10km, MLh4.3/13, Error ellipse: s-maj=4.8km s-min=2.2km az=68.2, confirmed*
IDC ***23*** *00:46:21.6±0.7,51°.42N×85°.10E, h0km, mb3.7/9, mbtmp3.8/18, ML3.6/8, Error ellipse: s-maj=9.6km s-min=8.6km az=114.0*
MOS ***23*** *00:46:22.7±1.6,51°.38N×84°.90E, h13km, mb5.3/38, Error ellipse: s-maj=10.0km s-min=7.5km az=98.2*
NNC ***23*** *00:46:24.6±2.7,51°.34N×84°.95E, h11km±19km, mb4.3, mpv4.2, Error ellipse: s-maj=16.9km s-min=11.9km az=99.0*

ISC 23 00:46:23.1±1.1, 51°.43N±0°.02×85°.05E±0°.03, h14km±8km, n60, σ1§45/81, mb3.8/7, 9C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GALT	**Gorno-Altaysk,**	**0.77**	**46**	PG	**Pn**	**00 46 39.2**	**-0.3**
GALT						00 46 51.3	
GALT	**Gorno-Altaysk,**	**0.77**	**46**	Pg	**Pn**	**00 46 39.2**	**-0.3**
GALT				Sg	**Sn**	**00 46 51.2**	**+0.3**
ARTR	**Artybash**	**1.44**	**74**	P*	**Pg**	**00 46 50.6**	**-0.1**
ARTR						00 47 09.7	
ARTR	**Artybash**	**1.44**	**74**	Pg	**Pg**	**00 46 50.6**	**-0.1**
ARTR				Sg	**Sg**	**00 47 09.7**	**+0.3**
TUNR	**Tungur**	**1.51**	**147**	PG	**Pn**	**00 46 49.0**	**-0.7**
TUNR						00 47 09.5	
TUNR	**Tungur**	**1.51**	**147**	Pg	**Pn**	**00 46 49.1**	**-0.7**
TUNR				Sg	**Sb**	**00 47 09.6**	**-0.3**
YALR	**Yailyu, Altay**	**1.63**	**77**	PN	**Pg**	**00 46 54.2**	**-0.2**
YALR						00 47 16.4	
YALR	**Yailyu, Altay**	**1.63**	**77**	Pg	**Pg**	**00 46 53.8**	**-0.6**
YALR				Sg	**Sg**	**00 47 15.6**	**0.0**
CHBI	**Chibit, Altay**	**1.91**	**125**	PN	**Pb**	**00 46 57.2**	**-0.6**
CHBI						00 47 23.1	
CHBI	**Chibit, Altay**	**1.91**	**125**	Pg	**Pb**	**00 46 57.3**	**-0.6**
CHBI				Sg	**Sg**	**00 47 23.9**	**-0.7**
AKAR	**Aktash**	**1.97**	**123**	PN	**Pb**	**00 46 58.3**	**-0.5**
AKAR						00 47 24.3	
AKAR	**Aktash**	**1.97**	**123**	Pg	**Pb**	**00 46 58.3**	**-0.5**
AKAR				Sg	**Sg**	**00 47 25.5**	**-0.9**
ELT	**Eltsovka**	**1.98**	**21**	PN	**Pg**	**00 47 00.2**	**-0.7**
ELT						00 47 26.9	
ELT	**Eltsovka**	**1.98**	**21**	Pg	**Pg**	**00 47 00.3**	**-0.7**
ELT				Sg	**Sg**	**00 47 27.0**	**+0.4**
ULGR	**Ulagan, Altay**	**2.01**	**113**	PN	**Pb**	**00 46 59.4**	**0.0**
ULGR						00 47 26.1	
ULGR	**Ulagan, Altay**	**2.01**	**113**	Pg	**Pb**	**00 46 59.4**	**0.0**
ULGR				Sg	**Sg**	**00 47 26.1**	**-1.5**
CUR	**Chagan-Uzun**	**2.48**	**121**	PN	**Pb**	**00 47 08.0**	**+0.5**
CUR						00 47 40.9	
CUR	**Chagan-Uzun**	**2.48**	**121**	Pg	**Pb**	**00 47 08.1**	**+0.5**
CUR				Sg	**Sg**	**00 47 40.9**	**-1.9**
ZAA0	**Zalesovo Array**	**2.53**	**357**	⇑Pn	**Pb**	**00 47 06.7**	**-1.5**
	35nm,0.4s						
ZAA0				⇓Sn	**Sb**	**00 47 38.8**	**-0.4**
	183nm,0.4s						
ZALV	**Zalesovo Beam**	**2.53**	**357**	Pn	**Pn**	**00 47 04.9**	**+1.3**
	25nm,0.3s,baz=179,slow=15,SNR=230						
ZALV				Lg	Lg	00 47 40.4	
	76nm,0.3s,baz=179,slow=22,SNR=21						
	56nm,0.4s						
KALT3	**Kaltan 3**	**2.55**	**34**	Pg	**Pb**	**00 47 09.1**	**+0.5**
KALT3				Sg	**Sg**	**00 47 45.6**	**+0.7**
KIYZ	**Kiyzas, Kuzbas**	**2.70**	**37**	Pg	**Pb**	**00 47 11.6**	**+0.5**
KIYZ				Sg	**Sg**	**00 47 50.4**	**+0.6**
BJR1	**Bachatsky 1, K**	**2.88**	**12**	Pg	**Pb**	**00 47 13.0**	**-1.1**
BJR1				Sg	**Sg**	**00 47 56.2**	**+0.7**
BJR2	**Bachatsky-2, K**	**2.93**	**12**	PN	**Pb**	**00 47 14.2**	**-0.9**
BJR2						00 47 51.4	
BJR2	**Bachatsky-2, K**	**2.93**	**12**	Pg	**Pb**	**00 47 14.2**	**-0.9**
BJR2				Sg	**Sg**	**00 47 57.7**	**+0.5**
SALR	**Pechorkino, Sa**	**3.02**	**7**	Pg	**Pb**	**00 47 17.9**	**+1.3**
SALR				Sg	**Sg**	**00 47 59.6**	**-0.5**
SEM	**Semipalatinsk**	**3.21**	**253**	Pg	**Pg**	**00 47 23.7**	**-0.9**
	83nm,0.4s						
SEM				Lg	Lg	00 48 05.5	
	666nm,0.4s						
LUZB	**Luzhba, Kemero**	**3.24**	**45**	Pg	**Pb**	**00 47 18.3**	**-2.1**
LUZB				Sg	**Sg**	**00 48 06.5**	**-0.7**
NVSII	**Novosibirsk**	**3.59**	**343**	Pn	**Pn**	**00 47 20.0**	**+1.8**
NVSII				Pg	**Pg**	**00 47 30.3**	**-1.5**
NVSII				Sg	**Sg**	**00 48 18.4**	**+0.1**
ZSN	**Zaisan**	**3.98**	**182**	Pg	**Pb**	**00 47 34.1**	**+1.1**
	48nm,0.4s						
ZSN				Lg	Lg	00 48 23.4	
	148nm,0.7s						
KURK	**Kurchatov**	**4.12**	**263**	⇑Pn	**Pn**	**00 47 27.5**	**+2.0**
	4.2nm,0.3s						
KURK				⇓Lg	Lg	00 48 30.1	
	108nm,0.8s						
KURK	**Kurchatov**	**4.12**	**263**	PN	**Pn**	**00 47 28.4**	**+2.9**
KURK						00 48 16.1	
KURBB	**Kurchatov Arra**	**4.20**	**261**	Pn	**Pn**	**00 47 28.4**	**+1.8**
	3.0nm,0.3s,baz=79,slow=16,SNR=99						
KURBB				Sn	**Sn**	**00 48 16.1**	**+0.8**
	2.7nm,0.3s,baz=80,slow=21,SNR=7.2						
KURBB				Lg	Lg	00 48 32.2	
	11nm,0.3s,baz=77,slow=34,SNR=13						
	15nm,0.4s						
KURBB	**Kurchatov Arra**	**4.20**	**261**	⇑Pn	**Pn**	**00 47 28.5**	**+2.0**
	18nm,0.3s						
KURBB				⇑Lg	Lg	00 48 32.7	
	443nm,0.6s						
MK31	**Makanchi Array**	**4.98**	**202**	⇑Pn	**Pn**	**00 47 39.2**	**+1.8**
	2.1nm,0.2s,baz=25,slow=13,SNR=434						
MK31				⇑Lg	Lg	00 48 55.2	
	108nm,0.7s,baz=25,slow=28,SNR=12						
MKAR	**Makanchi Array**	**4.98**	**202**	Pn	**Pn**	**00 47 39.2**	**+1.8**
	2.9nm,0.3s,baz=21,slow=12,SNR=229						
MKAR				Sn	**Sn**	**00 48 36.2**	**+1.4**
	8.0nm,0.3s,baz=25,slow=29,SNR=5.9						
MKAR				Lg	Lg	00 48 56.8	
	8.4nm,0.3s,baz=28,slow=28,SNR=4.3						
	9.6nm,0.3s						
MAKZ	**Makanchi**	**5.05**	**205**	⇓Pn	**Pn**	**00 47 40.2**	**+1.8**
	18nm,0.4s						
MAKZ				⇓Lg	Lg	00 48 58.0	
	65nm,0.5s						
KAPS	**Kapalarasan**	**7.22**	**214**	Pg	**Pn**	**00 48 12.3**	**+4.1**
	25nm,0.4s						
KAPS				Lg	Lg	00 49 29.7	
	15nm,0.2s						
DJR	**Jarkent**	**7.93**	**208**	Pg	**Pn**	**00 48 20.8**	**+2.8**
	9.8nm,0.3s						
DJR				Lg	Lg	00 49 43.2	
	6.1nm,0.4s						
KNOS	**Konyrlen**	**8.10**	**211**	Pg	Pn	00 48 25.3	+5.0
	6.6nm,0.2s						
KNOS				Lg	Lg	00 49 51.0	
	11nm,0.7s						
BVA0	**Borovoye Array**	**9.14**	**286**	⇓Pn	**Pn**	**00 48 36.4**	**+2.0**
	3.3nm,0.8s,baz=109,slow=14,SNR=17						
BVA0				⇑Sn	**Sn**	**00 50 14.6**	**-2.4**
	13nm,0.8s,baz=82,slow=26,SNR=6.7						
BVAR	**Borovoye Array**	**9.14**	**286**	Pn	**Pn**	**00 48 35.3**	**+0.8**
	0.1nm,0.3s,baz=98,slow=14,SNR=15						
BVAR				Sn	**Sn**	**00 50 15.1**	**-1.9**
	0.6nm,0.3s,baz=90,slow=22,SNR=12						
BVAR				Lg	Lg	00 51 14.0	
	baz=116,slow=23						
	1.9nm,0.3s						
SATY	**Saty**	**9.51**	**211**	Pg	Pn	00 48 52.3	+13
	5.6nm,0.4s						
SATY				Lg	Lg	00 50 37.4	
	3.9nm,0.4s						
AAK	**Ala-Archa**	**11.36**	**223**	Pn	**Pn**	**00 49 06.6**	**+1.6**
	0.3nm,0.3s,baz=61,slow=5.8,SNR=8.2						
AAK				Sn	**Sn**	**00 51 06.5**	**-5.1**
	0.2nm,0.3s,baz=0.8,slow=18,SNR=4.0						
	1.3nm,0.4s						
AAK	**Ala-Archa**	**11.36**	**223**	⇑Pn	**Pn**	**00 49 04.6**	**-0.4**
	1.4nm,0.9s						
KK31	**Karatay Array**	**12.90**	**235**	⇑Pn	**Pn**	**00 49 23.4**	**-2.5**
	1.9nm,0.4s,baz=43,slow=14,SNR=43						
SONM	**Songino Array**	**14.28**	**96**	Pn	**Pn**	**00 49 45.8**	**+1.0**
	0.3nm,0.8s,baz=286,slow=12,SNR=4.2						
SONM				Lg	Lg	00 53 56.5	
	0.1nm,0.3s,baz=289,slow=32,SNR=5.7						
AB31	**Akbulak array**	**16.15**	**272**	Pn	**Pn**	**00 50 10.2**	**+0.7**
	0.2nm,0.3s,baz=64,slow=7.0,SNR=15						
ARTI	**Arti**	**16.42**	**298**	Pn	**Pn**	**00 50 13.4**	**+0.5**
	0.5nm,0.3s,baz=74,slow=18,SNR=3.4						
ARTI				Sn	**Sn**	**00 53 12.7**	**-2.0**
	0.5nm,0.3s,baz=4.9,slow=22,SNR=2.9						
	0.5nm,0.3s						
AKTO	**Aktyubinsk**	**17.04**	**277**	P	**P**	**00 50 21.9**	**-0.6**
	0.2nm,0.3s,baz=78,slow=12,SNR=10.0						
	2.0nm,0.6s						
NRIK	**Noril'sk**	**18.01**	**3**	P	**P**	**00 50 34.8**	**+1.8**
	0.8nm,0.3s,baz=188,slow=9.0,SNR=6.9						
	2.3nm,0.4s						
LZDM	**Lanzhou Array**	**20.43**	**132**	P	Pn	00 51 02.1	-0.1
	1.1nm,0.3s,baz=330,slow=8.5,SNR=3.1						
	1.1nm,0.3s						
KIRV	**Kirov**	**21.45**	**303**	P	**P**	**00 51 13.6**	**+3.1**
	10nm,0.6s,baz=90,slow=3.0,SNR=5.3						
	10nm,0.6s						
FINES	**FINESS Array B**	**32.98**	**311**	P	**P**	**00 52 56.8**	**-0.2**
	1.8nm,0.9s,baz=81,slow=8.6,SNR=1.3						
	1.8nm,0.9s						
HFS	**Hagfors**	**39.17**	**311**	P	**P**	**00 53 49.3**	**-0.7**
	0.5nm,0.3s,baz=82,slow=12,SNR=5.3						
	0.5nm,0.3s						
ILAR	**Eielson Array**	**57.38**	**24**	P	**P**	**00 56 11.5**	**+1.2**
	0.6nm,0.5s,baz=323,slow=5.9,SNR=11						
	0.6nm,0.5s						
YKA	**Yellowknife Ar**	**65.36**	**10**	P	**P**	**00 57 04.2**	**-0.1**
	0.2nm,0.5s,baz=346,slow=7.2,SNR=4.9						
	0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**75.71**	**273**	P	**P**	**00 58 08.0**	**-0.2**
	0.2nm,0.6s,baz=13,slow=4.1,SNR=1.6						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**83.12**	**134**	P	**P**	**00 58 47.5**	**-0.8**
	0.2nm,0.8s,baz=343,slow=5.4,SNR=1.8						
	0.2nm,0.8s						
ASAR	**Alice Springs**	**86.19**	**136**	P	**P**	**00 59 03.4**	**-0.3**
	0.3nm,0.5s,baz=322,slow=4.6,SNR=1.4						
	0.3nm,0.5s						

KRNET ***23*** *00:53:05.9±0.1,39°.62N×77°.00E, mb3.3*
SOME ***23*** *00:53:07.5,39°.95N×77°.02E, h20km*
NNC ***23*** *00:53:08.9±1.0,40°.03N×77°.07E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=6.5km s-min=5.3km az=171.0*

ISC 23 00:53:07.4±2.0, 39°.89N±0°.10×76°.85E±0°.04, h10km, n41, σ1§84/59, 10C-8D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.68**	**337**	⇑*i*P	**Pb**	**00 53 38.4**	**-0.2**
NRN				⇑*i*S	**Sg**	**00 54 02.1**	**+0.7**
TARG	**Taragay, Kyrgy**	**1.98**	**21**	⇑*i*P	**Pn**	**00 53 41.5**	**+0.2**
TARG				⇑*i*S	**Sb**	**00 54 07.6**	**-1.0**
KDJ	**Kajisay**	**2.26**	**6**	⇑*i*P	**Pb**	**00 53 46.1**	**-2.2**
KDJ				⇑*i*S	**Sb**	**00 54 15.2**	**-1.2**
ULHL	**Ulahol**	**2.40**	**349**	P	**Pb**	**00 53 51.2**	**+0.4**
	SNR=25						
ULHL	**Ulahol**	**2.40**	**349**	⇓*i*P	**Pb**	**00 53 48.4**	**-2.5**
ULHL				⇓*i*S	**Sb**	**00 54 19.5**	**-1.1**
SALK	**Salom-Alik**	**2.52**	**294**	⇓*i*P	**Pn**	**00 53 49.3**	**+0.7**
SALK				⇓*i*S	**Sn**	**00 54 20.8**	**+1.3**
BOOM	**Boomskoye usch**	**2.69**	**345**	⇑*i*P	**Pb**	**00 53 52.6**	**-3.2**
BOOM				⇑*i*S	**Sb**	**00 54 26.6**	**-2.3**
ARLS	**Aral**	**2.75**	**317**	⇓*e*P	**Pn**	**00 53 53.2**	**+1.5**
ARLS				⇓*i*S	**Sn**	**00 54 27.3**	**+2.2**
KBK	**Karagaybulak**	**3.12**	**333**	P	**Pg**	**00 54 05.9**	**-1.2**
	SNR=9.1						
TNSS	**Tian-Shan**	**3.15**	**1**	Pg	**Pb**	**00 54 04.0**	**+0.3**
	2.3nm,0.5s						
TNSS				Lg	Lg	00 54 44.8	
	17nm,0.8s						
TNSS	**Tian-Shan**	**3.15**	**1**	*e*P	**Pb**	**00 54 04.0**	**+0.3**
	2.3nm,0.5s				

SHLS					*e*S		**Sg**	**00 55 08.6**	**-1.1**
	21nm,0.7s								
KTBS	**Karatobe**	**3.83**	**358**		*e*P		**Pb**	**00 54 14.1**	**-0.9**
	2.6nm,0.5s								
KTBS					*e*S		**Sb**	**00 55 01.6**	**+0.2**
	0.6nm,0.3s								
KPKS	**Kokpek**	**3.83**	**20**		Pg		**Pb**	**00 54 15.6**	**+0.5**
	0.3nm,0.2s								
KPKS					Lg		Lg	00 55 04.3	
	41nm,0.7s								
KPKS	**Kokpek**	**3.83**	**20**		*e*P		**Pb**	**00 54 15.6**	**+0.5**
	0.3nm,0.2s								
KPKS					*e*S		**Sb**	**00 55 04.3**	**+2.7**
	41nm,0.7s								
PDGK	**Podgornoye**	**3.97**	**29**		⇓Pg		**Pb**	**00 54 16.7**	**-0.8**
	6.0nm,0.5s								
PDGK					⇓Lg		Lg	00 55 08.8	
	44nm,0.9s								
BLB	**Baldybastay**	**4.38**	**16**		Pg		**Pb**	**00 54 25.1**	**+0.7**
	6.4nm,0.5s								
BLB					Lg		Lg	00 55 20.7	
	38nm,0.7s								
ARXS	**Arharly**	**4.38**	**9**		Pg		**Pb**	**00 54 26.2**	**+1.6**
	3.0nm,0.5s								
ARXS					Lg		Lg	00 55 22.6	
	22nm,0.7s								
ARXS	**Arharly**	**4.38**	**9**		*e*P		**Pb**	**00 54 26.2**	**+1.6**
	3.0nm,0.5s								
ARXS					*e*S		**Sb**	**00 55 22.6**	**+5.1**
	22nm,0.7s								
KNOS	**Konyrlen**	**4.79**	**20**		Pg		**Pb**	**00 54 34.4**	**+2.8**
	2.0nm,0.4s								
KNOS					Lg		Lg	00 55 36.7	
	7.6nm,0.8s								
DJR	**Jarkent**	**4.95**	**25**		Pg		**Pb**	**00 54 34.9**	**+0.7**
	2.3nm,0.3s								
DJR					Lg		Lg	00 55 37.6	
	5.9nm,0.8s								
DJR	**Jarkent**	**4.95**	**25**		*e*P		**Pb**	**00 54 34.9**	**+0.7**
	2.3nm,0.3s								
DJR					*e*S		**Sb**	**00 55 37.5**	**+3.8**
	5.9nm,0.8s								

*UUSS **23** 01:17:15.3±0.9, 40.78N±0.01×112.05W±0.02, h10km±3km, Error ellipse: s-maj=1.8km s-min=1.7km az=159.0*
*NEIC **23** 01:17:15.1, 40.76N×112.07W, h10km*
*IDC **23** 01:17:15.1±0.7, 40.84N×112.00W, h0km, mb3.8/4, mbtmp3.7/10, ML3.3/5, Error ellipse: s-maj=12.0km s-min=5.7km az=151.0*
*NEIC **23** 01:17:15.2±0.9, 40.78N±0.01×112.07W±0.01, h10km±1km, mb4.1/9, ML3.9/128, Mwr3.8/23, ML3.9/20(UUSS), Error ellipse: s-maj=2.7km s-min=1.9km az=167.0, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr~3.75; Mθθ-1.84; Mϕϕ5.59; Mrθ-3.63; Mϕθ-0.33; Mϕr~3.77; Fault plane solution: M0 7.20000×10^14 NP1: ϕs147.74000°, δ34.52000°, λ-146.63000°. NP2: ϕs29.25000°, δ71.84000°, λ-60.12000°. Principal axes: T 7.0277, Plg21.0000°, Azm97.0000°; N 0.3397, Plg28.0000°, Azm199.0000°; P -7.3673, Plg53.0000°, Azm335.0000°;*

ISC 23 01:17:15.3±0.7, 40.77N±0.02×112.08W±0.02, h12km±5km, n139, σ1$67/148, mb3.9/6, Utah

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NOQ	**North Oquirrh**	**0.12**	**197**			**Pg**	**01 17 18.8**	**+0.2**
NOQ						**Sg**	**01 17 21.1**	**+0.3**
SAIU	**Southern Antel**	**0.12**	**318**			**Sg**	**01 17 20.5**	**-0.4**
SAIU	**Southern Antel**	**0.12**	**318**			**Pg**	**01 17 18.5**	**0.0**
EOCU	**Emergency Oper**	**0.14**	**85**			**Pg**	**01 17 18.7**	**-0.1**
EOCU						**Sg**	**01 17 21.1**	**-0.2**
HRU	**Hogsback Ridge**	**0.15**	**82**			**Pg**	**01 17 18.7**	**-0.2**
RBU	**Red Butte Cany**	**0.20**	**86**			**Pg**	**01 17 19.5**	**-0.3**
RBU	**Red Butte Cany**	**0.20**	**86**			**Sg**	**01 17 22.4**	**-0.5**
MHD	**Mile High Driv**	**0.23**	**117**			**Pg**	**01 17 20.2**	**-0.1**
CTU	**Camp Tracy**	**0.26**	**106**	Pg		**Pg**	**01 17 20.5**	**-0.2**
CTU						**Sg**	**01 17 24.0**	**-0.5**
CTU				IAML			01 17 24.6	
	comp=N,21μm,0.6s							
CTU				IAML			01 17 25.1	
	comp=E,13μm,0.6s							
NAIU	**Northern Antel**	**0.28**	**335**			**Sg**	**01 17 24.7**	**-0.2**
NAIU	**Northern Antel**	**0.28**	**335**			**Pg**	**01 17 21.2**	**+0.1**
GMU	**Granite Mounta**	**0.30**	**129**			**Pg**	**01 17 21.6**	**0.0**
FPU	**Francis Peak**	**0.32**	**35**			**Pg**	**01 17 21.7**	**-0.2**
CWU	**Camp Williams**	**0.32**	**184**			**Pb**	**01 17 22.4**	**-0.7**
WTU	**Western Traver**	**0.32**	**163**			**Pb**	**01 17 22.5**	**-0.7**
SNUT	**Stansbury Nort**	**0.35**	**290**			**Pg**	**01 17 22.9**	**+0.5**
AAU	**Alta**	**0.38**	**117**			**Pg**	**01 17 22.9**	**-0.1**
WBC	**Weber Canyon**	**0.40**	**19**			**Pg**	**01 17 23.0**	**-0.2**
TCVU	**Timpanogos Cav**	**0.43**	**139**			**Pg**	**01 17 23.9**	**+0.1**
N16A	**Rees Ranch, Co**	**0.50**	**76**			**Pg**	**01 17 25.3**	**+0.2**
DCU	**Deer Creek Res**	**0.55**	**130**			**Pg**	**01 17 26.1**	**+0.1**
SPUT	**South Promonto**	**0.61**	**333**	Pg		**Pg**	**01 17 27.3**	**0.0**
SPUT				Sg		**Sg**	**01 17 35.2**	**-0.2**
SPUT				IAML			01 17 39.6	
	comp=N,4μm,0.3s							
TCUT	**Toone Canyon**	**0.61**	**55**			**Pg**	**01 17 27.4**	**0.0**
TCUT				Sg		**Sg**	**01 17 35.6**	**0.0**
TCUT	**Toone Canyon**	**0.61**	**55**			**Pg**	**01 17 27.4**	**0.0**
HEB	**Heber**	**0.62**	**115**			**Pg**	**01 17 27.7**	**+0.3**
HTU	**Hoyt Peak**	**0.66**	**98**			**Pg**	**01 17 28.1**	**-0.1**
EPU	**East Promontor**	**0.67**	**338**			**Pg**	**01 17 28.4**	**0.0**
WMUT	**West Mountain**	**0.71**	**165**			**Pb**	**01 17 29.6**	**-0.3**
DAU	**Daniels Canyon**	**0.72**	**119**			**Pb**	**01 17 29.7**	**-0.3**
BGU	**Big Grassy Mou**	**0.74**	**283**	Pg		**Pb**	**01 17 30.1**	**-0.2**
BGU				IAML			01 17 42.8	
	comp=N,3μm,0.5s							
BGU				IAML			01 17 43.1	
	comp=E,7μm,0.5s							
DUG	**Dugway, Tooele**	**0.80**	**225**	Pg		**Pb**	**01 17 30.9**	**-0.4**
DUG				Sg		**Sb**	**01 17 42.6**	**+0.4**
DUG				IAML			01 17 45.6	
	comp=E,4μm,0.8s							
DUG				IAML			01 17 52.4	
	comp=E,3μm,0.6s							
MCU	**Monte Cristo P**	**0.82**	**31**			**Pg**	**01 17 30.6**	**-0.6**
MPU	**Maple Canyon**	**0.82**	**156**	Pg		**Pb**	**01 17 31.5**	**-0.1**
MPU				Sg		**Sb**	**01 17 42.7**	**-0.1**
MPU				IAML			01 17 46.2	
	comp=N,6μm,0.6s							
MPU				IAML			01 17 46.4	
	comp=E,4μm,0.6s							
LHUT	**Little Humpy P**	**0.83**	**81**			**Pg**	**01 17 31.6**	**+0.2**
WVUT	**Wellsville**	**0.85**	**6**			**Pg**	**01 17 31.6**	**-0.2**
HWUT	**Hardware Ranch**	**0.92**	**24**	Pg		**Pg**	**01 17 32.5**	**-0.7**
HWUT				Sg		**Sg**	**01 17 44.4**	**-0.9**
HWUT				IAML			01 17 48.1	
	comp=E,5μm,0.4s							
HWUT				IAML			01 17 48.6	
	comp=E,5μm,0.4s							
RSUT	**Red Spur Mount**	**1.00**	**30**			**Pg**	**01 17 33.9**	**-0.8**
BSUT	**Blindstream Ca**	**1.02**	**102**	Pg		**Pg**	**01 17 34.8**	**-0.3**
BSUT				Sg		**Sg**	**01 17 47.9**	**-0.6**
BSUT				IAML			01 17 54.1	
	comp=N,4μm,0.7s							
HVU	**Hansel Valley**	**1.14**	**333**	Pg		**Pg**	**01 17 36.7**	**-0.7**
HVU				Sg		**Sg**	**01 17 52.2**	**0.0**
FSU	**Fish Springs**	**1.45**	**224**			**Pn**	**01 17 41.6**	**0.0**
P17A	**Butcher Ranch,**	**1.65**	**141**	Pn		**Pn**	**01 17 44.9**	**+0.6**
P17A				IAML			01 18 09.8	
	comp=N,2μm,0.5s							
P17A				IAML			01 18 11.8	
	comp=E,2μm,0.5s							
Q16A	**Castle Valley**	**1.97**	**159**	Pn		**Pn**	**01 17 49.7**	**+0.9**
Q16A				IAML			01 18 23.9	
	comp=E,664nm,0.6s							
SRU	**San Rafael Swe**	**2.04**	**144**	Pn		**Pn**	**01 17 50.7**	**+1.0**
OWUT	**Old Woman Plat**	**2.05**	**166**			**Pn**	**01 17 51.3**	**+1.5**
AHID	**Auburn Hatcher**	**2.13**	**20**	Pn		**Pn**	**01 17 52.1**	**+1.2**
TCRU	**Three Creeks R**	**2.17**	**188**	Pn		**Pn**	**01 17 52.5**	**+0.9**
TCRU				IAML			01 18 33.5	
	comp=N,616nm,0.9s							
TCRU				IAML			01 18 34.9	
	comp=E,1μm,0.8s							
IMU	**Iron Mountain**	**2.29**	**202**			**Pb**	**01 17 57.3**	**+0.6**
ELK	**Elko**	**2.40**	**271**	Pn		**Pb**	**01 17 58.1**	**-0.6**
	comp=E,88nm,0.3s,baz=84,slow=14							
ELK				Lg		Lg	01 18 31.9	
	comp=E,95nm,0.3s,baz=9.8,slow=11,SNR=10							
ELK	**Elko**	**2.40**	**271**	Pn		**Pn**	**01 17 55.4**	**+0.7**
PSUT	**Pine Spring**	**2.62**	**212**	Pn		**Pn**	**01 17 59.0**	**+1.4**
PSUT				IAML			01 18 45.7	
	comp=E,601nm,0.8s							
PSUT				IAML			01 18 46.9	
	comp=N,660nm,0.7s							
MTPU	**Mount Pierson**	**2.72**	**182**	Pn		**Pn**	**01 18 00.6**	**+1.3**
BW06	**Boulder Array**	**2.75**	**42**	Pn		**Pn**	**01 18 00.8**	**+1.3**
BW06				IAML			01 18 40.6	
	comp=N,825nm,0.5s							
BW06				IAML			01 18 50.0	
	comp=N,721nm,0.6s							
PD31	**Pinedale Array**	**2.75**	**42**	Pn		**Pn**	**01 18 00.9**	**+1.5**
PDAR	**Pinedale Array**	**2.75**	**42**	Pn		**Pn**	**01 18 01.0**	**+1.5**
	comp=N,63nm,0.3s,baz=234,slow=14,SNR=475							
PDAR				Lg		Lg	01 18 38.6	
	comp=N,258nm,0.3s,baz=204,slow=24,SNR=20							
PDAR	**Pinedale Array**	**2.75**	**42**	Pn		**Pn**	**01 18 00.5**	**+1.1**
SNOW	**Snow King Moun**	**2.87**	**20**	Pn		**Pn**	**01 18 02.5**	**+1.4**
SNOW				IAML			01 18 47.5	
	comp=N,591nm,0.6s							
SNOW				IAML			01 18 51.9	
	comp=N,796nm,0.5s							
FXWY	**Fox Creek**	**2.97**	**15**	Pn		**Pn**	**01 18 03.9**	**+1.3**
FXWY				IAML			01 18 54.7	
	comp=N,197nm,1.2s							
O20A	**White River Ci**	**2.99**	**101**	Pn		**Pn**	**01 18 04.6**	**+1.8**
O20A				IAML			01 18 52.8	
	comp=N,712nm,0.7s							
HMU	**Henry Mountain**	**3.01**	**159**	Pn		**Pn**	**01 18 05.0**	**+1.9**
LOHW	**Long Hollow**	**3.05**	**21**	Pn		**Pn**	**01 18 04.7**	**+1.1**
LOHW				IAML			01 18 52.9	
	comp=N,517nm,0.9s							
LOHW				IAML			01 18 59.7	
	comp=N,222nm,0.8s							
MOOW	**Moose Ponds**	**3.14**	**18**	Pn		**Pn**	**01 18 05.9**	**+1.1**
PV21	**Cone Mtn., Par**	**3.25**	**132**	Pn		**Pn**	**01 18 07.8**	**+1.4**
SZCU	**Shurtz Canyon**	**3.26**	**194**	Pn		**Pn**	**01 18 08.5**	**+2.0**
SZCU				IAML			01 19 06.0	
	comp=E,183nm,0.6s							
HLID	**Hailey**	**3.29**	**329**	Pn		**Pn**	**01 18 07.8**	**+0.9**
HLID				IAML			01 19 15.2	
	comp=E,155nm,0.8s							
PV23	**Carpenter Ridg**	**3.31**	**133**	Pn		**Pn**	**01 18 08.4**	**+1.2**
CCUT	**Cedar City**	**3.36**	**198**	Pn		**Pn**	**01 18 09.9**	**+2.0**
CCUT				IAML			01 19 08.3	
	comp=E,186nm,0.7s							
PV22	**Blue Mesa, Par**	**3.38**	**130**	Pn		**Pn**	**01 18 09.6**	**+1.5**
PV04	**Paradox Valley**	**3.41**	**133**	Pn		**Pn**	**01 18 09.8**	**+1.3**
FLWY	**Flagg Ranch**	**3.47**	**17**	Pn		**Pn**	**01 18 11.0**	**+1.7**
FLWY				IAML			01 19 18.5	
	comp=E,226nm,1.4s							
YPP	**Pitchstone Pla**	**3.63**	**15**	Pn		**Pn**	**01 18 13.3**	**+1.7**
HAYD	**Hayden**	**3.67**	**92**	Pn		**Pn**	**01 18 14.6**	**+2.4**
KNB	**Kanab**	**3.79**	**189**	Pn		**Pn**	**01 18 15.8**	**+2.0**
H17A	**Grant Village**	**3.79**	**16**	Pn		**Pn**	**01 18 16.1**	**+2.2**
MFID	**Camas Ranch**	**3.85**	**315**	Pn		**Pn**	**01 18 16.7**	**+2.2**
MFID				IAML			01 19 21.3	
	comp=E,281nm,0.7s							
MFID				IAML			01 19 31.2	
	comp=E,317nm,0.7s							
LCMT	**Little Creek M**	**3.86**	**194**	Pn		**Pn**	**01 18 17.1**	**+2.5**
LCMT				IAML			01 19 24.5	
	comp=E,104nm,0.5s							
YMR	**Madison River**	**3.98**	**11**	Pn		**Pn**	**01 18 19.1**	**+2.6**
YMR				IAML			01 19 45.1	
	comp=E,139nm,0.9s							
YMR				IAML			01 19 48.2	
	comp=N,153nm,0.9s							
YNR	**Norris Junctio**	**4.08**	**14**	Pn		**Pn**	**01 18 19.9**	**+2.1**
QLMT	**Earthquake Lak**	**4.09**	**6**	Pn		**Pn**	**01 18 19.8**	**+1.9**
MCMT	**McKenzie Canyo**	**4.10**	**352**	Pn		**Pn**	**01 18 19.6**	**+1.6**
YHH	**Holmes Hill**	**4.12**	**12**	Pn		**Pn**	**01 18 20.4**	**+2.0**
YHL	**Hebgen Lake**	**4.13**	**9**	Pn		**Pn**	**01 18 20.6**	**+2.0**
MVCO	**Mesa Verde**	**4.51**	**141**	Pn		**Pn**	**01 18 24.2**	**+0.5**
K22A	**Casper**	**4.56**	**64**	Pn		**Pn**	**01 18 24.2**	**-0.1**
RLMT	**Red Lodge**	**4.82**	**24**	Pn		**Pn**	**01 18 31.3**	**+3.5**
RLMT				IAML			01 19 45.4	
	comp=N,48nm,0.5s							
RLMT				IAML			01 19 46.1	
	comp=N,57nm,0.3s							
BOZ	**Bozeman (W)**	**4.84**	**4**	Pn		**Pn**	**01 18 31.1**	**+3.0**
SHPR	**Sheep Range**	**4.89**	**211**	Pn		**Pn**	**01 18 32.3**	**+3.4**
SHPR				IAML			01 19 57.5	
	comp=E,57nm,0.8s							
KVN	**Kaiserville**	**4.94**	**252**	Pn		**Pn**	**01 18 30.9**	**+1.3**
KVN				IAML			01 19 59.0	
	comp=E,62nm,0.8s							
KVN				IAML			01 20 08.8	
	comp=N,65nm,1.0s							
ISCO	**Idaho Springs**	**5.04**	**99**	Pn		**Pn**	**01 18 33.0**	**+2.0**
ISCO				IAML			01 20 03.3	
	comp=N,50nm,1.0s							
ISCO				IAML			01 20 11.2	
	comp=N,49nm,1.0s							
LRM	**Limekiln Ridge**	**5.06**	**357**	Pn		**Pn**	**01 18 34.8**	**+3.6**
PLID	**Pearl Lake**	**5.19**	**328**	Pn		**Pn**	**01 18 35.1**	**+2.0**
PLID				IAML			01 20 08.4	
	comp=N,44nm,1.6s							
PLID				IAML			01 20 12.1	
	comp=N,48nm,1.1s							
WVOR	**Wild Horse Val**	**5.20**	**291**	Pn		**Pn**	**01 18 35.5**	**+2.5**
WVOR				IAML			01 20 03.2	
	comp=N,55nm,2.3s							
WVOR				IAML			01 20 06.3	
	comp=N,98nm,1.4s							
NV11	**Mina Array Sit**	**5.24**	**246**	Pn		**Pn**	**01 18 36.5**	**+2.8**
NV11				IAML			01 20 10.3	
	comp=N,85nm,1.5s							
NV11				IAML			01 20 11.3	
	comp=E,62nm,0.8s							
WUAZ	**Wupatki**	**5.27**	**174**	Pn		**Pn**	**01 18 36.6**	**+2.5**
WUAZ				IAML			01 20 14.5	
	comp=E,117nm,0.5s							
GMN	**Gold Mountain**	**5.32**	**231**	Pn		**Pn**	**01 18 38.3**	**+3.5**
GMN				IAML			01 20 06.9	
	comp=E,43nm,0.5s							
GMN				IAML			01 20 23.9	
	comp=N,73nm,0.8s							
WCT	**Wildcat Mounta**	**5.33**	**223**	Pn		**Pn**	**01 18 38.0**	**+3.3**
WCT				IAML			01 20 08.6	
	comp=E,64nm,1.3s							
WCT				IAML			01 20 12.1	
	comp=N,76nm,1.0s							
NVAR	**Mina Array Bea**	**5.35**	**246**	Pn		**Pn**	**01 18 38.5**	**+3.4**
	comp=N,3.4nm,0.3s,baz=56,slow=13,SNR=46							
NVAR				Pg		**Pg**	**01 18 53.9**	**-3.8**
	comp=N,4.8nm,0.3s,baz=68,slow=13,SNR=14							
NVAR				Lg		Lg	01 20 00.6	
	comp=N,16nm,0.3s,baz=25,slow=33,SNR=7.2							
	comp=N,4.4nm,0.4s							
J08A	**Circle Bar Ran**	**5.42**	**301**	Pn		**Pn**	**01 18 38.8**	**+2.7**
V12A	**Nelson**	**5.49**	**204**	Pn		**Pn**	**01 18 39.7**	**+2.8**
BMO	**Blue Mountains**	**5.61**	**318**	Pn		**Pn**	**01 18 40.7**	**+2.0**
PAHR	**Pah Rah Range**	**5.69**	**262**	Pn		**Pn**	**01 18 41.9**	**+2.0**
FURC	**Furnace Creek,**	**5.70**	**223**	Pn		**Pn**	**01 18 44.0**	**+4.2**
SDCO	**Great Sand Dun**	**5.93**	**118**	Pn		**Pn**	**01 18 44.5**	**+1.3**
QSM	**Queen of Sheba**	**6.09**	**220**	Pn		**Pn**	**01 18 48.8**	**+3.5**
BEKR	**Beckworth**	**6.40**	**265**	Pn		**Pn**	**01 18 51.3**	**+1.7**
F10A	**Beach Ranch, E**	**6.42**	**326**	Pn		**Pn**	**01 18 52.4**	**+2.7**
RSSD	**Black Hills**	**6.83**	**58**	Pn		**Pn**	**01 18 55.3**	**-0.2**
IRM	**Iron Mountain**	**7.03**	**201**	Pn		**Pn**	**01 19 00.2**	**+2.0**
HATC	**Hat Creek Radi**	**7.12**	**273**	Pn		**Pn**	**01 19 02.6**	**+3.1**
LAO	**LASA Array**	**7.28**	**34**	Pn		**Pn**	**01 19 02.9**	**+1.4**
ANMO	**Albuquerque**	**7.31**	**141**	Pn		**Pn**	**01 19 04.7**	**+2.6**
	comp=N,0.2nm,0.3s,baz=324,slow=9.1,SNR=6.2							
ANMO				Pg		Pg	01 19 29.6	-5.7
	comp=N,0.9nm,0.3s,baz=328,slow=8.8,SNR=6.6							
ANMO				Lg		Lg	01 21 00.5	
	comp=N,1.3nm,0.3s,baz=348,slow=20,SNR=7.5							
	comp=N,0.8nm,0.4s							
ANMO	**Albuquerque**	**7.31**	**141**	Pn		**Pn**	**01 19 03.2**	**+1.1**
OGNE	**Ogallala**	**7.62**	**85**	Pn		**Pn**	**01 19 05.8**	**-0.4**
F07A	**Phinny Hill Vi**	**7.68**	**314**	Pn		**Pn**	**01 19 07.3**	**+0.3**
SBM	**South Baldy**	**7.82**	**149**	Pn		**Pn**	**01 19 08.9**	**-0.4**
PFO	**Pinyon Flats O**	**7.95**	**207**	Pn		**Pn**	**01 19 14.3**	**+3.5**
	comp=N,0.2nm,0.3s,baz=24,slow=12,SNR=2.2							
PFO				Lg		Lg	01 21 28.9	
	comp=N,0.3nm,0.3s,baz=348,slow=12,SNR=3.7							
	comp=N,1.4nm,0.5s							
YBH	**Yreka Blue Hor**	**8.07**	**280**	Pn		**Pn**	**01 19 15.5**	**+3.0**
	baz=74,slow=3.3,SNR=4.9							
YBH				Lg		Lg	01 21 29.2	
	baz=184,slow=21							
NEW	**Newport**	**8.32**	**336**	Pn		**Pn**	**01 19 18.3**	**+2.6**
	comp=N,0.2nm,0.3s,baz=150,slow=14,SNR=6.8							
NEW				Lg		Lg	01 21 33.1	
	comp=N,0.2nm,0.3s,baz=74,slow=23,SNR=2.1							
	comp=N,2.1nm,0.6s							
K30B	**Basset**	**9.51**	**74**	Pn		**Pn**	**01 19 32.5**	**+0.4**
E28A	**Huff**	**10.08**	**51**	Pn		**Pn**	**01 19 40.3**	**+0.4**
ECSD	**EROS Data Cent**	**11.84**	**70**	Pn		**Pn**	**01 20 02.4**	**-1.5**
F33A	**5 Mile Ranch,**	**12.56**	**61**	Pn		**Pn**	**01 20 11.3**	**-2.4**
TXAR	**Lajitas Array**	**13.31**	**146**	Lg		Lg	01 24 15.8	
	comp=N,0.1nm,0.3s,baz=325,slow=28,SNR=7.7							
AGMN	**Agassiz Nation**	**13.78**	**51**	Pn		**Pn**	**01 20 27.7**	**-2.8**
ULM	**Lac du Bonnet**	**14.77**	**45**	Pn		**Pn**	**01 20 40.9**	**-3.1**
	comp=N,0.6nm,0.3s,baz=233,slow=15,SNR=7.5							
ULM				Lg		Lg	01 24 52.1	
	comp=N,0.2nm,0.3s,baz=113,slow=5.5,SNR=4.5							
	comp=N,1.9nm,0.4s							
EPLO	**Experimental L**	**15.67**	**49**	Pn		**Pn**	**01 20 52.1**	**-3.7**
EPLO				IAmb		IAmb	01 21 28.4	
	comp=Z,8.4nm,1.1s							
EYMN	**Ely**	**16.35**	**57**	Pn		**Pn**	**01 21 02.4**	**-2.2**
EYMN				IAmb		IAmb	01 21 40.5	
	comp=Z,14nm,1.0s							
FCAR	**Ozark Folk Cen**	**16.39**	**101**	Pn		**Pn**	**01 21 04.2**	**-0.9**
I42A	**Draeger Farm,**	**17.40**	**72**	Pn		**Pn**	**01 21 18.0**	**+0.1**
I42A				IAmb		IAmb	01 21 28.9	
	comp=Z,26nm,1.4s							
E46A	**Sault Ste Mari**	**20.83**	**65**			**P**	**01 21 56.6**	**-0.1**
YKAW1	**Yellowknife Wh**	**21.80**	**357**	P		**P**	**01 22 07.8**	**+0.9**
YKAW1				IAmb		IAmb	01 22 08.5	
	comp=Z,4.9nm,1.0s							
YKA	**Yellowknife Ar**	**21.81**	**357**	P		**P**	**01 22 07.3**	**+0.2**
	comp=Z,1.5nm,0.8s,baz=182,slow=9.3,SNR=39							
	comp=Z,1.5nm,0.8s							
YKAW3	**Yellowknife Wh**	**21.88**	**357**	P		**P**	**01 22 07.8**	**0.0**
TGL	**Tana Glacier**	**27.48**	**327**	P		**P**	**01 23 00.3**	**-1.0**
FINES	**FINESS Array B**	**72.63**	**20**	P		**P**	**01 28 42.5**	**+0.3**
	comp=Z,3.3nm,1.0s,baz=308,slow=6.8,SNR=1.8							
	comp=Z,3.3nm,1.0s							
KURK	**Kurchatov**	**88.42**	**353**	P		**P**	**01 30 08.1**	**+1.0**
KURK	**Kurchatov**	**88.42**	**353**	IAmb		IAmb	01 30 18.5	
	comp=Z,2.0nm,1.1s							
KURBB	**Kurchatov Arra**	**88.52**	**353**	P		**P**	**01 30 08.1**	**+0.5**
	comp=Z,0.6nm,0.9s,baz=5.5,slow=5.3,SNR=5.4							
	comp=Z,0.6nm,0.9s							
MKAR	**Makanchi Array**	**91.89**	**350**	P		**P**	**01 30 24.7**	**+1.3**
	comp=Z,0.1nm,0.6s,baz=28,slow=6.5,SNR=2.3							
	comp=Z,0.1nm,0.6s							
WRA	**Warramunga Arr**	**120.43**	**269**	PKP		**PKPdf**	**01 36 06.7**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=59,slow=2.0,SNR=6.0							

*SSNC **23** 01:22:28.3±1.9, 19.17N×79.70W, h25km±24km, MD3.3, ML2.4, Presumed earthquake*
*JSN **23** 01:22:30.1±1.1, 19.29N×79.19W, h0km±398km, MW4.3, Presumed earthquake*

ISC 23 01:22:25.0±2.4, 19.10N±0.1×79.9W±0.1, h35km, n9, σ2$92/10, 1C, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LCCY	**Blossom Villag**	**0.68**	**343**	*e*P		Pn	01 22 39.9	+1.7
LCCY				*e*S		**Sn**	**01 22 47.1**	**-0.5**
LCCY				IAML			01 22 48.5	
	comp=E,118nm,0.2s							
LCCY				IAML			01 22 48.7	
	comp=N,220nm,0.2s							
CBCY	**The Bluff, Cay**	**0.73**	**8**	*e*P		Pn	01 22 38.1	-0.7
CBCY				*e*S		**Sn**	**01 22 45.1**	**-3.7**
CBCY				IAML			01 22 45.7	
	comp=N,304nm,0.1s							
CBCY				IAML			01 22 45.8	
	comp=E,251nm,0.2s							
MTDJ	**Mount Denham**	**2.34**	**109**	*e*P		**Pn**	**01 23 01.6**	**+0.5**
LMGC	**Las Mercedes**	**2.90**	**68**	*e*P		**Pn**	**01 23 08.6**	**0.0**
CCCC	**Cccc**	**2.94**	**42**	*e*P		**Pn**	**01 23 12.9**	**+3.7**
CCCC				*e*S		**Sn**	**01 23 43.1**	**-0.2**
STH	**Stony Hill**	**3.05**	**107**	⇑*i*P		**Pn**	**01 23 11.4**	**+0.7**
MGV	**Manicaragua**	**3.09**	**358**	*e*P		**Pn**	**01 23 11.8**	**+0.6**
CHIV	**Chivirico**	**3.40**	**73**	*e*P		**Pn**	**01 23 15.5**	**0.0**
YAR	**Yar**	**3.57**	**67**	*e*P		**Pn**	**01 23 18.0**	**+0.1**

TRN 23 01:24:28.2, 15.91N×60.81W, h45km, MD4.0, 1C, East of Marie-Galante., Leeward Islands

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

JCJ Sn **Sn** **01 32 39.5 -2.4**
211nm,0.3s,baz=102,slow=23,SNR=9.6
JCJ LR LR 01 33 35.8
comp=Z,1µm,20.5s,baz=131,slow=38
120nm,0.5s
JCJ Chichijima 4.59 338 Pn **Pn** **01 31 48.2 -1.0**
GUMO Guam 9.22 175 LR LR 01 36 06.6
comp=Z,2µm,20.4s,baz=9.0,slow=35
JHJ2 Mitsune 10.92 341 Pn **Pn** **01 33 17.0 +1.0**
JHJ Hachijo jima 2 10.94 340 Pn **Pn** **01 33 15.5 -0.8**
5.2nm,0.3s,baz=79,slow=23,SNR=2.0
126nm,0.8s
BSO1 Boso 1 12.09 348 *e*P **Pn** **01 33 29.2 -2.4**
JMZ Minamidaito 2 12.12 287 Pn **Pn** **01 33 36.2 +3.7**
BSO3 Boso 3 12.34 346 *e*P **Pn** **01 33 34.8 -0.4**
BSO3 *e*S **Sn** **01 35 49.7 -2.2**
BSO4 Boso 4 12.55 346 *e*P **Pn** **01 33 37.6 -0.7**
JRY Ryogami san 13.90 342 *e*P **Pn** **01 33 54.3 -2.5**
INU Inuyama 13.92 335 P **Pn** **01 33 58.0 +0.9**
INU Inuyama 13.92 335 Pn **Pn** **01 33 55.7 -1.4**
JGF Kuroka 14.02 337 P **Pn** **01 33 59.0 +0.6**
JGF Kuroka 14.02 337 Pn **Pn** **01 33 56.8 -1.7**
JMN Monobe 14.10 323 Pn **Pn** **01 34 00.4 +0.9**
JTO Tosashimizu 14.13 317 *e*P **Pn** **01 34 00.3 +0.4**
MJAR Matsushiro Arr 14.59 341 Pn **Pn** **01 34 03.8 -2.4**
0.4nm,0.3s,baz=158,slow=9.6,SNR=15
4.5nm,0.7s
MJAR Matsushiro Arr 14.59 341 Pn **Pn** **01 34 05.1 -1.1**
MJAR Matsushiro Arr 14.59 341 P **Pn** **01 34 05.1 -1.1**
MAJO Matsushiro 14.59 341 P **Pn** **01 34 07.6 +1.4**
MAJO Matsushiro 14.59 341 Pn **Pn** **01 34 04.9 -1.3**
MAJO Matsushiro 14.59 341 *i*P **Pn** **01 34 06.4 +0.2**
MJB9 Matsu-Tunnel 14.59 341 Pn **Pn** **01 34 05.4 -0.9**
JOW Kunigami 14.92 289 Pn **Pn** **01 34 13.1 +2.3**
1.4nm,0.3s,baz=108,slow=12,SNR=6.6
JOW Kunigami 14.92 289 P **P** **01 34 16.0 -0.2**
JNU Nakatsue 15.53 314 Pn **Pn** **01 34 18.6 -0.2**
1.4nm,0.3s,baz=85,slow=5.5,SNR=5.2
13nm,0.8s
JTM Tenmabayashi 18.09 353 P **Pn** **01 34 51.7 +0.8**
YOJ Yonaguni jima 19.40 279 P **P** **01 35 06.5 +0.7**
YOJ IAmb IAmb 01 35 08.4
comp=Z,144nm,1.2s
YOJ Yonaguni jima 19.40 279 P **P** **01 35 06.5 +0.7**
YOJ pmax pmax
comp=Z,144nm,1.2s
TJN Taejon 19.82 317 P **Pn** **01 35 11.8 0.0**
KSRS Korea Array 20.16 320 P **P** **01 35 13.8 -0.2**
comp=Z,12nm,0.6s,baz=132,slow=10,SNR=17
comp=Z,12nm,0.6s
KSAR Wonju Array Be 20.18 320 P **P** **01 35 12.8 -1.3**
KSAR Wonju Array Be 20.18 320 P **P** **01 35 12.9 -1.3**
KS19 Wonju Array Si 20.23 320 P **P** **01 35 14.0 -0.7**
KS19 IAmb IAmb 01 35 22.2
comp=Z,59nm,0.9s
YHNB Yeheng 20.89 280 P Pn 01 35 26.3 +1.7
YULB Yu-li 20.99 276 P Pn 01 35 25.6 -0.2
YULB Yu-li 20.99 276 P **P** **01 35 24.3 +1.2**
YULB IAmb IAmb 01 35 28.3
comp=Z,40nm,0.9s
YUK Yuzh-Kuril'sk 21.20 3 *i*P **P** **01 35 25.2 +0.1**
TWGBT Beinan 21.23 274 P **P** **01 35 28.2 +2.5**
JKA Kamikawa-asahi 21.27 357 P **P** **01 35 26.2 +0.4**
ASAJ Asahikawa 21.27 357 P **P** **01 35 26.6 +0.7**
comp=Z,7.0nm,0.6s,baz=221,slow=17,SNR=6.6
comp=Z,7.0nm,0.6s
ASAJ Asahikawa 21.27 357 P **P** **01 35 26.2 +0.3**
ASAJ pmax pmax
comp=Z,24nm,0.9s
SSLB Suanglung 21.29 277 P **P** **01 35 29.6 +3.3**
SSLB Suanglung 21.29 277 P **P** **01 35 26.9 +0.5**
H11N1 WAKE ISLAND Hy 21.45 94 T T 01 57 34.1
baz=283,slow=74,SNR=48
H11N2 WAKE ISLAND Hy 21.45 94 T T 01 57 41.4
baz=283,slow=74,SNR=49
H11N3 WAKE ISLAND Hy 21.47 94 T T 01 57 46.3
baz=283,slow=74,SNR=50
H11S3 WAKE ISLAND Hy 21.55 97 T T 01 58 06.3
baz=283,slow=74,SNR=27
H11S1 WAKE ISLAND Hy 21.56 97 T T 01 58 21.3
baz=283,slow=74,SNR=20
H11S2 WAKE ISLAND Hy 21.57 97 T T 01 58 08.6
baz=283,slow=74,SNR=17
TPUB Ta-pu 21.61 276 P **P** **01 35 32.1 +2.3**
TPUB Ta-pu 21.61 276 P **P** **01 35 29.8 0.0**
TPUB IAmb IAmb 01 35 36.0
comp=Z,108nm,1.1s
SSE Sheshan 22.00 297 P **P** **01 35 33.8 -0.1**
SSE S **S** **01 39 35.9 0.0**
SSE pmax pmax
comp=Z,24nm,1.0s
SSE L L
comp=Z,260nm,21.8s
SSE L L
comp=Z,320nm,22.0s
VLA Vladivostok 22.64 336 *i*P **P** **01 35 41.1 +0.5**
VLA pmax pmax
comp=Z,53nm,1.1s
PSTR Posyet 22.66 334 *i*P **P** **01 35 41.4 +0.6**
QZH2 Quanzhou 23.41 280 P **P** **01 35 44.8 -3.9**
QZH2 S **S** **01 40 06.1 +5.0**
QZH2 L L
comp=Z,1µm,19.9s
QZH2 L L
comp=Z,1µm,22.0s
USRK Ussuriysk Ar. 23.54 338 P **P** **01 35 49.9 +0.2**
comp=Z,12nm,0.5s,baz=153,slow=11,SNR=35
comp=Z,12nm,0.5s
TGY Tagaytay City 23.61 252 LR LR 01 44 01.4
comp=Z,2µm,20.0s,baz=88,slow=34
DAV Davao City (W) 23.75 232 LR LR 01 43 07.7
comp=Z,1µm,21.9s,baz=68,slow=32
YSS Yuzhno-Sakhali 24.09 358 P **P** **01 35 55.3 +0.3**
YSS Yuzhno-Sakhali 24.09 358 *e*P **P** **01 35 56.7 +1.7**
YSS *e*S **S** **01 40 10.8 -0.7**
YSS pmax pmax
comp=Z,20nm,1.3s
YSS pmax pmax
comp=Z,100nm,3.9s
YSS MLR MLR
comp=N,300nm,15.0s
NJ2 Nanjing 24.18 298 ⇑P **P** **01 35 55.6 -0.4**
NJ2 pP **pP** **01 36 00.5 -0.5**
NJ2 S **S** **01 40 19.3 +6.1**
NJ2 pmax pmax
comp=N,310nm,1.0s
NJ2 L L
comp=N,2µm,17.5s
NJ2 L L
comp=N,3µm,18.5s
MDJ Mudanjiang 24.78 335 P **P** **01 36 02.9 +1.5**
MDJ Mudanjiang 24.78 335 P **P** **01 36 02.2 +0.9**
MDJ IAmb IAmb 01 36 04.1
comp=Z,36nm,0.9s
MDJ Mudanjiang 24.78 335 P **P** **01 36 02.4 +1.0**
MDJ pmax pmax
comp=Z,49nm,1.2s
MDJ L L
comp=Z,1µm,16.9s
MDJ L L
comp=Z,650nm,16.4s
MANU Manus Island 24.93 172 P **P** **01 36 02.9 +0.1**
MANU IAmb IAmb 01 36 05.3
comp=Z,21nm,0.7s
DL2 Dalian 24.98 315 P **P** **01 36 03.4 +0.2**
DL2 S **S** **01 40 27.3 +1.3**
DL2 pmax pmax
comp=Z,71nm,0.8s
DL2 pmax pmax
comp=Z,370nm,8.0s
DL2 L L
comp=Z,600nm,16.3s
DL2 L L
comp=Z,630nm,15.2s
DL2 L L
comp=Z,770nm,15.1s
JAY Jayapura 25.41 188 LR LR 01 44 48.8
comp=Z,406nm,19.1s,baz=1.0,slow=33
JAY Jayapura 25.41 188 P **P** **01 36 09.2 +1.9**
SNY Shenyang 25.57 323 P **P** **01 36 07.9 -0.6**
SNY S **S** **01 40 40.6 +5.3**
SNY pmax pmax
comp=Z,57nm,1.2s
SNY L L
comp=Z,400nm,19.2s
SNY L L
comp=Z,680nm,20.1s
SNY L L
comp=Z,1µm,19.4s
CN2 Changchun 25.98 328 P **P** **01 36 13.9 +1.7**
CN2 S **S** **01 40 42.3 +0.6**
CN2 pmax pmax
comp=Z,20nm,1.3s
CN2 pmax pmax
comp=Z,300nm,6.0s
CN2 L L
comp=Z,1µm,18.0s
CN2 L L
comp=Z,900nm,18.0s
CN2 L L
comp=Z,1µm,18.0s
BNX BinXian 26.59 333 ⇓P **P** **01 36 18.3 +0.6**
BNX S **S** **01 40 57.5 +6.1**
BNX pmax pmax
comp=Z,62nm,1.0s
BNX pmax pmax
comp=Z,300nm,7.3s
BNX L L
comp=Z,570nm,19.8s
BNX L L
comp=Z,500nm,16.3s
BNX L L
comp=Z,720nm,14.7s
SIJI Sorong 26.68 210 LR LR 01 44 20.1
comp=Z,480nm,21.3s,baz=352,slow=31
TIA Tai'an 26.90 306 P **P** **01 36 20.8 +0.2**
TIA pmax pmax
comp=Z,73nm,0.8s
TIA pmax pmax
comp=Z,370nm,7.1s
TIA L L
comp=Z,500nm,18.8s
TIA L L
comp=Z,490nm,15.9s
TIA L L
comp=Z,740nm,16.5s
WHN Wuhan 27.62 293 P **P** **01 36 27.3 +0.2**
WHN pP **pP** **01 36 30.4 -1.8**
WHN S **S** **01 41 06.8 -1.1**
WHN pmax pmax
comp=Z,190nm,1.2s
WHN L L
comp=Z,2µm,19.2s
WHN L L
comp=Z,2µm,21.4s
WHN L L
comp=Z,3µm,18.0s
TYV Tymovskoe 28.00 358 *e*P **P** **01 36 30.8 +0.5**
TYV *e*S **S** **01 41 17.7 +4.2**
TYV pmax pmax
comp=Z,400nm,5.7s
TYV pmax pmax
comp=Z,7.0nm,1.2s
TYV smax smax
comp=N,400nm,9.3s
TYV smax smax
comp=E,300nm,9.3s
KRVT Keravat (AS076 28.06 163 LR LR 01 47 30.9
comp=E,43nm,19.7s,baz=253,slow=36
KLR Kul'dur 28.10 343 *ce*P **P** **01 36 31.9 +0.6**
comp=E,28nm,0.7s,baz=152,slow=6.8,SNR=87
KLR LR LR 01 48 14.4
comp=E,783nm,18.2s,baz=166,slow=38
comp=E,28nm,0.7s
KLR Kul'dur 28.10 343 *ce*P **P** **01 36 31.8 +0.6**
KLR pmax pmax
comp=Z,34nm,0.8s
HNS HongShan 29.14 307 ⇓P **P** **01 36 41.0 +0.4**
HNS S **S** **01 41 36.8 +5.1**
HNS pmax pmax
comp=Z,59nm,1.1s
HNS L L
comp=Z,640nm,18.0s
HNS L L
comp=Z,340nm,17.9s
HNS L L
comp=Z,470nm,16.7s
BJI2 Beijing 29.19 312 P **P** **01 36 39.9 -1.1**
BJI2 pmax pmax
comp=Z,5.0nm,0.9s
BJI2 L L
comp=Z,240nm,20.3s
BJI2 L L
comp=Z,230nm,22.5s
BJI2 L L
comp=Z,330nm,22.0s
BJT Baijiatuau 29.19 312 P **P** **01 36 44.2 +3.2**
LYN LuoYang 29.99 300 P **P** **01 36 46.1 -2.1**
LYN pmax pmax
comp=Z,100nm,1.5s
LYN pmax pmax
comp=Z,410nm,3.5s
LYN L L
comp=Z,450nm,14.8s
LYN L L
comp=Z,810nm,19.6s
LYN L L
comp=Z,1µm,18.9s
GTOI Gorontalo 30.13 226 P **P** **01 36 49.4 -0.1**
comp=Z,45nn,1.1s
KRAI Karang Ratu 30.18 213 P **P** **01 36 49.9 -0.1**
MYLDM Lahad Datu 30.32 239 P **P** **01 36 54.2 +2.9**
MYLDM Lahad Datu 30.32 239 P **P** **01 36 53.0 +1.7**
MYLDM Lahad Datu 30.32 239 P **P** **01 36 53.4 +2.1**
comp=Z,60nn,1.1s
HEH HeiHe 30.34 339 *e*P **P** **01 36 51.9 +0.9**
HEH pP **pP** **01 36 54.8 -1.2**
HEH sP sP 01 36 58.3 +0.2
HEH PcP **PcP** **01 39 51.0 +0.1**
HEH S **S** **01 41 52.9 +2.7**
HEH pmax pmax
comp=Z,24nm,1.0s
HEH L L
comp=Z,580nm,19.6s
HEH L L
comp=Z,510nm,18.1s
HEH L L
comp=Z,1µm,19.2s
SANI Sanana 30.40 218 P **P** **01 36 50.9 -1.0**
comp=Z,14nm,0.5s
GULI GuiLin 30.86 281 P **P** **01 36 58.4 +2.4**
GULI S S 01 42 06.6 +7.5
GULI pmax pmax
comp=Z,10.0nm,1.4s
GULI L L
comp=Z,270nm,21.8s
GULI L L
comp=Z,270nm,22.2s
GULI L L
comp=Z,530nm,23.5s
TIY Taiyuan 30.94 306 P P 01 37 03.4 +6.7
TIY S **S** **01 42 02.3 +2.1**
TIY pmax pmax
comp=Z,180nm,6.0s
TIY LR LR
comp=N,470nm,16.5s
TIY LR LR
comp=E,230nm,17.9s
TIY LR LR
comp=Z,310nm,22.7s
MRSI Marisa 30.96 227 P **P** **01 36 57.1 +0.2**
comp=Z,845nmcomp=Z,85nm,1.0s
TOLI2 Tolitoli 31.30 230 P **P** **01 37 01.0 +1.1**
TOLI2 Tolitoli 31.30 230 P **P** **01 37 00.1 +0.1**
TOLI2 IAmb IAmb 01 37 04.0
comp=Z,17nm,0.7s
LUWI Luwuk 31.55 224 P **P** **01 37 03.7 +1.6**
KKM Kota Kinabalu 31.65 242 P **P** **01 37 03.5 +0.3**
KKM IAmb IAmb 01 37 11.5
comp=Z,16nm,0.9s
ENH Enshi 31.76 291 P **P** **01 37 03.8 -0.1**
PETK Petropavlovsk- 31.96 16 LR LR 01 49 56.6
comp=Z,380nm,20.2s,baz=195,slow=36
PMG Port Moresby 32.18 174 *i*P **P** **01 37 08.0 +0.4**
PMG pmax pmax
comp=Z,20nm,1.0s
APSI Ampana 32.18 226 P **P** **01 37 07.9 +0.3**
comp=Z,39nn,1.0s
QIZ Qiongzhong 32.19 270 P **P** **01 37 07.9 +0.2**
QIZ S **S** **01 42 23.0 +3.2**
QIZ L L
comp=Z,230nm,15.5s
QIZ L L
comp=Z,390nm,20.8s
QIZ L L
comp=Z,450nm,19.0s
MPSI Mapaga 32.47 230 P **P** **01 37 10.4 +0.2**
comp=Z,11nm,0.9s
HIA Hailar 32.65 330 P **P** **01 37 12.4 +0.9**
HHC Hu-ho-hao-te 32.72 311 ⇓*i*P **P** **01 37 12.6 +0.3**
HHC sP sP 01 37 20.4 +1.1
HHC pmax pmax
comp=Z,19nm,1.3s
HHC pmax pmax
comp=Z,180nm,3.9s
HHC L L
comp=Z,200nm,17.8s
HHC L L
comp=Z,590nm,19.6s
HHC L L
comp=Z,630nm,18.7s
XAN Xi'an 32.75 298 ⇓P **P** **01 37 12.8 +0.2**
XAN pP pP 01 37 16.4 -1.3
XAN S S 01 42 35.3 +6.9
XAN pmax pmax
comp=Z,30nm,0.9s
XAN pmax pmax
comp=Z,330nm,4.8s
XAN L L
comp=Z,640nm,19.8s
XAN L L
comp=Z,1µm,24.4s
XAN L L
comp=Z,910nm,22.0s
ZEA Zeya 33.40 342 *e*P **P** **01 37 18.6 +0.7**
ZEA pmax pmax
comp=N,10.0nm,0.8s
ZEA pmax pmax
comp=Z,20nm,0.9s
BTO2 Baotou 33.86 310 *e*P **P** **01 37 22.8 +0.5**
BTO2 pP **pP** **01 37 27.3 -0.1**
BTO2 sP sP 01 37 29.6 +0.2
BTO2 S **S** **01 42 46.9 +1.2**
BTO2 sS sS 01 42 53.0 -1.2
BTO2 pmax pmax
comp=Z,43nm,1.5s
BTO2 pmax pmax
comp=Z,500nm,9.8s
BTO2 L L
comp=Z,2µm,18.6s
BTO2 L L
comp=Z,990nm,18.8s
BTO2 L L
comp=Z,2µm,19.1s
TTSI Tana Toraja 34.98 226 P **P** **01 37 32.6 +0.6**
comp=Z,60nm,1.0s
SPSI Sidrap Palu 35.70 225 P **P** **01 37 39.1 +0.9**
BKB Balikpapan 35.73 232 P **P** **01 37 40.1 +1.6**
KAPI Kappang 36.51 224 LR LR 01 51 18.1
comp=Z,223nm,21.5s,baz=50,slow=34
KAPI Kappang 36.51 224 P **P** **01 37 46.4 +1.3**
KAPI Kappang 36.51 224 P **P** **01 37 46.0 +0.8**
KAPI IAmb IAmb 01 37 47.1
comp=Z,20nm,0.8s
KAPI Kappang 36.51 224 *i*P **P** **01 37 45.9 +0.8**
KAPI pmax pmax
comp=Z,23nm,1.0s
KAPI Kappang 36.51 224 P **P** **01 37 45.5 +0.4**
comp=Z,17nm,1.2s
COEN Coen 36.57 182 P **P** **01 37 44.5 -1.1**
COEN Coen 36.57 182 P **P** **01 37 46.5 +0.8**
COEN IAmb IAmb 01 38 06.4
comp=Z,23nm,0.9s
CD2 Chengdu 36.73 291 P **P** **01 37 46.3 -0.7**
CD2 pP pP 01 37 49.4 -2.7
CD2 sP sP 01 37 51.0 -3.1
CD2 S **S** **01 43 32.9 +3.1**
CD2 pmax pmax
comp=Z,40nm,1.0s
CD2 pmax pmax
comp=Z,250nm,9.3s
CD2 L L
comp=Z,900nm,14.6s
CD2 L L
comp=Z,1µm,17.1s
CD2 L L
comp=Z,1µm,20.3s
MKS Makassar 36.84 224 P **P** **01 37 49.2 +1.2**
comp=Z,1µmcomp=Z,36nm,1.0s
BSSI Bau Bau, Buton 36.92 222 P **P** **01 37 49.0 +0.3**
comp=Z,38nn,1.2s
SBUM Sibu 36.97 241 P **P** **01 37 50.6 +1.5**
SBUM Sibu 36.97 241 P **P** **01 37 50.2 +1.2**
SBUM Sibu 36.97 241 P **P** **01 37 49.5 +0.4**
LZH Lanzhou 37.21 300 P **P** **01 37 52.4 +1.3**
LZH sP pwP 01 38 00.0 -0.5
LZH S **S** **01 43 36.0 -1.2**
LZH pmax pmax
comp=Z,63nm,1.2s
LZH pmax pmax
comp=Z,290nm,4.8s
LZH L L
comp=Z,320nm,17.2s
LZH L L
comp=Z,680nm,18.6s
LZH L L
comp=Z,1µm,19.2s
LZDM Lanzhou Array 37.30 300 P **P** **01 37 52.3 +0.2**
comp=Z,13nm,0.5s,baz=128,slow=9.3,SNR=24
LZDM PcP **PcP** **01 40 12.3 +0.9**
comp=Z,1.7nm,0.4s,baz=90,slow=4.3,SNR=1.5
LZDM LR LR 01 54 23.1
comp=Z,554nm,18.9s,baz=65,slow=38
comp=Z,13nm,0.5s
SHEM Shemya Is, Ala 37.61 30 LR LR 01 50 56.8
comp=Z,404nm,21.2s,baz=284,slow=32
MTN Manton Dam 37.67 201 P **P** **01 37 54.9 0.0**
MTN IAmb IAmb 01 37 60.0
comp=Z,27nm,1.5s
KMI2 Kunming 37.76 282 P **P** **01 37 56.6 +0.6**
KMI2 pmax pmax
comp=Z,17nm,0.6s
KMI2 L L
comp=Z,360nm,15.8s
KMI2 L L
comp=Z,250nm,16.8s
KMI2 L L
comp=Z,420nm,26.0s
BATI Baumata 38.46 214 LR LR 01 52 52.7
comp=Z,156nm,21.1s,baz=48,slow=35
PZH PanZhiHua 38.55 284 P **P** **01 38 04.3 +1.7**
ULN Ulaanbaatar 38.65 319 P **P** **01 38 02.9 -0.2**
ULN IAmb IAmb 01 38 04.7
comp=Z,67nm,1.8s
ULN Ulaanbaatar 38.65 319 *ce*P **P** **01 38 03.4 +0.2**
ULN pmax pmax
comp=Z,25nn,1.3s
ULN Ulaanbaatar 38.65 319 P **P** **01 38 02.6 -0.6**
comp=Z,72nm,1.5s
SONM Songino Array 39.03 319 P **P** **01 38 06.0 -0.4**
comp=Z,3.5nm,0.6s,baz=126,slow=6.7,SNR=24
SONM PcP **PcP** **01 40 15.9 -0.3**
comp=Z,1.3nm,0.8s,baz=108,slow=4.7,SNR=2.9
SONM ScP **S** **01 44 01.4 -3.1**
comp=Z,0.2nm,0.2s,baz=92,slow=4.3,SNR=2.0
SONM LR LR 01 54 22.7
comp=Z,850nm,20.2s,baz=120,slow=36
comp=Z,3.5nm,0.6s
DBNI Kabupaten Domp 40.10 222 P **P** **01 38 15.5 +0.1**
comp=Z,12nm,0.7s
YAK Yakutsk 40.41 350 P **P** **01 38 17.5 +0.2**
comp=Z,45nn,0.5s,baz=151,slow=1.7,SNR=12
comp=Z,45nn,0.5s
YAK Yakutsk 40.41 350 P **P** **01 38 17.5 +0.2**
YAK Yakutsk 40.41 350 *e*P **P** **01 38 17.3 0.0**
YAK *e* 01 39 50.8
YAK *e* 01 40 20.7
YAK *e*S **S** **01 44 22.4 -2.0**
YAK *e*SS **SS** **01 47 23.7 +0.2**
YAK *e*SSS SSS 01 47 48.4
YAK pmax pmax
comp=Z,51nm,0.9s
YAK pmax pmax
comp=N,13nm,1.1s
YAK pmax pmax
comp=E,4.0nm,0.9s
YAK pmax pmax

comp=Z,148nm,5.0s
YAK pmax pmax
comp=N,105nm,5.3s
YAK smax smax
comp=E,48nm,2.0s
YAK smax smax
comp=N,22nm,2.3s
YAK MLR MLR
comp=Z,683nm,19.0s
YAK MLR MLR
comp=N,454nm,19.0s
SEY Seymchan 40.47 6 P P 01 38 19.1 +1.2
comp=N,1.3nm,0.3s,baz=175,slow=6.7,SNR=7.0
comp=N,1.3nm,0.3s
SEY Seymchan 40.47 6*ce*P P 01 38 18.9 +1.0
SEY pmax pmax
comp=Z,6.0nm,1.0s
PLAI Plampang 40.68 222 P P 01 38 20.2 0.0
PLAI Plampang 40.68 222 P P 01 38 19.0 -1.2
comp=Z,731nmcomp=Z,45nm,1.0s
MTSU Mount Surprise 40.72 180 P P 01 38 19.3 -1.1
GTA2 Gaotai 40.99 304 *e*P P 01 38 22.8 +0.1
GTA2 S S **01 44 33.3 -0.7**
GTA2 pmax pmax
comp=Z,45nm,1.0s
GTA2 L L
comp=Z,440nm,19.7s
GTA2 L L
comp=Z,430nm,20.9s
GTA2 L L
comp=Z,660nm,20.0s
KNRA Kununurra 41.12 203 P P 01 38 23.2 -0.5
TWSI Taliwang, Sumb 41.17 223 P P 01 38 24.8 +0.5
comp=Z,32nm,1.0s
KLNI Mataram 41.44 225 P P 01 38 26.9 +0.5
comp=Z,2µmcomp=Z,51nm,0.9s
KHKI Kahang-Kahang 41.71 225 P P 01 38 29.4 +0.7
KMMI Kalianget 41.86 228 P P 01 38 31.0 +1.1
ZAK Zakamensk 41.99 321 *e*P P 01 38 29.8 -0.9
ZAK pmax pmax
comp=Z,34nm,1.3s
ABJI Asem Bagus 42.21 227 P P 01 38 33.5 +0.7
comp=Z,1µmcomp=Z,51nm,1.1s
RTBI Rangdo, Negare 42.22 226 P P 01 38 32.9 0.0
comp=Z,38nm,0.6s
CHTO Chiang Mai 42.29 273 P P 01 38 33.9 +0.5
CHTO Chiang Mai 42.29 273 P P 01 38 32.9 -0.5
CHTO Chiang Mai 42.29 273 P P 01 38 32.9 -0.5
CHTO pmax pmax
comp=Z,13nm,1.1s
CHTO Chiang Mai 42.29 273 P P 01 38 32.2 -1.2
TLY Talaya 42.36 323 LR LR 01 56 35.8
comp=Z,892nm,19.7s,baz=111,slow=37
TLY Talaya 42.36 323*ce*P P 01 38 34.4 +0.8
TLY pmax pmax
comp=Z,29nm,1.7s
CMAR Chiang Mai Arr 42.37 273 P P 01 38 34.1 0.0
comp=Z,4.2nm,0.6s,baz=60,slow=8.1,SNR=23
CMAR PcP **PcP 01 40 27.2 -0.2**
comp=Z,1.9nm,0.3s,baz=80,slow=1.5,SNR=4.5
CMAR LR LR 01 55 52.2
comp=Z,335nm,19.6s,baz=80,slow=36
comp=Z,4.2nm,0.6s
CMAR Chiang Mai Arr 42.37 273 P P 01 38 33.7 -0.4
CMAR Chiang Mai Arr 42.37 273*ce*P P 01 38 34.7 +0.6
CMAR pmax pmax
comp=Z,4.0nm,0.5s
BYJI Banyuwangi 42.43 227 P P 01 38 36.0 +1.4
BLJI Banyuglugur 42.61 228 P P 01 38 36.7 +0.7
comp=Z,2µmcomp=Z,68nm,1.2s
CTA Charters Tower 42.71 177 LR LR 01 55 43.6
comp=Z,226nm,21.7s,baz=24,slow=35
CTAO Charters Tower 42.71 177 P P 01 38 37.2 +0.6
CTAO IAmb IAmb 01 38 41.2
comp=Z,69nm,1.6s
CTAO Charters Tower 42.71 177 P P 01 38 37.3 +0.6
CTAO pmax pmax
comp=Z,69nm,1.7s
QIS Mount Isa 43.35 186 P P 01 38 42.5 +0.6
WR8 Warramunga Arr 43.55 193 IAmb IAmb 01 38 51.9
comp=Z,28nm,1.6s
WRAB Tennant Creek 43.56 193 P P 01 38 43.3 -0.3
WRAB Tennant Creek 43.56 193 P P 01 38 43.6 +0.1
WRAB IAmb IAmb 01 38 53.1
comp=Z,9.8nm,0.6s
WRAB Tennant Creek 43.56 193 *i* P P 01 38 44.1 +0.5
WRAB pmax pmax
comp=Z,7.0nm,0.9s
WRA Warramunga Arr 43.57 193 P P 01 38 43.3 -0.4
comp=Z,4.8nm,0.5s,baz=16,slow=9.0,SNR=46
WRA PcP **PcP 01 40 31.7 +0.4**
comp=Z,1.4nm,0.7s,baz=8.2,slow=3.1,SNR=1.9
WRA ScP **ScP 01 44 20.2 -1.6**
comp=Z,3.2nm,1.0s,baz=19,slow=4.0,SNR=9.9
comp=Z,4.8nm,0.5s
WRA Warramunga Arr 43.57 193 P P 01 38 43.0 -0.7
WRA Warramunga Arr 43.57 193 *i* P P 01 38 43.7 0.0
WRA pmax pmax
comp=Z,6.0nm,0.4s
WB1 Warramunga Ar. 43.59 193 P P 01 38 43.5 -0.3
MOY Mondy 43.84 322 *e*P P 01 38 45.8 +0.1
MOY pmax pmax
comp=Z,19nm,1.8s
SJI Sawahan 43.88 230 P P 01 38 46.4 0.0
comp=Z,89nm,1.9s
SNJI Sawahan-Nganju 43.91 230 P P 01 38 45.7 -1.1
comp=Z,43nm,1.4s
MYKOM Kota Tinggi 44.30 248 P P 01 38 51.6 +1.9
MYKOM Kota Tinggi 44.30 248 IAmb IAmb 01 38 51.9
comp=Z,38nm,1.5s
MYKOM Kota Tinggi 44.30 248 P P 01 38 49.6 -0.1
GOMU GeErMu 44.48 299 P P 01 38 50.4 -1.0
GOMU S S **01 45 23.0 -2.9**
GOMU pmax pmax
comp=Z,70nm,1.1s
GOMU L L
comp=Z,320nm,17.2s
GOMU L L
comp=Z,260nm,18.7s
PCJI Pacitan 44.61 230 P P 01 38 52.0 -0.1
comp=Z,85nm,1.5s
KULM Kulim 45.40 254 P P 01 38 58.7 +0.2
KULM IAmb IAmb 01 39 00.1
comp=Z,16nm,0.8s
KULM Kulim 45.40 254 P P 01 38 57.8 -0.7
comp=Z,25nm,0.8s
KNGR Kungurtug, Tuv 45.47 320 *i* P P 01 38 59.3 +0.6
KNGR pmax pmax
comp=Z,8.0nm,0.9s
LEM Lembang 46.30 235 LR LR 01 59 17.5
comp=Z,231nm,21.0s,baz=16,slow=37
LEM Lembang 46.30 235 P P 01 39 05.2 -0.5
comp=Z,52nm,1.4s
DBJI Dramaga 46.78 236 P P 01 39 09.6 +0.3
comp=Z,59nm,0.8s
BILL Bilibino 47.24 11 P P 01 39 12.4 +0.2
BILL IAmb IAmb 01 39 31.6
comp=Z,9.6nm,1.0s
BILL Bilibino 47.24 11*ce*P P 01 39 11.6 -0.7
BILL pmax pmax
comp=Z,7.0nm,1.0s
ASAR Alice Springs 47.27 193 P P 01 39 13.0 0.0
comp=Z,2.7nm,0.6s,baz=17,slow=8.1,SNR=28
ASAR PcP **PcP 01 40 44.6 +0.5**
comp=Z,1.1nm,0.8s,baz=17,slow=4.1,SNR=1.6
ASAR ScP **ScP 01 44 35.7 -1.4**
comp=Z,0.5nm,0.5s,baz=11,slow=6.0,SNR=5.9
ASAR LR LR 01 57 58.2
comp=Z,375nm,21.3s,baz=356,slow=35
comp=Z,2.7nm,0.6s
ASAR Alice Springs 47.27 193 P P 01 39 12.0 -1.0
ASAR Alice Springs 47.27 193 P P 01 39 12.0 -1.0
SHL Shillong 47.47 284 P P 01 39 14.1 -0.8
SHL Shillong 47.47 284 P P 01 39 14.1 -0.8
SHL pmax pmax
comp=Z,20nm,0.7s
MDSI Maura Dua 47.52 240 P P 01 39 17.3 +2.2
LSA Lhasa 47.65 290 P P 01 39 15.8 -0.8
LSA pmax pmax
comp=Z,18nm,0.8s
PSI Prapat 48.07 252 P P 01 39 20.1 +0.5
PSI Prapat 48.07 252 P P 01 39 20.1 +0.5
comp=Z,20nm,0.9s
RPSI Rantau Prapat 48.12 252 IAmb IAmb 01 39 20.9
comp=Z,15nm,0.8s
UNV Unalaska Valle 48.19 37 P P 01 39 20.5 +0.8
baz=250
EIDS Eidsvold 48.39 172 P P 01 39 21.2 -0.4
EIDS IAmb IAmb 01 39 44.6
comp=Z,16nm,1.3s
MNSI Mandailing Nat 48.48 249 P P 01 39 22.0 -0.5
comp=Z,4µmcomp=Z,40nm,0.7s
PDSI Padang 48.60 247 P P 01 39 23.2 -0.3
comp=Z,22nm,0.6s
KCSI Kotacane, Aceh 48.76 254 P P 01 39 23.6 -1.1
comp=Z,647nmcomp=Z,19nm,1.0s
QLP Quilpie 49.12 180 P P 01 39 27.0 -0.2
TPTI 49.40 254 P P 01 39 28.1 -1.5
comp=Z,20nm,1.0s
TIXI Tiksi 49.62 354 P P 01 39 30.2 -0.3
comp=Z,8.0nm,0.6s,baz=148,slow=5.3,SNR=14
comp=Z,8.0nm,0.6s
TIXI Tiksi 49.62 354 P P 01 39 30.6 +0.2
TIXI IAmb IAmb 01 39 33.7
comp=Z,9.0nm,0.8s
TIXI Tiksi 49.62 354*ce*P P 01 39 29.7 -0.8
TIXI pmax pmax
comp=Z,8.0nm,0.7s
GSI Gunungsitoli 49.97 251 P P 01 39 33.7 -0.3
GSI Gunungsitoli 49.97 251 P P 01 39 33.6 -0.4
SISI Saibi 49.98 247 P P 01 39 33.4 -0.6
comp=Z,820nmcomp=Z,53nm,0.7s
PSA00 Pilbara Seismi 50.07 210 P P 01 39 34.0 -0.5
PSA00 IAmb IAmb 01 39 35.6
comp=Z,22nm,1.6s
GAMB Gambell 50.24 24 P P 01 39 37.8 +2.5
baz=237
WMQ Urumqi 50.54 309 *e*P P 01 39 39.1 +1.1
WMQ pP pP 01 39 44.3 +1.0
WMQ PcP **PcP 01 40 59.0 +3.2**
WMQ pmax pmax
comp=Z,28nm,1.1s
WMQ L L
comp=Z,370nm,21.9s
WMQ L L
comp=Z,570nm,19.1s
WMQ L L
comp=Z,350nm,21.5s
M11K Mekoryuk 50.85 29 P P 01 39 41.1 +1.1
baz=245
AULRC Lightning Ridg 52.09 176 P P 01 39 48.7 -0.9
M13K Dall Lake 52.16 30 P P 01 39 51.3 +1.5
baz=248
K13K Kusilvak Mount 52.18 28 P P 01 39 51.6 +1.6
baz=246
CHNA Chernabura Isl 52.35 37 P P 01 39 52.3 +1.0
baz=256
S14K Fog Glacier 52.74 36 P P 01 39 54.7 +0.4
baz=255
N14K Kuskokwak Cree 52.76 31 P P 01 39 55.2 +1.0
baz=250
L14K Kuka Creek 52.81 29 P P 01 39 55.9 +1.3
baz=248
ZSN Zaisan 52.88 313 *e*P P 01 39 55.9 +0.5
M14K Bethel 52.92 30 IAmb IAmb 01 40 12.5
comp=Z,25nm,1.3s
M14K Bethel 52.92 30 P P 01 39 56.2 +0.8
baz=249
ANM Nome 53.03 25 P P 01 39 57.9 +1.7
ANM Nome 53.03 25 P P 01 39 57.9 +1.7
ANM pmax pmax
comp=Z,9.0nm,1.0s
ANM Nome 53.03 25 P P 01 39 57.7 +1.4
baz=243
F14K Arctic Creek 53.10 23 P P 01 39 58.6 +1.9
baz=241
O15K Ungalikthiuk R 53.42 32 P P 01 40 00.2 +1.1
baz=252
L15K Ungalak Mounta 53.47 29 P P 01 40 00.9 +1.4
baz=249
M15K Kasigluk River 53.49 30 P P 01 40 00.6 +0.9
baz=250
N15K Kwethluk River 53.60 31 IAmb IAmb 01 40 10.3
comp=Z,8.5nm,0.8s
N15K Kwethluk River 53.60 31 P P 01 40 01.3 +0.8
baz=251
K15K Wolf Creek Mou 53.67 28 P P 01 40 02.6 +1.6
baz=248
G15K Niukluk 53.74 24 P P 01 40 03.2 +1.8
baz=244
F15K North Star Dit 53.83 24 P P 01 40 04.0 +2.0
baz=243
ZAA0 Zalesovo Array 53.87 321 P P 01 40 01.5 -1.0
ZALV Zalesovo Beam 53.87 321 P P 01 40 01.3 -1.2
comp=Z,6.0nm,0.5s,baz=107,slow=7.8,SNR=31
ZALV PcP **PcP 01 41 07.2 -0.7**
comp=Z,7.1nm,0.8s,baz=106,slow=4.7,SNR=5.7
ZALV LR LR 02 03 37.5
comp=Z,579nm,19.9s,baz=81,slow=37
comp=Z,6.0nm,0.5s
ZALV Zalesovo Beam 53.87 321 P P 01 40 01.7 -0.8
ZALV Zalesovo Beam 53.87 321 *i* P P 01 40 01.7 -0.8
ZALV pmax pmax
comp=Z,6.0nm,0.5s
CMSA Cobar Meteorol 54.08 178 P P 01 40 03.3 -0.9
P16K Nushagak River 54.28 33 P P 01 40 06.2 +0.8
baz=254
H16K Elim 54.29 25 P P 01 40 07.3 +1.9
baz=246
N16K Nishlik Lake 54.32 31 P P 01 40 06.8 +1.1
baz=252
J16K Anvik River 54.44 27 P P 01 40 08.2 +1.8
baz=249
G16K Koyuk River 54.55 24 P P 01 40 09.6 +2.3
baz=246
MK31 Makanchi Array 54.57 312*ce*P P 01 40 08.3 +0.5
MKAR Makanchi Array 54.57 312 P P 01 40 07.1 -0.8
comp=Z,9.6nm,0.6s,baz=89,slow=9.2,SNR=49
MKAR PcP **PcP 01 41 10.4 -0.4**
comp=Z,3.5nm,0.5s,baz=75,slow=5.3,SNR=5.4
MKAR ScP **ScP 01 45 05.2 -3.1**
comp=Z,0.4nm,0.8s,baz=98,slow=6.0,SNR=2.8
MKAR LR LR 02 05 01.3
comp=Z,294nm,18.2s,baz=92,slow=38
comp=Z,9.6nm,0.6s
MKAR Makanchi Array 54.57 312*ce*P P 01 40 07.5 -0.3
MKAR pmax pmax
comp=Z,10.0nm,0.6s
MAKZ Makanchi 54.79 312 P P 01 40 08.7 -0.7
MAKZ IAmb IAmb 01 40 13.1
comp=Z,16nm,0.9s
MAKZ Makanchi 54.79 312 P P 01 40 08.7 -0.7
MAKZ pmax pmax
comp=Z,16nm,0.9s
C16K Lisburne Hills 54.80 21 P P 01 40 11.7 +2.6
baz=240
O17K Koliganek Bris 54.92 32 P P 01 40 11.5 +1.4
baz=254
L17K Donlin 55.05 29 P P 01 40 12.6 +1.7
baz=252
N17K Nushagak Hills 55.09 31 P P 01 40 12.1 +0.9
baz=254
J17K VABM Dome 55.12 27 P P 01 40 12.8 +1.4
baz=250
M17K Holitna River 55.22 30 P P 01 40 13.2 +1.0
baz=253
K17K Iditarod 55.23 28 IAmb IAmb 01 40 30.3
comp=Z,11nm,0.9s
K17K Iditarod 55.23 28 P P 01 40 13.1 +0.8
baz=251
G17K Kiwalik Mounta 55.25 25 P P 01 40 14.1 +1.8
baz=247
D17K Noatak River 55.29 22 P P 01 40 14.9 +2.4
baz=243
H17K Granite Mounta 55.32 25 P P 01 40 14.4 +1.5
baz=248
F17K Baldwin Pennin 55.40 23 IAmb IAmb 01 40 40.1
comp=Z,14nm,1.4s
F17K Baldwin Pennin 55.40 23 P P 01 40 15.4 +2.1
baz=246
C17K DeLong Mountai 55.61 21 P P 01 40 17.1 +2.2
baz=243
P18K Big Mountain, 55.75 33 P P 01 40 16.6 +0.5
P18K Big Mountain, 55.75 33 P P 01 40 17.0 +0.8
baz=256
L18K Granite Mounta 55.79 29 P P 01 40 17.4 +1.1
baz=253
O18K Koktuh Hills 55.87 32 P P 01 40 18.3 +1.4
baz=256
H18K Honhosa River 56.01 25 P P 01 40 18.8 +0.9
baz=250
E18K Tukpahlearik C 56.03 23 P P 01 40 19.6 +1.7
baz=246
F18K Selawik 56.05 24 P P 01 40 19.6 +1.5
baz=248
G18K Tagagawik 56.16 25 P P 01 40 20.5 +1.6
baz=249
C18K Utukok River 56.34 21 P P 01 40 22.1 +1.9
baz=245
N19K Bonanza Creek 56.45 31 P P 01 40 21.7 +0.6
baz=256
PDGK Podgornoye 56.47 308 P P 01 40 21.6 -0.1
SHLS Shalkode 56.49 308 *e*P P 01 40 20.0 -1.9
comp=Z,5.8nm,0.8s
AFI Afiamalu 56.56 126 LR LR 02 02 37.6
comp=Z,483nm,18.9s,baz=340,slow=34
L19K White Mountain 56.61 29 P P 01 40 23.1 +0.9
baz=255
KDAK Kodiak Island 56.78 35 LR LR 02 01 34.1
comp=Z,402nm,22.0s,baz=240,slow=33
P19K Oil Pt 56.80 33 P P 01 40 24.0 +0.4
baz=258
UZB Uzynbulak 56.82 308 *e*P P 01 40 24.5 +0.4
comp=Z,4.6nm,0.8s
F19K Shaleruckik Mo 56.83 24 P P 01 40 25.3 +1.7
baz=249
G19K Purcell Mounta 56.85 25 P P 01 40 25.6 +1.9
baz=250
H19K Roundabout Mou 56.90 25 P P 01 40 25.5 +1.5
baz=251
A19K Wainwright 57.05 19 P P 01 40 27.7 +2.6
baz=244
KPKS Kokpek 57.06 308 *e*P P 01 40 26.2 +0.5
C19K Lookout Ridge 57.06 21 P P 01 40 27.8 +2.5
baz=246
NRIK Noril'sk 57.24 339 P P 01 40 26.2 -0.2
comp=Z,13nm,0.7s,baz=106,slow=8.3,SNR=26
NRIK LR LR 02 05 51.6
comp=Z,433nm,19.3s,baz=117,slow=37
comp=Z,13nm,0.7s
NRIK Noril'sk 57.24 339 *i* P P 01 40 26.8 +0.3
NRIK pmax pmax
comp=Z,14nm,1.0s
KURK Kurchatov 57.24 317 P P 01 40 26.1 -0.7
KURK IAmb IAmb 01 40 28.0
comp=Z,13nm,0.8s
KURK Kurchatov 57.24 317*ce*P P 01 40 25.6 -1.2
KURK pmax pmax
comp=Z,34nm,1.7s
E19K Redstone River 57.25 23 P P 01 40 28.6 +2.0
baz=249
K20K Telida 57.26 28 P P 01 40 27.9 +1.1
baz=255
SATY Saty 57.27 307 *e*P P 01 40 27.8 +0.4
comp=Z,11nm,0.9s
KURBB Kurchatov Arra 57.29 316 P P 01 40 26.1 -1.0
comp=Z,13nm,0.7s,baz=93,slow=7.9,SNR=127
KURBB LR LR 02 06 53.3
comp=Z,521nm,18.0s,baz=139,slow=38
comp=Z,13nm,0.7s
KURBB Kurchatov Arra 57.29 316 P P 01 40 26.6 -0.6
D19K Kuna River 57.31 22 P P 01 40 29.2 +2.1
baz=248
M20K Styx River 57.33 30 P P 01 40 28.4 +1.0
baz=257
J20K Nowinta River 57.44 27 P P 01 40 28.8 +0.8
baz=254
H20K Anotleneega Mo 57.51 26 P P 01 40 29.8 +1.4
baz=253
F20K Avaraart Lake 57.66 24 P P 01 40 31.5 +2.1
baz=251
TARG Taragay, Kyrgy 57.77 306 P P 01 40 31.3 +0.1
TARG Taragay, Kyrgy 57.77 306 P P 01 40 31.3 +0.1
TARG pmax pmax
comp=Z,31nm,1.0s
E20K Nigu River 57.90 22 P P 01 40 33.4 +2.2
baz=250
D20K Etivluk River 57.91 22 IAmb IAmb 01 40 50.5
comp=Z,14nm,1.1s
D20K Etivluk River 57.91 22 P P 01 40 33.6 +2.4
baz=249
PPLA Purkeypile 57.98 29 P P 01 40 32.6 +0.6
baz=257
SKT Skwentna 58.09 30 P P 01 40 33.1 +0.5
baz=258
B20K Meade River 58.20 20 IAmb IAmb 01 40 35.8
comp=Z,8.8nm,0.8s
B20K Meade River 58.20 20 P P 01 40 34.8 +1.7
baz=248
KDJ Kajisay 58.21 306 P P 01 40 34.0 0.0
KDJ Kajisay 58.21 306 P P 01 40 34.0 0.0
KDJ pmax pmax
comp=Z,67nm,1.5s
MDOK Medeo 58.26 308 *e*P P 01 40 34.6 +0.3
G21K Allakaket 58.34 25 P P 01 40 35.3 +1.0
baz=254
TNSS Tian-Shan 58.34 307 *e*P P 01 40 35.3 +0.1
AAA Alma-Ata 58.35 308 *e*P P 01 40 35.4 +0.5
comp=Z,13nm,0.7s
H21K Melozitna Rive 58.38 26 P P 01 40 35.9 +1.3
baz=255
F21K Alatna River 58.55 24 P P 01 40 37.9 +2.1
baz=253
I21K Tanana 58.60 26 P P 01 40 37.7 +1.6
baz=256
C21K Knifeblade Rid 58.68 22 P P 01 40 39.0 +2.4
baz=251
E21K Killik River 58.73 22 P P 01 40 38.9 +1.8
baz=252
ULHL Ulahol 58.90 307 P P 01 40 39.6 +0.7
SNR=21
TRF Thorofare Moun 58.94 29 P P 01 40 39.5 +0.7
baz=259
H22K Ishtalitna Cre 59.01 26 P P 01 40 40.7 +1.7
baz=256
MLY Manley 59.08 27 P P 01 40 40.5 +1.0
baz=257
G22K Bettles 59.21 24 P P 01 40 41.8 +1.5
baz=255
A22K Sinclair Lake 59.24 19 P P 01 40 42.9 +2.4
baz=250
TKM2 Tokmak 2 59.34 307 P P 01 40 42.6 +0.7
SNR=25
E22K Anaktuvuk Pass 59.41 23 P P 01 40 43.8 +2.0
baz=254,SNR=5.1
B22K Teshekpuk Lake 59.51 20 P 01 40 43.2 +1.0
B22K Teshekpuk Lake 59.51 20 P P 01 40 44.0 +1.7
baz=252
SML Sawmill 59.55 31 P P 01 40 44.0 +1.1
baz=261
MCK McKinley 59.59 28 P P 01 40 44.2 +1.2
baz=260
KSH2 Kashi 59.67 303 P P 01 40 45.1 +0.9
KSH2 sP sP 01 40 51.5 +0.1
KSH2 pmax pmax
comp=Z,39nm,0.9s
I23K Minto, Yukon-K 59.67 27 P P 01 40 45.2 +1.7
baz=258
H23K Yukon River 59.73 26 P P 01 40 45.6 +1.6
baz=258
G23K Bananza Creek 59.73 25 P P 01 40 45.6 +1.6
baz=257,SNR=7.4
COLD Coldfoot 59.78 24 P P 01 40 45.8 +1.5
baz=256
M23K Glacier View 59.83 31 P P 01 40 45.0 +0.3
baz=262
WAT6 Susitna Watana 59.94 30 P P 01 40 46.1 +0.5
baz=262
CHMS Chumysh 59.95 308 P P 01 40 46.9 +1.0
SNR=9.8
SGDS Sogindy 60.01 308 *e*P P 01 40 46.7 +0.4
SCM Sheep Creek Mo 60.02 31 P P 01 40 46.7 +0.6
baz=262
D23K Nanushuk River 60.03 22 P P 01 40 47.6 +1.6
baz=255
USP Ospenovka 60.11 308 P P 01 40 46.5 -0.5
SNR=13
AAK Ala-Archa 60.16 307 LR LR 02 09 25.2
comp=Z,454nm,18.7s,baz=88,slow=39
AAK Ala-Archa 60.16 307 P P 01 40 47.8 +0.3
SNR=15
AAK Ala-Archa 60.16 307 P P 01 40 47.9 +0.3
AAK Ala-Archa 60.16 307*ce*P P 01 40 46.5 -1.0
AAK pmax pmax
comp=Z,26nm,1.7s
UCH Uchtor 60.18 307 P P 01 40 49.1 +1.1
SNR=33
E23K Chandalar 60.19 23 P P 01 40 48.4 +1.2
baz=257
C23K Itkillik River 60.28 21 IAmb IAmb 01 41 00.7
comp=Z,15nm,0.8s

C23K Itkillik River 60.28 21 P P 01 40 50.1 +2.4
baz=255,SNR=12
TOLK Toolik Lake Re 60.35 23 P P 01 40 49.4 +1.3
baz=256,SNR=5.7
H24K Noodor Dome 60.41 26 P P 01 40 50.2 +1.5
baz=260
E24K Your Creek 60.61 23 P P 01 40 51.6 +1.6
baz=258
IL31 60.64 27 P P 01 40 50.4 +0.3
IL31 IAmb IAmb 01 41 59.6
comp=Z,33nm,1.9s
ILAR Eielson Array 60.64 27 P P 01 40 49.9 -0.3
comp=Z,2.4nm,0.7s,baz=256,slow=5.3,SNR=26
ILAR LR LR 02 06 26.2
comp=Z,196nm,19.7s,baz=256,slow=35
comp=Z,2.4nm,0.7s
ILAR Eielson Array 60.64 27 P P 01 40 49.5 -0.7
ILAR Eielson Array 60.64 27 P P 01 40 49.5 -0.7
EKS2 Erkin-Say 60.69 307 P P 01 40 52.2 +1.1
SNR=13
F24K Squaw Lake 60.72 24 P P 01 40 52.6 +1.8
baz=259
G24K Hadweenzic Riv 60.73 25 P P 01 40 51.9 +1.2
baz=260,SNR=5.9
D24K Happy Valley 60.73 22 P P 01 40 52.6 +1.9
baz=257
C24K Franklin Bluff 60.90 22 P P 01 40 53.4 +1.6
baz=257
K24K Donnelly Dome 60.98 29 P P 01 40 53.6 +1.0
baz=263
BRZS Berezniki 61.03 316 *e*P P 01 40 53.9 +0.7
G25K Bearman Lake 61.27 25 P P 01 40 55.4 +1.0
baz=261
HYB Hyderabad 61.37 278 *e*P P 01 40 56.1 +0.2
HYB *e*S S 01 49 17.3 +1.3
RIDG Independent Ri 61.39 29 P P 01 40 55.8 +0.4
baz=264
F25K Christian Rive 61.58 24 P P 01 40 58.2 +1.5
baz=261
D25K Kavik River 61.62 22 P P 01 40 58.4 +1.5
baz=259,SNR=10.0
E25K Arctic Village 61.70 24 P P 01 40 59.0 +1.6
baz=260,SNR=5.5
SCRK Sand Creek 61.79 28 P P 01 40 58.7 +0.6
SCRK IAmb IAmb 01 41 18.4
comp=Z,6.4nm,0.7s
SCRK Sand Creek 61.79 28 P P 01 40 58.8 +0.6
baz=264,SNR=5.5
CRQE Cirque 61.96 32 P P 01 40 59.9 +0.6
baz=267
BMAR Burnt Mountain 61.96 24 P P 01 41 00.9 +1.8
F26K Sheenjek River 62.16 24 P P 01 41 02.3 +1.8
baz=262,SNR=11
G26K Porcupine Rive 62.21 25 P P 01 41 02.2 +1.5
baz=263
C26K Camden Bay 62.23 22 P P 01 41 02.9 +2.1
baz=260
I26K Coal Creek Min 62.28 27 P P 01 41 02.7 +1.5
baz=264
NIL Nilore 62.28 297 P P 01 41 02.0 +0.1
NIL Nilore 62.28 297 P P 01 41 02.0 +0.1
NIL pmax pmax
comp=Z,72nm,1.3s
BVA0 Borovoye Array 62.38 319 *i* P P 01 41 01.8 -0.3
BVAR Borovoye Array 62.38 319 P P 01 41 01.7 -0.4
comp=Z,42nm,0.5s,baz=86,slow=6.6,SNR=252
BVAR LR LR 02 09 04.7
comp=Z,562nm,19.0s,baz=87,slow=37
BORK Borovoye 62.42 319 P P 01 41 02.1 -0.3
BORK Borovoye 62.42 319 *ce*P P 01 41 02.0 -0.3
BORK pmax pmax
comp=Z,40nm,0.8s
DZA Taraz 62.46 308 *e*P P 01 41 03.4 +0.5
comp=Z,7.2nm,1.0s
C27K Jago River 62.59 22 P P 01 41 05.9 +2.6
baz=262
M27K Edge Creek, AK 62.62 30 P P 01 41 04.7 +0.9
baz=267
L27K Beaver Creek, 62.69 30 P P 01 41 05.3 +1.3
baz=267
PALK Pallekele 62.73 266 LR LR 02 07 51.6
comp=Z,81nm,20.0s,baz=55,slow=36
CTG Chitna Glacier 62.83 32 P P 01 41 06.1 +1.0
baz=268
I27K Kandik River 62.95 27 P P 01 41 07.6 +1.8
baz=266
G27K Doyon Strip 63.03 25 P P 01 41 08.3 +2.0
baz=265
H27K Steamboat Moun 63.03 26 P P 01 41 08.1 +1.8
baz=265
BVCY Beaver Creek 63.10 30 P P 01 41 07.7 +0.9
baz=268
E27K Coleen River 63.18 24 P P 01 41 09.0 +1.8
baz=264
YUK3 Moose Creek 63.27 31 P P 01 41 09.2 +1.0
baz=269
O28M Mount Upton 63.38 32 P P 01 41 10.2 +1.2
baz=269
IUG Iuzhnay 63.50 307 *e*P P 01 41 10.3 +0.4
comp=Z,8.0nm,0.7s
D27M Malcolm River 63.51 23 P P 01 41 12.2 +2.7
baz=264
YUK8 Steele Glacier 63.60 32 P P 01 41 11.5 +1.1
baz=269
I28M Miner Creek 63.63 27 P P 01 41 12.1 +1.7
baz=267
F28M Old Crow 63.78 24 P P 01 41 13.2 +2.0
baz=266,SNR=5.4
CHM Chimkent 63.80 307 *e*P P 01 41 12.3 +0.5
comp=Z,7.6nm,0.6s
E28M Babbage River 63.97 23 P P 01 41 15.4 +2.9
baz=266
YUK4 Talbot Arm 64.14 31 P P 01 41 15.4 +1.5
baz=270
O29M Mount Kennedy 64.18 33 P P 01 41 15.4 +1.2
baz=271
M29M Somme Creek 64.22 30 P P 01 41 15.7 +1.4
baz=270
D28M Stokes Point 64.31 23 P P 01 41 17.0 +2.4
baz=266
H29M Whitestone 64.31 26 P P 01 41 16.4 +1.7
baz=268
L29M L29M 64.37 30 P P 01 41 16.8 +1.6
baz=270
G29M Pine Creek 64.47 25 P P 01 41 17.9 +2.1
baz=268
E29M Blow River 64.56 24 P P 01 41 18.8 +2.4
baz=268
K29M Barlow Dome 64.64 29 P P 01 41 18.9 +1.9
baz=270
HYT Haines Junctio 64.70 32 P P 01 41 19.1 +1.6
baz=272
N30M Aishikik Lake 64.88 31 P P 01 41 20.2 +1.6
baz=272
EPYK Eagle Plains 64.98 26 P P 01 41 21.2 +2.1
baz=270
M30M Minto, Yukon 64.99 30 P P 01 41 20.8 +1.6
baz=271
P30M Million Dollar 65.00 33 P P 01 41 21.2 +1.9
baz=272
I30M Mount Dempster 65.12 27 P P 01 41 22.0 +1.8
baz=271
J30M Hart River 65.15 28 P P 01 41 21.8 +1.4
baz=271
G30M tAoh Zraii Nji 65.18 25 P P 01 41 22.9 +2.5
baz=270
F30M Barrier River 65.35 25 P P 01 41 23.2 +1.8
baz=270
MAYO Mayo, Yukon 65.37 29 P P 01 41 23.4 +1.8
baz=272
S31K Pelican 65.50 35 P P 01 41 24.0 +1.5
baz=274
KBL Kabul 65.54 299 P P 01 41 22.5 -1.0
KBL Kabul 65.54 299 P P 01 41 22.5 -1.0
KBL pmax pmax
comp=Z,49nm,1.0s
H31M Peel River 65.96 27 P P 01 41 27.1 +1.7
baz=272
WHY Whitehorse 66.00 32 P P 01 41 27.0 +1.1
baz=274
INK Inuvik 66.19 24 P P 01 41 27.0 +0.3
comp=Z,2.3nm,0.6s,baz=313,slow=5.7,SNR=26
comp=Z,2.3nm,0.6s
INK Inuvik 66.19 24 P P 01 41 26.8 0.0
INK Inuvik 66.19 24 P P 01 41 26.8 0.0
INK pmax pmax
comp=Z,6.0nm,1.0s
INK Inuvik 66.19 24 P P 01 41 28.8 +2.0
baz=272
SVE Sverdlovsk 67.67 324 *e*P P 01 41 36.6 +0.2
SVE pmax pmax
comp=Z,22nm,1.0s
URZ Urewera 68.21 153 LR LR 02 08 19.8
comp=Z,235nm,21.7s,baz=324,slow=33
RTZ Ruatahuna 68.45 153 P P 01 41 41.6 0.0
A36M Sachs Harbour 68.69 20 P P 01 41 42.9 +0.4
A36M IAmb IAmb 01 42 04.1
comp=Z,16nm,1.4s
A36M Sachs Harbour 68.69 20 P P 01 41 45.6 +3.1
baz=278
DLBC Dease Lake 68.71 34 P P 01 41 44.2 +1.2
comp=Z,2.9nm,0.9s,baz=256,slow=8.3,SNR=4.3
DLBC LR LR 02 11 18.6
comp=Z,56nm,20.1s,baz=272,slow=35
comp=Z,2.9nm,0.9s
DLBC Dease Lake 68.71 34 P P 01 41 44.2 +1.2
baz=279
ARTI Arti 68.97 324 LR LR 02 14 17.1
comp=Z,309nm,18.7s,baz=80,slow=38
RAR Rarotonga 70.05 125 LR LR 02 06 40.1
comp=Z,418nm,20.7s,baz=292,slow=31
AKTO Aktyubinsk 70.32 317 LR LR 02 14 10.0
comp=Z,482nm,18.5s,baz=52,slow=37
AKTO Aktyubinsk 70.32 317 P P 01 41 51.4 -1.6
RPZ Rata Peaks 70.69 160 LR LR 02 10 53.1
comp=Z,143nm,20.4s,baz=67,slow=34
BBB Bella Bella 70.97 41 LR LR 02 05 50.7
comp=Z,102nm,21.8s,baz=252,slow=30
KIRV Kirov 73.20 327 LR LR 02 16 46.1
comp=Z,361nm,18.7s,baz=68,slow=38
KIRV Kirov 73.20 327 *ce*P P 01 42 09.3 -0.8
SPA0 Spitsbergen Ar 74.86 350 *e*P P 01 42 20.3 +0.7
SPITS Spitsbergen Ar 74.86 350 P P 01 42 20.1 +0.5
comp=Z,7.0nm,0.8s,baz=30,slow=6.8,SNR=1.7
comp=Z,7.0nm,0.8s
KBS Kingsbay 75.00 351 *e*P P 01 42 20.8 +0.4
KBS IAmb IAmb 01 42 22.5
comp=Z,22nm,1.0s
YKA Yellowknife Ar 75.05 28 P P 01 42 21.0 +0.1
comp=Z,1.2nm,0.8s,baz=296,slow=6.4,SNR=19
YKA LR LR 02 15 49.9
comp=Z,181nm,19.7s,baz=286,slow=36
comp=Z,1.2nm,0.8s
YKA Yellowknife Ar 75.05 28 P P 01 42 20.6 -0.4
YKA Yellowknife Ar 75.05 28 *i* P P 01 42 20.1 -0.8
YKA pmax pmax
comp=Z,1.0nm,0.8s
LLLB Lillooet 75.15 41 IAmb IAmb 01 42 53.0
comp=Z,13nm,1.3s
RES Resolute Bay 75.78 14 LR LR 02 22 21.6
comp=Z,78nm,18.0s,baz=344,slow=41
RES Resolute Bay 75.78 14 IAmb IAmb 01 42 26.6
comp=Z,21nm,1.8s
BELG Belogornoye 76.05 321 LR LR 02 17 43.8
comp=Z,540nm,19.6s,baz=87,slow=37
APA Apatity 76.64 338⇓ *e*P P 01 42 29.2 -0.7
APA pmax pmax
comp=Z,15nm,1.0s
APA MLR MLR
comp=Z,2μm,5.3s
H04A Detroit Lake 76.83 47 P P 01 42 31.6 +0.1
H04A IAmb IAmb 01 42 49.3
comp=Z,14nm,1.0s
KLMR Klimovskoe 77.14 331 *e*P P 01 42 31.3 -1.5
KLMR pmax pmax
comp=Z,23nm,1.2s
YBH Yreka Blue Hor 77.43 50 LR LR 02 13 10.0
comp=Z,14nm,19.9s,baz=269,slow=33
B08A Colville Reser 77.45 43 IAmb IAmb 01 42 57.9
comp=Z,8.4nm,0.9s
PINE Pine Mountain 77.97 48 P P 01 42 39.8 +1.7
PINE IAmb IAmb 01 43 03.6
comp=Z,12nm,0.9s
ARA0 ARCESS Array S 78.12 342 *e*P P 01 42 39.1 +0.9
ARA0 IAmb IAmb 01 42 41.3
comp=Z,113nm,1.7s
ARCES ARCESS Array B 78.12 342 P P 01 42 38.8 +0.6
comp=Z,8.2nm,0.8s,baz=70,slow=8.5,SNR=16
comp=Z,8.2nm,0.8s
ARCES ARCESS Array B 78.12 342 P P 01 42 39.2 +1.0
ARCES ARCESS Array B 78.12 342 P P 01 42 39.2 +1.0
ARCES pmax pmax
comp=Z,96nm,1.7s
K05A Summer Lake 78.37 49 P P 01 42 41.5 +1.2
K05A IAmb IAmb 01 43 05.2
comp=Z,25nm,1.3s
NEW Newport 78.87 42 LR LR 02 09 46.1
comp=Z,252nm,21.9s,baz=280,slow=30
KTK1 Kautokeino 79.08 342 *e*P P 01 42 44.4 +0.9
KTK1 IAmb IAmb 01 42 55.4
comp=Z,614nm,2.8s
MAK Makhachkala 79.39 312 *e*P P 01 42 40.9 -4.7
MAK *e* 01 45 48.8
MAK *e*S S 01 52 37.9 -7.7
MAK *e*SS SS 01 57 51.9 -0.5
MAK pmax pmax
comp=Z,157nm,1.3s
JETT Jettan, Norway 79.55 343 *e*P P 01 42 47.4 +1.3
JETT IAmb IAmb 01 42 54.3
comp=Z,28nm,0.9s
AKT Akhty 79.77 311 *e*P P 01 42 47.4 -0.5
AKT *e* 01 42 55.0
AKT *e* 01 45 44.5
AKT pmax pmax
comp=Z,12nm,0.6s
VRH Novokhopyorsk 79.90 321 *e*P P 01 42 47.9 -0.3
VRH pmax pmax
comp=Z,34nm,0.8s
TRO Tromso 79.90 343 *e*P P 01 42 48.1 +0.2
TRO IAmb IAmb 01 42 48.2
comp=Z,103nm,1.4s
MOS Moscow 80.20 327 *e*P P 01 42 47.9 -1.9
MOS MLR MLR
comp=Z,500nm,17.0s
LPSR Galich'ya Gora 80.89 323 *e*P P 01 42 53.1 -0.4
LPSR pmax pmax
comp=Z,28nm,0.9s
OBN Obninsk 81.02 326 LR LR 02 21 41.2
comp=Z,497nm,19.1s,baz=14,slow=38
OBN Obninsk 81.02 326 *e*P P 01 42 52.7 -1.5
OBN *i* 01 42 58.6
OBN pmax pmax
comp=Z,13nm,1.3s
OBN MLR MLR
comp=Z,516nm,19.0s
VORR Voronezh 81.13 322 *e*P P 01 42 54.4 -0.5
VORR pmax pmax
comp=Z,29nm,0.4s
VSR Storozhevoye 81.36 322 *e*P P 01 42 54.1 -1.9
VSR pmax pmax
comp=Z,20nm,1.0s
VORD Divnogorie 81.39 322 *e*P P 01 42 53.7 -2.5
VORD pmax pmax
comp=Z,10.0nm,1.0s
NVAR Mina Array Bea 81.77 52 P P 01 43 00.1 +1.2
comp=Z,2.2nm,0.8s,baz=263,slow=5.9,SNR=12
NVAR LR LR 02 11 53.8
comp=Z,278nm,21.6s,baz=274,slow=30
comp=Z,2.2nm,0.8s
NVAR Mina Array Bea 81.77 52 P P 01 42 59.4 +0.6
STEI Steigen 82.04 343 *e*P P 01 42 59.6 +0.2
STEI IAmb IAmb 01 43 07.8
comp=Z,129nm,1.6s
KBZ Khabaz 82.20 314 P P 01 43 00.2 -0.4
comp=Z,34nm,0.9s,baz=120,slow=2.4,SNR=74
KBZ LR LR 02 22 34.6
comp=Z,207nm,18.9s,baz=56,slow=38
KBZ Khabaz 82.20 314 *ce*P P 01 43 00.6 0.0
KBZ pmax pmax
comp=Z,31nm,0.9s
KVAR Kislovodsk Arr 82.24 314 LR LR 02 22 39.4
comp=Z,276nm,18.7s,baz=270,slow=38
KIV Kislovodsk 82.25 314 ⇑P P 01 43 02.0 +0.9
KIV Kislovodsk 82.25 314 P P 01 43 00.4 -0.7
KIV Kislovodsk 82.25 314 *e*P P 01 43 01.2 +0.1
KIV pmax pmax
comp=Z,24nm,1.1s
KIV MLR MLR
comp=Z,220nm,19.0s
KIV Kislovodsk 82.25 314 P P 01 43 01.4 +0.3
comp=Z,26nm,1.1s
SHA1 Shidzhatmaz 82.36 314 *ce*P P 01 43 01.1 -0.7
GNI Garni 82.38 310 LR LR 02 24 00.7
comp=Z,194nm,18.3s,baz=61,slow=39
GNI Garni 82.38 310 P P 01 43 01.9 0.0
GNI Garni 82.38 310 *ce*P P 01 43 01.6 -0.3
GNI pmax pmax
comp=Z,25nm,1.7s
GNI Garni 82.38 310 P P 01 43 02.7 +0.8
comp=Z,11nm,0.7s
FAUS Fauske 82.41 342 *e*P P 01 43 01.3 0.0
FAUS IAmb IAmb 01 43 05.3
comp=Z,118nm,1.6s
NEUR Neytrino 82.52 314 *i* P P 01 43 02.1 -0.5
NEUR pmax pmax
comp=Z,5.0nm,1.0s
FINES FINESS Array B 82.53 335 P P 01 43 00.8 -1.2
comp=Z,6.6nm,0.5s,baz=68,slow=5.0,SNR=94
comp=Z,6.6nm,0.5s
FINES FINESS Array B 82.53 335 P P 01 43 01.0 -1.0
FINES FINESS Array B 82.53 335 *ce*P P 01 43 01.1 -1.0
FINES pmax pmax
comp=Z,7.0nm,0.5s
ERBR Yeremizino-Bor 82.94 317 *e*P P 01 43 03.9 -0.6
ERBR pmax pmax
comp=Z,39nm,0.7s
ERBR MLR MLR
comp=Z,587nm,20.0s
ELK Elko 83.03 49 LR LR 02 12 31.1
comp=Z,182nm,21.5s,baz=270,slow=30
LABN Labinsk 83.24 316 *e*P P 01 43 14.9 +8.8
LABN pmax pmax
comp=Z,11nm,0.6s
RAUS Rausandaksla 83.42 342 *e*P P 01 43 05.8 -0.8
RAUS IAmb IAmb 01 43 07.9
comp=Z,74nm,1.4s
MOR8 Moi Rana 83.50 342 *e*P P 01 43 05.7 -1.3
VSU Vasula 83.96 332 *ce*P P 01 43 08.9 -0.5
VSU pmax pmax
comp=Z,18nm,1.3s
YHL Hebgen Lake 84.00 44 IAmb IAmb 01 43 36.2
comp=Z,9.1nm,1.3s
FFC Flin Flon 84.41 32 P P 01 43 13.4 +1.6
FFC IAmb IAmb 01 43 31.9
comp=Z,9.0nm,1.1s
FFC Flin Flon 84.41 32 P P 01 43 13.4 +1.6
FFC pmax pmax
comp=Z,9.0nm,1.1s
PFO Pinyon Flats O 85.04 56 LR LR 02 16 14.7
comp=Z,173nm,19.3s,baz=250,slow=32
ANN Anapa 85.27 317 *e*P P 01 43 22.1 +5.7
ANN pmax pmax
comp=Z,52nm,1.0s
NSS Namsos 85.40 341 *e*P P 01 43 15.7 -0.9
NSS IAmb IAmb 01 43 23.8
comp=Z,387nm,2.2s
MNK Minsk 85.67 328 *i* P P 01 43 18.1 -0.1
comp=E,8.0nm,0.8s,baz=56
MNK *i* P P 01 43 18.1 -0.1
comp=N,5.0nm,0.9s
MNK *i* P P 01 43 18.1 -0.1
comp=Z,18nm,0.7s
MNK *i* PcP pP 01 43 23.2 -0.3
MNK *i* PP PP 01 46 37.0 +0.4
MNK *i* PPP PPP 01 48 30.4
MNK *i* S SKSac 01 53 42.8 +0.3
MNK *i* PS PnS 01 55 03.0 +16
MNK *i* SS SS 01 59 34.5 +10
MNK *i* SSS SSS 02 02 12.2
MNK *i* LQ LQ 02 16 31.5
MNK *i* LR LR 02 22 34.8
MNK *i* LRM MLR 02 24 19.1
comp=Z,305nm,16.4s
MNK *i* LRM MLR 02 24 23.1
comp=E,131nm,15.1s
MNK *i* LRM MLR 02 24 33.4
comp=N,179nm,15.0s
MNK Minsk 85.67 328 *i* P P 01 43 18.0 -0.1
MNK *i* 01 43 23.2
MNK *i* 01 46 36.9
MNK *i* PPP PPP 01 48 30.3
MNK *i* S SKSac 01 53 42.8 +0.3
MNK *i* PS PnS 01 55 03.0 +16
MNK *i* SS SS 01 59 34.4 +10
MNK pmax pmax
comp=E,8.0nm,0.8s
MNK pmax pmax
comp=Z,18nm,0.7s
MNK pmax pmax
comp=N,5.0nm,0.9s
MNK MLR MLR
comp=Z,305nm,16.0s
MNK MLR MLR
comp=E,131nm,15.0s
MNK MLR MLR
comp=N,179nm,15.0s
PDAR Pinedale Array 85.99 45 P P 01 43 20.0 -0.3
comp=N,0.5nm,0.8s,baz=255,slow=2.9,SNR=5.8
PDAR LR LR 02 17 06.1
comp=N,147nm,20.5s,baz=313,slow=32
comp=N,0.5nm,0.8s
PDAR Pinedale Array 85.99 45 P P 01 43 18.1 -2.3
KNB Kanab 86.31 51 IAmb IAmb 01 43 41.0
comp=Z,9.5nm,1.0s
P17A Butcher Ranch, 86.69 48 IAmb IAmb 01 46 38.5
comp=Z,8.8nm,0.6s
PABE Paberze 86.92 330 P P 01 43 22.3 -2.0
AKASG Malin Array Be 87.08 325 P P 01 43 23.3 -1.9
comp=Z,3.1nm,0.5s,baz=52,slow=4.8,SNR=34
AKASG LR LR 02 24 41.2
comp=Z,273nm,20.7s,baz=48,slow=37
comp=Z,3.1nm,0.5s
AKASG Malin Array Be 87.08 325 P P 01 43 23.6 -1.6
AKBB Malin Array Si 87.08 325 IAmb IAmb 01 43 24.6
comp=Z,9.6nm,0.9s
AKBB Malin Array Si 87.08 325 *ce*P P 01 43 24.5 -0.7
AKBB pmax pmax
comp=Z,8.0nm,0.9s
KIEV Kiev 87.10 325 ⇓P P 01 43 23.2 -2.1
KIEV Kiev 87.10 325 P P 01 43 22.9 -2.4
KIEV IAmb IAmb 01 43 24.6
comp=Z,8.1nm,0.8s
KIEV Kiev 87.10 325 P P 01 43 22.9 -2.4
KIEV pmax pmax
comp=Z,8.0nm,0.9s
Y14A Wickenburg 87.51 54 IAmb IAmb 01 43 38.2
comp=Z,6.3nm,0.9s
HFS Hagfors 88.01 338 P P 01 43 27.2 -2.2
comp=Z,4.8nm,0.6s,baz=85,slow=4.8,SNR=24
HFS LR LR 02 27 09.8
comp=Z,142nm,19.0s,baz=54,slow=38
comp=Z,4.8nm,0.6s
DOMB Dombas 88.13 341 *e*P P 01 43 30.3 +0.2
DOMB IAmb IAmb 01 43 34.9
comp=Z,5μm,5.6s
SUW Suwalki 88.19 330 P P 01 43 28.0 -2.4
SUW Suwalki 88.19 330 P P 01 43 28.0 -2.4
NB2 NORSAR Subarra 88.20 339 P P 01 43 29.0 -1.4
comp=Z,25nm,1.4s,baz=45,slow=5.1
NB2 NORSAR Subarra 88.20 339 P P 01 43 29.0 -1.4
NOA NORSAR Array B 88.20 339 P P 01 43 28.6 -1.8
comp=Z,4.5nm,0.9s,baz=45,slow=4.7,SNR=9.4
NOA LR LR 02 26 55.0
comp=Z,217nm,20.9s,baz=30,slow=38
comp=Z,4.5nm,0.9s
RAYN Ar Rayn 88.49 295 P P 01 43 32.1 -0.4
RAYN Ar Rayn 88.49 295 P P 01 43 32.1 -0.4
RAYN pmax pmax
comp=Z,27nm,1.1s
SORM Soroca 88.97 323 ⇑P P 01 43 31.9 -2.4
BNN Bunyan 89.12 312 IAmb IAmb 01 43 43.7
comp=Z,8.6nm,1.1s
SFJD Kangerlussuaq 89.77 6 LR LR 02 23 45.6
comp=Z,93nm,20.4s,baz=28,slow=36
FRB Frobisher Bay 89.99 14 LR LR 02 30 22.7
comp=Z,115nm,18.7s,baz=313,slow=40
ULM Lac du Bonnet 90.03 34 LR LR 02 23 56.0
comp=Z,201nm,19.6s,baz=346,slow=35
BR131 Keskin Array S 90.19 314 IAmb IAmb 01 43 40.3
comp=Z,6.5nm,0.8s
BRTR Keskin Array B 90.19 314 P P 01 43 38.6 -1.7
comp=Z,3.8nm,0.8s,baz=87,slow=3.6,SNR=29
BRTR LR LR 02 30 08.0
comp=Z,118nm,18.3s,baz=38,slow=40
comp=Z,3.8nm,0.8s
BRTR Keskin Array B 90.19 314 P P 01 43 38.8 -1.5
BRTR Keskin Array B 90.19 314 *ce*P P 01 43 39.2 -1.1
BRTR pmax pmax
comp=Z,4.0nm,0.8s
BR104 Keskin Array S 90.19 314 P P 01 43 39.4 -0.9

comp=Z,46nmcomp=Z,6.4nm,0.9s
BURAR Bucovina Array 91.00 324 ⇓P **P** **01 43 42.8 -1.1**
KWP Kalwaria Pacla 91.11 326 *e*P **P** **01 43 44.1 -0.2**
ASF Jabal al Asfar 91.55 306 LR LR 02 30 27.2
comp=Z,91nm,20.4s,baz=39,slow=39
MLR Muntele Rosu 91.84 322 LR LR 02 27 50.3
comp=Z,281nm,19.5s,baz=60,slow=37
ANMO Albuquerque 91.84 51 LR LR 02 22 50.4
comp=Z,173nm,19.2s,baz=295,slow=34
STHS Stebnicka Huta 91.99 327 *e*P **P** **01 43 44.9 -3.4**
STHS Stebnicka Huta 91.99 327 *e*P **P** **01 43 44.9 -3.4**
MMAI Mount Meron Ar 92.26 307 P **P** **01 43 48.9 -1.0**
comp=Z,0.8nm,0.6s,baz=35,slow=5.3,SNR=3.7
MMAI LR LR 02 29 36.7
comp=Z,55nm,18.8s,baz=64,slow=38
comp=Z,0.8nm,0.6s
MARR Marisel-Cluj 92.71 324 ⇑P **P** **01 43 51.0 -0.8**
DRGR 92.86 324 ⇑P **P** **01 43 52.0 -0.4**
LANS Liptovska Anna 93.06 327 *e*P **P** **01 43 53.2 -0.1**
LANS Liptovska Anna 93.06 327 *e*P **P** **01 43 53.2 -0.1**
KSP Ksiaz 93.45 330 *e*P **P** **01 43 54.9 -0.1**
MORC Moravsky Berou 93.59 329 *e*P **P** **01 43 55.4 -0.3**
DPC Dobruska-Polom 93.78 330 P **P** **01 43 56.0 -0.6**
LPIG La Paz 94.00 62 LR LR 02 19 21.1
comp=Z,152nm,20.0s,baz=280,slow=31
JAVC Velka Javorina 94.14 328 *e*P **P** **01 43 58.9 +0.6**
EIL Elat 94.22 304 LR LR 02 29 59.8
comp=Z,58nm,21.1s,baz=46,slow=38
VRAC Vranov 94.36 329 LR LR 02 30 09.3
comp=Z,310nm,19.1s,baz=50,slow=38
VRAC Vranov 94.36 329 *e*P **P** **01 43 57.9 -1.3**
SRO Srobarova 94.52 327 *e*P **P** **01 43 57.9 -2.0**
SRO Srobarova 94.52 327 *e*P **P** **01 43 57.9 -2.0**
CLL Collm 94.61 332 *e*P **P** **01 43 59.0 -1.3**
CLL *e*S **S** **01 55 07.0 -5.2**
CLL MLR MLR
comp=Z,300nm,21.0s
CLL Collm 94.61 332 *e*P **P** **01 43 59.0 -1.3**
CLL *e*S **S** **01 55 07.0 -5.2**
CLL AMS AMS 02 30 00.0
comp=Z,300nm,21.0s
KRUC Moravsky 94.62 329 *e*P **P** **01 43 58.8 -1.6**
MODS Modra-Piesok 94.66 328 *e*P **P** **01 43 59.7 -0.9**
MODS Modra-Piesok 94.66 328 *e*P **P** **01 43 59.7 -0.9**
GERES GERESS Array B 96.05 330 P **P** **01 44 04.8 -2.3**
comp=Z,0.4nm,0.6s,baz=79,slow=6.9,SNR=3.6
GERES LR LR 02 30 42.5
comp=Z,183nm,19.8s,baz=52,slow=38
comp=Z,0.4nm,0.6s
TXAR Lajitas Array 96.70 54 P **P** **01 44 12.4 +1.9**
comp=Z,0.2nm,0.6s,baz=187,slow=3.1,SNR=3.5
TXAR LR LR 02 30 02.2
comp=Z,118nm,18.5s,baz=251,slow=37
comp=Z,0.2nm,0.6s
TXAR Lajitas Array 96.70 54 P **P** **01 44 10.4 0.0**
TXAR Lajitas Array 96.70 54 P **P** **01 44 10.4 0.0**
SCHQ Schefferville 98.23 17 LR LR 02 29 59.9
comp=Z,51nm,20.9s,baz=352,slow=36
DAVOX Davos/Dischmat 99.32 330 LR LR 02 34 08.2
comp=Z,291nm,18.5s,baz=28,slow=38
NVL N'lazarevskaya 124.73 197 *e*PKIKP **PKiKP** **01 49 41.3 +2.6**
NVL *e* 01 51 28.9
NVL *e*PPP PPP 01 54 08.4
NVL *e* 01 56 53.2
NVL *e*SS SS 02 08 25.0 +6.3
NVL *e*SSS SSS 02 13 01.3
NVL pmax pmax
comp=Z,21nm,1.5s
NVL MLR MLR
comp=Z,434nm,21.0s
TORD Torodi Ar. Bea 128.68 310 PKP **PKPdf** **01 49 46.6 -1.0**
comp=Z,0.9nm,0.6s,baz=34,slow=0.2,SNR=9.3
TORD Torodi Ar. Bea 128.68 310 *c* **PKPdf** **01 49 46.3 -1.4**
NNA Nana 139.59 82 *c* iPKIKP **PKiKP** **01 50 10.1 -0.3**
NNA pmax pmax
comp=Z,30nm,1.7s
PLCA Paso Flores 145.84 130 PKPbc **PKPbc** **01 50 19.4 +0.4**
comp=Z,5.9nm,0.5s,baz=237,slow=4.3,SNR=52
PLCA Paso Flores 145.84 130 PKPdf **PKPdf** **01 50 19.0 +0.6**
PLCA Paso Flores 145.84 130 PKP2 **PKPdf** **01 50 19.0 +0.6**
LPAZ La Paz 148.97 84 PKPbc **PKPbc** **01 50 28.9 -0.1**
comp=Z,6.1nm,0.6s,baz=281,slow=2.8,SNR=4.9
LPAZ La Paz 148.97 84 PKPdf **PKPdf** **01 50 23.3 -1.7**
LPAZ La Paz 148.97 84 PKiKP **PKPdf** **01 50 23.3 -1.7**

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*BJI **23** 01:38:09.4, 22°.71N×144°.29E, h18km, mB5.0/13, mb4.8/54, Ms4.6/11, Ms7 4.4/11*
*NEIC **23** 01:38:12.4±2.2, 22°.90N±0°.07×144°.1E±0°.1, h10km±1km, mb4.8/65, Error ellipse: s-maj=19.7km s-min=11.4km az=249.0*
*IDC **23** 01:38:16.1±2.9, 22°.86N×144°.04E, h41km±24km, mb4.3/32, mbtmp4.5/35, ML4.3/3, MS4.0/1, Error ellipse: s-maj=16.2km s-min=12.8km az=109.0*
ISC 23 01:38:15.3±0.4, 22°.89N±0°.06×144°.07E±0°.07, h34km, n362, σ0°.83/352, mb4.8/82, MS4.3/3, 2C-2D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**4.52**	**338**	P	**Pn**	**01 39 21.3**	**-0.1**
	68nm,0.3s,baz=265,slow=21,SNR=8.8						
JCJ				S	**Sn**	**01 40 12.8**	**0.0**
	272nm,0.6s,baz=266,slow=19,SNR=4.4						
	147nm,0.4s						
JCJ	**Chichijima**	**4.52**	**338**	Pn	**Pn**	**01 39 20.7**	**-0.7**
JGF	**Kuroka**	**13.95**	**337**	Pn	**Pn**	**01 41 28.6**	**-2.0**
MJAR	**Matsushiro Arr**	**14.52**	**341**	P	**Pn**	**01 41 38.8**	**+0.4**
	0.4nm,0.3s,baz=154,slow=10,SNR=16						
	7.3nm,0.7s						
MJAR	**Matsushiro Arr**	**14.52**	**341**	Pn	**Pn**	**01 41 36.4**	**-1.9**
MAJO	**Matsushiro**	**14.52**	**341**	Pn	**Pn**	**01 41 37.0**	**-1.3**
MJB9	**Matsu-Tunnel**	**14.53**	**341**	Pn	**Pn**	**01 41 36.5**	**-1.9**
JOW	**Kunigami**	**14.86**	**289**	P	**P**	**01 41 49.5**	**+1.2**
	5.8nm,0.4s,baz=97,slow=9.2,SNR=5.3						
JOW	**Kunigami**	**14.86**	**289**	P	**P**	**01 41 47.6**	**-0.8**
JNU	**Nakatsue**	**15.46**	**314**	P	**Pn**	**01 41 51.2**	**+0.3**
	0.8nm,0.3s,baz=102,slow=6.3,SNR=6.9						
	3.8nm,0.6s						
KSRS	**Korea Array**	**20.09**	**320**	P	**P**	**01 42 46.5**	**+0.6**
	7.1nm,0.8s,baz=137,slow=12,SNR=15						
	7.1nm,0.8s						
KSAR	**Wonju Array Be**	**20.11**	**320**	P	**P**	**01 42 46.8**	**+0.6**
KS19	**Wonju Array Si**	**20.16**	**320**	P	**P**	**01 42 46.3**	**-0.4**
JKA	**Kamikawa-asahi**	**21.21**	**357**	P	**P**	**01 42 57.7**	**-0.3**
JKA				IAmb	IAmb	01 43 01.7	
	comp=Z,38nm,1.1s						
ASAJ	**Asahikawa**	**21.21**	**357**	P	**P**	**01 43 00.2**	**+2.2**
	comp=Z,200nm,1.0s,baz=231,slow=14,SNR=9.6						
	comp=Z,200nm,1.0s						
SSLB	**Suanglung**	**21.24**	**277**	P	**P**	**01 42 59.5**	**+0.9**
H11N1	**WAKE ISLAND Hy**	**21.50**	**94**	T	T	02 05 10.6	
	baz=283,slow=74,SNR=42						
H11N2	**WAKE ISLAND Hy**	**21.50**	**94**	T	T	02 05 10.8	
	baz=283,slow=74,SNR=29						
H11N3	**WAKE ISLAND Hy**	**21.51**	**94**	T	T	02 05 13.4	
	baz=283,slow=74,SNR=32						
H11S3	**WAKE ISLAND Hy**	**21.60**	**97**	T	T	02 05 23.1	
	baz=283,slow=74,SNR=11						
H11S1	**WAKE ISLAND Hy**	**21.61**	**97**	T	T	02 05 33.6	
	baz=283,slow=74,SNR=7.5						
H11S2	**WAKE ISLAND Hy**	**21.62**	**97**	T	T	02 05 15.2	
	baz=283,slow=74,SNR=8.0						
USRK	**Ussuriysk Ar.**	**23.47**	**338**	P	**P**	**01 43 23.4**	**+1.7**
	comp=Z,13nm,0.8s,baz=157,slow=10,SNR=21						
	comp=Z,13nm,0.8s						
DAV	**Davao City (W)**	**23.75**	**231**	LR	LR	01 51 41.8	
	comp=Z,378nm,19.6s,baz=358,slow=34						
NJ2	**Nanjing**	**24.11**	**298**	⇑P	**P**	**01 43 28.1**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,110nm,1.0s						
MDJ	**Mudanjiang**	**24.72**	**335**	P	**P**	**01 43 33.8**	**+0.5**
MDJ				IAmb	IAmb	01 43 36.3	
	comp=Z,15nm,0.7s						
MDJ	**Mudanjiang**	**24.72**	**335**	P	**P**	**01 43 35.1**	**+1.8**
MDJ				pmax	pmax		
	comp=Z,26nm,1.1s						
CN2	**Changchun**	**25.91**	**328**	P	**P**	**01 43 46.6**	**+2.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.4s						
BNX	**BinXian**	**26.52**	**333**	⇑P	**P**	**01 43 50.6**	**+1.0**
BNX				pmax	pmax		
	comp=Z,28nm,0.9s						
WHN	**Wuhan**	**27.56**	**292**	P	**P**	**01 44 00.8**	**+1.6**
WHN				pmax	pmax		
	comp=Z,64nm,1.1s						
KLR	**Kul'dur**	**28.04**	**343**	P	**P**	**01 44 04.5**	**+1.3**
	comp=Z,24nm,0.8s,baz=150,slow=7.5,SNR=51						
	comp=Z,24nm,0.8s						
HNS	**HongShan**	**29.08**	**307**	⇓P	**P**	**01 44 13.3**	**+0.7**
HNS				pmax	pmax		
	comp=Z,30nm,1.1s						
BJI2	**Beijing**	**29.12**	**312**	P	**P**	**01 44 15.9**	**+2.9**
BJI2				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HEH	**HeiHe**	**30.27**	**339**	*e*P	**P**	**01 44 24.0**	**+1.0**
HEH				pmax	pmax		
	comp=Z,18nm,1.0s						
MYLDM	**Lahad Datu**	**30.32**	**238**	P	**P**	**01 44 25.3**	**+1.5**
MYLDM				IAmb	IAmb	01 44 56.7	
	comp=Z,23nm,1.1s						
TOLI2	**Tolitoli**	**31.31**	**230**	P	**P**	**01 44 34.0**	**+1.4**
HHC	**Hu-ho-hao-te**	**32.65**	**311**	*e*P	**P**	**01 44 45.3**	**+1.1**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,86nm,4.8s						
XAN	**Xi'an**	**32.69**	**298**	⇓P	**P**	**01 44 45.3**	**+0.7**
XAN				pP	pP	01 44 53.3	0.0
XAN				pmax	pmax		
	comp=Z,18nm,1.3s						
BTO2	**Baotou**	**33.80**	**310**	*e*P	**P**	**01 44 55.5**	**+1.2**
BTO2				pP	**pP**	**01 44 59.9**	**-3.1**
BTO2				sP	**sP**	**01 45 02.6**	**-4.3**
BTO2				pmax	pmax		
	comp=Z,20nm,1.1s						
BTO2				pmax	pmax		
	comp=Z,160nm,3.8s						
BTO2				L	L		
	comp=Z,930nm,18.3s						
BTO2				L	L		
	comp=Z,440nm,14.5s						
BTO2				L	L		
	comp=Z,740nm,15.9s						
COEN	**Coen**	**36.63**	**181**	P	**P**	**01 45 18.1**	**-0.5**
COEN				IAmb	IAmb	01 45 37.2	
	comp=Z,20nm,0.8s						
CD2	**Chengdu**	**36.67**	**291**	P	**P**	**01 45 18.8**	**-0.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LZH	**Lanzhou**	**37.14**	**300**	*e*P	**P**	**01 45 24.0**	**+0.9**
LZH				sP	pP	01 45 31.3	-0.7
LZH				pmax	pmax		
	comp=Z,26nm,1.1s						
LZDM	**Lanzhou Array**	**37.24**	**300**	P	**P**	**01 45 25.0**	**+0.9**
	comp=Z,4.9nm,0.5s,baz=151,slow=10,SNR=11						
	comp=Z,4.9nm,0.5s						
PZH	**PanZhiHua**	**38.50**	**284**	P	**P**	**01 45 36.3**	**+1.7**
ULN	**Ulaanbaatar**	**38.58**	**319**	P	**P**	**01 45 35.3**	**+0.2**
ULN				IAmb	IAmb	01 45 36.9	
	comp=Z,32nm,1.8s						
SONM	**Songino Array**	**38.96**	**319**	P	**P**	**01 45 38.4**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=128,slow=7.8,SNR=11						
	comp=Z,0.9nm,0.5s						
SONM	**Songino Array**	**38.96**	**319**	P	**P**	**01 45 38.6**	**+0.4**
YAK	**Yakutsk**	**40.34**	**350**	P	**P**	**01 45 49.3**	**0.0**
	comp=Z,20nm,0.4s,baz=135,slow=5.7,SNR=8.0						
	comp=Z,20nm,0.4s						
YAK	**Yakutsk**	**40.34**	**350**	P	**P**	**01 45 49.3**	**0.0**
SEY	**Seymchan**	**40.42**	**6**	P	**P**	**01 45 50.5**	**+0.5**
	comp=Z,1.1nm,0.4s,baz=180,slow=7.8,SNR=6.0						
	comp=Z,1.1nm,0.4s						
GTA2	**Gaotai**	**40.92**	**304**	*e*P	**P**	**01 45 55.3**	**+0.7**
GTA2				pmax	pmax		
	comp=Z,18nm,1.0s						
TLY	**Talaya**	**42.29**	**323**	P	**P**	**01 46 05.9**	**+0.3**
CMAR	**Chiang Mai Arr**	**42.33**	**273**	P	**P**	**01 46 06.6**	**+0.3**
	comp=Z,1.1nm,0.3s,baz=60,slow=8.4,SNR=7.6						
	comp=Z,1.1nm,0.3s						
CMAR	**Chiang Mai Arr**	**42.33**	**273**	P	**P**	**01 46 06.1**	**-0.2**
WB0	**Warramunga Arr**	**43.43**	**193**	P	**P**	**01 46 14.3**	**-0.8**
WR8	**Warramunga Arr**	**43.59**	**193**	P	**P**	**01 46 15.5**	**-0.9**
WRAB	**Tennant Creek**	**43.60**	**193**	P	**P**	**01 46 15.9**	**-0.5**
WRAB				IAmb	IAmb	01 46 35.5	
	comp=Z,28nm,1.6s						
WRA	**Warramunga Arr**	**43.62**	**193**	P	**P**	**01 46 16.0**	**-0.5**
	comp=Z,2.1nm,0.3s,baz=16,slow=8.9,SNR=35						
WRA				PcP	**PcP**	**01 48 03.7**	**0.0**
	comp=Z,0.9nm,0.8s,baz=8.7,slow=3.3,SNR=1.7						
WRA				S	**S**	**01 52 43.2**	**-0.7**
	comp=Z,0.4nm,1.0s,baz=28,slow=14,SNR=1.6						
	comp=Z,2.1nm,0.3s						
WRA	**Warramunga Arr**	**43.62**	**193**	P	**P**	**01 46 16.2**	**-0.4**
GOMU	**GeErMu**	**44.42**	**299**	P	**P**	**01 46 21.8**	**-1.6**
GOMU				PcP	**PP**	**01 48 08.1**	**+0.9**
GOMU				pmax	pmax		
	comp=Z,33nm,1.1s						
BILL	**Bilibino**	**47.20**	**11**	P	**P**	**01 46 44.3**	**-0.1**
BILL				IAmb	IAmb	01 46 47.4	
	comp=Z,11nm,1.1s						
ASAR	**Alice Springs**	**47.32**	**193**	P	**P**	**01 46 44.9**	**-1.0**
	comp=Z,1.3nm,0.4s,baz=9.7,slow=7.4,SNR=11						
	comp=Z,1.3nm,0.4s						
RPSI	**Rantau Prapat**	**48.10**	**252**	P	**P**	**01 46 51.9**	**-0.2**
RPSI				IAmb	IAmb	01 46 53.6	
	comp=Z,7.0nm,0.9s						
TIXI	**Tiksi**	**49.56**	**354**	P	**P**	**01 47 02.0**	**-0.4**
	comp=Z,4.5nm,0.2s,baz=161,slow=4.8,SNR=11						
	comp=Z,4.5nm,0.2s						
TIXI	**Tiksi**	**49.56**	**354**	P	**P**	**01 47 02.4**	**0.0**
TIXI				IAmb	IAmb	01 47 05.8	
	comp=Z,7.2nm,0.8s						
WMQ	**Urumqi**	**50.47**	**309**	*e*P	**P**	**01 47 11.5**	**+1.5**
WMQ				pP	pP	01 47 15.3	-3.7
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s						
WMQ				L	L		
	comp=Z,380nm,22.7s						
WMQ				L	L		
	comp=Z,610nm,22.7s						
WMQ				L	L		
	comp=Z,190nm,23.9s						
M11K	**Mekoryuk**	**50.83**	**29**	P	**P**	**01 47 12.8**	**+0.5**
	baz=245						
EVN	**Everest**	**51.56**	**288**	P	**P**	**01 47 19.4**	**+0.4**
EVN				IAmb	IAmb	01 47 26.9	
	comp=Z,9.3nm,0.5s						
SDPT	**Sand Point**	**51.97**	**37**	P	**P**	**01 47 21.0**	**+0.1**
	baz=255						
M13K	**Dall Lake**	**52.13**	**30**	P	**P**	**01 47 23.1**	**+1.1**
	baz=248						
K13K	**Kusilvak Mount**	**52.15**	**28**	P	**P**	**01 47 22.6**	**+0.4**
	baz=246						
CHNA	**Chernabura Isl**	**52.33**	**37**	P	**P**	**01 47 23.4**	**-0.1**
	baz=256						
TNA	**Tin City**	**52.53**	**23**	P	**P**	**01 47 25.5**	**+0.6**
	baz=240						
O14K	**Tigyukauivet M**	**52.72**	**32**	P	**P**	**01 47 27.0**	**+0.7**
	baz=251						
S14K	**Fog Glacier**	**52.72**	**36**	P	**P**	**01 47 26.1**	**-0.5**
	baz=255						
N14K	**Kuskokwak Cree**	**52.74**	**31**	P	**P**	**01 47 26.4**	**-0.1**
	baz=250						
L14K	**Kuka Creek**	**52.79**	**29**	P	**P**	**01 47 27.8**	**+1.0**
	baz=248						
ZSN	**Zaisan**	**52.81**	**313**	*e*P	**P**	**01 47 28.0**	**+0.7**
M14K	**Bethel**	**52.90**	**30**	P	**P**	**01 47 29.0**	**+1.3**
M14K				IAmb	IAmb	01 48 00.7	
	comp=Z,19nm,1.2s						
M14K	**Bethel**	**52.90**	**30**	P	**P**	**01 47 28.0**	**+0.4**
	baz=249						
J14K	**Nanvaranak Lak**	**52.96**	**27**	P	**P**	**01 47 28.2**	**+0.1**
	baz=246						
ANM	**Nome**	**53.00**	**25**	P	**P**	**01 47 29.4**	**+1.0**
ANM	**Nome**	**53.00**	**25**	P	**P**	**01 47 29.2**	**+0.8**
	baz=243						
F14K	**Arctic Creek**	**53.07**	**23**	P	**P**	**01 47 29.8**	**+0.9**
	baz=241						
CHGN	**Chignik**	**53.34**	**36**	P	**P**	**01 47 31.3**	**+0.3**
	baz=256						
O15K	**Ungalikthiuk R**	**53.40**	**32**	P	**P**	**01 47 32.1**	**+0.7**
	baz=252						
L15K	**Ungalak Mounta**	**53.44**	**29**	P	**P**	**01 47 32.4**	**+0.7**
	baz=249						
M15K	**Kasigluk River**	**53.47**	**30**	P	**P**	**01 47 32.2**	**+0.3**
	baz=250						
N15K	**Kwethluk River**	**53.57**	**31**	P	**P**	**01 47 33.1**	**+0.4**
	baz=251						
K15K	**Wolf Creek Mou**	**53.65**	**28**	P	**P**	**01 47 34.0**	**+0.8**
	baz=248						
G15K	**Niukluk**	**53.71**	**25**	P	**P**	**01 47 33.3**	**-0.2**
	baz=244						
F15K	**North Star Dit**	**53.80**	**24**	P	**P**	**01 47 34.8**	**+0.6**
	baz=243,SNR=5.2						
ZAA0	**Zalesovo Array**	**53.80**	**321**	P	**P**	**01 47 33.6**	**-0.8**
ZALV	**Zalesovo Beam**	**53.80**	**321**	P	**P**	**01 47 34.2**	**-0.2**
	comp=Z,2.2nm,0.4s,baz=110,slow=8.1,SNR=11						
	comp=Z,2.2nm,0.4s						
ZALV	**Zalesovo Beam**	**53.80**	**321**	P	**P**	**01 47 33.5**	**-0.9**
H16K	**Elim**	**54.26**	**25**	P	**P**	**01 47 38.1**	**+0.6**
	baz=246						
P16K	**Nushagak River**	**54.26**	**33**	P	**P**	**01 47 38.6**	**+1.0**
	baz=254						
N16K	**Nishlik Lake**	**54.29**	**31**	P	**P**	**01 47 38.5**	**+0.5**
	baz=252						
L16K	**Owhat River**	**54.36**	**29**	P	**P**	**01 47 37.9**	**-0.4**
	baz=251						
O16K	**Kokwok River B**	**54.36**	**32**	P	**P**	**01 47 38.0**	**-0.4**
	baz=254						
M16K	**Timber Creek**	**54.37**	**30**	P	**P**	**01 47 38.0**	**-0.5**
	baz=252						
J16K	**Anvik River**	**54.41**	**27**	P	**P**	**01 47 38.6**	**-0.1**
	baz=249						
MKAR	**Makanchi Array**	**54.51**	**312**	P	**P**	**01 47 39.8**	**+0.1**
	comp=Z,3.7nm,0.6s,baz=87,slow=9.6,SNR=26						
MKAR				PcP	**PcP**	**01 48 42.9**	**0.0**
	comp=Z,1.4nm,0.4s,baz=74,slow=4.6,SNR=6.7						
	comp=Z,3.7nm,0.6s						
G16K	**Koyuk River**	**54.52**	**24**	P	**P**	**01 47 39.8**	**+0.4**
	baz=246						
I17K	**Unalakleet**	**54.59**	**26**	P	**P**	**01 47 40.5**	**+0.5**
	baz=248						
MAKZ	**Makanchi**	**54.72**	**312**	P	**P**	**01 47 41.3**	**0.0**
MAKZ				IAmb	IAmb	01 47 43.0	
	comp=Z,8.6nm,1.1s						
R17L	**Mt. Peulik Vol**	**54.74**	**35**	P	**P**	**01 47 41.8**	**+0.5**
	baz=257						
C16K	**Lisburne Hills**	**54.77**	**21**	P	**P**	**01 47 42.0**	**+0.8**
	baz=241						
O17K	**Koliganek Bris**	**54.90**	**32**	P	**P**	**01 47 42.4**	**+0.1**
	baz=255						
L17K	**Donlin**	**55.02**	**29**	P	**P**	**01 47 42.9**	**-0.2**
	baz=252						
N17K	**Nushagak Hills**	**55.06**	**31**	P	**P**	**01 47 44.1**	**+0.6**
	baz=254						
P17K	**Kvichak River**	**55.08**	**33**	P	**P**	**01 47 43.6**	**0.0**
	baz=256						
Q17K	**Contact Creek**	**55.13**	**34**	P	**P**	**01 47 43.8**	**-0.4**
	baz=257						
M17K	**Holitna River**	**55.19**	**30**	P	**P**	**01 47 44.3**	**-0.2**
	baz=253						
K17K	**Iditarod**	**55.20**	**28**	P	**P**	**01 47 44.4**	**-0.1**
	baz=252						
G17K	**Kiwalik Mounta**	**55.22**	**25**	P	**P**	**01 47 45.1**	**+0.5**
	baz=247						
D17K	**Noatak River**	**55.25**	**22**	P	**P**	**01 47 44.6**	**-0.2**
	baz=243,SNR=7.2						
H17K	**Granite Mounta**	**55.29**	**25**	P	**P**	**01 47 45.9**	**+0.8**
	baz=248						
F17K	**Baldwin Pennin**	**55.36**	**23**	P	**P**	**01 47 46.4**	**+0.8**
	baz=246						
RDOG	**Red Dog Mine**	**55.47**	**21**	P	**P**	**01 47 46.9**	**+0.6**
	baz=243						
C17K	**DeLong Mountai**	**55.57**	**21**	P	**P**	**01 47 47.8**	**+0.7**
	baz=243						
Q18K	**Katmai Hardscr**	**55.67**	**34**	P	**P**	**01 47 48.4**	**+0.3**
	baz=257						
P18K	**Big Mountain,**	**55.73**	**33**	P	**P**	**01 47 49.0**	**+0.6**
	baz=257						
L18K	**Granite Mounta**	**55.77**	**29**	P	**P**	**01 47 49.2**	**+0.7**
	baz=253						
O18K	**Koktuh Hills**	**55.84**	**32**	P	**P**	**01 47 49.7**	**+0.5**
	baz=256						
M18K	**Stony River**	**55.96**	**30**	P	**P**	**01 47 50.8**	**+0.9**
	baz=255						
H18K	**Honhosa River**	**55.98**	**25**	P	**P**	**01 47 50.7**	**+0.6**
	baz=250						
E18K	**Tukpahlearik C**	**55.99**	**23**	P	**P**	**01 47 51.4**	**+1.3**
E18K				IAmb	IAmb	01 47 52.7	
	comp=Z,8.3nm,1.0s						
E18K	**Tukpahlearik C**	**55.99**	**23**	P	**P**	**01 47 51.0**	**+0.9**
	baz=246,SNR=12						
F18K	**Selawik**	**56.01**	**24**	P	**P**	**01 47 50.9**	**+0.7**
	baz=248,SNR=5.8						
J18K	**Innoko River**	**56.12**	**28**	P	**P**	**01 47 51.7**	**+0.7**
	baz=252						
G18K	**Tagagawik**	**56.13**	**25**	P	**P**	**01 47 51.8**	**+0.7**
	baz=249						
OHAK	**Old Harbor**	**56.29**	**36**	P	**P**	**01 47 53.0**	**+0.6**
	baz=260						
C18K	**Utukok River**	**56.30**	**21**	P	**P**	**01 47 53.5**	**+1.1**
	baz=245						
N19K	**Bonanza Creek**	**56.42**	**31**	P	**P**	**01 47 54.1**	**+0.7**
	baz=256						
Q19K	**Cape Douglas,**	**56.42**	**33**	P	**P**	**01 47 54.2**	**+0.8**
	baz=258						
SHLS	**Shalkode**	**56.43**	**307**	*e*P	**P**	**01 47 52.0**	**-1.8**
	comp=Z,4.3nm,1.2s						
L19K	**White Mountain**	**56.58**	**29**	P	**P**	**01 47 55.0**	**+0.6**
	baz=255						
M19K	**Big River Lodg**	**56.72**	**30**	P	**P**	**01 47 56.0**	**+0.6**
	baz=256						
J19K	**Poorman**	**56.74**	**27**	P	**P**	**01 47 56.5**	**+1.0**
	baz=253						
UZB	**Uzynbulak**	**56.75**	**307**	*e*P	**P**	**01 47 56.5**	**+0.4**
	comp=Z,6.5nm,1.0s						
KDAK	**Kodiak Island**	**56.76**	**35**	P	**P**	**01 47 56.3**	**+0.6**
	baz=260						
P19K	**Oil Pt**	**56.78**	**33**	P	**P**	**01 47 56.5**	**+0.6**
	baz=258						
F19K	**Shaleruckik Mo**	**56.80**	**24**	P	**P**	**01 47 56.2**	**+0.4**
	baz=249						
G19K	**Purcell Mounta**	**56.82**	**25**	P	**P**	**01 47 55.9**	**-0.1**
	baz=250						
H19K	**Roundabout Mou**	**56.86**	**25**	P	**P**	**01 47 57.3**	**+1.0**
	baz=252						
KPKS	**Kokpek**	**56.99**	**308**	*e*P	**P**	**01 47 58.3**	**+0.5**
Q20K	**Shuyak Island**	**57.00**	**34**	P	**P**	**01 47 57.8**	**+0.4**
	baz=260						
A19K	**Wainwright**	**57.02**	**19**	P	**P**	**01 47 58.2**	**+0.9**
	baz=244,SNR=7.0						
C19K	**Lookout Ridge**	**57.02**	**21**	P	**P**	**01 47 58.3**	**+0.9**
	baz=246						
KURK	**Kurchatov**	**57.17**	**317**	P	**P**	**01 47 58.6**	**-0.2**
KURK				IAmb	IAmb	01 48 00.2	
	comp=Z,11nm,1.1s						
NRIK	**Noril'sk**	**57.17**	**339**	P	**P**	**01 47 59.0**	**+0.6**
	comp=Z,7.7nm,0.7s,baz=112,slow=8.1,SNR=13						
	comp=Z,7.7nm,0.7s						
SATY	**Saty**	**57.20**	**307**	*e*P	**P**	**01 47 59.9**	**+0.6**
	comp=Z,7.4nm,1.3s						
E19K	**Redstone River**	**57.21**	**23**	P	**P**	**01 47 59.5**	**+0.8**
	baz=250						
KURBB	**Kurchatov Arra**	**57.22**	**316**	P	**P**	**01 47 58.9**	**-0.2**
	comp=

MDOK **Medeo** 58.19 308 *e*P P 01 48 06.1 -0.2
TNSS **Tian-Shan** 58.27 307 *e*P P 01 48 07.3 +0.2
AAA **Alma-Ata** 58.29 308 *e*P P 01 48 07.5 +0.6
G21K **Allakaket** 58.31 25 P P 01 48 07.2 +0.7
baz=254
H21K **Melozitna Rive** 58.35 26 P P 01 48 07.7 +0.9
baz=255
F21K **Alatna River** 58.52 24 P P 01 48 08.8 +0.8
baz=253
L22K **Petersville** 58.52 30 P P 01 48 07.7 -0.4
I21K **Tanana** 58.57 26 P P 01 48 09.2 +0.9
baz=256,SNR=5.2
C21K **Knifeblade Rid** 58.64 22 P P 01 48 09.1 +0.3
baz=251
O22K **Cooper Landing** 58.66 32 P P 01 48 09.3 +0.4
baz=261
E21K **Killik River** 58.70 22 P P 01 48 09.7 +0.5
baz=252
SEW **Seward** 58.73 33 P P 01 48 09.5 0.0
baz=262
BPAW **Bear Paw Mtn.** 58.74 28 P P 01 48 09.9 +0.4
baz=258
RC01 **Rabbit Creek A** 58.74 31 P P 01 48 09.8 +0.2
baz=261
A21K **Barrow** 58.82 19 P P 01 48 10.4 +0.4
baz=248
B21K **Ikpikpuk River** 58.85 21 P P 01 48 10.4 +0.3
baz=251,SNR=5.4
TRF **Thorofare Moun** 58.91 29 P P 01 48 11.0 +0.1
baz=259
H22K **Ishtalitna Cre** 58.98 26 P P 01 48 11.3 +0.1
baz=256
MLY **Manley** 59.05 27 P P 01 48 12.2 +0.6
MLY IAmb IAmb 01 48 19.6
comp=Z,20nm,1.9s
MLY **Manley** 59.05 27 P P 01 48 12.7 +1.0
baz=257
PMR **Palmer** 59.11 31 P P 01 48 12.8 +0.7
baz=261
G22K **Bettles** 59.18 24 P P 01 48 12.6 +0.1
baz=256
A22K **Sinclair Lake** 59.20 19 P P 01 48 13.4 +0.9
baz=250
TKM2 **Tokmak 2** 59.27 307 P P 01 48 15.0 +1.2
SNR=16
E22K **Anaktuvuk Pass** 59.38 23 P P 01 48 14.5 +0.6
baz=254,SNR=6.5
KNK **Knik Glacier** 59.41 31 P P 01 48 14.5 +0.3
baz=262
B22K **Teshekpuk Lake** 59.47 20 P P 01 48 15.3 +0.8
baz=252
SML **Sawmill** 59.52 31 P P 01 48 15.3 +0.3
baz=262
MCK **McKinley** 59.56 28 P P 01 48 15.2 0.0
baz=260
WAT1 **Susitna Watana** 59.58 29 P P 01 48 15.3 -0.1
baz=261
KSH2 **Kashi** 59.60 303 P P 01 48 18.0 +1.9
KSH2 pmax pmax
comp=Z,18nm,0.7s
I23K **Minto, Yukon-K** 59.64 27 P P 01 48 16.2 +0.5
baz=259
NEA2 **Nenana** 59.66 27 P P 01 48 16.5 +0.6
baz=259
G23K **Bananza Creek** 59.70 25 P P 01 48 17.5 +1.3
baz=257
H23K **Yukon River** 59.70 26 P P 01 48 16.9 +0.7
baz=258
COLD **Coldfoot** 59.75 24 IAmb IAmb 01 48 19.5
comp=Z,5.3nm,0.9s
COLD **Coldfoot** 59.75 24 P P 01 48 17.3 +0.8
baz=257,SNR=5.9
KBK **Karagaybulak** 59.76 307 P P 01 48 18.3 +1.1
SNR=7.1
M23K **Glacier View** 59.80 31 P P 01 48 17.6 +0.6
baz=262
WAT6 **Susitna Watana** 59.91 30 P P 01 48 18.5 +0.7
baz=262
SGDS **Sogindy** 59.94 308 *e*P P 01 48 18.7 +0.4
GLI **Glacier Island** 59.99 32 P P 01 48 18.6 +0.4
baz=263
SCM **Sheep Creek Mo** 60.00 31 P P 01 48 18.7 +0.3
SCM **Sheep Creek Mo** 60.00 31 P P 01 48 18.6 +0.2
baz=262
D23K **Nanushuk River** 60.00 22 IAmb IAmb 01 48 42.9
comp=Z,8.1nm,1.1s
D23K **Nanushuk River** 60.00 22 P P 01 48 18.8 +0.6
baz=255
USP **Ospenovka** 60.05 308 P P 01 48 20.1 +1.1
SNR=6.1
AAK **Ala-Archa** 60.10 307 P P 01 48 20.6 +1.1
SNR=6.7
AAK **Ala-Archa** 60.10 307 P P 01 48 20.5 +1.0
AAK IAmb IAmb 01 48 21.2
comp=Z,7.0nm,1.2s
UCH **Uchtor** 60.12 307 P P 01 48 21.9 +2.0
SNR=10
DHY **Denali Highway** 60.15 29 P P 01 48 19.7 +0.3
baz=262
E23K **Chandalar** 60.16 23 P P 01 48 20.0 +0.6
baz=257
Q23K **Middleton Isla** 60.21 34 P P 01 48 19.7 0.0
baz=265
C23K **Itkillik River** 60.25 21 P P 01 48 20.6 +0.8
baz=255,SNR=13
TOLK **Toolik Lake Re** 60.31 23 P P 01 48 21.0 +0.7
baz=256
H24K **Noodor Dome** 60.38 26 P P 01 48 21.2 +0.4
baz=260
POKR **Poker Plat Res** 60.44 27 P P 01 48 21.4 +0.2
baz=260
HDA **Harding Lake** 60.53 28 P P 01 48 22.2 +0.4
baz=261
M24K **Tolsona, Glenn** 60.57 30 P P 01 48 22.6 +0.4
baz=263
E24K **Your Creek** 60.58 23 P P 01 48 22.8 +0.6
baz=258,SNR=7.3
IL31 60.61 27 P P 01 48 21.4 -0.9
ILAR **Eielson Array** 60.61 27 P P 01 48 21.7 -0.7
comp=Z,2.7nm,0.8s,baz=259,slow=5.9,SNR=26
comp=Z,2.7nm,0.8s
ILAR **Eielson Array** 60.61 27 P P 01 48 21.0 -1.4
EKS2 **Erkin-Say** 60.62 307 P P 01 48 24.3 +1.3
SNR=6.2
KLU **Klutina** 60.62 31 P P 01 48 22.7 +0.1
baz=264
F24K **Squaw Lake** 60.69 24 P P 01 48 23.5 +0.5
baz=259
D24K **Happy Valley** 60.69 22 P P 01 48 23.6 +0.7
baz=257
G24K **Hadweenzic Riv** 60.69 25 P P 01 48 23.6 +0.7
baz=260
C24K **Franklin Bluff** 60.87 22 P P 01 48 24.7 +0.7
baz=257
BMRM **Bremner River** 61.21 32 P P 01 48 26.6 0.0
baz=265
J25K **Salcha River,** 61.23 28 P P 01 48 27.0 +0.3
baz=263
G25K **Bearman Lake** 61.24 25 P P 01 48 26.9 +0.2
baz=261
N25K **Chitina, Valde** 61.27 31 P P 01 48 27.3 +0.3
baz=265
PRP **Porcupine Dome** 61.29 27 P P 01 48 28.0 +0.8
baz=262
RIDG **Independent Ri** 61.36 29 P P 01 48 28.1 +0.5
baz=264
F25K **Christian Rive** 61.55 24 P P 01 48 29.5 +0.7
baz=261
D25K **Kavik River** 61.58 22 P P 01 48 30.4 +1.5
D25K IAmb IAmb 01 48 31.3
comp=Z,6.9nm,0.9s
D25K **Kavik River** 61.58 22 P P 01 48 29.9 +0.9
baz=259,SNR=10
E25K **Arctic Village** 61.66 24 P P 01 48 30.5 +1.0
baz=261,SNR=5.4
SCRK **Sand Creek** 61.76 28 P P 01 48 30.9 +0.5
SCRK IAmb IAmb 01 48 51.5
comp=Z,7.3nm,1.0s
SCRK **Sand Creek** 61.76 28 P P 01 48 30.4 +0.1
baz=264,SNR=5.1
BGLC **Bering Glacier** 61.81 33 P P 01 48 30.6 +0.1
baz=267
BMAR **Burnt Mountain** 61.93 24 P P 01 48 32.8 +1.5
CRQE **Cirque** 61.94 32 P P 01 48 32.0 +0.5
baz=267
MCARA **McCarthy VSAT** 62.00 31 P P 01 48 32.5 +0.6
baz=267
M26K **Nabesna, AK** 62.08 30 P P 01 48 33.1 +0.7
baz=266
F26K **Sheenjek River** 62.13 24 P P 01 48 33.5 +0.8
baz=262
G26K **Porcupine Rive** 62.17 25 P P 01 48 33.8 +0.9
baz=263
C26K **Camden Bay** 62.19 22 P P 01 48 34.2 +1.2
baz=260
NIL **Nikiye** 62.22 297 P P 01 48 33.9 0.0
BVAR **Borovoye Array** 62.31 319 P P 01 48 34.2 +0.1
comp=Z,20nm,0.4s,baz=86,slow=7.0,SNR=128
comp=Z,20nm,0.4s
BORK **Borovoye** 62.35 319 P P 01 48 34.3 0.0
DZA **Taraz** 62.39 308 *e*P P 01 48 35.3 +0.5
C27K **Jago River** 62.56 22 P P 01 48 36.5 +1.0
baz=262
M27K **Edge Creek, AK** 62.60 30 P P 01 48 36.8 +0.8
baz=267
L27K **Beaver Creek,** 62.66 30 P P 01 48 36.5 +0.3
baz=267
CTG **Chitna Glacier** 62.80 32 P P 01 48 37.8 +0.4
baz=268
I27K **Kandik River** 62.91 27 P P 01 48 38.4 +0.4
baz=266
H27K **Steamboat Moun** 63.00 26 P P 01 48 39.4 +0.9
baz=265
BVCY **Beaver Creek** 63.07 30 P P 01 48 39.5 +0.5
baz=268
E27K **Coleen River** 63.15 24 P P 01 48 40.4 +1.0
baz=264
YUK3 **Moose Creek** 63.24 31 P P 01 48 40.9 +0.5
baz=269
PINM **Pinnacle** 63.32 33 P P 01 48 41.6 +0.8
baz=270
O28M **Mount Upton** 63.36 32 P P 01 48 41.4 +0.1
baz=269
IUG **Iuzinay** 63.44 307 *e*P P 01 48 42.5 +0.6
comp=Z,6.1nm,1.0s
D27M **Malcolm River** 63.48 23 P P 01 48 42.5 +0.8
baz=264
YUK8 **Steele Glacier** 63.57 32 P P 01 48 43.0 +0.4
baz=270
I28M **Miner Creek** 63.60 27 P P 01 48 43.2 +0.6
baz=267
CHM **Chimkent** 63.73 307 *e*P P 01 48 44.4 +0.7
F28M **Old Crow** 63.75 24 P P 01 48 43.3 -0.1
baz=266
E28M **Babbage River** 63.94 23 P P 01 48 45.3 +0.6
baz=266
YUK4 **Talbot Arm** 64.11 32 P P 01 48 46.5 +0.4
baz=270
O29M **Mount Kennedy** 64.16 33 P P 01 48 47.0 +0.6
baz=271
M29M **Somme Creek** 64.19 30 P P 01 48 46.9 +0.4
baz=270
D28M **Stokes Point** 64.27 23 P P 01 48 47.4 +0.6
baz=266
H29M **Whitestone** 64.28 26 P P 01 48 46.8 -0.1
baz=268
J29N **Klondike Camp** 64.31 28 P P 01 48 47.8 +0.6
baz=269
L29M **L29M** 64.34 30 P P 01 48 48.0 +0.6
baz=270
G29M **Pine Creek** 64.44 25 P P 01 48 48.5 +0.6
baz=268
E29M **Blow River** 64.53 24 P P 01 48 48.9 +0.4
baz=268
K29M **Barlow Dome** 64.61 29 P P 01 48 49.6 +0.4
baz=270
HYT **Haines Junctio** 64.68 32 P P 01 48 50.3 +0.5
baz=272
N30M **Aishikik Lake** 64.86 31 P P 01 48 51.6 +0.7
baz=272
EPYK **Eagle Plains** 64.95 26 P P 01 48 51.7 +0.4
baz=270
M30M **Minto, Yukon** 64.96 30 P P 01 48 52.0 +0.6
baz=272
P30M **Million Dollar** 64.97 33 P P 01 48 52.3 +0.7
baz=272
I30M **Mount Dempster** 65.09 27 P P 01 48 52.7 +0.3
baz=271
J30M **Hart River** 65.12 28 P P 01 48 52.5 -0.1
baz=271
G30M **tAoh Zraii Nji** 65.14 25 P P 01 48 53.1 +0.6
baz=270
F30M **Barrier River** 65.31 25 P P 01 48 54.1 +0.5
baz=270
MAYO **Mayo, Yukon** 65.34 29 P P 01 48 54.3 +0.4
baz=272
KBL **Kabul** 65.48 299 P P 01 48 56.3 +0.8
N31M **Braeburn, Yuko** 65.48 31 P P 01 48 54.6 -0.2
baz=273
SKAG **Skagway** 65.83 34 P P 01 48 57.0 -0.1
baz=274
H31M **Peel River** 65.93 27 P P 01 48 58.6 +1.0
baz=272
WHY **Whitehorse** 65.97 32 P P 01 48 58.6 +0.5
baz=274
M31M **Drury Creek, Y** 66.10 30 P P 01 48 58.8 0.0
baz=274
F31M **Tsiigehtchic** 66.10 25 P P 01 48 58.9 +0.3
baz=272
INK **Inuvik** 66.15 24 P P 01 48 59.4 +0.4
comp=Z,3.0nm,0.9s,baz=288,slow=6.5,SNR=15
comp=Z,3.0nm,0.9s
INK **Inuvik** 66.15 24 P P 01 48 59.6 +0.7
INK **Inuvik** 66.15 24 P P 01 48 59.1 +0.1
baz=272
S32K **Killisnoo** 66.40 36 P P 01 49 00.7 0.0
baz=276
P33M **Teslin, Yukon** 67.03 33 P P 01 49 04.6 -0.2
baz=276
U33K **Whale Pass** 67.36 37 P P 01 49 07.0 +0.2
baz=278
R33M **Jennings River** 68.06 33 P P 01 49 10.9 -0.6
baz=278
V35K **Ketchikan** 68.31 38 P P 01 49 12.6 -0.3
baz=279
A36M **Sachs Harbour** 68.65 20 P P 01 49 14.4 -0.3
A36M **Sachs Harbour** 68.65 20 P P 01 49 15.0 +0.4
baz=278
DLBC **Dease Lake** 68.68 34 P P 01 49 16.0 +0.7
comp=Z,2.7nm,1.0s,baz=228,slow=5.8,SNR=3.5
comp=Z,2.7nm,1.0s
WTLY **Watson Lake, Y** 69.04 32 P P 01 49 17.4 0.0
baz=279
AB31 **Akbulak array** 69.27 316 P P 01 49 18.7 -0.3
C36M **Paulatuk** 69.46 22 P P 01 49 20.4 +0.7
baz=280
SPITS **Spitsbergen Ar** 74.80 350 P P 01 49 51.8 +0.2
comp=Z,12nm,0.9s,baz=64,slow=6.6,SNR=2.8
comp=Z,12nm,0.9s
YKAW3 **Yellowknife Wh** 75.00 28 IAmb IAmb 01 50 28.8
comp=Z,20nm,1.9s
YKA **Yellowknife Ar** 75.03 28 P P 01 49 53.0 -0.2
comp=Z,1.3nm,0.8s,baz=297,slow=6.3,SNR=18
comp=Z,1.3nm,0.8s
YKA **Yellowknife Ar** 75.03 28 P P 01 49 52.5 -0.6
B08A **Colville Reser** 77.44 43 IAmb IAmb 01 50 29.3
comp=Z,6.6nm,0.7s
PINE **Pine Mountain** 77.96 48 P P 01 50 11.9 +1.5
PINE IAmb IAmb 01 50 26.7
comp=Z,10nm,1.0s
ARCES **ARCESS Array B** 78.06 342 P P 01 50 10.2 0.0
comp=Z,8.8nm,1.0s,baz=59,slow=5.1,SNR=11
comp=Z,8.8nm,1.0s
ARCES **ARCESS Array B** 78.06 342 P P 01 50 09.6 -0.6
BEKR **Beckworth** 79.75 51 P P 01 50 20.4 +0.1
BEKR IAmb IAmb 01 50 30.4
comp=Z,8.1nm,1.0s
NVAR **Mina Array Bea** 81.77 52 P P 01 50 32.2 +1.1
comp=Z,2.1nm,0.8s,baz=274,slow=5.9,SNR=12
comp=Z,2.1nm,0.8s
NVAR **Mina Array Bea** 81.77 52 P P 01 50 31.5 +0.3
KBZ **Khabaz** 82.13 314 P P 01 50 33.2 +0.6
comp=Z,18nm,0.9s,baz=135,slow=2.2,SNR=44
comp=Z,18nm,0.9s
KIV **Kislovodsk** 82.18 314 P P 01 50 33.2 +0.2
FINES **FINESS Array B** 82.46 335 P P 01 50 33.5 -0.5
comp=Z,2.3nm,0.4s,baz=62,slow=4.9,SNR=40
comp=Z,2.3nm,0.4s
FINES **FINESS Array B** 82.46 335 P P 01 50 33.6 -0.4
GWY **Greenwater Val** 83.85 53 IAmb IAmb 01 50 56.3
comp=Z,6.2nm,0.9s
YHL **Hebgen Lake** 83.98 44 IAmb IAmb 01 51 03.3
comp=Z,12nm,1.5s
FFC **Flin Flon** 84.39 32 P P 01 50 44.4 +0.3
FFC IAmb IAmb 01 50 45.6
comp=Z,7.4nm,1.1s
PDAR **Pinedale Array** 85.98 45 P P 01 50 52.2 -0.4
comp=Z,0.3nm,0.4s,baz=258,slow=4.2,SNR=5.6
comp=Z,0.3nm,0.4s
PDAR **Pinedale Array** 85.98 45 P P 01 50 51.4 -1.2
LCMT **Little Creek M** 86.01 52 IAmb IAmb 01 51 16.8
comp=Z,14nm,1.6s
LAO **LASA Array** 86.19 41 IAmb IAmb 01 50 55.7
comp=Z,9.4nm,1.0s
KNB **Kanab** 86.31 51 P P 01 50 55.3 +1.0
KNB IAmb IAmb 01 51 05.1
comp=Z,6.9nm,0.9s
AKASG **Malin Array Be** 87.02 325 P P 01 50 55.9 -1.2
comp=Z,1.5nm,0.5s,baz=51,slow=4.6,SNR=12
comp=Z,1.5nm,0.5s
AKASG **Malin Array Be** 87.02 325 P P 01 50 55.5 -1.7
HFS **Hagfors** 87.95 338 P P 01 50 59.8 -1.6
comp=Z,1.3nm,0.4s,baz=78,slow=1.7,SNR=16
comp=Z,1.3nm,0.4s
NB2 **NORSAR Subarra** 88.13 339 P P 01 51 01.1 -1.3
comp=Z,0.8nm,0.5s,baz=42,slow=5.1
NOA **NORSAR Array B** 88.13 339 P P 01 51 00.7 -1.7
comp=Z,2.5nm,0.9s,baz=45,slow=4.6,SNR=4.5
comp=Z,2.5nm,0.9s
RAYN **Ar Rayn** 88.43 295 P P 01 51 04.2 -0.4
BR131 **Keskin Array S** 90.12 314 IAmb IAmb 01 51 13.3
comp=Z,5.1nm,1.1s
BRTR **Keskin Array B** 90.12 314 P P 01 51 11.3 -1.0
comp=Z,2.2nm,0.9s,baz=97,slow=3.5,SNR=12
comp=Z,2.2nm,0.9s
Q24A **Divide** 90.74 47 IAmb IAmb 01 51 18.4
comp=Z,6.1nm,0.9s
STHS **Stebnicka Huta** 91.93 327 *e*P P 01 51 20.9 +0.6
SRO **Srobarova** 94.45 327 *e*P P 01 51 30.2 -1.7
TXAR **Lajitas Array** 96.70 54 P P 01 51 43.4 +0.7
comp=Z,0.1nm,0.4s,baz=319,slow=9.9,SNR=1.5
comp=Z,0.1nm,0.4s
TORD **Torodi Ar. Bea** 128.61 310 PKP PKPdf 01 57 19.3 -0.4
comp=Z,0.3nm,0.5s,baz=64,slow=0.4,SNR=4.5
PLCA **Paso Flores** 145.90 130 PKPbc PKPab 01 57 52.2 +0.3
comp=Z,4.2nm,0.6s,baz=233,slow=2.1,SNR=8.3
LPAZ **La Paz** 149.01 84 PKPbc PKPbc 01 57 59.8 -1.6
comp=Z,3.5nm,0.6s,baz=252,slow=2.7,SNR=6.2

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*IDC **23** 01:53:28.6±2.7, 22°.90N×144°.58E, h0km, mb3.8/10, mbtmp3.8/11, ML3.5/1, MS3.9/1, Error ellipse: s-maj=111.4km s-min=25.2km az=77.0*
ISC 23 01:53:34.2±2.3, 22°.9N±0°.2×144°.5E±0°.6, h35km, n12, σ0s81/11, mb3.8/9, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**14.66**	**340**	Pn	**Pn**	**01 56 58.9**	**-0.2**
	0.2nm,0.3s,baz=149,slow=12,SNR=5.0						
	1.5nm,0.4s						
KSRS	**Korea Array**	**20.37**	**319**	P	**P**	**01 58 09.1**	**+1.3**
	0.6nm,0.3s,baz=144,slow=9.3,SNR=6.8						
	0.6nm,0.3s						
SONM	**Songino Array**	**39.24**	**319**	P	**P**	**02 00 58.9**	**-0.5**
	0.2nm,0.3s,baz=126,slow=7.4,SNR=1.9						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**43.71**	**194**	P	**P**	**02 01 36.1**	**-0.1**
	0.4nm,0.7s,baz=17,slow=9.0,SNR=8.1						
	0.4nm,0.7s						
MSVF	**Nonsavu**	**52.00**	**138**	LR	LR	02 21 28.5	
	comp=Z,126nm,20.5s,baz=342,slow=32						
ZALV	**Zalesovo Beam**	**54.06**	**321**	P	**P**	**02 02 54.1**	**-1.1**
	0.4nm,0.3s,baz=106,slow=4.7,SNR=2.0						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**54.82**	**312**	P	**P**	**02 03 00.3**	**-0.5**
	0.5nm,0.6s,baz=79,slow=7.5,SNR=6.9						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**57.51**	**316**	P	**P**	**02 03 19.2**	**-0.8**
	0.9nm,0.9s,baz=94,slow=7.6,SNR=9.3						
	0.9nm,0.9s						
BVAR	**Borovoye Array**	**62.58**	**319**	P	**P**	**02 03 54.6**	**-0.1**
	2.2nm,0.5s,baz=84,slow=6.4,SNR=11						
	2.2nm,0.5s						
KBZ	**Khabaz**	**82.44**	**314**	P	**P**	**02 05 53.1**	**+0.1**
	1.9nm,0.8s,baz=89,slow=2.5,SNR=6.0						
	1.9nm,0.8s						
FINES	**FINESS Array B**	**82.64**	**335**	P	**P**	**02 05 53.6**	**-0.2**
	2.2nm,0.9s,baz=48,slow=5.5,SNR=3.7						
	2.2nm,0.9s						
AKASG	**Malin Array Be**	**87.26**	**325**	P	**P**	**02 06 18.2**	**+1.1**
	0.2nm,0.4s,baz=54,slow=4.7,SNR=1.9						
	0.2nm,0.4s						

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*IDC **23** 01:54:00.9±0.7, 22°.89N×144°.08E, h0km, mb4.0/20, mbtmp4.0/22, ML3.7/2, MS2.3/1, Error ellipse: s-maj=23.5km s-min=16.0km az=66.0*
*NEIC **23** 01:54:03.4±2.7, 22°.91N±0°.09×144°.1E±0°.1, h10km±1km, mb4.3/17, Error ellipse: s-maj=23.6km s-min=11.5km az=62.0*
ISC 23 01:54:05.9±0.6, 22°.89N±0°.08×144°.2E±0°.1, h34km, n60, σ0s98/54, mb4.2/27, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**4.55**	**337**	Pn	**Pn**	**01 55 12.1**	**-0.3**
	16nm,0.3s,baz=262,slow=23,SNR=2.0						
JCJ				Sn	**Sn**	**01 56 05.3**	**+1.2**
	10nm,0.3s,baz=286,slow=23,SNR=1.9						
	52nm,0.4s						
JCJ	**Chichijima**	**4.55**	**337**		**Pn**	**01 55 12.8**	**+0.5**
MJAR	**Matsushiro Arr**	**14.54**	**341**	Pn	**Pn**	**01 57 28.7**	**-0.6**
	0.1nm,0.3s,baz=152,slow=13,SNR=2.2						
	2.2nm,0.5s						
MJAR	**Matsushiro Arr**	**14.54**	**341**	Pn	**Pn**	**01 57 27.1**	**-2.2**
KSRS	**Korea Array**	**20.14**	**320**	P	**P**	**01 58 35.9**	**-1.2**
	1.3nm,0.5s,baz=146,slow=8.5,SNR=12						
	1.3nm,0.5s						
SSLB	**Suanglung**	**21.32**	**277**	P	**P**	**01 58 51.6**	**+1.6**
SSLB				IAmb	IAmb	01 58 55.2	
	comp=Z,21nm,0.8s						
H11N1	**WAKE ISLAND Hy**	**21.42**	**94**	T	T	02 21 01.0	
	baz=283,slow=74,SNR=11						
H11N2	**WAKE ISLAND Hy**	**21.42**	**94**	T	T	02 21 01.1	
	baz=283,slow=74,SNR=12						
H11N3	**WAKE ISLAND Hy**	**21.43**	**94**	T	T	02 21 02.2	
	baz=283,slow=74,SNR=12						
H11S3	**WAKE ISLAND Hy**	**21.53**	**98**	T	T	02 21 29.3	
	baz=283,slow=76						
H11S1	**WAKE ISLAND Hy**	**21.54**	**98**	T	T	02 21 29.9	
	baz=283,slow=76						
H11S2	**WAKE ISLAND Hy**	**21.54**	**98**	T	T	02 21 25.1	
	baz=283,slow=76						
HNR	**Honiara**	**35.66**	**153**	LR	LR	02 14 14.8	
	comp=Z,5.1nm,19.6s,baz=64,slow=34						
COEN	**Coen**	**36.63**	**182**	P	**P**	**02 01 09.6**	**+0.2**
LZDM	**Lanzhou Array**	**37.30**	**300**	P	**P**	**02 01 15.6**	**+0.3**
	comp=Z,3.4nm,0.4s,baz=113,slow=15,SNR=4.1						
	comp=Z,3.4nm,0.4s						
SONM	**Songino Array**	**39.01**	**319**	P	**P**	**02 01 29.1**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=122,slow=6.6,SNR=6.4						
	comp=Z,0.6nm,0.5s						
SONM	**Songino Array**	**39.01**	**319**	P	**P**	**02 01 29.6**	**+0.3**
CTAO	**Charters Tower**	**42.77**	**177**	P	**P**	**02 02 00.2**	**-0.2**
WB0	**Warramunga Arr**	**43.46**	**193**	P	**P**	**02 02 06.9**	**+1.0**
WB0				IAmb	IAmb	02 02 26.0	
	comp=Z,5.3nm,1.2s						
WR8	**Warramunga Arr**	**43.62**	**193**	P	**P**	**02 02 06.4**	**-0.8**
WRA	**Warramunga Arr**	**43.64**	**193**	P	**P**	**02 02 07.0**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=17,slow=9.1,SNR=9.6						
	comp=Z,0.6nm,0.5s						
WRA	**Warramunga Arr**	**43.64**	**193**	P	**P**	**02 02 07.0**	**-0.4**
ASAR	**Alice Springs**	**47.34**	**193**	P	**P**	**02 02 36.2**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=12,slow=7.3,SNR=6.2						
	comp=Z,0.3nm,0.4s						
AKUT	**Akutan**	**48.63**	**37**	P	**P**	**02 02 46.7**	**+0.4**
EVN	**Everest**	**51.63**	**288**	P	**P**	**02 03 11.1**	**+0.8**
EVN				IAmb	IAmb	02 03 11.6	
	comp=Z,2.4nm,0.7s						
ZALV	**Zalesovo Beam**	**53.84**	**321**	P	**P**	**02 03 25.1**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=102,slow=8.3,SNR=4.9						
	comp=Z,1.1nm,0.6s						
ZALV	**Zalesovo Beam**	**53.84**	**321**	P	**P**	**02 03 24.8**	**-0.6**
MKAR	**Makanchi Array**	**54.56**	**312**	P	**P**	**02 03 31.2**	**+0.4**
	comp=Z,1.7nm,0.6s,baz=86,slow=8.9,SNR=17						
	comp=Z,1.7nm,0.6s						
C18K	**Utukok River**	**56.27**	**21**	P	**P**	**02 03 43.3**	**+0.5**
C19K	**Lookout Ridge**	**56.99**	**21**	P	**P**	**02 03 49.6**	**+1.7**
C19K				IAmb	IAmb	02 03 57.9	
	comp=Z,2.4nm,1.0s						
NRIK	**Noril'sk**	**57.19**	**339**	P	**P**	**02 03 49.9**	**+0.6**
	comp=Z,1.9nm,0.4s,baz=126,slow=6.7,SNR=3.5						
	comp=Z,1.9nm,0.4s						

NRIK	**Noril'sk**	**57.19**	**339**	P	**P**	**02 03 49.0**	**-0.3**
NRIK				IAmb	IAmb	02 03 50.8	
	comp=Z,4.0nm,1.0s						
KURK	**Kurchatov**	**57.22**	**317**	P	**P**	**02 03 49.6**	**-0.2**
KURK				IAmb	IAmb	02 03 50.9	
	comp=Z,2.1nm,0.8s						
KURBB	**Kurchatov Arra**	**57.27**	**316**	P	**P**	**02 03 50.0**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=93,slow=7.9,SNR=12						
	comp=Z,1.6nm,0.6s						
IMAR	**Indian Mountai**	**58.03**	**25**	P	**P**	**02 03 56.1**	**+0.9**
B20K	**Meade River**	**58.13**	**20**	P	**P**	**02 03 58.1**	**+2.3**
B20K				IAmb	IAmb	02 04 09.0	
	comp=Z,4.3nm,1.2s						
ILAR	**Eielson Array**	**60.57**	**27**	P	**P**	**02 04 13.0**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=268,slow=5.9,SNR=6.7						
	comp=Z,0.6nm,0.8s						
ILAR	**Eielson Array**	**60.57**	**27**	P	**P**	**02 04 12.7**	**-0.1**
F25K	**Christian Rive**	**61.51**	**24**	P	**P**	**02 04 21.7**	**+2.5**
F25K				IAmb	IAmb	02 04 38.1	
	comp=Z,3.8nm,1.5s						
BMAR	**Burnt Mountain**	**61.89**	**24**	P	**P**	**02 04 24.0**	**+2.2**
BVAR	**Borovoye Array**	**62.35**	**319**	P	**P**	**02 04 25.3**	**+0.3**
	comp=Z,7.1nm,0.5s,baz=85,slow=6.7,SNR=21						
	comp=Z,7.1nm,0.5s						
BORK	**Borovoye**	**62.39**	**319**	P	**P**	**02 04 25.8**	**+0.5**
HRA	**Herat**	**71.04**	**300**	P	**P**	**02 05 21.6**	**+0.6**
HRA				IAmb	IAmb	02 05 22.6	
	comp=Z,2.8nm,0.8s						
YKA	**Yellowknife Ar**	**74.98**	**28**	P	**P**	**02 05 44.0**	**+0.5**
	comp=Z,2.2nm,0.8s,baz=294,slow=6.6,SNR=3.1						
	comp=Z,0.2nm,0.8s						
YKA	**Yellowknife Ar**	**74.98**	**28**	P	**P**	**02 05 43.0**	**-0.5**
ARCES	**ARCESS Array B**	**78.08**	**342**	P	**P**	**02 06 01.0**	**+0.1**
	comp=Z,5.4nm,1.0s,baz=36,slow=6.4,SNR=1.4						
	comp=Z,5.4nm,1.0s						
NVAR	**Mina Array Bea**	**81.70**	**52**	P	**P**	**02 06 22.2**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=288,slow=5.1,SNR=4.0						
	comp=Z,0.4nm,0.8s						
KBZ	**Khabaz**	**82.18**	**314**	P	**P**	**02 06 24.0**	**+0.4**
	comp=Z,5.1nm,0.8s,baz=72,slow=3.2,SNR=13						
	comp=Z,5.1nm,0.8s						
FINES	**FINESS Array B**	**82.49**	**335**	P	**P**	**02 06 24.3**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=68,slow=4.6,SNR=7.7						
	comp=Z,0.6nm,0.3s						
FINES	**FINESS Array B**	**82.49**	**335**	P	**P**	**02 06 23.9**	**-0.9**
PDAR	**Pinedale Array**	**85.92**	**45**	P	**P**	**02 06 42.9**	**0.0**
	comp=Z,0.1nm,0.3s,baz=298,slow=12,SNR=1.7						
	comp=Z,0.1nm,0.3s						
PDAR	**Pinedale Array**	**85.92**	**45**	P	**P**	**02 06 41.5**	**-1.4**
AKASG	**Malin Array Be**	**87.06**	**325**	P	**P**	**02 06 46.8**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=52,slow=3.2,SNR=5.5						
	comp=Z,0.3nm,0.4s						
HFS	**Hagfors**	**87.97**	**338**	P	**P**	**02 06 51.0**	**-1.3**
	comp=Z,1.4nm,0.8s,baz=72,slow=1.8,SNR=1.6						
	comp=Z,1.4nm,0.8s						
BRTR	**Keskin Array B**	**90.17**	**314**	P	**P**	**02 07 02.1**	**-1.1**
	comp=Z,0.8nm,0.8s,baz=73,slow=1.8,SNR=6.0						
	comp=Z,0.8nm,0.8s						
BRTR	**Keskin Array B**	**90.17**	**314**	P	**P**	**02 07 01.7**	**-1.5**
PCRV	**Puerto La Cruz**	**136.70**	**44**	PKP	**PKiKP**	**02 13 27.0**	**-0.5**
	comp=Z,0.3nm,0.9s,baz=340,slow=8.5,SNR=16						
PLCV	**Puerto La Cruz**	**136.74**	**44**		**PKiKP**	**02 13 27.0**	**-0.5**
PLCA	**Paso Flores**	**145.85**	**130**	PKPbc	**PKPab**	**02 13 43.2**	**+0.8**
	comp=Z,1.7nm,0.8s,baz=249,slow=4.5,SNR=4.3						
LPAZ	**La Paz**	**148.93**	**84**	PKPbc	**PKiKP**	**02 13 53.0**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=12,slow=7.1,SNR=5.3						

IDC ***23*** *02:08:26.1±1.2,22.2°93N×144.2°57E, h0km, mb3.8/10, mbtmp3.9/11, ML3.8/1, MS3.3/2, Error ellipse: s-maj=35.9km s-min=25.2km az=77.0*
NEIC ***23*** *02:08:29.2±2.5,23.0°N±0.1°×144.3°E±0.2, h10km±2km, mb4.2/6, Error ellipse: s-maj=40.3km s-min=7.5km az=53.0*

ISC 23 02:08:31.7±1.0, 23.1°N±0.1°×144.5°E±0.2, h35km, n27, σ1s10/22, mb4.1/13, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**4.51**	**333**	Pn	**Pn**	**02 09 37.0**	**-0.5**
JMN	**Monobe**	**14.11**	**321**	Pn	**Pn**	**02 11 48.0**	**-1.1**
MAJO	**Matsushiro**	**14.47**	**339**	P	**P**	**02 11 58.5**	**-1.9**
MJB9	**Matsu-Tunnel**	**14.48**	**339**	P	**P**	**02 11 59.5**	**-0.9**
JOW	**Kunigami**	**15.14**	**288**	LR	LR	02 16 50.3	
	comp=Z,108nm,18.3s,baz=135,slow=33						
JNU	**Nakatsue**	**15.60**	**313**	Pn	**Pn**	**02 12 10.4**	**+1.4**
	0.3nm,0.3s,baz=18,slow=4.5,SNR=4.3						
	20nm,1.2s						
KSRS	**Korea Array**	**20.19**	**319**	P	**P**	**02 13 04.2**	**+0.9**
	1.4nm,0.6s,baz=141,slow=7.9,SNR=9.7						
	1.4nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**21.15**	**95**	T	T	02 35 27.9	
	baz=283						
H11N2	**WAKE ISLAND Hy**	**21.16**	**95**	T	T	02 35 30.5	
	baz=283						
H11N3	**WAKE ISLAND Hy**	**21.17**	**95**	T	T	02 35 30.5	
	baz=283						
WB0	**Warramunga Arr**	**43.69**	**194**	P	**P**	**02 16 33.8**	**+0.4**
WR8	**Warramunga Arr**	**43.85**	**194**	P	**P**	**02 16 33.4**	**-1.3**
WR8				IAmb	IAmb	02 17 12.6	
	comp=Z,6.8nm,1.3s						
WRA	**Warramunga Arr**	**43.87**	**194**	P	**P**	**02 16 33.5**	**-1.5**
	comp=Z,0.3nm,0.4s,baz=17,slow=9.0,SNR=10						
	comp=Z,0.3nm,0.4s						
WRA	**Warramunga Arr**	**43.87**	**194**	P	**P**	**02 16 33.6**	**-1.3**
TIXI	**Tiksi**	**49.42**	**354**	LR	LR	02 37 55.7	
	comp=Z,34nm,21.7s,baz=82,slow=36						
EVN	**Everest**	**51.84**	**288**	P	**P**	**02 17 36.9**	**-0.6**
EVN				IAmb	IAmb	02 17 44.5	
	comp=Z,2.0nm,0.6s						
ZALV	**Zalesovo Beam**	**53.88**	**321**	P	**P**	**02 17 51.6**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=102,slow=6.9,SNR=2.3						
	comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**54.65**	**312**	P	**P**	**02 17 57.9**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=86,slow=9.4,SNR=13						
	comp=Z,0.9nm,0.6s						
KURK	**Kurchatov**	**57.29**	**316**	P	**P**	**02 18 15.1**	**-0.8**
KURK				IAmb	IAmb	02 18 18.6	
	comp=Z,2.0nm,1.0s						
KURBB	**Kurchatov Arra**	**57.34**	**316**	P	**P**	**02 18 16.6**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=94,slow=7.6,SNR=11						
	comp=Z,0.9nm,0.6s						
ILAR	**Eielson Array**	**60.29**	**27**	P	**P**	**02 18 37.7**	**+1.2**
	comp=Z,0.2nm,0.7s,baz=264,slow=6.2,SNR=2.8						
	comp=Z,0.2nm,0.7s						
BVAR	**Borovoye Array**	**62.40**	**319**	P	**P**	**02 18 52.3**	**+1.3**
	comp=Z,4.0nm,0.5s,baz=86,slow=6.8,SNR=29						
	comp=Z,4.0nm,0.5s						
AB31	**Akbulak array**	**69.39**	**316**	P	**P**	**02 19 36.8**	**+0.8**
AB31				IAmb	IAmb	02 20 08.0	
	comp=Z,2.5nm,1.2s						
ABKAR	**Akbulak array**	**69.39**	**316**	P	**P**	**02 19 36.3**	**+0.3**
YKA	**Yellowknife Ar**	**74.70**	**28**	P	**P**	**02 20 06.7**	**-0.8**
	comp=Z,0.1nm,0.7s,baz=294,slow=6.3,SNR=1.1						
	comp=Z,0.1nm,0.7s						
KBZ	**Khabaz**	**82.26**	**314**	P	**P**	**02 20 50.7**	**+1.1**
	comp=Z,3.0nm,0.9s,baz=182,slow=4.2,SNR=9.3						
	comp=Z,3.0nm,0.9s						
FINES	**FINESS Array B**	**82.45**	**335**	P	**P**	**02 20 51.1**	**+0.9**
	comp=Z,2.7nm,1.0s,baz=56,slow=4.8,SNR=6.2						
	comp=Z,2.7nm,1.0s						

SNET ***23*** *02:11:31.0±0.9, 12.69°N×88.32°W, h30km±6km, ML3.9, Presumed earthquake*
CATAC ***23*** *02:11:31.1±0.3, 13.2°N±2.8°×88.8°W±1.4°, h36km±5km, M3.7/21, MLv3.7/21, Error ellipse: s-maj=4.1km s-min=1.3km az=30.5, confirmed*
GCG ***23*** *02:11:32.3±0.9, 12.71°N×88.41°W, h35km±65km, MD3.7, Presumed earthquake*
IDC ***23*** *02:11:35.0±2.0, 13.18°N×87.51°W, h103km±43km, mb2.9/3, mbtmp3.2/4, Error ellipse: s-maj=129.5km s-min=10.1km az=41.0*

ISC 23 02:11:30.8±1.0, 12.64°N±0.05°×88.33°W±0.03, h56km±11km, n94, σ0s59/143, mb3.1/3, 3C-27D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCY	**Lacayo**	**0.78**	**3**	*i* P	**Pn**	**02 11 45.9**	**-0.1**
RANC	**El Ranchito**	**0.80**	**3**	↑P	**Pn**	**02 11 46.1**	**-0.1**
RANC				S	**Sn**	**02 11 58.1**	**+0.6**
RANC	**El Ranchito**	**0.80**	**3**	↑*e*P	**Pn**	**02 11 46.1**	**-0.1**
CNCH	**Conchagua**	**0.80**	**37**	↓P	**Pn**	**02 11 45.9**	**-0.4**
CNCH	**Conchagua**	**0.80**	**37**	↓*e*P	**Pn**	**02 11 45.9**	**-0.4**
CNCH				*e*S	**Sn**	**02 11 58.7**	**+1.1**
CSGN	**Cosiguina Volc**	**0.83**	**66**	↓P	**Pn**	**02 11 46.2**	**-0.3**
CSGN				S	**Sn**	**02 11 58.2**	**+0.1**
PACA	**Pacayal**	**0.83**	**1**	↓P	**Pn**	**02 11 46.5**	**-0.1**
PACA	**Pacayal**	**0.83**	**1**	↓*i*P	**Pn**	**02 11 46.5**	**-0.1**
PACA				*e*S	**Sn**	**02 11 58.4**	**+0.2**
CNRM	**Centro Naciona**	**0.85**	**11**	↓P	**Pn**	**02 11 46.7**	**-0.1**
CNRM				S	**Sn**	**02 11 59.2**	**+0.7**
CNRM	**Centro Naciona**	**0.85**	**11**	*e*P	**Pn**	**02 11 46.6**	**-0.1**
TECA	**Tecapa**	**0.87**	**349**	↓*i*P	**Pn**	**02 11 47.0**	**-0.3**
POTN	**Potosi Cosigui**	**0.88**	**66**	↓P	**Pn**	**02 11 47.2**	**-0.1**
POTN				S	**Sn**	**02 11 59.2**	**0.0**
TECO	**Alcaldia de Te**	**1.00**	**334**	↓P	**Pn**	**02 11 48.2**	**-0.6**
TECO				S	**Sn**	**02 12 01.6**	**-0.4**
TECO	**Alcaldia de Te**	**1.00**	**334**	*e*P	**Pn**	**02 11 48.2**	**-0.6**
PQSS	**Presa 15 de Se**	**1.01**	**347**	*e*P	**Pn**	**02 11 49.0**	**+0.1**
SCLA	**Alcaldia de Sa**	**1.13**	**340**	↓P	**Pn**	**02 11 50.8**	**+0.2**
SCLA				S	**Sn**	**02 12 06.2**	**+1.1**
SCLA	**Alcaldia de Sa**	**1.13**	**340**	↓*e*P	**Pn**	**02 11 50.7**	**+0.2**
SJTE	**Alcalda de S**	**1.17**	**326**	↓*e*P	**Pn**	**02 11 50.9**	**-0.3**
LFRS	**El Faro**	**1.21**	**324**	↑*i*P	**Pn**	**02 11 51.6**	**-0.1**
LFRS				*e*S	**Sn**	**02 12 06.1**	**-1.1**
PAVA	**Las Pavas**	**1.22**	**331**	↓P	**Pn**	**02 11 52.0**	**+0.1**
PAVA				S	**Sn**	**02 12 08.1**	**+0.6**
PAVA	**Las Pavas**	**1.22**	**331**	*e*P	**Pn**	**02 11 51.8**	**0.0**
CRIN	**San Cristobal**	**1.25**	**87**	↓P	**Pn**	**02 11 52.9**	**+0.7**
CRIN				S	**Sn**	**02 12 09.6**	**+1.5**
LOMA	**Loma Larga**	**1.29**	**321**	*e*P	**Pn**	**02 11 52.6**	**-0.2**
UDBS	**Universidad Do**	**1.34**	**323**	*e*P	**Pn**	**02 11 53.4**	**0.0**
LFU	**La Fuente**	**1.34**	**326**	*e*P	**Pn**	**02 11 53.7**	**+0.3**
IGN	**Direccin Gen**	**1.35**	**323**	P	**Pn**	**02 11 53.4**	**0.0**
IGN				S	**Sn**	**02 12 10.7**	**+0.3**
IGN	**Direccin Gen**	**1.35**	**323**	*e*P	**Pn**	**02 11 53.5**	**0.0**
UTEC	**Universidad Te**	**1.35**	**321**	P	**Pn**	**02 11 53.6**	**0.0**
UTEC				S	**Sn**	**02 12 10.7**	**+0.1**
SEMO	**Seminario San**	**1.37**	**321**	P	**Pn**	**02 11 54.3**	**+0.5**
SEMO				S	**Sn**	**02 12 10.8**	**-0.2**
UEES	**Universidad Ev**	**1.39**	**321**	P	**Pn**	**02 11 54.4**	**+0.3**
UEES				S	**Sn**	**02 12 12.0**	**+0.6**
UEES	**Universidad Ev**	**1.39**	**321**	*e*P	**Pn**	**02 11 54.1**	**0.0**
P5NO	**Presa 5 de nov**	**1.41**	**343**	↓P	**Pn**	**02 11 54.1**	**-0.1**
P5NO				S	**Sn**	**02 12 12.0**	**+0.3**
PIC2	**El Picacho**	**1.42**	**321**	*e*P	**Pn**	**02 11 55.0**	**+0.3**
BOQS	**Boqueron**	**1.43**	**320**	*e*P	**Pn**	**02 11 55.0**	**+0.3**
PMON	**Piamonte**	**1.44**	**318**	P	**Pn**	**02 11 54.7**	**0.0**
PMON				S	**Sn**	**02 12 13.1**	**+0.5**
PMON	**Piamonte**	**1.44**	**318**	*e*P	**Pn**	**02 11 54.6**	**0.0**
TEL3	**Telica 3**	**1.45**	**92**	↓P	**Pn**	**02 11 55.0**	**+0.1**
HERN	**Volcan Telica**	**1.47**	**91**	↓P	**Pn**	**02 11 55.2**	**+0.1**
HERN				S	**Sn**	**02 12 13.8**	**+0.5**
HOYN	**Al Sur del Vol**	**1.47**	**91**	↓P	**Pn**	**02 11 55.1**	**0.0**
HOYN				S	**Sn**	**02 12 13.8**	**+0.5**
JAYA	**Jayaque - finc**	**1.49**	**313**	P	**Pn**	**02 11 55.2**	**-0.2**
JAYA				S	**Sn**	**02 12 14.5**	**+0.6**
JAYA	**Jayaque - finc**	**1.49**	**313**	*e*P	**Pn**	**02 11 55.0**	**-0.4**
JAYA	**Jayaque - finc**	**1.49**	**313**	*i* Pg	**Pn**	**02 11 56.6**	**+1.2**
JAYA				*e*P	**Pn**	**02 11 56.6**	**+1.2**
JAYA	**Jayaque - finc**	**1.49**	**313**	*e*P	**Pn**	**02 11 55.0**	**-0.4**
MARCA	**Marcala la Paz**	**1.54**	**11**	P	**Pn**	**02 11 56.7**	**+0.5**
MARCA				S	**Sn**	**02 12 15.8**	**+0.6**
MARCA	**Marcala la Paz**	**1.54**	**11**	*i* P	**Pn**	**02 11 56.5**	**+0.4**
MARCA				*e*S	**Sn**	**02 12 16.3**	**+1.1**
MARCA	**Marcala la Paz**	**1.54**	**11**	*e*S	**Sn**	**02 12 16.3**	**+1.1**
CEDA	**San Andres**	**1.55**	**318**	P	**Pn**	**02 11 56.5**	**+0.3**
CEDA				S	**Sn**	**02 12 16.4**	**+1.1**
CNGA	**Al SSO del Vol**	**1.60**	**95**	↓P	**Pn**	**02 11 56.8**	**0.0**
CNGN	**Cerro Negro**	**1.60**	**95**	↓P	**Pn**	**02 11 56.7**	**-0.1**
CNGN				S	**Sn**	**02 12 17.0**	**+0.5**
MACN	**El Madrono**	**1.63**	**96**	↓P	**Pn**	**02 11 57.1**	**-0.1**
MACN				S	**Sn**	**02 12 17.7**	**+0.6**
LLGN	**La Laguna**	**1.63**	**339**	P	**Pn**	**02 11 57.6**	**+0.3**
LLGN				S	**Sn**	**02 12 18.2**	**+0.9**
CEVE	**Cerro Verde**	**1.73**	**313**	P	**Pn**	**02 11 58.8**	**0.0**
CEVE				S	**Sn**	**02 12 20.5**	**+0.6**
CEVE	**Cerro Verde**	**1.73**	**313**	*e*P	**Pn**	**02 11 59.6**	**+0.8**
SBLS	**San Blas**	**1.73**	**314**	*e*P	**Pn**	**02 11 59.5**	**+0.6**
TGUH	**Tegucigalpa,Un**	**1.75**	**36**	P	**Pn**	**02 11 59.4**	**+0.4**
TGUH				S	**Sn**	**02 12 20.6**	**+0.3**
COPN	**Copaltepe**	**1.76**	**105**	P	**Pn**	**02 11 58.4**	**-0.6**
AESN	**El Sauce Leon**	**1.77**	**82**	S	**Sn**	**02 12 20.9**	**+0.4**
MOM3	**MOM3**	**1.78**	**94**	P	**Pn**	**02 11 59.3**	**+0.1**
MOM3				S	**Sn**	**02 12 21.2**	**+0.5**
UNIC	**Universidad Ca**	**1.79**	**319**	P	**Pn**	**02 11 59.9**	**+0.5**
UNIC				S	**Sn**	**02 12 21.8**	**+0.7**
MOM2	**El Cardon**	**1.81**	**96**	↓P	**Pn**	**02 12 01.7**	**+0.3**
MOM2				S	**Sn**	**02 12 21.9**	**+0.3**
NUBE	**Las Nubes**	**1.89**	**312**	↓P	**Pn**	**02 12 01.2**	**+0.3**
NUBE	**Las Nubes**	**1.89**	**312**	*e*P	**Pn**	**02 12 01.2**	**+0.3**
NUBE				*e*S	**Sn**	**02 12 23.4**	**-0.3**
NUBE	**Las Nubes**	**1.89**	**312**	*e*P	**Pn**	**02 12 01.2**	**+0.3**
NUBE				*e*S	**Sn**	**02 12 23.4**	**-0.3**
NUBE	**Las Nubes**	**1.89**	**312**	*e*P	**Pn**	**02 12 01.1**	**+0.3**
AMTN	**Mateare**	**1.90**	**102**	P	**Pn**	**02 12 01.5**	**+0.6**
AMTN				S	**Sn**	**02 12 24.1**	**+0.4**
APQ3	**Volcan Apoyequ**	**1.95**	**100**	P	**Pn**	**02 12 02.1**	**+0.5**
APQ3				S	**Sn**	**02 12 25.5**	**+0.6**
LOAL	**Lomas de Alarc**	**1.96**	**314**	S	**Sn**	**02 12 26.1**	**+0.9**
YUSH	**Yuscaran**	**1.96**	**48**	↓P	**Pn**	**02 12 02.2**	**+0.5**
YUSH				S	**Sn**	**02 12 25.6**	**+0.4**
LIMN	**Finca el Limon**	**1.96**	**77**	↓P	**Pn**	**02 12 01.9**	**0.0**
LIMN				S	**Sn**	**02 12 25.8**	**+0.4**
APYN	**Apoyeque**	**1.98**	**101**	P	**Pn**	**02 12 02.4**	**+0.4**
APYN				S	**Sn**	**02 12 26.2**	**+0.6**
APQ2	**Apoyeque**	**2.01**	**102**	P	**Pn**	**02 12 02.7**	**+0.4**
APQ2				S	**Sn**	**02 12 26.6**	**+0.3**
MTO3	**Montecristo**	**2.02**	**330**	P	**Pn**	**02 12 02.9**	**+0.2**
MTO3				S	**Sn**	**02 12 27.6**	**+0.7**
FAME	**Alcaldia de Sa**	**2.03**	**306**	P	**Pn**	**02 12 03.7**	**+1.0**
FAME				S	**Sn**	**02 12 27.4**	**+0.5**
ABCN	**Banco Central**	**2.04**	**104**	S	**Sn**	**02 12 27.6**	**+0.4**
OCON	**Estacion meteo**	**2.06**	**61**	S	**Sn**	**02 12 28.0**	**+0.3**
ALLN	**Telcor Managua**	**2.07**	**103**	S	**Sn**	**02 12 28.2**	**+0.4**
UNAN	**Cigeo UNAN**	**2.08**	**104**	P	**Pn**	**02 12 03.7**	**+0.3**
UNAN				S	**Sn**	**02 12 28.4**	**+0.2**
MGAN	**Managua**	**2.10**	**103**	P	**Pn**	**02 12 03.5**	**-0.1**
MGAN				S	**Sn**	**02 12 28.7**	**+0.2**
ESQI	**Esquipulas**	**2.15**	**333**	P	**Pn**	**02 12 05.2**	**+0.8**
ESQI				S	**Sn**	**02 12 30.9**	**+0.9**
ESQI	**Esquipulas**	**2.15**	**333**	*e*P	**Pn**	**02 12 05.0**	**+0.6**
SARH	**Santa Rosa de**	**2.17**	**349**	S	**Sn**	**02 12 29.1**	**+1.2**
SARH	**Santa Rosa de**	**2.17**	**349**	*e*P	**Pn**	**02 12 05.5**	**+0.9**
AERN	**Aeropuerto Man**	**2.17**	**103**	S	**Sn**	**02 12 30.7**	**+0.4**
MAS3	**Al N del Volca**	**2.19**	**106**	S	**Sn**	**02 12 31.0**	**+0.1**
NANN	**Nandasmo**	**2.27**	**108**	P	**Pn**	**02 12 06.7**	**+0.7**
NANN				S	**Sn**	**02 12 33.2**	**+0.4**
RCVN	**Varillal2**	**2.29**	**65**	P	**Pn**	**02 12 07.1**	**+0.8**
RCVN				S	**Sn**	**02 12 33.8**	**+0.4**
RCPN	**Sur Rio San Ju**	**2.35**	**68**	↓P	**Pn**	**02 12 07.8**	**+0.6**
MATN	**Matagalpa**	**2.37**	**83**	P	**Pn**	**02 12 06.6**	**-0.8**
MATN				S	**Sn**	**02 12 35.1**	**-0.2**
BOAB	**BOACO BROADBAN**	**2.61**	**94**	P	**Pn**	**02 12 10.5**	**-0.1**
BOAB				S	**Sn**	**02 12 41.5**	**+0.3**
APG	**El Apazote**	**3.13**	**319**	P	Pn	02 12 24.6	+6.6
	0.6nm,0.5s,baz=199,slow=14,SNR=8.2						
APG				S	Sn	02 13 06.9	+13
	1.5nm,0.7s,baz=226,slow=20,SNR=6.2						
JTS	**Las Juntas de**	**4.05**	**125**	P	**Pn**	**02 12 32.1**	**+1.7**
	3.5nm,0.6s,baz=285,slow=12,SNR=47						
JTS				S	**Sn**	**02 13 16.4**	**-0.2**
	6.3nm,0.3s,baz=320,slow=21,SNR=1.6						
TXAR	**Lajitas Array**	**21.89**	**322**	P	**P**	**02 16 20.4**	**+1.1**
	0.7nm,0.5s,baz=137,slow=10,SNR=17						
	0.7nm,0.5s						
NVAR	**Mina Array Bea**	**37.00**	**319**	P	**P**	**02 18 35.9**	**+0.5**
	0.1nm,0.5s,baz=107,slow=9.4,SNR=1.6						
	0.1nm,0.5s						
YKA	**Yellowknife Ar**	**53.21**	**345**	P	**P**	**02 20 40.5**	**-2.8**
	0.1nm,0.5s,baz=141,slow=6.8,SNR=3.6						
	0.1nm,0.5s						

IDC ***23*** *02:49:14.6±1.3, 31.84°N×141.65E, h0km, mb3.4/5, mbtmp3.4/6, ML2.2/1, Error ellipse: s-maj=48.3km s-min=23.5km az=79.0*

ISC 23 02:49:18.4±1.3, 31.9°N±0.2°×141.6°E±0.3, h26km, n6, σ0s55/6, mb3.4/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**5.47**	**330**	Pn	**Pn**	**02 50 38.4**	**+0.2**
	0.1nm,0.3s,baz=150,slow=10.0,SNR=1.7						
	0.8nm,0.3s						
ZALV	**Zalesovo Beam**	**45.66**	**316**	P	**P**	**02 57 35.9**	**-0.7**
	0.3nm,0.4s,baz=86,slow=7.5,SNR=1.8						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**47.18**	**306**	P	**P**	**02 57 49.1**	**+0.3**
	0.3nm,0.7s,baz=85,slow=8.9,SNR=3.7						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**51.98**	**189**	P	**P**	**02 58 25.8**	**+0.4**
	0.9nm,1.0s,baz=5.7,slow=7.4,SNR=8.6						
	0.9nm,1.0s						
ILAR	**Eielson Array**	**53.82**	**30**	P	**P**	**02 58 38.7**	**+0.1**
	0.2nm,0.8s,baz=258,slow=5.6,SNR=1.8						
	0.2nm,0.8s						
ASAR	**Alice Springs**	**55.70**	**189**	P	**P**	**02 58 52.3**	**-0.4**
	0.1nm,0.3s,baz=2.0,slow=8.2,SNR=2.0						
	0.1nm,0.3s						

IDC ***23*** *03:50:57.6±0.7, 22.90°N×144.10E, h0km, mb4.1/24, mbtmp4.2/26, ML3.8/2, MS3.3/11, Error ellipse: s-maj=21.8km s-min=15.2km az=69.0*
NEIC ***23*** *03:51:01.2±2.4, 23.04°N±0.09°×143.9E±0.1, h10km±1km, mb4.4/30, Error ellipse: s-maj=21.7km s-min=15.5km az=270.0*

ISC 23 03:51:03.1±0.6, 22.94°N±0.07°×144.1E±0.1, h34km, n79, σ1s38/69, mb4.3/39, MS3.3/9, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**4.47**	**338**	Pn	**Pn**	**03 52 05.6**	**-2.9**
	17nm,0.3s,baz=299,slow=18,SNR=2.8						
JCJ				Sn	**Sn**	**03 53 01.4**	**+2.1**
	28nm,0.3s,baz=289,slow=22,SNR=2.1						
	64nm,0.3s						
JCJ	**Chichijima**	**4.47**	**338**		**Pn**	**03 52 05.2**	**-3.2**
JGF	**Kuroka**	**13.89**	**337**	Pn	**Pn**	**03 54 17.3**	**-0.4**
MJAR	**Matsushiro Arr**	**14.47**	**341**	Pn	**Pn**	**03 54 22.0**	**-3.4**
	0.1nm,0.3s,baz=145,slow=17,SNR=5.7						
MJAR				LR	LR	04 00 00.5	
	comp=Z,62nm,19.2s,baz=162,slow=37						
	0.6nm,0.3s						
MJAR	**Matsushiro Arr**	**14.47**	**341**	Pn	**Pn**	**03 54 21.6**	**-3.8**
JNU	**Nakatsue**	**15.42**	**314**	LR	LR	04 00 13.8	
	comp=Z,28nm,19.6s,baz=137,slow=36						
KSRS	**Korea Array**	**20.05**	**320**	P	**Pn**	**03 55 34.4**	**-0.8**
	2.4nm,0.7s,baz=142,slow=8.6,SNR=13						
KSRS				LR	LR	04 02 50.0	
	comp=Z,83nm,20.0s,baz=135,slow=35						
	2.4nm,0.7s						
SSLB	**Suanglung**	**21.22**	**277**	P	**P**	**03 55 49.3**	**+3.1**
H11N1	**WAKE ISLAND Hy**	**21.51**	**94**	T	T	04 17 59.2	
	baz=283,slow=74,SNR=67						
H11N2	**WAKE ISLAND Hy**	**21.51**	**94**	T	T	04 18 00.5	
	baz=283,slow=74,SNR=42						
H11N3	**WAKE ISLAND Hy**	**21.53**	**94**	T	T	04 18 00.5	
	baz=283,slow=74,SNR=46						
H11S3	**WAKE ISLAND Hy**	**21.62**	**98**	T	T	04 18 06.0	
	baz=288,slow=74,SNR=8.0						
H11S1	**WAKE ISLAND Hy**	**21.63**	**98**	T	T	04 18 17.2	
	baz=288,slow=74,SNR=7.

INK					IAmb	IAmb	04 02 10.1		
	comp=Z,4.8nm,1.4s								
ARTI	**Arti**	**68.85**	**324**	P		**P**	**04 02 03.5**	**-0.5**	
	comp=Z,3.4nm,0.6s,baz=115,slow=3.0,SNR=5.8								
	comp=Z,3.4nm,0.6s								
AB31	**Akbulak array**	**69.22**	**316**	P		**P**	**04 02 06.0**	**-0.5**	
AB31					IAmb	IAmb	04 02 07.2		
	comp=Z,3.6nm,1.1s								
ABKAR	**Akbulak array**	**69.22**	**316**	P		**P**	**04 02 06.4**	**-0.1**	
AKTO	**Aktyubinsk**	**70.20**	**317**	P		**P**	**04 02 11.7**	**-0.8**	
	comp=Z,1.4nm,0.6s,baz=81,slow=9.8,SNR=5.3								
	comp=Z,1.4nm,0.6s								
YKA	**Yellowknife Ar**	**74.98**	**28**	P		**P**	**04 02 41.0**	**+0.3**	
	comp=Z,0.3nm,0.7s,baz=295,slow=6.3,SNR=6.2								
	comp=Z,0.3nm,0.7s								
ARCES	**ARCESS Array B**	**78.00**	**342**	P		**P**	**04 02 58.8**	**+1.2**	
	comp=Z,8.0nm,1.2s,baz=39,slow=7.8,SNR=4.3								
	comp=Z,8.0nm,1.2s								
ARCES	**ARCESS Array B**	**78.00**	**342**	P		**P**	**04 02 58.9**	**+1.2**	
POIN	**Pond Inlet**	**80.50**	**12**	P		**P**	**04 03 12.1**	**+0.8**	
POIN					IAmb	IAmb	04 03 14.3		
	comp=Z,5.7nm,1.4s								
NVAR	**Mina Array Bea**	**81.74**	**52**	P		**P**	**04 03 19.6**	**+0.7**	
	comp=Z,0.8nm,0.9s,baz=269,slow=6.8,SNR=4.1								
NVAR					LR	LR	04 35 09.1		
	comp=Z,42nm,19.8s,baz=44,slow=32								
	comp=Z,0.8nm,0.9s								
KBZ	**Khabaz**	**82.09**	**314**	P		**P**	**04 03 20.6**	**+0.4**	
	comp=Z,7.9nm,0.9s,baz=119,slow=1.8,SNR=19								
	comp=Z,7.9nm,0.9s								
FINES	**FINESS Array B**	**82.41**	**335**	P		**P**	**04 03 21.1**	**-0.4**	
	comp=Z,2.4nm,0.7s,baz=70,slow=5.7,SNR=15								
	comp=Z,2.4nm,0.7s								
AKASG	**Malin Array Be**	**86.96**	**325**	P		**P**	**04 03 43.4**	**-1.3**	
	comp=Z,1.1nm,0.6s,baz=51,slow=4.5,SNR=8.7								
	comp=Z,1.1nm,0.6s								
HFS	**Hagfors**	**87.89**	**338**	P		**P**	**04 03 47.4**	**-1.6**	
	comp=Z,2.3nm,0.9s,baz=64,slow=3.4,SNR=7.5								
	comp=Z,2.3nm,0.9s								
NOA	**NORSAR Array B**	**88.08**	**339**	P		**P**	**04 03 48.3**	**-1.6**	
	comp=Z,0.4nm,0.7s,baz=33,slow=3.2,SNR=1.3								
	comp=Z,0.4nm,0.7s								
BRTR	**Keskin Array B**	**90.07**	**314**	P		**P**	**04 03 58.8**	**-1.1**	
	comp=Z,0.8nm,0.7s,baz=82,slow=3.6,SNR=6.4								
	comp=Z,0.8nm,0.7s								
BRTR	**Keskin Array B**	**90.07**	**314**	P		**P**	**04 03 58.9**	**-1.0**	
TORD	**Torodi Ar. Bea**	**128.57**	**310**	PKP		**PKPdf**	**04 10 06.1**	**-1.3**	
	comp=Z,0.5nm,0.9s,baz=52,slow=5.2,SNR=3.5								
PLCA	**Paso Flores**	**145.95**	**130**	PKPbc		**PKPab**	**04 10 40.0**	**+0.1**	
	comp=Z,2.0nm,0.5s,baz=239,slow=4.5,SNR=13								
LPAZ	**La Paz**	**149.01**	**84**	PKPbc		**PKPbc**	**04 10 49.4**	**+0.2**	
	comp=Z,2.4nm,0.9s,baz=280,slow=1.7,SNR=5.4								
LPAZ	**La Paz**	**149.01**	**84**	PKPdf		**PKPdf**	**04 10 45.5**	**+0.4**	

*CATAC **23** 04:05:16.1±0.9, 13°N±6°×97°W±°, h25km±6km, M2.9/7, MLv2.9/7, Error ellipse: s-maj=12.1km s-min=9.3km az=14.3, confirmed*
*SNET **23** 04:05:17.0±0.7, 13°.16N×89°.61W, h47km±11km, ML2.8, Presumed earthquake*
*GCG **23** 04:05:17.0±0.5, 13°.15N×89°.69W, h42km±12km, MD4.0, Presumed earthquake*

ISC 23 04:05:15.4±3.0, 13°.1N±0°.2×89°.66W±0°.09, h28km±16km, n39, σ0926/51, 9C, El Salvador

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.55**	**37**	P			**Pn**	**04 05 27.5**	**+0.2**
LALI				S			**Sn**	**04 05 35.7**	**+0.2**
LALI	**Alcalda de L**	**0.55**	**37**	*i* P			**Pn**	**04 05 27.5**	**+0.2**
LALI	**Alcalda de L**	**0.55**	**37**	*e*P			**Pb**	**04 05 27.5**	**+0.2**
JAYA	**Jayaque - finc**	**0.63**	**19**	P			**Pn**	**04 05 28.6**	**-0.1**
JAYA				S			**Sn**	**04 05 38.1**	**+0.2**
JAYA	**Jayaque - finc**	**0.63**	**19**	*i* P			**Pn**	**04 05 28.6**	**-0.1**
JAYA				*e*S			**Sn**	**04 05 37.3**	**-0.6**
JAYA	**Jayaque - finc**	**0.63**	**19**	*e*P			**Pn**	**04 05 28.6**	**-0.1**
JAYA				*e*S			**Sn**	**04 05 37.6**	**-0.4**
PANCS	**Alcalda de**	**0.73**	**40**	P			**Pb**	**04 05 29.7**	**+0.1**
PANCS				S			**Sn**	**04 05 40.0**	**-0.1**
PMON	**Piamonte**	**0.74**	**27**	P			**Pb**	**04 05 30.0**	**+0.1**
PMON	**Piamonte**	**0.74**	**27**	*e*P			**Pb**	**04 05 29.9**	**+0.1**
LOMA	**Loma Larga**	**0.76**	**39**	*e*P			**Pb**	**04 05 30.2**	**+0.1**
LOMA				*e*S			**Sn**	**04 05 40.7**	**-0.2**
BOQS	**Boqueron**	**0.77**	**28**	*e*P			**Pb**	**04 05 30.6**	**+0.1**
CEVE	**Cerro Verde**	**0.77**	**2**	P			**Pn**	**04 05 30.8**	**+0.1**
CEVE	**Cerro Verde**	**0.77**	**2**	*e*P			**Pn**	**04 05 30.7**	**+0.1**
UEES	**Universidad Ev**	**0.78**	**32**	P			**Pb**	**04 05 30.5**	**0.0**
UEES				S			**Sn**	**04 05 41.2**	**-0.1**
UEES	**Universidad Ev**	**0.78**	**32**	*e*P			**Pb**	**04 05 30.4**	**0.0**
SBLS	**San Blas**	**0.79**	**2**	*e*P			**Pb**	**04 05 30.9**	**+0.2**
UTEC	**Universidad Te**	**0.79**	**34**	P			**Pb**	**04 05 30.5**	**0.0**
CEDA	**San Andres**	**0.79**	**19**	P			**Pn**	**04 05 30.8**	**0.0**
CEDA				S			**Sn**	**04 05 41.7**	**+0.1**
CEDA	**San Andres**	**0.79**	**19**	*e*P			**Pn**	**04 05 30.7**	**0.0**
IGN	**Direccin Gen**	**0.81**	**36**	P			**Pb**	**04 05 31.0**	**-0.1**
LFRS	**El Faro**	**0.81**	**45**	*e*P			**Pb**	**04 05 31.0**	**0.0**
LFRS				*e*S			**Sn**	**04 05 42.2**	**-0.1**
UDBS	**Universidad Do**	**0.82**	**36**	P			**Pb**	**04 05 31.3**	**+0.1**
RTR	**El Retiro**	**0.84**	**1**	*e*P			**Pn**	**04 05 31.8**	**+0.3**
SJTE	**Alcalda de S**	**0.85**	**48**	*i* P			**Pb**	**04 05 31.4**	**-0.2**
NUBE	**Las Nubes**	**0.85**	**352**	P			**Pb**	**04 05 31.8**	**0.0**
NUBE	**Las Nubes**	**0.85**	**352**	*i* P			**Pb**	**04 05 31.8**	**0.0**
NUBE				*i* S			**Sn**	**04 05 43.2**	**-0.2**
NUBE	**Las Nubes**	**0.85**	**352**	*i* P			**Pb**	**04 05 31.8**	**0.0**
NUBE				*e*S			**Sn**	**04 05 43.2**	**-0.2**
LBRS	**Las Brisas**	**0.91**	**41**	*e*P			**Pb**	**04 05 32.5**	**-0.2**
UNIC	**Universidad Ca**	**0.93**	**7**	P			**Pb**	**04 05 33.0**	**-0.1**
PAVA	**Las Pavas**	**0.96**	**47**	P			**Pb**	**04 05 33.5**	**-0.1**
PAVA				S			**Sn**	**04 05 46.4**	**+0.5**
PAVA	**Las Pavas**	**0.96**	**47**	*e*P			**Pb**	**04 05 33.4**	**-0.1**
SLOZ	**Alcaldia de Sa**	**0.98**	**353**	*e*P			**Pb**	**04 05 33.6**	**-0.2**
TECO	**Alcaldia de Te**	**0.98**	**60**	*e*P			**Pb**	**04 05 32.9**	**-1.0**
SCLA	**Alcaldia de Sa**	**1.11**	**54**	*e*P			**Pn**	**04 05 35.3**	**+0.2**
P5NO	**Presa 5 de nov**	**1.28**	**43**	*e*P			**Pn**	**04 05 37.2**	**-0.2**
PACA	**Pacayal**	**1.36**	**72**	*e*P			**Pn**	**04 05 39.3**	**+0.6**
MTO3	**Montecristo**	**1.37**	**12**	*i* P			**Pn**	**04 05 38.9**	**0.0**
ESQI	**Esquipulas**	**1.53**	**12**	*e*P			**Pn**	**04 05 41.1**	**+0.1**
SARH	**Santa Rosa de**	**1.92**	**27**	*i* P			**Pn**	**04 05 46.8**	**+0.5**

IDC 23 04:14:13.8±1.5, 17°.17N×119°.81E, h0km, mb3.4/4, mbtmp3.5/5, ML4.8/1, Error ellipse: s-maj=68.4km s-min=22.1km az=57.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**19.91**	**277**	P			P	04 18 47.0	-0.1
	1.1nm,0.3s,baz=82,slow=12,SNR=7.6								
	1.5nm,0.3s								
WRA	**Warramunga Arr**	**39.55**	**158**	P			P	04 21 46.1	-0.6
	0.5nm,0.6s,baz=335,slow=9.4,SNR=8.0								
	0.5nm,0.6s								
ASAR	**Alice Springs**	**42.86**	**161**	P			P	04 22 14.5	+0.5
	0.2nm,0.4s,baz=344,slow=8.9,SNR=1.7								
	0.2nm,0.4s								
KURBB	**Kurchatov Arra**	**46.86**	**325**	P			P	04 22 47.0	+1.4
	0.1nm,0.5s,baz=130,slow=8.0,SNR=4.5								
	0.1nm,0.5s								
BVAR	**Borovoye Array**	**52.45**	**325**	P			P	04 23 26.7	-1.4
	0.5nm,0.4s,baz=95,slow=7.8,SNR=5.2								
	0.5nm,0.4s								

*IDC **23** 04:25:43.8±2.2, 18°.66N×81°.04W, h0km, mb3.5/4, mbtmp3.7/6, ML3.3/2, MS3.0/2, Error ellipse: s-maj=52.8km s-min=30.2km az=26.0*
*JSN **23** 04:25:47.0±0.9, 19°.33N×80°.85W, h49km±999km, MD4.4, Presumed earthquake*
*SSNC **23** 04:25:47.5±2.4, 18°.90N×80°.90W, h25km±28km, MD4.2, Presumed earthquake*

ISC 23 04:25:45.2±1.0, 18°.87N±0°.08×80°.88W±0°.07, h10km, n22, σ1890/23, mb3.5/4, 2C, North of Honduras

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LCCY	**Blossom Villag**	**1.09**	**43**	*e*P			**Pb**	**04 26 04.9**	**-1.3**
CBCY	**The Bluff, Cay**	**1.37**	**51**	*e*P			**Pn**	**04 26 07.9**	**-2.4**
CBCY				*e*S			Sb	04 26 19.6	-8.8
MTDJ	**Mount Denham**	**3.24**	**101**	*e*P			**Pn**	**04 26 35.8**	**-0.4**
MTDJ				*e*S			**Sn**	**04 27 10.1**	**-4.7**
MGV	**Manicaragua**	**3.33**	**14**	*e*P			**Pn**	**04 26 35.5**	**-1.9**
CCCC	**Cccc**	**3.73**	**51**	*e*P			**Pn**	**04 26 46.8**	**+3.9**
LMGC	**Las Mercedes**	**3.84**	**71**	*e*P			**Pn**	**04 26 44.2**	**-0.2**
STH	**Stony Hill**	**3.94**	**101**	*i*P			**Pn**	**04 26 45.7**	**-0.1**
HOJ	**Hope**	**4.01**	**102**	*i* P			**Pn**	**04 26 46.9**	**+0.2**
GWJ	**Greenwich**	**4.02**	**101**	*i*P			**Pn**	**04 26 46.6**	**-0.3**
CAMR	**Camarioca**	**4.20**	**354**	*e*P			**Pn**	**04 26 46.5**	**-2.7**
CAMR				*e*Pg			Pb	04 26 51.6	-7.5
CHIV	**Chivirico**	**4.35**	**75**	*e*P			**Pn**	**04 26 51.5**	**+0.1**
SOR	**Soroa**	**4.38**	**333**	*e*P			**Pn**	**04 26 50.5**	**-1.3**
YAR	**Yar**	**4.51**	**70**	*e*P			**Pn**	**04 26 54.1**	**+0.5**
RCC	**Rio Carpintero**	**5.02**	**76**	*e*P			**Pn**	**04 26 59.8**	**-0.8**
PINC	**Pinares de May**	**5.06**	**71**	*e*P			**Pn**	**04 27 01.6**	**+0.5**
PINC				*e*S			**Sn**	**04 27 58.9**	**-0.7**
JTS	**Las Juntas de**	**9.39**	**205**	LR			LR	04 31 31.6	
	comp=Z,86nm,21.8s,baz=6.1,slow=38								
SDV	**Santo Domingo**	**14.04**	**134**	Pn			**Pn**	**04 29 03.1**	**-1.4**
	0.4nm,0.3s,baz=319,slow=20,SNR=4.1								
SDV				LR			LR	04 34 25.2	
	comp=Z,65nm,19.5s,baz=324,slow=37								
	3.8nm,0.8s								
TKL	**Tuckaleechee C**	**16.92**	**352**	P			**Pn**	**04 29 43.8**	**+1.7**
	0.4nm,0.3s,baz=157,slow=6.8,SNR=5.7								
	2.3nm,0.7s								
TXAR	**Lajitas Array**	**23.23**	**301**	P			**P**	**04 30 52.6**	**-0.1**
	0.6nm,0.7s,baz=117,slow=9.8,SNR=5.1								
	0.6nm,0.7s								
SCHQ	**Schefferville**	**37.47**	**13**	P			**P**	**04 33 00.6**	**+1.8**
	1.7nm,0.6s,baz=203,slow=5.5,SNR=5.8								
	1.7nm,0.6s								
ILAR	**Eielson Array**	**62.91**	**334**	P			**P**	**04 36 12.4**	**+1.0**
	0.2nm,0.8s,baz=102,slow=6.2,SNR=5.1								
	0.2nm,0.8s								
ESDC	**Sonseca Array**	**68.29**	**54**	P			**P**	**04 36 48.8**	**+2.1**
	0.4nm,0.7s,baz=289,slow=5.6,SNR=6.0								
	0.4nm,0.7s								

*IDC **23** 04:29:14.0±2.2, 53°.21N×100°.65E, h0km, mb3.8/1, mbtmp3.3/6, ML2.5/3, MS2.8/5, Error ellipse: s-maj=50.0km s-min=10.7km az=19.0*
*MOS **23** 04:29:19.8±1.6, 51°.65N×100°.17E, h16km, mb5.3/52, Error ellipse: s-maj=17.3km s-min=10.7km az=169.2*
*BYKL **23** 04:29:19.1±0.2, 51°.66N×100°.39E*

ISC 23 04:29:19.2±0.7, 51°.55N±0°.04×100°.28E±0°.03, h10km, n54, σ2828/94, 7C-2D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MOY	**Mondy**	**0.46**	**75**	*i*PG			**Pg**	**04 29 27.0**	**-1.2**
MOY				*e*				04 29 33.2	
	comp=Z,2μm,0.5s								
MOY					smax	smax			
	comp=E,5μm,0.5s								
MOY	**Mondy**	**0.46**	**75**	*i*Pg			**Pg**	**04 29 27.1**	**-1.2**
MOY					Pmax			04 29 27.3	
	comp=E,2μm,0.4s								
MOY				*e*Sg			**Sg**	**04 29 33.1**	**-1.3**
MOY					Smax			04 29 33.5	
	comp=E,4μm,0.4s								
ORL	**Orlik**	**1.03**	**344**	*i*PG			**Pg**	**04 29 37.5**	**-1.5**
ORL				*e*				04 29 49.8	
ORL					pmax	pmax			
	comp=Z,485nm,0.2s								
ORL					smax	smax			
	comp=E,1μm,0.4s								
ORL	**Orlik**	**1.03**	**344**	*i*Pg			**Pg**	**04 29 37.2**	**-1.8**
ORL					Pmax			04 29 37.9	
	comp=E,457nm,0.2s								
ORL				*e*Sg			**Sg**	**04 29 49.9**	**-2.6**
ORL					Smax			04 29 50.2	
	comp=E,960nm,0.3s								
ARS	**Arshan**	**1.39**	**74**	*i*PN			**Pn**	**04 29 43.2**	**-1.5**
ARS				*e*				04 30 01.1	
ARS					pmax	pmax			
	comp=Z,372nm,0.5s								
ARS					smax	smax			
	comp=N,4μm,0.5s								
ARS	**Arshan**	**1.39**	**74**	*i*Pg			**Pn**	**04 29 43.2**	**-1.5**
ARS				*e*				04 29 45.7	
ARS					max			04 29 47.6	
	comp=N,245nm,0.2s								
ARS				*e*Sg			**Sb**	**04 30 00.9**	**-2.1**
ARS				*e*Sb			**Sg**	**04 30 03.1**	**-0.7**
ARS				*e*				04 30 06.6	
ARS					max			04 30 07.3	
	comp=N,4μm,0.4s								
KNGR	**Kungurtug, Tuv**	**1.98**	**243**	*e*Pg			**Pb**	**04 29 57.5**	**+2.1**
KNGR				*e*Sg			**Sg**	**04 30 24.7**	**+1.8**
TLY	**Talaya**	**2.10**	**85**	Pn			**Pn**	**04 29 55.5**	**+1.0**
	comp=N,102nm,0.4s,baz=266,slow=14								
TLY				Sn			**Sb**	**04 30 23.6**	**+0.1**
	baz=80,slow=18								
TLY				LR			LR	04 30 37.2	
	comp=N,43nm,20.7s,baz=12,slow=35								
TLY	**Talaya**	**2.10**	**85**	*i*PN			**Pn**	**04 29 55.5**	**+1.0**
TLY				*e*				04 30 22.4	
TLY					pmax	pmax			
	comp=Z,101nm,0.5s								
TLY					smax	smax			
	comp=N,573nm,0.5s								
TLY	**Talaya**	**2.10**	**85**	*i*Pg			**Pn**	**04 29 55.5**	**+1.0**
TLY					Pmax			04 29 57.0	
	comp=N,101nm,0.5s								
TLY				*e*				04 29 59.9	
TLY				*e*Sg			**Sb**	**04 30 22.4**	**-1.2**
TLY					Smax			04 30 26.1	
	comp=N,574nm,0.3s								
ZAK	**Zakamensk**	**2.23**	**120**	*i*PN			**Pb**	**04 29 59.3**	**-0.3**
ZAK				*e*				04 30 29.9	
ZAK					pmax	pmax			
	comp=Z,429nm,0.5s								
ZAK					smax	smax			
	comp=N,766nm,0.5s								
ZAK	**Zakamensk**	**2.23**	**120**	*e*Pg			**Pb**	**04 29 59.1**	**-0.5**
ZAK					Pmax			04 30 00.1	
	comp=N,311nm,0.3s								
ZAK				*e*Sg			**Sb**	**04 30 28.3**	**+1.0**
ZAK				*e*				04 30 32.0	
ZAK					max			04 30 36.0	
	comp=N,518nm,0.2s								
IRK	**Irkutsk**	**2.57**	**73**	*e*PN			**Pb**	**04 30 04.3**	**-1.1**
IRK				*e*				04 30 36.2	
IRK					pmax	pmax			
	comp=Z,596nm,0.3s								
IRK					smax	smax			
	comp=E,4μm,0.6s								
IRK	**Irkutsk**	**2.57**	**73**	*e*Pg			**Pb**	**04 30 03.8**	**-1.6**
IRK					Pmax			04 30 05.0	
	comp=E,597nm,0.3s								
IRK				*e*Sg			**Sb**	**04 30 36.3**	**-0.7**
IRK					Smax			04 30 39.4	
	comp=E,3μm,0.6s								
IVK	**Ivanovka**	**2.59**	**83**	*e*PN			**Pb**	**04 30 05.1**	**-0.6**
IVK				*e*				04 30 38.5	
IVK					pmax	pmax			
	comp=Z,179nm,0.5s								
IVK					smax	smax			
	comp=N,1μm,0.5s								
IVK	**Ivanovka**	**2.59**	**83**	*e*Pg			**Pb**	**04 30 04.4**	**-1.3**
IVK					Pmax			04 30 05.6	
	comp=N,172nm,0.3s								
IVK				*e*Sg			**Sb**	**04 30 37.6**	**+0.1**
IVK					Smax			04 30 39.6	
	comp=N,984nm,0.6s								
LSTR	**Listvyanka**	**2.85**	**82**	*e*PN			**Pb**	**04 30 09.4**	**-0.8**
LSTR				*e*				04 30 44.8	
LSTR					pmax	pmax			
	comp=Z,38nm,0.6s								
LSTR					smax	smax			
	comp=N,357nm,0.6s								
LSTR	**Listvyanka**	**2.85**	**82**	*e*Pn			**Pn**	**04 30 06.3**	**+1.5**
LSTR				*e*Pg			**Pb**	**04 30 09.1**	**-1.1**
LSTR					Pmax			04 30 12.7	
	comp=N,29nm,0.4s								
LSTR				*e*Sg			**Sb**	**04 30 45.0**	**-0.1**
LSTR					Smax			04 30 47.9	
	comp=N,356nm,0.6s								
BGT	**Bolshoye Golou**	**3.22**	**79**	*e*PN			**Pb**	**04 30 15.0**	**-1.5**
BGT				*e*				04 30 55.8	
BGT					pmax	pmax			
	comp=Z,125nm,0.4s								
BGT					smax	smax			
	comp=N,1μm,0.7s								
BGT	**Bolshoye Golou**	**3.22**	**79**	*e*Pg			**Pb**	**04 30 14.8**	**-1.7**
BGT				*e*PgPg			**PnPn**	**04 30 16.9**	**-0.1**
BGT				max				04 30 18.5	
	comp=N,125nm,0.4s								
BGT				*e*				04 30 21.1	
BGT				*e*Sg			**Sb**	**04 30 55.9**	**+0.1**
BGT				Smax				04 30 57.0	
	comp=N,1μm,0.8s								
KZLR	**Kyzyl**	**3.63**	**275**	*e*PN			**Pb**	**04 30 26.0**	**+2.5**
KZLR				*e*S			**Sb**	**04 31 12.4**	**+4.8**
KZLR	**Kyzyl**	**3.63**	**275**	*e*Pg			**Pb**	**04 30 25.0**	**+1.5**
KZLR				*e*Sg			**Sb**	**04 31 12.8**	**+5.2**
STDB	**Stepnoy Dvoret**	**3.83**	**78**	*e*Pg			**Pb**	**04 30 27.0**	**+0.2**
STDB				*e*				04 31 12.6	
STDB				*e*Sg			**Sb**	**04 31 15.5**	**+2.4**
TRG	**Tyrgan**	**3.93**	**70**	*e*PN			**Pn**	**04 30 23.3**	**+3.6**
TRG				*e*				04 30 29.9	
TRG				*e*				04 31 18.3	
TRG					pmax	pmax			
	comp=Z,64nm,0.4s								
TRG					smax	smax			
	comp=N,413nm,0.7s								
TRG	**Tyrgan**	**3.93**	**70**	*e*Pn			**Pn**	**04 30 23.2**	**+3.6**
TRG				*e*				04 30 24.8	
TRG				*e*Pg			**Pb**	**04 30 27.9**	**-0.7**
TRG				*e*PgPg			**PbPb**	**04 30 29.1**	**-2.6**
TRG				max				04 30 30.6	
	comp=N,64nm,0.2s								
TRG				*e*				04 31 09.6	
TRG				*e*Sg			**Sb**	**04 31 17.6**	**+1.4**
TRG				Smax				04 31 22.7	
	comp=N,417nm,0.5s								
KAB	**Kabansk**	**3.99**	**80**	*e*Pg			**Pb**	**04 30 29.1**	**-0.5**
KAB					Pmax			04 30 37.0	
	comp=N,90nm,0.2s								
KAB				*e*				04 31 15.7	
KAB				*e*Sg			**Sb**	**04 31 19.8**	**+2.0**
KAB				*e*SgSg			**Sg**	**04 31 26.7**	**-0.5**
KAB				max				04 31 27.2	
	comp=N,703nm,0.5s								
FFNB	**Fofonovo**	**4.06**	**80**	*e*Pg			**Pb**	**04 30 30.6**	**-0.1**
FFNB				*e*				04 31 17.9	
FFNB				*e*Sg			**Sb**	**04 31 21.9**	**+2.1**
HRMR	**Khuramsha**	**4.17**	**86**	*e*Pn			**Pn**	**04 30 24.9**	**+2.1**
HRMR				*e*Pg			**Pb**	**04 30 32.5**	**-0.1**
HRMR				Pmax				04 30 42.3	
	comp=N,49nm,0.3s								
HRMR				*e*				04 31 21.4	
HRMR				*e*Sg			**Sb**	**04 31 26.5**	**+3.6**
HRMR				Smax				04 31 27.6	
	comp=N,371nm,0.6s								
ZRHB	**Zarechye**	**4.36**	**74**	*e*Pg			**Pb**	**04 30 35.3**	**-0.6**
ZRHB				Pmax				04 30 53.1	
	comp=N,182nm,1.0s								
ZRHB				*e*Sg			**Sb**	**04 31 31.6**	**+3.1**
ZRHB				*e*				04 31 36.2	
ZRHB				max				04 31 40.5	
	comp=N,2μm,1.1s								
ZRHB				*e*				04 31 46.6	
UUDB	**Ulan-Yde**	**4.61**	**83**	*e*Pn			**Pn**	**04 30 31.8**	**+2.9**
UUDB				*e*Pg			**Pb**	**04 30 40.6**	**+0.6**
UUDB				Pmax				04 30 48.3	
	comp=N,29nm,0.6s								
UUDB				*e*				04 30 30.2	
UUDB				*e*Sg			**Sb**	**04 31 39.1**	**+3.6**
UUDB				*e*				04 31 41.7	
UUDB				max				04 31 53.5	
	comp=N,171nm,1.9s								
UZR	**Uzur**	**4.90**	**66**	*e*Pn			**Pn**	**04 30 35.1**	**+2.2**
UZR				*e*Pg			**Pb**	**04 30 44.9**	**-0.1**
UZR				Pmax				04 30 47.8	
	comp=N,19nm,0.4s								
UZR				*e*Sn			**Sn**	**04 31 31.1**	**+1.5**
UZR				*e*Sg			**Sb**	**04 31 46.4**	**+2.4**
UZR				Smax				04 31 53.2	
	comp=N,307nm,0.6s								
OGRR	**Ongureny**	**4.93**	**62**	*e*PN			**Pn**	**04 30 34.8**	**+1.5**
OGRR				*e*				04 30 47.2	
OGRR				pmax	pmax				
	comp=Z,45nm,0.4s								
OGRR	**Ongureny**	**4.93**	**62**	*e*Pn			**Pn**	**04 30 34.7**	**+1.5**
OGRR				*e*Pg			**Pb**	**04 30 44.9**	**-0.6**
OGRR				*e*				04 30 48.8	
OGRR				max				04 30 49.7	
	comp=Z,45nm,0.4s								
OGRR				*e*Sn			**Sn**	**04 31 31.0**	**+0.7**
OGRR				*e*Sg			**Sb**	**04 31 47.7**	**+2.9**
OGRR				Smax				04 31 52.4	
	comp=Z,296nm,0.8s								
KELR	**Kotokel**	**4.96**	**73**	*e*Pg			**Pb**	**04 30 46.4**	**+0.4**
KELR				*e*				04 31 34.2	
KELR				*e*Sg			**Sb**	**04 31 49.8**	**+4.2**
MINR	**Mina**	**4.96**	**315**	*e*Pg			**Pb**	**04 30 48.4**	**+2.4**
MINR				*e*Sg			**Sg**	**04 31 54.8**	**-3.4**
GORB	**Goryachinsk**	**5.12**	**71**	*e*			**Pn**	**04 30 40.5**	**+4.5**
GORB				*e*Pg			**Pb**	**04 30 49.9**	**+1.0**

KURK Kurchatov 13.62 275 P **Pn** **04 32 32.0 -0.3**
KURBB Kurchatov Arra 13.70 275 Pn **Pn** **04 32 32.0 -1.2**
baz=73,slow=11,SNR=1.6
KURBB Lg Lg 04 36 34.8
baz=73,slow=33,SNR=6.0
comp=Z,0.1nm,0.5s
BVAR Borovoye Array 18.29 286 P Pn 04 33 25.4 -7.4
baz=76,slow=12,SNR=1.3
comp=Z,0.2nm,0.5s
AAK Ala-Archa 19.60 253 LR LR 04 41 57.8
comp=Z,35nm,19.4s,baz=35,slow=38
KLR Kul'dur 20.12 84 LR LR 04 41 37.8
comp=Z,32nm,20.1s,baz=358,slow=38
KSRS Korea Array 24.05 115 P **P** **04 34 35.6 +1.3**
comp=Z,1.5nm,0.6s,baz=323,slow=9.6,SNR=5.3
comp=Z,1.5nm,0.6s
DLBC Dease Lake 62.96 27 LR LR 05 08 06.7
comp=Z,60nm,19.8s,baz=47,slow=38

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*IDC **23** 04:32:23.9±1.7, 22.°85N × 144.°07E, h0km, mb3.9/10, mbtmp3.9/10, MS3.0/5, Error ellipse: s-maj=68.5km s-min=19.3km az=71.0*
ISC 23 04:32:29.2±1.8, 22.°9N±0.°2 × 144.°0E±0.°5, h34km, n18, σ0°54/11, mb3.9/9, MS2.8/4, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**14.53**	**341**	LR	LR	04 41 25.5	
	comp=Z,40nm,18.6s,baz=279,slow=37						
KSRS	**Korea Array**	**20.07**	**320**	P	**Pn**	**04 37 01.4**	**-0.2**
	1.2nm,0.6s,baz=146,slow=8.8,SNR=6.8						
KSRS				LR	LR	04 44 06.1	
	comp=Z,34nm,20.4s,baz=155,slow=35						
	1.2nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**21.56**	**94**	T	T	04 59 24.6	
	baz=282,slow=74,SNR=10						
H11N2	**WAKE ISLAND Hy**	**21.56**	**94**	T	T	04 59 26.3	
	baz=282,slow=74,SNR=13						
H11N3	**WAKE ISLAND Hy**	**21.58**	**94**	T	T	04 59 23.6	
	baz=282,slow=74,SNR=11						
TGY	**Tagaytay City**	**23.51**	**252**	LR	LR	04 45 59.4	
	comp=Z,34nm,19.5s,baz=327,slow=35						
LZDM	**Lanzhou Array**	**37.20**	**300**	P	**P**	**04 39 38.4**	**+0.7**
	1.2nm,0.3s,baz=93,slow=5.9,SNR=1.7						
	1.2nm,0.3s						
SONM	**Songino Array**	**38.94**	**319**	P	**P**	**04 39 51.6**	**-0.4**
	0.3nm,0.5s,baz=131,slow=5.9,SNR=2.2						
	0.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**42.26**	**273**	LR	LR	04 56 18.6	
	comp=Z,8.7nm,21.1s,baz=75,slow=34						
WRA	**Warramunga Arr**	**43.57**	**193**	P	**P**	**04 40 29.7**	**-0.4**
	0.5nm,0.6s,baz=17,slow=9.1,SNR=10						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**47.27**	**193**	P	**P**	**04 40 59.2**	**-0.2**
	0.2nm,0.3s,baz=14,slow=12,SNR=4.8						
	0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**53.78**	**321**	P	**P**	**04 41 47.5**	**-0.7**
	0.4nm,0.4s,baz=96,slow=10,SNR=2.1						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**54.48**	**312**	P	**P**	**04 41 53.8**	**+0.3**
	0.7nm,0.6s,baz=91,slow=8.7,SNR=9.6						
	0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**57.20**	**316**	P	**P**	**04 42 13.4**	**+0.6**
	0.9nm,0.3s,baz=93,slow=7.9,SNR=3.5						
	0.9nm,0.3s						
BVAR	**Borovoye Array**	**62.29**	**319**	P	**P**	**04 42 47.9**	**+0.1**
	2.7nm,0.5s,baz=85,slow=7.3,SNR=18						
	2.7nm,0.5s						
AKTO	**Aktyubinsk**	**70.23**	**317**	LR	LR	05 13 53.3	
	comp=Z,56nm,18.3s,baz=144,slow=35						
KBZ	**Khabaz**	**82.11**	**314**	P	**P**	**04 44 46.2**	**-0.2**
	1.9nm,0.8s,baz=68,slow=5.4,SNR=5.8						
	1.9nm,0.8s						
PLCA	**Paso Flores**	**145.94**	**130**	PKPbc	**PKPdf**	**04 52 05.5**	**+0.7**
	0.9nm,0.8s,baz=250,slow=4.9,SNR=3.5						

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*IDC **23** 04:36:00.4±6.8, 21.°52N × 143.°09E, h319km±69km, mb3.1/5, mbtmp3.8/6, Error ellipse: s-maj=50.5km s-min=18.1km az=83.0*
ISC 23 04:35:59.2±1.1, 21.°5N±0.°2 × 143.°2E±0.°3, h311km, n7, σ0°69/7, mb3.5/4, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**15.59**	**345**	P	**P**	**04 39 22.4**	**+0.4**
	1.7nm,0.5s,baz=154,slow=9.4,SNR=4.3						
KSRS	**Korea Array**	**20.66**	**324**	P	**P**	**04 40 16.4**	**+0.5**
	1.2nm,0.7s,baz=145,slow=8.0,SNR=5.2						
	1.2nm,0.7s						
WRA	**Warramunga Arr**	**42.10**	**192**	P	**P**	**04 43 21.7**	**0.0**
	0.7nm,0.3s,baz=16,slow=9.2,SNR=22						
	0.7nm,0.3s						
BVAR	**Borovoye Array**	**62.81**	**320**	P	**P**	**04 45 52.5**	**+0.3**
	0.6nm,0.4s,baz=106,slow=8.4,SNR=3.7						
	0.6nm,0.4s						
NVAR	**Mina Array Bea**	**83.25**	**51**	P	**P**	**04 47 51.8**	**+0.1**
	0.3nm,0.7s,baz=324,slow=5.7,SNR=3.1						
	0.3nm,0.7s						
FINES	**FINESS Array B**	**83.35**	**334**	P	**P**	**04 47 50.3**	**-1.1**
	1.1nm,0.7s,baz=76,slow=5.8,SNR=0.9						
	1.1nm,0.7s						
PLCA	**Paso Flores**	**145.63**	**132**	PKPbc	**PKPbc**	**04 55 02.2**	**+0.4**
	0.7nm,0.5s,baz=265,slow=3.4,SNR=6.9						

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*IDC **23** 04:41:01.1±0.8, 39.°26N × 20.°57E, h0km, mb3.9/13, mbtmp3.8/23, ML3.5/8, MS3.0/6, Error ellipse: s-maj=14.3km s-min=12.9km az=149.0*
*THE **23** 04:41:03.1, 39.°N±1.°× 20.°E±1.°0, h23km±5km, M3.8/10, ML h3.8/10*
*ATH **23** 04:41:03.2, 39.°30N × 20.°61E, h14km±1km, ML4.0/22, Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
*PDG **23** 04:41:03.7±0.4, 39.°28N × 20.°58E, h12km±1km, ML3.9/12, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0*
*NAO **23** 04:41:11.9, 39.°92N × 19.°66E, h10km, MB3.6*
ISC 23 04:41:03.5±0.9, 39.°29N±0.°02 × 20.°60E±0.°02, h14km±6km, n141, σ1°59/172, mb3.8/12, 19C-13D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGT	**Igoumenitsa**	**0.32**	**320**	P	**Pg**	**04 41 10.0**	**0.0**
IGT				S	**Sb**	**04 41 15.5**	**-0.5**
IGT	**Igoumenitsa**	**0.32**	**320**	P	**Pg**	**04 41 10.0**	**0.0**
IGT				S	**Sb**	**04 41 15.2**	**-0.8**
ART2	**Arta**	**0.34**	**114**	P	**Pg**	**04 41 10.2**	**-0.2**
ART2				S	**Sg**	**04 41 15.5**	**+0.4**
JAN	**Janina**	**0.42**	**28**	P	**Pg**	**04 41 11.5**	**-0.4**
JAN				S	**Sg**	**04 41 17.8**	**+0.3**
LFKM	**Lefkimmi**	**0.44**	**291**	P	**Pg**	**04 41 11.6**	**-0.6**
LFKM				S	**Sb**	**04 41 19.2**	**-0.4**
PRMD	**Pramanda**	**0.46**	**58**	S	**Sg**	**04 41 19.3**	**+0.5**
PRMD	**Pramanda**	**0.46**	**58**	P	**Pg**	**04 41 12.2**	**+0.3**
PRMD				S	**Sg**	**04 41 19.2**	**+0.5**
TSLK	**Tsoukalades, L**	**0.47**	**174**	P	**Pg**	**04 41 12.9**	**+0.2**
TSLK				S	**Sb**	**04 41 20.9**	**+0.6**
TSLK	**Tsoukalades, L**	**0.47**	**174**	P	**Pg**	**04 41 12.7**	**0.0**
TSLK				S	**Sg**	**04 41 18.8**	**-0.1**
LKD2	**Lefkada island**	**0.50**	**174**	P	**Pg**	**04 41 13.4**	**0.0**
LKD2				S	**Sb**	**04 41 21.7**	**+0.4**
LKD2	**Lefkada island**	**0.50**	**174**	P	**Pg**	**04 41 13.5**	**+0.1**
LKD2				S	**Sb**	**04 41 21.7**	**+0.4**
TETR	**Tetrakomo, Epi**	**0.53**	**84**	P	**Pg**	**04 41 13.2**	**-0.7**
TETR				S	**Sg**	**04 41 21.6**	**+0.6**
TETR	**Tetrakomo, Epi**	**0.53**	**84**	P	**Pg**	**04 41 13.2**	**-0.7**
TETR				S	**Sg**	**04 41 20.3**	**-0.7**
NYDR	**Nydri-Lefkada**	**0.58**	**172**	P	**Pg**	**04 41 14.5**	**-0.3**
NYDR				S	**Sb**	**04 41 23.0**	**-0.5**
NYDR	**Nydri-Lefkada**	**0.58**	**172**	P	**Pg**	**04 41 14.7**	**-0.2**
NYDR				S	**Sg**	**04 41 22.9**	**+0.4**
AMPL	**Ampelaki**	**0.60**	**127**	P	**Pg**	**04 41 14.6**	**-0.7**
AMPL				S	**Sb**	**04 41 24.9**	**+0.6**
DRAG	**Dragano-Lefkad**	**0.60**	**182**	P	**Pg**	**04 41 14.8**	**-0.5**
DRAG	**Dragano-Lefkad**	**0.60**	**182**	P	**Pg**	**04 41 14.7**	**-0.5**
EVGI	**Lefkada island**	**0.67**	**176**	P	**Pg**	**04 41 16.0**	**-0.5**
EVGI				S	**Sb**	**04 41 26.5**	**+0.4**
EVGI	**Lefkada island**	**0.67**	**176**	P	**Pg**	**04 41 16.0**	**-0.5**
KEK	**Kerkira**	**0.75**	**305**	P	**Pg**	**04 41 17.4**	**-0.6**
FSK	**Fiskardo**	**0.83**	**182**	P	**Pg**	**04 41 18.9**	**-0.7**
AST1	**Astakos**	**0.84**	**153**	P	**Pg**	**04 41 19.5**	**-0.3**
KPRO	**Kipourio**	**0.89**	**41**	P	**Pg**	**04 41 19.5**	**-1.3**
KPRO	**Kipourio**	**0.89**	**41**	P	**Pg**	**04 41 19.7**	**-1.1**
PENT	**Pentalofos**	**1.00**	**25**	P	**Pb**	**04 41 21.6**	**-1.0**
EVR	**Evrytania**	**1.01**	**111**	P	**Pb**	**04 41 22.0**	**-0.9**
DMLN	**Damoulianata-K**	**1.06**	**189**	P	**Pg**	**04 41 23.7**	**-0.3**
VLS	**Valsamata**	**1.11**	**180**	P	**Pb**	**04 41 23.8**	**-0.7**
ARG2	**Argostoli**	**1.11**	**184**	P	**Pn**	**04 41 24.5**	**-0.1**
MSL1	**Messolongi**	**1.12**	**144**	P	**Pg**	**04 41 24.9**	**-0.1**
KFL1	**Kefalonia,Entr**	**1.12**	**184**	P	**Pg**	**04 41 25.2**	**+0.1**
THL	**Klokotos Trika**	**1.13**	**75**	P	**Pb**	**04 41 23.9**	**-1.0**
NEST	**Nestorio**	**1.18**	**17**	P	**Pn**	**04 41 25.3**	**-0.4**
RTZL	**Ratzakli, Kefa**	**1.22**	**173**	P	**Pn**	**04 41 25.5**	**-0.6**
MAKR	**Makrakomi, Fth**	**1.23**	**102**	P	**Pn**	**04 41 25.9**	**-0.4**
ANX	**Ano Chora**	**1.25**	**123**	P	**Pn**	**04 41 26.1**	**-0.6**
AXS	**Araxos**	**1.25**	**151**	P	**Pn**	**04 41 25.6**	**-0.9**
AGRP	**Agrapidokambos**	**1.25**	**135**	P	**Pn**	**04 41 25.4**	**-1.2**
YRMI	**Loutra Irminis**	**1.32**	**153**	P	**Pn**	**04 41 27.4**	**-0.2**
EFP	**Efpalio**	**1.34**	**130**	P	**Pb**	**04 41 28.6**	**+0.3**
MALA	**Malamata, Dori**	**1.34**	**131**	P	**Pb**	**04 41 28.4**	**0.0**
KZN	**Kozani**	**1.36**	**41**	P	**Pn**	**04 41 28.4**	**+0.2**
MG00	**Magoula, Dorid**	**1.37**	**129**	P	**Pb**	**04 41 29.4**	**+0.5**
UPR	**University Cam**	**1.37**	**137**	P	**Pb**	**04 41 29.4**	**+0.5**
AGG	**Agios Georgios**	**1.38**	**101**	P	**Pn**	**04 41 28.3**	**-0.1**
RLS	**Riolos of Patr**	**1.41**	**151**	P	**Pn**	**04 41 28.7**	**0.0**
KYPS	**Kipseli, Zakin**	**1.48**	**173**	P	**Pb**	**04 41 30.3**	**-0.4**
ULC	**Ulcinj**	**2.86**	**339**	⇑*i*	Pn	**04 41 50.0**	**+1.2**
ULC					*i* Sn	**Sn**	**04 42 25.3**	**+2.2**
TIP	**Timpagrande**	**2.98**	**269**	⇓P	**Pn**	**04 41 51.4**	**+0.9**
TIP				⇓S		**Sn**	**04 42 28.2**	**+2.1**
DRME	**Dracevica, Mon**	**3.09**	**340**	⇑*i*	Pn	**04 41 53.4**	**+1.5**
DRME					*i* Sn	**Sn**	**04 42 30.7**	**+2.1**
DRME	**Dracevica, Mon**	**3.09**	**340**	*e*Pn		**Pn**	**04 41 53.3**	**+1.4**
BUM	**Brajici-Budva**	**3.27**	**337**	⇑*i*	Pn	**04 41 55.6**	**+1.1**
BUM					*i* Sn	**Sn**	**04 42 35.0**	**+1.7**
MATE	**Matera**	**3.28**	**296**	⇓P		**Pn**	**04 41 56.2**	**+1.6**
PDG	**Podgorica**	**3.30**	**342**	⇑P		**Pn**	**04 41 56.6**	**+1.8**
PDG	**Podgorica**	**3.30**	**342**	*e*Pn		**Pn**	**04 41 55.7**	**+1.0**
PDG					*i* Sn	**Sn**	**04 42 35.6**	**+1.8**
PDG	**Podgorica**	**3.30**	**342**	*e*Pn		**Pn**	**04 41 56.1**	**+1.4**
PVY	**Plav**	**3.34**	**352**	⇓*i*	Pn	**04 41 57.5**	**+2.1**
PVY					*i* Sn	**Sn**	**04 42 37.0**	**+2.0**
CEME	**Cevo**	**3.49**	**339**	⇑*i*	Pn	**04 41 58.6**	**+1.1**
CEME					*i* Sn	**Sn**	**04 42 38.6**	**-0.1**
HCY	**Herceg Novi**	**3.54**	**334**	⇓*i*	Pn	**04 41 58.9**	**+0.9**
HCY					*i* Sn	**Sn**	**04 42 38.4**	**-1.2**
HCY	**Herceg Novi**	**3.54**	**334**	*e*Pn		**Pn**	**04 41 58.7**	**+0.7**
IVA	**Berane**	**3.62**	**352**	⇑*i*	Pn	**04 42 01.9**	**+2.7**
IVA					*i* Sn	**Sn**	**04 42 43.3**	**+1.5**
KOME	**Kolasin**	**3.65**	**347**	⇓*i*	Pn	**04 42 01.5**	**+1.8**
KOME					*i* Sn	**Sn**	**04 42 44.9**	**+2.3**
NKME	**Niksic**	**3.69**	**341**	⇑*i*	Pn	**04 42 01.3**	**+1.1**
NKME					*i* Sn	**Sn**	**04 42 45.0**	**+1.5**
TREB	**Trebinje**	**3.82**	**334**	*e*Pn		**Pn**	**04 42 02.0**	**0.0**
BRY	**Bratogost**	**3.93**	**337**	⇑*i*	Pn	**04 42 04.5**	**+0.9**
BRY					*i* Sn	**Sn**	**04 42 50.7**	**+1.1**
BRY	**Bratogost**	**3.93**	**337**	*e*Pn		**Pn**	**04 42 04.2**	**+0.6**
SJES	**Sjenica**	**4.00**	**353**	*e*Pn		**Pn**	**04 42 07.2**	**+2.7**
UPM	**Unac-Piva**	**4.11**	**342**	*e*Pn		**Pn**	**04 42 07.6**	**+1.5**
PLE	**Pljevlja**	**4.14**	**348**	⇑*i*	Pn	**04 42 08.3**	**+1.9**
PLE					*i* Sn	**Sn**	**04 42 56.1**	**+1.4**
RUDO	**Rudo**	**4.42**	**348**	*e*Pn		**Pn**	**04 42 11.6**	**+1.4**
APE	**Apeiranthos**	**4.47**	**118**	⇓P		**Pn**	**04 42 13.4**	**+2.4**
BBLS	**Lazi&#263i**	**4.66**	**349**	*e*Pn		**Pn**	**04 42 16.8**	**+3.3**
PLVB	**Pleven**	**5.09**	**35**	⇑P		**Pn**	**04 42 22.1**	**+2.7**
VAE	**Valguarnera**	**5.18**	**252**	Pn		**Pn**	**04 42 21.6**	**+0.9**
	8.6nm,0.7s,baz=126,slow=19,SNR=5.6						
VAE					Sn	**Sn**	**04 43 20.4**	**0.0**
	2.1nm,0.3s,baz=68,slow=5.9,SNR=4.6						
IDI	**Anoyia**	**5.26**	**138**	Pn		**Pn**	**04 42 21.8**	**0.0**
	19nm,0.4s,baz=274,slow=18,SNR=31						
IDI					Sn	**Sn**	**04 43 18.9**	**-3.3**
	10nm,0.3s,baz=334,slow=22,SNR=6.1						
ELND	**Elena**	**5.40**	**46**	⇑P		**Pn**	**04 42 26.2**	**+2.6**
MDVR	**Moldovita**	**5.55**	**8**	⇑P		**Pn**	**04 42 29.1**	**+3.4**
HERR	**Herculane**	**5.75**	**13**	⇓P		**Pn**	**04 42 30.5**	**+2.0**
FRGS	**Fruska Gora**	**5.89**	**355**	*e*Pn		**Pn**	**04 42 31.4**	**+1.0**
BLY	**Banja Luka**	**6.02**	**336**	⇓P		**Pn**	**04 42 33.2**	**+1.0**
BLY	**Banja Luka**	**6.02**	**336**	*e*Pn		**Pn**	**04 42 33.3**	**+1.2**
AQU	**L'Aquila**	**6.26**	**302**	*e*Pn		**Pn**	**04 42 35.7**	**+0.3**
GZR	**Gura Zlata**	**6.31**	**14**	⇓P		**Pn**	**04 42 39.5**	**+3.3**
ARR	**Arges**	**6.77**	**25**	⇑P		**Pn**	**04 42 44.7**	**+2.2**
VOIR		**6.97**	**27**	⇓P		**Pn**	**04 42 48.5**	**+3.2**
MORH	**Mrgy, Hungar**	**7.07**	**349**	⇑P		**Pn**	**04 42 48.5**	**+2.0**
MORH	**Mrgy, Hungar**	**7.07**	**349**	*e*Pn		**Pn**	**04 42 46.7**	**+0.2**
MLR	**Muntele Rosu**	**7.35**	**31**	Pn		**Pn**	**04 42 53.6**	**+3.1**
	0.7nm,0.3s,baz=197,slow=11,SNR=11						
MLR					Sn	**Sn**	**04 44 15.8**	**+1.9**
	0.3nm,0.3s,baz=202,slow=19,SNR=1.7						
	7.7nm,0.7s						
MLR	**Muntele Rosu**	**7.35**	**31**	⇑P		**Pn**	**04 42 54.4**	**+3.8**
DRGR		**7.66**	**11**	⇓P		**Pn**	**04 42 58.3**	**+3.6**
COVR	**Voineasa-Covas**	**7.75**	**30**	⇑P		**Pn**	**04 42 59.6**	**+3.7**
PLOR	**Plostina**	**7.93**	**32**	⇑P		**Pn**	**04 43 02.5**	**+3.9**
VRI	**Vrincioaia**	**7.98**	**33**	⇑P		**Pn**	**04 43 02.3**	**+3.3**
ONER	**Baraj Valea Uz**	**8.23**	**29**	⇓P		**Pn**	**04 43 06.2**	**+3.7**
SOKA	**Soboth**	**8.43**	**333**	*e*Pn		**Pn**	**04 43 07.1**	**+1.7**
	1.8nm,0.2s						
OBKA	**Obir**	**8.47**	**330**	*i* Pn		**Pn**	**04 43 06.8**	**+0.9**
	4.0nm,0.4s						
PSZ	**Piszkesteto**	**8.64**	**357**	⇑P		**Pn**	**04 43 09.7**	**+1.6**
ARSA	**Arzberg**	**8.77**	**337**	*i* Pn		**Pn**	**04 43 12.6**	**+2.7**
	2.4nm,0.4s						
MYKA	**Terra Mystica**	**8.93**	**327**	*e*Pn		**Pn**	**04 43 13.0**	**+0.9**
	1.4nm,0.4s						
RONA	**Rosalia, Austr**	**8.97**	**341**	*i* Pn		**Pn**	**04 43 13.4**	**+0.8**
	1.0nm,0.3s						
KECS	**Kecovo**	**9.19**	**360**	*e*PN		**Pn**	**04 43 18.3**	**+2.7**
CONA	**Conrad Observa**	**9.29**	**340**	*e*Pn		**Pn**	**04 43 20.4**	**+3.3**
	0.6nm,0.3s						
KBA	**Koelnbreinsper**	**9.41**	**328**	*e*Pn		**Pn**	**04 43 19.9**	**+1.1**
	1.6nm,0.4s						
ABTA	**Abfaltersbach**	**9.51**	**324**	*i* Pn		**Pn**	**04 43 21.2**	**+1.1**
	0.6nm,0.3s						
KEST	**Kesra**	**9.62**	**252**	Pn		**Pn**	**04 43 23.8**	**+2.3**
	0.2nm,0.3s,baz=67,slow=3.3,SNR=11						
KEST					LR	LR	04 47 54.7	
	comp=Z,82nm,18.5s,baz=356,slow=43						
MOA	**Molln**	**9.71**	**334**	*i* Pn		**Pn**	**04 43 24.1**	**+1.4**
	2.8nm,0.4s						
LESA	**Schwarzleotal**	**9.96**	**327**	*i* Pn		**Pn**	**04 43 27.6**	**+1.3**
	6.3nm,0.5s						
BRTR	**Keskin Array B**	**10.09**	**83**	Pn		**Pn**	**04 43 31.0**	**+2.8**
	0.3nm,0.3s,baz=262,slow=12,SNR=6.7						
	0.5nm,0.4s						
WTTA	**Wattenberg**	**10.30**	**324**	*e*Pn		**Pn**	**04 43 33.1**	**+2.1**
	1.6nm,0.4s						
WATA	**Walderalm**	**10.38**	**324**	*i* Pn		**Pn**	**04 43 33.7**	**+1.7**
	2.3nm,0.4s						
VRAC	**Vranov**	**10.42**	**345**	LR		LR	04 48 42.4	
	comp=Z,88nm,21.4s,baz=168,slow=44						
SQTA	**Sankt Quirin**	**10.47**	**322**	*i* Pn		**Pn**	**04 43 34.9**	**+1.7**
	3.2nm,0.3s						
FETA	**Feichten**	**10.56**	**320**	*e*Pn		**Pn**	**04 43 38.3**	**+3.8**
	0.8nm,0.4s						
MOTA	**Moosalm**	**10.61**	**322**	*i* Pn		**Pn**	**04 43 36.6**	**+1.4**
	7.2nm,0.6s						
GERES	**GERESS Array B**	**10.76**	**335**	Pn		**Pn**	**04 43 37.1**	**-0.1**
	0.1nm,0.3s,baz=158,slow=14,SNR=7.9						
	2.5nm,0.9s						
DAVOX	**Davos/Dischmat**	**10.84**	**317**	Pn		**Pn**	**04 43 38.1**	**-0.3**
	0.4nm,0.3s,baz=119,slow=21,SNR=6.9						
DAVOX					Sn	**Sn**	**04 45 35.4**	**-4.1**
	0.3nm,0.3s,baz=312,slow=15,SNR=1.6						
	2.9nm,0.9s						
RETA	**Reutte**	**10.87**	**322**	*e*Pn		**Pn**	**04 43 39.6**	**+0.9**
	1.5nm,0.2s						
KHC	**Kasperske Hory**	**11.05**	**335**	*e*PN		**Pn**	**04 43 42.8**	**+1.7**
KHC					*e*SN	**Sn**	**04 45 44.5**	**+0.1**
DAVA	**Damuels**	**11.17**	**319**	*e*Pn		**Pn**	**04 43 42.1**	**-0.8**
	0.3nm,0.3s						
AKASG	**Malin Array Be**	**12.93**	**25**	Pn		**Pn**	**04 44 06.4**	**-0.3**
	0.3nm,0.3s,baz=212,slow=12,SNR=2.1						
AKASG					LR	LR	04 49 39.9	
	comp=Z,74nm,21.3s,baz=230,slow=40						
	0.3nm,0.5s						
MMAI	**Mount Meron Ar**	**13.50**	**113**	Pn		**Pn**	**04 44 13.1**	**-1.6**
	1.0nm,0.3s,baz=316,slow=15,SNR=4.3						
	0.4nm,0.3s						
ASF	**Jabal al Asfar**	**15.01**	**113**	Pn		**Pn**	**04 44 33.6**	**-1.7**
	baz=289,slow=6.9,SNR=3.1						
	1.8nm,0.9s						
EIL	**Elat**	**15.22**	**125**	Pn		**Pn**	**04 44 33.9**	**-4.2**
	0.3nm,0.3s,baz=18,slow=3.1,SNR=6.1						
KBZ	**Khabaz**	**17.27**	**68**	P		**Pn**	**04 45 04.0**	**-0.1**
	0.1nm,0.3s,baz=285,slow=9.7,SNR=3.6						
	0.6nm,0.6s						
ESDC	**Sonseca Array**	**18.95**	**279**	LR	LR	LR	04 52 09.2	
	comp=Z,58nm,18.2s,baz=75,slow=35						
HFS	**Hagfors**	**21.32**	**350**	P		**P**	**04 45 49.3**	**-0.4**
	3.4nm,0.7s,baz=165,slow=12,SNR=14						
	3.4nm,0.7s						
MDT	**Midelt**	**21.34**	**260**	LR	LR	04 56 04.2	
	comp=Z,34nm,18.4s,baz=19,slow=42						
FINES	**FINESS Array B**	**22.44**	**7**	P		**P**	**04 46 00.7**	**-1.0**
	2.1nm,0.4s,baz=178,slow=11,SNR=12						
	2.1nm,0.4s						
NB2	**NORSAR Subarra**	**22.54**	**348**	P		**P**	**04 46 03.1**	**+0.2**
	comp=Z,2.1nm,0.6s,baz=162,slow=11						
NOA	**NORSAR Array B**	**22.54**	**348**	P		**P**	**04 46 02.1**	**-0.8**
	comp=Z,2.4nm,0.9s,baz=164,slow=11,SNR=7.2						
NOA					LR	LR	04 56 16.7	
	comp=Z,37nm,18.8s,baz=295,slow=41						
	comp=Z,2.4nm,0.9s						
EKA	**Eskdalemuir Ar**	**22.57**	**323**	P		**P**	**04 46 02.4**	**-0.7**
	comp=Z,5.7nm,0.8s,baz=124,slow=10,SNR=8.6						
	comp=Z,5.7nm,0.8s						
ARCES	**ARCESS Array B**	**30.42**	**3**	P		**P**	**04 47 14.0**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=186,slow=8.5,SNR=4.4						
	comp=Z,0.8nm,0.5s						
TORD	**Torodi Ar. Bea**	**30.93**	**218**	P		**P**	**04 47 20.1**	**0.0**
	comp=Z,2.5nm,0.8s,baz=30,slow=7.7,SNR=12						
	comp=Z,2.5nm,0.8s						
BVAR	**Borovoye Array**	**36.37**	**51**	P		**P**	**04 48 07.0**	**0.0**
	comp=Z,0.9nm,0.6s,baz=279,slow=11,SNR=4.4						
	comp=Z,0.9nm,0.6s						
KURBB	**Kurchatov Arra**	**41.53**	**55**	P		**P**	**04 48 49.4**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=285,slow=9.0,SNR=5.3						
	comp=Z,0.9nm,0.7s						
MKAR	**Makanchi Array**	**44.68**	**59**	P		**P**	**04 49 14.9**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=281,slow=7.7,SNR=12						
	comp=Z,0.8nm,0.4s						
ZALV	**Zalesovo Beam**	**44.91**	**49**	P		**P**	**04 49 16.7**	**-0.9**
	comp=Z,3.5nm,0.5s,baz=282,slow=8.8,SNR=16						
	comp=Z,3.5nm,0.5s						
SONM	**Songino Array**	**59.71**	**51**	P		**P**	**04 51 06.8**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=308,slow=7.2,SNR=2.6						
	comp=Z,0.2nm,0.3s						
YKA	**Yellowknife Ar**	**72.37**	**340**	P		**P**	**04 52 28.9**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=24,slow=5.4,SNR=5.3						
	comp=Z,0.3nm,0.7s						
TXAR	**Lajitas Array**	**94.25**	**314**	P		**P**	**04 54 23.9**	**+1.3**
	comp=Z,0.2nm,0.7s,baz=49,slow=4.0,SNR=3.5						
	comp=Z,0.2nm,0.7s						

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*CNRM **23** 04:42:50.3, 39.°78N × 0.°78E, h76km*
*INMG **23** 04:42:57.8±2.1, 39.°44N × 0.°06E, h13km±5km, ML3.5, Error ellipse: s-maj=4.4km s-min=3.2km az=90.0, #DIST_RANGE: REGIONAL #IPMA_REGION: E Valncia (ESP)*
*MDD **23** 04:42:57.6±0.2, 39.°34N × 0.°10E, h0km±1km, mb_Lg3.7/83, Error ellipse: s-maj=1.8km s-min=1.0km az=130.0*
*LDG **23** 04:42:57.9±0.1, 39.°37N × 0.°01E, h2km, ML3.5/31, Error ellipse: s-maj=2.9km s-min=1.5km az=131.0*
*SFS **23** 04:42:58.3, 39.°36N × 0.°12E, h15km, ML4.0/13, ML3.9/17, MLv3.7/17*
**ISC 23 04:42:55.3±1

ESBB				Sg	Sb	04 44 32.0	+2.3
ESDC	**Sonseca Array**	**3.15**	**277**	Pn	Pn	**04 43 45.4**	**+0.5**
ESDC				Sg	Sb	**04 44 31.6**	**+1.8**
ESDC				*i* IVmb_Lg		04 44 37.7	
MAHO	**Mahon**	**3.27**	**80**	Pn	Pn	**04 43 48.2**	**+1.8**
MAHO				Sn	Sn	**04 44 23.9**	**-1.3**
ECHI	**Chisagues Biel**	**3.28**	**1**	Sg	Sg	**04 44 38.4**	**-2.2**
CGIR	**Ginora - Unive**	**3.33**	**38**	Pn	Pn	**04 43 48.5**	**+1.2**
CGIR				Sn	Sn	**04 44 28.4**	**+1.6**
EXQUE	**Queralbs**	**3.35**	**27**	Pg	Pg	**04 44 00.1**	**+0.6**
VIES	**Vielha - Hospi**	**3.36**	**9**	Pg	Pb	**04 43 57.5**	**+2.6**
VIES				Sg	Sb	**04 44 38.8**	**+3.0**
VIER	**Vielha - Casau**	**3.36**	**9**	Pn	Pn	**04 43 50.0**	**+2.1**
VIER				Pg	Pg	**04 43 58.9**	**-0.8**
VIER				Sn	Sn	**04 44 30.3**	**+2.5**
VIER				Sg	Sb	**04 44 38.9**	**+3.1**
LLIS	**Llivia - Polie**	**3.39**	**24**	Pn	Pn	**04 43 51.1**	**+2.8**
LLIS				Pg	Pg	**04 44 00.9**	**+0.7**
LLIS				Sn	Sn	**04 44 31.7**	**+3.1**
LLIS				Sg	Sg	**04 44 41.6**	**-2.6**
EBER	**Berja**	**3.42**	**224**	Pn	Pn	**04 43 51.2**	**+2.4**
EBER	**Berja**	**3.42**	**224**	Pn	Pn	**04 43 52.6**	**+3.8**
EBER				*i* IVmb_Lg		04 44 57.0	
PAB	**San Pablo**	**3.44**	**274**	Pn	Pn	**04 43 49.4**	**+0.4**
PAB				Pn	Pb	04 43 49.8	-6.5
PAB				Sg	Sb	**04 44 41.3**	**+3.2**
PAB				Sg	Sg	**04 44 41.4**	**-4.3**
EQTA	**Presa de Quent**	**3.53**	**233**	Pn	Pn	**04 43 52.1**	**+1.9**
EQUE	**Quentar**	**3.53**	**233**	Pn	Pn	**04 43 52.0**	**+1.8**
EQUE				Pg	Pg	**04 44 02.5**	**-0.4**
EQUE				Sg	Sb	**04 44 44.5**	**+3.8**
EQUE				*i* IVmb_Lg		04 44 50.3	
ETSF	**Etsaut**	**3.54**	**352**	*e*Pn	Pn	**04 43 52.8**	**+2.4**
ETSF				*e*Pg	Pg	**04 44 02.5**	**-0.7**
ETSF				*e*Sg	Sg	**04 44 47.0**	**-2.1**
	176nm,0.6s						
EARA	**Aranguren**	**3.61**	**340**	Pn	Pn	**04 43 54.6**	**+3.3**
EARA				Pg	Pg	**04 44 05.3**	**+0.8**
EARA				Sn	Sn	**04 44 36.3**	**+2.4**
EARA				Sg	Sg	**04 44 49.0**	**-2.3**
EARA				*i* IVmb_Lg		04 45 02.8	
EPF	**Esparros**	**3.65**	**3**	*e*Pn	Pn	**04 43 54.2**	**+2.4**
EPF				*e*Pg	Pg	**04 44 05.8**	**+0.6**
EPF				*e*Sg	Sg	**04 44 50.8**	**-1.6**
	102nm,0.4s						
EORO	**Oroz-Betelu**	**3.66**	**344**	Pn	Pn	**04 43 55.2**	**+3.3**
EORO				Pg	Pg	**04 44 07.1**	**+1.7**
EORO				Sg	Sg	**04 44 51.5**	**-1.3**
EORO				*i* IVmb_Lg		04 45 06.5	
EJON	**La Jonquera**	**3.72**	**34**	Pn	Pn	**04 43 55.0**	**+2.2**
EJON	**La Jonquera**	**3.72**	**34**	Pn	Pn	**04 43 55.5**	**+2.7**
EJON				*i* IVmb_Lg		04 45 04.1	
EADA	**Adamuz**	**3.84**	**253**	Pn	Pn	**04 43 54.6**	**+0.1**
EADA	**Adamuz**	**3.84**	**253**	Pn	Pn	**04 43 54.3**	**-0.2**
EADA				Pg	Pg	**04 44 08.3**	**-0.7**
EADA				Sn	Sn	**04 44 38.3**	**-1.4**
EADA				Sg	Sg	**04 44 55.8**	**-3.0**
EADA				*i* IVmb_Lg		04 45 09.5	
SJPF	**Ste Jean**	**3.85**	**346**	*e*Pn	Pn	**04 43 56.8**	**+2.2**
SJPF				*e*Sg	Sg	**04 44 57.8**	**-1.3**
	151nm,0.5s						
ELGU	**Los Guajares,**	**3.86**	**231**	Pn	Pn	**04 43 57.5**	**+2.8**
ELGU	**Los Guajares,**	**3.86**	**231**	Pn	Pn	**04 43 57.7**	**+2.9**
ELGU				Pg	Pg	**04 44 08.1**	**-1.1**
ELGU				Sn	Sn	**04 44 43.7**	**+3.6**
ELGU				*i* IVmb_Lg		04 45 15.8	
EGOR	**Sierra Gorda,**	**4.01**	**237**	Pn	Pn	**04 43 58.6**	**+1.8**
EGOR	**Sierra Gorda,**	**4.01**	**237**	Pn	Pn	**04 43 58.4**	**+1.6**
EGOR				Sn	Sn	**04 44 46.0**	**+2.1**
EGOR				*i* IVmb_Lg		04 45 19.2	
MTLF	**Montolieu**	**4.26**	**21**	*e*Pn	Pn	**04 44 02.0**	**+1.8**
MTLF				*e*Pg	Pg	**04 44 17.5**	**+0.5**
MTLF				*e*Sg	Sg	**04 45 13.0**	**+0.8**
	86nm,0.4s						
CLAF	**Gruissan**	**4.38**	**30**	*e*Pn	Pn	**04 44 03.4**	**+1.7**
EMAL	**Malaga-Limoner**	**4.42**	**235**	Pn	Pn	**04 44 04.5**	**+2.1**
ECAB	**El Cabril**	**4.50**	**255**	Pn	Pn	**04 44 03.6**	**+0.1**
ECAB	**El Cabril**	**4.50**	**255**	Pn	Pn	**04 44 04.4**	**+0.9**
ECAB				Sg	Sg	**04 45 16.2**	**-3.6**
ECAB				*i* IVmb_Lg		04 45 26.2	
ELAN	**Lanestosa**	**4.67**	**327**	Pn	Pn	**04 44 09.2**	**+3.4**
ELAN				Sg	Sg	**04 45 21.8**	**-3.4**
ELAN				*i* IVmb_Lg		04 45 34.3	
E1302	**La Puebla de C**	**4.76**	**243**	Pn	Pn	**04 44 09.1**	**+2.0**
E1302				*i* IVmb_Lg		04 45 41.7	
EMIJ	**Mijas**	**4.76**	**235**	Sn	Sn	**04 45 05.8**	**+3.5**
EMIJ				*i* IVmb_Lg		04 45 46.8	
EPLA	**Plasencia**	**4.80**	**280**	Pn	Pn	**04 44 07.9**	**+0.2**
EPLA				Sn	Sn	**04 45 02.5**	**-0.8**
EPLA				Sg	Sb	**04 45 23.4**	**+6.0**
EPLA				*i* IVmb_Lg		04 45 32.6	
EJUZ	**Juzbado, Salam**	**4.88**	**292**	Pn	Pn	**04 44 09.7**	**+1.0**
EJUZ				Sn	Sn	**04 45 04.8**	**-0.4**
ALT04	**Santillana del**	**5.09**	**323**	Pn	Pn	**04 44 13.9**	**+2.4**
ALT01	**Santillana del**	**5.09**	**323**	Pn	Pn	**04 44 14.0**	**+2.4**
ALT03	**Santillana del**	**5.09**	**323**	Pn	Pn	**04 45 15.9**	**+4.4**
ALT03				Sg	Sg	**04 45 38.2**	**-0.5**
PALE	**Palemas**	**5.25**	**219**	P	Pn	**04 44 14.2**	**+0.3**
EJIF	**Jimena Fronter**	**5.28**	**238**	Pn	Pn	**04 44 15.8**	**+1.6**
ESPR	**Espera**	**5.32**	**244**	Pn	Pn	**04 44 15.6**	**+1.0**
ESPR	**Espera**	**5.32**	**244**	Pn	Pn	**04 44 16.4**	**+1.8**
ESPR				Sn	Sn	**04 45 18.9**	**+2.9**
ESPR				*i* IVmb_Lg		04 46 06.7	
LASF	**Ste Croix**	**5.47**	**30**	*e*Pn	Pn	**04 44 18.8**	**+2.0**
LASF				*e*Pg	Pg	**04 44 40.2**	**+0.2**
LASF				*e*Sg	Sg	**04 45 51.1**	**+0.3**
	14nm,0.5s						
JBK	**JBK**	**5.47**	**204**	P	Pn	**04 44 18.0**	**+1.0**
EMIN	**Mina Concepcio**	**5.54**	**255**	Pn	Pn	**04 44 21.6**	**+3.9**
EMIN				Sg	Sb	**04 45 46.2**	**+7.7**
EMIN				*i* IVmb_Lg		04 46 04.3	
LFF	**La Frestale**	**5.57**	**5**	*e*Pn	Pn	**04 44 20.0**	**+1.9**
LFF				*e*Sn	Sn	**04 45 19.9**	**-2.2**
	27nm,0.4s						
EARI	**Arriondas**	**5.59**	**316**	Pn	Pn	**04 44 21.5**	**+3.1**
EARI				Sn	Sn	**04 45 25.7**	**+3.1**
EARI				*i* IVmb_Lg		04 46 02.1	
PBAR	**Barrancos**	**5.70**	**260**	Pn	Pn	**04 44 20.0**	**+0.1**
PBAR	**Barrancos**	**5.70**	**260**	*e*Pn	Pn	**04 44 20.1**	**+0.2**
PBAR				*e*Sn	Sn	**04 45 24.5**	**-0.8**
PBAR				*e*Sg	Sg	**04 45 53.3**	**-4.9**
PBAR				*i* IAML		04 46 04.2	
PBAR				*i* IAML		04 46 04.5	
PBAR				*i* IAML		04 46 05.1	
MVO	**Moncorvo**	**5.73**	**290**	*e*Pn	Pn	**04 44 21.0**	**+0.7**
MVO				*e*Sn	Sn	**04 45 23.7**	**-2.4**
MVO				*e*Sg	Sg	**04 45 59.1**	**0.0**
MVO				*i* IAML		04 46 08.6	
MVO				*i* IAML		04 46 08.9	
MVO				*i* IAML		04 46 10.2	
CAF	**Calviac**	**5.73**	**14**	*e*Pn	Pn	**04 44 21.9**	**+1.6**
CAF				*e*Sn	Sn	**04 45 24.7**	**-1.4**
	10nm,0.4s						
PBRG	**Braganca**	**5.73**	**297**	*e*Pn	Pn	**04 44 21.3**	**+0.9**
PBRG				*e*Sn	Sn	**04 45 23.6**	**-2.7**
PBRG				*i* IAML		04 46 01.7	
PBRG				*i* IAML		04 46 03.0	
PBRG				*i* IAML		04 46 08.3	
ECAL	**Calabor**	**5.79**	**298**	Pn	Pn	**04 44 21.9**	**+0.7**
ECAL	**Calabor**	**5.79**	**298**	Pn	Pn	**04 44 21.9**	**+0.7**
ECAL				Sn	Sn	**04 45 25.4**	**-2.2**
ECAL				*i* IVmb_Lg		04 46 11.3	
PMRV	**Marv??o**	**5.79**	**273**	*e*Pn	Pn	**04 44 22.3**	**+1.1**
PMRV				*e*Sn	Sn	**04 45 25.8**	**-1.9**
PMRV				*e*Sg	Sb	**04 45 53.7**	**+7.8**
PMRV				*i* IAML		04 46 02.0	
PMRV				*i* IAML		04 46 02.3	
PMRV				*i* IAML		04 46 06.0	
AKLM	**AKL**	**5.80**	**214**	P	Pn	**04 44 22.6**	**+1.2**
PCBR	**Castelo Branco**	**5.86**	**277**	*e*Pn	Pn	**04 44 22.8**	**+0.6**
PCBR				*e*Sn	Sn	**04 45 27.2**	**-2.1**
PCBR				*e*Sg	Sg	**04 45 58.7**	**-4.8**
PCBR				*i* IAML		04 46 02.8	
PCBR				*i* IAML		04 46 06.6	
PCBR				*i* IAML		04 46 12.6	
MTE	**Manteigas**	**5.96**	**282**	*e*Pn	Pn	**04 44 23.9**	**+0.4**
MTE				*e*Sg	Sg	**04 46 04.5**	**-2.0**
MTE				*i* IAML		04 46 07.2	
MTE				*i* IAML		04 46 09.8	
MTE				*i* IAML		04 46 10.0	

PESTR	**Estremoz**	**5.99**	**267**	*e*Pn	Pn	**04 44 25.6**	**+1.6**
PESTR				*e*Sg	Sb	**04 45 59.7**	**+8.2**
PESTR				*i* IAML		04 46 12.0	
PESTR				*i* IAML		04 46 13.3	
PESTR				*i* IAML		04 46 16.4	
PESTR	**Estremoz**	**5.99**	**267**	P	Pn	**04 44 24.5**	**+0.5**
RJF	**Les Rejaudoux**	**6.01**	**10**	*e*Pn	Pn	**04 44 26.0**	**+1.8**
RJF				*e*Sg	Sg	**04 46 07.2**	**-0.9**
	15nm,0.4s						
SMRF	**Simiane la Rot**	**6.16**	**40**	*e*Pn	Pn	**04 44 28.4**	**+2.2**
SMRF				*e*Pg	Pg	**04 44 53.2**	**+0.1**
SMRF				*e*Sn	Sn	**04 45 35.1**	**-1.5**
SMRF				*e*Sg	Sg	**04 46 12.8**	**0.0**
	3.1nm,0.3s						
EGRO	**El Granado**	**6.22**	**255**	Pn	Pn	**04 44 27.2**	**+0.1**
EGRO				Sg	Sg	**04 46 07.9**	**-7.2**
EGRO				*i* IVmb_Lg		04 46 24.1	
LMR	**La Mourre**	**6.24**	**49**	*e*Pn	Pn	**04 44 28.6**	**+1.3**
LMR				*e*Sn	Sn	**04 45 37.8**	**-0.7**
	8.8nm,0.3s						
PVRL	**Vila Real**	**6.26**	**290**	*e*Pn	Pn	**04 44 28.1**	**+0.4**
PVRL				*e*Sg	Sg	**04 46 14.7**	**-1.4**
PVIS	**Viseu**	**6.27**	**285**	*e*Pn	Pn	**04 44 27.9**	**+0.1**
PVIS				*e*Sn	Sn	**04 45 36.6**	**-2.9**
PVIS				*e*Sg	Sg	**04 46 12.4**	**-4.0**
POLO	**Lamas de Olo**	**6.34**	**291**	*e*Pn	Pn	**04 44 29.4**	**+0.6**
POLO				*e*Sn	Sn	**04 45 37.6**	**-3.7**
POLO				*i* IAML		04 46 24.6	
POLO				*i* IAML		04 46 29.8	
POLO				*i* IAML		04 46 31.3	
PARRA	**Arraiolos**	**6.35**	**267**	*e*Pn	Pn	**04 44 30.1**	**+1.3**
PARRA				*e*Sg	Sg	**04 46 14.0**	**-5.0**
PARRA				*i* IAML		04 46 21.2	
PARRA				*i* IAML		04 46 26.6	
PARRA				*i* IAML		04 46 35.8	
PBEJ	**Beja**	**6.37**	**260**	*e*Sg	Sg	**04 46 18.4**	**-1.3**
PBEJ				*i* IAML		04 46 22.0	
PBEJ				*i* IAML		04 46 27.4	
PBEJ				*i* IAML		04 46 29.9	
EVO	**Evora**	**6.37**	**265**	*e*Pn	Pn	**04 44 30.7**	**+1.5**
EVO				*e*Sg	Sg	**04 46 13.8**	**-6.0**
EVO				*i* IAML		04 46 29.7	
EVO				*i* IAML		04 46 30.2	
EVO				*i* IAML		04 46 33.3	
PSARD	**Sardoal**	**6.39**	**275**	*e*Pn	Pn	**04 44 30.0**	**+0.7**
PSARD				*e*Sn	Sn	**04 45 39.6**	**-2.7**
PSARD				*e*Sg	Sg	**04 46 16.4**	**-3.9**
PSARD				*i* IAML		04 46 26.1	
PSARD				*i* IAML		04 46 29.1	
PSARD				*i* IAML		04 46 33.7	
VIVF	**Saint-Julien-l**	**6.44**	**30**	*e*Pn	Pn	**04 44 31.6**	**+1.5**
VIVF				*e*Sg	Sg	**04 46 21.5**	**-0.5**
	7.3nm,0.4s						
PVAQ	**Vaqueiros**	**6.44**	**255**	*e*Pn	Pn	**04 44 30.5**	**+0.4**
PVAQ				*e*Sg	Sg	**04 46 17.1**	**-5.0**
PVAQ				*i* IAML		04 46 26.7	
PVAQ				*i* IAML		04 46 36.7	
PVAQ				*i* IAML		04 46 38.7	
PVAQ	**Vaqueiros**	**6.44**	**255**	P	Pn	**04 44 29.9**	**-0.3**
PMTG	**Montargil**	**6.46**	**270**	*e*Pn	Pn	**04 44 31.4**	**+1.0**
PMTG				*e*Sn	Sn	**04 45 42.8**	**-1.3**
PMTG				*e*Sg	Sg	**04 46 19.8**	**-3.0**
PMTG				*i* IAML		04 46 24.9	
PMTG				*i* IAML		04 46 26.2	
PMTG				*i* IAML		04 46 36.4	
PCAB	**Cabril**	**6.60**	**293**	*e*Pn	Pn	**04 44 32.8**	**+0.4**
PCAB				*e*Sn	Sn	**04 45 44.1**	**-3.5**
PCAB				*e*Sg	Sg	**04 46 23.9**	**-3.4**
PCAB				*i* IAML		04 46 32.4	
PCAB				*i* IAML		04 46 36.4	
PCAB				*i* IAML		04 46 42.9	
PCVE	**Castro Verde**	**6.61**	**257**	*e*Sn	Sn	**04 45 45.8**	**-2.0**
PCVE				*e*Sg	Sg	**04 46 24.5**	**-3.0**
PCVE				*i* IAML		04 46 34.0	
PCVE				*i* IAML		04 46 37.7	
PCVE				*i* IAML		04 46 43.2	
MOE	**Montemor**	**6.63**	**265**	*e*Sg	Sg	**04 46 25.7**	**-2.5**
MOE				*i* IAML		04 46 31.1	
MOE				*i* IAML		04 46 33.8	
MOE				*i* IAML		04 46 37.2	
PCAS	**Casmilo, Conde**	**6.66**	**278**	*e*Pn	Pn	**04 44 33.9**	**+0.8**
PCAS				*e*Sn	Sn	**04 45 46.9**	**-2.0**
PCAS				*e*Sg	Sg	**04 46 26.1**	**-2.8**
PCAS				*i* IAML		04 46 35.3	
PCAS				*i* IAML		04 46 37.2	
PCAS				*i* IAML		04 46 40.5	
PBDV	**Barranco-do-Ve**	**6.66**	**254**	*e*Pn	Pn	**04 44 33.1**	**0.0**
PBDV				*e*Sg	Sg	**04 46 22.9**	**-6.1**
PBDV				*i* IAML		04 46 38.1	
PBDV				*i* IAML		04 46 40.4	
PBDV				*i* IAML		04 46 42.2	
ELOB	**Lobios**	**6.68**	**294**	Pn	Pn	**04 44 36.3**	**+2.9**
ELOB				Sn	Sn	**04 45 48.6**	**-1.0**
ELOB				Sg	Sg	**04 46 21.7**	**-7.9**
ELOB				*i* IVmb_Lg		04 46 38.5	
MESJ	**Messejana**	**6.69**	**259**	*e*Sg	Sg	**04 46 23.9**	**-6.1**
MESJ				*i* IAML		04 46 41.5	
MESJ				*i* IAML		04 46 42.4	
MESJ				*i* IAML		04 46 44.9	
EPON	**Pontenova**	**6.72**	**308**	Pn	Pn	**04 44 35.4**	**+1.4**
EPON				Sn	Sn	**04 45 52.5**	**+2.0**
EPON				*i* IVmb_Lg		04 46 52.1	
PGAV	**Gavieira, Arco**	**6.86**	**295**	*e*Pn	Pn	**04 44 36.6**	**+0.7**
PGAV				*e*Sn	Sn	**04 45 51.5**	**-2.5**
PGAV				*e*Sg	Sg	**04 46 31.5**	**-3.8**
PGAV				*i* IAML		04 46 44.2	
PGAV				*i* IAML		04 46 46.0	
PGAV				*i* IAML		04 46 50.5	
PSBE	**So Bento**	**6.88**	**274**	*e*Pn	Pn	**04 44 37.3**	**+1.1**
PSBE				*e*Sn	Sn	**04 45 51.9**	**-2.5**
PSBE				*e*Sg	Sg	**04 46 35.3**	**-0.7**
PSBE				*i* IAML		04 46 42.1	
PSBE				*i* IAML		04 46 50.2	
PSBE				*i* IAML		04 46 51.2	
ORIF	**Oris-en-Rattie**	**7.00**	**36**	*e*Pn	Pn	**04 44 39.9**	**+2.0**
ORIF				*e*Sn	Sn	**04 45 56.4**	**-1.2**
	1.1nm,0.4s						
EAGO	**Agolada(Pontev**	**7.06**	**302**	Pn	Pn	**04 44 39.8**	**+1.2**
EAGO				Sn	Sn	**04 45 58.7**	**-0.1**
EAGO				*i* IVmb_Lg		04 46 56.9	
TCF	**Toulx Ste Croi**	**7.07**	**12**	*e*Pn	Pn	**04 44 39.0**	**+0.2**
TCF				*e*Sg	Sg	**04 46 38.6**	**-3.6**
	3.7nm,0.3s						
SBF	**Sospel**	**7.09**	**49**	*e*Pn	Pn	**04 44 42.0**	**+2.9**
SBF				*e*Sn	Sn	**04 45 57.5**	**-2.2**
	30nm,0.7s						
PTEO	**Sao Teotonio**	**7.16**	**258**	*e*Sg	Sg	**04 46 42.2**	**-2.7**
PTEO				*i* IAML		04 46 52.4	
PTEO				*i* IAML		04 46 52.7	
PTEO				*i* IAML		04 46 55.7	
MORF	**Marmelete**	**7.18**	**256**	*e*Sn	Sn	**04 45 55.7**	**-6.1**
MORF				*e*Sg	Sg	**04 46 42.4**	**-3.2**
MORF				*i* IAML		04 46 54.2	
MORF				*i* IAML		04 46 54.5	
MORF				*i* IAML		04 47 01.0	
VSL	**Villasalto**	**7.19**	**86**	Pn	Pn	**04 44 42.9**	**+2.5**
VSL				Sn	Sn	**04 46 02.7**	**+0.6**
MFF	**Saint Martin d**	**7.22**	**359**	*e*Pn	Pn	04 44 45.9	+5.2
MBDF	**Montbardon**	**7.29**	**41**	*e*P	Pn	04 44 49.3	+7.4
MBDF				*e*Sn	Sn	**04 46 01.6**	**-3.2**
	0.7nm,0.3s						
PMAFR	**Mafra**	**7.29**	**270**	*e*Sg	Sg	**04 46 49.0**	**-0.4**
PMAFR				*i* IAML		04 47 03.2	
PMAFR				*i* IAML		04 47 09.2	
PMAFR				*i* IAML		04 47 09.9	
PGF	**Pioggiola**	**7.45**	**62**	*e*Pn	Pn	**04 44 46.2**	**+2.2**
PGF				*e*Sn	Sn	**04 46 05.3**	**-3.2**
	40nm,1.0s						
BGF	**Bois d'Agland**	**7.45**	**15**	*e*Pn	Pn	**04 44 45.9**	**+2.0**
BGF				*e*Sn	Sn	**04 46 06.1**	**-2.3**
BGF				*e*Sg	Sg	**04 46 50.6**	**-3.6**
	40nm,0.5s						
MDT	**Midelt**	**7.58**	**212**	P	Pn	**04 44 46.8**	**+1.0**
MD31	**MD31**	**7.59**	**213**	P	Pn	**04 44 47.8**	**+1.7**
SMF	**Signal de Mont**	**7.76**	**20**	*e*Pn	Pn	**04 44 50.3**	**+2.1**
SMF				*e*Sg	Sg	**04 47 01.1**	**-3.1**
	8.1nm,0.5s						
AVF	**Avril sur Loir**	**7.78**	**17**	*e*Pn	Pn	**04 44 49.4**	**+1.0**
AVF				*e*Sg	Sg	**04 47 01.7**	**-3.1**
	1.5nm,0.3s						

SSF	**Saint Saulge**	**8.07**	**17**	*e*Pn	Pn	**04 44 54.1**	**+1.7**
SSF				*e*Sg	Sg	**04 47 10.8**	**-3.3**
	4.3nm,0.6s						
LOR	**Lormes**	**8.34**	**18**	*e*Pg	Pg	**04 45 33.1**	**-1.9**
LOR				*e*Sg	Sg	**04 47 17.9**	**-5.0**
	2.1nm,0.3s						
CABF	**La Chapelle**	**8.45**	**29**	*e*Pn	Pn	**04 44 59.1**	**+1.3**
CABF				*e*Pg	Pg	**04 45 36.2**	**-0.8**
CABF				*e*Sg	Sg	**04 47 24.9**	**-1.5**
	3.9nm,0.4s						
QUIF	**Quistinic**	**8.85**	**346**	*e*Pn	Pn	**04 45 03.7**	**+0.6**
QUIF				*e*Sn	Sn	**04 46 38.0**	**-4.7**
	8.1nm,0.5s						
GRR	**Gorron**	**9.03**	**356**	*e*Pn	Pn	**04 45 07.4**	**+1.9**
GRR				*e*Sn	Sn	**04 46 43.8**	**-3.3**
	4.1nm,0.2s						
SGMF	**Saint Gilles**	**9.07**	**349**	*e*Pn	Pn	**04 45 07.2**	**+1.1**
SGMF				*e*Sn	Sn	**04 46 44.1**	**-4.1**
	2.2nm,0.3s						
LDF	**La Druitiere**	**9.21**	**359**	*e*Pn	Pn	**04 45 09.5**	**+1.5**
LDF				*e*Sn	Sn	**04 46 47.4**	**-4.2**
	2.7nm,0.3s						
ROSF	**Rostrenen**	**9.27**	**346**	*e*Pn	Pn	**04 45 08.9**	**0.0**
FLN	**La Foliniere**	**9.38**	**358**	*e*Pn	Pn	**04 45 12.5**	**+2.1**

NEIC ***23*** *04:55:33.6±1.0, 17°.90N±0°.02×66°.78W±0°.01, h10km±1km, ML2.5/35, Md2.9/11(RSPR), Error ellipse: s-maj=2.9km s-min=2.7km az=152.0*
OSPL ***23*** *04:55:34.1±0.3, 17°.84N×66°.79W, h2km±999km, ML3.0, Presumed earthquake*
SDD ***23*** *04:55:34.2±1.2, 17°.90N×66°.81W, h15km±10km, MD2.7, ML2.4, MW2.6, Presumed earthquake*

ISC 23 04:55:34.4±1.1,17°.92N±0°.04×66°.79W±0°.02,h11km±7km, n30,σ0s70/54,14C,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.10**	**300**		**Pg**	**Pg**	**04 55 36.9**	**-0.3**
GBPR					Sg	Sg	**04 55 38.9**	**-0.1**
OBIP	**Obispado Ponce**	**0.21**	**55**	Pg	**Pg**	**Pg**	**04 55 38.4**	**-0.5**
OBIP				Sg	Sg	Sg	**04 55 41.7**	**-0.2**
OBIP	**Obispado Ponce**	**0.21**	**55**	*i* P	**Pg**	**Pg**	**04 55 38.9**	**0.0**
OBIP				*e*S	Sg	Sg	**04 55 42.5**	**+0.7**
OBIP				IAML			04 55 43.9	
	comp=Z,2μm,0.1s							
CELP	**Cerrillos**	**0.25**	**53**	Pg	**Pg**	**Pg**	**04 55 39.4**	**-0.2**
CELP				Sg	Sg	Sg	**04 55 43.5**	**+0.4**
CELP	**Cerrillos**	**0.25**	**53**	↑*e*Pg	**Pg**	**Pg**	**04 55 39.6**	**0.0**
CELP				↑*e*Sg	Sg	Sg	**04 55 43.7**	**+0.7**
CELP				IAML			04 55 44.4	
	comp=N,162nm,0.2s							
MLPR	**Magueyes Islan**	**0.25**	**281**	Pg	**Pg**	**Pg**	**04 55 38.8**	**-0.7**
MLPR				Sg	Sg	Sg	**04 55 43.0**	**0.0**
MLPR				IAML			04 55 45.0	
	comp=N,610nm,0.2s							
MLPR				IAML			04 55 45.1	
	comp=N,524nm,0.4s							
MLPR	**Magueyes Islan**	**0.25**	**281**	↑*e*Pg	**Pg**	**Pg**	**04 55 39.0**	**-0.5**
MLPR				↑*e*Sg	Sg	Sg	**04 55 41.6**	**-1.4**
MLPR				IAML			04 55 45.0	
	comp=N,189nm,0.2s							
CRPR	**Cabo Rojo, PR**	**0.32**	**285**	Pg	**Pg**	**Pg**	**04 55 40.2**	**-0.6**
CRPR				Sg	Sg	Sg	**04 55 44.5**	**-0.5**
CRPR				IAML			04 55 45.7	
	comp=N,378nm,0.2s							
CRPR	**Cabo Rojo, PR**	**0.32**	**285**	*i* P	**Pg**	**Pg**	**04 55 40.3**	**-0.5**
CRPR				*e*S	Sg	Sg	**04 55 45.0**	**-0.1**
CRPR				IAML			04 55 45.6	
	comp=Z,219nm,0.4s							
UUPR	**Utuado, UPR, P**	**0.33**	**11**	Pg	**Pg**	**Pg**	**04 55 40.6**	**-0.5**
UUPR				Sg	Sg	Sg	**04 55 45.0**	**-0.6**
LSP	**Las Mesas**	**0.38**	**311**		**Pg**	**Pg**	**04 55 41.5**	**-0.5**
LSP					Sg	Sg	**04 55 47.3**	**+0.3**
AOPR	**Arecibo Observ**	**0.42**	**4**	Pg	**Pg**	**Pg**	**04 55 42.1**	**-0.6**
AOPR				Sg	Sg	Sg	**04 55 48.2**	**-0.2**
AOPR				IAML			04 55 49.2	
	comp=Z,866nm,0.2s							
AOPR	**Arecibo Observ**	**0.42**	**4**	↑*e*Pg	**Pg**	**Pg**	**04 55 42.3**	**-0.5**
AOPR				↑*e*Sg	Sg	Sg	**04 55 48.4**	**0.0**
AOPR				IAML			04 55 49.3	
	comp=N,762nm,0.2s							
PRSN	**Puerto Rico Se**	**0.45**	**311**	Pg	**Pg**	**Pg**	**04 55 42.4**	**-0.8**
PRSN				Sg	Sg	Sg	**04 55 49.1**	**-0.1**
PRSN	**Puerto Rico Se**	**0.45**	**311**	↑*e*Pg	**Pg**	**Pg**	**04 55 42.6**	**-0.6**
PRSN				↑*e*Sg	Sg	Sg	**04 55 49.4**	**+0.2**
PRSN				IAML			04 55 52.2	
	comp=N,714nm,0.3s							

ASAK	**Asacha**	**1.65**	**13**	PN	**Pn**	**04 57 59.1**	**0.0**
ASAK	**Asacha**	**1.65**	**13**	*e*P	**Pn**	**04 57 59.2**	**0.0**
MTVR	**Mutnovka**	**1.79**	**18**	PN	**Pn**	**04 58 01.2**	**+0.1**
MTVR				S	**Sn**	**04 58 23.2**	**+0.1**
MTVR	**Mutnovka**	**1.79**	**18**	*e*P	**Pn**	**04 58 01.3**	**+0.1**
MTVR				*e*S	**Sn**	**04 58 23.2**	**+0.1**
RUS	**Russkaya**	**1.82**	**24**	PN	**Pn**	**04 58 00.9**	**-0.4**
RUS				S	**Sn**	**04 58 22.3**	**-1.2**
RUS	**Russkaya**	**1.82**	**24**	*e*P	**Pn**	**04 58 00.9**	**-0.4**
RUS				*e*S	**Sn**	**04 58 22.4**	**-1.2**
GRL	**Gorelyy**	**1.84**	**15**	PN	**Pn**	**04 58 02.3**	**+0.6**
GRL				S	**Sn**	**04 58 24.7**	**+0.5**
GRL	**Gorelyy**	**1.84**	**15**	*e*P	**Pn**	**04 58 02.3**	**+0.6**
GRL				*e*S	**Sn**	**04 58 24.7**	**+0.5**
KRMR	**Karymshinskiy**	**2.12**	**14**	PN	**Pn**	**04 58 05.6**	**+0.3**
KRMR	**Karymshinskiy**	**2.12**	**14**	*e*P	**Pn**	**04 58 05.7**	**+0.3**
APC	**Apacha**	**2.15**	**358**	PN	**Pn**	**04 58 06.1**	**+0.4**
APC	**Apacha**	**2.15**	**358**	*e*P	**Pn**	**04 58 06.2**	**+0.4**
PEA0B	**Petropavlovsk-**	**2.34**	**6**	Pn	**Pn**	**04 58 09.1**	**+0.7**
PEA0B	**Petropavlovsk-**	**2.34**	**6**	*ce*PN	**Pn**	**04 58 08.2**	**-0.2**
PETK	**Petropavlovsk-**	**2.34**	**6**	P	**Pn**	**04 58 09.1**	**+0.7**
	23nm,0.5s,baz=169,slow=13,SNR=92						
PETK				S	**Sn**	**04 58 34.8**	**-1.4**
	28nm,0.4s,baz=139,slow=14,SNR=5.9						
PETK				LR	LR	04 59 08.9	
	comp=Z,64nm,18.7s,baz=226,slow=43						
PETK	**Petropavlovsk-**	**2.34**	**6**	Pn	**Pn**	**04 58 08.9**	**+0.5**
PET	**Petropavlovsk**	**2.40**	**20**		**Pn**	**04 58 08.9**	**-0.2**
PET	**Petropavlovsk**	**2.40**	**20**	*e*PN	**Pn**	**04 58 09.5**	**+0.4**
PET				*e*S	**Sn**	**04 58 38.6**	**+1.1**
PET				pmax	pmax		
	comp=Z,87nm,0.5s						
PET				smax	smax		
	comp=E,639nm,0.5s						
PET				smax	smax		
	comp=N,541nm,0.6s						
PET	**Petropavlovsk**	**2.40**	**20**	*e*P	**Pn**	**04 58 09.6**	**+0.5**
PET				*e*S	**Sn**	**04 58 38.3**	**+0.8**
DALK	**Dalny**	**2.43**	**21**	PN	**Pn**	**04 58 09.9**	**+0.4**
DALK				S	**Sn**	**04 58 38.9**	**+0.8**
DALK	**Dalny**	**2.43**	**21**	*e*P	**Pn**	**04 58 10.0**	**+0.4**
DALK				*e*S	**Sn**	**04 58 39.0**	**+0.8**
INSR	**Institute**	**2.43**	**19**	PN	**Pn**	**04 58 10.5**	**+1.0**
INSR				S	**Sn**	**04 58 39.8**	**+1.6**
INSR	**Institute**	**2.43**	**19**	*e*P	**Pn**	**04 58 10.5**	**+1.0**
INSR				*e*S	**Sn**	**04 58 39.9**	**+1.6**
UGLR	**Uglovaya**	**2.61**	**21**	PN	**Pn**	**04 58 13.4**	**+1.3**
UGLR				S	**Sn**	**04 58 44.8**	**+2.1**
UGLR	**Uglovaya**	**2.61**	**21**	*e*P	**Pn**	**04 58 13.4**	**+1.3**
UGLR				*e*S	**Sn**	**04 58 44.9**	**+2.1**
AVH	**Avacha**	**2.64**	**19**	PN	**Pn**	**04 58 14.5**	**+2.0**
AVH				S	**Sn**	**04 58 45.5**	**+2.0**
AVH	**Avacha**	**2.64**	**19**	*e*P	**Pn**	**04 58 14.5**	**+2.0**
AVH				*e*S	**Sn**	**04 58 45.6**	**+2.0**
KOK	**Koryaka**	**2.65**	**18**	PN	**Pn**	**04 58 14.8**	**+2.2**
KOK	**Koryaka**	**2.65**	**18**	*e*P	**Pn**	**04 58 14.8**	**+2.2**
SMAR	**Somma**	**2.66**	**20**	PN	**Pn**	**04 58 14.0**	**+1.2**
SMAR				S	**Sn**	**04 58 45.0**	**+1.0**
SMAR	**Somma**	**2.66**	**20**	*e*P	**Pn**	**04 58 14.0**	**+1.2**
SMAR				*e*S	**Sn**	**04 58 45.0**	**+1.0**
KRER	**Koryakskii**	**2.68**	**19**	PN	**Pn**	**04 58 14.8**	**+1.7**
KRER				S	**Sn**	**04 58 46.2**	**+1.6**
KRER	**Koryakskii**	**2.68**	**19**	*e*P	**Pn**	**04 58 14.8**	**+1.7**
KRER				*e*S	**Sn**	**04 58 46.2**	**+1.6**
SDLR	**Sedlovina**	**2.69**	**21**	PN	**Pn**	**04 58 13.8**	**+0.7**
SDLR				S	**Sn**	**04 58 45.7**	**+1.0**
SDLR	**Sedlovina**	**2.69**	**21**	*e*P	**Pn**	**04 58 13.8**	**+0.7**
SDLR				*e*S	**Sn**	**04 58 45.7**	**+1.0**
NLC	**Nalytchevo**	**2.71**	**27**	PN	**Pn**	**04 58 11.9**	**-1.4**
NLC				S	**Sn**	**04 58 42.8**	**-2.1**
NLC	**Nalytchevo**	**2.71**	**27**	*e*P	**Pn**	**04 58 11.9**	**-1.4**
NLC				*e*S	**Sn**	**04 58 42.9**	**-2.1**
KRX	**Arik**	**2.71**	**17**	PN	**Pn**	**04 58 15.2**	**+1.7**
KRX	**Arik**	**2.71**	**17**	*e*P	**Pn**	**04 58 15.2**	**+1.7**
SPN	**Mys Shipunski**	**2.87**	**35**	PN	**Pn**	**04 58 15.6**	**+0.1**
SPN				S	**Sn**	**04 58 48.6**	**-0.3**
SPN	**Mys Shipunski**	**2.87**	**35**	*e*P	**Pn**	**04 58 15.6**	**+0.1**
SPN				*e*S	**Sn**	**04 58 48.7**	**-0.3**
KII	**Karymskiy**	**3.52**	**21**	PN	**Pn**	**04 58 26.8**	**+2.5**
KII	**Karymskiy**	**3.52**	**21**	*e*P	**Pn**	**04 58 26.9**	**+2.5**
MKZ	**Mys Kozlova**	**4.65**	**34**	PN	**Pn**	**04 58 39.1**	**-0.5**
MKZ	**Mys Kozlova**	**4.65**	**34**	*e*P	**Pn**	**04 58 39.2**	**-0.5**
KBTR	**Krutoberegovo**	**6.36**	**29**	PN	**Pn**	**04 59 03.3**	**+0.3**
KBTR	**Krutoberegovo**	**6.36**	**29**	*e*P	**Pn**	**04 59 03.4**	**+0.3**
BKI	**Bering**	**6.86**	**46**	PN	**Pn**	**04 59 09.3**	**-0.5**
BKI	**Bering**	**6.86**	**46**	*e*P	**Pn**	**04 59 09.4**	**-0.5**
BKI				*e*S	**Sn**	**05 00 21.3**	**-5.1**
MA2	**Magadan**	**9.56**	**340**	LR	LR	05 03 05.1	
	comp=N,49nm,20.0s,baz=140,slow=35						
MA2	**Magadan**	**9.56**	**340**	*ce*PN	**Pn**	**04 59 42.9**	**-3.9**
MA2				pmax	pmax		
	comp=Z,14nm,1.7s						
YSS	**Yuzhno-Sakhali**	**10.31**	**254**	*e*PN	**Pn**	**04 59 59.0**	**+2.0**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.5s						
JKA	**Kamikawa-asahi**	**11.96**	**242**	Pn	**Pn**	**05 00 21.7**	**+2.1**
ASAJ	**Asahikawa**	**11.96**	**242**	P	**Pn**	**05 00 22.3**	**+2.7**
	comp=Z,4.9nm,0.4s,baz=70,slow=12,SNR=4.5						
ASAJ	**Asahikawa**	**11.96**	**242**	PN	**Pn**	**05 00 21.7**	**+2.1**
SEY	**Seymchan**	**12.47**	**350**	*i* PN	**Pn**	**05 00 25.8**	**-0.5**
JTM	**Tenmabayashi**	**15.02**	**235**	Pn	**Pn**	**05 00 58.7**	**-2.0**
KLR	**Kul'dur**	**16.47**	**275**	P	**P**	**05 01 20.1**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=96,slow=8.4,SNR=4.1						
KLR	**Kul'dur**	**16.47**	**275**	*i* P	**Pn**	**05 01 16.7**	**-1.7**
BILL	**Bilibino**	**17.87**	**11**	*i* P	**Pn**	**05 01 35.3**	**-0.1**
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
YAK	**Yakutsk**	**18.81**	**317**	*i* P	**P**	**05 01 44.7**	**-0.8**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HEH	**HeiHe**	**18.95**	**280**	*e*P	**P**	**05 01 46.1**	**-1.1**
HEH				pmax	pmax		
	comp=Z,14nm,0.8s						
MJAR	**Matsushiro Arr**	**19.74**	**231**	P	**P**	**05 01 56.7**	**+0.7**
	comp=Z,1.2nm,0.3s,baz=26,slow=7.5,SNR=2.0						
TNA	**Tin City**	**23.14**	**37**	P	**P**	**05 02 31.3**	**-0.5**
K13K	**Kusilvak Mount**	**23.48**	**47**	P	**P**	**05 02 35.0**	**0.0**
ANM	**Nome**	**23.81**	**40**	P	**P**	**05 02 38.6**	**+0.6**
ANM	**Nome**	**23.81**	**40**	P	**P**	**05 02 38.6**	**+0.6**
ANM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
M13K	**Dall Lake**	**23.88**	**51**	P	**P**	**05 02 38.6**	**0.0**
M13K				IAmb	IAmb	05 03 10.1	
	comp=Z,27nm,1.5s						
M14K	**Bethel**	**24.60**	**50**	P	**P**	**05 02 45.4**	**+0.4**
C18K	**Utukok River**	**26.74**	**33**	P	**P**	**05 03 03.6**	**-0.9**
M17K	**Holitna River**	**26.84**	**49**	P	**P**	**05 03 04.6**	**-0.8**
M17K				IAmb	IAmb	05 03 09.6	
	comp=Z,7.2nm,1.0s						
B21K	**Ikpikpuk River**	**29.28**	**32**	P	**P**	**05 03 26.9**	**-0.1**
B21K				IAmb	IAmb	05 03 28.4	
	comp=Z,2.6nm,0.6s						
E22K	**Anaktuvuk Pass**	**29.96**	**36**	P	**P**	**05 03 33.1**	**0.0**
E22K				IAmb	IAmb	05 03 49.9	
	comp=Z,6.7nm,1.4s						
SML	**Sawmill**	**31.18**	**48**	P	**P**	**05 03 43.4**	**-0.6**
ILAR	**Eielson Array**	**31.69**	**42**	P	**P**	**05 03 47.9**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=263,slow=6.0,SNR=14						
	comp=Z,0.8nm,0.7s						
ILAR	**Eielson Array**	**31.69**	**42**	*e*P	**P**	**05 03 48.1**	**-0.2**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**31.90**	**163**	T	T	05 37 32.8	
	baz=348,slow=76,SNR=95						
H11N3	**WAKE ISLAND Hy**	**31.92**	**163**	T	T	05 37 34.1	
	baz=348,slow=76,SNR=145						
H11N1	**WAKE ISLAND Hy**	**31.92**	**163**	T	T	05 37 40.2	
	baz=348,slow=76,SNR=92						
J25K	**Salcha River,**	**32.34**	**43**	P	**P**	**05 03 53.1**	**-1.1**
SONM	**Songino Array**	**32.78**	**285**	P	**P**	**05 03 57.9**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=63,slow=8.1,SNR=2.8						
	comp=Z,0.4nm,0.4s						
HHC	**Hu-ho-hao-te**	**32.90**	**270**	*e*P	**P**	**05 04 03.3**	**+4.0**
HHC				pmax	pmax		
	comp=Z,14nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,4.5s						
TLY	**Talaya**	**32.97**	**293**	LR	LR	05 17 46.9	
	comp=Z,34nm,19.1s,baz=334,slow=37						
H11S1	**WAKE ISLAND Hy**	**33.06**	**163**	T	T	05 39 04.9	
	baz=349,slow=76,SNR=141						
H11S3	**WAKE ISLAND Hy**	**33.07**	**164**	T	T	05 38 59.4	
	baz=349,slow=76,SNR=127						
H11S2	**WAKE ISLAND Hy**	**33.08**	**163**	T	T	05 39 00.1	
	baz=349,slow=76,SNR=118						
BCAR	**Beaver Creek A**	**34.07**	**45**	P	**P**	**05 04 09.5**	**+0.3**
INK	**Inuvik**	**36.76**	**35**	P	**P**	**05 04 32.1**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=284,slow=6.2,SNR=3.2						
	comp=Z,0.8nm,0.6s						
INK	**Inuvik**	**36.76**	**35**	P	**P**	**05 04 31.9**	**-0.1**
INK	**Inuvik**	**36.76**	**35**	P	**P**	**05 04 31.9**	**-0.1**
INK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
H31M	**Peel River**	**36.83**	**40**	P	**P**	**05 04 33.4**	**+0.6**
H31M				IAmb	IAmb	05 04 40.1	
	comp=Z,3.1nm,1.1s						
A36M	**Sachs Harbour**	**39.00**	**29**	P	**P**	**05 04 50.6**	**-0.2**
A36M				IAmb	IAmb	05 04 51.8	
	comp=Z,3.4nm,0.7s						
YKA	**Yellowknife Ar**	**46.05**	**40**	P	**P**	**05 05 48.3**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=302,slow=8.3,SNR=14						
	comp=Z,0.7nm,0.6s						
YKA	**Yellowknife Ar**	**46.05**	**40**	P	**P**	**05 05 47.7**	**-0.4**
WMQ	**Urumqi**	**46.11**	**290**	*e*P	**P**	**05 05 49.9**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
KURK	**Kurchatov**	**47.49**	**302**	P	**P**	**05 05 57.6**	**-1.9**
KURK				IAmb	IAmb	05 05 59.6	
	comp=Z,2.2nm,0.3s						
KURK	**Kurchatov**	**47.49**	**302**	*i* P	**P**	**05 05 57.4**	**-2.1**
KURK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KURBB	**Kurchatov Arra**	**47.59**	**302**	P	**P**	**05 05 58.3**	**-1.9**
	comp=Z,0.6nm,0.3s,baz=61,slow=7.4,SNR=6.5						
	comp=Z,0.6nm,0.3s						
MK31	**Makanchi Array**	**47.60**	**296**	*ce*P	**P**	**05 05 59.7**	**-0.7**
MKAR	**Makanchi Array**	**47.60**	**296**	P	**P**	**05 05 59.5**	**-1.0**
	comp=Z,0.5nm,0.4s,baz=65,slow=7.6,SNR=14						
	comp=Z,0.5nm,0.4s						
MKAR	**Makanchi Array**	**47.60**	**296**	P	**P**	**05 05 59.0**	**-1.4**
PZH	**PanZhiHua**	**48.34**	**262**	P	**P**	**05 06 10.3**	**+3.8**
BVAR	**Borovoye Array**	**50.47**	**309**	P	**P**	**05 06 18.8**	**-3.4**
	comp=Z,0.3nm,0.3s,baz=58,slow=8.4,SNR=2.2						
	comp=Z,0.3nm,0.3s						
BORK	**Borovoye**	**50.49**	**309**	*ce*P	**P**	**05 06 21.8**	**-0.6**
BORK				pmax	pmax		
	comp=Z,3.0nm,1.7s						
BLKN	**Baker Lake**	**51.98**	**32**	P	**P**	**05 06 32.3**	**-1.0**
BLKN				IAmb	IAmb	05 06 33.9	
	comp=Z,2.9nm,0.9s						
I04A	**Tendick Farm,**	**52.39**	**64**	P	**P**	**05 06 38.6**	**+1.9**
I04A				IAmb	IAmb	05 06 38.7	
	comp=Z,4.6nm,1.0s						
ILON	**Igloolik, Nuna**	**52.63**	**23**	P	**P**	**05 06 37.9**	**-0.1**
O03E	**Paynes Creek**	**54.94**	**67**	P	**P**	**05 06 56.5**	**+1.1**
WVOR	**Wild Horse Val**	**55.39**	**63**	P	**P**	**05 06 59.8**	**+1.1**
WVOR				IAmb	IAmb	05 07 01.3	
	comp=Z,3.3nm,0.9s						
WVOR	**Wild Horse Val**	**55.39**	**63**	P	**P**	**05 06 59.8**	**+1.1**
WVOR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**55.99**	**257**	P	**P**	**05 07 03.8**	**+0.7**
	comp=Z,1.1nm,0.3s,baz=43,slow=6.8,SNR=2.0						
	comp=Z,1.1nm,0.3s						
PNTR	**Pine Nut**	**57.01**	**67**	P	**P**	**05 07 11.6**	**+1.1**
KVN	**Kaiserville**	**57.91**	**66**	P	**P**	**05 07 17.8**	**+1.0**
KVN				IAmb	IAmb	05 07 19.1	
	comp=Z,1.6nm,0.7s						
KVN	**Kaiserville**	**57.91**	**66**	P	**P**	**05 07 17.8**	**+1.0**
KVN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
YHH	**Holmes Hill**	**58.14**	**57**	P	**P**	**05 07 19.6**	**+1.2**
NVAR	**Mina Array Bea**	**58.21**	**67**	P	**P**	**05 07 20.2**	**+1.4**
	comp=Z,2.6nm,0.7s,baz=299,slow=7.8,SNR=23						
NVAR				pP	**pP**	**05 07 38.4**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=301,slow=7.8,SNR=1.9						
	comp=Z,2.6nm,0.7s						
LHV	**Little Huntoon**	**58.21**	**67**	P	**P**	**05 07 20.6**	**+2.0**
DSP	**Deep Springs**	**59.11**	**68**	P	**P**	**05 07 26.7**	**+1.8**
DSP				IAmb	IAmb	05 07 27.3	
	comp=Z,1.7nm,0.8s						
PDAR	**Pinedale Array**	**60.20**	**58**	P	**P**	**05 07 33.4**	**+0.8**
	comp=Z,1.6nm,0.8s,baz=309,slow=2.7,SNR=12						
PDAR				pP	**pP**	**05 07 50.6**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=308,slow=2.1,SNR=4.0						
	comp=Z,1.6nm,0.8s						
PDAR	**Pinedale Array**	**60.20**	**58**	P	**P**	**05 07 33.6**	**+1.0**
FURC	**Furnace Creek,**	**60.38**	**68**	P	**P**	**05 07 34.6**	**+1.1**
FINES	**FINESS Array B**	**61.53**	**336**	P	**P**	**05 07 40.1**	**-0.9**
	comp=Z,6.0nm,1.1s,baz=30,slow=8.8,SNR=5.5						
	comp=Z,6.0nm,1.1s						
FINES	**FINESS Array B**	**61.53**	**336**	P	**P**	**05 07 39.8**	**-1.2**
FINES	**FINESS Array B**	**61.53**	**336**	*e*P	**P**	**05 07 39.7**	**-1.2**
FINES				pmax	pmax		
	comp=Z,6.0nm,1.1s						
OBN	**Obninsk**	**63.51**	**327**	*i* P	**P**	**05 07 53.3**	**-0.9**
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
PV10	**Paradox Valley**	**63.53**	**61**	P	**P**	**05 07 56.8**	**+1.9**
NOA	**NORSAR Array B**	**65.25**	**343**	P	**P**	**05 08 04.0**	**-1.6**
	comp=Z,0.4nm,0.7s,baz=32,slow=8.4,SNR=3.3						
	comp=Z,0.4nm,0.7s						
NOA	**NORSAR Array B**	**65.25**	**343**	P	**P**	**05 08 04.0**	**-1.6**
EYMN	**Ely**	**65.32**	**44**	P	**P**	**05 08 05.8**	**-0.5**
HFS	**Hagfors**	**65.60**	**341**	P	**P**	**05 08 05.8**	**-1.9**
	comp=Z,1.8nm,0.9s,baz=26,slow=4.0,SNR=5.6						
	comp=Z,1.8nm,0.9s						
ECSD	**EROS Data Cent**	**66.13**	**50**	P	**P**	**05 08 11.5**	**0.0**
ECSD				IAmb	IAmb	05 08 11.9	
	comp=Z,4.9nm,1.1s						
MNHN	**Monahans**	**72.18**	**62**	P	**P**	**05 08 49.8**	**+0.6**
MNHN				IAmb	IAmb	05 08 50.7	
	comp=Z,4.2nm,0.6s						
EKA	**Eskdalemuir Ar**	**73.01**	**348**	P	**P**	**05 08 52.8**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=21,slow=6.1,SNR=2.1						
	comp=Z,0.4nm,0.4s						
TX31	**Lajitas Ar. Si**	**73.17**	**64**	P	**P**	**05 08 56.1**	**+1.0**
TX31				IAmb	IAmb	05 08 56.9	
	comp=Z,3.2nm,0.8s						
TXAR	**Lajitas Array**	**73.17**	**64**	P	**P**	**05 08 55.9**	**+0.8**
	comp=Z,2.9nm,0.7s,baz=297,slow=4.7,SNR=35						
TXAR				pP	**PcP**	**05 09 13.7**	**+2.3**
	comp=Z,0.7nm,0.6s,baz=286,slow=6.9,SNR=4.0						
	comp=Z,2.9nm,0.7s						
WRA	**Warramunga Arr**	**73.26**	**203**	P	**P**	**05 08 54.6**	**-0.8**
	comp=Z,0.7nm,0.5s,baz=20,slow=6.3,SNR=11						
WRA				pP	**PcP**	**05 09 13.2**	**+1.7**
	comp=Z,0.7nm,0.5s,baz=20,slow=6.3,SNR=4.9						
	comp=Z,0.7nm,0.5s						
WRA	**Warramunga Arr**	**73.26**	**203**	P	**P**	**05 08 54.1**	**-1.3**
BUR08	**Bucovina Ar. S**	**73.65**	**328**	P	**P**	**05 08 55.7**	**-2.0**
BUR08				IAmb	IAmb	05 09 03.8	
	comp=Z,7.7nm,1.4s						
LANS	**Liptovska Anna**	**74.11**	**333**	*e*P	**P**	**05 08 55.7**	**-4.5**
LANS	**Liptovska Anna**	**74.11**	**333**	*e*P	**P**	**05 08 55.7**	**-4.5**
GERES	**GERESS Array B**	**75.96**	**336**	P	**P**	**05 09 08.5**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=3.0,slow=8.4,SNR=2.0						
	comp=Z,0.1nm,0.3s						
ASAR	**Alice Springs**	**76.95**	**202**	P	**P**	**05 09 16.4**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=16,slow=5.2,SNR=9.9						
	comp=Z,0.5nm,0.5s						
ASAR	**Alice Springs**	**76.95**	**202**	P	**P**	**05 09 17.2**	**+0.7**
H03N2	**Juan Fernandez**	**135.96**	**89**	T	T	07 47 53.8	
	baz=313,slow=77,SNR=58						
H03N1	**Juan Fernandez**	**135.98**	**89**	T	T	07 47 55.2	
	baz=313,slow=77,SNR=42						
H03N3	**Juan Fernandez**	**135.98**	**89**	T	T	07 47 57.8	
	baz=313,slow=77,SNR=54						
PLCA	**Paso Flores**	**145.69**	**92**	PKPbc	**PKPdf**	**05 17 01.7**	**+0.1**
	comp=Z,2.0nm,1.1s,baz=304,slow=3.6,SNR=3.9						
PLCA	**Paso Flores**	**145.69**	**92**	PKPdf	**PKPdf**	**05 17 01.9**	**+0.2**

IDC 23 05:03:10.9±1.7, 23°.47N×145°.01E, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=49.6km s-min=33.0km az=84.0, North Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**44.38**	**194**	P	P	05 11 22.7	-0.6
	0.4nm,0.8s,baz=11,slow=7.4,SNR=1.9						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**54.77**	**312**	P	P	05 12 42.6	+0.2
	0.6nm,0.5s,baz=99,slow=7.4,SNR=7.4						
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**57.40**	**316**	P	P	05 13 02.2	+1.1
	1.2nm,0.7s,baz=102,slow=6.2,SNR=14						
	1.2nm,0.7s						
ILAR	**Eielson Array**	**59.70**	**27**	P	P	05 13 15.5	-1.4
	0.3nm,0.6s,baz=254,slow=5.3,SNR=1.6						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**62.44**	**319**	P	P	05 13 35.4	-0.4
	2.1nm,0.5s,baz=98,slow=7.4,SNR=9.8						
	2.1nm,0.5s						

IDC 23 05:19:37.3±2.2, 14°.84S×168°.02E, h0km, mb3.8/3, mbtmp3.8/4, ML3.5/1, MS3.4/1, Error ellipse: s-maj=53.6km s-min=31.4km az=115.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.35**	**192**	Pn	Pn	05 21 26.2	+0.1
	0.9nm,0.3s,baz=14,slow=12,SNR=6.7						
DZM				Sn	Sn	05 22 50.8	+0.6
	0.3nm,0.3s,baz=316,slow=22,SNR=2.0						
	4.1nm,0.8s						
WRA	**Warramunga Arr**	**32.51**	**256**	P	P	05 26 09.8	-0.4
	0.9nm,0.8s,baz=86,slow=8.9,SNR=5.4						
	0.9nm,0.8s						
ASAR	**Alice Springs**	**33.32**	**249**	P	P	05 26 17.4	+0.2
	2.4nm,0.8s,baz=80,slow=9.1,SNR=18						
	2.4nm,0.8s						
GUMO	**Guam**	**36.37**	**320**	LR	LR	05 41 41.7	
	comp=Z,54nm,19.8s,baz=61,slow=36						
ILAR	**Eielson Array**	**86.41**	**18**	P	P	05 32 21.2	0.0
	0.2nm,0.7s,baz=235,slow=5.5,SNR=2.5						
	0.2nm,0.7s						

*IDC **23** 05:24:37.3±1.0, 34°.20S×178°.92W, h0km, mb4.2/4, mbtmp4.2/5, ML4.0/1, Error ellipse: s-maj=34.7km s-min=24.7km az=113.0*
*WEL **23** 05:24:41.1±0.8, 34°.5±6″×17°.9W±1°.1, h153km±20km, M4.2/8, mB4.4/3, ML4.1/12, MLv4.3/8, Mw(mB)3.6/3, Error ellipse: s-maj=14.9km s-min=4.7km az=112.5, confirmed*
ISC 23 05:24:42.3±0.8, 34°.36S±0°.07×178°.7W±0°.1, h35km, n47, σ18 39/74, mb4.1/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.01**	**216**	P	**Pn**	**05 25 42.0**	**+0.8**
MXZ				S	**Sn**	**05 26 29.0**	**+2.0**
WMGZ	**Waiomatatini S**	**4.16**	**213**	P	**Pn**	**05 25 44.0**	**+0.6**
WMGZ				S	**Sn**	**05 26 34.1**	**+3.3**
PKGZ	**Pakihiroa**	**4.36**	**216**	P	**Pn**	**05 25 45.4**	**-0.7**
PKGZ				S	**Sn**	**05 26 37.6**	**+2.0**
HAZ	**Te Kaha**	**4.42**	**219**	P	**Pn**	**05 25 47.6**	**+0.7**
HAZ				S	**Sn**	**05 26 39.1**	**+2.0**
PUZ	**Puketiti**	**4.44**	**213**	P	**Pn**	**05 25 45.8**	**-1.4**
PUZ				S	**Sn**	**05 26 37.3**	**-0.3**
RUGZ	**Raukumara Rang**	**4.63**	**218**	P	**Pn**	**05 25 50.0**	**+0.1**
RUGZ				S	**Sn**	**05 26 44.3**	**+1.7**
TWGZ	**Tauwhareparae**	**4.65**	**214**	P	**Pn**	**05 25 50.4**	**+0.3**
TWGZ				S	**Sn**	**05 26 45.8**	**+2.9**
CNGZ	**Carnagh Statio**	**4.81**	**210**	P	**Pn**	**05 25 52.4**	**+0.2**
TKGZ	**Te Karaka**	**4.93**	**213**	P	**Pn**	**05 25 53.8**	**0.0**
TKGZ				S	**Sn**	**05 26 49.6**	**0.0**
MWZ	**Matawai**	**4.99**	**216**	P	**Pn**	**05 25 54.1**	**-0.7**
MWZ				S	**Sn**	**05 26 51.9**	**+0.5**
GLKZ	**Green Lake**	**5.13**	**8**	S	**Sn**	**05 26 53.9**	**-0.8**
GRZ	**Great Barrier**	**5.13**	**247**	P	**Pn**	**05 25 57.4**	**+0.8**
URZ	**Urewera**	**5.15**	**220**	Pn	**Pn**	**05 25 56.5**	**-0.4**
	5.7nm,0.3s,baz=340,slow=3.8,SNR=9.0						
URZ				Sn	**Sn**	**05 26 54.5**	**-0.6**
	6.1nm,0.3s,baz=318,slow=23,SNR=7.6						
	24nm,0.5s						
URZ	**Urewera**	**5.15**	**220**	P	**Pn**	**05 25 56.2**	**-0.7**
URZ				S	**Sn**	**05 26 54.1**	**-0.9**
**RI

H11S2 WAKE ISLAND Hy 21.54 98 T T 06 00 50.2
baz=283
USRK Ussuriysk Ar. 23.51 338 P **P** **05 38 47.3 +0.6**
2.6nm,0.7s,baz=161,slow=8.6,SNR=3.1
2.6nm,0.7s
SONM Songino Array 39.02 319 P **P** **05 41 04.0 +0.6**
0.2nm,0.3s,baz=128,slow=9.3,SNR=3.8
0.2nm,0.3s
TLY Talaya 42.35 323 LR LR 05 59 42.2
comp=Z,32nm,18.8s,baz=35,slow=37
CMAR Chiang Mai Arr 42.41 273 LR LR 05 58 30.7
comp=Z,12nm,20.2s,baz=235,slow=35
WRA Warramunga Arr 43.63 193 P **P** **05 41 41.4 +0.2**
0.5nm,0.5s,baz=16,slow=8.7,SNR=8.7
0.5nm,0.5s
ASAR Alice Springs 47.33 193 P **P** **05 42 10.9 +0.4**
0.4nm,0.6s,baz=16,slow=6.8,SNR=5.2
0.4nm,0.6s
ZALV Zalesovo Beam 53.85 321 P **P** **05 42 58.8 -0.7**
0.4nm,0.4s,baz=104,slow=9.2,SNR=2.1
0.4nm,0.4s
MKAR Makanchi Array 54.57 312 P **P** **05 43 05.6 +0.7**
1.0nm,0.7s,baz=95,slow=8.8,SNR=9.0
1.0nm,0.7s
KURBB Kurchatov Arra 57.29 316 P **P** **05 43 24.1 -0.1**
1.5nm,0.8s,baz=93,slow=7.7,SNR=12
1.5nm,0.8s
ILAR Eielson Array 60.58 27 P **P** **05 43 47.0 +0.2**
0.3nm,0.6s,baz=252,slow=4.9,SNR=2.5
0.3nm,0.6s
BVAR Borovoye Array 62.37 319 P **P** **05 43 59.8 +0.7**
4.1nm,0.6s,baz=87,slow=7.1,SNR=22
4.1nm,0.6s
YKA Yellowknife Ar 74.99 28 P **P** **05 45 17.7 +0.1**
0.2nm,0.8s,baz=299,slow=6.5,SNR=3.3
0.2nm,0.8s
KBZ Khabaz 82.20 314 P **P** **05 45 57.0 -0.5**
3.4nm,0.8s,baz=125,slow=2.1,SNR=8.4
3.4nm,0.8s
FINES FINESS Array B 82.50 335 P **P** **05 45 58.1 -0.7**
1.8nm,0.9s,baz=64,slow=3.2,SNR=1.2
1.8nm,0.9s
BRTR Keskin Array B 90.18 314 P **P** **05 46 36.1 -1.2**
0.3nm,0.4s,baz=46,slow=4.2,SNR=1.9
0.3nm,0.4s

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*NEIC **23** 05:53:56.8±1.6,35.°954N±0.°004×117.°36W±0.°01, h5km±1km, mb4.1/14, ML4.4/202, Mwr4.3/6(PAS), Error ellipse: s-maj=2.8km s-min=1.7km az=122.0*
*IDC **23** 05:53:57.8±0.6,35.°93N×117.°24W, h0km, mb3.6/3, mbtmp3.6/9, ML3.7/5, MS3.7/32, Error ellipse: s-maj=13.2km s-min=5.3km az=74.0*
*PAS **23** 05:53:57.3±1.7,35.°96N±0.°01×117.°36W±0.°01, h1km±2km, Error ellipse: s-maj=2.1km s-min=1.4km az=161.0*

ISC 23 05:53:57.7±0.9,35.°94N±0.°02×117.°36W±0.°02, h10km±7km, n154, σ1°23/110, mb3.8/4, MS3.7/27, Central California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CLC	**China Lake**	**0.23**	**237**		**Pg**	**05 54 02.1**	**-0.4**
CLC				Sg	**Sg**	**05 54 05.5**	**-0.2**
RCWM	**Renegade Canyo**	**0.23**	**272**		**Pg**	**05 54 02.2**	**-0.3**
RCWM					**Sg**	**05 54 05.9**	**+0.1**
WCSM	**Coso Springs S**	**0.34**	**285**		**Pg**	**05 54 04.1**	**-0.5**
WCSM					**Sg**	**05 54 09.4**	**+0.2**
TOW	**Tower One**	**0.35**	**248**		**Pg**	**05 54 05.0**	**+0.2**
TOW					**Sb**	**05 54 10.9**	**-1.0**
WVPM	**Volcano Peak E**	**0.37**	**271**		**Pg**	**05 54 04.9**	**-0.3**
WVPM					**Sg**	**05 54 10.2**	**+0.1**
GPO	**China Lake**	**0.38**	**220**		**Pg**	**05 54 05.1**	**-0.2**
GPO					**Sg**	**05 54 11.2**	**+0.9**
DAC	**Darwin (Calif)**	**0.39**	**330**		**Pg**	**05 54 04.3**	**-1.1**
DAC					**Sg**	**05 54 09.8**	**-0.8**
QSM	**Queen of Sheba**	**0.40**	**86**		**Sg**	**05 54 10.8**	**0.0**
QSM	**Queen of Sheba**	**0.40**	**86**	Pg	**Pg**	**05 54 05.2**	**-0.4**
QSM	**Queen of Sheba**	**0.40**	**86**	IAML		05 54 16.0	
	comp=N,33μm,0.9s						
QSM				IAML		05 54 17.9	
	comp=E,19μm,1.0s						
SRTC	**Snort**	**0.40**	**232**		**Pg**	**05 54 05.7**	**+0.1**
SRTC					**Sb**	**05 54 12.5**	**-0.8**
CCCA	**Chr Cany lake**	**0.41**	**181**	Pg	**Pg**	**05 54 06.1**	**+0.2**
CCCA				IAML		05 54 13.0	
	comp=N,48μm,0.5s						
CCCA				IAML		05 54 17.2	
	comp=E,43μm,0.8s						
WRVM	**Rose V. Centra**	**0.44**	**279**		**Pg**	**05 54 05.8**	**-0.5**
WRVM					**Sg**	**05 54 12.1**	**0.0**
MFS	**McCloud Flat S**	**0.44**	**294**		**Pg**	**05 54 05.9**	**-0.5**
MFS					**Sg**	**05 54 12.2**	**0.0**
WNMM	**Nine Mile Cany**	**0.46**	**258**		**Pg**	**05 54 06.4**	**-0.2**
LRMC	**Laurel Mtn Rad**	**0.53**	**210**		**Sg**	**05 54 15.4**	**+0.3**
LRMC	**Laurel Mtn Rad**	**0.53**	**210**	Pg	**Pg**	**05 54 07.7**	**-0.4**
LRMC	**Laurel Mtn Rad**	**0.53**	**210**	IAML		05 54 15.7	
	comp=E,24μm,0.7s						
LRMC				IAML		05 54 15.7	
	comp=N,17μm,0.6s						
WCHM	**Chimney Peak**	**0.58**	**265**		**Pg**	**05 54 08.6**	**-0.5**
WCHM					**Sg**	**05 54 16.3**	**-0.6**
GWY	**Greenwater Val**	**0.61**	**66**		**Sb**	**05 54 18.5**	**-0.8**
GWY	**Greenwater Val**	**0.61**	**66**	Pg	**Pg**	**05 54 09.1**	**-0.5**
GWY	**Greenwater Val**	**0.61**	**66**	IAML		05 54 23.1	
	comp=E,20μm,0.6s						
GWY				IAML		05 54 25.4	
	comp=N,14μm,0.7s						
FURC	**Furnace Creek,**	**0.66**	**37**	Pg	**Pg**	**05 54 10.1**	**-0.4**
FURC	**Furnace Creek,**	**0.66**	**37**		**Sg**	**05 54 19.4**	**+0.2**
CGO	**Cerro Gordo**	**0.71**	**330**		**Pg**	**05 54 10.5**	**-1.0**
CGO					**Sg**	**05 54 20.6**	**-0.2**
WBSM	**Bird Springs**	**0.75**	**238**		**Sg**	**05 54 21.8**	**-0.3**
WORM	**Onyx Ranch**	**0.76**	**251**		**Pg**	**05 54 11.8**	**-0.6**
WORM					**Sg**	**05 54 21.9**	**-0.4**
CWC	**Cottonwood Cre**	**0.77**	**311**	Pg	**Pg**	**05 54 11.8**	**-0.7**
CWC	**Cottonwood Cre**	**0.77**	**311**		**Sg**	**05 54 22.3**	**-0.3**
CWC	**Cottonwood Cre**	**0.77**	**311**	IAML		05 54 22.8	
	comp=E,6μm,0.6s						
CWC				IAML		05 54 23.1	
	comp=N,7μm,0.6s						
DTP	**Desert Tortois**	**0.78**	**211**		**Pg**	**05 54 12.1**	**-0.7**
DTP					**Sg**	**05 54 22.9**	**0.0**
GSC	**Goldstone, Bar**	**0.78**	**145**		**Sg**	**05 54 23.4**	**+0.4**
GSC	**Goldstone, Bar**	**0.78**	**145**	Pg	**Pg**	**05 54 12.4**	**-0.4**
GSC	**Goldstone, Bar**	**0.78**	**145**	IAML		05 54 26.6	
	comp=N,18μm,0.6s						
GSC				IAML		05 54 27.0	
	comp=E,29μm,0.7s						
WHFM	**Hanning Flat**	**0.84**	**253**		**Pg**	**05 54 13.4**	**-0.6**
WHFM					**Sg**	**05 54 24.6**	**-0.3**
SHOC	**Shoshone, Teco**	**0.88**	**92**		**Pg**	**05 54 14.1**	**-0.6**
ISA	**Isabella, Lake**	**0.95**	**253**		**Pg**	**05 54 15.4**	**-0.6**
ISA	**Isabella, Lake**	**0.95**	**253**		**Sg**	**05 54 28.1**	**-0.2**
ISA	**Isabella, Lake**	**0.95**	**253**	IAML		05 54 31.8	
	comp=N,5μm,1.0s						
ISA				IAML		05 54 33.9	
	comp=E,3μm,0.6s						
WCT	**Wildcat Mounta**	**1.04**	**35**		**Pg**	**05 54 16.7**	**-1.0**
WCT				IAML		05 54 31.4	
	comp=E,10μm,0.5s						
WCT				IAML		05 54 32.5	
	comp=N,7μm,0.6s						
GRAC	**Grapevine Rang**	**1.05**	**360**		**Pg**	**05 54 17.2**	**-0.8**
SPG2	**Springville 2**	**1.17**	**283**		**Pg**	**05 54 19.0**	**-1.2**
TPO	**Tropico Hills**	**1.28**	**214**		**Pg**	**05 54 21.3**	**-0.9**
TPO				IAML		05 54 43.1	
	comp=N,10μm,0.8s						
TIN	**Tinemaha, Big**	**1.31**	**328**		**Pg**	**05 54 21.5**	**-1.5**
TPNV	**Topopah Spring**	**1.35**	**41**		**Pg**	**05 54 22.4**	**-1.2**
TPNV				IAML		05 54 43.6	
	comp=N,9μm,0.9s						
TPNV				IAML		05 54 45.2	
	comp=N,9μm,1.1s						
GMN	**Gold Mountain**	**1.36**	**3**		**Pg**	**05 54 22.7**	**-1.2**
GMN				IAML		05 54 47.0	
	comp=E,5μm,0.6s						
GMN				IAML		05 54 47.3	
	comp=N,6μm,0.5s						
HEC	**Hector,Ludlow**	**1.39**	**143**		**Pn**	**05 54 22.6**	**-0.7**
VES	**Vestal, Richgr**	**1.41**	**266**		**Pn**	**05 54 23.3**	**-0.1**
VES				IAML		05 54 53.0	
	comp=E,5μm,1.1s						
VES				IAML		05 54 53.9	
	comp=N,6μm,1.0s						
DSP	**Deep Springs**	**1.51**	**341**		**Pn**	**05 54 24.5**	**-0.3**
MTPC	**Mountain Pass**	**1.54**	**107**		**Pn**	**05 54 24.6**	**-0.8**
MTPC				IAML		05 54 49.9	
	comp=N,5μm,1.1s						
MTPC				IAML		05 54 50.1	
	comp=E,4μm,0.9s						
VOG	**Valley Oaks Go**	**1.68**	**284**		**Pb**	**05 54 28.6**	**-0.2**
MWC	**Mount Wilson**	**1.81**	**199**		**Pn**	**05 54 29.2**	**+0.1**
MWC				IAML		05 54 58.3	
	comp=N,4μm,1.1s						
MWC				IAML		05 55 06.8	
	comp=E,3μm,0.8s						
SHPR	**Sheep Range**	**1.86**	**72**		**Pn**	**05 54 29.7**	**-0.2**
PASC	**Pasadena Art C**	**1.89**	**201**	Pn	**Pn**	**05 54 30.2**	**+0.1**
PASC				IAML		05 55 08.3	
	comp=E,2μm,1.2s						
DJJ	**Donna J Jenkin**	**2.04**	**207**		**Pn**	**05 54 32.1**	**0.0**
V12A	**Nelson**	**2.05**	**95**		**Pn**	**05 54 31.8**	**-0.5**
V12A				IAML		05 55 12.6	
	comp=N,2μm,1.3s						
DANC	**Danby, Needles**	**2.08**	**128**		**Pn**	**05 54 31.8**	**-0.8**
S11A	**Rachel**	**2.14**	**37**		**Pn**	**05 54 33.5**	**-0.1**
MDPB	**Devils Postpil**	**2.18**	**321**		**Pn**	**05 54 33.6**	**-0.7**
MDPB				IAML		05 55 08.4	
	comp=N,3μm,1.1s						
MDPB				IAML		05 55 13.8	
	comp=E,3μm,1.0s						
ELS	**Elsinore Mount**	**2.29**	**181**		**Pn**	**05 54 35.4**	**-0.2**
PMD	**Palm Desert**	**2.43**	**160**		**Pn**	**05 54 37.0**	**-0.4**
PFO	**Pinyon Flats O**	**2.44**	**162**	Pn	**Pn**	**05 54 37.4**	**-0.3**
	comp=E,12nm,0.3s,baz=351,slow=10,SNR=102						
PFO				Pg	**Pb**	**05 54 41.9**	**+0.1**
	comp=E,88nm,0.3s,baz=340,slow=14,SNR=80						
PFO				Sn	**Sn**	**05 55 05.4**	**-2.3**
	comp=E,42nm,0.3s,baz=26,slow=23,SNR=5.9						
PFO				Lg	Lg	05 55 13.9	
	comp=E,101nm,0.3s,baz=245,slow=22,SNR=10						
PFO				LR	LR	05 55 47.4	
	comp=E,1μm,18.2s,baz=330,slow=46						
	comp=E,108nm,1.0s						
DNR	**Dunn Ranch,Anz**	**2.44**	**166**	IAML		05 55 25.7	
	comp=E,3μm,1.4s						
IRM	**Iron Mountain**	**2.54**	**134**	IAML		05 55 25.3	
	comp=N,1μm,1.1s						
IRM				IAML		05 55 26.1	
	comp=E,2μm,1.2s						
PKD	**Bear Valley Ra**	**2.58**	**271**		**Pn**	**05 54 38.9**	**-0.7**
PKD				IAML		05 55 44.3	
	comp=N,1μm,1.1s						
NVAR	**Mina Array Bea**	**2.60**	**343**	Pn	**Pn**	**05 54 41.0**	**+1.0**
	comp=N,62nm,0.5s,baz=164,slow=13,SNR=19						
NVAR				Pg	**Pg**	**05 54 45.7**	**-1.8**
	comp=N,13nm,0.3s,baz=166,slow=15,SNR=186						
NVAR				Sn	**Sn**	**05 55 14.2**	**+2.4**
	comp=N,45nm,0.3s,baz=195,slow=40,SNR=1.0						
NVAR				Lg	Lg	05 55 21.4	
	comp=N,45nm,0.3s,baz=108,slow=18,SNR=1.6						
BC3	**Big Chuckawall**	**2.77**	**145**		**Pn**	**05 54 41.5**	**-0.8**
BC3				IAML		05 55 27.9	
	comp=N,1μm,0.6s						
BC3				IAML		05 55 28.2	
	comp=E,932nm,0.8s						
BORC	**Borrego Spring**	**2.78**	**164**	IAML		05 55 30.9	
	comp=E,2μm,1.0s						
BORC				IAML		05 55 31.5	
	comp=N,1μm,0.8s						
PMPB	**Monarch Peak**	**2.80**	**277**	IAML		05 55 41.4	
	comp=N,2μm,0.9s						
Q09A	**Carvers**	**2.89**	**3**		**Pn**	**05 54 45.2**	**+1.1**
W13A	**Hualapai Mount**	**2.96**	**106**	IAML		05 55 35.1	
	comp=E,774nm,0.8s						
W13A				IAML		05 55 41.0	
	comp=N,1μm,1.4s						
CPE	**Camp Elliot**	**3.05**	**176**	IAML		05 55 37.4	
	comp=E,936nm,0.8s						
HULI	**Fort Hunter Li**	**3.15**	**273**		**Pn**	**05 54 47.9**	**+0.5**
HULI				IAML		05 55 39.8	
	comp=E,831nm,1.1s						
BLYC	**Blythe**	**3.19**	**132**		**Pn**	**05 54 46.9**	**-1.2**
BLYC				IAML		05 55 45.2	
	comp=E,916nm,0.8s						
BLYC				IAML		05 55 47.5	
	comp=N,945nm,0.8s						
CMB	**Columbia Colle**	**3.20**	**312**		**Pn**	**05 54 48.1**	**-0.1**
CMB				IAML		05 55 40.3	
	comp=N,1μm,0.7s						
CMB				IAML		05 55 42.1	
	comp=E,2μm,0.9s						
BAR	**Barrett**	**3.30**	**170**	IAML		05 55 45.1	
	comp=E,604nm,1.4s						
SAO	**San Andreas Ge**	**3.40**	**285**		**Pn**	**05 54 51.3**	**+0.4**
LCMT	**Little Creek M**	**3.48**	**71**		**Pn**	**05 54 52.9**	**+0.8**
CCUT	**Cedar City**	**3.59**	**62**	IAML		05 55 56.0	
	comp=N,470nm,1.3s						
PNTR	**Pine Nut**	**3.61**	**331**		**Pn**	**05 54 54.9**	**+0.9**
PNTR				IAML		05 56 07.2	
	comp=N,633nm,1.0s						
PNTR				IAML		05 56 22.9	
	comp=E,610nm,1.2s						
FORD	**Fort Ord Natur**	**3.65**	**283**	IAML		05 56 22.6	
	comp=N,1μm,0.9s						
MHC	**Mount Hamilton**	**3.72**	**293**	IAML		05 56 02.4	
	comp=E,654nm,1.0s						
MHC				IAML		05 56 09.8	
	comp=N,887nm,1.3s						
PSUT	**Pine Spring**	**3.81**	**46**		**Pn**	**05 54 56.6**	**-0.1**
PSUT				IAML		05 56 00.9	
	comp=N,884nm,0.7s						
PSUT				IAML		05 56 01.7	
	comp=E,958nm,0.8s						
CPBX	**Cerro Prieto**	**3.90**	**154**	IAML		05 57 19.0	
	comp=E,222nm,2.1s						
MPK	**Martis Peak**	**3.96**	**328**	IAML		05 56 23.4	
	comp=E,888nm,1.0s						
MPK				IAML		05 56 24.8	
	comp=N,868nm,1.5s						
Y14A	**Wickenburg**	**4.10**	**118**	IAML		05 56 08.6	
	comp=N,790nm,0.9s						
Y14A				IAML		05 56 16.6	
	comp=E,641nm,1.0s						
ESJX	**Sierra Juarez**	**4.10**	**163**	IAML		05 56 12.4	
	comp=E,310nm,1.4s						
CCX	**Cicese**	**4.10**	**172**	IAML		05 56 16.9	
	comp=E,435nm,1.9s						
CCX				IAML		05 56 18.5	
	comp=N,326nm,1.0s						
U15A	**North Rim**	**4.13**	**82**	IAML		05 56 13.8	
	comp=N,363nm,1.1s						
U15A				IAML		05 56 20.3	
	comp=E,470nm,0.9s						
AFDM	**Forest Hills D**	**4.16**	**317**	IAML		05 56 13.7	
	comp=E,769nm,1.4s						
JRSC	**Jasper Ridge**	**4.19**	**292**	IAML		05 56 24.5	
	comp=N,344nm,1.4s						
JRSC				IAML		05 56 38.6	
	comp=E,285nm,1.4s						
PKCU	**Pink Cliffs**	**4.33**	**68**	IAML		05 56 17.0	
	comp=E,544nm,1.0s						
PKCU				IAML		05 56 18.7	
	comp=N,536nm,1.0s						
113A	**Mohawk Valley,**	**4.34**	**136**	IAML		05 56 34.0	
	comp=N,267nm,1.0s						
BEKR	**Beckworth**	**4.58**	**330**	IAML		05 56 33.5	
	comp=N,256nm,1.0s						
BEKR				IAML		05 56 37.4	
	comp=E,423nm,0.7s						
MTPU	**Mount Pierson**	**4.64**	**62**	IAML		05 56 32.4	
	comp=N,210nm,1.8s						
VTX	**Valle De La Tr**	**4.72**	**163**	IAML		05 56 31.5	
	comp=E,278nm,1.8s						
VTX				IAML		05 56 35.3	
	comp=N,214nm,1.2s						
CVS	**Carmenet Viney**	**4.73**	**302**		**Pn**	**05 55 08.2**	**-0.9**
CVS				IAML		05 56 48.6	
	comp=N,274nm,1.5s						
CVS				IAML		05 56 49.8	
	comp=E,338nm,1.5s						
ORV	**Oroville**	**4.88**	**319**	IAML		05 56 34.4	
	comp=E,342nm,0.9s						
ORV				IAML		05 56 41.2	
	comp=N,275nm,1.2s						
WUAZ	**Wupatki**	**4.89**	**93**		**Pn**	**05 55 12.6**	**+1.2**
WUAZ				IAML		05 56 42.4	
	comp=N,417nm,1.4s						
WUAZ				IAML		05 57 10.2	
	comp=N,342nm,1.4s						
MNRC	**McLaughlin Min**	**5.00**	**307**	IAML		05 57 00.7	
	comp=E,391nm,1.6s						
ELK	**Elko**	**5.08**	**19**	Pn	**Pn**	**05 55 15.1**	**+1.0**
	baz=218,slow=20						
ELK				Lg	Lg	05 56 35.4	
	comp=E,44nm,0.3s,baz=309,slow=16,SNR=10						
ELK	**Elko**	**5.08**	**19**		**Pn**	**05 55 13.6**	**-0.5**
ELK				IAML		05 56 41.4	
	comp=E,159nm,0.7s						
X16A	**Lo Mia Camp, P**	**5.08**	**106**	IAML		05 56 48.1	
	comp=N,186nm,1.4s						
X16A				IAML		05 56 50.3	
	comp=E,218nm,1.1s						
SFX	**San Felipe**	**5.32**	**156**	IAML		05 56 56.8	
	comp=N,132nm,1.0s						
PIX	**Pinacate**	**5.44**	**142**	Pn	**Pn**	**05 55 18.0**	**-1.0**
TUC	**Tucson**	**6.54**	**122**		**Pn**	**05 55 33.9**	**-0.3**
YBH	**Yreka Blue Hor**	**7.13**	**326**	Pn	**Pn**	**05 55 46.9**	**+4.7**
	baz=134,slow=5.2,SNR=6.3						
YBH				Lg	Lg	05 57 38.0	
	baz=37,slow=21,SNR=3.5						
YBH				LR	LR	05 58 12.9	
	comp=N,17nm,19.7s,baz=142,slow=36						
ANMO	**Albuquerque**	**8.95**	**93**	Pn	**Pn**	**05 56 08.6**	**+1.3**
	comp=N,0.1nm,0.3s,baz=276,slow=13,SNR=8.5						
ANMO				Lg	Lg	05 58 38.8	
	baz=198,slow=22						
ANMO				LR	LR	05 59 58.7	
	comp=N,482nm,18.2s,baz=274,slow=41						
	comp=N,1.0nm,0.6s						
ANMO	**Albuquerque**	**8.95**	**93**		**Pn**	**05 56 11.8**	**+4.5**
PDAR	**Pinedale Array**	**9.10**	**39**	Pn	**Pn**	**05 56 13.1**	**+3.7**
	comp=N,0.1nm,0.3s,baz=226,slow=12,SNR=12						
PDAR				Lg	Lg	05 58 40.7	
	comp=N,0.6nm,0.3s,baz=112,slow=27,SNR=9.1						
PDAR				LR	LR	05 59 17.8	
	comp=N,63nm,21.8s,baz=222,slow=35						
	comp=N,1.0nm,0.6s						
PDAR	**Pinedale Array**	**9.10**	**39**		Pn	05 56 14.5	+5.1
NEW	**Newport**	**12.32**	**1**	Pn	**Pn**	**05 56 56.7**	**+3.5**
	comp=N,0.1nm,0.3s,baz=174,slow=11,SNR=3.1						
NEW				Lg	Lg	06 00 28.0	
	comp=N,0.1nm,0.3s,baz=110,slow=13,SNR=2.7						
	comp=N,0.5nm,0.5s						
LPIG	**La Paz**	**13.28**	**151**	LR	LR	06 02 04.0	
	comp=N,65nm,19.2s,baz=338,slow=37						
TXAR	**Lajitas Array**	**13.28**	**116**	Pn	**Pn**	**05 57 08.7**	**+2.3**
	comp=N,0.1nm,0.3s,baz=287,slow=14,SNR=20						
TXAR				Lg	Lg	06 00 57.0	
	comp=N,0.1nm,0.3s,baz=294,slow=29,SNR=9.3						
TXAR				LR	LR	06 03 07.7	
	comp=N,260nm,18.2s,baz=300,slow=42						
	comp=N,1.7nm,0.8s						
TXAR	**Lajitas Array**	**13.28**	**116**		**P**	**05 57 12.5**	**-3.8**
DRIO	**Del Rio**	**15.51**	**110**	IAmb	IAmb	05 57 47.0	
	comp=Z,9.7nm,0.8s						
JCT	**Junction City**	**15.66**	**105**	IAmb	IAmb	05 57 57.5	
	comp=Z,8.7nm,1.1s						
TUL3	**Leonard**	**17.47**	**84**		**Pn**	**05 58 02.4**	**+0.9**
TUL3				IAmb	IAmb	05 58 09.8	
	comp=Z,14nm,0.9s						
EDM	**Edmonton**	**17.51**	**8**		**Pn**	**05 58 00.7**	**-1.1**
EDM				IAmb	IAmb	05 58 14.9	
	comp=Z,19nm,1.1s						
BBB	**Bella Bella**	**17.95**	**338**	LR	LR	06 04 58.0	
	comp=Z,125nm,20.9s,baz=175,slow=37						
P38A	**Dawn**	**19.17**	**72**	P	**P**	**05 58 20.5**	**-0.9**
P38A				IAmb	IAmb	05 58 28.0	
	comp=Z,6.8nm,0.8s						
ULM	**Lac du Bonnet**	**21.12**	**41**	P	**P**	**05 58 43.8**	**+1.3**
	comp=Z,2.9nm,0.7s,baz=222,slow=12,SNR=7.2						
ULM				LR	LR	06 07 11.8	
	comp=Z,177nm,18.1s,baz=250,slow=38						
	comp=Z,2.9nm,0.7s						
ULM	**Lac du Bonnet**	**21.12**	**41**	P	**P**	**05 58 41.1**	**-1.4**
ULM				IAmb	IAmb	05 58 52.0	
	comp=Z,7.6nm,1.0s						
FFC	**Flin Flon**	**21.59**	**25**	P	**P**	**05 58 47.7**	**+0.2**
DLBC	**Dease Lake**	**24.02**	**344**	LR	LR	06 09 53.2	
	comp=Z,170nm,20.5s,baz=108,slow=40						
SWET	**Sewanee**	**25.52**	**82**	P	**P**	**05 59 24.9**	**-1.6**
FPAL	**Fort Paine**	**25.91**	**84**	P	**P**	**05 59 28.0**	**-2.0**
YKAW1	**Yellowknife Wh**	**26.63**	**3**	P	**P**	**05 59 36.5**	**+0.4**
YKAW1				IAmb	IAmb	05 59 40.2	
	comp=Z,3.4nm,0.9s						
YKA	**Yellowknife Ar**	**26.63**	**3**	P	**P**	**05 59 36.8**	**+0.6**
	comp=Z,1.3nm,0.8s,baz=188,slow=8.6,SNR=18						
YKA				LR	LR	06 12 00.3	
	comp=Z,173nm,19.9s,baz=114,slow=41						
	comp=Z,1.3nm,0.8s						
TKL	**Tuckaleechee C**	**27.17**	**81**	LR	LR	06 11 14.2	
	comp=Z,180nm,20.8s,baz=296,slow=38						
CMIG	**Matias Romero**	**27.40**	**127**	LR	LR	06 11 56.2	
	comp=Z,190nm,18.8s,baz=292,slow=40						
SADO	**Sadowa**	**30.20**	**61**	LR	LR	06 11 32.9	
	comp=Z,156nm,18.3s,baz=304,slow=35						
APG	**El Apazote**	**31.82**	**124**	LR	LR	06 12 41.3	
	comp=Z,11nm,21.4s,baz=206,slow=35						
INK	**Inuvik**	**33.67**	**349**	LR	LR	06 15 19.0	
	comp=Z,131nm,18.2s,baz=307,slow=38						
ILAR	**Eielson Array**	**33.84**	**338**	P	**P**	**06 00 42.8**	**+2.8**
	comp=Z,0.4nm,0.7s,baz=156,slow=6.8,SNR=4.6						
	comp=Z,0.4nm,0.7s						
JTS	**Las Juntas de**	**38.93**	**123**	LR	LR	06 18 16.3	
	comp=Z,113nm,18.4s,baz=37,slow=38						
RES	**Resolute Bay**	**40.30**	**9**	LR	LR	06 18 44.0	
	comp=Z,134nm,19.6s,baz=230,slow=37						
ROSC	**El Rosal**	**50.21**	**118**	LR	LR	06 27 34.5	
	comp=Z,134nm,18.2s,baz=266,slow=40						
SDV	**Santo Domingo**	**50.26**	**111**	LR	LR	06 25 40.1	
	comp=Z,70nm,21.8s,baz=307,slow=38						
SPITS	**Spitsbergen Ar**	**62.86**	**10**	LR	LR	06 30 04.7	
	comp=Z,96nm,19.1s,baz=313,slow=34						
RPN	**Rapa Nui**	**63.19**	**172**	LR	LR	06 24 58.6	
	comp=Z,74nm,20.6s,baz=252,slow=30						
TIXI	**Tiksi**	**63.21**	**341**	LR	LR	06 35 21.8	
	comp=Z,30nm,20.4s,baz=52,slow=39						
MDP	**Montagnes des**	**66.62**	**101**	LR	LR	06 37 59.9	
	comp=Z,32nm,18.6s,baz=322,slow=40						
GERES	**GERESS Array B**	**85.03**	**30**	LR	LR	06 45 00.3	
	comp=Z,54nm,18.1s,baz=350,slow=36						
KIRV	**Kirov**	**85.18**	**7**	LR	LR	06 51 52.6	
	comp=Z,60nm,18.4s,baz=315,slow=41						
TLY	**Talaya**	**85.64**	**336**	LR	LR	06 48 01.6	
	comp=Z,22nm,19.6s,baz=16,slow=38						
VRAC	**Vranov**	**85.80**	**28**	LR	LR	06 47 05.4	
	comp=Z,64nm,18.5s,baz=281,slow=37						
MDT	**Midelt**	**87.08**	**51**	LR	LR	06 47 08.1	
	comp=Z,19nm,18.1s,baz=296,slow=37						
ARTI	**Arti**

	0.2nm,0.5s							
PDAR	**Pinedale Array**	**87.29**	**43**	P		**P**	**06 06 33.1**	**-0.8**
	0.3nm,0.6s,baz=247,slow=3.1,SNR=4.0							
	0.3nm,0.6s							
CMAR	**Chiang Mai Arr**	**89.33**	**290**	P		**P**	**06 06 43.0**	**-0.6**
	0.8nm,0.3s,baz=104,slow=7.7,SNR=1.6							
	0.8nm,0.3s							
BRTR	**Keskin Array B**	**145.24**	**315**	PKPbc		**PKPdf**	**06 13 19.8**	**-0.5**
	0.7nm,0.5s,baz=63,slow=5.4,SNR=4.0							
MMAI	**Mount Meron Ar**	**146.61**	**303**	PKPbc		**PKPdf**	**06 13 24.2**	**+1.5**
	1.1nm,0.4s,baz=5.7,slow=2.9,SNR=2.6							
GERES	**GERESS Array B**	**147.97**	**345**	PKPbc		**PKPdf**	**06 13 27.1**	**+2.6**
	0.8nm,0.6s,baz=3.7,slow=4.1,SNR=4.3							

IDC ***23*** *06:24:03.1±1.9, 9.85S×112.99E, h0km, mb3.8/8, mbtmp3.9/9, ML3.9/1, Error ellipse: s-maj=81.9km s-min=18.7km az=49.0*
NEIC ***23*** *06:24:07.6±1.7, 10.05S±0.1×113.32E±0.07, h35km±2km, mb4.3/9, Error ellipse: s-maj=17.4km s-min=11.4km az=184.0*
DJA ***23*** *06:24:08.8±0.3, 10.3S×113.1E±, h10km, M4.3/26, mB5.1/2, mb4.4/2, MLv4.2/26, Mw(mB)4.5/2*

ISC 23 06:24:07.7±0.7, 10.00S±0.08×113.13E±0.05, h35km, n57, σ1s96/52, mb4.1/12, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**1.74**	**10**	P	**Pn**	**06 24 35.7**	**+0.3**
JAGI	**Jajag, Banyuwa**	**1.82**	**34**		**Pn**	**06 24 34.2**	**-2.4**
JAGI	**Jajag, Banyuwa**	**1.82**	**34**	P	**Pn**	**06 24 37.6**	**+1.0**
BLJI	**Banyuglugur**	**2.29**	**12**	P	**Pn**	**06 24 45.1**	**+2.2**
BLJI				S	**Sn**	**06 25 10.3**	**+0.4**
IGBI	**Denpasar**	**2.31**	**60**	P	**Pn**	**06 24 45.0**	**+1.7**
RTBI	**Rangdo, Negare**	**2.36**	**50**	P	**Pn**	**06 24 45.9**	**+2.0**
DNP	**Denpasar**	**2.44**	**58**	P	**Pn**	**06 24 47.7**	**+2.7**
SNJI	**Sawahan-Nganju**	**2.58**	**328**	P	**Pn**	**06 24 49.4**	**+2.2**
PCJI	**Pacitan**	**2.63**	**313**	P	**Pn**	**06 24 48.9**	**+1.3**
SRBI	**Singaraja**	**2.80**	**47**	P	**Pn**	**06 24 52.2**	**+2.2**
KHKI	**Kahang-Kahang**	**2.94**	**57**	P	**Pn**	**06 24 55.5**	**+3.6**
KMMI	**Kalianget**	**3.04**	**16**	P	**Pn**	**06 24 55.3**	**+1.9**
NGJI	**Ngawi**	**3.09**	**328**	P	**Pn**	**06 24 56.4**	**+2.4**
UGM	**Wanagama**	**3.30**	**309**		**Pn**	**06 24 58.7**	**+1.8**
UGM	**Wanagama**	**3.30**	**309**	P	**Pn**	**06 24 59.0**	**+2.1**
KLNI	**Mataram**	**3.32**	**62**	P	**Pn**	**06 25 00.2**	**+3.0**
TBJI	**Tambak Boyo**	**3.40**	**338**	P	**Pn**	**06 25 00.1**	**+1.8**
TWSI	**Taliwang, Sumb**	**3.91**	**72**	P	**Pn**	**06 25 07.9**	**+2.6**
PLAI	**Plampang**	**4.73**	**76**	P	**Pn**	**06 25 19.2**	**+2.6**
KPJI	**Karang Pucung**	**4.92**	**302**	P	**Pn**	**06 25 20.9**	**+1.7**
CMJI	**Cimerak**	**5.12**	**295**	P	**Pn**	**06 25 22.8**	**+0.9**
	0.5nm3µm74nm,1.0s						
DBNI	**Kabupaten Domp**	**5.33**	**74**	P	**Pn**	**06 25 27.7**	**+2.9**
BBJI	**Bungbulang**	**5.97**	**295**	Pn	**Pn**	**06 25 35.4**	**+1.8**
BBJI	**Bungbulang**	**5.97**	**295**	P	**Pn**	**06 25 35.5**	**+1.8**
MNAI	**Manna**	**11.54**	**298**	Pn	**Pn**	**06 26 50.6**	**+0.6**
PSA00	**Pilbara Seismi**	**13.20**	**152**	Pn	**Pn**	**06 27 12.3**	**-0.4**
PSA00	**Pilbara Seismi**	**13.20**	**152**	Pn	**Pn**	**06 27 11.0**	**-1.6**
FITZ	**Fitzroy Crossi**	**14.56**	**125**	Pn	**Pn**	**06 27 31.4**	**+0.1**
	0.4nm,0.3s,baz=300,slow=8.1,SNR=10						
FITZ				Sn	Sn	06 30 01.6	-10
	0.3nm,0.3s,baz=5.0,slow=23,SNR=7.0						
	1.5nm,0.4s						
FAKI	**Fak Fak**	**20.25**	**71**	P	**P**	**06 28 35.3**	**-4.9**
WB0	**Warramunga Arr**	**22.71**	**118**	P	**P**	**06 29 04.3**	**-2.3**
WRA	**Warramunga Arr**	**22.73**	**118**	P	**P**	**06 29 08.8**	**+2.0**
	1.0nm,0.8s,baz=293,slow=12,SNR=9.3						
	1.0nm,0.8s						
WRA	**Warramunga Arr**	**22.73**	**118**	P	**P**	**06 29 02.0**	**-4.8**
ASAR	**Alice Springs**	**24.04**	**127**	P	**P**	**06 29 22.4**	**+2.7**
	0.8nm,0.6s,baz=302,slow=9.2,SNR=14						
	0.8nm,0.6s						
H08S2	**Diego Garcia H**	**40.20**	**270**	T	T	07 14 43.2	
	baz=96,slow=75,SNR=20						
H08S3	**Diego Garcia H**	**40.21**	**270**	T	T	07 14 42.4	
	baz=96,slow=75,SNR=21						
H08S1	**Diego Garcia H**	**40.22**	**270**	T	T	07 14 44.7	
	baz=96,slow=75,SNR=18						
EVN	**Everest**	**45.52**	**327**		**P**	**06 32 23.5**	**-1.3**
EVN				IAmb	IAmb	06 32 25.5	
	comp=Z,3.1nm,0.5s						
KSRS	**Korea Array**	**49.20**	**16**	P	**P**	**06 32 52.1**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=204,slow=7.6,SNR=4.5						
	comp=Z,1.2nm,0.5s						
SONM	**Songino Array**	**57.89**	**355**	P	**P**	**06 33 55.9**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=172,slow=10,SNR=6.3						
	comp=Z,0.7nm,0.4s						
SONM	**Songino Array**	**57.89**	**355**	P	**P**	**06 33 55.5**	**-0.7**
SONM				IAmb	IAmb	06 33 56.2	
	comp=Z,0.7nm,0.7s						
MKAR	**Makanchi Array**	**62.88**	**337**	P	**P**	**06 34 30.0**	**-0.2**
	comp=Z,0.9nm,0.3s,baz=139,slow=6.1,SNR=8.4						
	comp=Z,0.9nm,0.3s						
MKAR	**Makanchi Array**	**62.88**	**337**	P	**P**	**06 34 29.7**	**-0.5**
MAKZ	**Makanchi**	**63.02**	**337**	P	**P**	**06 34 31.0**	**-0.1**
MAKZ				IAmb	IAmb	06 35 01.7	
	comp=Z,3.0nm,0.7s						
H04N2	**CROZET ISLANDS**	**63.09**	**223**	T	T	07 43 16.3	
	baz=74						
H04N1	**CROZET ISLANDS**	**63.11**	**223**	T	T	07 43 21.8	
	baz=74						
H04N3	**CROZET ISLANDS**	**63.11**	**223**	T	T	07 43 18.4	
	baz=74						
KURBB	**Kurchatov Arra**	**67.45**	**337**	P	**P**	**06 34 59.1**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=141,slow=6.0,SNR=4.6						
	comp=Z,0.5nm,0.6s						
KURK	**Kurchatov**	**67.49**	**337**	P	**P**	**06 35 00.3**	**+0.4**
KURK				IAmb	IAmb	06 35 36.3	
	comp=Z,2.3nm,1.2s						
ZALV	**Zalesovo Beam**	**68.07**	**342**	P	**P**	**06 35 03.0**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=131,slow=3.4,SNR=2.7						
	comp=Z,0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**68.07**	**342**	P	**P**	**06 35 02.6**	**-0.9**
BVAR	**Borovoye Array**	**72.57**	**335**	P	**P**	**06 35 30.9**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=150,slow=6.7,SNR=5.1						
	comp=Z,1.0nm,0.6s						
AB31	**Akbulak array**	**75.14**	**327**	P	**P**	**06 35 46.9**	**+0.6**
AB31				IAmb	IAmb	06 35 47.2	
	comp=Z,4.0nm,0.7s						
ABKAR	**Akbulak array**	**75.14**	**327**	P	**P**	**06 35 46.8**	**+0.5**
TIXI	**Tiksi**	**82.14**	**5**	P	**P**	**06 36 24.8**	**+0.5**
T42A	**Van Buren**	**145.32**	**35**	PKPdf	**PKPab**	**06 43 43.2**	**+1.0**
FCAR	**Ozark Folk Cen**	**145.50**	**38**		**PKPdf**	**06 43 43.0**	**+0.4**
WVT	**Waverly**	**147.77**	**33**	PKPab	**PKPbc**	**06 43 50.8**	**+1.5**

NOU ***23*** *06:37:13.4, 14.79S×167.51E, h112km, mb5.1/38, Vanuatu Islands*
IDC ***23*** *06:37:15.0±1.9, 14.97S×167.30E, h120km±15km, mb4.3/13, mbtmp4.6/15, MS3.2/4, Error ellipse: s-maj=17.3km s-min=12.5km az=75.0*
NEIC ***23*** *06:37:14.1±1.2, 14.96S±0.07×167.44E±0.10, h108km±5km, mb4.7/46, Error ellipse: s-maj=14.2km s-min=9.6km az=111.0*

ISC 23 06:37:13.0±0.4, 14.89S±0.05×167.40E±0.06, h100km, n159, σ1s55/160, mb4.7/50, 1C-4D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.59**	**198**	P	**Pn**	**06 37 31.0**	**+1.5**
SANVU	**Saraoutou**	**0.59**	**198**		**Pn**	**06 37 30.7**	**+1.2**
DVP	**Devils Point**	**2.92**	**165**	P	**Pn**	**06 37 59.8**	**+2.1**
DVP	**Devils Point**	**2.92**	**165**	S	**Sn**	**06 38 35.9**	**+3.7**
RTV	**Rentapao**	**3.06**	**161**	P	**Pn**	**06 38 01.8**	**+2.3**
RTV	**Rentapao**	**3.06**	**161**	S	**Sn**	**06 38 37.6**	**+2.3**
MARNC	**Mare, Loyalty**	**6.59**	**175**		**Pn**	**06 38 46.7**	**-0.6**
MARNC					**Sn**	**06 39 59.2**	**-1.7**
HURO	**Huro Makira**	**6.93**	**309**	P	**Pn**	**06 38 53.1**	**+1.1**
DZM	**Mont Dzumac**	**7.20**	**187**	P	**Pn**	**06 38 56.7**	**+1.0**
	65nm,0.3s,baz=268,slow=18,SNR=89						
DZM				S	**Sn**	**06 40 16.8**	**+0.7**
	121nm,0.4s,baz=308,slow=22,SNR=9.4						
ONTNC	**Ouen Toro**	**7.44**	**187**	P	**Pn**	**06 39 00.6**	**+1.8**
ONTNC	**Ouen Toro**	**7.44**	**187**	S	**Sn**	**06 40 26.4**	**+4.8**
ONTNC	**Ouen Toro**	**7.44**	**187**		**Pn**	**06 38 57.9**	**-1.0**
OUENC	**Ouen Island, N**	**7.51**	**184**		**Pn**	**06 38 59.8**	**0.0**
NGOA	**Tingoa Renbel**	**7.87**	**294**	P	**Pn**	**06 39 05.9**	**+1.1**
HNR	**Honiara**	**9.08**	**306**	P	**Pn**	**06 39 23.3**	**+2.1**
	8.6nm,0.8s,baz=297,slow=5.2,SNR=6.4						
HNR				S	**Sn**	**06 41 04.0**	**+2.3**
	8.4nm,0.8s,baz=360,slow=8.4,SNR=4.7						
HNR				LR	LR	06 42 42.9	
	comp=Z,6.8nm,20.8s,baz=186,slow=36						
HNR	**Honiara**	**9.08**	**306**	P	**Pn**	**06 39 22.8**	**+1.6**
HNR	**Honiara**	**9.08**	**306**		**Pn**	**06 39 23.0**	**+1.8**
SAVO	**Savo Central**	**9.35**	**307**	P	**Pn**	**06 39 27.6**	**+2.6**
MSVF	**Nonsavu**	**10.61**	**107**	P	**Pn**	**06 39 46.6**	**+4.4**
	3.2nm,0.7s,baz=275,slow=7.9,SNR=10						
MSVF				LR	LR	06 43 19.7	
	comp=Z,159nm,19.4s,baz=329,slow=34						
MSVF	**Nonsavu**	**10.61**	**107**	P	**Pn**	**06 39 41.6**	**-0.6**
DGTI	**Dogotuki**	**11.97**	**98**	P	**Pn**	**06 39 59.3**	**-1.1**
TAVE	**Taveuni**	**12.36**	**100**	P	**Pn**	**06 40 04.2**	**-1.3**
EIDS	**Eidsvold**	**18.51**	**233**	P	**Pn**	**06 41 23.2**	**+0.3**
EIDS	**Eidsvold**	**18.51**	**233**		**P**	**06 41 21.8**	**+0.3**
EIDS				IAmb	IAmb	06 41 24.2	
	comp=Z,53nm,0.7s						
TW1H	**Toowoomba 1 Ha**	**19.09**	**226**	P	**P**	**06 41 29.6**	**+1.7**
OUZ	**Omahuta**	**21.00**	**166**	P	**P**	**06 41 47.8**	**-0.6**
ARMA	**Armidale**	**21.19**	**220**	P	**P**	**06 41 52.0**	**+1.4**
ARMA	**Armidale**	**21.19**	**220**		**P**	**06 41 51.2**	**+0.6**
ARMA				IAmb	IAmb	06 41 53.0	
	comp=Z,39nm,1.0s						
WCZ	**Waipu Caves**	**21.87**	**165**	P	**P**	**06 41 59.7**	**+2.1**
AUPHS	**Peel High Scho**	**22.12**	**220**	P	**P**	**06 42 01.2**	**+0.8**
MTSU	**Mount Surprise**	**22.36**	**259**	P	**P**	**06 42 03.2**	**+0.2**
GRZ	**Great Barrier**	**22.46**	**163**	P	**P**	**06 42 05.0**	**+1.1**
AULRC	**Lightning Rid**	**23.03**	**228**	P	**P**	**06 42 10.7**	**+1.0**
MKAZ	**Moumakai**	**23.18**	**164**	P	**P**	**06 42 11.8**	**+0.8**
COEN	**Coen**	**23.47**	**269**	P	**P**	**06 42 13.3**	**-0.7**
TOZ	**Tahuroa Road**	**23.86**	**164**		**P**	**06 42 17.2**	**+0.1**
TOZ	**Tahuroa Road**	**23.86**	**164**	P	**P**	**06 42 19.5**	**+2.3**
RIV	**Riverview**	**23.91**	**215**	P	**P**	**06 42 18.7**	**+1.1**
AUDCS	**Dubbo College**	**24.30**	**221**	P	**P**	**06 42 22.3**	**+1.1**
HIZ	**Hauiti**	**24.44**	**166**	P	**P**	**06 42 23.3**	**+0.9**
HIZ	**Hauiti**	**24.44**	**166**	P	**P**	**06 42 25.4**	**+3.1**
QLP	**Quilpie**	**24.54**	**238**	P	**P**	**06 42 24.5**	**+1.1**
HAZ	**Te Kaha**	**24.57**	**160**	P	**P**	**06 42 24.9**	**+1.3**
PKGZ	**Pakihiroa**	**24.77**	**160**	P	**P**	**06 42 25.6**	**+0.2**
URZ	**Urewera**	**24.82**	**162**	P	**P**	**06 42 25.7**	**-0.1**
WMGZ	**Waiomatatini S**	**24.84**	**159**	P	**P**	**06 42 28.2**	**+2.2**
MWZ	**Matawai**	**25.02**	**161**	P	**P**	**06 42 27.7**	**0.0**
PUZ	**Puketiti**	**25.02**	**159**	P	**P**	**06 42 26.9**	**-0.8**
TWGZ	**Tauwhareparae**	**25.02**	**160**	P	**P**	**06 42 28.8**	**+1.1**
RTZ	**Ruatahuna**	**25.11**	**162**	P	**P**	**06 42 27.4**	**-1.1**
RTZ				IAmb	IAmb	06 42 32.2	
	comp=Z,41nm,1.1s						
TMVZ	**Te Maari**	**25.22**	**165**	P	**P**	**06 42 31.0**	**+1.4**
ETVZ	**East Tongariro**	**25.24**	**165**	P	**P**	**06 42 33.0**	**+3.1**
OTVZ	**Oturere**	**25.26**	**165**	P	**P**	**06 42 31.4**	**+1.4**
CNGZ	**Carnagh Statio**	**25.37**	**160**	P	**P**	**06 42 31.7**	**+0.8**
BKZ	**Black Stump Fm**	**25.48**	**163**		**P**	**06 42 31.6**	**-0.3**
BKZ				IAmb	IAmb	06 42 32.6	
	comp=Z,19nm,0.4s						
BKZ	**Black Stump Fm**	**25.48**	**163**	P	**P**	**06 42 31.6**	**-0.3**
NMHZ	**Naumai**	**25.50**	**163**	P	**P**	**06 42 32.6**	**+0.5**
KWHZ	**Kaweka Forest**	**25.70**	**164**	P	**P**	**06 42 33.5**	**-0.4**
CMSA	**Cobar Meteorol**	**25.85**	**226**	P	**P**	**06 42 35.2**	**-0.1**
KRHZ	**Kereru**	**25.89**	**164**	P	**P**	**06 42 35.0**	**-0.6**
TSZ	**Takapari Road**	**26.18**	**165**	P	**P**	**06 42 37.3**	**-0.8**
CAN	**Canberra**	**26.21**	**216**	P	**P**	**06 42 38.6**	**+0.1**
CAN				IAmb	IAmb	06 42 40.3	
	comp=Z,12nm,0.9s						
MRZ	**Mangatainoka R**	**26.65**	**166**	P	**P**	**06 42 41.8**	**-0.6**
QIS	**Mount Isa**	**27.05**	**254**	P	**P**	**06 42 45.7**	**-0.5**
KHZ	**Kahutara**	**27.94**	**170**	P	**P**	**06 42 53.6**	**-0.2**
INZ	**Inchbonnie**	**27.96**	**174**	P	**P**	**06 42 53.6**	**-0.4**
LTZ	**Lake Taylor**	**28.11**	**172**	P	**P**	**06 42 55.0**	**-0.5**
TOO	**Toolangi**	**29.80**	**217**	P	**P**	**06 43 10.1**	**-0.4**
TOO				IAmb	IAmb	06 43 11.6	
	comp=Z,18nm,1.5s						
EAZ	**Earnscleugh**	**30.29**	**177**	P	**P**	**06 43 14.2**	**-0.5**
MLZ	**Mavora Lakes**	**30.39**	**179**	P	**P**	**06 43 15.2**	**-0.4**
HTT	**Hallett**	**31.71**	**229**	P	**P**	**06 43 27.6**	**+0.2**
WR8	**Warramunga Arr**	**31.76**	**256**	P	**P**	**06 43 26.4**	**-1.5**
WB0	**Warramunga Arr**	**31.84**	**256**		**P**	**06 43 26.6**	**-2.1**
WB0				IAmb	IAmb	06 43 27.5	
	comp=Z,16nm,1.2s						
WRA	**Warramunga Arr**	**31.91**	**256**	P	**P**	**06 43 27.4**	**-1.8**
	comp=Z,6.8nm,0.8s,baz=80,slow=6.6,SNR=66						
WRA				PcP	**PcP**	**06 46 16.4**	**-1.3**
	comp=Z,2.0nm,0.8s,baz=88,slow=2.6,SNR=8.1						
	comp=Z,6.8nm,0.8s						
WRA	**Warramunga Arr**	**31.91**	**256**		**P**	**06 43 26.9**	**-2.4**
AUMBR	**Murray Bridge**	**32.30**	**226**	P	**P**	**06 43 33.0**	**+0.5**
AS31	**Alice Springs**	**32.73**	**249**		**P**	**06 43 34.9**	**-1.5**
AS31				IAmb	IAmb	06 43 36.1	
	comp=Z,7.4nm,0.6s						
ASAR	**Alice Springs**	**32.73**	**249**	P	**P**	**06 43 34.9**	**-1.6**
	comp=Z,16nm,0.6s,baz=80,slow=9.0,SNR=232						
ASAR				PcP	**PcP**	**06 46 18.6**	**-1.3**
	comp=Z,1.3nm,0.8s,baz=94,slow=2.7,SNR=5.6						
ASAR				ScP	**ScP**	**06 49 53.9**	**-1.1**
	comp=Z,1.2nm,0.9s,baz=94,slow=3.4,SNR=5.9						
ASAR				LR	LR	06 55 42.3	
	comp=Z,43nm,19.1s,baz=106,slow=34						
	comp=Z,16nm,0.6s						
AUALC	**St Philip's Co**	**32.75**	**249**	P	**P**	**06 43 37.3**	**+0.7**
BBOO	**Buckleboo**	**33.58**	**232**	P	**P**	**06 43 43.7**	**0.0**
BBOO	**Buckleboo**	**33.58**	**232**	P	**P**	**06 43 44.1**	**+0.4**
GUMO	**Guam**	**36.02**	**321**	LR	LR	06 57 09.6	
	comp=Z,27nm,19.2s,baz=58,slow=33						
KNRA	**Kununurra**	**37.24**	**264**		**P**	**06 44 14.0**	**-1.2**
FORT	**Forrest**	**39.32**	**239**		**P**	**06 44 32.0**	**-0.5**
EDFI	**Ende, Flores**	**45.09**	**272**	P	**P**	**06 45 18.9**	**-0.8**
	comp=Z,27nm,1.0s						
PSA00	**Pilbara Seismi**	**45.51**	**254**	P	**P**	**06 45 21.9**	**-0.9**
PSA00	**Pilbara Seismi**	**45.51**	**254**	P	**P**	**06 45 22.1**	**-0.7**
PSA00				IAmb	IAmb	06 45 23.1	
	comp=Z,19nm,1.1s						
PSA00	**Pilbara Seismi**	**45.51**	**254**	P	**P**	**06 45 22.4**	**-0.5**
PSA00				IAmb	IAmb	06 45 23.1	
	comp=Z,16nm,1.1s						
MBWA	**Marble Bar**	**45.62**	**255**	P	**P**	**06 45 23.0**	**-0.7**
MBWA	**Marble Bar**	**45.62**	**255**	P	**P**	**06 45 23.1**	**-0.6**
MEEK	**Meekatharra**	**46.84**	**247**	P	**P**	**06 45 32.4**	**-0.8**
LBFI	**Labuhan Bajo,**	**46.88**	**272**	P	**P**	**06 45 32.6**	**-1.1**
KAPI	**Kappang**	**47.85**	**277**	P	**P**	**06 45 41.3**	**+0.2**
KAPI				IAmb	IAmb	06 45 42.1	
	comp=Z,12nm,0.9s						
DBNI	**Kabupaten Domp**	**48.40**	**272**	P	**P**	**06 45 44.4**	**-1.0**
	comp=Z,725nmcomp=Z,70nm,0.8s						
NWAO	**Narrogin (SRO)**	**48.77**	**239**	P	**P**	**06 45 47.0**	**-1.1**
NWAO				IAmb	IAmb	06 45 47.3	
	comp=Z,16nm,0.9s						
PLAI	**Plampang**	**48.85**	**271**	P	**P**	**06 45 47.3**	**-1.6**
	comp=Z,22nm,0.9s						
MORW	**Morawa**	**49.31**	**244**	P	**P**	**06 45 51.4**	**-0.8**
MORW	**Morawa**	**49.31**	**244**	IAmb	IAmb	06 45 51.9	
	comp=Z,13nm,0.8s						
MPSI	**Mapaga**	**49.33**	**284**	P	**P**	**06 45 52.2**	**-0.3**
	comp=Z,14nm,0.9s						
TWSI	**Taliwang, Sumb**	**49.74**	**271**	P	**P**	**06 45 54.7**	**-0.9**
	comp=Z,4µmcomp=Z,878nmcomp=Z,65nm,0.9s						
IGBI	**Denpasar**	**51.40**	**271**	P	**P**	**06 46 07.2**	**-0.9**
SNJI	**Sawahan-Nganju**	**54.89**	**271**	P	**P**	**06 46 33.4**	**-0.6**
	comp=Z,18nm,0.7s						
UGM	**Wanagama**	**56.06**	**270**	P	**P**	**06 46 41.7**	**-0.5**
CGJI	**Cibinong**	**61.02**	**271**	P	**P**	**06 47 14.9**	**-1.7**
VNDA	**Vanda**	**62.71**	**181**	P	**P**	**06 47 26.1**	**-0.7**
	comp=Z,2.7nm,0.7s,baz=359,slow=7.2,SNR=12						
	comp=Z,2.7nm,0.7s						
VNDA	**Vanda**	**62.71**	**181**	P	**P**	**06 47 26.6**	**-0.3**
SBA	**Scott Base**	**62.98**	**180**	P	**P**	**06 47 29.3**	**+0.7**
MDSI	**Maura Dua**	**62.99**	**273**	P	**P**	**06 47 27.5**	**-2.3**
	comp=Z,730nmcomp=Z,12nm,0.8s						
CASY	**Casey**	**63.43**	**202**	P	**P**	**06 47 31.4**	**-0.4**
CASY				IAmb	IAmb	06 47 31.5	
	comp=Z,7.4nm,0.7s						
NJ2	**Nanjing**	**65.87**	**316**	*e*P	**P**	**06 47 49.9**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,28nm,0.7s						
PETK	**Petropavlovsk-**	**68.23**	**354**	P	**P**	**06 48 03.3**	**+0.7**
	comp=Z,4.9nm,0.8s,baz=176,slow=6.5,SNR=3.8						
	comp=Z,4.9nm,0.8s						
BNX	**BinXian**	**70.33**	**331**	⇓P	**P**	**06 48 15.6**	**-0.2**
BNX				pmax	pmax		
	comp=Z,5.0nm,0.5s						
CM31	**Chiang Mai Arr**	**75.12**	**294**	P	**P**	**06 48 44.6**	**-0.1**
CM31				IAmb	IAmb	06 48 46.4	
	comp=Z,13nm,1.4s						
CMAR	**Chiang Mai Arr**	**75.12**	**294**	P	**P**	**06 48 45.5**	**+0.7**
	comp=Z,1.5nm,0.4s,baz=123,slow=4.4,SNR=11						
	comp=Z,1.5nm,0.4s						
CMAR	**Chiang Mai Arr**	**75.12**	**294**	P	**P**	**06 48 45.0**	**+0.2**
QSPA	**South Pole Qui**	**75.14**	**180**	P	**P**	**06 48 43.5**	**-0.7**
	comp=Z,23nm,0.8s,baz=296,slow=0.8,SNR=108						
	comp=Z,23nm,0.8s						
QSPA	**South Pole Qui**	**75.14**	**180**	P	**Pn**	**06 48 43.5**	**-0.7**
CHTO	**Chiang Mai**	**75.25**	**294**	P	**P**	**06 48 45.7**	**+0.2**
MA2	**Magadan**	**75.42**	**351**	LR	LR	07 16 49.4	
	comp=Z,13nm,21.3s,baz=312,slow=32						
HHC	**Hu-ho-hao-te**	**75.78**	**320**	*e*P	**P**	**06 48 49.4**	**+1.2**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,4.7s						
PZH	**PanZhiHua**	**75.88**	**303**	P	**P**	**06 48 50.3**	**+1.2**
BTO2	**Baotou**	**76.79**	**319**	*e*P	**P**	**06 48 54.3**	**+0.4**
BTO2				pP	**pP**	**06 49 22.5**	**+3.3**
BTO2				sP	**sP**	**06 49 34.8**	**+4.9**
BTO2				pmax	pmax		
	comp=Z,21nm,0.6s						
BTO2				pmax	pmax		
	comp=Z,83nm,6.4s						
MAW	**Mawson**	**81.79**	**202**	P	**P**	**06 49 19.8**	**-0.6**
	comp=Z,2.5nm,0.6s,baz=151,slow=6.9,SNR=6.3						
	comp=Z,2.5nm,0.6s						
MAW	**Mawson**	**81.79**	**202**	P	**P**	**06 49 20.2**	**-0.3**
SONM	**Songino Array**	**82.69**	**324**	P	**P**	**06 49 26.0**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=138,slow=5.0,SNR=6.0						
	comp=Z,1.2nm,0.6s						
SONM	**Songino Array**	**82.69**	**324**	P	**P**	**06 49 25.9**	**+0.2**
KNK	**Knik Glacier**	**83.69**	**20**	P	**P**	**06 49 31.1**	**+0.7**
KNK				IAmb	IAmb	06 49 37.1	
	comp=Z,24nm,1.4s						
G19K	**Purcell Mounta**	**85.02**	**14**		**P**	**06 49 37.6**	**+0.7**
G19K				IAmb	IAmb	06 49 38.2	
	comp=Z,4.0nm,0.8s						
I21K	**Tanana**	**85.51**	**16**	IAmb	IAmb	06 49 40.4	
	comp=Z,6.5nm,0.9s						
IMAR	**Indian Mountai**	**85.69**	**15**	P	**P**	**06 49 40.9**	**+0.7**
E19K	**Redstone River**	**86.08**	**13**	IAmb	IAmb	06 49 43.9	
	comp=Z,4.0nm,0.8s						
BELA	**Belgrano 2**	**86.56**	**175**	IAmb	IAmb	06 49 43.4	
	comp=Z,7.7nm,0.8s						
IL31		**86.64**	**18**	IAmb	IAmb	06 50 22.1	
	comp=Z,8.9nm,1.5s						
ILAR	**Eielson Array**	**86.64**	**18**	P	**P**	**06 49 43.4**	**-1.6**
	comp=Z,1.6nm,0.7s,baz=234,slow=5.8,SNR=19						
	comp=Z,1.6nm,0.7s						
ILAR	**Eielson Array**	**86.64**	**18**	P	**P**	**06 49 43.8**	**-1.2**
F21K	**Alatna River**	**86.74**	**14**	P	**P**	**06 49 45.9**	**+0.5**
D20K	**Etivluk River**	**87.25**	**12**	IAmb	IAmb	06 49 49.3	
	comp=Z,3.7nm,0.8s						
NVAR	**Mina Array Bea**	**87.28**	**49**	P	**P**	**06 49 49.2**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=254,slow=9.4,SNR=3.8						
ELIB	**Princess Elisa**	**90.08**	**191**	*e*P	**P**	**06 50 00.1**	**-1.4**
TROLL	**Troll, Antarti**	**92.72**	**185**	P	**P**	**06 50 12.2**	**-1.6**
WMQ	**Urumqi**	**92.92**	**315**	*e*P	**P**	**06 50 15.4**	**+0.4**
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SNAA	**Sanae**	**93.40**	**183**	⇓P	**P**	**06 50 15.2**	**-1.6**
	comp=Z,103nm,0.6s						

OCON	**Estacion meteo**	**2.31**	**12**	P		Pn	06 41 01.9	0.0
RCPN	**Sur Rio San Ju**	**2.32**	**21**	P		Pn	06 41 02.5	+0.4
RCVN	**Varillal2**	**2.34**	**19**	P		Pn	06 41 02.5	+0.1
YUSH	**Yuscaran**	**2.58**	**3**	⇑P		Pn	06 41 06.2	+0.5
YUSH				S		Sn	06 41 37.6	+0.7
TGUH	**Tegucigalpa,Un**	**2.70**	**354**	P		Pn	06 41 07.4	+0.1
TGUH				S		Sn	06 41 40.1	+0.4
TECO	**Alcaldia de Te**	**2.80**	**321**	P		Pn	06 41 08.9	+0.2
TECO				S		Sn	06 41 42.5	+0.4
SCLA	**Alcaldia de Sa**	**2.90**	**324**	P		Pn	06 41 10.3	+0.3
SCLA				S		Sn	06 41 45.1	+0.6
MARCA	**Marcala la Paz**	**2.97**	**340**	P		Pn	06 41 11.4	+0.3

IDC ***23*** *07:03:46.6±5.7, 22.91N×144.42E, h0km, mb3.6/6, mbtmp3.6/6, MS3.5/5.2, Error ellipse: s-maj=225.4km s-min=22.6km az=76.0*

ISC 23 07:03:45.9±6.6, 23.0N±0.5×14.5E±°, h10km, n11, σ0s92/6, mb3.6/5, North Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H11N1	**WAKE ISLAND Hy**	**20.52**	**95**	T	T	07 30 47.9	
	baz=283,slow=74,SNR=12						
H11N2	**WAKE ISLAND Hy**	**20.52**	**95**	T	T	07 30 48.3	
	baz=283,slow=74,SNR=11						
H11N3	**WAKE ISLAND Hy**	**20.54**	**95**	T	T	07 30 48.1	
	baz=283,slow=74,SNR=7.8						
KSRS	**Korea Array**	**20.63**	**318**	P	**P**	**07 08 25.6**	**+0.2**
	0.5nm,0.4s,baz=134,slow=7.0,SNR=5.0						
	0.5nm,0.4s						
SEY	**Seymchan**	**40.17**	**5**	LR	LR	07 27 37.2	
	comp=Z,57nm,20.3s,baz=329,slow=35						
WRA	**Warramunga Arr**	**44.01**	**195**	P	**P**	**07 11 53.9**	**+0.1**
	0.2nm,0.4s,baz=14,slow=8.9,SNR=7.8						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**47.70**	**194**	P	**P**	**07 12 22.8**	**-0.1**
	0.1nm,0.3s,baz=9.2,slow=7.0,SNR=2.4						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**55.14**	**312**	P	**P**	**07 13 18.0**	**-0.5**
	0.5nm,0.7s,baz=96,slow=7.4,SNR=4.6						
	0.5nm,0.7s						
NRIK	**Noril'sk**	**57.38**	**339**	LR	LR	07 39 37.2	
	comp=Z,37nm,18.0s,baz=43,slow=38						
KURBB	**Kurchatov Arra**	**57.79**	**316**	P	**P**	**07 13 35.8**	**-1.4**
	0.4nm,0.6s,baz=94,slow=7.9,SNR=7.4						
	0.4nm,0.6s						
BVAR	**Borovoye Array**	**62.84**	**319**	P	**P**	**07 14 12.2**	**+0.4**
	1.9nm,0.4s,baz=85,slow=7.2,SNR=14						
	1.9nm,0.4s						

ISK ***23*** *07:04:55.0, 36.67N×27.09E, h136km, ML2.0/7*
THE ***23*** *07:04:56.0, 37.N±8.×2.7E±°, h121km±32km, M2.9/6, MLh2.9/6*
ATH ***23*** *07:04:55.7, 36.63N×26.95E, h124km±7km, ML3.0/4, Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*
AFAD ***23*** *07:04:55.5, 36.49N×27.18E, h21km±2km, ML2.1*

ISC 23 07:04:54.3±1.6, 36.63N±0.05×27.01E±0.04, h138km±10km, n32, σ0s63/50, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAT	**Datca**	**0.47**	**78**	Pg	**Pn**	**07 05 14.5**	**+0.2**
DAT				Sg	**Sn**	**07 05 28.9**	**-0.5**
BODT	**Bodrum**	**0.49**	**30**	Pg	**Pn**	**07 05 14.8**	**+0.5**
BODT				Sg	**Sn**	**07 05 29.2**	**-0.3**
MLSB	**Milas**	**0.90**	**43**	Pg	**Pn**	**07 05 17.5**	**+0.3**
ARG	**Arkhangelos**	**1.00**	**114**	P	**Pn**	**07 05 18.6**	**+0.7**
ARG				S	**Sn**	**07 05 35.8**	**-0.1**
ARG	**Arkhangelos**	**1.00**	**114**	Pg	**Pn**	**07 05 18.6**	**+0.7**
ARG	**Arkhangelos**	**1.00**	**114**	P	**Pn**	**07 05 18.6**	**+0.7**
ARG				S	**Sn**	**07 05 35.7**	**-0.2**
TURN	**Turunc**	**1.01**	**82**	Pg	**Pn**	**07 05 18.1**	**+0.1**
KARP	**Karpathos**	**1.09**	**173**	P	**Pn**	**07 05 19.3**	**+0.3**
KARP				S	**Sn**	**07 05 37.5**	**-0.1**
KARP	**Karpathos**	**1.09**	**173**	P	**Pn**	**07 05 19.2**	**+0.3**
KARP				S	**Sn**	**07 05 37.3**	**-0.3**
YER	**Yerkesik**	**1.14**	**64**	P	**Pn**	**07 05 19.9**	**+0.5**
YER				S	**Sn**	**07 05 38.5**	**+0.1**
YER	**Yerkesik**	**1.14**	**64**	Pg	**Pn**	**07 05 19.7**	**+0.4**
THERA	**Ancient Thera,**	**1.26**	**258**	P	**Pn**	**07 05 21.1**	**+0.6**
SNT5	**Nea Kammeni, S**	**1.32**	**260**	P	**Pn**	**07 05 21.5**	**+0.5**
AYDB	**Zeytinkoy-Aydi**	**1.49**	**28**	Pn	**Pn**	**07 05 23.3**	**+0.3**
AYDB				Sn	**Sn**	**07 05 43.8**	**-1.1**
SABU	**Mula-Dalaman**	**1.59**	**83**	P	**Pn**	**07 05 24.4**	**+0.4**
SABU				S	**Sn**	**07 05 46.8**	**+0.2**
SABU				IAML		07 05 50.0	
	comp=N,22nm,0.6s						
SABU				IAML		07 05 51.0	
	comp=E,22nm,0.4s						
ZKR	**Zakros**	**1.65**	**203**	P	**Pn**	**07 05 25.7**	**+1.1**
ZKR				S	**Sn**	**07 05 48.0**	**+0.2**
FETY	**Fethiye**	**1.67**	**89**	P	Pn	07 05 17.0	-8.0
FETY				S	Sn	07 05 39.0	-9.3
DNZT	**Denizli-Tavas-**	**1.74**	**68**	P	**Pn**	**07 05 26.1**	**+0.3**
DNZT				S	**Sn**	**07 05 49.0**	**-0.9**
NPS	**Neapolis**	**1.77**	**220**	P	**Pn**	**07 05 26.4**	**+0.3**
NPS				S	**Sn**	**07 05 49.7**	**-0.7**
NPS	**Neapolis**	**1.77**	**220**	P	**Pn**	**07 05 26.4**	**+0.3**
NPS				S	**Sn**	**07 05 49.5**	**-0.9**
IZZE	**Mula-Seydike**	**1.80**	**96**	P	**Pn**	**07 05 26.1**	**-0.3**
IZZE				S	**Sn**	**07 05 48.8**	**-2.1**
IZZE				IAML		07 05 51.0	
	comp=N,45nm,0.4s						
IZZE				IAML		07 05 57.0	
	comp=E,22nm,0.5s						
KNIK	**Mula-Seydike**	**2.07**	**83**	P	**Pn**	**07 05 30.2**	**+0.5**
KNIK				S	**Sn**	**07 05 57.4**	**+0.6**
GOLH	**Golhisar**	**2.13**	**73**	P	**Pn**	**07 05 31.4**	**+1.0**
GOLH				S	**Sn**	**07 05 58.1**	**-0.1**
GOLH				IAML		07 06 00.0	
	comp=N,14nm,0.3s						
GOLH				IAML		07 06 02.0	
	comp=E,14nm,0.6s						
AKAS	**Kas**	**2.13**	**100**	P	**Pn**	**07 05 30.4**	**-0.1**
AKAS				S	**Sn**	**07 05 57.6**	**-0.6**
AKAS				IAML		07 05 58.0	
	comp=E,25nm,0.6s						
AKAS				IAML		07 06 05.0	
	comp=N,42nm,0.4s						
IDI	**Anoyia**	**2.18**	**233**	P	**Pn**	**07 05 31.1**	**+0.1**
IDI	**Anoyia**	**2.18**	**233**	P	**Pn**	**07 05 31.1**	**+0.1**
IDI				S	**Sn**	**07 05 57.8**	**-1.3**
KARY	**Karystos**	**2.48**	**305**	P	**Pn**	**07 05 35.0**	**+0.5**
AKUM	**Antalya-Kumluc**	**2.71**	**96**	P	**Pn**	**07 05 37.9**	**+0.4**
AKUM				S	**Sn**	**07 06 10.3**	**-0.4**
AKUM				IAML		07 06 12.0	
	comp=N,10nm,0.4s						
AKUM				IAML		07 06 14.0	
	comp=E,12nm,0.3s						
IMMV	**Iera Moni Meta**	**2.72**	**245**	P	**Pn**	**07 05 38.2**	**+0.6**
DION	**Dionisos Attik**	**2.84**	**301**	P	**Pn**	**07 05 39.8**	**+0.6**
VLI	**Veliai**	**3.27**	**273**	P	**Pn**	**07 05 45.3**	**+0.6**
VLI	**Veliai**	**3.27**	**273**	P	**Pn**	**07 05 44.9**	**+0.2**

IDC 23 07:29:39.6±3.2, 53.15N×87.39E, h0km, mbtmp2.4/2, ML1.9/2, Error ellipse: s-maj=33.4km s-min=17.0km az=64.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.73**	**299**	I	I	07 41 20.0	
	0.3nm,0.9s,baz=114,slow=327,SNR=5.7						
ZALV	**Zalesovo Beam**	**1.73**	**299**	Pn	Pn	07 30 11.4	+0.4
	0.3nm,0.3s,baz=119,slow=12,SNR=6.1						
ZALV				Lg	Lg	07 30 34.0	
	0.6nm,0.3s,baz=121,slow=22,SNR=8.1						
KURBB	**Kurchatov Arra**	**6.04**	**249**	Pn	Pn	07 31 10.7	+0.5
	baz=66,slow=14,SNR=2.4						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**7.16**	**209**	Pn	Pn	07 31 26.7	+1.1
	baz=29,slow=12,SNR=2.0						
	0.2nm,0.5s						

IDC ***23*** *07:45:41.3±1.4, 59.26S×149.87E, h0km, mb4.4/6, mbtmp4.4/7, ML2.9/1, MS4.5/35, Error ellipse: s-maj=69.9km s-min=18.6km az=83.0*
NEIC ***23*** *07:45:44.3±1.1, 59.27S±0.06×149.5E±0.3, h10km±1km, mb4.6/16, Error ellipse: s-maj=23.7km s-min=10.6km az=83.0*

GCMT ***23*** *07:45:46.3±0.1, 59.28S±0.01×149.33E±0.02, h12km, MW5.2/124, Moment Tensor Solution. s86,c127; s124,c222; Duration: 1s0 Moment tensor: Scale 1016 Nm; Mrr-0.15±.12; Mθθ4.02±.10; Mφφ-3.87±.12; Mrθ-2.93±.29; Mrφ-6.68±.09; Mθφ-1.43±.32; Best double couple: Mw8.41200×1016 NP1:φs344.00000°, δ68.00000°, λ-4.00000°. NP2:φs75.00000°, δ86.00000°, λ-158.00000°. Principal axes: T 8.2570, Plg13.0000°, Azm207.0000°; N 0.3070, Plg67.0000°, Azm84.0000°; P -8.5670, Plg18.0000°, Azm302.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 07:45:44.0±0.5, 59.28S±0.08×149.5E±0.1, h10km, n98, σ1s58/58, mb4.5/10, MS4.5/36, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MCQ	**Macquarie Isla**	**7.06**	**51**	Pn	**Pn**	**07 47 27.5**	**+0.2**
VNDA	**Vanda**	**18.80**	**172**	P	**P**	**07 50 00.7**	**-2.4**
	baz=146,slow=1.7,SNR=3.3						
VNDA				LR	LR	07 56 38.8	
	comp=Z,3μm,18.6s,baz=345,slow=35						
	7.2nm,0.7s						
VNDA	**Vanda**	**18.80**	**172**	P	**P**	**07 50 02.9**	**-0.2**
CASY	**Casey**	**18.86**	**232**	P	**P**	**07 50 04.4**	**+0.5**
CASY				IAmb	IAmb	07 50 16.0	
	comp=Z,30nm,1.1s						
SBA	**Scott Base**	**19.52**	**169**	P	**P**	**07 50 11.3**	**+0.2**
SBA				IAmb	IAmb	07 50 35.5	
	comp=Z,48nm,1.3s						
RPZ	**Rata Peaks**	**20.42**	**50**	LR	LR	07 56 53.6	
	comp=Z,3μm,19.0s,baz=113,slow=33						
TOO	**Toolangi**	**21.87**	**351**	P	**P**	**07 50 37.0**	**+0.2**
TOO				IAmb	IAmb	07 50 43.2	
	comp=Z,21nm,1.4s						
URZ	**Urewera**	**27.47**	**52**	LR	LR	08 01 50.5	
	comp=Z,2μm,18.3s,baz=200,slow=36						
QSPA	**South Pole Qui**	**30.82**	**180**	P	**P**	**07 51 58.9**	**-0.8**
	comp=Z,8.6nm,0.9s,baz=348,slow=5.9,SNR=15						
QSPA				LR	LR	08 04 13.8	
	comp=Z,2μm,18.9s,baz=8.5,slow=36						
	comp=Z,8.6nm,0.9s						
QSPA	**South Pole Qui**	**30.82**	**180**	P	**P**	**07 52 00.1**	**+0.4**
QSPA				IAmb	IAmb	07 52 42.1	
	comp=Z,14nm,1.1s						
FORT	**Forrest**	**31.97**	**324**	P	**P**	**07 52 09.2**	**-0.8**
NWAO	**Narrogin (SRO)**	**33.96**	**307**	LR	LR	08 02 47.6	
	comp=Z,1μm,19.8s,baz=110,slow=30						
MAW	**Mawson**	**36.46**	**220**	P	**P**	**07 52 48.0**	**-0.5**
	comp=Z,3.8nm,0.9s,baz=173,slow=5.3,SNR=4.4						
MAW				LR	LR	08 06 27.5	
	comp=Z,916nm,21.8s,baz=104,slow=34						
	comp=Z,3.8nm,0.9s						
MAW	**Mawson**	**36.46**	**220**	P	**P**	**07 52 48.6**	**+0.1**
ASAR	**Alice Springs**	**37.25**	**336**	P	**P**	**07 52 55.4**	**-0.3**
	comp=Z,2.3nm,0.8s,baz=154,slow=6.5,SNR=5.8						
ASAR				LR	LR	08 05 55.0	
	comp=Z,614nm,20.8s,baz=164,slow=32						
	comp=Z,2.3nm,0.8s						
ASAR	**Alice Springs**	**37.25**	**336**	P	**P**	**07 52 56.6**	**+0.9**
AS31	**Alice Springs**	**37.25**	**336**	P	**P**	**07 52 54.8**	**-0.9**
RAO	**Raoul Island**	**37.33**	**51**	LR	LR	08 06 28.4	
	comp=Z,1μm,19.6s,baz=178,slow=34						
DZM	**Mont Dzumac**	**39.09**	**25**	LR	LR	08 07 03.9	
	comp=Z,1μm,18.1s,baz=208,slow=33						
CTA	**Charters Tower**	**39.21**	**355**	LR	LR	08 07 40.2	
	comp=Z,1μm,19.1s,baz=181,slow=34						
WRA	**Warramunga Arr**	**40.78**	**338**	P	**P**	**07 53 23.9**	**-1.3**
	comp=Z,7.8nm,1.1s,baz=173,slow=7.2,SNR=10						
	comp=Z,7.8nm,1.1s						
WRA	**Warramunga Arr**	**40.78**	**338**	P	**P**	**07 53 25.4**	**+0.2**
WRAB	**Tennant Creek**	**40.79**	**338**	P	**P**	**07 53 24.4**	**-0.9**
WRAB				IAmb	IAmb	07 53 42.6	
	comp=Z,8.7nm,0.6s						
BELA	**Belgrano 2**	**43.08**	**179**	P	**P**	**07 53 43.9**	**+0.5**
BELA				IAmb	IAmb	07 53 50.5	
	comp=Z,15nm,1.3s						
PSA00	**Pilbara Seismi**	**43.19**	**318**	P	**P**	**07 53 44.5**	**-0.5**
PSA00				IAmb	IAmb	07 53 58.1	
	comp=Z,13nm,1.4s						
FITZ	**Fitzroy Crossi**	**44.63**	**327**	LR	LR	08 10 31.1	
	comp=Z,1μm,20.4s,baz=164,slow=33						
MSVF	**Nonsavu**	**46.41**	**39**	LR	LR	08 10 14.4	
	comp=Z,1μm,18.8s,baz=224,slow=32						
SNAA	**Sanae**	**47.92**	**191**	P	**P**	**07 54 21.3**	**-0.5**
	comp=Z,10nm,0.9s,baz=184,slow=7.6,SNR=6.1						
SNAA				LR	LR	08 13 51.2	
	comp=Z,433nm,20.7s,baz=186,slow=35						
	comp=Z,10nm,0.9s						
SNAA	**Sanae**	**47.92**	**191**	P	**P**	**07 54 22.5**	**+0.6**
PMG	**Port Moresby**	**49.79**	**357**	LR	LR	08 12 14.2	
	comp=Z,616nm,21.2s,baz=184,slow=32						
HNR	**Honiara**	**50.37**	**13**	LR	LR	08 11 30.2	
	comp=Z,48nm,20.9s,baz=246,slow=31						
RAR	**Rarotonga**	**52.28**	**66**	LR	LR	08 14 03.4	
	comp=Z,225nm,19.1s,baz=219,slow=33						
BATI	**Baumata**	**52.70**	**327**	LR	LR	08 15 07.5	
	comp=Z,526nm,20.7s,baz=190,slow=34						
AFI	**Afiamalu**	**53.57**	**49**	LR	LR	08 17 36.7	
	comp=Z,170nm,18.3s,baz=185,slow=36						
PMSA	**Palmer Station**	**53.71**	**163**	LR	LR	08 16 03.5	
	comp=Z,349nm,18.3s,baz=136,slow=34						
H04S2	**CROZET ISLANDS**	**54.72**	**236**	T	T	08 55 02.3	
	baz=140,slow=75,SNR=19						
H04S1	**CROZET ISLANDS**	**54.72**	**236**	T	T	08 55 03.3	
	baz=140,slow=75,SNR=22						
H04S3	**CROZET ISLANDS**	**54.73**	**236**	T	T	08 55 01.8	
	baz=140,slow=75,SNR=21						
KRVT	**Keravat (AS076**	**54.86**	**3**	LR	LR	08 15 23.4	
	comp=Z,24nm,20.6s,baz=231,slow=32						
ESPZ	**Base Esperanza**	**55.99**	**166**	P	**P**	**07 55 22.1**	**+0.1**
JAY	**Jayapura**	**57.02**	**350**	LR	LR	08 18 43.6	
	comp=Z,686nm,21.9s,baz=179,slow=35						
FAKI	**Fak Fak**	**57.78**	**340**	P	**P**	**07 55 34.8**	**-0.4**
KAPI	**Kappang**	**58.76**	**325**	LR	LR	08 19 37.0	
	comp=Z,559nm,19.2s,baz=179,slow=35						
SIJI	**Sorong**	**59.96**	**339**	LR	LR	08 21 58.2	
	comp=Z,237nm,20.4s,baz=144,slow=36						
PPT	**Papeete**	**60.31**	**74**	LR	LR	08 15 31.8	
	comp=Z,99nm,22.0s,baz=224,slow=30						
DAV	**Davao City (W)**	**68.84**	**334**	LR	LR	08 25 24.3	
	comp=Z,105nm,21.7s,baz=143,slow=35						
GUMO	**Guam**	**72.70**	**355**	LR	LR	08 29 51.8	
	comp=Z,94nm,18.1s,baz=182,slow=36						
PLCA	**Paso Flores**	**74.99**	**150**	LR	LR	08 23 31.6	
	comp=Z,182nm,21.3s,baz=196,slow=30						
H08S2	**Diego Garcia H**	**76.82**	**277**	T	T	09 21 57.6	
	baz=148,slow=76,SNR=37						
H08S1	**Diego Garcia H**	**76.83**	**277**	T	T	09 22 06.9	
	baz=148,slow=76,SNR=28						
H08S3	**Diego Garcia H**	**76.84**	**277**	T	T	09 21 52.3	
	baz=148,slow=76,SNR=44						
H03S2	**Juan Fernandez**	**78.94**	**141**	T	T	09 25 19.8	
	baz=201,slow=74,SNR=12						
H03S1	**Juan Fernandez**	**78.94**	**141**	T	T	09 25 21.1	
	baz=201,slow=74,SNR=11						
H03S3	**Juan Fernandez**	**78.95**	**141**	T	T	09 25 20.8	
	baz=201,slow=74,SNR=13						
SUR	**Sutherland**	**79.29**	**222**	LR	LR	08 29 27.1	
	comp=Z,230nm,19.4s,baz=158,slow=33						
BOSA	**Boshof**	**81.09**	**227**	P	**P**	**07 57 58.6**	**-0.8**
	comp=Z,1.9nm,0.7s,baz=145,slow=7.1,SNR=4.3						
BOSA				LR	LR	08 29 51.8	
	comp=Z,280nm,19.4s,baz=174,slow=33						
	comp=Z,1.9nm,0.7s						
BOSA	**Boshof**	**81.09**	**227**	P	**P**	**07 57 59.3**	**-0.1**
BOSA				IAmb	IAmb	07 58 11.9	
	comp=Z,17nm,1.4s						
LBTB	**Lobatse**	**84.19**	**229**	LR	LR	08 30 11.3	
	comp=Z,307nm,21.8s,baz=156,slow=32						
JOW	**Kunigami**	**87.57**	**341**	LR	LR	08 35 45.4	
	comp=Z,169nm,21.8s,baz=284,slow=34						
CMAR	**Chiang Mai Arr**	**87.72**	**313**	LR	LR	08 35 55.0	
	comp=Z,204nm,19.5s,baz=165,slow=34						
CPUP	**Villa Florida**	**91.87**	**156**	LR	LR	08 37 34.3	
	comp=Z,134nm,18.0s,baz=198,slow=34						
LSZ	**Lusaka**	**91.87**	**236**	LR	LR	08 35 21.3	
	comp=Z,283nm,19.5s,baz=150,slow=32						
TSUM	**Tsumeb**	**92.49**	**225**	LR	LR	08 39 06.6	
	comp=Z,221nm,18.7s,baz=152,slow=35						
BRDH	**Bariadhala**	**94.39**	**308**	LR	LR	08 40 07.9	
	comp=Z,155nm,19.6s,baz=124,slow=35						
LPAZ	**La Paz**	**98.71**	**144**	LR	LR	08 34 43.3	
	comp=Z,212nm,21.4s,baz=166,slow=30						
TORD	**Torodi Ar. Bea**	**128.10**	**221**	PKP	**PKPdf**	**08 04 49.3**	**-0.9**
	comp=Z,1.1nm,1.0s,baz=232,slow=1.6,SNR=3.4						
YKA	**Yellowknife Ar**	**141.68**	**48**	PKP	**PKPdf**	**08 05 12.1**	**-1.9**
	comp=Z,0.3nm,0.8s,baz=234,slow=1.2,SNR=4.7						
KEST	**Kesra**	**145.04**	**246**	PKPbc	**PKPdf**	**08 05 21.0**	**+0.1**
	comp=Z,8.3nm,0.9s,baz=338,slow=5.2,SNR=8.1						
KEST	**Kesra**	**145.04**	**246**	PKPbc	**PKPdf**	**08 05 21.1**	**+0.1**
NDNU	**Novodnistrovsk**	**145.38**	**278**	PKP	**PKiKP**	**08 05 26.0**	**+1.1**
AK09	**Malin Array Si**	**145.69**	**282**	PKP	**PKiKP**	**08 05 27.2**	**+1.8**
AK10	**Malin Array Si**	**145.69**	**282**	PKP	**PKiKP**	**08 05 27.2**	**+1.8**
AK06	**Malin Array Si**	**145.71**	**282**	PKP	**PKiKP**	**08 05 27.2**	**+1.7**
AK08	**Malin Array Si**	**145.71**	**282**	PKP	**PKiKP**	**08 05 26.9**	**+1.4**
AKASG	**Malin Array Be**	**145.77**	**282**	PKPbc	**PKPdf**	**08 05 21.6**	**+0.2**
	comp=Z,2.2nm,0.3s,baz=101,slow=2.8,SNR=5.0						
AKBB	**Malin Array Si**	**145.77**	**282**	PKP	**PKiKP**	**08 05 24.9**	**-0.7**
KIEV	**Kiev**	**145.77**	**282**	PKP	**PKiKP**	**08 05 25.2**	**-0.4**
BURAR	**Bucovina Array**	**145.84**	**275**	PKPdf	**PKPbc**	**08 05 22.7**	**+0.1**
MI29	**MI29, Kamyanyy**	**146.28**	**281**	PKP	**PKiKP**	**08 05 26.0**	**-0.7**
STNU	**Starunia**	**146.91**	**276**	PKP	**PKPbc**	**08 05 26.0**	**+0.5**
MUKU	**Mukachevo**	**147.68**	**274**	PKP	**PKPbc**	**08 05 28.4**	**+0.8**
RNPP9	**Sopachiv**	**147.88**	**281**	PKP	**PKPbc**	**08 05 27.9**	**-0.1**
MORH	**Mrgy, Hungar**	**148.28**	**268**	PKP	**PKPbc**	**08 05 28.5**	**-0.8**
SOKA	**Soboth**	**150.44**	**265**	*i* PKP	**PKPab**	**08 05 41.2**	**-0.2**
	comp=Z,7.4nm,1.3s						
ARSA	**Arzberg**	**150.57**	**267**	*e*PKP	**PKPab**	**08 05 41.2**	**-0.6**
	comp=Z,6.2nm,0.8s						
OBKA	**Obir**	**150.58**	**264**	*e*PKP	**PKPab**	**08 05 43.8**	**+1.9**
	comp=Z,18nm,1.5s						
CONA	**Conrad Observa**	**150.84**	**268**	*e*PKP	**PKPab**	**08 05 44.8**	**+1.8**
	comp=Z,7.8nm,1.3s						
MYKA	**Terra Mystica**	**151.12**	**264**	*e*PKP	**PKPab**	**08 05 45.9**	**+1.7**
	comp=Z,10nm,1.2s						
LESA	**Schwarzleotal**	**152.14**	**264**	*e*PKP	**PKPab**	**08 05 46.4**	**-2.0**
	comp=Z,4.7nm,0.8s						
GERES	**GERESS Array B**	**152.53**	**267**	PKPbc	**PKPbc**	**08 05 37.8**	**-1.7**
	comp=Z,1.8nm,0.8s,baz=191,slow=1.4,SNR=5.9						
WTTA	**Wattenberg**	**152.57**	**263**	*e*PKP	**PKPab**	**08 05 50.0**	**-0.4**
	comp=Z,7.8nm,1.1s						
FINES	**FINESS Array B**	**152.67**	**299**	PKPbc	**PKPbc**	**08 05 38.0**	**-1.3**
	comp=Z,4.9nm,0.8s,baz=90,slow=2.1,SNR=5.4						
SQTA	**Sankt Quirin**	**152.76**	**262**	*i* PKP	**PKiKP**	**08 05 45.9**	**+5.6**
	comp=Z,9.1nm,1.0s						
FETA	**Feichten**	**152.87**	**262**	*e*PKiKP	**PKPab**	**08 05 51.8**	**+0.2**
	comp=Z,13nm,1.1s						
MOTA	**Moosalm**	**152.89**	**262**	*e*PKP	**PKPab**	**08 05 47.2**	**-4.5**
	comp=Z,1.1nm,0.5s						
RETA	**Reutte**	**153.16**	**262**	*e*PKP	**PKiKP**	**08 05 45.7**	**+4.6**
	comp=Z,11nm,1.4s						
DAVA	**Damuels**	**153.48**	**261**	*e*PKP	**PKPab**	**08 05 50.7**	**-3.5**
	comp=Z,7.0nm,1.2s						
ESDC	**Sonseca Array**	**154.17**	**232**	PKPbc	**PKPbc**	**08 05 43.1**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=182,slow=1.8,SNR=4.8						

NEIC ***23*** *07:47:02.4±1.5, 6.17S±0.06×148.91E±0.08, h58km±3km, mb4.5/30, Error ellipse: s-maj=11.5km s-min=7.8km az=112.0*
IDC ***23*** *07:47:03.1±1.7, 6.22S×148.95E, h80km±15km, mb3.7/11, mbtmp4.1/16, MS2.7/5, Error ellipse: s-maj=22.8km s-min=10.6km az=110.0*

ISC 23 07:47:01.7±0.5, 6.17S±0.05×148.91E±0.07, h60km, n69, σ0s96/69, mb4.4/23, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**3.62**	**59**	LR	LR	07 49 26.9	
	comp=Z,58nm,18.8s,baz=133,slow=40						
PMG	**Port Moresby**	**3.65**	**208**	P	**Pn**	**07 47 56.8**	**+1.0**
	268nm,0.3s,baz=33,slow=4.9,SNR=161						
PMG				S	**Sn**	**07 48 39.3**	**+1.7**
	526nm,0.6s,baz=102,slow=23,SNR=12						
PMG				LR	LR	07 49 14.9	
	comp=Z,123nm,21.5s,baz=352,slow=36						
PMG	**Port Moresby**	**3.65**	**208**	P	**Pn**	**07 47 56.6**	**+0.8**
PMG	**Port Moresby**	**3.65**	**208**	P	**Pn**	**07 47 56.5**	**+0.8**
PMG	**Port Moresby**	**3.65**	**208**		**Pn**	**07 47 56.2**	**+0.4**
PMG				Sn	**Sn**	**07 48 38.5**	**+0.9**
RABL	**Rabaul**	**3.79**	**59**	Pn	**Pn**	**07 47 58.5**	**+0.7**
MANU	**Manus Island**	**4.38**	**339**	Pn	**Pn**	**07 48 05.5**	**-0.3**
JAY	**Jayapura**	**8.95**	**294**	P	**Pn**	**07 49 09.8**	**+1.3**
	11nm,0.7s,baz=349,slow=23,SNR=1.8						
COEN	**Coen**	**9.57**	**216**	Pn	**Pn**	**07 49 15.9**	**-1.1**
HNR	**Honiara**	**11.41**	**107**	P	**Pn**	**07 49 43.0**	**+1.0**
	1.6nm,0.5s,baz=198,slow=3.2,SNR=2.1						
HNR				LR	LR	07 53 02.2	
	comp=Z,5.8nm,19.6s,baz=43,slow=32						
HNR	**Honiara**

MKAR	**Makanchi Array**	**78.84**	**320**	P	**P**	**07 58 57.6**	**-0.9**	
	comp=Z,0.2nm,0.4s,baz=100,slow=7.2,SNR=4.5							
	comp=Z,0.2nm,0.4s							
MKAR	**Makanchi Array**	**78.84**	**320**	P	**P**	**07 58 58.3**	**-0.2**	
J16K	**Anvik River**	**79.01**	**21**	P	**P**	**07 59 00.0**	**+1.1**	
J16K				IAmb	IAmb	07 59 37.8		
	comp=Z,12nm,1.4s							
ZALV	**Zalesovo Beam**	**80.17**	**327**	P	**P**	**07 59 03.5**	**-2.0**	
	comp=Z,1.0nm,0.5s,baz=109,slow=7.0,SNR=4.8							
	comp=Z,1.0nm,0.5s							
ZALV	**Zalesovo Beam**	**80.17**	**327**	P	**P**	**07 59 06.2**	**+0.7**	
G18K	**Tagagawik**	**81.28**	**19**	P	**P**	**07 59 11.9**	**+0.7**	
BOOM	**Boomskoye usch**	**81.75**	**314**	P	**P**	**07 59 14.0**	**-0.4**	
KURK	**Kurchatov**	**82.48**	**323**	P	**P**	**07 59 17.2**	**-0.6**	
KURK				IAmb	IAmb	07 59 19.2		
	comp=Z,4.9nm,1.5s							
KURBB	**Kurchatov Arra**	**82.51**	**323**	P	**P**	**07 59 16.8**	**-1.1**	
	comp=Z,0.2nm,0.4s,baz=95,slow=8.3,SNR=5.3							
	comp=Z,0.2nm,0.4s							
E19K	**Redstone River**	**82.67**	**18**	P	**P**	**07 59 19.4**	**+0.9**	
E19K				IAmb	IAmb	08 00 00.4		
	comp=Z,4.7nm,1.4s							
QSPA	**South Pole Qui**	**83.80**	**180**	P	**P**	**07 59 23.2**	**-1.3**	
	comp=Z,1.5nm,0.9s,baz=302,slow=1.3,SNR=7.6							
	comp=Z,1.5nm,0.9s							
QSPA	**South Pole Qui**	**83.80**	**180**	P	**P**	**07 59 25.0**	**+0.5**	
ILAR	**Eielson Array**	**84.90**	**23**	P	**P**	**07 59 28.6**	**-1.3**	
	comp=Z,1.4nm,0.7s,baz=258,slow=4.9,SNR=6.4							
	comp=Z,1.4nm,0.7s							
D23K	**Nanushuk River**	**85.55**	**18**	P	**P**	**07 59 34.4**	**+1.3**	
D23K				IAmb	IAmb	07 59 47.7		
	comp=Z,5.3nm,1.3s							
KKAR	**Karatay Array**	**85.77**	**314**	P	**P**	**07 59 34.3**	**-0.4**	
BVAR	**Borovoye Array**	**88.03**	**324**	P	**P**	**07 59 44.7**	**-0.7**	
	comp=Z,0.6nm,0.5s,baz=128,slow=5.2,SNR=3.1							
	comp=Z,0.6nm,0.5s							
TORD	**Torodi Ar. Bea**	**146.97**	**285**	PKPbc	**PKPdf**	**08 06 37.6**	**+0.9**	
	comp=Z,1.0nm,0.4s,baz=111,slow=2.2,SNR=8.7							
TORD	**Torodi Ar. Bea**	**146.97**	**285**	PKPbc	**PKPbc**	**08 06 38.0**	**-0.7**	
BDFB	**Brasilia**	**152.60**	**142**	PKPbc	**PKPbc**	**08 06 51.1**	**-1.6**	
	comp=Z,2.4nm,0.4s,baz=278,slow=2.3,SNR=7.8							

ASRS ***23*** *07:50:08.0±0.9,53.78N×88.13E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 23 07:50:11.5±3.2, 53.82N×88.15E, h0km, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=28.6km s-min=19.8km az=51.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.98**	**275**			I	I	08 03 20.0	
	0.2nm,1.0s,baz=91,slow=337,SNR=15								
ZALV	**Zalesovo Beam**	**1.98**	**275**			Pn	Pn	07 50 45.9	-0.3
	1.6nm,0.3s,baz=91,slow=16,SNR=17								
ZALV						Lg	Lg	07 51 13.7	
	2.6nm,0.3s,baz=96,slow=24,SNR=21								
KURBB	**Kurchatov Arra**	**6.72**	**245**			Pn	Pn	07 51 52.0	+0.7
	0.1nm,0.3s,baz=62,slow=14,SNR=11								
KURBB						Lg	Lg	07 53 46.0	
	baz=61,slow=29,SNR=4.5								
	0.8nm,0.4s								
MKAR	**Makanchi Array**	**7.96**	**210**			Pn	Pn	07 52 09.4	+1.0
	0.1nm,0.3s,baz=29,slow=12,SNR=2.3								
MKAR						Lg	Lg	07 54 23.3	
	0.1nm,0.3s,baz=28,slow=34,SNR=2.7								
	0.2nm,0.5s								

SSNC ***23*** *07:59:14.9±1.8, 19.19N×79.50W, h20km±29km, MD3.9, ML3.2, Presumed earthquake*
JSN ***23*** *07:59:16.6±1.0, 19.40N×78.97W, h0km±228km, MW3.9, Presumed earthquake*
ISC 23 07:59:13.4±2.3, 19.1N±0.1×79.5W±0.1, h35km, n12, σ1°98/11, 1C, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CBCY	**The Bluff, Cay**	**0.64**	**340**	*e*P		P	Pn	07 59 25.4	-0.6
CBCY				*e*S		S	**Sn**	**07 59 32.8**	**-2.3**
CBCY				IAML				07 59 33.3	
	comp=E,3μm,0.2s								
CBCY				IAML				07 59 33.4	
	comp=N,1μm,0.1s								
LCCY	**Blossom Villag**	**0.75**	**315**	*e*P		P	Pn	07 59 28.3	+0.8
LCCY				*e*S		Sn		07 59 35.7	-1.9
LCCY				IAML				07 59 37.7	
	comp=N,997nm,0.2s								
LCCY				IAML				07 59 38.0	
	comp=E,657nm,0.2s								
MTDJ	**Mount Denham**	**2.09**	**115**	*e*P		**P**	**Pn**	**07 59 46.9**	**+0.9**
LMCC	**Las Mercedes**	**2.55**	**68**	*e*P		**P**	**Pn**	**07 59 52.4**	**+0.2**
CCCC	**Cccc**	**2.64**	**38**	*e*P		**P**	**Pn**	**07 59 57.7**	**+4.3**
STH	**Stony Hill**	**2.78**	**112**	*i*P		**P**	**Pn**	**07 59 56.6**	**+1.2**
MGV	**Manicaragua**	**3.00**	**352**	*e*P		**P**	**Pn**	**07 59 58.9**	**+0.5**
CHIV	**Chivirico**	**3.05**	**73**	*e*P		**P**	**Pn**	**07 59 57.7**	**-1.4**
MARVS	**Santiago de Cu**	**3.52**	**75**	*e*P		**P**	**Pn**	**08 00 05.3**	**-0.3**
HLGC	**Holguin**	**3.70**	**61**	*e*P		**P**	**Pn**	**08 00 06.9**	**-1.1**
RCC	**Rio Carpintero**	**3.71**	**76**	*e*P		**P**	**Pn**	**08 00 08.1**	**-0.1**
PINC	**Pinares de May**	**3.76**	**68**	*e*P		**P**	**Pn**	**08 00 10.4**	**+1.5**

IDC ***23*** *07:58:50.8±8.0, 23.63S×178.68W, h0km, mb4.2/2, mbtmp4.2/2, Error ellipse: s-maj=335.5km s-min=60.9km az=149.0*
NEIC ***23*** *07:59:47.0±1.9, 24.5S±0.2×179.5W±0.1, h525km±7km, mb4.3/18, Error ellipse: s-maj=23.1km s-min=15.0km az=166.0*
ISC 23 07:59:48.2±0.9, 24.5S±0.1×179.6W±0.1, h550km, n26, σ1°33/26, mb4.2/12, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.93**	**163**	P		**P**	**P**	**08 01 13.8**	**-3.5**
MSVF	**Nonsavu**	**7.12**	**342**	P		**P**	**P**	**08 01 37.6**	**+0.1**
MARNC	**Mare, Loyalty**	**11.80**	**282**	P		**P**	**P**	**08 02 22.2**	**-2.5**
OUENC	**Ouen Island, N**	**12.63**	**277**	P		**P**	**P**	**08 02 31.9**	**-1.4**
ARMA	**Armidale**	**26.16**	**251**	P		**P**	**P**	**08 04 39.2**	**-0.2**
EIDS	**Eidsvold**	**26.59**	**262**	P		**P**	**P**	**08 04 43.1**	**+0.1**
EIDS				IAmb		IAmb	IAmb	08 05 24.5	
	comp=Z,14nm,1.4s								
CAN	**Canberra**	**29.16**	**241**	P		**P**	**P**	**08 05 06.5**	**+1.1**
CAN				IAmb		IAmb	IAmb	08 05 28.1	
	comp=Z,33nm,1.5s								
CTAO	**Charters Tower**	**31.86**	**271**	P		**P**	**P**	**08 05 28.2**	**-0.5**
TOO	**Toolangi**	**32.43**	**238**	P		**P**	**P**	**08 05 33.9**	**+0.6**
TOO				IAmb		IAmb	IAmb	08 05 50.8	
	comp=Z,7.7nm,1.4s								
COEN	**Coen**	**36.59**	**280**	P		**P**	**P**	**08 06 07.7**	**-0.7**
COEN				IAmb		IAmb	IAmb	08 06 38.0	
	comp=Z,20nm,1.3s								
BBOO	**Buckleboo**	**39.55**	**248**	P		**P**	**P**	**08 06 34.2**	**+2.0**
BBOO				IAmb		IAmb	IAmb	08 06 41.6	
	comp=Z,24nm,1.4s								
AS31	**Alice Springs**	**42.31**	**261**	P		**P**	**P**	**08 06 54.9**	**+0.6**
ASAR	**Alice Springs**	**42.31**	**261**	P		**P**	**P**	**08 06 54.5**	**+0.3**
	comp=Z,1.4nm,0.5s,baz=94,slow=7.2,SNR=27								
	comp=Z,1.4nm,0.5s								
ASAR	**Alice Springs**	**42.31**	**261**	P		**P**	**P**	**08 06 54.8**	**+0.5**
WR8	**Warramunga Arr**	**42.59**	**267**	P		**P**	**P**	**08 06 55.7**	**-0.9**
WR8				IAmb		IAmb	IAmb	08 06 57.5	
	comp=Z,7.0nm,1.2s								
WB0	**Warramunga Arr**	**42.74**	**267**	P		**P**	**P**	**08 06 56.8**	**-0.9**
WB0				IAmb		IAmb	IAmb	08 07 17.9	
	comp=Z,7.8nm,1.3s								
WRA	**Warramunga Arr**	**42.74**	**267**	P		**P**	**P**	**08 06 56.9**	**-0.8**
	comp=Z,1.8nm,0.4s,baz=104,slow=8.1,SNR=100								
	comp=Z,1.8nm,0.4s								
WRA	**Warramunga Arr**	**42.74**	**267**	P		**P**	**P**	**08 06 57.0**	**-0.7**
FORT	**Forrest**	**46.45**	**250**	P		**P**	**P**	**08 07 27.7**	**+1.7**
FORT				IAmb		IAmb	IAmb	08 08 06.4	
	comp=Z,13nm,1.2s								
PSA00	**Pilbara Seismi**	**55.42**	**260**	P		**P**	**P**	**08 08 31.8**	**+0.5**
MBWA	**Marble Bar**	**55.64**	**260**	P		**P**	**P**	**08 08 33.1**	**+0.3**
MBWA				IAmb		IAmb	IAmb	08 08 52.2	
	comp=Z,16nm,1.4s								
MORW	**Morawa**	**57.01**	**250**	P		**P**	**P**	**08 08 42.0**	**-0.2**
MORW				IAmb		IAmb	IAmb	08 09 03.8	
	comp=Z,23nm,1.5s								
GIRL	**Giralia**	**60.14**	**257**	P		**P**	**P**	**08 09 04.3**	**+1.0**
QSPA	**South Pole Qui**	**65.55**	**180**	P		**P**	**P**	**08 09 39.6**	**+2.1**
JRSC	**Jasper Ridge**	**81.86**	**43**	P		**P**	**P**	**08 11 10.7**	**+0.5**
AKASG	**Malin Array Be**	**145.71**	**327**	PKPbc		**PKiKP**	**P**	**08 18 29.6**	**+1.2**
	comp=Z,0.3nm,0.4s,baz=45,slow=2.7,SNR=4.3								

ASRS ***23*** *08:00:35.0±0.4, 55.73N×85.93E, h0km, M2.6(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 23 08:00:39.2±3.3, 55.64N×86.07E, h0km, mbtmp2.9/2, ML2.3/2, Error ellipse: s-maj=26.7km s-min=25.3km az=52.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.85**	**204**			I	I	08 13 20.0	
	0.1nm,0.8s,baz=21,slow=335,SNR=6.9								
ZALV	**Zalesovo Beam**	**1.85**	**204**			Pn	Pn	08 01 11.3	-0.8
	2.0nm,0.3s,baz=22,slow=16,SNR=21								
ZALV						Lg	Lg	08 01 37.7	
	2.0nm,0.3s,baz=23,slow=27,SNR=14								
KURBB	**Kurchatov Arra**	**6.77**	**225**			Pn	Pn	08 02 19.4	-0.4
	0.1nm,0.3s,baz=42,slow=14,SNR=5.4								
KURBB						Lg	Lg	08 04 17.1	
	baz=51,slow=32,SNR=4.8								
	0.8nm,0.5s								
MKAR	**Makanchi Array**	**9.17**	**197**			Pn	Pn	08 02 53.5	+0.8
	baz=21,slow=13,SNR=2.5								
MKAR						Lg	Lg	08 05 27.0	
	0.1nm,0.3s,baz=20,slow=27,SNR=3.2								
	0.3nm,0.6s								

ASRS ***23*** *08:05:18.0±0.4, 54.23N×87.11E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 23 08:05:19.6±3.6, 54.26N×87.32E, h0km, mbtmp2.6/2, ML2.2/2, Error ellipse: s-maj=32.0km s-min=20.2km az=50.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.51**	**259**			I	I	08 15 00.0	
	0.1nm,0.7s,baz=77,slow=334,SNR=3.9								
ZALV	**Zalesovo Beam**	**1.51**	**259**			Pg	Pn	08 05 45.8	-2.1
	0.7nm,0.3s,baz=80,slow=16,SNR=6.5								
ZALV						Lg	Lg	08 06 08.0	
	1.1nm,0.3s,baz=81,slow=25,SNR=6.1								
KURBB	**Kurchatov Arra**	**6.49**	**239**			Pn	Pn	08 06 56.5	+0.2
	baz=56,slow=14,SNR=4.5								
	0.4nm,0.4s								
MKAR	**Makanchi Array**	**8.13**	**205**			Pn	Pn	08 07 20.7	+1.9
	0.1nm,0.3s,baz=23,slow=14,SNR=1.4								
	0.1nm,0.4s								

NEIC ***23*** *08:08:12.7±1.1, 25.09N±0.09×95.1E±0.1, h101km±8km, mb4.5/21, Error ellipse: s-maj=16.3km s-min=9.1km az=50.0*
IDC ***23*** *08:08:14.3±3.5, 24.98N×95.12E, h122km±35km, mb3.4/10, mbtmp3.8/11, MS4.0/1, Error ellipse: s-maj=54.6km s-min=14.8km az=60.0*
ISC 23 08:08:12.5±0.6, 25.04N±0.08×95.04E±0.08, h104km, n44, σ0°94/45, mb4.1/21, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MORE	**Moreh**	**1.05**	**220**				**Pn**	**08 08 34.0**	**+0.2**
MORE						Sn	**Sn**	**08 08 50.4**	**+0.7**
SHL	**Shillong**	**2.90**	**281**				**Pn**	**08 08 57.2**	**-0.1**
SHL						Sn	**Sn**	**08 09 29.2**	**-2.5**
CHTO	**Chiang Mai**	**7.18**	**149**			Pn	**Pn**	**08 09 55.5**	**+0.6**
CMAR	**Chiang Mai Arr**	**7.49**	**150**			P	**Pn**	**08 09 59.6**	**+0.5**
	1.3nm,0.3s,baz=329,slow=13,SNR=10								
CMAR	**Chiang Mai Arr**	**7.49**	**150**				**Pn**	**08 10 00.1**	**+1.0**
EVN	**Everest**	**7.92**	**293**				**Pn**	**08 10 05.5**	**+0.1**
WUS	**Wushi**	**20.81**	**325**	P		P	**P**	**08 12 46.6**	**+1.0**
MK31	**Makanchi Array**	**23.97**	**338**	P		P	**P**	**08 13 18.8**	**+1.5**
MKAR	**Makanchi Array**	**23.97**	**338**	P		P	**P**	**08 13 18.8**	**+1.5**
	2.5nm,0.5s,baz=149,slow=9.1,SNR=24								
	2.5nm,0.5s								
MKAR	**Makanchi Array**	**23.97**	**338**	P		P	**P**	**08 13 18.6**	**+1.3**
SONM	**Songino Array**	**24.46**	**19**	P		P	**P**	**08 13 22.1**	**+0.4**
	0.5nm,0.6s,baz=202,slow=11,SNR=3.4								
	0.5nm,0.6s								
KURBB	**Kurchatov Arra**	**28.54**	**338**	P		P	**P**	**08 13 59.1**	**+0.9**
	1.0nm,0.5s,baz=145,slow=9.2,SNR=5.0								
	1.0nm,0.5s								
KURK	**Kurchatov**	**28.59**	**338**	P		P	**P**	**08 13 59.3**	**+0.7**
ZALV	**Zalesovo Beam**	**29.86**	**348**	P		P	**P**	**08 14 10.4**	**+0.5**
	0.6nm,0.4s,baz=152,slow=11,SNR=1.4								
	0.6nm,0.4s								
ZALV	**Zalesovo Beam**	**29.86**	**348**	P		P	**P**	**08 14 09.6**	**-0.3**
BVAR	**Borovoye Array**	**33.54**	**333**	P		P	**P**	**08 14 42.8**	**+0.6**
	0.5nm,0.4s,baz=130,slow=14,SNR=4.0								
	0.5nm,0.4s								
JMN	**Monobe**	**34.77**	**66**	P		P	**P**	**08 14 52.2**	**-0.9**
AB31	**Akbulak array**	**36.46**	**321**	P		P	**P**	**08 15 08.7**	**+1.5**
AB31				IAmb		IAmb	IAmb	08 15 09.1	
	comp=Z,1.1nm,0.5s								
ABKAR	**Akbulak array**	**36.46**	**321**	P		P	**P**	**08 15 08.5**	**+1.3**
FAKI	**Fak Fak**	**45.56**	**122**	P		P	**P**	**08 16 21.6**	**-0.7**
FAKI				IAmb		IAmb	IAmb	08 16 32.9	
	comp=Z,20nm,1.1s								
KARS	**Kars**	**45.70**	**303**	P		P	**P**	**08 16 23.0**	**-0.3**
PETK	**Petropavlovsk-**	**54.05**	**41**	LR		LR	LR	08 42 57.5	
	comp=Z,159nm,21.7s,baz=177,slow=38								
FINES	**FINESS Array B**	**58.29**	**328**	P		P	**P**	**08 17 56.9**	**+0.8**
	comp=Z,4.0nm,1.0s,baz=39,slow=5.3,SNR=3.2								
	comp=Z,4.0nm,1.0s								
WB0	**Warramunga Arr**	**58.73**	**136**	P		P	**P**	**08 17 58.6**	**-1.1**
WB0				IAmb		IAmb	IAmb	08 18 42.7	
	comp=Z,4.5nm,1.1s								
WRA	**Warramunga Arr**	**58.83**	**136**	P		P	**P**	**08 17 59.1**	**-1.3**
	comp=Z,0.4nm,0.7s,baz=324,slow=7.1,SNR=5.8								
	comp=Z,0.4nm,0.7s								
WRA	**Warramunga Arr**	**58.83**	**136**	P		P	**P**	**08 17 58.2**	**-2.1**
WR8	**Warramunga Arr**	**58.94**	**136**	P		P	**P**	**08 18 01.1**	**-0.1**
WR8				IAmb		IAmb	IAmb	08 18 31.8	
	comp=Z,9.1nm,1.4s								
ASAR	**Alice Springs**	**61.34**	**139**	P		P	**P**	**08 18 17.4**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=319,slow=7.6,SNR=4.5								
	comp=Z,0.2nm,0.5s								
ASAR	**Alice Springs**	**61.34**	**139**	P		P	**P**	**08 18 16.7**	**-0.9**
HFS	**Hagfors**	**64.36**	**327**	P		P	**P**	**08 18 37.3**	**+0.3**
	comp=Z,2.3nm,0.6s,baz=104,slow=6.1,SNR=6.0								
	comp=Z,2.3nm,0.6s								
NC405	**NORSAR Array S**	**65.21**	**328**	P		P	**P**	**08 18 41.4**	**-1.2**
NC602	**NORSAR Array S**	**65.35**	**328**	P		P	**P**	**08 18 43.2**	**-0.2**
NOA	**NORSAR Array B**	**65.47**	**328**	P		P	**P**	**08 18 44.1**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=110,slow=10,SNR=1.4								
	comp=Z,0.4nm,0.6s								
NC204	**NORSAR Array S**	**65.65**	**328**	P		P	**P**	**08 18 45.9**	**+0.4**
NC204				IAmb		IAmb	IAmb	08 19 15.9	
	comp=Z,24nm,1.2s								
L14K	**Kuka Creek**	**73.99**	**29**	P		P	**P**	**08 19 36.0**	**-0.4**
L14K				IAmb		IAmb	IAmb	08 19 41.2	
	comp=Z,8.5nm,1.3s								
C23K	**Itkillik River**	**74.62**	**19**	P		P	**P**	**08 19 40.1**	**+0.2**
C23K				IAmb		IAmb	IAmb	08 20 18.8	
	comp=Z,5.0nm,1.4s								
D23K	**Nanushuk River**	**75.05**	**20**	P		P	**P**	**08 19 43.1**	**+0.6**
D23K				IAmb		IAmb	IAmb	08 20 22.9	
	comp=Z,3.2nm,1.2s								
H21K	**Melozitna Rive**	**76.04**	**23**	P		P	**P**	**08 19 47.9**	**-0.3**
H21K				IAmb		IAmb	IAmb	08 20 17.8	
	comp=Z,4.4nm,1.4s								
BMAR	**Burnt Mountain**	**77.80**	**20**	P		P	**P**	**08 19 58.6**	**+0.5**
KNK	**Knik Glacier**	**79.96**	**26**	P		P	**P**	**08 20 09.6**	**-0.3**
KNK				IAmb		IAmb	IAmb	08 20 41.8	
	comp=Z,20nm,1.3s								
POIN	**Pond Inlet**	**82.39**	**358**	P		P	**P**	**08 20 22.9**	**+0.3**
SKAG	**Skagway**	**86.19**	**23**	P		P	**P**	**08 20 41.7**	**-0.2**
SKAG				IAmb		IAmb	IAmb	08 20 42.6	
	comp=Z,9.2nm,0.8s								
KUQ	**Kuujjuaa**	**96.02**	**351**	P		P	**P**	**08 21 27.1**	**-0.7**
QSPA	**South Pole Qui**	**114.85**	**180**	Pdif		**Pdif**	**P**	**08 22 53.0**	**+1.5**

ASRS ***23*** *08:10:09.0±1.5, 53.60N×87.75E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 23 08:10:11.2±3.0, 53.61N×87.86E, h0km, mbtmp2.9/2, ML2.4/2, Error ellipse: s-maj=27.1km s-min=17.8km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.84**	**282**			I	I	08 21 40.0	
	baz=99,slow=337,SNR=3.0								
ZALV	**Zalesovo Beam**	**1.84**	**282**			Pn	Pn	08 10 44.0	-0.1
	1.9nm,0.3s,baz=98,slow=15,SNR=17								
ZALV						Lg	Lg	08 11 09.6	
	1.6nm,0.3s,baz=95,slow=24,SNR=9.1								
KURBB	**Kurchatov Arra**	**6.48**	**246**			Pn	Pn	08 11 48.8	+1.0
	baz=62,slow=14,SNR=2.1								
KURBB						Lg	Lg	08 13 35.2	
	baz=63,slow=32								
	0.5nm,0.3s								
MKAR	**Makanchi Array**	**7.70**	**210**			Pn	Pn	08 12 05.5	+1.0
	0.1nm,0.3s,baz=28,slow=14,SNR=4.2								
MKAR						Lg	Lg	08 14 14.6	
	0.1nm,0.3s,baz=26,slow=26,SNR=2.6								
	0.1nm,0.3s								

GCG ***23*** *08:28:38.8±2.3, 13.96N×89.96W, h6km±12km, MD3.9, ML3.5, MW2.8, Presumed earthquake*
SNET ***23*** *08:28:38.0±1.2, 13.95N×89.98W, h6km±4km, ML2.9, Presumed earthquake*
CATAC ***23*** *08:28:38.7±0.4, 14.N±2.×9.0W±., h7km±2km, M2.8/7, MLv2.8/7, Error ellipse: s-maj=4.1km s-min=3.9km az=163.4, confirmed*
ISC 23 08:28:39.9±0.9, 13.91N±0.03×89.91W±0.02, h16km±5km, n40, σ1°13/61, 4C-1D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FAME	**Alcaldia de Sa**	**0.12**	**239**			P	**Pb**	**08 28 42.0**	**-1.9**
FAME						S	**Sb**	**08 28 43.7**	**-2.7**
NUBE	**Las Nubes**	**0.13**	**91**			P	**Pg**	**08 28 43.8**	**0.0**
NUBE	**Las Nubes**	**0.13**	**91**			*i* P	**Pg**	**08 28 43.8**	**0.0**
NUBE						*i* S	**Sg**	**08 28 46.3**	**0.0**
NUBE						IAML		08 28 47.6	
	comp=N,6μm,0.4s								
NUBE	**Las Nubes**	**0.13**	**91**			*e*P	**Pg**	**08 28 43.8**	**0.0**
NUBE						*e*S	**Sg**	**08 28 47.0**	**+0.7**
LOAL	**Lomas de Alarc**	**0.16**	**54**			P	**Pb**	**08 28 43.9**	**-0.7**
LOAL						S	**Sg**	**08 28 47.5**	**+0.6**
LOAL	**Lomas de Alarc**	**0.16**	**54**			*e*P	**Pb**	**08 28 43.9**	**-0.7**
SLOZ	**Alcaldia de Sa**	**0.17**	**46**			P	**Pb**	**08 28 43.9**	**-1.0**
SLOZ	**Alcaldia de Sa**	**0.17**	**46**			*i* P	**Pb**	**08 28 43.8**	**-1.0**
SLOZ						*e*S	**Sg**	**08 28 47.6**	**+0.4**
RTR	**El Retiro**	**0.26**	**92**			*e*P	**Pb**	**08 28 46.4**	**+0.1**
SBLS	**San Blas**	**0.29**	**103**			*e*P	**Pb**	**08 28 46.9**	**0.0**
CEVE	**Cerro Verde**	**0.29**	**105**			P	**Pb**	**08 28 47.2**	**+0.3**
CEVE						S	**Sn**	**08 28 53.9**	**-2.1**
CEVE	**Cerro Verde**	**0.29**	**105**			*e*P	**Pb**	**08 28 47.0**	**+0.1**
SNJE	**San Jose**	**0.30**	**97**			*e*P	**Pb**	**08 28 47.1**	**0.0**
RBDL	**Robledal**	**0.30**	**47**			*i* P	**Pg**	**08 28 46.1**	**-0.3**
RBDL						*e*S	**Sg**	**08 28 51.1**	**+0.3**
UNIC	**Universidad Ca**	**0.36**	**78**			P	**Pg**	**08 28 47.3**	**-0.1**
UNIC	**Universidad Ca**	**0.36**	**78**			*e*P	**Pg**	**08 28 47.4**	**0.0**
UNIC						*e*S	**Sb**	**08 28 53.3**	**-0.2**
CEDA	**San Andres**	**0.51**	**101**			P	**Pb**	**08 28 50.7**	**+0.1**
CEDA						S	**Sb**	**08 28 59.0**	**+1.2**
CEDA	**San Andres**	**0.51**	**101**			*e*P	**Pb**	**08 28 50.8**	**+0.2**
JAYA	**Jayaque - finc**	**0.51**	**119**			P	**Pb**	**08 28 50.5**	**-0.1**
JAYA						S	**Sb**	**08 28 59.1**	**+1.1**
JAYA	**Jayaque - finc**	**0.51**	**119**			*i* P	**Pb**	**08 28 50.4**	**-0.4**
JAYA						*i* S	**Sb**	**08 28 58.9**	**+0.8**
JAYA						IAML		08 29 02.8	
	comp=N,2μm,0.2s								
JAYA	**Jayaque - finc**	**0.51**	**119**			*e*P	**Pb**	**08 28 50.6**	**-0.1**
PMON	**Piamonte**	**0.61**	**108**			P	**Pb**	**08 28 52.5**	**+0.2**
PMON						S	**Sn**	**08 29 03.3**	**-0.4**
UEES	**Universidad Ev**	**0.68**	**106**			P	**Pg**	**08 28 53.8**	**+0.5**
UEES						S	**Sn**	**08 29 04.8**	**-0.6**
LALI	**Alcalda de L**	**0.71**	**126**			*i* P	**Pb**	**08 28 51.5**	**-2.4**
FG8	**Yepocapa, Chim**	**0.72**	**299**			*i* P	**Pn**	**08 28 58.0**	**+2.4**
MTO3	**Montecristo**	**0.73**	**47**			P	**Pb**	**08 28 53.3**	**-1.2**
MTO3						S	**Sb**	**08 29 03.8**	**-0.4**
MTO3	**Montecristo**	**0.73**	**47**			*i* P	**Pb**	**08 28 53.2**	**-1.2**
UDBS	**Universidad Do**	**0.76**	**104**			P	**Pn**	**08 28 55.4**	**-0.7**
UDBS						S	**Sn**	**08 29 07.2**

az=76.0
*NOU **23** 08:44:09.3, 25°.81S × 179°.94W, h470 km, mb4.3/35, South of Fiji Islands*
*NEIC **23** 08:44:10.0 ± 1.8, 25°.9S ± 0°.1 × 179°.9W ± 0°.1, h469 km ± 8 km, mb4.3/20, Error ellipse: s-maj=19.3km s-min=17.0km az=78.0*
ISC 23 08:44:08.6 ± 0.4, **25°.79S** ± 0°.05 × **179°.92W** ± 0°.07, **h458** km, **n141**, σ1°.**43**/144, **mb4.2**/17, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RIZ	**Raoul Island**	**3.87**	**153**	P	P	08 45 16.3	-6.8
RAO	**Raoul Island**	**3.88**	**153**	P	P	**08 45 23.6**	**+0.4**
	2um,0.2s,baz=83,slow=8.7,SNR=29						
RAO	**Raoul Island**	**3.88**	**153**	P	P	**08 45 26.2**	**+3.0**
RAO	**Raoul Island**	**3.88**	**153**	S	S	**08 46 25.3**	**+1.4**
RAO	**Raoul Island**	**3.88**	**153**	P	P	**08 45 26.3**	**+3.0**
RAO	**Raoul Island**	**3.88**	**153**	P	P	**08 45 25.3**	**+2.2**
GLKZ	**Green Lake**	**3.89**	**153**	P	P	**08 45 25.9**	**+2.6**
GLKZ				S	S	**08 46 25.7**	**+1.7**
MSVF	**Nonsavu**	**8.23**	**346**	P	P	**08 46 07.0**	**+0.2**
	5.5nm,0.5s,baz=278,slow=23,SNR=12						
MSVF	**Nonsavu**	**8.23**	**346**	P	P	**08 46 07.1**	**+0.2**
MSVF	**Nonsavu**	**8.23**	**346**		P	**08 46 07.3**	**+0.4**
TAVE	**Taveuni**	**9.03**	**0**	P	P	**08 46 16.4**	**+1.0**
DGTI	**Dogotuki**	**9.45**	**358**	P	P	**08 46 20.0**	**+0.7**
OUZ	**Omahuta**	**10.94**	**209**	P	P	**08 46 38.0**	**+2.2**
OUZ	**Omahuta**	**10.94**	**209**	P	P	**08 46 38.3**	**+2.5**
WCZ	**Waipu Caves**	**11.25**	**205**	P	P	**08 46 41.7**	**+2.5**
NIUE	**Niue**	**11.40**	**56**	P	P	**08 46 43.7**	**+2.7**
NIUE	**Niue**	**11.40**	**56**	S	S	**08 48 48.5**	**+1.9**
NIUE	**Niue**	**11.40**	**56**	P	P	**08 46 40.5**	**-0.5**
NIUE	**Niue**	**11.40**	**56**	P	P	**08 46 39.4**	**-1.6**
MXZ	**Matakaoa Point**	**11.84**	**187**	P	P	**08 46 46.2**	**+0.7**
MXZ	**Matakaoa Point**	**11.84**	**187**	S	S	**08 48 55.9**	**+1.0**
MXZ	**Matakaoa Point**	**11.84**	**187**	P	P	**08 46 43.4**	**-2.1**
MARNC	**Mare, Loyalty**	**11.85**	**289**	P	P	**08 46 48.0**	**+2.2**
WMGZ	**Waiomatatini S**	**12.08**	**186**	P	P	**08 46 46.2**	**-1.9**
HAZ	**Te Kaha**	**12.09**	**189**	P	P	**08 46 47.6**	**-0.6**
HAZ				S	S	**08 49 02.0**	**+2.1**
RUGZ	**Raukumara Rang**	**12.31**	**189**	P	P	**08 46 52.0**	**+1.3**
RUGZ				S	S	**08 49 05.9**	**+1.4**
PUZ	**Puketiti**	**12.35**	**187**	P	P	**08 46 50.6**	**-0.4**
PUZ				S	S	**08 49 04.5**	**-1.5**
TWGZ	**Tauwhareparae**	**12.48**	**188**	P	P	**08 46 52.0**	**-0.5**
TWGZ				S	S	**08 49 08.3**	**+0.5**
TOZ	**Tahuroa Road**	**12.53**	**197**	P	P	**08 46 53.9**	**+1.0**
OUENC	**Ouen Island, N**	**12.55**	**283**	P	P	**08 46 54.6**	**+1.1**
LIRZ	**Lichensteins R**	**12.58**	**194**	P	P	**08 46 52.0**	**-1.5**
KARZ	**Kaharoa**	**12.62**	**194**	P	P	**08 46 55.5**	**+1.5**
OMRZ	**Omania**	**12.68**	**193**	P	P	**08 46 54.9**	**+0.3**
URZ	**Urewera**	**12.69**	**191**	P	P	**08 46 53.0**	**-1.6**
	21nm,0.3s,baz=265,slow=2.9,SNR=27						
URZ				S	S	**08 49 10.4**	**-1.3**
	20nm,0.5s,baz=44,slow=23,SNR=15						
URZ	**Urewera**	**12.69**	**191**	P	P	**08 46 53.3**	**-1.4**
URZ	**Urewera**	**12.69**	**191**	S	S	**08 49 12.1**	**+0.4**
URZ	**Urewera**	**12.69**	**191**	P	P	**08 46 53.0**	**-1.6**
MWZ	**Matawai**	**12.70**	**189**	P	P	**08 46 53.1**	**-1.7**
TKGZ	**Te Karaka**	**12.76**	**188**	P	P	**08 46 54.8**	**-0.6**
CNGZ	**Carnagh Statio**	**12.76**	**187**	P	P	**08 46 54.8**	**-0.7**
RAGZ	**Rawiri**	**12.87**	**189**	P	P	**08 46 55.8**	**-0.9**
ONTNC	**Ouen Toro**	**12.92**	**283**	P	P	**08 46 58.7**	**+1.2**
MUGZ	**Murupara**	**12.96**	**192**	P	P	**08 46 57.4**	**-0.3**
DZM	**Mont Dzumac**	**13.01**	**284**	P	P	**08 46 59.7**	**+1.2**
	23nm,0.6s,baz=94,slow=14,SNR=22						
RIGZ	**Rimuhau**	**13.03**	**188**	P	P	**08 46 57.6**	**-0.8**
PRGZ	**Paritu Road**	**13.23**	**188**	P	P	**08 47 01.4**	**+0.9**
MTHZ	**Maungataniwha**	**13.31**	**191**	P	P	**08 47 00.2**	**-1.3**
RAHZ	**Arahi**	**13.33**	**190**	P	P	**08 47 01.2**	**-0.4**
HIZ	**Hauiti**	**13.44**	**198**	P	P	**08 47 04.1**	**+1.4**
HIZ	**Hauiti**	**13.44**	**198**	P	P	**08 47 03.9**	**+1.2**
NMHZ	**Naumai**	**13.55**	**191**	P	P	**08 47 01.8**	**-2.3**
BKZ	**Black Stump Fm**	**13.68**	**192**	P	P	**08 47 05.2**	**-0.2**
BKZ	**Black Stump Fm**	**13.68**	**192**	S	S	**08 49 32.6**	**+1.2**
BKZ	**Black Stump Fm**	**13.68**	**192**	P	P	**08 47 02.6**	**-2.8**
VRZ	**Vera Road**	**14.03**	**197**	P	P	**08 47 10.0**	**+0.9**
AFI	**Afiamalu**	**14.07**	**34**	P	P	**08 47 06.8**	**-3.1**
	44nm,0.5s,baz=75,slow=1.7,SNR=13						
BFZ	**Birch Farm**	**15.20**	**191**	P	P	**08 47 20.2**	**-1.3**
BFZ	**Birch Farm**	**15.20**	**191**	S	S	**08 50 01.6**	**+0.8**
MRZ	**Mangatainoka R**	**15.30**	**193**	P	P	**08 47 19.1**	**-3.5**
SANVU	**Saraoutou**	**15.84**	**308**	P	P	**08 47 29.4**	**+0.8**
SANVU	**Saraoutou**	**15.84**	**308**	S	S	**08 50 14.6**	**+0.8**
SANVU	**Saraoutou**	**15.84**	**308**	P	P	**08 47 29.3**	**+0.8**
SNZO	**South Karori**	**16.11**	**195**	P	P	**08 47 31.3**	**+0.1**
QRZ	**Quartz Range**	**16.26**	**201**	P	P	**08 47 31.8**	**-1.0**
QRZ	**Quartz Range**	**16.26**	**201**	P	P	**08 47 32.1**	**-0.7**
NNZ	**Nelson**	**16.36**	**198**	P	P	**08 47 31.2**	**-2.7**
THZ	**Tophouse**	**17.00**	**199**	P	P	**08 47 38.3**	**-2.3**
DSZ	**Denniston Nort**	**17.32**	**201**	P	P	**08 47 42.3**	**-1.7**
KHZ	**Kahutara**	**17.44**	**196**	P	P	**08 47 44.7**	**-0.4**
KHZ	**Kahutara**	**17.44**	**196**	S	S	**08 50 41.7**	**-1.5**
KHZ	**Kahutara**	**17.44**	**196**	P	P	**08 47 42.4**	**-2.7**
GVZ	**Greta Valley S**	**18.09**	**197**	P	P	**08 47 48.5**	**-3.2**
LTZ	**Lake Taylor**	**18.12**	**199**	P	P	**08 47 49.3**	**-2.8**
INZ	**Inchbonnie**	**18.32**	**201**	P	P	**08 47 52.0**	**-2.0**
OXZ	**Oxford**	**18.69**	**199**	P	P	**08 47 54.8**	**-2.6**
WVZ	**Waitaha Valley**	**18.87**	**202**	P	P	**08 47 57.1**	**-1.9**
RPZ	**Rata Peaks**	**19.34**	**200**	P	P	**08 48 00.9**	**-2.5**
	18nm,0.4s,baz=195,slow=0.7,SNR=10						
RPZ	**Rata Peaks**	**19.34**	**200**	P	P	**08 48 02.9**	**-0.5**
RPZ	**Rata Peaks**	**19.34**	**200**	P	P	**08 48 03.0**	**-0.3**
FOZ	**Fox Glacier**	**19.59**	**203**	P	P	**08 48 04.0**	**-1.6**
TMZ	**Timaru**	**19.96**	**199**	P	P	**08 48 07.5**	**-1.5**
JCZ	**Jackson Bay**	**20.42**	**204**	P	P	**08 48 14.7**	**+1.4**
ODZ	**Otahua Downs**	**20.67**	**199**	P	P	**08 48 15.2**	**-0.2**
WKZ	**Wanaka**	**21.00**	**202**	P	P	**08 48 17.2**	**-1.3**
EAZ	**Earnscleugh**	**21.25**	**201**	P	P	**08 48 19.1**	**-1.7**
TATA	**Tatamba Isabel**	**25.91**	**308**	P	P	**08 49 01.0**	**-1.9**
EIDS	**Eidsvold**	**26.14**	**265**	P	P	**08 49 05.7**	**+0.9**
EIDS	**Eidsvold**	**26.14**	**265**	P	P	**08 49 05.6**	**+0.8**
EIDS				IAmb	IAmb	08 49 06.4	
	comp=Z,6.1nm,0.8s						
CTA	**Charters Tower**	**31.61**	**273**	P	P	**08 49 53.0**	**+0.4**
CTAO	**Charters Tower**	**31.61**	**273**	P	P	**08 49 53.3**	**+0.7**
CTAO	**Charters Tower**	**31.61**	**273**	P	P	**08 49 53.4**	**+0.7**
CTAO				IAmb	IAmb	08 49 53.9	
	comp=Z,13nm,0.7s						
HTT	**Hallett**	**36.40**	**248**	P	P	**08 50 32.9**	**-0.2**
COEN	**Coen**	**36.53**	**282**	P	P	**08 50 34.7**	**+0.5**
COEN	**Coen**	**36.53**	**282**	P	P	**08 50 34.9**	**+0.6**
COEN				IAmb	IAmb	08 50 35.4	
	comp=Z,9.6nm,0.7s						
QIS	**Mount Isa**	**37.47**	**269**	P	P	**08 50 41.6**	**-0.4**
BBOO	**Buckleboo**	**38.81**	**249**	P	P	**08 50 51.8**	**-1.0**
BBOO	**Buckleboo**	**38.81**	**249**	P	P	**08 50 52.2**	**-0.6**
BBOO				IAmb	IAmb	08 51 09.3	
	comp=Z,36nm,1.4s						
AS31	**Alice Springs**	**41.83**	**263**		P	**08 51 17.1**	**-0.3**
ASAR	**Alice Springs**	**41.84**	**263**	P	P	**08 51 16.8**	**-0.5**
	comp=Z,3.7nm,0.6s,baz=95,slow=8.0,SNR=76						
ASAR				PcP	PcP	**08 53 01.6**	**-1.4**
	comp=Z,0.6nm,0.6s,baz=100,slow=3.6,SNR=4.4						
ASAR				S	S	**08 57 00.1**	**-1.1**
	comp=Z,0.9nm,0.7s,baz=99,slow=17,SNR=6.7						
	comp=Z,3.7nm,0.6s						
ASAR	**Alice Springs**	**41.84**	**263**	P	P	**08 51 17.0**	**-0.3**
WR8	**Warramunga Arr**	**42.24**	**268**		P	**08 51 19.8**	**-0.7**
WR8				IAmb	IAmb	08 51 20.4	
	comp=Z,7.5nm,0.8s						
WRAB	**Tennant Creek**	**42.38**	**268**	P	P	**08 51 20.5**	**-1.2**
WRA	**Warramunga Arr**	**42.39**	**268**	P	P	**08 51 20.8**	**-0.9**
	comp=Z,5.9nm,0.6s,baz=100,slow=7.5,SNR=93						
	comp=Z,5.9nm,0.6s						
WRA	**Warramunga Arr**	**42.39**	**268**	P	P	**08 51 21.1**	**-0.7**
WB0	**Warramunga Arr**	**42.39**	**268**		P	**08 51 21.0**	**-0.8**
WB0				IAmb	IAmb	08 51 21.6	
	comp=Z,10nm,0.8s						
KNRA	**Kununurra**	**48.78**	**271**		P	**08 52 10.8**	**-0.1**
KNRA				IAmb	IAmb	08 52 11.4	
	comp=Z,7.7nm,0.5s						
SIJI	**Sorong**	**53.12**	**290**	P	P	**08 52 41.8**	**-0.9**
	comp=Z,4.1nm,0.3s,baz=105,slow=4.3,SNR=5.2						
	comp=Z,4.1nm,0.3s						
MORW	**Morawa**	**56.32**	**251**	P	P	**08 53 04.0**	**-1.0**
MORW				IAmb	IAmb	08 53 48.1	
	comp=Z,9.1nm,1.1s						
CASY	**Casey**	**58.46**	**206**	P	P	**08 53 18.2**	**-0.8**
CASY				IAmb	IAmb	08 53 53.7	
	comp=Z,12nm,1.4s						
QSPA	**South Pole Qui**	**64.30**	**180**	P	P	**08 53 56.2**	**-1.5**
	comp=Z,1.6nm,0.7s,baz=336,slow=0.8,SNR=9.2						
	comp=Z,1.6nm,0.7s						
QSPA	**South Pole Qui**	**64.30**	**180**	P	P	**08 53 58.8**	**+1.1**
MJAR	**Matsushiro Arr**	**73.49**	**326**	P	P	**08 54 53.5**	**0.0**
JSU	**Suzuyama**	**74.11**	**317**	P	P	**08 54 57.9**	**+0.7**
BELA	**Belgrano 2**	**74.56**	**173**	P	P	**08 54 58.9**	**-0.1**
SSLB	**Suanglung**	**75.51**	**306**	P	P	**08 55 06.7**	**+1.4**
JKA	**Kamikawa-asahi**	**77.58**	**333**	P	P	**08 55 18.1**	**+1.9**
KSRS	**Korea Array**	**79.74**	**320**	P	P	**08 55 28.6**	**+0.7**
	comp=Z,1.9nm,0.7s,baz=137,slow=5.2,SNR=8.9						
	comp=Z,1.9nm,0.7s						
PEA0B	**Petropavlovsk-**	**80.94**	**347**	P	P	**08 55 34.4**	**+0.5**
PETK	**Petropavlovsk-**	**80.94**	**347**	P	P	**08 55 34.1**	**+0.2**
	comp=Z,4.5nm,0.8s,baz=114,slow=7.2,SNR=7.2						
	comp=Z,4.5nm,0.8s						
PETK	**Petropavlovsk-**	**80.94**	**347**	P	P	**08 55 33.8**	**-0.1**
SNAA	**Sanae**	**82.79**	**179**	P	P	**08 55 43.0**	**-0.3**
SNAA				IAmb	IAmb	08 56 24.7	
	comp=Z,10.0nm,1.2s						
CMAR	**Chiang Mai Arr**	**90.25**	**290**	P	P	**08 56 20.6**	**+0.6**
	comp=Z,1.7nm,0.3s,baz=172,slow=2.5,SNR=5.7						
	comp=Z,1.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**90.25**	**290**	P	P	**08 56 21.4**	**+1.4**
KURK	**Kurchatov**	**116.61**	**316**		**PKPdf**	**09 01 58.1**	**-1.4**
KURBB	**Kurchatov Arra**	**116.65**	**316**	PKP	**PKPdf**	**09 01 58.1**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=124,slow=2.1,SNR=4.4						
BVAR	**Borovoye Array**	**121.89**	**318**	PKP	**PKPdf**	**09 02 08.1**	**-1.6**
	comp=Z,0.9nm,0.5s,baz=119,slow=1.9,SNR=4.2						
SPITS	**Spitsbergen Ar**	**127.00**	**356**	PKP	**PKPdf**	**09 02 17.5**	**-1.2**
	comp=Z,9.8nm,1.1s,baz=50,slow=6.6,SNR=4.2						
ARCES	**ARCESS Array B**	**133.74**	**348**	PKP	**PKPdf**	**09 02 30.9**	**-0.8**
	comp=Z,18nm,1.3s,baz=85,slow=1.4,SNR=1.7						
FINES	**FINESS Array B**	**140.25**	**341**	PKhKP	PKPpre	09 02 36.1	
	comp=Z,1.2nm,0.6s,baz=31,slow=4.4,SNR=5.9						
FINES				PKP	**PKPdf**	**09 02 44.8**	**+0.9**
	comp=Z,2.6nm,0.9s,baz=48,slow=2.8,SNR=3.8						
NB201	**NORSAR Array S**	**143.93**	**351**	PKPbc	PKPbc	09 02 48.9	-0.5
NB2	**NORSAR Subarra**	**143.95**	**351**	PKP	PKPbc	09 02 48.9	-0.6
	comp=Z,0.6nm,0.5s,baz=18,slow=3.2						
NOA	**NORSAR Array B**	**143.95**	**351**	PKP	PKPbc	09 02 49.0	-0.6
	comp=Z,4.6nm,0.8s,baz=16,slow=4.9,SNR=14						
NAO01	**NORSAR Array S**	**144.18**	**351**	PKPbc	**PKPdf**	**09 02 50.6**	**-0.2**
HFS	**Hagfors**	**144.40**	**348**	PKP	PKPbc	09 02 50.0	-0.9
	comp=Z,8.5nm,0.5s,baz=66,slow=3.6,SNR=53						
AKASG	**Malin Array Be**	**146.58**	**326**	PKPbc	**PKPbc**	**09 02 56.6**	**-1.0**
	comp=Z,1.2nm,0.4s,baz=45,slow=4.4,SNR=10						
AKASG	**Malin Array Be**	**146.58**	**326**	PKPbc	**PKPbc**	**09 02 56.8**	**-0.8**
AKBB	**Malin Array Si**	**146.58**	**326**	PKPbc	**PKPbc**	**09 02 57.2**	**-0.4**
KIEV	**Kiev**	**146.59**	**326**	PKPbc	**PKPbc**	**09 02 57.1**	**-0.5**
MMAI	**Mount Meron Ar**	**146.50**	**292**	PKPbc	**PKPbc**	**09 03 02.6**	**-0.7**
	comp=Z,2.3nm,0.5s,baz=128,slow=4.4,SNR=2.4						
BRTR	**Keskin Array B**	**148.74**	**305**	PKPbc	**PKPbc**	**09 03 03.1**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=139,slow=4.4,SNR=5.0						
EKA	**Eskdalemuir Ar**	**150.39**	**4**	PKPbc	**PKPbc**	**09 03 05.5**	**-1.5**
	comp=Z,0.7nm,0.4s,baz=346,slow=2.8,SNR=6.9						

*ASRS **23** 08:49:33.0 ± 1.3, 53°.60N × 87°.98E, h0 km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 23 08:49:37.0 ± 3.2, **53°.55N × 87°.95E, h0 km, mbtmp2.8**/2, **ML2.3**/2, **Error ellipse: s-maj=29.9km s-min=18.0km az=62.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.90**	**284**	I	I	09 02 00.0	
	0.1nm,0.9s,baz=98,slow=338,SNR=3.5						
ZALV	**Zalesovo Beam**	**1.90**	**284**	Pn	Pn	08 50 09.7	-0.9
	1.1nm,0.3s,baz=104,slow=18,SNR=11						
ZALV				Lg	Lg	08 50 37.2	
	3.0nm,0.3s,baz=104,slow=25,SNR=28						
KURBB	**Kurchatov Arra**	**6.50**	**247**	Pn	Pn	08 51 14.6	+0.8
	0.1nm,0.3s,baz=62,slow=14,SNR=6.3						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**7.67**	**210**	Pn	Pn	08 51 31.2	+1.3
	0.1nm,0.3s,baz=32,slow=14,SNR=2.5						
MKAR				Lg	Lg	08 53 38.4	
	0.1nm,0.3s,baz=31,slow=24,SNR=3.2						
	0.1nm,0.3s						

*UPP **23** 08:59:11.0 ± 0.5, 67°.83N × 20°.19E, h2 km ± 4 km, ML2.6, Confirmed Induced event*
*HEL **23** 08:59:11.9 ± 0.4, 67°.80N × 20°.01E, h0 km, ML1.1, Suspected explosion*
ISC 23 08:59:10.8 ± 1.1, **67°.78N** ± 0°.03 × **20°.22E** ± 0°.04, **h0** km, **n14**, σ1°.**13**/19, **Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.18**	**15**	P	**Pg**	**08 59 13.7**	**-0.6**
KUA				S	**Sg**	**08 59 15.7**	**-0.8**
RATU	**Laukkuluspa**	**0.24**	**280**	P	**Pg**	**08 59 15.3**	**-0.2**
KOVU	**Salmi**	**0.44**	**357**	P	**Pg**	**08 59 18.7**	**-0.6**
LANU	**Lannavaara**	**0.72**	**68**	P	**Pg**	**08 59 24.4**	**-0.3**
LANU	**Lannavaara**	**0.72**	**68**	PG	**Pb**	**08 59 25.9**	**-0.4**
LANU				SG	**Sb**	**08 59 36.0**	**-0.8**
SALU	**Saltoluokta**	**0.77**	**239**	P	**Pg**	**08 59 25.7**	**+0.1**
HEF	**Hetta**	**1.44**	**63**	PG	**Pb**	**08 59 38.6**	**+0.1**
HEF				smax	smax	08 59 57.0	
	comp=Z,1.3nm,0.2s						
HEF				SG	**Sn**	**08 59 58.6**	**+1.0**
KLF	**Kolari**	**1.54**	**109**	smax	smax	09 00 00.4	
	comp=Z,1.1nm,0.2s						
KLF				SN	**Sn**	**09 00 02.9**	**+2.7**
KTK1	**Kautokeino**	**1.67**	**41**	PG	**Pb**	**08 59 42.2**	**-0.1**
KTK1				SN	**Sg**	**09 00 05.9**	**+1.6**
TOF	**Tornio**	**2.35**	**135**	smax	smax	09 00 23.7	
	comp=Z,0.5nm,0.2s						
TOF				SG	**Sg**	**09 00 26.2**	**-0.2**
RNF	**Rovaniemi**	**2.55**	**115**	PG	**Pg**	**08 59 59.2**	**-0.4**
RNF				SG	**Sg**	**09 00 31.7**	**-0.9**
ARA0	**ARCESS Array S**	**2.62**	**45**	SN	**Sb**	**09 00 30.4**	**-0.7**
RANF	**Ranua**	**3.14**	**121**	SN	**Sn**	**09 00 41.7**	**+2.0**
OBF4	**Vikkela, Lumij**	**3.58**	**144**	PG	**Pb**	**09 00 13.6**	**-1.3**

*ASRS **23** 09:09:39.0 ± 0.9, 54°.15N × 87°.22E, h0 km, M2.8(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 23 09:09:41.1 ± 3.5, **54°.17N × 87°.36E, h0 km, mbtmp2.7**/2, **ML2.3**/2, **Error ellipse: s-maj=31.6km s-min=19.1km az=46.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.51**	**263**	I	I	09 19 10.0	
	0.1nm,0.8s,baz=80,slow=333,SNR=1.6						
ZALV	**Zalesovo Beam**	**1.51**	**263**	Pg	Pn	09 10 07.6	-1.8
	1.2nm,0.3s,baz=82,slow=14,SNR=16						
ZALV				Lg	Lg	09 10 29.0	
	3.0nm,0.3s,baz=82,slow=29,SNR=17						
KURBB	**Kurchatov Arra**	**6.46**	**240**	Pn	Pn	09 11 19.0	+1.6
	baz=52,slow=13,SNR=3.5						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**8.06**	**206**	Pn	Pn	09 11 40.2	+0.8
	0.1nm,0.3s,baz=28,slow=13,SNR=5.3						
	0.1nm,0.3s						

*NNC **23** 09:11:46.6 ± 0.3, 42°.72N × 75°.82E, h0 km, mb2.5, mpv2.6, Error ellipse: s-maj=3.3km s-min=1.1km az=150.0*
*SOME **23** 09:11:46.7, 42°.72N × 75°.87E, h5 km*
*KRNET **23** 09:11:47.1 ± 0.1, 42°.73N × 75°.82E, h16 km, mb2.8*
ISC 23 09:11:47.1 ± 0.9, **42°.72N** ± 0°.03 × **75°.82E** ± 0°.02, **h10** km ± 10 km, **n20**, σ0°.**53**/38, **4C-15D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOOM	**Boomskoye usch**	**0.25**	**159**	*i* P	**Pg**	**09 11 52.3**	**0.0**
BOOM				*i* S	**Sg**	**09 11 56.1**	**+0.4**
TKM2	**Tokmak 2**	**0.26**	**320**	*i* P	**Pg**	**09 11 52.2**	**-0.3**
TKM2				*i* S	**Sg**	**09 11 56.2**	**+0.1**
KST	**Kastek**	**0.34**	**18**	P	**Pg**	**09 11 53.5**	**-0.4**
	26nm,0.1s						
KST				S	**Sg**	**09 11 58.5**	**+0.1**
	32nm,0.5s						
KST	**Kastek**	**0.34**	**18**	*e*P	**Pg**	**09 11 53.5**	**-0.4**
	26nm,0.1s						
KST				*e*S	**Sg**	**09 11 58.5**	**+0.1**
	32nm,0.5s						
DGS	**Degeres**	**0.52**	**356**	P	**Pg**	**09 11 56.8**	**-0.5**
	2.4nm,0.1s						
DGS				S	**Sg**	**09 12 04.3**	**+0.1**
	17nm,0.5s						
DGS	**Degeres**	**0.52**	**356**	*e*P	**Pg**	**09 11 56.8**	**-0.5**
	2.4nm,0.1s						
DGS				*e*S	**Sg**	**09 12 04.3**	**+0.1**
	17nm,0.5s						
KBK	**Karagaybulak**	**0.65**	**265**	⇓*i* P	**Pg**	**09 11 59.7**	**0.0**
KBK				⇓*i* S	**Sb**	**09 12 09.0**	**-0.8**
IZV	**Izvestkoviy**	**0.66**	**61**	P	**Pg**	**09 11 59.5**	**-0.5**
	2.7nm,0.1s						
IZV				S	**Sg**	**09 12 08.8**	**+0.1**
	4.5nm,0.2s						
IZV	**Izvestkoviy**	**0.66**	**61**	*e*P	**Pg**	**09 11 59.5**	**-0.5**
	2.7nm,0.1s						
IZV				*e*S	**Sg**	**09 12 08.8**	**+0.1**
	4.5nm,0.2s						
CHMS	**Chumysh**	**0.83**	**290**	⇓*i* P	**Pg**	**09 12 02.7**	**-0.5**
CHMS				⇓*i* S	**Sg**	**09 12 14.1**	**0.0**
AAK	**Ala-Archa**	**0.98**	**266**	⇑P	**Pg**	**09 12 05.7**	**-0.4**
	0.4nm,0.5s						
AAK				⇑S	**Sb**	**09 12 19.0**	**-0.5**
	0.4nm,0.3s						
AAK	**Ala-Archa**	**0.98**	**266**	⇑*i* P	**Pg**	**09 12 05.6**	**-0.4**
AAK				⇑*i* S	**Sb**	**09 12 19.0**	**-0.5**
UCH	**Uchtor**	**1.09**	**243**	⇓*i* P	**Pg**	**09 12 07.6**	**-0.5**
UCH				⇓*i* S	**Sb**	**09 12 22.7**	**0.0**
KTBS	**Karatobe**	**1.17**	**32**	P	**Pg**	**09 12 09.1**	**-0.6**
	2.0nm,0.2s						
KTBS				S	**Sb**	**09 12 25.3**	**+0.5**
	0.4nm,0.2s						
KTBS	**Karatobe**	**1.17**	**32**	*e*P	**Pg**	**09 12 09.1**	**-0.6**
	2.0nm,0.2s						
KTBS				*e*S	**Sb**	**09 12 25.3**	**+0.5**
	0.4nm,0.2s						
EKS2	**Erkin-Say**	**1.51**	**268**	⇓*i* P	**Pn**	**09 12 14.7**	**+0.3**
EKS2				⇓*i* S	**Sg**	**09 12 35.1**	**-0.6**
TARG	**Taragay, Kyrgy**	**1.77**	**123**	⇓*i* P	**Pb**	**09 12 19.3**	**-0.7**
TARG				⇓*i* S	**Sb**	**09 12 42.8**	**+0.3**
MRKS	**Merke**	**1.91**	**272**	Pg	**Pb**	**09 12 22.4**	**+0.2**
	1.3nm,0.1s						
MRKS				Lg	Lg	09 12 48.2	
	6.0nm,0.4s						
MRKS	**Merke**	**1.91**	**272**	*e*P	**Pb**	**09 12 22.4**	**+0.2**
	1.3nm,0.1s						
MRKS				*e*S	**Sg**	**09 12 48.2**	**-0.5**
	6.0nm,0.4s						
KK31	**Karatay Array**	**3.92**	**277**	⇓Pg	**Pb**	**09 12 58.1**	**+1.7**
	0.2nm,0.3s,baz=96,slow=16,SNR=5.9						
KK31				Lg	Lg	09 13 53.3	
	1.8nm,0.5s,baz=97,slow=27,SNR=8.7						

*ASRS **23** 09:15:30.0 ± 1.4, 53°.66N × 86°.86E, h0 km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 23 09:15:33.0 ± 2.6, **53°.72N × 86°.91E, h0** km, **mbtmp3.0**/2, **ML2.4**/2, **Error ellipse: s-maj=26.0km s-min=14.7km az=67.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.26**	**281**	I	I	09 24 00.0	
	baz=99,slow=338,SNR=2.3						
ZALV	**Zalesovo Beam**	**1.26**	**281**	Pg	Pg	09 15 55.2	-1.8
	0.9nm,0.3s,baz=103,slow=18,SNR=14						
ZALV				Lg	Lg	09 16 14.2	
	1.0nm,0.3s,baz=103,slow=27,SNR=6.2						
KURBB	**Kurchatov Arra**	**6.02**	**242**	Pn	Pn	09 17 04.0	+0.9
	0.1nm,0.3s,baz=57,slow=13,SNR=12						
	0.7nm,0.5s						
MKAR

ZALV	**Zalesovo Beam**	**57.73 332**		**P**	**09 28 37.6**	**-0.6**
KURK	**Kurchatov**	**59.04 327**		**P**	**09 28 47.4**	**+0.1**
KURK			IAmb	IAmb	09 28 48.1	
	comp=Z,5.8nm,0.7s					
KURBB	**Kurchatov Arra**	**59.04 326**	P	**P**	**09 28 47.2**	**-0.1**
	comp=Z,4.5nm,0.7s,baz=125,slow=6.2,SNR=41					
	comp=Z,4.5nm,0.7s					
KKAR	**Karatay Array**	**60.89 316**	P	**P**	**09 28 59.9**	**-0.2**
BVAR	**Borovoye Array**	**64.63 326**	P	**P**	**09 29 24.5**	**-0.1**
	comp=Z,2.7nm,0.5s,baz=85,slow=5.9,SNR=12					
	comp=Z,2.7nm,0.5s					
BORK	**Borovoye**	**64.68 326**	P	**P**	**09 29 25.1**	**+0.2**
BORK			IAmb	IAmb	09 29 25.6	
	comp=Z,5.5nm,0.7s					
NRIK	**Noril'sk**	**67.32 346**	P	**P**	**09 29 41.2**	**-0.3**
	comp=Z,2.0nm,0.5s,baz=69,slow=5.8,SNR=4.9					
	comp=Z,2.0nm,0.5s					
NRIK	**Noril'sk**	**67.32 346**	IAmb	IAmb	09 29 41.6	
	comp=Z,2.0nm,0.7s					
AB31	**Akbulak array**	**69.66 320**	IAmb	IAmb	09 29 56.9	
	comp=Z,2.3nm,0.7s					
ABKAR	**Akbulak array**	**69.66 320**	P	**P**	**09 29 56.1**	**-0.2**
AKTO	**Aktyubinsk**	**71.14 321**	P	**P**	**09 30 05.3**	**0.0**
	comp=Z,2.0nm,0.7s,baz=97,slow=4.6,SNR=7.7					
	comp=Z,2.0nm,0.7s					
ILAR	**Eielson Array**	**82.24 26**	P	**P**	**09 31 06.7**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=241,slow=5.2,SNR=8.5					
	comp=Z,0.8nm,0.6s					
ARCES	**ARCESS Array B**	**87.44 340**	P	**P**	**09 31 31.6**	**-1.5**
	comp=Z,4.4nm,0.8s,baz=64,slow=2.8,SNR=5.4					
	comp=Z,4.4nm,0.8s					
FINES	**FINESS Array B**	**89.00 332**	P	**P**	**09 31 39.0**	**-1.6**
	comp=Z,2.9nm,1.0s,baz=54,slow=3.3,SNR=5.8					
	comp=Z,2.9nm,1.0s					
YKA	**Yellowknife Ar**	**96.61 24**	P	**P**	**09 32 15.3**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=225,slow=5.5,SNR=7.5					
	comp=Z,0.3nm,0.7s					

*NOU **23** 09:27:44.2, 37.36S × 178.63E, h107km, MLv4.2/13, Off E. Coast of N. Island, N.Z.*
*WEL **23** 09:27:52.1 ± 0.6, 37.3S ± 4.1 × 17.8E ± , h29km ± 3km, M3.6/61, ML3.5/63, MLv3.6/61, Error ellipse: s-maj=5.7km s-min=3.5km az=46.2, confirmed*

ISC 23 09:27:52.2 ± 1.6, **37.36S** ± 0.06 × **177.79E** ± 0.04, **h53**km ± 11km, **n120**, σ 1.9 **38**/131, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**0.40**	**181**	P	**Pn**	**09 28 02.2**	**-0.4**
HAZ				S	**Sn**	**09 28 10.3**	**+0.4**
MXZ	**Matakaoa Point**	**0.46**	**117**	P	**Pn**	**09 28 01.5**	**-1.7**
MXZ	**Matakaoa Point**	**0.46**	**117**	S	**Sn**	**09 28 13.3**	**+2.2**
MXZ	**Matakaoa Point**	**0.46**	**117**	P	**Pn**	**09 28 02.4**	**-0.7**
MXZ				S	**Sn**	**09 28 10.4**	**-0.6**
WIZ	**White Island**	**0.51**	**250**	P	**Pn**	**09 28 03.7**	**0.0**
WIZ				S	**Sn**	**09 28 12.4**	**+0.4**
WSRZ	**White Island S**	**0.52**	**252**	P	**Pn**	**09 28 04.0**	**+0.1**
WSRZ				S	**Sn**	**09 28 12.6**	**+0.4**
RUGZ	**Raukumara Rang**	**0.61**	**188**	P	**Pn**	**09 28 04.5**	**-0.7**
RUGZ				S	**Sn**	**09 28 14.2**	**-0.4**
WMGZ	**Waiomatatini S**	**0.68**	**133**	P	**Pn**	**09 28 06.9**	**+1.1**
WMGZ				S	**Sn**	**09 28 19.3**	**+3.7**
PUZ	**Puketiti**	**0.80**	**153**	P	**Pn**	**09 28 08.0**	**+0.6**
PUZ				S	**Sn**	**09 28 21.6**	**+3.0**
WHRZ	**Whale Island**	**0.82**	**232**	P	**Pn**	**09 28 07.9**	**+0.3**
WHRZ				S	**Sn**	**09 28 19.7**	**+0.8**
TWGZ	**Tauwhareparae**	**0.83**	**170**	P	**Pn**	**09 28 09.5**	**+1.6**
MWZ	**Matawai**	**1.00**	**192**	P	**Pn**	**09 28 09.7**	**-0.3**
MWZ				S	**Sn**	**09 28 22.9**	**-0.2**
URZ	**Urewera**	**1.05**	**211**	P	**Pn**	**09 28 10.6**	**-0.1**
URZ	**Urewera**	**1.05**	**211**	P	**Pn**	**09 28 10.4**	**-0.3**
URZ				S	**Sn**	**09 28 24.0**	**-0.3**
TKGZ	**Te Karaka**	**1.08**	**178**	P	**Pn**	**09 28 12.1**	**+1.0**
MARZ	**Manawahe**	**1.09**	**234**	P	**Pn**	**09 28 11.2**	**0.0**
OPRZ	**Ohinepanea**	**1.10**	**243**	P	**Pn**	**09 28 10.8**	**-0.5**
OPRZ				S	**Sn**	**09 28 24.7**	**-0.7**
EDRZ	**Edgecumbe**	**1.12**	**228**	P	**Pn**	**09 28 11.6**	**-0.1**
CNGZ	**Carnagh Statio**	**1.17**	**164**	P	**Pn**	**09 28 12.9**	**+0.6**
RAGZ	**Rawiri**	**1.18**	**195**	P	**Pn**	**09 28 12.8**	**+0.4**
MYRZ	**Mayor Island**	**1.24**	**273**	P	**Pn**	**09 28 12.8**	**-0.4**
TGRZ	**Tauranga**	**1.27**	**253**	P	**Pn**	**09 28 13.3**	**-0.4**
LIRZ	**Lichensteins R**	**1.29**	**240**	P	**Pn**	**09 28 14.1**	**+0.2**
TARZ	**Mount Tarawera**	**1.34**	**229**	P	**Pn**	**09 28 15.7**	**+1.0**
RIGZ	**Rimuhau**	**1.35**	**181**	P	**Pn**	**09 28 15.2**	**+0.5**
OMRZ	**Omania**	**1.35**	**236**	P	**Pn**	**09 28 15.0**	**+0.2**
MUGZ	**Murupara**	**1.38**	**216**	P	**Pn**	**09 28 15.0**	**-0.1**
KARZ	**Kaharoa**	**1.40**	**241**	P	**Pn**	**09 28 15.3**	**-0.1**
RRRZ	**Republican Roa**	**1.41**	**225**	P	**Pn**	**09 28 15.6**	**+0.1**
RTZ	**Ruatahuna**	**1.41**	**207**	P	**Pn**	**09 28 15.8**	**+0.2**
HLRZ	**Highlands Stat**	**1.45**	**231**	P	**Pn**	**09 28 16.5**	**+0.4**
UTU	**Utuhina**	**1.51**	**237**	P	**Pn**	**09 28 18.4**	**+1.5**
KMRZ	**Kaimai**	**1.55**	**251**	P	**Pn**	**09 28 17.0**	**-0.4**
HSRZ	**Hossack Road**	**1.55**	**232**	P	**Pn**	**09 28 18.4**	**+0.9**
PRGZ	**Paritu Road**	**1.56**	**177**	P	**Pn**	**09 28 17.4**	**-0.2**
PRRZ	**Plateau Road**	**1.59**	**224**	P	**Pn**	**09 28 18.2**	**+0.2**
RAHZ	**Arahi**	**1.65**	**199**	P	**Pn**	**09 28 19.6**	**+0.8**
ALRZ	**Allen Road**	**1.66**	**223**	P	**Pn**	**09 28 20.0**	**+1.1**
KNZ	**Kokohu**	**1.67**	**183**	P	**Pn**	**09 28 18.7**	**-0.3**
MTHZ	**Maungataniwha**	**1.67**	**206**	P	**Pn**	**09 28 19.3**	**+0.2**
WPRZ	**Whakapapatarin**	**1.73**	**227**	P	**Pn**	**09 28 21.4**	**+1.5**
WHHZ	**Waihua**	**1.77**	**194**	P	**Pn**	**09 28 21.4**	**+0.9**
MHGZ	**Mahia Peninsul**	**1.79**	**177**	P	**Pn**	**09 28 20.6**	**-0.2**
MRHZ	**Matea Rd**	**1.83**	**216**	P	**Pn**	**09 28 21.6**	**+0.2**
TOZ	**Tahuroa Road**	**1.86**	**258**	P	**Pn**	**09 28 21.3**	**-0.3**
NMHZ	**Naumai**	**1.90**	**204**	P	**Pn**	**09 28 23.7**	**+1.4**
ARHZ	**Aropaoanui**	**2.00**	**198**	P	**Pn**	**09 28 24.1**	**+0.5**
BKZ	**Black Stump Fm**	**2.08**	**209**	P	**Pn**	**09 28 24.7**	**0.0**
BKZ	**Black Stump Fm**	**2.08**	**209**	S	**Sn**	**09 28 54.7**	**+5.3**
BKZ	**Black Stump Fm**	**2.08**	**209**	P	**Pn**	**09 28 25.1**	**+0.5**
WATZ	**Wairara**	**2.11**	**230**	P	**Pn**	**09 28 25.7**	**+0.6**
MKAZ	**Moumakai**	**2.12**	**276**	P	**Pn**	**09 28 24.9**	**-0.3**
GRZ	**Great Barrier**	**2.17**	**300**	P	**Pn**	**09 28 25.2**	**-0.7**
RATZ	**Rangitukua**	**2.19**	**226**	P	**Pn**	**09 28 27.9**	**+1.6**
WIAZ	**Waiheke Island**	**2.20**	**284**	P	**Pn**	**09 28 26.0**	**-0.3**
RITZ	**Rihia Road**	**2.22**	**223**	P	**Pn**	**09 28 28.5**	**+1.8**
MCHZ	**McNeill Hill**	**2.25**	**202**	P	**Pn**	**09 28 27.2**	**+0.2**
ETAZ	**East Tamaki Re**	**2.32**	**279**	P	**Pn**	**09 28 28.0**	**0.0**
KWHZ	**Kawiu Forest**	**2.33**	**207**	P	**Pn**	**09 28 28.3**	**+0.2**
KBAZ	**Karaka Road Bo**	**2.33**	**276**	P	**Pn**	**09 28 28.5**	**+0.4**
CKHZ	**Cape Kidnapper**	**2.37**	**193**	P	**Pn**	**09 28 27.1**	**-1.4**
MBAZ	**Motutapu North**	**2.39**	**283**	P	**Pn**	**09 28 28.8**	**0.0**
TMVZ	**Te Maari**	**2.41**	**222**	P	**Pn**	**09 28 30.3**	**+1.1**
NTVZ	**North Tongarir**	**2.41**	**223**	P	**Pn**	**09 28 29.5**	**+0.2**
ETVZ	**East Tongariro**	**2.42**	**222**	P	**Pn**	**09 28 30.8**	**+1.4**
KRVZ	**Karewarewa**	**2.42**	**224**	P	**Pn**	**09 28 31.0**	**+1.6**
OTVZ	**Oturere**	**2.46**	**222**	P	**Pn**	**09 28 31.3**	**+1.3**
WTVZ	**West Tongariro**	**2.47**	**224**	P	**Pn**	**09 28 31.6**	**+1.5**
EPAZ	**Eden Park BICE**	**2.48**	**280**	P	**Pn**	**09 28 30.6**	**+0.4**
ABAZ	**Army Bay**	**2.49**	**287**	P	**Pn**	**09 28 30.3**	**+0.1**
SNVZ	**South Ngauruho**	**2.49**	**222**	P	**Pn**	**09 28 31.8**	**+1.3**
HBAZ	**Herne Bay Bore**	**2.50**	**281**	P	**Pn**	**09 28 30.8**	**+0.4**
NGZ	**Ngauruhoe**	**2.50**	**223**	P	**Pn**	**09 28 31.9**	**+1.3**
TWVZ	**Taurewa**	**2.52**	**227**	P	**Pn**	**09 28 32.4**	**+1.5**
AWAZ	**Awhitu Peninsu**	**2.53**	**276**	P	**Pn**	**09 28 31.1**	**+0.3**
KAHZ	**Kahuranaki**	**2.54**	**196**	P	**Pn**	**09 28 30.3**	**-0.7**
KRHZ	**Kereru**	**2.54**	**206**	P	**Pn**	**09 28 30.4**	**-0.6**
COVZ	**Chateau Observ**	**2.55**	**223**	P	**Pn**	**09 28 32.6**	**+1.3**
FWVZ	**Far West T-bar**	**2.59**	**222**	P	**Pn**	**09 28 33.1**	**+1.3**
WHVZ	**Whangaehu Hut**	**2.59**	**221**	P	**Pn**	**09 28 32.7**	**+0.8**
HIZ	**Hauiti**	**2.59**	**243**	P	**Pn**	**09 28 32.3**	**+0.6**
HIZ	**Hauiti**	**2.59**	**243**	P	**Pn**	**09 28 32.3**	**+0.6**
MOVZ	**Moawhango**	**2.60**	**217**	P	**Pn**	**09 28 32.0**	**+0.1**
WTAZ	**Waiatarua**	**2.61**	**278**	P	**Pn**	**09 28 32.3**	**+0.4**
WNVZ	**Wahianoa**	**2.62**	**221**	P	**Pn**	**09 28 32.9**	**+0.8**
TRVZ	**Turoa**	**2.62**	**222**	P	**Pn**	**09 28 33.1**	**+0.8**
RVAZ	**Riverhead Bore**	**2.64**	**282**	P	**Pn**	**09 28 32.5**	**+0.3**
PKVZ	**Pokaka**	**2.72**	**224**	P	**Pn**	**09 28 34.7**	**+1.1**
MTVZ	**Mangateitei**	**2.73**	**221**	P	**Pn**	**09 28 34.3**	**+0.8**
PXZ	**Pawanui**	**2.77**	**195**	P	**Pn**	**09 28 32.3**	**-1.7**
PNHZ	**Pukenui**	**2.84**	**206**	P	**Pn**	**09 28 33.7**	**-1.4**
WPHZ	**Waipukurau**	**2.90**	**201**	P	**Pn**	**09 28 34.4**	**-1.6**
VRZ	**Vera Road**	**2.97**	**233**	P	**Pn**	**09 28 34.2**	**+1.4**
PRHZ	**Porangahau**	**3.04**	**197**	P	**Pn**	**09 28 36.0**	**-1.8**
TSZ	**Takapari Road**	**3.05**	**207**	P	**Pn**	**09 28 36.4**	**-1.6**
WCZ	**Waipu Caves**	**3.11**	**296**	P	**Pn**	**09 28 38.4**	**-0.4**
DVHZ	**Dannevirke**	**3.20**	**203**	P	**Pn**	**09 28 37.7**	**-2.3**
WAZ	**Wanganui**	**3.25**	**222**	P	**Pn**	**09 28 41.6**	**+0.9**
ANWZ	**Angora Road**	**3.26**	**198**	P	**Pn**	**09 28 38.8**	**-2.1**
LREZ	**Lake Rotokare**	**3.39**	**231**	P	**Pn**	**09 28 44.5**	**+1.9**
POWZ	**Post Office Ro**	**3.42**	**207**	P	**Pn**	**09 28 42.5**	**-0.5**
OHWZ	**Ohakea**	**3.44**	**213**	P	**Pn**	**09 28 42.8**	**-0.5**
PRWZ	**Pori Road**	**3.50**	**203**	P	**Pn**	**09 28 42.1**	**-1.9**
BFZ	**Birch Farm**	**3.53**	**199**	P	**Pn**	**09 28 42.3**	**-2.2**
BFZ	**Birch Farm**	**3.53**	**199**	S	**Sn**	**09 29 24.0**	**-1.0**
BFZ	**Birch Farm**	**3.53**	**199**	P	**Pn**	**09 28 42.1**	**-2.4**
KHEZ	**Kahui Hut**	**3.54**	**236**	P	**Pn**	**09 28 47.0**	**+2.2**
KHEZ	**Kahui Hut**	**3.54**	**236**	P	**Pn**	**09 28 47.7**	**+2.9**
NBEZ	**Newall Road No**	**3.63**	**237**	P	**Pn**	**09 28 48.8**	**+2.9**
CPWZ	**Castlepoint**	**3.76**	**199**	P	**Pn**	**09 28 45.6**	**-2.0**
OUZ	**Omahuta**	**4.00**	**301**	P	**Pn**	**09 28 51.1**	**+0.1**
OUZ	**Omahuta**	**4.00**	**301**	P	**Pn**	**09 28 51.1**	**+0.1**
OGWZ	**Otaki Gorge**	**4.01**	**210**	P	**Pn**	**09 28 48.7**	**-2.4**
KIW	**Kapiti Island**	**4.16**	**212**	P	**Pn**	**09 28 50.6**	**-2.5**
SNZO	**South Karori**	**4.62**	**210**	P	**Pn**	**09 28 55.9**	**-3.5**
TKNZ	**Takaka Hill**	**5.25**	**224**	P	**Pn**	**09 29 05.9**	**-2.2**
QRZ	**Quartz Range**	**5.36**	**228**	P	**Pn**	**09 29 07.4**	**-2.2**
QRZ	**Quartz Range**	**5.36**	**228**	P	**Pn**	**09 29 07.5**	**-2.2**
KHZ	**Kahutara**	**6.02**	**212**	P	**Pn**	**09 29 14.9**	**-3.7**
CTZ	**Chatham Island**	**7.66**	**148**	P	**Pn**	**09 29 39.6**	**-1.4**

*IDC **23** 09:34:30.3 ± 3.5, 4.33S × 138.32E, h144km ± 59km, mb3.0/1, mbtmp3.7/5, Error ellipse: s-maj=81.2km s-min=20.2km az=107.0*
*DJA **23** 09:34:31.6 ± 0.7, 4.5 ± 6.3 × 13.8E ± , h165km ± 6km, M3.6/6, MLv3.6/6*

ISC 23 09:34:30.7 ± 0.9, **4.60S** ± 0.08 × **138.57E** ± 0.09, **h150**km, **n9**, σ **2.5 27**/15, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAMI	**Wamena**	**0.73**	**11**	P	**Pn**	**09 34 55.5**	**+2.1**
WAMI				S	**Sn**	**09 35 14.5**	**+3.8**
GENI	**Genyem**	**2.56**	**39**	P	**Pn**	**09 35 12.5**	**0.0**
GENI				S	**Sn**	**09 35 43.7**	**-1.1**
JAY	**Jayapura**	**2.98**	**46**	P	**Pn**	**09 35 16.4**	**-1.3**
	14nm,0.5s,baz=214,slow=18,SNR=11						
JAY				S	**Sn**	**09 35 54.2**	**0.0**
	15nm,0.3s,baz=73,slow=23,SNR=6.9						
JAY	**Jayapura**	**2.98**	**46**	P	**Pn**	**09 35 17.6**	**-0.2**
JAY				S	**Sn**	**09 35 53.2**	**-1.0**
FAKI	**Fak Fak**	**6.52**	**285**	P	**Pn**	**09 36 03.0**	**-1.4**
WRA	**Warramunga Arr**	**15.80**	**195**	P	**Pn**	**09 38 06.6**	**+1.6**
	2.7nm,0.5s,baz=16,slow=12,SNR=31						
WRA				S	**Sn**	**09 40 56.2**	**-4.8**
	1.4nm,0.7s,baz=15,slow=21,SNR=4.5						
FITZ	**Fitzroy Crossi**	**18.43**	**222**	P	**P**	**09 38 35.3**	**+0.5**
	1.2nm,0.8s,baz=53,slow=9.1,SNR=6.1						
ASAR	**Alice Springs**	**19.48**	**193**	P	**P**	**09 38 49.0**	**+2.8**
	1.6nm,0.3s,baz=13,slow=10,SNR=43						
ASAR				S	**S**	**09 42 18.3**	**0.0**
	1.3nm,0.7s,baz=17,slow=26,SNR=6.8						
MKAR	**Makanchi Array**	**71.19**	**323**	P	**P**	**09 45 31.5**	**-1.8**
	0.2nm,0.5s,baz=99,slow=8.9,SNR=2.4						
	0.2nm,0.5s						

*ASRS **23** 09:39:29.0 ± 1.2, 53.62N × 87.84E, h0km, M2.9(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
*NNC **23** 09:39:32.0 ± 4.4, 53.32N × 87.78E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=38.6km s-min=20.1km az=72.0, Suspected Mining explosion.*
*IDC **23** 09:39:32.1 ± 2.7, 53.61N × 87.86E, h0km, mbtmp3.3/3, ML2.8/3, Error ellipse: s-maj=26.4km s-min=16.2km az=61.0*

ISC 23 09:39:25.0 ± 2.1, **52.28N** ± 0.05 × **86.9E** ± 0.1, **h0**km, **n9**, σ **1.9 04**/11, **7C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**2.08**	**324**	⇑P	**Pb**	**09 40 03.8**	**+0.2**
	2.1nm,0.3s						
ZAA0				⇑S	**Sb**	**09 40 30.1**	**+0.1**
	5.5nm,0.3s						
ZALV	**Zalesovo Beam**	**2.08**	**324**	Pn	**Pg**	**09 40 04.5**	**-0.4**
	3.5nm,0.3s,baz=97,slow=16,SNR=34						
ZALV				Lg	Lg	09 40 28.9	
	1.1nm,0.3s,baz=98,slow=26,SNR=3.5						
I46RU	**ZALESOVO INFRA**	**2.08**	**324**	I	I	09 51 38.6	
	0.8nm,1.1s,baz=98,slow=338,SNR=8.0						
KURK	**Kurchatov**	**5.38**	**256**	⇑Pn	**Pg**	**09 41 07.2**	**-0.9**
	0.4nm,0.6s						
KURK				⇓Sn	**Sg**	**09 42 18.2**	**+0.3**
	0.8nm,0.9s						
KURK				⇑Lg	Lg	09 42 49.9	
	2.9nm,1.2s						
KURBB	**Kurchatov Arra**	**5.47**	**256**	Pn	**Pg**	**09 41 09.1**	**-0.6**
	0.2nm,0.3s,baz=62,slow=14,SNR=20						
KURBB				Lg	Lg	09 42 57.7	
	0.1nm,0.3s,baz=63,slow=32,SNR=6.5						
	2.0nm,0.5s						
KURBB	**Kurchatov Arra**	**5.47**	**256**	⇓Pn	**Pg**	**09 41 09.0**	**-0.8**
	2.5nm,0.4s,baz=63,slow=15						
KURBB				⇑Sn	**Sg**	**09 42 21.8**	**+1.3**
	1.4nm,0.5s						
KURBB				⇑Lg	Lg	09 42 52.0	
	3.1nm,0.7s,baz=64,slow=31						
MK31	**Makanchi Array**	**6.24**	**210**	Pn	**Pg**	**09 41 23.1**	**-1.5**
	0.3nm,0.3s,baz=179,slow=18,SNR=16						
MK31				⇓Sn	**Sg**	**09 42 45.1**	**-0.4**
	2.4nm,1.1s						
MK31				⇑Lg	Lg	09 43 24.4	
	0.8nm,0.7s						
MKAR	**Makanchi Array**	**6.24**	**210**	Pn	**Pg**	**09 41 26.1**	**+1.6**
	0.4nm,0.3s,baz=28,slow=13,SNR=15						
MKAR				Lg	Lg	09 43 37.5	
	0.1nm,0.3s,baz=23,slow=27,SNR=2.4						
	0.5nm,0.3s						
BVAR	**Borovoye Array**	**10.04**	**281**	Pn	Pn	09 42 03.1	+13
	baz=68,slow=16,SNR=2.3						
	0.3nm,0.3s						

*IDC **23** 09:59:00.6 ± 1.0, 32.67N × 85.47E, h0km, mb3.7/5, mbtmp3.6/8, ML2.9/2, MS3.2/4, Error ellipse: s-maj=36.5km s-min=20.8km az=57.0*

ISC 23 09:59:05.8 ± 1.0, **32.7N** ± 0.1 × **85.5E** ± 0.2, **h35**km, **n12**, σ **0.6 67**/8, **mb3.8**/4, **MS3.4**/3, **Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**13.18**	**322**	LR	LR	10 07 47.1	
	comp=Z,52nm,18.2s,baz=16,slow=40						
MKAR	**Makanchi Array**	**14.25**	**351**	Pn	**Pn**	**10 02 25.2**	**+0.2**
	0.1nm,0.3s,baz=161,slow=12,SNR=4.8						
	0.7nm,0.9s						
KURBB	**Kurchatov Arra**	**18.60**	**346**	P	**Pn**	**10 03 21.6**	**+1.2**
	baz=158,slow=11,SNR=5.3						
	1.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**18.64**	**136**	P	**P**	**10 03 20.8**	**+0.2**
	1.8nm,0.7s,baz=315,slow=12,SNR=10						
SONM	**Songino Array**	**21.82**	**40**	P	**P**	**10 03 54.5**	**-0.5**
	0.7nm,0.6s,baz=234,slow=10,SNR=6.8						
	0.7nm,0.6s						
ARTI	**Arti**	**30.18**	**330**	LR	LR	10 18 00.5	
	comp=Z,87nm,18.1s,baz=345,slow=38						
KSRS	**Korea Array**	**34.78**	**70**	LR	LR	10 20 21.0	
	comp=Z,22nm,18.2s,baz=350,slow=37						
EIL	**Elat**	**43.05**	**280**	LR	LR	10 28 47.1	
	comp=Z,41nm,18.0s,baz=322,slow=42						
NOA	**NORSAR Array B**	**54.47**	**325**	P	**P**	**10 08 29.1**	**-0.5**
	0.8nm,0.6s,baz=87,slow=7.4,SNR=1.8						
	0.8nm,0.6s						
WRA	**Warramunga Arr**	**70.14**	**131**	P	**P**	**10 10 14.8**	**-0.1**
	0.5nm,0.5s,baz=326,slow=6.4,SNR=4.8						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**72.63**	**134**	P	**P**	**10 10 30.2**	**+0.3**
	0.6nm,0.7s,baz=318,slow=7.2,SNR=9.5						
	0.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**77.89**	**278**	P	**P**	**10 11 00.3**	**-0.1**
	0.4nm,0.5s,baz=38,slow=3.4,SNR=4.5						
	0.4nm,0.5s						

*ASRS **23** 10:01:09.0 ± 1.3, 53.75N × 91.08E, h0km, M2.9(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 23 10:01:13.9 ± 3.3, **53.69N** × **91.05E, h0**km, **mbtmp2.9**/3, **ML2.7**/3, **Error ellipse: s-maj=27.8km s-min=23.9km az=54.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.70**	**276**	I	I	10 26 00.0	
	0.1nm,0.9s,baz=91,slow=339,SNR=7.6						
ZALV	**Zalesovo Beam**	**3.70**	**276**	Pn	Pn	10 02 12.5	+0.1
	1.1nm,0.3s,baz=93,slow=18,SNR=10.0						
ZALV				Lg	Lg	10 03 10.4	
	1.1nm,0.3s,baz=89,slow=24,SNR=7.1						
	0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**8.29**	**253**	Pn	Pn	10 03 14.5	-0.8
	0.1nm,0.3s,baz=66,slow=16,SNR=6.8						
KURBB				Sn	Sn	10 04 49.1	-0.5
	baz=68,slow=27,SNR=4.3						
KURBB				Lg	Lg	10 05 37.4	
	baz=62,slow=32,SNR=8.6						
	1.4nm,0.7s						
MKAR	**Makanchi Array**	**8.89**	**223**	Pn	Pn	10 03 24.9	+1.2
	0.2nm,0.3s,baz=37,slow=13,SNR=7.8						
MKAR				Sn	Sn	10 05 02.8	-1.7
	0.1nm,0.3s,baz=44,slow=24,SNR=2.9						
MKAR				Lg	Lg	10 05 53.2	
	0.1nm,0.3s,baz=40,slow=25,SNR=5.8						
	0.2nm,0.3s						

*NEIC **23** 10:07:50.6 ± 2.7, 40.22N ± 0.04 × 124.97W ± 0.04, h10km ± 2km, ML3.2/84, Mwr3.5/4(NCEDC), Error ellipse: s-maj=6.0km s-min=5.3km az=341.0*
*NCEDC **23** 10:07:55.6 ± 4.0, 40.31N ± 0.03 × 124.67W ± 0.05, h16km ± 7km, Error ellipse: s-maj=5.3km s-min=3.9km az=111.0*
*IDC **23** 10:07:57.2 ± 4.1, 40.40N × 124.09W, h0km, mb2.7/1, mbtmp2.8/3, ML3.2/2, MS3.2/1, Error ellipse: s-maj=53.6km s-min=33.7km az=45.0*

ISC 23 10:07:56.5 ± 1.3, **40.30N** ± 0.03 × **124.64W** ± 0.07, **h33**km ± 3km, **n115**, σ 0.9 **83**/108, **Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETL	**Petrolia**	**0.23**	**94**		**Pn**	**10 08 01.8**	**-1.3**
PETL					**Sn**	**10 08 06.0**	**-0.3**
KCTM	**Capetown**	**0.29**	**53**		**Pn**	**10 08 03.1**	**-1.0**
KCTM					**Sn**	**10 08 08.7**	**-0.4**
FER	**Ferndale**	**0.40**	**46**		**Pb**	**10 08 04.8**	**-0.7**
FER					**Sb**	**10 08 12.0**	**+0.3**
KMPM	**Mount Pierce**	**0.41**	**74**		**Pb**	**10 08 04.8**	**-1.1**
KMPM					**Sb**	**10 08 11.3**	**-0.9**
KMPM	**Mount Pierce**	**0.41**	**74**	IAML		10 08 12.4	
	comp=N,25μm,0.4s						
KMPM				IAML		10 08 12.4	
	comp=E,18μm,0.2s						
BRIC	**Briceland Vine**	**0.60**	**108**		**Pn**	**10 08 07.7**	**-0.9**
BRIC					**Sn**	**10 08 17.4**	**+0.2**
KCRM	**Chalk Rock**	**0.64**	**79**		**Pn**	**10 08 08.4**	**-0.9**
JCC	**Jacoby Creek,**	**0.69**	**42**		**Pn**	**10 08 08.3**	**-1.6**
JCC				IAML		10 08 17.9	
	comp=N,636nm,0.8s						
JCC				IAML		10 08 34.3	
	comp=E,463nm,0.8s						
KMRM	**Mail Ridge**	**0.72**	**96**		**Pn**	**10 08 09.8**	**-0.6**
DMOR	**Dinsmores, CA**	**0.82**	**60**		**Pn**	**10 08 11.0**	**-0.9**
KHMM	**Horse Mountain**	**0.90**	**50**		**Pn**	**10 08 11.9**	**-1.0**
KHMM	**Horse Mountain**	**0.90**	**50**	IAML		10 08 24.6	
	comp=N,783nm,0.7s						
KRPM	**Rodgers**	**0.97**	**28**		**Pn**	**10 08 12.6**	**-1.4**
KRPM	**Rodgers**	**0.97**	**28**	IAML		10 08 39.3	
	comp=N,683nm,0.6s						
KRPM				IAML		10 08 42.0	
	comp=E,436nm,0.9s						
KIPM	**

MCCM	**Marconi Confer**	**2.55**	**147**		**Pn**	**10 08 35.2**	**-0.3**
MCCM				IAML		10 09 10.9	
	comp=E,97nm,2.2s						
MCCM				IAML		10 09 41.1	
	comp=N,108nm,2.5s						
MCCM	**Marconi Confer**	**2.55**	**147**		**Pn**	**10 08 34.7**	**-0.8**
M04C	**Macdoel**	**2.58**	**54**		**Pn**	**10 08 36.2**	**+0.1**
CVS	**Carmenet Viney**	**2.58**	**138**	Pn	**Pn**	**10 08 35.8**	**-0.2**
LMHM	**Little Mount H**	**2.59**	**60**		**Pn**	**10 08 36.4**	**0.0**
L04D	**Klamath Falls**	**2.60**	**42**		**Pn**	**10 08 37.4**	**+1.0**
L04D				IAML		10 09 10.1	
	comp=N,92nm,0.8s						
LOC	**Lincoln School**	**2.62**	**145**		**Pn**	**10 08 35.4**	**-1.1**
LASM	**Arnica Sink**	**2.66**	**60**		**Pn**	**10 08 37.0**	**-0.2**
FARB	**Farallon Islan**	**2.90**	**153**	IAML		10 09 10.8	
	comp=E,64nm,0.7s						
FARB				IAML		10 10 19.4	
	comp=N,86nm,2.3s						
BBOR	**Butler Butte**	**2.97**	**29**		**Pn**	**10 08 42.1**	**+0.7**
BBOR				IAML		10 09 17.6	
	comp=N,44nm,0.4s						
BBOR				IAML		10 09 22.2	
	comp=E,42nm,0.5s						
AFDM	**Forest Hills D**	**3.14**	**114**		**Pn**	**10 08 43.5**	**-0.1**
K04D	**Chiloquin, OR**	**3.17**	**42**		**Pn**	**10 08 44.9**	**+0.7**
K04D				IAML		10 09 14.5	
	comp=E,71nm,0.8s						
BEKR	**Beckworth**	**3.31**	**96**	IAML		10 09 27.3	
	comp=E,28nm,0.7s						
J04A	**Umpqua Nationa**	**3.49**	**32**		**Pn**	**10 08 49.9**	**+1.2**
MPK	**Martis Peak**	**3.69**	**104**		**Pn**	**10 08 52.8**	**+1.3**
MPK				IAML		10 09 37.5	
	comp=N,39nm,1.1s						
MPK				IAML		10 09 43.3	
	comp=E,38nm,0.9s						
K05A	**Summer Lake**	**3.71**	**48**		**Pn**	**10 08 52.0**	**+0.3**
K05A				IAML		10 09 48.9	
	comp=E,20nm,4.0s						
MHC	**Mount Hamilton**	**3.77**	**141**		**Pn**	**10 08 52.3**	**-0.1**
MHC				IAML		10 09 21.3	
	comp=N,26nm,2.7s						
MHC				IAML		10 10 00.1	
	comp=E,30nm,2.8s						
I04A	**Tendick Farm,**	**3.86**	**25**		**Pn**	**10 08 54.5**	**+0.9**
I04A				IAML		10 09 38.7	
	comp=N,29nm,0.7s						
I04A				IAML		10 09 39.6	
	comp=E,20nm,0.5s						
PNTR	**Pine Nut**	**4.07**	**106**		**Pn**	**10 08 58.7**	**+2.0**
PNTR				IAML		10 10 19.0	
	comp=E,23nm,1.5s						
PNTR				IAML		10 10 25.5	
	comp=N,27nm,1.9s						
PAHR	**Pah Rah Range**	**4.08**	**97**		**Pn**	**10 08 56.7**	**0.0**
WIFE	**Three Sisters-**	**4.30**	**28**	Pn	**Pn**	**10 09 00.6**	**+0.8**
WIFE				IAML		10 10 06.0	
	comp=N,18nm,3.3s						
WIFE				IAML		10 10 12.7	
	comp=E,33nm,3.5s						
SAO	**San Andreas Ge**	**4.33**	**144**	Pn	**Pn**	**10 08 58.9**	**-1.1**
PINE	**Pine Mountain**	**4.44**	**37**		**Pn**	**10 09 02.8**	**+1.1**
PINE				IAML		10 10 42.3	
	comp=N,17nm,4.9s						
WVOR	**Wild Horse Val**	**4.99**	**63**		**Pn**	**10 09 08.2**	**-1.0**
HULI	**Fort Hunter Li**	**5.04**	**147**	Pn	**Pn**	**10 09 09.1**	**-0.7**
PMPB	**Monarch Peak**	**5.08**	**142**	Pn	**Pn**	**10 09 10.3**	**0.0**
NVAR	**Mina Array Bea**	**5.25**	**109**	Pn	**Pn**	**10 09 12.5**	**-0.4**
	comp=N,0.3nm,0.3s,baz=294,slow=16,SNR=9.7						
NVAR				Lg	Lg	10 10 31.6	
	comp=N,0.1nm,0.3s,baz=304,slow=20,SNR=2.0						
	comp=N,0.6nm,0.5s						
J08A	**Circle Bar Ran**	**5.52**	**54**		**Pn**	**10 09 16.7**	**+0.2**
ISA	**Isabella, Lake**	**6.72**	**132**		**Pn**	**10 09 35.1**	**+2.2**
PDAR	**Pinedale Array**	**11.57**	**73**	Pn	Pn	10 10 41.9	+2.5
	baz=264,slow=11,SNR=2.7						
	comp=N,0.2nm,0.7s						
DLBC	**Dease Lake**	**18.48**	**351**	LR	LR	10 19 25.1	
	comp=N,75nm,21.0s,baz=335,slow=37						
TXAR	**Lajitas Array**	**20.35**	**116**	P	**P**	**10 12 32.7**	**+2.5**
	comp=N,0.4nm,0.8s,baz=310,slow=9.7,SNR=3.8						
	comp=N,0.4nm,0.8s						

*JMA **23** 10:10:36.2±0.2,22°.9N±0°.4×12°.2E±°, h30km±4km, MV3.5/15, TAIWAN REGION*
*TAP **23** 10:10:37.1,22°.89N×121°.62E, h19km, ML3.8, C*
ISC 23 10:10:35.7±1.1**,22°.88N**±0°.02×**121°.68E**±0°.02**, h18**km±4km**, n126,σ0s91**/204**,3C-22D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LDUT	**Ludao**	**0.28**	**224**	P	**Pb**	**10 10 43.2**	**+0.9**
CHKT	**Chengkung**	**0.37**	**307**	⇓*iP*	**Pg**	**10 10 43.6**	**+0.2**
CHKT				*iS*	**Sg**	**10 10 48.1**	**-0.5**
CHKH	**Chenggong**	**0.41**	**320**	⇓P	**Pg**	**10 10 44.5**	**+0.3**
CHKH				S	**Sg**	**10 10 49.6**	**-0.3**
ECS	**Chishang**	**0.48**	**297**	⇓*iP*	**Pb**	**10 10 46.0**	**+0.3**
ECS				*iS*	**Sb**	**10 10 52.7**	**+0.3**
FULB	**Fuli**	**0.48**	**312**	⇓*iP*	**Pg**	**10 10 45.4**	**0.0**
FULB				S	**Sg**	**10 10 51.3**	**-0.7**
ECBN	**Changbin**	**0.49**	**334**	P	**Pb**	**10 10 46.0**	**+0.3**
ECBN				*iS*	**Sg**	**10 10 52.1**	**-0.1**
TTN	**Taitung**	**0.51**	**256**	⇓*iP*	**Pb**	**10 10 46.6**	**+0.4**
TTN				S	**Sg**	**10 10 53.1**	**+0.2**
LONT	**Longtian**	**0.51**	**273**	*eP*	**Pg**	**10 10 46.0**	**0.0**
LONT				*eS*	**Sb**	**10 10 53.6**	**+0.3**
EHD	**Haiduan**	**0.52**	**302**	⇓*iP*	**Pg**	**10 10 46.3**	**+0.2**
EHD				S	**Sg**	**10 10 52.8**	**-0.2**
TWGBT	**Beinan**	**0.56**	**264**	P	**Pg**	**10 10 46.7**	**-0.2**
TWGBT	**Beinan**	**0.56**	**264**	⇓*iP*	**Pg**	**10 10 46.9**	**0.0**
TWGBT				*eS*	**Sg**	**10 10 54.6**	**+0.2**
TWG	**Pinlang**	**0.57**	**264**	⇓*iP*	**Pg**	**10 10 46.9**	**-0.2**
TWG				*eS*	**Sg**	**10 10 54.5**	**-0.2**
EYUL	**Yuli**	**0.57**	**324**	*eP*	**Pb**	**10 10 47.6**	**+0.4**
EYUL				*eS*	**Sb**	**10 10 55.7**	**+0.6**
TWF1	**Yuli**	**0.59**	**323**	*eP*	**Pb**	**10 10 47.5**	**0.0**
TWF1				*eS*	**Sg**	**10 10 54.9**	**-0.5**
YULB	**Yu-li**	**0.62**	**325**	P	**Pg**	**10 10 48.6**	**+0.5**
YULB	**Yu-li**	**0.62**	**325**	⇓*iP*	**Pb**	**10 10 48.1**	**0.0**
YULB				S	**Sb**	**10 10 55.9**	**-0.6**
HGSD	**Ruisui**	**0.66**	**339**	⇓*iP*	**Pb**	**10 10 48.5**	**-0.2**
EHYH	**Wanrong**	**0.69**	**333**	*eP*	**Pb**	**10 10 49.3**	**+0.2**
EHYH				*eS*	**Sb**	**10 10 57.9**	**-0.4**
ELDTW	**Lidau**	**0.69**	**297**	⇓*iP*	**Pb**	**10 10 48.6**	**-0.7**
ELDTW				*eS*	**Sb**	**10 10 57.6**	**-0.9**
EHY	**Hungye**	**0.71**	**332**	*eP*	**Pb**	**10 10 49.4**	**-0.1**
ECL	**Taimali**	**0.73**	**248**	⇓*iP*	**Pb**	**10 10 49.6**	**-0.2**
ECL				*eS*	**Sb**	**10 10 59.0**	**-0.6**
TEGC	**Jichi Village**	**0.84**	**351**	*eS*	**Sb**	**10 11 02.4**	**-0.3**
LAY	**Lan-yu**	**0.84**	**188**	*eP*	**Pb**	**10 10 51.5**	**-0.4**
LAY				*eS*	**Sb**	**10 11 02.0**	**-0.9**
LYUB	**Lan-yu**	**0.88**	**186**	P	**Pb**	**10 10 51.2**	**-1.2**
LYUB				*eS*	**Sb**	**10 11 01.1**	**-2.6**
WARBT	**Fenglin Townsh**	**0.88**	**342**	P	**Pb**	**10 10 52.2**	**-0.3**
WARBT				*eS*	**Sb**	**10 11 02.9**	**-1.1**
STYH	**Taoyuan**	**0.89**	**289**	P	**Pb**	**10 10 52.2**	**-0.3**
STYH				*eS*	**Sb**	**10 11 02.9**	**-1.2**
TAW	**Tawu**	**0.89**	**235**	*eP*	**Pb**	**10 10 52.6**	**-0.1**
TAW				*eS*	**Sb**	**10 11 03.8**	**-0.4**
SHUL	**Shoufeng**	**0.91**	**353**	*eP*	**Pb**	**10 10 53.1**	**+0.1**
SHUL				*eS*	**Sb**	**10 11 05.1**	**+0.2**
EAST	**Anshuo**	**0.92**	**238**	⇓P	**Pb**	**10 10 52.8**	**-0.3**
ESL	**Shilin**	**0.96**	**346**	*eP*	**Pb**	**10 10 53.6**	**-0.2**
ESL				*eS*	**Sb**	**10 11 04.5**	**-1.7**
SLGT	**Liugui**	**0.96**	**277**	*eP*	**Pb**	**10 10 53.8**	**-0.1**
TSMG	**Majia**	**0.97**	**260**	P	**Pb**	**10 10 53.8**	**-0.3**
TSMG				S	**Sb**	**10 11 04.8**	**-1.8**
SSD	**Sandimen**	**0.98**	**263**	⇑P	**Pb**	**10 10 53.8**	**-0.4**
TEYL	**Yanliau Villag**	**0.99**	**355**	*eP*	**Pb**	**10 10 54.8**	**+0.4**
TEYL				S	**Sb**	**10 11 07.8**	**+0.7**
TWDT	**VWDT**	**1.00**	**330**	⇓P	**Pb**	**10 10 54.5**	**-0.1**
VWDT				*eS*	**Sb**	**10 11 06.8**	**-0.7**
MASBT	**Mashibuluo**	**1.00**	**255**	⇓*iP*	**Pb**	**10 10 54.3**	**-0.3**
ALS	**Alishan**	**1.02**	**308**	⇓*iP*	**Pb**	**10 10 55.1**	**0.0**
SGST	**Jiashian**	**1.03**	**282**	P	**Pb**	**10 10 54.6**	**-0.5**
SGST				*eS*	**Sb**	**10 11 09.0**	**+0.6**
SLIU	**Shizi**	**1.05**	**231**	*eP*	**Pb**	**10 10 54.8**	**-0.6**
WTP	**Ta-pu**	**1.05**	**291**	⇓P	**Pb**	**10 10 55.6**	**+0.2**
WTP				*eS*	**Sg**	**10 11 10.7**	**+0.7**
TPUB	**Ta-pu**	**1.06**	**294**	P	**Pb**	**10 10 55.7**	**+0.2**
TPUB	**Ta-pu**	**1.06**	**294**	⇓P	**Pb**	**10 10 55.7**	**+0.2**
TPUB				*eS*	**Sg**	**10 11 10.6**	**+0.5**
ETM	**Tongmen**	**1.10**	**351**	P	**Pb**	**10 10 55.6**	**-0.6**
ETM				S	**Sb**	**10 11 08.5**	**-1.7**
HWA	**Hwalien**	**1.10**	**356**	*eP*	**Pg**	**10 10 56.9**	**-0.1**
HWA				*eS*	**Sb**	**10 11 10.6**	**+0.5**
SSPT	**Xinbi**	**1.10**	**249**	*eP*	**Pg**	**10 10 57.2**	**+0.2**
CHN1	**Nanshi**	**1.11**	**286**	⇓P	**Pb**	**10 10 57.0**	**+0.7**
CHN1				*eS*	**Sg**	**10 11 12.3**	**+0.6**
SGLT	**Jiouru**	**1.11**	**262**	*eP*	**Pg**	**10 10 57.9**	**+0.6**
WHYT	**Xinyi Township**	**1.12**	**317**	*eP*	**Pg**	**10 10 57.3**	**-0.1**
WHYT				*eS*	**Sb**	**10 11 10.6**	**-0.2**
SSLB	**Suanglung**	**1.13**	**324**	P	**Pb**	**10 10 57.0**	**+0.3**
SSLB	**Suanglung**	**1.13**	**324**	⇓P	**Pn**	**10 10 56.6**	**0.0**
SSLB				*eS*	**Sb**	**10 11 09.6**	**-1.4**
WCKO	**Fanlu**	**1.14**	**300**	*eP*	**Pg**	**10 10 58.0**	**+0.2**
WCKO				*eS*	**Sg**	**10 11 12.9**	**+0.2**
SMST	**Manzhou Townsh**	**1.16**	**223**	*eP*	**Pn**	**10 10 56.9**	**-0.1**
TWM1	**Shoushan**	**1.16**	**268**	*eP*	**Pg**	**10 10 59.8**	**+1.6**
LXIB	**Xiulin Townshi**	**1.17**	**348**	⇑*iP*	**Pn**	**10 10 56.5**	**-0.7**
LXIB				*eS*	**Sb**	**10 11 10.3**	**-1.9**
TWK	**Hsinying**	**1.17**	**290**	⇓P	**Pb**	**10 10 57.8**	**+0.4**
TWK				*eS*	**Sg**	**10 11 13.8**	**+0.2**
OWD	**Renai**	**1.17**	**337**	*eP*	**Pn**	**10 10 57.1**	**-0.2**
OWD				*eS*	**Sb**	**10 11 10.2**	**-2.2**
CHN5	**Tsauling**	**1.17**	**308**	⇓P	**Pb**	**10 10 58.1**	**+0.6**
CHN5				*eS*	**Sg**	**10 11 13.9**	**+0.2**
TWD	**Chiawan**	**1.20**	**356**	*eP*	**Pn**	**10 10 57.6**	**0.0**
WUSB	**Renai**	**1.23**	**335**	*eP*	**Pn**	**10 10 58.1**	**0.0**
WUSB				*eS*	**Sb**	**10 11 11.8**	**-2.2**
SMLT	**Sun Moon Lake**	**1.23**	**324**	*eP*	**Pb**	**10 10 59.2**	**+0.6**
SMLT				*eS*	**Sb**	**10 11 14.4**	**+0.2**
TWKBT	**Hengchun**	**1.23**	**221**	*eP*	**Pn**	**10 10 58.1**	**+0.1**
TWK1	**Hengchun**	**1.23**	**221**	*eP*	**Pn**	**10 10 58.3**	**+0.2**
TYC	**Yuchr**	**1.27**	**324**	*eP*	**Pg**	**10 11 00.1**	**-0.3**
TYC				*eS*	**Sb**	**10 11 15.3**	**+0.1**
WJS	**Zhushan**	**1.29**	**317**	*eP*	**Pb**	**10 11 00.3**	**+0.9**
NACB	**Ninganchiao**	**1.29**	**356**	P	**Pn**	**10 10 58.6**	**-0.3**
NACB	**Ninganchiao**	**1.29**	**356**	⇑*eP*	**Pn**	**10 10 58.2**	**-0.7**
NACB				*eS*	**Sn**	**10 11 13.3**	**-2.4**
WGK	**Gukeng**	**1.31**	**308**	*eP*	**Pg**	**10 11 01.0**	**0.0**
WGK				*eS*	**Sg**	**10 11 18.0**	**-0.1**
CHY	**Chiayi**	**1.31**	**298**	*eP*	**Pg**	**10 11 00.9**	**-0.2**
CHY				*eS*	**Sg**	**10 11 17.8**	**-0.4**
WHF	**Hehuan Shan**	**1.32**	**343**	*eP*	**Pn**	**10 10 59.5**	**-0.1**
WHF				*eS*	**Sb**	**10 11 15.0**	**-2.0**
WDLH	**Douliu**	**1.33**	**308**	*eP*	**Pg**	**10 11 01.4**	**0.0**
WDLH				*eS*	**Sg**	**10 11 18.6**	**-0.1**
ETLH	**Xiulin Townshi**	**1.34**	**352**	*eP*	**Pn**	**10 10 59.2**	**-0.4**
ETLH				*eS*	**Sn**	**10 11 14.2**	**-2.8**
WNT	**Mingjian**	**1.35**	**318**	*eP*	**Pg**	**10 11 01.6**	**-0.3**
WNT				*eS*	**Sb**	**10 11 18.7**	**+1.1**
EOS4	**EOS4**	**1.37**	**25**	*eP*	**Pn**	**10 11 00.2**	**+0.6**
EOS4				*eS*	**Sn**	**10 11 16.4**	**-0.7**
WCS	**Beigang Elemen**	**1.37**	**329**	*eP*	**Pb**	**10 11 01.0**	**+0.1**
ICHU	**Yijhu**	**1.38**	**291**	*eS*	**Sg**	**10 11 20.3**	**0.0**
SCLT	**Jiali**	**1.40**	**282**	*eS*	**Sg**	**10 11 21.4**	**+0.2**
FUSS	**Fushou**	**1.42**	**344**	*eP*	**Pn**	**10 11 01.3**	**+0.4**
FUSS				*eS*	**Sn**	**10 11 17.5**	**-1.8**
CHN8	**Yiju**	**1.43**	**289**	*eS*	**Sg**	**10 11 21.5**	**-0.5**
WTK	**Tuku**	**1.44**	**304**	*eS*	**Sg**	**10 11 21.8**	**-0.4**
TWT	**Tachien**	**1.45**	**341**	*eP*	**Pb**	**10 11 02.1**	**-0.1**
TWT				*eS*	**Sn**	**10 11 18.2**	**-1.6**
TDCB	**Techi**	**1.45**	**341**	*eP*	**Pb**	**10 11 02.1**	**-0.2**
WSL	**Shuilin Townsh**	**1.48**	**296**	*eP*	**Pb**	**10 11 03.3**	**+0.5**
WSL				*eS*	**Sb**	**10 11 22.5**	**+1.1**
TSCK	**Chigu Township**	**1.50**	**281**	*eP*	**Pb**	**10 11 03.5**	**+0.5**
TSCK				*eS*	**Sb**	**10 11 22.6**	**+0.9**
EOS3	**EOS3**	**1.52**	**22**	P	**Pb**	**10 11 02.9**	**-0.4**
EOS3				*eS*	**Sn**	**10 11 20.7**	**-0.4**
WSF	**Szhu**	**1.54**	**300**	*eS*	**Sb**	**10 11 24.0**	**+1.0**
WHP	**Taichung City**	**1.55**	**334**	*eP*	**Pb**	**10 11 04.7**	**+0.8**
NNSB	**Datong**	**1.57**	**350**	*eP*	**Pn**	**10 11 03.2**	**+0.4**
WRL	**Guolierlin Hig**	**1.57**	**311**	*eP*	**Pb**	**10 11 04.6**	**+0.3**
WRL				*eS*	**Sb**	**10 11 24.4**	**+0.5**
WCHH	**Zhanghua**	**1.58**	**319**	*eS*	**Sb**	**10 11 24.9**	**+0.8**
EOS2	**EOS2**	**1.61**	**18**	*eP*	**Pb**	**10 11 04.4**	**-0.5**
LATG	**Datong**	**1.66**	**355**	*eP*	**Pn**	**10 11 04.5**	**+0.5**
TWQ1	**Liyutan**	**1.69**	**330**	*eP*	**Pb**	**10 11 06.9**	**+0.7**
TWQ1				*eS*	**Sb**	**10 11 27.7**	**+0.6**
TWC	**Suao**	**1.73**	**5**	*eP*	**Pb**	**10 11 06.2**	**-0.7**
TWC				*eS*	**Sn**	**10 11 25.9**	**-0.6**
NDS	**Dongshan**	**1.75**	**1**	*eP*	**Pb**	**10 11 07.0**	**-0.3**
YHNB	**Yeheng**	**1.81**	**351**	P	**Pb**	**10 11 07.7**	**-0.6**
YHNB	**Yeheng**	**1.81**	**351**	*eP*	**Pn**	**10 11 06.9**	**+0.9**
TWE	**Neicheng**	**1.83**	**360**	*eP*	**Pb**	**10 11 08.1**	**-0.6**
NSTT	**Nanjuang**	**1.85**	**340**	*eP*	**Pb**	**10 11 08.6**	**-0.5**
LIOB	**Emei**	**1.86**	**341**	*eP*	**Pb**	**10 11 08.9**	**-0.4**
FUSB	**Fushanzhiwuyua**	**1.88**	**357**	*eP*	**Pn**	**10 11 07.9**	**+0.9**
NWLT	**Wulai**	**1.90**	**355**	*eP*	**Pn**	**10 11 08.8**	**+1.6**
WDGT	**Dungji**	**1.90**	**282**	*eP*	**Pb**	**10 11 08.9**	**-1.0**
JYNG	**Yonagunijimaku**	**1.95**	**36**	*eP*	**Pb**	**10 11 09.6**	**-1.1**
JYNG				*eS*	**Sn**	**10 11 32.3**	**+0.4**
YOJ	**Yonaguni jima**	**1.99**	**37**	*eP*	**Pn**	**10 11 09.8**	**+1.3**
YOJ				*eS*	**Sn**	**10 11 34.3**	**+1.3**
PHUB	**P'eng-hu**	**2.04**	**288**	*eP*	**Pn**	**10 11 10.2**	**+1.0**
PHUB				*eS*	**Sn**	**10 11 33.8**	**-0.4**
PNG	**Penghu**	**2.08**	**290**	*eP*	**Pn**	**10 11 10.8**	**+1.2**
PNG				*eS*	**Sn**	**10 11 35.4**	**+0.3**
TIPB	**Shuangxi**	**2.09**	**4**	*eP*	**Pb**	**10 11 12.0**	**-1.1**
TIPB				*eS*	**Sn**	**10 11 36.6**	**+1.1**
VCHM	**Qimei**	**2.10**	**279**	*eP*	**Pn**	**10 11 10.8**	**+0.7**
VCHM				*eS*	**Sn**	**10 11 35.5**	**-0.3**
TWB1	**Santiao Chiao**	**2.14**	**7**	*eP*	**Pn**	**10 11 12.2**	**+1.7**
TWB1				*eS*	**Sn**	**10 11 36.5**	**-0.1**
WFSB	**Wu-fen Shan**	**2.19**	**2**	*eS*	**Sn**	**10 11 39.8**	**+2.0**
SXI1	**Grass Mountain**	**2.21**	**5**	*eP*	**Pb**	**10 11 13.8**	**-1.4**
SXI1				*eS*	**Sn**	**10 11 39.7**	**+1.1**
HATJ	**Hateruma jima**	**2.27**	**59**	*eP*	**Pn**	**10 11 13.7**	**+1.3**
HATJ				*eS*	**Sn**	**10 11 39.5**	**-0.5**
IRIF	**Iriomote-Funau**	**2.37**	**52**	*eP*	**Pn**	**10 11 15.3**	**+1.6**
IRIF				*eS*	**Sn**	**10 11 43.8**	**+1.4**
JKRS	**Kuro-shima**	**2.53**	**57**	*eP*	**Pn**	**10 11 17.2**	**+1.3**
JKRS				*eS*	**Sn**	**10 11 46.9**	**+0.6**
JIJ	**Ishigaki jima**	**2.70**	**56**	*eP*	**Pn**	**10 11 19.7**	**+1.5**
VWUC	**VWUC**	**2.93**	**316**	*eP*	**Pn**	**10 11 22.3**	**+0.8**
VWUC				*eS*	**Sn**	**10 11 54.9**	**-1.3**
JISG	**Ishigakijimahi**	**2.95**	**54**	*eP*	**Pn**	**10 11 22.8**	**+1.2**
JISG				*eS*	**Sn**	**10 11 56.0**	**-0.6**
PTMZ	**Houxiangcun**	**3.18**	**313**	*eP*	**Pn**	**10 11 26.1**	**+1.2**
PTMZ				*eS*	**Sn**	**10 12 00.9**	**-1.5**
JTJ	**Tarama**	**3.27**	**57**	*eS*	**Sn**	**10 12 05.6**	**+0.9**
KNM	**Kinmen**	**3.35**	**298**	*eS*	**Sn**	**10 12 07.9**	**+1.4**
KNMB	**Chin-men Tao**	**3.41**	**298**	*eP*	**Pn**	**10 11 28.9**	**+0.9**
KNMB				*eS*	**Sn**	**10 12 06.1**	**-1.9**
MATB	**Ma-tsu**	**3.62**	**334**	*eP*	**Pn**	**10 11 31.6**	**+0.7**
MATB				*eS*	**Sn**	**10 12 11.2**	**-2.0**
JMJ2	**Miyako jima3**	**3.82**	**60**	*eP*	**Pn**	**10 11 35.4**	**+1.8**
JMJ2				*eS*	**Sn**	**10 12 19.2**	**+1.1**
AXDP	**Jialang**	**3.95**	**301**	*eP*	**Pn**	**10 11 36.4**	**+1.0**
AXDP				*eS*	**Sn**	**10 12 19.6**	**-1.7**
MHZQ	**Yeshan**	**4.02**	**324**	*eP*	**Pn**	**10 11 38.2**	**+1.9**
MHZQ				*eS*	**Sn**	**10 12 21.5**	**-1.5**
LYJJ	**Jianjiangzhen**	**4.05**	**335**	*eP*	**Pn**	**10 11 38.8**	**+2.0**
LYJJ				*eS*	**Sn**	**10 12 22.7**	**-1.1**

*IDC **23** 10:25:11.4±1.3,5°.50S×153°.61E, h0km, mb3.8/7, mbtmp3.8/7, Error ellipse: s-maj=37.8km s-min=25.0km az=83.0*
ISC 23 10:25:17.5±1.1**,5°.5S**±0°.2×**153°.7E**±0°.1**, h43**km**, n12,** σ0s57/9**, mb3.7**/6**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.49**	**239**	Sn	**Sn**	**10 28 28.3**	**+0.3**
	2.2nm,0.3s,baz=164,slow=16,SNR=5.3						
DZM	**Mont Dzumac**	**20.57**	**144**	P	**P**	**10 29 53.4**	**+0.5**
	4.2nm,0.5s,baz=228,slow=15,SNR=8.6						
	4.2nm,0.5s						
WRA	**Warramunga Arr**	**23.61**	**231**	P	**P**	**10 30 24.2**	**-0.5**
	1.4nm,1.0s,baz=54,slow=9.7,SNR=9.0						
	1.4nm,1.0s						
ASAR	**Alice Springs**	**26.19**	**225**	P	**P**	**10 30 47.9**	**-0.5**
	0.7nm,0.7s,baz=57,slow=9.1,SNR=15						
	0.7nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**27.13**	**28**	T	T	10 59 22.2	
	baz=208,slow=76,SNR=6.9						
H11S2	**WAKE ISLAND Hy**	**27.13**	**28**	T	T	10 59 18.1	
	baz=208,slow=76,SNR=3.6						
H11S1	**WAKE ISLAND Hy**	**27.14**	**28**	T	T	10 59 12.2	
	baz=208,slow=76,SNR=3.9						
CMAR	**Chiang Mai Arr**	**58.95**	**295**	P	**P**	**10 35 13.5**	**+0.5**
	1.0nm,0.6s,baz=111,slow=5.0,SNR=7.7						
	1.0nm,0.6s						
SONM	**Songino Array**	**67.40**	**328**	P	**P**	**10 36 08.9**	**+0.2**
	0.4nm,0.6s,baz=147,slow=6.5,SNR=1.0						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**81.44**	**319**	P	**P**	**10 37 30.4**	**+0.2**
	0.8nm,0.7s,baz=107,slow=6.2,SNR=8.6						
	0.8nm,0.7s						
KURBB	**Kurchatov Arra**	**84.90**	**322**	P	**P**	**10 37 47.4**	**-0.5**
	0.5nm,0.8s,baz=106,slow=4.3,SNR=4.7						
	0.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**151.34**	**287**	PKPbc	**PKPbc**	**10 45 06.9**	**-0.7**
	1.1nm,0.5s,baz=90,slow=2.4,SNR=11						

*IDC **23** 10:26:22.1±1.1,28°.67N×142°.18E, h0km, mb3.6/6, mbtmp3.5/9, ML2.8/2, MS3.0/3, Error ellipse: s-maj=39.8km s-min=20.2km az=75.0*
ISC 23 10:26:27.1±1.0**,28°.69N**±0°.09×**142°.2E**±0°.2**, h36**km**, n13,** σ0s63/11**, mb3.8**/6**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**1.59**	**181**	Sn	**Sn**	**10 27 11.2**	**-0.8**
	23nm,0.3s,baz=280,slow=22,SNR=4.8						
MJAR	**Matsushiro Arr**	**8.52**	**338**	Pn	**Pn**	**10 28 27.0**	**-0.9**
	0.1nm,0.3s,baz=158,slow=10,SNR=5.2						
	1.7nm,0.7s						
KSRS	**Korea Array**	**14.81**	**310**	Pn	**Pn**	**10 29 54.0**	**+0.2**
	0.6nm,0.8s,baz=113,slow=11,SNR=1.5						
KSRS				LR	LR	10 34 26.6	
	comp=Z,17nm,19.4s,baz=340,slow=33						
USRK	**Ussuriysk Ar.**	**17.50**	**335**	P	**Pn**	**10 30 27.5**	**-0.7**
	baz=144,slow=16,SNR=2.0						
	0.7nm,0.6s						
CMAR	**Chiang Mai Arr**	**40.75**	**265**	LR	LR	10 51 12.3	
	comp=Z,11nm,19.2s,baz=300,slow=37						
WRA	**Warramunga Arr**	**48.95**	**190**	P	**P**	**10 35 10.3**	**+0.4**
	1.7nm,0.7s,baz=13,slow=8.4,SNR=14						
	1.7nm,0.7s						
MKAR	**Makanchi Array**	**49.49**	**309**	P	**P**	**10 35 14.0**	**+0.1**
	0.5nm,0.7s,baz=84,slow=11,SNR=5.8						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**51.95**	**314**	P	**P**	**10 35 32.4**	**0.0**
	0.9nm,0.7s,baz=90,slow=7.9,SNR=9.0						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**52.67**	**190**	P	**P**	**10 35 37.7**	**-0.3**
	0.2nm,0.7s,baz=17,slow=10,SNR=2.4						
	0.2nm,0.7s						
ILAR	**Eielson Array**	**56.31**	**29**	P	**P**	**10 36 04.7**	**+0.8**
	0.2nm,0.5s,baz=212,slow=5.7,SNR=1.9				

AKHS				IAML		11 00 42.0	
	comp=E,635nm,0.2s						
AKS	**Akhisar**	**0.24**	**182**	Pg	**Pg**	**11 00 37.6**	**-0.2**
AKS				Sg	**Sg**	**11 00 41.7**	**+0.4**
STEP	**BALIKESIR_Sava**	**0.27**	**343**	P	**Pg**	**11 00 38.3**	**-0.1**
STEP				S	**Sg**	**11 00 42.9**	**+0.7**
STEP				IAML		11 00 43.0	
	comp=N,1μm,0.6s						
STEP				IAML		11 00 43.0	
	comp=E,1μm,0.3s						
GORD	**Gordes-Manisa**	**0.35**	**127**	Pg	**Pg**	**11 00 39.7**	**-0.1**
GOMA	**Golmarmara-Man**	**0.42**	**170**	Pg	**Pg**	**11 00 40.8**	**-0.2**
KTTT	**Salihli**	**0.48**	**154**	P	**Pg**	**11 00 41.9**	**-0.3**
KTTT				S	**Sg**	**11 00 48.6**	**+0.1**
KTTT				IAML		11 00 49.0	
	comp=N,124nm,0.5s						
BALB	**Balikesir**	**0.52**	**5**	Pg	**Pg**	**11 00 42.9**	**-0.1**
CAMT	**Merkez**	**0.54**	**227**	P	**Pg**	**11 00 43.3**	**-0.1**
CAMT				IAML		11 00 51.0	
	comp=E,108nm,0.3s						
CAMT				S	**Sb**	**11 00 51.9**	**-0.1**
CAMT				IAML		11 00 56.0	
	comp=N,163nm,0.2s						
ZEDA	**zmir-Bergama**	**0.60**	**255**	P	**Pg**	**11 00 44.3**	**-0.1**
ZEDA				S	**Sg**	**11 00 52.6**	**+0.2**
ZEDA				IAML		11 00 55.0	
	comp=N,88nm,0.3s						
DST	**Dursunbey**	**0.79**	**52**	Pg	**Pg**	**11 00 47.7**	**-0.3**
ODEM	**Odemis-Izmir**	**0.86**	**167**	Pg	**Pb**	**11 00 49.6**	**-0.1**
SUSR	**Susurluk-Balik**	**0.87**	**13**	Pg	**Pg**	**11 00 49.1**	**-0.4**
KULA	**Kula-Manisa**	**0.89**	**132**	Pg	**Pb**	**11 00 49.9**	**-0.3**
SIMA	**Simav-Kutahya**	**0.90**	**92**	Pg	**Pb**	**11 00 50.1**	**-0.3**
SHAP	**Saphane-Kutahy**	**1.09**	**95**	Pn	**Pb**	**11 00 53.6**	**-0.1**
NAZL	**Nazilli-Aydin**	**1.21**	**162**	Pn	**Pn**	**11 00 55.9**	**+0.4**
KCTX	**Karacabey (Bur**	**1.22**	**20**	Pn	**Pb**	**11 00 55.7**	**0.0**
GEDZ	**Gediz**	**1.24**	**93**	Pn	**Pg**	**11 00 56.3**	**-0.3**
ORLT	**Orhaneli**	**1.24**	**42**	Pn	**Pn**	**11 00 56.1**	**+0.1**
TVSB	**Tavsanli**	**1.31**	**75**	Pn	**Pn**	**11 00 57.3**	**+0.3**
MDNY	**Mudanya-Bursa**	**1.49**	**33**	Pn	**Pn**	**11 00 59.4**	**+0.1**

*ISK **23** 11:03:18.6,40.62N×34.44E,h4km,ML2.0/4*

AFAD 23 11:03:22.3,40.52N×34.37E,h7km±3km,ML1.3,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUNG	**orum-Sungurl**	**0.34**	**196**	P	Pb	11 03 30.0	-0.7
SUNG				S	Sb	11 03 37.5	+1.1
SUNG				IAML		11 03 38.0	
	comp=N,30nm,0.3s						
SUNG				IAML		11 03 38.0	
	comp=E,39nm,0.5s						
CORM	**Corum**	**0.40**	**150**	Pg	Pg	11 03 28.3	-1.7
CORM				Sg	Sg	11 03 35.5	+0.3
DELI	**KIRIKKALE**	**0.62**	**214**	P	Pg	11 03 34.5	+0.1
DELI				S	Sb	11 03 43.9	-0.7
DELI				IAML		11 03 51.0	
	comp=N,12nm,0.3s						
KRGN	**Kargin**	**0.67**	**250**	P	Pg	11 03 35.3	+0.1
KRGN				S	Sb	11 03 45.8	0.0
KRGN				IAML		11 04 03.0	
	comp=E,12nm,1.7s						
GOKD	**Ankara-Kalecik**	**0.82**	**237**	P	Pb	11 03 38.6	-0.3
GOKD				S	Sb	11 03 50.2	+0.1
GOKD				IAML		11 03 53.0	
	comp=N,11nm,0.2s						
GOKD				IAML		11 03 57.0	
	comp=E,17nm,0.3s						
BR131	**Keskin Array S**	**0.97**	**215**	Pn	Pg	11 03 40.0	-0.9
BR131				Sn	Sn	11 03 55.7	-0.9
AKPI	**Kirsehir/Akpin**	**1.05**	**196**	P	Pg	11 03 41.5	-1.0
AKPI				IAML		11 03 56.0	
	comp=N,12nm,1.8s						
AKPI				S	Sb	11 03 57.7	+0.8
AKPI				IAML		11 04 25.0	
	comp=E,14nm,1.4s						
KESK	**Krkkale-Ke**	**1.07**	**215**	P	Pg	11 03 42.5	-0.4
KESK				S	Sn	11 03 59.0	+0.1
KESK				IAML		11 04 03.0	
	comp=N,7.8nm,0.5s						
YOZ	**Yozgat**	**1.14**	**140**	Pn	Pg	11 03 41.9	-2.3
YOZ				Sn	Sg	11 03 59.0	0.0
KAMT	**Kaman**	**1.26**	**204**	Pn	Pn	11 03 45.3	-1.1

*IDC **23** 11:04:31.8±1.8,6.17S×130.74E,h89km±16km,mb4.6/19, mbtmp4.9/24,MS3.4/25,Error ellipse: s-maj=15.9km s-min=10.2km az=81.0*

*MOS **23** 11:04:32.2±0.8,6.13S×130.70E,h107km,mb5.1/43,Error ellipse: s-maj=9.2km s-min=5.7km az=117.4*

*DJA **23** 11:04:33.7±0.1,6.5S±2.3×13.1E±.1,h128km±3km,M5.0/79, mB5.5/55,mb5.1/79,MLv5.6/28,Mw4.8/13,Mw(mB)4.9/55, MwMwp4.5/4,Mwp4.9/4*

*NEIC **23** 11:04:33.3±1.7,6.12S±0.05×130.69E±0.08,h95km±5km, mb5.0/173,Mww4.7/10,Error ellipse: s-maj=11.0km s-min=7.0km az=90.0*

*NEIC **23** 11:04:34.5,6.33S×130.99E,h80km,Moment Tensor Solution. Duration: 1ŧ1 Moment tensor: Scale 10^{16}Nm; M_{rr}1.31; $M_{\theta\theta}$-0.98; $M_{\phi\phi}$-0.33; $M_{r\theta}$0.33; $M_{\theta\phi}$0.55; $M_{\phi r}$0.19; Fault plane solution: $M_0$1.36000×10^{16} NP1: ϕ_s312.28000°,δ42.26000°,λ109.61000°. NP2: ϕ_s106.57000°,δ50.69000°,λ73.04000°. Principal axes: T 1.4018, Plg76.0000°, Azm316.0000°; N -0.0939, Plg13.0000°, Azm118.0000°; P -1.3080, Plg4.0000°, Azm209.0000°;*

*GCMT **23** 11:04:34.3±0.3,6.22S±0.02×130.51E±0.03,h115km±4km, MW4.8/73,Moment Tensor Solution. s10,c11; s73,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.14±.08; $M_{\theta\theta}$-2.11±.10; $M_{\phi\phi}$0.96±.11; $M_{r\theta}$0.64±.07; $M_{\theta\phi}$0.80±.11; $M_{\phi r}$0.59±.07; Best double couple: $M_0$2.13800×10^{16} NP1:ϕs320.00000°,δ53.00000°,λ149.00000°. NP2: ϕ_s70.00000°,δ66.00000°,λ41.00000°. Principal axes: T 1.9030, Plg46.0000°, Azm290.0000°; N 0.4650, Plg43.0000°, Azm94.0000°; P -2.3730, Plg8.0000°, Azm192.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **23** 11:04:34.1,6.13S×130.69E,h102km*

ISC 23 11:04:33.0±0.5,6.16S±0.03×130.67E±0.04,h102km±4km, n681,σ1ŧ06/648,mb5.2/166,12C-5D,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.80**	**335**	P	**Pn**	**11 05 05.6**	**+2.4**
BNDI	**Bandanaira**	**1.80**	**335**	P	**Pn**	**11 05 05.3**	**+2.1**
SAUI	**Saumlaki**	**1.91**	**161**	P	**Pn**	**11 05 06.4**	**+1.8**
SAUI	**Saumlaki**	**1.91**	**161**	S	**Sn**	**11 05 29.7**	**+1.1**
SAUI	**Saumlaki**	**1.91**	**161**		**Pn**	**11 05 06.4**	**+1.8**
SAUI				Sn	**Sn**	**11 05 29.1**	**+0.5**
SAUI	**Saumlaki**	**1.91**	**161**	P	**Pn**	**11 05 06.3**	**+1.7**
MSAI	**Masohi**	**3.29**	**328**	P	**Pn**	**11 05 25.0**	**+2.2**
AAI	**Ambon**	**3.49**	**315**	P	**Pn**	**11 05 27.6**	**+2.2**
FAKI	**Fak Fak**	**3.58**	**26**	Pn	**Pn**	**11 05 26.6**	**-0.1**
FAKI				Sn	**Sn**	**11 06 06.7**	**-1.5**
FAKI	**Fak Fak**	**3.58**	**26**	P	**Pn**	**11 05 26.3**	**-0.4**
KRAI	**Karang Ratu**	**3.63**	**321**	P	**Pn**	**11 05 30.7**	**+3.4**
KMPI	**Kaimana, Papua**	**3.91**	**51**	P	**Pn**	**11 05 31.1**	**0.0**
NLAI	**Namlea**	**4.60**	**309**	P	**Pn**	**11 05 43.2**	**+2.9**
SIJI	**Sorong**	**5.29**	**6**	P	**Pn**	**11 05 49.2**	**-0.6**
	2μm,0.3s,baz=201,slow=10.0,SNR=2584						
SIJI				S	**Sn**	**11 06 45.2**	**-4.3**
	574nm,0.3s,baz=119,slow=23,SNR=14						
SIJI				LR	LR	11 08 37.6	
	comp=Z,240nm,18.4s,baz=271,slow=46						
SIJI	**Sorong**	**5.29**	**6**	P	**Pn**	**11 05 49.1**	**-0.7**
SWI	**Sorong**	**5.30**	**6**	P	**Pn**	**11 05 49.2**	**-0.7**
RKPI	**Ransiki, Papua**	**5.79**	**37**	P	**Pn**	**11 05 56.4**	**-0.2**
MWPI	**Manokwari, Pap**	**6.19**	**33**	P	**Pn**	**11 06 02.0**	**0.0**
SANI	**Sanana**	**6.21**	**311**	P	**Pn**	**11 06 04.5**	**+2.3**
SANI	**Sanana**	**6.21**	**311**	P	**Pn**	**11 06 04.3**	**+2.1**
	0.9nm1μm3μm159nm,0.7s						
DRS	**Darwin Rock St**	**6.23**	**178**	P	**Pn**	**11 06 01.6**	**-0.9**
MTN	**Manton Dam**	**6.65**	**176**	P	**Pn**	**11 06 07.0**	**-1.3**
MTN	**Manton Dam**	**6.65**	**176**	Pn	**Pn**	**11 06 07.8**	**-0.5**
KDU	**Kakadu**	**6.72**	**165**	P	**Pn**	**11 06 07.8**	**-1.4**
	comp=Z,441nm,0.7s,comp=Z,3724μm						
SRPI	**Serui, Papua**	**7.00**	**53**	P	**Pn**	**11 06 11.7**	**-1.3**
	comp=Z,2.9nmcomp=Z,5μmcomp=Z,188nm,0.7s						
SOEI	**Soe**	**7.28**	**240**	P	**Pn**	**11 06 18.5**	**+1.6**
SOEI	**Soe**	**7.28**	**240**	S	**Sn**	**11 07 37.4**	**-0.7**
SOEI	**Soe**	**7.28**	**240**		**Pn**	**11 06 18.0**	**+1.1**
SOEI	**Soe**	**7.28**	**240**	P	**Pn**	**11 06 18.5**	**+1.6**
	comp=Z,1.9nmcomp=Z,3μmcomp=Z,346nm,0.8s						
BAKI	**Biak**	**7.33**	**48**	P	**Pn**	**11 06 19.3**	**+1.8**
TNTI	**Ternate**	**7.64**	**334**	Pn	**Pn**	**11 06 22.3**	**+0.6**
TNTI	**Ternate**	**7.64**	**334**	P	**Pn**	**11 06 22.0**	**+0.3**
BATI	**Baumata**	**8.02**	**239**	P	**Pn**	**11 06 26.9**	**0.0**
	comp=Z,236nm,0.4s,baz=122,slow=4.0,SNR=30						
BATI				S	**Sn**	**11 07 52.7**	**-3.2**
	comp=Z,217nm,0.3s,baz=72,slow=22,SNR=8.7						
BATI				LR	LR	11 09 24.2	
	comp=Z,341nm,18.2s,baz=64,slow=36						
BATI	**Baumata**	**8.02**	**239**	P	**Pn**	**11 06 27.3**	**+0.4**
WAMI	**Wamena**	**8.32**	**75**	P	**Pn**	**11 06 31.6**	**+0.7**
	comp=Z,336nm,0.9s						
MMRI	**Maumere**	**8.72**	**253**	P	**Pn**	**11 06 38.6**	**+2.2**
MMRI	**Maumere**	**8.72**	**253**		**Pn**	**11 06 38.8**	**+2.4**
MMRI	**Maumere**	**8.72**	**253**	P	**Pn**	**11 06 38.0**	**+1.6**
	comp=Z,1μmcomp=Z,76nm,0.7s						
KKSI	**Kolaka, Sulawe**	**9.20**	**282**	P	**Pn**	**11 06 46.4**	**+3.5**
	comp=Z,72nm,1.2s						
EDFI	**Ende, Flores**	**9.27**	**253**	P	**Pn**	**11 06 46.1**	**+2.1**
LUWI	**Luwuk**	**9.38**	**303**	Pn	**Pn**	**11 06 48.1**	**+2.7**
KNRA	**Kununurra**	**9.64**	**191**	P	**Pn**	**11 06 46.1**	**-2.8**
	comp=Z,801nm,0.7s						
KNRA	**Kununurra**	**9.64**	**191**		**Pn**	**11 06 46.6**	**-2.2**
MMPI	**Merauke**	**9.90**	**104**	P	**Pn**	**11 06 51.2**	**-1.2**
GENI	**Genyem**	**10.11**	**70**	P	**Pn**	**11 06 55.6**	**+0.3**
	comp=Z,128nm,1.3s						
BSSI	**Bau Bau, Buton**	**10.13**	**270**	P	**Pn**	**11 06 58.1**	**+2.6**
	comp=Z,41nm,0.7s						
GTOI	**Gorontalo**	**10.21**	**311**	P	**Pn**	**11 07 01.0**	**+4.4**
	comp=Z,1μmcomp=Z,72nm,0.7s						
APSI	**Ampana**	**10.41**	**300**	P	**Pn**	**11 07 02.6**	**+3.2**
	comp=Z,1μmcomp=Z,86nm,1.1s						
JAY	**Jayapura**	**10.64**	**71**	P	**Pn**	**11 07 00.3**	**-2.2**
	comp=Z,34nm,0.8s,baz=239,slow=8.5,SNR=7.3						
JAY				S	**Sn**	**11 08 56.4**	**-3.3**
	comp=Z,32nm,0.6s,baz=67,slow=14,SNR=4.6						
JAY	**Jayapura**	**10.64**	**71**	P	**Pn**	**11 07 00.6**	**-1.9**
BASI	**Baing, Sumba**	**10.78**	**247**	P	**Pn**	**11 07 05.1**	**+0.8**
	comp=Z,2μmcomp=Z,151nm,0.6s						
KAPI	**Kappang**	**10.93**	**275**	P	**Pn**	**11 07 04.2**	**-2.3**
	comp=Z,2.1nm,0.3s,baz=79,slow=7.8,SNR=7.5						
KAPI	**Kappang**	**10.93**	**275**	P	**Pn**	**11 07 06.2**	**-0.3**
KAPI	**Kappang**	**10.93**	**275**	Pn	**Pn**	**11 07 03.7**	**-2.7**
KAPI	**Kappang**	**10.93**	**275**	*i*	*iP*	**11 07 07.9**	**+1.4**
KAPI	**Kappang**	**10.93**	**275**	P	**Pn**	**11 07 08.4**	**+1.9**
MRSI	**Marisa**	**10.93**	**307**	P	**Pn**	**11 07 08.1**	**+1.6**
	comp=Z,84nm,0.7s						
LBFI	**Labuhan Bajo,**	**10.94**	**257**	P	**Pn**	**11 07 10.4**	**+3.8**
SPSI	**Sidrap Palu**	**11.08**	**281**	P	**Pn**	**11 07 11.1**	**+2.6**
	comp=Z,77nm,0.6s						
MKS	**Makassar**	**11.19**	**274**	P	P	11 07 26.4	+6.3
TTSI	**Tana Toraja**	**11.25**	**285**	P	**Pn**	**11 07 14.1**	**+3.3**
	comp=Z,1μmcomp=Z,121nm,1.0s						
WBSI	**Waikabubak, Su**	**11.70**	**252**	P	**Pn**	**11 07 16.8**	**0.0**
	comp=Z,1μmcomp=Z,66nm,0.6s						
PCI	**Palu**	**12.01**	**295**	P	**Pn**	**11 07 23.7**	**+2.8**
	comp=Z,170nm,1.1s						
PMSI	**Majene**	**12.01**	**282**	P	**Pn**	**11 07 24.7**	**+3.7**
MMSI	**Mamuju**	**12.22**	**286**	P	**P**	**11 07 28.4**	**-3.5**
	comp=Z,788nmcomp=Z,39nm,0.8s						
TOLI2	**Tolitoli**	**12.24**	**306**	P	**Pn**	**11 07 24.7**	**+0.8**
TOLI2	**Tolitoli**	**12.24**	**306**	Pn	**Pn**	**11 07 21.7**	**-2.2**
DBNI	**Kabupaten Domp**	**12.48**	**259**	P	**Pn**	**11 07 28.7**	**+1.6**
	comp=Z,27nm,0.4s						
MPSI	**Mapaga**	**12.55**	**301**	P	**Pn**	**11 07 30.5**	**+2.5**
	comp=Z,893nmcomp=Z,71nm,0.9s						
FITZ	**Fitzroy Crossi**	**12.84**	**202**	P	**Pn**	**11 07 27.2**	**-4.7**
	comp=Z,109nm,0.5s,baz=34,slow=9.7,SNR=187						
FITZ				S	Sn	11 09 39.9	-13
	comp=Z,118nm,0.4s,baz=196,slow=16,SNR=7.0						
FITZ				LR	LR	11 12 50.0	
	comp=Z,205nm,20.5s,baz=22,slow=39						
PLAI	**Plampang**	**13.06**	**258**	P	**Pn**	**11 07 33.8**	**-0.9**
PLAI	**Plampang**	**13.06**	**258**	P	**Pn**	**11 07 34.2**	**-0.5**
	comp=Z,784nmcomp=Z,51nm,0.5s						
WB0	**Warramunga Arr**	**14.00**	**165**		Pn	11 07 41.5	-5.5
DAV	**Davao City (W)**	**14.09**	**339**	LR	LR	11 13 24.0	
	comp=Z,156nm,21.1s,baz=112,slow=38						
WRAB	**Tennant Creek**	**14.15**	**166**		Pn	11 07 43.5	-5.4
WRAB	**Tennant Creek**	**14.15**	**166**	*d*	*iP*	11 07 43.1	-5.8
WRAB				pmax	pmax		
	comp=Z,66nm,0.4s						
WRA	**Warramunga Arr**	**14.15**	**166**	P	Pn	11 07 43.1	-5.9
	comp=Z,46nm,0.5s,baz=337,slow=13,SNR=124						
WRA				S	Sn	11 10 13.4	-12
	comp=Z,126nm,0.9s,baz=350,slow=22,SNR=6.2						
WRA	**Warramunga Arr**	**14.15**	**166**	Pn	Pn	11 07 44.0	-4.9
WRA	**Warramunga Arr**	**14.15**	**166**	P	Pn	11 07 44.0	-5.0
WR8	**Warramunga Arr**	**14.21**	**165**	P	Pn	11 07 44.3	-5.3
WR8	**Warramunga Arr**	**14.21**	**165**		Pn	11 07 44.4	-5.3
COEN	**Coen**	**14.54**	**123**	P	**Pn**	**11 07 52.0**	**-1.9**
	comp=Z,83nm,0.9s						
COEN	**Coen**	**14.54**	**123**		**Pn**	**11 07 52.2**	**-1.7**
BBKI	**Banjar Baru**	**16.00**	**279**	P	**P**	**11 08 15.1**	**+1.2**
JAGI	**Jajag, Banyuwa**	**16.55**	**261**	P	**Pn**	**11 08 18.7**	**-0.4**
JAGI	**Jajag, Banyuwa**	**16.55**	**261**	Pn	**Pn**	**11 08 17.4**	**-1.8**
MYLDM	**Lahad Datu**	**16.57**	**313**	P	**P**	**11 08 22.4**	**+2.2**
MYLDM	**Lahad Datu**	**16.57**	**313**		**P**	**11 08 21.3**	**+1.1**
MYLDM				IAmb	IAmb	11 08 34.6	
	comp=Z,179nm,1.2s						
MYLDM	**Lahad Datu**	**16.57**	**313**	P	**P**	**11 08 21.4**	**+1.2**
	comp=Z,1μmcomp=Z,126nm,1.3s						
KMMI	**Kalianget**	**16.62**	**266**	P	**P**	**11 08 22.4**	**+1.7**
	comp=Z,2μmcomp=Z,161nm,0.8s						
PMG	**Port Moresby**	**16.65**	**102**	P	**Pn**	**11 08 19.6**	**-0.8**
	comp=Z,32nm,0.8s,baz=262,slow=7.1,SNR=15						
PMG				LR	LR	11 15 11.9	
	comp=Z,73nm,21.9s,baz=307,slow=39						
PMG	**Port Moresby**	**16.65**	**102**	P	**P**	**11 08 21.7**	**+0.7**
PMG	**Port Moresby**	**16.65**	**102**	P	**P**	**11 08 21.8**	**+0.7**
PMG	**Port Moresby**	**16.65**	**102**		**P**	**11 08 21.7**	**+0.7**
PMG	**Port Moresby**	**16.65**	**102**	P	**P**	**11 08 21.7**	**+0.7**
PMG				pmax	pmax		
	comp=Z,46nm,0.8s						
PMG	**Port Moresby**	**16.65**	**102**	P	Pn	**11 08 17.7**	**-2.6**
	comp=Z,63nm,0.8s						
QIS	**Mount Isa**	**16.73**	**150**	P	**Pn**	**11 08 18.2**	**-3.1**
	comp=Z,62nm,1.1s						
AS31	**Alice Springs**	**17.68**	**170**	P	**P**	**11 08 30.6**	**-1.7**
AS31				IAmb	IAmb	11 08 35.4	
	comp=Z,50nm,0.5s						
ASAR	**Alice Springs**	**17.68**	**170**	P	**P**	**11 08 30.2**	**-2.2**
	comp=Z,112nm,0.7s,baz=7.6,slow=12,SNR=461						
ASAR				S	Sn	11 11 35.9	-14
	comp=Z,30nm,0.6s,baz=326,slow=17,SNR=7.8						
ASAR				LR	LR	11 16 08.3	
	comp=Z,157nm,18.6s,baz=340,slow=39						
MTSU	**Mount Surprise**	**17.86**	**133**	P	**P**	**11 08 32.8**	**-1.5**
	comp=Z,20nm,0.7s						
MBWA	**Marble Bar**	**18.29**	**214**	P	**P**	**11 08 37.9**	**-1.1**
	comp=Z,88nm,0.7s						
MBWA	**Marble Bar**	**18.29**	**214**	P	**P**	**11 08 39.5**	**+0.4**
MBWA	**Marble Bar**	**18.29**	**214**		**P**	**11 08 38.1**	**-1.0**
MBWA				IAmb	IAmb	11 08 40.5	
	comp=Z,51nm,0.5s						
MBWA	**Marble Bar**	**18.29**	**214**		**Pn**	**11 08 39.5**	**+0.4**
MBWA				IAmb	IAmb	11 08 40.5	
	comp=Z,60nm,0.5s						
PSAC2	**Pilbara Seismi**	**18.52**	**213**	P	**P**	**11 08 41.5**	**-0.1**
	comp=Z,113nm,0.9s						
PSAC1	**Pilbara Seismi**	**18.55**	**213**	P	**P**	**11 08 41.5**	**-0.4**
	comp=Z,174nm,0.8s						
PSA00	**Pilbara Seismi**	**18.56**	**213**	P	**P**	**11 08 42.2**	**+0.2**
	comp=Z,172nm,0.8s						
PSA00	**Pilbara Seismi**	**18.56**	**213**	P	**P**	**11 08 42.7**	**+0.7**
PSA00	**Pilbara Seismi**	**18.56**	**213**	P	**P**	**11 08 42.0**	**0.0**
PSAB3	**Pilbara Seismi**	**18.57**	**213**	P	**P**	**11 08 42.5**	**+0.3**
	comp=Z,176nm,0.8s						
SNJI	**Sawahan-Nganju**	**18.84**	**264**	P	**P**	**11 08 44.9**	**-0.5**
	comp=Z,27nm,0.6s						
KKM	**Kota Kinabalu**	**18.85**	**310**	P	**P**	**11 08 46.3**	**+1.0**
KKM	**Kota Kinabalu**	**18.85**	**310**	P	**Pn**	**11 08 46.5**	**-0.6**
KKM	**Kota Kinabalu**	**18.85**	**310**	P	**P**	**11 08 45.4**	**+0.1**
	comp=Z,2μmcomp=Z,142nm,0.6s						
WRKA	**Warakurna**	**18.91**	**187**	P	**P**	**11 08 45.4**	**-0.4**
	comp=Z,100nm,0.9s						
UGM	**Wanagama**	**20.07**	**264**	P	**P**	**11 08 58.3**	**-0.3**
SBUM	**Sibu**	**20.32**	**294**	P	**P**	**11 09 02.3**	**+1.1**
SBUM	**Sibu**	**20.32**	**294**		**P**	**11 09 01.8**	**+0.6**
SBUM	**Sibu**	**20.32**	**294**	P	**P**	**11 09 01.7**	**+0.6**
CTA	**Charters Tower**	**20.51**	**134**	P	**P**	**11 09 02.0**	**-1.2**
	comp=Z,14nm,0.8s,baz=304,slow=11,SNR=8.9						
CTA				LR	LR	11 17 17.2	
	comp=Z,139nm,19.0s,baz=269,slow=37						
	comp=Z,14nm,0.8s						
CTAO	**Charters Tower**	**20.51**	**134**	P	**P**	**11 09 04.0**	**+0.8**
CTAO	**Charters Tower**	**20.51**	**134**	P	**P**	**11 09 04.0**	**+0.8**
CTAO				pmax	pmax		
	comp=Z,39nm,1.2s						
KPJI	**Karang Pucung**	**21.62**	**266**	P	**P**	**11 09 14.8**	**-0.4**
	comp=Z,36nm,0.7s						
BBJI	**Bungbulang**	**22.90**	**265**	P	**P**	**11 09 27.4**	**-1.1**
BBJI	**Bungbulang**	**22.90**	**265**		**P**	**11 09 27.8**	**-0.7**
BBJI				IAmb	IAmb	11 09 28.9	
	comp=Z,41nm,0.8s						
BBJI	**Bungbulang**	**22.90**	**265**	P	**P**	**11 09 27.0**	**-1.5**
	comp=Z,698nmcomp=Z,62nm,1.4s						
LEM	**Lembang**	**22.92**	**267**	P	**P**	**11 09 27.6**	**-1.2**
	comp=Z,51nm,1.0s						
TPI	**Tanjungpandan**	**23.20**	**277**	P	**P**	**11 09 29.8**	**-1.4**
MEEK	**Meekatharra**	**23.38**	**208**	P	**P**	**11 09 32.7**	**-0.2**
	comp=Z,36nm,1.0s						
MEEK	**Meekatharra**	**23.38**	**208**	P	**P**	**11 09 33.0**	**+0.1**
INKA	**Innaminka**	**23.50**	**157**	P	**P**	**11 09 33.4**	**-0.4**
DBJI	**Dramaga**	**23.78**	**268**	P	**P**	**11 09 36.0**	**-0.6**
	comp=Z,86nm,0.8s						
QLP	**Quilpie**	**24.07**	**149**	P	**P**	**11 09 39.4**	**+0.4**
	comp=Z,95nm,0.8s						
QLP	**Quilpie**	**24.07**	**149**	P	**P**	**11 09 40.1**	**+1.1**
FORT	**Forrest**	**24.61**	**185**	P	**P**	**11 09 43.8**	**-0.1**
	comp=Z,70nm,0.8s						
FORT	**Forrest**	**24.61**	**185**	P	**P**	**11 09 44.0**	**+0.1**
FORT				IAmb	IAmb	11 09 59.6	
	comp=Z,48nm,0.8s						
CGJI	**Cibinong**	**24.83**	**268**	P	**P**	**11 09 45.0**	**-1.1**
	comp=Z,189nm,1.3s						
KLSI		**25.87**	**272**	P	**P**	**11 09 55.0**	**-0.5**
KMBL	**Kambalda**	**26.39**	**197**	P	**P**	**11 10 00.1**	**+0.1**
	comp=Z,29nm,0.8s						
MORW	**Morawa**	**26.65**	**210**	P	**P**	**11 10 02.4**	**0.0**
MORW	**Morawa**	**26.65**	**210**	P	**P**	**11 10 02.4**	**0.0**
BBOO	**Buckleboo**	**26.98**	**170**	P	**P**	**11 10 04.9**	**-0.3**
	comp=Z,35nm,1.3s						
BBOO	**Buckleboo**	**26.98**	**170**	P	**P**	**11 10 05.0**	**-0.3**
BBOO	**Buckleboo**	**26.98**	**170**	P	**P**	**11 10 04.6**	**-0.7**
BLDU	**Ballidu**	**27.64**	**207**	P	**P**	**11 10 11.0**	**-0.2**
BLDU	**Ballidu**	**27.64**	**207**	P	**P**	**11 10 11.0**	**-0.2**
MYKOM	**Kota Tinggi**	**27.92**	**286**	P	**P**	**11 10 13.7**	**-0.2**
KLBR	**Kellerberrin**	**28.04**	**204**	P	**P**	**11 10 14.7**	**0.0**
	comp=Z,76nm,0.7s						
KLBR	**Kellerberrin**	**28.04**	**204**	P	**P**	**11 10 15.0**	**+0.2**
HTT	**Hallett**	**28.19**	**165**	P	**P**	**11 10 16.6**	**+0.5**
	comp=Z,16nm,1.0s						
HTT	**Hallett**	**28.19**	**165**	P	**P**	**11 10 15.9**	**-0.3**
CMSA	**Cobar Meteorol**	**28.89**	**153**	P	**P**	**11 10 22.7**	**+0.4**
	comp=Z,35nm,1.0s						
CMSA	**Cobar Meteorol**	**28.89**	**153**	P	**P**	**11 10 22.7**	**+0.4**
MUN	**Mundaring**	**29.02**	**206**	P	**P**	**11 10 23.1**	**-0.4**
NWAO	**Narrogin (SRO)**	**29.42**	**203**	P	**P**	**11 10 27.8**	**+0.8**
	comp=Z,30nm,0.8s						
NWAO	**Narrogin (SRO)**	**29.42**	**203**	P	**P**	**11 10 27.5**	**+0.5**
	comp=Z,12nm,0.5s,baz=36,slow=7.2,SNR=13						
NWAO				LR	LR	11 22 35.4	
	comp=Z,112nm,20.6s,baz=158,slow=37						
	comp=Z,12nm,0.5s						
NWAO	**Narrogin (SRO)**	**29.42**	**203**	P	**P**	**11 10 26.6**	**-0.4**
NWAO	**Narrogin (SRO)**	**29.42**	**203**	P	**P**	**11 10 27.6**	**+0.6**
YULB	**Yu-li**	**30.77**	**343**	P	**P**	**11 10 37.7**	**-1.3**
YHNB	**Yeheng**	**31.96**	**344**	P	**P

MAJO Matsushiro 43.06 9⇓*i*P P 11 12 22.5 -0.4
MAJO pmax pmax
comp=Z,17nm,0.8s
MJB9 Matsu-Tunnel 43.07 9 P P 11 12 22.4 -0.5
MJB9 IAmb IAmb 11 12 23.7
comp=Z,17nm,0.8s
KSAR Wonju Array Be 43.46 357 P P 11 12 26.6 +0.6
KSAR Wonju Array Be 43.46 357 P P 11 12 26.6 +0.6
KSRS Korea Array 43.47 357 P P 11 12 26.8 +0.8
comp=Z,5.4nm,0.6s,baz=173,slow=8.8,SNR=24
KSRS LR LR 11 30 47.0
comp=Z,26nm,20.8s,baz=180,slow=36
comp=Z,5.4nm,0.6s
KS19 Wonju Array Si 43.52 357 P P 11 12 26.7 +0.2
KS19 IAmb IAmb 11 12 49.6
comp=Z,32nm,1.4s
INCN Inchon 43.58 355 P P 11 12 27.5 +0.5
INCN IAmb IAmb 11 12 28.2
comp=Z,15nm,0.8s
INCN Inchon 43.58 355 P P 11 12 27.5 +0.5
INCN pmax pmax
comp=Z,15nm,0.9s
LYN LuoYang 44.00 338 P P 11 12 31.0 +0.6
LYN pmax pmax
comp=Z,26nm,0.7s
HNS HongShan 45.83 342 ⇑P P 11 12 44.9 +0.1
HNS pmax pmax
comp=Z,25nm,1.0s
MSVF Nonsavu 47.62 108 P P 11 12 58.7 -0.6
MSVF Nonsavu 47.62 108 P P 11 12 58.7 -0.6
MSVF pmax pmax
comp=Z,16nm,1.4s
JTM Tenmabayashi 47.69 11 P P 11 13 00.6 +1.3
JTM Tenmabayashi 47.69 11 P P 11 12 60.0 +0.7
BJT Baijiatuau 47.86 345 P 11 13 01.3 +0.7
BJT IAmb IAmb 11 13 01.8
comp=Z,18nm,0.7s
BJT Baijiatuau 47.86 345 P P 11 13 01.3 +0.7
BJT pmax pmax
comp=Z,18nm,0.7s
LZDM Lanzhou Array 48.96 331 P P 11 13 10.6 +1.0
comp=Z,6.4nm,0.6s,baz=170,slow=10,SNR=8.4
comp=Z,6.4nm,0.6s
LZH Lanzhou 48.99 331 *e*P P 11 13 10.5 +0.9
LZH pP pP 11 13 33.3 -0.2
LZH PcP **PcP** 11 14 32.9 +0.7
LZH pmax pmax
comp=Z,31nm,1.2s
VLA Vladivostok 49.06 1⇑*i*P P 11 13 10.0 +0.2
VLA pmax pmax
comp=Z,23nm,0.9s
SHL Shillong 49.14 312 P P 11 13 10.2 -0.8
SHL PcP **PcP** 11 14 33.5 +0.5
SHL Shillong 49.14 312 P P 11 13 10.2 -0.8
SHL 11 14 33.5
SHL pmax pmax
comp=Z,40nm,1.3s
CN2 Changchun 49.96 355 P P 11 13 16.3 -0.3
CN2 pmax pmax
comp=Z,10.0nm,0.6s
HHC Hu-ho-hao-te 49.97 341 *e*P P 11 13 17.3 +0.4
HHC pmax pmax
comp=Z,12nm,0.7s
HHC pmax pmax
comp=Z,92nm,5.4s
USRK Ussuriysk Ar. 50.14 1 P P 11 13 18.5 +0.5
comp=Z,7.2nm,0.6s,baz=193,slow=8.4,SNR=14
comp=Z,7.2nm,0.6s
MDJ Mudanjiang 50.55 359 P 11 13 21.7 +0.6
MDJ IAmb IAmb 11 13 22.6
comp=Z,12nm,0.8s
ASAJ Asahikawa 51.19 11 LR LR 11 35 23.1
comp=Z,34nm,18.3s,baz=148,slow=36
ASAJ Asahikawa 51.19 11 P P 11 13 26.4 +0.5
ASAJ pmax pmax
comp=Z,12nm,0.9s
JKA Kamikawa-asahi 51.19 11 P P 11 13 26.4 +0.5
JKA IAmb IAmb 11 13 27.2
comp=Z,12nm,0.9s
PALK Pallekele 51.61 284 LR LR 11 35 53.6
comp=Z,32nm,20.0s,baz=109,slow=36
PALK Pallekele 51.61 284 P P 11 13 28.9 -0.6
PALK Pallekele 51.61 284 P P 11 13 29.0 -0.6
PALK pmax pmax
comp=Z,6.0nm,0.6s
BNX BinXian 51.75 357 ⇑P P 11 13 29.1 -0.9
BNX pmax pmax
comp=Z,9.0nm,1.2s
LSA Lhasa 52.07 315 P P 11 13 31.8 -1.5
LSA pmax pmax
comp=Z,13nm,1.0s
TUWZ Tuamarina 52.07 139 P P 11 13 33.1 +0.6
BKZ Black Stump Fm 52.71 136 P P 11 13 37.6 +0.2
BKZ Black Stump Fm 52.71 136 P P 11 13 38.0 +0.5
GTA2 Gaotai 53.66 330 *e*P P 11 13 45.0 +0.6
GTA2 PcP **PcP** 11 14 50.8 +1.3
GTA2 pmax pmax
comp=Z,23nm,1.2s
YSS Yuzhno-Sakhali 53.96 10 P P 11 13 46.9 +0.7
EVN Everest 54.23 311 P P 11 13 49.7 +0.3
KLR Kul'dur 55.17 1*c*⇓*i*P P 11 13 55.3 +0.4
KLR pmax pmax
comp=Z,10.0nm,1.0s
HEH HeiHe 56.26 357 *e*P P 11 14 03.0 +0.3
HEH pP **sP** 11 14 36.4 -0.9
HEH pmax pmax
comp=Z,14nm,1.1s
ULN Ulaanbaatar 57.69 341 P P 11 14 14.3 +1.3
ULN Ulaanbaatar 57.69 341*c*⇓*i*P P 11 14 14.1 +1.1
ULN pmax pmax
comp=Z,19nm,0.8s
TYV Tymovskoe 57.73 9 *e*P P 11 14 14.2 +1.1
TYV pmax pmax
comp=Z,7.0nm,0.9s
TYV pmax pmax
comp=Z,300nm,4.3s
DGAR Diego Garcia 57.79 265 P P 11 14 15.1 +0.9
DGAR Diego Garcia 57.79 265 P P 11 14 15.1 +0.9
DGAR pmax pmax
comp=Z,31nm,0.9s
SONM Songino Array 57.87 341 P P 11 14 15.2 +0.9
comp=Z,8.5nm,0.6s,baz=162,slow=6.6,SNR=41
SONM PcP **PcP** 11 15 04.4 -1.2
comp=Z,3.2nm,0.7s,baz=144,slow=3.6,SNR=4.6
SONM LR LR 11 40 29.0
comp=Z,25nm,19.6s,baz=348,slow=37
comp=Z,8.5nm,0.6s
SONM Songino Array 57.87 341 P 11 14 15.2 +0.9
SONM IAmb IAmb 11 14 16.2
comp=Z,21nm,1.2s
ZEA Zeya 59.75 358 *e*P P 11 14 27.6 +0.6
ZAK Zakamensk 61.10 340 *e*P P 11 14 35.8 -0.6
ZAK *e* 11 15 17.6
ZAK pmax pmax
comp=Z,8.0nm,1.6s
ZAK pmax pmax
comp=Z,7.0nm,1.0s
CASY Casey 61.63 189 P P 11 14 40.2 +0.6
TLY Talaya 62.10 341 P P 11 14 43.2 +0.2
TLY IAmb IAmb 11 14 45.0
comp=Z,15nm,1.0s
TLY Talaya 62.10 341*ce*P P 11 14 44.9 +1.9
TLY pmax pmax
comp=Z,6.0nm,0.8s
MOY Mondy 62.96 340 *e*P P 11 14 50.0 +1.1
MOY pmax pmax
comp=Z,28nm,1.9s
WMQ Urumqi 63.07 326 *e*P P 11 14 51.1 +1.4
WMQ pP pwP 11 15 17.0 -1.1
WMQ PcP **PcP** 11 15 27.6 +1.0
WMQ Urumqi 63.07 326 SS SS 11 27 22.1 +1.8
WMQ pmax pmax
comp=Z,46nm,0.9s
WMQ pmax pmax
comp=Z,120nm,3.6s
PEA0B Petropavlovsk- 63.33 18 P P 11 14 52.1 +1.0
PEA0B Petropavlovsk- 63.33 18 P P 11 14 52.1 +1.0
PEA0B pmax pmax
comp=Z,45nm,1.4s
PETK Petropavlovsk- 63.33 18 P P 11 14 52.0 +0.9
comp=Z,13nm,0.7s,baz=166,slow=2.3,SNR=21
PETK PcP **PcP** 11 15 26.3 -1.0
comp=Z,5.9nm,0.9s,baz=188,slow=3.2,SNR=3.5
PETK LR LR 11 41 19.6
comp=Z,24nm,20.0s,baz=169,slow=35
comp=Z,13nm,0.7s
PETK Petropavlovsk- 63.33 18 P P 11 14 52.0 +0.9
KNGR Kungurtug, Tuv 63.37 337*c*⇓*i*P P 11 14 51.4 -0.2
KNGR pmax pmax
comp=Z,5.0nm,1.0s
BOD Bodaibo 65.19 350 *e*P P 11 15 02.4 -0.7
BOD pmax pmax
comp=Z,14nm,1.3s
WUS Wushi 66.58 320 P 11 15 13.2 +0.6
WUS IAmb IAmb 11 15 14.7
comp=Z,35nm,1.5s
ZSN Zaisan 66.92 328 *e*P P 11 15 15.2 +0.7
NIL Nilore 67.19 310 P P 11 15 16.6 +0.2
NIL Nilore 67.19 310 P P 11 15 16.7 +0.2
NIL pmax pmax
comp=Z,8.0nm,0.8s
MA2 Magadan 67.45 11 P P 11 15 18.3 +0.7
MA2 IAmb IAmb 11 15 19.4
comp=Z,13nm,0.8s
MA2 Magadan 67.45 11 P P 11 15 18.3 +0.7
MA2 pmax pmax
comp=Z,13nm,0.8s
MA2 Magadan 67.45 11 P P 11 15 18.3 +0.7
comp=Z,20nm,0.9s
MA2 pP PcP 11 15 45.3 +1.1
comp=Z,20nm,0.9s
SHLS Shalkode 67.47 322 *e*P P 11 15 17.4 -0.8
comp=Z,17nm,0.9s
UZB Uzynbulak 67.74 322 *e*P P 11 15 20.6 +0.6
comp=Z,13nm,0.9s
TARG Taragay, Kyrgy 67.76 320 P P 11 15 21.3 +0.9
TARG IAmb IAmb 11 15 32.3
comp=Z,20nm,1.2s
TARG Taragay, Kyrgy 67.76 320 P P 11 15 21.3 +0.9
TARG pmax pmax
comp=Z,20nm,1.2s
MK31 Makanchi Array 67.90 326 P P 11 15 21.6 +0.9
MK31 Makanchi Array 67.90 326*c*⇓*i*P P 11 15 21.5 +0.8
MKAR Makanchi Array 67.90 326 P P 11 15 21.6 +0.9
comp=Z,38nm,0.4s,baz=113,slow=8.1,SNR=684
MKAR PcP **PcP** 11 15 46.6 +0.1
comp=Z,8.7nm,0.8s,baz=117,slow=4.8,SNR=4.8
MKAR LR LR 11 48 34.5
comp=Z,35nm,18.7s,baz=320,slow=39
comp=Z,38nm,0.4s
KSH2 Kashi 67.96 317 P P 11 15 22.3 +0.9
KSH2 pmax pmax
comp=Z,15nm,0.8s
YAK Yakutsk 68.00 359 P 11 15 21.4 +0.5
YAK Yakutsk 68.00 359 *e*P P 11 15 20.9 0.0
YAK *e**PP **PcP** 11 15 48.3 +1.9
YAK *e* 11 17 49.6
YAK *e*S **S** 11 24 10.6 -1.2
YAK *e**SS **sS** 11 24 55.2 +2.6
YAK *e*SS **SS** 11 28 37.2 +1.2
YAK pmax pmax
comp=Z,51nm,0.8s
YAK pmax pmax
comp=N,15nm,1.1s
YAK pmax pmax
comp=E,2.0nm,0.8s
YAK pmax pmax
comp=Z,57nm,3.5s
YAK pmax pmax
comp=E,109nm,4.6s
YAK pmax pmax
comp=N,28nm,3.8s
YAK smax smax
comp=N,19nm,2.1s
YAK smax smax
comp=E,12nm,1.4s
SATY Saty 68.07 321 *e*P P 11 15 22.8 +0.8
comp=E,20nm,0.9s
MAKZ Makanchi 68.08 326 P 11 15 22.6 +0.8
MAKZ Makanchi 68.08 326 P P 11 15 22.6 +0.8
MAKZ pmax pmax
comp=Z,89nm,1.2s
KPKS Kokpek 68.12 322 *e*P P 11 15 22.9 +0.7
KDJ Kajisay 68.36 320 P 11 15 24.7 +0.8
KDJ Kajisay 68.36 320 P P 11 15 24.7 +0.8
KDJ pmax pmax
comp=Z,24nm,0.8s
NRN Naryn 68.78 319 P 11 15 27.3 +0.6
NRN IAmb IAmb 11 15 28.3
comp=Z,17nm,0.9s
NRN Naryn 68.78 319 P P 11 15 27.3 +0.6
NRN pmax pmax
comp=Z,17nm,0.9s
TNSS Tian-Shan 68.97 321 *e*P P 11 15 28.3 +0.3
MDOK Medeo 68.98 321 *e*P P 11 15 28.6 +0.9
AAA Alma-Ata 69.08 321 *e*P P 11 15 29.0 +0.8
comp=Z,10nm,0.4s
SHEM Shemya Is, Ala 69.24 27 LR LR 11 48 38.9
comp=Z,6.0nm,18.3s,baz=306,slow=38
BOOM Boomskoye usch 69.34 320 P 11 15 31.4 +1.5
BOOM Boomskoye usch 69.34 320 P P 11 15 31.4 +1.5
BOOM pmax pmax
comp=Z,38nm,1.0s
TKM2 Tokmak 2 69.77 320 P P 11 15 33.7 +1.0
SNR=31
KBK Karagaybulak 70.06 320 P P 11 15 35.7 +1.4
SNR=7.5
UCH Uchtor 70.13 319 P P 11 15 36.6 +1.4
SNR=33
AAK Ala-Archa 70.34 319 P P 11 15 37.3 +1.2
SNR=28
AAK Ala-Archa 70.34 319 P 11 15 37.2 +1.2
AAK IAmb IAmb 11 15 38.4
comp=Z,32nm,1.1s
AAK Ala-Archa 70.34 319 P P 11 15 37.2 +1.1
AAK pmax pmax
comp=Z,32nm,1.1s
USP Ospenovka 70.64 320 P P 11 15 38.8 +1.1
SNR=7.2
SGDS Sogindy 70.65 320 *e*P P 11 15 38.6 +0.8
DRK Karamyk 70.72 315 P P 11 15 39.8 +1.2
DRK IAmb IAmb 11 15 40.6
comp=Z,27nm,0.8s
DRK Karamyk 70.72 315 P P 11 15 39.8 +1.2
DRK pmax pmax
comp=Z,27nm,0.8s
ARSB Arslanbob 70.72 318 P P 11 15 39.4 +1.0
ARSB Arslanbob 70.72 318 P P 11 15 39.4 +1.0
ARSB pmax pmax
comp=Z,55nm,0.9s
KBL Kabul 70.74 310 P 11 15 39.1 +0.4
KBL IAmb IAmb 11 15 40.2
comp=Z,25nm,1.1s
KBL Kabul 70.74 310 P P 11 15 39.1 +0.4
KBL pmax pmax
comp=Z,25nm,1.1s
EKS2 Erkin-Say 70.82 319 P P 11 15 40.5 +1.6
SNR=24
SEY Seymchan 70.87 10⇑*i*P P 11 15 39.5 +0.9
SEY pmax pmax
comp=Z,23nm,0.9s
ZAA0 Zalesovo Array 71.14 333 P 11 15 40.3 -0.1
ZAA0 IAmb IAmb 11 15 41.1
comp=Z,27nm,1.1s
ZALV Zalesovo Beam 71.14 333 P P 11 15 40.0 -0.4
comp=Z,13nm,0.7s,baz=108,slow=4.8,SNR=56
comp=Z,13nm,0.7s
ZALV Zalesovo Beam 71.14 333 P P 11 15 40.0 -0.4
GAR Garm 71.56 314 P 11 15 44.0 +0.6
BTK Batken 71.65 316 P 11 15 44.9 +1.0
BTK IAmb IAmb 11 15 46.6
comp=Z,19nm,0.9s
BTK Batken 71.65 316 P P 11 15 44.9 +1.0
BTK pmax pmax
comp=Z,19nm,0.9s
BTLS Baital 71.79 321 *e*P P 11 15 45.4 +0.9
KURBB Kurchatov Arra 72.15 328 P P 11 15 47.0 +0.4
comp=Z,15nm,0.5s,baz=127,slow=4.8,SNR=155
comp=Z,15nm,0.5s
KURK Kurchatov 72.16 328 P 11 15 47.1 +0.5
KURK IAmb IAmb 11 15 47.9
comp=Z,25nm,0.9s
KURK Kurchatov 72.16 328 P P 11 15 47.1 +0.5
KURK pmax pmax
comp=Z,25nm,0.9s
CHGR Chuyangaron 72.25 314 P 11 15 48.3 +0.8
CHGR Chuyangaron 72.25 314⇑*i*P P 11 15 47.9 +0.4
CHGR pmax pmax
comp=Z,79nm,1.0s
DZA Taraz 72.53 318 *e*P P 11 15 49.7 +0.6
comp=Z,13nm,0.8s
SHAA Shahritus 72.57 312 P P 11 15 48.7 -0.8
SHAA IAmb IAmb 11 15 49.3
comp=Z,37nm,1.3s
IUG Iuzhnay 73.07 317 *e*P P 11 15 53.1 +0.8
comp=Z,19nm,1.0s
KK31 Karatay Array 73.16 318 P 11 15 53.2 +0.5
KK31 IAmb IAmb 11 15 54.5
comp=Z,25nm,1.0s
KK31 Karatay Array 73.16 318 P P 11 15 53.3 +0.5
KK31 pmax pmax
comp=Z,25nm,1.0s
KKAR Karatay Array 73.16 318 P 11 15 53.2 +0.5
KKAR Karatay Array 73.16 318 P P 11 15 53.2 +0.5
VNDA Vanda 73.19 173 P P 11 15 52.6 +0.3
comp=Z,1.9nm,0.6s,baz=303,slow=6.9,SNR=8.0
VNDA LR LR 11 47 39.0
comp=Z,42nm,19.6s,baz=322,slow=35
comp=Z,1.9nm,0.6s
VNDA Vanda 73.19 173 P P 11 15 53.0 +0.7
VNDA Vanda 73.19 173 P P 11 15 53.0 +0.7
VNDA pmax pmax
comp=Z,5.0nm,1.1s
CHM Chimkent 73.43 317 *e*P P 11 15 55.1 +0.8
comp=Z,24nm,1.1s
BRZS Berezniki 75.00 325 *e*P P 11 16 04.3 +1.0
MAW Mawson 75.97 201 P P 11 16 09.0 +0.5
comp=Z,5.9nm,0.7s,baz=104,slow=12,SNR=3.7
MAW LR LR 11 46 11.8
comp=Z,63nm,20.7s,baz=63,slow=33
comp=Z,5.9nm,0.7s
MAW Mawson 75.97 201 P P 11 16 09.5 +1.0
MAW Mawson 75.97 201 P P 11 16 09.5 +1.0
HRA Herat 75.97 308 P P 11 16 09.3 -0.2
TIXI Tiksi 77.67 359 P P 11 16 17.8 0.0
TIXI Tiksi 77.67 359⇓*i*P P 11 16 17.3 -0.6
TIXI pmax pmax
comp=Z,8.0nm,0.9s
BVAR Borovoye Array 77.72 328 P P 11 16 18.8 +0.2
comp=Z,12nm,0.6s,baz=132,slow=6.2,SNR=50
comp=Z,12nm,0.6s
BORK Borovoye 77.77 328 P 11 16 19.1 +0.2
BORK IAmb IAmb 11 16 19.9
comp=Z,26nm,0.9s
BORK Borovoye 77.77 328 P P 11 16 19.1 +0.2
BORK pmax pmax
comp=Z,26nm,0.9s
BILL Bilibino 78.15 13 *e*P P 11 16 22.9 +2.2
BILL pmax pmax
comp=Z,2.0nm,0.9s
PPT2 Papeete2 78.42 107 *e*LR LR 11 40 51.4
comp=Z,48nm,22.8s
PPT2 *e*LR LR 11 40 55.1
comp=Z,77nm,35.0s
PPT Papeete 78.42 107 LR LR 11 48 43.0
comp=Z,44nm,18.1s,baz=247,slow=34
SPIA Saint Paul Isl 79.12 28 P P 11 16 26.4 +0.3
SPIA Saint Paul Isl 79.12 28 P P 11 16 27.1 +1.0
baz=240
UNV Unalaska Valle 79.44 32 P P 11 16 29.0 +1.0
UNV IAmb IAmb 11 16 29.9
comp=Z,18nm,0.8s
UNV Unalaska Valle 79.44 32 P P 11 16 28.4 +0.5
baz=244
NRIK Noril'sk 80.92 346 P P 11 16 36.0 +0.4
comp=Z,29nm,1.1s,baz=147,slow=6.1,SNR=20
comp=Z,29nm,1.1s
NRIK Noril'sk 80.92 346 P 11 16 36.2 +0.6
NRIK IAmb IAmb 11 16 38.7
comp=Z,24nm,0.8s
NRIK Noril'sk 80.92 346 P P 11 16 36.2 +0.6
NRIK pmax pmax
comp=Z,24nm,0.9s
GAMB Gambell 81.89 22 P P 11 16 41.9 +1.1
baz=238
VOI Vohitsoka 82.07 249 P P 11 16 43.4 +0.5
AB31 Akbulak array 82.28 321 P P 11 16 42.9 -0.3
ABKAR Akbulak array 82.28 321 P P 11 16 43.0 -0.2
M11K Mekoryuk 82.49 27 P P 11 16 45.5 +1.5
baz=243
SDPT Sand Point 83.26 32 P P 11 16 48.4 +0.3
SDPT Sand Point 83.26 32 P P 11 16 48.8 +0.7
baz=249
CNBA Chernabura Isl 83.55 33 P P 11 16 50.1 +0.5
CNBA IAmb IAmb 11 16 51.1
comp=Z,11nm,0.8s
CHNA Chernabura Isl 83.55 33 P P 11 16 49.9 +0.3
baz=250
M13K Dall Lake 83.78 27 P P 11 16 51.5 +0.8
baz=246
QSPA South Pole Qui 83.81 180 P P 11 16 51.0 0.0
comp=Z,4.5nm,0.7s,baz=313,slow=1.1,SNR=23
comp=Z,4.5nm,0.7s
QSPA South Pole Qui 83.81 180 P 11 16 51.1 +0.2
K13K Kusilvak Mount 83.84 25 P P 11 16 52.0 +1.0
baz=245
S14K Fog Glacier 84.08 32 P P 11 16 53.2 +0.7
baz=250
TNA Tin City 84.20 22 P P 11 16 53.2 +0.5
baz=241
O14K Tigyukauivet M 84.30 29 P P 11 16 54.1 +0.7
baz=248
N14K Kuskokwak Cree 84.35 28 P P 11 16 54.4 +0.9
baz=247
SVE Sverdlovsk 84.40 329 *e*P P 11 16 54.4 +0.5
SVE pmax pmax
comp=Z,40nm,0.9s
L14K Kuka Creek 84.46 26 P 11 16 55.0 +0.9
L14K IAmb IAmb 11 16 56.2
comp=Z,14nm,1.0s
L14K Kuka Creek 84.46 26 P P 11 16 55.0 +0.9
baz=246
M14K Bethel 84.55 27 P P 11 16 55.3 +0.8
M14K IAmb IAmb 11 16 56.0
comp=Z,10.0nm,0.8s
M14K Bethel 84.55 27 P P 11 16 54.9 +0.3
baz=247,SNR=6.5
J14K Nanvaranak Lak 84.66 25 IAmb IAmb 11 16 57.4
comp=Z,19nm,1.1s
J14K Nanvaranak Lak 84.66 25 P P 11 16 56.0 +1.0
baz=246
CHGN Chignik 84.68 32 P P 11 16 56.3 +1.0
baz=251
ANM Nome 84.70 23 P P 11 16 56.1 +0.9
baz=244
F14K Arctic Creek 84.75 22 P P 11 16 56.4 +0.9
baz=243
O15K Ungalikthiuk R 84.96 29 P P 11 16 57.3 +0.6
baz=249
M15K Kasigluk River 85.10 27 P P 11 16 58.2 +0.9
baz=248
L15K Ungalak Mounta 85.12 26 P P 11 16 58.4 +1.0
baz=248
N15K Kwethluk River 85.19 28 P P 11 16 58.8 +0.9
N15K IAmb IAmb 11 16 59.8
comp=Z,18nm,1.1s
N15K Kwethluk River 85.19 28 P P 11 16 58.5 +0.7
baz=249
K15K Wolf Creek Mou 85.33 26 IAmb IAmb 11 17 00.8
comp=Z,23nm,1.1s
K15K Wolf Creek Mou 85.33 26 P P 11 16 59.4 +0.9
baz=247
G15K Niukluk 85.40 23 P P 11 16 60.0 +1.2
baz=245
ARTI Arti 85.44 328 P 11 16 59.0 -0.1
ARTI Arti 85.44 328*d*⇓*i*P P 11 16 58.4 -0.7
ARTI S **SKSac** 11 27 12.0 -2.8
ARTI pmax pmax
comp=Z,17nm,0.7s
F15K North Star Dit 85.48 22 P P 11 17 00.4 +1.3
baz=244
P16K Nushagak River 85.80 29 P P 11 17 01.8 +1.0
baz=251
N16K Nishlik Lake 85.91 28 P P 11 17 02.2 +0.7
baz=250
O16K Kokwok River B 85.93 29 IAmb IAmb 11 17 03.2
comp=Z,11nm,0.8s
O16K Kokwok River B 85.93 29 P P 11 17 02.3 +0.8
baz=251
H16K Elim 85.96 23 P P 11 17 02.6 +1.0
baz=247
M16K Timber Creek 86.01 27 P P 11 17 02.9 +1.0
M16K Timber Creek 86.01 27 P P 11 17 02.9 +1.0
baz=250
L16K Owhat River 86.02 27 P 11 17 03.0 +1.1
L16K IAmb IAmb 11 17 03.7
comp=Z,16nm,0.9s
L16K Owhat River 86.02 27 P P 11 17 02.8 +1.0

	baz=249							
J16K	**Anvik River**	86.10	25	P	P	11 17 03.4	+1.1	
	baz=248							
R17L	**Mt. Peulik Vol**	86.17	31	P	P	11 17 03.5	+0.8	
	baz=252							
G16K	**Koyuk River**	86.22	23	P	P	11 17 03.8	+1.1	
	baz=246							
I17K	**Unalakleet**	86.29	24	P	P	11 17 03.9	+0.7	
	baz=248							
C16K	**Lisburne Hills**	86.36	20		P	11 17 03.8	+0.3	
C16K	**Lisburne Hills**	86.36	20	P	P	11 17 03.7	+0.3	
	baz=244							
O17K	**Koliganek Bris**	86.47	29	P	P	11 17 04.9	+0.8	
	baz=252							
P17K	**Kvichak River**	86.61	30	P	P	11 17 05.4	+0.6	
	baz=252							
N17K	**Nushagak Hills**	86.67	28	P	P	11 17 05.5	+0.4	
	baz=251							
L17K	**Donlin**	86.69	26	P	P	11 17 06.1	+0.9	
	baz=250							
J17K	**VABM Dome**	86.79	25	P	P	11 17 06.4	+0.8	
	baz=250							
M17K	**Holitna River**	86.83	27	IAmb	IAmb	11 17 08.2		
	comp=Z,8.9nm,0.8s							
M17K	**Holitna River**	86.83	27	P	P	11 17 06.9	+1.0	
	baz=251							
ACHA	**Angle Creek He**	86.87	31	P	P	11 17 05.8	-0.4	
ACHA				IAmb	IAmb	11 17 09.0		
	comp=Z,12nm,1.2s							
K17K	**Iditarod**	86.89	26	IAmb	IAmb	11 17 08.2		
	comp=Z,16nm,0.9s							
K17K	**Iditarod**	86.89	26	P	P	11 17 07.1	+1.0	
	baz=250							
D17K	**Noatak River**	86.89	20	P	P	11 17 06.5	+0.5	
	baz=246							
G17K	**Kiwalik Mounta**	86.91	23	P	P	11 17 06.7	+0.5	
	baz=248							
F17K	**Baldwin Pennin**	87.04	22	P	P	11 17 07.1	+0.3	
	baz=247							
RDOG	**Red Dog Mine**	87.09	20	P	P	11 17 07.3	+0.3	
	baz=246							
Q18K	**Katmai Hardscr**	87.16	30	P	P	11 17 07.7	+0.1	
	baz=253							
C17K	**DeLong Mountai**	87.18	20	P	P	11 17 07.8	+0.4	
	baz=246							
P18K	**Big Mountain,**	87.26	30	P	P	11 17 08.2	+0.2	
	baz=253							
N18K	**Kilae Creek**	87.32	28	P	P	11 17 08.8	+0.4	
	baz=252							
O18K	**Koktuh Hills**	87.41	29	P	P	11 17 09.2	+0.5	
	baz=253							
L18K	**Granite Mounta**	87.43	27	IAmb	IAmb	11 17 10.9		
	comp=Z,10nm,0.8s							
L18K	**Granite Mounta**	87.43	27	P	P	11 17 09.4	+0.6	
	baz=252							
M18K	**Stony River**	87.60	27	P	P	11 17 10.2	+0.6	
	baz=252							
OHAK	**Old Harbor**	87.65	32	P	P	11 17 10.8	+0.9	
OHAK				IAmb	IAmb	11 17 11.2		
	comp=Z,18nm,0.9s							
OHAK	**Old Harbor**	87.65	32	P	P	11 17 10.7	+0.8	
	baz=255							
E18K	**Tukpahlearik C**	87.65	21	P	P	11 17 10.5	+0.8	
	baz=248							
H18K	**Honhosa River**	87.69	24	P	P	11 17 10.2	+0.2	
	baz=250							
F18K	**Selawik**	87.70	22	P	P	11 17 10.3	+0.5	
	baz=249							
J18K	**Innoko River**	87.81	25	P	P	11 17 11.0	+0.4	
	baz=252,SNR=7.0							
G18K	**Tagagawik**	87.83	23	P	P	11 17 10.8	+0.2	
	baz=250							
C18K	**Utukok River**	87.91	20	P	P	11 17 11.3	+0.3	
	baz=247							
Q19K	**Cape Douglas,**	87.92	30	P	P	11 17 11.3	+0.1	
	baz=254							
O19K	**Port Alsworth**	87.93	29	P	P	11 17 11.3	+0.2	
	baz=254							
RAYN	**Ar Rayn**	88.02	294		P	11 17 12.6	+0.1	
RAYN	**Ar Rayn**	88.02	294	P	P	11 17 12.6	+0.1	
RAYN				pmax	pmax			
	comp=Z,21nm,0.9s							
N19K	**Bonanza Creek**	88.02	28	P	P	11 17 11.6	-0.1	
	baz=254							
GCSA	**Galena City Sc**	88.15	24	P	P	11 17 12.1	0.0	
	baz=251,SNR=5.2							
KDAK	**Kodiak Island**	88.16	31	P	P	11 17 12.4	+0.2	
	baz=255							
L19K	**White Mountain**	88.24	27	IAmb	IAmb	11 17 15.2		
	comp=Z,14nm,1.0s							
L19K	**White Mountain**	88.24	27	P	P	11 17 12.6	0.0	
	baz=253							
P19K	**Oil Pt**	88.31	30	P	P	11 17 13.3	+0.2	
	baz=255							
J19K	**Poorman**	88.44	25	P	P	11 17 13.6	+0.1	
	baz=253							
Q20K	**Shuyak Island**	88.46	31	P	P	11 17 13.6	-0.1	
	baz=256							
F19K	**Shaleruckik Mo**	88.48	22	P	P	11 17 13.6	0.0	
	baz=251							
G19K	**Purcell Mounta**	88.51	23	P	P	11 17 14.2	+0.4	
	baz=251							
A19K	**Wainwright**	88.55	18	P	P	11 17 14.8	+0.9	
	baz=247							
H19K	**Roundabout Mou**	88.57	23	P	P	11 17 14.4	+0.4	
	baz=252							
C19K	**Lookout Ridge**	88.63	20	IAmb	IAmb	11 17 15.7		
	comp=Z,16nm,1.0s							
C19K	**Lookout Ridge**	88.63	20	P	P	11 17 14.4	0.0	
	baz=249							
E19K	**Redstone River**	88.88	22	IAmb	IAmb	11 17 16.5		
	comp=Z,9.3nm,1.0s							
E19K	**Redstone River**	88.88	22	P	P	11 17 15.8	+0.2	
	baz=251							
D19K	**Kuna River**	88.91	20	IAmb	IAmb	11 17 16.5		
	comp=Z,8.8nm,0.9s							
D19K	**Kuna River**	88.91	20	P	P	11 17 15.9	+0.2	
	baz=250							
K20K	**Telida**	88.92	26	P	P	11 17 16.0	+0.2	
	baz=254							
M20K	**Styx River**	88.94	27	P	P	11 17 16.5	+0.4	
	baz=255							
J20K	**Nowinta River**	89.11	25	IAmb	IAmb	11 17 18.1		
	comp=Z,13nm,1.4s							
J20K	**Nowinta River**	89.11	25	P	P	11 17 17.2	+0.5	
	baz=254							
I20K	**Naaghedeneel**	89.15	24	P	P	11 17 17.3	+0.6	
	baz=254							
H20K	**Anotleneega Mo**	89.18	24	P	P	11 17 17.0	0.0	
	baz=253							
N20K	**Mount Spurr**	89.19	28	P	P	11 17 17.2	0.0	
	baz=256							
SPCR	**Spurr Chakacha**	89.19	28	P	P	11 17 17.6	+0.3	
	baz=256							
F20K	**Avaraart Lake**	89.31	22	P	P	11 17 17.8	+0.3	
	baz=252							
ELIB	**Princess Elisa**	89.48	197	*d*P	P	11 17 19.8	+1.3	
	comp=Z,3.3nm,0.7s							
D20K	**Etivluk River**	89.51	20		P	11 17 18.4	-0.1	
D20K	**Etivluk River**	89.51	20	P	P	11 17 18.3	-0.1	
	baz=252							
E20K	**Nigu River**	89.51	21	P	P	11 17 18.5	0.0	
	baz=252							
BRSE	**Bradley Lake S**	89.56	30	P	P	11 17 19.0	+0.1	
	baz=257							
CAPN	**Captain Cook N**	89.59	29	P	P	11 17 19.1	+0.2	
	baz=257							
PPLA	**Purkeypile**	89.62	27	P	P	11 17 19.5	+0.3	
	baz=256							
SKT	**Skwentna**	89.70	27	P	P	11 17 19.6	+0.1	
	baz=256							
B20K	**Meade River**	89.74	19	P	P	11 17 19.1	-0.3	
	baz=251							
IMAR	**Indian Mountai**	89.77	23	P	P	11 17 19.7	0.0	
CHUM	**Lake Minchumin**	89.81	26	P	P	11 17 20.2	+0.3	
	baz=256							
G21K	**Allakaket**	90.00	23	P	P	11 17 20.7	-0.1	
	baz=254							
H21K	**Melozitna Rive**	90.06	24	P	P	11 17 21.2	+0.1	
	baz=255							
F21K	**Alatna River**	90.20	22	P	P	11 17 21.8	0.0	
	baz=254							
C21K	**Knifeblade Rid**	90.27	20	P	P	11 17 22.0	0.0	
	baz=253							
I21K	**Tanana**	90.27	24	P	P	11 17 22.1	+0.1	
	baz=256							
SEW	**Seward**	90.27	30	P	P	11 17 21.8	-0.3	
	baz=258							
M22K	**Willow**	90.30	28	P	P	11 17 22.2	0.0	
	baz=258							
A21K	**Barrow**	90.33	18	P	P	11 17 22.4	+0.3	
	baz=252							
RC01	**Rabbit Creek A**	90.34	29	P	P	11 17 22.5	0.0	
	baz=258							
BPAW	**Bear Paw Mtn.**	90.43	25	P	P	11 17 23.0	+0.2	
	baz=257							
B21K	**Ikpikpuk River**	90.46	20	IAmb	IAmb	11 17 23.8		
	comp=Z,9.3nm,1.1s							
B21K	**Ikpikpuk River**	90.46	20	P	P	11 17 23.3	+0.4	
	baz=254							
TRF	**Thorofare Moun**	90.59	26	P	P	11 17 23.6	-0.2	
	baz=257							
KIRV	**Kirov**	90.67	329	*e*P	P	11 17 23.1	-0.9	
H22K	**Ishtalitna Cre**	90.69	24	P	P	11 17 24.2	+0.2	
	baz=256							
PMR	**Palmer**	90.73	28	P	P	11 17 23.6	-0.6	
PMR				IAmb	IAmb	11 17 41.2		
	comp=Z,8.7nm,1.2s							
PMR	**Palmer**	90.73	28	P	P	11 17 23.6	-0.6	
PMR				pmax	pmax			
	comp=Z,9.0nm,1.2s							
PMR	**Palmer**	90.73	28	P	P	11 17 24.5	+0.3	
	baz=258							
A22K	**Sinclair Lake**	90.74	18	P	P	11 17 23.9	-0.1	
	baz=253							
MLY	**Manley**	90.75	25	P	P	11 17 24.3	-0.1	
	baz=257,SNR=5.3							
G22K	**Bettles**	90.88	23	P	P	11 17 24.7	-0.1	
	baz=256							
KNK	**Knik Glacier**	91.01	28	P	P	11 17 25.7	+0.1	
	baz=259							
E22K	**Anaktuvuk Pass**	91.05	21	P	P	11 17 25.4	-0.3	
	baz=256,SNR=7.0							
B22K	**Teshekpuk Lake**	91.06	19	IAmb	IAmb	11 17 26.3		
	comp=Z,8.9nm,1.0s							
B22K	**Teshekpuk Lake**	91.06	19	P	P	11 17 25.6	0.0	
	baz=255							
SML	**Sawmill**	91.14	28	P	P	11 17 26.2	-0.1	
	baz=259							
RND	**Reindeer**	91.21	26	P	P	11 17 25.8	-0.8	
RND				IAmb	IAmb	11 17 26.3		
	comp=Z,5.8nm,0.8s							
RND	**Reindeer**	91.21	26	P	P	11 17 25.8	-0.8	
RND				pmax	pmax			
	comp=Z,6.0nm,0.8s							
WAT1	**Susitna Watana**	91.24	27	P	P	11 17 26.3	-0.4	
	baz=259							
MCK	**McKinley**	91.24	26	P	P	11 17 26.0	-0.6	
	baz=259							
P23K	**Montague Islan**	91.26	30	P	P	11 17 26.7	0.0	
	baz=260							
I23K	**Minto, Yukon-K**	91.34	25	IAmb	IAmb	11 17 27.8		
	comp=Z,9.8nm,0.9s							
I23K	**Minto, Yukon-K**	91.34	25	P	P	11 17 27.1	+0.1	
	baz=258,SNR=6.5							
NEA2	**Nenana**	91.35	25	P	P	11 17 27.6	+0.5	
	baz=258							
G23K	**Bananza Creek**	91.40	23	IAmb	IAmb	11 17 28.5		
	comp=Z,6.6nm,0.8s							
G23K	**Bananza Creek**	91.40	23	P	P	11 17 27.6	+0.3	
	baz=258							
H23K	**Yukon River**	91.41	24	P	P	11 17 27.8	+0.4	
	baz=258							
M23K	**Glacier View**	91.42	28	P	P	11 17 27.9	+0.4	
	baz=260							
COLD	**Coldfoot**	91.44	22		P	11 17 27.7	+0.3	
COLD				IAmb	IAmb	11 17 29.5		
	comp=Z,7.2nm,0.9s							
COLD	**Coldfoot**	91.44	22	P	P	11 17 27.9	+0.4	
	baz=258,SNR=10							
WAT6	**Susitna Watana**	91.56	27	P	P	11 17 28.0	-0.3	
	baz=260							
GLI	**Glacier Island**	91.56	29	P	P	11 17 28.9	+0.8	
	baz=260							
SCM	**Sheep Creek Mo**	91.62	28	P	P	11 17 28.6	+0.1	
	baz=260							
D23K	**Nanushuk River**	91.65	21	IAmb	IAmb	11 17 29.9		
	comp=Z,9.8nm,1.1s							
D23K	**Nanushuk River**	91.65	21	P	P	11 17 28.9	+0.5	
	baz=257							
DHY	**Denali Highway**	91.81	27	IAmb	IAmb	11 17 31.6		
	comp=Z,5.0nm,0.8s							
DHY	**Denali Highway**	91.81	27	P	P	11 17 29.7	+0.3	
	baz=260							
E23K	**Chandalar**	91.84	22	P	P	11 17 29.9	+0.6	
	baz=258							
C23K	**Itkillik River**	91.86	20	IAmb	IAmb	11 17 30.3		
	comp=Z,9.1nm,0.9s							
C23K	**Itkillik River**	91.86	20	P	P	11 17 29.9	+0.5	
	baz=257							
CCB	**Clear Creek Bu**	91.90	25	IAmb	IAmb	11 17 29.2		
	comp=Z,7.6nm,0.9s							
COLA	**College**	91.92	25	P	P	11 17 30.3	+0.6	
	baz=260							
TOLK	**Toolik Lake Re**	91.97	21	P	P	11 17 30.3	+0.3	
	baz=258							
H24K	**Noodor Dome**	92.08	24	IAmb	IAmb	11 17 31.4		
	comp=Z,9.4nm,1.0s							
H24K	**Noodor Dome**	92.08	24	P	P	11 17 30.8	+0.3	
	baz=260							
POKR	**Poker Plat Res**	92.14	25	P	P	11 17 31.0	+0.3	
	baz=260							
EYAK	**Cordova Ski Ar**	92.16	29	P	P	11 17 30.9	0.0	
	baz=261							
M24K	**Tolsona, Glenn**	92.20	28	P	P	11 17 30.7	-0.5	
	baz=261							
KLU	**Klutina**	92.22	28	P	P	11 17 31.1	-0.2	
	baz=261							
HDA	**Harding Lake**	92.22	26	IAmb	IAmb	11 17 31.0		
	comp=Z,4.5nm,0.8s							
HDA	**Harding Lake**	92.22	26	P	P	11 17 30.6	-0.5	
	baz=260							
E24K	**Your Creek**	92.26	22	P	P	11 17 31.1	-0.2	
	baz=259							
IL31		92.31	25	P	P	11 17 30.2	-1.2	
ILAR	**Eielson Array**	92.31	25	P	P	11 17 29.8	-1.7	
	comp=Z,3.0nm,0.8s,baz=273,slow=4.2,SNR=44							
ILAR				LR	LR	11 59 30.4		
	comp=Z,27nm,18.8s,baz=344,slow=36							
	comp=Z,3.0nm,0.8s							
ILAR	**Eielson Array**	92.31	25	P	P	11 17 30.1	-1.4	
ILAR	**Eielson Array**	92.31	25	P	P	11 17 30.1	-1.4	
D24K	**Happy Valley**	92.34	21	IAmb	IAmb	11 17 32.8		
	comp=Z,5.7nm,0.9s							
D24K	**Happy Valley**	92.34	21	P	P	11 17 31.8	+0.2	
	baz=259							
KIBK	**Kibwezi**	92.36	267	P	P	11 17 31.9	-1.1	
F24K	**Squaw Lake**	92.38	22	IAmb	IAmb	11 17 33.2		
	comp=Z,8.3nm,0.9s							
F24K	**Squaw Lake**	92.38	22	P	P	11 17 32.1	+0.3	
	baz=260,SNR=11							
G24K	**Hadweenzic Riv**	92.39	23	IAmb	IAmb	11 17 32.6		
	comp=Z,4.5nm,0.8s							
G24K	**Hadweenzic Riv**	92.39	23	P	P	11 17 31.6	-0.3	
	baz=260							
C24K	**Franklin Bluff**	92.49	20	IAmb	IAmb	11 17 33.2		
	comp=Z,7.4nm,1.0s							
C24K	**Franklin Bluff**	92.49	20	P	P	11 17 31.5	-0.7	
	baz=259							
KBZ	**Khabaz**	92.61	314	P	P	11 17 33.6	+0.3	
	comp=Z,1.3nm,0.7s,baz=199,slow=0.7,SNR=3.0							
	comp=Z,1.3nm,0.7s							
K24K	**Donnelly Dome**	92.64	26	P	P	11 17 32.8	-0.3	
	baz=261							
PAX	**Paxson**	92.65	27	P	P	11 17 33.4	+0.1	
	baz=262							
KAIM	**Kayak Island**	92.73	30	P	P	11 17 33.3	-0.2	
	baz=262							
GURO	**Guroymak-BITLI**	92.73	308	P	P	11 17 35.3	+1.1	
BMRM	**Bremner River**	92.78	29	P	P	11 17 33.4	-0.4	
	baz=262							
N25K	**Chitina, Valde**	92.87	28	P	P	11 17 34.1	-0.2	
	baz=262							
J25K	**Salcha River,**	92.93	25	P	P	11 17 34.6	+0.1	
	baz=262							
G25K	**Bearman Lake**	92.94	23	P	P	11 17 34.6	+0.3	
	baz=261							
RIDG	**Independent Ri**	93.04	26	P	P	11 17 34.4	-0.5	
	baz=262							
D25K	**Kavik River**	93.23	21	P	P	11 17 36.1	+0.3	
	baz=261							
F25K	**Christian Rive**	93.24	22	IAmb	IAmb	11 17 37.2		
	comp=Z,4.9nm,0.9s							
F25K	**Christian Rive**	93.24	22	P	P	11 17 35.8	0.0	
	baz=262							
E25K	**Arctic Village**	93.34	22	IAmb	IAmb	11 17 37.7		
	comp=Z,9.3nm,1.1s							
E25K	**Arctic Village**	93.34	22	P	P	11 17 36.5	+0.3	
	baz=262,SNR=9.1							
DOT	**Dot Lake**	93.37	26	P	P	11 17 36.5	0.0	
DOT				IAmb	IAmb	11 17 36.9		
	comp=Z,11nm,1.4s							
SCRK	**Sand Creek**	93.44	26	P	P	11 17 37.3	+0.4	
	baz=263							
CRQE	**Cirque**	93.49	29	P	P	11 17 37.5	+0.3	
	baz=264							
MCARA	**McCarthy VSAT**	93.59	29	P	P	11 17 38.5	+1.0	
	baz=264							
L26K	**Log Cabin Wild**	93.62	27	P	P	11 17 38.4	+0.8	
	baz=264							
BMAR	**Burnt Mountain**	93.62	23		P	11 17 38.2	+0.6	
M26K	**Nabesna, AK**	93.71	28	P	P	11 17 38.6	+0.5	
	baz=264							
C26K	**Camden Bay**	93.82	20	P	P	11 17 39.0	+0.6	
	baz=263							
F26K	**Sheenjek River**	93.82	22	IAmb	IAmb	11 17 39.5		
	comp=Z,4.7nm,0.8s							
F26K	**Sheenjek River**	93.82	22	P	P	11 17 39.1	+0.6	
	baz=263							
G26K	**Porcupine Rive**	93.88	23	P	P	11 17 39.0	+0.3	
	baz=263							
I26K	**Coal Creek Min**	93.95	25	P	P	11 17 39.6	+0.6	
	baz=264							
MESA	**MESA**	93.99	30	P	P	11 17 39.7	0.0	
	baz=265							
C27K	**Jago River**	94.20	20	IAmb	IAmb	11 17 41.4		
	comp=Z,5.7nm,0.9s							
C27K	**Jago River**	94.20	20	P	P	11 17 40.3	+0.1	
	baz=264							
M27K	**Edge Creek, AK**	94.23	28	P	P	11 17 41.0	+0.4	
	baz=265							
K27K	**Chicken**	94.29	26	IAmb	IAmb	11 17 42.0		
	comp=Z,5.9nm,1.0s							
L27K	**Beaver Creek,**	94.31	27	P	P	11 17 41.1	+0.3	
	baz=265							
BCAR	**Beaver Creek A**	94.33	27	P	P	11 17 41.3	+0.3	
CTG	**Chitna Glacier**	94.36	29	P	P	11 17 41.3	+0.1	
	baz=265							
I27K	**Kandik River**	94.62	25	P	P	11 17 43.1	+0.9	
	baz=265							
G27K	**Doyon Strip**	94.70	23	P	P	11 17 43.0	+0.5	
	baz=265							
BVCY	**Beaver Creek**	94.70	28	P	P	11 17 43.2	+0.6	
	baz=266							
H27K	**Steamboat Moun**	94.70	24	P	P	11 17 42.8	+0.2	
	baz=265							
E27K	**Coleen River**	94.83	22	IAmb	IAmb	11 17 44.2		
	comp=Z,6.0nm,0.9s							
E27K	**Coleen River**	94.83	22	P	P	11 17 43.4	+0.3	
	baz=266							
YUK3	**Moose Creek**	94.85	28	P	P	11 17 43.9	+0.4	
	baz=266							
O28M	**Mount Upton**	94.91	30	P	P	11 17 44.0	+0.1	
	baz=266							
D27M	**Malcolm River**	95.14	21	IAmb	IAmb	11 17 45.5		
	comp=Z,4.9nm,1.1s							
D27M	**Malcolm River**	95.14	21	P	P	11 17 45.2	+0.7	
	baz=266							
I28M	**Miner Creek**	95.31	25	P	P	11 17 45.6	+0.2	
	baz=266							
F28M	**Old Crow**	95.44	23	P	P	11 17 46.1	+0.2	
F28M				IAmb	IAmb	11 17 46.2		
	comp=Z,4.9nm,0.8s							
F28M	**Old Crow**	95.44	23	P	P	11 17 45.9	0.0	
	baz=267							
E28M	**Babbage River**	95.62	22	IAmb	IAmb	11 17 47.6		
	comp=Z,8.1nm,1.4s							
E28M	**Babbage River**	95.62	22	P	P	11 17 46.5	-0.2	
	baz=268							
O29M	**Mount Kennedy**	95.68	30	P	P	11 17 47.8	+0.5	
	baz=268							
BELA	**Belgrano 2**	95.69	183	P	P	11 17 46.9	0.0	
BELA				IAmb	IAmb	11 17 49.2		
	comp=Z,6.3nm,1.4s							
YUK6	**Outpost Mounta**	95.81	29	P	P	11 17 47.9	-0.1	
	baz=268							
KLMR	**Klimovskoe**	95.90	331	*e*P	P	11 17 45.0	-3.0	
KLMR				pmax	pmax			
	comp=Z,21nm,1.2s							
D28M	**Stokes Point**	95.93	21	P	P	11 17 48.4	+0.4	
	baz=268							
I29M	**Ogilvie Camp,**	95.98	25	P	P	11 17 48.6	+0.2	
I29M	**Ogilvie Camp,**	95.98	25	P	P	11 17 48.4	0.0	
	baz=268							
L29M	**L29M**	95.99	27	P	P	11 17 48.4	-0.2	
	baz=268							
J29N	**Klondike Camp**	96.00	26	P	P	11 17 48.6	+0.1	
	baz=268							
G29M	**Pine Creek**	96.14	23	P	P	11 17 49.0	0.0	
	baz=269							
E29M	**Blow River**	96.21	22	P	P	11 17 48.9	-0.4	
	baz=269							
HYT	**Haines Junctio**	96.23	30	P	P	11 17 49.0	-0.7	
	baz=268							
K29M	**Barlow Dome**	96.29	26	P	P	11 17 50.0	+0.1	
	baz=269							
N30M	**Aishikik Lake**	96.44	29	P	P	11 17 50.7	+0.1	
	baz=269							
P30M	**Million Dollar**	96.48	30	P	P	11 17 50.8	0.0	
	baz=269							
M30M	**Minto, Yukon**	96.60	28	P	P	11 17 51.1	-0.2	
	baz=269							
SNAA	**Sanae**	96.63	193	LR	LR	12 02 21.0		
	comp=Z,36nm,18.7s,baz=13,slow=36							
EPYK	**Eagle Plains**	96.65	24	P	P	11 17 51.3	-0.1	
	baz=270							
I30M	**Mount Dempster**	96.79	25	IAmb	IAmb	11 17 52.5		
	comp=Z,3.5nm,0.9s							
I30M	**Mount Dempster**	96.79	25	P	P	11 17 52.3	+0.1	
	baz=270							
J30M	**Hart River**	96.81	26	IAmb	IAmb	11 17 53.5		
	comp=Z,3.6nm,0.8s							
J30M	**Hart River**	96.81	26	P	P	11 17 51.6	-0.7	
	baz=270							
S31K	**Pelican**	96.83	32	P	P	11 17 51.9	-0.3	
	baz=269							
G30M	**tAoh Zraii Nji**	96.85	23	IAmb	IAmb	11 17 52.3		
	comp=Z,6.3nm,0.9s							
G30M	**tAoh Zraii Nji**	96.85	23	P	P	11 17 51.3	-1.0	
	baz=270							
O30N	**Mendenhall**	96.92	30	P	P	11 17 52.4	-0.4	
	baz=270							
F30M	**Barrier River**	97.01	23	P	P	11 17 52.9	0.0	
	baz=271							
MAYO	**Mayo, Yukon**	97.01	27	P	P	11 17 52.8	-0.3	
	baz=270							
N31M	**Braeburn, Yuko**	97.07	29	P	P	11 17 53.2	-0.2	
	baz=270							
SIT	**Sitka**	97.31	33	P	P	11 17 54.1	-0.4	
	baz=270							
OBN	**Obninsk**	97.36	325	*e*P	P	11 17 52.2	-2.6	
OBN				pmax	pmax			
	comp=Z,7.0nm,1.0s							
H31M	**Peel River**	97.63	24	P	P	11 17 55.6	-0.2	
	baz=272							
S32K	**Killisnoo**	97.71	33	P	P	11 17 56.0	-0.3	
	baz=271							
M31M	**Drury Creek, Y**	97.72	28	P	P	11 17 56.0	-0.3	
	baz=271							
F31M	**Tsiigehtchic**	97.80	23	P	P	11 17 55.7	-0.7	
	baz=273							
INK	**Inuvik**	97.84	22	P	P	11 17 56.

CRAG	**Craig**	**98.56**	**35**	P		**P**	**11 17 59.9**	**-0.3**
	baz=272							
Q32M	**Nakina River**	**98.89**	**31**	P		**P**	**11 18 01.2**	**-0.6**
	baz=273							
WRAK	**Wrangell Islan**	**98.96**	**34**	P		**P**	**11 18 01.6**	**-0.3**
	baz=272							
V35K	**Ketchikan**	**99.42**	**35**	P		**Pdif**	**11 18 03.7**	**-0.3**
	baz=273							
R33M	**Jennings River**	**99.53**	**31**	P		**Pdif**	**11 18 04.2**	**-0.5**
	baz=274							
S34M	**Telegraph Cree**	**99.55**	**32**	P		**Pdif**	**11 18 03.8**	**-0.8**
	baz=274							
DLBC	**Dease Lake**	**100.09**	**32**	P		**Pdif**	**11 18 05.9**	**-1.1**
	baz=275							
A36M	**Sachs Harbour**	**100.17**	**18**	P		**Pdif**	**11 18 06.4**	**-0.5**
	baz=282							
ARCES	**ARCESS Array B**	**101.03**	**340**	P		**Pdif**	**11 18 09.9**	**-0.9**
	comp=Z,10nm,1.2s,baz=46,slow=3.5,SNR=4.8							
ARCES	**ARCESS Array B**	**101.03**	**340**	P		**Pdif**	**11 18 10.0**	**-0.9**
C36M	**Paulatuk**	**101.10**	**20**	Pdif		**Pdif**	**11 18 11.3**	**+0.1**
C36M	**Paulatuk**	**101.10**	**20**	P		**Pdif**	**11 18 10.8**	**-0.4**
	baz=282							
FIA1	**FINESS Array S**	**102.35**	**332**	Pdif		**Pdif**	**11 18 14.8**	**-2.1**
FINES	**FINESS Array B**	**102.35**	**332**	P		**Pdif**	**11 18 15.4**	**-1.5**
	comp=Z,5.2nm,1.1s,baz=20,slow=6.7,SNR=4.0							
FINES	**FINESS Array B**	**102.35**	**332**			**Pdif**	**11 18 14.8**	**-2.1**
FINES	**FINESS Array B**	**102.35**	**332**	*i* P		**Pdif**	**11 18 16.0**	**-0.9**
FINES				pmax		pmax		
	comp=Z,5.0nm,1.1s							
BURAR	**Bucovina Array**	**104.94**	**318**	Pdif		**Pdif**	**11 18 29.5**	**+0.6**
BUR08	**Bucovina Ar. S**	**104.95**	**318**	Pdif		**Pdif**	**11 18 29.6**	**+0.7**
PDAR	**Pinedale Array**	**115.83**	**45**	PKP		**PKPdf**	**11 23 04.0**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=240,slow=2.9,SNR=5.1							
PDAR				PKKPbc		**PKKPbc**	**11 33 35.1**	**-2.4**
	comp=Z,0.4nm,0.8s,baz=101,slow=4.7,SNR=4.2							
TXAR	**Lajitas Array**	**123.92**	**59**	PKP		**PKPdf**	**11 23 19.3**	**-0.8**
	comp=Z,0.6nm,0.8s,baz=225,slow=2.1,SNR=8.1							
TORD	**Torodi Ar. Bea**	**129.30**	**282**	PKP		**PKPdf**	**11 23 30.0**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=125,slow=2.5,SNR=7.6							
PLCA	**Paso Flores**	**129.42**	**159**	PKP		**PKPdf**	**11 23 30.4**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=236,slow=4.7,SNR=5.5							
PB07	**IPOC Station P**	**145.73**	**145**	PKPdf		**PKPdf**	**11 23 59.8**	**-1.0**
PATCX	**Punta Patache**	**146.27**	**143**	PKPbc		**PKPdf**	**11 24 01.8**	**+0.2**
TA01	**Diego Aracena**	**146.45**	**143**	PKPbc		**PKPbc**	**11 24 02.6**	**-0.6**
ITAB	**Concordia**	**146.69**	**175**	PKPbc		**PKPdf**	**11 24 02.9**	**+0.9**
CPUP	**Villa Florida**	**146.78**	**167**	PKPbc		**PKPbc**	**11 24 04.1**	**+0.1**
	comp=Z,8.4nm,0.9s,baz=198,slow=3.3,SNR=19							
CPUP	**Villa Florida**	**146.78**	**167**			**PKPbc**	**11 24 03.4**	**-0.6**
CPUP	**Villa Florida**	**146.78**	**167**	PKP2		**PKPbc**	**11 24 03.4**	**-0.6**
HMBC	**Humberstone**	**146.85**	**143**	PKPbc		**PKPbc**	**11 24 04.8**	**+0.2**
LPAZ	**La Paz**	**150.95**	**140**	PKP		**PKPdf**	**11 24 11.2**	**+1.3**
	comp=Z,0.7nm,0.8s,baz=212,slow=1.3,SNR=3.5							
LPAZ				PKPbc		**PKiKP**	**11 24 16.9**	**+0.6**
	comp=Z,7.0nm,0.4s,baz=11,slow=2.6,SNR=52							
LPAZ	**La Paz**	**150.95**	**140**			**PKPdf**	**11 24 11.9**	**+2.0**

*AFAD **23** 11:04:54.8, 43˚.30N×30˚.56E, h5km±3km, ML2.5*
*CFUSG **23** 11:04:54.8, 43˚.75N×31˚.09E, h42km, MD3.1/3, MSH2.8/8*
*MCSM **23** 11:04:55.6±1.3, 44˚N±17˚×3˚1E±1˚4, h20km±32km, mb3.8, MLv3.7*

ISC 23 11:04:51.5±1.2, **43˚.78N**±0˚.04×**31˚.02E**±0˚.02, **h25**km±14km, **n56,σ2$00/84, 19C-9D, Black Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EFOR	**EFORIE**	**1.75**	**281**	⇑P	**Pb**	**11 05 26.8**	**+3.8**
EFOR				⇓S	**Sb**	**11 05 44.1**	**-0.4**
MFTR	**Murfatlar**	**1.92**	**283**	⇑P	**Pb**	**11 05 28.5**	**+2.7**
TIRR	**Tirgusor**	**2.00**	**291**	⇑P	**Pb**	**11 05 27.7**	**+0.6**
TIRR				⇓S	**Sn**	**11 05 48.5**	**+0.7**
TIRR	**Tirgusor**	**2.00**	**291**	*e*P	**Pb**	**11 05 27.7**	**+0.6**
TIRR	**Tirgusor**	**2.00**	**291**	P	**Pn**	**11 05 25.2**	**+1.6**
SEV	**Sevastopol'**	**2.05**	**67**	⇓*e*P	**Pn**	**11 05 26.2**	**+1.9**
SEV				P	**Pb**	**11 05 27.7**	**-0.3**
	comp=Z,3.0nm,0.2s						
SEV				*e*S	**Sn**	**11 05 50.0**	**+0.9**
SEV				S	**Sb**	**11 05 54.8**	**+1.7**
	comp=E,18nm,0.2s						
SEV				S		11 05 55.3	
	comp=N,12nm,0.2s						
TLCR		**2.11**	**312**	⇑P	**Pn**	**11 05 27.0**	**+1.7**
TLCR				⇓S	**Sn**	**11 05 47.4**	**-3.2**
TPGR	**Topolog**	**2.15**	**301**	⇓P	**Pn**	**11 05 27.9**	**+2.0**
TPGR				⇑S	**Sn**	**11 05 50.2**	**-1.5**
CVD1	**Cernavoda-Powe**	**2.20**	**285**	⇑P	**Pb**	**11 05 31.9**	**+1.3**
DNZ2	**Donuzlav2**	**2.23**	**44**	*e*S	**Sn**	**11 05 54.5**	**+0.9**
DNZ2				S	**Sb**	**11 06 02.0**	**+3.7**
	comp=E,76nm,0.3s						
DNZ2				S		11 06 02.8	
	comp=N,78nm,0.2s						
ICOR	**Ion Corvin**	**2.35**	**279**	⇓P	**Pb**	**11 05 35.0**	**+1.8**
YAL	**Yalta**	**2.36**	**72**	*e*S	**Sn**	**11 05 56.9**	**+0.1**
YAL				S	**Sb**	**11 05 59.9**	**-2.1**
	comp=N,21nm,0.3s						
YAL				S		11 06 01.3	
	comp=E,18nm,0.2s						
CFR	**Carcaliu**	**2.49**	**305**	⇑P	**Pn**	**11 05 32.5**	**+2.0**
CFR				⇑S	**Sn**	**11 05 57.3**	**-2.7**
SIM	**Simferopol'**	**2.50**	**61**	*e*S	**Sn**	**11 06 01.3**	**+0.9**
SIM				S	**Sb**	**11 06 03.7**	**-2.5**
	comp=E,30nm,0.3s						
SIM				S		11 06 05.1	
	comp=N,28nm,0.2s						
ALU	**Alushta**	**2.59**	**69**	*e*S	**Sn**	**11 06 03.0**	**+0.6**
ALU				S	**Sb**	**11 06 05.7**	**-2.9**
	comp=E,53nm,0.5s						
ALU				S		11 06 06.3	
	comp=N,69nm,0.2s						
KAND	**Kocaeli-Kandir**	**2.76**	**193**	P	**Pn**	**11 05 36.0**	**+2.0**
KAND				S	**Sn**	**11 06 05.5**	**-1.1**
KAND				IAML		11 06 10.0	
	comp=N,33nm,0.5s						
KAND				IAML		11 06 13.0	
	comp=N,56nm,1.1s						
KAYN	**Sakarya, Kayna**	**2.86**	**190**	P	**Pn**	**11 05 36.6**	**+1.1**
KAYN				S	**Sn**	**11 06 06.9**	**-2.2**
SAHE	**Sakarya_HENDEK**	**2.93**	**183**	P	**Pn**	**11 05 39.1**	**+2.6**
SAHE				S	**Sn**	**11 06 08.8**	**-2.1**
SATE	**Sancaktepe,**	**3.05**	**206**	P	**Pn**	**11 05 38.9**	**+0.7**
SATE				S	**Sn**	**11 06 11.9**	**-2.0**
SATE				IAML		11 06 13.0	
	comp=N,66nm,0.4s						
SATE				IAML		11 06 14.0	
	comp=N,88nm,0.3s						
SUDU	**Sudak**	**3.06**	**67**	*ex*	**Pn**	**11 05 40.3**	**+2.1**
SUDU				P	**Pb**	**11 05 43.7**	**-1.5**
	comp=Z,18nm,0.3s						
SUDU				*e*S	**Sn**	**11 06 14.9**	**+0.9**
SUDU				S	**Sb**	**11 06 19.4**	**-2.7**
	comp=E,20nm,0.3s						
SUDU				S		11 06 20.0	
	comp=N,33nm,0.3s						
SEMS	**Kocaeli-K¶lrfe**	**3.06**	**199**	P	**Pn**	**11 05 38.2**	**-0.1**
SEMS				S	**Sn**	**11 06 12.1**	**-2.1**
SEMS				IAML		11 06 14.0	
	comp=N,26nm,0.2s						
SEMS				IAML		11 06 14.0	
	comp=N,28nm,0.2s						
RAZG	**Razgrad**	**3.28**	**268**	⇑P	**Pb**	**11 05 49.2**	**+0.2**
RAZG				⇑S	**Sb**	**11 06 26.0**	**-2.6**
FEO	**Feodosiya**	**3.36**	**67**	*ex*	x	11 06 23.9	
FEO				S	**Sn**	**11 06 24.2**	**+2.7**
	comp=E,26nm,0.2s						
FEO				S	**Sb**	**11 06 24.5**	**-6.4**
	comp=N,45nm,0.3s						
HISA	**Bilecik-Osmane**	**3.42**	**194**	P	**Pn**	**11 05 43.6**	**+0.4**
HISA				S	**Sn**	**11 06 22.0**	**-1.0**
HISA				IAML		11 06 24.0	
	comp=N,17nm,0.4s						
HISA				IAML		11 06 26.0	
	comp=N,19nm,0.8s						
VRI	**Vrincioaia**	**3.70**	**306**	⇑P	**Pn**	**11 05 49.1**	**+2.1**
VRI				⇑S	**Sn**	**11 06 26.6**	**-3.2**
VRI	**Vrincioaia**	**3.70**	**306**	P	**Pn**	**11 05 48.7**	**+1.7**
PLOR	**Plostina**	**3.73**	**305**	⇓P	**Pn**	**11 05 49.6**	**+2.0**
ELND	**Elena**	**3.85**	**259**	⇑P	**Pb**	**11 05 58.1**	**-0.6**
COVR	**Voineasa-Covas**	**4.00**	**303**	⇑P	**Pn**	**11 05 52.8**	**+1.6**
MLR	**Muntele Rosu**	**4.01**	**297**	⇑P	**Pn**	**11 05 53.4**	**+2.1**
MLR				⇓S	**Sn**	**11 06 36.4**	**-1.2**
TESR	**Tescani**	**4.12**	**313**	⇑P	**Pn**	**11 05 54.6**	**+1.7**
TESR				⇑S	**Sn**	**11 06 35.7**	**-4.6**
TESR	**Tescani**	**4.12**	**313**	P	**Pn**	**11 05 55.0**	**+2.1**
VOIR		**4.57**	**293**	⇓S	**Sn**	**11 06 50.7**	**-0.8**
VOIR		**4.57**	**293**	P	**Pn**	**11 06 03.0**	**+3.9**
VOIR		**4.57**	**293**	⇑P	**Pn**	**11 06 03.0**	**+3.9**
SORM	**Soroca**	**4.73**	**338**	P	**Pn**	**11 06 02.6**	**+1.4**
SORM				S	**Sn**	**11 06 54.2**	**-1.0**
NDNU	**Novodnistrovsk**	**5.44**	**333**	P	**Pn**	**11 06 11.3**	**+0.4**
BURAR	**Bucovina Array**	**5.59**	**315**	⇑P	**Pn**	**11 06 15.6**	**+2.5**
AK07	**Malin Array Si**	**6.88**	**350**	P	**Pn**	**11 06 31.1**	**+0.4**
AK06	**Malin Array Si**	**6.92**	**350**	P	**Pn**	**11 06 31.5**	**+0.3**
AK10	**Malin Array Si**	**6.92**	**351**	P	**Pn**	**11 06 31.7**	**+0.4**
AK09	**Malin Array Si**	**6.94**	**351**	P	**Pn**	**11 06 31.6**	**+0.1**
AK05	**Malin Array Si**	**6.95**	**350**	P	**Pn**	**11 06 31.9**	**+0.3**
AK08	**Malin Array Si**	**6.96**	**351**	P	**Pn**	**11 06 31.9**	**+0.2**
AK14	**Malin Array Si**	**6.97**	**350**	P	**Pn**	**11 06 32.9**	**+0.9**
AK12	**Malin Array Si**	**6.98**	**350**	P	**Pn**	**11 06 33.1**	**+1.0**
AK02	**Malin Array Si**	**6.99**	**350**	P	**Pn**	**11 06 32.7**	**+0.6**
AK11	**Malin Array Si**	**7.01**	**350**	P	**Pn**	**11 06 33.5**	**+1.0**
AK01	**Malin Array Si**	**7.02**	**351**	P	**Pn**	**11 06 33.3**	**+0.7**
AKBB	**Malin Array Si**	**7.03**	**351**	P	**Pn**	**11 06 34.3**	**+1.6**
AKBB				S	**Sn**	**11 07 50.9**	**-0.8**
AK17	**Malin Array Si**	**7.03**	**350**	P	**Pn**	**11 06 34.0**	**+1.2**
AK18	**Malin Array Si**	**7.07**	**350**	P	**Pn**	**11 06 34.3**	**+1.0**
AK19	**Malin Array Si**	**7.08**	**350**	P	**Pn**	**11 06 34.6**	**+1.2**
AK20	**Malin Array Si**	**7.09**	**350**	P	**Pn**	**11 06 34.7**	**+1.1**
AK22	**Malin Array Si**	**7.11**	**350**	P	**Pn**	**11 06 35.0**	**+1.2**
AK21	**Malin Array Si**	**7.12**	**350**	P	**Pn**	**11 06 34.9**	**+0.9**

ISK 23 11:05:50.4, 41˚.60N×29˚.55E, h23km, ML1.9/9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SILT	**Sile**	**0.46**	**171**	Pg	Pb	11 06 00.3	+0.5
SILT				Sg	Sb	11 06 07.5	+1.4
KLYT	**Kilyos**	**0.52**	**228**	Pg	Pb	11 06 01.6	+0.8
KLYT				Sg	Sn	11 06 09.3	-1.2
ISK	**Istanbul-Kandi**	**0.65**	**215**	Pg	Pn	11 06 04.2	-0.1
ISK				Sg	Sn	11 06 13.2	-0.6
KAVV	**Kandilli-Istan**	**0.65**	**215**	Pg	Pn	11 06 04.2	-0.1
KAVV				Sg	Sn	11 06 13.8	-0.1
BGKT	**Bogazkoy**	**0.72**	**234**	Pg	Pb	11 06 04.7	+0.4
HRT	**Hereke**	**0.79**	**173**	Pg	Pn	11 06 05.9	-0.3
BUYA	**Buyukada-Istan**	**0.80**	**204**	Pg	Pn	11 06 06.7	+0.4
BUYA				Sg	Sn	11 06 18.4	+0.9
BRGA	**Burgazada-Ista**	**0.81**	**207**	Pg	Pn	11 06 06.7	+0.3
BRGA				Sg	Sn	11 06 18.5	+0.9
HYBA	**Heybeliada-Ist**	**0.81**	**206**	Pg	Pb	11 06 05.9	+0.2

*UPP **23** 11:41:56.3±0.1, 63˚.48N×18˚.06E, h0km, ML2.7, Suspected explosion*
*DNK **23** 11:41:56.7±0.4, 63˚.48N×18˚.05E, h0km, ML2.7(UPP), Explosion*
*IDC **23** 11:41:57.2±1.0, 63˚.53N×18˚.21E, h0km, mbtmp2.7/4, ML1.8/4, Error ellipse: s-maj=12.8km s-min=8.4km az=147.0*

ISC 23 11:41:55.3±0.8, **63˚.57N**±0˚.04×**18˚.00E**±0˚.04, **h0km, n22, σ0$81/30, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BREU	**Bredtraesk**	**0.41**	**38**	P	**Pb**	**11 42 05.5**	**0.0**
BREU				S	**Sb**	**11 42 12.0**	**-0.3**
BREU	**Bredtraesk**	**0.41**	**38**	P	**Pb**	**11 42 05.5**	**0.0**
BREU				S	**Sb**	**11 42 12.0**	**-0.3**
SOLU	**Sollefteaa**	**0.46**	**226**	P	**Pg**	**11 42 04.6**	**+0.5**
SOLU				S	**Sg**	**11 42 10.4**	**+0.3**
SOLU	**Sollefteaa**	**0.46**	**226**	P	**Pg**	**11 42 04.6**	**+0.5**
SOLU				S	**Sg**	**11 42 10.4**	**+0.3**
HUSU	**Husum**	**0.59**	**112**	P	**Pg**	**11 42 06.5**	**0.0**
HUSU	**Husum**	**0.59**	**112**	P	**Pg**	**11 42 06.5**	**0.0**
HEMU	**Hemsoen**	**0.90**	**179**	P	**Pg**	**11 42 11.8**	**-0.6**
HEMU	**Hemsoen**	**0.90**	**179**	P	**Pg**	**11 42 11.8**	**-0.6**
SVAU	**Svanoeiden**	**1.16**	**36**	P	**Pn**	**11 42 18.8**	**+0.2**
SVAU				S	**Sn**	**11 42 35.2**	**+0.1**
SVAU	**Svanoeiden**	**1.16**	**36**	P	**Pn**	**11 42 18.8**	**+0.2**
SVAU				S	**Sn**	**11 42 35.2**	**+0.1**
UMAU	**Umeaa**	**1.23**	**74**	P	**Pb**	**11 42 19.3**	**-0.1**
UMAU	**Umeaa**	**1.23**	**74**	P	**Pb**	**11 42 19.3**	**-0.1**
NOD	**Norderasen**	**1.42**	**266**	P	**Pn**	**11 42 22.5**	**+0.2**
NOD	**Norderasen**	**1.42**	**266**	P	**Pn**	**11 42 22.5**	**+0.2**
ODEU	**Stanfors**	**1.47**	**54**	P	**Pb**	**11 42 23.7**	**+0.4**
ODEU	**Stanfors**	**1.47**	**54**	P	**Pb**	**11 42 23.7**	**+0.4**
HASU	**Hassela**	**1.56**	**205**	P	**Pn**	**11 42 23.4**	**-0.8**
HASU	**Hassela**	**1.56**	**205**	P	**Pn**	**11 42 23.4**	**-0.8**
HFS	**Hagfors**	**4.00**	**213**	Pn	**Pn**	**11 42 59.2**	**+1.4**
	0.1nm,0.3s,baz=42,slow=14,SNR=2.4						
HFS				Sn	**Sn**	**11 43 44.8**	**-0.5**
	0.6nm,0.3s,baz=34,slow=23,SNR=7.3						
HFS				Lg	Lg	11 43 57.7	
	1.8nm,0.3s,baz=35,slow=28,SNR=13						
	4.3nm,1.0s						
NOA	**NORSAR Array B**	**4.06**	**234**	Pn	**Pn**	**11 43 00.6**	**+2.0**
	baz=32,slow=20,SNR=1.4						
NOA				Lg	Lg	11 44 06.5	
	0.1nm,0.3s,baz=35,slow=23,SNR=7.7						
	0.1nm,0.3s						
FINES	**FINESS Array B**	**4.31**	**116**	Pn	**Pn**	**11 43 03.8**	**+1.8**
	0.3nm,0.3s,baz=305,slow=15,SNR=9.0						
FINES				Lg	Lg	11 44 08.2	
	1.7nm,0.3s,baz=302,slow=28,SNR=17						
	1.6nm,0.9s						
ARCES	**ARCESS Array B**	**6.69**	**23**	Pn	**Pn**	**11 43 34.9**	**+0.2**
	0.1nm,0.3s,baz=202,slow=16,SNR=1.4						
ARCES				Sn	**Sn**	**11 44 49.3**	**-2.2**
	0.1nm,0.3s,baz=206,slow=23,SNR=2.1						
	2.4nm,0.9s						

*NEIC **23** 11:51:23, 55˚.48N×135˚.17W, h13km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.00; $M_{\theta\theta}$-4.44; $M_{\phi\phi}$4.44; $M_{r\theta}$1.19; $M_{\theta\phi}$2.56; $M_{r\phi}$0.69; Fault plane solution: M_o5.31000×10^{14} NP1:ϕ_s60.00000°, δ90.00000°, λ.15.00000°. NP2:ϕ_s330.00000°, δ75.00000°, λ180.00000°. Principal axes: T 5.3060, Plg11.0000°, Azm286.0000°; N 0.0002, Plg75.0000°, Azm60.0000°; P -5.3063, Plg11.0000°, Azm194.0000°;*
*NEIC **23** 11:51:24.0±1.8, 55˚.49N±0˚.03×135˚.11W±0˚.07, h10km±2km, mb3.6/9, ML3.9/56, ML3.8(AEIC), Mwr3.8/12(SLM) Error ellipse: s-maj=8.5km s-min=3.0km az=231.0*
*ANF **23** 11:51:24.4±0.4, 55˚.54N×135˚.00W, h0km, ML4.1/21, Error ellipse: s-maj=4.4km s-min=2.3km az=4.0*
*PGC **23** 11:51:25.5±0.0, 55˚.50N×134˚.93W, h3km, Mw4.0, mb3.6(NEIC), ML3.8(AEIC), 175km south of Sitka, Ak Southeastern Alaska*
*AEIC **23** 11:51:25.6±1.9, 55˚.45N±0˚.04×135˚.08W±0˚.08, h15km±6km, Error ellipse: s-maj=7.2km s-min=4.9km az=58.0*
*IDC **23** 11:51:25.1±1.3, 55˚.48N×134˚.99W, h0km, mb3.3/3, mbtmp3.5/9, ML3.3/6, MS3.0/3, Error ellipse: s-maj=20.4km s-min=11.4km az=53.0*

ISC 23 11:51:24.4±1.4, **55˚.50N**±0˚.03×**135˚.02W**±0˚.04, **h4**km±10km, **n317,σ1$30/369, Off coast of southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRAG	**Craig**	**1.08**	**91**	P	**Pg**	**11 51 45.0**	**-0.1**
CRAG	**Craig**	**1.08**	**91**	S	**Sb**	**11 52 00.2**	**+0.2**
CRAG	**Craig**	**1.08**	**91**		**Pg**	**11 51 45.2**	**+0.1**
CRAG				Sg	**Sb**	**11 52 00.2**	**+0.2**
CRAG				IAML		11 52 01.4	
	comp=E,2μm,0.6s						
CRAG				IAML		11 52 07.2	
	comp=N,3μm,0.9s						
CRAG	**Craig**	**1.08**	**91**	P	**Pg**	**11 51 45.2**	**+0.1**
	baz=271,SNR=195						
CRAG				S	**Sg**	**11 51 59.2**	**+0.1**
	baz=271						
U33K	**Whale Pass**	**1.23**	**59**	Pn	**Pg**	**11 51 47.1**	**-0.9**
U33K				Sn	**Sg**	**11 52 03.5**	**-0.5**
U33K				IAML		11 52 04.5	
	comp=E,3μm,0.5s						
U33K	**Whale Pass**	**1.23**	**59**	P	**Pg**	**11 51 46.8**	**-1.2**
	baz=242						
U33K				S	**Sg**	**11 52 03.6**	**-0.5**
	baz=242						
SIT	**Sitka**	**1.57**	**354**	P	**Pn**	**11 51 52.9**	**0.0**
SIT	**Sitka**	**1.57**	**354**	S	**Sn**	**11 52 14.3**	**+0.7**
SIT	**Sitka**	**1.57**	**354**		**Pn**	**11 51 51.3**	**-1.6**
SIT					**Sn**	**11 52 11.1**	**-2.5**
SIT				IAML		11 52 17.1	
	comp=N,1μm,0.4s						
SIT				IAML		11 52 21.6	
	comp=E,2μm,0.4s						
SIT	**Sitka**	**1.57**	**354**	P	**Pn**	**11 51 51.2**	**-1.6**
	baz=177,SNR=58						
SIT				Sb	**Sn**	**11 52 14.6**	**+1.0**
	baz=177						
T33K	**Petersburg**	**1.75**	**40**		**Pn**	**11 51 55.1**	**-0.4**
T33K					**Sn**	**11 52 17.3**	**-0.8**
T33K	**Petersburg**	**1.75**	**40**	Pn	**Pn**	**11 51 55.0**	**-0.4**
T33K	**Petersburg**	**1.75**	**40**	P	**Pn**	**11 51 54.7**	**-0.7**
	baz=224,SNR=46						
T33K				Sb	**Sb**	**11 52 19.6**	**+0.4**
	baz=224						
WRAK	**Wrangell Islan**	**1.76**	**57**		**Pn**	**11 51 55.4**	**-0.2**
WRAK	**Wrangell Islan**	**1.76**	**57**	Sn	**Sn**	**11 52 16.7**	**-1.7**
WRAK	**Wrangell Islan**	**1.76**	**57**	Pn	**Pn**	**11 51 55.2**	**-0.3**
WRAK	**Wrangell Islan**	**1.76**	**57**	P	**Pn**	**11 51 54.6**	**-0.9**
	baz=240,SNR=38						
WRAK				Sb	**Sb**	**11 52 19.7**	**+0.1**
	baz=240						
V35K	**Ketchikan**	**1.95**	**94**		**Pn**	**11 51 57.8**	**-0.4**
V35K				Sn	**Sn**	**11 52 21.4**	**-1.6**
V35K				IAML		11 52 32.5	
	comp=N,820nm,0.6s						
V35K				IAML		11 52 32.6	
	comp=E,816nm,0.7s						
V35K	**Ketchikan**	**1.95**	**94**	P	**Pn**	**11 51 57.6**	**-0.5**
	baz=276,SNR=70						
V35K				Sb	**Sb**	**11 52 26.1**	**+1.1**
	baz=276						
NDB	**Naden**	**1.96**	**141**		**Sb**	**11 52 26.1**	**+0.6**
NDB	**Naden**	**1.96**	**141**	Pn	**Pn**	**11 51 57.8**	**-0.6**
NDB				Sg	**Sg**	**11 52 27.1**	**-0.3**
S32K	**Killisnoo**	**1.99**	**7**		**Pn**	**11 51 58.0**	**-0.6**
S32K				Sn	**Sn**	**11 52 21.2**	**-2.7**
S32K				IAML		11 52 30.3	
	comp=E,989nm,0.7s						
S32K	**Killisnoo**	**1.99**	**7**	P	**Pn**	**11 51 57.3**	**-1.4**
	baz=190,SNR=36						
S32K				S	**Sn**	**11 52 22.5**	**-1.4**
	baz=190						
MASB	**Masset**	**2.29**	**129**	Pn	**Pn**	**11 52 02.2**	**-0.6**
PCLB	**Port Clements**	**2.31**	**140**	Pn	**Pn**	**11 52 02.5**	**-0.6**
PCLB				Sn	**Sn**	**11 52 31.9**	**0.0**
PCLB				Sg	**Sb**	**11 52 36.8**	**+1.5**
S31K	**Pelican**	**2.55**	**345**		**Pn**	**11 52 05.9**	**-0.6**
S31K				Sn	**Sn**	**11 52 35.1**	**-2.8**
S31K	**Pelican**	**2.55**	**345**	P	**Pn**	**11 52 05.5**	**-0.9**
	baz=166,SNR=6.0						
S31K				S	**Sn**	**11 52 34.2**	**-3.7**
	baz=166						
DIB	**Dawson Inlet,**	**2.74**	**146**		**Pn**	**11 52 08.7**	**-0.4**
DIB				Sn	**Sn**	**11 52 41.5**	**-1.1**
DIB	**Dawson Inlet,**	**2.74**	**146**	Pn	**Pn**	**11 52 08.4**	**-0.7**
DIB				Sn	**Sn**	**11 52 40.5**	**-2.1**
H02S2	**DAWSON INLET T**	**2.74**	**146**	Pn	**Pn**	**11 52 08.7**	**-0.3**
H02S2				Sn	**Sn**	**11 52 41.4**	**-1.2**
R32K	**Eaglecrest**	**2.79**	**5**		**Pn**	**11 52 09.8**	**0.0**
R32K				IAML		11 52 54.1	
	comp=E,582nm,0.4s						
R32K				IAML		11 53 00.6	
	comp=N,326nm,0.5s						
R32K	**Eaglecrest**	**2.79**	**5**	P	**Pn**	**11 52 09.5**	**-0.3**
	baz=188,SNR=12						
R32K				Sb	**Sb**	**11 52 50.5**	**+1.2**
	baz=188						
JIS	**Juneau Island**	**2.80**	**7**	P	**Pn**	**11 52 09.3**	**-0.6**
JIS	**Juneau Island**	**2.80**	**7**		**Pn**	**11 52 09.3**	**-0.6**
JIS					**Sn**	**11 52 42.0**	**-2.0**
U35K	**Hyder**	**2.86**	**80**		**Pn**	**11 52 11.0**	**+0.4**
U35K	**Hyder**	**2.86**	**80**	Pn	**Pn**	**11 52 10.4**	**-0.1**
U35K	**Hyder**	**2.86**	**80**	P	**Pn**	**11 52 10.1**	**-0.5**
	baz=264						
U35K				Sg	**Sg**	**11 52 57.5**	**+1.5**
	baz=264						
R31K	**City Hall, Gus**	**2.94**	**353**		**Pn**	**11 52 12.0**	**+0.2**
R31K	**City Hall, Gus**	**2.94**	**353**	Sg	**Sb**	**11 52 56.5**	**+2.9**
R31K	**City Hall, Gus**	**2.94**	**353**	P	**Pn**	**11 52 10.6**	**-1.3**
	baz=174						
R31K				Sg	**Sb**	**11 52 57.1**	**+3.5**
	baz=174						
MOBC	**Moresby Island**	**2.96**	**142**		**Pn**	**11 52 11.8**	**-0.3**
MOBC				Sn	**Sn**	**11 52 45.7**	**-2.4**
MOBC				IAML		11 53 04.9	
	comp=E,431nm,1.0s						
MOBC				IA

baz=191,SNR=6.8
P32M S Sn 11 53 15.8 -1.8
baz=191
R33M Jennings River 4.47 28 Pn 11 52 33.5 +0.5
R33M Jennings River 4.47 28 IAML 11 53 52.2
comp=N,127nm,0.6s
R33M IAML 11 53 57.0
comp=E,122nm,0.8s
R33M Jennings River 4.47 28 Pn **Pn 11 52 33.6 +0.6**
R33M Jennings River 4.47 28 P **Pn 11 52 33.2 +0.3**
baz=212
R33M S Sn 11 53 24.6 -0.9
baz=212
P30M Million Dollar 4.75 348 Pn 11 52 36.1 -0.5
P33M Teslin, Yukon 4.87 13 Pn 11 52 39.0 +0.7
P33M Teslin, Yukon 4.87 13 Pn **Pn 11 52 39.1 +0.8**
P33M Teslin, Yukon 4.87 13 P **Pn 11 52 38.8 +0.5**
baz=196
P33M S Sn 11 53 33.6 -1.5
baz=196
BCPM Bancas Point 5.10 333 Pn 11 52 42.2 +0.8
BCPM IAML 11 54 06.5
comp=E,118nm,3.2s
O29M Mount Kennedy 5.17 340 Pn 11 52 42.9 +0.3
O29M Mount Kennedy 5.17 340 IAML 11 53 44.5
comp=E,115nm,0.7s
O29M Mount Kennedy 5.17 340 Pn **Pn 11 52 43.1 +0.6**
O29M Sn **Sn 11 53 41.2 -1.4**
O29M Mount Kennedy 5.17 340 P **Pn 11 52 43.6 +1.0**
baz=158
O29M S Sn 11 53 41.2 -1.4
baz=158
WHY Whitehorse 5.17 1 Pn 11 52 42.7 +0.2
WHY Whitehorse 5.17 1 Pn **Pn 11 52 41.7 -0.8**
WHY Sn **Sn 11 53 39.9 -2.7**
WHY Whitehorse 5.17 1 P **Pn 11 52 42.6 +0.1**
baz=182
WHY S Sn 11 53 40.5 -2.1
baz=182
BBB Bella Bella 5.27 126 Pn **Pn 11 52 43.7 0.0**
comp=E,1.6nm,0.3s,baz=314,slow=6.9,SNR=43
BBB Sn **Sn 11 53 42.5 -2.3**
comp=E,3.3nm,0.3s,baz=120,slow=18,SNR=9.0
BBB Lg Lg 11 54 10.3
comp=E,5.5nm,0.3s,baz=76,slow=24,SNR=4.2
BBB LR LR 11 54 45.6
comp=E,122nm,19.1s,baz=46,slow=38
comp=E,5.7nm,0.4s
BBB Bella Bella 5.27 126 Pn **Pn 11 52 43.9 +0.1**
BBB IAML 11 53 56.2
comp=E,62nm,2.4s
BBB IAML 11 54 33.0
comp=N,49nm,1.4s
BBB Bella Bella 5.27 126 Pn **Pn 11 52 43.6 -0.1**
BBB Sn **Sn 11 53 42.8 -2.1**
YUK7 Dusty Glacier 5.31 343 Pn **Pn 11 52 45.2 +0.8**
YUK7 Sn **Sn 11 53 45.6 -0.5**
O30N Mendenhall 5.31 354 Pn 11 52 45.0 +0.5
O30N Mendenhall 5.31 354 IAML 11 54 16.2
comp=E,92nm,0.8s
O30N Mendenhall 5.31 354 Pn **Pn 11 52 45.4 +0.9**
O30N Mendenhall 5.31 354 P **Pn 11 52 44.9 +0.5**
baz=174,SNR=5.4
PINM Pinnacle 5.39 331 P **Pn 11 52 46.6 +1.2**
baz=147
PINM S Sn 11 53 45.8 -2.1
baz=147
PCA Pinnacle 5.39 331 Pn 11 52 46.8 +1.3
PCA Pinnacle 5.39 331 Pn **Pn 11 52 46.6 +1.1**
PCA Sn **Sn 11 53 45.5 -2.5**
HYT Haines Junctio 5.50 347 Pn 11 52 49.2 +2.2
HYT Haines Junctio 5.50 347 Pn **Pn 11 52 48.2 +1.2**
HYT Haines Junctio 5.50 347 P **Pn 11 52 48.2 +1.2**
baz=166
HYT S Sn 11 53 50.1 -0.6
baz=166
WTLY Watson Lake, Y 5.69 33 Pn Pn 11 52 50.9 +1.3
WTLY Watson Lake, Y 5.69 33 P **Pn 11 52 50.6 +1.0**
baz=219
YUK6 Outpost Mounta 5.73 343 Pn Pn 11 52 51.5 +1.2
YUK6 Sn **Sn 11 53 55.7 -1.0**
YUK6 Outpost Mounta 5.73 343 P **Pn 11 52 51.0 +0.6**
baz=162
N32M Quiet Lake 5.76 9 Pn 11 52 51.7 +1.2
N32M Quiet Lake 5.76 9 Pn **Pn 11 52 51.8 +1.2**
N32M Quiet Lake 5.76 9 P **Pn 11 52 51.6 +1.1**
baz=192
RKAV Rock Avalanche 5.87 328 Pn Pn 11 52 53.5 +1.3
O28M Mount Upton 5.95 335 Pn 11 52 54.4 +1.0
O28M Mount Upton 5.95 335 Pn **Pn 11 52 54.4 +1.0**
O28M Sn **Sn 11 53 59.0 -3.0**
O28M Mount Upton 5.95 335 P **Pn 11 52 54.3 +0.9**
baz=151
O28M S Sn 11 53 58.2 -3.8
baz=151
MESA MESA 5.97 325 Pn 11 52 53.8 +0.3
MESA MESA 5.97 325 Pn **Pn 11 52 53.9 +0.3**
MESA MESA 5.97 325 P **Pn 11 52 53.8 +0.3**
baz=140
MESA S Sn 11 53 59.9 -2.6
baz=140
N30M Aishikik Lake 6.07 351 Pn 11 52 55.8 +0.9
N30M Aishikik Lake 6.07 351 Pn **Pn 11 52 55.8 +0.9**
N30M Aishikik Lake 6.07 351 P **Pn 11 52 55.6 +0.7**
baz=170
YUK4 Talbot Arm 6.16 343 Pn **Pn 11 52 58.1 +2.0**
YUK4 Talbot Arm 6.16 343 P **Pn 11 52 58.2 +2.0**
baz=162
LOGN Logan Glacier 6.20 332 Pn 11 52 58.4 +1.7
LOGN Logan Glacier 6.20 332 Pn **Pn 11 52 58.0 +1.2**
LOGN Sn **Sn 11 54 05.0 -3.1**
FSJB Fort St James 6.26 95 Pn **Pn 11 52 58.9 +1.4**
GRNC Granite Creek 6.34 329 Pn 11 53 00.3 +1.6
GRNC Granite Creek 6.34 329 Pn **Pn 11 53 00.1 +1.4**
BGLC Bering Glacier 6.39 320 Pn 11 52 59.2 0.0
HOLB Holberg 6.40 137 Pn Pn 11 52 57.9 -1.4
HOLB Holberg 6.40 137 Pn **Pn 11 52 58.2 -1.1**
CTGM Chitina Glacie 6.41 331 Pn 11 53 01.3 +1.8
CTGM Chitina Glacie 6.41 331 Pn **Pn 11 53 01.4 +1.8**
CTGM Sn **Sn 11 54 10.3 -2.9**
CTG Chitna Glacier 6.41 331 P **Pn 11 53 01.2 +1.6**
baz=147
CTG S Sn 11 54 10.6 -2.6
baz=147
SUCK Suckling Hills 6.55 318 Pn 11 53 01.2 -0.1
BARN Barnard Glacie 6.58 331 Pn 11 53 03.5 +1.6
PHC Port Hardy 6.63 133 Pn 11 53 02.0 -0.4
PHC Port Hardy 6.63 133 Sn **Sn 11 54 15.7 -2.6**
KIAG Kiagna River 6.67 328 Pn 11 53 04.0 +0.8
KIAG Kiagna River 6.67 328 Pn **Pn 11 53 04.0 +0.8**
TGL Tana Glacier 6.69 325 Pn 11 53 03.3 -0.1
KAIM Kayak Island 6.71 315 Pn **Pn 11 53 03.0 -0.4**
KAIM Kayak Island 6.71 315 P **Pn 11 53 03.5 0.0**
baz=128
M31M Drury Creek, Y 6.73 3 Pn Pn 11 53 05.0 +1.2
BALM Baldy 6.76 328 Pn 11 53 05.0 +0.7
BALM Baldy 6.76 328 Pn **Pn 11 53 05.3 +1.0**
BALM Sn **Sn 11 54 18.1 -3.6**
CRQE Cirque 6.78 324 P **Pn 11 53 04.9 +0.4**
baz=138
CRQE S Sn 11 54 19.3 -2.9
baz=138
CRQM Cirque 6.80 324 Pn 11 53 05.2 +0.3
YUK3 Moose Creek 6.90 338 Pn **Pn 11 53 08.4 +2.0**
YUK3 Moose Creek 6.90 338 S **Sn 11 54 22.9 -2.4**
baz=154
PTPK Patty Peak 6.91 329 Pn 11 53 07.8 +1.3
PTPK Patty Peak 6.91 329 Pn **Pn 11 53 08.3 +1.8**
YUK2 White River 6.99 337 Pn 11 53 09.2 +1.7
RAGM Ragged Mountai 7.09 318 Pn 11 53 07.8 -1.1
M30M Minto, Yukon 7.15 353 Pn 11 53 10.3 +0.6
M30M Minto, Yukon 7.15 353 P **Pn 11 53 10.3 +0.6**
baz=173
M29M Somme Creek 7.18 347 Pn 11 53 11.5 +1.4
M29M Somme Creek 7.18 347 Pn **Pn 11 53 11.7 +1.5**
M29M Somme Creek 7.18 347 P **Pn 11 53 11.3 +1.1**
baz=165
M29M S Sn 11 54 30.4 -1.7
baz=165
MCARA McCarthy VSAT 7.24 328 Pn Pn 11 53 12.7 +1.9
MCARA McCarthy VSAT 7.24 328 Pn **Pn 11 53 12.4 +1.6**
MCARA Sn **Sn 11 54 30.9 -2.4**
MCARA McCarthy VSAT 7.24 328 P **Pn 11 53 12.2 +1.4**
baz=142
MCARA S Sn 11 54 32.2 -1.0
baz=142
VRDI Verde Repeater 7.25 326 Pn 11 53 11.4 +0.3
FHBB Fair Harbour 7.26 135 Pn **Pn 11 53 11.9 +0.9**
WOSB Woss 7.40 133 Pn **Pn 11 53 14.0 +0.9**
NCSB Newcastle Ridg 7.44 130 Pn **Pn 11 53 14.5 +0.8**
NCSB Sn **Sn 11 54 38.4 -0.1**
GLB Gilahina Butte 7.52 326 Pn 11 53 15.0 +0.3
TAHB Tahsis 7.56 135 Pn **Pn 11 53 16.3 +1.0**
EYAK Cordova Ski Ar 7.61 316 P **Pn 11 53 16.5 +0.6**
EYAK Cordova Ski Ar 7.61 316 Pn **Pn 11 53 14.6 -1.3**
L29M L29M 7.79 350 Pn 11 53 19.5 +1.0
L29M L29M 7.79 350 Pn **Pn 11 53 19.9 +1.5**
L29M L29M 7.79 350 P **Pn 11 53 19.2 +0.7**
baz=168
HIN Hinchinbrook I 7.83 313 Pn **Pn 11 53 18.1 -0.9**
N25K Chitina, Valde 7.90 325 Pn **Pn 11 53 21.3 +1.3**
N25K Chitina, Valde 7.90 325 P **Pn 11 53 20.7 +0.7**
baz=137
P23K Montague Islan 8.01 309 Pn **Pn 11 53 19.5 -1.8**
KLU Klutina 8.28 321 Pn 11 53 24.9 -0.3
KLU Klutina 8.28 321 P **Pn 11 53 25.2 +0.1**
baz=132
GLI Glacier Island 8.34 315 P **Pn 11 53 25.3 -0.6**
baz=126
K29M Barlow Dome 8.46 352 Pn 11 53 28.1 +0.4
K29M Barlow Dome 8.46 352 Pn **Pn 11 53 29.2 +1.6**
K29M Barlow Dome 8.46 352 P **Pn 11 53 27.9 +0.2**
baz=171
SEW Seward 8.97 307 Pn **Pn 11 53 33.7 -0.8**
SCM Sheep Creek Mo 9.01 320 P **Pn 11 53 35.4 +0.2**
baz=130
J29N Klondike Camp 9.12 351 Pn 11 53 37.1 +0.5
J30M Hart River 9.13 356 Pn **Pn 11 53 35.5 -1.2**
J30M Hart River 9.13 356 Pn **Pn 11 53 38.9 +2.1**
J30M Hart River 9.13 356 P **Pn 11 53 37.8 +1.0**
baz=176
M23K Glacier View 9.13 319 P **Pn 11 53 37.2 +0.4**
baz=128
KNK Knik Glacier 9.19 316 Pn 11 53 36.7 -0.9
KNK Knik Glacier 9.19 316 P **Pn 11 53 37.2 -0.3**
baz=125
PAX Paxson 9.19 329 P **Pn 11 53 37.6 0.0**
baz=140
K27K Chicken 9.26 340 Pn Pn 11 53 37.9 -0.5
O22K Cooper Landing 9.26 309 Pn Pn 11 53 35.1 -3.3
DOT Dot Lake 9.36 334 Pn Pn 11 53 38.7 -1.1
SML Sawmill 9.37 318 Pn Pn 11 53 39.4 -0.6
SML Sawmill 9.37 318 P **Pn 11 53 39.7 -0.4**
baz=127
BRSE Bradley Lake S 9.44 303 Pn 11 53 38.9 -2.0
BRSE Bradley Lake S 9.44 303 P **Pn 11 53 38.9 -2.0**
baz=110
SLKM Skilak Lake 9.49 308 Pn Pn 11 53 39.8 -1.8
BRLK Bradley Lake 9.51 303 Pn Pn 11 53 40.4 -1.6
RC01 Rabbit Creek A 9.55 312 Pn Pn 11 53 40.8 -1.6
RC01 Rabbit Creek A 9.55 312 P **Pn 11 53 41.8 -0.6**
baz=120
PMR Palmer 9.56 315 P **Pn 11 53 42.1 -0.5**
PMR Palmer 9.56 315 S **Sn 11 55 29.5 -0.7**
PMR Palmer 9.56 315 Pn Pn 11 53 42.0 -0.5
PMR Palmer 9.56 315 P **Pn 11 53 42.4 -0.2**
baz=124
CNPM China Poot 9.60 301 Pn Pn 11 53 41.6 -1.6
WAT6 Susitna Watana 9.64 323 Pn 11 53 43.5 -0.4
WAT6 Susitna Watana 9.64 323 P **Pn 11 53 43.9 0.0**
baz=132
I30M Mount Dempster 9.78 357 Pn Pn 11 53 47.5 +1.9
I30M Mount Dempster 9.78 357 P **Pn 11 53 46.7 +1.1**
baz=176
DHY Denali Highway 9.86 325 P **Pn 11 53 48.2 +1.3**
baz=135
K24K Donnelly Dome 9.93 331 P **Pn 11 53 50.0 +2.3**
baz=142
KDAK Kodiak Island 9.94 290 Pn Pn 11 53 45.9 -1.9
comp=E,2.9nm,0.3s,baz=47,slow=4.3,SNR=68
KDAK LR LR 11 56 08.9
comp=E,28nm,18.1s,baz=58,slow=28
comp=E,9.4nm,0.4s
KDAK Kodiak Island 9.94 290 P **Pn 11 53 46.3 -1.5**
baz=96
WAT1 Susitna Watana 10.09 322 P **Pn 11 53 50.2 +0.3**
baz=131
OHAK Old Harbor 10.28 287 P **Pn 11 53 52.3 -0.1**
OHAK Old Harbor 10.28 287 Pn **Pn 11 53 49.9 -2.5**
OHAK Old Harbor 10.28 287 P **Pn 11 53 50.7 -1.7**
baz=92
CUT Chulitna 10.46 318 P **Pn 11 53 54.7 -0.2**
baz=125,SNR=8.3
P19K Ol Pt 10.61 300 P **Pn 11 53 56.5 -0.5**
baz=106
RED Redoubt Volcan 10.62 305 Pn **Pn 11 53 56.8 -0.4**
STLK Strandline Lak 10.63 311 Pn 11 53 56.7 -0.6
Q19K Cape Douglas, 10.66 296 P **Pn 11 53 56.6 -1.1**
baz=101
L22K Petersville 10.72 317 Pn 11 53 59.5 +1.0
SKT Skwentna 10.74 314 Pn 11 53 59.3 +0.6
SKT Skwentna 10.74 314 P **Pn 11 53 59.1 +0.4**
baz=120
MCK McKinley 10.82 325 P **Pn 11 54 01.3 +1.4**
baz=134
EPYK Eagle Plains 10.94 356 Pn **Pn 11 54 03.1 +1.7**
IL31 10.99 332 Pn 11 54 02.9 +0.8
ILAR Eielson Array 10.99 332 Pn **Pn 11 54 03.1 +0.9**
comp=E,0.4nm,0.3s,baz=155,slow=13,SNR=41
comp=E,1.7nm,0.6s
TRF Thorofare Moun 11.10 322 P **Pn 11 54 04.2 +0.5**
baz=129
WRH Wood River Hil 11.10 329 Pn 11 54 05.6 +2.1
CCB Clear Creek Bu 11.15 330 Pn **Pn 11 54 06.2 +2.0**
O19K Port Alsworth 11.29 302 Pn 11 54 06.3 +0.1
O19K Port Alsworth 11.29 302 P **Pn 11 54 05.7 -0.5**
baz=106
M20K Styx River 11.36 312 P **Pn 11 54 07.2 -0.1**
baz=116
PPLA Purkeypile 11.47 317 P **Pn 11 54 09.3 +0.4**
baz=123
P18K Big Mountain, 11.55 298 P **Pn 11 54 09.5 -0.3**
baz=101
N19K Bonanza Creek 11.55 305 P **Pn 11 54 09.1 -0.8**
baz=109
O18K Koktuh Hills 11.63 300 P **Pn 11 54 09.9 -1.1**
baz=104
R17L Mt. Peulik Vol 11.95 289 P **Pn 11 54 15.0 -0.4**
baz=92
I23K Minto, Yukon-K 11.96 330 Pn Pn 11 54 16.7 +1.2
F31M Tsiigehtchic 12.00 2 Pn Pn 11 54 17.2 +1.3
CHUM Lake Minchumin 12.08 321 P **Pn 11 54 16.9 0.0**
baz=126,SNR=5.8
P17K Kvichak River 12.13 297 Pn **Pn 11 54 16.2 -1.4**
P17K Kvichak River 12.13 297 P **Pn 11 54 16.5 -1.1**
baz=99
F30M Barrier River 12.16 359 Pn 11 54 16.8 -1.3
N18K Kilae Creek 12.17 304 Pn **Pn 11 54 17.4 -1.0**
L19K White Mountain 12.22 311 Pn 11 54 18.6 -0.4
L19K White Mountain 12.22 311 P **Pn 11 54 19.4 +0.4**
baz=115
F28M Old Crow 12.37 351 Pn **Pn 11 54 20.2 -0.8**
M18K Stony River 12.39 307 P **Pn 11 54 20.3 -1.0**
baz=110
K20K Telida 12.44 317 P **Pn 11 54 21.7 -0.3**
baz=121
H23K Yukon River 12.52 332 Pn **Pn 11 54 21.3 -1.7**
O17K Koliganek Bris 12.55 299 P **Pn 11 54 22.3 -1.1**
baz=101
YKA Yellowknife Ar 12.60 48 Pn **Pn 11 54 24.9 +0.8**
comp=E,0.1nm,0.3s,baz=252,slow=12,SNR=6.9
YKA Lg Lg 11 57 57.6
baz=248,slow=30,SNR=4.7
comp=E,0.7nm,0.9s
YKAW3 Yellowknife Wh 12.62 48 Pn **Pn 11 54 25.2 +0.8**
I21K Tanana 12.78 326 Pn **Pn 11 54 26.9 +0.4**
BMAR Burnt Mountain 12.79 343 Pn **Pn 11 54 27.7 +1.1**
INK Inuvik 12.87 2 Pn **Pn 11 54 29.6 +1.9**
comp=E,0.1nm,0.3s,baz=156,slow=12,SNR=4.8
comp=E,0.4nm,0.5s
P16K Nushagak River 12.90 295 Pn **Pn 11 54 27.6 -0.6**
P16K Nushagak River 12.90 295 P **Pn 11 54 27.9 -0.3**
baz=96
J20K Nowinta River 12.91 320 Pn 11 54 28.0 -0.3
J20K Nowinta River 12.91 320 P **Pn 11 54 27.9 -0.5**
baz=124
O16K Kokwok River B 13.02 298 Pn **Pn 11 54 28.8 -1.1**
O16K Kokwok River B 13.02 298 P **Pn 11 54 29.0 -0.9**
baz=98
H22K Ishtalitna Cre 13.09 329 Pn **Pn 11 54 30.5 -0.2**
M17K Holitna River 13.10 306 P **Pn 11 54 30.3 -0.6**
baz=107
E28M Babbage River 13.31 353 Pn **Pn 11 54 33.9 +0.1**
G23K Bananza Creek 13.32 333 P **Pn 11 54 33.7 -0.3**
baz=141
H21K Melozitna Rive 13.36 327 Pn **Pn 11 54 33.9 -0.5**
H21K Melozitna Rive 13.36 327 P **Pn 11 54 35.0 +0.6**
baz=132
J19K Poorman 13.36 318 P **Pn 11 54 33.6 -0.9**
baz=120
N16K Nishlik Lake 13.51 301 P **Pn 11 54 35.4 -1.1**
baz=101
J18K Innoko River 13.54 315 P **Pn 11 54 36.8 -0.2**
baz=116
O15K Ungalikthiuk R 13.86 296 P **Pn 11 54 40.3 -1.0**
baz=95
IMAR Indian Mountai 13.86 327 Pn **Pn 11 54 43.2 +1.8**
K17K Iditarod 13.91 311 P **Pn 11 54 42.0 0.0**
baz=111
CHNA Chernabura Isl 14.04 277 P **Pn 11 54 45.4 +1.6**
CHNA Chernabura Isl 14.04 277 P **Pn 11 54 43.5 -0.2**
baz=77
CNBA Chernabura Isl 14.04 277 Pn **Pn 11 54 41.7 -2.1**
N15K Kwethluk River 14.10 300 Pn **Pn 11 54 44.5 -0.2**
N15K Kwethluk River 14.10 300 P **Pn 11 54 43.7 -1.0**
baz=99
SDPT Sand Point 14.43 280 P **Pn 11 54 49.3 +0.2**
SDPT Sand Point 14.43 280 Pn **Pn 11 54 48.1 -1.0**
H19K Roundabout Mou 14.48 322 Pn **Pn 11 54 50.1 +0.4**
O14K Tigyukauivet M 14.60 296 P **Pn 11 54 50.5 -0.9**
baz=94
N14K Kuskokwak Cree 14.87 298 Pn **Pn 11 54 55.1 +0.1**
N14K Kuskokwak Cree 14.87 298 P **Pn 11 54 54.4 -0.6**
baz=96
G18K Tagagawik 15.45 322 P **Pn 11 55 02.2 -0.5**
baz=121
H17K Granite Mounta 15.45 318 P **Pn 11 55 01.7 -1.1**
baz=116
C24K Franklin Bluff 15.53 342 P **Pn 11 55 02.4 -1.3**
baz=150
L14K Kuka Creek 15.54 303 Pn **Pn 11 55 03.4 -0.6**
L14K Kuka Creek 15.54 303 P **Pn 11 55 03.8 -0.2**
baz=100
F19K Shaleruckik Mo 15.66 325 Pn **Pn 11 55 02.9 -2.7**
F19K IAmb IAmb 11 55 21.3
comp=E,4.3nm,1.1s
PLID Pearl Lake 15.95 123 Pn **Pn 11 55 09.9 +0.2**
YBH Yreka Blue Hor 15.97 145 Pn **Pn 11 55 08.9 -0.8**
DLMT Dillon 17.44 116 Pn **Pn 11 55 27.1 -1.4**
DLMT IAmb IAmb 11 55 56.3
comp=Z,4.7nm,1.3s
C18K Utukok River 17.78 328 P **Pn 11 55 31.0 -1.4**
C18K IAmb IAmb 11 55 37.4
comp=Z,3.2nm,0.8s
BOZ Bozeman (W) 17.78 114 Pn 11 55 32.5 -0.1
BOZ IAmb IAmb 11 56 02.5
comp=Z,6.2nm,1.0s
RDOG Red Dog Mine 17.99 325 Pn 11 55 33.9 -1.1
RDOG IAmb IAmb 11 55 34.0
comp=Z,4.2nm,0.5s
PDAR Pinedale Array 20.83 117 P Pn 11 56 10.0 +0.7
comp=Z,1.5nm,0.9s,baz=319,slow=8.5,SNR=7.8
comp=Z,1.5nm,0.9s
PDAR Pinedale Array 20.83 117 P **P 11 56 04.6 -2.3**
RES Resolute Bay 24.71 24 P **P 11 56 49.5 +3.4**
comp=Z,1.6nm,0.9s,baz=240,slow=13,SNR=6.1
comp=Z,1.6nm,0.9s
PV13 Radium Mtn., P 24.71 124 P **P 11 56 45.2 -1.5**
TXAR Lajitas Array 34.40 126 P **P 11 58 14.8 +2.2**
comp=Z,0.1nm,0.5s,baz=323,slow=6.1,SNR=2.1
comp=Z,0.1nm,0.5s
SADO Sadowa 36.43 83 LR LR 12 13 55.4
comp=Z,102nm,19.8s,baz=16,slow=37
H11N2 WAKE ISLAND Hy 55.99 255 T T 13 01 52.9
baz=35,slow=76,SNR=635
H11N3 WAKE ISLAND Hy 55.99 255 T T 13 01 54.8
baz=35,slow=76,SNR=729
H11N1 WAKE ISLAND Hy 56.01 255 T T 13 01 50.3
baz=35,slow=76,SNR=595
H11S1 WAKE ISLAND Hy 57.09 254 T T 13 03 14.7
baz=35,slow=75,SNR=213
H11S2 WAKE ISLAND Hy 57.10 254 T T 13 03 15.8
baz=35,slow=75,SNR=181
H11S3 WAKE ISLAND Hy 57.11 254 T T 13 03 16.1
baz=35,slow=75,SNR=214

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*DJA **23** 11:55:24.8±1.7,6°S±10°×14°7E±1°5,h63^{km}±8^{km},M5.0/18,mb4.7/18,mB5.6/5,MLv5.1/2,Mw(mB)5.1/5*
*IDC **23** 11:55:25.8±2.4,5°68S×146°58E,h68^{km}±21^{km},mb4.0/19,mbtmp4.4/23,MS3.3/17,Error ellipse: s-maj=20.1km s-min=12.1km az=68.0*
*NEIC **23** 11:55:26.4±1.9,5°69S±0°06×146°56E±0°08,h60^{km}±5^{km},mb4.6/69,Error ellipse: s-maj=11.7km s-min=8.6km az=87.0*

ISC 23 11:55:24.7±0.3,**5°67S**±0°05×**146°55E**±0°06,**h50**^{km},**n152**,σ1.8**30**/145,**mb4.6**/56,**MS3.3**/12,**1C**,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MANU	**Manus Island**	**3.69**	**13**		**Pn**	**11 56 21.5**	**+2.3**
PMG	**Port Moresby**	**3.77**	**171**	P	**Pn**	**11 56 21.6**	**+1.3**
	74nm,0.3s,baz=33,slow=6.0,SNR=61						
PMG				S	**Sn**	**11 57 04.0**	**+0.6**
	446nm,0.7s,baz=8.4,slow=13,SNR=6.0						
PMG				LR	LR	11 58 14.2	
	comp=Z,1μm,18.1s,baz=334,slow=45						
PMG	**Port Moresby**	**3.77**	**171**	P	**Pn**	**11 56 21.6**	**+1.3**
PMG	**Port Moresby**	**3.77**	**171**	P	**Pn**	**11 56 21.4**	**+1.1**
KRVT	**Keravat (AS076**	**5.62**	**76**	LR	LR	11 58 40.0	
	comp=Z,46nm,20.5s,baz=142,slow=35						
RABL	**Rabaul**	**5.79**	**76**		**Pn**	**11 56 50.0**	**+1.9**
COEN	**Coen**	**8.88**	**202**	P	**Pn**	**11 57 32.3**	**+1.7**
COEN	**Coen**	**8.88**	**202**	S	**Sn**	**11 59 08.8**	**-0.5**
COEN	**Coen**	**8.88**	**202**		**Pn**	**11 57 32.2**	**+1.7**
MTSU	**Mount Surprise**	**12.58**	**190**	P	**Pn**	**11 58 22.5**	**+1.4**
TATA	**Tatamba Isabel**	**13.43**	**102**	P	**P**	**11 58 42.1**	**+1.4**
HNR	**Honiara**	**13.80**	**107**	LR	LR	12 03 14.2	
	comp=Z,5.2nm,18.7s,baz=348,slow=34						
CTA	**Charters Tower**	**14.34**	**181**	P	**Pn**	**11 58 47.0**	**+2.0**
	4.5nm,0.4s,baz=351,slow=14,SNR=12						
CTA				LR	LR	12 04 00.6	
	comp=Z,230nm,19.9s,baz=24,slow=36						
CTA	**Charters Tower**	**14.34**	**181**	P	**Pn**	**11 58 48.2**	**+3.2**
CTAO	**Charters Tower**	**14.34**	**181**	P	**Pn**	**11 58 48.2**	**+3.2**
CTAO	**Charters Tower**	**14.34**	**181**	Pn	**Pn**	**11 58 46.8**	**+1.8**
FAKI	**Fak Fak**	**14.52**	**280**	P	**Pn**	**11 58 50.0**	**+2.7**
FAKI	**Fak Fak**	**14.52**	**280**		**Pn**	**11 58 49.7**	**+2.3**
NGOA	**Tingoa Renbel**	**14.58**	**115**	P	**P**	**11 58 55.1**	**+1.6**
SIJI	**Sorong**	**15.98**	**287**	P	**Pn**	**11 59 07.7**	**+1.4**
	15nm,0.6s,baz=91,slow=8.0,SNR=13						
SIJI				LR	LR	12 06 56.7	
	comp=Z,18nm,19.3s,baz=73,slow=43						
SIJI	**Sorong**	**15.98**	**287**	P	**Pn**	**11 59 07.3**	**+1.0**
	25nm,0.9s						
SWI	**Sorong**	**15.99**	**287**	P	**Pn**	**11 59 06.9**	**+0.5**
	44nm,0.8s						
QIS	**Mount Isa**	**16.27**	**204**	P	**Pn**	**11 59 11.7**	**+1.8**
MTN	**Manton Dam**	**16.79**	**244**		**Pn**	**11 59 17.5**	**+1.0**
KRAI	**Karang Ratu**	**18.25**	**277**	P	**Pn**	**11 59 36.9**	**+2.4**
	16μm26nm,0.6s						
WB0	**Warramunga Arr**	**18.34**	**219**		**P**	**11 59 36.1**	**+1.0**
WB0				IAmb	IAmb	11 59 55.0	
	comp=Z,35nm,1.4s						
WR8	**Warramunga Arr**	**18.41**	**218**	P	**P**	**11 59 36.1**	**+0.1**
WRAB	**Tennant Creek**	**18.49**	**219**	P	**P**	**11 59 36.5**	**-0.3**
WRAB				IAmb	IAmb	11 59 45.7	
	comp=Z,13nm,0.6s						
WRA	**Warramunga Arr**	**18.50**	**219**	P	**P**	**11 59 36.6**	**-0.4**
	comp=Z,6.0nm,0.7s,baz=40,slow=11,SNR=66						
WRA				PcP	**PcP**	**12 04 05.0**	**-0.5**
	comp=Z,2.0nm,0.7s,baz=12,slow=1.7,SNR=6.1						
GUMO	**Guam**	**19.20**	**355**	LR	LR	12 04 50.0	
	comp=Z,56nm,20.3s,baz=152,slow=29						
EIDS	**Eidsvold**	**20.07**	**168**	P	**P**	**11 59 55.3**	**+1.3**
KNRA	**Kununurra**	**20.09**	**239**		**P**	**11 59 54.0**	**-0.3**
KNRA				IAmb	IAmb	12 00 32.4	
	comp=Z,25nm,1.1s						
AS31	**Alice Springs**	**21.64**	**213**	P	**P**	**12 00 10.4**	**-0.6**
ASAR	**Alice Springs**	**21.65**	**213**	P	**P**	**12 00 11.1**	**0.0**
	comp=Z,2.6nm,0.6s,baz=38,slow=6.8,SNR=30						
ASAR				PcP	**PcP**	**12 04 11.0**	**-0.3**
	comp=Z,3.3nm,0.8s,baz=72,slow=1.8,SNR=9.9						

ASAR				LR	LR	12 09 41.5	
	comp=Z,193nm,19.4s,baz=27,slow=40						
	comp=Z,2.6nm,0.6s						
ASAR	**Alice Springs**	**21.65**	**213**	P	**P**	**12 00 10.5**	**-0.6**
ASAR				PcP	**PcP**	**12 04 11.2**	**-0.1**
SOEI	**Soe**	**22.44**	**258**	P	**P**	**12 00 19.9**	**+0.1**
SOEI				IAmb	IAmb	12 00 57.0	
	comp=Z,31nm,0.9s						
SOEI	**Soe**	**22.44**	**258**	P	**P**	**12 00 24.5**	**+4.7**
	comp=Z,29nm,1.0s						
SANVU	**Saraoutou**	**22.49**	**117**	P	**P**	**12 00 20.2**	**0.0**
SANVU				IAmb	IAmb	12 00 23.1	
	comp=Z,34nm,0.9s						
INKA	**Innaminka**	**22.64**	**193**		**P**	**12 00 21.4**	**-0.2**
INKA				IAmb	IAmb	12 00 29.8	
	comp=Z,13nm,0.8s						
BATI	**Baumata**	**23.10**	**257**	P	**P**	**12 00 26.8**	**+0.2**
	comp=Z,18nm,0.3s,baz=84,slow=9.2,SNR=2.4						
	comp=Z,18nm,0.3s						
FITZ	**Fitzroy Crossi**	**23.86**	**237**	P	**P**	**12 00 32.8**	**-0.9**
	comp=Z,16nm,0.8s,baz=54,slow=7.0,SNR=36						
FITZ				LR	LR	12 09 51.6	
	comp=Z,172nm,21.6s,baz=48,slow=36						
	comp=Z,16nm,0.8s						
LUWI	**Luwuk**	**24.17**	**280**	P	**P**	**12 00 36.9**	**+0.3**
LUWI	**Luwuk**	**24.17**	**280**	P	P	12 00 58.6	+22
MMRI	**Maumere**	**24.30**	**262**	P	**P**	**12 00 37.2**	**-0.6**
GTOI	**Gorontalo**	**24.32**	**284**	P	**P**	**12 00 39.6**	**+1.7**
	comp=Z,56nm,1.0s						
DAV	**Davao City (W)**	**24.45**	**301**	LR	LR	12 12 17.0	
	comp=Z,20nm,18.2s,baz=134,slow=41						
EDFI	**Ende, Flores**	**24.85**	**261**	P	**P**	**12 00 41.4**	**-1.5**
	comp=Z,17nm,0.6s						
ARMA	**Armidale**	**25.08**	**170**	P	**P**	**12 00 44.1**	**-0.7**
ARMA				IAmb	IAmb	12 01 13.2	
	comp=Z,50nm,1.5s						
DZM	**Mont Dzumac**	**25.22**	**132**	P	**P**	**12 00 45.4**	**-0.8**
	comp=Z,7.6nm,0.9s,baz=310,slow=17,SNR=2.0						
DZM				LR	LR	12 08 58.1	
	comp=Z,62nm,19.8s,baz=358,slow=32						
	comp=Z,7.6nm,0.9s						
BSSI	**Bau Bau, Buton**	**25.92**	**268**	P	**P**	**12 00 56.5**	**+4.0**
	comp=Z,16nm,1.0s						
TOLI2	**Tolitoli**	**26.59**	**284**	P	**P**	**12 00 59.9**	**+1.4**
TOLI2				IAmb	IAmb	12 01 05.6	
	comp=Z,24nm,0.8s						
KAPI	**Kappang**	**26.69**	**270**	LR	LR	12 13 06.9	
	comp=Z,34nm,19.6s,baz=62,slow=40						
BBOO	**Buckleboo**	**28.72**	**199**	P	**P**	**12 01 16.8**	**-0.7**
BBOO				IAmb	IAmb	12 01 30.3	
	comp=Z,15nm,1.2s						
MBWA	**Marble Bar**	**30.21**	**237**	P	**P**	**12 01 31.5**	**+0.8**
MBWA				IAmb	IAmb	12 01 55.3	
	comp=Z,14nm,1.1s						
PSA00	**Pilbara Seismi**	**30.30**	**236**		**P**	**12 01 32.0**	**+0.5**
TOO	**Toolangi**	**31.77**	**182**	P	**P**	**12 01 44.8**	**+0.4**
TOO				IAmb	IAmb	12 02 16.2	
	comp=Z,8.3nm,1.4s						
MGBR	**Mount Gambier**	**32.38**	**189**	P	**P**	**12 01 48.6**	**-1.0**
JOW	**Kunigami**	**36.83**	**332**	LR	LR	12 15 22.9	
	comp=Z,31nm,19.2s,baz=140,slow=32						
JOW	**Kunigami**	**36.83**	**332**	P	**P**	**12 02 28.7**	**+0.5**
MORW	**Morawa**	**37.06**	**228**	P	**P**	**12 02 29.7**	**-0.5**
MORW				IAmb	IAmb	12 02 33.7	
	comp=Z,23nm,1.5s						
NWAO	**Narrogin (SRO)**	**38.48**	**221**	LR	LR	12 18 23.3	
	comp=Z,106nm,20.2s,baz=16,slow=36						
BBJI	**Bungbulang**	**38.67**	**265**	P	**P**	**12 02 42.9**	**-1.1**
BBJI				IAmb	IAmb	12 02 48.6	
	comp=Z,7.4nm,0.7s						
LEM	**Lembang**	**38.71**	**266**	LR	LR	12 22 07.2	
	comp=Z,38nm,18.1s,baz=202,slow=41						
JMN	**Monobe**	**40.98**	**344**	P	**P**	**12 03 01.1**	**-1.7**
JNU	**Nakatsue**	**41.34**	**340**	LR	LR	12 16 46.7	
	comp=Z,62nm,20.6s,baz=136,slow=31						
HIZ	**Hauiti**	**41.57**	**146**	P	**P**	**12 03 05.8**	**-1.8**
JGF	**Kuroka**	**41.95**	**349**	P	**P**	**12 03 11.6**	**+0.9**
JGF				IAmb	IAmb	12 03 17.5	
	comp=Z,19nm,1.2s						
MJAR	**Matsushiro Arr**	**42.70**	**350**	P	**P**	**12 03 15.7**	**-1.1**
	comp=Z,1.8nm,0.8s,baz=184,slow=8.4,SNR=3.2						
MJAR				LR	LR	12 21 07.2	
	comp=Z,28nm,18.8s,baz=180,slow=36						
	comp=Z,1.8nm,0.8s						
MJAR	**Matsushiro Arr**	**42.70**	**350**	P	**P**	**12 03 16.5**	**-0.4**
MAJO	**Matsushiro**	**42.71**	**350**	P	**P**	**12 03 18.2**	**+1.3**
MAJO				IAmb	IAmb	12 03 44.0	
	comp=Z,8.7nm,1.1s						
MJB9	**Matsu-Tunnel**	**42.71**	**350**	P	**P**	**12 03 18.1**	**+1.1**
MJB9				IAmb	IAmb	12 03 43.9	
	comp=Z,8.9nm,1.1s						
RTZ	**Ruatahuna**	**42.85**	**144**	P	**P**	**12 03 17.7**	**-0.4**
KSRS	**Korea Array**	**46.28**	**339**	P	**P**	**12 03 45.9**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=157,slow=8.9,SNR=8.8						
KSRS				LR	LR	12 20 25.9	
	comp=Z,35nm,21.4s,baz=150,slow=32						
	comp=Z,1.6nm,0.6s						
KSAR	**Wonju Array Be**	**46.28**	**339**	P	**P**	**12 03 46.5**	**+1.1**
KS19	**Wonju Array Si**	**46.34**	**339**	P	**P**	**12 03 46.6**	**+0.7**
KS19				IAmb	IAmb	12 04 24.0	
	comp=Z,13nm,1.2s						
JTM	**Tenmabayashi**	**46.50**	**354**	P	**P**	**12 03 48.0**	**+1.0**
KULM	**Kulim**	**47.10**	**283**	P	**P**	**12 03 50.9**	**-1.3**
KULM				IAmb	IAmb	12 03 52.7	
	comp=Z,6.4nm,0.9s						
WHN	**Wuhan**	**47.39**	**321**	P	**P**	**12 03 55.3**	**+1.1**
WHN				pmax	pmax		
	comp=Z,32nm,1.2s						
JKA	**Kamikawa-asahi**	**49.68**	**356**	P	**P**	**12 04 13.0**	**+1.5**
MCQ	**Macquarie Isla**	**49.72**	**171**	P	**P**	**12 04 11.9**	**+0.2**
LYN	**LuoYang**	**51.32**	**324**	P	**P**	**12 04 24.4**	**+0.3**
LYN				pmax	pmax		
	comp=Z,15nm,1.0s						
USRK	**Ussuriysk Ar.**	**51.34**	**347**	P	**P**	**12 04 23.6**	**-0.5**
	comp=Z,2.8nm,0.6s,baz=188,slow=10,SNR=6.4						
	comp=Z,2.8nm,0.6s						
YSS	**Yuzhno-Sakhali**	**52.50**	**357**	P	**P**	**12 04 34.1**	**+1.5**
YSS				IAmb	IAmb	12 04 53.4	
	comp=Z,6.5nm,0.7s						
CM31	**Chiang Mai Arr**	**52.70**	**298**	P	**P**	**12 04 34.9**	**+0.3**
CMAR	**Chiang Mai Arr**	**52.70**	**298**	P	**P**	**12 04 34.5**	**-0.2**
	comp=Z,3.1nm,0.8s,baz=118,slow=5.8,SNR=22						
	comp=Z,3.1nm,0.8s						
CN2	**Changchun**	**52.80**	**341**	P	**P**	**12 04 36.4**	**+1.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CHTO	**Chiang Mai**	**52.83**	**299**	P	**P**	**12 04 35.4**	**-0.3**
CHTO				IAmb	IAmb	12 04 36.6	
	comp=Z,3.6nm,1.0s						
BNX	**BinXian**	**53.95**	**344**	⇑P	**P**	**12 04 44.1**	**+0.7**
BNX				pmax	pmax		
	comp=Z,8.0nm,1.2s						
HHC	**Hu-ho-hao-te**	**56.31**	**328**	*e*P	**P**	**12 05 03.4**	**+2.8**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,87nm,6.7s						
GTA2	**Gaotai**	**62.28**	**320**	*e*P	**P**	**12 05 42.1**	**+0.2**
GTA2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ULN	**Ulaanbaatar**	**63.60**	**331**	P	**P**	**12 05 50.6**	**+0.1**
ULN				IAmb	IAmb	12 05 51.6	
	comp=Z,4.0nm,0.8s						
SONM	**Songino Array**	**63.89**	**331**	P	**P**	**12 05 52.6**	**+0.2**
	comp=Z,1.9nm,0.7s,baz=152,slow=5.7,SNR=11						
	comp=Z,1.9nm,0.7s						
SONM	**Songino Array**	**63.89**	**331**	P	**P**	**12 05 52.4**	**-0.1**
MA2	**Magadan**	**65.12**	**2**	P	**P**	**12 06 00.2**	**+0.1**
MA2				IAmb	IAmb	12 06 03.5	
	comp=Z,11nm,1.4s						
EVN	**Everest**	**66.55**	**304**	P	**P**	**12 06 10.5**	**-0.2**
EVN				IAmb	IAmb	12 06 40.0	
	comp=Z,2.9nm,0.7s						
VNDA	**Vanda**	**72.27**	**177**	P	**P**	**12 06 42.9**	**-1.4**
	comp=Z,1.3nm,0.6s,baz=320,slow=8.0,SNR=5.9						
	comp=Z,1.3nm,0.6s						
VNDA	**Vanda**	**72.27**	**177**	P	**P**	**12 06 44.2**	**-0.2**
VNDA				IAmb	IAmb	12 06 51.8	
	comp=Z,6.4nm,1.4s						
M13K	**Dall Lake**	**76.61**	**23**	P	**P**	**12 07 10.7**	**+1.0**
O14K	**Tigyukauivet M**	**76.74**	**25**	P	**P**	**12 07 11.0**	**+0.5**
O14K				IAmb	IAmb	12 07 17.7	
	comp=Z,8.9nm,1.1s						
MKAR	**Makanchi Array**	**76.95**	**321**	P	**P**	**12 07 10.8**	**-1.3**
	comp=Z,1.4nm,0.7s,baz=104,slow=7.7,SNR=16						
	comp=Z,1.4nm,0.7s						
MKAR	**Makanchi Array**	**76.95**	**321**	P	**P**	**12 07 11.4**	**-0.7**
MAKZ	**Makanchi**	**77.16**	**320**	P	**P**	**12 07 12.7**	**-0.5**
MAKZ				IAmb	IAmb	12 07 52.1	
	comp=Z,5.6nm,1.4s						
M14K	**Bethel**	**77.36**	**23**	P	**P**	**12 07 15.4**	**+1.5**
M14K				IAmb	IAmb	12 07 48.4	
	comp=Z,12nm,1.2s						
ZAA0	**Zalesovo Array**	**78.49**	**328**	P	**P**	**12 07 18.9**	**-1.5**
ZALV	**Zalesovo Beam**	**78.49**	**328**	P	**P**	**12 07 18.4**	**-2.0**
	comp=Z,2.0nm,0.5s,baz=101,slow=5.4,SNR=10						
	comp=Z,2.0nm,0.5s						
ZALV	**Zalesovo Beam**	**78.49**	**328**	P	**P**	**12 07 18.7**	**-1.7**
KDJ	**Kajisay**	**78.74**	**315**	P	**P**	**12 07 20.9**	**-1.3**
L16K	**Owhat River**	**78.89**	**23**	P	**P**	**12 07 21.7**	**-0.7**
BOOM	**Boomskoye usch**	**79.72**	**315**	P	**P**	**12 07 27.5**	**-0.2**
BOOM				IAmb	IAmb	12 08 03.3	
	comp=Z,9.6nm,1.3s						
G16K	**Koyuk River**	**80.06**	**19**	P	**P**	**12 07 29.5**	**+0.8**
KURK	**Kurchatov**	**80.67**	**323**	P	**P**	**12 07 31.1**	**-1.2**
KURBB	**Kurchatov Arra**	**80.69**	**323**	P	**P**	**12 07 30.5**	**-1.9**
	comp=Z,1.4nm,0.2s,baz=113,slow=3.8,SNR=6.6						
	comp=Z,1.4nm,0.2s						
AAK	**Ala-Archa**	**80.79**	**315**	P	**P**	**12 07 32.9**	**-0.5**
G18K	**Tagagawik**	**81.59**	**20**	P	**P**	**12 07 37.1**	**+0.2**
IMAR	**Indian Mountai**	**83.34**	**21**	P	**P**	**12 07 46.2**	**+0.2**
KKAR	**Karatay Array**	**83.73**	**314**	P	**P**	**12 07 47.3**	**-1.3**
HIN	**Hinchinbrook I**	**83.78**	**27**	P	**P**	**12 07 48.9**	**+0.5**
MLY	**Manley**	**83.98**	**22**	P	**P**	**12 07 49.4**	**0.0**
QSPA	**South Pole Qui**	**84.30**	**180**	P	**P**	**12 07 49.2**	**-2.0**
	comp=Z,3.4nm,0.8s,baz=330,slow=1.0,SNR=12						
	comp=Z,3.4nm,0.8s						
QSPA	**South Pole Qui**	**84.30**	**180**	P	**P**	**12 07 50.3**	**-0.9**
QSPA				IAmb	IAmb	12 07 54.9	
	comp=Z,8.8nm,1.3s						
I23K	**Minto, Yukon-K**	**84.56**	**22**	P	**P**	**12 07 52.3**	**+0.1**
NRIK	**Noril'sk**	**84.82**	**342**	P	**P**	**12 07 51.7**	**-1.8**
	comp=Z,2.1nm,0.3s,baz=113,slow=4.9,SNR=5.4						
	comp=Z,2.1nm,0.3s						
NRIK	**Noril'sk**	**84.82**	**342**	P	**P**	**12 07 52.4**	**-1.0**
NRIK				IAmb	IAmb	12 07 53.2	
	comp=Z,3.7nm,0.9s						
CCB	**Clear Creek Bu**	**84.94**	**23**	P	**P**	**12 07 52.8**	**-1.4**
CCB				IAmb	IAmb	12 07 53.0	
	comp=Z,3.9nm,1.0s						
BERG	**Berg Lake**	**85.07**	**28**	P	**P**	**12 07 54.8**	**-0.2**
ILAR	**Eielson Array**	**85.35**	**23**	P	**P**	**12 07 54.4**	**-1.9**
	comp=Z,2.0nm,0.6s,baz=254,slow=4.7,SNR=36						
	comp=Z,2.0nm,0.6s						
ILAR	**Eielson Array**	**85.35**	**23**	P	**P**	**12 07 54.7**	**-1.5**
J25K	**Salcha River,**	**85.89**	**24**	P	**P**	**12 07 58.7**	**-0.4**
J25K				IAmb	IAmb	12 08 23.5	
	comp=Z,5.7nm,1.2s						
BVAR	**Borovoye Array**	**86.23**	**324**	P	**P**	**12 07 58.9**	**-2.0**
	comp=Z,1.4nm,0.8s,baz=104,slow=4.7,SNR=7.9						
	comp=Z,1.4nm,0.8s						
BCAR	**Beaver Creek A**	**86.83**	**26**	P	**P**	**12 08 03.6**	**0.0**
BMAR	**Burnt Mountain**	**87.25**	**21**	P	**P**	**12 08 06.3**	**+0.8**
I27K	**Kandik River**	**87.73**	**23**	P	**P**	**12 08 08.4**	**+0.5**
I27K				IAmb	IAmb	12 08 50.6	
	comp=Z,5.7nm,1.3s						
H31M	**Peel River**	**90.68**	**24**	P	**P**	**12 08 21.6**	**-0.2**
H31M				IAmb	IAmb	12 08 41.2	
	comp=Z,7.0nm,1.4s						
DLBC	**Dease Lake**	**91.34**	**32**	LR	LR	12 46 23.8	
	comp=Z,32nm,18.5s,baz=254,slow=34						
O02D	**Mt. Diablo Mer**	**94.12**	**50**	P	**P**	**12 08 39.9**	**+1.6**
N02D	**Trinity Center**	**94.24**	**49**	P	**P**	**12 08 40.2**	**+1.4**
PKD	**Bear Valley Ra**	**95.64**	**55**	P	**P**	**12 08 46.6**	**+1.3**
NVAR	**Mina Array Bea**	**97.52**	**52**	P	**P**	**12 08 53.7**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=260,slow=5.8,SNR=4.7						
	comp=Z,0.5nm,0.7s						
NVAR	**Mina Array Bea**	**97.52**	**52**	P	**P**	**12 08 53.8**	**-0.2**
NV11	**Mina Array Sit**	**97.64**	**52**	P	**P**	**12 08 52.2**	**-2.2**
NV11				IAmb	IAmb	12 08 52.6	
	comp=Z,2.5nm,1.3s						
YKA	**Yellowknife Ar**	**99.09**	**28**	P	**Pdif**	**12 08 59.8**	**-0.4**
	comp=Z,0.3nm,0.8s,baz=281,slow=5.5,SNR=4.4						
	comp=Z,0.3nm,0.8s						
PLID	**Pearl Lake**	**99.25**	**45**	P	**Pdif**	**12 09 01.4**	**-0.2**
PLCA	**Paso Flores**	**122.65**	**147**	PKP	**PKPdf**	**12 14 13.9**	**-1.5**
	comp=Z,2.0nm,0.7s,baz=219,slow=4.0,SNR=5.3						
LPAZ	**La Paz**	**139.34**	**123**	PKhKP	PKPpre	12 14 38.1	
	comp=Z,1.2nm,0.9s,baz=337,slow=4.3,SNR=3.5						
LPAZ				PKP	**PKPdf**	**12 14 47.0**	**-1.3**
	comp=Z,1.3nm,0.7s,baz=195,slow=2.7,SNR=6.1						
CPUP	**Villa Florida**	**140.66**	**145**	PKP	**PKPdf**	**12 14 48.6**	**-1.0**
	comp=Z,1.3nm,0.6s,baz=279,slow=4.1,SNR=3.2						
TORD	**Torodi Ar. Bea**	**144.57**	**285**	PKP	**PKPab**	**12 14 54.0**	**-1.3**
	comp=Z,2.4nm,0.7s,baz=91,slow=1.9,SNR=14						
CRPR	**Cabo Rojo, PR**	**144.93**	**67**	PKPbc	**PKPab**	**12 14 55.2**	**-1.3**
AQDB	**Aquidauana**	**146.05**	**141**	PKPdf	**PKPdf**	**12 14 57.9**	**-1.3**
TRCB	**Terra Rica**	**146.06**	**147**	PKPbc	**PKPdf**	**12 14 59.3**	**0.0**
DBIC	**Dimbokro**	**151.55**	**274**	PKPbc	**PKPbc**	**12 15 14.7**	**+0.2**
	comp=Z,2.0nm,0.6s,baz=60,slow=1.8,SNR=4.0						
BDFB	**Brasilia**	**154.39**	**146**	PKPbc	**PKPbc**	**12 15 20.1**	**-0.7**
	comp=Z,7.5nm,0.7s,baz=189,slow=3.8,SNR=11						
BDFB	**Brasilia**	**154.39**	**146**		**PKPbc**	**12 15 20.7**	**-0.1**

*NSSP **23** 12:01:10.3,38.38N×44.45E,h10km,Ms3.4*
*ISK **23** 12:01:10.8,38.21N×44.43E,h14km,ML3.4/5*
*AFAD **23** 12:01:10.8,38.45N×44.48E,h2km±2km,ML2.9*
*AZER **23** 12:01:12.6,38.58N×44.55E,h3km,ml3.3*
*TEH **23** 12:01:12.3,38.52N×44.56E,h10km±139km,ML2.9,*
Presumed earthquake
ISC 23 12:01:11.8±1.0,38.44N±0.02×44.47E±0.01,h12km±9km,
n65,σ2s01/117,1C-3D,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.43**	**301**	P	**Pg**	**12 01 20.3**	**-0.1**
OZAP				S	**Sg**	**12 01 26.2**	**0.0**
OZAP				IAML		12 01 29.0	
	comp=N,3μm,1.0s						
OZAP				IAML		12 01 30.0	
	comp=E,3μm,0.7s						
TVAN	**Van**	**0.84**	**276**	P	**Pg**	**12 01 27.1**	**-0.9**
TVAN				S	**Sn**	**12 01 42.2**	**+0.3**
TVAN				IAML		12 01 46.0	
	comp=E,1μm,0.5s						
TVAN				IAML		12 01 50.0	
	comp=N,1μm,0.8s						
VANB	**Van**	**0.86**	**281**	Pg	**Pb**	**12 01 27.9**	**-0.8**
VANB				Sg	**Sb**	**12 01 40.1**	**-0.1**
VMUR	**Van-Muradiye**	**0.89**	**308**	P	**Pb**	**12 01 28.5**	**-0.7**
VMUR				S	**Sn**	**12 01 41.8**	**-1.3**
VMUR				IAML		12 01 47.0	
	comp=E,423nm,0.4s						
VMUR				IAML		12 01 49.0	
	comp=N,599nm,0.5s						
ISHB	**Shabestar**	**0.92**	**100**	Pg	**Pb**	**12 01 28.9**	**-0.8**
ISHB				Sg	**Sn**	**12 01 42.9**	**-1.0**
MAKU	**Maku**	**0.93**	**10**	Pg	**Pb**	**12 01 29.1**	**-0.8**
HAKT	**HAKKARI**	**1.07**	**214**	P	**Pb**	**12 01 31.3**	**-1.0**
HAKT				S	**Sn**	**12 01 48.4**	**+0.8**
HAKT				IAML		12 01 52.0	
	comp=N,373nm,0.4s						
HAKT				IAML		12 01 53.0	
	comp=E,559nm,0.7s						
HAKT	**HAKKARI**	**1.07**	**214**	P	**Pg**	**12 01 31.7**	**-0.6**
HAKT				S	**Sn**	**12 01 49.2**	**+1.6**
NAX	**Nakhchivan**	**1.08**	**47**	P	**Pn**	**12 01 32.9**	**+0.1**
NAX				S	**Sn**	**12 01 48.8**	**+1.0**
GEVA	**Gevas**	**1.11**	**264**	P	**Pb**	**12 01 31.2**	**-1.8**
GEVA				S	**Sn**	**12 01 49.7**	**+1.0**
AKDM	**Akdamar-Van**	**1.18**	**265**	Pn	**Pb**	**12 01 32.6**	**-1.5**
AKDM				Sn	**Sg**	**12 01 49.2**	**-0.5**
DYDN	**Diyadin**	**1.26**	**331**	P	**Pn**	**12 01 34.3**	**-1.1**
DYDN				S	**Sn**	**12 01 51.5**	**-0.8**
DYDN				IAML		12 01 57.0	
	comp=N,262nm,0.5s						
DYDN				IAML		12 02 01.0	
	comp=E,406nm,0.6s						
SBZ	**Shahbuz**	**1.27**	**41**	P	**Pg**	**12 01 36.3**	**0.0**
SBZ				S	**Sg**	**12 01 55.0**	**+2.1**
ORD	**Ordubad**	**1.29**	**67**	P	**Pg**	**12 01 36.5**	**0.0**
ORD				S	**Sg**	**12 01 56.2**	**+2.8**
HYR	**Heyderabad**	**1.31**	**13**	P	**Pg**	**12 01 37.0**	**+0.1**
HYR				S	**Sg**	**12 01 56.7**	**+2.7**
ITBZ	**Tabriz**	**1.34**	**98**	Pg	**Pg**	**12 01 36.6**	**-0.8**
ADCV	**BITLIS_Adilcev**	**1.41**	**286**	P	**Pb**	**12 01 37.8**	**-0.3**
ADCV				S	**Sg**	**12 01 58.1**	**+0.8**
ADCV				IAML		12 02 04.0	
	comp=N,249nm,0.6s						
ADCV				IAML		12 02 07.0	
	comp=E,157nm,0.5s						
IAZR	**Azarshahr**	**1.42**	**122**	Pg	**Pg**	**12 01 38.9**	**-0.1**
IGDI	**IGDIR**	**1.46**	**348**	P	**Pg**	**12 01 39.5**	**-0.3**
IGDI				S	**Sg**	**12 01 59.2**	**+0.6**
IGDI				IAML		12 02 04.0	
	comp=N,215nm,0.7s						
IGDI				IAML		12 02 08.0	
	comp=E,197nm,0.7s						
IGDI	**IGDIR**	**1.46**	**348**	P	**Pg**	**12 01 40.6**	**+0.9**
IGDI				S	**Sg**	**12 02 02.7**	**+4.0**
VAYK	**Vayk**	**1.46**	**31**	⇓*e*P	**Pg**	**12 01 39.4**	**-0.3**
VAYK				⇓*e*S	**Sg**	**12 01 59.9**	**+1.2**
ALVK	**Alvank**	**1.56**	**71**	*e*P	**Pg**	**12 01 40.4**	**-1.2**
ALVK				*e*S	**Sg**	**12 02 02.9**	**+1.1**
PERV	**Siirt/Pervari-**	**1.60**	**253**	P	**Pg**	**12 01 41.2**	**-1.2**
PERV				S	**Sg**	**12 02 08.7**	**+5.5**
PERV				IAML		12 02 13.0	
	comp=N,624nm,0.6s						
PERV				IAML		12 02 15.0	
	comp=E,725nm,1.2s						
AGRB	**Hanur-Agry**	**1.61**	**315**	Pn	**Pb**	**12 01 41.4**	**-0.2**
AGRB				Sn	**Sg**	**12 02 04.4**	**+0.7**
DORK	**Agr/Tutak/Do**	**1.62**	**306**	P	**Pb**	**12 01 40.9**	**-0.8**
DORK				S	**Sg**	**12 02 04.0**	**0.0**
DORK				IAML		12 02 11.0	
	comp=E,119nm,0.8s						
DORK				IAML		12 02 16.0	
	comp=N,171nm,0.9s						
MLAZ	**Malazgirt-MUS**	**1.65**	**296**	Pn	**Pb**	**12 01 41.6**	**-0.6**
KOTA	**Agri, Merkez-K**	**1.68**	**325**	P	**Pn**	**12 01 40.8**	**-0.3**
KOTA				S	**Sg**	**12 02 08.2**	**+2.5**
KOTA				IAML		12 02 11.0	
	comp=E,80nm,0.7s						
KOTA				IAML		12 02 12.0	
	comp=N,58nm,0.7s						
GNI	**Garni**	**1.72**	**7**	Pn	**Pg**	**12 01 44.7**	**-0.1**
GNI	**Garni**	**1.72**	**7**	*e*P	**Pg**	**12 01 45.1**	**+0.3**
GNI				*e*S	**Sg**	**12 02 11.0**	**+3.9**
GRS	**Goris**	**1.80**	**53**	⇓*i*P	**Pn**	**12 01 42.0**	**-0.7**
GRS				⇑*i*S	**Sb**	**12 02 07.0**	**-0.2**
EGVZ	**Egvard**	**1.80**	**64**	*e*P	**Pg**	**12 01 44.7**	**-1.6**
EGVZ				*e*S	**Sg**	**12 02 10.0**	**+0.4**
BLIS	**Bitlis-Merkez**	**1.85**	**270**	P	**Pg**	**12 01 46.4**	**-0.8**
BLIS				S	**Sg**	**12 02 12.8**	**+1.6**
BLIS				IAML		12 02 20.0	
	comp=N,172nm,0.7s						
BLIS				IAML		12 02 22.0	
	comp=E,138nm,0.7s						
SIRN	**Sirnak**	**1.88**	**240**	P	**Pg**	**12 01 47.6**	**-0.2**
SIRN				S	**Sg**	**12 02 16.3**	**+4.1**
SIRN				IAML		12 02 23.0	
	comp=N,269nm,0.8s						
SIRN				IAML		12 02 23.0	
	comp=E,332nm,0.7s						
GURO	**Guroymak-BITLI**	**1.91**	**274**	Pn	**Pn**	**12 01 44.3**	**0.0**
MAHB	**Mahabad**	**1.94**	**149**	Pn	**Pg**	**12 01 50.6**	**+1.6**
AMBZ	**Amberd**	**1.95**	**355**	*e*P	**Pg**	**12 01 48.4**	**-0.8**
AMBZ				*e*S	**Sg**	**12 02 16.0**	**+1.5**
AYRK	**Ayrk**	**1.96**	**31**	*e*P	**Pg**	**12 01 48.4**	**-1.0**
AYRK				*e*S	**Sg**	**12 02 16.1**	**+1.3**
IHRS	**Heris**	**2.03**	**93**	Pn	**Pg**	**12 01 49.6**	**-1.1**
SRTM	**Siirt_Merkez**	**2.06**	**258**	P	**Pb**	**12 01 49.3**	**+0.3**
SRTM				S	**Sg**	**12 02 16.3**	**-1.5**
SRTM				IAML		12 02 23.0	
	comp=N,313nm,0.6s						
SRTM				IAML		12 02 29.0	
	comp=E,442nm,0.7s						
EATA	**Eleskirt**	**2.09**	**313**	P	**Pb**	**12 01 49.9**	**+0.1**
EATA				S	**Sg**	**12 02 18.1**	**-0.9**
EATA				IAML		12 02 27.0	
	comp=E,51nm,0.6s						
EATA				IAML		12 02 28.0	
	comp=N,34nm,0.8s						
DIGO	**Kars**	**2.14**	**337**	P	**Pb**	**12 01 50.8**	**+0.2**
DIGO				S	**Sg**	**12 02 19.2**	**-1.5**
DIGO				IAML		12 02 28.0	
	comp=N,195nm,0.8s						
DIGO				IAML		12 02 31.0	
	comp=E,217nm,0.7s						
MUSM	**Mu-Merkez**	**2.33**	**278**	P	**Pb**	**12 01 52.5**	**-1.3**
MUSM				S	**Sg**	**12 02 26.0**	**-0.7**
MUSM				IAML		12 02 32.0	
	comp=E,21nm,0.7s						
MUSM				IAML		12 02 34.0	
	com

NGOA **Tingoa Renbel** 22.43 291 P **P** **12 06 55.9 +0.5**
TATA **Tatamba Isabel** 24.21 297 P **P** **12 07 11.4 +0.2**
JCZ **Jackson Bay** 25.57 201 P **P** **12 07 21.6 -1.3**
ARMA **Armidale** 28.49 244 P **P** **12 07 49.1 +0.4**
ARMA IAmb IAmb 12 08 23.0
comp=Z,18nm,1.4s
CTA **Charters Tower** 32.94 265 P **P** **12 08 26.8 +0.1**
comp=Z,4.0nm,0.9s,baz=99,slow=8.4,SNR=6.0
comp=Z,4.0nm,0.9s
CTAO **Charters Tower** 32.94 265 P **P** **12 08 27.4 +0.7**
CTAO **Charters Tower** 32.94 265 P **P** **12 08 27.7 +1.0**
PMG **Port Moresby** 34.87 284 P **P** **12 08 43.2 +0.3**
comp=Z,5.8nm,0.6s,baz=103,slow=14,SNR=1.8
comp=Z,5.8nm,0.6s
PMG **Port Moresby** 34.87 284 P **P** **12 08 44.0 +1.1**
TOO **Toolangi** 35.34 234 P **P** **12 08 47.0 +0.4**
TOO IAmb IAmb 12 09 18.7
comp=Z,7.0nm,1.3s
COEN **Coen** 37.06 274 P **P** **12 09 01.7 +0.8**
COEN IAmb IAmb 12 09 16.8
comp=Z,21nm,1.4s
MANU **Manus Island** 38.04 295 P **P** **12 09 10.5 +1.5**
BBOO **Buckleboo** 41.97 244 P **P** **12 09 40.0 -0.1**
BBOO IAmb IAmb 12 10 19.7
comp=Z,24nm,1.4s
JAY **Jayapura** 43.60 289 P **P** **12 09 53.1 +0.1**
comp=Z,6.8nm,0.5s,baz=152,slow=5.9,SNR=5.4
comp=Z,6.8nm,0.5s
WR8 **Warramunga Arr** 43.89 262 P **P** **12 09 55.0 -0.2**
WR8 IAmb IAmb 12 09 55.4
comp=Z,11nm,1.5s
AS31 **Alice Springs** 43.95 257 P **P** **12 09 56.3 +0.7**
ASAR **Alice Springs** 43.95 257 P **P** **12 09 55.7 +0.1**
comp=Z,0.8nm,0.5s,baz=94,slow=7.5,SNR=28
ASAR PcP **PcP** **12 11 26.4 -1.9**
comp=Z,0.4nm,0.6s,baz=94,slow=3.8,SNR=6.3
ASAR ScP **ScP** **12 14 23.8 -0.9**
comp=Z,0.3nm,0.9s,baz=100,slow=4.7,SNR=1.7
ASAR S **S** **12 15 43.7 -2.0**
comp=Z,1.6nm,0.9s,baz=95,slow=15,SNR=9.0
comp=Z,0.8nm,0.5s
ASAR **Alice Springs** 43.95 257 P **P** **12 09 55.9 +0.3**
ASAR PcP **PcP** **12 11 28.7 +0.4**
WB0 **Warramunga Arr** 44.02 263 P **P** **12 09 56.4 +0.3**
WRAB **Tennant Creek** 44.03 262 P **P** **12 09 56.1 -0.1**
WRA **Warramunga Arr** 44.04 262 P **P** **12 09 56.0 -0.3**
comp=Z,1.2nm,0.3s,baz=97,slow=7.6,SNR=59
WRA S **S** **12 15 41.8 -5.3**
comp=Z,0.2nm,0.7s,baz=103,slow=13,SNR=1.4
comp=Z,1.2nm,0.3s
MTN **Manton Dam** 48.63 271 P **P** **12 10 30.8 -0.1**
MTN IAmb IAmb 12 10 32.1
comp=Z,4.4nm,0.8s
FORT **Forrest** 48.72 247 P **P** **12 10 31.5 +0.1**
FORT IAmb IAmb 12 11 03.8
comp=Z,11nm,1.1s
KNRA **Kununurra** 50.11 267 P **P** **12 10 41.8 0.0**
KNRA IAmb IAmb 12 11 25.1
comp=Z,8.4nm,1.3s
FITZ **Fitzroy Crossi** 52.47 263 P **P** **12 10 58.6 -0.2**
comp=Z,1.2nm,0.6s,baz=80,slow=5.5,SNR=7.7
comp=Z,1.2nm,0.6s
SIJI **Sorong** 52.77 285 P **P** **12 11 01.0 0.0**
comp=Z,7.0nm,0.5s,baz=77,slow=4.5,SNR=9.9
comp=Z,7.0nm,0.5s
SOEI **Soe** 55.97 272 P **P** **12 11 21.7 -1.8**
SOEI IAmb IAmb 12 11 34.8
comp=Z,11nm,0.8s
PSA00 **Pilbara Seismi** 57.10 257 P **P** **12 11 29.0 -2.0**
PSA00 IAmb IAmb 12 11 33.0
comp=Z,9.9nm,1.1s
MBWA **Marble Bar** 57.28 258 P **P** **12 11 31.6 -0.6**
MBWA IAmb IAmb 12 12 11.7
comp=Z,11nm,1.1s
VNDA **Vanda** 57.66 185 P **P** **12 11 33.3 -0.5**
comp=Z,1.1nm,0.9s,baz=346,slow=4.9,SNR=3.7
comp=Z,1.1nm,0.9s
VNDA **Vanda** 57.66 185 P **P** **12 11 34.5 +0.7**
RPN **Rapa Nui** 62.92 111 P **P** **12 12 10.5 +1.1**
comp=Z,30nm,0.3s,baz=333,slow=2.3,SNR=1.5
KKM **Kota Kinabalu** 69.29 285 P **P** **12 12 48.7 -0.5**
KKM IAmb IAmb 12 12 58.0
comp=Z,14nm,1.0s
QSPA **South Pole Qui** 69.36 180 P **P** **12 12 48.9 +0.3**
comp=Z,2.4nm,0.8s,baz=40,slow=4.4,SNR=16
comp=Z,2.4nm,0.8s
QSPA **South Pole Qui** 69.36 180 P **P** **12 12 49.3 +0.6**
MJAR **Matsushiro Arr** 70.06 324 P **P** **12 12 53.4 +0.3**
comp=Z,1.3nm,0.5s,baz=166,slow=6.4,SNR=5.3
comp=Z,1.3nm,0.5s
MJAR **Matsushiro Arr** 70.06 324 P **P** **12 12 53.4 +0.3**
YULB **Yu-li** 73.17 304 P **P** **12 13 11.2 -0.3**
YULB IAmb IAmb 12 13 35.6
comp=Z,19nm,1.1s
SHEM **Shemya Is, Ala** 73.40 355 P **P** **12 13 12.4 +0.4**
SMY **Shemya** 73.40 355 P **P** **12 13 12.4 +0.4**
JKA **Kamikawa-asahi** 73.65 332 P **P** **12 13 12.9 -0.8**
PEA0B **Petropavlovsk-** 76.34 346 P **P** **12 13 28.6 +0.1**
PETK **Petropavlovsk-** 76.34 346 P **P** **12 13 29.1 +0.6**
comp=Z,3.7nm,0.7s,baz=119,slow=5.2,SNR=5.2
comp=Z,3.7nm,0.7s
PETK **Petropavlovsk-** 76.34 346 P **P** **12 13 28.7 +0.2**
KSRS **Korea Array** 76.69 319 P **P** **12 13 32.0 +1.3**
comp=Z,0.5nm,0.5s,baz=126,slow=4.8,SNR=2.5
comp=Z,0.5nm,0.5s
KSAR **Wonju Array Be** 76.70 319 P **P** **12 13 31.7 +0.9**
SDPT **Sand Point** 77.31 10 P **P** **12 13 33.8 +0.2**
SDPT IAmb IAmb 12 14 00.6
comp=Z,34nm,1.3s
M02C **Callahan** 80.49 39 P **P** **12 13 53.0 +2.0**
YBH **Yreka Blue Hor** 80.79 39 P **P** **12 13 53.8 +1.3**
comp=Z,0.1nm,0.7s,baz=153,slow=3.6,SNR=5.2
YBH **Yreka Blue Hor** 80.79 39 P **P** **12 13 54.6 +2.0**
O14K **Tigyukauivet M** 80.93 9 P **P** **12 13 52.8 +0.1**
O14K IAmb IAmb 12 14 05.1
comp=Z,14nm,1.4s
N14K **Kuskokwak Cree** 81.52 9 P **P** **12 13 57.1 +1.4**
N14K IAmb IAmb 12 14 02.2
comp=Z,22nm,1.4s
NVAR **Mina Array Bea** 81.54 44 P **P** **12 13 57.4 +0.7**
comp=Z,0.7nm,0.6s,baz=228,slow=8.3,SNR=8.0
comp=Z,0.7nm,0.6s
NVAR **Mina Array Bea** 81.54 44 P **P** **12 13 58.1 +1.4**
O16K **Kokwok River B** 81.75 10 P **P** **12 13 56.6 -0.3**
O16K IAmb IAmb 12 13 57.4
comp=Z,6.0nm,1.1s
N15K **Kwethluk River** 81.98 9 P **P** **12 13 59.3 +1.3**
N15K IAmb IAmb 12 14 03.2
comp=Z,11nm,1.5s
K05A **Summer Lake** 82.46 39 P **P** **12 14 03.2 +2.0**
M16K **Timber Creek** 82.97 9 P **P** **12 14 04.9 +1.9**
M16K IAmb IAmb 12 14 18.1
comp=Z,15nm,1.4s
KULM **Kulim** 83.27 278 P **P** **12 14 06.7 +1.1**
KULM IAmb IAmb 12 14 44.1
comp=Z,5.1nm,1.0s
ELK **Elko** 84.80 43 P **P** **12 14 13.7 +0.8**
comp=Z,0.5nm,0.6s,baz=287,slow=9.2,SNR=3.5
comp=Z,0.5nm,0.6s
F10A **Beach Ranch, E** 86.49 38 P **P** **12 14 21.6 +1.0**
F10A IAmb IAmb 12 14 22.2
comp=Z,3.3nm,0.8s
TXAR **Lajitas Array** 87.62 58 P **P** **12 14 26.9 +0.6**
comp=Z,0.7nm,0.8s,baz=217,slow=7.7,SNR=7.6
comp=Z,0.7nm,0.8s
ILAR **Eielson Array** 88.64 13 P **P** **12 14 29.6 -0.4**
comp=Z,0.7nm,0.5s,baz=217,slow=5.1,SNR=12
comp=Z,0.7nm,0.5s
PDAR **Pinedale Array** 89.48 43 P **P** **12 14 35.0 +0.3**
comp=Z,0.7nm,0.6s,baz=209,slow=2.9,SNR=9.2
comp=Z,0.7nm,0.6s
CMAR **Chiang Mai Arr** 89.68 290 P **P** **12 14 36.4 +0.4**
comp=Z,0.6nm,0.5s,baz=120,slow=3.4,SNR=7.0
comp=Z,0.6nm,0.5s
MT02 **Curacav** 92.47 127 P **P** **12 14 51.6 +2.9**
SONM **Songino Array** 95.56 319 P **P** **12 15 01.6 -0.8**
comp=Z,0.3nm,0.5s,baz=123,slow=8.8,SNR=2.0
comp=Z,0.3nm,0.5s
MKAR **Makanchi Array** 110.95 313 PKiKP **PKiKP** **12 20 04.7 -1.7**
comp=Z,0.2nm,0.4s,baz=75,slow=1.6,SNR=2.1
BVAR **Borovoye Array** 118.89 320 PKP **PKPdf** **12 20 20.4 -1.0**
comp=Z,1.1nm,0.4s,baz=122,slow=3.0,SNR=8.3
ARCES **ARCESS Array B** 129.03 349 PKP **PKPdf** **12 20 38.6 -1.8**
comp=Z,5.1nm,1.0s,baz=31,slow=2.8,SNR=3.8
FINES **FINESS Array B** 135.82 343 PKhKP PKPpre 12 20 40.7
comp=Z,3.9nm,1.0s,baz=335,slow=13,SNR=2.6
FINES PKP **PKiKP** **12 20 54.1 -0.9**
comp=Z,2.5nm,1.0s,baz=27,slow=0.3,SNR=1.8
HFS **Hagfors** 139.66 351 PKhKP PKPpre 12 20 53.7
comp=Z,0.8nm,0.3s,baz=10,slow=1.7,SNR=7.0
HFS PKP **PKiKP** **12 21 01.6 -1.4**
comp=Z,1.2nm,0.7s,baz=48,slow=2.2,SNR=1.1
AKASG **Malin Array Be** 142.93 331 PKP **PKPdf** **12 21 03.6 -2.9**
comp=Z,3.5nm,0.4s,baz=44,slow=4.3,SNR=27
EKA **Eskdalemuir Ar** 145.26 5 PKPbc **PKPbc** **12 21 10.6 -0.9**
comp=Z,1.6nm,0.7s,baz=11,slow=3.1,SNR=2.5
BR131 **Keskin Array S** 146.58 312 PKPbc **PKPbc** **12 21 15.9 0.0**
BRTR **Keskin Array B** 146.58 312 PKPbc **PKPbc** **12 21 15.2 -0.7**
comp=Z,1.3nm,0.7s,baz=98,slow=4.4,SNR=5.2
BRTR **Keskin Array B** 146.58 312 PKPbc **PKPbc** **12 21 16.1 0.0**
BURAR **Bucovina Array** 146.97 330 PKPbc **PKiKP** **12 21 18.0 -0.5**
MMAI **Mount Meron Ar** 147.45 299 PKPbc **PKPbc** **12 21 17.8 -0.6**
comp=Z,1.9nm,0.4s,baz=50,slow=7.8,SNR=2.1
GERES **GERESS Array B** 150.25 344 PKPbc **PKPbc** **12 21 24.1 -0.6**
comp=Z,0.4nm,0.2s,baz=3.2,slow=19,SNR=2.9

IDC ***23*** *12:13:05.1±0.8, 13°.05S×112°.00W, h0km, mb3.8/13, mbtmp3.8/13,MS4.3/36, Error ellipse: s-maj=30.8km s-min=16.9km az=63.0*
NEIC ***23*** *12:13:06.7±1.3, 13°.6S±0°.1×112°.3W±0°.2, h10km±1km, mb4.6/106, Error ellipse: s-maj=25.6km s-min=17.3km az=260.0*
GCMT ***23*** *12:13:09.7±0.2, 13°.46S±0°.01×112°.20W±0°.01, h15km±1km, MW5.0/134, Moment Tensor Solution. s46,c56; s134,c200; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.14±.10; $M_{\theta\theta}$1.99±.11; $M_{\phi\phi}$-1.85±.12; $M_{r\theta}$0.59±.32; $M_{\theta\phi}$3.91±.09; $M_{\phi r}$0.39±.33; Best double couple: $M_0$4.41400×10^{16} NP1:ϕ_s13.00000°,δ81.00000°, λ-176.00000°. NP2:ϕ_s283.00000°,δ87.00000°, λ-9.00000°. Principal axes: T 4.4450, Plg4.0000°, Azm328.0000°; N -0.0660, Plg81.0000°, Azm81.0000°; P -4.3840, Plg9.0000°, Azm238.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 23 12:13:05.7±0.5, 13°.50S±0°.08×112°.3W±0°.1, h10km, n158, σ1**s29**/113**, mb4.6**/60**, MS4.3**/36**, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**13.83**	**169**	LR	LR	12 20 14.5	
	comp=Z,2μm,19.6s,baz=348,slow=30						
RPN	**Rapa Nui**	**13.83**	**169**	Pn	**Pn**	**12 16 21.4**	**-0.6**
VA02	**Isla de Pascua**	**13.85**	**169**	Pn	**Pn**	**12 16 21.4**	**-0.7**
H06S1	**SOCORRO T**	**32.06**	**2**	T	T	12 53 06.2	
	SNR=10						
TLIG	**Tlapa**	**33.69**	**24**	P	**P**	**12 19 48.2**	**+0.8**
TLIG				IAmb	IAmb	12 19 51.2	
	comp=Z,12nm,1.3s						
ATAH	**Atahualpa**	**33.88**	**83**	LR	LR	12 30 02.7	
	comp=Z,629nm,19.4s,baz=257,slow=30						
COHC	**Cochancay**	**34.42**	**74**	P	**P**	**12 19 53.4**	**-0.3**
NNA	**Nana**	**34.56**	**92**	LR	LR	12 30 12.4	
	comp=Z,351nm,19.0s,baz=253,slow=30						
NNA	**Nana**	**34.56**	**92**	P	**P**	**12 19 53.8**	**-1.2**
APG	**El Apazote**	**35.60**	**38**	LR	LR	12 31 30.4	
	comp=Z,84nm,20.8s,baz=256,slow=32						
MTO3	**Montecristo**	**35.81**	**40**	P	**P**	**12 20 05.7**	**-0.1**
ESQI	**Esquipulas**	**35.94**	**40**	P	**P**	**12 20 06.5**	**-0.3**
JTS	**Las Juntas de**	**35.96**	**50**	LR	LR	12 31 00.1	
	comp=Z,701nm,21.3s,baz=223,slow=30						
H03N2	**Juan Fernandez**	**36.21**	**129**	T	T	12 58 28.4	
	baz=300,slow=76,SNR=64						
H03N3	**Juan Fernandez**	**36.22**	**129**	T	T	12 58 30.8	
	baz=300,slow=76,SNR=71						
H03N1	**Juan Fernandez**	**36.23**	**129**	T	T	12 58 34.8	
	baz=300,slow=76,SNR=80						
LPIG	**La Paz**	**37.42**	**3**	LR	LR	12 31 41.5	
	comp=Z,708nm,20.3s,baz=190,slow=30						
CZSB	**Cruzeiro do Su**	**39.26**	**86**	P	**P**	**12 20 34.7**	**-0.3**
CZSB				IAmb	IAmb	12 20 39.2	
	comp=Z,16nm,1.4s						
AP01	**Chacalluta**	**40.53**	**103**	P	**P**	**12 20 45.5**	**+0.1**
HPIG		**40.70**	**9**	P	**P**	**12 20 47.0**	**+0.1**
ROSC	**El Rosal**	**41.84**	**67**	LR	LR	12 34 23.1	
	comp=Z,270nm,21.8s,baz=242,slow=31						
VA06	**Catapilco**	**41.88**	**124**	P	**P**	**12 20 56.5**	**+0.1**
VA06				IAmb	IAmb	12 20 59.8	
	comp=Z,14nm,1.1s						
CO03	**El Pedregal**	**41.90**	**121**	P	**P**	**12 20 56.5**	**-0.2**
LPAZ	**La Paz**	**42.67**	**99**	P	**P**	**12 21 03.6**	**-0.2**
	comp=Z,2.6nm,0.8s,baz=293,slow=8.4,SNR=8.6						
LPAZ				LR	LR	12 35 47.9	
	comp=Z,109nm,19.0s,baz=254,slow=32						
	comp=Z,2.6nm,0.8s						
LPAZ	**La Paz**	**42.67**	**99**	P	**P**	**12 21 03.4**	**-0.4**
LR04	**Corral**	**43.01**	**135**	P	**P**	**12 21 05.2**	**-0.2**
TX31	**Lajitas Ar. Si**	**43.38**	**11**	P	**P**	**12 21 08.3**	**-0.3**
TXAR	**Lajitas Array**	**43.38**	**11**	P	**P**	**12 21 05.3**	**-3.3**
	comp=Z,0.4nm,0.9s,baz=202,slow=13,SNR=4.5						
TXAR				LR	LR	12 35 59.2	
	comp=Z,288nm,18.1s,baz=196,slow=32						
	comp=Z,0.4nm,0.9s						
TXAR	**Lajitas Array**	**43.38**	**11**	P	**P**	**12 21 09.0**	**+0.4**
833A	**Chaparral WMA,**	**43.40**	**17**	P	**P**	**12 21 09.5**	**+0.8**
CFA	**Coronel Fontan**	**44.12**	**122**	P	**P**	**12 21 15.7**	**+1.0**
	comp=Z,1.3nm,0.7s,baz=280,slow=9.7,SNR=5.1						
	comp=Z,1.3nm,0.7s						
DRIO	**Del Rio**	**44.13**	**15**	P	**P**	**12 21 15.2**	**+0.6**
SAND	**Sanderson**	**44.29**	**13**	P	**P**	**12 21 17.0**	**+1.1**
SAND				IAmb	IAmb	12 21 27.9	
	comp=Z,7.4nm,1.2s						
VHRN	**Van Horn**	**44.58**	**9**	P	**P**	**12 21 18.4**	**+0.1**
319A	**Douglas**	**44.71**	**4**	P	**P**	**12 21 19.4**	**+0.1**
319A				IAmb	IAmb	12 21 54.7	
	comp=Z,5.6nm,0.9s						
VTX	**Valle De La Tr**	**44.76**	**356**	P	**P**	**12 21 20.9**	**+1.2**
VTX				IAmb	IAmb	12 21 21.5	
	comp=Z,7.2nm,1.2s						
PIX	**Pinacate**	**44.82**	**359**	P	**P**	**12 21 20.4**	**+0.4**
214A	**Organ Pipe Nat**	**45.20**	**359**	P	**P**	**12 21 25.0**	**+1.9**
JCT	**Junction City**	**45.34**	**15**	P	**P**	**12 21 25.3**	**+1.1**
JCT				IAmb	IAmb	12 21 36.3	
	comp=Z,5.5nm,0.8s						
PLCA	**Paso Flores**	**45.36**	**135**	LR	LR	12 35 53.5	
	comp=Z,734nm,18.1s,baz=292,slow=30						
MNTX	**Cornudas Mount**	**45.42**	**8**	P	**P**	**12 21 25.4**	**+0.6**
MNTX				IAmb	IAmb	12 21 36.3	
	comp=Z,5.1nm,0.9s						
OZNA	**Ozona**	**45.44**	**13**		**P**	**12 21 25.8**	**+0.7**
OZNA				IAmb	IAmb	12 21 36.5	
	comp=Z,9.8nm,1.3s						
MNHN	**Monahans**	**45.51**	**11**	P	**P**	**12 21 26.4**	**+0.9**
MNHN				IAmb	IAmb	12 21 37.1	
	comp=Z,4.8nm,0.8s						
TUC	**Tucson**	**45.57**	**2**	P	**P**	**12 21 26.5**	**+0.4**
RAR	**Rarotonga**	**45.86**	**254**	LR	LR	12 34 58.7	
	comp=Z,531nm,20.8s,baz=91,slow=28						
121A	**Cookes Peak, D**	**45.97**	**5**		**P**	**12 21 30.6**	**+1.3**
121A				IAmb	IAmb	12 21 41.7	
	comp=Z,6.9nm,0.9s						
435B	**Jarrell**	**46.23**	**18**	P	**P**	**12 21 31.0**	**-0.2**
BRDY	**Brady**	**46.31**	**16**		**P**	**12 21 32.6**	**+0.7**
BRDY				IAmb	IAmb	12 21 43.1	
	comp=Z,8.2nm,0.9s						
GLA	**Glamis**	**46.35**	**357**	P	**P**	**12 21 32.6**	**+0.3**
GLA				IAmb	IAmb	12 21 47.7	
	comp=Z,4.2nm,0.9s						
SGCY	**Sterling City**	**46.40**	**13**	P	**P**	**12 21 33.5**	**+0.9**
SDV	**Santo Domingo**	**46.93**	**64**	LR	LR	12 37 19.1	
	comp=Z,165nm,18.1s,baz=234,slow=31						
SDV	**Santo Domingo**	**46.93**	**64**		**P**	**12 21 38.1**	**+0.9**
PFO	**Pinyon Flats O**	**47.02**	**355**	LR	LR	12 36 21.9	
	comp=Z,360nm,20.4s,baz=210,slow=30						
WHTX	**Lake Whitney,**	**47.40**	**17**	P	**P**	**12 21 41.5**	**+1.2**
WHTX				IAmb	IAmb	12 21 52.1	
	comp=Z,7.9nm,1.0s						
ABTX	**Abilene, Hawle**	**47.42**	**14**	P	**P**	**12 21 39.8**	**-0.8**
POST	**Post**	**47.43**	**12**	P	**P**	**12 21 41.7**	**+1.0**
POST				IAmb	IAmb	12 21 52.0	
	comp=Z,6.8nm,1.0s						
Y22A	**Socorro**	**47.44**	**6**		**P**	**12 21 41.8**	**+0.9**
Y22A				IAmb	IAmb	12 21 53.1	
	comp=Z,7.8nm,1.0s						
CRNM	**Carthage**	**47.48**	**6**	P	**P**	**12 21 41.8**	**+0.6**
SN07	**Snyder 07**	**47.58**	**13**	P	**P**	**12 21 42.8**	**+1.0**
SN07				IAmb	IAmb	12 22 03.8	
	comp=Z,10.0nm,1.3s						
X16A	**Lo Mia Camp, P**	**47.66**	**1**	P	**P**	**12 21 43.5**	**+1.0**
LENM	**Lemitar**	**47.67**	**6**		**P**	**12 21 43.3**	**+0.7**
X18A	**Snowflake**	**47.81**	**3**		**P**	**12 21 43.9**	**+0.1**
X18A				IAmb	IAmb	12 21 56.9	
	comp=Z,8.7nm,1.1s						
APMT	**Aspermont**	**47.98**	**14**	P	**P**	**12 21 45.0**	**+0.1**
APMT				IAmb	IAmb	12 22 17.5	
	comp=Z,6.0nm,1.2s						
MSTX	**Muleshoe**	**48.06**	**11**		**P**	**12 21 46.5**	**+0.9**
FW06	**Azle**	**48.30**	**17**	P	**P**	**12 21 47.2**	**-0.1**
W13A	**Hualapai Mount**	**48.36**	**358**		**P**	**12 21 48.1**	**+0.2**
W13A				IAmb	IAmb	12 22 04.1	
	comp=Z,4.9nm,1.0s						
ANMO	**Albuquerque**	**48.49**	**6**	LR	LR	12 38 47.1	
	comp=Z,400nm,18.5s,baz=187,slow=32						
ANMO	**Albuquerque**	**48.49**	**6**	P	**P**	**12 21 50.1**	**+1.1**
ANMO	**Albuquerque**	**48.49**	**6**	P	**P**	**12 21 50.0**	**+1.0**
ANMO				IAmb	IAmb	12 21 56.3	
	comp=Z,1.3nm,0.9s						
WUAZ	**Wupatki**	**48.76**	**1**	P	**P**	**12 21 50.6**	**-0.4**
WUAZ				IAmb	IAmb	12 22 18.8	
	comp=Z,8.6nm,1.4s						
SIV	**San Ignacio**	**49.46**	**100**	P	**P**	**12 21 56.1**	**-0.6**
	comp=Z,2.2nm,0.9s,baz=261,slow=6.2,SNR=5.4						
	comp=Z,2.2nm,0.9s						
U15A	**North Rim**	**49.66**	**360**		**P**	**12 21 58.8**	**+0.8**
SHPR	**Sheep Range**	**49.81**	**357**		**P**	**12 22 00.2**	**+1.2**
MVCO	**Mesa Verde**	**50.56**	**4**	IAmb	IAmb	12 22 16.2	
	comp=Z,13nm,1.4s						
CCUT	**Cedar City**	**50.79**	**359**	IAmb	IAmb	12 22 19.8	
	comp=Z,8.2nm,1.3s						
HMU	**Henry Mountain**	**51.18**	**2**	P	**P**	**12 22 11.1**	**+1.6**
PTLB	**Pontes e Lacer**	**51.36**	**99**	P	**P**	**12 22 10.8**	**-0.2**
PTLB				IAmb	IAmb	12 22 24.0	
	comp=Z,6.6nm,1.1s						
SDCO	**Great Sand Dun**	**51.37**	**7**	P	**P**	**12 22 18.8**	**+1.8**
PV18	**Skein Mesa, Pa**	**51.57**	**3**	P	**P**	**12 22 13.5**	**+1.2**
PV18				IAmb	IAmb	12 22 24.7	
	comp=Z,4.5nm,0.9s						
PV10	**Paradox Valley**	**51.69**	**3**	IAmb	IAmb	12 22 27.3	
	comp=Z,9.1nm,1.1s						
PSUT	**Pine Spring**	**51.78**	**358**	P	**P**	**12 22 15.2**	**+1.3**
OK051	**E0350 and S346**	**51.82**	**16**	P	**P**	**12 22 15.0**	**+1.0**
OK051				IAmb	IAmb	12 22 25.3	
	comp=Z,11nm,1.0s						
NV11	**Mina Array Sit**	**51.95**	**354**	P	**P**	**12 22 16.2**	**+1.0**
NV11				IAmb	IAmb	12 22 32.5	
	comp=Z,12nm,1.4s						
NVAR	**Mina Array Bea**	**51.97**	**354**	P	**P**	**12 22 14.4**	**-0.9**
	comp=Z,1.0nm,0.8s,baz=180,slow=9.6,SNR=8.4						
NVAR				LR	LR	12 39 06.2	
	comp=Z,445nm,21.0s,baz=170,slow=30						
	comp=Z,1.0nm,0.8s						
NVAR	**Mina Array Bea**	**51.97**	**354**	P	**P**	**12 22 16.2**	**+0.8**
BANI	**BANI**	**52.07**	**54**	P	**P**	**12 22 15.7**	**-0.6**
SRU	**San Rafael Swe**	**52.36**	**2**	P	**P**	**12 22 20.1**	**+1.9**
P17A	**Butcher Ranch,**	**52.72**	**1**	IAmb	IAmb	12 22 33.8	
	comp=Z,8.4nm,1.2s						
PNTR	**Pine Nut**	**52.76**	**353**	IAmb	IAmb	12 22 35.1	
	comp=Z,10.0nm,1.1s						
CPUP	**Villa Florida**	**52.85**	**113**	P	**P**	**12 22 22.1**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=299,slow=6.4,SNR=3.9						
CPUP				LR	LR	12 40 20.8	
	comp=Z,265nm,21.4s,baz=265,slow=31						
	comp=Z,0.9nm,0.6s						
P18A	**Preston Nutter**	**52.88**	**2**	IAmb	IAmb	12 22 34.0	
	comp=Z,7.0nm,1.0s						
ELK	**Elko**	**54.04**	**357**	P	**P**	**12 22 28.9**	**-1.8**
	comp=Z,0.7nm,0.7s,baz=226,slow=10,SNR=4.6						
ELK				LR	LR	12 40 59.5	
	comp=Z,461nm,19.6s,baz=184,slow=31						
	comp=Z,0.7nm,0.7s						
ELK	**Elko**	**54.04**	**357**		**P**	**12 22 31.8**	**+1.2**
ELK				IAmb	IAmb	12 22 43.1	
	comp=Z,5.9nm,1.1s						
SJG	**San Juan**	**55.27**	**57**	LR	LR	12 42 38.9	
	comp=Z,92nm,20.0s,baz=246,slow=32						
YBH	**Yreka Blue Hor**	**55.80**	**351**	P	**P**	**12 22 40.8**	**-2.3**
	baz=176,slow=18,SNR=1.9						
YBH	**Yreka Blue Hor**	**55.80**	**351**	P	**P**	**12 22 43.4**	**+0.3**
TKL	**Tuckaleechee C**	**55.83**	**28**	LR	LR	12 44 42.1	
	comp=Z,52nm,20.4s,baz=338,slow=34						
WVOR	**Wild Horse Val**	**55.96**	**354**	P	**P**	**12 22 45.1**	**+0.7**
WVOR				IAmb	IAmb	12 23 01.6	
	comp=Z,7.3nm,1.1s						
BW06	**Boulder Array**	**56.04**	**2**	P	**P**	**12 22 45.9**	**+0.8**
PD31	**Pinedale Array**	**56.04**	**2**	P	**P**	**12 22 45.3**	**+0.2**
PDAR	**Pinedale Array**	**56.04**	**2**	P	**P**	**12 22 42.6**	**-2.4**
	comp=Z,0.8nm,0.6s,baz=158,slow=7.3,SNR=7.8						
PDAR				LR	LR	12 42 45.4	
	comp=Z,211nm,19.0s,baz=178,slow=32						
	comp=Z,0.8nm,0.6s						
PDAR	**Pinedale Array**	**56.04**	**2**	P	**P**	**12 22 45.6**	**+0.5**
MFID	**Camas Ranch**	**56.73**	**357**	IAmb	IAmb	12 23 01.6	
	comp=Z,7.7nm,1.1s						
FXWY	**Fox Creek**	**56.87**	**1**	P	**P**	**12 22 52.3**	**+1.3**
FXWY				IAmb	IAmb	12 22 59.9	
	comp=Z,5.9nm,1.4s						
FLWY	**Flagg Ranch**	**57.32**	**1**	IAmb	IAmb	12 23 06.0	
	comp=Z,9.0nm,1.1s						
I07A	**Izee**	**57.68**	**354**	IAmb	IAmb	12 22 59.6	
	comp=Z,6.9nm,1.3s						
PMSA	**Palmer Station**	**60.83**	**159**	LR	LR	12 42 36.8	
	comp=Z,379nm,20.4s,baz=336,slow=29						
MDP	**Montagnes des**	**61.99**	**77**	LR	LR	12 46 43.8	
	comp=Z,190nm,19.0s,baz=277,slow=33						
RAO	**Raoul Island**	**62.41**	**244**	LR	LR	12 41 45.7	
	comp=Z,85nm,21.8s,baz=95,slow=27						
URZ	**Urewera**	**66.61**	**234**	LR	LR	12 48 45.5	
	comp=Z,272nm,18.6s,baz=104,slow=32						
BBB	**Bella Bella**	**66.84**	**349**	LR	LR	12 46 31.1	
	comp=Z,139nm,18.3s,baz=187,slow=30						
MSVF	**Nonsavu**	**66.92**	**256**	LR	LR	12 45 49.0	
	comp=Z,323nm,21.9s,baz=92,slow=29						
RPZ	**Rata Peaks**	**71.21**	**228**	LR	LR	12 48 38.7	
	comp=Z,349nm,21.9s,baz=281,slow=30						
RCBR	**Riachuelo**	**75.42**	**93**	LR	LR	12 55 17.6	
	comp=Z,78nm,19.2s,baz=254,slow=34						
YKA	**Yellowknife Ar**	**75.77**	**359**	P	**P**	**12 24 49.1**	**-2.3**
	comp=Z,0.3nm,0.8s,baz=185,sl

WRH					IAmb	IAmb	12 25 30.3	
	comp=Z,6.3nm,1.0s							
INK	**Inuvik**	**83.01**	**352**	LR	LR		12 57 47.1	
	comp=Z,218nm,18.7s,baz=220,slow=32							
INK	**Inuvik**	**83.01**	**352**	P	**P**		**12 25 32.2**	**+1.5**
INK				IAmb	IAmb		12 25 47.7	
	comp=Z,8.6nm,1.5s							
SNAA	**Sanae**	**83.24**	**163**	LR	LR		12 55 56.4	
	comp=Z,157nm,20.7s,baz=206,slow=31							
SNAA	**Sanae**	**83.24**	**163**	P	**P**		**12 25 32.1**	**-0.1**
BMAR	**Burnt Mountain**	**84.07**	**348**	P	**P**		**12 25 37.8**	**+1.5**
F24K	**Squaw Lake**	**84.84**	**347**	P	**P**		**12 25 41.2**	**+1.0**
F24K				IAmb	IAmb		12 25 56.7	
	comp=Z,3.6nm,0.9s							
E25K	**Arctic Village**	**84.86**	**348**		**P**		**12 25 42.4**	**+2.1**
E25K				IAmb	IAmb		12 26 01.8	
	comp=Z,6.4nm,1.3s							
COLD	**Coldfoot**	**85.13**	**346**	P	**P**		**12 25 43.6**	**+2.0**
COLD				IAmb	IAmb		12 25 44.8	
	comp=Z,5.1nm,1.0s							
G21K	**Allakaket**	**85.38**	**345**	P	**P**		**12 25 45.0**	**+2.1**
H11S2	**WAKE ISLAND Hy**	**85.95**	**290**	T	T		14 00 40.3	
	baz=106,slow=74,SNR=97							
H11S1	**WAKE ISLAND Hy**	**85.96**	**290**	T	T		14 00 41.1	
	baz=106,slow=74,SNR=41							
H11S3	**WAKE ISLAND Hy**	**85.97**	**290**	T	T		14 00 41.6	
	baz=106,slow=74,SNR=50							
H11N3	**WAKE ISLAND Hy**	**86.09**	**291**	T	T		14 00 55.2	
	baz=107,slow=75,SNR=13							
H11N2	**WAKE ISLAND Hy**	**86.11**	**291**	T	T		14 00 48.0	
	baz=107,slow=75,SNR=14							
H11N1	**WAKE ISLAND Hy**	**86.11**	**291**	T	T		14 00 56.5	
	baz=107,slow=75,SNR=7.5							
MAW	**Mawson**	**99.04**	**178**	LR	LR		13 07 58.3	
	comp=Z,210nm,19.8s,baz=182,slow=33							
COEN	**Coen**	**100.48**	**253**	Pdif		**Pdif**	**12 26 50.0**	**-4.1**
HHC	**Hu-ho-hao-te**	**133.12**	**314**	*e*P		**PKPdf**	**12 32 16.8**	**-5.4**
HHC				pmax	pmax			
	comp=Z,6.0nm,0.6s							
HHC				pmax	pmax			
	comp=Z,99nm,5.2s							
ZALV	**Zalesovo Beam**	**137.45**	**345**	PKP		**PKPdf**	**12 32 29.3**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=88,slow=4.5,SNR=2.0							
MKAR	**Makanchi Array**	**144.63**	**343**	PKP		**PKPab**	**12 32 42.0**	**+0.6**
	comp=Z,1.0nm,1.0s,baz=25,slow=4.0,SNR=6.0							
MAKZ	**Makanchi**	**144.71**	**343**	PKPdf		**PKPab**	**12 32 42.2**	**+0.5**
WMQ	**Urumqi**	**145.27**	**334**	*e*PKPbc		**PKPbc**	**12 32 41.5**	**-2.3**
WMQ				PKPab		**PKPdf**	**12 32 45.3**	**+1.2**
WMQ				pPKP	PKiKP		12 32 52.6	+4.6
WMQ				sPKP			12 32 58.8	
WMQ				LR	LR			
	comp=Z,150nm,21.1s							
PZH	**PanZhiHua**	**145.65**	**297**	PKPbc		**PKPdf**	**12 32 44.8**	**-0.5**
CMAR	**Chiang Mai Arr**	**149.63**	**283**	PKPbc		**PKPbc**	**12 32 57.0**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=68,slow=1.6,SNR=4.6							

*IDC **23** 12:19:02.3±1.0, 13°.34S×112°.14W, h0km, mb3.9/10, mbtmp3.9/10, Error ellipse: s-maj=36.6km s-min=18.4km az=61.0*

*NEIC **23** 12:19:04.5±0.9, 13°.50S±0°.05×112°.2W±0°.1, h10km±1km, mb4.6/62, Error ellipse: s-maj=24.3km s-min=6.6km az=280.0*

ISC 23 12:19:03.6±0.7, 13°.49S±0°.1×112°.2W±0°.1, h10km, n89, σ0.68/76, mb4.5/38, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
PTCN	**Pitcairn Islan**	**20.41**	**233**	P		**P**	**12 23 40.0**	**-0.9**
TAOE	**Nuku Hiva Isla**	**27.78**	**277**	*e*LR		LR	12 31 35.3	
	88nm,23.0s							
H06S1	**SOCORRO T**	**32.04**	**2**	T		T	12 58 57.6	
H03N2	**Juan Fernandez**	**36.19**	**129**	T		T	13 04 26.1	
	baz=300,slow=77,SNR=72							
PPT2	**Papeete2**	**36.19**	**259**	*e*LR		LR	12 35 45.5	
	245nm,26.8s							
PPT2				*e*LR		LR	12 35 54.3	
	148nm,27.8s							
H03N3	**Juan Fernandez**	**36.20**	**129**	T		T	13 04 27.0	
	baz=300,slow=77,SNR=86							
H03N1	**Juan Fernandez**	**36.20**	**129**	T		T	13 04 26.6	
	baz=300,slow=77,SNR=76							
TBI	**Tubuai**	**36.58**	**249**	*e*LR		LR	12 36 03.6	
	1μm,27.2s							
TBI				*e*LR		LR	12 36 05.6	
	902nm,28.8s							
SRIG	**Santa Rosalia**	**40.56**	**360**	P		**P**	**12 26 43.2**	**-0.1**
SRIG				IAmb		IAmb	12 26 46.0	
	comp=Z,9.4nm,0.8s							
TEIG	**Tepich**	**40.95**	**36**	P		**P**	**12 26 46.7**	**0.0**
LPAZ	**La Paz**	**42.64**	**99**	P		**P**	**12 27 01.6**	**+0.3**
	comp=Z,2.5nm,0.9s,baz=269,slow=8.7,SNR=6.4							
	comp=Z,2.5nm,0.9s							
LPAZ	**La Paz**	**42.64**	**99**	P		**P**	**12 27 01.2**	**-0.2**
LPAZ				IAmb		IAmb	12 27 09.6	
	comp=Z,13nm,1.5s							
TX31	**Lajitas Ar. Si**	**43.37**	**11**	P		**P**	**12 27 06.2**	**-0.2**
TXAR	**Lajitas Array**	**43.37**	**11**	P		**P**	**12 27 06.2**	**-0.2**
	comp=Z,0.9nm,1.0s,baz=183,slow=8.5,SNR=6.2							
	comp=Z,0.9nm,1.0s							
TXAR	**Lajitas Array**	**43.37**	**11**	P		**P**	**12 27 06.4**	**+0.1**
CFA	**Coronel Fontan**	**44.10**	**122**	P		**P**	**12 27 12.3**	**0.0**
	comp=Z,0.5nm,0.3s,baz=284,slow=8.7,SNR=3.7							
	comp=Z,0.5nm,0.3s							
GO06	**Curarrehue**	**44.22**	**134**	P		**P**	**12 27 12.9**	**-0.4**
GO06				IAmb		IAmb	12 27 37.2	
	comp=Z,7.7nm,1.1s							
SAND	**Sanderson**	**44.27**	**13**			**P**	**12 27 14.1**	**+0.5**
SAND				IAmb		IAmb	12 27 24.5	
	comp=Z,8.4nm,1.3s							
VHRN	**Van Horn**	**44.57**	**9**	P		**P**	**12 27 16.1**	**0.0**
VHRN				IAmb		IAmb	12 27 26.6	
	comp=Z,8.3nm,1.4s							
319A	**Douglas**	**44.70**	**4**	P		**P**	**12 27 16.8**	**-0.3**
319A				IAmb		IAmb	12 27 27.2	
	comp=Z,8.1nm,1.1s							
PLCA	**Paso Flores**	**45.34**	**135**	P		**P**	**12 27 23.7**	**+1.6**
PLCA				IAmb		IAmb	12 28 03.2	
	comp=Z,13nm,1.3s							
MNTX	**Cornudas Mount**	**45.41**	**8**			**P**	**12 27 22.8**	**+0.2**
MNTX				IAmb		IAmb	12 27 32.3	
	comp=Z,6.1nm,1.0s							
OZNA	**Ozona**	**45.42**	**13**	P		**P**	**12 27 23.1**	**+0.3**
OZNA				IAmb		IAmb	12 27 24.3	
	comp=Z,7.2nm,1.2s							
DUN6	**Lazy B Ranch**	**45.88**	**4**	P		**P**	**12 27 27.1**	**+0.6**
121A	**Cookes Peak, D**	**45.96**	**5**	P		**P**	**12 27 26.8**	**-0.3**
121A				IAmb		IAmb	12 27 33.9	
	comp=Z,5.7nm,0.9s							
ODSA	**Odessa**	**46.29**	**11**	P		**P**	**12 27 29.6**	**0.0**
BRDY	**Brady**	**46.29**	**16**			**P**	**12 27 29.8**	**+0.2**
BRDY				IAmb		IAmb	12 27 31.2	
	comp=Z,6.9nm,0.9s							
Y22A	**Socorro**	**47.43**	**6**	P		**P**	**12 27 38.5**	**-0.1**
SN07	**Snyder 07**	**47.56**	**13**	P		**P**	**12 27 38.1**	**-1.5**
SN07				IAmb		IAmb	12 27 41.0	
	comp=Z,5.0nm,0.7s							
X16A	**Lo Mia Camp, P**	**47.65**	**1**	P		**P**	**12 27 39.3**	**-1.0**
LENM	**Lemitar**	**47.65**	**6**	P		**P**	**12 27 39.6**	**-0.8**
X18A	**Snowflake**	**47.80**	**3**	P		**P**	**12 27 41.2**	**-0.3**
X18A				IAmb		IAmb	12 27 52.7	
	comp=Z,6.6nm,1.2s							
237A	**Washetta, Mont**	**47.89**	**19**	P		**P**	**12 27 42.3**	**+0.3**
MSTX	**Muleshoe**	**48.04**	**11**			**P**	**12 27 43.8**	**+0.5**
W13A	**Hualapai Mount**	**48.35**	**358**	P		**P**	**12 27 45.8**	**0.0**
W13A				IAmb		IAmb	12 27 52.7	
	comp=Z,4.8nm,1.1s							
W18A	**Petrified Fore**	**48.40**	**3**	P		**P**	**12 27 46.6**	**+0.5**
W18A				IAmb		IAmb	12 27 57.1	
	comp=Z,8.6nm,1.0s							
SIV	**San Ignacio**	**49.43**	**100**	P		**P**	**12 27 53.6**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=299,slow=11,SNR=4.4							
	comp=Z,0.7nm,0.5s							
SHPR	**Sheep Range**	**49.80**	**357**	P		**P**	**12 27 57.1**	**+0.3**
PKCU	**Pink Cliffs**	**50.66**	**360**	P		**P**	**12 28 03.3**	**-0.2**
TRQA	**Tornquist**	**50.69**	**128**	P		**P**	**12 28 03.8**	**+0.2**
TRQA				IAmb		IAmb	12 28 41.4	
	comp=Z,6.2nm,1.2s							
CCUT	**Cedar City**	**50.78**	**359**	P		**P**	**12 28 04.5**	**+0.2**
PTLB	**Pontes e Lacer**	**51.33**	**99**	P		**P**	**12 28 08.3**	**-0.3**
PTLB				IAmb		IAmb	12 28 10.2	
	comp=Z,7.3nm,1.2s							
PV01	**Paradox Valley**	**51.46**	**4**	P		**P**	**12 28 09.9**	**+0.5**
PV02	**Paradox Valley**	**51.53**	**4**	P		**P**	**12 28 10.2**	**+0.2**
PV02				IAmb		IAmb	12 28 16.0	
	comp=Z,9.3nm,1.2s							
PSUT	**Pine Spring**	**51.77**	**358**	P		**P**	**12 28 11.9**	**+0.1**
NV11	**Mina Array Sit**	**51.95**	**354**	P		**P**	**12 28 13.0**	**0.0**
NVAR	**Mina Array Bea**	**51.96**	**354**	P		**P**	**12 28 12.8**	**-0.3**
	comp=Z,2.8nm,0.9s,baz=178,slow=10,SNR=14							
	comp=Z,2.8nm,0.9s							
NVAR	**Mina Array Bea**	**51.96**	**354**	P		**P**	**12 28 13.6**	**+0.5**
SRU	**San Rafael Swe**	**52.35**	**2**	P		**P**	**12 28 17.1**	**+1.1**
SRU				IAmb		IAmb	12 28 26.4	
	comp=Z,8.1nm,1.4s							
CPUP	**Villa Florida**	**52.81**	**113**	P		**P**	**12 28 19.6**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=338,slow=17,SNR=3.2							
	comp=Z,0.3nm,0.4s							
CPUP	**Villa Florida**	**52.81**	**113**	P		**P**	**12 28 19.4**	**-0.2**
P18A	**Preston Nutter**	**52.87**	**2**	P		**P**	**12 28 20.4**	**+0.4**
P18A				IAmb		IAmb	12 28 35.3	
	comp=Z,8.3nm,1.1s							
DUG	**Dugway, Tooele**	**53.41**	**359**	P		**P**	**12 28 24.2**	**+0.5**
DUG				IAmb		IAmb	12 28 36.2	
	comp=Z,5.3nm,1.1s							
O20A	**White River Ci**	**53.48**	**4**	P		**P**	**12 28 24.3**	**-0.1**
O20A				IAmb		IAmb	12 28 32.4	
	comp=Z,9.0nm,1.2s							
BSUT	**Blindstream Ca**	**53.77**	**1**	P		**P**	**12 28 27.2**	**+0.6**
BSUT				IAmb		IAmb	12 28 37.6	
	comp=Z,7.2nm,1.2s							
ELK	**Elko**	**54.03**	**357**	P		**P**	**12 28 28.4**	**0.0**
T45A	**Paducah**	**54.92**	**23**	P		**P**	**12 28 35.8**	**+1.1**
YBH	**Yreka Blue Hor**	**55.79**	**351**	P		**P**	**12 28 39.8**	**-1.2**
	comp=Z,0.1nm,0.8s,baz=203,slow=7.7,SNR=3.9							
YBH	**Yreka Blue Hor**	**55.79**	**351**	P		**P**	**12 28 40.7**	**-0.2**
WVOR	**Wild Horse Val**	**55.96**	**354**	P		**P**	**12 28 42.9**	**+0.7**
WVOR				IAmb		IAmb	12 28 49.1	
	comp=Z,7.6nm,1.1s							
PDAR	**Pinedale Array**	**56.03**	**2**	P		**P**	**12 28 41.0**	**-1.8**
	comp=Z,0.8nm,0.8s,baz=154,slow=6.1,SNR=7.5							
	comp=Z,0.8nm,0.8s							
PDAR	**Pinedale Array**	**56.03**	**2**	P		**P**	**12 28 41.7**	**-1.1**
N35A	**Tabor**	**56.21**	**15**	P		**P**	**12 28 43.7**	**-0.2**
MFID	**Camas Ranch**	**56.72**	**357**	P		**P**	**12 28 48.2**	**+0.6**
MFID				IAmb		IAmb	12 28 53.4	
	comp=Z,4.5nm,0.9s							
HLID	**Hailey**	**56.81**	**358**	P		**P**	**12 28 48.3**	**0.0**
J08A	**Circle Bar Ran**	**56.86**	**355**	P		**P**	**12 28 49.5**	**+0.9**
FXWY	**Fox Creek**	**56.86**	**1**	P		**P**	**12 28 49.3**	**+0.6**
Y60A	**Bolivia**	**57.25**	**34**	P		**P**	**12 28 51.5**	**+0.1**
FLWY	**Flagg Ranch**	**57.31**	**1**	P		**P**	**12 28 51.9**	**0.0**
FLWY				IAmb		IAmb	12 28 57.7	
	comp=Z,12nm,1.3s							
I07A	**Izee**	**57.68**	**354**	P		**P**	**12 28 56.0**	**+1.6**
I07A				IAmb		IAmb	12 29 00.3	
	comp=Z,4.9nm,1.1s							
YHH	**Holmes Hill**	**58.01**	**1**	P		**P**	**12 28 56.1**	**-0.8**
MCMT	**McKenzie Canyo**	**58.04**	**359**			**P**	**12 28 58.4**	**+1.3**
BMO	**Blue Mountains**	**58.25**	**356**			**P**	**12 28 58.7**	**+0.4**
BMO				IAmb		IAmb	12 29 04.0	
	comp=Z,4.1nm,1.0s							
Q54A	**Coxs Mills**	**59.87**	**28**	P		**P**	**12 29 10.0**	**+0.5**
HOPE	**Hope Point**	**70.83**	**143**	P		**P**	**12 30 19.6**	**-0.9**
YKA	**Yellowknife Ar**	**75.76**	**359**	P		**P**	**12 30 48.2**	**-1.0**
	comp=Z,0.6nm,1.0s,baz=183,slow=5.2,SNR=7.4							
	comp=Z,0.6nm,1.0s							
QSPA	**South Pole Qui**	**76.61**	**180**	P		**P**	**12 30 55.5**	**+1.1**
	comp=Z,0.8nm,0.7s,baz=123,slow=0.8,SNR=5.4							
	comp=Z,0.8nm,0.7s							
QSPA	**South Pole Qui**	**76.61**	**180**	P		**P**	**12 30 54.9**	**+0.5**
QSPA				IAmb		IAmb	12 31 23.8	
	comp=Z,9.3nm,1.5s							
SCHQ	**Schefferville**	**78.10**	**25**	P		**P**	**12 31 02.2**	**-0.4**
	comp=Z,4.1nm,0.9s,baz=196,slow=7.4,SNR=4.2							
	comp=Z,4.1nm,0.9s							
H11S2	**WAKE ISLAND Hy**	**85.98**	**290**	T		T	14 06 41.7	
	baz=106,slow=74,SNR=7.4							
H11S1	**WAKE ISLAND Hy**	**85.99**	**290**	T		T	14 06 42.7	
	baz=106,slow=74,SNR=9.5							
H11S3	**WAKE ISLAND Hy**	**86.00**	**290**	T		T	14 06 37.5	
	baz=106,slow=74,SNR=4.0							
H11N3	**WAKE ISLAND Hy**	**86.12**	**291**	T		T	14 06 52.0	
	baz=107,slow=74							
H11N2	**WAKE ISLAND Hy**	**86.14**	**291**	T		T	14 06 52.8	
	baz=107,slow=74							
H11N1	**WAKE ISLAND Hy**	**86.14**	**291**	T		T	14 06 53.4	
	baz=107							
MKAR	**Makanchi Array**	**144.63**	**343**	PKP		**PKPdf**	**12 38 42.2**	**+1.4**
	comp=Z,0.3nm,0.7s,baz=58,slow=3.6,SNR=3.3							
MKAR	**Makanchi Array**	**144.63**	**343**			**PKPdf**	**12 38 41.9**	**+1.2**
KIBK	**Kibwezi**	**146.57**	**116**	PKPbc		**PKPbc**	**12 38 46.2**	**-0.4**
CMAR	**Chiang Mai Arr**	**149.66**	**283**	PKPbc		**PKPbc**	**12 38 54.9**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=89,slow=3.5,SNR=1.5							

*BKK **23** 12:21:23.2±0.5, 25°.N±6°×9°.6E±°, h10km, M4.1/8, MLv4.1/8*

*IDC **23** 12:21:25.5±0.9, 25°.19N×96°.56E, h0km, mb3.8/9, mbtmp3.8/10, ML3.7/1, MS3.7/2, Error ellipse: s-maj=50.9km s-min=14.3km az=65.0*

*NDI **23** 12:21:25.5±3.0, 25°.04N×96°.66E, h10km, ML4.0, MW4.1, Presumed earthquake*

*NEIC **23** 12:21:27.0±1.5, 25°.10N±0°.07×96°.35E±0°.08, h10km±1km, mb4.4/18, Error ellipse: s-maj=13.3km s-min=10.5km az=225.0*

ISC 23 12:21:28.2±0.6, 25°.02N±0°.05×96°.41E±0°.06, h21km, n56, σ1.815/63, mb4.0/19, 1C, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
MORE	**Moreh**	**2.07**	**248**	Pn		**Pn**	**12 22 00.9**	**-0.8**
MOKO	**MOKOCHONG**	**2.14**	**308**	*e*P		**Pn**	**12 22 04.4**	**+1.5**
MOKO				*e*S		**Sb**	**12 22 34.0**	**+1.4**
MOKO				IAML			12 22 47.6	
	comp=E,986nm,0.5s							
MOKO				IAML			12 22 50.0	
	comp=N,873nm,0.7s							
KOHI	**KOHIMA**	**2.19**	**289**	*e*P		**Pn**	**12 22 05.4**	**+1.8**
KOHI				*e*S		**Sb**	**12 22 35.6**	**+1.5**
KOHI				IAML			12 22 44.4	
	comp=N,625nm,0.9s							
KOHI				IAML			12 22 59.9	
	comp=E,866nm,0.8s							
IMP	**Imphal**	**2.24**	**266**	*e*P		**Pn**	**12 22 04.9**	**+0.7**
JORH	**JORHAT**	**2.59**	**312**	*e*P		**Pn**	**12 22 11.6**	**+2.7**
JORH				*e*S		**Sb**	**12 22 44.1**	**-1.3**
JORH				IAML			12 23 04.9	
	comp=E,804nm,0.4s							
JORH				IAML			12 23 05.2	
	comp=N,733nm,0.6s							
PASG	**PASIGHAT**	**3.18**	**343**	*e*P		**Pn**	**12 22 18.3**	**+1.3**
ITAN	**ITANAGAR**	**3.21**	**312**	*e*P		**Pn**	**12 22 17.7**	**+0.3**
ITAN				*e*S		**Sn**	**12 22 56.8**	**+1.7**
ITAN				IAML			12 23 03.7	
	comp=E,806nm,0.3s							
ITAN				IAML			12 23 04.9	
	comp=N,931nm,0.7s							
ZIRO	**ZIRO**	**3.39**	**318**	*e*P		**Pn**	**12 22 19.4**	**-0.7**
ZIRO				*e*S		**Sn**	**12 23 00.4**	**+0.6**
ZIRO				IAML			12 23 07.4	
	comp=E,962nm,0.4s							
ZIRO				IAML			12 23 13.5	
	comp=N,639nm,0.5s							
TEZP	**TEZPUR**	**3.62**	**297**	*e*P		**Pn**	**12 22 23.3**	**+0.3**
TEZP				⇑*e*S		**Sn**	**12 23 06.0**	**+0.9**
SAIH	**SAIHA**	**4.02**	**232**	*e*P		**Pn**	**12 22 29.6**	**+0.9**
SAIH				*e*S		**Sn**	**12 23 19.1**	**+3.8**
SAIH				IAML			12 23 40.5	
	comp=E,769nm,0.6s							
SAIH				IAML			12 23 42.4	
	comp=N,746nm,1.0s							
SHL	**Shillong**	**4.13**	**279**	Pn		**Pn**	**12 22 29.0**	**-1.3**
SHL	**Shillong**	**4.13**	**279**	*e*P		**Pn**	**12 22 28.9**	**-1.4**
SHL				*e*S		**Sn**	**12 23 17.1**	**-1.0**
GUWA	**GUWAHATI**	**4.42**	**286**	*e*P		**Pn**	**12 22 34.4**	**+0.4**
GUWA				*e*S		**Sn**	**12 23 25.2**	**+0.4**
GUWA				IAML			12 23 26.7	
	comp=N,903nm,0.3s							
GUWA				IAML			12 23 27.9	
	comp=E,646nm,0.3s							
CMAI	**Chiengmai2**	**5.62**	**154**	P		**Pn**	**12 22 50.7**	**0.0**
CHTO	**Chiang Mai**	**6.61**	**159**	Pn		**Pn**	**12 23 05.3**	**+1.1**
CHTO	**Chiang Mai**	**6.61**	**159**	P		**Pn**	**12 23 04.8**	**+0.6**
CM31	**Chiang Mai Arr**	**6.94**	**160**	Pn		**Pn**	**12 23 10.1**	**+1.3**
CMAR	**Chiang Mai Arr**	**6.94**	**160**	Pn		**Pn**	**12 23 09.9**	**+1.1**
	comp=E,0.3nm,0.3s,baz=333,slow=12,SNR=7.6							
CMAR				Pg		Pb	12 23 35.5	+7.3
	comp=E,0.6nm,0.3s,baz=335,slow=18,SNR=25							
CMAR				Lg		Lg	12 25 08.6	
	comp=E,0.3nm,0.3s,baz=339,slow=29,SNR=5.6							
	comp=E,0.9nm,0.4s							
CMAR	**Chiang Mai Arr**	**6.94**	**160**	Pn		**Pn**	**12 23 09.6**	**+0.8**
CM02	**Chiang Mai Arr**	**6.96**	**160**	P		**Pn**	**12 23 10.3**	**+1.2**
CM05	**Chiang Mai Arr**	**7.00**	**160**	P		**Pn**	**12 23 08.6**	**-0.9**
EVN	**Everest**	**9.08**	**291**	Pn		**Pn**	**12 23 37.0**	**-1.6**
TARG	**Taragay, Kyrgy**	**22.70**	**322**	P		**P**	**12 26 27.0**	**-1.9**
SONM	**Songino Array**	**24.11**	**17**	P		**P**	**12 26 41.2**	**-1.3**
	comp=E,0.7nm,0.7s,baz=205,slow=10,SNR=4.2							
	comp=E,0.7nm,0.7s							
SONM	**Songino Array**	**24.11**	**17**	P		**P**	**12 26 42.6**	**+0.1**
BOOM	**Boomskoye usch**	**24.25**	**321**	P		**P**	**12 26 42.2**	**-1.8**
BOOM				IAmb		IAmb	12 26 57.6	
	comp=Z,3.7nm,1.0s							
MKAR	**Makanchi Array**	**24.48**	**336**	P		**P**	**12 26 45.0**	**-0.7**
	comp=Z,1.3nm,0.5s,baz=142,slow=8.6,SNR=20							
	comp=Z,1.3nm,0.5s							
MKAR	**Makanchi Array**	**24.48**	**336**	P		**P**	**12 26 45.5**	**-0.3**
MAKZ	**Makanchi**	**24.61**	**336**	P		**P**	**12 26 46.4**	**-0.6**
MAKZ				IAmb		IAmb	12 27 01.9	
	comp=Z,5.3nm,1.4s							
GAR	**Garm**	**26.04**	**309**	P		**P**	**12 27 00.2**	**+0.1**
GAR				IAmb		IAmb	12 27 06.7	
	comp=Z,9.4nm,1.1s							
KURBB	**Kurchatov Arra**	**29.05**	**336**	P		**P**	**12 27 26.9**	**+0.1**
	comp=Z,1.0nm,0.2s,baz=148,slow=9.9,SNR=5.3							
	comp=Z,1.0nm,0.2s							
KURK	**Kurchatov**	**29.09**	**336**	P		**P**	**12 27 26.5**	**-0.7**
KURK				IAmb		IAmb	12 27 32.4	
	comp=Z,1.6nm,0.7s							
ZAA0	**Zalesovo Array**	**30.16**	**346**	P		**P**	**12 27 36.9**	**+0.2**
ZALV	**Zalesovo Beam**	**30.16**	**346**	P		**P**	**12 27 35.9**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=164,slow=8.3,SNR=7.5							
	comp=Z,1.2nm,0.5s							
ZALV	**Zalesovo Beam**	**30.16**	**346**	P		**P**	**12 27 35.4**	**-1.2**
BVAR	**Borovoye Array**	**34.14**	**332**	P		**P**	**12 28 10.8**	**-0.8**
	comp=Z,1.3nm,0.4s,baz=137,slow=9.8,SNR=9.3							
	comp=Z,1.3nm,0.4s							
BORK	**Borovoye**	**34.19**	**332**	P		**P**	**12 28 11.0**	**-1.0**
BORK				IAmb		IAmb	12 28 17.5	
	comp=Z,3.5nm,0.5s							
KLR	**Kul'dur**	**36.61**	**39**	LR		LR	12 43 18.4	
	comp=Z,58nm,21.1s,baz=28,slow=36							
AB31	**Akbulak array**	**37.27**	**320**	P		**P**	**12 28 37.0**	**-1.4**
ABKAR	**Akbulak array**	**37.27**	**320**	P		**P**	**12 28 37.3**	**-1.2**
MJAR	**Matsushiro Arr**	**37.44**	**62**	P		**P**	**12 28 41.0**	**+0.9**
MJAR				IAmb		IAmb	12 29 09.7	
	comp=Z,3.9nm,1.4s							
ARTI	**Arti**	**41.67**	**329**	P		**P**	**12 29 15.1**	**+0.1**
ARTI				IAmb		IAmb	12 29 19.5	
	comp=Z,11nm,1.1s							
PEA0B	**Petropavlovsk-**	**53.25**	**41**	P		**P**	**12 30 44.0**	**-1.1**
PETK	**Petropavlovsk-**	**53.25**	**41**	P		**P**	**12 30 44.6**	**-0.5**
ILGA	**Ilgaz**	**53.84**	**304**	P		**P**	**12 30 49.9**	**-0.1**
ILGA				IAmb		IAmb	12 31 28.3	
	comp=Z,12nm,1.1s							
AKASG	**Malin Array Be**	**56.75**	**316**	P		**P**	**12 31 11.5**	**+1.0**
	comp=Z,0.3nm,0.2s,baz=90,slow=5.6,SNR=1.4							
	comp=Z,0.3nm,0.2s							
AKAS	**Kas**	**57.56**	**298**	P		**P**	**12 31 15.7**	**-0.9**
WB0	**Warramunga Arr**	**57.86**	**137**	P		**P**	**12 31 18.2**	**-0.4**
WB0				IAmb		IAmb	12 31 31.4	
	comp=Z,10nm,1.5s							
WRA	**Warramunga Arr**	**57.95**	**137**	P		**P**	**12 31 20.4**	**+1.1**
	comp=Z,0.7nm,1.0s,baz=322,slow=7.5,SNR=2.8							
	comp=Z,0.7nm,1.0s							
FINES	**FINESS Array B**	**58.96**	**328**	P		**P**	**12 31 25.6**	**-0.2**
ASAR	**Alice Springs**	**60.52**	**140**	P		**P**	**12 31 37.6**	**+0.5**
	comp=Z,0.3nm,0.8s,baz=319,slow=7.1,SNR=4.2							
	comp=Z,0.3nm,0.8s							
NC303	**NORSAR Array S**	**66.04**	**328**	P		**P**	**12 32 13.0**	**-0.1**
NC303				IAmb		IAmb	12 32 40.4	
	comp=Z,24nm,1.2s							
GERES	**GERESS Array B**	**66.93**

GSSP	Great Sitkin S	0.92	86			Pn	12 26 18.6	+3.7		
GSCK	Great Sitkin C	0.93	91			Pn	12 26 13.8	-1.2		
GSTD	Great Sitkin T	0.94	88			Pn	12 26 18.6	+3.3		
GSTD						Sn	12 26 28.0	-2.4		
GSTR	Great Sitkin T	0.99	86			Pn	12 26 14.3	-1.5		
GSTR					IAML		12 26 39.0			
	comp=E,37µm,0.6s									
GSMY	Great Sitkin M	0.99	89			Pn	12 26 19.4	+3.7		
GSMY						Sn	12 26 29.6	-1.7		
CESW	Semis' Southwe	1.72	267			Pn	12 26 23.8	-0.5		
AMKA	Amchitka	2.00	252			Pn	12 26 26.6	-1.1		
AMKA						Sn	12 26 51.5	-1.3		
AMKA					IAML		12 26 58.0			
	comp=E,5µm,0.6s									
AMKA					IAML		12 26 58.7			
	comp=N,6µm,0.5s									
KONW	Korovin Northw	2.15	79			Pn	12 26 28.8	-1.0		
KOFP	Korovin Flat P	2.21	82			Pn	12 26 29.9	-0.6		
KONE	Korovin Northe	2.21	79			Pn	12 26 29.8	-0.6		
LSPA	Little Sitkin	2.33	270			Pn	12 26 32.2	+0.2		
LSSE	Little Sitkin	2.33	269			Pn	12 26 31.8	-0.3		
LSNW	Little Sitkin	2.37	270			Pn	12 26 32.5	0.0		
SHEM	Shemya Is, Ala	5.10	281	P		Pn	12 27 08.6	-0.5		
	comp=N,136nm,0.4s,baz=56,slow=4.0,SNR=38									
SHEM				S		Sn	12 28 05.7	-0.9		
	comp=N,66nm,0.5s,baz=90,slow=20,SNR=1.4									
SHEM				LR		LR	12 28 59.3			
	comp=N,164nm,20.4s,baz=100,slow=36									
SHEM	Shemya Is, Ala	5.10	281			Pn	12 27 09.0	0.0		
SMY	Shemya	5.10	281			Pn	12 27 08.9	-0.1		
SMY					IAML		12 28 15.6			
	comp=E,296nm,2.1s									
SMY	Shemya	5.10	281	P		Pn	12 27 08.9	-0.1		
OKSP	Okmok Steeple	5.83	74			Pn	12 27 19.5	+0.5		
OKFG	Magazine Ridge	6.08	73			Pn	12 27 23.5	+1.1		
SPIA	Saint Paul Isl	6.71	37	P		Pn	12 27 34.0	+3.1		
SPIA	Saint Paul Isl	6.71	37	S		Sn	12 28 50.3	+4.5		
SPIA	Saint Paul Isl	6.71	37			Pn	12 27 33.8	+2.9		
SPIA	Saint Paul Isl	6.71	37	P		Pn	12 27 33.5	+2.6		
	baz=223,SNR=32									
MGOD	Makushin Gods	6.76	71			Pn	12 27 32.6	+1.0		
MREP	Makushin Rep't	6.84	71			Pn	12 27 34.0	+1.3		
MNAT	Makushin Natee	6.89	70			Pn	12 27 34.5	+1.2		
UNV	Unalaska Valle	6.98	71	P		Pn	12 27 33.3	-1.3		
UNV	Unalaska Valle	6.98	71			Pn	12 27 36.4	+1.9		
UNV	Unalaska Valle	6.98	71	P		Pn	12 27 36.3	+1.7		
	baz=259,SNR=7.3									
AKMO	Akutan Morgan	7.32	69			Pn	12 27 40.6	+1.5		
LVA	Lava Point	7.32	68			Pn	12 27 41.1	+1.9		
ZRO	Akutan Zero	7.33	69			Pn	12 27 40.9	+1.5		
AKGG	Akutan Green G	7.35	68			Pn	12 27 41.0	+1.4		
AKV	Akutan Volcano	7.35	69			Pn	12 27 41.0	+1.4		
AHB	Akutan Harbor	7.43	69			Pn	12 27 42.3	+1.5		
AKUT	Akutan	7.46	69			Pn	12 27 41.6	+0.6		
SSBA	Shishaldin	8.54	66			Pn	12 27 57.6	+1.8		
ISNN	Isanotski Nort	8.75	66			Pn	12 28 01.1	+2.5		
FALS	False Pass	8.96	66			Pn	12 28 03.2	+1.8		
FALS	False Pass	8.96	66	P		Pn	12 28 02.4	+1.0		
	baz=257									
DT1	Dutton Round H	9.65	65			Pn	12 28 11.1	+0.3		
DTNA	Dutton South F	9.68	65			Pn	12 28 11.8	+0.6		
PN7A	Pavlof North-7	9.88	64			Pn	12 28 15.1	+1.0		
DOL	Dolgoi Island	9.89	65			Pn	12 28 14.6	+0.4		
HAG	Hague Volcano	9.91	64			Pn	12 28 15.9	+1.6		
HAG	Hague Volcano	9.91	64	P		Pn	12 28 15.9	+1.6		
PS4A	Pavlof South-4	9.94	64			Pn	12 28 11.9	+1.2		
M11K	Mekoryuk	10.51	33			Pn	12 28 25.2	+2.8		
M11K	Mekoryuk	10.51	33	P		Pn	12 28 24.6	+2.2		
	baz=222,SNR=24									
SDPT	Sand Point	10.71	65	P		Pn	12 28 24.5	-0.6		
SDPT	Sand Point	10.71	65	S		Sn	12 30 22.2	-0.7		
SDPT	Sand Point	10.71	65			Pn	12 28 24.3	-0.9		
SDPT	Sand Point	10.71	65	P		Pn	12 28 24.6	-0.6		
	baz=259,SNR=9.0									
CNBA	Chernabura Isl	11.13	68			Pn	12 28 29.6	-1.2		
CHNA	Chernabura Isl	11.13	68	P		Pn	12 28 28.4	-2.5		
CHNA	Chernabura Isl	11.13	68	P		Pn	12 28 29.8	-1.1		
	baz=262,SNR=7.5									
S14K	Fog Glacier	11.43	61	P		Pn	12 28 35.6	+0.7		
	baz=255,SNR=8.9									
M13K	Dall Lake	11.55	38			Pn	12 28 38.9	+2.5		
M13K	Dall Lake	11.55	38	P		Pn	12 28 38.8	+2.5		
	baz=230,SNR=13									
O14K	Tigyukauivet M	11.73	46	P		Pn	12 28 40.7	+2.0		
	baz=239,SNR=10									
N14K	Kuskokwak Cree	11.91	42	P		Pn	12 28 43.1	+2.0		
	baz=235,SNR=50									
CHGN	Chignik	12.05	62			Pn	12 28 42.9	-0.2		
CHGN	Chignik	12.05	62	P		Pn	12 28 43.4	+0.4		
	baz=257									
K13K	Kusilvak Mount	12.17	30	P		Pn	12 28 46.0	+1.4		
	baz=221,SNR=15									
GAMB	Gambell	12.19	13			Pn	12 28 47.0	+2.3		
GAMB	Gambell	12.19	13	P		Pn	12 28 46.5	+1.7		
	baz=198									
M14K	Bethel	12.29	39	Pn		Pn	12 28 49.0	+2.7		
M14K	Bethel	12.29	39	P		Pn	12 28 47.4	+1.2		
	baz=232,SNR=27									
O15K	Ungalikthiuk R	12.34	48	P		Pn	12 28 48.6	+1.8		
	baz=242,SNR=18									
L14K	Kuka Creek	12.41	35	P		Pn	12 28 50.0	+2.3		
	baz=228,SNR=24									
N15K	Kwethluk River	12.71	43	P		Pn	12 28 53.6	+1.7		
	baz=238,SNR=21									
M15K	Kasigluk River	12.76	41	P		Pn	12 28 53.1	+0.7		
	baz=235,SNR=36									
R16K	Pilot Point	12.82	57	Pn		P	12 28 56.7	-3.3		
R16K	Pilot Point	12.82	57	P		Pn	12 28 53.8	+0.7		
	baz=253									
L15K	Ungalak Mounta	13.06	36	P		Pn	12 28 58.4	+2.1		
	baz=230,SNR=133									
J14K	Nanvaranak Lak	13.12	30	P		Pn	12 28 59.0	+1.9		
	baz=222,SNR=15									
P16K	Nushagak River	13.12	50	P		P	12 29 02.0	-1.4		
P16K	Nushagak River	13.12	50	P		Pn	12 28 59.3	+2.1		
	baz=246,SNR=15									
O16K	Kokwok River B	13.31	48	P		Pn	12 29 00.4	+0.7		
	baz=244,SNR=20									
N16K	Nishlik Lake	13.44	44	P		Pn	12 29 01.7	+0.4		
	baz=239,SNR=60									
K15K	Wolf Creek Mou	13.45	34	P		Pn	12 29 03.6	+2.1		
	baz=227,SNR=148									
R17L	Mt. Peulik Vol	13.46	57	P		Pn	12 29 02.8	+1.2		
	baz=254									
Q16K	King Salmon	13.64	53	P		Pn	12 29 04.4	+0.6		
	baz=250,SNR=15									
M16K	Timber Creek	13.65	41	P		Pn	12 29 05.7	+1.7		
	baz=237,SNR=30									
L16K	Owhat River	13.83	38			P	12 29 11.2	0.0		
L16K	Owhat River	13.83	38	P		Pn	12 29 07.7	+1.4		
	baz=234,SNR=39									
O17K	Koliganek Bris	13.85	48	P		Pn	12 29 09.0	+2.4		
	baz=245,SNR=23									
P17K	Kvichak River	13.93	51			P	12 29 11.3	-1.0		
P17K	Kvichak River	13.93	51	P		Pn	12 29 08.7	+1.1		
	baz=248,SNR=14									
ANM	Nome	14.09	22			P	12 29 12.8	-1.2		
ANM	Nome	14.09	22	P		P	12 29 12.8	-1.2		
ANM	Nome	14.09	22	P		Pn	12 29 11.1	+1.4		
	baz=213,SNR=57									
N17K	Nushagak Hills	14.14	45	P		Pn	12 29 11.9	+1.5		
	baz=242,SNR=43									
ACHA	Angle Creek He	14.15	55			Pn	12 29 12.0	+1.4		
PET	Petropavlovsk	14.44	283	*e*P		Pn	12 29 15.4	+1.2		
PET					pmax	pmax				
	comp=Z,23nm,0.6s									
PET					MLR	MLR				
	comp=Z,100nm,11.0s									
Q18K	Katmai Hardscr	14.44	54	P		Pn	12 29 15.1	+0.7		
	baz=252									
J16K	Anvik River	14.44	32	P		Pn	12 29 15.2	+0.9		
	baz=226,SNR=35									
TNA	Tin City	14.45	16	P		Pn	12 29 15.0	+0.8		
	baz=205,SNR=7.6									
M17K	Holitna River	14.47	42	P		Pn	12 29 16.1	+1.6		
	baz=239,SNR=44									
L17K	Donlin	14.53	38	P		Pn	12 29 17.0	+1.6		
	baz=235,SNR=55									
P18K	Big Mountain,	14.58	51	P		Pn	12 29 17.7	+1.7		
	baz=249,SNR=11									
F14K	Arctic Creek	14.67	19	P		Pn	12 29 18.7	+1.6		
	baz=209,SNR=28									
O18K	Koktuh Hills	14.76	49			P	12 29 22.0	+0.5		
O18K	Koktuh Hills	14.76	49	P		Pn	12 29 19.6	+1.4		
	baz=248,SNR=18									
G15K	Niukluk	14.76	23	P		P	12 29 20.1	-1.4		
	baz=215,SNR=109									
N18K	Kilae Creek	14.79	46	P		P	12 29 21.1	-0.7		
N18K	Kilae Creek	14.79	46	P		Pn	12 29 19.3	+0.7		
	baz=244,SNR=32									
I17K	Unalakleet	14.84	30	P		P	12 29 21.3	-1.0		
	baz=225									
K17K	Iditarod	14.88	37	P		Pn	12 29 21.3	+1.5		
	baz=233,SNR=70									
H16K	Elim	14.94	26	P		P	12 29 22.1	-1.5		
	baz=220,SNR=80									
OHAK	Old Harbor	15.00	60	P		Pn	12 29 19.0	-2.2		
OHAK	Old Harbor	15.00	60	P		Pn	12 29 21.4	+0.2		
	baz=260,SNR=8.0									
PETK	Petropavlovsk-	15.01	284	P		Pn	12 29 21.5	+0.1		
	comp=Z,3.3nm,0.5s,baz=86,slow=14,SNR=18									
PETK				S		Sn	12 32 02.2	-4.6		
	comp=Z,1.5nm,0.5s,baz=107,slow=14,SNR=0.9									
PETK				PcP		PcP	12 34 23.0	+0.5		
	comp=Z,4.8nm,0.8s,baz=110,slow=1.2,SNR=3.1									
PETK				LR		LR	12 35 11.2			
	comp=Z,60nm,18.5s,baz=81,slow=37									
PETK				ScP		ScP	12 37 45.4	-1.3		
	comp=Z,5.3nm,0.8s,baz=66,slow=3.2,SNR=6.4									
J17K	VABM Dome	15.03	34	P		P	12 29 23.9	-0.6		
	baz=229,SNR=106									
M18K	Stony River	15.19	43	P		Pn	12 29 24.4	+0.7		
	baz=241									
Q19K	Cape Douglas,	15.20	54			P	12 29 25.4	-1.1		
Q19K	Cape Douglas,	15.20	54	P		Pn	12 29 24.8	+0.9		
	baz=253									
L18K	Granite Mounta	15.21	40	P		P	12 29 25.6	-0.8		
	baz=237,SNR=59									
F15K	North Star Dit	15.22	21	P		P	12 29 25.9	-0.7		
	baz=212,SNR=50									
O19K	Port Alsworth	15.30	49	P		P	12 29 28.0	+0.5		
O19K	Port Alsworth	15.30	49	P		Pn	12 29 26.1	+1.1		
	baz=245									
N19K	Bonanza Creek	15.47	46	P		P	12 29 29.2	-0.3		
	baz=246,SNR=24									
KDAK	Kodiak Island	15.47	58	P		Pn	12 29 25.4	-1.8		
	comp=Z,35nm,0.4s,baz=249,slow=2.7,SNR=100									
KDAK				S		Sn	12 32 13.6	-4.4		
	comp=Z,8.9nm,0.4s,baz=317,slow=19,SNR=6.3									
KDAK				LR		LR	12 35 28.3			
	comp=Z,146nm,20.7s,baz=244,slow=37									
KDAK				ScP		ScP	12 37 47.1	-0.3		
	comp=Z,8.2nm,0.7s,baz=257,slow=4.9,SNR=4.3									
KDAK	Kodiak Island	15.47	58	P		P	12 29 28.4	-1.0		
	baz=259									
G16K	Koyuk River	15.51	24	P		P	12 29 29.3	-0.4		
	baz=218,SNR=55									
P19K	Oil Pt	15.62	51			P	12 29 30.2	-0.9		
P19K	Oil Pt	15.62	51	P		P	12 29 30.7	-0.4		
	baz=251									
Q20K	Shuyak Island	15.75	55	P		P	12 29 32.2	-0.3		
	baz=256									
SYI	Shuyak Island	15.75	55			P	12 29 31.7	-0.8		
ILSW	Iliamna Southw	15.78	50	P		P	12 29 33.8	+0.9		
H17K	Granite Mounta	15.83	28	P		P	12 29 33.0	-0.3		
	baz=224,SNR=13									
J18K	Innoko River	15.90	36	P		P	12 29 34.0	-0.2		
	baz=234,SNR=36									
L19K	White Mountain	15.93	42	P		P	12 29 35.5	+1.0		
L19K	White Mountain	15.93	42	P		P	12 29 34.7	+0.2		
	baz=241,SNR=132									
G17K	Kiwalik Mounta	16.04	26	P		P	12 29 36.3	+0.6		
	baz=231,SNR=34									
RED	Redoubt Volcan	16.10	49	P		P	12 29 38.1	+1.6		
HOM	Homer	16.40	52	P		P	12 29 40.7	+1.1		
	baz=254									
H18K	Honhosa River	16.45	30	P		P	12 29 42.4	+2.2		
	baz=226,SNR=59									
M20K	Styx River	16.51	44	P		P	12 29 42.6	+1.6		
	baz=244									
J19K	Poorman	16.61	35	P		P	12 29 43.2	+1.2		
	baz=234,SNR=94									
F17K	Baldwin Pennin	16.62	23	P		P	12 29 44.5	+2.5		
	baz=218,SNR=19									
N20K	Mount Spurr	16.64	47	P		P	12 29 44.5	+2.1		
	baz=248,SNR=19									
SPCR	Spurr Chakacha	16.64	47	P		P	12 29 44.4	+2.0		
	baz=248,SNR=9.1									
GCSA	Galena City Sc	16.64	32	P		P	12 29 44.8	+2.5		
	baz=230,SNR=58									
K20K	Telida	16.83	39	P		P	12 29 46.0	+1.6		
	baz=238									
BRSE	Bradley Lake S	16.86	52	P		P	12 29 46.1	+1.3		
	baz=254,SNR=6.7									
G18K	Tagagawik	16.89	27	P		P	12 29 46.6	+1.5		
	baz=224,SNR=57									
STLK	Strandline Lak	16.92	46	P		P	12 29 47.5	+2.0		
CAPN	Captain Cook N	16.97	49	P		P	12 29 47.6	+1.7		
	baz=251									
F18K	Selawik	17.14	25	P		P	12 29 50.6	+2.8		
	baz=220,SNR=45									
SKT	Skwentna	17.24	45	P		Pn	12 29 50.9	+1.9		
	baz=246,SNR=91									
J20K	Nowinta River	17.25	36	P		Pn	12 29 51.1	+2.0		
	baz=236,SNR=46									
D17K	Noatak River	17.25	19	P		Pn	12 29 51.5	+2.4		
	baz=212,SNR=80									
H19K	Roundabout Mou	17.29	30	P		Pn	12 29 51.1	+1.5		
	baz=229,SNR=22									
C16K	Lisburne Hills	17.34	15	P		Pn	12 29 53.0	+2.8		
	baz=206,SNR=95									
PPLA	Purkeypile	17.35	41	P		Pn	12 29 52.7	+2.2		
	baz=243,SNR=53									
I20K	Naaghedeneel	17.49	34	P		Pn	12 29 54.0	+2.1		
	baz=234,SNR=16									
G19K	Purcell Mounta	17.52	28	P		Pn	12 29 54.2	+1.8		
	baz=226,SNR=39									
O22K	Cooper Landing	17.55	50	P		Pn	12 29 53.2	+0.5		
	baz=254,SNR=13									
E18K	Tukpahlearik C	17.56	22	P		Pn	12 29 55.0	+2.3		
	baz=217,SNR=31									
SEW	Seward	17.58	52	P		Pn	12 29 53.2	+0.1		
SEW	Seward	17.58	52	P		P	12 29 52.9	+0.2		
	baz=255,SNR=13									
RDOG	Red Dog Mine	17.59	18	P		Pn	12 29 54.9	+1.7		
	baz=211,SNR=13									
RC01	Rabbit Creek A	17.73	48	P		Pn	12 29 56.9	+2.0		
	baz=252,SNR=12									
H20K	Anfonegga Mo	17.77	32	P		Pn	12 29 57.0	+1.5		
	baz=232,SNR=53									
M22K	Willow	17.77	46	P		Pn	12 29 55.8	+0.4		
	baz=249									
CHUM	Lake Minchumin	17.78	38	P		Pn	12 29 57.0	+1.5		
	baz=240,SNR=45									
F19K	Shaleruckik Mo	17.82	26	P		Pn	12 29 57.4	+1.4		
	baz=223,SNR=68									
BILL	Bilibino	17.84	340	P		Pn	12 29 58.5	+2.3		
BILL	Bilibino	17.84	340	*d*	*i*P	Pn	12 29 58.0	+1.8		
BILL					pmax	pmax				
	comp=Z,42nm,1.3s									
C17K	DeLong Mountai	17.90	17	P		Pn	12 29 59.0	+2.1		
	baz=210,SNR=114									
CUT	Chulitna	17.95	44	P		Pn	12 29 58.2	+0.7		
CUT	Chulitna	17.95	44	P		Pn	12 29 58.0	+0.4		
	baz=247,SNR=46									
PMR	Palmer	18.16	47	P		Pn	12 29 59.8	-0.3		
PMR	Palmer	18.16	47	P		Pn	12 30 00.4	+0.3		
PMR	Palmer	18.16	47	P		Pn	12 30 00.4	+0.3		
PMR	Palmer	18.16	47	P		Pn	12 29 59.8	-0.3		
	baz=251									
KTH	Kantishna Hill	18.16	40	P		Pn	12 30 00.8	+0.6		
TRF	Thorofare Moun	18.37	41	P		Pn	12 30 02.6	-0.2		
	baz=244,SNR=78									
BPAW	Bear Paw Mtn.	18.39	39	P		Pn	12 30 03.5	+0.6		
	baz=241,SNR=33									
KNK	Knik Glacier	18.41	48	P		Pn	12 30 03.3	+0.1		
	baz=252,SNR=12									
E19K	Redstone River	18.42	25	P		Pn	12 30 04.5	+1.3		
	baz=223,SNR=117									
C18K	Utukok River	18.43	19	P		Pn	12 30 04.5	+1.2		
	baz=214,SNR=83									
IMAR	Indian Mountai	18.45	32	P		Pn	12 30 04.0	+0.5		
F20K	Avaraart Lake	18.54	27	P		Pn	12 30 04.8	+0.2		
	baz=226									
P23K	Montague Islan	18.56	53	P		Pn	12 30 04.4	-0.4		
	baz=258,SNR=5.0									
H21K	Melozitna Rive	18.56	33	P		Pn	12 30 05.9	+1.0		
H21K	Melozitna Rive	18.56	33	P		Pn	12 30 05.8	+1.0		
	baz=235,SNR=59									
I21K	Tanana	18.58	35	P		Pn	12 30 06.1	+1.1		
I21K	Tanana	18.58	35	P		Pn	12 30 05.8	+0.8		
	baz=237,SNR=117									
SML	Sawmill	18.59	47	P		P	12 30 03.9	0.0		
	baz=252,SNR=7.1									
WAT1	Susitna Watana	18.85	44	P		P	12 30 06.2	-0.4		
	baz=248									
G21K	Allakaket	18.85	30	P		Pn	12 30 08.4	+0.1		
	baz=231,SNR=216									
M23K	Glacier View	18.86	47	P		P	12 30 06.6	-0.2		
	baz=252,SNR=32									
GLI	Glacier Island	18.90	50	P		P	12 30 07.6	+0.5		
	baz=256									
MLY	Manley	18.95	36	P		Pn	12 30 09.0	-0.4		
MLY	Manley	18.95	36	P		Pn	12 30 09.5	0.0		
	baz=239,SNR=103									
Q23K	Middleton Isla	18.98	55	P		Pn	12 30 08.9	-0.8		
	baz=261									
D19K	Kuna River	18.98	22	P		Pn	12 30 10.4	+0.5		
	baz=220,SNR=118									
MCK	McKinley	19.04	41	P		P	12 30 09.2	+0.5		
MCK	McKinley	19.04	41	P		P	12 30 09.2	+0.5		
MCK	McKinley	19.04	41	P		P	12 30 09.0	+0.3		
	baz=245,SNR=29									
SCM	Sheep Creek Mo	19.05	47	P		P	12 30 08.9	0.0		
	baz=253,SNR=19									
WAT6	Susitna Watana	19.11	45	P		P	12 30 09.9	+0.3		
	baz=250,SNR=44									
MA2	Magadan	19.13	306	P		P	12 30 10.4	+0.8		
	comp=Z,10nm,0.5s,baz=95,slow=10,SNR=11									
MA2				LR		LR	12 36 54.6			
	comp=Z,92nm,20.1s,baz=105,slow=35									
MA2				ScP		ScP	12 37 54.0	-0.9		
	comp=Z,1.4nm,0.3s,baz=117,slow=6.4,SNR=4.0									
MA2	Magadan	19.13	306	P		Pn	12 30 13.0	+1.4		
MA2	Magadan	19.13	306	P		Pn	12 30 11.0	-0.6		
MA2	Magadan	19.13	306	*i*P		Pn	12 30 12.2	+0.6		
MA2				pmax		pmax				
	comp=Z,11nm,0.7s									
C19K	Lookout Ridge	19.14	20	P		Pn	12 30 12.3	+0.6		
	baz=216,SNR=63									
H22K	Ishtalita Cre	19.18	34	P		Pn	12 30 12.5	+0.3		
	baz=236,SNR=86									
SEY	Seymchan	19.25	316	P		P	12 30 11.5	+0.6		
	comp=Z,55nm,1.0s,baz=118,slow=12,SNR=104									
SEY				ScP		ScP	12 37 52.6	-2.6		
	comp=Z,4.6nm,0.8s,baz=132,slow=3.5,SNR=12									
SEY	Seymchan	19.25	316	*i* P		Pn	12 30 13.1	+0.2		
SEY				pmax		pmax				
	comp=Z,68nm,1.0s									
E20K	Nigu River	19.28	24	P		Pn	12 30 13.6	+0.3		
	baz=223,SNR=150									
F21K	Alatna River	19.31	29	P		Pn	12 30 13.3	-0.4		
	baz=230,SNR=156									
NEA2	Nenana	19.36	39	P		Pn	12 30 13.8	-0.5		
NEA2	Nenana	19.36	39	P		P	12 30 13.0	+0.9		
	baz=243,SNR=48									
DHY	Denali Highway	19.44	44	P		P	12 30 13.6	+0.5		
	baz=249,SNR=137									
EYAK	Cordova Ski Ar	19.48	52	P		Pn	12 30 16.0	+0.5		
EYAK	Cordova Ski Ar	19.48	52	P		P	12 30 14.4	+1.1		
	baz=258									
D20K	Etivluk River	19.51	23	P		Pn	12 30 15.8	-0.1		
	baz=222,SNR=211									
I23K	Minto, Yukon-K	19.51	37	P		Pn	12 30 15.4	-0.5		
I23K	Minto, Yukon-K	19.51	37	P		Pn	12 30 15.5	-0.5		
	baz=241,SNR=61									
KLU	Klutina	19.61	49	P		Pn	12 30 16.4	-0.8		
KLU	Klutina	19.61	49	P		P	12 30 15.7	+0.8		
	baz=255,SNR=15									
M24K	Tolsona, Glenn	19.66	47	P		Pn	12 30 16.8	-1.0		
	baz=253,SNR=24									
G22K	Bettles	19.73	31	P		P	12 30 17.2	+1.1		
	baz=234									
A19K	Wainwright	19.78	17	P		Pn	12 30 18.9	0.0		
	baz=212,SNR=123									
H23K	Yukon River	19.79	35	P		P	12 30 17.9	+1.2		
	baz=239									
COLA	College	19.96	38	P		P	12 30 19.1	+0.6		
COLA	College	19.96	38	P		P	12 30 19.2	+0.7		
COLA	College	19.96	38	*i*P		P	12 30 19.7	+1.2		
COLA				pmax		pmax				
	comp=Z,49nm,0.9s									
COLA	College	19.96	38	P		Pn	12 30 19.9	-1.2		
	baz=244									
E21K

TOLK	Toolik Lake Re	21.35	28	P		P	12 30 34.8	+1.3
	baz=233,SNR=103							
GRNC	Granite Creek	21.45	52	P		P	12 30 37.0	+2.2
G25K	Bearman Lake	21.46	35	P		P	12 30 35.9	+1.3
	baz=242,SNR=24							
B22K	Teshekpuk Lake	21.47	22	P		P	12 30 35.2	+0.5
	baz=224,SNR=45							
A21K	Barrow	21.54	18	P		P	12 30 36.4	+1.0
	baz=217,SNR=20							
A22K	Sinclair Lake	21.62	20	P		P	12 30 37.1	+0.9
	baz=220							
M27K	Edge Creek, AK	21.67	48	P		P	12 30 38.0	+1.0
	baz=258,SNR=36							
CTG	Chitna Glacier	21.68	51	P		P	12 30 38.7	+1.6
	baz=262,SNR=5.4							
C23K	Itkillik River	21.82	25	P		P	12 30 39.8	+1.3
	baz=229,SNR=116							
L27K	Beaver Creek,	21.85	46	P		P	12 30 39.5	+0.7
	baz=256,SNR=30							
BCAR	Beaver Creek A	21.87	46	P		P	12 30 39.4	+0.3
D24K	Happy Valley	21.88	28	P		P	12 30 40.2	+1.1
	baz=233,SNR=130							
I26K	Coal Creek Min	21.96	40	P		P	12 30 39.2	-0.7
	baz=249							
F25K	Christian Rive	22.02	33	P		P	12 30 41.9	+1.3
	baz=241,SNR=61							
BVCY	Beaver Creek	22.14	48	P		P	12 30 42.6	+0.7
	baz=259,SNR=45							
O28M	Mount Upton	22.21	52	P		P	12 30 42.9	-0.1
	baz=264							
YUK3	Moose Creek	22.22	49	P		P	12 30 42.6	-0.3
	baz=261,SNR=30							
C24K	Franklin Bluff	22.26	26	P		P	12 30 44.0	+1.0
	baz=232							
BMAR	Burnt Mountain	22.30	34	P		P	12 30 45.1	+1.6
E25K	Arctic Village	22.30	32	P		P	12 30 45.1	+1.6
E25K	Arctic Village	22.30	32	P		P	12 30 44.5	+0.9
	baz=240,SNR=82							
G26K	Porcupine Rive	22.36	35	P		P	12 30 44.7	+0.6
	baz=245,SNR=232							
YUK8	Steele Glacier	22.48	51	P		P	12 30 45.5	-0.2
	baz=263							
F26K	Sheenjek River	22.57	33	P		P	12 30 47.3	+1.0
	baz=243,SNR=86							
I27K	Kandik River	22.66	39	P		P	12 30 47.0	-0.2
	baz=251,SNR=17							
D25K	Kavik River	22.69	29	P		P	12 30 48.1	+0.6
	baz=236							
H27K	Steamboat Moun	22.91	38	P		P	12 30 48.7	-1.0
	baz=249,SNR=13							
O29M	Mount Kennedy	22.97	54	P		P	12 30 49.6	-0.8
	baz=266							
YUK4	Talbot Arm	23.02	51	P		P	12 30 50.9	-0.1
	baz=264,SNR=15							
G27K	Doyon Strip	23.08	36	P		P	12 30 51.1	-0.2
	baz=248,SNR=22							
YUK6	Outpost Mounta	23.12	52	P		P	12 30 50.9	-1.1
	baz=265							
M29M	Somme Creek	23.25	48	P		P	12 30 52.9	-0.1
	baz=261,SNR=38							
I28M	Miner Creek	23.28	40	P		P	12 30 53.0	-0.2
	baz=253,SNR=100							
C26K	Camden Bay	23.45	28	P		P	12 30 55.2	+0.6
	baz=237							
L29M	L29M	23.51	47	P		P	12 30 55.3	0.0
	baz=260,SNR=59							
HYT	Haines Junctio	23.53	52	P		P	12 30 55.7	+0.1
	baz=266,SNR=5.5							
C27K	Jago River	23.65	29	P		P	12 30 57.5	+1.0
	baz=239,SNR=93							
E27K	Coleen River	23.65	33	P		P	12 30 57.1	+0.6
	baz=245,SNR=65							
J29N	Klondike Camp	23.73	43	P		P	12 30 57.1	-0.2
	baz=257,SNR=17							
P30M	Million Dollar	23.77	54	P		P	12 30 56.5	-1.2
	baz=268							
N30M	Aishikik Lake	23.78	51	P		P	12 30 57.2	-0.6
	baz=265,SNR=5.3							
K29M	Barlow Dome	23.91	45	P		P	12 30 58.9	-0.1
	baz=259,SNR=72							
I29M	Ogilvie Camp,	23.91	41	P		P	12 30 58.6	-0.3
	baz=255,SNR=68							
F28M	Old Crow	24.02	35	P		P	12 30 59.9	0.0
	baz=248,SNR=127							
M30M	Minto, Yukon	24.03	48	P		P	12 31 00.1	+0.1
	baz=263,SNR=8.4							
H29M	Whitestone	24.12	39	P		P	12 31 01.3	+0.6
	baz=253,SNR=25							
S31K	Pelican	24.18	59	P		P	12 31 01.4	+0.1
	baz=274							
O30N	Mendenhall	24.22	53	P		P	12 31 02.0	+0.3
	baz=268							
D27M	Malcolm River	24.32	31	P		P	12 31 03.9	+1.3
	baz=244							
N31M	Braeburn, Yuko	24.41	51	P		P	12 31 04.8	+1.3
	baz=266							
G29M	Pine Creek	24.46	37	P		P	12 31 03.8	0.0
	baz=252							
E28M	Babbage River	24.52	33	P		P	12 31 04.9	+0.6
	baz=247,SNR=102							
J30M	Hart River	24.55	43	P		P	12 31 05.2	+0.3
	baz=259,SNR=27							
MAYO	Mayo, Yukon	24.58	46	P		P	12 31 05.0	+0.1
	baz=262							
SKAG	Skagway	24.59	56	P		P	12 31 05.0	0.0
	baz=271							
I30M	Mount Dempster	24.67	42	P		P	12 31 04.8	-1.1
	baz=258,SNR=51							
SIT	Sitka	24.75	61	P		P	12 31 06.3	-0.2
	baz=276							
EPYK	Eagle Plains	24.80	39	P		P	12 31 06.1	-0.8
	baz=255,SNR=21							
WHY	Whitehorse	24.81	53	P		P	12 31 06.4	-0.7
	baz=269							
E29M	Blow River	25.00	34	P		P	12 31 08.4	-0.3
	baz=249,SNR=96							
R32K	Eaglecrest	25.07	59	P		P	12 31 08.8	-0.6
	baz=274							
D28M	Stokes Point	25.07	32	P		P	12 31 09.5	+0.2
	baz=246,SNR=19							
S32K	Killisnoo	25.11	60	P		P	12 31 09.2	-0.5
	baz=276							
M31M	Drury Creek, Y	25.11	49	P		P	12 31 09.9	+0.1
	baz=266,SNR=7.7							
G30M	tAoh Zraii Nji	25.16	38	P		P	12 31 10.8	+0.6
	baz=254,SNR=9.4							
P32M	Atlin	25.41	55	P		P	12 31 12.8	+0.3
	baz=272							
F30M	Barrier River	25.50	36	IAmb		IAmb	12 31 42.7	
	comp=Z,56nm,1.1s							
F30M	Barrier River	25.50	36	P		P	12 31 13.5	+0.3
	baz=253,SNR=16							
H31M	Peel River	25.62	41	P		P	12 31 14.6	+0.2
	baz=258,SNR=18							
N32M	Quiet Lake	25.70	52	P		P	12 31 14.6	-0.5
	baz=269							
P33M	Teslin, Yukon	25.84	54	P		P	12 31 16.6	+0.2
	baz=272							
YSS	Yuzhno-Sakhali	25.97	275	P		P	12 31 18.9	+1.3
YSS	Yuzhno-Sakhali	25.97	275	*eP*		P	12 31 18.8	+1.2
YSS				eS		S	12 35 37.2	-3.1
YSS				pmax		pmax		
	comp=Z,20nm,0.9s							
U33K	Whale Pass	26.09	63	P		P	12 31 19.5	+0.9
	baz=280							
Q32M	Nakina River	26.19	57	P		P	12 31 19.7	0.0
	baz=275							
CRAG	Craig	26.21	65	P		P	12 31 19.8	+0.1
	baz=281							
F31M	Tsiigehtchic	26.21	37	P		P	12 31 19.9	+0.4
	baz=256,SNR=14							
WRAK	Wrangell Islan	26.47	62	P		P	12 31 22.1	+0.1
	baz=280							
INK	Inuvik	26.51	35	LR		LR	12 41 43.8	
	comp=Z,111nm,21.7s,baz=244,slow=36							
INK	Inuvik	26.51	35	IAmb		IAmb	12 31 54.0	
	comp=Z,36nm,1.0s							
INK	Inuvik	26.51	35	P		P	12 31 22.9	+0.6
	baz=254,SNR=31							
R33M	Jennings River	26.82	56	P		P	12 31 25.9	+0.6
	baz=275							
S34M	Telegraph Cree	26.89	59	P		P	12 31 26.8	+1.0
	baz=278							
V35K	Ketchikan	27.08	65	P		P	12 31 28.2	+0.7
	baz=282							
DLBC	Dease Lake	27.41	58	P		P	12 31 30.0	-0.5
	comp=Z,2.8nm,1.0s,baz=208,slow=5.7,SNR=6.2							
DLBC				PcP		PcP	12 34 46.5	0.0
	comp=Z,2.4nm,0.6s,baz=257,slow=7.6,SNR=5.3							
	comp=Z,2.8nm,1.0s							
DLBC	Dease Lake	27.41	58	P		P	12 31 31.4	+0.9
	baz=277							
T35M	Bob Quinn	27.51	61	P		P	12 31 31.5	+0.1
	baz=280							
U35K	Hyder	27.84	63	P		P	12 31 33.6	-0.6
	baz=282							
WTLY	Watson Lake, Y	27.85	54	P		P	12 31 35.0	+0.6
	baz=275							
YAK	Yakutsk	29.53	310	LR		LR	12 44 15.7	
	comp=Z,82nm,18.1s,baz=84,slow=37							
YAK	Yakutsk	29.53	310⇑	*eP*		P	12 31 50.4	+1.3
YAK				pmax		pmax		
	comp=Z,8.0nm,0.6s							
BBB	Bella Bella	29.95	70	P		P	12 31 53.4	+0.4
	comp=Z,27nm,1.1s,baz=297,slow=6.8,SNR=2.8							
	comp=Z,27nm,1.1s							
BBB	Bella Bella	29.95	70	P		P	12 31 53.8	+0.7
C36M	Paulatuk	30.08	35	IAmb		IAmb	12 32 22.6	
	comp=Z,22nm,1.1s							
C36M	Paulatuk	30.08	35	P		P	12 31 54.6	+0.6
	baz=263,SNR=7.5							
WRGLY	Wrigley	30.15	47	IAmb		IAmb	12 31 56.9	
	comp=Z,29nm,0.9s							
WRGLY	Wrigley	30.15	47	P		P	12 31 55.5	+0.9
	baz=274,SNR=11							
A36M	Sachs Harbour	30.17	29	P		P	12 31 56.2	+1.5
A36M	Sachs Harbour	30.17	29	P		P	12 31 55.6	+0.9
	baz=257,SNR=19							
JTM	Tenmabayashi	30.20	265	P		P	12 31 56.4	+1.1
KOTAN	Kotaneelee Air	30.20	53	P		P	12 31 55.8	+0.6
	baz=279							
TIXI	Tiksi	30.42	330	LR		LR	12 44 31.1	
	comp=Z,70nm,20.7s,baz=127,slow=37							
TIXI	Tiksi	30.42	330	P		P	12 31 57.8	+0.9
TIXI	Tiksi	30.42	330	P		P	12 31 57.8	+0.9
TIXI				pmax		pmax		
	comp=Z,5.0nm,0.8s							
KLR	Kul'dur	31.69	285⇑	*iP*		P	12 32 08.5	+0.1
KLR				pmax		pmax		
	comp=Z,9.0nm,1.4s							
ZEA	Zeya	32.59	295	*eP*		P	12 32 15.2	-1.0
CLRS	Cowichan Lake	33.61	74	IAmb		IAmb	12 33 34.9	
	comp=Z,27nm,1.3s							
C03A	Quillayute Air	33.74	75	P		P	12 32 28.6	+2.3
HEH	HeiHe	33.82	289	*eP*		P	12 32 25.3	-1.6
HEH				pmax		pmax		
	comp=Z,4.0nm,0.7s							
USRK	Ussuriysk Ar.	33.92	277	P		P	12 32 27.5	-0.3
	comp=Z,3.2nm,0.5s,baz=58,slow=9.7,SNR=7.7							
USRK				pP		pP	12 32 50.3	0.0
	comp=Z,2.6nm,0.6s,baz=61,slow=8.6,SNR=2.7							
USRK				PcP		PcP	12 35 04.0	+0.3
	comp=Z,4.9nm,0.7s,baz=80,slow=2.5,SNR=5.9							
	comp=Z,3.2nm,0.5s							
LLLB	Lillooet	34.16	70	P		P	12 32 31.4	+1.4
YKAW3	Yellowknife Wh	34.25	47	P		P	12 32 30.7	+0.2
YKAW3				IAmb		IAmb	12 32 32.3	
	comp=Z,21nm,0.8s							
YKA	Yellowknife Ar	34.27	47	P		P	12 32 30.0	-0.6
	comp=Z,9.5nm,0.7s,baz=279,slow=9.7,SNR=144							
YKA				PcP		PcP	12 35 04.3	-0.1
	comp=Z,1.3nm,0.5s,baz=301,slow=3.8,SNR=6.8							
YKA				ScP		ScP	12 38 38.6	-1.1
	comp=Z,1.7nm,0.7s,baz=295,slow=3.8,SNR=13							
	comp=Z,9.5nm,0.7s							
YKA	Yellowknife Ar	34.27	47	P		P	12 32 30.7	+0.1
YKA						PcP	12 35 04.3	-0.1
YKA	Yellowknife Ar	34.27	47	*ceP*		P	12 32 30.6	0.0
YKA				pmax		pmax		
	comp=Z,7.0nm,0.4s							
YKAW1	Yellowknife Wh	34.32	47	P		P	12 32 32.0	+0.9
H11N2	WAKE ISLAND Hy	34.43	206	T		T	13 09 01.1	
	baz=18,slow=76,SNR=1239							
H11N3	WAKE ISLAND Hy	34.44	206	T		T	13 09 12.8	
	baz=18,slow=76,SNR=1818							
H11N1	WAKE ISLAND Hy	34.45	206	T		T	13 09 02.5	
	baz=18,slow=76,SNR=1149							
MJAR	Matsushiro Arr	34.59	261	P		P	12 32 33.9	+0.2
	comp=Z,2.0nm,0.8s,baz=41,slow=9.7,SNR=4.8							
MJAR				pP		pP	12 32 56.9	+0.4
	comp=Z,2.2nm,0.6s,baz=44,slow=6.5,SNR=4.0							
MJAR				PcP		PcP	12 35 06.2	+0.3
	comp=Z,1.4nm,0.5s,baz=77,slow=1.4,SNR=4.8							
MJAR				ScP		ScP	12 38 41.9	+0.6
	comp=Z,3.8nm,0.7s,baz=54,slow=3.1,SNR=8.7							
	comp=Z,2.0nm,0.8s							
MJAR	Matsushiro Arr	34.59	261	P		P	12 32 34.1	+0.4
MJAR						PcP	12 35 05.6	-0.3
MAJO	Matsushiro	34.59	261	P		P	12 32 34.9	+1.2
MAJO				IAmb		IAmb	12 32 35.3	
	comp=Z,59nm,1.9s							
MAJO	Matsushiro	34.59	261	P		P	12 32 34.9	+1.2
MAJO				pmax		pmax		
	comp=Z,59nm,1.9s							
MAJO	Matsushiro	34.59	261	P		P	12 32 35.4	+1.6
MAJO				pP		pwP	12 32 58.3	-1.1
MAJO				sP		sP	12 33 09.8	+1.6
MAJO				PcP		PcP	12 35 07.2	+1.3
MJB9	Matsu-Tunnel	34.59	261	P		P	12 32 35.2	+1.5
MJB9				IAmb		IAmb	12 32 35.3	
	comp=Z,55nm,1.9s							
RADR	Rader Ridge	34.93	77	P		P	12 32 38.4	+1.8
GNW	Green Mountain	34.96	75	P		P	12 32 39.1	+2.4
GNW				IAmb		IAmb	12 32 44.2	
	comp=Z,18nm,0.8s							
D05A	Enumclaw	35.64	75	P		P	12 32 45.0	+2.4
H11S1	WAKE ISLAND Hy	35.65	206	T		T	13 10 32.2	
	baz=17,slow=76,SNR=2521							
H11S2	WAKE ISLAND Hy	35.66	206	T		T	13 10 32.8	
	baz=17,slow=76,SNR=478							
H11S3	WAKE ISLAND Hy	35.66	206	T		T	13 10 16.8	
	baz=17,slow=76,SNR=1082							
JGF	Kuroka	35.73	261	P		P	12 32 44.3	+0.8
JGF				IAmb		IAmb	12 33 48.4	
	comp=Z,62nm,1.8s							
G03D	McMinnville, O	35.86	79	P		P	12 32 46.0	+1.5
BNX	BinXian	35.92	282	⇑P		P	12 32 43.4	-1.6
BNX				pmax		pmax		
	comp=Z,3.0nm,0.6s							
JHJ	Hachijo jima 2	35.95	255	LR		LR	12 49 12.7	
	comp=Z,9.3nm,19.0s,baz=54,slow=39							
LON	Longmire	35.96	76	P		P	12 32 46.8	+1.4
LON				IAmb		IAmb	12 32 48.8	
	comp=Z,12nm,0.7s							
LON	Longmire	35.96	76	P		P	12 32 46.8	+1.4
LON				pmax		pmax		
	comp=Z,12nm,0.7s							
I02E	Swisshome, OR	36.08	81	P		P	12 32 48.3	+1.9
COR	Corvallis	36.16	80	P		P	12 32 49.4	+2.3
LTY	Liberty	36.39	74	P		P	12 32 50.1	+1.0
LTY				IAmb		IAmb	12 32 51.7	
	comp=Z,33nm,1.6s							
H04D	Lebanon	36.54	80	IAmb		IAmb	12 32 58.0	
	comp=Z,28nm,0.8s							
J01E	Myrtle Point	36.54	82	P		P	12 32 52.1	+1.8
BUCK	Buck Mountain	36.56	80	P		P	12 32 53.4	+2.8
B08A	Colville Reser	36.65	72	P		P	12 32 52.5	+1.3
B08A				IAmb		IAmb	12 32 53.1	
	comp=Z,15nm,0.5s							
KBO	Bosley Butte	36.89	84	P		P	12 32 56.3	+2.9
K02D	Willamette Mer	36.96	83	P		P	12 32 55.9	+1.9
K02D				IAmb		IAmb	12 33 01.8	
	comp=Z,23nm,1.4s							
EPH	Ephrata	36.98	74	P		P	12 32 54.6	+0.5
EPH				IAmb		IAmb	12 32 55.4	
	comp=Z,9.7nm,0.5s							
G05A	Wamic	37.02	78	P		P	12 32 56.3	+1.9
I04A	Tendick Farm,	37.12	80	P		P	12 32 57.4	+2.1
E07A	Sunnyside	37.22	75	P		P	12 32 57.9	+1.8
E07A				IAmb		IAmb	12 32 59.1	
	comp=Z,40nm,1.5s							
G06A	Carlson Farm,	37.44	77	P		P	12 32 58.8	+0.9
G06A				IAmb		IAmb	12 32 59.9	
	comp=Z,20nm,1.3s							
BBOR	Butler Butte	37.46	82	P		P	12 33 00.6	+2.3
BBOR				IAmb		IAmb	12 33 02.0	
	comp=Z,20nm,0.9s							
I05D	Terrebonne, OR	37.48	79	P		P	12 33 00.2	+1.8
I05D				IAmb		IAmb	12 33 00.8	
	comp=Z,20nm,0.8s							
HAWA	Hanford	37.50	75	IAmb		IAmb	12 33 00.3	
	comp=Z,23nm,0.8s							
F07A	Phinny Hill Vi	37.52	76	IAmb		IAmb	12 33 00.7	
	comp=Z,27nm,0.7s							
D08A	Wollman Farm,	37.53	74	IAmb		IAmb	12 33 04.9	
	comp=Z,38nm,1.8s							
C09A	Chrisman Ranch	37.54	72	IAmb		IAmb	12 33 00.8	
	comp=Z,35nm,1.5s							
E08A	Dider Farm, El	37.73	74	IAmb		IAmb	12 33 01.9	
	comp=Z,8.9nm,0.8s							
KHMM	Horse Mountain	37.96	85	P		P	12 33 05.0	+2.5
KHMM				IAmb		IAmb	12 33 10.9	
	comp=Z,58nm,1.6s							
KMPM	Mount Pierce	37.99	86	P		P	12 33 04.7	+2.0
KMPM				IAmb		IAmb	12 33 10.8	
	comp=Z,21nm,0.9s							
NEW	Newport	37.99	71	IAmb		IAmb	12 33 04.3	
	comp=Z,26nm,1.2s							
YPT	Yellepit	38.02	75	P		P	12 33 04.0	+1.2
YPT				IAmb		IAmb	12 33 04.4	
	comp=Z,15nm,0.8s							
PINE	Pine Mountain	38.02	79	IAmb		IAmb	12 33 05.9	
	comp=Z,15nm,1.0s							
L04D	Klamath Falls	38.06	82	IAmb		IAmb	12 33 06.2	
	comp=Z,32nm,1.1s							
YBH	Yreka Blue Hor	38.09	83	P		P	12 33 06.0	+2.5
YBH				IAmb		IAmb	12 33 11.7	
	comp=Z,14nm,1.1s							
YBH	Yreka Blue Hor	38.09	83	P		P	12 33 06.0	+2.5
YBH				pmax		pmax		
	comp=Z,14nm,1.1s							
K04D	Chiloquin, OR	38.17	81	P		P	12 33 06.3	+2.0
M02C	Callahan	38.20	84	IAmb		IAmb	12 33 12.7	
	comp=Z,15nm,1.1s							
E09A	Wood Farm, Sta	38.26	74	IAmb		IAmb	12 33 07.2	
	comp=Z,35nm,1.6s							
G08A	Pilot Rock	38.41	76	P		P	12 33 07.1	+0.9
N02D	Trinity Center	38.53	84	IAmb		IAmb	12 33 10.6	
	comp=Z,25nm,1.4s							
K05A	Summer Lake	38.64	81	P		P	12 33 10.6	+2.3
K05A				IAmb		IAmb	12 33 11.3	
	comp=Z,24nm,0.8s							
M03C	McCloud	38.72	84	IAmb		IAmb	12 33 11.5	
	comp=Z,21nm,1.1s							
RES	Resolute Bay	38.85	25	IAmb		IAmb	12 33 38.8	
	comp=Z,16nm,1.2s							
HATC	Hat Creek Radi	39.39	84	IAmb		IAmb	12 33 24.1	
	comp=Z,22nm,0.8s							
O03E	Paynes Creek	39.49	85	IAmb		IAmb	12 33 17.9	
	comp=Z,33nm,1.2s							
J08A	Circle Bar Ran	39.76	78	IAmb		IAmb	12 33 19.5	
	comp=Z,12nm,0.7s							
WVOR	Wild Horse Val	40.18	80	P		P	12 33 22.3	+1.3
WVOR				IAmb		IAmb	12 33 23.2	
	comp=Z,18nm,0.8s							
WVOR	Wild Horse Val	40.18	80	P		P	12 33 22.3	+1.3
WVOR				pmax		pmax		
	comp=Z,18nm,0.8s							
CVS	Carmenet Viney	40.27	87	P		P	12 33 21.9	+0.4
PLID	Pearl Lake	40.29	75	P		P	12 33 22.4	+0.5
KSRS	Korea Array	40.34	271	P		P	12 33 22.9	+0.8
	comp=Z,5.8nm,0.6s,baz=52,slow=8.0,SNR=26							
KSRS				pP		pP	12 33 46.5	+1.2
	comp=Z,2.2nm,0.7s,baz=52,slow=8.4,SNR=2.9							
KSRS				PcP		PcP	12 35 23.6	+0.2
	comp=Z,1.5nm,0.8s,baz=6.0,slow=1.9,SNR=4.9							
KSRS				ScP		ScP	12 39 03.2	+0.4
	comp=Z,2.7nm,0.9s,baz=68,slow=3.7,SNR=6.6							
KSRS				LR		LR	12 49 35.3	
	comp=Z,12nm,21.7s,baz=55,slow=35							
	comp=Z,5.8nm,0.6s							
KS19	Wonju Array Si	40.34	271	P		P	12 33 22.8	+0.6
KS19				IAmb		IAmb	12 33 41.2	
	comp=Z,64nm,1.6s							
KSAR	Wonju Array Be	40.37	271	P		P	12 33 23.0	+0.6
KSAR	Wonju Array Be	40.37	271	P		P	12 33 23.0	+0.6
MSO	Missoula	40.58	71	P		P	12 33 24.7	+0.5
MSO				IAmb		IAmb	12 33 25.3	
	comp=Z,9.4nm,0.5s							
BEKR	Beckworth	40.63	84	P		P	12 33 25.9	+1.2
BEKR				IAmb		IAmb	12 33 26.8	
	comp=Z,27nm,1.8s							
MPK	Martis Peak	41.18	85	P		P	12 33 31.0	+1.6
MPK				IAmb		IAmb	12 33 31.8	
	comp=Z,26nm,1.2s							
PAHR	Pah Rah Range	41.33	84	IAmb		IAmb	12 34 15.7	
	comp=Z,16nm,1.1s							
JNU	Nakatsue	41.35	263	LR		LR	12 50 00.4	
	comp=Z,19nm,20.9s,baz=36,slow=35							
TJN	Taejon	41.37	270	P		P	12 33 31.6	+1.0
TJN	Taejon	41.37	270	P		P	12 33 31.3	+0.7
TJN	Taejon	41.37	270	P		P	12 33 31.3	+0.7
TJN				pmax		pmax		
	comp=Z,927nm,1.9s							
LYMT	Lyon Mountain	41.47	70	P		P	12 33 31.6	0.0
PNTR	Pine Nut	41.57	84	IAmb		IAmb	12 33 36.9	
	comp=Z,27nm,0.7s							
HLID	Hailey	42.08	76	IAmb		IAmb	12 33 38.2	
	comp=Z,11nm,0.8s							
BOZ	Bozeman (W)	42.59	71	IAmb		IAmb	12 33 42.4	
	comp=Z,35nm,1.6s							
LHV	Little Huntoon	42.76	85	IAmb		IAmb	12 33 44.8	
	comp=Z,25nm,1.4s							
NVAR	Mina Array Bea	42.77	84	P		P	12 33 43.1	+0.8
	comp=Z,4.4nm,0.8s,baz=297,slow=7.0,SNR=29							
NVAR				pP		pP	12 34 05.8	+0.2
	comp=Z,2.5nm,0.7s,baz=302,slow=7.3,SNR=4.0							
NVAR				PcP		PcP	12 35 32.0	+0.3
	comp=Z,0.8nm,0.6s,baz=327,slow=5.1,SNR=4.3							
NVAR				ScP		ScP	12 39 13.1	+0.2
	comp=Z,2.5nm,0.6s,baz=312,slow=4.6,SNR=20							
NVAR				S		S	12 39 59.5	+1.1
	comp=Z,2.8nm,0.9s,baz=53,slow=12,SNR=7.2							
	comp=Z,4.4nm,0.8s							
NVAR	Mina Array Bea	42.77	84	P		P	12 33 43.7	+1.4
NVAR				PcP		PcP	12 35 32.3	+0.5
FFC	Flin Flon	43.18	55	P		P	12 33 44.1	-1.0
FFC	Flin Flon	43.18	55	P		P	12 33 44.1	-1.0
FFC				pmax		pmax		
	comp=Z,3.0nm,0.7s							
ELK	Elko	43.23	79	P		P	12 33 47.6	+1.6
ELK				IAmb		IAmb	12 33 48.0	
	comp=Z,12nm,0.7s							
ELK	Elko	43.23	79	P		P	12 33 47.6	+1

DUG pmax pmax
comp=Z,26nm,0.8s
LAO LASA Array 45.11 67 IAmb IAmb 12 34 02.7
comp=Z,14nm,0.5s
GWY Greenwater Val 45.20 86 IAmb IAmb 12 34 04.5
comp=Z,12nm,0.8s
CCCA Chr Cany lake 45.20 87 P **P** **12 34 02.9 +1.4**
TCUT Toone Canyon 45.32 77 IAmb IAmb 12 34 04.2
comp=Z,16nm,0.7s
CTU Camp Tracy 45.38 77 IAmb IAmb 12 34 04.3
comp=Z,11nm,0.8s
PSUT Pine Spring 45.43 81 IAmb IAmb 12 34 07.0
comp=Z,13nm,0.6s
PD31 Pinedale Array 45.44 74 P **P** **12 34 03.8 +0.2**
PDAR Pinedale Array 45.44 74 P **P** **12 34 03.5 0.0**
comp=Z,5.2nm,0.5s,baz=329,slow=2.7,SNR=88
PDAR pP **pP** **12 34 26.8 -0.2**
comp=Z,9.2nm,0.5s,baz=313,slow=3.6,SNR=10
PDAR PcP **PcP** **12 35 40.7 -0.1**
comp=Z,2.1nm,0.5s,baz=157,slow=1.0,SNR=4.7
PDAR ScP **ScP** **12 39 23.6 -0.2**
comp=Z,1.4nm,1.0s,baz=270,slow=1.5,SNR=4.3
PDAR S S 12 40 27.4 -10
comp=Z,1.1nm,1.0s,baz=211,slow=7.3,SNR=5.6
comp=Z,5.2nm,0.5s
PDAR Pinedale Array 45.44 74 P **P** **12 34 03.4 -0.1**
SHOC Shoshone, Teco 45.63 86 IAmb IAmb 12 34 10.4
comp=Z,18nm,0.7s
GSC Goldstone, Bar 45.69 87 IAmb IAmb 12 34 11.2
comp=Z,13nm,0.7s
MPU Maple Canyon 45.86 78 P **P** **12 34 07.6 +0.8**
MPU IAmb IAmb 12 34 08.4
comp=Z,11nm,0.6s
BSUT Blindstream Ca 46.06 77 P **P** **12 34 09.6 +0.9**
BSUT IAmb IAmb 12 34 15.2
comp=Z,17nm,1.1s
NOR Nord 46.22 4 *i* P **P** **12 34 08.7 -0.1**
NOR IAmb IAmb 12 34 09.4
comp=Z,12nm,1.5s
TCRU Three Creeks R 46.24 80 P **P** **12 34 11.5 +1.6**
TCRU IAmb IAmb 12 34 17.0
comp=Z,17nm,0.8s
TLY Talaya 46.31 302 LR LR 12 56 45.6
comp=Z,44nm,18.4s,baz=43,slow=40
ULN Ulaanbaatar 46.61 296 P **P** **12 34 12.1 -0.4**
ULN Ulaanbaatar 46.61 296 P **P** **12 34 12.1 -0.4**
ULN pmax pmax
comp=Z,9.0nm,1.4s
V12A Nelson 46.62 85 P **P** **12 34 13.7 +1.0**
NEEM North Greenlan 46.63 14 *i* P **P** **12 34 12.5 0.0**
NEEM IAmb IAmb 12 34 13.2
comp=Z,11nm,0.8s
P17A Butcher Ranch, 46.74 78 IAmb IAmb 12 34 15.4
comp=Z,16nm,0.6s
MTPU Mount Pierson 46.76 80 IAmb IAmb 12 34 16.4
comp=Z,15nm,1.0s
LCMT Little Creek M 46.77 82 IAmb IAmb 12 34 16.2
comp=Z,18nm,1.1s
Q16A Castle Valley 46.82 79 IAmb IAmb 12 34 16.3
comp=Z,14nm,0.8s
P18A Preston Nutter 46.94 77 IAmb IAmb 12 34 22.0
comp=Z,21nm,1.0s
SONM Songino Array 46.99 297 P **P** **12 34 15.1 -0.4**
comp=Z,1.2nm,0.6s,baz=55,slow=7.8,SNR=7.1
SONM PcP **PcP** **12 35 46.1 0.0**
comp=Z,1.5nm,0.6s,baz=68,slow=2.6,SNR=4.3
SONM ScP **ScP** **12 39 28.3 -1.6**
comp=Z,3.9nm,0.9s,baz=57,slow=3.2,SNR=16
SONM LR LR 12 55 36.1
comp=Z,50nm,18.1s,baz=54,slow=38
comp=Z,1.2nm,0.6s
SONM Songino Array 46.99 297 P **P** **12 34 14.9 -0.5**
SONM **PcP** **12 35 46.0 -0.1**
SONM Songino Array 46.99 297 P **P** **12 34 14.9 -0.5**
SONM pmax pmax
comp=Z,8.0nm,1.6s
KNB Kanab 47.03 82 P **P** **12 34 17.7 +1.7**
KNB IAmb IAmb 12 34 18.3
comp=Z,38nm,1.6s
KNB Kanab 47.03 82 P **P** **12 34 17.7 +1.7**
KNB pmax pmax
comp=Z,38nm,1.6s
PKCU Pink Cliffs 47.07 81 IAmb IAmb 12 34 18.8
comp=Z,16nm,1.1s
SRU San Rafael Swe 47.09 78 IAmb IAmb 12 34 18.8
comp=Z,27nm,0.9s
ZAK Zakamensk 47.22 301 *e*P **P** **12 34 15.5 -1.7**
ZAK pmax pmax
comp=Z,5.0nm,1.3s
TIA Tai'an 47.78 278 P **P** **12 34 21.1 -0.5**
TIA pmax pmax
comp=Z,12nm,1.1s
RSSD Black Hills 47.86 69 P **P** **12 34 21.6 -0.7**
RSSD PcP **PcP** **12 35 49.0 -0.3**
RSSD IAmb IAmb 12 35 50.0
comp=Z,9.6nm,0.5s
RSSD Black Hills 47.86 69 P **P** **12 34 21.6 -0.7**
RSSD 12 35 49.1
RSSD pmax pmax
comp=Z,10.0nm,0.5s
RSSD Black Hills 47.86 69 P **P** **12 34 21.8 -0.5**
RSSD pP **pP** **12 34 44.8 -1.2**
RSSD sP **sP** **12 34 57.0 -0.4**
RSSD PcP **PcP** **12 35 49.7 +0.3**
HAYD Hayden 48.17 75 P **P** **12 34 25.4 +0.6**
HAYD PcP **PcP** **12 35 51.6 +1.0**
HHC Hu-ho-hao-te 48.19 286 *e*P **P** **12 34 27.0 +2.2**
HHC pmax pmax
comp=Z,5.0nm,0.6s
HHC pmax pmax
comp=Z,65nm,4.0s
PV21 Cone Mtn., Par 48.38 78 P **P** **12 34 27.0 +0.5**
GLA Glamis 48.41 87 IAmb IAmb 12 34 32.1
comp=Z,12nm,0.5s
HNS HongShan 48.49 280 ⇑P **P** **12 34 28.1 +1.1**
HNS pmax pmax
comp=Z,9.0nm,1.0s
PV22 Blue Mesa, Par 48.51 78 P **P** **12 34 28.0 +0.6**
PV22 IAmb IAmb 12 34 29.8
comp=Z,23nm,0.8s
PV05 Paradox Valley 48.61 78 IAmb IAmb 12 34 36.2
comp=Z,18nm,0.7s
ULM Lac du Bonnet 48.73 58 P **P** **12 34 27.6 -1.1**
comp=Z,2.4nm,0.4s,baz=310,slow=6.0,SNR=6.7
ULM ScP **ScP** **12 39 35.6 -1.5**
comp=Z,1.6nm,0.7s,baz=1.5,slow=6.3,SNR=2.9
comp=Z,2.4nm,0.4s
PV15 Paradox Valley 48.82 78 IAmb IAmb 12 34 38.3
comp=Z,22nm,0.7s
WUAZ Wupatki 48.89 82 IAmb IAmb 12 34 32.4
comp=Z,17nm,0.9s
KBS Kingsbay 49.17 358 *i* P **P** **12 34 32.7 +1.0**
BTO2 Baotou 49.26 287 *e*P **P** **12 34 33.8 +0.8**
BTO2 pP **pP** **12 34 56.9 +0.2**
BTO2 sP **sP** **12 35 08.1 +0.1**
BTO2 pmax pmax
comp=Z,14nm,0.7s
BTO2 pmax pmax
comp=Z,230nm,8.5s
NJ2 Nanjing 49.50 272 *e*P **P** **12 34 34.6 -0.1**
NJ2 pmax pmax
comp=Z,27nm,0.8s
MVCO Mesa Verde 49.53 79 IAmb IAmb 12 34 36.5
comp=Z,26nm,1.3s
SPITS Spitsbergen Ar 49.77 356 P **P** **12 34 35.9 -0.3**
comp=Z,7.3nm,0.5s,baz=46,slow=6.0,SNR=40
SPITS pP **pP** **12 35 00.7 +0.8**
comp=Z,5.8nm,0.5s,baz=40,slow=6.6,SNR=2.6
comp=Z,7.3nm,0.5s
EPLO Experimental L 50.19 57 IAmb IAmb 12 34 41.3
comp=Z,7.9nm,0.7s
DAG Danmarks Havn 50.77 6 *i* P **P** **12 34 43.1 -0.7**
SDCO Great Sand Dun 50.99 76 IAmb IAmb 12 34 47.9
comp=Z,8.9nm,0.8s
TUC Tucson 51.41 85 P **P** **12 34 50.3 +1.0**
TUC IAmb IAmb 12 34 51.0
comp=Z,7.9nm,0.8s
TUC Tucson 51.41 85 P **P** **12 34 50.3 +1.0**
TUC pmax pmax
comp=Z,8.0nm,0.9s
TUC Tucson 51.41 85 P **P** **12 34 50.2 +1.0**
TUC pP **pP** **12 35 14.7 +0.8**
ANMO Albuquerque 52.27 80 P **P** **12 34 56.6 +0.9**
ANMO PcP **PcP** **12 36 07.7 +2.0**
ANMO IAmb IAmb 12 36 08.2
comp=Z,7.1nm,0.8s
ANMO Albuquerque 52.27 80 ⇑*i* P **P** **12 34 56.4 +0.6**
ANMO pmax pmax
comp=Z,8.0nm,1.0s
ANMO Albuquerque 52.27 80 P **P** **12 34 56.3 +0.6**
ANMO pP **pP** **12 35 19.6 -0.3**
ANMO sP **sP** **12 35 32.0 +0.7**
ANMO PcP **PcP** **12 36 07.3 +1.6**
ECSD EROS Data Cent 52.31 65 P **P** **12 34 54.6 -1.1**
ECSD IAmb IAmb 12 36 05.6
comp=Z,15nm,1.6s
EYMN Ely 52.42 58 P **P** **12 34 55.9 -0.6**
EYMN IAmb IAmb 12 35 02.5
comp=Z,22nm,1.2s
SUMG Summit 52.49 14 *i* P **P** **12 34 57.0 -0.1**
Y22A Socorro 52.64 81 IAmb IAmb 12 35 00.7
comp=Z,32nm,1.4s
ILULI Ilulissat 52.90 21 P **P** **12 35 00.7 +1.1**
ILULI Ilulissat 52.90 21 P **P** **12 35 00.7 +1.1**
ILULI pmax pmax
comp=Z,68nm,1.2s
BGNE Belgrade 52.93 68 IAmb IAmb 12 36 12.9
comp=Z,21nm,1.0s
DBG Daneborg 53.03 8 *i* P **P** **12 35 00.1 -0.4**
121A Cookes Peak, D 53.10 83 IAmb IAmb 12 35 27.6
comp=Z,7.5nm,0.7s
E38A The Farm, Brul 53.24 59 IAmb IAmb 12 35 03.1
comp=Z,14nm,0.6s
WHN Wuhan 53.32 274 P **P** **12 35 03.3 +0.1**
WHN pmax pmax
comp=Z,78nm,1.3s
RTBA Rita Blanca 53.51 76 P **P** **12 35 05.1 +0.4**
RTBA IAmb IAmb 12 35 05.8
comp=Z,15nm,0.8s
I37A Lemond, Waseca 53.91 63 IAmb IAmb 12 35 09.0
comp=Z,18nm,1.1s
ZALV Zalesovo Beam 54.09 314 P **P** **12 35 07.4 -1.1**
comp=Z,0.4nm,0.3s,baz=22,slow=8.1,SNR=2.0
ZALV PcP **PcP** **12 36 10.0 -2.0**
comp=Z,2.8nm,0.6s,baz=36,slow=3.8,SNR=13
ZALV ScP **ScP** **12 39 58.4 -1.8**
comp=Z,0.8nm,0.6s,baz=72,slow=4.8,SNR=3.9
ZALV LR LR 12 59 28.4
comp=Z,54nm,20.1s,baz=25,slow=37
comp=Z,0.4nm,0.3s
ZALV Zalesovo Beam 54.09 314 P **P** **12 35 08.0 -0.6**
YULB Yu-li 54.18 262 P **P** **12 35 10.1 +0.5**
YULB IAmb IAmb 12 36 53.6
comp=Z,42nm,1.4s
EPT El Paso 54.41 82 IAmb IAmb 12 35 17.7
comp=Z,18nm,0.9s
R32A Long Quarter, 54.57 71 P **P** **12 35 11.7 -0.6**
R32A IAmb IAmb 12 35 14.8
comp=Z,12nm,0.9s
PH02 Texas Public H 54.69 76 P **P** **12 35 13.7 +0.4**
PH02 IAmb IAmb 12 35 14.4
comp=Z,52nm,0.9s
MNTX Cornudas Mount 55.15 82 P **P** **12 35 16.9 +0.4**
MNTX IAmb IAmb 12 35 18.3
comp=Z,14nm,1.1s
AMTX Amarillo 55.20 76 P **P** **12 35 17.2 +0.2**
SCIA State Center 55.40 65 P **P** **12 35 19.6 +1.5**
LZH Lanzhou 55.88 287 *e*P P 12 35 29.8 +7.9
LZH pP sP 12 35 56.5 -0.8
LZH pmax pmax
comp=Z,22nm,1.1s
SMWD Samnorwood 55.91 75 IAmb IAmb 12 35 23.1
comp=Z,20nm,0.8s
GTA2 Gaotai 55.96 292 *e*P **P** **12 35 21.9 -0.5**
GTA2 ScP **ScP** **12 40 07.8 -1.1**
GTA2 pmax pmax
comp=Z,5.0nm,0.6s
KAN01 Argonia South 55.98 72 IAmb IAmb 12 35 24.4
comp=Z,12nm,0.7s
VHRN Van Horn 56.02 82 IAmb IAmb 12 35 27.7
comp=Z,7.9nm,0.9s
LZDM Lanzhou Array 56.06 286 P **P** **12 35 21.5 -1.9**
comp=Z,1.3nm,0.3s,baz=38,slow=9.7,SNR=1.8
LZDM PcP **PcP** **12 36 20.1 -0.2**
comp=Z,3.7nm,0.4s,baz=5.0,slow=3.3,SNR=3.8
comp=Z,1.3nm,0.3s
128A Castleberry Fa 56.27 79 IAmb IAmb 12 35 30.5
comp=Z,16nm,0.9s
PECS Pecos 56.30 81 IAmb IAmb 12 36 22.9
comp=Z,6.4nm,0.6s
JFWS Jewell Farm 56.36 62 IAmb IAmb 12 35 25.8
comp=Z,13nm,0.6s
L40A Anamosa 56.40 63 IAmb IAmb 12 35 26.3
comp=Z,8.4nm,0.6s
ENH Enshi 56.50 278 P **P** **12 35 25.9 -0.3**
ENH Enshi 56.50 278 IAmb IAmb 12 35 26.5
comp=Z,22nm,1.5s
TPB01 Permian Basin 56.65 81 IAmb IAmb 12 35 29.6
comp=Z,7.4nm,0.8s
P38A Dawn 56.75 67 IAmb IAmb 12 35 29.0
comp=Z,13nm,0.5s
MNHN Monahans 56.99 80 IAmb IAmb 12 35 31.8
comp=Z,14nm,0.7s
WMOK Wichita Mounta 57.03 74 P **P** **12 35 30.2 +0.3**
WMOK IAmb IAmb 12 35 30.9
comp=Z,8.1nm,0.7s
WMOK Wichita Mounta 57.03 74 P **P** **12 35 30.2 +0.3**
WMOK pmax pmax
comp=Z,8.0nm,0.7s
E46A Sault Ste Mari 57.16 55 IAmb IAmb 12 35 32.5
comp=Z,13nm,0.6s
ARCES ARCESS Array B 57.56 351 P **P** **12 35 31.1 -2.1**
comp=Z,2.7nm,0.5s,baz=24,slow=7.7,SNR=16
ARCES pP **pP** **12 35 55.4 -1.9**
comp=Z,5.4nm,0.8s,baz=29,slow=7.7,SNR=3.1
comp=Z,2.7nm,0.5s
ARCES ARCESS Array B 57.56 351 P **P** **12 35 33.8 +0.7**
ARCES ARCESS Array B 57.56 351 P **P** **12 35 33.8 +0.7**
ARCES pmax pmax
comp=Z,189nm,2.0s
TX31 Lajitas Ar. Si 57.86 82 IAmb IAmb 12 35 40.2
comp=Z,6.4nm,0.6s
TXAR Lajitas Array 57.86 82 P **P** **12 35 35.8 0.0**
comp=Z,4.0nm,0.5s,baz=302,slow=5.2,SNR=56
TXAR pP **pP** **12 35 59.9 -0.5**
comp=Z,5.2nm,0.8s,baz=294,slow=4.7,SNR=4.9
TXAR PcP **PcP** **12 36 27.2 0.0**
comp=Z,1.9nm,0.5s,baz=302,slow=2.2,SNR=4.9
TXAR ScP **ScP** **12 40 17.1 -0.3**
comp=Z,0.9nm,0.6s,baz=287,slow=2.4,SNR=6.7
comp=Z,4.0nm,0.5s
TXAR Lajitas Array 57.86 82 P **P** **12 35 36.0 +0.2**
TXAR **PcP** **12 36 27.9 +0.7**
WTFS Witchita Falls 57.89 75 IAmb IAmb 12 35 36.8
comp=Z,17nm,0.9s
TUL3 Leonard 57.99 71 IAmb IAmb 12 36 28.3
comp=Z,14nm,0.5s
OZNA Ozona 58.28 79 IAmb IAmb 12 35 39.5
comp=Z,19nm,1.1s
U38A Gravette 58.44 70 IAmb IAmb 12 35 41.1
comp=Z,8.5nm,0.6s
HHAR Hobbs 58.81 70 P **P** **12 35 42.2 -0.1**
HHAR IAmb IAmb 12 35 43.7
comp=Z,10nm,0.5s
P43A Skaggs, Pawnee 58.99 64 IAmb IAmb 12 35 45.0
comp=Z,13nm,0.6s
SCHQ Schefferville 59.05 39 P **P** **12 35 42.4 -1.2**
comp=Z,3.2nm,0.7s,baz=324,slow=10,SNR=4.9
comp=Z,3.2nm,0.7s
SCHQ Schefferville 59.05 39 IAmb IAmb 12 35 45.8
comp=Z,15nm,1.3s
KURK Kurchatov 59.08 314 P **P** **12 35 43.2 -0.7**
KURK Kurchatov 59.08 314 P **P** **12 35 43.2 -0.7**
KURK pmax pmax
comp=Z,3.0nm,0.7s
CCM Cathedral Cave 59.12 67 P **P** **12 35 44.4 0.0**
CCM IAmb IAmb 12 36 32.3
comp=Z,6.4nm,0.7s
CCM Cathedral Cave 59.12 67 P **P** **12 35 44.4 0.0**
CCM pmax pmax
comp=Z,6.0nm,0.7s
CCM Cathedral Cave 59.12 67 P **P** **12 35 43.8 -0.6**
CCM pP **pP** **12 36 08.8 -0.1**
CCM x x 12 36 21.9
CCM PcP **PcP** **12 36 31.4 -0.5**
KURBB Kurchatov Arra 59.19 314 P **P** **12 35 43.2 -1.4**
comp=Z,1.5nm,0.4s,baz=42,slow=6.5,SNR=5.1
KURBB ScP **ScP** **12 40 21.0 -1.7**
comp=Z,0.5nm,0.3s,baz=38,slow=4.1,SNR=1.9
KURBB LR LR 13 02 43.4
comp=Z,82nm,19.4s,baz=168,slow=37
comp=Z,1.5nm,0.4s
BRDY Brady 59.31 77 IAmb IAmb 12 35 46.8
comp=Z,11nm,0.9s
WMQ Urumqi 59.58 303 *e*P **P** **12 35 48.3 +0.7**
WMQ pP pwP 12 36 14.5 -2.0
WMQ pmax pmax
comp=Z,13nm,0.7s
FVM French Village 59.63 66 IAmb IAmb 12 35 49.3
comp=Z,10nm,0.6s
DRIO Del Rio 59.66 80 IAmb IAmb 12 36 37.2
comp=Z,6.8nm,0.8s
MKAR Makanchi Array 60.18 309 P **P** **12 35 49.8 -1.8**
comp=Z,0.5nm,0.3s,baz=47,slow=7.1,SNR=14
MKAR pP **pP** **12 36 14.2 -1.8**
comp=Z,0.6nm,0.5s,baz=60,slow=7.2,SNR=2.8
comp=Z,0.5nm,0.3s
MKAR Makanchi Array 60.18 309 P **P** **12 35 50.2 -1.4**
N47A Urbana 60.22 61 IAmb IAmb 12 35 53.6
comp=Z,32nm,1.4s
MIAR Mount Ida 60.23 71 IAmb IAmb 12 36 38.0
comp=Z,11nm,0.8s
P46A Rosedale 60.29 63 P **P** **12 35 53.5 +1.2**
P46A IAmb IAmb 12 35 54.2
comp=Z,28nm,1.3s
WHAR Wooly Hollow 60.46 70 P **P** **12 35 52.8 -0.8**
PBMO Poplar Bluff 60.48 67 P **P** **12 35 53.5 -0.2**
S44A Carbondale 60.50 66 IAmb IAmb 12 35 56.0
comp=Z,12nm,1.1s
SIUC Southern Illin 60.51 66 P **P** **12 35 54.4 +0.5**
SIUC IAmb IAmb 12 35 54.7
comp=Z,22nm,1.4s
LCAR Lake Charles 60.56 68 IAmb IAmb 12 35 54.8
comp=Z,5.3nm,0.6s
BVAR Borovoye Array 60.84 320 P **P** **12 35 55.4 -0.5**
comp=Z,9.2nm,0.4s,baz=38,slow=7.5,SNR=5.1
BVAR LR LR 13 04 32.7
comp=Z,84nm,18.6s,baz=13,slow=38
comp=Z,9.2nm,0.4s
BORK Borovoye 60.86 320 P **P** **12 35 56.2 +0.2**
BORK IAmb IAmb 12 35 56.5
comp=Z,4.8nm,0.6s
BORK Borovoye 60.86 320 ⇑*i* P **P** **12 35 55.8 -0.2**
BORK *e**PP **pP** **12 36 20.2 -0.3**
BORK pmax pmax
comp=Z,15nm,1.5s
833A Chaparral WMA, 61.19 80 IAmb IAmb 12 36 00.1
comp=Z,23nm,1.4s
HKT Hockley 62.17 76 P **P** **12 36 05.6 +0.5**
HKT Hockley 62.17 76 P **P** **12 36 05.6 +0.5**
HKT pmax pmax
comp=Z,53nm,1.6s
HKT Hockley 62.17 76 P **P** **12 36 05.5 +0.4**
HKT pP **pP** **12 36 30.7 +0.7**
HKT sP **sP** **12 36 41.6 +0.4**
HKT PcP **PcP** **12 36 44.9 +0.7**
T47A Sharon Grove 62.20 65 IAmb IAmb 12 36 07.5
comp=Z,13nm,0.6s
WVT Waverly 62.41 66 P **P** **12 36 06.9 +0.2**
WVT IAmb IAmb 12 37 32.0
comp=Z,39nm,1.9s
WVT Waverly 62.41 66 P **P** **12 36 06.9 +0.2**
WVT pmax pmax
comp=Z,39nm,2.0s
WVT Waverly 62.41 66 P **P** **12 36 07.4 +0.7**
ARTI Arti 62.51 329 LR LR 13 05 30.9
comp=Z,64nm,20.0s,baz=4.5,slow=38
ARTI Arti 62.51 329 P **P** **12 36 06.2 -0.8**
ARTI IAmb IAmb 12 36 21.8
comp=Z,11nm,0.4s
ARTI Arti 62.51 329*d* *i* P **P** **12 36 07.9 +0.9**
ARTI 12 36 44.5
ARTI S **S** **12 44 29.4 +3.5**
ARTI SS **SS** **12 48 30.7 +0.1**
ARTI pmax pmax
comp=Z,31nm,3.8s
OXF Oxford 62.67 68 P **P** **12 36 09.2 +0.7**
OXF Oxford 62.67 68 P **P** **12 36 09.2 +0.7**
OXF pmax pmax
comp=Z,26nm,0.6s
Q51A Peebles 62.81 61 IAmb IAmb 12 36 12.1
comp=Z,12nm,0.5s
R50A Paris 62.81 62 IAmb IAmb 12 36 11.6
comp=Z,9.2nm,0.6s
LMQ La Malbaie 63.02 47 P **P** **12 36 10.9 +0.3**
LMQ IAmb IAmb 12 38 15.6
comp=Z,15nm,1.2s
U49A Red Boiling Sp 63.29 64 IAmb IAmb 12 36 39.4
comp=Z,19nm,1.4s
KIRV Kirov 63.29 335 LR LR 13 06 02.6
comp=Z,76nm,21.1s,baz=344,slow=38
KIRV Kirov 63.29 335⇑*e*P **P** **12 36 13.3 +1.2**
T50A Nancy 63.44 63 IAmb IAmb 12 36 15.5
comp=Z,15nm,1.2s
L56A Greenwood 63.57 55 IAmb IAmb 12 36 17.1
comp=Z,4.3nm,1.3s
KLMR Klimovskoe 63.59 341 *e*P **P** **12 36 15.1 +1.0**
KLMR pmax pmax
comp=Z,30nm,1.7s
PZH PanZhiHua 63.93 280 P **P** **12 36 18.6 +1.6**
Q54A Coxs Mills 64.19 59 P **P** **12 36 17.6 -0.7**
Q54A IAmb IAmb 12 36 55.5
comp=Z,64nm,1.8s
KMI2 Kunming 64.31 278 P **P** **12 36 20.3 +0.6**
KMI2 S **S** **12 44 51.3 +1.7**
KMI2 pmax pmax
comp=Z,18nm,1.1s
JAY Jayapura 64.72 227 LR LR 12 58 54.4
comp=Z,39nm,20.4s,baz=36,slow=31
FINES FINESS Array B 65.30 348 P **P** **12 36 24.8 -0.4**
comp=Z,4.2nm,1.0s,baz=1.9,slow=11,SNR=5.9
comp=Z,4.2nm,1.0s
FINES FINESS Array B 65.30 348 P **P** **12 36 25.1 -0.1**
FINES FINESS Array B 65.30 348 P **P** **12 36 25.1 -0.1**
HODGE Hodges 66.91 64 IAmb IAmb 12 38 19.2
comp=Z,34nm,1.5s
AAK Ala-Archa 66.98 310 P **P** **12 36 36.2 -0.4**
AAK Ala-Archa 66.98 310 P **P** **12 36 36.2 -0.4**
AAK pmax pmax
comp=Z,2.0nm,0.8s
AAK Ala-Archa 66.98 310 P **P** **12 36 35.0 -1.5**
NB2 NORSAR Subarra 67.05 355 P **P** **12 36 37.2 +0.7**
comp=Z,1.9nm,0.7s,baz=6.7,slow=6.5
NOA NORSAR Array B 67.05 355 P **P** **12 36 35.6 -0.9**
comp=Z,1.4nm,0.8s,baz=6.1,slow=6.4,SNR=3.8
NOA pP **pP** **12 37 01.6 +0.2**
comp=Z,2.4nm,0.9s,baz=4.4,slow=6.3,SNR=1.3
NOA LR LR 13 04 41.1
comp=Z,18nm,21.8s,baz=310,slow=35
comp=Z,1.4nm,0.8s
AKTO Aktyubinsk 67.56 325 LR LR 13 09 41.5
comp=Z,123nm,18.4s,baz=358,slow=39
HFS Hagfors 67.81 354 P **P** **12 36 40.6 -0.6**
comp=Z,1.8nm,0.5s,baz=41,slow=13,SNR=9.2
comp=Z,1.8nm,0.5s
KKAR Karatay Array 68.46 313 P **P** **12 36 44.9 -0.7**
KKAR Karatay Array 68.46 313 P **P** **12 36 44.9 -0.7**
KSH2 Kashi 69.16 307 P **P** **12 36 50.1 -0.1**
OBN Obninsk 69.50 340 *e*P **P** **12 36 52.2 +0.4**
OBN pmax pmax
comp=Z,11nm,0.5s
UBPT Khong Chiam 70.04 269 P **P** **12 36 56.3 +0.6**
CHTO Chiang Mai 71.38 277 P **P** **12 37 03.8 +0.1**
CHTO Chiang Mai 71.38 277 P **P** **12 37 03.9 +0.1**
CHTO Chiang Mai 71.38 277 P **P** **12 37 03.9 +0.1**
CHTO pmax pmax
comp=Z,7.0nm,1.1s
CM31 Chiang Mai Arr 71.65 277 P **P** **12 37 05.7 +0.3**
CMAR Chiang Mai Arr 71.65 277 P **P** **12 37 05.3 0.0**
comp=Z,5.8nm,0.7s,baz=27,slow=6.9,SNR=33
comp=Z,5.8nm,0.7s
CMAR Chiang Mai Arr 71.65 277 P **P** **12 37 05.8 +0.5**
CMAR Chiang Mai Arr 71.65 277*ce*P **P** **12 37 05.9 +0.5**
CMAR pmax pmax
comp=Z,5.0nm,0.5s
EVN Everest 71.69 292 P **P** **12 37 06.3 -0.1**
CHGR Chuyangaron 72.62 311 IAmb IAmb 12 37 17.4
comp=Z,11nm,0.7s
CHGR Chuyangaron 72.62 311⇑*i* P **P** **12 37 10.4 -0.6**
CHGR pmax pmax
comp=Z,11nm,0.9s
EKA Eskdalemuir Ar 72.90 3 P **P** **12 37 12.1 -0.2**
comp=Z,1.8nm,0.5s,baz=0.3,slow=4.4,SNR=11
comp=Z,1.8nm,0.5s
TEIG Tepich 73.95 78 P **P** **12 37 19.6 +0.7**
SHAA Shahritus 73.98 311 P **P** **12 37 19.3 +0.3**
SHAA IAmb IAmb 12 37 20.8
comp=Z,63nm,1.5s

AKASG Malin Array Be 75.14 343 P P 12 37 25.2 -0.2
comp=Z,0.9nm,0.4s,baz=14,slow=5.3,SNR=5.1
AKASG pP pP 12 37 50.0 -0.8
comp=Z,1.7nm,0.6s,baz=17,slow=5.6,SNR=2.3
AKASG LR LR 13 17 00.9
comp=Z,37nm,19.1s,baz=18,slow=41
comp=Z,0.9nm,0.4s
AKASG Malin Array Be 75.14 343 P P 12 37 25.5 +0.2
AKASG Malin Array Be 75.14 343 *ce*P P 12 37 24.3 -1.1
AKASG pmax pmax
comp=Z,1.0nm,0.4s
SBUM Sibu 75.92 256 P P 12 37 31.1 +0.8
SBUM Sibu 75.92 256 P P 12 37 31.0 +0.6
KBL Kabul 75.99 309 P P 12 37 29.7 -1.1
KBL IAmb IAmb 12 37 30.8
comp=Z,24nm,1.6s
KBL Kabul 75.99 309 P P 12 37 29.7 -1.1
KBL pmax pmax
comp=Z,24nm,1.7s
KIV Kislovodsk 78.24 331 *e*P P 12 37 43.4 +0.3
KIV pmax pmax
comp=Z,6.0nm,1.0s
MTN Manton Dam 78.24 231 P P 12 37 43.7 +0.5
MTN IAmb IAmb 12 37 49.3
comp=Z,13nm,0.8s
KBZ Khabaz 78.38 331 P P 12 37 43.6 0.0
comp=Z,1.4nm,0.8s,baz=78,slow=4.0,SNR=3.8
KBZ LR LR 13 18 26.3
comp=Z,66nm,18.8s,baz=350,slow=40
comp=Z,1.4nm,0.8s
KBZ Khabaz 78.38 331 *e*P P 12 37 43.0 -0.7
KBZ pmax pmax
comp=Z,9.0nm,1.8s
KECS Kecovo 78.67 348 *e*P P 12 37 47.1 +1.9
KECS Kecovo 78.67 348 *e*P P 12 37 47.1 +1.9
GERES GERESS Array B 79.03 352 P P 12 37 46.1 -1.2
comp=Z,0.2nm,0.3s,baz=14,slow=14,SNR=1.4
comp=Z,0.2nm,0.3s
RAO Raoul Island 80.93 180 P P 12 37 58.0 +0.6
comp=Z,178nm,0.3s,baz=89,slow=22,SNR=2.0
RAO Raoul Island 80.93 180 P P 12 37 57.7 +0.3
RAO Raoul Island 80.93 180 P P 12 37 57.7 +0.3
RAO pmax pmax
comp=Z,295nm,0.5s
GNI Garni 81.06 328 LR LR 13 19 41.3
comp=Z,53nm,18.3s,baz=2.0,slow=40
TIRR Tirgusor 81.29 341 P P 12 37 59.4 0.0
TIRR Tirgusor 81.29 341 P P 12 37 59.4 0.0
TIRR pmax pmax
comp=Z,109nm,1.5s
USIM UNAN 81.41 81 P P 12 38 00.7 +0.3
FUORN Ofenpass-Fuorn 81.49 354 P P 12 38 00.4 -0.3
FUORN IAmb IAmb 12 40 34.8
comp=Z,41nm,2.0s
MYKOM Kota Tinggi 81.51 262 P P 12 38 02.0 +1.0
MYKOM IAmb IAmb 12 38 03.5
comp=Z,21nm,1.4s
KNRA Kununurra 81.83 232 P P 12 38 02.9 +0.5
WB0 Warramunga Arr 82.80 225 P P 12 38 07.6 +0.2
WR0 Warramunga Arr 82.91 225 P P 12 38 08.1 +0.1
WRAB Tennant Creek 82.97 225 ⇓ *i*P P 12 38 08.2 -0.1
WRAB pmax pmax
comp=Z,3.0nm,1.0s
WRAB Tennant Creek 82.97 225 P P 12 38 08.2 -0.1
WRAB PcP PcP 12 38 12.4 -0.4
WRAB x x 12 38 48.5
WRA Warramunga Arr 82.98 225 P P 12 38 08.3 -0.1
comp=Z,3.0nm,0.9s,baz=33,slow=5.9,SNR=17
WRA pP pP 12 38 33.3 -2.2
comp=Z,2.4nm,0.7s,baz=36,slow=6.4,SNR=5.3
WRA PKKPbc PKKPbc 12 56 28.8 0.0
comp=Z,0.3nm,0.8s,baz=227,slow=2.4,SNR=5.9
comp=Z,3.0nm,0.9s
WRA Warramunga Arr 82.98 225 P P 12 38 07.6 -0.8
WRA Warramunga Arr 82.98 225 P P 12 38 07.6 -0.8
WRA pmax pmax
comp=Z,1.0nm,1.6s
JUD3 Juan Diaz 3 83.37 82 P P 12 38 10.5 -0.3
PSI Prapat 83.75 267 P P 12 38 13.1 +0.4
PSI Prapat 83.75 267 P P 12 38 13.1 +0.4
PSI pmax pmax
comp=Z,19nm,0.8s
RPSI Rantau Prapat 83.83 266 P P 12 38 13.1 +0.1
RPSI IAmb IAmb 12 38 13.7
comp=Z,19nm,0.8s
BR131 Keskin Array S 84.64 336 *e*P P 12 38 16.9 0.0
BRTR Keskin Array B 84.64 336 P P 12 38 16.3 -0.6
comp=Z,1.1nm,0.6s,baz=31,slow=3.8,SNR=4.7
comp=Z,1.1nm,0.6s
BRTR Keskin Array B 84.64 336 P P 12 38 16.8 -0.2
BRTR Keskin Array B 84.64 336 *ce*P P 12 38 17.0 0.0
BRTR pmax pmax
comp=Z,1.0nm,0.5s
HYB Hyderabad 84.64 291 *e*P P 12 38 18.4 +1.3
MURB Monte Urbino 84.67 353 P P 12 38 16.7 -0.3
FDMO Fiordimonte 84.85 352 P P 12 38 18.9 +1.1
NRCA Norcia 85.05 352 P P 12 38 19.4 +0.5
FITZ Fitzroy Crossi 85.42 233 LR LR 13 14 09.7
comp=Z,57nm,21.3s,baz=114,slow=34
DR12 Loma Pena Alta 86.09 64 P P 12 38 24.7 +0.4
PIRO Carate, Puerto 86.09 81 P P 12 38 25.4 +1.1
ARMA Armidale 86.41 206 P P 12 38 27.1 +1.6
AS31 Alice Springs 86.45 223 P P 12 38 26.6 +0.8
ASAR Alice Springs 86.45 223 P P 12 38 26.4 +0.7
comp=Z,5.7nm,0.9s,baz=25,slow=5.0,SNR=26
ASAR pP pP 12 38 50.9 -2.2
comp=Z,4.3nm,0.8s,baz=30,slow=5.1,SNR=7.7
ASAR PKKPbc PKKPbc 12 56 19.6 -1.1
comp=Z,0.1nm,0.5s,baz=203,slow=1.9,SNR=4.2
comp=Z,5.7nm,0.9s
ASAR Alice Springs 86.45 223 P P 12 38 26.3 +0.6
INKA Innaminka 87.40 216 P P 12 38 31.2 +1.0
ESDC Sonseca Array 88.50 5 P P 12 38 34.6 -1.0
comp=Z,0.9nm,0.6s,baz=350,slow=4.7,SNR=9.4
comp=Z,0.9nm,0.6s
ESDC Sonseca Array 88.50 5 P P 12 38 34.9 -0.8
VAE Valguarnera 90.24 350 LR LR 13 25 44.3
comp=Z,81nm,18.1s,baz=259,slow=40
ASF Jabal al Asfar 90.85 331 LR LR 13 24 51.8
comp=Z,28nm,19.2s,baz=21,slow=39
BFZ Birch Farm 92.49 185 P P 12 38 56.0 +2.4
TORD Torodi Ar. Bea 115.09 1 PKP PKiKP 12 44 22.5 -1.5
comp=Z,2.3nm,0.4s,baz=309,slow=2.0,SNR=41
TORD PKKPbc PKKPbc 12 54 57.6 +0.1
comp=Z,0.9nm,0.8s,baz=199,slow=3.4,SNR=4.1
TORD PKKPab PKKPab 12 55 07.0 -1.4
comp=Z,0.3nm,0.5s,baz=216,slow=3.2,SNR=4.4
H03N2 Juan Fernandez 120.64 106 T T 14 56 23.1
baz=317,slow=77,SNR=207
H03N1 Juan Fernandez 120.66 106 T T 14 56 33.3
baz=317,slow=77,SNR=233
H03N3 Juan Fernandez 120.66 106 T T 14 56 22.2
baz=317,slow=77,SNR=220
DBIC Dimbokro 121.20 8 PKP PKPdf 12 44 34.7 -1.1
comp=Z,2.3nm,0.3s,baz=0.8,slow=3.1,SNR=9.6
CPUP Villa Florida 128.82 84 PKP PKPdf 12 44 49.7 -0.3
comp=Z,1.1nm,0.6s,baz=307,slow=4.9,SNR=4.8
CPUP SKPab SKPab 12 48 00.4
comp=Z,2.0nm,0.7s,baz=321,slow=3.6,SNR=7.6
VNDA Vanda 129.91 186 PKP PKPdf 12 44 50.7 +0.2
comp=Z,0.2nm,0.4s,baz=16,slow=5.1,SNR=2.0
PLCA Paso Flores 130.48 107 PKP PKiKP 12 44 53.3 -0.3
comp=Z,2.4nm,1.0s,baz=357,slow=5.7,SNR=3.6
PLCA SKPbc SKPbc 12 48 04.9 -1.7
comp=Z,1.1nm,0.6s,baz=324,slow=4.7,SNR=3.6
QSPA South Pole Qui 141.79 180 PKhKP PKPpre 12 45 07.4
comp=Z,1.5nm,0.7s,baz=171,slow=0.7,SNR=12
QSPA PKP PKPdf 12 45 13.3 +0.4
comp=Z,2.3nm,0.5s,baz=325,slow=1.1,SNR=14
QSPA pPKPbc pPKPdf 12 45 39.0 -1.7
comp=Z,6.9nm,0.8s,baz=310,slow=0.6,SNR=5.8
QSPA SKPbc SKPbc 12 48 38.5 -1.8
comp=Z,5.1nm,1.1s,baz=88,slow=2.5,SNR=3.9
MREMI Moremi 144.80 317 PKPbc PKPbc 12 45 19.1 +0.2
TSUM Tsumeb 145.12 334 PKPbc PKPbc 12 45 19.0 -1.0
GRTLG Ghanzi 146.06 327 PKPbc PKPbc 12 45 22.9 0.0
LPHEP Lephephe 146.16 319 PKPbc PKPbc 12 45 23.0 -0.1
MAW Mawson 147.44 218 PKPbc PKPbc 12 45 24.6 -0.6
comp=Z,5.1nm,0.7s,baz=42,slow=3.6,SNR=2.7
MAW pPKPbc pPKPdf 12 45 51.4 +0.8
comp=Z,18nm,0.9s,baz=147,slow=1.0,SNR=5.9
LBTB Lobatse 147.74 318 PKPbc PKPbc 12 45 27.1 -0.4
comp=Z,14nm,0.4s,baz=359,slow=1.7,SNR=9.6
BOSA Boshof 151.04 315 PKPbc PKPbc 12 45 34.9 -0.7
comp=Z,12nm,0.5s,baz=20,slow=2.5,SNR=53
BOSA PKPab PKPab 12 45 40.2 -3.3

comp=Z,8.3nm,0.5s,baz=27,slow=2.5,SNR=13
SNAA Sanae 160.16 175 PKPab PKPab 12 46 21.8 +0.5
comp=Z,2.0nm,0.5s,baz=182,slow=14,SNR=1.7

GCMT 23 12:30:52.0±0.3, 13.46°S±0.02°×112.12°W±0.02°, h19km±1km, MW4.9/99, Moment Tensor Solution. s14,c15; s99,c125; Duration: 0 Moment tensor: Scale 10^{16} Nm; M_{rr}-0.19±.11; $M_{\theta\theta}$1.08±.10; $M_{\phi\phi}$-0.89±.11; $M_{r\theta}$0.18±.20; $M_{\theta\phi}$2.37±.09; $M_{\phi r}$-0.39±.21; **Best double couple:** $M_0$2.60600×10^{16} **NP1:**ϕ_s281.00000°, δ82.00000°, λ-6.00000°. **NP2:**ϕ_s12.00000°, δ84.00000°, λ-172.00000°. **Principal axes:** T 2.6630, Plg1.0000°, Azm146.0000°; N -0.1120, Plg80.0000°, Azm49.0000°; P -2.5490, Plg10.0000°, Azm236.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Central East Pacific Rise**

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*IDC **23** 12:33:56.9±2.1, 43.35°N×134.19°E, h438km±14km, mb2.8/4, mbtmp3.6/6 Error ellipse: s-maj=58.4km s-min=19.1km az=56.0*
ISC 23 12:33:57.0±1.2**, 43.4°N**±0.2°×**134.1°E**±0.2°**, h430km, n7, σ1.16/7, mb3.1/4, Primorye**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USRK	**Ussuriysk Ar.**	**1.73**	**300**	P	**P**	**12 34 54.7**	**+0.6**
	2.5nm,0.5s,baz=126,slow=4.6,SNR=11						
MJAR	**Matsushiro Arr**	**7.51**	**154**	P	**P**	**12 35 48.0**	**+1.0**
	0.9nm,0.6s,baz=350,slow=9.7,SNR=1.6						
KSRS	**Korea Array**	**7.54**	**221**	P	**P**	**12 35 48.1**	**+0.9**
	3.1nm,0.5s,baz=40,slow=11,SNR=12						
MKAR	**Makanchi Array**	**36.19**	**294**	P	**P**	**12 40 21.2**	**0.0**
	0.5nm,0.5s,baz=87,slow=9.9,SNR=5.1						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**37.79**	**301**	P	**P**	**12 40 34.3**	**-0.1**
	1.3nm,0.5s,baz=80,slow=8.9,SNR=4.6						
	1.3nm,0.5s						
WRA	**Warramunga Arr**	**62.99**	**180**	P	**P**	**12 43 38.5**	**-1.7**
	0.3nm,0.6s,baz=342,slow=5.2,SNR=2.3						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**66.69**	**180**	P	**P**	**12 44 03.0**	**-0.7**
	0.2nm,0.4s,baz=5.5,slow=4.6,SNR=1.6						
	0.2nm,0.4s						

IDC 23 12:34:32.2±3.5**, 19.51°S×169.82°E, h276km±46km, mb3.2/3, mbtmp3.7/4, Error ellipse: s-maj=137.4km s-min=33.7km az=153.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.06**	**230**	P	Pn	12 35 38.0	0.0
	5.5nm,0.6s,baz=55,slow=23,SNR=7.6						
DZM				S	S	12 36 24.6	-6.0
	8.2nm,0.4s,baz=120,slow=20,SNR=5.2						
WRA	**Warramunga Arr**	**33.37**	**263**	P	P	12 40 44.6	-0.5
	0.4nm,0.5s,baz=98,slow=7.7,SNR=22						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**33.60**	**256**	P	P	12 40 47.5	+0.3
	2.2nm,0.5s,baz=82,slow=9.3,SNR=31						
	2.2nm,0.5s						
ILAR	**Eielson Array**	**90.32**	**17**	P	P	12 47 01.4	0.0
	0.2nm,0.6s,baz=234,slow=5.8,SNR=4.7						
	0.2nm,0.6s						

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*PRE **23** 12:36:08.5±1.0, 27.86°S×26.68°E, h2km, ML2.6, Presumed earthquake*
*BGSI **23** 12:36:09.2±1.2, 28.13°S×26.82°E, h158km±48km, ML2.9*
ISC 23 12:36:11.5±2.5**, 27.89°S**±0.04°×**26.72°E**±0.04°**, h29km**±22km**, n23, σ1.38/44, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNKL	**Senekal, Frees**	**1.00**	**113**	*e*P	**Pn**	**12 36 28.3**	**-1.6**
SNKL				*e*S	**Sn**	**12 36 43.0**	**-0.2**
SNKL				IAML		12 36 46.0	
	comp=Z,201nm,0.5s						
PRYS	**Parys**	**1.12**	**31**	*e*P	**Pn**	**12 36 30.1**	**-1.3**
PRYS				*e*S	**Sn**	**12 36 45.9**	**-0.1**
PRYS				IAML		12 36 48.0	
	comp=Z,196nm,0.3s						
BOSA	**Boshof**	**1.48**	**241**	*e*P	**Pn**	**12 36 36.6**	**+0.3**
BOSA				*e*S	**Sb**	**12 36 56.7**	**-0.3**
BOSA				IAML		12 36 56.9	
	comp=Z,83nm,0.2s						
HRAO	**HartRAO**	**2.17**	**24**	*e*P	**Pn**	**12 36 46.1**	**+0.2**
HRAO				*e*S	**Sn**	**12 37 13.5**	**+1.6**
HRAO				IAML		12 37 18.0	
	comp=Z,40nm,0.4s						
MAKGR	**Makgori**	**2.69**	**320**	*i* P	**Pn**	**12 36 53.6**	**+0.6**
MAKGR				*i* S	**Sn**	**12 37 28.1**	**+3.5**
MAKGR				IAML		12 37 32.8	
	comp=N,211nm,0.6s						
LBTB	**Lobatse**	**3.04**	**340**	*e*P	**Pn**	**12 36 57.4**	**-0.4**
LBTB				*e*S	**Sn**	**12 37 33.8**	**+0.6**
LBTB				IAML		12 37 50.3	
	comp=Z,25nm,0.3s						
PMBG	**Pietermaritzbu**	**3.70**	**117**	*e*P	**Pn**	**12 37 08.7**	**+1.8**
PMBG				*e*S	**Sn**	**12 37 52.2**	**+2.6**
PMBG				IAML		12 38 05.0	
	comp=Z,20nm,0.3s						
LEPH	**Lephalale, Lim**	**4.13**	**14**	*e*P	**Pn**	**12 37 12.8**	**0.0**
LEPH				*e*S	**Sn**	**12 38 00.2**	**0.0**
LEPH				IAML		12 38 22.9	
	comp=Z,11nm,0.4s						
LPHEP	**Lephephe**	**4.58**	**350**	*i* P	**Pn**	**12 37 18.5**	**-0.4**
LPHEP				*i* S	**Sn**	**12 38 08.7**	**-2.5**
LPHEP				IAML		12 38 36.2	
	comp=N,7.9nm,0.6s						
PILG	**Pilgrimsrest,**	**4.63**	**51**	*e*P	**Pn**	**12 37 20.0**	**+0.1**
PILG				*e*S	**Sn**	**12 38 13.2**	**+0.4**
PILG				IAML		12 38 44.1	
	comp=Z,12nm,0.6s						
BFON	**Badsfontein, M**	**4.70**	**213**	*e*P	**Pn**	**12 37 22.1**	**+1.4**
BFON				*e*S	**Sn**	**12 38 14.2**	**-0.1**
BFON				IAML		12 38 42.2	
	comp=Z,22nm,0.8s						
GRAF	**Camdeboo Natio**	**4.78**	**203**	*e*P	**Pn**	**12 37 22.2**	**+0.5**
GRAF				*e*S	**Sn**	**12 38 16.1**	**-0.2**
GRAF				IAML		12 38 46.7	
	comp=Z,14nm,0.5s						
KDWAN	**Kaudwane**	**4.86**	**337**	*i* P	**Pn**	**12 37 22.4**	**-0.5**
KDWAN				IAML		12 38 40.3	
	comp=N,51nm,0.5s						
BRAK	**Brakfontein**	**5.11**	**220**	*e*P	**Pn**	**12 37 27.4**	**+1.2**
BRAK				*e*S	**Sn**	**12 38 25.1**	**+0.8**
BRAK				IAML		12 39 02.0	
	comp=Z,11nm,0.4s						
ROOI	**Rooidraai Farm**	**5.35**	**210**	*e*P	**Pn**	**12 37 30.2**	**+0.7**
ROOI				*e*S	**Sn**	**12 38 30.3**	**+0.2**
ROOI				IAML		12 39 00.6	
	comp=Z,17nm,0.6s						
GRHM	**Grahamstown, E**	**5.38**	**183**	*e*P	**Pn**	**12 37 31.1**	**+1.3**
GRHM				*e*S	**Sn**	**12 38 32.2**	**+1.4**
GRHM				IAML		12 39 01.2	
	comp=Z,5.8nm,0.6s						
GRAN	**Grantham**	**5.90**	**221**	*e*P	**Pn**	**12 37 38.6**	**+1.4**
GRAN				*e*S	**Sn**	**12 38 44.0**	**+0.1**
GRAN				IAML		12 39 16.1	
	comp=Z,18nm,0.4s						
FRAZ	**Fraserburg**	**6.12**	**228**	*e*P	**Pn**	**12 37 40.5**	**+0.4**
FRAZ				*e*S	**Sn**	**12 38 48.1**	**-1.2**
FRAZ				IAML		12 39 20.4	
	comp=Z,12nm,0.5s						
KGCAE	**Kacgae**	**6.47**	**320**	*i* P	**Pn**	**12 37 42.2**	**-2.8**
MERW	**Merweville**	**6.55**	**222**	*e*P	**Pn**	**12 37 47.8**	**+1.7**
MERW				*e*S	**Sn**	**12 38 58.9**	**-1.0**
MERW				IAML		12 39 36.5	
	comp=Z,8.4nm,0.4s						
SUR	**Sutherland**	**6.80**	**227**	*e*P	**Pn**	**12 37 51.1**	**+1.6**
SUR				*e*S	**Sn**	**12 39 05.4**	**-0.6**
SUR				IAML		12 39 40.2	
	comp=Z,9.4nm,0.7s						
MATJ	**Matjiesfontein**	**7.53**	**223**	*e*P	**Pn**	**12 38 01.2**	**+1.7**
MATJ				*e*S	**Sn**	**12 39 22.1**	**-1.8**
MATJ				IAML		12 40 17.7	
	comp=Z,6.8nm,0.4s						
CER	**Ceres**	**8.40**	**228**	*e*P	**Pn**	**12 38 12.1**	**+0.6**
CER				*e*S	**Sn**	**12 39 42.9**	**-2.5**

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*IDC **23** 12:51:38.0±0.9, 12.91°S×111.84°W, h0km, mb3.7/9, mbtmp3.7/9, MS4.1/46, Error ellipse: s-maj=34.9km s-min=19.8km az=62.0*
*GCMT **23** 12:51:39.0±0.3, 13.48°S±0.01°×112.11°W±0.01°, h12km, MW4.9/108, Moment Tensor Solution. s19,c22; s108,c148; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.34±.08; $M_{\theta\theta}$0.81±.08; $M_{\phi\phi}$-0.47±.09; $M_{r\theta}$-0.04±.23; $M_{\theta\phi}$2.58±.06; $M_{\phi r}$0.10±.24; Best double couple: $M_0$2.66200×10^{16} NP1:ϕ_s97.00000°, δ88.00000°, λ-2.00000°. NP2:ϕ_s187.00000°, δ88.00000°, λ-178.00000°. Principal axes: T 2.8270, Plg1.0000°, Azm322.0000°; N -0.3300, Plg87.0000°, Azm221.0000°; P -2.4980, Plg3.0000°, Azm52.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **23** 12:51:40.0±1.6, 13.3°S±0.1°×112.0°W±0.1°, h10km±1km, mb4.6/65 Error ellipse: s-maj=21.3km s-min=13.5km az=222.0*
ISC 23 12:51:38.9±0.7**, 13.3°S**±0.1°×**112.0°W**±0.1°**, h10km, n128, σ1.11/79, mb4.5/37, MS4.2/45, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**14.00**	**170**	LR	LR	12 58 45.5	
	comp=Z,2μm,19.7s,baz=338,slow=30						
PTCN	**Pitcairn Islan**	**20.67**	**233**	P	**P**	**12 56 18.9**	**-0.2**
TAOE	**Nuku Hiva Isla**	**27.93**	**276**	*e*LR	LR	13 03 46.9	
	353nm,23.9s						
ATAH	**Atahualpa**	**33.64**	**83**	LR	LR	13 08 50.0	
	comp=Z,447nm,19.4s,baz=260,slow=31						
COHC	**Cochancay**	**34.15**	**74**	P	**P**	**12 58 23.9**	**-0.7**
CMIG	**Matias Romero**	**34.62**	**30**	LR	LR	13 08 37.2	
	comp=Z,56nm,19.4s,baz=222,slow=30						
APG	**El Apazote**	**35.30**	**38**	LR	LR	13 10 00.4	
	comp=Z,58nm,20.3s,baz=256,slow=32						
CCIG	**Comitan**	**35.36**	**34**	P	**P**	**12 58 34.2**	**-0.9**
CCIG				IAmb	IAmb	12 58 57.9	
	comp=Z,15nm,1.2s						
SLOR	**San Lorenzo -**	**35.48**	**72**	P	**P**	**12 58 34.4**	**-2.2**
JTS	**Las Juntas de**	**35.66**	**50**	LR	LR	13 09 29.9	
	comp=Z,509nm,21.2s,baz=241,slow=30						
OTAV	**Otavalo**	**35.89**	**71**	P	**P**	**12 58 39.2**	**-0.9**
H03N2	**Juan Fernandez**	**36.18**	**129**	T	T	13 37 04.3	
	baz=300,slow=77,SNR=34						
H03N3	**Juan Fernandez**	**36.19**	**129**	T	T	13 37 05.3	
	baz=300,slow=77,SNR=36						
H03N1	**Juan Fernandez**	**36.19**	**129**	T	T	13 36 58.0	
	baz=300,slow=77,SNR=44						
PPT	**Papeete**	**36.40**	**258**	LR	LR	13 10 22.1	
	comp=Z,144nm,18.7s,baz=51,slow=31						
PPT2	**Papeete2**	**36.40**	**258**	*e*LR	LR	13 08 19.6	
PPT2				*e*LR	LR	13 08 26.9	
	comp=Z,311nm,31.8s						
TBI	**Tubuai**	**36.81**	**249**	*e*LR	LR	13 08 38.9	
	comp=Z,3μm,26.5s						
TBI				*e*LR	LR	13 08 39.6	
	comp=Z,1μm,28.5s						
LPIG	**La Paz**	**37.20**	**3**	LR	LR	13 10 11.7	
	comp=Z,440nm,20.3s,baz=189,slow=30						
CZSB	**Cruzeiro do Su**	**39.03**	**86**	P	**P**	**12 59 06.5**	**+0.3**
CZSB				IAmb	IAmb	12 59 23.8	
	comp=Z,16nm,1.4s						
PB07	**IPOC Station P**	**40.96**	**108**	P	**P**	**12 59 22.2**	**-0.2**
PB07				IAmb	IAmb	12 59 25.6	
	comp=Z,19nm,1.4s						
PB11	**IPOC Station P**	**41.05**	**105**	P	**P**	**12 59 22.6**	**-0.5**
PB11				IAmb	IAmb	12 59 36.1	
	comp=Z,15nm,1.3s						
PB16	**IPOC Station P**	**41.16**	**103**	P	**P**	**12 59 23.8**	**-0.7**
AC06	**Mina Casimiro**	**41.31**	**116**	P	**P**	**12 59 25.5**	**+0.5**
AC06				IAmb	IAmb	12 59 34.5	
	comp=Z,14nm,1.3s						
ROSC	**El Rosal**	**41.56**	**67**	LR	LR	13 12 53.1	
	comp=Z,233nm,19.8s,baz=248,slow=31						
LPAZ	**La Paz**	**42.50**	**100**	P	**P**	**12 59 35.4**	**-0.2**
	comp=Z,4.4nm,1.1s,baz=271,slow=5.5,SNR=10.0						
LPAZ				LR	LR	13 13 14.4	
	comp=Z,133nm,19.8s,baz=256,slow=31						
	comp=Z,4.4nm,1.1s						
LPAZ	**La Paz**	**42.50**	**100**		**P**	**12 59 36.0**	**+0.5**
LPAZ				IAmb	IAmb	12 59 56.8	
	comp=Z,13nm,1.4s						
TX31	**Lajitas Ar. Si**	**43.14**	**11**	P	**P**	**12 59 41.8**	**+1.9**
TXAR	**Lajitas Array**	**43.14**	**11**	P	**P**	**12 59 37.8**	**-2.1**
	comp=Z,0.1nm,0.6s,baz=193,slow=10,SNR=4.5						
TXAR				LR	LR	13 14 20.6	
	comp=Z,154nm,18.2s,baz=185,slow=32						
	comp=Z,0.1nm,0.6s						
TXAR	**Lajitas Array**	**43.14**	**11**	P	**P**	**12 59 42.2**	**+2.4**
833A	**Chaparral WMA,**	**43.14**	**16**	P	**P**	**12 59 41.0**	**+1.2**
SAND	**Sanderson**	**44.04**	**12**		**P**	**12 59 47.7**	**+0.7**
SAND				IAmb	IAmb	12 59 54.5	
	comp=Z,7.9nm,1.2s						
VHRN	**Van Horn**	**44.34**	**9**	P	**P**	**12 59 49.5**	**0.0**
MNTX	**Cornudas Mount**	**45.18**	**8**		**P**	**12 59 56.8**	**+0.7**
MNTX				IAmb	IAmb	13 00 17.3	
	comp=Z,6.3nm,1.2s						
OZNA	**Ozona**	**45.19**	**13**	P	**P**	**12 59 57.1**	**+0.9**
OZNA				IAmb	IAmb	13 00 03.8	
	comp=Z,14nm,1.4s						
PLCA	**Paso Flores**	**45.36**	**135**	P	**P**	**12 59 59.5**	**+1.8**
	comp=Z,2.0nm,0.8s,baz=314,slow=10,SNR=3.8						
PLCA				LR	LR	13 14 14.6	
	comp=Z,632nm,18.5s,baz=304,slow=30						
	comp=Z,2.0nm,0.8s						
PLCA	**Paso Flores**	**45.36**	**135**	P	**P**	**12 59 59.4**	**+1.8**
PLCA				IAmb	IAmb	13 00 18.7	
	comp=Z,7.4nm,1.2s						
TJX	**Tijuana**	**45.79**	**354**	P	**P**	**13 00 01.4**	**+0.5**
BRDY	**Brady**	**46.05**	**16**		**P**	**13 00 03.6**	**+0.6**
BRDY				IAmb	IAmb	13 00 07.0	
	comp=Z,9.3nm,1.1s						
RAR	**Rarotonga**	**46.12**	**253**	LR	LR	13 14 11.1	
	comp=Z,274nm,19.0s,baz=96,slow=29						
DPP	**Dos Picos Cty**	**46.26**	**354**	P	**P**	**13 00 06.1**	**+1.4**
DPP				IAmb	IAmb	13 00 09.3	
	comp=Z,8.7nm,1.1s						
SDV	**Santo Domingo**	**46.64**	**64**	LR	LR	13 16 58.8	
	comp=Z,150nm,18.9s,baz=245,slow=33						
SDV	**Santo Domingo**	**46.64**	**64**	P	**P**	**13 00 08.6**	**+0.5**
PFO	**Pinyon Flats O**	**46.83**	**355**	LR	LR	13 15 09.8	
	comp=Z,280nm,18.2s,baz=208,slow=30						
Y14A	**Wickenburg**	**46.97**	**359**	P	**P**	**13 00 12.1**	**+1.8**
Y14A				IAmb	IAmb	13 00 17.6	
	comp=Z,6.1nm,1.3s						
WHTX	**Lake Whitney,**	**47.14**	**17**	P	**P**	**13 00 12.1**	**+0.6**
WHTX				IAmb	IAmb	13 00 13.8	
	comp=Z,5.1nm,0.8s						
Y22A	**Socorro**	**47.21**	**6**	P	**P**	**13 00 14.0**	**+1.8**
CRNM	**Carthage**	**47.25**	**6**	P	**P**	**13 00 13.1**	**+0.6**
SN07	**Snyder 07**	**47.33**	**13**	P	**P**	**13 00 13.8**	**+0.7**
SN07				IAmb	IAmb	13 00 19.4	
	comp=Z,9.8nm,1.3s						
LENM	**Lemitar**	**47.44**	**6**	P	**P**	**13 00 14.8**	**+0.8**
X18A	**Snowflake**	**47.59**	**2**	P	**P**	**13 00 14.8**	**-0.5**
X18A				IAmb	IAmb	13 00 34.2	
	comp=Z,3.6nm,0.9s						
APMT	**Aspermont**	**47.73**	**14**	P	**P**	**13 00 16.1**	**0.0**
APMT				IAmb	IAmb	13 00 22.0	
	comp=Z,9.1nm,1.3s						
DKNS	**Dickens**	**47.88**	**13**	P	**P**	**13 00 18.4**	**+1.0**
W13A	**Hualapai Mount**	**48.15**	**358**		**P**	**13 00 21.4**	**+1.8**
ANMO	**Albuquerque**	**48.26**	**6**	LR	LR	13 17 17.6	
	comp=Z,242nm,18.4s,baz=189,slow=32						
WUAZ	**Wupatki**	**48.54**	**1**	P	**P**	**13 00 22.9**	**+0.4**
WUAZ				IAmb	IAmb	13 00 37.6	
	comp=Z,4.1nm,1.1s						
LOOK	**Love County**	**49.10**	**16**	P	**P**	**13 00 26.3**	**-0.3**
SHPR	**Sheep Range**	**49.61**	**357**	P	**P**	**13 00 30.6**	**-0.1**
VILB	**Vilhena**	**50.41**	**96**	P	**P**	**13 00 36.2**	**-0.9**
CCUT	**Cedar City**	**50.58**	**359**	P	**P**	**13 00 39.7**	**+1.6**
MTPU	**Mount Pierson**	**51.06**	**360**	P	**P**	**13 00 43.0**	**+1.2**
SDCO	**Great Sand Dun**	**51.13**	**7**	P	**P**	**13 00 42.9**	**+0.5**
SDCO				IAmb	IAmb	13 01 03.7	
	comp=Z,9.5nm,1.2s						
PTLB	**Pontes e Lacer**	**51.19**	**99**		**P**	**13 00 42.7**	**-0.2**
PTLB				IAmb	IAmb	13 00 42.8	
	comp=Z,6.1nm,1.2s						
PV18	**Skein Mesa, Pa**	**51.35**	**3**	P	**P**	**13 00 44.0**	**+0.2**
PV18				IAmb	IAmb	13 01 12.8	
	comp=Z,7.2nm,1.1s						
LHV	**Little Huntoon**	**51.62**	**354**	P	**P**	**13 00 47.1**	**+1.4**

LHV IAmb IAmb 13 00 50.8
comp=Z,7.7nm,1.3s
NV11 Mina Array Sit 51.77 354 P P 13 00 47.9 +1.0
NV11 IAmb IAmb 13 00 55.0
comp=Z,10nm,1.5s
NVAR Mina Array Bea 51.78 354 P **P 13 00 46.4 -0.7**
comp=Z,1.4nm,0.8s,baz=178,slow=9.6,SNR=15
NVAR LR LR 13 18 05.4
comp=Z,236nm,18.1s,baz=176,slow=31
comp=Z,1.4nm,0.8s
NVAR Mina Array Bea 51.78 354 P **P 13 00 48.1 +1.0**
P18A Preston Nutter 52.67 2 P **P 13 00 54.0 +0.2**
P18A IAmb IAmb 13 01 18.2
comp=Z,6.3nm,1.2s
CPUP Villa Florida 52.73 113 P **P 13 00 53.6 -0.6**
comp=Z,0.4nm,0.3s,baz=312,slow=12,SNR=3.2
CPUP LR LR 13 18 51.9
comp=Z,194nm,21.9s,baz=256,slow=31
comp=Z,0.4nm,0.3s
CPUP Villa Florida 52.73 113 P **P 13 00 53.7 -0.6**
ELK Elko 53.84 357 LR LR 13 19 19.3
comp=Z,272nm,20.3s,baz=195,slow=31
ELK Elko 53.84 357 P **P 13 01 03.6 +1.3**
ELK IAmb IAmb 13 01 05.4
comp=Z,7.4nm,1.4s
SJG San Juan 54.97 56 LR LR 13 21 56.7
comp=Z,79nm,18.6s,baz=238,slow=33
TKL Tuckaleechee C 55.54 28 LR LR 13 23 44.6
comp=Z,70nm,19.3s,baz=79,slow=35
YBH Yreka Blue Hor 55.62 350 LR LR 13 19 29.1
comp=Z,30nm,19.3s,baz=173,slow=30
WVOR Wild Horse Val 55.78 354 P **P 13 01 17.2 +1.0**
WVOR IAmb IAmb 13 01 23.7
comp=Z,8.6nm,1.4s
PDAR Pinedale Array 55.82 2 P **P 13 01 14.5 -2.2**
comp=Z,0.4nm,0.7s,baz=167,slow=7.2,SNR=5.2
PDAR LR LR 13 20 44.4
comp=Z,120nm,20.9s,baz=178,slow=32
comp=Z,0.4nm,0.7s
PDAR Pinedale Array 55.82 2 P **P 13 01 15.7 -0.9**
HLID Hailey 56.62 358 P **P 13 01 23.1 +0.9**
FXWY Fox Creek 56.66 1 P **P 13 01 23.1 +0.5**
J08A Circle Bar Ran 56.68 354 **P 13 01 23.9 +1.3**
J08A IAmb IAmb 13 01 33.1
comp=Z,6.6nm,1.0s
MOOW Moose Ponds 56.77 1 P **P 13 01 25.7 +2.3**
FLWY Flagg Ranch 57.11 1 P **P 13 01 26.8 +1.0**
MCMT McKenzie Canyo 57.84 359 P **P 13 01 32.2 +1.2**
BMO Blue Mountains 58.06 356 **P 13 01 33.3 +1.0**
BMO IAmb IAmb 13 01 47.5
comp=Z,6.9nm,1.5s
PMSA Palmer Station 60.95 159 LR LR 13 21 05.9
comp=Z,264nm,20.3s,baz=358,slow=29
NEW Newport 61.44 356 LR LR 13 23 38.6
comp=Z,166nm,20.1s,baz=168,slow=31
MDP Montagnes des 61.73 77 LR LR 13 25 13.2
comp=Z,99nm,20.2s,baz=297,slow=33
RAO Raoul Island 62.70 244 LR LR 13 22 10.1
comp=Z,118nm,21.8s,baz=104,slow=29
ULM Lac du Bonnet 64.84 11 LR LR 13 27 18.5
comp=Z,88nm,18.8s,baz=194,slow=33
SADO Sadowa 65.04 25 LR LR 13 29 58.3
comp=Z,113nm,18.6s,baz=236,slow=36
BBB Bella Bella 66.67 349 LR LR 13 25 11.7
comp=Z,94nm,18.7s,baz=162,slow=30
URZ Urewera 66.91 234 LR LR 13 23 56.8
comp=Z,219nm,20.8s,baz=122,slow=29
MSVF Nonsavu 67.18 256 LR LR 13 24 21.3
comp=Z,162nm,21.7s,baz=77,slow=29
RPZ Rata Peaks 71.51 228 LR LR 13 26 25.2
comp=Z,310nm,22.0s,baz=256,slow=29
DLBC Dease Lake 72.97 350 LR LR 13 29 59.6
comp=Z,126nm,18.8s,baz=110,slow=32
YKA Yellowknife Ar 75.56 359 P **P 13 03 21.9 -1.4**
comp=Z,0.3nm,0.9s,baz=183,slow=4.7,SNR=4.1
YKA LR LR 13 33 32.7
comp=Z,223nm,18.2s,baz=296,slow=33
comp=Z,0.3nm,0.9s
YKA Yellowknife Ar 75.56 359 P **P 13 03 24.5 +1.1**
VNDA Vanda 76.27 193 LR LR 13 29 44.8
comp=Z,92nm,21.7s,baz=88,slow=30
QSPA South Pole Qui 76.81 180 P P 13 03 35.0 +4.2
QSPA LR LR 13 31 04.3
comp=Z,107nm,21.7s,baz=104,slow=31
comp=Z,2.1nm,0.9s
QSPA South Pole Qui 76.81 180 P **P 13 03 30.6 -0.2**
SCHQ Schefferville 77.84 25 LR LR 13 36 29.8
comp=Z,200nm,20.5s,baz=200,slow=35
KDAK Kodiak Island 78.26 339 LR LR 13 30 23.9
comp=Z,217nm,18.2s,baz=144,slow=30
K29M Barlow Dome 79.35 349 P **P 13 03 45.3 +0.6**
K29M IAmb IAmb 13 04 04.3
comp=Z,4.8nm,1.1s
BCAR Beaver Creek A 79.54 347 P **P 13 03 44.8 -0.9**
L22K Petersville 81.38 343 P **P 13 03 54.9 -0.7**
PPLA Purkeypile 82.08 343 P **P 13 03 58.9 -0.5**
ILAR Eielson Array 82.18 346 P **P 13 03 57.1 -2.7**
comp=Z,0.4nm,1.0s,baz=181,slow=6.3,SNR=2.5
ILAR LR LR 13 32 23.5
comp=Z,82nm,20.7s,baz=98,slow=30
comp=Z,0.4nm,1.0s
WRH Wood River Hil 82.23 345 P **P 13 03 59.4 -0.5**
KTH Kantishna Hill 82.23 344 **P 13 04 00.2 0.0**
INK Inuvik 82.83 352 LR LR 13 36 17.9
comp=Z,164nm,18.7s,baz=292,slow=32
SNAA Sanae 83.37 162 LR LR 13 34 46.0
comp=Z,144nm,18.0s,baz=204,slow=31
FRB Frobisher Bay 83.71 18 LR LR 13 37 53.7
comp=Z,118nm,18.3s,baz=98,slow=33
BMAR Burnt Mountain 83.91 348 P **P 13 04 08.3 -0.4**
COLD Coldfoot 84.97 346 **P 13 04 14.7 +0.7**
COLD IAmb IAmb 13 04 23.3
comp=Z,7.3nm,1.3s
H11S2 WAKE ISLAND Hy 86.08 290 T T 14 39 24.5
baz=106,slow=75,SNR=3.4
H11S1 WAKE ISLAND Hy 86.09 290 T T 14 39 13.0
baz=106,slow=75,SNR=1.6
H11S3 WAKE ISLAND Hy 86.09 290 T T 14 39 16.7
baz=106,slow=75,SNR=1.2
H11N3 WAKE ISLAND Hy 86.22 291 T T 14 39 24.7
baz=107
H11N2 WAKE ISLAND Hy 86.23 291 T T 14 39 24.1
baz=107
H11N1 WAKE ISLAND Hy 86.23 291 T T 14 39 23.0
baz=107
RES Resolute Bay 88.45 4 LR LR 13 40 38.0
comp=Z,158nm,19.8s,baz=12,slow=33
SHEM Shemya Is, Ala 90.96 324 LR LR 13 36 55.5
comp=Z,123nm,21.0s,baz=104,slow=30
SFJD Kangerlussuaq 91.54 20 LR LR 13 46 14.7
comp=Z,188nm,18.4s,baz=83,slow=36
MAW Mawson 99.24 178 LR LR 13 44 52.1
comp=Z,100nm,18.1s,baz=192,slow=32
MKAR Makanchi Array 144.49 343 PKP **PKPab 13 11 13.0 -1.0**
comp=Z,0.5nm,0.8s,baz=348,slow=2.6,SNR=3.7
MKAR Makanchi Array 144.49 343 PKPdf **PKPab 13 11 13.8 -0.3**
CMAR Chiang Mai Arr 149.79 284 PKPbc **PKPbc 13 11 28.8 -1.4**
comp=Z,0.3nm,0.4s,baz=120,slow=2.5,SNR=4.9
CMAR PKPab **pPKPab 13 11 37.7 -0.2**
comp=Z,0.9nm,0.3s,baz=115,slow=2.0,SNR=6.5

*KRNET **23** 12:59:35.0±0.1, 43.°26N×78.°12E, h21km, mb3.0*
*NNC **23** 12:59:34.5±0.3, 43.°25N×78.°12E, h3km±2km, mb2.8, mpv3.0, Error ellipse: s-maj=3.0km s-min=1.6km az=177.0*
*SOME **23** 12:59:36.1, 43.°25N×78.°10E, h10km*
ISC 23 12:59:35.0±1.1, 43.°25N±0.°02×78.°08E±0.°01, h0km±10km, n43, σ1°18/82, 7C-9D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURS	**Kuram**	**0.25**	**15**	P	**Pg**	**12 59 40.6**	**+0.8**
	14nm,0.1s						
KURS				S	**Sg**	**12 59 43.8**	**+0.9**
	34nm,0.1s						
SATY	**Saty**	**0.30**	**129**	P	**Pg**	**12 59 41.4**	**+0.6**
	28nm,0.1s						
SATY				S	**Sg**	**12 59 45.4**	**+0.7**
	568nm,0.2s						
SATY	**Saty**	**0.30**	**129**	*e*P	**Pg**	**12 59 41.4**	**+0.6**
	28nm,0.1s						
SATY				*e*S	**Sg**	**12 59 45.4**	**+0.7**
	568nm,0.2s						
KPKS	**Kokpek**	**0.49**	**63**	P	**Pg**	**12 59 44.6**	**+0.3**
	0.3nm,0.1s						
KPKS				S	**Sg**	**12 59 50.8**	**+0.1**
	11nm,0.3s						
KPKS	**Kokpek**	**0.49**	**63**	*e*P	**Pg**	**12 59 44.6**	**+0.3**
	0.3nm,0.1s						
KPKS				*e*S	**Sg**	**12 59 50.8**	**+0.1**
	11nm,0.3s						
UZB	**Uzynbulak**	**0.69**	**98**	P	**Pg**	**12 59 48.2**	**-0.1**
	16nm,0.1s						
UZB				S	**Sg**	**12 59 57.0**	**-0.2**
	58nm,0.1s						
UZB	**Uzynbulak**	**0.69**	**98**	*e*P	**Pg**	**12 59 48.2**	**-0.1**
UZB				*e*S	**Sg**	**12 59 57.0**	**-0.2**
UZB	**Uzynbulak**	**0.69**	**98**	*e*P	**Pg**	**12 59 48.2**	**-0.1**
	16nm,0.1s						
UZB				*e*S	**Sg**	**12 59 57.0**	**-0.2**
	58nm,0.1s						
KOTS	**Kotyrbulak**	**0.71**	**269**	P	**Pg**	**12 59 49.5**	**+0.9**
	16nm,0.2s						
KOTS				S	**Sg**	**12 59 59.2**	**+1.4**
	44nm,0.3s						
KOTS	**Kotyrbulak**	**0.71**	**269**	*e*P	**Pg**	**12 59 49.5**	**+0.9**
KOTS				*e*S	**Sg**	**12 59 59.2**	**+1.4**
KOTS	**Kotyrbulak**	**0.71**	**269**	*e*P	**Pg**	**12 59 49.5**	**+0.9**
	16nm,0.2s						
KOTS				*e*S	**Sg**	**12 59 59.2**	**+1.4**
	44nm,0.3s						
MDOK	**Medeo**	**0.76**	**264**	Pg	**Pg**	**12 59 49.8**	**+0.3**
	8.5nm,0.2s						
MDOK				Lg	Lg	12 59 59.6	
	7.3nm,0.2s						
PRZ	**Przheval'sk**	**0.80**	**163**	⇓*i*P	**Pg**	**12 59 50.0**	**-0.3**
PRZ				⇓*i*S	**Sg**	**13 00 00.5**	**-0.1**
TNSS	**Tian-Shan**	**0.86**	**256**	P	**Pg**	**12 59 51.8**	**+0.4**
	1.7nm,0.1s						
TNSS				S	**Sg**	**13 00 03.1**	**+0.6**
	1.9nm,0.2s						
TNSS	**Tian-Shan**	**0.86**	**256**	*e*P	**Pg**	**12 59 51.8**	**+0.4**
	1.7nm,0.1s						
TNSS				*e*S	**Sg**	**13 00 03.1**	**+0.6**
	1.9nm,0.2s						
BLB	**Baldybastay**	**0.90**	**19**	P	**Pg**	**12 59 52.2**	**+0.1**
	20nm,0.1s						
BLB				S	**Sg**	**13 00 04.0**	**+0.3**
	55nm,0.3s						
ARXS	**Arharly**	**0.98**	**349**	P	**Pg**	**12 59 53.8**	**0.0**
	4.2nm,0.1s						
ARXS				S	**Sg**	**13 00 06.6**	**+0.1**
	13nm,0.1s						
ARXS	**Arharly**	**0.98**	**349**	*e*P	**Pg**	**12 59 53.8**	**0.0**
	4.2nm,0.1s						
ARXS				*e*S	**Sg**	**13 00 06.6**	**+0.1**
	13nm,0.1s						
SHLS	**Shalkode**	**1.01**	**95**	P	**Pn**	**12 59 59.7**	**+3.1**
	3.0nm,0.2s						
SHLS				S	**Sn**	**13 00 16.6**	**+5.1**
	14nm,0.3s						
SHLS	**Shalkode**	**1.01**	**95**	*e*P	**Pn**	**12 59 59.6**	**+3.1**
	3.0nm,0.2s						
SHLS				*e*S	**Sn**	**13 00 16.6**	**+5.1**
	14nm,0.3s						
PDGK	**Podgornoye**	**1.03**	**85**	⇓P	**Pg**	**12 59 53.6**	**-1.1**
	1.4nm,0.3s						
PDGK				⇑S	**Sg**	**13 00 07.0**	**-1.1**
	2.1nm,0.2s						
IZV	**Izvestkoviy**	**1.10**	**259**	P	**Pg**	**12 59 56.1**	**+0.1**
	11nm,0.1s						
IZV				S	**Sg**	**13 00 10.7**	**+0.5**
	8.6nm,0.1s						
IZV	**Izvestkoviy**	**1.10**	**259**	*e*P	**Pg**	**12 59 56.1**	**+0.1**
	11nm,0.1s						
IZV				*e*S	**Sg**	**13 00 10.7**	**+0.5**
	8.6nm,0.1s						
KTBS	**Karatobe**	**1.12**	**295**	P	**Pb**	**12 59 56.6**	**-0.7**
KTBS				S	**Sg**	**13 00 11.3**	**+0.3**
KTBS	**Karatobe**	**1.12**	**295**	*e*P	**Pb**	**12 59 56.6**	**-0.7**
	3.1nm,0.1s						
KTBS				*e*S	**Sg**	**13 00 11.3**	**+0.3**
	1.7nm,0.3s						
KDJ	**Kajisay**	**1.30**	**211**	⇓*i*P	**Pn**	**12 59 59.7**	**-0.8**
KDJ				⇓*i*S	**Sb**	**13 00 16.7**	**-1.0**
KNOS	**Konyrlen**	**1.36**	**35**	P	**Pn**	**13 00 00.5**	**-0.9**
	1.5nm,0.2s						
KNOS				S	**Sb**	**13 00 18.1**	**-1.4**
	11nm,0.3s						
TARG	**Taragay, Kyrgy**	**1.53**	**188**	⇑*i*P	**Pn**	**13 00 03.5**	**-0.4**
TARG				⇑*i*S	**Sn**	**13 00 23.6**	**-1.1**
KST	**Kastek**	**1.56**	**263**	P	**Pb**	**13 00 04.9**	**0.0**
	3.2nm,0.2s						
KST				S	**Sg**	**13 00 25.5**	**+0.2**
	4.7nm,0.2s						
KST	**Kastek**	**1.56**	**263**	*e*P	**Pb**	**13 00 04.9**	**0.0**
	3.2nm,0.2s						
KST				*e*S	**Sg**	**13 00 25.5**	**+0.2**
	4.7nm,0.2s						
DJR	**Jarkent**	**1.64**	**48**	P	**Pb**	**13 00 05.6**	**-0.6**
	3.0nm,0.1s						
DJR				S	**Sb**	**13 00 26.8**	**-0.7**
	13nm,0.2s						
DJR	**Jarkent**	**1.64**	**48**	*e*P	**Pb**	**13 00 05.6**	**-0.6**
	3.0nm,0.1s						
DJR				*e*S	**Sb**	**13 00 26.8**	**-0.7**
	13nm,0.3s						
KTMS	**Ketmen**	**1.67**	**82**	P	**Pn**	**13 00 05.2**	**-0.3**
	2.1nm,0.1s						
KTMS				S	**Sn**	**13 00 26.1**	**-1.6**
	5.8nm,0.2s						
KTMS	**Ketmen**	**1.67**	**82**	*e*P	**Pn**	**13 00 05.2**	**-0.3**
	2.1nm,0.1s						
KTMS				*e*S	**Sn**	**13 00 26.1**	**-1.6**
	5.8nm,0.2s						
ULHL	**Ulahol**	**1.69**	**234**	⇓*i*P	**Pn**	**13 00 05.9**	**0.0**
ULHL				⇓*i*S	**Sb**	**13 00 28.4**	**-0.4**
DGS	**Degeres**	**1.69**	**271**	P	**Pb**	**13 00 06.2**	**-0.8**
	4.4nm,0.4s						
DGS				S	**Sb**	**13 00 28.0**	**-0.8**
	13nm,0.3s						
DGS	**Degeres**	**1.69**	**271**	*e*P	**Pb**	**13 00 06.2**	**-0.8**
	4.4nm,0.4s						
DGS				*e*S	**Sb**	**13 00 28.0**	**-0.8**
	13nm,0.3s						
BOOM	**Boomskoye usch**	**1.75**	**245**	⇓*i*P	**Pn**	**13 00 06.9**	**+0.2**
BOOM				⇓*i*S	**Sb**	**13 00 29.8**	**-0.8**
KRBS	**Karabastau**	**1.81**	**285**	P	**Pb**	**13 00 08.3**	**-0.7**
	3.5nm,0.2s						
KRBS				S	**Sb**	**13 00 31.6**	**-0.6**
	16nm,0.4s						
KRBS	**Karabastau**	**1.81**	**285**	*e*P	**Pb**	**13 00 08.3**	**-0.7**
	3.5nm,0.2s						
KRBS				*e*S	**Sb**	**13 00 31.6**	**-0.6**
	16nm,0.4s						
AAK	**Ala-Archa**	**2.71**	**258**	⇑Pg	**Pb**	**13 00 23.0**	**-1.3**
	1.0nm,0.7s						
AAK				⇑Lg	Lg	13 01 01.3	
	0.3nm,0.4s						
AAK	**Ala-Archa**	**2.71**	**258**	⇑*i*P	**Pn**	**13 00 20.3**	**+0.5**
AAK				⇑*i*S	**Sn**	**13 00 52.9**	**-0.5**
MK31	**Makanchi Array**	**4.63**	**39**	Lg	Lg	13 01 59.0	
	0.3nm,0.4s,baz=219,slow=34,SNR=5.0						

*SDD **23** 13:12:30.4±1.5, 19.°19N×67.°59W, h10km±118km, MD3.4, ML3.2, MW3.1, Presumed earthquake*
*NEIC **23** 13:12:31.0±0.8, 19.°06N±0.°04×67.°57W±0.°04, h10km±1km, ML3.1/39, Md3.7/14(RSPR), Error ellipse: s-maj=6.8km s-min=5.3km az=230.0*
ISC 23 13:12:29.8±1.4, 19.°06N±0.°07×67.°60W±0.°03, h3km±11km, n40, σ0°63/50, 3C-2D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDE	**Isla Desecheo**	**0.68**	**170**		**Pb**	**13 12 44.4**	**+0.1**
IDE					**Sb**	**13 12 54.7**	**+0.5**
AGPR	**Aguadilla, PR**	**0.75**	**142**		**Pb**	**13 12 46.0**	**+0.5**
AGPR				IAML		13 12 57.9	
	778nm,0.2s						
AGPR				IAML		13 12 58.2	
	912nm,0.2s						
AGPR	**Aguadilla, PR**	**0.75**	**142**	⇑*e*Pg	**Pn**	**13 12 46.3**	**-0.9**
AGPR				⇑*e*Sg	**Sb**	**13 12 57.4**	**+1.3**
AGPR				IAML		13 12 57.9	
	comp=N,597nm,0.2s						
AGPR				IAML		13 12 58.1	
	comp=E,697nm,0.2s						
PRSN	**Puerto Rico Se**	**0.94**	**153**	Pg	**Pb**	**13 12 49.0**	**+0.3**
PRSN					**Sb**	**13 13 01.1**	**-0.6**
PRSN	**Puerto Rico Se**	**0.94**	**153**	*e*Pg	**Pn**	**13 12 49.6**	**-0.3**
PRSN				IAML		13 13 08.8	
	comp=E,763nm,0.2s						
PRSN				IAML		13 13 13.6	
	comp=N,1μm,0.3s						
LSP	**Las Mesas**	**1.01**	**151**		**Pn**	**13 12 50.1**	**-0.7**
LSP					**Sn**	**13 13 04.8**	**-0.7**
AOPR	**Arecibo Observ**	**1.07**	**132**		**Pb**	**13 12 50.9**	**-0.1**
AOPR	**Arecibo Observ**	**1.07**	**132**	*e*Pg	**Pn**	**13 12 51.3**	**-0.4**
AOPR				IAML		13 13 12.5	
	comp=N,316nm,0.2s						
AOPR				IAML		13 13 15.5	
	comp=E,763nm,0.2s						
CRPR	**Cabo Rojo, PR**	**1.15**	**156**		**Pn**	**13 12 52.5**	**-0.3**
CRPR					**Sn**	**13 13 08.5**	**-0.4**
CRPR				IAML		13 13 12.7	
	comp=E,358nm,0.6s						
CRPR				IAML		13 13 14.2	
	comp=E,488nm,0.5s						
UUPR	**Utuado, UPR, P**	**1.16**	**134**		**Pb**	**13 12 52.1**	**-0.3**
UUPR					**Sn**	**13 13 08.4**	**-0.8**
HIDR	**Higuey Centro**	**1.16**	**246**	*e*Pg	**Pg**	**13 12 51.4**	**-0.7**
HIDR				IAML		13 13 06.0	
	comp=E,503nm,0.2s						
HIDR				IAML		13 13 07.6	
	comp=N,527nm,0.2s						
HIDR				*e*Sg	**Sb**	**13 13 07.8**	**-0.1**
EMPR	**Esperanza - Ma**	**1.17**	**120**		**Pn**	**13 12 53.7**	**+0.7**
EMPR					**Sn**	**13 13 09.2**	**-0.2**
MLPR	**Magueyes Islan**	**1.21**	**154**		**Pb**	**13 12 53.0**	**-0.2**
MLPR					**Sn**	**13 13 10.1**	**-0.3**
MLPR	**Magueyes Islan**	**1.21**	**154**	IAML		13 13 12.9	
	comp=N,300nm,0.4s						
MLPR				IAML		13 13 13.8	
	comp=N,390nm,0.4s						
MLPR	**Magueyes Islan**	**1.21**	**154**	*e*Pg	**Pn**	**13 12 53.5**	**0.0**
MLPR				⇓*e*Sg	**Sn**	**13 13 12.6**	**+2.2**
MLPR				IAML		13 13 12.7	
	comp=E,107nm,0.5s						
MLPR				IAML		13 13 13.7	
	comp=N,137nm,0.4s						
GBPR	**Guanica, Bosqu**	**1.28**	**148**		**Pn**	**13 12 55.0**	**+0.5**
GBPR					**Sn**	**13 13 12.0**	**-0.2**
CELP	**Cerrillos**	**1.38**	**135**		**Pb**	**13 12 56.0**	**-0.2**
CELP				IAML		13 13 22.6	
	comp=N,324nm,0.3s						
CELP	**Cerrillos**	**1.38**	**135**		**Sn**	**13 13 14.9**	**+0.2**
CELP	**Cerrillos**	**1.38**	**135**	⇑*e*Pg	**Pb**	**13 12 56.6**	**+0.4**
CELP				IAML		13 13 22.5	
	comp=N,119nm,0.2s						
CELP				IAML		13 13 22.7	
	comp=E,87nm,0.2s						
OBIP	**Obispado Ponce**	**1.38**	**137**		**Pg**	**13 12 56.0**	**-0.3**
OBIP	**Obispado Ponce**	**1.38**	**137**		**Sn**	**13 13 14.5**	**-0.2**
ECPR	**Experimental S**	**1.38**	**122**		**Pb**	**13 12 56.1**	**-0.2**
ECPR				IAML		13 13 29.4	
	comp=E,486nm,0.2s						
ECPR	**Experimental S**	**1.38**	**122**		**Sn**	**13 13 14.7**	**-0.1**
SMDR	**Samana, DR**	**1.52**	**279**	*e*Pg	**Pb**	**13 12 58.4**	**-0.3**
SMDR				IAML		13 13 20.6	
	comp=E,263nm,0.2s						
SMDR				IAML		13 13 44.4	
	comp=N,171nm,0.7s						
SJG	**San Juan**	**1.67**	**124**		**Pn**	**13 12 59.1**	**-0.8**
SJG				IAML		13 13 26.9	
	comp=N,239nm,0.3s						
SJG				IAML		13 13 27.4	
	comp=N,184nm,0.4s						
SJG	**San Juan**	**1.67**	**124**		**Pn**	**13 13 00.1**	**+0.2**
SJG	**San Juan**	**1.67**	**124**	*e*Pg	**Pg**	**13 13 01.3**	**-0.5**
SJG				*e*Sg	**Sg**	**13 13 24.4**	**+1.0**
DR12	**Loma Pena Alta**	**1.71**	**261**		**Pn**	**13 13 01.0**	**+0.4**
DR12	**Loma Pena Alta**	**1.71**	**261**		**Sn**	**13 13 21.8**	**-1.1**
HATOM	**Hato Mayor del**	**1.71**	**261**	*e*Pg	**Pg**	**13 13 02.3**	**-0.3**
HATOM				⇓*e*Sg	**Sg**	**13 13 25.3**	**+0.5**
HATOM				IAML		13 13 26.1	
	comp=N,182nm,0.5s						
HATOM				IAML		13 13 26.8	
	comp=E,161nm,0.3s						
IGPR	**InterUniversit**	**1.79**	**127**		**Pb**	**13 13 02.5**	**-0.6**
IGPR					**Sb**	**13 13 25.4**	**-0.5**
PDPR	**Patillas Dam,**	**1.82**	**125**	Pn	**Pn**	**13 13 02.3**	**+0.3**
HUMP	**Col San Antoni**	**1.89**	**119**		**Pn**	**13 13 03.3**	**+0.3**
HUMP	**Col San Antoni**	**1.89**	**119**		**Sn**	**13 13 27.4**	**+0.1**
NADR	**Nagua**	**2.15**	**278**	*e*Sg	**Sb**	**13 13 37.1**	**+0.6**
NADR				IAML		13 13 38.3	
	comp=N,643nm,0.4s						
NADR				IAML		13 13 45.4	
	comp=E,370nm,0.5s						
SDD	**Santo Domingo**	**2.28**	**255**	IAML		13 13 47.4	
	comp=E,61nm,0.6s						
DR08	**Loma La Naviza**	**2.30**	**268**	IAML		13 13 42.4	
	comp=E,2μm,0.6s						
CUPR	**Culebra, Puert**	**2.32**	**109**	Pn	**Pn**	**13 13 08.8**	**0.0**
SDDR	**Presa de Saban**	**3.49**	**269**	Pn	**Pn**	**13 13 25.8**	**+0.7**
SDDR				IAML		13 14 25.6	
	comp=E,56nm,0.5s						
SDDR				IAML		13 14 25.9	
	comp=E,38nm,0.6s						
REDR	**Restauracion**	**3.59**	**272**	IAML		13 14 29.0	
	comp=N,51nm,0.2s						

*TRN **23** 13:26:50.3, 17.°14N×62.°09W, h98km, MD3.7, West of Antigua.*
*IDC **23** 13:26:51.5±1.5, 17.°07N×62.°01W, h114km±26km, mb3.1/5, mbtmp3.4/5, Error ellipse: s-maj=53.9km s-min=16.1km az=81.0*
ISC 23 13:26:51.0±0.8, 17.°13N±0.°05×62.°09W±0.°08, h106km±7km, n23, σ0°54/39, mb3.3/5, 1C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANWB	**Willy Bob**	**0.61**	**28**	*e*P	**Pn**	**13 27 08.7**	**+0.5**
ANWB				*e*S	**Sn**	**13 27 21.0**	**-0.1**
SKI	**Saint Kitts**	**0.65**	**288**	*e*P	**Pn**	**13 27 08.7**	**+0.1**
SKI				*e*S	**Sn**	**13 27 21.7**	**-0.1**
DHSZ	**Broadband at M**	**0.91**	**160**	*e*P	**Pn**	**13 27 10.8**	**-0.1**
DHSZ				*e*S	**Sn**	**13 27 25.5**	**-0.5**
MMLZ	**Guadeloupe Bro**	**1.15**	**160**	*e*P	**Pn**	**13 27 14.3**	**+0.7**
MMLZ				*e*S	**Sn**	**13 27 31.2**	**+0.6**
DSDZ	**La Diserade, G**	**1.27**	**130**	*e*P	**Pn**	**13 27 15.0**	**+0.1**
DSDZ				*e*S	**Sn**	**13 27 32.4**	**-0.5**
H05N1	**Guadeloupe/Mar**	**1.28**	**129**	P	**Pn**	**13 27 15.5**	**+0.5**
H05N1				S	**Sn**	**13 27 32.6**	**-0.5**
SMRT	**St. Maarten**	**1.31**	**314**	*e*P	**Pn**	**13 27 15.8**	**+0.4**
SMRT				*e*S	**Sn**	**13 27 33.0**	**-0.8**
TBG	**Guadaloupe-3**	**1.34**	**161**	*e*P	**Pn**	**13 27 15.9**	**+0.2**
TBG				*e*S	**Sn**	**13 27 34.9**	**+0.5**
MAGL	**Barre de l'ile**	**1.41**	**147**	*e*P	**Pn**	**13 27 16.8**	**+0.3**
DWS	**Wesley**	**1.72**	**154**	*e*P	**Pn**	**13 27 19.9**	**-0.4**
DWS				*e*S	**Sn**	**13 27 42.2**	**-0.5**
DSLB	**Salisbury**	**1.80**	**159**	⇑*i*P	**Pn**	**13 27 21.6**	**+0.3**
DSLB				*e*S	**Sn**	**13 27 45.0**	**+0.6**
DLPL	**La Plaine**	**1.96**	**156**	*e*S	**Sn**	**13 27 47.6**	**-0.5**
SVN	**Savane Anatole**	**2.44**	**159**	*e*P	**Pn**	**13 27 29.4**	**-0.2**
SVN				*e*S	**Sn**	**13 27 59.3**	**+0.1**
BIM	**Bigot**	**2.78**	**159**	*e*P	**Pn**	**13 27 34.2**	**+0.2**
BIM				*e*S	**Sn**	**13 28 07.0**	**-0.1**
H05S1	**Guadeloupe/Mar**	**2.95**	**156**	P	**Pn**	**13 27 36.7**	**+0.4**
H05S1				S	**Sn**	**13 28 10.2**	**-0.9**
SLBI	**Saint Lucia, B**	**3.27**	**161**	*e*P	**Pn**	**13 27 40.9**	**+0.3**
SLBI				*e*S	**Sn**	**13 28 19.5**	**+0.7**
SLAC	**Saint Lucia, A**	**3.42**	**160**	*e*P	**Pn**	**13 27 42.6**	**+0.2**
SLAC				*e*S	**Sn**	**13 28 22.9**	**+0.7**
MCLT	**Moule a Chique**	**3.58**	**162**	*e*P	**Pn**	**13 27 45.7**	**+1.1**
MCLT				*e*S	**Sn**	**13 28 25.1**	**-1.0**
SIV	**San Ignacio**	**32.93**	**178**	P	**P**	**13 33 14.7**	**-0.8**
	0.7nm,0.6s,baz=280,slow=8.4,

Ms4.5/56,Ms7 4.4/52
MOS ***23*** *13:57:25.5±1.0,26˚.54N×128˚.69E,h11km,mb4.8/27, MS4.0/5,Error ellipse: s-maj=9.7km s-min=5.9km az=107.6*
IDC ***23*** *13:57:26.4±0.6,26˚.52N×128˚.40E,h0km,mb4.3/24, mbtmp4.2/28,ML3.5/4,MS4.1/57,Error ellipse: s-maj=18.6km s-min=9.7km az=77.0*
NEIC ***23*** *13:57:28.2±1.3,26˚.50N±0˚.06×128˚.76E±0˚.05,h17km±4km, mb4.9/65,Error ellipse: s-maj=9.8km s-min=4.7km az=215.0*
JMA ***23*** *13:57:29.1±0.2,26˚.6N±0˚.7×128˚.8E±0˚.9,h25km±2km, MD4.5/23,MV4.4/23,NEAR OKINAWAJIMA ISLAND*
JMA Felt II J1 at NEAR OKINAWAJIMA ISLAND .
NIED ***23*** *13:57:29.1,26˚.56N×128˚.75E,h25km,MW4.8,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr0.10; Mθθ-0.08; Mϕϕ-0.02; Mrθ1.38; Mθϕ-0.44; Mϕr0.98; Fault plane solution: M₀1.72000×10¹⁶ NP1: ϕs194.00000°,δ6.00000°,λ48.00000°. NP2:ϕs56.00000°, δ85.00000°,λ,94.00000°.*
ISC 23 13:57:26.6±0.7,26˚.49N±0˚.04×128˚.83E±0˚.03,h11km±3km, h11km:pP-P,n257,σ1§52/232,mb4.7/85,MS4.1/62,7C-9D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JOW	**Kunigami**	**0.60**	**305**	Pn		**Pb**	**13 57 38.6**	**-0.6**
	5μm,0.3s,baz=126,slow=20,SNR=8828							
JOW				Sn		**Sg**	**13 57 46.6**	**+0.2**
	2μm,0.3s,baz=116,slow=30,SNR=4.8							
JOW	**Kunigami**	**0.60**	**305**			**Pb**	**13 57 39.0**	**-0.1**
JOW	**Kunigami**	**0.60**	**305**	*i* P		**Pb**	**13 57 39.1**	**-0.1**
JOW				A		A	13 57 39.1	
	comp=N,39nm,1.1s,comp=E,44nm,0.8s							
JOW				*e*S		**Sg**	**13 57 46.2**	**-0.2**
JYRO	**Yoronjima**	**0.63**	**328**	*i* P		**Pb**	**13 57 39.7**	**0.0**
JYRO				A		A	13 57 39.7	
	comp=N,27nm,1.0s,comp=E,20nm,2.6s							
JYRO				S		**Sg**	**13 57 46.9**	**-0.4**
JNTH	**Nagotoyohara**	**0.73**	**273**	*i* P		**Pb**	**13 57 41.6**	**+0.4**
JNTH				A		A	13 57 41.6	
	comp=N,26nm,2.5s,comp=E,35nm,0.8s							
JNTH				S		**Sg**	**13 57 50.3**	**+0.1**
JOKE	**Okinoerabujima**	**0.90**	**345**	*i* P		**Pb**	**13 57 44.5**	**+0.2**
JOKE				A		A	13 57 44.5	
	comp=N,44nm,1.8s,comp=E,22nm,2.8s							
JIH	**Iheya**	**0.95**	**305**	*i* P		**Pb**	**13 57 45.0**	**0.0**
JIH				A		A	13 57 45.0	
	comp=N,22nm,1.1s,comp=E,37nm,0.8s							
JIH				*e*S		**Sg**	**13 57 57.0**	**-0.2**
JJT3	**Tamagusuku3**	**1.00**	**250**	P		**Pn**	**13 57 46.5**	**0.0**
JJT3				A		A	13 57 46.5	
	comp=N,32nm,1.8s,comp=E,54nm,2.7s							
JTK	**Tokunoshima**	**1.30**	**5**	P		**Pg**	**13 57 50.3**	**-1.3**
JTK				A		A	13 57 50.3	
	comp=N,8.0nm,2.9s,comp=E,14nm,2.6s							
JTK				*e*S		**Sg**	**13 58 06.6**	**-1.8**
JAGN	**Aguni-jima**	**1.43**	**274**	*i* P		**Pn**	**13 57 52.4**	**0.0**
JAGN				A		A	13 57 52.4	
	comp=N,37nm,1.0s,comp=E,30nm,3.5s							
JAGN				S		**Sb**	**13 58 11.1**	**-0.3**
JAMN	**Amaminishikomi**	**1.77**	**10**	P		**Pn**	**13 57 57.3**	**+0.1**
JKE	**Kume jima 2**	**1.84**	**265**	P		**Pn**	**13 57 57.4**	**-0.8**
JKE				A		A	13 57 57.4	
	comp=N,10.0nm,2.4s,comp=E,5.0nm,3.4s							
JAM	**Amami Oshima**	**2.04**	**20**	P		**Pn**	**13 58 00.6**	**-0.2**
JAM				A		A	13 58 00.6	
	comp=N,4.0nm,2.9s,comp=E,7.0nm,2.2s							
JZK	**Kikaishima**	**2.08**	**29**	P		**Pb**	**13 58 02.9**	**-1.5**
JZK				A		A	13 58 02.9	
	comp=N,27nm,4.8s,comp=E,26nm,3.8s							
JZK				S		**Sn**	**13 58 28.2**	**+0.8**
JMZ	**Minamidaito 2**	**2.25**	**107**			**Pn**	**13 58 04.0**	**+0.2**
JMZ	**Minamidaito 2**	**2.25**	**107**	*i* P		**Pn**	**13 58 03.8**	**0.0**
JMZ				*e*S		**Sn**	**13 58 30.2**	**-1.3**
JKDJ	**Kitadaitoujima**	**2.28**	**103**	*i* P		**Pn**	**13 58 04.4**	**+0.3**
JKDJ				A		A	13 58 04.4	
	comp=N,5.0nm,2.8s,comp=E,4.0nm,3.2s							
JKDJ				S		**Sn**	**13 58 31.5**	**-0.7**
JNN	**Nakanoshima**	**3.46**	**15**	*e*P		**Pn**	**13 58 21.5**	**+1.0**
JOGS	**Gusukube**	**3.54**	**242**	A		A	13 58 23.8	
	comp=N,11nm,2.4s,comp=E,11nm,3.5s							
JYAK	**Yakushimahirau**	**4.02**	**21**	P		**Pn**	**13 58 28.3**	**+0.2**
JYAK				S		**Sn**	**13 59 12.5**	**-2.6**
JKC	**Kuchinoerabu**	**4.14**	**17**	P		**Pn**	**13 58 31.3**	**+1.6**
JTN	**Tanegashima 3**	**4.56**	**24**	*e*P		**Pn**	**13 58 36.1**	**+0.6**
JKRS	**Kuro-shima**	**4.90**	**244**	A		A	13 58 43.0	
	comp=N,14nm,3.0s,comp=E,8.0nm,2.7s							
JSU	**Suzuyama**	**5.20**	**15**	Pn		**Pn**	**13 58 45.0**	**+0.7**
YOJ	**Yonaguni jima**	**5.63**	**250**	Pn		**Pn**	**13 58 51.1**	**+0.9**
YOJ	**Yonaguni jima**	**5.63**	**250**	P		**Pn**	**13 58 51.2**	**+0.9**
JNU	**Nakatsue**	**6.85**	**15**	Pn		**Pn**	**13 59 09.0**	**+2.1**
	comp=E,1.9nm,0.3s,baz=90,slow=24,SNR=35							
JNU				Sn		**Sn**	**14 00 24.6**	**-0.3**
	comp=E,1.3nm,0.3s,baz=89,slow=24,SNR=0.8							
JNU				LR		LR	14 02 06.8	
	comp=E,817nm,21.6s,baz=180,slow=40							
	comp=E,11nm,0.3s							
YHNB	**Yeheng**	**6.97**	**257**			**Pn**	**13 59 08.7**	**0.0**
SSLB	**Suanglung**	**7.63**	**251**			**Pn**	**13 59 16.7**	**-1.0**
TPUB	**Ta-pu**	**8.09**	**249**			**Pn**	**13 59 22.2**	**-1.9**
SSE	**Sheshan**	**8.13**	**306**	P		**Pn**	**13 59 24.3**	**-0.2**
SSE				S		**Sn**	**14 00 57.0**	**+0.6**
SSE				pmax	pmax			
	comp=E,7.0nm,0.7s							
SSE				pmax	pmax			
	comp=E,120nm,4.0s							
SSE				L	L			
	comp=E,590nm,12.2s							
SSE				L	L			
	comp=E,870nm,12.0s							
NJ2	**Nanjing**	**10.32**	**305**	*e*P		**Pn**	**13 59 53.6**	**-1.0**
NJ2				pmax	pmax			
	comp=E,33nm,0.5s							
NJ2				L	L			
	comp=E,3μm,9.9s							
NJ2				L	L			
	comp=E,6μm,10.7s							
NJ2				L	L			
	comp=E,10μm,14.2s							
KSRS	**Korea Array**	**10.96**	**356**	Pn		**Pn**	**14 00 04.2**	**+0.8**
	comp=E,0.3nm,0.3s,baz=173,slow=13,SNR=13							
KSRS				LR		LR	14 04 37.9	
	comp=E,1μm,18.1s,baz=175,slow=40							
	comp=E,2.5nm,0.7s							
JHJ	**Hachijo jima 2**	**11.58**	**53**	LR		LR	14 04 19.7	
	comp=E,385nm,19.9s,baz=234,slow=35							
JCJ	**Chichijima**	**11.95**	**84**	LR		LR	14 04 07.7	
	comp=E,272nm,20.7s,baz=324,slow=33							
MJAR	**Matsushiro Arr**	**12.81**	**36**	Pn		Pn	14 00 34.8	+6.0
	baz=195,slow=7.5,SNR=5.0							
MJAR				LR		LR	14 05 43.6	
	comp=E,222nm,21.7s,baz=222,slow=38							
	comp=E,0.8nm,0.8s							
WHN	**Wuhan**	**13.36**	**291**	P		**Pn**	**14 00 37.4**	**+1.3**
DL2	**Dalian**	**13.78**	**336**	*e*P		**Pn**	**14 00 42.1**	**+0.2**
DL2				S		**Sn**	**14 03 11.3**	**-3.6**
DL2				pmax	pmax			
	comp=E,12nm,1.0s							
DL2				L	L			
	comp=E,1μm,15.8s							
DL2				L	L			
	comp=E,650nm,17.7s							
DL2				L	L			
	comp=E,2μm,14.2s							
HNS	**HongShan**	**16.17**	**316**	⇓P		**P**	**14 01 16.9**	**0.0**
HNS				*e*S		**Sn**	**14 04 18.3**	**+5.3**
HNS				pmax	pmax			
	comp=E,11nm,1.4s							
HNS				L	L			
	comp=E,770nm,11.6s							
HNS				L	L			
	comp=E,990nm,12.9s							
HNS				L	L			
	comp=E,1μm,12.2s							
LYN	**LuoYang**	**16.22**	**304**	P		**P**	**14 01 17.3**	**-0.2**
LYN				pmax	pmax			
	comp=E,24nm,0.5s							
LYN				pmax	pmax			
	comp=E,190nm,7.2s							
LYN				L	L			
	comp=E,670nm,13.4s							
LYN				L	L			
	comp=E,3μm,13.4s							
LYN				L	L			
	comp=E,4μm,12.7s							
BJI2	**Beijing**	**17.13**	**325**	P		**P**	**14 01 29.8**	**+2.2**
BJI2				pmax	pmax			
	comp=E,9.0nm,0.6s							
BJI2				pmax	pmax			
	comp=E,140nm,9.7s							
BJI2				L	L			
	comp=E,490nm,12.5s							
BJI2				L	L			
	comp=E,320nm,13.4s							
BJI2				L	L			
	comp=E,660nm,14.3s							
BJT	**Baijiatuan**	**17.13**	**325**	Pn		**Pn**	**14 01 25.5**	**-0.4**
BJT	**Baijiatuan**	**17.13**	**325**	P		**Pn**	**14 01 25.5**	**-0.4**
BJT				pmax	pmax			
	comp=Z,13nm,0.6s							
CN2	**Changchun**	**17.49**	**352**	P		**P**	**14 01 33.3**	**+1.7**
CN2				S		**Sn**	**14 04 46.1**	**+1.0**
CN2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
CN2				L	L			
	comp=Z,1μm,12.0s							
CN2				L	L			
	comp=Z,600nm,12.0s							
CN2				L	L			
	comp=Z,1μm,13.0s							
USRK	**Ussuriysk Ar.**	**17.86**	**7**	P		**P**	**14 01 36.5**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=204,slow=10.0,SNR=4.5							
	comp=Z,1.7nm,0.6s							
XAN	**Xi'an**	**18.75**	**298**	⇓P		**Pn**	**14 01 46.3**	**+0.2**
XAN				pP		pwP	14 01 50.9	-0.9
XAN				S		**Sn**	**14 05 13.6**	**-2.3**
XAN				pmax	pmax			
	comp=Z,53nm,0.7s							
XAN				pmax	pmax			
	comp=Z,240nm,6.2s							
XAN				L	L			
	comp=Z,910nm,16.5s							
XAN				L	L			
	comp=Z,1μm,14.6s							
XAN				L	L			
	comp=Z,2μm,16.5s							
QIZ	**Qiongzhong**	**19.01**	**251**	P		**Pn**	**14 01 49.0**	**-0.2**
QIZ				S		**Sn**	**14 05 22.8**	**+0.7**
QIZ				pmax	pmax			
	comp=Z,130nm,5.1s							
QIZ				L	L			
	comp=Z,500nm,19.2s							
QIZ				L	L			
	comp=Z,350nm,19.4s							
QIZ				L	L			
	comp=Z,510nm,21.6s							
DAV	**Davao City (W)**	**19.56**	**190**	LR		LR	14 09 04.9	
	comp=Z,217nm,21.8s,baz=328,slow=36							
GUMO	**Guam**	**19.76**	**127**	LR		LR	14 08 12.9	
	comp=Z,235nm,19.6s,baz=305,slow=32							
HHC	**Hu-ho-hao-te**	**20.24**	**319**	*e*P		Pn	14 02 06.6	+2.8
HHC				S		Sn	14 05 54.5	+2.9
HHC				pmax	pmax			
	comp=Z,7.0nm,0.7s							
HHC				pmax	pmax			
	comp=Z,190nm,4.9s							
HHC				L	L			
	comp=Z,740nm,17.1s							
HHC				L	L			
	comp=Z,580nm,15.0s							
HHC				L	L			
	comp=Z,820nm,16.5s							
ASAJ	**Asahikawa**	**20.82**	**29**	P		Pn	14 02 10.2	-0.3
	comp=Z,4.8nm,0.7s,baz=212,slow=15,SNR=6.6							
ASAJ				LR		LR	14 10 23.9	
	comp=Z,496nm,21.3s,baz=238,slow=37							
	comp=Z,4.8nm,0.7s							
ASAJ	**Asahikawa**	**20.82**	**29**	P		**P**	**14 02 08.7**	**+0.7**
ASAJ				pmax	pmax			
	comp=Z,64nm,1.9s							
JKA	**Kamikawa-asahi**	**20.82**	**29**	P		**P**	**14 02 08.7**	**+0.6**
JKA				IAmb	IAmb	IAmb	14 02 13.2	
	comp=Z,64nm,1.9s							
BTO2	**Baotou**	**21.18**	**317**	*e*P		**P**	**14 02 14.6**	**+2.5**
BTO2				pP		**pwP**	**14 02 18.5**	**+0.3**
BTO2				sP		pP	14 02 21.6	+7.1
BTO2				PP		**PnPn**	**14 02 37.8**	**+6.4**
BTO2				S		**S**	**14 06 04.6**	**-3.0**
BTO2				sS		**pS**	**14 06 12.6**	**-2.1**
BTO2				SS		**SnSn**	**14 06 38.0**	**+8.6**
BTO2				pmax	pmax			
	comp=Z,21nm,0.8s							
BTO2				pmax	pmax			
	comp=Z,340nm,9.3s							
BTO2				L	L			
	comp=Z,1μm,19.1s							
BTO2				L	L			
	comp=Z,860nm,16.7s							
BTO2				L	L			
	comp=Z,2μm,19.0s							
CD2	**Chengdu**	**22.41**	**287**	P		**P**	**14 02 26.0**	**+0.6**
CD2				pmax	pmax			
	comp=Z,20nm,0.7s							
CD2				L	L			
	comp=Z,730nm,12.7s							
CD2				L	L			
	comp=Z,2μm,14.6s							
CD2				L	L			
	comp=Z,1μm,16.5s							
KLR	**Kul'dur**	**22.82**	**5**	LR		LR	14 11 31.3	
	comp=Z,232nm,18.3s,baz=180,slow=37							
KLR	**Kul'dur**	**22.82**	**5**	‖*e*P		**P**	**14 02 29.9**	**+0.5**
KLR				pmax	pmax			
	comp=Z,2.0nm,1.0s							
YSS	**Yuzhno-Sakhali**	**23.21**	**25**			**P**	**14 02 33.8**	**+0.3**
YSS				IAmb	IAmb	IAmb	14 02 36.1	
	comp=Z,38nm,1.0s							
YSS	**Yuzhno-Sakhali**	**23.21**	**25**	*e*P		**P**	**14 02 34.4**	**+1.0**
YSS				*e*S		**S**	**14 06 44.9**	**-0.2**
YSS				pmax	pmax			
	comp=Z,40nm,1.0s							
LZH	**Lanzhou**	**23.34**	**300**	*e*P		**P**	**14 02 35.6**	**+0.5**
LZH				pP		pwP	14 02 43.3	+2.0
LZH				pmax	pmax			
	comp=Z,15nm,1.4s							
LZH				L	L			
	comp=Z,630nm,13.7s							
LZH				L	L			
	comp=Z,830nm,13.1s							
LZH				L	L			
	comp=Z,1μm,16.1s							
LZDM	**Lanzhou Array**	**23.42**	**300**	P		**P**	**14 02 34.6**	**-1.5**
	comp=Z,12nm,0.4s,baz=134,slow=11,SNR=14							
	comp=Z,12nm,0.4s							
KMI2	**Kunming**	**23.51**	**273**	P		**P**	**14 02 37.8**	**+0.9**
KMI2				S		**S**	**14 06 50.4**	**-0.5**
KMI2				pmax	pmax			
	comp=Z,12nm,1.1s							
KMI2				L	L			
	comp=Z,490nm,13.3s							
KMI2				L	L			
	comp=Z,1μm,12.5s							
KMI2				L	L			
	comp=Z,1μm,13.0s							
HEH	**HeiHe**	**23.75**	**358**	*e*P		**P**	**14 02 36.9**	**-1.9**
HEH				L	L			
	comp=Z,380nm,17.7s							
HEH				L	L			
	comp=Z,510nm,16.1s							
HEH				L	L			
	comp=Z,600nm,17.5s							
PZH	**PanZhiHua**	**24.23**	**276**	P		**P**	**14 02 44.3**	**+0.6**
GRNR	**Gornyy**	**24.93**	**11**	*e*P		**P**	**14 02 51.5**	**+1.8**
GRNR				MLR	MLR			
	comp=E,150nm,13.0s							
GRNR				MLR	MLR			
	comp=N,230nm,14.0s							
GRNR				MLR	MLR			
	comp=Z,330nm,15.0s							
TYV	**Tymovskoe**	**26.54**	**20**	*e*P		**P**	**14 03 06.9**	**+2.7**
TYV				*e*S		**S**	**14 07 47.0**	**+8.8**
TYV				pmax	pmax			
	comp=Z,9.0nm,1.4s							
TYV				pmax	pmax			
	comp=Z,200nm,4.8s							
TYV				smax	smax			
	comp=N,400nm,7.1s							
TYV				smax	smax			
	comp=E,400nm,7.1s							
SIJI	**Sorong**	**27.30**	**175**	LR		LR	14 13 22.2	
	comp=E,192nm,20.1s,baz=38,slow=35							
ULN	**Ulaanbaatar**	**27.33**	**327**	⇓*i*P		**P**	**14 03 12.8**	**+1.2**
ULN				pmax	pmax			
	comp=Z,6.0nm,0.7s							
ULN	**Ulaanbaatar**	**27.33**	**327**	P		**P**	**14 03 12.9**	**+1.3**
	comp=Z,36nm,1.1s							
GTA2	**Gaotai**	**27.48**	**305**	*e*P		**P**	**14 03 10.9**	**-2.1**
GTA2				sP		pwP	14 03 21.1	+1.8
GTA2				sS		sS	14 08 07.5	+9.5
GTA2				pmax	pmax			
	comp=Z,4.0nm,0.5s							
GTA2				L	L			
	comp=Z,590nm,13.6s							
GTA2				L	L			
	comp=Z,900nm,14.3s							
GTA2				L	L			
	comp=Z,1μm,14.0s							
SONM	**Songino Array**	**27.63**	**326**	P		**P**	**14 03 15.1**	**+0.9**
	comp=E,5.0nm,0.7s,baz=140,slow=10,SNR=23							
SONM				LR		LR	14 15 59.2	
	comp=Z,412nm,19.4s,baz=130,slow=41							
	comp=Z,5.0nm,0.7s							
SONM	**Songino Array**	**27.63**	**326**			**P**	**14 03 13.0**	**-1.3**
SONM	**Songino Array**	**27.63**	**326**	P		**P**	**14 03 13.0**	**-1.3**
SONM				pmax	pmax			
	comp=Z,12nm,1.4s							
CHTO	**Chiang Mai**	**28.57**	**261**			**P**	**14 03 23.3**	**+0.5**
CHTO	**Chiang Mai**	**28.57**	**261**	P		**P**	**14 03 23.3**	**+0.5**
CHTO				pmax	pmax			
	comp=Z,15nm,1.6s							
CHTO	**Chiang Mai**	**28.57**	**261**	P		**P**	**14 03 24.7**	**+1.9**
	comp=Z,4.9nm,0.9s							
CMAR	**Chiang Mai Arr**	**28.70**	**260**	P		**P**	**14 03 23.4**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=55,slow=7.7,SNR=5.1							
CMAR				LR		LR	14 16 20.8	
	comp=Z,280nm,18.9s,baz=80,slow=40							
	comp=Z,0.5nm,0.4s							
CMAR	**Chiang Mai Arr**	**28.70**	**260**	*i* P		**P**	**14 03 26.2**	**+2.3**
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.5s							
GOMU	**GeErMu**	**30.49**	**297**	P		**P**	**14 03 38.6**	**-1.5**
GOMU				S		**S**	**14 08 41.8**	**+0.2**
GOMU				pmax	pmax			
	comp=Z,7.0nm,1.4s							
GOMU				L	L			
	comp=Z,180nm,12.7s							
GOMU				L	L			
	comp=Z,260nm,15.8s							
JAY	**Jayapura**	**31.03**	**157**	LR		LR	14 13 26.0	
	comp=Z,170nm,21.2s,baz=30,slow=31							
TLY	**Talaya**	**31.56**	**330**	LR		LR	14 18 15.1	
	comp=Z,387nm,18.5s,baz=121,slow=40							
KAPI	**Kappang**	**32.53**	**197**	LR		LR	14 16 32.8	
	comp=Z,106nm,21.5s,baz=12,slow=35							
SHL	**Shillong**	**33.14**	**277**			**P**	**14 04 01.9**	**-1.4**
SHL				IAmb		IAmb	14 04 03.3	
	comp=Z,11nm,0.7s							
SHL	**Shillong**	**33.14**	**277**	P		**P**	**14 04 01.9**	**-1.4**
SHL				pmax	pmax			
	comp=Z,11nm,0.7s							
BRDH	**Bariadhala**	**33.95**	**272**	LR		LR	14 18 57.4	
	comp=Z,178nm,21.4s,baz=122,slow=38							
PETK	**Petropavlovsk-**	**34.20**	**31**	LR		LR	14 18 11.2	
	comp=Z,116nm,21.6s,baz=244,slow=36							
YAK	**Yakutsk**	**35.54**	**1**	LR		LR	14 19 10.7	
	comp=Z,194nm,19.4s,baz=180,slow=37							
YAK	**Yakutsk**	**35.54**	**1**	P		**P**	**14 04 22.1**	**-1.3**
YAK				IAmb		IAmb	14 04 34.9	
	comp=Z,13nm,0.8s							
YAK	**Yakutsk**	**35.54**	**1**	*e*P		**P**	**14 04 22.4**	**-1.0**
YAK				*e**PP		**pwP**	**14 04 25.8**	**-3.7**
YAK				*e*			14 05 39.1	
YAK				*e*PPP		PPP	14 05 57.1	
YAK				*e*S		**S**	**14 09 57.5**	**-1.1**
YAK				*e**SS		**sS**	**14 10 06.0**	**+3.0**
YAK				*e*SSS		SSS	14 12 44.9	
YAK				pmax	pmax			
	comp=Z,5.0nm,1.0s							
YAK				pmax	pmax			
	comp=N,3.0nm,1.4s							
YAK				pmax	pmax			
	comp=Z,76nm,4.2s							
YAK				pmax	pmax			
	comp=E,31nm,2.6s							
YAK				pmax	pmax			
	comp=N,38nm,3.9s							
YAK				smax	smax			
	comp=E,20nm,2.2s							
YAK				smax	smax			
	comp=N,54nm,3.0s							
YAK				MLR	MLR			
	comp=Z,166nm,12.0s							
YAK				MLR	MLR			
	comp=N,93nm,12.0s							
YAK				MLR	MLR			
	comp=E,78nm,13.0s							
H11N1	**WAKE ISLAND Hy**	**35.55**	**93**	T		T	14 42 45.2	
	baz=290,slow=74,SNR=3.8							
H11N2	**WAKE ISLAND Hy**	**35.55**	**93**	T		T	14 42 47.3	
	baz=290,slow=74,SNR=5.7							
H11N3	**WAKE ISLAND Hy**	**35.57**	**93**	T		T	14 42 42.8	
	baz=290,slow=74,SNR=5.2							
MA2	**Magadan**	**36.39**	**19**	LR		LR	14 20 44.2	
	comp=E,71nm,18.0s,baz=211,slow=38							
MA2	**Magadan**	**36.39**	**19**			sP	14 04 41.0	+6.6
MA2	**Magadan**	**36.39**	**19**	*e*P		**P**	**14 04 31.0**	**+0.3**
MA2				pmax	pmax			
	comp=Z,2.0nm,0.9s							
MA2	**Magadan**	**36.39**	**19**	P		**P**	**14 04 31.1**	**+0.3**
	comp=Z,14nm,1.4s							
EVN	**Everest**	**37.26**	**282**	P		**P**	**14 04 38.7**	**-0.6**
WMQ	**Urumqi**	**37.38**	**308**	*e*P		**P**	**14 04 38.8**	**-0.6**
WMQ				sP		pwP	14 04 47.6	+1.9
WMQ				PcP		**PcP**	**14 06 54.5**	**-3.8**
WMQ				pmax	pmax			
	comp=Z,12nm,1.7s							
WMQ				L	L			
	comp=Z,580nm,17.9s							
WMQ				L	L			
	comp=Z,370nm,23.9s							
KRVT	**Keravat (AS076**	**37.96**	**140**	LR		LR	14 17 13.8	
	comp=Z,12nm,20.7s,baz=227,slow=31							
LEM	**Lembang**	**38.99**	**215**	LR		LR	14 20 52.0	
	comp=Z,46nm,20.5s,baz=284,slow=36							
MTN	**Manton Dam**	**39.16**	**176**	P		**P**	**14 04 54.0**	**-0.5**
SEY	**Seymchan**	**39.62**	**17**	⇑*i*P		**P**	**14 04 59.2**	**+1.3**
SEY				pmax	pmax			
	comp=Z,13nm,1.9s							
PMG	**Port Moresby**	**39.88**	**151**	LR		LR	14 18 45.0	
	comp=Z,137nm,21.5s,baz=332,slow=32							
MK31	**Makanchi Array**	**41.77**	**312**	*d*P		**P**	**14 05 14.8**	**-1.1**
MKAR	**Makanchi Array**	**41.77**	**312**	P		**P**	**14 05 14.8**	**-1.1**
	comp=Z,1.9nm,0.6s,baz=92,slow=9.7,SNR=43							
MKAR				PcP		**PcP**	**14 07 12.7**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=82,slow=3.3,SNR=5.1							
MKAR				LR		LR	14 24 54.4	
	comp=Z,196nm,18.7s,baz=76,slow=40							
	comp=Z,1.9nm,0.6s							
MAKZ	**Makanchi**	**41.98**	**311**	P		**P**	**14 05 16.5**	**-1.2**
MAKZ	**Makanchi**	**41.98**	**311**	P		**P**	**14 05 16.5**	**-1.2**
MAKZ				pmax	pmax			
	comp=Z,7.0nm,1.1s							
ZAA0	**Zalesovo Array**	**42.37**	**322**	P		**P**	**14 05 19.4**	**-1.2**
ZALV	**Zalesovo Beam**	**42.37**	**322**	P		**P**	**14 05 19.3**	**-1.4**
	comp=Z,4.2nm,0.4s,baz=110,slow=9.1,SNR=21							
ZALV				PcP		**PcP**	**14 07 14.1**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=118,slow=5.2,SNR=3.7							
ZALV				LR		LR	14 24 49.3	
	comp=Z,545nm,18.2s,baz=109,slow=39							
	comp=Z,4.2nm,0.4s							
ZALV	**Zalesovo Beam**	**42.37**	**322**	P		**P**	**14 05 19.3**	**-1.4**
ZALV						**pwP**	**14 05 28.6**	**+1.6**
FITZ	**Fitzroy Crossi**	**44.43**	**184**	P	

	comp=Z,1.7nm,0.4s						
TIXI	**Tiksi**	**45.20**	**0**	LR	LR	14 25 29.8	
	comp=Z,267nm,19.6s,baz=201,slow=37						
TIXI	**Tiksi**	**45.20**	**0**	P	**P**	**14 05 42.5**	**-0.7**
TIXI				IAmb	IAmb	14 05 54.0	
	comp=Z,22nm,1.5s						
TIXI	**Tiksi**	**45.20**	**0** ⇓	*iP*	**P**	**14 05 43.7**	**+0.5**
TIXI				pmax	pmax		
	comp=Z,16nm,1.5s						
NRN	**Naryn**	**45.61**	**303**	P	**P**	**14 05 47.2**	**-0.1**
NRN				IAmb	IAmb	14 05 48.8	
	comp=Z,21nm,1.5s						
NRN	**Naryn**	**45.61**	**303**	P	**P**	**14 05 47.2**	**-0.1**
NRN				pmax	pmax		
	comp=Z,21nm,1.5s						
KSH2	**Kashi**	**45.91**	**300**	P	**P**	**14 05 50.8**	**+1.3**
KSH2				sP	pwP	14 05 59.4	+3.5
KSH2				pmax	pmax		
	comp=Z,6.0nm,1.3s						
TKM2	**Tokmak 2**	**45.97**	**305**	P	**P**	**14 05 50.1**	**+0.2**
	SNR=10						
KBK	**Karagaybulak**	**46.43**	**305**	P	**P**	**14 05 53.8**	**+0.1**
	SNR=5.7						
WRAB	**Tennant Creek**	**46.45**	**173**	*ce*P	**P**	**14 05 54.5**	**+0.8**
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WRA	**Warramunga Arr**	**46.46**	**173**	P	**P**	**14 05 55.4**	**+1.7**
	comp=Z,4.3nm,0.7s,baz=352,slow=8.2,SNR=36						
	comp=Z,4.3nm,0.7s						
WRA	**Warramunga Arr**	**46.46**	**173**	P	**P**	**14 05 53.4**	**-0.3**
WRA	**Warramunga Arr**	**46.46**	**173**	P	**P**	**14 05 53.4**	**-0.3**
WR8	**Warramunga Arr**	**46.49**	**173**	P	**P**	**14 05 53.8**	**-0.2**
CHMS	**Chumysh**	**46.59**	**305**	P	**P**	**14 05 55.4**	**+0.7**
	SNR=5.8						
UCH	**Uchtor**	**46.74**	**304**	P	**P**	**14 05 57.1**	**+0.7**
	SNR=12						
AAK	**Ala-Archa**	**46.77**	**305**	P	**P**	**14 05 56.1**	**-0.1**
	SNR=6.5						
AAK	**Ala-Archa**	**46.77**	**305**	P	**P**	**14 05 56.0**	**-0.2**
AAK	**Ala-Archa**	**46.77**	**305**	*eP*	**P**	**14 05 55.0**	**-1.2**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BILL	**Bilibino**	**47.26**	**18**	P	**P**	**14 06 00.5**	**+1.1**
BILL	**Bilibino**	**47.26**	**18** ⇓	*iP*	**P**	**14 06 00.7**	**+1.3**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NIL	**Nilore**	**48.15**	**293**	P	**P**	**14 06 07.0**	**+0.1**
NIL				IAmb	IAmb	14 06 08.1	
	comp=Z,17nm,1.2s						
NIL	**Nilore**	**48.15**	**293**	P	**P**	**14 06 07.0**	**+0.1**
NIL				pmax	pmax		
	comp=Z,17nm,1.2s						
NRIK	**Noril'sk**	**49.17**	**342**	LR	LR	14 29 11.3	
	comp=Z,462nm,18.1s,baz=134,slow=39						
NRIK	**Noril'sk**	**49.17**	**342** ⇑	*iP*	**P**	**14 06 13.8**	**-0.4**
NRIK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CTA	**Charters Tower**	**49.29**	**158**	LR	LR	14 27 25.1	
	comp=Z,61nm,18.1s,baz=20,slow=36						
PALK	**Pallekele**	**49.52**	**256**	LR	LR	14 26 45.8	
	comp=Z,137nm,21.5s,baz=52,slow=36						
KK31	**Karatay Array**	**49.70**	**305**	P	**P**	**14 06 18.6**	**-0.1**
KK31				IAmb	IAmb	14 06 19.4	
	comp=Z,32nm,1.6s						
KK31	**Karatay Array**	**49.70**	**305**	P	**P**	**14 06 18.6**	**-0.1**
KK31				pmax	pmax		
	comp=Z,32nm,1.7s						
KKAR	**Karatay Array**	**49.70**	**305**	P	**P**	**14 06 18.9**	**+0.2**
KKAR	**Karatay Array**	**49.70**	**305**	P	**P**	**14 06 18.9**	**+0.2**
AS31	**Alice Springs**	**50.10**	**174**	P	**P**	**14 06 22.6**	**+0.8**
ASAR	**Alice Springs**	**50.10**	**174**	P	**P**	**14 06 23.9**	**+2.1**
	comp=Z,2.5nm,0.7s,baz=5.8,slow=14,SNR=51						
ASAR				LR	LR	14 29 49.5	
	comp=Z,61nm,18.0s,baz=1.0,slow=39						
	comp=Z,2.5nm,0.7s						
ASAR	**Alice Springs**	**50.10**	**174**	P	**P**	**14 06 22.8**	**+1.0**
BVAR	**Borovoye Array**	**50.44**	**318**	P	**P**	**14 06 23.4**	**-0.8**
	comp=Z,3.3nm,0.5s,baz=87,slow=8.8,SNR=28						
BVAR				PcP	**PcP**	**14 07 42.7**	**+0.4**
	comp=Z,2.7nm,0.5s,baz=110,slow=2.6,SNR=9.1						
BVAR				LR	LR	14 29 41.7	
	comp=Z,819nm,18.2s,baz=88,slow=39						
	comp=Z,3.3nm,0.5s						
BORK	**Borovoye**	**50.49**	**318** ⇑	*iP*	**P**	**14 06 24.3**	**-0.1**
BORK				pmax	pmax		
	comp=Z,12nm,1.0s						
CHGR	**Chuyangaron**	**50.93**	**299**	P	**P**	**14 06 28.1**	**-0.1**
CHGR	**Chuyangaron**	**50.93**	**299** ⇓	*iP*	**P**	**14 06 27.8**	**-0.3**
CHGR				pmax	pmax		
	comp=Z,15nm,1.4s						
KBL	**Kabul**	**51.49**	**294**	P	**P**	**14 06 32.6**	**0.0**
KBL	**Kabul**	**51.49**	**294**	P	**P**	**14 06 32.6**	**0.0**
KBL				pmax	pmax		
	comp=Z,17nm,0.6s						
SHAA	**Shahritus**	**51.85**	**298**	IAmb	IAmb	14 06 36.6	
	comp=Z,37nm,1.1s						
C16K	**Lisburne Hills**	**56.74**	**24**	IAmb	IAmb	14 07 23.2	
	comp=Z,9.3nm,1.1s						
AB31	**Akbulak array**	**56.86**	**313**	P	**P**	**14 07 10.6**	**-0.6**
AB31				IAmb	IAmb	14 07 11.9	
	comp=Z,15nm,1.4s						
ABKAR	**Akbulak array**	**56.86**	**313**	P	**P**	**14 07 10.7**	**-0.5**
ARTI	**Arti**	**57.62**	**322**	LR	LR	14 34 27.0	
	comp=Z,351nm,20.6s,baz=80,slow=39						
ARTI	**Arti**	**57.62**	**322**	P	**P**	**14 07 16.1**	**-0.4**
ARTI	**Arti**	**57.62**	**322** *d*	*iP*	**P**	**14 07 13.4**	**-3.1**
ARTI				S	**S**	**14 15 10.1**	**-4.3**
ARTI				pmax	pmax		
	comp=Z,12nm,1.4s						
ARTI				MLR	MLR		
	comp=Z,573nm,17.0s						
AKTO	**Aktyubinsk**	**58.04**	**315**	LR	LR	14 34 47.6	
	comp=Z,254nm,21.0s,baz=116,slow=39						
C18K	**Utukok River**	**58.32**	**24**	P	**P**	**14 07 21.7**	**+0.5**
C18K				IAmb	IAmb	14 07 34.5	
	comp=Z,9.3nm,1.1s						
C19K	**Lookout Ridge**	**58.96**	**23**	IAmb	IAmb	14 07 40.0	
	comp=Z,14nm,1.4s						
D19K	**Kuna River**	**59.42**	**24**	IAmb	IAmb	14 07 46.0	
	comp=Z,13nm,1.1s						
E19K	**Redstone River**	**59.67**	**25**	IAmb	IAmb	14 07 47.3	
	comp=Z,6.1nm,0.8s						
D20K	**Etivluk River**	**59.99**	**24**	IAmb	IAmb	14 07 46.4	
	comp=Z,8.8nm,0.9s						
B22K	**Teshekpuk Lake**	**61.20**	**22**	IAmb	IAmb	14 07 54.2	
	comp=Z,7.2nm,0.9s						
E22K	**Anaktuvuk Pass**	**61.75**	**25**	P	**P**	**14 07 45.8**	**+1.0**
E22K				IAmb	IAmb	14 08 01.4	
	comp=Z,11nm,1.0s						
KIRV	**Kirov**	**62.35**	**324**	LR	LR	14 37 51.9	
	comp=Z,444nm,19.7s,baz=79,slow=39						
KIRV	**Kirov**	**62.35**	**324**	*eP*	**P**	**14 07 46.1**	**-2.7**
L22K	**Petersville**	**62.46**	**31**	P	**P**	**14 07 50.5**	**+0.8**
E23K	**Chandalar**	**62.58**	**25**	IAmb	IAmb	14 08 12.7	
	comp=Z,7.0nm,0.9s						
C24K	**Franklin Bluff**	**62.82**	**23**	P	**P**	**14 07 52.4**	**+0.6**
C24K				IAmb	IAmb	14 08 06.9	
	comp=Z,9.6nm,0.8s						
RND	**Reindeer**	**63.25**	**30**	P	**P**	**14 07 55.2**	**+0.3**
RND				IAmb	IAmb	14 08 14.0	
	comp=Z,19nm,1.3s						
RND	**Reindeer**	**63.25**	**30**	P	**P**	**14 07 55.2**	**+0.3**
RND				pmax	pmax		
	comp=Z,19nm,1.3s						
F24K	**Squaw Lake**	**63.27**	**25**	IAmb	IAmb	14 08 14.7	
	comp=Z,4.8nm,0.8s						
ILAR	**Eielson Array**	**63.95**	**28**	P	**P**	**14 08 03.5**	**+4.1**
	comp=Z,0.5nm,0.7s,baz=284,slow=8.3,SNR=12						
ILAR				LR	LR	14 38 55.6	
	comp=Z,40nm,18.0s,baz=46,slow=39						
	comp=Z,0.5nm,0.7s						
HDA	**Harding Lake**	**63.97**	**29**	IAmb	IAmb	14 08 17.5	
	comp=Z,11nm,1.3s						
BELG	**Belogornoye**	**64.25**	**318**	LR	LR	14 38 05.7	
	comp=Z,306nm,19.3s,baz=89,slow=38						
E28M	**Babbage River**	**66.22**	**24**	IAmb	IAmb	14 08 33.5	
	comp=Z,11nm,1.6s						
AKT	**Akhty**	**66.62**	**306**	*eP*	**P**	**14 08 17.7**	**+0.4**
AKT				MLR	MLR		
	comp=Z,117nm,8.0s						
INK	**Inuvik**	**68.44**	**23**	LR	LR	14 39 42.1	
	comp=Z,49nm,20.4s,baz=298,slow=37						
INK	**Inuvik**	**68.44**	**23**	P	**P**	**14 08 28.9**	**+0.8**
INK				IAmb	IAmb	14 09 04.7	
	comp=Z,9.0nm,1.4s						
INK	**Inuvik**	**68.44**	**23**	P	**P**	**14 08 28.9**	**+0.8**
				pmax	pmax		
	comp=Z,9.0nm,1.5s						
SPB2	**Spitsbergen Ar**	**68.69**	**348**	P	**P**	**14 08 30.8**	**+1.2**
SPITS	**Spitsbergen Ar**	**68.69**	**348**	P	**P**	**14 08 30.3**	**+0.7**
	comp=Z,11nm,0.9s,baz=79,slow=10,SNR=9.5						
SPITS				LR	LR	14 41 30.5	
	comp=Z,208nm,18.3s,baz=248,slow=39						
	comp=Z,11nm,0.9s						
KBS	**Kingsbay**	**69.09**	**349**	*ce*P	**P**	**14 08 31.0**	**-1.1**
KBS				pmax	pmax		
	comp=Z,38nm,1.7s						
GNI	**Garni**	**69.17**	**305**	LR	LR	14 42 57.1	
	comp=Z,116nm,19.3s,baz=51,slow=40						
KBZ	**Khabaz**	**69.41**	**309**	P	**P**	**14 08 34.1**	**-0.6**
	comp=Z,4.7nm,0.8s,baz=165,slow=5.3,SNR=13						
KBZ				LR	LR	14 42 38.1	
	comp=Z,173nm,18.5s,baz=28,slow=39						
	comp=Z,4.7nm,0.8s						
KBZ	**Khabaz**	**69.41**	**309** ⇑	*iP*	**P**	**14 08 35.8**	**+1.2**
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV	**Kislovodsk**	**69.49**	**310**	*eP*	**P**	**14 08 35.5**	**+0.2**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,117nm,17.0s						
KIV	**Kislovodsk**	**69.49**	**310**	P	**P**	**14 08 35.5**	**+0.2**
A36M				IAmb	IAmb	14 08 52.4	
	comp=Z,11nm,0.9s						
A36M	**Sachs Harbour**	**69.81**	**19**	P	**P**	**14 08 37.6**	**+1.0**
	comp=Z,10nm,0.9s						
OBN	**Obninsk**	**69.95**	**322**	LR	LR	14 41 58.8	
	comp=Z,425nm,19.4s,baz=40,slow=38						
ARCES	**ARCESS Array B**	**69.96**	**339**	P	**P**	**14 08 36.4**	**-1.2**
	comp=Z,4.2nm,0.8s,baz=70,slow=7.0,SNR=5.2						
ARCES				LR	LR	14 45 34.8	
	comp=Z,155nm,18.1s,baz=32,slow=41						
	comp=Z,4.2nm,0.8s						
FIA1	**FINESS Array S**	**72.90**	**331**	P	**P**	**14 08 55.3**	**-0.2**
FINES	**FINESS Array B**	**72.90**	**331**	P	**P**	**14 08 55.4**	**-0.1**
	comp=Z,3.6nm,0.4s,baz=72,slow=6.0,SNR=37						
FINES				LR	LR	14 44 14.5	
	comp=Z,239nm,18.8s,baz=48,slow=39						
	comp=Z,3.6nm,0.4s						
RES	**Resolute Bay**	**75.19**	**11**	LR	LR	14 45 53.9	
	comp=Z,56nm,18.2s,baz=13,slow=39						
RES	**Resolute Bay**	**75.19**	**11**	IAmb	IAmb	14 09 20.9	
	comp=Z,25nm,1.8s						
AK03	**Malin Array Si**	**75.68**	**320**	P	**P**	**14 09 11.4**	**-0.4**
AKASG	**Malin Array Be**	**75.69**	**320**	P	**P**	**14 09 11.5**	**-0.4**
	comp=Z,4.8nm,0.4s,baz=61,slow=6.6,SNR=16						
AKASG				LR	LR	14 45 05.4	
	comp=Z,567nm,18.8s,baz=64,slow=38						
	comp=Z,4.8nm,0.4s						
AKBB	**Malin Array Si**	**75.69**	**320**	P	**P**	**14 09 11.5**	**-0.4**
AKBB				IAmb	IAmb	14 09 13.2	
	comp=Z,10nm,0.6s						
AKBB	**Malin Array Si**	**75.69**	**320**	P	**P**	**14 09 11.5**	**-0.4**
AKBB				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AKBB	**Malin Array Si**	**75.69**	**320**	P	**P**	**14 09 12.0**	**+0.1**
AK09	**Malin Array Si**	**75.69**	**320**	P	**P**	**14 09 12.0**	**+0.1**
AK08	**Malin Array Si**	**75.69**	**320**	P	**P**	**14 09 12.1**	**+0.2**
AK01	**Malin Array Si**	**75.70**	**320**	P	**P**	**14 09 11.8**	**-0.1**
KIEV	**Kiev**	**75.70**	**320**	P	**P**	**14 09 11.6**	**-0.3**
KIEV				IAmb	IAmb	14 09 13.2	
	comp=Z,9.1nm,0.6s						
KIEV	**Kiev**	**75.70**	**320**	P	**P**	**14 09 11.6**	**-0.3**
KIEV				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KIEV	**Kiev**	**75.70**	**320**	P	**P**	**14 09 11.8**	**-0.1**
	comp=Z,61nm,0.7s						
AK04	**Malin Array Si**	**75.71**	**320**	P	**P**	**14 09 11.9**	**-0.1**
AK10	**Malin Array Si**	**75.71**	**320**	P	**P**	**14 09 11.9**	**-0.1**
AK06	**Malin Array Si**	**75.75**	**320**	P	**P**	**14 09 12.1**	**-0.1**
AK07	**Malin Array Si**	**75.76**	**320**	P	**P**	**14 09 12.0**	**-0.3**
LUBAR	**Lubar, Ukraine**	**76.87**	**319**	P	**P**	**14 09 18.3**	**-0.3**
BR131	**Keskin Array S**	**77.30**	**308**	IAmb	IAmb	14 09 23.9	
	comp=Z,8.2nm,0.8s						
BR131	**Keskin Array S**	**77.30**	**308**	*d*	*iP*	**P**	**14 09 21.7**	**+0.2**
BRTR	**Keskin Array B**	**77.30**	**308**	P	**P**	**14 09 21.6**	**+0.1**
	comp=Z,3.8nm,0.7s,baz=101,slow=4.5,SNR=14						
	comp=Z,3.8nm,0.7s						
BRTR	**Keskin Array B**	**77.30**	**308**	P	**P**	**14 09 21.3**	**-0.2**
BRTR	**Keskin Array B**	**77.30**	**308**	P	**P**	**14 09 21.3**	**-0.2**
BR104	**Keskin Array S**	**77.31**	**308**	P	**P**	**14 09 21.4**	**-0.1**
	comp=Z,73nmcomp=Z,7.4nm,0.9s						
BR106	**Keskin Array S**	**77.31**	**308**	P	**P**	**14 09 21.5**	**0.0**
	comp=Z,5.5nm,0.9s						
BR105	**Keskin Array S**	**77.32**	**308**	P	**P**	**14 09 21.4**	**-0.2**
	comp=Z,64nmcomp=Z,6.4nm,1.0s						
RNPP5	**Staryi Chortor**	**77.37**	**321**	P	**P**	**14 09 21.2**	**-0.2**
NDNU	**Novodnistrovsk**	**77.67**	**318**	P	**P**	**14 09 22.8**	**-0.4**
ASF	**Jabal al Asfar**	**77.91**	**300**	LR	LR	14 49 44.8	
	comp=Z,66nm,18.1s,baz=27,slow=40						
HORU	**Horodok**	**77.96**	**319**	P	**P**	**14 09 25.4**	**+0.6**
YKA	**Yellowknife Ar**	**78.06**	**25**	P	**P**	**14 09 26.8**	**+1.7**
	comp=Z,0.2nm,0.6s,baz=304,slow=6.3,SNR=6.9						
	comp=Z,0.2nm,0.6s						
URZ	**Urwera**	**78.70**	**143**	LR	LR	14 39 19.9	
	comp=Z,57nm,20.9s,baz=326,slow=32						
HFS	**Hagfors**	**78.84**	**332**	P	**P**	**14 09 29.0**	**-0.4**
	comp=Z,2.0nm,0.6s,baz=26,slow=8.3,SNR=4.4						
HFS				LR	LR	14 48 58.2	
	comp=Z,365nm,18.6s,baz=20,slow=39						
	comp=Z,2.0nm,0.6s						
NB2	**NORSAR Subarra**	**79.32**	**334**	P	**P**	**14 09 31.1**	**-1.0**
	comp=Z,3.2nm,0.6s,baz=53,slow=5.9						
NOA	**NORSAR Array B**	**79.32**	**334**	P	**P**	**14 09 31.8**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=50,slow=5.5,SNR=4.3						
NOA				LR	LR	14 46 31.5	
	comp=Z,95nm,21.8s,baz=55,slow=37						
	comp=Z,1.3nm,0.7s						
BUR08	**Bucovina Ar. S**	**79.40**	**318**	P	**P**	**14 09 33.1**	**+0.3**
BUR08				IAmb	IAmb	14 09 37.1	
	comp=Z,36nm,1.9s						
POIN	**Pond Inlet**	**79.40**	**8**	IAmb	IAmb	14 09 49.5	
	comp=Z,244nm,2.0s						
BURAR	**Bucovina Array**	**79.40**	**318**	P	**P**	**14 09 32.7**	**-0.2**
CSS	**Mathiatis**	**79.48**	**304**	P	**P**	**14 09 33.4**	**-0.1**
	comp=Z,16nm,0.9s						
MLR	**Muntele Rosu**	**79.94**	**316**	LR	LR	14 47 47.3	
	comp=Z,232nm,18.2s,baz=76,slow=38						
EIL	**Elat**	**80.46**	**298**	LR	LR	14 50 11.1	
	comp=Z,53nm,18.5s,baz=62,slow=40						
KECS	**Kecovo**	**81.75**	**320**	*eP*	**P**	**14 09 45.6**	**+0.3**
KECS	**Kecovo**	**81.75**	**320**	*eP*	**P**	**14 09 45.6**	**+0.3**
ILON	**Igloolik, Nuna**	**81.86**	**11**	P	**P**	**14 09 45.8**	**+0.3**
ILON				IAmb	IAmb	14 09 56.7	
	comp=Z,12nm,1.3s						
VRAC	**Vranov**	**83.49**	**322**	LR	LR	14 50 14.8	
	comp=Z,477nm,18.7s,baz=82,slow=38						
CLL	**Collm**	**84.25**	**325**	*i*	**P**	**14 09 58.4**	**+0.2**
CLL				pmax	pmax		
	comp=Z,11nm,1.1s						
CLL	**Collm**	**84.25**	**325**	*i*	**P**	**14 09 58.4**	**+0.2**
	comp=Z,11nm,1.1s						
CLL	**Collm**	**84.25**	**325**	P	**P**	**14 09 58.3**	**+0.1**
GERES	**GEESS Array B**	**85.32**	**323**	P	**P**	**14 10 04.1**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=56,slow=5.3,SNR=1.9						
	comp=Z,0.4nm,0.4s						
IDI	**Anoyia**	**85.50**	**307**	P	**P**	**14 10 04.5**	**-0.4**
SFJD	**Kangerlussuaq**	**86.81**	**360**	LR	LR	14 50 45.6	
	comp=Z,136nm,18.1s,baz=76,slow=37						
EKA	**Eskdalemuir Ar**	**88.77**	**335**	P	**P**	**14 10 20.4**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=39,slow=5.2,SNR=3.9						
EKA				LR	LR	14 56 12.6	
	comp=Z,214nm,18.8s,baz=9.5,slow=40						
	comp=Z,0.6nm,0.4s						
FRB	**Frobisher Bay**	**89.03**	**8**	LR	LR	14 51 24.2	
	comp=Z,55nm,20.3s,baz=33,slow=36						
PPT	**Papeete**	**90.46**	**109**	LR	LR	14 43 26.9	
	comp=Z,41nm,19.9s,baz=299,slow=30						
VAE	**Valguarnera**	**91.49**	**314**	LR	LR	14 55 58.7	
	comp=Z,169nm,18.4s,baz=208,slow=38						
PDAR	**Pinedale Array**	**92.62**	**39**	P	**P**	**14 10 42.3**	**+3.5**
	comp=Z,0.1nm,0.5s,baz=267,slow=3.0,SNR=3.6						
	comp=Z,0.1nm,0.5s						
PDAR	**Pinedale Array**	**92.62**	**39**	P	**P**	**14 10 38.4**	**-0.4**
MBAR	**Mbarara**	**97.52**	**273**	LR	LR	14 57 40.8	
	comp=Z,57nm,18.0s,baz=78,slow=37						
ESDC	**Sonseca Array**	**100.83**	**325**	P	**Pdif**	**14 11 17.5**	**+1.7**
	comp=Z,0.7nm,0.3s,baz=132,slow=6.4,SNR=4.0						

*HEL **23** 13:57:41.1±0.3, 60.98N×29.07E, h0km, ML2.0, Suspected explosion*
*IDC **23** 13:57:45.1±2.1, 61.15N×28.77E, h0km, mbtmp3.4/2, ML3.0/2, Error ellipse: s-maj=18.6km s-min=11.3km az=155.0*

ISC 23 13:57:40.2±1.0, 61.05N±0.04×28.87E±0.05, h0km, n33, σ1s86/44, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RUF	**Ruokolahti**	**0.37**	**6**	PG		**Pb**	**13 57 49.8**	**+0.1**
	baz=171							
RUF				SG		**Sb**	**13 57 55.3**	**-0.8**
RUF				smax		smax	13 57 56.2	
	comp=Z,22nm,0.2s							
VJF	**Virojoki**	**0.83**	**232**	PG		**Pb**	**13 57 57.3**	**-0.1**
	baz=59							
VJF				smax		smax	13 58 07.8	
	comp=Z,16nm,0.2s							
VJF				SB		**Sb**	**13 58 08.8**	**-0.3**
FIA0	**FINESS Array S**	**1.41**	**287**	PG		**Pb**	**13 58 08.0**	**+0.7**
FIA0				smax		smax	13 58 27.0	
	comp=Z,16nm,0.2s							
FIA0				SN		**Sn**	**13 58 28.4**	**+2.1**
FINES	**FINESS Array B**	**1.41**	**287**	Pg		**Pb**	**13 58 08.4**	**+1.1**
	comp=Z,3.2nm,0.3s,baz=112,slow=16,SNR=84							
FINES				Lg		Lg	13 58 26.9	
	comp=Z,11nm,0.3s,baz=103,slow=30,SNR=36							
PVF	**Pernaja**	**1.56**	**252**	PG		**Pb**	**13 58 10.2**	**+0.2**
PVF				smax		smax	13 58 30.1	
	comp=Z,19nm,0.2s							
PVF				SN		**Sg**	**13 58 34.1**	**+3.8**
SUF	**Sumiainen**	**2.11**	**324**	*eP*		**Pg**	**13 58 21.2**	**+0.6**
SUF	**Sumiainen**	**2.11**	**324**	PG		**Pg**	**13 58 21.5**	**+0.9**
	baz=138							
SUF				smax		smax	13 58 47.2	
	comp=Z,3.5nm,0.2s							
SUF				SG		**Sg**	**13 58 50.1**	**+2.1**
NUR	**Nurmijarvi**	**2.14**	**257**	PB		**Pb**	**13 58 19.5**	**-0.3**
NUR				smax		smax	13 58 46.9	
	comp=Z,6.5nm,0.2s							
NUR				SG		**Sg**	**13 58 49.6**	**+0.6**
ARBE	**Arbavere**	**2.17**	**223**	*eP*		**Pb**	**13 58 20.2**	**-0.1**
ARBE	**Arbavere**	**2.17**	**223**	SG		**Sg**	**13 58 50.1**	**+0.3**
JOF	**Joensuu**	**2.20**	**31**	*eP*		**Pb**	**13 58 21.1**	**+0.4**
JOF	**Joensuu**	**2.20**	**31**	PG		**Pb**	**13 58 20.8**	**0.0**
	baz=206							
JOF				SG		**Sb**	**13 58 49.6**	**+1.2**
KEF	**Keuruu**	**2.21**	**302**	*eP*		**Pb**	**13 58 21.8**	**+0.8**
KEF	**Keuruu**	**2.21**	**302**	PG		**Pb**	**13 58 22.0**	**+0.9**
KEF				smax		smax	13 58 50.3	
	comp=Z,4.2nm,0.2s							
KEF				SG		**Sg**	**13 58 53.1**	**+1.8**
MEF	**Metsahovi**	**2.36**	**251**	*eP*		**Pb**	**13 58 24.2**	**+0.6**
MEF	**Metsahovi**	**2.36**	**251**	PG		**Pb**	**13 58 24.0**	**+0.5**
MEF				smax		smax	13 58 52.9	
	comp=Z,5.2nm,0.2s							
MEF				SG		**Sb**	**13 58 53.7**	**+0.6**
NIF	**Nilsia**	**2.40**	**348**	PG		**Pb**	**13 58 25.0**	**+0.8**
	baz=164							
NIF				smax		smax	13 58 54.7	
	comp=Z,6.6nm,0.2s							
NIF				SG		**Sg**	**13 58 57.5**	**+0.4**
VSU	**Vasula**	**2.82**	**204**	SG		**Sb**	**13 59 08.0**	**+1.7**
TVF	**Tvarminne**	**3.04**	**249**	smax		smax	13 59 12.3	
	comp=Z,3.9nm,0.2s							
TVF				SG		**Sg**	**13 59 16.5**	**-1.2**
RMF	**Romuvaara**	**3.21**	**8**	PB		**Pb**	**13 58 36.9**	**-1.2**
	baz=191							
RAF	**Rauma**	**3.46**	**273**	*eP*		**Pb**	**13 58 40.3**	**-2.0**
RAF	**Rauma**	**3.46**	**273**	SN		**Sn**	**13 59 19.7**	**+2.9**
VAF	**Ylistaro**	**3.54**	**307**	*eP*		**Pb**	**13 58 40.7**	**-2.8**
VAF	**Ylistaro**	**3.54**	**307**	PG		**Pg**	**13 58 48.3**	**+0.4**
	baz=119							
OUF	**Merijarvi**	**3.83**	**332**	PG		**Pg**	**13 58 52.6**	**-1.0**
OBF4	**Vikkela, Lumij**	**4.15**	**337**	PG		**Pg**	**13 58 58.5**	**-1.1**
	baz=156							
AAL	**Aland**	**4.46**	**263**	SG		**Sg**	**14 00 01.9**	**-1.5**
KU1	**Kurvinen**	**4.54**	**4**	PG		**Pb**	**13 59 02.9**	**+2.3**
	baz=181							
HFS	**Hagfors**	**7.53**	**270**	Sn		**Sn**	**14 00 51.4**	**-5.7**
	comp=Z,0.5nm,0.3s,baz=79,slow=24,SNR=5.0							
HFS				Lg		Lg	14 01 35.9	
	comp=Z,0.5nm,0.3s,baz=82,slow=31,SNR=1.6							
NC602	**NORSAR Array S**	**8.46**	**275**	*eP*		**Pn**	**13 59 39.5**	**-4.3**
NB201	**NORSAR Array S**	**8.53**	**278**	*eP*		**Pn**	**13 59 45.9**	**+1.1**
NOA	**NORSAR Array B**	**8.57**	**278**	Pn		**Pn**	**13 59 47.9**	**+2.5**
	comp=Z,0.1nm,0.3s,baz=142,slow=13,SNR=31							
	comp=Z,1.0nm,0.6s							
ARCES	**ARCESS Array B**	**8.63**	**352**	Pn		**Pn**	**13 59 47.4**	**+1.2**
	comp=Z,0.1nm,0.3s,

IGDI	**IGDIR**	**1.42**	**351**	P	**Pg**	**14 06 37.4**	**+0.5**
IGDI				S	**Sg**	**14 06 59.8**	**+4.5**
IAZR	**Azarshahr**	**1.49**	**121**	Pg	**Pg**	**14 06 38.7**	**+0.6**
PERV	**Siirt/Pervari-**	**1.53**	**251**	P	**Pg**	**14 06 41.0**	**+2.1**
PERV				S	**Sg**	**14 07 02.9**	**+4.0**
PERV				IAML		14 07 08.0	
	comp=N,120nm,0.4s						
PERV				IAML		14 07 11.0	
	comp=E,185nm,0.6s						
DORK	**Agr/Tutak/Do**	**1.55**	**307**	P	**Pb**	**14 06 37.9**	**-0.7**
DORK				S	**Sg**	**14 06 59.5**	**+0.2**
DORK				IAML		14 07 03.0	
	comp=E,45nm,0.8s						
DORK				IAML		14 07 04.0	
	comp=N,34nm,1.1s						
SRTM	**Siirt_Merkez**	**1.99**	**257**	P	**Pb**	**14 06 45.3**	**-0.6**
SRTM				S	**Sg**	**14 07 13.7**	**+0.2**
SRTM				IAML		14 07 17.0	
	comp=E,49nm,0.5s						
SRTM				IAML		14 07 19.0	
	comp=N,59nm,0.6s						
IHRS	**Heris**	**2.10**	**93**	Pn	**Pg**	**14 06 48.8**	**-1.0**
MUSM	**Mu-Merkez**	**2.26**	**278**	P	**Pn**	**14 06 46.8**	**-0.4**
MUSM				S	**Sb**	**14 07 17.3**	**-1.4**
GDB	**GEDABAY**	**2.49**	**25**	P	**Pg**	**14 06 55.7**	**-1.6**
GDB				S	**Sb**	**14 07 24.1**	**-1.3**
YRD	**Yardimli**	**3.06**	**80**	P	**Pb**	**14 07 03.7**	**-0.5**
YRD				S	**Sg**	**14 07 45.9**	**-1.9**

OSPL ***23*** *14:10:00.0±0.4, 17°.89N×66°.66W, h2km±793km, ML2.9, Presumed earthquake*
SDD ***23*** *14:10:00.2±0.3, 17°.99N×66°.68W, h15km±2km, MD2.5, ML1.8, MW2.1, Presumed earthquake*
ISC 23 14:09:57.6±1.4, **17°.94N**±0°.10×**66°.66W**±0°.04, **h26**km±7km, **n8**, **σ0§57/15**, **3C-1D**, **Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
OBIP	**Obispado Ponce**	**0.11**	**27**	*i*	P		**Pb**	**14 10 02.9**	**+0.4**
OBIP				*e*	S		**Sb**	**14 10 04.9**	**-0.9**
OBIP				IAML				14 10 05.3	
	comp=Z,3μm,0.1s								
CELP	**Cerrillos**	**0.15**	**30⇓**	*e*	P		**Pb**	**14 10 03.5**	**+0.6**
CELP				*e*	S		**Sb**	**14 10 06.0**	**-0.4**
CELP				IAML				14 10 06.0	
	comp=E,453nm,0.2s								
CELP				IAML				14 10 06.2	
	comp=N,286nm,0.2s								
MLPR	**Magueyes Islan**	**0.37**	**274⇑**	*e*	Pg		**Pn**	**14 10 06.8**	**-0.5**
MLPR				IAML				14 10 12.6	
	comp=E,66nm,0.2s								
MLPR				IAML				14 10 14.6	
	comp=N,38nm,0.2s								
AOPR	**Arecibo Observ**	**0.41**	**347**	*e*	Pg		**Pb**	**14 10 07.0**	**+0.5**
AOPR			⇑	*e*	Sg		**Sb**	**14 10 12.3**	**-0.2**
AOPR				IAML				14 10 13.0	
	comp=E,436nm,0.2s								
AOPR				IAML				14 10 15.9	
	comp=N,114nm,0.3s								
CRPR	**Cabo Rojo, PR**	**0.43**	**278**	*i*	P		**Pn**	**14 10 07.8**	**-0.4**
CRPR				*e*	S		**Sb**	**14 10 13.9**	**+0.9**
CRPR				IAML				14 10 14.6	
	comp=Z,103nm,0.1s								
SJG	**San Juan**	**0.51**	**71**	*e*	Pg		**Pn**	**14 10 09.7**	**+0.4**
SJG				*e*	Sg		**Sn**	**14 10 16.8**	**-0.5**
SJG	**San Juan**	**0.51**	**71**	*i*	P		**Pn**	**14 10 09.4**	**+0.1**
SJG				*e*	S		**Sn**	**14 10 16.8**	**-0.5**
SJG				IAML				14 10 18.4	
	comp=Z,1μm,0.2s								
AGPR	**Aguadilla, PR**	**0.68**	**321⇑**	*e*	Pg		**Pn**	**14 10 11.5**	**-0.1**
AGPR				*e*	Sg		**Sb**	**14 10 19.9**	**0.0**
AGPR				IAML				14 10 21.2	
	comp=E,27nm,0.1s								
AGPR				IAML				14 10 43.6	
	comp=N,74nm,1.7s								

WEL 23 14:10:51.6±1.3, **33°S**±23°×**18°0E**±4°, **h338**km±26km, **M4.6/3, mB4.8/3, ML4.3/6, MLv4.7/3, Mw(mB)4.1/3, Error ellipse: s-maj=61.9km s-min=12.3km az=116.6, confirmed, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
WMGZ	**Waiomatatini S**	**4.96**	**194**	P			Pn	14 12 10.2	+0.1
WMGZ				S			S	14 13 13.4	-0.1
HAZ	**Te Kaha**	**5.05**	**199**	P			Pn	14 12 10.2	-0.9
HAZ				S			S	14 13 14.5	-0.9
PUZ	**Puketiti**	**5.24**	**194**	P			Pn	14 12 12.6	-0.6
PUZ				S			S	14 13 19.7	+0.5
RUGZ	**Raukumara Rang**	**5.28**	**199**	P			Pn	14 12 14.6	+0.9
CNGZ	**Carnagh Statio**	**5.65**	**194**	P			Pn	14 12 19.4	+1.6
MWZ	**Matawai**	**5.66**	**199**	P			Pn	14 12 17.3	-0.7
MWZ				S			S	14 13 29.2	+1.2
URZ	**Urewera**	**5.72**	**203**	P			Pn	14 12 18.9	+0.2
URZ				S			S	14 13 29.3	+0.3
MUGZ	**Murupara**	**6.03**	**204**	P			Pn	14 12 22.8	+0.6
MUGZ				S			S	14 13 38.3	+2.6
ARHZ	**Aropaoanui**	**6.68**	**200**	P			Pn	14 12 29.7	0.0
ARHZ				S			S	14 13 51.1	+1.7
BKZ	**Black Stump Fm**	**6.74**	**203**	P			Pn	14 12 29.3	-1.3
KWHZ	**Kaweka Forest**	**7.00**	**203**	P			Pn	14 12 34.6	+1.0
PRHZ	**Porangahau**	**7.71**	**199**	P			Pn	14 12 42.3	+0.3
TSZ	**Takapari Road**	**7.73**	**203**	P			Pn	14 12 43.2	+1.0
TSZ				S			S	14 14 13.2	+1.0
BFZ	**Birch Farm**	**8.21**	**200**	P			Pn	14 12 48.4	+0.5
BFZ				S			S	14 14 24.6	+1.9
MRZ	**Mangatainoka R**	**8.39**	**203**	P			Pn	14 12 49.5	-0.6
MRZ				S			S	14 14 24.2	-2.6

RSNC ***23*** *14:40:01.5±0.0, 7°N±1°×7°3W±°, h144km±1km, M3.0, mB4.7, mb2.9, ML2.7, MLv3.4, Mw(mB)4.0*
FUNV ***23*** *14:40:03.1, 7°.13N×73°.13W, h5km, MW3.1, Presumed earthquake*
ISC 23 14:39:59.8±1.3, **6°.83N**±0°.03×**73°.12W**±0°.04, **h151**km±8km, **n35**, **σ1§04/67**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
BARC	**Barichara**	**0.25**	**194**	P			**Pn**	**14 40 21.2**	**+0.5**
BARC				S			**Sn**	**14 40 36.0**	**-0.6**
BRJC	**Barrancabermej**	**0.63**	**283**	P			**Pn**	**14 40 22.9**	**+0.9**
BRJC				S			**Sn**	**14 40 39.1**	**+0.1**
PAMC	**Pamplona, Colo**	**0.65**	**40**	P			**Pn**	**14 40 23.9**	**+1.1**
PAMC				S			**Sn**	**14 40 40.8**	**+0.6**
RUSC	**La Rusia**	**0.94**	**178**	P			**Pn**	**14 40 25.1**	**+0.3**
RUSC				S			**Sn**	**14 40 43.2**	**-0.6**
RUSC	**La Rusia**	**0.94**	**178**	*e*	P		**Pn**	**14 40 25.7**	**+0.9**
RUSC				*e*	S		**Sn**	**14 40 42.8**	**-1.0**
PTBC	**PUERTO BERRIO,**	**1.36**	**258**	P			**Pn**	**14 40 27.6**	**-0.5**
PTBC				S			**Sn**	**14 40 47.8**	**-1.8**
SPBC	**San Pablo de B**	**1.51**	**219**	P			**Pn**	**14 40 29.9**	**+0.2**
SPBC				S			**Sn**	**14 40 51.8**	**-0.8**
NORC	**Norcasia**	**2.15**	**234**	P			**Pn**	**14 40 37.0**	**+0.2**
NORC				S			**Sn**	**14 41 05.0**	**-0.3**
CHIC	**Chingaza**	**2.27**	**196**	P			**Pn**	**14 40 39.4**	**+0.7**
CHIC				S			**Sn**	**14 41 08.3**	**-0.3**
ROSC	**El Rosal**	**2.31**	**211**	P			**Pn**	**14 40 39.6**	**+0.5**
ROSC				S			**Sn**	**14 41 09.6**	**+0.2**
HELC	**Santa Helena**	**2.48**	**255**	P			**Pn**	**14 40 41.4**	**+0.3**
HELC				S			**Sn**	**14 41 13.2**	**+0.4**
CVER	**Cruz Verde, Cu**	**2.49**	**202**	P			**Pn**	**14 40 42.4**	**+1.1**
CVER				S			**Sn**	**14 41 11.0**	**-2.3**
UREC	**San Jos de Ur**	**2.56**	**291**	P			**Pn**	**14 40 41.4**	**-0.4**
UREC				S			**Sn**	**14 41 12.0**	**-2.1**
GUY2C	**Guyana, Caldas**	**2.75**	**234**	P			**Pn**	**14 40 45.5**	**+1.0**
GUY2C				S			**Sn**	**14 41 17.8**	**-1.2**
VILC	**Villavicencio,**	**2.76**	**192**	P			**Pn**	**14 40 44.7**	**+0.3**
VILC				S			**Sn**	**14 41 18.6**	**-0.3**
PTGC	**Puerto Gaitan,**	**2.80**	**159**	P			**Pn**	**14 40 44.0**	**-0.7**
PTGC				S			**Sn**	**14 41 17.9**	**-1.5**
RECRC	**Villamaria, Ca**	**2.90**	**230**	P			**Pn**	**14 40 47.8**	**+1.3**
RECRC				S			**Sn**	**14 41 22.1**	**-0.4**
NIZA	**Niza - Manizal**	**2.93**	**233**	P			**Pn**	**14 40 46.9**	**+0.3**
NIZA				S			**Sn**	**14 41 21.8**	**-1.0**
CBOC	**Ciudad Bolivar**	**3.03**	**252**	P			**Pn**	**14 40 49.2**	**+1.4**
CBOC				S			**Sn**	**14 41 24.9**	**0.0**
DBBC	**Dabeiba**	**3.07**	**274**	P			**Pn**	**14 40 49.4**	**+1.2**
DBBC				S			**Sn**	**14 41 26.1**	**+0.4**
SDV	**Santo Domingo**	**3.20**	**50**	P			**Pn**	**14 40 50.8**	**+0.8**
SDV				S			**Sn**	**14 41 27.5**	**-1.3**
SDV	**Santo Domingo**	**3.20**	**50**	*e*	P		**Pn**	**14 40 51.0**	**+1.1**
SDV				*e*	S		**Sn**	**14 41 27.9**	**-0.9**
ARGC	**Ariguani, Magd**	**3.20**	**340**	P			**Pn**	**14 40 51.9**	**+2.0**
ARGC				S			**Sn**	**14 41 28.7**	**0.0**
ANIL	**Santa Ana**	**3.25**	**224**	P			**Pn**	**14 40 51.5**	**+0.7**
ANIL				S			**Sn**	**14 41 31.4**	**+1.2**
PRAC	**Prado**	**3.56**	**210**	P			**Pn**	**14 40 55.1**	**+0.6**
PRAC				S			**Sn**	**14 41 35.8**	**-1.2**
APAC	**Apartado, Choc**	**3.59**	**287**	P			**Pn**	**14 40 55.2**	**+0.4**
APAC				S			**Sn**	**14 41 37.6**	**+0.1**
ORTC	**Ortega, Tolima**	**3.59**	**216**	P			**Pn**	**14 40 56.0**	**+1.1**
ORTC				S			**Sn**	**14 41 38.2**	**+0.5**
SJCC	**San Jacinto, C**	**3.66**	**326**	P			**Pn**	**14 40 55.4**	**-0.4**
SJCC				S			**Sn**	**14 41 37.2**	**-2.1**
SJCC	**San Jacinto, C**	**3.66**	**326**	*e*	P		**Pn**	**14 40 56.0**	**+0.3**
SJCC				*e*	S		**Sn**	**14 41 37.0**	**-2.2**
PLMC	**San Jos del P**	**3.68**	**239**	P			**Pn**	**14 40 57.1**	**+1.0**
PLMC				S			**Sn**	**14 41 38.2**	**-1.5**
URMC	**La Uribe, Meta**	**3.78**	**199**	P			**Pn**	**14 40 58.4**	**+1.1**
URMC				S			**Sn**	**14 41 42.4**	**+0.4**
YOTC	**Yotoco, Valle**	**4.28**	**229**	P			**Pn**	**14 41 04.0**	**+0.1**
YOTC				S			**Sn**	**14 41 52.3**	**-1.5**
JAMC	**Jamundi, Valle**	**5.04**	**225**	P			**Pn**	**14 41 16.1**	**+2.0**
	0.0nm3.1nm,2.5s								
GARC	**Garzon, Huila**	**5.19**	**207**	P			**Pn**	**14 41 16.3**	**+0.3**
POPC	**Popayan, Colom**	**5.54**	**220**	P			**Pn**	**14 41 21.3**	**+0.5**

JMA ***23*** *14:57:07.6±0.2, 36°.3N±0°.8×13°.7E±°, h240km±1km, MV2.7/27, TOYAMA GIFU BORDER REG*
IDC ***23*** *14:57:07.7±1.2, 36°.44N×137°.78E, h245km±7km, mb3.1/2, mbtmp3.6/3, Error ellipse: s-maj=75.6km s-min=18.3km az=100.0*
ISC 23 14:57:07.0±1.1, **36°.46N**±0°.09×**137°.3E**±0°.1, **h242**km±8km, **n16**, **σ1§18/22**, **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
JGN	**Niukaw**	**0.23**	**180**	*e*	P		**Pn**	**14 57 38.5**	**+0.1**
JGN				*e*	S		**S**	**14 58 02.9**	**-0.2**
MAT	**Matsushiro**	**0.72**	**83**	*e*	P		**Pn**	**14 57 39.9**	**+0.2**
MAT				*e*	S		**S**	**14 58 04.8**	**-0.7**
MJAR	**Matsushiro Arr**	**0.72**	**83**	P			**Pn**	**14 57 39.9**	**+0.2**
	3.7nm,0.3s,baz=255,slow=6.8,SNR=20								
MJAR				S			**S**	**14 58 06.0**	**+0.6**
	2.9nm,0.7s,baz=316,slow=8.6,SNR=6.2								
JKG	**Kaga**	**0.81**	**258**	*e*	P		**Pn**	**14 57 41.0**	**+0.9**
JYTA	**Yamagatataniai**	**0.98**	**209**	*e*	P		**Pn**	**14 57 40.8**	**-0.2**
JYTA				*e*	S		**S**	**14 58 05.9**	**-1.9**
JHG	**Hegura jima**	**1.43**	**347**	*e*	P		**Pn**	**14 57 45.6**	**+1.8**
JWT	**Wachi**	**1.95**	**234**	P			**Pn**	**14 57 48.7**	**+0.5**
JNS	**Sasagawa**	**2.10**	**49**	*e*	P		**Pn**	**14 57 50.2**	**+0.7**
JIE	**Ise**	**2.12**	**194**	*e*	P		**Pn**	**14 57 50.0**	**0.0**
JAW	**Awa shima**	**2.52**	**37**	*e*	P		**Pn**	**14 57 55.0**	**+1.3**
JWY	**Kouya**	**2.64**	**213**	*e*	P		**Pn**	**14 57 55.7**	**+0.5**
JOTO	**OTAMA OYAMA**	**2.66**	**65**	*e*	P		**Pn**	**14 57 56.1**	**+0.9**
JOTO				*e*	S		**S**	**14 58 33.7**	**+0.5**
JTNC	**Tanabenakahech**	**2.98**	**208**	*e*	P		**Pn**	**14 57 59.1**	**+0.4**
ASAJ	**Asahikawa**	**8.65**	**26**	P			**Pn**	**14 59 08.4**	**+0.1**
	0.9nm,0.4s,baz=240,slow=16,SNR=7.2								
ASAJ				S			**S**	**15 00 42.7**	**-3.5**
	4.8nm,0.8s,baz=278,slow=13,SNR=2.7								
WRA	**Warramunga Arr**	**56.16**	**183**	P			**P**	**15 06 21.9**	**+0.2**
	0.8nm,0.3s,baz=360,slow=7.6,SNR=30								
	0.8nm,0.3s								
ASAR	**Alice Springs**	**59.88**	**184**	P			**P**	**15 06 48.1**	**+0.7**
	0.3nm,0.6s,baz=1.3,slow=6.5,SNR=9.2								
	0.3nm,0.6s								

FUNV ***23*** *15:03:25.6, 8°.35N×73°.56W, h5km, MW3.7, Presumed earthquake*
RSNC ***23*** *15:03:27.7±0.0, 8°N±1°×7°4W±°, h98km±2km, M3.2, mB4.7, mb3.8, ML2.9, MLv3.6, Mw(mB)3.9*
ISC 23 15:03:26.5±1.2, **8°.34N**±0°.03×**73°.59W**±0°.03, **h104**km±9km, **n34**, **σ1§28/65**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
OCAC	**Ocana**	**0.28**	**110**	P			**Pn**	**15 03 41.2**	**-0.4**
OCAC				S			**Sn**	**15 03 51.9**	**-1.0**
PAMC	**Pamplona, Colo**	**1.32**	**138**	P			**Pn**	**15 03 52.1**	**+0.7**
PAMC				S			**Sn**	**15 04 10.6**	**+0.5**
BRJC	**Barrancabermej**	**1.36**	**187**	P			**Pn**	**15 03 51.0**	**-0.3**
BRJC				S			**Sn**	**15 04 09.5**	**-0.6**
ARGC	**Ariguani, Magd**	**1.65**	**337**	P			**Pn**	**15 03 55.9**	**+1.1**
ARGC				S			**Sn**	**15 04 18.3**	**+2.1**
BARC	**Barichara**	**1.78**	**167**	P			**Pn**	**15 03 56.7**	**0.0**
BARC				S			**Sn**	**15 04 18.9**	**-0.7**
PTBC	**PUERTO BERRIO,**	**1.98**	**206**	P			**Pn**	**15 03 58.7**	**-0.3**
PTBC				S			**Sn**	**15 04 24.3**	**+0.4**
UREC	**San Jos de Ur**	**2.01**	**253**	P			**Pn**	**15 04 01.0**	**+1.6**
UREC				S			**Sn**	**15 04 26.9**	**+2.4**
SJCC	**San Jacinto, C**	**2.21**	**315**	P			**Pn**	**15 04 02.2**	**+0.2**
SJCC				S			**Sn**	**15 04 28.6**	**-0.5**
SJCC	**San Jacinto, C**	**2.21**	**315**	*e*	P		**Pn**	**15 04 02.6**	**+0.6**
SJCC				*e*	S		**Sn**	**15 04 30.1**	**+1.0**
RUSC	**La Rusia**	**2.48**	**168**	P			**Pn**	**15 04 05.0**	**-0.9**
RUSC				S			**Sn**	**15 04 35.9**	**-0.2**
RUSC	**La Rusia**	**2.48**	**168**	*e*	P		**Pn**	**15 04 05.4**	**-0.4**
SPBC	**San Pablo de B**	**2.71**	**190**	P			**Pn**	**15 04 08.9**	**+0.3**
SPBC				S			**Sn**	**15 04 41.3**	**+0.3**
HELC	**Santa Helena**	**2.87**	**222**	P			**Pn**	**15 04 12.0**	**+1.0**
HELC				S			**Sn**	**15 04 44.3**	**-0.9**
SMRC	**Santa Marta, M**	**2.88**	**347**	P			**Pn**	**15 04 11.6**	**+0.9**
SMRC				S			**Sn**	**15 04 45.8**	**+1.0**
DBBC	**Dabeiba**	**2.91**	**243**	P			**Pn**	**15 04 12.5**	**+1.3**
DBBC				S			**Sn**	**15 04 45.5**	**-0.2**
SDV	**Santo Domingo**	**2.97**	**79**	P			**Pn**	**15 04 12.9**	**+0.8**
SDV				S			**Sn**	**15 04 46.5**	**-0.8**
SDV	**Santo Domingo**	**2.97**	**79**	*e*	P		**Pn**	**15 04 13.0**	**+0.9**
SDV				*e*	S		**Sn**	**15 04 47.3**	**0.0**
APAC	**Apartado, Choc**	**3.00**	**262**	P			**Pn**	**15 04 12.7**	**+0.4**
APAC				S			**Sn**	**15 04 45.4**	**-2.2**
NORC	**Norcasia**	**3.04**	**205**	P			**Pn**	**15 04 12.7**	**-0.2**
NORC				S			**Sn**	**15 04 46.1**	**-2.5**
ROSC	**El Rosal**	**3.55**	**192**	P			**Pn**	**15 04 21.4**	**+1.3**
ROSC				S			**Sn**	**15 05 01.0**	**-0.4**
GUY2C	**Guyana, Caldas**	**3.56**	**210**	P			**Pn**	**15 04 20.4**	**+0.1**
GUY2C				S			**Sn**	**15 05 01.2**	**-0.6**
CHIC	**Chingaza**	**3.69**	**182**	P			**Pn**	**15 04 21.0**	**-0.9**
CHIC				S			**Sn**	**15 05 06.6**	**+1.9**
URIC	**Uribia, Colomb**	**3.69**	**25**	P			**Pn**	**15 04 20.8**	**-0.8**
URIC				S			**Sn**	**15 05 03.4**	**-0.9**
URIC	**Uribia, Colomb**	**3.69**	**25**	*e*	P		**Pn**	**15 04 20.9**	**-0.7**
URIC				*e*	S		**Sn**	**15 05 03.1**	**-1.2**
CAPC	**Capurgana**	**3.73**	**275**	P			**Pn**	**15 04 21.4**	**-0.8**
CAPC				S			**Sn**	**15 04 59.8**	**-5.5**
RECRC	**Villamaria, Ca**	**3.79**	**208**	P			**Pn**	**15 04 24.7**	**+1.3**
RECRC				S			**Sn**	**15 05 07.9**	**+0.6**
CVER	**Cruz Verde, Cu**	**3.82**	**187**	P			**Pn**	**15 04 25.8**	**+2.0**
CVER				S			**Sn**	**15 05 07.9**	**-0.2**
VILC	**Villavicencio,**	**4.20**	**181**	P			**Pn**	**15 04 29.3**	**+0.7**
VILC				S			**Sn**	**15 05 18.9**	**+2.2**
ANIL	**Santa Ana**	**4.23**	**205**	P			**Pn**	**15 04 31.2**	**+2.1**
ANIL				S			**Sn**	**15 05 18.2**	**+0.6**
PLMC	**San Jos del P**	**4.33**	**218**	P			**Pn**	**15 04 31.0**	**+0.6**
ORTC	**Ortega, Tolima**	**4.70**	**201**	P			**Pn**	**15 04 35.5**	**+0.2**
ORTC				S			**Sn**	**15 05 28.1**	**-0.6**
PRAC	**Prado**	**4.77**	**196**	P			**Pn**	**15 04 36.7**	**+0.5**
PRAC				S			**Sn**	**15 05 30.8**	**+0.3**
URMC	**La Uribe, Meta**	**5.12**	**189**	P			**Pn**	**15 04 40.6**	**-0.4**
	0.1nm914nm16nm,0.6s								
URMC				S			**Sn**	**15 05 37.1**	**-1.8**
	0.1nm914nm16nm,0.6s								
YOTC	**Yotoco, Valle**	**5.12**	**213**	P			**Pn**	**15 04 40.8**	**-0.2**

GII ***23*** *15:21:23.3±0.0, 34°.154N±0°.002×36°.858E±0°.001, h0km, Mws2.7, confirmed*
GRAL ***23*** *15:21:26.9±0.3, 33°.66N×37°.06E, h12km±26km, MD3.4*
ISC 23 15:21:27.5±2.6, **33°.80N**±0°.04×**36°.8E**±0°.1, **h6**km±12km, **n19**, **σ1§52/33**, **Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
FKH	**Fakeheh**	**0.56**	**323**	*e*	P		**Pn**	**15 21 41.1**	**-1.1**
FKH				*e*	S		**Sn**	**15 21 51.6**	**-0.3**
ZAHL	**Zahle**	**0.78**	**275**	*e*	P		**Pn**	**15 21 44.4**	**-0.7**
HWQ	**Hawqa**	**0.86**	**304**	*e*	P		**Pn**	**15 21 46.3**	**-0.1**
RCY	**Rachaya**	**0.87**	**250**	*e*	P		**Pb**	**15 21 45.0**	**-0.2**
BEIL	**Beino**	**0.91**	**325**	*e*	P		**Pn**	**15 21 46.7**	**-0.2**
BEIL				*e*	S		**Sn**	**15 22 01.4**	**+1.1**
BHL	**Bhannes**	**0.97**	**277**	*e*	P		**Pn**	**15 21 47.6**	**-0.2**
NATI	**Neve Ativ**	**1.05**	**240**	P			**Pg**	**15 21 46.5**	**-1.1**
NATI				S			**Sg**	**15 22 03.9**	**+2.7**
GEM	**Giv'at Ha'Em**	**1.13**	**239**	P			**Pn**	**15 21 48.2**	**-1.6**
GEM				S			**Sg**	**15 22 05.5**	**+1.8**
KSHT	**Keshet**	**1.17**	**226**	P			**Pn**	**15 21 48.3**	**-2.3**
KSHT				S			**Sb**	**15 22 05.5**	**-0.1**
MMA0B	**Mount Meron ar**	**1.42**	**237**	P			**Pn**	**15 21 51.7**	**-2.2**
MMA0B				S			**Sn**	**15 22 13.2**	**+0.3**
MMC7	**Mount Meron ar**	**1.42**	**237**	P			**Pn**	**15 21 51.8**	**-2.1**
HNTI	**Hanita**	**1.55**	**243**	P			**Pn**	**15 21 53.3**	**-2.4**
HNTI				S			**Sn**	**15 22 15.5**	**-0.5**
BLGI	**Bet Lehem HaGe**	**1.73**	**232**	P			**Pn**	**15 21 56.4**	**-1.7**
BLGI				S			**Sn**	**15 22 20.9**	**+0.4**
MMLI	**Mount Malkishu**	**1.79**	**221**	P			**Pn**	**15 21 57.9**	**-1.1**
MMLI				S			**Sn**	**15 22 23.8**	**+1.6**
HMDT	**Nahal Hemdat**	**1.88**	**215**	P			**Pn**	**15 21 59.5**	**-0.8**
HMDT				S			**Sn**	**15 22 26.0**	**+1.7**
OFRI	**`Ofer**	**1.93**	**233**	P			**Pn**	**15 21 59.1**	**-1.9**
OFRI				S			**Sn**	**15 22 26.0**	**+0.3**
SLTI	**Sal'it**	**2.15**	**224**	P			**Pn**	**15 22 02.8**	**-1.2**
SLTI				S			**Sn**	**15 22 32.3**	**+1.3**
DSI	**Dead Sea**	**2.53**	**209**	P			**Pn**	**15 22 08.1**	**-1.1**
DSI				S			**Sn**	**15 22 42.1**	**+1.8**
GHAJ	**Ghor Haditha**	**2.70**	**203**	P			**Pn**	**15 22 11.0**	**-0.5**
GHAJ				S			**Sn**	**15 22 47.1**	**+2.5**

IDC 23 15:34:26.1±2.5, **6°.64S**×**130°.33E**, **h0**km, **mb3.0/1, mbtmp2.9/3, ML2.9/2, Error ellipse: s-maj=141.3km s-min=33.6km az=70.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
WRA	**Warramunga Arr**	**13.79**	**164**	P			Pn	15 37 42.3	-0.7
	0.1nm,0.3s,baz=347,slow=14,SNR=7.8								
WRA				Sn			Sn	15 40 05.7	-11
	0.1nm,0.3s,baz=333,slow=24,SNR=2.1								
	0.3nm,0.6s								
ASAR	**Alice Springs**	**17.28**	**169**	P			Pn	15 38 29.6	+0.6
	0.1nm,0.3s,baz=346,slow=11,SNR=7.3								
	0.1nm,0.5s								
MKAR	**Makanchi Array**	**68.10**	**327**	P			P	15 45 27.9	0.0
	0.1nm,0.4s,baz=139,slow=9.6,SNR=1.6								
	0.1nm,0.4s								

JMA ***23*** *15:37:55.7±0.2, 23°.3N±0°.9×121°.9E±0°.9, h44km, MV3.6/16, TAIWAN REGION*
TAP ***23*** *15:37:56.5, 23°.30N×121°.94E, h34km, ML4.0, D*
ISC 23 15:37:53.7±1.0, **23°.26N**±0°.02×**122°.01E**±0°.02, **h16**km±8km, **n175**, **σ0§86/313**, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
ECBN	**Changbin**	**0.52**	**276**	*i*	P		**Pn**	**15 38 06.0**	**-0.5**
ECBN				*i*	S		**Sb**	**15 38 12.6**	**+0.9**
CHGH	**Chenggong**	**0.57**	**263**	*i*	P		**Pb**	**15 38 06.3**	**+1.0**
CHKH				*i*	S		**Sg**	**15 38 13.2**	**+0.5**
HGSD	**Ruisui**	**0.59**	**293**	*i*	P		**Pb**	**15 38 06.3**	**+0.7**
HGSD				*i*	S		**Sg**	**15 38 13.3**	**0.0**
CHKT	**Chengkung**	**0.62**	**255**	*i*	P		**Pb**	**15 38 07.0**	**+0.9**
CHKT				S			**Sg**	**15 38 14.6**	**+0.4**
TEGC	**Jichi Village**	**0.62**	**316**	P			**Pn**	**15 38 07.2**	**-0.6**
TEGC				S			**Sb**	**15 38 15.4**	**+0.8**
EYUL	**Yuli**	**0.64**	**278**	*i*	P		**Pn**	**15 38 07.8**	**-0.4**
EYUL				S			**Sg**	**15 38 14.2**	**-0.8**
EHYH	**Wanrong**	**0.66**	**291**	*i*	P		**Pb**	**15 38 07.6**	**+0.8**

TWT			S	Sb	15 38 31.4	-1.6	
TDCB	**Techi**	**1.26 322**	*i* P	Pb	15 38 17.3	+0.1	
TDCB			S	Sb	15 38 31.2	-2.0	
CHN5	**Tsauling**	**1.27 285**	*i* P	Pg	15 38 18.3	0.0	
CHN5			S	Sb	15 38 33.3	-0.1	
TPUB	**Ta-pu**	**1.27 272**	P	Pg	15 38 18.2	-0.1	
TPUB	**Ta-pu**	**1.27 272**	S	Sb	15 38 33.8	+0.3	
TPUB	**Ta-pu**	**1.27 272**	*i* P	Pg	15 38 18.1	-0.2	
TPUB			S	Sb	15 38 33.7	+0.3	
WCS	**Beigang Elemen**	**1.28 308**	*i* P	Pb	15 38 17.6	+0.1	
WCS			S	Sb	15 38 32.4	-1.3	
SLGT	**Liugui**	**1.28 258**	*i* P	Pb	15 38 18.0	+0.5	
SLGT			eS	Sb	15 38 33.5	-0.3	
WTP	**Ta-pu**	**1.29 270**	*i* P	Pg	15 38 18.4	-0.2	
WTP			S	Sb	15 38 34.2	+0.3	
LAY	**Lan-yu**	**1.29 199**	P	Pn	15 38 16.9	-0.2	
LAY			eS	Sb	15 38 30.7	-3.3	
NNSB	**Datong**	**1.30 334**	P	Pb	15 38 17.7	-0.1	
NNSB			S	Sb	15 38 32.3	-1.9	
WJS	**Zhushan**	**1.30 296**	P	Pg	15 38 18.9	0.0	
WJS			eS	Sn	15 38 34.6	+0.2	
WCKO	**Fanlu**	**1.30 278**	P	Pg	15 38 19.1	+0.1	
WCKO			S	Sb	15 38 35.5	+1.1	
NNS	**Nan Shan**	**1.31 334**	*i* P	Pb	15 38 18.0	-0.1	
NNS			S	Sb	15 38 32.7	-2.0	
ESAO	**Su ao**	**1.32 353**	*eP*	Pb	15 38 18.3	+0.2	
LYUB	**Lan-yu**	**1.32 198**	P	Pn	15 38 16.9	-0.5	
LYUB			eS	Sn	15 38 31.1	-3.5	
SGST	**Jiashian**	**1.33 263**	P	Pb	15 38 18.2	-0.1	
SGST			eS	Sn	15 38 34.6	-0.4	
LATG	**Datong**	**1.34 341**	*i* P	Pb	15 38 18.4	-0.2	
LATG			S	Sn	15 38 33.9	-1.7	
TWC	**Suao**	**1.35 354**	P	Pb	15 38 19.1	+0.5	
TWC			S	Sn	15 38 34.9	-0.5	
WNT	**Mingjian**	**1.36 297**	P	Pg	15 38 19.9	-0.2	
WNT			S	Sb	15 38 36.6	+0.5	
CHN1	**Nanshi**	**1.37 267**	*eP*	Pg	15 38 19.9	-0.2	
CHN1			S	Sb	15 38 37.2	+1.0	
TAW	**Tawu**	**1.37 229**	P	Pn	15 38 18.5	+0.4	
SSD	**Sandimen**	**1.37 248**	P	Pn	15 38 18.7	+0.5	
SSD			eS	Sn	15 38 33.9	-2.1	
TSMG	**Majia**	**1.38 247**	P	Pb	15 38 18.9	-0.2	
EAST	**Anshuo**	**1.39 231**	*eP*	Pn	15 38 18.5	+0.1	
NDS	**Dongshan**	**1.39 349**	*i* P	Pb	15 38 19.4	+0.1	
NDS			S	Sn	15 38 35.6	-0.9	
WGK	**Gukeng**	**1.40 288**	P	Pg	15 38 20.2	-0.5	
WGK			eS	Sb	15 38 37.5	+0.5	
TWK	**Hsinying**	**1.40 270**	P	Pg	15 38 20.4	-0.4	
TWK			eS	Sb	15 38 37.6	+0.4	
WHP	**Taichung City**	**1.41 316**	*eP*	Pb	15 38 19.9	+0.3	
WHP			eS	Sn	15 38 36.1	-0.9	
NDT	**Datong Townshi**	**1.41 341**	P	Pb	15 38 19.8	+0.1	
WDLH	**Douliu**	**1.42 288**	*eP*	Pg	15 38 20.7	-0.4	
WDLH			eS	Sb	15 38 38.3	+0.6	
WDL	**Douliou City**	**1.43 289**	eS	Sg	15 38 39.8	0.0	
MASBT	**Mashibuluo**	**1.43 243**	*i* P	Pb	15 38 19.6	-0.3	
MASBT			eS	Sn	15 38 35.8	-1.5	
ENTT	**Nioudou**	**1.43 344**	P	Pb	15 38 19.9	-0.1	
ENTT			eS	Sn	15 38 36.4	-1.2	
CHN2	**Minshiung**	**1.44 281**	S	Sb	15 38 39.5	+1.3	
SCST	**Cishan**	**1.45 255**	P	Pg	15 38 21.6	0.0	
SCST			eS	Sg	15 38 40.4	-0.1	
JYNG	**Yonagunijimaku**	**1.46 36**	P	Pg	15 38 21.4	-0.5	
JYNG			eS	Sb	15 38 39.4	+0.6	
CHY	**Chiayi**	**1.48 279**	P	Pb	15 38 21.6	+0.8	
CHY			eS	Sb	15 38 39.8	+0.4	
TWE	**Neicheng**	**1.49 348**	P	Pb	15 38 20.9	0.0	
TWE			eS	Sn	15 38 37.8	-1.0	
SGLT	**Jiouru**	**1.50 249**	*eP*	Pg	15 38 22.6	-0.1	
YOJ	**Yonaguni jima**	**1.50 37**	P	Pg	15 38 22.0	-0.7	
YOJ	**Yonaguni jima**	**1.50 37**	S	Sg	15 38 41.4	-0.9	
YOJ	**Yonaguni jima**	**1.50 37**	*i* P	Pg	15 38 21.9	-0.7	
YOJ			S	Sb	15 38 40.5	+0.4	
YOJ	**Yonaguni jima**	**1.50 37**	P	Pg	15 38 22.1	-0.7	
YOJ			S	Sb	15 38 40.8	+0.6	
TCU	**Taichung**	**1.51 306**	*i* P	Pg	15 38 22.4	-0.4	
TCU			S	Sb	15 38 40.9	+0.6	
ILA	**Ilan**	**1.52 351**	P	Pb	15 38 21.7	+0.2	
ILA			eS	Sn	15 38 39.5	-0.1	
YHNB	**Yeheng**	**1.52 338**	P	Pb	15 38 21.3	-0.3	
YHNB	**Yeheng**	**1.52 338**	S	Sn	15 38 38.5	-1.2	
YHNB	**Yeheng**	**1.52 338**	*i* P	Pb	15 38 21.2	-0.3	
YHNB			eS	Sn	15 38 38.0	-1.7	
CHN3	**Shinhua**	**1.53 263**	P	Pg	15 38 23.6	+0.5	
CHN3			eS	Sg	15 38 40.9	+0.9	
TWM1	**Shoushan**	**1.53 254**	P	Pg	15 38 24.3	+1.1	
TWM1			eS	Sg	15 38 44.9	+1.8	
NSK	**Sanguang**	**1.53 337**	*i* P	Pb	15 38 21.4	-0.3	
NSK			S	Sn	15 38 38.6	-1.5	
SLIU	**Shizi**	**1.53 227**	P	Pn	15 38 20.8	+0.4	
FUSB	**Fushanzhiwuyua**	**1.54 345**	P	Pb	15 38 21.7	-0.3	
FUSB			eS	Sn	15 38 39.2	-1.1	
SSPT	**Xinbi**	**1.54 240**	P	Pb	15 38 22.3	+0.4	
WTK	**Tuku**	**1.55 286**	*eP*	Pb	15 38 22.7	+0.7	
WTK			S	Sb	15 38 41.7	+0.3	
SCZT	**Fangliau**	**1.56 236**	*eP*	Pb	15 38 21.7	-0.5	
SCZT			eS	Sn	15 38 40.3	-0.3	
WCHH	**Zhanghua**	**1.56 302**	P	Pb	15 38 22.9	+0.6	
WCHH			eS	Sb	15 38 41.9	+0.2	
TWQ1	**Liyutan**	**1.57 314**	*i* P	Pb	15 38 23.0	+0.7	
TWQ1			S	Sb	15 38 41.9	-0.1	
WCH1	**Changhua City**	**1.57 301**	*eP*	Pg	15 38 23.8	-0.1	
WCH1			S	Sb	15 38 42.5	+0.6	
NWLT	**Wulai**	**1.58 343**	P	Pb	15 38 22.2	-0.4	
NWLT			S	Sn	15 38 39.9	-1.2	
NFF	**Wufeng Townshi**	**1.59 329**	*i* P	Pb	15 38 22.8	0.0	
NFF			S	Sn	15 38 40.9	-0.7	
SSHA	**Shanhua**	**1.59 266**	P	Pg	15 38 23.9	-0.4	
SSHA			S	Sg	15 38 44.6	-0.5	
ICHU	**Yijhu**	**1.60 274**	P	Pb	15 38 23.4	+0.5	
ICHU			S	Sb	15 38 43.4	+0.7	
WRL	**Guolierlin Hig**	**1.63 293**	P	Pb	15 38 23.6	+0.2	
WRL			eS	Sb	15 38 43.8	+0.1	
RLNB	**Erlin**	**1.64 293**	*eP*	Pb	15 38 23.8	+0.2	
RLNB			eS	Sn	15 38 43.5	+0.9	
SMST	**Manzhou Townsh**	**1.65 222**	*eP*	Pn	15 38 22.6	+0.7	
SMST			eS	Sn	15 38 41.9	-0.9	
NSTT	**Nanjuang**	**1.65 326**	P	Pb	15 38 24.1	+0.4	
NSTT			S	Sn	15 38 42.7	-0.1	
LIOB	**Emei**	**1.65 327**	P	Pb	15 38 24.9	+0.6	
LIOB			eS	Sn	15 38 43.4	+0.4	
WDJ	**Dajia District**	**1.66 311**	P	Pb	15 38 24.4	+0.5	
WDJ			S	Sb	15 38 44.9	+0.4	
CHN8	**Yiju**	**1.66 273**	P	Pb	15 38 24.1	+0.2	
CHN8			S	Sb	15 38 45.0	+0.5	
WSL	**Shuilin Townsh**	**1.66 279**	*eP*	Pb	15 38 23.9	0.0	
WSL			eS	Sn	15 38 44.0	+0.9	
WSF	**Szhu**	**1.69 283**	*eP*	Pb	15 38 23.7	-0.6	
WSF			S	Sn	15 38 44.7	+1.0	
KSHI	**Guanxi Townshi**	**1.69 333**	P	Pb	15 38 25.0	+0.5	
KSHI			S	Sn	15 38 44.8	+0.9	
NMLH	**Miaoli**	**1.69 319**	*eP*	Pb	15 38 25.0	+0.5	
NMLH			eS	Sn	15 38 44.3	+0.4	
TSEB	**Hengchuen, Pin**	**1.70 217**	*eP*	Pb	15 38 25.1	+0.5	
TSEB			eS	Sb	15 38 45.4	-0.4	
TIPB	**Shuangxi**	**1.71 354**	*i* P	Pb	15 38 24.9	+0.1	
TIPB			S	Sn	15 38 44.6	+0.2	
HEN	**Hengchun**	**1.72 224**	*eP*	Pg	15 38 26.5	-0.3	
HEN			eS	Sn	15 38 43.6	-1.1	
TWKBT	**Hengchun**	**1.72 220**	P	Pn	15 38 24.0	+1.0	
TWK1	**Hengchun**	**1.72 221**	*eP*	Pb	15 38 24.6	-0.4	
TWK1			eS	Sn	15 38 45.7	+1.0	
WSSB	**Gushan**	**1.73 249**	*eP*	Pg	15 38 26.5	-0.5	
WSSB			eS	Sg	15 38 49.2	-0.2	
TWB1	**Santiao Chiao**	**1.74 359**	*i* P	Pb	15 38 24.9	-0.4	
TWB1			S	Sn	15 38 44.3	-0.8	
TWA	**Mucha**	**1.75 347**	*i* P	Pb	15 38 25.4	-0.1	
TWA			S	Sn	15 38 45.6	+0.1	
WLCH	**Liuqiu**	**1.76 239**	P	Pg	15 38 28.5	+0.9	
TATO	**Taipei**	**1.77 344**	P	Pb	15 38 25.2	-0.6	
TATO	**Taipei**	**1.77 344**	S	Sn	15 38 46.0	+0.1	
TWP	**Hsiaoliuchiu**	**1.77 239**	*eP*	Pg	15 38 27.6	-0.2	
TSCK	**Chigu Township**	**1.78 267**	*eP*	Pb	15 38 25.7	-0.2	
TSCK			eS	Sn	15 38 47.3	+1.3	
SBCB	**Hsinchu**	**1.79 329**	*eP*	Pb	15 38 26.4	+0.2	
SBCB			S	Sb	15 38 48.4	0.0	
HSN	**Hsinchu**	**1.81 328**	eS	Sb	15 38 48.1	-0.6	
NWF	**Wu-fen Shan**	**1.81 353**	P	Pb	15 38 26.7	+0.1	
NWF			eS	Sn	15 38 47.4	+0.3	
WFSB	**Wu-fen Shan**	**1.81 353**	P	Pb	15 38 26.8	+0.2	
WFSB			eS	Sn	15 38 47.3	+0.4	
NHY	**Taipei**	**1.81 347**	*eS*	Sn	15 38 47.8	+0.9	
HATJ	**Hateruma jima**	**1.82 64**	P	Pb	15 38 26.6	-0.2	
HATJ			*eS*	Sb	15 38 48.4	-0.9	
SXI1	**Grass Mountain**	**1.83 356**	*i* P	Pb	15 38 26.5	-0.3	
SXI1			*eS*	Sn	15 38 48.1	+0.6	
NCUH	**Zhongli**	**1.86 336**	*eP*	Pb	15 38 27.5	+0.2	
NCUH			S	Sb	15 38 49.5	-0.9	
TNOU	**National Taiwa**	**1.89 353**	*eS*	Sn	15 38 49.0	+0.1	
IRIF	**Iriomote-Funau**	**1.90 56**	P	Pb	15 38 27.7	-0.3	
IRIF			S	Sb	15 38 51.4	-0.1	
TWS1	**Kuangyinshan**	**1.91 344**	*eP*	Pb	15 38 27.1	-1.1	
TWS1			*eS*	Sn	15 38 49.5	+0.2	
YM01	**YM01**	**1.92 348**	*eP*	Pb	15 38 27.1	-1.3	
YM01			S	Sn	15 38 49.5	-0.1	
ZUZH	**Zhuzihu**	**1.94 347**	*i* P	Pb	15 38 27.4	-1.3	
ZUZH			S	Sn	15 38 49.6	-0.5	
YM08	**YM08**	**1.96 349**	*i* P	Pn	15 38 27.4	+1.2	
YM08			*eS*	Sn	15 38 49.9	-0.6	
NTST	**Danshui**	**1.96 345**	*eS*	Sn	15 38 51.4	+0.8	
ANP	**Anpu**	**1.97 347**	*eP*	Pn	15 38 27.8	+1.3	
ANP			*eS*	Sn	15 38 52.0	+1.1	
TWY	**Chenhua**	**2.04 349**	*eP*	Pb	15 38 29.7	-0.7	
TWY			*eS*	Sn	15 38 53.6	+1.1	
JKRS	**Kuro-shima**	**2.07 62**	P	Pb	15 38 30.4	-0.6	
JKRS			*eS*	Sb	15 38 55.0	-1.4	
WDGT	**Dungji**	**2.16 270**	*i* P	Pn	15 38 30.3	+1.2	
WDGT			*eS*	Sn	15 38 53.7	-1.9	
JIJ	**Ishigaki jima**	**2.24 60**	P	Pb	15 38 32.1	-1.7	
JIJ			*eS*	Sn	15 38 58.9	+1.5	
PHUB	**P'eng-hu**	**2.26 277**	*i* P	Pn	15 38 31.4	+1.0	
PHUB			S	Sn	15 38 56.4	-1.5	
PNG	**Penghu**	**2.28 278**	P	Pn	15 38 31.9	+1.2	
PNG			S	Sn	15 38 57.7	-0.7	
VCHM	**Qimei**	**2.38 269**	*i* P	Pn	15 38 33.1	+1.0	
VCHM			S	Sn	15 39 00.7	-0.1	
JISG	**Ishigakijimahi**	**2.48 57**	P	Pn	15 38 35.1	+1.6	
JISG			S	Sn	15 39 03.4	-0.1	
JTJ	**Tarama**	**2.82 60**	P	Pn	15 38 40.2	+2.1	
JTJ			*eS*	Sn	15 39 13.2	+1.5	
VWUC	**VWUC**	**2.91 307**	P	Pn	15 38 40.1	+0.9	
VWUC			*eS*	Sn	15 39 11.6	-2.3	
JMJ2	**Miyako jima3**	**3.37 63**	P	Pn	15 38 48.3	+2.6	
JMJ	**Miyako jima 2**	**3.38 62**	P	Pn	15 38 48.3	+2.5	
JMJ	**Miyako jima 2**	**3.38 62**	S	Sn	15 39 27.3	+1.8	
MATB	**Ma-tsu**	**3.44 327**	*eP*	Pn	15 38 46.8	+0.2	
MATB			*eS*	Sn	15 39 24.5	-2.5	
KNM	**Kinmen**	**3.47 290**	*eS*	Sn	15 39 28.1	+0.2	
KNMB	**Chin-men Tao**	**3.53 291**	*eP*	Pn	15 38 48.4	+0.6	
KNMB			*eS*	Sn	15 39 27.8	-1.4	

*MDD **23** 15:47:39.5±0.3,38°.10N×1°.15W, h9km±2km, mb_Lg2.4/18, Error ellipse: s-maj=3.1km s-min=2.2km az=134.0*
*SFS **23** 15:47:39.1,38°.11N×1°.13W, h4km, ML2.6/7, ML2.6/7, MLv2.6/7*

ISC 23 15:47:38.6±1.0, 38°.11N±0°.03×1°.14W±0°.03, h15km±8km, n18, σ0s92/41, 1D, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMUR	**La Murta**	**0.28**	**198**	⇓Pg	**Pg**	**15 47 44.7**	**+0.2**
EMUR				Sg	**Sg**	**15 47 48.6**	**0.0**
EMUR				*i* IVmb_Lg		15 47 49.0	
CART	**Cartagena**	**0.53**	**168**	Pg	**Pg**	**15 47 49.0**	**-0.1**
CART				Sg	**Sg**	**15 47 55.9**	**-0.2**
ETOB	**Tobarra**	**0.63**	**329**	Pg	**Pb**	**15 47 51.1**	**-0.2**
ETOB				Sg	**Sg**	**15 47 58.9**	**-0.4**
ETOB	**Tobarra**	**0.63**	**329**	Pg	**Pb**	**15 47 51.5**	**+0.2**
ETOB				Sg	**Sb**	**15 47 59.8**	**-0.1**
ETOB				*i* IVmb_Lg		15 48 04.3	
EBEN2	**Beniarda presa**	**0.94**	**52**	Pg	**Pn**	**15 47 53.4**	**+0.1**
EBEN2				Sg	**Sb**	**15 48 08.9**	**+0.2**
EBEN2				*i* IVmb_Lg		15 48 14.2	
EVIV	**Cofrentes, Val**	**1.16**	**1**	Pg	**Pg**	**15 48 01.3**	**+0.3**
EVIV				Sg	**Sg**	**15 48 15.7**	**-0.4**
EVIV				*i* IVmb_Lg		15 48 19.3	
EQES	**Quesada**	**1.56**	**259**	Pn	**Pb**	**15 48 07.5**	**+0.3**
EQES				Sn	**Sn**	**15 48 26.0**	**+0.2**
EQES				*i* IVmb_Lg		15 48 32.0	
EBER	**Berja**	**1.84**	**230**	Pn	**Pb**	**15 48 11.6**	**-0.5**
EQTA	**Presa de Quent**	**2.04**	**245**	Pn	**Pn**	**15 48 12.4**	**0.0**
EQTA				Sn	**Sn**	**15 48 38.0**	**+0.3**
EIBI	**Ibiza**	**2.15**	**64**	Pn	**Pn**	**15 48 14.3**	**+0.4**
EIBI	**Ibiza**	**2.15**	**64**	Pn	**Pn**	**15 48 14.1**	**+0.3**
EIBI				Sn	**Sn**	**15 48 39.4**	**-0.8**
EIBI				*i* IVmb_Lg		15 48 39.5	
PSIM	**Granatula de C**	**2.18**	**290**	Pn	**Pn**	**15 48 14.8**	**+0.5**
PSIM				Pg	**Pb**	**15 48 18.5**	**+0.8**
PSIM				Sn	**Sn**	**15 48 40.0**	**-1.0**
PSIM				Sg	**Sb**	**15 48 45.1**	**+0.6**
E0901	**Celadas (Terue**	**2.37**	**0**	*i* IVmb_Lg		15 48 50.5	
E0901				Sg	**Sg**	**15 48 53.0**	**-1.8**
EADA	**Adamuz**	**2.71**	**272**	Pn	**Pn**	**15 48 21.8**	**+0.1**
EADA				Sn	**Sn**	**15 48 54.6**	**+0.4**
EADA	**Adamuz**	**2.71**	**272**	Pn	**Pn**	**15 48 21.8**	**+0.1**
EADA				Pg	**Pb**	**15 48 27.8**	**+1.0**
EADA				Sn	**Sn**	**15 48 54.2**	**0.0**
EADA				Sg	**Sg**	**15 49 04.7**	**-1.1**
EADA				*i* IVmb_Lg		15 48 08.3	
PAB	**San Pablo**	**2.89**	**301**	Pn	**Pn**	**15 48 24.2**	**+0.1**
PAB				Pg	**Pb**	**15 48 31.4**	**+1.5**
PAB				Sn	**Sn**	**15 48 57.5**	**-1.2**
PAB				Sg	**Sb**	**15 49 07.9**	**+2.8**
PAB				*i* IVmb_Lg		15 49 10.8	
ECAB	**El Cabril**	**3.38**	**271**	Pn	**Pn**	**15 48 30.7**	**-0.1**
ECAB				Sn	**Sn**	**15 49 10.5**	**-0.1**
ECAB	**El Cabril**	**3.38**	**271**	Pn	**Pn**	**15 48 30.4**	**-0.4**
ECAB				Pg	**Pb**	**15 48 37.4**	**-0.8**
ECAB				Sn	**Sn**	**15 49 09.9**	**-0.8**
ECAB				Sg	**Sg**	**15 49 24.2**	**-2.9**
ECAB				*i* IVmb_Lg		15 49 27.6	

IDC 23 15:48:14.4±4.4, 31°.69N×140°.66E, h0km, mb3.2/3, mbtmp3.1/4, ML1.9/1, MS3.4/1, Error ellipse: s-maj=179.2km s-min=27.7km az=72.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**5.25**	**338**	Pn	Pn	15 49 33.3	-0.8
	baz=145,slow=8.8,SNR=1.4						
	0.4nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**26.40**	**110**	T	T	16 21 51.3	
	baz=312						
H11N1	**WAKE ISLAND Hy**	**26.40**	**111**	T	T	16 21 46.9	
	baz=312						
H11N3	**WAKE ISLAND Hy**	**26.41**	**111**	T	T	16 21 50.0	
	baz=312						
H11S3	**WAKE ISLAND Hy**	**26.90**	**113**	T	T	16 22 29.1	
	baz=302						
H11S1	**WAKE ISLAND Hy**	**26.91**	**113**	T	T	16 22 28.0	
	baz=302						
H11S2	**WAKE ISLAND Hy**	**26.92**	**113**	T	T	16 22 30.2	
	baz=302						
MKAR	**Makanchi Array**	**46.60**	**306**	P	P	15 56 44.5	+0.2
	0.1nm,0.4s,baz=90,slow=7.2,SNR=1.4						
	0.1nm,0.4s						
NRIK	**Noril'sk**	**47.90**	**338**	LR	LR	16 16 10.9	
	comp=Z,37nm,18.8s,baz=314,slow=35						
WRA	**Warramunga Arr**	**51.70**	**188**	P	P	15 57 23.5	+0.1
	0.6nm,1.0s,baz=5.2,slow=7.6,SNR=6.8						
	0.6nm,1.0s						
ASAR	**Alice Springs**	**55.42**	**188**	P	P	15 57 50.2	-0.5
	0.2nm,0.9s,baz=3.2,slow=7.1,SNR=1.5						
	0.2nm,0.9s						

*IDC **23** 15:52:40.3±1.8, 30°.50S×60°.13E, h0km, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=52.0km s-min=41.6km az=135.0*
*NEIC **23** 15:52:42.4±1.4, 30°.72S±0°.08×60°.0E±0°.2, h10km±1km, mb4.6/13, Error ellipse: s-maj=22.6km s-min=13.1km az=80.0*

ISC 23 15:52:41.9±0.6, 30°.7S±0°.1×60°.1E±0°.1, h11km, n24, σ0s99/18, mb4.6/8, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VOI	**Vohitsoka**	**14.74**	**303**	Pn	**Pn**	**15 56 12.1**	**+1.5**
H04N2	**CROZET ISLANDS**	**16.76**	**200**	T	T	16 13 55.6	
	baz=26,slow=74,SNR=166						
H04N1	**CROZET ISLANDS**	**16.76**	**200**	T	T	16 13 57.9	
	baz=26,slow=74,SNR=272						
H04N3	**CROZET ISLANDS**	**16.77**	**200**	T	T	16 13 56.0	
	baz=26,slow=74,SNR=264						
CRZF	**Crozet Islands**	**16.98**	**200**		**P**	**15 56 41.4**	**+0.2**
CRZF				IAmb	IAmb	15 56 48.4	
	comp=Z,42nm,0.8s						
PAF	**Port-aux-Franc**	**20.18**	**160**	P	**P**	**15 57 17.1**	**+0.7**
H08S1	**Diego Carcia H**	**25.68**	**29**	T	T	16 24 49.2	
	baz=204,slow=76,SNR=3.0						
H08S2	**Diego Garcia H**	**25.69**	**29**	T	T	16 24 49.9	
	baz=204						
H08S3	**Diego Garcia H**	**25.70**	**29**	T	T	16 24 50.5	
	baz=204,slow=76,SNR=3.5						
LBTB	**Lobatse**	**30.91**	**272**	P	**P**	**15 58 57.3**	**-1.6**
LPHEP	**Lephephe**	**31.24**	**275**	P	**P**	**15 58 59.7**	**-2.1**
LPHEP				IAmb	IAmb	15 59 02.2	
	comp=Z,11nm,1.4s						
QSPA	**South Pole Qui**	**59.50**	**180**	P	**P**	**16 02 46.2**	**+1.3**
	comp=Z,2.5nm,0.9s,baz=215,slow=0.8,SNR=9.6						
	comp=Z,2.5nm,0.9s						
QSPA	**South Pole Qui**	**59.50**	**180**	P	**P**	**16 02 44.6**	**-0.3**
QSPA				IAmb	IAmb	16 03 28.5	
	comp=Z,6.6nm,1.4s						
ASAR	**Alice Springs**	**65.01**	**104**	P	**P**	**16 03 22.4**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=244,slow=6.1,SNR=24						
	comp=Z,0.6nm,0.6s						
ASAR	**Alice Springs**	**65.01**	**104**	P	**P**	**16 03 21.7**	**-0.8**
WRA	**Warramunga Arr**	**66.94**	**100**	P	**P**	**16 03 35.0**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=243,slow=6.0,SNR=18						
	comp=Z,0.6nm,0.5s						
WB0	**Warramunga Arr**	**67.06**	**100**	P	**P**	**16 03 35.5**	**-0.1**
WB0				IAmb	IAmb	16 04 06.8	
	comp=Z,7.1nm,1.4s						
WR8	**Warramunga Arr**	**67.07**	**100**	P	**P**	**16 03 35.6**	**-0.1**
WR8				IAmb	IAmb	16 03 41.0	
	comp=Z,9.1nm,1.5s						
TOO	**Toolangi**	**68.73**	**122**	P	**P**	**16 03 46.2**	**+0.3**
TOO				IAmb	IAmb	16 04 29.2	
	comp=Z,6.6nm,1.5s						
CSS	**Mathiatis**	**69.97**	**337**	P	**P**	**16 03 53.7**	**+0.3**
ENH	**Enshi**	**76.69**	**42**	P	**P**	**16 04 33.5**	**+0.4**
ENH				IAmb	IAmb	16 04 38.1	
	comp=Z,6.9nm,1.3s						
SSLB	**Suanglung**	**79.61**	**54**	P	**P**	**16 04 48.5**	**-1.0**
KEST	**Kesra**	**81.44**	**320**	P	**P**	**16 04 59.7**	**+0.6**
YKA	**Yellowknife Ar**	**147.97**	**355**	PKPbc	**PKPbc**	**16 12 25.7**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=352,slow=3.3,SNR=6.2						

IDC 23 16:03:11.4±2.0, 6°.22S×125°.83E, h0km, mb3.1/1, mbtmp3.1/3, ML3.3/2, Error ellipse: s-maj=210.7km s-min=31.0km az=62.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.95**	**150**	Pn	Pn	16 06 58.8	+1.4
	0.1nm,0.3s,baz=326,slow=12,SNR=9.9						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**19.00**	**157**	P	P	16 07 34.2	-0.6
	0.1nm,0.3s,baz=339,slow=11,SNR=11						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**65.36**	**329**	P	P	16 13 55.7	0.0
	0.1nm,0.4s,baz=128,slow=4.8,SNR=1.7						
	0.1nm,0.4s						

*IDC **23** 16:24:29.7±1.6, 6°.18S×147°.58E, h58km±14km, mb4.0/17, mbtmp4.3/21, MS3.6/30, Error ellipse: s-maj=19.7km s-min=9.7km az=80.0*
*NEIC **23** 16:24:30.3±1.6, 6°.19S±0°.03×147°.52E±0°.07, h50km±6km, mb4.7/45, Error ellipse: s-maj=10.7km s-min=4.2km az=78.0*
*DJA **23** 16:24:31.3±0.9, 6°S±4°×14°8E±°, h80km±4km, M5.0/79, mb5.2/79, mB5.5/43, MLv5.2/3, Mw(mB)5.0/43, MwMwp4.9/1, Mwp5.2/1*

ISC 23 16:24:29.6±0.4, 6°.21S±0°.04×147°.53E±0°.05, h50km, n183, σ1s24/159, mb4.8/58, MS3.7/25, 2D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.19**	**187**	P	**Pn**	**16 25 17.7**	**+0.4**
	194nm,0.3s,baz=339,slow=6.2,SNR=318						
PMG				S	**Sn**	**16 25 55.9**	**+1.7**
	318nm,0.5s,baz=277,slow=20,SNR=4.6						
PMG				LR	LR	16 26 56.4	
	comp=Z,1μm,21.0s,baz=40,slow=45						
PMG	**Port Moresby**	**3.19**	**187**	P	**

QLP	Quilpie	20.50	188	P	P	16 29 04.7	+1.2
NLAI	Namlea	20.57	277	P	P	16 29 05.9	+1.4
	comp=Z,78nm,0.6s						
KNRA	Kununurra	20.67	241		P	16 29 04.2	-1.2
KNRA				IAmb	IAmb	16 29 22.4	
	comp=Z,27nm,1.1s						
AS31	Alice Springs	21.75	216		P	16 29 17.1	0.0
AS31				IAmb	IAmb	16 29 21.3	
	comp=Z,11nm,0.4s						
ASAR	Alice Springs	21.75	216	P	P	16 29 17.1	0.0
	comp=Z,14nm,0.4s,baz=56,slow=8.7,SNR=327						
ASAR				S	S	16 33 02.8	-12
	comp=Z,0.6nm,0.7s,baz=26,slow=16,SNR=1.7						
ASAR				PcP	PcP	16 33 15.7	-0.7
	comp=Z,2.3nm,1.0s,baz=34,slow=2.2,SNR=5.4						
ASAR				ScP	ScP	16 36 48.0	-1.6
	comp=Z,1.4nm,0.8s,baz=53,slow=3.8,SNR=5.0						
ASAR				LR	LR	16 38 26.6	
	comp=Z,384nm,19.1s,baz=18,slow=38						
	comp=Z,14nm,0.4s						
ASAR	Alice Springs	21.75	216	P	P	16 29 16.9	-0.2
ASAR	Alice Springs	21.75	216		PcP	16 33 15.1	-1.3
AUALC	St Philip's Co	21.78	216	P	P	16 29 17.7	+0.3
SANI	Sanana	21.88	280	P	P	16 29 20.4	+1.9
SANI	Sanana	21.88	280	P	P	16 29 17.6	-0.9
	comp=Z,769nmcomp=Z,78nm,0.8s						
INKA	Innaminka	22.36	196		P	16 29 23.8	+0.3
AULRC	Lightning Ridg	23.10	179	P	P	16 29 32.7	+1.5
SOEI	Soe	23.30	260	P	P	16 29 34.6	+1.1
SOEI	Soe	23.30	260	P	P	16 29 33.3	-0.2
SOEI	Soe	23.30	260	P	P	16 29 34.2	+0.7
	comp=Z,834nmcomp=Z,51nm,0.8s						
MNI	Manado	23.90	288	P	P	16 29 39.3	+0.3
BATI	Baumata	23.95	259	LR	LR	16 41 27.3	
	comp=Z,316nm,20.7s,baz=102,slow=42						
BATI	Baumata	23.95	259	P	P	16 29 40.7	+1.2
	comp=Z,763nmcomp=Z,88nm,0.8s						
FITZ	Fitzroy Crossi	24.41	239	LR	LR	16 40 12.8	
	comp=Z,253nm,19.9s,baz=45,slow=39						
MMRI	Maumere	25.20	263	P	P	16 29 50.6	-0.2
MMRI	Maumere	25.20	263	P	P	16 29 50.2	-0.5
MMRI	Maumere	25.20	263	P	P	16 29 50.3	-0.5
	comp=Z,1μmcomp=Z,155nm,0.9s						
LUWI	Luwuk	25.23	281	P	P	16 29 51.8	+0.7
LUWI	Luwuk	25.23	281	P	P	16 29 50.7	-0.4
LUWI	Luwuk	25.23	281	P	P	16 29 51.5	+0.4
EDFI	Ende, Flores	25.74	263	P	P	16 29 53.8	-2.1
	comp=Z,37nm,1.1s						
APSI	Ampana	26.36	281	P	P	16 30 02.1	+0.8
	comp=Z,683nmcomp=Z,50nm,1.1s						
MRSI	Marisa	26.39	284	P	P	16 30 15.1	+13
BSSI	Bau Bau, Buton	26.88	269	P	P	16 30 06.8	+0.7
	comp=Z,35nm,0.9s						
WSI	Waingapu	27.18	261	P	P	16 30 08.4	-0.4
	comp=Z,164nm,1.2s						
KAPI	Kappang	27.67	271	LR	LR	16 44 27.0	
	comp=Z,69nm,18.8s,baz=80,slow=43						
KAPI	Kappang	27.67	271	P	P	16 30 14.8	+1.7
TOLI2	Tolitoli	27.68	284	P	P	16 30 12.8	-0.5
TOLI2				IAmb	IAmb	16 30 26.5	
	comp=Z,10nm,0.9s						
SPSI	Sidrap Palu	27.74	273	P	P	16 30 31.4	+18
PCI	Palu	28.13	280	P	P	16 30 19.1	+1.8
	comp=Z,102nm,0.9s						
MPSI	Mapaga	28.34	282	P	P	16 30 19.0	-0.1
BBOO	Buckleboo	28.54	201	P	P	16 30 21.3	+0.6
BBOO				IAmb	IAmb	16 30 33.5	
	comp=Z,32nm,1.3s						
MMSI	Mamuju	28.74	276	P	P	16 30 23.0	+0.3
	comp=Z,33nm,0.8s						
FORT	Forrest	30.52	214	P	P	16 30 38.0	-0.2
FORT				IAmb	IAmb	16 30 58.5	
	comp=Z,13nm,1.1s						
MBWA	Marble Bar	30.74	238	P	P	16 30 40.0	-0.3
MBWA				IAmb	IAmb	16 31 08.5	
	comp=Z,14nm,1.1s						
PSA00	Pilbara Seismi	30.82	238	P	P	16 30 40.1	-0.9
H11S3	WAKE ISLAND Hy	30.98	37	T	T	17 03 22.4	
	baz=220,slow=75,SNR=23						
H11S2	WAKE ISLAND Hy	30.99	37	T	T	17 03 22.8	
	baz=220,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	31.00	37	T	T	17 03 24.3	
	baz=220,slow=75,SNR=14						
H11N1	WAKE ISLAND Hy	32.05	36	T	T	17 04 39.4	
	baz=218,slow=76,SNR=6.3						
H11N3	WAKE ISLAND Hy	32.06	36	T	T	17 04 40.3	
	baz=218,slow=76,SNR=8.6						
H11N2	WAKE ISLAND Hy	32.06	36	T	T	17 04 41.8	
	baz=218,slow=76,SNR=9.7						
JAGI	Jajag, Banyuwa	33.17	264	P	P	16 30 59.0	-2.8
JAGI				IAmb	IAmb	16 31 00.0	
	comp=Z,11nm,0.6s						
MEEK	Meekatharra	34.22	230	P	P	16 31 11.1	+0.3
GIRL	Giralia	36.02	240	P	P	16 31 26.5	+0.3
MORW	Morawa	37.43	229	P	P	16 31 38.0	-0.2
MORW				IAmb	IAmb	16 31 41.8	
	comp=Z,18nm,1.2s						
JOW	Kunigami	37.78	331	LR	LR	16 43 45.1	
	comp=Z,90nm,20.8s,baz=140,slow=31						
KPJI	Karang Pucung	38.34	266	P	P	16 31 57.1	+11
NWAO	Narrogin (SRO)	38.73	223	LR	LR	16 49 15.4	
	comp=Z,190nm,18.3s,baz=290,slow=38						
NWAO	Narrogin (SRO)	38.73	223	P	P	16 31 48.8	-0.3
NWAO				IAmb	IAmb	16 32 10.7	
	comp=Z,19nm,1.1s						
YULB	Yu-li	39.02	320	P	P	16 31 51.3	-0.4
YULB				IAmb	IAmb	16 32 10.0	
	comp=Z,22nm,1.1s						
BBJI	Bungbulang	39.61	266	P	P	16 31 55.9	-0.9
BBJI	Bungbulang	39.61	266	P	P	16 31 55.5	-1.3
BBJI	Bungbulang	39.61	266	P	P	16 31 55.6	-1.2
	comp=Z,37nm,0.7s						
LEM	Lembang	39.65	267	LR	LR	16 49 54.9	
	comp=Z,30nm,21.9s,baz=32,slow=38						
TPI	Tanjungpandan	39.90	273	P	P	16 31 59.5	+0.4
	comp=Z,49nm,0.9s						
TKNZ	Takaka Hill	41.45	151	P	P	16 32 12.2	+0.7
CGJI	Cibinong	41.57	267	P	P	16 32 12.2	-0.7
URZ	Urewera	41.67	144	LR	LR	16 48 08.0	
	comp=Z,190nm,19.7s,baz=310,slow=34						
JNU	Nakatsue	42.20	339	P	P	16 32 17.0	-0.7
	comp=Z,13nm,0.9s,baz=87,slow=23,SNR=3.6						
JNU				LR	LR	16 48 13.1	
	comp=Z,58nm,19.0s,baz=180,slow=34						
	comp=Z,13nm,0.9s						
JGF	Kuroka	42.68	348	P	P	16 32 22.5	+0.9
JGF				IAmb	IAmb	16 32 40.9	
	comp=Z,23nm,1.1s						
RPZ	Rata Peaks	42.69	155	LR	LR	16 47 33.5	
	comp=Z,276nm,19.6s,baz=56,slow=32						
KASI	Kota Agung	42.81	269	P	P	16 32 22.8	-0.2
	comp=Z,22nm,1.0s						
MDSI	Maura Dua	43.19	270	P	P	16 32 31.4	+5.3
DSRI	Dabo	43.24	276	P	P	16 32 27.1	+0.6
MJAR	Matsushiro Arr	43.42	349	P	P	16 32 27.3	-0.3
	comp=Z,7.1nm,1.1s,baz=175,slow=8.2,SNR=7.7						
MJAR				LR	LR	16 48 10.1	
	comp=Z,60nm,21.7s,baz=166,slow=33						
	comp=Z,7.1nm,1.1s						
MAJO	Matsushiro	43.42	349	P	P	16 32 27.6	+0.1
MAJO				IAmb	IAmb	16 32 40.0	
	comp=Z,16nm,1.0s						
TPRI	Tanjung Pinang	43.51	278	P	P	16 32 29.7	+1.0
	comp=Z,52nm,0.9s						
MYKOM	Kota Tinggi	44.33	279	P	P	16 32 36.3	+1.1
MYKOM	Kota Tinggi	44.33	279	P	P	16 32 34.3	-0.9
MYKOM				IAmb	IAmb	16 32 36.9	
	comp=Z,20nm,1.0s						
MYKOM	Kota Tinggi	44.33	279	P	P	16 32 34.8	-0.4
	comp=Z,20nm,0.9s						
KRJI	Kerinci	46.12	273	P	P	16 32 49.5	0.0
NJ2	Nanjing	46.85	326	eP	P	16 32 56.9	+2.1
NJ2				pmax	pmax		
	comp=Z,27nm,0.5s						
KSRS	Korea Array	47.14	339	P	P	16 32 56.2	-0.7
	comp=Z,3.2nm,0.9s,baz=159,slow=9.0,SNR=10						
KSRS				LR	LR	16 51 22.0	
	comp=Z,62nm,21.8s,baz=145,slow=34						
	comp=Z,3.2nm,0.9s						
JTM	Tenmabayashi	47.15	353	P	P	16 32 58.0	+1.0
PDSI	Padang	47.25	274	P	P	16 32 57.0	-1.3
	comp=Z,25nm,0.7s						
PPI	Padang Panjang	47.38	275	P	P	16 32 58.9	-0.4
KULM	Kulim	48.18	283	P	P	16 33 05.2	-0.3
KULM				IAmb	IAmb	16 33 31.7	
	comp=Z,9.7nm,1.2s						

MNSI	Mandailing Nat	48.37	277	P	P	16 33 06.4	-0.6
	comp=Z,42nm,0.8s						
RPSI	Rantau Prapat	49.34	279	P	P	16 33 13.9	-0.5
PSI	Prapat	49.35	279	P	P	16 33 14.5	-0.2
PSI	Prapat	49.35	279	P	P	16 33 14.4	-0.2
ASAJ	Asahikawa	50.30	355	LR	LR	16 53 38.3	
	comp=Z,32nm,19.8s,baz=178,slow=35						
GSI	Gunungsitoli	50.43	277	P	P	16 33 22.4	-0.3
GSI	Gunungsitoli	50.43	277	P	P	16 33 22.0	-0.6
GSI	Gunungsitoli	50.43	277	P	P	16 33 21.2	-1.5
	comp=Z,59nm,0.8s						
KCSI	Kotacane, Aceh	50.62	280	P	P	16 33 22.5	-1.6
	comp=Z,10nm,0.8s						
TPTI		51.15	279	P	P	16 33 27.1	-1.0
	comp=Z,23nm,0.9s						
USRK	Ussuriysk Ar.	52.10	346	P	P	16 33 34.2	-0.4
	comp=Z,2.0nm,0.7s,baz=163,slow=5.3,SNR=10.0						
	comp=Z,2.0nm,0.7s						
HNS	HongShan	53.11	327	⇓P	P	16 33 41.4	-0.8
HNS				pmax	pmax		
	comp=Z,14nm,1.0s						
CMAR	Chiang Mai Arr	53.82	298	P	P	16 33 47.7	-0.1
	comp=Z,0.9nm,0.7s,baz=121,slow=5.6,SNR=6.1						
CMAR				LR	LR	16 57 38.9	
	comp=Z,13nm,19.1s,baz=125,slow=37						
	comp=Z,0.9nm,0.7s						
BJI2	Beijing	54.33	331	P	P	16 33 50.5	-0.6
BJI2				pmax	pmax		
	comp=Z,3.0nm,1.6s						
BNX	BinXian	54.76	343	⇓P	P	16 33 53.5	-0.6
BNX				pmax	pmax		
	comp=Z,4.0nm,1.3s						
PZH	PanZhiHua	55.01	308	P	P	16 33 59.3	+2.9
KLR	Kul'dur	56.91	348	P	P	16 34 08.8	-0.6
	comp=Z,0.6nm,0.4s,baz=225,slow=2.0,SNR=4.1						
KLR				LR	LR	16 55 29.7	
	comp=Z,33nm,21.6s,baz=206,slow=33						
	comp=Z,0.6nm,0.4s						
HHC	Hu-ho-hao-te	57.29	328	eP	P	16 34 16.4	+3.9
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,5.7s						
PETK	Petropavlovsk-	59.72	7	P	P	16 34 29.0	0.0
	comp=Z,3.7nm,0.9s,baz=197,slow=14,SNR=1.4						
PETK				LR	LR	16 56 34.7	
	comp=Z,57nm,21.3s,baz=214,slow=32						
	comp=Z,3.7nm,0.9s						
GTA2	Gaotai	63.32	320	eP	P	16 34 56.3	+2.5
GTA2				sP	sP	16 35 12.5	-1.2
GTA2				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ULN	Ulaanbaatar	64.55	331	P	P	16 35 01.1	-0.6
ULN				IAmb	IAmb	16 35 04.7	
	comp=Z,5.6nm,1.1s						
ULN	Ulaanbaatar	64.55	331	P	P	16 35 01.9	+0.2
SONM	Songino Array	64.85	331	P	P	16 35 03.7	+0.1
	comp=Z,4.9nm,1.1s,baz=152,slow=5.9,SNR=14						
SONM				LR	LR	17 03 57.3	
	comp=Z,66nm,19.3s,baz=91,slow=36						
	comp=Z,4.9nm,1.1s						
SONM	Songino Array	64.85	331	P	P	16 35 02.9	-0.7
SONM				IAmb	IAmb	16 35 07.1	
	comp=Z,9.0nm,1.4s						
MA2	Magadan	65.63	2	LR	LR	17 05 32.3	
	comp=Z,23nm,18.3s,baz=148,slow=38						
EVN	Everest	67.66	303	P	P	16 35 21.9	-0.8
TLY	Talaya	68.78	332	LR	LR	17 06 04.2	
	comp=Z,52nm,19.4s,baz=107,slow=36						
YAK	Yakutsk	69.43	351	LR	LR	17 06 10.1	
	comp=Z,28nm,18.2s,baz=250,slow=36						
VNDA	Vanda	71.67	177	P	P	16 35 45.8	+0.1
	comp=Z,2.4nm,0.7s,baz=343,slow=4.8,SNR=6.2						
	comp=Z,2.4nm,0.7s						
VNDA	Vanda	71.67	177	P	P	16 35 46.3	+0.7
VNDA				IAmb	IAmb	16 35 48.5	
	comp=Z,5.3nm,1.1s						
M11K	Mekoryuk	75.64	22	P	P	16 36 10.3	+1.3
O14K	Tigyukauivet M	76.83	24	P	P	16 36 16.9	+1.0
O14K				IAmb	IAmb	16 36 48.1	
	comp=Z,8.6nm,1.1s						
MKAR	Makanchi Array	78.00	320	P	P	16 36 21.6	-1.2
	comp=Z,1.3nm,0.7s,baz=106,slow=6.9,SNR=16						
	comp=Z,1.3nm,0.7s						
MAKZ	Makanchi	78.20	320		P	16 36 22.7	-1.3
K15K	Wolf Creek Mou	78.59	22	P	P	16 36 26.5	+0.8
TIXI	Tiksi	78.68	354	LR	LR	17 08 47.2	
	comp=Z,30nm,21.8s,baz=168,slow=34						
TIXI	Tiksi	78.68	354		P	16 36 25.8	-0.1
L16K	Owhat River	79.02	23	P	P	16 36 29.2	+1.2
L16K				IAmb	IAmb	16 36 43.5	
	comp=Z,6.7nm,1.4s						
ZALV	Zalesovo Beam	79.47	328	P	P	16 36 28.1	-2.5
	comp=Z,1.4nm,0.6s,baz=104,slow=6.3,SNR=7.7						
ZALV				LR	LR	17 10 23.8	
	comp=Z,46nm,21.1s,baz=308,slow=35						
	comp=Z,1.4nm,0.6s						
ZALV	Zalesovo Beam	79.47	328		P	16 36 29.0	-1.7
KURBB	Kurchatov Arra	81.72	323	P	P	16 36 40.5	-2.3
	comp=Z,0.5nm,0.7s,baz=111,slow=4.6,SNR=5.6						
	comp=Z,0.5nm,0.7s						
G18K	Tagagawik	81.78	20	P	P	16 36 44.1	+1.3
QSPA	South Pole Qui	83.75	180	P	P	16 36 53.2	-0.1
	comp=Z,4.8nm,0.8s,baz=310,slow=0.8,SNR=24						
	comp=Z,4.8nm,0.8s						
QSPA	South Pole Qui	83.75	180	P	P	16 36 52.8	-0.5
QSPA				IAmb	IAmb	16 36 54.9	
	comp=Z,11nm,1.2s						
HDA	Harding Lake	85.29	23	P	P	16 37 01.1	+0.2
HDA				IAmb	IAmb	16 37 34.0	
	comp=Z,6.1nm,1.5s						
ILAR	Eielson Array	85.47	23	P	P	16 36 59.8	-1.9
	comp=Z,0.5nm,0.5s,baz=250,slow=5.0,SNR=13						
	comp=Z,0.5nm,0.5s						
ILAR	Eielson Array	85.47	23	P	P	16 37 01.4	-0.3
F24K	Squaw Lake	86.28	20	P	P	16 37 06.7	+0.9
BVAR	Borovoye Array	87.25	324	P	P	16 37 08.4	-2.3
	comp=Z,0.6nm,0.5s,baz=102,slow=6.2,SNR=5.2						
	comp=Z,0.6nm,0.5s						
DLBC	Dease Lake	91.30	31	LR	LR	17 11 35.7	
	comp=Z,52nm,20.6s,baz=296,slow=31						
BBB	Bella Bella	91.41	38	LR	LR	17 11 42.5	
	comp=Z,57nm,20.5s,baz=280,slow=31						
YKA	Yellowknife Ar	99.11	28	P	Pdif	16 38 03.4	-1.8
	comp=Z,0.2nm,0.8s,baz=276,slow=4.1,SNR=2.2						
	comp=Z,0.2nm,0.8s						
SNAA	Sanae	99.87	189	LR	LR	17 22 14.3	
	comp=Z,110nm,20.9s,baz=186,slow=35						
LPAZ	La Paz	138.23	123	PKhKP	PKPpre	16 43 46.4	
	comp=Z,1.8nm,0.9s,baz=176,slow=0.3,SNR=4.1						
SIV	San Ignacio	144.10	128	PKP	PKPab	16 43 58.6	+0.1
	comp=Z,2.1nm,0.5s,baz=231,slow=6.9,SNR=6.2						
TORD	Torodi Ar. Bea	145.66	284	PKPbc	PKPdf	16 44 03.2	-0.3
	comp=Z,11nm,0.9s,baz=77,slow=2.6,SNR=32						
DBIC	Dimbokro	152.56	272	PKPbc	PKPbc	16 44 20.6	-1.1
	comp=Z,3.3nm,0.6s,baz=334,slow=2.1,SNR=5.1						
BDFB	Brasilia	153.38	145	PKPbc	PKPbc	16 44 22.3	-1.2
	comp=Z,3.5nm,0.5s,baz=233,slow=5.1,SNR=4.4						

*SJA **23** 16:33:15.9±0.4,24°.17S×67°.45W,h172km±3km, ML4.1, MW4.1*
*VAO **23** 16:33:16.5±0.4,24°.04S×67°.26W,h145km, mb4.7, Presumed earthquake*
*NEIC **23** 16:33:16.9±1.8,24°.28S±0°.06×67°.29W±0°.09,h153km±7km, mb4.7/174, ML5.0(GUC), Error ellipse: s-maj=12.1km s-min=9.0km az=84.0*
*IDC **23** 16:33:17.4±1.7,24°.15S×67°.13W,h152km±15km, mb4.2/16, mbtmp4.6/22, MS3.5/2, Error ellipse: s-maj=16.8km s-min=9.6km az=69.0*
*GUC **23** 16:33:18.2±0.6,23°.99S×67°.32W,h147km±8km, ML5.0*

ISC 23 16:33:16.9±0.6,**24°.19S**±0°.04×**67°.38W**±0°.04,**h156**km±6km, **n248,σ1ŝ73/203,mb4.7**/86,**9C-7D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SALTA		0.95	92	i	P	Pn	16 33 43.8	+1.4
SALTA		0.95	92	eP		Pn	16 33 43.8	+1.4
SALTA				eS		Sn	16 34 04.8	+2.9
SALTA				IAML			16 34 06.2	
	comp=Z,2μm,1.7s							
SALTA				IAML			16 34 08.5	
	comp=Z,474nm,0.5s							
AF01	San Pedro de A	1.43	329			Pn	16 33 48.9	+2.3
AF01	San Pedro de A	1.43	329	⇓	eP	Pn	16 33 49.1	+2.5
SLA	San Lorenzo	1.79	108	⇓	eP	Pn	16 33 51.9	+1.7
SLA					i S	Sn	16 34 17.7	+1.9
SLA	San Lorenzo	1.79	108		eP	Pn	16 33 51.9	+1.7
SLA					eS	Sn	16 34 18.5	+2.7
SLA				IAML			16 34 19.1	
	comp=Z,543nm,1.1s							
SLA				IAML			16 34 19.9	
	comp=Z,263nm,0.9s							
HJA	Humahuaca	2.06	62	eP		Pn	16 33 55.1	+1.7
HJA				eS		Sn	16 34 23.3	+1.8
HJA				IAML			16 34 26.9	
	comp=Z,181nm,0.7s							
HJA				IAML			16 34 26.9	
	comp=Z,362nm,1.0s							
FSA	Cafayete	2.30	147	eP		Pn	16 33 57.3	+1.3
FSA				eS		Sn	16 34 28.0	+1.7
PB06	IPOC Station P	2.50	306			Pn	16 33 59.9	+1.4
PB06	IPOC Station P	2.50	306	⇑	iP	Pn	16 34 00.3	+1.8
PB06					eS	Sn	16 34 31.5	+1.0
PB06				IAML			16 34 35.6	
	comp=E,4μm,0.3s							
YJA	Yavi	2.64	41	⇓	eP	Pn	16 34 02.1	+1.6
YJA	Yavi	2.64	41		eP	Pn	16 34 02.1	+1.6
YJA					eS	Sn	16 34 35.9	+1.8
YJA				IAML			16 34 37.2	
	comp=Z,13nm,0.5s							
YJA				IAML			16 34 37.9	
	comp=Z,19nm,1.0s							
PB14	IPOC Station P	2.79	260			Pn	16 34 02.8	+0.7
PB05	IPOC Station P	2.91	297			Pn	16 34 04.5	+1.0
PB09	IPOC Station P	2.94	324			Pn	16 34 05.8	+1.9
PB10	IPOC Station P	2.98	282			Pn	16 34 05.5	+1.2
PB10	IPOC Station P	2.98	282	⇑	iP	Pn	16 34 05.7	+1.4
PB10					eS	Sn	16 34 40.7	-0.2
PB10				IAML			16 34 53.5	
	comp=N,3μm,0.2s							
PB03	IPOC Station P	3.05	314			Pn	16 34 06.7	+1.4
PB03	IPOC Station P	3.05	314	⇑	iP	Pn	16 34 06.7	+1.4
PB03					eS	Sn	16 34 42.9	+0.1
PB03				IAML			16 34 47.1	
	comp=N,3μm,0.4s							
AC02	Maricunga	3.07	211			Pn	16 34 07.2	+1.4
AC02	Maricunga	3.07	211	⇑	iP	Pn	16 34 07.5	+1.6
AC02	Maricunga	3.07	211		eP	Pn	16 34 07.4	+1.5
AC02					eS	Sn	16 34 49.0	+5.3
AC02				IAML			16 34 51.0	
	comp=Z,411nm,0.6s							
AHML	Horco Molle	3.18	145	⇓	eP	Pn	16 33 53.5	-13
PB07	IPOC Station P	3.37	316			Pn	16 34 10.3	+1.0
PB07	IPOC Station P	3.37	316		i P	Pn	16 34 10.5	+1.1
PB07					eS	Sn	16 34 49.2	-0.8
PB07				IAML			16 34 51.4	
	comp=E,3μm,0.6s							
AC01	Pan de Azucar	3.51	236			Pn	16 34 10.7	-0.2
AC01	Pan de Azucar	3.51	236	⇑	iP	Pn	16 34 10.9	0.0
PB02	IPOC Station P	3.68	320			Pn	16 34 13.9	+0.6
PB02	IPOC Station P	3.68	320		eP	Pn	16 34 14.2	+0.9
PB02					eS	Sn	16 34 56.2	-0.9
PB01	IPOC Station P	3.69	328			Pn	16 34 14.1	+0.7
PB01	IPOC Station P	3.69	328		eP	Pn	16 34 14.3	+0.9
AC06	Mina Casimiro	4.14	220			Pn	16 34 18.5	-0.7
AC06	Mina Casimiro	4.14	220	⇑	iP	Pn	16 34 18.6	-0.5
PATCX	Punta Patache	4.22	322			Pn	16 34 20.0	-0.3
PATCX	Punta Patache	4.22	322	⇑	iP	Pn	16 34 20.4	+0.1
GO03	Copiapo	4.25	217			Pn	16 34 20.0	-0.7
GO03	Copiapo	4.25	217	⇑	iP	Pn	16 34 20.1	-0.5
GO03					eS	Sn	16 35 07.2	-3.1
GO03	Copiapo	4.25	217		eP	Pn	16 34 20.4	-0.3
GO03					eS	Sn	16 35 08.5	-1.8
GO03				IAML			16 35 11.6	
	comp=Z,1μm,0.2s							
TA01	Diego Aracena	4.44	324			Pn	16 34 22.6	-0.5
VCA	Vinchina	4.59	189	eP		Pn	16 34 26.5	+1.4
VCA				eS		Sn	16 35 27.3	+8.9
VCA				IAML			16 35 30.5	
	comp=Z,136nm,0.4s							
AANI	Anillaco	4.62	175	eP		Pn	16 34 26.1	+0.6
AANI				eS		Sn	16 35 18.0	-1.1
AANI				IAML			16 35 32.1	
	comp=Z,244nm,0.9s							
PB11	IPOC Station P	4.89	334			Pn	16 34 28.7	-0.5
AC04	Llanos de Chal	5.19	219			Pn	16 34 31.0	-1.9
AC04	Llanos de Chal	5.19	219	eP		Pn	16 34 31.3	-1.7
ACLC	CERRO LA CRUZ	5.23	176	eP		Pn	16 34 33.8	+0.2
ACLC				IAML			16 35 43.2	
	comp=Z,19nm,0.5s							
AC05	El Transito	5.30	209			Pn	16 34 33.5	-1.1
LCO	Las Campanas	5.64	211			Pn	16 34 37.4	-1.8
ACDV	Cuesta del Vie	6.15	194	eP		Pn	16 34 46.0	+0.1
ACDV				eS		Sn	16 35 52.9	-2.7
ACDV				IAML			16 35 56.9	
	comp=Z,135nm,1.0s							
AROD	Rodeo	6.24	197	eP		Pn	16 34 47.6	+0.5
AROD				eS		Sn	16 35 56.2	-1.5
AVFE	Valle Fertil	6.44	181	eP		Pn	16 34 49.0	-0.6
AVFE				IAML			16 36 04.7	
	comp=Z,38nm,0.4s							
ACCO	Cerro Coronel	6.54	193	eP		Pn	16 34 51.4	+0.2
ACCO				eS		Sn	16 36 02.8	-2.3
ACHE	Chepes	6.97	175	eP		Pn	16 34 56.1	-0.6
ACHE				eS		Sn	16 36 12.2	-2.9
RTLL	Cerro Villicun	7.18	188	eP	

PLTB	Pedras Altas	14.31	125	P		Pn	16 36 33.1	+0.6
C2SB	Chapadao do Su	14.57	71	eP		Pn	16 36 34.8	-1.0
LDASE	Londrina, Braz	14.91	90	eP		Pn	16 36 38.6	-1.4
GO06	Curarrehue	15.73	192	P		Pn	16 36 48.3	-1.8
PDRB	Porto dos Gac	16.09	41	eP		Pn	16 36 51.7	-2.9
FRTB	Fartura	16.34	91	eP		Pn	16 36 55.9	-1.7
ITRB	Iturama	16.41	78	eP		Pn	16 36 57.3	-1.1
PLCA	Paso Flores	16.71	188	P		Pn	16 37 03.2	+1.4
	comp=Z,6.4nm,0.9s,baz=2.2,slow=14,SNR=7.7							
PLCA				PcP		PcP	16 41 42.3	+0.9
	comp=Z,4.8nm,1.0s,baz=29,slow=2.4,SNR=4.1							
PLCA	Paso Flores	16.71	188			Pn	16 37 03.3	+1.4
PLCA				IAmb	IAmb		16 37 11.6	
	comp=Z,26nm,1.1s							
PLCA	Paso Flores	16.71	188	eP		Pn	16 37 03.7	+1.8
ARAG	Araguaiana, MT	16.89	63	eP		Pn	16 37 04.0	-0.2
CZSB	Cruzeiro do Su	17.14	342			P	16 37 05.7	-0.9
CZSB				IAmb	IAmb		16 37 15.7	
	comp=Z,19nm,0.7s							
CZSB	Cruzeiro do Su	17.14	342	eP		P	16 37 05.6	-0.9
CLDB	Colider	17.23	42	eP		P	16 37 06.3	-1.1
SPB	Sao Paulo	18.25	92	IAmb	IAmb		16 37 22.1	
	comp=Z,15nm,0.5s							
RCLB	Rio Claro- Sao	18.32	88	eP		P	16 37 18.2	-1.2
VAO	Valinhos	18.75	91			P	16 37 22.4	-1.7
VAO				IAmb	IAmb		16 37 25.0	
	comp=Z,33nm,0.6s							
VAO	Valinhos	18.75	91	eP		P	16 37 23.0	-1.1
IPMB	Ipameri, GO	18.92	75	eP		P	16 37 25.1	-0.8
SNDB	Serra Nova Dou	19.51	54	eP		P	16 37 30.7	-1.6
PARB	Paraibuna	19.93	92	eP		P	16 37 35.2	-1.7
ATAH	Atahualpa	19.98	326	P		Pn	16 37 40.6	-0.6
	comp=Z,4.2nm,0.8s,baz=50,slow=9.3,SNR=7.8							
	comp=Z,4.2nm,0.8s							
BDFB	Brasilia	20.08	69	P		P	16 37 38.2	-0.4
	comp=Z,62nm,0.7s,baz=240,slow=10,SNR=78							
BDFB	Brasilia	20.08	69	P		P	16 37 37.6	-0.9
NPGB	Novo Progresso	20.58	36	eP		P	16 37 41.2	-2.6
TEFE	Tefe	20.73	8	eP		P	16 37 44.6	-0.8
MACA	Manacapuru-AM	21.89	18	P		P	16 37 55.4	-2.2
MACA	Manacapuru-AM	21.89	18	eP		P	16 37 55.1	-2.5
ITTB	Itaituba	22.68	31	eP		P	16 38 03.6	-1.7
JANB	Januaria	23.52	72	eP		P	16 38 11.6	-1.6
SMTB	Santa Maria do	24.29	54	eP		P	16 38 19.6	-0.4
SDBA	SAO DESIDERIO	24.30	65	eP		P	16 38 18.7	-1.6
BOAV	Boa Vista	27.26	15	P		P	16 38 45.1	-1.6
BOAV	Boa Vista	27.26	15	eP		P	16 38 46.9	+0.2
ROSC	El Rosal	29.64	346	P		P	16 39 07.7	-0.6
	comp=Z,6.5nm,0.5s,baz=200,slow=21,SNR=2.3							
	comp=Z,6.5nm,0.5s							
ROSC	El Rosal	29.64	346	IAmb	IAmb		16 39 10.3	
	comp=Z,6.1nm,0.6s							
NBPS	Pedro II - PI	31.80	56	eP		P	16 39 25.1	-1.9
SDV	Santo Domingo	33.03	354	P		P	16 39 37.1	-0.7
SJG	San Juan	42.06	2	LR	LR		17 02 19.3	
	comp=Z,38nm,18.3s,baz=112,slow=42							
BELA	Belgrano 2	55.90	172	P		P	16 42 38.4	+0.4
BELA				IAmb	IAmb		16 42 40.1	
	comp=Z,10nm,0.8s							
VNA3	Neumayer Olymp	57.09	161	⇑P		P	16 42 47.5	+1.0
	comp=Z,3.3nm,0.6s							
VNA2	Neumayer--Watz	57.66	160	⇓P		P	16 42 51.4	+0.9
	comp=Z,11nm,0.6s,baz=271,slow=6.9							
SNAA	Sanae	59.29	161	P		P	16 43 02.3	+0.5
	comp=Z,6.2nm,0.8s,baz=258,slow=9.7,SNR=5.4							
SNAA				PcP		PcP	16 43 49.0	+0.8
	comp=Z,5.1nm,0.8s,baz=260,slow=6.1,SNR=3.0							
	comp=Z,6.2nm,0.8s							
SNAA	Sanae	59.29	161	P		P	16 43 01.7	-0.1
SNAA				IAmb	IAmb		16 43 04.8	
	comp=Z,20nm,1.2s							
TROLL	Troll, Antarti	61.00	161	P		P	16 43 14.4	+0.9
X48A	Hartselle	61.24	342	IAmb	IAmb		16 43 16.7	
	comp=Z,11nm,0.7s							
HNDO	Hondo	61.58	328	IAmb	IAmb		16 43 20.1	
	comp=Z,9.6nm,0.7s							
WVT	Waverly	63.03	341			P	16 43 27.1	-0.2
WVT				IAmb	IAmb		16 43 28.1	
	comp=Z,12nm,0.8s							
SAND	Sanderson	63.33	326	IAmb	IAmb		16 43 32.2	
	comp=Z,12nm,1.0s							
MIAR	Mount Ida	63.49	336	IAmb	IAmb		16 43 32.1	
	comp=Z,20nm,1.2s							
T47A	Sharon Grove	63.63	342	IAmb	IAmb		16 43 32.6	
	comp=Z,15nm,0.9s							
TXAR	Lajitas Array	63.63	325	P		P	16 43 32.8	+1.3
	comp=Z,2.1nm,0.8s,baz=159,slow=7.9,SNR=9.6							
	comp=Z,2.1nm,0.8s							
TPB05	Hovey Rd	64.72	326	IAmb	IAmb		16 43 41.2	
	comp=Z,13nm,0.9s							
MNHN	Monahans	64.78	327	IAmb	IAmb		16 43 41.3	
	comp=Z,17nm,1.1s							
TPB01	Permian Basin	64.97	326	IAmb	IAmb		16 43 43.0	
	comp=Z,17nm,0.9s							
HHAR	Hobbs	65.17	337	IAmb	IAmb		16 43 42.9	
	comp=Z,11nm,1.0s							
SN07	Snyder 07	65.31	329	IAmb	IAmb		16 43 44.1	
	comp=Z,12nm,0.8s							
MGMO	Mountain Grove	65.37	338	IAmb	IAmb		16 43 44.1	
	comp=Z,8.4nm,0.7s							
RLO	Rose Lookout	65.47	336	IAmb	IAmb		16 43 45.0	
	comp=Z,15nm,1.0s							
U38A	Gravette	65.47	336	IAmb	IAmb		16 43 44.7	
	comp=Z,6.9nm,0.6s							
VHRN	Van Horn	65.47	325	IAmb	IAmb		16 43 45.9	
	comp=Z,9.0nm,0.9s							
DKNS	Dickens	65.80	330	IAmb	IAmb		16 43 47.2	
	comp=Z,7.5nm,0.8s							
CCM	Cathedral Cave	65.85	340			P	16 43 45.4	-0.2
QSPA	South Pole Qui	66.01	180	P		P	16 43 48.0	+1.5
	comp=Z,13nm,0.6s,baz=190,slow=0.1,SNR=125							
	comp=Z,13nm,0.6s							
QSPA	South Pole Qui	66.01	180	P		P	16 43 47.8	+1.2
R40A	Maddies Statio	66.40	339	IAmb	IAmb		16 43 50.0	
	comp=Z,8.6nm,0.8s							
OK051	E0350 and S346	66.47	334	P		P	16 43 50.6	+1.0
P40A	Paris	67.45	340	IAmb	IAmb		16 43 57.1	
	comp=Z,17nm,0.9s							
P38A	Dawn	68.02	338	IAmb	IAmb		16 44 00.6	
	comp=Z,18nm,0.9s							
121A	Cookes Peak, D	68.33	324	IAmb	IAmb		16 44 05.2	
	comp=Z,10nm,0.8s							
RTBA	Rita Blanca	68.92	330	IAmb	IAmb		16 44 09.0	
	comp=Z,7.5nm,0.8s							
ANMO	Albuquerque	69.51	326	P		P	16 44 11.2	+2.3
	comp=Z,8.5nm,0.8s,baz=157,slow=6.3,SNR=14							
	comp=Z,8.5nm,0.8s							
ANMO	Albuquerque	69.51	326			P	16 44 09.7	+0.8
ANMO				IAmb	IAmb		16 44 12.0	
	comp=Z,9.2nm,0.8s							
L40A	Anamosa	69.51	341	IAmb	IAmb		16 44 09.6	
	comp=Z,13nm,0.8s							
T25A	Trinidad	70.27	329	IAmb	IAmb		16 44 17.4	
	comp=Z,6.9nm,0.9s							
SDCO	Great Sand Dun	71.27	329	IAmb	IAmb		16 44 22.7	
	comp=Z,8.9nm,0.9s							
E46A	Sault Ste Mari	71.88	348	IAmb	IAmb		16 44 23.8	
	comp=Z,17nm,0.8s							
I37A	Lemond, Waseca	71.94	341	IAmb	IAmb		16 44 24.5	
	comp=Z,18nm,0.8s							
Q24A	Divide	72.09	330	IAmb	IAmb		16 44 27.6	
	comp=Z,14nm,0.9s							
ECSD	EROS Data Cent	72.73	338	IAmb	IAmb		16 44 29.5	
	comp=Z,15nm,1.2s							
BLYC	Blythe	73.01	320	IAmb	IAmb		16 44 33.3	
	comp=Z,12nm,1.0s							
PV15	Paradox Valley	73.18	327	IAmb	IAmb		16 44 34.5	
	comp=Z,10.0nm,0.9s							
PV02	Paradox Valley	73.20	327	IAmb	IAmb		16 44 33.8	
	comp=Z,8.5nm,0.9s							
PV18	Skein Mesa, Pa	73.32	327	IAmb	IAmb		16 44 34.8	
	comp=Z,8.1nm,0.8s							
PV12	Saucer Basin,	73.32	327	IAmb	IAmb		16 44 35.4	
	comp=Z,8.8nm,0.9s							
PV22	Blue Mesa, Par	73.48	327	IAmb	IAmb		16 44 35.8	
	comp=Z,10nm,0.9s							
U15A	North Rim	73.70	324	IAmb	IAmb		16 44 37.9	
	comp=Z,9.8nm,0.9s							
HMU	Henry Mountain	74.01	326	IAmb	IAmb		16 44 39.5	
	comp=Z,13nm,1.1s							
PFO	Pinyon Flats O	74.06	319	P		P	16 44 38.1	+2.1
	comp=Z,4.6nm,0.7s,baz=121,slow=1.1,SNR=5.6							
	comp=Z,4.6nm,0.7s							
PFO	Pinyon Flats O	74.06	319	P		P	16 44 37.1	+1.2
PFO				IAmb	IAmb		16 44 39.9	
	comp=Z,14nm,1.4s							
KNB	Kanab	74.42	324	IAmb	IAmb		16 44 42.1	
	comp=Z,22nm,1.0s							
VNDA	Vanda	74.45	190	P		P	16 44 39.6	+2.1
	comp=Z,4.3nm,0.9s,baz=139,slow=5.6,SNR=13							
	comp=Z,4.3nm,0.9s							
O20A	White River Ci	74.46	329	IAmb	IAmb		16 44 41.5	
	comp=Z,16nm,0.8s							
V12A	Nelson	74.61	322	IAmb	IAmb		16 44 42.4	
	comp=Z,9.7nm,0.9s							
P18A	Preston Nutter	75.04	327	IAmb	IAmb		16 44 45.1	
	comp=Z,13nm,0.7s							
CCUT	Cedar City	75.10	324	IAmb	IAmb		16 44 46.2	
	comp=Z,16nm,0.8s							
P17A	Butcher Ranch,	75.17	327	IAmb	IAmb		16 44 45.5	
	comp=Z,15nm,0.9s							
RDMU	Red Mountain	75.44	328	IAmb	IAmb		16 44 46.8	
	comp=Z,11nm,0.7s							
RSSD	Black Hills	75.82	334			P	16 44 47.2	+1.3
GWY	Greenwater Val	75.97	321	IAmb	IAmb		16 44 50.2	
	comp=Z,9.8nm,0.9s							
BSUT	Blindstream Ca	75.99	327	IAmb	IAmb		16 44 50.6	
	comp=Z,13nm,0.8s							
PSUT	Pine Spring	76.09	324	IAmb	IAmb		16 44 51.1	
	comp=Z,10nm,0.7s							
TCUT	Toone Canyon	76.75	327	IAmb	IAmb		16 44 56.4	
	comp=Z,7.8nm,0.6s							
TORD	Torodi Ar. Bea	76.96	69	P		P	16 44 52.5	-0.3
	comp=Z,1.5nm,0.4s,baz=254,slow=5.6,SNR=6.3							
	comp=Z,1.5nm,0.4s							
TORD	Torodi Ar. Bea	76.96	69	IAmb	IAmb		16 44 53.0	
	comp=Z,5.4nm,1.1s							
PDAR	Pinedale Array	77.13	330	P		P	16 44 55.1	+1.7
	comp=Z,1.9nm,0.6s,baz=130,slow=7.8,SNR=21							
	comp=Z,1.9nm,0.6s							
PDAR	Pinedale Array	77.13	330	P		P	16 44 54.3	+0.9
EPLO	Experimental L	77.18	343	IAmb	IAmb		16 44 54.8	
	comp=Z,9.6nm,1.0s							
HWUT	Hardware Ranch	77.20	328	IAmb	IAmb		16 44 57.5	
	comp=Z,10nm,0.6s							
AHID	Auburn Hatcher	77.86	329	IAmb	IAmb		16 45 00.2	
	comp=Z,15nm,0.8s							
ULM	Lac du Bonnet	78.30	342	P		P	16 44 60.0	+0.6
	comp=Z,6.1nm,0.6s,baz=149,slow=7.4,SNR=13							
	comp=Z,6.1nm,0.6s							
ELK	Elko	78.43	325	P		P	16 45 02.5	+1.9
	comp=Z,6.3nm,0.8s,baz=128,slow=2.9,SNR=21							
	comp=Z,6.3nm,0.8s							
NVAR	Mina Array Bea	78.47	322	P		P	16 45 02.5	+1.6
	comp=Z,2.3nm,0.7s,baz=153,slow=5.8,SNR=11							
	comp=Z,2.3nm,0.7s							
NVAR	Mina Array Bea	78.47	322	P		P	16 45 01.9	+1.1
FLWY	Flagg Ranch	78.68	330	IAmb	IAmb		16 45 05.4	
	comp=Z,12nm,0.9s							
LAO	LASA Array	78.81	334	IAmb	IAmb		16 45 04.9	
	comp=Z,13nm,0.9s							
YNE	Yellowstone No	79.08	331	IAmb	IAmb		16 45 07.0	
	comp=Z,11nm,1.0s							
YHB	Horse Butte	79.42	330	IAmb	IAmb		16 45 09.3	
	comp=Z,8.4nm,0.9s							
PAHR	Pah Rah Range	79.96	322	IAmb	IAmb		16 45 12.3	
	comp=Z,15nm,0.9s							
MPK	Martis Peak	80.04	321	IAmb	IAmb		16 45 13.7	
	comp=Z,20nm,1.3s							
HLID	Hailey	80.06	327	IAmb	IAmb		16 45 12.9	
	comp=Z,14nm,0.8s							
BOSA	Boshof	80.96	117	P		P	16 45 14.4	-0.2
	comp=Z,7.0nm,0.9s,baz=247,slow=4.1,SNR=9.6							
	comp=Z,7.0nm,0.9s							
BOSA	Boshof	80.96	117	P		P	16 45 14.1	-0.4
BOSA				IAmb	IAmb		16 45 15.7	
	comp=Z,9.5nm,0.9s							
EGMT	Eagleton	81.32	333	IAmb	IAmb		16 45 18.1	
	comp=Z,10nm,1.0s							
MAW	Mawson	81.36	163	P		P	16 45 16.7	+1.0
	comp=Z,7.0nm,0.6s,baz=200,slow=7.3,SNR=3.6							
	comp=Z,7.0nm,0.6s							
PLID	Pearl Lake	81.95	328	IAmb	IAmb		16 45 22.2	
	comp=Z,12nm,0.8s							
J08A	Circle Bar Ran	81.98	325	IAmb	IAmb		16 45 22.5	
	comp=Z,9.8nm,0.7s							
LBTB	Lobatse	82.63	114	P		P	16 45 22.6	-0.7
LBTB				IAmb	IAmb		16 45 24.6	
	comp=Z,7.6nm,0.8s							
K05A	Summer Lake	82.84	323	IAmb	IAmb		16 45 27.3	
	comp=Z,14nm,0.9s							
F10A	Beach Ranch, E	83.19	328	IAmb	IAmb		16 45 33.7	
	comp=Z,4.9nm,0.7s							
YBH	Yreka Blue Hor	83.19	322	P		P	16 45 26.3	+0.6
	comp=Z,0.2nm,0.8s,baz=43,slow=4.6,SNR=5.4							
PINE	Pine Mountain	83.58	324	IAmb	IAmb		16 45 30.9	
	comp=Z,11nm,0.9s							
C09A	Chrisman Ranch	84.99	328	IAmb	IAmb		16 45 37.0	
	comp=Z,17nm,1.0s							
FCC	Fort Churchill	85.56	346	IAmb	IAmb		16 45 39.1	
	comp=Z,9.9nm,0.8s							
EDM	Edmonton	86.79	334	IAmb	IAmb		16 45 44.4	
	comp=Z,13nm,0.8s							
CASY	Casey	89.80	179			P	16 45 58.0	+0.5
YKAW1	Yellowknife Wh	94.14	340	IAmb	IAmb		16 46 19.1	
	comp=Z,5.3nm,1.1s							
YKA	Yellowknife Ar	94.18	340	P		P	16 46 18.6	+1.2
	comp=Z,1.9nm,0.7s,baz=135,slow=3.8,SNR=29							
	comp=Z,1.9nm,0.7s							
YKAW3	Yellowknife Wh	94.24	340	IAmb	IAmb		16 46 19.2	
	comp=Z,3.3nm,0.7s							
MBAR	Mbarara	97.17	94	LR	LR		17 27 06.8	
	comp=Z,30nm,20.2s,baz=358,slow=33							
MODS	Monte Piesok	104.30	43	ePDIFF		Pdif	16 47 10.7	+7.5
KBZ	Khabaz	120.67	52	PKP		PKPdf	16 51 49.9	-0.3
	comp=Z,2.4nm,0.8s,baz=284,slow=3.1,SNR=6.0							
ASAR	Alice Springs	128.14	205	PKP		PKPdf	16 52 06.0	+0.7
	comp=Z,3.9nm,0.7s,baz=138,slow=2.0,SNR=41							
WRA	Warramunga Arr	131.30	208	PKP		PKPdf	16 52 12.4	+1.0
	comp=Z,2.4nm,0.5s,baz=160,slow=1.7,SNR=32							
PETK	Petropavlovsk-	135.55	322	PKP		PKiKP	16 52 19.8	-0.1
	comp=Z,10nm,1.0s,baz=71,slow=4.8,SNR=5.2							
BVAR	Borovoye Array	137.16	37	PKP		PKPdf	16 52 22.1	+0.9
	comp=Z,1.5nm,0.3s,baz=274,slow=4.0,SNR=5.6							
KURBB	Kurchatov Arra	142.74	36	PKP		PKPdf	16 52 29.1	-2.3
	comp=Z,1.2nm,0.7s,baz=299,slow=3.1,SNR=11							
ZALV	Zalesovo Beam	143.72	28	PKP	PKPbc		16 52 32.0	+1.0
	comp=Z,6.1nm,0.5s,baz=300,slow=4.0,SNR=30							
KSH2	Kashi	145.38	56	PKPbc		PKPab	16 52 38.0	+0.8
KSH2				pPKP	pPKPdf		16 53 21.8	+2.5
MKAR	Makanchi Array	146.89	39	PKPbc		PKPbc	16 52 40.1	-0.8
	comp=Z,9.3nm,0.7s,baz=320,slow=1.0,SNR=74							
HEH	HeiHe	151.55	340	PKPbc		PKPbc	16 52 52.6	+0.3
WMQ	Urumqi	151.72	40	ePKPbc		PKPdf	16 52 46.3	-0.3
WMQ				LR	LR			
	comp=Z,120nm,20.9s							
USRK	Ussuriysk Ar.	154.52	326	PKPbc		PKPbc	16 52 59.3	+0.2
	comp=Z,0.7nm,0.6s,baz=87,slow=7.2,SNR=4.6							
MJAR	Matsushiro Arr	154.81	305	PKPbc		PKiKP	16 53 01.4	+1.5
	comp=Z,0.7nm,0.6s,baz=63,slow=1.3,SNR=1.9							
MJAR				PKPab		PKPab	16 53 16.9	+1.2
	comp=Z,3.7nm,1.0s,baz=72,slow=0.9,SNR=7.2							
BNX	BinXian	155.40	335	⇓P		PKPdf	16 52 52.5	+0.8
BNX				pmax	pmax			
	comp=Z,4.0nm,1.0s							
SONM	Songino Array	155.89	10	PKP		PKPdf	16 52 52.4	0.0
	comp=Z,1.1nm,1.0s,baz=122,slow=1.9,SNR=4.9							
SONM				PKPab		PKPab	16 53 20.9	+0.9
	comp=Z,0.7nm,0.5s,baz=334,slow=1.4,SNR=4.2							
GTA2	Gaotai	161.27	32	ePKP		PKPdf	16 53 00.3	+1.2
GTA2				pPKP		PKPab	16 53 44.5	+0.8
KSRS	Korea Array	161.39	319	PKP		PKPdf	16 53 00.2	+1.1
	comp=Z,0.7nm,0.8s,baz=39,slow=1.5,SNR=3.0							
KSRS				PKPab		PKPab	16 53 45.7	+1.6
	comp=Z,0.7nm,0.7s,baz=46,slow=3.6,SNR=4.8							
HHC	Hu-ho-hao-te	163.37	3	eP		PKPdf	16 52 57.8	-3.3
CMAR	Chiang Mai Arr	166.04	112	PKP		PKPdf	16 53 05.1	+1.1
	comp=Z,0.3nm,0.4s,baz=244,slow=3.8,SNR=4.9							
PZH	PanZhiHua	169.90	75	PKP		PKPdf	16 53 04.6	-2.0
NJ2	Nanjing	170.43	326	eP		PKPdf	16 53 05.9	-0.6
NJ2				pmax	pmax			
	comp=Z,37nm,0.6s							

*IDC **23** 16:42:45.0±4.4, 10°.40S×160°.69E, h48km±32km, mb3.4/7, mbtmp3.7/8, ML3.6/1, MS3.3/5, Error ellipse: s-maj=42.5km s-min=20.8km az=106.0*

ISC 23 16:42:45.2±1.4, 10°.4S±0°.1×160°.7E±0°.2, h50km, n12, σ0s98/10, mb3.6/7, MS3.4/3, Bougainville-Solomon Islands region

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

HNR	Honiara	1.20	323	P		Pn	16 43 05.4	-0.3
	36nm,0.5s,baz=256,slow=22,SNR=179							
HNR				S		Sn	16 43 20.9	0.0
	105nm,0.3s,baz=268,slow=23,SNR=20							
HNR				LR	LR		16 43 34.2	
	comp=Z,9.1nm,20.9s,baz=180,slow=41							
PMG	Port Moresby	13.36	273	LR	LR		16 50 46.6	
	comp=Z,134nm,18.8s,baz=138,slow=36							
CTA	Charters Tower	16.92	234	P		Pn	16 46 38.8	+0.2
	0.2nm,0.3s,baz=75,slow=16,SNR=2.2							
CTA				LR	LR		16 53 05.0	
	comp=Z,115nm,18.3s,baz=46,slow=37							
	4.6nm,0.9s							
WRA	Warramunga Arr	27.11	246	P		P	16 48 23.6	0.0
	0.7nm,0.5s,baz=75,slow=9.4,SNR=15							
	0.7nm,0.5s							
GUMO	Guam	28.53	326	LR	LR		17 00 33.4	
	comp=Z,18nm,18.5s,baz=117,slow=37							
ASAR	Alice Springs	28.74	239	P		P	16 48 38.0	-0.2
	0.3nm,0.7s,baz=63,slow=10,SNR=8.0							
ASAR				LR	LR		17 00 04.0	
	comp=Z,86nm,18.6s,baz=80,slow=36							
	0.3nm,0.7s							
PPT	Papeete	48.68	104	LR	LR		17 09 52.6	
	comp=Z,36nm,18.5s,baz=192,slow=33							
CMAR	Chiang Mai Arr	67.31	295	P		P	16 53 35.8	+0.4
	0.4nm,0.4s,baz=111,slow=7.8,SNR=2.3							
	0.4nm,0.4s							
SONM	Songino Array	75.26	326	P		P	16 54 24.7	+1.7
	0.4nm,0.5s,baz=128,slow=6.9,SNR=1.8							
	0.4nm,0.5s							
ILAR	Eielson Array	84.54	20	P		P	16 55 12.7	0.0
	0.3nm,0.5s,baz=235,slow=4.1,SNR=7.0							
	0.3nm,0.5s							
MKAR	Makanchi Array	89.67	318	P		P	16 55 36.8	-1.2
	0.1nm,0.4s,baz=102,slow=5.9,SNR=1.4							
	0.1nm,0.4s							
KURBB	Kurchatov Arra	93.02	321	P		P	16 55 51.9	-1.4
	0.2nm,0.7s,baz=96,slow=3.7,SNR=1.7							
	0.2nm,0.7s							

*IDC **23** 16:52:35.6±0.8, 18°.85N×80°.92W, h0km, mb4.1/8, mbtmp4.1/9, ML3.0/2, MS3.3/6, Error ellipse: s-maj=23.9km s-min=20.5km az=27.0*

*NEIC **23** 16:52:38.4±1.6, 18°.92N±0°.06×80°.87W±0°.02, h11km±4km, mb4.3/19, Error ellipse: s-maj=9.1km s-min=2.1km az=175.0*

*CATAC **23** 16:52:38.5±0.8, 19°N±2°×8°1W±°, h19km±6km, M4.7/11, mb4.6/10, mB4.2/2, MLv4.7/11, Mw(mB)3.3/2, Error ellipse: s-maj=5.1km s-min=3.3km az=165.8, confirmed*

*SSNC **23** 16:52:41.1±1.2, 18°.92N×80°.83W, h20km±12km, MD4.2, ML4.2, Presumed earthquake*

*JSN **23** 16:52:42.0±1.2, 18°.50N×80°.57W, h0km±46km, MD4.3, Presumed earthquake*

ISC 23 16:52:37.4±0.5, 18°.91N±0°.05×80°.88W±0°.04, h10km, n96, σ1s74/106, mb4.3/16, MS3.3/5, 1C-2D, North of Honduras

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

LCCY	Blossom Villag	1.07	45	eP		Pg	16 52 57.1	-0.8
LCCY				eS		Sg	16 53 10.1	-1.7
CBCY	The Bluff, Cay	1.34	52	P		Pn	16 53 00.7	-1.5
CBCY				S		Sb	16 53 16.8	-3.1
CBCY	The Bluff, Cay	1.34	52	eP		Pn	16 53 00.1	-2.1
CBCY				eS		Sb	16 53 16.5	-3.4
CBCY				IAML			16 53 37.3	
	comp=Z,3μm,1.0s							
MTDJ	Mount Denham	3.25	102			Pn	16 53 27.8	-0.6
MTDJ	Mount Denham	3.25	102	P		Pn	16 53 28.5	0.0
MTDJ	Mount Denham	3.25	102	iP		Pn	16 53 28.2	-0.2
MTDJ	Mount Denham	3.25	102	⇑eP		Pn	16 53 27.9	-0.6
MTDJ				eP		Pb	16 53 28.1	-7.1
MTDJ				eS		Sn	16 54 00.7	-6.6
MTDJ				IAML			16 54 13.9	
	comp=Z,680nm,1.0s							
MGV	Manicaragua	3.29	15	⇓eP		Pn	16 53 27.9	-1.1
CCCC	Cccc	3.71	52	eP		Pn	16 53 39.0	+4.3
CAIB	Caibarien	3.80	20			Pn	16 53 35.1	-0.9
CAIB	Caibarien	3.80	20	P		Pn	16 53 36.2	+0.2
CAIB				S		Sn	16 54 21.0	+0.2
CAIB	Caibarien	3.80	20	eP		Pn	16 53 36.4	+0.4

TXAR	**Lajitas Array**	**23.20 301**	P	**P**	**16 57 44.8**	**+0.1**
TX31	**Lajitas Ar. Si**	**23.20 301**		**P**	**16 57 44.7**	**0.0**
POST	**Post**	**23.23 311**	P	**P**	**16 57 45.0**	**+0.1**
POST			IAmb	IAmb	16 57 47.1	
	comp=Z,13nm,0.8s					
PECS	**Pecos**	**24.17 305**	P	**P**	**16 57 54.3**	**+0.3**
PECS			IAmb	IAmb	16 57 55.5	
	comp=Z,12nm,1.4s					
MSTX	**Muleshoe**	**24.61 312**		**P**	**16 57 58.9**	**+0.8**
MSTX			IAmb	IAmb	16 58 00.1	
	comp=Z,10nm,0.8s					
VHRN	**Van Horn**	**24.81 303**		**P**	**16 58 00.3**	**+0.4**
VHRN			IAmb	IAmb	16 58 28.1	
	comp=Z,4.6nm,1.1s					
JFWS	**Jewell Farm**	**25.21 344**	P	**P**	**16 58 04.3**	**+1.1**
JFWS			IAmb	IAmb	16 58 09.3	
	comp=Z,6.4nm,0.9s					
ANMO	**Albuquerque**	**27.73 310**	LR	LR	17 10 42.6	
	comp=Z,45nm,19.8s,baz=113,slow=39					
MDP	**Montagnes des**	**30.77 113**	LR	LR	17 12 27.2	
	comp=Z,36nm,19.2s,baz=276,slow=39					
PDAR	**Pinedale Array**	**33.95 321**	P	**P**	**16 59 21.3**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=111,slow=8.3,SNR=2.4					
	comp=Z,0.3nm,0.5s					
MOOW	**Moose Ponds**	**35.22 321**	P	**P**	**16 59 32.5**	**+0.3**
ELK	**Elko**	**36.56 314**	LR	LR	17 17 24.1	
	comp=Z,72nm,18.2s,baz=36,slow=41					
LPAZ	**La Paz**	**37.16 159**	LR	LR	17 15 42.0	
	comp=Z,42nm,18.6s,baz=298,slow=37					
EGMT	**Eagleton**	**37.32 328**	P	**P**	**16 59 50.2**	**+0.3**
EGMT			IAmb	IAmb	17 00 27.9	
	comp=Z,5.5nm,1.3s					
SIV	**San Ignacio**	**39.78 149**	P	**P**	**17 00 10.1**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=326,slow=11,SNR=6.7					
	comp=Z,1.4nm,0.7s					
BCPM	**Bancas Point**	**58.30 330**	P	**P**	**17 02 33.3**	**+1.1**
ILAR	**Eielson Array**	**62.87 334**	P	**P**	**17 03 04.2**	**+0.9**
	comp=Z,0.9nm,0.8s,baz=110,slow=4.3,SNR=12					
	comp=Z,0.9nm,0.8s					
SKT	**Skwentna**	**64.40 330**	P	**P**	**17 03 14.2**	**+0.7**
SKT			IAmb	IAmb	17 03 49.3	
	comp=Z,6.6nm,1.2s					
ESDC	**Sonseca Array**	**68.27 54**	P	**P**	**17 03 39.8**	**+1.0**
	comp=Z,1.9nm,0.7s,baz=284,slow=6.4,SNR=11					
	comp=Z,1.9nm,0.7s					
ESDC	**Sonseca Array**	**68.27 54**	IAmb	IAmb	17 03 44.1	
	comp=Z,1.7nm,1.1s					
M14K	**Bethel**	**69.35 329**	P	**P**	**17 03 45.4**	**+0.4**
MG03	**Isla Dawson**	**73.01 174**	P	**P**	**17 04 08.3**	**+1.2**
SPITS	**Spitsbergen Ar**	**73.11 12**	P	**P**	**17 04 06.5**	**-1.0**
	comp=Z,7.0nm,1.0s,baz=264,slow=3.1,SNR=6.5					
	comp=Z,7.0nm,1.0s					
ARCES	**ARCESS Array B**	**78.02 20**	P	**P**	**17 04 35.6**	**-0.2**
	comp=Z,9.2nm,1.2s,baz=298,slow=6.1,SNR=1.8					
	comp=Z,9.2nm,1.2s					
FINES	**FINESS Array B**	**81.38 28**	P	**P**	**17 04 54.7**	**+0.5**
	comp=Z,4.6nm,1.1s,baz=273,slow=7.9,SNR=3.5					
	comp=Z,4.6nm,1.1s					
WMQ	**Urumqi**	**116.70 9**	PKP	**PKPdf**	**17 11 21.3**	**-1.0**
WMQ			sPKP		17 11 41.5	
WMQ			PP	**PP**	**17 12 35.5**	**+6.7**
WMQ			LR	LR		
	comp=Z,120nm,23.3s					
HHC	**Hu-ho-hao-te**	**119.43 349**	*e*P	**PKPdf**	**17 11 22.8**	**-4.9**
PZH	**PanZhiHua**	**134.79 357**	PKP	**PKPdf**	**17 11 56.8**	**-0.6**
WRA	**Warramunga Arr**	**146.81 262**	PKPbc	**PKPdf**	**17 12 19.8**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=86,slow=3.8,SNR=10.0					
ASAR	**Alice Springs**	**147.30 255**	PKPbc	**PKPdf**	**17 12 21.5**	**+1.8**
	comp=Z,0.5nm,0.7s,baz=97,slow=3.9,SNR=15					

IDC 23 16:54:13.8±292.0, 24°.14S×68°.14W, h0km, Error ellipse: s-maj=133.7km s-min=116.1km az=54.0, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I08BO	**LAS PENAS INFR**	**7.89**	**358**	I	I	17 41 40.0	
	0.1nm,1.4s,baz=177,slow=322,SNR=2.4						
I14CL	**ROBINSON CRUSO**	**13.29**	**222**	I	I	18 14 00.0	
	0.1nm,0.4s,baz=51,slow=322,SNR=0.3						
I09BR	**BRASILIA INFRA**	**20.71**	**70**	I	I	19 12 40.0	
	baz=239,slow=306,SNR=2.7						
I02AR	**USHUAIA INFRAS**	**30.41**	**179**	I	I	20 02 40.0	
	baz=358,slow=311,SNR=1.0						
I13CL	**EASTER ISLAND**	**37.17**	**256**	I	I	20 38 00.0	
	baz=91,slow=319,SNR=2.0						
I27DE	**GEORG VON NEUM**	**57.58**	**160**	I	I	22 46 40.0	
	baz=292,slow=337,SNR=2.9						

*PRU **23** 16:56:28.8, 50°.31N×18°.74E, h0km*
*IPEC **23** 16:56:28.6±0.1, 50°.26N×18°.82E, h1km, ML2.3/6, Error ellipse: s-maj=1.8km s-min=0.6km az=174.0*
*VIE **23** 16:56:28.1±0.3, 50°.33N×18°.79E, h0km, mb2.4/2, ml2.3/1, Error ellipse: s-maj=3.1km s-min=1.6km az=169.0 16 km WNW of Katowice Suspected Mining induced.*
*IDC **23** 16:56:32.0±1.8, 50°.45N×18°.39E, h0km, mbtmp3.7/1, ML2.5/1, Error ellipse: s-maj=36.3km s-min=12.4km az=141.0*

ISC 23 16:56:27.1±0.8, 50°.34N±0°.04×18°.89E±0°.02, h0km, n28, σ1s16/46, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.60**	**101**	*e*Pg	**Pb**	**16 56 40.8**	**+0.3**
OJC				*e*Sg	**Sb**	**16 56 49.3**	**-0.1**
OKC	**Ostrava-Krasne**	**0.69**	**224**	*e*PG	**Pg**	**16 56 40.7**	**+0.4**
STEB	**Steborice**	**0.82**	**241**	*e*PG	**Pg**	**16 56 43.2**	**+0.3**
STEB				*e*SG	**Sg**	**16 56 52.7**	**-0.8**
	comp=Z,71nm,0.3s						
ANAC	**Anensky vrch**	**1.00**	**255**	*e*Pg	**Pg**	**16 56 46.6**	**+0.3**
	baz=78						
ANAC				*e*Sg	**Sg**	**16 56 58.7**	**-0.6**
	65nm,0.3s,baz=78						
MORC	**Moravsky Berou**	**1.03**	**238**	*e*Pg	**Pg**	**16 56 46.6**	**-0.3**
	baz=59						
MORC				*e*Sg	**Sg**	**16 56 58.5**	**-1.7**
	31nm,0.4s,baz=59						
MAUC	**Maruska**	**1.19**	**216**	*e*PG	**Pg**	**16 56 49.8**	**-0.1**
MAUC				*e*SG	**Sg**	**16 57 04.5**	**-0.8**
LOSC	**Losov**	**1.21**	**234**	*e*Pg	**Pg**	**16 56 50.0**	**-0.3**
	baz=55						
LOSC				*e*Sg	**Sg**	**16 57 04.1**	**-1.9**
	30nm,0.4s,baz=55						
LANS	**Liptovska Anna**	**1.25**	**162**	*e*PG	**Pn**	**16 56 51.7**	**-0.1**
LANS				*e*SG	**Sb**	**16 57 07.8**	**-0.4**
LANS				*e*LG	Lg	16 57 12.7	
NIE	**Niedzica**	**1.30**	**135**	*e*Pg	**Pn**	**16 56 52.9**	**+0.4**
NIE				*e*Sg	**Sn**	**16 57 12.1**	**+1.5**
KRLC	**Kraliky**	**1.38**	**260**	*e*PG	**Pg**	**16 56 52.6**	**-0.9**
KRLC				*e*SG	**Sg**	**16 57 09.6**	**-1.7**
	comp=Z,32nm,0.8s						
DPC	**Dobruska-Polom**	**1.64**	**271**	*e*PG	**Pn**	**16 56 57.4**	**+0.1**
DPC				*e*SG	**Sn**	**16 57 17.8**	**-1.3**
	comp=Z,16nm,0.4s						
JAVC	**Velka Javorina**	**1.68**	**209**	*e*Pn	**Pn**	**16 56 57.5**	**-0.3**
	baz=28						
OSTC	**Ostas**	**1.72**	**278**	*e*PG	**Pn**	**16 56 58.5**	**+0.2**
OSTC				*e*SG	**Sn**	**16 57 20.8**	**-0.2**
KSP	**Ksiaz**	**1.73**	**288**	*e*Pg	**Pg**	**16 57 00.9**	**+0.7**
KSP				*e*Sg	**Sg**	**16 57 23.4**	**+0.8**
STHS	**Stebnicka Huta**	**1.78**	**120**	*e*PG	**Pg**	**16 57 01.2**	**-0.1**
STHS				*e*SG	**Sg**	**16 57 27.8**	**+3.5**
STHS				*e*LG	Lg	16 57 30.3	
VRAC	**Vranov**	**1.81**	**236**	*e*Pn	**Pn**	**16 56 59.6**	**+0.1**
	baz=56						
VRAC				*e*Sg	**Sn**	**16 57 22.7**	**-0.4**
	21nm,0.4s,baz=56						
CHVC	**Chvalec**	**1.83**	**279**	*e*PG	**Pn**	**16 57 00.0**	**+0.2**
KRUC	**Moravsky**	**2.06**	**233**	*e*Pn	**Pn**	**16 57 03.2**	**+0.2**
	baz=52						
KRUC				*e*Sg	**Sn**	**16 57 30.1**	**+0.7**
	16nm,0.4s,baz=52						
KECS	**Kecovo**	**2.13**	**150**	*e*SN	**Sn**	**16 57 29.8**	**-1.3**
MODS	**Modra-Piesok**	**2.23**	**209**	*e*PN	**Pn**	**16 57 04.9**	**-0.4**
PRU	**Pruhonice**	**2.81**	**265**	*e*SG	**Sb**	**16 57 54.0**	**+0.8**
CONA	**Conrad Observa**	**3.12**	**221**	*i* Pn	**Pn**	**16 57 17.7**	**0.0**
	0.6nm,0.2s						
CONA				*i* Sn	**Sn**	**16 57 55.3**	**-0.4**
	1.7nm,0.3s						
ZVC	**Zvikov**	**3.17**	**255**	*e*PG	**Pb**	**16 57 24.0**	**-0.2**
ZVC				*e*SG	**Sb**	**16 58 05.1**	**+1.8**
CKRC	**Cesky Krumlov**	**3.34**	**245**	*e*SG	**Sb**	**16 58 10.3**	**+1.8**
KHC	**Kasperske Hory**	**3.65**	**253**	*e*PG	**Pb**	**16 57 32.4**	**-0.1**
KHC				*e*SG	**Sb**	**16 58 20.7**	**+3.4**
	comp=Z,9.6nm,0.6s						
GERES	**GERESS Array B**	**3.69**	**248**	Pg	**Pb**	**16 57 34.5**	**+1.3**
	0.1nm,0.3s,baz=62,slow=19,SNR=10						
GERES				Lg	Lg	16 58 22.1	
	0.2nm,0.3s,baz=61,slow=27,SNR=10						
AKASG	**Malin Array Be**	**6.60**	**83**	Pg	**Pg**	**16 58 31.8**	**-1.7**
	baz=275,slow=15						
FINES	**FINESS Array B**	**11.83**	**17**	Pn	**Pn**	**16 59 16.0**	**-0.9**
	0.1nm,0.3s,baz=200,slow=14,SNR=6.5						
	1.9nm,0.8s						

IDC 23 17:01:59.6±8.9, 25°.38N×145°.56E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=336.3km s-min=28.3km az=75.0, North Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.36**	**195**	P	P	17 10 27.6	-0.1
	0.4nm,0.6s,baz=18,slow=7.7,SNR=8.4						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**50.05**	**194**	P	P	17 10 56.0	-0.2
	0.8nm,1.2s,baz=12,slow=6.8,SNR=6.6						
	0.8nm,1.2s						
MKAR	**Makanchi Array**	**53.89**	**311**	P	P	17 11 25.1	+0.3
	0.1nm,0.5s,baz=76,slow=6.5,SNR=1.6						
	0.1nm,0.5s						
KURBB	**Kurchatov Arra**	**56.39**	**315**	P	P	17 11 42.3	-0.4
	0.1nm,0.2s,baz=91,slow=6.6,SNR=1.7						
	0.1nm,0.2s						

*IDC **23** 17:07:42.9±1.2, 24°.64N×125°.19E, h0km, mb3.3/4, mbtmp3.3/5, ML2.8/1, Error ellipse: s-maj=32.8km s-min=24.0km az=99.0*
*NIED **23** 17:07:47.9, 24°.73N×125°.43E, h47km, MW3.5, Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁴Nm; Mrr0.06; Mθθ0.74; Mϕϕ-0.81; Mrθ1.11; Mθϕ-0.12; Mrϕ1.20; Fault plane solution: M₀1.82000×10¹⁴ NP1: ϕs138.00000°, δ25.00000°, λ4.00000°. NP2:ϕs45.00000°, δ88.00000°, λ115.00000°.*
*JMA **23** 17:07:47.9±0.1, 24°.7N±0°.6×125°.4E±0°.6, h47km, MV3.4/10, NEAR MIYAKOJIMA ISLAND*
JMA Felt I J1 at NEAR MIYAKOJIMA ISLAND .

ISC 23 17:07:48.0±1.2, 24°.57N±0°.07×125°.45E±0°.06, h31km±7km, n22, σ1s29/30, mb3.3/4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**0.20**	**350**	*i* P	**Pn**	**17 07 55.1**	**+0.3**
JOGS				S	**Sb**	**17 08 00.5**	**+1.8**
JMJ2	**Miyako jima3**	**0.20**	**328**	*i* P	**Pn**	**17 07 55.2**	**+0.3**
JMJ2				S	**Sb**	**17 08 00.3**	**+1.5**
JMJ	**Miyako jima 2**	**0.28**	**331**	P	**Pb**	**17 07 54.9**	**-0.5**
JIKM	**Ikemajima**	**0.40**	**333**	*i* P	**Pb**	**17 07 56.2**	**-0.8**
JIKM				S	**Sb**	**17 08 02.3**	**-0.8**
JTJ	**Tarama**	**0.68**	**276**	*i* P	**Pb**	**17 08 01.1**	**-0.3**
JTJ				*e*S	**Sb**	**17 08 10.9**	**+0.2**
JISG	**Ishigakijimahi**	**1.03**	**271**	*i* P	**Pn**	**17 08 06.0**	**-0.4**
JISG				*e*S	**Sn**	**17 08 20.1**	**+0.4**
JIJ	**Ishigaki jima**	**1.20**	**261**	*i* P	**Pn**	**17 08 09.3**	**+0.7**
JIJ				*e*S	**Sn**	**17 08 26.0**	**+2.0**
JKRS	**Kuro-shima**	**1.35**	**256**	P	**Pn**	**17 08 11.4**	**+0.7**
JKRS				*e*S	**Sb**	**17 08 31.4**	**+1.8**
HATJ	**Hateruma jima**	**1.58**	**252**	P	**Pb**	**17 08 16.5**	**-0.1**
IRIF	**Iriomote-Funau**	**1.58**	**262**	P	**Pn**	**17 08 14.2**	**+0.4**
YOJ	**Yonaguni jima**	**2.22**	**268**	P	**Pn**	**17 08 23.4**	**+0.8**
JOW	**Kunigami**	**3.41**	**48**	Pn	**Pn**	**17 08 38.3**	**-0.7**
	1.6nm,0.3s,baz=135,slow=15,SNR=9.7						
JOW				Sn	**Sn**	**17 09 21.8**	**+3.4**
	4.9nm,0.3s,baz=146,slow=26,SNR=4.2						
	9.7nm,0.5s						
NACB	**Ninganchiao**	**3.53**	**264**	P	**Pn**	**17 08 41.3**	**+0.6**
YHNB	**Yeheng**	**3.71**	**272**	P	**Pn**	**17 08 45.2**	**+2.0**
YULB	**Yu-li**	**3.97**	**254**	P	**Pn**	**17 08 45.6**	**-1.2**
SSLB	**Suanglung**	**4.17**	**260**	P	**Pn**	**17 08 49.7**	**+0.1**
TWGBT	**Beinan**	**4.36**	**247**	P	**Pn**	**17 08 51.1**	**-1.1**
TPUB	**Ta-pu**	**4.58**	**255**	P	**Pn**	**17 08 55.5**	**+0.3**
MKAR	**Makanchi Array**	**40.82**	**314**	P	**P**	**17 15 23.9**	**-2.7**
	0.4nm,0.5s,baz=104,slow=9.1,SNR=7.5						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**45.08**	**168**	P	**P**	**17 16 01.5**	**+0.2**
	0.4nm,1.0s,baz=346,slow=8.0,SNR=1.7						
	0.4nm,1.0s						
ASAR	**Alice Springs**	**48.64**	**170**	P	**P**	**17 16 29.4**	**+0.3**
	0.2nm,0.8s,baz=359,slow=14,SNR=4.4						
	0.2nm,0.8s						
ILAR	**Eielson Array**	**67.08**	**28**	P	**P**	**17 18 38.8**	**+0.7**
	0.2nm,0.6s,baz=291,slow=8.3,SNR=5.2						
	0.2nm,0.6s						

*NEIC **23** 17:17:32.7±2.0, 47°.56N±0°.03×92°.72W±0°.03, h0km±1km, ML2.7/10, Error ellipse: s-maj=4.8km s-min=3.2km az=159.0*
*IDC **23** 17:17:36.1±3.6, 47°.58N×92°.99W, h0km, mbtmp2.5/2, ML0.8/1, Error ellipse: s-maj=78.1km s-min=24.3km az=55.0*

ISC 23 17:17:31.9±1.0, 47°.57N±0°.05×92°.73W±0°.06, h0km, n11, σ1s04/14, Minnesota

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EYMN	**Ely**	**0.92**	**65**		**Pg**	**17 17 48.6**	**-0.9**
EYMN				IAML		17 18 03.4	
	157nm,0.6s						
EYMN				IAML		17 18 04.3	
	124nm,0.9s						
E38A	**The Farm, Brul**	**1.25**	**140**		**Pg**	**17 17 54.5**	**-1.4**
E38A				IAML		17 18 18.5	
	117nm,0.5s						
E38A				IAML		17 18 20.4	
	121nm,0.5s						
EPLO	**Experimental L**	**2.21**	**343**		**Pn**	**17 18 10.0**	**+0.1**
EPLO					**Sn**	**17 18 38.1**	**+0.3**
AGMN	**Agassiz Nation**	**2.23**	**290**		**Pn**	**17 18 10.5**	**+0.4**
AGMN					**Sn**	**17 18 39.1**	**+0.8**
AGMN				IAML		17 18 47.2	
	72nm,0.6s						
SPMN	**Marine on St.**	**2.34**	**181**		**Pn**	**17 18 12.2**	**+0.5**
SPMN				IAML		17 18 48.9	
	88nm,0.4s						
G40A	**Rib Lake**	**2.89**	**142**		**Pn**	**17 18 20.1**	**+0.9**
F33A	**5 Mile Ranch,**	**3.00**	**236**		**Pn**	**17 18 20.9**	**+0.3**
ULM	**Lac du Bonnet**	**3.39**	**324**	Pn	**Pn**	**17 18 27.2**	**+1.2**
	0.2nm,0.3s,baz=146,slow=11,SNR=1.4						
ULM				Pg	**Pg**	**17 18 35.2**	**-1.7**
	0.2nm,0.3s,baz=144,slow=19,SNR=2.1						
ULM				Sn	**Sn**	**17 19 06.1**	**-0.9**
	0.2nm,0.3s,baz=119,slow=19,SNR=3.0						
ULM				Lg	Lg	17 19 16.9	
	1.9nm,0.3s,baz=226,slow=12,SNR=18						
	0.9nm,0.6s						
I10CA	**LAC DU BONNET**	**3.42**	**322**	I	I	17 39 40.4	
	0.2nm,0.7s,baz=142,slow=331,SNR=0.1						
I42A	**Draeger Farm,**	**4.55**	**143**	Pn	**Pn**	**17 18 42.1**	**+0.2**
YKA	**Yellowknife Ar**	**19.36**	**329**	P	**Pn**	**17 22 01.2**	**+1.4**
	0.1nm,0.5s,baz=128,slow=12,SNR=3.7						

IDC 23 17:18:37.4±1.4, 2°.02S×140°.34E, h0km, mb3.4/3, mbtmp3.5/4, ML3.5/1, Error ellipse: s-maj=40.9km s-min=9.9km az=51.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**0.62**	**143**	Pg	Pg	17 18 49.8	+0.5
	57nm,0.3s,baz=350,slow=6.4,SNR=288						
JAY				Lg	Lg	17 18 57.5	
	135nm,0.3s,baz=350,slow=4.1,SNR=20						
WRA	**Warramunga Arr**	**18.76**	**198**	P	P	17 22 58.0	-0.2
	0.2nm,0.3s,baz=18,slow=12,SNR=13						
	2.5nm,0.8s						
ASAR	**Alice Springs**	**22.41**	**196**	P	P	17 23 37.2	-0.6
	2.1nm,0.7s,baz=29,slow=11,SNR=30						
	2.1nm,0.7s						
MKAR	**Makanchi Array**	**70.25**	**322**	P	P	17 29 52.8	+0.2
	0.6nm,1.1s,baz=131,slow=5.6,SNR=1.6						
	0.6nm,1.1s						
KURBB	**Kurchatov Arra**	**74.11**	**324**	P	P	17 30 15.5	-0.1
	0.1nm,0.7s,baz=96,slow=5.0,SNR=1.2						
	0.1nm,0.7s						

*IDC **23** 17:25:46.9±0.5, 2°.05S×141°.11E, h0km, mb4.1/17, mbtmp4.1/21, ML4.3/3, MS4.0/26, Error ellipse: s-maj=15.3km s-min=7.2km az=118.0*
*NEIC **23** 17:25:49.7±2.6, 2°.11S±0°.05×140°.78E±0°.07, h10km±1km, mb4.6/45, Error ellipse: s-maj=12.3km s-min=7.8km az=112.0*
*GCMT **23** 17:25:53.7±0.2, 1°.91S±0°.02×140°.55E±0°.03, h20km, MW5.0/98, Moment Tensor Solution. s49, c62; s98, c136; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-3.56±.18; Mθθ2.91±.13; Mϕϕ0.65±.13; Mrθ1.30±.24; Mθϕ0.89±.10; Mrϕ1.29±.30; Best double couple: M₀3.84200×10¹⁶ NP1:ϕs80.00000°, δ33.00000°, λ-73.00000°. NP2: ϕs240.00000°, δ59.00000°, λ-100.00000°. Principal axes: T 3.6080, Plg13.0000°, Azm338.0000°; N 0.4730, Plg9.0000°, Azm245.0000°; P -4.0760, Plg74.0000°, Azm122.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **23** 17:25:54.1±0.7, 2°.52S×14°.1E±°, h10km, M4.6/30, mb4.7/30, mB5.1/18, MLv4.8/7, Mw(mB)4.5/18*

ISC 23 17:25:50.7±0.4, 2°.18S±0°.05×140°.80E±0°.05, h20km, n144, σ1s67/117, mb4.5/51, MS4.2/32, 1C-2D, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**0.35**	**196**	Pg	**Pb**	**17 26 00.4**	**+2.2**
	277nm,0.3s,baz=348,slow=6.9,SNR=109						
JAY				Lg	Lg	17 26 07.5	
	644nm,0.3s,baz=347,slow=7.3,SNR=17						
JAY	**Jayapura**	**0.35**	**196**	P	**Pb**	**17 25 59.7**	**+1.5**
GENI	**Genyem**	**0.75**	**237**	P	**Pb**	**17 26 04.9**	**-0.2**
WAMI	**Wamena**	**2.69**	**231**	P	**Pn**	**17 26 36.0**	**+3.2**
SRPI	**Serui, Papua**	**4.57**	**274**	P	**Pb**	**17 27 10.2**	**0.0**
BAKI	**Biak**	**4.79**	**282**	P	**Pn**	**17 27 00.0**	**-1.8**
MANU	**Manus Island**	**6.56**	**89**	Pn	**Pn**	**17 27 25.3**	**-0.9**
KMPI	**Kaimana, Papua**	**7.24**	**258**	P	**Pn**	**17 27 34.6**	**-0.8**
	0.3nm1µm69nm,0.9s						
FAKI	**Fak Fak**	**8.57**	**265**		**Pn**	**17 27 51.7**	**-2.1**
FAKI	**Fak Fak**	**8.57**	**265**	P	**Pn**	**17 27 53.9**	**+0.1**
	634nm39nm,1.3s						
PMG	**Port Moresby**	**9.57**	**139**	Pn	**Pn**	**17 28 05.7**	**-1.7**
	18nm,1.1s,baz=29,slow=5.1,SNR=6.1						
PMG	**Port Moresby**	**9.57**	**139**	Pn	**Pn**	**17 28 08.9**	**+1.5**
SIJI	**Sorong**	**9.62**	**278**	Pn	**Pn**	**17 28 09.3**	**+1.1**
	0.8nm,0.3s,baz=36,slow=21,SNR=6.2						
SIJI				LR	LR	17 31 58.8	
	comp=Z,1µm,18.9s,baz=84,slow=38						
	1.7nm,0.5s						
SIJI	**Sorong**	**9.62**	**278**	P	Pn	17 28 24.7	+17
KRVT	**Keravat (AS076**	**11.40**	**101**	LR	LR	17 32 24.9	
	comp=Z,138nm,21.0s,baz=206,slow=36						
RABL	**Rabaul**	**11.52**	**100**		**Pn**	**17 28 34.5**	**+0.3**
KRAI	**Karang Ratu**	**12.44**	**265**	P	**P**	**17 29 01.3**	**+2.7**
MTN	**Manton Dam**	**14.28**	**222**		**Pn**	**17 29 08.9**	**-2.9**
MNI	**Manado**	**16.36**	**283**	P	**P**	**17 29 45.5**	**+3.4**
DAV	**Davao City (W)**	**17.75**	**301**	LR	LR	17 36 37.3	
	comp=Z,385nm,20.3s,baz=142,slow=36						
KNRA	**Kununurra**	**17.91**	**221**		**Pn**	**17 29 58.1**	**-0.6**
LUWI	**Luwuk**	**18.06**	**273**	P	**Pn**	**17 29 59.0**	**-1.6**
LUWI				IAmb	IAmb	17 30 42.0	
	comp=Z,88nm,1.1s						
SOEI	**Soe**	**18.07**	**245**		**Pn**	**17 30 01.3**	**+0.4**
SOEI	**Soe**	**18.07**	**245**	P	**Pn**	**17 30 01.4**	**+0.5**
	comp=Z,1µmcomp=Z,104nm,0.9s						
WB0	**Warramunga Arr**	**18.57**	**199**		**P**	**17 30 06.0**	**-0.6**
CTA	**Charters Tower**	**18.58**	**164**	P	**P**	**17 30 06.3**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=333,slow=11,SNR=4.2						
	comp=Z,4.0nm,0.9s						
WR8	**Warramunga Arr**	**18.71**	**199**		**P**	**17 30 08.1**	**0.0**
WRAB	**Tennant Creek**	**18.74**	**199**	P	**P**	**17 30 08.7**	**+0.3**
WRA	**Warramunga Arr**	**18.75**	**199**	P	**P**	**17 30 08.3**	**-0.2**
	comp=Z,2.2nm,0.3s,baz=25,slow=12,SNR=70						
	comp=Z,8.3nm,0.4s						
WRA	**Warramunga Arr**	**18.75**	**199**		**P**	**17 30 07.6**	**-1.0**
BATI	**Baumata**	**18.80**	**244**	P	**P**	**17 30 10.3**	**+1.1**
	comp=Z,74nm,0.6s,baz=259,slow=0.7,SNR=14						
BATI	**Baumata**	**18.80**	**244**	P	**Pn**	**17 30 11.2**	**+1.5**
MRSI	**Marisa**	**19.04**	**278**	P	Pn	17 30 20.5	+7.9
APSI	**Ampana**	**19.19**	**273**	P	Pn	17 30 30.0	+16
EDFI	**Ende, Flores**	**20.10**	**250**	P	**P**	**17 30 24.0**	**+0.5**
	comp=Z,18nm,0.9s						
TOLI2	**Tolitoli**	**20.28**	**279**		**P**	**17 30 25.3**	**0.0**
TOLI2				IAmb	IAmb	17 30 29.8	
	comp=Z,17nm,0.8s						
HNR	**Honiara**	**20.35**	**112**	P	**P**	**17 30 22.4**	**-3.7**
	comp=Z,2.4nm,1.1s,baz=241,slow=3.3,SNR=2.5						
BSSI	**Bau Bau, Buton**	**20.63**	**258**	P	Pn	17 30 32.7	+1.2
	comp=Z,39nm,1.3s						
TTSI	**Tana Toraja**	**20.98**	**267**	P	Pn	17 30 41.9	+6.4
PCI	**Palu**	**20.99**	**273**	P	Pn	17 30 36.2	+0.5
MPSI	**Mapaga**	**21.05**	**277**	P	**P**	**17 30 37.8**	**+4.2**
SPSI	**Sidrap Palu**	**21.07**	**265**	P	**P**	**17 30 36.8**	**+2.9**
	comp=Z,32nm,1.3s						
MKS	**Makassar**	**21.50**	**261**	P	**P**	**17 30 42.8**	**+4.3**
	comp=Z,54nm,1.0s						
FITZ	**Fitzroy Crossi**	**21.71**	**222**	P	**P**	**17 30 40.4**	**-0.3**
	comp=Z,17nm,0.9s,baz=33,slow=12,SNR=

comp=E,730nm,18.0s
NJ2 LR LR
comp=Z,1μm,22.7s
WHN Wuhan 41.17 324 P P 17 33 35.8 +1.9
WHN S **S 17 39 49.3 +2.9**
WHN LR LR
comp=Z,1μm,32.6s
KSRS Korea Array 41.20 344 P **P 17 33 34.1 +0.1**
comp=Z,1.0nm,0.7s,baz=161,slow=9.6,SNR=4.2
KSRS LR LR 17 47 57.0
comp=Z,221nm,21.9s,baz=160,slow=32
comp=Z,1.0nm,0.7s
RPSI Rantau Prapat 42.14 276 P **P 17 33 41.0 -1.2**
RPSI IAmb IAmb 17 33 46.1
comp=Z,11nm,1.1s
GSI Gunungsitoli 43.36 274 P **P 17 33 49.4 -2.7**
GSI IAmb IAmb 17 34 02.4
comp=Z,10nm,0.8s
TIA Tai'an 44.12 332 P **P 17 33 57.3 -0.5**
TIA pmax pmax
comp=Z,6.0nm,1.3s
TIA LR LR
comp=N,220nm,24.0s
TIA LR LR
comp=E,370nm,23.0s
TIA LR LR
comp=Z,620nm,27.5s
CMAR Chiang Mai Arr 46.01 298 P **P 17 34 12.2 -0.9**
comp=Z,0.5nm,0.8s,baz=115,slow=5.3,SNR=5.3
CMAR LR LR 17 56 09.7
comp=Z,40nm,18.7s,baz=115,slow=39
comp=Z,0.5nm,0.8s
CMAR Chiang Mai Arr 46.01 298 P **P 17 34 13.1 0.0**
HNS HongShan 46.22 331 ⇑P **P 17 34 14.3 -0.2**
HNS S **S 17 40 58.8 -1.3**
HNS pmax pmax
comp=Z,10.0nm,0.9s
HNS LR LR
comp=E,280nm,17.5s
HNS LR LR
comp=Z,390nm,19.9s
USRK Ussuriysk Ar. 46.84 351 P **P 17 34 18.4 -0.9**
comp=Z,1.9nm,0.7s,baz=165,slow=9.5,SNR=6.2
comp=Z,1.9nm,0.7s
PZH PanZhiHua 47.27 310 P **P 17 34 25.1 +2.0**
CD2 Chengdu 48.22 316 P **P 17 34 30.6 +0.3**
CD2 S **S 17 41 29.1 +0.1**
CD2 pmax pmax
comp=Z,10.0nm,0.8s
CD2 LR LR
comp=N,230nm,10.8s
CD2 LR LR
comp=E,430nm,15.9s
CD2 LR LR
comp=Z,430nm,17.8s
URZ Urewera 48.91 142 LR LR 17 56 14.4
comp=Z,341nm,19.1s,baz=300,slow=37
BNX BinXian 49.17 348 ⇓P **P 17 34 37.1 -0.1**
BNX pmax pmax
comp=Z,8.0nm,1.2s
HHC Hu-ho-hao-te 50.44 331 *e*P **P 17 34 50.6 +3.4**
HHC S **S 17 42 03.4 +3.5**
HHC pmax pmax
comp=Z,9.0nm,0.5s
HHC pmax pmax
comp=Z,110nm,5.2s
HHC LR LR
comp=N,170nm,19.0s
HHC LR LR
comp=E,250nm,18.9s
HHC LR LR
comp=Z,280nm,22.7s
LZH Lanzhou 51.34 321 *e*P P 17 34 59.3 +5.2
LZH sP pwP 17 35 09.4 +6.9
LZH pmax pmax
comp=Z,23nm,1.4s
LZDM Lanzhou Array 51.35 321 LR LR 17 55 49.1
comp=Z,228nm,22.0s,baz=75,slow=35
KLR Kul'dur 51.80 352 P **P 17 34 56.7 -0.3**
comp=Z,2.5nm,0.9s,baz=199,slow=2.7,SNR=6.3
comp=Z,2.5nm,0.9s
HEH HeiHe 53.48 349 *e*P **P 17 35 09.0 -0.5**
HEH pmax pmax
comp=Z,4.0nm,1.1s
BRDH Bariadhala 53.91 300 LR LR 18 00 12.3
comp=Z,72nm,20.4s,baz=81,slow=38
GTA2 Gaotai 55.99 322 *e*P **P 17 35 29.1 +1.0**
GTA2 pmax pmax
comp=Z,2.0nm,0.7s
GTA2 LR LR
comp=N,140nm,14.0s
GTA2 LR LR
comp=E,180nm,14.3s
GTA2 LR LR
comp=Z,230nm,16.8s
SONM Songino Array 58.16 333 P **P 17 35 43.8 +0.5**
comp=Z,0.3nm,0.5s,baz=128,slow=5.7,SNR=4.5
SONM LR LR 18 00 45.6
comp=Z,271nm,21.0s,baz=186,slow=36
comp=Z,0.3nm,0.5s
PALK Pallekele 60.70 280 LR LR 18 04 37.2
comp=Z,59nm,19.6s,baz=96,slow=38
RAR Rarotonga 60.80 113 LR LR 18 01 02.3
comp=Z,147nm,18.9s,baz=257,slow=35
TLY Talaya 62.21 335 LR LR 18 03 15.0
comp=Z,208nm,20.3s,baz=135,slow=36
YAK Yakutsk 64.60 354 P **P 17 36 25.3 -1.0**
comp=Z,11nm,0.9s,baz=50,slow=2.0,SNR=9.9
YAK LR LR 18 00 36.4
comp=Z,184nm,21.3s,baz=164,slow=32
comp=Z,11nm,0.9s
YAK Yakutsk 64.60 354 P 17 36 25.4 -1.0
WMQ Urumqi 65.91 321 *e*P **P 17 36 37.8 +2.4**
WMQ sP pwP 17 36 44.0 -0.1
WMQ pmax pmax
comp=Z,9.0nm,1.3s
WMQ LR LR
comp=Z,110nm,18.7s
MKAR Makanchi Array 70.66 322 P **P 17 37 04.5 -0.5**
comp=Z,1.4nm,0.8s,baz=108,slow=6.3,SNR=14
MKAR LR LR 18 10 08.2
comp=Z,73nm,19.0s,baz=68,slow=38
comp=Z,1.4nm,0.8s
MKAR Makanchi Array 70.66 322 P **P 17 37 04.7 -0.3**
MAKZ Makanchi 70.86 322 P **P 17 37 06.8 +0.6**
MAKZ IAmb IAmb 17 37 11.3
comp=Z,8.4nm,1.2s
TARG Taragay, Kyrgy 71.67 315 P **P 17 37 12.6 +0.8**
TARG IAmb IAmb 17 37 28.2
comp=Z,8.0nm,1.2s
KSH2 Kashi 72.44 312 P **P 17 37 18.0 +1.9**
KSH2 pmax pmax
comp=Z,5.0nm,1.0s
ZAA0 Zalesovo Array 72.54 329 P **P 17 37 16.5 +0.3**
ZAA0 IAmb IAmb 17 37 19.4
comp=Z,4.9nm,1.4s
ZALV Zalesovo Beam 72.54 329 P **P 17 37 16.0 -0.2**
comp=Z,0.7nm,0.7s,baz=120,slow=5.3,SNR=3.8
ZALV LR LR 18 08 60.0
comp=Z,145nm,20.2s,baz=120,slow=36
comp=Z,0.7nm,0.7s
ZALV Zalesovo Beam 72.54 329 P **P 17 37 15.9 -0.2**
NRN Naryn 72.84 315 P **P 17 37 18.5 -0.2**
NRN IAmb IAmb 17 37 23.2
comp=Z,4.2nm,1.1s
BOOM Boomskoye usch 73.23 316 P **P 17 37 20.9 +0.2**
BOOM IAmb IAmb 17 37 26.1
comp=Z,12nm,1.5s
AAK Ala-Archa 74.29 315 LR LR 18 13 52.8
comp=Z,78nm,18.4s,baz=90,slow=39
AAK Ala-Archa 74.29 315 P 17 37 26.9 0.0
KURK Kurchatov 74.50 324 P **P 17 37 27.0 -0.8**
KURK IAmb IAmb 17 37 33.0
comp=Z,8.5nm,1.4s
KURBB Kurchatov Arra 74.51 324 P **P 17 37 27.0 -0.9**
comp=Z,1.2nm,0.9s,baz=120,slow=5.0,SNR=8.6
comp=Z,1.2nm,0.9s
ARSB Arslanbob 74.97 314 P **P 17 37 31.8 +0.8**
ARSB IAmb IAmb 17 37 35.7
comp=Z,10nm,1.2s
DRK Karamyk 75.33 312 P **P 17 37 33.9 +0.7**
DRK IAmb IAmb 17 37 55.0
comp=Z,3.8nm,0.9s
VNDA Vanda 76.13 175 P **P 17 37 35.2 -1.4**
comp=Z,4.1nm,0.8s,baz=312,slow=2.1,SNR=7.1
comp=Z,4.1nm,0.8s
VNDA Vanda 76.13 175 P **P 17 37 35.9 -0.8**
VNDA IAmb IAmb 17 37 40.1
comp=Z,4.5nm,0.8s
GAR Garm 76.32 311 P 17 37 38.4 -0.3
GAR IAmb IAmb 17 37 47.8
comp=Z,12nm,1.2s
CHGR Chuyangaron 77.12 310 P **P 17 37 42.5 -0.7**
CHGR IAmb IAmb 17 37 48.1
comp=Z,9.4nm,0.9s
KK31 Karatay Array 77.22 315 P **P 17 37 40.6 -3.0**
KK31 IAmb IAmb 17 37 46.0
comp=Z,4.5nm,1.1s
KKAR Karatay Array 77.22 315 P **P 17 37 42.9 -0.7**
NRIK Noril'sk 79.81 343 P **P 17 37 57.0 -0.3**
comp=Z,0.6nm,0.4s,baz=103,slow=5.8,SNR=4.6
comp=Z,0.6nm,0.4s
NRIK Noril'sk 79.81 343 IAmb IAmb 17 38 05.3
comp=Z,8.4nm,1.2s
BVAR Borovoye Array 80.08 325 P **P 17 37 58.7 -0.4**
comp=Z,3.0nm,0.7s,baz=122,slow=7.3,SNR=12
comp=Z,3.0nm,0.7s
BORK Borovoye 80.13 325 P 17 38 00.2 +0.9
BORK IAmb IAmb 17 38 04.1
comp=Z,7.0nm,1.0s
E19K Redstone River 81.59 20 P 17 38 08.9 +2.1
DHY Denali Highway 83.78 26 P **P 17 38 20.2 +1.7**
DHY IAmb IAmb 17 38 21.1
comp=Z,6.0nm,1.1s
IL31 84.49 24 P **P 17 38 21.0 -0.8**
IL31 IAmb IAmb 17 38 26.9
comp=Z,8.3nm,1.5s
ILAR Eielson Array 84.49 24 P **P 17 38 20.3 -1.5**
comp=Z,1.2nm,0.9s,baz=264,slow=5.1,SNR=12
ILAR LR LR 18 10 18.0
comp=Z,133nm,21.4s,baz=258,slow=32
comp=Z,1.2nm,0.9s
ILAR Eielson Array 84.49 24 P **P 17 38 21.0 -0.9**
D24K Happy Valley 85.13 20 P **P 17 38 25.7 +0.7**
ABKAR Akbulak array 85.67 320 P **P 17 38 26.6 -1.6**
BMAR Burnt Mountain 86.13 22 P **P 17 38 31.0 +0.9**
E27K Coleen River 87.41 21 P **P 17 38 37.9 +1.6**
E27K IAmb IAmb 17 39 03.0
comp=Z,7.8nm,1.3s
QSPA South Pole Qui 87.76 180 P **P 17 38 36.4 -1.8**
comp=Z,4.4nm,0.9s,baz=174,slow=1.8,SNR=10
comp=Z,4.4nm,0.9s
QSPA South Pole Qui 87.76 180 P **P 17 38 37.5 -0.7**
I29M Ogilvie Camp, 88.17 24 P **P 17 38 41.1 +1.2**
INK Inuvik 90.40 22 LR LR 18 13 42.8
comp=Z,101nm,21.2s,baz=298,slow=32
GNI Garni 96.03 310 LR LR 18 28 34.0
comp=Z,53nm,18.6s,baz=14,slow=39
G06A Carlson Farm, 97.58 45 P **P 17 39 22.4 -1.5**
YKA Yellowknife Ar 98.65 27 P **P 17 39 28.1 -0.1**
comp=Z,0.4nm,1.0s,baz=278,slow=5.4,SNR=4.9
comp=Z,0.4nm,1.0s
BMRD Maredsous 119.35 329 *d*PKPdf **PKPdf 17 44 39.0 +0.3**
LPAZ La Paz 146.04 124 PKPbc **PKPdf 17 45 31.2 +1.0**
comp=Z,6.3nm,1.0s,baz=42,slow=1.3,SNR=16
LPAZ La Paz 146.04 124 PKPab 17 45 32.8 +1.3
CPUP Villa Florida 146.68 149 PKPbc **PKPdf 17 45 31.1 +0.8**
comp=Z,4.8nm,0.8s,baz=238,slow=4.7,SNR=15
CPUP Villa Florida 146.68 149 PKPbc 17 45 33.2 +1.3

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*JMA **23** 17:27:27.8±0.1, 41.°0N±0.°4×140.°1E±0.°8, h161km±1km, MV2.9/38, W OFF AOMORI PREF*
*IDC **23** 17:27:28.1±1.7, 40.°97N×140.°04E, h161km±19km, mb3.3/4, mbtmp3.7/7, Error ellipse: s-maj=29.4km s-min=19.7km az=148.0*
ISC 23 17:27:27.6±0.9**, 41.°00N**±0.°05×**140.°14E**±0.°08**, h162**km±6km**, n22,** σ**0.s80**/31**, mb3.5**/4**, Eastern Honshu**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JSI2 Shiura 2 0.21 74 P **Pn 17 27 49.4 0.0**
JSI2 *e*S **Sn 17 28 05.9 -0.1**
JHHS Hirosakihyakuz 0.39 154 *e*P **Pn 17 27 50.3 +0.4**
JHHS *e*S **Sn 17 28 07.4 +0.5**
JIW Iwasaki 0.42 194 P **Pn 17 27 50.1 +0.1**
JIW *e*S **Sn 17 28 07.4 +0.2**
JOMM Oshimamatsumae 0.53 349 *e*P **Pn 17 27 50.6 +0.2**
JOMM S **Sn 17 28 07.3 -0.7**
JSR Shiriuchi 0.57 22 P **Pn 17 27 50.6 0.0**
JSR *e*S **Sn 17 28 07.7 -0.7**
JTM Tenmabayashi 0.74 106 *i* P **Pn 17 27 51.9 +0.3**
JTM S **Sn 17 28 09.9 -0.1**
JOT Ohata 0.79 61 *i* P **Pn 17 27 52.2 +0.3**
JAH Hinai 0.89 155 *i* P **Pn 17 27 52.9 +0.2**
JAH S **Sn 17 28 11.9 -0.1**
JKB Kayabe 1.11 37 P **Pn 17 27 54.8 +0.4**
JOSM Okushiri--Mats 1.19 336 P **Pn 17 27 55.1 0.0**
JOSM S **Sn 17 28 15.7 -0.7**
JANG Nango 1.22 120 *i* P **Pn 17 27 55.2 -0.2**
JOM Ohasama 1.76 150 *i* P **Pn 17 28 00.6 -0.3**
JEW Eniwo 2.08 28 P **Pn 17 28 05.4 +1.1**
JYK Kaneyama 2.09 175 P **Pn 17 28 04.5 +0.1**
JMK Ichinoseki 2.21 158 P **Pn 17 28 05.4 -0.5**
ASAJ Asahikawa 3.61 29 P **Pn 17 28 24.1 +1.1**
18nm,0.3s,baz=211,slow=19,SNR=270
ASAJ S **Sn 17 29 03.1 -3.1**
8.0nm,0.3s,baz=327,slow=24,SNR=8.7
MJAR Matsushiro Arr 4.70 199 P **Pn 17 28 37.1 -0.2**
3.4nm,0.5s,baz=13,slow=12,SNR=16
USRK Ussuriysk Ar. 6.81 301 P **Pn 17 29 05.2 +0.2**
1.4nm,0.5s,baz=116,slow=12,SNR=2.0
MKAR Makanchi Array 41.27 298 P **P 17 34 56.9 +0.2**
1.1nm,0.7s,baz=82,slow=9.5,SNR=13
1.1nm,0.7s
KURBB Kurchatov Arra 42.86 305 P **P 17 35 09.9 +0.5**
1.2nm,0.6s,baz=81,slow=8.7,SNR=11
1.2nm,0.6s
ILAR Eielson Array 46.73 34 P **P 17 35 41.0 +1.1**
0.5nm,0.6s,baz=284,slow=9.1,SNR=10
0.5nm,0.6s
BVAR Borovoye Array 47.23 309 P **P 17 35 42.9 -1.0**
0.5nm,0.4s,baz=84,slow=9.1,SNR=3.0
0.5nm,0.4s

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*IDC **23** 17:28:12.1±0.6, 1.°92S×141.°00E, h0km, mb4.2/12, mbtmp4.2/16, ML2.9/3, MS4.1/7, Error ellipse: s-maj=18.2km s-min=7.8km az=107.0*
*NEIC **23** 17:28:14.0±2.4, 2.°15S±0.°09×140.°78E±0.°07, h10km±1km, mb4.6/50, Error ellipse: s-maj=15.5km s-min=11.9km az=201.0*
*DJA **23** 17:28:15.0±0.8, 2°S±4°×14°1E±°, h10km, M4.9/6, mB5.2/1, mb5.0/5, MLv4.9/6, Mw(mB)4.6/1*
*GCMT **23** 17:28:17.0±0.2, 1.°89S±0.°02×140.°56E±0.°03, h22km, MW5.0/100, Moment Tensor Solution. s45,c57; s100,c141; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-4.58±.22; Mθθ3.66±.13; Mφφ0.92±.13; Mrθ1.44±.19; Mθφ0.51±.09; Mφr0.28±.28; Best double couple: Mo4.41600×10^16 NP1:φs80.00000°, δ35.00000°, λ-90.00000°. NP2:φs260.00000°, δ55.00000°, λ-90.00000°. Principal axes: T 4.0020, Plg10.0000°, Azm350.0000°; N 0.8350, Plg0.0000°, Azm260.0000°; P -4.8310, Plg80.0000°, Azm168.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 23 17:28:15.2±0.4**, 2.°07S**±0.°05×**140.°76E**±0.°06**, h20**km**, n114,** σ**1.s52**/102**, mb4.6**/44**, MS4.2**/11**, 2D, Near north coast of Irian Jaya**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JAY Jayapura 0.45 187 Pg **Pb 17 28 25.9 +1.5**
279nm,0.3s,baz=330,slow=5.2,SNR=12
JAY Lg Lg 17 28 34.1
954nm,0.3s,baz=358,slow=5.9,SNR=16
JAY Jayapura 0.45 187 P **Pb 17 28 25.6 +1.2**
JAY S **Sb 17 28 34.3 +3.6**
GENI Genyem 0.79 229 P **Pb 17 28 30.4 +0.2**
GENI S **Sb 17 28 42.3 +1.8**
WAMI Wamena 2.73 229 P **Pn 17 29 02.0 +4.1**
RKPI Ransiki, Papua 6.60 275 P **Pn 17 29 49.3 -1.9**
0.4nm52nm,0.8s
MANU Manus Island 6.60 90 Pn **Pn 17 29 51.5 +0.3**
KMPI Kaimana, Papua 7.22 257 P **Pn 17 30 00.0 +0.3**
FAKI Fak Fak 8.54 264 Pn **Pn 17 30 16.8 -1.1**
SIJI Sorong 9.56 277 Pn **Pn 17 30 33.6 +1.7**
0.2nm,0.3s,baz=23,slow=20,SNR=1.6
3.2nm,0.8s
PMG Port Moresby 9.68 139 Pn **Pn 17 30 31.0 -2.4**
0.7nm,0.3s,baz=323,slow=22,SNR=2.3
11nm,1.1s
PMG Port Moresby 9.68 139 Pn **Pn 17 30 31.0 -2.4**
MTN Manton Dam 14.33 221 Pn 17 31 35.8 -1.3
GUMO Guam 16.08 15 LR LR 17 37 31.0
comp=Z,603nm,19.2s,baz=219,slow=35
KNRA Kununurra 17.96 220 Pn 17 32 23.5 -0.4
LUWI Luwuk 18.01 273 Pn 17 32 24.4 -0.2
LUWI IAmb IAmb 17 32 55.7
comp=Z,84nm,1.1s
SOEI Soe 18.08 244 Pn 17 32 25.4 -0.1
WB0 Warramunga Arr 18.66 199 P **P 17 32 31.3 -0.7**
CTA Charters Tower 18.70 164 P **P 17 32 32.6 +0.2**
comp=Z,0.1nm,0.3s,baz=80,slow=7.6,SNR=1.4
CTA LR LR 17 39 43.3
comp=Z,1μm,18.1s,baz=342,slow=37
comp=Z,6.9nm,1.0s
CTAO Charters Tower 18.70 164 P **P 17 32 32.6 +0.2**
WR8 Warramunga Arr 18.80 199 P 17 32 33.0 -0.6
BATI Baumata 18.81 244 P **P 17 32 35.8 +2.0**
comp=Z,137nm,1.1s,baz=22,slow=0.6,SNR=7.4
WRAB Tennant Creek 18.83 199 P P 17 32 27.2 -6.7
WRA Warramunga Arr 18.84 199 P **P 17 32 34.2 +0.2**
comp=Z,9.6nm,0.7s,baz=18,slow=12,SNR=10
WRA Warramunga Arr 18.84 199 P **P 17 32 31.9 -2.1**
TOLI2 Tolitoli 20.22 279 P **P 17 32 49.4 +0.2**
TOLI2 IAmb IAmb 17 33 18.9
comp=Z,30nm,1.1s
HNR Honiara 20.43 112 P **P 17 32 49.5 -2.0**
comp=Z,0.6nm,0.7s,baz=284,slow=13,SNR=1.1
HNR LR LR 17 41 01.6
comp=Z,25nm,18.1s,baz=22,slow=38
KAPI Kappang 21.17 261 LR LR 17 42 48.7
comp=Z,195nm,19.1s,baz=86,slow=41
FITZ Fitzroy Crossi 21.77 222 P **P 17 33 05.2 -0.6**
comp=Z,14nm,0.7s,baz=62,slow=6.8,SNR=7.1
AS31 Alice Springs 22.47 197 P **P 17 33 13.7 +0.3**
ASAR Alice Springs 22.47 197 P **P 17 33 13.5 +0.1**
comp=Z,12nm,0.6s,baz=28,slow=12,SNR=23
comp=Z,12nm,0.6s
ASAR Alice Springs 22.47 197 P 17 33 13.3 -0.1
EIDS Eidsvold 25.21 158 P 17 33 43.1 +3.3
INKA Innaminka 25.53 180 P 17 33 43.7 +1.2
INKA IAmb IAmb 17 33 47.5
comp=Z,5.8nm,0.6s
MBWA Marble Bar 27.93 226 P **P 17 34 04.0 -0.3**
MBWA IAmb IAmb 17 34 16.8
comp=Z,10nm,0.9s
PSA00 Pilbara Seismi 28.11 225 P **P 17 34 06.6 +0.6**
PSA00 IAmb IAmb 17 34 22.6
comp=Z,16nm,1.2s
PSA00 Pilbara Seismi 28.11 225 P **P 17 34 04.3 -1.7**
PSA00 IAmb IAmb 17 34 24.9
comp=Z,7.0nm,1.2s
JCJ Chichijima 29.03 3 LR LR 17 44 32.9
comp=Z,215nm,20.2s,baz=164,slow=34
BBOO Buckleboo 30.90 188 P **P 17 34 30.7 +0.1**
FORT Forrest 30.98 202 P **P 17 34 31.4 +0.1**
FORT IAmb IAmb 17 34 34.2
comp=Z,9.5nm,0.7s
H11S3 WAKE ISLAND Hy 32.69 50 T T 18 09 22.0
baz=232,slow=75
H11S2 WAKE ISLAND Hy 32.70 50 T T 18 09 22.6
baz=232,slow=75
H11S1 WAKE ISLAND Hy 32.71 50 T T 18 09 23.1
baz=232,slow=75
BBJI Bungbulang 33.41 260 P **P 17 34 50.0 -3.0**
BBJI IAmb IAmb 17 34 52.5
comp=Z,8.2nm,0.7s
H11N1 WAKE ISLAND Hy 33.57 49 T T 18 10 24.6
baz=233
H11N2 WAKE ISLAND Hy 33.58 49 T T 18 10 26.3
baz=233
H11N3 WAKE ISLAND Hy 33.58 49 T T 18 10 28.0
baz=233
CAN Canberra 33.96 168 P **P 17 34 56.2 -1.3**
MGBR Mount Gambier 35.48 180 P P 17 35 07.1 -3.4
MORW Morawa 35.70 219 P **P 17 35 11.1 -1.5**
MORW IAmb IAmb 17 35 15.3
comp=Z,26nm,1.4s
NWAO Narrogin (SRO) 37.81 213 LR LR 17 52 37.0
comp=Z,845nm,19.2s,baz=54,slow=38
MSVF Nonsavu 39.77 115 LR LR 17 51 50.3
comp=Z,332nm,19.6s,baz=290,slow=36
NJ2 Nanjing 39.79 330 *e*P **P 17 35 49.4 +2.4**
NJ2 pmax pmax
comp=Z,26nm,0.5s
NJ2 pmax pmax
comp=Z,400nm,5.0s
NJ2 LR LR
comp=N,770nm,10.9s
NJ2 LR LR
comp=E,460nm,9.0s
NJ2 LR LR
comp=Z,700nm,17.1s
WHN Wuhan 41.06 324 P **P 17 35 59.3 +1.8**
WHN S **S 17 42 10.5 +1.2**
WHN pmax pmax
comp=Z,24nm,1.0s
KSRS Korea Array 41.09 344 P **P 17 35 58.6 +1.0**
comp=Z,1.0nm,0.9s,baz=158,slow=8.8,SNR=4.9
comp=Z,1.0nm,0.9s
RPSI Rantau Prapat 42.09 276 P 17 36 04.1 -2.1
RPSI IAmb IAmb 17 36 06.5
comp=Z,10nm,0.9s
GSI Gunungsitoli 43.31 274 P 17 36 14.0 -2.2
GSI IAmb IAmb 17 36 26.1
comp=Z,13nm,0.7s
CMAR Chiang Mai Arr 45.92 298 P **P 17 36 37.3 +0.3**
comp=Z,0.6nm,0.6s,baz=119,slow=6.5,SNR=4.8
comp=Z,0.6nm,0.6s
CMAR Chiang Mai Arr 45.92 298 P **P 17 36 36.7 -0.3**
HNS HongShan 46.11 331 ⇓P **P 17 36 38.8 +0.7**
PZH PanZhiHua 47.17 310 P **P 17 36 49.8 +3.0**
CD2 Chengdu 48.12 316 P **P 17 36 54.0 0.0**
CD2 S **S 17 43 52.6 +0.6**
CD2 pmax pmax
comp=Z,10.0nm,1.1s
BNX BinXian 49.05 348 ⇓P **P 17 37 01.4 +0.5**
BNX pmax pmax
comp=Z,9.0nm,1.2s
HHC Hu-ho-hao-te 50.33 331 *e*P **P 17 37 14.3 +3.5**
HHC pmax pmax
comp=Z,9.0nm,0.5s
HHC pmax pmax
comp=Z,130nm,4.8s
LZH Lanzhou 51.23 321 SS **S 17 44 39.8 +4.1**
LZH pmax pmax
comp=Z,190nm,8.2s
LZH LR LR
comp=N,200nm,20.6s
LZH LR LR
comp=E,220nm,18.9s
LZH LR LR
comp=Z,410nm,21.8s
LZH Lanzhou 51.23 321 *e*P **P 17 37 19.5 +1.7**
LZH pP pwP 17 37 28.5 +1.8
LZH pmax pmax
comp=Z,23nm,1.5s
HEH HeiHe 53.37 349 *e*P **P 17 37 29.3 -3.9**
HEH pmax pmax
comp=Z,5.0nm,1.3s
HEH LR LR
comp=N,230nm,20.6s
HEH LR LR
comp=E,200nm,17.4s
HEH LR LR
comp=Z,450nm,21.4s
GTA2 Gaotai 55.88 322 *e*P **P 17 37 52.9 +1.1**
GTA2 pmax pmax
comp=Z,4.0nm,0.9s
GTA2 LR LR
comp=N,180nm,17.8s
GTA2 LR LR
comp=E,150nm,16.8s
GTA2 LR LR
comp=Z,140nm,15.6s
LSA Lhasa 56.92 308 P **P 17 37 58.9 -1.0**
LSA IAmb IAmb 17 38 21.4
comp=Z,5.7nm,1.2s
ULN Ulaanbaatar 57.77 334 P **P 17 38 04.9 -0.2**
EVN Everest 59.76 304 P **P 17 38 19.9 0.0**
EVN IAmb IAmb 17 38 40.9
comp=Z,6.7nm,1.0s
YAK Yakutsk 64.48 354 P **P 17 38 49.7 -0.5**

comp=Z,11nm,0.8s,baz=207,slow=4.5,SNR=6.5
comp=Z,11nm,0.8s

YAK	Yakutsk	64.48 354		P	P	17 38 50.0	-0.1
WMQ	Urumqi	65.80 321	*eP*	P	P	17 39 01.0	+1.8
WMQ			pmax	pmax			
	comp=Z,9.0nm,0.9s						
WMQ			LR	LR			
	comp=Z,140nm,17.9s						
WUS	Wushi	70.38 315	P	P		17 39 27.7	-0.5
WUS			IAmb	IAmb		17 39 43.3	
	comp=Z,9.9nm,1.5s						
MKAR	Makanchi Array	70.55 322	P	P		17 39 29.4	+0.6
	comp=Z,1.6nm,0.8s,baz=114,slow=8.1,SNR=6.8						
	comp=Z,1.6nm,0.8s						
MKAR	Makanchi Array	70.55 322		P		17 39 28.8	-0.1
MAKZ	Makanchi	70.75 322		P		17 39 29.9	-0.2
MAKZ			IAmb	IAmb		17 39 45.5	
	comp=Z,3.7nm,0.7s						
PRZ	Przheval'sk	71.41 316	P	P		17 39 34.0	-0.5
PRZ			IAmb	IAmb		17 39 37.7	
	comp=Z,9.1nm,1.0s						
TARG	Taragay, Kyrgy	71.56 315	P	P		17 39 34.8	-0.8
TARG			IAmb	IAmb		17 40 06.5	
	comp=Z,4.9nm,1.1s						
KSH2	Kashi	72.33 312	P	P		17 39 41.4	+1.4
ZAA0	Zalesovo Array	72.43 329	P	P		17 39 39.5	-0.6
ZALV	Zalesovo Beam	72.43 329	P	P		17 39 40.0	0.0
	comp=Z,0.8nm,0.8s,baz=123,slow=10,SNR=2.4						
	comp=Z,0.8nm,0.8s						
ZALV	Zalesovo Beam	72.43 329	P	P		17 39 39.3	-0.7
NIL	Nilore	72.59 306		P		17 39 41.5	0.0
NIL			IAmb	IAmb		17 39 43.9	
	comp=Z,8.6nm,0.8s						
BOOM	Boomskoye usch	73.12 316	IAmb	IAmb		17 39 59.8	
	comp=Z,4.3nm,0.9s						
AAK	Ala-Archa	74.18 315	P	P		17 39 51.3	+0.5
AAK			IAmb	IAmb		17 40 16.8	
	comp=Z,7.1nm,1.4s						
KURK	Kurchatov	74.38 324	P	P		17 39 51.4	-0.2
KURBB	Kurchatov Arra	74.40 324	P	P		17 39 51.8	0.0
	comp=Z,1.0nm,0.9s,baz=114,slow=5.2,SNR=4.6						
	comp=Z,1.0nm,0.9s						
DRK	Karamyk	75.23 312	P	P		17 39 58.0	+0.8
DRK			IAmb	IAmb		17 40 17.6	
	comp=Z,9.6nm,1.4s						
GAR	Garm	76.22 311		P		17 40 02.9	+0.3
VNDA	Vanda	76.24 175	P	P		17 40 02.3	+0.5
	comp=Z,3.6nm,0.7s,baz=332,slow=6.5,SNR=17						
	comp=Z,3.6nm,0.7s						
VNDA	Vanda	76.24 175	P	P		17 40 02.2	+0.3
VNDA			IAmb	IAmb		17 40 06.0	
	comp=Z,3.9nm,0.9s						
L14K	Kuka Creek	76.46 24	P	P		17 40 04.0	+0.7
L14K			IAmb	IAmb		17 40 11.2	
	comp=Z,13nm,1.5s						
CHGR	Chuyangaron	77.02 310	P	P		17 40 06.6	-0.5
KK31	Karatay Array	77.12 315	P	P		17 40 06.2	-1.3
KK31			IAmb	IAmb		17 40 28.4	
	comp=Z,6.4nm,1.4s						
KKAR	Karatay Array	77.12 315	P	P		17 40 06.8	-0.7
NRIK	Noril'sk	79.69 343	P	P		17 40 21.1	0.0
	comp=Z,1.2nm,0.6s,baz=134,slow=3.1,SNR=4.3						
	comp=Z,1.2nm,0.6s						
NRIK	Noril'sk	79.69 343	IAmb	IAmb		17 40 51.3	
	comp=Z,8.2nm,1.5s						
BVAR	Borovoye Array	79.97 325	P	P		17 40 23.2	+0.3
	comp=Z,2.7nm,0.8s,baz=123,slow=5.5,SNR=6.3						
	comp=Z,2.7nm,0.8s						
BORK	Borovoye	80.01 325		P		17 40 22.6	-0.6
BORK			IAmb	IAmb		17 40 42.7	
	comp=Z,4.3nm,0.9s						
DIV	Divide	83.88 28	P	P		17 40 43.9	+0.5
ILAR	Eielson Array	84.41 24	P	P		17 40 44.4	-1.6
	comp=Z,0.8nm,0.7s,baz=258,slow=4.1,SNR=7.0						
	comp=Z,0.8nm,0.7s						
ILAR	Eielson Array	84.41 24	P	P		17 40 45.5	-0.5
AB31	Akbulak array	85.56 320		P		17 40 51.6	-0.5
AB31			IAmb	IAmb		17 40 53.8	
	comp=Z,3.6nm,0.8s						
ABKAR	Akbulak array	85.56 320		P		17 40 51.2	-0.9
BMAR	Burnt Mountain	86.05 22	P	P		17 40 55.7	+1.5
BCAR	Beaver Creek A	86.16 26	P	P		17 40 54.5	-0.3
AKTO	Aktyubinsk	86.95 321	LR	LR		18 20 39.8	
	comp=Z,100nm,21.7s,baz=234,slow=36						
QSPA	South Pole Qui	87.87 180	P	P		17 41 03.7	+0.4
	comp=Z,2.9nm,0.9s,baz=323,slow=1.1,SNR=8.9						
	comp=Z,2.9nm,0.9s						
DBIC	Dimbokro	145.42 279	PKPdf	PKPbc		17 47 48.2	-4.7
LPAZ	La Paz	146.13 124	PKPbc	PKPbc		17 47 56.7	+0.9
	comp=Z,5.0nm,1.0s,baz=263,slow=1.8,SNR=8.0						
LPAZ	La Paz	146.13 124		PKPab		17 47 57.3	+0.9
CPUP	Villa Florida	146.79 149	PKPbc	PKPbc		17 47 57.3	+0.6
	comp=Z,3.9nm,0.9s,baz=219,slow=4.0,SNR=8.0						
CPUP	Villa Florida	146.79 149		PKPbc		17 47 58.5	+1.8

*IDC **23** 17:35:47.7±1.4, 9.°46S×123.°80E, h0km, mb3.3/2, mbtmp3.5/5, ML3.2/3, Error ellipse: s-maj=46.3km s-min=15.2km az=87.0*
*DJA **23** 17:35:55.6±0.3, 10.°S±4.°×12.°4E±.°, h10km, M3.5/12, mb4.1/2, MLv3.2/12*
ISC 23 17:35:54.0±1.1, 9.°84S±0.°08×123.°68E±0.°08, h10km, n14, σ1§21/11, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	0.37	182	Pg	Pg	17 36 02.0	+0.7
	114nm,0.3s,baz=11,slow=3.4,SNR=40						
BATI	Baumata	0.37	182	P	Pg	17 36 01.7	+0.3
SOEI	Soe	0.59	82	P	Pg	17 36 06.4	+0.9
MMRI	Maumere	1.85	310	P	Pn	17 36 24.9	-1.0
EDFI	Ende, Flores	2.24	299	P	Pn	17 36 30.0	-1.3
LBFI	Labuhan Bajo,	3.97	290	P	Pn	17 36 57.2	+2.1
WBSI	Waikabubak, Su	4.23	272	P	Pn	17 36 58.6	0.0
DBNI	Kabupaten Domp	5.46	284	P	Pn	17 37 15.9	+0.4
	0.1nm16nm,0.9s						
PLAI	Plampang	5.91	279	P	Pn	17 37 22.3	+0.6
FITZ	Fitzroy Crossi	8.43	167	Pn	Pn	17 37 56.5	+0.1
	0.2nm,0.3s,baz=353,slow=17,SNR=6.6						
FITZ				Sn	Sn	17 39 26.4	-5.3
	0.2nm,0.3s,baz=58,slow=11,SNR=2.4						
	9.3nm,0.8s						
WRA	Warramunga Arr	14.38	136	Pn	Pn	17 39 14.6	-3.4
	0.1nm,0.3s,baz=316,slow=14,SNR=1.3						
WRA				Sn	Sn	17 41 46.1	-12
	baz=313,slow=24,SNR=1.5						
	0.7nm,0.7s						
ASAR	Alice Springs	16.87	146	P	Pn	17 39 48.9	-1.6
	0.2nm,0.3s,baz=316,slow=11,SNR=5.3						
ASAR				S	Sn	17 42 51.8	-6.3
	0.2nm,0.6s,baz=320,slow=23,SNR=1.1						
	0.8nm,0.7s						
MKAR	Makanchi Array	67.38	331	P	P	17 46 43.9	-5.7
	0.3nm,0.7s,baz=132,slow=6.8,SNR=6.2						
	0.3nm,0.7s						
KURBB	Kurchatov Arra	71.83	332	P	P	17 47 09.8	-7.1
	0.2nm,0.8s,baz=130,slow=7.6,SNR=2.0						
	0.2nm,0.8s						

*UPP **23** 17:40:19.9±0.0, 67.°85N×20.°21E, h1km, ML2.5, Confirmed Induced event*
*HEL **23** 17:40:20.8±0.3, 67.°85N×20.°24E, h0km, ML0.9, Suspected explosion*
ISC 23 17:40:19.9±0.9, 67.°83N±0.°03×20.°25E±0.°03, h0km, n17, σ1§10/24, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.13	15	P	Pg	17 40 22.2	-0.1
KUA				S	Sg	17 40 23.9	-0.1
RATU	Laukkuluspa	0.25	268	P	Pg	17 40 24.6	-0.1
KOVU	Salmi	0.39	355	P	Pg	17 40 27.0	-0.5
	baz=175						
NIKU	Nikkaluokta	0.46	275	P	Pg	17 40 28.4	-0.4
LANU	Lannavaara	0.69	71	P	Pg	17 40 33.4	+0.1
LANU	Lannavaara	0.69	71	PG	Pg	17 40 33.4	+0.1
LANU				SG	Sg	17 40 42.4	+0.2
DUNU	Dundret	0.72	170	P	Pg	17 40 33.7	-0.1
SALU	Saltoluokta	0.81	237	P	Pg	17 40 34.9	-0.5
HEF	Hetta	1.40	64	PG	Pg	17 40 45.9	-0.9
HEF				smax	smax	17 41 02.8	
	comp=Z,0.6nm,0.2s						
HEF				SN	Sn	17 41 08.7	+2.7
ERTU	Ertsjaerv	1.49	149	PG	Pn	17 40 48.1	+0.1
	baz=328						
ERTU				SN	Sn	17 41 08.8	+0.8
KLF	Kolari	1.55	111	PG	Pn	17 40 48.6	-0.1
	baz=298						
KLF				smax	smax	17 41 07.5	
	comp=Z,0.6nm,0.2s						
KLF				SN	Sg	17 41 10.1	+0.5
KTK1	Kautokeino	1.62	42	PG	Pn	17 40 49.8	0.0
KTK1				SN	Sg	17 41 13.6	+1.7
TOF	Tornio	2.38	136	smax	smax	17 41 31.5	
	comp=Z,0.4nm,0.2s						
TOF				SG	Sb	17 41 34.8	+1.4
RNF	Rovaniemi	2.56	116	PB	Pb	17 41 04.9	-1.7
RNF				SG	Sb	17 41 39.4	+0.8
ARA0	ARCESS Array S	2.57	46	SG	Sb	17 41 37.9	-1.1
KEV	Kevo	3.12	49	SB	Sn	17 41 49.8	+1.5
VRF	Varrio	3.56	87	PG	Pg	17 41 26.0	-2.0

IDC 23 17:42:34.9±1.9, 2.°05S×141.°28E, h0km, mb3.5/2, mbtmp3.6/3, ML3.7/1, MS3.2/2, Error ellipse: s-maj=40.8km s-min=14.7km az=136.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	0.74	231	Pg	Pb	17 42 50.2	-0.5
	42nm,0.3s,baz=350,slow=8.1,SNR=20						
JAY				Lg	Lg	17 42 58.5	
	92nm,0.3s,baz=158,slow=19,SNR=7.2						
SIJI	Sorong	10.08	277	LR	LR	17 48 45.8	
	comp=Z,255nm,21.6s,baz=97,slow=37						
WRA	Warramunga Arr	19.04	200	P	P	17 46 58.4	-0.4
	0.3nm,0.3s,baz=26,slow=12,SNR=10						
	1.4nm,0.6s						
ASAR	Alice Springs	22.65	198	P	P	17 47 38.0	+0.1
	1.4nm,0.5s,baz=28,slow=10,SNR=24						
	1.4nm,0.5s						
JCJ	Chichijima	28.99	2	LR	LR	17 56 51.0	
	comp=Z,33nm,20.6s,baz=134,slow=30						
MKAR	Makanchi Array	70.85	321	P	P	17 53 53.2	-0.6
	0.3nm,0.8s,baz=124,slow=7.5,SNR=3.0						
	0.3nm,0.8s						

*IDC **23** 17:43:27.3±0.5, 1.°89S×140.°59E, h0km, mb4.1/15, mbtmp4.1/19, ML1.2/1, MS3.7/5, Error ellipse: s-maj=21.0km s-min=7.2km az=77.0*
*DJA **23** 17:43:28.3±0.6, 2.°S±3.°×14.°1E±.°, h10km, M4.5/25, mb4.5/25, mB5.1/8, MLv4.5/3, Mw(mB)4.4/8*
*NEIC **23** 17:43:29.2±1.6, 1.°96S±0.°05×140.°60E±0.°07, h10km±1km, mb4.6/40, Error ellipse: s-maj=12.7km s-min=7.4km az=73.0*
*GCMT **23** 17:43:32.2±0.3, 1.°97S±0.°02×140.°59E±0.°05, h19km±1km, MW4.8/65, Moment Tensor Solution. s12,c15; s65,c95; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-1.66±.18; Mθθ 1.66±.11; Mϕϕ 0.00±.10; Mrθ-0.23±.19; Mϕθ 0.18±.06; Mrϕ 0.40±.29; Best double couple: M0 1.73100×10^16 NP1:ϕs251.00000°, δ43.00000°, λ-110.00000°. NP2: ϕs97.00000°, δ50.00000°, λ-72.00000°. Principal axes: T 1.6890, Plg3.0000°, Azm175.0000°; N 0.0880, Plg13.0000°, Azm266.0000°; P -1.7720, Plg76.0000°, Azm72.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 23 17:43:29.2±0.4, 2.°01S±0.°05×140.°60E±0.°05, h10km, n107, σ1§43/88, mb4.5/42, MS3.9/3, 1C-1D, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	0.51	168	Pg	Pg	17 43 40.3	+1.0
	222nm,0.3s,baz=331,slow=4.9,SNR=32						
JAY				Lg	Lg	17 43 48.6	
	601nm,0.3s,baz=328,slow=8.5,SNR=9.1						
JAY				LR	LR	17 44 13.8	
	comp=Z,9μm,21.7s,baz=238,slow=74						
JAY	Jayapura	0.51	168	P	Pg	17 43 40.6	+1.4
JAY				S	Sb	17 43 49.8	+1.9
WAMI	Wamena	2.65	225	P	Pg	17 44 19.9	-0.2
SRPI	Serui, Papua	4.36	272	P	Pg	17 44 52.9	0.0
MANU	Manus Island	6.76	90	Pn	Pn	17 45 08.2	-0.4
FAKI	Fak Fak	8.39	264		Pn	17 45 32.2	+1.1
SIJI	Sorong	9.40	277	Pn	Pn	17 45 43.2	-1.7
	2.3nm,0.7s,baz=20,slow=6.4,SNR=3.7						
PMG	Port Moresby	9.82	139	Pn	Pn	17 45 50.7	0.0
	0.1nm,0.3s,baz=259,slow=16,SNR=1.6						
PMG				LR	LR	17 50 31.2	
	comp=Z,414nm,19.8s,baz=306,slow=43						
	6.6nm,0.9s						
MTN	Manton Dam	14.28	221		Pn	17 46 50.5	-1.1
MNI	Manado	16.13	282	P	P	17 47 20.9	+1.3
GTOI	Gorontalo	17.78	278	P	P	17 47 41.9	+4.0
	586nm25nm,1.6s						
LUWI	Luwuk	17.85	273	P	Pn	17 47 37.9	0.0
	41nm,1.3s						
KNRA	Kununurra	17.91	220	Pn	Pn	17 47 37.2	-1.4
SOEI	Soe	17.97	244		Pn	17 47 38.7	-0.8
SOEI				IAmb	IAmb	17 47 51.1	
	comp=Z,61nm,0.9s						
SOEI	Soe	17.97	244	P	P	17 47 41.1	+1.0
	comp=Z,876nmcomp=Z,76nm,1.4s						
WB0	Warramunga Arr	18.66	199	P	P	17 47 47.2	-0.4
BATI	Baumata	18.70	243	P	P	17 47 47.0	-1.0
	comp=Z,17nm,0.4s,baz=347,slow=20,SNR=4.7						
CTA	Charters Tower	18.80	163	LR	LR	17 55 42.7	
	comp=Z,294nm,19.1s,baz=351,slow=39						
WR8	Warramunga Arr	18.81	198		P	17 47 48.0	-1.1
WRA	Warramunga Arr	18.84	199	P	P	17 47 48.6	-0.9
	comp=Z,3.3nm,0.6s,baz=14,slow=12,SNR=13						
WRA	Warramunga Arr	18.84	199	P	P	17 47 48.1	-1.5
APSI	Ampana	18.98	273	P	Pn	17 47 59.3	+7.6
TOLI2	Tolitoli	20.06	279		P	17 48 03.3	+0.4
BSSI	Bau Bau, Buton	20.47	258	P	Pn	17 48 08.8	-0.8
	comp=Z,22nm,1.3s						
HNR	Honiara	20.60	112	P	P	17 48 07.9	-0.9
	comp=Z,1.5nm,0.9s,baz=294,slow=6.7,SNR=2.3						
HNR	Honiara	20.60	112	IAmb	IAmb	17 48 16.7	
	comp=Z,37nm,0.8s						
PCI	Palu	20.79	273	P	Pn	17 48 13.7	+0.4
	comp=Z,71nm,1.2s						
TTSI	Tana Toraja	20.79	267	P	Pn	17 48 17.6	+4.4
MPSI	Mapaga	20.83	276	P	Pn	17 48 16.6	+2.8
	comp=Z,402nmcomp=Z,12nm,1.1s						
MMSI	Mamuju	21.68	268	P	P	17 48 27.3	+6.8
FITZ	Fitzroy Crossi	21.71	222	P	P	17 48 20.4	-0.2
	comp=Z,4.9nm,0.9s,baz=358,slow=13,SNR=6.0						
	comp=Z,4.9nm,0.9s						
AS31	Alice Springs	22.48	196		P	17 48 28.1	-0.9
ASAR	Alice Springs	22.48	196	P	P	17 48 28.7	-0.3
	comp=Z,2.8nm,0.5s,baz=27,slow=9.9,SNR=17						
	comp=Z,2.8nm,0.5s						
ASAR	Alice Springs	22.48	196	P	P	17 48 28.0	-1.0
EIDS	Eidsvold	25.32	157		P	17 48 56.5	+0.1
INKA	Innaminka	25.59	180	P	P	17 48 56.3	-2.3
SBUM	Sibu	28.72	279		P	17 49 26.4	-0.7
SBUM				IAmb	IAmb	17 49 29.8	
	comp=Z,11nm,1.5s						
SBUM	Sibu	28.72	279	P	P	17 49 28.3	+1.2
H11S3	WAKE ISLAND Hy	32.77	50	T	T	18 24 38.4	
	baz=232,slow=75						
H11S2	WAKE ISLAND Hy	32.78	50	T	T	18 24 36.1	
	baz=232,slow=75						
H11S1	WAKE ISLAND Hy	32.79	50	T	T	18 24 38.4	
	baz=232,slow=75						
H11N1	WAKE ISLAND Hy	33.65	49	T	T	18 25 54.8	
	baz=229						
H11N2	WAKE ISLAND Hy	33.66	49	T	T	18 25 56.3	
	baz=229						
H11N3	WAKE ISLAND Hy	33.66	49	T	T	18 25 58.0	
	baz=229						
MDSI	Maura Dua	36.44	265	P	P	17 50 35.2	+0.5
NJ2	Nanjing	39.66	330	*eP*	P	17 51 03.1	+1.6
NJ2				pmax	pmax		
	comp=Z,26nm,0.5s						
MSVF	Nonsavu	39.94	115	LR	LR	18 06 54.9	
	comp=Z,163nm,19.0s,baz=304,slow=35						
RPSI	Rantau Prapat	41.93	276		P	17 51 19.5	-1.1
RPSI				IAmb	IAmb	17 51 21.3	
	comp=Z,26nm,1.4s						
PSI	Prapat	41.94	276	P	P	17 51 20.2	-0.6
	comp=Z,12nm,1.3s						
GSI	Gunungsitoli	43.15	274	P	P	17 51 28.8	-1.7
GSI	Gunungsitoli	43.15	274	P	P	17 51 29.0	-1.5
	comp=Z,20nm,1.3s						
CMAR	Chiang Mai Arr	45.75	298	P	P	17 51 51.0	-0.3
	comp=Z,0.6nm,0.6s,baz=114,slow=4.8,SNR=6.3						
	comp=Z,0.6nm,0.6s						
CMAR	Chiang Mai Arr	45.75	298		P	17 51 49.7	-1.6
HNS	HongShan	45.98	331	⇓P	P	17 51 52.6	-0.1
HNS				pmax	pmax		
	comp=Z,9.0nm,1.4s						
PZH	PanZhiHua	47.01	310	P	P	17 52 03.8	+2.6
BJT	Baijiatuau	47.43	334	P	P	17 52 03.8	-0.3
BJT				IAmb	IAmb	17 52 05.1	
	comp=Z,7.2nm,1.2s						
CD2	Chengdu	47.96	316	P	P	17 52 09.3	+0.8
CD2				pmax	pmax		
	comp=Z,20nm,1.3s						
BNX	BinXian	48.96	348	⇑P	P	17 52 15.6	-0.2
BNX				pmax	pmax		
	comp=Z,7.0nm,1.3s						
HHC	Hu-ho-hao-te	50.20	331	*eP*	P	17 52 27.8	+2.3
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,160nm,6.4s						
LZH	Lanzhou	51.09	321	*eP*	P	17 52 33.4	+1.0
LZH				pP	pwP	17 52 41.0	+2.3
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
GTA2	Gaotai	55.74	322	*eP*	P	17 53 07.4	+0.9
GTA2				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SONM	Songino Array	57.92	333	P	P	17 53 20.3	-1.4
	comp=Z,0.3nm,0.6s,baz=151,slow=6.6,SNR=2.3						
SONM				LR	LR	18 16 19.0	
	comp=Z,102nm,21.2s,baz=189,slow=34						
	comp=Z,0.3nm,0.6s						
SONM	Songino Array	57.92	333	IAmb	IAmb	17 53 27.4	
	comp=Z,1.2nm,1.3s						
MA2	Magadan	61.92	6	LR	LR	18 22 58.0	
	comp=Z,18nm,18.2s,baz=196,slow=38						
YAK	Yakutsk	64.41	354	P	P	17 54 04.7	-0.6
	comp=Z,6.3nm,0.8s,baz=9.1,slow=1.8,SNR=9.8						
	comp=Z,6.3nm,0.8s						
YAK	Yakutsk	64.41	354	P	P	17 54 04.8	-0.5
WMQ	Urumqi	65.66	321	*eP*	P	17 54 15.0	+1.1
WMQ				pP	pwP	17 54 19.3	-1.0
WMQ				PcP	PcP	17 54 45.6	+0.2
WMQ				ScP		17 58 48.5	
WMQ				PcS		17 58 49.8	
WMQ				S	S	18 03 03.4	+3.5
WMQ				SKS	ScS	18 04 13.8	+3.8
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
WUS	Wushi	70.22	315	P	P	17 54 43.2	+0.3
WUS				IAmb	IAmb	17 54 44.9	
	comp=Z,7.4nm,1.3s						
MKAR	Makanchi Array	70.41	322	P	P	17 54 43.6	-0.1
	comp=Z,1.5nm,0.8s,baz=105,slow=7.9,SNR=12						
	comp=Z,1.5nm,0.8s						
MKAR	Makanchi Array	70.41	322		P	17 54 43.4	-0.3
MAKZ	Makanchi	70.61	322		P	17 54 44.2	-0.7
MAKZ				IAmb	IAmb	17 54 45.7	
	comp=Z,3.6nm,0.8s						
PRZ	Przheval'sk	71.26	316		P	17 54 49.3	+0.1
TARG	Taragay, Kyrgy	71.41	315	P	P	17 54 51.4	+1.0
TARG				IAmb	IAmb	17 55 02.7	
	comp=Z,4.0nm,1.0s						
KSH2	Kashi	72.18	312	P	P	17 54 55.9	+1.1
KSH2				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ZALV	Zalesovo Beam	72.30	329	P	P	17 54 53.8	-1.1
	comp=Z,0.4nm,0.2s,baz=93,slow=5.9,SNR=3.6						
	comp=Z,0.4nm,0.2s						
NIL	Nilore	72.43	306		P	17 54 55.3	-0.9
NRN	Naryn	72.58	315	P	P	17 54 56.2	-1.2
NRN				IAmb	IAmb	17 54 58.2	
	comp=Z,3.3nm,1.0s						
TIXI	Tiksi	73.93	356	P	P	17 55 04.0	-0.2
	comp=Z,1.5nm,0.3s,baz=174,slow=1.7,SNR=3.7						
	comp=Z,1.5nm,0.3s						
TIXI	Tiksi	73.93	356	IAmb	IAmb	17 55 06.5	
	comp=Z,4.1nm,1.4s						
AAK	Ala-Archa	74.03	315		P	17 55 04.2	-1.4
AAK				IAmb	IAmb	17 55 07.5	
	comp=Z,6.2nm,1.4s						
KURK	Kurchatov	74.24	324		P	17 55 06.1	-0.4
KURK				IAmb	IAmb	17 55 09.0	
	comp=Z,7.0nm,1.4s						
KURBB	Kurchatov Arra	74.26	324	P	P	17 55 05.8	-0.8
	comp=Z,1.3nm,0.9s,baz=127,slow=4.7,SNR=12						
	comp=Z,1.3nm,0.9s						
ARSB	Arsianbob	74.71	314	IAmb	IAmb	17 55 11.6	
	comp=Z,7.4nm,1.0s						
GAR	Garm	76.06	311	IAmb	IAmb	17 55 18.1	
	comp=Z,7.6nm,0.8s						
VNDA	Vanda	76.31	175	P	P	17 55 17.9	0.0
	comp=Z,1.0nm,0.8s,baz=309,slow=6.5,SNR=7.9						
	comp=Z,1.0nm,0.8s						
VNDA	Vanda	76.31	175	P	P	17 55 17.2	-0.7
KK31	Karatay Array	76.97	315	IAmb	IAmb	17 55 23.8	
	comp=Z,4.0nm,1.0s						
KKAR	Karatay Array	76.97	315		P	17 55 20.7	-1.6
NRIK	Noril'sk	79.59	343	P	P	17 55 35.6	-0.7
	comp=Z,1.1nm,0.5s,baz=79,slow=4.2,SNR=4.0						
	comp=Z,1.1nm,0.5s						
NRIK	Noril'sk	79.59	343	P	P	17 55 35.6	-0.7
NRIK				IAmb	IAmb	17 55 37.3	
	comp=Z,8.0nm,1.3s						
BVAR	Borovoye Array	79.83	325	P	P	17 55 37.1	-0.8
	comp=Z,1.2nm,0.5s,baz=108,slow=8.0,SNR=9.7						
	comp=Z,1.2nm,0.5s						
BORK	Borovoye	79.88	325		P	17 55 37.9	-0.3
BORK				IAmb	IAmb	17 55 39.2	
	comp=Z,10nm,1.4s						
J20K	Nowinta River	81.26	24		P	17 55 44.8	-0.5
J20K				IAmb	IAmb	17 55 48.5	
	comp=Z,5.0nm,1.3s						
CCB	Clear Creek Bu	84.01	24	IAmb	IAmb	17 56 09.4	
	comp=Z,3.0nm,1.0s						
ILAR	Eielson Array	84.42	24	P	P	17 55 59.9	-1.9
	comp=Z,1.1nm,0.8s,baz=254,slow=4.7,SNR=10						
	comp=Z,1.1nm,0.8s						
AB31	Akbulak array	85.41	320	IAmb	IAmb	17 56 08.7	
	comp=Z,2.0nm,0.7s						
ABKAR	Akbulak array	85.41	320		P	17 56 07.1	0.0
BMAR	Burnt Mountain	86.05	22	P	P	17 56 10.6	+0.6
E27K

cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
NEIC ***23*** *17:46:20.5, 44°.77S×78°.99W, h16km, Moment Tensor Solution. Duration: 1⅟6 Moment tensor: Scale 10^{16}Nm; M_{rr}3.14; $M_{\theta\theta}$-2.21; $M_{\phi\phi}$-0.93; $M_{r\theta}$3.96; $M_{r\phi}$-1.63; $M_{\theta\phi}$2.68; Fault plane solution: M_o5.78000×10^{16} NP1: ϕ_s235.45000°, δ17.00000°, λ89.60000°. NP2:ϕ_s55.87000°, δ73.00000°, λ90.12000°. Principal axes: T 5.6840, Plg62.0000°, Azm326.0000°; N 0.1828, Plg0.0000°, Azm236.0000°; P -5.8667, Plg28.0000°, Azm146.0000°;*
ISC 23 17:46:11.6±0.3, 44°.44S±0.05×79°.10W±0.07, h10km, n378, σ1⅟41/302, mb5.0/92, MS4.2/30, 10C-13D, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO07	**Milladeo Hill,**	**4.16**	**73**	Pn	**Pn**	**17 47 14.0**	**-1.0**
GO07				Sn	**Sn**	**17 47 59.6**	**-4.0**
LL07	**Hotel Espejo d**	**4.39**	**70**	Pn	**Pn**	**17 47 16.5**	**-1.8**
AY01	**Puyuhuapi**	**4.62**	**92**		**Pn**	**17 47 22.4**	**+0.9**
COYC	**Coyhaique**	**5.11**	**105**		**Pn**	**17 47 28.0**	**0.0**
LL05	**Los Muermos**	**5.13**	**56**	Pn	**Pn**	**17 47 27.3**	**-1.1**
LL01	**San Ignacio de**	**5.29**	**69**		**Pn**	**17 47 29.8**	**-0.9**
AY03	**Cochrane**	**5.35**	**124**		**Pn**	**17 47 32.9**	**+1.5**
LL02	**Futaleuf**	**5.40**	**79**		**Pn**	**17 47 32.9**	**+0.8**
GO08	**Villa O'Higgin**	**6.05**	**134**		**Pn**	**17 47 41.1**	**0.0**
LR04	**Corral**	**6.21**	**45**	Pn	**Pn**	**17 47 43.9**	**+0.6**
LR05	**Currie**	**6.74**	**54**		**Pn**	**17 47 51.1**	**+0.7**
PLCA	**Paso Flores** 0.8nm,0.3s,baz=231,slow=12,SNR=16	**7.32**	**63**	Pn	**Pn**	**17 47 58.6**	**0.0**
PLCA	comp=Z,145nm,21.1s,baz=258,slow=30 7.4nm,0.6s			LR	LR	17 49 49.2	
PLCA	**Paso Flores**	**7.32**	**63**	*e*P	**Pn**	**17 48 01.7**	**+3.1**
GO06	**Curarrehue**	**7.47**	**52**		**Pn**	**17 48 00.3**	**-0.4**
GO06	**Curarrehue**	**7.47**	**52**	*e*P	**Pn**	**17 48 00.9**	**+0.2**
GO09	**Cerro Castillo**	**8.20**	**149**	Pn	**Pn**	**17 48 10.4**	**-0.2**
MG05	**Puerto Natales**	**8.48**	**151**		**Pn**	**17 48 14.1**	**-0.2**
MG04	**Isla Riesco**	**9.78**	**152**	Pn	**Pn**	**17 48 31.9**	**-0.2**
BI02	**San Fabin de**	**9.79**	**40**		**Pn**	**17 48 32.8**	**+0.3**
GO10	**Punta Arenas**	**10.20**	**152**		**Pn**	**17 48 37.3**	**-0.7**
ML02	**Panimavida**	**10.47**	**37**		**Pn**	**17 48 42.3**	**+0.6**
H03S1	**Juan Fernandez** baz=179,slow=73,SNR=702	**10.59**	**1**	T	T	17 59 41.0	
MG02	**Cerro Sombrero**	**10.59**	**145**	Pn	**Pn**	**17 48 42.9**	**-0.3**
H03S2	**Juan Fernandez** baz=179,slow=73,SNR=508	**10.59**	**1**	T	T	17 59 38.3	
H03S3	**Juan Fernandez** baz=179,slow=73,SNR=732	**10.61**	**1**	T	T	17 59 39.7	
GO05	**Hualane**	**10.92**	**33**	Pn	**Pn**	**17 48 47.7**	**-0.1**
MG03	**Isla Dawson**	**10.97**	**152**		**Pn**	**17 48 47.6**	**-0.9**
BO02	**Sierra Bellavi**	**11.57**	**36**		**Pn**	**17 48 57.1**	**+0.2**
BO01	**Tunca**	**11.79**	**34**		**Pn**	**17 48 58.7**	**-1.1**
MT01	**Popeta**	**12.19**	**33**		**Pn**	**17 49 03.6**	**-1.6**
BO04	**La Punta**	**12.34**	**35**		**Pn**	**17 49 06.2**	**-1.1**
MT09	**Talagante**	**12.37**	**33**		**Pn**	**17 49 07.2**	**-0.6**
USHA	**Ushuaia** 1.1nm,0.3s,baz=323,slow=9.8,SNR=6.1 7.8nm,0.5s	**12.47**	**150**	Pn	**Pn**	**17 49 08.2**	**-0.8**
MT02	**Curacav**	**12.77**	**32**		**Pn**	**17 49 11.4**	**-1.7**
PEL	**Peldehue**	**13.04**	**33**		**Pn**	**17 49 18.4**	**+1.5**
PEL	**Peldehue**	**13.04**	**33**	P	**Pn**	**17 49 18.4**	**+1.5**
MT08	**Bocatoma Ro**	**13.05**	**36**		**Pn**	**17 49 17.3**	**+0.1**
VA06	**Catapilco**	**13.34**	**30**		**Pn**	**17 49 20.1**	**-0.8**
VA03	**San Esteban**	**13.43**	**33**		**Pn**	**17 49 21.4**	**-0.9**
CO06	**Fray Jorge**	**14.96**	**26**	P	**Pn**	**17 49 41.6**	**-1.4**
ZON	**Zonda**	**15.26**	**36**		**Pn**	**17 49 46.8**	**-0.3**
ZON	**Zonda**	**15.26**	**36**	P	**Pn**	**17 49 46.8**	**-0.3**
ZON	comp=Z,47nm,2.0s			pmax	pmax		
CFA	**Coronel Fontan** comp=Z,0.4nm,0.3s,baz=233,slow=13,SNR=6.1	**15.39**	**37**	Pn	**Pn**	**17 49 48.5**	**-0.4**
CFA	comp=Z,0.6nm,0.5s,baz=294,slow=3.6,SNR=3.8 comp=Z,0.7nm,0.3s			PcP	**PcP**	**17 54 50.7**	**-2.0**
EFI	**East Falkland**	**15.78**	**125**	⇓*e*P	**P**	**17 49 55.4**	**-2.2**
EFI	comp=Z,37nm,1.0s			pmax	pmax		
CO01	**Juntas del Tor**	**16.11**	**29**		**Pn**	**17 49 58.3**	**0.0**
LCO	**Las Campanas**	**16.80**	**26**	P	**Pn**	**17 50 06.0**	**-1.1**
LCO	**Las Campanas**	**16.80**	**26**	P	**Pn**	**17 50 06.0**	**-1.1**
LCO	comp=Z,63nm,1.6s			pmax	pmax		
AC05	**El Transito**	**17.09**	**27**	P	**Pn**	**17 50 11.6**	**+0.8**
GO03	**Copiapo**	**18.26**	**26**		**Pn**	**17 50 21.1**	**-4.0**
AC06	**Mina Casimiro**	**18.45**	**25**	P	**P**	**17 50 21.2**	**-6.1**
AC02	**Maricunga**	**19.32**	**28**		**Pn**	**17 50 38.7**	**+0.2**
PB14	**IPOC Station P**	**21.00**	**23**		**P**	**17 50 55.2**	**-0.3**
PB14	comp=Z,117nm,1.4s			IAmb	IAmb	17 51 02.3	
PSAL	**Palomas, Salto**	**21.52**	**59**	*e*P	**P**	**17 51 03.8**	**+3.1**
PB10	**IPOC Station P**	**22.02**	**21**	P	**P**	**17 51 07.9**	**+1.8**
PB10	comp=Z,116nm,1.4s			IAmb	IAmb	17 51 18.2	
PMSA	**Palmer Station** comp=Z,165nm,21.9s,baz=331,slow=27	**22.04**	**163**	LR	LR	17 56 08.3	
PB05	**IPOC Station P**	**22.75**	**22**	P	**P**	**17 51 13.3**	**-0.7**
PB06	**IPOC Station P**	**23.06**	**23**	P	**P**	**17 51 17.6**	**+0.3**
AF01	**San Pedro de A**	**23.24**	**26**	P	**P**	**17 51 19.8**	**+0.5**
AF01	comp=Z,70nm,0.9s			IAmb	IAmb	17 51 40.0	
PLTB	**Pedras Altas**	**23.62**	**66**	P	**P**	**17 51 22.9**	**+0.2**
PLTB	**Pedras Altas**	**23.62**	**66**	*e*P	**P**	**17 51 23.9**	**+1.2**
PB03	**IPOC Station P** comp=Z,74nm,1.1s	**23.63**	**22**	IAmb	IAmb	17 51 34.4	
PB07	**IPOC Station P** comp=Z,38nm,1.1s	**23.90**	**22**	IAmb	IAmb	17 51 39.0	
PB09	**IPOC Station P** comp=Z,51nm,1.2s	**24.01**	**23**	IAmb	IAmb	17 51 55.6	
PB02	**IPOC Station P** comp=Z,64nm,1.3s	**24.29**	**21**	IAmb	IAmb	17 51 34.3	
CPSB	**Cacapava Do Su**	**24.61**	**64**	*e*P	**P**	**17 51 33.4**	**+1.5**
PB01	**IPOC Station P** comp=Z,82nm,1.3s	**24.66**	**22**	IAmb	IAmb	17 51 46.6	
TA01	**Diego Aracena** comp=Z,59nm,1.2s	**24.94**	**20**	IAmb	IAmb	17 51 48.9	
CPUP	**Villa Florida** comp=Z,27nm,1.0s,baz=230,slow=9.9,SNR=36	**25.20**	**51**	P	**P**	**17 51 38.1**	**+0.7**
CPUP	comp=Z,174nm,19.2s,baz=242,slow=38 comp=Z,27nm,1.0s			LR	LR	18 02 13.6	
CPUP	**Villa Florida**	**25.20**	**51**		**P**	**17 51 37.6**	**+0.3**
CPUP	comp=Z,28nm,0.9s			IAmb	IAmb	17 51 42.2	
CPUP	**Villa Florida**	**25.20**	**51**	P	**P**	**17 51 37.6**	**+0.3**
CPUP	comp=Z,28nm,0.9s			pmax	pmax		
CPUP	**Villa Florida**	**25.20**	**51**	*e*P	**P**	**17 51 37.8**	**+0.5**
HMBC	**Humberstone** comp=Z,32nm,1.0s	**25.29**	**21**	IAmb	IAmb	17 51 50.0	
PB11	**IPOC Station P** comp=Z,49nm,1.1s	**25.84**	**21**	IAmb	IAmb	17 51 58.8	
PSGCX	**Pisagua** comp=Z,31nm,1.1s	**25.89**	**20**	IAmb	IAmb	17 51 51.3	
CNLB	**Canela**	**27.01**	**66**	*e*P	**P**	**17 51 55.6**	**+1.9**
PB16	**IPOC Station P** comp=Z,28nm,1.2s	**27.25**	**20**	IAmb	IAmb	17 52 14.2	
ITAB	**Concordia**	**27.62**	**61**		**P**	**17 51 58.8**	**-0.3**
ITAB	comp=Z,25nm,1.1s			IAmb	IAmb	17 52 08.8	
ITAB	**Concordia**	**27.62**	**61**	*e*P	**P**	**17 52 01.1**	**+1.9**
MURT	**Porto Murtinho**	**28.83**	**45**	*e*P	**P**	**17 52 10.4**	**+0.5**
AMBA	**Amambai (Brazi**	**29.19**	**51**	*e*P	**P**	**17 52 14.2**	**+1.1**
LPAZ	**La Paz** comp=Z,4.2nm,1.0s,baz=166,slow=5.9,SNR=8.8	**29.56**	**22**	P	**P**	**17 52 17.9**	**+0.8**
LPAZ	comp=Z,2.7nm,0.9s,baz=247,slow=3.0,SNR=3.9			PcP	**PcP**	**17 55 22.2**	**0.0**
LPAZ	comp=Z,40nm,18.5s,baz=188,slow=33 comp=Z,4.2nm,1.0s			LR	LR	18 02 32.9	
LPAZ	**La Paz**	**29.56**	**22**	*e*P	**P**	**17 52 17.4**	**+0.2**
RPN	**Rapa Nui** comp=Z,600nm,19.4s,baz=122,slow=30	**29.77**	**295**	LR	LR	18 01 12.7	
BDQN	**Bodoquena, MS**	**30.28**	**45**	*e*P	**P**	**17 52 23.1**	**+0.2**
TRCB	**Terra Rica**	**30.62**	**54**	*e*P	**P**	**17 52 28.5**	**+2.5**
AQDB	**Aquidauana** comp=Z,19nm,1.0s	**30.80**	**47**	IAmb	IAmb	17 52 36.6	
AQDB	**Aquidauana**	**30.80**	**47**	*e*P	**P**	**17 52 29.2**	**+1.8**
BBSD	**Serra de San D**	**31.32**	**36**	*e*P	**P**	**17 52 33.2**	**+1.2**
NNA	**Nana** comp=Z,141nm,21.1s,baz=182,slow=30	**32.40**	**4**	LR	LR	18 02 27.3	
NNA	**Nana**	**32.40**	**4**	⇑*e*P	**P**	**17 52 40.3**	**-1.3**
NNA				pmax	pmax		
PTLB	**Pontes e Lacer** comp=Z,22nm,1.0s	**33.49**	**37**	IAmb	IAmb	17 53 01.0	
PTLB	**Pontes e Lacer**	**33.49**	**37**	*e*P	**P**	**17 52 52.3**	**+1.2**
PP1B	**Ponte de Pedra**	**33.62**	**45**	*e*P	**P**	**17 52 53.9**	**+1.7**
C2SB	**Chapadao do Su**	**33.72**	**49**	*e*P	**P**	**17 52 56.1**	**+3.0**
RCLB	**Rio Claro- Sao**	**33.98**	**60**	*e*P	**P**	**17 52 56.7**	**+1.4**
SALV	**Santo Antonio**	**34.67**	**42**	*e*P	**P**	**17 53 03.5**	**+2.2**
VILB	**Vilhena** comp=Z,42nm,1.0s	**35.31**	**33**	IAmb	IAmb	17 53 17.8	
VILB	**Vilhena**	**35.31**	**33**	*e*P	**P**	**17 53 08.4**	**+1.5**
ARAG	**Araguaiana, MT**	**36.79**	**48**	*e*P	**P**	**17 53 22.2**	**+2.6**
CZSB	**Cruzeiro do Su**	**37.00**	**11**	*e*P	**P**	**17 53 23.4**	**+2.1**
ATAH	**Atahualpa** comp=Z,256nm,19.3s,baz=191,slow=30	**37.17**	**1**	LR	LR	18 05 02.2	
BELA	**Belgrano 2**	**37.81**	**166**		**P**	**17 53 28.5**	**+1.0**
PDRB	**Porto dos Gac**	**37.95**	**37**	*e*P	**P**	**17 53 30.6**	**+1.2**
BDFB	**Brasilia** comp=Z,5.0nm,0.8s,baz=216,slow=8.6,SNR=5.3	**38.93**	**52**	P	**P**	**17 53 36.1**	**-1.6**
BDFB				PcP	**PcP**	**17 55 46.3**	**-2.1**
	comp=Z,4.3nm,0.8s,baz=129,slow=13,SNR=3.1						
BDFB				LR	LR	18 08 20.6	
	comp=Z,138nm,20.2s,baz=225,slow=34 comp=Z,5.0nm,0.8s						
CLDB	**Colider**	**39.02**	**38**	*e*P	**P**	**17 53 39.6**	**+1.2**
DIAM	**Diamantina, MG**	**39.45**	**60**	*e*P	**P**	**17 53 44.6**	**+2.5**
SNDB	**Serra Nova Dou**	**40.20**	**45**	*e*P	**P**	**17 53 49.5**	**+1.2**
JANB	**Januaria**	**41.54**	**56**	*e*P	**P**	**17 54 01.8**	**+2.4**
VNA3	**Neumayer Olymp** comp=Z,25nm,0.9s	**42.12**	**153**	⇓P	**P**	**17 54 05.8**	**+2.3**
VNA3	comp=Z,56nm,0.8s			⇓pP	**pwP**	**17 54 11.5**	**+1.1**
VNA1	**Neumayer--Stat** comp=Z,23nm,1.0s	**42.59**	**152**	⇓P	**P**	**17 54 09.6**	**+2.4**
VNA1	comp=Z,32nm,0.8s			⇑pP	**pwP**	**17 54 15.1**	**+1.0**
NPGB	**Novo Progresso**	**42.63**	**36**	*e*P	**P**	**17 54 08.9**	**+0.8**
TEFE	**Tefe**	**42.72**	**22**	*e*P	**P**	**17 54 10.2**	**+1.3**
VNA2	**Neumayer--Watz** comp=Z,18nm,0.8s,baz=275,slow=8.6	**42.87**	**153**	⇑P	**P**	**17 54 10.3**	**+0.8**
VNA2	comp=Z,55nm,0.7s,baz=276,slow=8.7			⇓pP	**pwP**	**17 54 17.6**	**+1.1**
SDBA	**SAO DESIDERIO**	**43.30**	**53**	*e*P	**P**	**17 54 15.9**	**+2.3**
CMC01	**Camacan, BA**	**44.25**	**62**	*e*P	**P**	**17 54 22.7**	**+1.4**
SNAA	**Sanae** comp=Z,7.9nm,1.0s,baz=301,slow=5.8,SNR=7.7	**44.29**	**154**	P	**P**	**17 54 20.2**	**-0.8**
SNAA	comp=Z,122nm,21.6s,baz=192,slow=34 comp=Z,7.9nm,1.0s			LR	LR	18 10 53.7	
SNAA	**Sanae** comp=Z,14nm,0.9s	**44.29**	**154**	IAmb	IAmb	17 54 30.0	
SNAA	**Sanae**	**44.29**	**154**	⇑*e*P	**P**	**17 54 22.3**	**+1.2**
SNAA	comp=Z,10.0nm,1.1s			pmax	pmax		
OTAV	**Otavalo**	**44.49**	**1**	*e*P	**P**	**17 54 25.1**	**+1.4**
SMTB	**Santa Maria do**	**44.75**	**47**	*e*P	**P**	**17 54 27.1**	**+1.9**
ITTB	**Itaituba**	**44.89**	**34**	*e*P	**P**	**17 54 26.0**	**-0.4**
QSPA	**South Pole Qui** comp=Z,5.7nm,1.0s,baz=142,slow=4.2,SNR=11	**45.80**	**180**	P	**P**	**17 54 32.9**	**-0.4**
QSPA	comp=Z,5.8nm,1.0s,baz=153,slow=3.9,SNR=3.2 comp=Z,5.7nm,1.0s			PcP	**PcP**	**17 56 10.1**	**-0.3**
QSPA	**South Pole Qui**	**45.80**	**180**	P	**P**	**17 54 32.2**	**-1.0**
PRPB	**Parauapebas**	**45.92**	**43**	*e*P	**P**	**17 54 37.2**	**+2.7**
NVL	**N'lazarevskaya**	**49.12**	**154**	*e*P	**P**	**17 54 59.8**	**+1.1**
NVL				*e*		17 56 20.8	
NVL				*e*		17 56 54.5	
NVL				*e*PPP	PPP	17 57 41.1	
NVL				*e*S	**S**	**18 02 05.5**	**+2.1**
NVL				*e*SS	**SS**	**18 05 38.2**	**+4.4**
NVL				*e*SSS	SSS	18 06 53.6	
NVL	comp=Z,16nm,1.0s			pmax	pmax		
NVL	comp=Z,693nm,23.0s			MLR	MLR		
ROSC	**El Rosal** comp=Z,526nm,22.0s,baz=228,slow=33	**49.25**	**6**	LR	LR	18 13 08.4	
BOAV	**Boa Vista** comp=Z,14nm,1.1s	**49.51**	**25**		**P**	**17 55 02.8**	**+0.5**
BOAV				IAmb	IAmb	17 55 06.0	
BOAV	**Boa Vista**	**49.51**	**25**	*e*P	**P**	**17 55 03.1**	**+0.8**
NBMA	**Muriti-CE**	**50.92**	**56**	*e*P	**P**	**17 55 15.0**	**+1.8**
NBPS	**Pedro II - PI**	**51.79**	**51**	*e*P	**P**	**17 55 21.8**	**+2.1**
ELIB	**Princess Elisa** comp=Z,9.6nm,1.0s	**52.06**	**157**	*d*P	**P**	**17 55 20.2**	**-0.9**
VNDA	**Vanda** comp=Z,3.8nm,1.1s,baz=152,slow=5.0,SNR=6.8	**52.74**	**194**	P	**P**	**17 55 26.0**	**+0.1**
VNDA	comp=Z,2.6nm,1.0s,baz=141,slow=6.5,SNR=2.6 comp=Z,3.8nm,1.1s			PcP	**PcP**	**17 56 35.5**	**+0.1**
VNDA	**Vanda**	**52.74**	**194**	P	**P**	**17 55 26.6**	**+0.7**
VNDA	comp=Z,5.6nm,1.1s			IAmb	IAmb	17 55 49.0	
NBPA	**Parau_RN**	**53.19**	**56**	*e*P	**P**	**17 55 32.8**	**+2.8**
NBMO	**Morrinhos-CE**	**53.47**	**52**	*e*P	**P**	**17 55 35.1**	**+3.1**
SDV	**Santo Domingo** comp=Z,91nm,18.2s,baz=235,slow=36	**53.63**	**10**	LR	LR	18 18 18.0	
SDV	**Santo Domingo**	**53.63**	**10**		**P**	**17 55 35.2**	**+1.9**
SDV	comp=Z,21nm,1.1s			IAmb	IAmb	17 55 36.2	
SDV	**Santo Domingo**	**53.63**	**10**	*e*P	**P**	**17 55 35.3**	**+2.0**
NBPV	**Pedro Velho**	**53.76**	**59**	*e*P	**P**	**17 55 36.5**	**+2.3**
RCBR	**Riachuelo**	**53.85**	**58**	*e*P	**P**	**17 55 36.6**	**+1.7**
HDC	**Heredia**	**54.38**	**354**	P	**P**	**17 55 40.5**	**+1.8**
HDC	**Heredia**	**54.38**	**354**	*e*P	**P**	**17 55 40.0**	**+1.2**
JTS	**Las Juntas de** comp=Z,113nm,20.2s,baz=246,slow=30	**54.73**	**353**	LR	LR	18 13 06.5	
JTS	**Las Juntas de**	**54.73**	**353**	P	**P**	**17 55 42.8**	**+1.6**
JTS	**Las Juntas de**	**54.73**	**353**	*de*P	**P**	**17 55 43.4**	**+2.2**
JTS	comp=Z,11nm,0.8s			pmax	pmax		
MDP	**Montagnes des** comp=Z,96nm,19.7s,baz=124,slow=35	**54.75**	**33**	LR	LR	18 17 60.0	
MTO3	**Montecristo**	**59.30**	**348**	P	**P**	**17 56 14.8**	**+1.1**
MTO3	comp=Z,16nm,1.0s			IAmb	IAmb	17 56 18.1	
PETF	**Flores**	**61.85**	**348**	P	**P**	**17 56 31.5**	**+0.7**
CMIG	**Matias Romero** comp=Z,151nm,21.6s,baz=176,slow=30	**62.91**	**343**	LR	LR	18 17 34.1	
CELP	**Cerrillos**	**63.26**	**13**	P	**P**	**17 56 40.3**	**+0.1**
SJG	**San Juan** comp=Z,77nm,20.3s,baz=89,slow=34	**63.37**	**14**	LR	LR	18 22 12.0	
PPT	**Papeete** comp=Z,82nm,21.6s,baz=270,slow=29	**64.04**	**270**	LR	LR	18 17 02.3	
MAW	**Mawson** comp=Z,5.0nm,0.8s,baz=172,slow=8.6,SNR=4.2	**64.64**	**165**	P	**P**	**17 56 48.8**	**0.0**
MAW	comp=Z,237nm,20.8s,baz=183,slow=34 comp=Z,5.0nm,0.8s			LR	LR	18 23 12.7	
MAW	**Mawson**	**64.64**	**165**	P	**P**	**17 56 48.8**	**0.0**
MAW	comp=Z,7.0nm,1.5s			pmax	pmax		
TEIG	**Tepich**	**64.90**	**350**	P	**P**	**17 56 51.8**	**+0.8**
SOR	**Soroa**	**67.00**	**356**		**P**	**17 57 04.1**	**-0.4**
SOR	**Soroa**	**67.00**	**356**	P	**P**	**17 57 04.1**	**-0.4**
SOR	comp=Z,40nm,1.1s			pmax	pmax		
RAR	**Rarotonga** comp=Z,208nm,19.0s,baz=123,slow=28	**68.94**	**261**	LR	LR	18 18 44.0	
LPIG	**La Paz** comp=Z,255nm,20.0s,baz=234,slow=30	**73.95**	**330**	LR	LR	18 22 48.0	
SUR	**Sutherland** comp=Z,124nm,19.6s,baz=189,slow=32	**74.48**	**120**	LR	LR	18 26 29.4	
833A	**Chaparral WMA,**	**74.76**	**342**	P	**P**	**17 57 51.8**	**+0.2**
HKT	**Hockley**	**75.60**	**345**	⇑*e*P	**P**	**17 57 55.8**	**-0.4**
HKT	comp=Z,2.0nm,0.9s			pmax	pmax		
HNDO	**Hondo**	**75.89**	**342**	P	**P**	**17 57 59.2**	**+1.1**
HNDO	comp=Z,14nm,0.8s			IAmb	IAmb	17 58 09.9	
250A	**Grady**	**76.34**	**354**	P	**P**	**17 58 01.2**	**+0.7**
TXAR	**Lajitas Array** comp=Z,4.0nm,1.0s,baz=153,slow=8.4,SNR=17	**76.78**	**338**	P	**P**	**17 58 04.5**	**+1.3**
TXAR	comp=Z,213nm,20.4s,baz=218,slow=30 comp=Z,4.0nm,1.0s			LR	LR	18 25 07.2	
TXAR	**Lajitas Array**	**76.78**	**338**	P	**P**	**17 58 03.9**	**+0.7**
TXAR	**Lajitas Array**	**76.78**	**338**	P	**P**	**17 58 03.9**	**+0.7**
TX31	**Lajitas Ar. Si**	**76.78**	**338**		**P**	**17 58 04.1**	**+0.9**
LRAL	**Lakeview Retre** comp=Z,20nm,1.1s	**77.45**	**353**	IAmb	IAmb	17 58 10.3	
Y52A	**Lilburn** comp=Z,26nm,1.0s	**78.07**	**356**	IAmb	IAmb	17 59 24.2	
X48A	**Hartselle** comp=Z,19nm,1.1s	**78.86**	**353**	IAmb	IAmb	17 58 17.9	
W50A	**Signal Mountai** comp=Z,24nm,1.1s	**79.47**	**355**	IAmb	IAmb	17 58 28.9	
SWET	**Sewanee** comp=Z,26nm,0.9s	**79.53**	**354**	IAmb	IAmb	17 58 22.2	
CPCT	**Cooper Cave** comp=Z,21nm,1.3s	**79.67**	**356**	IAmb	IAmb	17 58 34.8	
BOSA	**Boshof** comp=Z,6.0nm,0.8s,baz=264,slow=2.4,SNR=8.0	**79.85**	**120**	P	**P**	**17 58 20.4**	**-0.1**
BOSA	comp=Z,96nm,20.5s,baz=208,slow=32 comp=Z,6.0nm,0.8s			LR	LR	18 29 16.3	
BOSA	**Boshof**	**79.85**	**120**	P	**P**	**17 58 20.0**	**-0.6**
BOSA	comp=Z,13nm,0.9s			IAmb	IAmb	17 58 29.7	
BOSA	**Boshof**	**79.85**	**120**	P	**P**	**17 58 20.0**	**-0.6**
BOSA	comp=Z,13nm,0.9s			pmax	pmax		
V48A	**Smith Brothers** comp=Z,25nm,1.0s	**80.12**	**354**	IAmb	IAmb	17 58 25.0	
WHAR	**Wooly Hollow** comp=Z,26nm,1.4s	**80.26**	**349**	IAmb	IAmb	17 58 33.1	
319A	**Douglas** comp=Z,13nm,0.9s	**80.32**	**334**	IAmb	IAmb	17 58 28.4	
LKGWB	**Lokgwabe**	**80.43**	**114**		**P**	**17 58 24.8**	**+1.0**
KOOLE	**Kule** comp=Z,26nm,0.8s	**80.54**	**113**	IAmb	IAmb	17 58 33.7	
U49A	**Red Boiling Sp** comp=Z,26nm,1.1s	**80.81**	**355**	IAmb	IAmb	17 58 28.6	
FCAR	**Ozark Folk Cen** comp=Z,21nm,1.4s	**80.83**	**349**	IAmb	IAmb	17 58 26.6	
T47A	**Sharon Grove** comp=Z,17nm,0.9s	**81.38**	**354**	IAmb	IAmb	17 58 31.3	
TUL3	**Leonard** comp=Z,21nm,1.0s	**81.40**	**346**	IAmb	IAmb	17 58 29.9	
MAKGR	**Makgori** comp=Z,11nm,0.9s	**81.54**	**118**	IAmb	IAmb	17 58 38.5	
AMTX	**Amarillo** comp=Z,15nm,1.1s	**81.58**	**341**	IAmb	IAmb	17 58 45.7	
S51A	**Beattyville** comp=Z,24nm,1.0s	**81.81**	**356**	IAmb	IAmb	17 58 33.9	
T42A	**Van Buren** comp=Z,16nm,1.1s	**81.82**	**350**	IAmb	IAmb	17 58 33.2	
CGM3	**Cape Girardeau** comp=Z,19nm,1.2s	**81.92**	**352**	IAmb	IAmb	17 58 32.3	
KGCAE	**Kacgae**	**81.96**	**114**		**P**	**17 58 31.2**	**-0.7**
KGCAE	comp=Z,23nm,0.9s			IAmb	IAmb	17 58 41.6	
MGMO	**Mountain Grove** comp=Z,29nm,1.3s	**82.09**	**349**	IAmb	IAmb	17 58 33.5	
GRTLG	**Ghanzi** comp=Z,16nm,0.9s	**82.35**	**112**	IAmb	IAmb	17 58 43.4	
T35A	**Sooner Cattle**	**82.51**	**346**		**P**	**17 58 35.1**	**+1.1**
T35A	comp=Z,20nm,1.0s			IAmb	IAmb	17 58 45.2	
LBTB	**Lobatse** comp=Z,126nm,21.6s,baz=177,slow=31	**82.61**	**118**	LR	LR	18 29 23.1	
LBTB	**Lobatse**	**82.61**	**118**		**P**	**17 58 33.9**	**-1.4**
LBTB	comp=Z,12nm,0.8s			IAmb	IAmb	17 58 44.4	
LBTB	**Lobatse**	**82.61**	**118**	P	**P**	**17 58 33.9**	**-1.4**
LBTB	comp=Z,12nm,0.9s			pmax	pmax		
FVM	**French Village** comp=Z,23nm,1.2s	**82.69**	**351**	IAmb	IAmb	17 58 36.6	
S39A	**Bolivar** comp=Z,16nm,1.0s	**82.76**	**349**	IAmb	IAmb	17 58 36.8	
ANMO	**Albuquerque** comp=Z,230nm,21.5s,baz=206,slow=31	**82.84**	**338**	LR	LR	18 28 44.8	
ANMO	**Albuquerque**	**82.84**	**338**	P	**P**	**17 58 36.8**	**+0.8**
ANMO	**Albuquerque** comp=Z,11nm,1.2s	**82.84**	**338**	IAmb	IAmb	17 58 40.6	
ANMO	**Albuquerque**	**82.84**	**338**	⇓*e*P	**P**	**17 58 37.7**	**+1.7**
ANMO	comp=Z,6.0nm,1.0s			pmax	pmax		
CCM	**Cathedral Cave**	**82.85**	**350**		**P**	**17 58 36.0**	**+0.2**
CCM	**Cathedral Cave**	**82.85**	**350**	P	**P**	**17 58 36.0**	**+0.2**
CCM	comp=Z,40nm,1.1s			pmax	pmax		
DBIC	**Dimbokro** comp=Z,4.8nm,0.9s,baz=236,slow=4.0,SNR=3.6 comp=Z,4.8nm,0.9s	**83.53**	**74**	P	**P**	**17 58 41.0**	**+1.0**
DBIC	**Dimbokro**	**83.53**	**74**	P	**P**	**17 58 38.8**	**-1.1**
DBIC	comp=Z,19nm,1.2s			IAmb	IAmb	17 58 43.3	
DBIC	**Dimbokro**	**83.53**	**74**	P	**P**	**17 58 38.8**	**-1.1**
DBIC	comp=Z,19nm,1.3s			pmax	pmax		
T25A	**Trinidad** comp=Z,18nm,1.3s	**84.38**	**340**	IAmb	IAmb	17 58 47.0	
PFO	**Pinyon Flats O**	**84.80**	**329**	⇑*e*P	**P**	**17 58 46.0**	**0.0**
PFO	comp=Z,10.0nm,1.1s			pmax	pmax		
PV18	**Skein Mesa, Pa** comp=Z,18nm,1.2s	**86.61**	**337**	IAmb	IAmb	17 58 59.2	
PV04	**Paradox Valley** comp=Z,13nm,1.2s	**86.74**	**337**	IAmb	IAmb	17 59 00.6	
L40A	**Anamosa** comp=Z,17nm,1.0s	**86.81**	**351**	IAmb	IAmb	17 59 06.0	
PV23	**Carpenter Ridg** comp=Z,16nm,1.2s	**86.83**	**337**	IAmb	IAmb	17 59 00.4	
PV22	**Blue Mesa, Par** comp=Z,10nm,1.3s	**86.84**	**337**	IAmb	IAmb	17 59 01.4	
ISCO	**Idaho Springs** comp=Z,17nm,1.6s	**87.20**	**340**	IAmb	IAmb	17 59 09.4	
CCUT	**Cedar City** comp=Z,20nm,1.6s	**87.31**	**333**	IAmb	IAmb	17 59

H11N3 **WAKE ISLAND Hyl** 20.55 268 T T 20 16 47.4
baz=131
H11N1 **WAKE ISLAND Hyl** 20.56 268 T T 20 16 47.7
baz=131
H11N2 **WAKE ISLAND Hyl** 20.57 268 T T 20 16 50.2
baz=131
F28M Old Crow 120.70 337 **PKPdf** 18 05 01.7 -0.7
SQTA Sankt Quirin 120.88 53 *e*PKP **PKiKP** 18 05 04.3 +0.7
comp=Z,4.9nm,0.9s
MOTA Moosalm 120.89 52 *e*PKP **PKPdf** 18 05 03.6 0.0
comp=Z,5.4nm,1.1s
ILAR Eielson Array 120.96 332 PKP **PKPdf** 18 05 02.5 -0.4
comp=Z,1.7nm,0.9s,baz=178,slow=1.6,SNR=12
JAY Jayapura 121.29 228 PKP **PKPdf** 18 05 04.1 -1.2
comp=Z,13nm,0.3s,baz=109,slow=22,SNR=8.4
COLA College 121.34 332 ⇑*i*PKIKP **PKPdf** 18 05 03.4 -0.3
comp=Z,0.4nm,0.4s
LESA Schwarzleotal 121.83 53 *e*PKP **PKPdf** 18 05 05.5 +0.2
comp=Z,0.4nm,0.4s
GERES GERESS Array B 123.16 52 PKP **PKPdf** 18 05 07.4 -0.4
comp=Z,2.5nm,0.7s,baz=222,slow=1.8,SNR=14
KHC Kasperske Hory 123.24 52 ⇓*i*PKIKP **PKPdf** 18 05 07.7 -0.2
ARSA Arzberg 123.38 54 *e*PKP **PKPdf** 18 05 08.7 +0.5
comp=Z,3.9nm,0.7s
CONA Conrad Observa 123.93 54 *e*PKP **PKPdf** 18 05 08.9 -0.5
comp=Z,5.3nm,0.9s
IMAR Indian Mountai 123.99 332 **PKPdf** 18 05 08.6 -0.1
CLL Collm 124.04 49 *e*PKIKP **PKPdf** 18 05 09.0 -0.3
CLL *i* 18 05 17.4
CLL Collm 124.04 49 *e*PKPdf **PKPdf** 18 05 09.0 -0.3
CLL *i* x x 18 05 17.4
comp=Z,8.0nm,1.2s
MPLH Magyarpolny 124.52 55 PKP **PKPdf** 18 05 10.5 +0.1
E22K Anaktuvuk Pass 124.56 334 **PKPdf** 18 05 09.7 -0.2
MORH Mrgy, Hungar 124.69 57 ⇓P **PKPdf** 18 05 10.4 -0.3
KRUC Moravsky 124.80 53 *e*PKP **PKPdf** 18 05 11.2 +0.4
KRUC *e* 18 05 19.4
MODS Modra-Piesok 124.97 54 *e*PKIKP **PKPdf** 18 05 11.6 +0.4
MODS Modra-Piesok 124.97 54 *e*PKP **PKPdf** 18 05 11.6 +0.4
VRAC Vranov 125.04 53 *e*PKP **PKPdf** 18 05 11.5 +0.2
VRAC *e* 18 05 19.6
DPC Dobruska-Polom 125.39 51 PKP **PKPdf** 18 05 11.9 -0.1
JAVC Velka Javorina 125.44 54 *e*PKP **PKiKP** 18 05 12.8 +0.3
MORC Moravsky Berou 125.81 53 ⇓P **PKiKP** 18 05 13.7 +0.4
MORC Moravsky Berou 125.81 53 *e*PKP **PKPdf** 18 05 13.4 +0.6
NOA NORSAR Array B 127.70 58 PKP **PKPdf** 18 05 15.8 -0.3
comp=Z,4.5nm,1.2s,baz=222,slow=1.5,SNR=3.9
BRIU Brid 128.33 56 PKP **PKPdf** 18 05 17.4 -0.2
HFS Hagfors 128.44 40 PKP **PKPdf** 18 05 16.0 -1.4
comp=Z,2.3nm,0.7s,baz=230,slow=4.4,SNR=2.0
KWP Kalwaria Pacla 128.72 55 PKP **PKPdf** 18 05 18.1 -0.2
MMAI Mount Meron Ar 128.91 79 PKP **PKPdf** 18 05 19.3 0.0
comp=Z,2.4nm,0.8s,baz=188,slow=9.9,SNR=2.6
BURAR Bucovina Array 129.32 58 **PKPdf** 18 05 19.7 0.0
SUW Suwalki 130.79 50 **PKPdf** 18 05 20.9 -1.1
SUW Suwalki 130.79 50 PKIKP **PKPdf** 18 05 20.9 -1.1
KIRS Kirsehir-Merke 131.03 72 ⇑P **PKPdf** 18 05 16.5 -6.7
BR105 Keskin Array S 131.11 71 PKP **PKPdf** 18 05 23.2 -0.2
BR104 Keskin Array S 131.12 71 PKP **PKPdf** 18 05 23.3 -0.1
BR131 Keskin Array S 131.13 71 ⇑*i*PKIKP **PKPdf** 18 05 23.8 +0.4
BRTR Keskin Array B 131.13 71 PKP **PKPdf** 18 05 22.8 -0.6
comp=Z,2.4nm,1.0s,baz=289,slow=3.8,SNR=7.2
LUBAR Lubar, Ukraine 131.81 56 PKP **PKPdf** 18 05 24.9 +0.7
AK17 Malin Array Si 132.88 56 PKP **PKPdf** 18 05 25.3 -0.8
AK16 Malin Array Si 132.90 56 PKP **PKPdf** 18 05 25.4 -0.8
AK21 Malin Array Si 132.90 55 PKP **PKPdf** 18 05 25.4 -0.8
AK12 Malin Array Si 132.92 56 PKP **PKPdf** 18 05 25.5 -0.7
AK15 Malin Array Si 132.92 56 PKP **PKPdf** 18 05 25.3 -0.9
AK06 Malin Array Si 132.93 56 PKP **PKPdf** 18 05 25.3 -0.9
AK05 Malin Array Si 132.94 56 PKP **PKPdf** 18 05 25.3 -0.9
KIEV Kiev 132.97 56 ⇓P **PKPdf** 18 05 25.6 -0.6
KIEV Kiev 132.97 56 **PKPdf** 18 05 25.3 -1.0
KIEV Kiev 132.97 56 PKIKP **PKPdf** 18 05 25.3 -1.0
KIEV Kiev 132.97 56 PKP **PKPdf** 18 05 25.8 -0.5
AKASG Malin Array Be 132.98 56 PKP **PKPdf** 18 05 25.0 -1.4
comp=Z,1.0nm,0.4s,baz=265,slow=2.7,SNR=10
AKASG Malin Array Be 132.98 56 **PKPdf** 18 05 24.5 -1.8
AKASG Malin Array Be 132.98 56 PKIKP **PKPdf** 18 05 24.5 -1.8
AKBB Malin Array Si 132.98 56 PKP **PKPdf** 18 05 25.8 -0.5
AK03 Malin Array Si 132.99 56 PKP **PKPdf** 18 05 26.1 -0.2
GSI Gunungsitoli 136.94 175 PKPdf **PKPdf** 18 05 34.1 -0.9
OBN Obninsk 138.54 51 *e*PKIKP **PKPdf** 18 05 37.4 +0.9
OBN *i* 18 05 43.4
OBN pmax pmax
comp=Z,7.0nm,0.8s
KIV Kislovodsk 139.04 69 *e*PKIKP **PKPdf** 18 05 37.8 -0.2
KIV pmax pmax
comp=Z,12nm,1.0s
KIV Kislovodsk 139.04 69 PKP **PKPdf** 18 05 37.8 -0.2
VSR Storozhevoye 139.10 58 *e*PKHKP PKPpre 18 05 28.8
VSR pmax pmax
comp=Z,8.0nm,0.6s
VORD Divnogorie 139.11 58 *e*PKHKP PKPpre 18 05 27.6
VORD pmax pmax
comp=Z,6.0nm,0.5s
VORR Voronezh 139.25 57 *e*PKHKP PKPpre 18 05 27.9
VORR pmax pmax
comp=Z,20nm,0.4s
LPSR Galich'ya Gora 139.31 56 *e*PKHKP PKPpre 18 05 26.1
LPSR pmax pmax
comp=Z,10.0nm,0.7s
BILL Bilibino 139.36 328 ⇓*e*PKIKP **PKPdf** 18 05 38.4 +0.7
VRH Novokhopyorsk 140.65 58 *e*PKIKP **PKPdf** 18 05 37.2 -3.3
VRH pmax pmax
comp=Z,5.0nm,0.4s
KLMR Klimovskoe 140.94 43 *e*PKIKP **PKPdf** 18 05 39.2 -1.5
KLMR pmax pmax
comp=Z,19nm,1.1s
AKT Akhty 141.55 75 *e*PKIKP **PKPdf** 18 05 42.1 -0.5
AKT pmax pmax
comp=Z,22nm,1.0s
TGY Tagaytay City 145.27 216 PKPbc **PKPbc** 18 05 48.3 -1.3
comp=Z,44nm,0.4s,baz=246,slow=10,SNR=3.6
SEY Seymchan 145.54 321 ⇑*e*PKIKP **PKPdf** 18 05 49.2 +0.4
KIRV Kirov 145.90 47 PKPbc **PKPdf** 18 05 49.3 -0.1
comp=Z,14nm,0.7s,baz=352,slow=3.9,SNR=6.0
MA2 Magadan 146.68 315 **PKPdf** 18 05 50.7 -0.1
MA2 Magadan 146.68 315 PKIKP **PKPdf** 18 05 50.7 -0.1
MA2 Magadan 146.68 315 PKP **PKPdf** 18 05 51.2 +0.4
HYB Hyderabad 147.15 138 *e*PKPbc **PKPbc** 18 05 54.5 -0.7
HRA Herat 148.75 95 **PKPdf** 18 05 54.4 -0.9
TIXI Tiksi 149.57 343 **PKPdf** 18 05 54.7 -0.5
TIXI Tiksi 149.57 343 PKHKP PKPpre 18 05 54.7
JKA Kamikawa-asahi 150.37 284 **PKPbc** 18 06 01.5 -1.1
ASAJ Asahikawa 150.37 284 PKIKP **PKPbc** 18 06 01.5 -1.1
MJAR Matsushiro Arr 150.75 267 PKPbc **PKPbc** 18 06 03.2 -0.5
comp=Z,12nm,1.0s,baz=189,slow=2.1,SNR=19
MJAR Matsushiro Arr 150.75 267 **PKPbc** 18 06 02.5 -1.3
MJAR Matsushiro Arr 150.75 267 PKIKP **PKPbc** 18 06 02.5 -1.3
MAJO Matsushiro 150.75 267 **PKPdf** 18 06 01.3 +3.1
MAJO Matsushiro 150.75 267 PKIKP **PKPdf** 18 06 01.3 +3.1
ARTI Arti 150.88 51 PKPbc **PKPbc** 18 06 03.1 -0.3
comp=Z,33nm,1.0s,baz=270,slow=2.1,SNR=26
ARTI Arti 150.88 51 *i* PKIKP **PKPbc** 18 06 03.5 +0.1
ARTI 18 09 36.9
YSS Yuzhno-Sakhali 150.91 290 **PKPbc** 18 06 03.1 -0.6
YSS Yuzhno-Sakhali 150.91 290 *e*PKIKP **PKPbc** 18 06 03.7 0.0
YSS *e* 18 06 11.2
YSS pmax pmax
comp=Z,30nm,1.0s
ABKAR Akbulak array 151.84 65 **PKPdf** 18 05 58.9 -0.5
JMN Monobe 152.43 259 **PKPbc** 18 06 07.3 -0.4
QIZ Qiongzhong 153.58 199 PKPbc **PKPdf** 18 06 01.8 -1.1
QIZ PP **PP** 18 10 00.8 +4.7
CMAR Chiang Mai Arr 154.04 176 PKP **PKPdf** 18 06 03.4 -0.2
comp=Z,1.3nm,0.8s,baz=237,slow=3.2,SNR=9.3
CMAR PKPbc **PKPbc** 18 06 11.3 -0.3
comp=Z,3.3nm,1.0s,baz=212,slow=4.3,SNR=13
CMAR Chiang Mai Arr 154.04 176 **PKPdf** 18 06 02.4 -1.2
CMAR Chiang Mai Arr 154.04 176 PKIKP **PKPdf** 18 06 02.4 -1.2
NRIK Noril'sk 154.12 11 PKPbc **PKPbc** 18 06 08.4 -1.8
comp=Z,2.6nm,1.0s,baz=155,slow=1.9,SNR=5.4
CHTO Chiang Mai 154.39 176 **PKPbc** 18 06 10.9 -1.5
CHTO Chiang Mai 154.39 176 PKIKP **PKPbc** 18 06 10.9 -1.5
YAK Yakutsk 155.69 327 PKP **PKPdf** 18 06 03.6 -0.8
comp=Z,1.6nm,0.4s,baz=66,slow=1.6,SNR=1.5
YAK PKPab **PKPab** 18 06 29.5 -1.4
comp=Z,12nm,0.9s,baz=93,slow=4.0,SNR=6.6
YAK Yakutsk 155.69 327 *e*PKIKP **PKPdf** 18 06 07.8 +3.3
YAK *e* 18 10 14.8
YAK pmax pmax
comp=Z,13nm,1.0s
YAK pmax pmax
comp=Z,121nm,4.3s
YAK pmax pmax
comp=N,65nm,4.3s
YAK pmax pmax
comp=E,73nm,5.7s
BORK Borovoye 158.22 56 **PKPdf** 18 06 08.2 +0.2
BORK Borovoye 158.22 56 PKIKP **PKPdf** 18 06 08.2 +0.2
BVAR Borovoye Array 158.26 56 PKP **PKPdf** 18 06 07.0 -1.0
comp=E,4.1nm,1.0s,baz=321,slow=2.1,SNR=11
KSRS Korea Array 158.49 260 PKPab **PKPab** 18 06 43.8 +0.1
comp=E,2.2nm,0.9s,baz=132,slow=3.4,SNR=5.5
MORE Moreh 159.13 163 **PKPdf** 18 06 09.3 -0.7
KSH2 Kashi 160.42 97 PKP **PKPdf** 18 06 12.3 +1.1
ZEA Zeya 160.50 308 *e*PKP2 **PKPab** 18 06 51.2 -0.8
ZEA pmax pmax
comp=Z,10.0nm,1.2s
AAK Ala-Archa 160.80 86 **PKPdf** 18 06 11.2 -0.4
AAK Ala-Archa 160.80 86 PKIKP **PKPdf** 18 06 11.2 -0.4
NJ2 Nanjing 161.29 235 *e*P **PKPdf** 18 06 12.3 +0.1
NJ2 pmax pmax
comp=Z,25nm,0.5s
BOOM Boomskoye usch 161.80 87 **PKPdf** 18 06 11.6 -1.0
BOOM Boomskoye usch 161.80 87 PKIKP **PKPdf** 18 06 11.6 -1.0
PZH PanZhiHua 162.09 182 PKP **PKPdf** 18 06 13.8 +0.4
LSA Lhasa 163.37 149 **PKPdf** 18 06 14.3 -0.7
LSA Lhasa 163.37 149 PKIKP **PKPdf** 18 06 14.3 -0.7
KURBB Kurchatov Arra 163.71 60 PKP **PKPdf** 18 06 13.5 -0.4
comp=Z,3.4nm,1.0s,baz=279,slow=1.1,SNR=18
KURBB PKPab **PKPab** 18 07 06.4 +0.2
comp=Z,1.3nm,1.0s,baz=287,slow=5.3,SNR=4.2
KURBB PP **PP** 18 10 53.1 +0.9
comp=Z,0.5nm,0.9s,baz=268,slow=4.9,SNR=4.2
KURK Kurchatov 163.75 59 **PKPdf** 18 06 13.6 -0.4
KURK Kurchatov 163.75 59 PKIKP **PKPdf** 18 06 13.6 -0.4
KURK 18 07 06.4
ZALV Zalesovo Beam 165.86 42 PKP **PKPdf** 18 06 14.6 -1.1
comp=Z,5.2nm,1.0s,baz=252,slow=2.8,SNR=19
ZALV Zalesovo Beam 165.86 42 **PKPdf** 18 06 13.7 -2.0
ZALV Zalesovo Beam 165.86 42 PKIKP **PKPdf** 18 06 13.7 -2.0
MAKZ Makanchi 166.55 73 **PKPdf** 18 06 14.6 -2.0
MAKZ Makanchi 166.55 73 PKIKP **PKPdf** 18 06 14.6 -2.0
MKAR Makanchi Array 166.76 73 PKP **PKPdf** 18 06 16.3 -0.4
comp=Z,2.2nm,1.1s,baz=282,slow=2.4,SNR=11
MKAR PKPab **PKPab** 18 07 19.7 -0.2
comp=Z,1.6nm,0.9s,baz=270,slow=3.6,SNR=7.2
MKAR PP **PP** 18 11 05.5 -3.0
comp=Z,0.9nm,1.0s,baz=289,slow=3.7,SNR=4.7
MKAR Makanchi Array 166.76 73 **PKPdf** 18 06 15.1 -1.6
MKAR **PKPab** 18 07 18.9 -1.0
MKAR Makanchi Array 166.76 73 PKP2 **PKPab** 18 07 18.9 -1.0
MKAR 19 06 15.1
WMQ Urumqi 170.48 89 *e*PKP **PKPdf** 18 06 19.9 +0.6
HHC Hu-ho-hao-te 171.36 249 *e*P **PKPdf** 18 06 16.3 -3.6
SONM Songino Array 174.89 314 PKPab **PKPab** 18 07 55.2 -0.8
comp=Z,1.2nm,0.9s,baz=54,slow=1.7,SNR=5.2
GTA2 Gaotai 174.97 170 *e*PKP **PKPdf** 18 06 21.5 +0.1
GTA2 PKPab **PKPab** 18 07 54.4 -1.9

*IDC **23** 17:53:43.9±1.7,21°.66N×143°.13E,h297km±16km, mb3.6/25,mbtmp4.3/29,Error ellipse: s-maj=15.6km s-min=8.8km az=82.0*
*NEIC **23** 17:53:43.7±1.5,21°.78N±0°.07×143°.2E±0°.1,h290km±7km, mb4.3/27,Error ellipse: s-maj=18.9km s-min=10.6km az=83.0*
ISC 23 17:53:44.2±0.5,21°.75N±0°.05×143°.15E±0°.10,h300km,n80, σ0$91/82,mb4.0/32,1C,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.39**	**351**	P	**Pn**	**17 55 05.3**	**-1.0**
	90nm,0.5s,baz=254,slow=12,SNR=9.4						
JCJ				S	**S**	**17 56 09.4**	**-2.8**
	60nm,0.3s,baz=286,slow=23,SNR=6.3						
JCJ	**Chichijima**	**5.39**	**351**		**Pn**	**17 55 05.0**	**-1.3**
GUMO	**Guam**	**8.28**	**168**	P	**Pn**	**17 55 40.7**	**-0.6**
	66nm,0.8s,baz=73,slow=21,SNR=3.6						
GUMO	**Guam**	**8.28**	**168**		**Pn**	**17 55 40.5**	**-0.8**
JMN	**Monobe**	**14.47**	**328**	Pn	**Pn**	**17 56 58.8**	**+2.5**
JGF	**Kuroka**	**14.70**	**341**	P	**P**	**17 56 57.5**	**-0.5**
JSU	**Suzuyama**	**14.93**	**313**	P	**P**	**17 57 00.8**	**+0.3**
MJAR	**Matsushiro Arr**	**15.35**	**345**	P	**P**	**17 57 05.6**	**+0.5**
	1.1nm,0.5s,baz=38,slow=14,SNR=8.7						
MJAR				S	**S**	**17 59 49.2**	**-2.6**
	1.3nm,0.8s,baz=147,slow=23,SNR=4.2						
MJAR	**Matsushiro Arr**	**15.35**	**345**	P	**P**	**17 57 04.3**	**-0.7**
MJAR				IAmb	IAmb	17 57 30.2	
	comp=Z,7.4nm,1.4s						
MAJO	**Matsushiro**	**15.36**	**345**	P	**P**	**17 57 03.5**	**-1.5**
MAJO				IAmb	IAmb	17 57 09.3	
	comp=Z,20nm,1.4s						
MJB9	**Matsu-Tunnel**	**15.36**	**345**	P	**P**	**17 57 04.0**	**-1.1**
MJB9				IAmb	IAmb	17 57 10.3	
	comp=Z,21nm,1.5s						
JNU	**Nakatsue**	**15.70**	**319**	P	**Pn**	**17 57 10.7**	**-0.1**
	comp=Z,15nm,0.8s,baz=90,slow=24,SNR=9.0						
YOJ	**Yonaguni jima**	**18.72**	**282**	P	**P**	**17 57 40.2**	**-1.3**
JTM	**Tenmabayashi**	**19.06**	**355**	P	**P**	**17 57 45.8**	**+0.8**
YHNB	**Yehenq**	**20.22**	**282**	P	**P**	**17 57 57.8**	**+0.4**
KSRS	**Korea Array**	**20.45**	**323**	P	**P**	**17 58 00.7**	**+1.1**
	comp=Z,5.5nm,0.6s,baz=148,slow=9.0,SNR=32						
	comp=Z,5.5nm,0.6s						
KSAR	**Wonju Array Be**	**20.46**	**323**	P	**P**	**17 58 00.3**	**+0.6**
KS19	**Wonju Array Si**	**20.52**	**323**	P	**P**	**17 58 00.4**	**+0.1**
KS19				IAmb	IAmb	17 58 03.1	
	comp=Z,12nm,1.0s						
SSLB	**Suanglung**	**20.56**	**280**	P	**P**	**17 58 01.0**	**0.0**
SSLB				IAmb	IAmb	17 58 42.1	
	comp=Z,37nm,1.3s						
USRK	**Ussuriysk Ar.**	**24.22**	**340**	P	**P**	**17 58 35.2**	**+1.1**
	comp=Z,0.8nm,0.5s,baz=150,slow=11,SNR=2.1						
	comp=Z,0.8nm,0.5s						
TOLI2	**Tolitoli**	**29.93**	**230**	P	**P**	**17 59 25.4**	**+0.2**
TOLI2				IAmb	IAmb	18 00 04.1	
	comp=Z,4.1nm,0.8s						
KKM	**Kota Kinabalu**	**30.36**	**243**	P	**P**	**17 59 29.7**	**+0.5**
KKM				IAmb	IAmb	17 59 58.2	
	comp=Z,30nm,1.3s						
ENH	**Enshi**	**31.33**	**293**	P	**P**	**17 59 37.1**	**-0.3**
ENH				IAmb	IAmb	17 59 37.5	
	comp=Z,5.1nm,0.4s						
SAUI	**Saumlaki**	**31.75**	**203**	P	**P**	**17 59 40.2**	**-0.9**
COEN	**Coen**	**35.48**	**180**	P	**P**	**18 00 14.0**	**+0.9**
COEN				IAmb	IAmb	18 00 23.4	
	comp=Z,11nm,1.1s						
SBUM	**Sibu**	**35.67**	**242**	P	**P**	**18 00 15.2**	**+0.5**
LZDM	**Lanzhou Array**	**37.08**	**301**	P	**P**	**18 00 26.6**	**-0.2**
	comp=Z,8.2nm,0.4s,baz=181,slow=7.4,SNR=4.3						
	comp=Z,8.2nm,0.4s						
SONM	**Songino Array**	**39.28**	**320**	P	**P**	**18 00 45.2**	**+0.7**
	comp=Z,0.8nm,0.4s,baz=130,slow=7.3,SNR=18						
	comp=Z,0.8nm,0.4s						
GTA2	**Gaotai**	**40.87**	**306**	*e*P	**P**	**18 00 58.0**	**+0.3**
GTA2				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YAK	**Yakutsk**	**41.31**	**350**	P	**P**	**18 01 00.9**	**+0.2**
	comp=Z,4.8nm,0.5s,baz=178,slow=2.2,SNR=6.1						
	comp=Z,4.8nm,0.5s						
CMAR	**Chiang Mai Arr**	**41.54**	**274**	P	**P**	**18 01 03.1**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=82,slow=5.9,SNR=6.6						
	comp=Z,0.9nm,0.6s						
CTAO	**Charters Tower**	**41.69**	**176**	P	**P**	**18 01 04.5**	**+0.1**
CTAO				IAmb	IAmb	18 01 16.0	
	comp=Z,27nm,1.5s						
WR8	**Warramunga Arr**	**42.30**	**192**	P	**P**	**18 01 08.9**	**-0.3**
WRA	**Warramunga Arr**	**42.32**	**192**	P	**P**	**18 01 08.9**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=18,slow=9.0,SNR=42						
	comp=Z,0.5nm,0.3s						
WRA	**Warramunga Arr**	**42.32**	**192**	P	**P**	**18 01 07.8**	**-1.6**
FITZ	**Fitzroy Crossi**	**43.15**	**205**	P	**P**	**18 01 14.8**	**-1.3**
	comp=Z,0.7nm,0.4s,baz=20,slow=8.2,SNR=11						
	comp=Z,0.7nm,0.4s						
UGM	**Wanagama**	**43.51**	**231**	P	**P**	**18 01 18.4**	**-0.6**
AS31	**Alice Springs**	**46.03**	**192**	P	**P**	**18 01 38.3**	**-0.3**
ASAR	**Alice Springs**	**46.03**	**192**	P	**P**	**18 01 37.5**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=11,slow=6.9,SNR=18						
	comp=Z,0.2nm,0.4s						
ASAR	**Alice Springs**	**46.03**	**192**	P	**P**	**18 01 38.6**	**0.0**
TIXI	**Tiksi**	**50.59**	**354**	P	**P**	**18 02 13.0**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=151,slow=3.8,SNR=8.3						
	comp=Z,0.6nm,0.3s						
TIXI	**Tiksi**	**50.59**	**354**	P	**P**	**18 02 12.5**	**0.0**
EVN	**Everest**	**51.12**	**289**		**P**	**18 02 18.4**	**+0.5**
EVN				IAmb	IAmb	18 02 20.0	
	comp=Z,4.0nm,0.5s						
ZALV	**Zalesovo Beam**	**54.15**	**322**	P	**P**	**18 02 39.1**	**+0.3**
	comp=Z,2.0nm,0.6s,baz=107,slow=7.3,SNR=10						
ZALV				PcP	**PcP**	**18 03 39.0**	**-0.2**
	comp=Z,1.8nm,0.4s,baz=114,slow=3.9,SNR=8.3						
	comp=Z,2.0nm,0.6s						
ZALV	**Zalesovo Beam**	**54.15**	**322**		**P**	**18 02 38.5**	**-0.3**
ZALV					**PcP**	**18 03 38.6**	**-0.5**
MKAR	**Makanchi Array**	**54.64**	**313**	P	**P**	**18 02 43.0**	**+0.6**
	comp=Z,1.7nm,0.5s,baz=90,slow=8.8,SNR=36						
MKAR				PcP	**PcP**	**18 03 41.7**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=78,slow=4.9,SNR=8.3						
	comp=Z,1.7nm,0.5s						
KURK	**Kurchatov**	**57.41**	**317**		**P**	**18 03 02.0**	**+0.1**
KURK	**Kurchatov**	**57.41**	**317**		**PcP**	**18 03 50.8**	**-1.2**
KURBB	**Kurchatov Arra**	**57.46**	**317**	P	**P**	**18 03 02.5**	**+0.4**
	comp=Z,5.5nm,0.6s,baz=94,slow=7.4,SNR=98						
KURBB				PcP	**PcP**	**18 03 50.8**	**-1.4**
	comp=Z,0.2nm,0.5s,baz=103,slow=4.4,SNR=4.0						
	comp=Z,5.5nm,0.6s						
ILAR	**Eielson Array**	**62.01**	**27**	P	**P**	**18 03 33.0**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=257,slow=5.7,SNR=7.0						
	comp=Z,0.6nm,0.8s						
ILAR	**Eielson Array**	**62.01**	**27**	P	**P**	**18 03 33.2**	**+0.4**
BVAR	**Borovoye Array**	**62.61**	**319**	P	**P**	**18 03 37.6**	**+0.7**
	comp=Z,9.1nm,0.4s,baz=98,slow=7.9,SNR=75						
	comp=Z,9.1nm,0.4s						
BORK	**Borovoye**	**62.65**	**320**		**P**	**18 03 37.4**	**+0.2**
KK31	**Karatay Array**	**63.00**	**308**	IAmb	IAmb	18 03 41.2	
	comp=Z,3.5nm,0.8s						
KKAR	**Karatay Array**	**63.00**	**308**		**P**	**18 03 40.3**	**+0.6**
ARTI	**Arti**	**69.31**	**324**	P	**P**	**18 04 19.2**	**0.0**
	comp=Z,3.5nm,0.7s,baz=120,slow=4.4,SNR=4.9						
	comp=Z,3.5nm,0.7s						
ARTI	**Arti**	**69.31**	**324**	IAmb	IAmb	18 04 20.1	
	comp=Z,4.2nm,0.8s						
SPITS	**Spitsbergen Ar**	**75.78**	**350**	P	**P**	**18 04 58.0**	**+1.1**
	comp=Z,6.4nm,1.0s,baz=96,slow=7.6,SNR=6.5						
	comp=Z,6.4nm,1.0s						
YKA	**Yellowknife Ar**	**76.42**	**28**	P	**P**	**18 05 01.8**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=297,slow=6.2,SNR=9.0						
	comp=Z,0.7nm,0.6s						
YKA	**Yellowknife Ar**	**76.42**	**28**	P	**P**	**18 05 01.4**	**+0.7**
ARCES	**ARCESS Array B**	**78.86**	**341**	P	**P**	**18 05 15.0**	**+1.0**
	comp=Z,4.0nm,0.5s,baz=70,slow=7.5,SNR=21						
	comp=Z,4.0nm,0.5s						
ARCES	**ARCESS Array B**	**78.86**	**341**	P	**P**	**18 05 14.8**	**+0.8**
ARCES				IAmb	IAmb	18 05 20.3	
	comp=Z,20nm,1.4s						
ARCES	**ARCESS Array B**	**78.86**	**341**	*e*PKHKP	PKPpre	18 05 15.0	
KBZ	**Khabaz**	**82.31**	**314**	P	**P**	**18 05 33.6**	**+1.0**
	comp=Z,4.7nm,0.8s,baz=94,slow=3.9,SNR=12						
	comp=Z,4.7nm,0.8s						
KBZ	**Khabaz**	**82.31**	**314**	*e*PKIKP	P	**18 05 33.6**	**+1.0**
KIV	**Kislovodsk**	**82.36**	**314**	⇑P	P	**18 05 31.9**	**-1.1**
KIV	**Kislovodsk**	**82.36**	**314**	P	P	**18 05 33.1**	**0.0**
FINES	**FINESS Array B**	**83.12**	**334**	P	**P**	**18 05 36.1**	**-0.3**
	comp=Z,3.1nm,0.5s,baz=62,slow=4.9,SNR=44						
	comp=Z,3.1nm,0.5s						
FINES	**FINESS Array B**	**83.12**	**334**	P	**P**	**18 05 35.8**	**-0.6**
FINES	**FINESS Array B**	**83.12**	**334**	*e*PKIKP	P	**18 05 36.1**	**-0.3**
NVAR	**Mina Array Bea**	**83.14**	**51**	P	**P**	**18 05 37.9**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=311,slow=7.7,SNR=4.0						
	comp=Z,0.7nm,0.7s						
NVAR	**Mina Array Bea**	**83.14**	**51**	P	**P**	**18 05 37.0**	**-0.3**
AKASG	**Malin Array Be**	**87.44**	**324**	P	**P**	**18 05 57.1**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=52,slow=5.2,SNR=8.9						
	comp=Z,0.4nm,0.4s						
AKASG	**Malin Array Be**	**87.44**	**324**	IAmb	IAmb	18 06 08.8	
	comp=Z,3.8nm,1.2s						
HFS	**Hagfors**	**88.67**	**337**	P	**P**	**18 06 02.5**	**-1.0**
	comp=Z,1.6nm,0.4s,baz=80,slow=3.5,SNR=16						
	comp=Z,1.6nm,0.4s						
BRTR	**Keskin Array B**	**90.28**	**313**	P	**P**	**18 06 10.2**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=88,slow=1.7,SNR=1.2						
	comp=Z,0.5nm,0.7s						
PLCA	**Paso Flores**	**145.82**	**131**	PKPbc	**PKPdf**	**18 12 48.6**	**+1.2**
	comp=Z,2.4nm,0.6s,baz=218,slow=2.4,SNR=6.3						
PLCA	**Paso Flores**	**145.82**	**131**	PKPdf	**PKPdf**	**18 12 48.8**	**+1.4**
LPAZ	**La Paz**	**149.97**	**85**	PKPbc	**PKPbc**	**18 13 00.4**	**-0.4**
	comp=Z,1.5nm,0.5s,baz=274,slow=2.2,SNR=7.4						
LPAZ	**La Paz**	**149.97**	**85**	PKPdf	**PKPdf**	**18 12 54.6**	**-1.0**

IDC 23 17:59:48.9±3.7,34°.94S×178°.34W,h0km,mb3.2/2, mbtmp3.2/3,ML2.8/1,Error ellipse: s-maj=94.8km s-min=48.7km az=133.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**4.94**	**226**	Pn	Pn	18 01 04.2	-0.2
	0.3nm,0.3s,baz=284,slow=19,SNR=10						
	7.8nm,0.9s						
ASAR	**Alice Springs**	**42.78**	**272**	P	P	18 07 48.5	+0.1
	0.2nm,0.7s,baz=113,slow=7.3,SNR=6.0						
	0.2nm,0.7s						
WRA	**Warramunga Arr**	**44.17**	**277**	P	P	18 07 59.1	-0.6
	0.4nm,0.9s,baz=119,slow=7.2,SNR=1.8						
	0.4nm,0.9s						
FINES	**FINESS Array B**	**149.25**

ILAR	**Eielson Array**	**150.37**	**312**	PKPbc	**PKPbc**	**18**	**25**	**00.2**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=136,slow=4.9,SNR=4.6								

*TEH **23** 18:10:21.6, 38°.61N × 44°.31E, h10 km ± 100 km, ML2.6, Presumed earthquake*
*AZER **23** 18:10:24.8, 38°.43N × 44°.52E, h10 km, ml2.5*
*AFAD **23** 18:10:25.9, 38°.42N × 44°.39E, h8 km ± 3 km, ML2.4*

ISC 23 18:10:26.3 ± 1.0, 38°.45N ± 0°.03 × 44°.43E ± 0°.02, h16 km ± 9 km, n30, σ1°39/54, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.40**	**301**	P		**Pg**	**18 10 34.2**	**-0.4**
OZAP				S		**Sg**	**18 10 39.5**	**-0.7**
OZAP				IAML			18 10 42.0	
	comp=E,616nm,0.4s							
OZAP				IAML			18 10 44.0	
	comp=N,438nm,0.7s							
TVAN	**Van**	**0.81**	**276**	P		**Pb**	**18 10 40.9**	**-1.2**
TVAN				S		**Sb**	**18 10 52.6**	**-0.2**
TVAN				IAML			18 11 04.0	
	comp=N,165nm,0.7s							
TVAN				IAML			18 11 10.0	
	comp=E,136nm,0.6s							
VMUR	**Van-Muradiye**	**0.86**	**309**	P		**Pg**	**18 10 43.3**	**+0.2**
VMUR				S		**Sg**	**18 10 55.3**	**+0.9**
ISHB	**Shabestar**	**0.95**	**100**	Pg		**Pb**	**18 10 42.3**	**-2.2**
HAKT	**HAKKARI**	**1.06**	**213**	P		**Pb**	**18 10 45.5**	**-0.9**
HAKT				S		**Sb**	**18 10 59.7**	**-0.5**
HAKT				IAML			18 11 05.0	
	comp=N,79nm,0.3s							
HAKT				IAML			18 11 11.0	
	comp=E,100nm,0.7s							
HAKT	**HAKKARI**	**1.06**	**213**	P		**Pb**	**18 10 45.9**	**-0.6**
HAKT				S		**Sn**	**18 11 03.4**	**+2.1**
GEVA	**Gevas**	**1.09**	**263**	P		**Pb**	**18 10 45.0**	**-1.8**
GEVA				S		**Sg**	**18 11 02.0**	**+0.4**
GEVA				IAML			18 11 05.0	
	comp=N,74nm,0.5s							
NAX	**Nakhchivan**	**1.10**	**49**	P		**Pb**	**18 10 46.5**	**-0.5**
NAX				S		**Sg**	**18 11 02.7**	**+0.8**
DYDN	**Diyadin**	**1.23**	**332**	P		**Pn**	**18 10 47.6**	**-1.5**
DYDN				S		**Sb**	**18 11 03.2**	**-1.9**
DYDN				IAML			18 11 11.0	
	comp=E,62nm,0.7s							
DYDN				IAML			18 11 13.0	
	comp=N,60nm,0.7s							
SBZ	**Shahbuz**	**1.28**	**43**	P		**Pn**	**18 10 49.6**	**-0.1**
SBZ				S		**Sg**	**18 11 09.8**	**+1.9**
HYR	**Heyderabad**	**1.30**	**14**	P		**Pg**	**18 10 51.0**	**-0.4**
HYR				S		**Sg**	**18 11 09.7**	**+1.2**
ORD	**Ordubad**	**1.31**	**68**	P		**Pn**	**18 10 49.9**	**-0.1**
ORD				S		**Sg**	**18 11 08.8**	**0.0**
ITBZ	**Tabriz**	**1.37**	**99**	Pg		**Pn**	**18 10 50.2**	**-0.7**
ADCV	**BITLIS_Adilcev**	**1.38**	**285**	P		**Pb**	**18 10 52.0**	**+0.1**
ADCV				S		**Sg**	**18 11 11.8**	**+0.8**
IGDI	**IGDIR**	**1.44**	**349**	P		**Pb**	**18 10 53.2**	**+0.5**
IGDI				S		**Sg**	**18 11 12.6**	**-0.2**
IGDI				IAML			18 11 19.0	
	comp=E,47nm,1.0s							
IGDI	**IGDIR**	**1.44**	**349**	P		**Pg**	**18 10 53.9**	**-0.2**
IGDI				S		**Sg**	**18 11 15.4**	**+2.6**
IAZR	**Azarshahr**	**1.45**	**122**	Pg		**Pb**	**18 10 52.7**	**-0.3**
IAZR				Sg		**Sg**	**18 11 16.2**	**+3.1**
PERV	**Siirt/Pervari-**	**1.57**	**252**	P		**Pb**	**18 10 55.6**	**+0.5**
PERV				S		**Sg**	**18 11 17.9**	**+0.9**
PERV				IAML			18 11 24.0	
	comp=N,92nm,0.5s							
DORK	**Agr/Tutak/Do**	**1.59**	**306**	P		**Pn**	**18 10 54.1**	**+0.2**
KOTA	**Agri, Merkez-K**	**1.65**	**325**	P		**Pb**	**18 10 56.3**	**-0.2**
KOTA				S		**Sn**	**18 11 15.3**	**-0.4**
IHRS	**Heris**	**2.06**	**93**	Pn		**Pb**	**18 11 03.1**	**-0.3**
QRD	**Qoradiz**	**2.47**	**65**	P		**Pb**	**18 11 08.3**	**-1.9**
QRD				S		**Sb**	**18 11 40.1**	**-0.3**
GDB	**GEDABAY**	**2.48**	**24**	P		**Pb**	**18 11 10.6**	**0.0**
GDB				S		**Sb**	**18 11 42.2**	**+1.1**
GANJ	**Ganja**	**2.63**	**33**	P		**Pb**	**18 11 11.5**	**-1.6**
GANJ				S		**Sb**	**18 11 45.5**	**+0.3**
AGDM	**Agdam**	**2.65**	**51**	P		**Pb**	**18 11 13.1**	**-0.4**
AGDM				S		**Sb**	**18 11 45.8**	**-0.1**
YRD	**Yardimli**	**3.02**	**80**	P		**Pn**	**18 11 16.0**	**+2.4**
YRD				S		**Sb**	**18 11 55.3**	**-1.2**
LRK	**Lerik**	**3.07**	**85**	P		**Pn**	**18 11 16.8**	**+2.5**
LRK				S		**Sg**	**18 12 04.2**	**-0.8**
DGRG	**David-gareji**	**3.08**	**13**	P		**Pg**	**18 11 24.4**	**-1.0**
VSHL	**Vashlovani**	**3.16**	**28**	P		**Pg**	**18 11 26.1**	**-0.7**
VSHL				S		**Sg**	**18 12 10.8**	**+3.0**
ASTR	**Astara**	**3.42**	**87**	S		**Sb**	**18 12 03.9**	**-4.0**

*IDC **23** 18:16:35.9 ± 2.0, 7°.22S × 129°.14E, h160 km ± 23 km, mb2.9/2, mbtmp3.7/7, Error ellipse: s-maj=34.0km s-min=19.7km az=96.0*

ISC 23 18:16:33.8 ± 0.8, 7°.38S ± 0°.06 × 129°.43E ± 0°.08, h150 km, n15, σ3°55/18, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DRS	**Darwin Rock St**	**5.22**	**164**	P		Pn	18 17 56.2	+6.1
SOEI	**Soe**	**5.62**	**245**	P		**Pn**	**18 17 58.1**	**+2.5**
BATI	**Baumata**	**6.35**	**243**	P		**Pn**	**18 18 06.6**	**+1.4**
	52nm,0.4s,baz=129,slow=2.1,SNR=15							
BATI				S		**Sn**	**18 19 13.3**	**-3.6**
	38nm,0.4s,baz=44,slow=19,SNR=13							
SIJI	**Sorong**	**6.72**	**16**	P		**Pn**	**18 18 11.2**	**+0.9**
	2.3nm,0.5s,baz=226,slow=23,SNR=23							
SIJI				S		**Sn**	**18 19 22.5**	**-3.3**
	4.9nm,0.2s,baz=235,slow=23,SNR=9.9							
FITZ	**Fitzroy Crossi**	**11.27**	**199**	P		**Pn**	**18 19 11.8**	**+1.2**
	1.1nm,0.5s,baz=29,slow=9.2,SNR=16							
FITZ				S		**Sn**	**18 21 10.3**	**-5.0**
	2.6nm,0.3s,baz=233,slow=19,SNR=8.5							
TOLI2	**Tolitoli**	**12.07**	**314**	P		Pn	18 19 09.8	-11
WRAB	**Tennant Creek**	**13.36**	**160**	P		**P**	**18 19 43.6**	**+1.8**
WRA	**Warramunga Arr**	**13.36**	**160**	P		**Pn**	**18 19 40.6**	**+2.9**
	0.6nm,0.2s,baz=329,slow=14,SNR=43							
WRA				S		**Sn**	**18 22 03.8**	**-1.8**
	1.1nm,0.4s,baz=336,slow=22,SNR=8.7							
WB1	**Warramunga Ar.**	**13.38**	**160**	P		**P**	**18 19 42.7**	**+0.6**
COEN	**Coen**	**15.00**	**117**	P		**Pn**	**18 19 53.8**	**-4.5**
QIS	**Mount Isa**	**16.39**	**144**	P		**Pn**	**18 20 22.1**	**+6.7**
ASAR	**Alice Springs**	**16.75**	**166**	P		**Pn**	**18 20 25.1**	**+5.3**
	0.6nm,0.4s,baz=345,slow=11,SNR=33							
ASAR				S		**S**	**18 23 21.9**	**-4.1**
	0.3nm,0.6s,baz=342,slow=21,SNR=2.4							
MTSU	**Mount Surprise**	**18.01**	**128**	P		**P**	**18 20 34.8**	**+1.5**
MKAR	**Makanchi Array**	**68.24**	**327**	P		**P**	**18 27 17.5**	**-0.8**
	0.1nm,0.3s,baz=119,slow=7.3,SNR=7.1							
	0.1nm,0.3s							
KURBB	**Kurchatov Arra**	**72.54**	**329**	P		**P**	**18 27 43.6**	**-0.7**
	0.2nm,0.6s,baz=123,slow=5.1,SNR=2.2							
	0.2nm,0.6s							

SCB 23 18:20:47.6 ± 1.2, 21°.56S × 66°.76W, h221 km ± 10 km, ML3.5/4, Error ellipse: s-maj=5.0km s-min=2.4km az=0.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MOCB	**Mochara**	**1.09**	**74**	P		Pn	18 21 21.0	+0.3
YJA	**Yavi**	**1.31**	**118**	P		Pn	18 21 22.8	+0.6
AOVT	**TarijaAcel**	**1.91**	**90**	P		Pn	18 21 27.6	+0.5
PB09	**IPOC Station P**	**2.32**	**264**	P		Pn	18 21 32.0	+0.8
PB01	**IPOC Station P**	**2.60**	**281**	P		Pn	18 21 35.2	+1.2
PB01				S		S	18 22 10.1	0.0
PB01				IAML			18 22 11.9	
	81nm,0.2s							
PB08	**IPOC Station P**	**2.65**	**302**	P		Pn	18 21 34.5	-0.4
PB03	**IPOC Station P**	**2.83**	**260**	P		Pn	18 21 37.5	+0.9
PB03				S		S	18 22 14.1	-0.6
PB03				IAML			18 22 15.1	
	92nm,0.2s							
PB07	**IPOC Station P**	**2.92**	**266**	P		Pn	18 21 38.1	+0.5
PB02	**IPOC Station P**	**2.93**	**274**	P		Pn	18 21 38.6	+0.9
PB02				S		S	18 22 15.8	-1.0
PB02				IAML			18 22 18.9	
	117nm,0.2s							
GO01	**Chusmiza**	**2.96**	**309**	P		Pn	18 21 39.5	+1.0
SOEO	**Opoqueri**	**3.17**	**340**	P		Pn	18 21 42.1	+1.2
HMBC	**Humberstone**	**3.19**	**293**	P		Pn	18 21 40.9	+0.1
PB11	**IPOC Station P**	**3.25**	**303**	P		Pn	18 21 41.9	+0.4
PB11				S		S	18 22 23.0	-0.5
PB11				IAML			18 22 24.6	
	139nm,0.2s							
PB05	**IPOC Station P**	**3.44**	**247**	P		Pn	18 21 44.6	+1.0
SOET	**ToroToro**	**3.54**	**15**	P		Pn	18 21 45.8	+0.7
AOEA	**Aiquile**	**3.66**	**23**	P		Pn	18 21 46.4	0.0
PSGC	**Pisagua**	**3.71**	**301**	P		Pn	18 21 47.0	+0.2
PB16	**IPOC Station P**	**4.12**	**321**	P		Pn	18 21 53.5	+1.2
PB12	**IPOC Station P**	**4.46**	**311**	P		Pn	18 21 55.8	-0.1
SOEJ	**Jacaque**	**4.76**	**343**	P		Pn	18 22 01.0	+0.9
BBOE	**La Paz, Chanca**	**4.87**	**346**	P		Pn	18 22 02.2	+0.7
BBOD	**La Paz, Gloria**	**5.20**	**340**	P		Pn	18 22 06.6	+0.9
LPAZ	**La Paz**	**5.41**	**346**	P		Pn	18 22 08.9	+0.6
SIV	**San Ignacio**	**7.73**	**45**	P		Pn	18 22 36.5	-1.0
LCO	**Las Campanas**	**8.23**	**205**	P		Pn	18 22 44.4	+0.4

*MAN **23** 18:23:55.0, 13°.71N × 120°.64E, h175 km, MS3.5*
*IDC **23** 18:23:55.1 ± 0.6, 13°.59N × 120°.87E, h179 km ± 6 km, mb3.2/7, mbtmp3.7/7, Error ellipse: s-maj=42.2km s-min=12.3km az=63.0*

ISC 23 18:23:54.5 ± 0.9, 13°.45N ± 0°.08 × 120°.2E ± 0°.1, h150 km, n13, σ2°56/15, mb3.6/7, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TGY	**Tagaytay City**	**0.96**	**48**	P		**Pn**	**18 24 21.0**	**+2.0**
	2µm,0.5s,baz=241,slow=1.9,SNR=40							
TGY				S		**Sn**	**18 24 39.9**	**+2.1**
	803nm,0.7s,baz=342,slow=21,SNR=6.5							
TGY	**Tagaytay City**	**0.96**	**48**	*i* P		**Pn**	**18 24 21.0**	**+2.0**
TGY				*e*S		**Sn**	**18 24 40.0**	**+2.3**
PCPS	**Palayan City**	**1.45**	**35**	*e*P		Pn	18 24 31.6	+8.1
PCPS				*e*S		Sn	18 24 58.7	+13
BOLP	**Bolinao**	**2.92**	**354**	*i* P		**Pn**	**18 24 42.3**	**+1.4**
BOLP				*i* S		**Sn**	**18 25 15.9**	**-1.0**
RCP	**Roxas**	**3.11**	**127**	*e*P		**Pn**	**18 24 43.7**	**+0.4**
JAP	**San Jose, Anti**	**3.18**	**147**	*e*P		**Pn**	**18 24 47.6**	**+3.4**
CMAR	**Chiang Mai Arr**	**21.04**	**286**	P		**P**	**18 28 31.1**	**+4.4**
	0.8nm,0.8s,baz=95,slow=7.8,SNR=7.9							
	0.8nm,0.8s							
WRA	**Warramunga Arr**	**35.98**	**157**	P		**P**	**18 30 37.6**	**-3.5**
	0.7nm,0.4s,baz=337,slow=9.4,SNR=23							
	0.7nm,0.4s							
SONM	**Songino Array**	**36.16**	**344**	P		**P**	**18 30 40.6**	**-1.9**
	0.7nm,0.5s,baz=162,slow=10,SNR=7.6							
	0.7nm,0.5s							
ASAR	**Alice Springs**	**39.25**	**160**	P		**P**	**18 31 05.7**	**-2.8**
	0.6nm,0.4s,baz=339,slow=7.2,SNR=16							
	0.6nm,0.4s							
MKAR	**Makanchi Array**	**45.95**	**324**	P		**P**	**18 32 02.3**	**-0.1**
	0.6nm,0.7s,baz=124,slow=8.9,SNR=9.3							
	0.6nm,0.7s							
ZALV	**Zalesovo Beam**	**49.06**	**333**	P		**P**	**18 32 24.3**	**-1.9**
	0.6nm,0.3s,baz=114,slow=6.2,SNR=5.9							
	0.6nm,0.3s							
KURBB	**Kurchatov Arra**	**50.13**	**327**	P		**P**	**18 32 34.3**	**0.0**
	0.9nm,0.8s,baz=120,slow=8.9,SNR=9.5							
	0.9nm,0.8s							

*IDC **23** 18:32:15.8 ± 1.3, 39°.04N × 109°.72E, h0 km, mb3.4/5, mbtmp3.4/6, ML3.5/1, MS3.2/2, Error ellipse: s-maj=44.4km s-min=18.4km az=63.0*

ISC 23 18:32:17.6 ± 1.3, 39°.0N ± 0°.1 × 109°.6E ± 0°.3, h10 km, n8, σ0°20/6, mb3.4/5, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SONM	**Songino Array**	**9.16**	**346**	Pn		**Pn**	**18 34 29.9**	**0.0**
	0.5nm,0.3s,baz=164,slow=13,SNR=12							
SONM				Lg		Lg	18 37 02.4	
	0.3nm,0.3s,baz=159,slow=30,SNR=9.0							
	0.9nm,0.4s							
TLY	**Talaya**	**13.38**	**344**	LR		LR	18 41 26.5	
	comp=Z,51nm,18.1s,baz=288,slow=41							
MKAR	**Makanchi Array**	**21.42**	**300**	P		**P**	**18 37 05.5**	**-0.1**
	0.6nm,0.5s,baz=93,slow=12,SNR=13							
	0.6nm,0.5s							
CMAR	**Chiang Mai Arr**	**22.45**	**207**	P		**P**	**18 37 16.8**	**0.0**
	0.6nm,0.8s,baz=18,slow=8.4,SNR=4.4							
	0.6nm,0.8s							
KURBB	**Kurchatov Arra**	**24.76**	**308**	P		**P**	**18 37 39.3**	**+0.1**
	0.7nm,0.8s,baz=109,slow=9.8,SNR=6.7							
	0.7nm,0.8s							
KAPI	**Kappang**	**44.76**	**166**	LR		LR	19 01 48.7	
	comp=Z,42nm,18.0s,baz=201,slow=40							
WRA	**Warramunga Arr**	**63.02**	**154**	P		**P**	**18 42 44.5**	**-0.2**
	0.6nm,0.8s,baz=341,slow=5.5,SNR=3.9							
	0.6nm,0.8s							
ASAR	**Alice Springs**	**66.33**	**156**	P		**P**	**18 43 06.6**	**+0.2**
	0.3nm,0.5s,baz=341,slow=6.1,SNR=7.7							
	0.3nm,0.5s							

*IDC **23** 18:34:07.5 ± 3.4, 11°.26S × 115°.04E, h0 km, mb2.9/3, mbtmp3.0/3, Error ellipse: s-maj=182.2km s-min=30.2km az=46.0*
*DJA **23** 18:34:13.0 ± 1.6, 11°.5S ± 14°.× 11°.5E ± °, h20 km ± 27 km, M3.5/8, mb3.7/2, MLv3.5/8*

ISC 23 18:34:13.3 ± 1.6, 11°.0S ± 0°.1 × 115°.2E ± 0°.1, h42 km, n9, σ1°21/11, South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IGBI	**Denpasar**	**2.16**	**358**	P		**Pn**	**18 34 45.4**	**-1.4**
IGBI				S		**Sn**	**18 35 11.8**	**-0.6**
RTBI	**Rangdo, Negare**	**2.53**	**354**	P		**Pn**	**18 34 51.9**	**0.0**
KHKI	**Kahang-Kahang**	**2.64**	**8**	P		**Pn**	**18 34 54.6**	**+1.2**
JAGI	**Jajag, Banyuwa**	**2.72**	**337**	P		**Pn**	**18 34 53.6**	**-0.9**
JAGI				S		**Sn**	**18 35 25.9**	**-0.2**
PLAI	**Plampang**	**3.31**	**50**	P		**Pn**	**18 35 01.0**	**-1.7**
DBNI	**Kabupaten Domp**	**3.93**	**51**	P		**Pn**	**18 35 12.2**	**+1.1**
WRA	**Warramunga Arr**	**20.45**	**118**	P		**P**	**18 38 46.5**	**-0.9**
	0.3nm,0.7s,baz=291,slow=10,SNR=2.1							
	0.3nm,0.7s							
ASAR	**Alice Springs**	**21.81**	**128**	P		**P**	**18 39 01.6**	**-0.4**
	0.2nm,0.6s,baz=299,slow=10,SNR=6.3							
	0.2nm,0.6s							
MKAR	**Makanchi Array**	**64.62**	**336**	P		**P**	**18 44 48.0**	**+1.5**
	0.3nm,0.8s,baz=149,slow=6.7,SNR=2.4							
	0.3nm,0.8s							

IDC 23 18:35:41.0 ± 4.7, 3°.47S × 128°.39E, h141 km ± 58 km, mb2.4/2, mbtmp3.2/5, Error ellipse: s-maj=63.5km s-min=20.4km az=91.0, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SIJI	**Sorong**	**3.86**	**48**	P		Pn	18 36 40.0	+0.8
	4.1nm,0.2s,baz=308,slow=23,SNR=32							
SIJI				S		Sn	18 37 24.6	+0.2
	5.3nm,0.2s,baz=247,slow=23,SNR=12							
FITZ	**Fitzroy Crossi**	**14.78**	**190**	P		Pn	18 39 03.9	+0.8
	1.1nm,0.7s,baz=6.3,slow=18,SNR=1.9							
WRA	**Warramunga Arr**	**17.37**	**161**	P		P	18 39 32.9	-1.2
	0.1nm,0.3s,baz=342,slow=12,SNR=5.6							
ASAR	**Alice Springs**	**20.77**	**166**	P		P	18 40 11.1	+0.1
	0.1nm,0.3s,baz=344,slow=9.4,SNR=4.7							
	0.1nm,0.3s							
MKAR	**Makanchi Array**	**64.42**	**327**	P		P	18 46 02.3	+0.1
	0.1nm,0.6s,baz=125,slow=7.6,SNR=1.9							
	0.1nm,0.6s							

*GCG **23** 18:41:00.9 ± 1.2, 14°.28N × 92°.61W, h19 km ± 23 km, MD3.8, Presumed earthquake*
*MEX **23** 18:41:02.5 ± 0.5, 14°.35N × 92°.65W, h60 km ± 20 km, MD4.0*

ISC 23 18:41:01.6 ± 2.1, 14°.3N ± 0°.1 × 92°.63W ± 0°.06, h62 km, n21, σ2°28/26, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
THIG		**0.69**	**31**	*e*P		**Pn**	**18 41 14.8**	**-1.1**
THIG				*e*S		**Sn**	**18 41 23.5**	**-2.8**
PATR	**El Naranjo**	**0.88**	**26**	*e*P		**Pn**	**18 41 17.2**	**-1.3**
PATR				*e*S		**Sn**	**18 41 29.1**	**-1.9**
CHUJ	**Union Juarez**	**0.92**	**33**	*e*P		**Pn**	**18 41 18.0**	**-1.0**
CHUJ				*e*S		**Sn**	**18 41 30.2**	**-1.6**
RTAL	**Retalhuleu**	**0.93**	**77**	*e*P		**Pn**	**18 41 18.1**	**-0.8**
RTAL				*e*S		**Sn**	**18 41 31.1**	**-0.5**
PAVE	**Pavencul**	**0.98**	**27**	*e*P		**Pn**	**18 41 18.6**	**-1.1**
PAVE				*e*S		**Sn**	**18 41 31.7**	**-1.3**
STG2	**El Palmar, Qui**	**1.22**	**84**	*i* P		Pn	18 41 20.1	-2.7
STG5	**El Palmar, Qui**	**1.24**	**86**	*i* P		Pn	18 41 20.3	-2.8
STG8	**El Palmar, Qui**	**1.25**	**84**	*i* P		Pn	18 41 20.6	-2.6
SOKI	**Kika Raxquin**	**1.29**	**67**	*i* P		**Pn**	**18 41 24.1**	**+0.2**
HUEH	**Huehuetenango**	**1.48**	**47**	*e*P		Pn	18 41 18.7	-7.6
HUEH				*e*S		**Sn**	**18 41 47.0**	**+2.2**
PCIG		**1.49**	**338**	*e*P		**Pn**	**18 41 25.6**	**-0.7**
PCIG				*e*S		**Sn**	**18 41 42.6**	**-2.3**
FG8	**Yepocapa, Chim**	**2.00**	**91**	*i* P		Pn	18 41 28.3	-5.0
CCIG	**Comitan**	**2.01**	**14**	*e*P		**Pn**	**18 41 34.3**	**+0.8**
CCIG				*e*S		**Sn**	**18 42 00.4**	**+2.7**
CCIG	**Comitan**	**2.01**	**14**	*i* P		**Pn**	**18 41 34.6**	**+1.1**
FG16	**Alotenango, Sa**	**2.05**	**91**	*i* P		Pn	18 41 29.6	-4.5
APG	**El Apazote**	**2.20**	**72**	*i* P		**Pn**	**18 41 37.9**	**+1.8**
CARR	**Arriaga**	**2.29**	**327**	*e*P		**Pn**	**18 41 35.2**	**-1.9**
CARR				*e*S		**Sn**	**18 42 04.9**	**+0.8**
TGIG		**2.49**	**349**	*e*P		**Pn**	**18 41 39.5**	**-0.4**
TGIG				*e*S		**Sn**	**18 42 09.7**	**+0.4**
TGIG		**2.49**	**349**	*i* P		**Pn**	**18 41 41.6**	**+1.6**
CMIG	**Matias Romero**	**3.51**	**322**	*e*P		**Pn**	**18 41 52.1**	**-1.7**
CMIG				*e*S		Sn	18 42 26.4	-7.7
NEUV	**Arroyo Zacate**	**4.55**	**318**	*e*P		**Pn**	**18 42 05.8**	**-2.3**
NEUV				*e*S		**Sn**	**18 43 07.3**	**+7.7**

*IDC **23** 18:50:28.4 ± 4.4, 11°.92S × 114°.42E, h0 km, mb2.9/3, mbtmp3.0/3, MS3.1/1, Error ellipse: s-maj=234.7km s-min=30.2km az=44.0*
*DJA **23** 18:50:31.2 ± 2.3, 11°.S ± 21°.× 11°.5E ± °, h10 km, M3.5/8, MLv3.5/8*

ISC 23 18:50:35.4 ± 1.7, 11°.2S ± 0°.2 × 115°.2E ± 0°.1, h35 km, n11, σ1°03/10, South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IGBI	**Denpasar**	**2.32**	**359**	P		**Pn**	**18 51 09.9**	**-1.2**
RTBI	**Rangdo, Negare**	**2.69**	**354**	P		**Pn**	**18 51 15.4**	**-0.8**
KHKI	**Kahang-Kahang**	**2.80**	**8**	P		**Pn**	**18 51 18.6**	**+0.9**
JAGI	**Jajag, Banyuwa**	**2.86**	**339**	P		**Pn**	**18 51 17.5**	**-1.1**
PLAI	**Plampang**	**3.43**	**48**	P		**Pn**	**18 51 25.7**	**-0.7**
DBNI	**Kabupaten Domp**	**4.04**	**50**	P		**Pn**	**18 51 34.7**	**-0.1**
WBSI	**Waikabubak, Su**	**4.38**	**70**	P		**Pn**	**18 51 38.3**	**-1.3**
WRA	**Warramunga Arr**	**20.38**	**118**	P		**P**	**18 55 10.0**	**+0.6**
	0.4nm,1.0s,baz=286,slow=12,SNR=1.7							
	0.4nm,1.0s							
ASAR	**Alice Springs**	**21.72**	**127**	P		**P**	**18 55 23.8**	**0.0**
	0.3nm,0.6s,baz=299,slow=10.0,SNR=6.7							
	0.3nm,0.6s							
JAY	**Jayapura**	**26.71**	**73**	LR		LR	19 09 42.4	
	comp=Z,38nm,19.8s,baz=80,slow=42							
MKAR	**Makanchi Array**	**64.76**	**336**	P		**P**	**19 01 11.2**	**+0.8**
	0.2nm,0.7s,baz=159,slow=7.6,SNR=3.0							
	0.2nm,0.7s							

*IDC **23** 19:20:27.6 ± 1.1, 4°.60N × 127°.31E, h0 km, mb3.6/7, mbtmp3.6/8, ML3.3/1, Error ellipse: s-maj=85.8km s-min=16.2km az=68.0*
*MAN **23** 19:20:39.0, 5°.18N × 127°.80E, h41 km, MS3.4*

ISC 23 19:20:32.7 ± 2.2, 4°.8N ± 0°.2 × 128°.0E ± 0°.1, h35 km, n13, σ2°63/11, mb3.5/7, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DDMP	**Don Marcelino,**	**2.62**	**301**	*e*P		**Pn**	**19 21 14.7**	**+2.2**
DDMP				*e*S		**Sn**	**19 21 44.4**	**+1.3**
GSPH	**General Santos**	**3.28**	**294**	*i* P		**Pn**	**19 21 23.2**	**+1.3**
GSPH				*i* S		**Sn**	**19 21 56.0**	**-3.7**
CDOP	**Cateel, Davao**	**3.38**	**333**	*e*P		**Pn**	**19 21 24.9**	**+1.9**
CDOP				*i* S		**Sn**	**19 21 58.5**	**-3.4**
KCP	**Kidapawan**	**3.63**	**308**	*e*P		Pn	19 21 32.5	+5.9
CGP	**Cagayan de Oro**	**4.91**	**319**	*e*P		**Pn**	**19 21 47.9**	**+3.8**
CGP				*e*S		**Sn**	**19 22 39.5**	**-0.2**
SIJI	**Sorong**	**6.48**	**149**	Pn		Pn	19 22 09.6	+3.8
	0.6nm,0.3s,baz=251,slow=23,SNR=10							
SIJI				Sn		Sn	19 23 18.5	-0.1
	1.0nm,0.3s,baz=204,slow=23,SNR=6.4							
	2.5nm,0.4s							
FITZ	**Fitzroy Crossi**	**22.82**	**186**	P		P	19 25 29.9	-2.9
	1.6nm,0.9s,baz=355,slow=11,SNR=3.1							
	1.6nm,0.9s							
WRA	**Warramunga Arr**	**25.33**	**166**	P		P	19 25 56.0	-0.4
	0.3nm,0.4s,baz=344,slow=10.0,SNR=11							
	0.3nm,0.4s							
ASAR	**Alice Springs**	**28.83**	**169**	P		P	19 26 27.4	-0.5
	0.3nm,

PLAI	**Plampang**	**3.50**	**45**	P	**Pn**	19 31 41.6	**+0.7**
PLAI	**Plampang**	**3.50**	**45**	P	**Pn**	19 31 41.6	**+0.7**
ABJI	**Asem Bagus**	**3.66**	**344**	P	**Pn**	19 31 44.8	**+1.7**
BLJI	**Banyuglugur**	**3.93**	**335**	P	**Pn**	19 31 46.8	**0.0**
DBNI	**Kabupaten Domp**	**4.10**	**47**	P	**Pn**	19 31 50.6	**+1.3**
WBSI	**Waikabubak, Su**	**4.38**	**68**	P	**Pn**	19 31 53.2	**+0.1**
KMMI	**Kalianget**	**4.44**	**343**	P	**Pn**	19 31 54.1	**+0.2**
SNJI	**Sawahan-Nganju**	**4.94**	**315**	P	**Pn**	19 32 01.1	**+0.1**
PCJI	**Pacitan**	**5.10**	**307**	P	**Pn**	19 32 01.4	**-1.6**
LBFI	**Labuhan Bajo,**	**5.36**	**59**	P	**Pn**	19 32 07.6	**+1.1**
UGM	**Wanagama**	**5.79**	**305**	P	**Pn**	19 32 11.7	**-0.7**
UGM	**Wanagama**	**5.79**	**305**	Pn	**Pn**	19 32 11.4	**-1.0**
BSSI	**Bau Bau, Buton**	**7.29**	**45**	P	**Pn**	19 32 35.8	**+2.8**
MMRI	**Maumere**	**7.36**	**69**	P	**Pn**	19 32 36.4	**+2.3**
MMRI	**Maumere**	**7.36**	**69**	S	**Sn**	19 33 56.9	**+0.5**
MMRI	**Maumere**	**7.36**	**69**	Pn	**Pn**	19 32 31.7	**-2.4**
KAPI	**Kappang**	**7.68**	**36**	Pn	Pn	19 32 33.4	-5.0
	3.7nm,0.2s,baz=82,slow=16,SNR=1.1						
BATI	**Baumata**	**8.32**	**83**	Pn	**Pn**	19 32 45.5	**-1.8**
	4.5nm,0.4s,baz=98,slow=21,SNR=1.5						
BATI				Sn	**Sn**	19 34 18.7	**-1.3**
	3.5nm,0.3s,baz=213,slow=23,SNR=3.0						
BBJI	**Bungbulang**	**8.45**	**296**	P	**Pn**	19 32 47.8	**-1.2**
BBJI	**Bungbulang**	**8.45**	**296**	S	**Sn**	19 34 18.7	**-4.5**
BBJI	**Bungbulang**	**8.45**	**296**	Pn	**Pn**	19 32 48.5	**-0.5**
SOEI	**Soe**	**8.98**	**81**	P	**Pn**	19 32 58.4	**+2.0**
SOEI	**Soe**	**8.98**	**81**	S	**Sn**	19 34 37.0	**+0.6**
SOEI	**Soe**	**8.98**	**81**	Pn	**Pn**	19 32 53.5	**-2.8**
MBWA	**Marble Bar**	**10.67**	**157**	P	**Pn**	19 33 19.5	**+0.1**
MBWA	**Marble Bar**	**10.67**	**157**	Pn	**Pn**	19 33 18.6	**-0.8**
PSA00	**Pilbara Seismi**	**11.09**	**157**	P	**Pn**	19 33 26.3	**+1.1**
PSA00	**Pilbara Seismi**	**11.09**	**157**	Pn	**Pn**	19 33 24.8	**-0.4**
GIRL	**Giralia**	**11.30**	**185**	Pn	**Pn**	19 33 28.4	**+0.4**
FITZ	**Fitzroy Crossi**	**12.07**	**125**	Pn	**Pn**	19 33 38.6	**-0.1**
	0.4nm,0.3s,baz=316,slow=7.3,SNR=15						
FITZ				Sn	**Sn**	19 35 45.5	**-6.6**
	0.8nm,0.3s,baz=177,slow=20,SNR=6.5						
KNRA	**Kununurra**	**13.81**	**110**	Pn	**Pn**	19 34 03.6	**+1.3**
MEEK	**Meekatharra**	**15.55**	**169**	P	**Pn**	19 34 26.3	**+0.6**
MORW	**Morawa**	**17.67**	**178**	P	**P**	19 34 53.3	**+0.2**
MORW	**Morawa**	**17.67**	**178**	Pn	**Pn**	19 34 51.3	**-1.1**
MORW				IAmb	IAmb	19 35 13.1	
	comp=Z,22nm,1.4s						
FAKI	**Fak Fak**	**18.79**	**65**	P	**P**	19 35 06.0	**+0.5**
FAKI	**Fak Fak**	**18.79**	**65**		**P**	19 35 05.5	**0.0**
FAKI				IAmb	IAmb	19 35 32.6	
	comp=Z,13nm,0.9s						
WB0	**Warramunga Arr**	**20.22**	**117**		Pn	19 35 25.5	+2.2
WRA	**Warramunga Arr**	**20.24**	**117**	P	Pn	19 35 24.6	+1.1
	comp=Z,2.1nm,0.9s,baz=292,slow=11,SNR=11						
WRA				S	**S**	19 38 57.5	**-9.3**
	comp=Z,0.3nm,0.9s,baz=295,slow=22,SNR=1.4						
	comp=Z,2.1nm,0.9s						
WR8	**Warramunga Arr**	**20.39**	**117**		Pn	19 35 27.7	+2.5
WR8				IAmb	IAmb	19 35 43.2	
	comp=Z,5.5nm,0.9s						
AS31	**Alice Springs**	**21.56**	**127**	P	**P**	19 35 35.1	**-0.5**
ASAR	**Alice Springs**	**21.56**	**127**	P	**P**	19 35 40.8	**+5.1**
	comp=Z,1.9nm,0.7s,baz=299,slow=10,SNR=43						
ASAR				S	**S**	19 39 31.6	**-1.3**
	comp=Z,1.1nm,0.9s,baz=306,slow=23,SNR=6.7						
	comp=Z,1.9nm,0.7s						
ASAR	**Alice Springs**	**21.56**	**127**	P	**P**	19 35 35.8	**+0.1**
NWAO	**Narrogin (SRO)**	**21.57**	**176**	P	P	19 35 43.8	+8.1
	comp=Z,4.1nm,0.6s,baz=3.5,slow=12,SNR=9.6						
	comp=Z,4.1nm,0.6s						
GSI	**Gunungsitoli**	**21.61**	**304**	P	**P**	19 35 36.1	**-0.1**
GSI				IAmb	IAmb	19 36 00.4	
	comp=Z,9.1nm,1.3s						
FORT	**Forrest**	**22.70**	**150**	P	**P**	19 35 51.3	**+3.6**
FORT				IAmb	IAmb	19 36 24.2	
	comp=Z,10nm,1.1s						
CMAR	**Chiang Mai Arr**	**33.70**	**331**	P	**P**	19 37 28.2	**+1.1**
	comp=Z,0.5nm,0.7s,baz=164,slow=8.5,SNR=4.4						
	comp=Z,0.5nm,0.7s						
H08S2	**Diego Garcia H**	**42.33**	**271**	T	T	20 23 54.2	
	baz=95						
H08S3	**Diego Garcia H**	**42.34**	**271**	T	T	20 23 52.1	
	baz=95						
H08S1	**Diego Garcia H**	**42.35**	**271**	T	T	20 23 55.5	
	baz=95						
SONM	**Songino Array**	**59.42**	**353**	P	**P**	19 40 49.5	**+1.3**
	comp=Z,0.4nm,0.6s,baz=163,slow=10,SNR=2.7						
	comp=Z,0.4nm,0.6s						
SONM	**Songino Array**	**59.42**	**353**	IAmb	IAmb	19 41 08.6	
	comp=Z,1.6nm,1.2s						
MKAR	**Makanchi Array**	**64.95**	**336**	P	**P**	19 41 27.0	**+1.8**
	comp=Z,1.6nm,0.8s,baz=149,slow=7.2,SNR=18						
	comp=Z,1.6nm,0.8s						
KURBB	**Kurchatov Arra**	**69.50**	**336**	P	**P**	19 41 55.8	**+1.9**
	comp=Z,1.0nm,0.2s,baz=148,slow=5.0,SNR=6.1						
	comp=Z,1.0nm,0.2s						
KURK	**Kurchatov**	**69.54**	**336**	P	**P**	19 41 55.8	**+1.7**
KURK	**Kurchatov**	**69.54**	**336**	IAmb	IAmb	19 42 08.7	
	comp=Z,2.3nm,0.7s						
ZALV	**Zalesovo Beam**	**69.98**	**341**	P	**P**	19 41 57.9	**+1.2**
	comp=Z,1.6nm,0.5s,baz=152,slow=5.1,SNR=9.8						
	comp=Z,1.6nm,0.5s						
ZALV	**Zalesovo Beam**	**69.98**	**341**	P	**P**	19 41 56.4	**-0.3**
VNDA	**Vanda**	**70.30**	**170**	P	**P**	19 42 01.2	**+2.8**

*ISK **23** 19:34:07.5,38.°10N×44.°67E,h5km,ML2.6/4*
*AFAD **23** 19:34:11.4,38.°38N×44.°49E,h4km±2km,ML2.4*
*AZER **23** 19:34:11.9,38.°46N×44.°57E,h10km,ml2.6*

ISC 23 19:34:11.1±1.2,38.°37N±0.°03×44.°57E±0.°02,h4km±10km, n32,σ1.8°20/59,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.54**	**303**	P	**Pg**	**19 34 21.2**	**-0.3**
OZAP				S	**Sg**	**19 34 28.1**	**-0.3**
OZAP				IAML		19 34 32.0	
	comp=N,402nm,0.6s						
OZAP				IAML		19 34 32.0	
	comp=E,365nm,0.6s						
TVAN	**Van**	**0.93**	**280**	P	**Pg**	**19 34 27.7**	**-1.2**
TVAN				S	**Sg**	**19 34 40.8**	**-0.1**
TVAN				IAML		19 34 48.0	
	comp=E,131nm,0.5s						
TVAN				IAML		19 34 49.0	
	comp=N,171nm,0.7s						
VMUR	**Van-Muradiye**	**1.00**	**309**	P	**Pg**	**19 34 29.9**	**-0.4**
VMUR				S	**Sg**	**19 34 43.6**	**+0.4**
VMUR				IAML		19 34 47.0	
	comp=N,128nm,0.4s						
VMUR				IAML		19 34 48.0	
	comp=E,115nm,0.3s						
HAKT	**HAKKARI**	**1.06**	**220**	P	**Pg**	**19 34 31.6**	**+0.2**
HAKT				S	**Sb**	**19 34 47.7**	**+1.3**
HAKT				IAML		19 34 52.0	
	comp=E,114nm,0.4s						
HAKT	**HAKKARI**	**1.06**	**220**	P	**Pb**	**19 34 32.6**	**+0.5**
HAKT				S	**Sn**	**19 34 51.4**	**+3.1**
NAX	**Nakhchivan**	**1.08**	**42**	P	**Pg**	**19 34 32.1**	**+0.2**
NAX				S	**Sn**	**19 34 47.9**	**-0.9**
GEVA	**Gevas**	**1.19**	**268**	P	**Pg**	**19 34 32.1**	**-1.8**
GEVA				S	**Sg**	**19 34 49.7**	**+0.4**
GEVA				IAML		19 34 54.0	
	comp=N,102nm,0.5s						
AKDM	**Akdamar-Van**	**1.25**	**269**	Pn	**Pg**	**19 34 33.6**	**-1.5**
AKDM				Sn	**Sn**	**19 34 52.8**	**-0.2**
ORD	**Ordubad**	**1.25**	**63**	P	**Pg**	**19 34 35.3**	**+0.2**
ORD				S	**Sn**	**19 34 53.5**	**+0.6**
SBZ	**Shahbuz**	**1.28**	**37**	P	**Pg**	**19 34 35.5**	**-0.3**
SBZ				S	**Sn**	**19 34 55.2**	**+1.4**
DYDN	**Diyadin**	**1.36**	**330**	P	**Pn**	**19 34 35.5**	**-1.6**
DYDN				IAML		19 34 59.0	
	comp=N,67nm,0.3s						
DYDN				IAML		19 35 00.0	
	comp=E,73nm,0.6s						
HYR	**Heyderabad**	**1.37**	**9**	P	**Pg**	**19 34 38.1**	**+0.7**
HYR				S	**Sn**	**19 34 56.3**	**+0.5**
ADCV	**BITLIS_Adilcev**	**1.51**	**288**	P	**Pn**	**19 34 39.0**	**-0.1**
ADCV				S	**Sn**	**19 34 59.0**	**-0.4**
ADCV				IAML		19 35 05.0	
	comp=N,56nm,0.6s						
IGDI	**IGDIR**	**1.55**	**346**	P	**Pn**	**19 34 39.4**	**-0.2**
IGDI				S	**Sb**	**19 35 00.1**	**-0.3**
IGDI	**IGDIR**	**1.55**	**346**	P	**Pg**	**19 34 41.0**	**+0.2**
IGDI				S	**Sg**	**19 35 04.3**	**+3.5**
PERV	**Siirt/Pervari-**	**1.65**	**256**	P	**Pb**	**19 34 42.2**	**0.0**
PERV				S	**Sg**	**19 35 05.2**	**+1.0**
PERV				IAML		19 35 16.0	
	comp=N,88nm,0.5s						
AGRB	**Hanur-Agry**	**1.72**	**315**	Pn	**Pn**	**19 34 42.4**	**+0.3**
AGRB				Sn	**Sg**	**19 35 07.9**	**+1.4**
DORK	**Agr/Tutak/Do**	**1.73**	**307**	P	**Pn**	**19 34 42.0**	**-0.1**
AGRI	**Agri, Merkez-K**	**1.78**	**324**	P	**Pn**	**19 34 43.0**	**0.0**
KOTA				S	**Sn**	**19 35 04.0**	**-2.2**
GNI	**Garni**	**1.79**	**4**	Pn	**Pn**	**19 34 43.6**	**+0.6**
GNI				Sn	**Sg**	**19 35 09.7**	**+1.2**
SIRN	**Sırnak**	**1.91**	**244**	P	**Pg**	**19 34 47.9**	**+0.1**
SIRN				S	**Sg**	**19 35 14.3**	**+1.8**
SIRN				IAML		19 35 27.0	
	comp=E,46nm,0.9s						
BLIS	**Bitlis-Merkez**	**1.93**	**272**	P	**Pb**	**19 34 46.8**	**-0.1**
BLIS				S	**Sb**	**19 35 10.8**	**-0.7**
GURO	**Guroymak-BITLI**	**2.00**	**276**	Pn	**Pn**	**19 34 44.5**	**-1.4**
SRTM	**Siirt_Merkez**	**2.12**	**261**	P	**Pb**	**19 34 50.3**	**+0.1**
SRTM				IAML		19 35 29.0	
	comp=N,33nm,0.5s						
SRTM				IAML		19 35 29.0	
	comp=E,33nm,0.6s						
QRD	**Qoradiz**	**2.41**	**62**	P	**Pb**	**19 34 54.5**	**-0.6**
QRD				S	**Sg**	**19 35 27.0**	**-1.6**
MUSM	**Mu-Merkez**	**2.42**	**279**	P	**Pb**	**19 34 54.0**	**-1.4**
GDB	**GEDABAY**	**2.52**	**21**	P	**Pb**	**19 34 56.1**	**-1.0**
GDB				S	**Sb**	**19 35 29.2**	**+0.6**
AGDM	**Agdam**	**2.63**	**48**	P	**Pb**	**19 34 58.9**	**+0.1**
AGDM				S	**Sg**	**19 35 34.1**	**-1.5**
GANJ	**Ganja**	**2.65**	**30**	P	**Pn**	**19 34 56.9**	**+2.1**
GANJ				S	**Sb**	**19 35 31.5**	**-0.6**
QZX	**Qazax, Azerbai**	**2.76**	**13**	P	**Pb**	**19 35 02.4**	**+1.4**
QZX				S	**Sg**	**19 35 41.2**	**+1.5**
YRD	**Yardimli**	**2.93**	**78**	P	**Pb**	**19 35 02.1**	**-1.9**
YRD				S	**Sb**	**19 35 39.8**	**-0.5**
LRK	**Lerik**	**2.97**	**84**	P	**Pb**	**19 35 03.0**	**-1.8**
LRK				S	**Sb**	**19 35 41.0**	**-0.6**

IDC 23 19:34:23.6±1.8,0.°45N×122.°51E,h0km,mb3.4/3, mbtmp3.5/4,ML3.8/1,MS3.1/1,Error ellipse: s-maj=168.6km s-min=26.9km az=64.0,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**18.43**	**99**	LR	LR	19 47 41.1	
	comp=Z,59nm,19.7s,baz=18,slow=43						
FITZ	**Fitzroy Crossi**	**18.69**	**171**	P	Pn	19 38 44.2	+0.4
	0.3nm,0.3s,baz=5.7,slow=10,SNR=2.3						
	1.6nm,0.6s						
WRA	**Warramunga Arr**	**23.35**	**151**	P	P	19 39 34.4	+0.6
	0.8nm,0.6s,baz=324,slow=11,SNR=6.0						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**26.41**	**156**	P	P	19 40 01.4	-0.7
	0.3nm,0.5s,baz=345,slow=15,SNR=6.6						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**57.97**	**328**	P	P	19 44 17.9	0.0
	0.2nm,0.4s,baz=125,slow=8.7,SNR=3.1						
	0.2nm,0.4s						

IDC 23 19:37:30.9±4.6,27.°45S×177.°65W,h0km,mb3.5/3, mbtmp3.5/3,Error ellipse: s-maj=128.5km s-min=40.3km az=38.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.66**	**264**	P	P	19 45 37.2	-0.4
	0.1nm,0.5s,baz=101,slow=7.9,SNR=4.8						
	0.1nm,0.5s						
WRA	**Warramunga Arr**	**44.38**	**269**	P	P	19 45 43.5	+0.1
	0.4nm,0.6s,baz=109,slow=7.8,SNR=6.6						
	0.4nm,0.6s						
QSPA	**South Pole Qui**	**62.65**	**180**	P	P	19 47 57.2	0.0
	1.2nm,0.8s,baz=48,slow=4.6,SNR=5.5						
	1.2nm,0.8s						
FINES	**FINESS Array B**	**142.47**	**341**	PKP	PKPdf	19 57 04.6	-0.5
	4.4nm,1.1s,baz=42,slow=4.5,SNR=4.3						

*TAP **23** 19:40:53.8,22.°31N×121.°27E,h39km,ML3.7,B*
*JMA **23** 19:40:54.0±0.2,22.°1N×12.°1E±.°,h57km±2km,MV3.5/15, TAIWAN REGION*

ISC 23 19:40:53.3±1.0,22.°39N±0.°02×121.°30E±0.°02,h15km±8km, n125,σ0.8°95/233,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LDUT	**Ludao**	**0.33**	**28**	*i* P	**Pn**	**19 41 03.4**	**-0.1**
LDUT				S	**Sn**	**19 41 11.2**	**+1.1**
TAW	**Tawu**	**0.38**	**266**	*i* P	**Pb**	**19 41 02.4**	**+0.7**
TAW				*i* S	**Sb**	**19 41 08.6**	**+1.3**
ECL	**Taimali**	**0.38**	**303**	*i* P	**Pb**	**19 41 02.9**	**+1.0**
ECL				*i* S	**Sb**	**19 41 09.4**	**+1.8**
TAWH	**Dawu Township**	**0.39**	**263**	*i* P	**Pb**	**19 41 02.5**	**+0.7**
TAWH				S	**Sb**	**19 41 08.6**	**+1.0**
TTN	**Taitung**	**0.39**	**339**	P	**Pn**	**19 41 04.8**	**+0.3**
TTN				*e*S	**Sn**	**19 41 14.1**	**+2.4**
LAY	**Lan-yu**	**0.41**	**146**	*i* P	**Pb**	**19 41 03.0**	**+0.7**
LAY				*i* S	**Sb**	**19 41 09.3**	**+0.8**
EAST	**Anshuo**	**0.42**	**270**	*i* P	**Pb**	**19 41 03.0**	**+0.6**
EAST				*i* S	**Sb**	**19 41 09.9**	**+1.3**
LYUB	**Lan-yu**	**0.46**	**146**	*i* P	**Pg**	**19 41 02.6**	**+0.1**
LYUB				*i* S	**Sg**	**19 41 09.0**	**+0.3**
TWGBT	**Beinan**	**0.48**	**335**	*i* P	**Pb**	**19 41 04.5**	**+1.0**
TWGBT				*i* S	**Sn**	**19 41 12.6**	**-1.2**
TWG	**Pinlang**	**0.48**	**334**	*i* P	**Pb**	**19 41 04.6**	**+1.1**
TWG				*i* S	**Sn**	**19 41 12.4**	**-1.5**
SLIU	**Shizi**	**0.49**	**250**	*i* P	**Pb**	**19 41 03.6**	**-0.1**
SLIU				S	**Sb**	**19 41 10.5**	**-0.3**
LONT	**Longtian**	**0.54**	**343**	*i* P	**Pn**	**19 41 05.7**	**-0.8**
LONT				S	**Sn**	**19 41 14.3**	**-1.1**
SMST	**Manzhou Townsh**	**0.56**	**230**	*i* P	**Pg**	**19 41 04.3**	**-0.1**
SMST				*i* S	**Sg**	**19 41 11.8**	**-0.1**
TSEB	**Hengchuen, Pin**	**0.61**	**218**	*i* P	**Pb**	**19 41 05.4**	**-0.3**
TSEB				*i* S	**Sb**	**19 41 14.1**	**0.0**
SCZT	**Fangliau**	**0.63**	**269**	P	**Pb**	**19 41 06.1**	**+0.1**
SCZT				*e*S	**Sb**	**19 41 15.3**	**+0.6**
TWKBT	**Hengchun**	**0.63**	**226**	*i* P	**Pg**	**19 41 05.2**	**-0.5**
TWKBT				*i* S	**Sg**	**19 41 13.5**	**-0.6**
TWK1	**Hengchun**	**0.64**	**226**	*i* P	**Pg**	**19 41 05.3**	**-0.5**
TWK1				*e*S	**Sg**	**19 41 13.7**	**-0.6**
HEN	**Hengchun**	**0.65**	**234**	*i* P	**Pb**	**19 41 06.0**	**-0.3**
HEN				*i* S	**Sg**	**19 41 14.2**	**-0.3**
MASBT	**Mashibuluo**	**0.66**	**290**	*i* P	**Pb**	**19 41 07.0**	**+0.5**
MASBT				*i* S	**Sb**	**19 41 16.1**	**+0.6**
SSPT	**Xinbi**	**0.69**	**278**	*i* P	**Pn**	**19 41 07.8**	**-0.7**
SSPT				*e*S	**Sn**	**19 41 18.4**	**-0.5**
TSMG	**Majia**	**0.69**	**298**	*i* P	**Pb**	**19 41 07.5**	**+0.5**
ECS	**Chishang**	**0.71**	**354**	P	**Pn**	**19 41 08.4**	**-0.4**
ECS				S	**Sn**	**19 41 19.7**	**+0.1**
CHKT	**Chengkung**	**0.71**	**5**	*i* P	**Pn**	**19 41 08.4**	**-0.4**
CHKT				S	**Sn**	**19 41 19.6**	**+0.1**
SSD	**Sandimen**	**0.71**	**300**	P	**Pb**	**19 41 07.9**	**+0.4**
EHD	**Haiduan**	**0.77**	**353**	P	**Pb**	**19 41 08.5**	**+0.1**
EHD				*e*S	**Sb**	**19 41 19.3**	**+0.7**
CHKH	**Chenggong**	**0.81**	**6**	P	**Pn**	**19 41 09.7**	**-0.4**
CHKH				S	**Sn**	**19 41 21.7**	**-0.2**
FULB	**Fuli**	**0.81**	**359**	P	**Pn**	**19 41 09.9**	**-0.3**
FULB				*e*S	**Sn**	**19 41 22.5**	**+0.5**
SGLT	**Jiouru**	**0.82**	**294**	*e*P	**Pn**	**19 41 11.2**	**+0.8**
ELDTW	**Lidau**	**0.84**	**342**	P	**Pb**	**19 41 09.7**	**0.0**
ELDTW				S	**Sg**	**19 41 20.9**	**+0.1**
WLCH	**Liuqiu**	**0.85**	**268**	*e*P	**Pn**	**19 41 11.5**	**+0.7**
SLGT	**Liugui**	**0.86**	**315**	*e*P	**Pn**	**19 41 11.2**	**+0.3**
TWP	**Hsiaoliuchiu**	**0.87**	**268**	*e*P	**Pn**	**19 41 11.3**	**+0.3**
SCST	**Cishan**	**0.90**	**304**	*e*P	**Pn**	**19 41 12.3**	**+0.9**
STYH	**Taoyuan**	**0.92**	**328**	P	**Pn**	**19 41 11.5**	**-0.2**
STYH				S	**Sn**	**19 41 24.7**	**0.0**
TWM1	**Shoushan**	**0.92**	**298**	*e*P	**Pn**	**19 41 13.6**	**+1.8**
STYT	**Tauyuan**	**0.92**	**327**	*i* P	**Pn**	**19 41 11.7**	**-0.1**
STYT				*i* S	**Sn**	**19 41 24.5**	**-0.4**
ECBN	**Changbin**	**0.94**	**8**	*e*P	**Pn**	**19 41 11.9**	**0.0**
ECBN				*e*S	**Sn**	**19 41 25.5**	**+0.3**
EYUL	**Yuli**	**0.96**	**1**	*e*P	**Pb**	**19 41 11.6**	**0.0**
EYUL				*e*S	**Sg**	**19 41 24.9**	**+0.5**
SGST	**Jiashian**	**0.96**	**316**	*e*P	**Pn**	**19 41 12.5**	**+0.2**
SGST				*e*S	**Sn**	**19 41 26.9**	**+1.1**
TWF1	**Yuli**	**0.96**	**360**	*e*P	**Pb**	**19 41 11.0**	**-0.7**
TWF1				*e*S	**Sb**	**19 41 23.5**	**-0.7**
WSSB	**Gushan**	**0.99**	**285**	*e*P	**Pb**	**19 41 12.3**	**0.0**
WSSB				*e*S	**Sg**	**19 41 25.6**	**0.0**
YULB	**Yu-li**	**1.00**	**360**	P	**Pb**	**19 41 11.5**	**-0.9**
YULB				*e*S	**Sb**	**19 41 24.5**	**-1.0**
WTP	**Ta-pu**	**1.07**	**324**	*e*P	**Pn**	**19 41 14.8**	**+1.0**
WTP				*e*S	**Sn**	**19 41 30.5**	**+2.1**
CHN1	**Nanshi**	**1.07**	**318**	*e*P	**Pn**	**19 41 14.5**	**+0.7**
CHN1				*e*S	**Sn**	**19 41 29.9**	**+1.4**
TPUB	**Ta-pu**	**1.10**	**326**	*e*P	**Pg**	**19 41 14.7**	**+0.1**
TPUB				*e*S	**Sn**	**19 41 31.0**	**+1.8**
EHYH	**Wanrong**	**1.10**	**2**	*e*P	**Pb**	**19 41 13.2**	**-1.0**
EHYH				*e*S	**Sb**	**19 41 26.9**	**-1.4**
CHN3	**Shinhua**	**1.10**	**309**	*e*P	**Pg**	**19 41 15.5**	**+0.9**
HGSD	**Ruisui**	**1.11**	**6**	*e*P	**Pn**	**19 41 14.4**	**+0.2**
HGSD				*e*S	**Sn**	**19 41 30.3**	**+1.0**
EHY	**Hungye**	**1.11**	**1**	*e*P	**Pb**	**19 41 13.2**	**-1.2**
EHY				*e*S	**Sb**	**19 41 27.3**	**-1.3**
TWK	**Hsinying**	**1.15**	**320**	*e*P	**Pg**	**19 41 15.6**	**0.0**
TWK				*e*S	**Sn**	**19 41 32.5**	**+2.0**
ALS	**Alishan**	**1.21**	**338**	*e*P	**Pg**	**19 41 16.5**	**-0.1**
ALS				*e*S	**Sn**	**19 41 34.3**	**+2.0**
WCKO	**Fanlu**	**1.23**	**329**	*e*P	**Pg**	**19 41 16.9**	**-0.1**
WCKO				*e*S	**Sg**	**19 41 34.9**	**+1.8**
EGFH	**Guangfu**	**1.28**	**5**	*e*P	**Pb**	**19 41 17.4**	**+0.2**
WARBT	**Fenglin Townsh**	**1.33**	**3**	*e*P	**Pn**	**19 41 16.0**	**-1.3**
WARBT				*e*S	**Sb**	**19 41 32.8**	**-2.0**
ICHU	**Yijhu**	**1.35**	**316**	*e*P	**Pn**	**19 41 18.0**	**+0.4**
ICHU				*e*S	**Sb**	**19 41 36.2**	**+0.7**
TSCK	**Chigu Township**	**1.35**	**304**	*e*P	**Pn**	**19 41 17.2**	**-0.4**
TSCK				*e*S	**Sn**	**19 41 34.4**	**-1.0**
WHYT	**Xinyi Township**	**1.37**	**343**	P	**Pg**	**19 41 19.4**	**-0.3**
WHYT				*e*S	**Sg**	**19 41 37.6**	**+0.2**
VWDT	**VWDT**	**1.37**	**354**	P	**Pn**	**19 41 18.1**	**+0.2**
VWDT				*e*S	**Sn**	**19 41 35.3**	**-0.5**
CHY	**Chiayi**	**1.37**	**324**	*e*P	**Pb**	**19 41 18.5**	**-0.2**
CHY				*e*S	**Sb**	**19 41 36.8**	**+0.8**
CHN8	**Yiju**	**1.39**	**314**	*e*P	**Pb**	**19 41 18.6**	**-0.3**
SHUL	**Shoufeng**	**1.42**	**10**	*e*P	**Pb**	**19 41 19.8**	**+0.4**
SHUL				*e*S	**Sb**	**19 41 37.5**	**+0.1**
ESL	**Shilin**	**1.43**	**5**	*e*P	**Pn**	**19 41 18.6**	**-0.1**
ESL				*e*S	**Sn**	**19 41 34.8**	**-2.4**
SSLB	**Suanglung**	**1.43**	**347**	P	**Pb**	**19 41 19.9**	**+0.1**
SSLB				*e*S	**Sn**	**19 41 37.8**	**+0.4**
WGK	**Gukeng**	**1.46**	**332**	*e*P	**Pb**	**19 41 20.2**	**0.0**
WGK				*e*S	**Sb**	**19 41 39.3**	**+0.7**
WDLH	**Douliu**	**1.48**	**332**	*e*P	**Pb**	**19 41 20.5**	**0.0**
WDLH				*e*S	**Sb**	**19 41 39.6**	**+0.6**
TEYL	**Yanliau Villag**	**1.50**	**10**	*e*P	**Pb**	**19 41 21.1**	**+0.2**
TEYL				*e*S	**Sg**	**19 41 41.2**	**-0.5**
WSL	**Shuilin Townsh**	**1.50**	**319**	*e*P	**Pn**	**19 41 19.9**	**+0.1**
WSL				*e*S	**Sn**	**19 41 39.1**	**0.0**
WJS	**Zhushan**	**1.52**	**340**	*e*P	**Pg**	**19 41 22.0**	**-0.6**
WJS				*e*S	**Sg**	**19 41 42.3**	**-0.2**
SMLT	**Sun Moon Lake**	**1.54**	**346**	*e*P	**Pb**	**19 41 21.7**	**+0.2**
SMLT				*e*S	**Sb**	**19 41 41.6**	**+0.7**
WTK	**Tuku**	**1.54**	**327**	*e*S	**Sb**	**19 41 41.2**	**+0.2**
OWD	**Renai**	**1.57**	**356**	*e*P	**Pn**	**19 41 20.9**	**+0.2**
OWD				*e*S	**Sn**	**19 41 40.0**	**-0.8**
ETM	**Tongmen**	**1.58**	**6**	*e*P	**Pn**	**19 41 20.5**	**-0.3**
ETM				*e*S	**Sn**	**19 41 38.8**	**-2.3**
WNT	**Mingjian**	**1.59**	**339**	*e*P	**Pn**	**19 41 20.6**	**-0.3**
WSF	**Szhu**	**1.59**	**322**	*e*P	**Pn**	**19 41 20.5**	**-0.5**
WSF				*e*S	**Sn**	**19 41 41.0**	**-0.3**
HWA	**Hwalien**	**1.61**	**10**	*e*P	**Pb**	**19 41 22.6**	**-0.2**
HWA				*e*S	**Sb**	**19 41 43

IDC 23 19:41:46.2±3.6, 14°81N×122°71E, h0km, mb3.4/4, mbtmp3.4/4, MS3.3/2, Error ellipse: s-maj=356.7km s-min=24.2km az=63.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**34.16**	**133**	LR	LR	20 04 31.8	
	comp=Z,32nm,18.3s,baz=335,slow=40						
WRA	**Warramunga Arr**	**36.38**	**161**	P	P	19 48 52.4	-0.1
	0.3nm,0.7s,baz=342,slow=8.9,SNR=1.7						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**39.78**	**164**	P	P	19 49 21.1	-0.1
	0.1nm,0.3s,baz=340,slow=6.8,SNR=6.9						
	0.1nm,0.3s						
TLY	**Talaya**	**39.83**	**341**	LR	LR	20 08 21.7	
	comp=Z,63nm,19.2s,baz=330,slow=40						
MKAR	**Makanchi Array**	**46.33**	**322**	P	P	19 50 12.7	-1.3
	0.1nm,0.7s,baz=106,slow=4.8,SNR=1.2						
	0.1nm,0.7s						
KURBB	**Kurchatov Arra**	**50.38**	**325**	P	P	19 50 46.3	+1.1
	0.5nm,0.2s,baz=125,slow=8.0,SNR=1.7						
	0.5nm,0.2s						

*TRN **23** 19:48:39.5, 11°.26N×62°.09W, h116km, MD3.5, North of the Paria peninsula.*
*IDC **23** 19:48:40.5±5.8, 11°.48N×62°.27W, h146km±40km, mb3.1/5, mbtmp3.5/5, Error ellipse: s-maj=59.8km s-min=22.8km az=4.0*

ISC 23 19:48:38.3±2.0, 11°26N±0°.04×62°.1W±0°.3, h124km±7km, n26, σ0s86/34, mb3.4/4, 1C, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMDM	**Guralp CMG5TDE**	**0.76**	**137**	*e*P	**Pn**	**19 48 59.3**	**+0.7**
DMDM				*e*S	**Sn**	**19 49 13.0**	**-0.8**
PSMG	**Mucurapo Girls**	**0.80**	**137**	*e*P	**Pn**	**19 48 59.5**	**+0.7**
PSMG				*e*S	**Sn**	**19 49 13.4**	**-0.9**
PSQC	**Port of Spain**	**0.81**	**137**	*e*P	**Pn**	**19 48 59.6**	**+0.7**
PSQC				*e*S	**Sn**	**19 49 13.8**	**-0.7**
PSWS	**West Secondary**	**0.81**	**137**	*e*P	**Pn**	**19 48 59.8**	**+0.9**
PSWS				*e*S	**Sn**	**19 49 13.8**	**-0.7**
GRFF	**Grenada Fort F**	**0.85**	**23**	*e*P	**Pn**	**19 48 59.4**	**+0.1**
GRFF				*e*S	**Sn**	**19 49 15.1**	**-0.2**
TRN	**Trinidad (W)**	**0.90**	**132**	⇑*i*P	**Pn**	**19 49 00.4**	**+0.7**
TRN				*e*S	**Sn**	**19 49 14.8**	**-1.2**
GRGR	**Grenville**	**0.96**	**26**	*e*P	**Pn**	**19 49 01.0**	**+0.7**
GRGR				*e*S	**Sn**	**19 49 16.9**	**-0.2**
GRW	**Mount Saint Ca**	**0.99**	**25**	*e*P	**Pn**	**19 49 02.0**	**+1.3**
GRW				*e*S	**Sn**	**19 49 16.4**	**-1.2**
TPP	**Pointe-a-Pierr**	**1.12**	**146**	*e*P	**Pn**	**19 49 03.6**	**+1.7**
TPP				*e*S	**Sn**	**19 49 20.0**	**+0.2**
GRSS	**Sisters**	**1.13**	**24**	*e*P	**Pn**	**19 49 02.8**	**+0.8**
GRSS				*e*S	**Sn**	**19 49 20.2**	**+0.2**
MCLT	**Moule a Chique**	**2.68**	**24**	*e*P	**Pn**	**19 49 20.7**	**+0.2**
MCLT				*e*S	**Sn**	**19 49 52.6**	**-0.5**
SLAC	**Saint Lucia, A**	**2.87**	**24**	*e*P	**Pn**	**19 49 23.8**	**+0.8**
SLAC				*e*S	**Sn**	**19 49 57.7**	**+0.2**
SLBI	**Saint Lucia, B**	**2.95**	**21**	*e*P	**Pn**	**19 49 24.5**	**+0.4**
SLBI				*e*S	**Sn**	**19 49 59.7**	**+0.3**
H05S1	**Guadeloupe/Mar**	**3.37**	**21**	P	**Pn**	**19 49 31.1**	**+1.5**
H05S1				S	**Sn**	**19 50 10.2**	**+0.9**
BIM	**Bigot**	**3.39**	**17**	*e*P	**Pn**	**19 49 30.2**	**+0.4**
BIM				*e*S	**Sn**	**19 50 08.1**	**-1.6**
TXAR	**Lajitas Array**	**42.67**	**301**	P	P	19 56 21.5	-1.5
	0.1nm,0.3s,baz=121,slow=12,SNR=6.1						
	0.1nm,0.3s						
H10N3	**ASCENSION HYDR**	**51.00**	**110**	T	T	20 52 46.7	
	baz=292,slow=75,SNR=7.4						
H10N2	**ASCENSION HYDR**	**51.01**	**110**	T	T	20 52 46.5	
	baz=292,slow=75,SNR=4.8						
H10N1	**ASCENSION HYDR**	**51.02**	**110**	T	T	20 52 47.6	
	baz=292,slow=75,SNR=7.2						
H10S3	**ASCENSION HYDR**	**51.26**	**111**	T	T	20 53 12.4	
	baz=292,slow=75,SNR=4.8						
H10S2	**ASCENSION HYDR**	**51.28**	**111**	T	T	20 53 13.7	
	baz=288,slow=75,SNR=5.1						
PDAR	**Pinedale Array**	**51.72**	**316**	P	P	19 57 29.4	-3.7
	0.4nm,0.7s,baz=113,slow=6.1,SNR=4.0						
	0.4nm,0.7s						
ESDC	**Sonseca Array**	**58.45**	**50**	P	**P**	**19 58 20.5**	**-0.9**
	0.2nm,0.4s,baz=236,slow=5.4,SNR=1.2						
	0.2nm,0.4s						
TORD	**Torodi Ar. Bea**	**62.22**	**81**	P	**P**	**19 58 47.8**	**+0.4**
	0.2nm,0.3s,baz=284,slow=7.5,SNR=4.5						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**79.32**	**29**	P	**P**	**20 00 29.9**	**0.0**
	0.8nm,0.5s,baz=256,slow=5.7,SNR=8.8						
	0.8nm,0.5s						
CMAR	**Chiang Mai Arr**	**145.04**	**33**	PKP	**PKPab**	**20 08 01.0**	**-0.5**
	0.8nm,1.0s,baz=315,slow=2.5,SNR=4.0						

IDC 23 20:00:22.4±1.9, 6°68S×129°24E, h0km, mb3.6/2, mbtmp3.3/4, ML3.1/2, Error ellipse: s-maj=151.3km s-min=29.8km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.08**	**160**	Pn	Pn	20 03 43.1	-0.2
	0.1nm,0.3s,baz=339,slow=13,SNR=14						
WRA				Sn	Sn	20 06 05.2	-15
	0.2nm,0.3s,baz=342,slow=22,SNR=2.1						
	0.5nm,1.0s						
ASAR	**Alice Springs**	**17.47**	**166**	P	Pn	20 04 28.0	+0.3
	baz=338,slow=9.1,SNR=5.5						
ASAR				S	Sn	20 07 27.7	-15
	0.3nm,0.5s,baz=354,slow=26,SNR=1.9						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**67.55**	**327**	P	P	20 11 21.3	+0.5
	0.2nm,0.4s,baz=113,slow=7.8,SNR=8.0						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**71.85**	**329**	P	P	20 11 46.5	-0.6
	0.3nm,0.6s,baz=131,slow=5.2,SNR=5.4						
	0.3nm,0.6s						

*SDD **23** 20:08:24.7±0.6, 17°.82N×66°.86W, h12km±9km, MD2.8, ML1.9, MW2.3, Presumed earthquake*
*OSPL **23** 20:08:25.7±0.8, 17°.86N×66°.86W, h2km±999km, ML2.2, Presumed earthquake*

ISC 23 20:08:23.9±1.7, 17°9N±0°.1×66°87W±0°03, h20km±6km, n8, σ0s36/14, 2C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLPR	**Magueyes Islan**	**0.21**	**306**	⇑*e*Pg	**Pg**	**20 08 29.2**	**0.0**
MLPR				*e*Sg	**Sg**	**20 08 32.5**	**-0.2**
MLPR				IAML		20 08 32.8	
	comp=E,120nm,0.4s						
MLPR				IAML		20 08 33.0	
	comp=N,249nm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.28**	**305**	*i* P	**Pg**	**20 08 30.4**	**+0.2**
CRPR				*e*S	**Sg**	**20 08 34.8**	**+0.2**
CRPR				IAML		20 08 35.2	
	comp=Z,188nm,0.8s						
OBIP	**Obispado Ponce**	**0.32**	**52**	*i* P	**Pg**	**20 08 30.8**	**-0.1**
OBIP				*e*S	**Sg**	**20 08 35.2**	**-0.4**
OBIP				IAML		20 08 36.0	
	comp=Z,575nm,0.2s						
CELP	**Cerrillos**	**0.36**	**50**	⇓*e*Pg	**Pg**	**20 08 31.5**	**-0.1**
CELP				*e*Sg	**Sg**	**20 08 36.8**	**0.0**
CELP				IAML		20 08 38.0	
	comp=N,41nm,0.5s						
CELP				IAML		20 08 38.8	
	comp=E,24nm,0.2s						
AOPR	**Arecibo Observ**	**0.51**	**12**	⇑*e*Sg	**Sg**	**20 08 41.2**	**-0.1**
AOPR				IAML		20 08 41.5	
	comp=E,221nm,0.5s						
AOPR				IAML		20 08 43.6	
	comp=N,94nm,0.4s						
AGPR	**Aguadilla, PR**	**0.66**	**340**	⇓*e*Pg	**Pg**	**20 08 37.1**	**+0.1**
AGPR				⇓*e*Sg	**Sg**	**20 08 46.4**	**+0.5**
AGPR				IAML		20 09 02.2	
	comp=N,96nm,2.5s						
SJG	**San Juan**	**0.73**	**69**	*i* P	**Pg**	**20 08 39.1**	**+0.8**
SJG				*e*S	**Sg**	**20 08 48.0**	**-0.2**
HATOM	**Hato Mayor del**	**2.56**	**292**	*e*Pg	**Pb**	**20 09 09.0**	**-0.3**
HATOM				IAML		20 10 28.0	
	comp=N,28nm,2.7s						

*BJI **23** 20:23:20.1, 15°.64N×119°.21E, h27km, mB4.8/11, mb4.3/47, Ms4.2/18, Ms7 3.9/18*

*NEIC **23** 20:23:21.2±2.3, 15°.82N±0°.07×119°.02E±0°.09, h10km±1km, mb4.8/120, Error ellipse: s-maj=15.0km s-min=11.4km az=92.0*
*MAN **23** 20:23:21.0, 15°.90N×119°.00E, h28km, MS4.5*
*IDC **23** 20:23:27.2±1.7, 15°.87N×119°.19E, h64km±16km, mb4.1/32, mbtmp4.4/34, MS3.3/9, Error ellipse: s-maj=17.5km s-min=8.7km az=69.0*
*DJA **23** 20:23:31.4±1.5, 16°N±5°×11°9E±°, h102km±15km, M4.5/43, mb4.6/43, mB5.1/6, Mw(mB)4.4/6, MwMwp5.8/1, Mwp5.9/1*

ISC 23 20:23:22.1±0.8, 15°83N±0°04×119°16E±0°05, h19km±3km, n469, σ1s38/434, mb4.7/127, MS3.5/10, 2C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.91**	**53**	*i* P	**Pn**	**20 23 39.9**	**0.0**
BOLP				*i* S	**Sn**	**20 23 54.5**	**+2.0**
PCPS	**Palayan City**	**2.17**	**122**	*e*P	**Pn**	**20 23 54.2**	**-3.1**
PCPS				*e*S	**Sn**	**20 24 20.5**	**-3.3**
TGY	**Tagaytay City**	**2.43**	**135**	P	**Pb**	**20 24 04.1**	**-1.1**
	456nm,0.5s,baz=303,slow=4.9,SNR=20						
TGY				S	**Sb**	**20 24 35.4**	**+0.6**
	494nm,0.3s,baz=11,slow=16,SNR=8.5						
TGY				LR	LR	20 24 51.3	
	comp=Z,370nm,21.1s,baz=235,slow=34						
TGY	**Tagaytay City**	**2.43**	**135**	*e*P	**Pb**	**20 24 05.6**	**+0.3**
TGY				*e*S	**Sg**	**20 24 37.7**	**-2.6**
SIPP	**Brgy, Tapao**	**2.43**	**31**	*e*P	**Pn**	**20 23 59.0**	**-1.8**
SIPP				*e*S	**Sn**	**20 24 25.6**	**-4.5**
JAP	**San Jose, Anti**	**5.73**	**151**	*e*P	**Pn**	**20 24 48.4**	**+2.1**
TWG	**Pinlang**	**7.19**	**14**	Pn	**Pn**	**20 25 05.8**	**-0.5**
TPUB	**Ta-pu**	**7.56**	**10**	Pn	**Pn**	**20 25 12.2**	**+0.7**
YULB	**Yu-li**	**7.79**	**15**		**Pn**	**20 25 15.3**	**+0.7**
SSLB	**Suanglung**	**8.10**	**12**	Pn	**Pn**	**20 25 20.7**	**+1.9**
NACB	**Ninganchiao**	**8.62**	**15**	Pn	**Pn**	**20 25 28.3**	**+2.5**
YHNB	**Yeheng**	**9.04**	**13**	Pn	**Pn**	**20 25 33.7**	**+2.0**
QIZ	**Qiongzhong**	**9.44**	**291**	Pn	**Pn**	**20 25 35.0**	**-2.3**
QIZ	**Qiongzhong**	**9.44**	**291**	P	**Pn**	**20 25 35.4**	**-1.9**
QIZ				S	**Sn**	**20 27 21.4**	**-1.6**
QIZ				L	L		
	comp=N,300nm,11.8s						
QIZ				L	L		
	comp=E,330nm,13.7s						
QIZ				L	L		
	comp=Z,460nm,16.7s						
KKM	**Kota Kinabalu**	**10.14**	**197**	Pn	**Pn**	**20 25 46.7**	**-0.2**
JOW	**Kunigami**	**13.85**	**36**	LR	LR	20 32 00.1	
	comp=Z,105nm,20.1s,baz=324,slow=37						
TOLI2	**Tolitoli**	**14.71**	**174**	Pn	**Pn**	**20 26 50.2**	**+0.8**
SBUM	**Sibu**	**14.95**	**208**		**Pn**	**20 26 55.4**	**+2.9**
MPSI	**Mapaga**	**15.41**	**177**	P	**P**	**20 27 05.5**	**+2.4**
	12nm,1.0s						
NJ2	**Nanjing**	**16.16**	**359**	*e*P	**Pn**	**20 27 08.5**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,23nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,350nm,4.3s						
NJ2				L	L		
	comp=N,800nm,9.5s						
NJ2				L	L		
	comp=E,650nm,9.5s						
NJ2				L	L		
	comp=Z,970nm,8.5s						
MMSI	**Mamuju**	**18.40**	**181**	P	**Pn**	**20 27 39.1**	**+2.8**
	17nm,0.9s						
SANI	**Sanana**	**19.00**	**159**	P	**P**	**20 27 41.6**	**-1.3**
	48nm,0.7s						
PZH	**PanZhiHua**	**19.38**	**306**	P	**Pn**	**20 27 48.8**	**+0.5**
CMAR	**Chiang Mai Arr**	**19.49**	**281**	P	**Pn**	**20 27 50.5**	**+0.9**
	0.8nm,0.6s,baz=90,slow=6.5,SNR=16						
CMAR				PcP	**PcP**	**20 32 09.3**	**+0.3**
	0.9nm,0.7s,baz=162,slow=0.7,SNR=9.1						
CMAR				LR	LR	20 35 22.1	
	comp=Z,180nm,19.6s,baz=100,slow=37						
CMAR	**Chiang Mai Arr**	**19.49**	**281**		**P**	**20 27 46.7**	**-1.6**
LYN	**LuoYang**	**19.59**	**343**	P	**Pn**	**20 27 56.8**	**+6.2**
LYN				pmax	pmax		
	comp=Z,18nm,0.9s						
LYN				pmax	pmax		
	comp=Z,200nm,6.9s						
LYN				LR	LR		
	comp=N,320nm,11.7s						
LYN				LR	LR		
	comp=E,490nm,12.0s						
LYN				LR	LR		
	comp=Z,340nm,10.3s						
SPSI	**Sidrap Palu**	**19.67**	**178**	P	**Pn**	**20 27 52.9**	**+1.2**
	comp=Z,34nm,1.0s						
JNU	**Nakatsue**	**20.23**	**30**	P	**P**	**20 27 56.1**	**-0.1**
	comp=Z,21nm,1.1s,baz=270,slow=20,SNR=4.5						
JNU				LR	LR	20 35 19.4	
	comp=Z,53nm,21.7s,baz=180,slow=35						
	comp=Z,21nm,1.1s						
TIA	**Tai'an**	**20.38**	**355**	P	**P**	**20 27 56.1**	**-1.7**
TIA				pmax	pmax		
	comp=Z,7.0nm,1.4s						
TIA				L	L		
	comp=Z,230nm,16.7s						
TIA				L	L		
	comp=Z,250nm,14.2s						
SIJI	**Sorong**	**20.45**	**143**	P	**P**	**20 28 00.1**	**+1.4**
	comp=Z,3.9nm,0.5s,baz=314,slow=18,SNR=1.5						
	comp=Z,3.9nm,0.5s						
CD2	**Chengdu**	**20.59**	**320**	P	Pn	20 28 02.3	-0.1
CD2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CD2				L	L		
	comp=Z,600nm,12.1s						
CD2				L	L		
	comp=Z,760nm,11.4s						
CD2				L	L		
	comp=Z,340nm,10.2s						
KAPI	**Kappang**	**20.71**	**178**	P	**P**	**20 28 01.4**	**-0.1**
	comp=Z,7.5nm,0.8s,baz=283,slow=5.7,SNR=6.1						
KAPI				LR	LR	20 36 19.5	
	comp=Z,50nm,18.8s,baz=10.0,slow=37						
	comp=Z,7.5nm,0.8s						
KAPI	**Kappang**	**20.71**	**178**		**P**	**20 27 59.0**	**-2.6**
KAPI	**Kappang**	**20.71**	**178**	P	Pn	20 28 07.7	+3.8
MKS	**Makassar**	**20.91**	**179**	P	Pn	20 28 08.8	+2.6
KRAI	**Karang Ratu**	**21.10**	**154**	P	**P**	**20 28 10.0**	**+4.2**
	comp=Z,16nm,0.8s						
TNCH	**TengChong**	**21.37**	**299**	P	**P**	**20 28 08.8**	**-0.1**
TNCH				PP	**PnPn**	**20 28 34.5**	**+5.6**
TNCH				S	**S**	**20 31 57.5**	**-8.2**
TNCH				pmax	pmax		
	comp=Z,16nm,2.3s						
TNCH				L	L		
	comp=Z,180nm,5.2s						
TNCH				L	L		
	comp=Z,100nm,5.2s						
TNCH				L	L		
	comp=Z,130nm,9.1s						
DSRI	**Dabo**	**21.68**	**223**	P	**P**	**20 28 17.1**	**+5.2**
	comp=Z,14nm,1.0s						
TJN	**Taejon**	**21.73**	**18**	P	**P**	**20 28 11.6**	**-0.7**
HNS	**HongShan**	**21.85**	**350**	⇑P	**P**	**20 28 14.6**	**+1.0**
HNS				S	**S**	**20 32 19.5**	**+5.2**
HNS				pmax	pmax		
	comp=Z,11nm,1.1s						
HNS				L	L		
	comp=Z,400nm,10.7s						
HNS				L	L		
	comp=Z,230nm,12.0s						
BSSI	**Bau Bau, Buton**	**21.87**	**176**	P	**P**	**20 28 14.9**	**+0.9**
	comp=Z,31nm,1.1s						
KSAR	**Wonju Array Be**	**22.88**	**18**		**P**	**20 28 23.7**	**-0.8**
KSRS	**Korea Array**	**22.90**	**18**	P	**P**	**20 28 23.5**	**-1.2**
	comp=Z,9.7nm,0.8s,baz=200,slow=10,SNR=30						
	comp=Z,9.7nm,0.8s						
KS19	**Wonju Array Si**	**22.93**	**18**	P	**P**	**20 28 25.2**	**+0.1**
DL2	**Dalian**	**23.09**	**5**	P	**P**	**20 28 26.4**	**-0.4**
DL2				pmax	pmax		
	comp=Z,13nm,1.0s						
PSI	**Prapat**	**23.76**	**239**	P	P	20 28 48.8	+15
RPSI	**Rantau Prapat**	**23.82**	**239**	P	**P**	**20 28 34.8**	**+0.7**
ABJI	**Asem Bagus**	**23.97**	**192**	P	**P**	**20 28 40.2**	**+4.7**
	comp=Z,44nm,1.2s						
LBFI	**Labuhan Bajo,**	**24.16**	**178**	P	**P**	**20 28 38.6**	**+1.3**
DBNI	**Kabupaten Domp**	**24.18**	**182**	P	**P**	**20 28 38.8**	**+1.2**
	comp=Z,38nm,1.1s						
BJI2	**Beijing**	**24.25**	**354**	P	**P**	**20 28 38.1**	**+0.2**
BJI2				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BJT	**Baijiatuan**	**24.25**	**354**		**P**	**20 28 38.3**	**+0.4**
BJT				IAmb	IAmb	20 28 39.7	
	comp=Z,28nm,1.3s						
KHKI	**Kahang-Kahang**	**24.29**	**189**	P	**P**	**20 28 43.0**	**+4.5**
	comp=Z,15μmcomp=Z,16nm,1.4s						
SMRI	**Semarang**	**24.31**	**201**	P	**P**	**20 28 38.5**	**-0.2**
LZDM	**Lanzhou Array**	**24.34**	**328**	P	**P**	**20 28 37.5**	**-1.7**
	comp=Z,2.6nm,0.4s,baz=110,slow=12,SNR=1.3						
	comp=Z,2.6nm,0.4s						
LZH	**Lanzhou**	**24.36**	**329**	*e*P	**P**	**20 28 40.8**	**+1.5**
LZH				pmax	pmax		
	comp=Z,30nm,1.3s						
MMRI	**Maumere**	**24.50**	**173**	P	**P**	**20 28 40.6**	**+0.2**
PLAI	**Plampang**	**24.53**	**183**	P	**P**	**20 28 41.6**	**+0.9**
EDFI	**Ende, Flores**	**24.55**	**174**	P	**P**	**20 28 41.7**	**+0.7**
	comp=Z,532nmcomp=Z,44nm,0.7s						
SNJI	**Sawahan-Nganju**	**24.57**	**198**	P	**P**	**20 28 44.2**	**+2.9**
	comp=Z,22nm,2.0s						
JAGI	**Jajag, Banyuwa**	**24.64**	**192**		**P**	**20 28 41.2**	**-0.6**
JAGI	**Jajag, Banyuwa**	**24.64**	**192**	P	**P**	**20 28 43.3**	**+1.6**
	comp=Z,38nm,1.0s						
KLSI		**24.89**	**216**	P	P	**20 28 45.3**	**+1.3**
GUMO	**Guam**	**24.96**	**92**	LR	LR	20 37 59.8	
	comp=Z,92nm,19.1s,baz=249,slow=35						
MDSI	**Maura Dua**	**25.04**	**218**	P	**P**	**20 28 50.7**	**+5.3**
KPJI	**Karang Pucung**	**25.14**	**204**	P	**P**	**20 28 51.8**	**+5.6**
	comp=Z,21nm,1.0s						
MASI	**Maura Aman, Be**	**25.20**	**223**	P	**P**	**20 28 52.4**	**+5.5**
WBSI	**Waikabubak, Su**	**25.30**	**179**	P	**P**	**20 28 49.9**	**+2.1**
	comp=Z,34nm,0.7s						
HHC	**Hu-ho-hao-te**	**25.79**	**347**	*e*P	**P**	**20 28 53.0**	**+0.9**
HHC				pmax	pmax		
	comp=Z,17nm,1.5s						
HHC				pmax	pmax		
	comp=Z,54nm,3.9s						
BBJI	**Bungbulang**	**25.79**	**207**	P	**P**	**20 28 52.6**	**+0.3**
BBJI				IAmb	IAmb	20 28 57.8	
	comp=Z,16nm,1.1s						
BBJI	**Bungbulang**	**25.79**	**207**	P	**P**	**20 28 55.4**	**+3.1**
	comp=Z,15nm,1.0s						
SOEI	**Soe**	**25.91**	**168**	P	P	**20 28 53.1**	**-0.3**
SOEI	**Soe**	**25.91**	**168**	P	**P**	**20 28 57.8**	**+4.4**
BTO2	**Baotou**	**26.10**	**344**	*e*P	**P**	**20 28 55.0**	**0.0**
BTO2				pP	**pwP**	**20 29 06.6**	**+2.4**
BTO2				PP	**PnPn**	**20 29 39.1**	**+5.6**
BTO2				pmax	pmax		
	comp=Z,17nm,1.3s						
BTO2				pmax	pmax		
	comp=Z,320nm,5.7s						
BATI	**Baumata**	**26.25**	**170**	P	**P**	**20 28 55.6**	**-0.7**
	comp=Z,40nm,0.8s,baz=358,slow=1.1,SNR=12						
	comp=Z,40nm,0.8s						
BATI	**Baumata**	**26.25**	**170**	P	**P**	**20 28 55.9**	**-0.4**
	comp=Z,39nm,1.0s						
MJAR	**Matsushiro Arr**	**26.70**	**36**	P	**P**	**20 28 59.5**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=197,slow=7.6,SNR=1.1						
MJAR				LR	LR	20 38 47.4	
	comp=Z,21nm,21.8s,baz=214,slow=34						
	comp=Z,0.9nm,0.8s						
BRDH	**Bariadhala**	**26.83**	**289**	LR	LR	20 40 55.7	
	comp=Z,118nm,19.4s,baz=349,slow=39						
SHL	**Shillong**	**27.24**	**295**		**P**	**20 29 04.9**	**-0.6**
GTA2	**Gaotai**	**29.04**	**328**	*e*P	**P**	**20 29 22.3**	**+1.0**
GTA2				pmax	pmax		
	comp=Z,10.0nm,1.3s						
LSA	**Lhasa**	**29.19**	**303**	P	**P**	**20 29 21.3**	**-1.8**
LSA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
GOMU	**GeErMu**	**29.69**	**318**	P	**P**	**20 29 28.0**	**+0.6**
GOMU				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MDJ	**Mudanjiang**	**30.03**	**15**	P	**P**	**20 29 28.6**	**-1.2**
MDJ				IAmb	IAmb	20 29 32.6	
	comp=Z,13nm,1.2s						
BNX	**BinXian**	**30.61**	**11**	⇑P	**P**	**20 29 35.3**	**+0.3**
BNX				pmax	pmax		
	comp=Z,3.0nm,1.4s						
EVN	**Everest**	**32.24**	**298**		**P**	**20 29 49.5**	**-0.8**
ULN	**Ulaanbaatar**	**33.48**	**345**	P	**P**	**20 29 59.8**	**-0.5**
SONM	**Songino Array**	**33.61**	**344**	P	**P**	**20 30 01.7**	**+0.2**
	comp=Z,5.7nm,0.8s,baz=166,slow=9.1,SNR=36						
SONM				PcP	**PcP**	**20 32 40.7**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=101,slow=1.5,SNR=4.5						
	comp=Z,5.7nm,0.8s						
SONM	**Songino Array**	**33.61**	**344**		**P**	**20 30 01.1**	**-0.4**
SONM				IAmb	IAmb	20 30 02.7	
	comp=Z,7.6nm,1.0s						
FITZ	**Fitzroy Crossi**	**34.31**	**169**	P	**P**	**20 30 07.2**	**-0.4**
	comp=Z,9.0nm,0.8s,baz=349,slow=6.2,SNR=16						
	comp=Z,9.0nm,0.8s						
PSA00	**Pilbara Seismi**	**37.17**	**179**	P	**P**	**20 30 31.1**	**-1.0**
TLY	**Talaya**	**37.86**	**344**	P	**P**	**20 30 35.7**	**-2.0**
WB0	**Warramunga Arr**	**38.41**	**157**		**P**	**20 30 41.3**	**-1.3**
WRAB	**Tennant Creek**	**38.55**	**157**	P	**P**	**20 30 42.3**	**-1.5**
WRA	**Warramunga Arr**	**38.55**	**157**	P	**P**	**20 30 42.5**	**-1.3**
	comp=Z,4.3nm,0.7s,baz=338,slow=9.1,SNR=47						
WRA				PcP	**PcP**	**20 32 56.5**	**0.0**
	comp=Z,1.4nm,0.7s,baz=338,slow=3.1,SNR=9.0						
	comp=Z,4.3nm,0.7s						
WRA	**Warramunga Arr**	**38.55**	**157**	P	**P**	**20 30 42.7**	**-1.1**
PALK	**Pallekele**	**38.57**	**262**	LR	LR	20 45 53.8	
	comp=Z,78nm,18.9s,baz=34,slow=35						
WMQ	**Urumqi**	**38.62**	**323**	*e*P	**P**	**20 30 44.4**	**+0.1**
WMQ				S	**S**	**20 36 43.3**	**+3.5**
WMQ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WMQ				L	L		
	comp=Z,140nm,14.3s						
WR8	**Warramunga Arr**	**38.62**	**157**		**P**	**20 30 42.9**	**-1.5**
AS31	**Alice Springs**	**41.81**	**160**		**P**	**20 31 10.1**	**-0.8**
ASAR	**Alice Springs**	**41.81**	**160**	P	**P**	**20 31 10.3**	**-0.6**
	comp=Z,4.2nm,0.5s,baz=338,slow=7.0,SNR=89						
ASAR				PcP	**PcP**	**20 33 07.4**	**+0.5**
	comp=Z,1.9nm,0.8s,baz=344,slow=3.0,SNR=7.5						
	comp=Z,4.2nm,0.5s						
ASAR	**Alice Springs**	**41.81**	**160**	P	**P**	**20 31 10.0**	**-0.9**
MKAR	**Makanchi Array**	**43.45**	**323**	P	**P**	**20 31 24.4**	**+0.4**
	comp=Z,3.2nm,0.8s,baz=126,slow=9

TIXI	Tiksi	56.11	4		P	P	20 32 57.3	-2.5	
TIXI	comp=Z,12nm,1.1s			IAmb	IAmb	20 32 59.6			
NRIK	Noril'sk	57.02	347	P	P	P	20 33 06.0	-0.3	
	comp=Z,13nm,0.8s,baz=136,slow=6.9,SNR=23 comp=Z,13nm,0.8s								
ABKAR	Akbulak array	58.16	319			P	20 33 14.2	-0.6	
BILL	Bilibino	60.16	19	P		P	20 33 28.6	+0.3	
BILL	comp=Z,6.7nm,1.1s			IAmb	IAmb	20 33 28.7			
SPIA	Saint Paul Isl	66.33	34	P		P	20 34 09.9	+0.6	
	baz=262								
NIKH	Nikolski High	66.68	39	P		P	20 34 12.4	+0.8	
	baz=266								
GAMB	Gambell	66.73	27	P		P	20 34 12.7	+1.0	
	baz=258								
UNV	Unalaska Valle	68.14	38	P		P	20 34 21.7	+0.8	
	baz=267								
GNI	Garni	68.14	307	P		P	20 34 19.8	-1.6	
TNA	Tin City	68.65	25	P		P	20 34 24.7	+0.8	
	baz=261								
M11K	Mekoryuk	68.79	31	P		P	20 34 25.7	+0.9	
	baz=265								
RAYN	Ar Rayn	69.13	290			P	20 34 27.2	-0.6	
RAYN	comp=Z,7.8nm,0.9s			IAmb	IAmb	20 34 28.9			
F14K	Arctic Creek	69.29	25	P		P	20 34 29.1	+1.3	
	baz=263								
KBZ	Khabaz	69.36	311	P		P	20 34 28.6	-0.1	
	comp=Z,7.2nm,0.9s,baz=116,slow=5.5,SNR=15 comp=Z,7.2nm,0.9s								
KIV	Kislovodsk	69.51	311			P	20 34 29.1	-0.6	
KIV	Kislovodsk	69.51	311	P		P	20 34 30.0	+0.2	
KIV	comp=Z,21nm,0.9s			pP		pP	20 34 32.3	-2.4	
	comp=Z,21nm,0.9s								
GEVA	Gevas	69.56	305	IAmb		IAmb	20 34 31.9		
	comp=Z,5.6nm,1.1s								
ANM	Nome	69.59	26	P		P	20 34 30.8	+1.1	
	baz=264								
K13K	Kusilvak Mount	69.67	29	P		P	20 34 31.2	+1.0	
	baz=266								
F15K	North Star Dit	70.02	25	P		P	20 34 33.4	+1.0	
	baz=264								
C16K	Lisburne Hills	70.05	23	P		P	20 34 33.4	+0.9	
	baz=263,SNR=12								
M13K	Dall Lake	70.20	31	P		P	20 34 34.6	+1.1	
	baz=267								
G15K	Niukluk	70.20	26	P		P	20 34 34.3	+0.8	
	baz=265								
J14K	Nanvaranak Lak	70.24	28	P		P	20 34 34.7	+1.0	
	baz=266								
L14K	Kuka Creek	70.57	30	P		P	20 34 37.2	+1.4	
	baz=268,SNR=6.3								
D17K	Noatak River	70.83	23	P		P	20 34 38.4	+1.2	
	baz=265,SNR=16								
C17K	DeLong Mountai	70.87	22	P		P	20 34 38.3	+0.8	
	baz=265,SNR=9.7								
M14K	Bethel	70.90	31	P		P	20 34 38.8	+1.0	
	baz=268								
RDOG	Red Dog Mine	70.93	23	IAmb		IAmb	20 34 39.2		
	comp=Z,4.1nm,0.8s								
RDOG	Red Dog Mine	70.93	23	P		P	20 34 38.9	+1.0	
	baz=265								
G16K	Koyuk River	70.94	26	P		P	20 34 38.8	+0.8	
	baz=266								
H16K	Elim	70.94	27	P		P	20 34 38.9	+0.9	
	baz=267								
N14K	Kuskokwak Cree	71.01	32	P		P	20 34 39.5	+1.0	
	baz=269								
K15K	Wolf Creek Mou	71.15	29	P		P	20 34 40.2	+0.9	
	baz=268								
L15K	Ungalak Mounta	71.16	30	P		P	20 34 40.1	+0.7	
	baz=268								
O14K	Tigyukauivet M	71.22	32	P		P	20 34 40.6	+0.8	
	baz=270								
MARD	Mardin	71.45	305	IAmb		IAmb	20 34 43.3		
	comp=Z,10nm,1.0s								
F17K	Baldwin Pennin	71.45	25	IAmb		IAmb	20 34 43.2		
	comp=Z,7.7nm,0.8s								
F17K	Baldwin Pennin	71.45	25	P		P	20 34 42.1	+1.0	
	baz=267								
M15K	Kasigluk River	71.52	31	P		P	20 34 42.3	+0.7	
	baz=270								
I17K	Unalakleet	71.58	27	P		P	20 34 42.5	+0.7	
	baz=268								
C18K	Utukok River	71.61	22	P		P	20 34 42.7	+0.6	
	baz=266								
J16K	Anvik River	71.61	28	P		P	20 34 42.9	+0.9	
	baz=269								
G17K	Kiwalik Mounta	71.66	26	P		P	20 34 43.3	+1.0	
	baz=268								
SDPT	Sand Point	71.67	36	P		P	20 34 43.5	+0.9	
	baz=272								
A19K	Wainwright	71.76	21	P		P	20 34 44.2	+1.4	
	baz=266								
E18K	Tukpahlearik C	71.76	24	P		P	20 34 43.9	+1.0	
	baz=267								
N15K	Kwethluk River	71.82	31			P	20 34 44.1	+0.7	
N15K	Kwethluk River	71.82	31	P		P	20 34 44.5	+1.1	
	baz=270								
H17K	Granite Mounta	71.95	26	IAmb		IAmb	20 34 46.0		
	comp=Z,7.1nm,0.9s								
H17K	Granite Mounta	71.95	26	P		P	20 34 45.4	+1.2	
	baz=269,SNR=5.6								
O15K	Ungalikthiuk R	71.96	32	P		P	20 34 44.8	+0.5	
	baz=271								
F18K	Selawik	72.10	25	P		P	20 34 46.0	+1.1	
	baz=268,SNR=12								
L16K	Owhat River	72.11	30	P		P	20 34 46.0	+0.9	
	baz=270								
S14K	Fog Glacier	72.17	35	P		P	20 34 46.7	+1.0	
	baz=272								
CHNA	Chernabura Isl	72.20	37	P		P	20 34 47.0	+1.3	
	baz=272								
C19K	Lookout Ridge	72.21	22	P		P	20 34 46.9	+1.2	
	baz=268								
J17K	VABM Dome	72.30	28	P		P	20 34 47.4	+1.2	
	baz=270								
M16K	Timber Creek	72.37	30	P		P	20 34 47.6	+0.9	
	baz=271								
N16K	Nishlik Lake	72.47	31	P		P	20 34 48.4	+1.1	
	baz=271								
G18K	Tagagawik	72.49	25	IAmb		IAmb	20 34 48.9		
	comp=Z,6.2nm,0.9s								
G18K	Tagagawik	72.49	25	P		P	20 34 48.0	+0.7	
	baz=270,SNR=7.9								
H18K	Honhosa River	72.61	26	P		P	20 34 48.8	+0.7	
	baz=270								
K17K	Iditarod	72.66	29			P	20 34 49.0	+0.7	
K17K	Iditarod	72.66	29	P		P	20 34 49.6	+1.3	
	baz=271,SNR=7.3								
L17K	Donlin	72.67	29	P		P	20 34 50.1	+1.7	
	baz=271,SNR=5.2								
D19K	Kuna River	72.73	23	P		P	20 34 49.6	+0.9	
	baz=269								
CHGN	Chignik	72.80	35	P		P	20 34 50.2	+0.9	
	baz=273								
O16K	Kokwok River B	72.83	32	IAmb		IAmb	20 34 51.4		
	comp=Z,9.4nm,1.0s								
O16K	Kokwok River B	72.83	32	P		P	20 34 50.3	+0.9	
	baz=272								
F19K	Shaleruckik Mo	72.85	24	P		P	20 34 50.4	+1.0	
	baz=270								
P16K	Nushagak River	72.91	32	P		P	20 34 50.7	+0.8	
	baz=272								
E19K	Redstone River	73.06	24	P		P	20 34 51.5	+0.8	
	baz=270								
B20K	Meade River	73.09	21	P		P	20 34 51.7	+1.0	
	baz=270								
M17K	Holitna River	73.09	30	P		P	20 34 52.2	+1.2	
	baz=272								
G19K	Purcell Mounta	73.13	25	IAmb		IAmb	20 34 52.9		
	comp=Z,7.0nm,0.8s								
G19K	Purcell Mounta	73.13	25	P		P	20 34 51.9	+0.8	
	baz=271,SNR=9.9								
ARPR	Arapgir-MALATY	73.16	307	IAmb		IAmb	20 34 54.0		
	comp=Z,8.3nm,1.1s								
R16K	Pilot Point	73.19	34	P		P	20 34 52.1	+0.5	
	baz=273								
GCSA	Galena City Sc	73.25	26	P		P	20 34 52.7	+0.9	
	baz=272								
N17K	Nushagak Hills	73.25	31	P		P	20 34 53.2	+1.3	
	baz=273								
A21K	Barrow	73.28	20	P		P	20 34 52.8	+0.9	
	baz=270								
D20K	Etivluk River	73.28	22	P		P	20 34 52.9	+0.8	
	baz=271								
O17K	Koliganek Bris	73.33	32	P		P	20 34 53.2	+0.8	
	baz=273								
J18K	Innoko River	73.36	28	P		P	20 34 53.3	+0.8	
	baz=272								
H19K	Roundabout Mou	73.41	26	IAmb		IAmb	20 34 55.0		
	comp=Z,11nm,0.9s								
H19K	Roundabout Mou	73.41	26	P		P	20 34 53.8	+1.0	
	baz=272								
L18K	Granite Mounta	73.42	29	IAmb		IAmb	20 34 55.2		
	comp=Z,8.0nm,0.9s								
L18K	Granite Mounta	73.42	29	P		P	20 34 53.9	+1.0	
	baz=272								
E20K	Nigu River	73.45	23	P		P	20 34 54.0	+0.9	
	baz=271								
F20K	Avaraart Lake	73.65	24	IAmb		IAmb	20 34 56.1		
	comp=Z,7.4nm,0.9s								
F20K	Avaraart Lake	73.65	24	P		P	20 34 55.1	+0.9	
	baz=272								
P17K	Kvichak River	73.70	32	P		P	20 34 55.5	+1.0	
	baz=274,SNR=6.3								
A22K	Sinclair Lake	73.81	20	P		P	20 34 56.0	+1.0	
	baz=272								
J19K	Poorman	73.82	27	P		P	20 34 56.2	+1.0	
	baz=273								
R17L	Mt. Peulik Vol	73.84	34	P		P	20 34 56.4	+0.9	
	baz=274								
M18K	Stony River	73.86	30	P		P	20 34 56.4	+0.9	
	baz=274								
N18K	Kilae Creek	73.88	31	P		P	20 34 56.6	+0.9	
	baz=274								
C21K	Knifeblade Rid	73.93	22	P		P	20 34 56.7	+0.9	
	baz=272,SNR=7.4								
B21K	Ikpikpuk River	73.98	21	IAmb		IAmb	20 34 58.0		
	comp=Z,10nm,1.0s								
B21K	Ikpikpuk River	73.98	21	P		P	20 34 56.8	+0.8	
	baz=272,SNR=8.3								
Q17K	Contact Creek	74.05	33	P		P	20 34 56.9	+0.1	
	baz=274								
H20K	Anotleneega Mo	74.06	26	P		P	20 34 57.7	+1.1	
	baz=273,SNR=10								
E21K	Killik River	74.26	23	P		P	20 34 58.4	+0.6	
	baz=273								
I20K	Naaghedeneel	74.27	26	P		P	20 34 58.8	+1.0	
	baz=274								
O18K	Koktuh Hills	74.28	32	P		P	20 34 58.9	+0.9	
	baz=274								
L19K	White Mountain	74.28	29	IAmb		IAmb	20 34 59.7		
	comp=Z,6.2nm,0.9s								
L19K	White Mountain	74.28	29	P		P	20 34 59.0	+1.1	
	baz=274								
GAZ	Gaziantep	74.29	305	IAmb		IAmb	20 35 00.3		
	comp=Z,11nm,1.0s								
P18K	Big Mountain,	74.30	32	P		P	20 34 59.0	+0.8	
	baz=275								
B22K	Teshekpuk Lake	74.36	21	IAmb		IAmb	20 34 59.9		
	comp=Z,12nm,1.1s								
B22K	Teshekpuk Lake	74.36	21	P		P	20 34 58.9	+0.7	
	baz=273								
J20K	Nowinta River	74.46	27	IAmb		IAmb	20 35 00.7		
	comp=Z,7.0nm,0.8s								
J20K	Nowinta River	74.46	27	P		P	20 34 59.9	+0.9	
	baz=274								
Q18K	Katmai Hardscr	74.48	33	P		P	20 34 59.8	+0.5	
	baz=275								
IMAR	Indian Mountai	74.50	25	P		P	20 34 59.2	+0.1	
M19K	Big River Lodg	74.52	29	P		P	20 35 00.3	+1.0	
	baz=275								
F21K	Alatna River	74.52	24	P		P	20 35 00.1	+0.8	
	baz=274								
K20K	Telida	74.55	28	P		P	20 35 00.4	+0.8	
	baz=274								
G21K	Allakaket	74.56	25	P		P	20 35 00.3	+0.8	
	baz=274								
N19K	Bonanza Creek	74.56	30	P		P	20 35 00.7	+1.0	
	baz=275								
O19K	Port Alsworth	74.69	31	P		P	20 35 01.2	+0.9	
	baz=275								
H21K	Melozitna Rive	74.91	25	IAmb		IAmb	20 35 03.8		
	comp=Z,14nm,1.1s								
H21K	Melozitna Rive	74.91	25	P		P	20 35 02.7	+1.2	
	baz=275								
F22K	John River	75.00	23	P		P	20 35 03.1	+1.0	
	baz=275								
E22K	Anaktuvuk Pass	75.08	23	P		P	20 35 03.3	+0.8	
	baz=275,SNR=6.3								
M20K	Styx River	75.11	29	IAmb		IAmb	20 35 04.7		
	comp=Z,6.5nm,0.8s								
M20K	Styx River	75.11	29	P		P	20 35 04.0	+1.1	
	baz=276,SNR=6.5								
Q19K	Cape Douglas,	75.16	32	P		P	20 35 03.9	+0.8	
	baz=276								
I21K	Tanana	75.30	26	IAmb		IAmb	20 35 06.1		
	comp=Z,7.8nm,1.0s								
I21K	Tanana	75.30	26	P		P	20 35 04.9	+1.1	
	baz=276,SNR=5.5								
G22K	Bettles	75.32	24	P		P	20 35 04.5	+0.7	
	baz=276								
C23K	Itkillik River	75.35	21	IAmb		IAmb	20 35 05.7		
	comp=Z,12nm,1.0s								
C23K	Itkillik River	75.35	21	P		P	20 35 04.5	+0.5	
	baz=276								
D23K	Nanushuk River	75.42	22	P		P	20 35 05.3	+0.9	
	baz=276								
PPLA	Purkeypile	75.45	28	P		P	20 35 05.5	+0.7	
	baz=276								
H22K	Ishtalitna Cre	75.47	25	IAmb		IAmb	20 35 07.3		
	comp=Z,14nm,1.2s								
H22K	Ishtalitna Cre	75.47	25	P		P	20 35 05.9	+1.1	
	baz=276,SNR=10								
OHAK	Old Harbor	75.54	34	P		P	20 35 05.8	+0.5	
	baz=277								
N20K	Mount Spurr	75.63	30	P		P	20 35 05.9	+0.1	
	baz=277								
SPCR	Spurr Chakacha	75.63	30	P		P	20 35 06.1	+0.3	
	baz=277								
COLD	Coldfoot	75.79	24	P		P	20 35 07.2	+0.6	
	baz=277								
MLY	Manley	75.84	26	IAmb		IAmb	20 35 08.8		
	comp=Z,8.3nm,0.8s								
MLY	Manley	75.84	26	P		P	20 35 07.6	+0.6	
	baz=277,SNR=7.6								
Q20K	Shuyak Island	75.84	33	P		P	20 35 07.0	0.0	
	baz=277								
BPAW	Bear Paw Mtn.	75.84	27	P		P	20 35 07.5	+0.6	
	baz=277								
KDAK	Kodiak Island	75.85	34	P		P	20 35 07.1	+0.1	
	baz=277								
SKT	Skwentna	75.86	29	IAmb		IAmb	20 35 07.4		
	comp=Z,9.7nm,1.1s								
SKT	Skwentna	75.86	29	P		P	20 35 07.0	-0.1	
	baz=277,SNR=5.2								
TOLK	Toolik Lake Re	75.86	22	P		P	20 35 07.4	+0.4	
	baz=277,SNR=5.5								
E23K	Chandalar	75.91	23	IAmb		IAmb	20 35 08.7		
	comp=Z,4.2nm,0.8s								
E23K	Chandalar	75.91	23	P		P	20 35 08.2	+0.9	
	baz=277								
G23K	Bananza Creek	75.92	24	IAmb		IAmb	20 35 09.4		
	comp=Z,13nm,1.4s								
G23K	Bananza Creek	75.92	24	P		P	20 35 08.1	+0.7	
	baz=277,SNR=6.4								
C24K	Franklin Bluff	76.03	21	P		P	20 35 08.5	+0.6	
	baz=278								
D24K	Happy Valley	76.06	22	P		P	20 35 08.8	+0.7	
	baz=278								
HOM	Homer	76.09	32	P		P	20 35 09.3	+0.9	
	baz=278								
L22K	Petersville	76.14	29	IAmb		IAmb	20 35 09.2		
	comp=Z,7.6nm,1.0s								
CAPN	Captain Cook N	76.19	30	P		P	20 35 09.1	+0.2	
	baz=278								
H23K	Yukon River	76.23	25	P		P	20 35 10.1	+1.0	
	baz=278								
TRF	Thorofare Moun	76.23	28	P		P	20 35 09.8	+0.4	
	baz=278								
E24K	Your Creek	76.33	23	IAmb		IAmb	20 35 11.4		
	comp=Z,7.0nm,0.9s								
E24K	Your Creek	76.33	23	P		P	20 35 10.5	+0.8	
	baz=278								
CUT	Chulitna	76.39	29	P		P	20 35 10.8	+0.8	
	baz=278								
I23K	Minto, Yukon-K	76.40	26	IAmb		IAmb	20 35 12.9		
	comp=Z,4.7nm,0.8s								
I23K	Minto, Yukon-K	76.40	26	P		P	20 35 11.0	+0.9	
	baz=278,SNR=5.8								
BRSE	Bradley Lake S	76.54	31	P		P	20 35 11.3	+0.3	
	baz=278								
ARCES	ARCESS Array B	76.58	339	P		P	20 35 11.2	+0.2	
	comp=Z,3.9nm,0.9s,baz=63,slow=5.3,SNR=1.8 comp=Z,3.9nm,0.9s								
NEA2	Nenana	76.61	26	IAmb		IAmb	20 35 13.0		
	comp=Z,6.7nm,0.7s								
NEA2	Nenana	76.61	26	P		P	20 35 12.1	+0.8	
	baz=279								
F24K	Squaw Lake	76.64	23	P		P	20 35 12.2	+0.7	
	baz=279								
BRTR	Keskin Array B	76.67	308	P		P	20 35 12.2	-0.1	
	comp=Z,0.8nm,0.8s,baz=151,slow=2.8,SNR=4.4 comp=Z,0.8nm,0.8s								
MCK	McKinley	76.79	27	P		P	20 35 12.5	+0.1	
	baz=279,SNR=6.4								
RC01	Rabbit Creek A	76.83	30	P		P	20 35 13.1	+0.6	
	baz=279								
D25K	Kavik River	76.90	21	P		P	20 35 13.3	+0.4	
	baz=280								
H24K	Noodor Dome	76.91	25	IAmb		IAmb	20 35 15.1		
	comp=Z,4.8nm,0.9s								
H24K	Noodor Dome	76.91	25	P		P	20 35 14.0	+1.0	
	baz=279,SNR=5.3								
G24K	Hadweenzic Riv	76.93	24	IAmb		IAmb	20 35 14.9		
	comp=Z,7.6nm,1.0s								
G24K	Hadweenzic Riv	76.93	24	P		P	20 35 14.0	+0.9	
	baz=280,SNR=5.5								
PMR	Palmer	77.04	29	P		P	20 35 14.2	+0.5	
	baz=279								
WAT1	Susitna Watana	77.11	28	P		P	20 35 14.2	+0.1	
	baz=280								
SEW	Seward	77.12	31	P		P	20 35 14.3	+0.2	
	baz=279								
POKR	Poker Plat Res	77.21	26	P		P	20 35 15.6	+0.9	
	baz=280								
SPITS	Spitsbergen Ar	77.22	348	P		P	20 35 14.1	-0.4	
	comp=Z,4.8nm,0.7s,baz=106,slow=6.2,SNR=6.1 comp=Z,4.8nm,0.7s								
C26K	Camden Bay	77.29	21	P		P	20 35 15.6	+0.6	
	baz=281,SNR=11								
SML	Sawmill	77.38	29	P		P	20 35 16.1	+0.4	
	baz=280								
KNK	Knik Glacier	77.39	30	P		P	20 35 16.1	+0.4	
	baz=280								
E25K	Arctic Village	77.40	22	P		P	20 35 16.4	+0.6	
	baz=281,SNR=5.2								
G25K	Bearman Lake	77.45	24	P		P	20 35 17.0	+1.0	
	baz=281,SNR=5.1								
F25K	Christian Rive	77.47	23	IAmb		IAmb	20 35 18.4		
	comp=Z,6.3nm,0.8s								
F25K	Christian Rive	77.47	23	P		P	20 35 17.0	+0.8	
	baz=281,SNR=10								
ILAR	Eielson Array	77.50	26	P		P	20 35 14.6	-1.7	
	comp=Z,1.1nm,0.8s,baz=285,slow=5.2,SNR=13 comp=Z,1.1nm,0.8s								
WAT6	Susitna Watana	77.52	28	P		P	20 35 16.7	+0.1	
	baz=280,SNR=5.6								
HDA	Harding Lake	77.54	26	P		P	20 35 16.3	-0.2	
	baz=281								
DHY	Denali Highway	77.59	28	P		P	20 35 17.3	+0.2	
	baz=280								
M23K	Glacier View	77.67	29	P		P	20 35 18.1	+0.8	
	baz=280								
FINES	FINESS Array B	77.71	331	P		P	20 35 17.1	-0.4	
	comp=Z,4.3nm,0.7s,baz=46,slow=6.0,SNR=12 comp=Z,4.3nm,0.7s								
CSS	Mathiatis	77.75	303	P		P	20 35 18.1	-0.2	
	comp=Z,26nm,1.0s								
C27K	Jago River	77.76	21	P		P	20 35 18.6	+0.9	
	baz=282								
SCM	Sheep Creek Mo	77.84	29	P		P	20 35 18.9	+0.6	
	baz=281								
AK09	Malin Array Si	77.86	319	P		P	20 35 16.9	-1.6	
AK08	Malin Array Si	77.88	319	P		P	20 35 17.3	-1.3	
AKASG	Malin Array Be	77.89	319	P		P	20 35 17.6	-1.1	
	comp=Z,2.7nm,0.7s,baz=67,slow=5.3,SNR=11 comp=Z,2.7nm,0.7s								
AKBB	Malin Array Si	77.89	319	P		P	20 35 17.7	-1.0	
AK10	Malin Array Si	77.89	319	P		P	20 35 17.6	-1.1	
AK01	Malin Array Si	77.89	319	P		P	20 35 17.7	-1.0	
KIEV	Kiev	77.90	319	P		P	20 35 17.7	-1.0	
	comp=Z,37nm,0.9s								
BMAR	Burnt Mountain	77.91	23			P	20 35 19.1	+0.5	
PRP	Porcupine Dome	77.92	25	P		P	20 35 19.6	+0.8	
	baz=282								
F26K	Sheenjek River	78.02	23	IAmb		IAmb	20 35 21.2		
	comp=Z,6.7nm,1.1s								
F26K	Sheenjek River	78.02	23	P		P	20 35 20.0	+0.9	
	baz=282,SNR=5.9								
GLI	Glacier Island	78.13	30	P		P	20 35 20.6	+0.7	
	baz=281								
P23K	Montague Islan	78.15	31	P		P	20 35 19.8	-0.1	
	baz=281								
K24K	Donnelly Dome	78.16	27	P		P	20 35 20.4	+0.4	
	baz=282								
J25K	Salcha River,	78.17	26	P		P	20 35 19.4	-0.7	
	baz=282								
G26K	Porcupine Rive	78.31	24	IAmb		IAmb	20 35 22.8		
	comp=Z,8.0nm,0.9s								
G26K	Porcupine Rive	78.31	24	P		P	20 35 21.6	+0.9	
	baz=283,SNR=8.3								
M24K	Tolsona, Glenn	78.33	29	P		P	20 35 21.6	+0.6	
	baz=282								
PAX	Paxson	78.47	28	P		P	20 35 22.1	+0.3	
	baz=282								
KLU	Klutina	78.57	29	P		P	20 35 22.5	+0.1	
	baz=282								
RIDG	Independent Ri	78.58	27	P		P	20 35 22.5	+0.1	
	baz=282								
Q23K	Middleton Isla	78.79	31	P		P	20 35 24.1	+0.7	
	baz=282								
D27M	Malcolm River	78.79	21	P		P	20 35 24.1	+0.7	
	baz=285								
E27K	Coleen River	78.84	22	IAmb		IAmb	20 35 25.5		
	comp=Z,12nm,1.1s								
E27K	Coleen River	78.84	22	P		P	20 35 24.2	+0.6	
	baz=285,SNR=11								
EYAK	Cordova Ski Ar	78.85	30	P		P	20 35 24.0	+0.2	
	baz=282								
SCRK	Sand Creek	78.90	27	P		P	20 35 24.4	+0.2	
	baz=283								
SORM	Soroca	78.92	317	P		P	20 35 23.6	-0.8	
	comp=Z,18nm,1.7s								
I26K	Coal Creek Min	78.94	25	P		P	20 35 24.4	+0.2	
	baz=284								
LUBAR	Lubar, Ukraine	78.95	319	P		P	20 35 23.6	-1.0	
N25K	Chitina, Valde	79.16	29	P		P	20 35 25.8	+0.2	
	baz=283								
G27K	Doyon Strip	79.16	23	P		P	20 35 26.0	+0.5	
	baz=285,SNR=6.4								
BMRM	Bremner River	79.31	30	P		P	20 35 26.5	+0.1	
	baz=283								
H27K	Steamboat Moun	79.36	24	P		P	20 35 27.3	+0.7	
	baz=285								
E28M	Babbage River	79.46	21	IAmb		IAmb	20 35 28.6		
	comp=Z,11nm,1.4s								
E28M	Babbage River	79.46	21	P		P	20 35 27.4	+0.4	
	baz=286								
NDNU	Novodnistrovsk	79.47	318	P		P	20 35 26.3	-1.2	
I27K	Kandik River	79.49	25	IAmb		IAmb

baz=288
I28M **Miner Creek** 80.20 25 P P 20 35 32.0 +0.8
baz=287
M27K **Edge Creek, AK** 80.22 28 P P 20 35 31.9 +0.4
baz=285
VRI **Vrincioaia** 80.48 315 P P 20 35 32.9 -0.1
comp=Z,21nm,1.1s
G29M **Pine Creek** 80.51 23 P P 20 35 33.5 +0.7
baz=288
H29M **Whitestone** 80.59 24 P P 20 35 33.8 +0.6
baz=288
BVCY **Beaver Creek** 80.67 28 P P 20 35 34.6 +0.9
baz=286
MESA **MESA** 80.77 30 P P 20 35 34.9 +0.4
baz=286
CTG **Chitna Glacier** 80.85 29 P P 20 35 35.2 +0.4
baz=286
I29M **Ogilvie Camp,** 80.88 24 P P 20 35 35.2 +0.4
baz=288
YUK3 **Moose Creek** 81.03 28 P P 20 35 36.0 +0.2
baz=287
BUR08 **Bucovina Ar. S** 81.10 317 IAmb IAmb 20 35 37.4
comp=Z,4.7nm,0.7s
MLR **Muntele Rosu** 81.10 315 P P 20 35 37.0 +0.5
comp=Z,19nm,0.9s
F30M **Barrier River** 81.11 22 IAmb IAmb 20 35 37.3
comp=Z,7.6nm,0.8s
F30M **Barrier River** 81.11 22 P P 20 35 36.1 +0.2
baz=290
G30M **tAoh Zraii Nji** 81.16 23 P P 20 35 36.2 -0.1
baz=290
EPYK **Eagle Plains** 81.18 23 P P 20 35 36.5 +0.2
baz=289
STNU **Starunia** 81.30 318 P P 20 35 37.0 -0.3
O28M **Mount Upton** 81.44 29 P P 20 35 38.2 0.0
baz=287
YUK8 **Steele Glacier** 81.49 29 P P 20 35 38.5 +0.1
baz=287
MORS **Morshin** 81.58 319 P P 20 35 38.7 -0.1
PINM **Pinnacle** 81.61 30 P P 20 35 39.2 +0.4
baz=287
INK **Inuvik** 81.66 21 P P 20 35 37.9 -0.9
comp=Z,3.3nm,1.1s,baz=286,slow=8.1,SNR=5.1
comp=Z,3.3nm,1.1s
INK **Inuvik** 81.66 21 P P 20 35 39.1 +0.4
baz=292
L29M **L29M** 81.66 27 P P 20 35 40.0 +1.1
baz=288
K29M **Barlow Dome** 81.68 26 P P 20 35 39.8 +0.6
baz=289
I30M **Mount Dempster** 81.69 24 IAmb IAmb 20 35 40.1
comp=Z,5.7nm,0.9s
I30M **Mount Dempster** 81.69 24 P P 20 35 39.6 +0.4
baz=290
M29M **Somme Creek** 81.72 27 P P 20 35 40.2 +0.8
baz=288
SHIU **Shidnytsya** 81.90 319 P P 20 35 40.5 0.0
F31M **Tsiigehtchic** 81.90 22 IAmb IAmb 20 35 40.8
comp=Z,12nm,1.1s
F31M **Tsiigehtchic** 81.90 22 P P 20 35 40.4 +0.4
baz=292
J30M **Hart River** 81.93 25 P P 20 35 40.7 +0.2
baz=290
YUK4 **Talbot Arm** 81.98 28 P P 20 35 41.1 +0.1
baz=288
KWP **Kalwaria Pacla** 82.21 319 P P 20 35 41.8 -0.3
comp=Z,21nm,1.4s
YUK6 **Outpost Mounta** 82.24 29 P P 20 35 42.1 -0.2
baz=289
H31M **Peel River** 82.28 24 P P 20 35 42.6 +0.4
baz=292
KORU **Korolevo** 82.32 318 P P 20 35 42.6 -0.1
BRIU **Brid** 82.34 318 P P 20 35 42.9 +0.1
O29M **Mount Kennedy** 82.34 29 P P 20 35 42.9 +0.2
baz=288
M30M **Minto, Yukon** 82.41 27 P P 20 35 43.3 +0.3
baz=290
MUKU **Mukachevo** 82.53 318 P P 20 35 43.8 +0.1
A36M **Sachs Harbour** 82.63 16 P P 20 35 44.2 +0.3
baz=299
N30M **Aishikik Lake** 82.66 28 P P 20 35 44.7 +0.4
baz=290
HYT **Haines Junctio** 82.68 29 P P 20 35 44.8 +0.3
baz=289
HOLU **Holmets** 82.70 318 P P 20 35 44.6 -0.1
P30M **Million Dollar** 83.17 29 P P 20 35 47.0 +0.1
baz=290
STHS **Stebnicka Huta** 83.18 319 *e*P P 20 35 46.8 -0.4
N31M **Braeburn, Yuko** 83.24 28 P P 20 35 47.5 +0.2
baz=291
O30N **Mendenhall** 83.35 29 P P 20 35 48.3 +0.5
baz=291
M31M **Drury Creek, Y** 83.59 27 P P 20 35 49.3 +0.3
baz=292
NIE **Niedzica** 83.77 320 P P 20 35 50.2 -0.1
comp=Z,5.6nm,2.0s
OJC **Ojcow** 83.85 320 P P 20 35 50.4 -0.2
comp=Z,7.1nm,1.2s
HFS **Hagfors** 83.90 331 P P 20 35 49.0 -1.6
comp=Z,7.3nm,1.0s,baz=64,slow=6.6,SNR=2.6
comp=Z,7.3nm,1.0s
WHY **Whitehorse** 83.94 28 P P 20 35 50.9 0.0
baz=292
SKAG **Skagway** 84.17 30 P P 20 35 52.0 0.0
baz=291
S31K **Pelican** 84.27 31 P P 20 35 52.5 0.0
baz=291
NB2 **NORSAR Subarra** 84.70 332 P P 20 35 53.1 -1.6
comp=Z,2.1nm,0.8s,baz=70,slow=4.8
NOA **NORSAR Array B** 84.70 332 P P 20 35 52.9 -1.8
comp=Z,1.4nm,0.8s,baz=68,slow=5.1,SNR=4.0
comp=Z,1.4nm,0.8s
P33M **Teslin, Yukon** 85.06 28 P P 20 35 56.4 -0.3
baz=293
S32K **Killisnoo** 85.28 31 P P 20 35 57.3 -0.2
baz=292
MORC **Moravsky Berou** 85.37 320 *e*P P 20 35 58.5 +0.2
JAVC **Velka Javorina** 85.59 320 *e*P P 20 36 00.8 +1.3
MORH **Mrgy, Hungar** 85.81 317 P P 20 36 00.2 -0.3
comp=Z,6.1nm,2.2s
Q32M **Nakina River** 85.82 30 P P 20 36 00.2 -0.3
baz=294
DPC **Dobruska-Polom** 85.92 321 P P 20 36 01.0 -0.1
VRAC **Vranov** 86.11 320 *e*P P 20 36 02.1 +0.1
MPLH **Magyarpolny** 86.22 318 P P 20 36 02.5 0.0
comp=Z,31nm,1.4s
R33M **Jennings River** 86.25 29 P P 20 36 02.7 +0.1
baz=295
KRUC **Moravsky** 86.31 320 *e*P P 20 36 03.0 0.0
TGTN **Hyland Airport** 86.51 26 P P 20 36 03.8 +0.1
baz=297
U33K **Whale Pass** 86.54 32 P P 20 36 04.1 +0.3
baz=293
CRAG **Craig** 86.79 33 P P 20 36 04.8 -0.3
baz=294
S34M **Telegraph Cree** 86.80 30 P P 20 36 04.9 -0.2
baz=295
WRAK **Wrangell Islan** 86.81 32 P P 20 36 05.1 -0.1
baz=294
DLBC **Dease Lake** 87.10 29 P P 20 36 05.8 -0.9
comp=Z,2.8nm,0.7s,baz=250,slow=9.9,SNR=3.4
comp=Z,2.8nm,0.7s
DLBC **Dease Lake** 87.10 29 P P 20 36 06.8 +0.1
baz=296
RES **Resolute Bay** 87.17 9 IAmb IAmb 20 36 07.4
comp=Z,5.3nm,0.9s
CLL **Collm** 87.54 323 *e*P P 20 36 08.0 -0.9
T35M **Bob Quinn** 87.62 31 P P 20 36 09.3 +0.1
baz=296
V35K **Ketchikan** 87.64 33 P P 20 36 09.5 +0.3
baz=295
GERES **GERESS Array B** 88.05 320 P P 20 36 09.5 -2.0
comp=Z,0.8nm,0.9s,baz=92,slow=3.3,SNR=3.8
comp=Z,0.8nm,0.9s
KOTAN **Kotaneelee Air** 89.00 27 P P 20 36 15.2 -0.4
baz=301
WTTA **Wattenberg** 89.94 319 *e*P P 20 36 18.4 -2.1
comp=Z,5.2nm,0.9s
WATA **Walderalm** 89.95 320 *e*PcP P 20 36 21.0 +0.5
comp=Z,6.0nm,1.3s
SQTA **Sankt Quirin** 90.22 320 *i* P P 20 36 20.6 -1.1
comp=Z,3.9nm,0.7s
MOTA **Moosalm** 90.24 320 *e*P P 20 36 21.0 -0.9
comp=Z,5.1nm,0.9s
FETA **Feichten** 90.60 320 *e*PcP P 20 36 23.1 -0.5
comp=Z,12nm,1.2s
FUORN **Ofenpass-Fuorn** 91.06 319 P 20 36 25.2 -0.6
YKA **Yellowknife Ar** 91.38 22 P P 20 36 26.6 0.0
comp=Z,1.1nm,0.9s,baz=315,slow=5.3,SNR=20
comp=Z,1.1nm,0.9s
TUE **Stuetta** 91.70 319 P P 20 36 28.5 -0.2
VNDA **Vanda** 96.35 171 P P 20 36 49.3 +0.3
comp=Z,1.1nm,0.9s,baz=268,slow=22,SNR=8.0
comp=Z,1.1nm,0.9s

NOU ***23*** *20:33:09.8,24˚.04S×176˚.54W,h398km,mb5.6/26,South of Fiji Islands*
IDC ***23*** *20:33:10.9±1.1,25˚.26S×179˚.64E,h502km±12km, mb3.8/22,mbtmp4.6/25,Error ellipse: s-maj=12.2km s-min=10.3km az=36.0*
NEIC ***23*** *20:33:11.1±1.5,25˚.3S±0˚.1×179˚.69E±0˚.07,h501km±7km, mb5.4/43,Error ellipse: s-maj=15.6km s-min=8.6km az=183.0*

ISC 23 20:33:10.8±0.4,25˚.32S±0˚.05×179˚.70E±0˚.07,h507km, n122,σ1§47/122,mb4.4/37,3C-1D,South of Fiji Islands

Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
RAO **Raoul Island** 4.46 152 P P 20 34 34.1 +0.8
2μm,0.2s,baz=287,slow=19,SNR=30
RAO **Raoul Island** 4.46 152 P P 20 34 34.7 +1.4
12μm,0.7s
RAO **Raoul Island** 4.46 152 P P 20 34 33.4 +0.1
GLKZ **Green Lake** 4.46 152 P P 20 34 34.1 +0.8
MSVF **Nonsavu** 7.70 348 P P 20 35 03.6 -0.9
23nm,0.4s,baz=169,slow=7.9,SNR=52
MSVF **Nonsavu** 7.70 348 P P 20 35 03.6 -0.9
378nm,1.0s
MSVF **Nonsavu** 7.70 348 P 20 35 03.3 -1.2
OUZ **Omahuta** 11.19 207 P P 20 35 42.4 +1.8
MARNC **Mare, Loyalty** 11.38 287 P P 20 35 42.9 +0.1
GRZ **Great Barrier** 11.49 197 P P 20 35 45.0 +1.2
WCZ **Waipu Caves** 11.55 202 P P 20 35 46.7 +2.3
OUENC **Ouen Island, N** 12.12 281 P P 20 35 50.0 -0.7
MXZ **Matakaoa Point** 12.27 185 P P 20 35 52.4 +0.4
HAZ **Te Kaha** 12.51 187 P P 20 35 53.9 -0.6
WMGZ **Waiomatatini S** 12.51 185 P P 20 35 54.5 0.0
WMGZ S S 20 38 06.3 -3.3
DZM **Mont Dzumac** 12.57 282 P P 20 35 56.4 +0.8
26nm,0.8s,baz=143,slow=20,SNR=7.9
RUGZ **Raukumara Rang** 12.73 187 P P 20 35 57.5 +0.5
PUZ **Puketiti** 12.78 185 P P 20 35 57.6 +0.3
TOZ **Tahuroa Road** 12.88 195 P P 20 36 02.2 +3.8
TWGZ **Tauwhareparae** 12.91 186 P P 20 35 58.8 +0.1
TWGZ S S 20 38 17.7 +0.4
URZ **Urewera** 13.09 189 P P 20 35 58.6 -2.0
56nm,0.6s,baz=20,slow=2.2,SNR=29
URZ S S 20 38 21.6 +0.9
134nm,0.5s,baz=308,slow=18,SNR=6.3
URZ **Urewera** 13.09 189 P P 20 35 58.4 -2.2
URZ S S 20 38 16.2 -4.5
MWZ **Matawai** 13.11 188 P P 20 36 00.5 -0.4
MWZ S S 20 38 17.1 -4.0
RAGZ **Rawiri** 13.28 188 P P 20 36 01.1 -1.7
HIZ **Hauiti** 13.78 196 P P 20 36 11.4 +3.5
AFI **Afiamalu** 13.89 37 P P 20 36 05.4 -4.1
20nm,0.6s,baz=225,slow=19,SNR=2.7
BKZ **Black Stump Fm** 14.07 190 P 20 36 10.2 -0.9
BKZ **Black Stump Fm** 14.07 190 P P 20 36 09.6 -1.5
BKZ S S 20 38 36.3 -3.4
TSZ **Takapari Road** 15.03 191 S S 20 38 53.6 -4.4
SANVU **Saraoutou** 15.28 308 P P 20 36 23.3 -0.6
MRZ **Mangatainoka R** 15.69 192 P P 20 36 25.9 -2.0
RPZ **Rata Peaks** 19.67 199 P P 20 37 05.7 -0.1
7.4nm,0.5s,baz=94,slow=1.4,SNR=5.7
HNR **Honiara** 24.54 307 P P 20 37 48.8 -1.2
4.2nm,0.6s,baz=96,slow=2.6,SNR=7.5
4.2nm,0.6s
HNR **Honiara** 24.54 307 P P 20 37 48.6 -1.4
ARMA **Armidale** 25.30 252 P P 20 37 57.8 +1.0
EIDS **Eidsvold** 25.85 264 P 20 38 02.1 +0.6
CTA **Charters Tower** 31.24 273 P P 20 38 49.2 +0.6
50nm,0.6s,baz=95,slow=9.9,SNR=91
50nm,0.6s
CTAO **Charters Tower** 31.24 273 P 20 38 49.0 +0.4
CTAO **Charters Tower** 31.24 273 P P 20 38 49.0 +0.4
CTAO x x 20 40 20.0
PMG **Port Moresby** 34.73 291 P P 20 39 18.1 -0.1
31nm,0.6s,baz=94,slow=5.4,SNR=20
31nm,0.6s
PMG **Port Moresby** 34.73 291 P 20 39 17.9 -0.3
PMG **Port Moresby** 34.73 291 P P 20 39 18.1 -0.1
XMAS **Kiritimati** 35.07 42 x x 20 40 47.3
COEN **Coen** 36.10 281 P P 20 39 30.1 +0.5
BBOO **Buckleboo** 38.66 248 P P 20 39 49.9 -0.5
BBOO IAmb IAmb 20 40 19.5
comp=Z,100nm,0.9s
MANU **Manus Island** 38.80 301 P 20 39 52.1 +0.3
TAOE **Nuku Hiva Isla** 41.52 74 P P 20 40 15.9 +2.2
TAOE x x 20 41 54.8
TAOE x x 20 42 11.1
TAOE x x 20 42 49.0
AS31 **Alice Springs** 41.56 262 P 20 40 13.6 -0.2
AS31 IAmb IAmb 20 40 43.8
comp=Z,82nm,0.9s
ASAR **Alice Springs** 41.56 262 P P 20 40 13.0 -0.8
comp=Z,15nm,0.8s,baz=90,slow=6.2,SNR=188
ASAR S S 20 45 53.9 +0.9
comp=Z,4.5nm,0.8s,baz=104,slow=14,SNR=5.2
comp=Z,15nm,0.8s
ASAR **Alice Springs** 41.56 262 P 20 40 13.6 -0.2
WR8 **Warramunga Arr** 41.91 268 P 20 40 16.3 -0.4
WRAB **Tennant Creek** 42.05 268 P P 20 40 17.1 -0.7
WRAB **Tennant Creek** 42.05 268 P P 20 40 17.5 -0.3
WRAB x x 20 41 53.0
WB0 **Warramunga Arr** 42.06 268 P 20 40 17.4 -0.5
WRA **Warramunga Arr** 42.06 268 P P 20 40 17.4 -0.5
comp=Z,18nm,0.8s,baz=100,slow=6.6,SNR=241
comp=Z,18nm,0.8s
WRA **Warramunga Arr** 42.06 268 P 20 40 17.4 -0.5
JAY **Jayapura** 43.84 295 P P 20 40 31.1 -0.8
comp=Z,13nm,0.8s,baz=122,slow=13,SNR=5.1
comp=Z,13nm,0.8s
FORT **Forrest** 45.58 251 P P 20 40 44.5 -0.6
KNRA **Kununurra** 48.43 271 P 20 41 06.8 +0.1
FITZ **Fitzroy Crossi** 50.47 267 P P 20 41 21.9 +0.2
comp=Z,5.6nm,0.6s,baz=93,slow=7.7,SNR=29
comp=Z,5.6nm,0.6s
FAKI **Fak Fak** 50.75 288 P P 20 41 24.0 +0.1
FAKI IAmb IAmb 20 41 52.7
comp=Z,490nm,1.7s
GUMO **Guam** 51.46 315 P P 20 41 28.2 -0.7
GUMO PcP PcP 20 42 34.4 -0.3
GUMO x x 20 44 01.0
SIJI **Sorong** 52.64 290 P P 20 41 37.4 -0.2
comp=Z,22nm,0.8s,baz=175,slow=2.7,SNR=8.7
comp=Z,22nm,0.8s
VNDA **Vanda** 52.95 185 P P 20 41 39.9 +1.1
comp=Z,2.2nm,0.7s,baz=358,slow=8.6,SNR=8.0
comp=Z,2.2nm,0.7s
VNDA **Vanda** 52.95 185 P P 20 41 40.2 +1.4
VNDA **Vanda** 52.95 185 P P 20 41 40.1 +1.3
SBA **Scott Base** 52.95 183 x x 20 43 08.6
MBWA **Marble Bar** 54.88 261 P P 20 41 49.7 -3.6
MBWA PcP PcP 20 42 43.1 -4.8
BATI **Baumata** 55.07 275 P P 20 41 55.5 +0.7
comp=Z,5.6nm,0.3s,baz=106,slow=8.1,SNR=4.6
comp=Z,5.6nm,0.3s
MORW **Morawa** 56.15 251 P P 20 42 01.9 -0.2
CASY **Casey** 58.73 206 P P 20 42 18.8 -0.2
QSPA **South Pole Qui** 64.77 180 P P 20 42 59.9 +1.2
comp=Z,23nm,1.0s,baz=26,slow=1.5,SNR=40
comp=Z,23nm,1.0s
QSPA **South Pole Qui** 64.77 180 P 20 42 59.9 +1.2
QSPA IAmb IAmb 20 43 29.3
comp=Z,82nm,0.8s
QSPA **South Pole Qui** 64.77 180 P P 20 42 59.8 +1.1
LEM **Lembang** 70.93 271 P P 20 43 36.5 -0.8
comp=Z,5.6nm,0.4s,baz=150,slow=20,SNR=3.9
comp=Z,5.6nm,0.4s
MJAR **Matsushiro Arr** 72.91 326 P P 20 43 47.4 -0.7
comp=Z,4.1nm,0.9s,baz=151,slow=5.5,SNR=5.6
comp=Z,4.1nm,0.9s
KSRS **Korea Array** 79.16 320 P P 20 44 23.9 +1.3
comp=Z,1.2nm,0.6s,baz=131,slow=5.7,SNR=5.8
comp=Z,1.2nm,0.6s
KSAR **Wonju Array Be** 79.17 320 P 20 44 24.0 +1.4
PETK **Petropavlovsk-** 80.41 347 P P 20 44 29.4 +0.6
comp=Z,2.8nm,0.8s,baz=118,slow=7.9,SNR=5.2
comp=Z,2.8nm,0.8s
SYO **Syowa Base** 81.58 194⇑*i*PKiKP PKiKP 20 50 02.0 +8.1
USRK **Ussuriysk Ar.** 81.81 327 P P 20 44 37.2 +1.0
comp=Z,1.9nm,0.8s,baz=173,slow=1.5,SNR=6.2
comp=Z,1.9nm,0.8s
TROLL **Troll, Antarti** 82.92 181 P P 20 44 42.1 +0.4
VNA3 **Neumayer Olymp** 83.48 177 ⇓P P 20 44 44.4 0.0
comp=Z,1.9nm,0.2s
VNA2 **Neumayer--Watz** 83.89 178 ⇑P P 20 44 46.9 +0.4
comp=Z,1.1nm,0.4s,baz=193,slow=5.7
VNA1 **Neumayer--Stat** 84.14 177 ⇑P P 20 44 48.4 +0.8
comp=Z,1.7nm,0.4s
CN2 **Changchun** 84.86 324 P P 20 44 52.9 +1.4
CN2 pmax pmax
comp=Z,10.0nm,1.5s
LL02 **Futaleuf** 85.38 136 P 20 44 55.7 +1.4
QSM **Queen of Sheba** 85.42 47 IAmb IAmb 20 45 24.9
comp=Z,173nm,1.8s
IRM **Iron Mountain** 85.54 49 IAmb IAmb 20 45 26.5
comp=Z,131nm,1.2s
GWY **Greenwater Val** 85.68 47 IAmb IAmb 20 45 26.2
comp=Z,114nm,1.7s
NVAR **Mina Array Bea** 85.95 44 P P 20 44 58.4 +1.2
comp=Z,0.6nm,0.5s,baz=222,slow=7.8,SNR=7.1
comp=Z,0.6nm,0.5s
NVAR **Mina Array Bea** 85.95 44 P P 20 44 57.7 +0.5
ENH **Enshi** 87.04 305 P P 20 45 02.9 +0.6
ENH IAmb IAmb 20 45 32.4
comp=Z,91nm,1.2s
PLCA **Paso Flores** 87.47 134 P P 20 45 05.9 +1.5
comp=Z,6.0nm,1.0s,baz=250,slow=5.9,SNR=4.2
comp=Z,6.0nm,1.0s
PLCA **Paso Flores** 87.47 134 P P 20 45 05.8 +1.4
PLCA x x 20 47 50.9
TUC **Tucson** 87.59 53 P P 20 45 05.5 +0.6
TUC IAmb IAmb 20 45 36.7
comp=Z,94nm,0.9s
PINE **Pine Mountain** 87.66 39 P P 20 45 06.0 +0.8
U15A **North Rim** 88.74 48 IAmb IAmb 20 45 41.7
comp=Z,75nm,1.0s
CMAR **Chiang Mai Arr** 89.76 290 P P 20 45 17.4 +2.1
comp=Z,0.4nm,0.3s,baz=140,slow=4.6,SNR=8.2
comp=Z,0.4nm,0.3s
CHTO **Chiang Mai** 89.92 291 P 20 45 16.2 +0.3
SRU **San Rafael Swe** 91.36 47 IAmb IAmb 20 45 52.9
comp=Z,66nm,0.8s
TXAR **Lajitas Array** 91.41 58 P P 20 45 23.8 +1.1
comp=Z,2.0nm,1.0s,baz=224,slow=5.2,SNR=12
comp=Z,2.0nm,1.0s
DRIO **Del Rio** 93.81 59 IAmb IAmb 20 46 03.7
comp=Z,46nm,0.9s
PDAR **Pinedale Array** 93.89 44 P P 20 45 32.7 -1.3
comp=Z,0.3nm,0.7s,baz=246,slow=7.4,SNR=2.2
comp=Z,0.3nm,0.7s
SONM **Songino Array** 98.00 319 P P 20 45 54.1 +1.8
comp=Z,0.1nm,0.3s,baz=57,slow=5.5,SNR=3.8
comp=Z,0.1nm,0.3s
MKAR **Makanchi Array** 112.91 312 PKiKP PKiKP 20 50 48.7 -1.0
comp=Z,1.1nm,1.0s,baz=74,slow=0.4,SNR=3.8
MKAR PKKPbc PKKPbc 21 01 39.0 -0.2
comp=Z,0.2nm,0.4s,baz=301,slow=3.3,SNR=7.5
KURK **Kurchatov** 116.03 316 PKPdf 20 50 54.5 -1.0
KURBB **Kurchatov Arra** 116.07 316 PKP PKPdf 20 50 55.4 -0.2
comp=Z,0.4nm,0.7s,baz=105,slow=1.8,SNR=4.7
KURBB PKKPbc PKKPbc 21 01 28.4 0.0
comp=Z,0.8nm,0.9s,baz=293,slow=5.1,SNR=4.1
AAK **Ala-Archa** 117.53 307 PKKPbc PKKPbc 21 01 23.3 -0.1
comp=Z,0.8nm,0.5s,baz=222,slow=5.3,SNR=3.5
BVAR **Borovoye Array** 121.31 318 PKP PKPdf 20 51 05.2 -0.4
comp=Z,0.6nm,0.5s,baz=88,slow=2.3,SNR=4.4
SPITS **Spitsbergen Ar** 126.51 356 PKP PKiKP 20 51 15.4 0.0
comp=Z,17nm,1.2s,baz=69,slow=8.2,SNR=5.2
ARCES **ARCESS Array B** 133.21 348 PKP PKPdf 20 51 28.1 +0.2
comp=Z,3.2nm,0.9s,baz=19,slow=5.7,SNR=5.2
FINES **FINESS Array B** 139.69 341 PKhKP PKPpre 20 51 33.4
comp=Z,2.5nm,0.9s,baz=29,slow=3.2,SNR=5.6
FINES PKP PKPdf 20 51 40.0 0.0
comp=Z,1.8nm,0.8s,baz=48,slow=2.8,SNR=4.3
FINES SKPbc SKPbc 20 54 27.4 -0.3
comp=Z,8.6nm,1.0s,baz=56,slow=3.5,SNR=4.7
FINES **FINESS Array B** 139.69 341 PKPdf 20 51 40.9 +1.0
MARD **Mardin** 143.19 299 PKPbc 20 51 46.1 +0.8
NOA **NORSAR Array B** 143.43 351 PKP PKPab 20 51 44.9 0.0
comp=Z,3.2nm,0.8s,baz=16,slow=5.0,SNR=6.8
HFS **Hagfors** 143.87 348 PKP PKPbc 20 51 46.5 0.0
comp=Z,3.0nm,0.4s,baz=40,slow=2.5,SNR=24
AKASG **Malin Array Be** 146.00 326 PKPbc PKPdf 20 51 52.3 +0.9
comp=Z,0.6nm,0.4s,baz=47,slow=4.2,SNR=10.0
MMAI **Mount Meron Ar** 148.01 292 PKPbc PKiKP 20 52 00.7 0.0
comp=Z,2.2nm,0.5s,baz=61,slow=7.7,SNR=12
BRTR **Keskin Array B** 148.19 305 PKPbc PKPbc 20 51 59.6 0.0
comp=Z,0.6nm,0.4s,baz=120,slow=1.4,SNR=6.2
EKA **Eskdalemuir Ar** 149.94 3 PKPbc PKPbc 20 52 02.9 -0.2
comp=Z,0.5nm,0.4s,baz=351,slow=2.8,SNR=7.9
TORD **Torodi Ar. Bea** 167.75 189 PKP PKPdf 20 52 18.8 -0.5
comp=Z,2.0nm,1.2s,baz=248,slow=1.9,SNR=5.5
TORD PKPab PKPab 20 53 29.4 +0.3
comp=Z,4.1nm,1.0s,baz=187,slow=4.3,SNR=8.9

MOS ***23*** *20:33:37.6±0.9,25˚.29S×179˚.58E,h492km,mb5.1/21, Error ellipse: s-maj=10.2km s-min=7.9km az=44.1*
GFZ ***23*** *20:33:38.3,25˚.26S×179˚.67E,h504km,MW5.5,Moment Tensor Solution. s30 Moment tensor: Mrr0.66; Mθθ-0.93; Mφφ0.27; Mrθ-0.75; Mθφ-0.92; Mφr-1.92; Fault plane solution: NP1:φs97.00000°,δ27.00000°, λ160.00000°. NP2:φs205.00000°,δ81.00000°,λ64.00000°. Principal axes: T 2.4000, Plg47.0000°, Azm88.0000°; N 0.0200, Plg25.0000°, Azm209.0000°; P -2.4200, Plg31.0000°, Azm316.0000°;*
IDC ***23*** *20:33:38.3±0.3,25˚.29S×179˚.67E,h494km±2km,mb4.7/32, mbtmp5.5/37 Error ellipse: s-maj=7.4km s-min=6.4km az=14.0*
NEIC ***23*** *20:33:39.2±2.5,25˚.28S±0˚.08×179˚.72E±0˚.08,h506km±5km, mb5.3/458,Mww5.5/11,Error ellipse: s-maj=11.3km s-min=10.2km az=206.0*
NOU ***23*** *20:33:39.1,25˚.28S×179˚.72E,h505km,ML5.1/145,South of Fiji Islands*
NEIC ***23*** *20:33:39.2,25˚.28S×179˚.72E,h506km*
NEIC ***23*** *20:33:40,24˚.88S×179˚.94E,h520km,Moment Tensor Solution. Duration: 2§9 Moment tensor: Scale 10^17Nm; Mrr0.67; Mθθ-0.37; Mφφ-0.30; Mrθ-0.40; Mθφ-1.22; Mφr-1.74; Fault plane solution: Mo2.24000×10^17 NP1: φs85.02000°,δ31.15000°,λ158.65000°. NP2: φs193.51000°,δ79.15000°,λ60.63000°. Principal axes: T 2.0786, Plg48.0000°, Azm73.0000°; N 0.2935, Plg29.0000°, Azm200.0000°; P -2.3721, Plg28.0000°, Azm307.0000°;*
GCMT ***23*** *20:33:41.2±0.2,25˚.34S±0˚.03×179˚.78E±0˚.03,h507km±1km, MW5.6/101,Moment Tensor Solution. s101,c153; Duration: 1§5 Moment tensor: Scale 10^17Nm; Mrr1.08±.05; Mθθ-0.92±.09; Mφφ-0.15±.08; Mrθ-0.51±.08; Mθφ-1.48±.07; Mφr-2.41±.07; Best double couple: Mo3.04600×10^17 NP1:φs87.00000°,δ31.00000°, λ156.00000°. NP2:φs198.00000°,δ78.00000°,λ62.00000°. Principal axes: T 3.0220, Plg49.0000°, Azm77.0000°; N 0.0490, Plg28.0000°, Azm205.0000°; P -3.0690, Plg28.0000°, Azm310.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 23 20:33:38.5±0.2,25˚.31S±0˚.03×179˚.73E±0˚.04,h503km±2km, h503km:pP-P,n1307,σ1§18/1254,mb5.3/360,79C-54D, South of Fiji Islands

Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
RAO **Raoul Island** 4.45 152 P P 20 35 01.4 +0.7
4μm,0.2s,baz=277,slow=8.1,SNR=26
RAO S S 20 36 08.3 +0.4
1μm,0.3s,baz=270,slow=20,SNR=1.7
RAO **Raoul Island** 4.45 152 P P 20 35 01.9 +1.2
RAO **Raoul Island** 4.45 152 S S 20 36 09.6 +1.7
RAO **Raoul Island** 4.45 152 P P 20 35 00.3 -0.4
GLKZ **Green Lake** 4.46 153 P P 20 35 01.9 +1.1
GLKZ S S 20 36 09.2 +1.3
LKBA **Tubou, Lakemba** 7.17 11 P P 20 35 27.0 +0.3
LKBA **Tubou, Lakemba** 7.17 11 P S 20 36 56.0 +0.9
MSVF **Nonsavu** 7.70 348 P P 20 35 31.7 -0.4
134nm,0.4s,baz=194,slow=12,SNR=47
MSVF S S 20 37 05.3 +0.1
90nm,1.1s,baz=166,slow=19,SNR=4.6
MSVF **Nonsavu** 7.70 348 P P 20 35 31.8 -0.4
MSVF **Nonsavu** 7.70 348 S S 20 37 05.6 +0.4
MSVF **Nonsavu** 7.70 348 P P 20 35 30.8 -1.4

MSVF Nonsavu 7.70 348*d* P **P** 20 35 31.5 -0.7
MSVF pmax pmax
comp=Z,325nm,0.9s
TAVE Taveuni 8.57 2 P **P** 20 35 42.0 +1.0
TAVE Taveuni 8.57 2 S **S** 20 37 22.9 +1.4
DGTI Dogotuki 8.97 0 P **P** 20 35 45.8 +0.6
DGTI Dogotuki 8.97 0 S **S** 20 37 29.3 +0.1
FUTU Fugatoga 11.13 11 P **P** 20 36 08.5 +0.5
FUTU Fugatoga 11.13 11 P **P** 20 36 06.3 -1.8
OUZ Omahuta 11.20 207 P **P** 20 36 10.9 +2.5
MARNC Mare, Loyalty 11.40 287 P **P** 20 36 11.8 +1.0
MARNC Mare, Loyalty 11.40 287 S **S** 20 38 16.9 +0.8
MARNC Mare, Loyalty 11.40 287 **P** 20 36 11.2 +0.5
NIUE Niue 11.41 59 P **P** 20 36 10.5 -0.5
NIUE Niue 11.41 59 P **P** 20 36 09.5 -1.4
NIUE Niue 11.41 59 P **P** 20 36 09.9 -1.1
GRZ Great Barrier 11.50 198 P **P** 20 36 13.2 +1.5
WCZ Waipu Caves 11.56 202 P **P** 20 36 15.0 +2.7
MXZ Matakaoa Point 12.27 185 P **P** 20 36 20.1 +0.3
MXZ Matakaoa Point 12.27 185 **P** 20 36 19.1 -0.7
MKAZ Moumakai 12.38 197 P **P** 20 36 22.5 +1.5
ONTNC Ouen Toro 12.51 281 P P 20 36 29.0 +6.4
comp=Z,432nm,0.9s
ONTNC Ouen Toro 12.51 281 P **P** 20 36 24.1 +1.5
ONTNC Ouen Toro 12.51 281 **P** 20 36 23.7 +1.1
WMGZ Waiomatatini S 12.52 185 P **P** 20 36 24.1 +1.7
DZM Mont Dzumac 12.59 282 P **P** 20 36 24.6 +1.1
comp=Z,296nm,0.8s,baz=81,slow=17,SNR=57
DZM S **S** 20 38 39.7 +0.2
baz=102,slow=19
RUGZ Raukumara Rang 12.73 187 P **P** 20 36 25.5 +0.7
TOZ Tahuroa Road 12.89 195 P **P** 20 36 24.6 -1.7
TOZ Tahuroa Road 12.89 195 **P** 20 36 27.3 +1.0
RTV Rentapao 12.90 303 P **P** 20 36 27.2 +0.5
comp=Z,836nm,1.0s
TWGZ Tauwhareparae 12.91 186 P **P** 20 36 26.7 +0.1
URZ Urewera 13.10 189 P **P** 20 36 26.6 -1.8
comp=Z,128nm,0.3s,baz=87,slow=3.4,SNR=28
URZ S **S** 20 38 45.6 -3.1
comp=Z,149nm,0.5s,baz=60,slow=20,SNR=6.8
URZ Urewera 13.10 189 P **P** 20 36 28.0 -0.5
URZ Urewera 13.10 189 S **S** 20 38 49.2 +0.6
TKGZ Te Karaka 13.19 186 P **P** 20 36 29.4 0.0
CNGZ Carnagh Statio 13.20 185 P **P** 20 36 29.6 +0.1
RAGZ Rawiri 13.29 188 P **P** 20 36 29.2 -1.5
RIGZ Rimuhau 13.46 187 P **P** 20 36 32.1 -0.3
RTZ Ruatahuna 13.47 189 P **P** 20 36 30.8 -1.7
PRGZ Paritu Road 13.66 186 P **P** 20 36 35.4 +1.0
HIZ Hauiti 13.79 196 P **P** 20 36 36.2 +0.4
comp=Z,282nm,0.9s
HIZ Hauiti 13.79 196 P **P** 20 36 37.3 +1.5
HIZ Hauiti 13.79 196 P **P** 20 36 36.5 +0.7
AFI Afiamalu 13.88 97 P **P** 20 36 32.9 -4.2
comp=Z,95nm,0.6s,baz=180,slow=7.1,SNR=9.7
AFI S S 20 38 55.0 -9.3
comp=Z,86nm,0.7s,baz=249,slow=17,SNR=5.7
MHGZ Mahia Peninsul 13.89 186 P **P** 20 36 37.3 +0.5
BKZ Black Stump Fm 14.08 190 P **P** 20 36 36.6 -2.3
comp=Z,151nm,0.6s
BKZ Black Stump Fm 14.08 190 P **P** 20 36 37.7 -1.2
BKZ Black Stump Fm 14.08 190 **P** 20 36 37.0 -1.9
BKZ Black Stump Fm 14.08 190 P **P** 20 36 37.4 -1.5
BKZ S S 20 39 03.4 -4.3
ARHZ Aropaoanui 14.10 189 P **P** 20 36 37.9 -1.2
MCHZ McNeill Hill 14.32 190 P **P** 20 36 39.6 -1.8
KWHZ Kaweka Forest 14.34 190 P **P** 20 36 39.6 -2.1
KRHZ Kereru 14.57 190 P **P** 20 36 41.4 -2.6
KHEZ Kahui Hut 14.75 198 P **P** 20 36 47.1 +1.1
comp=Z,743nm,2.0s
SANVU Saraoutou 15.29 308 P **P** 20 36 49.5 -2.4
comp=Z,609nm,0.8s
SANVU Saraoutou 15.29 308 P **P** 20 36 51.5 -0.4
SANVU Saraoutou 15.29 308 S **S** 20 39 32.3 +1.0
SANVU Saraoutou 15.29 308 **P** 20 36 49.8 -2.0
BFZ Birch Farm 15.60 190 P **P** 20 36 50.9 -3.9
comp=Z,105nm,1.0s
BFZ Birch Farm 15.60 190 P **P** 20 36 51.2 -3.6
MRZ Mangatainoka R 15.69 192 P **P** 20 36 52.1 -3.6
TCW Tory Channel 16.49 195 P **P** 20 37 02.5 -1.6
SNZO South Karori 16.49 193 P **P** 20 37 01.1 -2.9
comp=Z,94nm,0.7s
SNZO South Karori 16.49 193 P **P** 20 37 01.4 -2.6
BHW Baring Head 16.55 193 P **P** 20 37 02.8 -1.9
QRZ Quartz Range 16.59 199 P **P** 20 37 05.3 +0.2
comp=Z,265nm,0.5s
QRZ Quartz Range 16.59 199 P **P** 20 37 05.4 +0.3
QRZ Quartz Range 16.59 199 S **S** 20 39 56.9 +2.1
QRZ Quartz Range 16.59 199 **P** 20 37 05.0 -0.1
PLWZ Palliser 16.63 192 P **P** 20 37 03.1 -2.5
FUNA Funafuti 16.70 358 P **P** 20 37 06.8 +0.2
FUNA Funafuti 16.70 358 P **P** 20 37 03.0 -3.6
NNZ Nelson 16.72 197 P **P** 20 37 05.2 -1.1
CMWZ Cape Campbell 17.02 194 P **P** 20 37 07.3 -2.1
MRNZ Matariki Terra 17.06 198 P **P** 20 37 07.9 -1.9
THZ Tophouse 17.35 197 **P** 20 37 11.9 -0.7
KHZ Kahutara 17.81 195 P **P** 20 37 15.8 -1.0
KHZ Kahutara 17.81 195 **P** 20 37 15.7 -1.0
LTZ Lake Taylor 18.47 198 **P** 20 37 21.0 -1.9
INZ Inchbonnie 18.66 199 **P** 20 37 24.1 -0.5
OXZ Oxford 19.04 197 P **P** 20 37 25.8 -2.3
LHI Lord Howe Isla 19.19 246 P **P** 20 37 31.7 +2.1
comp=Z,675nm,0.7s
LHI Lord Howe Isla 19.19 246 **P** 20 37 31.2 +1.6
RAR Rarotonga 19.27 82 P **P** 20 37 29.8 -0.6
comp=Z,67nm,0.7s,baz=237,slow=8.6,SNR=9.2
RAR Rarotonga 19.27 82 P **P** 20 37 30.7 +0.3
RAR Rarotonga 19.27 82 P **P** 20 37 29.9 -0.5
RAR Rarotonga 19.27 82 P **P** 20 37 29.9 -0.5
RPZ Rata Peaks 19.68 199 P **P** 20 37 33.9 0.0
comp=Z,20nm,0.4s,baz=3.9,slow=8.5,SNR=13
RPZ S **S** 20 40 43.1 -2.2
comp=Z,29nm,0.7s,baz=5.0,slow=22,SNR=4.3
RPZ Rata Peaks 19.68 199 P **P** 20 37 33.1 -0.8
comp=Z,65nm,1.3s
JCZ Jackson Bay 20.73 203 P **P** 20 37 42.9 -0.7
comp=Z,58nm,1.1s
ODZ Otahua Downs 21.01 198 P **P** 20 37 44.0 -2.0
comp=Z,46nm,1.7s
ODZ Otahua Downs 21.01 198 P **P** 20 37 47.4 +1.4
HURO Huro Makira 22.45 308 P **P** 20 37 58.0 -1.3
comp=Z,913nm,0.6s
HURO Huro Makira 22.45 308 P **P** 20 37 58.5 -0.8
NGOA Tingoa Renbel 23.09 303 P **P** 20 38 05.1 0.0
comp=Z,2µm,1.3s
NGOA Tingoa Renbel 23.09 303 P **P** 20 38 05.5 +0.4
GC1S Gold Coast 1 S 23.57 257 P **P** 20 38 11.1 +1.9
AUBSH Beerwah State 24.09 260 P **P** 20 38 14.2 +0.4
HNR Honiara 24.56 307 P **P** 20 38 17.2 -0.9
comp=Z,79nm,0.7s,baz=103,slow=4.1,SNR=99
comp=Z,79nm,0.7s
HNR Honiara 24.56 307 P **P** 20 38 17.0 -1.1
comp=Z,2µm,0.8s
HNR Honiara 24.56 307 P **P** 20 38 17.3 -0.8
HNR Honiara 24.56 307 P **P** 20 38 16.5 -1.7
SAVO Savo Central 24.84 307 P **P** 20 38 19.3 -1.4
comp=Z,220nm,0.7s
SAVO Savo Central 24.84 307 P **P** 20 38 19.1 -1.6
TW1H Toowoomba 1 Ha 24.93 259 P **P** 20 38 23.2 +1.8
ARMA Armidale 25.32 252 P **P** 20 38 26.6 +1.7
comp=Z,226nm,0.8s
ARMA Armidale 25.32 252 P **P** 20 38 26.2 +1.3
ARMA Armidale 25.32 252 **P** 20 38 25.9 +1.0
TATA Tatamba Isabel 25.37 308 P **P** 20 38 23.3 -2.0
comp=Z,630nm,0.6s
TATA Tatamba Isabel 25.37 308 P **P** 20 38 23.4 -1.9
EIDS Eidsvold 25.87 264 P **P** 20 38 30.4 +0.7
comp=Z,503nm,0.8s
EIDS Eidsvold 25.87 264 P **P** 20 38 30.4 +0.7
EIDS Eidsvold 25.87 264 **P** 20 38 29.8 +0.1
GD1S Gladstone Soft 25.99 267 P **P** 20 38 31.5 +0.8
AUPHS Peel High Scho 26.02 251 P **P** 20 38 31.8 +0.9
MGCD Mangrove Creek 26.12 246 P **P** 20 38 33.8 +2.1
comp=Z,212nm,0.8s
MGCD Mangrove Creek 26.12 246 P **P** 20 38 33.7 +1.9
SYDH Sydney Hard Ro 26.52 245 P **P** 20 38 36.5 +1.2
WOLH Wollongong Har 26.54 243 P **P** 20 38 36.7 +1.3
AUNRC North Rockhamp 26.65 268 P **P** 20 38 37.3 +0.7
AUUHS Ulladulla High 27.08 241 P **P** 20 38 41.1 +1.0
TARA Tarawa 27.32 345 P **P** 20 38 42.8 +0.3
RMQ Roma 27.85 261 P **P** 20 38 49.1 +1.9
comp=Z,222nm,1.0s
RMQ Roma 27.85 261 P **P** 20 38 47.8 +0.7
CNB Canberra Magne 27.95 242 P **P** 20 38 50.3 +2.4
comp=Z,85nm,0.9s
CNB Canberra Magne 27.95 242 P **P** 20 38 49.8 +1.9
AUDCS Dubbo College 28.05 249 P **P** 20 38 49.9 +1.1
AUDAR Daramalan Coll 28.11 242 P **P** 20 38 50.1 +0.8
AUMHS Melrose High S 28.18 242 P **P** 20 38 51.5 +1.6
AUMTS Mt Stromlo 28.24 242 P **P** 20 38 52.1 +1.7
CAN Canberra 28.24 242 P **P** 20 38 51.1 +0.6
comp=Z,71nm,0.9s
CAN Canberra 28.24 242 P **P** 20 38 52.1 +1.6
CAN Canberra 28.24 242 **P** 20 38 49.6 -0.9
CAN Canberra 28.24 242 P **P** 20 38 49.6 -0.9
AULRC Lightning Ridg 28.44 255 P **P** 20 38 53.7 +1.5
MILA Mila 28.53 238 P **P** 20 38 55.5 +2.5
comp=Z,46nm,1.2s
YNG Young 28.53 244 P **P** 20 38 55.2 +2.3
comp=Z,113nm,0.9s
PPT Papeete 29.54 81 P **P** 20 39 03.3 +1.4
comp=Z,144nm,0.9s,baz=242,slow=3.4,SNR=21
PPT ScP **ScP** 20 44 47.4 +1.8
comp=Z,12nm,0.4s,baz=87,slow=9.4,SNR=4.4
comp=Z,144nm,0.9s
PPTF Pamatai, Papee 29.55 81 P **P** 20 39 02.9 +0.9
PPTF Pamatai, Papee 29.55 81 P **P** 20 39 01.7 -0.3
AUAYR Ayr State High 30.36 274 P **P** 20 39 09.6 +0.6
CMSA Cobar Meteorol 30.49 250 P **P** 20 39 10.5 +0.5
comp=Z,230nm,0.8s
CMSA Cobar Meteorol 30.49 250 P **P** 20 39 10.3 +0.4
CTA Charters Tower 31.26 273 P **P** 20 39 17.4 +0.6
comp=Z,757nm,0.6s,baz=99,slow=10,SNR=229
CTA S **S** 20 43 47.4 -0.3
comp=Z,10nm,0.8s,baz=196,slow=22,SNR=9.5
CTA ScP **ScP** 20 44 54.1 +2.8
comp=Z,30nm,1.1s,baz=143,slow=2.8,SNR=3.7
CTAO Charters Tower 31.26 273 P **P** 20 39 17.2 +0.4
CTAO Charters Tower 31.26 273 P **P** 20 39 16.9 +0.1
CTAO Charters Tower 31.26 273 P **P** 20 39 16.9 +0.1
CTAO pmax pmax
comp=Z,872nm,0.7s
CTAO Charters Tower 31.26 273 P **P** 20 39 17.2 +0.4
TOO Toolangi 31.49 239 P **P** 20 39 20.0 +1.4
comp=Z,38nm,1.0s
TOO Toolangi 31.49 239 P **P** 20 39 19.2 +0.6
TOO Toolangi 31.49 239 P **P** 20 39 19.2 +0.6
TOO pmax pmax
comp=Z,21nm,0.8s
QLP Quilpie 31.88 260 P **P** 20 39 22.6 +0.6
comp=Z,458nm,1.1s
QLP Quilpie 31.88 260 P **P** 20 39 22.4 +0.4
GEXS Deakin Univers 32.56 238 P **P** 20 39 28.3 +0.7
BRAT Ballarat 32.70 239 P **P** 20 39 30.3 +1.5
AUMTC Mt Clear Colle 32.75 239 P **P** 20 39 30.4 +1.2
MTSU Mount Surprise 33.59 275 P **P** 20 39 37.5 +0.9
comp=Z,1µm,0.7s
MTSU Mount Surprise 33.59 275 P **P** 20 39 37.5 +0.9
RABL Rabaul 33.79 304 P **P** 20 39 36.8 -1.6
ARPS Mont Arapiles 34.21 241 P **P** 20 39 42.6 +1.0
comp=Z,59nm,1.1s
BULU Kimbe 34.35 300 P **P** 20 39 43.7 +0.6
PMG Port Moresby 34.74 291 P **P** 20 39 46.7 +0.3
comp=Z,580nm,0.7s,baz=97,slow=5.5,SNR=131
PMG ScP **ScP** 20 45 06.0 +2.4
comp=Z,42nm,0.9s,baz=70,slow=2.2,SNR=6.4
comp=Z,580nm,0.7s
PMG Port Moresby 34.74 291 P **P** 20 39 46.3 -0.1
comp=Z,580nm,0.8s
PMG Port Moresby 34.74 291 P **P** 20 39 46.6 +0.3
PMG Port Moresby 34.74 291 **P** 20 39 46.1 -0.3
PMG Port Moresby 34.74 291*d* *i*P **P** 20 39 45.5 -0.9
PMG pmax pmax
comp=Z,499nm,0.8s
PMG Port Moresby 34.74 291 P **P** 20 39 46.1 -0.3
PMG Port Moresby 34.74 291 P **P** 20 39 46.1 -0.3
INKA Innaminka 34.87 257 **P** 20 39 48.7 +1.5
INKA IAmb IAmb 20 39 49.7
comp=Z,132nm,1.1s
XMAS Kiritimati 35.05 42 P **P** 20 39 49.8 +0.9
XMAS Kiritimati 35.05 42 P **P** 20 39 48.8 -0.1
XMAS Kiritimati 35.05 42 P **P** 20 39 49.9 +0.9
AUMBR Murray Bridge 36.08 245 P **P** 20 39 57.6 +0.4
COEN Coen 36.12 281 P **P** 20 39 58.8 +1.0
comp=Z,650nm,0.8s
COEN Coen 36.12 281 P **P** 20 39 58.2 +0.4
COEN Coen 36.12 281 P **P** 20 39 58.1 +0.3
HTT Hallett 36.28 247 P **P** 20 39 59.6 +0.5
comp=Z,96nm,1.0s
HTT Hallett 36.28 247 P **P** 20 39 59.3 +0.2
AUMAR Marden Senior 36.59 245 P **P** 20 40 02.0 +0.5
QIS Mount Isa 37.16 269 P **P** 20 40 06.2 -0.1
comp=Z,217nm,1.2s
QIS Mount Isa 37.16 269 P **P** 20 40 06.5 +0.1
PATS Pohnpei 38.15 324 P **P** 20 40 14.8 +0.4
PATS Pohnpei 38.15 324 P **P** 20 40 14.6 +0.2
PATS Pohnpei 38.15 324 P **P** 20 40 14.4 0.0
BBOO Buckleboo 38.68 248 P **P** 20 40 18.2 -0.4
comp=Z,134nm,1.0s
BBOO Buckleboo 38.68 248 P **P** 20 40 17.9 -0.7
MANU Manus Island 38.82 301 **P** 20 40 19.5 -0.5
MMPI Merauke 41.01 287 P **P** 20 40 38.2 +0.6
TAOE Nuku Hiva Isla 41.50 74 P **P** 20 40 42.4 +0.8
TAOE Nuku Hiva Isla 41.50 74 P **P** 20 40 42.0 +0.4
TAOE Nuku Hiva Isla 41.50 74 P **P** 20 40 42.2 +0.6
ASAR Alice Springs 41.58 262 P **P** 20 40 42.4 +0.3
comp=Z,285nm,0.9s,baz=101,slow=8.3,SNR=268
ASAR pP **pP** 20 42 11.8 -0.2
comp=Z,26nm,0.9s,baz=101,slow=8.1,SNR=3.8
ASAR S **S** 20 46 21.6 -0.1
comp=Z,18nm,0.7s,baz=95,slow=15,SNR=21
comp=Z,285nm,0.9s
AUALC St Philip's Co 41.59 262 P **P** 20 40 42.4 +0.2
WB1 Warramunga Ar. 42.07 268 P **P** 20 40 45.2 -0.8
WRAB Tennant Creek 42.08 268 P **P** 20 40 45.3 -0.7
WRAB Tennant Creek 42.08 268*d* *i*P **P** 20 40 45.0 -1.0
WRAB pmax pmax
comp=Z,321nm,0.9s
WRAB Tennant Creek 42.08 268 P **P** 20 40 45.1 -1.0
WRA Warramunga Arr 42.08 268 P **P** 20 40 45.4 -0.7
comp=Z,296nm,0.8s,baz=103,slow=8.1,SNR=38
WRA pP **pP** 20 42 15.3 -1.1
comp=Z,8.9nm,0.7s,baz=103,slow=8.2,SNR=1.8
WRA PP **PP** 20 42 35.9 -0.3
comp=Z,9.2nm,0.8s,baz=100,slow=9.0,SNR=4.6
WRA ScP **ScP** 20 45 32.9 +1.1
comp=Z,24nm,1.1s,baz=108,slow=4.1,SNR=17
WRA S **S** 20 46 26.4 -2.5
comp=Z,50nm,1.0s,baz=100,slow=15,SNR=18
comp=Z,296nm,0.8s
JAY Jayapura 43.86 295 P **P** 20 40 59.9 -0.2
comp=Z,54nm,0.6s,baz=144,slow=4.3,SNR=27
comp=Z,54nm,0.6s
JAY Jayapura 43.86 295 P **P** 20 40 59.7 -0.4
comp=Z,2µmcomp=Z,149nm,1.6s
GENI Genyem 44.26 294 P **P** 20 41 03.0 -0.2
comp=Z,459nm,1.4s
GENI Genyem 44.26 294 P **P** 20 41 03.5 +0.4
GENI Genyem 44.26 294 P **P** 20 41 02.9 -0.2
comp=Z,5µmcomp=Z,455nm,1.4s
FORT Forrest 45.60 251 P **P** 20 41 12.7 -0.6
comp=Z,74nm,0.8s
FORT Forrest 45.60 251 **P** 20 41 11.5 -1.8
FORT IAmb IAmb 20 41 14.2
comp=Z,54nm,0.8s
KDU Kakadu 46.19 277 P **P** 20 41 17.3 -0.6
comp=Z,85nm,1.3s
WRKA Warakurna 46.30 259 P **P** 20 41 18.2 -0.5
comp=Z,135nm,0.8s
MTN Manton Dam 47.33 276 P **P** 20 41 26.0 -0.6
comp=Z,43nm,0.6s
MTN Manton Dam 47.33 276 IAmb IAmb 20 41 27.1
comp=Z,173nm,1.8s
DRS Darwin Rock St 47.70 276 P **P** 20 41 28.7 -0.7
AUDHS Darwin High Sc 47.76 276 P **P** 20 41 29.1 -0.7
SRPI Serui, Papua 47.92 292 P **P** 20 41 31.3 +0.2
BAKI Biak 48.40 293 P **P** 20 41 36.0 +1.3
KNRA Kununurra 48.45 271 P **P** 20 41 35.0 0.0
comp=Z,325nm,1.0s
KNRA Kununurra 48.45 271 **P** 20 41 33.8 -1.1
KMPI Kaimana, Papua 49.14 288 P **P** 20 41 39.9 -0.2
comp=Z,3µmcomp=Z,265nm,0.7s
SAUI Saumlaki 49.19 282 P **P** 20 41 41.3 +0.8
SAUI Saumlaki 49.19 282 **P** 20 41 41.3 +0.8
comp=Z,358nm,1.1s
RKPI Ransiki, Papua 49.85 291 P **P** 20 41 45.0 -0.4
comp=Z,2µmcomp=Z,131nm,0.8s
MWPI Manokwari, Pap 50.28 292 P **P** 20 41 49.9 +1.4
comp=Z,2µmcomp=Z,160nm,1.2s

FITZ Fitzroy Crossi 50.49 267 P **P** 20 41 50.2 +0.2
comp=Z,112nm,0.8s,baz=102,slow=7.8,SNR=75
FITZ pP **pP** 20 43 24.6 -0.3
comp=Z,33nm,0.9s,baz=111,slow=9.2,SNR=4.2
comp=Z,112nm,0.8s
KHLU Kahalu`u 50.54 30 P **P** 20 41 50.1 -0.3
PUH Pauahi 50.67 31 **P** 20 41 51.7 +0.4
HMH Humu'ula Sheep 50.74 31 P **P** 20 41 52.0 -0.1
FAKI Fak Fak 50.77 288 P **P** 20 41 51.5 -0.6
comp=Z,156nm,1.5s
FAKI Fak Fak 50.77 288 P **P** 20 41 50.6 -1.6
FAKI Fak Fak 50.77 288 **P** 20 41 51.3 -0.8
comp=Z,2µmcomp=Z,155nm,1.5s
KMBL Kambalda 50.78 249 P **P** 20 41 51.7 -0.3
GUMO Guam 51.47 315 P **P** 20 41 56.9 -0.2
GUMO Guam 51.47 315 **P** 20 41 55.8 -1.3
GUMO Guam 51.47 315 P **P** 20 41 55.8 -1.3
GUMO pmax pmax
comp=Z,327nm,1.0s
GUMO Guam 51.47 315 P **P** 20 41 55.4 -1.7
BNDI Bandanaira 52.02 285 P **P** 20 42 00.2 -0.9
BNDI Bandanaira 52.02 285 **P** 20 42 00.3 -0.9
comp=Z,4µmcomp=Z,291nm,0.8s
SIJI Sorong 52.66 290 P **P** 20 42 05.3 -0.5
comp=Z,437nm,0.8s,baz=84,slow=6.2,SNR=93
SIJI pP **pP** 20 43 41.5 -0.4
comp=Z,48nm,1.1s,baz=92,slow=5.3,SNR=2.0
comp=Z,437nm,0.8s
SIJI Sorong 52.66 290 P **P** 20 42 05.3 -0.5
SWI Sorong 52.67 290 P **P** 20 42 05.3 -0.5
VNDA Vanda 52.96 185 P **P** 20 42 08.2 +1.2
comp=Z,6.2nm,0.5s,baz=2.9,slow=8.7,SNR=30
VNDA PcP **PcP** 20 43 08.3 +0.7
comp=Z,10nm,0.9s,baz=330,slow=4.1,SNR=6.9
VNDA ScP **ScP** 20 46 17.0 +0.3
comp=Z,2.9nm,0.4s,baz=9.5,slow=4.4,SNR=7.8
comp=Z,6.2nm,0.5s
VNDA Vanda 52.96 185 P **P** 20 42 07.9 +1.0
VNDA **ScP** 20 46 18.3 +1.6
SBA Scott Base 52.96 183 P **P** 20 42 08.5 +1.6
SBA Scott Base 52.96 183 P **P** 20 42 08.5 +1.6
SBA pmax pmax
comp=Z,64nm,1.2s
KRAI Karang Ratu 53.91 285 P **P** 20 42 13.8 -0.9
comp=Z,2µmcomp=Z,206nm,0.8s
KLBR Kellerberrin 54.23 248 P **P** 20 42 15.9 -0.8
NWAO Narrogin (SRO) 54.44 246 P **P** 20 42 16.8 -1.4
comp=Z,9.2nm,0.8s,baz=119,slow=7.8,SNR=5.9
comp=Z,9.2nm,0.8s
MEEK Meekatharra 54.48 254 P **P** 20 42 17.7 -0.9
PSA00 Pilbara Seismi 54.68 261 P **P** 20 42 19.4 -0.6
PSA00 Pilbara Seismi 54.68 261 **P** 20 42 18.9 -1.2
PSA00 IAmb IAmb 20 43 59.2
comp=Z,195nm,1.9s
PSA00 Pilbara Seismi 54.68 261 IAmb IAmb 20 43 59.2
comp=Z,312nm,2.0s
SOEI Soe 54.73 276 P **P** 20 42 21.9 +1.3
comp=Z,235nm,0.8s
SOEI Soe 54.73 276 P **P** 20 42 21.7 +1.1
SOEI Soe 54.73 276 IAmb IAmb 20 42 37.9
comp=Z,176nm,0.9s
SOEI Soe 54.73 276 P **P** 20 42 21.4 +0.8
comp=Z,3µmcomp=Z,232nm,0.8s
MBWA Marble Bar 54.90 261 P **P** 20 42 20.9 -0.7
MBWA Marble Bar 54.90 261 pwP 20 44 05.7 +1.0
MBWA Marble Bar 54.90 261 P **P** 20 42 19.9 -1.7
MBWA IAmb IAmb 20 44 06.8
comp=Z,144nm,1.3s
MBWA Marble Bar 54.90 261 P **P** 20 42 20.7 -0.9
MBWA pP **pP** 20 43 58.4 -0.4
NLAI Namlea 55.08 285 P **P** 20 42 22.9 -0.1
comp=Z,3µmcomp=Z,272nm,1.2s
BATI Baumata 55.09 275 P **P** 20 42 24.0 +1.0
comp=Z,86nm,0.6s,baz=141,slow=1.8,SNR=38
BATI pP **pP** 20 44 01.2 +0.8
comp=Z,27nm,0.6s,baz=129,slow=5.7,SNR=2.4
comp=Z,86nm,0.6s
BATI Baumata 55.09 275 P **P** 20 42 23.9 +0.8
comp=Z,2µmcomp=Z,153nm,0.8s
BLDU Ballidu 55.28 249 P **P** 20 42 23.2 -1.0
MORW Morawa 56.17 251 P **P** 20 42 29.5 -0.8
MORW Morawa 56.17 251 P **P** 20 42 28.9 -1.4
SANI Sanana 56.63 285 P **P** 20 42 33.0 -0.7
comp=Z,203nm,0.9s
SANI Sanana 56.63 285 P **P** 20 42 32.8 -0.9
SANI Sanana 56.63 285 P **P** 20 42 33.0 -0.7
comp=Z,2µmcomp=Z,203nm,0.8s
TNTI Ternate 56.84 289 P **P** 20 42 34.5 -0.6
TNTI Ternate 56.84 289 P **P** 20 42 33.5 -1.6
TNTI IAmb IAmb 20 42 35.9
comp=Z,176nm,1.0s
TNTI Ternate 56.84 289 P **P** 20 42 34.2 -0.9
comp=Z,2µmcomp=Z,201nm,1.0s
MMRI Maumere 57.01 276 P **P** 20 42 36.7 +0.3
MMRI Maumere 57.01 276 IAmb IAmb 20 42 37.0
comp=Z,122nm,0.9s
MMRI Maumere 57.01 276 P **P** 20 42 35.9 -0.5
comp=Z,2µmcomp=Z,192nm,1.4s
EDFI Ende, Flores 57.46 276 P **P** 20 42 38.9 -0.6
comp=Z,2µmcomp=Z,108nm,0.8s
WSI Waingapu 58.34 274 P **P** 20 42 45.2 -0.2
CASY Casey 58.74 206 P **P** 20 42 46.6 -0.6
CASY Casey 58.74 206 P **P** 20 42 46.9 -0.4
CASY pP **pP** 20 44 27.2 +0.8
WBSI Waikabubak, Su 59.17 274 P **P** 20 42 50.4 -0.7
comp=Z,2µmcomp=Z,104nm,0.8s
LBFI Labuhan Bajo, 59.19 275 P **P** 20 42 50.0 -1.1
MNI Manado 59.35 288 P **P** 20 42 51.3 -0.9
comp=Z,4µmcomp=Z,107nm,0.4s
KKSI Kolaka, Sulawe 59.46 281 P **P** 20 42 52.2 -0.8
comp=Z,75nm,1.0s
BSSI Bau Bau, Buton 59.63 278 P **P** 20 42 53.0 -1.1
LUWI Luwuk 59.92 284 P **P** 20 42 56.3 +0.3
LUWI Luwuk 59.92 284 P **P** 20 42 55.7 -0.3
comp=Z,3µmcomp=Z,288nm,1.0s
DBNI Kabupaten Domp 60.61 274 P **P** 20 42 59.6 -1.0
comp=Z,2µmcomp=Z,150nm,0.8s
KAPI Kappang 60.78 279 P **P** 20 43 02.5 +0.8
KAPI Kappang 60.78 279 P **P** 20 43 01.2 -0.5
KAPI IAmb IAmb 20 43 02.9
comp=Z,225nm,1.8s
KAPI Kappang 60.78 279*d* *i*P **P** 20 43 01.1 -0.6
KAPI pmax pmax
comp=Z,43nm,1.0s
KAPI Kappang 60.78 279 P **P** 20 43 01.8 +0.1
MKS Makassar 60.95 278 P **P** 20 43 03.1 +0.3
comp=Z,2µmcomp=Z,169nm,1.0s
PLAI Plampang 60.96 274 P **P** 20 43 02.3 -0.6
PLAI Plampang 60.96 274 P **P** 20 43 02.1 -0.8
comp=Z,3µmcomp=Z,260nm,0.9s
APSI Ampana 60.97 284 P **P** 20 43 04.4 +1.4
comp=Z,1µmcomp=Z,140nm,0.9s
SPSI Sidrap Palu 61.23 280 P **P** 20 43 02.8 -1.9
comp=Z,87nm,1.0s
MRSI Marisa 61.38 285 P **P** 20 43 04.4 -1.3
comp=Z,89nm,0.9s
TTSI Tana Toraja 61.60 281 P **P** 20 43 06.7 -0.4
comp=Z,1µmcomp=Z,60nm,1.1s
DAV Davao City (W) 61.70 294 P **P** 20 43 07.0 -0.7
comp=Z,168nm,0.4s,baz=73,slow=1.4,SNR=6.5
comp=Z,168nm,0.4s
DAV Davao City (W) 61.70 294 IAmb IAmb 20 43 08.9
comp=Z,208nm,0.8s
PMSI Majene 62.20 280 P **P** 20 43 11.0 -0.1
comp=Z,2µmcomp=Z,204nm,1.3s
MMSI Mamuju 62.57 281 P **P** 20 43 13.6 +0.1
comp=Z,953nmcomp=Z,81nm,1.4s
PCI Palu 62.57 283 P **P** 20 43 14.6 +1.2
comp=Z,2µmcomp=Z,150nm,1.5s
TOLI2 Tolitoli 62.70 285 P **P** 20 43 13.3 -1.0
TOLI2 Tolitoli 62.70 285 P **P** 20 43 12.3 -2.0
TOLI2 IAmb IAmb 20 43 16.0
comp=Z,104nm,0.9s
KHKI Kahang-Kahang 63.10 273 P **P** 20 43 17.1 +0.2
comp=Z,1µmcomp=Z,107nm,1.2s
MPSI Mapaga 63.10 284 P **P** 20 43 15.9 -1.0
comp=Z,1µmcomp=Z,95nm,1.2s
DNP Denpasar 63.34 273 P **P** 20 43 19.7 +1.3
comp=Z,192nm,0.7s
IGBI Denpasar 63.34 273 P **P** 20 43 18.1 -0.3
RTBI Rangdo, Negare 63.67 273 P **P** 20 43 20.0 -0.5
comp=Z,2µmcomp=Z,156nm,1.0s
JAGI Jajag, Banyuwa 64.38 273 P **P** 20 43 23.8 -1.2
JAGI Jajag, Banyuwa 64.38 273 P **P** 20 43 23.0 -2.0
JAGI **pwP** 20 45 12.3 -0.2
JAGI Jajag, Banyuwa 64.38 273 P **P** 20 43 23.6 -1.4

comp=Z,2µmcomp=Z,130nm,0.9s
ABJI Asem Bagus 64.58 273 P **P** **20 43 26.3 0.0**
comp=Z,73nm,1.1s
QSPA South Pole Qui 64.78 180 P **P** **20 43 27.8 +1.0**
comp=Z,89nm,0.9s,baz=42,slow=12,SNR=59
QSPA pP **pP** **20 45 10.2 +1.3**
comp=Z,4.0nm,0.8s,baz=65,slow=3.2,SNR=1.2
comp=Z,89nm,0.9s
QSPA South Pole Qui 64.78 180 PcP **P** **20 43 27.8 +1.0**
KMMI Kalianget 65.12 274 P **P** **20 43 30.1 +0.4**
comp=Z,2µmcomp=Z,142nm,1.1s
BLJI Banyuglugur 65.17 273 P **P** **20 43 29.9 -0.2**
comp=Z,1µmcomp=Z,146nm,0.7s
BBKI Banjar Baru 65.86 278 P **P** **20 43 34.8 +0.4**
comp=Z,130nm,1.0s
SNJI Sawahan-Nganju 66.82 272 P **P** **20 43 40.9 +0.3**
comp=Z,2µmcomp=Z,126nm,1.0s
PCJI Pacitan 67.18 272 P **P** **20 43 42.6 0.0**
UGM Wanagama 67.88 272 P **P** **20 43 46.0 -1.0**
KKM Kota Kinabalu 69.08 288 P **P** **20 43 54.3 0.0**
KKM Kota Kinabalu 69.08 288 IAmb IAmb 20 43 55.4
comp=Z,107nm,1.2s
KKM Kota Kinabalu 69.08 288 P **P** **20 43 54.6 +0.3**
comp=Z,1µmcomp=Z,78nm,2.1s
CTJI Waduk Cacaban 69.46 272 P **P** **20 43 57.0 +0.5**
comp=Z,77nm,1.1s
KPJI Karang Pucung 69.56 271 P **P** **20 43 56.6 -0.4**
comp=Z,60nm,1.2s
BBJI Bungbulang 70.67 271 P **P** **20 44 02.8 -0.9**
BBJI Bungbulang 70.67 271 P **P** **20 44 02.8 -0.9**
comp=Z,58nm,0.8s
SBUM Sibu 70.86 282 P **P** **20 44 05.0 +0.2**
SBUM Sibu 70.86 282 P **P** **20 44 05.0 +0.2**
LEM Lembang 70.95 271 P **P** **20 44 05.5 -0.1**
comp=Z,135nm,0.8s,baz=70,slow=5.0,SNR=39
LEM pP **pP** **20 45 48.5 -1.1**
comp=Z,25nm,0.7s,baz=182,slow=14,SNR=2.9
comp=Z,135nm,0.8s
XMI Christmas Isla 71.25 267 P **P** **20 44 07.5 +0.4**
JOW Kunigami 71.75 313 P **P** **20 44 10.2 +0.5**
JOW Kunigami 71.75 313 IAmb IAmb 20 44 11.2
comp=Z,119nm,0.9s
DBJI Dramaga 71.85 271 P **P** **20 44 10.3 -0.3**
comp=Z,3µmcomp=Z,176nm,1.0s
INU Inuyama 72.62 324 P **P** **20 44 15.0 +0.5**
INU Inuyama 72.62 324 IAmb IAmb 20 44 16.0
comp=Z,63nm,0.9s
TPI Tanjungpandan 72.63 275 P **P** **20 44 15.3 +0.2**
comp=Z,55nm,1.0s
JGF Kuroka 72.63 325 P **P** **20 44 14.8 +0.1**
CGJI Cibinong 72.78 271 P **P** **20 44 14.5 -1.5**
MJAR Matsushiro Arr 72.92 326 P **P** **20 44 16.3 0.0**
comp=Z,56nm,0.9s,baz=160,slow=5.7,SNR=84
MJAR pP **pP** **20 46 00.5 -0.9**
comp=Z,3.1nm,0.9s,baz=163,slow=5.7,SNR=2.7
comp=Z,56nm,0.9s
MJAR Matsushiro Arr 72.92 326 **P** **20 44 15.9 -0.3**
MJAR IAmb IAmb 20 44 17.5
comp=Z,79nm,1.0s
MAJO Matsushiro 72.92 326 P **P** **20 44 16.6 +0.3**
MAJO Matsushiro 72.92 326 P **P** **20 44 15.6 -0.7**
MAJO IAmb IAmb 20 44 17.5
comp=Z,94nm,0.9s
MAJO Matsushiro 72.92 326*d i*P **P** **20 44 16.0 -0.3**
MAJO pmax pmax
comp=Z,77nm,0.9s
MAJO Matsushiro 72.92 326 P **P** **20 44 16.2 0.0**
MAJO PcP **PcP** **20 44 29.7 -0.4**
MAJO pP **pP** **20 46 03.1 +1.7**
MAJO sP **sP** **20 46 54.9 +1.6**
MJB9 Matsu-Tunnel 72.93 326 IAmb IAmb 20 44 18.5
comp=Z,91nm,0.9s
JMN Monobe 73.12 321 P **P** **20 44 18.0 +0.5**
JMN Monobe 73.12 321 IAmb IAmb 20 44 19.5
comp=Z,118nm,1.1s
JSU Suzuyama 73.54 318 P **P** **20 44 20.1 +0.1**
YOJ Yonaguni jima 73.89 308 P **P** **20 44 22.3 +0.3**
TWGBT Beinan 74.30 305 P **P** **20 44 22.4 -2.0**
KASI Kota Agung 74.31 271 P **P** **20 44 23.4 -1.3**
comp=Z,1µmcomp=Z,122nm,1.0s
KLSI 74.45 272 P **P** **20 44 24.0 -1.5**
NACB Ninganchiao 74.73 306 P **P** **20 44 26.5 -0.3**
NACB Ninganchiao 74.73 306 IAmb IAmb 20 44 27.7
comp=Z,110nm,1.1s
LWLI Liwa 74.92 272 P **P** **20 44 27.6 -0.7**
comp=Z,4µmcomp=Z,193nm,0.8s
TPUB Ta-pu 74.92 305 P **P** **20 44 26.7 -1.2**
TPUB Ta-pu 74.92 305 IAmb IAmb 20 44 27.8
comp=Z,95nm,0.8s
SSLB Suanglung 74.97 306 P **P** **20 44 27.1 -1.1**
SSLB Suanglung 74.97 306 IAmb IAmb 20 44 27.7
comp=Z,69nm,0.9s
MDSI Maura Dua 75.03 272 P **P** **20 44 27.0 -1.8**
comp=Z,1µmcomp=Z,159nm,0.8s
BELA Belgrano 2 75.07 173 P **P** **20 44 27.4 -0.5**
BELA IAmb IAmb 20 44 29.2
comp=Z,65nm,0.9s
YHNB Yeheng 75.19 307 P **P** **20 44 30.0 +0.5**
TATO Taipei 75.30 307 P **P** **20 44 29.8 -0.1**
TATO Taipei 75.30 307 P **P** **20 44 28.4 -1.5**
MNAI Manna 76.19 272 P **P** **20 44 35.9 +0.6**
MAW Mawson 76.35 201 P **P** **20 44 36.0 +0.9**
comp=Z,29nm,0.7s,baz=130,slow=5.6,SNR=27
comp=Z,29nm,0.7s
MAW Mawson 76.35 201 **P** **20 44 35.2 +0.1**
MAW Mawson 76.35 201 P **P** **20 44 35.2 +0.1**
MAW pmax pmax
comp=Z,6.0nm,0.7s
DSRI Dabo 76.38 276 P **P** **20 44 36.4 +0.1**
comp=Z,1µmcomp=Z,63nm,1.1s
KSI Kapahiang 76.82 272 P **P** **20 44 37.8 -1.0**
TPRI Tanjung Pinang 77.03 277 P **P** **20 44 40.0 +0.1**
comp=Z,963nmcomp=Z,80nm,1.0s
MASI Maura Aman, Be 77.35 273 P **P** **20 44 41.2 -0.5**
QZH2 Quanzhou 77.39 305 P **P** **20 44 41.9 +0.4**
QZH2 S **S** **20 53 51.4 +0.5**
QZH2 ScS **ScS** **20 54 10.5 -2.5**
QZH2 pmax pmax
comp=Z,86nm,0.9s
QZH2 pmax pmax
comp=Z,790nm,2.6s
BTDF Bukit Timah Da 77.90 277 P **P** **20 44 45.2 +0.6**
BTDF Bukit Timah Da 77.90 277 P **P** **20 44 45.1 +0.5**
MYKOM Kota Tinggi 78.02 278 P **P** **20 44 45.3 +0.1**
MYKOM Kota Tinggi 78.02 278 pwP 20 46 38.7 +0.9
MYKOM Kota Tinggi 78.02 278 P **P** **20 44 45.3 +0.1**
comp=Z,828nmcomp=Z,68nm,1.0s
KRJI Kerinci 78.50 273 P **P** **20 44 47.0 -0.9**
comp=Z,2µmcomp=Z,91nm,1.0s
NIKH Nikolski High 78.58 7 P **P** **20 44 47.1 -0.2**
baz=190
TJN Taejon 78.76 319 P **P** **20 44 49.2 +0.6**
KSRS Korea Array 79.17 320 P **P** **20 44 52.0 +1.2**
comp=Z,27nm,0.8s,baz=136,slow=5.6,SNR=94
KSRS PP **PP** **20 47 59.8 +0.2**
comp=Z,4.9nm,1.0s,baz=143,slow=8.8,SNR=4.4
comp=Z,27nm,0.8s
KSRS Korea Array 79.17 320 P **P** **20 44 52.0 +1.2**
KSAR Wonju Array Be 79.18 320 P **P** **20 44 50.2 -0.7**
KSAR Wonju Array Be 79.18 320 P **P** **20 44 50.2 -0.7**
YSS Yuzhno-Sakhali 79.31 335 P **P** **20 44 52.8 +1.6**
YSS Yuzhno-Sakhali 79.31 335 **P** **20 44 51.4 +0.2**
YSS Yuzhno-Sakhali 79.31 335*ke*P **P** **20 44 53.0 +1.8**
YSS *e**PP **pwP** **20 46 44.7 +1.1**
YSS *e*S **SKSac** **20 54 16.6 -2.3**
YSS *e*SS **SS** **20 59 35.3 +3.6**
YSS pmax pmax
comp=Z,40nm,1.1s
YSS pmax pmax
comp=Z,200nm,2.5s
YSS smax smax
comp=N,1µm,5.9s
YSS smax smax
comp=E,200nm,6.7s
UNV Unalaska Valle 79.72 8 P **P** **20 44 53.2 -0.1**
baz=193
PDSI Padang 79.91 274 P **P** **20 44 53.9 -1.4**
comp=E,22nm,0.6s
INCN Inchon 79.94 320 P **P** **20 44 55.5 +0.6**
INCN Inchon 79.94 320 **P** **20 44 55.1 +0.2**
INCN Inchon 79.94 320 P **P** **20 44 55.1 +0.2**
INCN pmax pmax
comp=Z,69nm,1.2s
PETK Petropavlovsk- 80.41 347 P **P** **20 44 57.3 +0.3**
comp=Z,18nm,0.7s,baz=120,slow=6.7,SNR=17
PETK pP **pP** **20 46 46.0 +1.2**
comp=Z,3.9nm,0.7s,baz=116,slow=10,SNR=2.1
comp=Z,18nm,0.7s
PETK Petropavlovsk- 80.41 347 P **P** **20 44 57.6 +0.6**
MG04 Isla Riesco 80.67 144 **P** **20 44 59.7 +1.2**
MG04 IAmb IAmb 20 45 01.6
comp=Z,144nm,1.1s
MG03 Isla Dawson 80.75 146 IAmb IAmb 20 45 00.9
comp=Z,72nm,1.1s
MG05 Puerto Natales 80.75 143 IAmb IAmb 20 45 01.3
comp=Z,78nm,0.9s
GO10 Punta Arenas 80.79 145 IAmb IAmb 20 45 02.5
comp=Z,134nm,0.9s
QIZ Qiongzhong 80.99 296 P **P** **20 45 00.9 +0.2**
QIZ pP **pP** **20 46 44.8 -3.7**
QIZ S **SKSac** **20 54 30.6 -1.1**
QIZ pmax pmax
comp=Z,20nm,1.3s
QIZ pmax pmax
comp=Z,160nm,9.2s
GO09 Cerro Castillo 81.04 143 IAmb IAmb 20 45 03.9
comp=Z,144nm,1.6s
VLA Vladivostok 81.07 327*ce*P **P** **20 45 01.4 +0.8**
VLA pmax pmax
comp=Z,39nm,1.5s
PSTR Posyet 81.27 326⇓*e*P **P** **20 45 03.1 +1.5**
NJ2 Nanjing 81.40 311⇑*i*P **P** **20 45 03.9 +1.3**
NJ2 S **S** **20 54 39.1 +7.1**
NJ2 pmax pmax
comp=Z,84nm,0.9s
NJ2 pmax pmax
comp=Z,460nm,4.0s
MNSI Mandailing Nat 81.43 275 P **P** **20 45 01.9 -1.3**
comp=Z,34nm,0.9s
SYO Syowa Base 81.59 194⇓*i*P P 20 44 53.0 -10
SYO Syowa Base 81.59 194⇓*i*PcP P 20 44 57.4 -5.5
SYO Syowa Base 81.59 194⇑*e*PKiKP **PKiKP** **20 50 28.2 +6.1**
ELIB Princess Elisa 81.64 187 *d*P **P** **20 45 03.1 -0.3**
comp=Z,31nm,0.7s
CHNA Chernabura Isl 81.77 12 P **P** **20 45 04.2 +0.4**
baz=199
USRK Usuriysk Ar. 81.81 327 P **P** **20 45 04.6 +0.2**
comp=Z,7.5nm,0.7s,baz=132,slow=2.8,SNR=25
USRK pP **pP** **20 46 52.5 -0.1**
comp=Z,9.3nm,1.0s,baz=132,slow=5.4,SNR=1.8
comp=Z,7.5nm,0.7s
SDPT Sand Point 82.10 11 P **P** **20 45 05.9 +0.3**
SDPT Sand Point 82.10 11 **P** **20 45 05.7 +0.1**
SDPT Sand Point 82.10 11 P **P** **20 45 05.8 +0.3**
baz=199
SPIA Saint Paul Isl 82.60 5 P **P** **20 45 08.5 +0.5**
baz=189
TYV Tymovskoe 82.60 337 *e*P **P** **20 45 09.6 +1.4**
TYV pmax pmax
comp=Z,15nm,1.0s
TYV pmax pmax
comp=Z,100nm,4.8s
HULI Fort Hunter Li 82.61 45 IAmb IAmb 20 45 11.9
comp=Z,74nm,0.8s
UBPT Khong Chiam 82.78 291 P **P** **20 45 10.9 +1.0**
PSI Prapat 82.89 276 P **P** **20 45 09.8 -0.9**
PSI Prapat 82.89 276 P **P** **20 45 09.5 -1.2**
comp=Z,36nm,1.1s
TROLL Troll, Antarti 82.92 181 P **P** **20 45 09.8 -0.1**
PKD Bear Valley Ra 83.01 45 IAmb IAmb 20 45 13.5
comp=Z,56nm,0.8s
PMPB Monarch Peak 83.01 45 IAmb IAmb 20 45 13.8
comp=Z,105nm,1.1s
BBGB Big Mountain B 83.08 44 IAmb IAmb 20 45 14.6
comp=Z,126nm,1.3s
S14K Fog Glacier 83.16 11 P **P** **20 45 11.5 +0.5**
baz=199
MHC Mount Hamilton 83.18 43 IAmb IAmb 20 45 14.7
comp=Z,82nm,0.9s
SNAA Sanae 83.26 179⇑P **P** **20 45 11.3 -0.2**
comp=Z,104nm,0.4s
SNAA Sanae 83.26 179 P **P** **20 45 11.4 -0.1**
comp=Z,21nm,0.8s,baz=204,slow=9.0,SNR=11
SNAA pP **pP** **20 47 01.3 +0.9**
comp=Z,12nm,1.0s,baz=186,slow=11,SNR=1.6
comp=Z,21nm,0.8s
SNAA Sanae 83.26 179 **P** **20 45 10.8 -0.7**
SNAA Sanae 83.26 179*d i*P **P** **20 45 11.5 -0.1**
SNAA pmax pmax
comp=Z,58nm,1.3s
MDJ Mudanjiang 83.30 326 P **P** **20 45 13.1 +1.2**
MDJ Mudanjiang 83.30 326 P **P** **20 45 13.1 +1.2**
MDJ sP sP 20 47 52.3 +0.7
MDJ pmax pmax
comp=Z,30nm,1.4s
CVS Carmenet Viney 83.32 42 IAmb IAmb 20 45 14.8
comp=Z,108nm,0.9s
HOPS Hopland Field 83.36 41 IAmb IAmb 20 45 15.3
comp=Z,93nm,1.0s
CHGN Chignik 83.38 12 IAmb IAmb 20 45 13.5
comp=Z,40nm,0.7s
CHGN Chignik 83.38 12 P **P** **20 45 12.5 +0.5**
baz=200,SNR=10
CBX Cerro Bola 83.43 50 IAmb IAmb 20 45 15.9
comp=Z,90nm,0.7s
GSI Gunungsitoli 83.46 275 P **P** **20 45 14.2 +0.7**
GSI Gunungsitoli 83.46 275 P **P** **20 45 14.0 +0.5**
comp=Z,70nm,1.4s
CPE Camp Elliot 83.46 49 IAmb IAmb 20 45 15.7
comp=Z,91nm,1.1s
PASC Pasadena Art C 83.48 48 IAmb IAmb 20 45 15.5
comp=Z,60nm,0.9s
VNA3 Neumayer Olymp 83.48 177⇑P **P** **20 45 12.1 -0.5**
comp=Z,110nm,0.8s
KCPM Cahto Peak 83.51 40 IAmb IAmb 20 45 16.4
comp=Z,78nm,0.9s
VTX Valle De La Tr 83.51 51 IAmb IAmb 20 45 16.6
comp=Z,113nm,1.1s
MWC Mount Wilson 83.59 48 IAmb IAmb 20 45 16.4
comp=Z,71nm,1.1s
BAR Barrett 83.63 49 IAmb IAmb 20 45 16.7
comp=Z,193nm,1.8s
MNRC McLaughlin Min 83.67 42 IAmb IAmb 20 45 17.3
comp=Z,125nm,1.1s
WHN Wuhan 83.67 308 P **P** **20 45 14.9 +0.8**
WHN pP **pP** **20 47 04.3 +1.6**
WHN SKS **SKSac** **20 54 44.3 -4.3**
WHN S **SKKSac** **20 54 55.0 0.0**
WHN pmax pmax
comp=Z,160nm,1.1s
KMPM Mount Pierce 83.67 40 **P** **20 45 15.3 +1.4**
ELS Elsinore Mount 83.68 48 IAmb IAmb 20 45 17.0
comp=Z,72nm,1.0s
SLBS Sierra La Lagu 83.72 60 **P** **20 45 16.3 +1.7**
ESJX Sierra Juarez 83.75 50 IAmb IAmb 20 45 18.1
comp=Z,94nm,1.0s
KMRM Mail Ridge 83.78 40 IAmb IAmb 20 45 17.9
comp=Z,118nm,1.0s
GULI GuiLin 83.79 302 P **P** **20 45 17.6 +2.8**
GULI pmax pmax
comp=Z,45nm,1.1s
DL2 Dalian 83.84 318 P **P** **20 45 14.0 -0.7**
DL2 SKS **SKSac** **20 54 46.3 -3.1**
DL2 S **S** **20 54 58.9 +2.9**
DL2 sS **sS** **20 58 12.1 +1.2**
DL2 pmax pmax
comp=Z,48nm,1.2s
DL2 pmax pmax
comp=Z,360nm,4.9s
TPO Tropico Hills 83.87 47 IAmb IAmb 20 45 18.0
comp=Z,123nm,1.1s
VNA2 Neumayer--Watz 83.90 178⇑P **P** **20 45 14.8 +0.2**
comp=Z,6.2nm,0.3s,baz=194,slow=6.1
JCC Jacoby Creek, 83.98 39 IAmb IAmb 20 45 18.6
comp=Z,132nm,1.4s
COYC Coyhaique 84.02 138 IAmb IAmb 20 45 18.7
comp=Z,93nm,0.9s
YUH Yuha Desert 84.13 50 IAmb IAmb 20 45 19.4
comp=Z,81nm,0.9s
VNA1 Neumayer--Stat 84.14 177⇑P **P** **20 45 16.0 +0.2**
comp=Z,10nm,0.4s
DNR Dunn Ranch,Anz 84.17 49 IAmb IAmb 20 45 19.8
comp=Z,135nm,1.2s
ISA Isabella, Lake 84.17 46 IAmb IAmb 20 45 19.5
comp=Z,109nm,0.9s
KHMM Horse Mountain 84.19 39 IAmb IAmb 20 45 19.9
comp=Z,52nm,0.8s
KRPM Rodgers 84.21 39 IAmb IAmb 20 45 20.1
comp=Z,82nm,1.0s
KCSI Kotacane, Aceh 84.23 277 P **P** **20 45 16.6 -0.7**
AY01 Puyuhuapi 84.25 137 IAmb IAmb 20 45 19.4
comp=Z,84nm,1.2s
SUTB Sutter Butte 84.28 42 IAmb IAmb 20 45 19.3
comp=Z,131nm,1.1s
O02D Mt. Diablo Mer 84.29 40 **PcP** **20 45 19.1 -0.5**
PFO Pinyon Flats O 84.32 49 **P** **20 45 18.6 +1.2**
PFO IAmb IAmb 20 45 20.4
comp=Z,65nm,1.1s
PFO Pinyon Flats O 84.32 49*ce*P **P** **20 45 18.1 +0.7**
PFO pmax pmax
comp=Z,81nm,1.1s
KHBM Hayfork Bally 84.35 40 IAmb IAmb 20 45 20.5
comp=Z,60nm,0.9s
PMD Palm Desert 84.39 49 IAmb IAmb 20 45 20.4
comp=Z,68nm,1.1s
CMB Columbia Colle 84.39 43 IAmb IAmb 20 45 20.1
comp=Z,65nm,1.0s
LRMC Laurel Mtn Rad 84.59 47 IAmb IAmb 20 45 21.4
comp=Z,67nm,0.9s
AFDM Forest Hills D 84.60 42 IAmb IAmb 20 45 21.0
comp=Z,57nm,1.0s
TPTI 84.65 276 P **P** **20 45 19.3 -0.1**
comp=Z,547nmcomp=Z,42nm,1.4s
ORV Oroville 84.66 42 IAmb IAmb 20 45 21.4
comp=Z,62nm,1.1s
R16K Pilot Point 84.73 12 IAmb IAmb 20 45 20.5
comp=Z,61nm,0.8s
R16K Pilot Point 84.73 12 P **P** **20 45 19.5 +0.9**
baz=200,SNR=5.5
CLC China Lake 84.84 46 IAmb IAmb 20 45 22.5
comp=Z,81nm,0.9s
GRNR Gornyy 84.85 334⇓*i*P **P** **20 45 21.1 +1.7**
GRNR pmax pmax
comp=Z,10.0nm,1.0s
CN2 Changchun 84.87 324 P **P** **20 45 19.9 +0.2**
CN2 pP pP 20 47 08.3 -0.6
CN2 S **S** **20 55 06.8 +0.9**
CN2 pmax pmax
comp=Z,70nm,1.3s
O03E Paynes Creek 84.95 41 IAmb IAmb 20 45 22.8
comp=Z,99nm,1.1s
TIA Tai'an 85.03 314 P **P** **20 45 21.9 +1.2**
TIA pmax pmax
comp=Z,120nm,1.1s
TIA pmax pmax
comp=Z,360nm,4.7s
BC3 Big Chuckawall 85.03 49 IAmb IAmb 20 45 24.2
comp=Z,92nm,1.1s
R17L Mt. Peulik Vol 85.03 13 P **P** **20 45 21.1 +1.0**
baz=202
M02C Callahan 85.03 40 IAmb IAmb 20 45 24.1
comp=Z,96nm,1.2s
GSC Goldstone, Bar 85.06 47 IAmb IAmb 20 45 23.7
comp=Z,82nm,1.0s
L02F Cave Junction 85.09 39 IAmb IAmb 20 45 24.2
comp=Z,68nm,1.3s
BNX BinXian 85.19 326⇑P **P** **20 45 21.8 +0.6**
BNX pmax pmax
comp=Z,15nm,1.2s
PIX Pinacate 85.25 52 IAmb IAmb 20 45 24.8
comp=Z,95nm,1.1s
OHAK Old Harbor 85.30 14 P **P** **20 45 22.6 +1.2**
OHAK Old Harbor 85.30 14 IAmb IAmb 20 48 35.6
comp=Z,125nm,1.8s
OHAK Old Harbor 85.30 14 P **P** **20 45 22.3 +0.9**
baz=204
YBH Yreka Blue Hor 85.33 39 **P** **20 45 23.8 +1.7**
YBH Yreka Blue Hor 85.33 39 P **P** **20 45 23.8 +1.7**
YBH pmax pmax
comp=Z,53nm,1.2s
LL02 Futaleuf 85.37 136 **P** **20 45 23.9 +1.6**
LL02 IAmb IAmb 20 45 25.1
comp=Z,99nm,0.9s
HATC Hat Creek Radi 85.48 41 IAmb IAmb 20 45 25.7
comp=Z,79nm,0.8s
PNTR Pine Nut 85.53 43 IAmb IAmb 20 45 25.9
comp=Z,77nm,0.8s
J01E Myrtle Point 85.57 38 IAmb IAmb 20 45 26.2
comp=Z,79nm,0.9s
KLR Kul'dur 85.64 331 P **P** **20 45 24.5 +1.3**
comp=Z,5.3nm,0.8s,baz=91,slow=0.9,SNR=15
KLR pP **pP** **20 47 13.5 +0.7**
comp=Z,7.0nm,1.1s,baz=123,slow=6.5,SNR=1.1
comp=Z,5.3nm,0.8s
KLR Kul'dur 85.64 331*d i*P **P** **20 45 24.4 +1.1**
KLR pmax pmax
comp=Z,9.0nm,1.0s
GRAC Grapevine Rang 85.68 46 IAmb IAmb 20 45 26.7
comp=Z,73nm,0.9s
113A Mohawk Valley, 85.70 51 **PcP** **20 45 26.5 +0.5**
113A IAmb IAmb 20 45 27.2
comp=Z,89nm,1.2s
LHV Little Huntoon 85.70 44 IAmb IAmb 20 45 26.7
comp=Z,47nm,0.9s
O14K Tigyukauivet M 85.71 10 P **P** **20 45 24.0 +0.7**
baz=197
LHMI Lhok Sumawe 85.71 278 P **P** **20 45 25.1 +0.6**
LHMI Lhok Sumawe 85.71 278 P **P** **20 45 25.5 +1.0**
Q17K Contact Creek 85.71 13 P **P** **20 45 23.9 +0.4**
baz=202
BLYC Blythe 85.72 50 IAmb IAmb 20 45 27.2
comp=Z,78nm,1.1s
O15K Ungalikthiuk R 85.86 10 P **P** **20 45 24.4 +0.3**
baz=198
L04D Klamath Falls 85.88 39 IAmb IAmb 20 45 27.6
comp=Z,69nm,0.8s
214A Organ Pipe Nat 85.93 52 IAmb IAmb 20 45 28.6
comp=Z,72nm,1.0s
NVAR Mina Array Bea 85.94 44 P **P** **20 45 26.2 +0.9**
comp=Z,32nm,0.8s,baz=222,slow=8.4,SNR=131
comp=Z,32nm,0.8s
Q16K King Salmon 85.95 12 P **P** **20 45 25.1 +0.6**
baz=201,SNR=11
KDAK Kodiak Island 85.97 14 P **P** **20 45 25.4 +0.8**
baz=205
MTPC Mountain Pass 86.00 48 IAmb IAmb 20 45 28.5
comp=Z,48nm,1.0s
NV11 Mina Array Sit 86.03 44 IAmb IAmb 20 45 28.1
comp=Z,40nm,0.9s
P16K Nushagak River 86.03 11 P **P** **20 45 25.3 +0.4**
baz=200
PAHR Pah Rah Range 86.04 43 IAmb IAmb 20 45 28.0
comp=Z,35nm,0.8s
M11K Mekoryuk 86.16 7 P **P** **20 45 26.1 +0.7**
baz=193
Q18K Katmai Hardscr 86.25 13 P **P** **20 45 25.9 -0.2**
baz=203,SNR=15
N14K Kuskokwak Cree 86.29 9 P **P** **20 45 26.7 +0.6**
baz=197
TPNV Topopah Spring 86.38 46 IAmb IAmb 20 45 30.0
comp=Z,60nm,0.8s
P17K Kvichak River 86.47 12 P **P** **20 45 27.2 +0.2**
baz=202,SNR=8.5
M13K Dall Lake 86.53 8 P **P** **20 45 27.8 +0.6**
baz=195
O16K Kokwok River B 86.55 11 P **P** **20 45 28.0 +0.6**
baz=200
V12A Nelson 86.61 48 IAmb IAmb 20 45 31.3
comp=Z,88nm,1.5s
N15K Kwethluk River 86.76 10 P **P** **20 45 29.1 +0.8**
baz=198
LR05 Currie 86.77 133 **P** **20 45 30.4 +1.3**
Q19K Cape Douglas, 86.78 13 P **P** **20 45 28.6 0.0**
baz=204
I04A Tendick Farm, 86.82 38 IAmb IAmb 20 45 31.6
comp=Z,107nm,1.4s
Y14A Wickenburg 86.88 50 IAmb IAmb 20 45 32.5
comp=Z,34nm,0.8s
P18K Big Mountain, 86.89 13 P **P** **20 45 29.0 -0.1**
baz=203,SNR=9.6
O17K Koliganek Bris 86.89 12 P **P** **20 45 29.2 +0.3**
baz=201
W13A Hualapai Mount 86.91 49 IAmb IAmb 20 45 32.9
comp=Z,170nm,1.9s
M14K Bethel 87.04 9 P **P** **20 45 30.3 +0.7**
baz=197
ENH Enshi 87.05 305 P **P** **20 45 31.2 +0.7**
S11A Rachel 87.11 46 IAmb IAmb 20 45 33.3
comp=Z,48nm,0.9s
M15K Kasigluk River 87.17 10 P **P** **20 45 31.1 +0.8**
baz=198
LYN LuoYang 87.21 310 P **P** **20 45 33.1 +2.0**
LYN S **S** **20 55 31.4 +2.9**
LYN pmax pmax
comp=Z,97nm,1.0s
LYN pmax pmax
comp=Z,170nm,5.2s
GYA Guiyang 87.25 301⇓P **P** **20 45 32.3 +0.6**
GYA pmax pmax

	comp=Z,15nm,1.1s								
N16K	**Nishlik Lake**	87.26	10	P	**P**	**20 45 31.6 +0.8**			
	baz=199								
HNS	**HongShan**	87.29	314	⇓P	**P**	**20 45 32.9 +1.5**			
HNS				pP	**pP**	**20 47 21.3 0.0**			
HNS				SKS	**SKSac**	**20 55 08.1 -2.6**			
HNS				S	**ScS**	**20 55 32.6 -1.4**			
HNS				pmax	pmax				
	comp=Z,65nm,1.4s								
BSI	**Banda Aceh**	87.31	277	P	**P**	**20 45 31.8 -0.3**			
	comp=Z,670nmcomp=Z,56nm,1.0s								
O18K	**Koktuh Hills**	87.32	12	IAmb	IAmb	20 45 32.2			
	comp=Z,48nm,0.7s								
O18K	**Koktuh Hills**	87.32	12	P	**P**	**20 45 31.1 +0.1**			
	baz=203,SNR=15								
GO06	**Curarrehue**	87.45	133	IAmb	IAmb	20 45 35.3			
	comp=Z,52nm,1.2s								
PLCA	**Paso Flores**	87.46	134	P	**P**	**20 45 34.0 +1.5**			
	comp=Z,43nm,1.2s,baz=239,slow=6.6,SNR=16								
	comp=Z,43nm,1.2s								
PLCA	**Paso Flores**	87.46	134	IAmb	IAmb	20 45 35.5			
	comp=Z,104nm,1.4s								
PLCA	**Paso Flores**	87.46	134	P	**P**	**20 45 34.0 +1.5**			
PLCA	**Paso Flores**	87.46	134	P	**P**	**20 45 34.1 +1.6**			
L14K	**Kuka Creek**	87.51	8	P	**P**	**20 45 32.5 +0.7**			
	baz=196								
H04A	**Detroit Lake**	87.52	37	IAmb	IAmb	20 45 34.7			
	comp=Z,82nm,1.1s								
P19K	**Oil Pt**	87.53	13	P	**P**	**20 45 32.3 +0.3**			
	baz=204								
N17K	**Nushagak Hills**	87.58	11	P	**P**	**20 45 33.1 +0.9**			
	baz=201								
M16K	**Timber Creek**	87.75	10	IAmb	IAmb	20 47 30.8			
	comp=Z,59nm,1.5s								
M16K	**Timber Creek**	87.75	10	P	**P**	**20 45 34.1 +1.1**			
	baz=199								
O19K	**Port Alsworth**	87.81	13	IAmb	IAmb	20 45 34.3			
	comp=Z,53nm,0.9s								
O19K	**Port Alsworth**	87.81	13	P	**P**	**20 45 34.2 +1.0**			
	baz=203,SNR=8.1								
K13K	**Kusilvak Mount**	87.84	7	P	**P**	**20 45 34.4 +1.0**			
	baz=194								
CNPM	**China Poot**	87.85	14	IAmb	IAmb	20 45 35.2			
	comp=Z,41nm,0.9s								
ILSW	**Iliamna Southw**	87.86	13	IAmb	IAmb	20 45 35.1			
	comp=Z,54nm,0.8s								
BJI2	**Beijing**	87.87	317	P	**P**	**20 45 35.1 +1.0**			
BJI2				pP	**pP**	**20 47 22.3 -1.9**			
BJI2				PP	**PP**	**20 49 06.3 -3.3**			
BJI2				SKS	**SKSac**	**20 55 11.9 -2.1**			
BJI2				S	**ScS**	**20 55 38.0 -0.7**			
BJI2				pmax	pmax				
	comp=Z,13nm,1.2s								
BJT	**Baijiatuau**	87.87	317	P	**P**	**20 45 35.6 +1.5**			
MA2	**Magadan**	87.88	346	P	**P**	**20 45 34.0 +0.3**			
MA2	**Magadan**	87.88	346	P	**P**	**20 45 32.6 -1.0**			
MA2	**Magadan**	87.88	346	*ce*P	**P**	**20 45 33.9 +0.3**			
MA2				pmax	pmax				
	comp=Z,34nm,2.5s								
HOM	**Homer**	87.88	14	P	**P**	**20 45 34.5 +0.9**			
	baz=206								
N18K	**Kilae Creek**	87.96	12	P	**P**	**20 45 34.3 +0.3**			
	baz=202								
L15K	**Ungalak Mounta**	88.00	9	P	**P**	**20 45 34.8 +0.7**			
	baz=197								
BRLK	**Bradley Lake**	88.14	14	IAmb	IAmb	20 45 36.5			
	comp=Z,40nm,1.1s								
EFI	**East Falkland**	88.15	148	P	**P**	**20 45 35.6 +0.4**			
EFI	**East Falkland**	88.15	148	*ce*P	**P**	**20 45 35.8 +0.5**			
EFI				pmax	pmax				
	comp=Z,179nm,1.1s								
BRSE	**Bradley Lake S**	88.16	14	P	**P**	**20 45 35.4 +0.5**			
	baz=206,SNR=6.5								
X16A	**Lo Mia Camp, P**	88.23	50	IAmb	IAmb	20 45 39.4			
	comp=Z,58nm,0.9s								
L16K	**Owhat River**	88.33	10	P	**P**	**20 45 35.9 +0.3**			
	baz=199,SNR=8.3								
HEH	**HeiHe**	88.33	329	⇓P	**P**	**20 45 36.4 +0.5**			
HEH				PP	**PP**	**20 49 10.8 -2.2**			
HEH				SKS	**SKSac**	**20 55 14.0 -2.2**			
HEH				S	**ScS**	**20 55 41.1 -0.9**			
HEH				pmax	pmax				
	comp=Z,8.0nm,1.5s								
RED	**Redoubt Volcan**	88.33	13	IAmb	IAmb	20 45 37.2			
	comp=Z,53nm,1.3s								
G05A	**Wamic**	88.35	37	IAmb	IAmb	20 45 38.9			
	comp=Z,93nm,1.4s								
N19K	**Bonanza Creek**	88.35	12	P	**P**	**20 45 35.8 -0.1**			
	baz=203								
M17K	**Holitna River**	88.36	11	P	**P**	**20 45 36.9 +1.1**			
	baz=201								
NLWA	**Neilton Lookou**	88.38	34	IAmb	IAmb	20 45 39.3			
	comp=Z,53nm,1.0s								
LCMT	**Little Creek M**	88.40	47	IAmb	IAmb	20 45 39.7			
	comp=Z,58nm,1.1s								
K15K	**Wolf Creek Mou**	88.58	9	P	**P**	**20 45 37.8 +0.9**			
	baz=197								
CCUT	**Cedar City**	88.62	47	P	**P**	**20 45 40.0 +2.0**			
CCUT				IAmb	IAmb	20 45 41.1			
	comp=Z,52nm,1.1s								
HPIG		88.69	59	IAmb	IAmb	20 45 41.0			
	comp=Z,57nm,0.8s								
G06A	**Carlson Farm,**	88.72	38	IAmb	IAmb	20 45 40.5			
	comp=Z,75nm,1.1s								
M18K	**Stony River**	88.73	11	P	**P**	**20 45 38.3 +0.8**			
	baz=202								
J14K	**Nanvaranak Lak**	88.77	8	P	**P**	**20 45 38.6 +0.9**			
	baz=195								
SEW	**Seward**	88.78	15	P	**P**	**20 45 38.3 +0.6**			
	baz=208								
J08A	**Circle Bar Ran**	88.79	40	P	**P**	**20 45 39.8 +1.4**			
J08A				IAmb	IAmb	20 45 41.1			
	comp=Z,99nm,1.0s								
PSUT	**Pine Spring**	88.84	46	IAmb	IAmb	20 45 41.6			
	comp=Z,72nm,1.5s								
WUAZ	**Wupatki**	88.86	50	IAmb	IAmb	20 45 42.0			
	comp=Z,50nm,1.0s								
L17K	**Donlin**	88.91	10	P	**P**	**20 45 39.3 +0.9**			
	baz=200,SNR=6.5								
Q23K	**Middleton Isla**	88.94	17	P	**P**	**20 45 39.2 +0.6**			
	baz=210								
TIY	**Taiyuan**	88.96	313	P	**P**	**20 45 40.9 +1.6**			
TIY				SKS	**SKSac**	**20 55 21.1 +0.4**			
TIY				S	**ScS**	**20 55 47.3 -0.8**			
TIY				pmax	pmax				
	comp=Z,73nm,0.9s								
B04A	**Port Angeles**	89.00	34	IAmb	IAmb	20 45 42.2			
	comp=Z,50nm,0.9s								
LON	**Longmire**	89.04	36	IAmb	IAmb	20 45 41.5			
	comp=Z,30nm,0.7s								
GAMB	**Gambell**	89.04	4	P	**P**	**20 45 39.3 +0.4**			
	baz=188								
O22K	**Cooper Landing**	89.05	15	IAmb	IAmb	20 45 51.8			
	comp=Z,48nm,0.7s								
O22K	**Cooper Landing**	89.05	15	P	**P**	**20 45 39.2 +0.2**			
	baz=207								
BI02	**San Fabin de**	89.09	131	IAmb	IAmb	20 45 42.6			
	comp=Z,69nm,1.0s								
N20K	**Mount Spurr**	89.16	13	P	**P**	**20 45 39.4 -0.2**			
	baz=205,SNR=11								
SPCR	**Spurr Chakacha**	89.16	13	P	**P**	**20 45 39.4 -0.3**			
	baz=205								
P23K	**Montague Islan**	89.17	16	P	**P**	**20 45 39.5 -0.1**			
	baz=209								
ZAIG	**Zacatecas**	89.18	64	IAmb	IAmb	20 45 44.2			
	comp=Z,44nm,1.0s								
CLRS	**Cowichan Lake**	89.19	33	IAmb	IAmb	20 45 43.1			
	comp=Z,52nm,0.9s								
ELK	**Elko**	89.21	44	IAmb	IAmb	20 45 43.0			
	comp=Z,58nm,1.2s								
L18K	**Granite Mounta**	89.25	11	P	**P**	**20 45 40.9 +1.0**			
	baz=201								
X18A	**Snowflake**	89.33	51	IAmb	IAmb	20 45 44.2			
	comp=Z,51nm,0.8s								
M19K	**Big River Lodg**	89.37	12	P	**P**	**20 45 40.9 +0.3**			
	baz=203								
CBB	**Campbell River**	89.39	32	IAmb	IAmb	20 45 43.7			
	comp=Z,67nm,1.1s								
XAN	**Xi'an**	89.42	308	⇓P	**P**	**20 45 42.8 +1.3**			
XAN				pmax	pmax				
	comp=Z,81nm,1.3s								
K17K	**Iditarod**	89.46	10	P	**P**	**20 45 41.5 +0.6**			
	baz=200								
F07A	**Phinny Hill Vi**	89.52	37	IAmb	IAmb	20 45 44.3			
	comp=Z,60nm,1.3s								
L19K	**White Mountain**	89.54	12	P	**P**	**20 45 42.0 +0.6**			
	baz=203								
RC01	**Rabbit Creek A**	89.59	14	IAmb	IAmb	20 45 43.0			
	comp=Z,32nm,0.9s								
RC01	**Rabbit Creek A**	89.59	14	P	**P**	**20 45 42.1 +0.5**			
	baz=207,SNR=10								
M20K	**Styx River**	89.59	12	P	**P**	**20 45 42.0 +0.4**			
	baz=204								
BBB	**Bella Bella**	89.61	29	P	**P**	**20 45 43.4 +1.6**			
	comp=Z,25nm,0.8s,baz=233,slow=5.4,SNR=7.5								
	comp=Z,25nm,0.8s								
J16K	**Anvik River**	89.66	9	P	**P**	**20 45 42.4 +0.6**			
	baz=198								
MTPU	**Mount Pierson**	89.67	47		**PcP**	**20 45 45.1 +1.2**			
KMI2	**Kunming**	89.71	298	⇓P	**P**	**20 45 44.5 +1.2**			
KMI2				pP	pP	20 47 34.3 +0.5			
KMI2				pmax	pmax				
	comp=Z,34nm,1.5s								
MXC	**Moxie City**	89.74	37	IAmb	IAmb	20 45 45.2			
	comp=Z,30nm,0.9s								
CM31	**Chiang Mai Arr**	89.78	290	IAmb	IAmb	20 47 42.9			
	comp=Z,67nm,1.2s								
CMAR	**Chiang Mai Arr**	89.78	290	P	**P**	**20 45 45.6 +2.1**			
	comp=Z,13nm,0.9s,baz=136,slow=3.3,SNR=65								
CMAR				pP	**pP**	**20 47 33.6 -0.3**			
	comp=Z,8.3nm,0.9s,baz=130,slow=3.7,SNR=8.3								
CMAR				PP	**PP**	**20 49 25.1 +0.1**			
	comp=Z,15nm,1.0s,baz=129,slow=5.9,SNR=12								
CMAR				PKKPbc	**PKKPbc**	**21 03 14.4 +1.6**			
	comp=Z,2.2nm,0.6s,baz=290,slow=4.4,SNR=12								
	comp=Z,13nm,0.9s								
CMAR	**Chiang Mai Arr**	89.78	290	P	**P**	**20 45 43.8 +0.3**			
W18A	**Petrified Fore**	89.79	51	IAmb	IAmb	20 45 46.8			
	comp=Z,55nm,1.1s								
TCRU	**Three Creeks R**	89.81	47	IAmb	IAmb	20 45 46.6			
	comp=Z,41nm,0.9s								
KAIM	**Kayak Island**	89.88	17	P	**P**	**20 45 43.0 +0.1**			
	baz=212								
CHTO	**Chiang Mai**	89.94	291	P	**P**	**20 45 45.8 +1.6**			
CHTO	**Chiang Mai**	89.94	291	P	**P**	**20 45 45.3 +1.1**			
CHTO				IAmb	IAmb	20 45 46.9			
	comp=Z,32nm,0.9s								
CHTO	**Chiang Mai**	89.94	291	P	**P**	**20 45 45.3 +1.1**			
CHTO				pmax	pmax				
	comp=Z,32nm,1.0s								
CHTO	**Chiang Mai**	89.94	291	P	**P**	**20 45 45.6 +1.4**			
	comp=Z,359nmcomp=Z,37nm,1.3s								
CRAG	**Craig**	89.94	25	P	**P**	**20 45 43.8 +0.6**			
	baz=222								
LTY	**Liberty**	89.96	36	IAmb	IAmb	20 45 45.9			
	comp=Z,60nm,1.3s								
E07A	**Sunnyside**	89.97	37	IAmb	IAmb	20 45 46.5			
	comp=Z,40nm,0.8s								
J17K	**VABM Dome**	89.98	9	P	**P**	**20 45 44.3 +1.0**			
	baz=199								
SKT	**Skwentna**	90.00	13	P	**P**	**20 45 43.1 -0.4**			
	baz=206								
GLI	**Glacier Island**	90.02	16	P	**P**	**20 45 43.3 -0.2**			
	baz=210								
HAWA	**Hanford**	90.04	37	IAmb	IAmb	20 45 46.7			
	comp=Z,28nm,0.8s								
EYAK	**Cordova Ski Ar**	90.06	16	P	**P**	**20 45 44.3 +0.6**			
	baz=211								
M22K	**Willow**	90.10	14	P	**P**	**20 45 44.3 +0.4**			
	baz=207								
KNK	**Knik Glacier**	90.16	15	IAmb	IAmb	20 45 45.7			
	comp=Z,21nm,0.8s								
KNK	**Knik Glacier**	90.16	15	P	**P**	**20 45 44.7 +0.4**			
	baz=208,SNR=6.7								
PMR	**Palmer**	90.17	14	P	**P**	**20 45 44.7 +0.5**			
PMR	**Palmer**	90.17	14	P	**P**	**20 45 44.6 +0.4**			
	baz=208,SNR=5.3								
XLT	**XiLinHaoTe**	90.19	320	*e*P	**P**	**20 45 45.8 +0.9**			
XLT				SKS	**SKSac**	**20 55 25.9 -1.7**			
XLT				S	**S**	**20 55 56.1 +0.5**			
XLT				pmax	pmax				
	comp=Z,21nm,1.1s								
XLT				pmax	pmax				
	comp=Z,140nm,5.5s								
I17K	**Unalakleet**	90.22	9	P	**P**	**20 45 45.0 +0.6**			
	baz=198								
ANM	**Nome**	90.33	6	P	**P**	**20 45 45.7 +0.8**			
	baz=194								
SIT	**Sitka**	90.35	23	P	**P**	**20 45 46.2 +1.0**			
	baz=220								
E08A	**Dider Farm, El**	90.36	37	IAmb	IAmb	20 45 48.8			
	comp=Z,20nm,0.7s								
GHO	**Glory Hole Cre**	90.38	14	IAmb	IAmb	20 45 46.7			
	comp=Z,36nm,0.7s								
BO02	**Sierra Bellavi**	90.40	129	IAmb	IAmb	20 45 48.4			
	comp=Z,53nm,1.0s								
J18K	**Innoko River**	90.42	10	P	**P**	**20 45 45.5 +0.2**			
	baz=201								
V35K	**Ketchikan**	90.42	25	P	**P**	**20 45 46.4 +1.0**			
	baz=223								
U33K	**Whale Pass**	90.43	24	P	**P**	**20 45 46.5 +1.0**			
	baz=222								
DUG	**Dugway, Tooele**	90.44	45	IAmb	IAmb	20 45 48.6			
	comp=Z,24nm,0.9s								
SML	**Sawmill**	90.54	15	P	**P**	**20 45 46.6 +0.6**			
	baz=209								
DIV	**Divide**	90.56	16	IAmb	IAmb	20 45 47.6			
	comp=Z,52nm,1.6s								
HMU	**Henry Mountain**	90.58	48	IAmb	IAmb	20 45 49.2			
	comp=Z,86nm,1.6s								
SEY	**Seymchan**	90.59	348	⇓*e*P	**P**	**20 45 46.5 +0.4**			
SEY				pmax	pmax				
	comp=Z,5.0nm,0.8s								
EPH	**Ephrata**	90.60	36	IAmb	IAmb	20 45 49.9			
	comp=Z,11nm,0.8s								
CUT	**Chulitna**	90.65	13	P	**P**	**20 45 45.9 -0.5**			
	baz=207,SNR=9.0								
L22K	**Petersville**	90.65	13	IAmb	IAmb	20 45 47.1			
	comp=Z,22nm,0.8s								
M23K	**Glacier View**	90.67	15	P	**P**	**20 45 46.9 +0.3**			
	baz=209								
BGU	**Big Grassy Mou**	90.70	44	IAmb	IAmb	20 45 49.7			
	comp=Z,44nm,1.5s								
PPLA	**Purkeypile**	90.70	12	P	**P**	**20 45 47.0 +0.1**			
	baz=205								
BMRM	**Bremner River**	90.72	17	IAmb	IAmb	20 45 48.5			
	comp=Z,25nm,0.9s								
BMRM	**Bremner River**	90.72	17	P	**P**	**20 45 47.2 +0.4**			
	baz=212								
S31K	**Pelican**	90.74	22	P	**P**	**20 45 47.5 +0.6**			
	baz=219								
H16K	**Elim**	90.75	8	P	**P**	**20 45 47.0 +0.2**			
	baz=196								
MESA	**MESA**	90.77	18	P	**P**	**20 45 47.9 +0.6**			
	baz=214								
K20K	**Telida**	90.77	11	P	**P**	**20 45 47.3 +0.3**			
	baz=204								
D08A	**Wollman Farm,**	90.78	37	IAmb	IAmb	20 45 49.9			
	comp=Z,27nm,1.0s								
SCM	**Sheep Creek Mo**	90.80	15	IAmb	IAmb	20 45 48.7			
	comp=Z,34nm,0.8s								
SCM	**Sheep Creek Mo**	90.80	15	P	**P**	**20 45 47.7 +0.5**			
	baz=210,SNR=8.1								
Q16A	**Castle Valley**	90.81	47	IAmb	IAmb	20 45 51.9			
	comp=Z,47nm,0.9s								
ZEA	**Zeya**	90.83	332	*e*P	**P**	**20 45 48.3 +0.8**			
ZEA				*e*		20 55 30.7			
ZEA				pmax	pmax				
	comp=Z,10.0nm,0.7s								
KLU	**Klutina**	90.83	16	P	**P**	**20 45 48.0 +0.5**			
	baz=211								
E09A	**Wood Farm, Sta**	90.88	38	IAmb	IAmb	20 45 50.0			
	comp=Z,27nm,1.0s								
G15K	**Niukluk**	90.89	7	P	**P**	**20 45 48.2 +0.8**			
	baz=195								
CRQM	**Cirque**	90.92	17	IAmb	IAmb	20 48 01.9			
	comp=Z,68nm,1.6s								
S32K	**Killisnoo**	90.93	23	P	**P**	**20 45 48.6 +0.8**			
	baz=220								
CRQE	**Cirque**	90.93	17	P	**P**	**20 45 48.6 +0.7**			
	baz=213								
WRAK	**Wrangell Islan**	90.94	24	P	**P**	**20 45 48.7 +0.8**			
	baz=222								
F10A	**Beach Ranch, E**	91.07	38	IAmb	IAmb	20 45 50.6			
	comp=Z,30nm,0.8s								
VHRN	**Van Horn**	91.07	56	IAmb	IAmb	20 45 52.2			
	comp=Z,36nm,1.0s								
TNA	**Tin City**	91.08	5	IAmb	IAmb	20 45 50.2			
	comp=Z,21nm,0.8s								
TNA	**Tin City**	91.08	5	P	**P**	**20 45 49.1 +0.8**			
	baz=191,SNR=5.7								
J19K	**Poorman**	91.09	11	P	**P**	**20 45 49.1 +0.7**			
	baz=202								
F14K	**Arctic Creek**	91.13	6	P	**P**	**20 45 49.6 +1.0**			
	baz=193								
PZH	**PanZhiHua**	91.14	299	P	**P**	**20 45 50.3 +0.6**			
Y22A	**Socorro**	91.16	53	IAmb	IAmb	20 45 52.5			
	comp=Z,29nm,0.8s								
PINM	**Pinnacle**	91.18	19	P	**P**	**20 45 49.9 +0.8**			
	baz=216								
MNTX	**Cornudas Mount**	91.22	55	IAmb	IAmb	20 45 52.6			
	comp=Z,33nm,1.1s								
HHC	**Hu-ho-hao-te**	91.24	315	⇑*i*P	**P**	**20 45 51.5 +1.7**			
HHC				SKS	**SKSac**	**20 55 34.1 +0.4**			
HHC				S	**ScS**	**20 56 12.9 +6.0**			
HHC				pmax	pmax				
	comp=Z,25nm,1.0s								
HHC				pmax	pmax				
	comp=Z,130nm,4.7s								
N25K	**Chitina, Valde**	91.26	16	P	**P**	**20 45 50.1 +0.7**			
	baz=212,SNR=7.4								
M24K	**Tolsona, Glenn**	91.31	15	P	**P**	**20 45 50.2 +0.6**			
	baz=210								
HLID	**Hailey**	91.31	42	IAmb	IAmb	20 45 52.9			
	comp=Z,47nm,1.4s								
PEL	**Peldehue**	91.33	128	IAmb	IAmb	20 45 52.6			
	comp=Z,54nm,1.1s								
H17K	**Granite Mounta**	91.33	9	P	**P**	**20 45 50.0 +0.5**			
	baz=198								
WAT6	**Susitna Watana**	91.36	14	P	**P**	**20 45 50.2 +0.3**			
	baz=209,SNR=9.0								
TX31	**Lajitas Ar. Si**	91.39	58	P	**P**	**20 45 52.1 +1.3**			
TX31				IAmb	IAmb	20 45 53.7			
	comp=Z,48nm,0.9s								
TXAR	**Lajitas Array**	91.39	58	P	**P**	**20 45 52.1 +1.4**			
	comp=Z,30nm,0.8s,baz=213,slow=6.2,SNR=176								
TXAR				PP	**PP**	**20 49 37.2 -0.3**			
	comp=Z,2.0nm,1.1s,baz=231,slow=7.9,SNR=4.3								
TXAR				PKKPbc	**PKKPbc**	**21 03 10.5 +1.2**			
	comp=Z,0.5nm,0.6s,baz=89,slow=3.8,SNR=7.7								
	comp=Z,30nm,0.8s								
TXAR	**Lajitas Array**	91.39	58	P	**P**	**20 45 51.5 +0.7**			
WAT1	**Susitna Watana**	91.39	14	P	**P**	**20 45 50.2 +0.3**			
	baz=208								
G16K	**Koyuk River**	91.47	7	P	**P**	**20 45 50.8 +0.7**			
	baz=196								
MCARA	**McCarthy VSAT**	91.48	17	P	**P**	**20 45 51.0 +0.7**			
	baz=213,SNR=5.9								
J20K	**Nowinta River**	91.51	11	P	**P**	**20 45 50.7 +0.3**			
	baz=204								
F15K	**North Star Dit**	91.52	6	P	**P**	**20 45 50.7 +0.4**			
	baz=194								
LOGN	**Logan Glacier**	91.57	18	IAmb	IAmb	20 45 52.6			
	comp=Z,24nm,0.9s								
CHUM	**Lake Minchumin**	91.57	12	P	**P**	**20 45 50.1 -0.5**			
	baz=205,SNR=5.5								
BARN	**Barnard Glacie**	91.58	18	IAmb	IAmb	20 45 52.9			
	comp=Z,21nm,0.8s								
TRF	**Thorofare Moun**	91.58	13	IAmb	IAmb	20 45 51.5			
	comp=Z,19nm,0.7s								
TRF	**Thorofare Moun**	91.58	13	P	**P**	**20 45 50.2 -0.7**			
	baz=207,SNR=9.1								
CTG	**Chitna Glacier**	91.59	18	P	**P**	**20 45 51.3 +0.3**			
	baz=215,SNR=6.1								
CTGM	**Chitina Glacie**	91.59	18	IAmb	IAmb	20 45 52.9			
	comp=Z,18nm,0.8s								
GCSA	**Galena City Sc**	91.59	10	P	**P**	**20 45 51.0 +0.4**			
	baz=201								
CD2	**Chengdu**	91.65	303	P	**P**	**20 45 53.4 +1.5**			
CD2				SKS	**SKSac**	**20 55 35.8 -0.4**			
CD2				S	**ScS**	**20 56 10.3 -0.4**			
CD2				pmax	pmax				
	comp=Z,90nm,1.1s								
CD2				pmax	pmax				
	comp=Z,370nm,3.7s								
MT08	**Bocatoma Ro**	91.65	128	IAmb	IAmb	20 45 55.0			
	comp=Z,25nm,1.1s								
H18K	**Honhosa River**	91.75	9	P	**P**	**20 45 51.7 +0.2**			
	baz=200								
O28M	**Mount Upton**	91.75	18	P	**P**	**20 45 52.1 +0.2**			
	baz=216								
PV05	**Paradox Valley**	91.76	48	IAmb	IAmb	20 45 55.1			
	comp=Z,28nm,0.9s								
G17K	**Kiwalik Mounta**	91.78	8	P	**P**	**20 45 52.2 +0.6**			
	baz=198								
P18A	**Preston Nutter**	91.80	47	IAmb	IAmb	20 45 55.1			
	comp=Z,29nm,0.9s								
RND	**Reindeer**	91.84	14	IAmb	IAmb	20 45 53.1			
	comp=Z,23nm,0.7s								
O29M	**Mount Kennedy**	91.85	19	P	**P**	**20 45 52.8 +0.7**			
	baz=217								
DHY	**Denali Highway**	91.87	14	P	**P**	**20 45 52.7 +0.4**			
	baz=210								
PV10	**Paradox Valley**	91.95	48	IAmb	IAmb	20 45 55.2			
	comp=Z,32nm,0.8s								
PV17	**East Wray Mesa**	91.95	48	IAmb	IAmb	20 45 55.5			
	comp=Z,28nm,1.3s								
PV14	**Lion Creek, Pa**	91.96	48	IAmb	IAmb	20 45 55.5			
	comp=Z,25nm,0.9s								
PV20	**West Nyswonger**	91.98	48	IAmb	IAmb	20 45 55.5			
	comp=Z,44nm,1.0s								
PV13	**Radium Mtn., P**	91.99	48	IAmb	IAmb	20 45 55.5			
	comp=Z,18nm,0.8s								
PV03	**Paradox Valley**	92.02	48	IAmb	IAmb	20 47 10.2			
	comp=Z,18nm,0.8s								
ANMO	**Albuquerque**	92.02	52	P	**P**	**20 45 54.0 +0.3**			
ANMO	**Albuquerque**	92.02	52	*de*P	**P**	**20 45 55.0 +1.3**			
ANMO				pmax	pmax				
	comp=Z,26nm,1.0s								
PV11	**David Mesa, Pa**	92.02	48	IAmb	IAmb	20 45 55.8			
	comp=Z,34nm,1.3

baz=214,SNR=12
H20K Anotleneega Mo **92.60** **10** P **P** **20 45 55.7 +0.3**
baz=203
F17K Baldwin Pennin **92.60** **8** IAmb IAmb 20 45 57.5
comp=Z,16nm,0.8s
F17K Baldwin Pennin **92.60** **8** P **P** **20 45 56.0 +0.7**
baz=197,SNR=14
MENT Mentasta **92.61** **16** P **P** **20 45 55.9 +0.4**
YUK4 Talbot Arm **92.66** **19** P **P** **20 45 56.8 +0.8**
baz=217
RDMU Red Mountain **92.73** **46** IAmb IAmb 20 45 58.9
comp=Z,21nm,0.8s
I21K Tanana **92.81** **12** P **P** **20 45 56.9 +0.6**
baz=205,SNR=8.1
TPB06 Permian Basin **92.81** **56** IAmb IAmb 20 45 59.5
comp=Z,42nm,1.6s
P32M Atlin **92.83** **22** P **P** **20 45 57.9 +1.2**
baz=221
NEA2 Nenana **92.84** **13** P **P** **20 45 56.9 +0.4**
baz=208
Q32M Nakina River **92.86** **23** P **P** **20 45 57.3 +0.4**
baz=222
SAND Sanderson **92.86** **58** P **P** **20 45 58.4 +0.9**
SAND IAmb IAmb 20 45 59.5
comp=Z,30nm,0.9s
K24K Donnelly Dome **92.86** **15** IAmb IAmb 20 45 58.1
comp=Z,19nm,0.7s
K24K Donnelly Dome **92.86** **15** P **P** **20 45 57.3 +0.7**
baz=211
G19K Purcell Mounta **92.87** **9** P **P** **20 45 57.2 +0.6**
baz=201
MLY Manley **92.91** **12** P **P** **20 45 56.9 +0.1**
baz=206
BVCY Beaver Creek **92.91** **17** P **P** **20 45 57.2 +0.3**
baz=215,SNR=7.8
F18K Selawik **92.95** **8** P **P** **20 45 57.1 +0.2**
baz=199,SNR=5.6
O30N Mendenhall **92.97** **20** P **P** **20 45 57.8 +0.5**
baz=219
RIDG Independent Ri **93.02** **15** P **P** **20 45 57.9 +0.5**
baz=212,SNR=6.4
TNCH TengChong **93.06** **296** P **P** **20 45 58.5 -0.2**
TNCH pP pP 20 47 48.6 -0.8
TNCH sP sP 20 48 40.0 +0.2
TNCH PP **PP** **20 49 52.9 +2.2**
TNCH SKS **SKSac** **20 55 47.5 +3.0**
TNCH S **S** **20 56 21.8 -0.1**
TNCH sS sS 20 59 40.3 -0.7
TNCH pmax pmax
comp=Z,22nm,0.9s
H21K Melozitna Rive **93.10** **11** P **P** **20 45 58.0 +0.4**
baz=205
HDA Harding Lake **93.13** **14** IAmb IAmb 20 45 58.5
comp=Z,12nm,0.6s
HDA Harding Lake **93.13** **14** P **P** **20 45 58.2 +0.4**
baz=210,SNR=13
L27K Beaver Creek, **93.19** **16** P **P** **20 45 58.8 +0.6**
baz=214,SNR=5.6
BCAR Beaver Creek A **93.21** **16** P **P** **20 45 57.8 -0.4**
N30M Aishikik Lake **93.21** **19** P **P** **20 45 59.0 +0.7**
baz=218
IMAR Indian Mountai **93.24** **11** P **P** **20 45 57.4 -0.9**
WHY Whitehorse **93.27** **21** P **P** **20 45 59.4 +0.7**
baz=220
DLBC Dease Lake **93.28** **24** P **P** **20 45 59.3 +0.6**
comp=Z,2.5nm,0.8s,baz=244,slow=9.5,SNR=4.5
comp=Z,2.5nm,0.8s
DLBC Dease Lake **93.28** **24** P **P** **20 45 59.3 +0.6**
baz=224
I23K Minto, Yukon-K **93.28** **13** P **P** **20 45 58.6 +0.2**
baz=208
COLA College **93.34** **13** P **P** **20 45 58.7 0.0**
COLA College **93.34** **13**⇓ *e*P **P** **20 45 58.6 -0.1**
COLA pmax pmax
comp=Z,13nm,1.0s
COLA College **93.34** **13** P **P** **20 45 59.1 +0.4**
baz=209
O20A White River Ci **93.38** **47** IAmb IAmb 20 46 01.8
comp=Z,20nm,0.8s
F19K Shaleruckik Mo **93.42** **9** P **P** **20 45 59.5 +0.4**
baz=200
SCRK Sand Creek **93.43** **15** P **P** **20 45 59.7 +0.3**
baz=212,SNR=6.1
ILAR Eielson Array **93.46** **14** P **P** **20 45 58.6 -0.7**
comp=Z,3.4nm,0.6s,baz=225,slow=5.2,SNR=56
ILAR pP **pP** **20 47 50.7 -0.1**
comp=Z,2.2nm,1.0s,baz=219,slow=5.1,SNR=4.1
ILAR PKiKP **PKiKP** **20 50 41.5 -0.3**
comp=Z,0.7nm,0.6s,baz=283,slow=1.5,SNR=6.9
comp=Z,3.4nm,0.6s
ILAR Eielson Array **93.46** **14** P **P** **20 45 58.3 -1.0**
LCO Las Campanas **93.46** **124** P **P** **20 45 58.9 -1.8**
LCO IAmb IAmb 20 46 02.4
comp=Z,16nm,0.9s
LCO Las Campanas **93.46** **124** P **P** **20 45 58.9 -1.8**
LCO pmax pmax
comp=Z,16nm,0.9s
SNOW Snow King Moun **93.49** **43** IAmb IAmb 20 46 03.7
comp=Z,17nm,0.8s
H22K Ishtalitna Cre **93.57** **11** P **P** **20 46 00.5 +0.7**
baz=206
M29M Somme Creek **93.59** **18** P **P** **20 46 00.9 +0.8**
baz=217,SNR=6.6
P33M Teslin, Yukon **93.60** **22** P **P** **20 46 01.1 +0.9**
baz=222
BILL Bilibino **93.61** **355**⇓ *e*P **P** **20 46 01.3 +1.4**
BILL pmax pmax
comp=Z,2.0nm,0.8s
D17K Noatak River **93.61** **6** P **P** **20 46 01.1 +1.2**
baz=196,SNR=9.1
ZON Zonda **93.61** **127** IAmb IAmb 20 46 03.0
comp=Z,18nm,1.0s
E18K Tukpahlearik C **93.62** **7** P **P** **20 46 00.7 +0.8**
baz=198
N31M Braeburn, Yuko **93.63** **20** P **P** **20 46 00.8 +0.6**
baz=219
R33M Jennings River **93.63** **23** P **P** **20 46 01.1 +0.7**
baz=223
POKR Poker Plat Res **93.64** **13** P **P** **20 46 00.1 0.0**
baz=210
J25K Salcha River, **93.65** **14** P **P** **20 46 00.9 +0.6**
baz=211,SNR=8.4
G21K Allakaket **93.77** **10** P **P** **20 46 01.5 +0.8**
baz=204
FLWY Flagg Ranch **93.85** **43** IAmb IAmb 20 46 05.7
comp=Z,28nm,0.9s
PDAR Pinedale Array **93.87** **44** P **P** **20 46 02.4 +0.3**
comp=Z,6.5nm,0.9s,baz=218,slow=3.5,SNR=32
PDAR PP **PP** **20 49 53.4 -3.3**
comp=Z,1.9nm,1.1s,baz=224,slow=4.1,SNR=4.6
PDAR PKKPbc **PKKPbc** **21 03 03.8 +0.1**
comp=Z,0.3nm,0.6s,baz=64,slow=6.9,SNR=3.8
comp=Z,6.5nm,0.9s
PDAR Pinedale Array **93.87** **44** P **P** **20 46 01.2 -0.9**
AC05 El Transito **93.87** **124** IAmb IAmb 20 46 04.5
comp=Z,30nm,1.1s
C16K Lisburne Hills **93.96** **6** P **P** **20 46 02.5 +1.1**
baz=194,SNR=8.3
YHL Hebgen Lake **93.96** **42** IAmb IAmb 20 46 06.9
comp=Z,20nm,1.0s
RDOG Red Dog Mine **93.97** **6** P **P** **20 46 02.5 +0.9**
baz=196,SNR=7.0
LZH Lanzhou **94.05** **308** *e*P **P** **20 46 04.8 +1.9**
LZH SKS **SKSac** **20 55 48.9 -0.4**
LZH S **ScS** **20 56 35.6 +4.9**
LZH pmax pmax
comp=Z,23nm,1.3s
SDCO Great Sand Dun **94.06** **50** IAmb IAmb 20 46 05.1
comp=Z,14nm,0.8s
OZNA Ozona **94.07** **58** IAmb IAmb 20 46 04.7
comp=Z,20nm,0.8s
E19K Redstone River **94.08** **9** P **P** **20 46 03.0 +0.9**
baz=201
LZDM Lanzhou Array **94.09** **308** P **P** **20 46 03.6 +0.3**
comp=Z,1.8nm,0.3s,baz=83,slow=4.5,SNR=3.6
LZDM pP **pP** **20 47 53.8 -0.3**
comp=Z,2.1nm,0.3s,baz=78,slow=8.3,SNR=1.8
comp=Z,1.8nm,0.3s
M30M Minto, Yukon **94.17** **19** IAmb IAmb 20 46 04.2
comp=Z,12nm,0.7s
M30M Minto, Yukon **94.17** **19** P **P** **20 46 03.8 +1.1**
baz=219,SNR=12
H24K Noodor Dome **94.18** **13** P **P** **20 46 03.9 +1.3**
baz=209
L29M L29M **94.22** **18** P **P** **20 46 04.2 +1.3**
baz=218
N32M Quiet Lake **94.22** **21** P **P** **20 46 04.3 +1.4**
baz=222

833A Chaparral WMA, **94.25** **61** IAmb IAmb 20 46 05.8
comp=Z,22nm,1.1s
C17K DeLong Mountai **94.36** **6** P **P** **20 46 04.4 +1.1**
baz=196
PRP Porcupine Dome **94.39** **14** P **P** **20 46 04.6 +0.9**
baz=211
F21K Alatna River **94.42** **10** P **P** **20 46 04.1 +0.5**
baz=204
SGCY Sterling City **94.52** **57** IAmb IAmb 20 46 06.8
comp=Z,30nm,1.2s
YMP Mirror Lake Pl **94.53** **42** IAmb IAmb 20 47 22.9
comp=Z,19nm,0.6s
G23K Bananza Creek **94.55** **12** P **P** **20 46 04.2 -0.1**
baz=207
M31M Drury Creek, Y **94.60** **20** P **P** **20 46 04.2 -0.4**
baz=221
C18K Utukok River **94.73** **7** P **P** **20 46 05.5 +0.4**
baz=197
I26K Coal Creek Min **94.74** **15** P **P** **20 46 05.9 +0.7**
baz=213
YNE Yellowstone No **94.75** **42** IAmb IAmb 20 46 10.7
comp=Z,20nm,1.1s
POST Post **94.76** **56** IAmb IAmb 20 46 07.5
comp=Z,16nm,0.9s
HNDO Hondo **94.88** **60** IAmb IAmb 20 46 09.9
comp=Z,13nm,0.8s
JCT Junction City **94.89** **59** IAmb IAmb 20 46 08.2
comp=Z,41nm,1.4s
F22K John River **94.89** **10** P **P** **20 46 06.4 +0.6**
baz=205
D19K Kuna River **94.94** **8** P **P** **20 46 06.8 +0.7**
baz=200
K29M Barlow Dome **94.97** **18** P **P** **20 46 07.5 +1.2**
baz=218
E20K Nigu River **94.97** **9** P **P** **20 46 06.9 +0.7**
baz=202
COLD Coldfoot **94.98** **11** P **P** **20 46 07.2 +1.0**
baz=207,SNR=5.5
G24K Hadweenzic Riv **95.02** **12** P **P** **20 46 06.7 +0.3**
baz=210
J29N Klondike Camp **95.26** **17** P **P** **20 46 08.4 +0.8**
baz=218
D20K Etivluk River **95.34** **8** P **P** **20 46 08.8 +1.0**
baz=201
C19K Lookout Ridge **95.34** **7** P **P** **20 46 08.7 +0.8**
baz=199
G25K Bearman Lake **95.35** **13** P **P** **20 46 08.7 +0.8**
baz=211
I27K Kandik River **95.35** **15** P **P** **20 46 08.8 +0.8**
baz=215
AMTX Amarillo **95.45** **54** IAmb IAmb 20 46 15.5
comp=Z,26nm,1.6s
E22K Anaktuvuk Pass **95.52** **10** P **P** **20 46 09.2 +0.6**
baz=206
I28M Miner Creek **95.63** **16** P **P** **20 46 09.7 +0.4**
baz=216
F24K Squaw Lake **95.66** **12** P **P** **20 46 10.2 +0.9**
baz=209
K22A Casper **95.75** **45** IAmb IAmb 20 47 03.2
comp=Z,29nm,1.3s
YAK Yakutsk **95.80** **339** *e*P **P** **20 46 06.9 -3.0**
YAK *e* 20 50 08.7
YAK *e*S **SKSac** **20 55 53.4 -3.5**
YAK pmax pmax
comp=Z,4.0nm,0.9s
YAK pmax pmax
comp=Z,50nm,1.7s
YAK pmax pmax
comp=N,33nm,1.6s
YAK pmax pmax
comp=E,31nm,2.1s
YAK smax smax
comp=E,75nm,1.8s
YAK smax smax
comp=N,29nm,1.1s
E23K Chandalar **95.82** **11** P **P** **20 46 11.0 +0.9**
baz=208
BRDY Brady **95.86** **58** IAmb IAmb 20 46 12.8
comp=Z,30nm,1.3s
J30M Hart River **95.87** **18** P **P** **20 46 11.1 +0.7**
baz=219
MMPY Sheldon Lake, **95.89** **21** P **P** **20 46 11.4 +0.9**
baz=223
H27K Steamboat Moun **95.89** **15** P **P** **20 46 11.4 +1.1**
baz=215
I29M Ogilvie Camp, **95.97** **16** P **P** **20 46 11.0 +0.3**
baz=218
G26K Porcupine Rive **95.99** **14** P **P** **20 46 12.1 +1.4**
baz=213
C21K Knifeblade Rid **96.01** **9** P **P** **20 46 12.0 +1.2**
baz=203
E24K Your Creek **96.03** **11** P **P** **20 46 12.0 +1.0**
baz=209
TGTN Hyland Airport **96.09** **22** P **P** **20 46 12.2 +0.8**
baz=226
F25K Christian Rive **96.15** **13** P **P** **20 46 12.8 +1.3**
baz=211
MORE Moreh **96.18** **294** IAmb IAmb 20 48 08.8
comp=Z,7.6nm,1.2s
A19K Wainwright **96.23** **6** P **P** **20 46 12.8 +1.1**
baz=197
G27K Doyon Strip **96.34** **14** P **P** **20 46 13.1 +0.7**
baz=215
TOLK Toolik Lake Re **96.35** **11** P **P** **20 46 13.3 +0.9**
baz=208
I30M Mount Dempster **96.36** **17** P **P** **20 46 13.4 +0.8**
baz=219
D23K Nanushuk River **96.45** **10** P **P** **20 46 13.8 +1.0**
baz=207
B21K Ikpikpuk River **96.46** **9** P **P** **20 46 13.5 +0.7**
baz=203
B20K Meade River **96.49** **8** P **P** **20 46 13.8 +0.9**
baz=201
F26K Sheenjek River **96.54** **13** P **P** **20 46 14.4 +1.2**
baz=212
E25K Arctic Village **96.62** **12** P **P** **20 46 14.9 +1.3**
baz=211
H29M Whitestone **96.63** **16** P **P** **20 46 14.6 +0.9**
baz=218
D24K Happy Valley **96.93** **11** P **P** **20 46 15.6 +0.7**
baz=208
EPYK Eagle Plains **97.17** **16** IAmb IAmb 20 46 17.4
comp=Z,14nm,1.1s
EPYK Eagle Plains **97.17** **16** P Pdif 20 46 17.0 +0.9
baz=219
C23K Itkillik River **97.24** **10** IAmb IAmb 20 48 14.3
comp=Z,21nm,1.5s
C23K Itkillik River **97.24** **10** P **P** **20 46 17.2 +0.9**
baz=207
G29M Pine Creek **97.27** **16** P **P** **20 46 17.4 +0.9**
baz=218
B22K Teshekpuk Lake **97.29** **9** P **P** **20 46 17.5 +1.1**
baz=204
H31M Peel River **97.35** **17** P **P** **20 46 17.6 +0.6**
baz=221
F28M Old Crow **97.40** **14** P **P** **20 46 17.9 +0.8**
baz=216
C24K Franklin Bluff **97.45** **11** P **P** **20 46 18.0 +0.8**
baz=209
E27K Coleen River **97.49** **14** P **P** **20 46 18.3 +0.8**
baz=215
D25K Kavik River **97.51** **12** P **P** **20 46 18.4 +0.8**
baz=211
ULN Ulaanbaatar **97.64** **320** P **P** **20 46 18.9 +0.1**
ULN IAmb IAmb 20 48 16.8
comp=Z,21nm,1.3s
ULN Ulaanbaatar **97.64** **320**⇑ *e*P **P** **20 46 19.2 +0.4**
ULN pmax pmax
comp=Z,5.0nm,1.2s
ULN Ulaanbaatar **97.64** **320** P **P** **20 46 19.8 +1.0**
A22K Sinclair Lake **97.69** **8** P **P** **20 46 19.2 +0.9**
baz=203
G30M tAoh Zraii Nji **97.77** **16** P **P** **20 46 19.6 +0.8**
baz=219
A21K Barrow **97.78** **7** P **P** **20 46 19.6 +0.9**
baz=202
LAO LASA Array **97.89** **42** IAmb IAmb 20 46 22.5
comp=Z,11nm,0.8s
SONM Songino Array **98.01** **319** P **P** **20 46 20.8 +0.3**
comp=Z,1.7nm,0.8s,baz=119,slow=4.3,SNR=11
SONM pP **pP** **20 48 11.6 -0.2**
comp=Z,6.0nm,1.1s,baz=131,slow=6.1,SNR=11
SONM PKKPbc **PKKPbc** **21 02 52.4 -0.3**
comp=Z,1.6nm,0.9s,baz=287,slow=3.5,SNR=6.2
comp=Z,1.7nm,0.8s
SONM Songino Array **98.01** **319** **P** **20 46 21.1 +0.7**
SONM **pP** **20 48 11.5 -0.2**
SONM IAmb IAmb 20 48 18.3

comp=Z,15nm,1.3s
SONM Songino Array **98.01** **319** P **P** **20 46 21.1 +0.7**
SONM *PP **pP** **20 48 11.5 -0.2**
SONM pmax pmax
comp=Z,15nm,1.3s
C27K Jago River **98.26** **12** P **P** **20 46 21.6 +0.7**
baz=213
E28M Babbage River **98.27** **14** P **P** **20 46 22.0 +1.0**
baz=217
C26K Camden Bay **98.28** **12** P **P** **20 46 22.5 +1.5**
baz=212
F30M Barrier River **98.36** **16** P **P** **20 46 22.7 +1.3**
baz=220
E29M Blow River **98.47** **15** P **P** **20 46 22.6 +0.8**
baz=218
GTA2 Gaotai **98.47** **310** *e*P **P** **20 46 23.5 +0.8**
GTA2 pP pwP 20 48 18.1 -1.4
GTA2 SKS **SKSac** **20 56 10.8 -1.1**
GTA2 S **S** **20 57 10.6 +3.2**
GTA2 pmax pmax
comp=Z,8.0nm,1.5s
D27M Malcolm River **98.49** **13** P **P** **20 46 22.8 +0.7**
baz=215
F31M Tsiigehtchic **98.75** **16** P **P** **20 46 23.6 +0.5**
baz=222
D28M Stokes Point **99.03** **14** P **Pdif** **20 46 25.2 +1.0**
baz=217
JTS Las Juntas de **99.09** **83**⇑ *e*P **Pdif** **20 46 24.5 -1.4**
JTS pmax pmax
comp=Z,7.0nm,1.1s
INK Inuvik **99.45** **16** P **Pdif** **20 46 26.0 -0.1**
comp=Z,3.2nm,0.8s,baz=255,slow=4.8,SNR=11
comp=Z,3.2nm,0.8s
INK Inuvik **99.45** **16** IAmb IAmb 20 47 38.1
comp=Z,19nm,1.9s
INK Inuvik **99.45** **16** P **Pdif** **20 46 26.6 +0.5**
baz=222
YKA Yellowknife Ar **101.74** **26** P **Pdif** **20 46 37.1 +0.7**
comp=Z,0.3nm,0.6s,baz=260,slow=5.0,SNR=5.3
YKA PKiKP **PKiKP** **20 50 56.0 -0.4**
comp=Z,0.6nm,0.6s,baz=280,slow=2.1,SNR=5.5
YKA PKKPbc **PKKPbc** **21 02 40.3 -2.1**
comp=Z,0.5nm,0.7s,baz=28,slow=2.9,SNR=11
LPAZ La Paz **102.07** **115** P **Pdif** **20 46 40.9 +1.0**
comp=Z,1.5nm,0.8s,baz=200,slow=5.5,SNR=6.6
LPAZ PP **PP** **20 50 58.7 -0.2**
comp=Z,2.1nm,0.9s,baz=270,slow=8.1,SNR=4.3
A36M Sachs Harbour **104.05** **15** P **Pdif** **20 46 47.7 +1.2**
baz=230
ULM Lac du Bonnet **105.62** **42** Pdiff **Pdif** **20 46 55.6 +1.6**
comp=Z,2.5nm,0.9s,baz=340,slow=3.8,SNR=3.4
ULM PKiKP **PKiKP** **20 51 02.1 -1.9**
comp=Z,1.5nm,0.5s,baz=262,slow=1.4,SNR=4.4
WMQ Urumqi **108.46** **310** Pdif **Pdif** **20 47 10.5 +3.6**
ZALV Zalesovo Beam **112.88** **320** PKiKP **PKiKP** **20 51 16.7 -0.8**
comp=Z,1.9nm,0.5s,baz=151,slow=2.5,SNR=11
ZALV SKP **SKPdf** **20 54 06.0 +0.9**
comp=Z,2.2nm,0.8s,baz=153,slow=1.0,SNR=5.3
ZALV PKKPbc **PKKPbc** **21 02 06.6 -1.0**
comp=Z,0.6nm,0.4s,baz=287,slow=2.6,SNR=4.2
ZALV PKKPab **PKKPab** **21 02 15.7 +1.0**
comp=Z,0.8nm,0.6s,baz=276,slow=4.3,SNR=4.4
MK31 Makanchi Array **112.92** **312** *d* iPKiKP **PKiKP** **20 51 16.9 -1.0**
MKAR Makanchi Array **112.92** **312** Pdiff **Pdif** **20 47 27.6 +1.0**
comp=Z,0.4nm,0.6s,baz=95,slow=7.4,SNR=6.0
MKAR PKiKP **PKiKP** **20 51 17.0 -0.9**
comp=Z,3.2nm,0.7s,baz=111,slow=1.0,SNR=20
MKAR PP **PP** **20 52 10.4 -6.0**
comp=Z,2.4nm,0.8s,baz=111,slow=4.8,SNR=5.0
MKAR SKP **SKPdf** **20 54 06.3 +0.9**
comp=Z,4.2nm,0.9s,baz=64,slow=2.8,SNR=8.1
MKAR PKKPbc **PKKPbc** **21 02 07.2 -0.1**
comp=Z,5.6nm,0.8s,baz=282,slow=3.7,SNR=32
MKAR PKKPab **PKKPab** **21 02 15.6 +0.7**
comp=Z,1.9nm,0.8s,baz=287,slow=4.5,SNR=6.5
MKAR Makanchi Array **112.92** **312** *i* PKiKP **PKiKP** **20 51 17.0 -0.9**
NRIK Noril'sk **114.19** **337** PKiKP PKPdf 20 51 19.1 -0.5
comp=Z,3.1nm,0.5s,baz=71,slow=2.4,SNR=8.4
NRIK PP **PP** **20 52 19.9 -4.6**
comp=Z,5.2nm,1.0s,baz=117,slow=8.2,SNR=7.1
NRIK Noril'sk **114.19** **337**⇑ *i* PKiKP PKPdf 20 51 19.3 -0.3
KURK Kurchatov **116.04** **316** **PKPdf** **20 51 22.5 -1.2**
KURK Kurchatov **116.04** **316** *d* iPKiKP **PKPdf** **20 51 22.9 -0.8**
KURK pmax pmax
comp=Z,8.0nm,0.7s
KSH2 Kashi **116.07** **303** PKP **PKiKP** **20 51 24.8 +0.4**
KURBB Kurchatov Arra **116.09** **316** PKP **PKPdf** **20 51 23.0 -0.8**
comp=Z,7.2nm,0.7s,baz=100,slow=1.9,SNR=62
KURBB PP **PP** **20 52 32.6 -5.5**
comp=Z,2.3nm,0.9s,baz=103,slow=5.5,SNR=9.0
KURBB SKP **SKPdf** **20 54 12.6 +1.3**
comp=Z,4.9nm,0.9s,baz=99,slow=2.2,SNR=9.4
KURBB PKKPbc **PKKPbc** **21 01 56.5 -0.1**
comp=Z,3.4nm,0.9s,baz=282,slow=4.2,SNR=16
ULHL Ulahol **116.20** **306** P **PKiKP** **20 51 24.8 +0.1**
SNR=5.7
ILON Igloolik, Nuna **116.41** **23** **PKPdf** **20 51 22.5 -1.4**
TKM2 Tokmak 2 **116.80** **307** P **PKPdf** **20 51 25.0 -0.7**
SNR=12
KBK Karagaybulak **117.22** **307** P **PKPdf** **20 51 26.1 -0.4**
SNR=6.7
CHMS Chumysh **117.42** **307** P **PKPdf** **20 51 26.4 -0.3**
SNR=5.7
UCH Uchtor **117.46** **306** P **PKiKP** **20 51 27.9 +0.5**
SNR=7.1
AAK Ala-Archa **117.55** **307** PKP **PKPdf** **20 51 26.7 -0.4**
comp=Z,3.2nm,0.7s,baz=104,slow=2.4,SNR=9.0
AAK Ala-Archa **117.55** **307** **PKPdf** **20 51 26.0 -1.1**
AAK Ala-Archa **117.55** **307** PKPdf **PKPdf** **20 51 26.3 -0.8**
AAK Ala-Archa **117.55** **307**⇑ *i* PKiKP **PKPdf** **20 51 26.5 -0.6**
AAK pmax pmax
comp=Z,4.0nm,1.3s
POIN Pond Inlet **117.61** **19** **PKPdf** **20 51 23.9 -2.2**
EKS2 Erkin-Say **118.07** **307** P **PKiKP** **20 51 28.4 +0.2**
SNR=7.0
BDFB Brasilia **118.19** **126** PKP **PKPdf** **20 51 28.6 -0.6**
comp=Z,3.5nm,0.7s,baz=181,slow=2.5,SNR=6.1
HUMP Col San Antoni **119.17** **83** **PKPdf** **20 51 29.7 -1.0**
SUR Sutherland **119.20** **200** **PKPdf** **20 51 30.6 -0.3**
TULEG Thule **119.40** **14** *i* P **PKPdf** **20 51 29.1 -0.4**
KBL Kabul **120.26** **297** **PKPdf** **20 51 32.3 -0.3**
KBL Kabul **120.26** **297** PKiKP **PKPdf** **20 51 32.3 -0.3**
KKAR Karatay Array **120.51** **307** **PKPdf** **20 51 31.5 -1.1**
KKAR Karatay Array **120.51** **307** PKiKP **PKPdf** **20 51 31.5 -1.1**
CHGR Chuyangaron **120.90** **301**⇓ *i* PKiKP **PKiKP** **20 51 33.7 -0.1**
BOSA Boshof **121.03** **206** PKP **PKPdf** **20 51 34.4 0.0**
comp=Z,8.5nm,0.7s,baz=119,slow=1.6,SNR=20
BOSA PKKPbc **PKKPbc** **21 01 38.5 -1.0**
comp=Z,4.4nm,0.7s,baz=320,slow=3.2,SNR=13
BVAR Borovoye Array **121.33** **318** P **PKPdf** **20 51 33.4 -0.4**
comp=Z,12nm,0.6s,baz=108,slow=0.9,SNR=46
BVAR PP **PP** **20 53 11.3 -2.4**
comp=Z,3.4nm,0.9s,baz=88,slow=7.6,SNR=3.9
BVAR SKP **SKPdf** **20 54 21.6 +0.3**
comp=Z,4.4nm,0.8s,baz=93,slow=3.0,SNR=5.0
BVAR PKKPbc **PKKPab** **21 01 37.6 0.0**
comp=Z,1.2nm,0.6s,baz=262,slow=7.0,SNR=5.5
BORK Borovoye **121.37** **318** **PKPdf** **20 51 32.6 -1.4**
BORK Borovoye **121.37** **318** *c* iPKiKP **PKPdf** **20 51 33.6 -0.3**
BORK pmax pmax
comp=Z,18nm,1.7s
E62A Clayton Lake **121.94** **49** **PKPdf** **20 51 34.7 -0.5**
D62A Allapoint, All **122.30** **49** **PKPdf** **20 51 34.7 -1.2**
NEEM North Greenlan **122.69** **12** *i* P **PKPdf** **20 51 35.6 -0.6**
KULLO Kullorsuaq **122.81** **15** *i* P **PKPdf** **20 51 35.1 -0.9**
NOR Nord **123.25** **3** *i* P **PKPdf** **20 51 36.5 -0.3**
MAKGR Makgori **123.70** **207** *i* P **PKPdf** **20 51 39.4 -0.1**
SCHQ Schefferville **123.72** **40** PKP **PKPdf** **20 51 37.6 -0.8**
comp=Z,17nm,1.0s,baz=255,slow=1.1,SNR=13
UPNV Upernavik **123.86** **17** *i* P **PKPdf** **20 51 37.8 -0.4**
BATG Bathurst New B **124.34** **49** **PKPdf** **20 51 39.3 -0.5**
NUUG Nuugaatsiaq **125.23** **18** *i* P **PKPdf** **20 51 40.9 +0.1**
LPHEP Lephephe **125.39** **210** *i* P **PKPdf** **20 51 42.7 -0.1**
KDWAN Kaudwane **125.90** **209** *i* P **PKPdf** **20 51 43.5 -0.3**
KBS Kingsbay **126.03** **357** *i* P **PKiKP** **20 51 42.7 0.0**
SAQQ Saqqaq **126.32** **20** *i* P **PKPdf** **20 51 42.2 -0.6**
SPA0 Spitsbergen Ar **126.50** **356** *e* PKPdf **PKiKP** **20 51 43.6 -0.1**
SPITS Spitsbergen Ar **126.50** **356** PKP **PKiKP** **20 51 43.5 -0.2**
comp=Z,18nm,0.6s,baz=92,slow=4.3,SNR=40
SPB2 Spitsbergen Ar **126.51** **356** **PKPdf** **20 51 42.8 -0.3**
SVE Sverdlovsk **126.66** **323** *e* PKiKP **PKiKP** **20 51 44.5 0.0**
SVE pmax pmax
comp=Z,10.0nm,0.8s
KHWEE KHWEE **126.80** **210** *i* P **PKiKP** **20 51 45.8 -0.3**
KGCAE Kacgae **127.39** **206** *i* P **PKPdf** **20 51 46.8 +0.1**
SOOWA Sowa **127.63** **212** *i* P **PKPdf** **20 51 47.0 -0.1**

DAG	**Danmarks Havn**	**127.70**	**5**	*i* P		**PKPdf**	**20 51 44.2**	**-1.2**
ARTI	**Arti**	**127.97**	**323**			**PKPdf**	**20 51 45.9**	**-0.5**
ARTI	**Arti**	**127.97**	**323**	*i* PKIKP		**PKiKP**	**20 51 46.8**	**-0.3**
ARTI							20 53 56.2	
ARTI							20 58 09.7	
ARTI				SS		SS	21 10 30.2	-0.9
ABKAR	**Akbulak array**	**128.01**	**314**			**PKPdf**	**20 51 46.2**	**-0.6**
KOOLE	**Kule**	**128.04**	**204**	*i* P		**PKPdf**	**20 51 48.1**	**+0.2**
SFJD	**Kangerlussuaq**	**128.17**	**23**	*i* P		**PKPdf**	**20 51 46.0**	**-0.5**
SUMG	**Summit**	**128.30**	**14**			**PKPdf**	**20 51 46.9**	**-0.3**
SUMG	**Summit**	**128.30**	**14**	PKIKP		**PKPdf**	**20 51 46.9**	**-0.3**
SUMG	**Summit**	**128.30**	**14**	*i* P		**PKPdf**	**20 51 47.2**	**0.0**
SOHO	**SOHO**	**128.72**	**281**	*i* PKiKP		**PKPdf**	**20 51 48.9**	**0.0**
	SNR=7.1							
NUUK	**Nuuk**	**128.99**	**26**	*i* P		**PKPdf**	**20 51 48.4**	**+0.3**
GRTLG	**Ghanzi**	**129.13**	**206**	*i* P		**PKPdf**	**20 51 49.5**	**-0.5**
UOSS	**Minazif**	**129.21**	**282**	*i* PKPdf		**PKPdf**	**20 51 49.4**	**-0.4**
	SNR=8.2							
HATD	**Hatta, Dubai**	**129.24**	**282**	*i* PKiKP		**PKPdf**	**20 51 49.8**	**0.0**
	SNR=7.8							
ASHO	**Ashiyiah**	**129.28**	**282**	*i* PKPdf		**PKPdf**	**20 51 49.3**	**-0.6**
	SNR=13							
BANOM	**Banah**	**129.34**	**284**	*i* PKiKP		**PKiKP**	**20 51 51.3**	**+0.5**
	SNR=9.2							
MSFE	**Esma-Masafi**	**129.34**	**283**	*i* PKPdf		**PKPdf**	**20 51 49.6**	**-0.5**
	SNR=11							
ALNE	**Al Ain**	**129.40**	**281**	*i* PKiKP		**PKPdf**	**20 51 50.0**	**-0.2**
	SNR=6.3							
SHME	**Shamm**	**129.50**	**284**	PKPdf		**PKPdf**	**20 51 49.1**	**-1.2**
NAZ	**Nazwa, Dubai**	**129.69**	**282**	*i* PKiKP		**PKiKP**	**20 51 51.4**	**-0.1**
	SNR=11							
DBG	**Daneborg**	**129.84**	**7**	*i* P		**PKPdf**	**20 51 49.2**	**-0.3**
ASUD	**Al Ashush, Dub**	**129.91**	**282**	*i* PKiKP		**PKPdf**	**20 51 51.2**	**+0.1**
	SNR=5.5							
KSANE	**Kasane**	**130.51**	**213**	*i* P		**PKiKP**	**20 51 53.4**	**-0.2**
LSZ	**Lusaka**	**131.04**	**218**			**PKPdf**	**20 51 53.8**	**+0.1**
LSZ	**Lusaka**	**131.04**	**218**	PKIKP		**PKPdf**	**20 51 53.8**	**+0.1**
MZR	**Muzera**	**131.17**	**279**	*i* PKiKP		**PKiKP**	**20 51 54.3**	**-0.3**
	SNR=6.6							
IVI	**Ivigtut**	**131.75**	**29**	*i* P		**PKPdf**	**20 51 53.4**	**-0.1**
KIRV	**Kirov**	**131.98**	**327**	*d* PKIKP		**PKiKP**	**20 51 55.0**	**-0.1**
TSUM	**Tsumeb**	**132.47**	**203**			**PKPdf**	**20 51 55.7**	**-0.7**
HAMF	**Hammerfest**	**132.58**	**349**	*e*PKPdf		**PKPdf**	**20 51 55.0**	**+0.2**
NRS	**Narsarsuaq**	**132.95**	**28**	*i* P		**PKPdf**	**20 51 56.3**	**+0.6**
APA	**Apatity**	**132.98**	**343**	⇓*e*PKIKP		**PKPdf**	**20 51 56.1**	**+0.5**
APA				*e*SS		SS	21 11 28.4	-2.3
APA				pmax	pmax			
	comp=Z,11nm,0.8s							
ARA0	**ARCESS Array S**	**133.21**	**348**	*e*PKPdf		**PKPdf**	**20 51 56.3**	**+0.3**
ARCES	**ARCESS Array B**	**133.21**	**348**	PKP		**PKPdf**	**20 51 56.0**	**0.0**
	comp=Z,15nm,0.6s,baz=50,slow=1.6,SNR=26							
ARCES				SKPbc		**SKPab**	**20 54 38.6**	**-0.9**
	comp=Z,31nm,0.9s,baz=24,slow=4.2,SNR=14							
ARCES				SKKPbc		**SKKPbc**	**21 03 55.9**	**-3.1**
	comp=Z,3.5nm,0.8s,baz=29,slow=2.8,SNR=7.8							
ARCES	**ARCESS Array B**	**133.21**	**348**			**PKPdf**	**20 51 55.4**	**-0.6**
KTK1	**Kautokeino**	**134.08**	**348**	*e*PKPdf		**PKPdf**	**20 51 57.9**	**+0.2**
KMBO	**Kilima Mbogo**	**135.18**	**240**	PKP		**PKPdf**	**20 52 02.1**	**+0.4**
	baz=100,slow=1.8							
KMBO				SKP		**SKPdf**	**20 54 47.5**	**-1.5**
	baz=94,slow=2.4							
KMBO	**Kilima Mbogo**	**135.18**	**240**	⇓*i* PKIKP		**PKiKP**	**20 52 02.6**	**-0.7**
KLMR	**Klimovskoe**	**135.33**	**334**	*e*PKIKP		**PKPdf**	**20 51 58.2**	**-2.0**
KLMR				*e*			20 54 43.8	
KLMR				pmax	pmax			
	comp=Z,17nm,0.8s							
STEI	**Steigen**	**136.32**	**352**	*e*PKPdf		PKPpre	20 51 56.4	
FAUS	**Fauske**	**136.83**	**351**	*e*PKPdf		PKPpre	20 51 57.2	
AKT	**Akhty**	**137.36**	**304**	*e*PKIKP		**PKPdf**	**20 52 04.4**	**-0.3**
AKT				*e*			20 54 02.3	
AKT				*e*			20 54 52.2	
AKT				*e*			20 54 56.6	
AKT				*e*PPP		PPP	20 58 06.9	
AKT				pmax	pmax			
	comp=Z,8.0nm,0.8s							
LEIR	**Leirfjorden**	**138.32**	**352**	*e*PKPdf		PKPpre	20 52 00.5	
RAYN	**Ar Rayn**	**138.43**	**278**			**PKPdf**	**20 52 05.5**	**-1.7**
RAYN	**Ar Rayn**	**138.43**	**278**	PKIKP		**PKPdf**	**20 52 05.5**	**-1.7**
VRH	**Novokhopyorsk**	**138.91**	**320**	*e*PKIKP		**PKPdf**	**20 52 06.6**	**-0.5**
VRH				*e*			20 54 54.3	
VRH				pmax	pmax			
	comp=Z,20nm,0.6s							
FINES	**FINESS Array B**	**139.69**	**341**	PKhKP		PKPpre	20 52 00.5	
	comp=Z,5.9nm,0.5s,baz=60,slow=3.5,SNR=25							
FINES				PKP		**PKiKP**	**20 52 09.8**	**-1.0**
	comp=Z,5.1nm,0.4s,baz=40,slow=2.3,SNR=14							
FINES				SKPbc		**SKiKP**	**20 54 57.6**	**-1.3**
	comp=Z,29nm,0.7s,baz=64,slow=4.4,SNR=25							
FINES				SKKPbc		**SKKPbc**	**21 03 31.6**	**-2.6**
	comp=Z,4.7nm,1.0s,baz=232,slow=4.6,SNR=5.6							
OBN	**Obninsk**	**139.83**	**328**	*i* PKIKP		**PKiKP**	**20 52 11.2**	**0.0**
OBN				pmax	pmax			
	comp=Z,7.0nm,0.7s							
LPSR	**Galich'ya Gora**	**139.88**	**323**	*e*PKIKP		**PKPdf**	**20 52 09.1**	**+0.3**
LPSR				*e*			20 54 58.2	
LPSR				pmax	pmax			
	comp=Z,20nm,1.5s							
VORR	**Voronezh**	**140.15**	**322**	*e*PKIKP		**PKPdf**	**20 52 09.1**	**-0.2**
VORR				*e*			20 54 57.5	
VORR				pmax	pmax			
	comp=Z,40nm,1.0s							
VSR	**Storozhevoye**	**140.37**	**321**	*e*PKIKP		**PKPdf**	**20 52 10.7**	**+1.0**
VSR				*e*			20 54 58.8	
VSR				pmax	pmax			
	comp=Z,10.0nm,0.7s							
MBAR	**Mbarara**	**140.47**	**234**	⇑*i* PKIKP		**PKiKP**	**20 52 12.9**	**-1.1**
KBZ	**Khabaz**	**140.48**	**309**	PKhKP		PKPpre	20 52 02.6	
	comp=Z,1.7nm,0.7s,baz=150,slow=4.3,SNR=5.5							
KBZ				PKP		**PKPdf**	**20 52 10.5**	**+0.4**
	comp=Z,4.2nm,0.9s,baz=109,slow=3.3,SNR=6.8							
KBZ				SKPbc		**SKiKP**	**20 55 00.5**	**-0.5**
	comp=Z,5.1nm,0.9s,baz=27,slow=2.3,SNR=7.6							
KIV	**Kislovodsk**	**140.58**	**309**	*e*PKIKP		**PKPdf**	**20 52 11.7**	**+1.2**
KIV				pmax	pmax			
	comp=Z,6.0nm,1.1s							
GURO	**Guroymak-BITLI**	**142.07**	**301**			**PKPdf**	**20 52 10.2**	**-3.2**
MOL	**Molde**	**142.38**	**354**	*e*PKPdf		**PKPdf**	**20 52 10.2**	**-2.8**
DOMB	**Dombas**	**142.74**	**353**	*e*PKPdf		**PKPdf**	**20 52 10.7**	**-3.0**
KOPT	**Kop Dagi**	**143.01**	**304**			PKPbc	20 52 13.5	+0.5
MARD	**Mardin**	**143.21**	**299**			PKPab	20 52 12.9	-0.3
NB2	**NORSAR Subarra**	**143.43**	**351**	PKP		PKPab	20 52 12.7	-0.4
	comp=Z,18nm,0.8s,baz=16,slow=3.2							
NB2	**NORSAR Subarra**	**143.43**	**351**	PKP		PKPab	20 52 12.7	-0.4
NOA	**NORSAR Array B**	**143.43**	**351**	PKP		PKPab	20 52 12.9	-0.2
	comp=Z,24nm,0.6s,baz=21,slow=3.8,SNR=76							
NOA				SKPbc		**SKPbc**	**20 55 04.5**	**-1.2**
	comp=Z,9.4nm,1.1s,baz=15,slow=3.7,SNR=3.6							
NOA	**NORSAR Array B**	**143.43**	**351**	PKHKP		PKPpre	20 52 13.0	
FOO	**Floro**	**143.55**	**356**	*e*PKPbc		PKPab	20 52 13.3	-0.1
NC602	**NORSAR Array S**	**143.67**	**350**	*e*PKPbc		PKPab	20 52 13.4	-0.6
HFS	**Hagfors**	**143.87**	**348**	PKP		PKPbc	20 52 14.1	-0.6
	comp=Z,106nm,0.6s,baz=64,slow=3.4,SNR=103							
HFS				SKPbc		**SKiKP**	**20 55 07.8**	**+0.2**
	comp=Z,14nm,1.0s,baz=294,slow=4.7,SNR=3.6							
HFS				SKKPbc		**SKKPab**	**21 03 15.7**	**+0.2**
	comp=Z,5.3nm,0.8s,baz=160,slow=4.6,SNR=6.8							
HYA	**Hoyanger**	**143.89**	**355**	*e*PKPbc		PKPbc	20 52 14.4	-0.3
ANN	**Anapa**	**143.94**	**312**	*i* PKIKP		PKPbc	20 52 15.2	-0.2
ANN				pmax	pmax			
	comp=Z,48nm,0.6s							
SKAR	**Skarslia**	**144.16**	**353**	*e*PKPbc		PKPbc	20 52 15.4	-0.3
MNK	**Minsk**	**144.18**	**332**	*i* PKP		**PKPab**	**20 52 16.1**	**0.0**
	comp=E,17nm,1.0s							
MNK				*i* PKP		**PKPab**	**20 52 16.1**	**0.0**
	comp=N,14nm,0.9s							
MNK				*i* PKP		**PKPab**	**20 52 16.1**	**0.0**
	comp=Z,70nm,0.9s,baz=47							
MNK				*i* PKiKP		**PKiKP**	**20 52 19.5**	**-0.6**
MNK				*i* pPKP		**pPKPdf**	**20 54 17.2**	**+2.2**
MNK				*i* sPKP		**sPKPdf**	**20 55 08.9**	**+5.0**
MNK				*i* SKP		**SKPbc**	**20 55 15.4**	**+7.8**
MNK				*i* PKS		PP	20 55 27.3	-10
MNK				*i* PP		PP	20 55 45.5	+8.3
MNK				*i* PPP		PPP	20 59 04.7	
MNK				*i* SKS			20 59 40.2	
MNK				*i* SS		**SS**	**21 13 47.6**	**+6.1**
MNK				*i* SSS		SSS	21 18 31.6	
MNK	**Minsk**	**144.18**	**332**	*i* PKIKP		**PKPab**	**20 52 16.1**	**0.0**
MNK				*i*			20 55 45.5	
MNK				*i* PPP		PPP	20 59 04.6	
MNK				*i* SS		SS	21 13 47.6	+6.1
MNK				pmax	pmax			
	comp=N,14nm,0.9s							
MNK				pmax	pmax			
	comp=Z,70nm,0.9s							
MNK				pmax	pmax			
	comp=E,17nm,1.0s							
ASK	**Askoy**	**144.64**	**355**	*e*PKPbc		**PKPdf**	**20 52 16.8**	**-0.1**
BER	**Bergen**	**144.73**	**355**	*e*PKPbc		**PKPdf**	**20 52 17.1**	**0.0**
KONO	**Kongsberg**	**145.00**	**351**			**PKPdf**	**20 52 17.3**	**-0.3**
KONO	**Kongsberg**	**145.00**	**351**	*e*PKPdf		**PKPdf**	**20 52 17.4**	**-0.2**
KONO	**Kongsberg**	**145.00**	**351**	⇓*e*PKIKP		**PKPdf**	**20 52 17.9**	**+0.3**
ODD1	**Odda**	**145.09**	**354**	*e*PKPdf		**PKPdf**	**20 52 18.0**	**+0.1**
STRU	**Stroemstad**	**145.35**	**350**	*i* P		**PKPbc**	**20 52 18.1**	**-0.3**
BLS5	**Blasjo**	**145.59**	**354**	*e*PKPdf		**PKPdf**	**20 52 19.0**	**+0.3**
KMY	**Karmoy**	**145.90**	**355**	*e*PKPdf		**PKPdf**	**20 52 19.1**	**-0.1**
AKASG	**Malin Array Be**	**146.01**	**326**	PKPbc		**PKPbc**	**20 52 20.8**	**-0.7**
	comp=E,13nm,0.5s,baz=43,slow=4.3,SNR=61							
AKASG				pPKPbc		pPKPab	20 54 15.5	-1.3
	comp=E,17nm,0.7s,baz=45,slow=4.5,SNR=12							
AKASG				SKPbc		**SKiKP**	**20 55 13.4**	**+1.1**
	comp=E,7.9nm,0.7s,baz=49,slow=2.7,SNR=6.3							
AKASG	**Malin Array Be**	**146.01**	**326**			**PKPdf**	**20 52 19.4**	**-0.2**
AKBB	**Malin Array Si**	**146.01**	**326**			pPKPdf	20 54 16.0	-1.8
AKBB	**Malin Array Si**	**146.01**	**326**	*c*ePKIKP		**PKPdf**	**20 52 20.4**	**+0.8**
KIEV	**Kiev**	**146.02**	**326**	⇑P		**PKPdf**	**20 52 19.9**	**+0.3**
KIEV	**Kiev**	**146.02**	**326**			**PKPdf**	**20 52 19.6**	**0.0**
KIEV	**Kiev**	**146.02**	**326**	*i* PKPdf		**PKPdf**	**20 52 19.7**	**0.0**
	SNR=7.0							
KIEV	**Kiev**	**146.02**	**326**	⇑PKIKP		**PKPdf**	**20 52 19.9**	**+0.3**
KIEV	**Kiev**	**146.02**	**326**	PKP		**PKPbc**	**20 52 20.6**	**-0.9**
AK23	**Malin Array Si**	**146.02**	**326**	PKP		**PKPdf**	**20 52 20.3**	**+0.7**
TJOU	**Tjoern**	**146.22**	**349**	*i* P		**PKPbc**	**20 52 21.1**	**-0.7**
BORU	**Boraas**	**146.38**	**347**	*i* P		**PKPbc**	**20 52 21.5**	**-0.8**
SUW	**Suwalki**	**146.44**	**335**	*e*PKP		**PKPbc**	**20 52 23.4**	**+0.8**
HOMB	**Homborsund**	**146.48**	**352**	*i* P		**PKPbc**	**20 52 23.1**	**+0.6**
SNART	**Snartemo**	**146.57**	**353**	*e*PKPdf		**PKPdf**	**20 52 20.6**	**+0.3**
MI28	**Mi28,Pidlybu**	**146.64**	**327**	PKP		**PKPdf**	**20 52 21.4**	**+0.7**
BIGH	**Upper Bighouse**	**146.74**	**3**	*e*P		**PKPbc**	**20 52 23.1**	**-0.1**
ONAU	**Onsala**	**146.77**	**348**	*i* P		**PKPbc**	**20 52 22.7**	**-0.6**
BLEU	**Blekinge**	**146.90**	**344**	*i* P		**PKPbc**	**20 52 22.8**	**-0.9**
FABU	**Falkenberg**	**146.98**	**347**	*i* P		**PKPbc**	**20 52 23.3**	**-0.6**
RNPP9	**Sopachiv**	**147.17**	**329**	PKP		**PKPbc**	**20 52 24.2**	**-0.4**
DEL	**Delary**	**147.22**	**345**	*i* P		**PKPbc**	**20 52 24.1**	**-0.4**
LUBAR	**Lubar, Ukraine**	**147.23**	**326**	PKP		**PKPbc**	**20 52 24.5**	**-0.3**
RNPP8	**Varash**	**147.23**	**329**	PKP		**PKPbc**	**20 52 24.5**	**-0.3**
RNPP5	**Staryi Chortor**	**147.29**	**329**	PKP		**PKPbc**	**20 52 24.7**	**-0.2**
BAL3X	**Bal3x, Balta**	**147.40**	**322**	PKP		**PKPbc**	**20 52 24.6**	**-0.7**
HWQ	**Hawqa**	**147.46**	**295**	*e*P		**PKPbc**	**20 52 26.3**	**+0.2**
MCD	**Coleburn Disti**	**147.68**	**3**	*e*P		**PKPbc**	**20 52 25.2**	**-0.5**
BHL	**Bhannes**	**147.74**	**294**	*e*P		**PKPbc**	**20 52 27.4**	**+0.6**
KPL	**Plockton**	**147.77**	**5**	*e*P		**PKPbc**	**20 52 25.6**	**-0.3**
BJUU	**Bjuv**	**147.78**	**346**	*i* P		**PKPbc**	**20 52 26.1**	**+0.1**
SORM	**Soroca**	**147.98**	**323**	⇑P		**PKPbc**	**20 52 26.3**	**-0.5**
SORM	**Soroca**	**147.98**	**323**	⇑PKHKP		**PKPbc**	**20 52 26.3**	**-0.5**
PURM	**Purcari**	**147.99**	**319**	⇑P		**PKPbc**	**20 52 26.8**	**-0.1**
MMAI	**Mount Meron Ar**	**148.03**	**292**	PKPbc		**PKiKP**	**20 52 28.7**	**-0.2**
	comp=E,31nm,0.5s,baz=55,slow=7.2,SNR=74							
MMAI				pPKPbc		**pPKPbc**	**20 54 24.0**	**+0.1**
	comp=E,13nm,0.7s,baz=32,slow=8.0,SNR=7.1							
LUNU	**Lund**	**148.09**	**345**	*i* P		**PKPbc**	**20 52 27.0**	**+0.2**
HAMD	**Hammershus, De**	**148.09**	**344**	*i* P		**PKPbc**	**20 52 26.7**	**-0.1**
MUD	**Monsted U'grnd**	**148.14**	**350**	*i* P		**PKPbc**	**20 52 27.4**	**+0.5**
KIRS	**Kirsehir-Merke**	**148.16**	**304**	⇓P		**PKPdf**	**20 52 24.0**	**+0.3**
BSD	**Bornholm Skovb**	**148.20**	**343**	*i* P		**PKPbc**	**20 52 27.2**	**+0.1**
BRTR	**Keskin Array B**	**148.21**	**305**	PKPbc		**PKPbc**	**20 52 27.5**	**-0.4**
	comp=E,8.1nm,0.6s,baz=144,slow=4.4,SNR=25							
BRTR				pPKPbc		**pPKPbc**	**20 54 23.8**	**-0.7**
	comp=E,9.2nm,1.1s,baz=123,slow=2.9,SNR=4.3							
NDNU	**Novodnistrovsk**	**148.24**	**324**	PKP		**PKPbc**	**20 52 26.9**	**-0.6**
COP	**Copenhagen**	**148.26**	**346**	*i* P		**PKPbc**	**20 52 27.5**	**+0.3**
DRUM	**Mains of Drumt**	**148.39**	**2**	*e*P		**PKPbc**	**20 52 27.0**	**-0.5**
KMPD	**K-Podol'skiy**	**148.74**	**325**	PKP		**PKiKP**	**20 52 27.9**	**-1.8**
KMPD				PKP		**PKPbc**	**20 52 27.7**	**-1.0**
INVG	**Invergeldie, C**	**148.79**	**4**	*e*P		**PKPbc**	**20 52 28.4**	**-0.2**
EAB	**Aberfoyle**	**149.01**	**4**	*e*P		**PKPbc**	**20 52 28.6**	**-0.5**
BEL	**Belsk**	**149.04**	**334**	*e*PKP		**PKiKP**	**20 52 30.3**	**+0.1**
GKP	**Gorka Klasztor**	**149.14**	**339**	*e*PKP		**PKiKP**	**20 52 30.7**	**+0.4**
TLCR		**149.31**	**318**	⇑P		**PKPbc**	**20 52 30.3**	**+0.2**
TLCR		**149.31**	**318**	⇑PKHKP		**PKPbc**	**20 52 30.3**	**+0.2**
EDI	**Edinburgh**	**149.34**	**3**	*e*P		**PKPbc**	**20 52 29.9**	**0.0**
PGBU	**Glenifferbraes**	**149.38**	**5**	*e*P		**PKPbc**	**20 52 29.7**	**-0.3**
VLDR	**Vladesti**	**149.41**	**319**	⇑P		**PKPbc**	**20 52 30.8**	**+0.4**
BIR	**Birlad**	**149.45**	**320**	⇑P		**PKiKP**	**20 52 31.4**	**+0.1**
CSS	**Mathiatis**	**149.51**	**296**			**PKPbc**	**20 52 30.1**	**-0.9**
VARL	**Varlezi**	**149.52**	**320**	⇑P		**PKPbc**	**20 52 30.9**	**+0.3**
SCTR	**Scanteiesti**	**149.55**	**319**	⇓P		**PKiKP**	**20 52 31.4**	**-0.1**
PRAR	**RASCA**	**149.60**	**323**	⇑P		**PKiKP**	**20 52 31.4**	**-0.2**
GHRR		**149.69**	**320**	⇑P		**PKiKP**	**20 52 31.8**	**0.0**
GIRR	**Girov**	**149.69**	**322**	⇓P		**PKiKP**	**20 52 31.4**	**-0.4**
TPGR	**Topolog**	**149.72**	**317**	⇑P		**PKiKP**	**20 52 31.7**	**-0.3**
CFR	**Carcaliu**	**149.73**	**318**	⇑P		**PKiKP**	**20 52 31.9**	**0.0**
CFR	**Carcaliu**	**149.73**	**318**	⇑PKHKP		**PKiKP**	**20 52 31.9**	**0.0**
TUDR		**149.79**	**319**	⇑P		**PKiKP**	**20 52 32.5**	**+0.5**
SAHE	**Sakarya_HENDEK**	**149.86**	**309**	⇑P		**PKPbc**	**20 52 31.4**	**-0.2**
KWP	**Kalwaria Pacla**	**149.87**	**330**	*e*PKP		**PKiKP**	**20 52 32.3**	**+0.2**
TESR	**Tescani**	**149.87**	**321**	⇑P		**PKPbc**	**20 52 31.6**	**+0.1**
TIRR	**Tirgusor**	**149.93**	**317**	⇑P		**PKiKP**	**20 52 32.4**	**+0.1**
TIRR	**Tirgusor**	**149.93**	**317**	⇑PKHKP		**PKiKP**	**20 52 32.4**	**+0.1**
EKA	**Eskdalemuir Ar**	**149.94**	**3**	PKP		**PKPdf**	**20 52 25.5**	**-0.3**
	comp=E,2.6nm,0.7s,baz=336,slow=1.8,SNR=3.5							
EKA				PKPbc		**PKPbc**	**20 52 30.8**	**-0.5**
	comp=E,13nm,0.6s,baz=285,slow=1.3,SNR=30							
EKA				pPKPbc		**pPKPbc**	**20 54 27.9**	**-0.9**
	comp=E,3.6nm,0.8s,baz=347,slow=3.4,SNR=4.0							
ESK	**Eskdalemuir**	**149.95**	**3**	*e*P		**PKPbc**	**20 52 30.8**	**-0.6**
ESK	**Eskdalemuir**	**149.95**	**3**			**PKPbc**	**20 52 30.8**	**-0.6**
ESK	**Eskdalemuir**	**149.95**	**3**	PKHKP		**PKPbc**	**20 52 30.8**	**-0.6**
BURAR	**Bucovina Array**	**149.98**	**324**	⇓P		**PKPdf**	**20 52 28.6**	**+2.3**
BURAR	**Bucovina Array**	**149.98**	**324**	⇓PKHKP		**PKPdf**	**20 52 28.6**	**+2.3**
ODBI	**Odobesti**	**150.06**	**320**	⇓P		**PKPbc**	**20 52 31.8**	**-0.2**
MFTR	**Murfatlar**	**150.06**	**316**	⇓P		**PKiKP**	**20 52 32.8**	**+0.2**
NEWG	**New Galloway**	**150.08**	**5**	*e*P		**PKPbc**	**20 52 31.0**	**-0.6**
ONER	**Baraj Valea Uz**	**150.11**	**321**	⇓P		**PKPbc**	**20 52 32.3**	**+0.3**
VRI	**Vrincioaia**	**150.19**	**320**	⇑P		**PKiKP**	**20 52 32.6**	**-0.2**
VRI	**Vrincioaia**	**150.19**	**320**	⇑PKIKP		**PKiKP**	**20 52 32.6**	**-0.2**
CVDA	**Cernavoda**	**150.22**	**317**	⇑P		**PKiKP**	**20 52 33.6**	**+0.7**
PLOR	**Plostina**	**150.24**	**320**	⇑P		**PKPbc**	**20 52 32.7**	**+0.3**
PLOR	**Plostina**	**150.24**	**320**	⇑PKIKP		**PKPbc**	**20 52 32.7**	**+0.3**
GAL1	**Galloway**	**150.30**	**5**	*e*P		**PKPbc**	**20 52 31.6**	**-0.6**
ICOR	**Ion Corvin**	**150.48**	**317**	⇑P		**PKiKP**	**20 52 33.7**	**+0.2**
EDMD	**Edmundbyers**	**150.49**	**2**	*e*P		**PKPbc**	**20 52 32.1**	**-0.5**
COVR	**Voineasa-Covas**	**150.50**	**321**	⇓P		**PKPbc**	**20 52 32.9**	**-0.1**
SILT	**Sile**	**150.59**	**310**	⇑P		**PKiKP**	**20 52 34.1**	**+0.3**
STHS	**Stebnicka Huta**	**150.68**	**331**	*e*PKIKP		**PKPbc**	**20 52 33.2**	**-0.1**
STHS				*e*			20 54 33.0	
STHS	**Stebnicka Huta**	**150.68**	**331**	*e*PKP		**PKPbc**	**20 52 33.2**	**-0.1**
STHS				*e*			20 54 33.0	
KESW	**Keswick, Cumbr**	**150.68**	**3**	*e*P		**PKPbc**	**20 52 32.8**	**-0.3**
OJC	**Ojcow**	**150.69**	**333**	*e*PKP		**PKiKP**	**20 52 34.0**	**+0.3**
UZHM	**Uzhgorod**	**150.77**	**329**	PKP		**PKPdf**	**20 52 29.5**	**+2.2**
MLR	**Muntele Rosu**	**150.85**	**320**	PKPbc		**PKPbc**	**20 52 34.1**	**+0.2**
	comp=E,9.6nm,0.5s,baz=38,slow=12,SNR=18							
MLR				pPKPbc		**pPKPbc**	**20 54 29.0**	**-2.1**
	comp=E,7.4nm,1.0s,baz=117,slow=4.5,SNR=2.3							
MLR	**Muntele Rosu**	**150.85**	**320**	⇑P		**PKiKP**	**20 52 34.3**	**-0.1**
MLR	**Muntele Rosu**	**150.85**	**320**			**PKPbc**	**20 52 33.2**	**-0.8**
MLR	**Muntele Rosu**	**150.85**	**320**	⇑PKIKP		**PKiKP**	**20 52 34.3**	**-0.1**
DOPR	**Dopca**	**150.89**	**322**	⇓P		**PKiKP**	**20 52 35.0**	**+0.6**
IOMK	**Kirk Michael**	**150.91**	**5**	*e*P		**PKPbc**	**20 52 33.1**	**-0.5**
WIM	**Isle of Man**	**151.01**	**5**	*e*P		**PKPbc**	**20 52 33.9**	**0.0**
NIE	**Niedzica**	**151.09**	**332**	*e*PKP		**PKPdf**	**20 52 30.1**	**+2.2**
MDB	**Medias**	**151.35**	**323**	⇓P		**PKiKP**	**20 52 35.8**	**+0.6**
HPK	**Haverah Park**	**151.37**	**2**	*e*P		**PKPbc**	**20 52 34.4**	**-0.3**
VOIR		**151.40**	**321**	⇑P		**PKiKP**	**20 52 35.5**	**0.0**
VOIR		**151.40**	**321**	⇑PKIKP		**PKiKP**	**20 52 35.5**	**0.0**
MESR	**Meseseni**	**151.46**	**326**	⇓P		**PKiKP**	**20 52 35.8**	**+0.4**
KSP	**Ksiaz**	**151.50**	**338**	*e*PKP		**PKiKP**	**20 52 35.9**	**+0.6**
OKC	**Ostrava-Krasne**	**151.65**	**334**	*e*PKP		**PKiKP**	**20 52 36.1**	**+0.4**
OKC	**Ostrava-Krasne**	**151.65**	**334**	*e*PKIKP		**PKiKP**	**20 52 36.1**	**+0.4**
LANS	**Liptovska Anna**	**151.65**	**332**	*e*PKIKP		**PKiKP**	**20 52 37.0**	**+1.2**
LANS				*e*			20 54 33.3	
LANS	**Liptovska Anna**	**151.65**	**332**	*e*PKP		**PKiKP**	**20 52 37.0**	**+1.2**
LANS				*e*			20 54 33.3	
ARR	**Arges**	**151.68**	**321**	⇑P		**PKPdf**	**20 52 29.6**	**+0.6**
MARR	**Marisel-Cluj**	**151.68**	**325**	⇑P		**PKPbc**	**20 52 35.6**	**-0.1**
KECS	**Kecovo**	**151.71**	**330**	*e*PKIKP		**PKiKP**	**20 52 36.7**	**+0.8**
KECS	**Kecovo**	**151.71**	**330**	*e*PKP		**PKiKP**	**20 52 36.7**	**+0.8**
STEB	**Steborice**	**151.72**	**335**	⇑*e*PKP		**PKiKP**	**20 52 36.0**	**+0.1**
STEB				*e*pPKP		**pPKPbc**	**20 54 33.5**	**+0.6**
OSTC	**Ostas**	**151.77**	**337**	*e*PKPDF		**PKPdf**	**20 52 30.1**	**+1.3**
OSTC				⇑*e*PKP		**PKiKP**	**20 52 36.7**	**+0.7**
OSTC				*e*pPKP		**pPKPab**	**20 54 38.4**	**-1.3**
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DBIC	**Dimbokro**	**160.95**	**166**	PKP	**PKPdf**	**20 52 41.8**	**+0.1**
	comp=Z,12nm,1.0s,baz=217,slow=3.8,SNR=6.8						
DBIC				PKPab	**PKPab**	**20 53 28.2**	**+0.8**
	comp=Z,16nm,0.8s,baz=226,slow=4.4,SNR=10						
PGAV	**Gavieira, Arco**	**162.12**	**20**	*e*PKPdf	**PKPdf**	**20 52 43.3**	**+1.1**
PGAV				*e*tx	tx	20 53 32.5	
PBRG	**Braganca**	**162.70**	**16**	*e*tx	tx	20 53 35.6	
PVRL	**Vila Real**	**162.92**	**19**	*e*tx	tx	20 53 36.2	
MVO	**Moncorvo**	**163.22**	**18**	*e*PKPdf	**PKPdf**	**20 52 44.5**	**+1.3**
MVO				*e*tx	tx	20 53 37.8	
PVIS	**Viseu**	**163.37**	**21**	*e*PKPdf	**PKPdf**	**20 52 44.2**	**+0.9**
PVIS				*e*tx	tx	20 53 38.1	
PCAS	**Casmilo, Conde**	**163.76**	**23**	*e*tx	tx	20 53 39.9	
MTE	**Manteigas**	**163.77**	**20**	*e*PKPdf	**PKPdf**	**20 52 45.0**	**+1.3**
MTE				*e*tx	tx	20 53 39.9	
PSARD	**Sardoal**	**164.28**	**23**	*e*PKPdf	**PKPdf**	**20 52 45.5**	**+1.3**
PSARD				*e*tx	tx	20 53 42.0	
PCBR	**Castelo Branco**	**164.30**	**21**	*e*PKPdf	**PKPdf**	**20 52 45.5**	**+1.4**
PMAFR	**Mafra**	**164.42**	**27**	*e*tx	tx	20 53 42.5	
PMRV	**Marv??o**	**164.70**	**21**	*e*PKPdf	**PKPdf**	**20 52 45.1**	**+0.6**
PMTG	**Montargil**	**164.73**	**24**	*e*tx	tx	20 53 43.9	
PARRA	**Arraiolos**	**165.02**	**24**	*e*PKPdf	**PKPdf**	**20 52 46.0**	**+1.3**
PARRA				*e*tx	tx	20 53 45.2	
PESTR	**Estremoz**	**165.14**	**23**	*e*PKPdf	**PKPdf**	**20 52 46.2**	**+1.3**
PESTR				*e*tx	tx	20 53 45.8	
MOE	**Montemor**	**165.16**	**25**	*e*PKPdf	**PKPdf**	**20 52 46.2**	**+1.3**
MOE				*e*tx	tx	20 53 46.0	
EVO	**Evora**	**165.28**	**25**	*e*PKPdf	**PKPdf**	**20 52 46.5**	**+1.5**
EVO				*e*tx	tx	20 53 46.4	
ESDC	**Sonseca Array**	**165.35**	**11**	PKP	**PKPdf**	**20 52 45.9**	**+0.8**
	comp=Z,1.0nm,1.0s,baz=338,slow=1.6,SNR=4.9						
ESDC				PKPab	**PKPab**	**20 53 46.6**	**+0.3**
	comp=Z,5.6nm,0.8s,baz=343,slow=4.1,SNR=21						
ESDC				pPKPab	**pPKPab**	**20 55 37.9**	**-0.5**
	comp=Z,1.0nm,0.9s,baz=356,slow=4.1,SNR=3.0						
PBEJ	**Beja**	**165.78**	**25**	*e*PKPdf	**PKPdf**	**20 52 47.1**	**+1.6**
PBEJ				*e*tx	tx	20 53 48.7	
MESJ	**Messejana**	**165.80**	**27**	*e*PKPdf	**PKPdf**	**20 52 47.1**	**+1.7**
MESJ				*e*tx	tx	20 53 48.3	
PTEO	**Sao Teotonio**	**165.84**	**29**	*e*PKPdf	**PKPdf**	**20 52 47.3**	**+1.8**
PBAR	**Barrancos**	**165.95**	**22**	*e*PKPdf	**PKPdf**	**20 52 47.1**	**+1.6**
PBAR				*e*tx	tx	20 53 49.7	
PCVE	**Castro Verde**	**166.05**	**26**	*e*tx	tx	20 53 49.4	
MORF	**Marmelete**	**166.07**	**29**	*e*PKPdf	**PKPdf**	**20 52 47.3**	**+1.5**
PVAQ	**Vaqueiros**	**166.38**	**26**	*e*PKPdf	**PKPdf**	**20 52 47.4**	**+1.5**
PVAQ				*e*tx	tx	20 53 51.0	
PBDV	**Barranco-do-Ve**	**166.43**	**27**	*e*PKPdf	**PKPdf**	**20 52 48.0**	**+2.0**
KEST	**Kesra**	**166.72**	**324**	PKP	**PKPdf**	**20 52 46.9**	**+0.6**
	comp=Z,2.3nm,0.8s,baz=34,slow=7.3,SNR=4.9						
KEST				PKPab	**PKPab**	**20 53 52.9**	**+0.2**
	comp=Z,2.6nm,0.7s,baz=354,slow=19,SNR=4.7						
TORD	**Torodi Ar. Bea**	**167.76**	**189**	PKP	**PKPdf**	**20 52 47.1**	**-0.4**
	comp=Z,7.9nm,0.8s,baz=244,slow=1.4,SNR=34						
TORD				PKPab	**PKPab**	**20 53 57.2**	**-0.2**
	comp=Z,14nm,0.8s,baz=187,slow=4.9,SNR=24						
TORD				pPKPab	**pPKPab**	**20 55 49.1**	**0.0**
	comp=Z,3.5nm,0.9s,baz=194,slow=5.3,SNR=2.0						
TORD				PP	**PP**	**20 57 44.7**	**-1.0**
	comp=Z,4.0nm,1.1s,baz=170,slow=4.0,SNR=4.4						
MDT	**Midelt**	**171.62**	**26**	PKP	**PKPdf**	**20 52 50.4**	**+0.9**
	comp=Z,9.2nm,0.9s,baz=0.0,slow=3.0,SNR=9.9						
MDT				PKPab	**PKPab**	**20 54 14.3**	**-0.1**
	comp=Z,5.8nm,0.9s,baz=334,slow=4.3,SNR=5.9						

*NOU **23** 20:46:05.7,25.°37S×179.°65E,h480km, mb4.4/11, South of Fiji Islands*
*NEIC **23** 20:46:06.5±1.6,25.°3S±0.°1×179.°7E±0.°1, h495km±4km, mb4.5/23, Error ellipse: s-maj=16.0km s-min=14.5km az=159.0*
*IDC **23** 20:46:06.3±1.2,25.°25S×179.°55E,h490km±13km, mb3.6/13,mbtmp4.5/15, Error ellipse: s-maj=14.7km s-min=12.4km az=16.0*
ISC 23 20:46:07.0±0.5,25.°30S±0.°07×179.°64E±0.°08,h507km,n64, σ1§18/65,mb4.4/24,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.50**	**152**	P		**P**	**20 47 28.8**	**-1.0**
	276nm,0.3s,baz=288,slow=19,SNR=2.1							
RAO	**Raoul Island**	**4.50**	**152**	P		**P**	**20 47 28.5**	**-1.3**
MSVF	**Nonsavu**	**7.67**	**349**	P		**P**	**20 47 58.2**	**-2.2**
	19nm,0.4s,baz=164,slow=6.7,SNR=36							
MSVF	**Nonsavu**	**7.67**	**349**	P		**P**	**20 47 58.6**	**-1.8**
MSVF	**Nonsavu**	**7.67**	**349**			**P**	**20 47 58.4**	**-2.0**
TAVE	**Taveuni**	**8.56**	**3**	P		**P**	**20 48 09.0**	**-0.4**
MARNC	**Mare, Loyalty**	**11.32**	**287**	P		**P**	**20 48 39.3**	**+1.0**
DZM	**Mont Dzumac**	**12.51**	**282**	P		**P**	**20 48 50.4**	**-0.6**
	12nm,1.1s,baz=98,slow=15							
URZ	**Urewera**	**13.10**	**189**	P		**P**	**20 48 55.0**	**-1.9**
BKZ	**Black Stump Fm**	**14.08**	**190**	P		**P**	**20 49 06.2**	**-1.1**
BFZ	**Birch Farm**	**15.60**	**190**	P		**P**	**20 49 21.8**	**-1.3**
BFZ	**Birch Farm**	**15.60**	**190**	S		**S**	**20 52 04.0**	**-0.9**
MRZ	**Mangatainoka R**	**15.69**	**191**	P		**P**	**20 49 21.3**	**-2.8**
QRZ	**Quartz Range**	**16.58**	**199**	P		**P**	**20 49 32.5**	**-0.8**
HNR	**Honiara**	**24.48**	**307**	P		**P**	**20 50 43.6**	**-2.1**
	1.4nm,0.4s,baz=158,slow=5.4,SNR=2.2							
HNR	**Honiara**	**24.48**	**307**	P		**P**	**20 50 43.1**	**-2.5**
ARMA	**Armidale**	**25.25**	**252**	P		**P**	**20 50 53.6**	**+1.1**
ARMA				IAmb	IAmb		20 51 31.5	
	comp=Z,29nm,1.4s							
EIDS	**Eidsvold**	**25.79**	**264**	P		**P**	**20 50 58.2**	**+1.0**
EIDS				IAmb	IAmb		20 51 01.1	
	comp=Z,25nm,1.4s							
TARA	**Tarawa**	**27.28**	**345**	P		**P**	**20 51 09.7**	**-0.6**
CTA	**Charters Tower**	**31.18**	**273**	P		**P**	**20 51 45.1**	**+0.9**
	comp=Z,19nm,0.5s,baz=93,slow=10.0,SNR=30							
	comp=Z,19nm,0.5s							
CTAO	**Charters Tower**	**31.18**	**273**	P		**P**	**20 51 45.0**	**+0.7**
CTAO	**Charters Tower**	**31.18**	**273**	P		**P**	**20 51 45.2**	**+0.9**
CTAO				IAmb	IAmb		20 51 46.0	
	comp=Z,21nm,0.6s							
MTSU	**Mount Surprise**	**33.51**	**275**	P		**P**	**20 52 05.1**	**+1.0**
PMG	**Port Moresby**	**34.67**	**291**	P		**P**	**20 52 13.3**	**-0.6**
	comp=Z,14nm,0.7s,baz=108,slow=5.3,SNR=7.0							
	comp=Z,14nm,0.7s							
PMG	**Port Moresby**	**34.67**	**291**	P		**P**	**20 52 14.3**	**+0.4**
PMG				IAmb	IAmb		20 52 14.7	
	comp=Z,14nm,0.7s							
COEN	**Coen**	**36.04**	**281**	P		**P**	**20 52 26.4**	**+1.1**
COEN	**Coen**	**36.04**	**281**	P		**P**	**20 52 25.4**	**+0.1**
COEN				IAmb	IAmb		20 52 47.3	
	comp=Z,19nm,1.2s							
QIS	**Mount Isa**	**37.08**	**269**	P		**P**	**20 52 34.1**	**+0.3**
BBOO	**Buckleboo**	**38.61**	**248**	P		**P**	**20 52 45.9**	**-0.4**
BBOO				IAmb	IAmb		20 53 03.9	
	comp=Z,17nm,1.2s							
AS31	**Alice Springs**	**41.50**	**262**	P		**P**	**20 53 09.9**	**+0.3**
ASAR	**Alice Springs**	**41.50**	**262**	P		**P**	**20 53 09.9**	**+0.3**
	comp=Z,4.7nm,0.7s,baz=87,slow=7.1,SNR=69							
ASAR				S		**S**	**20 58 48.9**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=96,slow=17,SNR=7.6							
	comp=Z,4.7nm,0.7s							
ASAR	**Alice Springs**	**41.50**	**262**	P		**P**	**20 53 09.3**	**-0.3**
WR8	**Warramunga Arr**	**41.86**	**268**	P		**P**	**20 53 11.9**	**-0.6**
WR8				IAmb	IAmb		20 53 13.0	
	comp=Z,7.6nm,0.8s							
WRAB	**Tennant Creek**	**42.00**	**268**	P		**P**	**20 53 12.7**	**-0.8**
WRAB	**Tennant Creek**	**42.00**	**268**	P		**P**	**20 53 13.2**	**-0.4**
WRAB				IAmb	IAmb		20 53 14.0	
	comp=Z,9.9nm,0.8s							
WB0	**Warramunga Arr**	**42.01**	**268**	P		**P**	**20 53 13.4**	**-0.1**
WB0				IAmb	IAmb		20 53 14.1	
	comp=Z,11nm,0.7s							
WRA	**Warramunga Arr**	**42.01**	**268**	P		**P**	**20 53 13.3**	**-0.2**
	comp=Z,8.7nm,0.5s,baz=99,slow=6.3,SNR=162							
WRA				ScP		**ScP**	**20 58 02.5**	**+3.4**
	comp=Z,1.2nm,1.1s,baz=98,slow=3.1,SNR=3.2							
WRA				S		**S**	**20 58 54.6**	**-1.0**
	comp=Z,0.6nm,0.8s,baz=101,slow=13,SNR=4.6							
	comp=Z,8.7nm,0.5s							
WRA	**Warramunga Arr**	**42.01**	**268**	P		**P**	**20 53 13.5**	**-0.1**
PTCN	**Pitcairn Islan**	**45.26**	**101**	P		**P**	**20 53 39.6**	**+0.7**
MTN	**Manton Dam**	**47.25**	**276**	P		**P**	**20 53 52.9**	**-1.2**
KNRA	**Kununurra**	**48.37**	**271**	P		**P**	**20 54 02.9**	**+0.4**
KNRA				IAmb	IAmb		20 54 03.8	
	comp=Z,19nm,1.1s							
FAKI	**Fak Fak**	**50.69**	**288**	P		**P**	**20 54 19.4**	**-0.3**
FAKI				IAmb	IAmb		20 54 27.1	
	comp=Z,16nm,1.0s							
SIJI	**Sorong**	**52.58**	**290**	P		**P**	**20 54 33.1**	**-0.3**
	comp=Z,22nm,0.7s,baz=85,slow=11,SNR=8.9							
	comp=Z,22nm,0.7s							

VNDA	**Vanda**	**52.97**	**185**	P	**P**	**20 54 36.0**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=70,slow=16,SNR=3.8						
	comp=Z,1.0nm,0.8s						
QSPA	**South Pole Qui**	**64.79**	**180**	P	**P**	**20 55 55.8**	**+0.8**
	comp=Z,1.3nm,0.3s,baz=309,slow=0.6,SNR=11						
	comp=Z,1.3nm,0.3s						
QSPA	**South Pole Qui**	**64.79**	**180**	P	**P**	**20 55 55.3**	**+0.3**
QSPA				IAmb	IAmb	20 55 57.0	
	comp=Z,7.0nm,0.9s						
MJAR	**Matsushiro Arr**	**72.86**	**326**	P	**P**	**20 56 43.6**	**-0.4**
	comp=Z,3.2nm,0.8s,baz=165,slow=5.9,SNR=7.3						
	comp=Z,3.2nm,0.8s						
MJAR	**Matsushiro Arr**	**72.86**	**326**	P	**P**	**20 56 42.8**	**-1.2**
KSRS	**Korea Array**	**79.11**	**320**	P	**P**	**20 57 19.6**	**+1.1**
	comp=Z,2.0nm,0.7s,baz=143,slow=5.6,SNR=11						
	comp=Z,2.0nm,0.7s						
KSAR	**Wonju Array Be**	**79.12**	**320**	P	**P**	**20 57 18.9**	**+0.4**
PETK	**Petropavlovsk-**	**80.38**	**347**	P	**P**	**20 57 24.8**	**0.0**
	comp=Z,1.7nm,0.7s,baz=170,slow=5.4,SNR=1.6						
	comp=Z,1.7nm,0.7s						
VTX	**Valle De La Tr**	**83.56**	**51**	P	**P**	**20 57 40.2**	**-1.5**
NVAR	**Mina Array Bea**	**85.98**	**44**	P	**P**	**20 57 54.0**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=240,slow=4.2,SNR=4.2						
	comp=Z,0.5nm,0.6s						
NVAR	**Mina Array Bea**	**85.98**	**44**	P	**P**	**20 57 53.6**	**+0.1**
CMAR	**Chiang Mai Arr**	**89.70**	**290**	P	**P**	**20 58 13.4**	**+2.3**
	comp=Z,0.4nm,0.5s,baz=141,slow=2.8,SNR=4.2						
	comp=Z,0.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**89.70**	**290**	P	**P**	**20 58 12.5**	**+1.4**
HMU	**Henry Mountain**	**90.62**	**48**	IAmb	IAmb	20 58 16.9	
	comp=Z,16nm,0.9s						
TXAR	**Lajitas Array**	**91.44**	**58**	P	**P**	**20 58 20.1**	**+1.1**
	comp=Z,0.8nm,0.8s,baz=244,slow=4.6,SNR=5.0						
	comp=Z,0.8nm,0.8s						
TXAR	**Lajitas Array**	**91.44**	**58**	P	**P**	**20 58 19.6**	**+0.5**
HFS	**Hagfors**	**143.84**	**348**	PKP	PKPbc	21 04 42.2	-0.4
	comp=Z,1.6nm,0.3s,baz=63,slow=4.1,SNR=15						
AKASG	**Malin Array Be**	**145.95**	**326**	PKPbc	**PKPbc**	**21 04 50.0**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=42,slow=4.3,SNR=6.4						
MMAI	**Mount Meron Ar**	**147.95**	**292**	PKPbc	**PKPbc**	**21 04 56.7**	**+1.4**
	comp=Z,3.6nm,0.9s,baz=38,slow=7.3,SNR=2.0						
BRTR	**Keskin Array B**	**148.13**	**305**	PKPbc	**PKiKP**	**21 04 57.8**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=42,slow=2.3,SNR=4.0						
TORD	**Torodi Ar. Bea**	**167.76**	**189**	PKPab	**PKPab**	**21 06 24.9**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=206,slow=4.3,SNR=2.5						

*ISK **23** 20:46:30.6,39.°56N×26.°16E,h6km, ML2.6/24*
*THE **23** 20:46:31.2,39.°5N±0.°8×2.°6E±.°, h3km±1km, M2.5/11, MLh2.5/11*
*AFAD **23** 20:46:31.2,39.°55N×26.°27E,h7km±3km, ML2.5*
*ATH **23** 20:46:31.1,39.°54N×26.°19E,h8km±2km, ML2.5/6, Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*
ISC 23 20:46:30.9±0.9,39.°55N±0.°01×26.°19E±0.°02,h8km±7km, n73,σ0§83/106,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GPNR	**Gulpinar-Canak**	**0.11**	**205**	Pg		**Pg**	**20 46 33.3**	**0.0**
EZNE	**Ezine-Canakkal**	**0.24**	**34**	Pg		**Pg**	**20 46 35.9**	**+0.2**
EZNE				Sg		**Sg**	**20 46 39.9**	**+0.9**
EZN	**Ezine**	**0.29**	**21**	P		**Pg**	**20 46 37.1**	**+0.4**
EZN				S		**Sg**	**20 46 41.3**	**+0.7**
EZN	**Ezine**	**0.29**	**21**	Pg		**Pg**	**20 46 37.0**	**+0.4**
EZN				Sg		**Sg**	**20 46 41.4**	**+0.8**
BOZC	**Bozcaada**	**0.31**	**340**	P		Pg	20 46 29.9	-7.1
BOZC				S		**Sg**	**20 46 34.3**	**-6.8**
PRK	**Paraskevi**	**0.31**	**168**	P		**Pg**	**20 46 37.3**	**+0.3**
PRK				S		**Sg**	**20 46 41.1**	**-0.1**
PRK	**Paraskevi**	**0.31**	**168**	P		**Pg**	**20 46 37.2**	**+0.1**
PRK				S		**Sg**	**20 46 40.6**	**-0.5**
BAYC	**CANAKKALE_Bayr**	**0.33**	**55**	P		**Pg**	**20 46 37.3**	**-0.1**
BAYC				S		**Sg**	**20 46 41.6**	**-0.2**
SIGR	**SIGRI**	**0.43**	**217**	P		**Pg**	**20 46 39.4**	**+0.1**
SIGR				S		**Sg**	**20 46 45.1**	**+0.3**
SIGR	**SIGRI**	**0.43**	**217**	Pg		**Pg**	**20 46 39.1**	**-0.1**
SIGR				Sg		**Sg**	**20 46 45.7**	**+0.9**
SIGR	**SIGRI**	**0.43**	**217**	P		**Pg**	**20 46 39.3**	**+0.1**
SIGR				S		**Sg**	**20 46 44.9**	**+0.1**
AYVA	**Ayvalik**	**0.46**	**122**	P		**Pg**	**20 46 39.9**	**+0.2**
AYVA				S		**Sg**	**20 46 45.1**	**-0.6**
ECEA	**Canakkale, Ece**	**0.49**	**358**	P		**Pg**	**20 46 40.1**	**-0.3**
ECEA				IAML			20 46 49.0	
	comp=N,469nm,0.3s							
ECEA				IAML			20 46 49.0	
	comp=E,344nm,0.3s							
CNKL	**anakkale-Mer**	**0.53**	**16**	P		**Pg**	**20 46 41.4**	**+0.1**
CNKL				S		**Sb**	**20 46 49.6**	**-0.7**
CNKL				IAML			20 46 50.0	
	comp=N,260nm,0.3s							
CNKL				IAML			20 46 51.0	
	comp=E,293nm,0.3s							
COMU	**Canakkale**	**0.59**	**22**	Pg		**Pg**	**20 46 42.1**	**-0.1**
GOAD	**anakkale-G¶**	**0.65**	**340**	P		**Pg**	**20 46 44.0**	**+0.7**
GOAD				S		**Sg**	**20 46 51.6**	**-0.1**
GOAD				IAML			20 46 53.0	
	comp=E,284nm,1.2s							
GADA	**Gvkgeada**	**0.68**	**341**	P		**Pg**	**20 46 44.6**	**+0.7**
GADA				S		**Sg**	**20 46 53.4**	**+0.7**
GADA	**Gvkgeada**	**0.68**	**341**	Pg		**Pg**	**20 46 43.7**	**-0.2**
BUHA	**Balikesir, Bur**	**0.69**	**94**	P		**Pg**	**20 46 43.6**	**-0.5**
BUHA				S		**Sg**	**20 46 52.5**	**-0.6**
DKL	**Dikili**	**0.73**	**131**	Pg		**Pb**	**20 46 45.8**	**-0.1**
CANM	**Can-anakkale**	**0.81**	**55**	Pg		**Pg**	**20 46 46.9**	**+0.5**
LIA	**Limnos Island**	**0.85**	**294**	P		**Pg**	**20 46 47.7**	**+0.5**
LIA				S		**Sb**	**20 46 59.6**	**+0.2**
LIA	**Limnos Island**	**0.85**	**294**	P		**Pg**	**20 46 47.5**	**+0.2**
LIA				S		**Sb**	**20 46 59.7**	**+0.3**
LAPS	**Lapseki, ANA**	**0.86**	**35**	P		**Pg**	**20 46 47.1**	**-0.2**
LAPS				S		**Sg**	**20 46 58.1**	**-0.5**
LAPS				IAML			20 46 59.0	
	comp=E,176nm,0.3s							
GELI	**Tayfur-Gelibol**	**0.87**	**14**	Pg		**Pg**	**20 46 47.5**	**-0.1**
YENI	**Yenice-Canakka**	**0.90**	**64**	Pg		**Pg**	**20 46 48.5**	**+0.4**
ZEDA	**zmir-Bergama**	**0.90**	**130**	P		**Pg**	**20 46 48.0**	**-0.3**
KARB	**zmir-Karabur**	**0.91**	**169**	P		**Pg**	**20 46 48.5**	**+0.3**
KARB				IAML			20 47 03.0	
	comp=N,292nm,0.4s							
KARB				IAML			20 47 03.0	
	comp=E,154nm,0.3s							
LPK	**Lapseki**	**0.93**	**28**	Pg		**Pg**	**20 46 48.4**	**-0.3**
FOCM	**Foa**	**0.94**	**153**	Pg		**Pg**	**20 46 49.3**	**+0.4**
KRBN	**Karaburun**	**1.00**	**163**	Pg		**Pg**	**20 46 50.3**	**+0.3**
EAG2	**Marmaro, Chios**	**1.01**	**184**	P		**Pg**	**20 46 50.5**	**+0.2**
BAGT	**Foa**	**1.03**	**150**	P		**Pb**	**20 46 51.5**	**+0.5**
BAGT				S		**Sb**	**20 47 04.8**	**+0.1**
BAGT				IAML			20 47 07.0	
	comp=N,180nm,0.8s							
BAGT				IAML			20 47 08.0	
	comp=E,187nm,0.6s							
BIGA	**Biga-Canakkale**	**1.04**	**45**	Pg		**Pb**	**20 46 51.5**	**+0.5**
SMTH	**Samothraki Isl**	**1.05**	**331**	P		**Pg**	**20 46 51.4**	**+0.3**
SMTH				S		**Sb**	**20 47 06.2**	**+1.0**
SMTH	**Samothraki Isl**	**1.05**	**331**	P		**Pb**	**20 46 51.7**	**+0.4**
SOMA	**Soma-Manisa**	**1.11**	**110**	Pn		**Pb**	**20 46 52.8**	**+0.4**
BALY	**Balya**	**1.12**	**80**	P		**Pg**	**20 46 52.1**	**-0.2**
BALY				S		**Sg**	**20 47 06.5**	**-0.4**
BALY				IAML			20 47 09.0	
	comp=N,145nm,0.5s							
CAVK	**Edirne/Enez-Ca**	**1.14**	**359**	P		**Pb**	**20 46 53.2**	**+0.4**
CAVK				IAML			20 47 11.0	
	comp=E,123nm,0.3s							
ERIK	**Erikli-Kesan**	**1.14**	**12**	Pn		**Pg**	**20 46 52.9**	**+0.1**
GOKT	**Kean, EDRN**	**1.16**	**17**	P		**Pg**	**20 46 52.7**	**-0.3**
GOKT				S		**Sg**	**20 47 07.5**	**-0.6**
CHOS	**Chios island**	**1.17**	**185**	P		**Pg**	**20 46 52.9**	**+0.4**
CHOS				S		**Sb**	**20 47 09.2**	**+0.5**
CHOS	**Chios island**	**1.17**	**185**	Pn		**Pg**	**20 46 53.3**	**0.0**
CHOS	**Chios island**	**1.17**	**185**	P		**Pg**	**20 46 52.9**	**-0.4**
CHOS				S		**Sb**	**20 47 09.1**	**+0.5**
ENEZ	**Enez**	**1.18**	**359**	P		**Pn**	**20 46 54.1**	**+0.4**
ENEZ				S		**Sn**	**20 47 10.0**	**0.0**
ENEZ	**Enez**	**1.18**	**359**	Pn		**Pg**	**20 46 53.4**	**-0.2**
CAMT	**Merkez**	**1.19**	**132**	P		**Pg**	**20 46 53.7**	**0.0**
CAMT				IAML			20 47 14.0	
	comp=N,77nm,0.6s							
KRBG	**Karabiga-Canak**	**1.20**	**45**	Pn		**Pn**	**20 46 54.3**	**+0.4**
STEP	**BALIKESIR_Sava**	**1.20**	**98**	P		**Pn**	**20 46 54.7**	**+0.8**
STEP				S		**Sb**	**20 47 09.9**	**+0.5**
STEP				IAML			20 47 15.0	
	comp=N,109nm,0.7s							
STEP				IAML			20 47 16.0	
	comp=E,95nm,0.5s							

URLA	**Izmir**	**1.23**	**165**	P	**Pb**	**20 46 53.4**	**-1.0**
URLA				IAML		20 47 13.0	
	comp=N,204nm,0.4s						
URLA				IAML		20 47 13.0	
	comp=E,162nm,0.6s						
GONE	**Gonen-Balikesi**	**1.25**	**66**	Pn	**Pg**	**20 46 55.3**	**+0.4**
BALB	**Balikesir**	**1.31**	**86**	Pn	**Pb**	**20 46 55.9**	**+0.2**
KESN	**Edirne-Kesan**	**1.32**	**16**	P	**Pn**	**20 46 55.7**	**-0.3**
KESN				S	**Sg**	**20 47 13.3**	**-0.3**
KESN				IAML		20 47 17.0	
	comp=E,220nm,0.3s						
ALN	**Alexandroupoli**	**1.35**	**355**	P	**Pn**	**20 46 56.5**	**+0.5**
ALN				S	**Sb**	**20 47 14.2**	**+0.4**
ALN	**Alexandroupoli**	**1.35**	**355**	Pn	**Pn**	**20 46 56.3**	**+0.3**
ALN	**Alexandroupoli**	**1.35**	**355**	P	**Pn**	**20 46 56.2**	**+0.3**
ALN				S	**Sb**	**20 47 13.8**	**0.0**
BKES	**Balkesir-Mer**	**1.35**	**82**	P	**Pg**	**20 46 57.2**	**+0.4**
BKES				S	**Sb**	**20 47 14.0**	**+0.1**
BKES				IAML		20 47 17.0	
	comp=E,69nm,0.3s						
RKY	**Sarkoy-Tekirda**	**1.36**	**33**	Pn	**Pn**	**20 46 56.4**	**+0.2**
BLKS	**Balkesir-Sus**	**1.41**	**76**	P	**Pn**	**20 46 57.3**	**+0.5**
AKHS	**Akhisar**	**1.43**	**118**	P	**Pn**	**20 46 57.4**	**+0.3**
CMHT	**Manyas**	**1.45**	**71**	P	**Pn**	**20 46 57.7**	**+0.4**
CMHT				S	**Sn**	**20 47 15.9**	**-0.5**
CMHT				IAML		20 47 19.0	
	comp=E,57nm,0.5s						
MADA	**Marmara adas**	**1.47**	**45**	P	**Pb**	**20 46 58.7**	**+0.2**
MADA				S	**Sn**	**20 47 17.1**	**0.0**
MADA				IAML		20 47 19.0	
	comp=N,117nm,0.9s						
MADA				IAML		20 47 19.0	
	comp=E,94nm,0.5s						
GAZK	**Gazikoy-TEKIRD**	**1.48**	**36**	Pn	**Pn**	**20 46 58.3**	**+0.6**
EDC	**Edincik**	**1.51**	**58**	Pn	**Pn**	**20 46 58.7**	**+0.5**
SUSR	**Susurluk-Balik**	**1.52**	**74**	Pn	**Pn**	**20 46 58.9**	**+0.6**
THAS	**Thassos island**	**1.54**	**313**	S	**Sn**	**20 47 17.5**	**-1.1**
UKOP	**Uzunkopru-Edir**	**1.61**	**12**	Pn	**Pn**	**20 47 00.2**	**+0.6**
RDO	**Rodhopi**	**1.67**	**343**	P	**Pn**	**20 47 01.2**	**+0.8**
RDO				S	**Sb**	**20 47 23.1**	**+0.1**
RDO	**Rodhopi**	**1.67**	**343**	P	**Pn**	**20 47 00.7**	**+0.4**
DURS	**Dursunbey**	**1.77**	**88**	P	**Pn**	**20 47 02.0**	**+0.2**
DURS				S	**Sn**	**20 47 22.7**	**-1.8**
SMG	**Samos**	**1.91**	**164**	P	**Pn**	**20 47 03.0**	**-0.7**
SMG	**Samos**	**1.91**	**164**	P	**Pn**	**20 47 03.9**	**+0.2**
DION	**Dionisos Attik**	**2.30**	**231**	P	**Pn**	**20 47 09.5**	**+0.4**

*SCB **23** 20:47:42.6±1.0,20.°51S×67.°96W,h179km±8km, ML3.5/4, Error ellipse: s-maj=3.0km s-min=2.4km az=2.0*
ISC 23 20:47:42.2±1.7,20.°47S±0.°04×67.°99W±0.°05, h185km±15km,n34,σ0§96/53,7C,Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**1.15**	**287**	*i*P		**Pn**	**20 48 13

PCPS	**Palayan City**	**2.07**	**125**	*eP*	**Pn**	**20 57 20.9**	**-2.0**
PCPS				*eS*	**Sn**	**20 57 46.7**	**-1.0**
SIPP	**Brgy, Tapao**	**2.34**	**28**	*eP*	**Pn**	**20 57 25.6**	**-1.0**
SIPP				*eS*	**Sn**	**20 57 53.9**	**-0.4**
TGY	**Tagaytay City**	**2.35**	**138**	P	**Pb**	**20 57 30.9**	**-0.8**
	282nm,0.5s,baz=310,slow=16,SNR=12						
TGY				S	**Sb**	**20 58 00.4**	**0.0**
	472nm,0.8s,baz=38,slow=18,SNR=4.1						
TGY				LR	LR	20 58 29.1	
	comp=Z,455nm,18.0s,baz=251,slow=40						
TGY	**Tagaytay City**	**2.35**	**138**	*eP*	**Pb**	**20 57 31.0**	**-0.8**
TGY				*eS*	**Sb**	**20 58 03.0**	**+2.6**
TWG	**Pinlang**	**7.13**	**13**	Pn	**Pn**	**20 58 30.4**	**-2.0**
TPUB	**Ta-pu**	**7.52**	**9**	Pn	**Pn**	**20 58 37.2**	**-0.5**
YULB	**Yu-li**	**7.74**	**14**	Pn	**Pn**	**20 58 42.2**	**+1.5**
SSLB	**Suanglung**	**8.05**	**11**	Pn	**Pn**	**20 58 44.4**	**-0.7**
YHNB	**Yeheng**	**8.99**	**12**	Pn	**Pn**	**20 59 00.2**	**+2.3**
QIZ	**Qiongzhong**	**9.57**	**291**	P	**Pn**	**20 59 06.5**	**+0.6**
QIZ				S	**Sn**	**21 00 56.8**	**+4.4**
QIZ				smax	smax		
	comp=N,12nm,0.6s						
QIZ				smax	smax		
	comp=E,13nm,0.9s						
QIZ				LR	LR		
	comp=N,160nm,7.2s						
QIZ				LR	LR		
	comp=E,240nm,13.2s						
QIZ				LR	LR		
	comp=Z,320nm,13.2s						
KKM	**Kota Kinabalu**	**10.21**	**198**	Pn	**Pn**	**20 59 13.1**	**-1.7**
JOW	**Kunigami**	**13.75**	**36**	LR	LR	21 04 41.2	
	comp=Z,112nm,20.0s,baz=120,slow=34						
SBUM	**Sibu**	**15.03**	**208**	Pn	**Pn**	**21 00 20.4**	**-0.2**
MNI	**Manado**	**15.32**	**159**	P	**P**	**21 00 32.0**	**+3.1**
GTOI	**Gorontalo**	**15.55**	**166**	P	**Pn**	**21 00 27.8**	**+0.4**
NJ2	**Nanjing**	**16.14**	**359**	*eP*	**Pn**	**21 00 36.1**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,23nm,0.6s						
MMSI	**Mamuju**	**18.43**	**181**	P	**Pn**	**21 01 10.0**	**+6.6**
	comp=Z,491nmcomp=Z,32nm,0.8s						
SANI	**Sanana**	**18.97**	**159**	P	**P**	**21 01 08.1**	**-1.1**
PZH	**PanZhiHua**	**19.48**	**306**	P	**Pn**	**21 01 17.6**	**+1.3**
CMAR	**Chiang Mai Arr**	**19.63**	**281**	P	**P**	**21 01 16.1**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=91,slow=9.5,SNR=14						
CMAR				PcP	**PcP**	**21 05 35.9**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=51,slow=0.6,SNR=6.5						
CMAR				LR	LR	21 08 49.2	
	comp=Z,120nm,19.3s,baz=95,slow=37						
CMAR	**Chiang Mai Arr**	**19.63**	**281**	P	**P**	**21 01 17.4**	**+0.9**
CHTO	**Chiang Mai**	**19.66**	**282**	P	**P**	**21 01 16.8**	**+0.1**
SPSI	**Sidrap Palu**	**19.69**	**179**	P	**Pn**	**21 01 21.0**	**+2.3**
	comp=Z,30nm,0.9s						
NLAI	**Namlea**	**20.48**	**157**	P	Pn	21 01 28.3	+0.4
	comp=Z,590nmcomp=Z,61nm,1.0s						
CD2	**Chengdu**	**20.66**	**319**	P	Pn	21 01 30.3	+0.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CD2				LR	LR		
	comp=N,460nm,11.4s						
CD2				LR	LR		
	comp=E,550nm,12.1s						
CD2				LR	LR		
	comp=Z,290nm,12.1s						
MYKOM	**Kota Tinggi**	**20.67**	**229**	P	**P**	**21 01 28.0**	**+0.3**
KAPI	**Kappang**	**20.73**	**179**	P	**P**	**21 01 28.6**	**+0.2**
	comp=Z,3.9nm,0.5s,baz=9.0,slow=7.5,SNR=5.8						
	comp=Z,3.9nm,0.5s						
KAPI	**Kappang**	**20.73**	**179**		**P**	**21 01 28.4**	**0.0**
KAPI	**Kappang**	**20.73**	**179**	P	Pn	21 01 35.4	+4.5
MKS	**Makassar**	**20.93**	**180**	P	Pn	21 01 35.6	+2.4
	comp=Z,1µmcomp=Z,132nm,1.0s						
KRAI	**Karang Ratu**	**21.06**	**154**	P	**P**	**21 01 34.1**	**+2.1**
	comp=Z,29nm,0.7s						
TNCH	**TengChong**	**21.49**	**298**	P	**P**	**21 01 37.9**	**+1.2**
TNCH				pP	pP	21 01 39.5	-4.1
TNCH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TNCH				pmax	pmax		
	comp=Z,120nm,2.4s						
HNS	**HongShan**	**21.85**	**350**	⇓P	**P**	**21 01 41.8**	**+1.6**
HNS				*eS*	Sn	21 05 47.3	-3.3
HNS				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HNS				LR	LR		
	comp=E,330nm,10.7s						
HNS				LR	LR		
	comp=Z,280nm,14.3s						
BSSI	**Bau Bau, Buton**	**21.88**	**177**	P	**P**	**21 01 42.0**	**+1.2**
	comp=Z,35nm,0.9s						
KSAR	**Wonju Array Be**	**22.81**	**18**		**P**	**21 01 49.7**	**-0.8**
KSRS	**Korea Array**	**22.83**	**18**	P	**P**	**21 01 51.0**	**+0.2**
	comp=Z,4.6nm,0.8s,baz=201,slow=10,SNR=14						
	comp=Z,4.6nm,0.8s						
KMMI	**Kalianget**	**23.36**	**193**	P	**P**	**21 01 57.4**	**+1.2**
	comp=Z,17nm,1.1s						
LBFI	**Labuhan Bajo,**	**24.18**	**179**	P	**P**	**21 02 06.4**	**+2.4**
DBNI	**Kabupaten Domp**	**24.21**	**182**	P	**P**	**21 02 05.8**	**+1.4**
	comp=Z,38nm,0.8s						
BJI2	**Beijing**	**24.23**	**354**	P	**P**	**21 02 05.3**	**+0.9**
BJI2				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BJT	**Baijiatuan**	**24.23**	**354**		**P**	**21 02 06.0**	**+1.7**
BJT				IAmb	IAmb	21 02 08.1	
	comp=Z,13nm,1.4s						
LZH	**Lanzhou**	**24.42**	**329**	*eP*	P	21 02 14.8	+8.5
LZH				pP	pwP	21 02 25.6	+6.5
LZH				pmax	pmax		
	comp=Z,23nm,1.5s						
EDFI	**Ende, Flores**	**24.55**	**174**	P	**P**	**21 02 09.1**	**+1.5**
PLAI	**Plampang**	**24.57**	**184**	P	**P**	**21 02 08.7**	**+1.1**
	comp=Z,677nmcomp=Z,91nm,0.9s						
SNJI	**Sawahan-Nganju**	**24.64**	**198**	P	**P**	**21 02 13.3**	**+4.9**
	comp=Z,19nm,1.2s						
JAGI	**Jajag, Banyuwa**	**24.70**	**192**		**P**	**21 02 09.6**	**+0.8**
JAGI	**Jajag, Banyuwa**	**24.70**	**192**	P	**P**	**21 02 10.7**	**+1.9**
	comp=Z,25nm,0.9s						
GUMO	**Guam**	**24.82**	**92**	LR	LR	21 10 20.0	
	comp=Z,64nm,19.2s,baz=160,slow=32						
KLSI		**24.99**	**216**	P	**P**	**21 02 12.9**	**+1.4**
TNG	**Tangerang**	**25.22**	**211**	P	P	21 02 20.9	+7.5
TNG				P	P	21 02 21.0	+7.5
JHJ	**Hachijo jima 2**	**25.28**	**43**	LR	LR	21 11 28.5	
	comp=Z,417nm,21.2s,baz=95,slow=35						
WBSI	**Waikabubak, Su**	**25.33**	**180**	P	**P**	**21 02 21.2**	**+6.7**
LWLI	**Liwa**	**25.64**	**217**	P	**P**	**21 02 21.1**	**+3.6**
	comp=Z,33nm,0.9s						
HHC	**Hu-ho-hao-te**	**25.80**	**346**	*eP*	**P**	**21 02 21.1**	**+2.4**
HHC				pmax	pmax		
	comp=Z,2.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,73nm,4.5s						
BBJI	**Bungbulang**	**25.88**	**207**		**P**	**21 02 19.1**	**-0.4**
BBJI				IAmb	IAmb	21 02 22.6	
	comp=Z,11nm,0.9s						
SOEI	**Soe**	**25.91**	**169**		**P**	**21 02 19.5**	**-0.4**
SOEI	**Soe**	**25.91**	**169**	P	**P**	**21 02 19.9**	**0.0**
BATI	**Baumata**	**26.25**	**170**	P	**P**	**21 02 22.9**	**+0.1**
MJAR	**Matsushiro Arr**	**26.59**	**36**	P	**P**	**21 02 26.4**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=206,slow=8.6,SNR=2.6						
	comp=Z,1.0nm,0.8s						
SHL	**Shillong**	**27.36**	**295**	P	**P**	**21 02 32.2**	**-0.8**
SHL				IAmb	IAmb	21 02 51.3	
	comp=Z,6.8nm,0.5s						
GTA2	**Gaotai**	**29.10**	**328**	*eP*	**P**	**21 02 49.3**	**+1.0**
GTA2				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BNX	**BinXian**	**30.56**	**11**	⇑P	**P**	**21 03 02.3**	**+1.2**
BNX				pmax	pmax		
	comp=Z,5.0nm,1.7s						
MTN	**Manton Dam**	**30.82**	**157**	P	**P**	**21 03 01.6**	**-1.9**
MTN				IAmb	IAmb	21 03 07.5	
	comp=Z,11nm,1.1s						
ULN	**Ulaanbaatar**	**33.49**	**345**	P	**P**	**21 03 25.5**	**-1.5**
SONM	**Songino Array**	**33.63**	**344**	P	**P**	**21 03 28.3**	**+0.2**
	comp=Z,2.0nm,0.8s,baz=162,slow=9.0,SNR=9.0						
	comp=Z,2.0nm,0.8s						
SONM	**Songino Array**	**33.63**	**344**	P	P	21 03 23.6	-4.5
KLR	**Kul'dur**	**34.81**	**14**	P	**P**	**21 03 36.8**	**-1.3**
	comp=Z,2.7nm,0.6s,baz=236,slow=7.0,SNR=9.8						
	comp=Z,2.7nm,0.6s						
COEN	**Coen**	**37.87**	**140**	P	**P**	**21 04 03.8**	**-0.8**
WB0	**Warramunga Arr**	**38.38**	**157**		**P**	**21 04 07.7**	**-1.2**
WB0				IAmb	IAmb	21 04 09.6	
	comp=Z,7.8nm,0.8s						
WRAB	**Tennant Creek**	**38.51**	**157**	P	**P**	**21 04 08.8**	**-1.2**
WRAB				IAmb	IAmb	21 04 10.5	
	comp=Z,7.4nm,0.8s						
WRA	**Warramunga Arr**	**38.52**	**157**	P	**P**	**21 04 09.1**	**-0.9**
	comp=Z,5.6nm,0.7s,baz=337,slow=9.3,SNR=92						
WRA				PcP	**PcP**	**21 06 23.6**	**+0.9**
	comp=Z,1.4nm,0.7s,baz=341,slow=3.2,SNR=6.8						
	comp=Z,5.6nm,0.7s						
WRA	**Warramunga Arr**	**38.52**	**157**		**P**	**21 04 08.9**	**-1.2**
WR8	**Warramunga Arr**	**38.59**	**157**	P	**P**	**21 04 09.7**	**-0.9**
AS31	**Alice Springs**	**41.79**	**160**		**P**	**21 04 36.8**	**-0.4**
ASAR	**Alice Springs**	**41.79**	**160**	P	**P**	**21 04 36.9**	**-0.3**
	comp=Z,8.5nm,0.6s,baz=339,slow=7.1,SNR=142						
ASAR				PcP	**PcP**	**21 06 33.6**	**+0.5**
	comp=Z,1.4nm,0.6s,baz=341,slow=3.1,SNR=6.4						
	comp=Z,8.5nm,0.6s						
ASAR	**Alice Springs**	**41.79**	**160**		**P**	**21 04 36.4**	**-0.8**
MKAR	**Makanchi Array**	**43.51**	**323**	P	**P**	**21 04 51.3**	**+0.4**
	comp=Z,1.6nm,0.8s,baz=130,slow=9.3,SNR=10						
	comp=Z,1.6nm,0.8s						
MKAR	**Makanchi Array**	**43.51**	**323**	P	**P**	**21 04 51.5**	**+0.6**
MAKZ	**Makanchi**	**43.70**	**323**	P	**P**	**21 04 52.6**	**+0.1**
NRN	**Naryn**	**45.12**	**313**	P	**P**	**21 05 05.3**	**+1.0**
ZALV	**Zalesovo Beam**	**46.54**	**333**	P	**P**	**21 05 13.9**	**-0.9**
	comp=Z,1.2nm,0.8s,baz=104,slow=6.3,SNR=5.1						
	comp=Z,1.2nm,0.8s						
ZALV	**Zalesovo Beam**	**46.54**	**333**	P	**P**	**21 05 13.7**	**-1.2**
FORT	**Forrest**	**47.12**	**170**		**P**	**21 05 19.8**	**+0.2**
DRK	**Karamyk**	**47.54**	**309**	P	**P**	**21 05 24.1**	**+0.9**
KURBB	**Kurchatov Arra**	**47.66**	**326**	P	**P**	**21 05 23.6**	**0.0**
	comp=Z,2.5nm,0.8s,baz=120,slow=8.2,SNR=13						
KURBB				PcP	**PcP**	**21 06 51.8**	**-1.0**
	comp=Z,0.7nm,0.8s,baz=125,slow=3.3,SNR=2.2						
	comp=Z,2.5nm,0.8s						
KURK	**Kurchatov**	**47.66**	**326**	P	**P**	**21 05 23.9**	**+0.3**
KURK				IAmb	IAmb	21 05 27.0	
	comp=Z,6.2nm,0.9s						
KURK	**Kurchatov**	**47.66**	**326**		**PcP**	**21 06 51.8**	**-1.0**
PETK	**Petropavlovsk-**	**47.83**	**30**	P	**P**	**21 05 23.2**	**-1.7**
	comp=Z,8nm,0.9s,baz=232,slow=8.5,SNR=1.4						
	comp=Z,2.8nm,0.9s						
KK31	**Karatay Array**	**49.52**	**314**		**P**	**21 05 36.6**	**-1.5**
KKAR	**Karatay Array**	**49.52**	**314**	P	**P**	**21 05 37.7**	**-0.4**
BBOO	**Buckleboo**	**50.97**	**162**		**P**	**21 05 48.9**	**-0.2**
BVAR	**Borovoye Array**	**53.25**	**325**	P	**P**	**21 06 05.4**	**-0.4**
	comp=Z,0.4nm,0.2s,baz=152,slow=16,SNR=2.5						
	comp=Z,0.4nm,0.2s						
TIXI	**Tiksi**	**56.08**	**4**	P	**P**	**21 06 25.4**	**-0.6**
TIXI				IAmb	IAmb	21 06 26.3	
	comp=Z,6.2nm,1.1s						
NRIK	**Noril'sk**	**57.03**	**347**	P	**P**	**21 06 31.8**	**-1.1**
	comp=Z,7.1nm,0.9s,baz=137,slow=7.4,SNR=8.7						
	comp=Z,7.1nm,0.9s						
NRIK	**Noril'sk**	**57.03**	**347**	P	**P**	**21 06 32.5**	**-0.4**
NRIK				IAmb	IAmb	21 06 33.7	
	comp=Z,6.0nm,0.8s						
AB31	**Akbulak array**	**58.23**	**318**	P	**P**	**21 06 41.8**	**+0.1**
AB31				IAmb	IAmb	21 06 42.6	
	comp=Z,4.2nm,1.1s						
ABKAR	**Akbulak array**	**58.23**	**318**	P	**P**	**21 06 41.8**	**+0.1**
BILL	**Bilibino**	**60.10**	**18**	P	**P**	**21 06 54.6**	**+0.3**
BILL				IAmb	IAmb	21 06 56.8	
	comp=Z,8.5nm,1.3s						
RAYN	**Ar Rayn**	**69.26**	**290**	P	**P**	**21 07 55.1**	**+0.2**
RAYN				IAmb	IAmb	21 07 57.6	
	comp=Z,3.4nm,0.9s						
KBZ	**Khabaz**	**69.45**	**311**	P	**P**	**21 07 55.2**	**-0.4**
	comp=Z,3.1nm,0.9s,baz=3.8,slow=3.4,SNR=6.6						
	comp=Z,3.1nm,0.9s						
KIV	**Kislovodsk**	**69.60**	**311**	P	**P**	**21 07 56.3**	**-0.4**
GEVA	**Geas**	**69.66**	**305**	P	**P**	**21 07 55.9**	**-1.4**
GURO	**Guroymak-BITLI**	**70.44**	**306**	P	**P**	**21 08 02.4**	**+0.3**
GURO				IAmb	IAmb	21 08 03.9	
	comp=Z,5.9nm,1.0s						
RDOG	**Red Dog Mine**	**70.85**	**23**	P	**P**	**21 08 03.7**	**-0.1**
RDOG				IAmb	IAmb	21 08 05.9	
	comp=Z,3.3nm,0.6s						
F17K	**Baldwin Pennin**	**71.37**	**25**	IAmb	IAmb	21 08 11.5	
	comp=Z,6.7nm,1.1s						
C18K	**Utukok River**	**71.53**	**22**	IAmb	IAmb	21 08 10.4	
	comp=Z,5.9nm,1.0s						
MARD	**Mardin**	**71.55**	**305**	P	**P**	**21 08 08.7**	**-0.1**
MARD				IAmb	IAmb	21 08 10.0	
	comp=Z,4.8nm,1.0s						
C19K	**Lookout Ridge**	**72.14**	**22**	IAmb	IAmb	21 08 14.7	
	comp=Z,8.2nm,1.1s						
G19K	**Purcell Mounta**	**73.05**	**25**	IAmb	IAmb	21 08 19.5	
	comp=Z,4.7nm,0.8s						
P17K	**Kvichak River**	**73.60**	**32**	P	**P**	**21 08 22.2**	**+1.8**
B22K	**Teshekpuk Lake**	**74.28**	**21**	IAmb	IAmb	21 08 26.5	
	comp=Z,6.9nm,1.1s						
IMAR	**Indian Mountai**	**74.42**	**25**	P	**P**	**21 08 26.8**	**+1.8**
E22K	**Anaktuvuk Pass**	**75.01**	**23**	IAmb	IAmb	21 08 31.0	
	comp=Z,11nm,1.5s						
I21K	**Tanana**	**75.22**	**26**	P	**P**	**21 08 31.9**	**+2.2**
I21K				IAmb	IAmb	21 08 32.6	
	comp=Z,3.6nm,1.0s						
H22K	**Ishtalitna Cre**	**75.39**	**25**		**P**	**21 08 32.9**	**+2.2**
H22K				IAmb	IAmb	21 08 33.9	
	comp=Z,11nm,1.4s						
G23K	**Bananza Creek**	**75.84**	**24**	IAmb	IAmb	21 08 36.1	
	comp=Z,6.2nm,1.4s						
I23K	**Minto, Yukon-K**	**76.32**	**26**	IAmb	IAmb	21 08 39.5	
	comp=Z,3.0nm,0.6s						
F24K	**Squaw Lake**	**76.56**	**23**	IAmb	IAmb	21 08 39.9	
	comp=Z,3.8nm,0.8s						
ARCES	**ARCESS Array B**	**76.61**	**339**	P	**P**	**21 08 36.5**	**-1.0**
	comp=Z,3.1nm,0.9s,baz=49,slow=3.9,SNR=4.3						
	comp=Z,3.1nm,0.9s						
MCK	**McKinley**	**76.71**	**27**	P	**P**	**21 08 39.1**	**+0.8**
BRTR	**Keskin Array B**	**76.77**	**308**	P	**P**	**21 08 37.4**	**-1.8**
	comp=Z,0.9nm,0.9s,baz=49,slow=2.9,SNR=2.3						
	comp=Z,0.9nm,0.9s						
RND	**Reindeer**	**76.79**	**28**	P	**P**	**21 08 39.0**	**+0.2**
RND				IAmb	IAmb	21 08 40.2	
	comp=Z,5.9nm,0.8s						
WRH	**Wood River Hil**	**76.96**	**26**	P	**P**	**21 08 40.4**	**+0.8**
SPITS	**Spitsbergen Ar**	**77.22**	**348**	P	**P**	**21 08 40.7**	**-0.2**
	comp=Z,3.5nm,0.6s,baz=91,slow=10,SNR=3.8						
	comp=Z,3.5nm,0.6s						
F25K	**Christian Rive**	**77.40**	**23**	IAmb	IAmb	21 08 45.0	
	comp=Z,3.6nm,0.8s						
ILAR	**Eielson Array**	**77.42**	**26**	P	**P**	**21 08 41.6**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=256,slow=4.2,SNR=9.8						
	comp=Z,0.7nm,0.8s						
C27K	**Jago River**	**77.69**	**21**	IAmb	IAmb	21 08 46.3	
	comp=Z,6.0nm,0.9s						
SCM	**Sheep Creek Mo**	**77.75**	**29**	P	**P**	**21 08 45.4**	**+1.1**
FIA1	**FINESS Array S**	**77.76**	**331**	P	**P**	**21 08 43.5**	**-0.7**
FINES	**FINESS Array B**	**77.76**	**331**	P	**P**	**21 08 43.4**	**-0.8**
	comp=Z,1.4nm,0.5s,baz=60,slow=5.7,SNR=14						
	comp=Z,1.4nm,0.5s						
FINES	**FINESS Array B**	**77.76**	**331**	P	**P**	**21 08 43.6**	**-0.5**
BMAR	**Burnt Mountain**	**77.83**	**23**	P	**P**	**21 08 46.4**	**+1.8**
F26K	**Sheenjek River**	**77.94**	**23**	IAmb	IAmb	21 08 48.0	
	comp=Z,3.0nm,0.9s						
AKASG	**Malin Array Be**	**77.96**	**319**	P	**P**	**21 08 43.5**	**-2.0**
	comp=Z,1.7nm,0.8s,baz=70,slow=4.8,SNR=5.8						
	comp=Z,1.7nm,0.8s						
AKASG	**Malin Array Be**	**77.96**	**319**	IAmb	IAmb	21 08 45.6	
	comp=Z,2.5nm,1.0s						
G26K	**Porcupine Rive**	**78.23**	**24**	IAmb	IAmb	21 08 49.5	
	comp=Z,3.8nm,0.8s						
M24K	**Tolsona, Glenn**	**78.24**	**29**	P	**P**	**21 08 48.7**	**+1.9**
KLU	**Klutina**	**78.48**	**29**	P	**P**	**21 08 49.4**	**+1.1**
KLU				IAmb	IAmb	21 09 27.6	
	comp=Z,8.7nm,1.2s						
RIDG	**Independent Ri**	**78.50**	**27**	P	**P**	**21 08 49.1**	**+0.8**
RIDG				IAmb	IAmb	21 08 49.7	
	comp=Z,4.1nm,0.7s						
E27K	**Coleen River**	**78.76**	**22**	IAmb	IAmb	21 08 52.1	
	comp=Z,5.0nm,0.9s						
SCRK	**Sand Creek**	**78.81**	**27**	P	**P**	**21 08 49.6**	**-0.5**
DOT	**Dot Lake**	**78.86**	**27**	P	**P**	**21 08 50.7**	**+0.5**
N25K	**Chitina, Valde**	**79.07**	**29**	P	**P**	**21 08 52.6**	**+1.1**
N25K				IAmb	IAmb	21 09 16.0	
	comp=Z,10nm,1.4s						
GLB	**Gilahina Butte**	**79.48**	**29**	P	**P**	**21 08 54.7**	**+1.0**
F28M	**Old Crow**	**79.54**	**22**	P	**P**	**21 08 55.0**	**+1.1**
F28M				IAmb	IAmb	21 08 56.2	
	comp=Z,5.6nm,0.8s						
BCAR	**Beaver Creek A**	**79.99**	**27**		**P**	**21 08 58.9**	**+2.4**
BARN	**Barnard Glacie**	**80.58**	**29**	P	**P**	**21 09 00.9**	**+1.1**
CTGM	**Chitina Glacie**	**80.76**	**29**	P	**P**	**21 09 02.5**	**+1.7**
BURAR	**Bucovina Array**	**81.17**	**317**	P	**P**	**21 09 03.5**	**+0.3**
BURAR				IAmb	IAmb	21 09 04.2	
	comp=Z,3.3nm,0.8s						
BUR08	**Bucovina Ar. S**	**81.18**	**317**	IAmb	IAmb	21 09 15.8	
	comp=Z,6.6nm,1.1s						
F31M	**Tsiigehtchic**	**81.83**	**22**	P	**P**	**21 09 06.4**	**+0.3**
F31M				IAmb	IAmb	21 09 11.8	
	comp=Z,7.7nm,1.3s						
M30M	**Minto, Yukon**	**82.33**	**27**	P	**P**	**21 09 10.8**	**+1.9**
M31M	**Drury Creek, Y**	**83.51**	**27**	P	**P**	**21 09 16.3**	**+1.3**
M31M				IAmb	IAmb	21 09 37.4	
	comp=Z,3.0nm,1.2s						
NOA	**NORSAR Array B**	**84.74**	**332**	P	**P**	**21 09 20.1**	**-1.2**
	comp=Z,1.1nm,0.8s,baz=64,slow=5.0,SNR=3.3						
	comp=Z,1.1nm,0.8s						
YKA	**Yellowknife Ar**	**91.31**	**22**	P	**P**	**21 09 52.6**	**0.0**
	comp=Z,0.6nm,0.8s,baz=315,slow=5.3,SNR=12						
	comp=Z,0.6nm,0.8s						
VNDA	**Vanda**	**96.36**	**171**	P	**P**	**21 10 14.2**	**-1.2**
	comp=Z,1.7nm,1.0s,baz=280,slow=5.3,SNR=4.0						
	comp=Z,1.7nm,1.0s						
TXAR	**Lajitas Array**	**118.86**	**43**	PKP	**PKPdf**	**21 15 35.3**	**-1.1**
	comp=Z,0.2nm,0.9s,baz=230,slow=0.9,SNR=3.5						

IDC 23 21:08:59.7±1.5, **25.41S**×**177.51W**, **h0**km, **mb3.9**/6, **mbtmp3.9**/7, **MS3.6**/26, **Error ellipse: s-maj=35.8km s-min=35.2km az=39.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**3.84**	**185**	LR	LR	21 11 29.3	
	comp=Z,3µm,18.1s,baz=214,slow=39						
MSVF	**Nonsavu**	**8.69**	**331**	Pn	Pn	21 11 06.2	-0.6
	1.3nm,0.4s,baz=146,slow=18,SNR=0.9						
MSVF				LR	LR	21 13 51.9	
	comp=Z,495nm,19.9s,baz=141,slow=34						
AFI	**Afiamalu**	**12.65**	**26**	LR	LR	21 16 25.3	
	comp=Z,172nm,18.8s,baz=164,slow=35						
URZ	**Urewera**	**13.60**	**198**	LR	LR	21 16 45.9	
	comp=Z,442nm,18.2s,baz=25,slow=34						
RAR	**Rarotonga**	**16.82**	**79**	LR	LR	21 18 12.9	
	comp=Z,110nm,21.3s,baz=287,slow=33						
HNR	**Honiara**	**26.67**	**303**	LR	LR	21 23 19.4	
	comp=Z,10nm,21.8s,baz=213,slow=32						
PPT	**Papeete**	**27.10**	**79**	LR	LR	21 22 23.1	
	comp=Z,102nm,21.6s,baz=35,slow=30						
CTA	**Charters Tower**	**33.77**	**272**	P	P	21 15 44.0	+0.6
	4.4nm,0.8s,baz=94,slow=15,SNR=1.5						
CTA				LR	LR	21 27 48.2	
	comp=Z,83nm,18.5s,baz=53,slow=33						
	4.4nm,0.8s						
KRVT	**Keravat (AS076**	**35.99**	**301**	LR	LR	21 29 39.5	
	comp=Z,14nm,18.1s,baz=33,slow=34						
PMG	**Port Moresby**	**37.13**	**289**	LR	LR	21 28 58.3	
	comp=Z,117nm,19.5s,baz=120,slow=32						
ASAR	**Alice Springs**	**44.04**	**262**	P	P	21 17 09.8	+0.2
	2.1nm,1.0s,baz=114,slow=8.6,SNR=10						
ASAR				LR	LR	21 33 09.2	
	comp=Z,86nm,19.1s,baz=101,slow=33						
	2.1nm,1.0s						
WRA	**Warramunga Arr**	**44.58**	**267**	P	P	21 17 13.7	-0.2
	1.7nm,1.1s,baz=104,slow=7.9,SNR=5.0						
	1.7nm,1.1s						
FITZ	**Fitzroy Crossi**	**52.98**	**266**	P	P	21 18 17.7	-0.8
	3.0nm,1.0s,baz=104,slow=8.3,SNR=2.8						
FITZ				LR	LR	21 39 52.9	
	comp=Z,112nm,18.6s,baz=120,slow=35						
	3.0nm,1.0s						
GUMO	**Guam**	**53.36**	**312**	LR	LR	21 38 57.3	
	comp=Z,54nm,19.5s,baz=140,slow=34						
SIJI	**Sorong**	**55.06**	**288**	LR	LR	21 40 53.7	
	comp=Z,11nm,20.3s,baz=172,slow=35						
BATI	**Baunata**	**57.59**	**274**	LR	LR	21 43 55.0	
	comp=Z,116nm,18.1s,baz=116,slow=36						
RPN	**Rapa Nui**	**60.45**	**108**	LR	LR	21 41 45.9	
	comp=Z,6.0nm,18.5s,baz=214,slow=32						
KAPI	**Kappang**	**63.28**	**277**	LR	LR	21 45 46.4	
	comp=Z,25nm,21.1s,baz=97,slow=35						
DAV	**Davao City (W)**	**64.04**	**292**	LR	LR	21 47 05.0	
	comp=Z,45nm,18.4s,baz=347,slow=36						
QSPA	**South Pole Qui**	**64.68**	**180**	P	P	21 19 39.3	0.0
	0.8nm,0.8s,baz=81,slow=9.0,SNR=1.6						
	0.8

PCPS					*e*S		**Sn**	**21 44 53.5**	**-6.7**
TGY	**Tagaytay City**	**2.50**	**132**		Pn		**Pn**	**21 44 36.1**	**-0.6**
	24nm,0.3s,baz=286,slow=5.5,SNR=4.0								
TGY						Sn		**Sn**	**21 45 08.3**	**+2.2**
	57nm,0.3s,baz=254,slow=22,SNR=5.6								
	67nm,0.4s								
SJPP	**Brgy, Tapao**	**2.51**	**33**		*e*P		Pn	21 44 22.5	-14
SJPP					*e*S		**Sn**	**21 45 01.5**	**-4.6**
HKPS	**Hong Kong Po S**	**7.92**	**325**		Pn		Pn	**21 45 47.8**	**-3.3**
KKM	**Kota Kinabalu**	**10.09**	**196**		Pn		Pn	**21 46 20.7**	**-0.2**
CMAR	**Chiang Mai Arr**	**19.38**	**281**		P		**P**	**21 48 20.3**	**-0.2**
	0.3nm,0.3s,baz=95,slow=8.8,SNR=1.0								
CMAR						LR	LR	21 56 16.8	
	comp=Z,25nm,18.3s,baz=80,slow=38								
	0.6nm,0.3s								
KSRS	**Korea Array**	**22.95**	**18**		P		**P**	**21 48 58.3**	**-0.4**
	1.1nm,0.9s,baz=218,slow=11,SNR=1.9								
	1.1nm,0.9s								
SONM	**Songino Array**	**33.60**	**345**		P		**P**	**21 50 35.5**	**+1.2**
	0.6nm,0.8s,baz=166,slow=6.9,SNR=4.3								
	0.6nm,0.8s								
COEN	**Coen**	**38.01**	**140**		P		**P**	**21 51 11.9**	**-0.3**
COEN					IAmb		IAmb	21 51 36.5	
	comp=Z,22nm,1.4s								
WB0	**Warramunga Arr**	**38.44**	**156**		P		**P**	**21 51 15.4**	**-0.4**
WRAB	**Tennant Creek**	**38.58**	**157**		P		**P**	**21 51 16.5**	**-0.5**
WRAB					IAmb		IAmb	21 51 40.2	
	comp=Z,8.1nm,1.4s								
WRA	**Warramunga Arr**	**38.58**	**157**		P		**P**	**21 51 16.3**	**-0.8**
	comp=Z,1.3nm,0.8s,baz=337,slow=9.2,SNR=15								
	comp=Z,1.3nm,0.8s								
WRA	**Warramunga Arr**	**38.58**	**157**		P		**P**	**21 51 16.5**	**-0.6**
WR8	**Warramunga Arr**	**38.66**	**156**		P		**P**	**21 51 17.6**	**0.0**
WR8					IAmb		IAmb	21 51 29.0	
	comp=Z,5.5nm,1.2s								
ASAR	**Alice Springs**	**41.84**	**159**		P		**P**	**21 51 44.5**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=339,slow=7.1,SNR=21								
	comp=Z,1.3nm,0.6s								
ASAR	**Alice Springs**	**41.84**	**159**		P		**P**	**21 51 45.2**	**+1.2**
KURBB	**Kurchatov Arra**	**47.55**	**326**		P		**P**	**21 52 30.1**	**+1.0**
	comp=Z,0.9nm,1.0s,baz=122,slow=7.0,SNR=1.5								
	comp=Z,0.9nm,1.0s								
BBOO	**Buckleboo**	**51.01**	**162**		P		**P**	**21 52 56.1**	**+0.3**
C16K	**Lisburne Hills**	**70.11**	**23**		P		**P**	**21 55 07.0**	**+1.6**
C16K					IAmb		IAmb	21 55 36.4	
	comp=Z,4.1nm,1.5s								
N17K	**Nushagak Hills**	**73.33**	**31**		P		**P**	**21 55 27.7**	**+2.7**
SPITS	**Spitsbergen Ar**	**77.21**	**348**		P		**P**	**21 55 48.2**	**+1.2**
	comp=Z,5.3nm,0.8s,baz=45,slow=0.6,SNR=1.8								
	comp=Z,5.3nm,0.8s								
FINES	**FINESS Array B**	**77.67**	**331**		P		**P**	**21 55 51.1**	**+1.3**
	comp=Z,2.2nm,1.0s,baz=123,slow=15,SNR=1.2								
	comp=Z,2.2nm,1.0s								
YKA	**Yellowknife Ar**	**91.44**	**22**		P		**P**	**21 56 58.8**	**-0.6**
	comp=Z,0.1nm,0.7s,baz=308,slow=4.9,SNR=1.8								
	comp=Z,0.1nm,0.7s								

*SOME **23** 21:47:50.5, 44˚.37N×80˚.67E, h15km*
*NNC **23** 21:47:51.0±1.0, 44˚.38N×80˚.66E, h0km, mb3.6, mpv3.6,*
Error ellipse: s-maj=7.7km s-min=5.2km az=107.0
ISC 23 21:47:48.7±1.2, 44˚.41N±0˚.04×80.79E±0˚.04, h10km±11km, n35, σ1§53/51, 8C-7D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
DJR	**Jarkent**	**0.72**	**264**	P	**Pb**	**21 48 03.3**		**0.0**
	131nm,0.1s							
DJR				S	**Sb**	**21 48 12.7**		**-0.6**
	47nm,0.1s							
DJR	**Jarkent**	**0.72**	**264**	*e*P	**Pb**	**21 48 03.3**		**0.0**
	131nm,0.1s							
DJR				*e*S	**Sb**	**21 48 12.7**		**-0.6**
	47nm,0.1s							
KAPS	**Kapalarasan**	**1.34**	**311**	P	**Pg**	**21 48 15.0**		**+0.6**
	33nm,0.1s							
KAPS				S	**Sn**	**21 48 32.6**		**+1.2**
	272nm,0.1s							
PDGK	**Podgornoye**	**1.43**	**221**	⇓P	**Pg**	**21 48 17.4**		**+1.2**
	7.1nm,0.2s							
PDGK				⇑S	**Sg**	**21 48 35.9**		**+1.2**
	172nm,0.6s							
SHLS	**Shalkode**	**1.58**	**218**	P	**Pn**	**21 48 15.6**		**-1.3**
	32nm,0.1s							
SHLS				S	**Sn**	**21 48 33.9**		**-3.5**
	298nm,0.4s							
SHLS	**Shalkode**	**1.58**	**218**	*e*P	**Pn**	**21 48 15.6**		**-1.3**
	32nm,0.1s							
SHLS				*e*S	**Sn**	**21 48 33.9**		**-3.5**
	298nm,0.4s							
KPKS	**Kokpek**	**1.79**	**239**	P	**Pg**	**21 48 23.3**		**+0.3**
	0.8nm,0.3s							
KPKS				S	**Sg**	**21 48 46.1**		**0.0**
	163nm,0.1s							
KPKS	**Kokpek**	**1.79**	**239**	*e*P	**Pg**	**21 48 23.3**		**+0.3**
	0.8nm,0.3s							
KPKS				*e*S	**Sg**	**21 48 46.1**		**0.0**
	163nm,0.1s							
UZB	**Uzynbulak**	**1.80**	**226**	P	**Pg**	**21 48 23.4**		**+0.3**
	27nm,0.2s							
UZB				S	**Sg**	**21 48 46.6**		**+0.2**
	167nm,0.2s							
UZB	**Uzynbulak**	**1.80**	**226**	*e*P	**Pg**	**21 48 23.4**		**+0.3**
	27nm,0.2s							
UZB				*e*S	**Sg**	**21 48 46.6**		**+0.2**
	167nm,0.2s							
KURS	**Kuram**	**2.10**	**245**	Pg	**Pg**	**21 48 27.5**		**-1.5**
	27nm,0.4s							
KURS				Lg	Lg	21 48 54.5		
	28nm,0.4s							
ARXS	**Arharly**	**2.13**	**266**	Pg	**Pg**	**21 48 28.9**		**-0.7**
	59nm,0.2s							
ARXS				Lg	Lg	21 48 56.9		
	173nm,0.2s							
ARXS	**Arharly**	**2.13**	**266**	*e*P	**Pg**	**21 48 28.9**		**-0.7**
	59nm,0.2s							
ARXS				*e*S	**Sg**	**21 48 56.9**		**-0.3**
	173nm,0.2s							
SATY	**Saty**	**2.19**	**233**	Pg	**Pg**	**21 48 29.9**		**-0.7**
	52nm,0.1s							
SATY				Lg	Lg	21 48 57.8		
	226nm,0.2s							
MAKZ	**Makanchi**	**2.54**	**19**	⇓Pn	**Pg**	**21 48 36.1**		**-1.2**
	0.9nm,0.4s							
MAKZ				⇓Lg	Lg	21 49 09.9		
	8.4nm,0.3s							
MK31	**Makanchi Array**	**2.61**	**23**	⇓Pn	**Pg**	**21 48 36.9**		**-1.7**
	0.4nm,0.1s,baz=193,slow=16							
MK31				⇑Lg	Lg	21 49 11.9		
	5.8nm,0.3s,baz=197,slow=31							
MDOK	**Medeo**	**2.98**	**247**	Pg	**Pb**	**21 48 43.2**		**+1.2**
	9.7nm,0.1s							
MDOK				Lg	Lg	21 49 20.7		
	20nm,0.4s							
KNDC	**Almaty**	**3.01**	**248**	⇑Pg	**Pb**	**21 48 43.2**		**+0.8**
	21nm,0.6s							
KNDC				⇓Lg	Lg	21 49 26.3		
	13nm,0.3s							
KTBS	**Karatobe**	**3.04**	**258**	Pg	**Pb**	**21 48 43.2**		**+0.3**
	15nm,0.3s							
KTBS				Lg	Lg	21 49 21.0		
	22nm,0.3s							
KTBS	**Karatobe**	**3.04**	**258**	*e*P	**Pb**	**21 48 43.2**		**+0.3**
	15nm,0.3s							
KTBS				*e*S	**Sb**	**21 49 21.0**		**+0.9**
	22nm,0.3s							
TNSS	**Tian-Shan**	**3.10**	**245**	Pg	**Pb**	**21 48 44.5**		**+0.3**
	0.9nm,0.3s							
TNSS				Lg	Lg	21 49 23.6		
	2.2nm,0.3s							
TNSS	**Tian-Shan**	**3.10**	**245**	*e*P	**Pb**	**21 48 44.5**		**+0.3**
	0.9nm,0.3s							
TNSS				*e*S	**Sb**	**21 49 23.6**		**+1.4**
	2.2nm,0.3s							
IZV	**Izvestkoviy**	**3.32**	**247**	Pg	**Pb**	**21 48 48.4**		**+0.6**
	13nm,0.4s							
IZV				Lg	Lg	21 49 30.6		
	15nm,0.3s							
IZV	**Izvestkoviy**	**3.32**	**247**	*e*P	**Pb**	**21 48 48.4**		**+0.6**
	13nm,0.4s							
IZV				*e*S	**Sb**	**21 49 30.6**		**+2.3**
	15nm,0.3s							
KRBS	**Karabastau**	**3.75**	**261**	Pg	**Pb**	**21 48 55.8**		**+0.7**
	5.4nm,0.3s							
KRBS				Lg	Lg	21 49 42.6		
	6.3nm,0.2s							
KRBS	**Karabastau**	**3.75**	**261**	*e*P	**Pb**	**21 48 55.8**		**+0.7**
	5.4nm,0.3s							
KRBS				*e*S	**Sb**	**21 49 42.6**		**+2.0**
	6.3nm,0.2s							
KST	**Kastek**	**3.75**	**250**	Pg	**Pg**	**21 48 58.8**		**-1.8**
	9.5nm,0.3s							
KST				Lg	Lg	21 49 47.4		
	10.0nm,0.3s							
KST	**Kastek**	**3.75**	**250**	*e*P	**Pg**	**21 48 58.8**		**-1.8**
	9.5nm,0.3s							
KST				*e*S	**Sg**	**21 49 47.4**		**-1.8**
	10.0nm,0.3s							
ZSN	**Zaisan**	**4.16**	**42**	Pg	**Pg**	**21 49 07.8**		**-0.7**
	1.9nm,0.2s							
ZSN				Lg	Lg	21 50 02.8		
	16nm,0.6s							
ZSN	**Zaisan**	**4.16**	**42**	*e*P	**Pg**	**21 49 07.8**		**-0.7**
	1.9nm,0.2s							
ZSN				*e*S	**Sg**	**21 50 02.8**		**+0.4**
	16nm,0.6s							
AAK	**Ala-Archa**	**4.91**	**251**	⇑Pg	**Pg**	**21 49 19.1**		**-3.5**
	1.4nm,0.6s,baz=175,slow=28							
AAK				⇓Lg	Lg	21 50 26.2		
	1.7nm,0.6s,baz=175,slow=28							
KURBB	**Kurchatov Arra**	**6.40**	**347**	⇑Pg	**Pg**	**21 49 49.3**		**-1.9**
	5.2nm,1.5s							
KURBB				⇑Lg	Lg	21 51 17.8		
	9.7nm,0.7s							
KURK	**Kurchatov**	**6.47**	**348**	⇑Pg	**Pg**	**21 49 49.3**		**-3.3**
	0.7nm,1.0s							
KURK				⇓Lg	Lg	21 51 19.2		
	1.2nm,0.6s							
KK31	**Karatay Array**	**7.55**	**264**	⇑Lg	Lg	21 51 46.7		
	0.9nm,0.5s,baz=75,slow=28,SNR=6.7							
BVA0	**Borovoye Array**	**11.01**	**325**	Pn	**Pn**	**21 50 30.0**		**+3.9**
	0.1nm,0.3s,baz=152,slow=42,SNR=5.6							

*MEX **23** 22:12:48.9±0.3, 15˚.25N×92˚.43W, h109km±5km, MD3.6*
*GCG **23** 22:12:49.5±0.6, 15˚.30N×92˚.45W, h83km±10km, MD3.5, ML3.4, Presumed earthquake*
ISC 23 22:12:43.5±2.1, 14˚.97N±0˚.10×92˚.45W±0˚.09, h132km±12km, n13, σ1§85/24, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
THIG		**0.19**	**110**	*i* P	**Pn**	**22 13 03.7**		**+2.2**
THIG				*i* S	**Sn**	**22 13 15.2**		**+0.1**
THIG		**0.19**	**110**	*i* P	**Pn**	**22 13 03.7**		**+2.2**
THIG				*i* S	**Sn**	**22 13 13.4**		**-1.6**
THIG				IAML		22 13 15.5		
	comp=N,1μm,0.4s							
PATR	**El Naranjo**	**0.25**	**55**	*e*P	**Pn**	**22 13 02.9**		**+0.9**
PATR				*i* S	**Sn**	**22 13 14.4**		**-1.6**
PAVE	**Pavencul**	**0.34**	**50**	*e*P	**Pn**	**22 13 03.7**		**+1.4**
PAVE				*e*P	**Sn**	**22 13 14.8**		**-1.7**
CHUJ	**Union Juarez**	**0.35**	**70**	*e*P	**Pn**	**22 13 03.7**		**+1.4**
CHUJ				*e*S	**Sn**	**22 13 15.3**		**-1.2**
SMCA	**Catarina**	**0.38**	**107**	*i* P	**Pn**	**22 13 04.1**		**+2.0**
SMCA				*i* S	**Sn**	**22 13 16.1**		**-0.2**
PCIG		**1.04**	**315**	*e*P	**Pn**	**22 13 07.7**		**+0.8**
PCIG				*e*S	**Sn**	**22 13 21.9**		**-2.8**
PCIG				*e*S		22 13 22.4		
STG2	**El Palmar, Qui**	**1.17**	**117**	*i* S	**Sn**	**22 13 24.5**		**-2.7**
STG2				IAML		22 13 28.2		
	comp=E,894nm,0.4s							
STG8	**El Palmar, Qui**	**1.18**	**116**	*i* P	**Pn**	**22 13 09.3**		**+0.7**
STG5	**El Palmar, Qui**	**1.21**	**118**	*i* P	**Pn**	**22 13 09.8**		**+1.1**
STG5				*i* S	**Sn**	**22 13 25.3**		**-2.5**
CCIG	**Comitan**	**1.34**	**13**	*e*P	**Pn**	**22 13 12.0**		**+1.8**
CCIG				*e*S	**Sn**	**22 13 30.2**		**-0.2**
TGIG		**1.91**	**340**	*e*P	**Pn**	**22 13 17.4**		**+0.8**
TGIG				*i* S	**Sn**	**22 13 39.7**		**-2.1**
CMIG	**Matias Romero**	**3.15**	**312**	*e*P	**Pn**	**22 13 34.2**		**+2.1**
CMIG				*e*S	**Sn**	**22 14 07.6**		**-2.1**

*VAO **23** 22:16:32.9±0.7, 18˚.96S×70˚.47W, h10km, mb4.0,*
Presumed earthquake
*SJA **23** 22:16:43.6±0.8, 18˚.88S×70˚.06W, h74km±5km, ML4.7, MW4.5*
*NEIC **23** 22:16:44.6±1.9, 18˚.81S±0˚.05×70˚.02W±0˚.08, h72km±5km, mb4.7/20, ML4.6(GUC), Error ellipse: s-maj=11.3km s-min=6.4km az=61.0*
*GUC **23** 22:16:45.3±0.8, 18˚.86S×70˚.03W, h65km±4km, ML4.6*
*IDC **23** 22:16:48.7±2.4, 18˚.75S×69˚.68W, h115km±20km, mb3.7/11, mbtmp4.2/14, MS3.0/4, Error ellipse: s-maj=21.2km s-min=16.4km az=63.0*
ISC 23 22:16:43.6±0.6, 18˚.86S±0˚.03×70˚.08W±0˚.05, h75km±5km, n162, σ1§72/179, mb4.4/18, 6C-5D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
PX02	**IPOC Station P**	**0.16**	**228**	⇓*i*P	**Pn**	**22 16 55.0**		**+0.3**
PX02				*e*S	**Sn**	**22 17 03.3**		**+0.4**
PB12	**IPOC Station P**	**0.34**	**315**		**Pn**	**22 16 56.7**		**+1.0**
PB12					**Sn**	**22 17 04.9**		**+0.3**
PB12	**IPOC Station P**	**0.34**	**315**	⇑*i*P	**Pn**	**22 16 57.0**		**+1.3**
PB12				*e*S	**Sn**	**22 17 05.9**		**+1.3**
PB12	**IPOC Station P**	**0.34**	**315**	*e*P	**Pn**	**22 16 56.8**		**+1.1**
PB12				*e*S	**Sn**	**22 17 06.0**		**+1.3**
PB12				IAML		22 17 07.8		
	comp=Z,13μm,0.1s							
AP01	**Chacalluta**	**0.55**	**332**	Pn	**Pn**	**22 16 58.3**		**+1.1**
AP01				Sn	**Sn**	**22 17 08.3**		**+0.9**
AP01	**Chacalluta**	**0.55**	**332**	⇓*e*P	**Pn**	**22 16 58.7**		**+1.4**
AP01	**Chacalluta**	**0.55**	**332**	*e*P	**Pn**	**22 16 58.0**		**+0.7**
AP01				*e*S	**Sn**	**22 17 09.2**		**+1.9**
AP01				IAML		22 17 13.3		
	comp=Z,19μm,0.1s							
PSGCX	**Pisagua**	**0.73**	**184**	Pn	**Pn**	**22 17 00.6**		**+1.3**
PB16	**IPOC Station P**	**0.75**	**46**	Pn	**Pn**	**22 17 01.2**		**+1.2**
PB16	**IPOC Station P**	**0.75**	**46**	⇓*i*P	**Pn**	**22 17 01.3**		**+1.2**
PB16				*e*S	**Sn**	**22 17 13.4**		**+1.3**
PB16				IAML		22 17 14.2		
	comp=N,24μm,0.3s							
PB16	**IPOC Station P**	**0.75**	**46**	*e*P	**Pn**	**22 17 01.2**		**+1.2**
PB16				*e*S	**Sn**	**22 17 13.7**		**+1.6**
PB16				IAML		22 17 14.6		
	comp=Z,13μm,0.4s							
PB11	**IPOC Station P**	**0.98**	**156**	Pn	**Pn**	**22 17 03.4**		**+1.2**
PB11	**IPOC Station P**	**0.98**	**156**	⇓*i*P	**Pn**	**22 17 03.5**		**+1.2**
PB11				*e*S	**Sn**	**22 17 17.9**		**+1.7**
PB11				IAML		22 17 19.4		
	comp=E,25μm,0.3s							
PB11	**IPOC Station P**	**0.98**	**156**	*e*P	**Pn**	**22 17 02.7**		**+0.4**
PB11				IAML		22 17 20.5		
	comp=Z,11μm,0.6s							
GO01	**Chusmiza**	**1.16**	**134**	Pn	**Pn**	**22 17 06.5**		**+1.7**
GO01	**Chusmiza**	**1.16**	**134**	⇓*i*P	**Pn**	**22 17 06.8**		**+2.0**
GO01				*e*S	**Sn**	**22 17 24.2**		**+3.6**
GO01				IAML		22 17 26.5		
	comp=N,21μm,0.2s							
GO01	**Chusmiza**	**1.16**	**134**	*e*P	**Pn**	**22 17 06.0**		**+1.2**
GO01				*e*S	**Sn**	**22 17 24.4**		**+3.8**
GO01				IAML		22 17 25.9		
	comp=Z,8μm,0.5s							
PB18	**Visviri**	**1.38**	**24**	Pn	**Pn**	**22 17 11.5**		**+3.8**
PB18	**Visviri**	**1.38**	**24**	⇑*i*P	**Pn**	**22 17 11.7**		**+4.0**
PB18				*e*S	**Sn**	**22 17 31.5**		**+5.7**
PB18				IAML		22 17 33.1		
	comp=N,12μm,0.5s							
TA02	**Huaiquique**	**1.41**	**182**	*e*P	**Pn**	**22 17 09.2**		**+1.8**
TA02				*e*S	**Sn**	**22 17 27.1**		**+1.6**
TA02				IAML		22 17 29.0		
	comp=N,15μm,0.5s							
TA02	**Huaiquique**	**1.41**	**182**	*e*P	**Pn**	**22 17 08.6**		**+1.1**
TA02				*e*S	**Sn**	**22 17 25.4**		**0.0**
TA02				IAML		22 17 31.4		
	comp=Z,6μm,0.5s							
PB08	**IPOC Station P**	**1.54**	**146**	Pn	**Pn**	**22 17 11.6**		**+1.9**
PB08	**IPOC Station P**	**1.54**	**146**	*i* P	**Pn**	**22 17 11.9**		**+2.2**
PB08				*e*S	**Sn**	**22 17 31.9**		**+2.6**
PB08				IAML		22 17 33.8		
	comp=N,10μm,0.1s							
PB08	**IPOC Station P**	**1.54**	**146**	*e*P	**Pn**	**22 17 11.1**		**+1.4**
PB08				*e*S	**Sn**	**22 17 32.6**		**+3.4**
PB08				IAML		22 17 33.4		
	comp=Z,8μm,0.7s							
TA01	**Diego Aracena**	**1.70**	**183**	Pn	**Pn**	**22 17 12.6**		**+1.2**
TA01	**Diego Aracena**	**1.70**	**183**	⇑*e*P	**Pn**	**22 17 12.3**		**+0.9**
TA01				IAML		22 17 38.2		
	comp=N,10μm,0.3s							
TA01	**Diego Aracena**	**1.70**	**183**	*e*P	**Pn**	**22 17 11.8**		**+0.5**
TA01				IAML		22 17 39.4		
	comp=Z,6μm,0.3s							
PATCX	**Punta Patache**	**1.95**	**182**	Pn	**Pn**	**22 17 16.2**		**+1.4**
PATCX	**Punta Patache**	**1.95**	**182**	*e*P	**Pn**	**22 17 15.7**		**+0.8**
PATCX	**Punta Patache**	**1.95**	**182**	*e*P	**Pn**	**22 17 15.6**		**+0.8**
PATCX				IAML		22 17 51.2		
	comp=Z,4μm,0.7s							
PB01	**IPOC Station P**	**2.24**	**166**	Pn	**Pn**	**22 17 20.4**		**+1.7**
PB01	**IPOC Station P**	**2.24**	**166**	⇑*e*P	**Pn**	**22 17 19.9**		**+1.2**
PB01				IAML		22 17 52.8		
	comp=E,8μm,0.4s							
PB01	**IPOC Station P**	**2.24**	**166**	*e*P	**Pn**	**22 17 20.0**		**+1.3**
PB01				*e*S	**Sn**	**22 17 48.7**		**+3.1**
PB01				IAML		22 17 52.2		
	comp=Z,4μm,0.3s							
PB02	**IPOC Station P**	**2.45**	**176**	Pn	**Pn**	**22 17 23.4**		**+1.9**
PB02	**IPOC Station P**	**2.45**	**176**	⇑*e*P	**Pn**	**22 17 23.1**		**+1.6**
PB02	**IPOC Station P**	**2.45**	**176**	*e*P	**Pn**	**22 17 23.1**		**+1.6**
PB02				*e*S	**Sn**	**22 17 48.7**		**-1.9**
PB02				IAML		22 18 07.9		
	comp=Z,6μm,0.6s							
PB07	**IPOC Station P**	**2.86**	**176**	Pn	**Pn**	**22 17 29.3**		**+2.1**
PB07	**IPOC Station P**	**2.86**	**176**	*e*P	**Pn**	**22 17 28.4**		**+1.3**
PB07	**IPOC Station P**	**2.86**	**176**	*e*P	**Pn**	**22 17 28.5**		**+1.3**
PB07				*e*S	**Sn**	**22 18 02.1**		**+1.5**
PB07				IAML		22 18 17.1		
	comp=Z,5μm,0.8s							
PB09	**IPOC Station P**	**3.02**	**165**	Pn	**Pn**	**22 17 31.7**		**+2.3**
PB09	**IPOC Station P**	**3.02**	**165**	⇑*e*P	**Pn**	**22 17 31.4**		**+2.1**
PB09	**IPOC Station P**	**3.02**	**165**	*e*P	**Pn**	**22 17 31.3**		**+1.9**
PB09				*e*S	**Sn**	**22 18 07.4**		**+2.8**
PB09				IAML		22 18 23.4		
	comp=Z,4μm,0.4s							
LPAZ	**La Paz**	**3.16**	**36**	P	**Pn**	**22 17 35.3**		**+3.7**
	comp=Z,144nm,0.5s,baz=222,slow=6.3,SNR=759							
LPAZ				LR	LR	22 19 04.8		
	comp=Z,173nm,18.1s,baz=246,slow=48							
LPAZ	**La Paz**	**3.16**	**36**	*e*P	**Pn**	**22 17 35.5**		**+3.9**
LPAZ				*e*S	Sn	22 17 58.2		-10
LPAZ	**La Paz**	**3.16**	**36**	*e*P	**Pn**	**22 17 28.0**		**-3.6**
PB03	**IPOC Station P**	**3.19**	**175**	Pn	**Pn**	**22 17 32.8**		**+1.2**
PB03	**IPOC Station P**	**3.19**	**175**	*e*P	**Pn**	**22 17 32.6**		**+1.0**
PB03				IAML		22 18 28.1		
	comp=E,3μm,0.4s							
PB03	**IPOC Station P**	**3.19**	**175**	*e*P	**Pn**	**22 17 33.6**		**+2.1**
PB03				*e*S	**Sn**	**22 18 10.5**		**+2.0**
PB03				IAML		22 18 18.8		
	comp=Z,3μm,0.5s							
PB06	**IPOC Station P**	**3.86**	**173**	Pn	**Pn**	**22 17 41.5**		**+0.8**
PB06	**IPOC Station P**	**3.86**	**173**	*e*P	**Pn**	**22 17 41.4**		**+0.7**
PB06	**IPOC Station P**	**3.86**	**173**	*e*P	**Pn**	**22 17 41.9**		**+1.2**
PB06				*e*S	**Sn**	**22 18 29.0**		**+4.1**
PB06				IAML		22 18 47.5		
	comp=Z,1μm,1.4s							
PB05	**IPOC Station P**	**3.98**	**182**	Pn	**Pn**	**22 17 43.0**		**+0.8**
PB05	**IPOC Station P**	**3.98**	**182**	*e*P	**Pn**	**22 17 42.5**		**+0.3**
PB05	**IPOC Station P**	**3.98**	**182**	*e*P	**Pn**	**22 17 42.1**		**-0.2**
PB05				*e*S	Sn	22 18 36.8		+9.0
PB05				IAML		22 18 54.4		
	comp=Z,1μm,0.6s							
AF01	**San Pedro de A**	**4.44**	**157**	Pn	**Pn**	**22 17 51.0**		**+2.2**
PB10	**IPOC Station P**	**4.65**	**185**	Pn	**Pn**	**22 17 51.4**		**0.0**
PB10	**IPOC Station P**	**4.65**	**185**	*e*P	**Pn**	**22 17 51.6**		**+0.2**
PB10				*e*S	Sn	22 18 58.2		+14
PB10				IAML		22 19 13.9		
	comp=Z,399nm,0.4s							
YJA	**Yavi**	**5.40**	**128**	*e*P	**Pn**	**22 18 05.6**		**+3.6**
PB14	**IPOC Station P**	**5.75**	**183**	Pn	**Pn**	**22 18 05.7**		**-0.9**
AC01	**Pan de Azucar**	**7.27**	**184**	Pn	**Pn**	**22 18 25.3**		**-1.9**
AC02	**Maricunga**	**7.99**	**174**	Pn	**Pn**	**22 18 36.5**		**-0.9**
AC06	**Mina Casimiro**	**8.46**	**182**	Pn	**Pn**	**22 18 41.2**		**-2.3**
SIV	**San Ignacio**	**9.05**	**73**	P	**Pn**	**22 18 50.7**		**-0.9**
	comp=Z,27nm,0.4s,baz=262,slow=9.2,SNR=62							
SIV				LR	LR	22 22 16.2		
	comp=Z,56nm,19.6s,baz=277,slow=38							
BBSD	**Serra de San D**	**9.16**	**81**	*e*P	**Pn**	**22 18 51.6**		**-1.4**
NNA	**Nana**	**9.45**	**315**	P	**Pn**	**22 18 57.1**		**+0.2**
	comp=Z,20nm,0.4s,baz=142,slow=10,SNR=11							
NNA				S	**Sn**	**22 20 45.1**		**+3.5**
	comp=Z,5.7nm,0.3s,baz=242,slow=15,SNR=1.5							
NNA	**Nana**	**9.45**	**315**	Pn	**Pn**	**22 18 56.5**		**-0.5**
PTLB	**Pontes e Lacer**	**10.99**	**74**	Pn	**Pn**	**22 19 18.1**		**+0.1**
PTLB	**Pontes e Lacer**	**10.99**	**74**	*e*P	**Pn**	**22 19 16.6**		**-1.4**
VILB	**Vilhena**	**11.16**	**60**	Pn	**Pn**	**22 19 20.8**		**+0.4**
VILB	**Vilhena**	**11.16**	**60**	*e*P	**Pn**	**22 19 17.7**		**

TEIG					IAmb	IAmb	22 25 48.5	
	comp=E,46nm,1.5s							
553A	**Crawfordville**	**50.69**	**344**		P	**P**	**22 25 37.0**	**+1.4**
V55A	**Taylorsville**	**55.43**	**349**		P	**P**	**22 26 10.3**	**-0.1**
V55A					IAmb	IAmb	22 27 07.8	
	comp=Z,17nm,1.3s							
U49A	**Red Boiling Sp**	**57.04**	**345**		P	**P**	**22 26 22.2**	**+0.4**
U49A					IAmb	IAmb	22 26 52.6	
	comp=Z,8.1nm,1.1s							
R55A	**Marlinton**	**57.62**	**351**		P	**P**	**22 26 26.9**	**+0.9**
TXAR	**Lajitas Array**	**57.85**	**325**		P	**P**	**22 26 28.1**	**+0.4**
	comp=Z,0.5nm,7.5s,baz=152,slow=8.1,SNR=7.5							
	comp=Z,0.5nm,0.7s							
TXAR	**Lajitas Array**	**57.85**	**325**		P	**P**	**22 26 27.4**	**-0.4**
TX31	**Lajitas Ar. Si**	**57.85**	**325**		P	**P**	**22 26 27.7**	**-0.1**
SN07	**Snyder 07**	**59.46**	**330**		P	**P**	**22 26 39.4**	**+0.6**
SN07					IAmb	IAmb	22 26 40.4	
	comp=Z,7.3nm,0.6s							
PAOC	**Oil Creek Stat**	**60.72**	**352**		P	**P**	**22 26 47.7**	**+0.4**
DBIC	**Dimbokro**	**69.07**	**75**		P	**P**	**22 27 39.1**	**-3.0**
	comp=Z,2.5nm,0.8s,baz=256,slow=2.4,SNR=5.6							
	comp=Z,2.5nm,0.8s							
DBIC	**Dimbokro**	**69.07**	**75**		P	**P**	**22 27 39.4**	**-2.7**
DBIC					IAmb	IAmb	22 28 48.6	
	comp=Z,15nm,1.3s							
PDAR	**Pinedale Array**	**71.29**	**330**		P	**P**	**22 27 55.8**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=129,slow=5.8,SNR=6.1							
	comp=Z,0.7nm,0.7s							
QSPA	**South Pole Qui**	**71.32**	**180**		P	**P**	**22 27 56.6**	**+1.5**
	comp=Z,1.0nm,0.7s,baz=260,slow=2.9,SNR=7.3							
	comp=Z,1.0nm,0.7s							
QSPA	**South Pole Qui**	**71.32**	**180**		P	**P**	**22 27 57.4**	**+2.2**
ULM	**Lac du Bonnet**	**72.48**	**343**		P	**P**	**22 28 01.8**	**-0.2**
	comp=Z,1.9nm,0.5s,baz=159,slow=8.1,SNR=6.5							
	comp=Z,1.9nm,0.5s							
NVAR	**Mina Array Bea**	**72.75**	**322**		P	**P**	**22 28 05.9**	**+1.8**
	comp=Z,0.6nm,0.6s,baz=139,slow=3.8,SNR=3.5							
	comp=Z,0.6nm,0.6s							
NVAR	**Mina Array Bea**	**72.75**	**322**		P	**P**	**22 28 05.6**	**+1.5**
TORD	**Torodi Ar. Bea**	**77.53**	**71**		P	**P**	**22 28 30.3**	**-1.6**
	comp=Z,2.5nm,0.4s,baz=246,slow=6.5,SNR=15							
	comp=Z,2.5nm,0.4s							
ESDC	**Sonseca Array**	**84.74**	**45**		P	**P**	**22 29 09.2**	**-0.5**
	comp=Z,1.8nm,0.9s,baz=238,slow=5.4,SNR=6.7							
	comp=Z,1.8nm,0.9s							
ESDC	**Sonseca Array**	**84.74**	**45**		P	**P**	**22 29 10.1**	**+0.4**
YKAW1	**Yellowknife Wh**	**88.30**	**341**		P	**P**	**22 29 26.5**	**+0.1**
YKAW1					IAmb	IAmb	22 29 28.2	
	comp=Z,3.1nm,0.7s							
YKA	**Yellowknife Ar**	**88.35**	**341**		P	**P**	**22 29 27.8**	**+1.1**
	comp=Z,1.8nm,0.7s,baz=137,slow=4.0,SNR=43							
	comp=Z,1.8nm,0.7s							
YKAW3	**Yellowknife Wh**	**88.40**	**341**		P	**P**	**22 29 27.8**	**+0.9**
YKAW3					IAmb	IAmb	22 29 28.6	
	comp=Z,3.2nm,0.6s							
WRA	**Warramunga Arr**	**134.61**	**213**		PKP	**PKiKP**	**22 35 55.0**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=129,slow=2.0,SNR=2.1							
KURBB	**Kurchatov Arra**	**139.69**	**31**		PKP	**PKPdf**	**22 36 02.2**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=298,slow=2.0,SNR=2.4							
ZALV	**Zalesovo Beam**	**140.00**	**23**		PKP	**PKPdf**	**22 36 02.5**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=306,slow=2.7,SNR=6.9							
ZALV	**Zalesovo Beam**	**140.00**	**23**			**PKPdf**	**22 36 03.1**	**-0.1**
MKAR	**Makanchi Array**	**144.08**	**33**		PKP	PKPbc	22 36 08.9	0.0
	comp=Z,0.8nm,0.7s,baz=300,slow=3.4,SNR=8.4							
MKAR	**Makanchi Array**	**144.08**	**33**		PKPdf	**PKPdf**	**22 36 10.7**	**0.0**
USRK	**Ussuriysk Ar.**	**148.70**	**329**		PKPbc	**PKPbc**	**22 36 23.0**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=48,slow=3.5,SNR=4.1							
MJAR	**Matsushiro Arr**	**149.55**	**311**		PKPbc	**PKiKP**	**22 36 25.9**	**0.0**
	comp=Z,1.2nm,0.3s,baz=80,slow=2.5,SNR=5.7							
SONM	**Songino Array**	**150.96**	**5**		PKPbc	**PKiKP**	**22 36 28.4**	**-0.2**
	comp=Z,2.0nm,0.7s,baz=322,slow=1.8,SNR=17							
SONM	**Songino Array**	**150.96**	**5**			**PKiKP**	**22 36 29.2**	**+0.7**
HHC	**Hu-ho-hao-te**	**158.04**	**357**	*eP*		**PKPdf**	**22 36 29.8**	**-2.4**
NJ2	**Nanjing**	**164.60**	**330**	*eP*		**PKPdf**	**22 36 39.4**	**+0.2**
NJ2	**Nanjing**	**164.60**	**330**		pmax	pmax		
	comp=Z,22nm,0.5s							
PZH	**PanZhiHua**	**169.28**	**43**		PKP	**PKPdf**	**22 36 41.8**	**-1.3**

IDC ***23*** *22:29:10.1±1.8,8˚.32S×116˚.06E,h0km, mb3.9/5, mbtmp4.0/8, ML4.1/3, MS3.2/2, Error ellipse: s-maj=50.3km s-min=19.8km az=55.0*

DJA ***23*** *22:29:14.6±0.2,8˚.5±5˚×11˚.6E±˚, h10km, M4.4/19, mB4.6/2, mb4.6/4, MLv4.3/19, Mw(mB)3.8/2*

NEIC ***23*** *22:29:15.1±1.6,8˚.34S±0˚.10×116˚.15E±0˚.06, h29km±7km, mb4.3/11, Error ellipse: s-maj=14.0km s-min=9.1km az=177.0*

ISC 23 22:29:12.8±0.5,8˚.47S±0˚.04×116˚.25E±0˚.03,h10km,n66, σ2s04/70,mb4.0/9,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KHKI	**Kahang-Kahang**	**0.64**	**279**	P		**Pg**	**22 29 26.4**	**+1.1**
KHKI				S		**Sg**	**22 29 35.4**	**+1.7**
DNP	**Denpasar**	**1.05**	**258**	P		**Pg**	**22 29 34.2**	**+1.2**
DNP				S		**Sn**	**22 29 50.7**	**+2.4**
IGBI	**Denpasar**	**1.15**	**252**	P		**Pb**	**22 29 35.0**	**+0.3**
RTBI	**Rangdo, Negare**	**1.29**	**270**	P		**Pn**	**22 29 37.0**	**0.0**
PLAI	**Plampang**	**1.55**	**104**	P		**Pb**	**22 29 43.5**	**+1.9**
PLAI	**Plampang**	**1.55**	**104**	S		**Sg**	**22 30 06.2**	**+3.5**
PLAI	**Plampang**	**1.55**	**104**	P		**Pb**	**22 29 43.1**	**+1.5**
DBNI	**Kabupaten Domp**	**2.04**	**91**	P		**Pb**	**22 29 50.6**	**+0.6**
JAGI	**Jajag, Banyuwa**	**2.08**	**270**	P		**Pn**	**22 29 46.9**	**-0.8**
JAGI	**Jajag, Banyuwa**	**2.08**	**270**			**Pn**	**22 29 46.2**	**-1.6**
JAGI	**Jajag, Banyuwa**	**2.08**	**270**	P		**Pn**	**22 29 46.6**	**-1.1**
ABJI	**Asem Bagus**	**2.10**	**288**	P		**Pn**	**22 29 49.5**	**+1.4**
KMMI	**Kalianget**	**2.66**	**302**	P		**Pn**	**22 30 00.0**	**+4.2**
BLJI	**Banyuglugur**	**2.73**	**285**	P		**Pn**	**22 30 00.6**	**+4.0**
WBSI	**Waikabubak, Su**	**3.31**	**111**	P		**Pn**	**22 30 07.3**	**+2.5**
LBFI	**Labuhan Bajo,**	**3.60**	**90**	P		**Pn**	**22 30 09.7**	**+1.0**
WSI	**Waingapu**	**4.17**	**107**	P		**Pb**	**22 30 23.8**	**-2.5**
SNJI	**Sawahan-Nganju**	**4.50**	**278**	P		**Pn**	**22 30 21.8**	**+0.6**
BSSI	**Bau Bau, Buton**	**4.80**	**62**	P		**Pn**	**22 30 24.5**	**-0.7**
KAPI	**Kappang**	**4.88**	**46**	Pn		**Pn**	**22 30 24.8**	**-1.6**
	7.3nm,0.3s,baz=173,slow=12,SNR=5.6							
KAPI				Sn		**Sn**	**22 31 19.1**	**-3.9**
	10nm,0.3s,baz=233,slow=22,SNR=5.7							
	17nm,0.3s							
KAPI	**Kappang**	**4.88**	**46**	P		**Pn**	**22 30 28.4**	**+2.1**
KAPI	**Kappang**	**4.88**	**46**	Pn		**Pn**	**22 30 24.6**	**-1.7**
KAPI	**Kappang**	**4.88**	**46**	P		**Pg**	**22 30 50.3**	**+3.9**
PCJI	**Pacitan**	**5.03**	**273**	P		**Pn**	**22 30 28.2**	**-0.1**
	0.7nm123nm,1.2s							
BBKI	**Banjar Baru**	**5.16**	**344**	P		**Pb**	**22 30 45.6**	**+2.3**
EDFI	**Ende, Flores**	**5.39**	**93**	P		**Pn**	**22 30 35.0**	**+1.6**
	0.1nm528nm26nm,0.5s							
PMSI	**Majene**	**5.60**	**28**	P		**Pg**	**22 31 00.8**	**+0.7**
SPSI	**Sidrap Palu**	**5.68**	**38**	P		**Pg**	**22 31 02.0**	**+0.4**
UGM	**Wanagama**	**5.70**	**275**	P		**Pn**	**22 30 37.7**	**+0.1**
UGM	**Wanagama**	**5.70**	**275**	Pn		**Pn**	**22 30 36.9**	**-0.7**
MMRI	**Maumere**	**5.92**	**92**	Pn		**Pn**	**22 30 41.6**	**+0.9**
BATI	**Baumata**	**7.52**	**104**	Pn		**Pn**	**22 31 04.8**	**+2.2**
	5.8nm,0.3s,baz=312,slow=2.7,SNR=4.9							
BATI				Sn		**Sn**	**22 32 26.4**	**-1.6**
	4.4nm,0.3s,baz=348,slow=19,SNR=1.7							
	5.4nm,0.3s							
BATI	**Baumata**	**7.52**	**104**	P		Pb	22 31 17.6	-5.8
SOEI	**Soe**	**8.02**	**100**	P		**Pn**	**22 31 12.5**	**+2.9**
SOEI	**Soe**	**8.02**	**100**	Pn		**Pn**	**22 31 12.0**	**+2.4**
MBWA	**Marble Bar**	**13.06**	**165**	P		**Pn**	**22 32 20.2**	**+1.7**
MBWA	**Marble Bar**	**13.06**	**165**	Pn		**Pn**	**22 32 20.4**	**+1.9**
FITZ	**Fitzroy Crossi**	**13.23**	**137**	Pn		**Pn**	**22 32 21.1**	**+0.3**
	0.6nm,0.3s,baz=320,slow=12,SNR=11							
FITZ				Sn		**Sn**	**22 34 43.2**	**-4.9**
	0.1nm,0.3s,baz=11,slow=16,SNR=3.1							
	1.9nm,0.5s							
PSA00	**Pilbara Seismi**	**13.48**	**166**	P		**Pn**	**22 32 25.6**	**+1.3**
PSA00	**Pilbara Seismi**	**13.48**	**166**	Pn		**Pn**	**22 32 24.0**	**-0.3**
KNRA	**Kununurra**	**14.18**	**122**	Pn		**Pn**	**22 32 34.8**	**+1.0**
GIRL	**Giralia**	**14.23**	**188**	Pn		**Pn**	**22 32 34.4**	**-0.1**
MTN	**Manton Dam**	**15.26**	**108**	Pn		**Pn**	**22 32 49.2**	**+0.7**
MTN				IAmb		IAmb	22 33 10.8	
	comp=Z,16nm,1.2s							
DAV	**Davao City (W)**	**18.02**	**31**	LR		LR	22 40 57.3	
	comp=Z,66nm,19.3s,baz=19,slow=39							
MEEK	**Meekatharra**	**18.21**	**173**	P		**P**	**22 33 28.7**	**+2.6**
MORW	**Morawa**	**20.50**	**181**	P		**P**	**22 33 53.6**	**+2.5**
WB0	**Warramunga Arr**	**20.85**	**125**	P		**P**	**22 33 56.0**	**+1.0**
WRA	**Warramunga Arr**	**20.89**	**125**	P		**P**	**22 33 56.5**	**+1.1**
	comp=Z,7.2nm,0.5s,baz=300,slow=12,SNR=235							
WRA				S		**S**	**22 37 46.9**	**-1.7**
	comp=Z,0.7nm,0.9s,baz=276,slow=23,SNR=2.0							
	comp=Z,7.2nm,0.5s							
WRA	**Warramunga Arr**	**20.89**	**125**	P		**P**	**22 33 56.4**	**+0.9**
WRAB	**Tennant Creek**	**20.90**	**125**	P		**P**	**22 33 56.5**	**+1.0**
WRAB					IAmb	IAmb	22 33 57.4	
	comp=Z,9.9nm,0.8s							
WR8	**Warramunga Arr**	**21.03**	**125**	P		**P**	**22 33 58.0**	**+1.0**
BLDU	**Ballidu**	**22.04**	**179**	P		**P**	**22 34 10.9**	**+3.2**
AS31	**Alice Springs**	**22.68**	**134**	P		**P**	**22 34 16.3**	**+1.6**
AS31					IAmb	IAmb	22 34 18.2	
	comp=Z,2.0nm,0.7s							
ASAR	**Alice Springs**	**22.68**	**134**	P		**P**	**22 34 16.2**	**+1.6**
	comp=Z,4.3nm,0.8s,baz=310,slow=8.9,SNR=41							
ASAR				S		**S**	**22 38 24.6**	**+1.5**
	comp=Z,0.7nm,0.9s,baz=333,slow=28,SNR=4.7							
	comp=Z,4.3nm,0.8s							
ASAR	**Alice Springs**	**22.68**	**134**	P		**P**	**22 34 14.7**	**+0.1**
KLBR	**Kellerberrin**	**23.05**	**177**	P		**P**	**22 34 21.2**	**+2.8**
NWAO	**Narrogin (SRO)**	**24.36**	**178**	LR		LR	22 44 05.6	
	comp=Z,65nm,20.4s,baz=303,slow=36							
FORT	**Forrest**	**24.79**	**155**	P		**P**	**22 34 37.1**	**+2.1**
FORT					IAmb	IAmb	22 35 08.1	
	comp=Z,6.2nm,0.9s							
QIS	**Mount Isa**	**25.56**	**121**	P		**P**	**22 34 45.3**	**+3.1**
COEN	**Coen**	**26.95**	**104**	P		**P**	**22 34 54.9**	**+0.1**
COEN					IAmb	IAmb	22 35 29.1	
	comp=Z,21nm,1.4s							
EVN	**Everest**	**46.06**	**323**	P		**P**	**22 37 35.1**	**-2.7**
EVN					IAmb	IAmb	22 37 36.5	
	comp=Z,5.2nm,1.2s							
USRK	**Ussuriysk Ar.**	**54.32**	**14**	P		**P**	**22 38 37.4**	**-2.0**
	comp=Z,0.8nm,0.5s,baz=203,slow=6.3,SNR=2.5							
	comp=Z,0.8nm,0.5s							
SONM	**Songino Array**	**56.73**	**352**	P		**P**	**22 38 55.0**	**-1.9**
	comp=Z,0.8nm,0.6s,baz=171,slow=8.8,SNR=5.0							
	comp=Z,0.8nm,0.6s							
SONM	**Songino Array**	**56.73**	**352**	P		**P**	**22 38 55.3**	**-1.5**
MKAR	**Makanchi Array**	**62.77**	**334**	P		**P**	**22 39 35.5**	**-2.9**
	comp=Z,0.3nm,0.8s,baz=142,slow=6.1,SNR=2.4							
	comp=Z,0.3nm,0.8s							
BOSA	**Boshof**	**86.87**	**242**	P		**P**	**22 41 56.2**	**-2.3**
BOSA					IAmb	IAmb	22 42 23.7	
	comp=Z,5.4nm,1.2s							

GCG ***23*** *22:32:43.4±2.1,15˚.15N×92˚.60W,h84km±11km, MD4.8, ML4.7, MW3.8, Presumed earthquake*

NEIC ***23*** *22:32:43.2±1.7,15˚.04N±0˚.06×92˚.64W±0˚.03,h93km±4km, mb4.2/16, Md4.4/87(MEX), Error ellipse: s-maj=8.9km s-min=3.6km az=194.0*

MEX ***23*** *22:32:44.2±1.1,15˚.14N×92˚.52W,h101km±8km, MD4.4*

IDC ***23*** *22:32:44.6±2.0,15˚.32N×92˚.48W,h98km±10km, mb3.4/4, mbtmp3.7/7, MS3.3/4, Error ellipse: s-maj=54.5km s-min=7.4km az=25.0*

CATAC ***23*** *22:32:44.2±0.3,15˚N±2˚×9˚3W±˚, h78km±3km, M4.3/19, MLv4.3/19, Error ellipse: s-maj=6.4km s-min=2.8km az=38.9, confirmed*

ISC 23 22:32:43.2±0.7,15˚.03N±0˚.04×92˚.65W±0˚.03,h98km±6km, n147,σ1s78/213,mb4.1/10,2C-3D,Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
THIG		**0.39**	**109**			**Pn**	**22 32 57.5**	**-0.6**
THIG						**Sn**	**22 33 07.8**	**-1.4**
THIG		**0.39**	**109**	*eP*		**Pn**	**22 32 57.5**	**-0.6**
THIG				*eS*		**Sn**	**22 33 07.8**	**-1.4**
THIG		**0.39**	**109**	*iP*		**Pn**	**22 32 57.5**	**-0.6**
THIG				*iS*		**Sn**	**22 33 07.7**	**-1.4**
THIG				IAML			22 33 10.2	
	comp=N,79μm,0.4s							
PATR	**El Naranjo**	**0.41**	**78**			**Pn**	**22 32 57.1**	**-1.4**
PATR						**Sn**	**22 33 08.5**	**-1.4**
PATR	**El Naranjo**	**0.41**	**78**	*eP*		**Pn**	**22 32 57.1**	**-1.4**
PATR				*eS*		**Sn**	**22 33 08.5**	**-1.4**
PAVE	**Pavencul**	**0.48**	**71**			**Pn**	**22 32 58.0**	**-1.0**
PAVE						**Sn**	**22 33 09.7**	**-1.0**
PAVE	**Pavencul**	**0.48**	**71**	*eP*		**Pn**	**22 32 58.0**	**-1.0**
PAVE				*eS*		**Sn**	**22 33 09.7**	**-1.0**
CHUJ	**Union Juarez**	**0.53**	**83**	*eP*		**Pn**	**22 32 58.1**	**-1.2**
CHUJ				*eS*		**Sn**	**22 33 10.6**	**-0.7**
SMCA	**Catarina**	**0.58**	**107**	*iP*		**Pn**	**22 32 58.3**	**-1.2**
SMCA				*iS*		**Sn**	**22 33 10.0**	**-1.6**
SMCA				IAML			22 33 12.1	
	comp=N,17μm,0.1s							
PCIG		**0.86**	**321**			**Pn**	**22 33 01.7**	**-0.4**
PCIG						**Sn**	**22 33 16.4**	**+0.2**
PCIG		**0.86**	**321**	*eP*		**Pn**	**22 33 01.7**	**-0.4**
PCIG				*eS*		**Sn**	**22 33 16.4**	**+0.2**
RTAL	**Retalhuleu**	**1.05**	**119**			**Pn**	**22 33 03.5**	**-0.6**
RTAL				Sn		**Sn**	**22 33 19.0**	**-0.8**
RTAL	**Retalhuleu**	**1.05**	**119**	*eP*		**Pn**	**22 33 03.9**	**-0.2**
RTAL				*eS*		**Sn**	**22 33 19.0**	**-0.8**
RTAL	**Retalhuleu**	**1.05**	**119**	⇓P		**Pn**	**22 33 04.0**	**-0.1**
HUEH	**Huehuetenango**	**1.14**	**76**	Pn		**Pn**	**22 33 04.7**	**-0.6**
HUEH				Sn		**Sn**	**22 33 21.0**	**-1.0**
HUEH	**Huehuetenango**	**1.14**	**76**	*eP*		**Pn**	**22 33 04.9**	**-0.4**
HUEH				*eS*		**Sn**	**22 33 22.2**	**+0.2**
HUEH	**Huehuetenango**	**1.14**	**76**	⇓P		**Pn**	**22 33 05.0**	**-0.4**
HUEH				S		**Sn**	**22 33 19.9**	**-2.1**
HUEH	**Huehuetenango**	**1.14**	**76**	*iP*		**Pn**	**22 33 05.0**	**-0.4**
HUEH				*iS*		**Sn**	**22 33 21.5**	**-0.5**
HUEH				IAML			22 33 22.7	
	comp=N,15μm,0.3s							
SOKI	**Kika Raxquin**	**1.22**	**100**	*iP*		**Pn**	**22 33 06.7**	**+0.2**
CCIG	**Comitan**	**1.34**	**22**	Pn		**Pn**	**22 33 07.8**	**+0.2**
CCIG	**Comitan**	**1.34**	**22**	*eP*		**Pn**	**22 33 08.0**	**+0.4**
CCIG				*eS*		**Sn**	**22 33 25.8**	**-0.2**
CCIG	**Comitan**	**1.34**	**22**	⇓P		**Pn**	**22 33 07.8**	**+0.2**
CCIG				S		**Sn**	**22 33 23.8**	**-2.1**
CCIG	**Comitan**	**1.34**	**22**	*iP*		**Pn**	**22 33 07.8**	**+0.2**
CCIG				IAML			22 33 28.3	
	comp=N,3μm,0.4s							
STG2	**El Palmar, Qui**	**1.37**	**116**	*iP*		Pn	22 33 03.3	-4.6
STG2				*iS*		**Sn**	**22 33 18.8**	**-7.8**
STG2				IAML			22 33 22.5	
	comp=E,37μm,0.6s							
STG8	**El Palmar, Qui**	**1.38**	**115**	*iP*		Pn	22 33 03.6	-4.6
STG8				*iS*		**Sn**	**22 33 19.9**	**-7.2**
STG5	**El Palmar, Qui**	**1.41**	**116**	*iP*		Pn	22 33 03.9	-4.4
STG5				*iS*		Sn	22 33 18.8	-8.5
CARR	**Arriaga**	**1.71**	**315**	*eP*		**Pn**	**22 33 12.8**	**+0.7**
CARR				*eS*		**Sn**	**22 33 35.1**	**+1.1**
TGBT	**Tuxtla Gutierr**	**1.78**	**346**			**Pn**	**22 33 10.7**	**-2.3**
TGBT						**Sn**	**22 33 33.3**	**-2.3**
TGBT	**Tuxtla Gutierr**	**1.78**	**346**	*eP*		**Pn**	**22 33 10.7**	**-2.3**
TGBT				*eS*		**Sn**	**22 33 33.3**	**-2.3**
TGIG		**1.79**	**345**			**Pn**	**22 33 12.2**	**-0.9**
TGIG						**Sn**	**22 33 33.5**	**-2.4**
TGIG		**1.79**	**345**	*eP*		**Pn**	**22 33 12.2**	**-0.9**
TGIG				*eS*		**Sn**	**22 33 33.5**	**-2.4**
TGIG		**1.79**	**345**	*iP*		**Pn**	**22 33 12.1**	**-1.1**
TGIG				*iS*		**Sn**	**22 33 33.1**	**-2.9**
APG	**El Apazote**	**2.11**	**91**	P		**Pn**	**22 33 17.5**	**+0.1**
	comp=E,8.9nm,0.5s,baz=201,slow=14,SNR=103							
APG				S		**Sn**	**22 33 41.9**	**-1.6**
	comp=E,69nm,1.0s,baz=138,slow=10.0,SNR=6.0							
APG	**El Apazote**	**2.11**	**91**	*iP*		**Pn**	**22 33 17.5**	**+0.1**
FG8	**Yepocapa, Chim**	**2.16**	**111**	*iP*		Pn	22 33 12.6	-5.4
FG16	**Alotenango, Sa**	**2.20**	**110**	*iP*		Pn	22 33 13.9	-4.7
AVCB	**Coban**	**2.21**	**78**	*iP*		**Pn**	**22 33 18.0**	**-0.6**
AVCB				*iS*		**Sn**	**22 33 44.3**	**-1.4**
AVCB				IAML			22 33 48.1	
	comp=N,8μm,0.4s							
PCG5	**San Vicente Pa**	**2.35**	**110**	*iP*		**Pn**	**22 33 17.1**	**-3.3**
PCG5				IAML			22 33 46.3	
	comp=E,3μm,0.4s							
ESSJ	**San Jos, E**	**2.54**	**125**	*iP*		Pn	22 33 17.3	-5.6
FAME	**Alcaldia de Sa**	**2.81**	**115**	P		**Pn**	**22 33 26.5**	**+0.1**
FAME				S		**Sn**	**22 34 00.2**	**+0.4**
VHSA	**Villahermosa**	**2.95**	**355**			**Sn**	**22 34 03.7**	**+0.9**
VHSA	**Villahermosa**	**2.95**	**355**	*eS*		**Sn**	**22 34 03.7**	**+0.9**
LOAL	**Lomas de Alarc**	**2.96**	**110**	P		**Pn**	**22 33 28.5**	**0.0**
LOAL				S		**Sn**	**22 34 04.1**	**+0.7**
CMIG	**Matias Romero**	**2.97**	**314**	P		**Pn**	**22 33 29.2**	**+0.7**
	comp=E,27nm,0.3s,baz=139,slow=9.5,SNR=42							
CMIG				S		**Sn**	**22 34 03.6**	**+0.3**
	comp=E,141nm,0.4s,baz=100,slow=17,SNR=9.3							
CMIG	**Matias Romero**	**2.97**	**314**			**Pn**	**22 33 28.9**	**+0.4**
CMIG						**Sn**	**22 34 02.5**	**-0.9**
CMIG	**Matias Romero**	**2.97**	**314**	*eP*		**Pn**	**22 33 28.9**	**+0.4**
CMIG				*eS*		**Sn**	**22 34 02.5**	**-0.9**
NUBE	**Las Nubes**	**3.00**	**112**	P		**Pn**	**22 33 29.6**	**+0.5**
NUBE				S		**Sn**	**22 34 05.4**	**+1.0**
CEVE	**Cerro Verde**	**3.17**	**112**	P		**Pn**	**22 33 32.6**	**+1.2**
CEVE				S		**Sn**	**22 34 09.7**	**+1.1**
ESQI	**Esquipulas**	**3.23**	**98**	P		**Pn**	**22 33 32.9**	**+0.7**
ESQI				S		**Sn**	**22 34 10.1**	**+0.1**
MTO3	**Montecristo**	**3.24**	**101**	Pn		**Pn**	**22 33 32.3**	**-0.2**
MTO3	**Montecristo**	**3.24**	**101**	P		**Pn**	**22 33 32.3**	**-0.2**
PETF	**Flores**	**3.27**	**55**	Pn		**Pn**	**22 33 31.5**	**-1.0**
PETF	**Flores**	**3.27**	**55**	*eP*		**Pn**	**22 33 32.1**	**-0.4**
PETF				*eS*		**Sn**	**22 34 07.2**	**-3.4**
PETF	**Flores**	**3.27**	**55**	⇑P		**Pn**	**22 33 32.1**	**-0.4**
PETF				S		**Sn**	**22 34 09.6**	**-1.0**
PETF	**Flores**	**3.27**	**55**	*iP*		**Pn**	**22 33 32.1**	**-0.4**
PETF				*iS*		**Sn**	**22 34 06.2**	**-4.3**
PETF				IAML			22 34 15.4	
	comp=E,2μm,0.4s							
CEDA	**San Andres**	**3.38**	**111**	S		**Sn**	**22 34 14.1**	**+0.7**
JAYA	**Jayaque - finc**	**3.39**	**113**	P		**Pn**	**22 33 35.0**	**+0.7**
JAYA				S		**Sn**	**22 34 14.9**	**+1.1**
HUIG	**Huatulco**	**3.42**	**283**			**Pn**	**22 33 33.6**	**-0.9**
HUIG	**Huatulco**	**3.42**	**283**	*eP*		**Pn**	**22 33 33.6**	**-0.9**
HUIG				*eS*		**Sn**	**22 34 08.5**	**-5.7**
HUIG	**Huatulco**	**3.42**	**283**	*iP*		**Pn**	**22 33 33.3**	**-1.2**
PMON	**Piamonte**	**3.49**	**112**	P		**Pn**	**22 33 35.2**	**-0.4**
PMON				S		**Sn**	**22 34 16.6**	**+0.5**
UEES	**Universidad Ev**	**3.56**	**111**	S		**Sn**	**22 34 18.6**	**+0.9**
LALI	**Alcalda de L**	**3.57**	**115**	P		**Pn**	**22 33 38.3**	**+1.7**
LALI				S		**Sn**	**22 34 18.9**	**+0.9**
PANCS	**Alcalda de**	**3.65**	**112**	S		**Sn**	**22 34 20.0**	**+0.1**
SARH	**Santa Rosa de**	**3.77**	**93**	⇑P		**Pn**	**22 33 39.7**	**+0.3**
SARH				S		**Sn**	**22 34 23.4**	**+0.6**
SARH	**Santa Rosa de**	**3.77**	**93**	*iP*		**Pn**	**22 33 39.6**	**+0.3**
PAVA	**Las Pavas**	**3.83**	**110**	P		**Pn**	**22 33 41.1**	**+0.9**
NEUV	**Arroyo Zacate**	**4.03**	**312**			**Pn**	**22 33 42.7**	**-0.2**
NEUV						**Sn**	**22 34 28.2**	**-0.8**
NEUV	**Arroyo Zacate**	**4.03**	**312**	*eP*		**Pn**	**22 33 42.7**	**-0.2**
NEUV				*eS*		**Sn**	**22 34 28.2**	**-0.8**
SCIG	**Sabancuy**	**4.16**	**19**	*iP*		**Pn**	**22 33 43.6**	**-0.9**
PMUV	**Sontecomapan**	**4.22**	**326**	*eS*		**Sn**	**22 34 26.5**	**-7.2**
OXIG	**Oaxaca**	**4.42**	**298**			**Pn**	**22 33 49.0**	**+0.8**
OXIG						**Sn**	**22 34 39.5**	**+0.8**
VHO	**Vista Hermosa**

F21K				IAmb	IAmb	22 43 16.5		
	comp=Z,2.2nm,0.8s							
C23K	**Itkillik River**	**65.20**	**341**	P	**P**	**22 43 13.7**	**0.0**	
C23K				IAmb	IAmb	22 43 29.6		
	comp=Z,3.7nm,1.4s							
F19K	**Shaleruckik Mo**	**66.58**	**337**	P	**P**	**22 43 22.1**	**-0.5**	
F19K				IAmb	IAmb	22 43 23.8		
	comp=Z,3.1nm,1.1s							
B20K	**Meade River**	**67.35**	**340**	P	**P**	**22 43 28.5**	**+1.0**	
C16K	**Lisburne Hills**	**69.74**	**338**	P	**P**	**22 43 42.7**	**+0.4**	
C16K				IAmb	IAmb	22 43 45.6		
	comp=Z,5.7nm,1.5s							
CMAR	**Chiang Mai Arr**	**144.81**	**341**	PKP	**PKPab**	**22 52 09.1**	**+0.3**	
	comp=Z,1.1nm,0.6s,baz=330,slow=3.5,SNR=8.8							

IDC ***23*** *22:47:40.7±1.0,46°.10N×93°.88E,h0km,mb3.9/13, mbtmp3.8/19,ML3.0/6,MS3.3/7,Error ellipse: s-maj=24.1km s-min=12.9km az=5.0*
MOS ***23*** *22:47:41.3±1.4,46°.19N×93°.82E,h12km,mb4.4/14,Error ellipse: s-maj=7.2km s-min=6.4km az=34.4*
NEIC ***23*** *22:47:43.1±1.5,46°.20N±0°.09×93°.9E±0°.1,h10km±1km, mb4.2/31,Error ellipse: s-maj=16.0km s-min=12.8km az=169.0*
ASRS ***23*** *22:47:48.3±0.9,47°N±4°×9°4E±°,h9km,MLh5.0/5,Error ellipse: s-maj=9.5km s-min=5.5km az=179.2,confirmed*

ISC 23 22:47:43.9±0.7,46°.38N±0°.06×93°.84E±0°.05,h10km,n125, σ1§46/103,mb4.0/25,MS3.3/3,9C-6D,Mongolia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KNGR	**Kungurtug, Tuv**	**4.88**	**29**	P		**Pn**	**Pn**	**22 49 01.0**	**+3.7**
KNGR	**Kungurtug, Tuv**	**4.88**	**29**	Pn		Pn	**Pn**	**22 49 01.1**	**+3.7**
KNGR				Pg		**Pg**	**Pg**	**22 49 14.5**	**-2.7**
KNGR				Sg		**Sg**	**Sg**	**22 50 23.0**	**+2.5**
WMQ	**Urumqi**	**5.05**	**242**	Pn		Pn	Pn	22 48 59.3	-0.4
WMQ				Sn		**Sn**	**Sn**	**22 50 00.8**	**+2.7**
WMQ				smax		smax	smax		
	comp=N,380nm,0.7s								
WMQ				smax		smax	smax		
	comp=E,430nm,1.1s								
CUR	**Chagan-Uzun**	**5.22**	**317**	P		**Pn**	**Pn**	**22 49 05.3**	**+3.2**
CUR	**Chagan-Uzun**	**5.22**	**317**	Pn		**Pn**	**Pn**	**22 49 05.3**	**+3.2**
CUR				Pg		**Pb**	**Pb**	**22 49 18.1**	**+2.8**
CUR				Sg		**Sg**	**Sg**	**22 50 31.8**	**+0.3**
TEL	**Teeli**	**5.23**	**334**	Pn		Pn	Pn	22 48 54.5	-7.6
TEL	**Teeli**	**5.23**	**334**	Pn		**Pn**	**Pn**	**22 49 00.1**	**-2.0**
TEL				Pg		**Pb**	**Pb**	**22 49 14.0**	**-1.4**
TEL				Sg		**Sg**	**Sg**	**22 50 29.2**	**-2.4**
KZLR	**Kyzyl**	**5.34**	**4**	Pg		**Pg**	**Pg**	**22 49 26.3**	**+0.2**
KZLR				Sg		**Sg**	**Sg**	**22 50 33.8**	**-1.4**
AKAR	**Aktash**	**5.72**	**316**	P		**Pn**	**Pn**	**22 49 11.9**	**+3.0**
AKAR	**Aktash**	**5.72**	**316**	Sg		**Sg**	**Sg**	**22 50 49.5**	**+2.2**
MOY	**Mondy**	**7.07**	**39**	*eP*		Pn	Pn	22 49 38.2	+11
ZAK	**Zakamensk**	**7.45**	**54**	*eP*		**Pn**	**Pn**	**22 49 32.5**	**-0.1**
ZAK				pmax		pmax	pmax		
	comp=Z,52nm,1.1s								
MK31	**Makanchi Array**	**7.97**	**277**	Pn		Pn	**Pn**	**22 49 39.4**	**-0.3**
MK31	**Makanchi Array**	**7.97**	**277**	*de*P		Pn	**Pn**	**22 49 39.9**	**+0.2**
MKAR	**Makanchi Array**	**7.97**	**277**	Pn		Pn	**Pn**	**22 49 39.6**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=93,slow=14,SNR=19								
MKAR				Sn		**Sn**	**Sn**	**22 51 09.3**	**-0.5**
	comp=Z,2.9nm,0.3s,baz=87,slow=25,SNR=6.1								
MKAR				Lg		Lg	Lg	22 51 54.2	
	comp=Z,6.4nm,0.3s,baz=86,slow=30,SNR=10								
MKAR				LR		LR	LR	22 52 51.2	
	comp=Z,236nm,18.0s,baz=90,slow=39								
	comp=Z,1.3nm,0.4s								
MKAR	**Makanchi Array**	**7.97**	**277**	Pn		**Pn**	**Pn**	**22 49 39.4**	**-0.3**
MKAR	**Makanchi Array**	**7.97**	**277**	*i* P		**Pn**	**Pn**	**22 49 40.2**	**+0.5**
MKAR				pmax		pmax	pmax		
	comp=Z,4.0nm,0.6s								
GTA2	**Gaotai**	**8.14**	**146**	Pg		Pn	Pn	22 49 36.4	-5.8
GTA2				Sg		Sn	Sn	22 51 12.3	-2.1
GTA2				smax		smax	smax		
	comp=N,140nm,0.9s								
GTA2				smax		smax	smax		
	comp=E,130nm,1.1s								
GTA2				LR		LR			
	comp=N,380nm,7.9s								
GTA2				LR		LR			
	comp=E,340nm,8.3s								
GTA2				LR		LR			
	comp=Z,510nm,9.2s								
MAKZ	**Makanchi**	**8.18**	**277**	Pn		**Pn**	**Pn**	**22 49 42.1**	**-0.5**
MAKZ	**Makanchi**	**8.18**	**277**	P		**Pn**	**Pn**	**22 49 42.1**	**-0.5**
TLY	**Talaya**	**8.34**	**47**	Lg		Lg	Lg	22 52 07.7	
	baz=349,slow=19								
TLY				LR		LR	LR	22 52 16.3	
	comp=Z,49nm,20.2s,baz=235,slow=32								
TLY	**Talaya**	**8.34**	**47**	*e*P		**Pn**	**Pn**	**22 49 45.6**	**+0.9**
SONM	**Songino Array**	**8.69**	**76**	Pn		Pn	Pn	22 49 48.2	-1.4
	comp=Z,0.3nm,0.3s,baz=261,slow=14,SNR=10								
SONM				Pg		Pg	Pg	22 50 19.1	-11
	comp=Z,1.6nm,0.3s,baz=266,slow=18,SNR=16								
SONM				Lg		Lg	Lg	22 52 13.7	
	comp=Z,6.9nm,0.3s,baz=264,slow=24,SNR=11								
SONM				LR		LR	LR	22 53 33.4	
	comp=Z,162nm,20.7s,baz=288,slow=40								
	comp=Z,0.5nm,0.3s								
SONM	**Songino Array**	**8.69**	**76**	Pn		Pn	Pn	22 49 49.0	-0.7
ULN	**Ulaanbaatar**	**9.13**	**76**	*e*P		**Pn**	**Pn**	**22 49 59.0**	**+3.3**
ULN				pmax		pmax	pmax		
	comp=Z,1.0nm,0.6s								
ZALV	**Zalesovo Beam**	**9.53**	**326**	Pn		**Pn**	**Pn**	**22 50 02.6**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=142,slow=11,SNR=2.5								
ZALV				Lg		Lg	Lg	22 52 50.6	
	comp=Z,1.0nm,0.3s,baz=144,slow=25,SNR=10								
	comp=Z,0.4nm,0.3s								
ZALV	**Zalesovo Beam**	**9.53**	**326**			**Pn**	**Pn**	**22 50 02.2**	**+1.3**
ZALV	**Zalesovo Beam**	**9.53**	**326**	P		**Pn**	**Pn**	**22 50 02.2**	**+1.3**
KURK	**Kurchatov**	**10.98**	**299**	Pn		**Pn**	**Pn**	**22 50 20.2**	**-0.6**
KURK	**Kurchatov**	**10.98**	**299**	*i* P		**Pn**	**Pn**	**22 50 20.1**	**-0.7**
KURK				pmax		pmax	pmax		
	comp=Z,9.0nm,1.0s								
KURBB	**Kurchatov Arra**	**11.01**	**298**	Pn		**Pn**	**Pn**	**22 50 21.6**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=104,slow=13,SNR=17								
KURBB				Lg		Lg	Lg	22 53 34.4	
	comp=Z,0.4nm,0.3s,baz=115,slow=28,SNR=5.6								
	comp=Z,4.1nm,0.8s								
WUS	**Wushi**	**11.77**	**249**			Pn	Pn	22 50 30.5	-1.3
TARG	**Taragay, Kyrgy**	**12.44**	**254**	Pn		Pn	Pn	22 50 39.9	-1.3
TARG	**Taragay, Kyrgy**	**12.44**	**254**	P		Pn	Pn	22 50 39.9	-1.3
KDJ	**Kajisay**	**12.68**	**256**	Pn		Pn	Pn	22 50 39.3	-5.0
KDJ	**Kajisay**	**12.68**	**256**	P		Pn	Pn	22 50 39.3	-5.0
BOOM	**Boomskoye usch**	**13.37**	**260**	Pn		Pn	Pn	22 50 52.3	-1.4
BOOM	**Boomskoye usch**	**13.37**	**260**	P		Pn	Pn	22 50 52.3	-1.4
FRU1	**Bishkek**	**14.14**	**262**	Pn		Pn	Pn	22 51 02.8	-1.5
FRU1	**Bishkek**	**14.14**	**262**	P		Pn	Pn	22 51 02.8	-1.4
AAK	**Ala-Archa**	**14.30**	**262**	Pn		Pn	Pn	22 51 02.7	-3.7
	baz=91,slow=7.0,SNR=1.5								
AAK				Sn		Sn	Sn	22 53 36.4	-8.7
	comp=Z,0.2nm,0.3s,baz=242,slow=15,SNR=1.5								
AAK				Lg		Lg	Lg	22 55 13.3	
	comp=Z,0.1nm,0.3s,baz=232,slow=14,SNR=5.7								
AAK				LR		LR	LR	22 57 22.4	
	comp=Z,139nm,20.6s,baz=346,slow=41								
	comp=Z,0.4nm,0.6s								
AAK	**Ala-Archa**	**14.30**	**262**	Pn		**Pn**	**Pn**	**22 51 07.0**	**+0.5**
AAK	**Ala-Archa**	**14.30**	**262**	*e*P		**Pn**	**Pn**	**22 51 06.8**	**+0.4**
ARSB	**Arslanbob**	**15.86**	**259**	P		**Pn**	**Pn**	**22 51 29.8**	**+2.6**
ARSB	**Arslanbob**	**15.86**	**259**	P		Pn	**Pn**	**22 51 29.8**	**+2.6**
ARSB				pmax		pmax	pmax		
	comp=Z,16nm,1.4s								
BVAR	**Borovoye Array**	**16.52**	**302**	Pn		Pn	**Pn**	**22 51 33.3**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=96,slow=9.1,SNR=22								
BVAR				Lg		Lg	Lg	22 56 32.1	
	baz=103,slow=24,SNR=4.1								
	comp=Z,2.0nm,0.8s								
BORK	**Borovoye**	**16.56**	**302**	Pn		Pn	**Pn**	**22 51 35.7**	**-0.3**
BORK	**Borovoye**	**16.56**	**302**	P		Pn	**Pn**	**22 51 35.7**	**-0.3**
BORK				pmax		pmax	pmax		
	comp=Z,4.0nm,0.7s								
LSA	**Lhasa**	**16.79**	**188**	P		Pn	Pn	22 51 38.1	-1.3
LSA	**Lhasa**	**16.79**	**188**	P		Pn	Pn	22 51 38.1	-1.4
LSA				pmax		pmax	pmax		
	comp=Z,4.0nm,0.7s								
KK31	**Karatay Array**	**16.88**	**267**	P		**Pn**	**Pn**	**22 51 40.2**	**+0.1**
KK31	**Karatay Array**	**16.88**	**267**	P		**Pn**	**Pn**	**22 51 40.2**	**+0.1**
KK31				pmax		pmax	pmax		
	comp=Z,4.0nm,0.9s								
KKAR	**Karatay Array**	**16.88**	**267**	Pn		**Pn**	**Pn**	**22 51 37.4**	**-2.8**
KKAR	**Karatay Array**	**16.88**	**267**	P		**Pn**	**Pn**	**22 51 37.4**	**-2.8**
DRK	**Karamyk**	**17.52**	**255**				**Pn**	**22 51 47.9**	**-0.5**
DRK	**Karamyk**	**17.52**	**255**	P		**P**	**Pn**	**22 51 47.9**	**-0.5**
DRK				pmax		pmax	pmax		
	comp=Z,6.0nm,0.9s								
HIA	**Hailar**	**17.60**	**71**	*e*P		**Pn**	**Pn**	**22 51 50.7**	**+1.6**
HIA				pmax		pmax	pmax		
	comp=Z,3.0nm,0.6s								
GAR	**Garm**	**18.76**	**255**	P		**P**	**P**	**22 52 00.5**	**-2.6**
GAR				IAmb		IAmb	IAmb	22 52 07.7	
	comp=Z,13nm,1.0s								
EVN	**Everest**	**19.21**	**199**	P		P	P	22 52 05.3	-3.2
EVN				IAmb		IAmb	IAmb	22 52 12.0	
	comp=Z,6.5nm,0.6s								
CHGR	**Chuyangaron**	**19.71**	**256**	P		**P**	**P**	**22 52 11.3**	**-2.1**
CHGR				IAmb		IAmb	IAmb	22 52 40.3	
	comp=Z,14nm,1.0s								
CHGR	**Chuyangaron**	**19.71**	**256**	*e*P		**P**	**P**	**22 52 11.6**	**-1.8**
CHGR				pmax		pmax	pmax		
	comp=Z,12nm,1.0s								
NIL	**Nilore**	**20.19**	**238**	P		P	P	22 52 16.3	-2.2
NIL				IAmb		IAmb	IAmb	22 52 21.9	
	comp=Z,13nm,1.0s								
NIL	**Nilore**	**20.19**	**238**	P		P	P	22 52 16.3	-2.3
NIL				pmax		pmax	pmax		
	comp=Z,13nm,1.0s								
SHL	**Shillong**	**20.83**	**185**	P		P	P	22 52 21.9	-3.9
SHL	**Shillong**	**20.83**	**185**	P		P	P	22 52 21.9	-3.9
SHL				pmax		pmax	pmax		
	comp=Z,6.0nm,0.9s								
SHAA	**Shahritus**	**20.98**	**254**	P		P	**P**	**22 52 24.9**	**-2.3**
SHAA				IAmb		IAmb	IAmb	22 52 42.7	
	comp=Z,10nm,0.9s								
KBL	**Kabul**	**22.17**	**247**	P		P	P	22 52 37.6	-2.6
KBL				IAmb		IAmb	IAmb	22 53 04.4	
	comp=Z,5.6nm,0.8s								
KBL	**Kabul**	**22.17**	**247**	P		P	P	22 52 37.6	-2.6
KBL				pmax		pmax	pmax		
	comp=Z,6.0nm,0.9s								
AB31	**Akbulak array**	**22.83**	**290**	P		P	**P**	**22 52 46.4**	**-0.5**
AB31				IAmb		IAmb	IAmb	22 52 48.9	
	comp=Z,6.1nm,0.8s								
SVE	**Sverdlovsk**	**22.89**	**309**	*e*P		P	**P**	**22 52 49.8**	**+2.4**
NRIK	**Noril'sk**	**23.24**	**354**	P		P	**P**	**22 52 51.9**	**+1.1**
	comp=Z,3.6nm,0.8s,baz=140,slow=5.2,SNR=5.7								
	comp=Z,3.6nm,0.8s								
NRIK	**Noril'sk**	**23.24**	**354**	P		P	**P**	**22 52 51.5**	**+0.7**
NRIK				IAmb		IAmb	IAmb	22 52 59.4	
	comp=Z,5.4nm,0.9s								
NRIK	**Noril'sk**	**23.24**	**354**	P		P	**P**	**22 52 51.5**	**+0.7**
NRIK				pmax		pmax	pmax		
	comp=Z,5.0nm,1.0s								
AKTO	**Aktyubinsk**	**23.97**	**293**	P		P	**P**	**22 52 57.8**	**-0.4**
	comp=Z,2.6nm,0.6s,baz=83,slow=8.1,SNR=8.0								
	comp=Z,2.6nm,0.6s								
ARTI	**Arti**	**24.03**	**308**	P		P	**P**	**22 52 58.4**	**-0.2**
	comp=Z,8.3nm,0.8s,baz=116,slow=8.1,SNR=16								
	comp=Z,8.3nm,0.8s								
ARTI	**Arti**	**24.03**	**308**	P		**P**	**P**	**22 52 59.2**	**+0.5**
ARTI	**Arti**	**24.03**	**308**	*c* *i*P		**P**	**P**	**22 52 59.4**	**+0.7**
ARTI				S		**S**	**S**	**22 57 14.5**	**-1.0**
ARTI				pmax		pmax	pmax		
	comp=Z,9.0nm,0.8s								
KSRS	**Korea Array**	**26.71**	**97**	LR		LR	LR	23 04 54.7	
	comp=Z,6nm,18.3s,baz=295,slow=39								
CMAR	**Chiang Mai Arr**	**28.17**	**170**	*ce*P			P	22 53 42.5	+6.1
CMAR				pmax		pmax	pmax		
	comp=Z,1.0nm,0.3s								
KIRV	**Kirov**	**29.11**	**311**	*e*P		P	**P**	**22 53 42.8**	**-1.6**
TIXI	**Tiksi**	**30.23**	**21**	P		P	**P**	**22 53 53.5**	**-0.7**
TIXI				IAmb		IAmb	IAmb	22 53 58.6	
	comp=Z,3.5nm,0.8s								
TIXI	**Tiksi**	**30.23**	**21**	*e*P		P	**P**	**22 53 54.5**	**+0.4**
TIXI				pmax		pmax	pmax		
	comp=Z,2.0nm,0.8s								
BELG	**Belogornoye**	**30.25**	**299**	*e*P		P	**P**	**22 53 54.2**	**-0.4**
MJAR	**Matsushiro Arr**	**34.27**	**91**	LR		LR	LR	23 08 23.7	
	comp=Z,52nm,19.7s,baz=329,slow=36								
GNI	**Garni**	**35.82**	**278**	P		P	**P**	**22 54 44.0**	**+0.5**
GNI	**Garni**	**35.82**	**278**	*de*P		P	**P**	**22 54 44.2**	**+0.7**
GNI				pmax		pmax	pmax		
	comp=Z,11nm,1.0s								
NEUR	**Neytrino**	**35.89**	**284**	*e*P		P	**P**	**22 54 44.1**	**0.0**
NEUR				pmax		pmax	pmax		
	comp=Z,2.0nm,1.0s								
OBN	**Obninsk**	**36.32**	**305**	*e*P		P	**P**	**22 54 47.6**	**+0.2**
OBN				pmax		pmax	pmax		
	comp=Z,7.0nm,0.8s								
GEVA	**Gevas**	**37.83**	**276**	P		P	**P**	**22 55 00.6**	**-0.1**
GEVA				IAmb		IAmb	IAmb	22 55 03.4	
	comp=Z,6.7nm,0.9s								
GURO	**Guroymak-BITLI**	**38.42**	**277**	P		P	**P**	**22 55 05.8**	**+0.3**
GURO				IAmb		IAmb	IAmb	22 55 08.0	
	comp=Z,4.3nm,0.8s								
MARD	**Mardin**	**39.89**	**276**	P		P	**P**	**22 55 18.5**	**+0.6**
ARCES	**ARCESS Array B**	**40.05**	**329**	P		P	**P**	**22 55 20.3**	**+1.6**
	comp=Z,7.7nm,0.8s,baz=75,slow=6.2,SNR=4.1								
ARCES				PcP		**PcP**		**22 57 20.6**	**-2.6**
	comp=Z,3.5nm,0.8s,baz=77,slow=4.0,SNR=1.9								
	comp=Z,7.7nm,0.8s								
FINES	**FINESS Array B**	**40.65**	**317**	P		P	**P**	**22 55 24.2**	**+0.5**
	comp=Z,2.9nm,0.8s,baz=78,slow=9.9,SNR=4.3								
	comp=Z,2.9nm,0.8s								
FINES	**FINESS Array B**	**40.65**	**317**	P		P	**P**	**22 55 23.6**	**0.0**
FINES	**FINESS Array B**	**40.65**	**317**	*i* P		P	**P**	**22 55 24.7**	**+1.0**
FINES				pmax		pmax	pmax		
	comp=Z,3.0nm,0.8s								
AKASG	**Malin Array Be**	**41.78**	**300**	P		P	**P**	**22 55 32.8**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=63,slow=8.6,SNR=6.5								
	comp=Z,1.9nm,0.7s								
AKASG	**Malin Array Be**	**41.78**	**300**	*ce*P		P	**P**	**22 55 33.2**	**0.0**
AKASG				pmax		pmax	pmax		
	comp=Z,2.0nm,0.6s								
BR131	**Keskin Array S**	**43.56**	**284**	P		P	**P**	**22 55 47.8**	**-0.1**
BR131				IAmb		IAmb	IAmb	22 55 49.5	
	comp=Z,4.3nm,0.8s								
BR131	**Keskin Array S**	**43.56**	**284**	P		P	**P**	**22 55 47.8**	**-0.1**
BR131				pmax		pmax	pmax		
	comp=Z,4.0nm,0.9s								
BRTR	**Keskin Array B**	**43.56**	**284**	P		P	**P**	**22 55 48.0**	**+0.1**
	comp=Z,2.6nm,0.8s,baz=76,slow=7.4,SNR=14								
	comp=Z,2.6nm,0.8s								
BRTR	**Keskin Array B**	**43.56**	**284**	P		P	**P**	**22 55 48.6**	**+0.6**
BRTR	**Keskin Array B**	**43.56**	**284**	*ce*P		P	**P**	**22 55 48.5**	**+0.6**
BRTR				pmax		pmax	pmax		
	comp=Z,3.0nm,0.7s								
RAYN	**Ar Rayn**	**44.87**	**256**	P		P	P	22 55 56.8	-1.6
RAYN	**Ar Rayn**	**44.87**	**256**	P		P	P	22 55 56.8	-1.6
RAYN				pmax		pmax	pmax		
	comp=Z,2.0nm,0.9s								
BURAR	**Bucovina Array**	**45.40**	**298**	P		P	**P**	**22 56 02.2**	**-0.3**
BURAR				IAmb		IAmb	IAmb	22 56 04.3	
	comp=Z,1.7nm,0.8s								
HFS	**Hagfors**	**46.84**	**317**	P		P	**P**	**22 56 13.8**	**+0.3**
	comp=Z,5.7nm,0.7s,baz=98,slow=7.6,SNR=8.7								
	comp=Z,5.7nm,0.7s								
NC405	**NORSAR Array S**	**47.40**	**319**	P		P	**P**	**22 56 18.5**	**+0.7**
NB2	**NORSAR Subarra**	**47.65**	**319**	P		P	**P**	**22 56 20.0**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=65,slow=7.4								
NOA	**NORSAR Array B**	**47.65**	**319**	P		P	**P**	**22 56 20.0**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=65,slow=7.4,SNR=4.7								
NOA				LR		LR	LR	23 18 08.4	
	comp=Z,136nm,20.3s,baz=295,slow=38								
	comp=Z,1.4nm,0.8s								
NOA	**NORSAR Array B**	**47.65**	**319**	P		P	**P**	**22 56 20.0**	**+0.1**
CLL	**Collm**	**50.88**	**307**	*e*P		P	**P**	**22 56 44.0**	**-0.6**
CLL	**Collm**	**50.88**	**307**	*e*P		P	**P**	**22 56 44.0**	**-0.6**
B20K	**Meade River**	**53.12**	**24**	P		P	**P**	**22 57 01.5**	**+0.4**
B20K				IAmb		IAmb	IAmb	22 57 05.7	
	comp=Z,2.8nm,0.6s								
B22K	**Teshekpuk Lake**	**53.95**	**23**	P		P	**P**	**22 57 07.3**	**+0.2**
E19K	**Redstone River**	**54.60**	**27**	P		P	**P**	**22 57 12.1**	**+0.2**
E19K				IAmb		IAmb	IAmb	22 57 29.8	
	comp=Z,4.4nm,1.4s								
BMAR	**Burnt Mountain**	**58.28**	**23**	P		P	**P**	**22 57 38.0**	**-0.2**
BORG	**Borgarnes**	**58.29**	**333**	*i* P		P	**P**	**22 57 38.0**	**-0.2**
ILAR	**Eielson Array**	**59.54**	**26**	P		P	**P**	**22 57 47.1**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=325,slow=5.8,SNR=6.1								
	comp=Z,0.5nm,0.8s								
L22K	**Petersville**	**59.89**	**29**	P		P	**P**	**22 57 48.7**	**-0.7**
F30M	**Barrier River**	**60.34**	**20**	P		P	**P**	**22 57 52.2**	**-0.2**
G31M	**Satah River**	**61.25**	**20**	P		P	**P**	**22 57 57.2**	**-1.3**
G31M				IAmb		IAmb	IAmb	22 57 58.5	
	comp=Z,3.6nm,1.2s								
ESDC	**Sonseca Array**	**67.27**	**304**	P		P	**P**	**22 58 37.4**	**-1.2**
	comp=Z,0.9nm,0.8s,baz=52,slow=5.6,SNR=4.4								
	comp=Z,0.9nm,0.8s								
YKA	**Yellowknife Ar**	**69.11**	**14**	P		P	**P**	**22 58 48.9**	**-0.7**
	comp=Z,0.2nm,0.7s,baz=335,slow=7.2,SNR=3.2								
	comp=Z,0.2nm,0.7s								
WRA	**Warramunga Arr**	**75.49**	**141**	P		P		22 59 25.7	-2.5
	comp=Z,0.5nm,0.9s,baz=340,slow=6.1,SNR=2.6								
	comp=Z,0.5nm,0.9s								
NVL	**N'lazarevskaya**	**130.47**	**206**	*e*PKHKP		PKPpre		23 06 31.6	
NVL				pmax		pmax			
	comp=Z,92nm,2.2s								

IDC ***23*** *22:51:35.8±2.9,22°.98N×144°.45E,h0km,mb3.8/8, mbtmp3.9/9,ML4.1/1,MS2.9/1,Error ellipse: s-maj=122.2km s-min=23.7km az=76.0*
NEIC ***23*** *22:51:37.8±1.3,23°.0N±0°.1×144°.5E±0°.3,h10km±2km, mb4.2/6,Error ellipse: s-maj=53.8km s-min=6.7km az=67.0*

ISC 23 22:51:40.7±2.2,23°.0N±0°.2×144°.5E±0°.6,h35km,n24, σ0§71/18,mb4.2/11,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**4.56**	**333**	Pn		Pn	**Pn**	**22 52 47.4**	**+0.2**
	9.2nm,0.3s,baz=37,slow=20,SNR=2.3								
JCJ				Sn		**Sn**	**Sn**	**22 53 39.0**	**0.0**
	3.1nm,0.3s,baz=264,slow=10,SNR=1.9								
	53nm,0.5s								
JCJ	**Chichijima**	**4.56**	**333**	Pn		**Pn**	**Pn**	**22 52 46.0**	**-1.2**
KSRS	**Korea Array**	**20.25**	**319**	P		**P**	**P**	**22 56 12.9**	**0.0**
	0.7nm,0.5s,baz=138,slow=7.9,SNR=6.0								
	0.7nm,0.5s								
H11N1	**WAKE ISLAND Hy**	**21.12**	**95**	T		T	T	23 18 37.6	
	baz=283,slow=74								
H11N2	**WAKE ISLAND Hy**	**21.12**	**95**	T		T	T	23 18 37.7	
	baz=283,slow=74								
H11N3	**WAKE ISLAND Hy**	**21.13**	**95**	T		T	T	23 18 37.5	
	baz=283,slow=74								
H11S3	**WAKE ISLAND Hy**	**21.23**	**98**	T		T	T	23 18 58.1	
	baz=283								
H11S1	**WAKE ISLAND Hy**	**21.24**	**98**	T		T	T	23 18 55.5	
	baz=283								
H11S2	**WAKE ISLAND Hy**	**21.25**	**98**	T		T	T	23 19 00.5	
	baz=283								
SONM	**Songino Array**	**39.12**	**319**	P		**P**	**P**	**22 59 04.2**	**-0.6**
	0.2nm,0.4s,baz=130,slow=6.4,SNR=1.6								
	0.2nm,0.4s								
CMAR	**Chiang Mai Arr**	**42.71**	**273**	LR		LR		23 15 11.5	
	comp=Z,15nm,21.5s,baz=105,slow=33								
WB0	**Warramunga Arr**	**43.66**	**194**	P		**P**		**22 59 42.4**	**+0.2**
WB0				IAmb		IAmb		22 59 44.8	
	comp=Z,6.8nm,1.3s								
WR8	**Warramunga Arr**	**43.82**	**194**	P		**P**		**22 59 43.0**	**-0.5**
WRA	**Warramunga Arr**	**43.84**	**194**	P		**P**		**22 59 43.1**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=14,slow=8.4,SNR=6.7								
	comp=Z,0.2nm,0.3s								
WRA	**Warramunga Arr**	**43.84**	**194**	P		**P**		**22 59 42.6**	**-1.0**
MKAR	**Makanchi Array**	**54.70**	**312**	P		**P**		**23 01 07.0**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=91,slow=9.0,SNR=5.7								
	comp=Z,0.6nm,0.6s								
KURK	**Kurchatov**	**57.34**	**316**	P		**P**		**23 01 25.6**	**+0.4**
KURK				IAmb		IAmb		23 01 26.5	
	comp=Z,1.1nm,0.8s

TXAR	**Lajitas Array**	**82.30**	**55**	P		P		23 47 11.0	+5.8
	comp=Z,0.5nm,0.9s,baz=256,slow=4.7,SNR=4.5								
	comp=Z,0.5nm,0.9s								
ILAR	**Eielson Array**	**86.15**	**11**	P		**P**		**23 47 28.1**	**+4.3**
	comp=Z,0.5nm,1.0s,baz=212,slow=5.7,SNR=3.4								
	comp=Z,0.5nm,1.0s								
LPAZ	**La Paz**	**97.91**	**110**	LR		LR		00 27 54.6	
	comp=Z,27nm,18.1s,baz=70,slow=32								
BRTR	**Keskin Array B**	**149.50**	**317**	PKPbc		**PKPab**		**23 54 36.2**	**-1.6**
	comp=Z,1.3nm,0.9s,baz=66,slow=0.9,SNR=4.1								
GERES	**GERESS Array B**	**150.08**	**351**	PKPbc		**PKPab**		**23 54 37.9**	**-1.8**
	comp=Z,0.8nm,0.8s,baz=270,slow=1.6,SNR=4.7								

*IDC **24** 00:00:04.3±0.8, 28.8°N×139.3°E, h461km±16km, mb2.7/6, mbtmp3.6/9, Error ellipse: s-maj=36.1km s-min=17.8km az=67.0*

ISC 24 00:00:04.3±0.9, 28.8°N±0.1°×139.1°E±0.2°, h450km, n9, σ0°79/10, mb3.0/6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**3.19**	**122**	P	**P**	**00 01 13.8**	**+1.0**
	73nm,0.7s,baz=285,slow=19,SNR=1.4						
JCJ				S	**S**	**00 02 08.2**	**-0.1**
	79nm,0.3s,baz=304,slow=24,SNR=13						
MJAR	**Matsushiro Arr**	**7.75**	**354**	P	**P**	**00 01 57.1**	**+0.3**
	0.8nm,0.3s,baz=206,slow=18,SNR=3.9						
USRK	**Ussuriysk Ar.**	**16.39**	**341**	P	**P**	**00 03 30.7**	**+0.8**
	2.1nm,0.6s,baz=156,slow=5.7,SNR=4.7						
SONM	**Songino Array**	**31.62**	**316**	P	**P**	**00 05 48.8**	**+0.2**
	0.2nm,0.4s,baz=128,slow=8.1,SNR=3.1						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**47.31**	**308**	P	**P**	**00 07 55.4**	**-0.2**
	0.3nm,0.6s,baz=90,slow=9.4,SNR=5.4						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**48.69**	**186**	P	**P**	**00 08 05.9**	**-0.3**
	0.2nm,0.3s,baz=7.7,slow=7.8,SNR=4.8						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**49.92**	**313**	P	**P**	**00 08 14.7**	**-0.3**
	0.7nm,0.4s,baz=92,slow=8.4,SNR=14						
	0.7nm,0.4s						
BVAR	**Borovoye Array**	**54.96**	**317**	P	**P**	**00 08 51.4**	**0.0**
	0.3nm,0.4s,baz=86,slow=6.5,SNR=2.8						
	0.3nm,0.4s						
YKA	**Yellowknife Ar**	**71.90**	**28**	P	**P**	**00 10 38.8**	**-1.5**
	0.2nm,0.6s,baz=296,slow=6.5,SNR=3.5						
	0.2nm,0.6s						

IDC 24 00:02:49.1±26.0, 4.25°S×69.46°E, h0km, mb3.5/4, mbtmp3.5/4, MS3.0/3, Error ellipse: s-maj=887.5km s-min=38.6km az=62.0, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S3	**Diego Garcia H**	**4.50**	**138**	T	T	00 08 48.1	
	baz=310,slow=75,SNR=77						
H08S1	**Diego Carcia H**	**4.51**	**139**	T	T	00 08 46.7	
	baz=310,slow=75,SNR=125						
H08S2	**Diego Garcia H**	**4.53**	**138**	T	T	00 08 46.9	
	baz=310,slow=75,SNR=82						
PALK	**Pallekele**	**16.02**	**44**	LR	LR	00 11 21.8	
	comp=Z,75nm,20.5s,baz=286,slow=32						
CMAR	**Chiang Mai Arr**	**36.78**	**51**	LR	LR	00 24 10.8	
	comp=Z,9.6nm,18.2s,baz=330,slow=35						
KAPI	**Kappang**	**50.12**	**93**	LR	LR	00 31 48.9	
	comp=Z,31nm,19.9s,baz=284,slow=35						
MKAR	**Makanchi Array**	**52.08**	**11**	P	P	00 12 00.7	-0.1
	0.2nm,0.6s,baz=188,slow=7.4,SNR=3.6						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**55.21**	**7**	P	P	00 12 23.8	+0.2
	0.4nm,0.8s,baz=204,slow=7.7,SNR=2.5						
	0.4nm,0.8s						
ZALV	**Zalesovo Beam**	**59.40**	**10**	P	P	00 12 52.9	-0.3
	0.6nm,0.6s,baz=193,slow=5.9,SNR=2.2						
	0.6nm,0.6s						
WRA	**Warramunga Arr**	**64.96**	**110**	P	P	00 13 31.3	0.0
	0.7nm,0.8s,baz=271,slow=6.4,SNR=3.9						
	0.7nm,0.8s						

*THE **24** 00:25:31.5, 37°N±3°×2°1E±°, h7km±3km, M2.7/20, MLh2.7/20*
*ATH **24** 00:25:32.5, 36.75°N×21.28E, h13km±2km, ML2.9/16, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*IDC **24** 00:25:42.9±2.6, 38.32°N×22.92E, h0km, mb3.5/4, mbtmp3.5/5, ML3.1/1, Error ellipse: s-maj=67.5km s-min=33.7km az=166.0*

ISC 24 00:25:30.8±1.7, 36.72°N±0.06°×21.20E±0.05, h15km±9km, n58, σ1°07/66, mb3.5/4, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL1	**Pylos**	**0.44**	**64**	P	**Pg**	**00 25 40.0**	**+0.4**
PYL1				S	**Sg**	**00 25 45.0**	**-0.7**
PYL	**PYLOS**	**0.47**	**68**	P	**Pg**	**00 25 40.5**	**+0.5**
PYL				S	**Sg**	**00 25 46.8**	**+0.3**
PYL	**PYLOS**	**0.47**	**68**	P	**Pg**	**00 25 40.5**	**+0.4**
PYL				S	**Sg**	**00 25 45.5**	**-0.9**
ITM	**Ithomi**	**0.74**	**52**	P	**Pg**	**00 25 45.0**	**-0.2**
ITM				S	**Sb**	**00 25 55.6**	**+0.3**
ITM	**Ithomi**	**0.74**	**52**	P	**Pg**	**00 25 45.0**	**-0.2**
ITM				S	**Sg**	**00 25 54.6**	**-0.4**
AMT	**Artemida-Makis**	**0.91**	**27**	P	**Pg**	**00 25 48.0**	**-0.4**
AMT				S	**Sb**	**00 26 00.7**	**+0.7**
AMT	**Artemida-Makis**	**0.91**	**27**	P	**Pg**	**00 25 48.0**	**-0.4**
AMT				S	**Sb**	**00 26 00.2**	**+0.2**
LTHK	**Lithakia**	**1.03**	**344**	P	**Pg**	**00 25 49.4**	**-1.2**
VLX	**Vlachokerasia**	**1.15**	**55**	P	**Pg**	**00 25 52.2**	**-0.6**
VLX	**Vlachokerasia**	**1.15**	**55**	P	**Pg**	**00 25 52.4**	**-0.5**
VLX				S	**Sg**	**00 26 07.2**	**-0.6**
ORTH	**Orthonies,Zaky**	**1.20**	**341**	P	**Pg**	**00 25 53.4**	**-0.5**
ORTH	**Orthonies,Zaky**	**1.20**	**341**	P	**Pn**	**00 25 54.3**	**+1.3**
ORTH				S	**Sn**	**00 26 10.7**	**+1.7**
DRO	**Drossia**	**1.29**	**18**	P	**Pn**	**00 25 54.6**	**+0.3**
RLS	**Riolos of Patr**	**1.35**	**9**	P	**Pn**	**00 25 55.3**	**+0.3**
RLS	**Riolos of Patr**	**1.35**	**9**	P	**Pn**	**00 25 55.5**	**+0.5**
YRMI	**Loutra Irminis**	**1.38**	**5**	P	**Pg**	**00 25 57.3**	**-0.1**
RTZL	**Ratzakli, Kefa**	**1.39**	**346**	P	**Pn**	**00 25 56.0**	**+0.4**
RTZL	**Ratzakli, Kefa**	**1.39**	**346**	P	**Pg**	**00 25 57.4**	**-0.2**
VLI	**Veliai**	**1.40**	**90**	P	**Pn**	**00 25 56.5**	**+0.8**
VLI	**Veliai**	**1.40**	**90**	P	**Pn**	**00 25 56.5**	**+0.8**
VLI				S	**Sb**	**00 26 15.0**	**+0.9**
AXS	**Araxos**	**1.48**	**5**	P	**Pb**	**00 25 58.7**	**+0.8**
KLV1	**Kalavrita**	**1.50**	**29**	P	**Pn**	**00 25 58.4**	**+1.3**
GUR	**Goura**	**1.52**	**37**	P	**Pn**	**00 25 58.0**	**+0.6**
GUR	**Goura**	**1.52**	**37**	P	**Pn**	**00 25 57.8**	**+0.4**
KLV	**Kalavryta, Ach**	**1.52**	**30**	P	**Pn**	**00 25 57.6**	**+0.1**
KLV	**Kalavryta, Ach**	**1.52**	**30**	P	**Pn**	**00 25 57.8**	**+0.4**
VLS	**Valsamata**	**1.53**	**342**	P	**Pn**	**00 25 57.5**	**0.0**
KTHA	**Kythira Island**	**1.57**	**107**	P	**Pn**	**00 25 59.1**	**+1.0**
KTHA	**Kythira Island**	**1.57**	**107**	P	**Pn**	**00 25 59.3**	**+1.2**
AIOA	**Agios Ioannis,**	**1.62**	**25**	P	**Pn**	**00 25 60.0**	**+1.2**
AGEO	**AgiosGiorgios,**	**1.69**	**24**	P	**Pn**	**00 26 01.1**	**+1.5**
ZIRI	**Ziria, Aigiali**	**1.69**	**20**	P	**Pn**	**00 26 01.3**	**+1.6**
AGRP	**Agrapidokambos**	**1.72**	**14**	P	**Pn**	**00 26 01.5**	**+1.3**
MG00	**Magoula, Dorid**	**1.79**	**19**	P	**Pn**	**00 26 02.6**	**+1.5**
EFP	**Efpalio**	**1.79**	**18**	P	**Pn**	**00 26 01.7**	**+0.6**
EFP	**Efpalio**	**1.79**	**18**	P	**Pn**	**00 26 02.6**	**+1.5**
SERG	**Sergoula**	**1.82**	**22**	P	**Pn**	**00 26 02.5**	**+1.0**
KALE	**Kalithea**	**1.83**	**24**	P	**Pn**	**00 26 02.6**	**+0.9**
KALE	**Kalithea**	**1.83**	**24**	P	**Pn**	**00 26 03.3**	**+1.7**
ANKY	**Antikythira Is**	**1.90**	**116**	P	**Pn**	**00 26 03.5**	**+0.9**
PVO	**Paravola**	**1.91**	**8**	P	**Pn**	**00 26 03.7**	**+1.0**
LTK	**Loutraki**	**1.92**	**47**	P	**Pn**	**00 26 02.9**	**0.0**
ANX	**Ano Chora**	**1.95**	**17**	P	**Pn**	**00 26 04.8**	**+1.4**
ANX	**Ano Chora**	**1.95**	**17**	P	**Pn**	**00 26 04.8**	**+1.4**
NYDR	**Nydri-Lefkada**	**2.03**	**349**	P	**Pn**	**00 26 05.2**	**+0.9**
NYDR	**Nydri-Lefkada**	**2.03**	**349**	P	**Pn**	**00 26 06.6**	**+2.2**
LKD2	**Lefkada Island**	**2.11**	**348**	P	**Pn**	**00 26 07.3**	**+1.8**
EVR	**Evrytania**	**2.24**	**12**	P	**Pn**	**00 26 09.2**	**+1.8**
AXAR	**Agios Charalam**	**2.35**	**29**	P	**Pn**	**00 26 10.0**	**+1.2**
MAKR	**Makrakomi, Fth**	**2.40**	**18**	P	**Pn**	**00 26 11.3**	**+1.8**
DION	**Dionisos Attik**	**2.56**	**57**	P	**Pn**	**00 26 11.1**	**-0.7**
TETR	**Tetrakomo, Epi**	**2.62**	**1**	P	**Pn**	**00 26 13.6**	**+1.0**
PENT	**Pentalofos**	**3.47**	**359**	P	**Pn**	**00 26 25.6**	**+1.3**
KEST	**Kesra**	**9.63**	**268**	Pn	Pn	00 28 23.8	+35
	0.1nm,0.3s,baz=138,slow=13,SNR=8.5						
	1.1nm,0.5s						
FINES	**FINESS Array B**	**24.93**	**6**	P	**P**	**00 30 50.9**	**-2.1**
	4.4nm,1.0s,baz=185,slow=9.6,SNR=4.4						
	4.4nm,1.0s						
KURBB	**Kurchatov Arra**	**42.68**	**52**	P	**P**	**00 33 24.6**	**-2.1**
	0.2nm,0.3s,baz=276,slow=9.0,SNR=4.1						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**45.62**	**57**	P	P	00 33 47.2	-3.1
	0.1nm,0.4s,baz=273,slow=7.0,SNR=5.8						
	0.1nm,0.4s						
ZALV	**Zalesovo Beam**	**46.27**	**47**	P	**P**	**00 33 55.1**	**-0.2**
	0.3nm,0.3s,baz=282,slow=6.9,SNR=2.1						
	0.3nm,0.3s						

NNC 24 00:47:08.3±3.8, 38.21°N×69.49°E, h0km, mb3.8, mpv3.4, 4D, Error ellipse: s-maj=29.1km s-min=23.1km az=7.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**3.95**	**6**	Pg	Pg	00 48 21.6	-2.4
	27nm,0.8s						
IUG				Lg	Lg	00 49 15.9	
	50nm,0.8s						
KK31	**Karatay Array**	**4.95**	**9**	Pn	Pn	00 48 23.7	-0.2
	0.4nm,0.3s,baz=189,slow=15,SNR=9.6						
KK31				⇓Pg	Pb	00 48 38.8	+2.9
	2.2nm,0.5s,baz=185,slow=16,SNR=9.7						
KK31				⇓Lg	Lg	00 49 43.2	
	5.2nm,0.5s,baz=193,slow=26,SNR=6.5						
MRKS	**Merke**	**5.35**	**31**	Pg	Pb	00 48 45.2	+2.5
	7.1nm,0.5s						
MRKS				Lg	Lg	00 49 56.5	
	5.4nm,0.5s						
AAK	**Ala-Archa**	**5.84**	**39**	⇓Pn	Pn	00 48 35.9	-0.4
	0.6nm,0.6s						
AAK				⇓Lg	Lg	00 50 12.3	
	3.5nm,0.8s						
DGS	**Degeres**	**6.93**	**42**	Pg	Pg	00 49 15.4	-5.6
	2.1nm,0.5s						
DGS				Lg	Lg	00 50 48.3	
	3.2nm,0.9s						

*NEIC **24** 00:53:08.9±1.6, 56.01°N±0.08°×149.2°W±0.1°, h10km±2km, mb4.2/8, ML4.3/62, ML4.1(AEIC), Error ellipse: s-maj=13.6km s-min=9.5km az=178.0*
*ANF **24** 00:53:09.1±0.3, 56.11°N×149.22°W, h0km, ML4.6/30, Error ellipse: s-maj=4.1km s-min=1.6km az=178.0*
*IDC **24** 00:53:10.1±0.9, 56.03°N×149.36°W, h0km, mb3.8/14, mbtmp3.8/19, ML3.5/5, MS3.6/35, Error ellipse: s-maj=22.8km s-min=13.7km az=28.0*
*AEIC **24** 00:53:14.8±1.7, 56.12°N±0.08°×149.2°W±0.1°, h7km±7km, Error ellipse: s-maj=12.5km s-min=8.3km az=165.0*

ISC 24 00:53:11.2±0.6, 56.19°N±0.07°×149.23°W±0.04, h10km, n477, σ0°97/469, mb4.1/18, MS3.6/30, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.43**	**312**	Pn	**Pn**	**00 53 50.4**	**-0.5**
	14nm,0.3s,baz=115,slow=2.6,SNR=191						
KDAK				Sn	**Sn**	**00 54 19.0**	**-1.6**
	16nm,0.3s,baz=123,slow=8.8,SNR=4.3						
KDAK				LR	LR	00 55 04.6	
	comp=Z,1μm,19.3s,baz=140,slow=46						
	51nm,0.5s						
KDAK	**Kodiak Island**	**2.43**	**312**		**Pn**	**00 53 50.3**	**-0.6**
KDAK				Sn	**Sn**	**00 54 19.1**	**-1.6**
KDAK	**Kodiak Island**	**2.43**	**312**	P	**Pn**	**00 53 50.4**	**-0.6**
	baz=132						
KDAK				S	**Sn**	**00 54 19.2**	**-1.5**
	baz=132						
OHAK	**Old Harbor**	**2.46**	**296**	P	**Pn**	**00 53 50.4**	**-1.0**
OHAK	**Old Harbor**	**2.46**	**296**	S	**Sn**	**00 54 19.3**	**-2.2**
OHAK	**Old Harbor**	**2.46**	**296**		**Pn**	**00 53 50.1**	**-1.3**
OHAK				Sn	**Sn**	**00 54 19.0**	**-2.4**
OHAK	**Old Harbor**	**2.46**	**296**	P	**Pn**	**00 53 50.1**	**-1.3**
	baz=116,SNR=13						
OHAK				S	**Sn**	**00 54 18.9**	**-2.6**
	baz=116						
SYI	**Shuyak Island**	**2.97**	**326**		**Pn**	**00 53 58.1**	**-0.2**
SYI				IAML		00 54 35.4	
	comp=E,659nm,0.5s						
SYI	**Shuyak Island**	**2.97**	**326**		**Sn**	**00 54 32.8**	**-1.1**
Q20K	**Shuyak Island**	**2.97**	**326**	P	**Pn**	**00 53 58.0**	**-0.3**
	baz=145						
Q20K				S	**Sn**	**00 54 33.4**	**-0.6**
	baz=145						
CNPM	**China Poot**	**3.51**	**343**		**Pn**	**00 54 05.8**	**0.0**
CNPM				Sn	**Sn**	**00 54 47.2**	**-0.1**
CNPM				IAML		00 54 49.4	
	comp=E,371nm,0.7s						
Q23K	**Middleton Isla**	**3.59**	**24**	P	**Pn**	**00 54 06.3**	**-0.6**
	baz=206						
Q23K				S	**Sn**	**00 54 46.5**	**-2.8**
	baz=206						
MID	**Middleton Isla**	**3.60**	**24**	Pn	**Pn**	**00 54 06.5**	**-0.4**
MID				Sn	**Sn**	**00 54 47.0**	**-2.4**
Q19K	**Cape Douglas,**	**3.63**	**321**		**Pn**	**00 54 08.0**	**+0.6**
Q19K				Sn	**Sn**	**00 54 49.8**	**-0.5**
Q19K	**Cape Douglas,**	**3.63**	**321**	P	**Pn**	**00 54 07.2**	**-0.2**
	baz=139,SNR=15						
BRSE	**Bradley Lake S**	**3.65**	**348**		**Pn**	**00 54 07.5**	**-0.3**
BRSE					**Sn**	**00 54 48.2**	**-2.5**
BRSE					Lg	00 54 49.6	
BRSE	**Bradley Lake S**	**3.65**	**348**	P	**Pn**	**00 54 07.4**	**-0.3**
	baz=167,SNR=32						
BRSE				S	**Sn**	**00 54 48.8**	**-2.0**
	baz=167						
BRLK	**Bradley Lake**	**3.69**	**347**		**Pn**	**00 54 07.9**	**-0.4**
BRLK				Sn	**Sn**	**00 54 50.3**	**-1.5**
BRLK				IAML		00 54 56.3	
	comp=E,431nm,0.6s						
BRLK				IAML		00 54 58.2	
	comp=N,318nm,0.8s						
KAHG	**Katmai Hook Gl**	**3.69**	**311**		**Pn**	**00 54 09.2**	**+0.9**
HOM	**Homer**	**3.71**	**341**	Pn	**Pn**	**00 54 09.0**	**+0.5**
HOM	**Homer**	**3.71**	**341**	P	**Pn**	**00 54 09.2**	**+0.7**
	baz=159						
KAWH	**Katmai**	**3.73**	**308**		**Sn**	**00 54 50.0**	**-2.9**
KAWH					Lg	00 54 52.2	
KAKN	**Katmai Knife C**	**3.81**	**306**		**Sn**	**00 54 53.1**	**-1.6**
KAKN					Lg	00 54 55.5	
AUI	**Augustine Isla**	**3.87**	**326**		**Pn**	**00 54 11.2**	**+0.5**
AUI					**Sn**	**00 54 54.3**	**-1.9**
AUI					Lg	00 54 56.0	
AUJK	**Augustine Jueg**	**3.88**	**327**		**Pn**	**00 54 11.5**	**+0.7**
AUJ2	**Augustine Moun**	**3.88**	**327**		**Pn**	**00 54 11.3**	**+0.5**
AU22					Pb	00 54 11.6	-8.0
AU22					**Sn**	**00 54 54.6**	**-1.7**
AU22					Lg	00 54 56.9	
ACHA	**Angle Creek He**	**3.88**	**304**		**Pn**	**00 54 11.5**	**+0.5**
AGU	**Augustine-Summ**	**3.89**	**326**		**Pn**	**00 54 10.9**	**-0.2**
AUCH	**Augustine Cone**	**3.90**	**326**		**Pn**	**00 54 11.6**	**+0.5**
AUCH					**Sn**	**00 54 54.8**	**-2.2**
AUCH					Lg	00 54 58.6	
AUW	**Augustine West**	**3.91**	**326**		**Pn**	**00 54 11.7**	**+0.4**
SEW	**Seward**	**3.93**	**358**		**Pn**	**00 54 11.0**	**-0.4**
SEW	**Seward**	**3.93**	**358**	P	**Pn**	**00 54 10.7**	**-0.8**
	baz=178,SNR=16						
P23K	**Montague Islan**	**3.94**	**14**		**Pn**	**00 54 11.2**	**-0.4**
P23K				IAML		00 55 00.6	
	comp=E,291nm,0.5s						
P23K				IAML		00 55 04.1	
	comp=N,292nm,0.8s						
P23K	**Montague Islan**	**3.94**	**14**		**Sn**	**00 54 55.4**	**-2.5**
P23K	**Montague Islan**	**3.94**	**14**	P	**Pn**	**00 54 11.2**	**-0.4**
	baz=194,SNR=7.2						
P23K				S	**Sn**	**00 54 55.4**	**-2.5**
	baz=194						
ANCK	**Angle Creek**	**3.96**	**303**		**Pn**	**00 54 12.7**	**+0.7**
KAHC	**Katmai Hardscr**	**3.98**	**311**		**Pn**	**00 54 12.6**	**+0.3**
KAHC					**Sn**	**00 54 57.7**	**-1.3**
Q18K	**Katmai Hardscr**	**3.98**	**311**	P	**Pn**	**00 54 12.1**	**-0.2**
	baz=128,SNR=81						
P19K	**Oil Pt**	**4.07**	**330**		**Pn**	**00 54 13.3**	**-0.2**
P19K				IAML		00 55 06.6	
	comp=E,641nm,0.5s						
P19K	**Oil Pt**	**4.07**	**330**		**Sn**	**00 55 02.4**	**+1.2**
P19K	**Oil Pt**	**4.07**	**330**	P	**Pn**	**00 54 13.5**	**0.0**
	baz=148						
PLK4	**Peulik 4**	**4.16**	**293**		**Pn**	**00 54 14.1**	**-0.8**
PLK4				IAML		00 55 06.9	
	comp=N,327nm,0.5s						
PLK4				IAML		00 55 06.9	
	comp=E,343nm,0.5s						
R17L	**Mt. Peulik Vol**	**4.17**	**293**	P	**Pn**	**00 54 14.2**	**-0.6**
	baz=109,SNR=39						
CNTC	**Contact Creek**	**4.17**	**303**		**Pn**	**00 54 15.1**	**+0.2**
CNTC					**Sn**	**00 55 01.6**	**-2.1**
Q17K	**Contact Creek**	**4.17**	**303**	P	**Pn**	**00 54 14.6**	**-0.3**
	baz=119						
ILS	**Iliamna Low So**	**4.29**	**333**		**Pn**	**00 54 16.5**	**-0.1**
O22K	**Cooper Landing**	**4.31**	**357**		**Pn**	**00 54 16.8**	**0.0**
O22K	**Cooper Landing**	**4.31**	**357**	P	**Pn**	**00 54 16.5**	**-0.3**
	baz=176,SNR=16						
ILSW	**Iliamna Southw**	**4.33**	**333**		**Pn**	**00 54 17.0**	**-0.2**
ILSW				IAML		00 55 09.7	
	comp=E,334nm,0.7s						
ILSW				IAML		00 55 15.9	
	comp=N,254nm,0.7s						
PLK1	**Peulik 1**	**4.34**	**295**		**Pn**	**00 54 16.9**	**-0.3**
SLKM	**Skilak Lake**	**4.36**	**354**		**Pn**	**00 54 16.3**	**-1.2**
SLKM				IAML		00 55 10.6	
	comp=E,292nm,0.3s						
SLKM				IAML		00 55 16.3	
	comp=N,241nm,0.7s						
HIN	**Hinchinbrook I**	**4.46**	**18**		**Pn**	**00 54 18.1**	**-0.7**
HIN				IAML		00 55 10.8	
	comp=N,310nm,0.6s						
HIN				IAML		00 55 19.3	
	comp=E,375nm,0.9s						
KAIM	**Kayak Island**	**4.54**	**32**		**Pn**	**00 54 19.5**	**-0.3**
KAIM	**Kayak Island**	**4.54**	**32**	IAML		00 55 13.5	
	comp=E,352nm,0.9s						
KAIM				IAML		00 55 14.1	
	comp=N,382nm,0.6s						
KAIM	**Kayak Island**	**4.54**	**32**	P	**Pn**	**00 54 19.5**	**-0.3**
	baz=215						
KAIM				S	**Sn**	**00 55 10.5**	**-2.0**
	baz=215						
P18K	**Big Mountain,**	**4.54**	**317**		**Pn**	**00 54 19.2**	**-0.7**
P18K	**Big Mountain,**	**4.54**	**317**	P	**Pn**	**00 54 19.4**	**-0.5**
	baz=134,SNR=19						
P18K				S	**Sn**	**00 55 09.9**	**-2.8**
	baz=134						
PLK5	**Peulik 5**	**4.54**	**297**		**Pn**	**00 54 19.8**	**-0.1**
RED	**Redoubt Volcan**	**4.63**	**338**		**Pn**	**00 54 20.3**	**-1.0**
RED				IAML		00 55 19.3	
	comp=E,308nm,0.7s						
RED				IAML		00 55 21.2	
	comp=N,242nm,0.7s						
RDSO	**Redoubt South**	**4.66**	**338**		**Pn**	**00 54 20.8**	**-0.9**
CAPN	**Captain Cook N**	**4.70**	**348**	P	**Pn**	**00 54 22.0**	**-0.1**
	baz=167						
RDWB	**Redoubt West**	**4.71**	**338**		**Pn**	**00 54 21.7**	**-0.7**
Q16K	**King Salmon**	**4.72**	**305**		**Pn**	**00 54 22.6**	**+0.3**
Q16K	**King Salmon**	**4.72**	**305**	P	**Pn**	**00 54 22.4**	**+0.1**
	baz=120,SNR=68						
EYAK	**Cordova Ski Ar**	**4.74**	**21**	P	**Pn**	**00 54 22.3**	**-0.3**
EYAK	**Cordova Ski Ar**	**4.74**	**21**		**Pn**	**00 54 21.9**	**-0.7**
EYAK				IAML		00 55 20.5	
	comp=N,296nm,0.9s						
EYAK				IAML		00 55 20.8	
	comp=E,196nm,0.8s						
EYAK	**Cordova Ski Ar**	**4.74**	**21**	P	**Pn**	**00 54 22.4**	**-0.2**
	baz=203,SNR=33						
EYAK				S	**Sn**	**00 55 15.2**	**-2.4**
	baz=203						
DFR	**Drift River**	**4.77**	**339**		**Pn**	**00 54 22.6**	**-0.6**
R16K	**Pilot Point**	**4.78**	**290**		**Pn**	**00 54 22.4**	**-0.7**
R16K				IAML		00 55 33.1	
	comp=E,159nm,1.0s						
R16K				IAML		00 55 35.3	
	comp=N,159nm,0.9s						
R16K	**Pilot Point**	**4.78**	**290**	P	**Pn**	**00 54 22.1**	**-1.1**
	baz=105,SNR=11						
GLI	**Glacier Island**	**4.83**	**13**		**Pn**	**00 54 23.8**	**-0.2**
GLI	**Glacier Island**	**4.83**	**13**	IAML		00 55 36.5	
	comp=E,121nm,0.8s						
GLI	**Glacier Island**	**4.83**	**13**	P	**Pn**	**00 54 23.6**	**-0.4**
	baz=194						
GLI				S	**Sn**	**00 55 17.5**	**-2.4**
	baz=194						
O19K	**Port Alsworth**	**4.83**	**328**		**Pn**	**00 54 23.0**	**-0.9**
O19K	**Port Alsworth**	**4.83**	**328**	P	**Pn**	**00 54 23.4**	**-0.5**
	baz=145,SNR=11						
O19K				S	**Sn**	**00 55 17.8**	**-2.0**
	baz=145						
RAGM	**Ragged Mountai**	**4.85**	**28**		**Pn**	**00 54 23.7**	**-0.4**
SUCK	**Suckling Hills**	**4.85**	**34**		**Pn**	**00 54 23.7**	**-0.5**
SUCK				IAML		00 55 19.5	
	comp=N,368nm,0.6s						
SUCK				IAML		00 55 35.3	
	comp=E,198nm,0.9s						
O18K	**Koktuh Hills**	**4.85**	**322**		**Pn**	**00 54 23.7**	**-0.6**
O18K				IAML		00 55 24.8	
	comp=N,225nm,0.7s						
O18K				IAML		00 55 39.9	
	comp=E,131nm,1.0s						
O18K	**Koktuh Hills**	**4.85**	**322**	P	**Pn**	**00 54 23.5**	**-0.7**
	baz=138,SNR=12						
P17K	**Kvichak River**	**4.90**	**311**		**Pn**	**00 54 24.9**	**+0.1**
P17K	**Kvichak River**	**4.90**	**311**	P	**Pn**	**00 54 25.0**	**+0.2**
	baz=126,SNR=85						
RC01	**Rabbit Creek A**	**4.92**	**357**		**Pn**	**00 54 24.6**	**-0.5**
RC01				IAML		00 55 25.6	
	comp=E,192nm,0.4s						
RC01				IAML		00 55 33.5	
	comp=N,134nm,0.6s						
RC01	**Rabbit Creek A

SML	Sawmill	5.65	4	P		Pn	00 54 35.6	+0.4
	baz=185,SNR=24							
M23K	Glacier View	5.67	7	P		Pn	00 54 35.8	+0.3
	baz=188,SNR=18							
VNKR	Veniaminof 5	5.67	273			Pn	00 54 34.9	-0.7
TGL	Tana Glacier	5.68	34			Pn	00 54 34.4	-1.2
N18K	Kilae Creek	5.70	325			Pn	00 54 35.2	-0.6
N18K	Kilae Creek	5.70	325	P		Pn	00 54 35.1	-0.7
	baz=140,SNR=8.3							
SCM	Sheep Creek Mo	5.74	9			Pn	00 54 36.7	+0.2
SCM	Sheep Creek Mo	5.74	9	P		Pn	00 54 36.5	-0.1
	baz=190,SNR=17							
S14K	Fog Glacier	5.76	275	P		Pn	00 54 35.7	-1.0
	baz=88							
O16K	Kokwok River B	5.83	309			Pn	00 54 37.8	+0.2
O16K	Kokwok River B	5.83	309	P		Pn	00 54 37.7	+0.2
	baz=123							
RKAV	Rock Avalanche	5.86	42			Pn	00 54 38.1	0.0
VRDI	Verde Repeater	5.88	28			Pn	00 54 38.1	-0.4
SKT	Skwentna	5.93	349			Pn	00 54 39.2	+0.2
SKT	Skwentna	5.93	349	P		Pn	00 54 38.7	-0.3
	baz=168,SNR=13							
N25K	Chitina, Valde	5.94	22			Pn	00 54 38.4	-0.8
N25K	Chitina, Valde	5.94	22	P		Pn	00 54 38.9	-0.2
	baz=205,SNR=33							
KIAG	Kiagna River	5.95	34			Pn	00 54 39.2	-0.3
GLB	Gilahina Butte	5.97	26			Pn	00 54 38.9	-0.7
GRNC	Granite Creek	6.01	38			Pn	00 54 39.7	-0.5
N17K	Nushagak Hills	6.03	319			Pn	00 54 40.2	-0.2
N17K	Nushagak Hills	6.03	319	P		Pn	00 54 40.0	-0.4
	baz=134,SNR=11							
CHNA	Chernabura Isl	6.04	261	P		Pn	00 54 38.1	-2.4
CHNA	Chernabura Isl	6.04	261	P		Pn	00 54 38.1	-2.4
	baz=74,SNR=8.5							
CNBA	Chernabura Isl	6.04	261			Pn	00 54 37.7	-2.9
M20K	Styx River	6.05	342			Pn	00 54 40.5	-0.3
M20K	Styx River	6.05	342	P		Pn	00 54 40.2	-0.5
	baz=159							
MCARA	McCarthy VSAT	6.12	29			Pn	00 54 40.8	-0.9
MCARA	McCarthy VSAT	6.12	29	P		Pn	00 54 41.2	-0.4
	baz=214,SNR=14							
PTPK	Patty Peak	6.13	32			Pn	00 54 41.8	-0.1
M24K	Tolsona, Glenn	6.14	14			Pn	00 54 41.1	-0.8
M24K	Tolsona, Glenn	6.14	14	P		Pn	00 54 41.6	-0.3
	baz=196,SNR=12							
PCA	Pinnacle	6.16	47			Pn	00 54 42.9	+0.8
PINM	Pinnacle	6.16	47	P		Pn	00 54 42.0	-0.2
	baz=233							
CUT	Chulitna	6.25	356			Pn	00 54 43.5	+0.1
BARN	Barnard Glacie	6.28	36			Pn	00 54 44.0	0.0
M19K	Big River Lodg	6.32	337	P		Pn	00 54 44.1	-0.2
	baz=153							
CTG	Chitna Glacier	6.32	38	P		Pn	00 54 44.1	-0.4
	baz=223							
M18K	Stony River	6.32	330	P		Pn	00 54 43.8	-0.5
	baz=145,SNR=18							
CTGM	Chitina Glacie	6.32	38			Pn	00 54 44.2	-0.2
BCPM	Bancas Point	6.33	50			Pn	00 54 44.6	0.0
LOGN	Logan Glacier	6.34	39			Pn	00 54 44.5	-0.2
WACK	Wrangell Chich	6.34	21			Pn	00 54 45.0	+0.3
SDPT	Sand Point	6.40	267	P		Pn	00 54 44.2	-1.2
SDPT	Sand Point	6.40	267			Pn	00 54 43.8	-1.6
SDPT	Sand Point	6.40	267	P		Pn	00 54 43.5	-1.9
	baz=79,SNR=8.5							
L22K	Petersville	6.40	354			Pn	00 54 46.3	+0.7
O15K	Ungalikthiuk R	6.42	302			Pn	00 54 45.9	+0.2
O15K	Ungalikthiuk R	6.42	302	P		Pn	00 54 45.8	+0.1
	baz=114							
WAT6	Susitna Watana	6.46	6	P		Pn	00 54 46.6	+0.3
	baz=187,SNR=34							
O28M	Mount Upton	6.60	42			Pn	00 54 48.4	0.0
O28M	Mount Upton	6.60	42	P		Pn	00 54 48.6	+0.2
	baz=229							
N16K	Nishlik Lake	6.60	314			Pn	00 54 48.6	+0.3
N16K	Nishlik Lake	6.60	314	P		Pn	00 54 48.9	+0.6
	baz=127,SNR=33							
L19K	White Mountain	6.66	337			Pn	00 54 48.4	-0.7
L19K	White Mountain	6.66	337	P		Pn	00 54 48.8	-0.3
	baz=152,SNR=11							
WAT7	Susitna Watana	6.67	2			Pn	00 54 49.9	+0.7
WAT1	Susitna Watana	6.67	3			Pn	00 54 49.7	+0.6
WAT1	Susitna Watana	6.67	3	P		Pn	00 54 49.5	+0.4
	baz=183							
M17K	Holitna River	6.74	324			Pn	00 54 49.9	-0.2
M17K	Holitna River	6.74	324	P		Pn	00 54 50.0	-0.1
	baz=138							
PPLA	Purkeypile	6.89	349			Pn	00 54 53.5	+1.2
PPLA	Purkeypile	6.89	349	P		Pn	00 54 53.2	+0.9
	baz=166							
DHY	Denali Highway	6.97	7			Pn	00 54 53.6	+0.2
DHY	Denali Highway	6.97	7	P		Pn	00 54 53.6	+0.2
	baz=188,SNR=22							
O29M	Mount Kennedy	6.97	49			Pn	00 54 53.6	+0.1
O29M	Mount Kennedy	6.97	49	P		Pn	00 54 53.5	+0.1
	baz=237,SNR=12							
N15K	Kwethluk River	6.99	309			Pn	00 54 54.1	+0.6
N15K	Kwethluk River	6.99	309	P		Pn	00 54 53.5	0.0
	baz=121							
M26K	Nabesna, AK	7.00	25	P		Pn	00 54 54.3	+0.6
	baz=209							
M16K	Timber Creek	7.01	318			Pn	00 54 54.0	+0.1
M16K	Timber Creek	7.01	318	P		Pn	00 54 53.4	-0.5
	baz=130							
PAX	Paxson	7.06	14	Pn		Pn	00 54 55.3	+0.7
PAX	Paxson	7.06	14	P		Pn	00 54 55.0	+0.4
	baz=197,SNR=8.2							
YUK2	White River	7.09	34			Pn	00 54 55.8	+0.9
YUK8	Steele Glacier	7.09	40			Pn	00 54 56.0	+0.8
YUK8	Steele Glacier	7.09	40	P		Pn	00 54 55.4	+0.3
	baz=227,SNR=14							
PVV	Pavlof Volcano	7.13	269			Pn	00 54 53.9	-1.6
O14K	Tigyukauivet M	7.13	300			Pn	00 54 54.6	-0.9
O14K	Tigyukauivet M	7.13	300	P		Pn	00 54 55.6	+0.1
	baz=112,SNR=15							
L18K	Granite Mounta	7.15	331			Pn	00 54 55.1	-0.6
L18K	Granite Mounta	7.15	331	P		Pn	00 54 55.3	-0.4
	baz=145							
PS4A	Pavlof South-4	7.17	268			Pn	00 54 54.6	-1.5
YUK3	Moose Creek	7.20	35			Pn	00 54 57.4	+0.8
YUK3	Moose Creek	7.20	35	P		Pn	00 54 57.2	+0.6
	baz=222,SNR=8.6							
HAG	Hague Volcano	7.21	268			Pn	00 54 55.1	-1.4
DOL	Dolgoi Island	7.22	267			Pn	00 54 55.0	-1.8
M27K	Edge Creek, AK	7.24	28			Pn	00 54 57.5	+0.5
M27K	Edge Creek, AK	7.24	28	P		Pn	00 54 57.2	+0.2
	baz=214							
RND	Reindeer	7.24	1			Pn	00 54 57.5	+0.5
TRF	Thorofare Moun	7.30	356			Pn	00 54 58.7	+0.7
TRF	Thorofare Moun	7.30	356	P		Pn	00 54 58.1	+0.2
	baz=175							
S31K	Pelican	7.31	71			Pn	00 54 55.3	-2.5
S31K	Pelican	7.31	71	P		Pn	00 54 55.6	-2.2
	baz=260							
MENT	Mentasta	7.32	20			Pn	00 54 58.3	+0.2
YUK6	Outpost Mounta	7.41	46	P		Pn	00 54 59.1	-0.4
	baz=234							
KTH	Kantishna Hill	7.43	354			Pn	00 54 59.5	-0.2
DTNA	Dutton South F	7.44	267			Pn	00 54 58.0	-1.7
L26K	Log Cabin Wild	7.47	21			Pn	00 55 00.2	0.0
M15K	Kasigluk River	7.51	312			Pn	00 55 01.1	+0.4
M15K	Kasigluk River	7.51	312	P		Pn	00 55 00.5	-0.2
	baz=123,SNR=13							
YUK4	Talbot Arm	7.54	42	P		Pn	00 55 03.0	+1.7
	baz=230							
L17K	Donlin	7.56	326	P		Pn	00 55 00.6	-0.7
	baz=139							
BVCY	Beaver Creek	7.56	31			Pn	00 55 01.8	+0.3
BVCY	Beaver Creek	7.56	31	P		Pn	00 55 01.2	-0.2
	baz=217,SNR=7.1							
MCK	McKinley	7.57	1			Pn	00 55 02.5	+1.1
MCK	McKinley	7.57	1	P		Pn	00 55 02.2	+0.8
	baz=181							
N14K	Kuskokwak Cree	7.59	305			Pn	00 55 02.3	+0.6
N14K	Kuskokwak Cree	7.59	305	P		Pn	00 55 02.2	+0.6
	baz=115							
K20K	Telida	7.59	343	P		Pn	00 55 01.3	-0.5
	baz=159							
P30M	Million Dollar	7.59	54	P		Pn	00 55 02.0	+0.2
	baz=243							
L16K	Owhat River	7.65	321			Pn	00 55 02.5	-0.1
L16K	Owhat River	7.65	321	P		Pn	00 55 02.3	-0.3
	baz=132,SNR=17							
HYT	Haines Junctio	7.70	48	Pn		Pn	00 55 03.5	+0.2
HYT	Haines Junctio	7.70	48	P		Pn	00 55 02.1	-1.2
	baz=237							
SIT	Sitka	7.72	78	P		Pn	00 55 00.7	-2.8
SIT	Sitka	7.72	78	Pn		Pn	00 55 00.2	-3.3
SIT	Sitka	7.72	78	P		Pn	00 55 00.4	-3.1
	baz=268							
K24K	Donnelly Dome	7.83	11			Pn	00 55 06.2	+1.1
K24K	Donnelly Dome	7.83	11	P		Pn	00 55 05.5	+0.4
	baz=194,SNR=10							
L27K	Beaver Creek,	7.84	25			Pn	00 55 06.0	+0.7
L27K	Beaver Creek,	7.84	25	P		Pn	00 55 04.7	-0.5
	baz=241							
BCAR	Beaver Creek A	7.86	26	Pn		Pn	00 55 06.2	+0.8
CHUM	Lake Minchumin	7.87	350	P		Pn	00 55 05.9	+0.3
	baz=168,SNR=21							
RIDG	Independent Ri	7.88	14			Pn	00 55 06.2	+0.4
RIDG	Independent Ri	7.88	14	P		Pn	00 55 06.5	+0.6
	baz=198,SNR=19							
DOT	Dot Lake	7.92	17			Pn	00 55 07.1	+0.8
BPAW	Bear Paw Mtn.	7.98	354	Pn		Pn	00 55 06.7	-0.5
K17K	Iditarod	8.00	329			Pn	00 55 07.0	-0.4
K17K	Iditarod	8.00	329	P		Pn	00 55 06.7	-0.7
	baz=141							
M14K	Bethel	8.08	310			Pn	00 55 08.7	+0.2
M14K	Bethel	8.08	310	P		Pn	00 55 08.1	-0.3
	baz=120,SNR=24							
SKAG	Skagway	8.11	60	P		Pn	00 55 09.4	+0.5
SKAG	Skagway	8.11	60			Pn	00 55 09.5	+0.7
SKAG	Skagway	8.11	60	P		Pn	00 55 08.3	-0.6
	baz=251							
BESE	Bessie Mountai	8.13	67	Pn		Pn	00 55 07.9	-1.3
S32K	Killisnoo	8.14	75	Pn		Pn	00 55 08.0	-1.3
S32K	Killisnoo	8.14	75	P		Pn	00 55 07.5	-1.8
	baz=266							
J18K	Innoko River	8.21	336			Pn	00 55 09.9	-0.3
J18K	Innoko River	8.21	336	P		Pn	00 55 10.2	0.0
	baz=150							
N30M	Aishikik Lake	8.21	45			Pn	00 55 10.6	+0.2
N30M	Aishikik Lake	8.21	45	P		Pn	00 55 10.5	+0.2
	baz=234							
SCRK	Sand Creek	8.24	16			Pn	00 55 10.7	-0.1
SCRK	Sand Creek	8.24	16	P		Pn	00 55 10.6	-0.1
	baz=200							
R32K	Eaglecrest	8.25	69	Pn		Pn	00 55 10.3	-0.6
O30N	Mendenhall	8.27	51			Pn	00 55 11.1	0.0
O30N	Mendenhall	8.27	51	P		Pn	00 55 10.7	-0.4
	baz=241							
HDA	Harding Lake	8.32	7			Pn	00 55 12.6	+0.8
HDA	Harding Lake	8.32	7	P		Pn	00 55 12.5	+0.7
	baz=189							
JIS	Juneau Island	8.32	69	P		Pn	00 55 11.3	-0.5
WRH	Wood River Hil	8.33	3			Pn	00 55 12.9	+1.1
M29M	Somme Creek	8.34	37	P		Pn	00 55 12.4	+0.3
	baz=225							
J20K	Nowinta River	8.37	345			Pn	00 55 12.3	-0.2
J20K	Nowinta River	8.37	345	P		Pn	00 55 12.4	-0.1
	baz=161,SNR=7.7							
L15K	Ungalaik Mounta	8.38	316	P		Pn	00 55 12.6	0.0
	baz=126							
NEA2	Nenana	8.43	0			Pn	00 55 14.7	+1.4
NEA2	Nenana	8.43	0	P		Pn	00 55 13.1	-0.2
	baz=181							
J19K	Poorman	8.45	340			Pn	00 55 12.6	-0.9
J19K	Poorman	8.45	340	P		Pn	00 55 13.3	-0.2
	baz=155,SNR=5.7							
CCB	Clear Creek Bu	8.51	4			Pn	00 55 14.6	+0.3
SSLS	Shishaldin Sou	8.52	266			Pn	00 55 13.7	-0.9
M13K	Dall Lake	8.55	305			Pn	00 55 15.4	+0.6
M13K	Dall Lake	8.55	305	P		Pn	00 55 14.4	-0.4
	baz=114							
K27K	Chicken	8.63	21			Pn	00 55 16.9	+0.9
J25K	Salcha River,	8.66	11			Pn	00 55 16.2	-0.3
J25K	Salcha River,	8.66	11	P		Pn	00 55 16.1	-0.3
	baz=194							
L14K	Kuka Creek	8.68	312			Pn	00 55 16.6	-0.1
L14K	Kuka Creek	8.68	312	P		Pn	00 55 16.1	-0.5
	baz=121,SNR=30							
IL31		8.69	7			Pn	00 55 17.4	+0.7
ILAR	Eielson Array	8.69	7	Pn		Pn	00 55 17.1	+0.3
	comp=E,0.8nm,0.3s,baz=188,slow=13,SNR=47							
ILAR				Sn		Sn	00 56 51.7	-2.9
	comp=E,1.2nm,0.3s,baz=176,slow=20,SNR=5.4							
ILAR				LR		LR	00 58 58.5	
	comp=E,377nm,18.1s,baz=166,slow=39							
	comp=E,3.3nm,0.5s							
ILAR	Eielson Array	8.69	7			Pn	00 55 17.8	+1.0
COLA	College	8.74	4	P		Pn	00 55 17.7	+0.3
COLA	College	8.74	4	P		Pn	00 55 17.6	+0.1
	baz=185							
WHY	Whitehorse	8.76	53			Pn	00 55 18.7	+0.9
WHY	Whitehorse	8.76	53	P		Pn	00 55 17.4	-0.4
	baz=245,SNR=5.7							
J17K	VABM Dome	8.76	330	Pn		Pn	00 55 17.6	-0.1
J17K	VABM Dome	8.76	330	P		Pn	00 55 17.8	+0.1
	baz=142							
N31M	Braeburn, Yuko	8.76	47			Pn	00 55 18.4	+0.7
N31M	Braeburn, Yuko	8.76	47	P		Pn	00 55 17.8	+0.1
	baz=238							
K15K	Wolf Creek Mou	8.77	319	Pn		Pn	00 55 18.1	+0.1
K15K	Wolf Creek Mou	8.77	319	P		Pn	00 55 17.6	-0.3
	baz=129							
MLY	Manley	8.90	356			Pn	00 55 19.8	+0.1
L29M	L29M	8.92	34			Pn	00 55 20.6	+0.6
L29M	L29M	8.92	34	P		Pn	00 55 20.4	+0.4
	baz=223,SNR=6.1							
P32M	Atlin	8.94	61	Pn		Pn	00 55 19.8	-0.5
P32M	Atlin	8.94	61	P		Pn	00 55 19.1	-1.1
	baz=253							
I23K	Minto, Yukon-K	8.99	360			Pn	00 55 21.7	+0.8
I23K	Minto, Yukon-K	8.99	360	P		Pn	00 55 21.1	+0.2
	baz=180,SNR=7.6							
U33K	Whale Pass	9.00	84			Pn	00 55 18.0	-3.0
POKR	Poker Flat Res	9.00	5	P		Pn	00 55 21.4	+0.4
	baz=186							
M30M	Minto, Yukon	9.00	40			Pn	00 55 21.0	-0.2
M30M	Minto, Yukon	9.00	40	P		Pn	00 55 20.9	-0.2
	baz=230							
CRAG	Craig	9.10	88	P		Pn	00 55 20.1	-2.3
	baz=280							
I21K	Tanana	9.12	353	P		Pn	00 55 22.9	+0.2
	baz=170,SNR=8.9							
J16K	Anvik River	9.13	326			Pn	00 55 22.5	-0.2
J16K	Anvik River	9.13	326	P		Pn	00 55 22.4	-0.4
	baz=137							
PRP	Porcupine Dome	9.53	9	P		Pn	00 55 28.7	+0.2
	baz=192							
P33M	Teslin, Yukon	9.55	58			Pn	00 55 28.2	-0.4
P33M	Teslin, Yukon	9.55	58	P		Pn	00 55 27.9	-0.8
	baz=251							
I26K	Coal Creek Min	9.61	15	P		Pn	00 55 29.8	+0.4
	baz=200,SNR=6.4							
K29M	Barlow Dome	9.64	32	P		Pn	00 55 29.7	-0.2
	baz=222							
H21K	Melozitna Rive	9.65	351			Pn	00 55 29.4	-0.7
H21K	Melozitna Rive	9.65	351	P		Pn	00 55 30.2	+0.2
	baz=168,SNR=23							
H23K	Yukon River	9.67	359	P		Pn	00 55 30.2	-0.1
	baz=179							
M31M	Drury Creek, Y	9.69	45	P		Pn	00 55 30.2	-0.4
	baz=238							
H24K	Noodor Dome	9.70	3	P		Pn	00 55 31.8	+1.1
	baz=184							
H20K	Anotleneega Mo	9.72	346	P		Pn	00 55 31.4	+0.4
	baz=161							
N32M	Quiet Lake	9.76	53	P		Pn	00 55 30.8	-0.7
	baz=246							
H22K	Ishtalitna Cre	9.79	355	P		Pn	00 55 32.3	+0.4
	baz=173							
K13K	Kusilvak Mount	9.79	312			Pn	00 55 32.8	+0.9
K13K	Kusilvak Mount	9.79	312	P		Pn	00 55 32.0	+0.1
	baz=120,SNR=12							
J14K	Nanvaranak Lak	9.80	318	P		Pn	00 55 32.0	+0.1
	baz=126							
ZRO	Akutan Zero	9.81	265			Pn	00 55 30.9	-1.4
M11K	Mekoryuk	9.86	302	Pn		Pn	00 55 32.9	+0.1
M11K	Mekoryuk	9.86	302	P		Pn	00 55 32.1	-0.8
	baz=109							
J29N	Klondike Camp	9.91	29			Pn	00 55 34.3	+0.7
H19K	Roundabout Mou	10.00	342	P		Pn	00 55 35.5	+0.8
	baz=156							
H18K	Honhosa River	10.03	337	P		Pn	00 55 35.0	-0.2
	baz=150							
IM01	Indian Mountai	10.07	349			Pn	00 55 36.3	+0.6
I27K	Kandik River	10.14	18	P		Pn	00 55 37.2	+0.5
	baz=204							
R33M	Jennings River	10.26	64	P		Pn	00 55 37.2	-1.2
	baz=259							
I28M	Miner Creek	10.32	22	P		Pn	00 55 39.4	+0.1
	baz=210							
J30M	Hart River	10.53	32	P		Pn	00 55 42.2	0.0
	baz=222							
G21K	Allakaket	10.56	351	P		Pn	00 55 42.6	+0.2
	baz=167							
G23K	Bananza Creek	10.56	358	P		Pn	00 55 42.1	-0.4
	baz=178							
G24K	Hadweenzic Riv	10.58	4	P		Pn	00 55 43.4	+0.7
	baz=185							
H16K	Elim	10.61	328	P		Pn	00 55 42.7	-0.4
	baz=137							
DLBC	Dease Lake	10.62	70	Pn		Pn	00 55 44.5	+1.2
	comp=E,0.3nm,0.3s,baz=210,slow=15,SNR=5.1							
DLBC				Sn		Sn	00 57 41.5	-0.8
	comp=E,0.1nm,0.3s,baz=174,slow=22,SNR=1.6							
DLBC				LR		LR	00 59 06.1	
	comp=E,199nm,19.1s,baz=274,slow=33							
	comp=E,3.7nm,1.1s							
DLBC	Dease Lake	10.62	70	P		Pn	00 55 42.0	-1.3
	baz=265							
G19K	Purcell Mounta	10.67	343	P		Pn	00 55 44.2	+0.3
	baz=156							
G25K	Bearman Lake	10.71	7	P		Pn	00 55 45.2	+0.7
	baz=189							
H27K	Steamboat Moun	10.72	17	P		Pn	00 55 45.4	+0.7
	baz=203							
G18K	Tagagawik	10.74	339	P		Pn	00 55 45.3	+0.5
	baz=151							
I30M	Mount Dempster	11.01	29	P		Pn	00 55 48.5	-0.1
	baz=220							
G26K	Porcupine Rive	11.10	11	P		Pn	00 55 50.1	+0.4
	baz=196,SNR=6.3							
MMPY	Sheldon Lake,	11.17	47	P		Pn	00 55 50.6	-0.2
	baz=242							
G27K	Doyon Strip	11.24	16	P		Pn	00 55 51.9	+0.1
	baz=202							
F21K	Alatna River	11.25	351	P		Pn	00 55 52.4	+0.5
	baz=168							
F20K	Avaraart Lake	11.31	347	P		Pn	00 55 52.9	+0.2
	baz=161							
H29M	Whitestone	11.32	23	P		Pn	00 55 52.8	+0.1
	baz=212							
F24K	Squaw Lake	11.39	3	P		Pn	00 55 54.4	+0.7
	baz=184							
F19K	Shaleruckik Mo	11.41	343	P		Pn	00 55 54.9	+0.8
	baz=155							
ANM	Nome	11.55	323	P		Pn	00 55 56.2	+0.2
	baz=130							
F18K	Selawik	11.55	339	P		Pn	00 55 56.0	+0.1
	baz=150							
F25K	Christian Rive	11.56	7	P		Pn	00 55 55.5	-0.7
	baz=190							
F26K	Sheenjek River	11.78	10	P		Pn	00 55 59.2	+0.1
	baz=194							
EPYK	Eagle Plains	11.82	25	P		Pn	00 55 59.6	0.0
	baz=216							
E19K	Redstone River	11.90	345	P		Pn	00 56 01.0	+0.2
	baz=158							
E23K	Chandalar	11.91	359	P		Pn	00 56 01.2	+0.2
	baz=179							
E24K	Your Creek	11.93	1	P		Pn	00 56 01.7	+0.5
	baz=182							
G29M	Pine Creek	11.98	22	P		Pn	00 56 01.0	-0.9
	baz=211							
H31M	Peel River	12.01	31	P		Pn	00 56 02.2	0.0
	baz=223							
E22K	Anaktuvuk Pass	12.05	355	P		Pn	00 56 03.6	+0.8
	baz=173							
F15K	North Star Dit	12.09	328	P		Pn	00 56 02.9	-0.4
	baz=135							
E25K	Arctic Village	12.09	7	P		Pn	00 56 04.1	+0.7
	baz=190							
F28M	Old Crow	12.26	17	P		Pn	00 56 06.2	+0.6
	baz=205,SNR=5.3							
G30M	tAoh Zraii Nji	12.43	24	P		Pn	00 56 08.7	+0.7
	baz=215							
F14K	Arctic Creek	12.45	325	P		Pn	00 56 08.5	+0.3
	baz=131							
E18K	Tukpahlearik C	12.45	339	P		Pn	00 56 07.7	-0.5
	baz=150							
TOLK	Toolik Lake Re	12.50	359	P		Pn	00 56 09.1	+0.2
	baz=179							
E20K	Nigu River	12.52	348	P		Pn	00 56 09.5	+0.3
	baz=162							
E27K	Coleen River	12.54	13	P		Pn	00 56 10.3	+0.8
	baz=200							
D23K	Nanushuk River	12.84	358	P		Pn	00 56 15.3	+1.8
	baz=176							
G31M	Satah River	12.86	27	P		Pn	00 56 15.0	+1.2
	baz=220							
BBB	Bella Bella	12.99	99	LR		LR	01 00 03.8	
	comp=E,364nm,19.4s,baz=292,slow=32							
D19K	Kuna River	12.99	345	P		Pn	00 56 16.8	+1.1
	baz=158							
D20K	Etivluk River	13.01	348	P		Pn	00 56 16.4	+0.6
	baz=162							
D24K	Happy Valley	13.01	1	P		Pn	00 56 16.9	+1.1
	baz=181							
F30M	Barrier River	13.05	23	P		Pn	00 56 17.7	+1.4
	baz=215							
D17K	Noatak River	13.21	336	P		Pn	00 56 17.6	-0.9
	baz=144							
E28M	Babbage River	13.22	16	P		Pn	00 56 19.5	+0.8
	baz=204							
D25K	Kavik River	13.24	4	P		Pn	00 56 20.4	+1.4
	baz=187							
C21K	Knifeblade Rid	13.25	351	P		Pn	00 56 20.6	+1.5
	baz=166							
E29M	Blow River	13.29	18	P		Pn	00 56 21.4

NEW	**Newport**	**21.05**	**99**	P	**P**	**00 57 55.2**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=315,slow=5.4,SNR=3.2						
NEW				LR	LR	01 04 36.7	
	comp=Z,224nm,21.8s,baz=315,slow=32						
	comp=Z,1.3nm,0.7s						
SHEM	**Shemya Is, Ala**	**21.43**	**276**	LR	LR	01 06 09.9	
	comp=Z,38nm,20.4s,baz=110,slow=36						
YBH	**Yreka Blue Hor**	**22.45**	**119**	LR	LR	01 04 39.2	
	comp=Z,18nm,19.8s,baz=318,slow=31						
LYMT	**Lyon Mountain**	**24.47**	**96**	P	**P**	**00 58 29.6**	**-0.8**
NVAR	**Mina Array Bea**	**27.14**	**118**	P	**P**	**00 58 55.2**	**+0.6**
NVAR				LR	LR	01 07 56.5	
	comp=Z,0.4nm,0.8s,baz=332,slow=8.4,SNR=3.7						
	comp=Z,167nm,18.3s,baz=313,slow=33						
	comp=Z,0.4nm,0.8s						
RES	**Resolute Bay**	**27.63**	**28**	LR	LR	01 10 21.7	
	comp=Z,146nm,19.6s,baz=30,slow=37						
RES	**Resolute Bay**	**27.63**	**28**	IAmb	IAmb	00 59 46.2	
	comp=Z,7.8nm,1.2s						
PDAR	**Pinedale Array**	**28.62**	**101**	P	**P**	**00 59 07.9**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=343,slow=4.6,SNR=2.3						
PDAR				LR	LR	01 11 09.3	
	comp=Z,46nm,18.7s,baz=12,slow=38						
	comp=Z,0.2nm,0.6s						
PETK	**Petropavlovsk-**	**30.23**	**287**	LR	LR	01 10 49.5	
	comp=Z,74nm,21.7s,baz=86,slow=35						
MA2	**Magadan**	**31.13**	**302**	LR	LR	01 13 50.4	
	comp=Z,75nm,18.9s,baz=108,slow=40						
ULM	**Lac du Bonnet**	**31.80**	**78**	LR	LR	01 12 11.4	
	comp=Z,212nm,18.2s,baz=334,slow=36						
PFO	**Pinyon Flats O**	**31.89**	**121**	LR	LR	01 10 06.8	
	comp=Z,147nm,19.6s,baz=33,slow=32						
ANMO	**Albuquerque**	**35.92**	**108**	LR	LR	01 12 41.4	
	comp=Z,78nm,21.8s,baz=338,slow=33						
FRB	**Frobisher Bay**	**38.47**	**45**	LR	LR	01 16 01.9	
	comp=Z,156nm,19.0s,baz=46,slow=36						
YAK	**Yakutsk**	**39.46**	**313**	LR	LR	01 17 45.6	
	comp=Z,72nm,18.8s,baz=302,slow=37						
TXAR	**Lajitas Array**	**41.77**	**111**	P	**P**	**01 01 01.8**	**+1.1**
	comp=Z,0.6nm,0.9s,baz=317,slow=8.6,SNR=5.7						
TXAR				LR	LR	01 17 17.1	
	comp=Z,129nm,19.6s,baz=36,slow=35						
	comp=Z,0.6nm,0.9s						
LPIG	**La Paz**	**42.77**	**122**	LR	LR	01 16 23.7	
	comp=Z,66nm,20.0s,baz=5.0,slow=33						
SFJD	**Kangerlussuaq**	**43.15**	**35**	LR	LR	01 18 54.3	
	comp=Z,236nm,18.3s,baz=44,slow=36						
ASAJ	**Asahikawa**	**43.54**	**284**	LR	LR	01 19 22.9	
	comp=Z,43nm,18.2s,baz=332,slow=36						
SCHQ	**Schefferville**	**44.02**	**56**	LR	LR	01 20 04.8	
	comp=Z,80nm,18.2s,baz=41,slow=37						
KLR	**Kul'dur**	**45.90**	**296**	LR	LR	01 22 51.9	
	comp=Z,66nm,18.1s,baz=52,slow=39						
TKL	**Tuckaleechee C**	**47.91**	**87**	LR	LR	01 21 58.8	
	comp=Z,269nm,18.1s,baz=357,slow=36						
H11N2	**WAKE ISLAND Hy**	**48.86**	**240**	T	T	01 54 44.3	
	baz=30,slow=76,SNR=9.9						
H11N3	**WAKE ISLAND Hy**	**48.87**	**240**	T	T	01 55 13.2	
	baz=30,slow=76,SNR=7.3						
H11N1	**WAKE ISLAND Hy**	**48.88**	**240**	T	T	01 54 48.9	
	baz=30,slow=76,SNR=6.1						
H11S1	**WAKE ISLAND Hy**	**50.00**	**239**	T	T	01 56 32.1	
	baz=30,slow=76,SNR=15						
H11S2	**WAKE ISLAND Hy**	**50.01**	**239**	T	T	01 56 09.3	
	baz=30,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy**	**50.02**	**239**	T	T	01 56 02.2	
	baz=30,slow=76,SNR=14						
MJAR	**Matsushiro Arr**	**51.21**	**280**	LR	LR	01 22 33.5	
	comp=Z,27nm,21.9s,baz=7.0,slow=34						
KSRS	**Korea Array**	**56.12**	**288**	LR	LR	01 26 45.8	
	comp=Z,19nm,20.2s,baz=70,slow=36						
JNU	**Nakatsue**	**57.77**	**28**	LR	LR	01 31 27.6	
	comp=Z,29nm,18.3s,baz=360,slow=40						
SONM	**Songino Array**	**58.72**	**310**	P	**P**	**01 03 10.3**	**+1.4**
	comp=Z,1.6nm,0.8s,baz=44,slow=7.1,SNR=11						
SONM				LR	LR	01 28 37.1	
	comp=Z,124nm,18.3s,baz=21,slow=36						
	comp=Z,1.6nm,0.8s						
ZALV	**Zalesovo Beam**	**61.65**	**327**	P	**P**	**01 03 29.6**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=36,slow=6.8,SNR=5.3						
	comp=Z,0.5nm,0.3s						
HHC	**Hu-ho-hao-te**	**61.81**	**302**	*e*P	**P**	**01 03 28.3**	**-1.8**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,95nm,7.1s						
NOA	**NORSAR Array B**	**62.10**	**11**	P	**P**	**01 03 34.7**	**+3.1**
	comp=Z,1.9nm,1.1s,baz=348,slow=6.8,SNR=2.4						
NOA				LR	LR	01 32 41.3	
	comp=Z,48nm,18.4s,baz=315,slow=38						
	comp=Z,1.9nm,1.1s						
FINES	**FINESS Array B**	**62.65**	**3**	P	**P**	**01 03 37.6**	**+2.4**
	comp=Z,4.1nm,0.9s,baz=339,slow=7.4,SNR=4.5						
	comp=Z,4.1nm,0.9s						
ARTI	**Arti**	**65.57**	**344**	LR	LR	01 35 27.4	
	comp=Z,69nm,18.4s,baz=321,slow=39						
KURK	**Kurchatov**	**66.32**	**329**	IAmb	IAmb	01 04 15.9	
	comp=Z,1.6nm,0.9s						
BVAR	**Borovoye Array**	**66.38**	**335**	P	**P**	**01 04 01.0**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=38,slow=7.3,SNR=5.0						
	comp=Z,0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**66.43**	**329**	P	**P**	**01 03 59.7**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=31,slow=6.7,SNR=4.9						
	comp=Z,0.6nm,0.8s						
MKAR	**Makanchi Array**	**68.69**	**325**	P	**P**	**01 04 14.4**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=31,slow=5.3,SNR=12						
	comp=Z,0.5nm,0.4s						
LZH	**Lanzhou**	**69.24**	**304**	*e*P	**P**	**01 04 16.1**	**-2.2**
LZH				pP	sP	01 04 20.3	-0.4
LZH				pmax	pmax		
	comp=Z,28nm,1.3s						
CLL	**Collm**	**71.86**	**12**	*e*P	**P**	**01 04 36.0**	**+2.2**
CLL				*ex*	x	01 04 43.0	
AKASG	**Malin Array Be**	**73.47**	**1**	P	**P**	**01 04 45.5**	**+2.2**
	comp=Z,0.6nm,0.6s,baz=1.9,slow=5.6,SNR=4.1						
	comp=Z,0.6nm,0.6s						
AKASG	**Malin Array Be**	**73.47**	**1**	IAmb	IAmb	01 05 15.8	
	comp=Z,1.8nm,1.1s						
GERES	**GERESS Array B**	**74.37**	**12**	P	**P**	**01 04 51.5**	**+2.7**
	comp=Z,0.2nm,0.6s,baz=17,slow=7.2,SNR=4.1						
	comp=Z,0.2nm,0.6s						
SDV	**Santo Domingo**	**76.32**	**94**	LR	LR	01 41 29.3	
	comp=Z,56nm,18.1s,baz=210,slow=38						
RAR	**Rarotonga**	**77.61**	**190**	LR	LR	01 35 13.5	
	comp=Z,135nm,19.2s,baz=265,slow=33						
CMAR	**Chiang Mai Arr**	**86.35**	**298**	P	**P**	**01 05 53.5**	**0.0**
	comp=Z,0.8nm,0.3s,baz=18,slow=5.8,SNR=4.3						
CMAR				LR	LR	01 48 53.8	
	comp=Z,26nm,18.2s,baz=35,slow=39						
	comp=Z,0.8nm,0.3s						
MDP	**Montagnes des**	**89.47**	**82**	LR	LR	01 43 51.5	
	comp=Z,25nm,21.8s,baz=14,slow=34						

IDC 24 01:02:08.3±3.0, 14°.82N×119°.02E, *h*0km, mb3.6/2, mbtmp3.7/3, ML4.2/1, Error ellipse: s-maj=77.7km s-min=26.2km az=20.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**1.99**	**111**	Pn	Pn	01 02 43.0	-0.3
	32nm,0.3s,baz=320,slow=16,SNR=1.5						
TGY				Sn	Sb	01 03 11.2	+0.3
	40nm,0.3s,baz=252,slow=20,SNR=2.2						
CMAR	**Chiang Mai Arr**	**19.57**	**283**	P	P	01 06 38.2	+0.2
	0.3nm,0.3s,baz=102,slow=10,SNR=1.5						
	1.0nm,0.3s						
WRA	**Warramunga Arr**	**37.69**	**156**	P	P	01 09 25.1	-0.6
	0.4nm,0.5s,baz=337,slow=9.1,SNR=8.7						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**40.92**	**159**	P	P	01 09 53.0	+0.3
	0.7nm,0.6s,baz=337,slow=7.0,SNR=9.1						
	0.7nm,0.6s						

*SFS **24** 01:05:17.4, 35°.50N×3°.83W, *h*0km, ML3.1/14, ML3.3/14, MLv3.1/14*
*CNRM **24** 01:05:17.8, 35°.55N×3°.72W, *h*15km, ML2.7*
*MDD **24** 01:05:18.7±0.7, 35°.49N×3°.78W, *h*10km±6km, mb_Lg2.6/19, Error ellipse: s-maj=5.1km s-min=3.3km az=156.0*
*INMG **24** 01:05:19.1±1.1, 35°.49N×3°.75W, *h*15km±7km, ML2.0, Error ellipse: s-maj=3.6km s-min=2.5km az=107.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NE Al Hoceima (MARR)*

ISC 24 01:05:18.0±1.2, 35°.52N±0°.02×3°.80W±0°.03, *h*16km±9km, n53, σ1s01/95, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.32**	**201**	P	**Pg**	**01 05 24.7**	**-0.2**
PALE				S	**Sb**	**01 05 30.6**	**+0.1**
WMELI	**Melilla**	**0.72**	**106**	Pg	**Pb**	**01 05 31.5**	**-0.6**
WMELI				Sg	**Sb**	**01 05 40.2**	**-1.6**
AKLM	**AKL**	**1.01**	**183**	P	**Pb**	**01 05 37.2**	**0.0**
AKLM				S	**Sg**	**01 05 51.2**	**+0.4**
EMIJ	**Mijas**	**1.31**	**323**	Pn	**Pn**	**01 05 41.6**	**-0.1**
EMIJ				Sn	**Sb**	**01 05 59.9**	**+1.0**
EMIJ				*i* lVmb_Lg		01 06 02.4	
CHEFC	**Chefchaouen**	**1.33**	**252**	P	**Pn**	**01 05 42.6**	**+0.5**
CHEFC				S	**Sg**	**01 06 01.1**	**+0.1**
ECEU	**Ceuta**	**1.34**	**287**	Pn	**Pn**	**01 05 41.6**	**-0.5**
ECEU				Sn	**Sn**	**01 05 57.9**	**-1.8**
ECEU	**Ceuta**	**1.34**	**287**	Pn	**Pn**	**01 05 41.7**	**-0.5**
ECEU				Sn	**Sn**	**01 05 57.4**	**-2.2**
ECEU				*i* lVmb_Lg		01 06 03.8	
EMAL	**Malaga-Limoner**	**1.34**	**338**	Pn	**Pn**	**01 05 41.9**	**-0.2**
EMAL				Sn	**Sn**	**01 05 59.5**	**-0.1**
ELGU	**Los Guajares,**	**1.35**	**6**	Pn	**Pn**	**01 05 41.9**	**-0.5**
ELGU				Sn	**Sn**	**01 05 59.5**	**-0.5**
ELGU	**Los Guajares,**	**1.35**	**6**	Pn	**Pn**	**01 05 41.6**	**-0.8**
ELGU				Sn	**Sn**	**01 05 59.9**	**-0.1**
ELGU				*i* lVmb_Lg		01 06 03.6	
JBK	**JBK**	**1.55**	**139**	P	**Pn**	**01 05 44.0**	**-1.2**
JBK				S	**Sn**	**01 06 04.4**	**-0.7**
EBER	**Berja**	**1.56**	**28**	Pn	**Pn**	**01 05 45.6**	**+0.3**
EBER				Sn	**Sn**	**01 06 05.2**	**-0.1**
EBER	**Berja**	**1.56**	**28**	Pn	**Pn**	**01 05 45.1**	**-0.2**
EBER				Sn	**Sn**	**01 06 05.0**	**-0.2**
EBER				*i* lVmb_Lg		01 06 17.2	
EGOR	**Sierra Gorda,**	**1.61**	**351**	Pn	**Pn**	**01 05 46.6**	**+0.6**
EGOR				Sn	**Sb**	**01 06 08.6**	**+1.0**
EGOR	**Sierra Gorda,**	**1.61**	**351**	Pn	**Pn**	**01 05 46.5**	**+0.6**
EGOR				Sn	**Sn**	**01 06 07.1**	**+0.6**
EGOR				*i* lVmb_Lg		01 06 12.7	
EJIF	**Jimena Fronter**	**1.65**	**305**	Pn	**Pn**	**01 05 46.8**	**+0.5**
EJIF				Sn	**Sb**	**01 06 08.2**	**-0.3**
EQTA	**Presa de Quent**	**1.71**	**9**	Pn	**Pn**	**01 05 47.9**	**+0.6**
EQTA				Sn	**Sb**	**01 06 10.6**	**+0.1**
SICH	**Sidi Chahed**	**1.89**	**222**	P	**Pb**	**01 05 51.4**	**-0.7**
SICH				S	**Sb**	**01 06 15.4**	**-0.1**
E1302	**La Puebla de C**	**1.99**	**324**	Pn	**Pn**	**01 05 52.0**	**+1.0**
E1302				*i* lVmb_Lg		01 06 29.9	
LCRM	**LCR**	**2.03**	**206**	P	**Pb**	**01 05 54.2**	**-0.4**
LCRM				S	**Sb**	**01 06 21.3**	**+1.7**
ESPR	**Espera**	**2.14**	**310**	Sn	**Sn**	**01 06 19.2**	**-0.1**
IFR	**Ifrane**	**2.28**	**209**	Pn	**Pn**	**01 05 55.0**	**-0.2**
IFR				Sn	**Sn**	**01 06 21.6**	**-1.4**
EQES	**Quesada**	**2.35**	**14**	Pn	**Pn**	**01 05 56.5**	**+0.4**
EQES				Sn	**Sn**	**01 06 25.4**	**+0.7**
EQES				*i* lVmb_Lg		01 06 30.6	
E0802	**Ubeda,Jaen**	**2.52**	**8**	Sn	**Sn**	**01 06 29.4**	**+0.5**
EADA	**Adamuz**	**2.72**	**347**	Pn	**Pn**	**01 06 01.9**	**+0.8**
EADA				Sn	**Sn**	**01 06 35.4**	**+1.8**
EADA	**Adamuz**	**2.72**	**347**	Pn	**Pn**	**01 06 01.6**	**+0.5**
EADA				Sn	**Sn**	**01 06 34.0**	**+0.4**
EADA				*i* lVmb_Lg		01 06 46.3	
MD31	**MD31**	**2.76**	**197**	P	**Pn**	**01 06 02.5**	**+0.7**
MD31				S	**Sn**	**01 06 37.5**	**+2.6**
MDT	**Midelt**	**2.78**	**194**	P	**Pn**	**01 06 03.1**	**+1.1**
MDT				S	**Sn**	**01 06 37.8**	**+2.5**
ECAB	**El Cabril**	**2.87**	**333**	Pn	**Pn**	**01 06 02.5**	**-0.6**
ECAB				Sn	**Sn**	**01 06 37.8**	**+0.5**
ECAB	**El Cabril**	**2.87**	**333**	Pn	**Pn**	**01 06 04.3**	**+1.2**
ECAB				Sn	**Sn**	**01 06 38.7**	**+0.5**
ECAB				*i* lVmb_Lg		01 06 39.4	
EMIN	**Mina Concepcio**	**3.22**	**315**	Pn	**Pn**	**01 06 08.2**	**+0.2**
EMIN	**Mina Concepcio**	**3.22**	**315**	Pn	**Pn**	**01 06 08.9**	**+0.9**
EMIN				Sn	**Sn**	**01 06 44.6**	**-1.4**
EMIN				*i* lVmb_Lg		01 06 54.3	
PSIM	**Granatula de C**	**3.29**	**1**	Pn	**Pn**	**01 06 09.1**	**+0.1**
PSIM				Sn	**Sn**	**01 06 47.7**	**-0.3**
EGRO	**El Granado**	**3.59**	**305**	Pn	**Pn**	**01 06 12.6**	**-0.4**
EGRO				Sn	**Sn**	**01 06 53.2**	**-1.8**
EGRO	**El Granado**	**3.59**	**305**	Pn	**Pn**	**01 06 13.4**	**+0.5**
EGRO				Sn	**Sn**	**01 06 53.4**	**-1.6**
EGRO				*i* lVmb_Lg		01 06 59.7	
ETOB	**Tobarra**	**3.60**	**29**	Pn	**Pn**	**01 06 13.7**	**+0.5**
ETOB				Sn	**Sn**	**01 06 55.4**	**0.0**
ETOB	**Tobarra**	**3.60**	**29**	Pn	**Pn**	**01 06 13.7**	**+0.5**
ETOB				Sn	**Sn**	**01 06 54.3**	**-1.2**
ETOB				*i* lVmb_Lg		01 07 03.2	
PVAQ	**Vaqueiros**	**3.68**	**302**	*e*P	**Pn**	**01 06 15.1**	**+0.9**
PVAQ				*e*S	**Sn**	**01 06 57.1**	**-0.2**
PVAQ				*i* IAML		01 06 57.6	
PVAQ				*i* IAML		01 06 57.7	
PVAQ				*i* IAML		01 07 03.6	
PVAQ	**Vaqueiros**	**3.68**	**302**	P	**Pn**	**01 06 15.1**	**+0.9**
PBAR	**Barrancos**	**3.71**	**316**	Pn	**Pn**	**01 06 15.0**	**+0.2**
PBAR				Sn	**Sn**	**01 06 57.3**	**-0.8**
PBAR	**Barrancos**	**3.71**	**316**	*e*P	**Pn**	**01 06 16.0**	**+1.3**
PBAR				*e*S	**Sn**	**01 06 57.3**	**-0.8**
PBAR				*i* IAML		01 07 00.0	
PBAR				*i* IAML		01 07 00.2	
PBAR				*i* IAML		01 07 03.2	
PCVE	**Castro Verde**	**4.01**	**303**	Pn	**Pn**	**01 06 18.0**	**-0.9**
PCVE				Sn	**Sn**	**01 07 03.9**	**-1.6**
PCVE	**Castro Verde**	**4.01**	**303**	*e*S	**Sn**	**01 07 05.7**	**+0.2**
PCVE				*i* IAML		01 07 08.2	
PCVE				*i* IAML		01 07 09.3	
PCVE				*i* IAML		01 07 11.2	
PAB	**San Pablo**	**4.04**	**354**	Pn	**Pn**	**01 06 20.2**	**+0.9**
PAB				*i* lVmb_Lg		01 07 12.0	
MESJ	**Messejana**	**4.24**	**304**	*e*P	**Pn**	**01 06 23.3**	**+1.3**
MESJ				*e*S	**Sn**	**01 07 10.9**	**-0.3**
MESJ				*i* IAML		01 07 14.1	
MESJ				*i* IAML		01 07 18.4	
MESJ				*i* IAML		01 07 21.4	
PESTR	**Estremoz**	**4.51**	**319**	Pn	**Pn**	**01 06 25.9**	**+0.2**
MOE	**Montemor**	**4.72**	**311**	*e*S	**Sn**	**01 07 22.7**	**-0.3**
PARRA	**Arraiolos**	**4.72**	**315**	*e*P	**Pn**	**01 06 29.3**	**+0.7**
PARRA				*e*S	**Sn**	**01 07 21.3**	**-1.7**
PARRA				*i* IAML		01 07 23.6	
PARRA				*i* IAML		01 07 24.8	
PARRA				*i* IAML		01 07 24.9	
UCM	**Universidad Co**	**4.80**	**5**	Pn	**Pn**	**01 06 27.9**	**-1.8**
PMRV	**Marv??o**	**4.84**	**325**	*e*P	**Pn**	**01 06 32.9**	**+2.7**
PMRV				*e*S	**Sn**	**01 07 25.2**	**-0.7**
PMTG	**Montargil**	**5.00**	**316**	*e*P	**Pn**	**01 06 34.1**	**+1.7**
PSARD	**Sardoal**	**5.35**	**321**	*e*P	**Pn**	**01 06 38.8**	**+1.6**
PSARD				*e*S	**Sn**	**01 07 37.8**	**-0.8**
PSARD				*i* IAML		01 07 41.5	
PSARD				*i* IAML		01 07 43.5	
PSARD				*i* IAML		01 07 44.4	
TIO	**Tiouine**	**5.42**	**213**	Pn	**Pn**	**01 06 37.7**	**-0.7**
TIO				Sn	**Sn**	**01 07 38.9**	**-1.7**

*IDC **24** 01:24:42.2±2.0, 0°.20N×125°.48E, *h*0km, mb3.2/3, mbtmp3.3/3, MS3.4/1, Error ellipse: s-maj=199.1km s-min=27.5km az=64.0*
*DJA **24** 01:24:46.7±0.3, 0°.5°N±5°×12°.6E±°, *h*10km, M3.3/7, MLv3.3/7*

ISC 24 01:24:46.6±1.6, 0°.8N±0°.2×126°.5E±0°.1, h47km, n6, σ1s47/7, mb3.2/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNI	**Manado**	**1.77**	**293**	P	**Pn**	**01 25 12.8**	**-2.0**
MNI				S	**Sn**	**01 25 36.5**	**+0.4**
GTOI	**Gorontalo**	**3.46**	**268**	P	**Pn**	**01 25 38.5**	**+0.5**
GTOI				S	**Sn**	**01 26 17.5**	**-0.2**
WRA	**Warramunga Arr**	**21.96**	**160**	P	**P**	**01 29 35.2**	**-1.4**
	0.8nm,0.8s,baz=335,slow=11,SNR=5.9						
	0.8nm,0.8s						
ASAR	**Alice Springs**	**25.32**	**164**	P	**P**	**01 30 09.5**	**+0.3**
	0.2nm,0.4s,baz=341,slow=8.8,SNR=5.0						
	0.2nm,0.4s						
JOW	**Kunigami**	**25.99**	**4**	LR	LR	01 40 33.9	
	comp=Z,80nm,21.6s,baz=212,slow=36						
MKAR	**Makanchi Array**	**59.86**	**326**	P	**P**	**01 34 49.0**	**+1.5**
	0.3nm,0.7s,baz=125,slow=7.7,SNR=4.2						
	0.3nm,0.7s						

*IDC **24** 01:44:51.2±7.8, 19°.27N×117°.10W, *h*0km, mb3.4/5, mbtmp3.4/7, ML3.0/2, Error ellipse: s-maj=130.6km s-min=61.6km az=176.0*

ISC 24 01:44:52.5±6.7, 19°.3N±0°.8×117°.0W±0°.3, *h*10km, n10, σ0s44/7, mb3.3/5, Eastcentral Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TXAR	**Lajitas Array**	**15.75**	**48**	Pn	**P**	**01 48 39.0**	**+0.5**
	baz=232,slow=13,SNR=5.3						
	0.9nm,1.1s						
NVAR	**Mina Array Bea**	**19.15**	**357**	P	**P**	**01 49 16.6**	**+0.4**
	baz=168,slow=12,SNR=1.4						
	0.3nm,0.6s						
ELK	**Elko**	**21.48**	**4**	P	**P**	**01 49 41.2**	**-0.3**
	1.0nm,0.8s,baz=197,slow=9.4,SNR=4.8						
	1.0nm,0.8s						
PDAR	**Pinedale Array**	**24.28**	**13**	P	**P**	**01 50 10.1**	**-0.1**
	0.5nm,0.8s,baz=212,slow=8.9,SNR=4.6						
	0.5nm,0.8s						
ULM	**Lac du Bonnet**	**35.21**	**24**	P	**P**	**01 51 46.4**	**-0.5**
	2.1nm,1.0s,baz=216,slow=10.0,SNR=3.0						
	2.1nm,1.0s						
YKA	**Yellowknife Ar**	**43.24**	**2**	P	**P**	**01 52 53.6**	**-0.1**
	0.4nm,0.7s,baz=186,slow=8.0,SNR=9.5						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**49.68**	**344**	P	**P**	**01 53 44.5**	**+0.2**
	0.5nm,0.9s,baz=163,slow=8.2,SNR=7.4						
	0.5nm,0.9s						
H03N2	**Juan Fernandez**	**63.75**	**145**	T	T	03 05 57.6	
	baz=323,slow=77,SNR=3.7						
H03N1	**Juan Fernandez**	**63.76**	**145**	T	T	03 05 55.2	
	baz=323,slow=77,SNR=4.6						
H03N3	**Juan Fernandez**	**63.77**	**145**	T	T	03 06 00.6	
	baz=323,slow=77,SNR=3.5						

*SDD **24** 01:48:41.7±2.0, 18°.44N×70°.43W, *h*36km±11km, MD2.8, ML2.2, MW2.6, Presumed earthquake*
*OSPL **24** 01:48:44.4±1.3, 18°.55N×70°.28W, *h*25km±13km, ML2.3, Presumed earthquake*

ISC 24 01:48:42.1±1.0, 18°.59N±0°.04×70°.33W±0°.04, *h*28km±9km, n13, σ2s14/23, 12C-2D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BANI	**BANI**	**0.20**	**187**	*e*Pg	**Pb**	**01 48 48.1**	**-0.2**
BANI				*e*Sg	**Sb**	**01 48 51.2**	**-1.2**
BANI				IAML		01 48 52.8	
	comp=N,416nm,0.6s						
SDD	**Santo Domingo**	**0.42**	**108**	*i* P	**Pb**	**01 48 51.8**	**+0.6**
SDD				*e*S	**Sb**	**01 48 57.4**	**0.0**
DR08	**Loma La Naviza**	**0.48**	**38**	*e*Pg	**Pb**	**01 48 51.8**	**-0.4**
DR08				*e*Sg	**Sb**	**01 49 01.2**	**+2.2**
DR08				IAML		01 49 33.5	
	comp=N,779nm,0.2s						
SC01	**Santiago de lo**	**0.91**	**336**	*e*Pg	**Pn**	**01 48 59.1**	**0.0**
SC01				*e*Sg	**Sb**	**01 49 12.0**	**+0.7**
SC01				IAML		01 49 25.3	
	comp=N,46nm,1.8s						
HATOM	**Hato Mayor del**	**0.93**	**77**	*e*Pg	**Pn**	**01 48 59.1**	**-0.2**
HATOM				*e*Sg	**Sb**	**01 49 12.9**	**+1.4**
HATOM				IAML		01 49 15.5	
	comp=N,21nm,1.6s						
SDDR	**Presa de Saban**	**0.98**	**294**	*e*Pg	**Pn**	**01 48 57.5**	**-2.6**
SDDR				*e*Sg	**Sn**	**01 49 10.7**	**-2.5**
SDDR				IAML		01 49 19.9	
	comp=N,15nm,1.1s						
SDDR	**Presa de Saban**	**0.98**	**294**	*i* P	**Pn**	**01 49 02.1**	**+2.0**
SDDR				*e*S	**Sn**	**01 49 15.1**	**+1.9**
SDDR				IAML		01 49 20.6	
	comp=Z,225nm,0.1s						
PODR	**Polo**	**0.99**	**245**	*e*Pg	Pn	01 48 56.6	-3.8
PODR				*e*Sg	**Sn**	**01 49 07.0**	**-6.5**
LONE3	**El Aguacate, B**	**1.07**	**271**	*i* P	**Pn**	**01 49 02.3**	**+0.9**
LONE3				*e*S	**Sn**	**01 49 17.0**	**+1.7**
LONE3				IAML		01 49 18.0	
	comp=Z,15nm,1.4s						
LODU1	**El Espartillar**	**1.11**	**258**	*i* P	**Pn**	**01 49 03.6**	**+1.8**
LODU1				*e*S	**Sb**	**01 49 18.7**	**+2.0**
LODU1				IAML		01 49 21.3	
	comp=Z,46nm,1.4s						
MADR	**Mao Valverde**	**1.21**	**323**	*e*Pg	**Pn**	**01 49 01.6**	**-1.6**
MADR				IAML		01 50 02.2	
	comp=N,92nm,2.1s						
LOVI	**El Cajuil, Ovi**	**1.26**	**232**	*i* P	**Pn**	**01 49 04.5**	**+0.6**
LOVI				*e*S	**Sn**	**01 49 20.3**	**+0.5**
LOVI				IAML		01 49 24.4	
	comp=Z,82nm,1.1s						
LUDR	**Luperon**	**1.42**	**336**	*e*Pg	**Pn**	**01 49 05.2**	**-0.9**

*SFS **24** 01:56:02.5, 35°.49N×3°.93W, *h*0km, ML2.7/6, ML2.8/6, MLv2.8/6*
*CNRM **24** 01:56:02.3, 35°.58N×3°.76W, *h*15km, ML2.1*
*MDD **24** 01:56:03.1±1.8, 35°.52N×4°.00W, *h*3km±12km, mb_Lg2.1/6, Error ellipse: s-maj=11.7km s-min=4.7km az=112.0*

**ISC 24 01:56:02.1±1.3, 35°.52N±0°.03×3°.90W±0°.05, *h

	comp=Z,576nm,0.4s							
MCDR	**Montecristi**	**0.55**	**299**	⇑*e*Pg	**Pb**	**01 58 41.7**	**+0.7**
MCDR				IAML		01 58 56.0	
	comp=N,1μm,0.1s							
SDDR	**Presa de Saban**	**0.65**	**192**	⇓*e*Pg	**Pb**	**01 58 42.3**	**-0.3**
SDDR				⇑*e*Sg	**Sb**	**01 58 51.1**	**-0.2**
SDDR				IAML		01 58 52.3	
	comp=N,949nm,0.6s							
SDDR	**Presa de Saban**	**0.65**	**192**	*i* P	**Pb**	**01 58 42.3**	**-0.3**
SDDR				*e*S	**Sb**	**01 58 51.7**	**+0.4**
SDDR				IAML		01 58 52.2	
	comp=Z,9μm,0.3s							
SDDR	**Presa de Saban**	**0.65**	**192**	*i* P	**Pb**	**01 58 42.2**	**-0.4**
SDDR				*i* S	**Sb**	**01 58 51.7**	**+0.4**
SDDR				IAML		01 58 52.2	
	comp=Z,2μm,1.0s							
SFDR	**San Fco. de Ma**	**0.91**	**111**	⇑*e*Pg	**Pb**	**01 58 46.8**	**-0.3**
SFDR				⇑*e*Sg	**Sn**	**01 58 59.7**	**+0.2**
SFDR				IAML		01 59 02.5	
	comp=N,889nm,0.6s							
ABDR	**Alto Bandera**	**0.94**	**149**	⇑*e*Pg	**Pb**	**01 58 46.5**	**-1.2**
ABDR				⇑*e*Sg	**Sb**	**01 58 57.9**	**-2.1**
ABDR				IAML		01 59 42.4	
	comp=N,0.3nm,0.2s							
LONE3	**El Aguacate, B**	**1.05**	**196**	*i* P	**Pn**	**01 58 49.4**	**+0.3**
LONE3				*e*S	**Sn**	**01 59 04.0**	**+0.9**
LONE3				IAML		01 59 04.6	
	comp=Z,606nm,0.4s							
NADR	**Nagua**	**1.24**	**102**	⇑*e*Pg	**Pn**	**01 58 52.1**	**+0.5**
NADR				IAML		01 59 12.9	
	comp=N,2μm,0.3s							
DR08	**Loma La Naviza**	**1.25**	**121**	⇑*e*Pg	**Pb**	**01 58 52.4**	**-0.4**
DR08				⇑*e*Sg	**Sn**	**01 59 07.1**	**-0.7**
DR08				IAML		01 59 12.1	
	comp=N,6μm,0.2s							
LODU1	**El Espartillar**	**1.30**	**194**	*i* P	**Pb**	**01 58 54.0**	**+0.4**
LODU1				*e*S	**Sb**	**01 59 11.9**	**+2.1**
LODU1				IAML		01 59 12.8	
	comp=Z,2μm,0.5s							
BANI	**BANI**	**1.43**	**149**	⇓*e*Pg	**Pn**	**01 58 55.0**	**+0.7**
BANI				⇑*e*Sg	**Sb**	**01 59 13.5**	**-0.3**
BANI				IAML		01 59 21.9	
	comp=N,382nm,0.3s							
PODR	**Polo**	**1.45**	**185**	⇑*e*Pg	**Pb**	**01 58 56.0**	**-0.3**
PODR				⇑*e*Sg	**Sn**	**01 59 13.5**	**+0.5**
PODR				IAML		01 59 23.4	
	comp=N,345nm,0.3s							
PODR	**Polo**	**1.45**	**185**	*i* P	**Pb**	**01 58 56.3**	**0.0**
PODR				*e*S	**Sb**	**01 59 17.2**	**+2.7**
PODR				IAML		01 59 21.3	
	comp=Z,1μm,0.5s							
SDD	**Santo Domingo**	**1.64**	**135**	*i* P	**Pb**	**01 58 59.6**	**+0.2**
LOBH	**Bahia de las A**	**1.81**	**195**	*i* P	**Pb**	**01 59 01.9**	**-0.4**
LOBH				IAML		01 59 27.9	
	comp=Z,168nm,3.1s							
LOVI	**El Cajuil, Ovi**	**1.82**	**187**	*i* P	**Pb**	**01 59 02.0**	**-0.5**
LOVI				IAML		01 59 28.1	
	comp=Z,112nm,1.4s							
HATOM	**Hato Mayor del**	**1.86**	**116**	⇓*e*Pg	**Pn**	**01 59 01.5**	**+1.3**
HATOM				⇑*e*Sg	**Sb**	**01 59 25.6**	**-0.5**
HATOM				IAML		01 59 27.7	
	comp=N,177nm,0.3s							
GRTK	**Grand Turk**	**1.88**	**0**	*i* P	**Pn**	**01 59 01.6**	**+1.2**
GRTK				*e*S	**Sn**	**01 59 25.3**	**+1.9**
GRTK				IAML		01 59 30.8	
	comp=Z,151nm,0.5s							
GRTK	**Grand Turk**	**1.88**	**0**	*e*P	**Pn**	**01 59 01.3**	**+0.9**
GRTK				*e*S	**Sb**	**01 59 25.8**	**-0.9**
HIDR	**Higuey Centro**	**2.51**	**114**	⇑*e*Pg	**Pn**	**01 59 11.0**	**+1.9**
HIDR				⇑*e*Sg	**Sb**	**01 59 43.2**	**-1.6**
HIDR				IAML		01 59 47.3	
	comp=N,437nm,0.3s							
MASC	**Masc**	**2.96**	**281**	*e*P	**Pn**	**01 59 15.2**	**0.0**
MASC				*e*S	**Sn**	**01 59 51.0**	**+1.1**
MASC				IAML		02 00 02.1	
	comp=E,82nm,0.6s							
MASC				IAML		02 00 05.8		
	comp=N,98nm,0.5s							
QMBU	**Quimbuelo**	**3.50**	**280**	*e*P	**Pn**	**01 59 21.8**	**-0.9**
QMBU				*e*S	**Sn**	**02 00 02.8**	**-0.5**
QMBU				IAML		02 00 15.3	
	comp=Z,210nm,1.0s							
NMDO	**Nuevo Mundo**	**3.73**	**285**	*e*P	**Pn**	**01 59 25.8**	**0.0**
NMDO				*e*S	**Sn**	**02 00 08.1**	**-0.8**
NMDO				IAML		02 00 25.4	
	comp=E,38nm,0.7s							
NMDO				IAML		02 00 28.0		
	comp=N,34nm,0.4s							
MOAC	**Moa**	**3.73**	**287**	*e*P	**Pn**	**01 59 26.8**	**+1.0**
MOAC				*e*S	**Sn**	**02 00 07.8**	**-1.2**
GTBY	**Guantanamo Bay**	**3.75**	**275**	*e*P	**Pn**	**01 59 25.2**	**-0.9**
GTBY				*e*S	**Sn**	**02 00 08.7**	**-0.7**
GTBY				IAML		02 00 20.5	
	comp=N,53nm,1.0s							
GTBY				IAML		02 00 22.3		
	comp=N,29nm,0.7s							
RCC	**Rio Carpintero**	**4.30**	**276**	*i* P	**Pn**	**01 59 32.9**	**-0.8**
RCC				*i* S	**Sn**	**02 00 23.0**	**-0.1**
RCC				IAML		02 00 37.3	
	comp=Z,43nm,1.0s							
MARVS	**Santiago de Cu**	**4.49**	**276**	*e*P	**Pn**	**01 59 35.3**	**-1.1**
MARVS				*e*S	**Sn**	**02 00 26.1**	**-1.7**
MARVS				IAML		02 00 38.7	
	comp=N,25nm,0.4s							
MARVS				IAML		02 00 41.2		
	comp=E,29nm,1.2s							

*SSNC **24** 02:01:43.8±4.6, 19°.60N×71°.18W, h5km±22km, mb4.3, MD3.5, ML3.1, Presumed earthquake*
*OSPL **24** 02:01:44.8±1.5, 19°.63N×71°.18W, h0km±6km, ML2.9, Presumed earthquake*
*SDD **24** 02:01:44.1±2.2, 19°.63N×71°.16W, h23km±8km, MD3.4, ML3.2, MW3.5, Presumed earthquake*

ISC 24 02:01:43.7±0.9, **19°.63N**±0°.02×**71°.14W**±0°.02, **h25**km±6km, **n32**, σ0**s87**/57, **20C-4D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MADR	**Mao Valverde**	**0.08**	**150**	⇑*e*Pg	**Pb**	**02 01 47.7**	**-0.5**
MADR				⇑*e*Sg	**Sb**	**02 01 51.1**	**-0.1**
MADR				IAML		02 01 52.6	
	comp=N,7μm,0.5s						
LOPP1	**Punta Rusia, P**	**0.22**	**347**	*i* P	**Pb**	**02 01 49.6**	**-0.1**
LOPP1				IAML		02 01 57.0	
	comp=Z,808nm,0.2s						
LUDR	**Luperon**	**0.31**	**35**	⇑*e*Pg	**Pb**	**02 01 50.8**	**-0.1**
LUDR				⇓*e*Sg	**Sn**	**02 01 58.3**	**-0.2**
SC01	**Santiago de lo**	**0.44**	**118**	⇑*e*Pg	**Pb**	**02 01 52.6**	**-0.4**
SC01				⇑*e*Sg	**Sb**	**02 01 59.9**	**+0.6**
SC01				IAML		02 02 06.8	
	comp=N,1μm,0.5s						
SC01	**Santiago de lo**	**0.44**	**118**	*i* P	**Pb**	**02 01 52.5**	**-0.4**
SC01				*e*S	**Sb**	**02 02 00.1**	**+0.8**
SC01				IAML		02 02 05.2	
	comp=Z,310nm,0.7s						
REDR	**Restauracion**	**0.52**	**207**	⇓*e*Pg	**Pn**	**02 01 55.9**	**+0.4**
REDR				⇑*e*Sg	**Sn**	**02 02 04.5**	**+0.8**
REDR				IAML		02 02 06.1	
	comp=N,1μm,0.1s						
MCDR	**Montecristi**	**0.55**	**298**	⇑*e*Pg	**Pb**	**02 01 54.5**	**-0.2**
MCDR				IAML		02 02 08.6	
	comp=N,652nm,0.1s						
SDDR	**Presa de Saban**	**0.66**	**192**	⇓*e*Pg	**Pb**	**02 01 56.0**	**-0.7**
SDDR				⇑*e*Sg	**Sb**	**02 02 05.8**	**+0.2**
SDDR				IAML		02 02 05.8	
	comp=N,804nm,0.3s						
SDDR	**Presa de Saban**	**0.66**	**192**	*i* P	**Pb**	**02 01 56.0**	**-0.7**
SDDR				*e*S	**Sb**	**02 02 05.3**	**-0.3**
SDDR				IAML		02 02 05.9	
	comp=Z,9μm,0.3s						
SDDR	**Presa de Saban**	**0.66**	**192**	*e*P	**Pb**	**02 01 55.9**	**-0.8**
SDDR				*e*S	**Sb**	**02 02 05.1**	**-0.5**
SDDR				IAML		02 02 06.3	
	comp=Z,261nm,0.2s						
SDDR				IAML		02 02 06.9	
	comp=Z,148nm,0.2s						
SFDR	**San Fco. de Ma**	**0.92**	**112**	⇑*e*Pg	**Pb**	**02 01 59.6**	**-1.4**
SFDR				⇑*e*Sg	**Sn**	**02 02 13.4**	**-0.1**
SFDR				IAML		02 02 17.4	
	comp=N,637nm,0.3s						
LONE3	**El Aguacate, B**	**1.07**	**196**	*i* P	**Pn**	**02 02 03.1**	**-0.1**
LONE3				*e*S	**Sn**	**02 02 17.7**	**+0.4**
LONE3				IAML		02 02 18.2	
	comp=Z,365nm,0.4s						
NADR	**Nagua**	**1.25**	**103**	⇑*e*Pg	**Pn**	**02 02 05.5**	**0.0**
NADR				IAML		02 02 26.5	
	comp=N,943nm,0.2s						
DR08	**Loma La Naviza**	**1.25**	**122**	⇑*e*Pg	**Pn**	**02 02 06.0**	**+0.3**
DR08				⇑*e*Sg	**Sb**	**02 02 22.2**	**-0.3**
DR08				IAML		02 02 27.1	
	comp=N,3μm,0.2s						
LODU1	**El Espartillar**	**1.31**	**194**	*i* P	**Pb**	**02 02 07.8**	**+0.1**
LODU1				*e*S	**Sb**	**02 02 25.5**	**+1.4**
LODU1				IAML		02 02 26.5	
	comp=Z,879nm,0.5s						
BANI	**BANI**	**1.44**	**149**	⇑*e*Pg	**Pn**	**02 02 08.8**	**+0.5**
BANI				⇑*e*Sg	**Sb**	**02 02 27.7**	**-0.3**
BANI				IAML		02 02 35.7	
	comp=N,240nm,1.4s						
PODR	**Polo**	**1.47**	**185**	*i* P	**Pb**	**02 02 09.8**	**-0.6**
PODR				*e*S	**Sb**	**02 02 29.5**	**+0.8**
SDD	**Santo Domingo**	**1.65**	**135**	*i* P	**Pb**	**02 02 13.6**	**+0.1**
SDD				*e*S	**Sb**	**02 02 33.7**	**-0.1**
LOBH	**Bahia de las A**	**1.82**	**195**	*i* P	**Pb**	**02 02 15.8**	**-0.6**
LOBH				IAML		02 02 42.0	
	comp=Z,63nm,0.7s						
LOVI	**El Cajuil, Ovi**	**1.84**	**187**	*i* P	**Pb**	**02 02 16.1**	**-0.6**
LOVI				IAML		02 02 41.6	
	comp=Z,102nm,0.6s						
HATOM	**Hato Mayor del**	**1.87**	**117**	⇑*e*Pg	**Pn**	**02 02 14.7**	**+0.6**
HATOM				⇑*e*Sg	**Sb**	**02 02 39.8**	**-0.3**
HATOM				IAML		02 02 41.6	
	comp=N,105nm,0.3s						
GRTK	**Grand Turk**	**1.87**	**0**	*i* P	**Pn**	**02 02 15.2**	**+1.2**
GRTK				*e*S	**Sb**	**02 02 39.5**	**-0.5**
GRTK				IAML		02 02 45.5	
	comp=Z,111nm,1.5s						
GRTK	**Grand Turk**	**1.87**	**0**	*i* P	**Pn**	**02 02 14.5**	**+0.4**
GRTK				*i* S	**Sb**	**02 02 40.1**	**0.0**
GRTK				IAML		02 02 46.2	
	comp=Z,240nm,1.0s						
SMDR	**Samana, DR**	**1.88**	**100**	⇑*e*Pg	**Pn**	**02 02 14.4**	**+0.2**
SMDR				⇑*e*Sg	**Sb**	**02 02 40.1**	**-0.2**
SMDR				IAML		02 02 41.0	
	comp=N,176nm,0.8s						
HIDR	**Higuey Centro**	**2.52**	**114**	⇑*e*Pg	**Pn**	**02 02 24.8**	**+1.7**
HIDR				⇓*e*Sg	**Sb**	**02 02 57.7**	**-1.1**
HIDR				IAML		02 03 01.0	
	comp=N,188nm,0.2s						
MASC	**Masc**	**2.95**	**281**	*i* P	**Pn**	**02 02 28.9**	**-0.1**
MASC				*i* S	**Sn**	**02 03 04.5**	**+0.8**
QMBU	**Quimbuelo**	**3.50**	**280**	*e*P	**Pn**	**02 02 35.3**	**-1.2**
QMBU				*e*S	**Sn**	**02 03 16.8**	**-0.3**
NMDO	**Nuevo Mundo**	**3.72**	**285**	*i* P	**Pn**	**02 02 41.6**	**+2.0**
NMDO				*i* S	**Sn**	**02 03 21.5**	**-1.2**
NMDO				IAML		02 03 40.9	
	comp=Z,58nm,1.0s						
RCC	**Rio Carpintero**	**4.30**	**276**	*e*P	**Pn**	**02 02 46.8**	**-0.8**
RCC				*e*S	**Sn**	**02 03 36.6**	**-0.4**
PINC	**Pinares de May**	**4.45**	**282**	*i* P	**Pn**	**02 02 47.6**	**-2.0**
PINC				*i* S	**Sn**	**02 03 39.3**	**-1.3**
YAR	**Yar**	**4.96**	**279**	*e*P	**Pn**	**02 02 59.1**	**+2.5**
YAR				*e*S	**Sn**	**02 03 54.8**	**+1.5**
CCCC	**Cccc**	**6.40**	**285**	*i* P	Pn	02 03 09.5	-6.9
CCCC				*i* S	Sn	02 04 16.5	-12

DJA 24 02:03:22.1±0.9, **10°S**±4°×**11°7E**±°, **h30**km±8km, **M4.0**/20, **mb4.1**/4, **MLv3.9**/20, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWSI	**Taliwang, Sumb**	**0.80**	**10**	P	Pn	02 03 37.3	-0.1
TWSI				S	Sn	02 03 48.3	+0.1
PLAI	**Plampang**	**1.24**	**56**	P	Pn	02 03 43.1	-0.3
PLAI				S	Sn	02 03 57.8	-1.3
KLNI	**Mataram**	**1.27**	**330**	P	Pn	02 03 44.1	+0.2
KHKI	**Kahang-Kahang**	**1.61**	**316**	P	Pn	02 03 49.7	+1.2
IGBI	**Denpasar**	**1.73**	**294**	P	Pn	02 03 49.0	-1.1
DNP	**Denpasar**	**1.73**	**299**	P	Pn	02 03 50.8	+0.6
DBNI	**Kabupaten Domp**	**1.86**	**57**	P	Pn	02 03 52.7	+0.8
DBNI				S	Sn	02 04 15.9	+1.5
RTBI	**Rangdo, Negare**	**2.07**	**301**	P	Pn	02 03 55.2	+0.3
SRBI	**Singaraja**	**2.08**	**313**	P	Pn	02 03 55.6	+0.6
WBSI	**Waikabubak, Su**	**2.62**	**93**	P	Pn	02 04 01.3	-1.1
JAGI	**Jajag, Banyuwa**	**2.77**	**292**	P	Pn	02 04 04.4	0.0
ABJI	**Asem Bagus**	**3.02**	**305**	P	Pn	02 04 08.0	+0.1
BLJI	**Banyuglugur**	**3.58**	**299**	P	Pn	02 04 15.7	+0.1
EDFI	**Ende, Flores**	**4.95**	**81**	P	Pn	02 04 34.4	-0.2
BSSI	**Bau Bau, Buton** 0.1nm12nm,0.7s	**5.01**	**48**	P	Pn	02 04 36.4	+1.1
SNJI	**Sawahan-Nganju**	**5.22**	**289**	P	Pn	02 04 39.0	+0.6
PCJI	**Pacitan** 0.3nm59nm,1.4s	**5.66**	**283**	P	Pn	02 04 43.4	-0.8
UGM	**Wanagama**	**6.35**	**284**	P	Pn	02 04 54.4	+0.6

*IDC **24** 02:17:03.9±1.3, 11°.25N×125°.94E, h0km, mb3.8/8, mbtmp3.8/8, MS3.4/3, Error ellipse: s-maj=68.1km s-min=20.6km az=66.0*
*MAN **24** 02:17:04.0, 11°.28N×126°.16E, h1km, MS3.3*
*NEIC **24** 02:17:09.9±1.4, 11°.3N±0°.1×125°.9E±0°.1, h35km±1km, mb4.3/12, Error ellipse: s-maj=20.5km s-min=18.3km az=140.0*

ISC 24 02:17:08.9±0.7, **11°.30N**±0°.07×**126°.03E**±0°.07, **h33**km, **n35**, σ1**s72**/33, **mb4.1**/14, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**1.04**	**263**	*e*P	**Pn**	**02 17 24.9**	**-2.3**
PLP				*e*S	**Sn**	**02 17 37.0**	**-3.7**
LLP	**Lapu-Lapu**	**2.25**	**244**	*i* P	**Pb**	**02 17 49.1**	**+0.2**
LLP				*i* S	**Sb**	**02 18 21.1**	**+4.6**
MMPH	**Masbate**	**2.58**	**294**	*i* P	**Pn**	**02 17 51.6**	**+3.2**
MMPH				*i* S	**Sn**	**02 18 20.0**	**+1.3**
TBP	**Tagbilaran**	**2.67**	**233**	*e*P	**Pn**	**02 17 51.8**	**+2.2**
TBP				*e*S	**Sb**	**02 18 30.8**	**+2.4**
RCP	**Roxas**	**3.23**	**275**	*e*P	**Pn**	**02 17 58.9**	**+1.5**
RCP				*i* S	**Sb**	**02 18 42.8**	**-1.8**
SNPH	**Sibulan**	**3.37**	**235**	*i* P	Pn	02 17 44.6	-15
SNPH				*i* S	Sn	02 18 13.7	-24
SIJI	**Sorong** comp=Z,38nm,20.9s,baz=106,slow=37	**13.16**	**156**	LR	LR	02 25 12.2	
CMAR	**Chiang Mai Arr** 1.3nm,0.3s,baz=100,slow=7.5,SNR=4.6 1.3nm,0.3s	**27.10**	**288**	P	**P**	**02 22 47.8**	**-1.3**
CMAR	**Chiang Mai Arr**	**27.10**	**288**	P	**P**	**02 22 47.5**	**-1.6**
MNAI	**Manna**	**27.73**	**237**	P	**P**	**02 22 53.7**	**-1.0**
WB0	**Warramunga Arr**	**31.95**	**165**	P	**P**	**02 23 29.7**	**-2.2**
WB0				IAmb	IAmb	02 23 53.7	
	comp=Z,12nm,1.5s						
WRA	**Warramunga Arr** comp=Z,0.5nm,0.9s,baz=333,slow=11,SNR=2.7 comp=Z,0.5nm,0.9s	**32.11**	**165**	P	**P**	**02 23 31.6**	**-1.7**
WRA	**Warramunga Arr**	**32.11**	**165**	P	**P**	**02 23 33.1**	**-0.3**
ASAR	**Alice Springs** comp=Z,0.2nm,0.5s,baz=343,slow=6.8,SNR=4.3 comp=Z,0.2nm,0.5s	**35.60**	**168**	P	**P**	**02 24 04.2**	**+0.5**
ASAR	**Alice Springs**	**35.60**	**168**	P	**P**	**02 24 03.2**	**-0.5**
ULN	**Ulaanbaatar**	**39.78**	**340**	P	**P**	**02 24 39.2**	**+0.3**
SONM	**Songino Array** comp=Z,0.6nm,0.6s,baz=154,slow=9.3,SNR=3.8 comp=Z,0.6nm,0.6s	**39.98**	**339**	P	**P**	**02 24 40.0**	**-0.5**
SONM	**Songino Array**	**39.98**	**339**	P	**P**	**02 24 39.9**	**-0.7**
H11N1	**WAKE ISLAND Hy** baz=264,slow=75,SNR=4.7	**40.17**	**73**	T	T	03 08 06.2	
H11N2	**WAKE ISLAND Hy** baz=264,slow=75,SNR=4.2	**40.17**	**73**	T	T	03 08 02.2	
H11N3	**WAKE ISLAND Hy** baz=264,slow=75,SNR=5.1	**40.19**	**73**	T	T	03 08 06.7	
FORT	**Forrest**	**41.88**	**177**	P	**P**	**02 24 56.5**	**+0.3**
FORT				IAmb	IAmb	02 25 01.1	
	comp=Z,7.1nm,0.9s						
BBOO	**Buckleboo**	**44.90**	**168**	P	**P**	**02 25 20.5**	**-0.1**
MKAR	**Makanchi Array** comp=Z,0.4nm,0.4s,baz=122,slow=8.3,SNR=5.6 comp=Z,0.4nm,0.4s	**51.07**	**322**	P	**P**	**02 26 08.5**	**+0.2**
MAKZ	**Makanchi**	**51.27**	**322**	P	**P**	**02 26 10.1**	**+0.4**
MAKZ				IAmb	IAmb	02 26 35.5	
	comp=Z,1.8nm,0.6s						
ZALV	**Zalesovo Beam** comp=Z,0.4nm,0.3s,baz=116,slow=6.7,SNR=2.3 comp=Z,0.4nm,0.3s	**53.62**	**331**	P	**P**	**02 26 26.9**	**0.0**
ZALV	**Zalesovo Beam**	**53.62**	**331**	P	**P**	**02 26 26.6**	**-0.3**
KURK	**Kurchatov**	**55.09**	**325**	P	**P**	**02 26 37.4**	**-0.3**
KURK				IAmb	IAmb	02 26 38.5	
	comp=Z,1.9nm,0.7s						
KURBB	**Kurchatov Arra** comp=Z,0.9nm,0.6s,baz=130,slow=7.0,SNR=5.8 comp=Z,0.9nm,0.6s	**55.10**	**325**	P	**P**	**02 26 37.9**	**+0.2**
KBL	**Kabul**	**56.56**	**304**	P	**P**	**02 26 47.7**	**-1.2**
KBL				IAmb	IAmb	02 27 14.6	
	comp=Z,1.8nm,0.5s						
TIXI	**Tiksi** comp=Z,36nm,18.3s,baz=159,slow=37	**60.33**	**1**	LR	LR	02 53 59.9	
TIXI	**Tiksi**	**60.33**	**1**	P	**P**	**02 27 15.3**	**+1.2**
TIXI				IAmb	IAmb	02 27 42.8	
	comp=Z,1.7nm,0.6s						
P16K	**Nushagak River**	**73.17**	**32**	P	**P**	**02 28 37.7**	**+1.5**
FINES	**FINESS Array B** comp=Z,2.7nm,1.0s,baz=80,slow=5.7,SNR=4.2 comp=Z,2.7nm,1.0s	**84.88**	**332**	P	**P**	**02 29 39.9**	**-0.4**
BBB	**Bella Bella** comp=Z,54nm,18.3s,baz=54,slow=40	**90.66**	**36**	LR	LR	03 17 24.6	

*NIED **24** 02:17:41.9, 34°.57N×138°.76E, h218km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr0.84; Mθθ-1.04; Mφφ0.20; Mrθ-0.44; Mrφ0.27; Mθφ-0.25; Fault plane solution: M0 1.11000×10^15^ NP1: φs124.00000°, δ39.00000°, λ126.00000°. NP2: φs261.00000°, δ60.00000°, λ65.00000°.*
*JMA **24** 02:17:41.9±0.2, 34°.6N±0°.9×138°.8E±0°.8, h218km±1km, MV3.8/36, SOUTHERN IZU PENINSULA*
*IDC **24** 02:17:42.7±0.5, 34°.62N×138°.80E, h222km±5km, mb3.5/14, mbtmp4.0/18, Error ellipse: s-maj=23.5km s-min=6.7km az=70.0*

ISC 24 02:17:42.3±0.7, **34°.60N**±0°.06×**138°.73E**±0°.06, **h217**km±5km, **n41**, σ0**s76**/52, **mb3.6**/14, **Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIZS	**Izushimoda**	**0.17**	**47**	P	**Pn**	**02 18 10.4**	**-0.2**
JIZS				*e*S	**S**	**02 18 32.3**	**-0.5**
KTJ3	**Kamata3**	**0.43**	**40**	*e*P	**Pn**	**02 18 11.2**	**0.0**
KTJ3				S	**S**	**02 18 33.6**	**-0.2**
JSG	**Sagara**	**0.45**	**279**	P	**Pn**	**02 18 11.4**	**+0.2**
JTHY	**Toshimahigashi**	**0.47**	**100**	P	**Pn**	**02 18 11.5**	**+0.2**
JTHY				*e*S	**S**	**02 18 34.0**	**+0.1**
JIM2	**Oshima 3**	**0.59**	**79**	*e*P	**Pn**	**02 18 11.1**	**-0.7**
JIM2				*e*S	**S**	**02 18 33.3**	**-1.4**
JOD2	**Odawara 2**	**0.72**	**24**	P	**Pn**	**02 18 12.2**	**-0.1**
JOD2				*e*S	**S**	**02 18 35.2**	**-0.7**
JYN	**Shimob**	**0.91**	**350**	P	**Pn**	**02 18 13.4**	**+0.1**
JRY	**Ryogami san**	**1.42**	**6**	P	**Pn**	**02 18 17.5**	**+0.6**
JRY				*e*S	**S**	**02 18 44.2**	**+0.4**
JIE	**Ise**	**1.68**	**263**	P	**Pn**	**02 18 18.6**	**-0.5**
JHJ	**Hachijo jima 2** 448nm,0.3s,baz=55,slow=16,SNR=48	**1.72**	**149**	P	**Pn**	**02 18 19.5**	**-0.1**
JHJ				S	**S**	**02 18 50.9**	**+2.6**
	174nm,0.3s,baz=340,slow=23,SNR=7.1						
JHJ2	**Mitsune**	**1.74**	**148**	P	**Pn**	**02 18 19.2**	**-0.5**
BSO1	**Boso 1**	**1.86**	**88**	P	**Pn**	**02 18 19.9**	**-0.2**
BSO1				*e*S	**S**	**02 18 49.4**	**+1.0**
TTO1	**TONANKAI O.B.S**	**1.89**	**239**	P	**Pn**	**02 18 20.6**	**-0.1**
TTO1				*e*S	**S**	**02 18 50.7**	**+0.3**
JYTA	**Yamagatataniai**	**1.91**	**302**	P	**Pn**	**02 18 21.1**	**-0.1**
JAG	**Ashikaga**	**1.91**	**18**	P	**Pn**	**02 18 20.8**	**-0.4**
MJAR	**Matsushiro Arr** 30nm,0.4s,baz=171,slow=11,SNR=88	**1.98**	**348**	P	**Pn**	**02 18 21.8**	**-0.1**
MJAR				S	**S**	**02 18 53.4**	**+0.7**
	6.2nm,0.4s,baz=168,slow=12,SNR=7.5						
MAT	**Matsushiro**	**1.98**	**348**	P	**Pn**	**02 18 22.0**	**+0.1**
MAT				S	**S**	**02 18 53.4**	**+0.7**
JKG	**Kaga**	**2.57**	**311**	P	**Pn**	**02 18 28.4**	**+0.4**
JWY	**Kouya**	**2.62**	**262**	P	**Pn**	**02 18 28.3**	**-0.4**
JTNC	**Tanabenakahech**	**2.70**	**254**	P	**Pn**	**02 18 28.8**	**-0.7**
JWT	**Wachi**	**2.82**	**285**	P	**Pn**	**02 18 30.6**	**-0.1**
JWT				*e*S	**S**	**02 19 07.5**	**-0.9**
JCJ	**Chichijima** 41nm,0.4s,baz=297,slow=16,SNR=7.5	**8.05**	**157**	P	Pn	02 19 30.0	-6.3
JCJ				S	S	02 20 55.8	-12
	66nm,0.3s,baz=279,slow=22,SNR=7.5						
KSRS	**Korea Array** 1.2nm,0.5s,baz=110,slow=12,SNR=4.6	**9.20**	**291**	P	**Pn**	**02 19 53.0**	**+2.0**
ASAJ	**Asahikawa** 4.6nm,0.4s,baz=233,slow=9.6,SNR=5.9	**9.96**	**16**	P	**Pn**	**02 19 59.9**	**-0.8**
USRK	**Ussuriysk Ar.** 4.4nm,0.7s,baz=150,slow=13,SNR=12	**10.90**	**334**	P	**Pn**	**02 20 12.9**	**+0.2**
KLR	**Kul'dur** 2.8nm,0.5s,baz=159,slow=9.4,SNR=21	**15.50**	**343**	P	**P**	**02 21 08.7**	**-0.8**
SONM	**Songino Array** 0.7nm,0.6s,baz=110,slow=8.9,SNR=6.3 0.7nm,0.6s	**27.46**	**309**	P	**P**	**02 23 09.9**	**+1.6**
ZALV	**Zalesovo Beam** 0.8nm,0.5s,baz=100,slow=8.1,SNR=4.0 0.8nm,0.5s	**42.00**	**314**	P	**P**	**02 25 12.7**	**+0.7**
MKAR	**Makanchi Array** 1.0nm,0.5s,baz=89,slow=9.5,SNR=19 1.0nm,0.5s	**43.61**	**304**	P	**P**	**02 25 25.6**	**+0.5**
NRIK	**Noril'sk** 1.1nm,0.4s,baz=162,slow=6.4,SNR=2.3 1.1nm,0.4s	**44.60**	**337**	P	**P**	**02 25 32.1**	**-0.5**
KURBB	**Kurchatov Arra** 0.8nm,0.4s,baz=87,slow=7.6,SNR=10.0 0.8nm,0.4

AGPR					Sn	**Sn**	02 26 31.1	+0.5
AGPR					IAML		02 26 32.4	
	comp=Z,444nm,0.4s							
AGPR	**Aguadilla, PR**	**0.56**	**64**	⇓*e*Pg		**Pn**	**02 26 15.0**	**+0.2**
AGPR				⇑*e*Sg		**Sn**	**02 26 31.5**	**+0.9**
AGPR				IAML			02 26 32.4	
	comp=N,334nm,0.2s							
MLPR	**Magueyes Islan**	**0.62**	**114**			**Pn**	**02 26 15.3**	**+0.1**
MLPR					Sn	**Sn**	**02 26 30.6**	**-0.6**
MLPR	**Magueyes Islan**	**0.62**	**114**	⇓*e*Pg		**Pn**	**02 26 15.3**	**+0.1**
MLPR				⇑*e*Sg		**Sn**	**02 26 30.2**	**-1.0**
MLPR				IAML			02 26 30.7	
	comp=N,29nm,0.3s							
GBPR	**Guanica, Bosqu**	**0.77**	**109**			**Pn**	**02 26 16.6**	**+0.4**
GBPR						**Sn**	**02 26 33.1**	**+0.1**
AOPR	**Arecibo Observ**	**0.85**	**82**			**Pn**	**02 26 16.6**	**-0.2**
AOPR					Sn	**Sn**	**02 26 33.8**	**-0.4**
AOPR	**Arecibo Observ**	**0.85**	**82**	⇓*e*Pg		**Pn**	**02 26 16.9**	**0.0**
AOPR				⇑*e*Sg		**Sn**	**02 26 34.1**	**-0.1**
AOPR				IAML			02 26 36.2	
	comp=N,997nm,0.2s							
UUPR	**Utuado, UPR, P**	**0.88**	**88**			**Pn**	**02 26 17.3**	**+0.3**
UUPR	**Utuado, UPR, P**	**0.88**	**88**			**Sn**	**02 26 34.6**	**+0.1**
OBIP	**Obispado Ponce**	**1.00**	**100**			**Pn**	**02 26 18.1**	**+0.1**
OBIP	**Obispado Ponce**	**1.00**	**100**			**Sn**	**02 26 35.8**	**-0.5**
OBIP	**Obispado Ponce**	**1.00**	**100**	*i* P		**Pn**	**02 26 18.2**	**+0.1**
OBIP				*e*S		**Sn**	**02 26 35.7**	**-0.7**
OBIP				IAML			02 26 39.6	
	comp=Z,647nm,0.2s							
CELP	**Cerrillos**	**1.02**	**98**	Pn		**Pn**	**02 26 18.5**	**+0.2**
CELP				IAML			02 26 38.3	
	comp=Z,240nm,0.8s							
CELP	**Cerrillos**	**1.02**	**98**			**Sn**	**02 26 36.1**	**-0.5**
CELP	**Cerrillos**	**1.02**	**98**	⇑*e*Pg		**Pn**	**02 26 18.5**	**+0.2**
CELP				⇑*e*Sg		**Sn**	**02 26 36.2**	**-0.5**
CELP				IAML			02 26 38.1	
	comp=N,84nm,0.6s							
EMPR	**Esperanza - Ma**	**1.08**	**76**			**Pn**	**02 26 19.0**	**+0.2**
EMPR						**Sn**	**02 26 37.2**	**-0.5**
HIDR	**Higuey Centro**	**1.08**	**290**	⇓*e*Pg		**Pn**	**02 26 19.1**	**+0.3**
HIDR				⇑*e*Sg		**Sn**	**02 26 35.8**	**-1.9**
HIDR				IAML			02 26 42.6	
	comp=N,240nm,0.2s							
ECPR	**Experimental S**	**1.22**	**85**	Pn		**Pn**	**02 26 20.2**	**+0.2**
ECPR	**Experimental S**	**1.22**	**85**			**Sn**	**02 26 39.9**	**-0.1**
SJG	**San Juan**	**1.42**	**94**			**Pn**	**02 26 22.4**	**+0.2**
SJG				IAML			02 26 45.8	
	comp=N,197nm,0.3s							
SJG				IAML			02 26 46.5	
	comp=N,171nm,0.3s							
SJG	**San Juan**	**1.42**	**94**	*i* P		**Pn**	**02 26 22.3**	**+0.2**
SJG				*e*S		**Sn**	**02 26 43.5**	**-0.1**
SJG				IAML			02 26 48.0	
	comp=Z,1μm,0.3s							
IGPR	**InterUniversit**	**1.48**	**100**			**Pn**	**02 26 23.4**	**+0.6**
IGPR						**Sn**	**02 26 44.6**	**-0.1**
HUMP	**Col San Antoni**	**1.70**	**92**			**Pn**	**02 26 25.4**	**+0.1**
HUMP				IAML			02 26 51.3	
	comp=Z,282nm,0.2s							
HUMP	**Col San Antoni**	**1.70**	**92**			**Sn**	**02 26 49.5**	**+0.4**
DR12	**Loma Pena Alta**	**1.74**	**289**	Pn		**Pn**	**02 26 26.7**	**+1.0**
HATOM	**Hato Mayor del**	**1.74**	**289**	⇓*e*Pg		**Pn**	**02 26 26.9**	**+1.1**
HATOM				⇓*e*Sg		**Sn**	**02 26 51.4**	**+1.4**
HATOM				IAML			02 26 52.3	
	comp=N,51nm,0.2s							
CUPR	**Culebra, Puert**	**2.24**	**88**	Pn		**Pn**	**02 26 31.7**	**+0.1**
BANI	**BANI**	**2.59**	**274**	Pn		**Pn**	**02 26 38.0**	**+2.0**
SC01	**Santiago de lo**	**3.16**	**293**	Pn		**Pn**	**02 26 45.4**	**+2.2**
SC01				IAML			02 27 31.9	
	comp=N,91nm,0.6s							
SDDR	**Presa de Saban**	**3.54**	**283**	Pn		**Pn**	**02 26 48.3**	**+0.2**
SDDR				IAML			02 27 43.0	
	comp=N,34nm,1.1s							
SDDR				IAML			02 27 44.2	
	comp=N,27nm,1.1s							
SDDR	**Presa de Saban**	**3.54**	**283**	*i* P		**Pn**	**02 26 49.7**	**+1.6**
SDDR				IAML			02 27 42.7	
	comp=Z,251nm,0.1s							
LOVI	**El Cajuil, Ovi**	**3.57**	**264**	*i* P		**Pn**	**02 26 48.9**	**+0.4**
LOVI				*e*S		**Sn**	**02 27 27.8**	**-2.8**
LOVI				IAML			02 27 31.8	
	comp=Z,92nm,1.6s							
LODU1	**El Espartillar**	**3.64**	**273**	*i* P		**Pn**	**02 26 51.2**	**+1.8**
LODU1				IAML			02 27 38.4	
	comp=Z,62nm,1.3s							
LONE3	**El Aguacate, B**	**3.65**	**277**	*i* P		**Pn**	**02 26 52.1**	**+2.6**
LONE3				IAML			02 27 40.4	
	comp=Z,17nm,2.6s							
LOBH	**Bahia de las A**	**3.82**	**265**	*i* P		**Pn**	**02 26 52.1**	**+0.4**
LOBH				*e*S		**Sn**	**02 27 34.5**	**-2.0**
LOBH				IAML			02 27 39.2	
	comp=Z,35nm,1.8s							
GRTK	**Grand Turk**	**4.64**	**315**	*i* P		**Pn**	**02 27 02.5**	**+0.1**
GRTK				*e*S		**Sn**	**02 27 52.7**	**-3.0**
GRTK				IAML			02 27 57.7	
	comp=Z,80nm,2.4s							

*OSPL **24** 02:45:26.5±0.6, 18°.06N×67°.04W, h25km±26km, ML2.5, Presumed earthquake*
*SDD **24** 02:45:27.1±2.5, 17°.95N×66°.98W, h12km±12km, MD2.8, ML2.0, MW2.3, Presumed earthquake*
ISC 24 02:45:27.5±1.2, 17°.96N±0°.07×66°.97W±0°.03, h23km, n9, σ1§86/18, 8C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLPR	**Magueyes Islan**	**0.07**	**274**	⇑*e*Pg	**Pb**	**02 45 29.8**	**-1.9**
MLPR				⇑*e*Sg	**Sb**	**02 45 31.7**	**-2.8**
MLPR				IAML		02 45 31.9	
	comp=N,549nm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.14**	**287**	*i* P	**Pb**	**02 45 30.7**	**-1.5**
CRPR				*e*S	**Sb**	**02 45 33.3**	**-2.2**
CRPR				IAML		02 45 34.5	
	comp=Z,229nm,0.5s						
PRSN	**Puerto Rico Se**	**0.30**	**326**	⇑*e*Pg	**Pb**	**02 45 32.9**	**-1.6**
PRSN				⇑*e*Sg	**Sb**	**02 45 38.9**	**-0.2**
PRSN				IAML		02 45 39.4	
	comp=N,378nm,0.4s						
OBIP	**Obispado Ponce**	**0.35**	**77**	*i* P	**Pb**	**02 45 34.7**	**-0.5**
OBIP				*e*S	**Sb**	**02 45 40.4**	**-0.1**
OBIP				IAML		02 45 40.8	
	comp=Z,421nm,0.1s						
CELP	**Cerrillos**	**0.39**	**73**	⇓*e*Pg	**Pb**	**02 45 35.3**	**-0.5**
CELP				⇑*e*Sg	**Sb**	**02 45 39.9**	**-1.5**
CELP				IAML		02 45 41.7	
	comp=N,70nm,0.3s						
AOPR	**Arecibo Observ**	**0.43**	**28**	⇓*e*Pg	**Pb**	**02 45 36.1**	**-0.4**
AOPR				⇓*e*Pg	**Pb**	**02 45 36.2**	**-0.4**
AOPR				IAML		02 45 43.9	
	comp=N,94nm,0.3s						
AGPR	**Aguadilla, PR**	**0.52**	**345**	⇑*e*Pg	**Pb**	**02 45 35.9**	**-2.1**
AGPR				⇓*e*Sg	**Sb**	**02 45 43.2**	**-2.0**
AGPR				IAML		02 45 47.0	
	comp=N,65nm,0.5s						
SJG	**San Juan**	**0.79**	**79**	*i* P	**Pb**	**02 45 41.5**	**-1.2**
SJG				*e*S	**Sb**	**02 45 52.0**	**-0.9**
SJG				IAML		02 45 55.3	
	comp=Z,373nm,0.1s						
HATOM	**Hato Mayor del**	**2.43**	**290**	⇑*e*Pg	**Pb**	**02 46 08.8**	**+2.8**
HATOM				⇑*e*Sg	**Sb**	**02 46 43.3**	**+3.0**
HATOM				IAML		02 47 15.2	
	comp=N,26nm,1.9s						

RSNC 24 02:45:58.4±0.0, 7°N±1°×7°3W±°, h147km±2km, M2.8, mB5.0, mb2.9, ML2.6, Mw(mB)4.3, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.23**	**193**	P	Pn	02 46 18.3	-0.4
BARC				S	Sn	02 46 33.7	-0.5
BRJC	**Barrancabermej**	**0.63**	**284**	P	Pn	02 46 20.0	-0.1
BRJC				S	Sn	02 46 37.1	+0.5
PAMC	**Pamplona, Colo**	**0.67**	**40**	P	Pn	02 46 21.2	+0.2
PAMC				S	Sn	02 46 38.1	0.0
RUSC	**La Rusia**	**0.92**	**177**	P	Pn	02 46 22.2	-0.6
RUSC				S	Sn	02 46 40.5	-0.9
PTBC	**PUERTO BERRIO,**	**1.35**	**258**	P	Pn	02 46 24.7	-1.5
PTBC				S	Sn	02 46 45.4	-2.0
OCAC	**Ocana**	**1.42**	**352**	P	Pn	02 46 26.4	-0.7
OCAC				S	Sn	02 46 48.4	-0.7
SPBC	**San Pablo de B**	**1.49**	**219**	P	Pn	02 46 27.1	-0.7
SPBC				S	Sn	02 46 49.2	-1.0
NORC	**Norcasia**	**2.13**	**234**	P	Pn	02 46 34.1	-0.9
NORC				S	Sn	02 47 01.9	-1.2
CHIC	**Chingaza**	**2.26**	**195**	P	Pn	02 46 36.5	-0.4
CHIC				S	Sn	02 47 05.5	-0.9
ROSC	**El Rosal**	**2.30**	**211**	P	Pn	02 46 38.5	+1.2
ROSC				S	Sn	02 47 06.6	-0.6
HELC	**Santa Helena**	**2.46**	**255**	P	Pn	02 46 39.9	+0.6
HELC				S	Sn	02 47 13.1	+2.4
CVER	**Cruz Verde, Cu**	**2.47**	**202**	P	Pn	02 46 40.8	+1.3
CVER				S	Sn	02 47 12.0	+0.9
UREC	**San Jos de Ur**	**2.56**	**291**	P	Pn	02 46 39.0	-1.1
UREC				S	Sn	02 47 09.4	-2.8
GUY2C	**Guyana, Caldas**	**2.73**	**235**	P	Pn	02 46 43.9	+1.2
GUY2C				S	Sn	02 47 16.2	-0.6
VILC	**Villavicencio,**	**2.75**	**192**	P	Pn	02 46 42.0	-0.6
VILC				S	Sn	02 47 15.8	-1.0
CBOC	**Ciudad Bolivar**	**3.02**	**252**	P	Pn	02 46 46.6	+0.5
CBOC				S	Sn	02 47 22.7	-0.2
DBBC	**Dabeiba**	**3.06**	**274**	P	Pn	02 46 46.6	0.0
DBBC				S	Sn	02 47 21.5	-2.3
ARGC	**Ariguani, Magd**	**3.21**	**340**	P	Pn	02 46 49.7	+1.3
ARGC				S	Sn	02 47 27.8	+0.6
SDV	**Santo Domingo**	**3.21**	**50**	P	Pn	02 46 47.8	-0.8
SDV				S	Sn	02 47 24.8	-2.6
ANIL	**Santa Ana**	**3.24**	**224**	P	Pn	02 46 49.6	+0.6
ANIL				S	Sn	02 47 29.1	+1.0
PRAC	**Prado**	**3.55**	**210**	P	Pn	02 46 52.1	-0.7
PRAC				S	Sn	02 47 33.8	-1.1
ORTC	**Ortega, Tolima**	**3.58**	**216**	P	Pn	02 46 53.0	-0.2
ORTC				S	Sn	02 47 36.1	+0.5
APAC	**Apartado, Choc**	**3.59**	**288**	P	Pn	02 46 52.1	-1.1
APAC				S	Sn	02 47 34.1	-1.6
PLMC	**San Jos del P**	**3.67**	**239**	P	Pn	02 46 54.1	-0.3
PLMC				S	Sn	02 47 37.7	0.0
SJCC	**San Jacinto, C**	**3.67**	**327**	P	Pn	02 46 52.0	-2.3
SJCC				S	Sn	02 47 33.6	-4.1
URMC	**La Uribe, Meta**	**3.76**	**199**	P	Pn	02 46 55.1	-0.5
URMC				S	Sn	02 47 38.7	-1.3
SMRC	**Santa Marta, M**	**4.45**	**346**	P	Pn	02 47 03.2	-1.3
SMRC				S	Sn	02 47 51.7	-4.3
MACC	**Macarena, Meta**	**4.70**	**189**	P	Pn	02 47 05.3	-2.6
MACC				S	Sn	02 47 56.4	-5.6
URIC	**Uribia, Colomb**	**4.98**	**13**	P	Pn	02 47 09.0	-2.5
GARC	**Garzon, Huila**	**5.17**	**207**	P	Pn	02 47 12.6	-1.7
POPC	**Popayan, Colom** 1.7nm,2.3s	**5.53**	**220**	P	Pn	02 47 20.1	+1.0
FLOC	**Florencia**	**5.78**	**206**	P	Pn	02 47 20.8	-1.4

*PGC **24** 02:49:09.7±0.8, 65°.10N×131°.52W, h0km, ML3.3/37, 185km southwest of Fort Good Hope, Nt Nw Territories - Nunavut, Canada*
*ANF **24** 02:49:12.0±0.4, 65°.08N×131°.53W, h27km±4km, ML3.5/34, Error ellipse: s-maj=2.0km s-min=1.0km az=84.0*
ISC 24 02:49:09.5±0.9, 65°.13N±0°.03×131°.39W±0°.04, h10km, n120, σ1§15/158, Northwest Territories

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H31M	**Peel River**	**1.41**	**300**	P	**Pn**	**02 49 34.2**	**-0.9**
H31M	**Peel River**	**1.41**	**300**	P	**Pn**	**02 49 35.4**	**+0.3**
H31M	baz=119,SNR=334			S	**Sb**	**02 49 54.7**	**+0.9**
	baz=119						
I30M	**Mount Dempster**	**2.10**	**275**	Pn	**Pn**	**02 49 45.2**	**+0.4**
I30M	**Mount Dempster**	**2.10**	**275**	P	**Pn**	**02 49 45.2**	**+0.4**
I30M	baz=92,SNR=105			S	**Sn**	**02 50 11.3**	**+0.2**
	baz=92						
G31M	**Satah River**	**2.15**	**328**	Pn	**Pn**	**02 49 45.9**	**+0.6**
G31M				Sn	**Sn**	**02 50 13.5**	**+1.5**
G31M	**Satah River**	**2.15**	**328**	P	**Pn**	**02 49 45.7**	**+0.3**
G31M	baz=146			S	**Sn**	**02 50 13.4**	**+1.5**
	baz=146						
J30M	**Hart River**	**2.18**	**257**	Pn	**Pn**	**02 49 46.2**	**+0.3**
J30M	**Hart River**	**2.18**	**257**	P	**Pn**	**02 49 45.7**	**-0.2**
J30M	baz=74,SNR=135			S	**Sn**	**02 50 12.8**	**-0.2**
	baz=74						
MAYO	**Mayo, Yukon**	**2.49**	**234**	Sb	**Sn**	**02 50 24.1**	**+3.7**
	baz=50						
F31M	**Tsiigehtchic**	**2.51**	**339**	Pn	**Pn**	**02 49 51.0**	**+0.8**
F31M				Sn	**Sn**	**02 50 22.2**	**+1.4**
F31M	**Tsiigehtchic**	**2.51**	**339**	P	**Pn**	**02 49 51.0**	**+0.8**
F31M	baz=157,SNR=40			S	**Sn**	**02 50 22.5**	**+1.7**
	baz=157						
MMPY	**Sheldon Lake,**	**2.52**	**179**	Pn	**Pn**	**02 49 50.4**	**0.0**
MMPY	**Sheldon Lake,**	**2.52**	**179**	P	**Pn**	**02 49 50.4**	**0.0**
MMPY	baz=358,SNR=56			Sb	**Sb**	**02 50 26.9**	**+1.1**
	baz=358						
EPYK	**Eagle Plains**	**2.53**	**302**	Pn	**Pn**	**02 49 51.2**	**+0.7**
EPYK	**Eagle Plains**	**2.53**	**302**	P	**Pn**	**02 49 51.3**	**+0.7**
EPYK	baz=118,SNR=22			S	**Sn**	**02 50 21.9**	**+0.5**
	baz=118						
G30M	**tAoh Zraii Nji**	**2.71**	**316**	Pn	**Pn**	**02 49 52.9**	**-0.1**
G30M	**tAoh Zraii Nji**	**2.71**	**316**	P	**Pn**	**02 49 52.8**	**-0.2**
G30M	baz=132,SNR=50			Sb	**Sb**	**02 50 33.4**	**+2.2**
	baz=132						
I29M	**Ogilvie Camp,**	**2.92**	**278**	Pn	**Pn**	**02 49 56.1**	**+0.2**
I29M	**Ogilvie Camp,** baz=92	**2.92**	**278**	S	**Sn**	**02 50 30.2**	**-0.8**
K29M	**Barlow Dome**	**2.95**	**247**	Pn	**Pn**	**02 49 56.2**	**-0.2**
K29M	**Barlow Dome**	**2.95**	**247**	P	**Pn**	**02 49 56.1**	**-0.2**
K29M	baz=62,SNR=36			S	**Sn**	**02 50 30.8**	**-1.1**
	baz=62						
F30M	**Barrier River**	**3.06**	**327**	Pn	**Pn**	**02 49 58.9**	**+1.1**
F30M	**Barrier River**	**3.06**	**327**	P	**Pn**	**02 49 58.8**	**+1.1**
F30M	baz=143,SNR=121			S	**Sn**	**02 50 35.2**	**+0.9**
	baz=143						
H29M	**Whitestone**	**3.09**	**294**	Pn	**Pn**	**02 49 58.5**	**+0.3**
H29M				Sn	**Sn**	**02 50 34.9**	**-0.2**
H29M	**Whitestone**	**3.09**	**294**	P	**Pn**	**02 49 58.5**	**+0.3**
H29M	baz=108,SNR=85			S	**Sn**	**02 50 34.3**	**-0.9**
	baz=108						
M31M	**Drury Creek, Y**	**3.23**	**206**	Pn	**Pn**	**02 50 00.1**	**-0.1**
M31M	**Drury Creek, Y**	**3.23**	**206**	P	**Pn**	**02 49 59.9**	**-0.2**
M31M	baz=23,SNR=18			Sb	**Sb**	**02 50 47.3**	**+1.2**
	baz=23						
G29M	**Pine Creek**	**3.25**	**306**	Pn	**Pn**	**02 50 01.2**	**+0.8**
G29M	**Pine Creek** baz=121,SNR=21	**3.25**	**306**	P	**Pn**	**02 50 00.9**	**+0.6**
INK	**Inuvik**	**3.30**	**346**	Pn	**Pn**	**02 50 01.9**	**+0.8**
INK				Sn	**Sn**	**02 50 40.2**	**-0.1**
INK	**Inuvik** baz=164,SNR=90	**3.30**	**346**	P	**Pn**	**02 50 01.8**	**+0.8**
INK	baz=164			S	**Sn**	**02 50 40.6**	**+0.2**
M30M	**Minto, Yukon**	**3.50**	**225**	Pn	**Pn**	**02 50 03.3**	**-0.7**
M30M	**Minto, Yukon** baz=41,SNR=34	**3.50**	**225**	P	**Pn**	**02 50 03.2**	**-0.7**
M30M	baz=41			Sb	**Sb**	**02 50 56.2**	**+2.1**
L29M	**L29M**	**3.58**	**239**	Pn	**Pn**	**02 50 05.0**	**0.0**
L29M	**L29M** baz=53,SNR=39	**3.58**	**239**	P	**Pn**	**02 50 04.4**	**-0.6**
I28M	**Miner Creek**	**3.60**	**279**	Pn	**Pn**	**02 50 05.0**	**-0.4**
I28M	**Miner Creek** baz=92	**3.60**	**279**	P	**Pn**	**02 50 04.8**	**-0.6**
I28M	baz=92			S	**Sn**	**02 50 46.8**	**-1.2**
TGTN	**Hyland Airport**	**3.88**	**157**	Pn	**Pn**	**02 50 10.2**	**+1.0**
TGTN	**Hyland Airport** baz=340,SNR=12	**3.88**	**157**	P	**Pn**	**02 50 09.5**	**+0.3**
N32M	**Quiet Lake**	**4.07**	**192**	Pn	**Pn**	**02 50 11.6**	**-0.1**
N32M	**Quiet Lake** baz=10	**4.07**	**192**	P	**Pn**	**02 50 11.6**	**-0.1**
N32M	baz=10			Sb	**Sb**	**02 51 13.6**	**+3.3**
M29M	**Somme Creek**	**4.13**	**233**	Pn	**Pn**	**02 50 12.6**	**-0.1**
M29M	**Somme Creek** baz=46	**4.13**	**233**	P	**Pn**	**02 50 12.0**	**-0.7**
M29M	baz=46			S	**Sn**	**02 50 58.8**	**-2.3**
N31M	**Braeburn, Yuko**	**4.16**	**210**	Pn	**Pn**	**02 50 13.2**	**+0.3**
N31M	**Braeburn, Yuko** baz=27,SNR=15	**4.16**	**210**	P	**Pn**	**02 50 12.8**	**-0.2**
E29M	**Blow River**	**4.17**	**325**	Pn	**Pn**	**02 50 14.0**	**+1.0**
E29M	**Blow River** baz=139,SNR=24	**4.17**	**325**	P	**Pn**	**02 50 13.7**	**+0.8**
E29M	baz=139			S	**Sn**	**02 51 00.6**	**-1.0**
F28M	**Old Crow**	**4.23**	**310**	Pn	**Pn**	**02 50 14.2**	**+0.4**
F28M	**Old Crow** baz=123,SNR=19	**4.23**	**310**	P	**Pn**	**02 50 14.2**	**+0.4**
I27K	**Kandik River** baz=92,SNR=8.9	**4.31**	**281**	P	**Pn**	**02 50 14.6**	**-0.3**
I27K	baz=92			S	**Sn**	**02 51 03.6**	**-1.6**
H27K	**Steamboat Moun**	**4.33**	**289**	Pn	**Pn**	**02 50 15.7**	**+0.3**
H27K				Sn	**Sn**	**02 51 03.8**	**-2.1**
H27K	**Steamboat Moun** baz=101	**4.33**	**289**	P	**Pn**	**02 50 15.4**	**0.0**
H27K	baz=101			S	**Sn**	**02 51 03.9**	**-2.0**
N30M	**Aishikik Lake**	**4.49**	**217**	Pn	**Pn**	**02 50 17.3**	**-0.3**
N30M	**Aishikik Lake** baz=33,SNR=38	**4.49**	**217**	P	**Pn**	**02 50 17.2**	**-0.3**
N30M	baz=33			S	**Sn**	**02 51 07.2**	**-2.6**
G27K	**Doyon Strip**	**4.52**	**297**	Pn	**Pn**	**02 50 18.0**	**0.0**
G27K				Sn	**Sn**	**02 51 09.5**	**-1.0**
G27K	**Doyon Strip** baz=108,SNR=15	**4.52**	**297**	P	**Pn**	**02 50 17.9**	**0.0**
G27K	baz=108			S	**Sn**	**02 51 09.3**	**-1.2**
E28M	**Babbage River**	**4.74**	**321**	Pn	**Pn**	**02 50 21.4**	**+0.5**
E28M	**Babbage River** baz=134	**4.74**	**321**	P	**Pn**	**02 50 21.1**	**+0.2**
E28M	baz=134			S	**Sn**	**02 51 15.1**	**-0.7**
WHY	**Whitehorse**	**4.76**	**201**	Pn	**Pn**	**02 50 21.6**	**+0.4**
WHY	**Whitehorse** baz=18	**4.76**	**201**	Sb	**Sb**	**02 51 33.9**	**+3.7**
O30N	**Mendenhall**	**4.87**	**208**	Pn	**Pn**	**02 50 22.9**	**+0.1**
O30N	**Mendenhall** baz=24,SNR=5.9	**4.87**	**208**	P	**Pn**	**02 50 22.4**	**-0.3**
O30N	baz=24			Sb	**Sb**	**02 51 37.3**	**+3.9**
I26K	**Coal Creek Min** baz=87	**4.95**	**277**	P	**Pn**	**02 50 23.3**	**-0.5**
YUK5	**Granite Creek**	**4.97**	**219**	Pn	**Pn**	**02 50 24.5**	**+0.4**
P33M	**Teslin, Yukon**	**4.98**	**188**	Pn	**Pn**	**02 50 23.9**	**-0.4**
P33M	**Teslin, Yukon** baz=6.9,SNR=20	**4.98**	**188**	P	**Pn**	**02 50 23.8**	**-0.4**
BVCY	**Beaver Creek**	**5.00**	**241**	Pn	**Pn**	**02 50 24.7**	**+0.1**
BVCY				Sn	**Sn**	**02 51 20.4**	**-2.0**
BVCY	**Beaver Creek** baz=53,SNR=141	**5.00**	**241**	P	**Pn**	**02 50 24.2**	**-0.4**
BVCY	baz=53			S	**Sn**	**02 51 20.5**	**-2.0**
YUK4	**Talbot Arm**	**5.01**	**224**	Pn	**Pn**	**02 50 23.5**	**-1.4**
YUK4	**Talbot Arm** baz=38,SNR=62	**5.01**	**224**	P	**Pn**	**02 50 22.7**	**-2.2**
L27K	**Beaver Creek,**	**5.02**	**250**	Pn	**Pn**	**02 50 24.8**	**0.0**
E27K	**Coleen River** baz=123	**5.08**	**312**	P	**Pn**	**02 50 25.9**	**+0.2**
C36M	**Paulatuk**	**5.10**	**31**	Sn	**Sn**	**02 51 24.0**	**-0.6**
C36M	**Paulatuk** baz=217	**5.10**	**31**	P	**Pn**	**02 50 26.9**	**+1.1**
C36M	baz=217			S	**Sn**	**02 51 23.7**	**-0.9**
HYT	**Haines Junctio**	**5.14**	**216**	Pn	**Pn**	**02 50 26.8**	**+0.3**
HYT	**Haines Junctio** baz=30,SNR=30	**5.14**	**216**	P	**Pn**	**02 50 26.4**	**-0.1**
HYT	baz=30			S	**Sn**	**02 51 24.2**	**-1.6**
YUK6	**Outpost Mounta**	**5.26**	**220**	Pn	**Pn**	**02 50 28.4**	**+0.1**
YUK6				Sn	**Sn**	**02 51 26.5**	**-2.5**
YUK6	**Outpost Mounta** baz=34,SNR=26	**5.26**	**220**	P	**Pn**	**02 50 28.1**	**-0.1**
YUK3	**Moose Creek**	**5.28**	**235**	Pn	**Pn**	**02 50 28.6**	**+0.1**
YUK3	**Moose Creek** baz=47,SNR=9.1	**5.28**	**235**	P	**Pn**	**02 50 28.1**	**-0.4**
G26K	**Porcupine Rive** baz=105,SNR=13	**5.37**	**295**	P	**Pn**	**02 50 29.4**	**-0.1**
YUK2	**White River**	**5.40**	**236**	Pn	**Pn**	**02 50 29.5**	**-0.6**
M27K	**Edge Creek, AK** baz=55,SNR=32	**5.42**	**244**	P	**Pn**	**02 50 29.9**	**-0.5**
YUK7	**Dusty Glacier**	**5.55**	**217**	Pn	**Pn**	**02 50 32.4**	**+0.2**
D27M	**Malcolm River**	**5.56**	**322**	Sn	**Sn**	**02 51 36.3**	**+0.3**
D27M	**Malcolm River** baz=134	**5.56**	**322**	S	**Sn**	**02 51 35.6**	**-0.4**
P30M	**Million Dollar**	**5.64**	**210**	Pn	**Pn**	**02 50 33.5**	**+0.2**
P30M	**Million Dollar** baz=25,SNR=27	**5.64**	**210**	P	**Pn**	**02 50 33.3**	**-0.1**
P30M	baz=25			S	**Sn**	**02 51 36.5**	**-1.7**
P32M	**Atlin**	**5.66**	**192**	Pn	**Pn**	**02 50 33.9**	**+0.3**
P32M	**Atlin** baz=10.0,SNR=18	**5.66**	**192**	P	**Pn**	**02 50 33.4**	**-0.2**
F26K	**Sheenjek River**	**5.73**	**302**	Pn	**Pn**	**02 50 34.7**	**+0.2**
F26K	**Sheenjek River** baz=111,SNR=13	**5.73**	**302**	P	**Pn**	**02 50 34.8**	**+0.4**
F26K	baz=111			S	**Sn**	**02 51 39.2**	**-1.0**
R33M	**Jennings River**	**5.76**	**178**	Pn	**Pn**	**02 50 35.1**	**+0.1**
R33M	**Jennings River** baz=358	**5.76**	**178**	P	**Pn**	**02 50 35.1**	**+0.1**
M26K	**Nabesna, AK** baz=57	**5.83**	**247**	P	**Pn**	**02 50 35.5**	**-0.3**
O29M	**Mount Kennedy**	**5.86**	**218**	Pn	**Pn**	**02 50 36.7**	**+0.3**
O29M	**Mount Kennedy** baz=31	**5.86**	**218**	P	**Pn**	**02 50 36.5**	**+0.1**
PRP	**Porcupine Dome** baz=88	**5.93**	**280**	P	**Pn**	**02 50 36.7**	**-0.7**
Q32M	**Nakina River**	**6.21**	**184**	Pn	**Pn**	**02 50 41.6**	**+0.4**
Q32M	**Nakina River** baz=3.4,SNR=11	**6.21**	**184**	P	**Pn**	**02 50 41.1**	**-0.1**
F25K	**Christian Rive**	**6.24**	**300**	Pn	**Pn**	**02 50 41.6**	**+0.2**
F25K	**Christian Rive** baz=107,SNR=8.1	**6.24**	**

MARNC	**Mare, Loyalty**	**12.47**	**265**	P	**P**	**02 55 10.2**	**+0.3**
DZM	**Mont Dzumac**	**13.96**	**262**	P	**P**	**02 55 23.7**	**-1.4**
	6.5nm,0.8s,baz=68,slow=20,SNR=2.7						
MXZ	**Matakaoa Point**	**16.82**	**188**	P	**P**	**02 55 50.5**	**-0.6**
TOZ	**Tahuroa Road**	**17.53**	**196**	P	**P**	**02 55 58.8**	**+1.2**
URZ	**Urewera**	**17.69**	**191**	P	**P**	**02 55 56.9**	**-2.1**
	11nm,0.5s,baz=341,slow=1.4,SNR=14						
BFZ	**Birch Farm**	**20.20**	**191**	P	**P**	**02 56 21.6**	**-0.2**
THZ	**Tophouse**	**22.00**	**197**	P	**P**	**02 56 38.0**	**+0.1**
GVZ	**Greta Valley S**	**23.09**	**196**	P	**P**	**02 56 47.9**	**+0.4**
MLZ	**Mavora Lakes**	**26.74**	**201**	P	**P**	**02 57 20.6**	**+0.9**
EIDS	**Eidsvold**	**28.19**	**255**	P	**P**	**02 57 32.0**	**-0.5**
EIDS				IAmb	IAmb	02 57 43.2	
	comp=Z,19nm,1.2s						
CTA	**Charters Tower**	**32.88**	**265**	P	**P**	**02 58 12.9**	**+0.1**
	comp=Z,10nm,0.5s,baz=91,slow=10,SNR=20						
	comp=Z,10nm,0.5s						
CTAO	**Charters Tower**	**32.88**	**265**	P	**P**	**02 58 12.6**	**-0.2**
COEN	**Coen**	**37.04**	**274**	P	**P**	**02 58 47.0**	**-0.2**
COEN				IAmb	IAmb	02 58 48.3	
	comp=Z,9.8nm,0.9s						
BBOO	**Buckleboo**	**41.86**	**244**	P	**P**	**02 59 25.4**	**-0.2**
BBOO				IAmb	IAmb	02 59 44.6	
	comp=Z,19nm,1.4s						
WR0	**Warramunga Arr**	**43.79**	**263**	P	**P**	**02 59 39.8**	**-1.0**
WR0				IAmb	IAmb	02 59 40.9	
	comp=Z,6.1nm,0.7s						
WR8	**Warramunga Arr**	**43.83**	**263**		**P**	**02 59 39.7**	**-1.4**
WR8				IAmb	IAmb	02 59 41.6	
	comp=Z,10.0nm,1.1s						
AS31	**Alice Springs**	**43.87**	**257**		**P**	**02 59 41.0**	**-0.3**
ASAR	**Alice Springs**	**43.87**	**257**	P	**P**	**02 59 41.0**	**-0.4**
	comp=Z,12nm,0.7s,baz=95,slow=7.6,SNR=109						
ASAR				PcP	**PcP**	**03 01 13.5**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=100,slow=3.7,SNR=4.8						
	comp=Z,12nm,0.7s						
ASAR	**Alice Springs**	**43.87**	**257**		**P**	**02 59 40.0**	**-1.4**
ASAR					**PcP**	**03 01 12.1**	**-1.9**
WB0	**Warramunga Arr**	**43.96**	**263**		**P**	**02 59 40.9**	**-1.2**
WB0				IAmb	IAmb	02 59 41.8	
	comp=Z,13nm,0.7s						
WB2	**Warramunga Arr**	**43.97**	**263**	P	**P**	**02 59 41.3**	**-0.9**
WB2				IAmb	IAmb	02 59 42.1	
	comp=Z,22nm,1.1s						
WRAB	**Tennant Creek**	**43.97**	**263**	P	**P**	**02 59 41.4**	**-0.8**
WRAB				IAmb	IAmb	02 59 41.5	
	comp=Z,9.9nm,0.8s						
WRA	**Warramunga Arr**	**43.98**	**263**	P	**P**	**02 59 41.1**	**-1.1**
	comp=Z,5.8nm,0.3s,baz=97,slow=7.1,SNR=344						
	comp=Z,5.8nm,0.3s						
WRA	**Warramunga Arr**	**43.98**	**263**		**P**	**02 59 40.9**	**-1.4**
MTN	**Manton Dam**	**48.59**	**271**	P	**P**	**03 00 16.0**	**-1.1**
MTN				IAmb	IAmb	03 00 16.6	
	comp=Z,8.4nm,0.7s						
FORT	**Forrest**	**48.61**	**247**	P	**P**	**03 00 16.1**	**-0.8**
FORT				IAmb	IAmb	03 00 26.1	
	comp=Z,6.1nm,0.8s						
KNRA	**Kununurra**	**50.06**	**267**	P	**P**	**03 00 26.1**	**-1.6**
SOEI	**Soe**	**55.94**	**272**	P	**P**	**03 01 10.1**	**+0.4**
SOEI				IAmb	IAmb	03 01 20.1	
	comp=Z,17nm,0.7s						
PSA00	**Pilbara Seismi**	**57.02**	**257**	P	**P**	**03 01 15.7**	**-1.1**
MBWA	**Marble Bar**	**57.21**	**258**	P	**P**	**03 01 16.9**	**-1.2**
MBWA				IAmb	IAmb	03 01 40.9	
	comp=Z,17nm,1.2s						
SBA	**Scott Base**	**57.44**	**184**	P	**P**	**03 01 19.7**	**+1.1**
VNDA	**Vanda**	**57.47**	**185**	P	**P**	**03 01 20.3**	**+1.5**
	comp=Z,0.5nm,0.6s,baz=14,slow=6.6,SNR=2.2						
	comp=Z,0.5nm,0.6s						
VNDA	**Vanda**	**57.47**	**185**	P	**P**	**03 01 20.2**	**+1.4**
GIRL	**Giralia**	**61.89**	**255**	P	**P**	**03 01 48.6**	**-0.5**
GIRL				IAmb	IAmb	03 02 06.4	
	comp=Z,31nm,1.3s						
QSPA	**South Pole Qui**	**69.17**	**180**	P	**P**	**03 02 34.6**	**+0.9**
	comp=Z,1.6nm,0.5s,baz=307,slow=0.7,SNR=14						
	comp=Z,1.6nm,0.5s						
QSPA	**South Pole Qui**	**69.17**	**180**	P	**P**	**03 02 34.1**	**+0.3**
PLK4	**Peulik 4**	**80.41**	**12**	P	**P**	**03 03 36.2**	**-0.1**
PLK4				IAmb	IAmb	03 03 48.5	
	comp=Z,19nm,1.2s						
NVAR	**Mina Array Bea**	**81.71**	**44**	P	**P**	**03 03 45.3**	**+1.6**
	comp=Z,0.4nm,0.5s,baz=254,slow=5.8,SNR=4.1						
	comp=Z,0.4nm,0.5s						
NVAR	**Mina Array Bea**	**81.71**	**44**	P	**P**	**03 03 43.1**	**-0.5**
TXAR	**Lajitas Array**	**87.75**	**58**	P	**P**	**03 04 14.7**	**+1.7**
	comp=Z,0.5nm,0.9s,baz=306,slow=4.3,SNR=3.9						
	comp=Z,0.5nm,0.9s						
TXAR	**Lajitas Array**	**87.75**	**58**	P	**P**	**03 04 13.4**	**+0.4**
ILAR	**Eielson Array**	**88.83**	**13**	P	**P**	**03 04 16.4**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=216,slow=4.9,SNR=12						
	comp=Z,0.3nm,0.4s						
ILAR	**Eielson Array**	**88.83**	**13**	P	**P**	**03 04 16.2**	**-0.8**
PDAR	**Pinedale Array**	**89.64**	**43**	P	**P**	**03 04 22.6**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=197,slow=4.5,SNR=3.9						
	comp=Z,0.3nm,0.6s						
PDAR	**Pinedale Array**	**89.64**	**43**	P	**P**	**03 04 21.8**	**+0.2**
CMAR	**Chiang Mai Arr**	**89.71**	**290**	P	**P**	**03 04 22.4**	**+0.3**
	comp=Z,1.1nm,0.3s,baz=102,slow=1.5,SNR=5.4						
	comp=Z,1.1nm,0.3s						
CMAR	**Chiang Mai Arr**	**89.71**	**290**	P	**P**	**03 04 20.8**	**-1.4**
BVAR	**Borovoye Array**	**119.01**	**320**	PKP	**PKPdf**	**03 10 06.2**	**-1.4**
	comp=Z,0.9nm,0.4s,baz=71,slow=0.9,SNR=6.0						
FINES	**FINESS Array B**	**135.99**	**343**	PKP	**PKPdf**	**03 10 40.0**	**+0.4**
	comp=Z,1.9nm,0.8s,baz=62,slow=5.5,SNR=5.2						
FINES	**FINESS Array B**	**135.99**	**343**		**PKPdf**	**03 10 39.2**	**-0.3**
HFS	**Hagfors**	**139.84**	**350**	PKhKP	PKPpre	03 10 39.3	
	comp=Z,2.5nm,0.8s,baz=64,slow=3.4,SNR=9.5						
AKASG	**Malin Array Be**	**143.08**	**330**	PKP	**PKPdf**	**03 10 49.5**	**-3.2**
	comp=Z,3.9nm,0.4s,baz=44,slow=4.2,SNR=37						
AKASG	**Malin Array Be**	**143.08**	**330**		**PKPdf**	**03 10 49.4**	**-3.3**
EKA	**Eskdalemuir Ar**	**145.45**	**5**	PKPbc	**PKPdf**	**03 10 57.2**	**+0.5**
	comp=Z,1.4nm,0.8s,baz=298,slow=1.8,SNR=1.9						
BRTR	**Keskin Array B**	**146.68**	**311**	PKPbc	**PKPdf**	**03 11 01.3**	**+1.8**
	comp=Z,1.0nm,0.5s,baz=150,slow=5.5,SNR=10						
MMAI	**Mount Meron Ar**	**147.51**	**299**	PKPbc	**PKPbc**	**03 11 04.3**	**-0.3**
	comp=Z,1.6nm,0.5s,baz=63,slow=5.8,SNR=16						
ZVC	**Zvikov**	**149.75**	**343**	*e*PKP	**PKPab**	**03 11 15.1**	**-2.3**
KHC	**Kasperske Hory**	**150.19**	**344**	*e*PKP	**PKPdf**	**03 11 05.5**	**+0.8**
KHC				*ex*	x	03 11 10.1	
CKRC	**Cesky Krumlov**	**150.28**	**343**	*e*PKP	**PKPbc**	**03 11 10.5**	**-0.2**
GERES	**GERESS Array B**	**150.42**	**343**	PKPbc	**PKPbc**	**03 11 10.3**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=346,slow=2.8,SNR=3.5						

*IDC **24** 02:56:37.1±2.5, 18°.56S×169°.11E, h228km±27km, mb3.7/4, mbtmp4.2/6, Error ellipse: s-maj=33.7km s-min=19.1km az=164.0*

*NEIC **24** 02:56:37.9±1.1, 18°.71S±0°.07×169°.18E±0°.08, h229km±9km, mb4.5/33, Error ellipse: s-maj=12.4km s-min=9.9km az=52.0*

*NOU **24** 02:57:03.9, 17°.48S×168°.47E, h26km, MLv3.5/4, Vanuatu Islands*

ISC 24 02:56:35.4±0.7, 18°.51S±0°.10×169°.06E±0°.10, h201km, n45, σ1°46/43, mb4.5/13, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTV	**Rentapao**	**0.93**	**320**	P	Pn	02 57 12.6	+7.8
DVP	**Devils Point**	**1.14**	**313**	P	Pn	02 57 13.3	+7.1
MARNC	**Mare, Loyalty**	**3.11**	**198**		**Pn**	**02 57 27.4**	**+1.0**
MARNC					**S**	**02 58 08.1**	**+2.3**
SANVU	**Saraoutou**	**3.52**	**329**		Pn	02 57 37.4	+6.0
DZM	**Mont Dzumac**	**4.31**	**214**	P	**Pn**	**02 57 43.4**	**+2.3**
	13nm,0.3s,baz=54,slow=19,SNR=26						
OUENC	**Ouen Island, N**	**4.41**	**208**		**Pn**	**02 57 43.8**	**+1.5**
ONTNC	**Ouen Toro**	**4.50**	**212**		**Pn**	**02 57 44.9**	**+1.5**
MSVF	**Nonsavu**	**8.58**	**86**	P	**Pn**	**02 58 38.2**	**+1.9**
	7.5nm,0.8s,baz=258,slow=12,SNR=5.6						
MSVF	**Nonsavu**	**8.58**	**86**		**Pn**	**02 58 38.5**	**+2.2**
URZ	**Urewera**	**20.90**	**162**	P	**P**	**03 01 00.7**	**-1.4**
	2.8nm,0.5s,baz=0.0,slow=3.0,SNR=3.0						
	2.8nm,0.5s						
RTZ	**Ruatahuna**	**21.19**	**163**	P	**P**	**03 01 04.3**	**-1.0**
BKZ	**Black Stump Fm**	**21.57**	**164**	P	**P**	**03 01 07.2**	**-2.1**
BKZ				IAmb	IAmb	03 01 39.0	
	comp=Z,33nm,1.4s						
MRZ	**Mangatainoka R**	**22.78**	**167**	P	**P**	**03 01 18.0**	**-2.5**
BFZ	**Birch Farm**	**22.95**	**166**	P	**P**	**03 01 19.7**	**-2.4**
TCW	**Tory Channel**	**23.07**	**170**	P	**P**	**03 01 21.8**	**-1.4**
TUWZ	**Tuamarina**	**23.23**	**171**	P	**P**	**03 01 23.0**	**-1.5**
THZ	**Tophouse**	**23.41**	**173**	P	**P**	**03 01 23.5**	**-2.8**
PLWZ	**Palliser**	**23.59**	**168**	P	**P**	**03 01 25.0**	**-3.0**
WRA	**Warramunga Arr**	**32.78**	**262**	P	**P**	**03 02 49.3**	**-0.5**
	comp=Z,1.7nm,0.6s,baz=85,slow=8.5,SNR=9.7						
	comp=Z,1.7nm,0.6s						
WRA	**Warramunga Arr**	**32.78**	**262**	P	**P**	**03 02 49.7**	**-0.1**
ASAR	**Alice Springs**	**33.15**	**255**	P	**P**	**03 02 53.0**	**0.0**
	comp=Z,12nm,0.4s,baz=77,slow=8.9,SNR=4.2						
	comp=Z,12nm,0.4s						
MTN	**Manton Dam**	**36.90**	**273**	P	**P**	**03 03 25.7**	**+0.6**
FAKI	**Fak Fak**	**39.22**	**289**	P	**P**	**03 03 44.9**	**+0.4**
PSA00	**Pilbara Seismi**	**46.19**	**258**	P	**P**	**03 04 40.3**	**-0.1**
PSA00	**Pilbara Seismi**	**46.19**	**258**	P	**P**	**03 04 40.2**	**-0.2**
PSA00				IAmb	IAmb	03 04 46.6	
	comp=Z,22nm,1.5s						
MBWA	**Marble Bar**	**46.33**	**258**	P	**P**	**03 04 41.5**	**-0.1**
P16K	**Nushagak River**	**81.85**	**17**	P	**P**	**03 08 31.9**	**+0.2**
ACHA	**Angle Creek He**	**81.91**	**18**	P	**P**	**03 08 33.4**	**+1.2**
O16K	**Kokwok River B**	**82.31**	**16**	P	**P**	**03 08 33.6**	**-0.4**
O16K				IAmb	IAmb	03 09 17.3	
	comp=Z,12nm,1.5s						
M14K	**Bethel**	**82.37**	**14**	P	**P**	**03 08 34.0**	**-0.3**
M14K				IAmb	IAmb	03 08 34.5	
	comp=Z,13nm,1.1s						
BELA	**Belgrano 2**	**82.84**	**175**	P	**P**	**03 08 33.7**	**-3.1**
P18K	**Big Mountain,**	**82.92**	**18**	P	**P**	**03 08 37.7**	**+0.4**
O18K	**Koktuh Hills**	**83.32**	**17**	P	**P**	**03 08 39.2**	**-0.1**
O18K				IAmb	IAmb	03 08 50.4	
	comp=Z,8.9nm,1.2s						
M16K	**Timber Creek**	**83.32**	**15**	P	**P**	**03 08 39.9**	**+0.7**
N17K	**Nushagak Hills**	**83.34**	**16**	P	**P**	**03 08 40.6**	**+1.2**
N17K				IAmb	IAmb	03 08 42.2	
	comp=Z,19nm,1.5s						
J14K	**Nanvaranak Lak**	**83.81**	**12**	P	**P**	**03 08 40.4**	**-1.3**
M17K	**Holitna River**	**84.02**	**15**	P	**P**	**03 08 42.8**	**0.0**
M17K				IAmb	IAmb	03 09 09.8	
	comp=Z,7.8nm,1.1s						
M19K	**Big River Lodg**	**85.24**	**16**	P	**P**	**03 08 49.1**	**+0.2**
M19K				IAmb	IAmb	03 08 52.9	
	comp=Z,12nm,1.0s						
K20K	**Telida**	**86.53**	**16**	P	**P**	**03 08 55.7**	**+0.5**
K20K				IAmb	IAmb	03 08 58.8	
	comp=Z,9.1nm,1.1s						
H19K	**Roundabout Mou**	**87.77**	**14**	P	**P**	**03 09 01.6**	**+0.6**
H19K				IAmb	IAmb	03 09 03.4	
	comp=Z,7.0nm,0.9s						
H21K	**Melozitna Rive**	**88.73**	**15**	P	**P**	**03 09 06.4**	**+0.8**
ILAR	**Eielson Array**	**89.59**	**17**	P	**P**	**03 09 07.8**	**-1.8**
	comp=Z,0.4nm,0.6s,baz=233,slow=5.4,SNR=8.2						
	comp=Z,0.4nm,0.6s						
D23K	**Nanushuk River**	**91.88**	**14**	P	**P**	**03 09 20.2**	**+0.1**
D23K				IAmb	IAmb	03 09 25.3	
	comp=Z,6.3nm,1.0s						
YKA	**Yellowknife Ar**	**100.10**	**27**	P	**Pdif**	**03 09 57.6**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=266,slow=4.9,SNR=4.7						
MKAR	**Makanchi Array**	**101.10**	**316**	P	**Pdif**	**03 10 02.6**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=98,slow=4.4,SNR=3.9						

*NEIC **24** 02:56:52.0±1.1, 10°.71S±0°.08×162°.05E±0°.09, h86km±6km, mb4.6/70, Error ellipse: s-maj=14.3km s-min=9.4km az=49.0*

*IDC **24** 02:56:52.1±2.1, 10°.76S×162°.03E, h99km±18km, mb4.0/12, mbtmp4.3/15, MS3.2/9, Error ellipse: s-maj=21.4km s-min=13.2km az=81.0*

ISC 24 02:56:48.3±0.4, 10°.68S±0°.06×162°.17E±0°.07, h54km, n336, σ0°94/326, mb4.7/57, MS3.4/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.52**	**299**	P	**Pn**	**02 57 28.7**	**+1.9**
	78nm,0.5s,baz=39,slow=5.1,SNR=56						
HNR				S	**Sn**	**02 58 00.9**	**+4.6**
	136nm,0.7s,baz=208,slow=13,SNR=5.6						
HNR				LR	LR	02 58 40.3	
	comp=Z,26nm,19.1s,baz=166,slow=44						
HNR	**Honiara**	**2.52**	**299**	Sn	**Sn**	**02 57 59.1**	**+2.9**
SANVU	**Saraoutou**	**6.82**	**135**		**Pn**	**02 58 29.5**	**+3.6**
KRVT	**Keravat (AS076**	**11.88**	**301**	LR	LR	03 04 32.7	
	comp=Z,19nm,20.8s,baz=213,slow=39						
DZM	**Mont Dzumac**	**12.05**	**161**	P	**Pn**	**02 59 40.2**	**+2.8**
	5.4nm,0.4s,baz=322,slow=18,SNR=0.7						
DZM				S	**Sn**	**03 01 52.2**	**+1.9**
	11nm,0.5s,baz=270,slow=17,SNR=5.3						
DZM				LR	LR	03 03 08.9	
	comp=Z,118nm,19.6s,baz=343,slow=31						
PMG	**Port Moresby**	**14.84**	**274**	LR	LR	03 05 24.9	
	comp=Z,86nm,20.5s,baz=168,slow=35						
PATS	**Pohnpei**	**17.82**	**347**		**P**	**03 00 54.0**	**+1.3**
CTA	**Charters Tower**	**17.96**	**237**	P	**Pn**	**03 00 54.8**	**+0.5**
	4.4nm,0.5s,baz=60,slow=12,SNR=7.5						
CTA				LR	LR	03 06 31.9	
	comp=Z,54nm,21.7s,baz=40,slow=33						
CTAO	**Charters Tower**	**17.96**	**237**		**Pn**	**03 00 54.9**	**+0.6**
COEN	**Coen**	**18.84**	**258**	Pn	**Pn**	**03 01 04.9**	**-0.1**
AFI	**Afiamalu**	**25.65**	**100**	LR	LR	03 10 10.3	
	comp=Z,113nm,18.4s,baz=266,slow=31						
WR8	**Warramunga Arr**	**28.20**	**248**	P	**P**	**03 02 33.8**	**-2.3**
WB0	**Warramunga Arr**	**28.25**	**248**	P	**P**	**03 02 34.2**	**-2.4**
WRAB	**Tennant Creek**	**28.33**	**248**	P	**P**	**03 02 34.5**	**-2.8**
WRA	**Warramunga Arr**	**28.34**	**248**	P	**P**	**03 02 35.0**	**-2.4**
	2.4nm,0.6s,baz=77,slow=9.2,SNR=15						
	2.4nm,0.6s						
WRA	**Warramunga Arr**	**28.34**	**248**	P	**P**	**03 02 34.6**	**-2.8**
GUMO	**Guam**	**29.60**	**324**	LR	LR	03 15 51.9	
	comp=Z,42nm,18.0s,baz=78,slow=38						
AS31	**Alice Springs**	**29.86**	**241**		**P**	**03 02 52.9**	**+2.0**
ASAR	**Alice Springs**	**29.86**	**241**	P	**P**	**03 02 48.7**	**-2.2**
	11nm,0.4s,baz=88,slow=8.2,SNR=70						
ASAR				LR	LR	03 13 34.0	
	comp=Z,62nm,20.5s,baz=104,slow=34						
	11nm,0.4s						
ASAR	**Alice Springs**	**29.86**	**241**		**P**	**03 02 48.3**	**-2.7**
TOO	**Toolangi**	**30.69**	**207**	P	**P**	**03 02 57.9**	**-0.2**
TCW	**Tory Channel**	**32.23**	**163**	P	**P**	**03 03 11.4**	**-0.1**
TUWZ	**Tuamarina**	**32.34**	**163**	P	**P**	**03 03 13.0**	**+0.6**
KNRA	**Kununurra**	**32.88**	**258**	P	**P**	**03 03 15.9**	**-1.6**
KNRA				IAmb	IAmb	03 03 18.0	
	comp=Z,6.5nm,0.8s						
LBZ	**Lake Benmore**	**34.29**	**170**	P	**P**	**03 03 31.1**	**+1.7**
MBWA	**Marble Bar**	**42.00**	**250**	P	**P**	**03 04 33.8**	**-0.8**
MBWA				IAmb	IAmb	03 04 52.2	
	comp=Z,31nm,1.5s						
MBWA	**Marble Bar**	**42.00**	**250**	IAmb	IAmb	03 04 52.2	
	comp=Z,31nm,1.5s						
JKA	**Kamikawa-asahi**	**57.36**	**343**		**P**	**03 06 31.1**	**+0.2**
ASAJ	**Asahikawa**	**57.36**	**343**	LR	LR	03 31 50.5	
	comp=Z,38nm,18.6s,baz=86,slow=37						
NJ2	**Nanjing**	**59.33**	**317**	*e*P	**P**	**03 06 46.3**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,21nm,0.5s						
USRK	**Ussuriysk Ar.**	**61.10**	**336**	P	**P**	**03 06 55.5**	**-1.4**
	comp=Z,1.7nm,0.7s,baz=147,slow=4.5,SNR=5.4						
	comp=Z,1.7nm,0.7s						
PETK	**Petropavlovsk-**	**63.65**	**357**	P	**P**	**03 07 13.6**	**-0.1**
	comp=Z,6.4nm,0.8s,baz=166,slow=7.6,SNR=5.2						
PETK				LR	LR	03 31 59.9	
	comp=Z,27nm,19.5s,baz=345,slow=33						
	comp=Z,6.4nm,0.8s						
PETK	**Petropavlovsk-**	**63.65**	**357**	P	**P**	**03 07 13.8**	**+0.1**
VNDA	**Vanda**	**66.83**	**180**	P	**P**	**03 07 32.4**	**-1.7**
	comp=Z,1.3nm,0.7s,baz=349,slow=6.9,SNR=6.0						
	comp=Z,1.3nm,0.7s						
VNDA	**Vanda**	**66.83**	**180**	P	**P**	**03 07 32.7**	**-1.3**
HHC	**Hu-ho-hao-te**	**69.31**	**321**	*e*P	**P**	**03 07 52.8**	**+2.5**
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,100nm,7.2s						
PZH	**PanZhiHua**	**69.33**	**304**	P	**P**	**03 07 51.8**	**+1.1**
UNV	**Unalaska Valle**	**69.56**	**19**	P	**P**	**03 07 52.6**	**+1.3**
	baz=213						
SPIA	**Saint Paul Isl**	**71.33**	**15**	P	**P**	**03 08 02.0**	**-0.1**
	baz=209						
CHNA	**Chernabura Isl**	**72.75**	**22**	P	**P**	**03 08 11.3**	**+0.7**
	baz=220						
SDPT	**Sand Point**	**72.83**	**21**	P	**P**	**03 08 10.7**	**-0.4**
	baz=219						
S14K	**Fog Glacier**	**73.89**	**21**	P	**P**	**03 08 17.7**	**+0.3**
	baz=219						
M11K	**Mekoryuk**	**75.17**	**16**	P	**P**	**03 08 25.1**	**+0.5**
	baz=212						
R16K	**Pilot Point**	**75.57**	**21**	P	**P**	**03 08 27.2**	**+0.2**
	baz=221						
O14K	**Tigyukauivet M**	**75.66**	**18**	P	**P**	**03 08 28.0**	**+0.5**
	baz=217						
M13K	**Dall Lake**	**75.98**	**17**	P	**P**	**03 08 29.8**	**+0.6**
	baz=215						
O15K	**Ungalikthiuk R**	**76.06**	**19**	P	**P**	**03 08 29.9**	**+0.1**
	baz=219						
R17L	**Mt. Peulik Vol**	**76.06**	**22**	P	**P**	**03 08 30.2**	**+0.4**
	baz=222						
N14K	**Kuskokwak Cree**	**76.07**	**18**	P	**P**	**03 08 30.7**	**+0.9**
	baz=217						
SONM	**Songino Array**	**76.32**	**325**	P	**P**	**03 08 30.7**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=143,slow=5.3,SNR=8.7						
	comp=Z,1.2nm,0.7s						
SONM	**Songino Array**	**76.32**	**325**	P	**P**	**03 08 30.9**	**-0.9**
P16K	**Nushagak River**	**76.54**	**20**	P	**P**	**03 08 32.6**	**+0.1**
	baz=220						
M14K	**Bethel**	**76.66**	**17**	P	**P**	**03 08 33.4**	**+0.3**
	baz=216						
Q17K	**Contact Creek**	**76.69**	**21**	P	**P**	**03 08 33.3**	**-0.3**
	baz=222						
Q16K	**King Salmon**	**76.73**	**21**	P	**P**	**03 08 33.2**	**-0.3**
	baz=222						
N15K	**Kwethluk River**	**76.75**	**18**	IAmb	IAmb	03 08 35.7	
	comp=Z,11nm,1.1s						
N15K	**Kwethluk River**	**76.75**	**18**	P	**P**	**03 08 34.4**	**+0.7**
	baz=218						
N15K	**Kwethluk River**	**76.75**	**18**	P	**P**	**03 08 34.4**	**+0.7**
GAMB	**Gambell**	**76.87**	**12**	P	**P**	**03 08 35.0**	**+0.8**
	baz=206						
K13K	**Kusilvak Mount**	**76.89**	**15**	P	**P**	**03 08 35.2**	**+0.8**
	baz=214						
K13K	**Kusilvak Mount**	**76.89**	**15**	P	**P**	**03 08 35.2**	**+0.8**
OHAK	**Old Harbor**	**76.90**	**23**	P	**P**	**03 08 35.2**	**+0.7**
	baz=225						
L14K	**Kuka Creek**	**76.93**	**17**	IAmb	IAmb	03 08 36.2	
	comp=Z,9.4nm,1.2s						
L14K	**Kuka Creek**	**76.93**	**17**	P	**P**	**03 08 35.5**	**+0.8**
	baz=216						
L14K	**Kuka Creek**	**76.93**	**17**	P	**P**	**03 08 35.5**	**+0.8**
O16K	**Kokwok River B**	**76.94**	**20**	P	**P**	**03 08 34.7**	**0.0**
	baz=220						
M15K	**Kasigluk River**	**76.99**	**18**	P	**P**	**03 08 35.2**	**+0.2**
	baz=218						
Q18K	**Katmai Hardscr**	**77.29**	**21**	P	**P**	**03 08 36.8**	**-0.1**
	baz=223						
N16K	**Nishlik Lake**	**77.40**	**19**	P	**P**	**03 08 37.9**	**+0.5**
	baz=219						
O17K	**Koliganek Bris**	**77.41**	**20**	P	**P**	**03 08 37.3**	**0.0**
	baz=221						
L15K	**Ungalak Mounta**	**77.54**	**17**	P	**P**	**03 08 38.2**	**+0.1**
	baz=217						
KDAK	**Kodiak Island**	**77.57**	**23**	P	**P**	**03 08 38.7**	**+0.4**
	baz=226						
P18K	**Big Mountain,**	**77.76**	**21**	P	**P**	**03 08 39.8**	**+0.4**
	baz=223						
M16K	**Timber Creek**	**77.77**	**18**	P	**P**	**03 08 40.5**	**+1.1**
	baz=219						
J14K	**Nanvaranak Lak**	**77.85**	**15**	P	**P**	**03 08 40.9**	**+1.2**
	baz=215						
J14K	**Nanvaranak Lak**	**77.85**	**15**	IAmb	IAmb	03 08 41.0	
	comp=Z,11nm,1.0s						
N17K	**Nushagak Hills**	**77.95**	**19**	P	**P**	**03 08 41.5**	**+1.1**
	baz=221						
Q19K	**Cape Douglas,**	**77.98**	**22**	P	**P**	**03 08 41.0**	**+0.3**
	baz=224						
K15K	**Wolf Creek Mou**	**78.02**	**16**	IAmb	IAmb	03 08 42.5	
	comp=Z,13nm,1.0s						
K15K	**Wolf Creek Mou**	**78.02**	**16**	P	**P**	**03 08 41.4**	**+0.7**
	baz=217						
K15K	**Wolf Creek Mou**	**78.02**	**16**	P	**P**	**03 08 41.5**	**+0.8**
O18K	**Koktuh Hills**	**78.11**	**20**	P	**P**	**03 08 41.3**	**0.0**
	baz=223						
L16K	**Owhat River**	**78.15**	**18**	P	**P**	**03 08 41.8**	**+0.3**
L16K	**Owhat River**	**78.15**	**18**	P	**P**	**03 08 42.2**	**+0.8**
	baz=219						
Q20K	**Shuyak Island**	**78.22**	**22**	P	**P**	**03 08 42.3**	**+0.4**
	baz=226						
N18K	**Kilae Creek**	**78.49**	**20**	P	**P**	**03 08 43.6**	**+0.2**
	baz=222						
M17K	**Holitna River**	**78.53**	**19**	P	**P**	**03 08 44.4**	**+0.8**
	baz=221						
BILL	**B

Q23K	Middleton Isla	81.10	24	P		P	03 08 57.5	0.0
	baz=231							
H18K	Honhosa River	81.16	16	P		P	03 08 57.5	-0.2
	baz=219							
M22K	Willow	81.22	21	P		P	03 08 58.0	-0.1
	baz=227							
GCSA	Galena City Sc	81.25	17	P		P	03 08 57.7	-0.5
	baz=221							
PPLA	Purkeypile	81.31	19	P		P	03 08 59.3	+0.5
	baz=225							
F17K	Baldwin Pennin	81.45	14	P		P	03 09 00.1	+0.9
	baz=216							
PMR	Palmer	81.46	21	P		P	03 09 00.1	+0.7
	baz=228							
KNK	Knik Glacier	81.58	22	P		P	03 09 00.2	+0.2
	baz=229							
CUT	Chulitna	81.61	20	P		P	03 09 00.6	+0.5
	baz=227							
J20K	Nowinta River	81.62	18			P	03 09 00.8	+0.6
J20K				IAmb		IAmb	03 09 01.8	
	comp=Z,6.4nm,1.0s							
J20K	Nowinta River	81.62	18	P		P	03 09 00.5	+0.4
	baz=223							
G18K	Tagagawik	81.66	15	IAmb		IAmb	03 09 01.3	
	comp=Z,6.2nm,0.9s							
G18K	Tagagawik	81.66	15	P		P	03 09 00.7	+0.4
G18K	Tagagawik	81.66	15	P		P	03 09 00.7	+0.4
GLI	Glacier Island	81.74	22	P		P	03 09 01.6	+0.7
	baz=230							
SML	Sawmill	81.89	21	P		P	03 09 02.5	+0.8
	baz=229							
H19K	Roundabout Mou	81.96	16	P		P	03 09 02.6	+0.6
	baz=221							
CHUM	Lake Minchumin	81.97	19	P		P	03 09 02.6	+0.6
	baz=225							
EYAK	Cordova Ski Ar	82.04	23	P		P	03 09 02.8	+0.3
	baz=232							
C16K	Lisburne Hills	82.08	12	P		P	03 09 02.8	+0.3
	baz=212							
M23K	Glacier View	82.09	22	P		P	03 09 02.8	0.0
	baz=230							
KAIM	Kayak Island	82.18	24	P		P	03 09 03.4	+0.2
	baz=233							
G19K	Purcell Mounta	82.26	16			P	03 09 04.5	+0.9
G19K	Purcell Mounta	82.26	16	P		P	03 09 04.3	+0.8
	baz=220							
SCM	Sheep Creek Mo	82.26	22	P		P	03 09 04.9	+1.2
	baz=230							
EVN	Everest	82.30	300	P		P	03 09 02.5	-2.9
TRF	Thorofare Moun	82.31	20	P		P	03 09 03.8	-0.2
	baz=227							
H20K	Anotleneega Mo	82.37	17	P		P	03 09 04.6	+0.4
	baz=223							
E18K	Tukpahlearik C	82.39	14			P	03 09 04.3	+0.2
E18K				IAmb		IAmb	03 09 05.3	
	comp=Z,6.3nm,0.8s							
E18K	Tukpahlearik C	82.39	14	P		P	03 09 04.9	+0.7
	baz=217							
RDOG	Red Dog Mine	82.39	13			P	03 09 04.2	0.0
RDOG				IAmb		IAmb	03 09 05.3	
	comp=Z,8.3nm,0.8s							
WAT1	Susitna Watana	82.48	21	P		P	03 09 04.9	+0.1
	baz=229							
KLU	Klutina	82.57	22	P		P	03 09 06.3	+0.9
	baz=231							
WAT6	Susitna Watana	82.60	21	P		P	03 09 05.9	+0.3
	baz=230							
F19K	Shaleruckik Mo	82.61	15			P	03 09 05.9	+0.6
F19K				IAmb		IAmb	03 09 06.3	
	comp=Z,5.7nm,0.9s							
F19K	Shaleruckik Mo	82.61	15	P		P	03 09 05.7	+0.4
	baz=220							
C17K	DeLong Mountai	82.69	12	P		P	03 09 06.2	+0.4
	baz=214							
BMRM	Bremner River	82.74	23	P		P	03 09 06.8	+0.6
	baz=233							
RND	Reindeer	82.76	20	IAmb		IAmb	03 09 06.2	
	comp=Z,6.3nm,1.0s							
RND				P		P	03 09 06.4	+0.1
M24K	Tolsona, Glenn	82.86	22	P		P	03 09 07.1	+0.3
	baz=231							
MCK	McKinley	82.95	20			P	03 09 07.3	+0.1
MCK				IAmb		IAmb	03 09 07.6	
	comp=Z,7.5nm,0.8s							
I21K	Tanana	82.99	18	P		P	03 09 07.9	+0.6
I21K				IAmb		IAmb	03 09 08.7	
	comp=Z,13nm,1.2s							
IMAR	Indian Mountai	83.05	17	P		P	03 09 08.3	+0.6
DHY	Denali Highway	83.05	21	P		P	03 09 08.1	+0.2
	baz=230							
H21K	Melozitna Rive	83.08	17	P		P	03 09 08.1	+0.3
	baz=224							
N25K	Chitina, Valde	83.14	23	P		P	03 09 08.6	+0.3
N25K				IAmb		IAmb	03 09 10.5	
	comp=Z,8.5nm,1.1s							
N25K	Chitina, Valde	83.14	23	P		P	03 09 09.1	+0.8
	baz=232							
CRQE	Cirque	83.21	24	P		P	03 09 09.3	+0.6
	baz=234							
E19K	Redstone River	83.23	15			P	03 09 08.9	+0.3
E19K				IAmb		IAmb	03 09 10.0	
	comp=Z,6.7nm,0.8s							
E19K	Redstone River	83.23	15	P		P	03 09 09.3	+0.8
	baz=220							
C18K	Utukok River	83.25	13			P	03 09 08.8	+0.1
C18K				IAmb		IAmb	03 09 09.4	
	comp=Z,6.3nm,0.9s							
C18K	Utukok River	83.25	13	P		P	03 09 09.3	+0.6
	baz=216							
MLY	Manley	83.26	18	P		P	03 09 09.0	+0.2
MLY				IAmb		IAmb	03 09 09.5	
	comp=Z,5.2nm,0.8s							
F20K	Avaraart Lake	83.30	15	P		P	03 09 09.7	+0.8
MESA	MESA	83.33	25	P		P	03 09 09.8	+0.4
	baz=235							
NEA2	Nenana	83.49	19	P		P	03 09 10.0	+0.1
	baz=228							
G21K	Allakaket	83.50	16	P		P	03 09 10.5	+0.5
	baz=224							
MCARA	McCarthy VSAT	83.61	23	P		P	03 09 11.0	+0.4
	baz=234							
PAX	Paxson	83.66	21	P		P	03 09 11.6	+0.7
	baz=232							
H22K	Ishtalitna Cre	83.67	17			P	03 09 11.3	+0.5
WRH	Wood River Hil	83.72	19			P	03 09 10.5	-0.6
WRH				IAmb		IAmb	03 09 10.8	
	comp=Z,4.0nm,0.8s							
I23K	Minto, Yukon-K	83.77	19	P		P	03 09 11.1	-0.2
	baz=228							
D19K	Kuna River	83.82	14	IAmb		IAmb	03 09 12.5	
	comp=Z,3.7nm,0.8s							
D19K	Kuna River	83.82	14	P		P	03 09 11.6	0.0
	baz=219							
D19K	Kuna River	83.82	14	P		P	03 09 12.0	+0.4
CCB	Clear Creek Bu	83.93	19			P	03 09 11.6	-0.6
CCB				IAmb		IAmb	03 09 12.9	
	comp=Z,4.4nm,0.7s							
C19K	Lookout Ridge	83.97	13			P	03 09 12.7	+0.4
C19K				IAmb		IAmb	03 09 13.7	
	comp=Z,7.6nm,1.1s							
C19K	Lookout Ridge	83.97	13	P		P	03 09 12.4	+0.1
	baz=218							
PINM	Pinnacle	83.99	25	P		P	03 09 12.9	+0.3
	baz=237							
F21K	Alatna River	84.02	16	P		P	03 09 12.7	0.0
F21K	Alatna River	84.02	16	P		P	03 09 12.9	+0.2
	baz=224							
CTG	Chitna Glacier	84.03	24	P		P	03 09 12.9	0.0
	baz=236							
HDA	Harding Lake	84.06	20	P		P	03 09 13.1	+0.3
COLA	College	84.06	19	P		P	03 09 13.1	+0.3
	baz=229							
K24K	Donnelly Dome	84.07	21	P		P	03 09 13.5	+0.5
K24K	Donnelly Dome	84.07	21	P		P	03 09 13.2	+0.3
	baz=231							
E20K	Nigu River	84.10	14	P		P	03 09 13.9	+0.9
	baz=221							
H23K	Yukon River	84.17	18	P		P	03 09 13.2	-0.3
	baz=228							
M26K	Nabesna, AK	84.22	22	P		P	03 09 13.5	-0.2
	baz=234							
IL31		84.31	20	P		P	03 09 13.5	-0.6
ILAR	Eielson Array	84.31	20	P		P	03 09 13.3	-0.8
	comp=Z,1.8nm,0.7s,baz=247,slow=5.0,SNR=22							
	comp=Z,1.8nm,0.7s							
ILAR	Eielson Array	84.31	20	P		P	03 09 13.5	-0.6
D20K	Etivluk River	84.34	14	P		P	03 09 14.9	+0.7
D20K				IAmb		IAmb	03 09 15.3	
	comp=Z,6.7nm,1.1s							
D20K	Etivluk River	84.34	14	P		P	03 09 14.7	+0.5
	baz=221							
G22K	Bettles	84.35	17	P		P	03 09 14.5	+0.3
	baz=226							
RIDG	Independent Ri	84.36	21	P		P	03 09 14.4	0.0
	baz=232							
POKR	Poker Plat Res	84.36	19	P		P	03 09 13.8	-0.6
	baz=230							
O28M	Mount Upton	84.39	25	P		P	03 09 14.6	-0.3
	baz=237							
L26K	Log Cabin Wild	84.46	22	P		P	03 09 15.1	+0.1
	baz=234							
A19K	Wainwright	84.54	12	P		P	03 09 14.8	-0.3
	baz=216							
DOT	Dot Lake	84.58	21	P		P	03 09 15.6	+0.1
DOT				IAmb		IAmb	03 09 16.9	
	comp=Z,5.1nm,0.8s							
M27K	Edge Creek, AK	84.62	23	P		P	03 09 16.3	+0.4
M27K	Edge Creek, AK	84.62	23	P		P	03 09 15.7	-0.2
	baz=235							
G23K	Bananza Creek	84.63	17			P	03 09 16.1	+0.4
G23K	Bananza Creek	84.63	17	P		P	03 09 16.1	+0.4
	baz=227							
S31K	Pelican	84.64	28	P		P	03 09 16.1	+0.2
	baz=240							
H24K	Noodor Dome	84.69	18	P		P	03 09 16.1	0.0
	baz=229							
J25K	Salcha River,	84.72	20	P		P	03 09 16.5	+0.3
J25K				IAmb		IAmb	03 09 17.8	
	comp=Z,6.4nm,0.6s							
J25K	Salcha River,	84.72	20	P		P	03 09 16.7	+0.4
	baz=232							
SCRK	Sand Creek	84.80	21			P	03 09 17.1	+0.4
YUK8	Steele Glacier	84.84	24	P		P	03 09 18.1	+0.9
	baz=237							
COLD	Coldfoot	84.93	17	P		P	03 09 18.7	+1.5
	baz=227							
CRAG	Craig	84.96	31	P		P	03 09 17.7	+0.2
	baz=243							
BVCY	Beaver Creek	85.04	23	P		P	03 09 18.3	+0.4
	baz=236							
L27K	Beaver Creek,	85.04	22	P		P	03 09 18.4	+0.5
	baz=235							
BCAR	Beaver Creek A	85.06	22			P	03 09 18.7	+0.7
TIXI	Tiksi	85.09	350	P		P	03 09 16.3	-1.6
	comp=Z,2.2nm,0.3s,baz=136,slow=4.8,SNR=4.5							
	comp=Z,2.2nm,0.3s							
TIXI	Tiksi	85.09	350	P		P	03 09 16.9	-1.0
TIXI				IAmb		IAmb	03 09 17.3	
	comp=Z,9.2nm,1.4s							
C21K	Knifeblade Rid	85.11	14	P		P	03 09 18.6	+0.6
	baz=222							
E22K	Anaktuvuk Pass	85.12	16	P		P	03 09 18.3	+0.1
	baz=225							
B20K	Meade River	85.21	13			P	03 09 18.7	+0.3
B20K				IAmb		IAmb	03 09 19.9	
	comp=Z,5.0nm,1.0s							
B20K	Meade River	85.21	13	P		P	03 09 18.9	+0.4
	baz=220							
PRP	Porcupine Dome	85.23	19	P		P	03 09 19.7	+0.8
	baz=231							
YUK6	Outpost Mounta	85.23	25	P		P	03 09 19.4	+0.2
	baz=238							
U33K	Whale Pass	85.26	31	P		P	03 09 19.4	+0.4
	baz=243							
YUK4	Talbot Arm	85.33	25	P		P	03 09 20.3	+0.7
	baz=238							
G24K	Hadweenzic Riv	85.38	18	P		P	03 09 19.8	+0.4
	baz=230							
P30M	Million Dollar	85.40	26	P		P	03 09 20.0	+0.2
	baz=240							
B21K	Ikpikpuk River	85.50	14			P	03 09 20.0	0.0
B21K				IAmb		IAmb	03 09 21.2	
	comp=Z,5.3nm,0.8s							
B21K	Ikpikpuk River	85.50	14	P		P	03 09 20.5	+0.6
	baz=223							
E23K	Chandalar	85.67	16	P		P	03 09 21.2	+0.3
	baz=227							
V35K	Ketchikan	85.67	32	P		P	03 09 21.4	+0.3
	baz=244							
WRAK	Wrangell Islan	85.78	30	P		P	03 09 21.8	+0.2
	baz=244							
F24K	Seqaw Lake	85.80	17	P		P	03 09 22.4	+0.9
	baz=229							
G25K	Bearman Lake	85.84	18	P		P	03 09 21.6	0.0
	baz=231							
I26K	Coal Creek Min	85.89	20	P		P	03 09 22.7	+0.7
	baz=234							
M29M	Somme Creek	85.99	24	P		P	03 09 23.5	+0.8
	baz=238							
E24K	Your Creek	85.99	17	P		P	03 09 23.3	+0.8
	baz=228							
D23K	Nanushuk River	86.00	15	P		P	03 09 23.9	+1.4
	baz=226							
N30M	Aishikik Lake	86.03	25	P		P	03 09 23.2	+0.3
	baz=239							
TOLK	Toolik Lake Re	86.08	16	P		P	03 09 23.1	+0.2
	baz=227							
O30N	Mendenhall	86.10	26	P		P	03 09 23.6	+0.4
	baz=240							
B22K	Teshekpuk Lake	86.31	14	P		P	03 09 24.2	+0.3
	baz=224							
WMQ	Urumqi	86.36	316	eP		P	03 09 21.1	-3.8
WMQ				sP		sP	03 09 55.3	+8.8
WMQ				pmax		pmax		
	comp=Z,21nm,0.9s							
A22K	Sinclair Lake	86.44	13	P		P	03 09 25.4	+0.8
	baz=222							
L29M	L29M	86.47	23	P		P	03 09 25.9	+0.9
L29M				IAmb		IAmb	03 09 26.5	
	comp=Z,4.2nm,0.7s							
L29M	L29M	86.47	23	P		P	03 09 26.0	+1.0
	baz=238							
F25K	Christian Rive	86.50	18	P		P	03 09 26.1	+1.1
	baz=231							
P32M	Atlin	86.57	27	P		P	03 09 26.0	+0.5
	baz=242							
I27K	Kandik River	86.58	20			P	03 09 26.5	+1.0
I27K				IAmb		IAmb	03 09 27.2	
	comp=Z,9.8nm,1.0s							
I27K	Kandik River	86.58	20	P		P	03 09 26.3	+0.8
	baz=235							
N31M	Braeburn, Yuko	86.59	25	P		P	03 09 26.2	+0.6
	baz=240							
D24K	Happy Valley	86.62	16	P		P	03 09 26.4	+0.8
	baz=228							
C23K	Itkillik River	86.63	15	P		P	03 09 25.9	+0.4
	baz=226							
G26K	Porcupine Rive	86.67	19			P	03 09 26.9	+1.1
G26K	Porcupine Rive	86.67	19	P		P	03 09 26.6	+0.8
	baz=233							
BMAR	Burnt Mountain	86.72	18			P	03 09 26.5	+0.4
M30M	Minto, Yukon	86.72	24	P		P	03 09 27.1	+0.9
	baz=240							
U35K	Hyder	86.74	31	P		P	03 09 27.1	+0.8
	baz=246							
E25K	Arctic Village	86.86	17	P		P	03 09 27.8	+1.1
	baz=231							
Q32M	Nakina River	86.95	28	P		P	03 09 28.2	+0.6
	baz=244							
H27K	Steamboat Moun	86.98	20			P	03 09 27.8	+0.4
H27K				IAmb		IAmb	03 09 29.2	
	comp=Z,7.8nm,1.1s							
H27K	Steamboat Moun	86.98	20	P		P	03 09 27.8	+0.4
	baz=235							
F26K	Sheenjek River	87.02	18	P		P	03 09 28.5	+0.9
	baz=233							
S34M	Telegraph Cree	87.03	29	P		P	03 09 28.1	+0.4
	baz=245							
C24K	Franklin Bluff	87.04	15	P		P	03 09 28.3	+0.8
	baz=228							
I28M	Miner Creek	87.08	21	P		P	03 09 28.3	+0.4
	baz=237							
K29M	Barlow Dome	87.09	23	P		P	03 09 28.9	+0.8
	baz=239							
J29N	Klondike Camp	87.15	22	P		P	03 09 29.2	+0.9
J29N	Klondike Camp	87.15	22	P		P	03 09 29.5	+1.2
	baz=238							
P33M	Teslin, Yukon	87.26	27	P		P	03 09 29.2	+0.3
	baz=243							
G27K	Doyon Strip	87.27	19	P		P	03 09 29.7	+0.9
	baz=235							
D25K	Kavik River	87.39	16	P		P	03 09 30.0	+0.7
	baz=230							
M31M	Drury Creek, Y	87.51	25	P		P	03 09 30.6	+0.6
	baz=242							
N32M	Quiet Lake	87.57	26	P		P	03 09 30.3	0.0
	baz=243							
I29M	Ogilvie Camp,	87.60	21	P		P	03 09 31.1	+0.7
I29M	Ogilvie Camp,	87.60	21	P		P	03 09 30.8	+0.4
	baz=238							
R33M	Jennings River	87.74	28	P		P	03 09 31.0	-0.3
	baz=245							
DLBC	Dease Lake	87.78	29	P		P	03 09 31.7	+0.2
	baz=246							
J30M	Hart River	87.91	22	P		P	03 09 32.5	+0.5
	baz=240							
H29M	Whitestone	88.04	20	P		P	03 09 33.1	+0.7
	baz=238							
E27K	Coleen River	88.08	18			P	03 09 33.6	+0.9
E27K	Coleen River	88.08	18	P		P	03 09 33.8	+1.1
	baz=235							
C26K	Camden Bay	88.17	16	P		P	03 09 34.1	+1.2
	baz=232							
I30M	Mount Dempster	88.22	22			P	03 09 33.7	+0.3
I30M				IAmb		IAmb	03 09 35.0	
	comp=Z,4.6nm,0.8s							
I30M	Mount Dempster	88.22	22	P		P	03 09 34.2	+0.7
	baz=240							
F28M	Old Crow	88.30	19	P		P	03 09 34.9	+1.2
	baz=236							
C27K	Jago River	88.32	16	P		P	03 09 34.4	+0.7
C27K				IAmb		IAmb	03 09 35.4	
	comp=Z,5.0nm,1.0s							
C27K	Jago River	88.32	16	P		P	03 09 34.7	+1.0
	baz=233							
NVAR	Mina Array Bea	88.49	51	P		P	03 09 35.0	-0.5
	comp=Z,0.7nm,0.7s,baz=237,slow=7.2,SNR=4.7							
	comp=Z,0.7nm,0.7s							
G29M	Pine Creek	88.52	20	P		P	03 09 35.8	+1.1
	baz=238							
EPYK	Eagle Plains	88.69	21	P		P	03 09 36.1	+0.5
EPYK	Eagle Plains	88.69	21	P		P	03 09 36.6	+1.1
	baz=240							
D27M	Malcolm River	88.88	17	P		P	03 09 37.8	+1.4
	baz=236							
E28M	Babbage River	88.95	18	P		P	03 09 37.8	+1.1
	baz=237							
G30M	tAoh Zraii Nji	89.17	20			P	03 09 38.1	+0.3
G30M				IAmb		IAmb	03 09 41.2	
	comp=Z,6.5nm,1.2s							
G30M	tAoh Zraii Nji	89.17	20	P		P	03 09 38.0	+0.3
	baz=240							
H31M	Peel River	89.25	22	P		P	03 09 38.5	+0.4
	baz=242							
E29M	Blow River	89.34	19	P		P	03 09 38.6	+0.1
	baz=238							
LLLB	Lillooet	89.42	38	P		P	03 09 39.1	-0.2
LLLB				IAmb		IAmb	03 09 51.8	
	comp=Z,7.9nm,1.4s							
D28M	Stokes Point	89.59	18	P		P	03 09 40.1	+0.5
	baz=238							
F30M	Barrier River	89.63	20	P		P	03 09 40.2	+0.3
	baz=240							
G31M	Satah River	89.81	21	P		P	03 09 40.9	+0.2
	baz=242							
F31M	Tsiigehtchic	90.24	20	P		P	03 09 43.0	+0.3
	baz=242							
INK	Inuvik	90.71	20	P		P	03 09 44.6	-0.3
	baz=242							
MKAR	Makanchi Array	90.86	317	P		P	03 09 44.0	-2.1
	comp=Z,0.3nm,0.6s,baz=81,slow=7.5,SNR=4.8							
	comp=Z,0.3nm,0.6s							
KOTAN	Kotaneelee Air	91.26	29	P		P	03 09 47.7	+0.1
	baz=251							
WRGLY	Wrigley	92.53	26	P		P	03 09 53.4	0.0
	baz=251							
KSH2	Kashi	94.04	309	P		P	03 10 02.9	+1.7
KSH2				pmax		pmax		
	comp=Z,7.0nm,0.9s							
C36M	Paulatuk	94.28	20			P	03 10 01.4	+0.1
C36M	Paulatuk	94.28	20	P		P	03 10 01.1	-0.2
	baz=251							
A36M	Sachs Harbour	94.78	17	P		P	03 10 03.6	0.0
A36M				IAmb		IAmb	03 10 04.9	
	comp=Z,3.8nm,1.1s							
A36M	Sachs Harbour	94.78	17	P		P	03 10 03.9	+0.3
	baz=250							
YKA	Yellowknife Ar	96.27	28	P		P	03 10 09.3	-1.2
	comp=Z,0.7nm,0.8s,baz=267,slow=5.1,SNR=15							
	comp=Z,0.7nm,0.8s							
YKA	Yellowknife Ar	96.27	28	P		P	03 10 09.0	-1.6
KEST	Kesra	144.93	320	PKPbc		PKPab	03 16 18.1	-1.2

*IDC **24** 03:14:55.7±2.7,31°.91N×133°.34E,h0km,mb3.8/3, mbtmp3.8/3,MS2.5/1,Error ellipse: s-maj=129.0km s-min=30.3km az=68.0*
*JMA **24** 03:15:08.7±0.1,32°.1N±0°.2×131°.5E±0°.3,h19km,MV3.4/20, SOUTHERN MIYAZAKI PREF*
JMA Felt III J1 at SOUTHERN MIYAZAKI PREF .

ISC 24 03:15:08.5±1.1,32°.15N±0°.04×131°.44E±0°.06,h19km±3km, n14,σ0°.68/16,mb3.7/3,2D,Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTSN	Tsuno	0.10	30	*i* P	Pg	03 15 12.5	+0.2
JTSN				S	Sg	03 15 15.3	+0.3
JHHC	Hyugahichiya	0.33	30	*i* P	Pg	03 15 15.7	+0.1
JHHC				S	Sg	03 15 20.7	+0.2
JTZ	Takazaki	0.39	230	*i* P	Pg	03 15 16.6	-0.1
JTZ				S	Sg	03 15 22.4	+0.2
JNAR	Kushima--Naru	0.64	193	P	Pg	03 15 21.4	+0.2
JNAR				S	Sg	03 15 30.8	+1.0
JIU3	Izumi3	0.66	307	‖ *i* P	Pb	03 15 21.8	+0.4
JIU3				‖ S	Sg	03 15 31.2	+0.7
JZO	Okuchi	0.72	269	*i* P	Pb	03 15 22.5	+0.1
JZO				S	Sb	03 15 32.3	+0.5
JUS	Usuki	0.95	16	*i* P	Pb	03 15 26.7	+0.4
JUS				*e*S	Sb	03 15 39.0	+0.7
KSRS	Korea Array	6.03	332	LR	LR	03 19 09.0	
	comp=Z,37nm,18.0s,baz=335,slow=96						
MKAR	Makanchi Array	40.00	306	P		03 22 42.1	+0.1
	0.3nm,0.5s,baz=93,slow=9.9,SNR=6.0						
	0.3nm,0.5s						
WRA	Warramunga Arr	51.87	177	P	P	03 24 03.6	-12
	0.7nm,0.8s,baz=6.5,slow=7.7,SNR=8.2						
	0.7nm,0.8s						
FINES	FINESS Array B	69.12	330	P	P	03 26 11.3	-1.6
	4.1nm,1.0s,baz=55,slow=5.3,SNR=3.8						
	4.1nm,1.0s						
H03N2	Juan Fernandez	154.47	101	T	T	06 24 54.7	
	baz=277,slow=74,SNR=4.5						
H03N3	Juan Fernandez	154.48	101	T	T	06 24 54.5	
	baz=277,slow=74,SNR=7.1						
H03N1	Juan Fernandez	154.49	101	T	T	06 24 54.7	
	baz=277,slow=74,SNR=6.5						

RSNC 24 03:16:54.6±0.0,4°N±1°×77°W±°,h127km±2km,M3.0,mb3.6, ML2.7,Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOTC	Yotoco, Valle	0.28	189	P	Pn	03 17 12.0	-0.5
YOTC				S	Sn	03 17 25.9	-0.1
PLMC	San Jos del P	0.64	2	P	Pn	03 17 13.7	-0.7
PLMC				S	Sn	03 17 30.3	+1.0
ARMEC	Armenia, Quind	0.70	65	P	Pn	03 17 13.8	-1.1
ARMEC				S	Sn	03 17 29.8	-0.4
ANIL	Santa Ana	0.92	76	P	Pn	03 17 16.1	-0.8
ANIL				S	Sn	03 17 32.4	-1.3
JAMC	Jamundi, Valle	1.10	200	P	Pn	03 17 18.0	-0.5
JAMC				S	Sn	03 17 36.5	-0.1
ORTC	Ortega, Tolima	1.11	108	P	Pn	03 17 17.4	-0.9
ORTC				S	Sn	03 17 35.5	-0.8
CMAN1	Manizales, Cal	1.12	44	P	Pn	03 17 19.5	+0.8
CMAN1				S	Sn	03 17 37.4	+0.4
NIZA	Niza - Manizal	1.15	46	P	Pn	03

CBOC				S	Sn	03 17 45.8	-0.7		
POPC	**Popayan, Colom**	**1.75**	**192**	P	Pn	03 17 24.7	-1.0		
POPC				S	Sn	03 17 47.8	-1.5		
BETC	**Betania**	**1.79**	**151**	P	Pn	03 17 25.8	-0.1		
BETC				S	Sn	03 17 50.0	+0.2		
NORC	**Norcasia**	**1.93**	**48**	P	Pn	03 17 27.2	-0.4		
NORC				S	Sn	03 17 52.0	-0.8		
ROSC	**El Rosal**	**2.06**	**74**	P	Pn	03 17 30.5	+1.0		
ROSC				S	Sn	03 17 59.0	+2.9		
URMC	**La Uribe, Meta**	**2.17**	**118**	P	Pn	03 17 29.9	-0.6		
URMC				S	Sn	03 17 56.8	-1.3		
GARC	**Garzon, Huila**	**2.21**	**159**	P	Pn	03 17 30.6	-0.7		
GARC				S	Sn	03 17 58.9	-0.5		
GR1C	**Gorgona, Isla**	**2.24**	**236**	P	Pn	03 17 29.8	-1.6		
GR1C				S	Sn	03 17 58.0	-1.7		
SOLC	**Bahia Solano**	**2.24**	**331**	P	Pn	03 17 30.9	-0.6		
SOLC				S	Sn	03 17 59.5	-0.2		
BBAC	**Balboa, Cauca**	**2.42**	**203**	P	Pn	03 17 33.3	-0.6		
BBAC				S	Sn	03 18 03.3	-0.7		
CHIC	**Chingaza**	**2.59**	**82**	P	Pn	03 17 36.9	+0.7		
CHIC				S	Sn	03 18 08.9	+0.8		
VILC	**Villavicencio,**	**2.60**	**93**	P	Pn	03 17 36.8	+0.7		
VILC				S	Sn	03 18 09.7	+1.6		
SPBC	**San Pablo de B**	**2.62**	**58**	P	Pn	03 17 36.0	-0.2		
SPBC				S	Sn	03 18 07.9	-0.4		
FLOC	**Florencia**	**2.74**	**166**	P	Pn	03 17 37.2	-0.6		
FLOC				S	Sn	03 18 10.6	-0.4		
DBBC	**Dabeiba**	**2.74**	**2**	P	Pn	03 17 37.2	-0.7		
DBBC				S	Sn	03 18 12.0	+0.8		
CRUC	**La Cruz**	**2.75**	**194**	P	Pn	03 17 38.2	-0.1		
PTBC	**PUERTO BERRIO,**	**2.92**	**39**	P	Pn	03 17 38.5	-1.6		
PTBC				S	Sn	03 18 12.7	-2.4		
GCUF	**Volcan Galeras**	**3.19**	**199**	P	Pn	03 17 43.0	-1.1		
GCUF				S	Sn	03 18 21.0	-1.2		
MACC	**Macarena, Meta**	**3.23**	**131**	P	Pn	03 17 43.4	-0.7		
MACC				S	Sn	03 18 16.7	-5.7		
PTAC	**Punta Ardita,**	**3.24**	**332**	P	Pn	03 17 43.1	-1.1		
PTAC				S	Sn	03 18 19.2	-3.4		
UREC	**San Jos de Ur**	**3.55**	**12**	P	Pn	03 17 47.2	-1.2		
UREC				S	Sn	03 18 29.0	-1.1		
RUSC	**La Rusia**	**3.59**	**63**	P	Pn	03 17 49.3	0.0		
RUSC				S	Sn	03 18 32.8	+1.2		
APAC	**Apartado, Choc**	**3.63**	**356**	P	Pn	03 17 50.7	+1.3		
BARC	**Barichara**	**3.87**	**53**	P	Pn	03 17 52.1	-0.8		
PAMC	**Pamplona, Colo**	**4.71**	**49**	P	Pn	03 18 03.1	-1.1		
OCAC	**Ocana**	**4.94**	**37**	P	Pn	03 18 05.6	-1.4		
SJCC	**San Jacinto, C** 10nm,1.7s	**5.71**	**11**	P	Pn	03 18 16.3	-1.0		
ARGC	**Ariguani, Magd** 13nm,2.3s	**5.92**	**20**	P	Pn	03 18 19.2	-0.9		
BCIP	**Isla Barro Col** 85nm,1.8s	**6.01**	**324**	P	Pn	03 18 21.4	+0.2		

GCG ***24*** *03:20:15.1±0.9, 14°.79N×92°.19W, h89km±6km, MD3.6, Presumed earthquake*

MEX ***24*** *03:20:15.3±1.0, 14°.79N×92°.33W, h100km±7km, MD3.6*

ISC 24 03:20:13.4±2.4**, 14°.65N**±0°.10×**92°.23W**±0°.07**, h97**km±13km**, n16**, σ1.9**52**/25**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMCA	**Catarina**	**0.25**	**37**	*i* P	**Pn**	**03 20 27.7**	**+0.1**
SMCA				*i* S	**Sn**	**03 20 37.9**	**-0.1**
THIG		**0.26**	**353**	*e*P	**Pn**	**03 20 28.2**	**+0.7**
THIG				*i* S	**Sn**	**03 20 39.3**	**+1.3**
THIG		**0.26**	**353**	*i* P	**Pn**	**03 20 27.8**	**+0.3**
CHUJ	**Union Juarez**	**0.46**	**15**	*i* P	**Pn**	**03 20 28.8**	**-0.1**
CHUJ				*i* S	**Sn**	**03 20 39.5**	**-1.0**
PATR	**El Naranjo**	**0.46**	**360**	*e*P	**Pn**	**03 20 28.5**	**-0.5**
PATR				*i* S	**Sn**	**03 20 39.5**	**-1.1**
RTAL	**Retalhuleu**	**0.54**	**104**	*i* P	**Pn**	**03 20 31.0**	**+1.8**
RTAL				*i* S	**Sn**	**03 20 43.9**	**+2.8**
PAVE	**Pavencul**	**0.54**	**6**	*e*P	**Pn**	**03 20 29.3**	**-0.2**
PAVE				*i* S	**Sn**	**03 20 41.1**	**-0.5**
STG2	**El Palmar, Qui**	**0.86**	**104**	*i* P	Pn	03 20 30.3	-2.0
STG2				*i* S	**Sn**	**03 20 42.8**	**-3.7**
STG8	**El Palmar, Qui**	**0.88**	**103**	*i* P	Pn	03 20 30.9	-1.7
STG5	**El Palmar, Qui**	**0.89**	**106**	*i* P	Pn	03 20 30.9	-1.7
STG5				*i* S	**Sn**	**03 20 43.0**	**-4.0**
HUEH	**Huehuetenango**	**0.97**	**47**	*i* P	**Pn**	**03 20 34.0**	**+0.5**
HUEH				*i* S	**Sn**	**03 20 48.7**	**0.0**
HUEH	**Huehuetenango**	**0.97**	**47**	*i* P	**Pn**	**03 20 34.0**	**+0.5**
HUEH				*i* S	**Sn**	**03 20 48.7**	**0.0**
PCIG		**1.41**	**318**	*e*P	**Pn**	**03 20 38.2**	**-0.2**
PCIG				*e*S	**Sn**	**03 20 57.7**	**+0.2**
CCIG	**Comitan**	**1.62**	**3**	*e*P	**Pn**	**03 20 41.8**	**+0.5**
CCIG				*e*S	**Sn**	**03 21 02.1**	**-0.3**
CCIG	**Comitan**	**1.62**	**3**	*i* P	**Pn**	**03 20 41.6**	**+0.3**
APG	**El Apazote**	**1.75**	**78**	*i* P	**Pn**	**03 20 44.2**	**+1.3**

NEIC ***24*** *04:01:17.6±0.9, 58°.63N±0°.03×153°.86W±0°.05, h84km±4km, ML3.3/146, ML3.3(AEIC), Error ellipse: s-maj=4.7km s-min=4.0km az=163.0*

AEIC ***24*** *04:01:18.6±1.0, 58°.63N±0°.03×153°.87W±0°.03, h77km±5km, Error ellipse: s-maj=4.9km s-min=1.9km az=166.0*

IDC ***24*** *04:01:19.2±3.5, 58°.82N×153°.08W, h60km±17km, mb3.1/3, mbtmp3.4/6, Error ellipse: s-maj=71.7km s-min=12.4km az=92.0*

ISC 24 04:01:17.7±0.8**, 58°.64N**±0°.03×**153°.83W**±0°.03**, h86**km±6km**, n203**, σ0.**86**/214**, mb3.2**/3**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
Q19K	**Cape Douglas,**	**0.30**	**18**		**Pn**	**04 01 30.5**	**-0.1**
Q19K				Sn	**Sn**	**04 01 39.5**	**-0.7**
KAHG	**Katmai Hook Gl**	**0.41**	**249**		**Pn**	**04 01 30.9**	**-0.4**
KAHG					**Sn**	**04 01 41.0**	**-0.4**
KARR	**Katmai Rainbow**	**0.48**	**253**		**Pn**	**04 01 31.4**	**-0.4**
KARR					**Sn**	**04 01 42.3**	**0.0**
KAWH	**Katmai**	**0.57**	**243**		**Pn**	**04 01 31.9**	**-0.8**
KAWH					**Sn**	**04 01 43.1**	**-0.7**
KAHC	**Katmai Hardscr**	**0.62**	**271**		**Pn**	**04 01 32.4**	**-0.7**
KAHC					**Sn**	**04 01 43.6**	**-1.0**
AUI	**Augustine Isla**	**0.72**	**17**		**Pn**	**04 01 34.1**	**+0.1**
AUI					**Sn**	**04 01 46.6**	**+0.5**
KAKN	**Katmai Knife C**	**0.73**	**242**		**Pn**	**04 01 33.4**	**-0.8**
KAKN					**Sn**	**04 01 45.4**	**-1.2**
AUJK	**Augustine Jueg**	**0.74**	**17**		**Pn**	**04 01 34.4**	**+0.2**
AUJK					**Sn**	**04 01 47.1**	**+0.6**
AGU	**Augustine-Summ**	**0.75**	**16**		**Pn**	**04 01 34.6**	**+0.3**
AUCH	**Augustine Cone**	**0.75**	**15**		**Pn**	**04 01 34.6**	**+0.3**
AUCH					**Sn**	**04 01 47.4**	**+0.7**
AUW	**Augustine West**	**0.75**	**14**		**Pn**	**04 01 34.6**	**+0.3**
AUW					**Sn**	**04 01 47.1**	**+0.5**
SYI	**Shuyak Island**	**0.75**	**92**		**Pn**	**04 01 34.6**	**+0.3**
SYI				Sn	**Sn**	**04 01 46.4**	**-0.3**
SYI				IAML		04 01 48.3	
	comp=N,996nm,0.3s						
AU22	**Augustine Moun**	**0.77**	**18**		**Pn**	**04 01 34.7**	**+0.3**
KABU	**Katmai Buttres**	**0.85**	**244**		**Pn**	**04 01 35.1**	**-0.4**
KABU					**Sn**	**04 01 48.6**	**-0.1**
ACHA	**Angle Creek He**	**0.90**	**242**		**Pn**	**04 01 35.3**	**-0.6**
ACHA				Sn	**Sn**	**04 01 48.4**	**-1.3**
ANCK	**Angle Creek**	**0.98**	**244**		**Pn**	**04 01 36.5**	**-0.4**
P18K	**Big Mountain,**	**1.04**	**317**		**Pn**	**04 01 36.6**	**-1.0**
P18K				Sn	**Sn**	**04 01 51.0**	**-1.6**
P18K				IAML		04 01 51.6	
	comp=N,527nm,0.5s						
P18K				IAML		04 01 51.7	
	comp=E,688nm,0.3s						
P19K	**Oil Pt**	**1.06**	**17**		**Pn**	**04 01 37.6**	**-0.1**
P19K				IAML		04 01 54.6	
	comp=E,873nm,0.5s						
P19K				IAML		04 01 58.9	
	comp=N,652nm,0.5s						
KDAK	**Kodiak Island**	**1.09**	**142**	P	**Pn**	**04 01 37.9**	**-0.1**
	comp=N,112nm,0.2s,baz=337,slow=3.8,SNR=419						
KDAK				S	**Sn**	**04 01 52.4**	**-0.9**
	comp=N,131nm,0.4s,baz=270,slow=20,SNR=9.3						
KDAK	**Kodiak Island**	**1.09**	**142**		**Pn**	**04 01 38.0**	**-0.1**
KDAK				IAML		04 01 54.0	
	comp=N,498nm,0.3s						
KDAK				IAML		04 01 56.0	
	comp=N,486nm,0.8s						
CNTC	**Contact Creek**	**1.15**	**251**		**Pn**	**04 01 38.3**	**-0.6**
CNTC					**Sn**	**04 01 53.9**	**-0.9**
ILS	**Iliamna Low So**	**1.37**	**16**		**Pn**	**04 01 41.7**	**0.0**
ILSW	**Iliamna Southw**	**1.39**	**14**		**Pn**	**04 01 41.7**	**-0.1**
ILSW				IAML		04 02 01.0	
	comp=N,243nm,0.8s						
O18K	**Koktuh Hills**	**1.41**	**330**		**Pn**	**04 01 41.4**	**-0.6**
O18K				IAML		04 02 00.1	
	comp=N,573nm,0.7s						
O18K				IAML		04 02 00.2	
	comp=E,462nm,1.0s						
O18K	**Koktuh Hills**	**1.41**	**330**		**Sn**	**04 01 58.9**	**-1.5**
OHAK	**Old Harbor**	**1.46**	**168**	P	**Sn**	**04 01 42.2**	**-0.4**
OHAK	**Old Harbor**	**1.46**	**168**	S	**Sn**	**04 02 00.0**	**-1.4**
OHAK	**Old Harbor**	**1.46**	**168**		**Pn**	**04 01 42.1**	**-0.4**
OHAK				IAML		04 02 01.1	
	comp=E,437nm,0.5s						
OHAK				IAML		04 02 01.4	
	comp=N,401nm,0.3s						
OHAK	**Old Harbor**	**1.46**	**168**		**Sn**	**04 01 59.9**	**-1.5**
P17K	**Kvichak River**	**1.46**	**293**		**Pn**	**04 01 42.2**	**-0.5**
P17K				IAML		04 02 01.3	
	comp=N,489nm,0.4s						
P17K				IAML		04 02 08.5	
	comp=E,510nm,0.8s						
Q16K	**King Salmon**	**1.48**	**273**		**Pn**	**04 01 42.4**	**-0.5**
Q16K					**Sn**	**04 02 01.6**	**-0.3**
HOM	**Homer**	**1.52**	**47**		**Pn**	**04 01 43.9**	**+0.6**
HOM				IAML		04 02 05.3	
	comp=N,412nm,1.1s						
O19K	**Port Alsworth**	**1.58**	**351**		**Pn**	**04 01 43.6**	**-0.5**
CNPM	**China Poot**	**1.60**	**55**		**Pn**	**04 01 44.5**	**0.0**
CNPM				IAML		04 02 07.9	
	comp=E,246nm,0.4s						
PLK4	**Peulik 4**	**1.68**	**234**		**Pn**	**04 01 45.4**	**-0.2**
PLK4	**Peulik 4**	**1.68**	**234**		**Sn**	**04 02 06.6**	**-0.2**
PLK1	**Peulik 1**	**1.70**	**241**		**Pn**	**04 01 45.4**	**-0.3**
PLK5	**Peulik 5**	**1.73**	**249**		**Pn**	**04 01 46.1**	**0.0**
PLK5					**Sn**	**04 02 07.7**	**-0.1**
PLBL	**Peulik Blue Cr**	**1.85**	**240**		**Pn**	**04 01 47.5**	**-0.2**
RED	**Redoubt Volcan**	**1.86**	**16**		**Pn**	**04 01 47.9**	**0.0**
BRLK	**Bradley Lake**	**1.89**	**52**		**Pn**	**04 01 47.7**	**-0.5**
BRLK				IAML		04 02 12.6	
	comp=N,194nm,0.5s						
BRLK				IAML		04 02 14.7	
	comp=E,203nm,0.5s						
RDSO	**Redoubt South**	**1.90**	**16**		**Pn**	**04 01 48.5**	**0.0**
RDWB	**Redoubt West**	**1.92**	**15**		**Pn**	**04 01 48.8**	**+0.1**
BRSE	**Bradley Lake S**	**1.93**	**54**		**Pn**	**04 01 48.5**	**-0.3**
NCT	**North Crescent**	**1.98**	**13**		**Pn**	**04 01 49.7**	**+0.2**
RDJH	**Redoubt Jeurge**	**2.02**	**14**		**Pn**	**04 01 50.3**	**+0.2**
O17K	**Koliganek Bris**	**2.03**	**305**		**Pn**	**04 01 49.3**	**-0.7**
DFR	**Drift River**	**2.04**	**16**		**Pn**	**04 01 50.4**	**+0.2**
RDT	**Redoubt**	**2.07**	**20**		**Pn**	**04 01 50.4**	**-0.2**
P16K	**Nushagak River**	**2.20**	**282**		**Pn**	**04 01 52.0**	**-0.2**
P16K				IAML		04 02 19.7	
	comp=E,167nm,1.0s						
P16K				IAML		04 02 21.9	
	comp=N,132nm,0.9s						
N19K	**Bonanza Creek**	**2.20**	**352**		**Pn**	**04 01 52.3**	**-0.1**
N19K				IAML		04 02 19.8	
	comp=N,159nm,0.7s						
N19K				IAML		04 02 31.8	
	comp=E,210nm,0.6s						
R16K	**Pilot Point**	**2.26**	**243**		**Pn**	**04 01 52.9**	**-0.2**
R16K				IAML		04 02 21.1	
	comp=N,199nm,0.9s						
R16K				IAML		04 02 36.3	
	comp=E,183nm,0.8s						
N18K	**Kilae Creek**	**2.29**	**334**		**Pn**	**04 01 52.9**	**-0.7**
N18K				IAML		04 02 35.9	
	comp=N,168nm,0.8s						
N18K				IAML		04 02 36.5	
	comp=E,137nm,0.8s						
O16K	**Kokwok River B**	**2.40**	**295**		**Pn**	**04 01 54.3**	**-0.6**
CAPN	**Captain Cook N**	**2.53**	**31**		**Pn**	**04 01 58.1**	**+1.5**
N17K	**Nushagak Hills**	**2.55**	**319**		**Pn**	**04 01 56.3**	**-0.6**
SLKM	**Skilak Lake**	**2.62**	**43**		**Pn**	**04 01 57.4**	**-0.6**
SLKM				IAML		04 02 31.5	
	comp=E,144nm,0.2s						
SLKM				IAML		04 02 32.5	
	comp=N,180nm,0.3s						
CKL	**Chakachamna La**	**2.67**	**16**		**Pn**	**04 01 58.9**	**+0.2**
SEW	**Seward**	**2.68**	**55**		**Pn**	**04 01 57.7**	**-0.9**
SEW				IAML		04 02 39.1	
	comp=N,72nm,0.7s						
SPCR	**Spurr Chakacha**	**2.69**	**17**		**Pn**	**04 01 59.1**	**+0.2**
SPCR	**Spurr Chakacha**	**2.69**	**17**		**Pn**	**04 01 59.1**	**+0.2**
SPU	**Mount Spurr**	**2.70**	**19**		**Pn**	**04 01 59.1**	**+0.1**
SPWE	**Spurr West**	**2.71**	**13**		**Pn**	**04 01 59.9**	**+0.6**
SPCN	**Chakachatna No**	**2.72**	**17**		**Pn**	**04 01 59.6**	**+0.4**
SPBG	**Spurr Blockage**	**2.73**	**15**		**Pn**	**04 01 59.8**	**+0.4**
SPNN	**North Nagishla**	**2.79**	**11**		**Pn**	**04 02 00.8**	**+0.5**
SPCG	**Spurr Capps Gl**	**2.81**	**18**		**Pn**	**04 02 00.7**	**+0.2**
ANNW	**Aniakchak Nort**	**2.89**	**236**		**Pn**	**04 02 01.6**	**+0.1**
STLK	**Strandline Lak**	**3.03**	**18**		**Pn**	**04 02 03.6**	**+0.1**
N16K	**Nishlik Lake**	**3.11**	**308**		**Pn**	**04 02 04.4**	**-0.2**
O15K	**Ungalikthiuk R**	**3.16**	**282**		**Pn**	**04 02 05.0**	**-0.2**
RC01	**Rabbit Creek A**	**3.21**	**38**		**Pn**	**04 02 05.3**	**-0.5**
RC01				IAML		04 02 44.8	
	comp=E,141nm,0.5s						
RC01				IAML		04 02 44.8	
	comp=N,119nm,0.2s						
M20K	**Styx River**	**3.27**	**6**		**Pn**	**04 02 07.2**	**+0.5**
M20K	**Styx River**	**3.27**	**6**	IAML		04 02 45.7	
	comp=N,45nm,0.7s						
M19K	**Big River Lodg**	**3.28**	**355**		**Pn**	**04 02 06.8**	**-0.1**
M17K	**Holitna River**	**3.31**	**328**		**Pn**	**04 02 07.0**	**-0.1**
M17K	**Holitna River**	**3.31**	**328**	IAML		04 03 09.2	
	comp=E,127nm,0.7s						
M17K				IAML		04 03 09.4	
	comp=N,129nm,0.7s						
CHGN	**Chignik**	**3.41**	**228**		**Pn**	**04 02 08.0**	**-0.6**
CHGN				IAML		04 02 48.6	
	comp=E,85nm,0.3s						
CHGN				IAML		04 02 48.0	
	comp=N,69nm,0.1s						
M16K	**Timber Creek**	**3.52**	**315**		**Pn**	**04 02 09.9**	**-0.1**
SKT	**Skwentna**	**3.54**	**18**		**Pn**	**04 02 10.0**	**-0.3**
N15K	**Kwethluk River**	**3.55**	**298**		**Pn**	**04 02 10.1**	**-0.4**
N15K				IAML		04 03 08.2	
	comp=N,36nm,0.6s						
P23K	**Montague Islan**	**3.56**	**65**		**Pn**	**04 02 10.2**	**-0.4**
L19K	**White Mountain**	**3.59**	**352**		**Pn**	**04 02 10.7**	**-0.3**
L19K				IAML		04 03 19.1	
	comp=N,44nm,0.9s						
L19K				IAML		04 03 21.7	
	comp=E,44nm,0.9s						
M22K	**Willow**	**3.63**	**29**		**Pn**	**04 02 11.6**	**+0.1**
PMR	**Palmer**	**3.78**	**36**	P	**Pn**	**04 02 12.9**	**-0.6**
PMR	**Palmer**	**3.78**	**36**		**Pn**	**04 02 12.4**	**-1.1**
PMR				IAML		04 02 56.3	
	comp=N,33nm,0.3s						
PMR				IAML		04 02 56.6	
	comp=E,34nm,0.4s						
L18K	**Granite Mounta**	**3.86**	**340**		**Pn**	**04 02 14.4**	**-0.2**
L18K				IAML		04 02 59.3	
	comp=N,58nm,0.7s						
KNK	**Knik Glacier**	**3.87**	**42**		**Pn**	**04 02 13.8**	**-1.0**
KNK				IAML		04 03 00.6	
	comp=N,69nm,0.7s						
VNFG	**Fog Glacier, M**	**3.89**	**235**		**Pn**	**04 02 15.2**	**+0.1**
VNFG	**Fog Glacier, M**	**3.89**	**235**	IAML		04 03 32.2	
	comp=E,68nm,1.1s						
VNFG				IAML		04 03 41.7	
	comp=N,70nm,1.1s						
O14K	**Tigyukauivet M**	**3.90**	**282**		**Pn**	**04 02 14.9**	**-0.2**
GHO	**Glory Hole Cre**	**3.98**	**36**		**Pn**	**04 02 15.3**	**-1.0**
GHO				IAML		04 03 02.1	
	comp=N,77nm,0.4s						
VNKR	**Veniaminof 5**	**3.98**	**231**		**Pn**	**04 02 16.4**	**0.0**
GLI	**Glacier Island**	**4.08**	**54**		**Pn**	**04 02 15.9**	**-1.6**
HIN	**Hinchinbrook I**	**4.12**	**62**		**Pn**	**04 02 17.8**	**-0.4**
CUT	**Chulitna**	**4.16**	**23**		**Pn**	**04 02 18.4**	**-0.3**
L16K	**Owhat River**	**4.17**	**320**		**Pn**	**04 02 18.4**	**-0.5**
L16K				IAML		04 03 37.6	
	comp=N,24nm,0.9s						
L22K	**Petersville**	**4.18**	**20**		**Pn**	**04 02 18.9**	**-0.1**
L22K				IAML		04 03 07.5	
	comp=E,47nm,0.6s						
L22K				IAML		04 03 10.7	
	comp=N,29nm,0.4s						
SML	**Sawmill**	**4.19**	**38**		**Pn**	**04 02 18.3**	**-0.9**
SML				IAML		04 03 11.8	
	comp=N,32nm,0.6s						
SML				IAML		04 03 20.4	
	comp=E,31nm,1.0s						
N14K	**Kuskokwak Cree**	**4.23**	**291**		**Pn**	**04 02 19.5**	**-0.1**
N14K	**Kuskokwak Cree**	**4.23**	**291**	IAML		04 03 39.7	
	comp=N,32nm,0.9s						
N14K				IAML		04 03 59.3	
	comp=E,25nm,1.2s						
PPLA	**Purkeypile**	**4.34**	**10**		**Pn**	**04 02 21.9**	**+0.6**
M23K	**Glacier View**	**4.38**	**41**		**Pn**	**04 02 20.8**	**-1.0**
EYAK	**Cordova Ski Ar**	**4.53**	**62**	P	**Pn**	**04 02 23.0**	**-0.7**
EYAK	**Cordova Ski Ar**	**4.53**	**62**		**Pn**	**04 02 22.9**	**-0.7**
EYAK				IAML		04 03 15.2	
	comp=N,36nm,0.5s						
EYAK				IAML		04 03 16.2	
	comp=E,29nm,0.6s						
SCM	**Sheep Creek Mo**	**4.55**	**43**		**Pn**	**04 02 23.4**	**-0.7**
SCM				IAML		04 03 17.1	
	comp=N,47nm,0.5s						
M14K	**Bethel**	**4.63**	**301**		**Pn**	**04 02 24.9**	**-0.2**
K17K	**Iditarod**	**4.64**	**334**		**Pn**	**04 02 25.1**	**-0.1**
K17K				IAML		04 03 45.8	
	comp=N,24nm,0.9s						
K17K				IAML		04 04 03.4	
	comp=E,26nm,1.0s						
K20K	**Telida**	**4.73**	**359**		**Pn**	**04 02 26.4**	**-0.1**
DIV	**Divide**	**4.76**	**55**		**Pn**	**04 02 26.4**	**-0.6**
DIV				IAML		04 03 21.3	
	comp=E,38nm,0.4s						
DIV				IAML		04 03 21.9	
	comp=N,41nm,0.4s						
KLU	**Klutina**	**4.88**	**51**		**Pn**	**04 02 28.2**	**-0.4**
L15K	**Ungalak Mounta**	**4.89**	**312**		**Pn**	**04 02 28.5**	**0.0**
SDPT	**Sand Point**	**4.91**	**231**	P	**Pn**	**04 02 28.1**	**-0.8**
SDPT	**Sand Point**	**4.91**	**231**	S	**Sn**	**04 03 22.5**	**-1.9**
SDPT	**Sand Point**	**4.91**	**231**		**Pn**	**04 02 27.9**	**-1.0**
SDPT	**Sand Point**	**4.91**	**231**	IAML		04 03 22.7	
	comp=N,31nm,1.0s						
SDPT				IAML		04 03 25.9	
	comp=E,22nm,0.4s						
CHNA	**Chernabura Isl**	**4.97**	**222**	P	**Pn**	**04 02 28.0**	**-1.7**
CNBA	**Chernabura Isl**	**4.97**	**222**		**Pn**	**04 02 27.6**	**-2.2**
CNBA	**Chernabura Isl**	**4.97**	**222**	IAML		04 03 27.4	
	comp=E,24nm,0.5s						
CNBA				IAML		04 03 27.6	
	comp=N,17nm,1.2s						
RAGM	**Ragged Mountai**	**4.98**	**66**		**Pn**	**04 02 29.5**	**-0.4**
KAIM	**Kayak Island**	**4.99**	**71**		**Pn**	**04 02 30.1**	**+0.1**
J18K	**Innoko River**	**5.04**	**345**		**Pn**	**04 02 30.6**	**0.0**
J18K				IAML		04 04 02.4	
	comp=E,14nm,0.8s						
TRF	**Thorofare Moun**	**5.12**	**18**		**Pn**	**04 02 31.9**	**0.0**
TRF				IAML		04 03 32.5	
	comp=E,24nm,0.3s						
TRF				IAML		04 03 34.1	
	comp=N,22nm,0.4s						
KTH	**Kantishna Hill**	**5.12**	**15**		**Pn**	**04 02 31.6**	**-0.3**
KTH				IAML		04 03 31.2	
	comp=N,18nm,1.1s						
KTH				IAML		04 03 33.6	
	comp=E,12nm,0.5s						
M24K	**Tolsona, Glenn**	**5.14**	**44**		**Pn**	**04 02 31.7**	**-0.5**
M13K	**Dall Lake**	**5.16**	**294**	Pn	**Pn**	**04 02 32.6**	**+0.3**
M13K				IAML		04 04 32.7	
	comp=E,12nm,1.0s						
L14K	**Kuka Creek**	**5.20**	**305**		**Pn**	**04 02 32.9**	**0.0**
L14K	**Kuka Creek**	**5.20**	**305**	IAML		04 04 04.6	
	comp=N,15nm,1.1s						
L14K				IAML		04 04 22.3	
	comp=E,11nm,1.1s						
BMRM	**Bremner River**	**5.21**	**60**		**Pn**	**04 02 32.0**	**-1.0**
K15K	**Wolf Creek Mou**	**5.28**	**317**		**Pn**	**04 02 34.0**	**0.0**
K15K				IAML		04 04 14.2	
	comp=N,12nm,1.1s						
SUCK	**Suckling Hills**	**5.34**	**70**		**Pn**	**04 02 34.6**	**-0.2**
SUCK	**Suckling Hills**	**5.34**	**70**	IAML		04 03 56.3	
	comp=N,25nm,1.0s						
RND	**Reindeer**	**5.35**	**25**		**Pn**	**04 02 34.5**	**-0.5**
J19K	**Poorman**	**5.44**	**352**		**Pn**	**04 02 35.6**	**-0.4**
BERG	**Berg Lake**	**5.45**	**67**		**Pn**	**04 02 35.6**	**-0.6**
DHY	**Denali Highway**	**5.45**	**33**		**Pn**	**04 02 35.6**	**-0.7**
N25K	**Chitina, Valde**	**5.49**	**53**		**Pn**	**04 02 36.2**	**-0.7**
J20K	**Nowinta River**	**5.55**	**359**		**Pn**	**04 02 37.1**	**-0.5**
MCK	**McKinley**	**5.63**	**23**		**Pn**	**04 02 38.2**	**-0.5**
GLB	**Gilahina Butte**	**5.75**	**57**		**Pn**	**04 02 39.7**	**-0.7**
CRQM	**Cirque**	**5.81**	**64**		**Pn**	**04 02 40.6**	**-0.7**
VRDI	**Verde Repeater**	**5.82**	**59**		**Pn**	**04 02 40.6**	**-0.9**
TGL	**Tana Glacier**	**5.96**	**65**		**Pn**	**04 02 42.6**	**-0.6**
PAX	**Paxson**	**5.96**	**40**		**Pn**	**04 02 42.7**	**-0.6**
MCARA	**McCarthy VSAT**	**6.07**	**59**		**Pn**	**04 02 44.4**	**-0.4**
KIAG	**Kiagna River**	**6.23**	**64**		**Pn**	**04 02 46.3**	**-0.7**
MESA	**MESA**	**6.26**	**71**		**Pn**	**04 02 47.5**	**+0.1**
K13K	**Kusilvak Mount**	**6.31

PB01 eS Sn 04 24 02.5 -0.3
PB01 IAML 04 24 03.1
comp=N,807nm,0.2s
PX03 IPOC Station P 0.74 312 ⇑eP Pn 04 23 52.1 -1.2
PX03 eS Sn 04 24 06.4 -0.5
PX03 IAML 04 24 08.2
comp=N,204nm,0.1s
PB08 IPOC Station P 0.76 352 ⇑eP Pn 04 23 53.4 -0.4
PB08 eS Sn 04 24 07.4 -0.4
PB08 IAML 04 24 08.9
comp=N,272nm,0.1s
PB02 IPOC Station P 0.90 242 ⇑eP Pn 04 23 54.2 -0.6
PB02 eS Sn 04 24 09.1 -0.6
PB02 IAML 04 24 12.9
comp=E,426nm,0.2s
PB09 IPOC Station P 0.92 192 eS Sn 04 24 10.5 +0.4
PB09 IAML 04 24 13.3
comp=N,107nm,0.2s
PATCX Punta Patache 1.04 274 ⇑eP Pn 04 23 55.7 -0.6
PATCX eS Sn 04 24 11.8 -0.5
PATCX IAML 04 24 16.4
comp=E,278nm,0.2s
TA01 Diego Aracena 1.11 287 eP Pn 04 23 56.6 -0.3
TA01 eS Sn 04 24 12.8 -0.7
TA01 IAML 04 24 14.8
comp=E,131nm,0.2s
TA01 IAML 04 24 15.7
comp=N,119nm,0.3s
PB07 IPOC Station P 1.14 223 *i* P Pn 04 23 56.6 -0.9
PB07 eS Sn 04 24 14.0 -0.3
PB07 IAML 04 24 15.8
comp=N,252nm,0.5s
TA02 Huaiquique 1.19 301 eP Pn 04 23 57.0 -0.9
TA02 eS Sn 04 24 14.3 -0.8
TA02 IAML 04 24 15.9
comp=N,410nm,0.1s
GO01 Chusmiza 1.23 353 ⇑eP Pn 04 23 58.4 -0.5
GO01 eS Sn 04 24 16.5 -0.2
GO01 IAML 04 24 18.4
comp=N,263nm,0.2s
PB11 IPOC Station P 1.27 333 ⇑eP Pn 04 23 58.3 -0.6
PB11 eS Sn 04 24 16.8 -0.1
PB11 IAML 04 24 17.8
comp=N,316nm,0.2s
PB03 IPOC Station P 1.32 210 ⇑eP Pn 04 23 57.2 -2.4
PB03 eS Sn 04 24 17.6 -0.5
PB03 IAML 04 24 23.4
comp=E,90nm,0.2s

*CATAC **24** 04:35:26.6±0.5,1°N±2″×7°9W±°, h8km, M3.6/11, mb4.0/1, MLv3.4/11, Error ellipse: s-maj=9.1km s-min=4.1km az=106.5, confirmed*
*RSNC **24** 04:35:28.4±0.0,1°N±1″×7°9W±°, h38km±5km, M2.9, mb3.7, ML2.4, MLv3.2*
ISC 24 04:35:23.0±1.5,**1°22N**±0°03×**78°92W**±0°06,**h6**km±10km, **n35**, σ2s**09**/63, **Colombia-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAC1	**Pacto, Paraso**	**0.96**	**173**	P	**Pg**	**04 35 41.9**	**+0.5**
PAC1				S	**Sg**	**04 35 52.4**	**-1.4**
CUSE	**Cuicocha Este**	**1.04**	**150**	P	**Pg**	**04 35 43.8**	**+0.7**
CUSE				S	**Sg**	**04 35 55.7**	**-1.0**
OTAV	**Otavalo**	**1.08**	**155**	P	**Pg**	**04 35 44.3**	**+0.4**
OTAV				S	**Sg**	**04 35 56.5**	**-1.4**
OTAV	**Otavalo**	**1.08**	**155**	P	**Pg**	**04 35 44.2**	**+0.4**
OTAV				S	**Sg**	**04 35 56.3**	**-1.6**
CMBC	**Cumbal**	**1.12**	**104**	P	**Pg**	**04 35 45.0**	**+0.4**
CMBC				S	**Sg**	**04 35 57.5**	**-1.8**
IMBA	**Imbabura, San**	**1.18**	**143**	P	**Pn**	**04 35 46.8**	**+0.4**
IMBA				S	**Sb**	**04 36 01.9**	**+0.1**
TULM	**Tulcn-Chalpat**	**1.23**	**114**	P	**Pb**	**04 35 47.1**	**+0.1**
TULM				S	**Sn**	**04 36 04.3**	**0.0**
TULM	**Tulcn-Chalpat**	**1.23**	**114**	P	**Pb**	**04 35 47.2**	**+0.2**
PULU	**Pululahua**	**1.26**	**161**	P	**Pb**	**04 35 47.5**	**+0.1**
PULU				S	**Sb**	**04 36 02.6**	**-1.5**
GGPC	**Guagua Pichinc**	**1.43**	**167**	P	**Pn**	**04 35 50.4**	**+0.5**
GGPC				S	**Sb**	**04 36 07.3**	**-1.6**
GCUF	**Volcan Galeras**	**1.57**	**90**	P	**Pn**	**04 35 52.2**	**+0.4**
GCUF				S	**Sn**	**04 36 09.7**	**-3.0**
BONI	**La Bonita**	**1.58**	**119**	P	**Pn**	**04 35 52.4**	**+0.6**
BONI				S	**Sn**	**04 36 10.8**	**-1.9**
BBAC	**Balboa, Cauca**	**1.85**	**64**	P	**Pn**	**04 35 55.6**	**+0.2**
BBAC				S	**Sn**	**04 36 16.6**	**-2.6**
ANTS	**Antisana-Sarah**	**1.86**	**156**	P	**Pb**	**04 35 57.9**	**+0.1**
ANTS				S	**Sn**	**04 36 20.1**	**+0.1**
CASC	**Dorado de Casc**	**1.91**	**124**	P	**Pb**	**04 35 58.3**	**0.0**
CASC				S	**Sb**	**04 36 21.4**	**-1.0**
GR1C	**Gorgona, Isla**	**1.92**	**23**	P	**Pn**	**04 35 56.8**	**+0.6**
GR1C				S	**Sb**	**04 36 23.9**	**+1.2**
SLOR	**San Lorenzo -**	**1.98**	**168**	P	**Pb**	**04 36 00.4**	**+0.6**
SLOR				S	**Sb**	**04 36 24.7**	**-0.1**
CRUC	**La Cruz**	**1.99**	**80**	P	**Pb**	**04 35 59.7**	**-0.2**
CRUC				S	**Sn**	**04 36 23.2**	**+0.2**
VCES	**Cotopaxi**	**2.07**	**165**	P	**Pb**	**04 36 01.6**	**+0.3**
VCES				S	**Sn**	**04 36 26.0**	**+0.8**
POPC	**Popayan, Colom**	**2.59**	**60**	P	**Pn**	**04 36 07.1**	**+1.4**
POPC				S	**Sn**	**04 36 35.7**	**-1.9**
JAMC	**Jamundi, Valle**	**2.99**	**48**	P	**Pn**	**04 36 11.6**	**+0.5**
JAMC				S	**Sn**	**04 36 42.6**	**-4.8**
FLOC	**Florencia**	**3.28**	**84**	P	**Pn**	**04 36 18.0**	**+3.1**
FLOC	**Florencia**	**3.28**	**84**	P	**Pn**	**04 36 17.5**	**+2.5**
YOTC	**Yotoco, Valle**	**3.76**	**43**	P	**Pn**	**04 36 22.0**	**+0.4**
YOTC				S	**Sn**	**04 37 01.9**	**-4.3**
PLMC	**San Jos del P**	**4.51**	**36**	P	**Pn**	**04 36 33.7**	**+1.8**
PLMC				S	**Sn**	**04 37 16.8**	**-7.8**
ORTC	**Ortega, Tolima**	**4.53**	**54**	P	**Pn**	**04 36 34.2**	**+2.0**
ORTC				S	**Sn**	**04 37 24.3**	**-1.0**
PRAC	**Prado**	**4.72**	**58**	P	**Pn**	**04 36 38.0**	**+3.1**
PRAC				S	**Sn**	**04 37 32.8**	**+2.8**
PRAC	**Prado**	**4.72**	**58**	P	**Pn**	**04 36 37.4**	**+2.5**
ANIL	**Santa Ana**	**4.78**	**47**	P	**Pn**	**04 36 39.0**	**+3.2**
ANIL				S	**Sn**	**04 37 43.9**	**+0.6**
ARNL	**Arenillas**	**4.88**	**194**	P	**Pn**	**04 36 38.9**	**+2.0**
URMC	**La Uribe, Meta**	**4.96**	**66**	P	**Pn**	**04 36 41.7**	**+3.6**
URMC				S	**Sn**	**04 37 35.9**	**+0.1**
GUY2C	**Guyana, Caldas** 0.0nm3.9nm,1.0s	**5.33**	**42**	P	**Pn**	**04 36 47.0**	**+3.5**
GUY2C	0.0nm3.9nm,1.0s			S	**Sn**	**04 37 46.3**	**+0.9**
CBOC	**Ciudad Bolivar** 8.1nm,0.7s	**5.45**	**32**	P	**Pn**	**04 36 47.5**	**+2.6**
CBOC	8.1nm,0.7s			S	**Sn**	**04 37 47.3**	**-0.7**
CHIC	**Chingaza**	**6.18**	**57**	P	**Pn**	**04 36 58.7**	**+3.4**
CHIC				S	**Sn**	**04 38 07.4**	**+0.9**
DBBC	**Dabeiba**	**6.36**	**25**	P	Pn	04 37 03.8	+6.4

IDC 24 05:29:40.8±4.0,**54°94N**×**88°13E**,**h0**km,**mbtmp2.6**/3, **ML2.0**/2,**1C-1D**,**Error ellipse: s-maj=37.8km s-min=28.0km az=19.0**,**Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=62,slow=333,SNR=1.4	**2.18**	**244**	I	I	05 44 00.0	
ZALV	**Zalesovo Beam** 0.5nm,0.3s,baz=58,slow=16,SNR=6.4	**2.18**	**244**	Pn	Pn	05 30 18.4	+0.2
ZALV	1.4nm,0.3s,baz=61,slow=27,SNR=12			Lg	Lg	05 30 49.9	
KURBB	**Kurchatov Arra** 0.2nm,0.2s,baz=56,slow=14,SNR=0.9 1.0nm,0.3s	**7.25**	**237**	Pn	Pn	05 31 27.8	-0.1
MK31	**Makanchi Array** 0.3nm,0.5s,baz=110,slow=20,SNR=3.8	**8.95**	**207**	⇑Pn	Pg	05 32 39.6	+7.4
MK31	2.2nm,0.8s,baz=107,slow=29,SNR=3.9			⇓Lg	Lg	05 33 53.5	
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=19,slow=13,SNR=2.6 0.1nm,0.4s	**8.95**	**207**	Pn	Pn	05 31 51.9	+0.6

IDC 24 06:08:06.8±8.3,**4°85S**×**127°00E**,**h643**km±137km,**mb2.5**/1, **mbtmp3.4**/4,**Error ellipse: s-maj=121.0km s-min=44.2km az=56.0**,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi** 0.6nm,0.3s,baz=343,slow=11,SNR=6.2	**13.24**	**186**	P	P	06 10 56.2	-0.8
WRA	**Warramunga Arr**	**16.62**	**155**	P	P	06 11 28.6	+0.4
	0.8nm,0.6s,baz=336,slow=9.2,SNR=16						
WRA				S	S	06 14 12.6	+0.9
	0.3nm,1.0s,baz=335,slow=24,SNR=1.6						
ASAR	**Alice Springs** 0.2nm,0.5s,baz=337,slow=7.5,SNR=4.5	**19.86**	**161**	P	P	06 11 58.1	+0.6
MKAR	**Makanchi Array** 0.3nm,0.6s,baz=121,slow=5.6,SNR=4.3 0.3nm,0.6s	**64.81**	**328**	P	P	06 17 44.5	+0.1

*ASRS **24** 06:14:59.0±1.1,54°26N×86°19E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 24 06:15:03.8±2.4,**54°16N**×**86°00E**,**h0**km,**mbtmp2.7**/2, **ML2.5**/2,**Error ellipse: s-maj=17.4km s-min=10.0km az=62.0**,**Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=73,slow=339,SNR=6.5	**0.73**	**253**	I	I	06 17 40.0	
ZALV	**Zalesovo Beam** 0.6nm,0.3s,baz=72,slow=16,SNR=5.4	**0.73**	**253**	Pg	Pg	06 15 16.5	-1.3
ZALV	3.3nm,0.3s,baz=72,slow=30,SNR=16			Lg	Lg	06 15 28.9	
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=51,slow=13,SNR=5.4	**5.79**	**235**	Pn	Pn	06 16 31.7	+0.9
KURBB	baz=26,slow=36,SNR=1.7 0.2nm,0.3s			Lg	Lg	06 18 05.9	
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=22,slow=13,SNR=6.0	**7.75**	**199**	Pn	Pn	06 16 58.8	+1.1
MKAR	0.1nm,0.3s,baz=72,slow=35,SNR=5.4 0.1nm,0.3s			Lg	Lg	06 19 03.3	

*TIR **24** 06:16:13.9,41°13N×20°05E, h26km±1km, Md2.7/6, Ml2.6/8*
*THE **24** 06:16:15.0,41°N±3″×2°0E±°, h0km±4km, M2.3/8, MLh2.3/8*
*PDG **24** 06:16:14.6±0.4,41°15N×19°92E, h14km±1km, ML2.7/12, Error ellipse: s-maj=0.8km s-min=1.5km az=0.0*
*BEO **24** 06:16:16.6±0.7,41°22N×20°16E, h0km, ML2.5/2*
ISC 24 06:16:14.9±0.9,**41°15N**±0°02×**20°03E**±0°03,**h12**km±8km, **n40**, σ0s**91**/64, **8C-4D**, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.23**	**327**	Pg	**Pg**	**06 16 20.5**	**+0.6**
TIR				Sg	**Sg**	**06 16 23.6**	**+0.3**
TIR	6.3nm,0.4s			AML	AML	06 16 27.0	
PHP	**Peshkopia**	**0.62**	**30**	Pg	**Pg**	**06 16 26.2**	**-0.7**
PHP				Sg	**Sg**	**06 16 34.8**	**-0.3**
PHP	1.2nm,0.3s			AML	AML	06 16 40.6	
PHP				AMd		06 17 17.5	
PHP	**Peshkopia**	**0.62**	**30**	P	**Pg**	**06 16 26.4**	**-0.5**
PHP				S	**Sb**	**06 16 35.9**	**-0.4**
KBN	**Korca**	**0.78**	**132**	Sn	**Sg**	**06 16 39.0**	**-1.1**
KBN	0.8nm,0.5s			AML	AML	06 16 45.4	
KBN	**Korca**	**0.78**	**132**	P	**Pg**	**06 16 29.6**	**-0.4**
KBN				S	**Sb**	**06 16 41.4**	**+0.4**
VLO	**Vlora**	**0.79**	**211**	Pg	**Pg**	**06 16 28.0**	**-2.2**
VLO	2.7nm,0.5s			Sg	**Sg**	**06 16 40.9**	**+0.3**
VLO				AML	AML	06 16 50.2	
VLO				AMd		06 17 09.6	
SDA	**Shkodra**	**0.99**	**336**	Pg	**Pb**	**06 16 32.9**	**-1.0**
SDA				Sg	**Sn**	**06 16 47.6**	**-0.8**
SDA	0.4nm,0.2s			AML	AML	06 16 51.7	
SDA				AMd		06 17 33.7	
ULC	**Ulcinj**	**1.00**	**324**	⇑Pg	**Pb**	**06 16 32.3**	**-1.9**
ULC				*i* Sg	**Sb**	**06 16 47.1**	**-0.3**
NEST	**Nestorio**	**1.07**	**133**	P	**Pg**	**06 16 35.3**	**-0.1**
NEST				S	**Sn**	**06 16 50.9**	**+0.4**
DRME	**Dracevica, Mon**	**1.22**	**329**	⇑*i* Pg	**Pn**	**06 16 37.2**	**-0.5**
DRME				*i* Sg	**Sg**	**06 16 54.5**	**+0.4**
SRN	**Sarande**	**1.27**	**181**	Pg	**Pn**	**06 16 38.3**	**-0.1**
SRN				Sg	**Sb**	**06 16 55.2**	**+0.2**
SRN	0.3nm,0.5s			AML	AML	06 17 04.2	
SRN				AMd		06 17 31.3	
SRN	**Sarande**	**1.27**	**181**	P	**Pg**	**06 16 39.4**	**+0.1**
SRN				S	**Sg**	**06 16 57.9**	**+2.1**
PENT	**Pentalofos**	**1.27**	**138**	P	**Pg**	**06 16 39.2**	**-0.1**
PDG	**Podgorica**	**1.40**	**336**	Pn	**Pn**	**06 16 40.4**	**+0.2**
PDG				Sn	**Sg**	**06 17 00.6**	**+0.5**
PDG				AMd		06 17 35.1	
PDG	**Podgorica**	**1.40**	**336**	*e*Pg	**Pg**	**06 16 42.5**	**+0.6**
PDG				*e*Sg	**Sg**	**06 17 01.4**	**+1.3**
PDG	**Podgorica**	**1.40**	**336**	⇑*i* Pg	**Pn**	**06 16 39.7**	**-0.6**
PDG				*i* Sg	**Sg**	**06 17 01.2**	**+1.1**
BUM	**Brajici-Budva**	**1.43**	**324**	⇑*i* Pg	**Pn**	**06 16 40.8**	**+0.1**
BUM				*i* Sg	**Sg**	**06 17 01.5**	**+0.5**
PVY	**Plav**	**1.44**	**358**	⇑*i* Pg	**Pn**	**06 16 41.0**	**0.0**
PVY				*i* Sg	**Sg**	**06 17 01.4**	**+2.0**
KEK	**Kerkira**	**1.45**	**187**	P	**Pb**	**06 16 42.0**	**+0.2**
CEME	**Cevo**	**1.62**	**330**	⇑*i* Pn	**Pn**	**06 16 43.6**	**+0.2**
CEME				*i* Sn	**Sg**	**06 17 06.5**	**-0.7**
IGT	**Igoumenitsa**	**1.63**	**172**	Sn	**Sb**	**06 17 05.4**	**-0.1**
IGT	**Igoumenitsa**	**1.63**	**172**	P	**Pn**	**06 16 44.0**	**+0.6**
IVA	**Berane**	**1.72**	**357**	⇓*i* Pn	**Pb**	**06 16 46.1**	**-0.4**
IVA				*i* Sn	**Sg**	**06 17 10.4**	**+0.1**
HCY	**Herceg Novi**	**1.73**	**319**	⇓*i* Pn	**Pn**	**06 16 44.6**	**-0.2**
HCY				*i* Sn	**Sb**	**06 17 08.6**	**+0.2**
KOME	**Kolasin**	**1.74**	**347**	⇑*i* Pn	**Pb**	**06 16 46.0**	**-0.8**
KOME				*i* Sn	**Sg**	**06 17 10.5**	**-0.4**
GRG	**Griva**	**1.80**	**95**	P	**Pb**	**06 16 46.5**	**-1.3**
NKME	**Niksic**	**1.81**	**334**	⇑*i* Pn	**Pn**	**06 16 45.9**	**0.0**
NKME				*i* Sn	**Sb**	**06 17 11.0**	**+0.5**
BRY	**Bratogost**	**2.07**	**328**	⇓*i* Pn	**Pn**	**06 16 50.4**	**+0.8**
BRY				*i* Sn	**Sb**	**06 17 17.5**	**-0.8**
SJES	**Sjenica**	**2.11**	**359**	*e*Pg	**Pb**	**06 16 53.3**	**+0.2**
SJES				*e*Sg	**Sb**	**06 17 20.3**	**+1.0**
BARS	**Barje**	**2.13**	**38**	*e*Pn	**Pb**	**06 16 54.1**	**+0.7**
KNT	**Kendrikon**	**2.16**	**89**	P	**Pn**	**06 16 51.0**	**+0.2**
SELS	**Selova**	**2.22**	**21**	*e*Pn	**Pb**	**06 16 53.5**	**-1.4**
PLE	**Pljevlja**	**2.23**	**348**	⇓*i* Pn	**Pn**	**06 16 52.0**	**+0.2**
PLE				*i* Sn	**Sb**	**06 17 22.2**	**-0.6**
BOSS	**Bosilegrad**	**2.27**	**53**	*e*Pn	**Pn**	**06 16 52.4**	**+0.2**
NOCI	**Noci**	**2.28**	**262**	Sn	**Sn**	**06 17 21.5**	**+1.2**
NOCI	0.5nm,0.3s			AML	AML	06 17 29.0	
IVAS	**Ivanjica**	**2.43**	**2**	*e*Pn	**Pn**	**06 16 55.6**	**+1.2**
STON	**Ston**	**2.44**	**315**	*e*Pg	**Pb**	**06 16 58.9**	**+0.1**
GRUS	**Gruza**	**2.78**	**10**	*e*Pn	**Pb**	**06 17 02.0**	**-2.5**
ZAPS	**Zavoj**	**2.87**	**41**	*e*Pn	**Pn**	**06 17 02.3**	**+1.8**
ZAGS	**Zajecar**	**3.12**	**31**	*e*Pn	**Pn**	**06 17 04.7**	**+0.9**

*ASRS **24** 06:19:22.0±0.5,55°19N×83°79E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 24 06:19:26.2±3.3,**55°03N**×**83°81E**,**h0**km,**mbtmp2.3**/2, **ML2.1**/2,**Error ellipse: s-maj=28.5km s-min=16.8km az=2.0**,**Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** 0.1nm,0.7s,baz=333,slow=337,SNR=4.6	**1.23**	**151**	I	I	06 26 50.0	
ZALV	**Zalesovo Beam** 0.3nm,0.3s,baz=330,slow=15,SNR=2.6	**1.23**	**151**	Pg	Pg	06 19 49.8	+0.1
ZALV	1.6nm,0.3s,baz=329,slow=23,SNR=12			Lg	Lg	06 20 06.3	
KURBB	**Kurchatov Arra** baz=39,slow=14,SNR=1.9 0.2nm,0.3s	**5.45**	**218**	Pn	Pn	06 20 48.8	+0.2
MKAR	**Makanchi Array** baz=13,slow=13,SNR=1.2 0.1nm,0.4s	**8.30**	**187**	Pn	Pn	06 21 27.2	-0.6

IDC 24 06:29:48.8±2.9,**54°15N**×**86°62E**,**h0**km,**mbtmp2.7**/2, **ML2.5**/2,**Error ellipse: s-maj=24.5km s-min=14.2km az=57.0**,**Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=81,slow=323,SNR=0.3	**1.08**	**260**	I	I	06 35 20.0	
ZALV	**Zalesovo Beam** 0.7nm,0.3s,baz=78,slow=17,SNR=5.6	**1.08**	**260**	Pg	Pg	06 30 09.0	-0.5
ZALV	1.2nm,0.3s,baz=77,slow=29,SNR=7.3			Lg	Lg	06 30 25.0	
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=54,slow=13,SNR=4.3 0.4nm,0.5s	**6.08**	**238**	Pn	Pn	06 31 19.9	0.0
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=21,slow=11,SNR=7.7 0.2nm,0.3s	**7.86**	**202**	Pn	Pn	06 31 45.8	+1.4

IDC 24 06:34:40.8±3.1,**54°02N**×**86°46E**,**h0**km,**mbtmp2.4**/2, **ML2.1**/2,**Error ellipse: s-maj=25.0km s-min=15.6km az=54.0**,**Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=85,slow=323,SNR=1.8	**0.97**	**267**	I	I	06 41 50.0	
ZALV	**Zalesovo Beam** 0.3nm,0.3s,baz=86,slow=16,SNR=2.9	**0.97**	**267**	Pg	Pg	06 34 58.9	-0.5
ZALV	0.7nm,0.3s,baz=92,slow=31,SNR=5.9			Lg	Lg	06 35 12.4	
KURBB	**Kurchatov Arra** baz=56,slow=13,SNR=1.9 0.2nm,0.5s	**5.93**	**238**	Pn	Pn	06 36 11.8	+2.0
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=21,slow=12,SNR=2.3 0.1nm,0.3s	**7.71**	**202**	Pn	Pn	06 36 34.3	+0.1

*NEIC **24** 06:38:34.5±2.5,20°7S±0°1×178°3W±0°1, h454km±6km, mb4.4/75, Error ellipse: s-maj=16.1km s-min=13.3km az=130.0*
*IDC **24** 06:38:41.3±1.4,20°61S×178°42W, h527km±15km, mb3.5/14, mbtmp4.3/16, Error ellipse: s-maj=16.0km s-min=12.9km az=131.0*
ISC 24 06:38:33.8±0.4,**20°67S**±0°07×**178°33W**±0°07,**h450**km, **n113**,σ1s**46**/90,**mb4.4**/52,**2D**,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu** 65nm,0.7s,baz=139,slow=12,SNR=38	**4.49**	**310**	P	P	06 40 06.6	+13
FUTU	**Fugatoga**	**6.33**	**2**	P	**P**	**06 40 12.2**	**+0.5**
NIUE	**Niue**	**8.07**	**80**	P	**P**	**06 40 28.7**	**-1.3**
RAO	**Raoul Island**	**8.55**	**178**	P	**P**	**06 40 34.5**	**-0.6**
AFI	**Afiamalu** 10nm,0.4s,baz=212,slow=20,SNR=2.3	**9.19**	**44**	P	P	06 40 48.9	+6.6
AFI	29nm,0.8s,baz=280,slow=17,SNR=5.4			S	**S**	**06 42 26.4**	**-1.4**
FUNA	**Funafuti**	**12.31**	**348**	P	**P**	**06 41 14.7**	**-1.5**
MARNC	**Mare, Loyalty**	**12.76**	**264**	P	**P**	**06 41 22.4**	**+1.5**
DZM	**Mont Dzumac** 4.1nm,0.8s,baz=37,slow=20,SNR=1.4	**14.25**	**262**	P	**P**	**06 41 39.9**	**+2.8**
DZM	baz=72,slow=16			S	S	06 43 56.5	-12
ONTNC	**Ouen Toro**	**14.25**	**261**	P	**P**	**06 41 38.2**	**+1.2**
URZ	**Urewera** 4.8nm,0.4s,baz=281,slow=3.1,SNR=9.2	**17.97**	**192**	P	**P**	**06 42 16.5**	**+0.4**
EIDS	**Eidsvold**	**28.50**	**255**	P	**P**	**06 43 50.4**	**-0.9**
EIDS	comp=Z,26nm,1.5s			IAmb	IAmb	06 44 01.5	
CAN	**Canberra**	**32.16**	**236**	P	**P**	**06 44 21.9**	**-1.0**
CAN	comp=Z,21nm,1.3s			IAmb	IAmb	06 45 05.2	
RABL	**Rabaul**	**33.04**	**296**	P	**P**	**06 44 31.4**	**+0.8**
CTA	**Charters Tower** comp=Z,5.4nm,0.8s,baz=90,slow=8.1,SNR=2.7 comp=Z,5.4nm,0.8s	**33.16**	**265**	P	**P**	**06 44 33.2**	**+1.5**
CTAO	**Charters Tower**	**33.16**	**265**	P	**P**	**06 44 32.1**	**+0.4**
CTAO	comp=Z,11nm,1.1s			IAmb	IAmb	06 44 39.3	
PATS	**Pohnpei**	**35.69**	**318**	P	**P**	**06 44 53.5**	**+0.5**
COEN	**Coen**	**37.28**	**274**	P	**P**	**06 45 05.9**	**-0.3**
MGBR	**Mount Gambier**	**39.34**	**235**	P	**P**	**06 45 23.9**	**+1.2**
WR8	**Warramunga Arr**	**44.12**	**262**	P	**P**	**06 46 01.8**	**+0.7**
AS31	**Alice Springs**	**44.17**	**257**	P	**P**	**06 46 02.8**	**+1.2**
ASAR	**Alice Springs** comp=Z,3.9nm,0.6s,baz=96,slow=8.0,SNR=49	**44.17**	**257**	P	**P**	**06 46 03.0**	**+1.4**
ASAR	comp=Z,0.6nm,0.6s,baz=113,slow=3.9,SNR=5.7			PcP	**PcP**	**06 47 36.9**	**-0.2**
ASAR	comp=Z,0.3nm,0.7s,baz=96,slow=3.7,SNR=5.7			ScP	**ScP**	**06 50 39.9**	**-5.7**
ASAR	comp=Z,0.7nm,0.9s,baz=101,slow=14,SNR=5.8 comp=Z,3.9nm,0.6s			S	**S**	**06 51 52.9**	**-8.2**
ASAR	**Alice Springs**	**44.17**	**257**	P	**P**	**06 46 02.8**	**+1.3**
WB0	**Warramunga Arr**	**44.25**	**263**	P	**P**	**06 46 03.1**	**+1.0**
WRA	**Warramunga Arr** comp=Z,1.4nm,0.3s,baz=96,slow=7.3,SNR=110	**44.27**	**262**	P	**P**	**06 46 03.2**	**+0.9**
WRA	comp=Z,0.4nm,1.0s,baz=93,slow=15,SNR=2.0 comp=Z,1.4nm,0.3s			S	S	06 51 53.7	-8.7
WRA	**Warramunga Arr**	**44.27**	**262**		**P**	**06 46 02.3**	**+0.1**
SIJI	**Sorong** comp=Z,19nm,0.7s,baz=93,slow=3.8,SNR=6.3 comp=Z,19nm,0.7s	**52.98**	**285**	P	**P**	**06 47 08.4**	**+0.9**
VNDA	**Vanda** comp=Z,1.3nm,0.7s,baz=14,slow=6.3,SNR=8.5 comp=Z,1.3nm,0.7s	**57.72**	**185**	P	**P**	**06 47 41.9**	**+2.2**
VNDA	**Vanda** comp=Z,3.5nm,1.2s	**57.72**	**185**	IAmb	IAmb	06 47 46.3	
QSPA	**South Pole Qui** comp=Z,8.2nm,0.9s,baz=54,slow=5.7,SNR=36 comp=Z,8.2nm,0.9s	**69.40**	**180**	P	**P**	**06 48 56.5**	**+1.3**
QSPA	**South Pole Qui** comp=Z,8.3nm,0.9s	**69.40**	**180**	P	**P**	**06 48 56.5**	**+1.3**
QSPA	comp=Z,8.3nm,0.9s			IAmb	IAmb	06 48 57.2	
MJAR	**Matsushiro Arr** comp=Z,1.1nm,0.5s,baz=170,slow=6.2,SNR=2.0 comp=Z,1.1nm,0.5s	**70.16**	**324**	P	**P**	**06 49 00.2**	**+0.1**
ADK	**Adak**	**72.25**	**1**	P	**P**	**06 49 12.4**	**+0.5**
UNV	**Unalaska Valle**	**74.90**	**7**	P	**P**	**06 49 26.8**	**-0.3**
AKUT	**Akutan**	**75.28**	**8**	P	**P**	**06 49 29.0**	**-0.2**
PETK	**Petropavlovsk-** comp=Z,3.9nm,0.8s,baz=130,slow=10,SNR=4.4 comp=Z,3.9nm,0.8s	**76.35**	**345**	P	**P**	**06 49 35.5**	**+0.2**
KSRS	**Korea Array** comp=Z,0.9nm,0.7s,baz=145,slow=4.5,SNR=2.2 comp=Z,0.9nm,0.7s	**76.81**	**319**	P	**P**	**06 49 39.0**	**+0.9**
CNBA	**Chernabura Isl**	**76.88**	**11**	P	**P**	**06 49 38.3**	**+0.2**
CNBA	comp=Z,16nm,1.1s			IAmb	IAmb	06 50 09.5	
BELA	**Belgrano 2**	**79.43**	**173**		**P**	**06 49 51.6**	**-0.1**
R16K	**Pilot Point**	**79.85**	**11**	P	**P**	**06 49 54.8**	**+0.8**
ACHA	**Angle Creek He**	**80.88**	**12**		**P**	**06 50 00.1**	**+0.6**
O15K	**Ungalikthiuk R**	**81.00**	**10**	P	**P**	**06 50 00.2**	**+0.2**
P16K	**Nushagak River**	**81.16**	**10**		**P**	**06 50 01.2**	**+0.4**
NVAR	**Mina Array Bea** comp=Z,1.1nm,0.7s,baz=225,slow=9.2,SNR=9.6 comp=Z,1.1nm,0.7s	**81.36**	**43**	P	**P**	**06 50 03.7**	**+0.9**
N14K	**Kuskokwak Cree**	**81.45**	**8**	P	**P**	**06 50 03.3**	**+1.1**
NV11	**Mina Array Sit**	**81.46**	**44**	P	**P**	**06 50 02.9**	**-0.3**
P17K	**Kvichak River**	**81.59**	**11**		**P**	**06 50 03.4**	**+0.4**
O16K	**Kokwok River B** comp=Z,7

PMR	**Palmer**	**85.25**	**14**	P	**P**	**06 50 21.6**	**+0.2**		
PMR				IAmb	IAmb	06 50 22.0			
	comp=Z,18nm,1.5s								
L22K	**Petersville**	**85.75**	**12**	IAmb	IAmb	06 50 23.9			
	comp=Z,4.1nm,0.8s								
ELIB	**Princess Elisa**	**86.44**	**187**	*d*P	**P**	**06 50 26.6**	**-0.7**		
	comp=Z,3.8nm,0.8s								
TRF	**Thorofare Moun**	**86.68**	**12**	IAmb	IAmb	06 50 29.3			
	comp=Z,7.6nm,0.8s								
RND	**Reindeer**	**86.93**	**13**		**P**	**06 50 29.7**	**+0.2**		
RND				IAmb	IAmb	06 50 30.1			
	comp=Z,11nm,0.8s								
MCK	**McKinley**	**87.20**	**13**		**P**	**06 50 30.1**	**-0.6**		
MCK				IAmb	IAmb	06 50 32.1			
	comp=Z,4.4nm,0.7s								
TXAR	**Lajitas Array**	**87.41**	**57**	P	**P**	**06 50 33.6**	**+1.0**		
	comp=Z,0.5nm,0.9s,baz=258,slow=4.7,SNR=4.7								
	comp=Z,0.5nm,0.9s								
I21K	**Tanana**	**87.93**	**11**	IAmb	IAmb	06 50 34.6			
	comp=Z,5.5nm,0.8s								
VNA3	**Neumayer Olymp**	**87.99**	**176**	⇓P	**P**	**06 50 33.8**	**-0.7**		
	comp=Z,2.1nm,0.4s								
WRH	**Wood River Hil**	**88.03**	**13**		**P**	**06 50 34.6**	**0.0**		
WRH				IAmb	IAmb	06 50 34.9			
	comp=Z,8.7nm,0.8s								
HDA	**Harding Lake**	**88.22**	**13**	IAmb	IAmb	06 50 35.8			
	comp=Z,7.0nm,0.6s								
H21K	**Melozitna Rive**	**88.23**	**10**	IAmb	IAmb	06 50 36.3			
	comp=Z,2.9nm,0.7s								
BCAR	**Beaver Creek A**	**88.27**	**16**	P	**P**	**06 50 36.4**	**+0.6**		
IMAR	**Indian Mountai**	**88.38**	**10**	P	**P**	**06 50 36.4**	**+0.3**		
IL31		**88.55**	**13**	IAmb	IAmb	06 50 37.2			
	comp=Z,8.9nm,1.4s								
ILAR	**Eielson Array**	**88.55**	**13**	P	**P**	**06 50 36.4**	**-0.6**		
	comp=Z,3.1nm,0.9s,baz=226,slow=6.0,SNR=36								
	comp=Z,3.1nm,0.9s								
ILAR	**Eielson Array**	**88.55**	**13**	P	**P**	**06 50 36.9**	**-0.1**		
M29M	**Somme Creek**	**88.65**	**17**	IAmb	IAmb	06 50 39.0			
	comp=Z,4.5nm,0.8s								
H22K	**Ishtalitna Cre**	**88.69**	**11**	IAmb	IAmb	06 50 38.4			
	comp=Z,5.6nm,0.6s								
J25K	**Salcha River,**	**88.73**	**14**	IAmb	IAmb	06 50 38.5			
	comp=Z,2.8nm,0.6s								
G21K	**Allakaket**	**88.91**	**10**	IAmb	IAmb	06 50 39.5			
	comp=Z,3.2nm,0.8s								
M30M	**Minto, Yukon**	**89.23**	**18**	IAmb	IAmb	06 50 41.5			
	comp=Z,6.7nm,0.9s								
HHC	**Hu-ho-hao-te**	**89.25**	**314**	*e*P	**P**	**06 50 42.3**	**+1.4**		
HHC				pmax	pmax				
	comp=Z,10.0nm,0.6s								
HHC				pmax	pmax				
	comp=Z,140nm,5.8s								
HHC				LR	LR				
	comp=N,320nm,18.7s								
HHC				LR	LR				
	comp=E,200nm,17.9s								
HHC				LR	LR				
	comp=Z,390nm,19.6s								
E19K	**Redstone River**	**89.25**	**8**	IAmb	IAmb	06 50 41.2			
	comp=Z,4.7nm,0.7s								
L29M	**L29M**	**89.27**	**17**	IAmb	IAmb	06 50 42.1			
	comp=Z,8.0nm,0.9s								
PDAR	**Pinedale Array**	**89.30**	**43**	P	**P**	**06 50 41.7**	**+0.4**		
	comp=Z,1.0nm,0.6s,baz=214,slow=2.6,SNR=11								
	comp=Z,1.0nm,0.6s								
PDAR	**Pinedale Array**	**89.30**	**43**	P	**P**	**06 50 42.0**	**+0.7**		
CMAR	**Chiang Mai Arr**	**89.88**	**290**	P	**P**	**06 50 42.6**	**-1.6**		
	comp=Z,0.6nm,0.3s,baz=116,slow=2.4,SNR=5.5								
	comp=Z,0.6nm,0.3s								
K29M	**Barlow Dome**	**90.03**	**17**	IAmb	IAmb	06 50 45.1			
	comp=Z,3.2nm,0.8s								
C19K	**Lookout Ridge**	**90.54**	**7**	IAmb	IAmb	06 50 47.3			
	comp=Z,3.8nm,0.8s								
E22K	**Anaktuvuk Pass**	**90.66**	**10**	IAmb	IAmb	06 50 47.7			
	comp=Z,5.1nm,1.1s								
BMAR	**Burnt Mountain**	**91.33**	**12**	P	**P**	**06 50 50.7**	**+0.8**		
EPYK	**Eagle Plains**	**92.23**	**16**	P	**P**	**06 50 54.3**	**+0.3**		
EPYK				IAmb	IAmb	06 50 54.8			
	comp=Z,3.1nm,0.9s								
WMQ	**Urumqi**	**106.80**	**311**	Pdif	**Pdif**	**06 52 01.6**	**+1.7**		
WMQ				LR	LR				
	comp=Z,220nm,18.5s								
MKAR	**Makanchi Array**	**111.09**	**313**	PKiKP	**PKiKP**	**06 56 13.3**	**-1.9**		
	comp=Z,0.5nm,0.7s,baz=57,slow=2.8,SNR=2.7								
BVAR	**Borovoye Array**	**119.01**	**320**	PKP	**PKPdf**	**06 56 28.2**	**-2.0**		
	comp=Z,1.1nm,0.5s,baz=114,slow=2.4,SNR=6.4								
FINES	**FINESS Array B**	**135.84**	**343**	PKP	**PKPdf**	**06 57 01.1**	**-0.8**		
	comp=Z,3.9nm,1.0s,baz=339,slow=7.4,SNR=3.6								
HFS	**Hagfors**	**139.66**	**351**	PKhKP	PKPpre	06 56 59.7			
	comp=Z,1.0nm,0.4s,baz=66,slow=3.6,SNR=5.5								
AKASG	**Malin Array Be**	**143.01**	**331**	PKhKP	PKPpre	06 57 11.2			
	comp=Z,4.1nm,0.5s,baz=44,slow=4.2,SNR=40								
RNPP5	**Staryi Chortor**	**144.08**	**334**	PKP	PKPbc	06 57 14.9	-1.3		
LUBAR	**Lubar, Ukraine**	**144.23**	**331**	PKP	PKPbc	06 57 15.2	-1.6		
EKB	**Eskdalemuir**	**145.19**	**5**	PKPbc	**PKPbc**	**06 57 20.6**	**+0.9**		
EKA	**Eskdalemuir Ar**	**145.20**	**5**	PKPbc	**PKPdf**	**06 57 19.1**	**+0.2**		
	comp=Z,2.7nm,0.7s,baz=0.2,slow=2.9,SNR=5.0								
KMPD	**K-Podol'skiy**	**145.79**	**330**	PKP	**PKPdf**	**06 57 18.6**	**-1.5**		
BRTR	**Keskin Array B**	**146.72**	**312**	PKPbc	**PKPdf**	**06 57 23.8**	**+1.6**		
	comp=Z,1.2nm,0.6s,baz=133,slow=3.5,SNR=4.9								
BRTR	**Keskin Array B**	**146.72**	**312**	PKPbc	**PKPdf**	**06 57 24.2**	**+2.0**		
MMAI	**Mount Meron Ar**	**147.62**	**299**	PKPbc	**PKPbc**	**06 57 27.4**	**+0.2**		
	comp=Z,2.3nm,0.5s,baz=62,slow=3.4,SNR=3.7								
CLL	**Collm**	**148.15**	**346**	*i* PKPdf	**PKPdf**	**06 57 24.3**	**+0.3**		
CLL				*i* PKPbc	**PKPbc**	**06 57 27.3**	**-0.5**		
	comp=Z,9.0nm,0.6s								
CLL				*e*PKPab	**PKPab**	**06 57 32.0**	**-0.3**		
	comp=Z,4.0nm,0.6s								
GERES	**GERESS Array B**	**150.28**	**344**	PKPbc	**PKPbc**	**06 57 32.1**	**-1.1**		
	comp=Z,0.4nm,0.4s,baz=86,slow=5.2,SNR=3.3								
ESDC	**Sonseca Array**	**160.45**	**13**	PKPab	**PKPab**	**06 58 24.8**	**-0.4**		
	comp=Z,1.1nm,1.0s,baz=40,slow=2.5,SNR=2.9								
TORD	**Torodi Ar. Bea**	**172.52**	**180**	PKPab	**PKPab**	**06 59 17.6**	**-1.2**		
	comp=Z,0.6nm,1.0s,baz=153,slow=1.9,SNR=3.2								

SJA ***24*** *06:52:12.9±0.8, 30.52S×72.12W, h12km, ML4.8, MW4.7*
IDC ***24*** *06:52:13.2±0.5, 30.55S×71.78W, h0km, mb4.2/14, mbtmp4.2/18, ML4.3/4, MS4.1/19, Error ellipse: s-maj=22.5km s-min=15.2km az=86.0*
VAO ***24*** *06:52:15.7±1.9, 30.74S×71.90W, h20km±10km, mb4.6, Presumed earthquake*
NEIC ***24*** *06:52:16.1, 30.61S×71.97W, h14km*
NEIC ***24*** *06:52:17.8±2.0, 30.58S±0.03×71.88W±0.07, h24km±3km, mb4.8/34, Mwr4.7/50, Mwr4.8(GUC), Error ellipse: s-maj=8.3km s-min=4.5km az=98.0, Moment Tensor Solution. Moment tensor: Scale 10^16 Nm; Mrr1.07; Mθθ0.17; Mϕϕ-1.24; Mrθ0.19; Mrϕ0.10; Mθϕ0.19; Fault plane solution: M=1.20000×10^16 NP1:φ=164.22000°, δ=41.98000°, λ=72.24000°. NP2:φ=7.53000°, δ=50.43000°, λ=105.34000°. Principal axes: T 1.1243, Plg77.0000°, Azm337.0000°; N 0.1358, Plg12.0000°, Azm178.0000°; P -1.2601, Plg4.0000°, Azm87.0000°;*
GUC ***24*** *06:52:18.8±0.6, 30.63S×71.68W, h36km±3km, ML4.9*
GCMT ***24*** *06:52:22.0±0.5, 30.50S±0.03×71.89W±0.04, h36km±1km, MW5.0/60, Moment Tensor Solution. s34, c38; s60, c74; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr4.20±.26; Mθθ-0.77±.14; Mϕϕ-3.43±.16; Mrθ0.46±.13; Mϕθ-0.09±.07; Mϕr-1.47±.15; Best double couple: M=4.10900×10^16 NP1:φ=6.00000°, δ=35.00000°, λ=99.00000°. NP2: φ=176.00000°, δ=56.00000°, λ=84.00000°. Principal axes: T 4.5150, Plg78.0000°, Azm64.0000°; N -0.8120, Plg5.0000°, Azm179.0000°; P -3.7030, Plg11.0000°, Azm270.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 06:52:16.0±0.7, 30.61S±0.02×71.90W±0.03, h19km±2km, n259, σ1§78/269, mb4.7/22, MS4.2/15, 12C-6D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.90**	**40**		**Pg**	**06 52 33.3**	**-0.1**
CO05				Sn	**Sb**	**06 52 45.0**	**+0.6**
CO05	**La Serena**	**0.90**	**40**	⇓*i* P	**Pg**	**06 52 33.4**	**-0.1**
CO05				*e*S	**Sb**	**06 52 44.6**	**+0.2**
CO05				IAML		06 52 47.6	
	comp=N,32μm,0.2s						
CO02	**Combarbal**	**0.97**	**128**		**Pb**	**06 52 34.2**	**-0.1**
CO02					**Sb**	**06 52 45.8**	**-0.9**
CO02	**Combarbal**	**0.97**	**128**	⇓*e*P	**Pb**	**06 52 34.1**	**-0.1**
CO02				*e*S	**Sb**	**06 52 45.7**	**-1.1**
CO02				IAML		06 52 46.8	
	comp=N,92μm,0.3s						
CO02	**Combarbal**	**0.97**	**128**	*e*P	**Pb**	**06 52 34.2**	**-0.1**
CO02				IAML		06 52 51.9	
	comp=Z,21μm,0.5s						
GO04	**Tololo Observa**	**1.04**	**66**		**Pb**	**06 52 35.2**	**-0.4**
GO04	**Tololo Observa**	**1.04**	**66**	⇓*i* P	**Pb**	**06 52 35.1**	**-0.4**
GO04				IAML		06 52 51.9	
	comp=E,146μm,0.3s						
GO04	**Tololo Observa**	**1.04**	**66**	*e*P	**Pb**	**06 52 35.2**	**-0.4**
GO04				IAML		06 52 51.8	
	comp=Z,47μm,0.2s						
CO03	**El Pedregal**	**1.07**	**103**		**Pb**	**06 52 35.1**	**-0.8**
CO03	**El Pedregal**	**1.07**	**103**	⇓*e*P	**Pb**	**06 52 35.1**	**-0.8**
CO03				*e*S	**Sb**	**06 52 46.5**	**-2.9**
CO03				IAML		06 52 50.9	
	comp=E,39μm,0.4s						
CO03	**El Pedregal**	**1.07**	**103**	*e*P	**Pb**	**06 52 35.4**	**-0.5**
CO03				IAML		06 52 56.9	
	comp=Z,11μm,0.6s						
CO04	**Los Peladeros**	**1.63**	**151**		**Pb**	**06 52 45.4**	**-0.2**
CO04				Sn	**Sb**	**06 53 06.0**	**0.0**
CO04	**Los Peladeros**	**1.63**	**151**	⇓*e*P	**Pb**	**06 52 45.1**	**-0.5**
CO04				*e*S	**Sb**	**06 53 05.8**	**-0.1**
CO04				IAML		06 53 12.6	
	comp=E,21μm,0.4s						
CO01	**Juntas del Tor**	**1.68**	**68**		**Pn**	**06 52 45.2**	**+0.6**
CO01	**Juntas del Tor**	**1.68**	**68**	⇓*e*P	**Pn**	**06 52 45.1**	**+0.6**
CO01	**Juntas del Tor**	**1.68**	**68**	*e*P	**Pn**	**06 52 45.4**	**+0.8**
CO01				IAML		06 53 09.5	
	comp=Z,4μm,0.7s						
LCO	**Las Campanas**	**1.90**	**33**	Pn	**Pn**	**06 52 48.5**	**+1.0**
LCO				Sn	**Sb**	**06 53 13.1**	**-0.7**
LCO	**Las Campanas**	**1.90**	**33**	*i* P	**Pn**	**06 52 48.6**	**+1.0**
LCO				*e*S	**Sb**	**06 53 13.4**	**-0.3**
LCO				IAML		06 53 21.2	
	comp=Z,41μm,0.5s						
LCO	**Las Campanas**	**1.90**	**33**	*e*P	**Pn**	**06 52 48.6**	**+1.0**
LCO				IAML		06 53 19.8	
	comp=Z,7μm,0.6s						
VA06	**Catapilco**	**2.01**	**165**		**Pn**	**06 52 50.1**	**+1.2**
VA06	**Catapilco**	**2.01**	**165**	⇑*e*P	**Pn**	**06 52 50.3**	**+1.4**
VA06				IAML		06 53 24.1	
	comp=E,17μm,0.6s						
AROD	**Rodeo**	**2.14**	**79**	*e*P	**Pb**	**06 52 53.7**	**-0.7**
AC05	**El Transito**	**2.26**	**39**	Pn	**Pn**	**06 52 54.3**	**+1.8**
AC05	**El Transito**	**2.26**	**39**	⇑*i* P	**Pn**	**06 52 54.3**	**+1.8**
AC05				IAML		06 53 30.4	
	comp=N,5μm,0.4s						
AC05	**El Transito**	**2.26**	**39**	*e*P	**Pn**	**06 52 53.9**	**+1.4**
AC05				IAML		06 53 30.1	
	comp=Z,3μm,0.6s						
VA01	**Torpederas**	**2.42**	**175**		**Pn**	**06 52 56.3**	**+1.9**
VA01	**Torpederas**	**2.42**	**175**	*e*P	**Pb**	**06 52 59.6**	**+0.8**
VA03	**San Esteban**	**2.44**	**152**		**Pn**	**06 52 56.9**	**+2.1**
VA03	**San Esteban**	**2.44**	**152**	⇑*e*P	**Pn**	**06 52 56.8**	**+2.0**
VA03	**San Esteban**	**2.44**	**152**	*e*P	**Pb**	**06 52 57.5**	**-1.7**
VA03				*e*S	**Sb**	**06 53 30.5**	**+1.6**
VA03				IAML		06 53 35.8	
	comp=Z,4μm,0.2s						
ACDV	**Cuesta del Vie**	**2.44**	**80**	*e*P	**Pb**	**06 52 58.8**	**-0.6**
ACDV				IAML		06 53 32.0	
	comp=Z,3μm,0.4s						
ACCO	**Cerro Coronel**	**2.44**	**90**	*e*P	**Pb**	**06 52 58.8**	**-0.6**
ACCO				*e*S	**Sg**	**06 53 32.6**	**-2.0**
ROCH	**El Roble**	**2.47**	**162**	⇑*e*P	**Pn**	**06 52 57.0**	**+1.6**
ROCH				⇑*e*P	**Pn**	**06 52 57.0**	**+1.6**
ROCH				IAML		06 53 37.1	
	comp=N,10μm,0.3s						
ROCH				IAML		06 53 37.2	
	comp=N,5μm,0.2s						
AC04	**Llanos de Chal**	**2.50**	**17**		**Pn**	**06 52 56.5**	**+0.9**
AC04	**Llanos de Chal**	**2.50**	**17**	*i* P	**Pn**	**06 52 56.5**	**+0.9**
AC04				*e*S	**Sb**	**06 53 32.1**	**+1.4**
AC04				IAML		06 53 42.7	
	comp=E,2μm,0.4s						
AC04	**Llanos de Chal**	**2.50**	**17**	*e*P	**Pn**	**06 52 56.0**	**+0.3**
RTLS	**Leoncito**	**2.52**	**119**	*e*P	**Pb**	**06 52 59.8**	**-1.1**
RTLS				IAML		06 53 38.1	
	comp=Z,11μm,0.6s						
RTLS				IAML		06 53 41.4	
	comp=Z,10μm,0.6s						
MT02	**Curacav**	**2.72**	**166**		**Pn**	**06 53 00.2**	**+1.6**
MT02	**Curacav**	**2.72**	**166**	*e*P	**Pn**	**06 52 59.6**	**+1.0**
MT02				IAML		06 53 48.2	
	comp=E,2μm,0.4s						
MT02	**Curacav**	**2.72**	**166**	*e*P	**Pn**	**06 53 01.3**	**+2.7**
MT02				IAML		06 53 48.6	
	comp=Z,2μm,0.4s						
PEL	**Peldehue**	**2.73**	**158**		**Pn**	**06 53 00.7**	**+1.9**
PEL	**Peldehue**	**2.73**	**158**	⇑*e*P	**Pn**	**06 53 00.8**	**+2.0**
PEL				IAML		06 53 48.0	
	comp=E,6μm,0.1s						
PEL	**Peldehue**	**2.73**	**158**	*e*P	**Pn**	**06 53 00.8**	**+2.0**
PEL				*e*S	**Sb**	**06 53 37.4**	**+0.1**
PEL				IAML		06 53 46.1	
	comp=Z,4μm,0.9s						
MT10	**Hacienda Santa**	**2.90**	**157**	⇑*e*P	**Pn**	**06 53 03.3**	**+2.1**
ZON	**Zonda**	**2.92**	**109**		**Pn**	**06 53 04.7**	**+3.3**
ZON	**Zonda**	**2.92**	**109**	*e*P	**Pb**	**06 53 05.1**	**-2.3**
ZON				IAML		06 53 47.6	
	comp=Z,2μm,0.6s						
MT05	**Renca**	**2.94**	**161**		**Pn**	**06 53 03.7**	**+2.0**
MT05	**Renca**	**2.94**	**161**	*e*P	**Pn**	**06 53 03.7**	**+2.0**
MT05				IAML		06 53 47.0	
	comp=E,8μm,0.3s						
MT05	**Renca**	**2.94**	**161**	*e*P	**Pn**	**06 53 04.0**	**+2.2**
MT05				IAML		06 53 53.5	
	comp=Z,3μm,0.3s						
SJA	**San Juan**	**3.01**	**109**	*e*P	**Pb**	**06 53 06.5**	**-2.4**
SJA				IAML		06 53 56.3	
	comp=Z,2μm,0.3s						
MT14	**Cerro Cal¡n**	**3.01**	**158**	⇑*e*P	**Pn**	**06 53 04.7**	**+2.1**
MT14				IAML		06 53 53.0	
	comp=E,8μm,0.3s						
RTLL	**Cerro Villicun**	**3.03**	**105**	*e*P	**Pn**	**06 53 06.1**	**+3.3**
RTLL				IAML		06 53 50.3	
	comp=Z,2μm,0.4s						
MT16	**CCHEN**	**3.04**	**158**		**Pn**	**06 53 04.5**	**+1.4**
MT16	**CCHEN**	**3.04**	**158**	*e*P	**Pn**	**06 53 05.6**	**+2.5**
MT16				IAML		06 53 53.3	
	comp=E,2μm,0.5s						
MT03	**Universidad Ad**	**3.11**	**158**		**Pn**	**06 53 06.0**	**+2.0**
MT03	**Universidad Ad**	**3.11**	**158**	*e*P	**Pn**	**06 53 06.0**	**+2.0**
MT03	**Universidad Ad**	**3.11**	**158**	*e*P	**Pn**	**06 53 07.2**	**+3.1**
MT03				*e*S	**Sb**	**06 53 46.6**	**-1.6**
MT03				IAML		06 53 57.5	
	comp=Z,3μm,0.6s						
MT04	**Ro Olivares**	**3.16**	**152**	⇑*e*P	**Pn**	**06 53 08.2**	**+3.2**
MT04				IAML		06 53 59.2	
	comp=N,2μm,0.5s						
MT04	**Ro Olivares**	**3.16**	**152**	*e*P	**Pn**	**06 53 07.9**	**+3.0**
MT04				IAML		06 53 59.1	
	comp=Z,2μm,1.8s						
MT15	**Las Vizcachas**	**3.21**	**159**	*e*P	**Pn**	**06 53 07.7**	**+2.4**
MT15				IAML		06 53 58.8	
	comp=E,6μm,0.4s						
MT08	**Bocatoma Ro**	**3.25**	**151**		**Pn**	**06 53 09.7**	**+3.6**
MT08	**Bocatoma Ro**	**3.25**	**151**	*i* P	**Pb**	**06 53 10.1**	**-3.0**
MT08				IAML		06 53 59.9	
	comp=E,2μm,0.6s						
MT08	**Bocatoma Ro**	**3.25**	**151**	*e*P	**Pn**	**06 53 09.6**	**+3.5**
MT08				*e*S	**Sb**	**06 53 51.3**	**-1.1**
MT08				IAML		06 54 02.0	
	comp=Z,2μm,1.0s						
MT09	**Talagante**	**3.25**	**167**		**Pn**	**06 53 08.0**	**+2.0**
MT09	**Talagante**	**3.25**	**167**	*e*P	**Pn**	**06 53 08.0**	**+2.0**
MT09				IAML		06 54 03.8	
	comp=N,4μm,0.1s						
ASAL	**Salagasta**	**3.28**	**128**	*e*P	**Pb**	**06 53 10.4**	**-3.1**
ASAL				*e*S	**Sb**	**06 53 52.5**	**-0.5**
MT01	**Popeta**	**3.29**	**171**		**Pn**	**06 53 07.7**	**+1.2**
MT01	**Popeta**	**3.29**	**171**	*e*P	**Pn**	**06 53 07.9**	**+1.4**
MT01				IAML		06 54 02.9	
	comp=E,2μm,0.3s						
MT01	**Popeta**	**3.29**	**171**	*e*P	**Pn**	**06 53 08.8**	**+2.3**
MT01				IAML		06 54 09.8	
	comp=Z,1μm,0.6s						
CFA	**Coronel Fontan**	**3.29**	**108**	Pn	**Pn**	**06 53 09.6**	**+3.0**
	comp=Z,111nm,0.3s,baz=298,slow=12,SNR=664						
CFA				Sn	**Sn**	**06 53 48.9**	**+3.7**
	comp=Z,98nm,0.3s,baz=286,slow=20,SNR=4.1						
CFA				LR	LR	06 54 43.2	
	comp=Z,2μm,19.0s,baz=275,slow=47						
CFA	**Coronel Fontan**	**3.29**	**108**	*e*P	**Pn**	**06 53 10.2**	**+3.7**
CFA				IAML		06 53 59.0	
	comp=Z,2μm,0.6s						
MT12	**Pirque**	**3.32**	**160**	⇑*e*P	**Pn**	**06 53 08.8**	**+1.9**
MT12				IAML		06 54 00.9	
	comp=N,4μm,0.3s						
GO03	**Copiapo**	**3.34**	**26**		**Pn**	**06 53 08.6**	**+1.4**
GO03	**Copiapo**	**3.34**	**26**	*e*P	**Pn**	**06 53 08.3**	**+1.0**
GO03	**Copiapo**	**3.34**	**26**	*e*P	**Pn**	**06 53 08.1**	**+0.9**
GO03				IAML		06 54 07.7	
	comp=Z,2μm,0.6s						
ARCO	**CERRO ARCO**	**3.37**	**132**	*e*P	**Pb**	**06 53 13.0**	**-2.1**
ARCO				IAML		06 54 05.1	
	comp=Z,3μm,0.4s						
MT13	**San Alfonso**	**3.41**	**157**		**Pn**	**06 53 10.8**	**+2.6**
MT13	**San Alfonso**	**3.41**	**157**	*e*P	**Pn**	**06 53 10.9**	**+2.7**
MT13				IAML		06 54 07.3	
	comp=E,4μm,0.6s						
MT13	**San Alfonso**	**3.41**	**157**	*e*P	**Pn**	**06 53 11.4**	**+3.2**
MT13				IAML		06 54 02.8	
	comp=Z,2μm,0.5s						
AC06	**Mina Casimiro**	**3.51**	**23**		**Pn**	**06 53 10.5**	**+0.9**
AC06	**Mina Casimiro**	**3.51**	**23**	⇑*e*P	**Pn**	**06 53 10.4**	**+0.8**
AC06				IAML		06 54 09.6	
	comp=N,1μm,0.5s						
BO04	**La Punta**	**3.54**	**162**		**Pn**	**06 53 11.9**	**+2.0**
BO04	**La Punta**	**3.54**	**162**	⇑*e*P	**Pn**	**06 53 11.9**	**+2.0**
BO04				IAML		06 54 08.6	
	comp=N,2μm,0.1s						
AAGR	**Agrelo**	**3.59**	**134**	*e*P	**Pb**	**06 53 15.4**	**-3.5**
AAGR				IAML		06 54 15.3	
	comp=Z,2μm,1.3s						
VCA	**Vinchina**	**3.72**	**61**	*e*P	**Pn**	**06 53 16.9**	**+4.5**
VCA				*e*S	**Sb**	**06 54 01.6**	**-4.2**
VCA				IAML		06 54 16.0	
	comp=Z,5μm,0.5s						
AVFE	**Valle Fertil**	**3.83**	**92**	*e*P	**Pn**	**06 53 16.4**	**+2.5**
AVFE				*e*S	**Sb**	**06 54 05.8**	**-3.2**
AVFE				IAML		06 54 12.8	
	comp=Z,2μm,0.4s						
BO01	**Tunca**	**3.83**	**170**		**Pn**	**06 53 15.4**	**+1.5**
BO01	**Tunca**	**3.83**	**170**	*e*P	**Pn**	**06 53 15.7**	**+1.8**
BO01				IAML		06 54 20.2	
	comp=E,775nm,0.3s						
BO03	**Pichilemu**	**3.88**	**181**	*e*P	**Pn**	**06 53 14.8**	**+0.4**
BO03				IAML		06 54 43.3	
	comp=E,38400μm,12.6s						
AVIZ	**Vizcacheras**	**4.05**	**136**	*e*P	**Pn**	**06 53 21.1**	**+4.2**
BO02	**Sierra Bellavi**	**4.28**	**168**		**Pn**	**06 53 22.5**	**+2.5**
ACAN	**Cantantal**	**4.35**	**114**	*e*P	**Pn**	**06 53 23.4**	**+2.3**
GO05	**Hualane**	**4.39**	**180**		**Pn**	**06 53 22.3**	**+0.8**
ACLC	**CERRO LA CRUZ**	**4.45**	**76**	*e*P	**Pn**	**06 53 25.9**	**+3.3**
ACLC				IAML		06 54 26.5	
	comp=Z,1μm,0.5s						
AC02	**Maricunga**	**4.48**	**34**	Pn	**Pn**	**06 53 24.4**	**+1.1**
AC02	**Maricunga**	**4.48**	**34**	*e*P	**Pn**	**06 53 24.7**	**+1.5**
AC02	**Maricunga**	**4.48**	**34**	*e*P	**Pn**	**06 53 24.8**	**+1.5**
AC02				*e*S	**Sn**	**06 54 18.3**	**+3.2**
AC02				IAML		06 54 47.6	
	comp=Z,695nm,0.7s						
ACHE	**Chepes**	**4.53**	**98**	*e*P	**Pn**	**06 53 26.1**	**+2.4**
TINO	**Tinogasta**	**4.55**	**57**	*e*P	**Pn**	**06 53 27.1**	**+3.2**
AC01	**Pan de Azucar**	**4.59**	**15**		**Pn**	**06 53 23.8**	**-0.6**
AC01	**Pan de Azucar**	**4.59**	**15**	*e*P	**Pn**	**06 53 23.6**	**-0.7**
AC01				IAML		06 54 48.9	
	comp=Z,615nm,0.7s						
RFA	**San Rafael**	**5.06**	**146**	*e*P	**Pn**	**06 53 33.8**	**+2.9**
RFA				IAML		06 55 03.6	
	comp=Z,393nm,0.5s						
ML02	**Panimavida**	**5.15**	**176**		**Pn**	**06 53 33.4**	**+1.3**
BI02	**San Fabin de**	**6.06**	**175**		**Pn**	**06 53 46.1**	**+1.6**
PB14	**IPOC Station P**	**6.11**	**13**		**Pn**	**06 53 44.6**	**-0.9**
TCA	**Tanti**	**6.31**	**98**	*i* P	**Pn**	**06 53 48.7**	**+0.6**
H03N1	**Juan Fernandez**	**6.59**	**243**	Pn	**Pn**	**06 53 53.3**	**+1.7**
	baz=115,slow=19						
H03N1				Sn	**Sn**	**06 55 01.8**	**-4.2**
H03N1				T	T	07 00 47.0	
	baz=71,slow=72,SNR=6140						
H03N2	**Juan Fernandez**	**6.61**	**243**	Pn	**Pn**	**06 53 53.5**	**+1.7**
	baz=115,slow=19						
H03N2				Sn	**Sn**	**06 55

TRCB	Terra Rica	18.87	70	*eP*		Pn	06 56 36.1	+0.3
PTLB	Pontes e Lacer	19.10	41	P		P	06 56 36.1	-1.5
PTLB	Pontes e Lacer	19.10	41	*eP*		P	06 56 37.6	0.0
LDASE	Londrina, Braz	19.85	74	*eP*		P	06 56 44.8	-1.1
PP1B	Ponte de Pedra	20.19	54	*eP*		P	06 56 48.9	-0.7
MAJ01	Sao Joao Batis	20.27	87	*eP*		P	06 56 50.7	+0.3
VILB	Vilhena	20.63	34	P		P	06 56 52.8	-1.6
VILB					IAmb	IAmb	06 57 07.4	
	comp=Z,26nm,0.8s							
VILB	Vilhena	20.63	34	*eP*		P	06 56 52.3	-2.1
SALV	Santo Antonio	20.84	49	*eP*		P	06 56 55.6	-1.1
FRTB	Fartura	21.16	75	*eP*		P	06 56 59.0	-1.1
MG02	Cerro Sombrero	22.24	176	P		P	06 57 10.4	-1.0
ITRB	Iturama	22.28	66	*eP*		P	06 57 12.8	+0.7
PET01	Itanhaem-SP	22.72	80	*eP*		P	06 57 17.8	+1.1
CZSB	Cruzeiro do Su	22.78	358	P		P	06 57 16.9	-0.5
CZSB					IAmb	IAmb	06 57 37.0	
	comp=Z,56nm,1.3s							
CZSB	Cruzeiro do Su	22.78	358	*eP*		P	06 57 19.0	+1.6
SPB	Sao Paulo	22.85	78	*eP*		P	06 57 19.0	+0.9
BB19B	Bebedouro	23.04	71	*eP*		P	06 57 19.0	-1.2
RCLB	Rio Claro- Sao	23.25	75	*eP*		P	06 57 23.6	+1.3
EFI	East Falkland	23.41	158	P		P	06 57 23.1	-0.4
VAO	Valinhos	23.48	77	P		P	06 57 24.4	-0.2
VAO					IAmb	IAmb	06 57 55.6	
	comp=Z,38nm,1.2s							
VAO	Valinhos	23.48	77	*eP*		P	06 57 23.8	-0.8
ARAG	Araguaiana, MT	23.63	56	*eP*		P	06 57 25.9	-0.2
ATAH	Atahualpa	24.14	344	LR		LR	07 05 55.5	
	comp=Z,215nm,18.1s,baz=169,slow=34							
MG01	Puerto William	24.50	174	P		P	06 57 34.4	+0.6
BDFB	Brasilia	26.46	61	P		P	06 57 50.7	-1.4
	comp=Z,6.1nm,0.5s,baz=228,slow=8.8,SNR=19							
BDFB					LR	LR	07 09 20.6	
	comp=Z,1μm,18.1s,baz=229,slow=39							
	comp=Z,6.1nm,0.5s							
BDFB	Brasilia	26.46	61	P		P	06 57 51.6	-0.5
SNDB	Serra Nova Dou	26.61	50	*eP*		P	06 57 52.5	-0.7
TEFE	Tefe	27.82	16	*eP*		P	06 58 05.1	+1.0
MACA	Manacapuru-AM	29.29	23	P		P	06 58 17.4	+0.2
MACA					IAmb	IAmb	06 58 30.4	
	comp=Z,12nm,0.6s							
MACA	Manacapuru-AM	29.29	23	*eP*		P	06 58 17.2	0.0
JANB	Januaria	29.65	65	*eP*		P	06 58 21.7	+1.2
SJMB	Sao Joao De Ma	30.23	74	*eP*		P	06 58 24.5	-1.1
ITTB	Itaituba	30.23	33	*eP*		P	06 58 27.0	+1.4
BSFB	Barra de Sao F	30.45	75	*eP*		P	06 58 26.4	-1.0
SDBA	SAO DESIDERIO	30.83	60	*eP*		P	06 58 32.2	+1.2
OTAV	Otavalo	31.30	347	*eP*		P	06 58 35.8	+0.2
SMTB	Santa Maria do	31.35	51	*eP*		P	06 58 36.6	+1.1
PMSA	Palmer Station	34.53	174	LR		LR	07 13 01.4	
	comp=Z,403nm,18.5s,baz=317,slow=36							
PMSA	Palmer Station	34.53	174	P		P	06 59 01.7	-1.1
BOAV	Boa Vista	34.57	20	P		P	06 59 04.0	+0.4
BOAV					IAmb	IAmb	06 59 05.3	
	comp=Z,6.5nm,0.6s							
BOAV	Boa Vista	34.57	20	*eP*		P	06 59 04.2	+0.6
ROSC	El Rosal	35.33	356	P		P	06 59 09.7	-0.8
	comp=Z,2.1nm,0.4s,baz=237,slow=22,SNR=1.6							
	comp=Z,2.1nm,0.4s							
ROSC	El Rosal	35.33	356		IAmb	IAmb	06 59 23.4	
	comp=Z,12nm,1.4s							
NBPS	Pedro II - PI	38.77	54	*eP*		P	06 59 38.9	-0.6
SDV	Santo Domingo	39.29	2	LR		LR	07 17 24.4	
	comp=Z,213nm,18.3s,baz=180,slow=38							
MDP	Montagnes des	40.01	31	LR		LR	07 17 53.7	
	comp=Z,244nm,18.1s,baz=204,slow=39							
CMIG	Matias Romero	52.33	332	LR		LR	07 18 37.7	
	comp=Z,76nm,21.1s,baz=136,slow=30							
SNAA	Sanae	54.68	159	P		P	07 01 43.9	+0.6
	comp=Z,2.6nm,0.5s,baz=259,slow=7.8,SNR=5.7							
SNAA					LR	LR	07 23 26.3	
	comp=Z,113nm,21.6s,baz=304,slow=34							
	comp=Z,2.6nm,0.5s							
SNAA	Sanae	54.68	159	P		P	07 01 44.6	+1.3
SNAA					IAmb	IAmb	07 01 53.2	
	comp=Z,9.3nm,0.8s							
MOIG	Morelia	57.39	327	P		P	07 02 03.3	-0.2
QSPA	South Pole Qui	59.62	180	P		P	07 02 19.6	+1.2
	comp=Z,3.1nm,0.7s,baz=202,slow=5.4,SNR=16							
	comp=Z,3.1nm,0.7s							
QSPA	South Pole Qui	59.62	180	P		P	07 02 20.5	+2.1
QSPA					IAmb	IAmb	07 02 29.3	
	comp=Z,8.5nm,1.1s							
146A	Union	64.97	344	P		P	07 02 54.1	-0.3
SAND	Sanderson	66.75	332			P	07 03 09.8	+3.9
TXAR	Lajitas Array	66.85	330	P		P	07 03 08.2	+1.5
	comp=Z,0.2nm,0.5s,baz=159,slow=7.6,SNR=5.0							
	comp=Z,0.2nm,0.5s							
TXAR	Lajitas Array	66.85	330	P		P	07 03 07.3	+0.5
PLPT	Palo Pinto	67.86	336	P		P	07 03 10.9	-2.0
PLPT					IAmb	IAmb	07 03 55.5	
	comp=Z,6.4nm,0.6s							
DBIC	Dimbokro	74.00	72	P		P	07 03 50.3	-0.3
	comp=Z,4.6nm,0.5s,baz=242,slow=6.7,SNR=14							
DBIC					LR	LR	07 33 46.5	
	comp=Z,284nm,19.8s,baz=230,slow=34							
	comp=Z,4.6nm,0.5s							
DBIC	Dimbokro	74.00	72	P		P	07 03 50.5	-0.2
N35A	Tabor	74.43	342	P		P	07 03 52.3	-0.2
N35A					IAmb	IAmb	07 04 04.3	
	comp=Z,22nm,1.5s							
SADO	Sadowa	75.31	355	P		P	07 03 59.2	+1.7
SADO					IAmb	IAmb	07 04 00.9	
	comp=Z,9.7nm,1.2s							
SUR	Sutherland	76.38	120	LR		LR	07 36 06.7	
	comp=Z,126nm,18.2s,baz=260,slow=34							
SUR	Sutherland	76.38	120	P		P	07 04 03.2	-1.2
SUR					IAmb	IAmb	07 04 08.3	
	comp=Z,28nm,1.5s							
MAW	Mawson	76.39	164	P		P	07 04 04.5	+0.9
	comp=Z,4.7nm,0.5s,baz=209,slow=4.8,SNR=16							
MAW					LR	LR	07 40 31.6	
	comp=Z,170nm,18.8s,baz=236,slow=38							
	comp=Z,4.7nm,0.5s							
MAW	Mawson	76.39	164	P		P	07 04 05.2	+1.7
ECSD	EROS Data Cent	77.37	342	P		P	07 04 10.8	+1.6
D62A	Allapoint, All	77.38	2	P		P	07 04 11.2	+2.0
D62A					IAmb	IAmb	07 04 26.9	
	comp=Z,14nm,1.1s							
BATG	Bathurst New B	77.71	4	P		P	07 04 12.8	+1.7
BATG					IAmb	IAmb	07 04 30.1	
	comp=Z,12nm,1.1s							
TSUM	Tsumeb	80.04	106	LR		LR	07 35 29.8	
	comp=Z,128nm,19.8s,baz=328,slow=32							
HWUT	Hardware Ranch	80.65	331	P		P	07 04 26.2	-1.3
PDAR	Pinedale Array	80.80	333	P		P	07 04 27.3	-1.1
	comp=Z,0.3nm,0.6s,baz=153,slow=9.5,SNR=3.7							
	comp=Z,0.3nm,0.6s							
NVAR	Mina Array Bea	81.18	325	P		P	07 04 30.2	-0.3
	comp=Z,0.5nm,0.8s,baz=160,slow=4.7,SNR=3.9							
	comp=Z,0.5nm,0.8s							
BOSA	Boshof	81.55	118	P		P	07 04 32.5	-0.3
	comp=Z,1.9nm,0.7s,baz=248,slow=2.9,SNR=6.6							
BOSA					LR	LR	07 36 21.4	
	comp=Z,119nm,20.3s,baz=188,slow=32							
	comp=Z,1.9nm,0.7s							
BOSA	Boshof	81.55	118		IAmb	IAmb	07 04 49.1	
	comp=Z,8.1nm,1.2s							
TORD	Torodi Ar. Bea	82.95	70	P		P	07 04 40.1	+0.1
	comp=Z,1.5nm,0.5s,baz=276,slow=6.4,SNR=30							
	comp=Z,1.5nm,0.5s							
ULM	Lac du Bonnet	83.27	345	P		P	07 04 40.1	-0.7
	comp=Z,1.6nm,0.6s,baz=159,slow=3.8,SNR=3.2							
	comp=Z,1.6nm,0.6s							
LBTB	Lobatse	83.62	115	LR		LR	07 39 25.1	
	comp=Z,173nm,18.5s,baz=216,slow=34							
SCHQ	Schefferville	85.20	3	P		P	07 04 51.9	+1.3
	comp=Z,1.1nm,0.7s,baz=238,slow=15,SNR=1.3							
	comp=Z,1.1nm,0.7s							
SCHQ	Schefferville	85.20	3		IAmb	IAmb	07 05 02.9	
	comp=Z,16nm,1.4s							
LSZ	Lusaka	90.75	108	LR		LR	07 43 05.5	
	comp=Z,77nm,20.2s,baz=160,slow=34							
FRB	Frobisher Bay	94.07	1	LR		LR	07 48 55.5	
	comp=Z,190nm,19.9s,baz=292,slow=36							
YKA	Yellowknife Ar	98.89	341	P		Pdif	07 05 55.0	+0.8
	comp=Z,0.1nm,0.5s,baz=96,slow=7.8,SNR=5.6							
	comp=Z,0.1nm,0.5s							
ASAR	Alice Springs	120.63	208	PKP		PKPdf	07 11 06.7	-0.4
	comp=Z,0.2nm,0.5s,baz=137,slow=1.5,SNR=5.7							
WRA	Warramunga Arr	123.76	210	PKP		PKPdf	07 11 13.0	-0.1
	comp=Z,0.7nm,0.5s,baz=158,slow=1.6,SNR=16							
H11S2	WAKE ISLAND Hyl	25.87	272	T		T	09 30 01.7	
	baz=115,slow=75,SNR=382							
H11S1	WAKE ISLAND Hyl	25.88	272	T		T	09 29 59.9	
	baz=115,slow=75,SNR=494							
H11S3	WAKE ISLAND Hyl	25.89	272	T		T	09 29 58.7	
	baz=115,slow=75,SNR=367							
H11N3	WAKE ISLAND Hyl	26.20	273	T		T	09 30 26.5	
	baz=117,slow=75,SNR=45							
H11N1	WAKE ISLAND Hyl	26.21	273	T		T	09 30 27.5	
	baz=117,slow=75,SNR=22							
H11N2	WAKE ISLAND Hyl	26.22	273	T		T	09 30 27.7	
	baz=117,slow=75,SNR=72							
SEY	Seymchan	137.13	332	PKP		PKiKP	07 11 38.3	-0.5
	comp=Z,0.5nm,0.3s,baz=52,slow=19,SNR=1.7							
PETK	Petropavlovsk-	137.83	317	PKP		PKiKP	07 11 40.5	-0.1
	comp=Z,1.4nm,0.6s,baz=5.7,slow=2.9,SNR=1.5							
BORK	Borovoye	144.62	40			PKPdf	07 11 50.9	+0.1
BVAR	Borovoye Array	144.66	40	PKP		PKPdf	07 11 51.2	+0.4
	comp=Z,3.6nm,0.5s,baz=300,slow=2.8,SNR=23							
KKAR	Karatay Array	147.71	57			PKPdf	07 11 57.8	+1.4
KURBB	Kurchatov Arra	150.25	39	PKPbc		PKiKP	07 12 06.0	-0.1
	comp=Z,1.7nm,0.7s,baz=305,slow=3.1,SNR=17							
KURBB				PKPab		SKPdf	07 15 34.7	+2.0
	comp=Z,0.1nm,0.4s,baz=305,slow=3.3,SNR=1.5							
KURK	Kurchatov	150.25	39			PKPbc	07 12 05.8	+0.4
AAK	Ala-Archa	150.67	56	PKPbc		PKPbc	07 12 05.0	-1.8
	comp=Z,0.9nm,0.4s,baz=194,slow=2.6,SNR=4.9							
ZAA0	Zalesovo Array	151.26	29	PKPbc		PKiKP	07 12 08.9	+0.8
ZALV	Zalesovo Beam	151.26	29	PKPbc		PKiKP	07 12 08.5	+0.4
	comp=Z,4.8nm,0.5s,baz=307,slow=3.2,SNR=27							
ZALV				PKPab		sPKPbc	07 12 15.2	-0.6
	comp=Z,5.5nm,0.5s,baz=300,slow=3.0,SNR=14							
MKAR	Makanchi Array	154.34	44	PKPbc		PKPbc	07 12 14.5	-0.3
	comp=Z,1.0nm,1.0s,baz=336,slow=2.7,SNR=5.0							
MKAR				PKPab		sPKPbc	07 12 24.9	+2.1
	comp=Z,0.9nm,0.8s,baz=298,slow=3.1,SNR=6.4							
WMQ	Urumqi	159.14	45	*e*PKP		PKPdf	07 12 14.3	+1.5
SONM	Songino Array	162.75	4	PKPab		PKPab	07 13 06.5	+1.2
	comp=Z,0.8nm,0.8s,baz=344,slow=3.1,SNR=5.2							
HHC	Hu-ho-hao-te	169.40	346	*eP*		PKPdf	07 12 18.8	-3.3
NJ2	Nanjing	170.69	282	*eP*		PKPdf	07 12 22.1	-0.8
NJ2					pmax	pmax		
	comp=Z,31nm,0.6s							
PZH	PanZhiHua	173.07	125	PKP		PKPdf	07 12 24.4	0.0

ASRS ***24*** *06:59:43.0±1.7,54.12N×86.46E,h0km,M2.5(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 24 06:59:44.7±2.5,54.08N×86.56E,h0km,mbtmp2.9/2, ML2.9/2,Error ellipse: s-maj=20.1km s-min=12.6km az=59.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.04	263	I	I	07 06 40.0	
	baz=81,slow=316,SNR=1.3						
ZALV	Zalesovo Beam	1.04	263	Pg	Pg	07 00 03.0	-1.6
	1.1nm,0.3s,baz=82,slow=17,SNR=14						
ZALV				Lg	Lg	07 00 18.8	
	1.6nm,0.3s,baz=84,slow=30,SNR=5.8						
KURBB	Kurchatov Arra	6.02	238	Pn	Pn	07 01 15.7	+0.7
	0.1nm,0.3s,baz=54,slow=13,SNR=8.7						
KURBB				Sn	Sn	07 02 25.4	+0.9
	baz=57,slow=14						
KURBB				Lg	Lg	07 02 57.1	
	baz=57,slow=35,SNR=1.7						
	0.7nm,0.6s						
MKAR	Makanchi Array	7.79	202	Pn	Pn	07 01 40.8	+1.5
	0.3nm,0.3s,baz=26,slow=14,SNR=12						
MKAR				Sn	Sn	07 03 06.3	-1.8
	baz=24,slow=28,SNR=1.8						
MKAR				Lg	Lg	07 03 52.7	
	baz=26,slow=30,SNR=2.0						
	0.2nm,0.3s						

NNC 24 07:03:36.8±1.8,43.43N×87.14E,h0km,mb3.5,mpv3.1, 4C-1D,Error ellipse: s-maj=17.8km s-min=14.7km az=82.0,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	Makanchi Array	4.80	316	Pn	Pn	07 04 50.3	-0.1
	2.4nm,1.0s,baz=137,slow=14,SNR=9.0						
MK31				⇑Lg	Lg	07 06 10.7	
	3.0nm,0.7s,baz=132,slow=32,SNR=5.3						
MAKZ	Makanchi	4.97	315	⇑Pn	Pn	07 04 52.5	-0.3
	1.4nm,0.7s						
MAKZ				⇑Lg	Lg	07 06 15.0	
	6.0nm,0.9s						
PDGK	Podgornoye	5.58	272	⇓Pn	Pn	07 05 01.7	+0.5
	4.0nm,0.7s						
PDGK				⇑Lg	Lg	07 06 32.8	
	9.3nm,0.9s						

IDC ***24*** *07:11:12.3±0.6,51.55N×175.07W,h0km,mb4.2/33, mbtmp4.2/36,ML3.9/3,MS4.2/49,Error ellipse: s-maj=19.0km s-min=10.7km az=176.0*

NEIC ***24*** *07:11:15.6±1.3,51.31N±0.06×175.10W±0.06,h20km±3km, mb4.8/327,ML4.4/8,ML4.1(AEIC),Error ellipse: s-maj=9.0km s-min=5.3km az=183.0*

AEIC ***24*** *07:11:18.2±1.7,51.46N±0.07×175.15W±0.08,h42km±4km, Error ellipse: s-maj=10.0km s-min=7.4km az=189.0*

GCMT ***24*** *07:11:18.6±0.3,51.30N±0.02×175.21W±0.04,h18km±1km, MW5.0/104,Moment Tensor Solution. s43,c48; s104,c143; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.88±.18; Mθθ-2.74±.12; Mφφ-0.14±.11; Mrθ2.25±.25; Mθφ-0.55±.07; Mrφ0.68±.29; Best double couple: Ms3.70600×10^16 NP1:ϕs262.00000°,δs25.00000°, λ96.00000°. NP2:ϕs75.00000°,δ65.00000°,λ87.00000°. Principal axes: T 3.7250, Plg70.0000°, Azm339.0000°; N -0.0410, Plg3.0000°, Azm76.0000°; P -3.6870, Plg20.0000°, Azm167.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 07:11:15.1±1.1,51.30N±0.06×175.06W±0.03,h22km±7km, n629,σ1s39/509,mb4.7/161,MS4.2/53,1C-7D,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSIG	Igitkin Island	0.87	322		Pb	07 11 32.3	+0.7
GSIG					Sb	07 11 41.9	-0.9
GSMY	Great Sitkin M	0.97	321		Pb	07 11 33.8	+0.7
GSMY					Sn	07 11 45.6	-0.7
GSCK	Great Sitkin C	0.99	317		Pb	07 11 34.2	+0.7
GSCK					Sn	07 11 45.3	-1.6
GSTR	Great Sitkin T	1.01	322		Pb	07 11 34.8	+0.9
GSTR				Sn	Sb	07 11 50.0	+3.3
ETKA	Kagalaska Isla	1.01	304		Pb	07 11 34.1	+0.3
ETKA					Sn	07 11 46.2	-1.1
GSTD	Great Sitkin T	1.01	319		Pb	07 11 34.6	+0.7
GSTD					Sn	07 11 46.0	-1.6
GSTD					Sb	07 11 48.0	+1.2
GSSP	Great Sitkin S	1.05	319		Pb	07 11 35.3	+0.7
GSSP					Sn	07 11 47.6	-0.8
KOFP	Korovin Flat P	1.15	31		Sn	07 11 49.9	-0.9
KOFP					Sb	07 11 52.5	+1.9
KOKL	Mount Kliuchef	1.16	27		Sn	07 11 51.7	+0.7
KOKL					Sb	07 11 52.5	+1.6
ADK	Adak	1.17	301	P	Pb	07 11 36.6	+0.1
ADK	Adak	1.17	301		Pn	07 11 35.9	-0.1
ADK				Sn	Sb	07 11 52.5	+1.3
ADK				IAML		07 11 59.4	
	6μm,0.4s						
ADK				IAML		07 11 59.8	
	6μm,0.3s						
ADAG	Mount Adagdak	1.18	306		Sn	07 11 50.9	-0.6
KOWE	Korovin West	1.18	25		Sn	07 11 52.1	+0.5
KOWE					Sb	07 11 53.4	+1.7
KOSE	Korovin Southe	1.22	31		Pn	07 11 37.8	+1.0
KIWB	Kanaga Island	1.42	294		Sb	07 11 58.9	+0.5
KIWB	Kanaga Island	1.42	294	Pn	Pn	07 11 40.0	+0.5
KIWB				IAML		07 12 05.1	
	comp=E,7μm,0.5s						
KIWB				IAML		07 12 08.8	
	comp=N,6μm,0.4s						
KIMD	Kanaga Island	1.43	290		Sb	07 11 58.6	-0.3
TAPA	Tanaga Point A	1.79	288		Pb	07 11 46.0	-1.2
TAFL	Tanaga Flats	1.83	286		Pb	07 11 46.4	-1.4
TANO	Tanaga North	2.00	289		Pb	07 11 49.5	-1.3
GALAA	Gareloi Lava P	2.36	283		Pn	07 11 54.4	+1.9
GANE	Gareloi Northe	2.38	284		Pn	07 11 54.7	+2.1
GANO	Gareloi North	2.39	284		Pn	07 11 54.6	+1.7
CEPE	Semis' Perret	3.36	283		Pn	07 12 07.7	+1.5
CEAP	Semis' Anvil P	3.41	284		Pn	07 12 08.4	+1.5
AMKA	Amchitka	3.53	273	Pn	Pn	07 12 08.6	0.0
LSNW	Little Sitkin	4.05	282		Pn	07 12 17.1	+1.3
OKCE	Okmok Cone E	4.73	61		Pn	07 12 28.0	+2.9
OKTU	Okmok Mt. Tuli	4.78	61		Pn	07 12 28.1	+2.3
MGOD	Makushin Gods	5.59	60		Pn	07 12 38.5	+1.7
MNAT	Makushin Natee	5.72	60		Pn	07 12 40.8	+2.1
UNV	Unalaska Valle	5.81	61	P	Pn	07 12 44.3	+4.6
UNV	Unalaska Valle	5.81	61		Pn	07 12 42.7	+2.9
UNV	Unalaska Valle	5.81	61	P	Pn	07 12 41.1	+1.3
	baz=246,SNR=7.6						
LVA	Lava Point	6.19	59	Pn	Pn	07 12 44.6	-0.4
ZRO	Akutan Zero	6.19	60		Pn	07 12 47.5	+2.4
AKUT	Akutan	6.32	60	P	Pn	07 12 52.5	+5.8
AKUT	Akutan	6.32	60	Pn	Pn	07 12 47.1	+0.4
SPIA	Saint Paul Isl	6.53	24	P	Pn	07 12 54.4	+4.8
SPIA	Saint Paul Isl	6.53	24	Pn	Pn	07 12 53.6	+4.0
SPIA	Saint Paul Isl	6.53	24	P	Pn	07 12 51.5	+1.9
	baz=207						
SHEM	Shemya Is, Ala	6.84	286	Pn	Pn	07 12 51.7	-2.2
	comp=N,4.0nm,0.3s,baz=74,slow=2.0,SNR=4.5						
SHEM				Sn	Sn	07 14 15.0	+3.9
	baz=127,slow=20						
SHEM				LR	LR	07 15 53.8	
	comp=N,2μm,18.1s,baz=109,slow=42						
	comp=N,19nm,0.7s						
SHEM	Shemya Is, Ala	6.84	286	Pn	Pn	07 12 52.0	-1.9
SMY	Shemya	6.84	286	Pn	Pn	07 12 52.0	-1.9
FALS	False Pass	7.86	59	P	Pn	07 13 11.2	+3.3
FALS	False Pass	7.86	59	Pn	Pn	07 13 09.6	+1.7
FALS	False Pass	7.86	59	P	Pn	07 13 09.0	+1.1
	baz=247						
DT1	Dutton Round H	8.56	59		Pn	07 13 18.9	+1.3
PS1A	Pavlof South-1	8.97	57		Pn	07 13 25.2	+2.1
SDPT	Sand Point	9.62	59	P	Pn	07 13 33.0	+1.0
SDPT	Sand Point	9.62	59	Pn	Pn	07 13 32.5	+0.5
SDPT	Sand Point	9.62	59	P	Pn	07 13 32.3	+0.3
	baz=250,SNR=10						
CNBA	Chernabura Isl	9.96	63	Pn	Pn	07 13 36.2	-0.4
CHNA	Chernabura Isl	9.96	63	P	Pn	07 13 36.0	-0.7
CHNA	Chernabura Isl	9.96	63	P	Pn	07 13 36.7	+0.1
	baz=255						
M11K	Mekoryuk	10.37	25	P	Pn	07 13 43.9	+1.7
	baz=212						
S14K	Fog Glacier	10.44	55	P	Pn	07 13 45.1	+1.9
	baz=247						
CHGN	Chignik	11.04	57	Pn	Pn	07 13 51.1	-0.3
CHGN	Chignik	11.04	57	P	Pn	07 13 52.1	+0.8
	baz=249						
O14K	Tigyukauivet M	11.18	39		Pn	07 13 57.3	+4.0
O14K	Tigyukauivet M	11.18	39	P	Pn	07 13 55.2	+1.9
	baz=230,SNR=13						
M13K	Dall Lake	11.24	31		Pn	07 13 58.8	+4.7
M13K	Dall Lake	11.24	31	P	Pn	07 13 56.2	+2.2
	baz=221,SNR=8.0						
N14K	Kuskokwak Cree	11.46	36	Pn	Pn	07 14 01.0	+3.9
N14K	Kuskokwak Cree	11.46	36	P	Pn	07 13 58.2	+1.0
	baz=227,SNR=25						
O15K	Ungalikthiuk R	11.72	42	P	Pn	07 14 01.5	+0.8
	baz=234,SNR=16						
R16K	Pilot Point	11.94	52	Pn	Pn	07 14 07.2	+3.4
R16K	Pilot Point	11.94	52	P	Pn	07 14 04.4	+0.7
	baz=245,SNR=6.1						
M14K	Bethel	11.95	33	P	Pn	07 14 05.1	+1.3
	baz=223						
K13K	Kusilvak Mount	12.08	24		Pn	07 14 10.5	+4.9
K13K	Kusilvak Mount	12.08	24	P	Pn	07 14 07.8	+2.2
	baz=213,SNR=11						
L14K	Kuka Creek	12.16	29	P	Pn	07 14 08.7	+2.0
	baz=220						
N15K	Kwethluk River	12.22	38	P	Pn	07 14 09.1	+1.5
	baz=230,SNR=30						
M15K	Kasigluk River	12.35	35	P	Pn	07 14 10.0	+0.7
	baz=226,SNR=35						
P16K	Nushagak River	12.43	45		Pn	07 14 13.9	+3.6
P16K	Nushagak River	12.43	45	P	Pn	07 14 10.3	-0.1
	baz=238,SNR=19						
R17L	Mt. Peulik Vol	12.57	52	P	Pn	07 14 13.0	+0.7
	baz=247						
PLK4	Peulik 4	12.57	52	Pn	Pn	07 14 13.1	+0.7
GAMB	Gambell	12.63	7	Pn	Pn	07 14 15.5	+2.3
GAMB	Gambell	12.63	7	P	Pn	07 14 14.7	+1.5
	baz=190						
O16K	Kokwok River B	12.69	43	Pn	Pn	07 14 17.7	+3.8
O16K	Kokwok River B	12.69	43	P	Pn	07 14 15.9	+2.0
	baz=236,SNR=48						
L15K	Ungalak Mounta	12.79	30	P	Pn	07 14 17.1	+1.9
	baz=222						
Q16K	King Salmon	12.86	48	P	Pn	07 14 17.5	+1.2
	baz=242						
N16K	Nishlik Lake	12.93	38	P	Pn	07 14

N19K **Bonanza Creek** 14.86 42 P Pn 07 14 43.7 +0.1
baz=239
G15K **Niukluk** 14.88 18 P Pn 07 14 45.8 +2.1
baz=208,SNR=21
P19K **Oil Pt** 14.88 47 P Pn 07 14 44.9 +1.1
baz=245
Q20K **Shuyak Island** 14.88 52 P Pn 07 14 44.8 +1.0
baz=250
F14K **Arctic Creek** 14.91 14 P Pn 07 14 45.9 +1.7
baz=202
H16K **Elim** 14.95 22 P Pn 07 14 46.0 +1.2
baz=213,SNR=8.2
ILSW **Iliamna Southw** 15.06 46 Pn 07 14 47.0 +0.7
ILSW IAmb IAmb 07 14 53.3
comp=Z,32nm,1.1s
F15K **North Star Dit** 15.40 16 Pn P 07 14 53.6 -1.5
F15K **North Star Dit** 15.40 16 P Pn 07 14 52.1 +1.4
baz=205,SNR=29
RED **Redoubt Volcan** 15.41 45 Pn Pn 07 14 51.3 +0.3
L19K **White Mountain** 15.46 37 P Pn 07 14 53.1 +1.6
baz=234,SNR=18
M19K **Big River Lodg** 15.48 39 P Pn 07 14 53.5 +1.7
baz=236
G16K **Koyuk River** 15.57 20 Pn Pn 07 14 55.2 +2.3
G16K IAmb IAmb 07 15 04.5
comp=Z,77nm,1.4s
G16K **Koyuk River** 15.57 20 P Pn 07 14 55.0 +2.1
baz=211
J18K **Innoko River** 15.62 32 P Pn 07 14 55.4 +1.9
baz=227
CNPM **China Poot** 15.76 49 Pn 07 14 56.4 +1.0
CNPM IAmb IAmb 07 15 10.5
comp=Z,49nm,1.0s
H17K **Granite Mounta** 15.77 24 P Pn 07 14 57.4 +1.9
baz=217
M20K **Styx River** 15.97 40 Pn 07 14 59.0 +0.8
M20K IAmb IAmb 07 15 06.8
comp=Z,56nm,1.4s
M20K **Styx River** 15.97 40 P Pn 07 14 59.3 +1.1
baz=236,SNR=24
BRLK **Bradley Lake** 16.02 49 Pn 07 14 59.8 +1.1
N20K **Mount Spurr** 16.02 43 P Pn 07 15 00.4 +1.6
baz=242
SPCR **Spurr Chakacha** 16.02 43 P Pn 07 15 00.4 +1.6
baz=242
G17K **Kiwalik Mounta** 16.05 22 P Pn 07 15 01.1 +2.1
baz=214,SNR=7.7
BRSE **Bradley Lake S** 16.07 49 P Pn 07 15 00.5 +1.1
baz=249
SPU **Mount Spurr** 16.08 43 Pn 07 15 00.6 +1.1
CAPN **Captain Cook N** 16.29 45 P Pn 07 15 04.3 +2.3
baz=245
STLK **Strandline Lak** 16.32 42 Pn 07 15 03.7 +1.1
J19K **Poorman** 16.33 31 P Pn 07 15 04.6 +2.0
J19K IAmb IAmb 07 15 13.5
comp=Z,72nm,1.3s
J19K **Poorman** 16.33 31 P Pn 07 15 04.7 +2.0
baz=228,SNR=25
H18K **Honhosa River** 16.35 26 P P 07 15 06.0 +0.3
H18K IAmb IAmb 07 15 26.8
comp=Z,79nm,1.4s
H18K **Honhosa River** 16.35 26 P Pn 07 15 04.9 +2.0
baz=220,SNR=25
K20K **Telida** 16.46 35 P Pn 07 15 05.7 +1.4
baz=232
GCSA **Galena City Sc** 16.47 28 P Pn 07 15 05.5 +1.2
baz=224,SNR=23
SLKM **Skilak Lake** 16.60 47 Pn 07 15 06.7 +0.6
SLKM IAmb IAmb 07 15 21.4
comp=Z,53nm,1.2s
SKT **Skwentna** 16.68 41 Pn 07 15 08.8 +1.7
SKT **Skwentna** 16.68 41 P Pn 07 15 08.4 +1.4
baz=241,SNR=11
F17K **Baldwin Pennin** 16.71 19 P 07 15 09.8 +0.3
F17K IAmb IAmb 07 15 18.9
comp=Z,105nm,1.4s
F17K **Baldwin Pennin** 16.71 19 P Pn 07 15 08.9 +1.5
baz=211,SNR=43
PETK **Petropavlovsk-** 16.76 287 Pn Pn 07 15 08.1 0.0
comp=Z,0.5nm,0.3s,baz=92,slow=16,SNR=7.8
PETK LR LR 07 21 09.9
comp=Z,926nm,21.6s,baz=99,slow=36
comp=Z,2.2nm,0.8s
SEW **Seward** 16.81 48 Pn 07 15 08.3 -0.4
SEW **Seward** 16.81 48 P Pn 07 15 09.8 +1.1
baz=249
O22K **Cooper Landing** 16.82 47 Pn 07 15 09.6 +0.7
O22K **Cooper Landing** 16.82 47 P Pn 07 15 09.4 +0.6
baz=248
G18K **Tagagawik** 16.86 24 P Pn 07 15 10.8 +1.5
G18K **Tagagawik** 16.86 24 P Pn 07 15 09.9 +0.6
baz=218,SNR=15
PPLA **Purkeypile** 16.89 38 P 07 15 11.7 0.0
PPLA IAmb IAmb 07 15 27.5
comp=Z,105nm,1.3s
PPLA **Purkeypile** 16.89 38 P Pn 07 15 10.9 +1.1
baz=237,SNR=17
J20K **Nowinta River** 16.94 32 P Pn 07 15 10.9 +0.5
baz=230
RC01 **Rabbit Creek A** 17.05 45 P Pn 07 15 12.2 +0.5
baz=246
H19K **Roundabout Mou** 17.16 27 IAmb IAmb 07 15 20.5
comp=Z,103nm,1.5s
H19K **Roundabout Mou** 17.16 27 P Pn 07 15 13.8 +0.7
baz=223,SNR=24
F18K **Selawik** 17.19 21 P P 07 15 14.9 0.0
baz=214
I20K **Naaghedeneel** 17.24 31 P P 07 15 16.1 +0.6
I20K IAmb IAmb 07 15 24.4
comp=Z,101nm,1.4s
I20K **Naaghedeneel** 17.24 31 P Pn 07 15 14.7 +0.7
baz=228
CHUM **Lake Minchumin** 17.40 35 P P 07 15 17.6 +0.3
baz=234
CUT **Chulitna** 17.40 41 IAmb IAmb 07 15 35.2
comp=Z,145nm,1.5s
CUT **Chulitna** 17.40 41 P P 07 15 17.6 +0.4
baz=241
G19K **Purcell Mounta** 17.45 25 P P 07 15 18.3 +0.5
baz=220,SNR=19
D17K **Noatak River** 17.47 15 P P 07 15 18.8 +0.8
baz=206
PMR **Palmer** 17.52 44 P Pn 07 15 18.4 +0.9
baz=246
H20K **Anotleneega Mo** 17.59 28 P Pn 07 15 19.4 +0.9
baz=226,SNR=17
C16K **Lisburne Hills** 17.67 12 P P 07 15 20.8 +0.6
baz=200,SNR=9.1
E18K **Tukpahlearik C** 17.68 19 P P 07 15 21.0 +0.7
baz=211,SNR=14
KTH **Kantishna Hill** 17.73 37 IAmb IAmb 07 15 48.0
comp=Z,62nm,0.9s
KNK **Knik Glacier** 17.75 45 P Pn 07 15 21.0 +0.5
baz=247
P23K **Montague Islan** 17.75 50 P Pn 07 15 21.4 +0.9
baz=253
F19K **Shaleruckik Mo** 17.82 23 P P 07 15 23.2 +1.4
baz=218,SNR=30
RDOG **Red Dog Mine** 17.82 15 P P 07 15 22.8 +0.9
baz=206
TRF **Thorofare Moun** 17.91 38 IAmb IAmb 07 15 32.1
comp=Z,80nm,1.2s
TRF **Thorofare Moun** 17.91 38 P Pn 07 15 23.3 +0.7
baz=239,SNR=11
SML **Sawmill** 17.96 44 P Pn 07 15 23.0 0.0
baz=246,SNR=6.4
BPAW **Bear Paw Mtn.** 18.00 35 IAmb IAmb 07 15 37.3
comp=Z,45nm,1.0s
BPAW **Bear Paw Mtn.** 18.00 35 P Pn 07 15 23.6 0.0
baz=236
Q23K **Middleton Isla** 18.11 52 P Pn 07 15 24.8 -0.1
baz=256
C17K **DeLong Mountai** 18.17 14 P P 07 15 26.7 +1.0
baz=204
GLI **Glacier Island** 18.17 47 P P 07 15 26.7 +0.9
baz=250
M23K **Glacier View** 18.22 44 P P 07 15 25.6 -0.6
baz=247,SNR=15
IMAR **Indian Mountai** 18.27 28 P Pn 07 15 28.1 +1.3
I21K **Tanana** 18.30 32 IAmb IAmb 07 15 35.4
comp=Z,83nm,1.2s
I21K **Tanana** 18.30 32 P Pn 07 15 28.1 +0.9
baz=231,SNR=42
WAT1 **Susitna Watana** 18.30 41 P P 07 15 28.1 +0.8
baz=243
H21K **Melozitna Rive** 18.34 30 IAmb IAmb 07 15 36.0
comp=Z,106nm,1.4s

H21K **Melozitna Rive** 18.34 30 P Pn 07 15 28.9 +1.3
baz=229,SNR=26
SCM **Sheep Creek Mo** 18.41 44 P P 07 15 29.0 +0.5
baz=247,SNR=5.6
E19K **Redstone River** 18.44 22 P Pn 07 15 29.7 +0.8
baz=217,SNR=38
F20K **Avaraart Lake** 18.50 24 IAmb IAmb 07 15 37.8
comp=Z,60nm,1.4s
F20K **Avaraart Lake** 18.50 24 P P 07 15 29.9 +0.6
baz=221
WAT6 **Susitna Watana** 18.53 42 P P 07 15 30.1 +0.2
baz=245
MCK **McKinley** 18.58 38 P P 07 15 30.3 0.0
baz=240,SNR=19
MLY **Manley** 18.63 33 IAmb IAmb 07 15 43.4
comp=Z,44nm,1.2s
MLY **Manley** 18.63 33 P Pn 07 15 32.0 +0.8
baz=234,SNR=17
C18K **Utukok River** 18.64 16 P Pn 07 15 32.0 +0.6
baz=208
EYAK **Cordova Ski Ar** 18.70 49 P P 07 15 32.1 +0.5
baz=253
G21K **Allakaket** 18.71 27 IAmb IAmb 07 15 40.9
comp=Z,101nm,1.4s
G21K **Allakaket** 18.71 27 P Pn 07 15 32.9 +0.7
baz=226,SNR=37
DHY **Denali Highway** 18.89 41 P P 07 15 34.2 +0.4
baz=244,SNR=8.6
KLU **Klutina** 18.91 46 P P 07 15 34.7 +0.7
baz=250
H22K **Ishtalitna Cre** 18.95 31 P Pn 07 15 35.6 +0.6
baz=231,SNR=30
NEA2 **Nenana** 18.97 36 P P 07 15 35.7 +1.1
baz=238
M24K **Tolsona, Glenn** 19.01 44 IAmb IAmb 07 15 59.2
comp=Z,32nm,0.9s
M24K **Tolsona, Glenn** 19.01 44 P Pn 07 15 36.4 +0.5
baz=248
D19K **Kuna River** 19.10 19 P P 07 15 36.8 +0.8
D19K IAmb IAmb 07 15 46.9
comp=Z,95nm,1.4s
D19K **Kuna River** 19.10 19 P Pn 07 15 38.0 +1.1
baz=214,SNR=45
BILL **Bilibino** 19.10 338 Pn 07 15 36.8 0.0
BILL IAmb IAmb 07 15 44.4
comp=Z,101nm,1.5s
RAGM **Ragged Mountai** 19.17 50 P P 07 15 37.9 +1.2
RAGM IAmb IAmb 07 15 51.4
comp=Z,36nm,1.1s
I23K **Minto, Yukon-K** 19.18 34 P P 07 15 37.9 +1.1
baz=236,SNR=47
KAIM **Kayak Island** 19.18 51 P P 07 15 38.2 +1.3
baz=257
F21K **Alatna River** 19.22 26 IAmb IAmb 07 15 46.8
comp=Z,67nm,1.4s
F21K **Alatna River** 19.22 26 P Pn 07 15 39.0 +0.7
baz=224,SNR=36
E20K **Nigu River** 19.32 21 P Pn 07 15 39.8 +0.3
baz=218,SNR=48
C19K **Lookout Ridge** 19.33 17 P Pn 07 15 40.5 +0.9
baz=210,SNR=57
BMRM **Bremner River** 19.36 48 IAmb IAmb 07 15 55.5
comp=Z,36nm,1.2s
BMRM **Bremner River** 19.36 48 P P 07 15 38.8 0.0
baz=254,SNR=6.8
H23K **Yukon River** 19.50 32 P P 07 15 41.6 +1.2
baz=234
N25K **Chitina, Valde** 19.55 46 P P 07 15 42.0 +1.0
baz=252
COLA **College** 19.57 36 P P 07 15 42.3 +1.3
COLA **College** 19.57 36 P P 07 15 42.2 +1.2
baz=239
G22K **Bettles** 19.57 28 P Pn 07 15 42.5 0.0
baz=228
D20K **Etivluk River** 19.59 20 P Pn 07 15 42.8 0.0
baz=216
PAX **Paxson** 19.64 42 P P 07 15 42.4 +0.4
baz=247,SNR=8.8
HDA **Harding Lake** 19.67 37 P P 07 15 42.7 +0.5
HDA IAmb IAmb 07 16 02.5
comp=Z,35nm,0.6s
HDA **Harding Lake** 19.67 37 P P 07 15 43.2 +1.0
baz=241,SNR=34
BGLC **Bering Glacier** 19.78 51 P P 07 15 44.4 +1.0
baz=257
POKR **Poker Plat Res** 19.85 35 P P 07 15 44.8 +0.7
baz=239
K24K **Donnelly Dome** 19.86 40 IAmb IAmb 07 16 12.9
comp=Z,52nm,1.1s
K24K **Donnelly Dome** 19.86 40 P P 07 15 44.6 +0.4
baz=244,SNR=10
IL31 **19.87 37** IAmb IAmb 07 16 00.4
comp=Z,16nm,0.5s
ILAR **Eielson Array** 19.87 37 P P 07 15 42.6 -1.7
comp=Z,1.0nm,0.3s,baz=230,slow=8.6,SNR=55
ILAR S S 07 19 19.4 -7.4
comp=Z,1.1nm,1.1s,baz=221,slow=16,SNR=2.2
ILAR PcP PcP 07 20 00.1 -0.6
comp=Z,0.3nm,0.6s,baz=250,slow=2.4,SNR=1.4
ILAR ScP ScP 07 23 40.0 +4.8
comp=Z,0.2nm,0.7s,baz=243,slow=4.0,SNR=1.8
ILAR LR LR 07 24 02.2
comp=Z,629nm,18.5s,baz=226,slow=39
comp=Z,5.2nm,0.7s
G23K **Bananza Creek** 19.89 30 IAmb IAmb 07 15 48.0
comp=Z,36nm,1.0s
G23K **Bananza Creek** 19.89 30 P P 07 15 45.7 +1.1
baz=231,SNR=46
E21K **Killik River** 19.99 23 P P 07 15 46.7 +1.1
baz=221
CRQM **Cirque** 20.00 49 P P 07 15 46.8 +0.9
CRQM IAmb IAmb 07 16 12.7
comp=Z,36nm,1.2s
CRQE **Cirque** 20.02 49 P P 07 15 46.2 +0.1
baz=256
A19K **Wainwright** 20.06 14 P P 07 15 47.6 +1.3
baz=206,SNR=33
H24K **Noodor Dome** 20.07 33 P 07 15 47.6 +1.0
H24K **Noodor Dome** 20.07 33 P P 07 15 47.1 +0.5
baz=236,SNR=81
TGL **Tana Glacier** 20.14 50 P P 07 15 47.7 +0.2
COLD **Coldfoot** 20.16 28 P 07 15 49.0 +1.5
COLD IAmb IAmb 07 16 01.7
comp=Z,37nm,1.0s
COLD **Coldfoot** 20.16 28 P P 07 15 49.0 +1.5
baz=230,SNR=32
RIDG **Independent Ri** 20.21 40 P 07 15 48.2 +0.1
RIDG IAmb IAmb 07 16 08.2
comp=Z,88nm,1.5s
RIDG **Independent Ri** 20.21 40 P P 07 15 48.5 +0.4
baz=246,SNR=17
MCARA **McCarthy VSAT** 20.21 48 P P 07 15 48.4 +0.3
MCARA IAmb IAmb 07 15 58.6
comp=Z,23nm,0.9s
MCARA **McCarthy VSAT** 20.21 48 P P 07 15 48.7 +0.7
baz=254
E22K **Anaktuvuk Pass** 20.32 25 P P 07 15 50.1 +0.9
baz=225
C21K **Knifeblade Rid** 20.35 21 P P 07 15 50.1 +0.5
baz=219,SNR=54
J25K **Salcha River,** 20.37 38 IAmb IAmb 07 15 56.2
comp=Z,43nm,0.8s
J25K **Salcha River,** 20.37 38 P P 07 15 49.2 -0.7
baz=243,SNR=51
MESA **MESA** 20.45 51 P P 07 15 50.9 0.0
baz=259
DOT **Dot Lake** 20.49 41 IAmb IAmb 07 16 14.6
comp=Z,22nm,0.7s
M26K **Nabesna, AK** 20.51 45 P P 07 15 53.0 +1.6
baz=252,SNR=10
B20K **Meade River** 20.55 18 P P 07 15 52.9 +1.3
baz=213
L26K **Log Cabin Wild** 20.57 43 P P 07 15 53.0 +1.1
baz=250
SCRK **Sand Creek** 20.65 40 P 07 15 52.8 -0.2
SCRK **Sand Creek** 20.65 40 P P 07 15 52.3 -0.7
baz=246,SNR=94
GRNC **Granite Creek** 20.65 50 P P 07 15 52.7 -0.4
G24K **Hadweenzic Riv** 20.69 31 IAmb IAmb 07 16 02.4
comp=Z,71nm,1.3s
G24K **Hadweenzic Riv** 20.69 31 P P 07 15 54.2 +1.0
baz=235,SNR=15
PRP **Porcupine Dome** 20.74 35 P 07 15 54.5 +0.6
PRP **Porcupine Dome** 20.74 35 P P 07 15 55.3 +1.3
baz=241
B21K **Ikpikpuk River** 20.75 20 IAmb IAmb 07 15 58.7
comp=Z,47nm,1.1s
B21K **Ikpikpuk River** 20.75 20 P P 07 15 54.8 +0.9
baz=218,SNR=41

MA2 **Magadan** 20.87 307 P P 07 15 54.7 -0.5
comp=Z,1.4nm,0.3s,baz=92,slow=8.5,SNR=5.8
MA2 LR LR 07 23 55.7
comp=Z,582nm,19.2s,baz=106,slow=37
comp=Z,1.4nm,0.3s
MA2 **Magadan** 20.87 307 P P 07 15 55.0 -0.2
E23K **Chandalar** 20.87 27 IAmb IAmb 07 16 07.2
comp=Z,57nm,1.3s
E23K **Chandalar** 20.87 27 P P 07 15 56.7 +1.4
baz=229,SNR=14
SEY **Seymchan** 20.90 316 P P 07 15 54.1 -1.3
comp=Z,1.2nm,0.4s,baz=112,slow=15,SNR=4.3
SEY ScP ScP 07 23 41.4 +3.7
comp=Z,0.6nm,0.4s,baz=92,slow=4.4,SNR=1.4
SEY LR LR 07 24 29.1
comp=Z,2um,18.7s,baz=114,slow=38
comp=Z,1.2nm,0.4s
CTG **Chitna Glacier** 20.90 49 P P 07 15 56.6 +0.9
baz=257
CTGM **Chitina Glacie** 20.90 49 IAmb IAmb 07 16 05.6
comp=Z,34nm,1.4s
M27K **Edge Creek, AK** 21.00 45 P P 07 15 58.0 +1.2
baz=253,SNR=11
LOGN **Logan Glacier** 21.03 50 IAmb IAmb 07 16 13.8
comp=Z,44nm,1.5s
F24K **Squaw Lake** 21.04 29 IAmb IAmb 07 16 05.7
comp=Z,85nm,1.5s
F24K **Squaw Lake** 21.04 29 P P 07 15 58.6 +1.5
baz=233
G25K **Bearman Lake** 21.18 32 P P 07 15 59.4 +0.9
baz=237
D23K **Nanushuk River** 21.20 24 P P 07 15 59.9 +1.2
baz=226
E24K **Your Creek** 21.21 28 IAmb IAmb 07 16 10.8
comp=Z,54nm,1.3s
E24K **Your Creek** 21.21 28 P P 07 15 59.9 +1.1
baz=231,SNR=42
L27K **Beaver Creek,** 21.23 44 P P 07 16 00.1 +0.9
baz=252
BCAR **Beaver Creek A** 21.25 44 P P 07 15 60.0 +0.6
PCA **Pinnacle** 21.27 52 IAmb IAmb 07 16 28.7
comp=Z,24nm,0.9s
PINM **Pinnacle** 21.27 52 P P 07 15 59.9 +0.3
baz=261
TOLK **Toolik Lake Re** 21.27 26 P P 07 16 00.4 +0.9
baz=228,SNR=37
FYU **Fort Yukon** 21.37 33 P 07 16 01.4 +0.9
O28M **Mount Upton** 21.41 50 IAmb IAmb 07 16 33.9
comp=Z,32nm,1.4s
O28M **Mount Upton** 21.41 50 P P 07 16 01.5 +0.2
baz=259
BVCY **Beaver Creek** 21.47 46 P P 07 16 02.5 +0.8
baz=254,SNR=8.8
YUK3 **Moose Creek** 21.49 47 P P 07 16 02.0 -0.2
baz=256
I26K **Coal Creek Min** 21.53 37 P P 07 16 02.4 +0.2
baz=244
B22K **Teshekpuk Lake** 21.57 20 P P 07 16 03.0 +0.3
baz=219
YUK8 **Steele Glacier** 21.71 49 P P 07 16 04.4 -0.1
baz=258
A21K **Barrow** 21.76 16 P P 07 16 05.1 +0.5
baz=212
F25K **Christian Rive** 21.79 30 IAmb IAmb 07 16 12.8
comp=Z,46nm,1.4s
F25K **Christian Rive** 21.79 30 P P 07 16 05.8 +0.7
baz=236,SNR=26
A22K **Sinclair Lake** 21.79 18 P P 07 16 05.6 +0.6
baz=216
D24K **Happy Valley** 21.82 25 P P 07 16 06.5 +1.1
baz=228
C23K **Itkillik River** 21.84 23 IAmb IAmb 07 16 07.6
comp=Z,79nm,1.2s
C23K **Itkillik River** 21.84 23 P P 07 16 06.1 +0.6
baz=224,SNR=46
BMAR **Burnt Mountain** 22.04 31 P 07 16 08.8 +1.0
G26K **Porcupine Rive** 22.06 33 IAmb IAmb 07 16 31.4
comp=Z,32nm,1.2s
G26K **Porcupine Rive** 22.06 33 P P 07 16 08.2 +0.2
baz=240,SNR=19
E25K **Arctic Village** 22.11 29 IAmb IAmb 07 16 12.4
comp=Z,42nm,1.2s
E25K **Arctic Village** 22.11 29 P P 07 16 09.2 +0.7
baz=235,SNR=37
O29M **Mount Kennedy** 22.13 52 P P 07 16 09.4 +0.5
baz=262
C24K **Franklin Bluff** 22.23 24 P P 07 16 10.1 +0.3
baz=227
I27K **Kandik River** 22.23 37 P P 07 16 10.2 +0.3
baz=246,SNR=11
YUK4 **Talbot Arm** 22.25 49 P P 07 16 11.0 +0.7
baz=259
YUK6 **Outpost Mounta** 22.32 50 P P 07 16 11.0 -0.1
baz=261
F26K **Sheenjek River** 22.33 31 P P 07 16 11.7 +0.8
baz=238,SNR=16
H27K **Steamboat Moun** 22.53 36 P P 07 16 13.6 +0.5
baz=245
M29M **Somme Creek** 22.56 46 P P 07 16 14.4 +0.9
baz=257,SNR=6.5
D25K **Kavik River** 22.59 26 IAmb IAmb 07 16 15.7
comp=Z,31nm,1.0s
D25K **Kavik River** 22.59 26 P P 07 16 14.0 +0.3
baz=232,SNR=45
HYT **Haines Junctio** 22.72 51 P P 07 16 15.6 +0.4
HYT **Haines Junctio** 22.72 51 P P 07 16 15.7 +0.4
baz=262
G27K **Doyon Strip** 22.74 34 P P 07 16 15.8 +0.5
baz=243
I28M **Miner Creek** 22.82 38 IAmb IAmb 07 16 24.4
comp=Z,19nm,1.0s
I28M **Miner Creek** 22.82 38 P P 07 16 16.1 -0.1
baz=248,SNR=13
L29M **L29M** 22.86 45 IAmb IAmb 07 16 25.0
comp=Z,30nm,1.3s
L29M **L29M** 22.86 45 P P 07 16 16.6 0.0
baz=256
P30M **Million Dollar** 22.91 53 P P 07 16 17.3 +0.2
baz=264
N30M **Aishikik Lake** 23.01 49 P P 07 16 18.3 +0.2
N30M **Aishikik Lake** 23.01 49 P P 07 16 18.4 +0.3
baz=261
S31K **Pelican** 23.18 58 IAmb IAmb 07 16 23.3
comp=Z,36nm,1.1s
S31K **Pelican** 23.18 58 P P 07 16 20.4 +0.6
baz=270
J29N **Klondike Camp** 23.18 41 IAmb IAmb 07 16 35.8
comp=Z,16nm,0.9s
J29N **Klondike Camp** 23.18 41 P P 07 16 20.1 +0.2
baz=253,SNR=7.6
K29M **Barlow Dome** 23.31 43 IAmb IAmb 07 16 30.5
comp=Z,16nm,0.9s
K29M **Barlow Dome** 23.31 43 P P 07 16 21.2 0.0
baz=255,SNR=15
M30M **Minto, Yukon** 23.34 46 P P 07 16 21.8 +0.4
baz=259
C26K **Camden Bay** 23.37 26 P P 07 16 22.2 +0.7
baz=233,SNR=32
O30N **Mendenhall** 23.40 51 P P 07 16 22.4 +0.3
baz=264
E27K **Coleen River** 23.41 31 P P 07 16 22.3 +0.2
baz=240,SNR=13
I29M **Ogilvie Camp,** 23.43 39 IAmb IAmb 07 16 29.7
comp=Z,57nm,1.2s
I29M **Ogilvie Camp,** 23.43 39 P P 07 16 22.9 +0.6
baz=251,SNR=26
R31K **City Hall, Gus** 23.44 57 P P 07 16 22.4 +0.1
baz=269
C27K **Jago River** 23.53 27 P P 07 16 23.4 +0.3
baz=235,SNR=12
N31M **Braeburn, Yuko** 23.64 49 P P 07 16 24.7 +0.3
baz=262
SKAG **Skagway** 23.68 54 P P 07 16 25.1 +0.4
baz=267
SIT **Sitka** 23.70 60 P P 07 16 25.3 +0.4
baz=273
H29M **Whitestone** 23.70 37 IAmb IAmb 07 16 32.0
comp=Z,65nm,1.5s
H29M **Whitestone** 23.70 37 P P 07 16 24.5 -0.4
baz=249,SNR=19
F28M **Old Crow** 23.72 33 P 07 16 26.4 +1.3
F28M **Old Crow** 23.72 33 P P 07 16 26.0 +0.9
baz=244,SNR=8.9
WHY **Whitehorse** 23.98 51 P P 07 16 28.4 +0.6
baz=265
J30M **Hart River** 24.00 42 P P 07 16 28.2 +0.3
baz=255

S32K **Killisnoo** 24.08 59 P **P** 07 16 28.7 +0.2
baz=272
R32K **Eaglecrest** 24.09 57 P **P** 07 16 29.1 +0.5
baz=271
D27M **Malcolm River** 24.14 29 IAmb IAmb 07 16 56.4
comp=Z,24nm,1.1s
D27M **Malcolm River** 24.14 29 P **P** 07 16 29.3 +0.2
baz=239,SNR=13
I30M **Mount Dempster** 24.16 40 IAmb IAmb 07 16 46.1
comp=Z,18nm,0.8s
I30M **Mount Dempster** 24.16 40 P **P** 07 16 28.8 -0.6
baz=253,SNR=24
E28M **Babbage River** 24.28 31 P **P** 07 16 31.1 +0.9
E28M IAmb IAmb 07 16 39.0
comp=Z,28nm,1.1s
E28M **Babbage River** 24.28 31 P **P** 07 16 30.9 +0.6
baz=242,SNR=22
EPYK **Eagle Plains** 24.38 37 IAmb IAmb 07 16 42.1
comp=Z,20nm,1.1s
EPYK **Eagle Plains** 24.38 37 P **P** 07 16 31.1 -0.2
baz=250,SNR=9.0
M31M **Drury Creek, Y** 24.39 48 P **P** 07 16 31.3 0.0
baz=262
P32M **Atlin** 24.51 54 P **P** 07 16 32.4 -0.1
baz=268
E29M **Blow River** 24.72 32 **P** 07 16 35.4 +1.1
E29M IAmb IAmb 07 16 42.3
comp=Z,40nm,1.1s
E29M **Blow River** 24.72 32 P **P** 07 16 35.0 +0.7
baz=245,SNR=52
G30M **tAoh Zraii Nji** 24.77 36 P **P** 07 16 34.7 -0.1
baz=250,SNR=9.1
D28M **Stokes Point** 24.87 30 P **P** 07 16 35.7 +0.1
baz=242,SNR=12
N32M **Quiet Lake** 24.90 50 P **P** 07 16 37.2 +1.1
baz=266
P33M **Teslin, Yukon** 24.98 53 P **P** 07 16 37.7 +1.0
baz=268,SNR=6.1
U33K **Whale Pass** 24.99 62 P **P** 07 16 37.4 +0.7
baz=276
T33K **Petersburg** 25.01 61 P **P** 07 16 37.7 +0.7
baz=275
CRAG **Craig** 25.07 64 P **P** 07 16 37.8 +0.3
baz=278
H31M **Peel River** 25.14 39 IAmb IAmb 07 17 01.3
comp=Z,43nm,1.2s
H31M **Peel River** 25.14 39 P **P** 07 16 37.9 -0.2
baz=254,SNR=19
F30M **Barrier River** 25.15 35 IAmb IAmb 07 16 46.7
comp=Z,21nm,1.1s
F30M **Barrier River** 25.15 35 P **P** 07 16 38.6 +0.5
baz=249,SNR=10
Q32M **Nakina River** 25.25 56 IAmb IAmb 07 16 43.3
comp=Z,26nm,1.1s
Q32M **Nakina River** 25.25 56 P **P** 07 16 40.1 +0.8
baz=271,SNR=5.3
WRAK **Wrangell Islan** 25.38 62 P **P** 07 16 40.6 +0.2
baz=276,SNR=6.5
G31M **Satah River** 25.48 37 P **P** 07 16 41.5 +0.4
baz=252
F31M **Tsiigehtchic** 25.84 36 P **P** 07 16 45.3 +0.9
baz=252,SNR=7.4
S34M **Telegraph Cree** 25.90 58 IAmb IAmb 07 16 50.4
comp=Z,34nm,1.1s
S34M **Telegraph Cree** 25.90 58 P **P** 07 16 45.6 +0.6
baz=274,SNR=8.6
R33M **Jennings River** 25.91 55 P **P** 07 16 45.8 +0.5
baz=271
V35K **Ketchikan** 25.94 64 P **P** 07 16 45.6 +0.2
baz=279
INK **Inuvik** 26.19 34 P **P** 07 16 48.1 +0.6
baz=250,SNR=6.1
DLBC **Dease Lake** 26.45 57 LR LR 07 27 50.5
comp=Z,211nm,18.9s,baz=268,slow=38
DLBC **Dease Lake** 26.45 57 P **P** 07 16 50.4 +0.4
baz=274,SNR=11
T35M **Bob Quinn** 26.47 60 IAmb IAmb 07 16 55.1
comp=Z,41nm,1.1s
T35M **Bob Quinn** 26.47 60 P **P** 07 16 50.2 0.0
baz=277,SNR=8.2
WTLY **Watson Lake, Y** 26.99 53 P **P** 07 16 55.3 +0.4
baz=272
BBB **Bella Bella** 28.69 70 LR LR 07 26 57.9
comp=Z,278nm,20.3s,baz=281,slow=33
JKA **Kamikawa-asahi** 29.05 272 P **P** 07 17 14.3 +1.0
JKA **Kamikawa-asahi** 29.05 272 IAmb IAmb 07 17 20.6
comp=Z,17nm,1.3s
ASAJ **Asahikawa** 29.05 272 P **P** 07 17 14.3 +1.0
comp=Z,3.7nm,0.7s,baz=27,slow=18,SNR=2.6
ASAJ LR LR 07 30 05.0
comp=Z,187nm,19.2s,baz=92,slow=39
comp=Z,3.7nm,0.7s
KOTAN **Kotaneelee Air** 29.36 53 P **P** 07 17 16.4 +0.5
baz=275
WRGLY **Wrigley** 29.48 46 P **P** 07 17 17.6 +0.7
baz=270
C36M **Paulatuk** 29.78 34 P **P** 07 17 19.9 +0.3
baz=259
A36M **Sachs Harbour** 30.03 28 IAmb IAmb 07 17 46.4
comp=Z,7.6nm,0.8s
A36M **Sachs Harbour** 30.03 28 P **P** 07 17 22.1 +0.4
baz=253,SNR=13
YAK **Yakutsk** 31.23 312 LR LR 07 30 34.8
comp=Z,554nm,19.0s,baz=97,slow=37
TIXI **Tiksi** 31.86 330 LR LR 07 31 21.0
comp=Z,284nm,19.2s,baz=127,slow=38
TIXI **Tiksi** 31.86 330 P **P** 07 17 38.7 +0.8
TIXI IAmb IAmb 07 17 48.0
comp=Z,4.4nm,0.6s
LLLB **Lillooet** 32.90 70 P **P** 07 17 47.7 +0.4
LLLB IAmb IAmb 07 18 05.5
comp=Z,15nm,1.3s
KLR **Kul'dur** 33.45 288 P **P** 07 17 52.4 +0.4
comp=Z,3.5nm,0.5s,baz=71,slow=7.7,SNR=14
KLR LR LR 07 30 47.1
comp=Z,579nm,21.8s,baz=79,slow=35
comp=Z,3.5nm,0.5s
YKAW3 **Yellowknife Wh** 33.57 47 P **P** 07 17 53.1 +0.2
YKA **Yellowknife Ar** 33.58 47 P **P** 07 17 51.9 -1.1
comp=Z,0.9nm,0.8s,baz=280,slow=9.7,SNR=15
YKA PcP **PcP** 07 20 33.4 +0.6
comp=Z,0.8nm,1.0s,baz=273,slow=3.3,SNR=3.1
YKA ScP **ScP** 07 24 16.2 +0.4
comp=Z,0.3nm,0.9s,baz=271,slow=4.6,SNR=4.6
YKA LR LR 07 33 09.8
comp=Z,872nm,19.0s,baz=274,slow=39
comp=Z,0.9nm,0.8s
YKA **Yellowknife Ar** 33.58 47 P **P** 07 17 52.3 -0.7
YKAW1 **Yellowknife Wh** 33.64 47 P **P** 07 17 54.4 +0.9
H11N2 **WAKE ISLAND Hy** 34.56 211 T T 07 55 06.6
baz=16
H11N3 **WAKE ISLAND Hy** 34.57 211 T T 07 55 39.7
baz=16
LON **Longmire** 34.57 76 P **P** 07 18 03.1 +1.2
LON IAmb IAmb 07 18 28.5
comp=Z,21nm,1.4s
H11N1 **WAKE ISLAND Hy** 34.58 211 T T 07 55 39.6
baz=16
H04A **Detroit Lake** 35.34 80 P **P** 07 18 08.4 -0.1
H04A IAmb IAmb 07 18 35.2
comp=Z,21nm,1.1s
B08A **Colville Reser** 35.34 72 P **P** 07 18 09.3 +0.8
B08A IAmb IAmb 07 18 27.0
comp=Z,12nm,0.9s
HOOD **Mount Hood Mea** 35.35 78 P **P** 07 18 07.7 -1.0
HEH **HeiHe** 35.59 291 *e*P **P** 07 18 08.3 -2.2
HEH pmax pmax
comp=Z,9.0nm,0.9s
HEH LR LR
comp=N,280nm,18.3s
HEH LR LR
comp=E,430nm,18.7s
HEH LR LR
comp=Z,430nm,17.7s
USRK **Ussuriysk Ar.** 35.62 280 P **P** 07 18 11.2 +0.3
comp=Z,1.6nm,0.6s,baz=44,slow=7.1,SNR=2.6
comp=Z,1.6nm,0.6s
EPH **Ephrata** 35.63 74 P **P** 07 18 12.2 +1.2
EPH IAmb IAmb 07 18 36.1
comp=Z,14nm,1.3s
WAH2 **Wahluke Slope** 35.93 75 P **P** 07 18 14.3 +0.8
WAH2 IAmb IAmb 07 18 39.7
comp=Z,28nm,1.4s
MJAR **Matsushiro Arr** 36.10 264 P **P** 07 18 15.3 +0.2
comp=Z,2.2nm,0.7s,baz=39,slow=6.9,SNR=5.8
MJAR LR LR 07 31 40.0
comp=Z,298nm,20.4s,baz=54,slow=34
comp=Z,2.2nm,0.7s

HAWA **Hanford** 36.12 75 P **P** 07 18 16.1 +0.9
HAWA IAmb IAmb 07 18 37.3
comp=Z,11nm,0.9s
C09A **Chrisman Ranch** 36.22 73 P **P** 07 18 16.5 +0.5
C09A IAmb IAmb 07 18 33.7
comp=Z,22nm,1.3s
YBH **Yreka Blue Hor** 36.56 84 LR LR 07 30 24.5
comp=Z,16nm,18.8s,baz=295,slow=32
NEW **Newport** 36.70 71 LR LR 07 31 40.9
comp=Z,216nm,18.5s,baz=302,slow=34
NEW **Newport** 36.70 71 P **P** 07 18 20.6 +0.5
NEW IAmb IAmb 07 18 38.3
comp=Z,16nm,0.9s
EDM **Edmonton** 36.79 62 **P** 07 18 22.2 +1.4
JHJ **Hachijo jima 2** 37.36 259 LR LR 07 31 12.7
comp=Z,152nm,20.7s,baz=61,slow=32
O02D **Mt. Diablo Mer** 37.39 86 P **P** 07 18 26.1 0.0
O02D IAmb IAmb 07 18 51.4
comp=Z,14nm,1.4s
BNX **BinXian** 37.66 285 ⇓P **P** 07 18 28.1 -0.1
BNX pmax pmax
comp=Z,20nm,1.0s
O03E **Paynes Creek** 37.94 85 P **P** 07 18 29.8 -0.9
O03E IAmb IAmb 07 18 51.3
comp=Z,22nm,1.2s
BMO **Blue Mountains** 38.25 76 P **P** 07 18 34.7 +1.4
J08A **Circle Bar Ran** 38.31 79 P **P** 07 18 33.1 -0.8
J08A IAmb IAmb 07 19 01.1
comp=Z,12nm,1.1s
WVOR **Wild Horse Val** 38.71 80 P **P** 07 18 37.4 +0.1
RES **Resolute Bay** 38.84 25 LR LR 07 39 49.5
comp=Z,302nm,18.3s,baz=327,slow=44
MSO **Missoula** 39.28 72 **P**
MSO IAmb IAmb 07 18 59.9
comp=Z,20nm,1.2s
PAHR **Pah Rah Range** 39.79 85 P **P** 07 18 45.8 -0.6
PAHR IAmb IAmb 07 19 06.5
comp=Z,20nm,1.2s
MFID **Camas Ranch** 39.91 77 P **P** 07 18 48.0 +0.7
LYMT **Lyon Mountain** 40.19 71 P **P** 07 18 50.6 +0.9
HLID **Hailey** 40.69 76 **P** 07 18 53.9 +0.1
EGMT **Eagleton** 41.15 68 IAmb IAmb 07 19 26.4
comp=Z,22nm,1.1s
NVAR **Mina Array Bea** 41.23 85 P **P** 07 19 00.1 +1.7
comp=Z,1.3nm,0.9s,baz=292,slow=7.6,SNR=8.6
NVAR PcP **PcP** 07 20 58.7 +1.7
comp=Z,1.4nm,1.1s,baz=304,slow=3.3,SNR=1.6
NVAR ScP **ScP** 07 24 45.6 +0.4
comp=Z,0.4nm,0.6s,baz=319,slow=4.3,SNR=4.2
comp=Z,1.3nm,0.9s
BOZ **Bozeman (W)** 41.29 72 IAmb IAmb 07 19 16.1
comp=Z,33nm,1.5s
ELK **Elko** 41.77 80 **P** 07 19 03.2 +0.4
YHL **Hebgen Lake** 41.95 73 P **P** 07 19 04.6 +0.3
YHL IAmb IAmb 07 19 22.5
comp=Z,22nm,1.1s
KSRS **Korea Array** 41.98 274 P **P** 07 19 06.2 +2.0
comp=Z,3.4nm,0.8s,baz=55,slow=8.8,SNR=14
KSRS LR LR 07 36 13.0
comp=Z,80nm,20.5s,baz=60,slow=36
comp=Z,3.4nm,0.8s
KSAR **Wonju Array Be** 42.01 274 P **P** 07 19 03.2 -1.3
FFC **Flin Flon** 42.27 56 **P** 07 19 06.9 +0.5
FFC IAmb IAmb 07 19 08.0
comp=Z,13nm,1.2s
YNR **Norris Junctio** 42.33 73 IAmb IAmb 07 19 34.8
comp=Z,28nm,1.1s
H17A **Grant Village** 42.56 73 IAmb IAmb 07 19 28.9
comp=Z,23nm,1.2s
JNU **Nakatsue** 42.90 266 LR LR 07 35 56.8
comp=Z,49nm,21.6s,baz=58,slow=35
RLMT **Red Lodge** 42.95 71 IAmb IAmb 07 19 20.2
comp=Z,33nm,1.2s
DUG **Dugway, Tooele** 43.59 79 IAmb IAmb 07 19 37.1
comp=Z,22nm,1.2s
LAO **LASA Array** 43.90 68 IAmb IAmb 07 19 34.6
comp=Z,7.1nm,0.8s
TCUT **Toone Canyon** 43.91 77 IAmb IAmb 07 19 40.5
comp=Z,35nm,1.5s
CTU **Camp Tracy** 43.95 78 IAmb IAmb 07 19 38.4
comp=Z,11nm,1.3s
BW06 **Boulder Array** 44.09 74 IAmb IAmb 07 19 47.2
comp=Z,17nm,1.1s
PD31 **Pinedale Array** 44.09 74 IAmb IAmb 07 19 47.2
comp=Z,16nm,1.0s
PDAR **Pinedale Array** 44.09 74 P **P** 07 19 22.1 +0.6
comp=Z,4.8nm,0.8s,baz=310,slow=4.1,SNR=36
comp=Z,4.8nm,0.8s
PDAR **Pinedale Array** 44.09 74 **P** 07 19 22.0 +0.5
ILON **Igloolik, Nuna** 44.33 30 **P** 07 19 23.0 +0.2
ILON IAmb IAmb 07 19 23.5
comp=Z,14nm,1.5s
BSUT **Blindstream Ca** 44.65 78 IAmb IAmb 07 20 00.1
comp=Z,12nm,1.1s
LCMT **Little Creek M** 45.26 83 P **P** 07 19 31.0 +0.1
LCMT IAmb IAmb 07 19 50.8
comp=Z,11nm,1.3s
MTPU **Mount Pierson** 45.28 81 IAmb IAmb 07 19 51.3
comp=Z,14nm,1.3s
Q16A **Castle Valley** 45.37 80 IAmb IAmb 07 19 51.6
comp=Z,20nm,1.1s
PFO **Pinyon Flats O** 45.43 89 LR LR 07 34 38.5
comp=Z,248nm,21.2s,baz=326,slow=31
XLT **XiLinHaoTe** 45.45 289 *e*P **P** 07 19 33.5 +1.3
XLT pP pP 07 19 37.6 -0.1
XLT sP sP 07 19 40.4 +0.6
XLT PcP **PcP** 07 21 05.3 -5.6
XLT pmax pmax
comp=Z,7.0nm,1.0s
XLT pmax pmax
comp=Z,200nm,5.7s
XLT LR LR
comp=N,25nm,18.8s
XLT LR LR
comp=E,270nm,18.9s
XLT LR LR
comp=Z,410nm,21.8s
P18A **Preston Nutter** 45.51 78 IAmb IAmb 07 19 52.1
comp=Z,20nm,1.1s
KNB **Kanab** 45.52 83 P **P** 07 19 32.6 -0.4
KNB IAmb IAmb 07 20 01.8
comp=Z,13nm,1.3s
NRIK **Noril'sk** 45.65 331 P **P** 07 19 32.7 -0.5
comp=Z,1.4nm,0.7s,baz=322,slow=4.8,SNR=1.9
comp=Z,1.4nm,0.7s
NRIK **Noril'sk** 45.65 331 IAmb IAmb 07 19 37.9
comp=Z,7.6nm,1.5s
K22A **Casper** 45.98 73 IAmb IAmb 07 19 52.8
comp=Z,13nm,1.1s
U15A **North Rim** 46.22 83 IAmb IAmb 07 19 58.6
comp=Z,9.5nm,1.1s
HMU **Henry Mountain** 46.24 81 P **P** 07 19 39.8 +1.1
HMU IAmb IAmb 07 19 57.7
comp=Z,14nm,0.8s
RSSD **Black Hills** 46.61 70 **P** 07 19 41.6 +0.1
RSSD IAmb IAmb 07 19 45.1
comp=Z,8.6nm,1.1s
PV21 **Cone Mtn., Par** 46.95 79 IAmb IAmb 07 20 14.6
comp=Z,10.0nm,1.1s
PV10 **Paradox Valley** 47.02 79 P **P** 07 19 46.4 +1.6
PV16 **Nyswonger Mesa** 47.14 79 IAmb IAmb 07 20 15.5
comp=Z,13nm,1.0s
PV03 **Paradox Valley** 47.21 79 IAmb IAmb 07 20 04.7
comp=Z,10.0nm,0.9s
WUAZ **Wupatki** 47.38 84 IAmb IAmb 07 20 07.3
comp=Z,13nm,1.3s
PV01 **Paradox Valley** 47.46 79 IAmb IAmb 07 20 06.6
comp=Z,11nm,0.8s
BJI2 **Beijing** 47.69 285 P **P** 07 19 51.0 +1.4
BJI2 pmax pmax
comp=Z,5.0nm,0.8s
BJI2 LR LR
comp=N,210nm,19.3s
BJI2 LR LR
comp=E,110nm,15.6s
BJI2 LR LR
comp=Z,290nm,19.8s
ULM **Lac du Bonnet** 47.75 58 P **P** 07 19 50.0 0.0
comp=Z,5.4nm,0.8s,baz=299,slow=8.7,SNR=9.2
comp=Z,5.4nm,0.8s
ULM **Lac du Bonnet** 47.75 58 IAmb IAmb 07 19 51.4
comp=Z,18nm,1.2s
ISCO **Idaho Springs** 48.24 75 IAmb IAmb 07 20 22.2
comp=Z,5.3nm,1.1s
SONM **Songino Array** 48.76 299 P **P** 07 19 57.7 -0.3
comp=Z,2.3nm,1.0s,baz=50,slow=8.2,SNR=10
SONM PcP **PcP** 07 21 22.5 -0.2
comp=Z,0.8nm,0.7s,baz=32,slow=3.8,SNR=2.2
SONM ScP **ScP** 07 25 18.7 +2.8
comp=Z,0.3nm,0.4s,baz=60,slow=3.5,SNR=2.2
SONM LR LR 07 42 11.4
comp=Z,455nm,19.3s,baz=72,slow=38
comp=Z,2.3nm,1.0s
SONM **Songino Array** 48.76 299 **P** 07 19 57.1 -0.9
S22A **4UR Ranch, Cre** 48.77 78 IAmb IAmb 07 20 18.6
comp=Z,18nm,1.5s
SDCO **Great Sand Dun** 49.59 77 IAmb IAmb 07 20 23.6
comp=Z,8.1nm,1.1s
TUC **Tucson** 49.85 86 **P** 07 20 07.2 +0.7
HHC **Hu-ho-hao-te** 49.95 288 *e*P **P** 07 20 07.6 +0.4
HHC pmax pmax
comp=Z,12nm,0.6s
HHC pmax pmax
comp=Z,150nm,4.9s
HHC LR LR
comp=N,260nm,17.0s
HHC LR LR
comp=E,190nm,17.9s
HHC LR LR
comp=Z,350nm,17.9s
F33A **5 Mile Ranch,** 50.05 63 IAmb IAmb 07 20 17.3
comp=Z,16nm,1.4s
HNS **HongShan** 50.22 283 ⇑P **P** 07 20 10.8 +1.8
HNS pmax pmax
comp=Z,20nm,1.0s
SPITS **Spitsbergen Ar** 50.60 357 P **P** 07 20 09.5 -1.9
comp=Z,6.4nm,0.7s,baz=55,slow=7.2,SNR=9.8
SPITS LR LR 07 42 24.3
comp=Z,346nm,19.6s,baz=5.0,slow=37
comp=Z,6.4nm,0.7s
ANMO **Albuquerque** 50.80 81 LR LR 07 41 53.0
comp=Z,205nm,18.2s,baz=285,slow=36
ECSD **EROS Data Cent** 51.15 66 IAmb IAmb 07 20 40.4
comp=Z,8.7nm,1.1s
Y22A **Socorro** 51.15 82 IAmb IAmb 07 20 35.8
comp=Z,9.5nm,1.0s
NJ2 **Nanjing** 51.16 275 *e*P **P** 07 20 14.6 -1.6
NJ2 pmax pmax
comp=Z,35nm,0.5s
EYMN **Ely** 51.43 59 IAmb IAmb 07 20 19.5
comp=Z,25nm,1.4s
TBO **Thunder Bay** 52.11 57 IAmb IAmb 07 20 25.2
comp=Z,20nm,1.1s
RTBA **Rita Blanca** 52.12 77 IAmb IAmb 07 20 54.0
comp=Z,16nm,1.3s
SPMN **Marine on St.** 52.38 62 IAmb IAmb 07 20 52.2
comp=Z,20nm,1.5s
MNTX **Cornudas Mount** 53.64 83 IAmb IAmb 07 20 53.8
comp=Z,7.8nm,1.2s
G40A **Rib Lake** 53.78 61 IAmb IAmb 07 20 37.9
comp=Z,14nm,1.2s
KSU1 **Kansas State U** 54.08 70 IAmb IAmb 07 20 53.5
comp=Z,14nm,1.1s
128A **Castleberry Fa** 54.81 80 IAmb IAmb 07 21 02.2
comp=Z,8.8nm,1.1s
JFWS **Jewell Farm** 55.27 63 IAmb IAmb 07 20 48.2
comp=Z,13nm,1.1s
I42A **Draeger Farm,** 55.37 61 IAmb IAmb 07 20 49.6
comp=Z,18nm,1.2s
MNHN **Monahans** 55.52 81 IAmb IAmb 07 20 58.2
comp=Z,6.1nm,0.8s
P38A **Dawn** 55.54 68 IAmb IAmb 07 21 03.2
comp=Z,9.4nm,0.7s
H43A **Windswept, Lux** 55.62 60 IAmb IAmb 07 20 50.5
comp=Z,11nm,0.8s
WMOK **Wichita Mounta** 55.66 76 IAmb IAmb 07 21 19.8
comp=Z,11nm,1.2s
ZALV **Zalesovo Beam** 55.76 315 P **P** 07 20 49.0 -0.7
comp=Z,0.4nm,0.4s,baz=52,slow=5.9,SNR=2.2
ZALV PcP **PcP** 07 21 48.5 -0.1
comp=Z,0.4nm,0.3s,baz=36,slow=5.5,SNR=5.7
ZALV LR LR 07 46 30.4
comp=Z,399nm,19.2s,baz=46,slow=38
comp=Z,0.4nm,0.4s
APMT **Aspermont** 55.79 78 IAmb IAmb 07 21 09.2
comp=Z,19nm,1.4s
LPIG **La Paz** 55.89 93 LR LR 07 40 08.2
comp=Z,87nm,20.9s,baz=322,slow=31
XAN **Xi'an** 55.97 284 ⇓P **P** 07 20 52.5 +1.0
XAN pP pP 07 20 58.6 +1.4
XAN pmax pmax
comp=Z,19nm,1.8s
SGCY **Sterling City** 56.14 80 IAmb IAmb 07 21 11.5
comp=Z,17nm,1.1s
TXAR **Lajitas Array** 56.34 84 P **P** 07 20 55.0 +0.7
comp=Z,2.3nm,0.9s,baz=304,slow=5.0,SNR=8.8
comp=Z,2.3nm,0.9s
TXAR **Lajitas Array** 56.34 84 **P** 07 20 54.6 +0.3
W35A **Tecumseh** 56.53 74 IAmb IAmb 07 21 12.9
comp=Z,12nm,0.9s
OZNA **Ozona** 56.82 81 IAmb IAmb 07 21 22.8
comp=Z,5.5nm,0.9s
U38A **Gravette** 57.16 71 IAmb IAmb 07 21 18.2
comp=Z,15nm,1.4s
R40A **Maddies Statio** 57.16 68 IAmb IAmb 07 21 15.3
comp=Z,16nm,1.3s
HHAR **Hobbs** 57.53 71 IAmb IAmb 07 21 17.3
comp=Z,5.1nm,0.9s
JMIC **Jan Mayen** 57.64 5 LR LR 07 45 50.6
comp=Z,196nm,19.4s,baz=244,slow=36
LZH **Lanzhou** 57.64 289 *e*P **P** 07 21 06.3 +2.8
LZH pP pP 07 21 12.3 +3.1
LZH pmax pmax
comp=Z,17nm,1.4s
LZH LR LR
comp=N,400nm,14.1s
LZH LR LR
comp=E,500nm,13.7s
LZH LR LR
comp=Z,650nm,14.4s
LZDM **Lanzhou Array** 57.82 289 P **P** 07 21 05.7 +0.7
comp=Z,1.1nm,0.3s,baz=96,slow=5.8,SNR=1.5
LZDM LR LR 07 47 03.9
comp=Z,341nm,20.6s,baz=25,slow=37
comp=Z,1.1nm,0.3s
BRDY **Brady** 57.88 79 IAmb IAmb 07 21 21.0
comp=Z,7.6nm,1.2s
MGMO **Mountain Grove** 57.92 69 IAmb IAmb 07 21 06.0
comp=Z,13nm,1.3s
ARCES **ARCESS Array B** 58.54 352 P **P** 07 21 06.2 -2.9
comp=Z,5.5nm,0.9s,baz=21,slow=7.5,SNR=2.1
ARCES LR LR 07 47 39.8
comp=Z,180nm,19.9s,baz=250,slow=38
comp=Z,5.5nm,0.9s
SCHQ **Schefferville** 58.58 40 P **P** 07 21 09.9 +0.2
comp=Z,4.1nm,1.0s,baz=0.8,slow=6.5,SNR=3.0
comp=Z,4.1nm,1.0s
SCHQ **Schefferville** 58.58 40 IAmb IAmb 07 21 30.8
comp=Z,11nm,1.4s
SADO **Sadowa** 59.99 55 LR LR 07 48 49.1
comp=Z,409nm,18.3s,baz=313,slow=38
KURK **Kurchatov** 60.74 316 **PcP** 07 22 09.1 +0.8
KURK **Kurchatov** 60.74 316 **P** 07 21 24.8 +0.3
KURK IAmb IAmb 07 21 26.6
comp=Z,5.3nm,0.6s
KURBB **Kurchatov Arra** 60.85 316 P **P** 07 21 25.4 +0.1
comp=Z,3.5nm,0.5s,baz=43,slow=6.7,SNR=46
KURBB PcP **PcP** 07 22 09.1 +0.3
comp=Z,2.6nm,0.9s,baz=44,slow=4.7,SNR=5.3
KURBB LR LR 07 49 42.4
comp=Z,427nm,18.9s,baz=194,slow=38
comp=Z,3.5nm,0.5s
DELO **Deloro Mine** 60.94 54 **P** 07 21 27.1 +1.1
WVT **Waverly** 61.22 67 **P** 07 21 28.7 +0.7
WVT IAmb IAmb 07 21 29.2
comp=Z,14nm,1.4s
WMQ **Urumqi** 61.33 305 *e*P **P** 07 21 27.8 -0.9
WMQ sP sP 07 21 37.8 +1.3
WMQ pmax pmax
comp=Z,22nm,0.7s
WMQ pmax pmax
comp=Z,130nm,3.9s
WMQ LR LR
comp=Z,300nm,18.3s
OXF **Oxford** 61.43 70 **P** 07 21 30.0 +0.6
Q51A **Peebles** 61.74 62 **P** 07 21 32.4 +0.9
O52A **Adamsville** 61.80 60 **P** 07 21 32.3 +0.3
MK31 **Makanchi Array** 61.89 311 P **P** 07 21 31.9 -0.5
MKAR **Makanchi Array** 61.89 311 P **P** 07 21 32.1 -0.4
comp=Z,1.5nm,0.4s,baz=48,slow=6.2,SNR=50
MKAR LR LR 07 50 34.3
comp=Z,240nm,19.2s,baz=338,slow=38
comp=Z,1.5nm,0.4s
MAKZ **Makanchi** 62.03 311 **P** 07 21 33.5 +0.1
CLTN **Cedars of Leba** 62.11 66 IAmb IAmb 07 21 49.4

	comp=Z,5.0nm,0.9s							
U49A	**Red Boiling Sp**	**62.13**	**66**	IAmb	IAmb	07 21 49.2		
	comp=Z,12nm,1.3s							
T50A	**Nancy**	**62.31**	**65**	IAmb	IAmb	07 21 36.6		
	comp=Z,11nm,1.1s							
BVAR	**Borovoye Array**	**62.43**	**322**	P	**P**	**07 21 35.6**	**-0.4**	
	comp=Z,3.3nm,0.4s,baz=55,slow=6.9,SNR=43							
BVAR				LR	LR	07 51 21.1		
	comp=Z,741nm,18.6s,baz=33,slow=39							
	comp=Z,3.3nm,0.4s							
BORK	**Borovoye**	**62.44**	**322**	P	**P**	**07 21 37.0**	**+1.0**	
BORK				IAmb	IAmb	07 21 38.4		
	comp=Z,2.4nm,0.6s							
BORG	**Borgarnes**	**62.51**	**12**	LR	LR	07 50 39.2		
	comp=Z,256nm,18.4s,baz=69,slow=38							
GOMU	**GeErMu**	**62.83**	**295**	P	**P**	**07 21 38.5**	**-0.8**	
GOMU				S	**S**	**07 30 07.8**	**+0.3**	
GOMU				pmax	pmax			
	comp=Z,4.0nm,0.6s							
GOMU				LR	LR			
	comp=N,310nm,17.6s							
GOMU				LR	LR			
	comp=E,290nm,17.1s							
GOMU				LR	LR			
	comp=Z,36μm,17.0s							
FPAL	**Fort Paine**	**63.62**	**67**	IAmb	IAmb	07 21 59.4		
	comp=Z,8.4nm,0.8s							
TKL	**Tuckaleechee C**	**63.88**	**65**	LR	LR	07 48 19.1		
	comp=Z,302nm,21.3s,baz=336,slow=35							
BG3	**Lake Jocassee**	**64.84**	**65**	IAmb	IAmb	07 22 08.4		
	comp=Z,9.3nm,0.9s							
PZH	**PanZhiHua**	**65.66**	**282**	P	**P**	**07 21 58.8**	**+1.1**	
HODGE	**Hodges**	**65.77**	**65**	IAmb	IAmb	07 22 13.7		
	comp=Z,7.5nm,0.9s							
FINES	**FINESS Array B**	**66.34**	**349**	P	**P**	**07 22 00.4**	**-0.9**	
	comp=Z,5.6nm,1.0s,baz=20,slow=6.1,SNR=6.0							
	comp=Z,5.6nm,1.0s							
M65A	**Busby, Falmout**	**66.60**	**52**	P	**P**	**07 22 01.7**	**-1.6**	
	baz=318							
KDJ	**Kajisay**	**67.80**	**310**	IAmb	IAmb	07 22 14.2		
	comp=Z,7.8nm,1.2s							
TARG	**Taragay, Kyrgy**	**67.81**	**309**	IAmb	IAmb	07 22 15.9		
	comp=Z,3.2nm,0.6s							
NOA	**NORSAR Array B**	**67.90**	**357**	P	**P**	**07 22 10.6**	**-0.7**	
	comp=Z,5.3nm,1.1s,baz=4.6,slow=6.2,SNR=3.5							
NOA				LR	LR	07 52 30.6		
	comp=Z,69nm,19.4s,baz=0.0,slow=37							
	comp=Z,5.3nm,1.1s							
AAK	**Ala-Archa**	**68.68**	**312**		**P**	**07 22 17.7**	**+1.0**	
AAK				IAmb	IAmb	07 22 20.4		
	comp=Z,3.0nm,0.8s							
HFS	**Hagfors**	**68.69**	**355**	P	**P**	**07 22 15.1**	**-1.1**	
	comp=Z,2.3nm,0.5s,baz=339,slow=3.7,SNR=11							
	comp=Z,3nm,0.5s							
AKTO	**Aktyubinsk**	**69.07**	**327**	LR	LR	07 55 53.4		
	comp=Z,176nm,18.6s,baz=54,slow=39							
AB31	**Akbulak array**	**69.38**	**325**	P	**P**	**07 22 21.7**	**+1.0**	
AB31				PcP	**PcP**	**07 22 45.6**	**+1.5**	
AB31				IAmb	IAmb	07 22 46.6		
	comp=Z,6.4nm,1.1s							
ABKAR	**Akbulak array**	**69.38**	**325**	P	**P**	**07 22 20.9**	**+0.3**	
ABKAR				PcP	**PcP**	**07 22 44.8**	**+0.7**	
KK31	**Karatay Array**	**70.13**	**315**		**P**	**07 22 26.0**	**+0.5**	
KK31				IAmb	IAmb	07 22 27.8		
	comp=Z,3.9nm,0.6s							
KKAR	**Karatay Array**	**70.13**	**315**		**P**	**07 22 26.0**	**+0.5**	
ARSB	**Arslanbob**	**70.41**	**312**	P	**P**	**07 22 28.2**	**+0.9**	
ARSB				IAmb	IAmb	07 22 45.8		
	comp=Z,7.1nm,1.2s							
CMIG	**Matias Romero**	**70.75**	**87**	LR	LR	07 48 54.6		
	comp=Z,130nm,21.7s,baz=310,slow=32							
KSH2	**Kashi**	**70.88**	**309**	P	**P**	**07 22 30.8**	**+0.5**	
KSH2				pmax	pmax			
	comp=Z,14nm,1.3s							
CMAR	**Chiang Mai Arr**	**73.35**	**279**	P	**P**	**07 22 46.5**	**+1.4**	
	comp=Z,1.5nm,0.3s,baz=30,slow=8.7,SNR=4.1							
CMAR				LR	LR	07 57 45.9		
	comp=Z,58nm,19.9s,baz=80,slow=38							
	comp=Z,1.5nm,0.3s							
EVN	**Everest**	**73.47**	**294**	IAmb	IAmb	07 22 49.1		
	comp=Z,20nm,1.4s							
EKA	**Eskdalemuir Ar**	**73.52**	**5**	P	**P**	**07 22 45.4**	**-0.1**	
	comp=Z,5.6nm,1.0s,baz=336,slow=1.8,SNR=4.2							
	comp=Z,5.6nm,1.0s							
BRDH	**Bariadhala**	**74.63**	**287**	LR	LR	08 00 15.8		
	comp=Z,107nm,18.1s,baz=338,slow=40							
SHAA	**Shahritus**	**75.67**	**313**	IAmb	IAmb	07 23 01.8		
	comp=Z,65nm,1.4s							
AKASG	**Malin Array Be**	**76.30**	**344**	P	**P**	**07 23 00.3**	**-1.4**	
	comp=Z,0.7nm,0.4s,baz=14,slow=6.4,SNR=4.1							
AKASG				LR	LR	08 02 47.8		
	comp=Z,193nm,18.1s,baz=324,slow=41							
	comp=Z,0.7nm,0.4s							
NIL	**Nilore**	**76.36**	**307**		**P**	**07 23 03.6**	**+1.2**	
KBL	**Kabul**	**77.70**	**311**		**P**	**07 23 09.9**	**-0.3**	
KBL				IAmb	IAmb	07 23 11.7		
	comp=Z,14nm,1.2s							
BGES	**Gesves**	**78.69**	**360**	*d*P	**P**	**07 23 15.6**	**+0.5**	
BMRD	**Maredsous**	**78.77**	**0**	*d*P	**P**	**07 23 15.7**	**+0.2**	
RCHB	**Rochefort**	**78.92**	**360**	*d*P	**P**	**07 23 17.3**	**+1.0**	
DOU	**Dourbes**	**78.98**	**0**	*d*P	**P**	**07 23 17.2**	**+0.5**	
KBZ	**Khabaz**	**79.78**	**333**	LR	LR	08 03 54.5		
	comp=Z,180nm,19.1s,baz=350,slow=40							
GERES	**GERESS Array B**	**79.95**	**354**	P	**P**	**07 23 22.3**	**+0.2**	
	comp=Z,0.3nm,0.4s,baz=28,slow=6.1,SNR=1.9							
	comp=Z,0.3nm,0.4s							
MLR	**Muntele Rosu**	**81.89**	**345**	LR	LR	08 05 20.3		
	comp=Z,279nm,18.4s,baz=60,slow=40							
GNI	**Garni**	**82.52**	**330**	LR	LR	08 06 04.0		
	comp=Z,92nm,20.5s,baz=5.0,slow=40							
WRA	**Warramunga Arr**	**83.63**	**227**	P	**P**	**07 23 41.4**	**-0.2**	
	comp=Z,0.2nm,0.4s,baz=28,slow=5.0,SNR=2.0							
	comp=Z,0.2nm,0.4s							
BRTR	**Keskin Array B**	**85.94**	**338**	P	**P**	**07 23 51.5**	**-1.8**	
	comp=Z,0.7nm,0.5s,baz=352,slow=2.5,SNR=4.4							
BRTR				LR	LR	08 07 48.7		
	comp=Z,125nm,18.0s,baz=314,slow=40							
	comp=Z,0.7nm,0.5s							
ASAR	**Alice Springs**	**87.06**	**226**	P	**P**	**07 23 59.1**	**+0.4**	
	comp=Z,0.3nm,0.5s,baz=26,slow=5.5,SNR=4.6							
	comp=Z,0.3nm,0.5s							
ESDC	**Sonseca Array**	**89.07**	**7**	P	**P**	**07 24 07.2**	**-1.0**	
	comp=Z,1.4nm,0.9s,baz=354,slow=6.0,SNR=4.9							
	comp=Z,1.4nm,0.9s							
ESDC	**Sonseca Array**	**89.07**	**7**	IAmb	IAmb	07 24 10.2		
	comp=Z,2.9nm,1.1s							
MMAI	**Mount Meron Ar**	**91.86**	**335**	LR	LR	08 09 07.1		
	comp=Z,62nm,21.7s,baz=350,slow=38							
SDV	**Santo Domingo**	**92.01**	**73**	LR	LR	08 05 53.0		
	comp=Z,93nm,21.9s,baz=299,slow=36							
ASF	**Jabal al Asfar**	**92.25**	**333**	LR	LR	08 13 21.3		
	comp=Z,141nm,18.8s,baz=11,slow=40							
PALK	**Pallekele**	**93.17**	**286**	LR	LR	08 09 28.3		
	comp=Z,82nm,20.4s,baz=354,slow=38							
MDT	**Midelt**	**95.83**	**8**	LR	LR	08 09 02.8		
	comp=Z,138nm,18.8s,baz=30,slow=36							
RAYN	**Ar Rayn**	**97.40**	**323**	P	Pdif	07 24 47.4	+0.4	
H03N2	**Juan Fernandez**	**118.88**	**108**	T	T	09 40 31.3		
	baz=317,slow=77							
H03N1	**Juan Fernandez**	**118.89**	**108**	T	T	09 40 32.7		
	baz=317,slow=77							
H03N3	**Juan Fernandez**	**118.90**	**108**	T	T	09 40 23.6		
	baz=317,slow=77							
QSPA	**South Pole Qui**	**141.06**	**180**	PKhKP	PKPpre	07 30 35.9		
	comp=Z,1.3nm,1.1s,baz=27,slow=2.3,SNR=5.1							
QSPA				PKP	**PKiKP**	**07 30 44.2**	**-0.5**	
	comp=Z,0.9nm,0.6s,baz=124,slow=1.0,SNR=5.6							
TSUM	**Tsumeb**	**146.45**	**338**	PKPbc	**PKPab**	**07 30 55.5**	**+0.2**	
LPHEP	**Lephephe**	**147.76**	**322**	PKPbc	**PKPbc**	**07 30 58.5**	**+0.5**	
MAW	**Mawson**	**147.85**	**218**	PKPbc	**PKPbc**	**07 30 57.0**	**+0.3**	
	comp=Z,5.6nm,1.1s,baz=75,slow=4.4,SNR=2.1							
LBTB	**Lobatse**	**149.35**	**321**		**PKiKP**	**07 31 03.0**	**-0.2**	
BOSA	**Boshof**	**152.68**	**318**	PKPbc	**PKiKP**	**07 31 10.4**	**+0.4**	
	comp=Z,1.8nm,0.4s,baz=26,slow=2.7,SNR=9.9							
ELIB	**Princess Elisa**	**157.72**	**195**	*d*PKP	**PKPab**	**07 31 39.8**	**-1.1**	

*IDC **24** 07:11:24.9±0.8, 4°.51S×26°.64E, h0km, mb3.9/13, mbtmp4.0/16, ML1.7/1, Error ellipse: s-maj=22.7km s-min=15.3km az=101.0*

ISC 24 07:11:26.1±0.6, 4°.65S±0°.06×26°.58E±0°.08, h10km, n17, σ1°68/21, mb4.0/11, Zaire

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MBAR	**Mbarara**	**5.78**	**46**	Pn	**Pn**	**07 12 51.4**	**-0.8**
	6.8nm,0.3s,baz=202,slow=19,SNR=4.5						
MBAR				Pg	**Pb**	**07 13 09.1**	**+1.9**
	13nm,0.3s,baz=240,slow=20,SNR=8.5						
MBAR				Sn	**Sn**	**07 13 57.7**	**-1.0**
	24nm,0.3s,baz=127,slow=20,SNR=4.2						
MBAR				Lg	Lg	07 14 20.2	
	48nm,0.3s,baz=163,slow=23,SNR=4.8						
LSZ	**Lusaka**	**10.68**	**172**	Pn	**Pn**	**07 14 00.6**	**+1.3**
	5.8nm,0.5s,baz=357,slow=11,SNR=7.5						
LSZ				Sn	**Sn**	**07 15 55.5**	**-3.7**
	4.5nm,0.3s,baz=306,slow=8.7,SNR=6.1						
LSZ				Lg	Lg	07 17 00.5	
	3.3nm,0.3s,baz=295,slow=22,SNR=6.8						
KMBO	**Kilima Mbogo**	**11.22**	**72**	Sn	**Sn**	**07 16 13.8**	**+1.2**
	baz=225,slow=18						
KMBO				Lg	Lg	07 17 08.3	
	baz=234,slow=17						
TSUM	**Tsumeb**	**16.92**	**211**	Pn	**Pn**	**07 15 24.1**	**+0.8**
	0.1nm,0.3s,baz=333,slow=18,SNR=2.4						
TSUM				Sn	Sn	07 18 20.7	-11
	0.5nm,0.3s,baz=113,slow=15,SNR=1.6						
TSUM				Lg	Lg	07 20 20.4	
	0.2nm,0.3s,baz=112,slow=19,SNR=1.7						
	1.8nm,0.5s						
LBTB	**Lobatse**	**20.27**	**183**	P	**P**	**07 16 04.2**	**+2.2**
	0.9nm,0.5s,baz=6.3,slow=9.2,SNR=1.5						
LBTB				S	**S**	**07 19 46.8**	**-2.8**
	2.1nm,0.8s,baz=352,slow=16,SNR=1.8						
LBTB				Lg	Lg	07 22 06.3	
	0.2nm,0.3s,baz=77,slow=19,SNR=1.6						
	0.9nm,0.5s						
BOSA	**Boshof**	**23.87**	**183**	P	**P**	**07 16 41.3**	**+1.3**
	3.0nm,0.9s,baz=356,slow=8.6,SNR=3.3						
BOSA				Lg	Lg	07 24 00.1	
	0.1nm,0.3s,baz=291,slow=14,SNR=1.8						
	3.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**30.39**	**306**	P	**P**	**07 17 39.1**	**+0.4**
	1.9nm,0.7s,baz=134,slow=8.3,SNR=21						
	1.9nm,0.7s						
DBIC	**Dimbokro**	**33.33**	**289**	P	**P**	**07 18 04.8**	**+0.1**
	2.1nm,0.4s,baz=133,slow=7.2,SNR=8.6						
	2.1nm,0.4s						
KEST	**Kesra**	**43.30**	**339**	P	**P**	**07 19 27.8**	**-0.6**
	2.3nm,0.8s,baz=177,slow=6.9,SNR=4.4						
	2.3nm,0.8s						
BRTR	**Keskin Array B**	**44.63**	**8**	P	**P**	**07 19 38.0**	**-1.0**
	0.6nm,0.5s,baz=188,slow=11,SNR=2.8						
	0.6nm,0.5s						
ESDC	**Sonseca Array**	**52.31**	**330**	P	**P**	**07 20 39.4**	**+1.3**
	0.4nm,0.6s,baz=126,slow=6.5,SNR=3.2						
	0.4nm,0.6s						
AKASG	**Malin Array Be**	**55.18**	**2**	P	**P**	**07 20 57.5**	**-1.3**
	0.2nm,0.4s,baz=183,slow=6.3,SNR=1.3						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**70.78**	**32**	P	**P**	**07 22 41.9**	**-0.7**
	0.3nm,0.5s,baz=240,slow=6.4,SNR=1.2						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**70.89**	**37**	P	**P**	**07 22 42.1**	**-1.5**
	0.7nm,0.6s,baz=222,slow=6.2,SNR=1.9						
	0.7nm,0.6s						
ARCES	**ARCESS Array B**	**74.03**	**360**	P	**P**	**07 23 00.3**	**-1.4**
	1.9nm,0.8s,baz=171,slow=7.8,SNR=3.6						
	1.9nm,0.8s						
SPITS	**Spitsbergen Ar**	**82.91**	**358**	P	**P**	**07 23 50.8**	**+0.2**
	8.0nm,0.9s,baz=182,slow=5.3,SNR=4.4						
	8.0nm,0.9s						
QSPA	**South Pole Qui**	**85.42**	**180**	P	**P**	**07 24 05.9**	**+2.1**
	1.5nm,0.9s,baz=215,slow=0.7,SNR=16						
	1.5nm,0.9s						

IDC 24 07:15:13.0±3.1, 54°.03N×86°.47E, h0km, mbtmp2.4/2, ML2.3/2, Error ellipse: s-maj=24.8km s-min=14.8km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.98**	**266**	I	I	07 20 10.0	
	baz=86,slow=327,SNR=1.0						
ZALV	**Zalesovo Beam**	**0.98**	**266**	Pg	Pg	07 15 30.9	-0.8
	0.3nm,0.3s,baz=81,slow=17,SNR=1.3						
ZALV				Lg	Lg	07 15 45.4	
	0.5nm,0.3s,baz=83,slow=27,SNR=2.0						
KURBB	**Kurchatov Arra**	**5.94**	**238**	Pn	Pn	07 16 43.5	+1.4
	0.1nm,0.3s,baz=55,slow=13,SNR=2.1						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**7.72**	**202**	Pn	Pn	07 17 07.1	+0.6
	baz=25,slow=14,SNR=1.7						
	0.1nm,0.3s						

KRSC 24 07:19:34.4±2.6, 50°.17N×157°.05E, h96km±30km, MI3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.79**	**311**	*e*P	Pn	07 19 52.4	+0.2
SKR				*e*S	Sn	07 20 04.5	-1.0
PAU	**Pauzhetka**	**1.31**	**354**	*e*P	Pn	07 19 59.4	+1.4
PAU				*e*S	Sn	07 20 17.0	+1.1
KDTR	**Khodutka, Kamc**	**1.77**	**21**	*e*P	Pn	07 20 06.1	+2.3
KDTR				*e*S	Sn	07 20 28.5	+2.4
MIPR	**Malaya Ipel'ka**	**2.12**	**355**	*e*P	Pn	07 20 09.3	+1.0
MIPR				*e*S	Sn	07 20 34.1	-0.2
ASAK	**Asacha**	**2.28**	**13**	*e*P	Pn	07 20 13.1	+2.5
ASAK				*e*S	Sn	07 20 41.8	+3.6
MTVR	**Mutnovka**	**2.42**	**17**	*e*P	Pn	07 20 15.0	+2.6
MTVR				*e*S	Sn	07 20 44.5	+2.8
RUS	**Russkaya**	**2.45**	**22**	*e*P	Pn	07 20 14.7	+2.1
RUS				*e*S	Sn	07 20 43.9	+2.0
GRL	**Gorelyy**	**2.47**	**15**	*e*P	Pn	07 20 16.0	+3.0
GRL				*e*S	Sn	07 20 45.9	+3.2
KRMR	**Karymshinskiy**	**2.75**	**14**	*e*P	Pn	07 20 18.9	+2.3
KRMR				*e*S	Sn	07 20 53.2	+4.1
APC	**Apacha**	**2.76**	**1**	*e*P	Pn	07 20 18.2	+1.5
DALK	**Dalny**	**3.06**	**20**	*e*P	Pn	07 20 23.4	+2.7
DALK				*e*S	Sn	07 20 59.6	+3.1
UGLR	**Uglovaya**	**3.24**	**19**	*e*P	Pn	07 20 26.5	+3.2
AVH	**Avacha**	**3.27**	**18**	*e*P	Pn	07 20 27.1	+3.3
KOK	**Koryaka**	**3.28**	**17**	*e*P	Pn	07 20 27.3	+3.5
SMAR	**Somma**	**3.29**	**19**	*e*P	Pn	07 20 27.0	+2.9
KRER	**Koryakskii**	**3.31**	**18**	*e*P	Pn	07 20 27.3	+2.9
SDLR	**Sedlovina**	**3.32**	**19**	*e*P	Pn	07 20 27.0	+2.7
NLC	**Nalytchevo**	**3.33**	**25**	*e*P	Pn	07 20 25.9	+1.5
NLC				*e*S	Sn	07 21 02.7	-0.3
KRX	**Arik**	**3.35**	**17**	*e*P	Pn	07 20 27.8	+3.0
SPN	**Mys Shipunski**	**3.47**	**31**	*e*P	Pn	07 20 28.9	+2.6
SPN				*e*S	Sn	07 21 08.0	+1.6
GNL	**Ganaly**	**3.58**	**9**	*e*P	Pn	07 20 29.9	+2.1
KBTR	**Krutoberegovo**	**6.97**	**28**	*e*P	Pn	07 21 15.3	+1.6
BKI	**Bering**	**7.40**	**44**	*e*S	Sn	07 22 38.2	-3.7

*IDC **24** 07:21:50.2±1.3, 8°.16S×159°.60E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=34.1km s-min=24.6km az=97.0*

ISC 24 07:21:56.2±1.0, 8°.42S±0°.07×159°.47E±0°.09, h35km, n21, σ1°18/16, mb3.6/4, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TATA	**Tatamba Isabel**	**0.33**	**85**	P	**Pn**	**07 22 05.5**	**+1.0**
TATA	**Tatamba Isabel**	**0.33**	**85**	S	**Sn**	**07 22 12.1**	**+1.9**
SAVO	**Savo Central**	**0.80**	**155**	P	**Pn**	**07 22 11.3**	**+0.2**
SAVO	**Savo Central**	**0.80**	**155**	S	**Sn**	**07 22 22.3**	**+0.5**
HNR	**Honiara**	**1.11**	**155**	Pn	**Pn**	**07 22 15.8**	**+0.5**
	6.7nm,0.3s,baz=262,slow=15,SNR=41						
HNR				LR	LR	07 22 28.4	
	comp=Z,4.9nm,19.6s,baz=359,slow=29						
HNR				Sn	**Sn**	**07 22 28.7**	**-0.7**
	51nm,0.3s,baz=75,slow=20,SNR=22						
HNR	**Honiara**	**1.11**	**155**	P	**Pn**	**07 22 16.3**	**+1.0**
HNR	**Honiara**	**1.11**	**155**	S	**Sn**	**07 22 29.3**	**-0.1**
HURO	**Huro Makira**	**3.15**	**131**	P	**Pn**	**07 22 43.6**	**+0.3**
HURO	**Huro Makira**	**3.15**	**131**	S	**Sn**	**07 23 18.0**	**-1.6**
NGOA	**Tingoa Renbel**	**3.17**	**170**	P	**Pn**	**07 22 44.8**	**+1.1**
NGOA	**Tingoa Renbel**	**3.17**	**170**	S	**Sn**	**07 23 20.5**	**+0.2**
WRA	**Warramunga Arr**	**26.88**	**242**	P	**P**	**07 27 35.1**	**+1.0**
	0.7nm,0.4s,baz=68,slow=9.0,SNR=14						
	0.7nm,0.4s						
H11S2	**WAKE ISLAND Hy**	**27.67**	**15**	T	T	07 56 18.0	
	baz=198,slow=76,SNR=680						
H11S3	**WAKE ISLAND Hy**	**27.67**	**15**	T	T	07 56 18.0	
	baz=198,slow=76,SNR=678						
H11S1	**WAKE ISLAND Hy**	**27.69**	**15**	T	T	07 56 19.3	
	baz=198,slow=76,SNR=428						
ASAR	**Alice Springs**	**28.80**	**235**	P	**P**	**07 27 52.5**	**+1.4**
	0.2nm,0.4s,baz=65,slow=10.0,SNR=6.6						
	0.2nm,0.4s						
H11N1	**WAKE ISLAND Hy**	**28.89**	**15**	T	T	07 57 49.4	
	baz=194,slow=76,SNR=242						
H11N3	**WAKE ISLAND Hy**	**28.90**	**15**	T	T	07 57 37.9	
	baz=194,slow=76,SNR=198						
H11N2	**WAKE ISLAND Hy**	**28.91**	**15**	T	T	07 57 39.2	
	baz=194,slow=76,SNR=199						
ILAR	**Eielson Array**	**83.11**	**20**	P	**P**	**07 34 16.2**	**-1.9**
	0.4nm,0.5s,baz=225,slow=5.2,SNR=12						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**87.41**	**318**	P	**P**	**07 34 39.1**	**-0.9**
	0.2nm,0.5s,baz=102,slow=6.5,SNR=2.7						
	0.2nm,0.5s						

*ASRS **24** 07:29:19.0±1.1, 53°.77N×88°.23E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 24 07:29:22.8±3.0, 53°.63N×87°.89E, h0km, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=24.9km s-min=15.8km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.85**	**281**	I	I	07 41 20.0	
	baz=95,slow=332,SNR=1.6						
ZALV	**Zalesovo Beam**	**1.85**	**281**	Pg	Pn	07 29 56.2	+0.5
	1.4nm,0.3s,baz=100,slow=13,SNR=20						
ZALV				Lg	Lg	07 30 21.4	
	2.4nm,0.3s,baz=103,slow=25,SNR=12						
KURBB	**Kurchatov Arra**	**6.50**	**246**	Pn	Pn	07 31 00.4	+0.8
	0.1nm,0.3s,baz=60,slow=14,SNR=5.7						
KURBB				Sn	Sn	07 32 13.8	-0.6
	baz=72,slow=15,SNR=1.7						
KURBB				Lg	Lg	07 32 48.1	
	baz=57,slow=34,SNR=2.7						
	0.6nm,0.4s						
MKAR	**Makanchi Array**	**7.73**	**210**	Pn	Pn	07 31 17.5	+1.1
	0.1nm,0.3s,baz=30,slow=13,SNR=5.3						
MKAR				Sn	Sn	07 32 44.0	-0.7
	baz=29,slow=21,SNR=1.5						
MKAR				Lg	Lg	07 33 24.5	
	baz=29,slow=27,SNR=1.7						
	0.2nm,0.4s						

*ASRS **24** 07:35:20.0±0.9, 53°.43N×87°.50E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 24 07:35:23.0±3.6, 53°.39N×87°.57E, h0km, mbtmp2.6/2, ML2.3/2, Error ellipse: s-maj=34.8km s-min=17.6km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.73**	**290**	I	I	07 46 10.0	
	baz=107,slow=344,SNR=6.9						
ZALV	**Zalesovo Beam**	**1.73**	**290**	Pg	Pn	07 35 53.9	-0.4
	0.7nm,0.3s,baz=108,slow=14,SNR=7.9						
ZALV				Lg	Lg	07 36 17.9	
	0.3nm,0.3s,baz=112,slow=27,SNR=1.4						
KURBB	**Kurchatov Arra**	**6.23**	**247**	Pn	Pn	07 36 57.1	+1.0
	0.1nm,0.3s,baz=62,slow=14,SNR=2.4						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**7.42**	**209**	Pn	Pn	07 37 13.6	+1.0
	0.1nm,0.3s,baz=30,slow=13,SNR=2.0						
	0.1nm,0.3s						

*NEIC **24** 07:38:37.9±2.4, 23°.6S±0°.1×174°.7W±0°.1, h10km±1km, mb5.0/36, Error ellipse: s-maj=19.4km s-min=18.0km az=121.0*

*IDC **24** 07:38:38.8±0.7, 23°.57S×175°.20W, h0km, mb4.3/17, mbtmp4.3/18, ML4.1/1, MS4.0/16, Error ellipse: s-maj=26.0km s-min=20.1km az=129.0*

*NOU **24** 07:38:46.3, 22°.91S×174°.50W, h115km, mb4.7/12, Tonga Islands Region*

ISC 24 07:38:38.5±0.4, 23°.57S±0°.07×174°.85W±0°.07, h10km, n118, σ2°21/103, mb4.9/38, MS4.1/18, 1C-2D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**6.41**	**47**	P	**Pn**	**07 40 09.2**	**-3.8**
NIUE	**Niue**	**6.41**	**47**	S	Sn	07 41 13.6	-13
NIUE	**Niue**	**6.41**	**47**		**Pn**	**07 40 09.5**	**-3.5**
MSVF	**Nonsavu**	**8.83**	**310**	Pn	**Pn**	**07 40 48.3**	**+2.0**
	5.2nm,0.3s,baz=138,slow=14,SNR=29						
MSVF	**Nonsavu**	**8.83**	**310**	P	**Pn**	**07 40 48.3**	**+2.0**
MSVF	**Nonsavu**	**8.83**	**310**		**Pn**	**07 40 48.4**	**-1.6**
DGTI	**Dogotuki**	**8.85**	**324**	P	**Pn**	**07 40 47.7**	**+1.2**
AFI	**Afiamalu**	**10.04**	**17**	Pn	**Pn**	**07 41 00.1**	**-2.9**
	4.9nm,0.3s,baz=239,slow=12,SNR=6.9						
AFI				Sn	Sn	07 42 41.8	-14
	1.7nm

GUMO	**Guam**	**54.00**	**309**	LR	LR	08 08 24.9	
	comp=Z,66nm,21.3s,baz=110,slow=33						
SIJI	**Sorong**	**56.86**	**285**	LR	LR	08 12 59.4	
	comp=Z,75nm,18.2s,baz=66,slow=36						
RPN	**Rapa Nui**	**58.72**	**108**	LR	LR	08 09 14.5	
	comp=Z,90nm,18.8s,baz=278,slow=31						
SOEI	**Soe**	**59.53**	**272**	P	**P**	**07 48 42.1**	**-0.7**
PSA00	**Pilbara Seismi**	**59.86**	**258**	P	**P**	**07 48 42.3**	**-2.5**
BATI	**Baumata**	**59.92**	**272**	LR	LR	08 13 01.9	
	comp=Z,238nm,21.7s,baz=154,slow=35						
MBWA	**Marble Bar**	**60.07**	**258**	P	**P**	**07 48 45.2**	**-1.0**
MBWA				IAmb	IAmb	07 49 07.2	
	comp=Z,19nm,1.3s						
MORW	**Morawa**	**61.41**	**249**	P	**P**	**07 48 54.7**	**-0.5**
QSPA	**South Pole Qui**	**66.51**	**180**	P	**P**	**07 49 30.8**	**+2.4**
QSPA				LR	LR	08 13 26.1	
	comp=Z,2.7nm,0.9s,baz=355,slow=3.1,SNR=3.9						
	comp=Z,97nm,21.5s,baz=28,slow=31						
	comp=Z,2.7nm,0.9s						
QSPA	**South Pole Qui**	**66.51**	**180**		**P**	**07 49 27.4**	**-0.9**
QSPA				IAmb	IAmb	07 49 47.4	
	comp=Z,9.3nm,1.1s						
MJAR	**Matsushiro Arr**	**74.41**	**322**	P	**P**	**07 50 16.4**	**-0.3**
	comp=Z,0.9nm,0.4s,baz=124,slow=0.5,SNR=1.6						
	comp=Z,0.9nm,0.4s						
MJAR	**Matsushiro Arr**	**74.41**	**322**	IAmb	IAmb	07 50 46.7	
	comp=Z,20nm,1.8s						
JKA	**Kamikawa-asahi**	**77.82**	**330**		**P**	**07 50 36.6**	**+0.6**
ASAJ	**Asahikawa**	**77.82**	**330**	P	**P**	**07 50 38.5**	**+2.5**
	comp=Z,16nm,0.8s,baz=221,slow=9.3,SNR=15						
ASAJ				LR	LR	08 18 47.7	
	comp=Z,122nm,21.8s,baz=106,slow=31						
	comp=Z,16nm,0.8s						
TPUB	**Ta-pu**	**78.08**	**302**	P	**P**	**07 50 36.8**	**-1.1**
LPIG	**La Paz**	**78.52**	**57**	LR	LR	08 17 38.1	
	comp=Z,129nm,20.1s,baz=298,slow=30						
MAW	**Mawson**	**79.66**	**199**	P	**P**	**07 50 48.0**	**+2.2**
	comp=Z,3.6nm,0.9s,baz=71,slow=9.7,SNR=1.7						
	comp=Z,3.6nm,0.9s						
YSS	**Yuzhno-Sakhali**	**79.95**	**332**		**P**	**07 50 47.0**	**-0.6**
YSS				IAmb	IAmb	07 51 03.3	
	comp=Z,28nm,1.1s						
PETK	**Petropavlovsk-**	**80.00**	**344**	P	**P**	**07 50 48.7**	**+1.0**
	comp=Z,6.8nm,0.9s,baz=120,slow=8.7,SNR=6.1						
PETK				LR	LR	08 20 04.5	
	comp=Z,99nm,21.6s,baz=129,slow=31						
	comp=Z,6.8nm,0.9s						
KSRS	**Korea Array**	**81.11**	**317**	P	**P**	**07 50 55.3**	**+1.2**
	comp=Z,1.8nm,0.7s,baz=141,slow=6.1,SNR=12						
KSRS				LR	LR	08 22 17.1	
	comp=Z,28nm,21.5s,baz=130,slow=32						
	comp=Z,1.8nm,0.7s						
NVAR	**Mina Array Bea**	**81.31**	**42**	P	**P**	**07 50 58.6**	**+3.1**
	comp=Z,1.1nm,1.0s,baz=217,slow=8.3,SNR=4.6						
	comp=Z,1.1nm,1.0s						
H03S2	**Juan Fernandez**	**81.86**	**123**	T	T	09 22 54.9	
	baz=253						
H03S1	**Juan Fernandez**	**81.87**	**123**	T	T	09 23 08.0	
	baz=253						
H03S3	**Juan Fernandez**	**81.88**	**123**	T	T	09 22 56.7	
	baz=253						
USRK	**Ussuriysk Ar.**	**83.14**	**325**	P	**P**	**07 51 06.5**	**+1.9**
	comp=Z,11nm,0.8s,baz=111,slow=7.9,SNR=11						
	comp=Z,11nm,0.8s						
NJ2	**Nanjing**	**84.08**	**309**	*e*P	**P**	**07 51 08.9**	**-0.8**
NJ2				pmax	pmax		
	comp=Z,26nm,0.5s						
ELK	**Elko**	**84.60**	**41**	LR	LR	08 21 20.9	
	comp=Z,105nm,21.2s,baz=286,slow=30						
MDJ	**Mudanjiang**	**84.71**	**324**		**P**	**07 51 13.3**	**+0.8**
MDJ				IAmb	IAmb	07 51 15.5	
	comp=Z,11nm,0.8s						
MDJ	**Mudanjiang**	**84.71**	**324**	P	**P**	**07 51 14.3**	**+1.7**
MDJ				pmax	pmax		
	comp=Z,16nm,0.8s						
TXAR	**Lajitas Array**	**86.30**	**56**	P	**P**	**07 51 23.8**	**+2.8**
	comp=Z,0.4nm,0.9s,baz=213,slow=5.5,SNR=4.5						
	comp=Z,0.4nm,0.9s						
CN2	**Changchun**	**86.51**	**321**	P	**P**	**07 51 22.6**	**+1.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BNX	**BinXian**	**86.61**	**324**	⇓P	**P**	**07 51 23.6**	**+1.6**
BNX				pmax	pmax		
	comp=Z,13nm,1.0s						
KLR	**Kul'dur**	**86.66**	**328**	P	**P**	**07 51 24.4**	**+2.3**
	comp=Z,1.4nm,0.8s,baz=94,slow=6.8,SNR=4.3						
KLR				LR	LR	08 24 42.7	
	comp=Z,111nm,21.6s,baz=70,slow=32						
	comp=Z,1.4nm,0.8s						
TIA	**Tai'an**	**87.49**	**311**	P	**P**	**07 51 28.3**	**+1.7**
TIA				pmax	pmax		
	comp=Z,18nm,1.0s						
RPSI	**Rantau Prapat**	**87.61**	**274**		**P**	**07 51 24.8**	**-2.8**
PDAR	**Pinedale Array**	**89.23**	**42**	P	**P**	**07 51 37.5**	**+2.5**
	comp=Z,0.3nm,0.7s,baz=204,slow=6.5,SNR=3.7						
	comp=Z,0.3nm,0.7s						
DLBC	**Dease Lake**	**89.76**	**22**	LR	LR	08 24 20.2	
	comp=Z,49nm,21.1s,baz=324,slow=30						
HNS	**HongShan**	**89.77**	**311**	⇑P	**P**	**07 51 38.9**	**+1.7**
HNS				pmax	pmax		
	comp=Z,8.0nm,1.1s						
LYN	**LuoYang**	**89.95**	**308**	P	**P**	**07 51 40.6**	**+2.4**
LYN				pmax	pmax		
	comp=Z,21nm,0.8s						
LYN				L	L		
	comp=Z,330nm,19.2s						
LYN				L	L		
	comp=Z,350nm,18.2s						
LYN				L	L		
	comp=Z,330nm,18.9s						
ENH	**Enshi**	**90.17**	**303**		**P**	**07 51 40.0**	**+0.6**
ILAR	**Eielson Array**	**90.68**	**12**	P	**P**	**07 51 42.2**	**+1.3**
	comp=Z,0.6nm,1.0s,baz=217,slow=6.4,SNR=4.5						
	comp=Z,0.6nm,1.0s						
F19K	**Shaleruckik Mo**	**91.04**	**7**	P	**P**	**07 51 42.6**	**+0.1**
F19K				IAmb	IAmb	07 51 58.3	
	comp=Z,8.7nm,1.4s						
L29M	**L29M**	**91.13**	**16**	P	**P**	**07 51 42.1**	**-1.0**
L29M				IAmb	IAmb	07 52 00.7	
	comp=Z,7.8nm,1.0s						
E19K	**Redstone River**	**91.70**	**7**	P	**P**	**07 51 44.6**	**-1.0**
E19K				IAmb	IAmb	07 52 37.5	
	comp=Z,5.7nm,1.1s						
XAN	**Xi'an**	**92.30**	**306**	⇓P	**P**	**07 51 51.8**	**+2.6**
XAN				pmax	pmax		
	comp=Z,31nm,0.8s						
ATAH	**Atahualpa**	**93.06**	**99**	LR	LR	08 24 24.9	
	comp=Z,104nm,21.7s,baz=293,slow=29						
HHC	**Hu-ho-hao-te**	**93.58**	**313**	*e*P	**P**	**07 51 54.3**	**-0.7**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,100nm,5.7s						
CMAR	**Chiang Mai Arr**	**93.87**	**288**	P	**P**	**07 51 58.6**	**+1.8**
	comp=Z,6.1nm,0.8s,baz=132,slow=3.3,SNR=34						
	comp=Z,6.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**93.87**	**288**		**P**	**07 51 56.8**	**+0.1**
CHTO	**Chiang Mai**	**94.01**	**289**		**P**	**07 51 57.4**	**0.0**
PZH	**PanZhiHua**	**94.71**	**297**	P	**P**	**07 52 00.8**	**+0.2**
YKA	**Yellowknife Ar**	**98.09**	**24**	P	Pdif	07 52 16.6	+1.7
	comp=Z,0.1nm,0.7s,baz=209,slow=11,SNR=3.8						
	comp=Z,0.1nm,0.7s						
SONM	**Songino Array**	**99.98**	**318**	P	**Pdif**	**07 52 23.0**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=90,slow=2.9,SNR=1.7						
	comp=Z,0.2nm,0.4s						
MKAR	**Makanchi Array**	**115.42**	**312**	PKP	**PKiKP**	**07 57 20.7**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=48,slow=2.1,SNR=6.3						
KURK	**Kurchatov**	**118.22**	**316**		**PKiKP**	**07 57 26.4**	**+0.6**
KURBB	**Kurchatov Arra**	**118.28**	**316**	PKP	**PKiKP**	**07 57 26.4**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=103,slow=1.9,SNR=4.9						
BVAR	**Borovoye Array**	**123.30**	**319**	PKP	**PKiKP**	**07 57 36.5**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=101,slow=2.9,SNR=4.0						
ARTI	**Arti**	**129.49**	**325**	PKP	**PKiKP**	**07 57 48.8**	**+0.9**
	comp=Z,1.5nm,0.5s,baz=37,slow=5.1,SNR=1.7						
AKTO	**Aktyubinsk**	**131.29**	**317**	PKP	**PKiKP**	**07 57 52.2**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=68,slow=5.1,SNR=1.6						
FINES	**FINESS Array B**	**139.51**	**345**	PKP	**PKiKP**	**07 58 09.0**	**+1.0**
	comp=Z,8.8nm,1.1s,baz=1.9,slow=4.2,SNR=3.3						
KOPT	**Kop Dagi**	**146.04**	**307**	PKPdf	**PKPdf**	**07 58 16.1**	**-2.2**
MARD	**Mardin**	**146.58**	**303**	PKPdf	**PKPdf**	**07 58 14.6**	**-4.6**
SUW	**Suwalki**	**146.71**	**341**	PKPdf	**PKPdf**	**07 58 15.0**	**-3.7**
AKASG	**Malin Array Be**	**147.10**	**331**	PKPbc	**PKPab**	**07 58 22.7**	**-0.4**
	comp=Z,2.2nm,0.6s,baz=41,slow=4.5,SNR=11						
AKASG	**Malin Array Be**	**147.10**	**331**	PKPbc	**PKPbc**	**07 58 21.7**	**+0.2**
AKBB	**Malin Array Si**	**147.10**	**331**	PKPdf	**PKPdf**	**07 58 16.8**	**-2.6**
KIEV	**Kiev**	**147.11**	**331**	PKPdf	**PKPdf**	**07 58 17.4**	**-2.0**
EKA	**Eskdalemuir Ar**	**147.68**	**9**	PKPbc	**PKPab**	**07 58 26.4**	**+1.1**
	comp=Z,1.6nm,0.8s,baz=308,slow=1.7,SNR=1.9						
BRTR	**Keskin Array B**	**151.05**	**311**	PKPbc	**PKiKP**	**07 58 33.5**	**+0.8**
	comp=Z,1.6nm,0.8s,baz=101,slow=5.2,SNR=5.3						
BRTR				PKPab	**sPKPab**	**07 58 41.4**	**+1.7**
	comp=Z,1.7nm,0.8s,baz=77,slow=3.4,SNR=3.7						
BRTR	**Keskin Array B**	**151.05**	**311**		**PKPbc**	**07 58 31.6**	**-0.5**
MMAI	**Mount Meron Ar**	**151.83**	**296**	PKPbc	**PKPbc**	**07 58 33.5**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=93,slow=2.9,SNR=2.0						
GERES	**GERESS Array B**	**153.89**	**347**	PKPbc	**PKiKP**	**07 58 38.1**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=102,slow=5.8,SNR=1.8						
ESDC	**Sonseca Array**	**162.19**	**24**	PKPab	**PKPab**	**07 59 29.2**	**+2.0**
	comp=Z,0.7nm,0.7s,baz=338,slow=3.0,SNR=2.0						

CATAC ***24*** *07:38:46.8±0.6, 13˚N±3˚×8˚9W±˚, h23km±4km, M2.6/19, MLv2.6/19, Error ellipse: s-maj=5.8km s-min=3.0km az=21.6, confirmed*
SNET ***24*** *07:38:47.2±1.7, 12˚.75N×88˚.78W, h30km, ML2.6, Presumed earthquake*
GCG ***24*** *07:38:48.2±1.2, 12˚.76N×88˚.87W, h45km±184km, MD3.6, Presumed earthquake*

ISC 24 07:38:45.2±1.9, 12˚.66N±0˚.08×88˚.83W±0˚.03, h20km±5km, n39, σ0s48/61, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TECO	**Alcaldia de Te**	**0.87**	**3**	P	**Pn**	**07 39 02.6**	**+0.1**
TECO				S	**Sb**	**07 39 12.9**	**-0.1**
PACA	**Pacayal**	**0.94**	**32**	P	**Pn**	**07 39 03.6**	**0.0**
PACA				S	**Sb**	**07 39 15.3**	**+0.2**
LALI	**Alcalda de L**	**0.95**	**330**	P	**Pn**	**07 39 03.6**	**+0.1**
LALI				S	**Sb**	**07 39 15.7**	**+0.5**
COEG	**Centro de Oper**	**0.95**	**357**	P	**Pb**	**07 39 03.4**	**+0.3**
COEG				S	**Sg**	**07 39 16.4**	**-0.1**
COEG	**Centro de Oper**	**0.95**	**357**	*e*P	**Pn**	**07 39 03.9**	**+0.3**
PQSS	**Presa 15 de Se**	**0.99**	**15**	P	**Pn**	**07 39 04.1**	**0.0**
PQSS				S	**Sb**	**07 39 16.7**	**+0.2**
PANCS	**Alcalda de**	**1.00**	**340**	S	**Sb**	**07 39 17.1**	**+0.3**
LOMA	**Loma Larga**	**1.03**	**341**	P	**Pb**	**07 39 03.6**	**-0.9**
LOMA				S	**Sn**	**07 39 18.5**	**-0.2**
CNRM	**Centro Naciona**	**1.03**	**39**	S	**Sb**	**07 39 17.8**	**+0.2**
SCLA	**Alcaldia de Sa**	**1.04**	**6**	P	**Pn**	**07 39 05.2**	**+0.4**
SCLA				S	**Sn**	**07 39 18.5**	**-0.3**
PAVA	**Las Pavas**	**1.05**	**354**	P	**Pn**	**07 39 05.2**	**+0.2**
PAVA				S	**Sb**	**07 39 17.9**	**-0.3**
UDBS	**Universidad Do**	**1.09**	**343**	P	**Pg**	**07 39 06.4**	**-0.1**
UDBS				S	**Sn**	**07 39 20.3**	**+0.1**
UTEC	**Universidad Te**	**1.09**	**341**	S	**Sn**	**07 39 20.4**	**+0.3**
SEMO	**Seminario San**	**1.10**	**340**	S	**Sb**	**07 39 19.5**	**-0.2**
LCND	**La Caada**	**1.12**	**55**	P	**Pb**	**07 39 06.1**	**+0.1**
LCND	**La Caada**	**1.12**	**55**	*e*P	**Pg**	**07 39 06.9**	**-0.1**
LCND				*e*S	**Sb**	**07 39 19.7**	**-0.5**
UEES	**Universidad Ev**	**1.12**	**339**	P	**Pn**	**07 39 06.1**	**+0.2**
UEES				S	**Sb**	**07 39 20.3**	**0.0**
PMON	**Piamonte**	**1.14**	**336**	P	**Pn**	**07 39 06.4**	**+0.1**
PMON				S	**Sb**	**07 39 21.3**	**+0.4**
CNCH	**Conchagua**	**1.15**	**58**	S	**Sn**	**07 39 21.3**	**-0.2**
BOQS	**Boqueron**	**1.15**	**338**	*e*P	**Pn**	**07 39 06.7**	**+0.2**
JAYA	**Jayaque - finc**	**1.16**	**329**	P	**Pn**	**07 39 06.7**	**+0.1**
JAYA				S	**Sb**	**07 39 21.3**	**0.0**
JAYA	**Jayaque - finc**	**1.16**	**329**	*i* P	**Pn**	**07 39 06.6**	**+0.1**
JAYA	**Jayaque - finc**	**1.16**	**329**	*e*P	**Pn**	**07 39 06.6**	**+0.1**
CEDA	**San Andres**	**1.26**	**334**	S	**Sn**	**07 39 23.9**	**-0.3**
CSGN	**Cosiguina Volc**	**1.28**	**76**	P	**Pb**	**07 39 08.9**	**+0.1**
CSGN				S	**Sn**	**07 39 24.7**	**-0.1**
P5NO	**Presa 5 de nov**	**1.32**	**3**	P	**Pn**	**07 39 09.0**	**+0.4**
P5NO				S	**Sb**	**07 39 25.9**	**+0.1**
CEVE	**Cerro Verde**	**1.39**	**326**	P	**Pn**	**07 39 10.3**	**+0.5**
CEVE	**Cerro Verde**	**1.39**	**326**	*e*P	**Pb**	**07 39 11.2**	**+0.5**
CEVE				*e*S	**Sn**	**07 39 27.9**	**+0.1**
UNIC	**Universidad Ca**	**1.48**	**332**	P	**Pn**	**07 39 11.6**	**+0.7**
UNIC				S	**Sn**	**07 39 29.6**	**-0.3**
LLGN	**La Laguna**	**1.50**	**356**	P	**Pn**	**07 39 11.0**	**-0.1**
NUBE	**Las Nubes**	**1.54**	**323**	P	**Pn**	**07 39 12.4**	**+0.6**
NUBE				S	**Sn**	**07 39 31.1**	**-0.2**
NUBE	**Las Nubes**	**1.54**	**323**	*i* P	**Pn**	**07 39 12.4**	**+0.6**
NUBE				*e*S	**Sn**	**07 39 29.4**	**-1.9**
SLOZ	**Alcaldia de Sa**	**1.64**	**326**	P	**Pn**	**07 39 13.3**	**+0.2**
SLOZ				S	**Sn**	**07 39 34.1**	**+0.5**
FAME	**Alcaldia de Sa**	**1.65**	**316**	P	**Pn**	**07 39 12.8**	**-0.3**
FAME				S	**Sn**	**07 39 32.8**	**-0.9**
MARCA	**Marcala la Paz**	**1.68**	**27**	P	**Pn**	**07 39 13.5**	**-0.1**
MARCA				S	**Sn**	**07 39 33.9**	**-0.8**
MARCA	**Marcala la Paz**	**1.68**	**27**	*i* P	**Pn**	**07 39 14.1**	**+0.4**
MTO3	**Montecristo**	**1.80**	**343**	P	**Pn**	**07 39 16.1**	**+0.6**
MTO3	**Montecristo**	**1.80**	**343**	*i* P	**Pn**	**07 39 16.0**	**+0.6**
SARH	**Santa Rosa de**	**2.10**	**2**	*i* P	**Pn**	**07 39 20.8**	**+1.3**

IDC 24 07:39:17.6±3.5, 54˚.19N×87˚.15E, h0km, mbtmp2.5/2, ML2.2/2, Error ellipse: s-maj=32.1km s-min=20.4km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.40**	**261**	I	I	07 48 35.0	
	0.2nm,1.2s,baz=80,slow=332,SNR=4.2						
ZALV	**Zalesovo Beam**	**1.40**	**261**	Pg	Pn	07 39 43.0	-1.2
	1.4nm,0.3s,baz=79,slow=18,SNR=3.4						
ZALV				Lg	Lg	07 40 02.1	
	0.7nm,0.3s,baz=80,slow=26,SNR=4.0						
KURBB	**Kurchatov Arra**	**6.37**	**239**	Pn	Pn	07 40 53.0	+0.5
	baz=56,slow=14,SNR=2.2						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**8.03**	**205**	Pn	Pn	07 41 16.8	+1.4
	0.1nm,0.3s,baz=23,slow=13,SNR=2.0						
	0.2nm,0.8s						

ASRS ***24*** *07:55:23.0±0.8, 54˚.43N×86˚.85E, h0km, M2.6(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 24 07:55:26.3±3.1, 54˚.31N×86˚.62E, h0km, mbtmp3.0/2, ML2.4/2, Error ellipse: s-maj=24.3km s-min=15.5km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.12**	**252**	I	I	08 02 20.0	
	0.1nm,1.0s,baz=69,slow=334,SNR=3.3						
ZALV	**Zalesovo Beam**	**1.12**	**252**	Pg	Pg	07 55 46.9	-0.9
	1.1nm,0.3s,baz=70,slow=14,SNR=17						
ZALV				Lg	Lg	07 56 03.3	
	0.7nm,0.3s,baz=72,slow=24,SNR=6.0						
KURBB	**Kurchatov Arra**	**6.17**	**237**	Pn	Pn	07 56 59.6	+1.1
	0.1nm,0.3s,baz=53,slow=14,SNR=17						
KURBB				Sn	Sn	07 58 09.4	-0.3
	baz=49,slow=42,SNR=1.9						
	2.3nm,0.7s						
MKAR	**Makanchi Array**	**8.01**	**202**	Pn	Pn	07 57 24.5	+0.7
	0.1nm,0.3s,baz=23,slow=13,SNR=4.1						
MKAR				Sn	Sn	07 58 53.9	-1.2
	0.1nm,0.3s,baz=22,slow=31,SNR=2.8						
MKAR				Lg	Lg	07 59 39.5	
	baz=17,slow=26,SNR=3.7						
	0.4nm,0.7s						

ASRS ***24*** *08:00:24.0±0.7, 55˚.59N×86˚.08E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 24 08:00:33.0±3.8, 55˚.35N×85˚.83E, h0km, mbtmp2.5/2, ML2.3/2, Error ellipse: s-maj=32.5km s-min=24.3km az=37.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.52**	**203**	I	I	08 10 20.0	
	0.1nm,0.7s,baz=24,slow=341,SNR=2.1						
ZALV	**Zalesovo Beam**	**1.52**	**203**	Pg	Pn	08 00 59.0	-2.4
	1.5nm,0.3s,baz=24,slow=16,SNR=11						
ZALV				Lg	Lg	08 01 21.6	
	2.7nm,0.3s,baz=22,slow=28,SNR=5.7						
KURBB	**Kurchatov Arra**	**6.47**	**226**	Pn	Pn	08 02 08.8	-0.5
	0.1nm,0.3s,baz=41,slow=13,SNR=6.5						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**8.85**	**196**	Pn	Pn	08 02 43.7	+1.6
	baz=15,slow=14,SNR=1.5						
	0.1nm,0.3s						

ASRS ***24*** *08:15:30.0±1.3, 53˚.66N×88˚.07E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 24 08:15:32.6±3.2, 53˚.61N×87˚.89E, h0km, mbtmp2.6/2, ML2.2/2, Error ellipse: s-maj=27.1km s-min=17.2km az=60.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.86**	**282**	I	I	08 27 40.0	
	0.1nm,1.0s,baz=98,slow=346,SNR=23						
ZALV	**Zalesovo Beam**	**1.86**	**282**	Pg	Pn	08 16 05.5	-0.1
	0.9nm,0.3s,baz=99,slow=16,SNR=13						
ZALV				Lg	Lg	08 16 31.8	
	1.5nm,0.3s,baz=100,slow=31,SNR=13						
KURBB	**Kurchatov Arra**	**6.50**	**246**	Pn	Pn	08 17 09.9	+0.5
	baz=61,slow=14,SNR=3.5						
KURBB				Lg	Lg	08 18 58.6	
	baz=62,slow=32,SNR=7.2						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**7.71**	**210**	Pn	Pn	08 17 27.7	+1.7
	0.1nm,0.3s,baz=21,slow=15,SNR=2.2						
MKAR				Lg	Lg	08 19 35.7	
	0.1nm,0.3s,baz=33,slow=30,SNR=3.2						
	0.1nm,0.4s						

ASRS ***24*** *08:25:28.0±1.6, 53˚.43N×87˚.23E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 24 08:25:30.7±3.0, 53˚.44N×87˚.23E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=31.2km s-min=15.8km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.52**	**290**	I	I	08 35 30.0	
	0.1nm,0.9s,baz=108,slow=341,SNR=1.4						
ZALV	**Zalesovo Beam**	**1.52**	**290**	Pg	Pn	08 25 57.6	-1.5
	0.6nm,0.3s,baz=113,slow=15,SNR=12						
ZALV				Lg	Lg	08 26 19.2	
	0.9nm,0.3s,baz=112,slow=22,SNR=5.5						
KURBB	**Kurchatov Arra**	**6.07**	**246**	Pn	Pn	08 27 02.3	+0.7
	0.1nm,0.3s,baz=59,slow=13,SNR=4.1						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**7.37**	**207**	Pn	Pn	08 27 20.8	+1.3
	0.1nm,0.3s,baz=29,slow=15,SNR=8.3						
	0.2nm,0.2s						

ASRS ***24*** *08:30:08.0±1.2, 54˚.17N×86˚.50E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 24 08:30:10.2±3.0, 54˚.17N×86˚.51E, h0km, mbtmp2.5/2, ML2.1/2, Error ellipse: s-maj=22.6km s-min=13.4km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.02**	**258**	I	I	08 36 00.0	
	baz=78,slow=330,SNR=1.9						
ZALV	**Zalesovo Beam**	**1.02**	**258**	Pg	Pg	08 30 28.1	-1.6
	1.0nm,0.3s,baz=75,slow=16,SNR=9.1						
ZALV				Lg	Lg	08 30 44.6	
	1.3nm,0.3s,baz=77,slow=30,SNR=9.4						
KURBB	**Kurchatov Arra**	**6.03**	**237**	Pn	Pn	08 31 41.9	+1.3
	baz=54,slow=13,SNR=2.6						
KURBB				Lg	Lg	08 33 21.9	
	baz=56,slow=24,SNR=3.0						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**7.85**	**202**	Pn	Pn	08 32 06.8	+1.2
	0.1nm,0.3s,baz=24,slow=14,SNR=2.3						
MKAR				Lg	Lg	08 34 18.1	
	baz=24,slow=28,SNR=5.1						
	0.1nm,0.3s						

CATAC ***24*** *08:34:17.7±0.7, 13˚N±4˚×9˚0W±˚, h26km±4km, M2.6/13, MLv2.6/13, Error ellipse: s-maj=8.7km s-min=4.7km az=14.7, confirmed*
GCG ***24*** *08:34:18.3±0.5, 13˚.18N×89˚.78W, h34km±4km, MD3.7, Presumed earthquake*
SNET ***24*** *08:34:18.6±1.6, 13˚.21N×89˚.69W, h46km, ML2.8, Presumed earthquake*

ISC 24 08:34:16.4±2.8, 13˚.1N±0˚.1×89˚.69W±0˚.07, h32km±12km, n25, σ0s54/40, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.56**	**39**	P	**Pb**	**08 34 28.4**	**+0.5**
LALI				S	**Sn**	**08 34 35.9**	**-0.6**
JAYA	**Jayaque - finc**	**0.65**	**21**	P	**Pb**	**08 34 29.5**	**+0.1**
JAYA	**Jayaque - finc**	**0.65**	**21**	*i* P	**Pn**	**08 34 29.7**	**+0.2**
JAYA				*i* S	**Sn**	**08 34 38.7**	**-0.1**
JAYA	**Jayaque - finc**	**0.65**	**21**	*e*P	**Pn**	**08 34 29.8**	**+0.3**
JAYA				*e*S	**Sn**	**08 34 38.7**	**-0.1**
PANCS	**Alcalda de**	**0.75**	**41**	S	**Sb**	**08 34 40.5**	**-0.4**
PMON	**Piamonte**	**0.75**	**29**	P	**Pn**	**08 34 30.6**	**-0.3**
PMON				S	**Sn**	**08 34 40.8**	**-0

HRAO	**HartRAO**	**1.33**	**46**	*e*P	**Pg**	**08 42 13.0**	**-1.1**
HRAO				*e*S	**Sb**	**08 42 31.2**	**-0.1**
HRAO				IAML		08 42 32.8	
	comp=Z,71nm,0.3s						
SNKL	**Senekal, Frees**	**1.77**	**145**	*e*P	**Pn**	**08 42 20.9**	**+1.1**
SNKL				*e*S	**Sg**	**08 42 45.6**	**+0.2**
SNKL				IAML		08 43 21.7	
	comp=Z,71nm,0.4s						
MAKGR	**Makgori**	**1.93**	**301**	*i* P	**Pn**	**08 42 24.1**	**+2.1**
MAKGR				*i* S	**Sb**	**08 42 49.9**	**+1.4**
LBTB	**Lobatse**	**2.03**	**333**	*e*P	**Pn**	**08 42 23.5**	**+0.2**
LBTB				*e*S	**Sn**	**08 42 49.3**	**+0.3**
LBTB				IAML		08 42 54.1	
	comp=Z,57nm,0.5s						
BOSA	**Boshof**	**2.16**	**214**	*e*P	**Pn**	**08 42 25.3**	**+0.2**
BOSA				*e*S	**Sn**	**08 42 53.6**	**+1.4**
BOSA				IAML		08 43 36.0	
	comp=Z,20nm,0.5s						
LEPH	**Lephalale, Lim**	**3.14**	**20**	*e*P	**Pn**	**08 42 38.8**	**+0.2**
LEPH				*e*S	**Sn**	**08 43 16.5**	**0.0**
LEPH				IAML		08 43 28.9	
	comp=Z,12nm,0.3s						
LPHEP	**Lephephe**	**3.52**	**348**	*i* P	**Pn**	**08 42 44.7**	**+0.8**
LPHEP				*i* S	**Sn**	**08 43 25.6**	**-0.2**
LPHEP				IAML		08 43 43.9	
	comp=N,10nm,0.3s						
KDWAN	**Kaudwane**	**3.87**	**332**	*i* P	**Pn**	**08 42 50.2**	**+1.5**
KDWAN				*i* S	**Sn**	**08 43 33.4**	**-1.0**
KDWAN				IAML		08 43 53.2	
	comp=N,47nm,0.4s						
PILG	**Pilgrimsrest,**	**4.13**	**64**	*e*P	**Pn**	**08 42 52.8**	**+0.4**
PILG				*e*S	**Sn**	**08 43 41.2**	**+0.1**
PILG				IAML		08 43 56.9	
	comp=Z,8.3nm,0.7s						
PMBG	**Pietermaritzbu**	**4.35**	**129**	*e*P	**Pn**	**08 42 56.9**	**+1.7**
PMBG				*e*S	**Sn**	**08 43 47.4**	**+1.2**
PMBG				IAML		08 44 09.4	
	comp=Z,7.3nm,0.3s						
KSTD	**Kokstad**	**4.45**	**149**	*e*P	**Pn**	**08 42 58.8**	**+2.1**
KSTD				*e*S	**Sn**	**08 43 50.2**	**+1.3**
KSTD				IAML		08 44 45.8	
	comp=Z,8.0nm,0.3s						
KGCAE	**Kacgae**	**5.64**	**314**	*i* P	**Pn**	**08 43 13.5**	**+0.5**
KGCAE				*i* S	**Sn**	**08 44 16.9**	**-1.2**
KGCAE				IAML		08 45 29.2	
	comp=N,167nm,0.5s						
GRAF	**Camdeboo Natio**	**5.74**	**198**	*e*P	**Pn**	**08 43 15.2**	**+0.8**
GRAF				IAML		08 44 12.9	
	comp=Z,2.0nm,0.3s						
GRAF				*e*S	**Sn**	**08 44 19.9**	**-0.7**
BRAK	**Brakfontein**	**5.92**	**213**	*e*P	**Pn**	**08 43 18.1**	**+1.3**
BRAK				*e*S	**Sn**	**08 44 24.4**	**-0.6**
BRAK				IAML		08 45 07.1	
	comp=Z,3.6nm,0.3s						
SOOWA	**Sowa**	**6.25**	**356**	*i* P	**Pn**	**08 43 22.2**	**+0.9**
SOOWA				IAML		08 45 18.7	
	comp=N,16nm,0.6s						
ROOI	**Rooidraai Farm**	**6.25**	**205**	*e*P	**Pn**	**08 43 22.0**	**+0.6**
ROOI				*e*S	**Sn**	**08 44 31.4**	**-1.8**
ROOI				IAML		08 45 14.7	
	comp=Z,2.8nm,0.5s						
GRHM	**Grahamstown, E**	**6.43**	**182**	*e*P	**Pn**	**08 43 25.1**	**+1.3**
GRHM				*e*S	**Sn**	**08 44 37.4**	**-0.2**
GRHM				IAML		08 45 23.5	
	comp=Z,2.5nm,0.7s						
GRAN	**Grantham**	**6.70**	**214**	*e*P	**Pn**	**08 43 28.8**	**+1.3**
GRAN				*e*S	**Sn**	**08 44 42.4**	**-1.7**
GRAN				IAML		08 44 52.8	
	comp=Z,1.3nm,1.0s						
FRAZ	**Fraserburg**	**6.83**	**221**	*e*P	**Pn**	**08 43 29.9**	**+0.6**
FRAZ				*e*S	**Sn**	**08 44 45.8**	**-1.6**
FRAZ				IAML		08 46 02.4	
	comp=Z,3.5nm,0.6s						
SUR	**Sutherland**	**7.50**	**221**	*e*P	**Pn**	**08 43 39.6**	**+0.9**
SUR				*e*S	**Sn**	**08 45 01.0**	**-3.0**
SUR				IAML		08 46 25.3	
	comp=Z,3.7nm,0.8s						

ASRS ***24*** *08:45:50.0±2.0,8,53.67N×86.86E,h0km,M2.3(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 24 08:45:55.8±2.6,53.74N×86.59E,h0km,mbtmp2.7/2, ML2.6/1,Error ellipse: s-maj=22.9km s-min=13.2km az=66.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.07**	**282**	I	I		08 54 00.0	
	baz=101,slow=321,SNR=2.2							
ZALV	**Zalesovo Beam**	**1.07**	**282**	Pg	Pg		08 46 14.6	-1.7
	0.8nm,0.3s,baz=102,slow=17,SNR=20							
ZALV				Lg	Lg		08 46 32.7	
	0.6nm,0.3s,baz=103,slow=29,SNR=5.7							
KURBB	**Kurchatov Arra**	**5.86**	**241**	Pn	Pn		08 47 23.5	-0.2
	0.2nm,0.3s,baz=58,slow=14,SNR=0.9							
MKAR	**Makanchi Array**	**7.48**	**203**	Pn	Pn		08 47 48.1	+2.0
	0.1nm,0.3s,baz=23,slow=13,SNR=7.2							
	0.2nm,0.2s							

ASRS ***24*** *08:53:24.0±1.2,53.60N×87.99E,h0km,M2.7(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 24 08:53:26.0±3.0,53.57N×87.91E,h0km,mbtmp2.8/2, ML2.6/2,Error ellipse: s-maj=27.5km s-min=17.9km az=51.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.87**	**283**	I	I		09 05 30.0	
	0.1nm,1.0s,baz=100,slow=344,SNR=8.7							
ZALV	**Zalesovo Beam**	**1.87**	**283**	Pn	Pn		08 53 59.2	-0.1
	2.3nm,0.3s,baz=98,slow=15,SNR=19							
ZALV				Lg	Lg		08 54 25.4	
	5.1nm,0.3s,baz=105,slow=23,SNR=17							
KURBB	**Kurchatov Arra**	**6.49**	**247**	Pn	Pn		08 55 03.0	+0.3
	0.1nm,0.3s,baz=62,slow=14,SNR=5.4							
KURBB				Sn	Sn		08 56 17.0	-0.4
	0.1nm,0.3s,baz=54,slow=20,SNR=1.6							
	0.6nm,0.4s							
MKAR	**Makanchi Array**	**7.68**	**210**	Pn	Pn		08 55 20.4	+1.3
	0.1nm,0.3s,baz=27,slow=12,SNR=5.8							
	0.1nm,0.3s							

ISK ***24*** *09:20:11.9,39.44N×27.93E,h12km,ML4.1/64*
AFAD ***24*** *09:20:12.0,39.44N×27.95E,h7km±4km,ML3.8*
THE ***24*** *09:20:13.4,39.1N±3.2×28.8E±.1,h11km,M3.6/21,MLh3.6/21*
ATH ***24*** *09:20:13.3,39.49N×27.77E,h5km±2km,ML3.7/5,Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
CFUSG ***24*** *09:20:17.0,39.72N×28.12E,h10km,Mb3.0/3,MD3.4/2, MSH3.2/4*
ISC 24 09:20:11.9±0.8,39.40N±0.01×27.94E±0.01,h14km±6km, n154,σ0.86/189,13C-10D,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
STEP	**BALIKESIR_Sava**	**0.17**	**262**	P	**Pg**		**09 20 16.5**	**+0.4**
STEP				S	**Sg**		**09 20 19.9**	**+0.9**
STEP				IAML			09 20 20.0	
	comp=N,6μm,0.5s							
STEP				IAML			09 20 20.0	
	comp=E,11μm,0.4s							
BALB	**Balikesir**	**0.24**	**349**	Pg	**Pg**		**09 20 17.2**	**0.0**
BALB				Sg	**Sg**		**09 20 20.8**	**0.0**
BKES	**Balkesir-Mer**	**0.33**	**358**	P	**Pg**		**09 20 18.5**	**-0.3**
BKES				S	**Sg**		**09 20 22.1**	**-1.4**
BKES				IAML			09 20 23.0	
	comp=E,9μm,0.4s							
BKES				IAML			09 20 23.0	
	comp=N,6μm,0.3s							
SOMA	**Soma-Manisa**	**0.40**	**233**	Pg	**Pb**		**09 20 20.6**	**-0.1**
SOMA				Sg	**Sb**		**09 20 27.4**	**+0.7**
GORD	**Gordes-Manisa**	**0.52**	**160**	Pg	**Pn**		**09 20 23.7**	**-1.3**
AKHS	**Akhisar**	**0.53**	**191**	P	**Pb**		**09 20 23.3**	**+0.4**
AKHS				S	**Sb**		**09 20 32.0**	**+1.6**
AKHS				IAML			09 20 36.0	
	comp=E,3μm,0.5s							
AKS	**Akhisar**	**0.53**	**191**	Pg	**Pb**		**09 20 23.3**	**+0.3**
DST	**Dursunbey**	**0.56**	**69**	Pg	**Pb**		**09 20 22.8**	**-0.7**
SUSR	**Susurluk-Balik**	**0.57**	**11**	Pg	**Pg**		**09 20 22.7**	**-0.5**
CMHT	**Manyas**	**0.61**	**2**	P	**Pg**		**09 20 23.4**	**-0.5**
CMHT				S	**Sg**		**09 20 30.2**	**-1.8**
CMHT				IAML			09 20 32.0	
	comp=N,8μm,0.2s							
CMHT				IAML			09 20 34.0	
	comp=E,7μm,0.3s							
GONE	**Gonen-Balikesi**	**0.68**	**343**	Pg	**Pg**		**09 20 24.6**	**-0.5**
BUHA	**Balikesir, Bur**	**0.68**	**279**	P	**Pb**		**09 20 25.9**	**+0.4**
BUHA				S	**Sn**		**09 20 37.1**	**-0.3**
BUHA				IAML			09 20 38.0	
	comp=E,6μm,0.5s							
GOMA	**Golmarmara-Man**	**0.69**	**182**	Pg	**Pn**		**09 20 26.4**	**-0.8**
YENI	**Yenice-Canakka**	**0.76**	**315**	Pg	**Pg**		**09 20 26.3**	**-0.4**
YENI				Sg	**Sg**		**09 20 36.0**	**-0.8**
ZEDA	**zmir-Bergama**	**0.80**	**237**	P	**Pn**		**09 20 28.3**	**-0.4**
ZEDA				S	**Sb**		**09 20 39.2**	**+1.0**
ZEDA				IAML			09 20 42.0	
	comp=E,6μm,0.7s							
CAMT	**Merkez**	**0.81**	**217**	P	**Pn**		**09 20 28.8**	**-0.2**
CAMT				S	**Sn**		**09 20 40.2**	**-0.6**
CAMT				IAML			09 20 43.0	
	comp=E,4μm,0.4s							
SMAA	**Simav-Kutahya**	**0.86**	**110**	Pg	**Pn**		**09 20 29.4**	**-0.2**
SIMA	**Simav-Kutahya**	**0.87**	**111**	Pg	**Pn**		**09 20 29.7**	**0.0**
DKL	**Dikili**	**0.87**	**248**	Pg	**Pn**		**09 20 29.1**	**-0.5**
CANM	**Can-anakkale**	**0.92**	**312**	Pg	**Pg**		**09 20 29.1**	**-0.6**
KCTX	**Karacabey (Bur**	**0.92**	**20**	Pg	**Pg**		**09 20 28.9**	**-0.9**
EDC	**Edincik**	**0.95**	**356**	Pg	**Pg**		**09 20 29.5**	**-0.7**
BAND	**Balkesir-Ban**	**0.96**	**7**	⇑P	**Pb**		**09 20 30.4**	**+0.1**
BAND				⇑S	**Sn**		**09 20 44.5**	**+0.1**
BAND	**Balkesir-Ban**	**0.96**	**7**	P	**Pg**		**09 20 29.9**	**-0.6**
BAND				S	**Sg**		**09 20 42.1**	**-1.0**
BAND				IAML			09 20 44.0	
	comp=E,1μm,0.3s							
BAND				IAML			09 20 45.0	
	comp=N,1μm,0.3s							
ORLT	**Orhaneli**	**0.98**	**48**	Pg	**Pb**		**09 20 30.6**	**0.0**
ORLT	**Orhaneli**	**0.98**	**48**	P	**Pb**		**09 20 30.7**	**0.0**
ORLT				S	**Sb**		**09 20 43.8**	**+0.4**
ORLT				IAML			09 20 44.0	
	comp=E,4μm,1.1s							
ORLT				IAML			09 20 47.0	
	comp=N,1μm,0.3s							
MANT	**Manisa**	**1.03**	**152**	P	**Pn**		**09 20 32.9**	**+0.8**
MANT				S	**Sn**		**09 20 46.1**	**-0.3**
MANT				IAML			09 20 48.0	
	comp=N,2μm,0.5s							
KULA	**Kula-Manisa**	**1.05**	**147**	Pn	**Pn**		**09 20 33.2**	**+1.0**
SHAP	**Saphane-Kutahy**	**1.06**	**110**	Pn	**Pn**		**09 20 33.3**	**+0.9**
EMET	**Ktahya-Emet**	**1.07**	**91**	P	**Pn**		**09 20 33.5**	**+1.0**
EMET				S	**Sn**		**09 20 47.1**	**0.0**
EMET				IAML			09 20 50.0	
	comp=E,2μm,0.6s							
EMET				IAML			09 20 55.0	
	comp=N,2μm,0.4s							
BIGA	**Biga-Canakkale**	**1.07**	**326**	Pg	**Pb**		**09 20 32.1**	**-0.1**
USAK	**Uak-Merkez**	**1.08**	**129**	P	**Pn**		**09 20 33.6**	**+1.0**
USAK				S	**Sb**		**09 20 46.8**	**+0.4**
USAK				IAML			09 20 58.0	
	comp=E,824nm,0.6s							
KRBG	**Karabiga-Canak**	**1.11**	**334**	Pg	**Pb**		**09 20 32.7**	**-0.1**
ODEM	**Odemis-Izmir**	**1.13**	**175**	Pn	**Pn**		**09 20 34.4**	**+1.1**
FOCM	**Foa**	**1.17**	**234**	Pn	**Pb**		**09 20 33.5**	**-0.3**
TVSB	**Tavsanli**	**1.18**	**87**	Pn	**Pn**		**09 20 34.6**	**+0.6**
ULDT	**Uludag**	**1.18**	**51**	P	**Pn**		**09 20 34.3**	**+0.2**
ULDT				S	**Sb**		**09 20 49.8**	**+0.4**
ULDT				IAML			09 20 51.0	
	comp=N,4μm,0.5s							
ULDT				IAML			09 20 53.0	
	comp=E,5μm,0.4s							
GEDZ	**Gediz**	**1.19**	**107**	Pn	**Pn**		**09 20 35.2**	**+1.0**
MDNY	**Mudanya-Bursa**	**1.21**	**37**	Pn	**Pg**		**09 20 34.4**	**-0.8**
MADA	**Marmara adas**	**1.22**	**346**	P	**Pb**		**09 20 34.7**	**-0.1**
MADA				S	**Sb**		**09 20 49.6**	**-0.8**
MADA				IAML			09 20 52.0	
	comp=N,3μm,0.3s							
MADA				IAML			09 20 53.0	
	comp=E,2μm,0.3s							
MRMT	**Marmara Adasi**	**1.23**	**348**	Pn	**Pn**		**09 20 34.7**	**0.0**
BLCB	**Balcova**	**1.23**	**215**	P	**Pg**		**09 20 35.5**	**-0.2**
BLCB				S	**Sn**		**09 20 52.4**	**+1.4**
BLCB	**Balcova**	**1.23**	**215**	Pn	**Pg**		**09 20 34.9**	**-0.8**
GDZ	**Gediz**	**1.23**	**104**	P	**Pg**		**09 20 36.5**	**+0.7**
GDZ				S	**Sn**		**09 20 52.6**	**+1.3**
GDZ				IAML			09 20 54.0	
	comp=N,740nm,0.4s							
GDZ				IAML			09 20 54.0	
	comp=E,914nm,0.3s							
IMRA	**Mudanya**	**1.25**	**21**	P	**Pg**		**09 20 35.2**	**-0.7**
IMRA				S	**Sg**		**09 20 51.3**	**-0.9**
IMRA				IAML			09 20 52.0	
	comp=E,3μm,0.7s							
IMRA				IAML			09 20 53.0	
	comp=N,4μm,0.2s							
KIRA	**zmir-Kiraz**	**1.25**	**163**	P	**Pg**		**09 20 36.9**	**+0.8**
KIRA				S	**Sn**		**09 20 52.6**	**+0.9**
KIRA				IAML			09 20 57.0	
	comp=N,796nm,0.4s							
EZNE	**Ezine-Canakkal**	**1.27**	**287**	Pn	**Pg**		**09 20 35.5**	**-0.8**
AVDN	**Avdancik/Bursa**	**1.30**	**46**	P	**Pg**		**09 20 36.3**	**-0.6**
AVDN				S	**Sg**		**09 20 52.9**	**-0.9**
AVDN				IAML			09 20 56.0	
	comp=E,5μm,0.4s							
AVDN				IAML			09 20 56.0	
	comp=N,9μm,0.4s							
PRK	**Paraskevi**	**1.30**	**264**	P	**Pg**		**09 20 36.7**	**-0.3**
PRK				S	**Sg**		**09 20 53.7**	**-0.3**
PRK	**Paraskevi**	**1.30**	**264**	P	**Pg**		**09 20 36.3**	**-0.8**
PRK				S	**Sb**		**09 20 51.9**	**-0.8**
EZN	**Ezine**	**1.32**	**289**	P	**Pg**		**09 20 36.7**	**-0.6**
EZN				S	**Sg**		**09 20 53.7**	**-0.7**
EZN	**Ezine**	**1.32**	**289**	Pn	**Pb**		**09 20 36.2**	**-0.2**
COMU	**Canakkale**	**1.33**	**302**	Pn	**Pb**		**09 20 36.3**	**-0.3**
LPK	**Lapseki**	**1.33**	**317**	Pn	**Pb**		**09 20 36.2**	**-0.4**
KRBN	**Karaburun**	**1.35**	**234**	Pn	**Pg**		**09 20 37.2**	**-0.7**
ARMT	**Armutlu**	**1.36**	**31**	Pn	**Pb**		**09 20 37.1**	**-0.1**
GPNP	**Gulpinar-Canak**	**1.40**	**273**	Pn	**Pb**		**09 20 37.6**	**-0.2**
DOMA	**Ktahya-Doman**	**1.41**	**74**	P	**Pg**		**09 20 38.4**	**-0.6**
DOMA				S	**Sg**		**09 20 56.7**	**-0.6**
DOMA				IAML			09 21 00.0	
	comp=N,1μm,0.4s							
DOMA				IAML			09 21 08.0	
	comp=E,2μm,0.5s							
RKY	**Sarkoy-Tekirda**	**1.41**	**336**	Pn	**Pn**		**09 20 37.3**	**+0.1**
GAZK	**Gazikoy-TEKIRD**	**1.43**	**341**	Pn	**Pn**		**09 20 37.2**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**1.45**	**182**	Pn	**Pg**		**09 20 38.7**	**-1.1**
NAZL	**Nazilli-Aydin**	**1.46**	**169**	Pn	**Pg**		**09 20 39.1**	**-0.9**
URLA	**Izmir**	**1.48**	**226**	Pn	**Pb**		**09 20 38.4**	**-0.7**
GELI	**Tayfur-Gelibol**	**1.51**	**312**	Pn	**Pb**		**09 20 38.9**	**-0.7**
ANDZ	**Kutahya, Merke**	**1.52**	**85**	P	**Pg**		**09 20 40.2**	**-0.9**
ANDZ				S	**Sg**		**09 21 01.1**	**+0.2**
ANDZ				IAML			09 21 08.0	
	comp=E,1μm,1.0s							
ANDZ				IAML			09 21 08.0	
	comp=N,2μm,0.6s							
GMLD	**Gumuldur**	**1.55**	**212**	Pn	**Pg**		**09 20 40.4**	**-1.2**
KUTH	**Kutahya**	**1.61**	**90**	P	**Pg**		**09 20 42.5**	**-0.4**
KUTH				S	**Sg**		**09 21 03.3**	**-0.5**
KUTH				IAML			09 21 12.0	
	comp=N,3μm,0.8s							
TKR	**Tekirdag**	**1.62**	**349**	Pn	**Pn**		**09 20 40.2**	**+0.2**
SIGR	**SIGRI**	**1.63**	**264**	P	**Pb**		**09 20 41.0**	**-0.7**
SIGR				S	**Sn**		**09 21 01.6**	**+0.7**
SIGR	**SIGRI**	**1.63**	**264**	Pn	**Pb**		**09 20 40.9**	**-0.7**
SIGR	**SIGRI**	**1.63**	**264**	P	**Pb**		**09 20 41.0**	**-0.7**
SIGR				S	**Sn**		**09 21 00.9**	**+0.1**
SINB	**Sinanoba-Istan**	**1.66**	**16**	Pn	**Pn**		**09 20 40.9**	**+0.4**
EAG2	**Marmaro, Chios**	**1.67**	**240**	P	**Pb**		**09 20 42.4**	**+0.1**
CESE	**eme**	**1.67**	**231**	Pn	**Pb**		**09 20 41.8**	**-0.6**
BILE	**Bilecik/Merkez**	**1.67**	**62**	P	**Pb**		**09 20 41.6**	**-0.9**
BILE				S	**Sn**		**09 21 02.1**	**0.0**
BILE				IAML			09 21 07.0	
	comp=N,1μm,0.5s							
ERIK	**Erikli-Kesan**	**1.68**	**320**	Pn	**Pn**		**09 20 41.1**	**+0.3**
YKBL	**Yakuplu-Istanb**	**1.68**	**19**	Pn	**Pn**		**09 20 41.2**	**+0.4**
YLVH	**Yalova**	**1.69**	**40**	Pn	**Pn**		**09 20 41.6**	**+0.6**
AVCI	**Avcilar-stanb**	**1.70**	**20**	Pn	**Pn**		**09 20 41.4**	**+0.3**
HVHR	**Bakirkoy-Istan**	**1.71**	**23**	Pn	**Pn**		**09 20 41.3**	**0.0**
BRGA	**Burgazada-Ista**	**1.71**	**30**	Pn	**Pn**		**09 20 41.8**	**+0.5**
HYBA	**Heybeliada-Ist**	**1.71**	**30**	Pn	**Pn**		**09 20 41.6**	**+0.3**
ADVT	**Abdulvahap**	**1.72**	**53**	Pn	**Pn**		**09 20 41.8**	**+0.4**
BUYA	**Buyukada-Istan**	**1.73**	**31**	Pn	**Pn**		**09 20 41.9**	**+0.5**
CRLT	**Corlu**	**1.73**	**355**	Pn	**Pn**		**09 20 42.3**	**+0.7**
LAFA	**Gebze-Kocaeli**	**1.74**	**38**	Pn	**Pn**		**09 20 41.9**	**+0.3**
TUZL	**Tuzla-Istanbul**	**1.74**	**35**	Pn	**Pn**		**09 20 41.9**	**+0.3**
GADA	**Gvkgeada**	**1.76**	**297**	P	**Pn**		**09 20 42.8**	**+0.8**
GADA	**Gvkgeada**	**1.76**	**297**	Pn	**Pn**		**09 20 42.5**	**+0.6**
CHOS	**Chios island**	**1.79**	**236**	P	**Pn**		**09 20 43.0**	**+0.6**
CHOS	**Chios island**	**1.79**	**236**	P	**Pb**		**09 20 44.1**	**-0.4**
CHOS				S	**Sb**		**09 21 07.2**	**+0.5**
OSMT	**Osmaniye**	**1.81**	**48**	Pn	**Pn**		**09 20 43.2**	**+0.6**
ENZZ	**Sultanice-Enez**	**1.83**	**312**	Pn	**Pn**		**09 20 43.2**	**+0.3**
SLVT	**Silivri**	**1.84**	**6**	Pn	**Pn**		**09 20 42.8**	**-0.2**
KAVV	**Kandilli-Istan**	**1.87**	**27**	Pn	**Pn**		**09 20 43.5**	**+0.1**
ISK	**Istanbul-Kandi**	**1.87**	**27**	Pn	**Pn**		**09 20 43.2**	**-0.2**
KRL1	**Karlovasi Samo**	**1.87**	**212**	P	**Pg**		**09 20 46.4**	**-1.5**
KRL1				S	**Sg**		**09 21 11.1**	**-1.1**
CAVK	**Edirne/Enez-Ca**	**1.88**	**314**	⇓P	**Pn**		**09 20 44.1**	**+0.6**
CAVK				⇓S	**Sn**		**09 21 08.2**	**+1.3**
CTKG	**Kestanelik-??a**	**1.88**	**13**	Pn	**Pn**		**09 20 43.7**	**+0.1**
BGKT	**Bogazkoy**	**1.89**	**19**	Pn	**Pb**		**09 20 45.0**	**-1.1**
SMG	**Samos**	**1.90**	**208**	P	**Pb**		**09 20 45.2**	**-1.1**
SMG	**Samos**	**1.90**	**208**	P	**Pg**		**09 20 47.1**	**-1.2**
SMG				S	**Sg**		**09 21 12.2**	**-0.8**
ENEZ	**Enez**	**1.92**	**315**	P	**Pn**		**09 20 45.0**	**+1.0**
ENEZ				S	**Sn**		**09 21 08.6**	**+0.7**
ENEZ	**Enez**	**1.92**	**315**	Pn	**Pn**		**09 20 44.1**	**+0.1**
HRT	**Hereke**	**1.94**	**42**	Pn	**Pn**		**09 20 44.5**	**0.0**
UKOP	**Uzunkopru-Edir**	**2.00**	**330**	Pn	**Pn**		**09 20 45.1**	**-0.1**
ALN	**Alexandroupoli**	**2.08**	**316**	P	**Pn**		**09 20 46.9**	**+0.5**
ALN	**Alexandroupoli**	**2.08**	**316**	P	**Pn**		**09 20 46.7**	**+0.3**
ALN				S	**Sn**		**09 21 11.6**	**-0.5**
SMTH	**Samothraki Isl**	**2.14**	**301**	P	**Pn**		**09 20 47.9**	**+0.7**
SMTH	**Samothraki Isl**	**2.14**	**301**	P	**Pn**		**09 20 47.8**	**+0.6**
SILT	**Sile**	**2.18**	**36**	⇓P	**Pb**		**09 20 49.9**	**-1.2**
SILT				⇓S	**Sb**		**09 21 17.6**	**-0.3**
LIA	**Limnos Island**	**2.19**	**284**	P	**Pn**		**09 20 48.8**	**+1.1**
LIA	**Limnos Island**	**2.19**	**284**	P	**Pn**		**09 20 48.7**	**+0.9**
YER	**Yerkesik**	**2.28**	**173**	P	**Pn**		**09 20 50.2**	**+1.1**
BODT	**Bodrum**	**2.39**	**192**	P	**Pn**		**09 20 51.9**	**+1.4**
RDO	**Rodhopi**	**2.54**	**314**	P	**Pn**		**09 20 53.3**	**+0.8**
RDO	**Rodhopi**	**2.54**	**314**	P	**Pn**		**09 20 53.0**	**+0.4**
ISP	**Isparta**	**2.56**	**127**	P	**Pn**		**09 20 55.0**	**+2.0**
SAHE	**Sakarya_HENDEK**	**2.66**	**56**	⇑P	**Pn**		**09 20 55.8**	**+1.5**
THAS	**Thassos island**	**2.75**	**297**	P	**Pn**		**09 20 56.0**	**+0.4**
FETY	**Fethiye**	**2.90**	**162**	P	**Pn**		**09 21 00.1**	**+2.5**
KAVA	**Kavala**	**3.07**	**302**	P	**Pn**		**09 21 00.7**	**+0.7**
KAVA	**Kavala**	**3.07**	**302**	P	**Pn**		**09 21 00.6**	**+0.7**
KYMI	**Kymi, Euboea I**	**3.09**	**257**	P	**Pn**		**09 21 01.2**	**+1.0**
ARG	**Arkhangelos**	**3.18**	**177**	P	**Pn**		**09 21 02.6**	**+1.2**
ARG	**Arkhangelos**	**3.18**	**177**	P	**Pb**		**09 21 05.5**	**-2.6**
DIM	**Dimitrovgrad**	**3.20**	**327**	P	**Pn**		**09 21 02.2**	**+0.6**
RZN	**Rozhen**	**3.35**	**314**	P	**Pn**		**09 21 04.6**	**+0.7**
PLG	**Polygyros**	**3.59**	**287**	P	**Pn**		**09 21 07.9**	**+0.7**
NVR	**Nevrokopi**	**3.67**	**303**	P	**Pn**		**09 21 09.0**	**+0.7**
MMB	**Musomishta**	**3.85**	**305**	P	**Pn**		**09 21 11.8**	**+1.1**
ELND	**Elena**	**3.85**	**337**	⇑P	**Pn**		**09 21 11.5**	**+0.7**
HORT	**Hortiatis**	**3.91**	**289**	P	**Pn**		**09 21 12.2**	**+0.7**
PLVB	**Pleven**	**4.70**	**329**	⇓P	**Pn**		**09 21 22.7**	**+0.3**
CFR	**Carcaliu**	**5.78**	**1**	⇑P	**Pn**		**09 21 39.2**	**+2.1**
TLCR		**5.82**	**6**	⇑P	**Pn**		**09 21 39.6**	**+1.9**
MLR	**Muntele Rosu**	**6.26**	**347**	⇓P	**Pn**		**09 21 44.3**	**+0.4**
ARR	**Arges**	**6.45**	**339**	⇑P	**Pn**		**09 21 47.9**	**+1.5**
PLOR	**Plostina**	**6.52**	**352**	⇑P	**Pn**		**09 21 49.1**	**+1.8**
VRI	**Vrincioaia**	**6.52**	**353**	⇑P	**Pn**		**09 21 48.7**	**+1.3**
SEV	**Sevastopol'**	**6.68**	**38**	*ex*	x		09 21 48.1	
SEV				pmax	pmax		09 21 58.1	
	comp=Z,3.0nm,0.4s							
SEV				smax	smax		09 23 05.8	
	comp=N,10.0nm,0.5s							
SEV			

PNHZ	Pukenui	8.22	205	P	Pn	09 35 10.9 -2.9
WPHZ	Waipukurau	8.28	203	P	P	09 35 13.8 -0.8
PRHZ	Porangahau	8.40	201	P	P	09 35 15.3 -0.7
TSZ	Takapari Road	8.44	205	P	Pn	09 35 13.4 -2.8
DVHZ	Dannevirke	8.58	204	P	Pn	09 35 16.2 -1.6
PRWZ	Pori Road	8.87	204	P	P	09 35 20.8 -0.4
BFZ	Birch Farm	8.90	202	P	P	09 35 21.4 -0.1
BFZ	Birch Farm	8.90	202	P	P	09 35 20.1 -1.4
TIWZ	Tintock	9.10	203	P	P	09 35 22.2 -1.6
MRZ	Mangatainoka R	9.10	205	P	P	09 35 20.9 -2.9
HOWZ	Holdsworth Sta	9.34	205	P	P	09 35 25.0 -1.4
SNZO	South Karori	9.99	207	P	Pn	09 35 34.0 -0.1
	47nm,2.0s					
QRZ	Quartz Range	10.55	216	P	Pn	09 35 40.6 0.0
KHZ	Kahutara	11.39	208	P	Pn	09 35 48.9 -1.3

*NEIC **24** 09:40:03.8±1.0,56.51N±0.08×149.2W±0.1,h10km±2km, ML3.3/86,ML3.2(AEIC),Error ellipse: s-maj=13.6km s-min=9.4km az=170.0*
*ANF **24** 09:40:04.2±0.8,56.62N×149.26W,h0km,ML3.5/25,Error ellipse: s-maj=11.0km s-min=3.1km az=177.0*
*AEIC **24** 09:40:09.3±1.1,56.56N±0.09×149.16W±0.10,h12km±7km, Error ellipse: s-maj=12.7km s-min=7.5km az=168.0*

ISC 24 09:40:03.4±1.4,56.53N±0.09×149.23W±0.06,h10km, n189,σ1§14/190,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.22**	**306**		**Pn**	**09 40 40.6**	**+0.4**
KDAK	**Kodiak Island**	**2.22**	**306**		**Sn**	**09 41 06.0**	**-1.7**
KDAK	**Kodiak Island**	**2.22**	**306**	P	**Pn**	**09 40 40.9**	**+0.6**
	baz=121						
KDAK				S	**Sn**	**09 41 05.7**	**-2.0**
	baz=121						
OHAK	**Old Harbor**	**2.33**	**289**		**Pn**	**09 40 41.8**	**-0.1**
OHAK	**Old Harbor**	**2.33**	**289**		**Sn**	**09 41 08.2**	**-2.3**
OHAK	**Old Harbor**	**2.33**	**289**	P	**Pn**	**09 40 42.1**	**+0.2**
	baz=104						
OHAK				S	**Sn**	**09 41 08.2**	**-2.3**
	baz=104						
SYI	**Shuyak Island**	**2.69**	**322**	Pn	**Pn**	**09 40 47.5**	**+0.8**
SYI					**Sn**	**09 41 19.5**	**+0.1**
Q20K	**Shuyak Island**	**2.69**	**322**	P	**Pn**	**09 40 47.8**	**+1.0**
	baz=138						
CNPM	**China Poot**	**3.19**	**341**		**Pn**	**09 40 54.0**	**+0.3**
Q23K	**Middleton Isla**	**3.29**	**27**	P	**Pn**	**09 40 55.1**	**+0.2**
	baz=210						
MID	**Middleton Isla**	**3.29**	**27**	Pn	**Pn**	**09 40 54.9**	**0.0**
MID				IAML		09 41 35.5	
	comp=N,66nm,1.1s						
MID				IAML		09 41 58.0	
	comp=E,71nm,1.1s						
BRSE	**Bradley Lake S**	**3.32**	**347**		**Pn**	**09 40 55.8**	**+0.4**
BRSE					**Sn**	**09 41 32.8**	**-2.1**
BRSE	**Bradley Lake S**	**3.32**	**347**	P	**Pn**	**09 40 55.8**	**+0.4**
	baz=165						
BRLK	**Bradley Lake**	**3.36**	**346**		**Pn**	**09 40 56.1**	**+0.1**
BRLK				IAML		09 41 39.5	
	comp=E,57nm,0.5s						
Q19K	**Cape Douglas,**	**3.38**	**317**		**Pn**	**09 40 57.8**	**+1.6**
Q19K				IAML		09 41 47.7	
	comp=N,64nm,0.9s						
Q19K	**Cape Douglas,**	**3.38**	**317**	P	**Pn**	**09 40 57.9**	**+1.7**
	baz=133						
HOM	**Homer**	**3.39**	**339**	Pn	**Pn**	**09 40 57.9**	**+1.6**
KAHG	**Katmai Hook Gl**	**3.48**	**307**		**Pn**	**09 40 59.6**	**+1.9**
KAWH	**Katmai**	**3.54**	**304**		**Pn**	**09 41 00.4**	**+2.0**
KARR	**Katmai Rainbow**	**3.55**	**306**		**Pn**	**09 41 00.9**	**+2.2**
SEW	**Seward**	**3.59**	**358**	Pn	**Pn**	**09 40 58.9**	**-0.1**
SEW				IAML		09 41 40.2	
	comp=E,39nm,0.3s						
SEW	**Seward**	**3.59**	**358**	P	**Pn**	**09 40 59.1**	**+0.1**
	baz=178						
AUI	**Augustine Isla**	**3.60**	**323**		**Pn**	**09 41 00.3**	**+1.1**
AUJK	**Augustine Jueg**	**3.60**	**323**		**Pn**	**09 41 00.4**	**+1.2**
P23K	**Montague Islan**	**3.61**	**15**		**Pn**	**09 40 59.5**	**+0.2**
P23K				IAML		09 41 40.2	
	comp=E,68nm,0.7s						
P23K				IAML		09 41 42.6	
	comp=N,73nm,0.4s						
P23K	**Montague Islan**	**3.61**	**15**	P	**Pn**	**09 40 59.7**	**+0.4**
	baz=197						
KAKN	**Katmai Knife C**	**3.62**	**302**		**Pn**	**09 41 01.3**	**+1.7**
ACHA	**Angle Creek He**	**3.71**	**300**		**Pn**	**09 41 02.2**	**+1.4**
KABU	**Katmai Buttres**	**3.71**	**301**		**Pn**	**09 41 02.9**	**+2.0**
Q18K	**Katmai Hardscr**	**3.77**	**307**	P	**Pn**	**09 41 03.4**	**+1.8**
	baz=121						
P19K	**Oil Pt**	**3.79**	**327**	Pn	**Pn**	**09 41 03.0**	**+1.2**
P19K	**Oil Pt**	**3.79**	**327**	P	**Pn**	**09 41 03.4**	**+1.6**
	baz=144						
O22K	**Cooper Landing**	**3.97**	**356**		**Pn**	**09 41 04.9**	**+0.6**
O22K	**Cooper Landing**	**3.97**	**356**	P	**Pn**	**09 41 06.2**	**+1.9**
	baz=176						
ILS	**Iliamna Low So**	**3.99**	**331**		**Pn**	**09 41 05.3**	**+0.5**
CNTC	**Contact Creek**	**4.00**	**299**		**Pn**	**09 41 06.4**	**+1.5**
Q17K	**Contact Creek**	**4.00**	**299**	P	**Pn**	**09 41 06.9**	**+2.0**
	baz=112						
SLKM	**Skilak Lake**	**4.02**	**353**		**Pn**	**09 41 05.3**	**+0.2**
ILSW	**Iliamna Southw**	**4.03**	**331**	Pn	**Pn**	**09 41 05.9**	**+0.5**
ILSW				IAML		09 41 53.9	
	comp=N,31nm,0.3s						
ILSW				IAML		09 41 54.2	
	comp=E,24nm,0.3s						
PLK4	**Peulik 4**	**4.05**	**289**		**Pn**	**09 41 06.2**	**+0.8**
PLK4				IAML		09 41 58.9	
	comp=N,31nm,0.6s						
PLK4				IAML		09 42 01.4	
	comp=E,28nm,0.5s						
R17L	**Mt. Peulik Vol**	**4.05**	**289**	P	**Pn**	**09 41 06.6**	**+1.2**
	baz=102						
HIN	**Hinchinbrook I**	**4.13**	**19**		**Pn**	**09 41 07.0**	**+0.4**
HIN				IAML		09 41 54.3	
	comp=N,39nm,0.3s						
HIN				IAML		09 41 55.6	
	comp=E,45nm,0.5s						
PLK1	**Peulik 1**	**4.22**	**291**		**Pn**	**09 41 08.8**	**+1.2**
KAIM	**Kayak Island**	**4.25**	**35**	Pn	**Pn**	**09 41 08.6**	**+0.5**
KAIM				IAML		09 42 03.4	
	comp=N,46nm,1.0s						
KAIM				IAML		09 42 06.8	
	comp=E,45nm,0.9s						
KAIM	**Kayak Island**	**4.25**	**35**	P	**Pn**	**09 41 08.7**	**+0.5**
	baz=220						
P18K	**Big Mountain,**	**4.30**	**314**		**Pn**	**09 41 09.4**	**+0.6**
P18K	**Big Mountain,**	**4.30**	**314**	P	**Pn**	**09 41 09.4**	**+0.6**
	baz=129						
PLBL	**Peulik Blue Cr**	**4.30**	**289**		**Pn**	**09 41 10.2**	**+1.3**
RED	**Redoubt Volcan**	**4.32**	**336**	Pn	**Pn**	**09 41 08.9**	**-0.3**
RED				IAML		09 42 02.3	
	comp=E,25nm,0.4s						
RED				IAML		09 42 04.1	
	comp=N,40nm,0.5s						
RDWB	**Redoubt West**	**4.40**	**336**		**Pn**	**09 41 10.9**	**+0.6**
PLK5	**Peulik 5**	**4.41**	**293**		**Pn**	**09 41 11.7**	**+1.4**
EYAK	**Cordova Ski Ar**	**4.42**	**23**		**Pn**	**09 41 10.9**	**+0.4**
EYAK				IAML		09 42 06.8	
	comp=E,20nm,1.2s						
EYAK				IAML		09 42 08.3	
	comp=N,22nm,0.6s						
EYAK	**Cordova Ski Ar**	**4.42**	**23**	P	**Pn**	**09 41 11.2**	**+0.7**
	baz=206						
NCT	**North Crescent**	**4.49**	**336**		**Pn**	**09 41 11.8**	**+0.3**
GLI	**Glacier Island**	**4.50**	**13**	Pn	**Pn**	**09 41 12.1**	**+0.4**
GLI				IAML		09 42 03.0	
	comp=N,18nm,0.4s						
GLI				IAML		09 42 03.7	
	comp=E,38nm,0.3s						
GLI	**Glacier Island**	**4.50**	**13**	P	**Pn**	**09 41 12.5**	**+0.8**
	baz=196						
Q16K	**King Salmon**	**4.54**	**301**		**Pn**	**09 41 13.7**	**+1.6**
Q16K	**King Salmon**	**4.54**	**301**	P	**Pn**	**09 41 13.9**	**+1.8**
	baz=114						
RAGM	**Ragged Mountai**	**4.55**	**30**		**Pn**	**09 41 12.7**	**+0.4**
RAGM				IAML		09 42 14.5	
	comp=E,41nm,0.4s						
O19K	**Port Alsworth**	**4.55**	**326**		**Pn**	**09 41 12.7**	**+0.4**
SUCK	**Suckling Hills**	**4.57**	**37**	Pn	**Pn**	**09 41 13.2**	**+0.7**
SUCK				IAML		09 42 07.8	
	comp=N,34nm,1.1s						
SUCK				IAML		09 42 17.0	
	comp=E,17nm,0.9s						
RC01	**Rabbit Creek A**	**4.58**	**357**		**Pn**	**09 41 13.2**	**+0.5**
RC01				IAML		09 42 04.8	
	comp=E,33nm,0.4s						
RC01				IAML		09 42 08.6	
	comp=N,26nm,0.4s						
RC01	**Rabbit Creek A**	**4.58**	**357**	P	**Pn**	**09 41 13.5**	**+0.8**
	baz=176						
O18K	**Koktuh Hills**	**4.60**	**319**		**Pn**	**09 41 13.4**	**+0.5**
O18K	**Koktuh Hills**	**4.60**	**319**	P	**Pn**	**09 41 13.6**	**+0.7**
	baz=133						
R16K	**Pilot Point**	**4.68**	**286**	Pn	**Pn**	**09 41 15.0**	**+1.0**
P17K	**Kvichak River**	**4.69**	**308**		**Pn**	**09 41 15.0**	**+0.8**
P17K	**Kvichak River**	**4.69**	**308**	P	**Pn**	**09 41 15.5**	**+1.4**
	baz=121						
BERG	**Berg Lake**	**4.84**	**35**		**Pn**	**09 41 16.5**	**+0.3**
SPU	**Mount Spurr**	**4.89**	**344**	Pn	**Pn**	**09 41 17.4**	**+0.3**
KNK	**Knik Glacier**	**4.92**	**4**	Pn	**Pn**	**09 41 17.9**	**+0.6**
KNK				IAML		09 44 30.6	
	comp=N,25nm,0.6s						
KNK				IAML		09 44 34.5	
	comp=E,17nm,1.2s						
N20K	**Mount Spurr**	**4.93**	**343**	P	**Pn**	**09 41 17.9**	**+0.3**
	baz=160						
DIV	**Divide**	**4.95**	**20**	Pn	**Pn**	**09 41 18.5**	**+0.7**
DIV				IAML		09 42 16.4	
	comp=N,14nm,0.4s						
CKL	**Chakachamna La**	**4.95**	**342**		**Pn**	**09 41 18.1**	**+0.3**
SPCG	**Spurr Capps Gl**	**4.99**	**344**		**Pn**	**09 41 19.2**	**+0.8**
BMRM	**Bremner River**	**5.06**	**26**		**Pn**	**09 41 20.0**	**+0.6**
BMRM				IAML		09 42 18.4	
	comp=E,19nm,0.5s						
BMRM				IAML		09 44 39.3	
	comp=N,19nm,0.8s						
BMRM	**Bremner River**	**5.06**	**26**	P	**Pn**	**09 41 20.1**	**+0.8**
	baz=211						
PMR	**Palmer**	**5.08**	**1**	Pn	**Pn**	**09 41 20.2**	**+0.7**
PMR				IAML		09 42 16.9	
	comp=E,13nm,0.3s						
PMR				IAML		09 42 20.4	
	comp=N,15nm,0.4s						
PMR	**Palmer**	**5.08**	**1**	P	**Pn**	**09 41 20.4**	**+0.9**
	baz=181						
N19K	**Bonanza Creek**	**5.10**	**330**	Pn	**Pn**	**09 41 20.2**	**+0.3**
CHGN	**Chignik**	**5.11**	**271**	Pn	**Pn**	**09 41 21.2**	**+1.3**
CHGN				IAML		09 42 21.1	
	comp=E,17nm,0.1s						
CHGN				IAML		09 42 23.6	
	comp=N,22nm,0.3s						
STLK	**Strandline Lak**	**5.16**	**346**		**Pn**	**09 41 21.3**	**+0.5**
STLK				IAML		09 42 23.3	
	comp=N,14nm,0.5s						
STLK				IAML		09 42 23.5	
	comp=E,16nm,0.5s						
GHO	**Glory Hole Cre**	**5.26**	**2**		**Pn**	**09 41 23.1**	**+1.0**
GHO	**Glory Hole Cre**	**5.26**	**2**	IAML		09 42 25.1	
	comp=E,18nm,0.5s						
KLU	**Klutina**	**5.26**	**18**		**Pn**	**09 41 23.0**	**+0.8**
KLU	**Klutina**	**5.26**	**18**	P	**Pn**	**09 41 23.2**	**+1.1**
	baz=201						
MESA	**MESA**	**5.30**	**43**	Pn	**Pn**	**09 41 23.6**	**+0.9**
MESA	**MESA**	**5.30**	**43**	P	**Pn**	**09 41 23.4**	**+0.7**
	baz=230						
CRQM	**Cirque**	**5.30**	**34**		**Pn**	**09 41 23.3**	**+0.6**
CRQM	**Cirque**	**5.30**	**34**	IAML		09 42 27.5	
	comp=E,13nm,0.7s						
CRQM				IAML		09 44 44.9	
	comp=N,23nm,0.7s						
CRQE	**Cirque**	**5.31**	**35**	P	**Pn**	**09 41 23.5**	**+0.6**
	baz=220						
SML	**Sawmill**	**5.31**	**5**		**Pn**	**09 41 23.8**	**+1.0**
SML	**Sawmill**	**5.31**	**5**	IAML		09 42 28.2	
	comp=N,19nm,0.6s						
SML				IAML		09 42 28.9	
	comp=E,16nm,0.7s						
SML	**Sawmill**	**5.31**	**5**	P	**Pn**	**09 41 24.2**	**+1.3**
	baz=186						
P16K	**Nushagak River**	**5.32**	**302**		**Pn**	**09 41 23.7**	**+0.9**
P16K				IAML		09 42 27.8	
	comp=E,12nm,1.2s						
P16K				IAML		09 42 44.5	
	comp=N,11nm,1.2s						
P16K	**Nushagak River**	**5.32**	**302**	P	**Pn**	**09 41 24.9**	**+2.1**
	baz=114						
M23K	**Glacier View**	**5.34**	**8**	P	**Pn**	**09 41 24.3**	**+1.2**
	baz=189						
TGL	**Tana Glacier**	**5.39**	**36**		**Pn**	**09 41 24.6**	**+0.6**
SCM	**Sheep Creek Mo**	**5.41**	**10**	Pn	**Pn**	**09 41 24.9**	**+0.7**
N18K	**Kilae Creek**	**5.43**	**323**		**Pn**	**09 41 24.7**	**+0.4**
N18K	**Kilae Creek**	**5.43**	**323**	P	**Pn**	**09 41 24.7**	**+0.4**
	baz=137						
VNHG	**Veniaminof 1**	**5.53**	**271**		**Pn**	**09 41 27.6**	**+1.8**
SKT	**Skwentna**	**5.59**	**349**	P	**Pn**	**09 41 27.9**	**+1.3**
	baz=167						
O16K	**Kokwok River B**	**5.62**	**307**		**Pn**	**09 41 28.1**	**+1.2**
O16K	**Kokwok River B**	**5.62**	**307**	P	**Pn**	**09 41 28.3**	**+1.4**
	baz=119						
N25K	**Chitina, Valde**	**5.62**	**23**		**Pn**	**09 41 27.9**	**+0.8**
N25K	**Chitina, Valde**	**5.62**	**23**	P	**Pn**	**09 41 27.2**	**+0.2**
	baz=208						
GLB	**Gilahina Butte**	**5.67**	**27**		**Pn**	**09 41 28.2**	**+0.6**
KIAG	**Kiagna River**	**5.67**	**36**		**Pn**	**09 41 28.3**	**+0.4**
M20K	**Styx River**	**5.73**	**341**		**Pn**	**09 41 29.1**	**+0.6**
M20K	**Styx River**	**5.73**	**341**	P	**Pn**	**09 41 29.1**	**+0.6**
	baz=158						
GRNC	**Granite Creek**	**5.74**	**40**		**Pn**	**09 41 29.2**	**+0.4**
N17K	**Nushagak Hills**	**5.78**	**317**		**Pn**	**09 41 29.8**	**+0.6**
N17K	**Nushagak Hills**	**5.78**	**317**	P	**Pn**	**09 41 29.8**	**+0.6**
	baz=130						
MCARA	**McCarthy VSAT**	**5.83**	**31**		**Pn**	**09 41 30.6**	**+0.8**
MCARA	**McCarthy VSAT**	**5.83**	**31**	P	**Pn**	**09 41 31.1**	**+1.2**
	baz=217						
PTPK	**Patty Peak**	**5.84**	**34**		**Pn**	**09 41 30.8**	**+0.7**
PCA	**Pinnacle**	**5.93**	**49**		**Pn**	**09 41 31.9**	**+0.7**
BARN	**Barnard Glacie**	**6.01**	**38**		**Pn**	**09 41 33.2**	**+0.7**
WACK	**Wrangell Chich**	**6.02**	**23**		**Pn**	**09 41 33.5**	**+0.8**
M18K	**Stony River**	**6.03**	**328**		**Pn**	**09 41 32.7**	**+0.2**
M18K	**Stony River**	**6.03**	**328**	P	**Pn**	**09 41 33.0**	**+0.5**
	baz=142						
CTG	**Chitna Glacier**	**6.05**	**39**	P	**Pn**	**09 41 33.8**	**+0.8**
	baz=227						
CTGM	**Chitina Glacie**	**6.05**	**39**		**Pn**	**09 41 33.7**	**+0.7**
LOGN	**Logan Glacier**	**6.08**	**41**		**Pn**	**09 41 33.7**	**+0.3**
CNBA	**Chernabura Isl**	**6.11**	**258**		**Pn**	**09 41 34.1**	**+0.5**
WAT6	**Susitna Watana**	**6.12**	**6**		**Pn**	**09 41 34.9**	**+1.0**
O15K	**Ungalikthiuk R**	**6.25**	**300**		**Pn**	**09 41 37.3**	**+1.7**
O15K	**Ungalikthiuk R**	**6.25**	**300**	P	**Pn**	**09 41 37.6**	**+2.0**
	baz=110						
WAT7	**Susitna Watana**	**6.33**	**2**		**Pn**	**09 41 38.0**	**+1.2**
WAT1	**Susitna Watana**	**6.33**	**3**		**Pn**	**09 41 37.9**	**+1.1**
O28M	**Mount Upton**	**6.35**	**44**		**Pn**	**09 41 37.7**	**+0.5**
O28M	**Mount Upton**	**6.35**	**44**	P	**Pn**	**09 41 38.0**	**+0.8**
	baz=232						
L19K	**White Mountain**	**6.36**	**335**		**Pn**	**09 41 37.4**	**+0.4**
L19K	**White Mountain**	**6.36**	**335**	P	**Pn**	**09 41 37.5**	**+0.4**
	baz=150						
N16K	**Nishlik Lake**	**6.37**	**312**		**Pn**	**09 41 38.5**	**+1.1**
N16K	**Nishlik Lake**	**6.37**	**312**	P	**Pn**	**09 41 38.8**	**+1.4**
	baz=124						
SDPT	**Sand Point**	**6.43**	**264**		**Pn**	**09 41 39.4**	**+1.3**
M17K	**Holitna River**	**6.47**	**322**		**Pn**	**09 41 39.4**	**+0.8**
M17K	**Holitna River**	**6.47**	**322**	P	**Pn**	**09 41 39.4**	**+0.8**
	baz=135						
O29M	**Mount Kennedy**	**6.75**	**52**		**Pn**	**09 41 43.5**	**+0.9**
O29M	**Mount Kennedy**	**6.75**	**52**	P	**Pn**	**09 41 43.9**	**+1.3**
	baz=241						
M16K	**Timber Creek**	**6.77**	**316**		**Pn**	**09 41 43.9**	**+1.2**
M16K	**Timber Creek**	**6.77**	**316**	P	**Pn**	**09 41 44.0**	**+1.2**
	baz=127						
N15K	**Kwethluk River**	**6.78**	**307**	P	**Pn**	**09 41 45.1**	**+2.2**
	baz=117						
YUK2	**White River**	**6.81**	**36**		**Pn**	**09 41 44.8**	**+1.5**
YUK8	**Steele Glacier**	**6.83**	**42**	P	**Pn**	**09 41 45.8**	**+2.0**
	baz=230						
RND	**Reindeer**	**6.90**	**1**		**Pn**	**09 41 45.8**	**+1.2**
YUK3	**Moose Creek**	**6.92**	**37**	P	**Pn**	**09 41 46.7**	**+1.7**
	baz=225						
YUK6	**Outpost Mounta**	**7.17**	**47**		**Pn**	**09 41 50.1**	**+1.6**
YUK6	**Outpost Mounta**	**7.17**	**47**	P	**Pn**	**09 41 50.4**	**+1.9**
	baz=237						
PS4A	**Pavlof South-4**	**7.19**	**266**		**Pn**	**09 41 49.5**	**+1.0**
S31K	**Pelican**	**7.20**	**73**		**Pn**	**09 41 47.0**	**-1.5**
S31K	**Pelican**	**7.20**	**73**	P	**Pn**	**09 41 47.8**	**-0.8**
	baz=265						
HAG	**Hague Volcano**	**7.23**	**266**		**Pn**	**09 41 50.2**	**+1.1**
DOL	**Dolgoi Island**	**7.25**	**264**		**Pn**	**09 41 49.9**	**+0.6**
BVCY	**Beaver Creek**	**7.27**	**32**		**Pn**	**09 41 51.2**	**+1.5**
YUK4	**Talbot Arm**	**7.29**	**44**	P	**Pn**	**09 41 53.1**	**+3.0**
	baz=234						
P30M	**Million Dollar**	**7.39**	**56**	P	**Pn**	**09 41 53.2**	**+1.9**
	baz=247						
L16K	**Owhat River**	**7.40**	**319**		**Pn**	**09 41 52.4**	**+1.1**
L16K	**Owhat River**	**7.40**	**319**	P	**Pn**	**09 41 52.5**	**+1.1**
	baz=130						
N14K	**Kuskokwak Cree**	**7.40**	**303**		**Pn**	**09 41 53.1**	**+1.7**
DTNA	**Dutton South F**	**7.46**	**265**		**Pn**	**09 41 53.0**	**+0.7**
SIT	**Sitka**	**7.65**	**80**	Pn	**Pn**	**09 41 52.7**	**-2.1**
K17K	**Iditarod**	**7.72**	**327**	Pn	**Pn**	**09 41 55.9**	**+0.1**
N30M	**Aishikik Lake**	**7.97**	**47**	Pn	**Pn**	**09 42 00.2**	**+0.9**
N30M	**Aishikik Lake**	**7.97**	**47**	P	**Pn**	**09 42 00.3**	**+1.0**
	baz=238						
BESE	**Bessie Mountai**	**8.00**	**69**	Pn	**Pn**	**09 41 59.6**	**0.0**
S32K	**Killisnoo**	**8.06**	**77**	Pn	**Pn**	**09 41 59.9**	**-0.4**
O30N	**Mendenhall**	**8.06**	**53**	Pn	**Pn**	**09 42 01.4**	**+0.9**
M29M	**Somme Creek**	**8.06**	**38**	P	**Pn**	**09 42 01.9**	**+1.3**
	baz=228						
R32K	**Eaglecrest**	**8.13**	**71**	Pn	**Pn**	**09 42 02.0**	**+0.5**
R32K	**Eaglecrest**	**8.13**	**71**	P	**Pn**	**09 42 01.9**	**+0.5**
	baz=264						
L15K	**Ungalak Mounta**	**8.14**	**314**	P	**Pn**	**09 42 03.1**	**+1.6**
	baz=124						
ILAR	**Eielson Array**	**8.35**	**7**	Pn	**Pn**	**09 42 05.0**	**+0.7**
N31M	**Braeburn, Yuko**	**8.53**	**49**	Pn	**Pn**	**09 42 07.8**	**+0.9**
WHY	**Whitehorse**	**8.55**	**55**	Pn	**Pn**	**09 42 08.2**	**+0.9**
L29M	**L29M**	**8.64**	**36**	Pn	**Pn**	**09 42 09.1**	**+0.7**
L29M	**L29M**	**8.64**	**36**	P	**Pn**	**09 42 09.8**	**+1.4**
	baz=226						
P32M	**Atlin**	**8.77**	**63**	Pn	**Pn**	**09 42 10.7**	**+0.4**
P32M	**Atlin**	**8.77**	**63**	P	**Pn**	**09 42 11.1**	**+0.9**
	baz=257						
U33K	**Whale Pass**	**8.96**	**86**	Pn	**Pn**	**09 42 10.7**	**-2.1**
H21K	**Meloztina Rive**	**9.32**	**351**	Pn	**Pn**	**09 42 18.0**	**+0.4**
K29M	**Barlow Dome**	**9.35**	**34**	Pn	**Pn**	**09 42 19.6**	**+1.3**
P33M	**Teslin, Yukon**	**9.37**	**60**	Pn	**Pn**	**09 42 18.6**	**+0.2**
M31M	**Drury Creek, Y**	**9.46**	**47**	Pn	**Pn**	**09 42 21.0**	**+1.5**
M31M	**Drury Creek, Y**	**9.46**	**47**	P	**Pn**	**09 42 21.3**	**+1.8**
	baz=240						
R33M	**Jennings River**	**10.11**	**66**	Pn	**Pn**	**09 42 28.5**	**-0.1**
J30M	**Hart River**	**10.24**	**33**	P	**Pn**	**09 42 33.6**	**+3.2**
	baz=224						

*NEIC **24** 09:42:18,69.55N×144.19W,h8km,Moment Tensor Solution. Moment tensor: Scale 10^14^Nm; Mrr0.98; Mθθ-3.99; Mφφ3.02; Mrθ0.08; Mθφ-4.94; Mφr-2.89; Fault plane solution: M0 6.76000×10^14^ NP1:φs200.00000°, δ80.00000°,λ25.00000°. NP2:φs105.00000°,δ65.00000°, λ169.00000°. Principal axes: T 6.7661, Plg25.0000°, Azm65.0000°; N -0.0030, Plg63.0000°, Azm220.0000°; P -6.7631, Plg10.0000°, Azm331.0000°;*
*AEIC **24** 09:42:19.3±1.7,69.52N±0.03×144.26W±0.06,h9km±4km Error ellipse: s-maj=4.2km s-min=3.2km az=171.0*
*ANF **24** 09:42:20.9±0.3,69.56N×144.21W,h7km±2km,ML4.2/68, Error ellipse: s-maj=2.0km s-min=1.2km az=23.0*
*NEIC **24** 09:42:21.1±0.9,69.57N±0.05×144.16W±0.03,h10km±1km, mb4.0/12,ML4.0/128,ML3.9(AEIC),Mwr3.8/27(SLM),Error ellipse: s-maj=8.4km s-min=2.9km az=348.0*
*IDC **24** 09:42:21.2±0.9,69.71N×143.96W,h0km,mb3.9/8, mbtmp3.9/12,ML4.0/4,MS3.3/3,Error ellipse: s-maj=20.1km s-min=14.2km az=40.0*

ISC 24 09:42:19.4±1.2,69.52N±0.03×144.22W±0.02,h0km±8km, n385,σ1§44/397,mb4.0/12,MS3.1/3,Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
C27K	**Jago River**	**0.21**	**59**		**Pg**	**09 42 24.6**	**+1.3**
C27K	**Jago River**	**0.21**	**59**	IAML		09 42 29.7	
	comp=N,9μm,0.3s						
C27K				IAML		09 42 31.0	
	comp=E,19μm,0.8s						
C27K	**Jago River**	**0.21**	**59**	P	**Pg**	**09 42 24.8**	**+1.5**
	baz=241						
C26K	**Camden Bay**	**0.47**	**329**		**Pb**	**09 42 30.2**	**-0.2**
C26K	**Camden Bay**	**0.47**	**329**	P	**Pb**	**09 42 29.9**	**-0.5**
	baz=150						
D25K	**Kavik River**	**0.79**	**256**		**Pg**	**09 42 33.9**	**-0.5**
D25K					**Sg**	**09 42 45.8**	**+1.1**
D25K	**Kavik River**	**0.79**	**256**	P	**Pg**	**09 42 34.0**	**-0.5**
	baz=74						
D27M	**Malcolm River**	**1.19**	**102**		**Pg**	**09 42 41.5**	**-0.5**
D27M	**Malcolm River**	**1.19**	**102**		**Sg**	**09 42 57.9**	**+0.5**
D27M				IAML		09 43 04.7	
	comp=E,2μm,0.5s						
D27M				IAML		09 43 05.1	
	comp=N,3μm,0.5s						
D27M	**Malcolm River**	**1.19**	**102**	P	**Pg**	**09 42 41.5**	**-0.5**
	baz=285						
E25K	**Arctic Village**	**1.49**	**200**		**Pn**	**09 42 47.4**	**0.0**
E25K	**Arctic Village**	**1.49**	**200**	IAML		09 43 11.6	
	comp=N,2μm,1.0s						
E25K	**Arctic Village**	**1.49**	**200**	P	**Pn**	**09 42 47.2**	**-0.2**
	baz=18						
C24K	**Franklin Bluff**	**1.58**	**279**		**Pb**	**09 42 49.2**	**-0.1**
C24K				IA

F28M	**Old Crow**	**2.49 138**	P	**Pn**	**09 43 02.1 +1.0**
	baz=322,SNR=1000				
F28M			S	**Sn**	**09 43 32.4 +0.2**
	baz=322				
E29M	**Blow River**	**2.55 114**		**Pn**	**09 43 02.3 +0.5**
E29M			IAML		09 43 44.8
	comp=N,729nm,0.6s				
E29M			IAML		09 43 48.4
	comp=E,738nm,0.7s				
E29M	**Blow River**	**2.55 114**	P	**Pn**	**09 43 02.7 +0.9**
	baz=299,SNR=210				
E29M			Sb	**Sn**	**09 43 35.5 +2.0**
	baz=299				
G26K	**Porcupine Rive**	**2.59 176**		**Pn**	**09 43 03.4 +1.0**
G26K	**Porcupine Rive**	**2.59 176**	P	**Pn**	**09 43 03.4 +1.0**
	baz=356				
G25K	**Bearman Lake**	**2.86 195**		**Pn**	**09 43 07.5 +1.4**
G25K				**Pb**	**09 43 07.9 -3.3**
G25K	**Bearman Lake**	**2.86 195**	P	**Pn**	**09 43 06.8 +0.7**
	baz=13				
G27K	**Doyon Strip**	**2.89 159**		**Pn**	**09 43 07.3 +0.8**
G27K	**Doyon Strip**	**2.89 159**	P	**Pn**	**09 43 07.3 +0.8**
	baz=342				
FYU	**Fort Yukon**	**2.99 188**		**Pn**	**09 43 09.2 +1.3**
FYU				**Sn**	**09 43 45.0 +0.5**
G24K	**Hadweenzic Riv**	**3.09 205**		**Pn**	**09 43 10.2 +1.0**
G24K			IAML		09 44 01.3
	comp=N,446nm,1.1s				
G24K			IAML		09 44 03.1
	comp=E,466nm,0.9s				
G24K	**Hadweenzic Riv**	**3.09 205**	P	**Pn**	**09 43 10.3 +1.1**
	baz=22				
G24K			S	**Sn**	**09 43 47.8 +1.0**
	baz=22				
E22K	**Anaktuvuk Pass**	**3.09 247**		**Pn**	**09 43 10.1 +0.8**
E22K	**Anaktuvuk Pass**	**3.09 247**	P	**Pn**	**09 43 09.8 +0.5**
	baz=60				
E22K			S	**Sn**	**09 43 46.9 0.0**
	baz=60				
COLD	**Coldfoot**	**3.20 227**	Pn	**Pn**	**09 43 11.7 +0.9**
COLD				**Pn**	**09 43 11.8 +1.1**
COLD			IAML		09 44 07.4
	comp=E,256nm,1.2s				
COLD	**Coldfoot**	**3.20 227**	P	**Pn**	**09 43 11.6 +0.9**
	baz=41				
B22K	**Teshekpuk Lake**	**3.28 289**		**Pn**	**09 43 12.3 +0.5**
B22K			IAML		09 44 12.3
	comp=N,441nm,0.8s				
B22K	**Teshekpuk Lake**	**3.28 289**	P	**Pn**	**09 43 12.4 +0.6**
	baz=100				
H27K	**Steamboat Moun**	**3.46 162**		**Pn**	**09 43 15.5 +1.1**
H27K	**Steamboat Moun**	**3.46 162**	IAML		09 44 18.4
	comp=E,226nm,1.1s				
H27K	**Steamboat Moun**	**3.46 162**	P	**Pn**	**09 43 15.4 +1.0**
	baz=344				
G23K	**Bananza Creek**	**3.56 220**		**Pn**	**09 43 16.4 +0.6**
G23K	**Bananza Creek**	**3.56 220**	IAML		09 44 25.7
	comp=E,226nm,0.8s				
G23K	**Bananza Creek**	**3.56 220**	P	**Pn**	**09 43 16.5 +0.7**
	baz=35				
F30M	**Barrier River**	**3.64 118**		**Pn**	**09 43 18.9 +2.1**
F30M	**Barrier River**	**3.64 118**	P	**Pn**	**09 43 17.9 +1.0**
	baz=306,SNR=468				
F30M			S	**Sn**	**09 44 02.5 +2.1**
	baz=306				
B21K	**Ikpikpuk River**	**3.65 276**		**Pn**	**09 43 18.1 +1.2**
B21K	**Ikpikpuk River**	**3.65 276**	IAML		09 44 33.7
	comp=N,322nm,1.1s				
B21K			IAML		09 44 46.3
	comp=E,209nm,1.0s				
B21K	**Ikpikpuk River**	**3.65 276**	P	**Pn**	**09 43 18.1 +1.2**
	baz=87				
B21K			S	**Sn**	**09 44 01.1 +0.6**
	baz=87				
E21K	**Killik River**	**3.68 257**	IAML		09 44 30.3
	comp=E,198nm,0.9s				
E21K			IAML		09 44 31.7
	comp=N,282nm,1.1s				
E21K	**Killik River**	**3.68 257**	P	**Pn**	**09 43 18.5 +1.1**
	baz=68				
C21K	**Knifeblade Rid**	**3.76 269**		**Pn**	**09 43 20.2 +1.6**
C21K	**Knifeblade Rid**	**3.76 269**	P	**Pn**	**09 43 19.3 +0.8**
	baz=80				
C21K			S	**Sn**	**09 44 03.9 +0.5**
	baz=80				
G22K	**Bettles**	**3.77 230**	P	**Pn**	**09 43 19.2 +0.6**
	baz=43				
G30M	**tAoh Zraii Nji**	**3.92 127**		**Pn**	**09 43 22.3 +1.6**
G30M	**tAoh Zraii Nji**	**3.92 127**	IAML		09 44 33.8
	comp=E,178nm,0.8s				
G30M			IAML		09 44 42.5
	comp=N,163nm,1.1s				
G30M	**tAoh Zraii Nji**	**3.92 127**	P	**Pn**	**09 43 21.0 +0.3**
	baz=314				
G30M			S	**Sn**	**09 44 08.1 +0.8**
	baz=314				
A22K	**Sinclair Lake**	**3.94 297**		**Pn**	**09 43 21.6 +0.8**
A22K	**Sinclair Lake**	**3.94 297**	P	**Pn**	**09 43 21.5 +0.6**
	baz=107				
A22K			S	**Sn**	**09 44 07.8 +0.1**
	baz=107				
H24K	**Noodor Dome**	**3.96 202**		**Pn**	**09 43 22.0 +0.8**
H24K			IAML		09 44 10.3
	comp=N,173nm,1.1s				
H24K			IAML		09 44 30.2
	comp=E,214nm,1.1s				
H24K	**Noodor Dome**	**3.96 202**	P	**Pn**	**09 43 22.2 +1.0**
	baz=19				
H24K			S	**Sn**	**09 44 08.6 +0.4**
	baz=19				
H29M	**Whitestone**	**3.99 144**		**Pn**	**09 43 22.9 +1.3**
H29M	**Whitestone**	**3.99 144**	P	**Pn**	**09 43 23.1 +1.5**
	baz=329				
H29M			S	**Sn**	**09 44 09.8 +0.9**
	baz=329				
INK	**Inuvik**	**4.05 102**	Pn	**Pn**	**09 43 22.5 0.0**
	comp=E,3.2nm,0.3s,baz=316,slow=12,SNR=94				
INK			Sn	**Sn**	**09 44 08.7 -1.8**
	comp=E,7.9nm,0.3s,baz=208,slow=31,SNR=7.6				
INK			Lg	Lg	09 44 25.6
	comp=E,5.3nm,0.3s,baz=22,slow=18,SNR=4.4				
	comp=E,13nm,0.5s				
INK	**Inuvik**	**4.05 102**		**Pn**	**09 43 23.0 +0.5**
INK	**Inuvik**	**4.05 102**	P	**Pn**	**09 43 21.8 -0.6**
	baz=292				
INK			S	**Sn**	**09 44 10.6 +0.2**
	baz=292				
PRP	**Porcupine Dome**	**4.05 188**		**Pn**	**09 43 24.1 +1.4**
PRP			IAML		09 44 14.3
	comp=N,189nm,0.3s				
PRP			IAML		09 44 14.7
	comp=E,171nm,0.6s				
PRP	**Porcupine Dome**	**4.05 188**	P	**Pn**	**09 43 24.1 +1.4**
	baz=6.3				
PRP			S	**Sn**	**09 44 11.4 +0.6**
	baz=6.3				
I27K	**Kandik River**	**4.06 165**		**Pn**	**09 43 23.9 +1.3**
I27K	**Kandik River**	**4.06 165**	P	**Pn**	**09 43 24.1 +1.4**
	baz=347,SNR=222				
F21K	**Alatna River**	**4.13 240**		**Pn**	**09 43 25.0 +1.4**
F21K	**Alatna River**	**4.13 240**	IAML		09 44 34.5
	comp=N,116nm,0.7s				
F21K			IAML		09 44 46.2
	comp=E,144nm,1.1s				
F21K	**Alatna River**	**4.13 240**	P	**Pn**	**09 43 24.8 +1.2**
	baz=52				
H23K	**Yukon River**	**4.23 211**	IAML		09 44 43.3
	comp=N,172nm,0.9s				
H23K	**Yukon River**	**4.23 211**	P	**Pn**	**09 43 26.1 +1.1**
	baz=26				
EPYK	**Eagle Plains**	**4.24 135**		**Pn**	**09 43 26.0 +0.9**
EPYK	**Eagle Plains**	**4.24 135**	P	**Pn**	**09 43 26.4 +1.2**
	baz=322,SNR=44				
EPYK			S	**Sn**	**09 44 14.5 -0.8**
	baz=322				
I26K	**Coal Creek Min**	**4.25 174**		**Pn**	**09 43 26.5 +1.3**
I26K	**Coal Creek Min**	**4.25 174**	P	**Pn**	**09 43 26.5 +1.3**
	baz=355				
F31M	**Tsiigehtchic**	**4.39 113**		**Pn**	**09 43 27.3 +0.3**
F31M			IAML		09 44 41.6
	comp=N,140nm,1.1s				
F31M			IAML		09 44 43.8
	comp=E,145nm,0.7s				
F31M	**Tsiigehtchic**	**4.39 113**	P	**Pn**	**09 43 28.0 +1.0**
	baz=303,SNR=55				
I28M	**Miner Creek**	**4.41 156**		**Pn**	**09 43 28.9 +1.3**
I28M	**Miner Creek**	**4.41 156**	IAML		09 44 25.5
	comp=E,150nm,0.7s				
I28M			IAML		09 44 53.1
	comp=N,125nm,1.1s				
I28M	**Miner Creek**	**4.41 156**	P	**Pn**	**09 43 28.8 +1.3**
	baz=340				
I28M			S	**Sn**	**09 44 20.9 +1.4**
	baz=340				
D20K	**Etivluk River**	**4.51 265**		**Pn**	**09 43 30.5 +1.7**
D20K	**Etivluk River**	**4.51 265**	IAML		09 45 16.4
	comp=N,95nm,1.1s				
D20K			IAML		09 45 19.6
	comp=E,89nm,1.1s				
D20K	**Etivluk River**	**4.51 265**	P	**Pn**	**09 43 30.1 +1.3**
	baz=74				
D20K			S	**Sn**	**09 44 21.8 -0.1**
	baz=74				
E20K	**Nigu River**	**4.51 259**		**Pn**	**09 43 30.7 +1.8**
E20K	**Nigu River**	**4.51 259**	P	**Pn**	**09 43 29.7 +0.8**
	baz=68				
E20K			S	**Sn**	**09 44 22.5 +0.6**
	baz=68				
B20K	**Meade River**	**4.52 282**		**Pn**	**09 43 30.1 +1.2**
B20K	**Meade River**	**4.52 282**	IAML		09 44 56.5
	comp=E,143nm,0.9s				
B20K	**Meade River**	**4.52 282**	P	**Pn**	**09 43 30.0 +1.2**
	baz=90				
B20K			S	**Sn**	**09 44 21.5 -0.5**
	baz=90				
G31M	**Satah River**	**4.53 120**		**Pn**	**09 43 29.7 +0.7**
G31M			IAML		09 44 44.4
	comp=E,146nm,1.0s				
G31M	**Satah River**	**4.53 120**	P	**Pn**	**09 43 30.3 +1.3**
	baz=310,SNR=178				
G31M			S	**Sn**	**09 44 23.0 +0.8**
	baz=310				
A21K	**Barrow**	**4.54 299**		**Pn**	**09 43 30.3 +1.1**
A21K	**Barrow**	**4.54 299**	P	**Pn**	**09 43 30.1 +0.9**
	baz=108				
A21K			S	**Sn**	**09 44 22.0 -0.6**
	baz=108				
H22K	**Ishtalitna Cre**	**4.55 220**		**Pn**	**09 43 29.9 +0.6**
H22K			IAML		09 44 50.5
	comp=E,97nm,0.7s				
H22K	**Ishtalitna Cre**	**4.55 220**	P	**Pn**	**09 43 30.1 +0.8**
	baz=33				
H22K			S	**Sn**	**09 44 23.8 +1.0**
	baz=33				
POKR	**Poker Plat Res**	**4.60 197**		**Pn**	**09 43 31.6 +1.7**
POKR	**Poker Plat Res**	**4.60 197**	P	**Pn**	**09 43 30.9 +0.9**
	baz=14				
POKR			S	**Sn**	**09 44 24.2 +0.3**
	baz=14				
G21K	**Allakaket**	**4.61 234**		**Pn**	**09 43 30.7 +0.5**
G21K	**Allakaket**	**4.61 234**	IAML		09 45 01.9
	comp=N,143nm,1.1s				
G21K	**Allakaket**	**4.61 234**	P	**Pn**	**09 43 30.5 +0.4**
	baz=45				
I29M	**Ogilvie Camp,**	**4.76 149**		**Pn**	**09 43 33.0 +0.8**
I29M			IAML		09 44 35.7
	comp=N,120nm,0.5s				
I29M			IAML		09 44 59.8
	comp=E,121nm,0.7s				
I29M	**Ogilvie Camp,**	**4.76 149**	P	**Pn**	**09 43 33.0 +0.8**
	baz=334,SNR=48				
I29M			S	**Sn**	**09 44 28.4 +0.4**
	baz=334				
I23K	**Minto, Yukon-K**	**4.82 207**		**Pn**	**09 43 34.4 +1.4**
I23K			IAML		09 44 58.9
	comp=E,139nm,0.8s				
I23K			IAML		09 45 04.7
	comp=N,130nm,1.0s				
I23K	**Minto, Yukon-K**	**4.82 207**	P	**Pn**	**09 43 34.4 +1.4**
	baz=22				
COLA	**College**	**4.88 199**		**Pn**	**09 43 36.1 +2.3**
COLA	**College**	**4.88 199**	S	**Sn**	**09 44 30.9 +0.1**
	baz=15				
IL01		**4.88 194**		**Pn**	**09 43 35.7 +1.9**
IL31		**4.88 194**		**Pn**	**09 43 35.4 +1.5**
ILAR	**Eielson Array**	**4.88 194**	Pn	**Pn**	**09 43 35.9 +2.0**
	comp=N,2.3nm,0.3s,baz=7.4,slow=14,SNR=79				
ILAR			Sn	**Sn**	**09 44 32.4 +1.4**
	comp=N,9.9nm,0.3s,baz=6.5,slow=24,SNR=11				
ILAR			Lg	Lg	09 44 51.2
	comp=N,10nm,0.3s,baz=11,slow=32,SNR=3.9				
	comp=N,12nm,0.6s				
ILAR	**Eielson Array**	**4.88 194**		**Pn**	**09 43 35.6 +1.7**
F20K	**Avaraart Lake**	**4.94 245**		**Pn**	**09 43 35.7 +1.1**
F20K	**Avaraart Lake**	**4.94 245**	P	**Pn**	**09 43 35.6 +0.9**
	baz=54				
J25K	**Salcha River,**	**4.95 186**		**Pn**	**09 43 36.4 +1.6**
J25K	**Salcha River,**	**4.95 186**	IAML		09 44 58.8
	comp=E,115nm,0.9s				
J25K			IAML		09 45 04.8
	comp=N,79nm,0.6s				
J25K	**Salcha River,**	**4.95 186**	P	**Pn**	**09 43 36.5 +1.6**
	baz=4.5				
J25K			S	**Sn**	**09 44 34.6 +1.8**
	baz=4.5				
IMAR	**Indian Mountai**	**5.07 230**		**Pn**	**09 43 36.6 +0.2**
H21K	**Melozitna Rive**	**5.08 224**		**Pn**	**09 43 37.7 +1.0**
H21K	**Melozitna Rive**	**5.08 224**	IAML		09 45 08.6
	comp=N,84nm,1.1s				
H21K			IAML		09 45 09.2
	comp=E,90nm,1.1s				
H21K	**Melozitna Rive**	**5.08 224**	P	**Pn**	**09 43 37.9 +1.3**
	baz=36				
CCB	**Clear Creek Bu**	**5.09 198**		**Pn**	**09 43 37.9 +1.2**
CCB			IAML		09 44 38.5
	comp=E,69nm,0.6s				
D19K	**Kuna River**	**5.10 265**	IAML		09 45 22.4
	comp=N,88nm,0.9s				
D19K			IAML		09 45 34.7
	comp=E,110nm,1.2s				
D19K	**Kuna River**	**5.10 265**	P	**Pn**	**09 43 38.0 +1.0**
	baz=72				
D19K			S	**Sn**	**09 44 36.1 -0.3**
	baz=72				
MLY	**Manley**	**5.17 212**		**Pn**	**09 43 39.6 +1.8**
MLY	**Manley**	**5.17 212**	P	**Pn**	**09 43 39.3 +1.4**
	baz=26				
E19K	**Redstone River**	**5.22 253**		**Pn**	**09 43 38.9 +0.4**
E19K	**Redstone River**	**5.22 253**	IAML		09 45 15.2
	comp=E,85nm,0.9s				
E19K			IAML		09 45 16.9
	comp=N,81nm,0.7s				
E19K	**Redstone River**	**5.22 253**	P	**Pn**	**09 43 39.0 +0.5**
	baz=61				
HDA	**Harding Lake**	**5.25 193**		**Pn**	**09 43 40.6 +1.7**
HDA			IAML		09 45 09.7
	comp=N,98nm,0.8s				
HDA	**Harding Lake**	**5.25 193**	P	**Pn**	**09 43 40.5 +1.6**
	baz=10				
I30M	**Mount Dempster**	**5.27 141**		**Pn**	**09 43 40.3 +1.1**
I30M	**Mount Dempster**	**5.27 141**	P	**Pn**	**09 43 40.4 +1.1**
	baz=328,SNR=448				
I21K	**Tanana**	**5.29 218**		**Pn**	**09 43 40.5 +1.0**
I21K	**Tanana**	**5.29 218**	P	**Pn**	**09 43 40.5 +1.0**
	baz=31				
WRH	**Wood River Hil**	**5.29 198**		**Pn**	**09 43 41.3 +1.8**
WRH			IAML		09 45 13.4
	comp=N,90nm,0.6s				
WRH			IAML		09 45 14.5
	comp=E,90nm,0.8s				
H31M	**Peel River**	**5.30 130**		**Pn**	**09 43 40.2 +0.6**
H31M	**Peel River**	**5.30 130**	IAML		09 45 21.8
	comp=E,94nm,1.1s				
H31M			IAML		09 45 25.5
	comp=N,92nm,1.2s				
H31M	**Peel River**	**5.30 130**	P	**Pn**	**09 43 39.9 +0.3**
	baz=319,SNR=74				
NEA2	**Nenana**	**5.30 203**		**Pn**	**09 43 40.6 +1.0**
NEA2	**Nenana**	**5.30 203**	P	**Pn**	**09 43 40.8 +1.2**
	baz=19				
C19K	**Lookout Ridge**	**5.46 273**		**Pn**	**09 43 43.3 +1.4**
C19K	**Lookout Ridge**	**5.46 273**	P	**Pn**	**09 43 42.8 +0.9**
	baz=78				
SCRK	**Sand Creek**	**5.57 179**		**Pn**	**09 43 45.4 +1.9**
SCRK	**Sand Creek**	**5.57 179**	P	**Pn**	**09 43 45.2 +1.7**
	baz=359,SNR=79				
K27K	**Chicken**	**5.58 170**		**Pn**	**09 43 45.3 +1.9**
J29N	**Klondike Camp**	**5.61 152**		**Pn**	**09 43 44.7 +0.8**
J29N	**Klondike Camp**	**5.61 152**	P	**Pn**	**09 43 45.2 +1.3**
	baz=338,SNR=19				
F19K	**Shaleruckik Mo**	**5.73 248**		**Pn**	**09 43 46.0 +0.6**
F19K	**Shaleruckik Mo**	**5.73 248**	P	**Pn**	**09 43 45.9 +0.4**
	baz=56				
H20K	**Anotleneega Mo**	**5.75 230**		**Pn**	**09 43 46.6 +0.8**
H20K	**Anotleneega Mo**	**5.75 230**	P	**Pn**	**09 43 46.2 +0.4**
	baz=40				
K24K	**Donnelly Dome**	**5.78 187**		**Pn**	**09 43 48.2 +2.0**
K24K	**Donnelly Dome**	**5.78 187**	P	**Pn**	**09 43 47.9 +1.7**
	baz=5.3				
RIDG	**Independent Ri**	**5.81 183**	P	**Pn**	**09 43 48.1 +1.4**
	baz=2.0				
J30M	**Hart River**	**5.84 144**		**Pn**	**09 43 48.1 +0.9**
J30M	**Hart River**	**5.84 144**	P	**Pn**	**09 43 48.4 +1.2**
	baz=332				
A19K	**Wainwright**	**5.86 285**		**Pn**	**09 43 48.3 +1.1**
A19K	**Wainwright**	**5.86 285**	P	**Pn**	**09 43 48.2 +1.0**
	baz=89				
DOT	**Dot Lake**	**5.90 179**		**Pn**	**09 43 49.2 +1.4**
G19K	**Purcell Mounta**	**5.93 241**		**Pn**	**09 43 48.4 +0.2**
G19K	**Purcell Mounta**	**5.93 241**	P	**Pn**	**09 43 48.7 +0.4**
	baz=49				
BPAW	**Bear Paw Mtn.**	**6.06 209**		**Pn**	**09 43 51.5 +1.4**
BPAW	**Bear Paw Mtn.**	**6.06 209**	P	**Pn**	**09 43 51.1 +1.0**
	baz=23				
MCK	**McKinley**	**6.11 200**		**Pn**	**09 43 52.6 +1.8**
MCK	**McKinley**	**6.11 200**	P	**Pn**	**09 43 52.5 +1.7**
	baz=16				
C18K	**Utukok River**	**6.14 270**		**Pn**	**09 43 51.7 +0.5**
C18K	**Utukok River**	**6.14 270**	P	**Pn**	**09 43 51.7 +0.5**
	baz=74				
H19K	**Roundabout Mou**	**6.16 235**	P	**Pn**	**09 43 52.8 +1.3**
	baz=44				
K29M	**Barlow Dome**	**6.29 152**		**Pn**	**09 43 54.9 +1.7**
K29M	**Barlow Dome**	**6.29 152**	P	**Pn**	**09 43 54.7 +1.4**
	baz=338				
E18K	**Tukpahlearik C**	**6.38 259**		**Pn**	**09 43 55.6 +1.2**
E18K	**Tukpahlearik C**	**6.38 259**	P	**Pn**	**09 43 55.7 +1.2**
	baz=63				
RND	**Reindeer**	**6.42 199**		**Pn**	**09 43 57.0 +2.0**
F18K	**Selawik**	**6.48 250**		**Pn**	**09 43 57.0 +1.3**
F18K	**Selawik**	**6.48 250**	P	**Pn**	**09 43 56.9 +1.2**
	baz=56				
CHUM	**Lake Minchumin**	**6.50 213**	P	**Pn**	**09 43 57.6 +1.5**
	baz=26				
L26K	**Log Cabin Wild**	**6.54 177**		**Pn**	**09 43 58.6 +2.1**
L26K	**Log Cabin Wild**	**6.54 177**	P	**Pn**	**09 43 58.9 +2.3**
	baz=357,SNR=26				
BCAR	**Beaver Creek A**	**6.56 170**		**Pn**	**09 43 58.5 +1.6**
L27K	**Beaver Creek,**	**6.56 170**		**Pn**	**09 43 58.6 +1.7**
L27K	**Beaver Creek,**	**6.56 170**	P	**Pn**	**09 43 58.3 +1.4**
	baz=352				
KTH	**Kantishna Hill**	**6.56 207**		**Pn**	**09 43 57.1 +0.1**
TRF	**Thorofare Moun**	**6.56 205**	P	**Pn**	**09 43 58.7 +1.6**
	baz=19				
BC02	**Beaver Creek A**	**6.58 170**		**Pn**	**09 43 58.9 +1.7**
G18K	**Tagagawik**	**6.58 243**		**Pn**	**09 43 58.2 +1.0**
G18K	**Tagagawik**	**6.58 243**	P	**Pn**	**09 43 58.4 +1.2**
	baz=50				
DHY	**Denali Highway**	**6.60 193**		**Pn**	**09 44 00.3 +2.8**
DHY	**Denali Highway**	**6.60 193**	P	**Pn**	**09 44 00.6 +3.0**
	baz=9.6				
PAX	**Paxson**	**6.60 185**		**Pn**	**09 43 59.9 +2.3**
PAX	**Paxson**	**6.60 185**	P	**Pn**	**09 43 59.3 +1.7**
	baz=3.7				
MENT	**Mentasta**	**6.62 178**		**Pn**	**09 43 59.6 +1.9**
J20K	**Nowinta River**	**6.63 221**		**Pn**	**09 43 58.8 +0.9**
J20K	**Nowinta River**	**6.63 221**	P	**Pn**	**09 43 58.5 +0.6**
	baz=32				
A36M	**Sachs Harbour**	**6.73 60**		**Pn**	**09 43 59.2 +0.1**
A36M	**Sachs Harbour**	**6.73 60**	P	**Pn**	**09 43 59.0 -0.1**
	baz=258				
MAYO	**Mayo, Yukon**	**6.81 147**	P	**Pn**	**09 44 00.9 +0.6**
	baz=334				
GCSA	**Galena City Sc**	**6.87 232**	P	**Pn**	**09 44 02.6 +1.5**
	baz=40				
C17K	**DeLong Mountai**	**6.89 270**		**Pn**	**09 44 00.9 -0.4**
C17K	**DeLong Mountai**	**6.89 270**	P	**Pn**	**09 44 01.4 0.0**
	baz=72				
L29M	**L29M**	**6.89 156**		**Pn**	**09 44 02.6 +1.2**
L29M	**L29M**	**6.89 156**	P	**Pn**	**09 44 02.4 +1.0**
	baz=342				
RDOG	**Red Dog Mine**	**6.93 267**		**Pn**	**09 44 02.2 +0.2**
RDOG	**Red Dog Mine**	**6.93 267**	P	**Pn**	**09 44 02.2 +0.2**
	baz=69				
WAT1	**Susitna Watana**	**6.95 197**		**Pn**	**09 44 04.5 +2.3**
WAT1	**Susitna Watana**	**6.95 197**	P	**Pn**	**09 44 04.0 +1.8**
	baz=13				
WAT7	**Susitna Watana**	**6.97 198**		**Pn**	**09 44 05.0 +2.3**
H18K	**Honhosa River**	**7.00 238**		**Pn**	**09 44 03.6 +0.7**
H18K	**Honhosa River**	**7.00 238**	P	**Pn**	**09 44 02.8 -0.1**
	baz=45				
C36M	**Paulatuk**	**7.09 82**	P	**Pn**	**09 44 03.1 -1.0**
	baz=281				
F17K	**Baldwin Pennin**	**7.10 252**		**Pn**	**09 44 04.1 -0.1**
F17K	**Baldwin Pennin**	**7.10 252**	P	**Pn**	**09 44 04.3 0.0**
	baz=56				
D17K	**Noatak River**	**7.13 264**		**Pn**	**09 44 04.3 -0.3**
D17K	**Noatak River**	**7.13 264**	P	**Pn**	**09 44 04.4 -0.3**
	baz=66				
J19K	**Poorman**	**7.14 225**	P	**Pn**	**09 44 05.5 +0.6**
	baz=34				
M26K	**Nabesna, AK**	**7.17 175**	P	**Pn**	**09 44 07.2 +1.9**
	baz=356,SNR=93				
M27K	**Edge Creek, AK**	**7.26 171**		**Pn**	**09 44 08.7 +2.1**
M27K	**Edge Creek, AK**	**7.26 171**	P	**Pn**	**09 44 07.8 +1.2**
	baz=353				
BVCY	**Beaver Creek**	**7.27 168**	P	**Pn**	**09 44 08.4 +1.8**
	baz=350,SNR=83				
K20K	**Telida**	**7.33 217**		**Pn**	**09 44 08.1 +0.7**
K20K	**Telida**	**7.33 217**	P	**Pn**	**09 44 08.2 +0.7**
	baz=28				
PPLA	**Purkeypile**	**7.38 210**		**Pn**	**09 44 09.7 +1.3**
PPLA	**Purkeypile**	**7.38 210**	P	**Pn**	**09 44 09.6 +1.3**
	baz=22				
G17K	**Kiwalik Mounta**	**7.47 245**		**Pn**	**09 44 10.3 +1.0**
G17K	**Kiwalik Mounta**	**7.47 245**	P	**Pn**	**09 44 10.1 +0.8**
	baz=50				
M29M	**Somme Creek**	**7.48 159**		**Pn**	**09 44 11.1 +1.5**
M29M	**Somme Creek**	**7.48 159**	P	**Pn**	**09 44 11.1 +1.5**
	baz=344,SNR=41				
M24K	**Tolsona, Glenn**	**7.49 187**	P	**Pn**	**09 44 10.7 +1.0**
	baz=5.2				
L22K	**Petersville**	**7.51 204**		**Pn**	**09 44 12.3 +2.4**
WACK	**Wrangell Chich**	**7.57 180**		**Pn**	**09 44 13.3 +2.4**
M30M	**Minto, Yukon**	**7.59 153**	P	**Pn**	**09 44 11.8 +0.7**
	baz=340,SNR=35				
H17K	**Granite Mounta**	**7.62 240**	P	**Pn**	**09 44 12.2 +0.9**
	baz=46				
C16K	**Lisburne Hills**	**7.71 271**		**Pn**	**09 44 12.8 +0.1**
C16K	**Lisburne Hills**	**7.71 271**	P	**Pn**	**09 44 12.8 +0.1**
	baz=71				
SCM	**Sheep Creek Mo**	**7.83 191**	P	**Pn**	**09 44 16.9 +2.5**
	baz=8.0				
J18K	**Innoko River**	**7.85 225**	P	**Pn**	**09 44 15.8 +1.1**
	baz=34				
YUK2	**White River**	**7.89 168**		**Pn**	**09 44 17.6 +2.4**
M23K	**Glacier View**	**7.89 192**	P	**Pn**	**09 44 16.8 +1.6**
	baz=8.9				
SML	**Sawmill**	**7.93 194**	P	**Pn**	**09 44 16.1 +0.4**
	baz=10				
YUK3	**Moose Creek**	**7.93 167**	P	**Pn**	**09 44 16.9 +1.0**
	baz=350,SNR=30				
N25K	**Chitina, Valde**	**7.95 181**	P	**Pn**	**09 44 15.8 -0.3**
	baz=0.9				
G16K	**Koyuk River**	**8.09 248**	P	**Pn**	**09 44 17.6 -0.2**
	baz=51				
KLU	**Klutina**	**8.10 186**	P	**Pn**	**09 44 18.8 +0.8**
	baz=4.2				
SKT	**Skwentna**	**8.14 205**	Pn	**Pn**	**09 44 20.6 +2.0**
SKT	**Skwentna**	**8.14 205**	P	**Pn**	**09 44 19.3 +0.7**
	baz=18				
MCARA	**McCarthy VSAT**	**8.19 176**		**Pn**	**09 44 22.0 +2.8**
MCARA	**McCarthy VSAT**	**8.19 176**	P	**Pn**	**09 44 21.6 +2.4**
	baz=357,SNR=42				
PMR	**Palmer**	**8.22 197**	P	**Pn**	**09 44 21.7 +2.2**
	baz=12				
KNK	**Knik Glacier**	**8.33 194**	P	**Pn**	**09 44 23.0 +1.8**

baz=37
H16K Elim 8.54 244 P Pn 09 44 23.9 -0.2
baz=47
L19K White Mountain 8.55 216 Pn 09 44 25.1 +1.0
L19K White Mountain 8.55 216 P Pn 09 44 24.6 +0.4
baz=26
BALM Baldy 8.56 174 Pn 09 44 27.5 +3.1
BARN Barnard Glacie 8.56 172 Pn 09 44 27.6 +3.0
BMRM Bremner River 8.59 181 Pn 09 44 28.3 +3.5
BMRM Bremner River 8.59 181 P Pn 09 44 27.3 +2.5
baz=0.8
N30M Aishikik Lake 8.61 157 Pn 09 44 26.6 +1.5
N30M Aishikik Lake 8.61 157 P Pn 09 44 26.6 +1.5
baz=343,SNR=26
STLK Strandline Lak 8.64 205 Pn 09 44 27.6 +2.1
F15K North Star Dit 8.66 254 P Pn 09 44 25.7 +0.1
baz=55
KIAG Kiagna River 8.67 174 Pn 09 44 29.9 +3.9
CTG Chitna Glacier 8.68 171 P Pn 09 44 28.4 +2.4
baz=353,SNR=56
M19K Big River Lodg 8.71 214 Pn 09 44 28.2 +1.9
M19K Big River Lodg 8.71 214 P Pn 09 44 27.4 +1.1
baz=24
RC01 Rabbit Creek A 8.77 198 P Pn 09 44 28.4 +1.2
baz=13
N31M Braeburn, Yuko 8.79 153 P Pn 09 44 28.1 +0.6
baz=340,SNR=5.5
CRQM Cirque 8.81 177 Pn 09 44 31.8 +3.8
CRQE Cirque 8.82 176 P Pn 09 44 30.1 +2.1
baz=357
TGL Tana Glacier 8.82 176 Pn 09 44 31.3 +3.3
LOGN Logan Glacier 8.84 170 Pn 09 44 31.3 +3.1
K17K Iditarod 8.88 227 P Pn 09 44 29.4 +0.7
baz=34
G15K Niukluk 8.89 249 P Pn 09 44 28.8 0.0
baz=50
SPNN North Nagishla 8.90 207 Pn 09 44 31.6 +2.4
L18K Granite Mounta 8.91 221 Pn 09 44 29.6 +0.5
L18K Granite Mounta 8.91 221 P Pn 09 44 29.6 +0.5
baz=29
O28M Mount Upton 8.95 167 P Pn 09 44 32.1 +2.3
baz=351,SNR=10
YUK6 Outpost Mounta 8.95 161 P Pn 09 44 31.6 +1.7
baz=347,SNR=52
N20K Mount Spurr 8.99 206 P Pn 09 44 32.4 +2.1
baz=18
EYAK Cordova Ski Ar 9.03 185 P Pn 09 44 32.6 +1.9
baz=3.4
J16K Anvik River 9.04 234 Pn 09 44 33.1 +2.1
J16K Anvik River 9.04 234 P Pn 09 44 32.4 +1.5
baz=39
HYT Haines Junctio 9.17 159 P Pn 09 44 33.7 +1.0
baz=345,SNR=17
RAGM Ragged Mountai 9.18 181 Pn 09 44 36.6 +3.8
RKAV Rock Avalanche 9.34 171 Pn 09 44 38.7 +3.6
F14K Arctic Creek 9.36 255 P Pn 09 44 35.1 -0.1
baz=54
O22K Cooper Landing 9.37 197 P Pn 09 44 35.2 -0.2
baz=12
L17K Donlin 9.37 225 P Pn 09 44 36.0 +0.6
baz=32
M18K Stony River 9.37 216 Pn 09 44 36.4 +1.0
M18K Stony River 9.37 216 P Pn 09 44 36.2 +0.8
baz=26
YUK7 Dusty Glacier 9.38 161 Pn 09 44 38.3 +2.6
O30N Mendenhall 9.42 155 P Pn 09 44 37.1 +1.0
baz=342,SNR=12
MESA MESA 9.43 173 P Pn 09 44 40.1 +3.6
baz=355,SNR=38
O29M Mount Kennedy 9.56 163 P Pn 09 44 38.8 +0.7
baz=348
N32M Quiet Lake 9.58 146 Pn 09 44 38.6 +0.2
N32M Quiet Lake 9.58 146 P Pn 09 44 37.4 -1.0
baz=336
ANM Nome 9.61 249 Pn 09 44 39.6 +1.1
ANM Nome 9.61 249 P Pn 09 44 38.9 +0.3
baz=50
PINM Pinnacle 9.61 168 P Pn 09 44 42.0 +3.2
baz=352,SNR=9.8
SEW Seward 9.71 196 P Pn 09 44 38.2 -1.8
baz=11
WHY Whitehorse 9.71 152 P Pn 09 44 40.5 +0.3
baz=340,SNR=8.1
N19K Bonanza Creek 9.73 211 P Pn 09 44 38.4 -2.0
baz=22
M17K Holitna River 9.80 220 P Pn 09 44 42.2 +0.9
baz=28
P30M Million Dollar 9.92 158 P Pn 09 44 44.2 +1.2
baz=345
L16K Owhat River 10.03 226 Pn Pn 09 44 46.3 +1.9
L16K Owhat River 10.03 226 P Pn 09 44 45.2 +0.9
baz=32
K15K Wolf Creek Mou 10.09 233 P Pn 09 44 46.5 +1.2
baz=37
BRLK Bradley Lake 10.20 199 Pn 09 44 48.4 +1.6
O19K Port Alsworth 10.28 209 Pn 09 44 47.9 +0.1
WRGLY Wrigley 10.40 117 Pn 09 44 49.8 +0.4
WRGLY Wrigley 10.40 117 P Pn 09 44 48.8 -0.7
baz=316,SNR=6.7
M16K Timber Creek 10.49 223 P Pn 09 44 50.9 +0.2
baz=29
P33M Teslin, Yukon 10.50 147 P Pn 09 44 51.4 +0.4
baz=338,SNR=5.2
N17K Nushagak Hills 10.53 217 P Pn 09 44 51.5 +0.2
baz=26
L15K Ungalak Mounta 10.58 230 P Pn 09 44 52.0 0.0
baz=35
N16K Nishlik Lake 10.93 221 P Pn 09 44 54.9 -1.9
baz=28
WTLY Watson Lake, Y 11.45 138 P Pn 09 45 04.3 +0.4
baz=332
Q32M Nakina River 11.77 148 Pn 09 45 10.4 +2.0
Q32M Nakina River 11.77 148 P Pn 09 45 10.0 +1.5
baz=339
KOTAN Kotaneelee Air 12.66 128 P Pn 09 45 21.6 +1.2
baz=326
DLBC Dease Lake 12.70 144 Pn Pn 09 45 21.2 +0.2
comp=N,0.8nm,0.3s,baz=344,slow=10,SNR=20
DLBC Sn Sn 09 47 37.8 -5.1
comp=N,0.1nm,0.3s,baz=18,slow=24,SNR=1.4
DLBC Lg Lg 09 49 01.0
baz=12,slow=26,SNR=3.6
comp=N,2.6nm,0.4s
DLBC Dease Lake 12.70 144 P Pn 09 45 21.7 +0.8
baz=337,SNR=7.5
S34M Telegraph Cree 12.97 147 P Pn 09 45 26.1 +1.5
baz=339
YKAW3 Yellowknife Wh 13.77 106 Pn 09 45 32.5 -2.9
YKA Yellowknife Ar 13.81 106 Pn Pn 09 45 33.1 -2.9
comp=N,1.3nm,0.3s,baz=316,slow=13,SNR=47
YKA Sn Sn 09 47 55.5 -14
comp=N,0.8nm,0.3s,baz=272,slow=19,SNR=8.7
comp=N,3.6nm,0.5s
YKAW1 Yellowknife Wh 13.86 106 Pn 09 45 33.7 -3.0
RES Resolute Bay 15.56 49 Pn Pn 09 45 56.0 -3.6
comp=N,1.6nm,0.3s,baz=262,slow=13,SNR=29
RES Sn Sn 09 48 36.6 -16
comp=N,1.1nm,0.3s,baz=191,slow=17,SNR=6.9
RES Resolute Bay 15.56 49 Pn 09 45 56.2 -3.4
RES IAmb IAmb 09 46 07.5
comp=Z,6.9nm,0.8s
BILL Bilibino 17.59 289 Pn Pn 09 46 24.1 -1.4
BLKN Baker Lake 19.15 82 P 09 46 43.5 -0.1
POIN Pond Inlet 20.68 51 P 09 47 00.5 +0.2
POIN IAmb IAmb 09 47 07.3
comp=Z,3.6nm,0.8s
ILON Igloolik, Nuna 21.08 61 P 09 47 03.5 -1.1
ILON IAmb IAmb 09 47 11.8
comp=Z,5.4nm,0.6s
EDM Edmonton 21.64 123 P 09 47 09.2 -1.6
FCC Fort Churchill 23.59 92 P 09 47 31.5 +0.4
FCC IAmb IAmb 09 47 48.2
comp=Z,3.6nm,0.7s
SHEM Shemya Is, Ala 25.46 250 LR LR 09 57 18.3
comp=Z,42nm,19.6s,baz=55,slow=35
EGMT Eagleton 27.31 124 P P 09 48 06.1 +0.8
EGMT IAmb IAmb 09 48 08.7
comp=Z,4.5nm,0.8s
MA2 Magadan 28.19 282 LR LR 10 00 09.4
comp=Z,51nm,20.4s,baz=7.5,slow=38
ULM Lac du Bonnet 29.79 105 P P 09 48 28.4 +1.1
comp=Z,0.8nm,0.6s,baz=301,slow=5.9,SNR=1.8
comp=Z,0.8nm,0.6s
PDAR Pinedale Array 32.17 128 P P 09 48 51.6 +3.0
comp=Z,1.3nm,0.7s,baz=14,slow=5.5,SNR=12
comp=Z,1.3nm,0.7s
PDAR Pinedale Array 32.17 128 P P 09 48 47.9 -0.7

HWUT Hardware Ranch 32.71 132 P 09 48 53.5 +0.2
YAK Yakutsk 33.20 301 LR LR 10 05 52.0
comp=Z,68nm,19.2s,baz=329,slow=42
NVAR Mina Array Bea 34.11 142 P P 09 49 09.6 +4.0
comp=Z,1.6nm,0.8s,baz=345,slow=7.0,SNR=11
comp=Z,1.6nm,0.8s
NVAR Mina Array Bea 34.11 142 P P 09 49 04.2 -1.3
SCHQ Schefferville 36.10 73 P P 09 49 22.7 +0.4
comp=Z,2.2nm,0.6s,baz=263,slow=7.3,SNR=6.5
comp=Z,2.2nm,0.6s
SCHQ Schefferville 36.10 73 P P 09 49 22.4 0.0
TXAR Lajitas Array 46.39 128 P P 09 50 49.4 +2.2
comp=Z,0.4nm,0.4s,baz=350,slow=7.6,SNR=19
comp=Z,0.4nm,0.4s
TXAR Lajitas Array 46.39 128 P P 09 50 47.5 +0.3
KSRS Korea Array 54.74 283 P P 09 51 51.9 +1.8
comp=Z,0.8nm,0.6s,baz=21,slow=8.2,SNR=3.3
comp=Z,0.8nm,0.6s
HHC Hu-ho-hao-te 57.02 299 eP P 09 52 04.6 -1.9
HHC pmax pmax
comp=Z,15nm,0.6s
HHC pmax pmax
comp=Z,130nm,5.6s
MKAR Makanchi Array 59.09 324 P P 09 52 20.9 +0.1
comp=Z,0.2nm,0.5s,baz=44,slow=6.0,SNR=2.1
comp=Z,0.2nm,0.5s
MKAR Makanchi Array 59.09 324 PcP PcP 09 53 08.5 -1.0
AKASG Malin Array Be 60.00 5 P P 09 52 28.1 +1.1
comp=Z,1.3nm,0.6s,baz=356,slow=7.0,SNR=5.3
comp=Z,1.3nm,0.6s
AKASG Malin Array Be 60.00 5 P P 09 52 26.9 -0.1
AKASG IAmb IAmb 09 52 36.8
comp=Z,1.5nm,0.9s

*ASRS **24** 09:47:02.0±0.7,53°.62N×87°.85E,h0km,M2.7(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 24 09:47:05.1±2.9,53°.56N×87°.79E,h0km,mbtmp3.1/2, ML2.7/2,Error ellipse: s-maj=27.3km s-min=20.5km az=83.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.81	284	I	I	09 58 30.0	
	0.1nm,0.7s,baz=99,slow=306,SNR=8.9						
ZALV	Zalesovo Beam	1.81	284	Pn	Pn	09 47 37.0	-0.5
	1.4nm,0.3s,baz=102,slow=15,SNR=17						
ZALV				Sn	Sb	09 48 01.8	-0.4
	2.1nm,0.3s,baz=105,slow=26,SNR=11						
KURBB	Kurchatov Arra	6.42	247	Pn	Pn	09 48 41.2	+0.4
	0.1nm,0.3s,baz=62,slow=14,SNR=11						
KURBB				Sn	Sn	09 49 55.3	+0.6
	baz=56,slow=31,SNR=1.7						
KURBB				Lg	Lg	09 50 27.2	
	baz=55,slow=31,SNR=4.4						
	1.6nm,0.5s						
MKAR	Makanchi Array	7.63	210	Pn	Pn	09 48 58.8	+1.3
	0.2nm,0.3s,baz=28,slow=12,SNR=7.2						
MKAR				Lg	Lg	09 51 04.2	
	0.1nm,0.3s,baz=38,slow=31,SNR=6.0						
	0.4nm,0.5s						

*ASRS **24** 09:50:08.0±1.1,54°.19N×87°.21E,h0km,M2.3(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 24 09:50:07.8±3.6,54°.20N×87°.49E,h0km,mbtmp2.6/2, ML2.2/2,Error ellipse: s-maj=31.3km s-min=19.4km az=47.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.60	262	I	I	09 59 35.7	
	0.2nm,1.1s,baz=82,slow=334,SNR=1.2						
ZALV	Zalesovo Beam	1.60	262	Pg	Pn	09 50 35.6	-1.6
	2.5nm,0.3s,baz=80,slow=16,SNR=18						
ZALV				Lg	Lg	09 50 59.1	
	4.1nm,0.3s,baz=80,slow=26,SNR=9.5						
KURBB	Kurchatov Arra	6.55	240	Pn	Pn	09 51 45.6	+0.4
	0.1nm,0.3s,baz=54,slow=14,SNR=2.6						
	0.3nm,0.3s						
MKAR	Makanchi Array	8.12	206	Pn	Pn	09 52 08.4	+1.6
	baz=24,slow=14,SNR=0.9						
	0.1nm,0.3s						

*CATAC **24** 09:53:43.8±0.5,1°.N±2°×7°.9W±°,h0km,M3.8/11, MLv3.8/11,Error ellipse: s-maj=11.5km s-min=4.4km az=93.6,confirmed*
*IGQ **24** 09:53:46.3±0.2,1°.N±3°×7°.9W±°,h17km±2km,M3.8/43, Mjma3.6/43,ML4.0/42,MLv3.5/42,Ms(BB)4.0/10, MwMwp5.7/1,Mwp5.8/1*
*RSNC **24** 09:53:47.3±0.0,1°.N±1°×7°.9W±°,h38km±5km,M3.3,mB6.1, mb4.1,ML2.8,Mw(mB)5.7*
ISC 24 09:53:44.9±1.2,1°.19N±0°.03×78°.80W±0°.02,h17km±9km, n113,σ1°58/135,Colombia-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNLR	San Lorenzo-Es	0.11	332	P	Pb	09 53 53.3	+4.7
SNLR				S	Sb	09 53 59.7	+8.6
ALIT	Ecuador-Imbabu	0.59	132	P	Pg	09 53 56.6	0.0
LITE1	Lita	0.59	132	P	Pg	09 53 56.7	+0.1
RVRD	Rio Verde	0.60	258	P	Pg	09 53 58.1	+1.2
CHMA	Chilma	0.80	114	P	Pg	09 53 58.7	-1.9
AES2	Ecuador-Puerto	0.88	257	P	Pb	09 54 02.2	+0.6
ECEN	Cerro Negro	0.90	114	P	Pb	09 54 02.3	0.0
LNGL	El Angel-Carch	0.91	120	P	Pb	09 54 02.6	+0.1
PAC1	Pacto, Paraso	0.92	180	P	Pb	09 54 01.1	-1.4
PAC1	Pacto, Paraso	0.92	180	P	Pb	09 54 01.0	-1.4
PAC1				S	Sb	09 54 11.5	-2.9
URCU	Urcuqui	0.92	144	P	Pb	09 54 02.2	-0.4
CHL1	Volc¡n Chiles	0.94	115	P	Pb	09 54 02.4	-0.5
CHL2	Volc¡n Chiles	0.96	114	P	Pb	09 54 03.3	-0.1
AMA1	Acelerografo,	0.96	255	P	Pb	09 54 03.7	+0.6
CUSE	Cuicocha Este	0.96	156	P	Pb	09 54 02.6	-0.8
CUSE	Cuicocha Este	0.96	156	P	Pb	09 54 02.9	-0.5
CUSE				S	Sb	09 54 14.8	-1.2
COTA	Cotacachi	0.97	152	P	Pb	09 54 02.5	-0.9
CUIC	Cuicocha-Domo	0.98	154	P	Pb	09 54 02.8	-0.9
CMBC	Cumbal	1.00	104	P	Pb	09 54 03.6	-0.4
CMBC	Cumbal	1.00	104	P	Pb	09 54 03.2	-0.8
OTAV	Otavalo	1.01	160	P	Pb	09 54 03.4	-0.8
OTAV				S	Sb	09 54 15.8	-1.5
OTAV	Otavalo	1.01	160	P	Pb	09 54 02.9	-1.2
OTAV	Otavalo	1.01	160	P	Pb	09 54 03.5	-0.6
OTAV				S	Sb	09 54 15.2	-2.1
AAT1	Ecuador-Atunta	1.03	146	P	Pb	09 54 04.8	+0.3
ATON	Ecuador-Tonsup	1.06	254	P	Pb	09 54 04.7	-0.1
IMBA	Imbabura, San	1.09	147	P	Pb	09 54 05.9	+0.4
IMBA				S	Sn	09 54 21.1	+0.5
IMBA	Imbabura, San	1.09	147	P	Pb	09 54 04.3	-1.2
YAHU	Yahuarcocha	1.09	138	P	Pb	09 54 05.6	+0.1
AV18	Acelerografo,	1.11	218	P	Pn	09 54 06.1	+0.5
BV15	Puerto Quito-O	1.11	203	P	Pn	09 54 04.9	-0.8
TULM	Tulcn-Chalpat	1.11	115	P	Pb	09 54 06.0	0.0
TULM	Tulcn-Chalpat	1.11	115	P	Pb	09 54 05.9	0.0
TULM	Tulcn-Chalpat	1.11	115	P	Pb	09 54 05.9	0.0
TULM				S	Sg	09 54 21.0	-0.2
AATC	Ecuador-Atacam	1.12	253	P	Pn	09 54 05.3	-0.4
APR2	Miler	1.12	189	P	Pb	09 54 05.4	-0.4
ATUL	Tulcn	1.15	111	P	Pg	09 54 07.3	+0.1
PULU	Pululahua	1.20	166	P	Pn	09 54 06.8	-0.4
PULU				S	Sb	09 54 22.1	-0.6
PULU	Pululahua	1.20	166	P	Pn	09 54 06.5	-0.7
APR1	Acelerografo,	1.24	172	P	Pn	09 54 07.5	-0.3
YANA	Yana	1.32	170	P	Pn	09 54 09.3	+0.3
FENY	Casa Vinicio C	1.37	167	P	Pn	09 54 10.8	+1.3
TERV	Terraza Guagua	1.37	172	P	Pn	09 54 09.8	+0.1
GGPC	Guagua Pichinc	1.38	172	P	Pn	09 54 09.7	-0.1
GGPC	Guagua Pichinc	1.38	172	P	Pn	09 54 09.7	-0.1
ANGU	Angureal	1.38	145	P	Pn	09 54 10.5	+0.6
PUEM	Granja Avicola	1.39	162	P	Pn	09 54 10.5	+0.8
CAYR	Refugio Cayamb	1.41	146	P	Pn	09 54 10.5	+0.2
JUA2	San Juan 2	1.41	172	P	Pn	09 54 10.7	+0.5
GGPT	Toaza - Volcan	1.42	173	P	Pn	09 54 10.6	+0.4
GCUF	Volcan Galeras	1.45	89	P	Pn	09 54 10.5	-0.2
GCUF				S	Sn	09 54 28.2	-1.4
BONI	La Bonita	1.46	120	P	Pn	09 54 11.7	+1.0
BONI	La Bonita	1.46	120	P	Pn	09 54 11.3	+0.6
BONI				S	Sn	09 54 29.6	0.0
ZALD	Colegio Gonzal	1.47	170	P	Pn	09 54 11.8	+0.9
ASDO	Santo Domingo	1.48	193	P	Pn	09 54 10.8	0.0
TING	Casa Alexandra	1.50	167	P	Pn	09 54 12.7	+1.3

TOMA Boca Toma-Volc 1.72 168 P Pn 09 54 15.8 +1.4
REVS Reventador Sur 1.74 138 P Pn 09 54 15.5 +0.9
ANTI Antisana 1.75 159 P Pn 09 54 15.8 +0.8
BBAC Balboa, Cauca 1.75 62 P Pn 09 54 14.5 -0.2
BBAC Balboa, Cauca 1.75 62 P Pn 09 54 14.1 -0.6
BBAC S Sn 09 54 35.3 -1.4
ANTG Antisana-Guama 1.77 162 P Pn 09 54 15.7 +0.5
PITA Cotopaxi Volc 1.78 168 P Pn 09 54 16.3 +1.1
ANTS Antisana-Sarah 1.79 160 P Pn 09 54 16.7 +1.2
ANTS S Sn 09 54 38.8 +0.6
ANTS Antisana-Sarah 1.79 160 P Pn 09 54 17.0 +1.4
CASC Dorado de Casc 1.79 126 P Pb 09 54 17.2 -0.2
CASC Dorado de Casc 1.79 126 P Pb 09 54 17.3 0.0
CASC S Sb 09 54 40.0 +0.4
ANTM Antisana-La Mi 1.81 162 P Pn 09 54 17.0 +1.2
SUCR Mariscal Sucre 1.84 171 P Pn 09 54 17.9 +1.8
NAS2 Nasa 1.85 170 P Pn 09 54 18.1 +1.8
VC1 Cotopaxi 1 1.86 168 P Pn 09 54 17.4 +0.9
BVC2 Cotopaxi Volca 1.88 168 P Pn 09 54 18.4 +1.7
BNAS Cotopaxi Volca 1.88 170 P Pn 09 54 18.4 +1.8
CRUC La Cruz 1.88 79 P Pn 09 54 17.8 +1.3
BREF Cotopaxi Volca 1.88 169 P Pn 09 54 18.3 +1.5
ILLI Illinizas Sur 1.90 178 P Pn 09 54 18.4 +1.6
BTAM Cotopaxi Volca 1.90 168 P Pn 09 54 18.9 +2.0
GR1C Gorgona, Isla 1.91 19 P Pn 09 54 16.6 0.0
GR1C S Sn 09 54 42.4 +2.3
TAMB Tambo 1.92 167 P Pn 09 54 18.9 +1.6
SLOR San Lorenzo - 1.93 171 P Pb 09 54 19.7 -0.2
SLOR S Sb 09 54 43.9 0.0
SLOR San Lorenzo - 1.93 171 P Pn 09 54 18.8 +1.4
BMOR Cotopaxi Volca 1.94 170 P Pn 09 54 19.2 +1.6
BRRN Barrancas-Volc 1.99 171 P Pn 09 54 20.2 +2.1
VCES Cotopaxi 2.02 169 P Pn 09 54 20.8 +2.2
VCES S Sn 09 54 45.7 +2.0
VCES Cotopaxi 2.02 169 P Pn 09 54 20.3 +1.7
PIS1 Pisayambo 2.27 170 P Pn 09 54 24.7 +2.6
PECV Mancha de Ca P 2.32 213 P Pb 09 54 26.1 -0.2
ABH2 Ecuador-Univer 2.44 221 P Pn 09 54 24.7 +0.8
POPC Popayan, Colom 2.51 58 P Pn 09 54 26.0 +1.0
POPC S Sn 09 54 54.9 -0.4
JUI6 Juive 2.62 173 P Pn 09 54 27.3 +0.6
BMAS Trigal station 2.69 173 P Pn 09 54 28.6 +0.8
BPAT Tungurahua Vol 2.70 172 P Pn 09 54 31.5 +3.5
TAMH Tambohuasha Ch 2.72 180 P Pn 09 54 31.7 +3.6
AMNT Manta-Manabi 2.87 222 P Pn 09 54 30.4 +0.5
JSCH Cashca Tororas 2.90 184 P Pn 09 54 32.8 +2.3
JAMC Jamundi, Valle 2.92 46 P Pn 09 54 30.1 -0.6
JAMC S Sn 09 55 02.0 -3.6
PKYU Pakayacu 3.06 157 P Pn 09 54 36.9 -2.1
FLOC Florencia 3.17 83 P Pn 09 54 35.1 +1.2
FLOC Florencia 3.17 83 P Pn 09 54 36.0 +2.1
CSOL CASCOL 3.29 210 P Pn 09 54 34.8 -0.8
GARC Garzon, Huila 3.44 73 P Pn 09 54 39.4 +1.4
YOTC Yotoco, Valle 3.70 41 P Pn 09 54 40.4 -1.0
YOTC S Sn 09 55 22.0 -2.6
PLMC San Jos del P 4.46 34 P Pn 09 54 51.0 -0.8
PLMC S Sn 09 55 39.2 -4.2
PRAC Prado 4.64 57 P Pn 09 54 57.1 +2.8
PRAC Prado 4.64 57 P Pn 09 54 56.4 +2.2
ANIL Santa Ana 4.71 46 P Pn 09 54 58.1 +2.6
ANIL S Sn 09 55 52.1 +2.2
URMC La Uribe, Meta 4.86 65 P Pn 09 55 00.4 +3.1
ARNL Arenillas 4.88 195 P Pn 09 54 57.7 +0.3
ARNL Arenillas 4.88 195 P Pn 09 54 58.3 +0.8
GUY2C Guyana, Caldas 5.27 40 P Pn 09 55 05.6 +2.3
7.9nm,0.6s
GUY2C S Sn 09 56 04.1 +0.2
7.9nm,0.6s
CBOC Ciudad Bolivar 5.41 31 P Pn 09 55 05.7 +0.8
19nm,0.6s
CBOC S Sn 09 56 05.2 -1.7
19nm,0.6s
ROSC El Rosal 5.75 51 P Pn 09 55 13.2 +3.3
VILC Villavicencio, 5.86 60 P Pn 09 55 15.5 +4.4
14µm28nm,0.5s
VILC S Sn 09 56 24.3 +6.2
14µm28nm,0.5s
RUSC La Rusia 7.37 51 P Pn 09 55 35.4 +3.3

IDC 24 09:56:04.3±1.8,22°.90N×93°.38E,h183km±27km,mb3.2/3, mbtmp3.6/4,Error ellipse: s-maj=61.7km s-min=17.6km az=53.0,Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRDH	Bariadhala	1.62	263	P	Pn	09 56 37.0	-0.7
	89nm,0.3s,baz=242,slow=19,SNR=1.5						
BRDH				S	Sn	09 57 09.2	+5.7
	56nm,0.3s,baz=249,slow=22,SNR=1.0						
CMAR	Chiang Mai Arr	6.83	129	P	Pn	09 57 43.5	+1.3
	0.7nm,0.3s,baz=315,slow=14,SNR=4.2						
MKAR	Makanchi Array	25.47	342	P	P	10 01 15.6	+0.2
	1.8nm,0.4s,baz=150,slow=9.7,SNR=30						
	1.8nm,0.4s						
KURBB	Kurchatov Arra	30.00	341	P	P	10 01 55.8	+0.1
	0.5nm,0.6s,baz=161,slow=7.7,SNR=4.4						
	0.5nm,0.6s						
WRA	Warramunga Arr	58.40	134	P	P	10 05 40.4	-0.6
	0.4nm,0.8s,baz=318,slow=7.6,SNR=5.4						
	0.4nm,0.8s						

*ASRS **24** 09:56:52.0±1.1,54°.14N×87°.15E,h0km,M2.3(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 24 09:56:55.5±3.2,54°.09N×87°.13E,h0km,mbtmp2.7/2, ML2.4/2,Error ellipse: s-maj=29.7km s-min=18.4km az=61.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.37	265	I	I	10 05 00.0	
	0.2nm,1.0s,baz=82,slow=331,SNR=1.9						
ZALV	Zalesovo Beam	1.37	265	Pg	Pg	09 57 19.9	-1.9
	2.1nm,0.3s,baz=85,slow=16,SNR=15						
ZALV				Lg	Lg	09 57 39.4	
	1.5nm,0.3s,baz=87,slow=28,SNR=6.7						
KURBB	Kurchatov Arra	6.31	240	Pn	Pn	09 58 31.1	+1.4
	0.1nm,0.3s,baz=54,slow=13,SNR=4.2						
	0.4nm,0.4s						
MKAR	Makanchi Array	7.93	205	Pn	Pn	09 58 52.9	+1.0
	0.1nm,0.3s,baz=20,slow=12,SNR=1.9						
	0.1nm,0.3s						

*IDC **24** 10:08:28.7±1.7,3°.22N×74°.66W,h0km,mbtmp4.1/1, ML3.0/1,Error ellipse: s-maj=53.3km s-min=15.3km az=107.0*
*RSNC **24** 10:08:32.2±0.0,3°.N±1°×7°5W±°,h16km±2km,M3.4,mB4.5, mb4.5,ML3.1,Mw(mB)3.7*
ISC 24 10:08:31.3±1.0,3°.34N±0°.02×74°.67W±0°.02,h11km±8km, n29,σ0°93/55,Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URMC	La Uribe, Meta	0.30	107	P	Pb	10 08 38.6	-0.2
URMC				S	Sg	10 08 42.2	+0.6
PRAC	Prado	0.43	330	P	Pg	10 08 40.2	+0.3
PRAC				S	Sg	10 08 45.8	+0.1
BETC	Betania	1.01	230	P	Pb	10 08 51.3	+0.5
BETC				S	Sb	10 09 05.3	+1.1
VILC	Villavicencio,	1.24	52	P	Pg	10 08 54.9	-0.3
VILC				S	Sg	10 09 11.5	+0.1
ANIL	Santa Ana	1.36	327	P	Pn	10 08 56.5	0.0
ANIL				S	Sb	10 09 15.1	+0.5
GARC	Garzon, Huila	1.41	216	P	Pb	10 08 58.5	+0.8
GARC				P	Pb	10 08 58.5	+0.8
GARC				P	Pb	10 08 58.5	+0.8
GARC				S	Sn	10 09 17.4	+1.6
MACC	Macarena, Meta	1.44	145	P	Pn	10 08 58.0	+0.6
MACC				S	Sb	10 09 15.9	-0.6
ROSC	El Rosal	1.54	13	Pg	Pb	10 09 00.3	+0.4
	60nm,0.3s,baz=116,slow=9.7,SNR=108						
ROSC				Lg	Lg	10 09 19.9	
	104nm,0.3s,baz=190,slow=23,SNR=11						
ROSC	El Rosal	1.54	13	P	Pb	10 09 00.4	+0.4
ROSC				S	Sg	10 09 21.4	+0.6
ARMEC	Armenia, Quind	1.56	321	P	Pn	10 09 00.0	+0.7
ARMEC				S	Sn	10 09 20.2	+0.6
CHIC	Chingaza	1.59	36	P	Pn	10 09 00.6	+0.8
CHIC				S	Sn	10 09 19.9	-0.6
RECRC	Villamaria, Ca	1.75	337	P	Pn	10 09 03.1	+1.0

RECRC				S		**Sn**	**10 09 25.5**	**+0.7**
YOTC	**Yotoco, Valle**	**1.79**	**291**	P		**Pb**	**10 09 03.7**	**-0.6**
YOTC				S		**Sb**	**10 09 27.4**	**+0.6**
NIZA	**Niza - Manizal**	**1.89**	**335**	P		**Pb**	**10 09 06.6**	**+0.6**
NIZA				S		**Sg**	**10 09 31.5**	**-0.7**
FLOC	**Florencia**	**2.00**	**209**	P		**Pb**	**10 09 08.1**	**+0.4**
FLOC				S		**Sg**	**10 09 34.4**	**-1.2**
GUY2C	**Guyana, Caldas**	**2.00**	**340**	P		**Pn**	**10 09 06.9**	**+1.4**
GUY2C				S		**Sb**	**10 09 33.1**	**0.0**
JAMC	**Jamundi, Valle**	**2.00**	**267**	P		**Pb**	**10 09 08.3**	**+0.4**
JAMC				S		**Sg**	**10 09 35.9**	**0.0**
POPC	**Popayan, Colom**	**2.15**	**249**	P		**Pb**	**10 09 10.2**	**-0.3**
POPC				S		**Sg**	**10 09 39.8**	**-0.9**
PLMC	**San Jos del P**	**2.24**	**314**	P		**Pn**	**10 09 09.6**	**+1.1**
PLMC				S		**Sb**	**10 09 38.9**	**-0.8**
SPBC	**San Pablo de B**	**2.38**	**14**	P		**Pb**	**10 09 13.6**	**-0.6**
SPBC				S		**Sb**	**10 09 44.2**	**+0.6**
CBOC	**Ciudad Bolivar**	**2.85**	**332**	P		**Pb**	**10 09 21.4**	**-0.9**
CRUC	**La Cruz**	**2.88**	**232**	P		**Pg**	**10 09 25.2**	**-1.3**
CRUC				S		**Sg**	**10 10 03.3**	**-0.6**
BBAC	**Balboa, Cauca**	**2.89**	**243**	P		**Pb**	**10 09 22.6**	**-0.4**
BBAC				S		**Sg**	**10 10 03.4**	**-0.8**
RUSC	**La Rusia**	**2.99**	**32**	P		**Pn**	**10 09 21.9**	**+2.8**
RUSC				S		**Sb**	**10 10 01.1**	**-0.6**
PTBC	**PUERTO BERRIO,**	**3.19**	**4**	P		**Pn**	**10 09 22.3**	**+0.8**
PTBC				S		**Sb**	**10 10 05.1**	**-1.9**
OCAC	**Ocana**	**5.05**	**15**	P		**Pn**	**10 09 48.6**	**+1.4**
SDV	**Santo Domingo**	**6.82**	**36**	Pn		**Pn**	**10 10 11.8**	**+0.3**
	2.7nm,0.3s,baz=271,slow=7.3,SNR=14							
SDV				Sn		**Sn**	**10 11 27.5**	**-1.8**
	2.7nm,0.3s,baz=26,slow=18,SNR=6.7 4.7nm,0.3s							
ASAR	**Alice Springs**	**145.79**	**231**	PKPbc		**PKPdf**	**10 28 09.6**	**-1.5**
	0.3nm,0.7s,baz=128,slow=3.0,SNR=5.5							
WRA	**Warramunga Arr**	**147.24**	**237**	PKPbc		**PKPdf**	**10 28 13.9**	**+0.4**
	0.5nm,0.7s,baz=113,slow=2.1,SNR=5.9							

*IDC **24** 10:29:03.3±1.4,6˚.83N×126˚.83E, h0km, mb3.5/5, mbtmp3.5/5, MS3.4/1, Error ellipse: s-maj=30.5km s-min=13.8km az=33.0*
*MAN **24** 10:29:09.0, 6˚.53N×126˚.38E, h53km, MS3.4*

ISC 24 10:29:12.2±1.1, 6˚.57N±0˚.07×126˚.3E±0˚.1, h68km, n10, σ1s31/12, mb3.7/5, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.75**	**232**	*eP*	**Pn**	**10 29 26.2**	**-1.3**
DDMP				*eS*	**Sn**	**10 29 37.6**	**-1.1**
DAV	**Davao City (W)**	**0.87**	**305**	Pg	**Pn**	**10 29 28.8**	**-0.2**
	96nm,0.3s,baz=26,slow=2.0,SNR=10						
DAV				Lg	Lg	10 29 43.8	
	163nm,0.3s,baz=61,slow=21,SNR=12						
CDOP	**Cateel, Davao**	**1.21**	**7**	*i* P	**Pn**	**10 29 31.6**	**-1.7**
CDOP				*i* S	**Sn**	**10 29 46.8**	**-2.3**
TSSP	**Tandag City**	**2.46**	**358**	*eP*	**Pn**	**10 29 49.9**	**-0.1**
TSSP				*eS*	**Sn**	**10 30 20.3**	**+1.4**
FITZ	**Fitzroy Crossi**	**24.52**	**182**	P	**P**	**10 34 26.6**	**+1.1**
	1.4nm,0.5s,baz=260,slow=0.7,SNR=13 1.4nm,0.5s						
WRA	**Warramunga Arr**	**27.51**	**163**	P	**P**	**10 34 53.0**	**+0.5**
	0.2nm,0.3s,baz=342,slow=9.6,SNR=5.0 0.2nm,0.3s						
ASAR	**Alice Springs**	**30.96**	**166**	P	**P**	**10 35 23.8**	**+0.7**
	0.4nm,0.8s,baz=341,slow=8.0,SNR=5.1 0.4nm,0.8s						
CTA	**Charters Tower**	**32.97**	**144**	LR	LR	10 50 55.9	
	comp=Z,54nm,18.2s,baz=96,slow=40						
MKAR	**Makanchi Array**	**55.00**	**324**	P	**P**	**10 38 36.5**	**-0.1**
	0.4nm,0.5s,baz=117,slow=8.5,SNR=4.5 0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**59.14**	**327**	P	**P**	**10 39 06.5**	**+0.8**
	0.5nm,0.8s,baz=123,slow=6.7,SNR=1.9 0.5nm,0.8s						

*IDC **24** 10:31:28.0±0.8, 13˚.38N×120˚.50E, h218km±8km, mb2.9/6, mbtmp3.4/6, Error ellipse: s-maj=31.8km s-min=15.2km az=62.0*
*MAN **24** 10:31:31.0, 16˚.07N×119˚.23E, h25km, MS3.9*

ISC 24 10:31:27.1±1.0, 13˚.3N±0˚.1×120˚.3E±0˚.2, h200km, n8, σ2s27/10, mb3.2/6, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**1.01**	**36**	P	**Pn**	**10 32 00.3**	**+3.2**
	48nm,0.3s,baz=239,slow=18,SNR=1.8						
TGY				S	**Sn**	**10 32 22.9**	**+2.5**
	99nm,0.5s,baz=263,slow=6.1,SNR=3.6						
PCPS	**Palayan City**	**1.54**	**28**	*eP*	**Pn**	**10 32 02.3**	**+1.1**
PCPS				*eS*	**Sn**	**10 32 25.8**	**-2.0**
CMAR	**Chiang Mai Arr**	**21.18**	**287**	P	**P**	**10 35 58.2**	**+0.9**
	0.7nm,0.3s,baz=82,slow=10,SNR=4.2 0.7nm,0.3s						
KSRS	**Korea Array**	**25.01**	**14**	P	**P**	**10 36 30.1**	**-2.5**
	0.5nm,0.5s,baz=201,slow=10.0,SNR=4.1 0.5nm,0.5s						
WRA	**Warramunga Arr**	**35.78**	**157**	P	**P**	**10 38 06.4**	**-1.0**
	0.2nm,0.6s,baz=332,slow=9.8,SNR=4.6 0.2nm,0.6s						
ASAR	**Alice Springs**	**39.05**	**160**	P	**P**	**10 38 34.0**	**-0.8**
	0.3nm,0.5s,baz=340,slow=6.7,SNR=8.2 0.3nm,0.5s						
MKAR	**Makanchi Array**	**46.15**	**324**	P	**P**	**10 39 32.7**	**+1.0**
	0.3nm,0.7s,baz=134,slow=6.2,SNR=2.9 0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**50.33**	**327**	P	**P**	**10 40 01.4**	**-2.1**
	0.8nm,0.8s,baz=123,slow=8.2,SNR=4.4 0.8nm,0.8s						

DJA 24 10:34:15.4±2.1, 2˚.N±3˚×126˚.6E±˚, h16km±20km, M3.8/12, mb4.1/2, MLv3.6/12, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNI	**Manado**	**1.52**	**254**	P	Pn	10 34 42.3	+0.4
TNTI	**Ternate**	**1.52**	**135**	P	Pn	10 34 41.7	-0.2
SGSI	**Sangihe**	**1.97**	**337**	P	Pn	10 34 47.8	-0.4
GTOI	**Gorontalo**	**3.51**	**250**	P	Pn	10 35 10.8	+1.5
SANI	**Sanana**	**3.90**	**185**	P	Pn	10 35 14.3	-0.4
LUWI	**Luwuk**	**4.56**	**231**	P	Pn	10 35 24.6	+0.9
MRSI	**Marisa**	**4.57**	**253**	P	Pn	10 35 27.4	+3.5
NLAI	**Namlea**	**5.13**	**171**	P	Pn	10 35 31.3	-0.3

*NEIC **24** 10:35:57.6±2.1, 7˚.85S±0˚.08×122˚.99E±0˚.07, h232km±7km, mb4.3/14, Error ellipse: s-maj=13.0km s-min=7.4km az=213.0*
*DJA **24** 10:35:58.9±0.6, 8˚.S±4˚×122˚.3E±˚, h227km±9km, M4.2/18, mB4.8/5, mb4.3/7, MLv4.3/18, Mw(mB)4.1/5*
*IDC **24** 10:35:58.5±0.9, 8˚.02S×123˚.03E, h232km±8km, mb3.2/3, mbtmp4.0/9, Error ellipse: s-maj=23.7km s-min=10.7km az=66.0*

ISC 24 10:35:57.3±0.5, 7˚.96S±0˚.05×123˚.01E±0˚.05, h221km, n76, σ2s11/84, mb4.2/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**1.02**	**228**	P	**Pn**	**10 36 32.0**	**+2.6**
MMRI	**Maumere**	**1.02**	**228**	Pn	**Pn**	**10 36 31.7**	**+2.2**
MMRI	**Maumere**	**1.02**	**228**	P	**Pn**	**10 36 32.3**	**+2.9**
EDFI	**Ende, Flores**	**1.52**	**239**	P	**Pn**	**10 36 35.5**	**+2.2**
SOEI	**Soe**	**2.18**	**145**	P	**Pn**	**10 36 41.3**	**+1.9**
SOEI	**Soe**	**2.18**	**145**		**Pn**	**10 36 41.0**	**+1.6**
SOEI				Sn	**S**	**10 37 14.3**	**+2.2**
SOEI	**Soe**	**2.18**	**145**	P	**Pn**	**10 36 41.6**	**+2.2**
BATI	**Baumata**	**2.33**	**164**	P	**Pn**	**10 36 42.6**	**+1.9**
	148nm,0.3s,baz=79,slow=2.0,SNR=51						
BATI				S	**S**	**10 37 16.8**	**+2.0**
	716nm,0.5s,baz=355,slow=18,SNR=15						
BATI	**Baumata**	**2.33**	**164**	P	**Pn**	**10 36 42.7**	**+1.9**
BSSI	**Bau Bau, Buton**	**3.08**	**306**	P	**Pn**	**10 36 51.3**	**+2.2**
LBFI	**Labuhan Bajo,**	**3.13**	**260**	P	**Pn**	**10 36 51.8**	**+2.2**
WSI	**Waingapu**	**3.17**	**237**	P	**Pn**	**10 36 52.1**	**+2.0**
BASI	**Baing, Sumba**	**3.29**	**227**	P	**Pn**	**10 36 53.9**	**+2.5**
WBSI	**Waikabubak, Su**	**3.95**	**245**	P	**Pn**	**10 37 01.3**	**+2.0**
KAPI	**Kappang**	**4.36**	**312**	P	**Pn**	**10 37 05.8**	**+1.5**
	3.7nm,0.3s,baz=126,slow=13,SNR=2.2						
KAPI	**Kappang**	**4.36**	**312**	Pn	**Pn**	**10 37 03.0**	**-1.3**
DBNI	**Kabupaten Domp**	**4.68**	**263**	P	**Pn**	**10 37 10.6**	**+2.3**
PLAI	**Plampang**	**5.25**	**260**	P	**Pn**	**10 37 16.6**	**+1.2**
PLAI	**Plampang**	**5.25**	**260**	P	**Pn**	**10 37 17.1**	**+1.7**
TWSI	**Taliwang, Sumb**	**6.11**	**262**	P	**Pn**	**10 37 27.8**	**+1.4**
	0.5nm1µm37nm,0.8s						
KHKI	**Kahang-Kahang**	**7.34**	**266**	P	**Pn**	**10 37 44.2**	**+2.1**
	0.1nm16nm,1.1s						
IGBI	**Denpasar**	**7.83**	**263**	P	**Pn**	**10 37 50.6**	**+2.2**
JAGI	**Jajag, Banyuwa**	**8.78**	**266**	P	**Pn**	**10 38 01.4**	**+0.7**
JAGI	**Jajag, Banyuwa**	**8.78**	**266**	Pn	**Pn**	**10 37 58.7**	**-2.0**
JAGI				Sn	**S**	**10 39 31.7**	**-8.1**
DRS	**Darwin Rock St**	**8.95**	**120**	P	**Pn**	**10 38 02.9**	**+0.1**
TOLI2	**Tolitoli**	**9.28**	**346**		**Pn**	**10 38 05.0**	**-2.1**
MTN	**Manton Dam**	**9.35**	**122**		**Pn**	**10 38 07.7**	**-0.3**
MTN				Sn	S	10 39 42.1	-11
KNRA	**Kununurra**	**9.52**	**144**		**Pn**	**10 38 10.3**	**+0.1**
KNRA				Sn	**S**	**10 39 49.4**	**-7.8**
FITZ	**Fitzroy Crossi**	**10.40**	**166**	P	**Pn**	**10 38 21.0**	**-0.4**
	10nm,0.6s,baz=2.9,slow=13,SNR=34						
FITZ				S	**S**	**10 40 15.0**	**-3.1**
	12nm,0.5s,baz=202,slow=5.8,SNR=5.3						
FAKI	**Fak Fak**	**10.47**	**62**	P	**Pn**	**10 38 20.5**	**-1.9**
FAKI	**Fak Fak**	**10.47**	**62**	S	**S**	**10 40 17.4**	**-2.5**
FAKI	**Fak Fak**	**10.47**	**62**	Pn	**Pn**	**10 38 21.9**	**-0.5**
SIJI	**Sorong**	**10.83**	**50**	P	**Pn**	**10 38 27.0**	**0.0**
	2.0nm,0.3s,baz=206,slow=21,SNR=5.9						
SIJI				S	**S**	**10 40 33.7**	**+5.4**
	1.4nm,0.3s,baz=222,slow=22,SNR=1.5						
UGM	**Wanagama**	**12.37**	**269**	P	**Pn**	**10 38 46.6**	**+0.2**
UGM	**Wanagama**	**12.37**	**269**	S	**S**	**10 41 06.0**	**+2.7**
UGM	**Wanagama**	**12.37**	**269**	Pn	**Pn**	**10 38 46.2**	**-0.2**
MBWA	**Marble Bar**	**13.50**	**193**	P	**P**	**10 39 04.5**	**+2.1**
MBWA	**Marble Bar**	**13.50**	**193**	Pn	**Pn**	**10 38 59.5**	**-0.9**
PSA00	**Pilbara Seismi**	**13.88**	**192**	P	**P**	**10 39 08.1**	**+1.6**
PSA00	**Pilbara Seismi**	**13.88**	**192**	Pn	**Pn**	**10 39 04.8**	**-0.3**
PSA00	**Pilbara Seismi**	**13.88**	**192**	Pn	**Pn**	**10 39 05.1**	**+0.1**
BBJI	**Bungbulang**	**15.23**	**271**	P	**P**	**10 39 21.6**	**0.0**
WB0	**Warramunga Arr**	**16.11**	**138**	P	**P**	**10 39 31.1**	**-0.2**
WB0				IAmb	IAmb	10 39 32.9	
	comp=Z,10nm,1.1s						
WRA	**Warramunga Arr**	**16.20**	**139**	P	**Pn**	**10 39 32.8**	**-0.4**
	comp=Z,1.6nm,0.3s,baz=315,slow=12,SNR=51						
WRA				S	**S**	**10 42 27.8**	**-3.3**
	comp=Z,3.4nm,0.6s,baz=318,slow=21,SNR=7.2						
WRA	**Warramunga Arr**	**16.20**	**139**	P	**P**	**10 39 32.5**	**+0.3**
WRAB	**Tennant Creek**	**16.20**	**138**	P	**Pn**	**10 39 33.4**	**+0.2**
WRAB	**Tennant Creek**	**16.20**	**138**	P	**P**	**10 39 32.3**	**+0.1**
WRAB				IAmb	IAmb	10 39 38.8	
	comp=Z,5.7nm,0.8s						
WR8	**Warramunga Arr**	**16.32**	**138**		**Pn**	**10 39 34.3**	**-0.3**
WR8				IAmb	IAmb	10 39 36.4	
	comp=Z,18nm,1.2s						
AS31	**Alice Springs**	**18.79**	**147**		**P**	**10 40 01.6**	**+1.1**
AS31				IAmb	IAmb	10 40 06.5	
	comp=Z,4.5nm,0.7s						
ASAR	**Alice Springs**	**18.79**	**147**	P	**P**	**10 40 02.0**	**+1.5**
	comp=Z,11nm,0.7s,baz=326,slow=11,SNR=63						
ASAR				S	**S**	**10 43 20.8**	**-1.7**
	comp=Z,1.4nm,0.8s,baz=320,slow=21,SNR=6.0						
ASAR	**Alice Springs**	**18.79**	**147**		**P**	**10 40 01.1**	**+0.6**
MEEK	**Meekatharra**	**19.04**	**192**	P	**Pn**	**10 40 05.2**	**-1.4**
MNAI	**Manna**	**20.25**	**279**	P	**P**	**10 40 18.7**	**-0.5**
OIS	**Mount Isa**	**20.36**	**130**	P	**P**	**10 40 18.2**	**+0.9**
COEN	**Coen**	**20.67**	**109**	P	**P**	**10 40 20.2**	**-0.4**
COEN	**Coen**	**20.67**	**109**	P	**P**	**10 40 19.6**	**-1.0**
MORW	**Morawa**	**22.00**	**196**	P	**P**	**10 40 34.8**	**+1.0**
MORW	**Morawa**	**22.00**	**196**	P	**P**	**10 40 34.4**	**+0.6**
MORW				IAmb	IAmb	10 40 35.5	
	comp=Z,9.9nm,0.6s						
FORT	**Forrest**	**23.19**	**169**	P	**P**	**10 40 45.3**	**+0.6**
FORT				IAmb	IAmb	10 41 03.4	
	comp=Z,5.7nm,0.8s						
BLDU	**Ballidu**	**23.30**	**194**	P	**P**	**10 40 47.0**	**+1.4**
KLBR	**Kellerberrin**	**24.02**	**191**	P	**P**	**10 40 54.8**	**+2.6**
QLP	**Quilpie**	**27.38**	**135**	P	**P**	**10 41 24.4**	**+2.0**
BBOO	**Buckeboo**	**27.54**	**156**	P	**P**	**10 41 24.8**	**+1.1**
BBOO	**Buckeboo**	**27.54**	**156**	P	**P**	**10 41 24.3**	**+0.6**
BBOO				IAmb	IAmb	10 41 47.2	
	comp=Z,18nm,1.4s						
HTT	**Hallett**	**29.31**	**152**	P	**P**	**10 41 40.4**	**+0.9**
CMSA	**Cobar Meteorol**	**31.58**	**141**	P	**P**	**10 42 01.4**	**+2.0**
ARMA	**Armidale**	**34.88**	**134**	P	**P**	**10 42 27.0**	**-1.1**
ARMA				IAmb	IAmb	10 43 10.1	
	comp=Z,6.7nm,1.1s						
HHC	**Hu-ho-hao-te**	**49.69**	**349**	*eP*	**P**	**10 44 28.8**	**+1.7**
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC				pmax	pmax		
	comp=Z,160nm,6.9s						
BKZ	**Black Stump Fm**	**57.00**	**132**	P	**P**	**10 45 21.2**	**+1.0**
CASY	**Casey**	**58.87**	**186**	P	**P**	**10 45 32.3**	**-0.3**
MKAR	**Makanchi Array**	**65.42**	**330**	P	**P**	**10 46 17.3**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=140,slow=7.9,SNR=5.4 comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**65.42**	**330**	P	**P**	**10 46 14.5**	**-1.9**
KURBB	**Kurchatov Arra**	**69.87**	**332**	P	**P**	**10 46 42.7**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=141,slow=5.5,SNR=1.9 comp=Z,0.2nm,0.3s						
KURK	**Kurchatov**	**69.89**	**332**	P	**P**	**10 46 42.9**	**-1.3**
QSPA	**South Pole Qui**	**82.03**	**180**	P	**P**	**10 47 53.0**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=20,slow=9.9,SNR=6.9 comp=Z,0.9nm,0.7s						
QSPA	**South Pole Qui**	**82.03**	**180**	P	**P**	**10 47 50.8**	**-1.9**

*SDD **24** 10:46:13.4±2.8, 17˚.90N×67˚.24W, h15km±61km, MD2.7, ML2.5, MW2.8, Presumed earthquake*
*NEIC **24** 10:46:17.0±0.7, 17˚.86N±0˚.01×66˚.98W±0˚.01, h10km±1km, ML2.8/31, Md3.2/14(RSPR), Error ellipse: s-maj=3.2km s-min=2.0km az=17.0*
*OSPL **24** 10:46:17.7±0.3, 17˚.86N×66˚.98W, h11km±3km, ML2.9, Presumed earthquake*

ISC 24 10:46:17.5±1.1, 17˚.92N±0˚.06×66˚.96W±0˚.03, h16km±6km, n33, σ0s42/42, 1C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLPR	**Magueyes Islan**	**0.09**	**302**		**Pg**	**10 46 20.6**	**-0.2**
MLPR					**Sg**	**10 46 22.6**	**-0.5**
MLPR	**Magueyes Islan**	**0.09**	**302**	IAML		10 46 22.9	
	5µm,0.1s						
MLPR				IAML		10 46 23.0	
	13µm,0.2s						
GBPR	**Guanica, Bosqu**	**0.10**	**56**		**Pg**	**10 46 20.8**	**0.0**
GBPR					**Sg**	**10 46 22.9**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.16**	**302**	*i* P	**Pg**	**10 46 21.6**	**-0.1**
CRPR				*eS*	**Sg**	**10 46 24.3**	**-0.2**
CRPR				IAML		10 46 24.6	
	comp=Z,2µm,0.1s						
LSP	**Las Mesas**	**0.28**	**335**		**Pg**	**10 46 23.5**	**0.0**
LSP					**Sg**	**10 46 28.3**	**+0.6**
PRSN	**Puerto Rico Se**	**0.34**	**330**		**Pg**	**10 46 24.6**	**0.0**
PRSN					**Sg**	**10 46 29.6**	**+0.1**
PRSN	**Puerto Rico Se**	**0.34**	**330**	IAML		10 46 30.3	
	comp=Z,2µm,0.4s						
PRSN				IAML		10 46 32.6	
	comp=Z,1µm,0.4s						
OBIP	**Obispado Ponce**	**0.36**	**70**		**Pg**	**10 46 25.0**	**+0.1**
OBIP					**Sg**	**10 46 30.4**	**+0.4**
OBIP	**Obispado Ponce**	**0.36**	**70**	IAML		10 46 30.9	
	comp=N,97nm,0.5s						
OBIP	**Obispado Ponce**	**0.36**	**70**	*i* P	**Pg**	**10 46 25.0**	**+0.1**
OBIP				*eS*	**Sg**	**10 46 30.5**	**+0.4**
OBIP				IAML		10 46 31.4	
	comp=Z,1µm,0.2s						
CELP	**Cerrillos**	**0.40**	**67**		**Pg**	**10 46 25.7**	**+0.1**
CELP					**Sg**	**10 46 31.6**	**+0.6**
CELP	**Cerrillos**	**0.40**	**67**	IAML		10 46 32.8	
	comp=Z,368nm,0.2s						
CELP				IAML		10 46 35.0	
	comp=Z,196nm,0.4s						
CELP	**Cerrillos**	**0.40**	**67**	*i* P	**Pg**	**10 46 25.9**	**+0.4**
CELP				*eSg*	**Sb**	**10 46 32.6**	**+0.7**
CELP				IAML		10 46 32.8	
	comp=N,132nm,0.2s						
UUPR	**Utuado, UPR, P**	**0.40**	**35**		**Pg**	**10 46 25.6**	**-0.1**
UUPR					**Sg**	**10 46 31.0**	**-0.4**
UUPR	**Utuado, UPR, P**	**0.40**	**35**	IAML		10 46 31.9	
	comp=N,5µm,0.4s						
UUPR				IAML		10 46 32.6	
	comp=N,4µm,0.3s						
AOPR	**Arecibo Observ**	**0.47**	**25**		**Pg**	**10 46 26.7**	**-0.2**
AOPR					**Sg**	**10 46 33.0**	**-0.3**
AOPR	**Arecibo Observ**	**0.47**	**25**	IAML		10 46 33.3	
	comp=N,3µm,0.3s						
AOPR				IAML		10 46 34.4	
	comp=N,998nm,0.4s						
AOPR	**Arecibo Observ**	**0.47**	**25**	⇑*i* P	**Pg**	**10 46 26.7**	**-0.2**
AOPR				*eSg*	**Sg**	**10 46 33.0**	**-0.3**
AOPR				IAML		10 46 34.1	
	comp=N,812nm,0.6s						
AGPR	**Aguadilla, PR**	**0.56**	**346**		**Pg**	**10 46 28.4**	**-0.2**
AGPR					**Sg**	**10 46 36.3**	**+0.1**
AGPR	**Aguadilla, PR**	**0.56**	**346**	IAML		10 46 36.7	
	comp=N,177nm,0.6s						
AGPR				IAML		10 46 40.1	
	comp=N,172nm,0.5s						
IDE	**La Desecheo**	**0.67**	**314**		**Pg**	**10 46 30.3**	**-0.4**
IDE					**Sg**	**10 46 39.3**	**-0.3**
EMPR	**Esperanza - Ma**	**0.69**	**37**		**Pg**	**10 46 31.1**	**+0.1**
EMPR					**Sg**	**10 46 39.8**	**-0.4**
ECPR	**Experimental S**	**0.69**	**55**		**Pg**	**10 46 30.5**	**-0.6**
ECPR					**Sg**	**10 46 39.9**	**-0.5**
ECPR	**Experimental S**	**0.69**	**55**	IAML		10 46 42.4	
	comp=N,586nm,0.2s						
SJG	**San Juan**	**0.80**	**76**		**Pg**	**10 46 32.2**	**-0.8**
SJG				IAML		10 46 44.0	
	comp=N,132nm,0.3s						
SJG	**San Juan**	**0.80**	**76**	*i* P	**Pg**	**10 46 32.3**	**-0.7**
SJG				*eS*	**Sg**	**10 46 43.3**	**-0.3**
SJG				IAML		10 46 49.1	
	comp=Z,2µm,0.2s						
IGPR	**InterUniversit**	**0.82**	**87**		**Pg**	**10 46 33.0**	**-0.4**
IGPR					**Sb**	**10 46 45.2**	**+1.2**
HUMP	**Col San Antoni**	**1.08**	**78**		**Pb**	**10 46 37.2**	**-0.6**
HUMP				IAML		10 46 55.4	
	comp=Z,90nm,0.3s						
HUMP				IAML		10 46 57.0	
	comp=Z,74nm,0.2s						
HUMP	**Col San Antoni**	**1.08**	**78**		**Sb**	**10 46 51.9**	**+0.2**
CUPR	**Culebra, Puert**	**1.64**	**76**	Pn	**Pb**	**10 46 47.1**	**-0.3**
HIDR	**Higuey Centro**	**1.80**	**292**	*i* P	Pn	10 46 37.9	-10
HIDR				IAML		10 47 15.4	
	comp=N,36nm,1.2s						
DR12	**Loma Pena Alta**	**2.45**	**291**	Pg	**Pb**	**10 47 01.3**	**0.0**
SMRT	**St. Maarten**	**3.70**	**87**	Pn	**Pn**	**10 47 14.2**	**+0.2**

*NIED **24** 11:13:15.3, 40˚.03N×142˚.25E, h41km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^14Nm; Mrr3.13; Mθθ-3.09; Mϕϕ-0.05; Mrθ-0.85; Mθϕ1.15; Mϕr-0.96; Fault plane solution: M0 3.56000×10^14 NP1: ϕs127.00000°, δ44.00000°, λ119.00000°. NP2: ϕs270.00000°, δ53.00000°, λ65.00000°.*
*JMA **24** 11:13:15.3±0.1, 40˚.0N±0˚.3×142˚.3E±0˚.8, h41km, MD3.8/40, MV4.0/40, NE OFF IWATE PREF*
JMA Felt I J1 at NE OFF IWATE PREF .
*IDC **24** 11:13:18.2±2.5, 39˚.97N×142˚.51E, h80km±25km, mb3.0/5, mbtmp3.3/8, MS2.6/1, Error ellipse: s-maj=37.5km s-min=10.8km az=113.0*

ISC 24 11:13:12.8±1.5, 40˚.07N±0˚.04×142˚.39E±0˚.07, h27km±11km, n25, σ1s70/30, mb3.5/5, 8D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**0.42**	**252**	*i* P	**Pn**	**11 13 23.9**	**+0.8**
JTH				A	A	11 13 23.9	
	comp=N,13nm,0.6s,comp=E,10.0nm,0.6s						
JTH				S	**Sn**	**11 13 29.7**	**-0.4**
JKEN	**Kujiedanarisaw**	**0.54**	**285**	*i* P	**Pn**	**11 13 25.1**	**+0.4**
JKEN				A	A	11 13 25.1	
	comp=N,16nm,0.3s,comp=E,10.0nm,0.3s						
JKEN				S	**Sb**	**11 13 31.9**	**+0.8**
MIYJ	**Miyakonagasawa**	**0.66**	**222**	⇓*i* P	**Pn**	**11 13 26.6**	**+0.2**
MIYJ				⇓S	**Sb**	**11 13 34.5**	**-0.1**
JANG	**Nango**	**0.73**	**295**	*i* P	**Pn**	**11 13 27.9**	**+0.5**
JANG				S	**Sb**	**11 13 36.6**	**-0.1**
JKZ	**Kuzumaki**	**0.82**	**264**	*i* P	**Pn**	**11 13 29.2**	**+0.6**
JKZ				A	A	11 13 29.2	
	comp=N,18nm,0.3s,comp=E,12nm,0.3s						
JKZ				S	**Sb**	**11 13 38.9**	**-0.2**
JOM	**Ohasama**	**1.03**	**235**	⇓*i* P	**Pb**	**11 13 31.8**	**-0.2**
JOM				⇓*eS*	**Sb**	**11 13 43.6**	**-1.6**
OFUJ	**Ofunato**	**1.13**	**209**	⇓*i* P	**Pb**	**11 13 33.4**	**-0.4**
OFUJ				⇓S	**Sn**	**11 13 47.0**	**-0.6**
JTM	**Tenmabayashi**	**1.23**	**306**	*i* P	**Pb**	**11 13 35.5**	**0.0**
JTM				S	**Sn**	**11 13 50.5**	**+0.4**
JAH	**Hinai**	**1.35**	**276**	*i* P	**Pb**	**11 13 36.9**	**-0.5**
JAH				S	**Sn**	**11 13 52.6**	**-0.2**
JMK	**Ichinoseki**	**1.44**	**219**	⇓P	**Pn**	**11 13 37.7**	**+0.7**
JMK				⇓*eS*

	comp=Z,22nm,0.2s							
NIF				SG	Sn	11 14 28.5	-0.1	
RANF	**Ranua**	**2.10 307**		PG	Pn	11 14 05.4	+0.6	
	baz=125							
RANF				SG	Sn	11 14 31.1	-0.4	
OUL	**Oulu**	**2.15 279**		PG	Pn	11 14 05.8	+0.3	
	baz=99							
OUL				SG	Sn	11 14 32.1	-0.6	
OBF4	**Vikkela, Lumij**	**2.48 272**		PB	Pn	11 14 10.2	+0.1	
	baz=92							
OBF4				smax	smax	11 14 39.9		
	comp=Z,13nm,0.2s							
OBF4				SG	Sn	11 14 42.8	+1.9	
OUF	**Merijarvi**	**2.70 263**		PB	Pn	11 14 13.2	+0.1	
OUF				smax	smax	11 14 46.1		
	comp=Z,15nm,0.2s							
OUF				SG	Sn	11 14 48.2	+1.8	
RNF	**Rovaniemi**	**2.70 314**		PG	Pn	11 14 15.0	+1.9	
	baz=132							
RNF				SG	Sn	11 14 49.3	+2.9	
OBF0	**Syolatti, Pyha**	**2.88 267**		PG	Pn	11 14 18.3	+2.7	
OBF0				smax	smax	11 14 51.6		
	comp=Z,7.7nm,0.2s							
OBF0				SG	Sb	11 14 55.5	-1.0	
APA0	**Apatity Array**	**2.92 16**		P	Pn	11 14 17.8	+1.7	
APA0				S	Sn	11 14 54.3	+2.4	
APA	**Apatity**	**2.94 19**		P	Pn	11 14 17.8	+1.4	
APA				S	Sn	11 14 53.5	+1.2	
SUF	**Sumiainen**	**2.98 227**		PB	Pn	11 14 17.8	+0.8	
	baz=38							
SUF				smax	smax	11 14 54.2		
	comp=Z,4.2nm,0.2s							
VRF	**Varrio**	**2.98 351**		PB	Pn	11 14 18.5	+1.5	
VRF				smax	smax	11 14 56.3		
	comp=Z,5.0nm,0.2s							
VRF				SG	Sb	11 14 60.0	+0.5	
TOF	**Tornio**	**3.02 298**		PB	Pn	11 14 18.1	+0.6	
TOF				smax	smax	11 14 56.0		
	comp=Z,3.6nm,0.2s							
TOF				SB	Sn	11 14 56.9	+2.5	
KALU	**Kalix**	**3.33 292**		P	Pn	11 14 22.3	+0.6	
KALU				S	Sn	11 15 02.7	+0.8	
LVZ	**Lovozero**	**3.44 24**		S	Sn	11 15 05.0	+0.3	
KLF	**Kolari**	**3.73 314**		PN	Pn	11 14 27.6	+0.4	
KLF				SG	Sb	11 15 22.7	+2.0	
KEF	**Keuruu**	**3.80 228**		PB	Pn	11 14 29.8	+1.7	
	baz=44							
KEF				SG	Sb	11 15 24.6	+1.9	
RAJF	**Raja-Jooseppi**	**3.81 345**		PN	Pn	11 14 28.9	+0.6	
RAJF				SN	Sn	11 15 13.8	0.0	
SJUU	**Sjulsmark**	**3.98 284**		P	Pn	11 14 29.8	-0.9	
ERTU	**Ertsjaerv**	**4.00 300**		P	Pn	11 14 31.0	0.0	
ERTU	**Ertsjaerv**	**4.00 300**		PN	Pn	11 14 31.5	+0.6	
FIA0	**FINESS Array S**	**4.04 215**		PN	Pn	11 14 30.9	-0.6	
	baz=30							
FIA0				SG	Sb	11 15 30.6	+0.9	
FINES	**FINESS Array B**	**4.04 215**		Pn	Pn	11 14 31.2	-0.2	
	comp=Z,0.2nm,0.3s,baz=33,slow=14,SNR=7.9							
FINES				Pg	Pb	11 14 40.6	+0.2	
	comp=Z,1.0nm,0.3s,baz=32,slow=15,SNR=16							
FINES				Lg	Lg	11 15 31.7		
	comp=Z,2.5nm,0.3s,baz=31,slow=28,SNR=14							
	comp=Z,0.8nm,0.5s							
VAF	**Ylistaro**	**4.05 248**		PB	Pn	11 14 33.3	+1.7	
	baz=57							
BURU	**Burvik**	**4.10 271**		PN	Pn	11 14 31.2	-1.1	
UMAU	**Umeaa**	**4.54 263**		PN	Pn	11 14 36.7	-1.7	
UMAU				SG	Sb	11 15 47.2	+3.1	
VJF	**Virojoki**	**4.57 201**		SG	Sb	11 15 47.8	+2.9	
HEF	**Hetta**	**4.61 325**		PN	Pn	11 14 38.6	-0.7	
HEF				SG	Sb	11 15 49.4	+3.2	
ARCES	**ARCESS Array B**	**5.18 338**		Pn	Pn	11 14 47.4	+0.3	
	comp=Z,0.8nm,0.3s,baz=154,slow=14,SNR=45							
ARCES				Sn	Sn	11 15 43.5	-4.0	
	comp=Z,0.4nm,0.3s,baz=156,slow=24,SNR=5.7							
ARCES				Lg	Lg	11 16 05.9		
	comp=Z,0.9nm,0.3s,baz=152,slow=32,SNR=8.7							
	comp=Z,1.5nm,0.2s							
ARCES	**ARCESS Array B**	**5.18 338**		P	Pn	11 14 46.9	-0.2	
ARCES				S	Sn	11 15 45.6	-1.8	
KUA	**Kurravaara**	**5.28 311**		P	Pn	11 14 49.9	+1.4	
VADS	**Vadso**	**5.36 354**		P	Pn	11 14 49.9	+0.4	
VADS				S	Sn	11 15 50.9	-0.9	
FAUS	**Fauske**	**6.84 299**		S	Sn	11 16 27.2	-1.1	
NOA	**NORSAR Array B**	**9.72 256**		Pn	Pn	11 15 48.1	-1.4	
	baz=55,slow=12,SNR=1.7							
	comp=Z,1.8nm,0.9s							

*GCG **24** 11:17:24.1±1.2, 13.°96N×91.°06W, h67km±9km, MD4.0, ML3.9, MW3.0, Presumed earthquake*
*CATAC **24** 11:17:25.0±0.6, 14.°N±9.°×9.°1W±.°, h56km±11km, M3.3/8, MLv3.3/8, Error ellipse: s-maj=20.3km s-min=3.2km az=21.1, confirmed*
*SNET **24** 11:17:27.6±19.0, 13.°32N×90.°56W, h30km, ML3.4, Presumed earthquake*

ISC 24 11:17:25.8±1.7, 13.°87N±0.°08×91.°00W±0.°05, h57km±15km, n26, σ1s62/37, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESSJ	**San Jos, E**	**0.58**	**122**	*i* P	**Pn**	**11 17 35.0**	**-3.3**
FG8	**Yepocapa, Chim**	**0.58**	**48**	*i* P	**Pn**	**11 17 37.2**	**-1.3**
FG16	**Alotenango, Sa**	**0.62**	**50**	*i* P	**Pn**	**11 17 37.8**	**-1.3**
FG16				*i* S	**Sn**	**11 17 48.4**	**-0.4**
FG16				IAML		11 17 49.5	
	comp=N,14μm,0.3s						
STG5	**El Palmar, Qui**	**0.63**	**328**	*i* P	**Pn**	**11 17 40.9**	**+1.8**
STG5				*i* S	**Sn**	**11 17 53.2**	**+4.5**
STG8	**El Palmar, Qui**	**0.67**	**330**	*i* P	**Pn**	**11 17 42.0**	**+2.3**
STG8				IAML		11 17 57.7	
	comp=N,2μm,0.2s						
STG2	**El Palmar, Qui**	**0.67**	**327**	*i* P	**Pn**	**11 17 41.9**	**+2.3**
PCG5	**San Vicente Pa**	**0.70**	**60**	*i* P	**Pn**	**11 17 38.1**	**-1.9**
PCG5				*i* S	**Sn**	**11 17 48.9**	**-1.4**
PCG5				IAML		11 17 50.2	
	comp=N,3μm,0.4s						
RTAL	**Retalhuleu**	**0.93**	**314**	P	**Pn**	**11 17 40.8**	**-2.0**
RTAL				S	**Sn**	**11 17 53.8**	**-1.6**
FAME	**Alcaldia de Sa**	**0.96**	**91**	P	**Pn**	**11 17 42.8**	**-0.4**
NUBE	**Las Nubes**	**1.19**	**88**	P	**Pn**	**11 17 46.1**	**-0.2**
NUBE				S	**Sn**	**11 18 03.0**	**+1.4**
NUBE	**Las Nubes**	**1.19**	**88**	*i* P	**Pn**	**11 17 46.0**	**-0.3**
NUBE				*i* S	**Sn**	**11 18 01.9**	**+0.3**
APG	**El Apazote**	**1.24**	**25**	*i* P	**Pn**	**11 17 46.3**	**-0.8**
CEVE	**Cerro Verde**	**1.34**	**92**	*i* P	**Pn**	**11 17 48.8**	**+0.3**
CEVE	**Cerro Verde**	**1.34**	**92**	*i* P	**Pn**	**11 17 48.7**	**+0.3**
CEVE				*e*S	**Sn**	**11 18 07.6**	**+2.2**
SMCA	**Catarina**	**1.43**	**314**	*i* P	**Pn**	**11 17 46.9**	**-2.5**
HUEH	**Huehuetenango**	**1.52**	**342**	*i* P	**Pn**	**11 17 49.2**	**-1.7**
HUEH	**Huehuetenango**	**1.52**	**342**	*e*P	**Pn**	**11 17 49.8**	**-1.1**
HUEH				*e*S	**Sn**	**11 18 09.5**	**-0.2**
JAYA	**Jayaque - finc**	**1.53**	**98**	P	**Pn**	**11 17 51.4**	**+0.5**
JAYA	**Jayaque - finc**	**1.53**	**98**	*i* P	**Pn**	**11 17 50.7**	**-0.2**
JAYA	**Jayaque - finc**	**1.53**	**98**	*e*P	**Pn**	**11 17 51.0**	**+0.1**
JAYA				*e*S	**Sn**	**11 18 10.1**	**+0.3**
PMON	**Piamonte**	**1.65**	**95**	P	**Pn**	**11 17 52.5**	**0.0**
PMON				S	**Sn**	**11 18 14.2**	**+1.4**
MTO3	**Montecristo**	**1.68**	**72**	P	**Pn**	**11 17 52.1**	**-0.9**
MTO3				S	**Sn**	**11 18 13.9**	**+0.3**
MTO3	**Montecristo**	**1.68**	**72**	*i* P	**Pn**	**11 17 52.1**	**-0.9**
BQQS	**Boqueron**	**1.68**	**94**	*e*P	**Pn**	**11 17 53.7**	**+0.7**
COEG	**Centro de Oper**	**2.08**	**97**	*e*P	**Pn**	**11 17 59.5**	**+1.2**
SCLA	**Alcaldia de Sa**	**2.22**	**94**	P	**Pn**	**11 18 01.2**	**+1.0**

IDC 24 11:20:31.2±1.4, 2.°41N×121.°98E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=94.5km s-min=23.2km az=60.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.31**	**152**	P	P	11 25 59.8	0.0
	0.4nm,0.7s,baz=326,slow=10,SNR=4.6						
	0.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**27.64**	**307**	P	P	11 26 21.3	+0.4
	0.6nm,0.3s,baz=117,slow=12,SNR=2.2						
	0.6nm,0.3s						
ASAR	**Alice Springs**	**28.40**	**157**	P	P	11 26 27.6	0.0
	0.3nm,0.5s,baz=344,slow=8.2,SNR=9.8						
	0.3nm,0.5s						
SONM	**Songino Array**	**47.22**	**346**	P	P	11 29 05.6	-0.5
	3.8nm,0.7s,baz=148,slow=8.5,SNR=3.0						

*JMA **24** 11:28:14.4±0.3, 24.°N±1.°×122.°4E±0.°6, h22km±4km, MV3.2/14, NW OFF ISHIGAKIJIMA IS*
*TAP **24** 11:28:15.1, 24.°04N×122.°42E, h26km, ML3.6, C*
*IDC **24** 11:28:17.0±1.4, 24.°55N×121.°71E, h0km, mb3.5/4, mbtmp3.5/5, ML3.2/1, Error ellipse: s-maj=69.9km s-min=23.5km az=67.0*

ISC 24 11:28:14.8±0.9, 23.°98N±0.°02×122.°42E±0.°02, h27km±7km, n149, σ0s96/232, mb3.3/4, 1C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS4	**EOS4**	**0.17**	**327**	*i* P	**Pb**	**11 28 19.8**	**-0.1**
EOS4				S	**Sb**	**11 28 23.5**	**+0.1**
EOS3	**EOS3**	**0.32**	**343**	*i* P	**Pn**	**11 28 22.3**	**-1.3**
EOS3				*e*S	**Sn**	**11 28 27.5**	**-1.8**
EOS2	**EOS2**	**0.47**	**339**	*i* P	**Pn**	**11 28 25.0**	**-0.7**
EOS2				S	**Sn**	**11 28 32.4**	**-0.7**
JYNG	**Yonagunijimaku**	**0.67**	**45**	*i* P	**Pb**	**11 28 27.7**	**-0.3**
JYNG				S	**Sb**	**11 28 36.0**	**-0.9**
EAHA	**Aohua**	**0.71**	**300**	*e*P	**Pn**	**11 28 28.8**	**-0.3**
YOJ	**Yonaguni jima**	**0.72**	**48**	↓*i*P	**Pb**	**11 28 28.7**	**-0.1**
YOJ				*i* S	**Sb**	**11 28 37.6**	**-0.8**
YOJ	**Yonaguni jima**	**0.72**	**48**	P	**Pb**	**11 28 28.7**	**-0.1**
YOJ				S	**Sb**	**11 28 37.9**	**-0.6**
HWA	**Hwalien**	**0.74**	**270**	*e*P	**Pb**	**11 28 29.0**	**-0.1**
HWA				*e*S	**Sb**	**11 28 39.8**	**+0.8**
EWUT	**Wuta**	**0.75**	**309**	*e*P	**Pb**	**11 28 29.0**	**-0.2**
ETL	**Fush Village**	**0.75**	**284**	*e*P	**Pb**	**11 28 29.2**	**0.0**
TEYL	**Yanliau Villag**	**0.76**	**262**	*e*P	**Pb**	**11 28 29.2**	**-0.2**
TEYL				*e*S	**Sb**	**11 28 39.9**	**+0.5**
TWD	**Chiawan**	**0.76**	**278**	*e*P	**Pb**	**11 28 28.8**	**-0.6**
TWD				*e*S	**Sb**	**11 28 39.4**	**0.0**
ENA	**Nanau**	**0.77**	**306**	*e*P	**Pn**	**11 28 29.5**	**-0.3**
NACB	**Ninganchiao**	**0.78**	**285**	↑*i*P	**Pb**	**11 28 29.2**	**-0.6**
NACB				*e*S	**Sb**	**11 28 39.9**	**0.0**
ESAO	**Su ao**	**0.79**	**319**	*e*P	**Pb**	**11 28 29.8**	**-0.2**
ESAO				*e*S	**Sn**	**11 28 40.2**	**-1.0**
SHUL	**Shoufeng**	**0.81**	**257**	*e*P	**Pb**	**11 28 29.9**	**-0.2**
SHUL				S	**Sb**	**11 28 41.6**	**+0.9**
TWC	**Suao**	**0.82**	**321**	*e*P	**Pb**	**11 28 29.6**	**-0.8**
TWC				*e*S	**Sb**	**11 28 40.3**	**-0.7**
ETM	**Tongmen**	**0.85**	**269**	*e*P	**Pb**	**11 28 30.2**	**-0.7**
ETM				*e*S	**Sb**	**11 28 41.2**	**-0.7**
ETLH	**Xiulin Townshi**	**0.89**	**285**	*i* P	**Pb**	**11 28 31.0**	**-0.6**
ETLH				*e*S	**Sb**	**11 28 43.0**	**-0.1**
ESL	**Shilin**	**0.92**	**260**	*e*P	**Pb**	**11 28 31.2**	**-0.9**
NDS	**Dongshan**	**0.92**	**316**	P	**Pn**	**11 28 31.8**	**-0.1**
NDS				S	**Sn**	**11 28 44.0**	**-0.2**
LXIB	**Xiulin Townshi**	**0.92**	**273**	*e*P	**Pb**	**11 28 31.4**	**-0.8**
EGS		**0.97**	**333**	*e*P	**Pn**	**11 28 33.0**	**+0.4**
WARBT	**Fenglin Townsh**	**0.98**	**255**	*i* P	**Pb**	**11 28 32.0**	**-1.1**
WARBT				*e*S	**Sb**	**11 28 44.5**	**-1.2**
LATG	**Datong**	**0.99**	**305**	*e*P	**Pn**	**11 28 33.0**	**+0.1**
LATG				*e*S	**Sn**	**11 28 47.4**	**+1.3**
ILA	**Ilan**	**1.00**	**322**	*e*P	**Pn**	**11 28 33.5**	**+0.5**
TWE	**Neicheng**	**1.01**	**317**	*e*P	**Pn**	**11 28 33.5**	**+0.3**
ENTT	**Nioudou**	**1.02**	**311**	*e*P	**Pn**	**11 28 33.8**	**+0.5**
NTC	**Toucheng**	**1.03**	**329**	*e*P	**Pn**	**11 28 33.9**	**+0.5**
NDT	**Datong Townshi**	**1.03**	**307**	*e*P	**Pn**	**11 28 34.1**	**+0.5**
NDT				S	**Sn**	**11 28 48.2**	**+1.0**
NNSB	**Datong**	**1.05**	**296**	*e*P	**Pb**	**11 28 33.9**	**-0.4**
NNSB				*e*S	**Sn**	**11 28 47.8**	**+0.2**
NNS	**Nan Shan**	**1.06**	**296**	*e*P	**Pn**	**11 28 34.2**	**+0.2**
NNS				*e*S	**Sn**	**11 28 48.0**	**+0.1**
WHF	**Hehuan Shan**	**1.07**	**279**	*i* P	**Pb**	**11 28 34.1**	**-0.3**
WHF				*e*S	**Sb**	**11 28 48.2**	**-0.4**
FUSB	**Fushanzhiwuyua**	**1.09**	**316**	*e*P	**Pb**	**11 28 34.9**	**-0.1**
FUSB				*e*S	**Sn**	**11 28 49.9**	**+1.4**
EHYH	**Wanrong**	**1.09**	**244**	*e*P	**Pn**	**11 28 34.3**	**0.0**
EHYH				*e*S	**Sb**	**11 28 48.3**	**-0.6**
TWB1	**Santiao Chiao**	**1.10**	**339**	P	**Pb**	**11 28 34.6**	**-0.5**
TWB1				*e*S	**Sn**	**11 28 48.8**	**+0.1**
ECBN	**Changbin**	**1.10**	**234**	*e*P	**Pn**	**11 28 34.0**	**-0.5**
FUSS	**Fushou**	**1.11**	**284**	*i* P	**Pn**	**11 28 34.8**	**0.0**
FUSS				*e*S	**Sn**	**11 28 49.6**	**+0.4**
EHY	**Hungye**	**1.11**	**245**	*e*P	**Pn**	**11 28 34.1**	**-0.4**
EHY				*e*S	**Sb**	**11 28 48.2**	**-1.2**
TIPB	**Shuangxi**	**1.13**	**332**	*e*P	**Pb**	**11 28 35.0**	**-0.7**
TIPB				*e*S	**Sn**	**11 28 49.4**	**-0.1**
OWD	**Renai**	**1.14**	**269**	*i* P	**Pn**	**11 28 35.0**	**-0.1**
OWD				*i* S	**Sb**	**11 28 49.1**	**-1.2**
NWLT	**Wulai**	**1.16**	**314**	*e*P	**Pn**	**11 28 36.0**	**-0.1**
TWT	**Tachien**	**1.17**	**284**	*e*P	**Pn**	**11 28 36.1**	**+0.6**
TWT				*e*S	**Sn**	**11 28 51.5**	**+0.8**
YHNB	**Yeheng**	**1.18**	**306**	*e*P	**Pb**	**11 28 36.1**	**-0.4**
YULB	**Yu-li**	**1.18**	**241**	*i* P	**Pn**	**11 28 35.2**	**-0.3**
YULB				*e*S	**Sn**	**11 28 49.8**	**-0.9**
TDCB	**Techi**	**1.18**	**284**	*e*P	**Pn**	**11 28 36.3**	**+0.6**
TDCB				S	**Sn**	**11 28 51.5**	**+0.5**
VWDT	**VWDT**	**1.19**	**260**	*e*P	**Pn**	**11 28 36.0**	**+0.3**
VWDT				S	**Sn**	**11 28 51.1**	**+0.2**
WUSB	**Renai**	**1.19**	**271**	P	**Pn**	**11 28 35.7**	**-0.1**
WUSB				S	**Sb**	**11 28 51.8**	**0.0**
NSK	**Sanguang**	**1.19**	**306**	*e*P	**Pb**	**11 28 36.2**	**-0.6**
TWF1	**Yuli**	**1.20**	**239**	*e*P	**Pn**	**11 28 35.6**	**-0.2**
TWF1				S	**Sn**	**11 28 51.3**	**0.0**
SXI1	**Grass Mountain**	**1.22**	**336**	*e*P	**Pb**	**11 28 36.5**	**-0.7**
SXI1				*i* S	**Sn**	**11 28 54.0**	**+2.2**
CHKH	**Chenggong**	**1.22**	**230**	*e*P	**Pn**	**11 28 37.1**	**+1.1**
NWF	**Wu-fen Shan**	**1.23**	**332**	*e*P	**Pb**	**11 28 36.7**	**-0.8**
NWF				*e*S	**Sn**	**11 28 53.3**	**+1.1**
WFSB	**Wu-fen Shan**	**1.23**	**332**	*e*P	**Pn**	**11 28 36.1**	**-0.2**
IRIF	**Iriomote-Funau**	**1.25**	**73**	P	**Pn**	**11 28 37.1**	**+0.7**
IRIF				S	**Sb**	**11 28 54.1**	**+0.7**
TWA	**Mucha**	**1.26**	**323**	*e*P	**Pb**	**11 28 38.4**	**+0.5**
HATJ	**Hateruma jima**	**1.27**	**86**	P	**Pn**	**11 28 37.7**	**+0.9**
HATJ				S	**Sb**	**11 28 54.2**	**+0.3**
NHDH	**Xindian Distri**	**1.28**	**321**	*e*P	**Pb**	**11 28 38.4**	**+0.2**
FULB	**Fuli**	**1.29**	**233**	*e*P	**Pn**	**11 28 36.4**	**-0.7**
FULB				*e*S	**Sn**	**11 28 52.3**	**-1.2**
CHKT	**Chengkung**	**1.30**	**228**	*e*P	**Pn**	**11 28 36.1**	**-1.1**
CHKT				*e*S	**Sn**	**11 28 51.3**	**-2.4**
TNOU	**National Taiwa**	**1.31**	**333**	*e*P	**Pb**	**11 28 37.6**	**-1.1**
NFF	**Wufeng Townshi**	**1.35**	**299**	*e*P	**Pb**	**11 28 39.2**	**-0.3**
SSLB	**Suanglung**	**1.35**	**262**	*e*P	**Pn**	**11 28 38.5**	**+0.5**
WHP	**Taichung City**	**1.38**	**283**	*e*P	**Pb**	**11 28 40.0**	**0.0**
WCS	**Beigang Elemen**	**1.38**	**274**	*e*P	**Pn**	**11 28 39.4**	**+1.1**
EHD	**Haiduan**	**1.38**	**234**	*e*P	**Pn**	**11 28 37.9**	**-0.5**
EHD				*e*S	**Sn**	**11 28 54.9**	**-0.9**
KSHI	**Guanxi Townshi**	**1.39**	**305**	*e*P	**Pb**	**11 28 39.7**	**-0.3**
SMLT	**Sun Moon Lake**	**1.39**	**266**	*e*P	**Pb**	**11 28 40.6**	**+0.4**
SMLT				*e*S	**Sn**	**11 28 56.4**	**+0.3**
YM01	**YM01**	**1.40**	**327**	*e*P	**Pb**	**11 28 40.0**	**-0.2**
ECS	**Chishang**	**1.41**	**232**	*e*P	**Pn**	**11 28 39.8**	**+1.2**
ECS				*e*S	**Sn**	**11 28 56.9**	**+0.5**
YM08	**YM08**	**1.42**	**328**	*e*P	**Pb**	**11 28 40.0**	**-0.7**
ZUZH	**Zhuzihu**	**1.42**	**326**	*e*P	**Pn**	**11 28 39.2**	**+0.3**
TYC	**Yuchr**	**1.43**	**267**	*e*P	**Pb**	**11 28 41.2**	**+0.4**
LIOB	**Emei**	**1.44**	**298**	*e*P	**Pb**	**11 28 41.0**	**0.0**
LIOB				*e*S	**Sb**	**11 28 60.0**	**+1.0**
TWS1	**Kuangyinshan**	**1.44**	**321**	*e*P	**Pb**	**11 28 40.4**	**-0.6**
TWS1				*e*S	**Sb**	**11 28 59.3**	**+0.4**
NSTT	**Nanjuang**	**1.45**	**297**	*e*P	**Pb**	**11 28 40.6**	**-0.4**
NSTT				*e*S	**Sb**	**11 28 59.3**	**+0.2**
ANP	**Anpu**	**1.46**	**326**	*e*P	**Pb**	**11 28 40.1**	**-1.2**
WHYT	**Xinyi Township**	**1.46**	**259**	*e*P	**Pn**	**11 28 40.4**	**+1.0**
NTST	**Danshui**	**1.48**	**323**	*e*P	**Pb**	**11 28 40.6**	**-1.0**
NTST				*e*S	**Sb**	**11 28 58.8**	**-1.1**
JKRS	**Kuro-shima**	**1.48**	**80**	P	**Pn**	**11 28 40.7**	**+1.1**
JKRS				*e*S	**Sb**	**11 29 00.4**	**+0.5**
TWY	**Chenhua**	**1.49**	**330**	*e*P	**Pb**	**11 28 41.4**	**-0.5**
ELDTW	**Lidau**	**1.51**	**239**	*i* P	**Pn**	**11 28 39.8**	**-0.3**
ELDTW				S	**Sn**	**11 28 57.9**	**-1.1**
SBCB	**Hsinchu**	**1.54**	**302**	*e*P	**Pb**	**11 28 41.6**	**-1.0**
TWQ1	**Liyutan**	**1.55**	**284**	*e*P	**Pb**	**11 28 42.5**	**-0.3**
ALS	**Alishan**	**1.55**	**253**	*e*P	**Pn**	**11 28 42.0**	**+1.1**
ALS				*e*S	**Sn**	**11 29 01.1**	**+0.9**
WJS	**Zhushan**	**1.56**	**265**	*e*P	**Pb**	**11 28 43.5**	**+0.6**
WJS				*e*S	**Sb**	**11 29 04.6**	**+2.4**
LDUT	**Ludao**	**1.56**	**214**	*e*P	**Pn**	**11 28 39.8**	**-1.0**
LDUT				*e*S	**Sn**	**11 28 58.3**	**-1.8**
WNT	**Mingjian**	**1.59**	**267**	*e*P	**Pn**	**11 28 42.8**	**+1.6**
WNT				*e*S	**Sb**	**11 29 02.6**	**-0.6**
LONT	**Longtian**	**1.59**	**228**	*e*P	**Pn**	**11 28 40.8**	**-0.4**
LONT				*e*S	**Sn**	**11 29 00.5**	**-0.4**
TCU	**Taichung**	**1.60**	**276**	*e*P	**Pb**	**11 28 43.2**	**-0.5**
TCU				*e*S	**Sb**	**11 29 05.3**	**+1.8**
JIJ	**Ishigaki jima**	**1.62**	**76**	P	**Pn**	**11 28 42.1**	**+0.5**
JIJ				*e*S	**Sn**	**11 29 02.8**	**+1.2**
CHN5	**Tsauling**	**1.64**	**257**	*e*P	**Pb**	**11 28 43.9**	**-0.5**
CHN5				*e*S	**Sn**	**11 29 03.6**	**+1.4**
WDJ	**Dajia District**	**1.67**	**283**	*e*P	**Pn**	**11 28 42.3**	**+0.1**
PCYT	**Pengchaiyu**	**1.68**	**349**	*e*P	**Pn**	**11 28 42.7**	**+0.3**
TWGBT	**Beinan**	**1.69**	**227**	*e*P	**Pn**	**11 28 42.0**	**-0.4**
TWGBT				*e*S	**Sn**	**11 29 02.4**	**-0.8**
TTN	**Taitung**	**1.69**	**224**	*e*P	**Pn**	**11 28 43.4**	**+1.0**
TTN				*e*S	**Sn**	**11 29 02.5**	**-0.7**
TWG	**Pinlang**	**1.69**	**227**	*e*P	**Pn**	**11 28 41.9**	**-0.6**
TWG				*e*S	**Sn**	**11 29 02.1**	**-1.2**
WCHH	**Zhanghua**	**1.70**	**274**	*e*P	**Pb**	**11 28 44.5**	**-0.9**
WCHH				*e*S	**Sb**	**11 29 07.0**	**+0.6**
STYH	**Taoyuan**	**1.71**	**242**	*e*P	**Pn**	**11 28 43.7**	**+1.0**
STYH				*e*S	**Sn**	**11 29 05.0**	**+1.3**
WCH1	**Changhua City**	**1.71**	**274**	*e*P	**Pn**	**11 28 43.0**	**+0.1**
WCH1				*e*S	**Sb**	**11 29 06.8**	**+0.1**
WGK	**Gukeng**	**1.72**	**261**	*e*P	**Pb**	**11 28 45.9**	**+0.2**
WGK				*e*S	**Sb**	**11 29 08.6**	**+1.6**
WDLH	**Douliu**	**1.75**	**261**	*e*P	**Pb**	**11 28 45.3**	**-0.8**
WDLH				*e*S	**Sb**	**11 29 08.3**	**+0.6**
WCKO	**Fanlu**	**1.75**	**253**	*e*P	**Pn**	**11 28 45.4**	**+2.1**
WCKO				*e*S	**Sb**	**11 29 07.5**	**-0.2**
TPUB	**Ta-pu**	**1.77**	**248**	*e*P	**Pn**	**11 28 45.9**	**+2.1**
TPUB				*i* S	**Sn**	**11 29 07.9**	**+2.5**
WTP	**Ta-pu**	**1.81**	**247**	*e*P	**Pb**	**11 28 46.8**	**-0.4**
WTP				*e*S	**Sn**	**11 29 08.5**	**+2.2**
JISG	**Ishigakijimahi**	**1.83**	**70**	P	**Pn**	**11 28 44.9**	**+0.5**
JISG				*e*S	**Sn**	**11 29 07.6**	**+0.9**
WRL	**Guolierlin Hig**	**1.87**	**268**	P	**Pb**	**11 28 47.3**	**-1.0**
WRL				*e*S	**Sb**	**11 29 10.6**	**-0.6**
RLNB	**Erlin**	**1.89**	**268**	P	**Pn**	**11 28 47.1**	**+1.9**
RLNB				*e*S	**Sb**	**11 29 11.9**	**+0.3**
CHY	**Chiayi**	**1.89**	**256**	*e*P	**Pn**	**11 28 47.5**	**+2.3**
CHY				S	**Sb**	**11 29 11.2**	**-0.5**
SLGT	**Liugui**	**1.90**	**239**	*e*P	**Pb**	**11 28 48.2**	**-0.5**
CHN1	**Nanshi**	**1.91**	**246**	*e*P	**Pb**	**11 28 48.0**	**-0.8**
CHN1				*i* S	**Sb**	**11 29 11.9**	**-0.4**
SGST	**Jiashian**	**1.91**	**243**	*e*P	**Pn**	**11 28 46.9**	**+1.4**
SGST				*e*S	**Sb**	**11 29 12.4**	**+0.1**
TWK	**Hsinying**	**1.91**	**249**	*e*P	**Pn**	**11 28 47.8**	**+2.3**
TWK				*e*S	**Sb**	**11 29 11.7**	**-0.7**
ECL	**Taimali**	**1.92**	**225**	*e*P	**Pn**	**11 28 45.3**	**-0.5**
ECL				*e*S	**Sn**	**11 29 07.3**	**-1.8**
WSF	**Szhu**	**2.04**	**261**	*e*P	**Pb**	**11 28 50.2**	**-0.9**
WSF				*e*S	**Sb**	**11 29 15.7**	**-0.4**
SSD	**Sandimen**	**2.05**	**234**	*e*P	**Pn**	**11 28 48.3**	**+0.9**
SSD				*e*S	**Sn**	**11 29 14.7**	**+2.5**
ICHU	**Yijhu**	**2.06**	**253**	*e*P	**Pn**	**11 28 48.7**	**+1.2**
WSL	**Shuilin Townsh**	**2.06**	**258**	*e*P

HATOM	**Hato Mayor del**	**0.63**	**185**	⇓	*i* P	**Pn**	**11 37 15.6**	**+0.4**
HATOM				⇓	*e*Sg	**Sn**	**11 37 25.8**	**-3.0**
HATOM					IAML		11 37 28.3	
	comp=N,419nm,0.4s							
CADR	**Cabrera**	**0.63**	**293**	⇓	*i* P	**Pn**	**11 37 15.6**	**+0.5**
CADR				⇓	*e*Sg	**Sn**	**11 37 26.8**	**-2.0**
CADR					IAML		11 37 27.6	
	comp=N,3µm,0.2s							
DR08	**Loma La Naviza**	**0.80**	**236**	⇑	*i* P	**Pn**	**11 37 16.7**	**+0.1**
DR08				⇑	*e*Sg	**Sn**	**11 37 27.9**	**-3.5**
DR08					IAML		11 37 28.6	
	comp=N,46µm,0.2s							
SFDR	**San Fco. de Ma**	**0.87**	**262**	⇑	*i* P	**Pn**	**11 37 17.9**	**+0.7**
SFDR				⇑	*e*Sg	**Sn**	**11 37 31.0**	**-1.4**
SFDR					IAML		11 37 31.3	
	comp=N,6µm,0.3s							
HIDR	**Higuey Centro**	**1.00**	**145**	⇓	*i* P	**Pn**	**11 37 21.2**	**+2.7**
HIDR				⇑	*e*Sg	**Sn**	**11 37 35.5**	**+0.7**
HIDR					IAML		11 37 36.8	
	comp=N,4µm,0.2s							
SDD	**Santo Domingo**	**1.10**	**210**	⇑	*i* P	**Pn**	**11 37 20.5**	**+0.9**
SDD				⇓	*e*Sg	**Sn**	**11 37 34.2**	**-2.3**
SDD					IAML		11 37 37.4	
	comp=N,273nm,0.2s							
SDD	**Santo Domingo**	**1.10**	**210**		*i* P	**Pn**	**11 37 20.4**	**+0.9**
SDD					*e*S	**Sn**	**11 37 34.2**	**-2.3**
SC01	**Santiago de lo**	**1.32**	**271**	⇓	*i* P	**Pn**	**11 37 24.4**	**+2.4**
SC01				⇑	*e*Sg	**Sn**	**11 37 42.6**	**+1.7**
SC01					IAML		11 37 48.9	
	comp=N,704nm,0.3s							
SC01	**Santiago de lo**	**1.32**	**271**		*i* P	**Pn**	**11 37 24.6**	**+2.7**
SC01					*e*S	**Sn**	**11 37 41.3**	**+0.4**
ABDR	**Alto Bandera**	**1.37**	**244**	⇑	*i* P	**Pn**	**11 37 24.1**	**+1.2**
ABDR				⇑	*e*Sg	**Sn**	**11 37 41.5**	**-1.0**
ABDR					IAML		11 38 23.4	
	comp=N,0.2nm,0.2s							
BANI	**BANI**	**1.41**	**224**	⇑	*i* P	**Pn**	**11 37 24.9**	**+1.7**
BANI				⇑	*e*Sg	**Sn**	**11 37 42.6**	**-0.3**
BANI					IAML		11 37 43.8	
	comp=N,2µm,0.2s							
LUDR	**Luperon**	**1.60**	**287**	⇓	*i* P	**Pn**	**11 37 27.4**	**+2.1**
LUDR				⇑	*e*Sg	**Sn**	**11 37 47.7**	**+0.9**
MADR	**Mao Valverde**	**1.68**	**275**	⇓	*i* P	**Pn**	**11 37 30.6**	**+4.3**
MADR				⇑	*e*Sg	**Sn**	**11 37 48.7**	**+0.3**
MADR					IAML		11 37 53.8	
	comp=N,1µm,0.3s							
LOPP1	**Punta Rusia, P**	**1.82**	**284**		*i* P	**Pn**	**11 37 30.3**	**+2.4**
LOPP1					*e*S	**Sn**	**11 37 52.1**	**+0.6**
LOPP1					IAML		11 37 52.8	
	comp=Z,393nm,0.4s							
SDDR	**Presa de Saban**	**1.90**	**257**		*i* P	**Pn**	**11 37 31.6**	**+2.6**
SDDR					*e*S	**Sn**	**11 37 53.6**	**+0.2**
SDDR					IAML		11 37 58.3	
	comp=Z,5µm,0.5s							
SDDR	**Presa de Saban**	**1.90**	**257**		*e*P	**Pn**	**11 37 31.6**	**+2.6**
SDDR					*e*S	**Sn**	**11 37 54.0**	**+0.6**
SDDR					IAML		11 37 55.4	
	comp=Z,360nm,0.2s							
SDDR					IAML		11 37 57.5	
	comp=Z,371nm,0.3s							
REDR	**Restauracion**	**1.97**	**263**	⇑	*i* P	Pn	11 37 35.0	+5.3
REDR				⇑	*e*Sg	**Sn**	**11 37 59.8**	**+5.0**
REDR					IAML		11 38 01.1	
	comp=N,2µm,0.2s							
LONE3	**El Aguacate, B**	**2.17**	**249**		*i* P	**Pn**	**11 37 35.0**	**+2.5**
LONE3					*e*S	**Sn**	**11 38 01.5**	**+1.9**
LONE3					IAML		11 38 02.9	
	comp=Z,79nm,0.4s							
PODR	**Polo**	**2.23**	**236**		*i* P	**Pn**	**11 37 36.0**	**+2.7**
PODR					IAML		11 38 06.7	
	comp=Z,1µm,0.5s							
MCDR	**Montecristi**	**2.25**	**283**	⇓	*i* P	**Pn**	**11 37 35.3**	**+2.0**
MCDR				⇓	*e*Sg	**Sn**	**11 38 01.3**	**+0.2**
MCDR					IAML		11 38 05.2	
	comp=N,523nm,0.1s							
LODU1	**El Espartillar**	**2.29**	**243**		*i* P	**Pn**	**11 37 37.3**	**+3.3**
LODU1					IAML		11 38 14.9	
	comp=Z,135nm,0.6s							
LOVI	**El Cajuil, Ovi**	**2.52**	**231**		*i* P	**Pn**	**11 37 38.6**	**+1.7**
LOVI					*e*S	**Sn**	**11 38 06.6**	**-0.7**
LOVI					IAML		11 38 09.0	
	comp=Z,78nm,1.2s							
LOBH	**Bahia de las A**	**2.68**	**235**		*i* P	**Pn**	**11 37 42.2**	**+3.2**
LOBH					*e*S	**Sn**	**11 38 13.0**	**+1.8**
LOBH					IAML		11 38 16.2	
	comp=Z,52nm,0.8s							
GRTK	**Grand Turk**	**2.69**	**321**		*i* P	**Pn**	**11 37 41.5**	**+2.6**
GRTK					*e*S	**Sn**	**11 38 12.3**	**+1.0**
GRTK					IAML		11 38 14.3	
	comp=Z,83nm,0.2s							
GRTK	**Grand Turk**	**2.69**	**321**		*e*P	**Pn**	**11 37 41.6**	**+2.6**
GRTK					*e*S	**Sn**	**11 38 11.8**	**+0.5**
GRTK					IAML		11 38 13.9	
	comp=Z,221nm,0.1s							
GRTK					IAML		11 38 14.2	
	comp=Z,194nm,0.1s							
MASC	**Masc**	**4.68**	**280**		*e*P	**Pn**	**11 38 05.5**	**-0.1**
MASC					*e*S	**Sn**	**11 38 56.3**	**-2.6**
QMBU	**Quimbuelo**	**5.22**	**279**		*e*P	**Pn**	**11 38 12.1**	**-0.9**
QMBU					*e*S	**Sn**	**11 39 08.1**	**-4.0**
MOAC	**Moa**	**5.44**	**284**		*e*P	**Pn**	**11 38 15.4**	**-0.4**
MOAC					*e*S	**Sn**	**11 39 13.2**	**-4.0**
NMDO	**Nuevo Mundo**	**5.44**	**283**		*e*P	**Pn**	**11 38 14.6**	**-1.3**
NMDO					*e*S	Sn	11 39 09.9	-7.4
GTBY	**Guantanamo Bay**	**5.47**	**276**		*e*P	**Pn**	**11 38 16.9**	**+0.6**
RCC	**Rio Carpintero**	**6.03**	**277**		*e*P	**Pn**	**11 38 23.3**	**-0.5**
RCC					*e*S	**Sn**	**11 39 27.3**	**-4.2**
PINC	**Pinares de May**	**6.17**	**281**		*e*P	Pn	11 38 24.3	-1.5
PINC					*e*S	**Sn**	**11 39 30.1**	**-5.0**
MARVS	**Santiago de Cu**	**6.22**	**276**		*e*P	**Pn**	**11 38 25.4**	**-1.0**
MARVS					*e*S	**Sn**	**11 39 31.9**	**-4.3**

*IDC **24** 11:42:08.0±0.9, 40.86N×112.02W, h0km, mb2.7/1, mbtmp2.8/4, ML3.0/3, Error ellipse: s-maj=15.2km s-min=5.8km az=153.0*
*UUSS **24** 11:42:09.1±0.7, 40.78N±0.01×112.05W±0.02, h9km±4km, Error ellipse: s-maj=2.2km s-min=1.9km az=212.0*
*NEIC **24** 11:42:09.1±0.7, 40.77N±0.01×112.05W±0.02, h9km±2km, ML3.1/58, ML3.1/19(UUSS), Error ellipse: s-maj=2.6km s-min=2.1km az=93.0*
ISC 24 11:42:09.5±1.0, 40.78N±0.02×112.05W±0.02, h8km±8km, n59, σ0s74/59, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAIU	**Southern Antel**	**0.12**	**306**		**Pg**	**11 42 12.3**	**0.0**
HRU	**Hogsback Ridge**	**0.13**	**89**		**Pg**	**11 42 12.3**	**-0.1**
NOQ	**North Oquirrh**	**0.14**	**202**		**Pg**	**11 42 12.5**	**-0.1**
NOQ					**Sg**	**11 42 14.9**	**+0.2**
RBU	**Red Butte Cany**	**0.18**	**91**		**Pg**	**11 42 13.2**	**-0.2**
MHD	**Mile High Driv**	**0.23**	**123**		**Pg**	**11 42 13.8**	**-0.3**
CTU	**Camp Tracy**	**0.25**	**112**		**Pg**	**11 42 14.2**	**-0.3**
CTU					IAML	11 42 17.8	
	comp=N,2µm,0.3s						
NAIU	**Northern Antel**	**0.27**	**330**		**Pg**	**11 42 15.0**	**+0.1**
FPU	**Francis Peak**	**0.29**	**34**		**Pg**	**11 42 15.3**	**-0.1**
GMU	**Granite Mounta**	**0.30**	**133**		**Pg**	**11 42 15.2**	**-0.3**
WTU	**Western Traver**	**0.34**	**167**		**Pg**	**11 42 16.2**	**0.0**
CWU	**Camp Williams**	**0.34**	**187**		**Pg**	**11 42 16.1**	**-0.1**
SNUT	**Stansbury Nort**	**0.36**	**286**		**Pg**	**11 42 16.8**	**+0.1**
AAU	**Alta**	**0.37**	**121**		**Pg**	**11 42 16.5**	**-0.3**
WBC	**Weber Canyon**	**0.37**	**18**		**Pg**	**11 42 16.7**	**-0.1**
TCVU	**Timpanogos Cav**	**0.43**	**142**		**Pg**	**11 42 17.6**	**-0.3**
N16A	**Rees Ranch, Co**	**0.48**	**77**		**Pg**	**11 42 19.0**	**+0.2**
RCJ	**Ross Creek**	**0.48**	**105**		**Pg**	**11 42 18.6**	**-0.2**
LDJ	**Lady**	**0.53**	**112**		**Pg**	**11 42 19.8**	**0.0**
TCUT	**Toone Canyon**	**0.59**	**55**		**Pg**	**11 42 20.9**	**-0.1**
TCUT	**Toone Canyon**	**0.59**	**55**		**Pg**	**11 42 21.0**	**+0.1**
SPUT	**South Promonto**	**0.60**	**330**		**Pg**	**11 42 21.1**	**-0.1**
SPUT					IAML	11 42 31.2	
	comp=N,964nm,0.3s						
SPUT					IAML	11 42 31.4	
	comp=E,555nm,0.3s						
HTU	**Hoyt Peak**	**0.64**	**99**		**Pg**	**11 42 21.8**	**-0.1**
EPU	**East Promontor**	**0.66**	**336**		**Pg**	**11 42 22.3**	**-0.1**
DAU	**Daniels Canyon**	**0.71**	**121**		**Pb**	**11 42 23.4**	**-1.0**
BGU	**Big Grassy Mou**	**0.76**	**281**		**Pg**	**11 42 24.0**	**-0.1**
BGU					IAML	11 42 36.9	
	comp=N,573nm,0.4s						
BGU					IAML	11 42 37.0	
	comp=E,984nm,0.5s						
MCU	**Monte Cristo P**	**0.79**	**31**		**Pg**	**11 42 24.5**	**-0.3**
LHUT	**Little Humpy P**	**0.81**	**82**		**Pb**	**11 42 25.3**	**-0.8**
DUG	**Dugway, Tooele**	**0.83**	**225**		**Pg**	**11 42 24.9**	**-0.5**
DUG					IAML	11 42 39.3	
	comp=E,592nm,0.7s						
DUG					IAML	11 42 42.7	
	comp=E,461nm,0.7s						
NLU	**North Lily Min**	**0.83**	**181**		**Pg**	**11 42 25.1**	**-0.4**
MPU	**Maple Canyon**	**0.83**	**157**		**Pg**	**11 42 25.1**	**-0.4**
MPU					IAML	11 42 39.8	
	comp=N,950nm,0.5s						
MPU					IAML	11 42 40.0	
	comp=E,665nm,0.6s						
HWUT	**Hardware Ranch**	**0.90**	**24**		**Pg**	**11 42 26.4**	**-0.5**
HWUT					IAML	11 42 41.8	
	comp=E,500nm,0.4s						
HWUT					IAML	11 42 42.2	
	comp=E,561nm,0.4s						
BSUT	**Blindstream Ca**	**1.01**	**104**		**Pg**	**11 42 28.4**	**-0.6**
BSUT					IAML	11 42 45.9	
	comp=N,407nm,0.4s						
BSUT					IAML	11 42 45.9	
	comp=E,632nm,0.6s						
HVU	**Hansel Valley**	**1.14**	**332**		**Pg**	**11 42 30.5**	**-0.8**
FSU	**Fish Springs**	**1.48**	**224**		**Pn**	**11 42 35.6**	**-0.9**
L17A	**Cokeville**	**1.58**	**34**		**Pg**	**11 42 39.1**	**-0.8**
P17A	**Butcher Ranch,**	**1.65**	**142**		**Pn**	**11 42 38.8**	**-0.2**
P17A					IAML	11 43 03.4	
	comp=N,144nm,0.5s						
P17A					IAML	11 43 05.4	
	comp=E,142nm,0.6s						
P18A	**Preston Nutter**	**1.80**	**129**		**Pb**	**11 42 42.1**	**-0.8**
P18A					IAML	11 43 08.1	
	comp=N,90nm,0.4s						
P18A					IAML	11 43 09.9	
	comp=E,144nm,0.6s						
RDMU	**Red Mountain**	**1.90**	**96**		**Pb**	**11 42 43.4**	**-1.2**
SRU	**San Rafael Swe**	**2.04**	**144**		**Pn**	**11 42 44.7**	**+0.3**
SRU					IAML	11 43 20.9	
	comp=E,190nm,0.6s						
AHID	**Auburn Hatcher**	**2.10**	**19**		**Pb**	**11 42 46.1**	**-1.9**
TCRU	**Three Creeks R**	**2.19**	**188**	Pn	**Pn**	**11 42 45.2**	**-1.3**
ELK	**Elko**	**2.42**	**270**	Pn	**Pn**	**11 42 48.6**	**-1.0**
	comp=E,3.7nm,0.3s,baz=82,slow=9.7,SNR=34						
ELK				Lg	Lg	11 43 25.4	
	comp=E,18nm,0.3s,baz=349,slow=16,SNR=15						
	comp=E,3.1nm,0.3s						
PSUT	**Pine Spring**	**2.64**	**212**		**Pn**	**11 42 53.1**	**+0.5**
PSUT					IAML	11 43 35.2	
	comp=N,62nm,0.6s						
PSUT					IAML	11 43 41.0	
	comp=E,60nm,1.2s						
BW06	**Boulder Array**	**2.72**	**42**		**Pn**	**11 42 52.9**	**-0.9**
BW06					IAML	11 43 34.2	
	comp=E,78nm,0.5s						
BW06					IAML	11 43 34.7	
	comp=E,108nm,0.6s						
PD31	**Pinedale Array**	**2.72**	**42**		**Pn**	**11 42 53.3**	**-0.4**
PDAR	**Pinedale Array**	**2.72**	**42**	Pg	**Pb**	**11 42 57.9**	**-0.7**
	comp=E,12nm,0.3s,baz=232,slow=14,SNR=312						
PDAR				Lg	Lg	11 43 31.2	
	comp=E,25nm,0.3s,baz=224,slow=25,SNR=18						
SNOW	**Snow King Moun**	**2.84**	**19**		**Pn**	**11 42 56.6**	**+1.2**
SNOW					IAML	11 43 43.2	
	comp=E,90nm,0.7s						
SNOW					IAML	11 43 47.9	
	comp=E,58nm,0.9s						
FXWY	**Fox Creek**	**2.95**	**15**		**Pn**	**11 42 57.9**	**+1.0**
LOHW	**Long Hollow**	**3.02**	**20**		**Pn**	**11 42 59.4**	**+1.5**
LOHW					IAML	11 43 47.0	
	comp=E,53nm,0.9s						
PV21	**Cone Mtn., Par**	**3.25**	**132**		**Pn**	**11 43 01.1**	**+0.1**
PV10	**Paradox Valley**	**3.35**	**135**	Pn	**Pn**	**11 43 03.1**	**+0.7**
CCUT	**Cedar City**	**3.39**	**198**	Pn	**Pn**	**11 43 02.8**	**-0.1**
PV19	**Morning Glory**	**3.42**	**135**		**Pn**	**11 43 04.3**	**+0.9**
PV03	**Paradox Valley**	**3.54**	**135**	Pn	**Pn**	**11 43 04.9**	**0.0**
PV01	**Paradox Valley**	**3.78**	**133**	Pn	**Pn**	**11 43 08.3**	**0.0**
NVAR	**Mina Array Bea**	**5.37**	**246**	Pn	**Pn**	**11 43 31.9**	**+1.8**
	comp=E,0.4nm,0.3s,baz=55,slow=13,SNR=5.9						
NVAR				Lg	Lg	11 44 55.6	
	comp=E,2.2nm,0.3s,baz=33,slow=28,SNR=6.8						
	comp=E,0.5nm,0.3s						
ANMO	**Albuquerque**	**7.32**	**141**	Pg	Pb	11 44 21.5	+4.7
	comp=E,0.2nm,0.3s,baz=331,slow=19,SNR=3.9						
ANMO				Lg		11 45 54.7	
	comp=E,0.2nm,0.3s,baz=231,slow=20,SNR=6.1						
TXAR	**Lajitas Array**	**13.32**	**146**	Pn	**Pn**	**11 45 21.2**	**+2.2**
	baz=322,slow=13,SNR=2.6						
	comp=E,0.1nm,0.7s						
YKA	**Yellowknife Ar**	**21.80**	**357**	P	**P**	**11 47 00.9**	**-0.7**
	comp=E,0.3nm,0.9s,baz=180,slow=9.4,SNR=5.9						
	comp=E,0.3nm,0.9s						

*OSPL **24** 11:42:41.4±1.7, 19.42N×69.21W, h65km±20km, ML3.0, Presumed earthquake*
*SDD **24** 11:42:42.8±2.6, 19.37N×69.39W, h81km±12km, MD2.8, ML3.5, MW3.6, Presumed earthquake*
ISC 24 11:42:37.7±1.7, 19.45N±0.05×69.32W±0.06, h110km±9km, n30, σ2s43/54, 14C-6D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMDR	**Samana, DR**	**0.20**	**141**	⇑ *i* P	**Pn**	**11 42 53.6**	**+0.5**
SMDR				⇑ *e*Sg	**Sn**	**11 43 02.9**	**-1.7**
SMDR				IAML		11 43 03.0	
	comp=N,762nm,0.2s						
NADR	**Nagua**	**0.51**	**260**	⇓ *i* P	**Pn**	**11 42 54.6**	**+0.1**
NADR				⇑ *e*Sg	**Sn**	**11 43 04.9**	**-2.4**
NADR				IAML		11 43 05.3	
	comp=N,3µm,0.2s						
LONA1	**Toro Cenizo, N**	**0.52**	**263**	*i* P	Pn	11 43 02.3	+7.7
LONA1				*e*S	**Sn**	**11 43 12.5**	**+5.2**
CADR	**Cabrera**	**0.62**	**291**	⇑ *i* P	**Pn**	**11 42 55.2**	**-0.1**
CADR				⇑ *e*Sg	**Sn**	**11 43 07.8**	**-0.9**
CADR				IAML		11 43 08.0	
	comp=N,990nm,0.3s						
HATOM	**Hato Mayor del**	**0.66**	**185**	⇑ *i* P	**Pn**	**11 42 54.5**	**-1.2**
HATOM				⇑ *e*Sg	**Sn**	**11 43 06.3**	**-3.0**
HATOM				IAML		11 43 08.7	
	comp=N,119nm,0.4s						
DR08	**Loma La Naviza**	**0.82**	**234**	⇓ *i* P	**Pn**	**11 42 57.1**	**0.0**
DR08				⇑ *e*Sg	**Sn**	**11 43 08.2**	**-3.6**
DR08				IAML		11 43 09.0	
	comp=N,18µm,0.2s						
SFDR	**San Fco. de Ma**	**0.88**	**260**	*i* P	**Pn**	**11 42 59.6**	**+2.0**
SFDR				⇑ *e*Sg	**Sn**	**11 43 11.4**	**-1.4**
SFDR				IAML		11 43 11.8	
	comp=N,2µm,0.2s						
HIDR	**Higuey Centro**	**1.02**	**146**	⇑ *i* P	**Pn**	**11 43 01.7**	**+2.6**
HIDR				⇑ *e*Sg	**Sn**	**11 43 15.8**	**+0.5**
HIDR				IAML		11 43 17.0	
	comp=N,1µm,0.3s						
SDD	**Santo Domingo**	**1.13**	**210**	*i* P	**Pn**	**11 43 01.6**	**+1.3**
SDD				*e*S	**Sn**	**11 43 14.6**	**-2.7**
SC01	**Santiago de lo**	**1.33**	**269**	⇓ *i* P	**Pn**	**11 43 05.2**	**+2.7**
SC01				IAML		11 43 29.3	
	comp=N,259nm,0.2s						
SC01	**Santiago de lo**	**1.33**	**269**	*i* P	**Pn**	**11 43 05.1**	**+2.7**
SC01				*e*S	**Sn**	**11 43 21.6**	**+0.4**
SC01				IAML		11 43 24.7	
	comp=Z,191nm,0.3s						
BANI	**BANI**	**1.44**	**223**	⇑ *i* P	**Pn**	**11 43 05.3**	**+1.4**
BANI				⇑ *e*Sg	**Sn**	**11 43 23.0**	**-0.7**
BANI				IAML		11 43 24.2	
	comp=N,614nm,0.2s						
LUDR	**Luperon**	**1.60**	**286**	⇓ *i* P	**Pn**	**11 43 07.7**	**+2.1**
LUDR				⇓ *e*Sg	**Sn**	**11 43 27.8**	**+0.8**
LOPP1	**Punta Rusia, P**	**1.81**	**283**	*i* P	**Pn**	**11 43 10.8**	**+2.4**
LOPP1				*e*S	**Sn**	**11 43 32.3**	**+0.6**
LOPP1				IAML		11 43 33.0	
	comp=Z,118nm,0.3s						
SDDR	**Presa de Saban**	**1.91**	**256**	*i* P	**Pn**	**11 43 12.1**	**+2.5**
SDDR				*e*S	**Sn**	**11 43 34.5**	**+0.5**
SDDR				IAML		11 43 38.6	
	comp=Z,2µm,0.5s						
SDDR	**Presa de Saban**	**1.91**	**256**	*e*P	**Pn**	**11 43 12.1**	**+2.5**
SDDR				*e*S	**Sn**	**11 43 35.0**	**+1.0**
SDDR				IAML		11 43 37.9	
	comp=Z,134nm,0.3s						
SDDR				IAML		11 43 38.9	
	comp=Z,61nm,0.2s						
REDR	**Restauracion**	**1.98**	**262**	⇓ *i* P	Pn	11 43 15.5	+5.1
REDR				⇑ *e*Sg	**Sn**	**11 43 40.1**	**+4.8**
REDR				IAML		11 43 41.5	
	comp=N,750nm,0.1s						
LONE3	**El Aguacate, B**	**2.19**	**248**	*i* P	**Pn**	**11 43 15.4**	**+2.2**
LONE3				*e*S	**Sn**	**11 43 42.1**	**+1.8**
LONE3				IAML		11 43 43.8	
	comp=Z,28nm,0.3s						
PODR	**Polo**	**2.25**	**236**	*i* P	**Pn**	**11 43 16.6**	**+2.6**
LODU1	**El Espartillar**	**2.31**	**242**	*i* P	**Pn**	**11 43 17.6**	**+3.0**
LODU1				IAML		11 43 50.9	
	comp=Z,47nm,1.4s						
LOVI	**El Cajuil, Ovi**	**2.54**	**230**	*i* P	**Pn**	**11 43 20.0**	**+2.4**
LOVI				*e*S	**Sn**	**11 43 46.8**	**-1.5**
LOVI				IAML		11 43 48.4	
	comp=Z,59nm,0.7s						
GRTK	**Grand Turk**	**2.67**	**321**	*i* P	**Pn**	**11 43 21.6**	**+2.4**
GRTK				*e*S	**Sn**	**11 43 51.7**	**+0.5**
GRTK				IAML		11 44 01.2	
	comp=Z,71nm,1.4s						
GRTK	**Grand Turk**	**2.67**	**321**	*e*P	**Pn**	**11 43 21.6**	**+2.4**
GRTK				*e*S	**Sn**	**11 43 52.1**	**+0.9**
GRTK				IAML		11 43 54.3	
	comp=Z,56nm,0.1s						
GRTK				IAML		11 43 54.5	
	comp=Z,65nm,0.1s						
LOBH	**Bahia de las A**	**2.70**	**235**	*i* P	**Pn**	**11 43 22.6**	**+2.9**
LOBH				*e*S	**Sn**	**11 43 53.4**	**+1.3**
LOBH				IAML		11 44 01.2	
	comp=Z,57nm,2.4s						
MASC	**Masc**	**4.68**	**280**	*e*P	**Pn**	**11 43 45.7**	**-0.4**
MASC				*e*S	**Sn**	**11 44 36.6**	**-2.8**
QMBU	**Quimbuelo**	**5.22**	**279**	*e*P	**Pn**	**11 43 53.0**	**-0.5**
QMBU				*e*S	**Sn**	**11 44 48.8**	**-3.8**
NMDO	**Nuevo Mundo**	**5.44**	**283**	*e*P	**Pn**	**11 43 55.8**	**-0.6**
NMDO				*e*S	**Sn**	**11 44 53.5**	**-4.3**
GTBY	**Guantanamo Bay**	**5.47**	**276**	*e*P	**Pn**	**11 43 56.3**	**-0.7**
GTBY				*e*S	**Sn**	**11 44 55.4**	**-3.3**
RCC	**Rio Carpintero**	**6.03**	**276**	*e*P	**Pn**	**11 44 04.0**	**-0.4**
RCC				*e*S	**Sn**	**11 45 07.7**	**-4.4**
PINC	**Pinares de May**	**6.17**	**281**	*e*P	Pn	11 44 04.7	-1.6
PINC				*e*S	**Sn**	**11 45 11.0**	**-4.6**

*LVSN **24** 12:25:42.7±4.4, 59.48N×24.15E, h0km±999km, ML1.0, Presumed earthquake*
EST 24 12:24:56.1±0.1, 59.14N×28.24E, h0km, ML1.4(HEL), Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EE04	**Vaivara Sinima**	**0.30**	**321**	*e*S	Sg	12 25 05.4	-0.4
VSU	**Vasula**	**1.04**	**230**	*e*P	Pg	12 25 13.7	-2.3
EE03	**Tooma soojaam,**	**1.05**	**256**	*e*P	Pg	12 25 14.6	-1.6
EE03				*e*S	Sg	12 25 28.5	-1.4
EE07	**Piusa Caves, O**	**1.36**	**198**	*e*PB	Pg	12 25 20.7	-1.5
EE07				*e*S	Sg	12 25 37.9	-1.9
VJF	**Virojoki**	**1.45**	**346**	*e*P	Pn	12 25 22.2	-1.2
VJF				*e*PN	Pg	12 25 23.2	-0.6
VJF				*e*S	Sg	12 25 40.5	-2.0
VJF				smax	smax	12 25 45.9	
	comp=Z,2.3nm,0.1s						
EE08	**Sarghaua, Vand**	**1.63**	**254**	*e*P	Pn	12 25 25.0	-1.0
EE08				*e*S	Sn	12 25 45.8	-1.9
PVF	**Pernaja**	**1.85**	**321**	*e*PG	Pn	12 25 29.5	+0.5
PVF				*e*SG	Sn	12 25 53.0	-0.1
PVF				smax	smax	12 25 55.3	
	comp=Z,1.2nm,0.1s						
VUOS	**Vuosaari Helsi**	**1.89**	**305**	*e*PG	Pn	12 25 30.3	+0.7
VUOS				*e*S	Sn	12 25 53.3	-0.8
VUOS				smax	smax	12 25 55.6	
	comp=Z,2.0nm,0.1s						
MEF	**Metsahovi**	**2.23**	**301**	*e*S	Sb	12 26 04.2	-1.1
MEF				*e*P	Sn	12 25 58.2	-4.2
MEF				AML	AML	12 26 05.7	
	comp=E,4.9nm,0.5s						
MEF				AML	AML	12 26 07.0	
	comp=N,8.7nm,0.9s						
MEF				AML	AML	12 26 08.0	
	comp=Z,8.8nm,0.7s						
MEF	**Metsahovi**	**2.23**	**301**	*e*SB	Sn	12 26 03.6	+1.2
NUR	**Nurmijarvi**	**2.27**	**309**	*e*PG	Pn	12 25 36.4	+1.5
NUR				*e*SB	Sn	12 26 04.5	+0.9
NUR				smax	smax	12 26 07.4	
	comp=Z,1.4nm,0.1s						
RUF	**Ruokolahti**	**2.32**	**8**	*e*P	Pn	12 25 35.6	+0.1
RUF				*e*SG	Sb	12 26 07.1	-0.8
RUF				smax	smax	12 26 08.7	
	comp=Z,0.8nm,0.1s						
MTSE	**Matsula**	**2.33**	**261**	*e*S	Sb	12 26 06.9	-1.4
MTSE	**Matsula**	**2.33**	**261**	*e*SB	Sb	12 26 06.8	-1.5
EE01	**Perakula, Nova**	**2.38**	**274**	*e*SB	Sb	12 26 08.3	-1.3
FIA0	**FINESS Array S**	**2.55**	**336**	*e*PB	Pn	12 25 40.2	+1.6
FIA0				*e*SG	Sb	12 26 14.0	-0.5
FIA0				smax	smax	12 26 15.8	
	comp=Z,1.3nm,0.1s						
FIA1	**FINESS Array S**	**2.55**	**336**	*e*PB	Pn	12 25

comp=Z,338nm,19.2s,baz=56,slow=38
TORD Torodi Ar. Bea 65.79 268 P P 12 59 49.4 -4.1
0.4nm,0.6s,baz=53,slow=6.1,SNR=2.8
0.4nm,0.6s

*IDC **24** 12:58:16.8±0.7, 13.°93N × 145.°00E, h150km±4km, mb3.2/7, mbtmp3.6/7, Error ellipse: s-maj=32.5km s-min=16.9km az=95.0*
*NEIC **24** 12:58:16.9±1.4, 13.°97N±0.°09 × 145.°2E±0.°2, h154km±7km, mb4.2/5, Error ellipse: s-maj=27.8km s-min=12.9km az=87.0*
ISC 24 12:58:16.3±0.7, 14.°0N±0.°1 × 145.°2E±0.°2, h150km, n25, σ0°90/26, mb3.9/16, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.46**	**218**	P	**Pn**	**12 58 39.2**	**+1.6**
	627nm,0.3s,baz=14,slow=4.2,SNR=251						
GUMO				S	**Sn**	**12 58 54.4**	**+0.8**
	496nm,0.3s,baz=338,slow=22,SNR=13						
FAKI	**Fak Fak**	**21.09**	**218**	P	**P**	**13 02 49.4**	**+0.2**
COEN	**Coen**	**27.80**	**184**	P	**P**	**13 03 50.5**	**-1.0**
KSAR	**Wonju Array Be**	**28.00**	**330**	P	**P**	**13 03 51.8**	**-1.3**
WB0	**Warramunga Arr**	**35.15**	**198**	P	**P**	**13 04 54.9**	**-0.9**
WB0				IAmb	IAmb	13 05 36.5	
	comp=Z,7.4nm,1.4s						
WR0	**Warramunga Arr**	**35.28**	**197**	P	**P**	**13 04 56.5**	**-0.5**
WR0				IAmb	IAmb	13 05 17.0	
	comp=Z,10nm,1.5s						
WRAB	**Tennant Creek**	**35.32**	**198**	P	**P**	**13 04 56.5**	**-0.8**
WRAB				IAmb	IAmb	13 04 58.2	
	comp=Z,9.3nm,1.4s						
WRA	**Warramunga Arr**	**35.33**	**198**	P	**P**	**13 04 57.0**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=17,slow=8.7,SNR=11						
	comp=Z,0.5nm,0.5s						
WRA	**Warramunga Arr**	**35.33**	**198**	P	**P**	**13 04 55.4**	**-2.0**
AS31	**Alice Springs**	**38.98**	**197**	P	**P**	**13 05 28.0**	**-0.2**
ASAR	**Alice Springs**	**38.98**	**197**	P	**P**	**13 05 27.8**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=13,slow=6.3,SNR=11						
	comp=Z,0.1nm,0.3s						
BBOO	**Buckleboo**	**47.31**	**190**	P	**P**	**13 06 34.6**	**-0.3**
BBOO				IAmb	IAmb	13 07 09.9	
	comp=Z,12nm,1.2s						
UNV	**Unalaska Valle**	**54.87**	**33**	P	**P**	**13 07 29.8**	**-1.2**
MKAR	**Makanchi Array**	**61.42**	**316**	P	**P**	**13 08 17.2**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=86,slow=7.8,SNR=5.4						
	comp=Z,0.3nm,0.4s						
MAKZ	**Makanchi**	**61.64**	**316**	P	**P**	**13 08 18.4**	**+0.1**
MAKZ				IAmb	IAmb	13 08 19.0	
	comp=Z,0.7nm,0.5s						
KURBB	**Kurchatov Arra**	**64.53**	**320**	P	**P**	**13 08 37.1**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=104,slow=6.8,SNR=8.3						
	comp=Z,0.6nm,0.5s						
RND	**Reindeer**	**66.93**	**27**	P	**P**	**13 08 52.2**	**-0.2**
RND				IAmb	IAmb	13 08 57.4	
	comp=Z,2.4nm,1.1s						
SCM	**Sheep Creek Mo**	**67.22**	**28**	P	**P**	**13 08 53.5**	**-0.9**
SCM				IAmb	IAmb	13 09 06.2	
	comp=Z,9.9nm,0.8s						
ILAR	**Eielson Array**	**68.12**	**25**	P	**P**	**13 08 59.9**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=249,slow=5.5,SNR=9.0						
	comp=Z,0.3nm,0.4s						
D25K	**Kavik River**	**69.48**	**21**	P	**P**	**13 09 08.9**	**+0.7**
D25K				IAmb	IAmb	13 09 43.7	
	comp=Z,3.7nm,1.4s						
BMAR	**Burnt Mountain**	**69.66**	**23**	P	**P**	**13 09 09.7**	**+0.4**
BVAR	**Borovoye Array**	**69.81**	**322**	P	**P**	**13 09 10.5**	**0.0**
	comp=Z,0.6nm,0.4s,baz=102,slow=7.4,SNR=4.3						
	comp=Z,0.6nm,0.4s						
F26K	**Sheenjek River**	**69.88**	**23**	P	**P**	**13 09 11.1**	**+0.5**
G31M	**Satah River**	**73.56**	**24**	P	**P**	**13 09 32.6**	**+0.1**
G31M				IAmb	IAmb	13 10 09.2	
	comp=Z,5.5nm,1.4s						
NVAR	**Mina Array Bea**	**86.47**	**51**	P	**P**	**13 10 44.5**	**+1.7**
	comp=Z,0.3nm,0.7s,baz=337,slow=4.5,SNR=3.6						
	comp=Z,0.3nm,0.7s						

*KRNET **24** 13:00:12.9±0.1, 43.°19N × 75.°04E, h20km, mb2.1*
*NNC **24** 13:00:13.0±0.2, 43.°17N × 75.°03E, h0km, mb2.6, mpv2.9, Error ellipse: s-maj=2.6km s-min=1.3km az=146.0, Suspected Mining explosion.*
*KNET **24** 13:00:13.7±0.4, 43.°10N × 75.°04E, h18km±1km, ml1.5, Error ellipse: s-maj=3.6km s-min=1.7km az=0.0*
*SOME **24** 13:00:14.1, 43.°17N × 74.°98E*
ISC 24 13:00:13.6±0.8, 43.°17N±0.°02 × 75.°04E±0.°02, h0km, n31, σ0°54/60, 36C-10D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHMS	**Chumysh**	**0.27**	**231**	↑P	**Pg**	**13 00 19.1**	**+0.3**
	4.1nm,0.1s,SNR=31						
CHMS				↑S	**Sg**	**13 00 23.1**	**+0.8**
	85nm,0.1s						
CHMS	**Chumysh**	**0.27**	**231**	↑*i*P	**Pg**	**13 00 19.0**	**+0.3**
CHMS				↑*i*S	**Sg**	**13 00 23.0**	**+0.7**
USP	**Ogonevka**	**0.41**	**284**	↓*i*P	**Pg**	**13 00 20.9**	**-0.5**
USP				↓*i*S	**Sg**	**13 00 26.6**	**-0.1**
SGDS	**Sogindy**	**0.41**	**313**	P	**Pg**	**13 00 21.3**	**-0.2**
	30nm,0.1s						
SGDS				S	**Sg**	**13 00 26.7**	**-0.1**
	50nm,0.1s						
TKM2	**Tokmak 2**	**0.48**	**121**	↑P	**Pg**	**13 00 22.8**	**+0.1**
	15nm,0.2s,SNR=9.6						
TKM2				↓S	**Sg**	**13 00 29.5**	**+0.6**
	102nm,0.1s						
TKM2	**Tokmak 2**	**0.48**	**121**	↑*i*P	**Pg**	**13 00 22.6**	**-0.1**
TKM2				↑*i*S	**Sg**	**13 00 29.4**	**+0.6**
KBK	**Karagaybulak**	**0.52**	**188**	↑P	**Pg**	**13 00 23.9**	**+0.4**
	9.2nm,0.1s,SNR=7.1						
KBK				↓S	**Sg**	**13 00 30.7**	**+0.5**
	48nm,0.1s						
KBK	**Karagaybulak**	**0.52**	**188**	↑*i*P	**Pg**	**13 00 23.6**	**+0.1**
KBK				↑*i*S	**Sg**	**13 00 31.0**	**+0.8**
DGS	**Degeres**	**0.54**	**82**	P	**Pg**	**13 00 24.2**	**+0.3**
	6.7nm,0.1s						
DGS				S	**Sg**	**13 00 31.7**	**+0.8**
	36nm,0.2s						
AAK	**Ala-Archa**	**0.67**	**217**	↑P	**Pg**	**13 00 26.4**	**+0.1**
	1.6nm,0.1s,SNR=9.8						
AAK				↑S	**Sg**	**13 00 35.2**	**+0.3**
	4.9nm,0.3s						
AAK	**Ala-Archa**	**0.67**	**217**	↑P	**Pg**	**13 00 25.9**	**-0.4**
	0.2nm,0.4s						
AAK				↑S	**Sg**	**13 00 35.4**	**+0.3**
	0.9nm,0.5s						
AAK	**Ala-Archa**	**0.67**	**217**	↑*i*P	**Pg**	**13 00 26.0**	**-0.4**
AAK				↑*i*S	**Sg**	**13 00 35.3**	**+0.3**
KST	**Kastek**	**0.69**	**100**	P	**Pg**	**13 00 26.9**	**+0.2**
	5.9nm,0.1s						
KST				S	**Sg**	**13 00 36.3**	**+0.7**
	32nm,0.2s						
KRBS	**Karabastau**	**0.70**	**41**	P	**Pg**	**13 00 27.0**	**0.0**
	1.2nm,0.1s						
KRBS				S	**Sg**	**13 00 36.4**	**+0.3**
	12nm,0.2s						
BOOM	**Boomskoye usch**	**0.95**	**135**	↑*i*P	**Pg**	**13 00 31.1**	**-0.6**
BOOM				↑*i*S	**Sg**	**13 00 43.9**	**-0.1**
UCH	**Uchtor**	**1.02**	**203**	↑P	**Pg**	**13 00 32.8**	**-0.3**
	1.0nm,0.1s						
UCH				↑S	**Sg**	**13 00 46.2**	**-0.1**
	4.8nm,0.1s						
UCH	**Uchtor**	**1.02**	**203**	↑*i*P	**Pg**	**13 00 32.3**	**-0.8**
UCH				↑*i*S	**Sg**	**13 00 46.5**	**+0.2**
EKS2	**Erkin-Say**	**1.06**	**242**	↓P	**Pg**	**13 00 33.2**	**-0.6**
	2.1nm,0.1s,SNR=6.0						
EKS2				S	**Sg**	**13 00 47.6**	**+0.1**
	3.3nm,0.1s						
EKS2	**Erkin-Say**	**1.06**	**242**	↑*i*P	**Pg**	**13 00 32.9**	**-1.0**
EKS2				↑*i*S	**Sg**	**13 00 47.2**	**-0.4**
IZV	**Izvestkoviy**	**1.16**	**96**	P	**Pg**	**13 00 35.3**	**-0.5**
	5.9nm,0.1s						
IZV				S	**Sg**	**13 00 50.5**	**-0.3**
	12nm,0.2s						
ULHL	**Ulahol**	**1.28**	**136**	↓P	**Pg**	**13 00 37.0**	**-1.1**
	5.7nm,0.3s,SNR=6.8						
ULHL				↓S	**Sg**	**13 00 54.6**	**-0.1**
	3.8nm,0.2s						
ULHL	**Ulahol**	**1.28**	**136**	↑*i*P	**Pg**	**13 00 36.8**	**-1.3**
ULHL				↑*i*S	**Sg**	**13 00 54.1**	**-0.5**
KTBS	**Karatobe**	**1.31**	**65**	P	**Pg**	**13 00 37.9**	**-0.8**
	2.1nm,0.1s						
KTBS				S	**Sg**	**13 00 54.9**	**-0.8**
	4.5nm,0.1s						

ARLS	**Aral**	**1.41**	**202**	↑*i*P	**Pg**	**13 00 39.2**	**-1.4**
ARLS				↑*i*S	**Sg**	**13 00 58.3**	**-0.6**
MDOK	**Medeo**	**1.47**	**90**	Pg	**Pn**	**13 00 41.1**	**-0.4**
	6.3nm,0.1s						
MDOK				Lg	Lg	13 01 00.5	
	13nm,0.3s						
KOTS	**Kotyrbulak**	**1.52**	**87**	P	**Pn**	**13 00 42.1**	**0.0**
	2.9nm,0.2s						
KOTS				S	**Sg**	**13 01 02.3**	**0.0**
	6.1nm,0.2s						
NRN	**Naryn**	**1.88**	**157**	↑*i*P	**Pn**	**13 00 46.9**	**-0.3**
NRN				↑*i*S	**Sn**	**13 01 11.9**	**+0.2**
KDJ	**Kajisay**	**1.89**	**123**	↓*i*P	**Pn**	**13 00 47.3**	**0.0**
KDJ				↓*i*S	**Sn**	**13 01 12.2**	**+0.3**
MNAS	**Manas**	**1.99**	**251**	↑*i*P	**Pn**	**13 00 48.4**	**-0.2**
MNAS				↑*i*S	**Sn**	**13 01 14.2**	**-0.1**
TARG	**Taragay, Kyrgy**	**2.50**	**124**	↑*i*P	**Pn**	**13 00 55.9**	**0.0**
TARG				↑*i*S	**Sn**	**13 01 27.0**	**-0.3**
KK31	**Karatay Array**	**3.32**	**270**	↑Pg	**Pb**	**13 01 14.1**	**+0.8**
	0.4nm,0.5s,baz=86,slow=17,SNR=4.1						
KK31				↑Lg	Lg	13 01 55.2	
	0.5nm,0.3s,baz=93,slow=30,SNR=5.5						

*LDG **24** 13:19:18.7±0.1, 43.°08N × 0.°52W, h2km, Md2.5/1, Ml2.3/5, Error ellipse: s-maj=1.7km s-min=0.9km az=5.0*
*STR **24** 13:19:19.1±0.0, 43.°04N±0.°09 × 0.°55W±0.°06, h2km, MLv1.6/11, LOCSAT earthModelID pyrenees_taup-2.11 preliminary*
*MDD **24** 13:19:20.4±0.3, 43.°05N × 0.°53W, h0km, mb_Lg1.9/12, Error ellipse: s-maj=2.9km s-min=1.7km az=14.0*
ISC 24 13:19:19.0±0.9, 43.°06N±0.°02 × 0.°54W±0.°02, h6km±8km, n26, σ0°78/48, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
REYF	**Montagne du Re**	**0.10**	**87**	Pg	**Pg**	**13 19 21.3**	**-0.1**
REYF				Sg	**Sg**	**13 19 23.4**	**+0.5**
ATE	**Arette**	**0.12**	**281**	Pg	**Pg**	**13 19 21.5**	**-0.1**
ATE				Sg	**Sg**	**13 19 23.5**	**+0.2**
ETSF	**Etsaut**	**0.17**	**186**	*e*Pg	**Pg**	**13 19 22.1**	**-0.3**
ETSF				*e*Sg	**Sg**	**13 19 24.6**	**0.0**
	75nm,0.2s						
CANF	**Canfranc**	**0.30**	**177**	Pg	**Pg**	**13 19 24.9**	**0.0**
CANF				Sg	**Sg**	**13 19 29.6**	**+0.8**
ORDF	**Ordiarp**	**0.33**	**297**	Pg	**Pg**	**13 19 25.3**	**-0.2**
ORDF				Sg	**Sg**	**13 19 30.5**	**+0.7**
PYLO	**Lourdes**	**0.36**	**84**	Pg	**Pg**	**13 19 25.8**	**-0.2**
LABF	**Labassere**	**0.45**	**92**	Pg	**Pg**	**13 19 27.7**	**0.0**
LABF				Sg	**Sg**	**13 19 34.2**	**+0.7**
VIEF	**Viey**	**0.45**	**113**	Pg	**Pg**	**13 19 27.5**	**-0.2**
VIEF				Sg	**Sg**	**13 19 34.2**	**+0.7**
SJPF	**Ste Jean**	**0.51**	**276**	*e*Pg	**Pg**	**13 19 28.4**	**-0.4**
SJPF				*e*Sg	**Sg**	**13 19 35.4**	**0.0**
	9.3nm,0.3s						
OSSF	**Osses**	**0.56**	**290**	Pg	**Pg**	**13 19 29.5**	**-0.4**
EORO	**Oroz-Betelu**	**0.59**	**254**	Sg	**Sg**	**13 19 38.9**	**+0.7**
EORO				*i* IVmb_Lg		13 19 41.4	
EPF	**Esparros**	**0.64**	**93**	*e*Pg	**Pg**	**13 19 30.8**	**-0.6**
EPF				*e*Sg	**Sg**	**13 19 40.0**	**+0.2**
	10nm,0.2s						
ECHI	**Chisagues Biel**	**0.67**	**126**	Pg	**Pg**	**13 19 31.5**	**-0.3**
ECHI				Sg	**Sg**	**13 19 40.2**	**-0.4**
ECHI	**Chisagues Biel**	**0.67**	**126**	Pg	**Pg**	**13 19 31.6**	**-0.3**
ECHI				Sg	**Sg**	**13 19 40.3**	**-0.4**
TERF	**Tercis-les-Bai**	**0.74**	**326**	Pg	**Pg**	**13 19 33.3**	**0.0**
MLZA	**Monlezun-d-Arm**	**0.82**	**21**	Pg	**Pg**	**13 19 34.9**	**+0.1**
MLZA				Sg	**Sb**	**13 19 47.3**	**+0.3**
MELF	**Melles**	**0.97**	**101**	Pg	**Pg**	**13 19 37.7**	**0.0**
MELF				Sg	**Sb**	**13 19 51.1**	**-0.3**
CRAS	**Crastes**	**1.13**	**54**	Pg	**Pg**	**13 19 40.9**	**+0.2**
CRAS				Sg	**Sb**	**13 19 57.0**	**+1.0**
SALF	**Salau**	**1.30**	**103**	Pg	**Pn**	**13 19 44.3**	**+0.5**
SALF				Sg	**Sb**	**13 20 01.6**	**+0.6**
ESAC	**San Caprasio**	**1.34**	**178**	Pg	**Pb**	**13 19 45.3**	**+0.7**
ESAC				Sg	**Sn**	**13 20 03.2**	**+0.7**
ESAC				*i* IVmb_Lg		13 20 05.0	
FNEB	**Nbias**	**1.95**	**94**	Pg	**Pg**	**13 19 55.9**	**-0.5**
FNEB				Sg	**Sg**	**13 20 23.3**	**+1.8**
CARF	**Carcanieres**	**1.97**	**99**	Pg	**Pg**	**13 19 56.4**	**-0.4**
MTLF	**Montolieu**	**2.03**	**81**	*e*Pn	**Pn**	**13 19 51.4**	**-2.4**
MTLF				*e*Pg	**Pb**	**13 19 55.6**	**-0.8**
MTLF				*e*Sg	**Sb**	**13 20 22.5**	**+0.6**
	2.4nm,0.2s						
LFF	**La Frestale**	**2.09**	**26**	*e*Pg	**Pb**	**13 19 57.1**	**-0.2**
LFF				*e*Sg	**Sb**	**13 20 23.5**	**0.0**
	11nm,0.4s						
CAF	**Calviac**	**2.64**	**44**	*e*Pn	**Pn**	**13 20 00.4**	**-1.8**
CAF				*e*Sg	**Sb**	**13 20 41.3**	**+1.8**
	2.0nm,0.2s						
RJF	**Les Rejaudoux**	**2.68**	**33**	*e*Pg	**Pb**	**13 20 07.7**	**+0.2**
RJF				*e*Sg	**Sb**	**13 20 42.4**	**+1.8**
	3.8nm,0.3s						

*JMA **24** 13:20:08.1±0.1, 36.°4N±0.°3 × 141.°0E±0.°8, h44km±1km, MV2.2/36, E OFF IBARAKI PREF*
*IDC **24** 13:20:15.7±4.8, 36.°65N × 140.°21E, h0km, mb3.5/2, mbtmp3.5/2, MS3.0/1, Error ellipse: s-maj=98.4km s-min=27.9km az=21.0*
ISC 24 13:20:08.0±2.0, 36.°46N±0.°06 × 141.°0E±0.°1, h27km±14km, n14, σ0°63/19, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHYU	**Hitachinakayam**	**0.35**	**250**	P	**Pn**	**13 20 17.3**	**+0.1**
JHYU				S	**Sn**	**13 20 23.5**	**+0.2**
JHO	**Hitachi**	**0.37**	**294**	*i* P	**Pn**	**13 20 17.6**	**0.0**
JHO				S	**Sn**	**13 20 23.9**	**0.0**
JIHU	**Itakohorinouch**	**0.62**	**217**	S	**Sn**	**13 20 30.4**	**+0.4**
ONAJ	**Iwakimizuishiy**	**0.66**	**346**	*e*P	**Pb**	**13 20 21.2**	**+0.2**
ONAJ				S	**Sb**	**13 20 30.2**	**+0.4**
JYT	**Yasato**	**0.69**	**250**	P	**Pn**	**13 20 21.4**	**-0.4**
JYT				S	**Sb**	**13 20 30.3**	**-0.1**
JFK	**Kawauchi**	**0.91**	**354**	S	**Sb**	**13 20 35.7**	**-1.2**
JOTO	**OTAMA OYAMA**	**1.22**	**335**	P	**Pb**	**13 20 30.2**	**-0.2**
JOTO				S	**Sb**	**13 20 46.1**	**+0.5**
JAG	**Ashikaga**	**1.24**	**269**	P	**Pn**	**13 20 29.5**	**0.0**
JAG				S	**Sn**	**13 20 44.4**	**-1.0**
JMM	**Marumori**	**1.41**	**354**	P	**Pn**	**13 20 32.0**	**+0.2**
JMM				S	**Sn**	**13 20 49.4**	**-0.2**
JKT	**Katashina**	**1.44**	**283**	S	**Sn**	**13 20 51.4**	**+1.1**
MJAR	**Matsushiro Arr**	**2.24**	**273**	Pn	**Pn**	**13 20 44.1**	**+0.7**
	0.1nm,0.3s,baz=88,slow=9.9,SNR=6.5						
MJAR				Sn	**Sn**	**13 21 09.1**	**-1.0**
	0.1nm,0.3s,baz=302,slow=18,SNR=4.4						
GUMO	**Guam**	**23.04**	**170**	LR	LR	13 33 40.4	
	comp=Z,36nm,19.1s,baz=58,slow=34						
WRA	**Warramunga Arr**	**56.45**	**188**	P	P	13 29 59.0	+12
	0.4nm,0.4s,baz=5.4,slow=7.6,SNR=6.7						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**60.18**	**187**	P	P	13 30 27.2	+14
	0.2nm,0.6s,baz=8.0,slow=5.5,SNR=4.4						
	0.2nm,0.6s						

*NEIC **24** 13:21:10.5±0.9, 6.°11S±0.°09 × 147.°65E±0.°09, h66km±8km, mb4.2/15, Error ellipse: s-maj=14.5km s-min=10.8km az=129.0*
*IDC **24** 13:21:11.6±2.1, 6.°07S × 147.°47E, h72km±18km, mb3.4/7, mbtmp3.8/12, MS3.0/3, Error ellipse: s-maj=26.8km s-min=13.1km az=94.0*
ISC 24 13:21:11.2±0.7, 6.°07S±0.°07 × 147.°59E±0.°09, h77km, n36, σ1°01/37, mb3.7/10, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.34**	**187**	P	**Pn**	**13 21 59.9**	**-1.2**
	40nm,0.6s,baz=31,slow=12,SNR=20						
PMG				S	**Sn**	**13 22 40.9**	**+1.3**
	105nm,0.6s,baz=19,slow=23,SNR=7.7						
PMG				LR	LR	13 23 39.6	
	comp=Z,209nm,19.3s,baz=56,slow=44						
PMG	**Port Moresby**	**3.34**	**187**		**Pn**	**13 21 59.6**	**-1.5**
RABL	**Rabaul**	**4.93**	**68**	Pn	**Pn**	**13 22 21.1**	**-1.7**
JAY	**Jayapura**	**7.72**	**297**	P	**Pn**	**13 23 01.4**	**+0.4**
	27nm,1.0s,baz=122,slow=19,SNR=4.4						
JAY				LR	LR	13 26 23.9	
	comp=Z,130nm,21.0s,baz=102,slow=41						
COEN	**Coen**	**8.96**	**209**	Pn	**Pn**	**13 23 16.9**	**-1.0**
CTA	**Charters Tower**	**13.99**	**185**	P	**Pn**	**13 24 26.6**	**+0.7**
	7.4nm,1.1s,baz=7.6,slow=15,SNR=2.0						

CTAO	**Charters Tower**	**13.99**	**185**	Pn	**Pn**	**13 24 24.4**	**-1.6**
FAKI	**Fak Fak**	**15.61**	**281**	Pn	**Pn**	**13 24 46.8**	**0.0**
FAKI				IAmb	IAmb	13 25 02.0	
	comp=Z,45nm,1.3s						
SIJI	**Sorong**	**17.09**	**287**	P	**Pn**	**13 25 02.9**	**-2.3**
	comp=Z,1.4nm,0.4s,baz=90,slow=14,SNR=1.6						
SIJI				LR	LR	13 32 29.9	
	comp=Z,41nm,19.0s,baz=56,slow=40						
WB0	**Warramunga Arr**	**18.70**	**222**	P	**P**	**13 25 23.2**	**-0.4**
WB0				IAmb	IAmb	13 26 01.1	
	comp=Z,17nm,1.5s						
WR8	**Warramunga Arr**	**18.77**	**221**	P	**P**	**13 25 23.9**	**-0.4**
WR8				IAmb	IAmb	13 25 37.4	
	comp=Z,7.8nm,1.3s						
WRAB	**Tennant Creek**	**18.85**	**222**	P	**P**	**13 25 25.0**	**-0.3**
WRA	**Warramunga Arr**	**18.86**	**222**	P	**P**	**13 25 24.9**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=46,slow=11,SNR=24						
WRA	**Warramunga Arr**	**18.86**	**222**	P	**P**	**13 25 25.2**	**-0.2**
KNRA	**Kununurra**	**20.79**	**241**	P	**P**	**13 25 45.2**	**-1.0**
KNRA				IAmb	IAmb	13 26 27.9	
	comp=Z,28nm,1.4s						
AS31	**Alice Springs**	**21.89**	**216**	P	**P**	**13 25 56.8**	**-1.2**
AS31				IAmb	IAmb	13 26 15.9	
	comp=Z,1.8nm,0.5s						
ASAR	**Alice Springs**	**21.89**	**216**	P	**P**	**13 25 58.3**	**+0.2**
	comp=Z,1.8nm,0.9s,baz=52,slow=7.8,SNR=22						
ASAR				S	**S**	**13 29 55.8**	**0.0**
	comp=Z,0.4nm,0.9s,baz=39,slow=22,SNR=2.4						
	comp=Z,1.8nm,0.9s						
ASAR	**Alice Springs**	**21.89**	**216**	P	**P**	**13 25 57.0**	**-1.1**
INKA	**Innaminka**	**22.51**	**196**	P	**P**	**13 26 03.6**	**-0.9**
MMRI	**Maumere**	**25.27**	**263**	P	**P**	**13 26 31.1**	**+0.6**
GIRL	**Giralia**	**36.13**	**239**	P	**P**	**13 28 07.2**	**+1.1**
BBJI	**Bungbulang**	**39.67**	**266**	P	**P**	**13 28 35.6**	**-0.6**
BBJI				IAmb	IAmb	13 28 37.8	
	comp=Z,6.3nm,0.6s						
GSI	**Gunungsitoli**	**50.47**	**277**	P	**P**	**13 30 01.8**	**+0.1**
SONM	**Songino Array**	**64.75**	**331**	P	**P**	**13 31 41.0**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=157,slow=7.8,SNR=1.9						
	comp=Z,0.4nm,0.7s						
SONM	**Songino Array**	**64.75**	**331**	IAmb	IAmb	13 32 11.2	
	comp=Z,1.7nm,1.3s						
MKAR	**Makanchi Array**	**77.92**	**320**	P	**P**	**13 33 01.6**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=111,slow=6.6,SNR=4.4						
	comp=Z,0.3nm,0.6s						
K15K	**Wolf Creek Mou**	**78.44**	**22**	P	**P**	**13 33 04.0**	**+0.6**
K15K				IAmb	IAmb	13 33 33.2	
	comp=Z,11nm,1.5s						
ZALV	**Zalesovo Beam**	**79.39**	**328**	P	**P**	**13 33 09.1**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=89,slow=6.2,SNR=2.4						
	comp=Z,0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**79.39**	**328**	P	**P**	**13 33 08.7**	**0.0**
KURBB	**Kurchatov Arra**	**81.64**	**323**	P	**P**	**13 33 22.7**	**+1.9**
	comp=Z,0.3nm,0.8s,baz=96,slow=4.7,SNR=2.6						
	comp=Z,0.3nm,0.8s						
QSPA	**South Pole Qui**	**83.89**	**180**	P	**P**	**13 33 33.7**	**+1.3**
	comp=Z,2.3nm,0.8s,baz=8.1,slow=7.1,SNR=10						
	comp=Z,2.3nm,0.8s						
QSPA	**South Pole Qui**	**83.89**	**180**	P	**P**	**13 33 33.8**	**+1.3**
QSPA				IAmb	IAmb	13 33 47.0	
	comp=Z,4.2nm,0.8s						
ILAR	**Eielson Array**	**85.32**	**23**	P	**P**	**13 33 39.9**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=256,slow=4.3,SNR=8.0						
	comp=Z,0.5nm,0.7s						
ILAR	**Eielson Array**	**85.32**	**23**	P	**P**	**13 33 39.6**	**+0.2**
SIV	**San Ignacio**	**144.15**	**128**	PKP	**PKPdf**	**13 40 39.4**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=225,slow=2.9,SNR=5.1						
TORD	**Torodi Ar. Bea**	**145.68**	**284**	PKPbc	**PKPab**	**13 40 43.7**	**+1.1**
	comp=Z,2.2nm,0.6s,baz=89,slow=2.7,SNR=12						

*IDC **24** 13:22:16.4±5.3, 26.°18N × 140.°89E, h527km±26km, mb3.0/4, mbtmp3.8/5, Error ellipse: s-maj=215.9km s-min=69.7km az=24.0*
ISC 24 13:22:16.9±3.9, 26.°4N±0.°9 × 140.°6E±0.°3, h500km, n6, σ1°64/7, mb3.3/4, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**1.60**	**62**	P	**P**	**13 23 21.8**	**+1.6**
	59nm,0.3s,baz=166,slow=17,SNR=12						
JCJ				S	**S**	**13 24 10.5**	**-1.1**
	243nm,1.1s,baz=270,slow=22,SNR=6.5						
KSRS	**Korea Array**	**15.42**	**319**	P	**P**	**13 25 33.2**	**+1.9**
	0.8nm,0.5s,baz=147,slow=8.8,SNR=8.8						
MKAR	**Makanchi Array**	**49.85**	**310**	P	**P**	**13 30 23.4**	**-0.2**
	0.2nm,0.6s,baz=94,slow=9.1,SNR=2.9						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**52.55**	**315**	P	**P**	**13 30 42.4**	**-0.6**
	0.6nm,0.5s,baz=93,slow=8.1,SNR=7.4						
	0.6nm,0.5s						
**

HEF				SB	Sb	13 30 16.2	-0.4	
DUNU	**Dundret**	**1.11 255**		P	Pg	**13 30 04.3**	**+0.2**	
KUA	**Kurravaara**	**1.26 296**		P	Pg	**13 30 06.8**	**-0.1**	
RNF	**Rovaniemi**	**1.34 127**		PG	Pg	**13 30 08.0**	**-0.5**	
RNF				SN	Sn	**13 30 30.6**	**+3.4**	
TOF	**Tornio** baz=348	**1.41 163**		PN	Pn	**13 30 09.5**	**-0.1**	
TOF				smax	smax	13 30 26.2		
	comp=Z,1.6nm,0.2s							
TOF				SB	Sg	**13 30 27.6**	**-0.4**	
KOVU	**Salmi**	**1.44 305**		P	Pn	**13 30 10.3**	**+0.1**	
RATU	**Laukkuluspa**	**1.48 287**		P	Pn	**13 30 10.8**	**0.0**	
HARU	**Harads**	**1.57 217**		P	Pn	**13 30 12.0**	**+0.1**	
KALU	**Kalix**	**1.57 179**		P	Pn	**13 30 12.2**	**+0.3**	
KTK1	**Kautokeino**	**1.59 359**		eP	Pn	**13 30 12.5**	**+0.1**	
KTK1				eS	Sn	**13 30 33.6**	**0.0**	
KTK1				IAML		13 30 37.0		
	comp=Z,4.8nm,0.7s							
KTK1	**Kautokeino**	**1.59 359**		PG	Pn	**13 30 12.4**	**+0.1**	
KTK1				SG	Sg	**13 30 34.1**	**+0.1**	
NIKU	**Nikkaluokta**	**1.70 287**		P	Pb	**13 30 14.6**	**-0.3**	
SALU	**Saltoluokta**	**1.86 271**		eP	Pb	**13 30 17.2**	**-0.4**	
RANF	**Ranua** baz=315	**1.98 134**		PG	Pb	**13 30 19.1**	**-0.5**	
RANF				SG	Sb	**13 30 44.7**	**0.0**	
RAJF	**Raja-Jooseppi**	**2.16 58**		PG	Pb	**13 30 21.7**	**-1.0**	
RAJF				SG	Sb	**13 30 50.8**	**+0.8**	
ARA0	**ARCESS Array S**	**2.27 20**		eP	Pn	**13 30 22.4**	**+0.9**	
ARA0				IAML		13 30 54.7		
	comp=Z,2.3nm,0.3s							
ARA0	**ARCESS Array S**	**2.27 20**		PN	Pn	**13 30 22.6**	**+1.1**	
ARA0				SB	Sb	**13 30 52.3**	**-0.8**	
ARCES	**ARCESS Array B** comp=Z,0.2nm,0.3s,baz=195,slow=14,SNR=6.2	**2.27 20**		Pn	Pn	**13 30 22.6**	**+1.1**	
ARCES				Lg	Lg	13 30 52.2		
	comp=Z,0.5nm,0.3s,baz=197,slow=29,SNR=8.4 comp=Z,3.9nm,0.9s							
JETT	**Jettan, Norway**	**2.40 335**		eP	Pn	**13 30 25.1**	**+1.8**	
JETT				eS	Sb	**13 30 55.7**	**-1.2**	
JETT				IAML		13 30 59.7		
	comp=Z,8.5nm,0.8s							
I37NO	**I37NO**	**2.41 316**		I	I	13 45 40.0		
	comp=Z,0.1nm,0.7s,baz=122,slow=328,SNR=5.5							
VRF	**Varrio**	**2.43 79**		PB	Pb	**13 30 26.2**	**-1.2**	
VRF				smax	smax	13 30 56.0		
	comp=Z,2.5nm,0.2s							
VRF				SG	Sb	**13 30 57.8**	**-0.1**	
KU2	**Taivalkoski**	**2.61 129**		PB	Pb	**13 30 29.7**	**-0.8**	
OLKF	**Oulanka, Finla**	**2.64 112**		PB	Pb	**13 30 29.9**	**-1.1**	
OLKF				smax	smax	13 31 02.0		
	comp=Z,1.5nm,0.2s							
OLKF				SG	Sg	**13 31 06.4**	**-1.3**	
KEV	**Kevo**	**2.70 28**		PN	Pn	**13 30 28.6**	**+1.2**	
KEV				SN	Sb	**13 31 03.6**	**-2.1**	
MSF	**Maaselka**	**2.74 121**		PN	Pn	**13 30 29.4**	**+1.4**	
KU6	**Riekki**	**2.96 115**		PN	Pn	**13 30 31.2**	**+0.1**	
KU6				smax	smax	13 31 11.1		
	comp=Z,0.6nm,0.2s							
KU6				SB	Sb	**13 31 13.3**	**+0.2**	
KU1	**Kurvinen**	**3.12 124**		PN	Pn	**13 30 34.6**	**+1.4**	
OUF	**Merijarvi**	**3.12 169**		SN	Sn	**13 31 08.9**	**-2.3**	
OUF				smax	smax	13 31 15.5		
	comp=Z,0.8nm,0.2s							
FINES	**FINESS Array B** comp=Z,0.1nm,0.3s,baz=353,slow=12,SNR=2.0 comp=Z,3.9nm,1.0s	**6.12 167**		Pn	Pn	**13 31 15.8**	**+1.4**	

*SJA **24** 13:31:03.7±0.7,28.83S×68.99W,h119km±3km, ML3.9, MW3.9*
*NEIC **24** 13:31:03.8±1.2,28.83S±0.05×68.82W±0.08,h83km±7km, mb4.5/12, Error ellipse: s-maj=10.7km s-min=7.1km az=86.0*
*IDC **24** 13:31:04.4±2.0,28.84S×68.93W,h90km±16km, mb3.9/8, mbtmp4.1/12, Error ellipse: s-maj=26.4km s-min=13.6km az=95.0*
ISC 24 13:31:04.8±0.7,28.83S±0.03×69.03W±0.03, h102km±6km, n111, σ1§60/139, mb4.2/11, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VCA	**Vinchina**	**0.72**	**83**	eP	Pn	**13 31 23.6**	**+0.7**
VCA				eS	Sn	**13 31 38.8**	**+2.4**
VCA				IAML		13 31 39.0	
	comp=Z,35μm,0.3s						
AC05	**El Transito**	**1.09**	**269**		Pn	**13 31 27.9**	**+1.4**
AC05				Sn	Sn	**13 31 45.2**	**+2.2**
AC05	**El Transito**	**1.09**	**269**	eP	Pn	**13 31 28.0**	**+1.4**
AC05				eS	Sn	**13 31 45.6**	**+2.6**
AC05				IAML		13 31 46.1	
	comp=Z,2μm,0.3s						
ACDV	**Cuesta del Vie**	**1.34**	**183**	eP	Pn	**13 31 30.5**	**+1.0**
ACDV				eS	Sn	**13 31 50.6**	**+2.5**
ACDV				IAML		13 31 51.3	
	comp=Z,768nm,0.5s						
AROD	**Rodeo**	**1.39**	**196**	eP	Pn	**13 31 31.4**	**+1.1**
CO01	**Juntas del Tor**	**1.48**	**219**		Pn	**13 31 32.6**	**+1.3**
CO01	**Juntas del Tor**	**1.48**	**219**	eP	Pn	**13 31 32.3**	**+1.1**
LCO	**Las Campanas**	**1.48**	**262**		Pn	**13 31 32.1**	**+0.9**
LCO				Sn	Sn	**13 31 52.0**	**+0.7**
LCO	**Las Campanas**	**1.48**	**262**	eP	Pn	**13 31 32.0**	**+0.8**
LCO				eS	Sn	**13 31 52.6**	**+1.3**
LCO				IAML		13 31 53.0	
	comp=Z,3μm,0.3s						
TINO	**Tinogasta**	**1.49**	**60**	eP	Pn	**13 31 32.2**	**+0.9**
GO03	**Copiapo**	**1.63**	**319**		Pn	**13 31 33.7**	**+0.9**
GO03	**Copiapo**	**1.63**	**319**	eP	Pn	**13 31 33.9**	**+1.1**
GO03				eS	Sn	**13 31 56.5**	**+2.3**
GO03				IAML		13 31 57.4	
	comp=Z,567nm,0.2s						
ACCO	**Cerro Coronel**	**1.76**	**181**	eP	Pn	**13 31 35.8**	**+1.0**
ACCO				eS	Sn	**13 31 59.2**	**+1.8**
AANI	**Anillaco**	**1.83**	**90**	eP	Pn	**13 31 37.0**	**+1.4**
AANI				IAML		13 32 01.9	
	comp=Z,3μm,0.6s						
AC06	**Mina Casimiro**	**1.88**	**321**		Pn	**13 31 36.4**	**+0.5**
AC04	**Llanos de Chal**	**1.91**	**288**		Pn	**13 31 36.7**	**+0.4**
AC04				Sn	Sn	**13 31 59.8**	**-0.5**
AC04	**Llanos de Chal**	**1.91**	**288**	eP	Pn	**13 31 36.0**	**-0.3**
AC04				eS	Sn	**13 32 00.4**	**+0.1**
AC04				IAML		13 32 01.2	
	comp=Z,762nm,0.3s						
ACLC	**CERRO LA CRUZ**	**1.91**	**109**	eP	Pn	**13 31 37.0**	**+0.5**
ACLC				eS	Sn	**13 32 00.9**	**+0.2**
ACLC				IAML		13 32 02.3	
	comp=Z,724nm,0.3s						
AC02	**Maricunga**	**1.98**	**357**		Pn	**13 31 40.1**	**+2.3**
AC02	**Maricunga**	**1.98**	**357**	eP	Pn	**13 31 39.5**	**+1.7**
AC02				eS	Sn	**13 32 01.0**	**-1.8**
AC02				IAML		13 32 10.8	
	comp=Z,303nm,0.4s						
GO04	**Tololo Observa**	**2.05**	**229**		Pn	**13 31 38.6**	**+0.2**
GO04	**Tololo Observa**	**2.05**	**229**	eP	Pn	**13 31 38.3**	**-0.1**
GO04				IAML		13 32 11.2	
	comp=Z,1μm,0.5s						
CO05	**La Serena**	**2.22**	**240**		Pn	**13 31 40.0**	**-0.3**
AVFE	**Valle Fertil**	**2.28**	**144**	eP	Pn	**13 31 41.5**	**+0.3**
AVFE				eS	Sn	**13 32 09.3**	**+0.2**
AVFE				IAML		13 32 09.5	
	comp=Z,281nm,0.2s						
CO03	**El Pedregal**	**2.47**	**215**		Pn	**13 31 44.3**	**+0.5**
CO03	**El Pedregal**	**2.47**	**215**	eP	Pn	**13 31 44.4**	**+0.5**
CO03				eS	Sn	**13 32 09.3**	**-4.3**
CO03				eS		13 32 15.4	
CO03				IAML		13 32 21.9	
	comp=Z,479nm,0.4s						
RTLL	**Cerro Villicun**	**2.54**	**169**	eP	Pn	**13 31 44.7**	**+0.1**
RTLL				eS	Sn	**13 32 15.5**	**+0.4**
RTLL				IAML		13 32 17.5	
	comp=Z,2μm,0.4s						
SJA	**San Juan**	**2.72**	**172**	eP	Pn	**13 31 48.0**	**+0.9**
SJA				eS	Sn	**13 32 22.1**	**+2.6**
SJA				IAML		13 32 24.7	
	comp=Z,266nm,0.4s						
SJA				IAML		13 32 25.0	
	comp=Z,268nm,0.3s						
ZON	**Zonda**	**2.73**	**174**		Pn	**13 31 47.2**	**+0.1**
ZON	**Zonda**	**2.73**	**174**	eP	Pn	13 31 38.6	-8.5
ZON				eS	Sn	**13 32 19.7**	**+0.1**
ZON				IAML		13 32 23.4	
	comp=Z,241nm,0.3s						

CFA	**Coronel Fontan**	**2.85**	**166**	P	Pn	**13 31 49.1**	**+0.4**	
	comp=Z,22nm,0.3s,baz=359,slow=15,SNR=140							
CFA				S	Sn	**13 32 21.0**	**-1.5**	
	comp=Z,130nm,0.3s,baz=195,slow=21,SNR=45							
CFA	**Coronel Fontan**	**2.85**	**166**	eP	Pn	**13 31 49.2**	**+0.4**	
CFA				eS	Sn	**13 32 22.6**	**+0.1**	
CFA				IAML		13 32 58.1		
	comp=Z,229nm,0.8s							
CO02	**Combarbal**	**2.92**	**215**		Pn	**13 31 49.4**	**-0.3**	
CO02	**Combarbal**	**2.92**	**215**	eP	Pn	**13 31 49.0**	**-0.8**	
CO02				eS	Sn	13 32 10.3	-14	
CO02				IAML		13 32 31.4		
	comp=Z,426nm,0.5s							
RTLS	**Leoncito**	**2.97**	**184**	eP	Pn	**13 31 48.5**	**-2.1**	
RTLS				eS	Sn	**13 32 27.1**	**+1.3**	
RTLS				IAML		13 32 28.5		
	comp=Z,933nm,0.5s							
AC01	**Pan de Azucar**	**3.01**	**332**		Pn	**13 31 50.7**	**-0.1**	
AC01	**Pan de Azucar**	**3.01**	**332**	eP	Pn	**13 31 51.5**	**+0.7**	
AC01				eS	Sn	13 32 15.8	-10	
AC01				IAML		13 32 37.7		
	comp=Z,134nm,0.6s							
ACHE	**Chepes**	**3.10**	**139**	eP	Pn	**13 31 52.6**	**+0.4**	
ACHE				eS	Sn	**13 32 27.9**	**-0.7**	
CO04	**Los Peladeros**	**3.62**	**207**		Pn	**13 31 58.1**	**-1.1**	
ASAL	**Salagasta**	**3.76**	**178**	eP	Pn	**13 32 01.6**	**+0.8**	
ASAL				eS	Sn	**13 32 45.3**	**+1.0**	
ACAN	**Cantantal**	**3.79**	**156**	eP	Pn	**13 32 01.0**	**-0.2**	
ACAN				IAML		13 32 52.5		
	comp=Z,378nm,0.3s							
FSA	**Cafayete**	**3.83**	**46**	eP	Pn	**13 32 04.0**	**+2.0**	
ARCO	**CERRO ARCO**	**4.00**	**179**	eP	Pn	**13 32 05.3**	**+1.0**	
ARCO				eS	Sn	**13 32 47.6**	**-2.7**	
ARCO				IAML		13 33 00.1		
	comp=Z,152nm,0.3s							
VA03	**San Esteban**	**4.14**	**198**		Pn	**13 32 05.2**	**-0.9**	
VA03	**San Esteban**	**4.14**	**198**	eP	Pn	**13 32 06.2**	**+0.2**	
VA03				eS	Sn	**13 32 56.7**	**+3.3**	
VA03				IAML		13 33 05.3		
	comp=Z,134nm,0.5s							
VA06	**Catapilco**	**4.21**	**207**		Pn	**13 32 04.9**	**-1.9**	
AAGR	**Agrelo**	**4.25**	**178**	eP	Pn	**13 32 08.4**	**+0.8**	
AAGR				eS	Sn	**13 32 57.2**	**+1.0**	
AAGR				IAML		13 33 02.5		
	comp=Z,104nm,0.3s							
PB14	**IPOC Station P**	**4.36**	**343**		Pn	**13 32 09.8**	**+0.5**	
PB14	**IPOC Station P**	**4.36**	**343**	eP	Pn	**13 32 09.7**	**+0.5**	
PB14				eS	Sn	**13 32 58.7**	**-0.5**	
PB14				IAML		13 33 08.1		
	comp=Z,70nm,1.0s							
PEL	**Peldehue**	**4.54**	**198**		Pn	**13 32 09.9**	**-1.4**	
MRA	**San Martin**	**4.58**	**142**	eP	Pn	**13 32 10.3**	**-1.6**	
MRA				IAML		13 33 38.7		
	comp=Z,72nm,0.6s							
TCA	**Tanti**	**4.58**	**124**	eP	Pn	**13 32 11.6**	**-0.4**	
TCA				eS	Sn	13 33 16.3	+12	
TCA				IAML		13 33 18.7		
	comp=Z,78nm,0.3s							
MT04	**Ro Olivares**	**4.66**	**192**	eP	Pn	**13 32 13.6**	**+0.3**	
MT04				eS	Sn	**13 33 05.7**	**-0.7**	
MT04				IAML		13 33 20.2		
	comp=Z,53nm,0.7s							
MT08	**Bocatoma Ro**	**4.68**	**190**		Pn	**13 32 11.8**	**-1.6**	
MT08	**Bocatoma Ro**	**4.68**	**190**	eP	Pn	**13 32 14.3**	**+0.8**	
MT08				eS	Sn	13 33 16.3	+10	
MT08				IAML		13 33 25.2		
	comp=Z,64nm,0.9s							
VA01	**Torpederas**	**4.75**	**208**	Pn	Pn	**13 32 12.2**	**-2.0**	
MT16	**CCHEN**	**4.76**	**195**		Pn	**13 32 12.4**	**-2.0**	
MT05	**Renca**	**4.78**	**197**		Pn	**13 32 12.6**	**-2.1**	
MT05	**Renca**	**4.78**	**197**	eP	Pn	**13 32 14.0**	**-0.7**	
MT05				eS	Sn	**13 33 09.2**	**+0.2**	
MT05				IAML		13 33 17.6		
	comp=Z,126nm,1.0s							
MT03	**Universidad Ad**	**4.83**	**195**		Pn	**13 32 13.3**	**-2.0**	
MT03	**Universidad Ad**	**4.83**	**195**	eP	Pn	**13 32 15.3**	**+0.1**	
MT03				eS	Sn	**13 33 08.8**	**-1.3**	
MT03				IAML		13 33 20.5		
	comp=Z,140nm,0.7s							
MT13	**San Alfonso**	**5.02**	**192**		Pn	**13 32 16.5**	**-1.5**	
MT13	**San Alfonso**	**5.02**	**192**	eP	Pn	**13 32 17.9**	**-0.1**	
MT13				eS	Sn	**13 33 15.9**	**+1.1**	
MT13				IAML		13 33 27.1		
	comp=Z,93nm,0.7s							
SLA	**San Lorenzo**	**5.16**	**38**	eP	Pn	**13 32 21.6**	**+1.6**	
MT09	**Talagante**	**5.21**	**198**		Pn	**13 32 18.2**	**-2.4**	
PB10	**IPOC Station P**	**5.46**	**345**	Pn	Pn	**13 32 20.7**	**-3.2**	
PB05	**IPOC Station P**	**6.04**	**350**		Pn	**13 32 30.0**	**-1.9**	
PB06	**IPOC Station P**	**6.11**	**355**		Pn	**13 32 31.6**	**-1.3**	
GO05	**Hualane**	**6.64**	**201**		Pn	**13 32 37.1**	**-2.8**	
PB07	**IPOC Station P**	**7.11**	**354**		Pn	**13 32 44.8**	**-1.6**	
PB02	**IPOC Station P**	**7.51**	**354**		Pn	**13 32 49.5**	**-2.3**	
PB01	**IPOC Station P**	**7.76**	**357**		Pn	**13 32 52.4**	**-2.9**	
BI02	**San Fabin de**	**8.04**	**193**		Pn	**13 32 56.1**	**-2.8**	
TA01	**Diego Aracena**	**8.29**	**352**	Pn	Pn	**13 32 59.5**	**-2.8**	
PB08	**IPOC Station P**	**8.65**	**359**		Pn	**13 33 04.3**	**-3.2**	
PB11	**IPOC Station P**	**9.04**	**356**	Pn	Pn	**13 33 08.9**	**-3.8**	
GO01	**Chusmiza**	**9.12**	**359**		Pn	**13 33 11.0**	**-3.0**	
PSGCX	**Pisagua**	**9.24**	**354**	Pn	Pn	**13 33 11.0**	**-4.3**	
PB16	**IPOC Station P**	**10.45**	**357**	Pn	Pn	**13 33 29.9**	**-2.4**	
CPUP	**Villa Florida**	**10.67**	**79**	P	Pn	**13 33 32.3**	**-2.3**	
	comp=Z,2.8nm,0.5s,baz=260,slow=14,SNR=12							
CPUP	**Villa Florida**	**10.67**	**79**		Pn	**13 33 31.6**	**-3.1**	
GO06	**Curarrehue**	**10.92**	**190**	Pn	Pn	**13 33 34.6**	**-3.4**	
TRQA	**Tornquist**	**10.92**	**149**	Pn	Pn	**13 33 35.2**	**-2.8**	
LPAZ	**La Paz**	**12.51**	**4**	P	Pn	**13 33 58.4**	**-1.4**	
	comp=Z,0.4nm,0.3s,baz=175,slow=11,SNR=2.1							
SIV	**San Ignacio**	**14.73**	**32**	P	Pn	**13 34 26.6**	**-1.6**	
	comp=Z,0.6nm,0.4s,baz=215,slow=10,SNR=4.9							
BDFB	**Brasilia**	**23.41**	**60**	P	**P**	**13 36 04.2**	**-0.9**	
TEIG	**Tepich**	**52.19**	**337**	P	**P**	**13 40 06.4**	**+1.2**	
SNAA	**Sanae**	**55.45**	**159**	P	**P**	**13 40 28.9**	**+0.4**	
	comp=Z,3.6nm,0.6s,baz=310,slow=9.6,SNR=2.8 comp=Z,3.6nm,0.6s							
SNAA	**Sanae**	**55.45**	**159**	P	**P**	**13 40 29.0**	**+0.4**	
QSPA	**South Pole Qui**	**61.40**	**180**	P	**P**	**13 41 10.8**	**+0.8**	
	comp=Z,2.0nm,0.6s,baz=175,slow=0.9,SNR=12 comp=Z,2.0nm,0.6s							
QSPA	**South Pole Qui**	**61.40**	**180**	P	**P**	**13 41 10.8**	**+0.8**	
QSPA				IAmb	IAmb	13 41 11.5		
	comp=Z,3.1nm,0.8s							
154A	**Montrose**	**62.55**	**347**	P	**P**	**13 41 18.5**	**+0.7**	
TXAR	**Lajitas Array**	**66.64**	**327**	P	**P**	**13 41 46.2**	**+1.6**	
	comp=Z,0.3nm,0.6s,baz=148,slow=7.4,SNR=3.5 comp=Z,0.3nm,0.6s							
WVT	**Waverly**	**66.99**	**344**	P	**P**	**13 41 47.2**	**+0.7**	
WVT				IAmb	IAmb	13 41 47.9		
	comp=Z,3.1nm,0.8s							
FVM	**French Village**	**69.42**	**342**	P	**P**	**13 42 02.7**	**+1.0**	
FVM				IAmb	IAmb	13 42 03.2		
	comp=Z,6.4nm,0.6s							
S39A	**Bolivar**	**69.98**	**340**	P	**P**	**13 42 06.4**	**+1.2**	
S39A				IAmb	IAmb	13 42 06.8		
	comp=Z,3.3nm,0.9s							
DBIC	**Dimbokro**	**71.07**	**71**	P	**P**	**13 42 12.8**	**+0.4**	
	comp=Z,1.4nm,0.3s,baz=244,slow=4.1,SNR=4.5 comp=Z,1.4nm,0.3s							
DBIC	**Dimbokro**	**71.07**	**71**	P	**P**	**13 42 11.8**	**-0.5**	
DBIC				IAmb	IAmb	13 42 48.5		
	comp=Z,21nm,1.4s							
MAW	**Mawson**	**77.38**	**163**	P	**P**	**13 42 48.9**	**+0.8**	
	comp=Z,2.3nm,0.7s,baz=225,slow=1.4,SNR=1.7 comp=Z,2.3nm,0.7s							
TORD	**Torodi Ar. Bea**	**79.99**	**69**	P	**P**	**13 43 04.1**	**+0.8**	
	comp=Z,2.6nm,0.6s,baz=260,slow=6.3,SNR=14 comp=Z,2.6nm,0.6s							
TORD	**Torodi Ar. Bea**	**79.99**	**69**	IAmb	IAmb	13 43 24.8		
	comp=Z,4.3nm,1.1s							
BOSA	**Boshof**	**80.16**	**117**	P	**P**	**13 43 04.2**	**-0.1**	
	comp=Z,1.1nm,0.4s,baz=237,slow=4.3,SNR=5.7 comp=Z,1.1nm,0.4s							
BOSA	**Boshof**	**80.16**	**117**	IAmb	IAmb	13 43 09.8		
	comp=Z,3.6nm,1.1s							
PDAR	**Pinedale Array**	**80.41**	**331**	P	**P**	**13 43 06.5**	**+1.3**	
	comp=Z,0.8nm,0.9s,baz=128,slow=6.7,SNR=5.2 comp=Z,0.8nm,0.9s							
ASAR	**Alice Springs**	**123.33**	**205**	PKP	**PKPdf**	**13 49 50.2**	**-0.3**	
	comp=Z,0.4nm,0.4s,baz=130,slow=1.7,SNR=22							
WRA	**Warramunga Arr**	**126.52**	**208**	PKP	**PKPdf**	**13 49 56.8**	**+0.1**	
	comp=Z,1.0nm,0.5s,baz=164,slow=1.7,SNR=32							
BVAR	**Borovoye Array**	**141.70**	**39**	PKP	**PKiKP**	**13 50 26.3**	**-0.5**	
	comp=Z,0.6nm,0.7s,baz=316,slow=4.0,SNR=1.0							
KURBB	**Kurchatov Arra**	**147.29**	**39**	PKPbc	**PKPbc**	**13 50 37.4**	**+1.2**	
	comp=Z,1.9nm,0.6s,baz=304,slow=3.1,SNR=18							
KURK	**Kurchatov**	**147.30**	**39**		**PKPbc**	**13 50 37.2**	**+1.1**	
ZALV	**Zalesovo Beam**	**148.48**	**30**	PKPbc	**PKPbc**	**13 50 40.0**	**+0.9**	
	comp=Z,4.7nm,0.5s,baz=311,slow=3.1,SNR=18							
MKAR	**Makanchi Array**	**151.33**	**43**	PKPbc	**PKiKP**	**13 50 47.0**	**+0.2**	
	comp=Z,2.9nm,0.7s,baz=301,slow=2.0,SNR=34							
MKAR				PKPab	**PKPab**	**13 50 56.0**	**+1.1**	
	comp=Z,1.1nm,0.7s,baz=302,slow=3.6,SNR=6.7							

IDC 24 13:37:01.7±1.8,9.42N×104.51W,h0km,mb3.6/4, mbtmp3.5/5,ML3.3/1,MS3.4/4, Error ellipse: s-maj=99.1km s-min=23.0km az=66.0, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**15.61**	**340**	LR	LR	13 45 03.0	
	comp=Z,124nm,18.4s,baz=80,slow=31						
JTS	**Las Juntas de**	**19.29**	**86**	LR	LR	13 46 38.7	
	comp=Z,68nm,21.9s,baz=315,slow=30						
TXAR	**Lajitas Array**	**19.83**	**2**	P	P	13 41 33.2	-1.0
	baz=185,slow=11,SNR=6.3 1.0nm,1.0s						
PFO	**Pinyon Flats O**	**26.47**	**337**	LR	LR	13 50 05.8	
	comp=Z,68nm,19.4s,baz=44,slow=30						
LPAZ	**La Paz**	**44.15**	**125**	P	P	13 45 13.8	+0.6
	0.8nm,0.7s,baz=315,slow=8.6,SNR=3.6						
LPAZ				LR	LR	14 00 50.5	
	comp=Z,77nm,20.7s,baz=342,slow=32 0.8nm,0.7s						
H03N2	**Juan Fernandez**	**49.08**	**151**	T	T	14 39 08.9	
	baz=329,slow=78,SNR=4.2						
H03N1	**Juan Fernandez**	**49.09**	**151**	T	T	14 39 08.0	
	baz=329,slow=78,SNR=8.0						
H03N3	**Juan Fernandez**	**49.10**	**151**	T	T	14 39 05.1	
	baz=329,slow=78,SNR=7.5						
YKA	**Yellowknife Ar**	**53.48**	**354**	P	P	13 46 23.6	+0.1
	0.1nm,0.5s,baz=160,slow=8.1,SNR=3.8 0.1nm,0.5s						
PLCA	**Paso Flores**	**58.92**	**150**	P	P	13 47 02.1	-0.7
	0.6nm,0.3s,baz=270,slow=4.0,SNR=5.0 0.6nm,0.3s						
ILAR	**Eielson Array**	**62.66**	**341**	P	P	13 47 28.1	+0.3
	0.5nm,0.7s,baz=146,slow=4.6,SNR=11 0.5nm,0.7s						

*MEX **24** 13:50:35.8±0.5,14.81N×92.81W,h82km±10km, MD3.9*
*GCG **24** 13:50:36.7±1.6,14.73N×92.78W,h40km±83km, MD4.1, ML4.0, Presumed earthquake*
ISC 24 13:50:31.6±1.6,14.51N±0.08×92.92W±0.06,h71km±18km, n22,σ2§30/37, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.74**	**58**	eP	Pn	**13 50 48.4**	**+1.3**
THIG				eS	Sn	**13 50 58.8**	**+0.3**
SMCA	**Catarina**	**0.89**	**67**	*i* P	Pn	**13 50 49.7**	**+1.0**
SMCA				*i* S	Sn	**13 51 01.1**	**-0.4**
PATR	**El Naranjo**	**0.89**	**48**	eP	Pn	**13 50 49.5**	**+0.4**
PATR				eS	Sn	**13 51 00.5**	**-1.6**
CHUJ	**Union Juarez**	**0.97**	**53**	eP	Pn	**13 50 50.9**	**+0.9**
CHUJ				eS	Sn	**13 51 02.7**	**-1.1**
PAVE	**Pavencul**	**0.99**	**46**	eP	Pn	**13 50 51.0**	**+0.8**
PAVE				eS	Sn	**13 51 02.6**	**-1.4**
RTAL	**Retalhuleu**	**1.18**	**89**	eP	Pn	**13 50 55.4**	**+3.0**
RTAL				eS	Sn	**13 51 10.1**	**+2.0**
PCIG		**1.22**	**346**	eP	Pn	**13 50 53.5**	**+0.6**
PCIG				eS	Sn	**13 51 06.9**	**-2.0**
STG2	**El Palmar, Qui**	**1.50**	**93**	*i* P	Pn	**13 50 56.5**	**-0.2**
STG2				*i* S	Sn	**13 51 11.3**	**-4.3**
STG2				IAML		13 51 13.4	
	comp=N,8μm,0.2s						
STG8	**El Palmar, Qui**	**1.52**	**92**	*i* P	Pn	**13 50 56.9**	**-0.2**
STG8				*i* S	Sn	**13 51 12.5**	**-3.7**
STG8				IAML		13 51 15.1	
	comp=N,3μm,0.2s						
STG5	**El Palmar, Qui**	**1.52**	**94**	*i* P	Pn	**13 50 56.9**	**-0.1**
STG5				*i* S	Sn	**13 51 11.9**	**-4.3**
HUEH	**Huehuetenango**	**1.59**	**59**	eP	Pn	**13 51 00.1**	**+2.2**
HUEH				eS	Sn	**13 51 19.4**	**+1.5**
HUEH	**Huehuetenango**	**1.59**	**59**	*i* S	Sn	**13 51 19.6**	**+1.8**
HUEH				IAML		13 51 25.1	
	comp=E,2μm,0.4s						
CCIG	**Comitan**	**1.92**	**23**	eP	Pn	**13 51 02.0**	**-0.3**
CCIG				eS	Sn	**13 51 21.8**	**-3.8**
CCIG	**Comitan**	**1.92**	**23**	*i* P	Pn	**13 51 04.8**	**+2.5**
QUIS	**Sacapulas**	**1.93**	**66**	*i* P	Pn	**13 51 06.0**	**+3.6**
QUIS				IAML		13 51 31.7	
	comp=E,1μm,0.3s						
CARR	**Arriaga**	**1.98**	**331**	eP	Pn	**13 51 04.8**	**+1.8**
CARR				eS	Sn	**13 51 26.6**	**-0.1**
TGIG		**2.26**	**355**	eP	Pn	**13 51 08.0**	**+1.1**
TGIG				eS	Sn	**13 51 29.3**	**-4.6**
TGIG		**2.26**	**355**	*i* P	Pn	**13 51 08.2**	**+1.3**

G31M					IAmb	IAmb	14 02 53.8	
	comp=Z,3.6nm,1.4s							
YKA	**Yellowknife Ar**	**77.74**	**28**	P		**P**	**14 03 30.1**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=297,slow=5.9,SNR=5.7							
	comp=Z,0.3nm,0.5s							
YKA	**Yellowknife Ar**	**77.74**	**28**	P		**P**	**14 03 29.9**	**+0.6**
NVAR	**Mina Array Bea**	**83.02**	**52**	P		**P**	**14 03 59.3**	**+1.1**
	comp=Z,0.9nm,0.6s,baz=268,slow=5.7,SNR=5.6							
	comp=Z,0.9nm,0.6s							

*MAN **24** 14:17:52.0,9.31N×126.52E,h13km,MS3.3*
*IDC **24** 14:18:07.9±1.9,9.11N×126.20E,h174km±20km,mb3.2/9,*
mbtmp3.6/10,Error ellipse: s-maj=40.4km s-min=17.8km
az=70.0
ISC 24 14:17:50.3±0.8,9.40N±0.05×126.67E±0.06,h10km,n23,
σ1s72/23,mb3.7/9,Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
TSSP	**Tandag City**	**0.58**	**233**	*i*	P		**Pb**	**14 18 01.9**	**-0.8**
TSSP				*i*	S		**Sg**	**14 18 07.8**	**-1.5**
CDOP	**Cateel, Davao**	**1.62**	**188**	*i*	P		**Pn**	**14 18 18.9**	**0.0**
CDOP				*e*	S		**Sn**	**14 18 39.9**	**0.0**
BUKP	**Musuan**	**2.19**	**227**	*i*	P		**Pn**	**14 18 27.9**	**+1.1**
BUKP				*i*	S		**Sn**	**14 18 53.8**	**-0.3**
DAV	**Davao City (W)**	**2.55**	**205**	P			Pg	14 18 44.0	+4.8
	157nm,0.4s,baz=161,slow=6.6,SNR=3.6								
DAV				S			**Sg**	**14 19 16.5**	**+4.2**
	262nm,0.4s,baz=177,slow=12,SNR=3.7								
TBP	**Tagbilaran**	**2.79**	**276**	*e*	P		**Pn**	**14 18 35.5**	**+0.5**
TBP				*i*	S		**Sn**	**14 19 09.3**	**+0.6**
LLP	**Lapu-Lapu**	**2.82**	**289**	*e*	P		**Pb**	**14 18 38.0**	**-2.8**
LLP				*e*	S		**Sn**	**14 19 11.3**	**+1.8**
SNPH	**Sibulan**	**3.39**	**269**	*e*	P		**Pn**	**14 18 44.9**	**+1.5**
SNPH				*e*	S		**Sn**	**14 19 24.2**	**+0.5**
RCP	**Roxas**	**4.42**	**299**	*i*	P		**Pn**	**14 19 00.1**	**+2.6**
WRA	**Warramunga Arr**	**30.12**	**166**	P			**P**	**14 23 59.4**	**-1.0**
	0.3nm,0.9s,baz=344,slow=8.3,SNR=1.8								
	0.3nm,0.9s								
ASAR	**Alice Springs**	**33.61**	**168**	P			**P**	**14 24 30.2**	**-0.9**
	0.2nm,0.5s,baz=350,slow=7.1,SNR=9.5								
	0.2nm,0.5s								
H11S3	**WAKE ISLAND Hy**	**39.80**	**72**	T			T	15 08 18.0	
	baz=262,slow=75,SNR=33								
H11S1	**WAKE ISLAND Hy**	**39.81**	**72**	T			T	15 08 24.6	
	baz=262,slow=75,SNR=41								
H11S2	**WAKE ISLAND Hy**	**39.81**	**72**	T			T	15 08 22.6	
	baz=262,slow=75,SNR=54								
H11N1	**WAKE ISLAND Hy**	**40.16**	**71**	T			T	15 08 48.0	
	baz=265,slow=75,SNR=9.6								
H11N2	**WAKE ISLAND Hy**	**40.17**	**71**	T			T	15 08 54.1	
	baz=265,slow=75,SNR=9.5								
H11N3	**WAKE ISLAND Hy**	**40.18**	**71**	T			T	15 09 00.3	
	baz=265,slow=75,SNR=11								
PETK	**Petropavlovsk-**	**50.27**	**24**	P			**P**	**14 26 49.4**	**+2.6**
	1.1nm,0.6s,baz=232,slow=6.8,SNR=1.6								
	1.1nm,0.6s								
MKAR	**Makanchi Array**	**52.96**	**323**	P			**P**	**14 27 05.8**	**-1.3**
	0.5nm,0.6s,baz=121,slow=8.1,SNR=4.9								
	0.5nm,0.6s								
KURBB	**Kurchatov Arra**	**57.01**	**326**	P			**P**	**14 27 34.3**	**-1.9**
	0.6nm,0.7s,baz=126,slow=7.0,SNR=4.4								
	0.6nm,0.7s								
BVAR	**Borovoye Array**	**62.60**	**326**	P			**P**	**14 28 13.4**	**-1.3**
	0.6nm,0.7s,baz=146,slow=8.7,SNR=2.8								
	0.6nm,0.7s								
ILAR	**Eielson Array**	**80.05**	**26**	P			**P**	**14 30 00.2**	**+0.2**
	0.3nm,0.8s,baz=249,slow=5.4,SNR=5.8								
	0.3nm,0.8s								
ARCES	**ARCESS Array B**	**85.14**	**340**	P			**P**	**14 30 25.7**	**-0.8**
	1.4nm,0.6s,baz=64,slow=5.6,SNR=3.8								
	1.4nm,0.6s								
YKA	**Yellowknife Ar**	**94.39**	**24**	P			**P**	**14 31 10.6**	**+0.4**
	0.2nm,0.5s,baz=221,slow=6.3,SNR=5.2								
	0.2nm,0.5s								

*SOME **24** 14:19:08.8,41.00N×83.37E,h20km*
*NNC **24** 14:19:11.9±2.3,41.58N×83.67E,h7km±12km,mb3.7,*
mpv3.3,Error ellipse: s-maj=16.9km s-min=11.3km
az=153.0
ISC 24 14:19:14.7±2.3,41.6N±0.1×83.44E±0.07,h10km,n30,
σ2s73/43,3C-7D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
KTMS	**Ketmen**	**2.96**	**311**		Pg		**Pb**	**14 20 08.9**	**+1.2**
	6.2nm,0.3s								
KTMS					Lg		Lg	14 20 52.3	
	27nm,0.4s								
KTMS	**Ketmen**	**2.96**	**311**	*e*	P		**Pb**	**14 20 08.9**	**+1.2**
	6.2nm,0.3s								
KTMS					*e*	S	**Sg**	**14 20 52.3**	**+2.5**
	27nm,0.4s								
SHLS	**Shalkode**	**3.35**	**300**		Pg		**Pn**	**14 20 09.2**	**+1.9**
	5.6nm,0.2s								
SHLS					Lg		Lg	14 20 53.1	
	31nm,0.3s								
SHLS	**Shalkode**	**3.35**	**300**	*e*	P		**Pn**	**14 20 09.2**	**+1.9**
	5.6nm,0.2s								
SHLS					*e*	S	**Sb**	**14 20 53.0**	**-2.1**
	31nm,0.3s								
PDGK	**Podgornoye**	**3.42**	**303**	⇓	Pn		**Pn**	**14 20 07.6**	**-0.5**
	1.9nm,0.7s								
PDGK				⇓	Pg		**Pg**	**14 20 19.4**	**-0.7**
	15nm,0.8s								
PDGK				⇓	Lg		Lg	14 21 04.1	
	16nm,0.6s								
DJR	**Jarkent**	**3.86**	**317**		Pg		**Pg**	**14 20 27.3**	**-1.2**
	3.8nm,0.3s								
DJR					Lg		Lg	14 21 24.0	
	8.0nm,0.5s								
DJR	**Jarkent**	**3.86**	**317**	*e*	P		**Pg**	**14 20 27.3**	**-1.2**
	3.8nm,0.3s								
DJR					*e*	S	**Sg**	**14 21 24.0**	**+5.5**
	8.0nm,0.5s								
KPKS	**Kokpek**	**4.00**	**300**		Pg		**Pb**	**14 20 26.6**	**+1.3**
	0.2nm,0.2s								
KPKS					Lg		Lg	14 21 22.8	
	24nm,0.3s								
KPKS	**Kokpek**	**4.00**	**300**	*e*	P		**Pb**	**14 20 26.6**	**+1.3**
	0.2nm,0.2s								
KPKS					*e*	S	**Sg**	**14 21 22.8**	**-0.3**
	24nm,0.3s								
SATY	**Saty**	**4.02**	**294**		Pg		**Pb**	**14 20 24.4**	**-1.3**
	2.4nm,0.2s								
SATY					Lg		Lg	14 21 18.6	
	18nm,0.1s								
KNOS	**Konyrlen**	**4.20**	**313**		Pg		**Pg**	**14 20 32.9**	**-2.2**
	7.3nm,0.5s								
KNOS					Lg		Lg	14 21 33.4	
	12nm,0.6s								
BLB	**Baldybastay**	**4.45**	**307**		Pg		**Pg**	**14 20 36.0**	**-3.8**
	12nm,0.5s								
BLB					Lg		Lg	14 21 39.2	
	14nm,0.3s								
ARXS	**Arharly**	**4.90**	**305**		Pg		**Pg**	**14 20 45.1**	**-3.4**
	2.6nm,0.1s								
ARXS					Lg		Lg	14 21 54.5	
	11nm,0.4s								
ARXS	**Arharly**	**4.90**	**305**	*e*	P		**Pg**	**14 20 45.1**	**-3.4**
	2.6nm,0.1s								
ARXS					*e*	S	**Sg**	**14 21 54.5**	**+2.4**
	11nm,0.4s								
MDOK	**Medeo**	**5.00**	**291**		Pg		**Pb**	**14 20 46.0**	**+3.6**
	3.9nm,0.4s								
MDOK					Lg		Lg	14 21 56.5	
	9.9nm,0.5s								
TNSS	**Tian-Shan**	**5.04**	**289**		Pg		**Pb**	**14 20 45.0**	**+1.9**
	0.5nm,0.1s								
TNSS					Lg		Lg	14 21 54.3	
	2.0nm,0.7s								
TNSS	**Tian-Shan**	**5.04**	**289**	*e*	P		**Pb**	**14 20 45.0**	**+1.9**
	0.5nm,0.1s								
TNSS					*e*	S	**Sg**	**14 21 54.4**	**-2.0**
	2.0nm,0.7s								
IZV	**Izvestkoviy**	**5.27**	**289**		Pg		**Pb**	**14 20 51.1**	**+4.1**
	1.9nm,0.3s								
IZV					Lg		Lg	14 22 04.7	
	17nm,0.6s								
IZV	**Izvestkoviy**	**5.27**	**289**	*e*	P		**Pb**	**14 20 51.1**	**+4.1**
	1.9nm,0.3s								
IZV					*e*	S	**Sg**	**14 22 04.7**	**+0.8**
	17nm,0.6s								
MK31	**Makanchi Array**	**5.30**	**351**	⇑	Pn		**Pn**	**14 20 31.5**	**-2.4**
	0.1nm,0.3s								
MK31				⇓	Pg		**Pb**	**14 20 48.7**	**+1.3**
	0.3nm,0.3s,baz=178,slow=15,SNR=4.0								
MK31				⇓	Lg		Lg	14 22 00.1	
	14nm,0.7s,baz=166,slow=27,SNR=4.6								
MAKZ	**Makanchi**	**5.36**	**349**	⇑	Pg		**Pb**	**14 20 48.7**	**+0.4**
	0.6nm,0.6s								
MAKZ				⇓	Lg		Lg	14 22 03.2	
	12nm,1.1s								
KTBS	**Karatobe**	**5.43**	**296**		Pg		**Pb**	**14 20 52.8**	**+3.2**
	1.4nm,0.3s								
KTBS					Lg		Lg	14 22 07.3	
	0.3nm,0.3s								
KTBS	**Karatobe**	**5.43**	**296**	*e*	P		**Pb**	**14 20 52.8**	**+3.2**
	1.4nm,0.3s								
KTBS					*e*	S	**Sg**	**14 22 07.3**	**-1.6**
	0.3nm,0.3s								
KST	**Kastek**	**5.74**	**288**		Pg		**Pb**	**14 20 58.9**	**+4.0**
	2.4nm,0.4s								
KST					Lg		Lg	14 22 17.9	
	6.8nm,0.8s								
KST	**Kastek**	**5.74**	**288**	*e*	P		**Pb**	**14 20 58.9**	**+4.0**
	2.4nm,0.4s								
KST					*e*	S	**Sg**	**14 22 17.9**	**-1.0**
	6.8nm,0.8s								
ZSN	**Zaisan**	**5.98**	**9**		Pg		**Pg**	**14 21 06.8**	**-2.5**
	2.0nm,0.3s								
ZSN					Lg		Lg	14 22 31.1	
	11nm,0.8s								
ZSN	**Zaisan**	**5.98**	**9**	*e*	P		**Pg**	**14 21 06.8**	**-2.5**
	2.0nm,0.3s								
ZSN					*e*	S	**Sg**	**14 22 31.1**	**+4.4**
	11nm,0.8s								
KRBS	**Karabastau**	**6.11**	**293**		Pg		**Pb**	**14 21 04.8**	**+3.6**
	0.5nm,0.3s								
KRBS					Lg		Lg	14 22 28.0	
	2.9nm,0.6s								
KRBS	**Karabastau**	**6.11**	**293**	*e*	P		**Pb**	**14 21 04.8**	**+3.6**
	0.5nm,0.3s								
KRBS					*e*	S	**Sg**	**14 22 28.0**	**-2.8**
	2.9nm,0.6s								
AAK	**Ala-Archa**	**6.74**	**282**	⇓	Pg		**Pg**	**14 21 21.9**	**-1.8**
	1.2nm,0.7s								
AAK				⇑	Lg		Lg	14 22 55.1	
	3.4nm,0.8s								

*TAP **24** 14:27:23.4,21.25N×121.17E,h64km,ML3.4,D*
*JMA **24** 14:27:24.5±0.8,22.7N×121.5E,h1km,MV3.8/11,*
TAIWAN REGION
ISC 24 14:27:24.5±2.1,21.38N±0.09×121.05E±0.03,h15km±10km,
n78,σ1s32/131,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
TSEB	**Hengchuen, Pin**	**0.54**	**345**	*i*	P		**Pn**	**14 27 38.4**	**+0.7**
TSEB					S		**Sn**	**14 27 49.3**	**+2.9**
TWKBT	**Hengchun**	**0.60**	**338**	*e*	P		**Pn**	**14 27 38.9**	**+0.3**
TWKBT					S		**Sn**	**14 27 50.7**	**+2.7**
TWK1	**Hengchun**	**0.60**	**338**		P		**Pn**	**14 27 39.1**	**+0.4**
TWK1					S		**Sn**	**14 27 51.2**	**+3.0**
SMST	**Manzhou Townsh**	**0.67**	**343**		P		**Pn**	**14 27 38.9**	**-0.6**
SMST					S		**Sn**	**14 27 52.1**	**+2.5**
HEN	**Hengchun**	**0.69**	**335**	*i*	P		**Pn**	**14 27 40.7**	**+1.0**
HEN					S		**Sn**	**14 27 53.8**	**+3.6**
LYUB	**Lan-yu**	**0.79**	**39**		P		**Pg**	**14 27 40.1**	**+0.1**
LYUB					S		**Sb**	**14 27 52.0**	**+1.4**
LAY	**Lan-yu**	**0.80**	**35**		P		**Pg**	**14 27 40.3**	**+0.1**
LAY					S		**Sb**	**14 27 52.2**	**+1.3**
SLIU	**Shizi**	**0.86**	**344**		P		**Pg**	**14 27 41.5**	**+0.1**
TAW	**Tawu**	**0.98**	**352**	*e*	P		**Pb**	**14 27 43.0**	**-0.3**
TAW				*e*	S		**Sn**	**14 27 58.0**	**+0.6**
EAST	**Anshuo**	**1.02**	**349**	*e*	P		**Pb**	**14 27 43.1**	**-0.8**
SCZT	**Fangliau**	**1.06**	**338**		P		**Pg**	**14 27 45.9**	**+0.8**
SCZT				*e*	S		**Sn**	**14 28 01.8**	**+2.3**
SSPT	**Xinbi**	**1.19**	**338**	*e*	P		**Pn**	**14 27 45.3**	**-1.3**
ECL	**Taimali**	**1.21**	**356**	*e*	P		**Pn**	**14 27 45.3**	**-1.7**
ECL					S		**Sb**	**14 28 01.9**	**-0.9**
MASBT	**Mashibuluo**	**1.29**	**342**	*e*	P		**Pb**	**14 27 48.6**	**+0.2**
LDUT	**Ludao**	**1.34**	**17**	*e*	P		**Pn**	**14 27 47.3**	**-1.5**
LDUT				*e*	S		**Sn**	**14 28 05.8**	**-0.6**
TTN	**Taitung**	**1.37**	**4**	*e*	S		**Sg**	**14 28 08.6**	**-0.2**
SSD	**Sandimen**	**1.41**	**344**		P		**Pb**	**14 27 51.0**	**+0.4**
TWGBT	**Beinan**	**1.43**	**1**	*e*	P		**Pn**	**14 27 47.1**	**-2.9**
TWGBT				*e*	S		**Sn**	**14 28 08.2**	**-0.4**
ECS	**Chishang**	**1.71**	**5**	P			**Pn**	**14 27 53.2**	**-0.7**
ECS					S		**Sn**	**14 28 15.1**	**-0.5**
CHKT	**Chengkung**	**1.73**	**10**	*e*	S		**Sn**	**14 28 15.6**	**-0.4**
EHD	**Haiduan**	**1.77**	**5**	*e*	P		**Pn**	**14 27 52.8**	**-1.8**
EHD				*e*	S		**Sn**	**14 28 14.7**	**-2.1**
ELDTW	**Lidau**	**1.80**	**359**	*e*	P		**Pn**	**14 27 53.5**	**-1.7**
ELDTW				*e*	S		**Sn**	**14 28 17.1**	**-0.8**
STYH	**Taoyuan**	**1.80**	**352**	*e*	P		**Pb**	**14 27 56.5**	**-0.8**
FULB	**Fuli**	**1.82**	**7**	*e*	P		**Pn**	**14 27 55.0**	**-0.5**
FULB				*e*	S		**Sn**	**14 28 19.2**	**+0.9**
CHKH	**Chenggong**	**1.83**	**10**	*e*	S		**Sn**	**14 28 17.6**	**-0.8**
CHN1	**Nanshi**	**1.86**	**345**	*e*	P		**Pn**	**14 27 57.1**	**+1.2**
WTP	**Ta-pu**	**1.90**	**348**	*e*	P		**Pn**	**14 27 57.8**	**+1.3**
TWK	**Hsinying**	**1.95**	**345**	*e*	P		**Pn**	**14 27 57.9**	**+0.8**
TPUB	**Ta-pu**	**1.95**	**349**	*e*	P		**Pn**	**14 27 57.9**	**+0.7**
TPUB				*e*	S		**Sn**	**14 28 22.8**	**+1.4**
TSCK	**Chigu Township**	**1.97**	**333**		P		**Pn**	**14 27 57.7**	**+0.3**
TSCK					S		**Sn**	**14 28 22.6**	**+0.7**
TWF1	**Yuli**	**1.98**	**7**	*e*	P		**Pn**	**14 27 56.2**	**-1.3**
TWF1				*e*	S		**Sn**	**14 28 20.1**	**-2.0**
YULB	**Yu-li**	**2.02**	**6**	*e*	P		**Pn**	**14 27 56.3**	**-1.7**
YULB				*e*	S		**Sn**	**14 28 20.9**	**-2.1**
WCKO	**Fanlu**	**2.09**	**349**	*e*	P		**Pn**	**14 27 59.7**	**+0.6**
WCKO				*e*	S		**Sn**	**14 28 26.5**	**+1.6**
EHYH	**Wanrong**	**2.12**	**7**	*e*	P		**Pn**	**14 27 58.1**	**-1.4**
EHYH				*e*	S		**Sn**	**14 28 24.0**	**-1.6**
ALS	**Alishan**	**2.13**	**354**		P		**Pn**	**14 28 01.5**	**+1.6**
ALS				*e*	S		**Sn**	**14 28 27.6**	**+1.3**
CHN5	**Tsauling**	**2.23**	**351**		P		**Pn**	**14 28 02.9**	**+1.7**
WDGT	**Dungji**	**2.27**	**326**	*e*	P		**Pn**	**14 28 01.2**	**-0.3**
WDGT				*e*	S		**Sn**	**14 28 28.6**	**-0.7**
WHYT	**Xinyi Township**	**2.31**	**355**	*e*	P		**Pb**	**14 28 04.6**	**-1.4**
WHYT				*e*	S		**Sb**	**14 28 33.7**	**-0.7**
WARBT	**Fenglin Townsh**	**2.35**	**8**	*e*	P		**Pn**	**14 28 02.4**	**-0.2**
WARBT				*e*	S		**Sn**	**14 28 28.5**	**-2.7**
VCHM	**Qimei**	**2.36**	**321**	*i*	P		**Pn**	**14 28 02.0**	**-0.7**
VCHM					S		**Sn**	**14 28 31.0**	**-0.4**
VWDT	**VWDT**	**2.36**	**2**	*e*	P		**Pn**	**14 28 03.7**	**+0.9**
VWDT				*e*	S		**Sn**	**14 28 32.2**	**+0.7**
SSLB	**Suanglung**	**2.40**	**358**	*e*	P		**Pn**	**14 28 05.3**	**+1.9**
SSLB				*e*	S		**Sn**	**14 28 32.8**	**+0.4**
SHUL	**Shoufeng**	**2.44**	**11**	*e*	P		**Pn**	**14 28 04.1**	**+0.2**
SHUL				*e*	S		**Sn**	**14 28 34.3**	**+0.8**
SMLT	**Sun Moon Lake**	**2.50**	**357**	*e*	P		**Pn**	**14 28 07.5**	**-1.7**
WNT	**Mingjian**	**2.51**	**352**	*e*	S		**Sn**	**14 28 35.8**	**+0.6**
TYC	**Yuchr**	**2.52**	**356**	*e*	P		**Sn**	**14 28 05.8**	**+0.8**
TYC				*e*	S		**Sn**	**14 28 36.4**	**+1.1**
PHUB	**P'eng-hu**	**2.53**	**327**	*e*	P		**Pn**	**14 28 03.3**	**-1.8**
PHUB				*e*	S		**Sn**	**14 28 35.0**	**-0.6**
OWD	**Renai**	**2.56**	**3**	*e*	P		**Pn**	**14 28 06.2**	**+0.5**
OWD				*e*	S		**Sn**	**14 28 36.2**	**-0.6**
WUSB	**Renai**	**2.60**	**1**	*e*	P		**Pn**	**14 28 07.2**	**+1.0**
WUSB				*e*	S		**Sn**	**14 28 37.1**	**-0.5**
ETM	**Tongmen**	**2.60**	**9**	*e*	P		**Pn**	**14 28 05.7**	**-0.4**
ETM				*e*	S		**Sn**	**14 28 35.1**	**-2.4**
LXIB	**Xiulin Townshi**	**2.65**	**7**	*e*	P		**Pn**	**14 28 05.9**	**-1.0**
LXIB				*e*	S		**Sn**	**14 28 37.8**	**-1.1**
WCS	**Beigang Elemen**	**2.67**	**357**	*e*	P		**Pn**	**14 28 07.3**	**+0.3**
WCS				*e*	S		**Sn**	**14 28 38.6**	**-0.5**
WHF	**Hehuan Shan**	**2.76**	**4**	*e*	P		**Pn**	**14 28 08.9**	**+0.2**
WHF				*e*	S		**Sn**	**14 28 42.0**	**+0.1**
NACB	**Ninganchiao**	**2.83**	**10**	*e*	P		**Pn**	**14 28 09.0**	**-0.2**
NACB				*e*	S		**Sn**	**14 28 40.5**	**-2.5**
ETLH	**Xiulin Townshi**	**2.84**	**8**	*e*	P		**Pn**	**14 28 09.9**	**+0.4**
FUSS	**Fushou**	**2.86**	**4**	*e*	P		**Pn**	**14 28 10.4**	**+0.6**
FUSS				*e*	S		**Sn**	**14 28 43.5**	**-0.7**
WHP	**Taichung City**	**2.88**	**358**	*e*	P		**Pn**	**14 28 12.0**	**+1.9**
EOS4	**EOS4**	**2.97**	**23**	*e*	S		**Sn**	**14 28 46.2**	**+0.3**
NNSB	**Datong**	**3.05**	**6**	*e*	P		**Pn**	**14 28 13.4**	**+1.0**
EOS3	**EOS3**	**3.12**	**22**	*e*	P		**Pn**	**14 28 12.4**	**-0.6**
EOS3				*e*	S		**Sn**	**14 28 48.9**	**-1.1**
LATG	**Datong**	**3.17**	**8**	*e*	P		**Pn**	**14 28 14.5**	**+0.5**
LATG				*e*	S		**Sn**	**14 28 53.1**	**+1.4**
NFF	**Wufeng Townshi**	**3.24**	**1**	*e*	S		**Sn**	**14 28 53.4**	**+0.2**
YHNB	**Yeheng**	**3.29**	**5**	*e*	P		**Pn**	**14 28 16.8**	**+1.2**
YHNB				*e*	S		**Sn**	**14 28 54.0**	**-0.5**
NSK	**Sanguang**	**3.29**	**5**	*e*	P		**Pn**	**14 28 17.2**	**+1.6**
FUSB	**Fushanzhiwuyua**	**3.40**	**8**	*e*	P		**Pn**	**14 28 19.3**	**+2.1**
FUSB				*e*	S		**Sn**	**14 28 59.5**	**+2.3**
TIPB	**Shuangxi**	**3.65**	**11**	*e*	P		**Pn**	**14 28 23.3**	**+2.8**
HATJ	**Hateruma jima**	**3.68**	**43**	*e*	P		**Pn**	**14 28 22.6**	**+1.6**
SXI1	**Grass Mountain**	**3.77**	**11**	*e*	P		**Pn**	**14 28 22.9**	**+0.6**
SXI1				*e*	S		**Sn**	**14 29 04.7**	**-1.8**
IRIF	**Iriomote-Funau**	**3.84**	**40**	*e*	P		**Pn**	**14 28 25.1**	**+2.0**
VWUC	**VWUC**	**3.88**	**338**	*e*	P		**Pn**	**14 28 23.8**	**0.0**
VWUC				*e*	S		**Sn**	**14 29 08.3**	**-0.8**
KNMB	**Chin-men Tao**	**3.93**	**322**	*e*	P		**Pn**	**14 28 24.2**	**-0.2**
KNMB				*e*	S		**Sn**	**14 29 08.6**	**-1.6**
JKRS	**Kuro-shima**	**3.94**	**43**	*e*	P		**Pn**	**14 28 26.0**	**+1.5**
JKRS				*e*	S		**Sn**	**14 29 10.7**	**+0.2**
PTMZ	**Houxiangcun**	**4.05**	**334**	*e*	P		**Pn**	**14 28 26.6**	**+0.6**
PTMZ				*e*	S		**Sn**	**14 29 11.4**	**-1.8**
DSXP	**Dongshan**	**4.07**	**305**	*e*	P		**Pn**	**14 28 25.7**	**-0.6**
DSXP				*e*	S		**Sn**	**14 29 11.6**	**-2.2**
JIJ	**Ishigaki jima**	**4.12**	**43**	*e*	P		**Pn**	**14 28 27.9**	**+1.0**
JIJ				*e*	S		**Sn**	**14 29 15.0**	**+0.1**
JISG	**Ishigakijimahi**	**4.38**	**43**	*e*	P		**Pn**	**14 28 31.4**	**+0.8**
JISG				*e*	S		**Sn**	**14 29 21.4**	**0.0**
AXDP	**Jialang**	**4.51**	**322**	*e*	P		**Pn**	**14 28 32.4**	**+0.1**
AXDP				*e*	S		**Sn**	**14 29 23.9**	**-0.6**
MATB	**Ma-tsu**	**4.86**	**348**	*e*	P		**Pn**	**14 28 37.9**	**+0.8**

MAN 24 14:34:45.0,4.93N×128.49E,h24km,MS3.7,North of
Halmahera

NDI 24 14:37:48.0±3.7,32.72N×73.75E,h10km,ML3.2,MW3.0,
Presumed earthquake,Pakistan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
JMU	**Jammu**	**0.91**	**86**	*e*	P		Pg	14 38 03.8	-1.8
JMU				*e*	S		Sg	14 38 16.6	-0.9
JMU					IAML			14 38 17.1	
	comp=E,85nm,0.3s								
JMU					IAML			14 38 17.3	
	comp=N,66nm,0.1s								
THN	**Thein Dam**	**1.72**	**99**	*e*	P		Pn	14 38 18.0	-0.1
THN				*e*	S		Sb	14 38 41.9	+0.5
THN					IAML			14 38 44.0	
	comp=E,583nm,0.3s								
THN					IAML			14 38 44.5	
	comp=N,475nm,0.2s								
TSSA	**Tissa**	**2.03**	**86**	*e*	P		Pn	14 38 21.2	-1.2
TSSA				*e*	S		Sn	14 38 47.3	-0.5
TSSA					IAML			14 38 49.5	
	comp=E,410nm,0.2s								
TSSA					IAML			14 38 51.6	
	comp=N,629nm,0.2s								
DHRM	**DHARAMSHALA**	**2.21**	**102**	*e*	P		Pn	14 38 24.6	-0.3
DHRM				*e*	S		Sb	14 38 55.3	-0.3
DHRM					IAML			14 38 57.5	
	comp=N,352nm,0.5s								
DHRM					IAML			14 38 58.0	
	comp=E,347nm,0.3s								
BHK	**Bhakra**	**2.60**	**120**	*e*	P		Pb	14 38 34.9	+0.2
BHK				*e*	S		Sg	14 39 09.5	-1.9
BHK					IAML			14 39 10.4	
	comp=N,52nm,0.2s								
BHK					IAML			14 39 10.8	
	comp=E,41nm,0.3s								
ALCI	**Alchi Leh**	**3.23**	**62**	*e*	P		Pn	14 38 40.2	+1.0
ALCI				*e*	S		Sn	14 39 19.0	+1.0
ALCI					IAML			14 39 23.0	
	comp=E,135nm,0.3s								
SMLA	**Simla**	**3.31**	**118**	*e*	P		Pn	14 38 40.2	+0.4
SMLA				*e*	S		Sn	14 39 20.2	+0.9
SMLA					IAML			14 39 31.6	
	comp=N,345nm,0.2s								
SMLA					IAML			14 39 33.0	
	comp=E,340nm,0.4s								
KLP	**Kalpa**	**4.00**	**106**	*e*	S		Sn	14 39 35.9	-0.8
KUDL	**Kundal**	**5.14**	**152**	*e*	P		Pn	14 39 05.

ZSN eS Sn 14 44 44.2 +1.1
EVN Everest 12.04 215 Pn Pn 14 42 35.8 +0.6
BTO2 Baotou 12.07 73 eP Pn 14 42 35.3 +0.2
BTO2 pP 14 42 38.8
BTO2 sP 14 42 41.6
BTO2 PP PnPn 14 42 45.3 +2.5
BTO2 S Sn 14 44 49.5 -0.4
BTO2 SS SnSn 14 45 04.9 +3.2
BTO2 pmax pmax
comp=Z,74nm,0.8s
BTO2 pmax pmax
comp=Z,290nm,4.7s
BTO2 L L
comp=Z,1μm,19.2s
BTO2 L L
comp=Z,1μm,17.8s
BTO2 L L
comp=Z,1μm,16.2s
WUS Wushi 12.30 290 Pn Pn 14 42 37.2 -1.2
KOHI KOHIMA 12.33 182 eP Pn 14 42 38.8 +0.1
KOHI IAmb IAmb 14 42 46.7
comp=Z,34nm,0.5s
MK31 Makanchi Array 12.61 318 Pn Pn 14 42 41.6 -0.7
comp=Z,16nm,0.7s,baz=124,slow=14,SNR=241
MK31 ⇓Sn Sn 14 44 58.9 -4.0
comp=Z,39nm,0.8s,baz=125,slow=25,SNR=8.6
MK31 ⇓Lg Lg 14 46 16.2
comp=Z,42nm,1.1s,baz=121,slow=28,SNR=3.9
MK31 Makanchi Array 12.61 318 ceP Pn 14 42 42.1 -0.3
MKAR Makanchi Array 12.61 318 Pn Pn 14 42 41.2 -1.1
comp=Z,3.2nm,0.3s,baz=124,slow=14,SNR=196
MKAR Sn Sn 14 44 55.2 -7.7
comp=Z,1.5nm,0.3s,baz=123,slow=25,SNR=7.4
MKAR Lg Lg 14 46 24.4
baz=131,slow=32
MKAR LR LR 14 48 00.0
comp=Z,243nm,18.4s,baz=264,slow=39
comp=Z,16nm,0.6s
MKAR Makanchi Array 12.61 318 Pn 14 42 41.8 -0.6
MKAR Sn Sn 14 44 58.8 -4.1
MKAR Makanchi Array 12.61 318 P Pn 14 42 41.8 -0.6
PDGK Podgornoye 12.64 299 ⇑Pn Pn 14 42 41.5 -1.4
comp=Z,19nm,0.8s
PDGK ⇑Sn Sn 14 45 01.8 -2.1
comp=Z,24nm,0.7s
PDGK ⇑Lg Lg 14 46 18.6
comp=Z,85nm,1.1s
PDGK Podgornoye 12.64 299 P Pn 14 42 41.5 -1.4
PDGK 14 45 01.8
KNGR Kungurtug, Tuv 12.69 8 iP Pn 14 42 44.2 +0.7
SHL Shillong 12.69 191 Pn Pn 14 42 42.7 -1.0
SHL Shillong 12.69 191 P Pn 14 42 42.7 -1.0
SHL Shillong 12.69 191 eP Pn 14 42 45.3 +1.6
MAKZ Makanchi 12.79 317 Pn Sn 14 45 01.2 -5.9
MAKZ Sn Sn 14 45 01.2 -5.9
MAKZ Makanchi 12.79 317 ⇓Pn Pn 14 42 43.2 -1.5
comp=Z,28nm,0.8s
MAKZ ⇓Sn Sn 14 45 01.0 -6.1
comp=Z,26nm,0.8s
MAKZ ⇑Lg Lg 14 46 20.8
comp=Z,65nm,1.5s
MAKZ Makanchi 12.79 317 P Pn 14 42 43.7 -1.1
MAKZ 14 45 01.3
UZB Uzynbulak 12.91 298 eP Pn 14 42 47.2 +0.6
SONM Songino Array 12.99 38 Pn Pn 14 42 47.0 -0.5
comp=Z,2.4nm,0.3s,baz=221,slow=15,SNR=46
SONM Sn Sn 14 45 11.1 -1.0
comp=Z,0.1nm,0.3s,baz=226,slow=23,SNR=1.6
SONM Lg Lg 14 46 29.7
comp=Z,0.2nm,0.3s,baz=234,slow=25,SNR=3.8
SONM LR LR 14 48 06.0
comp=Z,226nm,19.3s,baz=230,slow=39
comp=Z,5.7nm,0.5s
SONM Songino Array 12.99 38 Pn 14 42 47.9 +0.3
PZH PanZhiHua 12.99 151 P Pn 14 42 51.3 +3.5
PRZ Przheval'sk 13.17 295 Pn 14 42 51.2 +1.1
PRZ Przheval'sk 13.17 295 P Pn 14 42 51.2 +1.1
IMP Imphal 13.22 183 eP Pn 14 42 50.8 0.0
IMP IAmb IAmb 14 42 56.7
comp=Z,44nm,0.7s
SATY Saty 13.32 297 eP Pn 14 42 52.7 +0.6
ULN Ulaanbaatar 13.33 39 Pn Pn 14 42 52.9 +0.6
ULN Ulaanbaatar 13.33 39 iP Pn 14 42 51.6 -0.7
HHC Hu-ho-hao-te 13.36 73 eP Pn 14 42 51.9 -0.7
HHC pmax pmax
comp=Z,18nm,0.7s
HHC pmax pmax
comp=Z,150nm,6.6s
HHC L L
comp=Z,300nm,11.5s
HHC L L
comp=Z,380nm,11.5s
HHC L L
comp=Z,490nm,12.3s
TARG Taragay, Kyrgy 13.44 291 Pn Pn 14 42 52.9 -1.2
TARG Taragay, Kyrgy 13.44 291 P Pn 14 42 52.9 -1.2
ZAK Zakamensk 13.76 24 eP Pn 14 43 01.1 +3.1
ZAK pmax pmax
comp=Z,27nm,1.9s
MORE Moreh 13.80 181 Pn Pn 14 42 57.6 -1.1
KDJ Kajisay 13.97 292 Pn 14 43 00.8 -0.3
KDJ Kajisay 13.97 292 P Pn 14 43 00.8 -0.3
TDK Taldyqorghan 13.99 305 eP Pn 14 43 01.5 +0.4
MDOK Medeo 14.30 296 eP Pn 14 43 05.1 -0.5
MOY Mondy 14.30 16 eP P 14 43 11.2 -1.6
MOY e 14 45 44.5
MOY pmax pmax
comp=Z,19nm,1.9s
TNSS Tian-Shan 14.34 296 eP Pn 14 43 06.7 +0.3
AAA Alma-Ata 14.41 296 eP Pn 14 43 07.7 +0.7
ENH Enshi 14.52 118 Pn Pn 14 43 05.9 -2.7
KMI2 Kunming 14.61 150 P P 14 43 15.3 -1.1
KMI2 pmax pmax
comp=Z,13nm,0.9s
KMI2 L L
comp=Z,250nm,18.0s
KMI2 L L
comp=Z,170nm,12.0s
KMI2 L L
comp=Z,370nm,10.8s
LYN LuoYang 14.78 98 P P 14 43 18.8 +0.7
LYN pmax pmax
comp=Z,44nm,0.9s
LYN LR LR
comp=N,490nm,8.2s
LYN LR LR
comp=E,380nm,7.6s
LYN LR LR
comp=Z,490nm,8.9s
KLP Kalpa 14.97 249 eP Pn 14 43 16.6 +1.7
KLP IAmb IAmb 14 43 29.6
comp=Z,24nm,0.9s
KSH2 Kashi 14.97 280 P Pn 14 43 13.8 -0.9
KSH2 pmax pmax
comp=Z,29nm,0.8s
TLY Talaya 15.00 22 LR LR 14 49 14.2
comp=Z,295nm,18.3s,baz=202,slow=38
TLY Talaya 15.00 22 Pn Pn 14 43 15.2 +0.3
TLY Talaya 15.00 22 iP Pn 14 43 14.5 -0.5
GYA Guiyang 15.39 135 ⇓P P 14 43 26.0 +1.0
GYA pmax pmax
comp=Z,42nm,0.9s
GYA L L
comp=Z,310nm,13.1s
IRK Irkutsk 15.68 22 eP Pn 14 43 24.6 +0.7
IRK eS Sn 14 46 20.0 +2.3
IRK pmax pmax
comp=Z,61nm,1.4s
HNS HongShan 15.88 86 ⇓P Pn 14 43 25.1 -1.4
HNS pmax pmax
comp=Z,45nm,1.0s
HNS L L
comp=Z,410nm,12.0s
HNS L L
comp=Z,730nm,11.1s
HNS L L
comp=Z,750nm,12.7s
TSSA Tissa 15.95 256 eP Pn 14 43 27.7 0.0
TSSA IAmb IAmb 14 43 52.2
comp=Z,32nm,0.5s
FRU1 Bishkek 15.96 294 Pn Pn 14 43 25.2 -2.3
FRU1 Bishkek 15.96 294 P Pn 14 43 25.2 -2.3
FRU1 pmax pmax
comp=Z,13nm,0.9s
SMLA Simla 15.97 250 eP Pn 14 43 27.6 -0.1
SMLA IAmb IAmb 14 43 39.9
comp=Z,61nm,0.3s
AAK Ala-Archa 16.02 293 Pn Pn 14 43 29.4 +0.9
comp=Z,0.8nm,0.3s,baz=114,slow=8.0,SNR=14
AAK LR LR 14 50 23.0
comp=Z,281nm,19.6s,baz=116,slow=40
comp=Z,5.5nm,0.7s
AAK Ala-Archa 16.02 293 Pn 14 43 24.7 -3.8
AAK Ala-Archa 16.02 293 ceP Pn 14 43 29.0 +0.5
AAK pmax pmax
comp=Z,14nm,1.3s
SGDS Sogindy 16.08 296 eP Pn 14 43 29.9 +0.7
DHRM DHARAMSHALA 16.09 254 eP Pn 14 43 29.9 +0.5
DHRM IAmb IAmb 14 43 36.6
comp=Z,32nm,1.2s
ALBI Allahabad 16.76 224 eP Pn 14 43 38.3 +0.5
ALBI IAmb IAmb 14 43 47.6
comp=Z,26nm,1.1s
BJT Baijiatuan 16.82 77 Pn Pn 14 43 38.6 +0.1
BJT Baijiatuan 16.82 77 P Pn 14 43 38.6 +0.1
BJT pmax pmax
comp=Z,10.0nm,0.9s
BJI2 Beijing 16.82 77 P Pn 14 43 39.6 +1.1
BJI2 pmax pmax
comp=Z,6.0nm,1.3s
ARSB Arslanbob 16.99 288 Pn 14 43 41.6 +0.8
ARSB Arslanbob 16.99 288 P Pn 14 43 41.6 +0.8
ARSB pmax pmax
comp=Z,26nm,0.7s
KURBB Kurchatov Arra 16.99 323 Pn Pn 14 43 37.9 -2.7
comp=Z,0.2nm,0.3s,baz=134,slow=11,SNR=34
KURBB Sn Sn 14 46 40.8 -8.6
comp=Z,0.1nm,0.3s,baz=109,slow=28,SNR=5.0
KURBB Lg Lg 14 48 44.0
baz=124,slow=28
comp=Z,1.7nm,1.0s
KURBB Kurchatov Arra 16.99 323 ⇑Pn Pn 14 43 40.3 -0.3
comp=Z,21nm,1.1s
KURBB ⇑Sn Sn 14 46 44.9 -4.5
comp=Z,21nm,0.7s
KURBB ⇓Lg Lg 14 48 39.5
comp=Z,41nm,0.9s
KURBB Kurchatov Arra 16.99 323 P Pn 14 43 40.3 -0.3
KURBB 14 46 44.9
KURK Kurchatov 17.01 323 Pn 14 43 38.5 -2.3
KURK Kurchatov 17.01 323 Sn 14 46 40.8 -9.0
XLT XiLinHaoTe 17.17 63 eP P 14 43 45.0 +0.4
XLT pP sP 14 43 49.3 -0.6
XLT sP pP 14 43 55.1 +6.9
XLT pmax pmax
comp=Z,17nm,1.1s
XLT L L
comp=Z,650nm,9.7s
XLT L L
comp=Z,710nm,10.2s
ZAA0 Zalesovo Array 17.25 340 Pn 14 43 43.0 -0.8
ZAA0 Zalesovo Array 17.25 340 ⇑P P 14 43 44.7 -0.7
comp=Z,7.2nm,0.8s
ZALV Zalesovo Beam 17.25 340 P Pn 14 43 43.2 -0.7
comp=Z,0.4nm,0.3s,baz=152,slow=12,SNR=17
ZALV Lg Lg 14 48 50.6
comp=Z,0.1nm,0.3s,baz=156,slow=22,SNR=3.6
comp=Z,9.0nm,0.8s
ZALV Zalesovo Beam 17.25 340 Pn 14 43 42.5 -1.4
DRK Karamyk 17.87 282 Pn Pn 14 43 50.6 -1.3
DRK Karamyk 17.87 282 P Pn 14 43 50.6 -1.3
DRK pmax pmax
comp=Z,8.0nm,0.7s
NIL Nilore 17.89 262 Pn 14 43 50.8 -1.2
NIL Nilore 17.89 262 P Pn 14 43 50.8 -1.2
NIL pmax pmax
comp=Z,35nm,1.4s
WHN Wuhan 17.90 109 P P 14 43 52.5 -0.1
WHN pmax pmax
comp=Z,110nm,1.5s
TIA Tai'an 18.00 89 P Pn 14 43 53.1 -0.2
TIA pmax pmax
comp=Z,13nm,1.2s
TIA L L
comp=Z,200nm,9.6s
TIA L L
comp=Z,500nm,14.9s
TIA L L
comp=Z,680nm,12.2s
KUDL Kundal 18.13 242 eP P 14 43 56.8 +1.6
KUDL IAmb IAmb 14 44 03.6
comp=Z,29nm,1.4s
DZA Taraz 18.36 293 eP P 14 43 58.3 +0.6
BTK Batken 18.61 284 P 14 44 00.1 -0.4
BTK Batken 18.61 284 P P 14 44 00.1 -0.4
BTK pmax pmax
comp=Z,16nm,1.3s
KK31 Karatay Array 18.99 293 P Pn 14 44 05.0 -0.3
KK31 Karatay Array 18.99 293 ⇑P Pn 14 44 05.8 +0.6
comp=Z,7.8nm,0.8s,baz=0.0,slow=0.1,SNR=11
KK31 Karatay Array 18.99 293 P Pn 14 44 05.0 -0.3
KK31 pmax pmax
comp=Z,10.0nm,0.9s
KKAR Karatay Array 18.99 293 P 14 44 04.8 +0.2
KKAR Karatay Array 18.99 293 P P 14 44 04.8 +0.2
GAR Garm 19.05 280 P 14 44 05.1 -0.4
CIT Chita 19.22 37 eP P 14 44 05.6 -1.5
CIT pmax pmax
comp=Z,44nm,3.3s
IUG Iuzhnay 19.25 290 eP Pn 14 44 08.3 -0.2
CHTO Chiang Mai 19.55 168 P 14 44 07.9 -3.0
CHTO Chiang Mai 19.55 168 P P 14 44 07.9 -3.0
CHTO pmax pmax
comp=Z,16nm,1.7s
CHM Chimkent 19.58 290 eP Pn 14 44 11.9 -0.4
CM31 Chiang Mai Arr 19.90 168 P Pn 14 44 15.9 -0.4
CMAR Chiang Mai Arr 19.90 168 P Pn 14 44 16.2 -0.1
comp=Z,0.4nm,0.3s,baz=342,slow=10,SNR=16
CMAR PcP PcP 14 48 32.9 +1.1
comp=Z,1.1nm,0.6s,baz=299,slow=2.4,SNR=7.5
CMAR LR LR 14 52 37.0
comp=Z,87nm,19.5s,baz=350,slow=39
comp=Z,1.7nm,0.5s
CMAR Chiang Mai Arr 19.90 168 Pn 14 44 16.5 +0.2
GUNA GUNA 19.91 233 eP P 14 44 14.7 0.0
GUNA IAmb IAmb 14 44 22.2
comp=Z,30nm,0.8s
CHGR Chuyangaron 19.99 280 Pn 14 44 16.6 -0.7
CHGR IAmb IAmb 14 44 19.6
comp=Z,33nm,0.7s
CHGR Chuyangaron 19.99 280 P Pn 14 44 16.6 -0.7
CHGR pmax pmax
comp=Z,33nm,0.7s
AJM Ajmer 20.49 241 eP P 14 44 21.8 +0.6
AJM IAmb IAmb 14 44 26.5
comp=Z,25nm,1.0s
NJ2 Nanjing 20.67 100 eP Pn 14 44 24.6 -0.7
NJ2 pmax pmax
comp=Z,41nm,0.6s
BHPL Bhopal 20.89 230 eP P 14 44 25.5 +0.1
BHPL IAmb IAmb 14 44 30.6
comp=Z,21nm,0.6s
KBL Kabul 20.92 268 P 14 44 26.1 +0.2
KBL Kabul 20.92 268 P P 14 44 26.1 +0.2
KBL pmax pmax
comp=Z,21nm,0.8s
SHAA Shahritus 20.95 277 P 14 44 25.4 -0.7
SHAA IAmb IAmb 14 44 42.5
comp=Z,40nm,1.0s
DL2 Dalian 21.11 79 P P 14 44 28.3 +0.7
DL2 eS S 14 48 23.8 +1.4
DL2 pmax pmax
comp=Z,44nm,1.0s
DL2 pmax pmax
comp=Z,280nm,4.4s
DL2 L L
comp=Z,260nm,15.0s
DL2 L L
comp=Z,330nm,13.5s
DL2 L L
comp=Z,370nm,12.0s
RAGD RAYAGADA 21.15 211 eP P 14 44 29.7 +1.5
HIA Hailar 21.21 50 P P 14 44 28.1 -0.6
HIA Hailar 21.21 50 P P 14 44 28.1 -0.6
HIA pmax pmax
comp=Z,14nm,1.0s
NGP Nagpur 21.58 223 eP P 14 44 32.7 -0.2
UDPR Udaipur 22.32 239 eP P 14 44 40.6 -0.2
UDPR IAmb IAmb 14 44 46.8
comp=Z,43nm,1.2s
SNY Shenyang 22.44 71 ⇓P P 14 44 41.3 -0.6
SNY pmax pmax
comp=Z,6.0nm,1.0s
BVA0 Borovoye Array 22.48 320 ⇑P P 14 44 42.7 +0.4
comp=Z,6.9nm,0.7s,baz=120,slow=9.5,SNR=11
BVA0 Borovoye Array 22.48 320 iP P 14 44 42.7 +0.4
BVAR Borovoye Array 22.48 320 P P 14 44 42.8 +0.5
comp=Z,7.0nm,0.7s,baz=123,slow=12,SNR=22
comp=Z,7.0nm,0.7s
BORK Borovoye 22.53 319 P 14 44 42.4 -0.4
BORK IAmb IAmb 14 44 53.1
comp=Z,19nm,0.8s
BORK Borovoye 22.53 319 ceP P 14 44 43.9 +1.1
BORK pmax pmax
comp=Z,12nm,0.7s
JASL Jaisalmer 22.85 248 eP P 14 44 46.5 +0.1
JASL IAmb IAmb 14 44 55.2
comp=Z,36nm,0.6s
AKL Akola 23.08 226 eP P 14 44 50.0 +1.1
AKL IAmb IAmb 14 44 55.6
comp=Z,24nm,0.8s
QIZ Qiongzhong 23.14 141 P P 14 44 50.6 +1.2
QIZ S S 14 49 03.0 +2.1
QIZ pmax pmax
comp=Z,130nm,6.3s
QIZ L L
comp=Z,180nm,9.6s
QIZ L L
comp=Z,290nm,11.5s
QIZ L L
comp=Z,190nm,10.1s
BOD Bodaibo 23.47 26 eP P 14 44 53.1 +0.7
BOD pmax pmax
comp=Z,14nm,1.4s
CN2 Changchun 23.87 66 P P 14 44 55.9 -0.6
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 L L
comp=Z,400nm,10.0s
CN2 L L
comp=Z,400nm,10.0s
CN2 L L
comp=Z,500nm,10.0s
HYB Hyderabad 24.96 219 eP P 14 45 07.8 +1.1
HYB IAmb IAmb 14 45 12.4
comp=Z,23nm,0.8s
BNX BinXian 25.41 62 ⇓P P 14 45 10.4 -0.1
BNX pmax pmax
comp=Z,7.0nm,1.0s
KS19 Wonju Array Si 26.18 81 P P 14 45 16.7 -0.9
KSAR Wonju Array Be 26.20 81 P P 14 45 16.5 -1.3
KSAR Wonju Array Be 26.20 81 P P 14 45 16.5 -1.3
KSRS Korea Array 26.23 81 P P 14 45 16.9 -1.0
comp=Z,5.6nm,0.9s,baz=277,slow=9.2,SNR=18
KSRS LR LR 14 56 07.5
comp=Z,61nm,19.3s,baz=280,slow=38
comp=Z,5.6nm,0.9s
KSRS Korea Array 26.23 81 P P 14 45 17.0 -1.0
HEH HeiHe 26.24 52 eP P 14 45 18.1 +0.1
HEH L L
comp=Z,910nm,11.8s
HEH L L
comp=Z,910nm,10.0s
HEH L L
comp=Z,1μm,10.0s
HRA Herat 26.33 272 P P 14 45 17.8 -1.5
POO Poona 26.63 229 eP P 14 45 22.1 +0.3
POO IAmb IAmb 14 45 30.0
ZEA Zeya 27.25 44 eP P 14 45 28.4 +1.3
ZEA pmax pmax
comp=Z,10.0nm,0.9s
ZEA MLR MLR
comp=Z,200nm,15.0s
AB31 Akbulak array 27.25 305 P 14 45 27.2 +0.1
AB31 Akbulak array 27.25 305 ⇑P P 14 45 27.9 +0.8
comp=Z,2.5nm,0.7s,baz=98,slow=8.9,SNR=30
AB31 Akbulak array 27.25 305 iP P 14 45 27.9 +0.8
ABKAR Akbulak array 27.25 305 P 14 45 27.0 -0.1
AKTO Aktyubinsk 28.70 307 P P 14 45 40.6 +0.4
comp=Z,4.3nm,0.8s,baz=92,slow=7.4,SNR=13
comp=Z,4.3nm,0.8s
AKTO Aktyubinsk 28.70 307 ⇑P P 14 45 40.6 +0.4
comp=Z,4.6nm,1.0s
KLR Kul'dur 28.78 55 LR LR 14 57 23.8
comp=Z,74nm,19.9s,baz=302,slow=37
KLR Kul'dur 28.78 55 ceP P 14 45 40.6 -0.2
KLR pmax pmax
comp=Z,5.0nm,1.5s
SVE Sverdlovsk 29.24 321 eP P 14 45 46.2 +1.4
ARTI Arti 30.20 319 P P 14 45 53.5 +0.2
comp=Z,2.6nm,0.5s,baz=140,slow=6.5,SNR=5.1
comp=Z,2.6nm,0.5s
ARTI Arti 30.20 319 P P 14 45 53.3 0.0
ARTI IAmb IAmb 14 46 34.0
comp=Z,12nm,1.1s
ARTI Arti 30.20 319 c iP P 14 45 54.0 +0.7
ARTI 14 46 47.2
ARTI S S 14 50 54.4 +2.0
ARTI SS SnSn 14 52 26.1 +0.5
ARTI pmax pmax
comp=Z,6.0nm,0.9s
NRIK Noril'sk 31.56 355 P P 14 46 04.8 -0.3
comp=Z,6.8nm,0.8s,baz=161,slow=6.0,SNR=13
comp=Z,6.8nm,0.8s
NRIK Noril'sk 31.56 355 P P 14 46 05.6 +0.4
NRIK IAmb IAmb 14 46 06.7
comp=Z,6.8nm,0.8s
NRIK Noril'sk 31.56 355 iP P 14 46 05.5 +0.4
NRIK pmax pmax
comp=Z,8.0nm,0.9s
BELG Belogornoye 35.42 309 iP P 14 46 39.4 +0.5
BELG pmax pmax
comp=Z,4.0nm,0.9s
KIRV Kirov 35.49 320 ceP P 14 46 41.0 +1.6
YSS Yuzhno-Sakhali 36.05 60 eP P 14 46 36.0 -8.4
YSS pmax pmax
comp=Z,20nm,1.2s
YSS MLR MLR
comp=N,100nm,12.0s
YSS MLR MLR
comp=E,200nm,13.0s
TIXI Tiksi 37.88 17 P P 14 46 58.7 -1.0
TIXI Tiksi 37.88 17 ceP P 14 46 59.5 -0.2
TIXI pmax pmax
comp=Z,7.0nm,1.0s
GNI Garni 38.38 289 LR LR 15 05 02.2
comp=Z,67nm,21.7s,baz=342,slow=40
GNI Garni 38.38 289 P P 14 47 05.2 +0.7
GNI Garni 38.38 289 ceP P 14 47 05.0 +0.5
GNI pmax pmax
comp=Z,17nm,1.7s
SBUM Sibu 38.94 151 P P 14 47 09.2 0.0
KBZ Khabaz 39.00 295 P P 14 47 10.7 +1.3
comp=Z,1.1nm,0.7s,baz=25,slow=4.9,SNR=3.6
comp=Z,1.1nm,0.7s
KBZ Khabaz 39.00 295 iP P 14 47 09.8 +0.4
VRH Novokhopyorsk 39.05 307 eP P 14 47 10.2 +0.5
VRH pmax pmax
comp=Z,21nm,0.7s
KIV Kislovodsk 39.11 296 P P 14 47 09.8 -0.7
KIV Kislovodsk 39.11 296 eP P 14 47 10.7 +0.2
KIV pmax pmax
comp=Z,8.0nm,1.1s
SHA1 Shidzhatmaz 39.17 295 ceP P 14 47 13.6 +2.4
MYLDM Lahad Datu 39.28 141 P 14 47 13.3 +1.3
MYLDM IAmb IAmb 14 47 15.5
comp=Z,22nm,0.8s
GEVA Gevas 40.11 287 P P 14 47 17.8 -1.2
ERBR Yeremizino-Bor 40.37 299 eP P 14 47 23.7 +2.9
VORD Divnogorie 40.59 307 eP P 14 47 22.9 +0.4
VORD pmax pmax
comp=Z,10.0nm,0.6s
VORR Voronezh 40.60 308 eP P 14 47 23.9 +1.3
VORR pmax pmax
comp=Z,40nm,0.4s
VSR Storozhevoye 40.65 307 eP P 14 47 23.3 +0.2
VSR pmax pmax
comp=Z,10.0nm,0.8s
LPSR Galich'ya Gora 40.74 309 eP P 14 47 24.5 +0.8
LPSR pmax pmax
comp=Z,40nm,0.7s
GURO Guroymak-BITLI 40.82 288 P P 14 47 26.2 +1.4
KLMR Klimovskoe 40.86 322 eP P 14 47 24.2 -0.4
KLMR e 14 49 23.7
KLMR pmax pmax
comp=Z,17nm,0.7s

MA2	**Magadan**	**41.18**	**40**	LR	LR	15 04 15.5			
	comp=Z,74nm,18.1s,baz=326,slow=36								
MA2	**Magadan**	**41.18**	**40**	*i* P	**P**	**14 47 26.3**	**-1.1**		
MA2				pmax	pmax				
	comp=Z,5.0nm,0.9s								
OBN	**Obninsk**	**42.07**	**313**	*e*P	**P**	**14 47 35.4**	**+0.8**		
OBN				*e**SP	**sP**	**14 47 41.5**	**+1.3**		
OBN						14 49 12.0			
OBN				*e*		14 49 30.3			
OBN				S	**S**	**14 53 50.0**	**-3.7**		
OBN				SSS	SSS	14 57 44.0			
OBN				pmax	pmax				
	comp=Z,56nm,1.7s								
OBN				MLR	MLR				
	comp=Z,927nm,7.0s								
OBN	**Obninsk**	**42.07**	**313**	P	**P**	**14 47 36.4**	**+1.8**		
	comp=Z,31nm,1.0s								
MARD	**Mardin**	**42.13**	**286**	P	**P**	**14 47 36.3**	**+0.8**		
SEY	**Seymchan**	**42.36**	**35**	*ce*P	**P**	**14 47 38.2**	**+1.3**		
SEY				pmax	pmax				
	comp=Z,7.0nm,2.5s								
ANN	**Anapa**	**42.66**	**298**	*e*P	P	14 47 44.9	+5.3		
ANN				pmax	pmax				
	comp=Z,78nm,1.0s								
TOLI2	**Tolitoli**	**43.92**	**141**	P	**P**	**14 47 48.4**	**-1.7**		
TOLI2				IAmb	IAmb	14 47 51.7			
	comp=Z,11nm,0.9s								
RAYN	**Ar Rayn**	**44.15**	**265**	P	**P**	**14 47 52.4**	**+0.4**		
RAYN	**Ar Rayn**	**44.15**	**265**	P	**P**	**14 47 52.4**	**+0.4**		
RAYN				pmax	pmax				
	comp=Z,5.0nm,1.2s								
BR131	**Keskin Array S**	**46.70**	**292**	P	**P**	**14 48 13.7**	**+1.6**		
BR131				IAmb	IAmb	14 48 49.2			
	comp=Z,15nm,1.5s								
BR131	**Keskin Array S**	**46.70**	**292**	P	**P**	**14 48 13.7**	**+1.6**		
BR131				pmax	pmax				
	comp=Z,15nm,1.5s								
BRTR	**Keskin Array B**	**46.70**	**292**	P	**P**	**14 48 13.3**	**+1.2**		
	comp=Z,2.8nm,0.8s,baz=93,slow=8.7,SNR=12								
	comp=Z,2.8nm,0.8s								
BRTR	**Keskin Array B**	**46.70**	**292**	P	**P**	**14 48 13.5**	**+1.4**		
BR106	**Keskin Array S**	**46.71**	**292**	P	**P**	**14 48 13.4**	**+1.2**		
	comp=Z,4.2nm,1.5s								
AK09	**Malin Array Si**	**46.93**	**308**	P	**P**	**14 48 14.2**	**+0.6**		
AK08	**Malin Array Si**	**46.95**	**308**	P	**P**	**14 48 14.4**	**+0.7**		
AK03	**Malin Array Si**	**46.95**	**308**	P	**P**	**14 48 14.2**	**+0.5**		
AKASG	**Malin Array Be**	**46.95**	**308**	P	**P**	**14 48 14.7**	**+1.0**		
	comp=Z,5.0nm,0.8s,baz=71,slow=7.4,SNR=11								
	comp=Z,5.0nm,0.8s								
AKBB	**Malin Array Si**	**46.95**	**308**	P	**P**	**14 48 14.6**	**+0.8**		
AKBB	**Malin Array Si**	**46.95**	**308**	*i* P	**P**	**14 48 14.9**	**+1.2**		
AKBB				pmax	pmax				
	comp=Z,18nm,1.5s								
AKBB	**Malin Array Si**	**46.95**	**308**	P	**P**	**14 48 14.3**	**+0.6**		
AK10	**Malin Array Si**	**46.95**	**308**	P	**P**	**14 48 14.4**	**+0.7**		
KIEV	**Kiev**	**46.96**	**308**	P	**P**	**14 48 14.1**	**+0.3**		
KIEV	**Kiev**	**46.96**	**308**	P	**P**	**14 48 14.1**	**+0.3**		
KIEV				pmax	pmax				
	comp=Z,31nm,1.7s								
KIEV	**Kiev**	**46.96**	**308**	P	**P**	**14 48 14.3**	**+0.5**		
AK02	**Malin Array Si**	**46.97**	**308**	P	**P**	**14 48 14.3**	**+0.4**		
AK05	**Malin Array Si**	**46.98**	**308**	P	**P**	**14 48 14.3**	**+0.4**		
AK06	**Malin Array Si**	**46.99**	**308**	P	**P**	**14 48 14.9**	**+0.9**		
AK11	**Malin Array Si**	**46.99**	**308**	P	**P**	**14 48 14.7**	**+0.7**		
AK15	**Malin Array Si**	**47.02**	**308**	P	**P**	**14 48 14.4**	**+0.2**		
AK15				pP	**sP**	**14 48 19.3**	**-0.5**		
AK22	**Malin Array Si**	**47.04**	**308**	P	**P**	**14 48 14.9**	**+0.5**		
AK21	**Malin Array Si**	**47.05**	**308**	P	**P**	**14 48 14.6**	**+0.1**		
AK17	**Malin Array Si**	**47.06**	**308**	P	**P**	**14 48 15.2**	**+0.6**		
AK13	**Malin Array Si**	**47.07**	**308**	P	**P**	**14 48 15.4**	**+0.7**		
AK20	**Malin Array Si**	**47.08**	**308**	P	**P**	**14 48 15.1**	**+0.4**		
MNK	**Minsk**	**47.13**	**313**	*i* P	**P**	**14 48 16.4**	**+1.3**		
	comp=E,23nm,0.8s								
MNK				*i* P	**P**	**14 48 16.4**	**+1.3**		
	comp=N,23nm,0.9s								
MNK				*i* P	**P**	**14 48 16.4**	**+1.3**		
	comp=Z,12nm,0.7s,baz=81								
MNK				*i* PP	**PP**	**14 50 07.7**	**+2.2**		
MNK				*i* PPP	PPP	14 50 51.0			
MNK				*i* S	**S**	**14 55 09.7**	**+2.5**		
MNK				*i* SS	**SS**	**14 58 38.6**	**+4.7**		
MNK				*i* SSS	SSS	14 59 36.6			
MNK				*i* LQ	LQ	15 04 43.6			
MNK				*i* LR	LR	15 08 05.6			
MNK				*i* LRM	MLR	15 09 59.1			
	comp=N,156nm,11.6s								
MNK				*i* LRM	MLR	15 10 02.0			
	comp=Z,121nm,12.5s								
MNK				*i* LRM	MLR	15 10 12.4			
	comp=E,168nm,10.6s								
MNK	**Minsk**	**47.13**	**313**	*i* P	**P**	**14 48 16.3**	**+1.3**		
MNK				*i*		14 50 07.7			
MNK				*i* PPP	PPP	14 50 51.0			
MNK				*i* S	**S**	**14 55 09.7**	**+2.5**		
MNK				*i* SSS	SSS	14 59 36.5			
MNK				pmax	pmax				
	comp=Z,12nm,0.7s								
MNK				pmax	pmax				
	comp=N,23nm,0.9s								
MNK				pmax	pmax				
	comp=E,23nm,0.8s								
MNK				MLR	MLR				
	comp=N,156nm,12.0s								
MNK				MLR	MLR				
	comp=Z,121nm,13.0s								
MNK				MLR	MLR				
	comp=E,168nm,11.0s								
FINES	**FINESS Array B**	**47.38**	**323**	P	**P**	**14 48 17.9**	**+0.9**		
	comp=E,7.0nm,0.6s,baz=88,slow=9.7,SNR=23								
	comp=E,7.0nm,0.6s								
FINES	**FINESS Array B**	**47.38**	**323**	P	**P**	**14 48 17.1**	**+0.2**		
ARCES	**ARCESS Array B**	**47.65**	**334**	P	**P**	**14 48 20.1**	**+1.1**		
	comp=E,2.6nm,0.6s,baz=72,slow=7.8,SNR=8.2								
ARCES				PcP	**PcP**	**14 49 48.6**	**+0.4**		
	comp=E,3.0nm,0.7s,baz=100,slow=3.7,SNR=6.2								
	comp=E,2.6nm,0.6s								
NACGM	**Naroch**	**47.70**	**314**	*e*P	**P**	**14 48 19.8**	**+0.4**		
	comp=Z,25nm,0.9s,baz=81								
MI28	**Mi28,Pidlybu**	**47.87**	**308**	P	**P**	**14 48 20.7**	**-0.2**		
MI28				pP	**pP**	**14 48 25.5**	**+0.6**		
KIS	**Kishinev**	**48.02**	**303**	P	**P**	**14 48 22.6**	**+0.5**		
	comp=Z,63nm,0.5s								
LUBAR	**Lubar, Ukraine**	**48.03**	**307**	P	**P**	**14 48 22.2**	**+0.1**		
LUBAR				pP	**pP**	**14 48 26.1**	**-0.1**		
BILL	**Bilibino**	**48.50**	**28**	P	**P**	**14 48 26.4**	**+0.9**		
BILL				IAmb	IAmb	14 48 34.3			
	comp=Z,7.0nm,1.1s								
BILL	**Bilibino**	**48.50**	**28**	*ce*P	**P**	**14 48 26.7**	**+1.2**		
BILL				pmax	pmax				
	comp=Z,5.0nm,1.0s								
NDNU	**Novodnistrovsk**	**48.58**	**305**	P	**P**	**14 48 27.2**	**+0.8**		
RNPP9	**Sopachiv**	**48.87**	**309**	P	**P**	**14 48 29.2**	**+0.6**		
RNPP8	**Varash**	**48.91**	**309**	P	**P**	**14 48 29.9**	**+1.0**		
RNPP5	**Staryi Chortor**	**48.91**	**309**	P	**P**	**14 48 29.7**	**+0.8**		
KMPD	**K-Podol'skiy**	**49.17**	**305**	P	**P**	**14 48 31.1**	**+0.2**		
BURAR	**Bucovina Array**	**50.23**	**304**	P	**P**	**14 48 40.1**	**+1.0**		
BUR08	**Bucovina Ar. S**	**50.23**	**305**	P	**P**	**14 48 39.6**	**+0.5**		
STHS	**Stebnicka Huta**	**52.25**	**308**	*e*P	**P**	**14 48 54.0**	**-0.2**		
STHS				pmax	pmax				
	comp=Z,7.0nm,0.9s								
STHS	**Stebnicka Huta**	**52.25**	**308**	*e*P	**P**	**14 48 54.0**	**-0.2**		
OJC	**Ojcow**	**52.91**	**309**		**P**	**14 48 59.8**	**+0.8**		
OJC	**Ojcow**	**52.91**	**309**	P	**P**	**14 48 59.8**	**+0.8**		
KECS	**Kecovo**	**53.01**	**307**	*e*P	**P**	**14 49 00.2**	**+0.4**		
KECS				pmax	pmax				
	comp=Z,19nm,1.3s								
KECS	**Kecovo**	**53.01**	**307**	*e*P	**P**	**14 49 00.2**	**+0.4**		
LANS	**Liptovska Anna**	**53.44**	**308**	*e*P	**P**	**14 49 01.3**	**-1.7**		
LANS				pmax	pmax				
	comp=Z,3.0nm,0.9s								
LANS	**Liptovska Anna**	**53.44**	**308**	*e*P	**P**	**14 49 01.3**	**-1.7**		
HFS	**Hagfors**	**53.58**	**322**	P	**P**	**14 49 03.9**	**+0.1**		
	comp=Z,5.8nm,0.8s,baz=91,slow=12,SNR=4.9								
	comp=Z,5.8nm,0.8s								
STEB	**Steborice**	**54.24**	**309**	*e*P	**P**	**14 49 10.5**	**+1.7**		
MORC	**Moravsky Berou**	**54.43**	**309**	P	**P**	**14 49 11.6**	**+1.3**		
MORC				IAmb	IAmb	14 49 12.8			
	comp=Z,11nm,1.0s								
MORC	**Moravsky Berou**	**54.43**	**309**	P	**P**	**14 49 11.6**	**+1.3**		
MORC				pmax	pmax				
	comp=Z,11nm,1.0s								
MORC	**Moravsky Berou**	**54.43**	**309**	*e*P	**P**	**14 49 11.5**	**+1.3**		
NB2	**NORSAR Subarra**	**54.52**	**324**	P	**P**	**14 49 10.6**	**-0.1**		
	comp=Z,3.5nm,0.6s,baz=74,slow=7.4								
NOA	**NORSAR Array B**	**54.52**	**324**	P	**P**	**14 49 11.0**	**+0.3**		
	comp=Z,4.9nm,0.6s,baz=74,slow=7.3,SNR=16								
	comp=Z,4.9nm,0.6s								
JAVC	**Velka Javorina**	**54.65**	**308**	*e*P	**P**	**14 49 13.8**	**+1.9**		
KRLC	**Kraliky**	**54.80**	**310**	*e*P	**P**	**14 49 14.3**	**+1.4**		
KRLC	**Kraliky**	**54.80**	**310**	*e*P	**P**	**14 49 14.3**	**+1.4**		
DPC	**Dobruska-Polom**	**54.98**	**310**	*e*P	**P**	**14 49 16.4**	**+2.1**		
DPC	**Dobruska-Polom**	**54.98**	**310**	*e*P	**P**	**14 49 16.4**	**+2.1**		
VRAC	**Vranov**	**55.17**	**309**	*e*P	**P**	**14 49 17.0**	**+1.4**		
KRUC	**Moravsky**	**55.38**	**309**	*e*P	**P**	**14 49 18.4**	**+1.4**		
CONA	**Conrad Observa**	**56.11**	**307**	*ep*P	**P**	**14 49 24.4**	**+1.9**		
	comp=Z,3.1nm,0.6s								
CLL	**Collm**	**56.63**	**312**	P	**P**	**14 49 26.5**	**+0.5**		
CLL				IAmb	IAmb	14 49 28.1			
	comp=Z,12nm,1.1s								
CLL	**Collm**	**56.63**	**312**	*i* P	**P**	**14 49 27.0**	**+1.0**		
CLL				pmax	pmax				
	comp=Z,10.0nm,0.8s								
CLL	**Collm**	**56.63**	**312**	*i* P	**P**	**14 49 27.0**	**+1.0**		
	comp=Z,10.0nm,0.8s								
CKRC	**Cesky Krumlov**	**56.75**	**309**	*e*P	**P**	**14 49 28.8**	**+1.9**		
CKRC	**Cesky Krumlov**	**56.75**	**309**	*e*P	**P**	**14 49 28.8**	**+1.9**		
KHC	**Kasperske Hory**	**57.08**	**309**	*ce*P	**P**	**14 49 29.9**	**+0.6**		
KHC				pmax	pmax				
	comp=Z,12nm,2.5s								
SOKA	**Soboth**	**57.10**	**306**	*ep*P	**P**	**14 49 30.6**	**+1.1**		
	comp=Z,2.3nm,0.4s								
GERES	**GERESS Array B**	**57.11**	**309**	P	**P**	**14 49 30.7**	**+1.2**		
	comp=Z,1.2nm,0.7s,baz=93,slow=6.7,SNR=5.6								
	comp=Z,1.2nm,0.7s								
MOA	**Mollm**	**57.13**	**308**	*ep*P	pP	14 49 31.9	-1.9		
	comp=Z,1.1nm,0.3s								
KBA	**Koelnbreinsper**	**58.01**	**307**	*ep*P	**P**	**14 49 37.2**	**+1.1**		
	comp=Z,2.5nm,0.5s								
GAMB	**Gambell**	**58.13**	**31**	P	**P**	**14 49 35.2**	**-1.1**		
	baz=292								
LESA	**Schwarzleotal**	**58.29**	**308**	*ep*P	**P**	**14 49 39.4**	**+1.5**		
	comp=Z,8.8nm,0.5s								
C16K	**Lisburne Hills**	**58.74**	**25**	IAmb	IAmb	14 49 42.0			
	comp=Z,5.7nm,0.9s								
C16K	**Lisburne Hills**	**58.74**	**25**	P	**P**	**14 49 40.0**	**-0.5**		
	baz=295								
TNA	**Tin City**	**58.93**	**29**	P	**P**	**14 49 40.9**	**-1.0**		
	baz=294								
WTTA	**Wattenberg**	**59.00**	**308**	*ep*P	**P**	**14 49 44.2**	**+1.2**		
	comp=Z,3.9nm,0.3s								
A19K	**Wainwright**	**59.26**	**23**	P	**P**	**14 49 43.1**	**-1.0**		
	baz=297								
SQTA	**Sankt Quirin**	**59.29**	**308**	*ep*P	**P**	**14 49 45.8**	**+1.0**		
	comp=Z,5.3nm,0.5s								
MOTA	**Moosalm**	**59.30**	**308**	*ep*P	**P**	**14 49 46.0**	**+1.0**		
	comp=Z,2.9nm,0.4s								
C17K	**DeLong Mountai**	**59.38**	**25**	P	**P**	**14 49 42.9**	**-2.0**		
	baz=296								
F14K	**Arctic Creek**	**59.57**	**29**	P	**P**	**14 49 44.9**	**-1.5**		
	baz=295								
RDOG	**Red Dog Mine**	**59.65**	**25**	P	**P**	**14 49 47.2**	**+0.3**		
RDOG				IAmb	IAmb	14 49 48.1			
	comp=Z,4.5nm,0.6s								
RDOG	**Red Dog Mine**	**59.65**	**25**	P	**P**	**14 49 45.9**	**-1.0**		
	baz=297								
FETA	**Feichten**	**59.67**	**308**	*ep*P	**P**	**14 49 48.4**	**+0.9**		
	comp=Z,2.4nm,0.6s								
D17K	**Noatak River**	**59.76**	**26**	P	**P**	**14 49 46.6**	**-1.0**		
	baz=297								
TEOL	**Teolo**	**59.77**	**306**	P	**P**	**14 49 48.1**	**0.0**		
C18K	**Utukok River**	**59.95**	**24**		**P**	**14 49 49.3**	**+0.3**		
C18K				IAmb	IAmb	14 49 50.3			
	comp=Z,6.2nm,0.7s								
C18K	**Utukok River**	**59.95**	**24**	P	**P**	**14 49 48.2**	**-0.7**		
	baz=298								
DAVA	**Damuels**	**60.08**	**309**	*ep*P	**P**	**14 49 52.0**	**+1.6**		
	comp=Z,1.4nm,0.2s								
F15K	**North Star Dit**	**60.10**	**28**	P	**P**	**14 49 49.0**	**-0.9**		
	baz=297								
FUORN	**Ofenpass-Fuorn**	**60.13**	**308**		**P**	**14 49 52.0**	**+1.2**		
C19K	**Lookout Ridge**	**60.24**	**23**	P	**P**	**14 49 50.2**	**-0.7**		
	baz=299								
ANM	**Nome**	**60.34**	**29**	P	**P**	**14 49 50.5**	**-1.1**		
	baz=297								
B20K	**Meade River**	**60.53**	**22**	P	**P**	**14 49 52.4**	**-0.4**		
	baz=301								
A22K	**Sinclair Lake**	**60.64**	**21**	P	**P**	**14 49 52.6**	**-0.9**		
	baz=302								
G15K	**Niukluk**	**60.65**	**29**	P	**P**	**14 49 52.9**	**-0.8**		
	baz=297								
E18K	**Tukpahlearik C**	**60.73**	**25**	IAmb	IAmb	14 49 55.5			
	comp=Z,4.3nm,0.9s								
E18K	**Tukpahlearik C**	**60.73**	**25**	P	**P**	**14 49 52.9**	**-1.4**		
	baz=299								
TUE	**Stuetta**	**60.76**	**308**		**P**	**14 49 55.7**	**+0.7**		
TUE				IAmb	IAmb	14 50 01.0			
	comp=Z,6.5nm,0.8s								
F17K	**Baldwin Pennin**	**60.98**	**26**	P	**P**	**14 49 55.2**	**-0.8**		
	baz=299								
D19K	**Kuna River**	**61.01**	**24**	P	**P**	**14 49 55.6**	**-0.6**		
	baz=300								
G16K	**Koyuk River**	**61.09**	**28**	IAmb	IAmb	14 49 58.4			
	comp=Z,5.0nm,0.8s								
G16K	**Koyuk River**	**61.09**	**28**	P	**P**	**14 49 56.0**	**-0.7**		
	baz=299								
D20K	**Etivluk River**	**61.37**	**23**	P	**P**	**14 49 57.8**	**-0.8**		
	baz=302								
B22K	**Teshekpuk Lake**	**61.44**	**21**	P	**P**	**14 49 57.9**	**-1.1**		
	baz=304								
F18K	**Selawik**	**61.46**	**26**	P	**P**	**14 49 58.0**	**-1.2**		
	baz=300								
B21K	**Ikpikpuk River**	**61.49**	**22**	IAmb	IAmb	14 50 01.5			
	comp=Z,9.4nm,0.8s								
B21K	**Ikpikpuk River**	**61.49**	**22**	P	**P**	**14 49 58.6**	**-0.7**		
	baz=303								
H16K	**Elim**	**61.50**	**29**	P	**P**	**14 49 58.5**	**-1.0**		
	baz=299								
G17K	**Kiwalik Mounta**	**61.66**	**27**	P	**P**	**14 49 59.7**	**-0.9**		
	baz=300								
C21K	**Knifeblade Rid**	**61.69**	**22**	P	**P**	**14 50 00.2**	**-0.6**		
	baz=303								
E20K	**Nigu River**	**61.74**	**24**	P	**P**	**14 50 00.3**	**-0.9**		
	baz=302								
BMRD	**Maredsous**	**61.82**	**313**	*d*P	**P**	**14 50 02.5**	**+0.6**		
E19K	**Redstone River**	**61.83**	**25**	P	**P**	**14 50 01.0**	**-0.7**		
	baz=302								
K13K	**Kusilvak Mount**	**61.84**	**32**	P	**P**	**14 50 00.6**	**-1.3**		
	baz=298								
F19K	**Shaleruckik Mo**	**61.98**	**25**	IAmb	IAmb	14 50 03.8			
	comp=Z,6.1nm,0.8s								
F19K	**Shaleruckik Mo**	**61.98**	**25**	P	**P**	**14 50 02.0**	**-0.7**		
	baz=302								
G18K	**Tagagawik**	**62.17**	**26**	P	**P**	**14 50 03.1**	**-0.9**		
	baz=301								
H17K	**Granite Mounta**	**62.21**	**28**	P	**P**	**14 50 03.5**	**-0.8**		
	baz=301								
E21K	**Killik River**	**62.33**	**23**	P	**P**	**14 50 04.4**	**-0.7**		
	baz=304								
I17K	**Unalakleet**	**62.46**	**29**	P	**P**	**14 50 05.0**	**-0.9**		
	baz=301								
C23K	**Itkillik River**	**62.51**	**21**	P	**P**	**14 50 05.0**	**-1.2**		
	baz=306								
F20K	**Avaraart Lake**	**62.55**	**25**	IAmb	IAmb	14 50 07.8			
	comp=Z,3.1nm,0.8s								
F20K	**Avaraart Lake**	**62.55**	**25**	P	**P**	**14 50 05.5**	**-1.0**		
	baz=303								
G19K	**Purcell Mounta**	**62.58**	**26**	P	**P**	**14 50 05.8**	**-0.9**		
	baz=302								
H18K	**Honhosa River**	**62.66**	**27**	IAmb	IAmb	14 50 08.3			
	comp=Z,4.7nm,0.7s								
H18K	**Honhosa River**	**62.66**	**27**	P	**P**	**14 50 06.2**	**-1.2**		
	baz=302								
J16K	**Anvik River**	**62.80**	**29**	P	**P**	**14 50 06.6**	**-1.6**		
	baz=301								
K15K	**Wolf Creek Mou**	**62.94**	**31**	P	**P**	**14 50 07.7**	**-1.5**		
	baz=301								
L14K	**Kuka Creek**	**62.96**	**32**	IAmb	IAmb	14 50 10.8			
	comp=Z,5.7nm,0.8s								
L14K	**Kuka Creek**	**62.96**	**32**	P	**P**	**14 50 07.7**	**-1.6**		
	baz=300								
FITZ	**Fitzroy Crossi**	**63.01**	**147**	P	**P**	**14 50 09.3**	**-0.8**		
	comp=Z,4.0nm,0.8s,baz=328,slow=6.1,SNR=8.2								
	comp=Z,4.0nm,0.8s								
D23K	**Nanushuk River**	**63.01**	**22**	IAmb	IAmb	14 50 11.1			
	comp=Z,5.2nm,0.7s								
D23K	**Nanushuk River**	**63.01**	**22**	P	**P**	**14 50 08.7**	**-0.9**		
	baz=306								
C24K	**Franklin Bluff**	**63.12**	**20**	P	**P**	**14 50 10.0**	**-0.2**		
C24K				IAmb	IAmb	14 50 11.8			
	comp=Z,7.8nm,0.9s								
C24K	**Franklin Bluff**	**63.12**	**20**	P	**P**	**14 50 09.4**	**-0.9**		
	baz=308								
H19K	**Roundabout Mou**	**63.14**	**26**	P	**P**	**14 50 09.2**	**-1.2**		
	baz=303								
M13K	**Dall Lake**	**63.14**	**33**	P	**P**	**14 50 09.5**	**-1.0**		
	baz=300								
F21K	**Alatna River**	**63.18**	**24**	IAmb	IAmb	14 50 12.6			
	comp=Z,10.0nm,1.1s								
F21K	**Alatna River**	**63.18**	**24**	P	**P**	**14 50 09.7**	**-1.1**		
	baz=305								
L15K	**Ungalak Mounta**	**63.28**	**31**	P	**P**	**14 50 10.3**	**-1.2**		
	baz=301								
J17K	**VABM Dome**	**63.33**	**29**	P	**P**	**14 50 10.8**	**-0.9**		
	baz=302								
GCSA	**Galena City Sc**	**63.41**	**27**	P	**P**	**14 50 10.8**	**-1.5**		
	baz=303								
D24K	**Happy Valley**	**63.43**	**21**	IAmb	IAmb	14 50 13.8			
	comp=Z,4.1nm,0.8s								
D24K	**Happy Valley**	**63.43**	**21**	P	**P**	**14 50 11.0**	**-1.4**		
	baz=308								
TOLK	**Toolik Lake Re**	**63.53**	**22**	P	**P**	**14 50 11.7**	**-1.4**		
	baz=307								
M14K	**Bethel**	**63.56**	**32**	P	**P**	**14 50 12.6**	**-0.7**		
	baz=301								
G21K	**Allakaket**	**63.58**	**25**	P	**P**	**14 50 12.4**	**-0.9**		
	baz=305								
H20K	**Anotleneega Mo**	**63.70**	**26**	P	**P**	**14 50 13.3**	**-1.0**		
	baz=304								
EKA	**Eskdalemuir Ar**	**63.73**	**321**	P	**P**	**14 50 14.6**	**+0.1**		
	comp=Z,3.4nm,0.7s,baz=64,slow=7.0,SNR=6.4								
	comp=Z,3.4nm,0.7s								
IMAR	**Indian Mountai**	**63.80**	**25**	P	**P**	**14 50 14.8**	**0.0**		
E23K	**Chandalar**	**63.87**	**22**	P	**P**	**14 50 14.6**	**-0.8**		
	baz=308								
PSA00	**Pilbara Seismi**	**63.88**	**154**		**P**	**14 50 16.4**	**+0.6**		
G22K	**Bettles**	**63.98**	**24**	P	**P**	**14 50 14.9**	**-1.1**		
	baz=307								
K17K	**Iditarod**	**63.99**	**29**	IAmb	IAmb	14 50 17.9			
	comp=Z,6.8nm,0.8s								
K17K	**Iditarod**	**63.99**	**29**	P	**P**	**14 50 15.8**	**-0.4**		
	baz=303								
D25K	**Kavik River**	**64.00**	**20**	IAmb	IAmb	14 50 17.7			
	comp=Z,3.4nm,0.8s								
D25K	**Kavik River**	**64.00**	**20**	P	**P**	**14 50 15.1**	**-1.1**		
	baz=310								
C26K	**Camden Bay**	**64.01**	**19**	P	**P**	**14 50 15.9**	**-0.2**		
	baz=311								
N14K	**Kuskokwak Cree**	**64.11**	**33**	P	**P**	**14 50 15.9**	**-1.0**		
	baz=302								
M15K	**Kasigluk River**	**64.12**	**32**	P	**P**	**14 50 16.7**	**-0.4**		
	baz=302								
J18K	**Innoko River**	**64.18**	**28**	IAmb	IAmb	14 50 18.7			
	comp=Z,5.9nm,0.7s								
J18K	**Innoko River**	**64.18**	**28**	P	**P**	**14 50 17.0**	**-0.4**		
	baz=304								
E24K	**Your Creek**	**64.20**	**22**	IAmb	IAmb	14 50 19.2			
	comp=Z,6.4nm,0.8s								
E24K	**Your Creek**	**64.20**	**22**	P	**P**	**14 50 17.0**	**-0.6**		
	baz=309								
COLD	**Coldfoot**	**64.20**	**23**	P	**P**	**14 50 16.8**	**-0.7**		
	baz=308								
I20K	**Naaghedeneel**	**64.24**	**26**	P	**P**	**14 50 16.8**	**-0.9**		
	baz=305								
J19K	**Poorman**	**64.29**	**27**	IAmb	IAmb	14 50 20.0			
	comp=Z,8.4nm,1.1s								
J19K	**Poorman**	**64.29**	**27**	P	**P**	**14 50 16.6**	**-1.5**		
	baz=304								
H21K	**Melozitna River**	**64.31**	**25**	IAmb	IAmb	14 50 19.8			
	comp=Z,6.2nm,0.8s								
H21K	**Melozitna Rive**	**64.31**	**25**	P	**P**	**14 50 16.9**	**-1.3**		
	baz=306								
L17K	**Donlin**	**64.31**	**30**	P	**P**	**14 50 17.4**	**-0.8**		
	baz=303								
C27K	**Jago River**	**64.51**	**19**	P	**P**	**14 50 18.5**	**-1.0**		
	baz=312								
G23K	**Bananza Creek**	**64.58**	**23**	IAmb	IAmb	14 50 21.8			
	comp=Z,9.8nm,1.6s								
G23K	**Bananza Creek**	**64.58**	**23**	P	**P**	**14 50 19.1**	**-0.9**		
	baz=308								
H22K	**Ishtalitna Cre**	**64.64**	**25**	P	**P**	**14 50 19.3**	**-1.1**		
	baz=307								
O14K	**Tigyukauivet M**	**64.64**	**33**	P	**P**	**14 50 19.6**	**-0.8**		
	baz=302								
N15K	**Kwethluk River**	**64.65**	**32**	P	**P**	**14 50 19.5**	**

	baz=308,SNR=7.1							
NEA2	**Nenana**	66.21	25	P	P	14 50 30.2	-0.4	
	baz=309							
E28M	**Babbage River**	66.31	19	IAmb	IAmb	14 50 32.5		
	comp=Z,4.7nm,0.7s							
E28M	**Babbage River**	66.31	19	P	P	14 50 31.1	0.0	
	baz=316							
G26K	**Porcupine Rive**	66.31	21	IAmb	IAmb	14 50 33.4		
	comp=Z,11nm,1.4s							
G26K	**Porcupine Rive**	66.31	21	P	P	14 50 30.4	-0.7	
	baz=313							
POKR	**Poker Plat Res**	66.41	24	P	P	14 50 31.7	-0.2	
	baz=310							
COLA	**College**	66.43	24	P	P	14 50 31.4	-0.5	
	baz=310							
M20K	**Styx River**	66.45	29	IAmb	IAmb	14 50 34.2		
	comp=Z,7.0nm,0.7s							
M20K	**Styx River**	66.45	29	P	P	14 50 31.3	-1.0	
	baz=307							
TRF	**Thorofare Moun**	66.52	26	P	P	14 50 32.0	-0.7	
	baz=309							
N19K	**Bonanza Creek**	66.57	30	P	P	14 50 32.5	-0.5	
	baz=307							
A36M	**Sachs Harbour**	66.72	13	P	P	14 50 33.1	-0.5	
	baz=327,SNR=22							
P17K	**Kvichak River**	66.74	32	P	P	14 50 32.8	-1.2	
	baz=306							
PRP	**Porcupine Dome**	66.75	23	P	P	14 50 33.7	-0.5	
	baz=312							
MCK	**McKinley**	66.81	26	P	P	14 50 33.7	-0.7	
	baz=310							
IL31		66.81	24	IAmb	IAmb	14 50 34.8		
	comp=Z,3.9nm,0.7s							
ILAR	**Eielson Array**	66.81	24	P	P	14 50 34.0	-0.4	
	comp=Z,3.4nm,0.8s,baz=295,slow=5.3,SNR=47							
	comp=Z,3.4nm,0.8s							
O18K	**Koktuh Hills**	66.86	31	P	P	14 50 33.9	-0.9	
	baz=306							
E29M	**Blow River**	66.88	19	P	P	14 50 34.0	-0.7	
	baz=317							
F28M	**Old Crow**	66.93	20	IAmb	IAmb	14 50 36.7		
	comp=Z,7.6nm,0.9s							
F28M	**Old Crow**	66.93	20	P	P	14 50 34.4	-0.8	
	baz=316,SNR=11							
L22K	**Petersville**	66.93	27	IAmb	IAmb	14 50 36.0		
	comp=Z,5.0nm,0.6s							
SKT	**Skwentna**	66.99	28	P	P	14 50 34.4	-1.2	
	baz=308,SNR=8.4							
O19K	**Port Alsworth**	67.01	30	P	P	14 50 34.7	-0.9	
	baz=307							
G27K	**Doyon Strip**	67.01	21	P	P	14 50 34.6	-1.1	
	baz=314							
HDA	**Harding Lake**	67.03	25	P	P	14 50 35.1	-0.8	
	baz=311							
P18K	**Big Mountain,**	67.12	31	P	P	14 50 35.8	-0.7	
	baz=306							
SDPT	**Sand Point**	67.14	37	P	P	14 50 35.6	-1.0	
	baz=304							
STLK	**Strandline Lak**	67.18	29	IAmb	IAmb	14 50 37.9		
	comp=Z,7.4nm,0.8s							
CUT	**Chulitna**	67.19	27	P	P	14 50 35.8	-0.9	
	baz=309							
R16K	**Pilot Point**	67.20	34	P	P	14 50 35.8	-1.1	
	baz=305							
N20K	**Mount Spurr**	67.22	29	P	P	14 50 35.6	-1.5	
	baz=308							
SPCR	**Spurr Chakacha**	67.22	29	P	P	14 50 35.3	-1.9	
	baz=308							
J25K	**Salcha River,**	67.41	24	P	P	14 50 36.9	-1.4	
	baz=312							
H27K	**Steamboat Moun**	67.46	21	IAmb	IAmb	14 50 40.4		
	comp=Z,4.0nm,0.9s							
H27K	**Steamboat Moun**	67.46	21	P	P	14 50 37.4	-1.1	
	baz=315							
Q17K	**Contact Creek**	67.52	33	P	P	14 50 37.7	-1.4	
	baz=306							
WAT1	**Susitna Watana**	67.53	26	P	P	14 50 38.3	-0.7	
	baz=310							
CHGN	**Chignik**	67.56	35	P	P	14 50 37.6	-1.6	
	baz=305							
I26K	**Coal Creek Min**	67.62	23	IAmb	IAmb	14 50 40.7		
	comp=Z,4.2nm,0.6s							
I26K	**Coal Creek Min**	67.62	23	P	P	14 50 38.5	-1.0	
	baz=314							
Q18K	**Katmai Hardscr**	67.66	32	P	P	14 50 39.2	-0.8	
	baz=307							
DHY	**Denali Highway**	67.77	26	P	P	14 50 39.6	-1.1	
	baz=311							
P19K	**Oil Pt**	67.78	31	P	P	14 50 39.9	-0.7	
	baz=308							
K24K	**Donnelly Dome**	67.82	25	P	P	14 50 39.9	-0.9	
	baz=312							
I27K	**Kandik River**	67.87	22	P	P	14 50 40.5	-0.7	
	baz=315,SNR=10							
CAPN	**Captain Cook N**	67.89	29	P	P	14 50 40.3	-0.9	
	baz=309							
G29M	**Pine Creek**	67.94	20	IAmb	IAmb	14 50 43.5		
	comp=Z,7.8nm,0.9s							
G29M	**Pine Creek**	67.94	20	P	P	14 50 40.7	-0.8	
	baz=317							
WAT6	**Susitna Watana**	67.97	26	P	P	14 50 41.1	-0.9	
	baz=311							
F30M	**Barrier River**	67.99	19	P	P	14 50 41.0	-0.9	
	baz=319							
INK	**Inuvik**	68.01	17	IAmb	IAmb	14 50 42.9		
	comp=Z,4.8nm,0.8s							
INK	**Inuvik**	68.01	17	P	P	14 50 41.2	-0.7	
	baz=321,SNR=8.1							
PMR	**Palmer**	68.12	28	P	P	14 50 41.7	-0.9	
	baz=310							
RIDG	**Independent Ri**	68.17	24	P	P	14 50 42.0	-1.1	
	baz=313,SNR=10							
RC01	**Rabbit Creek A**	68.22	28	P	P	14 50 42.7	-0.7	
	baz=310							
SML	**Sawmill**	68.27	27	P	P	14 50 42.8	-1.0	
	baz=311,SNR=11							
SCRK	**Sand Creek**	68.28	24	IAmb	IAmb	14 50 44.5		
	comp=Z,5.8nm,0.8s							
SCRK	**Sand Creek**	68.28	24	P	P	14 50 42.8	-1.0	
	baz=314,SNR=9.4							
H29M	**Whitestone**	68.35	20	IAmb	IAmb	14 50 45.4		
	comp=Z,8.7nm,1.0s							
H29M	**Whitestone**	68.35	20	P	P	14 50 43.2	-0.9	
	baz=317							
G30M	**tAoh Zraii Nji**	68.36	19	IAmb	IAmb	14 50 45.8		
	comp=Z,7.8nm,1.0s							
G30M	**tAoh Zraii Nji**	68.36	19	P	P	14 50 43.6	-0.6	
	baz=319							
HOM	**Homer**	68.40	30	P	P	14 50 43.8	-0.6	
	baz=309							
I28M	**Miner Creek**	68.47	21	IAmb	IAmb	14 50 46.2		
	comp=Z,3.2nm,0.7s							
I28M	**Miner Creek**	68.47	21	P	P	14 50 43.9	-1.1	
	baz=316							
KNK	**Knik Glacier**	68.48	27	P	P	14 50 44.3	-0.7	
	baz=311,SNR=5.6							
PAX	**Paxson**	68.49	25	P	P	14 50 44.3	-0.8	
	baz=313							
M23K	**Glacier View**	68.50	27	P	P	14 50 44.4	-0.7	
	baz=311,SNR=12							
WB0	**Warramunga Arr**	68.59	140		P	14 50 44.8	-1.3	
WB0				IAmb	IAmb	14 50 46.4		
	comp=Z,5.9nm,0.9s							
SCM	**Sheep Creek Mo**	68.61	27	P	P	14 50 44.3	-1.6	
	baz=312,SNR=8.3							
O22K	**Cooper Landing**	68.62	29	P	P	14 50 45.1	-0.7	
	baz=310							
F31M	**Tsiigehtchic**	68.63	18	P	P	14 50 45.2	-0.6	
	baz=321							
EPYK	**Eagle Plains**	68.69	20	P	P	14 50 45.7	-0.6	
	baz=319							
WRAB	**Tennant Creek**	68.70	140	*ce*P	P	14 50 45.7	-1.1	
WRAB				pmax	pmax			
	comp=Z,8.0nm,1.3s							
BRSE	**Bradley Lake S**	68.70	30	P	P	14 50 44.7	-1.7	
	baz=310							
WRA	**Warramunga Arr**	68.70	140	P	P	14 50 46.4	-0.5	
	comp=Z,3.5nm,1.0s,baz=339,slow=6.1,SNR=19							
	comp=Z,3.5nm,1.0s							
M24K	**Tolsona, Glenn**	68.83	26	P	P	14 50 45.9	-1.3	
	baz=312							
G31M	**Satah River**	68.90	19	P	P	14 50 46.9	-0.6	
	baz=320,SNR=11							
SEW	**Seward**	68.97	29	P	P	14 50 46.8	-1.2	
	baz=310							
C36M	**Paulatuk**	69.16	14	P	P	14 50 47.6	-1.5	
	baz=328							
KDAK	**Kodiak Island**	69.20	32	P	P	14 50 48.4	-1.1	
	baz=309							
OHAK	**Old Harbor**	69.26	33	P	P	14 50 49.2	-0.6	
	baz=309							
GLI	**Glacier Island**	69.33	27	P	P	14 50 49.3	-1.0	
	baz=312							
KLU	**Klutina**	69.34	27	P	P	14 50 49.3	-1.1	
	baz=313							
L27K	**Beaver Creek,**	69.62	24	P	P	14 50 51.5	-0.6	
	baz=316							
BCAR	**Beaver Creek A**	69.63	24	P	P	14 50 51.6	-0.6	
I30M	**Mount Dempster**	69.65	20	P	P	14 50 51.2	-1.2	
	baz=319							
J29N	**Klondike Camp**	69.71	22	P	P	14 50 52.9	+0.3	
J29N				IAmb	IAmb	14 50 54.2		
	comp=Z,8.7nm,0.8s							
J29N	**Klondike Camp**	69.71	22	P	P	14 50 51.7	-1.0	
	baz=318							
M26K	**Nabesna, AK**	69.71	25	P	P	14 50 51.6	-1.1	
	baz=315							
N25K	**Chitina, Valde**	69.72	26	P	P	14 50 51.9	-0.9	
	baz=314							
H31M	**Peel River**	69.75	19	IAmb	IAmb	14 50 54.1		
	comp=Z,11nm,1.1s							
H31M	**Peel River**	69.75	19	P	P	14 50 51.9	-0.9	
	baz=321							
P23K	**Montague Islan**	69.81	28	P	P	14 50 51.9	-1.3	
	baz=312							
EYAK	**Cordova Ski Ar**	70.04	27	P	P	14 50 53.4	-1.2	
	baz=313							
M27K	**Edge Creek, AK**	70.11	24	P	P	14 50 53.8	-1.4	
	baz=316							
J30M	**Hart River**	70.15	21	P	P	14 50 53.4	-2.1	
	baz=319							
BMRM	**Bremner River**	70.16	26	IAmb	IAmb	14 50 56.9		
	comp=Z,7.2nm,0.8s							
BMRM	**Bremner River**	70.16	26	P	P	14 50 54.5	-1.0	
	baz=314							
K29M	**Barlow Dome**	70.36	22	IAmb	IAmb	14 50 58.1		
	comp=Z,8.5nm,0.8s							
K29M	**Barlow Dome**	70.36	22	P	P	14 50 55.4	-1.4	
	baz=319							
BVCY	**Beaver Creek**	70.39	24	P	P	14 50 55.9	-0.9	
	baz=316							
MCARA	**McCarthy VSAT**	70.42	26	P	P	14 50 55.9	-1.0	
	baz=315,SNR=6.6							
L29M	**L29M**	70.73	23	IAmb	IAmb	14 51 00.7		
	comp=Z,7.4nm,1.2s							
L29M	**L29M**	70.73	23	P	P	14 50 57.7	-1.2	
	baz=318							
CRQE	**Cirque**	70.84	26	P	P	14 50 58.3	-1.4	
	baz=315							
KAIM	**Kayak Island**	70.95	27	P	P	14 50 58.5	-1.7	
	baz=314							
YUK3	**Moose Creek**	70.99	24	P	P	14 50 58.7	-2.0	
	baz=317							
M29M	**Somme Creek**	71.13	23	IAmb	IAmb	14 51 03.4		
	comp=Z,5.0nm,0.9s							
M29M	**Somme Creek**	71.13	23	P	P	14 51 00.1	-1.3	
	baz=318							
BGLC	**Bering Glacier**	71.22	27	P	P	14 51 00.7	-1.1	
	baz=315							
CTG	**Chitna Glacier**	71.29	25	P	P	14 51 01.4	-1.1	
	baz=316							
M30M	**Minto, Yukon**	71.54	22	P	P	14 51 02.6	-1.2	
	baz=319							
YUK8	**Steele Glacier**	71.58	24	P	P	14 51 02.6	-1.7	
	baz=318							
ASAR	**Alice Springs**	71.62	142	P	P	14 51 04.7	-0.1	
	comp=Z,4.6nm,0.6s,baz=330,slow=6.1,SNR=133							
	comp=Z,4.6nm,0.6s							
MESA	**MESA**	71.65	26	P	P	14 51 03.4	-1.3	
	baz=316							
O28M	**Mount Upton**	71.82	25	P	P	14 51 03.5	-2.3	
	baz=317							
YUK4	**Talbot Arm**	71.89	24	P	P	14 51 03.6	-2.5	
	baz=318							
YUK6	**Outpost Mounta**	72.29	24	P	P	14 51 06.2	-2.3	
	baz=319							
PINM	**Pinnacle**	72.29	25	P	P	14 51 07.2	-1.2	
	baz=317							
N30M	**Aishikik Lake**	72.30	23	P	P	14 51 07.1	-1.3	
	baz=319							
M31M	**Drury Creek, Y**	72.54	22	P	P	14 51 08.4	-1.4	
	baz=321							
ESDC	**Sonseca Array**	72.59	307	P	P	14 51 11.9	+1.4	
	comp=Z,3.2nm,0.9s,baz=45,slow=6.0,SNR=15							
	comp=Z,3.2nm,0.9s							
ESDC	**Sonseca Array**	72.59	307	IAmb	IAmb	14 51 12.6		
	comp=Z,5.8nm,1.1s							
HYT	**Haines Junctio**	72.65	24	P	P	14 51 09.3	-1.3	
	baz=319							
N31M	**Braeburn, Yuko**	72.69	23	P	P	14 51 09.5	-1.2	
	baz=320							
O29M	**Mount Kennedy**	72.70	25	P	P	14 51 09.4	-1.5	
	baz=319							
O30N	**Mendenhall**	73.14	23	P	P	14 51 12.3	-1.1	
	baz=320							
P30M	**Million Dollar**	73.36	24	P	P	14 51 13.9	-0.9	
	baz=320							
WHY	**Whitehorse**	73.61	23	P	P	14 51 14.8	-1.4	
	baz=321							
SKAG	**Skagway**	74.40	24	P	P	14 51 19.5	-1.2	
	baz=321							
WRGLY	**Wrigley**	74.55	17	P	P	14 51 20.5	-1.0	
	baz=330							
P33M	**Teslin, Yukon**	74.59	22	P	P	14 51 21.0	-0.9	
	baz=323							
P32M	**Atlin**	74.81	23	P	P	14 51 22.6	-0.5	
	baz=322							
S31K	**Pelican**	75.27	25	P	P	14 51 24.9	-0.9	
	baz=321							
CTA	**Charters Tower**	75.46	130	P	P	14 51 27.1	-0.2	
	comp=Z,8.5nm,0.7s,baz=341,slow=9.6,SNR=8.6							
	comp=Z,8.5nm,0.7s							
R32K	**Eaglecrest**	75.59	24	P	P	14 51 26.6	-1.0	
	baz=322							
Q32M	**Nakina River**	75.76	23	P	P	14 51 27.8	-1.1	
	baz=324							
R33M	**Jennings River**	75.80	22	IAmb	IAmb	14 51 30.8		
	comp=Z,6.5nm,0.9s							
R33M	**Jennings River**	75.80	22	P	P	14 51 28.0	-1.0	
	baz=324							
S32K	**Killisnoo**	76.21	25	P	P	14 51 29.9	-1.2	
	baz=322							
SIT	**Sitka**	76.29	26	P	P	14 51 30.8	-0.8	
	baz=322							
DLBC	**Dease Lake**	76.87	22	P	P	14 51 34.4	-0.6	
	baz=325							
S34M	**Telegraph Cree**	76.96	23	P	P	14 51 33.9	-1.5	
	baz=324							
YKA	**Yellowknife Ar**	77.04	13	P	P	14 51 35.4	-0.4	
	comp=Z,1.3nm,0.7s,baz=333,slow=6.1,SNR=23							
	comp=Z,1.3nm,0.7s							
YKAW1	**Yellowknife Wh**	77.07	13	IAmb	IAmb	14 51 37.0		
	comp=Z,4.9nm,0.9s							
KOTAN	**Kotaneelee Air**	77.09	19	P	P	14 51 34.7	-1.4	
	baz=330							
U33K	**Whale Pass**	77.78	25	P	P	14 51 38.6	-1.3	
	baz=323							
WRAK	**Wrangell Islan**	77.79	25	P	P	14 51 39.0	-1.0	
	baz=324							
T35M	**Bob Quinn**	78.00	23	P	P	14 51 39.4	-1.9	
	baz=325							
CRAG	**Craig**	78.30	26	P	P	14 51 41.4	-1.5	
	baz=323							
INKA	**Innaminka**	78.42	139	IAmb	IAmb	14 51 45.2		
	comp=Z,8.9nm,1.4s							
V35K	**Ketchikan**	78.92	25	P	P	14 51 44.6	-1.7	
	baz=324							
TORD	**Torodi Ar. Bea**	84.31	282	P	P	14 52 15.3	-0.2	
	comp=Z,2.3nm,0.8s,baz=49,slow=4.4,SNR=10							
	comp=Z,2.3nm,0.8s							
TORD	**Torodi Ar. Bea**	84.31	282	IAmb	IAmb	14 52 46.8		
	comp=Z,4.0nm,0.8s							
SCHQ	**Seffersville**	86.11	349	P	P	14 52 22.6	-1.2	
	comp=Z,3.3nm,0.8s,baz=48,slow=5.9,SNR=4.9							
	comp=Z,3.3nm,0.8s							
JTMT	**Jette**	90.74	19	P	P	14 52 46.7	+0.5	
ULM	**Lac du Bonnet**	91.56	7	P	P	14 52 48.1	-1.7	
	comp=Z,1.5nm,0.6s,baz=288,slow=3.5,SNR=3.0							
	comp=Z,1.5nm,0.6s							
VNDA	**Vanda**	122.20	166	PKP	PKPdf	14 58 36.3	-0.4	
	comp=Z,0.8nm,0.7s,baz=315,slow=4.3,SNR=3.5							
QSPA	**South Pole Qui**	127.84	180	PKP	PKPdf	14 58 47.8	-0.1	
	comp=Z,2.9nm,1.1s,baz=315,slow=1.4,SNR=3.8							
LPAZ	**La Paz**	153.53	320	PKP	PKPdf	14 59 35.5	+0.2	
	comp=Z,1.0nm,0.9s,baz=56,slow=7.3,SNR=4.7							
LPAZ				PKPbc	sPKPdf	14 59 42.2	+1.1	
	comp=Z,1.1nm,0.6s,baz=288,slow=2.2,SNR=5.2							
CPUP	**Villa Florida**	153.66	288	PKPbc	PKPbc	14 59 41.3	-0.9	
	comp=Z,1.7nm,0.4s,baz=57,slow=4.1,SNR=6.9							

*SOME **24** 14:47:21.7, 39°.78N×75°.50E, h10km*
*NNC **24** 14:47:23.7±1.1, 39°.84N×75°.55E, h0km, mb3.9, mpv3.5,*
Error ellipse: s-maj=8.0km s-min=5.9km az=163.0
*KRNET **24** 14:47:31.4±0.1, 40°.10N×75°.61E, mb3.4*

ISC 24 14:47:31.2±1.9, 39°.98N±0°.09×75°.56E±0°.04, h10km, n44, o29:67/66, 20C-10D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNKS	**Jany-Kuch**	1.07	3	⇑*i*P	Pg	14 47 49.8	-2.0
JNKS				⇑*i*S	Sg	14 48 03.1	-2.6
SALK	**Salom-Alik**	1.60	305	⇓*i*P	Pg	14 48 00.9	-1.0
SALK				⇓*i*S	Sg	14 48 22.6	-0.1
ARLS	**Aral**	2.10	334	⇑*i*P	Pb	14 48 08.3	-1.1
ARLS				⇑*i*S	Sb	14 48 35.5	0.0
ULHL	**Ulahol**	2.32	13	P	Pb	14 48 13.3	+0.2
	SNR=17						
ULHL	**Ulahol**	2.32	13	*i*P	Pb	14 48 11.2	-2.0
ULHL				⇑*i*S	Sb	14 48 40.2	-1.8
ARSB	**Arslanbob**	2.37	305	⇑*i*P	Pb	14 48 13.1	-1.0
ARSB				⇑*i*S	Sb	14 48 43.5	0.0
UCH	**Uchtor**	2.38	341	P	Pb	14 48 12.6	-1.8
	SNR=9.2						
UCH	**Uchtor**	2.38	341	⇑*i*P	Pb	14 48 12.5	-1.8
UCH				⇑*i*S	Sb	14 48 42.6	-1.3
TARG	**Taragay, Kyrgy**	2.44	44	⇓*e*P	Pb	14 48 13.1	-2.3
TARG				⇓*i*S	Sb	14 48 43.5	-2.1
KDJ	**Kajisay**	2.47	29	⇑*i*P	Pb	14 48 13.2	-2.6
KDJ				⇑*i*S	Sn	14 48 43.9	+1.9
BOOM	**Boomskoye usch**	2.52	6	⇑*i*P	Pb	14 48 14.1	-2.5
BOOM				⇑*i*S	Sn	14 48 45.1	+1.9
KBK	**Karagaybulak**	2.71	350	P	Pb	14 48 18.2	-1.6
	SNR=7.2						
KBK	**Karagaybulak**	2.71	350	⇓*e*P	Pn	14 48 16.7	+1.8
KBK				⇓*i*S	Sn	14 48 49.9	+2.0
AAK	**Ala-Archa**	2.77	344	P	Pb	14 48 18.6	-2.3
	SNR=21						
AAK	**Ala-Archa**	2.77	344	⇑Pg	Pb	14 48 18.1	-2.7
	6.8nm,0.5s						
AAK				⇑Lg	Lg	14 48 57.8	
	16nm,0.6s						
AAK	**Ala-Archa**	2.77	344	⇑*i*P	Pb	14 48 17.8	-3.0
AAK				⇑*i*S	Sn	14 48 51.7	+2.4
TKM2	**Tokmak 2**	2.93	1	P	Pb	14 48 21.2	-2.5
	SNR=9.3						
TKM2	**Tokmak 2**	2.93	1	⇓*i*P	Pn	14 48 19.8	+1.7
TKM2				⇓*i*S	Sn	14 48 55.1	+1.6
CHMS	**Chumysh**	3.07	349	P	Pb	14 48 22.5	-3.4
	SNR=5.3						
KST	**Kastek**	3.07	6	Pg	Pb	14 48 22.3	-3.6
	20nm,0.8s						
KST				Lg	Lg	14 49 06.1	
	85nm,0.9s						
KST	**Kastek**	3.07	6	*e*P	Pb	14 48 22.3	-3.6
	20nm,0.8s						
KST				*e*S	Sb	14 49 06.2	+2.6
	85nm,0.9s						
IZV	**Izvestkoviy**	3.15	14	Pg	Pb	14 48 24.3	-3.1
	11nm,0.9s						
IZV				Lg	Lg	14 49 09.1	
	35nm,0.8s						
IZV	**Izvestkoviy**	3.15	14	*e*P	Pb	14 48 24.3	-3.1
	11nm,0.9s						
IZV				*e*S	Sg	14 49 09.1	-3.2
	35nm,0.8s						
TNSS	**Tian-Shan**	3.22	18	Pg	Pn	14 48 24.7	+2.5
	8.7nm,0.5s						
TNSS				Lg	Lg	14 49 10.1	
	18nm,1.0s						
TNSS	**Tian-Shan**	3.22	18	*e*P	Pn	14 48 24.7	+2.5
	8.7nm,0.5s						
TNSS				*e*S	Sb	14 49 10.1	+1.9
	18nm,1.0s						
DGS	**Degeres**	3.26	3	Pg	Pb	14 48 25.5	-3.6
	16nm,0.6s						
DGS				Lg	Lg	14 49 11.3	
	19nm,0.8s						
DGS	**Degeres**	3.26	3	*e*P	Pb	14 48 25.5	-3.6
	16nm,0.6s						
DGS				*e*S	Sb	14 49 11.3	+2.4
	19nm,0.8s						
MRKS	**Merke**	3.27	328	Pg	Pn	14 48 24.9	+2.3
	9.7nm,0.6s						
MRKS				Lg	Lg	14 49 10.1	
	57nm,0.6s						
MRKS	**Merke**	3.27	328	*e*P	Pn	14 48 24.9	+2.3
	9.7nm,0.6s						
MRKS				*e*S	Sb	14 49 10.2	+0.9
	57nm,0.6s						
MDOK	**Medeo**	3.37	19	Pg	Pb	14 48 27.4	-3.6
	8.5nm,0.7s						
MDOK				Lg	Lg	14 49 14.9	
	79nm,0.9s						
KNDC	**Almaty**	3.40	18	⇑Pg	Pn	14 48 27.2	+2.9
	52nm,0.8s						
KNDC				⇓Lg	Lg	14 49 16.4	
	102nm,0.7s						
KOTS	**Kotyrbulak**	3.45	19	Pg	Pb	14 48 29.1	-3.3
	9.3nm,0.7s						
KOTS				Lg	Lg	14 49 17.7	
	122nm,0.8s						
KOTS	**Kotyrbulak**	3.45	19	*e*P	Pb	14 48 29.1	-3.3
	9.3nm,0.7s						
KOTS				*e*S	Sb	14 49 17.8	+3.3
	122nm,0.8s						
KRBS	**Karabastau**	3.71	1	Pg	Pb	14 48 34.1	-2.7
	2.6nm,0.7s						
KRBS				Lg	Lg	14 49 26.0	
	19nm,0.5s						
KRBS	**Karabastau**	3.71	1	*e*P	Pb	14 48 34.1	-2.7
	2.6nm,0.7s						
KRBS				*e*S	Sb	14 49 25.9	+4.1
	19nm,0.5s						
SATY	**Saty**	3.74	34	Pg	Pb	14 48 35.2	-2.3
	10nm,0.8s						
SATY				Lg	Lg	14 49 27.8	
	21nm,0.6s						
KTBS	**Karatobe**	3.82	12	Pg	Pb	14 48 35.3	-3.4
	17nm,0.8s						
KTBS				Lg	Lg	14 49 28.3	
	0.8nm,0.4s						
KTBS	**Karatobe**	3.82	12	*e*P	Pb	14 48 35.3	-3.4
	17nm,0.8s						
KTBS				*e*S	Sb	14 49 28.3	+3.3
	0.8nm,0.4s						
KPKS	**Kokpek**	4.19	33	Pg	Pb	14 48 42.1	-3.0
	0.4nm,0.1s						
KPKS				Lg	Lg	14 49 39.7	
	25nm,0.7s						
KPKS	**Kokpek**	4.19	33	*e*P	Pb	14 48 42.1	-3.0
	0.4nm,0.1s						
KPKS				*e*S	Sb	14 49 39.7

s-min=15.6km az=63.0
*DJA **24** 15:00:38.0±0.6,8°N×4°×9°E±°, h134km±11km, M4.8/14, mB5.3/11, mb4.6/12, MLv5.1/14, Mw(mB)4.8/11, MwMwp7.4/1, Mwp7.1/1*
ISC 24 15:00:30.6±0.5, 7.84N±0.05×92.20E±0.05, h10km, n100, σ1.92/89, mb4.5/25, MS3.5/6, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMBY	**CAMPBELL BAY**	**1.90**	**116**	*eP*		**Pn**		**15 01 07.0**	**+3.9**
CMBY				*eS*		**Sn**		**15 01 27.8**	**+0.7**
CMBY				IAML				15 01 30.6	
	comp=E,5μm,0.2s								
CMBY				IAML				15 01 31.0	
	comp=N,8μm,0.4s								
PBA	**Port Blair**	**3.83**	**8**			**Pn**		**15 01 29.2**	**-0.4**
PBA	**Port Blair**	**3.83**	**8**	*eP*		**Pn**		**15 01 30.7**	**+1.0**
PBA				*eS*		**Sn**		**15 02 11.1**	**-3.7**
PBA				IAML				15 02 15.3	
	comp=E,1μm,0.2s								
PBA				IAML				15 02 15.8	
	comp=N,1μm,0.4s								
BSI	**Banda Aceh**	**3.85**	**127**	P		**Pn**		**15 01 32.6**	**+2.5**
BSI				S		**Sn**		**15 02 14.3**	**-1.2**
LHMI	**Lhok Sumawe**	**5.38**	**119**	P		**Pn**		**15 01 54.2**	**+3.2**
	comp=N,2μmcomp=N,73nm,0.9s								
MLSI	**Meulaboh, Aceh**	**5.48**	**130**	P		**Pn**		**15 01 54.1**	**+1.7**
	comp=N,2.0nmcomp=N,88nm,0.6s								
PKDT	**Phuket**	**6.08**	**89**	P		**Pn**		**15 02 02.2**	**+1.6**
	comp=N,0.2nmcomp=N,0.2nmcomp=N,778nmcomp=N,31nm,0.7s								
RNTT	**Ranong**	**6.39**	**76**	P		**Pn**		**15 02 06.9**	**+2.0**
	comp=N,0.1nmcomp=N,0.2nmcomp=N,423nmcomp=N,25nm,0.5s								
KCSI	**Kotacane, Aceh**	**7.01**	**127**	P		**Pn**		**15 02 16.0**	**+2.6**
	comp=N,15nm,0.6s								
KCSI				S		**Sn**		**15 03 27.8**	**-5.4**
	comp=N,15nm,0.6s								
PSI	**Prapat**	**8.36**	**126**	P		Pn		15 02 29.7	-2.3
GSI	**Gunungsitoli**	**8.41**	**140**	P		**Pn**		**15 02 35.5**	**+2.8**
GSI	**Gunungsitoli**	**8.41**	**140**	Pn		**Pn**		**15 02 33.5**	**+0.7**
GSI	**Gunungsitoli**	**8.41**	**140**	P		**Pn**		**15 02 35.3**	**+2.6**
	comp=N,0.2nmcomp=N,26nm,0.5s								
RPSI	**Rantau Prapat**	**8.42**	**127**	Pn		Pn		15 02 30.2	-2.6
KULM	**Kulim**	**8.77**	**106**	P		**Pn**		**15 02 40.4**	**+2.8**
KULM	**Kulim**	**8.77**	**106**	P		**Pn**		**15 02 37.7**	**+0.1**
PBSI	**Pulau Batu**	**9.91**	**142**	P		**Pn**		**15 02 54.4**	**+1.1**
	comp=N,50nm,1.0s								
PALK	**Pallekele**	**11.42**	**268**	P		Pn		15 03 20.4	+6.5
	comp=N,3.3nm,0.3s,baz=86,slow=14,SNR=34								
PALK				S		**Sn**		**15 05 17.4**	**-4.3**
	comp=N,19nm,0.4s,baz=164,slow=16,SNR=9.0								
PALK				LR		LR		15 06 50.9	
	comp=N,122nm,21.7s,baz=48,slow=32								
	comp=N,7.6nm,0.3s								
PALK	**Pallekele**	**11.42**	**268**			Pn		15 03 20.6	+6.6
PALK						**Sn**		**15 05 19.1**	**-2.6**
BKNI	**Bangkinang**	**11.55**	**130**	P		**Pn**		**15 03 18.2**	**+2.5**
BKNI	**Bangkinang**	**11.55**	**130**	P		Pn		15 03 27.9	+12
CM31	**Chiang Mai Arr**	**12.42**	**31**			**Pn**		**15 03 29.0**	**+1.3**
CMAR	**Chiang Mai Arr**	**12.42**	**31**	P		**Pn**		**15 03 31.8**	**+4.1**
	comp=N,4.1nm,0.3s,baz=231,slow=14,SNR=300								
CMAR				LR		LR		15 08 32.5	
	comp=N,60nm,20.9s,baz=35,slow=39								
CMAR	**Chiang Mai Arr**	**12.42**	**31**			**Pn**		**15 03 29.0**	**+1.3**
CHTO	**Chiang Mai**	**12.72**	**30**	P		**Pn**		**15 03 35.0**	**+3.2**
CHTO	**Chiang Mai**	**12.72**	**30**			**Pn**		**15 03 29.7**	**-2.1**
CHTO	**Chiang Mai**	**12.72**	**30**	P		**Pn**		**15 03 32.4**	**+0.6**
	comp=N,0.1nmcomp=N,312nmcomp=N,37nm,1.0s								
MDRS	**Chennai**	**12.85**	**295**	*eP*		**Pn**		**15 03 34.7**	**+1.2**
MDRS				*eS*		Sn		15 05 45.5	-11
VIS	**Vishakhapatnam**	**13.08**	**319**	*eP*		**Pn**		**15 03 37.5**	**+0.8**
VIS				IAmb		IAmb		15 03 42.5	
	comp=Z,14nm,0.5s								
VIS				*eS*		Sn		15 05 50.5	-12
CMAI	**Chiengmai2**	**13.73**	**28**	P		**Pn**		**15 03 46.5**	**+0.9**
	comp=Z,0.3nmcomp=Z,1μmcomp=Z,14nm,0.9s								
SAIH	**SAIHA**	**14.58**	**3**	*eP*		**Pn**		**15 03 56.7**	**-0.6**
SAIH				*eS*		Sn		15 06 29.1	-10
BRDH	**Bariadhala**	**14.76**	**358**	LR		LR		15 10 00.4	
	comp=Z,73nm,21.0s,baz=119,slow=38								
UBPT	**Khong Chiam**	**14.95**	**59**	P		**P**		**15 04 07.5**	**-0.3**
HYB	**Hyderabad**	**16.36**	**307**	*eP*		**P**		**15 04 26.4**	**+2.9**
HYB				*eS*		**S**		**15 07 40.0**	**+5.1**
IMP	**Imphal**	**16.98**	**5**	*eP*		**Pn**		**15 04 27.0**	**-1.4**
IMP				IAmb		IAmb		15 04 31.4	
	comp=Z,15nm,0.5s								
IMP				*eS*		Sn		15 07 23.6	-14
SHL	**Shillong**	**17.63**	**359**			**Pn**		**15 04 33.5**	**-3.2**
SHL				IAmb		IAmb		15 04 45.2	
	comp=Z,26nm,0.5s								
SHL	**Shillong**	**17.63**	**359**	*eP*		**Pn**		**15 04 38.4**	**+1.7**
SHL				IAmb		IAmb		15 04 41.5	
	comp=Z,14nm,0.4s								
SHL				*eS*		Sn		15 07 38.8	-15
KOHI	**KOHIMA**	**17.87**	**6**	*eP*		**Pn**		**15 04 40.9**	**+1.2**
KOHI				IAmb		IAmb		15 04 44.5	
	comp=Z,15nm,0.4s								
KOHI				*eS*		Sn		15 07 43.2	-16
TNCH	**TengChong**	**18.13**	**19**	P		**Pn**		**15 04 43.1**	**+0.3**
TNCH				pmax		pmax			
	comp=Z,15nm,0.8s								
GUWA	**GUWAHATI**	**18.26**	**359**	*eP*		**Pn**		**15 04 45.0**	**+0.7**
GUWA				IAmb		IAmb		15 04 52.4	
	comp=Z,26nm,0.8s								
GUWA				*eS*		Sn		15 07 52.7	-16
MOKO	**MOKOCHONG**	**18.51**	**7**	*eP*		**P**		**15 04 48.3**	**+0.9**
MOKO				IAmb		IAmb		15 04 55.4	
	comp=Z,17nm,0.4s								
MOKO				*eS*		Sn		15 08 00.3	-14
TEZP	**TEZPUR**	**18.68**	**2**	*eP*		**Pn**		**15 04 50.7**	**+1.3**
TEZP				IAmb		IAmb		15 04 54.6	
	comp=Z,18nm,0.4s								
ITAN	**ITANAGAR**	**19.25**	**4**	IAmb		IAmb		15 04 57.1	
	comp=Z,12nm,0.6s								
ITAN				*eP*		**Pn**		**15 04 59.6**	**+3.2**
ITAN				*eS*		Sn		15 08 15.8	-16
ZIRO	**ZIRO**	**19.64**	**4**	*eP*		**Pn**		**15 05 05.3**	**+4.2**
ZIRO				IAmb		IAmb		15 05 08.8	
	comp=Z,15nm,0.5s								
ZIRO				*eS*		S		15 08 25.4	-16
KMI2	**Kunming**	**19.94**	**29**	P		**P**		**15 05 04.8**	**+1.7**
KMI2				pmax		pmax			
	comp=Z,33nm,0.9s								
SBUM	**Sibu**	**20.64**	**104**	P		**P**		**15 05 11.4**	**+0.8**
SBUM	**Sibu**	**20.64**	**104**			**P**		**15 05 09.7**	**-0.9**
EVN	**Everest**	**20.65**	**346**	Pn		**P**		**15 05 12.8**	**+1.6**
PZH	**PanZhiHua**	**20.66**	**25**	P		**P**		**15 05 11.8**	**+1.0**
BHPL	**Bhopal**	**20.88**	**319**	*eP*		Pn		15 05 21.4	+5.8
LEM	**Lembang**	**21.18**	**133**	LR		LR		15 14 43.0	
	comp=Z,95nm,18.4s,baz=333,slow=40								
LSA	**Lhasa**	**21.77**	**358**	P		**P**		**15 05 22.0**	**-1.1**
LSA				IAmb		IAmb		15 05 27.0	
	comp=Z,14nm,0.6s								
LSA	**Lhasa**	**21.77**	**358**	P		**P**		**15 05 22.5**	**-0.6**
LSA				pmax		pmax			
	comp=Z,6.0nm,0.8s								
H08S3	**Diego Garcia H**	**24.95**	**232**	T		T		15 32 19.7	
	baz=52,slow=76,SNR=1036								
H08S2	**Diego Garcia H**	**24.96**	**232**	T		T		15 32 27.8	
	baz=52,slow=76,SNR=817								
H08S1	**Diego Carcia H**	**24.97**	**232**	T		T		15 32 28.9	
	baz=52,slow=76,SNR=711								
CD2	**Chengdu**	**25.37**	**24**	P		**P**		**15 05 57.1**	**-1.0**
CD2				pmax		pmax			
	comp=Z,70nm,0.6s								
BKB	**Balikpapan**	**26.23**	**109**	P		**P**		**15 06 04.7**	**-1.4**
ENH	**Enshi**	**27.57**	**34**	P		**P**		**15 06 15.5**	**-2.6**
ENH				IAmb		IAmb		15 06 17.3	
	comp=Z,15nm,1.1s								
GTA2	**Gaotai**	**32.23**	**11**	*eP*		**P**		**15 06 59.3**	**-0.1**
GTA2				pmax		pmax			
	comp=Z,20nm,0.7s								
DAV	**Davao City (W)**	**33.10**	**89**	P		**P**		**15 07 06.5**	**-0.6**
KSH2	**Kashi**	**34.57**	**337**	P		**P**		**15 07 20.9**	**+1.1**
KSH2				pmax		pmax			
	comp=Z,4.0nm,0.9s								
WUS	**Wushi**	**35.17**	**343**	P		**P**		**15 07 26.4**	**+1.4**
WUS				IAmb		IAmb		15 07 27.2	
	comp=Z,13nm,1.1s								
WMQ	**Urumqi**	**36.06**	**354**	*eP*		**P**		**15 07 32.3**	**-0.1**
WMQ				pmax		pmax			
	comp=Z,12nm,1.1s								
WMQ				LR		LR			
	comp=Z,120nm,15.3s								
TARG	**Taragay, Kyrgy**	**36.08**	**342**	P		**P**		**15 07 34.5**	**+1.4**
DRK	**Karamyk**	**36.44**	**333**	P		**P**		**15 07 37.9**	**+1.9**
GAR	**Garm**	**36.74**	**331**	P		**P**		**15 07 39.2**	**+0.7**
GAR				IAmb		IAmb		15 07 40.3	
	comp=Z,5.0nm,0.9s								
SHAA	**Shahritus**	**36.77**	**327**	P		**P**		**15 07 38.8**	**+0.2**
SHAA				IAmb		IAmb		15 08 12.0	
	comp=Z,6.4nm,0.9s								
CHGR	**Chuyangaron**	**37.05**	**329**	P		**P**		**15 07 41.8**	**+0.8**
CHGR				IAmb		IAmb		15 07 42.6	
	comp=Z,8.3nm,1.0s								
HHC	**Hu-ho-hao-te**	**37.12**	**25**	*eP*		**P**		**15 07 41.4**	**-0.2**
HHC				pmax		pmax			
	comp=Z,15nm,0.6s								
HHC				pmax		pmax			
	comp=Z,110nm,6.4s								
ARSB	**Arslanbob**	**37.46**	**336**	IAmb		IAmb		15 07 47.6	
	comp=Z,16nm,1.0s								
AAK	**Ala-Archa**	**38.01**	**339**	P		**P**		**15 07 50.8**	**+1.6**
AAK				IAmb		IAmb		15 07 52.9	
	comp=Z,12nm,1.4s								
MKAR	**Makanchi Array**	**39.73**	**349**	P		**P**		**15 08 03.2**	**-0.2**
	comp=Z,3.4nm,0.5s,baz=168,slow=8.5,SNR=56								
	comp=Z,3.4nm,0.5s								
MKAR	**Makanchi Array**	**39.73**	**349**	P		**P**		**15 08 02.5**	**-0.9**
MAKZ	**Makanchi**	**39.80**	**349**	P		**P**		**15 08 03.8**	**-0.2**
MAKZ				IAmb		IAmb		15 08 04.8	
	comp=Z,4.3nm,0.7s								
KK31	**Karatay Array**	**39.96**	**335**	P		**P**		**15 08 05.8**	**+0.5**
KK31				IAmb		IAmb		15 08 07.7	
	comp=Z,5.4nm,0.8s								
KKAR	**Karatay Array**	**39.96**	**335**	P		**P**		**15 08 06.1**	**+0.8**
SONM	**Songino Array**	**41.64**	**14**	P		**P**		**15 08 18.5**	**-0.8**
	comp=Z,4.2nm,0.7s,baz=197,slow=8.0,SNR=30								
	comp=Z,4.2nm,0.7s								
SONM	**Songino Array**	**41.64**	**14**	P		**P**		**15 08 18.7**	**-0.6**
ULN	**Ulaanbaatar**	**41.84**	**15**	P		**P**		**15 08 19.6**	**-1.3**
KSRS	**Korea Array**	**43.76**	**42**	P		**P**		**15 08 35.1**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=235,slow=8.5,SNR=1.8								
KSRS				LR		LR		15 27 36.3	
	comp=Z,34nm,19.2s,baz=350,slow=37								
	comp=Z,0.3nm,0.4s								
KURBB	**Kurchatov Array**	**44.14**	**348**	P		**P**		**15 08 39.5**	**+0.2**
	comp=Z,6.5nm,0.7s,baz=174,slow=7.3,SNR=93								
	comp=Z,6.5nm,0.7s								
KURK	**Kurchatov**	**44.20**	**348**	P		**P**		**15 08 39.8**	**0.0**
KURK				IAmb		IAmb		15 08 41.1	
	comp=Z,8.1nm,1.1s								
ZALV	**Zalesovo Beam**	**46.36**	**354**	P		**P**		**15 08 56.5**	**-0.4**
	comp=Z,2.3nm,0.4s,baz=180,slow=7.4,SNR=13								
	comp=Z,2.3nm,0.4s								
ZALV	**Zalesovo Beam**	**46.36**	**354**	P		**P**		**15 08 56.3**	**-0.6**
BVAR	**Borovoye Array**	**48.42**	**343**	P		**P**		**15 09 13.0**	**0.0**
	comp=Z,3.7nm,0.7s,baz=139,slow=8.2,SNR=12								
	comp=Z,3.7nm,0.7s								
AB31	**Akbulak array**	**49.36**	**333**	P		**P**		**15 09 21.5**	**+1.3**
AB31				IAmb		IAmb		15 09 22.0	
	comp=Z,2.1nm,0.5s								
ABKAR	**Akbulak array**	**49.36**	**333**	P		**P**		**15 09 21.1**	**+0.9**
WRA	**Warramunga Arr**	**49.82**	**124**	P		**P**		**15 09 23.2**	**-1.0**
	comp=Z,0.8nm,0.7s,baz=306,slow=8.0,SNR=28								
WRA				PcP		**PcP**		**15 10 44.6**	**-0.4**
	comp=Z,0.6nm,0.9s,baz=293,slow=7.8,SNR=1.5								
	comp=Z,0.8nm,0.7s								
ASAR	**Alice Springs**	**51.38**	**129**	P		**P**		**15 09 35.5**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=303,slow=7.9,SNR=23								
ASAR				PcP		**PcP**		**15 10 50.2**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=306,slow=3.7,SNR=8.5								
ASAR				LR		LR		15 31 37.8	
	comp=Z,26nm,21.4s,baz=272,slow=36								
	comp=Z,0.7nm,0.6s								
ARTI	**Arti**	**55.22**	**338**	P		**P**		**15 10 03.9**	**+0.2**
H04N2	**CROZET ISLANDS**	**64.73**	**210**	T		T		16 21 52.2	
	baz=45,slow=75,SNR=38								
H04N1	**CROZET ISLANDS**	**64.73**	**210**	T		T		16 21 52.9	
	baz=45,slow=75								
H04N3	**CROZET ISLANDS**	**64.75**	**210**	T		T		16 21 51.6	
	baz=45,slow=75								
H04S1	**CROZET ISLANDS**	**65.15**	**209**	T		T		16 22 31.5	
	baz=50,slow=79,SNR=3.3								
H04S3	**CROZET ISLANDS**	**65.16**	**209**	T		T		16 22 35.2	
	baz=50,slow=79,SNR=6.8								
H04S2	**CROZET ISLANDS**	**65.17**	**209**	T		T		16 22 33.0	
	baz=50,slow=79,SNR=4.5								
TIXI	**Tiksi**	**67.65**	**12**	P		**P**		**15 11 25.7**	**-1.7**
MA2	**Magadan**	**67.69**	**28**	LR		LR		15 43 45.9	
	comp=Z,46nm,18.3s,baz=307,slow=38								
LBTB	**Lobatay**	**72.55**	**241**	LR		LR		15 40 09.4	
	comp=Z,45nm,19.2s,baz=24,slow=33								

*JMA **24** 15:03:06.8±0.2, 43.4N±0.9×14.7E±°, h51km, MV3.5/34, E OFF HOKKAIDO*
*SKHL **24** 15:03:07.9±0.0, 43.50N×147.50E, h55km±6km, mb4.3/4*
ISC 24 15:03:04.1±3.2, 43.51N±0.09×147.47E±0.09, h7km±16km, n20, σ0.99/29, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.58**	**308**	*eP*		Pn		15 03 31.6	+13
SHO				AMB		AMB		15 03 32.6	
	80nm,0.2s								
SHO				*eS*		Sn		15 03 41.1	+12
SHO				A		A		15 03 41.9	
	990nm,0.3s								
SHO				A		A		15 03 41.9	
	850nm,0.3s								
NEM2	**Nemuro 2**	**1.26**	**264**	*i* P		**Pn**		**15 03 28.6**	**+0.5**
NEM2				*eS*		**Sg**		**15 03 44.4**	**-0.3**
NMR	**Nemuro--Hokkai**	**1.27**	**264**	*i* P		**Pn**		**15 03 28.6**	**+0.3**
NMR				*i* S		**Sg**		**15 03 44.1**	**-1.0**
YUK	**Yuzh-Kuril'sk**	**1.27**	**295**	*i* P		**Pn**		**15 03 29.0**	**+0.7**
YUK				AMB		AMB		15 03 29.2	
	60nm,0.2s								
YUK				*eS*		**Sg**		**15 03 44.8**	**-0.3**
YUK				A		A		15 03 47.8	
	220nm,0.3s								
YUK				A		A		15 03 47.8	
	410nm,0.3s								
GLVR	**Golovnino**	**1.43**	**280**	*eP*		**Pn**		**15 03 31.4**	**+0.9**
GLVR				AMB		AMB		15 03 32.6	
	90nm,0.3s								
GLVR				*i* S		**Sn**		**15 03 49.3**	**-0.2**
GLVR				A		A		15 03 53.6	
	250nm,0.3s								
GLVR				A		A		15 03 53.6	
	160nm,0.3s								
JKHN	**Kushirohamanak**	**1.74**	**257**	*i* P		**Pn**		**15 03 35.4**	**+0.7**
KUR	**Kuril'sk**	**1.75**	**9**	*eP*		**Pn**		**15 03 35.6**	**+0.8**
KUR				AMB		AMB		15 03 37.5	
	20nm,0.3s								
KUR				*eS*		**Sn**		**15 03 55.7**	**-1.6**
KUR				A		A		15 03 57.9	
	80nm,0.3s								
KUR				A		A		15 03 57.9	
	100nm,0.3s								
JRA	**Rausu**	**1.75**	**285**	*i* P		**Pn**		**15 03 35.9**	**+1.0**
JRA				S		**Sn**		**15 03 57.0**	**-0.5**
JNSB	**Nemuroshibetsu**	**1.81**	**279**	P		**Pn**		**15 03 36.5**	**+0.9**
JNSB				*eS*		**Sn**		**15 03 58.5**	**-0.2**
AKK	**Akkeshi**	**1.98**	**256**	*eP*		**Pn**		**15 03 38.4**	**+0.4**
JNK	**Nakash**	**2.00**	**273**	P		**Pn**		**15 03 38.7**	**+0.4**
JAK	**Akkeshi**	**2.09**	**257**	*i* P		**Pn**		**15 03 39.7**	**+0.2**
JAK				*eS*		**Sn**		**15 04 04.5**	**-1.3**
JTKR	**Abashiri--Toko**	**2.62**	**281**	*eP*		**Pn**		**15 03 48.3**	**+1.4**
JAR	**Ashorobuto**	**2.70**	**267**	P		**Pn**		**15 03 49.0**	**+1.0**
JAR				S		**Sn**		**15 04 20.2**	**-0.7**
JOB	**Onbets**	**2.72**	**258**	P		**Pn**		**15 03 48.8**	**+0.5**
JMP	**Maruseppu**	**3.02**	**281**	*eP*		**Pn**		**15 03 54.0**	**+1.7**
JCH	**Churui**	**3.14**	**255**	P		**Pn**		**15 03 54.2**	**+0.2**
JCH				*eS*		**Sn**		**15 04 31.0**	**-0.6**
JEM	**Erimo**	**3.51**	**246**	*eP*		**Pn**		**15 04 00.9**	**+1.9**
JFR	**Furan**	**3.57**	**266**	*eP*		**Pn**		**15 04 01.7**	**+1.7**
JNBK	**Urakawa-nobuka**	**3.67**	**252**	*eP*		**Pn**		**15 04 01.7**	**+0.3**

SJA 24 15:06:41.1±0.8, 31.82S×67.90W, h9km, ML3.6, MW3.3, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CFA	**Coronel Fontan**	**0.36**	**306**	*eP*		Pg		15 06 48.9	+0.7
CFA				*eS*		Sg		15 06 54.0	+1.0
CFA				IAML				15 06 54.9	
	comp=Z,4μm,0.1s								
SJA	**San Juan**	**0.64**	**297**	*eP*		Pb		15 06 54.4	0.0
SJA				*eS*		Sb		15 07 03.8	+0.4
SJA				IAML				15 07 05.2	
	comp=Z,1μm,0.2s								
RTLL	**Cerro Villicun**	**0.69**	**314**	*eP*		Pg		15 06 54.9	+0.4
RTLL				*eS*		Sb		15 07 04.9	-0.1
RTLL				IAML				15 07 06.3	
	comp=Z,1μm,0.4s								
ZON	**Zonda**	**0.72**	**292**	*eP*		Pg		15 06 55.1	0.0
ZON				*eS*		Sb		15 07 06.2	+0.3
ACAN	**Cantantal**	**0.75**	**127**	*eP*		Pg		15 06 55.4	-0.3
ACAN				IAML				15 07 13.1	
	comp=Z,4μm,0.2s								
ASAL	**Salagasta**	**1.11**	**226**	*eP*		Pb		15 07 02.6	+0.1
RTLS	**Leoncito**	**1.19**	**270**	*eP*		Pb		15 07 03.9	-0.2
RTLS				IAML				15 07 21.8	
	comp=Z,2μm,0.3s								
AVFE	**Valle Fertil**	**1.21**	**18**	*eP*		Pg		15 07 04.4	-0.1
AVFE				*eS*		Sn		15 07 21.5	+0.6
AVFE				IAML				15 07 22.4	
	comp=Z,528nm,0.2s								
ACHE	**Chepes**	**1.24**	**58**	*eP*		Pg		15 07 05.2	+0.3
ARCO	**CERRO ARCO**	**1.35**	**220**	*eP*		Pg		15 07 07.7	+0.7
ARCO				*eS*		Sg		15 07 30.1	+5.6
ARCO				*eS*		Sn		15 07 30.2	+5.9
ARCO				IAML				15 07 32.2	
	comp=Z,894nm,0.3s								
AAGR	**Agrelo**	**1.49**	**212**	*eP*		Pg		15 07 10.2	+0.4
AAGR				*eS*		Sg		15 07 33.4	+4.3
AAGR				IAML				15 07 34.2	
	comp=Z,428nm,0.6s								
ACCO	**Cerro Coronel**	**1.58**	**320**	*eP*		Pg		15 07 11.2	-0.4
ACCO				*eS*		Sg		15 07 33.2	+1.1
AVIZ	**Vizcacheras**	**1.73**	**197**	*eP*		Pg		15 07 14.7	+0.3
AVIZ				*eS*		Sg		15 07 41.2	+4.3
MRA	**San Martin**	**1.94**	**109**	*eP*		Pn		15 07 15.3	+0.9
MRA				*eS*		Sb		15 07 42.1	+1.0
MRA				IAML				15 07 45.0	
	comp=Z,972nm,0.3s								
MRA				IAML				15 07 45.0	
	comp=Z,911nm,0.3s								
ACDV	**Cuesta del Vie**	**1.95**	**327**	*eP*		Pb		15 07 17.2	+0.3
ACDV				*eS*		Sn		15 07 40.2	+1.0
ACDV				IAML				15 07 46.4	
	comp=Z,411nm,0.4s								
AROD	**Rodeo**	**2.13**	**320**	*eP*		Pb		15 07 20.5	+0.5
AROD				*eS*		Sn		15 07 43.7	-0.2
AROD				*eS*		Sg		15 07 50.3	+0.6
MT08	**Bocatoma Ro**	**2.42**	**227**	*eP*		Pb		15 07 24.6	-0.3
MT08				*eS*		Sg		15 07 58.5	-0.3
MT08				IAML				15 07 58.5	
	comp=Z,297nm,0.9s								
VA03	**San Esteban**	**2.44**	**247**	*eP*		Pb		15 07 25.4	+0.3
VA03				*eS*		Sg		15 08 01.0	+1.5
VA03				IAML				15 08 01.9	
	comp=Z,426nm,0.4s								
MT04	**Ro Olivares**	**2.47**	**229**	*eP*		Pb		15 07 25.7	-0.1
MT04				*eS*		Sg		15 07 59.6	-0.8
MT04				IAML				15 08 01.9	
	comp=Z,256nm,0.4s								
ACLC	**CERRO LA CRUZ**	**2.52**	**19**	*eP*		Pb		15 07 25.3	-1.3
ACLC				IAML				15 08 11.5	
	comp=Z,212nm,0.2s								
CO03	**El Pedregal**	**2.58**	**291**	*eP*		Pb		15 07 27.7	+0.1
CO03				*eS*		Sg		15 08 02.6	-1.4
CO03				*eS*		Sb		15 08 02.7	+3.2
CO03				IAML				15 08 04.3	
	comp=Z,291nm,0.5s								
CO01	**Juntas del Tor**	**2.63**	**314**	*eP*		Pb		15 07 28.4	-0.2
CO01				*eS*		Sg		15 08 04.4	-1.4
CO01				IAML				15 08 05.2	
	comp=Z,210nm,0.4s								
PEL	**Peldehue**	**2.70**	**240**	*eP*		Pb		15 07 28.7	-0.9
CO02	**Combarbal**	**2.72**	**282**	*eP*		Pb		15 07 29.4	-0.6
CO02				*eS*		Sb		15 08 04.7	+1.1
CO02				IAML				15 08 10.4	
	comp=Z,439nm,0.4s								
MT13	**San Alfonso**	**2.78**	**226**	*eP*		Pb		15 07 32.4	+1.3
TCA	**Tanti**	**2.86**	**81**	*eP*		Pn		15 07 28.7	+1.8
TCA				*eP*		Pb		15 07 28.8	-3.5
TCA				*eS*		Sn		15 08 01.4	0.0
TCA				*eS*		Sg		15 08 10.7	-2.2
TCA				IAML				15 08 15.1	

HUEH	**Huehuetenango**	**1.62**	**82**	*e*S		**Sb**	**15 13 03.4**	**-1.9**
HUEH				IAML			15 13 09.4	
	comp=E,2μm,0.5s							
TGIG		**1.67**	**1**	*e*P		**Pn**	**15 12 43.9**	**+0.6**
TGIG				*e*S		**Sn**	**15 13 03.7**	**0.0**
TGIG		**1.67**	**1**	*i* P		**Pn**	**15 12 43.8**	**+0.6**
STG2	**El Palmar, Qui**	**1.85**	**111**	*i* P		Pn	15 12 41.5	-4.3
STG2				IAML			15 13 04.7	
	comp=E,10μm,0.4s							
STG8	**El Palmar, Qui**	**1.87**	**110**	*i* P		Pn	15 12 42.0	-4.1
STG5	**El Palmar, Qui**	**1.89**	**111**	*i* P		**Pn**	**15 12 42.2**	**-4.0**
QUIS	**Sacapulas**	**2.01**	**84**	*i* P		**Pn**	**15 12 49.2**	**+1.2**
CMIG	**Matias Romero**	**2.58**	**320**	*e*P		**Pn**	**15 12 57.0**	**+1.3**
CMIG				*e*S		**Sn**	**15 13 24.1**	**-2.0**
APG	**El Apazote**	**2.61**	**92**	*i* P		**Pn**	**15 12 56.9**	**+0.6**
FG8	**Yepocapa, Chim**	**2.66**	**108**	*i* P		Pn	15 12 52.4	-4.5
FG8				*i* S		Sn	15 13 18.4	-10
HUIG	**Huatulco**	**2.92**	**284**	*i* P		**Pn**	**15 13 01.6**	**+1.3**
FAME	**Alcaldia de Sa**	**3.30**	**112**	P		**Pn**	**15 13 05.9**	**+0.4**
FAME				S		**Sn**	**15 13 43.9**	**0.0**
NUBE	**Las Nubes**	**3.49**	**110**	P		**Pn**	**15 13 10.2**	**+1.9**
NUBE				S		**Sn**	**15 13 49.1**	**+0.4**
NEUV	**Arroyo Zacate**	**3.63**	**316**	*e*P		**Pn**	**15 13 11.2**	**+1.1**
NEUV				*e*S		**Sn**	**15 13 46.8**	**-5.1**
PETF	**Flores**	**3.65**	**60**	P		**Pn**	**15 13 10.5**	**+0.2**
PETF				S		**Sn**	**15 13 51.6**	**-0.9**
PETF	**Flores**	**3.65**	**60**	*i* P		**Pn**	**15 13 10.6**	**+0.2**
CEVE	**Cerro Verde**	**3.66**	**110**	P		**Pn**	**15 13 12.2**	**+1.5**
CEVE				S		**Sn**	**15 13 53.5**	**+0.5**
MTO3	**Montecristo**	**3.75**	**100**	P		**Pn**	**15 13 12.8**	**+0.9**
JAYA	**Jayaque - finc**	**3.88**	**111**	P		**Pn**	**15 13 15.3**	**+1.6**
JAYA				S		**Sn**	**15 13 58.6**	**+0.2**
JAYA	**Jayaque - finc**	**3.88**	**111**	*e*P		**Pn**	**15 13 17.4**	**+3.7**
PMON	**Piamonte**	**3.98**	**110**	P		**Pn**	**15 13 16.1**	**+1.1**
PMON				S		**Sn**	**15 14 01.5**	**+0.7**
LALI	**Alcalda de L**	**4.06**	**113**	P		**Pn**	**15 13 16.2**	**+0.2**
SCIG	**Sabancuy**	**4.29**	**26**	*i* P		**Pn**	**15 13 18.9**	**-0.2**

IDC ***24*** *15:13:53.3±1.9,2.′47S×141.′39E,h0km,mb3.5/3, mbtmp3.7/4,ML3.5/1, Error ellipse: s-maj=30.7km s-min=13.4km az=7.0*
DJA ***24*** *15:13:56.3±1.0,2.′3S±5.′×14.′1E±.′,h10km,M3.9/6,mb4.2/1, MLv3.8/6*
ISC 24 15:13:56.9±1.6,**2.′1S**±0.′1×**140.′7E**±0.′1,**h10**km,**n8,σ2§57**/9, **mb3.6**/3,**Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
JAY	**Jayapura**	**0.45**	**178**	Pg		**Pg**	**15 14 07.0**	**+1.3**
	62nm,0.3s,baz=341,slow=5.7,SNR=293							
JAY				Lg		Lg	15 14 15.8	
	177nm,0.3s,baz=111,slow=13,SNR=14							
JAY	**Jayapura**	**0.45**	**178**	P		**Pg**	**15 14 07.0**	**+1.3**
GENI	**Genyem**	**0.74**	**225**	P		**Pg**	**15 14 11.5**	**+0.3**
GENI				S		**Sg**	**15 14 23.4**	**+2.6**
WAMI	**Wamena**	**2.68**	**228**	P		**Pn**	**15 14 39.6**	**-0.5**
WRA	**Warramunga Arr**	**18.82**	**199**	P		**P**	**15 18 14.4**	**-2.5**
	0.2nm,0.3s,baz=25,slow=12,SNR=23 1.3nm,0.4s							
FITZ	**Fitzroy Crossi**	**21.72**	**222**	P		**P**	**15 18 46.4**	**-2.1**
	2.1nm,0.8s,baz=36,slow=9.2,SNR=8.3 2.1nm,0.8s							
ASAR	**Alice Springs**	**22.46**	**196**	P		**P**	**15 18 52.9**	**-3.5**
	1.5nm,0.5s,baz=28,slow=11,SNR=23 1.5nm,0.5s							
MKAR	**Makanchi Array**	**70.50**	**322**	P		**P**	**15 25 14.4**	**+2.4**
	0.2nm,0.6s,baz=123,slow=7.6,SNR=2.8 0.2nm,0.6s							

SJA ***24*** *15:35:52.1±0.8,21.′26S×68.′23W,h160km,ML4.4,MW4.2*
VAO ***24*** *15:35:52.9±0.6,21.′12S×67.′94W,h126km±5km,mb4.8, Presumed earthquake*
SCB ***24*** *15:35:53.8±1.4,21.′32S×68.′15W,h123km±18km,MB4.9, ML4.7/3,Error ellipse: s-maj=5.2km s-min=4.4km az=1.0*
NEIC ***24*** *15:35:53.7±1.8,21.′26S±0.′05×68.′23W±0.′08,h143km±6km, mb4.6/43,Mwr4.6(GUC), Error ellipse: s-maj=11.5km s-min=7.4km az=76.0*
IDC ***24*** *15:35:54.2±1.9,21.′19S×67.′90W,h138km±16km,mb4.3/9, mbtmp4.6/15,MS3.2/4, Error ellipse: s-maj=18.4km s-min=12.2km az=75.0*
GUC ***24*** *15:35:54.6±0.6,21.′25S×68.′20W,h143km±3km,ML4.5*
ISC 24 15:35:52.9±0.5,**21.′24S**±0.′03×**68.′09W**±0.′04,**h136**km±5km, **n216,σ1§59**/244,**mb4.6**/23,**13C-1D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
PB09	**IPOC Station P**	**1.21**	**243**			**Pn**	**15 36 19.3**	**+0.7**
PB09	**IPOC Station P**	**1.21**	**243**	⇑*i* P		**Pn**	**15 36 19.7**	**+1.1**
PB09				*e*S		**Sn**	**15 36 38.9**	**+0.9**
PB09				IAML			15 36 42.6	
	comp=E,2μm,0.2s							
PB09	**IPOC Station P**	**1.21**	**243**	*e*P		**Pn**	**15 36 19.0**	**+0.5**
PB09				*e*S		**Sn**	**15 36 40.1**	**+2.1**
PB09				IAML			15 36 42.3	
	comp=Z,3μm,0.5s							
PB09	**IPOC Station P**	**1.21**	**243**	P		**Pn**	**15 36 18.7**	**+0.2**
PB01	**IPOC Station P**	**1.32**	**278**			**Pn**	**15 36 19.4**	**-0.2**
PB01	**IPOC Station P**	**1.32**	**278**	⇑*i* P		**Pn**	**15 36 19.9**	**+0.3**
PB01				*i* S		**Sn**	**15 36 39.6**	**-0.4**
PB01				IAML			15 36 42.4	
	comp=E,6μm,0.2s							
PB01	**IPOC Station P**	**1.32**	**278**	*e*P		**Pn**	**15 36 19.9**	**+0.3**
PB01				*e*S		**Sn**	**15 36 41.4**	**+1.5**
PB01				IAML			15 36 43.8	
	comp=Z,3μm,0.2s							
PB01	**IPOC Station P**	**1.32**	**278**	P		**Pn**	**15 36 20.6**	**+1.0**
PB01				S		**Sn**	**15 36 39.4**	**-0.6**
PB01				IAML			15 36 44.0	
	comp=Z,5μm,0.2s							
PX03	**IPOC Station P**	**1.67**	**300**	*e*P		**Pn**	**15 36 23.3**	**-0.1**
PB02	**IPOC Station P**	**1.69**	**267**			**Pn**	**15 36 23.7**	**0.0**
PB02	**IPOC Station P**	**1.69**	**267**	⇑*i* P		**Pn**	**15 36 23.9**	**+0.3**
PB02				*i* S		**Sn**	**15 36 46.6**	**-0.6**
PB02				IAML			15 36 49.0	
	comp=N,13μm,0.5s							
PB02	**IPOC Station P**	**1.69**	**267**	*e*P		**Pn**	**15 36 23.9**	**+0.3**
PB02				*e*S		**Sn**	**15 36 47.2**	**+0.1**
PB02	**IPOC Station P**	**1.69**	**267**	P		**Pn**	**15 36 24.0**	**+0.3**
PB02				S		**Sn**	**15 36 47.0**	**-0.2**
PB02				IAML			15 36 48.0	
	comp=N,10μm,0.3s							
AF01	**San Pedro de A**	**1.70**	**183**			**Pn**	**15 36 26.2**	**+2.2**
AF01	**San Pedro de A**	**1.70**	**183**	⇑*i* P		**Pn**	**15 36 26.2**	**+2.2**
AF01				*i* S		**Sn**	**15 36 49.4**	**+1.6**
AF01				IAML			15 36 53.1	
	comp=N,4μm,0.8s							
AF01	**San Pedro de A**	**1.70**	**183**	*e*P		**Pn**	**15 36 25.9**	**+1.9**
AF01				*e*S		Sn	15 37 02.0	+14
AF01				IAML			15 37 09.7	
	comp=Z,2μm,1.4s							
PB07	**IPOC Station P**	**1.75**	**254**			**Pn**	**15 36 23.8**	**-0.6**
PB07	**IPOC Station P**	**1.75**	**254**	⇑*i* P		**Pn**	**15 36 24.6**	**+0.2**
PB07				*i* S		**Sn**	**15 36 47.8**	**-0.6**
PB07				IAML			15 36 49.5	
	comp=N,5μm,0.3s							
PB07	**IPOC Station P**	**1.75**	**254**	*e*P		**Pn**	**15 36 24.5**	**+0.1**
PB07				*e*S		**Sn**	**15 36 48.3**	**-0.1**
PB07				IAML			15 36 49.8	
	comp=Z,3μm,0.4s							
PB03	**IPOC Station P**	**1.75**	**242**			**Pn**	**15 36 24.2**	**-0.2**
PB03	**IPOC Station P**	**1.75**	**242**	⇑*i* P		**Pn**	**15 36 24.6**	**+0.2**
PB03				*i* S		**Sn**	**15 36 48.0**	**-0.4**
PB03				IAML			15 36 49.3	
	comp=E,4μm,0.2s							
PB03	**IPOC Station P**	**1.75**	**242**	*e*P		**Pn**	**15 36 24.0**	**-0.3**
PB03				*e*S		**Sn**	**15 36 48.6**	**+0.2**
PB03				IAML			15 36 49.5	
	comp=Z,2μm,0.4s							
GO01	**Chusmiza**	**1.88**	**326**	⇓*i* P		**Pn**	**15 36 27.5**	**+1.2**
GO01				*i* S		**Sn**	**15 36 53.4**	**+1.6**
GO01				IAML			15 36 59.2	
	comp=N,3μm,0.3s							
GO01	**Chusmiza**	**1.88**	**326**	*e*P		**Pn**	**15 36 27.1**	**+0.8**
GO01				*e*S		**Sn**	**15 36 55.8**	**+4.0**
GO01				IAML			15 36 57.3	
	comp=Z,1μm,0.3s							
GO01	**Chusmiza**	**1.88**	**326**	P		**Pn**	**15 36 27.9**	**+1.6**
HMBC	**Humberstone**	**1.94**	**299**	⇑*i* P		**Pn**	**15 36 26.8**	**+0.2**
HMBC				*i* S		**Sn**	**15 36 51.7**	**-0.7**
HMBC				IAML			15 36 53.2	
	comp=N,7μm,0.3s							
HMBC	**Humberstone**	**1.94**	**299**	*e*P		**Pn**	**15 36 26.8**	**+0.2**
HMBC				*e*S		**Sn**	**15 36 52.3**	**-0.2**
HMBC				IAML			15 36 55.7	
	comp=Z,5μm,0.3s							
PATCX	**Punta Patache**	**1.98**	**282**			**Pn**	**15 36 27.2**	**+0.2**
PATCX	**Punta Patache**	**1.98**	**282**	⇑*i* P		**Pn**	**15 36 27.3**	**+0.3**
PATCX				*i* S		**Sn**	**15 36 52.2**	**-0.9**
PATCX				IAML			15 36 53.7	
	comp=E,13μm,0.3s							
PATCX	**Punta Patache**	**1.98**	**282**	*e*P		**Pn**	**15 36 26.8**	**-0.2**
PATCX				*e*S		**Sn**	**15 36 53.4**	**+0.2**
PATCX				IAML			15 36 54.8	
	comp=Z,6μm,0.3s							
PB06	**IPOC Station P**	**2.00**	**223**			**Pn**	**15 36 27.8**	**+0.4**
PB06	**IPOC Station P**	**2.00**	**223**	⇑*i* P		**Pn**	**15 36 27.9**	**+0.4**
PB06				*i* S		**Sn**	**15 36 54.1**	**+0.3**
PB06				IAML			15 36 59.1	
	comp=E,2μm,0.4s							
PB06	**IPOC Station P**	**2.00**	**223**	*e*P		**Pn**	**15 36 27.3**	**-0.1**
PB06				*e*S		**Sn**	**15 36 54.6**	**+0.8**
PB06				IAML			15 36 58.8	
	comp=Z,1μm,0.3s							
PB06	**IPOC Station P**	**2.00**	**223**	P		**Pn**	**15 36 27.1**	**-0.3**
TA01	**Diego Aracena**	**2.07**	**289**			**Pn**	**15 36 27.9**	**-0.2**
TA01	**Diego Aracena**	**2.07**	**289**	⇑*i* P		**Pn**	**15 36 28.0**	**0.0**
TA01				*i* S		**Sn**	**15 36 53.6**	**-1.4**
TA01				IAML			15 36 55.6	
	comp=E,7μm,0.2s							
TA01	**Diego Aracena**	**2.07**	**289**	*e*P		**Pn**	**15 36 27.4**	**-0.6**
TA01				*e*S		**Sn**	**15 36 54.5**	**-0.5**
TA01				IAML			15 36 58.6	
	comp=Z,3μm,0.3s							
PB11	**IPOC Station P**	**2.08**	**315**			**Pn**	**15 36 28.9**	**+0.6**
PB11	**IPOC Station P**	**2.08**	**315**	⇑*i* P		**Pn**	**15 36 29.0**	**+0.6**
PB11				*i* S		**Sn**	**15 36 55.1**	**-0.5**
PB11				IAML			15 36 59.6	
	comp=E,4μm,0.2s							
PB11	**IPOC Station P**	**2.08**	**315**	*e*P		**Pn**	**15 36 28.5**	**+0.1**
PB11				*e*S		**Sn**	**15 36 56.3**	**+0.7**
PB11				IAML			15 36 59.5	
	comp=Z,1μm,0.2s							
PB11	**IPOC Station P**	**2.08**	**315**	P		**Pn**	**15 36 29.1**	**+0.7**
PB11				S		**Sn**	**15 36 55.9**	**+0.3**
PB11				IAML			15 36 57.9	
	comp=Z,3μm,0.2s							
MOCB	**Mochara**	**2.28**	**91**	P		**Pn**	**15 36 33.4**	**+2.3**
PSGCX	**Pisagua**	**2.52**	**310**			**Pn**	**15 36 33.4**	**-0.3**
PB05	**IPOC Station P**	**2.53**	**230**			**Pn**	**15 36 33.6**	**-0.3**
PB05	**IPOC Station P**	**2.53**	**230**	⇑*i* P		**Pn**	**15 36 33.6**	**-0.3**
PB05				*i* S		**Sn**	**15 37 03.4**	**-2.0**
PB05				IAML			15 37 11.7	
	comp=N,1μm,0.3s							
PB05	**IPOC Station P**	**2.53**	**230**	*e*P		**Pn**	**15 36 33.6**	**-0.3**
PB05				*e*S		**Sn**	**15 37 00.7**	**-4.7**
PB05				IAML			15 37 11.5	
	comp=Z,747nm,0.3s							
YJA	**Yavi**	**2.56**	**112**	*e*P		**Pn**	**15 36 37.1**	**+2.5**
YJA	**Yavi**	**2.56**	**112**	*e*P		**Pn**	**15 36 37.9**	**+3.3**
YJA				*e*S		**Sn**	**15 37 04.2**	**-2.4**
YJA	**Yavi**	**2.56**	**112**	P		**Pn**	**15 36 36.0**	**+1.4**
SOEO	**Opoqueri**	**2.67**	**4**	P		**Pn**	**15 36 37.5**	**+1.4**
PX02	**IPOC Station P**	**3.02**	**318**	*e*P		**Pn**	**15 36 39.3**	**-0.8**
HJA	**Humahuaca**	**3.16**	**129**	*e*P		**Pn**	**15 36 44.9**	**+2.8**
HJA				*e*S		**Sn**	**15 37 18.1**	**-2.0**
AOVT	**TarijaAcel**	**3.16**	**96**	P		**Pn**	**15 36 44.0**	**+2.0**
PB16	**IPOC Station P**	**3.19**	**335**			**Pn**	**15 36 43.9**	**+1.2**
PB16	**IPOC Station P**	**3.19**	**335**	*e*P		**Pn**	**15 36 44.7**	**+2.0**
PB16	**IPOC Station P**	**3.19**	**335**	*e*P		**Pn**	**15 36 44.8**	**+2.0**
PB16				*e*S		**Sn**	**15 37 15.9**	**-5.2**
PB16	**IPOC Station P**	**3.19**	**335**	P		**Pn**	**15 36 45.1**	**+2.4**
PB10	**IPOC Station P**	**3.21**	**225**			**Pn**	**15 36 41.5**	**-0.9**
PB10	**IPOC Station P**	**3.21**	**225**	*e*P		**Pn**	**15 36 41.6**	**-0.9**
PB10	**IPOC Station P**	**3.21**	**225**	*e*P		**Pn**	**15 36 41.6**	**-0.8**
PB10				*e*S		**Sn**	**15 37 19.3**	**-1.6**
PB10				IAML			15 37 21.0	
	comp=Z,445nm,0.4s							
PB12	**IPOC Station P**	**3.36**	**321**			**Pn**	**15 36 44.0**	**-0.5**
PB12	**IPOC Station P**	**3.36**	**321**	*e*P		**Pn**	**15 36 44.0**	**-0.5**
PB12	**IPOC Station P**	**3.36**	**321**	*e*P		**Pn**	**15 36 44.4**	**-0.1**
PB12				*e*S		**Sn**	**15 37 23.3**	**-1.1**
PB12				IAML			15 37 35.6	
	comp=Z,464nm,0.3s							
SALTA		**3.38**	**152**	*e*P		**Pn**	**15 36 47.7**	**+2.7**
AP01	**Chacalluta**	**3.56**	**323**	*e*P		Pn	15 36 35.0	-12
AP01				IAML			15 37 44.0	
	comp=Z,590nm,0.5s							
SOET	**ToroToro**	**3.78**	**35**	P		**Pn**	**15 36 52.3**	**+2.1**
PB18	**Visviri**	**3.87**	**340**			**Pn**	**15 36 55.0**	**+3.4**
PB18	**Visviri**	**3.87**	**340**	*e*P		**Pn**	**15 36 54.8**	**+3.2**
PB14	**IPOC Station P**	**3.99**	**212**			**Pn**	**15 36 51.5**	**-1.3**
PB14	**IPOC Station P**	**3.99**	**212**	*e*P		**Pn**	**15 36 51.6**	**-1.3**
PB14	**IPOC Station P**	**3.99**	**212**	*e*P		**Pn**	**15 36 51.6**	**-1.3**
PB14				IAML			15 37 39.4	
	comp=Z,361nm,0.4s							
PB14	**IPOC Station P**	**3.99**	**212**	P		**Pn**	**15 36 52.6**	**-0.3**
AOEA	**Aiquile**	**4.06**	**42**	P		**Pn**	**15 36 56.1**	**+2.2**
AOEA	**Aiquile**	**4.06**	**42**	P		**Pn**	**15 36 57.2**	**+3.3**
SLA	**San Lorenzo**	**4.20**	**146**	*e*P		**Pn**	**15 36 59.4**	**+3.8**
SOEJ	**Jacaque**	**4.25**	**359**	P		**Pn**	**15 36 59.4**	**+2.8**
BBOE	**La Paz, Chanca**	**4.41**	**1**	P		**Pn**	**15 37 01.7**	**+2.9**
BBOD	**La Paz, Gloria**	**4.61**	**354**	P		**Pn**	**15 37 03.4**	**+2.0**
LPAZ	**La Paz**	**4.93**	**359**	P		**Pn**	**15 37 08.0**	**+2.2**
	comp=Z,80nm,0.4s,baz=171,slow=6.7,SNR=193							
LPAZ				S		**Sn**	**15 38 03.5**	**+1.2**
	comp=Z,8.7nm,0.3s,baz=267,slow=21,SNR=0.9							
LPAZ	**La Paz**	**4.93**	**359**			**Pn**	**15 37 07.8**	**+2.0**
LPAZ	**La Paz**	**4.93**	**359**	*e*P		**Pn**	**15 37 08.0**	**+2.2**
LPAZ	**La Paz**	**4.93**	**359**	P		**Pn**	**15 37 06.7**	**+0.9**
AC01	**Pan de Azucar**	**5.40**	**205**			**Pn**	**15 37 09.3**	**-2.1**
AC02	**Maricunga**	**5.65**	**190**			**Pn**	**15 37 14.3**	**-0.8**
AC06	**Mina Casimiro**	**6.43**	**198**			**Pn**	**15 37 22.2**	**-3.0**
GO03	**Copiapo**	**6.62**	**197**			**Pn**	**15 37 24.2**	**-3.6**
AC05	**El Transito**	**7.81**	**194**			**Pn**	**15 37 41.0**	**-2.9**
LCO	**Las Campanas**	**8.09**	**197**			**Pn**	**15 37 43.4**	**-4.3**
BBSD	**Serra de San D**	**8.13**	**62**	*e*P		**Pn**	**15 37 45.5**	**-2.7**
SIV	**San Ignacio**	**8.46**	**53**	P		**Pn**	**15 37 50.5**	**-2.1**
	comp=Z,123nm,0.5s,baz=239,slow=11,SNR=600							
SIV				S		**Sn**	**15 39 20.7**	**-5.7**
	comp=Z,26nm,0.9s,baz=287,slow=17,SNR=7.8							
SIV				LR		LR	15 41 45.8	
	comp=Z,187nm,19.8s,baz=146,slow=42							
CO01	**Juntas del Tor**	**8.88**	**191**			**Pn**	**15 37 56.0**	**-2.4**
MURT	**Porto Murtinho**	**9.77**	**94**	*e*P		**Pn**	**15 38 08.0**	**-2.0**
CO03	**El Pedregal**	**9.84**	**193**			**Pn**	**15 38 06.8**	**-4.2**
PTLB	**Pontes e Lacer**	**10.27**	**57**			**Pn**	**15 38 14.3**	**-2.4**
PTLB	**Pontes e Lacer**	**10.27**	**57**	*e*P		**Pn**	**15 38 14.7**	**-2.0**
ZON	**Zonda**	**10.27**	**183**			**Pn**	**15 38 14.2**	**-2.6**
CFA	**Coronel Fontan**	**10.32**	**181**	P		**Pn**	**15 38 14.8**	**-2.6**
	comp=Z,1.4nm,0.3s,baz=350,slow=16,SNR=11							
CFA				S		Sn	15 40 01.9	-9.5
	comp=Z,2.4nm,0.5s,baz=118,slow=22,SNR=7.0							
BDQN	**Bodoquena, MS**	**10.63**	**88**	*e*P		**Pn**	**15 38 18.6**	**-2.9**
CO04	**Los Peladeros**	**11.06**	**193**			Pn	15 38 21.9	-5.6
CPUP	**Villa Florida**	**11.07**	**119**	P		**Pn**	**15 38 25.7**	**-1.6**
	comp=Z,2.1nm,0.7s,baz=298,slow=12,SNR=6.8							
CPUP				S		Sn	15 40 17.3	-12
	comp=Z,2.1nm,0.5s,baz=322,slow=16,SNR=3.2							
CPUP				LR		LR	15 43 41.9	
	comp=Z,29nm,20.0s,baz=261,slow=43							
CPUP	**Villa Florida**	**11.07**	**119**	*e*P		**Pn**	**15 38 26.7**	**-0.7**
VILB	**Vilhena**	**11.17**	**44**			**Pn**	**15 38 27.0**	**-1.7**
VILB	**Vilhena**	**11.17**	**44**	*e*P		**Pn**	**15 38 27.4**	**-1.3**
AQDB	**Aquidauana**	**11.61**	**88**	Pn		**Pn**	**15 38 31.2**	**-3.3**
AQDB	**Aquidauana**	**11.61**	**88**	*e*P		**Pn**	**15 38 32.0**	**-2.5**
VA03	**San Esteban**	**11.68**	**190**			**Pn**	**15 38 36.1**	**+0.6**
AMBA	**Amambai (Brazi**	**12.26**	**100**	*e*P		**Pn**	**15 38 42.6**	**-0.3**
MT08	**Bocatoma Ro**	**12.27**	**188**			**Pn**	**15 38 40.2**	**-3.1**
NNA	**Nana**	**12.45**	**316**	P		**P**	**15 38 53.3**	**+1.4**
	comp=Z,4.9nm,0.4s,baz=165,slow=10,SNR=8.4							
BO04	**La Punta**	**12.89**	**189**			**Pn**	**15 38 51.7**	**+0.6**
SALV	**Santo Antonio**	**12.89**	**68**	*e*P		**Pn**	**15 38 49.4**	**-1.9**
PP1B	**Ponte de Pedra**	**12.97**	**76**	*e*P		**Pn**	**15 38 50.6**	**-1.7**
PSAL	**Palomas, Salto**	**13.57**	**138**	*e*P		**Pn**	**15 39 00.9**	**+1.1**
CZSB	**Cruzeiro do Su**	**14.16**	**341**			**Pn**	**15 39 04.8**	**-2.6**
CZSB	**Cruzeiro do Su**	**14.16**	**341**	*e*P		**Pn**	**15 39 08.1**	**+0.7**
TRCB	**Terra Rica**	**14.41**	**99**			**Pn**	**15 39 10.2**	**-0.4**
TRCB	**Terra Rica**	**14.41**	**99**	*e*P		**Pn**	**15 39 09.6**	**-1.1**
PDRB	**Porto dos Gac**	**14.49**	**50**	*e*P		**Pn**	**15 39 10.2**	**-1.6**
C2SB	**Chapadao do Su**	**14.54**	**83**	*e*P		**Pn**	**15 39 10.0**	**-2.3**
PTGB	**Pitanga**	**15.15**	**106**	*e*P		**Pn**	**15 39 20.6**	**+0.6**
BI02	**San Fabin de**	**15.61**	**190**			**Pn**	**15 39 24.7**	**-0.9**
CLDB	**Colider**	**15.67**	**51**	*e*P		**Pn**	**15 39 26.0**	**-0.3**
ITAB	**Concordia**	**15.72**	**115**			**Pn**	**15 39 27.5**	**+0.5**
ITAB				IAmb		IAmb	15 39 30.3	
	comp=Z,32nm,1.4s							
ITAB	**Concordia**	**15.72**	**115**	*e*P		**Pn**	**15 39 27.4**	**+0.5**
LDASE	**Londrina, Braz**	**15.85**	**101**	*e*P		**Pn**	**15 39 27.2**	**-1.3**
CPSB	**Cacapava Do Su**	**16.02**	**128**	*e*P		**P**	**15 39 32.0**	**+0.7**
ARAG	**Araguaiana, MT**	**16.39**	**73**	*e*P		**Pn**	**15 39 33.3**	**-1.8**
ITRB	**Iturama**	**16.68**	**88**	*e*P		**P**	**15 39 37.4**	**-1.4**
ATAH	**Atahualpa**	**17.21**	**323**	P		**Pn**	**15 39 46.6**	**+1.0**
	comp=Z,1.7nm,0.7s,baz=106,slow=18,SNR=1.8							
FRTB	**Fartura**	**17.27**	**100**	*e*P		**P**	**15 39 45.6**	**+0.4**
CNLB	**Canela**	**17.52**	**121**	*e*P		**P**	**15 39 47.6**	**-0.3**
TRQA	**Tornquist**	**17.57**	**164**			**P**	**15 39 47.9**	**-0.4**
TRQA				IAmb		IAmb	15 39 50.9	
	comp=Z,15nm,0.6s							
TEFE	**Tefe**	**17.95**	**11**	*e*P		**P**	**15 39 51.8**	**-0.8**
BB19B	**Bebedouro**	**18.24**	**93**	*e*P		**P**	**15 39 56.6**	**+0.6**
MAJ01	**Sao Joao Batis**	**18.42**	**113**	*e*P		**P**	**15 39 57.5**	**-0.2**
GO06	**Curarrehue**	**18.51**	**188**	IAmb		IAmb	15 40 01.7	
	comp=Z,18nm,0.8s							
SNDB	**Serra Nova Dou**	**18.53**	**63**	*e*P		**P**	**15 39 59.0**	**0.0**
NPGB	**Novo Progresso**	**18.73**	**43**	*e*P		**P**	**15 40 00.5**	**-0.7**
IPMB	**Ipameri, GO**	**19.00**	**84**	*e*P		**P**	**15 40 03.9**	**-0.3**
RCLB	**Rio Claro- Sao**	**19.12**	**97**	*e*P		**P**	**15 40 05.2**	**-0.2**
LR05	**Currie**	**19.22**	**189**	IAmb		IAmb	15 40 09.4	
	comp=Z,21nm,0.7s							
SPB	**Sao Paulo**	**19.24**	**101**	P		**P**	**15 40 07.2**	**+0.6**
SPB				IAmb		IAmb	15 40 07.5	
	comp=Z,18nm,0.8s							
MACA	**Manacapuru-AM**	**19.36**	**23**			**P**	**15 40 06.5**	**-1.6**
MACA	**Manacapuru-AM**	**19.36**	**23**	*e*P		**P**	**15 40 06.7**	**-1.4**
PET01	**Itanhaem-SP**	**19.43**	**103**	*e*P		**P**	**15 40 09.4**	**+0.7**
PLCA	**Paso Flores**	**19.54**	**186**	P		**P**	**15 40 10.9**	**+1.1**
	comp=Z,14nm,0.7s,baz=6.0,slow=13,SNR=24							
PLCA	**Paso Flores**	**19.54**	**186**	IAmb		IAmb	15 40 15.7	
	comp=Z,16nm,0.8s							
PLCA	**Paso Flores**	**19.54**	**186**	*e*P		**P**	**15 40 11.1**	**+1.2**
VAO	**Valinhos**	**19.64**	**99**			**P**	**15 40 10.3**	**-0.9**
VAO				IAmb		IAmb	15 40 12.0	
	comp=Z,47nm,1.3s							
VAO	**Valinhos**	**19.64**	**99**	*e*P		**P**	**15 40 10.7**	**-0.5**
BDFB	**Brasilia**	**19.83**	**77**	P		**P**	**15 40 12.8**	**-0.5**
	comp=Z,19nm,0.6s,baz=257,slow=11,SNR=30							
BDFB					LR	LR	15 49 22.6	
	comp=Z,104nm,18.8s,baz=26,slow=41							
BDFB	**Br

MKAR	**Makanchi Array**	**144.97**	**36**	PKP	**PKPdf**	**15 55 14.8**	**+0.9**		
	comp=Z,3.8nm,0.6s,baz=324,slow=2.7,SNR=26								
MKAR	**Makanchi Array**	**144.97**	**36**		**PKPdf**	**15 55 15.0**	**+1.0**		
MJAR	**Matsushiro Arr**	**152.51**	**309**	PKPbc	**PKiKP**	**15 55 33.7**	**0.0**		
	comp=Z,1.7nm,0.8s,baz=84,slow=2.4,SNR=4.8								
SONM	**Songino Array**	**153.10**	**8**	PKP	**PKPdf**	**15 55 27.0**	**0.0**		
	comp=Z,0.2nm,0.4s,baz=327,slow=2.4,SNR=2.1								
SONM				PKPbc	**PKiKP**	**15 55 34.9**	**+0.2**		
	comp=Z,0.3nm,0.5s,baz=329,slow=1.7,SNR=2.8								

*IDC **24** 15:46:07.5±1.0, 39°.23N×20°.39E, h0km, mb3.8/10, mbtmp3.7/17, ML3.6/5, Error ellipse: s-maj=14.4km s-min=14.0km az=4.0*
*PDG **24** 15:46:10.7±0.5, 39°.29N×20°.51E, h1km±1km, ML3.5/12, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
*NEIC **24** 15:46:10.9±1.8, 39°.30N±0°.06×20°.46E±0°.05, h10km±1km, mb4.0/8, Error ellipse: s-maj=10.3km s-min=6.0km az=207.0*
*THE **24** 15:46:10.4, 39°.3N±0°.6×20°.6E±1°.0, h0km±3km, M3.5/19, MLh3.5/19*
*ATH **24** 15:46:10.7, 39°.30N×20°.56E, h10km, ML3.6/36, Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
*NAO **24** 15:46:20.4, 40°.00N×18°.66E, h10km, MB3.4*
*PRU **24** 15:46:23.0, 40°.19N×20°.57E, h10km, M4.0*

ISC 24 15:46:10.7±0.8, 39°.29N±0°.01×20°.54E±0°.02, h14km±5km, n160, σ1$05/233, mb3.8/12, 1C, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRGA	**Parga**	**0.11**	**268**	P	**Pg**	**15 46 14.2**	**+0.3**
PRGA				S	**Sg**	**15 46 15.7**	**-0.4**
IGT	**Igoumenitsa**	**0.29**	**326**	P	**Pg**	**15 46 16.7**	**-0.1**
IGT				S	**Sg**	**15 46 21.2**	**+0.2**
IGT	**Igoumenitsa**	**0.29**	**326**	P	**Pg**	**15 46 16.9**	**+0.1**
IGT				S	**Sg**	**15 46 21.1**	**+0.1**
ARTB	**Arta**	**0.36**	**111**	P	**Pg**	**15 46 17.5**	**-0.6**
ARTB				S	**Sg**	**15 46 22.4**	**-0.7**
ART2	**Arta**	**0.38**	**112**	P	**Pg**	**15 46 18.0**	**-0.3**
ART2				S	**Sg**	**15 46 23.7**	**+0.2**
JAN	**Janina**	**0.44**	**33**	P	**Pg**	**15 46 18.9**	**-0.5**
JAN				S	**Sg**	**15 46 25.4**	**0.0**
JAN	**Janina**	**0.44**	**33**	P	**Pg**	**15 46 19.0**	**-0.4**
JAN				S	**Sg**	**15 46 24.9**	**-0.5**
TSLK	**Tsoukalades, L**	**0.47**	**169**	P	**Pg**	**15 46 19.7**	**-0.4**
TSLK	**Tsoukalades, L**	**0.47**	**169**	P	**Pg**	**15 46 19.7**	**-0.4**
TSLK				S	**Sg**	**15 46 26.8**	**+0.4**
PRMD	**Pramanda**	**0.49**	**61**	P	**Pg**	**15 46 20.2**	**-0.3**
PRMD				S	**Sg**	**15 46 27.1**	**0.0**
LKD2	**Lefkada island**	**0.51**	**170**	P	**Pg**	**15 46 20.1**	**-0.6**
LKD2	**Lefkada island**	**0.51**	**170**	P	**Pg**	**15 46 20.3**	**-0.5**
LKD2				S	**Sg**	**15 46 27.6**	**0.0**
TETR	**Tetrakomo, Epi**	**0.57**	**84**	P	**Pg**	**15 46 20.9**	**-1.0**
TETR	**Tetrakomo, Epi**	**0.57**	**84**	P	**Pg**	**15 46 21.0**	**-1.0**
TETR				S	**Sb**	**15 46 29.8**	**-0.8**
KRK1	**kERKIRA**	**0.58**	**304**	P	**Pg**	**15 46 22.6**	**+0.4**
KRK1				S	**Sg**	**15 46 30.4**	**+0.4**
NYDR	**Nydri-Lefkada**	**0.59**	**168**	P	**Pg**	**15 46 21.3**	**-1.0**
NYDR				S	**Sg**	**15 46 30.6**	**+0.6**
NYDR	**Nydri-Lefkada**	**0.59**	**168**	P	**Pg**	**15 46 21.5**	**-0.8**
NYDR				S	**Sg**	**15 46 30.7**	**+0.6**
DRAG	**Dragano-Lefkad**	**0.61**	**177**	P	**Pg**	**15 46 21.5**	**-1.1**
DRAG	**Dragano-Lefkad**	**0.61**	**177**	P	**Pg**	**15 46 22.4**	**-0.2**
DRAG				S	**Sb**	**15 46 31.5**	**0.0**
AMPL	**Ampelaki**	**0.64**	**125**	P	**Pg**	**15 46 23.0**	**-0.2**
AMPL				S	**Sg**	**15 46 31.8**	**+0.2**
EVGI	**Lefkada island**	**0.67**	**172**	P	**Pg**	**15 46 22.7**	**-1.2**
EVGI	**Lefkada island**	**0.67**	**172**	P	**Pg**	**15 46 23.7**	**-0.1**
EVGI				S	**Sg**	**15 46 33.1**	**+0.4**
MSVA	**Metsovo**	**0.69**	**46**	P	**Pg**	**15 46 24.0**	**-0.2**
MSVA				S	**Sb**	**15 46 33.4**	**-0.7**
KEK	**Kerkira**	**0.71**	**307**		**Pg**	**15 46 23.9**	**-0.6**
KEK	**Kerkira**	**0.71**	**307**	P	**Pg**	**15 46 24.8**	**+0.2**
KEK				S	**Sb**	**15 46 34.9**	**+0.3**
SRN	**Sarande**	**0.72**	**325**	P	**Pg**	**15 46 24.3**	**-0.5**
FSK	**Fiskardo**	**0.83**	**179**	P	**Pg**	**15 46 25.0**	**-1.8**
FSK	**Fiskardo**	**0.83**	**179**	P	**Pb**	**15 46 27.4**	**+0.6**
FSK				S	**Sb**	**15 46 38.7**	**+0.8**
AST1	**Astakos**	**0.86**	**150**	P	**Pg**	**15 46 25.9**	**-1.4**
KPRO	**Kipourio**	**0.92**	**43**	P	**Pg**	**15 46 27.7**	**-0.8**
KPRO	**Kipourio**	**0.92**	**43**	P	**Pg**	**15 46 28.0**	**-0.6**
KPRO				S	**Sb**	**15 46 40.5**	**-0.1**
TRKA	**Trikala**	**0.98**	**74**	P	**Pg**	**15 46 29.2**	**-0.6**
TRKA				S	**Sb**	**15 46 42.6**	**+0.3**
PENT	**Pentalofos**	**1.01**	**27**	P	**Pb**	**15 46 30.2**	**+0.1**
PENT				S	**Sb**	**15 46 43.8**	**+0.4**
PVO	**Paravola**	**1.02**	**131**	P	**Pg**	**15 46 29.1**	**-1.3**
PVO	**Paravola**	**1.02**	**131**	P	**Pg**	**15 46 30.1**	**-0.3**
PVO				S	**Sb**	**15 46 43.8**	**+0.4**
SMHA	**Samh**	**1.04**	**175**	P	**Pg**	**15 46 30.7**	**-0.1**
SMHA				S	**Sg**	**15 46 44.3**	**0.0**
EVR	**Evrytania**	**1.05**	**110**	P	**Pg**	**15 46 30.1**	**-1.0**
EVR	**Evrytania**	**1.05**	**110**	P	**Pg**	**15 46 30.8**	**-0.3**
EVR				S	**Sb**	**15 46 44.9**	**+0.4**
DMLN	**Damoulianata-K**	**1.06**	**187**	P	**Pg**	**15 46 31.2**	**+0.1**
DMLN	**Damoulianata-K**	**1.06**	**187**	P	**Pn**	**15 46 31.6**	**+0.5**
DMLN				S	**Sb**	**15 46 45.4**	**+0.9**
ARG2	**Argostoli**	**1.11**	**182**	P	**Pb**	**15 46 31.2**	**-0.4**
ARG2	**Argostoli**	**1.11**	**182**	P	**Pb**	**15 46 31.4**	**-0.2**
ARG2				S	**Sb**	**15 46 47.3**	**+1.3**
VLS	**Valsamata**	**1.11**	**178**	P	**Pb**	**15 46 30.3**	**-1.4**
VLS	**Valsamata**	**1.11**	**178**	P	**Pb**	**15 46 32.1**	**+0.4**
VLS				S	**Sn**	**15 46 48.2**	**+1.2**
KFL1	**Kefalonia,Entr**	**1.12**	**182**	P	**Pb**	**15 46 32.2**	**+0.4**
KFL1				S	**Sn**	**15 46 48.1**	**+1.0**
MSL1	**Messolongi**	**1.15**	**143**	P	**Pn**	**15 46 33.7**	**+1.4**
MSL1				S	**Sn**	**15 46 48.6**	**+0.8**
THL	**Klokotos Trika**	**1.17**	**76**	P	**Pb**	**15 46 32.2**	**-0.6**
THL	**Klokotos Trika**	**1.17**	**76**	P	**Pb**	**15 46 32.5**	**-0.3**
THL				S	**Sn**	**15 46 48.6**	**+0.1**
NEST	**Nestorio**	**1.19**	**19**	P	**Pb**	**15 46 32.6**	**-0.5**
NEST	**Nestorio**	**1.19**	**19**	P	**Pn**	**15 46 33.7**	**+0.7**
NEST				S	**Sn**	**15 46 49.9**	**+0.8**
SOFA	**Sofades**	**1.21**	**87**	P	**Pb**	**15 46 32.9**	**-0.4**
SOFA				S	**Sn**	**15 46 49.6**	**+0.2**
RTZL	**Ratzakli, Kefa**	**1.23**	**171**	P	**Pn**	**15 46 33.7**	**+0.3**
RTZL				S	**Sn**	**15 46 50.8**	**+1.0**
MAKR	**Makrakomi, Fth**	**1.27**	**102**	P	**Pn**	**15 46 33.8**	**-0.2**
MAKR	**Makrakomi, Fth**	**1.27**	**102**	P	**Pg**	**15 46 34.7**	**-0.4**
MAKR				S	**Sn**	**15 46 51.5**	**+0.6**
AXS	**Araxos**	**1.27**	**149**	P	**Pg**	**15 46 35.0**	**-0.2**
AXS				S	**Sn**	**15 46 52.3**	**+1.4**
ANX	**Ano Chora**	**1.28**	**122**	P	**Pg**	**15 46 35.5**	**+0.1**
ANX				S	**Sn**	**15 46 52.4**	**+1.1**
AGRP	**Agrapidokambos**	**1.28**	**134**	P	**Pn**	**15 46 34.6**	**+0.4**
AGRP				S	**Sn**	**15 46 52.3**	**+1.0**
EFP	**Efpalio**	**1.37**	**129**	P	**Pg**	**15 46 36.8**	**-0.3**
EFP				S	**Sb**	**15 46 53.9**	**+0.4**
MALA	**Malamata, Dori**	**1.37**	**130**	P	**Pn**	**15 46 35.8**	**+0.4**
MALA				S	**Sn**	**15 46 54.1**	**+0.8**
KZN	**Kozani**	**1.39**	**43**	P	**Pb**	**15 46 36.7**	**+0.2**
KZN				S	**Sb**	**15 46 54.3**	**+0.2**
PATC	**Patra C**	**1.40**	**137**	P	**Pn**	**15 46 36.1**	**+0.4**
PATC				S	**Sn**	**15 46 54.7**	**+0.7**
UPR	**University Cam**	**1.40**	**136**	P	**Pn**	**15 46 36.4**	**+0.6**
UPR				S	**Sn**	**15 46 55.1**	**+1.1**
PATG	**Patra B**	**1.40**	**138**	P	**Pn**	**15 46 35.9**	**+0.1**
PATG				S	**Sg**	**15 46 55.8**	**0.0**
MG00	**Magoula, Dorid**	**1.40**	**128**	P	**Pn**	**15 46 36.2**	**+0.4**
MG00				S	**Sb**	**15 46 54.8**	**+0.4**
AGG	**Agios Georgios**	**1.42**	**100**	P	**Pb**	**15 46 36.9**	**-0.1**
AGG				S	**Sg**	**15 46 55.6**	**-0.8**
RLS	**Riolos of Patr**	**1.43**	**149**	P	**Pn**	**15 46 36.8**	**+0.6**
RLS				S	**Sg**	**15 46 56.4**	**-0.3**
ORTH	**Orthonies,Zaky**	**1.44**	**175**	P	**Pb**	**15 46 37.5**	**+0.1**
ORTH				S	**Sb**	**15 46 56.3**	**+0.7**
SERG	**Sergoula**	**1.47**	**126**	P	**Pn**	**15 46 37.0**	**+0.2**
SERG				S	**Sn**	**15 46 56.4**	**+0.5**
ZIRI	**Ziria, Aigiali**	**1.48**	**131**	P	**Pn**	**15 46 37.2**	**+0.3**
ZIRI				S	**Sb**	**15 46 57.5**	**+0.9**
GINA	**Giannouli**	**1.48**	**75**	P	**Pn**	**15 46 37.1**	**+0.2**
GINA				S	**Sb**	**15 46 56.6**	**0.0**
KYPS	**Kipseli, Zakin**	**1.49**	**171**	P	**Pb**	**15 46 38.1**	**0.0**
KYPS				S	**Sg**	**15 46 58.2**	**-0.4**
LAM2	**Lamia**	**1.52**	**104**	P	**Pb**	**15 46 38.5**	**-0.2**
LAM2				S	**Sb**	**15 46 58.2**	**+0.4**
KALE	**Kalithea**	**1.54**	**125**	P	**Pn**	**15 46 38.4**	**+0.6**
KALE				S	**Sb**	**15 46 59.1**	**+0.8**
AGEO	**AgiosGiorgios,**	**1.57**	**130**	P	**Pn**	**15 46 38.9**	**+0.8**
AGEO				S	**Sb**	**15 46 59.5**	**+0.3**
LTHK	**Lithakia**	**1.59**	**172**	P	**Pn**	**15 46 39.2**	**+0.7**
LTHK				S	**Sn**	**15 46 59.8**	**+0.9**
LMS2	**Laimos Florina**	**1.61**	**16**	P	**Pn**	**15 46 39.2**	**+0.4**
LMS2				S	**Sn**	**15 46 60.0**	**+0.5**
DRO	**Drossia**	**1.62**	**145**	P	**Pn**	**15 46 39.8**	**+0.9**
DRO				S	**Sb**	**15 47 00.8**	**+0.2**
AXAR	**Agios Charalam**	**1.73**	**107**	P	**Pn**	**15 46 40.9**	**+0.5**
KLV	**Kalavryta, Ach**	**1.77**	**134**	P	**Pn**	**15 46 41.8**	**+0.8**
SCTE	**Santa Cesarea**	**1.78**	**297**		**Pn**	**15 46 41.4**	**+0.4**
SCTE	**Santa Cesarea**	**1.78**	**297**	P	**Pn**	**15 46 42.0**	**+0.9**
GUR	**Goura**	**1.95**	**133**	P	**Pn**	**15 46 44.9**	**+1.3**
NEO	**Neokhori**	**2.08**	**89**	P	**Pn**	**15 46 45.6**	**+0.4**
ITM	**Ithomi**	**2.37**	**152**		**Pn**	**15 46 51.6**	**+2.4**
ITM	**Ithomi**	**2.37**	**152**	P	**Pn**	**15 46 50.5**	**+1.3**
MESG	**Mesagne**	**2.44**	**303**	P	**Pn**	**15 46 51.0**	**+0.8**
PYL	**PYLOS**	**2.57**	**158**	P	**Pn**	**15 46 53.0**	**+1.0**
STFN	**Stefani**	**2.60**	**114**	P	**Pn**	**15 46 52.7**	**+0.3**
ATH	**Athens Observa**	**2.81**	**117**	P	**Pn**	**15 46 55.6**	**+0.4**
ULC	**Ulcinj**	**2.85**	**340**	*e*Pn	**Pn**	**15 46 56.9**	**+1.2**
ULC				*i* Sn	**Sn**	**15 47 31.9**	**+2.1**
TIP	**Timpagrande**	**2.94**	**269**		**Pn**	**15 46 57.2**	**+0.2**
TIP	**Timpagrande**	**2.94**	**269**	P	**Pn**	**15 46 58.1**	**+1.0**
DRME	**Dracevica, Mon**	**3.07**	**341**	*e*Pn	**Pn**	**15 47 00.3**	**+1.5**
DRME				*i* Sn	**Sn**	**15 47 37.4**	**+2.1**
DRME	**Dracevica, Mon**	**3.07**	**341**	*e*Pn	**Pn**	**15 47 00.1**	**+1.3**
BUM	**Brajici-Budva**	**3.26**	**338**	*e*Pn	**Pn**	**15 47 02.8**	**+1.4**
BUM				*i* Sn	**Sn**	**15 47 41.7**	**+1.7**
PDG	**Podgorica**	**3.29**	**343**		**Pn**	**15 47 02.7**	**+1.0**
PDG	**Podgorica**	**3.29**	**343**	*e*Pn	**Pn**	**15 47 03.3**	**+1.6**
PDG				*i* Sn	**Sn**	**15 47 42.3**	**+1.7**
PDG	**Podgorica**	**3.29**	**343**	*e*Pn	**Pn**	**15 47 00.9**	**-0.8**
PVY	**Plav**	**3.33**	**353**	↑*i*Pn	**Pn**	**15 47 03.4**	**+0.9**
PVY				*i* Sn	**Sn**	**15 47 43.6**	**+1.7**
CEME	**Cevo**	**3.48**	**340**	*e*Pn	**Pn**	**15 47 05.5**	**+1.1**
CEME				*i* Sn	**Sn**	**15 47 46.7**	**+1.3**
HCY	**Herceg Novi**	**3.52**	**334**	*e*Pn	**Pn**	**15 47 05.8**	**+0.9**
IVA	**Berane**	**3.61**	**352**	*e*Pn	**Pn**	**15 47 08.1**	**+1.8**
IVA				*i* Sn	**Sn**	**15 47 50.4**	**+1.6**
KOME	**Kolasin**	**3.64**	**348**	*e*Pn	**Pn**	**15 47 08.2**	**+1.5**
KOME				*i* Sn	**Sn**	**15 47 50.9**	**+1.4**
NKME	**Niksic**	**3.67**	**341**	*e*Pn	**Pn**	**15 47 08.6**	**+1.5**
NKME				*i* Sn	**Sn**	**15 47 51.7**	**+1.4**
CEL	**Celeste**	**3.77**	**256**		**Pn**	**15 47 08.4**	**-0.1**
TREB	**Trebinje**	**3.80**	**335**	*e*Pn	**Pn**	**15 47 09.0**	**+0.1**
ACER	**Acerenza**	**3.83**	**294**	Pn	**Pn**	**15 47 09.5**	**+0.2**
BRY	**Bratogost**	**3.91**	**338**	*e*Pn	**Pn**	**15 47 12.0**	**+1.5**
BRY				*i* Sn	**Sn**	**15 47 57.2**	**+0.9**
BRY	**Bratogost**	**3.91**	**338**	*e*Pn	**Pn**	**15 47 10.9**	**+0.4**
SJES	**Sjenica**	**3.99**	**354**	*e*Pn	**Pn**	**15 47 12.9**	**+1.4**
UPM	**Unac-Piva**	**4.10**	**343**	*e*Pn	**Pn**	**15 47 14.4**	**+1.3**
UPM				*i* Sn	**Sn**	**15 48 01.7**	**+0.8**
UPM	**Unac-Piva**	**4.10**	**343**	*e*Pn	**Pn**	**15 47 14.9**	**+1.8**
PLE	**Pljevlja**	**4.13**	**348**	*e*Pn	**Pn**	**15 47 14.9**	**+1.5**
PLE				*i* Sn	**Sn**	**15 48 02.5**	**+0.9**
KLINJ	**Klinje**	**4.15**	**340**	*e*Pn	**Pn**	**15 47 14.8**	**+1.1**
RDO	**Rodhopi**	**4.25**	**63**	Pn	**Pn**	**15 47 17.4**	**+2.5**
RUDO	**Rudo**	**4.41**	**349**	*e*Pn	**Pn**	**15 47 19.5**	**+2.3**
BBLS	**Lazi&#263i**	**4.65**	**350**	*e*Pn	**Pn**	**15 47 22.7**	**+2.1**
VAE	**Valguarnera**	**5.14**	**251**	Pn	**Pn**	**15 47 23.9**	**-3.4**
	2.8nm,0.3s,baz=224,slow=4.6,SNR=6.4						
VAE					Sn	**15 48 24.1**	**-2.4**
	1.8nm,0.3s,baz=81,slow=13,SNR=2.1						
RAFF	**Raffo Rosso**	**5.28**	**249**	Pn	**Pn**	**15 47 29.2**	**+0.1**
IDI	**Anoyia**	**5.29**	**138**	Pn	**Pn**	**15 47 29.3**	**0.0**
	3.2nm,0.4s,baz=298,slow=12,SNR=9.2						
IDI					Sn	**Sn**	**15 48 28.8**	**-1.3**
	3.4nm,0.3s,baz=331,slow=18,SNR=6.3						
FRGS	**Fruska Gora**	**5.89**	**355**	*e*Pn	**Pn**	**15 47 38.1**	**+0.6**
BLY	**Banja Luka**	**6.00**	**336**	*e*Pn	**Pn**	**15 47 37.1**	**-1.9**
NRCA	**Norcia**	**6.63**	**305**		**Pn**	**15 47 47.8**	**0.0**
FDMO	**Fiordimonte**	**6.75**	**306**		**Pn**	**15 47 49.6**	**+0.2**
MORH	**Mrgy, Hungar**	**7.06**	**349**	*e*Pn	**Pn**	**15 47 53.4**	**-0.1**
MLR	**Muntele Rosu**	**7.37**	**31**	Pn	**Pn**	**15 48 01.3**	**+3.3**
	1.0nm,0.3s,baz=230,slow=11,SNR=8.7						
MLR					Sn	**Sn**	**15 49 24.2**	**+2.7**
	0.2nm,0.3s,baz=168,slow=20,SNR=0.9						
	5.0nm,0.6s						
MLR	**Muntele Rosu**	**7.37**	**31**		**Pn**	**15 48 00.1**	**+2.0**
SOKA	**Soboth**	**8.41**	**333**	*e*Pn	**Pn**	**15 48 12.4**	**+0.2**
	1.1nm,0.2s						
OBKA	**Obir**	**8.45**	**331**	*e*Pn	**Pn**	**15 48 13.7**	**+1.0**
	1.7nm,0.2s						
TEOL	**Teolo**	**8.94**	**316**	Pn	**Pn**	**15 48 19.5**	**+0.2**
ABTA	**Abfaltersbach**	**9.49**	**324**	*e*Pn	**Pn**	**15 48 29.4**	**+2.5**
	0.6nm,0.2s						
MOA	**Molln**	**9.69**	**334**	*e*Pn	**Pn**	**15 48 31.0**	**+1.4**
	0.9nm,0.2s						
BIOA	**Bad Ischl, Aus**	**9.78**	**331**	*e*Pn	**Pn**	**15 48 31.1**	**+0.2**
	1.9nm,0.3s						
LESA	**Schwarzleotal**	**9.94**	**327**	*e*Pn	**Pn**	**15 48 33.8**	**+0.7**
	0.9nm,0.3s						
BRTR	**Keskin Array B**	**10.13**	**83**	Pn	**Pn**	**15 48 39.7**	**+3.8**
	0.1nm,0.3s,baz=286,slow=10,SNR=2.4						
	0.5nm,0.5s						
CKRC	**Cesky Krumlov**	**10.53**	**337**	*e*SN	Sn	15 50 26.6	-12
MOTA	**Moosalm**	**10.58**	**323**	*e*Pn	**Pn**	**15 48 41.9**	**-0.1**
	1.2nm,0.4s						
GERES	**GERESS Array B**	**10.74**	**335**	Pn	**Pn**	**15 48 43.7**	**-0.4**
	baz=155,slow=12,SNR=4.3						
GERES					Sn	**Sn**	**15 50 40.9**	**-3.2**
	0.1nm,0.3s,baz=204,slow=34,SNR=2.1						
	0.5nm,0.4s						
DAVOX	**Davos/Dischmat**	**10.80**	**317**	Pn	**Pn**	**15 48 44.8**	**-0.3**
	0.2nm,0.3s,baz=131,slow=18,SNR=2.6						
	1.1nm,0.5s						
KHC	**Kasperske Hory**	**11.03**	**335**	*e*SN	Sn	15 50 37.0	-14
KOPT	**Kop Dagi**	**15.39**	**81**	Pn	**Pn**	**15 49 48.7**	**+1.1**
KOPT				IAmb	IAmb	15 49 50.6	
	comp=Z,7.5nm,1.2s						
ESDC	**Sonseca Array**	**18.91**	**279**	P	**P**	**15 50 27.6**	**-3.3**
	comp=Z,0.1nm,0.3s,baz=111,slow=14,SNR=1.4						
	comp=Z,0.5nm,0.7s						
ESDC	**Sonseca Array**	**18.91**	**279**	P	**P**	**15 50 29.1**	**-1.8**
HFS	**Hagfors**	**21.31**	**351**	P	**P**	**15 50 56.5**	**-0.3**
	comp=Z,1.5nm,0.5s,baz=163,slow=11,SNR=8.1						
	comp=Z,1.5nm,0.5s						
NC602	**NORSAR Array S**	**22.19**	**348**	P	**P**	**15 51 06.1**	**-0.1**
FINES	**FINESS Array B**	**22.44**	**7**	P	**P**	**15 51 08.6**	**-0.3**
	comp=Z,3.0nm,0.8s,baz=182,slow=9.4,SNR=9.0						
	comp=Z,3.0nm,0.8s						
FIA1	**FINESS Array S**	**22.44**	**7**	P	**P**	**15 51 08.6**	**-0.3**
NB2	**NORSAR Subarra**	**22.53**	**348**	P	**P**	**15 51 09.4**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=164,slow=11						
NOA	**NORSAR Array B**	**22.53**	**348**	P	**P**	**15 51 09.5**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=164,slow=10,SNR=3.9						
	comp=Z,0.5nm,0.5s						
EKA	**Eskdalemuir Ar**	**22.54**	**323**	P	**P**	**15 51 09.2**	**-0.8**
	comp=Z,2.7nm,0.8s,baz=126,slow=11,SNR=1.8						
	comp=Z,2.7nm,0.8s						
ARCES	**ARCESS Array B**	**30.42**	**3**	P	**P**	**15 52 21.4**	**-0.8**
	comp=Z,6.4nm,0.9s,baz=187,slow=10,SNR=6.1						
	comp=Z,6.4nm,0.9s						
ARCES	**ARCESS Array B**	**30.42**	**3**	P	**P**	**15 52 21.8**	**-0.4**
ARCES				IAmb	IAmb	15 52 43.8	
	comp=Z,15nm,1.1s						
TORD	**Torodi Ar. Bea**	**30.91**	**218**	P	**P**	**15 52 26.5**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=30,slow=7.8,SNR=3.8						
	comp=Z,0.7nm,0.6s						
BVAR	**Borovoye Array**	**36.40**	**51**	P	**P**	**15 53 15.2**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=235,slow=40,SNR=1.3						
	comp=Z,0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**41.56**	**54**	P	**P**	**15 53 56.7**	**-1.0**
	comp=Z,0.6nm,0.7s,baz=285,slow=9.4,SNR=5.1						
	comp=Z,0.6nm,0.7s						
KURK	**Kurchatov**	**41.61**	**54**	P	**P**	**15 53 58.1**	**+0.1**
KURK				IAmb	IAmb	15 54 36.6	
	comp=Z,3.3nm,1.4s						
MKAR	**Makanchi Array**	**44.71**	**59**	P	**P**	**15 54 22.2**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=269,slow=8.0,SNR=13						
	comp=Z,0.8nm,0.5s						
ZALV	**Zalesovo Beam**	**44.94**	**49**	P	**P**	**15 54 23.8**	**-1.2**
	comp=Z,1.6nm,0.5s,baz=279,slow=7.8,SNR=7.7						
	comp=Z,1.6nm,0.5s						
GTA2	**Gaotai**	**59.22**	**62**	*e*P	**P**	**15 56 13.5**	**+1.9**
GTA2				pmax	pmax		
	comp=Z,3.0nm,1.0s						
G31M	**Satah River**	**72.37**	**350**	P	**P**	**15 57 35.4**	**-0.3**
G31M				IAmb	IAmb	15 57 35.9	
	comp=Z,2.8nm,1.3s						

*UCR **24** 15:47:48.9±1.1, 10°.93N×86°.42W, h1km±7km, MW3.9, Presumed earthquake*
*CATAC **24** 15:47:49.0±0.5, 11°N±2°×8°6W±°, h16km±3km, M3.3/21, MLv3.3/21, Error ellipse: s-maj=5.4km s-min=3.2km az=42.5, confirmed*

ISC 24 15:47:48.7±1.5, 10°.93N±0°.04×86°.45W±0°.05, h9km±9km, n61, σ0$57/96, 13C-9D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCRUZ	**La Cruz**	**0.82**	**79**	*e*P	**Pg**	**15 48 04.4**	**-0.1**
LCRUZ				*e*S	**Sn**	**15 48 18.3**	**-0.4**
NADN	**Granada**	**0.92**	**27**	P	**Pg**	**15 48 06.7**	**+0.3**
NADN				S	**Sb**	**15 48 20.0**	**+0.9**
ELI1	**Hacienda Flor**	**0.93**	**107**	P	**Pg**	**15 48 06.4**	**-0.1**
ELI1				S	**Sn**	**15 48 20.4**	**-0.9**
ALIBA	**Liberia Airpor**	**0.95**	**110**	↑*i*P	**Pg**	**15 48 07.0**	**0.0**
ALIBA				*e*S	**Sn**	**15 48 21.5**	**-0.4**
CARN	**Rivas**	**0.95**	**74**	↓P	**Pn**	**15 48 08.2**	**0.0**
CARN				S	**Sn**	**15 48 21.5**	**-0.4**
CARN	**Rivas**	**0.95**	**74**	*e*P	**Pg**	**15 48 07.0**	**0.0**
CARN				*e*S	**Sn**	**15 48 21.1**	**-0.8**
JAPN	**AI SSO del Vol**	**0.97**	**52**	*e*P	**Pb**	**15 48 08.0**	**+0.4**
MORN	**AI O del Volca**	**1.00**	**52**	↓P	**Pg**	**15 48 08.3**	**+0.3**
DELF	**Filadelfia**	**1.00**	**118**	*e*P	**Pb**	**15 48 08.3**	**+0.1**
DELF				*e*S	**Sn**	**15 48 22.7**	**-0.5**
LAPC	**Finca la Perla**	**1.01**	**99**	↑*e*P	**Pg**	**15 48 07.7**	**-0.5**
LAPC				*e*S	**Sb**	**15 48 22.0**	**+0.3**
NANN	**Nandasmo**	**1.06**	**18**	↑P	**Pn**	**15 48 10.0**	**+0.3**
NANN				S	**Sb**	**15 48 24.0**	**+0.8**
VRLE	**La Escondida,**	**1.08**	**97**	*e*P	**Pg**	**15 48 09.4**	**0.0**
VORI	**VORI**	**1.09**	**95**	*e*P	**Pn**	**15 48 10.4**	**+0.1**
GPS2	**Hotel Rincn d**	**1.10**	**99**	*e*P	**Pn**	**15 48 10.2**	**-0.1**
GPS2				*e*S	**Sb**	**15 48 24.6**	**+0.3**
MASN	**Masaya**	**1.10**	**16**	S	**Sb**	**15 48 25.0**	**+0.7**
BUAI	**Buenos Aires**	**1.10**	**92**	*e*P	**Pg**	**15 48 09.7**	**-0.2**
BUAI				*e*S	**Sn**	**15 48 26.0**	**+0.3**
MAS3	**AI N del Volca**	**1.13**	**14**	P	**Pg**	**15 48 09.8**	**-0.5**
MAS3				S	**Sg**	**15 48 25.5**	**+0.5**
JUD3	**Juan Diaz 3**	**1.17**	**130**	*e*P	**Pb**	**15 48 11.0**	**-0.1**
UNAN	**Cigeo UNAN**	**1.19**	**9**	↑P	**Pb**	**15 48 11.1**	**-0.4**
UNAN				S	**Sg**	**15 48 27.9**	**+0.8**
TISN	**Laguna Tiscapa**	**1.22**

AC01	**Pan de Azucar**	**4.21**	**237**	*e*P	**Pn**	15 52 54.4	**-0.2**
AC01				*e*S	**Sn**	**15 53 42.2**	**-2.7**
AC01				IAML		15 53 42.8	
	comp=Z,52nm,0.4s						
PATCX	**Punta Patache**	**4.47**	**313**	*e*P	**Pn**	15 52 58.0	**0.0**
PATCX				IAML		15 53 54.6	
	comp=Z,45nm,0.3s						
HMBC	**Humberstone**	**4.71**	**320**	*e*P	**Pn**	**15 53 00.9**	**-0.1**
HMBC				IAML		15 53 59.6	
	comp=Z,88nm,0.6s						
GO03	**Copiapo**	**4.88**	**221**	*e*P	**Sn**	**15 53 03.1**	**+0.1**
GO03				*e*S	**Sn**	**15 53 58.1**	**-2.2**
GO03				IAML		15 54 03.9	
	comp=Z,48nm,0.5s						
VCA	**Vinchina**	**4.99**	**196**	*e*P	Pn	15 53 10.0	+5.4
PB11	**IPOC Station P**	**4.99**	**326**	*e*P	**Pn**	**15 53 04.3**	**-0.4**
PB11				IAML		15 54 05.1	
	comp=Z,35nm,0.6s						
LPAZ	**La Paz**	**7.72**	**349**	P	**Pn**	**15 53 41.9**	**+1.2**
	comp=Z,0.8nm,0.3s,baz=146,slow=6.5,SNR=11						
LPAZ				S	**Sn**	**15 55 06.0**	**-2.2**
	comp=Z,0.7nm,0.6s,baz=60,slow=18,SNR=1.7						
CFA	**Coronel Fontan**	**7.78**	**190**	P	**Pn**	**15 53 41.1**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=40,slow=15,SNR=37						
CPUP	**Villa Florida**	**8.79**	**108**	P	**Pn**	**15 53 54.7**	**+0.9**
	comp=Z,1.1nm,0.5s,baz=288,slow=12,SNR=5.2						
SIV	**San Ignacio**	**9.48**	**35**	P	**Pn**	**15 54 02.8**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=218,slow=18,SNR=2.1						
PLCA	**Paso Flores**	**17.08**	**190**	P	**Pn**	**15 55 38.0**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=15,slow=16,SNR=4.3						
BDFB	**Brasilia**	**19.37**	**68**	P	**Pn**	**15 56 02.1**	**-2.8**
	comp=Z,4.7nm,0.6s,baz=245,slow=12,SNR=6.4						
QSPA	**South Pole Qui**	**66.28**	**180**	P	**P**	**16 02 19.5**	**+2.0**
	comp=Z,0.5nm,0.6s,baz=117,slow=2.3,SNR=7.6						
	comp=Z,0.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**76.25**	**69**	P	**P**	**16 03 18.2**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=248,slow=6.8,SNR=3.7						
	comp=Z,0.5nm,0.6s						
ASAR	**Alice Springs**	**128.66**	**204**	PKP	**PKiKP**	**16 10 35.4**	**-0.2**
	comp=Z,0.4nm,1.0s,baz=141,slow=1.6,SNR=1.6						
WRA	**Warramunga Arr**	**131.84**	**207**	PKP	**PKiKP**	**16 10 42.3**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=142,slow=2.0,SNR=0.9						
MKAR	**Makanchi Array**	**146.27**	**40**	PKPbc	**PKPab**	**16 11 07.9**	**-1.0**
	comp=Z,0.3nm,0.6s,baz=306,slow=2.8,SNR=4.2						

*RSNC **24** 15:54:10.5±0.0, 7°N±1°×7°3W±°, h146km±1km, M3.1, mB4.8, mb3.7, ML2.7, MLv3.5, Mw(mB)4.1*
*FUNV **24** 15:54:10.2, 7°.25N×73°.44W, h16km, MW3.3, Presumed earthquake*
ISC 24 15:54:08.4±1.3, **6°.84N**±0°.03×**73°.13W**±0°.04, **h155**km±8km, **n38**, σ0**1**s**52**/72, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.26**	**192**	P	**Pn**	**15 54 30.4**	**+0.6**
BARC				S	**Sn**	**15 54 44.9**	**-1.2**
PAMC	**Pamplona, Colo**	**0.65**	**41**	P	**Pn**	**15 54 33.3**	**+1.5**
PAMC				S	**Sn**	**15 54 50.2**	**+0.6**
RUSC	**La Rusia**	**0.95**	**177**	P	**Pn**	**15 54 34.5**	**+0.6**
RUSC				S	**Sn**	**15 54 52.8**	**-0.5**
RUSC	**La Rusia**	**0.95**	**177**	*e*P	**Pn**	**15 54 34.6**	**+0.8**
RUSC				*e*S	**Sn**	**15 54 52.4**	**-0.8**
PTBC	**PUERTO BERRIO,**	**1.35**	**257**	P	**Pn**	**15 54 37.0**	**+0.1**
PTBC				S	**Sn**	**15 54 57.6**	**-1.1**
OCAC	**Ocana**	**1.40**	**352**	P	**Pn**	**15 54 38.5**	**+0.9**
OCAC				S	**Sn**	**15 55 00.1**	**+0.2**
SPBC	**San Pablo de B**	**1.51**	**218**	P	**Pn**	**15 54 39.3**	**+0.7**
SPBC				S	**Sn**	**15 55 00.9**	**-0.9**
NORC	**Norcasia**	**2.15**	**234**	P	**Pn**	**15 54 46.1**	**+0.5**
NORC				S	**Sn**	**15 55 14.3**	**0.0**
CHIC	**Chingaza**	**2.28**	**195**	P	**Pn**	**15 54 48.3**	**+0.7**
CHIC				S	**Sn**	**15 55 17.7**	**-0.1**
ROSC	**El Rosal**	**2.32**	**211**	P	**Pn**	**15 54 50.0**	**+2.0**
ROSC				S	**Sn**	**15 55 18.4**	**-0.1**
HELC	**Santa Helena**	**2.47**	**255**	P	**Pn**	**15 54 51.4**	**+1.6**
HELC				S	**Sn**	**15 55 22.1**	**+0.4**
HELC	**Santa Helena**	**2.47**	**255**	*e*P	**Pn**	**15 54 47.2**	**-2.6**
HELC				*e*S	**Sn**	**15 55 15.4**	**-6.2**
UREC	**San Jos de Ur**	**2.55**	**291**	P	**Pn**	**15 54 50.0**	**-0.4**
UREC				S	**Sn**	**15 55 21.7**	**-1.1**
GUY2C	**Guyana, Caldas**	**2.74**	**234**	P	**Pn**	**15 54 53.9**	**+0.6**
GUY2C				S	**Sn**	**15 55 27.1**	**-0.8**
VILC	**Villavicencio,**	**2.77**	**192**	P	**Pn**	**15 54 53.4**	**+0.1**
VILC				S	**Sn**	**15 55 27.2**	**-0.8**
PTGC	**Puerto Gaitan,**	**2.81**	**159**	P	**Pn**	**15 54 53.7**	**0.0**
PTGC				S	**Sn**	**15 55 27.1**	**-1.6**
RECRC	**Villamaria, Ca**	**2.90**	**230**	P	**Pn**	**15 54 57.5**	**+2.2**
RECRC				S	**Sn**	**15 55 32.5**	**+1.1**
NIZA	**Niza - Manizal**	**2.93**	**233**	P	**Pn**	**15 54 57.0**	**+1.6**
NIZA				S	**Sn**	**15 55 34.7**	**+3.0**
CBOC	**Ciudad Bolivar**	**3.02**	**251**	P	**Pn**	**15 54 58.0**	**+1.5**
CBOC				S	**Sn**	**15 55 33.7**	**0.0**
DBBC	**Dabeiba**	**3.06**	**273**	P	**Pn**	**15 54 57.7**	**+0.8**
DBBC				S	**Sn**	**15 55 32.4**	**-2.0**
ARGC	**Ariguani, Magd**	**3.19**	**340**	P	**Pn**	**15 55 00.8**	**+2.3**
ARGC				S	**Sn**	**15 55 38.8**	**+1.5**
SDV	**Santo Domingo**	**3.20**	**50**	P	**Pn**	**15 55 00.0**	**+1.3**
SDV				S	**Sn**	**15 55 36.9**	**-0.8**
SDV	**Santo Domingo**	**3.20**	**50**	*e*P	**Pn**	**15 54 59.9**	**+1.1**
SDV				*e*S	**Sn**	**15 55 35.6**	**-2.1**
ANIL	**Santa Ana**	**3.25**	**224**	P	**Pn**	**15 55 01.0**	**+1.5**
ANIL				S	**Sn**	**15 55 39.9**	**+0.8**
PRAC	**Prado**	**3.57**	**209**	P	**Pn**	**15 55 04.2**	**+0.9**
PRAC				S	**Sn**	**15 55 45.8**	**-0.1**
APAC	**Apartado, Choc**	**3.58**	**287**	P	**Pn**	**15 55 04.0**	**+0.6**
APAC				S	**Sn**	**15 55 42.5**	**-0.8**
ORTC	**Ortega, Tolima**	**3.60**	**216**	P	**Pn**	**15 55 04.7**	**+1.0**
ORTC				S	**Sn**	**15 55 47.2**	**+0.6**
SJCC	**San Jacinto, C**	**3.65**	**326**	P	**Pn**	**15 55 04.6**	**+0.2**
SJCC				S	**Sn**	**15 55 45.6**	**-2.2**
SJCC	**San Jacinto, C**	**3.65**	**326**	*e*P	Pn	15 54 57.9	-6.4
SJCC				*e*S	Sn	15 55 33.7	-14
PLMC	**San Jos del P**	**3.68**	**239**	P	**Pn**	**15 55 05.8**	**+1.0**
PLMC				S	**Sn**	**15 55 49.1**	**+0.6**
URMC	**La Uribe, Meta**	**3.78**	**199**	P	**Pn**	**15 55 07.1**	**+1.0**
URMC				S	**Sn**	**15 55 51.5**	**+0.5**
YOTC	**Yotoco, Valle**	**4.28**	**229**	P	**Pn**	**15 55 12.1**	**-0.5**
YOTC				S	**Sn**	**15 56 02.1**	**-0.5**
SMRC	**Santa Marta, M**	**4.43**	**346**	P	**Pn**	**15 55 15.2**	**+0.8**
SMRC				S	**Sn**	**15 56 03.3**	**-2.6**
MACC	**Macarena, Meta**	**4.72**	**189**	P	**Pn**	**15 55 17.5**	**-0.9**
MACC				S	**Sn**	**15 56 07.9**	**-5.0**
URIC	**Uribia, Colomb**	**4.96**	**13**	P	**Pn**	**15 55 21.0**	**-0.4**
URIC				S	**Sn**	**15 56 18.0**	**-0.4**
JAMC	**Jamundi, Valle**	**5.04**	**225**	P	**Pn**	**15 55 23.3**	**+0.5**
	0.0nm7.8nm,0.8s						
JAMC				S	**Sn**	**15 56 21.0**	**+0.2**
	0.0nm7.8nm,0.8s						
GARC	**Garzon, Huila**	**5.19**	**207**	P	**Pn**	**15 55 24.4**	**-0.4**
FLOC	**Florencia**	**5.80**	**206**	P	**Pn**	**15 55 32.8**	**+0.2**
	8.0nm,0.6s						

*IDC **24** 16:02:29.5±1.2, 0°.78N×122°.32E, h0km, mb3.7/4, mbtmp3.7/5, ML4.1/1, Error ellipse: s-maj=138.0km s-min=19.3km az=64.0*
*NEIC **24** 16:02:36.8±0.5, 0°.9N±0°.1×122°.67E±0°.02, h50km±14km, mb4.0/7, Error ellipse: s-maj=18.2km s-min=3.0km az=185.0*
*DJA **24** 16:02:44.0±0.3, 1°N±2°×12°2E±°, h110km±4km, M3.9/24, mb4.0/3, MLv3.9/24*
ISC 24 16:02:43.3±1.0, **0°.50N**±0°.09×**121°.78E**±0°.05, **h122**km±7km, **n25**, σ1**9**s**23**/26, **mb3.9**/9, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	**0.17**	**99**	P	**Pn**	**16 02 59.8**	**-0.3**
MRSI				S	**Sn**	**16 03 12.1**	**-0.6**
TOLI2	**Tolitoli**	**1.16**	**301**		**Pn**	**16 03 06.6**	**-0.5**
GTOI	**Gorontalo**	**1.24**	**84**	P	**Pn**	**16 03 08.0**	**0.0**
GTOI				S	**Sn**	**16 03 26.8**	**+0.1**
APSI	**Ampana**	**1.41**	**185**	P	**Pn**	**16 03 10.7**	**+0.9**
LUWI	**Luwuk**	**1.83**	**147**	Pn	**Pn**	**16 03 15.3**	**+0.6**
LUWI	**Luwuk**	**1.83**	**147**	P	**Pn**	**16 03 17.2**	**+2.4**
MPSI	**Mapaga**	**1.88**	**265**	P	**Pn**	**16 03 15.5**	**+0.1**
PCI	**Palu**	**2.39**	**234**	P	**Pn**	**16 03 20.8**	**-1.0**
MNI	**Manado**	**3.20**	**73**	P	**Pn**	**16 03 32.3**	**-0.1**
TTSI	**Tana Toraja**	**4.03**	**209**	P	**Pn**	**16 03 43.8**	**+0.5**
SANI	**Sanana**	**4.92**	**121**	P	**Pn**	**16 03 53.7**	**-1.5**
TNTI	**Ternate**	**5.60**	**87**	Pn	Pn	16 03 44.9	-19
MMRI	**Maumere**	**9.09**	**177**	Pn	**Pn**	**16 04 50.5**	**-1.0**
FITZ	**Fitzroy Crossi**	**18.87**	**169**	P	**P**	**16 06 54.0**	**-0.2**
	0.4nm,0.3s,baz=18,slow=9.8,SNR=8.4						
	0.8nm,0.3s						
WB0	**Warramunga Arr**	**23.64**	**149**	P	**P**	**16 07 42.0**	**-1.6**
WB0				IAmb	IAmb	16 07 43.6	
	comp=Z,4.3nm,0.5s						
WRAB	**Tennant Creek**	**23.76**	**149**	P	**P**	**16 07 43.0**	**-1.7**
WRAB				IAmb	IAmb	16 08 08.0	
	comp=Z,1.1nm,1.4s						
WRA	**Warramunga Arr**	**23.76**	**149**	P	**P**	**16 07 43.4**	**-1.3**
	comp=Z,3.1nm,0.7s,baz=325,slow=11,SNR=31						
	comp=Z,3.1nm,0.7s						
WRA	**Warramunga Arr**	**23.76**	**149**	P	**P**	**16 07 43.1**	**-1.6**
WR8	**Warramunga Arr**	**23.85**	**149**		**P**	**16 07 44.1**	**-1.4**
AS31	**Alice Springs**	**26.76**	**155**	P	**P**	**16 08 11.1**	**-0.7**
AS31				IAmb	IAmb	16 08 54.7	
	comp=Z,0.5nm,0.9s						
ASAR	**Alice Springs**	**26.76**	**155**	P	**P**	**16 08 11.3**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=329,slow=8.7,SNR=16						
	comp=Z,0.7nm,0.8s						
MKAR	**Makanchi Array**	**57.55**	**329**	P	**P**	**16 12 22.0**	**+1.9**
	comp=Z,0.4nm,0.3s,baz=126,slow=8.3,SNR=12						
	comp=Z,0.4nm,0.3s						
MAKZ	**Makanchi**	**57.72**	**329**	P	**P**	**16 12 23.4**	**+2.0**
MAKZ				IAmb	IAmb	16 12 43.2	
	comp=Z,1.0nm,1.4s						
KURBB	**Kurchatov Arra**	**61.92**	**330**	P	**P**	**16 12 49.8**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=119,slow=5.8,SNR=2.1						
	comp=Z,0.2nm,0.4s						
KURK	**Kurchatov**	**61.94**	**330**	P	**P**	**16 12 50.9**	**+0.9**
KURK				IAmb	IAmb	16 12 58.1	
	comp=Z,1.9nm,1.1s						

*IDC **24** 16:13:59.7±5.9, 53°.24N×170°.97W, h131km±54km, mb3.1/6, mbtmp3.6/9, Error ellipse: s-maj=53.1km s-min=16.3km az=8.0*
*NEIC **24** 16:14:05.6±0.9, 53°.3N±0°.2×171°.03W±0°.08, h193km±10km, mb3.9/41, ML3.8/12, ML3.3(AEIC), Error ellipse: s-maj=23.2km s-min=1.0km az=162.0*
*AEIC **24** 16:14:06.6±1.7, 53°.1N±0°.2×170°.96W±0°.08, h193km±7km, Error ellipse: s-maj=22.8km s-min=0.8km az=163.0*
ISC 24 16:14:05.3±0.7, **53°.2N**±0°.1×**170°.99W**±0°.05, **h200**km, **n87**, σ0**9**9**3**/86, **mb3.7**/12, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKSP	**Okmok Steeple**	**1.63**	**86**		**Pn**	**16 14 39.9**	**-0.3**
OKSP					**Sn**	**16 15 05.8**	**-1.4**
OKNC	**Okmok New Cone**	**1.75**	**79**		**Pn**	**16 14 40.6**	**-0.7**
OKFG	**Magazine Ridge**	**1.87**	**81**		**Pn**	**16 14 42.2**	**-0.1**
KOSE	**Korovin Southe**	**2.03**	**247**		**Pn**	**16 14 43.9**	**-0.2**
KONE	**Korovin Northe**	**2.05**	**249**		**Pn**	**16 14 43.9**	**-0.4**
KOFP	**Korovin Flat P**	**2.09**	**246**		**Pn**	**16 14 44.8**	**+0.1**
KOFP					**Sn**	**16 15 16.1**	**+0.7**
KOKL	**Mount Kliuchef**	**2.12**	**248**		**Pn**	**16 14 45.3**	**+0.2**
MAPS	**Pakushin South**	**2.51**	**73**		**Pn**	**16 14 49.1**	**0.0**
MAPS					**Sn**	**16 15 22.8**	**-0.6**
MGOD	**Makushin Gods**	**2.54**	**74**		**Pn**	**16 14 49.3**	**-0.3**
MNAT	**Makushin Natee**	**2.67**	**73**		**Pn**	**16 14 51.0**	**0.0**
UNV	**Unalaska Valle**	**2.77**	**74**		**Pn**	**16 14 51.8**	**-0.3**
UNV				IAML		16 15 28.5	
	comp=N,101nm,0.4s						
UNV	**Unalaska Valle**	**2.77**	**74**		**Sn**	**16 15 28.2**	**-0.5**
LVA	**Lava Point**	**3.12**	**69**	Pn	**Pn**	**16 14 56.3**	**+0.1**
LVA				IAML		16 15 44.2	
	comp=N,150nm,0.7s						
LVA				IAML		16 15 45.6	
	comp=E,72nm,0.6s						
ZRO	**Akutan Zero**	**3.13**	**71**		**Pn**	**16 14 56.6**	**+0.3**
ZRO					**Sn**	**16 15 35.4**	**-0.9**
GSIG	**Igitkin Island**	**3.23**	**251**		**Pn**	**16 14 56.9**	**-0.7**
GSIG					**Sn**	**16 15 35.7**	**-2.9**
AKUT	**Akutan**	**3.26**	**71**	Pn	**Pn**	**16 14 57.9**	**+0.1**
GSMY	**Great Sitkin M**	**3.29**	**252**		**Pn**	**16 14 58.2**	**-0.1**
GSTD	**Great Sitkin T**	**3.33**	**253**		**Pn**	**16 14 58.4**	**-0.5**
ADK	**Adak**	**3.71**	**252**	Pn	**Pn**	**16 15 03.0**	**-0.4**
ADK					**Sn**	**16 15 47.7**	**-1.1**
ADK				IAML		16 15 49.5	
	comp=E,324nm,0.2s						
KIWB	**Kanaga Island**	**3.98**	**253**	Pn	**Pn**	**16 15 06.7**	**-0.1**
KIWB					**Sn**	**16 15 54.9**	**-0.2**
KIWB				IAML		16 15 56.4	
	comp=E,142nm,0.4s						
KIWB				IAML		16 15 57.5	
	comp=N,165nm,0.5s						
KIMD	**Kanaga Island**	**4.07**	**252**		**Pn**	**16 15 07.4**	**-0.4**
ISNN	**Isanotski Nort**	**4.57**	**66**		**Pn**	**16 15 14.7**	**+0.5**
FALS	**False Pass**	**4.78**	**66**	Pn	**Pn**	**16 15 16.7**	**0.0**
DT1	**Dutton Round H**	**5.48**	**66**		**Pn**	**16 15 24.8**	**-0.9**
HAG	**Hague Volcano**	**5.75**	**64**		**Pn**	**16 15 28.9**	**-0.3**
PS4A	**Pavlof South-4**	**5.79**	**64**		**Pn**	**16 15 29.2**	**-0.4**
CEPE	**Semis' Perret**	**5.83**	**262**		**Pn**	**16 15 31.0**	**+0.7**
AMKA	**Amchitka**	**6.22**	**257**		**Pn**	**16 15 34.3**	**-1.0**
SDPT	**Sand Point**	**6.54**	**66**	Pn	**Pn**	**16 15 37.8**	**-1.6**
CNBA	**Chernabura Isl**	**6.93**	**72**	Pn	**Pn**	**16 15 42.5**	**-1.9**
O14K	**Tigyukauivet M**	**8.16**	**38**	Pn	**Pn**	**16 16 00.1**	**-0.3**
M13K	**Dall Lake**	**8.39**	**27**	Pn	**Pn**	**16 16 03.1**	**-0.2**
N15K	**Kwethluk River**	**9.23**	**36**	Pn	**Pn**	**16 16 14.2**	**-0.1**
O16K	**Kokwok River B**	**9.62**	**43**	Pn	**Pn**	**16 16 19.1**	**-0.2**
O18K	**Koktuh Hills**	**10.98**	**46**	Pn	**Pn**	**16 16 36.9**	**0.0**
KDAK	**Kodiak Island**	**11.41**	**59**	P	**Pn**	**16 16 38.8**	**-3.6**
	comp=N,8.3nm,1.0s,baz=80,slow=3.0,SNR=40						
KDAK				S	Sn	16 18 34.5	-15
	comp=N,6.1nm,0.8s,baz=236,slow=21,SNR=1.8						
N19K	**Bonanza Creek**	**11.79**	**43**	Pn	**Pn**	**16 16 47.5**	**+0.2**
L18K	**Granite Mounta**	**11.84**	**34**	Pn	**Pn**	**16 16 48.2**	**+0.3**
STLK	**Strandline Lak**	**13.25**	**43**	Pn	**Pn**	**16 17 06.3**	**+0.6**
PPLA	**Purkeypile**	**13.88**	**38**	Pn	**Pn**	**16 17 13.8**	**+0.3**
G18K	**Tagagawik**	**14.18**	**21**	P	**Pn**	**16 17 16.8**	**-0.3**
SCM	**Sheep Creek Mo**	**15.32**	**46**	Pn	**Pn**	**16 17 29.1**	**-2.0**
RND	**Reindeer**	**15.42**	**40**		**Pn**	**16 17 31.3**	**-1.0**
KLU	**Klutina**	**15.81**	**48**		**P**	**16 17 35.5**	**-1.3**
KLU				IAmb	IAmb	16 17 41.6	
	comp=Z,6.0nm,1.3s						
M24K	**Tolsona, Glenn**	**15.93**	**46**	P	**P**	**16 17 37.0**	**-1.1**
I23K	**Minto, Yukon-K**	**16.23**	**34**	P	**Pn**	**16 17 41.8**	**-0.2**
I23K				IAmb	IAmb	16 17 44.0	
	comp=Z,5.5nm,0.6s						
BERG	**Berg Lake**	**16.52**	**53**	P	**P**	**16 17 44.0**	**-0.6**
H23K	**Yukon River**	**16.59**	**32**	P	**P**	**16 17 45.5**	**+0.2**
HDA	**Harding Lake**	**16.67**	**38**	P	**Pn**	**16 17 46.5**	**-0.7**
IL31		**16.88**	**37**	P	**P**	**16 17 48.3**	**-0.2**
ILAR	**Eielson Array**	**16.88**	**37**	P	**P**	**16 17 47.1**	**-1.4**
	comp=Z,0.9nm,0.4s,baz=232,slow=9.1,SNR=54						
ILAR	**Eielson Array**	**16.88**	**37**	P	**P**	**16 17 48.5**	**0.0**
H24K	**Noodor Dome**	**17.14**	**33**	P	**P**	**16 17 51.5**	**+0.1**
H24K				IAmb	IAmb	16 17 54.5	
	comp=Z,5.9nm,1.1s						
RIDG	**Independent Ri**	**17.16**	**42**	P	**P**	**16 17 51.2**	**-0.4**
RIDG				IAmb	IAmb	16 17 58.7	
	comp=Z,3.0nm,0.4s						
M26K	**Nabesna, AK**	**17.42**	**47**	P	**P**	**16 17 54.9**	**+0.4**
M26K				IAmb	IAmb	16 17 56.2	
	comp=Z,3.6nm,0.4s						
SCRK	**Sand Creek**	**17.60**	**41**		**P**	**16 17 55.6**	**-0.9**
B20K	**Meade River**	**18.05**	**15**	P	**Pn**	**16 18 01.8**	**-1.6**
K27K	**Chicken**	**18.39**	**42**	P	**P**	**16 18 05.3**	**+0.3**
K27K				IAmb	IAmb	16 18 10.1	
	comp=Z,3.3nm,0.7s						
E24K	**Your Creek**	**18.40**	**27**	P	**P**	**16 18 05.5**	**+0.4**
I26K	**Coal Creek Min**	**18.52**	**38**		**P**	**16 18 05.9**	**-0.5**
I26K				IAmb	IAmb	16 18 06.2	
	comp=Z,3.9nm,0.8s						
PETK	**Petropavlovsk-**	**18.71**	**282**	P	**P**	**16 18 07.7**	**-0.8**
	comp=Z,1.6nm,0.7s,baz=84,slow=12,SNR=4.3						
B22K	**Teshekpuk Lake**	**18.99**	**18**	P	**P**	**16 18 10.7**	**-0.6**
B22K				IAmb	IAmb	16 18 51.4	
	comp=Z,5.7nm,1.5s						
D24K	**Happy Valley**	**19.07**	**24**	P	**P**	**16 18 12.3**	**0.0**
C23K	**Itkillik River**	**19.16**	**22**	IAmb	IAmb	16 18 13.8	
	comp=Z,5.0nm,0.8s						
I27K	**Kandik River**	**19.23**	**38**	IAmb	IAmb	16 18 18.3	
	comp=Z,5.9nm,1.0s						
F26K	**Sheenjek River**	**19.43**	**31**	IAmb	IAmb	16 18 20.5	
	comp=Z,3.4nm,0.8s						
H27K	**Steamboat Moun**	**19.55**	**37**	IAmb	IAmb	16 18 58.1	
	comp=Z,4.9nm,1.4s						
I28M	**Miner Creek**	**19.80**	**40**	IAmb	IAmb	16 18 25.1	
	comp=Z,3.5nm,0.6s						
K29M	**Barlow Dome**	**20.23**	**45**	P	**P**	**16 18 25.9**	**+1.0**
E27K	**Coleen River**	**20.51**	**32**	P	**P**	**16 18 28.1**	**+0.4**
E27K				IAmb	IAmb	16 18 30.5	
	comp=Z,2.6nm,0.7s						
F28M	**Old Crow**	**20.78**	**34**		**P**	**16 18 30.8**	**+0.2**
J30M	**Hart River**	**20.94**	**43**	IAmb	IAmb	16 18 33.9	
	comp=Z,2.9nm,0.8s						
D27M	**Malcolm River**	**21.28**	**29**	P	**P**	**16 18 35.8**	**0.0**
EPYK	**Eagle Plains**	**21.37**	**39**	IAmb	IAmb	16 18 51.3	
	comp=Z,3.2nm,1.0s						
SEY	**Seymchan**	**21.40**	**312**	P	**P**	**16 18 35.4**	**-1.7**
	comp=Z,1.2nm,0.5s,baz=89,slow=9.2,SNR=6.0						
	comp=Z,1.2nm,0.5s						
E29M	**Blow River**	**21.80**	**33**	P	**P**	**16 18 41.0**	**0.0**
E29M				IAmb	IAmb	16 18 42.5	
	comp=Z,3.5nm,1.1s						
F31M	**Tsiigehtchic**	**22.85**	**37**	IAmb	IAmb	16 18 50.9	
	comp=Z,2.3nm,0.8s						
INK	**Inuvik**	**23.24**	**35**		**P**	**16 18 54.0**	**-0.2**
YKAW3	**Yellowknife Wh**	**30.46**	**50**	P	**P**	**16 19 58.8**	**0.0**
YKAW3				IAmb	IAmb	16 20 01.1	
	comp=Z,5.6nm,1.5s						
YKA	**Yellowknife Ar**	**30.47**	**50**	P	**P**	**16 19 58.6**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=299,slow=10,SNR=6.8						
	comp=Z,0.3nm,0.6s						
NEW	**Newport**	**33.77**	**76**	P	**P**	**16 20 29.3**	**+1.4**
NEW				IAmb	IAmb	16 20 44.2	
	comp=Z,6.7nm,1.4s						
NVAR	**Mina Array Bea**	**38.66**	**91**	P	**P**	**16 21 10.0**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=302,slow=6.8,SNR=4.0						
	comp=Z,0.7nm,0.7s						
PDAR	**Pinedale Array**	**41.22**	**79**	P	**P**	**16 21 31.3**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=300,slow=2.4,SNR=15						
	comp=Z,0.6nm,0.5s						
PDAR	**Pinedale Array**	**41.22**	**79**	P	**P**	**16 21 31.5**	**+0.9**
PV13	**Radium Mtn., P**	**44.53**	**84**	P	**P**	**16 21 58.5**	**+1.3**
PV13				IAmb	IAmb	16 21 59.6	
	comp=Z,3.6nm,0.9s						
TXAR	**Lajitas Array**	**53.71**	**88**	P	**P**	**16 23 07.8**	**+1.2**
	comp=Z,0.4nm,0.4s,baz=307,slow=6.5,SNR=10						
	comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	**62.54**	**312**	P	**P**	**16 24 09.8**	**+2.3**
	comp=Z,0.1nm,0.4s,baz=36,slow=7.0,SNR=1.4						
	comp=Z,0.1nm,0.4s						

*IDC **24** 16:26:10.1±3.9, 26°.56S×70°.30E, h0km, mb3.8/7, mbtmp3.8/7, MS3.7/17, Error ellipse: s-maj=113.4km s-min=32.1km az=50.0*
*NEIC **24** 16:26:11.3±1.1, 26°.7S±0°.2×70°.3E±0°.2, h10km±2km, mb4.2/7, Error ellipse: s-maj=35.6km s-min=32.5km az=297.0*
ISC 24 16:26:12.4±3.3, **26°.5S**±0°.4×**70°.6E**±0°.5, **h10**km, **n45**, σ0**9**71/17, **mb3.9**/11, **MS3.8**/17, **Indian Ocean Triple Junction**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**18.85**	**6**	T	T	16 49 22.9	
	baz=185,slow=76,SNR=53						
H08S2	**Diego Garcia H**	**18.85**	**6**	T	T	16 49 29.3	
	baz=185,slow=76,SNR=54						
H08S3	**Diego Garcia H**	**18.87**	**6**	T	T	16 49 30.6	
	baz=185,slow=76,SNR=63						
H04N2	**CROZET ISLANDS**	**24.66**	**212**	T	T	16 57 48.0	
	baz=44,slow=74,SNR=2993						
H04N1	**CROZET ISLANDS**	**24.67**	**212**	T	T	16 57 51.4	
	baz=44,slow=74,SNR=2959						
H04N3	**CROZET ISLANDS**	**24.68**	**212**	T	T	16 57 50.4	
	baz=44,slow=74,SNR=3215						
H04S1	**CROZET ISLANDS**	**25.10**	**211**	T	T	16 58 24.7	
	baz=58,slow=19,SNR=4.9						
H04S3

s108,c156; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.86±.11; $M_{\theta\theta}$4.34±.09; $M_{\phi\phi}$-0.47±.12; $M_{r\theta}$2.60±.27; $M_{\theta\phi}$2.52±.09; $M_{r\phi}$0.92±.39; Best double couple: $M_0$5.39900×10^{16} NP1:ϕ_s63.00000°,δ30.00000°, λ-96.00000°. NP2:ϕ_s250.00000°,δ60.00000°, λ-87.00000°. Principal axes: T 6.1740, Plg15.0000°, Azm337.0000°; N -1.5420, Plg3.0000°, Azm68.0000°; P -4.6250, Plg74.0000°, Azm169.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 24 16:54:46.9±0.5,2.47N±0.07×95.36W±0.09,h10km,n249, σ1§50/119,mb4.9/112,MS4.4/43,1C,Galapagos Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	**Las Juntas de**	**12.93**	**53**	LR	LR	17 01 24.8	
	comp=Z,844nm,20.0s,baz=258,slow=30						
MTO3	**Montecristo**	**13.26**	**26**	Pn	**Pn**	**16 57 53.9**	**-1.6**
APG	**El Apazote**	**13.36**	**21**	Pn	**Pn**	**16 58 00.3**	**+3.4**
	baz=222,slow=19,SNR=9.3						
	1.3nm,0.9s						
ESQI	**Esquipulas**	**13.41**	**26**	Pn	**Pn**	**16 57 54.4**	**-3.0**
BOAB	**BOACO BROADBAN**	**13.80**	**44**		**Pn**	**16 58 01.2**	**-1.6**
TGUH	**Tegucigalpa,Un**	**14.02**	**34**		**Pn**	**16 58 01.1**	**-4.7**
CCIG	**Comitan**	**14.09**	**13**	Pn	**Pn**	**16 58 05.6**	**-1.3**
CMIG	**Matias Romero**	**14.54**	**2**	Pn	**Pn**	**16 58 15.0**	**+2.1**
	0.3nm,0.3s,baz=183,slow=10,SNR=14						
	1.1nm,0.2s						
SIUN	**Universidad Ur**	**15.31**	**43**		**Pn**	**16 58 19.5**	**-3.8**
TLIG	**Tlapa**	**15.33**	**348**		**Pn**	**16 58 25.2**	**+1.6**
PETF	**Flores**	**15.34**	**20**	Pn	**Pn**	**16 58 21.6**	**-2.0**
PETF				IAmb	IAmb	16 58 29.4	
	comp=Z,84nm,1.7s						
OTAV	**Otavalo**	**17.05**	**97**		**P**	**16 58 48.1**	**+0.2**
OTAV	**Otavalo**	**17.05**	**97**	*eP*	**P**	**16 58 51.2**	**+3.3**
MOIG	**Morelia**	**18.03**	**342**	P	**P**	**16 58 59.2**	**+0.7**
MOIG				IAmb	IAmb	16 59 03.8	
	comp=Z,94nm,1.2s						
TEIG	**Tepich**	**18.96**	**21**		**P**	**16 59 06.6**	**-1.8**
ATAH	**Atahualpa**	**19.43**	**120**	P	**Pn**	**16 59 16.9**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=316,slow=14,SNR=9.2						
	2.6,9nm,1.1s						
ROSC	**El Rosal**	**21.13**	**83**	P	**P**	**16 59 37.0**	**+4.5**
	comp=Z,5.0nm,0.4s,baz=53,slow=6.7,SNR=6.5						
ROSC				LR	LR	17 06 22.1	
	comp=Z,510nm,19.2s,baz=257,slow=32						
	comp=Z,5.0nm,0.4s						
ROSC	**El Rosal**	**21.13**	**83**		**P**	**16 59 30.0**	**-2.5**
ZAIG	**Zacatecas**	**21.36**	**341**		**P**	**16 59 35.6**	**+0.7**
ZAIG				IAmb	IAmb	16 59 41.7	
	comp=Z,52nm,1.2s						
NNA	**Nana**	**23.34**	**128**	LR	LR	17 06 57.0	
	comp=Z,618nm,20.1s,baz=288,slow=31						
SOR	**Soroa**	**23.49**	**30**	P	**P**	**16 59 53.8**	**-3.2**
SOR				IAmb	IAmb	17 00 07.0	
	comp=Z,92nm,1.6s						
HBVL	**Hebbronville**	**24.66**	**353**		**P**	**17 00 08.8**	**+0.8**
CZSB	**Cruzeiro do Su**	**24.77**	**114**	P	**P**	**17 00 10.3**	**+1.2**
CZSB	**Cruzeiro do Su**	**24.77**	**114**	*eP*	**P**	**17 00 11.0**	**+1.8**
CAIB	**Caibarien**	**25.18**	**37**		**P**	**17 00 11.0**	**-1.7**
SDV	**Santo Domingo**	**25.41**	**74**	LR	LR	17 08 57.2	
	comp=Z,210nm,18.3s,baz=248,slow=33						
SDV	**Santo Domingo**	**25.41**	**74**		**P**	**17 00 14.7**	**-0.4**
SDV				IAmb	IAmb	17 00 34.7	
	comp=Z,33nm,1.3s						
SDV	**Santo Domingo**	**25.41**	**74**	*eP*	**P**	**17 00 16.2**	**+1.1**
LPIG	**La Paz**	**25.91**	**327**	LR	LR	17 07 05.8	
	comp=Z,136nm,20.8s,baz=174,slow=29						
833A	**Chaparral WMA,**	**26.00**	**352**	P	**P**	**17 00 21.1**	**+1.0**
833A				IAmb	IAmb	17 00 28.4	
	comp=Z,65nm,1.8s						
HPIG		**26.26**	**339**	IAmb	IAmb	17 00 25.9	
	comp=Z,35nm,1.7s						
DRIO	**Del Rio**	**27.27**	**350**	P	**P**	**17 00 31.8**	**+0.2**
TXAR	**Lajitas Array**	**27.86**	**344**	P	**P**	**17 00 38.7**	**+1.7**
	comp=Z,6.7nm,0.8s,baz=162,slow=11,SNR=84						
TXAR				PcP	**PcP**	**17 03 53.2**	**+0.2**
	comp=Z,0.9nm,1.1s,baz=195,slow=1.9,SNR=3.6						
	comp=Z,6.7nm,0.8s						
TXAR	**Lajitas Array**	**27.86**	**344**	P	**P**	**17 00 37.7**	**+0.7**
SAND	**Sanderson**	**28.08**	**347**		**P**	**17 00 39.6**	**+0.7**
JCT	**Junction City**	**28.18**	**352**	P	**P**	**17 00 40.2**	**+0.5**
129A	**Stewart Farms,**	**30.62**	**349**	IAmb	IAmb	17 01 03.7	
	comp=Z,20nm,1.0s						
128A	**Castleberry Fa**	**30.73**	**348**	IAmb	IAmb	17 01 04.6	
	comp=Z,20nm,1.1s						
POST	**Post**	**30.98**	**350**	IAmb	IAmb	17 01 06.1	
	comp=Z,12nm,1.0s						
Z47A	**Carrollton**	**31.33**	**12**	IAmb	IAmb	17 01 10.5	
	comp=Z,22nm,1.0s						
DKNS	**Dickens**	**31.47**	**351**	IAmb	IAmb	17 01 11.1	
	comp=Z,19nm,0.9s						
MSTX	**Muleshoe**	**32.10**	**348**	IAmb	IAmb	17 01 16.9	
	comp=Z,17nm,1.0s						
121A	**Cookes Peak, D**	**32.11**	**340**	IAmb	IAmb	17 01 17.9	
	comp=Z,14nm,0.9s						
RPN	**Rapa Nui**	**32.36**	**204**	LR	LR	17 10 34.6	
	comp=Z,860nm,20.4s,baz=21,slow=30						
LPAZ	**La Paz**	**32.73**	**126**	P	**P**	**17 01 22.6**	**+1.8**
	comp=Z,11nm,1.2s,baz=315,slow=6.8,SNR=14						
LPAZ				PcP	**PcP**	**17 04 06.6**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=332,slow=2.7,SNR=4.8						
LPAZ				LR	LR	17 13 44.9	
	comp=Z,372nm,19.6s,baz=306,slow=35						
	comp=Z,11nm,1.2s						
LPAZ	**La Paz**	**32.73**	**126**	P	**P**	**17 01 21.1**	**+0.3**
LPAZ				IAmb	IAmb	17 01 32.9	
	comp=Z,14nm,1.1s						
LPAZ	**La Paz**	**32.73**	**126**	*eP*	**P**	**17 01 20.6**	**-0.1**
X48A	**Hartselle**	**32.75**	**13**	IAmb	IAmb	17 01 22.8	
	comp=Z,18nm,1.2s						
AMTX	**Amarillo**	**32.78**	**350**	IAmb	IAmb	17 01 23.0	
	comp=Z,18nm,0.9s						
SMWD	**Samnorwood**	**32.79**	**353**	IAmb	IAmb	17 01 22.3	
	comp=Z,13nm,1.0s						
PB16	**IPOC Station P**	**32.79**	**130**	P	**P**	**17 01 20.5**	**-0.8**
TUC	**Tucson**	**33.04**	**336**	P	**P**	**17 01 23.9**	**+1.2**
PH02	**Texas Public H**	**33.33**	**350**	IAmb	IAmb	17 01 29.6	
	comp=Z,26nm,0.7s						
FCAR	**Ozark Folk Cen**	**33.39**	**5**	IAmb	IAmb	17 01 28.4	
	comp=Z,21nm,1.3s						
X51A	**Calhoun**	**33.40**	**16**	IAmb	IAmb	17 01 27.9	
	comp=Z,23nm,1.2s						
PIX	**Pinacate**	**33.60**	**331**	IAmb	IAmb	17 01 30.7	
	comp=Z,15nm,1.1s						
214A	**Organ Pipe Nat**	**33.62**	**333**	IAmb	IAmb	17 01 30.6	
	comp=Z,26nm,1.4s						
LCAR	**Lake Charles**	**33.66**	**6**	IAmb	IAmb	17 01 34.7	
	comp=Z,24nm,1.5s						
SWET	**Sewanee**	**33.74**	**14**	IAmb	IAmb	17 01 31.5	
	comp=Z,24nm,1.4s						
OK051	**E0350 and S346**	**33.90**	**358**	IAmb	IAmb	17 01 32.1	
	comp=Z,20nm,1.1s						
ANMO	**Albuquerque**	**33.92**	**344**	LR	LR	17 14 25.9	
	comp=Z,1μm,20.6s,baz=152,slow=35						
ANMO	**Albuquerque**	**33.92**	**344**	P	**P**	**17 01 31.5**	**+0.9**
ANMO	**Albuquerque**	**33.92**	**344**	IAmb	IAmb	17 01 33.6	
	comp=Z,9.9nm,1.3s						
BLOK	**Blackwell**	**34.17**	**357**	IAmb	IAmb	17 01 37.6	
	comp=Z,21nm,1.0s						
WVT	**Waverly**	**34.21**	**11**	P	**P**	**17 01 34.0**	**+1.2**
WVT				IAmb	IAmb	17 01 34.8	
	comp=Z,23nm,1.0s						
T35A	**Sooner Cattle**	**34.30**	**358**	IAmb	IAmb	17 01 35.5	
	comp=Z,21nm,1.1s						
RTBA	**Rita Blanca**	**34.48**	**349**	IAmb	IAmb	17 01 38.4	
	comp=Z,24nm,1.4s						
PAULI	**Pauline**	**34.57**	**20**	IAmb	IAmb	17 01 45.1	
	comp=Z,35nm,1.5s						
T42A	**Van Buren**	**34.62**	**6**	IAmb	IAmb	17 01 38.1	
	comp=Z,13nm,1.0s						
X18A	**Snowflake**	**34.68**	**339**	P	**P**	**17 01 37.7**	**+0.6**
X18A				IAmb	IAmb	17 01 41.3	
	comp=Z,37nm,1.7s						
TKL	**Tuckaleechee C**	**34.73**	**17**	LR	LR	17 15 11.6	
	comp=Z,668nm,20.9s,baz=196,slow=35						
113A	**Mohawk Valley,**	**34.74**	**332**	IAmb	IAmb	17 01 40.4	
	comp=Z,20nm,1.3s						
BOAV	**Boa Vista**	**34.81**	**89**	P	**P**	**17 01 38.4**	**+0.2**
BOAV				IAmb	IAmb	17 01 56.6	
	comp=Z,20nm,1.3s						
BOAV	**Boa Vista**	**34.81**	**89**	*eP*	**P**	**17 01 40.0**	**+1.7**
W18A	**Petrified Fore**	**35.13**	**339**	IAmb	IAmb	17 01 44.2	
	comp=Z,39nm,1.7s						
X16A	**Lo Mia Camp, P**	**35.15**	**337**	IAmb	IAmb	17 01 44.5	
	comp=Z,25nm,1.6s						
Y14A	**Wickenburg**	**35.38**	**334**	IAmb	IAmb	17 01 46.2	
	comp=Z,24nm,1.6s						
GLA	**Glamis**	**35.48**	**331**	IAmb	IAmb	17 01 46.8	
	comp=Z,34nm,1.4s						
T25A	**Trinidad**	**35.50**	**347**	IAmb	IAmb	17 01 46.9	
	comp=Z,16nm,1.0s						
FVM	**French Village**	**35.64**	**7**	IAmb	IAmb	17 01 47.5	
	comp=Z,28nm,1.3s						
R40A	**Maddies Statio**	**35.77**	**4**	IAmb	IAmb	17 01 48.8	
	comp=Z,34nm,1.2s						
R32A	**Long Quarter,**	**35.92**	**356**	IAmb	IAmb	17 01 50.0	
	comp=Z,28nm,1.0s						
WUAZ	**Wupatki**	**36.09**	**338**	IAmb	IAmb	17 01 52.7	
	comp=Z,22nm,1.0s						
CBKS	**Cedar Bluff**	**36.40**	**354**	IAmb	IAmb	17 01 55.1	
	comp=Z,38nm,1.2s						
WCI	**Wyandotte Cave**	**36.55**	**12**	P	**P**	**17 01 54.2**	**+1.4**
S51A	**Beattyville**	**36.63**	**16**	IAmb	IAmb	17 01 56.6	
	comp=Z,19nm,1.1s						
S22A	**4UR Ranch, Cre**	**36.66**	**345**	IAmb	IAmb	17 01 58.0	
	comp=Z,22nm,1.4s						
PMD	**Palm Desert**	**36.72**	**330**	IAmb	IAmb	17 02 45.2	
	comp=Z,15nm,0.8s						
PFO	**Pinyon Flats O**	**36.73**	**330**	P	**P**	**17 01 55.5**	**+0.8**
W13A	**Hualapai Mount**	**36.75**	**334**	IAmb	IAmb	17 03 02.9	
	comp=Z,12nm,0.6s						
R49A	**Shelbyville**	**36.86**	**13**	IAmb	IAmb	17 01 58.2	
	comp=Z,32nm,1.2s						
P40A	**Paris**	**37.01**	**4**	IAmb	IAmb	17 01 59.2	
	comp=Z,21nm,1.1s						
R50A	**Paris**	**37.05**	**14**	IAmb	IAmb	17 01 59.9	
	comp=Z,30nm,1.4s						
PV13	**Radium Mtn., P**	**37.60**	**342**	IAmb	IAmb	17 02 04.9	
	comp=Z,22nm,1.2s						
PV15	**Paxx Valley**	**37.67**	**343**	IAmb	IAmb	17 02 06.8	
	comp=Z,31nm,1.3s						
PV03	**Paradox Valley**	**37.70**	**343**	IAmb	IAmb	17 02 05.7	
	comp=Z,31nm,1.4s						
PV18	**Skein Mesa, Pa**	**37.71**	**342**	IAmb	IAmb	17 02 05.8	
	comp=Z,42nm,1.3s						
P46A	**Rosedale**	**37.72**	**10**	IAmb	IAmb	17 02 05.1	
	comp=Z,31nm,0.9s						
PV11	**David Mesa, Pa**	**37.75**	**343**	IAmb	IAmb	17 02 06.1	
	comp=Z,26nm,1.7s						
PV17	**East Wray Mesa**	**37.76**	**342**	IAmb	IAmb	17 02 06.2	
	comp=Z,26nm,1.4s						
PV16	**Nyswonger Mesa**	**37.77**	**342**	IAmb	IAmb	17 02 06.4	
	comp=Z,22nm,1.4s						
PV19	**Morning Glory**	**37.79**	**342**	IAmb	IAmb	17 02 06.4	
	comp=Z,34nm,1.3s						
PV07	**Paradox Valley**	**37.81**	**343**	IAmb	IAmb	17 02 07.0	
	comp=Z,18nm,1.1s						
PV20	**West Nyswonger**	**37.81**	**342**	IAmb	IAmb	17 02 07.3	
	comp=Z,23nm,1.2s						
PV04	**Paradox Valley**	**37.84**	**343**	IAmb	IAmb	17 02 07.2	
	comp=Z,27nm,1.2s						
PV10	**Paradox Valley**	**37.87**	**342**	IAmb	IAmb	17 02 06.4	
	comp=Z,40nm,1.4s						
PV23	**Carpenter Ridg**	**37.93**	**342**	IAmb	IAmb	17 02 07.8	
	comp=Z,34nm,1.1s						
KNB	**Kanab**	**37.96**	**337**	IAmb	IAmb	17 02 08.7	
	comp=Z,20nm,1.3s						
Q51A	**Peebles**	**38.00**	**15**	IAmb	IAmb	17 02 08.3	
	comp=Z,35nm,1.1s						
PKCU	**Pink Cliffs**	**38.14**	**338**	IAmb	IAmb	17 02 45.5	
	comp=Z,29nm,1.3s						
Q52A	**Bidwell**	**38.24**	**17**	IAmb	IAmb	17 02 17.9	
	comp=Z,40nm,1.1s						
SFIN	**Lafayette**	**38.48**	**10**	IAmb	IAmb	17 02 12.7	
	comp=Z,41nm,1.6s						
SIV	**San Ignacio**	**38.54**	**120**	LR	LR	17 17 22.4	
	comp=Z,490nm,20.1s,baz=308,slow=35						
O48B	**Farmland**	**38.74**	**13**	IAmb	IAmb	17 02 13.4	
	comp=Z,36nm,1.2s						
OGNE	**Ogallala**	**38.78**	**352**	IAmb	IAmb	17 02 14.9	
	comp=Z,46nm,1.1s						
O49A	**Covington**	**38.86**	**14**	IAmb	IAmb	17 02 31.1	
	comp=Z,52nm,1.5s						
H03N2	**Juan Fernandez**	**38.94**	**158**	T	T	17 43 36.4	
	baz=334,slow=77						
H03N1	**Juan Fernandez**	**38.95**	**158**	T	T	17 43 31.6	
	baz=334,slow=77						
H03N3	**Juan Fernandez**	**38.95**	**158**	T	T	17 43 34.0	
	baz=334,slow=77,SNR=192						
O20A	**White River Ci**	**39.27**	**344**	IAmb	IAmb	17 02 19.4	
	comp=Z,25nm,1.2s						
P18A	**Preston Nutter**	**39.39**	**342**	IAmb	IAmb	17 02 20.4	
	comp=Z,41nm,1.5s						
BBSD	**Serra de San D**	**39.45**	**121**	*eP*	**P**	**17 02 17.1**	**-0.7**
L40A	**Anamosa**	**39.60**	**5**	IAmb	IAmb	17 02 20.3	
	comp=Z,29nm,1.1s						
PSUT	**Pine Spring**	**39.68**	**337**	IAmb	IAmb	17 03 23.2	
	comp=Z,15nm,0.8s						
L42A	**Oliver, Polo**	**39.69**	**7**	IAmb	IAmb	17 02 21.5	
	comp=Z,38nm,1.3s						
PTLB	**Pontes e Lacer**	**40.01**	**118**	P	**P**	**17 02 21.4**	**-0.9**
PTLB	**Pontes e Lacer**	**40.01**	**118**	*eP*	**P**	**17 02 22.8**	**+0.5**
L44A	**Lake County Fo**	**40.10**	**9**	P	**P**	**17 02 23.5**	**+0.8**
ITTB	**Itaituba**	**40.18**	**100**	*eP*	**P**	**17 02 23.7**	**-0.1**
K30B	**Basset**	**40.21**	**355**	P	**P**	**17 02 23.6**	**-0.1**
JFWS	**Jewell Farm**	**40.53**	**6**	P	**P**	**17 02 26.6**	**+0.4**
JFWS				IAmb	IAmb	17 02 27.8	
	comp=Z,18nm,0.8s						
K43A	**Burlington**	**40.55**	**8**	IAmb	IAmb	17 02 30.8	
	comp=Z,38nm,1.2s						
DUG	**Dugway, Tooele**	**40.75**	**339**	IAmb	IAmb	17 02 31.8	
	comp=Z,24nm,1.2s						
MCMM	**Convict Lake**	**41.10**	**331**	P	**P**	**17 02 33.4**	**+2.0**
ECSD	**EROS Data Cent**	**41.11**	**359**	IAmb	IAmb	17 02 32.4	
	comp=Z,18nm,0.8s						
TCUT	**Toone Canyon**	**41.11**	**341**	IAmb	IAmb	17 02 34.8	
	comp=Z,54nm,1.5s						
MLCM	**Laurel Creek C**	**41.12**	**331**	P	**P**	**17 02 32.8**	**+1.2**
MGPM	**Gravel Pit**	**41.13**	**331**	P	**P**	**17 02 32.9**	**+1.3**
MCSM	**Casa Diablo Ho**	**41.15**	**331**	P	**P**	**17 02 32.9**	**+1.1**
MMPM	**Mammoth Pass**	**41.18**	**331**	P	**P**	**17 02 33.3**	**+1.2**
MMPM	**Mammoth Pass**	**41.18**	**331**	P	**P**	**17 02 33.4**	**+1.2**
MEMM	**East Mammoth H**	**41.18**	**331**	P	**P**	**17 02 32.9**	**+0.8**
MRDM	**Red Cones**	**41.18**	**331**	P	**P**	**17 02 33.8**	**+1.7**
MMLB	**Mammoth Lakes**	**41.19**	**331**	P	**P**	**17 02 33.0**	**+0.8**
MLIM	**Lincoln Peak**	**41.19**	**331**	P	**P**	**17 02 33.4**	**+1.2**
MLIM	**Lincoln Peak**	**41.19**	**331**	P	**P**	**17 02 33.4**	**+1.2**
MDYM	**Dry Creek**	**41.21**	**331**	P	**P**	**17 02 33.4**	**+1.0**
MINS	**Minaret Summit**	**41.23**	**331**	P	**P**	**17 02 33.7**	**+1.2**
MDCM	**Deadman Creek**	**41.26**	**331**	P	**P**	**17 02 33.8**	**+1.0**
NVAR	**Mina Array Bea**	**41.49**	**332**	LR	LR	17 17 31.3	
	comp=Z,378nm,21.6s,baz=112,slow=33						
I42A	**Dreger Farm,**	**41.64**	**7**	IAmb	IAmb	17 02 42.6	
	comp=Z,64nm,1.6s						
PD31	**Pinedale Array**	**42.08**	**344**	IAmb	IAmb	17 02 41.8	
	comp=Z,20nm,1.1s						
PDAR	**Pinedale Array**	**42.08**	**344**	P	**P**	**17 02 40.4**	**+1.1**
	comp=Z,7.9nm,0.8s,baz=153,slow=8.0,SNR=56						
PDAR				PcP	**PcP**	**17 04 32.4**	**-1.7**
	comp=Z,0.6nm,0.8s,baz=174,slow=3.5,SNR=2.0						
PDAR				LR	LR	17 19 45.8	
	comp=Z,1μm,19.3s,baz=147,slow=36						
	comp=Z,7.9nm,0.8s						
PDAR	**Pinedale Array**	**42.08**	**344**	P	**P**	**17 02 39.6**	**+0.3**
ELK	**Elko**	**42.13**	**337**	LR	LR	17 20 35.0	
	comp=Z,856nm,18.3s,baz=135,slow=37						
ELK	**Elko**	**42.13**	**337**	P	**P**	**17 02 41.1**	**+1.4**
HVU	**Hansel Valley**	**42.15**	**341**	IAmb	IAmb	17 02 42.7	
	comp=Z,27nm,0.9s						
RSSD	**Black Hills**	**42.19**	**351**	P	**P**	**17 02 40.4**	**+0.3**
H43A	**Windswept, Lux**	**42.36**	**8**	P	**P**	**17 02 40.7**	**-0.6**
H43A				IAmb	IAmb	17 02 43.2	
	comp=Z,24nm,1.0s						
CFA	**Coronel Fontan**	**42.57**	**145**	LR	LR	17 17 03.8	
	comp=Z,408nm,19.0s,baz=322,slow=31						
SPMN	**Marine on St.**	**42.64**	**3**	IAmb	IAmb	17 02 46.1	
	comp=Z,54nm,1.8s						
MDP	**Montagnes des**	**42.70**	**85**	LR	LR	17 19 49.0	
	comp=Z,529nm,19.9s,baz=287,slow=35						
MT08	**Bocatoma Ro**	**42.99**	**148**	P	**P**	**17 02 47.3**	**+0.5**
LOHW	**Long Hollow**	**43.15**	**344**	IAmb	IAmb	17 02 50.5	
	comp=Z,20nm,1.7s						
SALV	**Santo Antonio**	**43.25**	**116**	*eP*	**P**	**17 02 49.2**	**+0.3**
MURT	**Porto Murtinho**	**44.02**	**125**	*eP*	**P**	**17 02 54.9**	**-0.1**
E38A	**The Farm, Brul**	**44.09**	**4**	IAmb	IAmb	17 02 56.6	
	comp=Z,14nm,1.1s						
BDQN	**Bodoquena, MS**	**44.17**	**123**	*eP*	**P**	**17 02 56.2**	**-0.1**
YNR	**Norris Junctio**	**44.19**	**344**	IAmb	IAmb	17 03 02.8	
	comp=Z,36nm,1.9s						
RLMT	**Red Lodge**	**44.21**	**346**	IAmb	IAmb	17 02 58.9	
	comp=Z,24nm,1.5s						
YHL	**Hebgen Lake**	**44.46**	**344**	IAmb	IAmb	17 03 02.1	
	comp=Z,28nm,1.2s						
SADO	**Sadowa**	**44.49**	**16**	LR	LR	17 21 05.3	
	comp=Z,488nm,21.9s,baz=232,slow=35						
BOZ	**Bozeman (W)**	**45.27**	**344**	IAmb	IAmb	17 03 07.5	
	comp=Z,19nm,1.4s						
DLMT	**Dillon**	**45.33**	**343**	IAmb	IAmb	17 03 07.4	
	comp=Z,9.4nm,0.8s						
EYMN	**Ely**	**45.43**	**4**	P	**P**	**17 03 05.8**	**-0.1**
EYMN				IAmb	IAmb	17 03 07.3	
	comp=Z,17nm,1.2s						
TBO	**Thunder Bay**	**46.29**	**5**	IAmb	IAmb	17 03 16.0	
	comp=Z,14nm,1.3s						
CPUP	**Villa Florida**	**46.58**	**130**	P	**P**	**17 03 15.3**	**0.0**
	comp=Z,1.5nm,0.3s,baz=313,slow=8.1,SNR=7.4						
	comp=Z,1.5nm,0.3s						
CPUP	**Villa Florida**	**46.58**	**130**	P	**P**	**17 03 13.6**	**-1.7**
CPUP				IAmb	IAmb	17 03 16.6	
	comp=Z,12nm,1.4s						
CPUP	**Villa Florida**	**46.58**	**130**	*eP*	**P**	**17 03 14.6**	**-0.6**
ARAG	**Araguaiana, MT**	**46.69**	**114**	*eP*	**P**	**17 03 15.3**	**-1.0**
GO06	**Curarrehue**	**47.25**	**155**	P	**P**	**17 03 20.4**	**-0.1**
GO06				IAmb	IAmb	17 03 22.1	
	comp=Z,19nm,1.4s						
G08A	**Pilot Rock**	**47.42**	**337**	IAmb	IAmb	17 03 39.4	
	comp=Z,16nm,1.7s						
ULM	**Lac du Bonnet**	**47.61**	**360**	P	**P**	**17 03 23.3**	**+0.4**
	comp=Z,9.8nm,0.8s,baz=182,slow=7.8,SNR=21						
ULM				LR	LR	17 23 17.3	
	comp=Z,168nm,21.4s,baz=200,slow=36						
	comp=Z,9.8nm,0.8s						
ULM	**Lac du Bonnet**	**47.61**	**360**	IAmb	IAmb	17 03 24.3	
	comp=Z,14nm,0.9s						
E09A	**Wood Farm, Sta**	**48.16**	**339**	IAmb	IAmb	17 03 29.1	
	comp=Z,18nm,1.3s						
PLCA	**Paso Flores**	**48.60**	**155**	P	**P**	**17 03 30.0**	**-0.8**
	comp=Z,2.5nm,0.8s,baz=353,slow=5.3,SNR=4.5						
PLCA				LR	LR	17 19 47.1	
	comp=Z,812nm,18.3s,baz=332,slow=31						
	comp=Z,2.5nm,0.8s						
PLCA	**Paso Flores**	**48.60**	**155**	*eP*	**P**	**17 03 27.7**	**-3.2**
SMTB	**Santa Maria do**	**48.93**	**104**	*eP*	**P**	**17 03 34.7**	**+1.0**
NEW	**Newport**	**49.32**	**341**	LR	LR	17 24 31.0	
	comp=Z,650nm,18.1s,baz=158,slow=36						
PTGB	**Pitanga**	**49.94**	**125**	*eP*	**P**	**17 03 41.2**	**-0.3**
BDFB	**Brasilia**	**50.15**	**113**	LR	LR	17 24 10.9	
	comp=Z,494nm,20.9s,baz=292,slow=35						
SDBA	**SAO DESIDERIO**	**52.25**	**108**	*eP*	**P**	**17 03 58.9**	**0.0**
FFC	**Flin Flon**	**52.37**	**355**	P	**P**	**17 03 59.1**	**+0.1**
FFC				IAmb	IAmb	17 04 01.1	
	comp=Z,19nm,1.4s						
FCC	**Fort Churchill**	**56.15**	**1**	IAmb	IAmb	17 04 28.3	
	comp=Z,27nm,1.5s						
BBB	**Bella Bella**	**56.56**	**336**	LR	LR	17 27 26.5	
	comp=Z,352nm,20.9s,baz=162,slow=35						
PPT	**Papeete**	**57.01**	**247**	LR	LR	17 21 36.1	
	comp=Z,56nm,20.4s,baz=96,slow=28						
SCHQ	**Schefferville**	**57.13**	**19**	P	**P**	**17 04 34.3**	**+0.7**
	comp=Z,2.2nm,0.8s,baz=219,slow=9.6,SNR=4.1						
SCHQ				LR	LR	17 28 09.0	
	comp=Z,219nm,20.4s,baz=194,slow=35						
	comp=Z,2.2nm,0.8s						
SCHQ	**Schefferville**	**57.13**	**19**	IAmb	IAmb	17 05 36.8	
	comp=Z,32nm,1.7s						
YKA	**Yellowknife Ar**	**61.59**	**350**	P	**P**	**17 05 04.3**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=160,slow=5.0,SNR=4.9						
YKA				LR	LR	17 31 25.5	
	comp=Z,209nm,21.5s,baz=96,slow=36						
	comp=Z,1.3nm,0.7s						
BLKN	**Baker Lake**	**61.72**	**360**	P	**P**	**17 05 04.6**	**-0.4**
DLBC	**Dease Lake**	**62.06**	**340**	P	**P**	**17 05 07.7**	**+0.1**
	comp=Z,2.4nm,0.8s,baz=132,slow=12,SNR=4.4						
DLBC				LR	LR	17 32 27.7	
	comp=Z,1μm,18.5s,baz=108,slow=36						
	comp=Z,2.4nm,0.8s						
FRB	**Frobisher Bay**	**64.22**	**13**	LR	LR	17 33 04.8	
	comp=Z,345nm,20.0s,baz=215,

CMAR PKPab **PKPab** **17 15 05.6 +0.8**
comp=Z,1.3nm,0.9s,baz=16,slow=5.0,SNR=6.5
CMAR Chiang Mai Arr 154.89 326 **PKPab** **17 15 05.2 +0.4**

IDC 24 16:59:14.1±2.7, 7.78S×128.48E, h0km, mb3.4/1, mbtmp3.1/3, ML2.7/2, MS3.9/1, Error ellipse: s-maj=286.1km s-min=34.1km az=65.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.36**	**155**	Pn	Pn	17 02 24.9	-0.2
	baz=334,slow=13,SNR=4.6						
WRA				Sn	Sn	17 04 42.8	-12
	0.1nm,0.3s,baz=342,slow=24,SNR=7.1						
	0.7nm,1.1s						
ASAR	**Alice Springs**	**16.63**	**162**	Pn	Pn	17 03 09.0	+0.2
	baz=341,slow=8.5,SNR=6.4						
ASAR				Sn	Sn	17 06 04.0	-10
	baz=329,slow=34,SNR=2.6						
	0.2nm,1.0s						
AFI	**Afiamalu**	**58.87**	**102**	LR	LR	17 34 06.5	
	comp=Z,86nm,18.1s,baz=88,slow=36						
MKAR	**Makanchi Array**	**68.06**	**328**	P	P	17 10 15.6	0.0
	0.4nm,0.9s,baz=119,slow=5.1,SNR=3.0						
	0.4nm,0.9s						

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*AEIC **24** 17:01:30.8±1.6, 69.48N±0.02×144.30W±0.08, h10km±4km, Error ellipse: s-maj=3.9km s-min=3.6km az=93.0*
*NEIC **24** 17:01:31.7±1.1, 69.54N±0.04×144.24W±0.06, h6km±4km, mb4.1/11, ML3.8/128, ML3.7(AEIC), Mwr3.7/28(SLM), Error ellipse: s-maj=5.9km s-min=2.7km az=195.0*
*IDC **24** 17:01:32.3±0.9, 69.61N×144.05W, h0km, mb3.7/6, mbtmp3.7/10, ML3.7/4, MS2.8/1, Error ellipse: s-maj=21.8km s-min=13.8km az=47.0*
*ANF **24** 17:01:32.6±0.3, 69.56N×144.22W, h13km±3km, ML4.1/68, Error ellipse: s-maj=2.5km s-min=1.4km az=22.0*
*NEIC **24** 17:01:32, 69.56N×144.24W, h8km, Moment Tensor Solution. Moment tensor: Scale 10^14^Nm; Mrr0.69; Mθθ-4.62; Mφφ3.93; Mrθ-0.81; Mθφ-0.35; Mφr-1.88; Fault plane solution: M0 4.79000×10^14^ NP1:φs225.00000°, δ80.00000°, λ25.00000°. NP2:φs130.00000°, δ65.00000°, λ169.00000°. Principal axes: T 4.7914, Plg25.0000°, Azm90.0000°; N -0.0025, Plg63.0000°, Azm245.0000°; P -4.7890, Plg10.0000°, Azm356.0000°;*

ISC 24 17:01:30.9±1.0, 69.51N±0.02×144.22W±0.02, h8km±7km, n385, σ1§68/434, mb4.0/12, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
C27K	**Jago River**	**0.21**	**57**		**Pg**	**17 01 35.4**	**+0.2**
C27K				Sg	**Sg**	**17 01 39.0**	**+0.9**
C27K	**Jago River**	**0.21**	**57**	P	**Pg**	**17 01 35.3**	**+0.1**
	baz=251						
C27K				S	**Sg**	**17 01 39.2**	**+1.1**
	baz=251						
C26K	**Camden Bay**	**0.47**	**330**		**Pb**	**17 01 41.1**	**-0.4**
C26K					**Sb**	**17 01 48.1**	**-0.4**
C26K	**Camden Bay**	**0.47**	**330**	P	**Pb**	**17 01 41.1**	**-0.4**
	baz=147						
C26K				S	**Sb**	**17 01 48.2**	**-0.4**
	baz=147						
D25K	**Kavik River**	**0.78**	**257**		**Pg**	**17 01 44.8**	**-1.2**
D25K				Sg	**Sg**	**17 01 55.2**	**-0.9**
D25K	**Kavik River**	**0.78**	**257**	P	**Pg**	**17 01 44.8**	**-1.2**
	baz=71						
D27M	**Malcolm River**	**1.19**	**102**		**Pg**	**17 01 52.3**	**-1.3**
D27M				Sg	**Sb**	**17 02 10.0**	**+0.8**
D27M				IAML		17 02 16.9	
	comp=N,2μm,0.5s						
D27M	**Malcolm River**	**1.19**	**102**	P	**Pg**	**17 01 52.3**	**-1.3**
	baz=287						
D27M				S	**Sn**	**17 02 10.6**	**+0.5**
	baz=287						
E25K	**Arctic Village**	**1.48**	**200**		**Pn**	**17 01 57.9**	**+0.1**
E25K					**Sb**	**17 02 18.3**	**+0.8**
E25K				IAML		17 02 21.9	
	comp=N,1μm,0.8s						
E25K	**Arctic Village**	**1.48**	**200**	P	**Pn**	**17 01 58.0**	**+0.1**
	baz=18						
E25K				S	**Sg**	**17 02 19.1**	**+0.8**
	baz=18						
C24K	**Franklin Bluff**	**1.58**	**280**		**Pb**	**17 01 60.0**	**-0.3**
C24K				Sn	**Sb**	**17 02 20.8**	**+0.4**
C24K				IAML		17 02 23.8	
	comp=N,1μm,0.5s						
C24K	**Franklin Bluff**	**1.58**	**280**	P	**Pb**	**17 02 00.0**	**-0.3**
	baz=94						
C24K				Sb	**Sg**	**17 02 22.9**	**+1.3**
	baz=94						
E27K	**Coleen River**	**1.64**	**143**		**Pn**	**17 02 00.8**	**+0.9**
E27K				Sn	**Sn**	**17 02 22.0**	**+0.8**
E27K				IAML		17 02 25.6	
	comp=E,1μm,0.6s						
E27K				IAML		17 02 26.8	
	comp=N,1μm,0.6s						
E27K	**Coleen River**	**1.64**	**143**	P	**Pn**	**17 02 00.9**	**+0.9**
	baz=326						
E27K				S	**Sg**	**17 02 23.5**	**+0.1**
	baz=326						
D24K	**Happy Valley**	**1.67**	**260**		**Pb**	**17 02 01.4**	**-0.5**
D24K				Sn	**Sb**	**17 02 23.6**	**+0.6**
D24K				IAML		17 02 27.8	
	comp=N,1μm,0.6s						
D24K	**Happy Valley**	**1.67**	**260**	P	**Pb**	**17 02 01.5**	**-0.4**
	baz=74						
D24K				Sb	**Sg**	**17 02 25.9**	**+1.4**
	baz=74						
F26K	**Sheenjek River**	**1.82**	**179**		**Pb**	**17 02 04.0**	**-0.5**
F26K				Sn	**Sb**	**17 02 27.5**	**0.0**
F26K				IAML		17 02 32.8	
	comp=E,1μm,0.6s						
F26K				IAML		17 02 34.5	
	comp=N,760nm,0.7s						
F26K	**Sheenjek River**	**1.82**	**179**	P	**Pb**	**17 02 04.3**	**-0.3**
	baz=359						
F26K				S	**Sb**	**17 02 28.6**	**+1.1**
	baz=359						
E28M	**Babbage River**	**1.92**	**116**		**Pn**	**17 02 04.6**	**+0.8**
E28M				Sn	**Sb**	**17 02 29.7**	**-0.3**
E28M				IAML		17 02 39.7	
	comp=E,653nm,1.0s						
E28M	**Babbage River**	**1.92**	**116**	P	**Pb**	**17 02 05.5**	**-0.5**
	baz=302						
D28M	**Stokes Point**	**1.95**	**93**		**Pb**	**17 02 06.0**	**-0.6**
D28M	**Stokes Point**	**1.95**	**93**	P	**Pb**	**17 02 06.0**	**-0.6**
	baz=279						
F25K	**Christian Rive**	**2.00**	**196**		**Pb**	**17 02 06.6**	**-0.9**
F25K				Sn	**Sb**	**17 02 32.6**	**+0.2**
F25K				IAML		17 02 37.0	
	comp=E,841nm,0.5s						
F25K	**Christian Rive**	**2.00**	**196**	P	**Pb**	**17 02 06.5**	**-0.9**
	baz=14						
F25K				S	**Sb**	**17 02 33.2**	**+0.8**
	baz=14						
BMAR	**Burnt Mountain**	**2.10**	**184**		**Pb**	**17 02 08.1**	**-1.0**
TOLK	**Toolik Lake Re**	**2.11**	**248**	P	**Pn**	**17 02 07.5**	**+1.0**
	baz=62						
E24K	**Your Creek**	**2.12**	**229**		**Pn**	**17 02 08.1**	**+1.5**
E24K				Sn	**Sb**	**17 02 36.9**	**+1.0**
E24K				IAML		17 02 48.6	
	comp=E,521nm,0.8s						
E24K	**Your Creek**	**2.12**	**229**	P	**Pn**	**17 02 08.3**	**+1.7**
	baz=44						
E24K				S	**Sb**	**17 02 37.6**	**+1.7**
	baz=44						
C23K	**Itkillik River**	**2.25**	**281**		**Pn**	**17 02 09.1**	**+0.7**
C23K				IAML		17 02 50.7	
	comp=E,700nm,0.6s						
C23K	**Itkillik River**	**2.25**	**281**	P	**Pn**	**17 02 09.4**	**+0.9**
	baz=94						
D23K	**Nanushuk River**	**2.37**	**260**		**Pn**	**17 02 11.1**	**+1.1**
D23K	**Nanushuk River**	**2.37**	**260**	P	**Pn**	**17 02 11.3**	**+1.3**
	baz=72						
F24K	**Squaw Lake**	**2.41**	**216**		**Pn**	**17 02 12.2**	**+1.5**
F24K	**Squaw Lake**	**2.41**	**216**	P	**Pn**	**17 02 12.2**	**+1.5**
	baz=32						
F24K				S	**Sb**	**17 02 43.2**	**-1.2**
	baz=32						
E23K	**Chandalar**	**2.44**	**236**		**Pn**	**17 02 12.2**	**+1.1**
E23K				IAML		17 02 52.4	
	comp=E,386nm,0.6s						
E23K				IAML		17 02 53.4	
	comp=N,446nm,0.8s						
E23K	**Chandalar**	**2.44**	**236**	P	**Pn**	**17 02 12.3**	**+1.2**
	baz=50						
F28M	**Old Crow**	**2.49**	**138**		**Pn**	**17 02 12.8**	**+1.2**
F28M				IAML		17 02 58.1	
	comp=N,545nm,0.6s						
F28M				IAML		17 02 59.7	
	comp=E,439nm,0.9s						
F28M	**Old Crow**	**2.49**	**138**	P	**Pn**	**17 02 13.0**	**+1.4**
	baz=323						
F28M				S	**Sn**	**17 02 43.6**	**+1.4**
	baz=323						
E29M	**Blow River**	**2.55**	**113**		**Pn**	**17 02 14.1**	**+1.6**
E29M				IAML		17 02 56.4	
	comp=N,375nm,0.8s						
E29M				IAML		17 02 59.3	
	comp=E,466nm,0.7s						
E29M	**Blow River**	**2.55**	**113**	P	**Pn**	**17 02 13.7**	**+1.3**
	baz=300,SNR=684						
G26K	**Porcupine Rive**	**2.58**	**176**		**Pn**	**17 02 14.2**	**+1.3**
G26K				IAML		17 02 55.1	
	comp=N,514nm,0.5s						
G26K	**Porcupine Rive**	**2.58**	**176**	P	**Pn**	**17 02 14.2**	**+1.3**
	baz=356						
G26K				S	**Sb**	**17 02 47.4**	**-1.6**
	baz=356						
G25K	**Bearman Lake**	**2.85**	**195**		**Pn**	**17 02 18.4**	**+1.8**
G25K					**Pb**	**17 02 19.0**	**-2.9**
G25K	**Bearman Lake**	**2.85**	**195**	P	**Pn**	**17 02 18.0**	**+1.5**
	baz=13						
G27K	**Doyon Strip**	**2.88**	**159**		**Pn**	**17 02 18.4**	**+1.4**
G27K	**Doyon Strip**	**2.88**	**159**	P	**Pn**	**17 02 18.2**	**+1.1**
	baz=342,SNR=86						
G27K				S	**Sn**	**17 02 54.6**	**+2.8**
	baz=342						
FYU	**Fort Yukon**	**2.98**	**188**		**Pn**	**17 02 20.0**	**+1.6**
G24K	**Hadweenzic Riv**	**3.08**	**205**		**Pn**	**17 02 20.9**	**+1.2**
G24K				IAML		17 03 15.5	
	comp=N,297nm,0.6s						
G24K	**Hadweenzic Riv**	**3.08**	**205**	P	**Pn**	**17 02 21.2**	**+1.5**
	baz=21						
G24K				S	**Sn**	**17 02 58.7**	**+2.1**
	baz=21						
COLD	**Coldfoot**	**3.19**	**227**		**Pn**	**17 02 23.2**	**+2.0**
COLD				IAML		17 03 18.7	
	comp=E,201nm,1.3s						
COLD	**Coldfoot**	**3.19**	**227**	P	**Pn**	**17 02 22.7**	**+1.5**
	baz=40						
B22K	**Teshekpuk Lake**	**3.28**	**289**		**Pn**	**17 02 23.0**	**+0.5**
B22K	**Teshekpuk Lake**	**3.28**	**289**	P	**Pn**	**17 02 23.4**	**+0.9**
	baz=100						
H27K	**Steamboat Moun**	**3.45**	**162**		**Pn**	**17 02 26.5**	**+1.6**
H27K	**Steamboat Moun**	**3.45**	**162**	P	**Pn**	**17 02 26.4**	**+1.5**
	baz=344,SNR=33						
G29M	**Pine Creek**	**3.49**	**136**		**Pn**	**17 02 26.7**	**+1.3**
G29M	**Pine Creek**	**3.49**	**136**	P	**Pn**	**17 02 27.0**	**+1.6**
	baz=322						
G29M				S	**Sn**	**17 03 09.2**	**+2.4**
	baz=322						
G23K	**Bananza Creek**	**3.55**	**220**		**Pn**	**17 02 27.3**	**+1.0**
G23K				IAML		17 03 28.6	
	comp=E,202nm,1.4s						
G23K				IAML		17 03 28.6	
	comp=N,179nm,1.1s						
G23K	**Bananza Creek**	**3.55**	**220**	P	**Pn**	**17 02 27.4**	**+1.0**
	baz=34						
F30M	**Barrier River**	**3.64**	**118**		**Pn**	**17 02 29.5**	**+2.1**
F30M				IAML		17 03 36.2	
	comp=E,187nm,1.2s						
F30M	**Barrier River**	**3.64**	**118**	P	**Pn**	**17 02 29.6**	**+2.2**
	baz=306,SNR=330						
B21K	**Ikpikpuk River**	**3.65**	**277**		**Pn**	**17 02 28.6**	**+1.1**
B21K				IAML		17 03 50.0	
	comp=E,170nm,1.2s						
B21K	**Ikpikpuk River**	**3.65**	**277**	P	**Pn**	**17 02 28.8**	**+1.3**
	baz=86						
E21K	**Killik River**	**3.67**	**258**		**Pn**	**17 02 29.5**	**+1.6**
E21K				IAML		17 03 37.9	
	comp=N,163nm,0.8s						
E21K				IAML		17 03 40.3	
	comp=E,176nm,0.8s						
E21K	**Killik River**	**3.67**	**258**	P	**Pn**	**17 02 29.5**	**+1.6**
	baz=68						
G22K	**Bettles**	**3.76**	**230**	P	**Pn**	**17 02 30.6**	**+1.6**
	baz=42						
C21K	**Knifeblade Rid**	**3.76**	**270**		**Pn**	**17 02 30.6**	**+1.5**
C21K					**Pn**	**17 02 31.4**	**+2.3**
C21K	**Knifeblade Rid**	**3.76**	**270**	P	**Pn**	**17 02 30.5**	**+1.4**
	baz=79						
G30M	**tAoh Zraii Nji**	**3.91**	**127**		**Pn**	**17 02 33.0**	**+1.7**
G30M				IAML		17 03 42.8	
	comp=E,108nm,0.8s						
G30M				IAML		17 03 49.7	
	comp=N,141nm,1.0s						
G30M	**tAoh Zraii Nji**	**3.91**	**127**	P	**Pn**	**17 02 32.8**	**+1.5**
	baz=315,SNR=151						
A22K	**Sinclair Lake**	**3.94**	**297**		**Pn**	**17 02 32.8**	**+1.2**
A22K	**Sinclair Lake**	**3.94**	**297**	P	**Pn**	**17 02 32.7**	**+1.2**
	baz=107						
H24K	**Noodor Dome**	**3.94**	**202**		**Pn**	**17 02 32.9**	**+1.2**
H24K				IAML		17 03 21.5	
	comp=N,121nm,0.7s						
H24K				IAML		17 03 41.5	
	comp=E,128nm,0.9s						
H24K	**Noodor Dome**	**3.94**	**202**	P	**Pn**	**17 02 32.9**	**+1.2**
	baz=19						
H24K				S	**Sn**	**17 03 19.9**	**+1.8**
	baz=19						
H29M	**Whitestone**	**3.98**	**143**		**Pn**	**17 02 33.9**	**+1.8**
H29M	**Whitestone**	**3.98**	**143**	P	**Pn**	**17 02 34.2**	**+2.1**
	baz=329						
H29M				S	**Sn**	**17 03 20.9**	**+2.0**
	baz=329						
PRP	**Porcupine Dome**	**4.04**	**188**		**Pn**	**17 02 34.8**	**+1.7**
PRP				IAML		17 03 25.6	
	comp=E,121nm,0.7s						
PRP	**Porcupine Dome**	**4.04**	**188**	P	**Pn**	**17 02 34.9**	**+1.7**
	baz=6.3						
I27K	**Kandik River**	**4.05**	**164**		**Pn**	**17 02 35.1**	**+2.0**
I27K				IAML		17 03 48.7	
	comp=N,117nm,0.9s						
I27K	**Kandik River**	**4.05**	**164**	P	**Pn**	**17 02 35.1**	**+2.0**
	baz=347						
INK	**Inuvik**	**4.05**	**102**	Pn	**Pn**	**17 02 33.7**	**+0.7**
	comp=N,0.9nm,0.3s,baz=311,slow=12,SNR=33						
INK				Sn	**Sn**	**17 03 21.6**	**+1.0**
	comp=N,3.9nm,0.3s,baz=68,slow=32,SNR=6.8						
INK				Lg	Lg	17 03 40.1	
	comp=N,5.6nm,0.3s,baz=245,slow=16,SNR=6.0						
	comp=N,7.0nm,0.4s						
INK	**Inuvik**	**4.05**	**102**		**Pn**	**17 02 34.2**	**+1.2**
INK	**Inuvik**	**4.05**	**102**	P	**Pn**	**17 02 34.3**	**+1.2**
	baz=293						
F21K	**Alatna River**	**4.13**	**241**		**Pn**	**17 02 35.5**	**+1.3**
F21K				IAML		17 03 54.5	
	comp=N,89nm,0.7s						
F21K				IAML		17 03 57.0	
	comp=E,103nm,0.8s						
F21K	**Alatna River**	**4.13**	**241**	P	**Pn**	**17 02 35.7**	**+1.5**
	baz=51						
H23K	**Yukon River**	**4.22**	**211**		**Pn**	**17 02 37.0**	**+1.5**
H23K				IAML		17 03 51.9	
	comp=N,112nm,1.1s						
H23K	**Yukon River**	**4.22**	**211**	P	**Pn**	**17 02 36.9**	**+1.5**
	baz=26						
EPYK	**Eagle Plains**	**4.24**	**135**	Pn	**Pn**	**17 02 36.7**	**+1.0**
EPYK	**Eagle Plains**	**4.24**	**135**	P	**Pn**	**17 02 37.4**	**+1.7**
	baz=322						
I26K	**Coal Creek Min**	**4.24**	**174**		**Pn**	**17 02 37.3**	**+1.5**
I26K				IAML		17 03 54.5	
	comp=E,117nm,0.9s						
I26K	**Coal Creek Min**	**4.24**	**174**	P	**Pn**	**17 02 37.2**	**+1.5**
	baz=355						
F31M	**Tsiigehtchic**	**4.38**	**113**		**Pn**	**17 02 38.8**	**+1.1**
F31M				IAML		17 03 57.4	
	comp=E,88nm,1.9s						
F31M				IAML		17 04 02.3	
	comp=N,104nm,1.2s						
F31M	**Tsiigehtchic**	**4.38**	**113**	P	**Pn**	**17 02 38.7**	**+1.1**
	baz=304						
I28M	**Miner Creek**	**4.40**	**156**		**Pn**	**17 02 40.0**	**+2.0**
I28M				IAML		17 03 33.9	
	comp=N,89nm,0.8s						
I28M				IAML		17 04 09.1	
	comp=E,99nm,0.9s						
I28M	**Miner Creek**	**4.40**	**156**	P	**Pn**	**17 02 39.9**	**+2.0**
	baz=340,SNR=294						
D20K	**Etivluk River**	**4.51**	**266**		**Pn**	**17 02 41.1**	**+1.8**
D20K				IAML		17 04 22.3	
	comp=E,82nm,1.9s						
D20K	**Etivluk River**	**4.51**	**266**	P	**Pn**	**17 02 41.4**	**+2.1**
	baz=73						
E20K	**Nigu River**	**4.51**	**259**		**Pn**	**17 02 41.3**	**+1.9**
E20K	**Nigu River**	**4.51**	**259**	P	**Pn**	**17 02 41.5**	**+2.1**
	baz=68						
B20K	**Meade River**	**4.52**	**282**		**Pn**	**17 02 40.6**	**+1.1**
B20K	**Meade River**	**4.52**	**282**	P	**Pn**	**17 02 40.9**	**+1.4**
	baz=90						
B20K				S	**Sn**	**17 03 32.7**	**+0.6**
	baz=90						
G31M	**Satah River**	**4.53**	**120**		**Pn**	**17 02 40.5**	**+0.9**
G31M				IAML		17 04 09.0	
	comp=N,111nm,1.4s						
G31M				IAML		17 04 12.8	
	comp=E,96nm,1.0s						
G31M	**Satah River**	**4.53**	**120**	P	**Pn**	**17 02 40.8**	**+1.2**
	baz=310						
H22K	**Ishtalitna Cre**	**4.54**	**220**		**Pn**	**17 02 40.8**	**+1.0**
H22K				IAML		17 04 05.2	
	comp=E,73nm,1.4s						
H22K	**Ishtalitna Cre**	**4.54**	**220**	P	**Pn**	**17 02 40.8**	**+1.0**
	baz=33						
A21K	**Barrow**	**4.55**	**299**	P	**Pn**	**17 02 42.6**	**+2.8**
	baz=107						
POKR	**Poker Plat Res**	**4.58**	**197**		**Pn**	**17 02 42.4**	**+1.9**
POKR	**Poker Plat Res**	**4.58**	**197**	P	**Pn**	**17 02 42.6**	**+2.1**
	baz=14						
POKR				S	**Sn**	**17 03 35.0**	**+1.2**
	baz=14						
G21K	**Allakaket**	**4.60**	**234**		**Pn**	**17 02 41.6**	**+0.9**
G21K				IAML		17 04 06.2	
	comp=N,87nm,0.6s						
G21K				IAML		17 04 11.1	
	comp=E,101nm,1.0s						
G21K	**Allakaket**	**4.60**	**234**	P	**Pn**	**17 02 41.4**	**+0.7**
	baz=44						
I29M	**Ogilvie Camp,**	**4.75**	**149**		**Pn**	**17 02 44.0**	**+1.3**
I29M				IAML		17 04 03.8	
	comp=E,79nm,0.6s						
I29M				IAML		17 04 12.2	
	comp=N,85nm,0.7s						
I29M	**Ogilvie Camp,**	**4.75**	**149**	P	**Pn**	**17 02 44.1**	**+1.4**
	baz=334						
I23K	**Minto, Yukon-K**	**4.81**	**207**		**Pn**	**17 02 45.0**	**+1.5**
I23K				IAML		17 04 09.8	
	comp=E,71nm,0.7s						
I23K				IAML		17 04 23.9	
	comp=N,93nm,1.2s						
I23K	**Minto, Yukon-K**	**4.81**	**207**	P	**Pn**	**17 02 44.8**	**+1.3**
	baz=22						
MDM	**Murphy Dome**	**4.83**	**201**		**Pn**	**17 02 45.8**	**+2.0**
COLA	**College**	**4.87**	**199**		**Pn**	**17 02 46.4**	**+2.1**
COLA	**College**	**4.87**	**199**	P	**Pn**	**17 02 46.4**	**+2.1**
	baz=15						
IL31		**4.87**	**194**		**Pn**	**17 02 46.0**	**+1.7**
ILAR	**Eielson Array**	**4.87**	**194**	Pn	**Pn**	**17 02 46.3**	**+1.9**
	comp=N,2.8nm,0.3s,baz=6.2,slow=14,SNR=219						
ILAR				Sn	**Sn**	**17 03 42.4**	**+1.5**
	comp=N,2.8nm,0.3s,baz=15,slow=14,SNR=5.4						
ILAR				Lg	Lg	17 04 01.3	
	comp=N,6.7nm,0.3s,baz=3.4,slow=26,SNR=6.0						
ILAR				LR	LR	17 05 07.6	
	comp=N,86nm,19.0s,baz=357,slow=43						
	comp=N,9.2nm,0.5s						
ILAR	**Eielson Array**	**4.87**	**194**		**Pn**	**17 02 45.7**	**+1.3**
F20K	**Avaraart Lake**	**4.93**	**245**		**Pn**	**17 02 46.8**	**+1.6**
F20K	**Avaraart Lake**	**4.93**	**245**	P	**Pn**	**17 02 47.1**	**+1.9**
	baz=54						
J25K	**Salcha River,**	**4.94**	**186**		**Pn**	**17 02 47.4**	**+2.0**
J25K				IAML		17 04 09.3	
	comp=E,66nm,0.7s						
J25K	**Salcha River,**	**4.94**	**186**	P	**Pn**	**17 02 47.0**	**+1.6**
	baz=4.5						
IM01	**Indian Mountai**	**5.04**	**230**		**Pn**	**17 02 48.5**	**+1.8**
IMAR	**Indian Mountai**	**5.06**	**230**		**Pn**	**17 02 48.2**	**+1.3**
H21K	**Melozitna Rive**	**5.07**	**224**		**Pn**	**17 02 48.6**	**+1.5**
H21K				IAML		17 04 19.5	
	comp=E,71nm,1.2s						
H21K				IAML		17 04 19.5	
	comp=N,69nm,1.1s						
H21K	**Melozitna Rive**	**5.07**	**224**	P	**Pn**	**17 02 48.6**	**+1.5**
	baz=36						
CCB	**Clear Creek Bu**	**5.08**	**198**		**Pn**	**17 02 48.9**	**+1.7**
CCB				IAML		17 04 17.9	
	comp=E,44nm,0.4s						
D19K	**Kuna River**	**5.10**	**265**		**Pn**	**17 02 48.9**	**+1.4**
D19K				IAML		17 04 46.5	
	comp=N,70nm,1.1s						
D19K	**Kuna River**	**5.10**	**265**	P	**Pn**	**17 02 49.2**	**+1.7**
	baz=72						
D19K				S	**Sn**	**17 03 46.3**	**-0.1**
	baz=72						
MLY	**Manley**	**5.16**	**212**		**Pn**	**17 02 50.0**	**+1.6**
MLY	**Manley**	**5.16**	**212**	P	**Pn**	**17 02 48.7**	**+0.3**
	baz=26						
E19K	**Redstone River**	**5.21**	**253**		**Pn**	**17 02 49.7**	**+0.7**
E19K				IAML		17 04 26.0	
	comp=E,58nm,1.0s						
E19K				IAML		17 04 32.7	
	comp=N,58nm,0.7s						
E19K	**Redstone River**	**5.21**	**253**	P	**Pn**	**17 02 49.7**	**+0.7**
	baz=60						
HDA	**Harding Lake**	**5.24**	**193**		**Pn**	**17 02 51.2**	**+1.9**
HDA				IAML		17 04 22.5	
	comp=N,70nm,0.6s						
HDA				IAML		17 04 23.2	
	comp=E,59nm,0.9s						
HDA	**Harding Lake**	**5.24**	**193**	P	**Pn**	**17 02 51.7**	**+2.4**
	baz=10						
I30M	**Mount Dempster**	**5.26**	**141**		**Pn**	**17 02 51.1**	**+1.3**
I30M	**Mount Dempster**	**5.26**	**141**	P	**Pn**	**17 02 50.8**	**+1.0**
	baz=329						
I30M				S	**Sn**	**17 03 50.0**	**-0.6**
	baz=329						
I21K	**Tanana**	**5.28**	**218**		**Pn**	**17 02 51.2**	**+1.3**
I21K				IAML		17 04 33.9	
	comp=E,67nm,1.2s						
I21K	**Tanana**	**5.28**	**218**	P	**Pn**	**17 02 51.0**	**+1.1**
	baz=31						
WRH	**Wood River Hil**	**5.28**	**199**		**Pn**	**17 02 51.7**	**+1.7**
WRH				IAML		17 04 24.2	
	comp=N,41nm,0.6s						
WRH				IAML		17 04 26.7	
	comp=E,41nm,1.0s						
NEA2	**Nenana**	**5.29**	**203**		**Pn**	**17 02 51.7**	**+1.6**
NEA2	**Nenana**	**5.29**	**203**	P	**Pn**	**17 02 51.4**	**+1.3**
	baz=18						
NEA2				S	**Sn**	**17 03 51.9**	**+0.7**
	baz=18						
H31M	**Peel River**	**5.29**	**130**		**Pn**	**17 02 51.0**	**+0.8**
H31M				IAML		17 04 31.3	
	comp=E,64nm,1.6s						
H31M	**Peel River**	**5.29**	**130**	P	**Pn**	**17 02 51.2**	**+1.0**
	baz=320,SNR=32						
C19K	**Lookout Ridge**	**5.46**	**273**		**Pn**	**17 02 53.9**	**+1.4**
C19K	**Lookout Ridge**	**5.46**	**273**	P	**Pn**	**17 02 54.0**	**+1.5**
	baz=78						
SCRK	**Sand Creek**	**5.56**	**179**		**Pn**	**17 02 56.1**	**+2.1**
SCRK	**Sand Creek**	**5.56**	**179**	P	**Pn**	**17 02 55.4**	**+1.5**
	baz=359						
K27K	**Chicken**	**5.57**	**170**		**Pn**	**17 02 55.8**	**+1.8**
J29N	**Klondike Camp**	**5.60**	**152**		**Pn**	**17 02 55.6**	**+1.2**
J29N	**Klondike Camp**	**5.60**	**152**	P	**Pn**	**17 02 56.2**	**+1.8**
	baz=338						
F19K	**Shaleruckik Mo**	**5.72**	**248**		**Pn**	**17 02 57.0**	**+1.0**
F19K	**Shaleruckik

	baz=88					
DOT	Dot Lake	5.89 179		Pn	17 03 00.2	+1.8
G19K	Purcell Mounta	5.92 241		Pn	17 02 59.7	+0.9
G19K	Purcell Mounta	5.92 241	P	Pn	17 02 59.4	+0.6
	baz=49					
BPAW	Bear Paw Mtn.	6.05 209		Pn	17 03 01.9	+1.3
BPAW	Bear Paw Mtn.	6.05 209	P	Pn	17 03 02.1	+1.5
	baz=23					
BPAW			S	Sn	17 04 10.3	+0.3
	baz=23					
MCK	McKinley	6.10 200		Pn	17 03 02.7	+1.5
MCK	McKinley	6.10 200	P	Pn	17 03 02.6	+1.5
	baz=16					
C18K	Utukok River	6.14 270		Pn	17 03 02.4	+0.6
C18K	Utukok River	6.14 270	P	Pn	17 03 02.5	+0.7
	baz=74					
H19K	Roundabout Mou	6.16 235		Pn	17 03 03.5	+1.5
H19K	Roundabout Mou	6.16 235	P	Pn	17 03 02.9	+0.9
	baz=44					
I20K	Naaghedeneel	6.19 225	Pn	Pn	17 03 04.7	+2.3
I20K	Naaghedeneel	6.19 225	P	Pn	17 03 04.4	+2.0
	baz=35					
K29M	Barlow Dome	6.28 152		Pn	17 03 05.3	+1.6
K29M	Barlow Dome	6.28 152	P	Pn	17 03 05.6	+1.8
	baz=338					
E18K	Tukpahlearik C	6.38 259		Pn	17 03 06.0	+1.0
E18K	Tukpahlearik C	6.38 259	P	Pn	17 03 06.5	+1.4
	baz=63					
E18K			S	Sn	17 04 15.0	-2.9
	baz=63					
RND	Reindeer	6.40 199		Pn	17 03 07.8	+2.3
F18K	Selawik	6.47 251		Pn	17 03 07.7	+1.4
F18K	Selawik	6.47 251	P	Pn	17 03 07.7	+1.4
	baz=56					
F18K			S	Sn	17 04 20.5	+0.4
	baz=56					
CHUM	Lake Minchumin	6.49 213		Pn	17 03 08.7	+2.1
CHUM	Lake Minchumin	6.49 213	P	Pn	17 03 08.7	+2.1
	baz=26					
L26K	Log Cabin Wild	6.52 176		Pn	17 03 08.9	+1.9
L26K	Log Cabin Wild	6.52 176	P	Pn	17 03 09.4	+2.3
	baz=357					
BC04	Beaver Creek A	6.53 170		Pn	17 03 09.3	+2.1
BCAR	Beaver Creek A	6.55 170		Pn	17 03 08.8	+1.4
L27K	Beaver Creek,	6.55 170		Pn	17 03 09.4	+2.1
L27K	Beaver Creek,	6.55 170	P	Pn	17 03 09.5	+2.1
	baz=353,SNR=90					
TRF	Thorofare Moun	6.55 205		Pn	17 03 09.0	+1.5
TRF	Thorofare Moun	6.55 205	P	Pn	17 03 09.7	+2.2
	baz=19					
KTH	Kantishna Hill	6.55 207		Pn	17 03 09.0	+1.6
G18K	Tagagawik	6.57 243		Pn	17 03 09.3	+1.6
G18K	Tagagawik	6.57 243	P	Pn	17 03 09.6	+1.9
	baz=50					
DHY	Denali Highway	6.59 193		Pn	17 03 10.0	+1.9
DHY	Denali Highway	6.59 193	P	Pn	17 03 10.8	+2.8
	baz=9.6					
PAX	Paxson	6.59 185		Pn	17 03 10.2	+2.2
PAX	Paxson	6.59 185	P	Pn	17 03 10.5	+2.4
	baz=3.7					
MENT	Mentasta	6.61 178		Pn	17 03 10.4	+2.2
J20K	Nowinta River	6.62 221		Pn	17 03 09.7	+1.3
J20K	Nowinta River	6.62 221	P	Pn	17 03 09.2	+0.8
	baz=31					
J20K			S	Sn	17 04 25.7	+1.7
	baz=31					
A36M	Sachs Harbour	6.73 60	Pn	Pn	17 03 09.8	0.0
A36M	Sachs Harbour	6.73 60	P	Pn	17 03 09.9	+0.1
	baz=258					
A36M			S	Sn	17 04 21.4	-5.1
	baz=258					
MAYO	Mayo, Yukon	6.80 147	Pn	Pn	17 03 12.4	+1.5
L29M	L29M	6.88 156		Pn	17 03 13.6	+1.6
L29M	L29M	6.88 156	P	Pn	17 03 13.7	+1.8
	baz=342					
C17K	DeLong Mountai	6.88 270		Pn	17 03 11.7	-0.3
C17K	DeLong Mountai	6.88 270	P	Pn	17 03 12.1	+0.2
	baz=72					
C17K			S	Sn	17 04 25.8	-4.6
	baz=72					
RDOG	Red Dog Mine	6.93 267		Pn	17 03 13.1	+0.5
RDOG	Red Dog Mine	6.93 267	P	Pn	17 03 13.1	+0.5
	baz=69					
WAT1	Susitna Watana	6.93 197		Pn	17 03 15.2	+2.5
WAT1	Susitna Watana	6.93 197	P	Pn	17 03 14.9	+2.2
	baz=12					
WAT1			S	Sn	17 04 33.5	+1.9
	baz=12					
WAT7	Susitna Watana	6.96 198		Pn	17 03 15.8	+2.6
H18K	Honhosa River	6.99 238		Pn	17 03 14.6	+1.3
H18K	Honhosa River	6.99 238	P	Pn	17 03 14.3	+0.9
	baz=45					
F17K	Baldwin Pennin	7.09 252		Pn	17 03 15.4	+0.6
F17K	Baldwin Pennin	7.09 252	P	Pn	17 03 15.7	+1.0
	baz=56					
C36M	Paulatuk	7.09 82		Pn	17 03 13.7	-1.0
C36M	Paulatuk	7.09 82	P	Pn	17 03 15.8	+1.1
	baz=281					
WAT6	Susitna Watana	7.10 193		Pn	17 03 17.8	+2.6
WAT6	Susitna Watana	7.10 193	P	Pn	17 03 17.5	+2.3
	baz=9.9					
D17K	Noatak River	7.12 264		Pn	17 03 15.2	0.0
D17K	Noatak River	7.12 264	P	Pn	17 03 15.4	+0.2
	baz=66					
J19K	Poorman	7.13 225		Pn	17 03 15.7	+0.3
J19K	Poorman	7.13 225	P	Pn	17 03 16.8	+1.4
	baz=34					
M26K	Nabesna, AK	7.16 175		Pn	17 03 18.1	+2.3
M26K	Nabesna, AK	7.16 175	P	Pn	17 03 18.3	+2.5
	baz=356					
M27K	Edge Creek, AK	7.25 171		Pn	17 03 18.9	+1.8
M27K	Edge Creek, AK	7.25 171	P	Pn	17 03 19.5	+2.4
	baz=353					
BVCY	Beaver Creek	7.26 168		Pn	17 03 19.8	+2.6
BVCY	Beaver Creek	7.26 168	P	Pn	17 03 19.2	+2.1
	baz=351					
K20K	Telida	7.32 217		Pn	17 03 18.4	+0.4
K20K	Telida	7.32 217	P	Pn	17 03 19.1	+1.1
	baz=28					
PPLA	Purkeypile	7.38 210		Pn	17 03 20.3	+1.4
PPLA	Purkeypile	7.38 210	P	Pn	17 03 20.5	+1.6
	baz=22					
G17K	Kiwalik Mounta	7.46 245		Pn	17 03 21.1	+1.2
G17K	Kiwalik Mounta	7.46 245	P	Pn	17 03 20.8	+0.9
	baz=50					
M29M	Somme Creek	7.47 159		Pn	17 03 21.6	+1.4
M29M	Somme Creek	7.47 159	P	Pn	17 03 21.9	+1.8
	baz=344					
M29M			S	Sn	17 04 46.4	+1.4
	baz=344					
M24K	Tolsona, Glenn	7.48 187		Pn	17 03 22.0	+1.8
M24K	Tolsona, Glenn	7.48 187	P	Pn	17 03 21.8	+1.6
	baz=5.2					
L22K	Petersville	7.50 204		Pn	17 03 22.0	+1.5
CUT	Chulitna	7.55 202	Pn	Pn	17 03 23.0	+2.0
M30M	Minto, Yukon	7.58 153		Pn	17 03 22.4	+0.8
M30M	Minto, Yukon	7.58 153	P	Pn	17 03 22.5	+0.8
	baz=340					
H17K	Granite Mounta	7.61 240		Pn	17 03 22.6	+0.7
H17K	Granite Mounta	7.61 240	P	Pn	17 03 22.9	+1.0
	baz=46					
C16K	Lisburne Hills	7.71 271		Pn	17 03 23.4	+0.1
C16K	Lisburne Hills	7.71 271	P	Pn	17 03 23.8	+0.5
	baz=71					
SCM	Sheep Creek Mo	7.81 191		Pn	17 03 25.5	+0.6
SCM	Sheep Creek Mo	7.81 191	P	Pn	17 03 27.3	+2.5
	baz=7.9					
J18K	Innoko River	7.84 225	Pn	Pn	17 03 25.5	+0.4
J18K	Innoko River	7.84 225	P	Pn	17 03 27.5	+2.4
	baz=34					
M23K	Glacier View	7.88 192	P	Pn	17 03 29.4	+3.7
	baz=8.9					
SML	Sawmill	7.92 194		Pn	17 03 27.6	+1.3
SML	Sawmill	7.92 194	P	Pn	17 03 27.2	+1.0
	baz=10					
YUK3	Moose Creek	7.92 167		Pn	17 03 29.0	+2.6
YUK3	Moose Creek	7.92 167	P	Pn	17 03 24.4	-2.0
	baz=350					
N25K	Chitina, Valde	7.94 181		Pn	17 03 27.3	+0.7
N25K	Chitina, Valde	7.94 181	P	Pn	17 03 28.7	+2.2
	baz=0.9					
GHO	Glory Hole Cre	8.01 196	Pn	Pn	17 03 28.9	+1.5
G16K	Koyuk River	8.08 248		Pn	17 03 28.4	+0.2
G16K	Koyuk River	8.08 248	P	Pn	17 03 28.5	+0.2
	baz=51					
KLU	Klutina	8.08 186		Pn	17 03 29.7	+1.2
KLU	Klutina	8.08 186	P	Pn	17 03 31.6	+3.1
	baz=4.2					
GLB	Gilahina Butte	8.11 179		Pn	17 03 29.6	+0.8
SKT	Skwentna	8.13 205		Pn	17 03 30.5	+1.4
SKT	Skwentna	8.13 205	P	Pn	17 03 31.4	+2.3
	baz=18					
MCARA	McCarthy VSAT	8.18 176		Pn	17 03 29.8	+0.1
MCARA	McCarthy VSAT	8.18 176	P	Pn	17 03 32.8	+3.1
	baz=357					
KNK	Knik Glacier	8.32 194		Pn	17 03 33.4	+1.7
KNK	Knik Glacier	8.32 194	P	Pn	17 03 35.3	+3.7
	baz=10					
VRDI	Verde Repeater	8.32 177		Pn	17 03 33.1	+1.2
M31M	Drury Creek, Y	8.36 147		Pn	17 03 33.1	+0.9
M31M	Drury Creek, Y	8.36 147	P	Pn	17 03 32.9	+0.7
	baz=336					
DIV	Divide	8.44 185	Pn	Pn	17 03 34.7	+1.3
YUK8	Steele Glacier	8.46 165	P	Pn	17 03 35.4	+1.5
	baz=349					
M20K	Styx River	8.48 210		Pn	17 03 34.9	+1.0
M20K	Styx River	8.48 210	P	Pn	17 03 36.3	+2.4
	baz=21					
YUK4	Talbot Arm	8.52 162	P	Pn	17 03 36.1	+1.6
	baz=346					
L19K	White Mountain	8.54 216		Pn	17 03 34.7	0.0
L19K	White Mountain	8.54 216	P	Pn	17 03 36.5	+1.8
	baz=26					
H16K	Elim	8.54 244		Pn	17 03 35.5	+0.9
H16K	Elim	8.54 244	P	Pn	17 03 35.7	+1.1
	baz=47					
BALM	Baldy	8.55 174		Pn	17 03 38.3	+3.4
BARN	Barnard Glacie	8.55 172		Pn	17 03 35.2	+0.1
BMRM	Bremner River	8.58 181		Pn	17 03 35.5	+0.2
BMRM	Bremner River	8.58 181	P	Pn	17 03 37.5	+2.2
	baz=0.8					
I17K	Unalakleet	8.60 237	Pn	Pn	17 03 35.9	+0.4
N30M	Aishikik Lake	8.60 156		Pn	17 03 35.2	-0.4
N30M	Aishikik Lake	8.60 156	P	Pn	17 03 37.9	+2.3
	baz=343,SNR=32					
STLK	Strandline Lak	8.63 205		Pn	17 03 36.8	+0.8
F15K	North Star Dit	8.65 254		Pn	17 03 35.8	-0.4
F15K	North Star Dit	8.65 254	P	Pn	17 03 35.8	-0.4
	baz=54					
KIAG	Kiagna River	8.66 174		Pn	17 03 40.8	+4.3
CTG	Chitina Glacier	8.67 171	P	Pn	17 03 38.9	+2.3
	baz=353					
CTGM	Chitina Glacie	8.67 171		Pn	17 03 38.4	+1.9
MMPY	Sheldon Lake,	8.67 137		Pn	17 03 38.4	+1.8
MMPY	Sheldon Lake,	8.67 137	P	Pn	17 03 38.3	+1.8
	baz=329					
RC01	Rabbit Creek A	8.76 198	P	Pn	17 03 38.1	+0.5
	baz=13					
N31M	Braeburn, Yuko	8.78 152		Pn	17 03 38.2	+0.3
N31M	Braeburn, Yuko	8.78 152	P	Pn	17 03 37.9	-0.1
	baz=340					
CRQE	Cirque	8.81 176	P	Pn	17 03 39.3	+0.8
	baz=357					
TGL	Tana Glacier	8.81 176		Pn	17 03 39.6	+1.1
K17K	Iditarod	8.87 227	P	Pn	17 03 43.1	+3.9
	baz=33					
GRNC	Granite Creek	8.88 172		Pn	17 03 39.9	+0.4
G15K	Niukluk	8.88 249		Pn	17 03 40.7	+1.4
G15K	Niukluk	8.88 249	P	Pn	17 03 40.9	+1.6
	baz=50					
L18K	Granite Mounta	8.90 221		Pn	17 03 40.1	+0.5
L18K	Granite Mounta	8.90 221	P	Pn	17 03 40.6	+0.9
	baz=29					
O28M	Mount Upton	8.94 167	P	Pn	17 03 43.5	+3.1
	baz=351					
YUK6	Outpost Mounta	8.94 161		Pn	17 03 43.4	+3.0
YUK6	Outpost Mounta	8.94 161	P	Pn	17 03 43.1	+2.7
	baz=347					
N20K	Mount Spurr	8.98 206	P	Pn	17 03 43.7	+3.0
	baz=18					
CKL	Chakachamna La	9.00 206		Pn	17 03 43.7	+2.6
J16K	Anvik River	9.04 234		Pn	17 03 41.8	+0.3
J16K	Anvik River	9.04 234	P	Pn	17 03 42.6	+1.1
	baz=39					
HYT	Haines Junctio	9.16 159		Pn	17 03 43.6	+0.3
HYT	Haines Junctio	9.16 159	P	Pn	17 03 44.7	+1.4
	baz=345					
F14K	Arctic Creek	9.36 255		Pn	17 03 46.0	+0.1
F14K	Arctic Creek	9.36 255	P	Pn	17 03 46.3	+0.5
	baz=54					
L17K	Donlin	9.36 225	P	Pn	17 03 47.0	+1.1
	baz=32					
M18K	Stony River	9.36 216		Pn	17 03 47.5	+1.6
M18K	Stony River	9.36 216	P	Pn	17 03 47.4	+1.6
	baz=26					
O30N	Mendenhall	9.41 155		Pn	17 03 46.2	-0.4
O30N	Mendenhall	9.41 155	P	Pn	17 03 46.6	0.0
	baz=342					
MESA	MESA	9.42 173	P	Pn	17 03 51.2	+4.3
	baz=355					
O29M	Mount Kennedy	9.55 163	P	Pn	17 03 51.8	+3.3
	baz=348,SNR=16					
N32M	Quiet Lake	9.58 146	P	Pn	17 03 50.3	+1.4
	baz=336					
ANM	Nome	9.60 249		Pn	17 03 49.3	+0.2
ANM	Nome	9.60 249	P	Pn	17 03 49.3	+0.2
	baz=49					
PINM	Pinnacle	9.60 168	P	Pn	17 03 53.3	+4.1
	baz=352					
WHY	Whitehorse	9.71 152		Pn	17 03 50.2	-0.5
WHY	Whitehorse	9.71 152	P	Pn	17 03 51.7	+1.0
	baz=340					
N19K	Bonanza Creek	9.72 211	P	Pn	17 03 52.2	+1.3
	baz=22					
M17K	Holitna River	9.79 220		Pn	17 03 51.7	-0.1
M17K	Holitna River	9.79 220	P	Pn	17 03 52.4	+0.6
	baz=28					
TNA	Tin City	9.85 258	P	Pn	17 03 51.6	-1.0
	baz=56					
P30M	Million Dollar	9.91 158	P	Pn	17 03 54.8	+1.3
	baz=345					
K15K	Wolf Creek Mou	10.08 233	P	Pn	17 03 57.5	+1.7
	baz=36					
N18K	Kilae Creek	10.11 215	Pn	Pn	17 03 55.6	-0.6
TGTN	Hyland Airport	10.35 133	P	Pn	17 04 00.6	+1.1
	baz=328					
HOM	Homer	10.38 201	P	Pn	17 03 58.0	-1.9
	baz=14					
M16K	Timber Creek	10.48 223	Pn	Pn	17 04 01.1	-0.1
M16K	Timber Creek	10.48 223	P	Pn	17 04 03.8	+2.6
	baz=29					
P33M	Teslin, Yukon	10.49 147	P	Pn	17 04 04.7	+3.2
	baz=338					
N17K	Nushagak Hills	10.52 217	Pn	Pn	17 04 01.3	-0.4
N17K	Nushagak Hills	10.52 217	P	Pn	17 04 05.1	+3.3
	baz=25					
L15K	Ungalak Mounta	10.57 230	P	Pn	17 04 05.5	+3.1
	baz=34					
N16K	Nishlik Lake	10.92 221	P	Pn	17 04 09.0	+1.8
	baz=28					
L14K	Kuka Creek	11.18 232	Pn	Pn	17 04 11.1	+0.4
K13K	Kusilvak Mount	11.27 238	P	Pn	17 04 12.3	+0.3
	baz=39					
N15K	Kwethluk River	11.50 223	Pn	Pn	17 04 16.3	+1.1
Q32M	Nakina River	11.76 148	Pn	Pn	17 04 18.9	-0.1
O15K	Ungalikthiuk R	12.32 220	Pn	Pn	17 04 27.2	+0.8
DLBC	Dease Lake	12.69 144	Pn	Pn	17 04 30.6	-0.8
	comp=E,0.3nm,0.3s,baz=356,slow=12,SNR=5.6					
DLBC			Sn	Sn	17 06 47.3	-5.5
	comp=E,0.2nm,0.3s,baz=356,slow=19,SNR=1.3					
	comp=E,1.0nm,0.5s					
YKAW3	Yellowknife Wh	13.76 106		Pn	17 04 42.5	-3.5
YKA	Yellowknife Ar	13.81 106	Pn	Pn	17 04 44.1	-2.6
	comp=E,0.7nm,0.3s,baz=316,slow=13,SNR=21					
YKA			Sn	Sn	17 07 08.5	-12
	comp=E,0.5nm,0.3s,baz=246,slow=15,SNR=10					
	comp=E,1.5nm,0.5s					
YKA	Yellowknife Ar	13.81 106		Pn	17 04 43.2	-3.5
YKAW1	Yellowknife Wh	13.86 106		Pn	17 04 43.7	-3.6
RES	Resolute Bay	15.57 49	Pn	Pn	17 05 07.6	-2.7
	comp=E,0.9nm,0.3s,baz=259,slow=9.0,SNR=25					
RES			Sn	Sn	17 07 48.0	-15
	comp=E,0.9nm,0.3s,baz=218,slow=17,SNR=7.4					
RES	Resolute Bay	15.57 49		Pn	17 05 07.0	-3.3
A04D	Lummi Island	23.33 142	P	P	17 06 36.0	-3.1
WIFE	Three Sisters-	27.96 144	P	P	17 07 21.1	-0.6
WIFE			IAmb	IAmb	17 07 45.5	
	comp=Z,3.1nm,1.0s					
BSUT	Blindstream Ca	33.92 131	P	P	17 08 14.4	0.0
BSUT			IAmb	IAmb	17 08 23.7	
	comp=Z,1.9nm,0.9s					
P18A	Preston Nutter	34.91 131	P	P	17 08 22.6	-0.3
P18A			IAmb	IAmb	17 08 29.1	
	comp=Z,2.5nm,0.7s					
SCO	Scoresbysund	35.08 30	P	P	17 08 23.4	-0.3
SCHQ	Schefferville	36.11 73	P	P	17 08 36.9	+4.1
	comp=Z,2.8nm,0.8s,baz=333,slow=6.8,SNR=3.7					
SCHQ	Schefferville	36.11 73	P	P	17 08 33.4	+0.6
PV10	Paradox Valley	36.40 130	P	P	17 08 37.9	+2.1
PV10			IAmb	IAmb	17 08 42.9	
	comp=Z,4.7nm,1.0s					
PV01	Paradox Valley	36.76 130	P	P	17 08 39.5	+0.8
PV01			IAmb	IAmb	17 08 45.1	
	comp=Z,1.9nm,0.6s					
TXAR	Lajitas Array	46.39 128	P	P	17 10 00.9	+3.4
	comp=Z,0.2nm,0.4s,baz=340,slow=4.7,SNR=5.9					
	comp=Z,0.2nm,0.4s					
TXAR	Lajitas Array	46.39 128	P	P	17 09 58.6	+1.1
FINES	FINESS Array B	49.15 6	P	P	17 10 20.0	+1.6
	comp=Z,3.1nm,0.9s,baz=335,slow=8.4,SNR=4.3					
	comp=Z,3.1nm,0.9s					
ZALV	Zalesovo Beam	51.79 325	P	P	17 10 41.3	+2.8
	comp=Z,0.4nm,0.5s,baz=38,slow=7.3,SNR=2.4					
	comp=Z,0.4nm,0.5s					
ZALV	Zalesovo Beam	51.79 325	P	P	17 10 39.8	+1.3
KURK	Kurchatov	56.06 329	P	P	17 11 10.9	+1.2
KURBB	Kurchatov Arra	56.16 329	P	P	17 11 12.8	+2.3
	comp=Z,0.8nm,0.9s,baz=16,slow=7.5,SNR=5.7					
	comp=Z,0.8nm,0.9s					
MKAR	Makanchi Array	59.10 324	P	P	17 11 33.4	+2.2
	comp=Z,0.3nm,0.4s,baz=31,slow=7.8,SNR=6.3					
	comp=Z,0.3nm,0.4s					
MKAR	Makanchi Array	59.10 324	P	P	17 11 31.9	+0.7
AKASG	Malin Array Be	60.01 5	P	P	17 11 38.5	+1.1
	comp=Z,0.5nm,0.4s,baz=360,slow=6.9,SNR=4.4					
	comp=Z,0.5nm,0.4s					

*IDC **24** 17:02:41.1±0.9, 2°.26N×95°.68W, h0km, mb4.1/9, mbtmp4.1/9, Error ellipse: s-maj=38.7km s-min=19.9km az=60.0*

*NEIC **24** 17:02:43.6±1.5, 2°.34N±0°.08×95°.54W±0°.09, h10km±1km, mb4.4/71, Error ellipse: s-maj=19.9km s-min=3.0km az=227.0*

ISC 24 17:02:42.6±0.6, **2°.32N**±0°.08×**95°.51W**±0°.10, **h10**km, **n97**, σ**0°69**/86, **mb4.3**/33, **Galapagos Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGUH	Tegucigalpa,Un	14.22	34	Pn	Pn	17 06 05.8	+1.3
CCIG	Comitan	14.27	13	Pn	Pn	17 06 05.8	+0.7
CMIG	Matias Romero	14.70	2	Pn	P	17 06 15.9	-1.1
	baz=164,slow=6.3						
TLIG	Tlapa	15.45	349	Pn	Pn	17 06 20.8	-0.1
SIUN	Universidad Ur	15.52	43	Pn	Pn	17 06 22.0	+0.2
OTAV	Otavalo	17.18	97	P	P	17 06 44.7	-0.4
OTAV				IAmb	IAmb	17 06 57.7	
	comp=Z,32nm,1.2s						
TEIG	Tepich	19.15	21	P	P	17 07 05.6	-0.7
TEIG				IAmb	IAmb	17 07 09.8	
	comp=Z,29nm,1.2s						
ROSC	El Rosal	21.30	83	P	P	17 07 32.4	+2.2
	comp=Z,6.4nm,0.5s,baz=281,slow=17,SNR=3.6						
	comp=Z,6.4nm,0.5s						
ROSC	El Rosal	21.30	83	P	P	17 07 30.1	-0.1
ROSC				IAmb	IAmb	17 07 46.4	
	comp=Z,13nm,0.9s						
ZAIG	Zacatecas	21.45	342	P	P	17 07 31.8	+0.2
SOR	Soroa	23.70	30	P	P	17 07 54.2	-0.6
HBVL	Hebbronville	24.79	353	P	P	17 08 05.1	+0.2
CZSB	Cruzeiro do Su	24.84	114	P	P	17 08 05.0	-0.6
SDV	Santo Domingo	25.59	74	P	P	17 08 12.5	0.0
SDV				IAmb	IAmb	17 08 21.3	
	comp=Z,12nm,1.2s						
TXAR	Lajitas Array	27.97	345	P	P	17 08 35.0	+1.3
	comp=Z,2.1nm,0.8s,baz=162,slow=9.9,SNR=22						
	comp=Z,2.1nm,0.8s						
TXAR	Lajitas Array	27.97	345	P	P	17 08 33.5	-0.2
TX31	Lajitas Ar. Si	27.97	345	P	P	17 08 33.8	+0.1
TX31				IAmb	IAmb	17 08 52.7	
	comp=Z,7.6nm,1.4s						
SAND	Sanderson	28.20	348	P	P	17 08 35.6	0.0
DWPF	Disney Wildern	28.96	26	P	P	17 08 43.4	+1.0
VHRN	Van Horn	29.70	343		P	17 08 49.6	+0.4
VHRN				IAmb	IAmb	17 09 10.2	
	comp=Z,5.3nm,1.2s						
RPN	Rapa Nui	32.16	204	P	P	17 09 11.9	+1.2
121A	Cookes Peak, D	32.20	340	P	P	17 09 10.7	-0.4
121A				IAmb	IAmb	17 09 19.0	
	comp=Z,5.5nm,0.9s						
WMOK	Wichita Mounta	32.40	355	P	P	17 09 13.2	+0.5
WMOK				IAmb	IAmb	17 09 35.9	
	comp=Z,5.6nm,1.1s						
PB18	Visviri	32.40	129	P	P	17 09 12.8	-0.7
LPAZ	La Paz	32.77	125	P	P	17 09 17.9	+1.0
	comp=Z,4.7nm,1.2s,baz=293,slow=6.0,SNR=5.4						
	comp=Z,4.7nm,1.2s						
LPAZ	La Paz	32.77	125	P	P	17 09 17.2	+0.4
LPAZ				IAmb	IAmb	17 09 31.0	
	comp=Z,6.4nm,1.2s						
SJG	San Juan	32.79	59	P	P	17 09 17.0	+0.6
PB16	IPOC Station P	32.81	130	P	P	17 09 15.8	-1.4
Y22A	Socorro	33.23	342	P	P	17 09 20.3	+0.1
Y22A				IAmb	IAmb	17 09 37.0	
	comp=Z,4.5nm,0.9s						
WVT	Waverly	34.39	11		P	17 09 30.4	+0.4
WVT				IAmb	IAmb	17 09 32.4	
	comp=Z,6.2nm,0.8s						
BOAV	Boa Vista	34.96	89	P	P	17 09 35.2	-0.1
X16A	Lo Mia Camp, P	35.22	337	P	P	17 09 36.6	-0.9
S44A	Carbondale	35.67	9	P	P	17 09 40.9	-0.2
BIM	Bigot	36.09	68	P	P	17 09 43.8	-1.3
BC3	Big Chuckawall	36.33	331	P	P	17 09 47.7	+0.7
BC3				IAmb	IAmb	17 09 58.2	
	comp=Z,5.4nm,1.3s						
IRM	Iron Mountain	36.60	332	P	P	17 09 48.9	-0.3
MVCO	Mesa Verde	36.73	343	P	P	17 09 50.7	+0.3
MVCO				IAmb	IAmb	17 10 01.7	
	comp=Z,5.2nm,1.1s						
WCI	Wyandotte Cave	36.73	12	P	P	17 09 50.1	0.0
W13A	Hualapai Mount	36.82	334	P	P	17 09 51.9	+0.6
ELS	Elsinore Mount	37.31	329	P	P	17 09 55.5	+0.2
U15A	North Rim	37.32	337	P	P	17 09 56.3	+0.8
U15A				IAmb	IAmb	17 10 12.7	
	comp=Z,6.6nm,1.5s						
PV01	Paradox Valley	37.60	343	P	P	17 09 59.1	+1.2
PV01				IAmb	IAmb	17 10 01.7	
	comp=Z,5.6nm,1.1s						
PV13	Radium Mtn., P	37.70	343	P	P	17 09 58.9	+0.2
PV13				IAmb	IAmb	17 10 42.7	
	comp=Z,3.8nm,0.9s						
PV02	Paradox Valley	37.72	343	P	P	17 09 59.2	+0.3
PV02				IAmb	IA

ELK	**Elko**	**42.21**	**338**		**P**	**17 10 36.0 -0.1**
HVU	**Hansel Valley**	**42.24**	**341**		**P**	**17 10 36.2 -0.1**
HVU				IAmb	IAmb	17 10 44.3
	comp=Z,8.3nm,0.9s					
LOHW	**Long Hollow**	**43.26**	**344**	P	**P**	**17 10 44.7 +0.1**
LOHW				IAmb	IAmb	17 10 51.6
	comp=Z,7.0nm,1.1s					
FXWY	**Fox Creek**	**43.40**	**344**	IAmb	IAmb	17 10 52.7
	comp=Z,4.5nm,0.9s					
MOOW	**Moose Ponds**	**43.42**	**344**	P	**P**	**17 10 46.4 +0.5**
YNE	**Yellowstone No**	**44.39**	**345**	P	**P**	**17 10 53.4 -0.3**
YNE				IAmb	IAmb	17 11 00.6
	comp=Z,5.1nm,1.1s					
EGMT	**Eagleton**	**47.16**	**347**	P	**P**	**17 11 15.1 -0.3**
YKA	**Yellowknife Ar**	**61.71**	**350**	P	**P**	**17 13 00.6 -0.3**
	comp=Z,0.5nm,0.8s,baz=159,slow=6.0,SNR=5.0					
	comp=Z,0.5nm,0.8s					
BCAR	**Beaver Creek A**	**69.50**	**339**	P	**P**	**17 13 51.3 0.0**
K27K	**Chicken**	**70.21**	**340**	P	**P**	**17 13 57.0 +1.4**
INK	**Inuvik**	**70.73**	**346**		**P**	**17 13 59.1 +0.5**
G29M	**Pine Creek**	**70.89**	**344**	P	**P**	**17 13 59.8 +0.2**
SML	**Sawmill**	**71.21**	**336**	P	**P**	**17 14 01.5 -0.2**
RND	**Reindeer**	**72.28**	**338**		**P**	**17 14 07.7 -0.5**
RES	**Resolute Bay**	**72.29**	**0**	P	**P**	**17 14 07.3 -0.6**
	comp=Z,0.9nm,0.8s,baz=201,slow=10,SNR=3.0					
	comp=Z,0.9nm,0.8s					
RES	**Resolute Bay**	**72.29**	**0**	IAmb	IAmb	17 14 12.9
	comp=Z,4.8nm,1.4s					
ILAR	**Eielson Array**	**72.33**	**339**	P	**P**	**17 14 08.2 -0.2**
	comp=Z,1.5nm,0.9s,baz=139,slow=3.5,SNR=14					
	comp=Z,1.5nm,0.9s					
ILAR	**Eielson Array**	**72.33**	**339**		**P**	**17 14 07.5 -0.8**
E27K	**Coleen River**	**72.77**	**344**	P	**P**	**17 14 11.2 +0.3**
H24K	**Noodor Dome**	**73.28**	**340**	P	**P**	**17 14 13.6 -0.5**
H24K				IAmb	IAmb	17 14 16.8
	comp=Z,3.8nm,1.1s					
D25K	**Kavik River**	**74.84**	**343**	P	**P**	**17 14 22.9 -0.2**
D25K				IAmb	IAmb	17 14 34.1
	comp=Z,6.8nm,1.2s					
E18K	**Tukpahlearik C**	**78.49**	**339**	P	**P**	**17 14 43.5 -0.2**
E18K				IAmb	IAmb	17 14 50.8
	comp=Z,3.8nm,1.1s					
QSPA	**South Pole Qui**	**92.34**	**180**	P	**P**	**17 15 54.2 +1.1**
	comp=Z,3.7nm,1.1s,baz=106,slow=1.8,SNR=4.2					
	comp=Z,3.7nm,1.1s					
QSPA	**South Pole Qui**	**92.34**	**180**	P	**P**	**17 15 53.7 +0.5**
H11N3	**WAKE ISLAND Hy**	**96.35**	**290**	T	T	19 03 14.6
	baz=85,slow=75,SNR=12					
H11N2	**WAKE ISLAND Hy**	**96.36**	**290**	T	T	19 03 11.4
	baz=85,slow=75,SNR=13					
H11N1	**WAKE ISLAND Hy**	**96.37**	**290**	T	T	19 03 16.1
	baz=85,slow=75,SNR=19					
H11S2	**WAKE ISLAND Hy**	**96.65**	**289**	T	T	19 03 38.0
	baz=86,slow=75,SNR=96					
H11S1	**WAKE ISLAND Hy**	**96.65**	**289**	T	T	19 03 37.9
	baz=86,slow=75,SNR=122					
H11S3	**WAKE ISLAND Hy**	**96.66**	**289**	T	T	19 03 39.0
	baz=86,slow=75,SNR=92					
BVAR	**Borovoye Array**	**123.60**	**10**	PKP	**PKPdf**	**17 21 40.3 -0.3**
	comp=Z,0.2nm,0.4s,baz=321,slow=2.0,SNR=2.2					
KURK	**Kurchatov**	**126.93**	**5**		**PKPdf**	**17 21 45.7 -1.3**
KURBB	**Kurchatov Arra**	**127.02**	**5**	PKP	**PKPdf**	**17 21 46.5 -0.6**
	comp=Z,1.1nm,1.1s,baz=347,slow=2.1,SNR=5.4					
ASAR	**Alice Springs**	**127.74**	**242**	PKP	**PKPdf**	**17 21 48.5 -0.9**
	comp=Z,0.6nm,0.7s,baz=98,slow=1.9,SNR=10.0					
ASAR	**Alice Springs**	**127.74**	**242**		**PKPdf**	**17 21 47.6 -1.8**
WRA	**Warramunga Arr**	**128.29**	**246**	PKP	**PKPdf**	**17 21 49.9 -0.5**
	comp=Z,1.0nm,0.8s,baz=100,slow=2.3,SNR=6.6					

*IDC **24** 17:07:44.4±4.3, 18°.34S×178°.31W, h559km±25km, mb2.9/3, mbtmp3.8/4, Error ellipse: s-maj=121.3km s-min=30.4km az=141.0*
*NEIC **24** 17:07:45.9±1.5, 17°.5S±0°.1×178°.8W±0°.1, h547km±10km, mb4.0/18, Error ellipse: s-maj=21.5km s-min=18.2km az=154.0*

ISC 24 17:07:46.1±0.6, 17°.4S±0°.1×178°.8W±0°.1, h550km, n27, σ1§22/29, mb4.0/13, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.06**	**263**	P	**P**	**17 09 04.1 +2.6**
	11nm,0.7s,baz=120,slow=23,SNR=15					
MSVF	**Nonsavu**	**3.06**	**263**	P	**P**	**17 09 03.3 +1.7**
FUTU	**Fugatoga**	**3.12**	**12**	P	**P**	**17 09 02.4 +0.5**
NIUE	**Niue**	**8.56**	**103**	P	**P**	**17 09 48.0 -1.5**
BBOO	**Buckleboo**	**43.37**	**240**	P	**P**	**17 14 58.9 -1.4**
WR8	**Warramunga Arr**	**44.25**	**259**	P	**P**	**17 15 05.6 -1.7**
WR8				IAmb	IAmb	17 15 30.1
	comp=Z,5.6nm,1.2s					
WRA	**Warramunga Arr**	**44.40**	**259**	P	**P**	**17 15 06.9 -1.5**
	comp=Z,0.3nm,0.3s,baz=95,slow=7.7,SNR=33					
WRA				PcP	**PcP**	**17 16 40.1 -0.2**
	comp=Z,0.2nm,0.7s,baz=94,slow=3.5,SNR=1.2					
	comp=Z,0.3nm,0.3s					
WRA	**Warramunga Arr**	**44.40**	**259**		**PcP**	**17 16 39.2 -1.1**
AS31	**Alice Springs**	**44.61**	**254**	P	**P**	**17 15 09.4 -0.7**
AS31				IAmb	IAmb	17 15 10.0
	comp=Z,1.4nm,0.5s					
ASAR	**Alice Springs**	**44.61**	**254**	P	**P**	**17 15 09.1 -1.0**
	comp=Z,3.8nm,0.5s,baz=89,slow=7.8,SNR=102					
ASAR				PcP	**PcP**	**17 16 40.5 -0.5**
	comp=Z,0.3nm,0.7s,baz=85,slow=3.6,SNR=2.2					
	comp=Z,3.8nm,0.5s					
ASAR	**Alice Springs**	**44.61**	**254**	P	**P**	**17 15 08.6 -1.4**
MIDW	**Midway**	**45.35**	**2**	P	**P**	**17 15 16.0 +0.6**
MTN	**Manton Dam**	**48.48**	**268**	P	**P**	**17 15 38.8 -0.6**
MTN				IAmb	IAmb	17 16 13.4
	comp=Z,18nm,1.4s					
FORT	**Forrest**	**49.93**	**244**	P	**P**	**17 15 48.9 -1.0**
FORT				IAmb	IAmb	17 15 52.3
	comp=Z,7.5nm,0.9s					
KNRA	**Kununurra**	**50.21**	**264**	P	**P**	**17 15 51.4 -0.7**
PSA00	**Pilbara Seismi**	**57.72**	**255**	P	**P**	**17 16 43.7 -1.2**
MBWA	**Marble Bar**	**57.88**	**256**	P	**P**	**17 16 44.8 -1.3**
MBWA				IAmb	IAmb	17 16 58.7
	comp=Z,8.5nm,1.1s					
KKM	**Kota Kinabalu**	**68.29**	**284**	P	**P**	**17 17 53.2 +0.1**
QSPA	**South Pole Qui**	**72.67**	**180**	P	**P**	**17 18 19.2 +1.1**
QSPA				IAmb	IAmb	17 18 21.2
	comp=Z,11nm,1.5s					
O18K	**Koktuh Hills**	**79.31**	**12**	P	**P**	**17 18 54.4 -0.1**
L18K	**Granite Mounta**	**81.24**	**10**	P	**P**	**17 19 05.7 +1.3**
L18K				IAmb	IAmb	17 19 41.9
	comp=Z,4.9nm,1.5s					
J16K	**Anvik River**	**81.65**	**8**	P	**P**	**17 19 08.1 +1.6**
J16K				IAmb	IAmb	17 19 13.3
	comp=Z,9.0nm,1.3s					
J18K	**Innoko River**	**82.40**	**10**	P	**P**	**17 19 11.2 +0.9**
J18K				IAmb	IAmb	17 19 22.4
	comp=Z,6.2nm,1.5s					
BELA	**Belgrano 2**	**82.73**	**173**	P	**P**	**17 19 12.6 +0.6**
GLB	**Gilahina Butte**	**83.35**	**16**	P	**P**	**17 19 15.6 +0.4**
GLB				IAmb	IAmb	17 19 25.4
	comp=Z,7.5nm,1.4s					
MAW	**Mawson**	**84.24**	**200**	P	**P**	**17 19 21.2 +1.6**
ILAR	**Eielson Array**	**85.45**	**13**	P	**P**	**17 19 25.1 -0.2**
	comp=Z,0.1nm,0.4s,baz=197,slow=2.8,SNR=5.1					
	comp=Z,0.1nm,0.4s					

IDC 24 17:20:54.1±1.6, 1°.66N×125°.85E, h0km, mb3.3/4, mbtmp3.4/5, ML3.4/1, Error ellipse: s-maj=123.0km s-min=20.4km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.64**	**181**	P	P	17 25 24.0	-0.5
	0.1nm,0.3s,baz=2.4,slow=10,SNR=1.8						
	1.4nm,0.7s						
WRA	**Warramunga Arr**	**23.03**	**159**	P	P	17 26 00.8	-0.2
	0.7nm,0.4s,baz=338,slow=10,SNR=16						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**26.36**	**163**	P	P	17 26 32.5	+0.3
	0.2nm,0.7s,baz=343,slow=11,SNR=5.3						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**58.76**	**326**	P	P	17 30 54.2	+0.2
	0.1nm,0.3s,baz=120,slow=7.6,SNR=5.5						
	0.1nm,0.3s						
KURBB	**Kurchatov Arra**	**63.01**	**328**	P	P	17 31 22.8	-0.1
	0.4nm,0.8s,baz=131,slow=7.7,SNR=4.8						
	0.4nm,0.8s						

IDC 24 17:25:43.7±2.4, 6°.78S×129°.92E, h182km±32km, mb2.9/1, mbtmp3.4/5, Error ellipse: s-maj=57.9km s-min=18.1km az=84.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.02**	**13**	P	Pn	17 27 10.1	-0.9
	1.6nm,0.4s,baz=248,slow=19,SNR=7.1						
SIJI				S	Sn	17 28 08.7	-11
	2.3nm,0.2s,baz=168,slow=23,SNR=9.3						
FITZ	**Fitzroy Crossi**	**12.01**	**200**	P	Pn	17 28 28.8	-0.4
	1.9nm,0.8s,baz=29,slow=10,SNR=2.1						
FITZ				S	Sn	17 30 33.8	-8.9
	2.4nm,0.9s,baz=143,slow=9.9,SNR=2.3						
WRA	**Warramunga Arr**	**13.77**	**162**	P	P	17 28 53.0	-1.3
	0.3nm,0.4s,baz=340,slow=12,SNR=17						
WRA				S	Sn	17 31 14.9	-10
	0.2nm,0.4s,baz=340,slow=20,SNR=6.8						
ASAR	**Alice Springs**	**17.23**	**168**	P	Pn	17 29 33.5	-0.2
	0.4nm,0.6s,baz=345,slow=9.0,SNR=12						
ASAR				S	S	17 32 40.3	-2.2
	0.4nm,1.1s,baz=360,slow=25,SNR=1.6						
MKAR	**Makanchi Array**	**68.00**	**327**	P	P	17 36 23.5	+0.3
	0.1nm,0.4s,baz=131,slow=7.2,SNR=2.4						
	0.1nm,0.4s						

*IDC **24** 17:34:34.6±2.3, 32°.52N×85°.14E, h0km, mb3.3/4, mbtmp3.3/7, ML3.0/3, MS4.0/2, Error ellipse: s-maj=72.2km s-min=21.6km az=72.0*

ISC 24 17:34:36.9±2.1, 32°.6N±0°.2×85°.2E±0°.4, h16km, n9, σ0§83/7, mb3.3/4, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**14.38**	**352**	Pn	**Pn**	**17 37 59.1**	**-0.6**
	baz=156,slow=12,SNR=6.9						
	0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**18.69**	**347**	P	**Pn**	**17 38 55.8**	**+1.1**
	baz=154,slow=11,SNR=8.4						
	1.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**18.75**	**135**	P	**Pn**	**17 38 55.4**	**-0.3**
	0.1nm,0.3s,baz=320,slow=12,SNR=5.7						
	0.6nm,0.7s						
ZALV	**Zalesovo Beam**	**21.37**	**359**	P	**P**	**17 39 23.1**	**-0.3**
	0.6nm,0.6s,baz=179,slow=13,SNR=4.4						
	0.6nm,0.6s						
SONM	**Songino Array**	**22.16**	**40**	P	**P**	**17 39 32.8**	**+0.6**
	0.5nm,0.5s,baz=232,slow=13,SNR=5.8						
	0.5nm,0.5s						
KIRV	**Kirov**	**35.37**	**328**	LR	LR	17 55 32.3	
	comp=Z,312nm,19.4s,baz=316,slow=36						
BRTR	**Keskin Array B**	**41.72**	**295**	LR	LR	18 04 40.7	
	comp=Z,147nm,18.4s,baz=317,slow=43						
WRA	**Warramunga Arr**	**70.28**	**131**	P	**P**	**17 45 49.2**	**-0.5**
	0.4nm,0.9s,baz=326,slow=6.5,SNR=4.8						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**72.75**	**134**	P	**P**	**17 46 05.1**	**+0.6**
	0.2nm,0.8s,baz=329,slow=6.5,SNR=2.3						
	0.2nm,0.8s						

*IDC **24** 17:40:01.4±2.4, 32°.39N×84°.55E, h0km, mb3.2/4, mbtmp3.3/7, ML3.1/3, MS3.7/1, Error ellipse: s-maj=77.3km s-min=22.0km az=72.0*

ISC 24 17:40:05.9±2.1, 32°.5N±0°.2×84°.5E±0°.4, h35km, n8, σ1§62/7, mb3.2/4, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**14.40**	**354**	Pn	**Pn**	**17 43 25.4**	**-1.9**
	baz=161,slow=12,SNR=4.5						
	0.4nm,0.8s						
KURBB	**Kurchatov Arra**	**18.67**	**348**	P	**Pn**	**17 44 21.5**	**+0.2**
	baz=161,slow=8.8,SNR=2.6						
	0.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**19.06**	**134**	P	**P**	**17 44 23.9**	**-1.4**
	0.1nm,0.3s,baz=317,slow=12,SNR=20						
	2.6nm,0.9s						
ZALV	**Zalesovo Beam**	**21.47**	**0**	P	**P**	**17 44 52.6**	**+1.5**
	0.4nm,0.5s,baz=174,slow=16,SNR=3.6						
	0.4nm,0.5s						
SONM	**Songino Array**	**22.58**	**41**	P	**P**	**17 45 04.1**	**+0.8**
	0.5nm,0.8s,baz=230,slow=11,SNR=3.3						
	0.5nm,0.8s						
EIL	**Elat**	**42.24**	**280**	LR	LR	18 07 60.0	
	comp=Z,93nm,18.6s,baz=236,slow=40						
WRA	**Warramunga Arr**	**70.62**	**130**	P	**P**	**17 51 17.7**	**-0.3**
	0.3nm,0.8s,baz=318,slow=6.2,SNR=1.6						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**73.07**	**133**	P	**P**	**17 51 34.1**	**+1.4**
	0.3nm,0.8s,baz=318,slow=5.3,SNR=4.1						
	0.3nm,0.8s						

*NEIC **24** 17:43:02.3±0.8, 17°.95N±0°.03×67°.00W±0°.01, h10km±1km, ML3.8/33, Md3.6/13(RSPR), Error ellipse: s-maj=5.8km s-min=2.1km az=12.0*
*OSPL **24** 17:43:02.6±0.4, 18°.10N×67°.02W, h12km±9km, ML4.1, Presumed earthquake*
*SDD **24** 17:43:03.5±1.0, 17°.95N×66°.97W, h0km±8km, MD3.0, ML3.4, MW3.1, Presumed earthquake*

ISC 24 17:43:00.9±0.9, 17°.91N±0°.05×67°.02W±0°.02, h18km±4km, n42, σ0§59/56, 4C-9D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLPR	**Magueyes Islan**	**0.06**	**337**		**Pg**	**17 43 04.6**	**+0.3**
MLPR					**Sg**	**17 43 05.7**	**-0.8**
MLPR				IAML		17 43 06.2	
	64μm,0.3s						
MLPR				IAML		17 43 06.4	
	70μm,0.3s						
MLPR	**Magueyes Islan**	**0.06**	**337**	*i* P	**Pg**	**17 43 04.6**	**+0.3**
MLPR				⇓*e*Sg	**Sg**	**17 43 06.0**	**-0.5**
MLPR				IAML		17 43 06.3	
	comp=N,24μm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.13**	**317**	*i* P	**Pg**	**17 43 05.7**	**+0.8**
CRPR				*e*S	**Sg**	**17 43 07.6**	**0.0**
CRPR				IAML		17 43 07.9	
	comp=Z,51μm,0.3s						
GBPR	**Guanica, Bosqu**	**0.15**	**65**		**Pg**	**17 43 05.3**	**+0.2**
GBPR					**Sb**	**17 43 07.3**	**-0.1**
LSP	**Las Mesas**	**0.27**	**346**		**Pb**	**17 43 07.5**	**+0.3**
PRSN	**Puerto Rico Se**	**0.33**	**338**		**Pb**	**17 43 08.6**	**+0.4**
PRSN	**Puerto Rico Se**	**0.33**	**338**		**Sb**	**17 43 13.2**	**0.0**
PRSN	**Puerto Rico Se**	**0.33**	**338**	*i* P	**Pb**	**17 43 08.6**	**+0.4**
PRSN				⇑*e*Sg	**Sb**	**17 43 13.3**	**+0.1**
PRSN				IAML		17 43 14.7	
	comp=N,23μm,0.2s						
OBIP	**Obispado Ponce**	**0.41**	**72**		**Pb**	**17 43 09.8**	**+0.1**
OBIP					**Sg**	**17 43 15.2**	**0.0**
OBIP	**Obispado Ponce**	**0.41**	**72**	*i* P	**Pb**	**17 43 09.9**	**+0.1**
OBIP				*e*S	**Sb**	**17 43 15.6**	**-0.1**
OBIP				IAML		17 43 16.5	
	comp=Z,17μm,0.2s						
UUPR	**Utuado, UPR, P**	**0.44**	**40**		**Pg**	**17 43 10.0**	**0.0**
UUPR					**Sg**	**17 43 15.3**	**-0.7**
CELP	**Cerrillos**	**0.45**	**69**		**Pb**	**17 43 10.5**	**+0.2**
CELP	**Cerrillos**	**0.45**	**69**		**Sb**	**17 43 16.7**	**0.0**
CELP	**Cerrillos**	**0.45**	**69**	*i* P	**Pb**	**17 43 10.6**	**+0.2**
CELP				⇓*e*Sg	**Sb**	**17 43 16.8**	**0.0**
CELP				IAML		17 43 18.4	
	comp=N,1μm,0.2s						
AOPR	**Arecibo Observ**	**0.50**	**30**		**Pg**	**17 43 11.1**	**0.0**
AOPR					**Sg**	**17 43 17.2**	**-0.6**
AOPR	**Arecibo Observ**	**0.50**	**30**	IAML		17 43 17.5	
	comp=N,15μm,0.3s						
AOPR				IAML		17 43 17.7	
	comp=N,34μm,0.5s						
AOPR	**Arecibo Observ**	**0.50**	**30**	*i* P	**Pg**	**17 43 11.1**	**0.0**
AOPR				⇓*e*Sg	**Sg**	**17 43 17.2**	**-0.6**
AOPR				IAML		17 43 17.4	
	comp=N,13μm,0.2s						
AGPR	**Aguadilla, PR**	**0.56**	**351**		**Pb**	**17 43 12.6**	**+0.4**
AGPR				IAML		17 43 23.9	
	comp=N,2μm,0.5s						
AGPR	**Aguadilla, PR**	**0.56**	**351**		**Sb**	**17 43 19.8**	**-0.1**
AGPR	**Aguadilla, PR**	**0.56**	**351**	⇑*i* P	**Pb**	**17 43 12.6**	**+0.4**
AGPR				⇓*e*Sg	**Sb**	**17 43 20.1**	**+0.2**
AGPR				IAML		17 43 20.4	
	comp=N,1μm,0.2s						
IDE	**Isla Desecheo**	**0.64**	**318**		**Pg**	**17 43 14.2**	**+0.6**
IDE					**Sn**	**17 43 23.5**	**-1.4**
EMPR	**Esperanza - Ma**	**0.73**	**40**		**Pg**	**17 43 15.6**	**+0.3**
EMPR					**Sg**	**17 43 25.3**	**+0.3**
ECPR	**Experimental S**	**0.74**	**57**		**Pb**	**17 43 15.3**	**-0.1**
ECPR				IAML		17 43 25.6	
	comp=N,5μm,0.3s						
ECPR	**Experimental S**	**0.74**	**57**		**Sb**	**17 43 24.9**	**-0.4**
SJG	**San Juan**	**0.85**	**76**		**Pb**	**17 43 17.2**	**0.0**
SJG	**San Juan**	**0.85**	**76**	⇓*i* P	**Pb**	**17 43 17.2**	**0.0**
SJG	**San Juan**	**0.85**	**76**	*i* P	**Pb**	**17 43 17.3**	**0.0**
SJG				IAML		17 43 31.5	
	comp=Z,15μm,0.3s						
IGPR	**InterUniversit**	**0.87**	**86**		**Pg**	**17 43 18.0**	**+0.1**
IGPR					**Sn**	**17 43 30.6**	**+0.1**
HUMP	**Col San Antoni**	**1.14**	**78**		**Pn**	**17 43 21.5**	**-0.5**
HUMP	**Col San Antoni**	**1.14**	**78**		**Sn**	**17 43 37.3**	**+0.2**
CUPR	**Culebra, Puert**	**1.70**	**76**		**Pb**	**17 43 31.2**	**-0.4**
HIDR	**Higuey Centro**	**1.75**	**293**	⇓*i* P	**Pb**	**17 43 33.2**	**+0.7**
HIDR				IAML		17 43 58.3	
	comp=N,381nm,0.2s						
DR12	**Loma Pena Alta**	**2.41**	**292**		**Pb**	**17 43 42.6**	**-1.1**
HATOM	**Hato Mayor del**	**2.41**	**292**	⇑*i* P	**Pb**	**17 43 42.9**	**-0.9**
HATOM				IAML		17 44 23.9	
	comp=N,128nm,0.8s						
BANI	**BANI**	**3.21**	**279**	Pn	**Pn**	**17 43 50.8**	**+0.2**
SABA	**Saba**	**3.61**	**94**	Pn	**Pn**	**17 43 55.3**	**-0.8**
SMRT	**St. Maarten**	**3.76**	**87**	Pn	**Pn**	**17 43 57.3**	**-0.7**
SCO1	**Santiago de lo**	**3.83**	**294**		**Pn**	**17 43 59.4**	**+0.4**
SDDR	**Presa de Saban**	**4.19**	**285**		**Pn**	**17 44 05.6**	**+1.5**
GDHS	**Morne Mazeau,**	**5.28**	**107**	Pn	**Pn**	**17 44 20.3**	**+1.2**
ABD	**La Joyeuse, An**	**5.48**	**104**	Pn	**Pn**	**17 44 22.0**	**+0.4**
MAGL	**Barre de l'ile**	**5.83**	**109**	Pn	**Pn**	**17 44 28.3**	**+1.8**

*IDC **24** 17:50:19.8±1.3, 31°.31N×130°.18E, h147km±21km, mb2.9/2, mbtmp3.4/4, Error ellipse: s-maj=95.4km s-min=11.4km az=114.0*
*JMA **24** 17:50:21.3±0.1, 31°.4N±0°.4×130°.5E±0°.6, h151km, MV3.1/39, SATSUMA PENINSULA REGION*

ISC 24 17:50:20.2±1.1, 31°.31N±0°.06×130°.4E±0°.1, h157km±8km, n14, σ1§10/21, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JSU	**Suzuyama**	**0.21**	**23**	P	**Pn**	**17 50 41.8**	**+0.5**
JSU				S	**Sn**	**17 50 57.9**	**-0.3**
JTSR	**Tashiro 2**	**0.51**	**106**	P	**Pn**	**17 50 42.5**	**+0.2**
JTSR				S	**Sn**	**17 50 57.9**	**-1.4**
JSJ	**Shimokoshiki**	**0.66**	**304**	*i* P	**Pn**	**17 50 44.2**	**+1.1**
JTN	**Tanegashima 3**	**0.84**	**141**	*i* P	**Pn**	**17 50 44.9**	**+0.4**
JTZ	**Takazaki**	**0.86**	**46**	*i* P	**Pn**	**17 50 44.4**	**-0.1**
JTZ				S	**Sn**	**17 51 01.2**	**-1.9**
JMTN	**Minamitane**	**1.02**	**153**	*i* P	**Pn**	**17 50 46.5**	**+0.7**
JMTN				S	**Sn**	**17 51 05.5**	**+0.1**
JYAK	**Yakushimahirau**	**1.08**	**173**	*i* P	**Pn**	**17 50 47.0**	**+0.7**
JYAK				S	**Sn**	**17 51 05.8**	**-0.4**
JIU3	**Izumi3**	**1.29**	**17**	*i* P	**Pn**	**17 50 48.4**	**+0.2**
JNN	**Nakanoshima**	**1.52**	**196**	P	**Pn**	**17 50 51.9**	**+1.4**
JNU	**Nakatsue**	**1.86**	**14**	P	**Pn**	**17 50 54.0**	**-0.2**
	36nm,0.4s,baz=212,slow=9.5,SNR=124						
JNU				S	**Sn**	**17 51 19.6**	**-0.8**
	8.8nm,0.5s,baz=86,slow=20,SNR=1.6						
JOW	**Kunigami**	**4.82**	**203**	P	**Pn**	**17 51 31.3**	**-0.1**
	14nm,0.9s,baz=118,slow=27,SNR=9.9						
JOW				S	**Sn**	**17 52 24.5**	**-2.4**
	6.8nm,0.3s,baz=131,slow=26,SNR=9.5						
MJAR	**Matsushiro Ar**	**8.35**	**49**	P	**Pn**	**17 52 20.0**	**+1.8**
	1.7nm,0.5s,baz=237,slow=13,SNR=15						
WRA	**Warramunga Arr**	**51.10**	**175**	P	**P**	**17 59 07.1**	**+0.3**
	0.5nm,1.1s,baz=355,slow=7.6,SNR=1.8						
	0.5nm,1.1s						
ASAR	**Alice Springs**	**54.77**	**176**	P	**P**	**17 59 34.3**	**+0.6**
	0.3nm,0.9s,baz=1.9,slow=6.4,SNR=6.4						
	0.3nm,0.9s						

*GCG **24** 18:52:43.7±1.5, 15°.57N×88°.41W, h0km±9km, MD3.7, Presumed earthquake*
*CATAC **24** 18:52:44.4±0.5, 16°N±3°×8°8W±°, h1km, M3.2/6, MLv3.2/6, Error ellipse: s-maj=7.1km s-min=4.8km az=44.1, confirmed*

ISC 24 18:52:40.7±1.5, 15°.70N±0°.05×88°.25W±0°.05, h6km±13km, n20, σ0§55/28, Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IZABA	**Izabal, Puerto**	**0.32**	**275**	P	**Pb**	**18 52 48.8**	**-0.1**
IZABA				S	**Sb**	**18 52 54.0**	**-0.3**
SARH	**Santa Rosa de**	**1.05**	**208**	P	**Pg**	**18 53 00.8**	**0.0**
SARH				S	**Sg**	**18 53 14.2**	**-0.2**
SARH	**Santa Rosa de**	**1.05**	**208**	*i* P	**Pg**	**18 53 00.8**	**0.0**
SARH				*e*S	**Sg**	**18 53 14.0**	**-0.4**
SARH				*e*		18 53 14.0	
ZAFR2	**Estanzuela, Za**	**1.54**	**224**	*i* P	**Pn**	**18 53 07.9**	**-0.9**
ESQI	**Esquipulas**	**1.55**	**223**	P	**Pb**	**18 53 10.0**	**+0.1**
ESQI				S	**Sg**	**18 53 30.4**	**-0.2**
MARCA	**Marcala la Paz**	**1.55**	**172**	P	**Pg**	**18 53 11.0**	**+0.6**
MARCA	**Marcala la Paz**	**1.55**	**172**	*i* P	**Pg**	**18 53 10.9**	**+0.4**
LLGN	**La Laguna**	**1.67**	**204**	P	**Pb**	**18 53 11.9**	**0.0**
MTO3	**Montecristo**	**1.68**	**220**	P	**Pb**	**18 53 11.9**	**-0.3**
MTO3				S	**Sn**	**18 53 32.6**	**-0.3**
MTO3	**Montecristo**	**1.68**	**220**	*e*P	**Pb**	**18 53 11.7**

IGDI					S	**Sg**	**18 59 04.0 +3.8**	**KSAR**	**Wonju Array Be**	**12.46 307**		Pn	**Pn**	**19 07 02.4 -0.8**	HNS			L	L	
PERV	**Siirt/Pervari-**	**1.63 253**			P	**Pg**	**18 58 45.4 +0.8**	**KSAR**	**Wonju Array Be**	**12.46 307**		P	**Pn**	**19 07 02.4 -0.8**		comp=Z,620nm,15.9s				
AGRB	**Hanur-Agry**	**1.63 314**			Pn	**Pb**	**18 58 43.6 -0.7**	**KS19**	**Wonju Array Si**	**12.50 307**			**Pn**	**19 07 03.1 -0.6**	**WHN**	**Wuhan**	**22.40 277**		P	**P**	**19 09 07.4 +2.8**
AGRB					Sn	**Sn**	**18 59 02.5 -2.4**	**INCN**	**Inchon**	**13.35 305**		Pn	**Pn**	**19 07 11.9 -3.5**	WHN				pmax	pmax	
DORK	**Agr/Tutak/Do**	**1.65 305**			P	**Pg**	**18 58 44.8 -0.1**	**INCN**	**Inchon**	**13.35 305**		P	**Pn**	**19 07 11.9 -3.5**		comp=Z,64nm,1.0s				
MLAZ	**Malazgirt-MUS**	**1.68 295**			Pn	**Pb**	**18 58 44.4 -0.7**	**ASAJ**	**Asahikawa**	**13.71 7**		Pn	**Pn**	**19 07 18.0 -2.2**	WHN				L	L	
MLAZ					Sn	**Sn**	**18 59 03.7 -2.4**		1.2nm,0.3s,baz=218,slow=13,SNR=20							comp=Z,2µm,13.4s				
KOTA	**Agri, Merkez-K**	**1.69 323**			P	**Pg**	**18 58 46.5 +0.7**	ASAJ				Sn	Sn	19 09 42.6 -10	WHN				L	L	
GNI	**Garni**	**1.71 6**			Pn	**Pg**	**18 58 46.5 +0.4**	ASAJ	0.4nm,0.3s,baz=344,slow=15,SNR=1.9			LR	LR	19 13 32.9		comp=Z,2µm,14.5s				
GNI					Sn	**Sg**	**18 59 08.1 -0.2**		comp=Z,731nm,19.5s,baz=189,slow=42						WHN				L	L	
BLIS	**Bitlis-Merkez**	**1.88 270**			P	**Pg**	**18 58 50.2 +0.7**		8.0nm,0.6s							comp=Z,2µm,16.3s				
GURO	**Guroymak-BITLI**	**1.95 274**			Pn	**Pn**	**18 58 48.4 +0.9**	**ASAJ**	**Asahikawa**	**13.71 7**		P	**Pn**	**19 07 18.0 -2.2**	**LYN**	**LuoYang**	**23.84 287**	*eP*	**P**	**19 09 20.5 +1.2**
IHRS	**Heris**	**1.99 93**			Pn	**Pb**	**18 58 50.4 0.0**	**JKA**	**Kamikawa-asahi**	**13.71 7**			**Pn**	**19 07 17.3 -2.9**	LYN	comp=Z,20nm,0.5s			pmax	pmax	
SRTM	**Siirt_Merkez**	**2.09 258**			P	**Pb**	**18 58 51.9 -0.1**	**USRK**	**Ussuriysk Ar.**	**15.20 336**		Pn	**Pn**	**19 07 40.0 -0.5**	**TGY**	**Tagaytay City**	**24.22 232**		LR	LR	19 19 12.7
EAK	**Akyaka**	**2.34 343**			P	**Pg**	**18 58 59.8 +1.5**		0.1nm,0.3s,baz=107,slow=8.5,SNR=3.2							comp=Z,272nm,18.4s,baz=130,slow=38				
MUSM	**Mu-Merkez**	**2.37 278**			P	**Pb**	**18 58 56.0 -0.8**		2.0nm,0.8s						**ZEA**	**Zeya**	**25.10 341**	*eP*	**P**	**19 09 31.9 +1.3**
QRD	**Qoradiz**	**2.41 64**			P	**Pb**	**18 58 56.5 -0.9**	**MDJ**	**Mudanjiang**	**16.46 332**		P	**P**	**19 07 59.4 -0.2**	ZEA			MLR	MLR	
QRD					S	**Sb**	**18 59 28.3 +0.7**	MDJ				S	**Sn**	**19 11 04.3 +4.7**		comp=E,100nm,11.0s				
GDB	**GEDABAY**	**2.46 23**			P	**Pb**	**18 58 56.6 -1.8**	MDJ				pmax	pmax		ZEA			MLR	MLR	
GDB					S	**Sb**	**18 59 29.2 -0.1**		comp=Z,7.0nm,2.0s							comp=N,200nm,14.0s				
ISRB	**Sarab**	**2.56 103**			Pn	**Pb**	**18 58 58.9 -1.3**	MDJ				L	L		ZEA			MLR	MLR	
HOMI	**Horasan**	**2.58 309**			P	**Pg**	**18 59 03.2 +0.4**		comp=N,610nm,17.9s							comp=Z,200nm,12.0s				
GANJ	**Ganja**	**2.60 32**			P	**Pn**	**18 58 57.8 +1.4**	MDJ				L	L		**HHC**	**Hu-ho-hao-te**	**25.48 302**	*eP*	**P**	**19 09 36.3 +2.0**
GANJ					S	**Sb**	**18 59 33.9 +0.7**		comp=E,770nm,15.1s						HHC			PP	**PnPn**	**19 10 14.0 +4.5**
AGDM	**Agdam**	**2.61 50**			P	**Pn**	**18 58 56.1 -0.4**	MDJ				L	L		HHC			S	**S**	**19 13 59.1 -2.6**
AGDM					S	**Sb**	**18 59 33.4 +0.1**		comp=Z,660nm,17.2s						HHC			pmax	pmax	
QZX	**Qazax, Azerbai**	**2.69 14**			P	**Pn**	**18 58 58.0 +0.3**	**SSE**	**Sheshan**	**16.50 277**		P	**Pn**	**19 07 57.0 -0.4**		comp=Z,14nm,0.7s				
QZX					S	**Sb**	**18 59 34.4 -1.3**	SSE				S	**Sn**	**19 10 59.4 -1.3**	HHC			pmax	pmax	
BLQ	**Beylaqan**	**2.69 61**			P	**Pn**	**18 58 57.4 -0.2**	SSE				pmax	pmax			comp=Z,100nm,7.1s				
BLQ					S	**Sb**	**18 59 33.0 -2.6**		comp=Z,10.0nm,0.7s						HHC			L	L	
SENK	**Senkaya-Erzuru**	**2.69 322**			Pn	**Pn**	**18 58 58.9 +1.1**	SSE				pmax	pmax			comp=Z,660nm,15.3s				
BRDA	**Brd**	**2.75 48**			P	**Pb**	**18 59 00.8 -2.4**		comp=Z,76nm,3.5s						HHC			L	L	
BRDA					S	**Sb**	**18 59 36.1 -1.2**	SSE				L	L			comp=Z,430nm,16.6s				
YRD	**Yardimli**	**2.96 80**			P	**Pb**	**18 59 04.6 -2.2**		comp=N,270nm,10.8s						HHC			L	L	
YRD					S	**Sn**	**18 59 39.5 +2.0**	SSE				L	L			comp=Z,390nm,15.3s				
LRK	**Lerik**	**3.01 85**			P	**Pb**	**18 59 05.1 -2.6**		comp=E,210nm,10.9s						**PETK**	**Petropavlovsk-**	**25.89 24**	P	**P**	**19 09 38.7 +0.9**
LRK					S	**Sb**	**18 59 44.6 -0.3**	**YSS**	**Yuzhno-Sakhali**	**16.53 6**		P	**Pn**	**19 07 58.5 +0.8**		comp=Z,3.4nm,0.7s,baz=164,slow=6.0,SNR=4.1				
GLBA	**Clilabad**	**3.13 74**			P	**Pn**	**18 59 04.4 +0.8**	**YSS**	**Yuzhno-Sakhali**	**16.53 6**		*eP*	**Pn**	**19 07 56.8 -0.9**	PETK			LR	LR	19 22 29.0
GLBA					S	**Sb**	**18 59 45.6 -2.7**	YSS				*eS*	**Sn**	**19 10 54.8 -6.6**		comp=Z,273nm,18.5s,baz=204,slow=43				
ASTR	**Astara**	**3.36 87**			P	**Pn**	**18 59 06.9 +0.1**	YSS				pmax	pmax			comp=Z,3.4nm,0.7s				
ASTR					S	**Sn**	**18 59 50.7 +3.5**		comp=Z,30nm,1.0s						**H11N2**	**WAKE ISLAND Hy**	**26.24 108**		T	T	19 37 10.4
SEKA	**Sheki**	**3.45 36**			P	**Pn**	**18 59 09.4 +1.3**	YSS				MLR	MLR			baz=299,slow=74,SNR=401				
ZKTA	**Zakatala**	**3.57 26**			P	**Pn**	**18 59 10.2 +0.4**		comp=Z,500nm,15.0s						**H11N1**	**WAKE ISLAND Hy**	**26.24 108**		T	T	19 37 08.8
ZKTA					S	**Sb**	**18 59 57.7 -3.3**	**GUMO**	**Guam**	**17.33 165**		P	**Pn**	**19 08 07.6 -0.4**		baz=299				
QBL	**Gabala**	**3.58 45**			P	**Pn**	**18 59 10.8 +1.0**		comp=Z,40nm,0.9s,baz=345,slow=11,SNR=5.3						**H11N3**	**WAKE ISLAND Hy**	**26.26 108**		T	T	19 37 11.7
QBL					S	**Sb**	**18 59 56.2 -5.0**	GUMO				LR	LR	19 13 49.9		baz=299,slow=74,SNR=316				
IML	**Ismayilli**	**3.68 49**			P	**Pn**	**18 59 12.0 +0.8**		comp=Z,275nm,21.8s,baz=356,slow=34						**ENH**	**Enshi**	**26.61 277**		P	**P**	**19 09 44.8 +0.3**
IML					S	**Sb**	**18 59 59.9 -4.2**	**DL2**	**Dalian**	**17.52 304**		P	**P**	**19 08 16.6 +5.2**	**H11S3**	**WAKE ISLAND Hy**	**26.69 111**		T	T	19 37 43.0
XNQ	**Khinaliq**	**3.90 45**			P	**Pn**	**18 59 15.3 +0.9**	DL2				S	**S**	**19 11 40.6 +7.0**		baz=301,slow=74,SNR=79				
PQL	**Pirkuli**	**3.92 52**			P	**Pn**	**18 59 16.1 +1.4**	DL2				pmax	pmax		**H11S1**	**WAKE ISLAND Hy**	**26.70 110**		T	T	19 37 42.3
PQL					S	**Sn**	**19 00 04.0 +2.6**		comp=Z,52nm,1.2s							baz=301				
ATGJ	**Altiaghaj**	**4.18 53**			P	**Pn**	**18 59 20.1 +1.9**	DL2				pmax	pmax		**H11S2**	**WAKE ISLAND Hy**	**26.71 111**		T	T	19 37 40.7
ATGJ					S	**Sn**	**19 00 10.1 +2.5**		comp=Z,290nm,4.2s							baz=301,slow=74,SNR=44				
QUBA	**Quba, Azerbaij**	**4.22 45**			P	**Pn**	**18 59 20.8 +2.1**	DL2				L	L		**XAN**	**Xi'an**	**26.77 286**	⇓*P*	**P**	**19 09 47.0 +1.0**
QUBA					S	**Sn**	**19 00 10.7 +2.2**		comp=Z,1µm,17.9s						XAN			pmax	pmax	
SIZA	**Siyzn**	**4.28 51**			P	**Pn**	**18 59 21.9 +2.4**	DL2				L	L			comp=Z,18nm,1.1s				
SIZA					S	**Sn**	**19 00 11.1 +1.1**		comp=Z,470nm,16.1s						**DAV**	**Davao City (W)**	**27.13 214**		LR	LR	19 18 28.2
								DL2				L	L			comp=Z,267nm,21.3s,baz=66,slow=32				
									comp=Z,830nm,12.3s						**DAV**	**Davao City (W)**	**27.13 214**		P	**P**	**19 09 50.3 +1.0**
								SNY	**Shenyang**	**17.62 314**		⇑*P*	**P**	**19 08 16.8 +4.4**	**GYA**	**Guiyang**	**29.84 271**	⇑*P*	**P**	**19 10 15.3 +1.8**
								SNY				S	**Sn**	**19 11 28.9 +1.1**	GYA				pmax	pmax	
								SNY				pmax	pmax			comp=Z,19nm,0.6s				
									comp=Z,6.0nm,1.4s						**QIZ**	**Qiongzhong**	**29.89 255**		P	**P**	**19 10 14.1 +0.2**
								SNY				pmax	pmax		QIZ				S	**S**	**19 15 11.4 0.0**
									comp=Z,140nm,4.3s						QIZ				pmax	pmax	
								SNY				L	L			comp=Z,160nm,3.9s				
									comp=Z,280nm,13.9s						QIZ				L	L	
								SNY				L	L			comp=Z,140nm,9.8s				
									comp=Z,470nm,13.4s						QIZ				L	L	
								SNY				L	L			comp=Z,300nm,15.2s				
									comp=Z,320nm,10.4s						QIZ				L	L	
								BNX	**BinXian**	**18.28 330**		⇑*P*	**P**	**19 08 19.6 -0.1**		comp=Z,340nm,20.5s				
								BNX				pmax	pmax		**MA2**	**Magadan**	**29.91 11**		LR	LR	19 22 53.5
									comp=Z,6.0nm,0.9s							comp=Z,215nm,19.2s,baz=206,slow=38				
								YULB	**Yu-li**	**18.41 252**		P	**Pn**	**19 08 19.8 -1.5**	**MA2**	**Magadan**	**29.91 11**		IAmb	IAmb	19 10 19.2
								NJ2	**Nanjing**	**18.46 280**		*eP*	**Pn**	**19 08 23.4 +1.6**	MA2						
								NJ2				sP	sP	19 08 36.8 +12		comp=Z,11nm,0.8s				
								NJ2				S	**Sn**	**19 11 47.6 -0.6**	**MA2**	**Magadan**	**29.91 11**	*ceP*	**P**	**19 10 13.4 -0.3**
								NJ2				sS	pS	19 12 03.9 -4.6	MA2				pmax	pmax	
								NJ2				pmax	pmax			comp=Z,12nm,0.8s				
									comp=Z,51nm,0.9s						**ULN**	**Ulaanbaatar**	**30.79 314**	P	**P**	**19 10 21.0 -0.8**
								NJ2				pmax	pmax		**ULN**	**Ulaanbaatar**	**30.79 314**	*ceP*	**P**	**19 10 23.6 +1.8**
									comp=Z,410nm,3.5s						ULN				pmax	pmax	
								NJ2				L	L			comp=Z,5.0nm,1.2s				
									comp=Z,2µm,11.2s						**ULN**	**Ulaanbaatar**	**30.79 314**	P	P	19 10 28.0 +6.2
								NJ2				L	L			comp=Z,13nm,1.0s				
									comp=Z,2µm,13.7s						**LZDM**	**Lanzhou Array**	**31.03 290**	LR	LR	19 22 27.6
								NJ2				L	L			comp=Z,245nm,20.9s,baz=170,slow=36				
									comp=Z,2µm,14.7s						**SONM**	**Songino Array**	**31.19 313**	P	**P**	**19 10 26.2 +0.8**
								SSLB	**Suanglung**	**18.52 254**			**P**	**19 08 20.4 -2.1**		comp=Z,1.5nm,0.9s,baz=111,slow=8.1,SNR=5.3				
								TWG	**Pinlang**	**18.85 251**		P	**P**	**19 08 24.9 -1.3**		comp=Z,1.5nm,0.9s				
								TWG				IAmb	IAmb	19 08 32.2	**SONM**	**Songino Array**	**31.19 313**	P	**P**	**19 10 24.5 -0.8**
									comp=Z,47nm,1.1s						**SONM**	**Songino Array**	**31.19 313**	P	**P**	**19 10 24.5 -0.8**
								TPUB	**Ta-pu**	**19.00 253**		P	**P**	**19 08 26.9 -0.8**	SONM				pmax	pmax	
								TPUB				IAmb	IAmb	19 08 38.0		comp=Z,12nm,1.8s				
									comp=Z,78nm,1.2s						**CD2**	**Chengdu**	**31.39 280**	P	**P**	**19 10 28.4 +1.2**
								KLR	**Kul'dur**	**19.82 343**		P	**P**	**19 08 35.9 -0.6**	CD2				pmax	pmax	
								KLR				LR	LR	19 16 04.5		comp=Z,10.0nm,0.6s				
									comp=Z,173nm,19.0s,baz=150,slow=36						CD2				L	L	
									comp=Z,1.5nm,0.6s							comp=Z,1µm,12.1s				
								KLR	**Kul'dur**	**19.82 343**	*ceP*		**Pn**	**19 08 37.9 -0.2**	CD2				L	L	
								KLR				pmax	pmax			comp=Z,1µm,16.5s				
									comp=Z,3.0nm,2.5s						CD2				L	L	
								TIA	**Tai'an**	**20.22 293**		P	Pn	19 08 43.8 +0.9		comp=Z,740nm,14.6s				
								TIA				S	**S**	**19 12 22.1 -5.9**	**YAK**	**Yakutsk**	**32.30 351**		LR	LR	19 23 47.9
								TIA				pmax	pmax			comp=Z,267nm,19.8s,baz=159,slow=37				
									comp=Z,23nm,1.1s						**YAK**	**Yakutsk**	**32.30 351**		P	**P**	**19 10 34.1 -0.7**
								TIA				L	L		YAK				IAmb	IAmb	19 10 39.6
									comp=Z,880nm,13.5s							comp=Z,16nm,1.1s				
								TIA				L	L		**YAK**	**Yakutsk**	**32.30 351**	*eP*	P	**19 10 34.6 -0.1**
									comp=Z,260nm,14.9s						YAK			*e*		19 11 43.5
								TIA				L	L		YAK			*e*		19 13 20.3
									comp=Z,550nm,13.3s						YAK			*eS*	S	**19 15 43.0 -5.3**
								TYV	**Tymovskoe**	**20.41 4**		*eP*	Pn	19 08 45.0 -0.1	YAK			*eSS*	**SnSn**	**19 17 41.8 +2.0**
								TYV				*eS*	Sn	19 12 34.0 -1.1	YAK			*e*		19 20 58.4
								TYV				pmax	pmax			comp=Z,11nm,1.0s				
									comp=Z,100nm,2.5s						YAK				pmax	pmax	
								TYV				pmax	pmax			comp=N,3.0nm,1.3s				
									comp=Z,12nm,0.8s						YAK				pmax	pmax	
								TYV				smax	smax			comp=E,2.0nm,1.2s				
									comp=N,200nm,4.8s						YAK				pmax	pmax	
								TYV				smax	smax			comp=Z,99nm,6.4s				
									comp=E,200nm,4.8s						YAK				pmax	pmax	
								TYV				smax	smax			comp=N,47nm,5.2s				
									comp=N,7.0nm,1.3s						YAK				pmax	pmax	
								TYV				smax	smax			comp=E,30nm,3.7s				
									comp=E,6.0nm,1.3s						YAK				smax	smax	
								GRNR	**Gornyy**	**20.46 353**	⇓*iP*		Pn	19 08 45.3 -0.4		comp=N,97nm,4.0s				
								GRNR				pmax	pmax		YAK				smax	smax	
									comp=Z,1.0nm,0.8s							comp=E,49nm,4.5s				
								GRNR				MLR	MLR		**SWI**	**Sorong**	**32.37 197**	P	**P**	**19 10 37.5 +1.7**
									comp=N,180nm,14.0s							comp=E,20nm,0.9s				
								BJI2	**Beijing**	**21.87 302**		P	**P**	**19 08 59.8 +1.0**	**SIJI**	**Sorong**	**32.38 197**	P	**P**	**19 10 36.4 +0.6**
								BJI2				S	**S**	**19 13 02.5 +1.9**	SIJI				LR	LR	19 23 07.6
								BJI2				pmax	pmax			comp=E,11nm,0.8s,baz=48,slow=6.6,SNR=9.7				
									comp=N,8.0nm,1.2s							comp=E,118nm,18.1s,baz=320,slow=35				
								BJI2				L	L			comp=E,11nm,0.8s				
									comp=N,260nm,14.9s						**SIJI**	**Sorong**	**32.38 197**	P	**P**	**19 10 37.9 +2.1**
								BJI2				L	L			comp=E,13nm,0.9s				
									comp=N,280nm,18.3s						**SHEM**	**Shemya Is, Ala**	**33.13 38**	LR	LR	19 23 14.4
								BJI2				L	L			comp=E,70nm,19.2s,baz=252,slow=35				
									comp=N,370nm,17.5s						**SEY**	**Seymchan**	**33.36 10**	*ceP*	**P**	**19 10 43.9 0.0**
								BJT	**Baijiatuau**	**21.87 302**			**P**	**19 08 58.7 -0.1**	SEY				pmax	pmax	
								BJT	**Baijiatuau**	**21.87 302**		P	**P**	**19 08 58.7 -0.1**		comp=Z,16nm,2.5s				
								BJT				pmax	pmax		**PZH**	**PanZhiHua**	**34.07 273**	P	**P**	**19 10 51.8 +1.1**
									comp=Z,27nm,1.3s						**GTA2**	**Gaotai**	**34.22 296**	*eP*	P	19 10 58.0 +6.1
								HEH	**HeiHe**	**22.00 337**	*eP*		**P**	**19 08 59.8 -0.3**	GTA2				pmax	pmax	
								HEH				S	**S**	**19 13 08.4 +5.4**		comp=Z,2.0nm,0.7s				
								HEH				pmax	pmax		GTA2				L	L	
									comp=Z,8.0nm,0.8s							comp=Z,390nm,14.9s				
								HEH				L	L		GTA2				L	L	
									comp=Z,400nm,12.7s							comp=Z,340nm,16.5s				
								HEH				L	L		GTA2				L	L	
									comp=Z,720nm,12.1s							comp=Z,420nm,16.8s				
								HEH				L	L		**MRSI**	**Marisa**	**34.61 214**	P	**P**	**19 10 57.1 +1.8**
									comp=Z,690nm,13.4s							comp=Z,40nm,1.2s				
								HNS	**HongShan**	**22.33 295**	⇑*P*		**P**	**19 09 07.9 +4.1**	**TOLI2**	**Tolitoli**	**34.64 216**		P	**19 10 54.9 -0.7**
								HNS				S	**S**	**19 13 14.9 +5.4**	TOLI2				IAmb	IAmb	19 10 58.6
								HNS				pmax	pmax			comp=Z,15nm,1.0s				
									comp=Z,8.0nm,1.6s						**SANI**	**Sanana**	**35.16 206**	P	**P**	**19 11 00.1 +0.1**
								HNS				L	L			comp=Z,28nm,0.6s				
									comp=Z,330nm,15.1s						**KRAI**	**Karang Ratu**	**35.52 201**	P	**P**	**19 11 06.0 +2.9**
								HNS				L	L			comp=Z,17nm,1.2s				
									comp=Z,520nm,16.7s						**LUWI**	**Luwuk**	**35.56 211**	P	**P**	**19 11 01.7 -1.8**
															APSI	**Ampana**	**35.97 213**	P	**P**	**19 11 08.1 +1.1**

MOS ***24*** *19:04:03.8±1.0,30.47N×140.30E,h9km,mb4.7/28,Error ellipse: s-maj=10.7km s-min=5.6km az=103.8*

IDC ***24*** *19:04:04.5±0.4,30.51N×140.31E,h0km,mb4.3/28, mbtmp4.3/35,ML3.8/7,MS3.9/51,Error ellipse: s-maj=15.5km s-min=9.5km az=73.0*

BJI ***24*** *19:04:04.1,30.19N×140.91E,h40km,mB4.8/22,mb4.4/57, Ms4.5/40,Ms7 4.2/41*

NIED ***24*** *19:04:05.4,30.66N×140.91E,h13km,MW5.0,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr-0.98; Mθθ0.18; Mφφ0.80; Mrθ0.69; Mθφ-0.73; Mφr-2.92; Fault plane solution: M₀3.21000×10¹⁶ NP1: φs123.00000°,δ13.00000°,λ-132.00000°. NP2: φs346.00000°,δ80.00000°,λ-81.00000°.*

JMA ***24*** *19:04:05.4±0.2,31.1×141.1E±,h13km,MV5.0/36, NEAR TORISHIMA IS*

NEIC ***24*** *19:04:06.5±1.6,30.52N±0.05×140.25E±0.10,h10km±1km, mb4.8/180,Error ellipse: s-maj=14.1km s-min=8.6km az=82.0*

GCMT ***24*** *19:04:11.5±0.4,30.45N±0.02×140.25E±0.02,h12km±1km, MW4.8/72,Moment Tensor Solution. s15,c16; s72,c98; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-1.27±.13; Mθθ-0.56±.07; Mφφ1.84±.11; Mrθ-0.04±.21; Mθφ-0.81±.06; Mφr0.37±.23; Best double couple: M₀1.72200×10¹⁶ NP1:φs335.00000°,δ39.00000°,λ-102.00000°. NP2: φs170.00000°,δ52.00000°,λ-81.00000°. Principal axes: T 2.1250, Plg6.0000°, Azm253.0000°; N -0.8010, Plg7.0000°, Azm344.0000°; P -1.3190, Plg80.0000°, Azm124.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 19:04:05.6±1.6,30.50N±0.03×140.37E±0.04,h8km±9km, n587,σ1ᵽ52/501,mb4.8/159,MS4.0/56,13C-3D,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**2.03**	**345**	P	**Pn**	**19 04 40.5**	**+0.4**
JHCJ	**Hachijojimakas**	**2.61**	**349**	*eP*	**Pn**	**19 04 46.4**	**-1.7**
JHCJ				*eS*	**Sn**	**19 05 17.8**	**-2.2**
JHJ2	**Mitsune**	**2.65**	**350**	P	**Pn**	**19 04 53.7**	**+0.4**
JHJ2	**Mitsune**	**2.65**	**350**		**Pn**	**19 04 48.3**	**-0.3**
JHJ	**Hachijo jima 2**	**2.66**	**349**	Pn	**Pn**	**19 04 46.8**	**-1.9**
	104nm,0.3s,baz=74,slow=20,SNR=23						
JHJ				Sn	**Sn**	**19 05 19.1**	**-2.2**
	322nm,0.3s,baz=22,slow=16,SNR=8.1						
JMKN	**Mikurajimanish**	**3.45**	**349**	*eP*	**Pn**	**19 05 02.0**	**+2.5**
JMYK	**Miyake Tsubota**	**3.62**	**349**	*eP*	**Pn**	**19 05 02.5**	**+0.6**
JMYK				*eS*	**Sn**	**19 05 45.9**	**+1.1**
CBIJ	**Chichi jima**	**3.75**	**154**	*eP*	**Pn**	**19 05 04.2**	**+0.5**
JCJ	**Chichijima**	**3.75**	**154**	Pn	**Pn**	**19 05 04.0**	**+0.3**
	24nm,0.3s,baz=292,slow=24,SNR=7.4						
JCJ				Sn	**Sn**	**19 05 49.4**	**+1.4**
	42nm,0.3s,baz=289,slow=22,SNR=1.8						
JCJ				LR	LR	19 06 36.3	
	comp=Z,848nm,19.9s,baz=347,slow=40 61nm,0.3s						
JCJ	**Chichijima**	**3.75**	**154**	P	**Pn**	**19 05 04.4**	**+0.7**
JCJ	**Chichijima**	**3.75**	**154**		**Pn**	**19 05 04.3**	**+0.7**
BSO1	**Boso 1**	**4.17**	**7**	P	**Pn**	**19 05 07.7**	**-1.4**
BSO3	**Boso 3**	**4.29**	**2**	P	**Pn**	**19 05 10.3**	**-0.6**
BSO3				S	**Sn**	**19 05 57.5**	**-3.5**
BSO4	**Boso 4**	**4.48**	**360**	*eP*	**Pn**	**19 05 13.8**	**+0.2**
JSG	**Sagara**	**4.55**	**337**	P	**Pb**	**19 05 22.0**	**-3.8**
JOD2	**Odawara 2**	**4.87**	**348**	*eP*	**Pn**	**19 05 21.8**	**+2.6**
JOD2				*eS*	**Sn**	**19 06 16.5**	**+0.7**
JIE	**Ise**	**4.97**	**322**	*eP*	**Pn**	**19 05 23.9**	**+3.5**
JIE				*eS*	**Sn**	**19 06 21.2**	**+3.1**
JNY	**Yasuok**	**5.29**	**337**	P	**Pn**	**19 05 29.3**	**+4.4**
INU	**Inuyama**	**5.60**	**331**	P	Pn	19 05 35.7	+6.6
INU	**Inuyama**	**5.60**	**331**		**Pn**	**19 05 29.9**	**+0.7**
JRY	**Ryogami san**	**5.64**	**348**	P	**Pn**	**19 05 32.5**	**+2.7**
JGF	**Kuroka**	**5.68**	**334**		**Pn**	**19 05 30.9**	**+0.6**
JYT	**Yasato**	**5.71**	**359**	*eP*	**Pn**	**19 05 31.6**	**+0.9**
MJAR	**Matsushiro Arr**	**6.29**	**344**	Pn	**Pn**	**19 05 39.8**	**+1.1**
	1.9nm,0.3s,baz=167,slow=14,SNR=64						
MJAR				LR	LR	19 08 08.7	
	comp=Z,997nm,20.4s,baz=126,slow=39 16nm,0.7s						
MJAR	**Matsushiro Arr**	**6.29**	**344**		**Pn**	**19 05 42.4**	**+3.7**
MAJO	**Matsushiro**	**6.29**	**344**	P	Pn	19 05 43.8	+5.1
MAJO	**Matsushiro**	**6.29**	**344**		**Pn**	**19 05 43.0**	**+4.3**
MAJO	**Matsushiro**	**6.29**	**344**	*i* P	**Pn**	**19 05 43.0**	**+4.3**
MJB9	**Matsu-Tunnel**	**6.30**	**344**		Pn	19 05 44.3	+5.5
JNU	**Nakatsue**	**8.49**	**290**	Pn	**Pn**	**19 06 09.3**	**+0.4**
	0.4nm,0.3s,baz=56,slow=7.5,SNR=5.9						
JNU				Sn	**Sn**	**19 07 43.3**	**-1.7**
	baz=191,slow=14						
JNU				LR	LR	19 09 14.5	
	comp=Z,2µm,18.3s,baz=112,slow=37 6.2nm,1.0s						
JTM	**Tenmabayashi**	**10.28**	**3**	P	**Pn**	**19 06 33.5**	**+0.1**
JTM	**Tenmabayashi**	**10.

comp=Z,45nm,1.1s
PCI Palu 36.85 216 P P 19 11 16.0 +1.5
comp=Z,38nm,1.2s
TNCH TengChong 37.28 272 P P 19 11 19.4 +1.0
TNCH S S **19 17 01.4 -4.8**
TNCH pmax pmax
comp=Z,19nm,1.3s
TNCH pmax pmax
comp=Z,170nm,4.4s
TNCH L L
comp=Z,150nm,12.6s
TNCH L L
comp=Z,380nm,13.7s
TNCH L L
comp=Z,520nm,19.1s
GOMU GeErMu 38.21 291 P P 19 11 23.0 -3.4
GOMU pmax pmax
comp=Z,4.0nm,0.9s
SBUM Sibu 38.58 229 P 19 11 27.7 -1.5
SBUM Sibu 38.58 229 P P 19 11 26.4 -2.8
CHTO Chiang Mai 39.20 263 P 19 11 33.9 -0.6
CHTO Chiang Mai 39.20 263 P P 19 11 33.9 -0.6
CHTO pmax pmax
comp=Z,16nm,1.2s
CHTO Chiang Mai 39.20 263 P P 19 11 35.2 +0.7
comp=Z,12nm,1.1s
CM31 Chiang Mai Arr 39.36 262 P P 19 11 35.1 -0.6
CMAR Chiang Mai Arr 39.36 262 P P 19 11 37.3 +1.5
comp=Z,1.5nm,0.6s,baz=55,slow=6.6,SNR=13
CMAR LR LR 19 28 18.8
comp=Z,233nm,19.5s,baz=60,slow=37
comp=Z,1.5nm,0.6s
CMAR Chiang Mai Arr 39.36 262 P 19 11 34.4 -1.3
KAPI Kappang 40.45 213 LR LR 19 27 59.2
comp=Z,78nm,19.5s,baz=18,slow=36
KAPI Kappang 40.45 213 P 19 11 43.9 -0.9
KAPI Kappang 40.45 213 *i* P **P 19 11 45.1 +0.3**
KAPI pmax pmax
comp=Z,11nm,0.9s
KAPI Kappang 40.45 213 P P 19 11 45.9 +1.1
BILL Bilibino 40.54 15 P 19 11 45.8 +0.8
BILL Bilibino 40.54 15 *ce* P **P 19 11 45.4 +0.5**
BILL pmax pmax
comp=Z,10.0nm,1.3s
TIXI Tiksi 41.68 355 LR LR 19 31 05.3
comp=Z,165nm,18.1s,baz=188,slow=39
TIXI Tiksi 41.68 355 P 19 11 53.3 -0.9
TIXI IAmb IAmb 19 11 55.2
comp=Z,7.3nm,0.6s
TIXI Tiksi 41.68 355 *ce* P **P 19 11 53.8 -0.4**
TIXI pmax pmax
comp=Z,8.0nm,1.0s
MMRI Maumere 42.63 207 P 19 12 02.3 -0.3
MMRI Maumere 42.63 207 P P 19 12 03.1 +0.5
comp=Z,32nm,1.1s
SHL Shillong 42.83 276 P 19 12 03.4 -1.1
SHL Shillong 42.83 276 P P 19 12 03.4 -1.1
SHL pmax pmax
comp=Z,6.0nm,1.2s
SOEI Soe 42.91 204 P 19 12 04.2 -0.8
SOEI Soe 42.91 204 P P 19 12 02.6 -2.4
comp=Z,34nm,0.9s
EDFI Ende, Flores 42.95 208 P P 19 12 05.6 +0.2
comp=Z,22nm,1.3s
SPIA Saint Paul Isl 43.15 37 P P 19 12 07.3 +0.9
baz=253
WMQ Urumqi 43.34 303 *e* P **P 19 12 10.3 +2.0**
WMQ L L
comp=Z,150nm,18.7s
BATI Baumata 43.54 204 P P 19 12 09.6 -0.4
comp=Z,48nm,1.1s
BRDH Bariadhala 43.99 272 LR LR 19 33 09.3
comp=Z,286nm,18.2s,baz=104,slow=40
DBNI Kabupaten Domp 44.19 212 P P 19 12 14.9 -0.3
comp=Z,26nm,0.9s
UNV Unalaska Valle 44.46 43 P P 19 12 17.5 +0.5
baz=260
PLAI Plampang 44.72 213 P P 19 12 19.7 +0.2
comp=Z,45nm,1.0s
GAMB Gambell 44.81 28 P P 19 12 20.9 +1.2
baz=246
KMMI Kalianget 45.11 219 P P 19 12 21.8 -0.8
comp=Z,24nm,1.0s
KHKI Kahang-Kahang 45.37 216 P P 19 12 26.3 +1.7
comp=Z,63nm,1.1s
TPI Tanjungpandan 45.47 229 P P 19 12 27.2 +1.7
comp=Z,31nm,1.3s
ABJI Asem Bagus 45.59 218 P P 19 12 28.2 +1.8
comp=Z,28nm,1.1s
RTBI Rangdo, Negare 45.79 216 P P 19 12 29.0 +1.0
ZALV Zalesovo Beam 45.90 317 P P 19 12 28.1 -0.3
comp=Z,0.5nm,0.5s,baz=104,slow=12,SNR=2.0
ZALV PcP PcP **19 14 05.1 -0.3**
comp=Z,1.3nm,0.6s,baz=116,slow=3.6,SNR=5.2
ZALV LR LR 19 32 39.3
comp=Z,94nm,19.1s,baz=79,slow=37
comp=Z,0.5nm,0.5s
M11K Mekoryuk 46.07 34 P P 19 12 30.5 +0.8
baz=254
JAGI Jajag, Banyuwa 46.20 217 P P 19 12 30.9 -0.3
EVN Everest 46.44 281 P 19 12 32.3 -1.6
SNJI Sawahan-Nganju 46.93 221 P P 19 12 37.8 +0.7
comp=Z,20nm,1.4s
TNA Tin City 47.02 27 P P 19 12 38.0 +1.0
baz=248
MK31 Makanchi Array 47.12 307 P P 19 12 36.9 -1.3
MK31 Makanchi Array 47.12 307 P P 19 12 36.9 -1.3
MK31 pmax pmax
comp=Z,2.0nm,1.0s
MKAR Makanchi Array 47.12 307 P P 19 12 37.4 -0.8
comp=Z,1.1nm,0.8s,baz=90,slow=9.0,SNR=13
MKAR PcP PcP **19 14 10.1 +0.1**
comp=Z,1.0nm,0.7s,baz=91,slow=6.1,SNR=4.4
MKAR LR LR 19 33 12.8
comp=Z,204nm,19.5s,baz=86,slow=37
comp=Z,1.1nm,0.8s
MKAR Makanchi Array 47.12 307 P P 19 12 36.0 -2.2
K13K Kusilvak Mount 47.22 32 P P 19 12 39.8 +1.2
K13K IAmb IAmb 19 12 42.4
comp=Z,7.1nm,1.1s
K13K Kusilvak Mount 47.22 32 P P 19 12 39.8 +1.2
baz=254
M13K Dall Lake 47.45 34 P P 19 12 40.6 +0.1
baz=257
F14K Arctic Creek 47.61 27 P P 19 12 42.0 +0.4
baz=250
ANM Nome 47.68 28 P 19 12 43.2 +0.9
ANM IAmb IAmb 19 12 46.2
comp=Z,8.1nm,1.0s
ANM Nome 47.68 28 P P 19 12 43.2 +0.9
ANM pmax pmax
comp=Z,8.0nm,1.0s
ANM Nome 47.68 28 P P 19 12 42.4 +0.1
baz=251,SNR=5.7
PSI Prapat 47.88 243 P P 19 12 43.6 -0.9
PSI pmax pmax
comp=Z,14nm,1.1s
BKNI Bangkinang 47.90 239 P P 19 12 46.0 +1.4
RPSI Rantau Prapat 47.95 243 P P 19 12 43.6 -1.3
L14K Kuka Creek 47.98 33 P P 19 12 44.7 +0.2
baz=257
SDPT Sand Point 48.14 41 P P 19 12 46.3 +0.4
baz=264
N14K Kuskokwak Cree 48.16 35 P P 19 12 46.6 +0.6
baz=259
M14K Bethel 48.20 34 P P 19 12 47.4 +1.2
baz=258
KPJI Karang Pucung 48.21 224 P P 19 12 45.9 -1.0
comp=Z,49nm,1.0s
O14K Tigyukauivet M 48.25 36 P P 19 12 47.6 +0.8
baz=260
F15K North Star Dit 48.34 27 IAmb IAmb 19 12 51.3
comp=Z,8.2nm,0.9s
F15K North Star Dit 48.34 27 P P 19 12 48.1 +0.7
baz=251
G15K Niukluk 48.36 28 P P 19 12 48.0 +0.5
baz=252
CHNA Chernabura Isl 48.60 42 P P 19 12 49.9 +0.5
baz=266
L15K Ungalak Mounta 48.61 33 P P 19 12 49.6 +0.1
baz=258
MNSI Mandailing Nat 48.67 240 P P 19 12 51.4 +0.9
K15K Wolf Creek Mou 48.73 32 P P 19 12 50.7 +0.3
baz=257
S14K Fog Glacier 48.75 40 P P 19 12 51.2 +0.4
baz=264
M15K Kasigluk River 48.80 34 P P 19 12 50.9 0.0
baz=259
KLSI 48.84 230 P P 19 12 53.2 +1.4
NRIK Noril'sk 48.91 338 P P 19 12 51.0 -0.6
comp=Z,4.5nm,0.8s,baz=115,slow=11,SNR=7.0
NRIK LR LR 19 33 50.0
comp=Z,270nm,18.7s,baz=284,slow=36
comp=Z,4.5nm,0.8s
NRIK Noril'sk 48.91 338 P 19 12 50.8 -0.8
NRIK IAmb IAmb 19 12 56.7
comp=Z,5.9nm,0.9s
NRIK Noril'sk 48.91 338 *i* P **P 19 12 50.9 -0.8**
NRIK pmax pmax
comp=Z,9.0nm,1.2s
O15K Ungalikthiuk R 48.97 36 IAmb IAmb 19 12 56.4
comp=Z,9.2nm,0.9s
O15K Ungalikthiuk R 48.97 36 P P 19 12 53.1 +0.8
baz=262
C16K Lisburne Hills 48.98 24 IAmb IAmb 19 12 55.4
comp=Z,8.4nm,0.9s
C16K Lisburne Hills 48.98 24 P P 19 12 53.0 +0.8
baz=248
N15K Kwethluk River 48.99 35 P P 19 12 52.7 +0.2
baz=260
H16K Elim 49.00 29 P P 19 12 53.2 +0.8
baz=255,SNR=7.1
BLSI Bandar Lampung 49.01 229 P P 19 12 53.9 +0.8
MDSI Maura Dua 49.06 231 P P 19 12 53.9 +0.4
BBJI Bungbulang 49.09 225 P 19 12 52.4 -1.3
BBJI IAmb IAmb 19 12 56.1
comp=Z,10.0nm,0.8s
BBJI Bungbulang 49.09 225 P P 19 12 51.6 -2.1
comp=Z,14nm,1.0s
G16K Koyuk River 49.16 28 P P 19 12 54.1 +0.5
baz=254
J16K Anvik River 49.37 31 P P 19 12 55.3 +0.1
baz=257
CHGN Chignik 49.39 40 P P 19 12 55.6 +0.1
baz=265
MASI Maura Aman, Be 49.43 234 P P 19 13 03.4 +7.1
I17K Unalakleet 49.46 30 IAmb IAmb 19 12 59.8
comp=Z,11nm,1.1s
I17K Unalakleet 49.46 30 P P 19 12 56.4 +0.5
baz=257
KURK Kurchatov 49.49 313 PcP 19 14 18.6 +0.3
KURK Kurchatov 49.49 313 P 19 12 55.5 -0.9
KURK IAmb IAmb 19 13 06.6
comp=Z,6.6nm,1.0s
KURK Kurchatov 49.49 313 *ce* P **P 19 12 56.3 -0.1**
KURK pmax pmax
comp=Z,5.0nm,1.0s
LWLI Liwa 49.53 231 P P 19 12 56.5 -0.7
KURBB Kurchatov Arra 49.55 312 P P 19 12 55.7 -1.2
comp=Z,1.6nm,0.7s,baz=90,slow=7.0,SNR=12
KURBB PcP **PcP 19 14 18.6 +0.1**
comp=Z,0.3nm,0.5s,baz=81,slow=2.9,SNR=1.2
KURBB LR LR 19 33 23.9
comp=Z,236nm,18.1s,baz=175,slow=36
comp=Z,1.6nm,0.7s
D17K Noatak River 49.58 25 P P 19 12 57.4 +0.6
baz=251
KASI Kota Agung 49.62 230 P P 19 12 56.6 -1.1
comp=Z,30nm,1.0s
M16K Timber Creek 49.69 34 P P 19 12 57.7 -0.1
baz=261
N16K Nishlik Lake 49.69 35 P P 19 12 58.0 +0.1
baz=261,SNR=5.7
RDOG Red Dog Mine 49.76 24 P P 19 12 58.8 +0.6
baz=251
C17K DeLong Mountai 49.80 24 P P 19 12 58.8 +0.3
baz=250
GSI Gunungsitoli 49.87 243 P 19 12 59.3 -0.4
GSI Gunungsitoli 49.87 243 P P 19 13 01.3 +1.6
G17K Kiwalik Mounta 49.87 28 P P 19 12 59.7 +0.6
baz=255,SNR=5.5
F17K Baldwin Pennin 49.89 27 IAmb IAmb 19 13 06.6
comp=Z,8.3nm,0.8s
F17K Baldwin Pennin 49.89 27 P P 19 12 59.5 +0.3
baz=254
P16K Nushagak River 49.89 37 P P 19 12 59.2 0.0
baz=263
O16K Kokwok River B 49.91 36 P P 19 12 59.2 -0.1
baz=263
R16K Pilot Point 49.96 38 P P 19 12 59.5 -0.2
baz=265
H17K Granite Mounta 50.04 29 P P 19 13 00.8 +0.5
baz=257
L17K Donlin 50.18 32 P P 19 13 02.1 +0.6
baz=260
K17K Iditarod 50.28 32 IAmb IAmb 19 13 09.6
comp=Z,12nm,0.9s
K17K Iditarod 50.28 32 P P 19 13 03.1 +0.8
baz=260,SNR=7.0
E18K Tukpahlearik C 50.41 25 IAmb IAmb 19 13 07.5
comp=Z,10nm,1.4s
E18K Tukpahlearik C 50.41 25 P P 19 13 03.9 +0.8
baz=254
M17K Holitna River 50.47 33 P P 19 13 04.4 +0.7
baz=262
WRAB Tennant Creek 50.48 187 P P 19 13 03.0 -1.1
WRAB IAmb IAmb 19 13 05.0
comp=Z,9.4nm,0.9s
WRAB Tennant Creek 50.48 187 P P 19 13 03.0 -1.1
WRAB pmax pmax
comp=Z,9.0nm,0.9s
N17K Nushagak Hills 50.48 35 P P 19 13 04.4 +0.7
baz=263
WRA Warramunga Arr 50.48 187 P P 19 13 04.3 +0.2
comp=Z,9.8nm,0.8s,baz=2.6,slow=7.5,SNR=60
WRA PcP **PcP 19 14 23.2 +0.9**
comp=Z,2.6nm,0.5s,baz=360,slow=4.1,SNR=13
comp=Z,9.8nm,0.8s
WRA Warramunga Arr 50.48 187 P 19 13 03.0 -1.2
WRA PcP **19 14 21.7 -0.6**
F18K Selawik 50.55 27 P P 19 13 04.5 +0.4
baz=256
C18K Utukok River 50.55 24 P P 19 13 04.6 +0.3
baz=252
R17L Mt. Peulik Vol 50.61 38 P P 19 13 05.6 +0.8
baz=266
P17K Kvichak River 50.70 36 P P 19 13 05.9 +0.5
baz=265
H18K Honhosa River 50.73 29 IAmb IAmb 19 13 12.7
comp=Z,9.4nm,1.0s
H18K Honhosa River 50.73 29 P P 19 13 06.0 +0.5
baz=258
G18K Tagagawik 50.77 28 IAmb IAmb 19 13 09.1
comp=Z,7.7nm,0.9s
G18K Tagagawik 50.77 28 P P 19 13 06.5 +0.6
baz=257,SNR=14
Q17K Contact Creek 50.91 38 P P 19 13 07.4 +0.2
baz=266
L18K Granite Mounta 50.94 33 IAmb IAmb 19 13 11.4
comp=Z,14nm,1.3s
L18K Granite Mounta 50.94 33 P P 19 13 06.8 -0.4
baz=262
A19K Wainwright 51.08 22 P P 19 13 08.1 -0.1
baz=251
J18K Innoko River 51.12 31 P P 19 13 08.3 -0.2
baz=261
N18K Kilae Creek 51.13 35 P P 19 13 09.0 +0.3
baz=264
ACHA Angle Creek He 51.20 38 P 19 13 09.9 +0.6
C19K Lookout Ridge 51.24 23 IAmb IAmb 19 13 17.1
comp=Z,11nm,0.9s
C19K Lookout Ridge 51.24 23 P P 19 13 09.2 -0.3
baz=254
M18K Stony River 51.25 34 P P 19 13 10.1 +0.6
baz=263
GCSA Galena City Sc 51.27 29 P P 19 13 10.2 +0.6
baz=260
F19K Shaleruckik Mo 51.33 27 P P 19 13 10.4 +0.4
baz=257
P18K Big Mountain, 51.34 36 IAmb IAmb 19 13 14.1
comp=Z,16nm,1.1s
P18K Big Mountain, 51.34 36 P P 19 13 10.6 +0.3
baz=266
O18K Koktuh Hills 51.39 36 P P 19 13 10.3 -0.4
baz=265
Q18K Katmai Hardscr 51.40 37 P P 19 13 10.5 -0.4
baz=266
G19K Purcell Mounta 51.45 27 P P 19 13 11.8 +0.8
baz=258
H19K Roundabout Mou 51.59 28 IAmb IAmb 19 13 18.9
comp=Z,9.3nm,1.0s
H19K Roundabout Mou 51.59 28 P P 19 13 12.8 +0.8
baz=260
D19K Kuna River 51.60 24 P P 19 13 12.5 +0.4
baz=256
E19K Redstone River 51.67 26 IAmb IAmb 19 13 20.3
comp=Z,7.7nm,0.8s
E19K Redstone River 51.67 26 P P 19 13 13.1 +0.4
baz=257
J19K Poorman 51.68 30 P P 19 13 13.2 +0.4
baz=262
SII Sitkinak Islan 51.75 40 P P 19 13 14.0 +0.6
baz=269
L19K White Mountain 51.79 33 P P 19 13 14.2 +0.6
baz=264
N19K Bonanza Creek 51.83 34 P P 19 13 14.3 +0.3
baz=265
M19K Big River Lodg 51.98 33 P P 19 13 16.1 +1.1
baz=264
Q19K Cape Douglas, 52.12 37 P P 19 13 16.9 +0.7
baz=267
F20K Avaraart Lake 52.16 26 P P 19 13 17.2 +0.9
baz=259
D20K Etivluk River 52.18 24 P P 19 13 16.5 0.0
D20K Etivluk River 52.18 24 P P 19 13 17.4 +1.0
baz=257
H20K Anotleneega Mo 52.23 29 P P 19 13 17.8 +1.0
baz=261,SNR=6.0
E20K Nigu River 52.23 25 P P 19 13 18.1 +1.3
baz=258
OHAK Old Harbor 52.25 39 P P 19 13 18.4 +1.4
baz=269
K20K Telida 52.28 31 IAmb IAmb 19 13 21.1
comp=Z,10nm,0.8s
K20K Telida 52.28 31 P P 19 13 18.4 +1.2
baz=264
I20K Naaghedeneel 52.29 29 P P 19 13 18.1 +0.9
baz=262
B20K Meade River 52.31 23 P P 19 13 18.7 +1.4
baz=255
J20K Nowinta River 52.35 30 IAmb IAmb 19 13 24.9
comp=Z,10nm,0.9s
J20K Nowinta River 52.35 30 P P 19 13 18.9 +1.2
baz=263
P19K Oil Pt 52.37 36 P P 19 13 20.0 +2.0
baz=267
M20K Styx River 52.57 33 P P 19 13 20.6 +1.1
baz=266
KDAK Kodiak Island 52.65 38 LR LR 19 35 18.5
comp=Z,125nm,19.8s,baz=259,slow=36
KDAK Kodiak Island 52.65 38 P P 19 13 20.9 +0.9
baz=269
IMAR Indian Mountai 52.76 28 P P 19 13 21.3 +0.6
Q20K Shuyak Island 52.76 37 P P 19 13 22.5 +1.7
baz=269
KSH2 Kashi 52.90 298 P P 19 13 23.3 +0.9
KSH2 pmax pmax
comp=Z,3.0nm,1.5s
C21K Knifeblade Rid 52.92 24 P P 19 13 23.4 +1.5
baz=258
G21K Allakaket 52.94 27 P P 19 13 23.7 +1.6
baz=262
N20K Mount Spurr 52.96 34 P P 19 13 24.2 +1.8
baz=267
SPCR Spurr Chakacha 52.96 34 P P 19 13 23.8 +1.4
baz=267
AAK Ala-Archa 53.05 303 LR LR 19 35 57.3
comp=Z,158nm,19.1s,baz=76,slow=36
AAK Ala-Archa 53.05 303 *i* P **P 19 13 25.3 +1.9**
F21K Alatna River 53.05 26 P P 19 13 24.6 +1.7
baz=261
E21K Killik River 53.08 25 P P 19 13 24.8 +1.7
baz=260
B21K Ikpikpuk River 53.08 23 IAmb IAmb 19 13 30.3
comp=Z,8.5nm,0.8s
B21K Ikpikpuk River 53.08 23 P P 19 13 24.7 +1.7
baz=258
PPLA Purkeypile 53.09 32 P 19 13 23.0 -0.4
PPLA Purkeypile 53.09 32 P P 19 13 24.8 +1.5
baz=266
H21K Melozitna Rive 53.10 28 P P 19 13 24.1 +0.8
baz=263
CHUM Lake Minchumin 53.12 31 P P 19 13 24.5 +1.1
baz=265
STLK Strandline Lak 53.16 34 P P 19 13 25.0 +1.2
A22K Sinclair Lake 53.26 22 P P 19 13 25.7 +1.4
baz=257
SKT Skwentna 53.33 33 P 19 13 26.7 +1.7
SKT Skwentna 53.33 33 P P 19 13 26.3 +1.3
baz=267
I21K Tanana 53.39 29 P P 19 13 26.2 +0.9
baz=264,SNR=5.5
B22K Teshekpuk Lake 53.63 23 IAmb IAmb 19 13 35.1
comp=Z,10nm,1.1s
B22K Teshekpuk Lake 53.63 23 P P 19 13 28.0 +1.0
baz=259
BRSE Bradley Lake S 53.64 36 P P 19 13 28.2 +0.9
baz=269
H22K Ishtalitna Cre 53.72 28 P P 19 13 29.3 +1.5
baz=264
L22K Petersville 53.72 32 IAmb IAmb 19 13 33.9
comp=Z,6.6nm,0.8s
BPAW Bear Paw Mtn. 53.72 30 P P 19 13 28.4 +0.6
baz=266
G22K Bettles 53.78 27 P P 19 13 29.4 +1.2
baz=263
MLY Manley 53.90 29 IAmb IAmb 19 13 33.4
comp=Z,14nm,1.3s
MLY Manley 53.90 29 P P 19 13 30.2 +1.0
baz=265,SNR=9.0
TRF Thorofare Moun 53.99 31 P P 19 13 30.4 +0.4
baz=267
RC01 Rabbit Creek A 54.16 34 P P 19 13 31.2 +0.1
baz=269
ASAR Alice Springs 54.21 187 P P 19 13 31.9 +0.1
comp=Z,3.7nm,0.7s,baz=358,slow=6.2,SNR=95
comp=Z,3.7nm,0.7s
ASAR Alice Springs 54.21 187 P 19 13 31.4 -0.5
ASAR Alice Springs 54.21 187 P P 19 13 31.4 -0.5
SEW Seward 54.29 35 P P 19 13 32.4 +0.4
baz=270
COLD Coldfoot 54.32 27 P P 19 13 32.6 +0.5
baz=264
G23K Bananza Creek 54.34 27 P P 19 13 33.2 +0.9
baz=265
D23K Nanushuk River 54.35 24 P P 19 13 33.2 +0.9
baz=263
PMR Palmer 54.46 34 P P 19 13 34.2 +1.0
PMR IAmb IAmb 19 13 35.6
comp=Z,14nm,1.1s
PMR Palmer 54.46 34 P P 19 13 34.2 +1.0
PMR pmax pmax
comp=Z,14nm,1.1s
PMR Palmer 54.46 34 P P 19 13 34.7 +1.5
baz=269
H23K Yukon River 54.46 28 P P 19 13 34.5 +1.2
baz=266,SNR=8.6
BVAR Borovoye Array 54.48 316 P P 19 13 32.7 -0.9
comp=Z,0.8nm,0.6s,baz=91,slow=7.1,SNR=9.8
BVAR PcP **PcP 19 14 35.4 -1.6**
comp=Z,1.1nm,0.7s,baz=72,slow=4.8,SNR=4.5
BVAR LR LR 19 36 14.9
comp=Z,188nm,19.3s,baz=48,slow=36
comp=Z,0.8nm,0.6s
C23K Itkillik River 54.49 23 P P 19 13 34.4 +1.1
baz=262,SNR=12
I23K Minto, Yukon-K 54.49 29 P P 19 13 35.1 +1.7
I23K IAmb IAmb 19 13 39.7
comp=Z,14nm,1.4s
I23K Minto, Yukon-K 54.49 29 P P 19 13 34.7 +1.3
baz=267
GHO Glory Hole Cre 54.56 33 P P 19 13 35.5 +1.5
GHO IAmb IAmb 19 13 40.2
comp=Z,11nm,1.0s
NEA2 Nenana 54.58 30 P P 19 13 35.4 +1.3
NEA2 Nenana 54.58 30 P P 19 13 35.5 +1.3
baz=267,SNR=14
MCK McKinley 54.60 31 P 19 13 35.4 +1.1
MCK IAmb IAmb 19 13 38.4
comp=Z,15nm,1.1s
MCK McKinley 54.60 31 P P 19 13 35.4 +1.1
MCK pmax pmax
comp=Z,15nm,1.1s
MCK McKinley 54.60 31 P P 19 13 35.2 +0.9
baz=268,SNR=6.3
RND Reindeer 54.63 31 IAmb IAmb 19 13 42.4
comp=Z,9.1nm,1.0s
E23K Chandalar 54.63 26 P P 19 13 35.1 +0.6
baz=264
TOLK Toolik Lake Re 54.71 25 P P 19 13 36.2 +1.2
baz=264
WAT1 Susitna Watana 54.75 32 P P 19 13 36.4 +1.0
baz=269

KNK **Knik Glacier** 54.78 34 P P 19 13 36.5 +0.9
baz=270,SNR=9.8
SML **Sawmill** 54.84 33 P P 19 13 37.1 +1.1
baz=270,SNR=5.8
WRH **Wood River Hil** 55.00 30 IAmb IAmb 19 13 44.4
comp=Z,6.3nm,1.0s
E24K **Your Creek** 55.05 26 P P 19 13 38.4 +0.8
baz=265
COLA **College** 55.12 30 *i* P P 19 13 37.2 -0.7
COLA pmax pmax
comp=Z,9.0nm,1.0s
WAT6 **Susitna Watana** 55.12 32 P P 19 13 39.0 +0.8
baz=270,SNR=7.4
M23K **Glacier View** 55.13 33 P P 19 13 39.2 +1.1
baz=270
CCB **Clear Creek Bu** 55.13 30 P P 19 13 39.4 +1.3
C24K **Franklin Bluff** 55.13 24 P P 19 13 39.6 +1.6
baz=264
H24K **Noodor Dome** 55.15 28 IAmb IAmb 19 13 42.6
comp=Z,9.8nm,1.2s
H24K **Noodor Dome** 55.15 28 P P 19 13 39.1 +0.8
baz=267
F24K **Squaw Lake** 55.24 26 P P 19 13 39.9 +1.1
baz=266
DHY **Denali Highway** 55.29 32 P P 19 13 40.6 +1.2
baz=270
POKR **Poker Flat Res** 55.30 29 P P 19 13 40.0 +0.6
baz=268
SCM **Sheep Creek Mo** 55.32 33 P P 19 13 40.2 +0.7
baz=271,SNR=7.1
P23K **Montague Islan** 55.32 36 P P 19 13 40.5 +1.0
baz=272
G24K **Hadweenzic Riv** 55.35 27 P P 19 13 40.7 +1.1
baz=267
PSA00 **Pilbara Seismi** 55.40 203 P 19 13 40.5 0.0
PSA00 IAmb IAmb 19 13 43.4
comp=Z,13nm,1.0s
GLI **Glacier Island** 55.45 35 P P 19 13 41.5 +1.1
baz=272
HDA **Harding Lake** 55.49 30 P P 19 13 41.1 +0.4
HDA IAmb IAmb 19 13 46.2
comp=Z,7.8nm,0.9s
HDA **Harding Lake** 55.49 30 P P 19 13 41.7 +1.0
baz=269,SNR=5.9
ILAR **Eielson Array** 55.53 30 P P 19 13 41.9 +1.0
comp=Z,5.0nm,0.9s,baz=266,slow=6.0,SNR=37
ILAR LR LR 19 42 28.7
comp=Z,39nm,19.1s,baz=268,slow=42
comp=Z,5.0nm,0.9s
ILAR **Eielson Array** 55.53 30 P 19 13 41.5 +0.5
KK31 **Karatay Array** 55.84 304 P P 19 13 42.0 -1.6
KK31 **Karatay Array** 55.84 304 P P 19 13 42.0 -1.6
KK31 pmax pmax
comp=Z,7.0nm,1.4s
KKAR **Karatay Array** 55.84 304 P P 19 13 42.7 -0.9
KKAR **Karatay Array** 55.84 304 P P 19 13 42.7 -0.9
M24K **Tolsona, Glenn** 55.86 33 P P 19 13 44.4 +1.0
baz=272
Q23K **Middleton Isla** 55.88 36 P P 19 13 44.7 +1.2
baz=273
G25K **Bearman Lake** 55.90 27 P P 19 13 44.7 +1.1
baz=268
D25K **Kavik River** 55.92 24 IAmb IAmb 19 13 51.3
comp=Z,7.2nm,0.9s
D25K **Kavik River** 55.92 24 P P 19 13 44.5 +0.8
baz=266
KLU **Klutina** 55.99 34 IAmb IAmb 19 13 51.1
comp=Z,7.6nm,0.9s
KLU **Klutina** 55.99 34 P P 19 13 45.5 +1.1
baz=272
K24K **Donnelly Dome** 56.01 31 P P 19 13 45.3 +0.8
baz=271
F25K **Christian Rive** 56.10 26 IAmb IAmb 19 13 54.6
comp=Z,12nm,1.1s
F25K **Christian Rive** 56.10 26 P P 19 13 46.2 +1.1
baz=268
PRP **Porcupine Dome** 56.11 29 P P 19 13 46.3 +1.0
baz=270
EYAK **Cordova Ski Ar** 56.12 35 P P 19 13 45.9 +0.7
baz=273
E25K **Arctic Village** 56.15 26 IAmb IAmb 19 13 52.8
comp=Z,10nm,1.1s
E25K **Arctic Village** 56.15 26 P P 19 13 45.9 +0.5
baz=268
PAX **Paxson** 56.16 32 IAmb IAmb 19 13 52.1
comp=Z,12nm,1.2s
PAX **Paxson** 56.16 32 P P 19 13 46.9 +1.3
baz=272,SNR=7.1
J25K **Salcha River,** 56.18 30 P P 19 13 46.6 +0.9
baz=271
RIDG **Independent Ri** 56.42 31 P P 19 13 48.3 +0.9
baz=272
C26K **Camden Bay** 56.46 24 P P 19 13 48.2 +0.7
baz=267
BMAR **Burnt Mountain** 56.51 27 P 19 13 49.3 +1.4
N25K **Chitina, Valde** 56.62 34 P P 19 13 49.7 +0.7
baz=273
BMRM **Bremner River** 56.66 34 P 19 13 49.6 +0.5
BMRM **Bremner River** 56.66 34 P P 19 13 49.9 +0.8
baz=274,SNR=7.8
F26K **Sheenjek River** 56.68 26 IAmb IAmb 19 13 56.7
comp=Z,10nm,1.1s
F26K **Sheenjek River** 56.68 26 P P 19 13 50.0 +0.8
baz=270
DOT **Dot Lake** 56.77 31 IAmb IAmb 19 13 55.9
comp=Z,8.9nm,1.0s
SCRK **Sand Creek** 56.80 31 IAmb IAmb 19 13 56.2
comp=Z,8.3nm,0.8s
SCRK **Sand Creek** 56.80 31 P P 19 13 51.1 +0.9
baz=272,SNR=11
G26K **Porcupine Rive** 56.82 27 IAmb IAmb 19 13 57.6
comp=Z,10nm,1.0s
G26K **Porcupine Rive** 56.82 27 P P 19 13 51.3 +1.2
baz=270
KAIM **Kayak Island** 56.82 36 P P 19 13 51.0 +0.7
baz=274
C27K **Jago River** 56.87 24 IAmb IAmb 19 13 57.9
comp=Z,8.2nm,0.8s
C27K **Jago River** 56.87 24 P P 19 13 51.7 +1.3
baz=269
I26K **Coal Creek Min** 57.11 29 P P 19 13 53.5 +1.3
baz=272
L26K **Log Cabin Wild** 57.13 32 P P 19 13 53.5 +1.1
baz=273
VRDI **Verde Repeater** 57.20 34 IAmb IAmb 19 14 02.0
comp=Z,13nm,1.2s
M26K **Nabesna, AK** 57.33 33 IAmb IAmb 19 14 06.9
comp=Z,7.9nm,1.0s
M26K **Nabesna, AK** 57.33 33 P P 19 13 55.4 +1.5
baz=274
MCARA **McCarthy VSAT** 57.39 34 P P 19 13 55.5 +1.3
baz=275,SNR=5.3
CRQE **Cirque** 57.41 35 P P 19 13 55.7 +1.1
baz=275
TGL **Tana Glacier** 57.54 35 IAmb IAmb 19 13 59.3
comp=Z,9.7nm,1.1s
K27K **Chicken** 57.63 31 IAmb IAmb 19 14 04.8
comp=Z,6.4nm,0.9s
E27K **Coleen River** 57.64 26 IAmb IAmb 19 14 03.6
comp=Z,8.7nm,1.1s
E27K **Coleen River** 57.64 26 P P 19 13 57.8 +1.9
baz=272
G27K **Doyon Strip** 57.66 27 P P 19 13 57.7 +1.6
baz=272
I27K **Kandik River** 57.73 29 IAmb IAmb 19 14 03.7
comp=Z,6.0nm,0.9s
I27K **Kandik River** 57.73 29 P P 19 13 58.7 +2.0
baz=273
H27K **Steamboat Moun** 57.74 28 IAmb IAmb 19 14 01.4
comp=Z,17nm,1.4s
H27K **Steamboat Moun** 57.74 28 P P 19 13 58.2 +1.5
baz=273,SNR=7.7
L27K **Beaver Creek,** 57.82 32 IAmb IAmb 19 14 06.3
comp=Z,7.2nm,0.9s
L27K **Beaver Creek,** 57.82 32 P P 19 13 58.4 +1.1
baz=275,SNR=11
BCAR **Beaver Creek A** 57.84 32 P 19 13 58.6 +1.2
D27M **Malcolm River** 57.84 24 IAmb IAmb 19 14 04.9
comp=Z,5.0nm,0.8s
D27M **Malcolm River** 57.84 24 P P 19 13 59.0 +1.6
baz=272
M27K **Edge Creek, AK** 57.85 33 IAmb IAmb 19 14 01.7
comp=Z,11nm,1.1s
M27K **Edge Creek, AK** 57.85 33 P P 19 13 59.1 +1.4
baz=275
CHGR **Chuyangaron** 57.87 299 P 19 13 57.6 -0.5
CHGR **Chuyangaron** 57.87 299 P P 19 13 57.6 -0.5
CHGR pmax pmax
comp=Z,11nm,0.7s
DZM **Mont Dzumac** 57.96 151 P P 19 13 57.6 -1.2
comp=Z,8.7nm,0.9s,baz=336,slow=17
comp=Z,8.7nm,0.9s
MESA **MESA** 58.03 35 P P 19 13 59.7 +0.7
baz=276
GRNC **Granite Creek** 58.07 34 IAmb IAmb 19 14 05.6
comp=Z,7.8nm,1.0s
CTG **Chitna Glacier** 58.24 34 P P 19 14 01.4 +1.0
baz=276
F28M **Old Crow** 58.31 26 IAmb IAmb 19 14 04.4
comp=Z,12nm,1.3s
F28M **Old Crow** 58.31 26 P P 19 14 01.9 +1.2
baz=274
BVCY **Beaver Creek** 58.32 32 P P 19 14 02.1 +1.3
baz=276
E28M **Babbage River** 58.38 25 IAmb IAmb 19 14 08.2
comp=Z,9.7nm,1.1s
E28M **Babbage River** 58.38 25 P P 19 14 02.1 +1.0
baz=273
I28M **Miner Creek** 58.44 29 IAmb IAmb 19 14 08.5
comp=Z,7.4nm,0.8s
I28M **Miner Creek** 58.44 29 P P 19 14 03.3 +1.6
baz=275,SNR=10
YUK3 **Moose Creek** 58.58 33 P P 19 14 03.7 +0.9
baz=277,SNR=7.8
D28M **Stokes Point** 58.63 24 P P 19 14 03.9 +1.2
baz=274
O28M **Mount Upton** 58.83 34 P P 19 14 05.3 +0.7
baz=278
PINM **Pinnacle** 58.88 35 P P 19 14 06.0 +1.1
baz=278
YUK8 **Steele Glacier** 58.97 34 P P 19 14 05.9 +0.3
baz=278
E29M **Blow River** 59.00 25 IAmb IAmb 19 14 12.4
comp=Z,7.1nm,1.1s
E29M **Blow River** 59.00 25 P P 19 14 06.6 +1.2
baz=275
H29M **Whitestone** 59.02 28 P P 19 14 06.4 +0.9
baz=276
G29M **Pine Creek** 59.09 27 P P 19 14 07.6 +1.5
baz=276
I29M **Ogilvie Camp,** 59.13 29 IAmb IAmb 19 14 10.3
comp=Z,9.6nm,1.1s
I29M **Ogilvie Camp,** 59.13 29 P P 19 14 07.7 +1.3
baz=276
M29M **Somme Creek** 59.42 32 IAmb IAmb 19 14 18.0
comp=Z,9.0nm,1.0s
M29M **Somme Creek** 59.42 32 P P 19 14 10.0 +1.4
baz=278
L29M **L29M** 59.48 31 P P 19 14 09.8 +0.9
baz=278
YUK4 **Talbot Arm** 59.49 34 P P 19 14 10.6 +1.4
baz=278,SNR=9.0
K29M **Barlow Dome** 59.66 31 IAmb IAmb 19 14 13.8
comp=Z,15nm,1.5s
K29M **Barlow Dome** 59.66 31 P P 19 14 11.2 +1.1
baz=278
EPYK **Eagle Plains** 59.66 28 P P 19 14 10.8 +0.7
baz=277
O29M **Mount Kennedy** 59.68 35 P P 19 14 11.8 +1.4
baz=279,SNR=9.4
YUK6 **Outpost Mounta** 59.69 34 P P 19 14 11.0 +0.5
baz=279
G30M **tAoh Zraii Nji** 59.78 27 IAmb IAmb 19 14 20.1
comp=Z,13nm,1.2s
G30M **tAoh Zraii Nji** 59.78 27 P P 19 14 12.2 +1.3
baz=277,SNR=6.1
F30M **Barrier River** 59.87 26 P P 19 14 13.1 +1.7
baz=277
I30M **Mount Dempster** 59.95 29 P P 19 14 13.0 +0.8
baz=278
J30M **Hart River** 60.07 30 P P 19 14 13.8 +0.8
baz=279
HYT **Haines Junctio** 60.12 34 P 19 14 15.2 +1.8
HYT **Haines Junctio** 60.12 34 P P 19 14 14.6 +1.1
baz=280
M30M **Minto, Yukon** 60.17 32 P 19 14 15.6 +2.0
M30M **Minto, Yukon** 60.17 32 P P 19 14 14.9 +1.3
baz=279
N30M **Aishikik Lake** 60.21 33 P P 19 14 15.0 +1.0
baz=280
PALK **Pallekele** 60.27 260 LR LR 19 41 34.5
comp=Z,98nm,18.8s,baz=51,slow=37
P30M **Million Dollar** 60.51 35 P P 19 14 16.8 +0.8
baz=281
G31M **Satah River** 60.55 27 P 19 14 17.4 +1.3
G31M **Satah River** 60.55 27 P P 19 14 17.6 +1.6
baz=279
INK **Inuvik** 60.62 25 P P 19 14 18.0 +1.5
baz=279
F31M **Tsiigehtchic** 60.67 26 P P 19 14 18.2 +1.3
baz=279
H31M **Peel River** 60.70 28 IAmb IAmb 19 14 24.4
comp=Z,9.3nm,1.1s
H31M **Peel River** 60.70 28 P P 19 14 18.6 +1.4
baz=280,SNR=7.5
O30N **Mendenhall** 60.81 34 P P 19 14 19.1 +1.0
baz=281
N31M **Braeburn, Yuko** 60.83 33 P P 19 14 19.0 +0.9
baz=281
ARTI **Arti** 60.88 321 *c i* P P 19 14 19.8 +1.3
ARTI 19 15 02.2
ARTI 19 16 32.4
ARTI S S 19 22 37.8 +1.4
ARTI SS SS 19 26 37.1 +2.2
ARTI pmax pmax
comp=Z,15nm,2.0s
M31M **Drury Creek, Y** 61.34 32 IAmb IAmb 19 14 25.0
comp=Z,6.7nm,1.1s
M31M **Drury Creek, Y** 61.34 32 P P 19 14 22.5 +0.9
baz=282,SNR=6.3
WHY **Whitehorse** 61.42 34 P P 19 14 23.0 +0.8
baz=282
SKAG **Skagway** 61.45 35 P P 19 14 23.0 +0.8
baz=282
SIT **Sitka** 61.98 38 P P 19 14 27.0 +1.1
baz=284
STKA **Stephens Creek** 62.05 179 P P 19 14 26.5 -0.1
comp=Z,4.3nm,0.8s,baz=302,slow=3.6,SNR=6.6
comp=Z,4.3nm,0.8s
STKA **Stephens Creek** 62.05 179 IAmb IAmb 19 14 27.2
comp=Z,18nm,0.8s
R32K **Eaglecrest** 62.12 37 P P 19 14 27.6 +0.7
baz=284
N32M **Quiet Lake** 62.17 33 P P 19 14 27.6 +0.4
baz=283
P32M **Atlin** 62.22 35 P P 19 14 28.7 +1.1
baz=284
S32K **Kiliwnoo** 62.28 37 P P 19 14 28.9 +1.0
baz=284
P33M **Teslin, Yukon** 62.52 34 IAmb IAmb 19 14 33.4
comp=Z,12nm,1.4s
P33M **Teslin, Yukon** 62.52 34 P P 19 14 30.6 +1.0
baz=284
A36M **Sachs Harbour** 62.65 20 IAmb IAmb 19 14 36.8
comp=Z,6.9nm,0.8s
A36M **Sachs Harbour** 62.65 20 P P 19 14 31.1 +0.9
baz=284
MMPY **Sheldon Lake,** 62.67 31 P P 19 14 31.5 +0.9
baz=284
Q32M **Nakina River** 63.09 35 P P 19 14 34.6 +1.0
baz=285
U33K **Whale Pass** 63.40 39 P P 19 14 36.5 +1.2
baz=286
CRAG **Craig** 63.57 39 P P 19 14 37.6 +1.1
baz=286
R33M **Jennings River** 63.63 35 P P 19 14 38.2 +1.2
baz=286
WRAK **Wrangell Islan** 63.73 38 P P 19 14 39.1 +1.5
baz=286
C36M **Paulatuk** 63.74 23 P P 19 14 38.6 +1.3
baz=287
S34M **Telegraph Cree** 63.95 36 IAmb IAmb 19 14 46.7
comp=Z,4.9nm,0.8s
S34M **Telegraph Cree** 63.95 36 P P 19 14 40.4 +1.4
baz=286
TGTN **Hyland Airport** 64.31 32 P P 19 14 42.9 +1.5
baz=287
DLBC **Dease Lake** 64.36 36 LR LR 19 39 45.4
comp=Z,58nm,21.9s,baz=283,slow=33
DLBC **Dease Lake** 64.36 36 P P 19 14 42.9 +1.1
baz=287
V35K **Ketchikan** 64.44 39 P P 19 14 43.7 +1.5
baz=287
WTLY **Watson Lake, Y** 64.48 34 P P 19 14 44.1 +1.6
baz=287
T35M **Bob Quinn** 64.68 37 P P 19 14 45.5 +1.6
baz=287
KIRV **Kirov** 65.00 325 LR LR 19 44 41.5
comp=Z,394nm,18.2s,baz=336,slow=38
WRGLY **Wrigley** 65.91 30 P P 19 14 53.2 +1.5
baz=290
SPITS **Spitsbergen Ar** 66.76 349 P P 19 14 57.2 +0.3
comp=Z,20nm,1.0s,baz=71,slow=8.7,SNR=3.9
SPITS LR LR 19 45 11.4
comp=Z,132nm,18.8s,baz=188,slow=37
comp=Z,20nm,1.0s
KBS **Kingsbay** 66.94 351 *i* P P 19 15 04.1 +6.1
BBB **Bella Bella** 67.43 42 LR LR 19 43 06.0
comp=Z,30nm,19.6s,baz=311,slow=35
NOR **Nord** 67.50 356 *i* P P 19 15 05.6 +4.0
RES **Resolute Bay** 69.14 14 IAmb IAmb 19 15 22.3
comp=Z,5.4nm,1.1s
ARCES **ARCESS Array B** 69.81 340 P P 19 15 16.5 +0.3
comp=Z,6.7nm,0.9s,baz=55,slow=6.8,SNR=2.4
comp=Z,6.7nm,0.9s
YKAW3 **Yellowknife Wh** 69.88 28 IAmb IAmb 19 15 21.9
comp=Z,15nm,1.9s
YKA **Yellowknife Ar** 69.92 29 P P 19 15 15.8 -1.1
comp=Z,0.8nm,0.8s,baz=299,slow=6.9,SNR=12
YKA LR LR 19 49 49.8
comp=Z,57nm,19.4s,baz=356,slow=39
comp=Z,0.8nm,0.8s
NEEM **North Greenlan** 72.08 3 *i* P P 19 15 31.2 +1.0
NEEM IAmb IAmb 19 15 36.6
comp=Z,9.5nm,0.9s
DAG **Danmarks Havn** 72.19 355 *i* P P 19 15 31.0 +0.5
DAG IAmb IAmb 19 15 36.6
comp=Z,7.1nm,0.9s
AKT **Akhty** 72.34 308 *e* P P 19 15 31.9 -0.3
AKT *e* 19 15 49.5
AKT pmax pmax
comp=Z,5.0nm,0.7s
POIN **Pond Inlet** 73.78 11 IAmb IAmb 19 16 14.9
comp=Z,14nm,1.6s
FINES **FINESS Array B** 74.20 333 P P 19 15 42.5 0.0
comp=Z,2.9nm,0.9s,baz=43,slow=3.9,SNR=8.7
comp=Z,2.9nm,0.9s
KBZ **Khabaz** 74.55 312 P P 19 15 45.0 +0.1
comp=Z,3.4nm,0.8s,baz=61,slow=6.5,SNR=10
comp=Z,3.4nm,0.8s
KBZ **Khabaz** 74.55 312 *ce* P P 19 15 46.1 +1.2
KIV **Kislovodsk** 74.58 312 *e* P P 19 15 45.1 -0.2
KIV pmax pmax
comp=Z,4.0nm,1.1s
GNI **Garni** 74.96 308 LR LR 19 52 39.2
comp=Z,138nm,18.1s,baz=357,slow=39
YBH **Yreka Blue Hor** 75.10 50 LR LR 19 41 03.7
comp=Z,18nm,21.9s,baz=302,slow=30
PINE **Pine Mountain** 75.30 48 P P 19 15 51.1 +1.6
NEW **Newport** 75.47 42 LR LR 19 49 14.6
comp=Z,35nm,19.1s,baz=357,slow=36
BLKN **Baker Lake** 75.74 22 IAmb IAmb 19 15 56.7
comp=Z,20nm,1.6s
URZ **Urewera** 76.52 151 P P 19 15 55.2 -0.8
comp=Z,3.0nm,0.4s,baz=39,slow=6.1,SNR=1.4
comp=Z,3.0nm,0.4s
SUMG **Summit** 77.20 360 P P 19 16 00.9 +0.8
SUMG IAmb IAmb 19 16 08.5
comp=Z,12nm,1.2s
SUMG **Summit** 77.20 360 P P 19 16 00.9 +0.8
SUMG pmax pmax
comp=Z,12nm,1.2s
SUMG **Summit** 77.20 360 *i* P P 19 16 01.1 +1.0
SUMG IAmb IAmb 19 16 07.1
comp=Z,14nm,1.1s
BEKR **Beckworth** 77.56 51 P P 19 16 03.1 +0.7
AKASG **Malin Array Be** 78.95 323 P P 19 16 09.2 -0.5
comp=Z,0.9nm,0.4s,baz=49,slow=5.6,SNR=7.3
comp=Z,0.9nm,0.4s
AKASG **Malin Array Be** 78.95 323 *i* P P 19 16 10.6 +1.0
AKASG pmax pmax
comp=Z,1.0nm,0.3s
RPZ **Rata Peaks** 79.02 158 P P 19 16 09.8 -0.1
comp=Z,19nm,0.8s,baz=12,slow=2.0,SNR=4.3
comp=Z,19nm,0.8s
AK17 **Malin Array Si** 79.04 323 P P 19 16 13.3 +3.1
AK13 **Malin Array Si** 79.08 323 P P 19 16 12.3 +1.9
NVAR **Mina Array Bea** 79.66 52 P P 19 16 15.2 +1.1
comp=Z,0.3nm,0.3s,baz=282,slow=7.4,SNR=6.3
NVAR LR LR 19 44 11.8
comp=Z,113nm,21.8s,baz=274,slow=30
comp=Z,0.3nm,0.3s
HFS **Hagfors** 79.68 336 P P 19 16 13.3 -0.2
comp=Z,3.7nm,0.9s,baz=57,slow=5.3,SNR=2.1
comp=Z,3.7nm,0.9s
NOA **NORSAR Array B** 79.87 337 P P 19 16 14.8 +0.2
comp=Z,2.4nm,0.9s,baz=41,slow=5.3,SNR=4.2
NOA LR LR 19 56 02.0
comp=Z,122nm,18.2s,baz=0.0,slow=39
comp=Z,2.4nm,0.9s
LUBAR **Lubar, Ukraine** 80.17 323 P P 19 16 19.8 +3.5
RNPP9 **Sopachiv** 80.23 325 P P 19 16 19.4 +2.8
DSP **Deep Springs** 80.43 52 IAmb IAmb 19 16 23.3
comp=Z,9.3nm,1.2s
KMPD **K-Podol'skiy** 81.66 322 P P 19 16 26.9 +2.6
HWUT **Hardware Ranch** 82.34 46 IAmb IAmb 19 16 35.4
comp=Z,12nm,1.4s
RAYN **Ar Rayn** 82.35 293 P P 19 16 25.1 -3.4
RAYN **Ar Rayn** 82.35 293 P P 19 16 25.1 -3.4
RAYN pmax pmax
comp=Z,2.0nm,0.7s
SFJD **Kangerlussuaq** 82.45 4 LR LR 19 56 13.7
comp=Z,125nm,18.2s,baz=21,slow=38
BRTR **Keskin Array B** 82.54 312 P P 19 16 28.3 -1.0
comp=Z,0.9nm,0.6s,baz=90,slow=3.7,SNR=4.3
BRTR LR LR 19 55 32.0
comp=Z,158nm,18.4s,baz=335,slow=37
comp=Z,0.9nm,0.6s
BRTR **Keskin Array B** 82.54 312 *i* P P 19 16 29.5 +0.2
BRTR pmax pmax
comp=Z,1.0nm,0.6s
PPT **Papeete** 82.56 115 LR LR 19 44 04.2
comp=Z,66nm,22.0s,baz=299,slow=29
PDAR **Pinedale Array** 82.90 44 P P 19 16 31.9 +0.7
comp=Z,0.6nm,0.6s,baz=233,slow=3.0,SNR=8.9
comp=Z,0.6nm,0.6s
FRB **Frobisher Bay** 83.32 13 LR LR 19 56 05.3
comp=Z,17nm,20.5s,baz=7.0,slow=38
PFO **Pinyon Flats O** 83.45 55 LR LR 19 53 31.2
comp=Z,73nm,18.9s,baz=245,slow=36
BC3 **Big Chuckawall** 84.13 54 IAmb IAmb 19 16 44.4
comp=Z,8.7nm,1.2s
RDMU **Red Mountain** 84.17 46 IAmb IAmb 19 16 48.9
comp=Z,6.5nm,0.9s
ASF **Jabal al Asfar** 84.43 304 LR LR 19 58 36.4
comp=Z,47nm,18.1s,baz=17,slow=39
ULM **Lac du Bonnet** 85.45 32 LR LR 19 59 38.5
comp=Z,49nm,18.0s,baz=5.5,slow=39
PV03 **Paradox Valley** 85.97 48 IAmb IAmb 19 16 53.5
comp=Z,13nm,1.3s
ANMO **Albuquerque** 89.49 49 LR LR 19 51 11.1
comp=Z,121nm,20.7s,baz=322,slow=32
BMRD **Maredsous** 90.46 333 *d* P P 19 17 06.9 -0.8
SCHQ **Schefferville** 91.85 15 LR LR 20 01 20.5
comp=Z,94nm,19.5s,baz=17,slow=37
VHRN **Van Horn** 93.01 52 P P 19 17 18.5 -1.7
LPIG **La Paz** 93.20 60 LR LR 19 50 34.0
comp=Z,78nm,21.8s,baz=261,slow=30
TXAR **Lajitas Array** 94.81 52 P P 19 17 30.4 +2.0
comp=Z,3.1nm,0.8s,baz=303,slow=2.7,SNR=25
TXAR LR LR 20 00 40.7
comp=Z,70nm,19.1s,baz=249,slow=36
comp=Z,3.1nm,0.8s
TXAR **Lajitas Array** 94.81 52 P P 19 17 28.7 +0.3
TXAR **Lajitas Array** 94.81 52 P P 19 17 28.7 +0.3
H06N1 **SOCORRO T-PHAS** 95.68 64 T T 21 04 01.1
SNR=3
SADO **Sadowa** 96.89 27 LR LR 20 08 39.4
comp=Z,38nm,18.9s,baz=316,slow=40
QSPA **South Pole Qui** 120.26 180 PKP PKiKP 19 22 56.6 0.0
comp=Z,2.5nm,0.8s,baz=280,slow=1.6,SNR=18
NVL **N'lazarevskaya** 130.90 200 *e* PKHKP PKPpre 19 23 04.7
NVL pmax pmax
comp=Z,57nm,2.2s
H03N2 **Juan Fernandez** 146.66 105 T T 22 07 42.1
baz=280,slow=75,SNR=28
H03N3 **Juan Fernandez** 146.67 106 T T 22 07 44.3
baz=280,slow=75,SNR=32
H03N1 **Juan Fernandez** 146.68 105 T T 22 07 43.6
baz=280,slow=75,SNR=41
LPAZ **La Paz** 150.37 68 PKPbc PKiKP 19 24 00.9 +1.1
comp=Z,2.3nm,0.7s,baz=269,slow=0.5,SNR=11
PLCA **Paso Flores** 152.99 121 PKPbc PKiKP 19 24 05.3 +1.5
comp=Z,1.1nm,0.5s,baz=274,slow=2.8,SNR=5.6

IDC 24 19:04:44.0±0.7, 2°20S×140°22E, h0km, mb3.2/2, mbtmp3.2/3, ML3.1/1, Error ellipse: s-maj=33.4km s-min=11.1km az=27.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**0.58**	**123**	Pg	Pg	19 04 55.4	+0.3
	41nm,0.3s,baz=298,slow=4.9,SNR=225						
JAY				Lg	Lg	19 05 03.0	
	73nm,0.3s,baz=330,slow=13,SNR=14						
WRA	**Warramunga Arr**	**18.55**	**198**	P	Pn	19 09 02.9	+0.4
	0.1nm,0.3s,baz=25,slow=12,SNR=5.4						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**22.20**	**195**	P	P	19 09 41.6	-0.5
	0.3nm,0.5s,baz=27,slow=11,SNR=9.5						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**70.31**	**322**	P	P	19 15 59.3	-0.2
	0.3nm,0.7s,baz=104,slow=7.0,SNR=2.4						
	0.3nm,0.7s						

IDC 24 19:06:49.2±2.4, 21°18S×177°76W, h399km±26km, mb3.4/5, mbtmp4.3/8, Error ellipse: s-maj=34.2km s-min=15.2km az=112.0

NEIC 24 19:06:49.4±1.6, 21°3S±0°1×177°7W±0°1, h400km±8km, mb4.4/23, Error ellipse: s-maj=23.6km s-min=3.1km az=132.0

ISC 24 19:06:49.3±0.7, 21°26S±0°10×177°8W±0°1, h400km, n43, σ1§45/42, mb4.4/16, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**9.29**	**39**	P	**P**	**19 08 58.7**	**-0.6**
	10nm,0.3s,baz=58,slow=19,SNR=3.1						
MARNC	**Mare, Loyalty**	**13.20**	**266**	P	**P**	**19 09 42.9**	**+0.6**
OUENC	**Ouen Island, N**	**14.30**	**263**	P	**P**	**19 09 55.7**	**+1.4**
ONTNC	**Ouen Toro**	**14.66**	**263**	P	**P**	**19 09 58.8**	**+0.6**
DZM	**Mont Dzumac**	**14.67**	**264**	P	**P**	**19 09 59.1**	**+0.7**
	9.4nm,0.8s,baz=108,slow=12,SNR=6.9						
TOZ	**Tahuroa Road**	**17.41**	**198**	P	**P**	**19 10 22.9**	**-4.6**
URZ	**Urewera**	**17.50**	**193**	P	**P**	**19 10 27.4**	**-1.1**
	5.2nm,0.3s,baz=264,slow=2.2,SNR=12						
URZ				S	**S**	**19 13 33.0**	**+3.1**
	10.0nm,0.5s,baz=231,slow=23,SNR=8.1						
MRZ	**Mangatainoka R**	**20.14**	**195**	P	**P**	**19 10 52.4**	**-2.6**
TUWZ	**Tuamarina**	**21.29**	**197**	P	**P**	**19 11 03.9**	**-1.5**
DSZ	**Denniston Nort**	**22.23**	**201**	P	**P**	**19 11 11.3**	**-2.7**
OXZ	**Oxford**	**23.59**	**199**	P	**P**	**19 11 25.0**	**-1.1**
RPZ	**Rata Peaks**	**24.24**	**200**	P	**P**	**19 11 34.2**	**+2.2**
	9.0nm,0.6s,baz=186,slow=0.6,SNR=7.7						
	9.0nm,0.6s						
RPZ	**Rata Peaks**	**24.24**	**200**	P	**P**	**19 11 31.4**	**-0.7**
CAN	**Canberra**	**32.25**	**237**	P	**P**	**19 12 43.1**	**+0.5**
CAN				IAmb	IAmb	19 13 08.9	
	comp=Z,38nm,1.4s						
RABL	**Rabaul**	**33.74**	**296**	P	**P**	**19 12 54.0**	**-1.6**
RABL				IAmb	IAmb	19 13 27.6	
	comp=Z,8.3nm,0.8s						
TOO	**Toolangi**	**35.60**	**235**	P	**P**	**19 13 11.2**	**+0.1**
TAU	**Tasmania Unive**	**36.22**	**225**	P	**P**	**19 13 15.4**	**-0.7**
STKA	**Stephens Creek**	**37.63**	**245**	P	**P**	**19 13 28.1**	**+0.1**
	comp=Z,2.2nm,0.8s,baz=101,slow=16,SNR=2.8						
	comp=Z,2.2nm,0.8s						
STKA	**Stephens Creek**	**37.63**	**245**	IAmb	IAmb	19 13 29.5	
	comp=Z,23nm,1.1s						
BBOO	**Buckleboo**	**42.38**	**244**	P	**P**	**19 14 06.1**	**-0.4**
BBOO				IAmb	IAmb	19 14 20.5	
	comp=Z,23nm,1.4s						
WR8	**Warramunga Arr**	**44.53**	**263**	P	**P**	**19 14 23.1**	**-0.6**
WRAB	**Tennant Creek**	**44.67**	**263**	P	**P**	**19 14 23.4**	**-1.3**
FORT	**Forrest**	**49.17**	**247**	P	**P**	**19 14 59.5**	**+0.6**
FORT				IAmb	IAmb	19 15 04.3	
	comp=Z,16nm,1.5s						
QSPA	**South Pole Qui**	**68.82**	**180**	P	**P**	**19 17 12.8**	**+1.1**
PETK	**Petropavlovsk-**	**77.05**	**345**	P	**P**	**19 18 00.6**	**+1.4**
PLK4	**Peulik 4**	**80.61**	**12**	P	**P**	**19 18 19.8**	**+1.4**
O14K	**Tigyukauivet M**	**81.36**	**9**	P	**P**	**19 18 23.2**	**+1.1**
O14K				IAmb	IAmb	19 18 24.1	
	comp=Z,8.5nm,1.1s						
N14K	**Kuskokwak Cree**	**81.95**	**8**	P	**P**	**19 18 26.2**	**+1.1**
N14K				IAmb	IAmb	19 18 27.6	
	comp=Z,7.3nm,0.8s						
N15K	**Kwethluk River**	**82.41**	**9**	P	**P**	**19 18 28.4**	**+0.9**
N15K				IAmb	IAmb	19 18 54.6	
	comp=Z,11nm,1.4s						
O18K	**Koktuh Hills**	**82.91**	**11**	P	**P**	**19 18 30.8**	**+0.7**
O18K				IAmb	IAmb	19 18 32.5	
	comp=Z,12nm,1.2s						
K15K	**Wolf Creek Mou**	**84.27**	**8**	P	**P**	**19 18 37.6**	**+0.8**
STLK	**Strandline Lak**	**85.07**	**12**	P	**P**	**19 18 41.3**	**+0.4**
STLK				IAmb	IAmb	19 18 55.9	
	comp=Z,4.1nm,1.4s						
GLI	**Glacier Island**	**85.53**	**15**	P	**P**	**19 18 44.2**	**+1.1**
GLI				IAmb	IAmb	19 19 13.0	
	comp=Z,7.8nm,0.9s						
BMRM	**Bremner River**	**86.21**	**16**	P	**P**	**19 18 46.8**	**+0.3**
BMRM				IAmb	IAmb	19 19 15.6	
	comp=Z,9.1nm,1.4s						
ILAR	**Eielson Array**	**89.01**	**13**	P	**P**	**19 18 58.9**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=216,slow=5.5,SNR=8.1						
	comp=Z,0.5nm,0.6s						
ILAR	**Eielson Array**	**89.01**	**13**	P	**P**	**19 18 58.7**	**-0.8**
PDAR	**Pinedale Array**	**89.39**	**43**	P	**P**	**19 19 02.9**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=272,slow=5.0,SNR=3.6						
	comp=Z,0.4nm,0.6s						
PDAR	**Pinedale Array**	**89.39**	**43**	P	**P**	**19 19 01.2**	**-0.9**
CMAR	**Chiang Mai Arr**	**90.54**	**289**	P	**P**	**19 19 08.7**	**+1.0**
	comp=Z,0.3nm,0.4s,baz=82,slow=4.1,SNR=4.0						
	comp=Z,0.3nm,0.4s						
BVAR	**Borovoye Array**	**119.77**	**320**	PKP	**PKPdf**	**19 24 50.5**	**-2.0**
	comp=Z,0.5nm,0.3s,baz=112,slow=2.3,SNR=7.2						
AKASG	**Malin Array Be**	**143.76**	**331**	PKP	PKPab	19 25 34.8	-1.0
	comp=Z,1.9nm,0.4s,baz=44,slow=4.1,SNR=16						
BRTR	**Keskin Array B**	**147.48**	**312**	PKPbc	**PKPbc**	**19 25 47.5**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=104,slow=5.2,SNR=4.7						
MMAI	**Mount Meron Ar**	**148.34**	**299**	PKPbc	**PKPbc**	**19 25 49.7**	**-0.1**
	comp=Z,1.6nm,0.5s,baz=40,slow=6.7,SNR=5.8						

IDC 24 19:10:18.5±1.1, 28°90N×139°15E, h459km±29km, mb2.9/6, mbtmp3.7/7, Error ellipse: s-maj=62.2km s-min=20.1km az=76.0

ISC 24 19:10:18.3±0.9, 28°9N±0°2×139°0E±0°2, h450km, n7, σ0§60/8, mb3.2/6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**3.36**	**122**	P	**P**	**19 11 28.9**	**+0.7**
	50nm,0.3s,baz=294,slow=20,SNR=16						
JCJ				S	**S**	**19 12 24.3**	**-0.5**
	73nm,0.4s,baz=286,slow=24,SNR=5.8						
KLR	**Kul'dur**	**21.03**	**347**	P	**P**	**19 14 28.6**	**-0.2**
	0.4nm,0.4s,baz=163,slow=17,SNR=2.0						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**47.13**	**308**	P	**P**	**19 18 08.5**	**+0.2**
	0.3nm,0.5s,baz=96,slow=8.0,SNR=4.2						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**48.78**	**186**	P	**P**	**19 18 20.6**	**-0.3**
	0.3nm,0.5s,baz=15,slow=7.2,SNR=5.4						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**49.74**	**313**	P	**P**	**19 18 28.1**	**+0.4**
	0.9nm,0.5s,baz=91,slow=7.7,SNR=13						
	0.9nm,0.5s						
BVAR	**Borovoye Array**	**54.78**	**317**	P	**P**	**19 19 04.6**	**+0.5**
	0.6nm,0.5s,baz=84,slow=7.0,SNR=5.1						
	0.6nm,0.5s						
FINES	**FINESS Array B**	**75.05**	**333**	P	**P**	**19 21 11.7**	**-0.7**
	2.0nm,0.8s,baz=67,slow=5.7,SNR=5.0						
	2.0nm,0.8s						

BJI 24 19:30:53.7, 6°19S×148°32E, h37km, mB5.2/13, mb4.4/30, Ms4.6/4, Ms7 4.4/4

NEIC 24 19:30:58.2±1.5, 6°17S±0°05×147°83E±0°07, h49km±5km, mb4.9/80, Error ellipse: s-maj=10.5km s-min=7.3km az=100.0

IDC 24 19:30:58.2±1.3, 6°21S×147°91E, h54km±11km, mb4.0/19, mbtmp4.3/24, MS3.8/34, Error ellipse: s-maj=16.5km s-min=8.3km az=100.0

DJA 24 19:31:01.5±0.5, 6°S±3°×14°8E±°, h68km±3km, M4.9/74, mB5.4/31, mb5.1/74, MLv5.4/2, Mw(mB)4.8/31

GCMT 24 19:31:01.2±0.3, 6°24S±0°02×147°95E±0°02, h34km±1km, MW4.9/73, Moment Tensor Solution. s23,c28; s73,c108;

Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr0.22±.19; Mθθ-1.19±.12; Mφφ0.97±.14; Mrθ0.42±.15; Mrφ2.46±.09; Mθφ-0.12±.15; Best double couple: Mw2.71900×10¹⁶ NP1:ϕs348.00000°, δ82.00000°, λ-177.00000°. NP2: ϕs258.00000°, δ87.00000°, λ-8.00000°. Principal axes: T 2.5870, Plg3.0000°, Azm303.0000°; N 0.2670, Plg82.0000°, Azm56.0000°; P -2.8510, Plg8.0000°, Azm213.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 24 19:30:58.8±0.3, 6°24S±0°04×147°87E±0°05, h60km, n262, σ1§53/246, mb4.9/93, MS3.9/31, 2C, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.23**	**192**	P	**Pn**	**19 31 47.4**	**+0.3**
	259nm,0.5s,baz=37,slow=5.9,SNR=131						
PMG				S	**Sn**	**19 32 25.2**	**+0.9**
	436nm,0.4s,baz=15,slow=14,SNR=7.5						
PMG				LR	LR	19 33 35.6	
	comp=Z,2μm,21.0s,baz=16,slow=48						
PMG	**Port Moresby**	**3.23**	**192**	P	**Pn**	**19 31 47.6**	**+0.5**
PMG	**Port Moresby**	**3.23**	**192**	P	**Pn**	**19 31 47.9**	**+0.8**
PMG	**Port Moresby**	**3.23**	**192**		**Pn**	**19 31 47.3**	**+0.2**
PMG	**Port Moresby**	**3.23**	**192**	P	**Pn**	**19 31 47.4**	**+0.3**
PMG				S	**Sn**	**19 32 27.7**	**+3.4**
MANU	**Manus Island**	**4.20**	**353**	Pn	**Pn**	**19 31 57.4**	**-3.0**
I40PG	**Keravat**	**4.55**	**65**	P	**Pn**	**19 32 05.4**	**+0.1**
	baz=252,slow=289						
I40PG				I	I	19 48 56.3	
	baz=246,slow=314,SNR=2.5						
KRVT	**Keravat (AS076**	**4.56**	**65**	LR	LR	19 33 44.8	
	comp=Z,235nm,18.9s,baz=178,slow=37						
RABL	**Rabaul**	**4.74**	**65**		**Pn**	**19 32 06.9**	**-0.9**
JAY	**Jayapura**	**8.04**	**297**	P	**Pn**	**19 32 53.3**	**+0.2**
	24nm,0.5s,baz=134,slow=2.4,SNR=35						
JAY	**Jayapura**	**8.04**	**297**	P	**Pn**	**19 32 55.9**	**+2.8**
	1μm118nm,0.9s						
GENI	**Genyem**	**8.48**	**295**	P	**Pn**	**19 33 01.5**	**+2.4**
COEN	**Coen**	**8.95**	**211**	P	**Pn**	**19 33 05.3**	**-0.3**
	comp=Z,32nm,0.9s						
COEN	**Coen**	**8.95**	**211**	P	**Pn**	**19 33 05.6**	**0.0**
COEN	**Coen**	**8.95**	**211**		**Pn**	**19 33 04.8**	**-0.8**
COEN				Sn	**Sn**	**19 34 42.6**	**-2.4**
MTSU	**Mount Surprise**	**12.32**	**196**	P	**Pn**	**19 33 52.0**	**+0.4**
	comp=Z,21nm,0.8s						
MTSU	**Mount Surprise**	**12.32**	**196**	P	**Pn**	**19 33 51.9**	**+0.3**
SRPI	**Serui, Papua**	**12.38**	**290**	P	**Pn**	**19 33 52.8**	**+0.4**
HNR	**Honiara**	**12.38**	**106**	P	**Pn**	**19 33 51.3**	**-1.1**
	comp=Z,4.7nm,0.8s,baz=318,slow=5.8,SNR=17						
HNR				LR	LR	19 37 23.9	
	comp=Z,12nm,19.4s,baz=7.5,slow=31						
HNR	**Honiara**	**12.38**	**106**	Pn	**Pn**	**19 33 49.7**	**-2.7**
BAKI	**Biak**	**12.76**	**293**	P	**Pn**	**19 33 59.7**	**+2.2**
	comp=Z,157nm,1.2s						
CTA	**Charters Tower**	**13.86**	**186**	P	**Pn**	**19 34 11.7**	**-0.7**
	comp=Z,6.3nm,1.0s,baz=10,slow=12,SNR=7.6						
CTA				LR	LR	19 39 54.4	
	comp=Z,760nm,18.9s,baz=7.0,slow=39						
CTAO	**Charters Tower**	**13.86**	**186**	Pn	**Pn**	**19 34 12.6**	**+0.1**
RKPI	**Ransiki, Papua**	**14.44**	**288**	P	**P**	**19 34 23.0**	**-2.4**
MWPI	**Manokwari, Pap**	**14.77**	**290**	P	**Pn**	**19 34 26.7**	**+2.3**
	comp=Z,196nm,0.9s						
QIS	**Mount Isa**	**16.34**	**209**	P	**Pn**	**19 34 44.5**	**0.0**
	comp=Z,107nm,0.8s						
QIS	**Mount Isa**	**16.34**	**209**	P	**Pn**	**19 34 43.7**	**-0.8**
KDU	**Kakadu**	**16.48**	**246**	P	**Pn**	**19 34 45.7**	**-0.5**
	comp=Z,21nm,1.0s						
SAUI	**Saumlaki**	**16.53**	**263**		**Pn**	**19 34 44.7**	**-2.2**
SAUI	**Saumlaki**	**16.53**	**263**	P	**Pn**	**19 34 47.7**	**+0.8**
	comp=Z,3μmcomp=Z,161nm,1.1s						
SIJI	**Sorong**	**17.40**	**287**	P	**Pn**	**19 34 57.9**	**+0.2**
	comp=Z,21nm,0.9s,baz=102,slow=11,SNR=14						
SIJI				LR	LR	19 42 48.9	
	comp=Z,313nm,20.9s,baz=81,slow=41						
SIJI	**Sorong**	**17.40**	**287**	P	**P**	**19 34 59.7**	**+1.5**
	comp=Z,82nm,1.3s						
SWI	**Sorong**	**17.41**	**287**	P	**P**	**19 34 59.5**	**+1.2**
	comp=Z,968nmcomp=Z,128nm,1.1s						
MTN	**Manton Dam**	**17.75**	**247**	P	**Pn**	**19 34 59.6**	**-2.4**
	comp=Z,15nm,0.7s						
MTN	**Manton Dam**	**17.75**	**247**		**Pn**	**19 34 59.1**	**-2.9**
WRAB	**Tennant Creek**	**18.92**	**223**	P	**P**	**19 35 14.6**	**-0.3**
WRAB	**Tennant Creek**	**18.92**	**223**	P	**P**	**19 35 13.8**	**-1.1**
WRAB				IAmb	IAmb	19 35 17.5	
	comp=Z,40nm,0.8s						
WRA	**Warramunga Arr**	**18.93**	**223**	P	**P**	**19 35 14.9**	**-0.1**
	comp=Z,33nm,0.6s,baz=49,slow=11,SNR=151						
WRA				S	**S**	**19 38 45.6**	**-1.5**
	comp=Z,8.3nm,1.2s,baz=44,slow=21,SNR=5.0						
WRA				ScP	**ScP**	**19 43 10.5**	**+0.5**
	comp=Z,3.3nm,0.9s,baz=43,slow=2.4,SNR=4.9						
WRA	**Warramunga Arr**	**18.93**	**223**	P	**P**	**19 35 12.8**	**-2.3**
WRA				S	**S**	**19 38 41.9**	**-5.2**
EIDS	**Eidsvold**	**19.27**	**171**	P	**Pn**	**19 35 19.9**	**-0.3**
	comp=Z,57nm,0.8s						
EIDS	**Eidsvold**	**19.27**	**171**	P	**Pn**	**19 35 20.5**	**+0.3**
EIDS	**Eidsvold**	**19.27**	**171**		**P**	**19 35 19.3**	**+0.6**
EIDS				IAmb	IAmb	19 35 21.4	
	comp=Z,34nm,0.7s						
KRAI	**Karang Ratu**	**19.62**	**278**	P	**Pn**	**19 35 25.1**	**+0.7**
	comp=Z,64nm,1.1s						
GUMO	**Guam**	**19.92**	**351**	LR	LR	19 42 04.9	
	comp=Z,92nm,19.3s,baz=168,slow=34						
RMQ	**Roma**	**20.16**	**178**	P	Pn	19 35 30.3	-0.4
	comp=Z,43nm,1.2s						
QLP	**Quilpie**	**20.53**	**189**	P	**P**	**19 35 33.4**	**+1.1**
	comp=Z,503nm,1.0s						
QLP	**Quilpie**	**20.53**	**189**	P	**P**	**19 35 33.4**	**+1.1**
NLAI	**Namlea**	**20.91**	**277**	P	Pn	19 35 38.6	-1.1
	comp=Z,47nm,0.7s						
KNRA	**Kununurra**	**20.95**	**242**	P	**P**	**19 35 36.7**	**-0.3**
	comp=Z,35nm,0.7s						
KNRA	**Kununurra**	**20.95**	**242**		**P**	**19 35 36.2**	**-0.8**
KNRA				IAmb	IAmb	19 35 49.4	
	comp=Z,26nm,0.7s						
SANVU	**Saraoutou**	**21.06**	**117**	P	**P**	**19 35 36.7**	**-1.5**
SANVU				IAmb	IAmb	19 35 52.7	
	comp=Z,40nm,0.8s						
TNTI	**Ternate**	**21.61**	**288**	P	**P**	**19 35 43.7**	**-0.5**
TNTI				IAmb	IAmb	19 35 59.5	
	comp=Z,89nm,1.7s						
TNTI	**Ternate**	**21.61**	**288**	P	P	19 35 58.7	+15
AS31	**Alice Springs**	**21.92**	**216**	P	**P**	**19 35 47.5**	**+0.1**
AS31				IAmb	IAmb	19 35 48.7	
	comp=Z,35nm,0.6s						
ASAR	**Alice Springs**	**21.93**	**216**	P	**P**	**19 35 48.0**	**+0.6**
	comp=Z,93nm,0.7s,baz=51,slow=9.0,SNR=1607						
ASAR				S	**S**	**19 39 47.4**	**+1.0**
	comp=Z,7.4nm,1.0s,baz=33,slow=22,SNR=5.3						
ASAR				ScP	**ScP**	**19 43 18.4**	**+1.3**
	comp=Z,3.4nm,0.9s,baz=38,slow=4.3,SNR=9.7						
ASAR	**Alice Springs**	**21.93**	**216**	P	**P**	**19 35 46.9**	**-0.5**
ASAR					**S**	**19 39 46.4**	**0.0**
ASAR					**ScP**	**19 43 15.9**	**-1.2**
SANI	**Sanana**	**22.21**	**280**	P	**P**	**19 35 56.3**	**+5.8**
SANI	**Sanana**	**22.21**	**280**	P	**P**	**19 35 54.7**	**+4.2**
	comp=Z,68nm,0.8s						
INKA	**Innaminka**	**22.43**	**197**		**P**	**19 35 52.6**	**-0.2**
INKA				IAmb	IAmb	19 35 54.3	
	comp=Z,39nm,0.8s						
SOEI	**Soe**	**23.63**	**260**	P	**P**	**19 36 06.6**	**+1.6**
SOEI	**Soe**	**23.63**	**260**		**P**	**19 36 05.4**	**+0.5**
SOEI				IAmb	IAmb	19 36 27.8	
	comp=Z,33nm,0.8s						
SOEI	**Soe**	**23.63**	**260**	P	**P**	**19 36 05.7**	**+0.7**
	comp=Z,1μmcomp=Z,64nm,0.9s						
BATI	**Baumata**	**24.27**	**259**	P	**P**	**19 36 12.1**	**+1.4**
	comp=Z,87nm,0.7s,baz=135,slow=1.4,SNR=29						
BATI				LR	LR	19 48 04.8	
	comp=Z,458nm,20.0s,baz=98,slow=42						
BATI	**Baumata**	**24.27**	**259**	P	**P**	**19 36 11.9**	**+1.2**
	comp=Z,106nm,0.8s						
ARMA	**Armidale**	**24.31**	**172**	P	**P**	**19 36 12.1**	**+1.0**
	comp=Z,55nm,0.9s						
ARMA	**Armidale**	**24.31**	**172**	P	**P**	**19 36 12.5**	**+1.5**
ARMA	**Armidale**	**24.31**	**172**	P	**P**	**19 36 11.8**	**+0.8**
ARMA				IAmb	IAmb	19 36 14.2	
	comp=Z,35nm,0.8s						
FITZ	**Fitzroy Crossi**	**24.68**	**239**	P	**P**	**19 36 15.2**	**+0.9**
	comp=Z,169nm,0.7s,baz=60,slow=7.9,SNR=388						
FITZ				LR	LR	19 47 04.6	
	comp=Z,402nm,20.2s,baz=60,slow=39						
CMSA	**Cobar Meteorol**	**25.25**	**184**	P	**P**	**19 36 20.0**	**+0.5**
CMSA	**Cobar Meteorol**	**25.25**	**184**	P	**P**	**19 36 20.4**	**+1.0**
MMRI	**Maumere**	**25.52**	**263**	P	**P**	**19 36 25.8**	**+3.7**
MMRI	**Maumere**	**25.52**	**263**	P	**P**	**19 36 20.8**	**-1.3**
MMRI				IAmb	IAmb	19 36 37.3	
	comp=Z,40nm,0.6s						
MMRI	**Maumere**	**25.52**	**263**	P	**P**	**19 36 21.4**	**-0.7**
	comp=Z,695nmcomp=Z,57nm,0.7s						
LUWI	**Luwuk**	**25.56**	**281**	P	**P**	**19 36 28.9**	**+6.5**
LUWI	**Luwuk**	**25.56**	**281**	P	**P**	**19 36 21.6**	**-0.8**
LUWI	**Luwuk**	**25.56**	**281**	P	**P**	**19 36 23.1**	**+0.7**
	comp=Z,111nm,1.0s						
GTOI	**Gorontalo**	**25.73**	**285**	P	**P**	**19 36 26.1**	**+2.1**
	comp=Z,430nmcomp=Z,45nm,0.8s						
DAV	**Davao City (W)**	**25.87**	**300**	LR	LR	19 46 32.0	
	comp=Z,79nm,20.3s,baz=116,slow=36						
EDFI	**Ende, Flores**	**26.07**	**263**	P	**P**	**19 36 25.6**	**-1.6**
	comp=Z,33nm,0.9s						
STKA	**Stephens Creek**	**26.18**	**192**	P	**P**	**19 36 28.4**	**+0.7**
	comp=Z,53nm,0.8s,baz=355,slow=7.3,SNR=56						
STKA				LR	LR	19 47 47.4	
	comp=Z,432nm,18.1s,baz=13,slow=38						
STKA	**Stephens Creek**	**26.18**	**192**	IAmb	IAmb	19 36 30.8	
	comp=Z,322nm,0.9s						
KKSI	**Kolaka, Sulawe**	**26.18**	**273**	P	**P**	**19 36 29.4**	**+1.3**
	comp=Z,31nm,0.7s						
WRKA	**Warakurna**	**26.47**	**223**	P	**P**	**19 36 31.0**	**+0.4**
	comp=Z,26nm,0.7s						
APSI	**Ampana**	**26.69**	**280**	P	**P**	**19 36 36.8**	**+4.2**
	comp=Z,554nmcomp=Z,46nm,1.1s						
MRSI	**Marisa**	**26.72**	**284**	P	**P**	**19 36 35.7**	**+2.8**
	comp=Z,20nm,1.2s						
BSSI	**Bau Bau, Buton**	**27.21**	**269**	P	**P**	**19 36 35.0**	**-2.4**
	comp=Z,21nm,0.8s						
LHI	**Lord Howe Isla**	**27.25**	**159**	P	**P**	**19 36 37.3**	**-0.2**
LHI				IAmb	IAmb	19 37 20.6	
	comp=Z,79nm,1.3s						
WSI	**Waingapu**	**27.51**	**261**	P	**P**	**19 36 40.3**	**+0.3**
LBFI	**Labuhan Bajo,**	**27.83**	**264**	P	P	19 37 00.3	+17
YNG	**Young**	**27.93**	**179**	P	**P**	**19 36 45.1**	**+1.5**
	comp=Z,52nm,1.1s						
KAPI	**Kappang**	**28.00**	**271**	P	**P**	**19 36 45.0**	**+0.6**
	comp=Z,4.9nm,0.3s,baz=121,slow=10,SNR=3.7						
KAPI				LR	LR	19 50 52.7	
	comp=Z,101nm,20.0s,baz=96,slow=43						
	comp=Z,4.9nm,0.3s						
KAPI	**Kappang**	**28.00**	**271**	P	**P**	**19 36 43.2**	**-1.3**
TOLI2	**Tolitoli**	**28.01**	**284**	P	P	19 36 51.0	+6.6
TOLI2	**Tolitoli**	**28.01**	**284**	P	**P**	**19 36 43.4**	**-1.0**
TOLI2				IAmb	IAmb	19 37 22.1	
	comp=Z,16nm,0.8s						
TTSI	**Tana Toraja**	**28.13**	**275**	P	**P**	**19 36 47.4**	**+1.9**
	comp=Z,50nm,0.9s						
HTT	**Hallett**	**28.31**	**196**	P	**P**	**19 36 47.9**	**+0.9**
	comp=Z,10nm,1.0s						
HTT	**Hallett**	**28.31**	**196**	P	**P**	**19 36 47.4**	**+0.5**
WBSI	**Waikabubak, Su**	**28.40**	**261**	P	**P**	**19 36 51.3**	**+3.3**
	comp=Z,505nmcomp=Z,37nm,0.8s						
PCI	**Palu**	**28.46**	**280**	P	**P**	**19 36 50.0**	**+1.5**
	comp=Z,30nm,1.1s						
BBOO	**Buckleboo**	**28.64**	**201**	P	**P**	**19 36 50.0**	**+0.2**
	comp=Z,24nm,0.8s						
BBOO	**Buckleboo**	**28.64**	**201**	P	**P**	**19 36 50.0**	**+0.2**
BBOO	**Buckleboo**	**28.64**	**201**		**P**	**19 36 49.3**	**-0.5**
BBOO				IAmb	IAmb	19 36 51.3	
	comp=Z,32nm,1.1s						
MPSI	**Mapaga**	**28.67**	**282**	P	**P**	**19 36 53.0**	**+2.7**
CAN	**Canberra**	**28.96**	**178**	P	**P**	**19 36 53.7**	**+0.9**
CAN				IAmb	IAmb	19 37 19.5	
	comp=Z,99nm,1.7s						
MMSI	**Mamuju**	**29.08**	**276**	P	**P**	**19 36 54.9**	**+0.9**
	comp=Z,12nm,1.0s						
DBNI	**Kabupaten Domp**	**29.39**	**264**	P	**P**	**19 36 58.4**	**+1.6**
	comp=Z,10.0nm,0.9s						
PLAI	**Plampang**	**29.94**	**263**	P	**P**	**19 36 59.5**	**-2.1**
	comp=Z,18nm,0.7s						
FORT	**Forrest**	**30.69**	**215**		**P**	**19 37 08.3**	**+0.3**
FORT				IAmb	IAmb	19 37 09.9	
	comp=Z,24nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**30.80**	**37**	T	T	20 09 16.1	
	baz=220,slow=74,SNR=8.1						
H11S2	**WAKE ISLAND Hy**	**30.81**	**37**	T	T	20 09 17.9	
	baz=220,slow=74,SNR=5.3						
H11S1	**WAKE ISLAND Hy**	**30.82**	**37**	T	T	20 09 18.8	
	baz=220,slow=74,SNR=7.4						
MBWA	**Marble Bar**	**31.02**	**239**	P	**P**	**19 37 11.7**	**+0.7**
	comp=Z,86nm,0.8s						
MBWA	**Marble Bar**	**31.02**	**239**	P	**P**	**19 37 11.6**	**+0.5**
MBWA	**Marble Bar**	**

comp=Z,77nm,1.9s
GVZ Greta Valley S 42.80 153 P P 19 38 50.4 -0.4
PLWZ Palliser 42.80 149 P P 19 38 49.8 -1.0
MJAR Matsushiro Arr 43.51 349 P P 19 38 56.3 -0.2
comp=Z,9.9nm,0.9s,baz=175,slow=7.9,SNR=17
MJAR LR LR 19 54 38.4
comp=Z,82nm,21.2s,baz=157,slow=33
comp=Z,9.9nm,0.9s
MJAR Matsushiro Arr 43.51 349 P P 19 38 55.9 -0.5
MAJO Matsushiro 43.51 349 P P 19 38 55.8 -0.6
MAJO IAmb IAmb 19 38 58.6
comp=Z,21nm,1.1s
MJB9 Matsu-Tunnel 43.51 349 P P 19 38 56.0 -0.6
MJB9 IAmb IAmb 19 38 59.6
comp=Z,20nm,1.1s
MDSI Maura Dua 43.52 270 P P 19 38 58.5 +1.5
comp=Z,17nm,1.1s
LWLI Liwa 43.60 269 P P 19 39 01.6 +3.8
comp=Z,64nm,1.0s
MNAI Manna 44.75 270 P P 19 39 05.0 -1.8
KRJI Kerinci 46.45 273 P P 19 39 25.1 +4.7
comp=Z,70nm,0.9s
NJ2 Nanjing 47.06 326 *eP* **P 19 39 25.6 +1.0**
KSRS Korea Array 47.28 338 P P 19 39 25.9 -0.5
comp=Z,2.0nm,0.9s,baz=158,slow=8.9,SNR=7.2
KSRS LR LR 19 58 24.0
comp=Z,55nm,18.8s,baz=150,slow=35
comp=Z,2.0nm,0.9s
PPI Padang Panjang 47.71 275 P P 19 39 31.7 +1.6
comp=Z,35nm,1.0s
JKA Kamikawa-asahi 50.34 355 P P 19 39 49.5 -0.2
ASAJ Asahikawa 50.34 355 LR LR 19 59 48.9
comp=Z,50nm,20.3s,baz=163,slow=34
GSI Gunungsitoli 50.76 277 P P 19 39 52.4 -1.0
TIA Tai'an 51.13 328 P P 19 39 55.3 -0.5
TIA pmax pmax
comp=Z,6.0nm,0.9s
USRK Ussuriysk Ar. 52.21 346 P P 19 40 03.9 +0.3
comp=Z,6.6nm,0.6s,baz=168,slow=13,SNR=4.4
comp=Z,2.6nm,0.6s
MDJ Mudanjiang 53.23 344 P P 19 40 12.0 +0.9
MDJ pmax pmax
comp=Z,4.0nm,0.7s
HNS HongShan 53.31 327 ⇑P **P 19 40 11.9 +0.1**
CM31 Chiang Mai Arr 54.12 298 P P 19 40 17.0 -1.2
CMAR Chiang Mai Arr 54.12 298 P P 19 40 18.0 -0.2
comp=Z,0.3nm,0.6s,baz=116,slow=6.2,SNR=4.4
CMAR LR LR 20 04 36.3
comp=Z,17nm,19.4s,baz=125,slow=37
comp=Z,0.3nm,0.6s
CMAR Chiang Mai Arr 54.12 298 P P 19 40 16.7 -1.5
BNX BinXian 54.88 343 ⇑P **P 19 40 22.8 -0.4**
BNX pmax pmax
comp=Z,4.0nm,0.9s
KLR Kul'dur 57.00 347 P P 19 40 38.5 +0.3
comp=Z,1.7nm,0.8s,baz=289,slow=3.1,SNR=8.5
comp=Z,1.7nm,0.8s
HHC Hu-ho-hao-te 57.49 328 *eP* **P 19 40 44.3 +2.3**
HHC pmax pmax
comp=Z,12nm,0.5s
HHC pmax pmax
comp=Z,200nm,6.5s
LZH Lanzhou 58.95 319 *eP* **P 19 40 53.5 +1.1**
LZH pP pP 19 41 04.0 -4.2
LZH sP sP 19 41 10.1 -4.7
LZH pmax pmax
comp=Z,16nm,1.3s
LZH pmax pmax
comp=Z,160nm,4.8s
LZH L L
comp=Z,250nm,12.7s
LZH L L
comp=Z,180nm,13.1s
HEH HeiHe 58.99 345 *eP* **P 19 40 51.8 -0.4**
PEA0B Petropavlovsk- 59.70 7 P P 19 40 57.7 +0.7
PETK Petropavlovsk- 59.70 7 P P 19 40 57.7 +0.6
comp=Z,5.3nm,0.8s,baz=154,slow=6.0,SNR=5.3
PETK LR LR 20 02 41.1
comp=Z,104nm,21.7s,baz=198,slow=32
comp=Z,5.3nm,0.8s
PETK Petropavlovsk- 59.70 7 P P 19 40 57.3 +0.3
DRV Dumont d'Urvil 60.58 184 P P 19 41 04.1 +1.3
SHL Shillong 62.87 303 P P 19 41 18.7 -0.5
SHL IAmb IAmb 19 42 10.7
comp=Z,5.4nm,1.0s
GTA2 Gaotai 63.55 320 *eP* **P 19 41 26.4 +3.0**
GTA2 pmax pmax
comp=Z,2.0nm,0.7s
GTA2 L L
comp=Z,150nm,12.7s
GTA2 L L
comp=Z,270nm,14.9s
ULN Ulaanbaatar 64.73 331 P P 19 41 30.3 -0.7
ULN Ulaanbaatar 64.73 331 P P 19 41 44.0 +13
SONM Songino Array 65.03 331 P P 19 41 33.6 +0.7
comp=Z,1.4nm,0.6s,baz=144,slow=6.2,SNR=7.3
comp=Z,1.4nm,0.6s
SONM Songino Array 65.03 331 P P 19 41 33.4 +0.5
CASY Casey 65.26 196 P P 19 41 34.6 +0.6
CASY IAmb IAmb 19 43 50.6
comp=Z,18nm,1.4s
ADK Adak 65.34 23 P P 19 41 35.5 +0.8
MA2 Magadan 65.64 2 P P 19 41 36.9 +0.5
comp=Z,2.4nm,0.7s,baz=137,slow=20,SNR=1.6
MA2 LR LR 20 05 58.6
comp=Z,39nm,22.0s,baz=168,slow=32
comp=Z,2.4nm,0.7s
EVN Everest 67.95 303 P P 19 41 50.6 -2.1
EVN IAmb IAmb 19 42 36.5
comp=Z,6.7nm,1.0s
PALK Pallekele 68.33 280 LR LR 20 15 52.6
comp=Z,19nm,18.6s,baz=102,slow=39
TLY Talaya 68.95 332 LR LR 20 11 42.9
comp=Z,25nm,21.0s,baz=99,slow=36
SEY Seymchan 69.06 2 P P 19 41 59.0 +1.0
comp=Z,1.2nm,0.8s,baz=185,slow=11,SNR=4.4
comp=Z,1.2nm,0.8s
YAK Yakutsk 69.50 351 P P 19 42 00.7 0.0
comp=Z,2.6nm,0.4s,baz=207,slow=3.1,SNR=4.0
YAK LR LR 20 12 50.0
comp=Z,87nm,18.2s,baz=294,slow=36
comp=Z,2.6nm,0.4s
YAK Yakutsk 69.50 351 IAmb IAmb 19 42 16.5
comp=Z,9.0nm,1.1s
CCD Concordia, Ant 70.24 187 P P 19 42 07.0 +1.4
VNDA Vanda 71.63 177 P P 19 42 14.1 +0.6
comp=Z,2.4nm,0.6s,baz=323,slow=4.6,SNR=6.6
VNDA LR LR 20 11 08.0
comp=Z,127nm,18.6s,baz=346,slow=34
comp=Z,2.4nm,0.6s
VNDA Vanda 71.63 177 IAmb IAmb 19 43 43.9
comp=Z,57nm,1.9s
WMQ Urumqi 73.53 319 *eP* **P 19 42 26.8 +1.3**
M13K Dall Lake 76.62 23 P P 19 42 42.1 -0.7
O14K Tigyukauivet M 76.72 24 P P 19 42 43.0 -0.3
O14K IAmb IAmb 19 43 08.2
comp=Z,13nm,1.1s
N14K Kuskokwak Cree 76.96 23 P P 19 42 43.9 -0.9
N14K IAmb IAmb 19 43 43.5
comp=Z,31nm,1.4s
O15K Ungalikthiuk R 77.26 25 P P 19 42 45.8 -0.7
O15K IAmb IAmb 19 43 13.5
comp=Z,8.1nm,1.1s
L14K Kuka Creek 77.47 22 P P 19 42 47.5 0.0
L14K IAmb IAmb 19 43 16.9
comp=Z,9.1nm,1.1s
MK31 Makanchi Array 78.23 320 P P 19 42 51.7 -0.5
MKAR Makanchi Array 78.23 320 P P 19 42 50.5 -1.7
comp=Z,0.8nm,0.4s,baz=99,slow=8.1,SNR=18
comp=Z,0.8nm,0.4s
MKAR Makanchi Array 78.23 320 P P 19 42 51.0 -1.2
MAKZ Makanchi 78.43 320 P P 19 42 52.3 -1.0
MAKZ Makanchi 78.43 320 P P 19 42 53.2 -0.1
MAKZ PcP **PcP 19 43 01.9 -0.4**
MAKZ pP **pP 19 43 07.5 -2.2**
K15K Wolf Creek Mou 78.49 22 P P 19 42 53.1 -0.2
K15K IAmb IAmb 19 43 45.2
comp=Z,15nm,1.4s
ZALV Zalesovo Beam 79.67 328 P P 19 42 58.4 -1.4
comp=Z,1.3nm,0.6s,baz=116,slow=6.4,SNR=7.9
ZALV LR LR 20 18 15.2
comp=Z,88nm,20.5s,baz=320,slow=36
comp=Z,1.3nm,0.6s
ZALV Zalesovo Beam 79.67 328 P P 19 42 58.6 -1.2
KDAK Kodiak Island 79.70 28 LR LR 20 12 09.0
comp=Z,67nm,21.9s,baz=259,slow=31
KSH2 Kashi 80.38 311 P P 19 43 04.9 +0.7

M19K Big River Lodg 81.02 24 P P 19 43 06.9 -0.1
BOOM Boomskoye usch 81.05 315 P P 19 43 07.6 -0.2
BOOM IAmb IAmb 19 43 26.0
comp=Z,19nm,1.2s
CNPM China Poot 81.16 27 P P 19 43 08.5 +0.7
G18K Tagagawik 81.69 19 P P 19 43 10.4 0.0
KURK Kurchatov 81.91 323 P P 19 43 11.6 -0.3
KURBB Kurchatov Arra 81.94 323 P P 19 43 11.6 -0.4
comp=Z,0.5nm,0.5s,baz=113,slow=4.0,SNR=6.4
comp=Z,0.5nm,0.5s
E18K Tukpahlearik C 81.99 18 P P 19 43 11.9 -0.1
AAK Ala-Archa 82.12 314 P P 19 43 11.8 -1.6
AAK Ala-Archa 82.12 314 P P 19 43 12.8 -0.6
AAK sP **sP 19 43 34.3 -2.3**
MAW Mawson 82.36 203 P P 19 43 14.6 +0.7
E19K Redstone River 83.06 19 P P 19 43 18.2 +0.7
C19K Lookout Ridge 83.33 17 IAmb IAmb 19 43 55.1
comp=Z,15nm,1.6s
IMAR Indian Mountai 83.41 21 P P 19 43 18.5 -0.8
QSPA South Pole Qui 83.73 180 P P 19 43 20.9 -0.3
comp=Z,5.7nm,0.5s,baz=182,slow=0.8,SNR=64
QSPA LR LR 20 19 36.3
comp=Z,88nm,19.2s,baz=16,slow=35
comp=Z,5.7nm,0.5s
QSPA South Pole Qui 83.73 180 P P 19 43 21.8 +0.5
QSPA IAmb IAmb 19 43 30.3
comp=Z,11nm,1.1s
QSPA South Pole Qui 83.73 180 P P 19 43 22.0 +0.8
QSPA pP **pP 19 43 37.0 -0.9**
RND Reindeer 83.98 24 P P 19 43 22.3 -0.2
RND IAmb IAmb 19 43 46.9
comp=Z,13nm,1.5s
ILAR Eielson Array 85.36 23 P P 19 43 27.4 -1.9
comp=Z,1.0nm,0.6s,baz=247,slow=5.1,SNR=16
comp=Z,1.0nm,0.6s
ILAR Eielson Array 85.36 23 P P 19 43 27.8 -1.5
J25K Salcha River, 85.89 23 IAmb IAmb 19 43 58.7
comp=Z,5.2nm,0.9s
BVAR Borovoye Array 87.47 324 P P 19 43 40.4 +0.6
comp=Z,0.6nm,0.7s,baz=96,slow=10,SNR=2.3
comp=Z,0.6nm,0.7s
HYT Haines Junctio 87.99 28 P P 19 43 42.2 -0.1
HYT IAmb IAmb 19 44 20.2
comp=Z,12nm,1.4s
S32K Killisnoo 88.57 32 P P 19 43 45.8 +0.9
G31M Satah River 90.96 23 P P 19 43 57.1 +1.2
DLBC Dease Lake 91.14 31 LR LR 20 18 44.5
comp=Z,80nm,20.3s,baz=282,slow=32
BBB Bella Bella 91.22 38 LR LR 20 21 47.5
comp=Z,62nm,18.1s,baz=320,slow=33
YBH Yreka Blue Hor 93.67 49 LR LR 20 19 28.8
comp=Z,5.9nm,19.6s,baz=304,slow=31
YKA Yellowknife Ar 98.98 28 P Pdif 19 44 32.9 +0.3
comp=Z,0.1nm,0.3s,baz=274,slow=5.4,SNR=2.5
comp=Z,0.1nm,0.3s
KIRV Kirov 99.70 328 LR LR 20 29 45.0
comp=Z,129nm,21.0s,baz=314,slow=35
SNAA Sanae 99.90 189 LR LR 20 28 53.3
comp=Z,197nm,21.4s,baz=176,slow=35
LPAZ La Paz 137.93 123 PKP **PKPdf 19 50 18.3 -0.2**
comp=Z,1.1nm,0.7s,baz=272,slow=2.6,SNR=3.9
LPAZ La Paz 137.93 123 PKPdf 19 50 15.6 -2.9
TORD Torodi Ar. Bea 145.98 284 PKPbc **PKPbc 19 50 32.8 -0.2**
comp=Z,3.6nm,0.5s,baz=59,slow=1.8,SNR=20
TORD SKPbc **SKiKP 19 54 08.1 +0.5**
comp=Z,0.7nm,0.9s,baz=92,slow=1.4,SNR=2.6
DBIC Dimbokro 152.89 272 PKPbc **PKiKP 19 50 52.1 +1.5**
comp=Z,3.0nm,0.7s,baz=163,slow=4.4,SNR=4.1
BDFB Brasilia 153.17 144 PKPbc **PKiKP 19 50 51.4 +0.2**
comp=Z,4.9nm,0.5s,baz=150,slow=3.0,SNR=7.2

DJA 24 19:31:38.4±0.6, 0°N±3°×9°7E±°, h35km±13km, M3.8/21, mB5.0/1, mb4.1/3, MLv3.7/21, Mw(mB)4.3/1, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**1.03**	**33**	P	Pn	19 31 57.1	+0.8
PBSI	**Pulau Batu**	**1.36**	**111**	P	Pn	19 32 01.2	+0.3
PBSI				S	Sn	19 32 17.2	-0.6
MNSI	**Mandailing Nat**	**2.59**	**82**	P	Pn	19 32 18.0	+0.1
KCSI	**Kotacane, Aceh**	**3.15**	**14**	P	Pn	19 32 26.0	+0.4
PDSI	**Padang**	**3.70**	**111**	P	Pn	19 32 35.3	+2.1
BSI	**Banda Aceh**	**5.31**	**341**	P	Pn	19 32 54.0	-1.2
	0.1nm20nm,1.1s						

*FUNV **24** 19:45:36.6, 10°.02N×73°.02W, h10km, MW3.2, Presumed earthquake*
*RSNC **24** 19:45:36.6±0.0, 10°N±1°×73°.3W±°, h128km±4km, M2.9, mB6.3, mb3.7, ML2.4, MLv3.3, Mw(mB)6.0*
ISC 24 19:45:34.2±1.6, 10°.05N±0°.05×73°.03W±0°.04, h148km±15km, n26, σ1°64/45, 3C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARGC	**Ariguani, Magd**	**1.22**	**261**	P	**Pn**	**19 46 02.5**	**+1.7**
ARGC				S	**Sn**	**19 46 21.7**	**+0.7**
SMRC	**Santa Marta, M**	**1.62**	**313**	P	**Pn**	**19 46 06.0**	**+1.1**
SMRC				S	**Sn**	**19 46 27.9**	**-0.6**
OCAC	**Ocana**	**1.82**	**189**	P	**Pn**	**19 46 08.1**	**+0.7**
OCAC				S	**Sn**	**19 46 31.6**	**-1.2**
URIC	**Uribia, Colomb**	**1.93**	**32**	P	**Pn**	**19 46 09.2**	**+0.7**
URIC				S	**Sn**	**19 46 33.4**	**-1.4**
URIC	**Uribia, Colomb**	**1.93**	**32**⇑	*eP*	**Pn**	**19 46 09.1**	**+0.6**
URIC				*eS*	**Sn**	**19 46 33.0**	**-1.8**
SJCC	**San Jacinto, C**	**2.12**	**266**	P	**Pn**	**19 46 11.8**	**+1.0**
SJCC				S	**Sn**	**19 46 38.4**	**-0.5**
SJCC	**San Jacinto, C**	**2.12**	**266**⇑	*iP*	**Pn**	**19 46 11.9**	**+1.0**
SJCC				*eS*	**Sn**	**19 46 38.0**	**-0.9**
SDV	**Santo Domingo**	**2.63**	**116**	P	**Pn**	**19 46 18.4**	**+1.4**
SDV				S	**Sn**	**19 46 48.4**	**-1.7**
SDV	**Santo Domingo**	**2.63**	**116**⇑	*iP*	**Pn**	**19 46 18.7**	**+1.6**
SDV				*eS*	**Sn**	**19 46 49.0**	**-1.1**
PAMC	**Pamplona, Colo**	**2.71**	**173**	P	**Pn**	**19 46 19.5**	**+1.1**
PAMC				S	**Sn**	**19 46 51.8**	**-0.6**
UREC	**San Jos de Ur**	**3.37**	**228**	P	**Pn**	**19 46 26.7**	**+0.4**
UREC				S	**Sn**	**19 47 03.9**	**-2.7**
PTBC	**PUERTO BERRIO,**	**3.76**	**202**	P	**Pn**	**19 46 32.7**	**+1.3**
PTBC				S	**Sn**	**19 47 13.8**	**-2.0**
RUSC	**La Rusia**	**4.13**	**181**	P	**Pn**	**19 46 37.1**	**+0.4**
RUSC	**La Rusia**	**4.13**	**181**	*eP*	**Pn**	**19 46 37.4**	**+0.7**
RUSC				*eS*	**Sn**	**19 47 23.7**	**-1.4**
DBBC	**Dabeiba**	**4.36**	**227**	P	**Pn**	**19 46 40.3**	**+1.1**
DBBC				S	**Sn**	**19 47 26.3**	**-3.5**
SPBC	**San Pablo de B**	**4.49**	**193**	P	**Pn**	**19 46 41.6**	**+0.6**
SPBC				S	**Sn**	**19 47 31.2**	**-1.8**
CAPC	**Capurgana**	**4.49**	**252**	P	**Pn**	**19 46 42.7**	**+1.8**
CAPC				S	**Sn**	**19 47 28.9**	**-3.9**
HELC	**Santa Helena**	**4.56**	**213**	P	**Pn**	**19 46 44.0**	**+1.8**
HELC				S	**Sn**	**19 47 33.7**	**-1.4**
HELC	**Santa Helena**	**4.56**	**213**	*eP*	**Pn**	**19 46 44.0**	**+1.8**
HELC				*eS*	**Sn**	**19 47 33.4**	**-1.7**
NORC	**Norcasia**	**4.81**	**202**	P	**Pn**	**19 46 46.1**	**+0.8**
CBOC	**Ciudad Bolivar**	**5.10**	**216**	P	**Pn**	**19 46 51.7**	**+2.5**
	0.1nm12nm,0.5s						
GUY2C	**Guyana, Caldas**	**5.32**	**206**	P	**Pn**	**19 46 54.4**	**+2.0**
CHIC	**Chingaza**	**5.43**	**187**	P	**Pn**	**19 46 55.5**	**+1.7**
	6.6nm,1.6s						
VILC	**Villavicencio,**	**5.93**	**186**	P	**Pn**	**19 47 02.2**	**+2.0**
	36µm10nm,0.5s						
PLMC	**San Jos del P**	**6.04**	**213**	P	**Pn**	**19 47 02.7**	**+1.1**
PLMC				S	**Sn**	**19 48 10.7**	**+0.7**
ORTC	**Ortega, Tolima**	**6.48**	**200**	P	**Pn**	**19 47 09.3**	**+1.8**

*NEIC **24** 19:53:49.1±0.9, 45°.86N±0°.03×16°.04E±0°.05, h10km±2km, ML3.2/46, Error ellipse: s-maj=5.3km s-min=4.8km az=98.0*
*KRSZO **24** 19:53:49.0±1.0, 45°.83N×15°.99E, h2km, ML3.5/45, Error ellipse: s-maj=8.8km s-min=4.6km az=171.0*
*LJU **24** 19:53:49.4, 45°.90N×16°.01E, h8km, ML2.8*
*BEO **24** 19:53:50.4±0.3, 45°.93N×16°.04E, h13km±3km, ML3.2/13*
*PRU **24** 19:53:51.1, 45°.98N×16°.07E, h10km*
ISC 24 19:53:49.1±0.8, 45°.90N±0°.01×16°.03E±0°.01, h6km±5km, n177, σ0°98/258, 7C-12D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PTJ	**Puntijarka**	**0.04**	**280**	*i* Pg	**Pg**	**19 53 50.6**	**0.0**
PTJ				Sg	**Sg**	**19 53 51.7**	**+0.1**
PTJ	**Puntijarka**	**0.04**	**280**	Pg	**Pg**	**19 53 50.6**	**0.0**
PTJ				Lg	Lg	19 53 51.6	
ZAG	**Zagreb**	**0.08**	**202**	*i* Pg	**Pg**	**19 53 51.2**	**+0.2**
ZAG				Sg	**Sg**	**19 53 52.7**	**+0.5**
ZAG	**Zagreb**	**0.08**	**202**	Pg	**Pg**	**19 53 50.8**	**-0.2**
ZAG				Lg	Lg	19 53 52.2	
LOBO	**Lobor**	**0.26**	**6**	*i* Pg	**Pg**	**19 53 54.9**	**+0.7**
LOBO				Sg	**Sg**	**19 53 59.1**	**+1.4**
GCIS	**Gornji Cirnik**	**0.28**	**264**⇑	*i* Pg	**Pg**	**19 53 55.0**	**+0.3**
GCIS				*i* Sg	**Sg**	**19 53 59.0**	**+0.6**
GCIS				IAML		19 54 00.0	
	comp=Z,315nm,0.1s						
GOLS	**Golise**	**0.30**	**292**⇓	*i* Pg	**Pg**	**19 53 55.5**	**+0.5**
GOLS				IAML		19 54 02.4	
	comp=Z,605nm,0.2s						
KALN	**Kalnik**	**0.38**	**52**	*i* Pg	**Pg**	**19 53 56.7**	**+0.3**
KALN				Sg	**Sg**	**19 54 01.9**	**+0.5**
CESS	**Cesta pri Krsk**	**0.40**	**281**	*i* Pg	**Pg**	**19 53 57.8**	**+0.9**
CESS				*i* Sg	**Sg**	**19 54 03.1**	**+1.0**
CESS				IAML		19 54 04.8	
	comp=Z,1µm,0.2s						
CRES	**Cresnjevec Ost**	**0.41**	**260**⇑	*i* Pg	**Pg**	**19 53 57.1**	**+0.1**
CRES				*i* Sg	**Sg**	**19 54 03.4**	**+1.1**
CRES				IAML		19 54 04.9	
	comp=Z,247nm,0.2s						
CRES	**Cresnjevec Ost**	**0.41**	**260**	Pg	**Pg**	**19 53 57.4**	**+0.3**
CRES				Lg	Lg	19 54 02.4	
DOBS	**Dobrina**	**0.46**	**303**⇓	*i* Pg	**Pg**	**19 53 58.7**	**+0.6**
DOBS				*eSg*	**Sg**	**19 54 05.5**	**+1.3**
DOBS				IAML		19 54 07.6	
	comp=Z,354nm,0.1s						
OZLJ	**Ozalj**	**0.48**	**234**	*e*Pg	**Pg**	**19 53 58.7**	**+0.2**
OZLJ				Sg	**Sg**	**19 54 05.0**	**+0.2**
LEGS	**Legarje**	**0.50**	**276**⇑	*i* Pg	**Pg**	**19 53 59.1**	**+0.3**
LEGS				*eSg*	**Sg**	**19 54 06.0**	**+0.8**
KOGS	**Kog**	**0.57**	**16**⇓	*i* Pg	**Pg**	**19 54 00.8**	**+0.7**
KOGS				*eSg*	**Sb**	**19 54 09.2**	**-0.7**
KOGS				IAML		19 54 13.7	
	comp=Z,1µm,0.2s						
KOGS	**Kog**	**0.57**	**16**	Pg	**Pg**	**19 54 00.8**	**+0.7**
KOGS				Lg	Lg	19 54 09.3	
MOSL	**Moslavina**	**0.58**	**119**	*i* Pg	**Pg**	**19 54 00.2**	**-0.2**
MOSL				Sg	**Sg**	**19 54 08.7**	**+0.7**
GROS	**Grobnik**	**0.67**	**327**⇓	*i* Pg	**Pg**	**19 54 02.5**	**+0.4**
GROS				*i* Sg	**Sb**	**19 54 12.0**	**-0.9**
GROS				IAML		19 54 12.5	
	comp=Z,402nm,0.2s						
BOJS	**Bojanci**	**0.67**	**234**	*i* Pg	**Pg**	**19 54 02.1**	**+0.1**
BOJS	**Bojanci**	**0.67**	**234**	*e*Pg	**Pg**	**19 54 02.4**	**+0.3**
BOJS				*e*Sg	**Sg**	**19 54 11.9**	**+1.1**
PDKS	**Podkum**	**0.74**	**283**⇑	*i* Pg	**Pg**	**19 54 03.6**	**+0.3**
PDKS				*i* Sg	**Sg**	**19 54 12.9**	**+0.1**
PDKS				IAML		19 54 15.1	
	comp=Z,201nm,0.3s						
BEHE	**Becsehely**	**0.77**	**42**	Pg	**Pb**	**19 54 05.0**	**0.0**
BEHE				Sg	**Sg**	**19 54 14.3**	**+0.3**
BEHE				IAML		19 54 19.3	
	comp=E,1µm,0.9s						
BEHE				IAML		19 54 23.3	
	comp=N,863nm,0.4s						
BEHE	**Becsehely**	**0.77**	**42**	Pg	**Pb**	**19 54 04.7**	**-0.3**
BEHE				Lg	Lg	19 54 17.2	
VISS	**Visnje**	**0.84**	**264**	*e*Pg	**Pg**	**19 54 05.2**	**0.0**
VISS				IAML		19 54 20.7	
	comp=Z,320nm,0.3s						
ZAVS	**Zavodnje**	**0.88**	**308**	*i* Pg	**Pg**	**19 54 06.3**	**+0.3**
ZAVS				*i* Sg	**Sg**	**19 54 17.7**	**+0.2**
ZAVS				IAML		19 54 20.7	
	comp=Z,715nm,0.4s						
A264A	**Tarany**	**0.92**	**73**	Pg	**Pn**	**19 54 07.8**	**-0.7**
A264A				Lg	Lg	19 54 20.9	
GBRS	**Gornja Briga**	**0.93**	**247**	*i* Pg	**Pg**	**19 54 06.7**	**-0.3**
VNDS	**Vrh nad Dolski**	**0.95**	**283**	*i* Pg	**Pg**	**19 54 07.4**	**+0.1**
VNDS				IAML		19 54 24.3	
	comp=Z,801nm,0.5s						
PERS	**Pernice**	**0.97**	**320**⇓	*i* Pg	**Pg**	**19 54 07.8**	**0.0**
PERS				*eSg*	**Sg**	**19 54 20.6**	**+0.3**
A262A	**Szaknyer**	**1.02**	**20**	Pg	**Pn**	**19 54 09.7**	**-0.4**
SOKA	**Soboth**	**1.04**	**319**	*e*Pg	**Pg**	**19 54 09.0**	**-0.2**
	comp=Z,72nm,0.3s,SNR=184						
SOKA				*eSg*	**Sn**	**19 54 24.3**	**-1.0**
	comp=Z,224nm,0.5s						
LJU	**Ljubljana**	**1.06**	**278**	*i* Pg	**Pg**	**19 54 09.4**	**+0.1**
LJU				*eSg*	**Sn**	**19 54 25.1**	**-0.5**
LJU				IAML		19 54 26.3	
	comp=Z,284nm,0.4s						
LJU	**Ljubljana**	**1.06**	**278**	*e*Pg	**Pg**	**19 54 09.5**	**+0.1**
LJU				*eSg*	**Sn**	**19 54 24.6**	**-1.0**
PLIT	**Plitvice**	**1.06**	**196**	*i* Pg	**Pg**	**19 54 08.4**	**-1.1**
PLIT				Sg	**Sg**	**19 54 23.2**	**0.0**
GBAS	**Gorenja Brezov**	**1.11**	**272**	*i* Pg	**Pb**	**19 54 10.2**	**-0.8**
GBAS				*i*		19 54 11.2	
GBAS				*eSg*	**Sn**	**19 54 25.9**	**-1.0**
GBAS				IAML		19 54 28.5	
	comp=Z,292nm,0.5s						
CEY	**Cerknica**	**1.13**	**262**	*i* Pg	**Pb**	**19 54 10.8**	**-0.3**
CEY				*eSg*	**Sn**	**19 54 26.8**	**-0.7**
CEY				IAML		19 54 28.5	
	comp=Z,585nm,0.6s						
CEY	**Cerknica**	**1.13**	**262**	*e*Pg	**Pn**	**19 54 11.7**	**+0.1**
CEY				*eSg*	**Sn**	**19 54 27.7**	**+0.2**
A263A	**Hollad**	**1.16**	**50**	Pn	**Pb**	**19 54 11.2**	**-0.4**
A263A				Pg	**Pn**	**19 54 12.5**	**+0.6**
MOZS	**Mozjanca**	**1.17**	**290**	*i* Pg	**Pb**	**19 54 11.6**	**-0.3**
MOZS				*eSg*	**Sn**	**19 54 28.2**	**-0.2**
MOZS				IAML		19 54 30.4	
	comp=Z,251nm,0.4s						
A010A	**Fuerstenfeld**	**1.18**	**2**	Pg	**Pg**	**19 54 12.1**	**+0.5**
A010A				Sn	**Sn**	**19 54 30.4**	**+1.9**
OBKA	**Obir**	**1.20**	**301**	*e*Pg	**Pb**	**19 54 12.1**	**-0.1**
	comp=Z,0.6nm,0.1s,SNR=24						
OBKA				*eSg*	**Sn**	**19 54 28.4**	**-0.8**
	comp=Z,125nm,0.3s						
OBKA	**Obir**	**1.20**	**301**	Pg	**Pb**	**19 54 12.2**	**-0.1**
OBKA				Lg	Lg	19 54 27.9	
RIY	**Rijeka**	**1.23**	**243**	*e*Pg	**Pn**	**19 54 12.1**	**-0.7**
RIY				Sg	**Sb**	**19 54 28.8**	**-0.1**
RIY	**Rijeka**	**1.23**	**243**	*e*Pg	**Pn**	**19 54 12.7**	**-0.1**
RIY				*e*Sg	**Sn**	**19 54 30.0**	**+0.3**
A273A	**Marcsa**	**1.25**	**89**	Pn	**Pb**	**19 54 12.9**	**-0.2**
A273A				Lg	Lg	19 54 31.6	
A261A	**Ohid**	**1.31**	**36**	Pn	**Pn**	**19 54 13.2**	**-0.7**
A265A	**Kaposfured**	**1.33**	**66**	Pn	**Pn**	**19 54 13.3**	**-1.0**
A265A				Pg	**Pg**	**19 54 16.5**	**+1.7**
A265A				Sn	**Sb**	**19 54 31.1**	**-0.9**
JAVS	**Javornik**	**1.37**	**270**	*i* Pg	**Pn**	**19 54 14.7**	**-0.2**
JAVS				IAML		19 54 39.8	
	comp=Z,173nm,0.5s						
UDBI	**Udbina**	**1.38**	**188**	*e*Pg	**Pn**	**19 54 14.6**	**-0.4**
UDBI				Sg	**Sn**	**19 54 33.4**	**-0.4**
ARSA	**Arzberg**	**1.40**	**346**	Pn	**Pn**	**19 54 14.8**	**-0.4**
ARSA				Sn	**Sn**	**19 54 33.5**	**-0.4**
ARSA	**Arzberg**	**1.40**	**346**	*e*Pn	**Pn**	**19 54 14.8**	**-0.4**
	comp=Z,8.0nm,0.4s,SNR=38						
ARSA				*eSg*	**Sg**	**19 54 34.3**	**+0.3**
	comp=Z,87nm,0.4s						
ARSA	**Arzberg**	**1.40**	**346**	Pn	**Pn**	**19 54 14.8**	**-0.4**
ARSA				Sn	**Sg**	**19 54 35.1**	**+1.1**
ARSA	**Arzberg**	**1.40**	**346**	*e*Pg	**Pn**	**19 54 15.0**	**-0.2**
ARSA				*eSg*	**Sn**	**19 54 33.7**	**-0.3**
BLY	**Banja Luka**	**1.41**	**144**	⇓P	**Pn**	**19 54 14.0**	**-1.3**
BLY				⇓S	**Sb**	**19 54 33.7**	**-0.3**
BLY	**Banja Luka**	**1.41**	**144**	Pn	**Pn**	**19 54 14.3**	**-1.0**
BLY				Sn	**Sn**	**19 54 32.8**	**-1.5**
BLY				IAML		19 54 42.0	
	comp=E,282nm,0.7s						
BLY	**Banja Luka**	**1.41**	**144**	Pn	**Pn**	**19 54 14.5**	**-0.9**
BLY				Sn	**Sg**	**19 54 35.1**	**+0.6**

TIH	**Tihany**	**1.63**	**52**	Pg		**Pg**	**19 54 20.4**	**0.0**
MPLH	**Magyarpolny**	**1.64**	**39**	Pn		**Pn**	**19 54 17.9**	**-0.7**
A266A	**Gyulaj**	**1.67**	**67**	Pn		**Pn**	**19 54 18.9**	**-0.1**
A266A				Pg		**Pg**	**19 54 21.9**	**+0.7**
A019A	**Kaintal**	**1.68**	**338**	Pn		**Pb**	**19 54 19.9**	**-0.6**
A019A				Pg		**Pg**	**19 54 21.5**	**+0.2**
VIRC	**Vir**	**1.75**	**204**	*e*Pn		**Pn**	**19 54 20.2**	**+0.2**
VIRC				Sn		**Sb**	**19 54 43.5**	**-0.3**
EGYH	**Egyhazaskeszo**	**1.76**	**30**	Pn		**Pn**	**19 54 20.5**	**+0.3**
EGYH				Pg		**Pg**	**19 54 24.1**	**+1.1**
PRED	**Cave del Predi**	**1.80**	**288**	Pn		**Pn**	**19 54 20.1**	**-0.6**
MYKA	**Terra Mystica**	**1.81**	**295**	*e*Pn		**Pn**	**19 54 21.1**	**+0.2**
	comp=Z,7.5nm,0.5s							
RONA	**Rosalia, Austr**	**1.81**	**6**	*e*Pn		**Pn**	**19 54 20.8**	**-0.2**
	comp=Z,11nm,0.3s,SNR=34							
SOP	**Sopron**	**1.82**	**11**	Pn		**Pn**	**19 54 20.7**	**-0.4**
MORH	**Mrgy, Hungar**	**1.85**	**79**	⇑P		**Pn**	**19 54 20.0**	**-1.4**
MORH	**Mrgy, Hungar**	**1.85**	**79**	Pn		**Pn**	**19 54 20.1**	**-1.3**
KIJV	**Kijevo**	**1.91**	**172**	*i* Pn		**Pn**	**19 54 22.4**	**+0.1**
KIJV				Sn		**Sb**	**19 54 47.8**	**-0.8**
A267A	**Kaloz**	**1.99**	**57**	Pg		**Pg**	**19 54 30.7**	**+3.3**
DUGI	**Dugi Otok**	**2.03**	**200**	*e*Pn		**Pn**	**19 54 24.1**	**+0.2**
DUGI				Sn		**Sn**	**19 54 49.5**	**0.0**
CONA	**Conrad Observa**	**2.03**	**357**	*e*Pn		**Pn**	**19 54 23.8**	**-0.3**
	comp=Z,0.9nm,0.2s,SNR=34							
CONA	**Conrad Observa**	**2.03**	**357**	Pn		**Pn**	**19 54 24.6**	**+0.6**
CONA				Pg		**Pg**	**19 54 29.3**	**+1.2**
CONA				Lg		Lg	19 54 57.5	
MORI	**Morici**	**2.05**	**187**	*i* Pn		**Pn**	**19 54 24.6**	**+0.5**
MORI				Sn		**Sb**	**19 54 51.6**	**-0.8**
CSKK	**Cskako**	**2.12**	**46**	Pn		**Pn**	**19 54 25.9**	**+0.8**
KBA	**Koelnbreinsper**	**2.20**	**303**	*e*Pn		**Pb**	**19 54 29.7**	**+0.3**
	comp=Z,20nm,0.5s							
WINA	**Alland / Wiene**	**2.21**	**1**	*e*Pn		**Pn**	**19 54 26.5**	**+0.2**
	comp=Z,9.5nm,0.2s,SNR=42							
ZIRJ	**Zirje**	**2.26**	**187**	*e*Pn		**Pn**	**19 54 27.4**	**+0.3**
ZIRJ				Sn		**Sn**	**19 54 56.1**	**+0.8**
MOA	**Molln**	**2.29**	**329**	*e*Pn		**Pn**	**19 54 28.8**	**+1.2**
	comp=Z,6.5nm,0.3s							
STAL	**STALIGIAL**	**2.34**	**280**	Pn		**Pn**	**19 54 27.6**	**-0.5**
STAL				IAML			19 55 13.9	
	comp=E,111nm,0.7s							
STAL				IAML			19 55 15.7	
	comp=N,82nm,0.6s							
ZST	**Bratislava**	**2.41**	**17**	Pn		**Pn**	**19 54 28.9**	**-0.3**
BIOA	**Bad Ischl, Aus**	**2.43**	**318**	*e*Pn		**Pn**	**19 54 31.0**	**+1.5**
	comp=N,5.9nm,0.3s							
SRO	**Srobarova**	**2.47**	**38**	Pn		**Pb**	**19 54 32.7**	**-1.3**
SRO	**Srobarova**	**2.47**	**38**	*e*PN		**Pn**	**19 54 30.5**	**+0.5**
SRO				*e*PG		**Pg**	**19 54 36.8**	**+0.3**
SRO				*e*SN		**Sn**	**19 54 59.5**	**-1.0**
A008A	**Tiefenfucha**	**2.48**	**354**	Pn		**Pn**	**19 54 30.7**	**+0.6**
RICI	**Ricice**	**2.53**	**161**	*e*Pn		**Pn**	**19 54 31.2**	**+0.5**
RICI				Sn		**Sb**	**19 55 03.8**	**-2.6**
ABTA	**Abfaltersbach**	**2.58**	**290**	*e*Pn		**Pn**	**19 54 32.0**	**+0.5**
	comp=N,3.0nm,0.4s							
ABTA				*e*Sg		**Sg**	**19 55 14.8**	**+2.8**
	comp=N,23nm,0.6s							
MODS	**Modra-Piesok**	**2.62**	**19**	Pn		**Pn**	**19 54 31.3**	**-0.7**
MODS				Pg		**Pg**	**19 54 40.3**	**+1.0**
MODS	**Modra-Piesok**	**2.62**	**19**	*e*PN		**Pn**	**19 54 31.3**	**-0.7**
MODS				*e*PG		**Pg**	**19 54 40.0**	**+0.7**
MODS				*e*SN		**Sn**	**19 55 00.6**	**-3.5**
A338A	**Semerovo**	**2.65**	**36**	Sn		**Sn**	**19 55 04.4**	**-0.4**
MAKA	**Makarska**	**2.71**	**164**	*i* Pn		**Pn**	**19 54 33.9**	**+0.7**
MAKA				Sn		**Sn**	**19 55 07.0**	**+0.8**
HVAR	**Hvar**	**2.74**	**174**	*i* Pn		**Pn**	**19 54 34.0**	**+0.4**
HVAR				Sn		**Sn**	**19 55 08.3**	**+1.3**
FRGS	**Fruska Gora**	**2.76**	**104**	*e*Pn		**Pn**	**19 54 34.3**	**+0.4**
LESA	**Schwarzleotal**	**2.77**	**305**	*e*Pn		**Pn**	**19 54 35.3**	**+1.2**
	comp=N,9.1nm,0.5s							
LESA				*e*Sn		**Sn**	**19 55 09.1**	**+1.3**
	comp=N,14nm,0.4s							
TEKS	**Tekeris**	**2.82**	**117**	*e*Pn		**Pn**	**19 54 34.6**	**-0.1**
A001A	**Falkenstein**	**2.86**	**7**	Pn		**Pn**	**19 54 36.0**	**+0.8**
A001A				Pg		**Pg**	**19 54 43.4**	**-0.5**
A334A	**Sterusy**	**2.93**	**22**	Pn		**Pn**	**19 54 37.3**	**+1.0**
CTI	**Castel Tesino**	**3.06**	**274**	Pn		**Pn**	**19 54 37.3**	**-0.8**
CTI				IAML			19 55 31.0	
	comp=N,76nm,0.5s							
CTI				IAML			19 55 37.8	
	comp=E,85nm,0.6s							
TEOL	**Teolo**	**3.10**	**262**	Pn		**Pn**	**19 54 37.8**	**-0.9**
BBLS	**Lazi&#263i**	**3.15**	**129**	*e*Pn		**Pn**	**19 54 39.1**	**-0.2**
CKRC	**Cesky Krumlov**	**3.15**	**339**	*e*PN		**Pn**	**19 54 40.4**	**+1.1**
CKRC				*e*SN		**Sn**	**19 55 16.9**	**-0.3**
CKRC				*e*SG		**Sg**	**19 55 28.5**	**-1.7**
	comp=E,45nm,0.7s							
JAVC	**Velka Javorina**	**3.16**	**20**	*e*PN		**Pn**	**19 54 39.6**	**+0.1**
KRUC	**Moravsky**	**3.17**	**4**	*e*PN		**Pn**	**19 54 39.2**	**-0.4**
KRUC				*e*PG		**Pg**	**19 54 47.7**	**+1.8**
LSTV	**Lastovo**	**3.19**	**169**	*e*Pn		**Pn**	**19 54 39.9**	**0.0**
LSTV				Sn		**Sn**	**19 55 19.4**	**+1.2**
STON	**Ston**	**3.26**	**158**	*e*Pn		**Pn**	**19 54 41.6**	**+0.9**
STON				Sn		**Sn**	**19 55 21.0**	**+1.3**
STON	**Ston**	**3.26**	**158**	*e*Pn		**Pn**	**19 54 41.9**	**+1.2**
PSZ	**Piszkesteto**	**3.33**	**51**	⇓P		**Pn**	**19 54 39.8**	**-2.0**
PSZ	**Piszkesteto**	**3.33**	**51**	Pn		**Pn**	**19 54 41.8**	**-0.1**
PSZ	**Piszkesteto**	**3.33**	**51**	Pn		**Pn**	**19 54 43.5**	**+1.6**
DIVS	**Divibare**	**3.34**	**121**	*e*Pn		**Pn**	**19 54 43.2**	**+1.2**
GEC2	**GERESS Array S**	**3.34**	**333**	Pn		**Pn**	**19 54 42.5**	**+0.4**
GEC2				IAML			19 55 41.3	
	comp=E,46nm,0.7s							
A332A	**Rudnianska**	**3.34**	**29**	Pn		**Pn**	**19 54 41.7**	**-0.3**
WATA	**Walderalm**	**3.39**	**297**	*e*Pn		**Pn**	**19 54 44.0**	**+1.3**
	comp=E,1.5nm,0.2s							
TREC	**Trest**	**3.42**	**354**	*e*PN		**Pn**	**19 54 43.4**	**+0.4**
GUMA	**Gualdo di Mace**	**3.43**	**215**	Pn		**Pn**	**19 54 42.4**	**-0.8**
VRAC	**Vranov**	**3.43**	**6**	⇑P		**Pn**	**19 54 43.0**	**-0.2**
VRAC	**Vranov**	**3.43**	**6**	*e*PN		**Pn**	**19 54 42.8**	**-0.4**
TRUS	**Trudelj**	**3.52**	**117**	*e*Pn		**Pn**	**19 54 45.4**	**+0.9**
FDMO	**Fiordimonte**	**3.55**	**217**	Pn		**Pn**	**19 54 44.4**	**-0.4**
FDMO				IAML			19 55 59.5	
	comp=E,41nm,1.2s							
FDMO				IAML			19 56 03.4	
	comp=N,41nm,1.1s							
DBRK	**Dubrovnik**	**3.57**	**154**	*e*Pn		**Pn**	**19 54 45.8**	**+0.7**
DBRK				Sn		**Sn**	**19 55 28.7**	**+1.1**
A331A	**Zubak**	**3.58**	**24**	Pn		**Pn**	**19 54 46.2**	**+1.1**
SQTA	**Sankt Quirin**	**3.58**	**293**	*i* Pn		**Pn**	**19 54 46.5**	**+1.2**
	comp=N,3.7nm,0.4s,SNR=6.5							
TREB	**Trebinje**	**3.59**	**152**	*e*Pn		**Pn**	**19 54 46.8**	**+1.4**
KHC	**Kasperske Hory**	**3.63**	**334**	Pn		**Pn**	**19 54 46.7**	**+0.7**
KHC				IAML			19 55 30.8	
	comp=E,46nm,0.9s							
KHC				IAML			19 55 30.9	
	comp=N,29nm,0.8s							
KHC	**Kasperske Hory**	**3.63**	**334**	*e*PN		**Pn**	**19 54 46.7**	**+0.7**
KHC				*e*SN		**Sn**	**19 55 27.9**	**-1.3**
KHC				*e*SG		**Sg**	**19 55 44.8**	**-1.0**
	comp=N,48nm,0.8s							
MURB	**Monte Urbino**	**3.63**	**225**	Pn		**Pn**	**19 54 44.8**	**-1.2**
MURB				IAML			19 56 02.2	
	comp=E,76nm,0.9s							
MURB				IAML			19 56 02.4	
	comp=N,87nm,1.4s							
MAUC	**Maruska**	**3.67**	**19**	*e*PN		**Pn**	**19 54 46.9**	**+0.4**
MAUC				*e*SN		**Sn**	**19 55 28.1**	**-2.1**
MOTA	**Moosalm**	**3.69**	**295**	*e*Pn		**Pn**	**19 54 48.9**	**+2.0**
	comp=N,1.4nm,0.2s							
NRCA	**Norcia**	**3.71**	**215**	Pn		**Pn**	**19 54 46.2**	**-0.9**
NRCA				IAML			19 56 02.2	
	comp=N,38nm,0.9s							
NRCA				IAML			19 56 15.6	
	comp=E,42nm,2.7s							
IVAS	**Ivanjica**	**3.75**	**127**	*e*Pn		**Pn**	**19 54 47.8**	**+0.3**
ZVC	**Zvikov**	**3.75**	**341**	*e*PN		**Pn**	**19 54 48.3**	**+0.7**
VRSS	**Vrsac**	**3.80**	**100**	*e*Pn		**Pn**	**19 54 48.2**	**-0.1**
FETA	**Feichten**	**3.83**	**289**	*e*Pn		**Pn**	**19 54 50.0**	**+1.2**
	comp=E,1.2nm,0.4s							
SJES	**Sjenica**	**3.86**	**132**	*e*Pn		**Pn**	**19 54 49.8**	**+0.7**
SALO	**Salr**	**3.86**	**268**	Pn		**Pn**	**19 54 50.0**	**+0.9**
GRUS	**Gruza**	**3.89**	**119**	*e*Pn		**Pn**	**19 54 48.4**	**-0.1**
ZCCA	**Zocca**	**3.90**	**248**	Pn		**Pn**	**19 54 49.8**	**+0.2**
BZS	**Buzias**	**3.92**	**92**	⇑P		**Pn**	**19 54 47.2**	**-2.7**
BZS	**Buzias**	**3.92**	**92**	Pn		**Pn**	**19 54 49.1**	**-0.8**
KECS	**Kecovo**	**3.99**	**48**	*e*PN		**Pn**	**19 54 51.8**	**+1.0**
KECS				*e*PG		**Pg**	**19 55 06.1**	**+0.6**
KECS				*e*SN		**Sn**	**19 55 38.5**	**+0.6**
LANS	**Liptovska Anna**	**4.00**	**34**	*e*PN		**Pn**	**19 54 51.8**	**+0.8**
LANS				*e*PG		**Pg**	**19 55 07.8**	**+2.0**
MORC	**Moravsky Berou**	**4.01**	**14**	⇓P		**Pn**	**19 54 51.6**	**+0.4**
MORC	**Moravsky Berou**	**4.01**	**14**	Pn		**Pn**	**19 54 51.2**	**0.0**
MORC	**Moravsky Berou**	**4.01**	**14**	*e*PN		**Pn**	**19 54 51.1**	**0.0**
FUORN	**Ofenpass-Fuorn**	**4.06**	**282**	Pn		**Pn**	**19 54 53.3**	**+1.2**
FUORN				IAML			19 56 08.2	
	comp=N,19nm,0.8s							
CESX	**Cesi**	**4.12**	**218**	Pn		**Pn**	**19 54 52.9**	**+0.3**
CESX				IAML			19 56 17.5	
	comp=E,40nm,1.0s							
CESX				IAML			19 56 25.9	
	comp=N,34nm,1.8s							
SGRT	**San Giovanni R**	**4.15**	**183**	Pn		**Pn**	**19 54 52.0**	**-1.1**
PDG	**Podgorica**	**4.17**	**145**	Pn		**Pn**	**19 54 51.1**	**-2.3**
PDG				IAML			19 56 52.0	
	comp=N,20nm,1.8s							
PDG				IAML			19 57 23.7	
	comp=E,18nm,2.3s							
PRU	**Pruhonice**	**4.21**	**347**	*e*PN		**Pn**	**19 54 54.4**	**+0.5**
DPC	**Dobruska-Polom**	**4.46**	**2**	*e*PN		**Pn**	**19 54 57.3**	**0.0**
DPC				*e*SG		**Sg**	**19 56 10.4**	**-1.8**
	comp=E,12nm,0.7s							
DAVA	**Damuels**	**4.46**	**290**	*i* Pn		**Pn**	**19 54 58.3**	**+0.9**
	comp=E,3.9nm,0.5s,SNR=4.4							
SELS	**Selova**	**4.52**	**125**	*e*Pn		**Pn**	**19 54 58.3**	**+0.2**
HERR	**Herculane**	**4.61**	**100**	⇓P		**Pn**	**19 54 57.3**	**-2.1**
OSTC	**Ostas**	**4.66**	**1**	*e*PN		**Pn**	**19 55 00.1**	**0.0**
TUE	**Stuetta**	**4.68**	**279**	Pn		**Pn**	**19 55 01.6**	**+1.1**
TUE				IAML			19 56 18.7	
	comp=N,13nm,4.9s							
TUE				IAML			19 57 30.8	
	comp=E,12nm,4.5s							
DRGR		**4.71**	**77**	⇓P		**Pn**	**19 54 58.7**	**-2.1**
PVCC	**Panska Ves**	**4.73**	**349**	*e*PN		**Pn**	**19 55 01.8**	**+0.8**
GZR	**Gura Zlata**	**4.76**	**94**	⇓P		**Pn**	**19 54 58.4**	**-3.0**
NKC	**Novy Kostel**	**4.96**	**332**	*e*PN		**Pn**	**19 55 04.2**	**+0.1**
GRA1	**Grafenberg Arr**	**4.99**	**321**	Pn		**Pn**	**19 55 03.4**	**-1.1**
GRA1				IAML			19 56 42.3	
	comp=E,30nm,1.6s							
HSKC	**Hora Svate Kat**	**5.02**	**341**	*e*PN		**Pn**	**19 55 05.0**	**0.0**
BARS	**Barje**	**5.17**	**125**	*e*Pn		**Pn**	**19 55 07.3**	**+0.3**
ZAPS	**Zavoj**	**5.40**	**117**	*e*Pn		**Pn**	**19 55 10.6**	**+0.4**
CLL	**Collm**	**5.77**	**341**	Pn		**Pn**	**19 55 15.1**	**-0.1**
CLL	**Collm**	**5.77**	**341**	*e*Pn		**Pn**	**19 55 15.0**	**-0.3**
CLL				*ex*		x	19 56 18.0	
CLL				*ex*		x	19 56 28.0	
CLL				*ex*		x	19 56 42.0	
CLL				*e*Sg		**Sg**	**19 56 51.0**	**-3.4**
	comp=Z,36nm,1.0s							
BFO	**Black Forest**	**5.79**	**298**	Pn		**Pn**	**19 55 15.1**	**-0.5**
SENIN	**Lac Senin/Sane**	**6.08**	**278**	Pn		**Pn**	**19 55 20.7**	**+0.9**
ECH	**Echery**	**6.49**	**294**	Pn		**Pn**	**19 55 24.9**	**-0.2**
BUR08	**Bucovina Ar. S**	**6.54**	**71**	Pn		**Pn**	**19 55 24.9**	**-1.0**
BURAR	**Bucovina Array**	**6.54**	**71**	Pn		**Pn**	**19 55 24.6**	**-1.4**
BNI	**Bardonecchia**	**6.63**	**266**	Pn		**Pn**	**19 55 25.8**	**-1.4**

***IDC 24** 20:35:47.2±2.9,**4°20S×135°38E,h0**km,**mb3.1**/1,*
mbtmp3.0/3,ML2.9/2,Error ellipse: s-maj=108.2km
s-min=34.3km az=79.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.68**	**184**	Pn	Pn	20 39 28.0	-1.6
	baz=5.2,slow=14,SNR=1.8						
WRA				Sn	Sn	20 42 10.1	-14
	0.1nm,0.3s,baz=2.3,slow=23,SNR=3.0						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**19.40**	**184**	P	Pn	20 40 15.7	-0.4
	0.1nm,0.3s,baz=7.8,slow=10,SNR=4.8						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**68.98**	**324**	P	P	20 46 54.5	0.0
	0.2nm,0.7s,baz=134,slow=6.2,SNR=2.3						
	0.2nm,0.7s						

*DJA **24** 20:57:48.3±0.4,3°S±4°×13°9E±°, h98km±7km, M4.2/9,*
mb4.3/7,MLv4.2/9
*IDC **24** 20:57:48.3±1.6,3°26S×138°85E,h86km±28km,mb2.9/2,*
mbtmp3.6/5,Error ellipse: s-maj=27.3km s-min=18.3km
az=145.0
ISC 24 20:57:46.1**±0.8,**3°52S**±0°07×**138°74E**±0°06,**h71**km,**n13,
*σ2*s**43**/19,**Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**1.70**	**57**	P	**Pn**	**20 58 14.7**	**+1.0**
GENI				S	**Sn**	**20 58 34.6**	**-0.1**
JAY	**Jayapura**	**2.20**	**63**	P	**Pn**	**20 58 20.9**	**+0.4**
	64nm,0.2s,baz=242,slow=12,SNR=182						
JAY				S	**Sn**	**20 58 45.1**	**-1.8**
	30nm,0.4s,baz=176,slow=15,SNR=4.5						
JAY	**Jayapura**	**2.20**	**63**	P	**Pn**	**20 58 20.8**	**+0.2**
SRPI	**Serui, Papua**	**2.99**	**303**	P	**Pn**	**20 58 32.1**	**+0.9**
BAKI	**Biak**	**3.50**	**311**	P	**Pn**	**20 58 38.6**	**+0.4**
MWPI	**Manokwari, Pap**	**5.35**	**299**	P	**Pn**	**20 59 02.2**	**-1.3**
	0.5nm92nm,2.2s						
FAKI	**Fak Fak**	**6.51**	**275**	P	**Pn**	**20 59 21.1**	**+1.8**
SIJI	**Sorong**	**7.92**	**289**	P	**Pn**	**20 59 40.6**	**+2.0**
	2.7nm,0.3s,baz=253,slow=22,SNR=6.5						
SIJI				S	**Sn**	**21 01 02.8**	**-3.9**
	2.3nm,0.3s,baz=270,slow=23,SNR=1.4						
BATI	**Baumata**	**16.37**	**245**	P	**P**	**21 01 36.1**	**+2.9**
	15nm,0.5s,baz=38,slow=1.8,SNR=7.6						
WRA	**Warramunga Arr**	**16.88**	**194**	P	**P**	**21 01 41.3**	**+2.4**
	1.3nm,0.6s,baz=14,slow=13,SNR=19						
WRA				S	**Sn**	**21 04 40.4**	**-4.5**
	0.4nm,0.6s,baz=4.6,slow=23,SNR=4.6						
FITZ	**Fitzroy Crossi**	**19.35**	**221**	P	**Pn**	**21 02 10.2**	**+2.4**
	2.2nm,0.8s,baz=34,slow=11,SNR=6.6						
FITZ				S	**S**	**21 05 36.6**	**-4.9**
	3.0nm,0.7s,baz=74,slow=16,SNR=3.1						
ASAR	**Alice Springs**	**20.57**	**193**	P	Pn	21 02 23.6	+1.6
	1.0nm,0.6s,baz=24,slow=9.5,SNR=20						
ASAR				S	**S**	**21 06 05.4**	**0.0**
	0.8nm,1.0s,baz=13,slow=29,SNR=4.3						
	1.0nm,0.6s						
MKAR	**Makanchi Array**	**70.45**	**323**	P	**P**	**21 08 52.5**	**-0.5**
	0.1nm,0.3s,baz=117,slow=6.6,SNR=1.5						
MKAR				pP	**pP**	**21 09 12.6**	**+0.7**
	0.4nm,0.8s,baz=117,slow=6.3,SNR=2.5						
	0.1nm,0.3s						

*NEIC **24** 20:58:08.5±1.2,59°51N±0°03×152°44W±0°05,h78km±5km,*
mb3.8/5,ML3.8/180,ML3.6(AEIC),Error ellipse:
s-maj=4.6km s-min=3.9km az=163.0
*AEIC **24** 20:58:09.8±1.4,59°49N±0°03×152°41W±0°04,h66km±5km,*
Error ellipse: s-maj=4.3km s-min=2.1km az=141.0
***ISC 24 20:58:08.1**±0.7,**59°49N**±0°04×**152°43W**±0°03,**h78**km±7km,*
n242,σ0s76**/241,**Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOM	**Homer**	**0.44**	**66**		**Pn**	**20 58 21.4**	**+0.3**
HOM	**Homer**	**0.44**	**66**		**Sn**	**20 58 31.8**	**+1.1**
P19K	**Oil Pt**	**0.44**	**293**		**Pn**	**20 58 21.4**	**+0.2**
P19K	**Oil Pt**	**0.44**	**293**		**Sn**	**20 58 31.1**	**+0.2**
AU22	**Augustine Moun**	**0.49**	**257**		**Pn**	**20 58 21.7**	**+0.2**
AU22					**Sn**	**20 58 31.8**	**+0.4**
AUJK	**Augustine Jueg**	**0.52**	**255**		**Pn**	**20 58 22.1**	**+0.3**
AUJK					**Sn**	**20 58 32.2**	**+0.2**
AUL	**Augustine Lava**	**0.53**	**259**		**Pn**	**20 58 22.3**	**+0.4**
AUL					**Sn**	**20 58 32.6**	**+0.5**
AUI	**Augustine Isla**	**0.53**	**254**		**Pn**	**20 58 22.1**	**+0.2**
AUI					**Sn**	**20 58 32.3**	**+0.1**
AUCH	**Augustine Cone**	**0.53**	**257**		**Pn**	**20 58 22.2**	**+0.2**
AUW	**Augustine West**	**0.55**	**258**		**Pn**	**20 58 22.3**	**+0.3**
ILS	**Iliamna Low So**	**0.57**	**326**		**Pn**	**20 58 22.3**	**-0.1**
ILS					**Sn**	**20 58 32.6**	**-0.5**
CNPM	**China Poot**	**0.61**	**86**		**Pn**	**20 58 23.0**	**+0.4**
CNPM				Sn	**Sn**	**20 58 33.0**	**-0.5**
CNPM				IAML		20 58 34.4	
	comp=E,3μm,0.4s						
ILSW	**Iliamna Southw**	**0.62**	**324**		**Pn**	**20 58 22.7**	**-0.2**
ILSW				Sn	**Sn**	**20 58 33.0**	**-0.9**
ILSW				IAML		20 58 33.5	
	comp=N,2μm,0.5s						
ILSW				IAML		20 58 33.6	
	comp=E,3μm,0.7s						
BRLK	**Bradley Lake**	**0.83**	**70**		**Pn**	**20 58 25.1**	**0.0**
BRLK				Sn	**Sn**	**20 58 37.7**	**0.0**
BRLK				IAML		20 58 39.3	
	comp=N,2μm,0.5s						
BRLK				IAML		20 58 39.4	
	comp=E,2μm,0.7s						

Q19K	**Cape Douglas,**	**0.84**	**229**			**Pn**	**20 58 25.5**	**+0.3**
Q19K				Sn		**Sn**	**20 58 37.9**	**0.0**
SYI	**Shuyak Island**	**0.88**	**179**			**Pn**	**20 58 26.2**	**+0.7**
SYI						**Sn**	**20 58 39.2**	**+0.7**
SYI				IAML			20 58 40.6	
	comp=N,2μm,0.7s							
SYI				IAML			20 58 41.7	
	comp=E,1μm,0.3s							
BRSE	**Bradley Lake S**	**0.90**	**73**			**Sn**	**20 58 39.6**	**+0.6**
RED	**Redoubt Volcan**	**0.95**	**350**			**Pn**	**20 58 26.8**	**+0.2**
RED				Sn		**Sn**	**20 58 40.2**	**-0.1**
RED				IAML			20 58 41.7	
	comp=N,3μm,0.4s							
RDSO	**Redoubt South**	**0.99**	**351**			**Sn**	**20 58 41.1**	**0.0**
RDT	**Redoubt**	**1.09**	**1**			**Sn**	**20 58 43.3**	**0.0**
O19K	**Port Alsworth**	**1.19**	**308**			**Pn**	**20 58 29.4**	**+0.1**
O19K				Sn		**Sn**	**20 58 44.8**	**-0.5**
P18K	**Big Mountain,**	**1.44**	**267**			**Pn**	**20 58 32.1**	**-0.4**
CAPN	**Captain Cook N**	**1.44**	**26**			**Pn**	**20 58 34.6**	**+2.1**
O18K	**Koktuh Hills**	**1.46**	**286**			**Pn**	**20 58 32.5**	**-0.3**
O18K				IAML			20 58 51.5	
	comp=N,1μm,0.3s							
O18K	**Koktuh Hills**	**1.46**	**286**			**Sn**	**20 58 51.0**	**-0.4**
SLKM	**Skilak Lake**	**1.51**	**46**			**Pn**	**20 58 33.3**	**-0.2**
SLKM				IAML			20 58 55.9	
	comp=E,1μm,0.2s							
SLKM				IAML			20 58 58.3	
	comp=N,1μm,0.4s							
SEW	**Seward**	**1.63**	**66**			**Pn**	**20 58 34.8**	**-0.2**
KAWH	**Katmai**	**1.65**	**229**			**Sn**	**20 58 56.2**	**+0.2**
N19K	**Bonanza Creek**	**1.68**	**323**			**Sn**	**20 58 56.4**	**-0.3**
N19K	**Bonanza Creek**	**1.68**	**323**			**Pn**	**20 58 36.1**	**+0.3**
N19K				IAML			20 58 57.0	
	comp=E,695nm,0.3s							
O22K	**Cooper Landing**	**1.69**	**52**			**Pn**	**20 58 35.8**	**+0.1**
KDAK	**Kodiak Island**	**1.71**	**183**			**Pn**	**20 58 36.3**	**+0.3**
KDAK				IAML			20 59 07.7	
	comp=E,551nm,0.5s							
SPU	**Mount Spurr**	**1.71**	**6**			**Pn**	**20 58 36.7**	**+0.6**
SPCR	**Spurr Chakacha**	**1.73**	**4**			**Pn**	**20 58 37.2**	**+0.9**
SPCR	**Spurr Chakacha**	**1.73**	**4**			**Pn**	**20 58 37.2**	**+0.9**
SPCN	**Chakachatna No**	**1.75**	**4**			**Pn**	**20 58 37.7**	**+1.1**
KAKN	**Katmai Knife C**	**1.81**	**230**			**Pn**	**20 58 38.0**	**+0.5**
ACHA	**Angle Creek He**	**1.98**	**231**			**Pn**	**20 58 40.1**	**+0.5**
STLK	**Strandline Lak**	**2.04**	**8**			**Pn**	**20 58 41.7**	**+1.2**
P17K	**Kvichak River**	**2.08**	**264**			**Pn**	**20 58 41.2**	**+0.3**
RC01	**Rabbit Creek A**	**2.10**	**39**			**Pn**	**20 58 42.1**	**+1.0**
RC01				IAML			20 59 08.6	
	comp=N,826nm,0.2s							
N18K	**Kilae Creek**	**2.11**	**306**			**Pn**	**20 58 41.6**	**+0.3**
N18K				IAML			20 59 06.5	
	comp=N,546nm,0.3s							
N18K				IAML			20 59 06.8	
	comp=E,590nm,0.2s							
OHAK	**Old Harbor**	**2.31**	**192**	P		**Pn**	**20 58 44.0**	**0.0**
OHAK	**Old Harbor**	**2.31**	**192**			**Pn**	**20 58 44.0**	**0.0**
Q16K	**King Salmon**	**2.33**	**251**			**Pn**	**20 58 45.2**	**+0.9**
M20K	**Styx River**	**2.43**	**352**			**P

KLU	Klutina	3.80	55			Pn	20 59 04.3	+0.1
O15K	Ungalikthiuk R	3.80	269			Pn	20 59 05.6	+1.3
N15K	Kwethluk River	3.93	283			Pn	20 59 07.2	+1.2
N15K	Kwethluk River	3.93	283		IAML		20 59 54.0	
	comp=N,188nm,0.5s							
K20K	Telida	3.96	349			Pn	20 59 07.6	+1.2
RAGM	Ragged Mountai	4.00	74			Pn	20 59 06.5	-0.6
RAGM					IAML		20 59 57.5	
	comp=E,128nm,0.4s							
M24K	Tolsona, Glenn	4.04	47			Pn	20 59 08.2	+0.8
KAIM	Kayak Island	4.08	80			Pn	20 59 08.8	+0.8
KAIM					IAML		21 00 02.2	
	comp=E,96nm,1.5s							
KAIM					IAML		21 00 06.6	
	comp=N,93nm,0.8s							
ANPB	Aniakchak Plen	4.11	232			Pn	20 59 09.4	+1.1
TRF	Thorofare Moun	4.11	14			Pn	20 59 09.3	+0.8
TRF	Thorofare Moun	4.11	14		IAML		20 59 59.9	
	comp=N,119nm,0.4s							
TRF					IAML		21 00 00.3	
	comp=E,120nm,0.5s							
KTH	Kantishna Hill	4.15	9			Pn	20 59 09.5	+0.5
KTH					IAML		21 00 06.9	
	comp=E,86nm,0.9s							
KTH					IAML		21 00 26.5	
	comp=N,110nm,1.0s							
BMRM	Bremner River	4.17	66			Pn	20 59 08.4	-0.9
BMRM					IAML		21 00 24.1	
	comp=N,76nm,1.0s							
RND	Reindeer	4.29	22			Pn	20 59 11.6	+0.7
RND					IAML		21 00 01.1	
	comp=N,76nm,0.4s							
M15K	Kasigluk River	4.31	290			Pn	20 59 11.9	+0.8
K17K	Iditarod	4.32	321			Pn	20 59 11.5	+0.4
K17K					IAML		21 00 17.5	
	comp=N,86nm,1.0s							
K17K					IAML		21 00 18.9	
	comp=E,103nm,0.7s							
DHY	Denali Highway	4.35	32			Pn	20 59 12.0	+0.2
SUCK	Suckling Hills	4.41	79			Pn	20 59 12.8	+0.3
SUCK	Suckling Hills	4.41	79		IAML		21 00 07.2	
	comp=N,54nm,0.6s							
N25K	Chitina, Valde	4.41	58			Pn	20 59 12.5	-0.1
N25K					IAML		21 00 02.8	
	comp=E,77nm,0.5s							
N25K					IAML		21 00 03.8	
	comp=N,88nm,0.3s							
BERG	Berg Lake	4.48	75			Pn	20 59 13.3	-0.2
J18K	Innoko River	4.49	335			Pn	20 59 14.5	+0.9
CHGN	Chignik	4.51	228			Pn	20 59 13.9	0.0
CHGN					IAML		21 00 06.5	
	comp=E,62nm,0.5s							
CHGN					IAML		21 01 12.1	
	comp=N,82nm,0.1s							
O14K	Tigyukauivet M	4.53	271			Pn	20 59 15.1	+1.1
MCK	McKinley	4.58	20			Pn	20 59 15.1	+0.3
MCK					IAML		21 00 09.2	
	comp=N,127nm,0.4s							
MCK					IAML		21 00 10.1	
	comp=E,103nm,0.3s							
BGLC	Bering Glacier	4.66	78			Pn	20 59 16.8	+0.9
BPAW	Bear Paw Mtn.	4.68	8			Pn	20 59 16.6	+0.4
N14K	Kuskokwak Cree	4.71	279			Pn	20 59 18.0	+1.4
N14K	Kuskokwak Cree	4.71	279		IAML		21 00 52.0	
	comp=E,84nm,0.8s							
J19K	Poorman	4.77	343			Pn	20 59 18.7	+1.3
J20K	Nowinta River	4.78	351			Pn	20 59 18.5	+1.0
VRDI	Verde Repeater	4.79	65			Pn	20 59 17.1	-0.6
VRDI					IAML		21 00 13.2	
	comp=N,45nm,0.5s							
CRQM	Cirque	4.82	71		IAML		21 00 12.5	
	comp=E,51nm,0.5s							
CRQM					IAML		21 00 13.6	
	comp=N,88nm,1.1s							
PAX	Paxson	4.85	41			Pn	20 59 18.6	+0.1
PAX					IAML		21 00 16.0	
	comp=E,41nm,0.5s							
PAX					IAML		21 00 18.7	
	comp=N,54nm,0.6s							
M14K	Bethel	4.94	289			Pn	20 59 19.7	+0.1
M14K					IAML		21 00 44.5	
	comp=E,77nm,1.4s							
M14K					IAML		21 00 51.6	
	comp=N,49nm,1.3s							
TGL	Tana Glacier	4.97	71			Pn	20 59 19.9	-0.3
TGL					IAML		21 00 19.4	
	comp=E,64nm,0.4s							
VNFG	Fog Glacier, M	4.97	233			Pn	20 59 20.5	+0.2
VNFG					IAML		21 00 23.6	
	comp=E,73nm,0.9s							
VNFG					IAML		21 00 44.3	
	comp=N,65nm,0.9s							
L15K	Ungalak Mounta	4.98	300			Pn	20 59 21.3	+1.1
MCARA	McCarthy VSAT	5.03	64			Pn	20 59 21.1	+0.2
MCARA					IAML		21 00 26.5	
	comp=N,76nm,0.5s							
MCARA					IAML		21 00 28.4	
	comp=E,81nm,0.5s							
J17K	VABM Dome	5.06	324			Pn	20 59 21.8	+0.5
J17K	VABM Dome	5.06	324		IAML		21 00 41.1	
	comp=N,41nm,0.7s							
BARK	Barkley Ridge	5.08	75			Pn	20 59 21.7	0.0
K15K	Wolf Creek Mou	5.26	306			Pn	20 59 25.0	+1.0
K15K	Wolf Creek Mou	5.26	306		IAML		21 00 24.3	
	comp=N,46nm,0.3s							
MESA	MESA	5.33	78			Pn	20 59 25.4	+0.1
MESA	MESA	5.33	78		IAML		21 00 26.2	
	comp=E,72nm,0.4s							
NEA2	Nenana	5.36	16			Pn	20 59 25.8	+0.3
NEA2	Nenana	5.36	16		IAML		21 00 27.4	
	comp=E,32nm,0.5s							
WRH	Wood River Hil	5.41	20			Pn	20 59 26.3	+0.2
WRH					IAML		21 00 25.8	
	comp=E,32nm,0.5s							
WRH					IAML		21 00 28.0	
	comp=N,32nm,0.5s							
L14K	Kuka Creek	5.41	295			Pn	20 59 27.4	+1.3
I20K	Naaghedeneel	5.42	351			Pn	20 59 26.2	0.0
M26K	Nabesna, AK	5.45	53			Pn	20 59 27.0	+0.3
MENT	Mentasta	5.45	47			Pn	20 59 26.6	-0.1
J16K	Anvik River	5.47	318			Pn	20 59 25.9	-1.1
GRNC	Granite Creek	5.48	72			Pn	20 59 27.1	-0.3
M13K	Dall Lake	5.57	284			Pn	20 59 29.7	+1.5
HDA	Harding Lake	5.58	25			Pn	20 59 27.2	-1.2
BARN	Barnard Glacie	5.59	69			Pn	20 59 28.7	0.0
RIDG	Independent Ri	5.59	37			Pn	20 59 28.5	-0.1
CCB	Clear Creek Bu	5.62	21			Pn	20 59 28.8	0.0
RKAV	Rock Avalanche	5.64	77			Pn	20 59 29.7	+0.3
I21K	Tanana	5.72	2			Pn	20 59 30.3	0.0
DOT	Dot Lake	5.78	40	Pn		Pn	20 59 31.4	+0.2
COLA	College	5.82	20	P		Pn	20 59 32.3	+0.7
COLA	College	5.82	20			Pn	20 59 31.6	+0.1
MDM	Murphy Dome	5.83	18			Pn	20 59 32.3	+0.4
I23K	Minto, Yukon-K	5.86	13			Pn	20 59 33.0	+0.8
LOGN	Logan Glacier	5.86	72			Pn	20 59 32.1	-0.3
I17K	Unalakleet	5.91	322			Pn	20 59 32.5	-0.4
SDPT	Sand Point	6.01	230	P		Pn	20 59 35.1	+0.9
SDPT	Sand Point	6.01	230	Pn		Pn	20 59 34.9	+0.6
SCRK	Sand Creek	6.03	38			Pn	20 59 34.5	-0.2
CHNA	Chernabura Isl	6.08	223	P		Pn	20 59 35.9	+0.7
CNBA	Chernabura Isl	6.08	223	Pn		Pn	20 59 34.9	-0.4
J25K	Salcha River,	6.12	30			Pn	20 59 36.3	+0.5
YUK2	White River	6.15	63			Pn	20 59 36.9	+0.6
PCA	Pinnacle	6.18	79			Pn	20 59 37.3	+0.7
H21K	Melozitna River	6.20	359			Pn	20 59 37.1	+0.2
L27K	Beaver Creek,	6.24	50			Pn	20 59 37.7	+0.2
O28M	Mount Upton	6.25	73			Pn	20 59 38.4	+0.5
BCAR	Beaver Creek A	6.26	50			Pn	20 59 37.5	-0.2
YUK3	Moose Creek	6.32	64			Pn	20 59 39.1	+0.4
H18K	Honhosa River	6.32	337			Pn	20 59 39.3	+0.8
H19K	Roundabout Mou	6.34	345			Pn	20 59 39.5	+0.8
BVCY	Beaver Creek	6.35	58			Pn	20 59 40.0	+1.0
H22K	Ishtalitna Cre	6.45	4			Pn	20 59 41.5	+1.2
BCPM	Bancas Point	6.49	80			Pn	20 59 41.5	+0.7
H17K	Granite Mounta	6.49	331			Pn	20 59 41.0	+0.2
YKU2	Yakutat	6.50	84	P		Pn	20 59 40.5	-0.4
YKU2	Yakutat	6.50	84	Pn		Pn	20 59 41.3	+0.4
H23K	Yukon River	6.50	11			Pn	20 59 42.0	+1.0
YUK8	Steele Glacier	6.53	69			Pn	20 59 43.3	+1.6
IMAR	Indian Mountai	6.55	355			Pn	20 59 41.9	+0.3
H24K	Noodor Dome	6.71	16			Pn	20 59 44.8	+0.9
PRP	Porcupine Dome	6.84	25			Pn	20 59 45.9	+0.2
DTNA	Dutton South F	6.87	235			Pn	20 59 47.2	+1.2
M11K	Mekoryuk	6.98	283			Pn	20 59 49.1	+1.6
G19K	Purcell Mounta	7.01	344			Pn	20 59 48.1	+0.2
G18K	Tagagawik	7.04	339			Pn	20 59 49.1	+0.8
G21K	Allakaket	7.08	356			Pn	20 59 49.5	+0.7
G17K	Kiwalik Mounta	7.13	331			Pn	20 59 50.2	+0.6
YUK7	Dusty Glacier	7.24	76			Pn	20 59 52.2	+1.0
I26K	Coal Creek Min	7.25	32			Pn	20 59 50.6	-0.5
G23K	Bananza Creek	7.33	8			Pn	20 59 53.2	+0.8
M29M	Somme Creek	7.41	60			Pn	20 59 53.2	-0.3
YUK5	Granite Creek	7.42	71			Pn	20 59 54.2	+0.6
G16K	Koyuk River	7.50	326			Pn	20 59 55.1	+0.5
G15K	Niukluk	7.73	321			Pn	20 59 58.8	+1.1
F20K	Avaraart Lake	7.74	350			Pn	20 59 59.2	+1.5
F19K	Shaleruckik Mo	7.76	344			Pn	20 59 59.4	+1.3
L29M	L29M	7.78	56			Pn	20 59 58.8	+0.4
F21K	Alatna River	7.78	357			Pn	20 59 58.8	+0.3
P30M	Million Dollar	7.83	79			Pn	20 59 59.8	+0.7
N30M	Aishikik Lake	7.83	69			Pn	20 59 59.5	+0.3
COLD	Coldfoot	7.84	6			Pn	21 00 00.5	+1.3
F18K	Selawik	7.85	338			Pn	21 00 00.7	+1.4
I27K	Kandik River	7.91	35			Pn	20 59 59.9	-0.3
ANM	Nome	7.93	315			Pn	21 00 01.4	+1.0
F17K	Baldwin Pennin	8.05	334			Pn	21 00 02.9	+0.9
M30M	Minto, Yukon	8.19	61			Pn	21 00 04.0	-0.1
O30N	Mendenhall	8.26	74			Pn	21 00 05.6	+0.6
E19K	Redstone River	8.28	347			Pn	21 00 07.1	+1.9
I28M	Miner Creek	8.31	39			Pn	21 00 05.5	-0.2
F24K	Squaw Lake	8.31	12			Pn	21 00 06.6	+0.9
H27K	Steamboat Moun	8.39	32			Pn	21 00 07.7	+0.9
F15K	North Star Dit	8.40	323			Pn	21 00 08.0	+1.1
G26K	Porcupine Rive	8.44	24	Pn		Pn	21 00 06.9	-0.4
N31M	Braeburn, Yuko	8.46	99			Pn	21 00 08.3	+0.6
S31K	Pelican	8.56	93			Pn	21 00 08.2	-0.9
SKAG	Skagway	8.71	83	P		Pn	21 00 11.0	0.0
SKAG	Skagway	8.71	83			Pn	21 00 11.2	+0.2
BM01	Burnt Mountain	8.73	20			Pn	21 00 11.0	-0.4
F14K	Arctic Creek	8.79	319			Pn	21 00 13.3	+1.2
E24K	Your Creek	8.80	10			Pn	21 00 13.1	+0.8
WHY	Whitehorse	8.85	75			Pn	21 00 13.7	+0.6
F26K	Sheenjek River	9.02	21			Pn	21 00 14.9	-0.4
M31M	Drury Creek, Y	9.21	65			Pn	21 00 17.7	-0.2
SIT	Sitka	9.33	98	P		Pn	21 00 19.1	-0.4
JIS	Juneau Island	9.42	90	P		Pn	21 00 20.8	+0.1
D20K	Etivluk River	9.44	351			Pn	21 00 20.5	-0.6
P33M	Teslin, Yukon	9.89	77			Pn	21 00 26.6	-0.6
C16K	Lisburne Hills	10.47	333			Pn	21 00 35.1	+0.2
MMPY	Sheldon Lake,	10.71	64	Pn		Pn	21 00 38.4	0.0
U33K	Whale Pass	10.83	100			Pn	21 00 39.1	-0.9
CRAG	Craig	11.13	103	P		Pn	21 00 43.8	-0.2
CRAG	Craig	11.13	103	Pn		Pn	21 00 42.8	-1.3
T35M	Bob Quinn	11.94	92			Pn	21 00 54.0	-1.1
V35K	Ketchikan	11.95	101	Pn		Pn	21 00 53.7	-1.5
INK	Inuvik	12.08	35	Pn		Pn	21 00 56.1	-0.8
DIB	Dawson Inlet,	12.70	111	Pn		Pn	21 01 04.5	-0.8
HG4B	Hotspring	13.87	112	Pn		Pn	21 01 22.8	+1.9
GSTR	Great Sitkin T	15.15	251			Pn	21 01 35.7	-1.8
C36M	Paulatuk	15.55	39			Pn	21 01 41.7	-0.7
C36M					IAmb	IAmb	21 01 54.4	
	comp=Z,10nm,0.4s							
ADK	Adak	15.58	251	Pn	Pn	Pn	21 01 42.5	-0.4
YKAW3	Yellowknife Wh	18.40	64	P	P	P	21 02 14.5	-2.0
YKAW3					IAmb	IAmb	21 02 44.7	
	comp=Z,1.6nm,0.8s							
YKA	Yellowknife Ar	18.41	64	P	P	P	21 02 15.8	-0.8
RES	Resolute Bay	25.59	31	P	P	P	21 03 30.6	+1.2
RES					IAmb	IAmb	21 03 52.5	
	comp=Z,4.5nm,1.4s							
PDAR	Pinedale Array	30.99	103	P	P	P	21 04 18.8	+0.8

*IDC **24** 21:13:02.7±2.0,23°.34S×66°.71W,h181km±21km,mb3.5/1, mbtmp4.0/5,Error ellipse: s-maj=40.6km s-min=22.3km az=104.0*

*SJA **24** 21:13:03.3±0.7,23°.28S×66°.97W,h191km±5km,ML3.9, MW3.6*

*NEIC **24** 21:13:03.6±1.5,23°.36S±0°.02×67°.1W±0°.1,h214km±13km, mb4.2/1,ML3.8(GUC),Error ellipse: s-maj=19.0km s-min=2.8km az=95.0*

*GUC **24** 21:13:05.2±0.6,23°.23S×67°.29W,h225km±10km,ML4.0*

ISC 24 21:13:02.4±0.7,**23°.32S**±0°.04×**67°.00W**±0°.04,**h204**km±8km, **n80**,σ1°.**49**/116,**4C,Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SALTA		1.08	146	eP		Pn		21 13 34.2	+0.5
AF01	San Pedro de A	1.15	289	P		Pn		21 13 36.0	+2.0
HJA	Humahuaca	1.47	86	eP		Pn		21 13 36.6	+0.1
HJA				eS		S		21 14 01.8	-0.9
YJA	Yavi	1.78	50	eP		Pn		21 13 40.5	+1.0
YJA				eS		S		21 14 06.7	-1.2
PB06	IPOC Station P	2.45	284	P		Pn		21 13 47.6	+1.4
PB06	IPOC Station P	2.45	284	i P		Pn		21 13 47.6	+1.4
PB06				i S		S		21 14 19.4	-0.3
PB06					IAML			21 14 20.8	
	comp=N,365nm,0.2s								
PB06	IPOC Station P	2.45	284	eP		Pn		21 13 47.6	+1.4
PB06				eS		S		21 14 19.6	-0.1
PB06					IAML			21 14 21.7	
	comp=Z,166nm,0.3s								
PB09	IPOC Station P	2.57	306	P		Pn		21 13 48.9	+1.4
PB09	IPOC Station P	2.57	306	eP		Pn		21 13 49.2	+1.7
PB09				i S		S		21 14 22.5	+0.4
PB09					IAML			21 14 25.2	
	comp=E,241nm,0.5s								
PB09	IPOC Station P	2.57	306	eP		Pn		21 13 48.7	+1.1
PB09				eS		S		21 14 21.5	-0.6
PB09					IAML			21 14 25.1	
	comp=Z,198nm,0.6s								
PB03	IPOC Station P	2.84	296	P		Pn		21 13 51.5	+0.8
PB03	IPOC Station P	2.84	296	eP		Pn		21 13 51.6	+1.0
PB03				i S		S		21 14 26.9	-0.8
PB03					IAML			21 14 28.2	
	comp=N,760nm,0.5s								
PB03	IPOC Station P	2.84	296	eP		Pn		21 13 51.6	+1.0
PB03				eS		S		21 14 27.2	-0.4
PB03					IAML			21 14 28.6	
	comp=Z,468nm,0.3s								
FSA	Cafayete	2.93	162	eP		Pn		21 13 52.7	+1.2
PB05	IPOC Station P	2.99	278	P		Pn		21 13 53.1	+0.9
PB05	IPOC Station P	2.99	278	i P		Pn		21 13 53.2	+0.9
PB05				i S		S		21 14 29.6	-0.9
PB05	IPOC Station P	2.99	278	eP		Pn		21 13 53.4	+1.1
PB05				eS		S		21 14 30.2	-0.3
PB05					IAML			21 14 30.9	
	comp=E,81nm,0.4s								
PB07	IPOC Station P	3.11	300	P		Pn		21 13 54.4	+0.7
PB07	IPOC Station P	3.11	300	eP		Pn		21 13 54.7	+1.0
PB07				i S		S		21 14 32.0	-1.1
PB07	IPOC Station P	3.11	300	eP		Pn		21 13 54.7	+1.0
PB07				eS		S		21 14 32.5	-0.7
PB07					IAML			21 14 33.8	
	comp=Z,535nm,0.3s								
PB01	IPOC Station P	3.24	314	P		Pn		21 13 56.4	+1.3
PB01	IPOC Station P	3.24	314	eP		Pn		21 13 56.0	+0.8
PB01				i S		S		21 14 34.5	-1.3
PB01					IAML			21 14 37.4	
	comp=N,472nm,0.3s								
PB01	IPOC Station P	3.24	314	eP		Pn		21 13 56.2	+1.0
PB01				eS		S		21 14 36.0	+0.1
PB01					IAML			21 14 37.4	
	comp=Z,168nm,0.3s								
PB10	IPOC Station P	3.27	266	P		Pn		21 13 56.8	+1.3
PB10	IPOC Station P	3.27	266	eP		Pn		21 13 56.7	+1.3
PB10				i S		S		21 14 35.4	-1.0
PB10					IAML			21 14 38.4	
	comp=N,154nm,0.5s								
PB10	IPOC Station P	3.27	266	eP		Pn		21 13 56.9	+1.3
PB10				eS		S		21 14 36.2	-0.1
PB10					IAML			21 14 37.6	
	comp=Z,80nm,0.4s								
PB02	IPOC Station P	3.34	306	P		Pn		21 13 57.1	+0.6
PB02	IPOC Station P	3.34	306	eP		Pn		21 13 57.1	+0.6
PB02				i S		S		21 14 36.3	-1.9
PB02	IPOC Station P	3.34	306	eP		Pn		21 13 57.4	+0.9
PB02				eS		S		21 14 37.2	-1.0
PB02					IAML			21 14 44.9	
	comp=Z,503nm,0.3s								
PB14	IPOC Station P	3.38	247	P		Pn		21 13 58.0	+1.0
PB14	IPOC Station P	3.38	247	eP		Pn		21 13 58.1	+1.0
PB14				i S		S		21 14 38.8	-0.3
PB14					IAML			21 14 40.6	
	comp=E,93nm,0.3s								
PB14	IPOC Station P	3.38	247	eP		Pn		21 13 58.5	+1.5
PB14				eS		S		21 14 39.5	+0.4
PB14					IAML			21 14 40.9	
	comp=Z,110nm,0.5s								
PB08	IPOC Station P	3.75	327	Pn		Pn		21 14 03.3	+1.6
PB08	IPOC Station P	3.75	327	eP		Pn		21 14 03.3	+1.6
PB08				i S		S		21 14 47.4	-0.1
PATCX	Punta Patache	3.84	310	Pn		Pn		21 14 04.1	+1.6
PATCX	Punta Patache	3.84	310	eP		Pn		21 14 03.2	+0.7
PATCX				i S		S		21 14 46.2	-2.9
PATCX	Punta Patache	3.84	310	eP		Pn		21 14 03.8	+1.3
PATCX				eS		S		21 14 47.9	-1.2
PATCX					IAML			21 14 52.5	
	comp=Z,164nm,0.3s								
AC02	Maricunga	4.00	208	Pn		Pn		21 14 06.6	+1.8
AC02	Maricunga	4.00	208	eP		Pn		21 14 06.4	+1.7
AC02				i S		S		21 14 55.2	+2.0
AC02	Maricunga	4.00	208	eP		Pn		21 14 06.6	+1.8
AC02				eS		S		21 14 53.5	+0.3
TA01	Diego Aracena	4.03	312	Pn		Pn		21 14 05.9	+1.1
HMBC	Humberstone	4.05	318	Pn		Pn		21 14 05.9	+0.8
HMBC	Humberstone	4.05	318	eP		Pn		21 14 05.2	+0.1
HMBC				i S		S		21 14 50.9	-2.9
HMBC	Humberstone	4.05	318	eP		Pn		21 14 05.3	+0.3
HMBC				eS		S		21 14 52.1	-1.7
HMBC					IAML			21 14 53.5	
	comp=Z,301nm,0.2s								
GO01	Chusmiza	4.17	330	Pn		Pn		21 14 08.4	+1.4
GO01	Chusmiza	4.17	330	eP		Pn		21 14 07.7	+0.7
GO01				i S		S		21 14 56.2	-0.9
GO01	Chusmiza	4.17	330	eP		Pn		21 14 07.6	+0.6
GO01				eS		S		21 14 58.0	+0.9
GO01					IAML			21 14 59.9	
	comp=Z,89nm,0.2s								
AC01	Pan de Azucar	4.32	229	Pn		Pn		21 14 09.5	+1.2
AC01	Pan de Azucar	4.32	229	eP		Pn		21 14 08.5	+0.3
AC01				i S		S		21 14 56.5	-3.2
AC01	Pan de Azucar	4.32	229	eP		Pn		21 14 08.6	+0.3
AC01				eS		S		21 14 59.5	-0.2
PB11	IPOC Station P	4.32	325	Pn		Pn		21 14 08.9	+0.4
PB11	IPOC Station P	4.32	325	eP		Pn		21 14 08.6	+0.1
PB11				eS		S		21 14 57.7	-2.4
PB11	IPOC Station P	4.32	325	eP		Pn		21 14 08.1	-0.5
PB11				eS		S		21 14 58.4	-1.7
PB11					IAML			21 15 00.9	
	comp=Z,163nm,0.2s								
TINO	Tinogasta	4.75	186	eP		Pn		21 14 16.1	+2.3
AC06	Mina Casimiro	5.04	216	Pn		Pn		21 14 17.0	-0.3
GO03	Copiapo	5.16	214	Pn		Pn		21 14 18.7	-0.3
GO03	Copiapo	5.16	214	eP		Pn		21 14 18.4	-0.6
GO03				eS		S		21 15 18.1	-1.0
GO03					IAML			21 15 21.0	
	comp=Z,58nm,0.3s								
PB16	IPOC Station P	5.49	334	Pn		Pn		21 14 24.4	+0.6
PB12	IPOC Station P	5.62	326	Pn		Pn		21 14 25.1	+0.1
AC05	El Transito	6.23	208	Pn		Pn		21 14 31.9	-0.9
LPAZ	La Paz	7.08	351	P		Pn		21 14 45.4	+1.1
LPAZ	comp=Z,8.6nm,0.3s,baz=158,slow=6.0,SNR=68			S		S		21 16 01.7	-3.4
	comp=Z,1.4nm,0.6s,baz=167,slow=4.1,SNR=0.6								
LPAZ	La Paz	7.08	351			Pn		21 14 44.9	+0.6
CO03	El Pedregal	8.18	203	Pn		Pn		21 14 56.2	-1.7
CFA	Coronel Fontan	8.32	187	P		Pn		21 15 00.3	+0.5
CFA	comp=Z,1.1nm,0.3s,baz=13,slow=13,SNR=15			S		S		21 16 26.3	-7.3
	comp=Z,1.7nm,0.5s,baz=101,slow=24,SNR=4.2								
BBSD	Serra de San D	8.55	46	eP		Pn		21 15 02.3	-0.7
BBSD	Serra de San D	8.55	46	eP		Pn		21 15 00.5	-2.4
SIV	San Ignacio	9.18	38	P		Pn		21 15 09.3	-1.9
SIV	comp=Z,4.8nm,0.5s,baz=220,slow=12,SNR=21			S		S		21 16 41.3	-13
	comp=Z,0.4nm,0.4s,baz=349,slow=21,SNR=1.0								
BO02	Sierra Bellavi	11.90	195	P		P		21 15 49.3	-1.3
PTGB	Pitanga	13.72	99	eP		P		21 16 13.6	+2.6
BI02	San Fabin de	13.80	195			P		21 16 11.6	-0.1
ITAB	Concordia	14.00	109			P		21 16 15.0	+1.0
FRTB	Fartura	16.02	94	eP		Pn		21 16 39.0	+2.2
MAJ01	Sao Joao Batis	16.75	108	eP		P		21 16 43.6	-0.8
IPMB	Ipameri, GO	18.36	77	eP		P		21 17 03.1	+1.0
VAO	Valinhos	18.43	93	eP		P		21 17 03.5	+0.8
BDFB	Brasilia	19.45	70	P		P		21 17 14.0	+0.1
BDFB	comp=Z,2.6nm,0.3s,baz=251,slow=13,SNR=3.1			PKPbc		IAmb	IAmb	21 17 16.0	
	comp=Z,6.8nm,0.9s								
JANB	Januaria	22.93	73	eP		P		21

FNO IAmb_Lg 21 33 40.3
comp=Z,55nm,0.8s
W35A Tecumseh 3.65 178 Pn **Pn** **21 32 35.9 -0.2**
R40A Maddies Statio 3.75 96 Pn **Pn** **21 32 38.8 +1.3**
P40A Paris 3.92 78 Pn **Pn** **21 32 41.0 +1.2**
P40A IAmb_Lg 21 33 51.3
comp=Z,61nm,0.7s
MGMO Mountain Grove 4.09 112 Pn **Pn** **21 32 44.0 +1.8**
SCIA State Center 4.24 42 Pn **Pn** **21 32 46.6 +2.3**
X34A Smith Ranch, M 4.25 189 Pn **Pn** **21 32 44.4 +0.1**
WMOK Wichita Mounta 4.30 200 Pn **Pn** **21 32 44.8 -0.3**
WMOK Wichita Mounta 4.30 200 IAmb_Lg 21 33 59.1
comp=Z,48nm,0.8s
K30B Basset 4.35 334 Pn **Pn** **21 32 47.0 +1.3**
K30B IAmb_Lg 21 34 08.3
comp=Z,43nm,0.7s
KSCO Kaye Shedlock' 4.39 274 IAmb_Lg 21 34 07.4
comp=Z,44nm,0.8s
OGNE Ogallala 4.42 301 Pn **Pn** **21 32 47.9 +1.1**
OGNE IAmb_Lg 21 34 04.7
comp=Z,101nm,0.8s
CCM Cathedral Cave 4.58 98 IAmb_Lg 21 34 13.2
comp=Z,66nm,0.8s
LOOK Love County 4.80 182 Pn **Pn** **21 32 51.6 -0.3**
LOOK IAmb_Lg 21 34 13.3
comp=Z,93nm,0.8s
FCAR Ozark Folk Cen 4.85 125 Pn **Pn** **21 32 53.0 +0.3**
FCAR IAmb_Lg 21 34 15.0
comp=Z,48nm,0.7s
ECSD EROS Data Cent 4.94 3 Pn **Pn** **21 32 56.7 +2.9**
T42A Van Buren 5.00 109 Pn **Pn** **21 32 55.9 +1.3**
T42A IAmb_Lg 21 34 25.5
comp=Z,59nm,1.0s
MIAR Mount Ida 5.06 146 Pn **Pn** **21 32 55.2 -0.3**
N41A Harden Midland 5.11 66 Pn **Pn** **21 32 57.4 +1.3**
N41A IAmb_Lg 21 34 29.2
comp=Z,69nm,0.9s
RTBA Rita Blanca 5.13 244 Pn **Pn** **21 32 56.1 -0.4**
RTBA IAmb_Lg 21 34 35.6
comp=Z,48nm,1.2s
WHAR Wooly Hollow 5.15 131 Pn **Pn** **21 32 56.4 -0.3**
WHAR IAmb_Lg 21 34 30.4
comp=Z,69nm,0.9s
WTFS Witchita Falls 5.16 194 Pn **Pn** **21 32 56.9 -0.1**
PH02 Texas Public H 5.22 231 Pn **Pn** **21 32 58.3 +0.6**
PH02 IAmb_Lg 21 34 29.8
comp=Z,63nm,1.0s
FVM French Village 5.23 97 Pn **Pn** **21 32 58.7 +0.8**
FVM IAmb_Lg 21 34 26.3
comp=Z,44nm,0.8s
SLM Saint Louis 5.29 90 Pn **Pn** **21 33 01.1 +2.4**
SLM IAmb_Lg 21 34 35.2
comp=Z,59nm,0.8s
LCAR Lake Charles 5.39 119 Pn **Pn** **21 33 01.4 +1.3**
LCAR IAmb_Lg 21 34 29.7
comp=Z,43nm,1.0s
AMTX Amarillo 5.42 225 IAmb_Lg 21 34 43.6
comp=Z,50nm,0.8s
X40A Basin Creek Fa 5.46 141 Pn **Pn** **21 33 00.9 -0.1**
X40A IAmb_Lg 21 34 37.8
comp=Z,46nm,0.7s
Z35A Perchaven, San 5.46 182 Pn **Pn** **21 33 00.6 -0.5**
L40A Anamosa 5.48 52 Pn **Pn** **21 33 02.8 +1.5**
UALR University of 5.49 136 IAmb_Lg 21 34 36.8
comp=Z,40nm,0.9s
Z38A Mt. Pleasant 5.77 163 Pn **Pn** **21 33 06.1 +0.9**
Z38A IAmb_Lg 21 34 52.5
comp=Z,36nm,0.8s
SUSD Miller 5.82 346 IAmb_Lg 21 34 57.7
comp=Z,34nm,0.9s
I37A Lemond, Waseca 5.87 26 IAmb_Lg 21 34 55.2
comp=Z,46nm,0.8s
P43A Skaggs, Pawnee 5.87 79 Pn **Pn** **21 33 08.1 +1.5**
CGM3 Cape Girardeau 5.99 102 Pn **Pn** **21 33 09.3 +1.0**
CGM3 IAmb_Lg 21 34 50.3
comp=Z,36nm,0.8s
WLAR White Oak Lake 6.00 147 IAmb_Lg 21 34 52.1
comp=Z,33nm,0.8s
APMT Aspermont 6.02 206 Pn **Pn** **21 33 09.2 +0.5**
DKNS Dickens 6.03 213 Pn **Pn** **21 33 09.2 +0.4**
DKNS IAmb_Lg 21 35 00.1
comp=Z,38nm,0.9s
S44A Carbondale 6.20 98 IAmb_Lg 21 35 02.6
comp=Z,54nm,0.7s
HDIL Hopedale 6.20 71 Pn **Pn** **21 33 12.9 +1.8**
SIUC Southern Illin 6.22 98 Pn **Pn** **21 33 13.5 +2.0**
SIUC IAmb_Lg 21 34 58.2
comp=Z,57nm,0.8s
Q44A Meyer Farm, Va 6.24 87 Pn **Pn** **21 33 13.2 +1.6**
L42A Oliver, Polo 6.45 58 Pn **Pn** **21 33 15.8 +1.3**
SN07 Snyder 07 6.51 210 IAmb_Lg 21 35 17.7
comp=Z,34nm,0.8s
JFWS Jewell Farm 6.56 49 **Pn** **21 33 17.5 +1.4**
JFWS Jewell Farm 6.56 49 Pn **Pn** **21 33 17.4 +1.3**
JFWS IAmb_Lg 21 35 08.6
comp=Z,40nm,0.7s
HALT Halls 6.75 113 IAmb_Lg 21 35 32.9
comp=Z,47nm,0.9s
ISCO Idaho Springs 6.75 281 Pn **Pn** **21 33 20.2 +1.2**
SDCO Great Sand Dun 6.77 264 Pn **Pn** **21 33 18.9 -0.4**
POST Post 6.79 214 Pn **Pn** **21 33 18.7 -0.6**
POST IAmb_Lg 21 35 24.3
comp=Z,26nm,0.9s
I40A Norwalk 6.99 41 IAmb_Lg 21 35 21.9
comp=Z,28nm,0.9s
F33A 5 Mile Ranch, 7.05 4 Pn **Pn** **21 33 25.5 +2.7**
129A Stewart Farms, 7.32 214 IAmb_Lg 21 35 39.3
comp=Z,16nm,1.2s
M44A Midewin, Midew 7.34 67 IAmb_Lg 21 35 38.9
comp=Z,43nm,1.1s
143A Socs Landing, 7.60 142 IAmb_Lg 21 35 50.4
comp=Z,32nm,0.9s
128A Castleberry Fa 7.61 218 IAmb_Lg 21 35 42.5
comp=Z,8.8nm,0.8s
P46A Rosedale 7.65 81 Pn **Pn** **21 33 30.8 -0.3**
SGCY Sterling City 7.65 207 IAmb_Lg 21 35 55.1
comp=Z,22nm,0.7s
BRDY Brady 7.68 193 Pn **Pn** **21 33 29.7 -1.8**
BRDY IAmb_Lg 21 35 47.5
comp=Z,20nm,0.9s
Y45A Yeager Farm, C 7.78 127 IAmb_Lg 21 35 50.7
comp=Z,41nm,0.7s
229A Bryant Ranch, 7.87 211 IAmb_Lg 21 35 51.8
comp=Z,14nm,1.2s
I42A Draeger Farm, 7.93 48 Pn **Pn** **21 33 36.0 +1.2**
435B Jarrell 8.02 184 IAmb_Lg 21 36 09.0
comp=Z,21nm,0.8s
T47A Sharon Grove 8.03 100 IAmb_Lg 21 35 54.4
comp=Z,35nm,0.8s
K22A Casper 8.19 301 IAmb_Lg 21 36 14.0
comp=Z,24nm,0.8s
ANMO Albuquerque 8.50 246 Pg **Pb** **21 34 09.1 +2.3**
comp=Z,0.7nm,0.3s,baz=59,slow=18,SNR=13
ANMO Lg Lg 21 35 58.7
comp=Z,0.8nm,0.3s,baz=349,slow=15,SNR=4.2
ANMO Albuquerque 8.50 246 IAmb_Lg 21 36 10.2
comp=Z,8.1nm,0.9s
ANMO Albuquerque 8.50 246 IAmb_Lg 21 36 12.7
comp=Z,6.4nm,0.8s
ANMO IAmb_Lg 21 36 12.7
comp=Z,6.3nm,0.8s
OZNA Ozona 8.56 205 IAmb_Lg 21 36 21.9
comp=Z,16nm,0.8s
JCT Junction City 8.62 196 IAmb_Lg 21 36 32.7
comp=Z,29nm,0.8s
TPB06 Permian Basin 8.76 217 IAmb_Lg 21 36 25.1
comp=Z,23nm,1.0s
146A Union 8.92 131 IAmb_Lg 21 36 46.7
comp=Z,21nm,0.8s
H43A Windswept, Lux 8.93 48 Pn **Pn** **21 33 50.0 +1.4**
PECS Pecos 9.30 219 Pn **Pn** **21 33 53.2 -0.7**
AGMN Agassiz Nation 9.53 5 Pn **Pn** **21 33 57.1 +0.4**
TPB01 Permian Basin 9.61 217 IAmb_Lg 21 36 58.3
comp=Z,15nm,0.7s
EYMN Ely 9.98 22 Pn **Pn** **21 34 03.6 +0.7**
N49A Columbus Grove 10.08 74 Pn **Pn** **21 34 03.9 -0.5**
PDAR Pinedale Array 10.31 297 Pn **Pn** **21 34 05.9 -1.8**
comp=Z,0.2nm,0.3s,baz=114,slow=16,SNR=3.0
PDAR Lg Lg 21 36 54.6
comp=Z,0.3nm,0.3s,baz=107,slow=31,SNR=3.1
comp=Z,0.3nm,0.5s
TXAR Lajitas Array 10.94 212 Pn Pn 21 34 09.6 -6.7
comp=Z,0.3nm,0.3s,baz=37,slow=14,SNR=6.5
TXAR Pg 21 34 55.5
comp=Z,0.3nm,0.3s,baz=29,slow=16,SNR=2.3
TXAR Sn Sn 21 36 05.0 -14
comp=Z,0.1nm,0.3s,baz=25,slow=21,SNR=1.4
TXAR Lg Lg 21 37 07.0
comp=Z,0.3nm,0.3s,baz=359,slow=18,SNR=4.5
comp=Z,0.1nm,0.3s
TXAR Lajitas Array 10.94 212 Pn **Pn** **21 34 13.7 -2.6**
TKL Tuckaleechee C 11.00 102 Lg Lg 21 37 19.7
comp=Z,0.8nm,0.3s,baz=30,slow=22,SNR=9.5
EPLO Experimental L 11.12 11 Pn **Pn** **21 34 18.3 -0.2**
ULM Lac du Bonnet 11.47 4 Pn **Pn** **21 34 22.4 -1.0**
comp=Z,0.8nm,0.3s,baz=182,slow=14,SNR=8.9
ULM Sn **Sn** **21 36 24.2 -7.3**
comp=Z,0.5nm,0.3s,baz=246,slow=14,SNR=3.1
comp=Z,1.8nm,0.3s
ULM Lac du Bonnet 11.47 4 Pn **Pn** **21 34 23.0 -0.4**
E46A Sault Ste Mari 12.02 47 Pn **Pn** **21 34 29.0 -1.9**
SADO Sadowa 14.59 60 Lg Lg 21 39 14.2
comp=Z,0.3nm,0.3s,baz=7,9,slow=7.9,SNR=5.5
YKA Yellowknife Ar 26.03 341 P **P** **21 37 13.9 +1.3**
comp=Z,0.2nm,0.6s,baz=145,slow=9.2,SNR=5.6
comp=Z,0.2nm,0.6s
ILAR Eielson Array 38.77 328 P **P** **21 39 04.3 +0.4**
comp=Z,0.6nm,0.8s,baz=113,slow=7.0,SNR=11
comp=Z,0.6nm,0.8s

*NEIC **24** 21:39:12.6±0.6,20.8S±0.1×178.6W±0.2,h601km±11km, mb4.1/16, Error ellipse: s-maj=32.1km s-min=10.0km az=117.0*
*IDC **24** 21:39:17.3±7.8, 19.88S×179.10W,h641km±44km, mb3.3/2, mbtmp4.1/3, Error ellipse: s-maj=247.2km s-min=42.9km az=148.0*
ISC 24 21:39:17.7±1.7,20.4S±0.3×179.2W±0.3,h645km,n26, σ1$47/26,mb4.1/10,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.71**	**314**	P	**P**	**21 40 42.3**	**-2.6**
	5.2nm,0.5s,baz=131,slow=19,SNR=8.7						
MSVF	**Nonsavu**	**3.71**	**314**	P	**P**	**21 40 41.2**	**-3.7**
MARNC	**Mare, Loyalty**	**12.04**	**262**	P	**P**	**21 41 56.0**	**-0.7**
CTAO	**Charters Tower**	**32.43**	**264**		**P**	**21 44 59.0**	**+1.1**
STKA	**Stephens Creek**	**36.89**	**244**	P	**P**	**21 45 34.6**	**0.0**
STKA				IAmb	IAmb	21 45 55.2	
	comp=Z,4.1nm,0.8s						
BBOO	**Buckleboo**	**41.65**	**243**	P	**P**	**21 46 11.7**	**-0.8**
BBOO				IAmb	IAmb	21 46 25.6	
	comp=Z,8.1nm,1.1s						
WR8	**Warramunga Arr**	**43.40**	**262**	P	**P**	**21 46 26.9**	**+0.6**
WR8				IAmb	IAmb	21 46 28.0	
	comp=Z,3.1nm,0.3s						
AS31	**Alice Springs**	**43.50**	**257**	P	**P**	**21 46 27.8**	**+0.7**
ASAR	**Alice Springs**	**43.50**	**257**	P	**P**	**21 46 27.9**	**+0.9**
	comp=Z,2.6nm,0.6s,baz=94,slow=7.6,SNR=38						
	comp=Z,2.6nm,0.6s						
ASAR	**Alice Springs**	**43.50**	**257**	P	**P**	**21 46 27.6**	**+0.6**
WB0	**Warramunga Arr**	**43.53**	**262**	P	**P**	**21 46 28.0**	**+0.7**
WRAB	**Tennant Creek**	**43.54**	**262**	P	**P**	**21 46 27.9**	**+0.6**
WRA	**Warramunga Arr**	**43.55**	**262**	P	**P**	**21 46 28.3**	**+0.9**
	comp=Z,2.1nm,0.3s,baz=97,slow=7.5,SNR=208						
	comp=Z,2.1nm,0.3s						
MTN	**Manton Dam**	**48.08**	**271**	P	**P**	**21 47 02.8**	**+1.2**
MTN				IAmb	IAmb	21 47 14.2	
	comp=Z,9.9nm,1.1s						
FORT	**Forrest**	**48.37**	**247**	P	**P**	**21 47 03.2**	**-0.3**
FORT				IAmb	IAmb	21 47 28.1	
	comp=Z,8.1nm,1.0s						
KNRA	**Kununurra**	**49.59**	**266**	P	**P**	**21 47 13.7**	**+1.0**
PSA00	**Pilbara Seismi**	**56.65**	**257**	P	**P**	**21 48 01.9**	**-0.4**
MBWA	**Marble Bar**	**56.83**	**258**	P	**P**	**21 48 04.2**	**+0.6**
MBWA				IAmb	IAmb	21 48 13.6	
	comp=Z,14nm,1.1s						
MORW	**Morawa**	**58.89**	**248**	P	**P**	**21 48 17.1**	**-0.1**
MAJO	**Matsushiro**	**69.45**	**324**	P	**P**	**21 49 24.8**	**+1.4**
MAJO				IAmb	IAmb	21 49 49.3	
	comp=Z,5.3nm,0.9s						
MJB9	**Matsu-Tunnel**	**69.46**	**324**	P	**P**	**21 49 25.7**	**+2.2**
MJB9				IAmb	IAmb	21 49 50.2	
	comp=Z,5.0nm,0.9s						
O30N	**Mendenhall**	**87.97**	**20**	P	**P**	**21 51 02.5**	**+1.9**
BVAR	**Borovoye Array**	**118.27**	**320**	PKP	**PKPdf**	**21 56 52.5**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=86,slow=2.6,SNR=4.2						
AKASG	**Malin Array Be**	**142.35**	**330**	PKP	**PKPdf**	**21 57 36.1**	**-2.3**
	comp=Z,1.3nm,0.4s,baz=43,slow=4.2,SNR=10						
AKBB	**Malin Array Si**	**142.35**	**330**	PKPdf	**PKPdf**	**21 57 36.4**	**-2.0**
BURAR	**Bucovina Array**	**146.39**	**330**	PKPbc	**PKPbc**	**21 57 48.5**	**+0.3**

*ISN **24** 22:22:28.8±1.2,34.01N×45.17E,h5km±19km, ML3.2, Presumed earthquake*
*TEH **24** 22:22:29.5,33.90N×45.51E,h7km±38km, ML3.2, Presumed earthquake*
ISC 24 22:22:31.9±1.3,33.90N±0.05×45.59E±0.06,h10km,n15, σ1$07/18,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLG1	**Gilan-e-Gharb**	**0.34**	**51**	Pg	**Pg**	**22 22 37.5**	**-1.3**
IGHG	**Ghaleghazi**	**0.92**	**62**	Pg	**Pg**	**22 22 48.6**	**-1.1**
IGHG				Sg	**Sg**	**22 23 02.7**	**+1.0**
IDHR	**Dehrash**	**1.04**	**39**	Pg	**Pg**	**22 22 49.6**	**-2.3**
KCHF	**Cheshme Sefid,**	**1.26**	**72**	Pg	**Pn**	**22 22 55.4**	**-0.4**
IKRK	**Kirkuk**	**1.82**	**326**	*e*Pg	**Pn**	**22 23 04.0**	**+0.8**
	baz=154						
IKRK				*e*Sg	**Sn**	**22 23 28.0**	**+1.7**
IBZA	**Bozab**	**1.97**	**73**	Pn	**Pn**	**22 23 06.6**	**+1.0**
RAFI	**Al-Rafai**	**2.21**	**168**	*e*Pn	**Pn**	**22 23 08.0**	**-0.7**
RAFI				*e*Sn	**Sn**	**22 23 37.0**	**+0.9**
RAFI				AML	AML	22 23 52.7	
	comp=E,169nm,0.7s						
RAFI				AML	AML	22 24 03.2	
	comp=N,156nm,0.5s						
BDRS	**Dareh Seyedi**	**2.74**	**88**	Pn	**Pn**	**22 23 16.8**	**+0.6**
MAHB	**Mahabad**	**2.86**	**2**	Pn	**Pn**	**22 23 17.6**	**-0.2**
IAZR	**Azarshahr**	**3.79**	**5**	Pn	**Pn**	**22 23 30.5**	**-0.1**
IHRS	**Heris**	**4.56**	**15**	Pn	**Pn**	**22 23 41.6**	**+0.4**
JHBN	**Jahan bin**	**4.58**	**110**	Pn	**Pn**	**22 23 42.1**	**+0.7**
IPIR	**Pirpir**	**4.61**	**104**	Pn	**Pn**	**22 23 42.6**	**+0.7**
ZNGN	**Zangian**	**4.77**	**110**	Pn	**Pn**	**22 23 44.5**	**+0.4**
IKLH	**Kolahrood**	**5.03**	**95**	Pn	**Pn**	**22 23 48.5**	**+0.8**

*KRNET **24** 22:29:36.5±0.1,39.38N×74.35E,h30km,mb3.4*
*SOME **24** 22:29:36.3,39.38N×73.57E,h10km*
*NNC **24** 22:29:47.2±3.5,39.72N×74.11E,h0km,mb3.5,mpv3.2, Error ellipse: s-maj=29.4km s-min=14.8km az=1.0*
ISC 24 22:29:38.8±1.5,39.49N±0.05×74.04E±0.04,h17km±10km, n40,σ1$95/67,24C-24D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**0.67**	**322**	⇑*i*P	**Pn**	**22 29 53.8**	**+0.1**
SFK				⇑*i*S	**Sn**	**22 30 06.3**	**+2.4**
OHH	**Osh**	**1.41**	**317**	⇑P	**Pg**	**22 30 05.9**	**-0.1**
OHH				⇑S	**Sg**	**22 30 27.4**	**+3.0**
DRK	**Karamyk**	**1.73**	**270**	⇑*i*P	**Pg**	**22 30 10.5**	**-1.6**
DRK				⇑*i*S	**Sg**	**22 30 35.4**	**+0.8**
ARSB	**Arslanbob**	**2.00**	**337**	⇑*i*P	**Pb**	**22 30 13.7**	**-1.2**
ARSB				⇑*i*S	**Sb**	**22 30 40.6**	**+1.0**
ARLS	**Aral**	**2.38**	**5**	⇑*i*P	**Pn**	**22 30 17.3**	**+0.1**
ARLS				⇑*i*S	**Sn**	**22 30 47.0**	**+0.9**
BTK	**Batken**	**2.54**	**284**	⇓*i*P	**Pb**	**22 30 21.9**	**-2.2**
BTK				⇓*i*S	**Sb**	**22 30 55.1**	**-0.1**
UCH	**Uchtor**	**2.76**	**7**	P	**Pg**	**22 30 31.9**	**+0.2**
	SNR=13						
UCH	**Uchtor**	**2.76**	**7**	⇑*i*P	**Pn**	**22 30 22.7**	**0.0**
UCH				⇑*i*S	**Sn**	**22 30 56.5**	**+0.6**
ARK	**Arkit**	**2.79**	**326**	⇓*i*P	**Pn**	**22 30 25.0**	**+2.1**
ARK				⇓*i*S	**Sb**	**22 31 00.4**	**-2.0**
GAR	**Garm**	**2.93**	**262**	⇓*i*P	**Pn**	**22 30 26.7**	**+1.9**
GAR				⇓*i*S	**Sb**	**22 31 03.4**	**-2.9**
TRKS	**Terek-Say**	**3.00**	**314**	⇓*i*P	**Pn**	**22 30 27.4**	**+1.6**
TRKS				⇓*i*S	**Sn**	**22 31 04.5**	**+2.9**
AAK	**Ala-Archa**	**3.16**	**6**	P	**Pg**	**22 30 37.5**	**-2.0**
	SNR=8.6						
AAK	**Ala-Archa**	**3.16**	**6**	⇑Pn	**Pg**	**22 30 37.1**	**-2.3**
	3.7nm,0.8s						
AAK				⇓Lg	Lg	22 31 20.3	
	3.9nm,0.6s						
AAK	**Ala-Archa**	**3.16**	**6**	⇑*i*P	**Pn**	**22 30 28.2**	**+0.2**
AAK				⇑*i*S	**Sn**	**22 31 05.8**	**+0.3**
EKS2	**Erkin-Say**	**3.17**	**357**	P	**Pg**	**22 30 37.8**	**-1.9**
	SNR=14						
EKS2	**Erkin-Say**	**3.17**	**357**	⇓*i*P	**Pn**	**22 30 28.8**	**+0.7**
EKS2				⇓*i*S	**Sn**	**22 31 07.1**	**+1.4**
MNAS	**Manas**	**3.21**	**339**	⇑*i*P	**Pn**	**22 30 30.3**	**+1.6**
MNAS				⇑*i*S	**Sn**	**22 31 09.6**	**+3.0**
ULHL	**Ulahol**	**3.22**	**31**	⇓*i*P	**Pn**	**22 30 27.6**	**-1.3**
ULHL				⇓*i*S	**Sn**	**22 31 04.8**	**-2.2**
KBK	**Karagaybulak**	**3.24**	**12**	P	**Pg**	**22 30 38.0**	**-2.9**
	SNR=18						
KBK	**Karagaybulak**	**3.24**	**12**	⇓*i*P	**Pn**	**22 30 28.8**	**-0.3**
KBK				⇓*i*S	**Sn**	**22 31 07.0**	**-0.3**
MRKS	**Merke**	**3.31**	**350**	Pg	**Pb**	**22 30 38.0**	**+0.9**
	2.8nm,0.3s						
MRKS				Lg	Lg	22 31 22.5	
	12nm,0.3s						
MRKS	**Merke**	**3.31**	**350**	*e*P	**Pb**	**22 30 38.0**	**+0.9**
	2.8nm,0.3s						
MRKS				*e*S	**Sg**	**22 31 22.5**	**-2.6**
	12nm,0.3s						
BOOM	**Boomskoye usch**	**3.33**	**25**	⇑*i*P	**Pn**	**22 30 29.2**	**-1.1**
BOOM				⇑*i*S	**Sn**	**22 31 07.9**	**-1.6**
FRU1	**Bishkek**	**3.35**	**8**	⇓*i*P	**Pn**	**22 30 30.9**	**+0.4**
FRU1				⇓*i*S	**Sn**	**22 31 10.7**	**+0.8**
CHMS	**Chumysh**	**3.55**	**9**	P	**Pb**	**22 30 42.4**	**+1.3**
	SNR=5.2						
CHMS	**Chumysh**	**3.55**	**9**	⇓*i*P	**Pn**	**22 30 33.3**	**+0.1**
CHMS				⇓*i*S	**Sn**	**22 31 14.6**	**-0.1**
TKM2	**Tokmak 2**	**3.62**	**18**	⇑*e*P	**Pn**	**22 30 33.8**	**-0.6**
TKM2				⇑*i*S	**Sn**	**22 31 15.6**	**-1.3**
USP	**Ospenovka**	**3.79**	**5**	⇓*i*P	**Pn**	**22 30 36.8**	**+0.3**
USP				⇓*i*S	**Sn**	**22 31 20.8**	**0.0**
KST	**Kastek**	**3.83**	**22**	Pg	**Pg**	**22 30 50.6**	**-1.7**
	3.9nm,0.5s						
KST				Lg	Lg	22 31 43.9	
	5.1nm,0.4s						
KST	**Kastek**	**3.83**	**22**	*e*P	**Pg**	**22 30 50.6**	**-1.7**
	3.9nm,0.5s						
KST				*e*S	**Sg**	**22 31 43.9**	**+1.9**
	5.1nm,0.4s						
CHGR	**Chuyangaron**	**3.89**	**259**	⇓*e*P	**Pn**	**22 30 39.9**	**+2.0**
CHGR				⇓*i*S	**Sn**	**22 31 26.2**	**+3.0**
DGS	**Degeres**	**3.97**	**19**	Pg	**Pg**	**22 30 53.9**	**-0.9**
	2.2nm,0.3s						
DGS				Lg	Lg	22 31 49.6	
	5.8nm,0.5s						
DGS	**Degeres**	**3.97**	**19**	*e*P	**Pg**	**22 30 53.9**	**-0.9**
	2.2nm,0.3s						
DGS				*e*S	**Sg**	**22 31 49.6**	**+3.4**
	5.8nm,0.5s						
IUG	**Iuzhnay**	**4.04**	**312**	Pg	**Pb**	**22 30 47.1**	**-2.4**
	14nm,0.5s						
IUG				Lg	Lg	22 31 38.5	
	28nm,0.6s						
IUG	**Iuzhnay**	**4.04**	**312**	*e*P	**Pb**	**22 30 47.1**	**-2.4**
	14nm,0.5s						
IUG				*e*S	**Sb**	**22 31 38.5**	**+0.4**
	28nm,0.6s						
TNSS	**Tian-Shan**	**4.17**	**31**	Pg	**Pg**	**22 30 59.3**	**+0.7**
	0.8nm,0.3s						
TNSS				Lg	Lg	22 31 59.3	
	2.6nm,0.6s						
TNSS	**Tian-Shan**	**4.17**	**31**	*e*P	**Pg**	**22 30 59.3**	**+0.7**
	0.8nm,0.3s						
TNSS				*e*S	**Sg**	**22 31 59.3**	**+6.7**
	2.6nm,0.6s						
MDOK	**Medeo**	**4.31**	**31**	Pg	**Pg**	**22 31 01.5**	**+0.1**
	3.0nm,0.4s						
MDOK				Lg	Lg	22 32 02.9	
	15nm,0.9s						
KK31	**Karatay Array**	**4.48**	**325**	Pn	**Pb**	**22 30 53.4**	**-3.6**
	0.4nm,0.2s,baz=134,slow=13,SNR=13						
KK31				⇑Sn	**Sb**	**22 31 46.6**	**-4.2**
	1.3nm,0.3s,baz=139,slow=30						
KK31				⇑Lg	Lg	22 32 04.2	
	7.4nm,0.8s,baz=134,slow=30,SNR=4.1						
PDGK	**Podgornoye**	**5.61**	**45**	⇓Pg	**Pg**	**22 31 25.3**	**-0.9**
	4.4nm,1.1s						
PDGK				⇑Lg	Lg	22 32 39.7	
	11nm,1.1s						

*JMA **24** 22:39:44.6±0.1,24.7N±0.7×123.9E±0.3,h70km±1km, MV2.8/10,NW OFF ISHIGAKIJIMA IS*
ISC 24 22:39:44.6±1.8,24.5N±0.1×123.90E±0.05,h79km±11km, n19,σ1$47/26,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.25**	**217**	*i*P	**Pn**	**22 39 56.4**	**-0.1**
IRIF				S	**Sn**	**22 40 05.2**	**-0.1**
JIJ	**Ishigaki jima**	**0.28**	**127**	*i*P	**Pn**	**22 39 56.7**	**-0.1**
JIJ				*i*S	**Sn**	**22 40 05.5**	**-0.1**
JKRS	**Kuro-shima**	**0.31**	**160**	*i*P	**Pn**	**22 39 57.4**	**+0.5**
JKRS				S	**Sn**	**22 40 07.2**	**+1.2**
JISG	**Ishigakijimahi**	**0.38**	**82**	*i*P	**Pn**	**22 39 56.9**	**-0.4**
JISG				*i*S	**Sn**	**22 40 06.0**	**-0.8**
HATJ	**Hateruma jima**	**0.48**	**190**	*e*P	**Pn**	**22 39 58.9**	**+0.7**
HATJ				S	**Sn**	**22 40 09.9**	**+1.8**
JTJ	**Tarama**	**0.74**	**82**	*i*P	**Pn**	**22 40 00.6**	**-0.1**
JTJ				S	**Sn**	**22 40 12.3**	**-0.3**
YOJ	**Yonaguni jima**	**0.81**	**265**	P	**Pn**	**22 40 00.8**	**-0.6**
YOJ	**Yonaguni jima**	**0.81**	**265**	S	**Sn**	**22 40 13.1**	**-0.8**
YOJ	**Yonaguni jima**	**0.81**	**265**	P	**Pn**	**22 40 00.9**	**-0.6**
YOJ				*e*S	**Sn**	**22 40 12.5**	**-1.4**
JYNG	**Yonagunijimaku**	**0.87**	**265**	P	**Pn**	**22 40 01.6**	**-0.5**
JYNG				S	**Sn**	**22 40 14.0**	**-1.1**
NACB	**Ninganchiao**	**2.13**	**261**	P	**Pn**	**22 40 19.3**	**+1.1**
YHNB	**Yeheng**	**2.30**	**274**	P	Pn	22 40 24.7	+4.2
YHNB	**Yeheng**	**2.30**	**274**	S	**Sn**	**22 40 53.0**	**+5.0**
YULB	**Yu-li**	**2.63**	**245**	P	**Pn**	**22 40 24.3**	**-0.7**
SSLB	**Suanglung**	**2.79**	**255**	P	**Pn**	**22 40 27.1**	**0.0**
SSLB	**Suanglung**	**2.79**	**255**	S	**Sn**	**22 40 58.9**	**-0.9**
TWGBT	**Beinan**	**3.09**	**237**	P	**Pn**	**22 40 30.2**	**-1.1**
TWGBT	**Beinan**	**3.09**	**237**	S	**Sn**	**22 41 04.7**	**-2.5**
TPUB	**Ta-pu**	**3.23**	**248**	P	**Pn**	**22 40 34.3**	**+1.2**

*IDC **24** 22:46:22.7±0.8,1.13S×120.57E,h0km,mb3.7/8, mbtmp3.7/10,ML3.5/1,MS3.1/6, Error ellipse: s-maj=65.3km s-min=15.4km az=66.0*
*DJA **24** 22:46:24.5±0.2,1°S±2°×12°0E±°,h10km,M4.3/31,mb5.0/1, MLv4.0/31*
ISC 24 22:46:24.2±0.7,1.21S±0.05×120.41E±0.05,h10km,n30, σ0$97/26,mb3.8/8,MS2.8/3,Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCI	**Palu**	**0.64**	**298**	P	**Pg**	**22 46 37.1**	**+0.4**
APSI	**Ampana**	**1.27**	**77**	P	**Pn**	**22 46 47.7**	**-0.4**
MPSI	**Mapaga**	**1.61**	**342**	P	**Pn**	**22 46 52.9**	**+0.1**
TTSI	**Tana Toraja**	**1.92**	**198**	P	**Pn**	**22 46 56.8**	**-0.2**
MMSI	**Mamuju**	**2.10**	**225**	P	**Pn**	**22 46 59.9**	**+0.4**
MRSI	**Marisa**	**2.27**	**43**	P	**Pn**	**22 47 02.8**	**+1.0**
LUWI	**Luwuk**	**2.37**	**86**	P	**Pn**	**22 47 01.9**	**-1.3**

KSRS	Korea Array	39.09	10	LR	LR	23 09 48.3	
	comp=Z,13nm,19.9s,baz=135,slow=36						
ASAJ	Asahikawa	49.29	21	LR	LR	23 16 54.4	
	comp=Z,58nm,18.9s,baz=188,slow=37						
SONM	Songino Array	50.35	348	P	P	22 55 21.4	-0.2
	0.3nm,0.5s,baz=160,slow=9.0,SNR=1.6						
	0.3nm,0.5s						
MKAR	Makanchi Array	58.31	330	P	P	22 56 19.8	+0.4
	0.7nm,0.8s,baz=132,slow=7.3,SNR=8.7						
	0.7nm,0.8s						
ZALV	Zalesovo Beam	62.37	337	P	P	22 56 46.7	-0.4
	0.3nm,0.3s,baz=135,slow=8.0,SNR=1.9						
	0.3nm,0.3s						
KURBB	Kurchatov Arra	62.74	331	P	P	22 56 50.1	+0.6
	0.5nm,0.3s,baz=142,slow=6.1,SNR=5.5						
	0.5nm,0.3s						
BVAR	Borovoye Array	68.20	330	P	P	22 57 24.2	-0.7
	0.7nm,0.8s,baz=122,slow=11,SNR=2.6						
	0.7nm,0.8s						

IDC 24 22:52:42.8±20.0, 8.66S×158.43E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=586.7km s-min=46.7km az=118.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	25.86	242	P	P	22 58 16.4	0.0
	0.3nm,0.5s,baz=66,slow=10.0,SNR=5.1						
	0.3nm,0.5s						
SONM	Songino Array	72.58	326	P	P	23 04 12.4	+0.4
	0.5nm,0.7s,baz=133,slow=6.1,SNR=2.2						
	0.5nm,0.7s						
MKAR	Makanchi Array	86.90	318	P	P	23 05 29.4	-0.3
	0.3nm,0.5s,baz=106,slow=6.2,SNR=4.9						
	0.3nm,0.5s						

IDC 24 23:07:41.0±1.6, 6.58S×128.50E, h0km, mb3.7/2, mbtmp3.7/6, ML3.9/4, Error ellipse: s-maj=52.1km s-min=23.8km az=82.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	5.99	233	Pn	Pn	23 09 11.2	+0.2
	6.4nm,0.3s,baz=143,slow=1.2,SNR=5.3						
BATI				Sn	Sn	23 10 13.1	-7.2
	4.8nm,0.3s,baz=120,slow=22,SNR=7.1						
	4.6nm,0.3s						
FITZ	Fitzroy Crossi	11.78	193	Pn	Pn	23 10 29.0	-1.4
	0.4nm,0.3s,baz=13,slow=8.3,SNR=13						
FITZ				Sn	Sn	23 12 22.2	-20
	1.0nm,0.3s,baz=325,slow=19,SNR=6.9						
	1.7nm,0.8s						
WRA	Warramunga Arr	14.44	157	Pn	Pn	23 11 05.3	-1.5
	0.5nm,0.3s,baz=337,slow=13,SNR=12						
WRA				Sn	Sn	23 13 33.9	-14
	0.9nm,0.3s,baz=330,slow=21,SNR=12						
	0.3nm,0.8s						
ASAR	Alice Springs	17.76	164	P	P	23 11 51.6	+0.9
	0.4nm,0.3s,baz=341,slow=11,SNR=27						
ASAR				S	Sn	23 14 53.2	-15
	0.3nm,0.4s,baz=327,slow=22,SNR=1.3						
	2.7nm,0.6s						
MKAR	Makanchi Array	67.07	327	P	P	23 18 35.5	-0.7
	0.3nm,0.4s,baz=118,slow=7.4,SNR=9.9						
	0.3nm,0.4s						
KURBB	Kurchatov Arra	71.38	329	P	P	23 19 03.8	+1.0
	0.5nm,0.5s,baz=125,slow=5.9,SNR=5.7						
	0.5nm,0.5s						

DJA 24 23:08:36.3±0.2, 1°N±3°×12°6E±°, h10km, M3.8/13, mb4.3/2, MLv3.5/13, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.18	124	P	Pb	23 08 57.8	-0.9
GAMI	Galela, Maluku	1.46	74	P	Pn	23 09 02.5	-0.2
GAMI				S	Sn	23 09 21.7	-0.1
MNI	Manado	1.55	271	P	Pn	23 09 04.0	0.0
MNI				S	Sn	23 09 23.4	-0.8
GTOI	Gorontalo	3.47	257	P	Pn	23 09 31.5	+1.1
LUWI	Luwuk	4.37	236	P	Pb	23 09 48.4	-4.9

*DMN **24** 23:13:24.3±0.4, 28.76N×87.48E, h10km, Ml4.2/5, Error ellipse: s-maj=7.3km s-min=5.1km az=21.0*
*NDI **24** 23:13:25.9±3.0, 28.78N×87.00E, h10km, ML3.3, MW3.2, Presumed earthquake*
ISC 24 23:13:31.7±1.4, 28.54N±0.10×87.38E±0.03, h10km, n14, σ2s06/22, 1C, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIRN	Jiri	1.37	231	Pg	Pn	23 13 54.1	-3.2
	baz=226,slow=0.0						
JIRN				Sg	Sb	23 14 14.5	-0.9
	639nm,0.3s,baz=226,slow=0.0						
GUN	Gumba	1.47	245	Pg	Pn	23 13 55.7	-2.9
	baz=239,slow=0.0						
GUN				Sg	Sn	23 14 16.1	-1.9
	644nm,0.3s,baz=239,slow=0.0						
RAMN	Ramite	1.73	204	Pg	Pn	23 14 01.2	-0.9
	baz=204,slow=0.0						
RAMN				Sg	Sn	23 14 25.2	+0.8
	372nm,0.5s,baz=204,slow=0.0						
KKN	Kakani	2.00	249	Pg	Pn	23 14 04.9	-0.9
	baz=244,slow=0.0						
KKN				Sg	Sn	23 14 33.2	+2.1
	1μm,0.8s,baz=244,slow=0.0						
DHUB	DHUBRI	3.42	137	eP	Pn	23 14 25.8	+0.7
DHUB				eS	Sn	23 15 08.5	+2.8
DHUB				IAML		23 15 17.6	
	comp=E,159nm,0.4s						
DHUB				IAML		23 15 19.8	
	comp=N,105nm,0.1s						
KOLN	Koldanda	3.43	258	Pg	Pn	23 14 30.2	+4.8
	baz=255,slow=0.0						
KOLN				Sg	Sb	23 15 16.4	+1.9
	comp=N,202nm,0.9s,baz=255,slow=0.0						
TAWA	Tawang	4.07	102	eP	Pn	23 14 36.5	+2.1
GUWA	GUWAHATI	4.49	120	eP	Pn	23 14 39.6	-0.1
SHL	Shillong	4.99	125	eP	Pn	23 14 45.8	-1.1
SHL				eS	Sn	23 15 45.5	+0.8
TEZP	TEZPUR	5.17	110	eP	Pn	23 14 46.3	-2.9
ITAN	ITANAGAR	5.78	102	eP	Pn	23 14 56.0	-1.6
ITAN				⇑eS	Sn	23 16 04.6	+0.6
ITAN				IAML		23 16 05.6	
	comp=N,46nm,0.5s						
ITAN				IAML		23 16 08.7	
	comp=E,23nm,0.5s						
ZIRO	ZIRO	5.80	98	eP	Pn	23 14 57.0	-1.0
ZIRO				eS	Sn	23 16 02.9	-1.9
ZIRO				IAML		23 16 06.6	
	comp=N,80nm,0.8s						
ZIRO				IAML		23 16 07.8	
	comp=E,56nm,0.6s						
MOKO	MOKOCHONG	6.71	108	eS	Sn	23 16 24.6	-2.5
MOKO				IAML		23 16 34.2	
	comp=E,19nm,0.7s						
MOKO				IAML		23 16 36.4	
	comp=N,16nm,0.8s						
SAIH	SAIHA	7.87	139	eP	Pn	23 15 25.7	-0.7
SAIH				eS	Sn	23 16 53.3	-2.3
SAIH				IAML		23 17 01.5	
	comp=N,19nm,1.2s						
SAIH				IAML		23 17 04.4	
	comp=E,11nm,1.2s						

*DMN **24** 23:39:25.8±0.4, 28.75N×87.47E, h10km, Ml4.5/10, Error ellipse: s-maj=6.6km s-min=3.5km az=27.0*
*IDC **24** 23:39:26.8±0.8, 28.60N×87.27E, h0km, mb3.9/19, mbtmp3.9/22, ML3.9/2, MS4.1/2, Error ellipse: s-maj=24.3km s-min=15.1km az=50.0*
*NEIC **24** 23:39:29.6±1.7, 28.61N±0.03×87.22E±0.06, h10km±1km, mb4.0/17, Error ellipse: s-maj=8.5km s-min=5.9km az=91.0*
*NDI **24** 23:39:32.1±3.9, 28.73N×87.49E, h10km, ML3.8, MW3.6, Presumed earthquake*
ISC 24 23:39:28.6±1.3, 28.68N±0.04×87.34E±0.03, h7km±9km, n83, σ1s45/109, mb4.0/23, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EVN	Everest	0.85	213		Pg	23 39 43.7	-1.4
EVN				Sg	Sg	23 39 54.5	-1.7
JIRN	Jiri	1.44	225	Pg	Pn	23 39 55.2	-0.2
	baz=226,slow=0.0						
JIRN				Sg	Sg	23 40 14.3	-0.6
	4μm,0.3s,baz=226,slow=0.0						
GUN	Gumba	1.50	240	Pg	Pb	23 39 56.6	-0.4
	baz=239,slow=0.0						
GUN				Sg	Sg	23 40 17.1	+0.2
	4μm,0.5s,baz=239,slow=0.0						
GTK	Tadong	1.75	140	eP	Pb	23 40 01.6	+0.5
GTK				eS	Sn	23 40 22.9	+0.9
GTK				IAML		23 40 33.4	
	comp=N,397nm,0.9s						
ODAN	Odare	1.81	179	Pg	Pb	23 40 01.6	-0.6
	baz=182,slow=0.0						
ODAN				Sg	Sb	23 40 25.9	+0.8
	comp=N,5μm,0.8s,baz=182,slow=0.0						
RAMN	Ramite	1.84	201	Pg	Pn	23 40 01.6	+0.8
	baz=204,slow=0.0						
RAMN				Sg	Sg	23 40 27.1	-0.7
	comp=N,2μm,0.5s,baz=204,slow=0.0						
KKN	Kakani	2.02	245	Pg	Pb	23 40 05.9	+0.1
	baz=244,slow=0.0						
KKN				Sg	Sg	23 40 34.1	+0.4
	baz=244,slow=0.0						
PKI	Pulchoki	2.03	238	Pg	Pb	23 40 06.4	+0.4
	baz=238,slow=0.0						
PKI				Sg	Sg	23 40 34.8	+0.8
	comp=N,4μm,0.6s,baz=238,slow=0.0						
PKIN	Phulchoki	2.04	238	Pg	Pb	23 40 06.4	+0.3
	baz=238,slow=0.0						
PKIN				Sg	Sg	23 40 34.8	+0.6
	comp=N,3μm,0.4s,baz=238,slow=0.0						
DMN	Daman	2.24	242	Pg	Pg	23 40 10.5	-1.1
	baz=242,slow=0.0						
DMN				Sg	Sg	23 40 42.1	+1.3
	comp=N,2μm,0.6s,baz=242,slow=0.0						
GKN	Gorkha	2.48	255	Pg	Pg	23 40 15.1	-1.0
	baz=254,slow=0.0						
GKN				Sg	Sg	23 40 48.7	+0.4
	comp=N,1μm,0.4s,baz=254,slow=0.0						
DANN	Dangsing	3.17	265	Sg	Sg	23 41 08.9	-1.6
	comp=N,17nm,0.2s,baz=264,slow=0.0						
KOLN	Koldanda	3.42	256	Sg	Sg	23 41 17.7	-1.0
	baz=255,slow=0.0						
SHBG	Sahibganj	3.44	176	eP	Pn	23 40 24.9	+2.4
SHBG				eS	Sn	23 41 06.9	+3.3
LSA	Lhasa	3.48	72		Pn	23 40 26.4	+2.8
LSA	Lhasa	3.48	72	Pn	Pn	23 40 27.4	+3.8
LSA				Sn	Sb	23 41 13.8	+0.3
LSA				smax	smax		
	comp=N,24nm,1.0s						
LSA				smax	smax		
	comp=E,22nm,1.0s						
DHUB	DHUBRI	3.54	138	eP	Pn	23 40 25.7	+1.8
DHUB				eS	Sn	23 41 07.1	+1.0
DHUB				IAML		23 41 16.5	
	comp=N,81nm,0.4s						
DHUB				IAML		23 41 24.0	
	comp=E,89nm,0.6s						
PYUN	Piuthan	3.88	263	Sg	Sg	23 41 31.2	-2.0
	comp=E,2.8nm,0.5s,baz=262,slow=0.0						
GUWA	GUWAHATI	4.59	122	eP	Pn	23 40 40.0	+1.7
GUWA				eS	Sn	23 41 30.6	-1.3
SHL	Shillong	5.09	126		Pn	23 40 45.5	0.0
SHL	Shillong	5.09	126	eP	Pn	23 40 47.0	+1.5
SHL				eS	Sn	23 41 44.4	-0.3
SHL				IAML		23 42 07.0	
	comp=E,301nm,0.4s						
SHL				IAML		23 42 08.0	
	comp=N,322nm,0.2s						
TEZP	TEZPUR	5.25	112	eP	Pn	23 40 47.7	+0.2
TEZP				eS	Sn	23 41 45.3	-3.0
ITAN	ITANAGAR	5.85	104	eP	Pn	23 40 56.6	+1.0
ITAN				eS	Sn	23 41 59.4	-3.5
ITAN				IAML		23 42 05.4	
	comp=N,75nm,0.5s						
ITAN				IAML		23 42 14.2	
	comp=E,77nm,0.8s						
ZIRO	ZIRO	5.86	100	eP	Pn	23 40 57.2	+1.2
ZIRO				eS	Sn	23 42 01.5	-2.0
ZIRO				IAML		23 42 07.5	
	comp=N,283nm,0.7s						
ZIRO				IAML		23 42 08.8	
	comp=E,186nm,0.5s						
ALBI	Allahabad	5.97	237	eP	Pn	23 40 59.4	+2.0
ALBI				eS	Sn	23 42 08.3	+2.4
ALBI				IAML		23 42 38.7	
	comp=N,102nm,0.8s						
ALBI				IAML		23 42 47.6	
	comp=E,67nm,0.8s						
KOHI	KOHIMA	6.70	114	eP	Pn	23 41 07.8	+0.3
KOHI				eS	Sn	23 42 23.4	-0.9
KOHI				IAML		23 42 28.5	
	comp=N,49nm,0.9s						
KOHI				IAML		23 42 32.5	
	comp=E,59nm,1.0s						
MOKO	MOKOCHONG	6.79	109	eP	Pn	23 41 09.0	+0.3
MOKO				eS	Sn	23 42 22.8	-3.6
MOKO				IAML		23 42 35.1	
	comp=E,66nm,0.8s						
MOKO				IAML		23 42 38.4	
	comp=N,54nm,1.0s						
IMP	Imphal	7.04	121	eP	Pn	23 41 15.0	+3.0
IMP				eS	Sn	23 42 30.4	-2.0
IMP				IAML		23 43 14.0	
	comp=N,23nm,1.2s						
IMP				IAML		23 43 15.4	
	comp=E,18nm,1.2s						
MORE	Moreh	7.64	124	Pn	Pn	23 41 20.0	-0.3
SAIH	SAIHA	7.99	139	eP	Pn	23 41 26.8	+1.6
SAIH				eS	Sn	23 42 51.3	-4.7
SAIH				IAML		23 43 06.1	
	comp=E,625nm,0.5s						
SAIH				IAML		23 43 07.6	
	comp=N,414nm,0.5s						
DDI	Dehra Dun	8.26	284	eP	Pn	23 41 32.4	+3.5
DDI				eS	Sn	23 43 01.5	-0.9
DDI				IAML		23 43 07.5	
	comp=E,431nm,0.3s						
DDI				IAML		23 43 13.3	
	comp=N,495nm,0.4s						
SMLA	Simla	9.16	288	eP	Pn	23 41 42.9	+1.8
SMLA				eS	Sn	23 43 23.6	-1.0
SMLA				IAML		23 43 42.7	
	comp=E,15nm,0.5s						
SMLA				IAML		23 43 43.1	
	comp=N,19nm,0.6s						
DHRM	DHARAMSHALA	10.17	293	eP	Pn	23 41 57.1	+1.8
DHRM				eS	Sn	23 43 47.9	-1.8
DHRM				IAML		23 44 08.8	
	comp=E,80nm,0.8s						
DHRM				IAML		23 44 13.6	
	comp=N,75nm,0.6s						
BHPL	Bhopal	10.44	241	eP	Pn	23 42 01.2	+2.5
BHPL				IAML		23 43 56.0	
	comp=N,212nm,0.5s						
BHPL				IAML		23 43 57.0	
	comp=E,198nm,0.4s						
BHPL				eS	Sn	23 43 57.1	+1.2
NIL	Nilore	13.04	296	Pn	Pn	23 42 33.6	-0.7
CMAR	Chiang Mai Arr	14.70	131	Pn	Pn	23 42 56.4	-0.7
	comp=E,1.1nm,0.3s,baz=324,slow=14,SNR=1.4						
CMAR	Chiang Mai Arr	14.70	131	Pn	Pn	23 42 58.1	+1.0
LZDM	Lanzhou Array	15.60	58	Pn	Pn	23 43 09.7	+0.5
	baz=230,slow=12						
	comp=E,1.1nm,0.3s						
KBL	Kabul	16.64	295	Pn	Pn	23 43 21.7	-0.8
KBL				IAmb	IAmb	23 43 27.6	
	comp=Z,6.1nm,0.8s						
GAR	Garm	17.47	311	Pn	Pn	23 43 31.6	-1.2
BTK	Batken	17.72	314	Pn	Pn	23 43 34.9	-0.9
CHGR	Chuyangaron	18.09	308		P	23 43 40.5	-0.4
CHGR				IAmb	IAmb	23 43 44.9	
	comp=Z,13nm,1.0s						
SHAA	Shahritus	18.35	304		P	23 43 43.8	+0.1
SHAA				IAmb	IAmb	23 43 51.5	
	comp=Z,10nm,0.8s						
MKAR	Makanchi Array	18.52	349	P	P	23 43 44.8	-0.6
	comp=Z,0.1nm,0.3s,baz=150,slow=12,SNR=7.9						
	comp=Z,1.0nm,0.9s						
MAKZ	Makanchi	18.58	348	P	Pn	23 43 46.8	+0.5
KURBB	Kurchatov Arra	22.91	345	P	P	23 44 32.4	-0.5
	comp=Z,3.1nm,0.9s,baz=166,slow=9.9,SNR=13						
	comp=Z,3.1nm,0.9s						
KURK	Kurchatov	22.98	346	P	P	23 44 34.9	+1.3
KURK				IAmb	IAmb	23 44 38.5	
	comp=Z,5.9nm,0.8s						
SONM	Songino Array	24.17	32	P	P	23 44 46.2	+0.7
	comp=Z,1.3nm,0.6s,baz=231,slow=11,SNR=6.0						
	comp=Z,1.3nm,0.6s						
SONM	Songino Array	24.17	32	P	P	23 44 46.2	+0.7
ULN	Ulaanbaatar	24.50	33	P	P	23 44 50.1	+1.5
ULN				IAmb	IAmb	23 44 52.5	
	comp=Z,3.5nm,1.1s						
ZALV	Zalesovo Beam	25.32	357	P	P	23 44 55.4	-0.2
	comp=Z,0.5nm,0.5s,baz=189,slow=7.3,SNR=3.2						
	comp=Z,0.5nm,0.5s						
ZALV	Zalesovo Beam	25.32	357	P	P	23 44 56.2	+0.6
BVAR	Borovoye Array	27.36	337	P	P	23 45 14.7	+0.5
	comp=Z,0.2nm,0.5s,baz=142,slow=7.2,SNR=1.7						
	comp=Z,0.2nm,0.5s						
AB31	Akbulak array	29.34	322	P	P	23 45 32.4	+0.6
AB31				IAmb	IAmb	23 45 41.5	
	comp=Z,1.8nm,1.1s						
ABKAR	Akbulak array	29.34	322	P	P	23 45 32.0	+0.2
BELG	Belogornoye	37.68	320	LR	LR	00 04 25.8	
	comp=Z,184nm,18.3s,baz=307,slow=40						
KARS	Kars	37.95	300	P	P	23 46 47.3	+0.3
KBZ	Khabaz	38.41	305	P	P	23 46 49.4	-1.2
	comp=Z,1.6nm,0.8s,baz=112,slow=8.9,SNR=5.1						
	comp=Z,1.6nm,0.8s						
NRIK	Noril'sk	40.70	0	P	P	23 47 09.6	+0.3
	comp=Z,2.7nm,0.8s,baz=167,slow=10.0,SNR=5.6						
	comp=Z,2.7nm,0.8s						
NRIK	Noril'sk	40.70	0	P	P	23 47 09.9	+0.6
NRIK				IAmb	IAmb	23 47 13.3	
	comp=Z,4.0nm,1.0s						
AKASG	Malin Array Be	48.43	314	P	P	23 48 10.5	-0.8
	comp=Z,0.7nm,0.5s,baz=82,slow=7.3,SNR=9.2						
	comp=Z,0.7nm,0.5s						
TIXI	Tiksi	48.61	16	P	P	23 48 12.0	-0.4
	comp=Z,2.6nm,0.5s,baz=247,slow=4.6,SNR=11						
	comp=Z,2.6nm,0.5s						
TIXI	Tiksi	48.61	16	P	P	23 48 14.6	+2.2
BURAR	Bucovina Array	50.99	310	P	P	23 48 29.9	-1.1
BURAR				IAmb	IAmb	23 48 35.2	
	comp=Z,2.2nm,1.1s						
FINES	FINESS Array B	51.56	327	P	P	23 48 34.7	-0.3
	comp=Z,2.2nm,0.6s,baz=100,slow=10,SNR=11						
	comp=Z,2.2nm,0.6s						
FINES	FINESS Array B	51.56	327	P	P	23 48 35.1	+0.1
ARCES	ARCESS Array B	53.65	337	P	P	23 48 50.7	+0.4
	comp=Z,6.6nm,0.9s,baz=99,slow=7.7,SNR=6.1						
	comp=Z,6.6nm,0.9s						
ARCES	ARCESS Array B	53.65	337	P	P	23 48 50.9	+0.5
HFS	Hagfors	57.51	325	P	P	23 49 17.6	-0.6
	comp=Z,2.0nm,0.6s,baz=104,slow=4.9,SNR=4.5						
	comp=Z,2.0nm,0.6s						
GERES	GERESS Array B	58.54	312	P	P	23 49 25.7	0.0
	comp=Z,1.1nm,0.7s,baz=81,slow=8.2,SNR=5.8						
	comp=Z,1.1nm,0.7s						
NOA	NORSAR Array B	58.70	326	P	P	23 49 26.4	-0.2
	comp=Z,0.8nm,0.7s,baz=84,slow=6.9,SNR=1.6						
	comp=Z,0.8nm,0.7s						
WRA	Warramunga Arr	66.30	131	P	P	23 50 17.5	-0.4
	comp=Z,0.6nm,0.6s,baz=325,slow=6.6,SNR=9.8						
	comp=Z,0.6nm,0.6s						
EKA	Eskdalemuir Ar	67.21	322	LR	LR	00 22 36.1	
	comp=Z,159nm,21.3s,baz=14,slow=38						
ASAR	Alice Springs	68.69	134	P	P	23 50 32.4	-0.6
	comp=Z,1.0nm,0.6s,baz=317,slow=6.5,SNR=11						
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	68.69	134	P	P	23 50 32.1	-0.8
ESDC	Sonseca Array	73.26	306	P	P	23 50 59.6	-1.1
	comp=Z,0.6nm,0.8s,baz=87,slow=6.4,SNR=2.4						
	comp=Z,0.6nm,0.8s						
ESDC	Sonseca Array	73.26	306	P	P	23 51 00.5	-0.2
ILAR	Eielson Array	77.81	21	P	P	23 51 25.6	-0.7
	comp=Z,0.4nm,0.8s,baz=320,slow=4.6,SNR=5.0						
	comp=Z,0.4nm,0.8s						
ILAR	Eielson Array	77.81	21	P	P	23 51 26.0	-0.2
TORD	Torodi Ar. Bea	80.05	280	P	P	23 51 38.5	-0.9
	comp=Z,0.7nm,0.8s,baz=58,slow=4.3,SNR=3.9						
	comp=Z,0.7nm,0.8s						
TORD	Torodi Ar. Bea	80.05	280	P	P	23 51 38.9	-0.5
TORD				IAmb	IAmb	23 52 22.2	
	comp=Z,1.5nm,0.5s						
YKA	Yellowknife Ar	87.45	10	P	P	23 52 15.9	-0.5
	comp=Z,0.4nm,0.9s,baz=336,slow=5.7,SNR=4.9						
	comp=Z,0.4nm,0.9s						
YKA	Yellowknife Ar	87.45	10	P	P	23 52 17.0	+0.5

*IDC **25** 00:08:36.7±1.2, 0.02N×128.96E, h0km, mb3.6/4, mbtmp3.6/5, ML3.2/1, MS2.8/2, Error ellipse: s-maj=42.2km s-min=19.7km az=51.0*
*DJA **25** 00:08:38.6±0.2, 0.7N±3°×12.9E±°, h10km, M3.8/13, mb4.2/1, MLv3.5/13*
ISC 25 00:08:42.0±1.0, 0.03S±0.10×129.05E±0.06, h35km, n14, σ1s79/14, mb3.8/3, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.86	295	P	Pn	00 09 10.5	-1.0
TNTI				S	Sn	00 09 35.6	+1.8
SWI	Sorong	2.36	110	P	Pn	00 09 17.0	-1.3
SIJI	Sorong	2.37	111	Pn	Pn	00 09 17.5	-0.9
	4.9nm,0.3s,baz=322,slow=18,SNR=12						
SIJI				Sn	Sn	00 09 49.4	+3.1
	2.6nm,0.3s,baz=155,slow=22,SNR=5.4						
	10.0nm,0.3s						
SIJI	Sorong	2.37	111	P	Pn	00 09 17.6	-0.9
KRAI	Karang Ratu	3.33	191	P	Pn	00 09 32.2	+0.6
SANI	Sanana	3.66	237	P	Pn	00 09 33.6	-2.6
FAKI	Fak Fak	4.29	132	P	Pn	00 09 42.3	-2.7
GTOI	Gorontalo	6.07	276	P	Pn	00 10 11.1	+1.7
BATI	Baumata	11.44	208	LR	LR	00 15 46.4	
	comp=Z,66nm,21.8s,baz=3.0,slow=38						
WRA	Warramunga Arr	20.45	166	P	P	00 13 16.3	-0.4
	1.0nm,0.7s,baz=342,slow=9.4,SNR=5.7						
	1.0nm,0.7s						
ASAR	Alice Springs	23.96	169	P	P	00 13 54.3	+1.0
	2.0nm,0.6s,baz=353,slow=10.0,SNR=14						
	2.0nm,0.6s						
KSRS	Korea Array	37.32	359	LR	LR	00 29 00.1	
	comp=Z,15nm,22.0s,baz=190,slow=33						
MKAR	Makanchi Array	61.95	325	P	P	00 18 57.9	-0.5
	0.4nm,0.6s,baz=126,slow=7.3,SNR=5.0						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	66.14	327	P	P	00 19 25.1	-0.7
	0.6nm,0.7s,baz=129,slow=5.8,SNR=5.2						
	0.6nm,0.7s						

*ISK **25** 00:23:31.8, 37.13N×36.36E, h6km, ML3.5/15*
*AFAD **25** 00:23:32.2, 37.15N×36.33E, h7km±4km, MW3.5*
ISC 25 00:23:32.0±1.2, 37.14N±0.02×36.33E±0.02, h2km±12km, n42, σ0s79/48, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAMA	Osmaniye	0.27	81	IAML		00 23 37.0	
	comp=E,4μm,0.1s						
KAMA				P	Pg	00 23 37.7	+0.5
KAMA				S	Sg	00 23 40.4	-0.4
KAMA				IAML		00 23 41.0	
	comp=N,3μm,0.1s						
HASA	Hatay-Hassa-Ha	0.41	163	P	Pg	00 23 40.3	+0.4
HASA				S	Sg	00 23 44.9	-0.3
HASA				IAML		00 23 46.0	
	comp=N,5μm,0.5s			

TAHT	**Tahtakopru-Hat**	**0.78**	**189**	Pg		**Pg**	**00 23 46.5**	**-0.3**
CAYT	**Sariam**	**0.81**	**272**	P		**Pg**	**00 23 47.7**	**+0.2**
SAIM	**ADANA**	**0.86**	**347**	P		**Pg**	**00 23 48.5**	**+0.1**
RHAN	**Hatay/Reyhanl**	**0.91**	**166**	P		**Pb**	**00 23 50.2**	**-0.3**
KRTS	**Karatas**	**0.96**	**234**	Pg		**Pb**	**00 23 50.9**	**-0.4**
GZT	**Gaziantep**	**1.00**	**77**	P		**Pn**	**00 23 52.3**	**-0.9**
NZIP	**Nizip/Gaziante**	**1.08**	**95**	P		**Pb**	**00 23 53.2**	**-0.2**
YAYL	**Yayladag**	**1.12**	**189**	P		**Pn**	**00 23 57.1**	**+2.3**
CMRD	**Camardi-Nigde**	**1.19**	**296**	Pn		**Pn**	**00 23 55.6**	**-0.2**
CMRD				Sn		**Sn**	**00 24 12.6**	**0.0**
AKCA	**Adyaman/G¶l**	**1.26**	**58**	P		**Pn**	**00 23 56.7**	**0.0**
SARI	**SarD1z-Kayseri**	**1.26**	**3**	Pn		**Pn**	**00 23 56.7**	**-0.2**
SARI				Sn		**Sn**	**00 24 14.8**	**+0.3**
ELBS	**KAHRAMANMARAS**	**1.34**	**28**	P		**Pg**	**00 23 58.9**	**+1.2**
BNN	**Bunyan**	**1.75**	**347**	Pn		**Pb**	**00 24 03.9**	**-1.0**
KIZK	**Mersin**	**1.88**	**250**	Pn		**Pn**	**00 24 05.4**	**+0.3**
GULA	**Gulagac**	**2.05**	**306**	Pn		**Pn**	**00 24 08.2**	**+0.6**
SILI	**Silifke-Mersin**	**2.08**	**249**	Pn		**Pn**	**00 24 08.3**	**+0.4**
YESY	**Yesilyurt**	**2.16**	**288**	Pn		**Pn**	**00 24 09.3**	**+0.2**
KEBE	**Keben-Mersin**	**2.21**	**253**	Pn		**Pn**	**00 24 10.5**	**+0.7**
IKL	**Isikli**	**2.31**	**248**	Pn		**Pn**	**00 24 11.9**	**+0.8**
KOZK	**Kozakli-Nevseh**	**2.37**	**331**	Pn		**Pn**	**00 24 12.8**	**+0.9**
TEVE	**Tevekalti-Mers**	**2.42**	**254**	Pn		**Pn**	**00 24 13.1**	**+0.4**
BECE	**Buyukeceli-Mer**	**2.44**	**247**	Pn		**Pn**	**00 24 13.2**	**+0.4**
KRMN	**Karaman**	**2.45**	**272**	Pn		**Pn**	**00 24 14.0**	**+0.9**
BEIL	**Beino**	**2.60**	**183**	*e*P		**Pn**	**00 24 15.2**	**+0.2**
YOZ	**Yozgat**	**2.62**	**343**	Pn		**Pn**	**00 24 15.9**	**+0.5**
HWQ	**Hawqa**	**2.88**	**186**	*e*P		**Pb**	**00 24 24.9**	**+0.8**
BHL	**Bhannes**	**3.28**	**190**	*e*P		**Pb**	**00 24 27.8**	**-3.1**
ZAHL	**Zahle**	**3.30**	**186**	*e*P		**Pn**	**00 24 24.2**	**-0.5**
DQRL	**Deir Qamar**	**3.49**	**191**	*e*P		**Pn**	**00 24 27.6**	**+0.3**
RCY	**Rachaya**	**3.66**	**187**	*e*P		**Pn**	**00 24 30.2**	**+0.5**

*NNC **25** 00:28:52.0±0.5, 44°.60N×79°.32E, h0km, mb3.4, mpv3.6, Error ellipse: s-maj=4.1km s-min=3.3km az=83.0*
*SOME **25** 00:28:52.1, 44°.63N×79°.37E, h20km*
ISC 25 00:28:49.7±1.2, 44°.71N±0°.03×79°.26E±0°.03, h5km±10km, n36, σ0§86/60, 12C-4D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNOS	**Konyrlen**	**0.36**	**189**	P	**Pb**	**00 28 57.8**	**-0.8**
	181nm,0.1s						
KNOS				S	**Sg**	**00 29 01.3**	**-0.1**
	790nm,0.1s						
DJR	**Jarkent**	**0.54**	**135**	P	**Pg**	**00 29 00.7**	**+0.6**
	273nm,0.1s						
DJR				S	**Sg**	**00 29 06.5**	**-0.5**
	191nm,0.1s						
DJR	**Jarkent**	**0.54**	**135**	*e*P	**Pg**	**00 29 00.7**	**+0.6**
	273nm,0.1s						
DJR				*e*S	**Sg**	**00 29 06.5**	**-0.5**
	191nm,0.1s						
KAPS	**Kapalarasan**	**0.57**	**7**	P	**Pn**	**00 29 05.3**	**+0.6**
KAPS				S	**Sn**	**00 29 13.9**	**-0.6**
	2µm,0.1s						
TDK	**Taldyqorghan**	**0.67**	**296**	P	**Pn**	**00 29 06.5**	**+0.7**
	34nm,0.1s						
TDK				S	**Sn**	**00 29 16.2**	**-0.5**
	233nm,0.2s						
TDK	**Taldyqorghan**	**0.67**	**296**	*e*P	**Pn**	**00 29 06.5**	**+0.7**
	34nm,0.1s						
TDK				*e*S	**Sn**	**00 29 16.2**	**-0.5**
	233nm,0.2s						
BLB	**Baldybastay**	**0.83**	**222**	P	**Pn**	**00 29 07.3**	**-0.9**
	44nm,0.1s						
BLB				S	**Sb**	**00 29 17.6**	**-0.6**
	92nm,0.1s						
ARXS	**Arharly**	**1.14**	**244**	P	**Pn**	**00 29 13.5**	**+1.1**
	41nm,0.1s						
ARXS				S	**Sn**	**00 29 27.8**	**-0.6**
	67nm,0.2s						
ARXS	**Arharly**	**1.14**	**244**	*e*P	**Pn**	**00 29 13.5**	**+1.1**
	41nm,0.1s						
ARXS				*e*S	**Sn**	**00 29 27.8**	**-0.6**
	67nm,0.2s						
KPKS	**Kokpek**	**1.31**	**198**	P	**Pb**	**00 29 15.3**	**+0.4**
	0.1nm,0.1s						
KPKS				S	**Sg**	**00 29 31.7**	**-0.1**
	112nm,0.2s						
KPKS	**Kokpek**	**1.31**	**198**	*e*P	**Pb**	**00 29 15.3**	**+0.4**
	0.1nm,0.1s						
KPKS				*e*S	**Sg**	**00 29 31.7**	**-0.1**
	112nm,0.2s						
PDGK	**Podgornoye**	**1.40**	**173**	⇓P	**Pn**	**00 29 16.0**	**0.0**
	4.4nm,0.2s						
PDGK				⇑S	**Sg**	**00 29 32.8**	**-1.7**
	22nm,0.4s						
KURS	**Kuram**	**1.45**	**213**	P	**Pg**	**00 29 18.2**	**+0.7**
	17nm,0.2s						
KURS				S	**Sg**	**00 29 36.4**	**+0.1**
	15nm,0.3s						
SHLS	**Shalkode**	**1.56**	**174**	P	**Pg**	**00 29 19.9**	**+0.3**
	24nm,0.2s						
SHLS				S	**Sg**	**00 29 39.9**	**0.0**
	171nm,0.2s						
SHLS	**Shalkode**	**1.56**	**174**	*e*P	**Pg**	**00 29 19.9**	**+0.3**
	24nm,0.2s						
SHLS				*e*S	**Sb**	**00 29 39.5**	**+0.2**
	171nm,0.2s						
UZB	**Uzynbulak**	**1.58**	**186**	P	**Pb**	**00 29 19.6**	**+0.2**
	28nm,0.2s						
UZB				S	**Sn**	**00 29 38.7**	**-0.5**
	266nm,0.2s						
UZB	**Uzynbulak**	**1.58**	**186**	*e*P	**Pb**	**00 29 19.6**	**+0.2**
	28nm,0.2s						
UZB				*e*S	**Sn**	**00 29 38.7**	**-0.5**
	266nm,0.2s						
SATY	**Saty**	**1.77**	**201**	P	**Pg**	**00 29 23.9**	**+0.5**
	54nm,0.1s						
SATY				S	**Sg**	**00 29 46.1**	**-0.2**
	166nm,0.1s						
KTBS	**Karatobe**	**2.10**	**242**	Pg	**Pg**	**00 29 30.4**	**+0.4**
	17nm,0.1s						
KTBS				Lg	Lg	00 29 57.3	
	37nm,0.3s						
KTBS	**Karatobe**	**2.10**	**242**	*e*P	**Pg**	**00 29 30.4**	**+0.4**
	17nm,0.1s						
KTBS				*e*S	**Sg**	**00 29 57.3**	**+0.1**
	37nm,0.3s						
KOTS	**Kotyrbulak**	**2.14**	**227**	Pg	**Pg**	**00 29 30.9**	**+0.3**
	15nm,0.1s						
KOTS				Lg	Lg	00 29 58.7	
	43nm,0.2s						
KOTS	**Kotyrbulak**	**2.14**	**227**	*e*P	**Pg**	**00 29 30.9**	**+0.3**
	15nm,0.1s						
KOTS				*e*S	**Sg**	**00 29 58.7**	**+0.3**
	43nm,0.2s						
MDOK	**Medeo**	**2.22**	**227**	Pg	**Pg**	**00 29 32.6**	**+0.3**
	16nm,0.1s						
MDOK				Lg	Lg	00 30 01.0	
	38nm,0.1s						
KNDC	**Almaty**	**2.23**	**229**	⇑Pn	**Pg**	**00 29 32.0**	**-0.4**
	45nm,0.3s						
KNDC				⇑Sn	**Sg**	**00 30 02.0**	**+0.7**
	36nm,0.5s						
IZV	**Izvestkoviy**	**2.54**	**230**	Pg	**Pg**	**00 29 38.3**	**0.0**
	7.8nm,0.1s						
IZV				Lg	Lg	00 30 10.9	
	25nm,0.4s						
IZV	**Izvestkoviy**	**2.54**	**230**	*e*P	**Pg**	**00 29 38.3**	**0.0**
	7.8nm,0.1s						
IZV				*e*S	**Sg**	**00 30 10.9**	**-0.4**
	25nm,0.4s						
MAKZ	**Makanchi**	**2.83**	**41**	⇑Pn	**Pb**	**00 29 40.5**	**-0.2**
	1.8nm,0.6s						
MAKZ				⇑Lg	Lg	00 30 22.0	
	4.9nm,0.3s						
KST	**Kastek**	**2.91**	**236**	Pg	**Pg**	**00 29 44.4**	**-1.0**
	4.6nm,0.2s						
KST				Lg	Lg	00 30 21.2	
	15nm,0.3s						
KST	**Kastek**	**2.91**	**236**	*e*P	**Pg**	**00 29 44.4**	**-1.0**
	4.6nm,0.2s						
KST				*e*S	**Sg**	**00 30 21.2**	**-1.9**
	15nm,0.3s						
DGS	**Degeres**	**2.91**	**241**	Pg	**Pg**	**00 29 44.7**	**-0.8**
	7.2nm,0.2s						
DGS				Lg	Lg	00 30 21.7	
	16nm,0.3s						
DGS	**Degeres**	**2.91**	**241**	*e*P	**Pg**	**00 29 44.6**	**-0.8**
	7.2nm,0.2s						
DGS				*e*S	**Sg**	**00 30 21.7**	**-1.5**
	16nm,0.3s						
MK31	**Makanchi Array**	**2.97**	**45**	⇑Pn	**Pb**	**00 29 42.3**	**-0.8**
	0.4nm,0.2s,baz=111,slow=12,SNR=43						
MK31				⇑Lg	Lg	00 30 25.7	
	1.6nm,0.2s,baz=221,slow=26,SNR=7.0						
AAK	**Ala-Archa**	**4.03**	**241**	⇑Pn	**Pn**	**00 29 55.7**	**+3.6**
	4.6nm,1.3s						
AAK				⇓P*g*	**Pg**	**00 30 07.3**	**+0.5**
	1.3nm,0.5s						
AAK				⇓Lg	Lg	00 31 01.1	
	6.8nm,1.0s						
KURBB	**Kurchatov Arra**	**5.93**	**356**	⇑Pg	**Pg**	**00 30 42.9**	**-0.3**
	1.8nm,0.8s						
KURBB				⇑Lg	Lg	00 32 05.0	
	13nm,0.7s						
KURK	**Kurchatov**	**6.02**	**356**	⇓Lg	Lg	00 32 07.4	
	1.9nm,0.8s						
KK31	**Karatay Array**	**6.52**	**259**	⇑Pg	**Pg**	**00 30 52.6**	**-1.9**
	0.8nm,0.6s,baz=72,slow=16,SNR=6.5						
KK31				⇑Lg	Lg	00 32 23.6	
	1.4nm,0.4s,baz=69,slow=29,SNR=5.7						

*NOU **25** 00:34:49.9, 37°.59S×179°.26E, h3km, MLv3.6/9, Off E. Coast of N. Island, N.Z.*
*WEL **25** 00:34:50.2±0.9, 37°.5S±0°.1×179°.9E±0°.1, h12km, M3.2/19, ML3.2/18, MLv3.2/19, Error ellipse: s-maj=10.6km s-min=6.4km az=112.2, confirmed*
ISC 25 00:34:48.6±2.7, 37°.23S±0°.07×179°.2E±0°.1, h14km±10km, n50, σ0§79/58, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.81**	**246**	P	**Pg**	**00 35 04.1**	**-0.3**
MXZ	**Matakaoa Point**	**0.81**	**246**	S	**Sg**	**00 35 14.8**	**-0.2**
MXZ	**Matakaoa Point**	**0.81**	**246**	P	**Pg**	**00 35 04.3**	**0.0**
MXZ				S	**Sg**	**00 35 14.3**	**-0.7**
WMGZ	**Waiomatatini S**	**0.88**	**228**	P	**Pn**	**00 35 07.6**	**+1.1**
WMGZ				S	**Sn**	**00 35 19.9**	**+0.8**
PKGZ	**Pakihiroa**	**1.11**	**235**	P	**Pn**	**00 35 10.7**	**+0.8**
PKGZ				S	**Sn**	**00 35 25.4**	**+0.4**
PUZ	**Puketiti**	**1.14**	**223**	P	**Pg**	**00 35 11.1**	**+0.4**
PUZ				S	**Sn**	**00 35 26.9**	**+1.3**
HAZ	**Te Kaha**	**1.27**	**245**	P	**Pn**	**00 35 11.3**	**-0.6**
HAZ				S	**Sb**	**00 35 28.8**	**+0.3**
TWGZ	**Tauwhareparae**	**1.37**	**226**	P	**Pb**	**00 35 14.5**	**+0.5**
TWGZ				S	**Sg**	**00 35 32.4**	**-0.5**
RUGZ	**Raukumara Rang**	**1.44**	**239**	P	**Pb**	**00 35 15.4**	**+0.1**
CNGZ	**Carnagh Statio**	**1.49**	**213**	P	**Pb**	**00 35 16.7**	**+0.6**
TKGZ	**Te Karaka**	**1.63**	**222**	P	**Pn**	**00 35 17.9**	**+1.0**
MWZ	**Matawai**	**1.74**	**230**	P	**Pn**	**00 35 19.3**	**+0.8**
RIGZ	**Rimuhau**	**1.88**	**218**	P	**Pn**	**00 35 21.2**	**+0.9**
WHRZ	**Whale Island**	**1.90**	**250**	P	**Pn**	**00 35 21.2**	**+0.6**
RAGZ	**Rawiri**	**1.92**	**228**	P	**Pn**	**00 35 21.6**	**+0.8**
RAGZ				S	**Sn**	**00 35 44.1**	**-0.7**
URZ	**Urewera**	**1.97**	**238**	P	**Pn**	**00 35 22.2**	**+0.6**
URZ	**Urewera**	**1.97**	**238**	P	**Sn**	**00 35 46.2**	**+0.2**
URZ	**Urewera**	**1.97**	**238**	P	**Pn**	**00 35 22.3**	**+0.8**
URZ				S	**Sn**	**00 35 45.7**	**-0.4**
PRGZ	**Paritu Road**	**2.00**	**212**	P	**Pn**	**00 35 22.8**	**+0.9**
KNZ	**Kokohu**	**2.17**	**214**	P	**Pn**	**00 35 24.5**	**+0.3**
MUGZ	**Murupara**	**2.31**	**237**	P	**Pn**	**00 35 26.6**	**+0.3**
TARZ	**Mount Tarawera**	**2.38**	**244**	P	**Pn**	**00 35 28.5**	**+1.2**
RAHZ	**Arahi**	**2.39**	**225**	P	**Pn**	**00 35 28.5**	**+1.1**
MYRZ	**Mayor Island**	**2.39**	**268**	P	**Pn**	**00 35 27.2**	**-0.2**
MTHZ	**Maungataniwha**	**2.49**	**229**	P	**Pn**	**00 35 29.5**	**+0.7**
NMHZ	**Naumai**	**2.67**	**225**	P	**Pn**	**00 35 31.8**	**+0.5**
ARHZ	**Arapoaanui**	**2.69**	**220**	P	**Pn**	**00 35 31.8**	**+0.4**
BKZ	**Black Stump Fm**	**2.90**	**227**	P	**Pn**	**00 35 34.5**	**+0.1**
BKZ	**Black Stump Fm**	**2.90**	**227**	P	**Sn**	**00 36 07.5**	**-1.5**
BKZ	**Black Stump Fm**	**2.90**	**227**	P	**Pn**	**00 35 34.6**	**+0.3**
MCHZ	**McNeill Hill**	**2.98**	**221**	P	**Pn**	**00 35 35.5**	**+0.1**
KWHZ	**Kaweka Forest**	**3.11**	**224**	P	**Pn**	**00 35 37.3**	**0.0**
KAHZ	**Kahuranaki**	**3.16**	**215**	P	**Pn**	**00 35 37.3**	**-0.6**
GRZ	**Great Barrier**	**3.19**	**287**	P	**Pn**	**00 35 38.4**	**+0.1**
MKAZ	**Moumakai**	**3.26**	**271**	P	**Pn**	**00 35 38.3**	**-0.9**
KRHZ	**Kereru**	**3.29**	**222**	P	**Pn**	**00 35 39.2**	**-0.6**
TMVZ	**Te Maari**	**3.36**	**235**	P	**Pn**	**00 35 40.7**	**-0.1**
ETVZ	**East Tongariro**	**3.37**	**235**	P	**Pn**	**00 35 40.7**	**-0.2**
NTVZ	**North Tongariro**	**3.37**	**235**	P	**Pn**	**00 35 40.8**	**-0.1**
OTVZ	**Oturere**	**3.41**	**234**	P	**Pn**	**00 35 41.6**	**+0.1**
SNVZ	**South Ngauruho**	**3.44**	**234**	P	**Pn**	**00 35 41.8**	**-0.1**
NGZ	**Ngauruhoe**	**3.46**	**235**	P	**Pn**	**00 35 42.0**	**-0.1**
MOVZ	**Moawhango**	**3.50**	**231**	P	**Pn**	**00 35 42.7**	**+0.1**
WNVZ	**Wahianoa**	**3.54**	**233**	P	**Pn**	**00 35 43.1**	**-0.3**
PNHZ	**Pukenui**	**3.58**	**221**	P	**Pn**	**00 35 42.7**	**+1.0**
HIZ	**Hauiti**	**3.69**	**248**	P	**Pn**	**00 35 46.1**	**+0.9**
HIZ	**Hauiti**	**3.69**	**248**	P	**Pn**	**00 35 46.0**	**+0.7**
BFZ	**Birch Farm**	**4.16**	**213**	P	**Pn**	**00 35 50.1**	**-1.5**
BFZ	**Birch Farm**	**4.16**	**213**	P	**Sn**	**00 36 37.0**	**-3.0**
OUZ	**Omahuta**	**4.98**	**292**	P	**Pn**	**00 36 03.3**	**+0.4**

*NEIC **25** 00:36:29.8±0.5, 17°.73N±0°.03×66°.90W±0°.02, h10km±2km, ML2.6/31, Md3.1/7(RSPR), Error ellipse: s-maj=5.8km s-min=3.0km az=18.0*
*SDD **25** 00:36:32.0±1.6, 17°.79N×66°.92W, h13km±17km, MD3.2, ML2.4, MW2.7, Presumed earthquake*
ISC 25 00:36:30.5±1.3, 17°.79N±0°.07×66°.89W±0°.02, h15km±7km, n22, σ0§36/41, 7C-5D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.19**	**2**		**Pg**	**00 36 34.9**	**-0.1**
GBPR					**Sg**	**00 36 38.5**	**+0.5**
MLPR	**Magueyes Islan**	**0.24**	**321**		**Pg**	**00 36 35.4**	**-0.3**
MLPR				Sg	**Sg**	**00 36 39.2**	**-0.1**
MLPR				IAML		00 36 40.2	
	696nm,0.7s						
MLPR				IAML		00 36 40.3	
	527nm,0.8s						
MLPR	**Magueyes Islan**	**0.24**	**321**	⇓*e*Pg	**Pg**	**00 36 35.7**	**0.0**
MLPR				⇑*e*Sg	**Sb**	**00 36 40.0**	**-0.4**
MLPR				IAML		00 36 41.8	
	comp=N,210nm,0.3s						
OBIP	**Obispado Ponce**	**0.37**	**46**	Pg	**Pg**	**00 36 38.0**	**-0.1**
OBIP				Sg	**Sb**	**00 36 44.0**	**-0.4**
CELP	**Cerrillos**	**0.41**	**45**	Pg	**Pg**	**00 36 38.8**	**0.0**
CELP				Sg	**Sb**	**00 36 45.3**	**-0.2**
CELP				IAML		00 36 47.9	
	comp=N,405nm,0.3s						
CELP				IAML		00 36 48.0	
	comp=N,279nm,0.2s						
LSP	**Las Mesas**	**0.43**	**334**		**Pb**	**00 36 39.8**	**0.0**
LSP					**Sb**	**00 36 46.3**	**+0.1**
UUPR	**Utuado, UPR, P**	**0.49**	**19**	Pg	**Pg**	**00 36 40.1**	**-0.2**
UUPR				Sg	**Sb**	**00 36 47.7**	**-0.2**
PRSN	**Puerto Rico Se**	**0.49**	**330**	Pg	**Pg**	**00 36 40.2**	**-0.1**
PRSN				Sg	**Sb**	**00 36 47.9**	**0.0**
PRSN	**Puerto Rico Se**	**0.49**	**330**	⇑*e*Pg	**Pg**	**00 36 40.5**	**+0.1**
PRSN				⇑*e*Sg	**Sg**	**00 36 46.4**	**-0.6**
PRSN				IAML		00 36 49.0	
	comp=N,817nm,0.3s						
AOPR	**Arecibo Observ**	**0.57**	**13**	Pg	**Pg**	**00 36 41.6**	**-0.2**
AOPR				Sg	**Sg**	**00 36 49.8**	**+0.3**
AOPR				IAML		00 36 52.1	
	comp=N,452nm,0.3s						
AOPR	**Arecibo Observ**	**0.57**	**13**	⇑*e*Pg	**Pg**	**00 36 41.8**	**0.0**
AOPR				⇓*e*Sg	**Sb**	**00 36 50.5**	**+0.3**
AOPR				IAML		00 36 52.1	
	comp=N,412nm,0.2s						
AGPR	**Aguadilla, PR**	**0.71**	**343**	Pg	**Pg**	**00 36 44.1**	**-0.3**
AGPR				Sg	**Sg**	**00 36 53.6**	**-0.2**
AGPR				IAML		00 36 56.1	
	comp=N,168nm,0.3s						
AGPR				IAML		00 36 59.2	
	comp=N,180nm,0.4s						
AGPR	**Aguadilla, PR**	**0.71**	**343**	⇑*e*Pg	**Pg**	**00 36 44.3**	**-0.1**
AGPR				⇓*e*Sg	**Sb**	**00 36 54.5**	**+0.3**
AGPR				IAML		00 36 56.1	
	comp=N,126nm,0.2s						
ECPR	**Experimental S**	**0.73**	**43**	Pg	**Pg**	**00 36 44.3**	**-0.4**
ECPR				Sg	**Sb**	**00 36 54.6**	**0.0**
ECPR				IAML		00 36 56.6	
	comp=N,306nm,0.2s						
ECPR				IAML		00 36 56.8	
	comp=N,333nm,0.2s						
IGPR	**InterUniversit**	**0.77**	**76**		**Pb**	**00 36 45.4**	**0.0**
IGPR					**Sn**	**00 36 57.7**	**-0.2**
SJG	**San Juan**	**0.77**	**65**	Pg	**Pg**	**00 36 45.3**	**-0.3**
SJG	**San Juan**	**0.77**	**65**	Sg	**Sg**	**00 36 55.7**	**-0.1**
IDE	**Isla Desecheo**	**0.82**	**317**		**Pb**	**00 36 46.2**	**-0.2**
IDE					**Sg**	**00 36 56.1**	**-1.1**
HUMP	**Col San Antoni**	**1.05**	**70**	Pg	**Pb**	**00 36 50.0**	**-0.3**
HUMP				Sg	**Sg**	**00 37 04.7**	**+0.1**
HIDR	**Higuey Centro**	**1.92**	**295**	⇑*e*Pg	**Pb**	**00 37 05.4**	**+0.3**
HIDR				⇓*e*Sg	**Sb**	**00 37 28.8**	**-0.1**
HIDR				IAML		00 37 37.1	
	comp=N,27nm,0.3s						
DR12	**Loma Pena Alta**	**2.57**	**293**	Pn	**Pn**	**00 37 12.5**	**+0.9**
HATOM	**Hato Mayor del**	**2.57**	**293**	⇓*e*Pg	**Pb**	**00 37 16.1**	**-0.2**
HATOM				⇑*e*Sg	**Sb**	**00 37 47.0**	**-0.7**
HATOM				IAML		00 37 50.6	
	comp=N,19nm,2.1s						

*JMA **25** 00:44:20.1±0.3, 44°.N±2°×14°.8E±°, h0km, MV3.9/15, SE OFF ETOROFU*
*SKHL **25** 00:44:22.1±0.3, 44°.50N×148°.20E, h35km±4km, mb4.5/4*
ISC 25 00:44:15.8±3.0, 44°.3N±0°.1×148°.2E±0°.1, h10km±16km, n13, σ1§02/18, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.01**	**346**	*e*P	**Pn**	**00 44 36.5**	**+0.6**
KUR				AMB	AMB	00 44 37.1	
	300nm,0.3s						
KUR				*e*S	**Sg**	**00 44 47.5**	**-0.8**
KUR				A	A	00 44 49.3	
	630nm,0.2s						
KUR				A	A	00 44 49.3	
	840nm,0.2s						
SHO	**Shikotan**	**1.07**	**249**	*e*P	Pn	00 44 51.5	+15
SHO				AMB	AMB	00 44 52.1	
	50nm,0.2s						
SHO				*e*S	Sn	00 45 04.4	+13
SHO				A	A	00 45 06.5	
	190nm,0.2s						
SHO				A	A	00 45 06.5	
	350nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.71**	**263**	*e*P	**Pg**	**00 44 49.6**	**+1.0**
YUK				AMB	AMB	00 44 51.7	
	130nm,0.2s						
YUK				*e*S	**Sg**	**00 45 10.2**	**-0.6**
YUK				A	A	00 45 17.8	
	310nm,0.4s						
YUK				A	A	00 45 17.8	
	490nm,0.4s						
NEM2	**Nemuro 2**	**2.00**	**244**	P	**Pg**	**00 44 53.9**	**-0.3**
NEM2				*e*S	**Sb**	**00 45 17.9**	**+0.7**
NMR	**Nemuro--Hokkai**	**2.01**	**245**	*i* P	**Pg**	**00 44 53.8**	**-0.5**
NMR				*i* S	**Sb**	**00 45 17.7**	**+0.3**
GLVR	**Golovnino**	**2.02**	**256**	*e*P	**Pg**	**00 44 56.5**	**+2.1**
GLVR				AMB	AMB	00 44 58.1	
	80nm,0.2s						
GLVR				*i* S	**Sg**	**00 45 21.4**	**+0.8**
GLVR				A	A	00 45 28.7	
	610nm,0.4s						
GLVR				A	A	00 45 28.7	
	470nm,0.4s						
JRA	**Rausu**	**2.25**	**263**	P	**Pg**	**00 44 58.6**	**-0.3**
JNSB	**Nemuroshibetsu**	**2.37**	**259**	*e*P	**Pg**	**00 45 00.4**	**-0.8**
JKHN	**Kushirohamanak**	**2.51**	**243**	*e*S	**Sb**	**00 45 31.1**	**-0.8**
JNK	**Nakash**	**2.62**	**256**	P	**Pb**	**00 45 03.8**	**+1.1**
AKK	**Akkeshi**	**2.75**	**244**	*e*P	**Pb**	**00 45 04.7**	**-0.2**
JAK	**Akkeshi**	**2.85**	**245**	P	**Pb**	**00 45 06.2**	**-0.6**
JAR	**Ashorobuto**	**3.36**	**255**	P	**Pb**	**00 45 14.8**	**-0.6**
JAR				*e*S	**Sb**	**00 45 54.6**	**-1.7**

*IDC **25** 01:10:49.3±1.2, 6°.59S×132°.38E, h0km, mb3.9/7, mbtmp4.0/11, ML4.3/4, MS3.1/2, Error ellipse: s-maj=56.8km s-min=20.8km az=80.0*
*NEIC **25** 01:10:52.0±1.9, 6°.54S±0°.02×132°.4E±0°.1, h10km±1km, mb4.4/6, Error ellipse: s-maj=17.0km s-min=2.9km az=97.0*
*DJA **25** 01:10:56.7±0.3, 6°.S±2°×13°.2E±°, h86km±7km, M4.5/21, mb4.5/13, mB5.2/6, MLv4.4/21, Mw(mB)4.6/6*
ISC 25 01:10:54.3±0.6, 6°.55S±0°.04×132°.40E±0.06, h35km, n49, σ1§67/53, mb3.9/8, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.79**	**217**		**Pn**	**01 11 23.4**	**+0.6**
SAUI				Sn	**Sn**	**01 11 44.9**	**+0.5**
SAUI	**Saumlaki**	**1.79**	**217**	P	**Pn**	**01 11 25.3**	**+2.5**
KMPI	**Kaimana, Papua**	**3.15**	**24**	P	**Pn**	**01 11 44.0**	**+2.5**
KMPI				S	**Sn**	**01 12 18.5**	**+0.6**
BNDI	**Bandanaira**	**3.20**	**309**	P	**Pn**	**01 11 44.0**	**+1.8**
BNDI	**Bandanaira**	**3.20**	**309**	S	**Sn**	**01 12 21.1**	**+2.0**
BNDI	**Bandanaira**	**3.20**	**309**	P	**Pn**	**01 11 43.7**	**+1.5**
FAKI	**Fak Fak**	**3.61**	**358**	P	**Pn**	**01 11 49.2**	**+1.4**
FAKI	**Fak Fak**	**3.61**	**358**		**Pn**	**01 11 48.9**	**+1.1**
FAKI				Sn	**Sn**	**01 12 27.8**	**-1.5**
FAKI	**Fak Fak**	**3.61**	**358**	P	**Pn**	**01 11 49.3**	**+1.4**
FAKI				S	**Sn**	**01 12 27.7**	**-1.6**
MSAI	**Masohi**	**4.70**	**312**	P	**Pn**	**01 12 03.3**	**+0.5**
KRAI	**Karang Ratu**	**5.12**	**309**	P	**Pn**	**01 12 10.7**	**+2.1**
	0.4nm8µm59nm,0.5s						
RKPI	**Ransiki, Papua**	**5.

comp=Z,0.5nm,0.6s
KKAR **Karatay Array** 74.59 318 P P 01 22 30.3 +0.3
BVAR **Borovoye Array** 78.97 327 P P 01 22 55.0 +0.6
comp=Z,0.5nm,0.7s,baz=141,slow=5.5,SNR=2.8
comp=Z,0.5nm,0.7s
QSPA **South Pole Qui** 83.42 180 P P 01 23 19.1 +1.0
comp=Z,1.4nm,0.9s,baz=9.5,slow=6.1,SNR=2.3
comp=Z,1.4nm,0.9s
QSPA **South Pole Qui** 83.42 180 P P 01 23 18.6 +0.6
QSPA IAmb IAmb 01 23 44.9
comp=Z,3.1nm,1.2s
ILAR **Eielson Array** 91.93 25 P P 01 23 59.1 +0.2
comp=Z,0.3nm,0.8s,baz=231,slow=4.3,SNR=3.0
comp=Z,0.3nm,0.8s

MAN ***25*** *01:43:34.0,2.˝84N×128.˚63E,h94km,MS4.2*
NEIC ***25*** *01:43:35.0±1.3,2.˚61N×128.˚28E,h146km±12km,mb4.2/22, mbtmp4.6/25,MS3.1/2,Error ellipse: s-maj=17.2km s-min=8.8km az=70.0*
IDC ***25*** *01:43:35.2±1.3,2.˚61N×128.˚28E,h146km±12km,mb4.2/22, mbtmp4.6/25,MS3.1/2,Error ellipse: s-maj=13.2km s-min=10.4km az=202.0*
DJA ***25*** *01:43:36.6±0.3,3˚N±4˚×12˚8E±˚,h129km±3km,M4.7/27, mB5.3/17,mb4.8/21,MLv4.7/27,Mw(mB)4.7/17*
ISC 25 01:43:34.8±0.5,**2.˚68N**±0.˚04×**128.˚25E**±0.˚06,**h140**km±4km, **n371**,σ1**12**/388,**mb4.7**/68,**3C-1D**,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
GAMI	**Galela, Maluku**	**0.95**	**209**	P		**Pn**	**01 43 58.9**	**+0.6**
GAMI				S		**Sn**	**01 44 15.9**	**-0.2**
TNTI	**Ternate**	**2.09**	**205**			**Pn**	**01 44 10.1**	**-0.3**
TNTI				Sn		**Sn**	**01 44 39.0**	**+1.2**
TNTI	**Ternate**	**2.09**	**205**	P		**Pn**	**01 44 10.8**	**+0.3**
SGSI	**Sangihe**	**2.89**	**290**	P		**Pn**	**01 44 21.5**	**+1.0**
MNI	**Manado**	**3.62**	**250**	P		**Pn**	**01 44 30.4**	**+0.5**
DDMP	**Don Marcelino,**	**4.24**	**324**	*eP*		**Pn**	**01 44 40.4**	**+2.3**
DDMP				*eS*		**Sn**	**01 45 26.8**	**-0.3**
SWI	**Sorong**	**4.63**	**139**	P		**Pn**	**01 44 44.8**	**+1.6**
SIJI	**Sorong**	**4.64**	**139**	P		**Pn**	**01 44 42.8**	**-0.6**
	11nm,0.2s,baz=317,slow=12,SNR=9.4							
SIJI				S		**Sn**	**01 45 36.0**	**-0.7**
	17nm,0.4s,baz=193,slow=23,SNR=8.3							
SIJI	**Sorong**	**4.64**	**139**	P		**Pn**	**01 44 44.2**	**+0.8**
GSPH	**General Santos**	**4.72**	**316**	*i* P		**Pn**	**01 44 45.0**	**+0.5**
GSPH				*i* S		**Sn**	**01 45 39.4**	**+0.7**
SANI	**Sanana**	**5.21**	**206**	P		**Pn**	**01 44 50.0**	**-0.9**
KCP	**Kidapawan**	**5.33**	**324**	*i* P		**Pn**	**01 44 55.4**	**+2.8**
KCP				*i* S		**Sn**	**01 45 56.2**	**+3.0**
CDOP	**Cateel, Davao**	**5.38**	**341**	*eP*		**Pn**	**01 44 53.6**	**+0.4**
CDOP				*eS*		**Sn**	**01 45 49.1**	**-5.3**
GTOI	**Gorontalo**	**5.61**	**249**	P		**Pn**	**01 44 57.7**	**+1.4**
	1.7nm5µm364nm,0.7s							
BIPH	**Bislig**	**5.78**	**341**	*eP*		**Pn**	**01 44 58.4**	**-0.2**
BIPH				*eS*		**Sn**	**01 45 56.8**	**-7.2**
NLAI	**Namlea**	**5.99**	**191**	P		**Pn**	**01 45 01.7**	**+0.4**
	0.2nm33nm,0.9s							
AAI	**Ambon**	**6.32**	**180**	P		**Pn**	**01 45 07.5**	**+1.7**
	0.2nm46nm,0.9s							
LUWI	**Luwuk**	**6.60**	**236**			**Pn**	**01 45 08.9**	**-0.7**
LUWI	**Luwuk**	**6.60**	**236**	P		**Pn**	**01 45 10.6**	**+1.0**
	1.0nm3µm124nm,0.7s							
TSSP	**Tandag City**	**6.64**	**342**	*eP*		**Pn**	**01 45 12.8**	**+2.7**
TSSP				*eS*		Sn	01 46 05.6	-19
MRSI	**Marisa**	**6.67**	**251**	P		**Pn**	**01 45 11.2**	**+0.7**
	1.2nm4µm369nm,1.1s							
CGP	**Cagayan de Oro**	**6.74**	**329**	*eP*		Pn	01 45 18.0	+6.6
CGP				*eS*		Sn	01 46 16.8	-10
MWPI	**Manokwari, Pap**	**6.81**	**122**	P		**Pn**	**01 45 15.4**	**+3.0**
	1.0nm3µm230nm,1.0s							
FAKI	**Fak Fak**	**6.85**	**144**			**Pn**	**01 45 12.4**	**-0.5**
FAKI	**Fak Fak**	**6.85**	**144**	P		**Pn**	**01 45 15.1**	**+2.2**
	0.2nm68nm,1.1s							
RKPI	**Ransiki, Papua**	**7.24**	**125**	P		**Pn**	**01 45 20.9**	**+2.7**
	63nm,0.7s							
APSI	**Ampana**	**7.50**	**242**	P		**Pn**	**01 45 22.3**	**+0.7**
	0.8nm2µm145nm,1.4s							
TOLI2	**Tolitoli**	**7.62**	**258**			**Pn**	**01 45 22.7**	**-0.6**
MPSI	**Mapaga**	**8.66**	**255**	P		**Pn**	**01 45 37.2**	**0.0**
	42nm,1.2s							
BAKI	**Biak**	**8.75**	**116**	P		**Pn**	**01 45 40.6**	**+2.2**
KAPI	**Kappang**	**11.42**	**228**	P		**Pn**	**01 46 12.8**	**-1.0**
	17nm,0.5s,baz=15,slow=5.6,SNR=13							
KAPI				S		**Sn**	**01 48 16.7**	**-3.3**
	5.0nm,0.4s,baz=204,slow=21,SNR=9.0							
KAPI	**Kappang**	**11.42**	**228**			**Pn**	**01 46 13.0**	**-0.9**
JAY	**Jayapura**	**13.48**	**112**	P		**Pn**	**01 46 39.5**	**-1.1**
	8.3nm,0.8s,baz=312,slow=6.1,SNR=4.1							
BATI	**Baumata**	**13.59**	**200**	LR		LR	01 52 30.5	
	comp=Z,50nm,19.8s,baz=172,slow=40							
SBUM	**Sibu**	**16.01**	**270**	P		**Pn**	**01 47 12.0**	**-0.4**
JAGI	**Jajag, Banyuwa**	**17.89**	**232**			**P**	**01 47 33.6**	**-0.2**
JAGI					IAmb	IAmb	01 47 38.7	
	comp=Z,33nm,0.9s							
KNRA	**Kununurra**	**18.24**	**178**	P		**P**	**01 47 38.3**	**+0.7**
FITZ	**Fitzroy Crossi**	**20.80**	**187**	P		**P**	**01 48 03.5**	**-1.7**
	comp=Z,1.8nm,1.0s,baz=12,slow=9.6,SNR=1.5							
TPUB	**Ta-pu**	**21.79**	**341**			**P**	**01 48 14.5**	**-1.2**
TPUB					IAmb	IAmb	01 48 17.4	
	comp=Z,44nm,0.8s							
SSLB	**Suanglung**	**22.14**	**342**			**P**	**01 48 17.8**	**-1.6**
SSLB					IAmb	IAmb	01 48 21.5	
	comp=Z,35nm,0.9s							
YOJ	**Yonaguni jima**	**22.24**	**347**	P		**P**	**01 48 19.1**	**-1.2**
WRA	**Warramunga Arr**	**23.26**	**165**	P		**P**	**01 48 29.4**	**-0.7**
	comp=Z,1.5nm,0.4s,baz=349,slow=9.7,SNR=31							
WRA					ScP	**ScP**	**01 55 36.1**	**-2.7**
	comp=Z,0.6nm,0.8s,baz=342,slow=2.5,SNR=3.5							
	comp=Z,1.5nm,0.4s							
WRA	**Warramunga Arr**	**23.26**	**165**	P		**P**	**01 48 28.0**	**-2.0**
JOW	**Kunigami**	**24.02**	**0**	P		**P**	**01 48 37.0**	**+0.2**
JOW					IAmb	IAmb	01 48 50.3	
	comp=Z,52nm,1.3s							
ASAR	**Alice Springs**	**26.76**	**168**	P		**P**	**01 49 00.8**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=348,slow=7.7,SNR=5.2							
ASAR					PcP	**PcP**	**01 52 21.4**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=350,slow=2.0,SNR=9.2							
ASAR					ScP	**ScP**	**01 55 47.0**	**-1.6**
	comp=Z,1.1nm,0.8s,baz=4.3,slow=2.3,SNR=8.2							
ASAR	**Alice Springs**	**26.76**	**168**	P		**P**	**01 49 00.2**	**-1.5**
ASAR						**PcP**	**01 52 21.2**	**-0.2**
ASAR						**ScP**	**01 55 46.7**	**-2.0**
NJ2	**Nanjing**	**30.53**	**344**	*eP*		**P**	**01 49 37.4**	**+2.5**
NJ2					pmax	pmax		
	comp=Z,24nm,0.6s							
JMN	**Monobe**	**31.34**	**9**	P		**P**	**01 49 42.1**	**0.0**
JMN					IAmb	IAmb	01 49 51.1	
	comp=Z,22nm,1.2s							
ENH	**Enshi**	**32.70**	**329**			**P**	**01 49 54.7**	**+0.7**
ENH					IAmb	IAmb	01 49 56.6	
	comp=Z,28nm,1.1s							
CM31	**Chiang Mai Arr**	**32.71**	**301**	P		**P**	**01 49 55.3**	**+1.0**
CM31					IAmb	IAmb	01 49 57.5	
	comp=Z,8.4nm,0.7s							
CMAR	**Chiang Mai Arr**	**32.71**	**301**	P		**P**	**01 49 55.1**	**+0.9**
	comp=Z,2.1nm,0.3s,baz=120,slow=7.1,SNR=20							
CMAR					PcP	**PcP**	**01 52 38.0**	**+1.2**
	comp=Z,0.9nm,0.3s,baz=143,slow=2.5,SNR=4.7							
CMAR					ScP	**ScP**	**01 56 07.7**	**-0.3**
	comp=Z,1.3nm,0.3s,baz=106,slow=4.6,SNR=1.5							
	comp=Z,2.1nm,0.3s							
CMAR	**Chiang Mai Arr**	**32.71**	**301**			**P**	**01 49 55.1**	**+0.9**
CMAR						**PcP**	**01 52 37.6**	**+0.8**
CMAR						**ScP**	**01 56 08.3**	**+0.4**
CHTO	**Chiang Mai**	**32.86**	**301**	P		**P**	**01 49 56.4**	**+0.8**
CHTO					IAmb	IAmb	01 49 58.4	
	comp=Z,10nm,0.8s							
KMI2	**Kunming**	**33.20**	**315**	⇑P		**P**	**01 50 01.3**	**+2.6**
KMI2					pmax	pmax		
	comp=Z,26nm,0.9s							
INU	**Inuyama**	**33.51**	**13**			**P**	**01 50 00.4**	**-0.6**
TJN	**Taejon**	**33.54**	**359**	P		**P**	**01 50 01.8**	**+0.5**
KSAR	**Wonju Array Be**	**34.60**	**359**	P		**P**	**01 50 10.6**	**+0.3**
KSRS	**Korea Array**	**34.61**	**360**	P		**P**	**01 50 11.1**	**+0.6**
	comp=Z,9.3nm,0.9s,baz=177,slow=10,SNR=36							
KSRS					PcP	**PcP**	**01 52 42.9**	**+1.1**
	comp=Z,1.2nm,0.6s,baz=177,slow=2.4,SNR=5.7							
	comp=Z,9.3nm,0.9s							
KS19	**Wonju Array Si**	**34.66**	**359**	P		**P**	**01 50 10.6**	**-0.3**
KS19					IAmb	IAmb	01 50 12.0	
	comp=Z,13nm,0.8s							
MJAR	**Matsushiro Arr**	**34.93**	**14**	P		**P**	**01 50 12.3**	**-1.0**
	comp=Z,13nm,0.7s,baz=183,slow=9.7,SNR=32							
	comp=Z,13nm,0.7s							
MJAR	**Matsushiro Arr**	**34.93**	**14**			**P**	**01 50 11.8**	**-1.4**
MAJO	**Matsushiro**	**34.93**	**14**			**P**	**01 50 12.2**	**-1.0**
MAJO					IAmb	IAmb	01 50 14.1	
	comp=Z,17nm,0.7s							
LYN	**LuoYang**	**34.95**	**337**	P		**P**	**01 50 15.0**	**+1.6**
LYN					pmax	pmax		
	comp=Z,19nm,0.8s							
XAN	**Xi'an**	**36.04**	**332**	⇑P		**P**	**01 50 23.5**	**+0.7**
XAN					pmax	pmax		
	comp=Z,35nm,1.1s							
STKA	**Stephens Creek**	**36.63**	**161**	P		**P**	**01 50 27.1**	**-0.6**
	comp=Z,2.4nm,0.3s,baz=348,slow=8.9,SNR=13							
	comp=Z,2.4nm,0.3s							
HNS	**HongShan**	**36.73**	**342**	⇑P		**P**	**01 50 29.3**	**+0.8**
HNS					pmax	pmax		
	comp=Z,11nm,0.9s							
BJI2	**Beijing**	**38.75**	**345**	P		**P**	**01 50 46.1**	**+0.6**
BJI2					pmax	pmax		
	comp=Z,8.0nm,0.7s							
BJT	**Baijiatuan**	**38.75**	**345**			**P**	**01 50 44.6**	**-0.9**
BJT					IAmb	IAmb	01 50 46.9	
	comp=Z,12nm,0.6s							
JTM	**Tenmabayashi**	**39.67**	**15**	P		**P**	**01 50 53.6**	**+0.6**
LZDM	**Lanzhou Array**	**40.15**	**328**	P		**P**	**01 50 58.8**	**+1.1**
	comp=Z,14nm,0.8s,baz=117,slow=8.3,SNR=14							
	comp=Z,14nm,0.8s							
LZH	**Lanzhou**	**40.18**	**329**	*eP*		**P**	**01 50 59.8**	**+2.2**
LZH					sP	sP	01 51 40.3	-3.3
LZH					pmax	pmax		
	comp=Z,52nm,1.3s							
LZH					L	L		
	comp=Z,150nm,14.1s							
LZH					L	L		
	comp=Z,170nm,14.1s							
LZH					L	L		
	comp=Z,180nm,13.1s							
H11S3	**WAKE ISLAND Hy**	**40.79**	**65**	T		T	02 34 47.5	
	baz=253,slow=75,SNR=5.4							
H11S2	**WAKE ISLAND Hy**	**40.80**	**65**	T		T	02 34 40.5	
	baz=253,slow=75,SNR=4.1							
H11S1	**WAKE ISLAND Hy**	**40.80**	**65**	T		T	02 34 39.4	
	baz=253,slow=75,SNR=3.7							
HHC	**Hu-ho-hao-te**	**40.88**	**341**	*eP*		**P**	**01 51 05.6**	**+2.4**
HHC					pmax	pmax		
	comp=Z,15nm,0.8s							
H11N1	**WAKE ISLAND Hy**	**41.36**	**63**	T		T	02 35 25.6	
	baz=250,slow=75,SNR=15							
H11N2	**WAKE ISLAND Hy**	**41.37**	**63**	T		T	02 35 25.6	
	baz=250,slow=75,SNR=6.5							
H11N3	**WAKE ISLAND Hy**	**41.38**	**63**	T		T	02 35 25.6	
	baz=250,slow=75,SNR=10							
USRK	**Ussuriysk Ar.**	**41.48**	**4**	P		**P**	**01 51 08.8**	**+0.9**
	comp=Z,14nm,0.9s,baz=172,slow=7.4,SNR=17							
	comp=Z,14nm,0.9s							
SHL	**Shillong**	**41.72**	**306**	P		**P**	**01 51 11.1**	**+0.7**
MDJ	**Mudanjiang**	**41.78**	**1**	P		**P**	**01 51 10.5**	**+0.1**
MDJ					IAmb	IAmb	01 51 12.2	
	comp=Z,28nm,1.2s							
BNX	**BinXian**	**42.89**	**359**	⇓P		**P**	**01 51 19.4**	**0.0**
BNX					pmax	pmax		
	comp=Z,4.0nm,0.8s							
LSA	**Lhasa**	**44.27**	**311**	P		**P**	**01 51 31.3**	**+0.1**
LSA					pmax	pmax		
	comp=Z,16nm,0.6s							
GTA2	**Gaotai**	**44.86**	**328**	*eP*		**P**	**01 51 36.8**	**+1.4**
GTA2					PcP	**PcP**	**01 53 16.3**	**+1.6**
GTA2					pmax	pmax		
	comp=Z,15nm,1.0s							
GOMU	**GeErMu**	**45.45**	**321**	P		**P**	**01 51 41.3**	**+1.0**
GOMU					PcP	**PcP**	**01 53 17.9**	**+0.8**
GOMU					pmax	pmax		
	comp=Z,6.0nm,0.7s							
KLR	**Kul'dur**	**46.48**	**3**	LR		LR	02 11 08.4	
	comp=Z,27nm,18.2s,baz=352,slow=36							
EVN	**Everest**	**46.83**	**307**	P		**P**	**01 51 52.5**	**+0.9**
HEH	**HeiHe**	**47.41**	**359**	*eP*		**P**	**01 51 54.8**	**-0.1**
HEH					pmax	pmax		
	comp=Z,14nm,1.1s							
ULN	**Ulaanbaatar**	**48.59**	**341**	P		**P**	**01 52 04.8**	**+0.5**
SONM	**Songino Array**	**48.78**	**341**	P		**P**	**01 52 06.4**	**+0.7**
	comp=Z,8.0nm,0.7s,baz=153,slow=8.5,SNR=34							
SONM					PcP	**PcP**	**01 53 28.9**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=150,slow=3.6,SNR=5.7							
	comp=Z,8.0nm,0.7s							
SONM	**Songino Array**	**48.78**	**341**	P		**P**	**01 52 06.2**	**+0.5**
SONM					IAmb	IAmb	01 52 07.4	
	comp=Z,7.7nm,0.8s							
SONM					PcP	**PcP**	**01 53 28.9**	**+0.5**
WMQ	**Urumqi**	**54.45**	**325**	*eP*		**P**	**01 52 48.3**	**+0.5**
WMQ					pmax	pmax		
	comp=Z,22nm,0.9s							
PETK	**Petropavlovsk-**	**55.85**	**21**	P		**P**	**01 52 58.5**	**+0.9**
	comp=Z,6.5nm,0.8s,baz=196,slow=6.3,SNR=4.8							
	comp=Z,6.5nm,0.8s							
PETK	**Petropavlovsk-**	**55.85**	**21**	P		**P**	**01 52 57.7**	**+0.2**
YAK	**Yakutsk**	**59.22**	**1**	P		**P**	**01 53 20.8**	**-0.2**
MKAR	**Makanchi Array**	**59.28**	**325**	P		**P**	**01 53 22.4**	**+0.7**
	comp=Z,11nm,0.7s,baz=120,slow=8.3,SNR=96							
MKAR					PcP	**sP**	**01 54 06.9**	**-2.3**
	comp=Z,3.5nm,0.8s,baz=117,slow=5.6,SNR=7.5							
	comp=Z,11nm,0.7s							
MKAR	**Makanchi Array**	**59.28**	**325**			**P**	**01 53 22.2**	**+0.4**
MKAR						**sP**	**01 54 08.3**	**-1.0**
MA2	**Magadan**	**59.37**	**13**	P		**P**	**01 53 22.3**	**+0.3**
MA2					IAmb	IAmb	01 53 23.9	
	comp=Z,13nm,0.9s							
MAKZ	**Makanchi**	**59.47**	**325**	P		**P**	**01 53 23.3**	**+0.3**
NIL	**Nilore**	**59.76**	**308**	P		**P**	**01 53 25.0**	**-0.3**
NIL					IAmb	IAmb	01 53 27.1	
	comp=Z,16nm,1.4s							
KSH2	**Kashi**	**59.99**	**314**	P		**P**	**01 53 28.1**	**+1.1**
KSH2					pmax	pmax		
	comp=Z,11nm,1.0s							
KDJ	**Kajisay**	**60.13**	**318**	P		**P**	**01 53 27.9**	**0.0**
NRN	**Naryn**	**60.63**	**317**	P		**P**	**01 53 31.9**	**+0.4**
BOOM	**Boomskoye usch**	**61.12**	**318**	P		**P**	**01 53 35.2**	**+0.6**
AAK	**Ala-Archa**	**62.15**	**318**	P		**P**	**01 53 41.0**	**-0.4**
ZAA0	**Zalesovo Array**	**62.21**	**333**	P		**P**	**01 53 40.6**	**-0.7**
ZAA0					IAmb	IAmb	01 53 41.8	
	comp=Z,7.3nm,0.9s							
ZALV	**Zalesovo Beam**	**62.21**	**333**	P		**P**	**01 53 40.8**	**-0.5**
	comp=Z,4.9nm,0.8s,baz=114,slow=6.8,SNR=21							
ZALV					PcP	**pwP**	**01 54 17.7**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=132,slow=2.1,SNR=4.9							
	comp=Z,4.9nm,0.8s							
ZALV	**Zalesovo Beam**	**62.21**	**333**	P		**P**	**01 53 40.5**	**-0.9**
ARSB	**Arslanbob**	**62.66**	**316**	P		**P**	**01 53 45.1**	**+0.2**
ARSB					IAmb	IAmb	01 53 46.2	
	comp=Z,4.2nm,0.6s							
DRK	**Karamyk**	**62.83**	**314**	P		**P**	**01 53 46.6**	**+0.5**
DRK					IAmb	IAmb	01 53 48.1	
	comp=Z,14nm,1.0s							
KBL	**Kabul**	**63.36**	**308**	P		**P**	**01 53 49.3**	**-0.4**
KBL					IAmb	IAmb	01 53 50.9	
	comp=Z,5.0nm,0.8s							
KURBB	**Kurchatov Arra**	**63.44**	**327**	P		**P**	**01 53 49.8**	**+0.2**
	comp=Z,13nm,0.7s,baz=126,slow=6.1,SNR=155							
	comp=Z,13nm,0.7s							
KURK	**Kurchatov**	**63.44**	**327**	P		**P**	**01 53 49.3**	**-0.3**
BTK	**Batken**	**63.74**	**314**	P		**P**	**01 53 51.9**	**0.0**
BTK					IAmb	IAmb	01 53 53.1	
	comp=Z,6.6nm,1.0s							
GAR	**Garm**	**63.74**	**313**	P		**P**	**01 53 51.9**	**-0.2**
KK31	**Karatay Array**	**65.03**	**317**			**P**	**01 53 59.9**	**-0.3**
KK31					IAmb	IAmb	01 54 01.5	
	comp=Z,9.3nm,0.9s							
KKAR	**Karatay Array**	**65.03**	**317**			**P**	**01 54 00.1**	**-0.1**
HRA	**Herat**	**68.77**	**306**	P		**P**	**01 54 23.6**	**-0.7**
TIXI	**Tiksi**	**68.88**	**0**	P		**P**	**01 54 23.1**	**-0.7**
TIXI					IAmb	IAmb	01 54 24.4	
	comp=Z,9.7nm,0.9s							
BVAR	**Borovoye Array**	**69.02**	**327**	P		**P**	**01 54 25.2**	**+0.1**
	comp=Z,11nm,0.9s,baz=125,slow=7.4,SNR=36							
BVAR					PcP	**PcP**	**01 54 47.8**	**-0.6**
	comp=Z,3.1nm,0.9s,baz=93,slow=5.8,SNR=4.0							
	comp=Z,11nm,0.9s							
BORK	**Borovoye**	**69.07**	**327**	P		**P**	**01 54 25.2**	**-0.3**
BORK					IAmb	IAmb	01 54 26.5	
	comp=Z,16nm,0.9s							
NRIK	**Noril'sk**	**71.81**	**346**	P		**P**	**01 54 41.8**	**+0.1**
	comp=Z,6.4nm,0.7s,baz=135,slow=7.0,SNR=14							
	comp=Z,6.4nm,0.7s							
NRIK	**Noril'sk**	**71.81**	**346**	P		**P**	**01 54 41.3**	**-0.5**
NRIK					IAmb	IAmb	01 54 42.8	
	comp=Z,13nm,1.1s							
UOSS	**Minazif**	**72.60**	**295**	P		**P**	**01 54 46.7**	**-0.7**
UOSS					IAmb	IAmb	01 55 14.0	
	comp=Z,11nm,1.1s							
AB31	**Akbulak array**	**73.92**	**321**			**P**	**01 54 54.0**	**-0.6**
ABKAR	**Akbulak array**	**73.92**	**321**			**P**	**01 54 54.0**	**-0.6**
GAMB	**Gambell**	**74.74**	**24**	P		**P**	**01 54 59.9**	**+0.8**
	baz=244							
ARTI	**Arti**	**76.71**	**328**	P		**P**	**01 55 09.6**	**-0.8**
ARTI					IAmb	IAmb	01 55 10.4	
	comp=Z,8.7nm,0.6s							
TNA	**Tin City**	**76.97**	**23**	P		**P**	**01 55 12.9**	**+1.2**
	baz=247							
K13K	**Kusilvak Mount**	**77.01**	**27**	P		**P**	**01 55 13.6**	**+1.6**
	baz=251							
M13K	**Dall Lake**	**77.13**	**28**	P		**P**	**01 55 13.9**	**+1.3**
	baz=252							
SDPT	**Sand Point**	**77.22**	**34**	P		**P**	**01 55 14.2**	**+1.0**
	baz=256							
F14K	**Arctic Creek**	**77.55**	**23**	P		**P**	**01 55 16.1**	**+1.2**
	baz=248							
CHNA	**Chernabura Isl**	**77.59**	**34**	P		**P**	**01 55 15.8**	**+0.5**
	baz=257							
ANM	**Nome**	**77.60**	**24**	P		**P**	**01 55 16.0**	**+0.7**
	baz=250							
L14K	**Kuka Creek**	**77.72**	**27**			**P**	**01 55 16.3**	**+0.4**
L14K					IAmb	IAmb	01 55 18.3	
	comp=Z,12nm,1.1s							
L14K	**Kuka Creek**	**77.72**	**27**	P		**P**	**01 55 16.8**	**+1.0**
	baz=253							
N14K	**Kuskokwak Cree**	**77.78**	**29**	P		**P**	**01 55 17.2**	**+0.9**
	baz=254							
O14K	**Tigyukauivet M**	**77.81**	**30**	P		**P**	**01 55 17.4**	**+1.0**
	baz=254							
M14K	**Bethel**	**77.89**	**28**	P		**P**	**01 55 17.3**	**+0.5**
M14K					IAmb	IAmb	01 55 19.0	
	comp=Z,11nm,0.9s							
M14K	**Bethel**	**77.89**	**28**	P		**P**	**01 55 17.8**	**+0.9**
	baz=254							
S14K	**Fog Glacier**	**77.95**	**33**	P		**P**	**01 55 18.0**	**+0.6**
	baz=257							
F15K	**North Star Dit**	**78.29**	**23**	P		**P**	**01 55 19.5**	**+0.5**
	baz=250							
G15K	**Niukluk**	**78.29**	**24**	P		**P**	**01 55 19.8**	**+0.8**
	baz=251							
M15K	**Kasigluk River**	**78.47**	**28**	P		**P**	**01 55 21.0**	**+0.9**
	baz=255							
O15K	**Ungalikthiuk R**	**78.50**	**30**	P		**P**	**01 55 21.0**	**+0.7**
	baz=256							
K15K	**Wolf Creek Mou**	**78.52**	**27**	P		**P**	**01 55 21.5**	**+1.1**
	baz=254							
CHGN	**Chignik**	**78.57**	**33**	P		**P**	**01 55 21.8**	**+1.1**
	baz=258							
N15K	**Kwethluk River**	**78.62**	**29**	P		**P**	**01 55 22.1**	**+1.2**
	baz=255							
H16K	**Elim**	**78.91**	**24**	P		**P**	**01 55 23.0**	**+0.6**
	baz=252							
C16K	**Lisburne Hills**	**78.94**	**20**			**P**	**01 55 22.6**	**+0.2**
C16K	**Lisburne Hills**	**78.94**	**20**	P		**P**	**01 55 23.6**	**+1.1**
	baz=249							
G16K	**Koyuk River**	**79.09**	**24**	P		**P**	**01 55 24.5**	**+1.1**
G16K	**Koyuk River**	**79.09**	**24**	P		**P**	**01 55 24.4**	**+1.1**
	baz=252							
J16K	**Anvik River**	**79.21**	**26**	P		**P**	**01 55 25.2**	**+1.1**
J16K	**Anvik River**	**79.21**	**26**	P		**P**	**01 55 25.1**	**+1.0**
	baz=254							
R16K	**Pilot Point**	**79.29**	**32**	P		**P**	**01 55 25.7**	**+1.1**
	baz=258							
I17K	**Unalakleet**	**79.33**	**25**	P		**P**	**01 55 26.0**	**+1.3**
	baz=254							
N16K	**Nishlik Lake**	**79.33**	**29**	P		**P**	**01 55 25.8**	**+0.9**
	baz=256							
M16K	**Timber Creek**	**79.37**	**28**	P		**P**	**01 55 26.0**	**+1.0**
	baz=256							
P16K	**Nushagak River**	**79.39**	**30**	P		**P**	**01 55 26.2**	**+1.1**
	baz=257							
O16K	**Kokwok River B**	**79.46**	**30**	P		**P**	**01 55 26.6**	**+1.1**
	baz=257							
D17K	**Noatak River**	**79.54**	**21**	P		**P**	**01 55 27.2**	**+1.4**
	baz=251							
RDOG	**Red Dog Mine**	**79.72**	**21**	P		**P**	**01 55 27.9**	**+1.2**
	baz=251							
C17K	**DeLong Mountai**	**79.76**	**20**	P		**P**	**01 55 28.4**	**+1.4**
	baz=251							
G17K	**Kiwalik Mounta**	**79.80**	**24**	P		**P**	**01 55 28.2**	**+1.0**
	baz=254							
E17K	**Hotham Inlet**	**79.81**	**22**	P		**P**	**01 55 28.5**	**+1.3**
	baz=252						

	baz=258						
H20K	Anotleneega Mo	82.14	24	P	P	01 55 41.1	+1.5
	baz=259,SNR=12						
D20K	Etivluk River	82.14	21	P	P	01 55 40.5	+0.9
D20K				IAmb	IAmb	01 55 42.6	
	comp=Z,16nm,1.2s						
D20K	Etivluk River	82.14	21	P	P	01 55 40.6	+0.9
	baz=257						
I20K	Naaghedeneel	82.17	25	P	P	01 55 41.1	+1.3
	baz=260						
Q20K	Shuyak Island	82.18	31	P	P	01 55 41.2	+1.2
	baz=262						
E20K	Nigu River	82.19	21	P	P	01 55 41.3	+1.3
	baz=258						
J20K	Nowinta River	82.21	26	P	P	01 55 41.5	+1.5
	baz=260,SNR=8.3						
B20K	Meade River	82.25	20	P	P	01 55 41.6	+1.5
	baz=256,SNR=7.2						
RAYN	Ar Rayn	82.28	293		P	01 55 41.0	-0.3
M20K	Styx River	82.29	28	P	P	01 55 41.6	+1.0
	baz=261						
N20K	Mount Spurr	82.62	29	P	P	01 55 43.2	+0.9
	baz=262						
IMAR	Indian Mountai	82.69	24		P	01 55 43.5	+1.0
A21K	Barrow	82.73	18	P	P	01 55 43.8	+1.3
	baz=257						
PPLA	Purkeypile	82.87	27	P	P	01 55 44.2	+0.6
	baz=262						
G21K	Allakaket	82.87	23	P	P	01 55 44.8	+1.4
	baz=260						
C21K	Knifeblade Rid	82.88	21	P	P	01 55 44.7	+1.3
	baz=259,SNR=8.2						
CHUM	Lake Minchumin	82.95	26	P	P	01 55 45.1	+1.3
	baz=262						
F21K	Alatna River	83.00	23	P	P	01 55 45.7	+1.6
	baz=260						
H21K	Melozitna Rive	83.02	24	P	P	01 55 45.8	+1.6
	baz=261,SNR=13						
B21K	Ikpikpuk River	83.03	20	P	P	01 55 45.6	+1.5
	baz=259						
E21K	Killik River	83.04	21	P	P	01 55 45.4	+1.1
	baz=260						
SKT	Skwentna	83.05	28	P	P	01 55 44.7	+0.2
	baz=263,SNR=5.5						
CAPN	Captain Cook N	83.08	29	P	P	01 55 45.5	+1.0
	baz=263						
BRSE	Bradley Lake S	83.16	30	P	P	01 55 46.4	+1.4
	baz=264						
A22K	Sinclair Lake	83.19	19	P	P	01 55 46.3	+1.4
	baz=258						
I21K	Tanana	83.28	25	P	P	01 55 46.9	+1.4
	baz=262						
BPAW	Bear Paw Mtn.	83.56	26	P	P	01 55 48.0	+0.9
	baz=263						
B22K	Teshekpuk Lake	83.57	19	P	P	01 55 48.0	+1.1
	baz=260						
H22K	Ishtalitna Cre	83.63	24	P	P	01 55 49.0	+1.7
	baz=262,SNR=6.0						
O22K	Cooper Landing	83.75	30	P	P	01 55 49.1	+1.1
	baz=264						
E22K	Anaktuvuk Pass	83.78	22	P	P	01 55 49.3	+1.2
	baz=262						
MLY	Manley	83.79	25		P	01 55 48.3	+0.1
MLY	Manley	83.79	25	P	P	01 55 49.2	+1.0
	baz=263						
TRF	Thorofare Moun	83.80	27	P	P	01 55 49.3	+0.9
	baz=264						
RC01	Rabbit Creek A	83.80	29	P	P	01 55 48.7	+0.5
	baz=264,SNR=5.7						
SEW	Seward	83.85	30	P	P	01 55 49.1	+0.6
	baz=265						
PMR	Palmer	84.14	28	P	P	01 55 50.5	+0.5
	baz=265						
COLD	Coldfoot	84.27	23		P	01 55 51.3	+0.8
COLD	Coldfoot	84.27	23	P	P	01 55 51.8	+1.3
	baz=263,SNR=12						
G23K	Bananza Creek	84.28	23	P	P	01 55 52.0	+1.4
	baz=264						
D23K	Nanushuk River	84.31	21	P	P	01 55 52.2	+1.5
	baz=263						
H23K	Yukon River	84.37	24	P	P	01 55 52.2	+1.1
	baz=264						
I23K	Minto, Yukon-K	84.38	25	P	P	01 55 51.9	+0.8
	baz=264,SNR=7.2						
MCK	McKinley	84.43	26	P	P	01 55 52.2	+0.8
	baz=265						
C23K	Itkillik River	84.44	20	P	P	01 55 52.6	+1.3
	baz=263,SNR=11						
KNK	Knik Glacier	84.45	29	P	P	01 55 52.1	+0.5
	baz=266,SNR=6.1						
NEA2	Nenana	84.45	25	P	P	01 55 52.6	+1.1
	baz=265						
WAT1	Susitna Watana	84.52	27	P	P	01 55 52.6	+0.7
	baz=265						
SML	Sawmill	84.54	28	P	P	01 55 52.0	0.0
SML				IAmb	IAmb	01 55 53.5	
	comp=Z,14nm,0.9s						
SML	Sawmill	84.54	28	P	P	01 55 52.5	+0.4
	baz=266,SNR=5.8						
GEVA	Gevas	84.57	308	P	P	01 55 53.1	+0.2
GEVA				IAmb	IAmb	01 55 54.6	
	comp=Z,7.2nm,0.7s						
E23K	Chandalar	84.59	22	P	P	01 55 52.9	+0.7
	baz=264						
TOLK	Toolik Lake Re	84.67	21	P	P	01 55 53.5	+0.9
	baz=264						
KBZ	Khabaz	84.80	313	P	P	01 55 53.7	0.0
	comp=Z,1.1nm,0.8s,baz=92,slow=8.6,SNR=2.0						
	comp=Z,1.1nm,0.8s						
M23K	Glacier View	84.82	28	P	P	01 55 54.4	+0.9
	baz=266,SNR=5.4						
P23K	Montague Islan	84.86	30	P	P	01 55 54.4	+0.8
	baz=268						
WAT6	Susitna Watana	84.87	28	P	P	01 55 54.6	+0.7
	baz=266,SNR=6.1						
D24K	Happy Valley	84.99	21	P	P	01 55 55.3	+1.2
	baz=264						
E24K	Your Creek	85.01	22	P	P	01 55 55.6	+1.3
	baz=265						
SCM	Sheep Creek Mo	85.02	28	P	P	01 55 55.2	+0.7
	baz=266,SNR=5.1						
H24K	Noodor Dome	85.06	24	P	P	01 55 55.5	+0.9
	baz=266						
GLI	Glacier Island	85.07	29	P	P	01 55 55.0	+0.3
	baz=267						
DHY	Denali Highway	85.07	27	P	P	01 55 55.2	+0.4
	baz=266						
C24K	Franklin Bluff	85.09	20	P	P	01 55 55.5	+0.9
	baz=264						
F24K	Squaw Lake	85.19	23	P	P	01 55 56.1	+0.9
	baz=265						
POKR	Poker Plat Res	85.19	25	P	P	01 55 55.9	+0.7
	baz=266						
G24K	Hadweenzic Riv	85.29	23	P	P	01 55 56.5	+0.8
	baz=266						
Q23K	Middleton Isla	85.37	31	P	P	01 55 56.6	+0.5
	baz=268						
ILAR	Eielson Array	85.40	25	P	P	01 55 55.8	-0.5
	comp=Z,0.4nm,0.7s,baz=252,slow=6.0,SNR=5.9						
	comp=Z,0.4nm,0.7s						
M24K	Tolsona, Glenn	85.58	28	P	P	01 55 57.7	+0.5
	baz=267						
KLU	Klutina	85.67	29	P	P	01 55 58.3	+0.6
	baz=268						
EYAK	Cordova Ski Ar	85.71	30	P	P	01 55 58.6	+0.8
	baz=268						
DIV	Divide	85.72	29	P	P	01 55 58.3	+0.3
DIV				IAmb	IAmb	01 56 00.1	
	comp=Z,14nm,1.0s						
G25K	Bearman Lake	85.83	23	P	P	01 55 59.3	+1.0
	baz=267						
D25K	Kavik River	85.87	21	P	P	01 55 59.4	+0.8
	baz=267						
PAX	Paxson	85.94	27	P	P	01 56 00.0	+1.0
	baz=268						
J25K	Salcha River,	86.04	26	P	P	01 56 00.4	+0.9
	baz=268						
F25K	Christian Rive	86.05	23	P	P	01 56 00.7	+1.2
	baz=268						
E25K	Arctic Village	86.11	22	P	P	01 56 00.8	+1.2
	baz=268,SNR=7.6						
RIDG	Independent Ri	86.24	26	P	P	01 56 01.2	+0.7
	baz=268						
BMRM	Bremner River	86.29	29	P	P	01 56 01.3	+0.6
	baz=269						
N25K	Chitina, Valde	86.31	29	P	P	01 56 01.5	+0.6
	baz=269						
KAIM	Kayak Island	86.36	30	P	P	01 56 01.6	+0.5
	baz=269						
BMAR	Burnt Mountain	86.46	23	P	P	01 56 01.9	+0.4
F26K	Sheenjek River	86.63	22	P	P	01 56 03.2	+0.9
	baz=269						
SCRK	Sand Creek	86.63	26	P	P	01 56 03.1	+0.6
	baz=269						
G26K	Porcupine Rive	86.76	23	P	P	01 56 03.8	+1.0
	baz=269						
C27K	Jago River	86.82	21	P	P	01 56 03.7	+0.6
	baz=269						
I26K	Coal Creek Min	87.00	25	P	P	01 56 05.4	+1.4
	baz=270						
CRQE	Cirque	87.03	29	P	P	01 56 05.6	+1.1
	baz=270						
M26K	Nabesna, AK	87.07	28	P	P	01 56 05.1	+0.5
	baz=270						
M27K	Edge Creek, AK	87.59	28	P	P	01 56 07.8	+0.6
	baz=271						
E27K	Coleen River	87.59	22	P	P	01 56 07.8	+0.9
	baz=271						
G27K	Doyon Strip	87.60	23	P	P	01 56 08.0	+1.1
	baz=271						
L27K	Beaver Creek,	87.60	27	P	P	01 56 08.2	+1.1
	baz=271						
MESA	MESA	87.60	30	P	P	01 56 07.8	+0.6
	baz=271						
I27K	Kandik River	87.64	25	P	P	01 56 08.0	+0.8
	baz=271						
H27K	Steamboat Moun	87.66	24	P	P	01 56 07.9	+0.6
	baz=271						
D27M	Malcolm River	87.80	21	P	P	01 56 08.7	+0.8
	baz=272						
CTG	Chitna Glacier	87.88	29	P	P	01 56 09.3	+0.7
	baz=272						
BVCY	Beaver Creek	88.06	28	P	P	01 56 09.9	+0.7
	baz=272						
F28M	Old Crow	88.26	23	P	P	01 56 10.8	+0.7
	baz=273						
YUK3	Moose Creek	88.28	28	P	P	01 56 10.9	+0.4
	baz=272						
E28M	Babbage River	88.34	22	P	P	01 56 10.8	+0.4
	baz=273						
I28M	Miner Creek	88.34	25	P	P	01 56 11.2	+0.6
	baz=273						
O28M	Mount Upton	88.45	29	P	P	01 56 11.3	-0.1
	baz=273						
PINM	Pinnacle	88.45	30	P	P	01 56 11.5	+0.3
	baz=273						
D28M	Stokes Point	88.58	21	P	P	01 56 11.8	+0.4
	baz=274						
YUK8	Steele Glacier	88.63	29	P	P	01 56 12.6	+0.3
	baz=273						
H29M	Whitestone	88.94	24	P	P	01 56 13.7	+0.5
	baz=274						
E29M	Blow River	88.96	22	P	P	01 56 13.9	+0.7
	baz=275						
G29M	Pine Creek	89.03	23	P	P	01 56 14.5	+0.8
	baz=275						
YUK4	Talbot Arm	89.17	29	P	P	01 56 15.1	+0.5
	baz=274						
M29M	Somme Creek	89.17	28	P	P	01 56 14.9	+0.3
	baz=274						
O29M	Mount Kennedy	89.28	30	P	P	01 56 15.7	+0.6
	baz=274						
L29M	L29M	89.28	27	P	P	01 56 15.7	+0.7
	baz=274						
K29M	Barlow Dome	89.49	26	P	P	01 56 16.5	+0.5
	baz=275						
EPYK	Eagle Plains	89.59	24	P	P	01 56 17.0	+0.7
	baz=276						
G30M	tAoh Zraii Nji	89.73	23	P	P	01 56 17.4	+0.4
	baz=276						
ASF	Jabal al Asfar	89.73	302	P	P	01 56 17.8	0.0
	comp=Z,3.4nm,0.9s,baz=104,slow=4.2,SNR=6.8						
	comp=Z,3.4nm,0.9s						
HYT	Haines Junctio	89.76	29	P	P	01 56 18.0	+0.7
	baz=275						
F30M	Barrier River	89.82	22	P	P	01 56 17.7	+0.4
	baz=277						
I30M	Mount Dempster	89.85	25	P	P	01 56 17.9	+0.2
	baz=276						
N30M	Aishikik Lake	89.90	29	P	P	01 56 18.1	+0.2
	baz=276						
M30M	Minto, Yukon	89.94	27	P	P	01 56 18.4	+0.4
	baz=276						
J30M	Hart River	89.94	25	P	P	01 56 18.6	+0.5
	baz=276						
P30M	Million Dollar	90.09	30	P	P	01 56 18.9	+0.1
	baz=276						
O30N	Mendenhall	90.46	29	P	P	01 56 20.7	+0.2
	baz=276						
G31M	Satah River	90.50	23	P	P	01 56 20.3	-0.2
	baz=278						
INK	Inuvik	90.58	22	P	P	01 56 20.1	-0.7
INK	Inuvik	90.58	22	P	P	01 56 20.7	0.0
	baz=279						
H31M	Peel River	90.62	24	P	P	01 56 21.2	+0.1
	baz=278						
F31M	Tsiigehtchic	90.62	22	P	P	01 56 21.1	+0.1
	baz=278						
WHY	Whitehorse	91.06	29	P	P	01 56 23.8	+0.4
	baz=277						
M31M	Drury Creek, Y	91.09	28	P	P	01 56 24.1	+0.7
	baz=278						
SIT	Sitka	91.28	33	P	P	01 56 24.7	+0.5
	baz=277						
R32K	Eaglecrest	91.55	32	P	P	01 56 26.0	+0.4
	baz=278						
P32M	Atlin	91.78	30	P	P	01 56 26.8	+0.2
	baz=278						
SPB2	Spitsbergen Ar	91.80	349	P	P	01 56 25.4	-0.9
SPITS	Spitsbergen Ar	91.80	349	P	P	01 56 25.6	-0.7
	comp=Z,4.0nm,0.6s,baz=35,slow=5.3,SNR=4.7						
	comp=Z,4.0nm,0.6s						
ARCES	ARCESS Array B	91.95	340	P	P	01 56 26.4	-0.8
	comp=Z,5.7nm,0.8s,baz=77,slow=4.1,SNR=4.7						
	comp=Z,5.7nm,0.8s						
P33M	Teslin, Yukon	92.14	30	P	P	01 56 28.9	+0.6
	baz=279						
MMPY	Sheldon Lake,	92.46	27	P	P	01 56 30.2	+0.5
	baz=281						
A36M	Sachs Harbour	92.53	17	P	P	01 56 30.1	+0.4
	baz=287						
QSPA	South Pole Qui	92.59	180	P	P	01 56 29.7	-0.6
QSPA				IAmb	IAmb	01 57 08.7	
	comp=Z,5.3nm,1.4s						
CRAG	Craig	92.71	34	P	P	01 56 31.4	+0.5
	baz=279						
WRAK	Wrangell Islan	92.99	33	P	P	01 56 32.9	+0.8
	baz=279						
R33M	Jennings River	93.20	30	P	P	01 56 34.1	+0.8
	baz=281						
S34M	Telegraph Cree	93.39	32	P	P	01 56 35.0	+1.0
	baz=280						
H02S2	DAWSON INLET T	93.43	36	T	T	03 40 10.9	
	SNR=8.0						
FINES	FINESS Array B	93.47	332	P	P	01 56 33.2	-1.1
	comp=Z,2.7nm,1.0s,baz=92,slow=9.7,SNR=1.3						
	comp=Z,2.7nm,1.0s						
V35K	Ketchikan	93.58	34	P	P	01 56 35.3	+0.4
	baz=280						
AKASG	Malin Array Be	93.66	321	P	P	01 56 34.5	-0.9
	comp=Z,0.2nm,0.4s,baz=82,slow=2.4,SNR=1.8						
	comp=Z,0.2nm,0.4s						
C36M	Paulatuk	93.69	20	P	P	01 56 35.4	+0.3
	baz=288						
DLBC	Dease Lake	93.86	31	P	P	01 56 36.7	+0.4
	baz=282						
T35M	Bob Quinn	94.03	33	P	P	01 56 37.6	+0.5
	baz=281						
TGTN	Hyland Airport	94.06	28	P	P	01 56 37.6	+0.4
	baz=283						
BURAR	Bucovina Array	96.79	318	P	P	01 56 49.0	-0.9
RES	Resolute Bay	98.57	11		P	01 56 57.0	-0.1
RES				IAmb	IAmb	01 56 57.7	
	comp=Z,3.1nm,0.8s						
YKA	Yellowknife Ar	99.82	25	P	Pdif	01 57 01.4	-1.5
	comp=Z,0.4nm,0.8s,baz=299,slow=5.4,SNR=7.0						
	comp=Z,0.4nm,0.8s						
TXAR	Lajitas Array	121.03	53	PKP	PKPdf	02 02 10.9	-0.8
	comp=Z,0.4nm,0.7s,baz=312,slow=1.8,SNR=5.7						
TORD	Torodi Ar. Bea	124.68	288	PKP	PKPdf	02 02 18.0	-0.9
	comp=Z,1.8nm,0.7s,baz=123,slow=1.4,SNR=17						

*IDC **25** 01:57:24.2±1.0,34°.74N×23°.97E,h0km,mb3.9/12, mbtmp3.7/19,ML3.1/7,Error ellipse: s-maj=20.5km s-min=10.2km az=157.0*

*ATH **25** 01:57:25.3,34°.66N×24°.03E,h8km±2km,ML3.1/7,Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*
*ISK **25** 01:57:25.4,34°.72N×24°.06E,h4km,ML3.1/10*
*NEIC **25** 01:57:25.5±0.5,34°.79N±0°.07×24°.05E±0°.06,h9km±3km, mb4.0/5,Error ellipse: s-maj=10.8km s-min=5.6km az=154.0*
*THE **25** 01:57:26.4,35°N±33°×2°4E±6°1,h12km±19km,M3.1/5, ML3.1/5*

ISC 25 01:57:25.5±1.0,34°.70N±0°.05×24°.08E±0°.03,h14km±5km, n76,σ1°30/90,mb3.9/14,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GVD	Gavdhos	0.14	4	P	Pg	01 57 29.0	-0.1
GVD				S	Sg	01 57 31.2	-0.4
GVD	Gavdhos	0.14	4	Pg	Pg	01 57 29.0	-0.1
GVD				Sg	Sg	01 57 31.2	-0.4
GVD	Gavdhos	0.14	4	P	Pg	01 57 29.1	-0.1
GVD				S	Sg	01 57 31.6	0.0
KNDR	Palaiochora Ch	0.65	325	Pg	Pb	01 57 37.7	-0.9
KNDR				Sg	Sb	01 57 47.7	+0.2
KNDR	Palaiochora Ch	0.65	325	P	Pb	01 57 38.3	-0.4
KNDR				S	Sb	01 57 47.3	-0.2
VAM	Vamos	0.71	8	P	Pg	01 57 38.8	-0.6
VAM	Vamos	0.71	8	P	Pb	01 57 39.3	-0.5
VAM				S	Sb	01 57 49.8	+0.5
IMMV	Iera Moni Meta	0.76	354	P	Pb	01 57 39.8	-0.8
IMMV	Iera Moni Meta	0.76	354	Pg	Pb	01 57 39.8	-0.8
IMMV				Sg	Sb	01 57 51.2	+0.4
IMMV	Iera Moni Meta	0.76	354	P	Pb	01 57 40.2	-0.4
IMMV				S	Sb	01 57 51.3	+0.5
CHAN	Chania	0.82	358	P	Pb	01 57 40.7	-0.8
CHAN				S	Sb	01 57 52.1	-0.3
IDI	Anoyia	0.89	49	Pg	Pg	01 57 42.5	-0.2
	8.2nm,0.3s,baz=268,slow=8.0,SNR=134						
IDI				Lg	Lg	01 57 56.0	
	98nm,0.3s,baz=339,slow=20,SNR=17						
IDI	Anoyia	0.89	49		Pg	01 57 42.0	-0.7
IDI				Sg	Sg	01 57 52.7	-1.8
IDI	Anoyia	0.89	49	P	Pg	01 57 42.6	-0.2
IDI	Anoyia	0.89	49	Pg	Pb	01 57 42.8	0.0
IDI				Sg	Sb	01 57 55.7	+1.2
IDI	Anoyia	0.89	49	P	Pg	01 57 42.6	-0.2
IDI				S	Sn	01 57 56.2	-0.2
ANKY	Antikythira Is	1.32	332	P	Pg	01 57 50.2	-0.8
ANKY	Antikythira Is	1.32	332	P	Pn	01 57 49.5	-0.1
ANKY				S	Sn	01 58 07.0	0.0
NPS	Neapolis	1.38	66	P	Pg	01 57 52.6	+0.5
NPS	Neapolis	1.38	66	P	Pg	01 57 52.8	+0.7
NPS				S	Sg	01 58 10.4	+0.3
KTHA	Kythira Island	1.76	332	Pn	Pb	01 57 57.4	-0.2
ZKR	Zakros	1.81	76	Pn	Pb	01 57 58.3	-0.1
ZKR	Zakros	1.81	76	P	Pn	01 57 57.6	+1.4
THERA	Ancient Thera,	2.02	34	P	Pn	01 57 60.0	+0.9
VLI	Veliai	2.22	336	P	Pn	01 58 02.5	+0.6
KARP	Karpathos	2.67	71		Pn	01 58 08.7	+0.6
KARP	Karpathos	2.67	71	Pn	Pn	01 58 10.7	+2.6
PYL	PYLOS	2.90	320	P	Pn	01 58 11.9	+0.7
MET5	Makryloggos,Me	2.97	349	P	Pn	01 58 13.6	+1.3
ITM	Ithomi	3.03	325	Pn	Pn	01 58 12.5	-0.6
ITM	Ithomi	3.03	325	Pn	Pn	01 58 15.6	+2.6
DAT	Datca	3.50	54	Pn	Pn	01 58 22.5	+3.0
BODT	Bodrum	3.53	47	Pn	Pn	01 58 22.5	+2.6
AKAS	Kas	4.76	70	Pn	Pn	01 58 37.8	+0.8
ELL	Elmali	5.17	65		Pn	01 58 42.7	+0.2
KEK	Kerkira	6.05	327	Pn	Pn	01 58 54.0	-0.6
TIP	Timpagrande	7.37	309	Pn	Pn	01 59 11.7	-1.1
CSS	Mathiatis	7.62	85	Pn	Pn	01 59 16.7	+0.6
CUC	Castrocucco	8.43	311	Pn	Pn	01 59 27.0	-0.3
PDG	Podgorica	8.59	335	Pn	Pn	01 59 28.4	-0.9
BRTR	Keskin Array B	9.13	54	Pn	Pn	01 59 38.4	+1.5
	baz=230,slow=13,SNR=1.1						
	0.4nm,0.7s						
MMAI	Mount Meron Ar	9.57	97	Pn	Pn	01 59 43.7	+0.8
	0.6nm,0.3s,baz=295,slow=14,SNR=3.1						
MMAI				Sn	Sn	02 01 26.7	-3.6
	0.6nm,0.3s,baz=83,slow=40,SNR=1.5						
	0.7nm,0.5s						
GHAJ	Ghor Haditha	10.23	106	Pn	Pn	01 59 52.6	+0.8
EIL	Elat	10.49	116	Pn	Pn	01 59 56.1	+0.7
	0.3nm,0.3s,baz=310,slow=17,SNR=3.6						
EIL				Sn	Sn	02 01 47.3	-5.5
	0.2nm,0.3s,baz=43,slow=18,SNR=1.4						
	3.8nm,0.8s						
ASF	Jabal al Asfar	11.01	100	Pn	Pn	02 00 02.6	0.0
	0.1nm,0.3s,baz=282,slow=9.3,SNR=1.3						
ASF				Sn	Sn	02 01 59.9	-5.7
	0.2nm,0.3s,baz=133,slow=22,SNR=1.8						
	0.3nm,0.2s						
ABTA	Abfaltersbach	14.87	328	eP	P	02 01 01.7	+0.6
	6.1nm,1.7s						
LESA	Schwarzleotal	15.32	329	i P	P	02 01 07.2	+1.1
	1.9nm,0.6s						
WTTA	Wattenberg	15.65	327	eP	P	02 01 09.3	-0.5
	5.0nm,1.1s						
WATA	Walderalm	15.73	327	eP	P	02 01 11.8	+1.1
	1.7nm,0.6s						
SQTA	Sankt Quirin	15.81	326	epP	pP	02 01 14.5	-1.0
	3.5nm,0.9s						
FETA	Feichten	15.89	325	epP	pP	02 01 16.0	-0.4
	3.1nm,0.8s						
MOTA	Moosalm	15.95	326	epP	pP	02 01 15.6	-1.5
	2.7nm,0.7s						
GERES	GERESS Array B	16.09	335	Pn	Pn	02 01 10.6	-0.7
	baz=150,slow=13,SNR=4.7						
	0.1nm,0.3s						
KHC	Kasperske Hory	16.37	335	Pn	Pn	02 01 14.9	0.0
AKASG	Malin Array Be	16.43	12	Pn	Pn	02 01 15.6	+0.1
	0.7nm,0.3s,baz=212,slow=10,SNR=4.8						
	0.3nm,0.4s						
KBZ	Khabaz	17.12	53	P	P	02 01 25.8	-0.1
	baz=265,slow=5.7,SNR=5.1						
	2.3nm,1.0s						
ESDC	Sonseca Array	22.84	291	P	P	02 02 26.9	-1.3
	0.9nm,1.0s,baz=90,slow=10,SNR=2.3						
	0.9nm,1.0s						
HFS	Hagfors	26.33	348	P	P	02 03 00.9	+0.2
	2.7nm,0.6s,baz=160,slow=14,SNR=5.4						
	2.7nm,0.6s						
FINES	FINESS Array B	26.79	2	P	P	02 03 04.2	-0.5
	3.5nm,0.9s,baz=180,slow=10.0,SNR=3.6						
	3.5nm,0.9s						
NOA	NORSAR Array B	27.62	346	P	P	02 03 12.4	0.0
	1.3nm,0.8s,baz=158,slow=9.5,SNR=2.2						
	1.3nm,0.8s						
TORD	Torodi Ar. Bea	29.52	229	P	P	02 03 31.1	+1.6
	0.8nm,0.6s,baz=36,slow=6.7,SNR=11						
	0.8nm,0.6s						
ARCES	ARCESS Array B	34.90	1	P	P	02 04 16.6	+0.4
	2.9nm,0.9s,baz=183,slow=9.7,SNR=1.8						
	2.9nm,0.9s						
KK31	Karatay Array	36.70	63	P	P	02 04 32.0	0.0
KK31				IAmb	IAmb	02 04 37.1	
	comp=Z,1.6nm,0.8s						
KKAR	Karatay Array	36.70	63	P	P	02 04 32.9	+0.8
KURBB	Kurchatov Arra	42.10	51	P	P	02 05 17.8	+0.8
	comp=Z,0.8nm,0.5s,baz=274,slow=8.6,SNR=9.4						
	comp=Z,0.8nm,0.5s						
KURK	Kurchatov	42.16	50	P	P	02 05 17.4	0.0
KURK				IAmb	IAmb	02 05 39.7	
	comp=Z,2.9nm,1.4s						
MKAR	Makanchi Array	44.77	56	P	P	02 05 40.0	+1.4
	comp=Z,0.7nm,0.5s,baz=274,slow=7.5,SNR=9.2						
	comp=Z,0.7nm,0.5s						
MKAR	Makanchi Array	44.77	56	P	P	02 05 39.2	+0.7
ZAA0	Zalesovo Array	45.96	46

IDC ***25*** *01:58:10.8±3.7,21.96N×144.52E, h48km±32km, mb3.7/7, mbtmp4.0/8, ML4.0/1, MS3.0/1, Error ellipse: s-maj=62.0km s-min=17.7km az=79.0*

ISC 25 01:58:08.8±1.4,21.9N±0.2×144.7E±0.4, h35km, n16, σ1s02/10, mb4.0/7, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.63**	**336**	P	**Pn**	**01 59 30.9**	**+0.8**
	4.3nm,0.3s,baz=303,slow=17,SNR=2.0						
JCJ				S	**Sn**	**02 00 33.5**	**-0.1**
	57nm,0.4s,baz=297,slow=23,SNR=6.3						
	83nm,0.9s						
H11N1	**WAKE ISLAND Hy**	**20.85**	**92**	T	T	02 25 07.7	
	baz=276						
H11N2	**WAKE ISLAND Hy**	**20.85**	**92**	T	T	02 25 08.1	
	baz=276						
H11N3	**WAKE ISLAND Hy**	**20.86**	**92**	T	T	02 25 08.8	
	baz=276						
H11S3	**WAKE ISLAND Hy**	**20.90**	**95**	T	T	02 25 17.1	
	baz=281						
H11S1	**WAKE ISLAND Hy**	**20.91**	**95**	T	T	02 25 20.5	
	baz=281						
H11S2	**WAKE ISLAND Hy**	**20.92**	**95**	T	T	02 25 17.7	
	baz=281						
KSRS	**Korea Array**	**21.21**	**321**	P	**P**	**02 02 52.1**	**+0.7**
	0.6nm,0.3s,baz=143,slow=8.1,SNR=1.2						
	0.6nm,0.3s						
SHEM	**Shemya Is, Ala**	**38.12**	**29**	LR	LR	02 18 32.3	
	comp=Z,22nm,20.7s,baz=299,slow=32						
WRA	**Warramunga Arr**	**42.83**	**194**	P	**P**	**02 06 04.2**	**+0.6**
	2.0nm,0.4s,baz=17,slow=8.9,SNR=23						
	2.0nm,0.4s						
ASAR	**Alice Springs**	**46.53**	**194**	P	**P**	**02 06 32.8**	**-0.2**
	1.0nm,0.4s,baz=8.5,slow=7.8,SNR=14						
	1.0nm,0.4s						
MKAR	**Makanchi Array**	**55.59**	**312**	P	**P**	**02 07 40.7**	**-0.3**
	0.4nm,0.5s,baz=95,slow=7.9,SNR=5.5						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**58.33**	**317**	P	**P**	**02 08 00.5**	**+0.3**
	0.4nm,0.5s,baz=92,slow=7.7,SNR=8.2						
	0.4nm,0.5s						
BVAR	**Borovoye Array**	**63.42**	**319**	P	**P**	**02 08 33.2**	**-1.6**
	0.7nm,0.5s,baz=95,slow=7.1,SNR=3.0						
	0.7nm,0.5s						
FINES	**FINESS Array B**	**83.58**	**335**	P	**P**	**02 10 31.8**	**-1.4**
	5.8nm,1.1s,baz=68,slow=5.9,SNR=3.8						
	5.8nm,1.1s						
LPAZ	**La Paz**	**148.50**	**86**	PKPbc	**PKPbc**	**02 17 54.5**	**+1.0**
	0.6nm,0.7s,baz=331,slow=4.4,SNR=1.9						

CATAC ***25*** *02:03:02.2±0.5, 13°N±2°×9°0W±°, h9km±2km, M3.3/25, MLv3.3/25, Error ellipse: s-maj=4.8km s-min=3.2km az=23.0, confirmed*

GCG ***25*** *02:03:03.1±1.1, 13°22N×90°11W, h2km±15km, MD3.7, Presumed earthquake*

SNET ***25*** *02:03:03.8±1.0, 13°15N×90°02W, h29km, ML3.2, Presumed earthquake*

ISC 25 02:03:05.3±1.7,13°16N±0°06×89°90W±0°04, h16km±9km, n49, σ1s03/77, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.65**	**60**	S	**Sn**	**02 03 29.8**	**0.0**
JAYA	**Jayaque - finc**	**0.65**	**42**	P	**Pg**	**02 03 18.1**	**-0.2**
JAYA	**Jayaque - finc**	**0.65**	**42**	*i* P	**Pg**	**02 03 18.0**	**-0.2**
JAYA				*i* S	**Sn**	**02 03 29.6**	**-0.7**
JAYA	**Jayaque - finc**	**0.65**	**42**	*e*P	**Pg**	**02 03 18.0**	**-0.2**
JAYA				*e*S	**Sn**	**02 03 29.5**	**-0.8**
FAME	**Alcaldia de Sa**	**0.68**	**350**	P	**Pg**	**02 03 16.9**	**-1.8**
FAME				S	**Sg**	**02 03 27.6**	**-0.3**
CEVE	**Cerro Verde**	**0.71**	**22**	P	**Pg**	**02 03 18.7**	**-0.6**
CEVE				S	**Sg**	**02 03 29.7**	**+0.9**
CEVE	**Cerro Verde**	**0.71**	**22**	*e*P	**Pg**	**02 03 18.7**	**-0.6**
SBLS	**San Blas**	**0.72**	**22**	*e*P	**Pb**	**02 03 20.0**	**+0.3**
NUBE	**Las Nubes**	**0.74**	**9**	P	**Pg**	**02 03 18.7**	**-1.2**
NUBE	**Las Nubes**	**0.74**	**9**	*i* P	**Pg**	**02 03 18.8**	**-1.1**
NUBE				*i* S	**Sb**	**02 03 31.0**	**+0.9**
SNJE	**San Jose**	**0.76**	**22**	*e*P	**Pg**	**02 03 19.3**	**-0.8**
PMON	**Piamonte**	**0.79**	**46**	P	**Pb**	**02 03 20.4**	**-0.4**
PMON	**Piamonte**	**0.79**	**46**	*e*P	**Pb**	**02 03 20.6**	**-0.2**
PMON				*e*S	**Sn**	**02 03 33.6**	**+0.2**
CEDA	**San Andres**	**0.80**	**38**	P	**Pb**	**02 03 20.4**	**-0.5**
CEDA				S	**Sn**	**02 03 33.7**	**0.0**
CEDA	**San Andres**	**0.80**	**38**	*e*P	**Pb**	**02 03 20.2**	**-0.8**
PANCS	**Alcalda de**	**0.83**	**57**	P	**Pb**	**02 03 20.4**	**-1.0**
PANCS				S	**Sg**	**02 03 33.7**	**+1.3**
LOAL	**Lomas de Alarc**	**0.84**	**8**	P	**Pb**	**02 03 20.5**	**-1.1**
LOAL				S	**Sg**	**02 03 33.6**	**+0.8**
UEES	**Universidad Ev**	**0.84**	**49**	P	**Pg**	**02 03 21.8**	**0.0**
UEES				S	**Sn**	**02 03 35.0**	**+0.2**
UEES	**Universidad Ev**	**0.84**	**49**	*e*P	**Pb**	**02 03 21.5**	**-0.2**
SEMO	**Seminario San**	**0.85**	**51**	P	**Pb**	**02 03 21.2**	**-0.6**
UTEC	**Universidad Te**	**0.86**	**52**	P	**Pb**	**02 03 21.8**	**-0.2**
UTEC				S	**Sn**	**02 03 36.0**	**+0.7**
SLOZ	**Alcaldia de Sa**	**0.86**	**7**	P	**Pb**	**02 03 20.6**	**-1.4**
SLOZ				S	**Sb**	**02 03 34.1**	**+0.6**
SLOZ	**Alcaldia de Sa**	**0.86**	**7**	*e*P	**Pb**	**02 03 20.6**	**-1.4**
UNIC	**Universidad Ca**	**0.88**	**23**	P	**Pb**	**02 03 20.9**	**-1.4**
UNIC				S	**Sg**	**02 03 34.9**	**+0.9**
IGN	**Direccin Gen**	**0.89**	**52**	S	**Sn**	**02 03 38.1**	**+2.0**
UDBS	**Universidad Do**	**0.91**	**53**	P	**Pn**	**02 03 23.5**	**0.0**
UDBS				S	**Sn**	**02 03 36.1**	**-0.2**
RBDL	**Robledal**	**0.96**	**12**	*e*P	**Pb**	**02 03 22.5**	**-1.3**
RBDL				*e*S	**Sg**	**02 03 37.6**	**+0.8**
SJTE	**Alcalda de S**	**0.97**	**63**	*e*P	**Pb**	**02 03 22.7**	**-1.2**
PAVA	**Las Pavas**	**1.08**	**60**	P	**Pb**	**02 03 25.2**	**-0.6**
PAVA				S	**Sn**	**02 03 42.0**	**+1.3**
COEG	**Centro de Oper**	**1.09**	**65**	P	**Pb**	**02 03 24.6**	**-1.3**
COEG				S	**Sg**	**02 03 42.0**	**+1.4**
COEG	**Centro de Oper**	**1.09**	**65**	*e*P	**Pb**	**02 03 24.3**	**-1.5**
TECO	**Alcaldia de Te**	**1.15**	**71**	P	**Pn**	**02 03 26.4**	**-0.4**
TECO				S	**Sb**	**02 03 41.9**	**+0.3**
FG16	**Alotenango, Sa**	**1.25**	**332**	*i* P	**Pg**	**02 03 29.9**	**+0.4**
SCLA	**Alcaldia de Sa**	**1.26**	**65**	P	**Pn**	**02 03 27.5**	**-0.9**
SCLA				S	**Sg**	**02 03 46.9**	**+0.9**
FG8	**Yepocapa, Chim**	**1.27**	**329**	*i* P	**Pg**	**02 03 30.4**	**+0.6**
FG8				*i* S	**Sg**	**02 03 50.6**	**+4.2**
MTO3	**Montecristo**	**1.33**	**23**	P	**Pn**	**02 03 28.2**	**-1.3**
MTO3				S	**Sb**	**02 03 48.1**	**+1.0**
MTO3	**Montecristo**	**1.33**	**23**	*i* P	**Pn**	**02 03 28.7**	**-0.9**
MTO3	**Montecristo**	**1.33**	**23**	*e*P	**Pn**	**02 03 28.7**	**-0.9**
LLGN	**La Laguna**	**1.36**	**43**	P	**Pn**	**02 03 29.2**	**-0.6**
LLGN				S	**Sg**	**02 03 49.7**	**+0.4**
P5NO	**Presa 5 de nov**	**1.38**	**53**	P	**Pn**	**02 03 29.0**	**-0.9**
P5NO				S	**Sg**	**02 03 50.0**	**+0.2**
P5NO	**Presa 5 de nov**	**1.38**	**53**	*e*P	**Pn**	**02 03 29.4**	**-0.5**
ESQI	**Esquipulas**	**1.49**	**21**	P	**Pn**	**02 03 31.1**	**-0.5**
ESQI				S	**Sb**	**02 03 53.1**	**+1.7**
PACA	**Pacayal**	**1.56**	**79**	P	**Pn**	**02 03 32.7**	**+0.1**
PACA				S	**Sb**	**02 03 54.5**	**+0.9**
APG	**El Apazote**	**1.91**	**343**	*i* P	**Pn**	**02 03 35.9**	**-1.6**
APG				*i* S	**Sn**	**02 04 01.8**	**+0.4**
SARH	**Santa Rosa de**	**1.94**	**34**	*i* P	**Pn**	**02 03 38.5**	**+0.7**
LCND	**La Caada**	**1.96**	**86**	P	**Pn**	**02 03 37.7**	**-0.2**
CNCH	**Conchagua**	**2.01**	**87**	P	**Pn**	**02 03 38.1**	**-0.7**
CNCH				S	**Sb**	**02 04 05.4**	**-1.2**
MARCA	**Marcala la Paz**	**2.06**	**61**	P	**Pn**	**02 03 39.6**	**+0.1**
CSGN	**Cosiguina Volc**	**2.29**	**94**	P	**Pn**	**02 03 42.0**	**-0.5**
CSGN				S	**Sn**	**02 04 12.0**	**+1.5**

UCR ***25*** *02:13:34.8±0.7, 8.80N×84.08W, h0km±58km, MW3.5, Presumed earthquake*

UPA ***25*** *02:13:35.0±4.2, 9.57N×83.97W, h10km±999km, ML2.5, Presumed earthquake*

CATAC ***25*** *02:13:35.6±0.6, 9°N±3°×8°4W±°, h5km±2km, M3.0/8, MLv3.0/8, Error ellipse: s-maj=9.5km s-min=3.7km az=53.5, confirmed*

ISC 25 02:13:34.6±1.7,8.78N±0.05×84.08W±0.05, h3km±12km, n40, σ0s67/49, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OCHAL	**Ojochal**	**0.53**	**53**	P	**Pb**	**02 13 45.8**	**-0.7**
OCHAL				S	**Sb**	**02 13 54.3**	**-0.4**
EDPE	**Pejibaye, P**	**0.62**	**53**	*e*P	**Pg**	**02 13 47.4**	**+0.8**
QUEP	**Quepos**	**0.66**	**352**	P	**Pb**	**02 13 48.7**	**0.0**
QUEP				S	**Sb**	**02 13 57.3**	**-1.0**
PIRO	**Carate, Puerto**	**0.82**	**117**	P	**Pb**	**02 13 51.5**	**0.0**
PIRO				S	**Sb**	**02 14 04.1**	**+1.1**
PIRO	**Carate, Puerto**	**0.82**	**117**	*e*P	**Pb**	**02 13 51.5**	**0.0**
BUS1	**Rivas**	**0.84**	**23**	*e*P	**Pg**	**02 13 50.7**	**+0.1**
PIEC	**Cerro El Cedra**	**0.85**	**8**	*e*P	**Pg**	**02 13 51.0**	**+0.1**
PICV	**PH. Pirrs**	**0.85**	**352**	*e*P	**Pb**	**02 13 51.7**	**-0.4**
EDP2	**Potrero Grande**	**0.92**	**75**	*e*P	**Pb**	**02 13 53.4**	**+0.2**
DRK0	**Durika**	**0.95**	**59**	P	**Pg**	**02 13 50.9**	**-2.0**
DRK0				S	**Sb**	**02 14 06.8**	**-0.1**
DRK0	**Durika**	**0.95**	**59**	*e*P	**Pg**	**02 13 50.8**	**-2.0**
LCR2	**La Lucha 2**	**0.96**	**4**	P	**Pb**	**02 13 53.8**	**-0.3**
LCR2				S	**Sb**	**02 14 07.8**	**+0.6**
NELY	**Ciudad Neily**	**1.12**	**96**	*e*P	**Pg**	**02 13 56.6**	**+0.5**
BELE	**Belen**	**1.20**	**355**	*e*P	**Pg**	**02 13 57.2**	**-0.3**
RAFA	**San Farael, Vo**	**1.20**	**12**	*e*P	**Pb**	**02 13 58.0**	**-0.2**
CDITO	**Canoas**	**1.21**	**100**	P	**Pg**	**02 13 57.6**	**-0.1**
CDITO				S	**Sn**	**02 14 15.0**	**-0.3**
ALCO	**Alturas Coton,**	**1.24**	**82**	*e*P	**Pg**	**02 13 58.2**	**-0.1**
CVTQ	**Turrialba Volc**	**1.26**	**14**	*e*P	**Pg**	**02 13 58.9**	**+0.2**
CVTV	**Tajo**	**1.26**	**15**	*e*P	**Pg**	**02 13 58.7**	**-0.1**
VTR0	**Volcan Turrial**	**1.27**	**14**	*e*P	**Pg**	**02 13 58.8**	**-0.1**
CVTR	**Volcan Turrial**	**1.27**	**14**	*e*P	**Pg**	**02 13 59.0**	**0.0**
RESJ	**San Isidro (Tu**	**1.31**	**19**	*e*P	**Pn**	**02 13 59.9**	**-0.1**
PTPA	**Petro Terminal**	**1.32**	**116**	*e*P	**Pn**	**02 13 59.4**	**-0.6**
BRU2	**Volcan**	**1.37**	**89**	P	**Pn**	**02 14 00.6**	**-0.1**
BRU2	**Volcan**	**1.37**	**89**	*e*S	**Sn**	**02 14 20.5**	**+1.0**
BRU2	**Volcan**	**1.37**	**89**	*e*P	**Pn**	**02 14 00.7**	**-0.1**
LMNES	**Limones**	**1.38**	**119**	*e*P	**Pn**	**02 13 58.9**	**-1.8**
LCOCO	**El Coco**	**1.40**	**21**	*e*P	**Pg**	**02 14 01.4**	**0.0**
CLLRA	**Cordillera,**	**1.44**	**91**	*i* P	**Pn**	**02 14 01.7**	**-0.1**
CLLRA	**Cordillera,**	**1.44**	**91**	*e*P	**Pn**	**02 14 01.9**	**+0.1**
JEFFS	**S de V. Baru**	**1.53**	**94**	*e*P	**Pn**	**02 14 03.1**	**+0.2**
JTS	**Las Juntas de**	**1.74**	**330**	P	**Pb**	**02 14 06.9**	**-0.2**
BGUAL	**Bijagual, Pana**	**1.74**	**99**	*e*P	**Pn**	**02 14 06.2**	**+0.4**
ARE1	**Arenal 1**	**1.79**	**339**	*e*P	**Pg**	**02 14 08.9**	**0.0**
TRT2	**Tortugero**	**1.80**	**11**	P	**Pn**	**02 14 07.0**	**+0.4**
TRT2				S	**Sg**	**02 14 33.3**	**+0.8**
PBNVO	**Pueblo Nuevo,**	**1.86**	**86**	*i* P	**Pn**	**02 14 07.6**	**+0.1**
PBNVO				*e*S	**Sn**	**02 14 30.7**	**-0.8**
PBNVO				IAML		02 14 33.7	
	comp=Z,38nm,1.9s						
PBNVO	**Pueblo Nuevo,**	**1.86**	**86**	*e*P	**Pn**	**02 14 07.7**	**+0.3**
RBALA	**Bur**	**1.90**	**87**	*i* P	**Pn**	**02 14 08.1**	**+0.1**
RBALA				*e*S	**Sn**	**02 14 33.0**	**+0.5**
RBALA	**Bur**	**1.90**	**87**	*e*P	**Pn**	**02 14 08.5**	**+0.6**
KKNTU	**Kakint²**	**2.24**	**88**	*e*P	**Pn**	**02 14 13.3**	**+0.6**

DJA ***25*** *02:20:06.4±0.2, 3°N±2°×12°8E±°, h106km±2km, M5.2/123, mb5.2/123, mB5.6/75, MLv5.5/30, Mw4.8/24, Mw(mB)5.2/75, MwMwp5.0/4, Mwp5.3/4*

NEIC ***25*** *02:20:06.8±1.4, 2.84N±0.06×128.13E±0.07, h130km±7km, mb4.7/69, Error ellipse: s-maj=11.0km s-min=8.6km az=64.0*

MAN ***25*** *02:20:08.0, 3.57N×128.22E, h179km, MS4.2*

IDC ***25*** *02:20:08.2±0.6, 2.86N×128.24E, h145km±5km, mb4.1/18, mbtmp4.6/22, MS3.2/9, Error ellipse: s-maj=18.1km s-min=7.8km az=74.0*

ISC 25 02:20:06.7±0.4,2.84N±0.03×128.11E±0.05, h133km±4km, h133km:pP-P, n481, σ1s11/499, mb4.7/70, 3D, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAMI	**Galela, Maluku**	**1.05**	**198**	P	**Pn**	**02 20 28.8**	**-1.5**
TNTI	**Ternate**	**2.19**	**200**	P	**Pn**	**02 20 42.7**	**-0.4**
TNTI	**Ternate**	**2.19**	**200**		**Pn**	**02 20 42.6**	**-0.5**
TNTI				Sn	**Sn**	**02 21 11.0**	**0.0**
TNTI	**Ternate**	**2.19**	**200**	P	**Pn**	**02 20 42.4**	**-0.7**
SGSI	**Sangihe**	**2.71**	**288**	P	**Pn**	**02 20 47.7**	**-2.0**
MNI	**Manado**	**3.55**	**247**	P	**Pn**	**02 20 59.3**	**-1.3**
DDMP	**Don Marcelino,**	**4.03**	**324**	*e*P	**Pn**	**02 21 04.8**	**-2.1**
DDMP				*e*S	**Sn**	**02 21 50.7**	**-2.9**
GSPH	**General Santos**	**4.51**	**316**	*i* P	**Pn**	02 21 09.6	-3.8
GSPH				*i* S	**Sn**	**02 22 02.0**	**-3.2**
SWI	**Sorong**	**4.84**	**139**	P	**Pn**	**02 21 17.5**	**-0.2**
SIJI	**Sorong**	**4.85**	**139**	P	**Pn**	**02 21 17.6**	**-0.2**
	235nm,0.2s,baz=225,slow=22,SNR=309						
SIJI				S	**Sn**	**02 22 11.0**	**-2.3**
	185nm,0.5s,baz=149,slow=21,SNR=21						
SIJI	**Sorong**	**4.85**	**139**	P	**Pn**	**02 21 17.6**	**-0.2**
DAV	**Davao City (W)**	**4.90**	**329**	P	**Pn**	**02 21 18.3**	**-0.2**
	294nm,0.3s,baz=133,slow=2.4,SNR=6.2						
DAV				S	**Sn**	**02 22 16.8**	**+2.4**
	360nm,0.4s,baz=79,slow=12,SNR=2.2						
DAV	**Davao City (W)**	**4.90**	**329**	Pn	**Pn**	**02 21 18.1**	**-0.4**
DMPH	**Davao City--Mi**	**4.95**	**329**	*e*P	**Pn**	**02 21 20.1**	**+1.0**
DMPH				*i* S	Sn	02 21 36.6	-37
KCP	**Kidapawan**	**5.12**	**324**	*i* P	**Pn**	**02 21 20.6**	**-0.9**
KCP				*i* S	**Sn**	**02 22 23.9**	**+4.2**
CDOP	**Cateel, Davao**	**5.18**	**341**	*i* P	**Pn**	**02 21 20.1**	**-2.2**
SANI	**Sanana**	**5.30**	**204**	P	**Pn**	**02 21 21.8**	**-2.1**
SANI	**Sanana**	**5.30**	**204**	S	**Sn**	**02 22 18.5**	**-5.5**
SANI	**Sanana**	**5.30**	**204**	P	**Pn**	**02 21 21.9**	**-2.0**
	1.4nm5μm269nm,0.9s						
GTOI	**Gorontalo**	**5.55**	**247**	P	**Pn**	**02 21 27.2**	**0.0**
BIPH	**Bislig**	**5.58**	**342**	*e*P	**Pn**	**02 21 24.8**	**-2.9**
BIPH				*e*S	Sn	02 22 21.0	-10
BUKP	**Musuan**	**5.85**	**329**	*i* P	**Pn**	**02 21 31.0**	**-0.3**
BUKP				*i* S	**Sn**	**02 22 34.6**	**-2.7**
NLAI	**Namlea**	**6.12**	**189**	P	**Pn**	**02 21 35.4**	**+0.5**
	1.4nm3μm174nm,0.7s						
KRAI	**Karang Ratu**	**6.12**	**177**	P	**Pn**	**02 21 37.2**	**+2.3**
	0.9nm223nm,0.7s						
MSAI	**Masohi**	**6.20**	**172**	P	**Pn**	**02 21 36.7**	**+0.7**
	1.1nm397nm,0.7s						
TSSP	**Tandag City**	**6.45**	**343**	*e*P	**Pn**	**02 21 36.5**	**-2.8**
TSSP				*e*S	Sn	02 22 24.1	-28
AAI	**Ambon**	**6.49**	**179**	P	**Pn**	**02 21 40.5**	**+0.7**
	1.1nm3μm381nm,0.8s						
LUWI	**Luwuk**	**6.58**	**234**	P	**Pn**	**02 21 40.6**	**-0.5**
LUWI	**Luwuk**	**6.58**	**234**	Pn	**Pn**	**02 21 39.9**	**-1.2**
LUWI	**Luwuk**	**6.58**	**234**	P	**Pn**	**02 21 39.2**	**-1.9**
MRSI	**Marisa**	**6.60**	**249**	P	**Pn**	**02 21 41.0**	**-0.3**
MWPI	**Manokwari, Pap**	**7.01**	**122**	P	**Pn**	**02 21 47.8**	**+0.9**
	4.3nm376nm,0.8s						
FAKI	**Fak Fak**	**7.06**	**144**	P	**Pn**	**02 21 48.3**	**+0.7**
FAKI	**Fak Fak**	**7.06**	**144**	S	**Sn**	**02 23 03.9**	**-2.6**
FAKI	**Fak Fak**	**7.06**	**144**		**Pn**	**02 21 47.1**	**-0.4**
FAKI	**Fak Fak**	**7.06**	**144**	P	**Pn**	**02 21 48.2**	**+0.7**
	1.0nm3μm298nm,0.8s						
RKPI	**Ransiki, Papua**	**7.45**	**125**	P	**Pn**	**02 21 53.4**	**+0.7**
	1.5nm6μm289nm,0.9s						
APSI	**Ampana**	**7.46**	**240**	P	**Pn**	**02 21 52.0**	**-0.8**
	2.0nm9μm890nm,1.1s						
TOLI2	**Tolitoli**	**7.52**	**257**		**Pn**	**02 21 52.3**	**-1.4**
BNDI	**Bandanaira**	**7.53**	**166**	P	**Pn**	**02 21 54.7**	**+0.8**
	1.7nm415nm,1.5s						
TBP	**Tagbilaran**	**8.01**	**328**	*e*P	**Pn**	**02 21 57.6**	**-2.7**
KMPI	**Kaimana, Papua**	**8.54**	**139**	P	**Pn**	**02 22 08.5**	**+1.0**
	106nm,0.6s						
MPSI	**Mapaga**	**8.58**	**253**	P	**Pn**	**02 22 07.3**	**-0.6**
	2μm241nm,0.9s						
KDI	**Kendari**	**8.70**	**219**	P	**Pn**	**02 22 09.3**	**-0.3**
BAKI	**Biak**	**8.94**	**117**	P	**Pn**	**02 22 13.9**	**+1.1**
	4μm531nm,1.0s						
PCI	**Palu**	**9.07**	**246**	P	**Pn**	**02 22 13.9**	**-0.7**
	3μm272nm,0.7s						
SRPI	**Serui, Papua**	**9.38**	**120**	P	**Pn**	**02 22 19.6**	**+0.9**
	274nm,0.8s						
KKSI	**Kolaka, Sulawe**	**9.50**	**223**	P	**Pn**	**02 22 18.7**	**-1.6**
	8μm299nm,1.0s						
TTSI	**Tana Toraja**	**10.14**	**235**	P	**Pn**	**02 22 26.9**	**-2.0**
MMSI	**Mamuju**	**10.71**	**239**	P	**Pn**	**02 22 34.8**	**-1.8**
	61nm,0.7s						
SPSI	**Sidrap Palu**	**10.73**	**231**	P	**Pn**	**02 22 34.9**	**-1.9**
	3μm415nm,0.8s						
PMSI	**Majene**	**11.14**	**236**	P	**Pn**	**02 22 41.7**	**-0.6**
	2μm145nm,0.8s						
SAUI	**Saumlaki**	**11.21**	**164**	Pn	**Pn**	**02 22 40.1**	**-3.1**
SAUI	**Saumlaki**	**11.21**	**164**	P	**Pn**	**02 22 42.5**	**-0.7**
	10μm331nm,0.9s						
KAPI	**Kappang**	**11.43**	**227**	P	**Pn**	**02 22 44.7**	**-1.4**
	82nm,0.5s,baz=49,slow=6.4,SNR=69						
KAPI				S	**Sn**	**02 24 47.5**	**-4.6**
	47nm,0.5s,baz=90,slow=20,SNR=10						
KAPI	**Kappang**	**11.43**	**227**	P	**Pn**	**02 22 46.8**	**+0.8**
KAPI	**Kappang**	**11.43**	**227**	S	**Sn**	**02 24 48.4**	**-3.7**
KAPI	**Kappang**	**11.43**	**227**		**Pn**	**02 22 44.5**	**-1.6**
KAPI	**Kappang**	**11.43**	**227**	P	**Pn**	**02 22 44.0**	**-2.0**
	765nm85nm,0.9s						
SMPI	**Sarmi**	**11.63**	**114**	P	**Pn**	**02 22 49.6**	**+0.9**
BSSI	**Bau Bau, Buton**	**11.73**	**220**	P	**Pn**	**02 22 49.0**	**-1.0**
	3μm301nm,0.9s						
MKS	**Makassar**	**11.77**	**227**	P	**Pn**	**02 22 50.0**	**-0.6**
BKB	**Balikpapan**	**11.93**	**250**	Pn	**Pn**	**02 22 52.0**	**-0.6**
BKB	**Balikpapan**	**11.93**	**250**	P	**Pn**	**02 22 52.4**	**-0.2**
	3μm241nm,1.0s						
KKM	**Kota Kinabalu**	**12.28**	**285**	Pn	**Pn**	**02 22 55.9**	**-1.4**
KKM	**Kota Kinabalu**	**12.28**	**285**	P	**Pn**	**02 22 56.4**	**-0.9**
	28nm,0.9s						
MMRI	**Maumere**	**12.82**	**207**	Pn	**Pn**	**02 23 03.4**	**-0.8**
MMRI	**Maumere**	**12.82**	**207**	P	**Pn**	**02 23 03.9**	**-0.3**
SOEI	**Soe**	**13.09**	**197**		**Pn**	**02 23 06.9**	**-0.8**
SOEI	**Soe**	**13.09**	**197**	P	**Pn**	**02 23 10.3**	**+2.5**
	89nm,0.8s						
GENI	**Genyem**	**13.21**	**114**	P	**P**	**02 23 10.9**	**-3.4**
	85nm,1.1s						
TGY	**Tagaytay City**	**13.24**	**328**	P	**Pn**	**02 23 10.5**	**+0.8**
	89nm,0.5s,baz=134,slow=18,SNR=6.3						
TGY				LR	LR	02 28 32.7	
	comp=Z,97nm,18.2s,baz=88,slow=38						
JAY	**Jayapura**	**13.67**	**113**	P	**Pn**	**02 23 15.4**	**+0.2**
	6.7nm,0.9s,baz=210,slow=11,SNR=5.3						
JAY	**Jayapura**	**13.67**	**113**	P	**P**	**02 23 17.9**	**-1.5**
BATI	**Baumata**	**13.70**	**199**	P	**Pn**	**02 23 16.7**	**+1.2**
	28nm,0.5s,baz=53,slow=4.2,SNR=4.3						
BATI				S	**Sn**	**02 25 51.8**	**+4.8**
	24nm,0.4s,baz=352,slow=2.5,SNR=2.1						
BATI	**Baumata**	**13.70**	**199**	P	**Pn**	**02 23 16.2**	**+0.7**
	51nm,0.7s						
MTKI	**Muara Teweh, K**	**13.73**	**254**	P	**Pn**	**02 23 16.2**	**+0.2**
LBFI	**Labuhan Bajo,**	**13.92**	**216**	P	**Pn**	**02 23 18.3**	**0.0**
WSI	**Waingapu**	**14.66**	**212**	P	**Pn**	**02 23 26.7**	**-1.1**
	5μm160nm,0.8s						
BBKI	**Banjar Baru**	**14.67**	**245**	P	**Pn**	**02 23 27.1**	**-0.7**
	6μm104nm,0.9s						
DBNI	**Kabupaten Domp**	**14.91**	**221**	P	**Pn**	**02 23 31.1**	**+0.2**
	947nm57nm,1.0s						
BASI	**Baing, Sumba**	**14.99**	**210**	P	**Pn**	**02 23 32.4**	**+0.6**
	3μm180nm,0.8s						
WBSI	**Waikabubak, Su**	**15.14**	**215**	P	**Pn**	**02 23 32.0**	**-1.8**
	1μm135nm,0.8s						
PLAI	**Plampang**	**15.51**	**222**	P	**Pn**	**02 23 39.5**	**+1.1**
PLAI	**Plampang**	**15.51**	**222**	P	**Pn**	**02 23 39.4**	**+1.1**
	2μm157nm,1.1s						
MTN	**Manton Dam**	**15.87**	**169**		**Pn**	**02 23 40.9**	**-1.8**
MTN				IAmb	IAmb	02 23 46.5	
	comp=Z,37nm,0.9s						
SBUM	**Sibu**	**15.88**	**269**		**Pn**	**02 23 41.5**	**-1.4**
SBUM	**Sibu**	**15.88**	**269**	P	**Pn**	**02 23 42.9**	**0.0**
TWSI	**Taliwang, Sumb**	**16.05**	**224**	P	**Pn**	**02 23 44.7**	**-0.3**
	comp=Z,955nmcomp=Z,102nm,1.2s						
KLNI	**Mataram**	**16.39**	**227**	P	**Pn**	**02 23 49.5**	**+0.3**
	comp=Z,2μmcomp=Z,93nm,0.8s						
KHKI	**Kahang-Kahang**	**16.71**	**228**	P	**P**	**02 23 54.4**	**+1.3**
	comp=Z,2μmcomp=Z,180nm,1.0s						
SRBI	**Singaraja**	**16.83**	**230**	P	**P**	**02 23 53.5**	**-0.9**
	comp=Z,83nm,0.9s						
KMMI	**Kalianget**	**17.20**	**235**	P	**P**	**02 23 58.8**	**+0.3**
	comp=

CMAR Chiang Mai Arr 32.51 301 P **P** **02 26 26.9 +1.9**
comp=Z,8.2nm,0.8s,baz=119,slow=7.4,SNR=44
CMAR pP **pwP** **02 26 57.3 +1.3**
comp=Z,8.0nm,1.0s,baz=113,slow=7.1,SNR=3.8
comp=Z,8.2nm,0.8s
CMAR Chiang Mai Arr 32.51 301 P **P** **02 26 25.8 +0.8**
CHTO Chiang Mai 32.66 301 P **P** **02 26 26.9 +0.5**
KMI2 Kunming 32.99 315 P **P** **02 26 31.5 +2.1**
KMI2 pmax pmax
comp=Z,22nm,1.4s
FORT Forrest 33.43 180 P **P** **02 26 32.9 +0.1**
FORT IAmb IAmb 02 26 59.6
comp=Z,14nm,0.9s
KSAR Wonju Array Be 34.44 360 P **P** **02 26 40.1 -1.4**
KSRS Korea Array 34.45 360 P **P** **02 26 41.0 -0.5**
comp=Z,3.4nm,0.9s,baz=180,slow=10,SNR=11
KSRS LR LR 02 39 54.1
comp=Z,29nm,20.5s,baz=185,slow=34
comp=Z,3.4nm,0.9s
PZH PanZhiHua 34.54 315 P **P** **02 26 44.8 +2.1**
LYN LuoYang 34.75 337 P **P** **02 26 45.4 +1.2**
LYN pmax pmax
comp=Z,16nm,0.9s
MJAR Matsushiro Arr 34.81 14 P **P** **02 26 43.0 -1.7**
comp=Z,3.1nm,0.8s,baz=181,slow=9.2,SNR=5.6
MJAR PcP **PcP** **02 29 16.4 +1.2**
comp=Z,0.8nm,0.3s,baz=224,slow=1.6,SNR=1.6
comp=Z,3.1nm,0.8s
XAN Xi'an 35.83 332 ⇓P **P** **02 26 53.9 +0.3**
XAN pmax pmax
comp=Z,55nm,1.1s
CD2 Chengdu 36.17 323 P **P** **02 26 57.6 +1.1**
CD2 pmax pmax
comp=Z,40nm,0.9s
HNS HongShan 36.53 342 ⇓P **P** **02 27 00.0 +0.6**
HNS pmax pmax
comp=Z,21nm,1.2s
STKA Stephens Creek 36.83 161 P **P** **02 27 02.3 +0.3**
comp=Z,26nm,0.8s,baz=338,slow=8.7,SNR=16
STKA LR LR 02 44 41.6
comp=Z,16nm,19.3s,baz=9.2,slow=40
comp=Z,26nm,0.8s
STKA Stephens Creek 36.83 161 P **P** **02 27 01.6 -0.4**
BJI2 Beijing 38.56 345 P **P** **02 27 16.8 +0.4**
BJI2 sP **sP** **02 27 59.3 -1.2**
BJI2 pmax pmax
comp=Z,11nm,1.2s
BJT Baijiatuau 38.56 345 P **P** **02 27 16.2 -0.2**
BJT IAmb IAmb 02 27 17.4
comp=Z,18nm,0.9s
LZDM Lanzhou Array 39.94 329 P **P** **02 27 29.6 +1.2**
comp=Z,18nm,0.8s,baz=156,slow=11,SNR=18
comp=Z,18nm,0.8s
LZH Lanzhou 39.97 329 eP **P** **02 27 30.8 +2.4**
LZH pmax pmax
comp=Z,78nm,1.2s
LZH L L
comp=Z,160nm,13.4s
LZH L L
comp=Z,200nm,13.4s
LZH L L
comp=Z,190nm,14.8s
ARMA Armidale 39.98 148 P **P** **02 27 28.8 +0.3**
ARMA IAmb IAmb 02 27 56.4
comp=Z,21nm,1.1s
HHC Hu-ho-hao-te 40.68 341 eP **P** **02 27 36.5 +2.4**
HHC pmax pmax
comp=Z,7.0nm,0.7s
USRK Ussuriysk Ar. 41.33 4 P **P** **02 27 39.5 +0.3**
comp=Z,6.8nm,0.8s,baz=171,slow=7.1,SNR=13
USRK pP **pP** **02 28 12.1 +3.4**
comp=Z,3.8nm,0.8s,baz=188,slow=7.9,SNR=3.4
comp=Z,6.8nm,0.8s
SHL Shillong 41.51 306 P **P** **02 27 41.8 +0.6**
MDJ Mudanjiang 41.62 2 P **P** **02 27 41.5 -0.1**
MDJ IAmb IAmb 02 27 42.7
comp=Z,11nm,0.8s
MDJ Mudanjiang 41.62 2 P **P** **02 27 42.0 +0.4**
MDJ pmax pmax
comp=Z,17nm,0.9s
XLT XiLinHaoTe 42.25 347 eP **P** **02 27 47.3 +0.4**
XLT pmax pmax
comp=Z,15nm,1.1s
BNX BinXian 42.73 359 ⇓P **P** **02 27 49.6 -1.0**
BNX pmax pmax
comp=Z,4.0nm,0.7s
LSA Lhasa 44.06 311 P **P** **02 28 03.0 +0.9**
LSA IAmb IAmb 02 28 05.4
comp=Z,19nm,0.8s
LSA Lhasa 44.06 311 P **P** **02 28 02.3 +0.2**
LSA pmax pmax
comp=Z,23nm,0.9s
GTA2 Gaotai 44.65 328 eP **P** **02 28 06.8 +0.5**
GTA2 pP pwP 02 28 40.8 +2.1
GTA2 pmax pmax
comp=Z,23nm,1.1s
GOMU GeErMu 45.23 321 P **P** **02 28 12.3 +1.1**
GOMU pmax pmax
comp=Z,13nm,1.4s
EVN Everest 46.62 307 P **P** **02 28 23.2 +0.6**
HIA Hailar 46.80 352 P **P** **02 28 22.2 -0.7**
HEH HeiHe 47.24 359 eP **P** **02 28 25.8 -0.4**
HEH sP **sP** **02 29 11.8 +0.7**
HEH pmax pmax
comp=Z,14nm,1.1s
ULN Ulaanbaatar 48.39 341 P **P** **02 28 35.4 +0.1**
ULN IAmb IAmb 02 28 36.8
comp=Z,16nm,0.9s
SONM Songino Array 48.58 341 P **P** **02 28 37.4 +0.6**
comp=Z,4.7nm,0.8s,baz=157,slow=8.6,SNR=24
comp=Z,4.7nm,0.8s
SONM Songino Array 48.58 341 P **P** **02 28 36.4 -0.4**
TLY Talaya 52.80 341 P **P** **02 29 08.5 +0.3**
WMQ Urumqi 54.24 325 eP **P** **02 29 20.4 +1.5**
WMQ pmax pmax
comp=Z,15nm,1.1s
PETK Petropavlovsk- 55.74 21 P **P** **02 29 30.3 +0.8**
comp=Z,16nm,0.9s,baz=222,slow=4.0,SNR=7.0
comp=Z,16nm,0.9s
PETK Petropavlovsk- 55.74 21 P **P** **02 29 29.1 -0.3**
WUS Wushi 58.14 318 P **P** **02 29 46.5 -0.2**
YAK Yakutsk 59.06 1 P **P** **02 29 52.1 -0.4**
MKAR Makanchi Array 59.07 325 P **P** **02 29 53.3 +0.4**
comp=Z,8.3nm,0.9s,baz=121,slow=8.1,SNR=68
MKAR pP **pwP** **02 30 27.7 +0.7**
comp=Z,5.7nm,0.7s,baz=120,slow=8.1,SNR=4.5
MKAR PP **PP** **02 32 03.1 -1.8**
comp=Z,1.6nm,0.9s,baz=120,slow=8.5,SNR=1.5
comp=Z,8.3nm,0.9s
MKAR Makanchi Array 59.07 325 **P** **02 29 53.0 +0.1**
MA2 Magadan 59.24 13 P **P** **02 29 53.9 +0.1**
MAKZ Makanchi 59.26 325 **P** **02 29 54.7 +0.5**
NIL Nilore 59.55 308 P **P** **02 29 56.8 +0.2**
KSH2 Kashi 59.78 314 P **P** **02 29 59.5 +1.4**
KSH2 pmax pmax
comp=Z,12nm,1.0s
ZAA0 Zalesovo Array 62.00 333 P **P** **02 30 11.8 -0.8**
ZAA0 IAmb IAmb 02 30 13.0
comp=Z,9.0nm,1.1s
ZALV Zalesovo Beam 62.00 333 P **P** **02 30 12.2 -0.4**
comp=Z,3.1nm,0.8s,baz=103,slow=6.4,SNR=13
ZALV pP **pwP** **02 30 47.7 +0.7**
comp=Z,0.7nm,0.4s,baz=120,slow=9.0,SNR=1.7
ZALV PP **PP** **02 32 28.9 -1.8**
comp=Z,0.7nm,0.6s,baz=162,slow=20,SNR=1.9
comp=Z,3.1nm,0.8s
ZALV Zalesovo Beam 62.00 333 **P** **02 30 11.8 -0.8**
ARSB Arslanbob 62.45 316 P **P** **02 30 15.7 -0.4**
ARSB IAmb IAmb 02 30 53.1
comp=Z,15nm,1.2s
KBL Kabul 63.15 307 P **P** **02 30 20.9 -0.1**
KBL IAmb IAmb 02 30 56.0
comp=Z,8.2nm,0.8s
KURBB Kurchatov Arra 63.23 327 P **P** **02 30 21.3 +0.5**
comp=Z,9.9nm,0.9s,baz=124,slow=6.0,SNR=79
KURBB PP **PP** **02 32 39.1 -2.4**
comp=Z,1.3nm,1.0s,baz=120,slow=10,SNR=4.0
comp=Z,9.9nm,0.9s
KURK Kurchatov 63.23 327 **P** **02 30 20.2 -0.6**
KURK IAmb IAmb 02 30 22.0
comp=Z,11nm,0.8s
BTK Batken 63.52 314 **P** **02 30 22.6 -0.5**
BTK IAmb IAmb 02 30 28.6
comp=Z,16nm,1.4s
GAR Garm 63.53 313 **P** **02 30 23.5 +0.2**
KK31 Karatay Array 64.82 317 **P** **02 30 31.2 -0.2**
KK31 IAmb IAmb 02 30 32.9
comp=Z,8.4nm,1.1s
KKAR Karatay Array 64.82 317 **P** **02 30 31.4 0.0**
HRA Herat 68.57 306 P **P** **02 30 54.9 -0.8**
TIXI Tiksi 68.71 0 P **P** **02 30 53.8 -1.7**
TIXI IAmb IAmb 02 30 56.4
comp=Z,11nm,1.1s
BVAR Borovoye Array 68.81 327 P **P** **02 30 56.7 +0.2**
comp=Z,7.5nm,1.0s,baz=116,slow=6.9,SNR=16
comp=Z,7.5nm,1.0s
BORK Borovoye 68.86 327 P **P** **02 30 56.3 -0.5**
BORK IAmb IAmb 02 31 35.0
comp=Z,7.1nm,0.8s
NRIK Noril'sk 71.62 346 P **P** **02 31 13.4 +0.2**
comp=Z,7.6nm,0.9s,baz=143,slow=6.8,SNR=10.0
comp=Z,7.6nm,0.9s
NRIK Noril'sk 71.62 346 P **P** **02 31 12.4 -0.9**
NRIK IAmb IAmb 02 31 14.2
comp=Z,9.5nm,0.9s
SPIA Saint Paul Isl 72.56 30 P **P** **02 31 19.3 +0.2**
baz=247
AB31 Akbulak array 73.70 321 **P** **02 31 25.6 -0.4**
ABKAR Akbulak array 73.70 321 **P** **02 31 25.2 -0.8**
GAMB Gambell 74.65 24 P **P** **02 31 31.4 +0.2**
GAMB Gambell 74.65 24 P **P** **02 31 31.7 +0.5**
baz=244
FALS False Pass 75.40 34 P **P** **02 31 35.9 +0.3**
baz=254
M11K Mekoryuk 75.70 28 P **P** **02 31 37.7 +0.4**
baz=250
TNA Tin City 76.87 23 P **P** **02 31 44.1 +0.4**
baz=247
K13K Kusilvak Mount 76.93 27 P **P** **02 31 44.4 +0.3**
K13K IAmb IAmb 02 31 46.6
comp=Z,11nm,1.1s
K13K Kusilvak Mount 76.93 27 P **P** **02 31 44.9 +0.7**
baz=251
M13K Dall Lake 77.05 28 P **P** **02 31 45.0 +0.2**
baz=252
SDPT Sand Point 77.16 34 P **P** **02 31 45.6 0.0**
baz=256
F14K Arctic Creek 77.45 23 P **P** **02 31 47.4 +0.3**
baz=249
ANM Nome 77.51 24 P **P** **02 31 47.4 +0.1**
baz=250
CHNA Chernabura Isl 77.53 34 P **P** **02 31 47.8 +0.1**
baz=257
L14K Kuka Creek 77.64 27 P **P** **02 31 48.0 -0.1**
baz=253
N14K Kuskokwak Cree 77.71 29 P **P** **02 31 48.5 0.0**
baz=254
O14K Tigyukauivet M 77.73 30 P **P** **02 31 48.8 +0.1**
baz=255
M14K Bethel 77.81 28 P **P** **02 31 49.5 +0.5**
baz=254
S14K Fog Glacier 77.89 33 P **P** **02 31 49.6 -0.1**
baz=257
F15K North Star Dit 78.19 23 P **P** **02 31 51.4 +0.3**
baz=250
G15K Niukluk 78.19 24 P **P** **02 31 51.3 +0.2**
baz=251
M15K Kasigluk River 78.39 28 P **P** **02 31 52.3 0.0**
baz=255
O15K Ungalikthiuk R 78.43 30 P **P** **02 31 52.7 +0.2**
baz=256
K15K Wolf Creek Mou 78.44 27 P **P** **02 31 53.6 +1.1**
K15K IAmb IAmb 02 31 55.7
comp=Z,13nm,1.2s
K15K Wolf Creek Mou 78.44 27 P **P** **02 31 53.3 +0.8**
baz=254
CHGN Chignik 78.51 33 P **P** **02 31 53.4 +0.4**
baz=258
N15K Kwethluk River 78.54 29 P **P** **02 31 53.8 +0.6**
baz=256
H16K Elim 78.81 24 P **P** **02 31 54.7 +0.2**
baz=253
C16K Lisburne Hills 78.83 20 P **P** **02 31 54.9 +0.4**
baz=249
G16K Koyuk River 78.99 24 P **P** **02 31 55.9 +0.4**
baz=252
J16K Anvik River 79.12 26 **P** **02 31 57.7 +1.4**
J16K Anvik River 79.12 26 P **P** **02 31 56.7 +0.5**
baz=254
R16K Pilot Point 79.22 32 P **P** **02 31 56.8 -0.1**
baz=258
I17K Unalakleet 79.24 25 P **P** **02 31 56.9 0.0**
baz=254
N16K Nishlik Lake 79.26 29 P **P** **02 31 57.2 +0.1**
baz=257
M16K Timber Creek 79.29 28 P **P** **02 31 57.8 +0.5**
baz=256
P16K Nushagak River 79.32 30 P **P** **02 31 57.4 0.0**
baz=258
O16K Kokwok River B 79.39 30 P **P** **02 31 58.3 +0.5**
baz=257
D17K Noatak River 79.44 21 P **P** **02 31 58.8 +0.9**
baz=251
RDOG Red Dog Mine 79.61 21 P **P** **02 31 59.5 +0.6**
RDOG Red Dog Mine 79.61 21 P **P** **02 31 59.6 +0.7**
baz=251
C17K DeLong Mountai 79.66 20 P **P** **02 31 59.5 +0.4**
baz=251
G17K Kiwalik Mounta 79.71 24 P **P** **02 31 59.8 +0.4**
baz=254
E17K Hotham Inlet 79.71 22 P **P** **02 31 59.9 +0.5**
baz=253
F17K Baldwin Pennin 79.74 23 P **P** **02 31 59.6 +0.1**
baz=253
J17K VABM Dome 79.81 26 P **P** **02 31 60.0 0.0**
baz=256
H17K Granite Mounta 79.85 24 P **P** **02 32 00.3 +0.1**
baz=255
L17K Donlin 79.86 27 P **P** **02 32 00.1 -0.2**
baz=257
R17L Mt. Peulik Vol 79.88 32 P **P** **02 32 00.4 -0.1**
baz=259
O17K Koliganek Bris 79.92 30 P **P** **02 32 00.8 +0.1**
baz=258
K17K Iditarod 80.00 27 P **P** **02 32 01.3 +0.3**
baz=257
N17K Nushagak Hills 80.03 29 P **P** **02 32 01.8 +0.6**
baz=258
M17K Holitna River 80.10 28 P **P** **02 32 01.9 +0.4**
baz=258
P17K Kvichak River 80.13 30 P **P** **02 32 02.0 +0.2**
baz=259
Q17K Contact Creek 80.24 31 P **P** **02 32 02.6 0.0**
baz=260
E18K Tukpahlearik C 80.26 22 P **P** **02 32 02.9 +0.6**
baz=254
F18K Selawik 80.40 23 P **P** **02 32 03.7 +0.6**
baz=255
C18K Utukok River 80.40 21 P **P** **02 32 03.8 +0.7**
baz=253
H18K Honhosa River 80.54 24 P **P** **02 32 04.3 +0.4**
baz=256
G18K Tagagawik 80.61 23 P **P** **02 32 04.2 0.0**
baz=256
L18K Granite Mounta 80.62 27 P **P** **02 32 04.6 +0.3**
baz=258
N18K Kilae Creek 80.69 29 P **P** **02 32 05.0 +0.2**
baz=259
Q18K Katmai Hardscr 80.76 31 P **P** **02 32 05.3 -0.1**
baz=260
P18K Big Mountain, 80.78 30 P **P** **02 32 05.8 +0.5**
baz=260
J18K Innoko River 80.86 26 P **P** **02 32 06.2 +0.6**
baz=258
SII Sitkinak Islan 80.87 33 P **P** **02 32 06.4 +0.6**
baz=261
O18K Utuh Hills 80.87 30 P **P** **02 32 06.3 +0.5**
baz=260
M18K Stony River 80.88 28 P **P** **02 32 06.4 +0.7**
baz=259
A19K Wainwright 80.90 19 P **P** **02 32 06.7 +1.0**
baz=253
GCSA Galena City Sc 81.07 25 P **P** **02 32 07.5 +0.9**
baz=258
C19K Lookout Ridge 81.09 20 P **P** **02 32 07.4 +0.7**
baz=254
F19K Shaleruckik Mo 81.18 23 P **P** **02 32 08.0 +0.8**
baz=256
G19K Purcell Mounta 81.29 23 P **P** **02 32 08.8 +1.0**
baz=257
O19K Port Alsworth 81.37 30 P **P** **02 32 09.0 +0.7**
baz=261
N19K Bonanza Creek 81.39 29 P **P** **02 32 09.5 +0.9**
baz=260
H19K Roundabout Mou 81.41 24 P **P** **02 32 09.2 +0.8**
baz=258
J19K Poorman 81.45 26 P **P** **02 32 09.4 +0.7**
baz=259
D19K Kuna River 81.45 21 P **P** **02 32 09.6 +0.9**
baz=256
OHAK Old Harbor 81.45 33 P **P** **02 32 09.4 +0.6**
baz=262
L19K White Mountain 81.45 28 P **P** **02 32 09.8 +1.0**
baz=260
Q19K Cape Douglas, 81.51 31 P **P** **02 32 09.7 +0.6**
baz=261
E19K Redstone River 81.53 22 P **P** **02 32 09.9 +0.8**
baz=257
P19K Oil Pt 81.83 30 P **P** **02 32 11.6 +0.8**
baz=262
KDAK Kodiak Island 81.90 32 P **P** **02 32 12.2 +1.1**
baz=262
F20K Avaraart Lake 82.01 23 P **P** **02 32 12.6 +1.0**
baz=258
K20K Telida 82.01 26 P **P** **02 32 12.7 +1.0**
baz=260
D20K Etivluk River 82.04 21 P **P** **02 32 12.4 +0.6**
baz=257,SNR=8.3
H20K Anotleneega Mo 82.05 24 P **P** **02 32 12.1 +0.2**
baz=259
I20K Naaghedeneel 82.08 25 P **P** **02 32 12.4 +0.4**
baz=260
E20K Nigu River 82.09 21 P **P** **02 32 13.0 +0.9**
baz=258
RAYN Ar Rayn 82.10 293 P **P** **02 32 12.4 -0.6**
Q20K Shuyak Island 82.11 31 P **P** **02 32 12.6 +0.4**
baz=262
J20K Nowinta River 82.12 26 P **P** **02 32 12.6 +0.3**
J20K Nowinta River 82.12 26 P **P** **02 32 13.4 +1.2**
baz=260
B20K Meade River 82.14 20 P **P** **02 32 13.3 +1.1**
baz=257
M20K Styx River 82.21 28 P **P** **02 32 13.6 +0.8**
baz=261
N20K Mount Spurr 82.55 29 P **P** **02 32 15.6 +1.0**
baz=262
IMAR Indian Mountai 82.59 24 P **P** **02 32 15.4 +0.8**
A21K Barrow 82.62 18 P **P** **02 32 15.9 +1.2**
baz=257
HOM Homer 82.63 30 P **P** **02 32 15.9 +0.9**
baz=263
C21K Knifeblade Rid 82.78 21 P **P** **02 32 16.7 +1.1**
baz=259
G21K Allakaket 82.78 23 P **P** **02 32 16.5 +0.8**
G21K IAmb IAmb 02 32 18.1
comp=Z,9.5nm,1.0s
G21K Allakaket 82.78 23 P **P** **02 32 16.7 +1.1**
baz=260
PPLA Purkeypile 82.79 27 P **P** **02 32 16.6 +0.7**
baz=262
CHUM Lake Minchumin 82.87 26 P **P** **02 32 17.0 +0.9**
baz=262
F21K Alatna River 82.91 23 P **P** **02 32 17.2 +0.9**
baz=260
H21K Melozitna Rive 82.92 24 P **P** **02 32 17.3 +0.9**
baz=261
B21K Ikpikpuk River 82.92 20 P **P** **02 32 17.3 +1.0**
B21K IAmb IAmb 02 32 18.8
comp=Z,14nm,1.0s
B21K Ikpikpuk River 82.92 20 P **P** **02 32 17.2 +1.0**
baz=259,SNR=15
E21K Killik River 82.93 21 P **P** **02 32 17.2 +0.8**
baz=260
SKT Skwentna 82.97 28 **P** **02 32 16.2 -0.5**
SKT IAmb IAmb 02 32 17.6
comp=Z,11nm,1.1s
SKT Skwentna 82.97 28 P **P** **02 32 17.3 +0.6**
baz=263,SNR=5.5
CAPN Captain Cook N 83.00 29 P **P** **02 32 17.5 +0.7**
baz=263
A22K Sinclair Lake 83.08 19 P **P** **02 32 17.8 +0.8**
baz=258
BRSE Bradley Lake S 83.09 30 P **P** **02 32 17.7 +0.3**
baz=264
I21K Tanana 83.19 25 P **P** **02 32 18.0 +0.3**
I21K IAmb IAmb 02 32 20.2
comp=Z,9.6nm,1.1s
I21K Tanana 83.19 25 P **P** **02 32 18.6 +0.8**
baz=262,SNR=8.9
B22K Teshekpuk Lake 83.46 19 P **P** **02 32 19.5 +0.5**
baz=260,SNR=5.4
BPAW Bear Paw Mtn. 83.48 26 P **P** **02 32 20.0 +0.7**
baz=263
H22K Ishtalitna Cre 83.54 24 P **P** **02 32 20.4 +0.9**
baz=262,SNR=9.0
CUT Chulitna 83.61 28 P **P** **02 32 20.6 +0.7**
baz=264
M22K Willow 83.61 28 P **P** **02 32 20.2 +0.3**
baz=264
O22K Cooper Landing 83.67 30 P **P** **02 32 21.0 +0.7**
baz=265
E22K Anaktuvuk Pass 83.68 22 P **P** **02 32 21.2 +1.0**
baz=262
MLY Manley 83.70 25 P **P** **02 32 20.7 +0.3**
MLY Manley 83.70 25 P **P** **02 32 20.9 +0.5**
baz=263,SNR=5.4
TRF Thorofare Moun 83.71 27 P **P** **02 32 20.8 +0.2**
baz=264
RC01 Rabbit Creek A 83.72 29 P **P** **02 32 20.9 +0.3**
baz=264
SEW Seward 83.77 30 P **P** **02 32 21.0 +0.3**
baz=265
PMR Palmer 84.06 28 P **P** **02 32 22.5 +0.3**
baz=265
COLD Coldfoot 84.17 23 P **P** **02 32 23.5 +0.8**
COLD IAmb IAmb 02 32 25.3
comp=Z,9.2nm,0.9s
COLD Coldfoot 84.17 23 P **P** **02 32 23.7 +1.0**
baz=263,SNR=10
G23K Bananza Creek 84.18 23 P **P** **02 32 23.8 +1.0**
baz=264
D23K Nanushuk River 84.20 21 P **P** **02 32 23.9 +1.0**
baz=263
H23K Yukon River 84.28 24 P **P** **02 32 24.2 +0.8**
baz=264
I23K Minto, Yukon-K 84.29 25 P **P** **02 32 24.0 +0.7**
baz=264,SNR=9.0
C23K Itkillik River 84.33 20 P **P** **02 32 24.2 +0.8**
baz=263
MCK McKinley 84.34 26 P **P** **02 32 24.2 +0.6**
baz=265
NEA2 Nenana 84.36 25 P **P** **02 32 24.3 +0.6**
baz=265
GEVA Gevas 84.36 308 P **P** **02 32 24.1 -0.4**
GEVA IAmb IAmb 02 33 03.4
comp=Z,7.6nm,0.8s
KNK Knik Glacier 84.37 29 P **P** **02 32 23.7 -0.2**
baz=266
WAT1 Susitna Watana 84.44 27 P **P** **02 32 24.3 +0.1**
baz=265
SML Sawmill 84.46 28 P **P** **02 32 24.4 0.0**
SML IAmb IAmb 02 32 25.9
comp=Z,11nm,0.9s
SML Sawmill 84.46 28 P **P** **02 32 24.6 +0.3**
baz=266,SNR=5.7
E23K Chandalar 84.49 22 P **P** **02 32 25.1 +0.7**
baz=264
TOLK Toolik Lake Re 84.56 21 P **P** **02 32 25.7 +1.0**
baz=264,SNR=6.9
M23K Glacier View 84.75 28 P **P** **02 32 26.8 +1.1**
baz=266
P23K Montague Islan 84.79 30 P **P** **02 32 26.9 +1.0**
baz=267
WAT6 Susitna Watana 84.79 28 P **P** **02 32 26.7 +0.6**
baz=266,SNR=5.1
D24K Happy Valley 84.89 21 P **P** **02 32 27.4 +1.2**
baz=264
COLA College 84.91 25 P **P** **02 32 27.5 +1.1**
baz=266
E24K Your Creek 84.91 22 P **P** **02 32 27.5 +1.0**
baz=265
SCM Sheep Creek Mo 84.94 28 P **P** **02 32 26.9 +0.2**
SCM IAmb IAmb 02 32 28.5
comp=Z,17nm,1.1s
SCM Sheep Creek Mo 84.94 28 P **P** **02 32 27.3 +0.6**
baz=267
H24K Noodor Dome 84.97 24 P **P** **02 32 27.7 +0.9**
baz=266
C24K Franklin Bluff 84.98 20 P **P** **02 32 27.7 +1.0**
baz=265
DHY Denali Highway 84.99 27 P **P** **02 32 27.6 +0.5**
baz=266

GLI	Glacier Island	84.99	29	P		P	02 32 27.5	+0.5
	baz=267							
F24K	Squaw Lake	85.09	23	P		P	02 32 28.0	+0.6
	baz=266							
POKR	Poker Plat Res	85.10	25	P		P	02 32 28.0	+0.6
	baz=266							
GURO	Guroymak-BITLI	85.17	308			P	02 32 29.0	+0.4
GURO				IAmb		IAmb	02 32 31.0	
	comp=Z,12nm,0.9s							
G24K	Hadweenzic Riv	85.19	23	P		P	02 32 28.6	+0.7
	baz=266							
HDA	Harding Lake	85.26	26	P		P	02 32 29.2	+0.9
	baz=267							
Q23K	Middleton Isla	85.30	31	P		P	02 32 28.6	+0.1
	baz=268							
ILAR	Eielson Array	85.31	25	P		P	02 32 28.1	-0.4
	comp=Z,0.3nm,0.7s,baz=256,slow=5.9,SNR=4.3							
ILAR				pP		pwP	02 33 04.7	-1.1
	comp=Z,0.4nm,0.6s,baz=264,slow=5.5,SNR=2.8							
	comp=Z,0.3nm,0.7s							
M24K	Tolsona, Glenn	85.50	28	P		P	02 32 30.0	+0.5
	baz=268							
KLU	Klutina	85.59	29	P		P	02 32 30.6	+0.5
	baz=268							
EYAK	Cordova Ski Ar	85.64	30	P		P	02 32 30.7	+0.5
	baz=268							
G25K	Bearman Lake	85.74	23	P		P	02 32 31.6	+1.1
	baz=267							
K24K	Donnelly Dome	85.75	26	P		P	02 32 31.3	+0.6
	baz=268							
D25K	Kavik River	85.77	21	P		P	02 32 30.6	-0.1
	baz=267							
PAX	Paxson	85.85	27	P		P	02 32 31.2	-0.2
	baz=268							
PRP	Porcupine Dome	85.92	25	P		P	02 32 31.6	0.0
	baz=268							
J25K	Salcha River,	85.95	26	P		P	02 32 32.2	+0.5
	baz=268							
F25K	Christian Rive	85.95	23	P		P	02 32 32.2	+0.5
	baz=268							
E25K	Arctic Village	86.00	22	P		P	02 32 32.8	+0.9
	baz=268							
RIDG	Independent Ri	86.16	26	P		P	02 32 33.6	+0.8
	baz=269							
BMRM	Bremner River	86.21	29	P		P	02 32 33.7	+0.6
	baz=269							
N25K	Chitina, Valde	86.23	29	P		P	02 32 33.7	+0.5
	baz=269							
KAIM	Kayak Island	86.29	30	P		P	02 32 33.6	+0.3
	baz=269							
C26K	Camden Bay	86.31	20	P		P	02 32 33.9	+0.7
	baz=268							
BMAR	Burnt Mountain	86.36	23			P	02 32 34.3	+0.6
KOPT	Kop Dagi	86.36	310			P	02 32 35.0	+0.4
KOPT				IAmb		IAmb	02 33 16.2	
	comp=Z,13nm,1.1s							
F26K	Sheenjek River	86.53	22	P		P	02 32 35.0	+0.6
	baz=269							
SCRK	Sand Creek	86.54	26	P		P	02 32 35.6	+0.9
	baz=269							
G26K	Porcupine Rive	86.66	23	P		P	02 32 35.5	+0.5
	baz=269							
C27K	Jago River	86.72	21	P		P	02 32 35.9	+0.6
	baz=269							
L26K	Log Cabin Wild	86.82	27	P		P	02 32 36.6	+0.6
	baz=270							
BGLC	Bering Glacier	86.86	30	P		P	02 32 36.6	+0.5
	baz=270							
I26K	Coal Creek Min	86.91	25	P		P	02 32 36.9	+0.6
	baz=270							
CRQE	Cirque	86.95	29	P		P	02 32 37.1	+0.3
	baz=270							
MCARA	McCarthy VSAT	86.98	29	P		P	02 32 37.1	+0.4
	baz=270							
M26K	Nabesna, AK	86.99	28	P		P	02 32 37.1	+0.3
	baz=270							
E27K	Coleen River	87.49	22	P		P	02 32 39.7	+0.6
	baz=271							
G27K	Doyon Strip	87.50	23	P		P	02 32 39.7	+0.5
	baz=271							
M27K	Edge Creek, AK	87.51	28	P		P	02 32 39.5	+0.1
	baz=271							
L27K	Beaver Creek,	87.52	27	P		P	02 32 39.6	+0.3
	baz=271							
MESA	MESA	87.53	30	P		P	02 32 39.8	+0.2
	baz=271							
I27K	Kandik River	87.55	25	P		P	02 32 39.8	+0.3
	baz=271							
H27K	Steamboat Moun	87.57	24	P		P	02 32 39.8	+0.2
	baz=272							
D27M	Malcolm River	87.69	21	P		P	02 32 40.2	+0.2
	baz=272							
CTG	Chitna Glacier	87.81	29	P		P	02 32 40.9	0.0
	baz=272							
BVCY	Beaver Creek	87.98	28	P		P	02 32 41.8	+0.3
	baz=272							
F28M	Old Crow	88.17	23	P		P	02 32 43.0	+0.7
	baz=273							
YUK3	Moose Creek	88.20	28	P		P	02 32 43.2	+0.4
	baz=273							
E28M	Babbage River	88.24	22	P		P	02 32 43.2	+0.7
	baz=273							
I28M	Miner Creek	88.25	25	P		P	02 32 43.7	+0.8
	baz=273							
O28M	Mount Upton	88.38	29	P		P	02 32 43.8	0.0
	baz=273							
PINM	Pinnacle	88.38	30	P		P	02 32 44.0	+0.5
	baz=273							
D28M	Stokes Point	88.48	21	P		P	02 32 44.5	+0.8
	baz=274							
YUK8	Steele Glacier	88.56	29	P		P	02 32 45.2	+0.6
	baz=273							
H29M	Whitestone	88.85	24	P		P	02 32 46.2	+0.7
	baz=274							
E29M	Blow River	88.86	22	P		P	02 32 46.5	+1.0
	baz=275							
G29M	Pine Creek	88.93	23	P		P	02 32 46.9	+1.0
	baz=275							
I29M	Ogilvie Camp,	88.94	25	P		P	02 32 46.7	+0.8
	baz=274							
J29N	Klondike Camp	89.05	26	P		P	02 32 46.6	0.0
	baz=275							
YUK4	Talbot Arm	89.09	29	P		P	02 32 47.4	+0.4
	baz=274							
M29M	Somme Creek	89.09	28	P		P	02 32 46.8	-0.1
	baz=274							
L29M	L29M	89.19	27	P		P	02 32 47.8	+0.6
	baz=275							
O29M	Mount Kennedy	89.20	30	P		P	02 32 48.1	+0.7
	baz=274							
YUK6	Outpost Mounta	89.26	29	P		P	02 32 48.1	+0.3
	baz=274							
K29M	Barlow Dome	89.40	26	P		P	02 32 48.7	+0.4
	baz=275							
EPYK	Eagle Plains	89.50	24	P		P	02 32 49.2	+0.7
	baz=276							
G30M	tAoh Zraii Nji	89.63	23	P		P	02 32 49.6	+0.4
	baz=276							
HYT	Haines Junctio	89.69	29	P		P	02 32 49.8	+0.1
	baz=275							
F30M	Barrier River	89.72	22	P		P	02 32 50.4	+0.8
	baz=277							
I30M	Mount Dempster	89.76	25	P		P	02 32 50.4	+0.5
	baz=276							
N30M	Aishikik Lake	89.83	29	P		P	02 32 50.8	+0.5
	baz=276							
J30M	Hart River	89.85	25	P		P	02 32 50.4	0.0
	baz=276							
M30M	Minto, Yukon	89.85	27	P		P	02 32 50.7	+0.3
	baz=276							
P30M	Million Dollar	90.02	30	P		P	02 32 51.3	+0.2
	baz=276							
O30N	Mendenhall	90.38	29	P		P	02 32 53.1	+0.3
	baz=276							
G31M	Satah River	90.40	23	P		P	02 32 52.8	+0.2
	baz=276							
N31M	Braeburn, Yuko	90.45	28	P		P	02 32 53.3	+0.2
	baz=277							
INK	Inuvik	90.48	22	P		P	02 32 53.0	0.0
	baz=279							
F31M	Tsiigehtchic	90.53	22	P		P	02 32 53.2	0.0
	baz=279							
H31M	Peel River	90.53	24	P		P	02 32 53.5	+0.2
	baz=278							
S31K	Pelican	90.62	32	P		P	02 32 53.8	-0.1
	baz=276							
SKAG	Skagway	90.91	30	P		P	02 32 55.6	+0.4
	baz=277							
WHY	Whitehorse	90.98	29	P		P	02 32 56.0	+0.3
	baz=278							
M31M	Drury Creek, Y	91.01	28	P		P	02 32 56.1	+0.4
	baz=278							
SIT	Sitka	91.21	33	P		P	02 32 56.8	+0.2
	baz=277							
R32K	Eaglecrest	91.48	32	P		P	02 32 58.2	+0.3
	baz=278							
P33M	Teslin, Yukon	92.06	30	P		P	02 33 01.1	+0.4
	baz=279							
MMPY	Sheldon Lake,	92.38	27	P		P	02 33 02.6	+0.6
	baz=281							
A36M	Sachs Harbour	92.42	17	P		P	02 33 03.1	+1.2
	baz=287							
Q32M	Nakina River	92.54	31	P		P	02 33 03.4	+0.3
	baz=280							
U33K	Whale Pass	92.55	34	P		P	02 33 03.7	+0.8
	baz=279							
CRAG	Craig	92.65	34	P		P	02 33 03.8	+0.5
	baz=279							
QSPA	South Pole Qui	92.75	180	P		P	02 33 04.4	+0.6
WRAK	Wrangell Islan	92.93	33	P		P	02 33 05.4	+0.8
	baz=280							
R33M	Jennings River	93.13	30	P		P	02 33 06.3	+0.6
	baz=281							
S34M	Telegraph Cree	93.32	32	P		P	02 33 06.8	+0.4
	baz=281							
V35K	Ketchikan	93.52	34	P		P	02 33 08.0	+0.6
	baz=280							
C36M	Paulatuk	93.58	20	P		P	02 33 07.9	+0.5
	baz=288							
DLBC	Dease Lake	93.79	31	P		P	02 33 08.9	+0.2
	baz=282							
WTLY	Watson Lake, Y	94.05	29	P		P	02 33 10.2	+0.4
	baz=283							
WRGLY	Wrigley	95.69	26	P		P	02 33 17.3	+0.2
	baz=288							
RES	Resolute Bay	98.43	11	P		P	02 33 28.8	-0.4
RES				IAmb		IAmb	02 34 04.4	
	comp=Z,2.2nm,1.2s							
YKA	Yellowknife Ar	99.73	25	P		Pdif	02 33 35.4	+0.1
	comp=Z,0.3nm,0.8s,baz=300,slow=5.9,SNR=4.4							
	comp=Z,0.3nm,0.8s							
TXAR	Lajitas Array	121.04	53	PKP		PKPdf	02 38 44.2	-0.2
	comp=Z,0.3nm,0.8s,baz=197,slow=2.6,SNR=4.0							
TXAR				pPKP		pPKPdf	02 39 22.4	+3.7
	comp=Z,0.4nm,0.8s,baz=157,slow=0.5,SNR=3.3							
TORD	Torodi Ar. Bea	124.50	288	PKP		PKPdf	02 38 51.9	+0.6
	comp=Z,1.8nm,0.7s,baz=68,slow=1.6,SNR=7.1							

DJA 25 02:27:00.0±1.3, 11°S±12°×11°5E±°, h10km, M3.9/15, mB4.9/1, mb4.0/2, MLv3.8/15, Mw(mB)4.2/1, South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IGBI	Denpasar	2.32	360	P		Pn	02 27 37.8	-0.4
DNP	Denpasar	2.46	1	P		Pn	02 27 40.0	-0.2
RTBI	Rangdo, Negare	2.68	356	P		Pn	02 27 43.3	0.0
KHKI	Kahang-Kahang	2.81	9	P		Pn	02 27 46.0	+1.1
JAGI	Jajag, Banyuwa	2.84	340	P		Pn	02 27 44.7	-0.7
KLNI	Mataram	2.87	19	P		Pn	02 27 45.7	-0.1
TWSI	Taliwang, Sumb	2.94	36	P		Pn	02 27 46.6	-0.2
SRBI	Singaraja	3.05	1	P		Pn	02 27 49.1	+0.8
ABJI	Asem Bagus	3.45	345	P		Pn	02 27 53.1	-0.8
PLAI	Plampang	3.47	48	P		Pn	02 27 53.3	-0.8
DBNI	Kabupaten Domp	4.08	50	P		Pn	02 28 03.2	+0.7
SNJI	Sawahan-Nganju	4.73	315	P		Pn	02 28 13.0	+1.4
PCJI	Pacitan	4.89	307	P		Pn	02 28 13.1	-0.6
UGM	Wanagama	5.58	305	P		Pn	02 28 22.2	-1.0
	30nm,1.8s							

JMA 25 02:33:05.7±0.2, 29°.3N±1°.0×14°.2E±°, h62km, MV4.5/26, NEAR TORISHIMA IS
NEIC 25 02:33:05.7±1.9, 28°.95N±0°.07×140°.9E±0°.1, h89km±7km, mb4.4/22, Error ellipse: s-maj=14.9km s-min=9.1km az=60.0
IDC 25 02:33:05.9±1.4, 28°.89N×140°.78E, h96km±13km, mb3.7/19, mbtmp4.1/24, Error ellipse: s-maj=19.1km s-min=12.4km az=72.0

ISC 25 02:33:05.4±0.5, 29°.01N±0°.05×140°.95E±0°.08, h90km, n74, σ1§45/96, mb4.3/29, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CBIJ	Chichi jima	2.20	150	P		Pn	02 33 40.1	-0.2
CBIJ				eS		Sn	02 34 06.0	-0.8
JCJ	Chichijima	2.20	150	P		Pn	02 33 40.0	-0.3
	80nm,0.3s,baz=299,slow=22,SNR=73							
JCJ				S		Sn	02 34 05.2	-1.7
	495nm,0.3s,baz=109,slow=23,SNR=20							
JCJ	Chichijima	2.20	150			Pn	02 33 40.1	-0.1
JCJ				Sn		Sn	02 34 04.7	-2.2
JHH2	Haha-jima-NKT2	2.61	155	P		Pn	02 33 46.4	+0.7
JHH2				eS		Sn	02 34 17.2	+0.6
JHJ2	Mitsune	4.20	347	Pn		Pn	02 34 10.0	+2.9
JHJ2	Mitsune	4.20	347	eP		Pn	02 34 10.2	+3.1
JHJ2				eS		Sn	02 34 56.3	+1.4
JHJ	Hachijo jima 2	4.21	347	P		Pn	02 34 08.8	+1.6
	175nm,0.9s,baz=39,slow=10.0,SNR=2.4							
JHJ				S		Sn	02 34 55.5	+0.2
	90nm,0.3s,baz=89,slow=22,SNR=6.8							
JMKN	Mikurajimanish	5.00	347	P		Pn	02 34 21.8	+3.8
BSO1	Boso 1	5.62	0	P		Pn	02 34 26.9	+1.0
BSO1				eS		Sn	02 35 29.2	+0.3
BSO3	Boso 3	5.78	356	P		Pn	02 34 29.1	+0.8
BSO3				S		Sn	02 35 31.2	-1.9
BSO4	Boso 4	5.98	355	P		Pn	02 34 33.1	+1.9
BSO4				eS		Sn	02 35 40.6	+2.4
JOD2	Odawara 2	6.43	346	eP		Pn	02 34 39.7	+2.3
JOD2				eS		Sn	02 35 53.0	+3.7
JRY	Ryogami san	7.19	347	eP		Pn	02 34 50.4	+2.5
JRY				eS		Sn	02 36 08.1	+0.2
JYT	Yasato	7.22	355	eP		Pn	02 34 49.4	+1.2
JYT				eS		Sn	02 36 06.0	-2.6
JHO	Hitachi	7.58	358	eP		Pn	02 34 53.1	0.0
JHO				eS		Sn	02 36 12.4	-5.1
MJAR	Matsushiro Arr	7.85	344	P		Pn	02 34 59.9	+3.0
	1.3nm,0.4s,baz=159,slow=13,SNR=5.0							
MJAR				S		Sn	02 36 22.4	-1.6
	3.5nm,0.6s,baz=157,slow=18,SNR=5.7							
MJAR	Matsushiro Arr	7.85	344			Pn	02 34 57.5	+0.6
MAJO	Matsushiro	7.85	344	Pn		Pn	02 34 58.9	+2.0
JNU	Nakatsue	9.55	298	P		Pn	02 35 21.1	+1.0
	1.7nm,0.4s,baz=116,slow=6.4,SNR=4.0							
JTM	Tenmabayashi	11.75	0	Pn		Pn	02 35 48.5	-1.3
KSRS	Korea Array	13.76	311	P		P	02 36 20.2	-1.7
	0.4nm,0.3s,baz=122,slow=11,SNR=4.4							
KSRS				ScP		ScP	02 44 57.4	-1.6
	1.1nm,0.8s,baz=132,slow=1.8,SNR=5.5							
ASAJ	Asahikawa	15.13	5	P		Pn	02 36 34.9	+0.8
	2.7nm,0.5s,baz=170,slow=17,SNR=2.1							
JKA	Kamikawa-asahi	15.13	5			Pn	02 36 33.2	-0.8
SSLB	Suanglung	18.64	258	P		P	02 37 16.7	+0.6
SSLB				IAmb		IAmb	02 37 21.7	
	comp=Z,30nm,1.0s							
KLR	Kul'dur	21.38	343	P		P	02 37 46.2	+0.8
	comp=Z,9.2nm,0.7s,baz=158,slow=8.0,SNR=30							
KLR				S		S	02 41 40.1	+2.5
	comp=Z,1.2nm,0.9s,baz=63,slow=24,SNR=6.7							
	comp=Z,9.2nm,0.7s							
ENH	Enshi	27.33	280	P		P	02 38 41.2	-0.7
ENH				IAmb		IAmb	02 38 42.5	
	comp=Z,7.2nm,0.6s							
CMAR	Chiang Mai Arr	39.68	264	P		P	02 40 27.6	-1.3
	comp=Z,0.8nm,0.4s,baz=66,slow=8.0,SNR=5.2							
	comp=Z,0.8nm,0.4s							
CMAR	Chiang Mai Arr	39.68	264	P		P	02 40 28.8	-0.1
EVN	Everest	47.23	282	P		P	02 41 30.3	0.0
EVN				IAmb		IAmb	02 41 48.5	
	comp=Z,5.1nm,1.5s							
ZALV	Zalesovo Beam	47.33	318	P		P	02 41 29.2	-0.6
	comp=Z,0.9nm,0.4s,baz=93,slow=7.8,SNR=3.9							
ZALV				PcP		PcP	02 42 58.9	-0.4
	comp=Z,1.0nm,0.6s,baz=113,slow=3.9,SNR=4.0							
	comp=Z,0.9nm,0.4s							
ZALV	Zalesovo Beam	47.33	318	P		P	02 41 29.1	-0.8
MKAR	Makanchi Array	48.42	308	P		P	02 41 37.9	-0.5
	comp=Z,0.9nm,0.8s,baz=93,slow=10,SNR=9.8							
MKAR				PcP		PcP	02 43 03.0	-0.5
	comp=Z,1.8nm,0.8s,baz=79,slow=7.5,SNR=9.3							
MKAR				ScP		ScP	02 46 48.4	-1.7
	comp=Z,0.4nm,0.8s,baz=84,slow=4.5,SNR=3.8							
	comp=Z,0.9nm,0.8s							
MKAR	Makanchi Array	48.42	308	P		P	02 41 37.3	-1.2
WB0	Warramunga Arr	48.91	188	P		P	02 41 41.9	-0.5
WB0				IAmb		IAmb	02 42 05.1	
	comp=Z,5.9nm,1.4s							
WRA	Warramunga Arr	49.09	188	P		P	02 41 42.5	-1.2
	comp=Z,0.6nm,0.6s,baz=9.0,slow=7.4,SNR=9.4							
WRA				pP		pP	02 42 06.2	+1.7
	comp=Z,3.0nm,0.7s,baz=7.3,slow=7.8,SNR=5.3							
	comp=Z,0.6nm,0.6s							
WRA	Warramunga Arr	49.09	188	P		P	02 41 42.5	-1.2
F15K	North Star Dit	49.44	26	P		P	02 41 47.3	+1.4
F15K				IAmb		IAmb	02 41 52.3	
	comp=Z,4.4nm,1.3s							
NRIK	Noril'sk	50.47	338	P		P	02 41 53.1	-0.5
	comp=Z,8.3nm,0.9s,baz=122,slow=9.5,SNR=10							
	comp=Z,8.3nm,0.9s							
NRIK	Noril'sk	50.47	338	P		P	02 41 53.8	+0.2
KURK	Kurchatov	50.87	313	P		P	02 41 55.9	-1.0
KURK				IAmb		IAmb	02 41 57.0	
	comp=Z,2.4nm,0.7s							
KURBB	Kurchatov Arra	50.93	313	P		P	02 41 55.8	-1.6
	comp=Z,1.2nm,0.5s,baz=92,slow=9.4,SNR=22							
	comp=Z,1.2nm,0.5s							
C19K	Lookout Ridge	52.41	23	P		P	02 42 08.7	+0.5
IMAR	Indian Mountai	53.84	27	P		P	02 42 19.7	+1.0
BVAR	Borovoye Array	55.90	317	P		P	02 42 33.3	-0.4
	comp=Z,2.5nm,0.5s,baz=91,slow=7.1,SNR=19							
BVAR				PcP		PcP	02 43 31.8	+0.4
	comp=Z,1.1nm,0.5s,baz=84,slow=4.6,SNR=5.1							
	comp=Z,2.5nm,0.5s							
BORK	Borovoye	55.94	317	P		P	02 42 33.8	-0.2
BORK				IAmb		IAmb	02 42 34.7	
	comp=Z,2.8nm,0.7s							
F24K	Squaw Lake	56.35	26	P		P	02 42 38.4	+1.6
ILAR	Eielson Array	56.57	29	P		P	02 42 39.1	+0.8
	comp=Z,0.8nm,0.9s,baz=263,slow=5.7,SNR=6.2							
	comp=Z,0.8nm,0.9s							
KK31	Karatay Array	57.09	305	P		P	02 42 41.0	-1.3
KK31				IAmb		IAmb	02 42 42.9	
	comp=Z,2.7nm,0.8s							
KKAR	Karatay Array	57.09	305	P		P	02 42 40.8	-1.5
BMAR	Burnt Mountain	57.61	26	P		P	02 42 46.6	+0.9
SCRK	Sand Creek	57.82	30	P		P	02 42 47.9	+0.6
SCRK				IAmb		IAmb	02 42 53.8	
	comp=Z,3.8nm,0.7s							
BCAR	Beaver Creek A	58.84	31	P		P	02 42 55.7	+1.4
EPYK	Eagle Plains	60.75	27	P		P	02 43 08.2	+1.0
INK	Inuvik	61.75	25	P		P	02 43 13.6	-0.4
ARTI	Arti	62.35	321	P		P	02 43 17.8	-0.3
AB31	Akbulak array	62.98	313	P		P	02 43 21.9	-0.6
AB31				IAmb		IAmb	02 43 22.6	
	comp=Z,4.2nm,0.6s							
ABKAR	Akbulak array	62.98	313	P		P	02 43 21.9	-0.6
YKA	Yellowknife Ar	70.98	28	P		P	02 44 14.4	+1.4
	comp=Z,0.2nm,0.7s,baz=298,slow=7.1,SNR=4.0							
	comp=Z,0.2nm,0.7s							
FINES	FINESS Array B	75.75	333	P		P	02 44 41.0	+0.1
	comp=Z,4.7nm,0.9s,baz=81,slow=5.3,SNR=12							
	comp=Z,4.7nm,0.9s							
FINES	FINESS Array B	75.75	333	P		P	02 44 41.5	+0.6
KBZ	Khabaz	75.91	312	P		P	02 44 42.3	+0.1
	comp=Z,1.7nm,0.8s,baz=104,slow=4.5,SNR=5.1							
	comp=Z,1.7nm,0.8s							
PABE	Paberze	80.17	329	P		P	02 45 06.1	+0.7
NVAR	Mina Array Bea	80.19	52	P		P	02 45 07.5	+1.2
	comp=Z,0.4nm,0.5s,baz=289,slow=5.3,SNR=3.6							
	comp=Z,0.4nm,0.5s							
AKASG	Malin Array Be	80.43	323	P		P	02 45 07.0	0.0
	comp=Z,3.6nm,0.8s,baz=51,slow=5.8,SNR=13							
	comp=Z,3.6nm,0.8s							
AKBB	Malin Array Si	80.43	323	P		P	02 45 07.0	0.0
HFS	Hagfors	81.23	336	P		P	02 45 11.1	0.0
	comp=Z,2.7nm,0.6s,baz=145,slow=5.4,SNR=8.6							
	comp=Z,2.7nm,0.6s							
NB2	NORSAR Subarra	81.43	338	P		P	02 45 12.2	0.0
	comp=Z,1.0nm,0.6s,baz=44,slow=5.3							
NOA	NORSAR Array B	81.43	338	P		P	02 45 12.3	0.0
	comp=Z,1.3nm,0.7s,baz=42,slow=5.0,SNR=4.9							
	comp=Z,1.3nm,0.7s							
BRTR	Keskin Array B	83.90	312	P		P	02 45 25.8	+0.2
	comp=Z,2.6nm,0.8s,baz=83,slow=4.5,SNR=12							
	comp=Z,2.6nm,0.8s							
BRTR	Keskin Array B	83.90	312	P		P	02 45 25.0	-0.6
BURAR	Bucovina Array	84.37	322	P		P	02 45 28.0	+0.3
BURAR				IAmb		IAmb	02 45 29.3	
	comp=Z,3.5nm,0.8s							
GERES	GERESS Array B	89.31	328	P		P	02 45 51.4	-0.3
	comp=Z,0.7nm,0.8s,baz=46,slow=2.8,SNR=5.1							
	comp=Z,0.7nm,0.8s							
TXAR	Lajitas Array	95.32	52	P		P	02 46 21.1	+1.3
	comp=Z,0.2nm,0.6s,baz=312,slow=5.4,SNR=1.9							
TXAR				pP		pwP	02 46 46.5	-1.4
	comp=Z,0.1nm,0.7s,baz=330,slow=5.0,SNR=1.7							
	comp=Z,0.2nm,0.6s							
TXAR	Lajitas Array	95.32	52	P		P	02 46 20.4	+0.5

GCG 25 02:36:08.7±1.1, 13°.13N×87°.71W, h211km±9km, MD4.0, MW3.3, Presumed earthquake
NEIC 25 02:36:10.5±1.5, 13°.25N±0°.04×87°.64W±0°.06, h201km±5km, mb4.4/30, Error ellipse: s-maj=8.7km s-min=5.8km az=81.0
CATAC 25 02:36:10.8, 13°.2N±0°.8×87°.7W±0°.8, h194km, M3.8/22, MLv3.8/22, confirmed
IDC 25 02:36:10.2±1.0, 13°.31N×87°.63W, h213km±12km, mb3.2/8, mbtmp3.9/11, Error ellipse: s-maj=27.8km s-min=9.8km az=47.0
SNET 25 02:36:11.1±2.2, 13°.19N×87°.69W, h189km, ML3.8, Presumed earthquake

ISC 25 02:36:09.6±0.6, 13°.22N±0°.04×87°.65W±0°.03, h204km±4km, n161, σ0§99/226, mb4.2/19, 26C-6D, Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CNCH	Conchagua	0.19	287	P		Pn	02 36 36.7	+0.2
CNCH				S		S	02 36 56.3	-1.1
CNCH	Conchagua	0.19	287	i	P	Pn	02 36 36.7	+0.2
LCND	La Caada	0.25	290	↑	P	Pn	02 36 36.7	+0.3
LCND				S		S	02 36 57.1	-0.3
CSGN	Cosiguina Volc	0.26	161	P		Pn	02 36 36.9	+0.3
CSGN				S		S	02 36 56.5	-1.2
POTN

CNGA				S		S	02 37 04.2	-0.9	
OCON	**Estacion meteo**	**1.21**	**70**	⇓P		Pn	02 36 42.0	+0.7	
OCON				S		S	02 37 05.6	-0.1	
LIMN	**Finca el Limon**	**1.26**	**97**	P		Pn	02 36 42.6	+0.9	
LIMN				S		S	02 37 06.5	+0.1	
COEG	**Centro de Oper**	**1.27**	**288**	⇑P		Pn	02 36 42.1	+0.3	
COEG				S		S	02 37 05.5	-1.0	
COEG	**Centro de Oper**	**1.27**	**288**	⇑*i*P		Pn	02 36 42.0	+0.3	
MOM3	**MOM3**	**1.31**	**123**	⇓P		Pn	02 36 42.8	+0.8	
MOM3				S		S	02 37 05.1	-1.8	
P5NO	**Presa 5 de nov**	**1.32**	**305**	P		Pn	02 36 42.9	+0.7	
P5NO				S		S	02 37 06.4	-0.8	
MOMN	**Momotombo**	**1.35**	**127**	P		Pn	02 36 43.0	+0.6	
MOMN				S		S	02 37 07.4	-0.2	
PAVA	**Las Pavas**	**1.35**	**291**	⇑P		Pn	02 36 42.8	+0.3	
PAVA				S		S	02 37 06.9	-0.8	
PAVA	**Las Pavas**	**1.35**	**291**	*i* P		Pn	02 36 42.8	+0.3	
MOM2	**El Cardon**	**1.37**	**124**	P		Pn	02 36 43.8	+1.2	
MOM2				S		S	02 37 07.7	-0.2	
LBRS	**Las Brisas**	**1.45**	**291**	*e*P		Pn	02 36 44.0	+0.7	
COPN	**Copaltepe**	**1.46**	**135**	⇑P		Pn	02 36 42.9	-0.4	
RCVN	**Varillal2**	**1.46**	**75**	P		Pn	02 36 44.1	+0.7	
RCON	**San Juan de Ri**	**1.47**	**80**	P		Pn	02 36 44.3	+0.7	
LFU	**La Fuente**	**1.52**	**290**	*e*P		Pn	02 36 44.4	+0.5	
AMTN	**Mateare**	**1.54**	**129**	P		Pn	02 36 44.9	+0.9	
AMTN				S		S	02 37 10.3	0.0	
RCPN	**Sur Rio San Ju**	**1.54**	**78**	P		Pn	02 36 44.9	+0.8	
LOMA	**Loma Larga**	**1.54**	**286**	⇑*i*P		Pn	02 36 44.3	+0.1	
PANCS	**Alcalda de**	**1.54**	**285**	P		Pn	02 36 44.3	+0.2	
PANCS				S		S	02 37 10.0	-0.5	
UDBS	**Universidad Do**	**1.55**	**289**	P		Pn	02 36 45.3	+1.2	
UDBS				S		S	02 37 10.6	-0.5	
APQ3	**Volcan Apoyequ**	**1.56**	**127**	P		Pn	02 36 45.4	+1.2	
APQ3				S		S	02 37 11.2	+0.5	
IGN	**Direccin Gen**	**1.56**	**288**	P		Pn	02 36 45.0	+0.8	
IGN				S		S	02 37 10.5	-0.2	
LLGN	**La Laguna**	**1.57**	**307**	P		Pn	02 36 45.2	+0.8	
UTEC	**Universidad Te**	**1.59**	**288**	P		Pn	02 36 44.9	+0.5	
UTEC				S		S	02 37 10.9	-0.3	
UTEC	**Universidad Te**	**1.59**	**288**	*e*P		Pn	02 36 44.8	+0.3	
UESS	**Universidad de**	**1.59**	**288**	*e*P		Pn	02 36 45.0	+0.5	
UESS				*e*S		S	02 37 15.5	+4.2	
SEMO	**Seminario San**	**1.61**	**288**	P		Pn	02 36 45.1	+0.4	
SEMO				S		S	02 37 11.8	+0.3	
UEES	**Universidad Ev**	**1.63**	**288**	⇑P		Pn	02 36 45.2	+0.3	
UEES				S		S	02 37 11.8	-0.1	
LALI	**Alcalda de L**	**1.65**	**279**	⇑P		Pn	02 36 44.8	-0.2	
LALI				S		S	02 37 12.1	+0.1	
LALI	**Alcalda de L**	**1.65**	**279**	*i* P		Pn	02 36 44.9	0.0	
LALI				*i* S		S	02 37 13.1	+1.0	
PMON	**Piamonte**	**1.70**	**287**	⇑P		Pn	02 36 45.6	+0.1	
PMON				S		S	02 37 13.3	+0.3	
PMON	**Piamonte**	**1.70**	**287**	*e*P		Pn	02 36 45.6	+0.1	
ABCN	**Banco Central**	**1.70**	**130**	P		Pn	02 36 46.0	+0.5	
ABCN				S		S	02 37 13.1	+0.2	
MATN	**Matagalpa**	**1.70**	**100**	⇓P		Pn	02 36 45.6	0.0	
ALLN	**Telcor Managua**	**1.71**	**128**	P		Pn	02 36 46.5	+0.9	
ALLN				S		S	02 37 13.5	+0.5	
USIM	**UNAN**	**1.73**	**129**	Pn		Pn	02 36 45.1	-0.6	
MGAN	**Managua**	**1.73**	**128**			Pn	02 36 46.2	+0.4	
MGAN				Sn		S	02 37 14.4	+0.9	
MGAN	**Managua**	**1.73**	**128**	P		Pn	02 36 47.0	+1.2	
MGAN				S		S	02 37 13.5	0.0	
UNAN	**Cigeo UNAN**	**1.74**	**129**	⇓P		Pn	02 36 46.9	+1.1	
UNAN				S		S	02 37 14.4	+0.9	
CEDA	**San Andres**	**1.80**	**289**	P		Pn	02 36 47.1	+0.7	
CEDA				S		S	02 37 14.2	-0.3	
JAYA	**Jayaque - finc**	**1.81**	**284**	P		Pn	02 36 46.6	+0.1	
JAYA	**Jayaque - finc**	**1.81**	**284**	*i* P		Pn	02 36 46.5	-0.1	
JAYA				*i* S		S	02 37 17.0	+2.0	
JAYA	**Jayaque - finc**	**1.81**	**284**	*e*P		Pn	02 36 46.5	-0.1	
JAYA				*e*S		S	02 37 15.1	+0.2	
MAS3	**Al N del Volca**	**1.86**	**129**	P		Pn	02 36 48.2	+1.1	
MAS3				S		S	02 37 16.5	+0.8	
SARH	**Santa Rosa de**	**1.89**	**325**	⇑P		Pn	02 36 49.0	+1.6	
SARH				S		S	02 37 16.2	-0.1	
SARH	**Santa Rosa de**	**1.89**	**325**	*i* P		Pn	02 36 48.9	+1.6	
SARH				*i* S		S	02 37 18.2	+1.9	
MASN	**Masaya**	**1.91**	**130**	P		Pn	02 36 48.4	+0.9	
MASN				S		S	02 37 16.9	+0.3	
UNIC	**Universidad Ca**	**2.00**	**292**	P		Pn	02 36 48.8	+0.4	
UNIC	**Universidad Ca**	**2.00**	**292**	*i* P		Pn	02 36 48.9	+0.4	
SNJE	**San Jose**	**2.01**	**289**	*e*P		Pn	02 36 49.0	+0.3	
CEVE	**Cerro Verde**	**2.02**	**288**	P		Pn	02 36 49.6	+0.7	
CEVE				S		S	02 37 18.6	+0.3	
SBLS	**San Blas**	**2.02**	**288**	*e*P		Pn	02 36 49.3	+0.5	
MTO3	**Montecristo**	**2.04**	**305**			Pn	02 36 49.8	+0.8	
MTO3	**Montecristo**	**2.04**	**305**	⇑P		Pn	02 36 50.0	+0.9	
MTO3				S		S	02 37 18.6	-0.6	
MTO3	**Montecristo**	**2.04**	**305**	*i* P		Pn	02 36 49.9	+0.9	
RTR	**El Retiro**	**2.06**	**289**	*e*P		Pn	02 36 49.6	+0.5	
BOAB	**BOACO BROADBAN**	**2.08**	**111**			Pn	02 36 50.3	+1.1	
BOAB	**BOACO BROADBAN**	**2.08**	**111**	⇓P		Pn	02 36 50.5	+1.3	
BOAB				S		S	02 37 20.3	+0.9	
ESQI	**Esquipulas**	**2.12**	**309**			Pn	02 36 51.0	+1.3	
ESQI	**Esquipulas**	**2.12**	**309**	⇑P		Pn	02 36 51.2	+1.5	
ESQI				S		S	02 37 20.6	+0.1	
ZAFR2	**Estanzuela, Za**	**2.14**	**309**	*i* P		Pn	02 36 55.9	+6.1	
NADN	**Granada**	**2.15**	**133**	P		Pn	02 36 50.9	+1.0	
NADN				S		S	02 37 20.9	0.0	
NUBE	**Las Nubes**	**2.18**	**288**	⇑P		Pn	02 36 50.6	+0.1	
NUBE				S		S	02 37 21.3	-0.5	
NUBE	**Las Nubes**	**2.18**	**288**	*i* P		Pn	02 36 50.8	+0.1	
NUBE				*i* S		S	02 37 24.4	+2.7	
LOAL	**Lomas de Alarc**	**2.22**	**291**	P		Pn	02 36 51.5	+0.8	
SLOZ	**Alcaldia de Sa**	**2.23**	**291**	⇑P		Pn	02 36 51.3	+0.5	
SLOZ	**Alcaldia de Sa**	**2.23**	**291**	*i* P		Pn	02 36 51.3	+0.5	
FAME	**Alcaldia de Sa**	**2.39**	**285**	P		Pn	02 36 52.1	-0.3	
FAME				S		S	02 37 25.6	+0.3	
SIUN	**Universidad Ur**	**2.84**	**80**			Pn	02 36 57.8	+0.2	
SIUN	**Universidad Ur**	**2.84**	**80**	P		Pn	02 36 58.0	+0.5	
CARN	**Rivas**	**2.90**	**134**	P		Pn	02 36 59.9	+1.6	
CARN				S		S	02 37 35.5	-0.2	
APG	**El Apazote**	**3.26**	**303**	P		Pn	02 37 04.1	+1.4	
	3.2nm,0.6s,baz=136,slow=10,SNR=34								
APG				S		S	02 37 44.2	+0.5	
	0.7nm,0.4s,baz=230,slow=20,SNR=1.3								
APG	**El Apazote**	**3.26**	**303**	*i* P		Pn	02 37 04.1	+1.4	
ELI1	**Hacienda Flor**	**3.28**	**141**	P		Pn	02 37 04.1	+1.4	
ELI1				S		S	02 37 44.3	+0.5	
JUD3	**Juan Diaz 3**	**3.67**	**146**	Pn		Pn	02 37 08.5	+0.9	
STG5	**El Palmar, Qui**	**3.79**	**289**	*i* P		Pn	02 37 13.1	+4.2	
STG8	**El Palmar, Qui**	**3.80**	**289**	*i* P		Pn	02 37 13.6	+4.3	
JTS	**Las Juntas de**	**3.93**	**138**	P		Pn	02 37 12.8	+2.1	
	13nm,0.4s,baz=118,slow=23,SNR=15								
JTS				S		S	02 37 56.5	-1.6	
	36nm,0.3s,baz=289,slow=22,SNR=13								
JTS	**Las Juntas de**	**3.93**	**138**			Pn	02 37 11.4	+0.7	
SOKI	**Kika Raxquin**	**3.98**	**294**	*i* P		Pn	02 37 13.2	+1.5	
RTAL	**Retalhuleu**	**4.14**	**289**			Pn	02 37 12.8	-0.5	
HUEH	**Huehuetenango**	**4.28**	**300**	Pn		Pn	02 37 15.7	+0.4	
TEIG	**Tepich**	**6.99**	**355**	Pn		Pn	02 37 50.1	+0.4	
CMIG	**Matias Romero**	**7.98**	**300**	P		Pn	02 38 03.0	+0.4	
	0.7nm,0.3s,baz=138,slow=8.5,SNR=9.2								
CMIG				S		S	02 39 23.7	-8.9	
	1.9nm,0.4s,baz=278,slow=18,SNR=8.6								
OTAV	**Otavalo**	**15.79**	**144**	P		Pn	02 39 43.3	+1.5	
656A	**Willston**	**16.75**	**16**			P	02 39 53.3	+1.8	
656A				IAmb		IAmb	02 40 20.3		
	comp=Z,24nm,0.9s								
SDV	**Santo Domingo**	**17.24**	**103**	P		P	02 39 58.5	+1.3	
	comp=Z,13nm,0.7s,baz=307,slow=8.6,SNR=16								
SDV	**Santo Domingo**	**17.24**	**103**			P	02 39 57.9	+0.7	
SDV				IAmb		IAmb	02 40 01.7		
	comp=Z,11nm,0.6s								
451A	**Vernon**	**17.40**	**5**	P		P	02 40 00.3	+1.7	
DR12	**Loma Pena Alta**	**18.40**	**70**	P		P	02 40 09.8	+0.1	
TIGA	**Tifton**	**18.51**	**11**	P		P	02 40 11.7	+1.0	
LRAL	**Lakeview Retre**	**19.73**	**2**			P	02 40 24.8	+1.0	
LRAL				IAmb		IAmb	02 40 28.5		
	comp=Z,8.5nm,0.7s								
DRIO	**Del Rio**	**20.12**	**325**	P		P	02 40 29.0	+0.9	
GOGA	**Godfrey**	**20.46**	**10**	P		P	02 40 32.5	+1.0	
Y49A	**Blount Mountai**	**20.58**	**3**	P		P	02 40 33.5	+0.7	
WHTX	**Lake Whitney,**	**20.74**	**336**	P		P	02 40 35.0	+0.4	
WHTX				IAmb		IAmb	02 40 37.3		
	comp=Z,8.0nm,0.8s								
BRDY	**Brady**	**20.80**	**332**	P		P	02 40 35.0	-0.2	
OXF	**Oxford**	**21.26**	**356**	P		P	02 40 39.7	-0.3	
OXF				IAmb		IAmb	02 41 13.6		
	comp=Z,16nm,1.2s								
HUMP	**Col San Antoni**	**21.54**	**74**	P		P	02 40 43.5	+0.4	
TXAR	**Lajitas Array**	**21.86**	**320**	P		P	02 40 46.8	+0.5	
	comp=Z,1.1nm,0.6s,baz=141,slow=9.1,SNR=17								
	comp=Z,1.1nm,0.6s								
MIAR	**Mount Ida**	**21.90**	**347**	P		P	02 40 46.6	+0.1	
MIAR				IAmb		IAmb	02 40 48.2		
	comp=Z,6.5nm,0.7s								
BG3	**Lake Jocassee**	**22.09**	**10**			P	02 40 49.1	+0.8	
BG3				IAmb		IAmb	02 40 50.3		
	comp=Z,28nm,1.2s								
CPCT	**Cooper Cave**	**22.31**	**7**	P		P	02 40 50.3	0.0	
CPCT				IAmb		IAmb	02 40 53.0		
	comp=Z,8.3nm,0.8s								
MNHN	**Monahans**	**22.77**	**325**	P		P	02 40 55.0	+0.4	
MNHN				IAmb		IAmb	02 40 56.3		
	comp=Z,5.1nm,1.1s								
CLTN	**Cedars of Leba**	**22.80**	**3**	P		P	02 40 55.2	+0.5	
CLTN				IAmb		IAmb	02 40 56.6		
	comp=Z,4.6nm,0.6s								
LCAR	**Lake Charles**	**22.97**	**353**	P		P	02 40 55.5	-0.8	
LCAR				IAmb		IAmb	02 40 56.4		
	comp=Z,5.7nm,0.6s								
TZTN	**Tazewell**	**23.52**	**8**	P		P	02 41 01.8	+0.6	
TZTN				IAmb		IAmb	02 41 05.0		
	comp=Z,15nm,1.1s								
WMOK	**Wichita Mounta**	**23.68**	**337**	P		P	02 41 03.7	+1.0	
WMOK				IAmb		IAmb	02 41 05.6		
	comp=Z,14nm,1.3s								
SSPA	**Standing Stone**	**28.62**	**16**	P		P	02 41 46.4	-0.6	
BOAV	**Boa Vista**	**28.90**	**110**	P		P	02 41 48.8	-1.0	
BOAV				IAmb		IAmb	02 41 49.7		
	comp=Z,4.6nm,1.1s								
ECSD	**EROS Data Cent**	**31.37**	**347**	P		P	02 42 09.8	-1.4	
ECSD				IAmb		IAmb	02 42 13.6		
	comp=Z,13nm,1.4s								
PDAR	**Pinedale Array**	**35.01**	**331**	P		P	02 42 43.7	+0.8	
	comp=Z,0.4nm,0.5s,baz=134,slow=10.0,SNR=6.1								
	comp=Z,0.4nm,0.5s								
PDAR	**Pinedale Array**	**35.01**	**331**	P		P	02 42 43.1	+0.2	
LPAZ	**La Paz**	**35.10**	**146**	P		P	02 42 44.5	+0.2	
	comp=Z,0.6nm,0.3s,baz=327,slow=6.2,SNR=7.4								
	comp=Z,0.6nm,0.3s								
LPAZ	**La Paz**	**35.10**	**146**	P		P	02 42 44.6	+0.2	
ULM	**Lac du Bonnet**	**37.54**	**351**	P		P	02 43 01.9	-2.0	
	comp=Z,3.2nm,0.4s,baz=160,slow=10,SNR=8.7								
	comp=Z,3.2nm,0.4s								
ULM	**Lac du Bonnet**	**37.54**	**351**	P		P	02 43 02.2	-1.7	
SIV	**San Ignacio**	**39.15**	**137**	P		P	02 43 16.8	-1.0	
	comp=Z,0.7nm,0.6s,baz=304,slow=10.0,SNR=2.7								
	comp=Z,0.7nm,0.6s								
FFC	**Flin Flon**	**42.91**	**348**	P		P	02 43 47.9	0.0	
SCHQ	**Schefferville**	**44.60**	**17**	P		P	02 44 00.2	-1.2	
	comp=Z,3.8nm,0.5s,baz=210,slow=9.4,SNR=16								
	comp=Z,3.8nm,0.5s								
YKA	**Yellowknife Ar**	**52.82**	**345**	P		P	02 45 03.0	-0.8	
	comp=Z,0.2nm,0.4s,baz=143,slow=6.5,SNR=7.7								
YKA				ScP		**ScP**	02 49 45.4	-2.8	
	comp=Z,0.2nm,0.8s,baz=151,slow=3.6,SNR=3.9								
	comp=Z,0.2nm,0.4s								
YKA	**Yellowknife Ar**	**52.82**	**345**	P		P	02 45 02.5	-1.2	
ILAR	**Eielson Array**	**65.24**	**336**	P		P	02 46 27.9	-1.2	
	comp=Z,0.2nm,0.6s,baz=157,slow=4.2,SNR=9.9								
	comp=Z,0.2nm,0.6s								
ILAR	**Eielson Array**	**65.24**	**336**	P		P	02 46 28.2	-0.8	
BMAR	**Burnt Mountain**	**65.50**	**339**	P		P	02 46 30.1	-0.6	
GO09	**Cerro Castillo**	**65.59**	**170**	P		P	02 46 33.9	+2.6	
SUMG	**Summit**	**65.89**	**14**	P		P	02 46 33.6	0.0	
WB0	**Warrunganga Arr**	**139.25**	**255**	PKPdf		**PKPdf**	02 55 11.8	-1.3	
WRA	**Warramunga Arr**	**139.29**	**255**	PKP		**PKPdf**	02 55 13.6	+0.4	
	comp=Z,1.7nm,0.8s,baz=90,slow=2.6,SNR=19								
WRA	**Warramunga Arr**	**139.29**	**255**			**PKPdf**	02 55 12.3	-0.9	
ASAR	**Alice Springs**	**139.37**	**249**	PKP		**PKPdf**	02 55 13.6	+0.2	
	comp=Z,1.0nm,0.6s,baz=89,slow=1.7,SNR=14								
ASAR	**Alice Springs**	**139.37**	**249**			**PKPdf**	02 55 12.9	-0.4	
PZH	**PanZhiHua**	**139.47**	**347**	PKP		**PKPdf**	02 55 12.8	-0.8	

PRU ***25*** *02:39:38.8,51.51N×16.04E,h0km*
VIE ***25*** *02:39:39.2±0.4,51.41N×15.91E,h0km,mb2.5/3,ml2.5/4,*
Error ellipse: s-maj=2.7km s-min=2.6km az=16.0 85 km
WNW of Wroclaw Suspected Mining induced.
ISC 25 02:39:35.2±0.8, 51.66N±0.03×16.07E±0.03, h0km, n32, σ1§11/68, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.83**	**170**	*e*Pg	**Pg**	02 39 51.5	+0.4
KSP				*e*Sg	**Sg**	02 40 01.5	-0.4
CHVC	**Chvalec**	**1.07**	**180**	*e*PG	**Pg**	02 39 55.7	-0.1
CHVC				*e*SG	**Sg**	02 40 09.2	-0.5
	comp=Z,20nm,0.6s						
OSTC	**Ostas**	**1.11**	**175**	*e*PG	**Pg**	02 39 56.7	+0.3
OSTC				*e*SG	**Sg**	02 40 10.3	-0.5
	comp=Z,33nm,0.6s						
UPC	**Upice**	**1.16**	**182**	*e*PG	**Pg**	02 39 57.6	+0.3
UPC				*e*SG	**Sg**	02 40 11.6	-0.7
	comp=Z,62nm,0.6s						
DPC	**Dobruska-Polom**	**1.32**	**173**	*e*PG	**Pg**	02 40 00.3	-0.2
DPC				*e*SG	**Sg**	02 40 16.6	-1.0
	comp=Z,14nm,0.4s						
PVCC	**Panska Ves**	**1.48**	**220**	*e*PG	**Pb**	02 40 03.7	+0.2
PVCC				*e*SG	**Sb**	02 40 22.6	-0.2
	comp=Z,75nm,0.5s						
KRLC	**Kraliky**	**1.65**	**164**	*e*PG	**Pn**	02 40 05.8	+0.3
KRLC				*e*SG	**Sn**	02 40 26.4	-1.0
	comp=Z,23nm,0.4s						
PRU	**Pruhonice**	**1.93**	**211**	*e*SG	**Sb**	02 40 35.6	-0.4
CLL	**Collm**	**1.95**	**261**	*i* Pn	**Pn**	02 40 09.6	+0.1
CLL				*e*Pg	**Pg**	02 40 13.0	+0.5
CLL				*ex*	x	02 40 17.0	
CLL				*e*Sg	**Sg**	02 40 38.0	+0.3
	comp=Z,12nm,0.4s						
HSKC	**Hora Svate Kat**	**1.97**	**239**	*e*PG	**Pb**	02 40 11.8	-0.1
HSKC				*e*SG	**Sb**	02 40 37.3	+0.4
	comp=Z,9.3nm,0.4s						
STEB	**Steborice**	**2.04**	**147**	*e*PG	**Pb**	02 40 13.7	+0.6
STEB				*e*SG	**Sb**	02 40 38.9	-0.1
	comp=Z,16nm,0.5s						
MORC	**Moravsky Berou**	**2.11**	**153**	*e*PN	**Pn**	02 40 11.4	-0.3
MORC				*e*SG	**Sn**	02 40 39.8	+1.1
OKC	**Ostrava-Krasne**	**2.25**	**143**	*e*PG	**Pb**	02 40 17.3	+0.6
OKC				*e*SG	**Sg**	02 40 46.7	-0.9
	comp=Z,19nm,0.5s						
VRAC	**Vranov**	**2.38**	**172**	*e*PN	**Pn**	02 40 15.4	-0.1
VRAC				*e*SG	**Sb**	02 40 49.0	+0.2
ZVC	**Zvikov**	**2.53**	**209**	*e*PN	**Pn**	02 40 18.7	+1.2
ZVC				*e*PG	**Pb**	02 40 21.8	+0.4
ZVC				*e*SG	**Sb**	02 40 54.0	+1.0
	comp=Z,8.2nm,0.3s						
MAUC	**Maruska**	**2.56**	**153**	*e*PG	**Pb**	02 40 22.8	+0.8
MAUC				*e*SG	**Sg**	02 40 56.1	-1.2
KRUC	**Moravsky**	**2.61**	**175**	*e*PN	**Pn**	02 40 19.1	+0.5
KRUC				*e*SG	**Sb**	02 40 56.1	+0.7
NKC	**Novy Kostel**	**2.70**	**239**	*e*SG	**Sg**	02 41 02.3	+0.5
OJC	**Ojcow**	**2.77**	**120**	*e*Pg	**Pg**	02 40 29.5	+1.3
OJC				*e*Sg	**Sg**	02 41 04.6	+0.5
KHC	**Kasperske Hory**	**2.99**	**213**	*e*PN	**Pn**	02 40 25.6	+1.7
KHC				*e*PG	**Pb**	02 40 30.7	+1.3
KHC				*e*SN	**Sn**	02 40 59.5	-1.0
KHC				*e*SG	**Sg**	02 41 09.5	-1.8
	comp=Z,4.4nm,0.4s						
CKRC	**Cesky Krumlov**	**3.06**	**202**	*e*PG	**Pb**	02 40 32.1	+1.6
CKRC				*e*SG	**Sg**	02 41 11.1	-2.3
	comp=Z,8.0nm,0.5s						
LANS	**Liptovska Anna**	**3.33**	**138**	*e*PN	**Pn**	02 40 30.3	+1.8
LANS				*e*PG	**Pg**	02 40 38.1	-0.8
LANS				*e*SG	**Sg**	02 41 19.7	-2.2
MODS	**Modra-Piesok**	**3.38**	**166**	*e*PN	**Pn**	02 40 29.8	+0.6
MODS				*e*PG	**Pb**	02 40 37.1	+1.1
MODS				*e*SG	**Sb**	02 41 16.6	-1.1
BSD	**Bornholm Skovb**	**3.53**	**349**	*i* P	**Pn**	02 40 32.2	+1.1
BSD				*i* S	**Sn**	02 41 11.2	-2.3
BSD				IAML		02 41 37.2	
	comp=Z,8.9nm,0.9s						
WINA	**Alland / Wiene**	**3.56**	**180**	*e*Pn	**Pn**	02 40 32.2	+0.5
	comp=Z,1.0nm,0.2s						
WINA				*e*Sg	**Sg**	02 41 26.9	-2.5
	comp=Z,1.6nm,0.2s						
HAMD	**Hammershus, De**	**3.70**	**348**	*i* P	**Pn**	02 40 34.3	+0.8
HAMD				*i* S	**Sn**	02 41 17.1	-0.7
HAMD				IAML		02 41 46.9	
	comp=Z,12nm,1.0s						
CONA	**Conrad Observa**	**3.74**	**182**	*e*Pn	**Pn**	02 40 35.3	+1.0
	comp=Z,0.5nm,0.3s						
CONA				*e*Sg	**Sg**	02 41 33.3	-2.0
	comp=Z,4.2nm,0.3s						
MOA	**Molln**	**3.99**	**198**	*i* Pn	**Pn**	02 40 38.0	+0.4
	comp=Z,1.0nm,0.2s						
MOA				*e*Sg	**Sg**	02 41 43.1	-0.2
	comp=Z,2.4nm,0.3s						
LUNU	**Lund**	**4.27**	**340**	*i* P	**Pn**	02 40 41.8	+0.4
LUNU				*i* S	**Sn**	02 41 31.1	-0.9
BLEU	**Blekinge**	**4.65**	**358**	*i* P	**Pn**	02 40 48.3	+1.6
BLEU				*e*S	**Sn**	02 41 38.4	-3.0
BJUU	**Bjuv**	**4.77**	**339**	*i* P	**Pn**	02 40 49.1	+0.8
BJUU				*i* S	**Sn**	02 41 42.9	-1.3
DEL	**Delary**	**4.99**	**346**	*i* P	**Pn**	02 40 51.8	+0.6
DEL				*i* S	**Sn**	02 41 48.1	-1.4

JMA ***25*** *02:48:29.2±0.1,23.3N±0.5×12.2E±, h31km,MV3.5/13,*
TAIWAN REGION
TAP ***25*** *02:48:29.9,23.31N×121.46E,h34km,ML3.9,C*
ISC 25 02:48:29.6±0.9, 23.30N±0.02×121.53E±0.02, h32km±4km, n124, σ0§96/214, 3C-24D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECBN	**Changbin**	**0.07**	**283**	⇑*i*P	**Pb**	02 48 35.6	+0.4
ECBN				*i* S	**Sb**	02 48 39.8	+0.9
CHKH	**Chenggong**	**0.16**	**229**	⇑P	**Pb**	02 48 35.9	+0.1
CHKH				S	**Sb**	02 48 40.3	+0.3
EYUL	**Yuli**	**0.20**	**284**	P	**Pb**	02 48 36.4	+0.3
TWF1	**Yuli**	**0.22**	**284**	⇓*i*P	**Pb**	02 48 36.2	-0.2
TWF1				*e*S	**Sb**	02 48 40.7	-0.3
YULB	**Yu-li**	**0.23**	**293**	⇓*i*P	**Pb**	02 48 36.2	-0.3
YULB				S	**Sb**	02 48 40.9	-0.2
FULB	**Fuli**	**0.24**	**245**	⇑*i*P	**Pb**	02 48 36.6	0.0
FULB				S	**Sn**	02 48 42.0	+0.4
CHKT	**Chengkung**	**0.25**	**217**	⇓*i*P	**Pb**	02 48 36.9	+0.2
CHKT				S	**Sb**	02 48 41.9	+0.5
EHYH	**Wanrong**	**0.26**	**319**	⇓*i*P	**Pb**	02 48 36.7	-0.1
EHYH				S	**Sb**	02 48 41.5	-0.2
EHY	**Hungye**	**0.28**	**317**	⇓*i*P	**Pb**	02 48 36.7	-0.4
EHY				S	**Sb**	02 48 41.3	-0.9
EHD	**Haiduan**	**0.33**	**243**	⇓*i*P	**Pb**	02 48 37.3	-0.5
EHD				S	**Sb**	02 48 42.5	-0.7
ECS	**Chishang**	**0.35**	**234**	⇓P	**Pb**	02 48 38.2	+0.2
ECS				*e*S	**Sb**	02 48 44.3	+0.6
WARBT	**Fenglin Townsh**	**0.44**	**343**	⇓*i*P	**Pb**	02 48 38.4	-0.8
WARBT				S	**Sb**	02 48 44.4	-1.4
ELDTW	**Lidau**	**0.48**	**257**	⇓*i*P	**Pb**	02 48 39.2	-0.8
ELDTW				S	**Sb**	02 48 45.1	-2.0
SHUL	**Shoufeng**	**0.49**	**4**	*e*P	**Pb**	02 48 40.3	+0.3

EOS3	**EOS3**	**1.22**	**36**	*e*P	**Pn**	**02 48 51.0**	**+0.8**		
EOS3				*e*S	**Sn**	**02 49 06.1**	**+0.5**		
LATG	**Datong**	**1.23**	**360**	*e*P	**Pn**	**02 48 50.5**	**-0.1**		
TWQ1	**Liyutan**	**1.25**	**327**	||P	**Pb**	**02 48 52.7**	**0.0**	
TWQ1				*e*S	**Sb**	**02 49 09.1**	**+0.6**		
LAY	**Lan-yu**	**1.25**	**179**	*e*P	**Pn**	**02 48 50.0**	**-1.0**		
LAY				*e*S	**Sn**	**02 49 06.7**	**-0.1**		
LYUB	**Lan-yu**	**1.29**	**178**	*e*P	**Pn**	**02 48 49.9**	**-1.5**		
LYUB				*e*S	**Sn**	**02 49 06.2**	**-1.4**		
WDJ	**Dajia District**	**1.32**	**322**	*e*P	**Pb**	**02 48 53.8**	**-0.1**		
WDJ				*e*S	**Sb**	**02 49 11.1**	**+0.6**		
ENTT	**Nioudou**	**1.33**	**1**	*e*P	**Pn**	**02 48 52.3**	**+0.2**		
YHNB	**Yeheng**	**1.37**	**354**	P	**Pn**	**02 48 53.8**	**+1.2**		
YHNB	**Yeheng**	**1.37**	**354**	*e*P	**Pn**	**02 48 53.4**	**+0.9**		
YHNB				*e*S	**Sn**	**02 49 09.2**	**-0.5**		
NFF	**Wufeng Townshi**	**1.38**	**344**	*e*P	**Pn**	**02 48 53.9**	**+1.2**		
NFF				*e*S	**Sb**	**02 49 11.8**	**-0.3**		
NSK	**Sanguang**	**1.38**	**354**	*e*P	**Pn**	**02 48 53.5**	**+0.8**		
NSK				*e*S	**Sn**	**02 49 09.7**	**-0.2**		
NSTT	**Nanjuang**	**1.41**	**340**	*e*P	**Pn**	**02 48 54.5**	**+1.5**		
NSTT				*e*S	**Sn**	**02 49 11.2**	**+0.6**		
LIOB	**Emei**	**1.42**	**341**	*e*P	**Pn**	**02 48 54.7**	**+1.5**		
LIOB				*e*S	**Sn**	**02 49 12.7**	**+1.9**		
SMST	**Manzhou Townsh**	**1.43**	**207**	*e*P	**Pn**	**02 48 53.6**	**+0.4**		
FUSB	**Fushanzhiwuyua**	**1.45**	**2**	*e*P	**Pn**	**02 48 54.3**	**+0.6**		
FUSB				*e*S	**Sn**	**02 49 12.1**	**+0.4**		
NWLT	**Wulai**	**1.47**	**359**	*e*P	**Pn**	**02 48 54.6**	**+0.7**		
NWLT				*e*S	**Sn**	**02 49 11.6**	**-0.5**		
KSHI	**Guanxi Townshi**	**1.50**	**348**	*e*P	**Pb**	**02 48 56.7**	**-0.3**		
KSHI				*e*S	**Sb**	**02 49 16.2**	**+0.5**		
TWKBT	**Hengchun**	**1.51**	**206**	*e*P	**Pn**	**02 48 55.0**	**+0.7**		
TWKBT				*e*S	**Sn**	**02 49 13.7**	**+0.8**		
TWK1	**Hengchun**	**1.51**	**206**	*e*P	**Pb**	**02 48 56.2**	**-0.8**		
TSEB	**Hengchuen, Pin**	**1.51**	**203**	*e*S	**Sn**	**02 49 14.1**	**+1.2**		
TIPB	**Shuangxi**	**1.69**	**9**	*e*P	**Pn**	**02 48 58.1**	**+1.2**		
WDGT	**Dungji**	**1.72**	**269**	*e*P	**Pn**	**02 48 57.9**	**+0.6**		
WDGT				*e*S	**Sn**	**02 49 17.6**	**-0.6**		
JYNG	**Yonagunijimaku**	**1.73**	**48**	*e*P	**Pn**	**02 48 58.6**	**+1.1**		
JYNG				S	**Sn**	**02 49 19.3**	**+0.9**		
YOJ	**Yonaguni jima**	**1.78**	**49**	*e*P	**Pn**	**02 48 59.2**	**+1.0**		
YOJ				*e*S	**Sn**	**02 49 20.6**	**+1.0**		
YOJ	**Yonaguni jima**	**1.78**	**49**	*e*P	**Pn**	**02 48 59.3**	**+1.2**		
YOJ				*e*S	**Sn**	**02 49 20.3**	**+0.6**		
PHUB	**P'eng-hu**	**1.81**	**277**	*e*P	**Pn**	**02 48 59.0**	**+0.4**		
PHUB				*e*S	**Sn**	**02 49 19.7**	**-0.6**		
SXI1	**Grass Mountain**	**1.81**	**10**	*e*P	**Pn**	**02 49 00.1**	**+1.4**		
SXI1				*e*S	**Sn**	**02 49 23.0**	**+2.4**		
PNG	**Penghu**	**1.83**	**279**	*e*P	**Pn**	**02 48 59.5**	**+0.7**		
PNG				*e*S	**Sn**	**02 49 20.7**	**-0.2**		
ZUZH	**Zhuzihu**	**1.85**	**0**	*e*S	**Sn**	**02 49 21.8**	**+0.3**		
VCHM	**Qimei**	**1.93**	**268**	*e*P	**Pn**	**02 49 00.8**	**+0.6**		
VCHM				*e*S	**Sn**	**02 49 22.4**	**-1.0**		
HATJ	**Hateruma jima**	**2.22**	**70**	*e*P	**Pn**	**02 49 05.0**	**+0.9**		
HATJ				S	**Sn**	**02 49 30.8**	**+0.3**		
IRIF	**Iriomote-Funau**	**2.26**	**62**	P	**Pn**	**02 49 06.0**	**+1.2**		
IRIF				*e*S	**Sn**	**02 49 32.5**	**+0.9**		
JKRS	**Kuro-shima**	**2.46**	**67**	*e*P	**Pn**	**02 49 08.9**	**+1.5**		
JKRS				*e*S	**Sn**	**02 49 37.6**	**+1.3**		
JIJ	**Ishigaki jima**	**2.62**	**66**	*e*P	**Pn**	**02 49 10.1**	**+0.5**		
JIJ				*e*S	**Sn**	**02 49 40.2**	**-0.1**		
PTMZ	**Houxiangcun**	**2.80**	**309**	*e*P	**Pn**	**02 49 12.6**	**+0.4**		
PTMZ				*e*S	**Sn**	**02 49 43.4**	**-1.4**		
JISG	**Ishigakijimahi**	**2.85**	**63**	*e*P	**Pn**	**02 49 13.4**	**+0.6**		
JISG				*e*S	**Sn**	**02 49 46.0**	**-0.1**		
KNM	**Kinmen**	**3.04**	**292**	*e*P	**Pn**	**02 49 17.0**	**+1.5**		
KNM				*e*S	**Sn**	**02 49 51.7**	**+0.9**		
KNMB	**Chin-men Tao**	**3.10**	**293**	||*e*P	**Pn**	**02 49 16.1**	**-0.2**	
KNMB				*e*S	**Sn**	**02 49 49.9**	**-2.3**		
MATB	**Ma-tsu**	**3.18**	**333**	*e*P	**Pn**	**02 49 17.7**	**+0.3**		
MATB				*e*S	**Sn**	**02 49 52.1**	**-2.1**		
JTJ	**Tarama**	**3.19**	**65**	*e*P	**Pn**	**02 49 18.4**	**+0.9**		
JTJ				*e*S	**Sn**	**02 49 54.8**	**+0.2**		
MHZQ	**Yeshan**	**3.60**	**321**	*e*P	**Pn**	**02 49 23.3**	**+0.2**		
MHZQ				*e*S	**Sn**	**02 50 03.1**	**-1.4**		
LYJJ	**Jianjiangzhen**	**3.61**	**334**	*e*S	**Sn**	**02 50 03.7**	**-1.1**		
AXDP	**Jialang**	**3.62**	**297**	*e*P	**Pn**	**02 49 23.6**	**+0.1**		
AXDP				*e*S	**Sn**	**02 50 03.1**	**-2.0**		
SXFK	**Yanhouchang**	**4.69**	**312**	*e*P	**Pn**	**02 49 38.4**	**+0.2**		

GFZ ***25*** *02:49:15.1,48.95N×157.75E,h43km,MW7.4,Moment Tensor Solution. s117 Moment tensor: Mrr1.32; Mθθ-0.16; Mϕϕ-1.16; Mrθ0.05; Mθϕ-0.55; Mϕr-0.11; Fault plane solution: NP1:ϕs199.00000°,δ46.00000°, λ84.00000°. NP2:ϕs28.00000°,δ43.00000°,λ96.00000°. Principal axes: T 1.3300, Plg85.0000°, Azm46.0000°; N 0.0800, Plg4.0000°, Azm203.0000°; P -1.4000, Plg1.0000°, Azm293.0000°;*

BJI ***25*** *02:49:16.4,48.93N×157.74E,h30km,mB7.2/66,mb6.4/87, Ms7.6/98,Ms7 7.5/96*

MOS ***25*** *02:49:17.5±0.8,48.84N×157.75E,h46km,mb7.0/64, MS7.5/38,Error ellipse: s-maj=5.2km s-min=2.5km az=89.5 Broadband fault plane solution: P waves. M0±2.10000×1020 NP1:ϕs202.00000°,δ45.00000°, λ83.00000°. NP2:ϕs31.00000°,δ45.00000°,λ97.00000°. Principal axes: T Plg85.0000°, Azm27.0000°; N Plg5.0000°, Azm207.0000°; P Plg0.0000°, Azm117.0000°;*

MOS MO 8.0E19 n.m, Mw 7.2 (TLY) Fault plane solution: P-wave C32, D18 . Felt (V-VI) at Severo-Kuril'sk;(IV-V) at Petropavlovsk-Kamchatskiy;(III) at Yuzhno-Kuril'sk.

SKHL ***25*** *02:49:18.2±0.1,48.80N×158.00E,h60km±9km,mb7.8/8, Ms7.5/7,msh7.5/7*

SKHL Felt (V-VI) at Severo-Kuril`sk, (III) at Yushno-Kuril`sk, Lagunnoe, Goryachy Plyash.

KRSC ***25*** *02:49:19.7±1.6,49.11N×158.08E,h48km±34km,Mc7.5, MI7.7,Felt [VI-VII] at Severo-Kurilsk; [VI] at lighthouse Chibuiny, lighthouse Krugliy; [V-VI] at Podgornay; [V] at kordon Ozernyy, Paujetka, Ozernovskiy, Zaporozhye, HMS Vodopadnaya, river Karimshina (stationary KF GS), Viluchinsk; [IV-V] at cape Lopatka, MGeoES-1, Ribachiy, Termalniy, Paratunka, Petropavlovsk, Nikolaevka, Pionersky, Nagorniy, Elizovo, kordon Cape Nalichevo, HMS Semyachik, kordon Kronoki; [IV] at lighthouse Petropavlovskiy, Vulkanniy, Razdolniy, Korjaki, cape Shipunskiy; [III-IV] at lighthouse Bolshereckiy, Apacha, Ust-Bolsheretsk, Sokoch; [III] at lighthouse Kurbatova, Oktjabrskiy, Nikolskoe, Yuzhno-Kurilsk, Lagunoe, Goryachii Plyazh; [II-III] at cape Vasilyeva, Kavalerskoe; [II] at Malokurilskoye; Felt at Sosnovka, kordon Tsentralnyi, Kitami, Adak.*

IDC ***25*** *02:49:20.0±1.7,48.94N×157.72E,h50km±15km,mb5.9/46, mbtmp6.3/53,ML5.8/7,MS7.3/79,Error ellipse: s-maj=10.0km s-min=9.1km az=155.0*

NEIC ***25*** *02:49:21,48.98N×157.70E,h53km*

NEIC ***25*** *02:49:21.2±1.3,48.96N±0.07×157.70E±0.06,h58km±2km, mb7.1/320,Mwb7.4/293,Mww7.5/239,Error ellipse: s-maj=10.0km s-min=5.4km az=183.0,Moment Tensor Solution. Moment tensor: Scale 1020Nm; Mrr1.44; Mθθ0.09; Mϕϕ-1.53; Mrθ0.18; Mθϕ-0.41; Mϕr-0.30; Fault plane solution: M0 1.58000×1020 NP1:ϕs24.05000°, δ41.29000°,λ106.14000°. NP2:ϕs182.99000°,δ50.66000°, λ76.28000°. Principal axes: T 1.5040, Plg78.0000°, Azm37.0000°; N 0.1401, Plg11.0000°, Azm192.0000°; P -1.6441, Plg5.0000°, Azm283.0000°;*

IPGP ***25*** *02:49:21.0,48.99N×157.69E,h45km,Mw7.5,Fault plane solution: NP1:ϕs30.00000°,δ39.00000°,λ95.00000°. NP2:ϕs203.00000°,δ51.00000°,λ86.00000°.*

NEIC ***25*** *02:49:21.4,49.00N×157.66E,h60km*

NEIC ***25*** *02:49:21.4,49.10N×157.66E,h60km,Moment Tensor Solution. Duration: 27s8 Moment tensor: Scale 1020Nm; Mrr1.83; Mθθ-0.09; Mϕϕ-1.73; Mrθ-0.02; Mθϕ-0.80; Mϕr-0.14; Fault plane solution: M0 1.96000×1020 NP1: ϕs23.37000°,δ42.94000°,λ91.82000°. NP2:ϕs200.88000°, δ47.09000°,λ88.31000°. Principal axes: T 1.8311, Plg88.0000°, Azm81.0000°; N 0.2292, Plg1.0000°, Azm202.0000°; P -2.0603, Plg2.0000°, Azm292.0000°;*

PTWC ***25*** *02:49:21,49.00N×157.80E,h67km,Mwp7.8/4*

BGR ***25*** *02:49:26.4,49.84N×156.55E,h33km,mb7.3,mB_BB7.8, Ms7.8*

GCMT ***25*** *02:49:31.2±0.1,49.11N±0.01×157.87E±0.01,h53km, MW7.5/174,Moment Tensor Solution. s174,c474;*

s172,c816; Duration: 13s4 Moment tensor: Scale 1020 Nm; Mrr1.96±.01; Mθθ-0.20±.00; Mϕϕ-1.76±.01; Mrθ0.19±.01; Mθϕ-0.81±.00; Mϕr-0.29±.01; Best double couple: M0 2.06600×1020 NP1:ϕs32.00000°,δ43.00000°, λ103.00000°. NP2:ϕs194.00000°,δ48.00000°,λ78.00000°. Principal axes: T 2.0140, Plg81.0000°, Azm40.0000°; N 0.1040, Plg9.0000°, Azm202.0000°; P -2.1170, Plg3.0000°, Azm293.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=150s. Triangular moment-rate function

ISC 25 02:49:19.9±0.2,48.85N±0.02×157.76E±0.02,h50km±1km, h50km:pP-P,n2519,σ1988/3209,mb6.9/649,MS7.4/220, 365C-100D,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.12**	**331**	||*i*P	**Pn**	**02 49 53.0**	**+0.2**
SKR					*i* S	**Sn**	**02 50 17.5**	**-0.4**
SKR				pmax		pmax		
	comp=Z,648μm,0.7s							
SKR				MLR		MLR		
	comp=Z,7465μm,10.0s							
SKR	**Severo-Kuril's**	**2.12**	**331**	*e*P		**Pn**	**02 49 53.0**	**+0.2**
SKR				*e*S		**Sn**	**02 50 17.7**	**-0.3**
SKR	**Severo-Kuril's**	**2.12**	**331**	*i* P		**Pn**	**02 49 52.3**	**-0.5**
SKR				AMB		AMB	02 49 56.3	
	comp=Z,506μm,0.6s							
SKR				*i* S		**Sn**	**02 50 17.8**	**-0.1**
SKR				A		A	02 50 19.0	
	comp=Z,3762μm,0.5s							
SKR				A		A	02 50 19.0	
	comp=Z,1730μm,0.5s							
PAU	**Pauzhetka**	**2.69**	**347**	PN		**Pn**	**02 50 00.1**	**-0.5**
PAU				S		**Sn**	**02 50 30.6**	**-1.3**
PAU	**Pauzhetka**	**2.69**	**347**	*e*P		**Pn**	**02 50 00.2**	**-0.5**
PAU				*e*S		**Sn**	**02 50 30.6**	**-1.3**
PAU	**Pauzhetka**	**2.69**	**347**	*e*P		**Pn**	**02 50 00.6**	**0.0**
PAU				AMB		AMB	02 50 09.5	
	comp=Z,135μm,0.4s							
PAU				AMB		AMB	02 50 13.9	
	comp=Z,158μm,2.0s							
PAU				*e*S		**Sn**	**02 50 32.5**	**+0.6**
PAU				A		A	02 50 48.6	
	comp=Z,276μm,0.5s							
PAU				A		A	02 50 48.6	
	comp=Z,255μm,0.5s							
PAU				A		A	02 51 04.7	
	comp=Z,240μm,2.3s							
PAU				A		A	02 51 04.7	
	comp=Z,240μm,2.3s							
PAU				AMS		AMS	02 52 18.0	
	comp=Z,4554μm,11.0s							
PAU				AMS		AMS	02 52 18.0	
	comp=Z,4082μm,11.0s							
KDTR	**Khodutka, Kamc**	**2.97**	**4**	PN		**Pn**	**02 50 03.9**	**-0.5**
KDTR				S		**Sn**	**02 50 35.5**	**-3.3**
KDTR	**Khodutka, Kamc**	**2.97**	**4**	*e*P		**Pn**	**02 50 03.9**	**-0.5**
KDTR				*e*S		**Sn**	**02 50 36.0**	**-2.8**
KDTR	**Khodutka, Kamc**	**2.97**	**4**	*e*P		**Pn**	**02 50 03.9**	**-0.5**
KDTR				*e*S		**Sn**	**02 50 35.5**	**-3.3**
MIPR	**Malaya Ipel'ka**	**3.49**	**350**	PN		**Pn**	**02 50 11.5**	**-0.1**
MIPR	**Malaya Ipel'ka**	**3.49**	**350**	*e*P		**Pn**	**02 50 12.2**	**+0.6**
ASAK	**Asacha**	**3.54**	**1**	PN		**Pn**	**02 50 11.5**	**-0.9**
ASAK	**Asacha**	**3.54**	**1**	*e*P		**Pn**	**02 50 12.1**	**-0.3**
RUS	**Russkaya**	**3.62**	**7**	PN		**Pn**	**02 50 12.6**	**-0.8**
RUS				S		**Sn**	**02 50 51.6**	**-3.2**
RUS	**Russkaya**	**3.62**	**7**	*e*P		**Pn**	**02 50 12.6**	**-0.8**
RUS				*e*S		**Sn**	**02 50 52.3**	**-2.5**
RUS	**Russkaya**	**3.62**	**7**	*e*P		**Pn**	**02 50 12.6**	**-0.8**
MTVR	**Mutnovka**	**3.65**	**4**	PN		**Pn**	**02 50 13.6**	**-0.3**
MTVR	**Mutnovka**	**3.65**	**4**	*e*P		**Pn**	**02 50 13.6**	**-0.3**
GRL	**Gorelyy**	**3.71**	**3**	PN		**Pn**	**02 50 14.6**	**-0.2**
GRL	**Gorelyy**	**3.71**	**3**	*e*P		**Pn**	**02 50 14.8**	**+0.1**
KRMR	**Karymshinskiy**	**3.99**	**3**	PN		**Pn**	**02 50 18.9**	**+0.5**
KRMR				S		**Sn**	**02 51 02.6**	**-1.3**
KRMR	**Karymshinskiy**	**3.99**	**3**	*e*P		**Pn**	**02 50 19.0**	**+0.5**
KRMR				*e*S		**Sn**	**02 51 02.7**	**-1.3**
KRMR	**Karymshinskiy**	**3.99**	**3**	*e*P		**Pn**	**02 50 18.9**	**+0.5**
APC	**Apacha**	**4.10**	**355**	PN		**Pn**	**02 50 20.5**	**+0.6**
APC	**Apacha**	**4.10**	**355**	*e*P		**Pn**	**02 50 20.5**	**+0.6**
PET	**Petropavlovsk**	**4.22**	**7**			**Pn**	**02 50 21.2**	**-0.3**
PET	**Petropavlovsk**	**4.22**	**7**	||*i*P	**Pn**	**02 50 21.3**	**-0.3**
PET				pmax		pmax		
	comp=Z,39μm,1.0s							
PET				pmax		pmax		
	comp=Z,279μm,6.8s							
PET				pmax		pmax		
	comp=Z,268μm,7.5s							
PET				MLR		MLR		
	comp=Z,2238μm,13.0s							
PET				MLR		MLR		
	comp=Z,2538μm,11.0s							
PET	**Petropavlovsk**	**4.22**	**7**	P		**Pn**	**02 50 21.4**	**-0.2**
PET	**Petropavlovsk**	**4.22**	**7**	*e*P		**Pn**	**02 50 21.3**	**-0.3**
PET				*e*S		**Sn**	**02 51 06.8**	**-2.7**
PET	**Petropavlovsk**	**4.22**	**7**	*e*P		**Pn**	**02 50 21.4**	**-0.2**
PET				AMB		AMB	02 50 25.8	
	comp=Z,206μm,3.8s							
PET				AMB		AMB	02 50 35.3	
	comp=Z,39μm,0.5s							
PET				*e*S		**Sn**	**02 51 07.5**	**-2.0**
PET				A		A	02 51 14.2	
	comp=Z,377μm,0.5s							
PET				A		A	02 51 14.2	
	comp=Z,334μm,0.5s							
PET				A		A	02 51 16.0	
	comp=Z,353μm,2.0s							
PET				A		A	02 51 16.0	
	comp=Z,321μm,2.0s							
DALK	**Dalny**	**4.23**	**8**	PN		**Pn**	**02 50 21.6**	**-0.2**
DALK	**Dalny**	**4.23**	**8**	*e*P		**Pn**	**02 50 21.6**	**-0.2**
DALK				*e*S		**Sn**	**02 51 07.4**	**-2.5**
DALK	**Dalny**	**4.23**	**8**	*e*P		**Pn**	**02 50 21.6**	**-0.2**
INSR	**Institute**	**4.26**	**7**	PN		**Pn**	**02 50 22.2**	**+0.1**
INSR	**Institute**	**4.26**	**7**	*e*P		**Pn**	**02 50 22.2**	**+0.1**
INSR				*e*S		**Sn**	**02 51 08.9**	**-1.6**
I44RU	**PETROPAVLOVSK-**	**4.26**	**360**	P		**Pn**	**02 50 21.0**	**-1.2**
	baz=146,slow=16,SNR=4.3							
I44RU				S		**Sn**	**02 51 08.5**	**-2.1**
	baz=177,slow=16							
I44RU				I		I	03 07 00.0	
	baz=208,slow=332,SNR=1.8							
PEA0B	**Petropavlovsk-**	**4.26**	**360**			**Pn**	**02 50 22.6**	**+0.3**
PEA0B	**Petropavlovsk-**	**4.26**	**360**	PN		**Pn**	**02 50 22.8**	**+0.6**
PEA0B	**Petropavlovsk-**	**4.26**	**360**	P		**Pn**	**02 50 22.8**	**+0.6**
PETK	**Petropavlovsk-**	**4.26**	**360**	P		**Pn**	**02 50 22.3**	**0.0**
	comp=Z,937nm,0.3s,baz=155,slow=14,SNR=1690							
PETK				P3KPbc			03 28 46.6	
	comp=Z,14nm,0.9s,baz=81,slow=2.6,SNR=5.5							
	comp=Z,24μm,0.9s							
PETK	**Petropavlovsk-**	**4.26**	**360**			**Pn**	**02 50 22.5**	**+0.3**
PETK	**Petropavlovsk-**	**4.26**	**360**	PN		**Pn**	**02 50 22.5**	**+0.3**
UGLR	**Uglovaya**	**4.42**	**8**	PN		**Pn**	**02 50 24.4**	**0.0**
UGLR	**Uglovaya**	**4.42**	**8**	*e*P		**Pn**	**02 50 24.5**	**0.0**
NLC	**Nalytchevo**	**4.44**	**12**	*e*P		**Pn**	**02 50 23.2**	**-1.5**
NLC				*e*S		**Sn**	**02 51 11.1**	**-3.9**
AVH	**Avacha**	**4.46**	**8**	PN		**Pn**	**02 50 25.7**	**+0.7**
AVH	**Avacha**	**4.46**	**8**	*e*P		**Pn**	**02 50 25.8**	**+0.7**
AVH	**Avacha**	**4.46**	**8**	*e*P		**Pn**	**02 50 25.7**	**+0.7**
SMAR	**Somma**	**4.47**	**8**	PN		**Pn**	**02 50 24.6**	**-0.6**
SMAR	**Somma**	**4.47**	**8**	*e*P		**Pn**	**02 50 24.9**	**-0.3**
KOK	**Koryaka**	**4.48**	**7**	PN		**Pn**	**02 50 26.1**	**+0.8**
KOK	**Koryaka**	**4.48**	**7**	*e*P		**Pn**	**02 50 26.2**	**+0.8**
KOK	**Koryaka**	**4.48**	**7**	*e*P		**Pn**	**02 50 26.1**	**+0.8**
SPN	**Mys Shipunski**	**4.49**	**18**	PN		**Pn**	**02 50 24.4**	**-0.9**
SPN	**Mys Shipunski**	**4.49**	**18**	*e*P		**Pn**	**02 50 24.7**	**-0.5**
SPN				*e*S		**Sn**	**02 51 12.9**	**-3.3**
KRER	**Koryakskii**	**4.50**	**8**	PN		**Pn**	**02 50 26.0**	**+0.3**
KRER	**Koryakskii**	**4.50**	**8**	*e*P		**Pn**	**02 50 26.0**	**+0.3**
KRX	**Arik**	**4.55**	**7**	PN		**Pn**	**02 50 26.7**	**+0.5**
KRX	**Arik**	**4.55**	**7**	*e*P		**Pn**	**02 50 26.7**	**+0.5**
GNL	**Ganaly**	**4.85**	**1**	PN		**Pn**	**02 50 30.9**	**+0.5**
GNL	**Ganaly**	**4.85**	**1**	*e*P		**Pn**	**02 50 31.0**	**+0.5**
KII	**Karymskiy**	**5.30**	**11**	PN		**Pn**	**02 50 37.0**	**+0.5**
KII	**Karymskiy**	**5.30**	**11**	*e*P		**Pn**	**02 50 37.0**	**+0.5**
MKZ	**Mys Kozlova**	**6.22**	**22**	PN		**Pn**	**02 50 47.8**	**-1.2**
MKZ	**Mys Kozlova**	**6.22**	**22**	*e*P		**Pn**	**02 50 47.8**	**-1.2**
TUMD	**Tumrok D**	**6.57**	**13**	PN		**Pn**	**02 50 54.1**	**+0.3**
TUMD	**Tumrok D**	**6.57**	**13**	*e*P		**Pn**	**02 50 54.1**	**+0.3**
TUMD				*e*S		**Sn**	**02 52 03.8**	**-3.4**
KMNR	**Kamenistaya**	**7.08**	**11**	PN		**Pn**	**02 51 01.8**	**+0.9**
KMNR	**Kamenistaya**	**7.08**	**11**	*e*P		**Pn**	**02 51 02.0**	**+1.1**
ESO	**Esso**	**7.11**	**4**	PN		**Pn**	**02 51 01.7**	**+0.5**
ESO	**Esso**	**7.11**	**4**	*e*P		**Pn**	**02 51 01.8**	**+0.5**
ESO				*e*S		**Sn**	**02 52 16.5**	**-4.1**
BZP	**Bezymyannyi-Pe**	**7.28**	**12**	PN		**Pn**	**02 51 04.6**	**+1.0**
BZP	**Bezymyannyi-Pe**	**7.28**	**12**	*e*P		**Pn**	**02 51 04.6**	**+1.0**
KPT	**Kopyto**	**7.29**	**11**	PN		**Pn**	**02 51 04.4**	**+0.7**
KPT	**Kopyto**	**7.29**	**11**	*e*P		**Pn**	**02 51 04.5**	**+0.7**
KIRR	**Kirishev**	**7.29**	**12**	PN		**Pn**	**02 51 04.7**	**+1.0**
KIRR	**Kirishev**	**7.29**	**12**	*e*P		**Pn**	**02 51 04.8**	**+1.0**
BZWR	**Bezymyannyi-We**	**7.32**	**12**	PN		**Pn**	**02 51 05.4**	**+1.2**
BZWR	**Bezymyannyi-We**	**7.32**	**12**	*e*P		**Pn**	**02 51 05.4**	**+1.2**
BZGR	**Bezymyannyi-Gr**	**7.33**	**13**	PN		**Pn**	**02 51 05.5**	**+1.3**
BZGR	**Bezymyannyi-Gr**	**7.33**	**13**	*e*P		**Pn**	**02 51 05.5**	**+1.3**
KOZ	**Kozyrevsk**	**7.33**	**9**	PN		**Pn**	**02 51 04.8**	**+0.5**
KOZ	**Kozyrevsk**	**7.33**	**9**	*e*P		**Pn**	**02 51 04.8**	**+0.5**
SRDR	**Sredinnyy**	**7.57**	**8**	PN		**Pn**	**02 51 07.4**	**-0.2**
SRDR	**Sredinnyy**	**7.57**	**8**	*e*P		**Pn**	**02 51 07.9**	**+0.3**
KUR	**Kuril'sk**	**7.66**	**246**	*d* PN		**Pn**	**02 51 09.8**	**+1.0**
KUR				*e*S		**Sn**	**02 52 37.1**	**+3.0**
KUR				pmax		pmax		
	comp=E,10μm,0.5s							
KUR				pmax		pmax		
	comp=Z,33μm,0.5s							
KUR				pmax		pmax		
	comp=N,8μm,0.6s							
KUR				smax		smax		
	comp=E,47μm,0.7s							
KUR				smax		smax		
	comp=N,26μm,0.8s							
KUR	**Kuril'sk**	**7.66**	**246**	*i* P		**Pn**	**02 51 10.0**	**+1.2**
KUR				AMB		AMB	02 51 18.6	
	comp=N,52μm,2.0s							
KUR				AMB		AMB	02 51 23.5	
	comp=N,40μm,0.7s							
KUR				*i* S		**Sn**	**02 52 32.3**	**-1.8**
KUR				A		A	02 53 00.4	
	comp=N,65μm,0.7s							
KUR				A		A	02 53 00.4	
	comp=N,74μm,0.7s							
KUR				AMS		AMS	02 54 41.0	
	comp=N,2051μm,17.0s							
KUR				AMS		AMS	02 54 41.0	
	comp=N,2389μm,17.0s							
KLY	**Klyuchi**	**7.68**	**12**	PN		**Pn**	**02 51 10.3**	**+1.3**
KLY	**Klyuchi**	**7.68**	**12**	*e*P		**Pn**	**02 51 10.3**	**+1.3**
KBTR	**Krutoberegovo**	**7.99**	**21**	PN		**Pn**	**02 51 12.3**	**-0.9**
KBTR	**Krutoberegovo**	**7.99**	**21**	*e*P		**Pn**	**02 51 12.5**	**-0.7**
KBG	**Krutoberegovo**	**8.01**	**20**	PN		**Pn**	**02 51 13.2**	**-0.2**
KBG	**Krutoberegovo**	**8.01**	**20**	*e*P		**Pn**	**02 51 13.0**	**-0.4**
KBG				*e*S		**Sn**	**02 52 38.8**	**-3.6**
KBG	**Krutoberegovo**	**8.01**	**20**	*e*P		**Pn**	**02 51 13.0**	**-0.4**
KBG				*e*S		**Sn**	**02 52 38.4**	**-4.0**
SMKR	**Semkarok**	**8.06**	**15**	PN		**Pn**	**02 51 14.5**	**+0.2**
SMKR	**Semkarok**	**8.06**	**15**	*e*P		**Pn**	**02 51 14.5**	**+0.2**
BKI	**Bering**	**8.13**	**35**	PN		**Pn**	**02 51 14.2**	**-0.9**
BKI	**Bering**	**8.13**	**35**	*e*P		**Pn**	**02 51 14.2**	**-0.9**
BKI				*e*S		**Sn**	**02 52 37.4**	**-8.2**
TIGL	**Tigil**	**8.95**	**3**	PN		**Pn**	**02 51 26.5**	**+0.2**
TIGL	**Tigil**	**8.95**	**3**	*e*P		**Pn**	**02 51 26.5**	**+0.2**
TIGL				*e*S		**Sn**	**02 53 03.9**	**-1.7**
YUK	**Yuzh-Kuril'sk**	**9.52**	**244**	*d* PN		**Pn**	**02 51 33.5**	**-0.7**
YUK				pmax		pmax		
	comp=Z,22μm,0.6s							
YUK				pmax		pmax		
	comp=N,15μm,0.5s							
YUK				pmax		pmax		
	comp=E,16μm,0.3s							
YUK				pmax		pmax		
	comp=Z,79μm,1.6s							
YUK	**Yuzh-Kuril'sk**	**9.52**	**244**	*i* P		**Pn**	**02 51 33.8**	**-0.4**
YUK				AMB		AMB	02 51 38.7	
	comp=Z,32μm,0.5s							
YUK				AMB		AMB	02 51 45.3	
	comp=Z,43μm,2.0s							
YUK				*i* S		**Sn**

UGL eS Sn 02 53 37.9 -1.4
UGL A A 02 54 12.0
comp=E,664µm,14.0s
UGL A A 02 54 12.0
comp=E,447µm,14.0s
UGL AMS AMS 02 57 10.0
comp=E,1970µm,16.0s
UGL AMS AMS 02 57 10.0
comp=E,2312µm,16.0s
PALN Palana 10.34 6 PN **Pn 02 51 44.7 -0.6**
PALN Palana 10.34 6 *e*P **Pn 02 51 44.8 -0.6**
OKH Okha 10.42 302 *d* PN Pn 02 51 40.1 -6.3
OKH *i* S Sn 02 53 55.0 +13
OKH pmax pmax
comp=Z,236µm,13.1s
OKH smax smax
comp=N,326µm,12.9s
OKH MLR MLR
comp=Z,1494µm,15.0s
OKH MLR MLR
comp=E,2169µm,15.0s
OKH Okha 10.42 302 *e*P Pn 02 51 39.7 -6.7
OKH eS **Sn 02 53 36.8 -4.8**
JNK Nakash 10.45 245 *e*P **Pn 02 51 45.9 -1.0**
JTKR Abashiri--Toko 10.73 248 P **Pn 02 51 50.5 -0.3**
JAK Akkeshi 10.81 242 *i* P **Pn 02 51 49.3 -2.6**
OSSR Ossora 10.87 15 PN **Pn 02 51 51.6 -1.0**
OSSR Ossora 10.87 15 *e*P **Pn 02 51 51.6 -1.0**
OSSR eS **Sn 02 53 47.1 -5.5**
SHEM Shemya Is, Ala 11.05 63 P **Pn 02 51 54.5 -0.5**
comp=E,15µm,0.6s,baz=113,slow=2.9,SNR=581
SHEM S **Sn 02 53 48.8 -8.2**
comp=E,77µm,0.8s,baz=278,slow=19,SNR=16
SHEM LR LR 02 55 36.8
comp=E,4135µm,21.3s,baz=277,slow=34
SHEM P3KPbc 03 28 25.7
comp=E,13nm,0.7s,baz=321,slow=10,SNR=1.7
SHEM Shemya Is, Ala 11.05 63 Pn 02 51 54.8 -0.2
SMY Shemya 11.05 63 P **Pn 02 51 54.7 -0.3**
comp=E,28µm,0.5s
SMY Shemya 11.05 63 Pn 02 51 54.6 -0.3
SMY Shemya 11.05 63 PN **Pn 02 51 54.8 -0.3**
SMY Shemya 11.05 63 P **Pn 02 51 54.9 -0.1**
JAR Ashorobuto 11.19 245 *e*P **Pn 02 51 55.6 -1.3**
JAR eS **Sn 02 53 57.2 -3.3**
JOB Onbets 11.37 244 *e*P **Pn 02 51 57.1 -2.4**
JOB eS **Sn 02 53 58.4 -6.6**
JWK2 Keihoku 11.38 258 P **Pn 02 52 02.6 +3.0**
JKA Kamikawa-asahi 11.47 251 Pn 02 52 01.8 +1.0
JKA Kamikawa-asahi 11.47 251 P **Pn 02 52 01.0 +0.2**
JKA Kamikawa-asahi 11.47 251 *e*P **Pn 02 52 01.8 +1.0**
ASAJ Asahikawa 11.47 251 P **Pn 02 52 02.0 +1.2**
comp=E,258nm,0.3s,baz=74,slow=12,SNR=1088
ASAJ S **Sn 02 54 09.6 +2.2**
comp=E,830nm,0.7s,baz=183,slow=14,SNR=0.7
ASAJ LR LR 02 57 31.2
comp=E,2169µm,18.7s,baz=68,slow=43
ASAJ P3KPbc 03 28 25.9
comp=E,3.5nm,0.8s,baz=294,slow=2.6,SNR=1.6
comp=E,7µm,0.7s
ASAJ Asahikawa 11.47 251 PN **Pn 02 52 01.8 +0.9**
MA2 Magadan 11.49 342 P **Pn 02 51 59.5 -1.5**
comp=E,44nm,0.3s,baz=158,slow=12,SNR=80
MA2 P3KPbc 03 28 25.5
comp=E,2.8nm,0.3s,baz=163,slow=18,SNR=2.0
comp=E,331nm,0.4s
MA2 Magadan 11.49 342 *d* PN **Pn 02 51 59.8 -1.3**
MA2 pmax pmax
comp=Z,2µm,1.7s
MA2 Magadan 11.49 342 P **Pn 02 51 59.9 -1.2**
MA2 Magadan 11.49 342 *e*P **Pn 02 51 59.9 -1.2**
JKK2 Kamakawa 2 11.50 250 P **Pn 02 52 01.4 +0.1**
NKL Nikolayevsk 11.58 298 *e*PN **Pn 02 52 02.8 +0.5**
NKL pmax pmax
comp=N,9µm,1.2s
NKL pmax pmax
comp=E,13µm,1.2s
NKL pmax pmax
comp=Z,16µm,1.2s
NKL MLR MLR
comp=N,1803µm,16.0s
NKL MLR MLR
comp=E,2987µm,16.0s
NKL MLR MLR
comp=Z,4950µm,16.0s
NKL Nikolayevsk 11.58 298 *e*P **Pn 02 52 02.6 +0.3**
JCH Churui 11.82 244 *e*P **Pn 02 52 02.4 -3.3**
JCH eS **Sn 02 54 08.1 -8.0**
JRBN Rebuntou 11.87 259 P **Pn 02 52 08.2 +1.8**
JAB Ashibetsu 12.01 249 P **Pn 02 52 08.3 0.0**
JEM Erimo 12.31 242 P **Pn 02 52 10.2 -2.1**
comp=E,5µm,0.7s
JNBK Urakawa-nobuka 12.39 244 P **Pn 02 52 08.9 -4.5**
TILK Tilichiki 12.58 19 PN **Pn 02 52 14.9 -1.0**
TILK Tilichiki 12.58 19 *e*P **Pn 02 52 15.7 -0.2**
TILK eS Sn 02 54 24.5 -10
GRNR Gornyy 13.90 286 ⇓ *i*P **Pn 02 52 35.1 +1.0**
GRNR eS **Sn 02 55 08.4 +1.7**
GRNR pmax pmax
comp=E,760nm,1.1s
GRNR pmax pmax
comp=Z,700nm,1.1s
GRNR pmax pmax
comp=N,10.0nm,1.2s
GRNR smax smax
comp=N,300nm,0.9s
GRNR MLR MLR
comp=N,430µm,14.0s
GRNR MLR MLR
comp=Z,904µm,15.0s
GRNR Gornyy 13.90 286 *e*P **Pn 02 52 35.1 +1.0**
AMKA Amchitka 14.05 71 Pn 02 52 34.9 -1.0
JTM Tenmabayashi 14.30 242 P **Pn 02 52 34.8 -4.7**
comp=Z,8µm,1.1s
JTM Tenmabayashi 14.30 242 ⇓P Pn 02 52 33.3 -6.2
JANG Nango 14.32 240 P Pn 02 52 32.9 -6.7
JANG eS Sn 02 55 01.4 -15
JTH Tanohata 14.41 238 *e*P Pn 02 52 34.6 -6.3
JTH eS Sn 02 55 04.5 -15
SEY Seymchan 14.43 350 P **Pn 02 52 39.1 -1.8**
comp=Z,6.8nm,0.3s,baz=153,slow=11,SNR=261
SEY S **Sn 02 55 18.9 -0.3**
comp=Z,218nm,0.7s,baz=151,slow=22,SNR=0.9
SEY LR LR 02 59 55.8
comp=Z,2571µm,18.5s,baz=162,slow=44
SEY P3KPbc 03 28 15.6
comp=Z,13nm,1.3s,baz=4.7,slow=23,SNR=2.9
SEY PKP2ab **P'P'ab 03 32 27.0 -4.9**
comp=Z,0.9nm,0.5s,baz=350,slow=7.7,SNR=1.4
comp=Z,901nm,1.0s
SEY Seymchan 14.43 350 *d* iP **Pn 02 52 39.5 -1.4**
SEY pmax pmax
comp=Z,986nm,1.0s
SEY Seymchan 14.43 350 *e*P **Pn 02 52 39.5 -1.4**
KMSK Kamenskaya 14.44 16 P **Pn 02 52 40.7 -0.3**
KMSK Kamenskaya 14.44 16 *e*P **Pn 02 52 40.8 -0.3**
TEY Ternei 14.93 263 ⇑ *e*P **Pn 02 52 46.7 -1.0**
TEY pmax pmax
comp=E,80nm,2.0s
TEY pmax pmax
comp=Z,200nm,2.1s
TEY pmax pmax
comp=N,50nm,2.0s
TEY pmax pmax
comp=Z,3µm,13.0s
TEY pmax pmax
comp=E,1µm,12.1s
TEY pmax pmax
comp=N,1µm,13.1s
TEY Ternei 14.93 263 *e*P **Pn 02 52 46.7 -1.0**
KIWB Kanaga Island 16.27 70 P 02 53 06.2 -0.9
ADK Adak 16.56 70 Pn 02 53 09.0 +0.6
ADK Adak 16.56 70 P **Pn 02 53 09.0 +0.6**
ADK pmax pmax
comp=Z,12µm,1.6s
GSTR Great Sitkin T 16.95 69 Pn 02 53 13.7 +0.4
KLR Kul'dur 17.03 281 P **Pn 02 53 14.2 -0.1**
comp=Z,18nm,0.3s,baz=82,slow=12,SNR=878
KLR S **Sn 02 56 23.7 +1.1**
comp=Z,403nm,1.1s,baz=94,slow=9.8,SNR=1.3
KLR LR LR 03 01 42.9
comp=Z,1560µm,18.1s,baz=84,slow=44
KLR P3KPbc 03 28 09.7
comp=Z,3.3nm,1.1s,baz=91,slow=6.4,SNR=2.4
comp=Z,1µm,0.9s

KLR Kul'dur 17.03 281 *d* iP **Pn 02 53 14.7 +0.4**
KLR pmax pmax
comp=Z,1µm,1.7s
USRK Ussuriysk Ar. 18.29 265 P **P 02 53 27.5 -1.9**
comp=Z,4.4nm,0.3s,baz=64,slow=8.7,SNR=192
USRK P3KPbc 03 28 01.9
comp=Z,0.9nm,0.6s,baz=294,slow=1.4,SNR=2.1
comp=Z,688nm,0.8s
I30JP ISUMI INFRASON 18.67 230 P **Pn 02 53 35.0 +0.6**
baz=36,slow=14,SNR=2.1
VLA Vladivostok 18.82 262 *c* iP **P 02 53 33.2 -2.1**
MJAR Matsushiro Arr 18.85 237 P **P 02 53 35.0 -0.6**
comp=Z,3.1nm,0.3s,baz=28,slow=14,SNR=448
MJAR S **S 02 57 07.8 +0.5**
comp=Z,67nm,0.8s,baz=222,slow=31,SNR=1.4
MJAR LR LR 03 01 39.4
comp=Z,922µm,21.1s,baz=26,slow=39
MJAR P3KPbc 03 28 05.5
comp=Z,3.5nm,0.8s,baz=208,slow=5.0,SNR=7.9
comp=Z,626nm,0.8s
MJAR Matsushiro Arr 18.85 237 P 02 53 35.3 -0.3
MJAR Matsushiro Arr 18.85 237 P **P 02 53 35.3 -0.3**
MJAR pmax pmax
comp=Z,3µm,1.2s
MJB9 Matsu-Tunnel 18.85 237 P **P 02 53 35.5 -0.1**
MAJO Matsushiro 18.85 237 P 02 53 35.3 -0.3
MAJO Matsushiro 18.85 237 P **P 02 53 35.3 -0.3**
MAJO pmax pmax
comp=Z,2µm,0.8s
MAJO Matsushiro 18.85 237 P **P 02 53 35.6 0.0**
ZEA Zeya 19.60 296 *e*P **P 02 53 42.5 -1.2**
ZEA eS **S 02 57 21.7 -0.4**
ZEA pmax pmax
comp=E,1µm,1.6s
ZEA pmax pmax
comp=Z,2µm,1.7s
ZEA pmax pmax
comp=E,63µm,13.1s
ZEA pmax pmax
comp=Z,95µm,13.2s
ZEA smax smax
comp=N,118µm,12.1s
ZEA smax smax
comp=E,146µm,11.2s
HEH HeiHe 19.68 286 *e*P **P 02 53 42.8 -1.7**
HEH pP **Pn 02 53 49.6 +3.3**
HEH S **S 02 57 21.3 -2.3**
HEH L L
comp=E,2118µm,17.5s
HEH L L
comp=E,651µm,17.1s
HEH L L
comp=E,1587µm,15.2s
MDJ Mudanjiang 19.71 268 P **P 02 53 42.5 -2.4**
MDJ Mudanjiang 19.71 268 P **P 02 53 42.5 -2.4**
MDJ S **Sn 02 57 29.3 +2.1**
MDJ pmax pmax
comp=E,43µm,8.9s
MDJ L L
comp=E,752µm,14.9s
MDJ L L
comp=E,957µm,21.3s
MDJ L L
comp=E,1677µm,21.0s
BILL Bilibino 19.72 10 P **P 02 53 45.2 +0.3**
BILL Bilibino 19.72 10 *d* iP **P 02 53 45.4 +0.6**
BILL pmax pmax
comp=Z,5µm,1.0s
BILL MLR MLR
comp=Z,3183µm,22.0s
BILL Bilibino 19.72 10 *e*P **Pn 02 53 46.5 -0.2**
PSTR Posyet 19.74 262 *d* iP **P 02 53 42.6 -2.7**
BILI Bilibino, Chuk 19.75 10 P **P 02 53 45.5 +0.2**
JGF Kuroka 20.00 236 P Pn 02 53 49.4 -1.0
comp=Z,8µm,2.0s
JGF Kuroka 20.00 236 P 02 53 49.1 +0.9
JGF Kuroka 20.00 236 ⇑P **P 02 53 49.3 +1.0**
JSG Sagara 20.26 233 P **P 02 53 51.2 +0.2**
comp=Z,15µm,1.7s
JSG Sagara 20.26 233 P Pn 02 53 52.2 -1.1
JSG IAmb IAmb 02 54 05.1
comp=Z,8µm,1.0s
JSG Sagara 20.26 233 P Pn 02 53 53.8 +0.5
JSG Sagara 20.26 233 ⇑P Pn 02 53 53.4 +0.1
INU Inuyama 20.38 236 P **P 02 53 53.1 +0.8**
comp=Z,6µm,0.9s
INU Inuyama 20.38 236 P 02 53 52.2 0.0
INU Inuyama 20.38 236 P **P 02 53 53.2 +0.9**
INU Inuyama 20.38 236 ⇑P **P 02 53 52.9 +0.6**
YAK Yakutsk 20.46 321 P **P 02 53 50.5 -2.4**
comp=Z,10µm,0.7s,baz=109,slow=10,SNR=598
YAK S **S 02 57 32.8 -6.2**
comp=Z,602nm,0.8s,baz=196,slow=22,SNR=2.1
YAK P3KPbc 03 27 59.4
comp=Z,21nm,0.4s,baz=332,slow=3.0,SNR=4.6
YAK Yakutsk 20.46 321 P 02 53 50.4 -2.6
YAK Yakutsk 20.46 321 *e*P **P 02 53 50.6 -2.4**
YAK *e**PP **pP 02 54 03.5 +1.0**
YAK *e* 02 54 09.2
YAK eS **S 02 57 39.0 0.0**
YAK *e*SS **SnSn 02 58 00.8 +0.7**
YAK pmax pmax
comp=N,2µm,1.5s
YAK pmax pmax
comp=E,9µm,1.5s
YAK pmax pmax
comp=Z,26µm,1.1s
YAK pmax pmax
comp=E,7µm,1.5s
YAK pmax pmax
comp=N,5µm,1.3s
YAK smax smax
comp=E,89µm,3.8s
YAK smax smax
comp=N,80µm,3.2s
YAK MLR MLR
comp=N,663µm,18.0s
YAK MLR MLR
comp=E,514µm,17.0s
YAK Yakutsk 20.46 321 P 02 53 50.7 -2.3
JHJ2 Mitsune 20.67 227 P **P 02 53 55.8 +0.3**
comp=E,15µm,1.3s
JHJ2 Mitsune 20.67 227 P 02 53 55.7 +0.3
JHJ2 IAmb IAmb 02 54 14.2
comp=Z,8µm,0.9s
JHJ2 Mitsune 20.67 227 ⇑P Pn 02 53 58.8 +0.6
JHJ Hachijo jima 2 20.68 227 P **P 02 53 56.3 +0.8**
comp=Z,715nm,0.9s,baz=174,slow=4.9,SNR=12
JHJ S **S 02 57 37.2 -6.5**
comp=Z,416nm,0.5s,baz=235,slow=19,SNR=2.6
comp=Z,715nm,0.9s
CLES Cleveland East 20.71 67 P P 02 53 55.6 -0.1
BNX BinXian 20.75 273 ⇓P **P 02 53 53.1 -3.1**
BNX pP **sP 02 54 08.6 -2.3**
BNX S **S 02 57 38.5 -6.5**
BNX pmax pmax
comp=Z,30µm,10.5s
BNX L L
comp=Z,1203µm,15.7s
BNX L L
comp=Z,1599µm,19.1s
BNX L L
comp=Z,1816µm,18.8s
SPIA Saint Paul Isl 20.81 54 P 02 53 57.4 +0.7
SPIA IAmb IAmb 02 54 06.9
comp=Z,10µm,1.2s
SPIA Saint Paul Isl 20.81 54 P **P 02 53 57.8 +1.0**
baz=260,SNR=68
SPIA S Sn 02 57 53.8 +0.4
baz=260
GAMB Gambell 22.27 37 P 02 54 12.7 +0.4
GAMB Gambell 22.27 37 P **P 02 54 13.1 +0.7**
baz=243,SNR=1000
GAMB S **S 02 58 19.4 +5.4**
baz=243
CN2 Changchun 22.77 269 ⇓ *i*P **P 02 54 13.8 -4.1**
CN2 pP pP 02 54 22.9 -4.4
CN2 sP sP 02 54 27.4 -5.2
CN2 S **S 02 58 14.9 -8.1**
CN2 pmax pmax
comp=E,580nm,0.8s
CN2 pmax pmax
comp=Z,86µm,10.0s
CN2 L L
comp=Z,1006µm,18.0s
CN2 L L
comp=Z,1061µm,18.0s
CN2 L L
comp=Z,1177µm,20.0s
LVA Lava Point 22.98 63 P **P 02 54 18.3 -1.6**
AKUT Akutan 23.13 63 P **P 02 54 20.6 -0.8**
comp=Z,3µm,2.2s
AKUT Akutan 23.13 63 P **P 02 54 19.7 -1.7**
AKUT Akutan 23.13 63 ⇑P **P 02 54 19.6 -1.8**
HHU Hamhung 23.24 259 P **P 02 54 21.2 -1.4**
HHU S **S 02 58 32.5 +1.7**
JMN Monobe 23.32 238 P **P 02 54 24.2 +0.7**
comp=Z,4µm,1.3s
JMN Monobe 23.32 238 P 02 54 23.5 0.0
JMN IAmb IAmb 02 54 46.5
comp=Z,15µm,1.6s
JMN Monobe 23.32 238 ⇑P **P 02 54 23.8 +0.3**
M11K Mekoryuk 23.52 47 P **P 02 54 25.8 +0.7**
baz=257
M11K S **S 02 58 41.9 +6.9**
baz=257
KSRS Korea Array 24.41 253 P **P 02 54 34.0 +0.5**
comp=Z,384nm,1.0s,baz=50,slow=9.6,SNR=105
KSRS S **S 02 58 51.8 +2.2**
comp=Z,122nm,1.1s,baz=321,slow=3.6,SNR=1.1
KSRS LR LR 03 05 02.7
comp=Z,1006µm,19.9s,baz=55,slow=39
KSRS P3KPbc 03 27 41.3
comp=Z,1.1nm,0.5s,baz=236,slow=3.5,SNR=4.2
KSRS PKP2ab **P'P'ab 03 31 43.0 +1.7**
comp=Z,0.4nm,0.3s,baz=230,slow=4.3,SNR=1.6
comp=Z,384nm,1.0s
KS19 Wonju Array Si 24.41 254 P **P 02 54 34.3 +0.7**
KS19 IAmb IAmb 02 55 04.7
comp=Z,10µm,1.2s
KSAR Wonju Array Be 24.44 253 P 02 54 33.5 -0.2
KSAR Wonju Array Be 24.44 253 *e*P **P 02 54 34.2 +0.5**
FALS False Pass 24.48 61 P **P 02 54 34.0 +0.1**
comp=Z,2µm,1.0s
FALS False Pass 24.48 61 P 02 54 31.9 -2.1
FALS False Pass 24.48 61 P **P 02 54 32.0 -1.9**
baz=272,SNR=8.8
FALS S **S 02 58 56.1 +5.6**
baz=272
TNA Tin City 24.54 34 P **P 02 54 35.1 +0.7**
baz=244,SNR=1000
TNA S **S 02 58 57.0 +5.7**
baz=244
TNA Tin City 24.54 34 ⇑P **P 02 54 34.9 +0.5**
K13K Kusilvak Mount 24.62 44 P **P 02 54 35.5 +0.3**
baz=256,SNR=753
K13K S **S 02 58 58.8 +6.0**
baz=256
HIA Hailar 24.75 285 P **P 02 54 34.0 -2.5**
HIA Hailar 24.75 285 P **P 02 54 34.0 -2.5**
HIA pmax pmax
comp=Z,2µm,1.1s
JCJ Chichijima 24.85 215 LR LR 03 05 49.8
comp=Z,124µm,18.1s,baz=10,slow=40
JCJ Chichijima 24.85 215 P **P 02 54 38.5 +0.9**
comp=Z,3µm,2.0s
JCJ Chichijima 24.85 215 P 02 54 37.1 -0.5
JCJ IAmb IAmb 02 54 55.6
comp=Z,8µm,1.6s
JCJ Chichijima 24.85 215 ⇑P **P 02 54 38.0 +0.4**
PYAG Pyongyang 24.87 259 S **S 02 58 59.3 +2.3**
SNY Shenyang 24.87 267 ⇓P **P 02 54 36.3 -1.3**
SNY S **S 02 59 01.3 +4.2**
SNY pmax pmax
comp=Z,260nm,1.4s
SNY pmax pmax
comp=Z,24µm,7.3s
SNY L L
comp=Z,895µm,17.9s
SNY L L
comp=Z,649µm,20.0s
SNY L L
comp=Z,808µm,24.5s
M13K Dall Lake 24.91 48 P **P 02 54 38.9 +1.0**
baz=260,SNR=156
M13K S **S 02 59 04.9 +7.6**
baz=260
F14K Arctic Creek 25.10 35 P **P 02 54 40.4 +0.8**
baz=246
F14K S **S 02 59 05.5 +5.2**
baz=246
ANM Nome 25.13 38 P 02 54 40.2 +0.5
ANM Nome 25.13 38 P **P 02 54 40.3 +0.5**
ANM Nome 25.13 38 P **P 02 54 40.5 +0.7**
baz=249,SNR=1000
ANM S **S 02 59 08.4 +7.6**
baz=249
SUJ Sinuiju 25.13 262 P **P 02 54 39.4 -0.5**
SUJ AmB
comp=Z,148µm,2.7s
INCN Inchon 25.21 255 P **P 02 54 41.4 +0.6**
INCN IAmb IAmb 02 55 11.5
comp=Z,18µm,1.8s
INCN Inchon 25.21 255 P **P 02 54 41.4 +0.6**
JTU Tsushima 25.38 246 P **P 02 54 43.1 +0.8**
comp=Z,3µm,1.8s
JTU Tsushima 25.38 246 ⇑P **P 02 54 42.2 0.0**
L14K Kuka Creek 25.41 46 P **P 02 54 43.1 +0.8**
baz=259
L14K S **S 02 59 11.1 +5.9**
baz=259
TJN Taejon 25.42 252 P **P 02 54 43.4 +0.7**
comp=Z,20µm,1.5s
TJN Taejon 25.42 252 P 02 54 43.1 +0.5
TJN Taejon 25.42 252 P **P 02 54 43.1 +0.5**
TJN pmax pmax
comp=Z,41µm,1.4s
HJU Haeju 25.46 257 P **P 02 54 43.3 +0.3**
HJU S **S 02 59 08.6 +2.1**
JNU Nakatsue 25.48 242 LR LR 03 07 06.7
comp=Z,223µm,18.1s,baz=36,slow=42
JNU P3KPbc 03 27 36.0
comp=Z,4.7nm,1.1s,baz=167,slow=19,SNR=1.5
M14K Bethel 25.65 47 P **P 02 54 44.9 +0.4**
baz=261,SNR=162
M14K S **S 02 59 15.0 +6.0**
baz=261
N14K Kuskokwak Cree 25.66 49 P **P 02 54 45.3 +0.7**
baz=263,SNR=215
N14K S **S 02 59 15.1 +5.9**
baz=263
O14K Tigyukauivet M 25.80 51 P **P 02 54 46.3 +0.5**
baz=265,SNR=200
O14K S **S 02 59 16.4 +5.0**
baz=265
G15K Niukluk 25.81 37 P **P 02 54 46.8 +0.8**
baz=250,SNR=952
G15K S **S 02 59 14.6 +3.0**
baz=250
F15K North Star Dit 25.84 35 P **P 02 54 47.0 +0.8**
baz=248
F15K S **S 02 59 17.3 +5.4**
baz=248
K15K Wolf Creek Mou 26.14 44 P **P 02 54 49.6 +0.7**
baz=258
K15K S **S 02 59 22.8 +6.0**
baz=258
SDPT Sand Point 26.15 60 P **P 02 54 49.7 +0.7**
comp=Z,2µm,1.5s
SDPT Sand Point 26.15 60 P **P 02 54 45.8 -3.3**
baz=274,SNR=19
SDPT S **S 02 59 22.3 +5.3**
baz=274
M15K Kasigluk River 26.26 48 P **P 02 54 50.3 +0.3**
baz=262,SNR=293
M15K S S 02 59 29.9 +11
baz=262
H16K Elim 26.43 38 P **P 02 54 51.8 +0.3**
baz=253,SNR=1000
H16K S **S 02 59 25.3 +4.0**
baz=253
TIXI Tiksi 26.45 340 P 02 54 50.7 -0.9
TIXI IAmb IAmb 02 55 24.8
comp=Z,7µm,1.1s
TIXI Tiksi 26.45 340 *d* iP **P 02 54 50.4 -1.2**
TIXI pmax pmax
comp=Z,4µm,1.2s
TIXI MLR MLR
comp=Z,728µm,16.0s
N15K Kwethluk River 26.48 49 P **P 02 54 52.6 +0.5**
baz=264,SNR=157
N15K S **S 02 59 24.3 +1.9**
baz=264

O15K	**Ungalikthiuk R**	**26.53**	**51**	P		**P**	**02 54 52.8**	**+0.3**
	baz=266,SNR=366								
O15K				S		**S**	**02 59 27.3**	**+4.3**
	baz=266								
G16K	**Koyuk River**	**26.62**	**37**	P		**P**	**02 54 53.2**	**0.0**
	baz=251								
G16K				S		**S**	**02 59 29.5**	**+5.3**
	baz=251								
S14K	**Fog Glacier**	**26.62**	**58**	P		**P**	**02 54 52.0**	**-1.5**
	baz=272								
S14K				S		**S**	**02 59 27.4**	**+2.7**
	baz=272								
C16K	**Lisburne Hills**	**26.69**	**30**	P		**P**	**02 54 53.9**	**+0.1**
	baz=242								
C16K				S		**S**	**02 59 30.1**	**+4.8**
	baz=242								
CHNA	**Chernabura Isl**	**26.69**	**61**	P		**P**	**02 54 53.3**	**-0.7**
	comp=Z,2μm,1.1s								
CHNA	**Chernabura Isl**	**26.69**	**61**	P		**P**	**02 54 52.3**	**-1.7**
	baz=275,SNR=30								
CHNA				S		**S**	**02 59 25.5**	**-0.1**
	baz=275								
J16K	**Anvik River**	**26.77**	**42**	P		**P**	**02 54 55.2**	**+0.6**
	baz=257,SNR=419								
J16K				S		**S**	**02 59 35.3**	**+8.6**
	baz=257								
I17K	**Unalakleet**	**26.87**	**40**	P		**P**	**02 54 56.1**	**+0.6**
	baz=256,SNR=209								
I17K				S		**S**	**02 59 32.7**	**+4.5**
	baz=256								
JSU	**Suzuyama**	**26.90**	**240**	P		**P**	**02 54 56.6**	**+0.5**
	comp=Z,3μm,1.4s								
JSU	**Suzuyama**	**26.90**	**240**			**P**	**02 54 56.1**	**0.0**
JSU				IAmb		IAmb	02 55 35.8	
	comp=Z,5μm,1.2s								
JSU	**Suzuyama**	**26.90**	**240**	⇑P		**P**	**02 54 56.6**	**+0.5**
M16K	**Timber Creek**	**27.14**	**47**	P		**P**	**02 54 57.8**	**-0.1**
M16K				IAmb		IAmb	02 55 25.1	
	comp=Z,5μm,1.4s								
M16K	**Timber Creek**	**27.14**	**47**	P		**P**	**02 54 58.4**	**+0.4**
	baz=263,SNR=193								
M16K				S		**S**	**02 59 38.7**	**+6.1**
	baz=263								
N16K	**Nishlik Lake**	**27.17**	**48**	P		**P**	**02 54 58.7**	**+0.4**
	baz=265,SNR=316								
N16K				S		**S**	**02 59 39.0**	**+5.8**
	baz=265								
BOD	**Bodaibo**	**27.18**	**306**	⇑*i*P		**P**	**02 54 56.5**	**-1.8**
BOD				pmax		pmax		
	comp=Z,5μm,2.0s								
D17K	**Noatak River**	**27.20**	**32**	P		**P**	**02 54 58.8**	**+0.4**
	baz=246								
D17K				S		**S**	**02 59 39.8**	**+6.5**
	baz=246								
CHGN	**Chignik**	**27.26**	**57**	P		**P**	**02 54 56.6**	**-2.4**
	baz=273								
CHGN				S		**S**	**02 59 39.1**	**+4.6**
	baz=273								
G17K	**Kiwalik Mounta**	**27.33**	**37**	P		**P**	**02 55 00.0**	**+0.4**
	baz=253,SNR=1000								
G17K				S		**S**	**02 59 41.9**	**+6.4**
	baz=253								
F17K	**Baldwin Pennin**	**27.39**	**35**	P		**P**	**02 55 00.9**	**+0.8**
	baz=251,SNR=1000								
F17K				S		**S**	**02 59 40.8**	**+4.3**
	baz=251								
E17K	**Hotham Inlet**	**27.41**	**33**	P		**P**	**02 55 01.0**	**+0.8**
	baz=249								
E17K				S		**S**	**02 59 40.8**	**+4.2**
	baz=249								
RDOG	**Red Dog Mine**	**27.41**	**31**			**P**	**02 55 00.4**	**+0.1**
RDOG	**Red Dog Mine**	**27.41**	**31**	P		**P**	**02 55 00.6**	**+0.4**
	baz=246,SNR=368								
RDOG				S		**S**	**02 59 40.8**	**+4.1**
	baz=246								
O16K	**Kokwok River B**	**27.44**	**50**	P		**P**	**02 55 00.7**	**+0.1**
	baz=267,SNR=141								
O16K				S		**S**	**02 59 42.3**	**+5.0**
	baz=267								
J17K	**VABM Dome**	**27.46**	**42**	P		**P**	**02 55 01.7**	**+0.8**
	baz=259								
J17K				S		**S**	**02 59 40.6**	**+3.0**
	baz=259								
H17K	**Granite Mounta**	**27.47**	**38**	P		**P**	**02 55 01.3**	**+0.4**
	baz=255								
H17K				S		**S**	**02 59 43.2**	**+5.5**
	baz=255								
P16K	**Nushagak River**	**27.47**	**51**	P		**P**	**02 55 01.2**	**+0.3**
	baz=268,SNR=197								
P16K				S		**S**	**02 59 43.4**	**+5.7**
	baz=268								
C17K	**DeLong Mountai**	**27.49**	**30**	P		**P**	**02 55 01.4**	**+0.3**
	baz=245,SNR=1000								
C17K				S		**S**	**02 59 42.4**	**+4.4**
	baz=245								
L17K	**Donlin**	**27.60**	**45**	P		**P**	**02 55 02.5**	**+0.4**
	baz=262,SNR=160								
L17K				S		**S**	**02 59 46.2**	**+6.4**
	baz=262								
DL2	**Dalian**	**27.64**	**263**	P		**P**	**02 55 02.3**	**-0.3**
DL2				S		**S**	**02 59 42.1**	**+1.3**
DL2				pmax		pmax		
	comp=Z,3μm,1.1s								
DL2				pmax		pmax		
	comp=Z,153μm,10.5s								
DL2				L		L		
	comp=Z,263μm,14.7s								
DL2				L		L		
	comp=Z,802μm,18.0s								
DL2				L		L		
	comp=Z,722μm,22.0s								
R16K	**Pilot Point**	**27.68**	**55**	P		**P**	**02 55 02.1**	**-0.7**
	baz=271,SNR=55								
R16K				S		**S**	**02 59 42.8**	**+1.7**
	baz=271								
K17K	**Iditarod**	**27.69**	**43**	P		**P**	**02 55 03.6**	**+0.7**
	baz=261								
K17K				S		**S**	**02 59 46.1**	**+4.9**
	baz=261								
M17K	**Holitna River**	**27.91**	**46**	P		**P**	**02 55 05.2**	**+0.3**
	baz=264,SNR=211								
M17K				S		**S**	**02 59 45.6**	**+0.8**
	baz=264								
N17K	**Nushagak Hills**	**27.96**	**48**	P		**P**	**02 55 05.8**	**+0.6**
	baz=266,SNR=147								
N17K				S		**S**	**02 59 48.6**	**+3.1**
	baz=266								
O17K	**Koliganek Bris**	**27.96**	**50**	P		**P**	**02 55 05.6**	**+0.4**
	baz=268								
O17K				S		**S**	**02 59 51.2**	**+5.8**
	baz=268								
E18K	**Tukpahlearik C**	**27.97**	**33**	P		**P**	**02 55 06.1**	**+0.7**
	baz=250,SNR=841								
E18K				S		**S**	**02 59 48.5**	**+2.9**
	baz=250								
CIT	**Chita**	**28.01**	**293**	*e*P		**P**	**02 55 04.8**	**-1.1**
CIT				*e*			02 55 16.4	
CIT				*e*			02 55 23.4	
CIT				*e*			02 56 14.0	
CIT				*e*S		**S**	**02 59 48.0**	**+1.5**
CIT				*e*			03 01 21.4	
F18K	**Selawik**	**28.05**	**35**	P		**P**	**02 55 06.7**	**+0.7**
	baz=252,SNR=1000								
F18K				S		**S**	**02 59 51.8**	**+5.0**
	baz=252								
MIDW	**Midway**	**28.12**	**128**	P		**P**	**02 55 08.0**	**+1.1**
Q16K	**King Salmon**	**28.15**	**52**	P		**P**	**02 55 07.3**	**+0.3**
	baz=270,SNR=74								
Q16K				S		**S**	**02 59 51.3**	**+2.7**
	baz=270								
H18K	**Honhosa River**	**28.16**	**38**	P		**P**	**02 55 07.4**	**+0.4**
	baz=256,SNR=957								
H18K				S		**S**	**02 59 51.0**	**+2.5**
	baz=256								
C18K	**Utukok River**	**28.23**	**31**	P		**P**	**02 55 08.0**	**+0.3**
	baz=247,SNR=1000								
C18K				S		**S**	**02 59 53.3**	**+3.5**
	baz=247								
G18K	**Tagagawik**	**28.23**	**37**	P		**P**	**02 55 07.7**	**0.0**
	baz=255								
G18K				S		**S**	**02 59 53.4**	**+3.7**
	baz=255								
P17K	**Kvichak River**	**28.27**	**51**	P		**P**	**02 55 08.3**	**+0.3**
	baz=269,SNR=98								
P17K				S		**S**	**02 59 56.6**	**+6.2**
	baz=269								
R17L	**Mt. Peulik Vol**	**28.33**	**54**	P		**P**	**02 55 08.0**	**-0.6**
	baz=272,SNR=44								
R17L				S		**S**	**02 59 53.7**	**+2.3**
	baz=272								
L18K	**Granite Mounta**	**28.36**	**45**	P		**P**	**02 55 09.6**	**+0.7**
	baz=263,SNR=211								
L18K				S		**S**	**02 59 56.4**	**+4.6**
	baz=263								
J18K	**Innoko River**	**28.52**	**42**	P		**P**	**02 55 10.5**	**+0.2**
	baz=261								
J18K				S		**S**	**02 59 56.9**	**+2.6**
	baz=261								
Q17K	**Contact Creek**	**28.56**	**53**	P		**P**	**02 55 10.0**	**-0.8**
	baz=272								
Q17K				S		**S**	**02 59 56.6**	**+1.4**
	baz=272								
N18K	**Kilae Creek**	**28.61**	**48**	P		**P**	**02 55 11.8**	**+0.7**
	baz=267								
N18K				S		**S**	**02 59 58.6**	**+2.9**
	baz=267								
GCSA	**Galena City Sc**	**28.68**	**39**	P		**P**	**02 55 11.2**	**-0.4**
	baz=259,SNR=175								
GCSA				S		**S**	**03 00 00.0**	**+3.3**
	baz=259								
M18K	**Stony River**	**28.69**	**46**	P		**P**	**02 55 12.3**	**+0.5**
	baz=266,SNR=166								
M18K				S		**S**	**03 00 01.9**	**+4.9**
	baz=266								
F19K	**Shaleruckik Mo**	**28.83**	**35**	P		**P**	**02 55 13.0**	**+0.1**
	baz=254,SNR=1000								
F19K				S		**S**	**03 00 03.0**	**+3.9**
	baz=254								
P18K	**Big Mountain,**	**28.89**	**51**			**P**	**02 55 13.3**	**-0.3**
P18K				IAmb		IAmb	02 55 36.4	
	comp=Z,7μm,1.8s								
P18K	**Big Mountain,**	**28.89**	**51**	P		**P**	**02 55 14.0**	**+0.3**
	baz=270,SNR=113								
P18K				S		**S**	**03 00 03.8**	**+3.5**
	baz=270								
XLT	**XiLinHaoTe**	**28.90**	**276**	*e*P		**P**	**02 55 13.3**	**-0.7**
XLT				pP		sP	02 55 28.3	-1.1
XLT				S		**S**	**03 00 00.8**	**-0.1**
XLT				pmax		pmax		
	comp=Z,460nm,1.1s								
XLT				pmax		pmax		
	comp=Z,3μm,3.9s								
XLT				L		L		
	comp=Z,173μm,20.4s								
XLT				L		L		
	comp=Z,1081μm,21.0s								
XLT				L		L		
	comp=Z,646μm,23.0s								
O18K	**Koktuh Hills**	**28.91**	**50**	P		**P**	**02 55 14.1**	**+0.3**
	baz=269,SNR=71								
O18K				S		**S**	**03 00 05.7**	**+5.1**
	baz=269								
G19K	**Purcell Mounta**	**28.91**	**37**	P		**P**	**02 55 13.7**	**-0.1**
	baz=256,SNR=552								
G19K				S		**S**	**03 00 05.5**	**+5.0**
	baz=256								
A19K	**Wainwright**	**28.92**	**28**	P		**P**	**02 55 14.3**	**+0.6**
	baz=244,SNR=1000								
A19K				S		**S**	**03 00 03.7**	**+3.3**
	baz=244								
C19K	**Lookout Ridge**	**28.95**	**30**	P		**P**	**02 55 14.4**	**+0.4**
	baz=248								
C19K				S		**S**	**03 00 03.9**	**+3.0**
	baz=248								
Q18K	**Katmai Hardscr**	**29.02**	**52**	P		**P**	**02 55 14.1**	**-0.7**
	baz=272,SNR=133								
Q18K				S		**S**	**03 00 05.8**	**+3.4**
	baz=272								
H19K	**Roundabout Mou**	**29.03**	**38**	P		**P**	**02 55 14.7**	**0.0**
H19K	**Roundabout Mou**	**29.03**	**38**	P		**P**	**02 55 15.0**	**+0.3**
	baz=258,SNR=1000								
H19K				S		**S**	**03 00 03.9**	**+1.8**
	baz=258								
J19K	**Poorman**	**29.09**	**41**	P		**P**	**02 55 15.2**	**0.0**
	baz=261,SNR=710								
J19K				S		**S**	**03 00 08.8**	**+5.6**
	baz=261								
L19K	**White Mountain**	**29.21**	**45**	P		**P**	**02 55 16.7**	**+0.3**
	baz=265,SNR=149								
L19K				S		**S**	**03 00 09.9**	**+4.7**
	baz=265								
E19K	**Redstone River**	**29.22**	**34**	P		**P**	**02 55 16.7**	**+0.3**
	baz=253								
E19K				S		**S**	**03 00 05.5**	**+0.3**
	baz=253								
D19K	**Kuna River**	**29.23**	**32**	P		**P**	**02 55 16.7**	**+0.2**
	baz=251								
D19K				S		**S**	**03 00 06.4**	**+1.1**
	baz=251								
N19K	**Bonanza Creek**	**29.30**	**48**	P		**P**	**02 55 17.8**	**+0.5**
	baz=268,SNR=116								
N19K				S		**S**	**03 00 11.6**	**+4.9**
	baz=268								
O19K	**Port Alsworth**	**29.36**	**49**	P		**P**	**02 55 18.0**	**+0.2**
	baz=269,SNR=49								
O19K				S		**S**	**03 00 11.4**	**+3.8**
	baz=269								
SII	**Sitkinak Islan**	**29.58**	**57**	P		**P**	**02 55 18.5**	**-1.2**
SII	**Sitkinak Islan**	**29.58**	**57**	P		**P**	**02 55 18.6**	**-1.2**
	baz=276								
SII				S		**S**	**03 00 10.0**	**-1.1**
	baz=276								
H20K	**Anotleneega Mo**	**29.66**	**38**	P		**P**	**02 55 20.6**	**+0.2**
	baz=259,SNR=758								
H20K				S		**S**	**03 00 13.8**	**+1.6**
	baz=259								
F20K	**Avaraart Lake**	**29.67**	**35**	P		**P**	**02 55 20.6**	**+0.3**
	baz=256,SNR=670								
F20K				S		**S**	**03 00 12.9**	**+0.8**
	baz=256								
K20K	**Telida**	**29.69**	**43**	P		**P**	**02 55 20.9**	**+0.3**
	baz=264								
K20K				S		**S**	**03 00 15.8**	**+3.2**
	baz=264								
I20K	**Naaghedeneel**	**29.70**	**40**	P		**P**	**02 55 21.1**	**+0.4**
	baz=261,SNR=108								
I20K				S		**S**	**03 00 13.3**	**+0.6**
	baz=261								
Q19K	**Cape Douglas,**	**29.72**	**52**	P		**P**	**02 55 20.1**	**-0.8**
Q19K	**Cape Douglas,**	**29.72**	**52**	P		**P**	**02 55 20.1**	**-0.8**
	baz=272								
Q19K				S		**S**	**03 00 14.5**	**+1.3**
	baz=272								
J20K	**Nowinta River**	**29.75**	**41**	P		**P**	**02 55 21.5**	**+0.3**
	baz=262,SNR=682								
J20K				S		**S**	**03 00 17.2**	**+3.6**
	baz=262								
D20K	**Etivluk River**	**29.82**	**32**	P		**P**	**02 55 22.0**	**+0.3**
	baz=252								
D20K				S		**S**	**03 00 14.2**	**-0.4**
	baz=252								
E20K	**Nigu River**	**29.83**	**33**	P		**P**	**02 55 22.2**	**+0.3**
	baz=253,SNR=892								
E20K				S		**S**	**03 00 13.5**	**-1.4**
	baz=253								
P19K	**Oil Pt**	**29.91**	**50**	P		**P**	**02 55 22.9**	**+0.3**
	baz=271,SNR=8.1								
P19K				S		**S**	**03 00 17.1**	**+0.8**
	baz=271								
H11N2	**WAKE ISLAND Hy**	**29.97**	**163**	P		**P**	**02 55 24.7**	**+1.5**
	baz=319,slow=9.6,SNR=249								
H11N2				T		T	03 28 35.0	
	baz=342,slow=75								
H11N3	**WAKE ISLAND Hy**	**29.98**	**163**	P		**P**	**02 55 24.8**	**+1.5**
	baz=319,slow=9.6,SNR=272								
H11N3				T		T	03 28 38.9	
	baz=342,slow=75								
H11N1	**WAKE ISLAND Hy**	**29.98**	**163**	P		**P**	**02 55 24.6**	**+1.2**
	baz=319,slow=9.6,SNR=324								
H11N1				T		T	03 28 37.2	
	baz=342,slow=75								
M20K	**Styx River**	**30.00**	**46**	P		**P**	**02 55 24.3**	**+0.8**
	baz=267								
M20K				S		**S**	**03 00 19.5**	**+1.8**
	baz=267								
OHAK	**Old Harbor**	**30.01**	**55**	P		**P**	**02 55 22.8**	**-0.7**
	comp=Z,1μm,1.0s								
OHAK	**Old Harbor**	**30.01**	**55**	P		**P**	**02 55 22.5**	**-1.0**
	baz=275,SNR=84								
OHAK				S		**S**	**03 00 18.1**	**+0.3**
	baz=275								
B20K	**Meade River**	**30.07**	**29**	P		**P**	**02 55 24.3**	**+0.4**
	baz=249,SNR=1000								
B20K				S		**S**	**03 00 17.3**	**-1.2**
	baz=249								
IMAR	**Indian Mountai**	**30.21**	**38**			**P**	**02 55 24.9**	**-0.2**
KDAK	**Kodiak Island**	**30.34**	**54**	LR		LR	03 09 49.5	
	comp=Z,363μm,19.1s,baz=255,slow=41								
KDAK	**Kodiak Island**	**30.34**	**54**			**P**	**02 55 24.9**	**-1.5**
KDAK				IAmb		IAmb	02 55 53.4	
	comp=Z,3μm,1.1s								
KDAK	**Kodiak Island**	**30.34**	**54***c*	*i*P		**P**	**02 55 25.3**	**-1.1**
KDAK				pmax		pmax		
	comp=Z,2μm,1.1s								
KDAK				MLR		MLR		
	comp=Z,2619μm,23.0s								
KDAK	**Kodiak Island**	**30.34**	**54**	P		**P**	**02 55 25.3**	**-1.1**
	baz=275								
KDAK				S		**S**	**03 00 24.4**	**+1.5**
	baz=275								
KDAK	**Kodiak Island**	**30.34**	**54**	⇑P		**P**	**02 55 25.1**	**-1.4**
KDAK	**Kodiak Island**	**30.34**	**54**	P		**P**	**02 55 25.4**	**-1.1**
KDAK				pP		**sP**	**02 55 40.2**	**-2.4**
KDAK				sP		**pwP**	**02 55 47.9**	**+2.3**
Q20K	**Shuyak Island**	**30.38**	**52**	P		**P**	**02 55 25.7**	**-1.0**
	baz=274,SNR=25								
Q20K				S		**S**	**03 00 23.8**	**+0.3**
	baz=274								
G21K	**Allakaket**	**30.41**	**37**	P		**P**	**02 55 27.4**	**+0.4**
	baz=259								
G21K				S		**S**	**03 00 23.8**	**-0.1**
	baz=259								
N20K	**Mount Spurr**	**30.42**	**47**	P		**P**	**02 55 27.7**	**+0.5**
	baz=269								
N20K				S		**S**	**03 00 28.4**	**+4.1**
	baz=269								
SPCR	**Spurr Chakacha**	**30.42**	**47**	P		**P**	**02 55 27.8**	**+0.6**
	baz=269,SNR=95								
SPCR				S		**S**	**03 00 25.8**	**+1.5**
	baz=269								
PPLA	**Purkeypile**	**30.50**	**44**	P		**P**	**02 55 29.1**	**+1.1**
	baz=266,SNR=264								
PPLA				S		**S**	**03 00 29.8**	**+4.2**
	baz=266								
CHUM	**Lake Minchumin**	**30.52**	**42**	P		**P**	**02 55 28.8**	**+0.9**
	baz=265,SNR=290								
CHUM				S		**S**	**03 00 28.3**	**+2.7**
	baz=265								
H21K	**Melozitna Rive**	**30.54**	**38**	P		**P**	**02 55 28.5**	**+0.4**
	baz=261,SNR=1000								
H21K				S		**S**	**03 00 27.5**	**+1.6**
	baz=261								
F21K	**Alatna River**	**30.56**	**35**	P		**P**	**02 55 28.5**	**+0.2**
	baz=258,SNR=727								
F21K				S		**S**	**03 00 26.0**	**-0.3**
	baz=258								
C21K	**Knifeblade Rid**	**30.58**	**31**	P		**P**	**02 55 29.2**	**+0.7**
	baz=253,SNR=1000								
C21K				S		**S**	**03 00 27.8**	**+1.3**
	baz=253								
BJI2	**Beijing**	**30.65**	**269**	P		**P**	**02 55 28.8**	**-0.5**
BJI2				S		**S**	**03 00 28.6**	**+0.5**
BJI2				pmax		pmax		
	comp=Z,480nm,1.5s								
BJI2				pmax		pmax		
	comp=Z,42μm,10.0s								
BJI2				L		L		
	comp=Z,295μm,16.7s								
BJI2				L		L		
	comp=Z,271μm,20.2s								
BJI2				L		L		
	comp=Z,334μm,22.5s								
BJT	**Baijiatuau**	**30.65**	**269**	P		**P**	**02 55 28.5**	**-0.9**
BJT	**Baijiatuau**	**30.65**	**269**	P		**P**	**02 55 28.5**	**-0.9**
BJT				pmax		pmax		
	comp=Z,2μm,1.4s								
E21K	**Killik River**	**30.67**	**33**	P		**P**	**02 55 29.3**	**0.0**
	baz=255								
E21K				S		**S**	**03 00 26.9**	**-1.1**
	baz=255								
HOM	**Homer**	**30.72**	**50**	P		**P**	**02 55 28.7**	**-1.0**
HOM				IAmb		IAmb	02 56 05.2	
	comp=Z,2μm,0.8s								
HOM	**Homer**	**30.72**	**50**	P		**P**	**02 55 28.9**	**-0.8**
	baz=272								
HOM				S		**S**	**03 00 28.4**	**-0.4**
	baz=272								
A21K	**Barrow**	**30.73**	**27**	P		**P**	**02 55 30.1**	**+0.4**
	baz=248,SNR=136								
A21K				S		**S**	**03 00 29.0**	**+0.3**
	baz=248								
SKT	**Skwentna**	**30.76**	**46**			**P**	**02 55 30.0**	**-0.1**
SKT				IAmb		IAmb	02 55 58.0	
	comp=Z,5μm,1.9s								
SKT	**Skwentna**	**30.76**	**46**	P		**P**	**02 55 30.3**	**+0.2**
	baz=269,SNR=218								
SKT				S		**S**	**03 00 33.0**	**+3.6**
	baz=269								
B21K	**Ikpikpuk River**	**30.78**	**30**	P		**P**	**02 55 30.9**	**+0.7**
	baz=253								
B21K				S		**S**	**03 00 33.0**	**+3.4**
	baz=253								
I21K	**Tanana**	**30.81**	**39**	P		**P**	**02 55 31.2**	**+0.7**
	baz=263,SNR=423								
I21K				S		**S**	**03 00 33.4**	**+3.2**
	baz=263								
JMZ	**Minamidaito 2**	**30.92**	**232**	P		**P**	**02 55 32.2**	**+0.4**
	comp=Z,2μm,2.4s								
JMZ	**Minamidaito 2**	**30.92**	**232**			**P**	**02 55 32.2**	**+0.4**
CAPN	**Captain Cook N**	**30.93**	**48**	P		**P**	**02 55 32.0**	**+0.4**
	baz=271,SNR=40								
CAPN				S		**S**	**03 00 35.5**	**+3.4**
	baz=271								
A22K	**Sinclair Lake**	**31.11**	**28**	P		**P**	**02 55 33.5**	**+0.5**
	baz=250								
A22K				S		**S**	**03 00 35.8**	**+1.2**
	baz=250								
H11S1	**WAKE ISLAND Hy**	**31.12**	**163**	P		**P**	**02 55 35.2**	**+1.8**
	baz=293,slow=6.2,SNR=425								
H11S1				T		T	03 30 11.0	
	baz=348,slow=76								
BPAW	**Bear Paw Mtn.**	**31.12**	**42**	P		**P**	**02 55 33.7**	**+0.4**
	baz=266,SNR=181								
BPAW				S		**S**	**03 00 37.9**	**+2.7**
	baz=266								
H11S3	**WAKE ISLAND Hy**	**31.13**	**163**	P		**P**	**02 55 35.6**	**+2.1**
	baz=293,slow=6.2,SNR=75								
H11S3				T		T	03 30 13.5	
	baz=348								
H11S2	**WAKE ISLAND Hy**	**31.14**	**163**	P		**P**	**02 55 35.4**	**+1.8**
	baz=293,slow=6.2,SNR=124								
H11S2				T		T	03 30 12.8	
	baz=348,slow=76								
H22K	**Ishtalitna Cre**	**31.16**	**38**	P		**P**	**02 55 34.3**	**+0.7**
	baz=262,SNR=706								
H22K				S		**S**	**03 00 38.1**	**+2.5**
	baz=262								
BRSE	**Bradley Lake S**	**31.17**	**50**	P		**P**	**02 55 32.4**	**-1.4**
	baz=273,SNR=49								
BRSE				S		**S**	**03 00 35.0**	**-0.9**
	baz=273								
MLY	**Manley**	**31.32**	**40**	P		**P**	**02 55 35.6**	**+0.6**
	baz=264,SNR=612								
MLY				S		**S**	**03 00 40.4**	**+2.2**
	baz=264								
CUT	**Chulitna**	**31.36**	**45**	P		**P**	**02 55 34.4**	**-0.9**
CUT	**Chulitna**	**31.36**	**45**	P		**P**	**02 55 34.8**	**-0.6**
	baz=269,SNR=60								
CUT				S		**S**	**03 00 41.8**	**+3.0**
	baz=269								
E22K	**Anaktuvuk Pass**	**31.38**	**34**	P		**P**	**02 55 36.1**	**+0.5**
	baz=258								
E22K				S		**S**	**03 00 39.1**	**0.0**
	baz=258								
B22K	**Teshekpuk Lake**	**31.39**	**29**	P		**P**	**02 55 35.8**	**+0.4**
	baz=253,SNR=1000								
B22K				S		**S**	**03 00 40.8**	**+1.8**
	baz=253								
TRF	**Thorofare Moun**	**31.39**	**43**	P		**P**	**02 55 36.1**	**+0.3**
	baz=267,SNR=197								
TRF				S		**S**	**03 00 42.8**	**+3.2**
	baz=267								
M22K	**Willow**	**31.43**	**46**	P		**P**	**02 55 34.6**	**-1.3**
	baz=270								
M22K				S		**S**	**03 00 42.3**	**+2.6**
	baz=270								
RC01	**Rabbit Creek A**	**31.62**	**47**	P		**P**	**02 55 36.1**	**-1.5**
	baz=272,SNR=119								
RC01				S		**S**	**03 00 44.0**	**+1.2**
	baz=272								
O22K	**Cooper Landing**	**31.65**	**49**	P		**P**	**02 55 36.8**	**-1.0**
	baz=273,SNR=50								
O22K				S		**S**	**03 00 43.4**	**+0.2**
	baz=273								

JOW	**Kunigami**	**31.69**	**237**	LR	LR	03 10 01.5			
	comp=Z,382μm,20.4s,baz=44,slow=39								
JOW	**Kunigami**	**31.69**	**237**	P	**P**	**02 55 39.1**	**+0.5**		
	comp=Z,3μm,1.2s								
JOW	**Kunigami**	**31.69**	**237**		**P**	**02 55 38.5**	**-0.2**		
JOW				IAmb	IAmb	02 55 59.5			
	comp=Z,6μm,1.5s								
JOW	**Kunigami**	**31.69**	**237**	⇑P	**P**	**02 55 38.6**	**0.0**		
SEW	**Seward**	**31.80**	**49**	P	**P**	**02 55 38.0**	**-1.2**		
	baz=274,SNR=68								
SEW				S	**S**	**03 00 45.7**	**0.0**		
	baz=274								
G23K	**Bananza Creek**	**31.81**	**37**	P	**P**	**02 55 39.4**	**+0.1**		
	baz=262,SNR=1000								
G23K				S	**S**	**03 00 47.2**	**+1.4**		
	baz=262								
COLD	**Coldfoot**	**31.82**	**36**		**P**	**02 55 39.4**	**0.0**		
COLD	**Coldfoot**	**31.82**	**36**	P	**P**	**02 55 39.7**	**+0.3**		
	baz=261,SNR=880								
COLD				S	**S**	**03 00 48.1**	**+2.3**		
	baz=261								
H23K	**Yukon River**	**31.90**	**38**	P	**P**	**02 55 40.8**	**+0.7**		
	baz=264,SNR=693								
H23K				S	**S**	**03 00 49.7**	**+2.6**		
	baz=264								
PMR	**Palmer**	**31.90**	**46**	P	**P**	**02 55 40.1**	**0.0**		
	comp=Z,992nm,2.4s								
PMR	**Palmer**	**31.90**	**46**		**P**	**02 55 38.4**	**-1.7**		
PMR	**Palmer**	**31.90**	**46**	P	**P**	**02 55 38.4**	**-1.7**		
PMR				pmax	pmax				
	comp=Z,888nm,1.1s								
PMR	**Palmer**	**31.90**	**46**	P	**P**	**02 55 38.4**	**-1.7**		
	baz=271,SNR=136								
PMR				S	**S**	**03 00 47.3**	**+0.2**		
	baz=271								
I23K	**Minto, Yukon-K**	**31.91**	**40**	P	**P**	**02 55 40.8**	**+0.7**		
	baz=265,SNR=260								
I23K				S	**S**	**03 00 50.7**	**+3.5**		
	baz=265								
D23K	**Nanushuk River**	**31.96**	**32**	P	**P**	**02 55 41.2**	**+0.7**		
	baz=258								
D23K				S	**S**	**03 00 50.2**	**+2.1**		
	baz=258								
NEA2	**Nenana**	**31.99**	**41**	P	**P**	**02 55 41.2**	**+0.3**		
	baz=267,SNR=171								
NEA2				S	**S**	**03 00 53.2**	**+4.6**		
	baz=267								
MCK	**McKinley**	**32.01**	**42**	P	**P**	**02 55 41.0**	**-0.1**		
	baz=268,SNR=543								
MCK				S	**S**	**03 00 51.6**	**+2.7**		
	baz=268								
TIA	**Tai'an**	**32.11**	**262**	P	**P**	**02 55 42.5**	**+0.3**		
TIA				sP	**sP**	**02 55 58.5**	**+0.9**		
TIA				S	**S**	**03 00 55.6**	**+4.6**		
TIA				pmax	pmax				
	comp=Z,200nm,1.2s								
TIA				pmax	pmax				
	comp=Z,75μm,6.3s								
TIA				L	L				
	comp=Z,829μm,19.4s								
TIA				L	L				
	comp=Z,510μm,18.6s								
TIA				L	L				
	comp=Z,775μm,21.6s								
WAT1	**Susitna Watana**	**32.16**	**44**	P	**P**	**02 55 41.6**	**-0.9**		
	baz=270								
WAT1				S	**S**	**03 00 51.3**	**-0.1**		
	baz=270								
E23K	**Chandalar**	**32.17**	**34**	P	**P**	**02 55 43.3**	**+0.8**		
	baz=260,SNR=1000								
E23K				S	**S**	**03 00 52.9**	**+1.4**		
	baz=260								
C23K	**Itkillik River**	**32.18**	**31**	P	**P**	**02 55 42.9**	**+0.4**		
	baz=257,SNR=1000								
C23K				S	**S**	**03 00 52.9**	**+1.5**		
	baz=257								
KNK	**Knik Glacier**	**32.23**	**47**	P	**P**	**02 55 42.2**	**-0.8**		
KNK	**Knik Glacier**	**32.23**	**47**	P	**P**	**02 55 42.4**	**-0.6**		
	baz=272,SNR=410								
KNK				S	**S**	**03 00 52.8**	**+0.4**		
	baz=272								
SML	**Sawmill**	**32.27**	**46**	P	**P**	**02 55 43.1**	**-0.4**		
	baz=272,SNR=796								
SML				S	**S**	**03 00 54.0**	**+0.8**		
	baz=272								
TOLK	**Toolik Lake Re**	**32.29**	**33**	P	**P**	**02 55 44.1**	**+0.6**		
	baz=260,SNR=1000								
TOLK				S	**S**	**03 00 53.1**	**-0.2**		
	baz=260								
I53US	**FAIRBANKS INFR**	**32.52**	**40**	P	**P**	**02 55 45.0**	**-0.5**		
	baz=261,slow=12,SNR=3.4								
COLA	**College**	**32.53**	**40**	P	**P**	**02 55 45.9**	**+0.4**		
	baz=267								
COLA				S	**S**	**03 01 00.4**	**+3.5**		
	baz=267								
WAT6	**Susitna Watana**	**32.54**	**44**	P	**P**	**02 55 45.1**	**-0.8**		
	baz=271,SNR=232								
WAT6				S	**S**	**03 00 58.9**	**+1.4**		
	baz=271								
M23K	**Glacier View**	**32.56**	**46**	P	**P**	**02 55 45.5**	**-0.5**		
	baz=272,SNR=226								
M23K				S	**S**	**03 00 59.1**	**+1.5**		
	baz=272								
H24K	**Noodor Dome**	**32.58**	**38**	P	**P**	**02 55 46.8**	**+0.7**		
	baz=266								
H24K				S	**S**	**03 01 01.7**	**+3.9**		
	baz=266								
E24K	**Your Creek**	**32.60**	**34**	P	**P**	**02 55 46.9**	**+0.7**		
	baz=262,SNR=1000								
E24K				S	**S**	**03 00 59.2**	**+1.1**		
	baz=262								
D24K	**Happy Valley**	**32.65**	**32**	P	**P**	**02 55 46.9**	**+0.3**		
	baz=260								
D24K				S	**S**	**03 01 01.4**	**+2.6**		
	baz=260								
DHY	**Denali Highway**	**32.70**	**44**	P	**P**	**02 55 46.8**	**-0.5**		
	baz=271,SNR=507								
DHY				S	**S**	**03 01 01.1**	**+1.2**		
	baz=271								
POKR	**Poker Plat Res**	**32.72**	**40**	P	**P**	**02 55 47.8**	**+0.6**		
	baz=267								
POKR				S	**S**	**03 01 03.8**	**+3.9**		
	baz=267								
F24K	**Squaw Lake**	**32.75**	**35**	P	**P**	**02 55 48.0**	**+0.5**		
	baz=263,SNR=744								
F24K				S	**S**	**03 01 01.4**	**+1.0**		
	baz=263								
SCM	**Sheep Creek Mo**	**32.75**	**46**	P	**P**	**02 55 47.3**	**-0.3**		
SCM				IAmb	IAmb	02 56 17.1			
	comp=Z,4μm,1.2s								
SCM	**Sheep Creek Mo**	**32.75**	**46**	P	**P**	**02 55 47.3**	**-0.3**		
SCM				pmax	pmax				
	comp=Z,4μm,1.2s								
SCM	**Sheep Creek Mo**	**32.75**	**46**	P	**P**	**02 55 47.5**	**-0.1**		
	baz=273,SNR=172								
SCM				S	**S**	**03 01 01.6**	**+1.0**		
	baz=273								
SSE	**Sheshan**	**32.76**	**251**	P	**P**	**02 55 48.3**	**+0.4**		
SSE				S	**S**	**03 01 02.3**	**+1.1**		
SSE				pmax	pmax				
	comp=Z,890nm,1.2s								
C24K	**Franklin Bluff**	**32.80**	**31**	P	**P**	**02 55 48.1**	**+0.2**		
	baz=259								
C24K				S	**S**	**03 01 02.7**	**+1.6**		
	baz=259								
G24K	**Hadweenzic Riv**	**32.82**	**37**	P	**P**	**02 55 49.1**	**+1.0**		
	baz=265,SNR=1000								
G24K				S	**S**	**03 01 03.7**	**+2.3**		
	baz=265								
P23K	**Montague Islan**	**32.83**	**49**	P	**P**	**02 55 47.9**	**-0.4**		
	baz=275,SNR=62								
P23K				S	**S**	**03 01 03.3**	**+1.5**		
	baz=275								
HDA	**Harding Lake**	**32.90**	**41**	P	**P**	**02 55 47.8**	**-1.0**		
HDA	**Harding Lake**	**32.90**	**41**	P	**P**	**02 55 48.0**	**-0.9**		
	baz=269,SNR=319								
HDA				S	**S**	**03 01 03.7**	**+0.9**		
	baz=269								
GLI	**Glacier Island**	**32.91**	**48**	P	**P**	**02 55 48.2**	**-0.8**		
	baz=274								
GLI				S	**S**	**03 01 03.1**	**0.0**		
	baz=274								
ILAR	**Eielson Array**	**32.94**	**40**	P	**P**	**02 55 48.1**	**-1.1**		
	comp=Z,618nm,1.2s,baz=248,slow=7.2,SNR=354								
ILAR				S	**S**	**03 01 07.7**	**+4.3**		
	comp=Z,36nm,1.0s,baz=314,slow=8.0,SNR=1.1								
ILAR				LR	LR	03 08 36.4			
	comp=Z,852μm,21.3s,baz=254,slow=35								
ILAR				P3KPbc		03 27 06.5			
	comp=Z,19nm,1.0s,baz=100,slow=2.9,SNR=16								
ILAR				PKP2ab	**P'P'ab**	**03 31 06.0**	**-3.0**		
	comp=Z,4.8nm,1.1s,baz=85,slow=3.1,SNR=2.4								
	comp=Z,618nm,1.2s								
ILAR	**Eielson Array**	**32.94**	**40**	P	**P**	**02 55 48.5**	**-0.7**		
HNS	**HongShan**	**33.02**	**266**	⇑P	**P**	**02 55 50.9**	**+0.8**		
HNS				S	**S**	**03 01 08.0**	**+2.9**		
HNS				pmax	pmax				
	comp=Z,1μm,1.1s								
HNS				L	L				
	comp=Z,265μm,18.1s								
HNS				L	L				
	comp=Z,988μm,22.1s								
HNS				L	L				
	comp=Z,1178μm,22.3s								
ULN	**Ulaanbaatar**	**33.20**	**288**		**P**	**02 55 51.0**	**-0.8**		
ULN	**Ulaanbaatar**	**33.20**	**288**	P	**P**	**02 55 51.0**	**-0.8**		
ULN				pmax	pmax				
	comp=Z,2μm,1.4s								
ULN	**Ulaanbaatar**	**33.20**	**288**	*e*P	**P**	**02 55 51.1**	**-0.8**		
ULN	**Ulaanbaatar**	**33.20**	**288**	P	**P**	**02 55 51.2**	**-0.6**		
ULN				pP	**sP**	**02 56 05.8**	**-1.7**		
ULN				sP	**pwP**	**02 56 11.9**	**-0.4**		
HHC	**Hu-ho-hao-te**	**33.27**	**274**	⇓*i*P	**P**	**02 55 52.3**	**-0.2**		
HHC				sP	sP	02 56 10.3	+2.3		
HHC				S	**S**	**03 01 07.3**	**-1.9**		
HHC				pmax	pmax				
	comp=Z,270nm,1.4s								
HHC				pmax	pmax				
	comp=Z,16μm,6.5s								
HHC				L	L				
	comp=Z,1025μm,16.3s								
HHC				L	L				
	comp=Z,920μm,17.5s								
HHC				L	L				
	comp=Z,1035μm,18.7s								
M24K	**Tolsona, Glenn**	**33.28**	**45**	P	**P**	**02 55 52.7**	**+0.4**		
	baz=273,SNR=169								
M24K				S	**S**	**03 01 11.4**	**+2.5**		
	baz=273								
G25K	**Bearman Lake**	**33.37**	**37**	P	**P**	**02 55 53.7**	**+0.9**		
	baz=266,SNR=346								
G25K				S	**S**	**03 01 09.4**	**-0.5**		
	baz=266								
K24K	**Donnelly Dome**	**33.41**	**42**	P	**P**	**02 55 52.7**	**-0.6**		
	baz=271								
K24K				S	**S**	**03 01 08.1**	**-2.6**		
	baz=271								
Q23K	**Middleton Isla**	**33.42**	**50**	P	**P**	**02 55 53.6**	**+0.2**		
	baz=277,SNR=10								
Q23K				S	**S**	**03 01 15.3**	**+4.4**		
	baz=277								
KLU	**Klutina**	**33.44**	**46**	P	**P**	**02 55 53.6**	**0.0**		
	baz=274,SNR=364								
KLU				S	**S**	**03 01 13.6**	**+2.3**		
	baz=274								
IRK	**Irkutsk**	**33.51**	**296**	*e*P	**P**	**02 55 53.8**	**-0.5**		
IRK				*e*S	**S**	**03 01 07.1**	**-5.4**		
IRK				pmax	pmax				
	comp=Z,6μm,2.0s								
PRP	**Porcupine Dome**	**33.54**	**39**	P	**P**	**02 55 54.3**	**-0.2**		
	baz=268,SNR=708								
PRP				S	**S**	**03 01 12.6**	**-0.3**		
	baz=268								
D25K	**Kavik River**	**33.54**	**32**	P	**P**	**02 55 55.0**	**+0.5**		
	baz=262,SNR=1000								
D25K				S	**S**	**03 01 13.4**	**+0.7**		
	baz=262								
PAX	**Paxson**	**33.57**	**44**	P	**P**	**02 55 54.4**	**-0.4**		
	baz=272,SNR=277								
PAX				S	**S**	**03 01 13.0**	**-0.4**		
	baz=272								
J25K	**Salcha River,**	**33.59**	**41**	P	**P**	**02 55 53.8**	**-1.1**		
	baz=270,SNR=459								
J25K				S	**S**	**03 01 14.8**	**+1.3**		
	baz=270								
NJ2	**Nanjing**	**33.59**	**255**	⇑P	**P**	**02 55 55.3**	**+0.1**		
NJ2				pP	**sP**	**02 56 11.1**	**+0.3**		
NJ2				S	**S**	**03 01 19.6**	**+5.6**		
NJ2				sS	**sS**	**03 01 30.3**	**-2.4**		
NJ2				ScS	**ScS**	**03 06 20.0**	**+4.0**		
NJ2				pmax	pmax				
	comp=Z,390nm,1.0s								
NJ2				pmax	pmax				
	comp=Z,20μm,4.3s								
NJ2				L	L				
	comp=Z,1618μm,17.1s								
NJ2				L	L				
	comp=Z,845μm,18.0s								
NJ2				L	L				
	comp=Z,1971μm,18.9s								
EYAK	**Cordova Ski Ar**	**33.60**	**48**	P	**P**	**02 55 55.3**	**+0.3**		
	comp=Z,845nm,2.6s								
EYAK	**Cordova Ski Ar**	**33.60**	**48**	P	**P**	**02 55 54.8**	**-0.1**		
	baz=276,SNR=92								
EYAK				S	**S**	**03 01 15.9**	**+2.3**		
	baz=276								
F25K	**Christian Rive**	**33.61**	**35**	P	**P**	**02 55 56.0**	**+1.0**		
	baz=265,SNR=852								
F25K				S	**S**	**03 01 17.5**	**+3.7**		
	baz=265								
SONM	**Songino Array**	**33.62**	**288**	P	**P**	**02 55 54.7**	**-0.8**		
	comp=Z,36nm,0.7s,baz=63,slow=8.2,SNR=61								
SONM				PcP	**PcP**	**02 58 34.2**	**-0.4**		
	comp=Z,176nm,0.9s,baz=77,slow=3.4,SNR=4.1								
SONM				S	**S**	**03 01 19.7**	**+5.1**		
	comp=Z,38nm,1.1s,baz=216,slow=5.0,SNR=1.9								
SONM				P3KPbc		03 27 03.3			
	comp=Z,7.0nm,0.9s,baz=242,slow=4.5,SNR=10.0								
SONM				P3KP		03 28 26.4			
	comp=Z,2.8nm,0.9s,baz=204,slow=3.2,SNR=1.5								
	comp=Z,36nm,0.7s								
SONM	**Songino Array**	**33.62**	**288**		**P**	**02 55 54.5**	**-1.0**		
SONM	**Songino Array**	**33.62**	**288**	P	**P**	**02 55 54.5**	**-1.0**		
SONM				pmax	pmax				
	comp=Z,644nm,1.2s								
E25K	**Arctic Village**	**33.69**	**34**	P	**P**	**02 55 56.6**	**+0.9**		
	baz=264,SNR=1000								
E25K				S	**S**	**03 01 16.4**	**+1.5**		
	baz=264								
RIDG	**Independent Ri**	**33.83**	**42**	P	**P**	**02 55 56.3**	**-0.7**		
	baz=272,SNR=664								
RIDG				S	**S**	**03 01 16.9**	**-0.3**		
	baz=272								
BMAR	**Burnt Mountain**	**34.01**	**36**		**P**	**02 55 59.1**	**+0.6**		
TLY	**Talaya**	**34.05**	**296**	LR	LR	03 10 57.1			
	comp=Z,571μm,20.8s,baz=35,slow=38								
TLY	**Talaya**	**34.05**	**296**		**P**	**02 55 58.7**	**-0.3**		
TLY				IAmb	IAmb	02 56 39.7			
	comp=Z,3μm,1.2s								
TLY	**Talaya**	**34.05**	**296**	*d*P	**P**	**02 55 59.1**	**+0.1**		
TLY				pmax	pmax				
	comp=Z,3μm,1.3s								
TLY				MLR	MLR				
	comp=Z,568μm,20.0s								
TLY	**Talaya**	**34.05**	**296**	P	**P**	**02 55 59.7**	**+0.7**		
TLY				S	**S**	**03 01 23.2**	**+2.4**		
TLY	**Talaya**	**34.05**	**296**	⇓P	**P**	**02 55 58.8**	**-0.2**		
TLY	**Talaya**	**34.05**	**296**	*e*P	**P**	**02 55 59.2**	**+0.2**		
N25K	**Chitina, Valde**	**34.06**	**46**	P	**P**	**02 55 59.5**	**+0.4**		
	baz=275,SNR=312								
N25K				S	**S**	**03 01 19.8**	**-1.1**		
	baz=275								
BMRM	**Bremner River**	**34.12**	**47**	P	**P**	**02 55 59.7**	**+0.2**		
	baz=276,SNR=191								
BMRM				S	**S**	**03 01 25.5**	**+3.7**		
	baz=276								
C26K	**Camden Bay**	**34.13**	**31**	P	**P**	**02 56 00.6**	**+1.1**		
	baz=262,SNR=1000								
C26K				S	**S**	**03 01 21.9**	**+0.2**		
	baz=262								
F26K	**Sheenjek River**	**34.19**	**35**	P	**P**	**02 56 01.3**	**+1.2**		
	baz=266,SNR=1000								
F26K				S	**S**	**03 01 25.9**	**+3.2**		
	baz=266								
SCRK	**Sand Creek**	**34.20**	**42**	P	**P**	**02 55 59.4**	**-0.9**		
	baz=272,SNR=703								
SCRK				S	**S**	**03 01 22.6**	**-0.5**		
	baz=272								
G26K	**Porcupine Rive**	**34.29**	**37**	P	**P**	**02 56 02.2**	**+1.3**		
	baz=268,SNR=1000								
G26K				S	**S**	**03 01 28.5**	**+4.4**		
	baz=268								
KAIM	**Kayak Island**	**34.33**	**49**	P	**P**	**02 56 02.1**	**+0.8**		
	baz=278,SNR=94								
KAIM				S	**S**	**03 01 27.4**	**+2.4**		
	baz=278								
TIY	**Taiyuan**	**34.34**	**268**	P	**P**	**02 56 03.4**	**+1.6**		
TIY				S	**S**	**03 01 29.4**	**+3.6**		
TIY				pmax	pmax				
	comp=Z,340nm,1.3s								
TIY				pmax	pmax				
	comp=Z,14μm,3.7s								
TIY				L	L				
	comp=Z,603μm,18.0s								
TIY				L	L				
	comp=Z,656μm,19.0s								
TIY				L	L				
	comp=Z,744μm,20.9s								
MENT	**Mentasta**	**34.37**	**44**	P	**P**	**02 56 02.4**	**+0.7**		
	comp=Z,2μm,1.9s								
MENT	**Mentasta**	**34.37**	**44**	P	**P**	**02 56 01.8**	**+0.1**		
BTO2	**Baotou**	**34.44**	**275**	*e*P	**P**	**02 56 02.3**	**-0.3**		
BTO2				pP	**sP**	**02 56 17.8**	**-0.3**		
BTO2				sP	**pwP**	**02 56 25.1**	**+1.6**		
BTO2				PP	**PnPn**	**02 57 18.8**	**+0.2**		
BTO2				S	**S**	**03 01 27.8**	**+0.5**		
BTO2				sS	**sS**	**03 01 52.6**	**+6.6**		
BTO2				SS	**SnSn**	**03 03 41.1**	**0.0**		
BTO2				pmax	pmax				
	comp=Z,68nm,1.2s								
BTO2				pmax	pmax				
	comp=Z,6μm,6.6s								
BTO2				LR	LR				
	comp=N,2572μm,19.4s								
BTO2				LR	LR				
	comp=E,1255μm,19.1s								
BTO2				LR	LR				
	comp=Z,1457μm,24.5s								
C27K	**Jago River**	**34.51**	**32**	P	**P**	**02 56 03.4**	**+0.6**		
C27K	**Jago River**	**34.51**	**32**	P	**P**	**02 56 03.6**	**+0.9**		
	baz=264,SNR=1000								
C27K				S	**S**	**03 01 30.3**	**+2.8**		
	baz=264								
I26K	**Coal Creek Min**	**34.53**	**39**	P	**P**	**02 56 01.3**	**-1.7**		
	baz=271								
I26K				S	**S**	**03 01 28.9**	**+1.0**		
	baz=271								
L26K	**Log Cabin Wild**	**34.53**	**44**	P	**P**	**02 56 03.6**	**+0.5**		
	baz=274,SNR=151								
L26K				S	**S**	**03 01 30.7**	**+2.6**		
	baz=274								
VRDI	**Verde Repeater**	**34.65**	**47**		**P**	**02 56 04.2**	**-0.1**		
VRDI				IAmb	IAmb	02 56 45.7			
	comp=Z,2μm,1.5s								
ZAK	**Zakamensk**	**34.67**	**294**	*e*P	**P**	**02 56 04.2**	**-0.3**		
ZAK				pmax	pmax				
	comp=Z,3μm,2.0s								
M26K	**Nabesna, AK**	**34.74**	**45**	P	**P**	**02 56 05.8**	**+0.8**		
	baz=275,SNR=318								
M26K				S	**S**	**03 01 34.3**	**+2.9**		
	baz=275								
MCARA	**McCarthy VSAT**	**34.84**	**46**	P	**P**	**02 56 06.3**	**+0.7**		
	baz=277,SNR=138								
MCARA				S	**S**	**03 01 35.1**	**+2.4**		
	baz=277								
BGLC	**Bering Glacier**	**34.87**	**49**	P	**P**	**02 56 06.9**	**+1.0**		
	baz=278								
BGLC				S	**S**	**03 01 36.3**	**+3.1**		
	baz=278								
CRQE	**Cirque**	**34.88**	**47**	P	**P**	**02 56 06.6**	**+0.4**		
	baz=278,SNR=484								
CRQE				S	**S**	**03 01 36.4**	**+2.7**		
	baz=278								
JMJ	**Miyako jima 2**	**34.93**	**238**	P	**P**	**02 56 08.2**	**+1.4**		
	comp=Z,18μm,0.9s								
G27K	**Doyon Strip**	**35.13**	**37**	P	**P**	**02 56 09.2**	**+1.1**		
	baz=270,SNR=674								
G27K				S	**S**	**03 01 39.1**	**+2.0**		
	baz=270								
I27K	**Kandik River**	**35.16**	**39**	P	**P**	**02 56 08.0**	**-0.5**		
	baz=272,SNR=130								
I27K				S	**S**	**03 01 40.3**	**+2.6**		
	baz=272								
E27K	**Coleen River**	**35.18**	**34**	P	**P**	**02 56 09.7**	**+1.2**		
	baz=268								
E27K				S	**S**	**03 01 42.1**	**+4.2**		
	baz=268								
H27K	**Steamboat Moun**	**35.18**	**38**	P	**P**	**02 56 09.7**	**+1.1**		
	baz=271,SNR=1000								
H27K				S	**S**	**03 01 42.2**	**+4.2**		
	baz=271								
L27K	**Beaver Creek,**	**35.22**	**43**	P	**P**	**02 56 10.0**	**+1.0**		
	baz=275,SNR=1000								
L27K				S	**S**	**03 01 41.8**	**+3.1**		
	baz=275								
BCAR	**Beaver Creek A**	**35.24**	**43**		**P**	**02 56 09.8**	**+0.6**		
M27K	**Edge Creek, AK**	**35.27**	**45**	P	**P**	**02 56 10.6**	**+1.0**		
	baz=276,SNR=308								
M27K				S	**S**	**03 01 42.2**	**+2.6**		
	baz=276								
D27M	**Malcolm River**	**35.45**	**33**	P	**P**	**02 56 12.0**	**+1.1**		
	baz=267,SNR=427								
D27M				S	**S**	**03 01 43.5**	**+1.4**		
	baz=267								
MESA	**MESA**	**35.52**	**48**	P	**P**	**02 56 12.7**	**+0.9**		
	baz=279,SNR=108								
MESA				S	**S**	**03 01 45.3**	**+1.7**		
	baz=279								
CTG	**Chitna Glacier**	**35.70**	**47**	P	**P**	**02 56 13.9**	**+0.6**		
	baz=279,SNR=437								
CTG				S	**S**	**03 01 47.7**	**+1.4**		
	baz=279								
BVCY	**Beaver Creek**	**35.73**	**44**	P	**P**	**02 56 14.2**	**+0.8**		
	baz=277,SNR=502								
BVCY				S	**S**	**03 01 49.6**	**+3.1**		
	baz=277								
F28M	**Old Crow**	**35.82**	**35**	P	**P**	**02 56 15.3**	**+1.3**		
	baz=271,SNR=1000								
F28M				S	**S**	**03 01 51.0**	**+3.3**		
	baz=271								
I28M	**Miner Creek**	**35.87**	**39**	P	**P**	**02 56 14.8**	**+0.2**		
	baz=274,SNR=1000								
I28M				S	**S**	**03 01 53.2**	**+4.6**		
	baz=274								
E28M	**Babbage River**	**35.95**	**34**	P	**P**	**02 56 16.2**	**+1.0**		
	baz=270,SNR=1000								
E28M				S	**S**	**03 01 50.4**	**+0.7**		
	baz=270								
YUK3	**Moose Creek**	**36.00**	**45**	P	**P**	**02 56 16.2**	**+0.2**		
	baz=278,SNR=571								
YUK3				S	**S**	**03 01 53.7**	**+2.6**		
	baz=278								
LYN	**LuoYang**	**36.15**	**264**	⇑P	**P**	**02 56 17.5**	**+0.3**		
LYN				S	**S**	**03 01 56.4**	**+3.0**		
LYN				pmax	pmax				
	comp=Z,230nm,1.5s								
LYN				pmax	pmax				
	comp=Z,27μm,4.3s								
LYN				L	L				
	comp=Z,751μm,19.2s								
LYN				L	L				
	comp=Z,477μm,20.0s								
LYN				L	L				
	comp=Z,644μm,19.6s								
D28M	**Stokes Point**	**36.24**	**33**	P	**P**	**02 56 18.5**	**+0.8**		
	baz=269								
D28M				S	**S**	**03 01 55.5**	**+1.4**		
	baz=269								
O28M	**Mount Upton**	**36.29**	**47**	P	**P**	**02 56 18.7**	**+0.3**		
	baz=280,SNR=603								
O28M				S	**S**	**03 01 57.8**	**+2.3**		
	baz=280								
PINM	**Pinnacle**	**36.37**	**48**	P	**P**	**02 56 19.3**	**+0.3**		
	baz=281,SNR=274								
PINM				S	**S**	**03 01 56.0**	**-0.4**		
	baz=281								
YUK8	**Steele Glacier**	**36.41**	**46**	P	**P**	**02 56 19.7**	**+0.3**		
	baz=280,SNR=196								
YUK8				S	**S**	**03 01 59.7**	**+2.4**		
	baz=280								
H29M	**Whitestone**	**36.46**	**38**	P	**P**	**02 56 20.5**	**+0.9**		
	baz=274								
H29M				S	**S**	**03 01 58.3**	**+0.7**		
	baz=274								
YOJ	**Yonaguni jima**	**36.51**	**241**	P	**P**	**02 56 21.7**	**+1.4**		
	comp=Z,799nm,1.0s								
YOJ	**Yonaguni jima**	**36.51**	**241**	P	**P**	**02 56 20.2**	**-0.1**		
Y

baz=271,SNR=1000
E29M S S 03 01 56.4 -2.5
baz=271
I29M Ogilvie Camp, 36.55 39 P P 02 56 20.6 +0.3
baz=275,SNR=568
I29M S S 03 01 59.1 +0.1
baz=275
G29M Pine Creek 36.56 37 P P 02 56 22.0 +1.6
baz=273,SNR=1000
G29M S S 03 01 59.9 +0.9
baz=273
J29N Klondike Camp 36.68 41 P P 02 56 21.7 +0.2
baz=276,SNR=250
J29N S S 03 01 59.3 -1.7
baz=276
GUMO Guam 36.74 201 LR LR 03 13 13.5
comp=Z,153μm,18.2s,baz=33,slow=39
GUMO Guam 36.74 201 P P 02 56 20.2 -2.1
GUMO Guam 36.74 201 P P 02 56 20.2 -2.1
GUMO pmax pmax
comp=Z,965nm,1.0s
M29M Somme Creek 36.83 44 P P 02 56 24.0 +1.1
baz=279,SNR=436
M29M S S 03 02 05.0 +1.5
baz=279
L29M L29M 36.89 43 P P 02 56 24.7 +1.4
baz=278,SNR=1000
L29M S S 03 02 04.6 +0.4
baz=278
YUK4 Talbot Arm 36.93 46 P P 02 56 24.6 +0.8
baz=280,SNR=248
TATO Taipei 37.00 243 P P 02 56 24.9 +0.4
TATO IAmb IAmb 02 57 05.2
comp=Z,3μm,1.3s
K29M Barlow Dome 37.06 42 P P 02 56 25.5 +0.7
baz=278
K29M S S 03 02 05.1 -1.8
baz=278
EPYK Eagle Plains 37.12 37 P P 02 56 26.1 +1.0
baz=275,SNR=1000
EPYK S S 03 02 06.4 -1.2
baz=275
YUK6 Outpost Mounta 37.14 47 P P 02 56 26.3 +0.6
baz=281,SNR=177
YUK6 S S 03 02 08.4 +0.1
baz=281
O29M Mount Kennedy 37.16 48 P P 02 56 26.3 +0.7
baz=282,SNR=118
O29M S S 03 02 09.5 +1.0
baz=282
G30M tAoh Zraii Nji 37.26 36 P P 02 56 27.1 +0.7
baz=275,SNR=731
G30M S S 03 02 02.4 -7.3
baz=275
YHNB Yeheng 37.30 243 P P 02 56 27.6 +0.4
comp=Z,700nm,1.7s
YHNB Yeheng 37.30 243 P P 02 56 26.0 -1.2
I30M Mount Dempster 37.38 39 P P 02 56 27.8 +0.3
baz=277,SNR=989
I30M S S 03 02 07.7 -3.9
baz=277
F30M Barrier River 37.38 35 P P 02 56 28.6 +1.2
baz=274
F30M S S 03 02 06.9 -4.6
baz=274
WHN Wuhan 37.47 257⇑iP P 02 56 28.0 -0.5
WHN pP **sP 02 56 44.3 +0.1**
WHN S **S 03 02 16.8 +3.3**
WHN L L
comp=Z,1304μm,16.9s
WHN L L
comp=Z,1589μm,18.9s
WHN L L
comp=Z,1222μm,21.2s
J30M Hart River 37.48 40 P P 02 56 28.8 +0.5
baz=278,SNR=386
J30M S S 03 02 08.6 -4.6
baz=278
NACB Ninganchiao 37.55 242 P P 02 56 30.1 +0.9
comp=Z,490nm,1.1s
NACB Ninganchiao 37.55 242 P P 02 56 29.0 -0.2
HYT Haines Junctio 37.57 47 P 02 56 29.6 +0.4
HYT IAmb IAmb 02 56 58.1
comp=Z,4μm,1.3s
HYT Haines Junctio 37.57 47 P P 02 56 30.4 +1.2
baz=282,SNR=536
HYT S S 03 02 15.5 +0.8
baz=282
M30M Minto, Yukon 37.58 44 P P 02 56 30.1 +1.0
baz=280,SNR=300
M30M S S 03 02 13.0 -1.7
baz=280
N30M Aishikik Lake 37.64 46 P P 02 56 30.3 +0.6
baz=281,SNR=107
N30M S S 03 02 16.1 +0.4
baz=281
MAYO Mayo, Yukon 37.81 42 P P 02 56 32.3 +1.3
baz=280,SNR=139
MAYO S S 03 02 17.5 -0.6
baz=280
P30M Million Dollar 37.98 48 P P 02 56 33.8 +1.2
baz=283
P30M S S 03 02 19.9 -1.0
baz=283
G31M Satah River 38.03 36 P P 02 56 33.4 +0.6
baz=277,SNR=1000
G31M S S 03 02 19.2 -2.0
baz=277
KNGR Kungurtug, Tuv 38.04 296d**iP P 02 56 33.4 +0.1**
KNGR pmax pmax
comp=Z,2μm,1.4s
KNGR MLR MLR
comp=Z,414μm,16.0s
H31M Peel River 38.14 38 P P 02 56 34.5 +0.7
baz=278,SNR=1000
H31M S S 03 02 21.9 -1.2
baz=278
INK Inuvik 38.18 34 LR LR 03 13 46.7
comp=Z,368μm,21.6s,baz=236,slow=38
INK Inuvik 38.18 34 P 02 56 34.5 +0.6
INK IAmb IAmb 02 56 49.1
comp=Z,2μm,0.9s
INK Inuvik 38.18 34 P P 02 56 34.6 +0.6
INK pmax pmax
comp=Z,2μm,0.9s
INK Inuvik 38.18 34 P P 02 56 35.0 +1.0
baz=275,SNR=1000
INK S S 03 02 20.4 -3.0
baz=275
INK Inuvik 38.18 34 ⇑P P 02 56 34.8 +0.8
F31M Tsiigehtchic 38.18 36 P P 02 56 34.8 +0.8
baz=276,SNR=1000
F31M S S 03 02 22.2 -1.3
baz=276
SSLB Suanglung 38.22 242 P P 02 56 35.8 +0.9
comp=Z,1μm,1.2s
N31M Braeburn, Yuko 38.25 45 P P 02 56 36.0 +1.2
baz=282,SNR=258
N31M S S 03 02 24.7 -0.2
baz=282
O30N Mendenhall 38.26 46 P P 02 56 35.9 +1.1
baz=283,SNR=472
O30N S S 03 02 25.6 +0.6
baz=283
YULB Yu-li 38.33 242 P P 02 56 36.4 +0.6
comp=Z,1μm,2.0s
YULB Yu-li 38.33 242 P P 02 56 34.9 -0.9
NRIK Noril'sk 38.62 328 P P 02 56 37.0 -0.7
comp=Z,328nm,1.0s,baz=93,slow=8.7,SNR=128
NRIK LR LR 03 13 37.8
comp=Z,444μm,21.2s,baz=76,slow=38
NRIK P3KPbc 03 26 45.6
comp=Z,1.4nm,0.5s,baz=230,slow=1.6,SNR=2.0
NRIK P3KP 03 28 14.8
comp=Z,2.0nm,0.6s,baz=297,slow=2.3,SNR=1.5
comp=Z,328nm,1.0s
NRIK Noril'sk 38.62 328 P 02 56 36.4 -1.2
NRIK Noril'sk 38.62 328d**iP P 02 56 36.5 -1.2**
NRIK pmax pmax
comp=Z,2μm,1.5s
NRIK MLR MLR
comp=Z,543μm,16.0s
M31M Drury Creek, Y 38.75 44 P P 02 56 40.1 +1.1
baz=282,SNR=604
M31M S S 03 02 30.5 -1.8
baz=282
QZH2 Quanzhou 38.75 246⇑iP P 02 56 39.3 0.0
QZH2 S **S 03 02 28.3 -4.7**
QZH2 sS **sS 03 02 53.1 +1.2**
QZH2 pmax pmax
comp=Z,290nm,1.9s
QZH2 pmax pmax
comp=Z,32μm,14.8s
QZH2 L L
comp=Z,291μm,22.7s
QZH2 L L
comp=Z,286μm,20.8s
QZH2 L L
comp=Z,543μm,20.9s
TPUB Ta-pu 38.78 242 P P 02 56 40.2 +0.6
comp=Z,1μm,1.2s
TPUB Ta-pu 38.78 242 P P 02 56 39.0 -0.6
TPUB IAmb IAmb 02 57 19.6
comp=Z,2μm,0.9s
XAN Xi'an 38.80 266 P P 02 56 39.3 -0.4
XAN pP pP 02 56 48.8 -1.7
XAN sP sP 02 56 55.5 0.0
XAN S **S 03 02 33.9 +0.2**
XAN pmax pmax
comp=Z,270nm,0.9s
XAN pmax pmax
comp=Z,9μm,8.4s
XAN L L
comp=Z,824μm,20.6s
XAN L L
comp=Z,904μm,20.6s
XAN L L
comp=Z,1379μm,20.6s
XAN Xi'an 38.80 266 P P 02 56 39.5 -0.1
XAN pP **sP 02 56 54.7 -0.8**
XAN sP **pwP 02 57 00.6 +0.3**
WHY Whitehorse 38.86 46 P P 02 56 41.3 +1.3
baz=284,SNR=660
WHY S S 03 02 29.8 -4.4
baz=284
S31K Pelican 38.89 51 P P 02 56 40.8 +0.8
baz=286,SNR=76
S31K S S 03 02 34.4 +0.1
baz=286
TWGBT Beinan 38.90 241 P P 02 56 41.8 +1.3
comp=Z,1μm,1.1s
SKAG Skagway 38.94 48 P P 02 56 40.7 +0.2
comp=Z,2μm,2.7s
SKAG Skagway 38.94 48 P P 02 56 42.0 +1.5
baz=285,SNR=142
SKAG S S 03 02 34.8 -0.3
baz=285
SKAG Skagway 38.94 48 ⇑P P 02 56 42.0 +1.5
R31K City Hall, Gus 39.01 50 P P 02 56 42.3 +1.2
baz=286,SNR=16
R31K S S 03 02 34.6 -1.6
baz=286
SIT Sitka 39.62 52 P P 02 56 46.4 +0.2
comp=Z,2μm,2.1s
SIT Sitka 39.62 52 P P 02 56 48.0 +1.8
baz=288,SNR=42
SIT S S 03 02 42.3 -3.1
baz=288
R32K Eaglecrest 39.67 50 P P 02 56 48.1 +1.5
baz=287,SNR=161
R32K S S 03 02 46.9 +0.8
baz=287
P32M Atlin 39.70 48 P P 02 56 48.2 +1.3
baz=286,SNR=116
P32M S S 03 02 45.4 -1.3
baz=286
JIS Juneau Island 39.74 50 P P 02 56 47.6 +0.5
comp=Z,2μm,2.1s
S32K Killisnoo 39.88 51 P P 02 56 49.8 +1.4
baz=288,SNR=121
S32K S S 03 02 50.4 +1.2
baz=288
P33M Teslin, Yukon 39.97 47 P P 02 56 50.5 +1.3
baz=286,SNR=362
P33M S S 03 02 50.2 -0.6
baz=286
CNSH ChangSha 39.98 256 P P 02 56 49.4 -0.1
CNSH S **S 03 02 56.8 +5.5**
CNSH pmax pmax
comp=Z,590nm,1.3s
CNSH L L
comp=Z,374μm,16.6s
CNSH L L
comp=Z,379μm,18.5s
CNSH L L
comp=Z,535μm,17.7s
MMPY Sheldon Lake, 40.07 43 P P 02 56 51.4 +1.4
baz=284,SNR=385
MMPY S S 03 02 51.8 -0.4
baz=284
A36M Sachs Harbour 40.56 28 P P 02 56 54.5 +0.8
A36M IAmb IAmb 02 57 36.8
comp=Z,2μm,0.9s
A36M Sachs Harbour 40.56 28 P P 02 56 54.9 +1.1
baz=278,SNR=1000
A36M S S 03 02 57.2 -1.8
baz=278
Q32M Nakina River 40.59 48 P P 02 56 56.4 +1.9
baz=288,SNR=323
Q32M S S 03 03 02.3 +1.9
baz=288
ENH Enshi 40.80 261 P 02 56 55.4 -1.0
T33K Petersburg 40.93 52 P P 02 56 58.9 +1.9
baz=290,SNR=22
T33K S S 03 03 06.8 +1.9
baz=290
LZH Lanzhou 40.94 273 P P 02 56 59.1 +1.5
LZH S **S 03 03 08.5 +2.6**
LZH pmax pmax
comp=Z,630nm,1.3s
LZH pmax pmax
comp=Z,34μm,5.5s
LZH L L
comp=Z,1070μm,13.7s
LZH L L
comp=Z,723μm,14.4s
LZH L L
comp=Z,920μm,14.1s
U33K Whale Pass 41.08 53 P P 02 56 60.0 +1.8
baz=290,SNR=68
U33K S S 03 03 07.2 +0.1
baz=290
R33M Jennings River 41.10 47 P P 02 57 00.4 +1.8
baz=288,SNR=583
R33M S S 03 03 11.5 +3.8
baz=288
LZDM Lanzhou Array 41.11 272 P P 02 56 59.5 +0.3
comp=Z,99nm,0.7s,baz=60,slow=4.1,SNR=100
LZDM P3KP 03 28 16.3
comp=Z,1.1nm,0.3s,baz=233,slow=8.9,SNR=1.8
comp=Z,99nm,0.7s
CRAG Craig 41.30 54 P P 02 57 01.3 +1.2
comp=Z,2μm,1.6s
CRAG Craig 41.30 54 P P 02 57 01.1 +1.0
CRAG IAmb IAmb 02 57 25.2
comp=Z,4μm,1.5s
CRAG Craig 41.30 54 P P 02 57 01.9 +1.8
baz=291,SNR=47
CRAG S S 03 03 15.1 +4.6
baz=291
CRAG Craig 41.30 54 ⇑P P 02 57 01.7 +1.6
WRAK Wrangell Islan 41.38 52 P P 02 57 02.3 +1.6
baz=290
WRAK S S 03 03 11.2 -0.3
baz=290
C36M Paulatuk 41.41 32 P P 02 57 01.3 +0.5
C36M IAmb IAmb 02 57 29.0
comp=Z,4μm,1.1s
C36M Paulatuk 41.41 32 P P 02 57 01.7 +0.9
baz=282,SNR=1000
C36M S S 03 03 14.6 +2.9
baz=282
S34M Telegraph Cree 41.49 50 P P 02 57 03.4 +1.8
baz=290,SNR=187
S34M S S 03 03 18.0 +4.7
baz=290
JOHN Johnston Islan 41.64 129 P P 02 57 04.8 +1.5
JOHN IAmb IAmb 02 57 26.7
comp=Z,4μm,1.6s
GTA2 Gaotai 41.72 280 P P 02 57 04.3 +0.4
GTA2 PP **PnPn 02 58 49.9 +3.8**
GTA2 S **S 03 03 16.3 -1.0**
GTA2 sS sS 03 03 38.8 +2.4
GTA2 SS **SS 03 06 24.3 +0.3**
GTA2 pmax pmax
comp=Z,170nm,1.1s
GTA2 pmax pmax
comp=Z,23μm,5.1s
GTA2 L L
comp=Z,66μm,21.3s
GTA2 L L
comp=Z,343μm,20.3s
GTA2 L L
comp=Z,693μm,20.9s
TGTN Hyland Airport 41.72 44 P P 02 57 04.9 +1.4
baz=288,SNR=227
TGTN S **S 03 03 18.7 +1.9**
baz=288
PATS Pohnpei 41.87 179 P P 02 57 05.8 +0.6
PATS IAmb IAmb 02 57 29.7
comp=Z,5μm,1.4s
DLBC Dease Lake 41.87 49 LR LR 03 17 00.1
comp=Z,470μm,18.6s,baz=276,slow=40
DLBC Dease Lake 41.87 49 P P 02 57 06.7 +1.9
baz=290,SNR=427
DLBC S S 03 03 24.0 +5.0
baz=290
WTLY Watson Lake, Y 41.92 46 P P 02 57 06.6 +1.4
baz=289,SNR=160
WTLY S S 03 03 25.5 +5.9
baz=289
V35K Ketchikan 42.16 53 P P 02 57 08.5 +1.4
baz=292,SNR=55
V35K S S 03 03 29.4 +6.3
baz=292
T35M Bob Quinn 42.26 51 P P 02 57 10.1 +2.1
baz=291,SNR=428
T35M S S 03 03 30.2 +5.4
baz=291
DIB Dawson Inlet, 42.51 57 P 02 57 10.7 +0.8
H02S2 DAWSON INLET T 42.51 57 P P 02 57 10.6 +0.7
SNR=286
GZH2 Guangzhou 42.74 250⇑iP P 02 57 12.5 +0.3
GZH2 sP **sP 02 57 26.3 -1.6**
GZH2 PP **PP 02 58 53.4 +1.5**
GZH2 S **S 03 03 35.6 +3.3**
GZH2 pmax pmax
comp=Z,550nm,1.0s
GZH2 pmax pmax
comp=Z,78μm,10.3s
GZH2 L L
comp=Z,348μm,20.6s
GZH2 L L
comp=Z,196μm,19.4s
GZH2 L L
comp=Z,625μm,20.3s
U35K Hyder 42.77 52 P P 02 57 13.6 +1.6
baz=292,SNR=37
U35K S S 03 03 40.2 +8.1
baz=292
MOBC Moresby Island 42.81 57 P P 02 57 12.7 +0.2
KEKH Kekaha 43.01 113 P P 02 57 15.4 +1.0
WRGLY Wrigley 43.32 40 P P 02 57 17.6 +1.3
baz=289,SNR=384
WRGLY S S 03 03 45.8 +5.8
baz=289
HKC Hong Kong Obse 43.41 248 ⇑P P 02 57 18.0 +0.4
SZP Santa 43.42 237 P P 02 57 18.5 +0.8
comp=Z,3μm,1.2s
SZP Santa 43.42 237 ⇑P P 02 57 16.8 -0.9
HKPS Hong Kong Po S 43.45 248 P P 02 57 19.4 +1.4
comp=Z,1μm,1.4s
HKPS Hong Kong Po S 43.45 248 P P 02 57 18.2 +0.3
HG4B Hotspring 43.59 57 P P 02 57 18.5 -0.2
HG4B IAmb IAmb 02 57 43.0
comp=Z,4μm,1.5s
GULI GuiLin 43.63 255 P P 02 57 20.8 +1.4
GULI S S 03 03 55.3 +10
GULI pmax pmax
comp=Z,120nm,1.2s
GULI L L
comp=Z,243μm,22.8s
GULI L L
comp=Z,406μm,19.5s
GULI L L
comp=Z,565μm,19.5s
MCO Taipa Grande 43.93 249 P P 02 57 22.0 +0.2
ZAA0 Zalesovo Array 43.93 305 P P 02 57 20.8 -0.7
ZALV Zalesovo Beam 43.93 305 P P 02 57 20.8 -0.7
comp=Z,221nm,0.6s,baz=62,slow=7.4,SNR=349
ZALV PcP **PcP 02 59 07.8 +1.2**
comp=Z,75nm,0.7s,baz=46,slow=4.8,SNR=0.9
ZALV P3KP 03 28 10.0
comp=Z,3.1nm,0.9s,baz=251,slow=4.4,SNR=2.0
comp=Z,221nm,0.6s
ZALV Zalesovo Beam 43.93 305 P P 02 57 20.6 -0.8
KOTAN Kotaneelee Air 44.14 45 P P 02 57 23.9 +0.8
baz=292,SNR=27
KOTAN S **S 03 03 55.7 +3.6**
baz=292
CD2 Chengdu 44.15 267 ⇑P P 02 57 23.5 -0.1
CD2 S **S 03 03 51.9 -1.1**
CD2 pmax pmax
comp=Z,4μm,1.3s
CD2 pmax pmax
comp=Z,28μm,4.7s
CD2 L L
comp=Z,377μm,17.1s
CD2 L L
comp=Z,707μm,17.1s
CD2 L L
comp=Z,1122μm,18.4s
KIP Kipapa 44.47 112 P P 02 57 27.4 +1.4
KIP IAmb IAmb 02 57 43.1
comp=Z,2μm,1.1s
KIP Kipapa 44.47 112 P P 02 57 27.5 +1.4
KIP pmax pmax
comp=Z,2μm,1.1s
KIP Kipapa 44.47 112 P P 02 57 28.4 +2.3
KIP pP **sP 02 57 42.5 -0.2**
GYA Guiyang 45.20 259 ⇑P P 02 57 31.8 -0.2
GYA pP sP 02 57 46.9 -1.0
GYA S **S 03 04 10.8 +2.4**
GYA pmax pmax
comp=Z,260nm,1.4s
GYA L L
comp=Z,298μm,19.3s
GYA L L
comp=Z,254μm,19.4s
GYA L L
comp=Z,354μm,17.9s
BBB Bella Bella 45.35 56 LR LR 03 14 29.1
comp=Z,505μm,21.8s,baz=296,slow=33
BBB Bella Bella 45.35 56 ⇑P P 02 57 33.5 +0.8
KHLH Kahului Airpor 45.84 111 P P 02 57 38.5 +1.5
KHLH IAmb IAmb 02 57 53.7
comp=Z,2μm,1.1s
GOMU GeErMu 46.80 279 P P 02 57 44.3 -0.6
GOMU S **S 03 04 32.3 +0.6**
GOMU L L
comp=Z,412μm,16.8s
GOMU L L
comp=Z,338μm,16.8s
GOMU L L
comp=Z,556μm,17.7s
ZSN Zaisan 46.90 297 eP **P 02 57 45.4 +0.4**
ZSN eS **S 03 04 31.4 -0.7**
WMQ Urumqi 47.07 292 ⇓P P 02 57 47.8 +1.3
WMQ PcP **PcP 02 59 18.8 +1.0**
WMQ PP **PP 02 59 37.0 -0.4**
WMQ S **S 03 04 38.0 +3.2**
WMQ sS sS 03 04 57.8 +3.7
WMQ SS **SS 03 07 55.6 -6.2**
WMQ pmax pmax
comp=Z,95nm,0.9s
WMQ pmax pmax
comp=Z,2μm,4.1s
WMQ L L
comp=Z,293μm,16.9s
WMQ L L
comp=Z,126μm,20.7s
WMQ L L
comp=Z,107μm,23.9s
HUH Hualalai 47.11 111 P P 02 57 48.4 +1.1
HUH IAmb IAmb 02 58 48.5
comp=Z,2μm,1.2s
POHA Pohakuloa 47.24 111 P P 02 57 49.3 +1.0
POHA IAmb IAmb 02 58 04.2
comp=Z,3μm,1.0s
POHA Pohakuloa 47.24 111 P P 02 57 50.2 +1.9
POHA sP **pwP 02 58 11.8 +4.4**

YKA	**Yellowknife Ar**	**47.34**	**39**	P		**P**		**02 57 48.5**	**+0.3**	
	comp=Z,427nm,1.0s,baz=299,slow=8.4,SNR=1104									
YKA				S		**S**		**03 04 38.7**	**+0.7**	
	comp=Z,4.1nm,0.7s,baz=17,slow=7.9,SNR=1.1									
YKA				LR		LR		03 20 02.5		
	comp=Z,369µm,20.6s,baz=300,slow=39									
YKA				P3KP				03 28 08.3		
	comp=Z,2.3nm,1.1s,baz=191,slow=2.2,SNR=4.0									
YKA				PKPPKP		P'P'df		03 28 54.9	-15	
	comp=Z,6.8nm,0.9s,baz=186,slow=1.9,SNR=7.8									
	comp=Z,427nm,1.0s									
WOH	**Wood Valley**	**47.65**	**111**	P		**P**		**02 57 52.4**	**+1.2**	
RES	**Resolute Bay**	**47.82**	**20**	LR		LR		03 20 14.1		
	comp=Z,283µm,21.1s,baz=299,slow=39									
RES	**Resolute Bay**	**47.82**	**20**	⇑P		**P**		**02 57 52.1**	**+0.4**	
CBB	**Campbell River**	**47.89**	**58**	P		**P**		**02 57 52.8**	**+0.1**	
CBB				IAmb		IAmb		02 58 17.2		
	comp=Z,3µm,1.7s									
SEM	**Semipalatinsk**	**48.05**	**303**	*e*P		**P**		**02 57 54.3**	**0.0**	
SEM				*e*S		**S**		**03 04 47.9**	**-1.0**	
SEM				LR		LR		03 18 35.8		
	comp=Z,128µm,15.6s									
PZH	**PanZhiHua**	**48.38**	**264**	P		**P**		**02 57 56.8**	**-0.1**	
PZH				PP		**PP**		**02 59 51.0**	**+1.3**	
PZH				S		**S**		**03 04 56.3**	**+2.4**	
PZH				sS		**sS**		**03 05 10.3**	**-2.9**	
PZH				pmax		pmax				
	comp=Z,350nm,1.5s									
PZH				pmax		pmax				
	comp=Z,11µm,9.8s									
PZH				L		L				
	comp=Z,270µm,22.2s									
PZH				L		L				
	comp=Z,217µm,19.0s									
PZH				L		L				
	comp=Z,295µm,18.6s									
QIZ	**Qiongzhong**	**48.53**	**250**			**P**		**02 57 58.8**	**+0.8**	
QIZ				IAmb		IAmb		02 58 35.0		
	comp=Z,3µm,1.4s									
QIZ	**Qiongzhong**	**48.53**	**250**	P		**P**		**02 57 59.0**	**+1.0**	
QIZ				sP		**sP**		**02 58 11.5**	**-2.3**	
QIZ				PP		**PP**		**02 59 54.3**	**+3.3**	
QIZ				S		**S**		**03 04 57.8**	**+2.0**	
QIZ				pmax		pmax				
	comp=Z,240nm,1.6s									
QIZ				pmax		pmax				
	comp=Z,15µm,9.0s									
QIZ				L		L				
	comp=Z,182µm,21.1s									
QIZ				L		L				
	comp=Z,203µm,18.6s									
QIZ				L		L				
	comp=Z,276µm,24.0s									
KMI2	**Kunming**	**48.65**	**261**	⇑P		**P**		**02 57 59.1**	**0.0**	
KMI2				pP		sP		02 58 13.4	-1.6	
KMI2				pmax		pmax				
	comp=Z,2µm,1.2s									
KMI2				pmax		pmax				
	comp=Z,99µm,5.5s									
KMI2				L		L				
	comp=Z,490µm,19.9s									
KMI2				L		L				
	comp=Z,210µm,17.4s									
KMI2				L		L				
	comp=Z,467µm,22.9s									
MK31	**Makanchi Array**	**48.74**	**298**	*d i*P		**P**		**02 57 59.1**	**-0.2**	
MKAR	**Makanchi Array**	**48.74**	**298**	P		**P**		**02 57 59.2**	**-0.2**	
	comp=Z,879nm,0.9s,baz=62,slow=6.8,SNR=929									
MKAR				S		**S**		**03 04 57.0**	**-1.3**	
	comp=Z,20nm,0.9s,baz=344,slow=3.9,SNR=0.5									
MKAR				LR		LR		03 20 06.8		
	comp=Z,753µm,18.4s,baz=38,slow=38									
MKAR				P3KP				03 28 01.0		
	comp=Z,2.8nm,1.0s,baz=202,slow=1.3,SNR=4.0									
MKAR				PKPPKP				03 28 58.5		
	comp=Z,17nm,1.1s,baz=260,slow=3.3,SNR=5.6									
MKAR				P4KPbc				03 35 38.0		
	comp=Z,2.4nm,0.9s,baz=350,slow=2.0,SNR=4.8									
	comp=Z,879nm,0.9s									
MKAR	**Makanchi Array**	**48.74**	**298**	P		**P**		**02 57 59.3**	**0.0**	
MKAR	**Makanchi Array**	**48.74**	**298**	*i* P		**P**		**02 57 59.2**	**-0.2**	
MKAR				pmax		pmax				
	comp=Z,878nm,0.9s									
KURK	**Kurchatov**	**48.80**	**304**	P		**P**		**02 57 59.4**	**-0.3**	
KURK	**Kurchatov**	**48.80**	**304**	P		**P**		**02 57 59.4**	**-0.3**	
KURK				pmax		pmax				
	comp=Z,3µm,0.8s									
KURK	**Kurchatov**	**48.80**	**304**	P		**P**		**02 58 00.2**	**+0.6**	
KURK				S		**S**		**03 04 58.2**	**-0.7**	
KURK	**Kurchatov**	**48.80**	**304**	*e*P		**P**		**02 57 59.5**	**-0.1**	
KURBB	**Kurchatov Arra**	**48.90**	**304**	P		**P**		**02 58 00.1**	**-0.3**	
	comp=Z,1µm,0.9s,baz=66,slow=8.5,SNR=618									
KURBB				S		**S**		**03 05 00.0**	**-0.2**	
	comp=Z,6.0nm,0.7s,baz=225,slow=53,SNR=1.5									
KURBB				P3KP				03 28 03.6		
	comp=Z,5.1nm,1.2s,baz=199,slow=1.9,SNR=5.7									
KURBB				PKPPKP				03 29 01.1		
	comp=Z,13nm,1.1s,baz=267,slow=2.8,SNR=5.3									
KURBB				P4KPbc				03 35 38.6		
	comp=Z,2.8nm,0.8s,baz=58,slow=3.9,SNR=10									
	comp=Z,1µm,0.9s									
KURBB	**Kurchatov Arra**	**48.90**	**304**	P		**P**		**02 58 00.4**	**0.0**	
MAKZ	**Makanchi**	**48.92**	**298**	P		**P**		**02 58 00.1**	**-0.6**	
MAKZ	**Makanchi**	**48.92**	**298**	P		**P**		**02 58 00.1**	**-0.6**	
MAKZ				pmax		pmax				
	comp=Z,7µm,1.8s									
TARA	**Tarawa**	**49.08**	**160**	P		**P**		**02 58 02.9**	**+0.8**	
TARA				IAmb		IAmb		02 58 38.0		
	comp=Z,2µm,1.2s									
C03A	**Quillayute Air**	**49.41**	**60**	P		**P**		**02 58 05.2**	**+0.8**	
DAV	**Davao City (W)**	**49.71**	**224**	P		**P**		**02 58 07.3**	**+0.3**	
NOR	**Nord**	**49.76**	**359**	⇑P		**P**		**02 58 06.0**	**-0.7**	
NOR	**Nord**	**49.76**	**359**	*i* P		**P**		**02 58 06.7**	**+0.1**	
NOR				IAmb		IAmb		02 58 15.6		
	comp=Z,358nm,0.9s									
NLWA	**Neilton Lookou**	**50.11**	**60**	P		**P**		**02 58 10.4**	**+0.6**	
NLWA				IAmb		IAmb		02 58 33.6		
	comp=Z,3µm,1.4s									
KBS	**Kingsbay**	**50.88**	**352**	P		**P**		**02 58 15.2**	**+0.2**	
KBS				IAmb		IAmb		02 58 47.9		
	comp=Z,3µm,1.1s									
KBS	**Kingsbay**	**50.88**	**352**	P		**P**		**02 58 15.2**	**+0.2**	
KBS				pmax		pmax				
	comp=Z,3µm,1.1s									
KBS	**Kingsbay**	**50.88**	**352**	⇑P		**P**		**02 58 15.2**	**+0.2**	
KBS	**Kingsbay**	**50.88**	**352**	*i* P		**P**		**02 58 16.4**	**+1.3**	
SPA0	**Spitsbergen Ar**	**51.08**	**350**	*e*P		**P**		**02 58 18.6**	**+2.0**	
SPITS	**Spitsbergen Ar**	**51.08**	**350**	P		**P**		**02 58 16.1**	**-0.5**	
	comp=Z,398nm,0.6s,baz=61,slow=8.7,SNR=173									
SPITS				S		**S**		**03 05 27.8**	**-2.3**	
	comp=Z,26nm,0.9s,baz=132,slow=15,SNR=0.9									
SPITS				LR		LR		03 22 24.2		
	comp=Z,501µm,18.9s,baz=28,slow=39									
SPITS				PKP2bc		P'P'df		03 29 19.4	+14	
	comp=Z,19nm,1.0s,baz=191,slow=4.4,SNR=2.8									
	comp=Z,398nm,0.6s									
SPITS	**Spitsbergen Ar**	**51.08**	**350**	P		**P**		**02 58 15.9**	**-0.7**	
SPITS				pmax		pmax				
	comp=Z,12µm,1.5s									
SPB2	**Spitsbergen Ar**	**51.08**	**350**	P		**P**		**02 58 16.2**	**-0.4**	
HOPEN	**Hopen**	**51.35**	**347**	*i* P		**P**		**02 58 17.8**	**-0.8**	
HOPEN				*e*				02 58 24.4		
HOPEN				IVmB				02 58 24.4		
	comp=Z,17µm,2.5s									
HOPEN				*e*pP		**sP**		**02 58 33.5**	**-1.5**	
HOPEN				*e*S		**S**		**03 05 33.4**	**-0.3**	
HOPEN				*e*SS		**SS**		**03 09 12.1**	**+3.1**	
HOPEN				*e*				03 11 19.0		
HOPEN				IVMs_BB		IVMs_BB		03 23 37.1		
	comp=Z,228µm,18.9s									
TULEG	**Thule**	**51.43**	**13**	P		**P**		**02 58 18.7**	**-0.5**	
TULEG				IAmb		IAmb		02 58 49.5		
	comp=Z,2µm,1.2s									
TULEG	**Thule**	**51.43**	**13**	⇑P		**P**		**02 58 18.8**	**-0.4**	
TULEG	**Thule**	**51.43**	**13**	*i* P		**P**		**02 58 18.7**	**-0.5**	
TULEG				IAmb		IAmb		02 58 25.4		
	comp=Z,2µm,1.5s									
MANU	**Manus Island**	**51.49**	**193**	P		**P**		**02 58 20.8**	**+0.5**	
MANU				IAmb		IAmb		02 58 49.9		
	comp=Z,4µm,1.6s									
MANU	**Manus Island**	**51.49**	**193**	⇑P		**P**		**02 58 21.3**	**+1.0**	
TNCH	**TengChong**	**51.51**	**265**	P		**P**		**02 58 21.5**	**+0.8**	
TNCH				S		**S**		**03 05 37.6**	**0.0**	
TNCH				SS		**SS**		**03 09 11.1**	**-2.7**	
TNCH				pmax		pmax				
	comp=Z,4µm,1.5s									
TNCH				pmax		pmax				
	comp=Z,10µm,3.7s									
TNCH				L		L				
	comp=Z,271µm,19.7s									
TNCH				L		L				
	comp=Z,137µm,20.2s									
TNCH				L		L				
	comp=Z,423µm,24.1s									
PASG	**PASIGHAT**	**51.57**	**270**	*e*P		**P**		**02 58 22.6**	**+1.6**	
PASG				IAmb		IAmb		02 58 59.3		
	comp=Z,5µm,1.3s									
LKP	**Lekhapani**	**51.71**	**269**	IAmb		IAmb		02 58 29.6		
	comp=Z,17µm,1.6s									
BVA0	**Borovoye Array**	**51.93**	**310**	*i* P		**P**		**02 58 23.4**	**+0.1**	
BVAR	**Borovoye Array**	**51.93**	**310**	P		**P**		**02 58 23.0**	**-0.2**	
	comp=Z,271nm,0.6s,baz=53,slow=7.7,SNR=542									
BVAR				S		**S**		**03 05 35.0**	**-7.3**	
	comp=Z,13nm,0.7s,baz=133,slow=54,SNR=1.5									
BVAR				LR		LR		03 22 39.1		
	comp=Z,275µm,20.4s,baz=41,slow=39									
BVAR				P3KP				03 27 56.9		
	comp=Z,0.8nm,0.7s,baz=190,slow=2.5,SNR=1.8									
BVAR				PKPPKP				03 28 57.6		
	comp=Z,17nm,1.1s,baz=196,slow=2.8,SNR=4.6									
BVAR				P4KPbc				03 35 48.9		
	comp=Z,2.0nm,0.5s,baz=59,slow=2.4,SNR=6.9									
	comp=Z,271nm,0.6s									
BORK	**Borovoye**	**51.95**	**310**	P		**P**		**02 58 23.0**	**-0.4**	
BORK				IAmb		IAmb		02 58 47.9		
	comp=Z,2µm,0.8s									
BORK	**Borovoye**	**51.95**	**310**	*c i*P		**P**		**02 58 23.1**	**-0.4**	
BORK				pmax		pmax				
	comp=Z,1µm,0.8s									
BORK				MLR		MLR				
	comp=Z,254µm,17.0s									
BORK	**Borovoye**	**51.95**	**310**	⇑P		**P**		**02 58 23.2**	**-0.2**	
BORK	**Borovoye**	**51.95**	**310**	P		**P**		**02 58 23.4**	**0.0**	
BORK				pP		**sP**		**02 58 37.8**	**-1.7**	
BORK				PcP		**PcP**		**02 59 34.0**	**-1.3**	
COR	**Corvallis**	**51.99**	**63**	P		**P**		**02 58 24.0**	**+0.2**	
COR				IAmb		IAmb		02 58 47.0		
	comp=Z,2µm,1.2s									
COR	**Corvallis**	**51.99**	**63**	P		**P**		**02 58 24.0**	**+0.2**	
COR				pmax		pmax				
	comp=Z,2µm,1.3s									
TDK	**Taldyqorghan**	**51.99**	**298**	*e*P		**P**		**02 58 24.4**	**+0.5**	
	comp=Z,2µm,0.8s									
TDK				*e*S		**S**		**03 05 42.9**	**-0.6**	
TDK				LR		LR		03 20 57.3		
	comp=Z,517µm,16.4s									
HSPB	**Hornsund (broa**	**52.18**	**350**	*e*P		**P**		**02 58 25.3**	**+0.5**	
HSPB				*e*S		**S**		**03 05 44.7**	**-0.5**	
HSPB				*e*L		L		03 17 50.1		
	comp=Z,581µm,26.0s									
PDGK	**Podgornoye**	**52.31**	**295**	P		**P**		**02 58 26.9**	**+0.5**	
BRZS	**Berezniki**	**52.41**	**306**	*e*P		**P**		**02 58 27.1**	**+0.2**	
SHLS	**Shalkode**	**52.43**	**295**	*e*P		**P**		**02 58 25.4**	**-1.9**	
	comp=Z,3µm,2.0s									
SHLS				*e*S		**S**		**03 05 45.4**	**-4.3**	
UZB	**Uzynbulak**	**52.70**	**296**	*e*P		**P**		**02 58 29.5**	**+0.2**	
NEEM	**North Greenlan**	**52.70**	**8**	⇑P		**P**		**02 58 28.5**	**-0.5**	
NEEM	**North Greenlan**	**52.70**	**8**	*i* P		**P**		**02 58 29.2**	**+0.2**	
NEEM				IAmb		IAmb		02 58 33.4		
	comp=Z,6µm,2.3s									
KPKS	**Kokpek**	**52.71**	**296**	*e*P		**P**		**02 58 29.9**	**+0.5**	
SGSI	**Sangihe**	**52.73**	**222**	P		P		02 58 34.7	+5.1	
POIN	**Pond Inlet**	**52.77**	**18**	P		**P**		**02 58 28.7**	**-0.4**	
ARXS	**Arharly**	**52.79**	**297**	*e*P		**P**		**02 58 29.7**	**-0.1**	
KBO	**Bosley Butte**	**52.81**	**66**	P		**P**		**02 58 31.1**	**+1.0**	
ZIRO	**ZIRO**	**52.90**	**271**	*e*P		**P**		**02 58 32.0**	**+1.0**	
ZIRO				IAmb		IAmb		02 59 05.3		
	comp=Z,11µm,1.6s									
ZIRO				IAMs_20		IAMs_20		03 06 42.6		
	comp=Z,122µm,16.7s									
RABL	**Rabaul**	**53.05**	**187**	P		**P**		**02 58 33.1**	**+1.2**	
JORH	**JORHAT**	**53.16**	**270**	*e*P		**P**		**02 58 34.4**	**+1.7**	
JORH				IAmb		IAmb		02 59 07.2		
	comp=Z,37µm,2.5s									
JORH				IAMs_20		IAMs_20		03 06 46.5		
	comp=Z,152µm,17.9s									
WIFE	**Three Sisters-**	**53.17**	**63**	P		**P**		**02 58 33.4**	**+0.6**	
KRVT	**Keravat (AS076**	**53.17**	**187**	LR		LR		03 19 53.0		
	comp=Z,32µm,18.9s,baz=279,slow=34									
ITAN	**ITANAGAR**	**53.24**	**270**	*e*P		**P**		**02 58 34.7**	**+1.4**	
ITAN				IAmb		IAmb		02 58 57.6		
	comp=Z,5µm,1.0s									
ITAN				IAMs_20		IAMs_20		03 06 27.9		
	comp=Z,144µm,20.5s									
BAKI	**Biak**	**53.25**	**207**	P		**P**		**02 58 35.7**	**+2.3**	
	comp=Z,312µmcomp=Z,74µmcomp=Z,4µm,1.6s									
LSA	**Lhasa**	**53.25**	**275**	P		**P**		**02 58 34.8**	**+0.8**	
LSA				IAmb		IAmb		02 59 13.8		
	comp=Z,2µm,1.1s									
LSA	**Lhasa**	**53.25**	**275**	P		**P**		**02 58 34.8**	**+0.8**	
LSA				pmax		pmax				
	comp=Z,2µm,1.1s									
LSA	**Lhasa**	**53.25**	**275**	P		**P**		**02 58 33.1**	**-0.8**	
LSA				pmax		pmax				
	comp=Z,150nm,1.3s									
LSA				L		L				
	comp=Z,232µm,18.0s									
LSA				L		L				
	comp=Z,243µm,22.6s									
LSA				L		L				
	comp=Z,480µm,20.5s									
JAY	**Jayapura**	**53.26**	**201**	LR		LR		03 20 22.3		
	comp=Z,99µm,19.1s,baz=356,slow=35									
JAY				PKPPKP				03 28 56.8		
	comp=Z,16nm,1.0s,baz=186,slow=1.9,SNR=3.1									
JAY	**Jayapura**	**53.26**	**201**	P		**P**		**02 58 34.5**	**+1.0**	
SMPI	**Sarmi**	**53.27**	**204**	P		**P**		**02 58 34.7**	**+1.2**	
MOKO	**MOKOCHONG**	**53.27**	**269**	*e*P		**P**		**02 58 35.9**	**+2.2**	
MOKO				IAmb		IAmb		02 59 09.0		
	comp=Z,13µm,1.4s									
NEW	**Newport**	**53.41**	**56**	LR		LR		03 19 33.4		
	comp=Z,263µm,21.4s,baz=302,slow=34									
GAMI	**Gamla, Maluku**	**53.43**	**218**	P		**P**		**02 58 33.7**	**-1.0**	
	comp=Z,61µmcomp=Z,2µm,1.0s									
PRZ	**Przheval'sk**	**53.45**	**295**	P		**P**		**02 58 35.0**	**+0.1**	
PRZ	**Przheval'sk**	**53.45**	**295**	P		**P**		**02 58 35.0**	**+0.1**	
PRZ				pmax		pmax				
	comp=Z,5µm,1.4s									
GENI	**Genyem**	**53.47**	**202**	P		**P**		**02 58 36.0**	**+1.0**	
	comp=Z,3µm,1.6s									
GENI	**Genyem**	**53.47**	**202**	P		**P**		**02 58 36.7**	**+1.7**	
	comp=Z,348µmcomp=Z,98µmcomp=Z,3µm,1.5s									
GENI	**Genyem**	**53.47**	**202**	⇑P		**P**		**02 58 36.8**	**+1.9**	
MWPI	**Manokwari, Pap**	**53.66**	**210**	P		**P**		**02 58 38.5**	**+2.1**	
	comp=Z,334µmcomp=Z,81µmcomp=Z,3µm,1.7s									
WUS	**Wushi**	**53.72**	**293**			**P**		**02 58 36.9**	**+0.1**	
SRPI	**Serui, Papua**	**53.85**	**207**	P		**P**		**02 58 40.1**	**+2.3**	
	comp=Z,264µmcomp=Z,53µmcomp=Z,1µm,1.8s									
MDOK	**Medeo**	**53.86**	**297**	*e*P		**P**		**02 58 38.0**	**+0.2**	
MDOK				LR		LR		03 22 20.0		
BJO1	**Bjornoya**	**53.87**	**347**	⇑*i*P		**P**		**02 58 36.9**	**-0.3**	
BJO1				*e*pP		**sP**		**02 58 52.2**	**-1.4**	
BJO1				IVmB_BB				02 59 00.3		
	comp=Z,66µm,7.0s									
BJO1				*e*S		**S**		**03 06 08.0**	**-0.1**	
BJO1				*e*SS		**SS**		**03 09 50.9**	**+2.1**	
BJO1				*e*				03 12 10.7		
BJO1				IVMs_BB		IVMs_BB		03 24 38.5		
	comp=Z,135µm,19.1s									
AAA	**Alma-Ata**	**53.91**	**297**	*e*P		**P**		**02 58 41.1**	**+3.0**	
AAA	**Alma-Ata**	**53.91**	**297**	*e*P		**P**		**02 58 38.4**	**+0.3**	
	comp=Z,2µm,1.7s									
AAA				LR		LR		03 22 26.2		
	comp=Z,439µm,15.8s									
KOHI	**KOHIMA**	**53.95**	**269**	*e*P		**P**		**02 58 39.2**	**+0.6**	
KOHI				IAmb		IAmb		02 59 17.0		
	comp=Z,29µm,1.9s									
KOHI				IAMs_20		IAMs_20		03 06 56.7		
	comp=Z,122µm,16.7s									
TNSS	**Tian-Shan**	**53.99**	**297**	*e*P		**P**		**02 58 39.1**	**0.0**	
	comp=Z,2µm,1.4s									
YBH	**Yreka Blue Hor**	**54.01**	**65**	LR		LR		03 17 37.0		
	comp=Z,51µm,21.8s,baz=292,slow=31									
YBH				PKPPKP				03 28 52.9		
	comp=Z,0.5nm,1.1s,baz=119,slow=3.8,SNR=4.3									
YBH				P4KPbc				03 35 58.4		
	comp=Z,0.1nm,0.8s,baz=10,slow=3.8,SNR=2.4									
YBH	**Yreka Blue Hor**	**54.01**	**65**	P		**P**		**02 58 39.9**	**+1.0**	
YBH				IAmb		IAmb		02 59 03.6		
	comp=Z,5µm,1.8s									
YBH	**Yreka Blue Hor**	**54.01**	**65**	P		**P**		**02 58 39.9**	**+1.0**	
YBH				pmax		pmax				
	comp=Z,5µm,1.8s									
UBPT	**Khong Chiam**	**54.09**	**251**	P		**P**		**02 58 40.3**	**+0.8**	
RKPI	**Ransiki, Papua**	**54.16**	**210**	P		**P**		**02 58 40.9**	**+0.8**	
	comp=Z,320µmcomp=Z,65µmcomp=Z,2µm,2.4s									
TAWA	**Tawang**	**54.17**	**272**	*e*P		**P**		**02 58 42.5**	**+1.9**	
TAWA				IAmb		IAmb		02 59 21.9		
	comp=Z,5µm,1.0s									
TAWA				IAMs_20		IAMs_20		03 06 43.9		
	comp=Z,108µm,17.9s									
TEZP	**TEZPUR**	**54.21**	**271**	*e*P		**P**		**02 58 40.9**	**+0.5**	
TEZP				IAmb		IAmb		02 59 14.2		
	comp=Z,17µm,2.1s									
TEZP				IAMs_20		IAMs_20		03 06 40.1		
	comp=Z,130µm,19.2s									
TARG	**Taragay, Kyrgy**	**54.26**	**295**	P		**P**		**02 58 41.1**	**0.0**	
TARG				IAmb		IAmb		02 59 19.9		
	comp=Z,3µm,1.2s									
TARG	**Taragay, Kyrgy**	**54.26**	**295**	P		**P**		**02 58 41.1**	**0.0**	
TARG				pmax		pmax				
	comp=Z,3µm,1.2s									
KMRM	**Mail Ridge**	**54.31**	**68**	P		**P**		**02 58 42.2**	**+1.2**	
KMRM				IAmb		IAmb		02 59 15.5		
	comp=Z,3µm,1.3s									
KDJ	**Kajisay**	**54.39**	**296**	P		**P**		**02 58 41.9**	**+0.2**	
KDJ	**Kajisay**	**54.39**	**296**	P		**P**		**02 58 41.9**	**+0.2**	
KDJ				pmax		pmax				
	comp=Z,3µm,0.9s									
SVE	**Sverdlovsk**	**54.40**	**318**	*d i*P		**P**		**02 58 41.4**	**+0.1**	
SVE				*e*				03 00 48.5		
SVE				*e*S		**S**		**03 06 14.5**	**-1.2**	
SVE				pmax		pmax				
	comp=Z,3µm,1.5s									
SVE				pmax		pmax				
	comp=Z,57µm,14.3s									
SVE				MLR		MLR				
	comp=Z,418µm,18.0s									
BTLS	**Baital**	**54.49**	**300**	*e*P		**P**		**02 58 42.6**	**+0.4**	
SWI	**Sorong**	**54.56**	**213**	P		**P**		**02 58 43.3**	**+0.4**	
	comp=Z,346µmcomp=Z,82µmcomp=Z,4µm,1.5s									
SIJI	**Sorong**	**54.56**	**213**	LR		LR		03 20 06.6		
	comp=Z,110µm,20.2s,baz=21,slow=34									
SIJI	**Sorong**	**54.56**	**213**	P		**P**		**02 58 43.3**	**+0.3**	
	comp=Z,286µmcomp=Z,69µmcomp=Z,3µm,1.5s									
TNTI	**Ternate**	**54.56**	**218**	P		**P**		**02 58 43.6**	**+0.6**	
	comp=Z,1µm,1.8s									
TNTI	**Ternate**	**54.56**	**218**	P		**P**		**02 58 42.7**	**-0.3**	
TNTI				IAmb		IAmb		02 59 07.5		
	comp=Z,5µm,1.7s									
TNTI	**Ternate**	**54.56**	**218**	P		**P**		**02 58 43.4**	**+0.4**	
	comp=Z,45µmcomp=Z,1µm,1.8s									
TNTI	**Ternate**	**54.56**	**218**	⇑P		**P**		**02 58 43.2**	**+0.2**	
DAG	**Danmarks Havn**	**54.63**	**359**	⇑P		**P**		**02 58 42.2**	**-0.6**	
DAG	**Danmarks Havn**	**54.63**	**359**	*i* P		**P**		**02 58 43.0**	**+0.2**	
DAG				IAmb		IAmb		02 58 49.3		
	comp=Z,720nm,0.8s									
KULLO	**Kullorsuaq**	**54.65**	**11**	*i* P		**P**		**02 58 42.7**	**-0.2**	
KULLO				IAmb		IAmb		02 58 49.5		
	comp=Z,4µm,1.4s									
IMP	**Imphal**	**54.66**	**268**	*e*P		**P**		**02 58 43.8**	**0.0**	
IMP				IAmb		IAmb		02 59 15.9		
	comp=Z,6µm,1.3s									
IMP				IAMs_20		IAMs_20		03 07 06.3		
	comp=Z,108µm,14.1s									
TKM2	**Tokmak 2**	**54.86**	**297**	P		**P**		**02 58 45.4**	**+0.3**	
	SNR=83									
ULHL	**Ulahol**	**54.88**	**296**	P		**P**		**02 58 46.5**	**+1.2**	
	SNR=27									
MNI	**Manado**	**55.03**	**222**	P		**P**		**02 58 46.5**	**+0.1**	
	comp=Z,335µmcomp=Z,59µmcomp=Z,2µm,0.9s									
SGDS	**Sogindy**	**55.10**	**298**	*e*P		**P**		**02 58 47.1**	**+0.4**	
	comp=Z,101nm,0.9s									
SGDS				*e*S		**S**		**03 06 25.2**	**-0.5**	
GUWA	**GUWAHATI**	**55.22**	**271**	*e*P		**P**		**02 58 47.9**	**+0.2**	
GUWA				*e*P		**P**		**02 58 48.1**	**+0.3**	
GUWA				IAmb		IAmb		02 59 06.4		
	comp=Z,2µm,0.9s									
GUWA				IAMs_20		IAMs_20		03 06 53.5		
	comp=Z,82µm,21.8s									
KKM	**Kota Kinabalu**	**55.23**	**233**	P

comp=Z,328µm,18.6s,baz=45,slow=39
CMAR PKPPKP **P'P'df** **03 28 54.9 +1.7**
comp=Z,2.4nm,0.8s,baz=235,slow=4.8,SNR=4.8
CMAR P4KPbc 03 36 07.7
comp=Z,2.0nm,0.3s,baz=13,slow=3.7,SNR=5.3
comp=Z,156nm,0.9s
CMAR Chiang Mai Arr 55.88 259 P **P** **02 58 53.0 +0.5**
CMAR Chiang Mai Arr 55.88 259 *i* P **P** **02 58 53.4 +0.9**
CMAR pmax pmax
comp=Z,161nm,0.9s
PLID Pearl Lake 55.91 59 P **P** **02 58 52.7 0.0**
PLID IAmb IAmb 02 59 17.2
comp=Z,3µm,1.5s
UCH Uchtor 55.91 297 P **P** **02 58 53.4 +0.4**
SNR=71
WVOR Wild Horse Val 56.00 63 P **P** **02 58 53.9 +0.6**
WVOR Wild Horse Val 56.00 63 P **P** **02 58 53.9 +0.6**
LVZ Lovozero 56.05 338 P **P** **02 58 52.0 -1.2**
LVZ IAmb IAmb 02 59 10.0
comp=Z,3µm,1.4s
LVZ Lovozero 56.05 338*c i*P **P** **02 58 52.7 -0.4**
LVZ pmax pmax
comp=Z,1µm,1.2s
LVZ MLR MLR
comp=Z,523µm,22.0s
EKS2 Erkin-Say 56.08 298 P **P** **02 58 54.5 +0.6**
SNR=232
MCCM Marconi Confer 56.09 69 ⇑P **P** **02 58 54.1 +0.4**
FAKI Fak Fak 56.12 211 P **P** **02 58 54.6 +0.4**
comp=Z,2µm,1.6s
FAKI Fak Fak 56.12 211 P **P** **02 58 54.2 0.0**
FAKI IAmb IAmb 02 59 22.6
comp=Z,3µm,1.3s
FAKI Fak Fak 56.12 211 P **P** **02 58 54.3 +0.1**
comp=Z,316µmcomp=Z,55µmcomp=Z,2µm,1.6s
FAKI Fak Fak 56.12 211 ⇑P **P** **02 58 54.4 +0.2**
HAMF Hammerfest 56.31 343 ⇑*i*P **P** **02 58 54.2 -0.7**
HAMF *ep*P **sP** **02 59 09.8 -1.3**
HAMF IVmB_BB 02 59 17.4
comp=Z,52µm,7.8s
HAMF *e*S **S** **03 06 38.2 -2.8**
HAMF *e*SS **SS** **03 10 30.7 +3.3**
HAMF *e* 03 13 28.0
HAMF IVMs_BB IVMs_BB 03 26 17.6
comp=Z,166µm,20.7s
KMPI Kaimana, Papua 56.33 209 P **P** **02 58 57.5 +1.8**
comp=Z,319µmcomp=Z,41µmcomp=Z,2µm,1.5s
KEV Kevo 56.38 342 P **P** **02 58 54.6 -0.7**
KEV IAmb IAmb 02 59 45.2
comp=Z,4µm,1.8s
KEV Kevo 56.38 342 P **P** **02 58 54.6 -0.7**
KEV pmax pmax
comp=Z,4µm,1.8s
UPNV Upernavik 56.40 12 *i*P **P** **02 58 55.0 -0.4**
UPNV IAmb IAmb 02 59 01.1
comp=Z,1µm,1.1s
DHUB DHUBRI 56.46 272 IAmb IAmb 02 59 30.0
comp=Z,12µm,2.2s
DHUB IAMs_20 IAMs_20 03 07 28.8
comp=Z,72µm,16.7s
GTK Tadong 56.50 274 *e*P **P** **02 58 57.6 +0.6**
GTK *e*P **P** **02 58 57.9 +0.9**
GTK IAmb IAmb 02 59 33.6
comp=Z,8µm,1.7s
GTK IAmb IAmb 02 59 34.1
comp=N,7µm,1.5s
GTK IAMs_20 IAMs_20 03 07 55.7
comp=Z,131µm,17.9s
BEKR Beckworth 56.56 66 P **P** **02 58 57.4 0.0**
BEKR IAmb IAmb 02 59 21.3
comp=Z,3µm,1.5s
GTOI Gorontalo 56.56 223 P **P** **02 58 56.4 -1.0**
comp=Z,311µmcomp=Z,38µmcomp=Z,1µm,1.5s
APA Apatity 56.62 338 ⇓*i*P **P** **02 58 54.9 -2.2**
APA *i* 02 59 52.3
APA *i* 03 01 04.8
APA *i*S **S** **03 06 37.7 -7.3**
APA pmax pmax
comp=Z,598nm,1.3s
APA MLR MLR
comp=Z,553µm,22.2s
COBR COOCHBEHAR 56.63 273 IAMs_20 IAMs_20 03 14 31.5
comp=Z,98µm,17.9s
TARAI Tarakan 56.83 230 P **P** **02 58 59.6 +0.3**
comp=Z,340µmcomp=Z,77µmcomp=Z,2µm,1.9s
ARA0 ARCESS Array S 56.86 342 *e*P **P** **02 58 58.8 -0.1**
ARA0 *ep*P **sP** **02 59 14.2 -0.9**
ARA0 IVmB_BB 02 59 21.6
comp=Z,63µm,8.4s
ARA0 *e*S **S** **03 06 48.2 0.0**
ARA0 *e*SS **SS** **03 10 37.7 +1.6**
ARA0 IVMs_BB IVMs_BB 03 24 54.3
comp=Z,207µm,23.4s
ARCES ARCESS Array B 56.86 342 P **P** **02 58 58.2 -0.6**
comp=Z,260nm,0.7s,baz=43,slow=8.0,SNR=127
ARCES S **S** **03 06 41.0 -7.3**
comp=Z,18nm,0.9s,baz=154,slow=34,SNR=1.5
ARCES LR LR 03 28 37.2
comp=Z,467µm,19.4s,baz=32,slow=42
ARCES PKPPKP 03 28 50.1
comp=Z,18nm,0.9s,baz=163,slow=1.3,SNR=4.6
comp=Z,260nm,0.7s
ARCES ARCESS Array B 56.86 342 P **P** **02 58 58.2 -0.6**
ARCES IAmb IAmb 02 59 30.9
comp=Z,2µm,1.2s
ARCES ARCESS Array B 56.86 342 P **P** **02 58 58.2 -0.6**
ARCES pmax pmax
comp=Z,2µm,1.2s
SAIH SAIHA 56.91 267 *e*P **P** **02 59 00.0 +0.1**
SAIH IAmb IAmb 02 59 38.2
comp=Z,10µm,1.1s
JPG JALPAIGURI 56.95 274 *e*P **P** **02 59 01.9 +1.9**
JPG IAmb IAmb 02 59 34.9
comp=Z,4µm,1.1s
JPG IAMs_20 IAMs_20 03 14 36.6
comp=Z,47µm,19.4s
AGT Agartala 57.09 269 *e*P **P** **02 59 04.4 +3.4**
AGT IAmb IAmb 02 59 41.8
comp=Z,15µm,1.5s
AGT IAMs_20 IAMs_20 03 07 37.7
comp=Z,303µm,15.4s
FFC Flin Flon 57.09 43 P **P** **02 59 00.7 0.0**
FFC IAmb IAmb 02 59 28.6
comp=Z,3µm,1.4s
FFC Flin Flon 57.09 43 P **P** **02 59 00.7 0.0**
FFC pmax pmax
comp=Z,3µm,1.5s
FFC Flin Flon 57.09 43 ⇑P **P** **02 59 00.8 0.0**
FFC Flin Flon 57.09 43 P **P** **02 59 01.1 +0.4**
FFC sP **pwP** **02 59 22.4 +1.3**
DBG Daneborg 57.13 359 ⇑P **P** **02 58 59.7 -0.9**
DBG Daneborg 57.13 359 *e*P **P** **02 58 60.0 -0.6**
DBG IAmb IAmb 02 59 07.2
comp=Z,356nm,0.8s
TOLI2 Tolitoli 57.17 226 P **P** **02 59 00.9 -0.8**
comp=Z,1µm,1.5s
TOLI2 Tolitoli 57.17 226 P **P** **02 59 01.1 -0.6**
TOLI2 IAmb IAmb 02 59 27.8
comp=Z,3µm,1.5s
KSH2 Kashi 57.19 294 P **P** **02 59 02.5 +0.7**
KSH2 pP sP 02 59 18.0 0.0
KSH2 S **S** **03 06 56.5 +2.8**
KSH2 pmax pmax
comp=Z,960nm,2.2s
KSH2 pmax pmax
comp=Z,83µm,8.2s
KSH2 L L
comp=Z,375µm,18.5s
KSH2 L L
comp=Z,403µm,19.6s
KSH2 L L
comp=Z,583µm,16.8s
EVN Everest 57.25 276 P **P** **02 59 03.2 +0.2**
EVN Everest 57.25 276 ⇑P **P** **02 59 03.6 +0.7**
DZA Taraz 57.35 299 *e*P **P** **02 59 03.1 +0.3**
comp=Z,2µm,2.0s
ARSB Arslanbob 57.37 297 P **P** **02 59 03.4 +0.4**
ARSB Arslanbob 57.37 297 P **P** **02 59 03.4 +0.4**
ARSB pmax pmax
comp=Z,15µm,1.8s
BELO BELONIA 57.40 269 *e*P **P** **02 59 05.1 +1.9**
BELO IAmb IAmb 02 59 34.3
comp=Z,18µm,1.4s
BELO IAMs_20 IAMs_20 03 07 40.9
comp=Z,197µm,15.4s
EGMT Eagleton 57.51 53 P **P** **02 59 03.8 0.0**

BRDH Bariadhala 57.67 268 LR LR 03 26 51.8
comp=Z,309µm,19.6s,baz=38,slow=39
SANI Sanana 57.69 219 P **P** **02 59 04.9 -0.4**
SANI Sanana 57.69 219 P **P** **02 59 04.5 -0.8**
comp=Z,3µm,0.9s
SANI Sanana 57.69 219 P **P** **02 59 04.4 -0.8**
comp=Z,274µmcomp=Z,62µmcomp=Z,3µm,0.9s
SANI Sanana 57.69 219 ⇑P **P** **02 59 04.8 -0.5**
KK31 Karatay Array 57.69 300 P **P** **02 59 04.6 -0.5**
KK31 IAmb IAmb 02 59 29.1
comp=Z,2µm,1.1s
KK31 Karatay Array 57.69 300 P **P** **02 59 04.6 -0.5**
KK31 pmax pmax
comp=Z,2µm,1.1s
KKAR Karatay Array 57.69 300 P **P** **02 59 04.7 -0.4**
KKAR Karatay Array 57.69 300 P **P** **02 59 04.7 -0.4**
MSAI Masohi 57.71 215 P **P** **02 59 06.1 +0.7**
comp=Z,379µmcomp=Z,91µmcomp=Z,2µm,1.2s
HLID Hailey 57.74 59 P **P** **02 59 06.3 +0.6**
HLID IAmb IAmb 02 59 29.9
comp=Z,3µm,1.4s
KTK1 Kautokeino 57.76 342 *e*P **P** **02 59 05.5 +0.4**
KTK1 *ep*P **sP** **02 59 21.0 -0.4**
KTK1 IVmB_BB 02 59 28.1
comp=Z,63µm,8.6s
KTK1 *e*S **S** **03 07 00.1 +0.1**
KTK1 *e*SS **SS** **03 10 52.5 +2.5**
KTK1 *e* 03 13 35.1
KTK1 IVMs_BB IVMs_BB 03 28 17.8
comp=Z,188µm,20.2s
SAO San Andreas Ge 57.84 69 ⇑P **P** **02 59 06.6 +0.3**
JETT Jettan, Norway 57.84 344 *e*P **P** **02 59 06.7 +0.9**
JETT *ep*P **sP** **02 59 21.3 -0.8**
JETT IVmB_BB 02 59 27.4
comp=Z,66µm,10.2s
JETT *e*S **S** **03 07 00.6 -0.6**
JETT *e*SS **SS** **03 10 53.9 +2.4**
JETT IVMs_BB IVMs_BB 03 20 08.3
comp=Z,114µm,30.6s
KRAI Karang Ratu 57.89 215 P **P** **02 59 08.2 +1.5**
comp=Z,385µmcomp=Z,83µmcomp=Z,2µm,0.9s
NUUG Nuugaatsiaq 57.91 11 *e*P **P** **02 59 05.3 -0.9**
NUUG IAmb IAmb 02 59 12.7
comp=Z,598nm,1.2s
KIRV Kirov 57.95 324 P **P** **02 59 06.3 -0.2**
comp=Z,285nm,0.7s,baz=46,slow=3.4,SNR=55
KIRV S **S** **03 06 57.6 -5.0**
comp=Z,27nm,0.8s,baz=51,slow=19,SNR=1.1
KIRV LR LR 03 27 55.8
comp=Z,432µm,18.1s,baz=33,slow=40
KIRV PKPPKP 03 28 51.2
comp=Z,67nm,1.2s,baz=119,slow=4.3,SNR=5.0
comp=Z,285nm,0.7s
KIRV Kirov 57.95 324*c i*P **P** **02 59 06.2 -0.4**
ADZR Andozero 58.00 333*c i*P **P** **02 59 06.6 -0.3**
ADZR *e**PP **sP** **02 59 22.8 -0.4**
ADZR S **S** **03 07 03.0 -0.2**
ADZR SS **SS** **03 11 01.9 +7.9**
ADZR pmax pmax
comp=Z,3µm,1.4s
ADZR pmax pmax
comp=Z,32µm,4.8s
ADZR MLR MLR
comp=Z,809µm,19.0s
TRO Tromso 58.05 344 ⇑*i*P **P** **02 59 06.8 -0.3**
TRO IVmB_BB 02 59 13.5
comp=Z,21µm,1.8s
TRO *ep*P **sP** **02 59 22.8 -0.8**
TRO *e*S **S** **03 07 02.9 -0.8**
TRO *e*SS **SS** **03 10 58.6 +4.0**
TRO IVMs_BB IVMs_BB 03 20 15.2
comp=Z,78µm,31.0s
HNR Honiara 58.06 177 LR LR 03 23 05.9
comp=Z,25µm,19.3s,baz=90,slow=35
HNR Honiara 58.06 177 P **P** **02 59 07.8 0.0**
HNR Honiara 58.06 177 P **P** **02 59 07.8 0.0**
HNR pmax pmax
comp=Z,3µm,1.1s
BRLS Borolday 58.12 300 *e*P **P** **02 59 09.8 +1.7**
LUWI Luwuk 58.16 222 P **P** **02 59 07.3 -1.4**
LUWI Luwuk 58.16 222 P **P** **02 59 07.3 -1.4**
comp=Z,3µm,1.2s
LUWI Luwuk 58.16 222 P **P** **02 59 07.2 -1.4**
LUWI Luwuk 58.16 222 P **P** **02 59 07.0 -1.6**
comp=Z,288µmcomp=Z,45µmcomp=Z,3µm,1.2s
MPSI Mapaga 58.27 226 P **P** **02 59 08.9 -0.5**
AAI Ambon 58.30 215 P **P** **02 59 09.7 +0.1**
comp=Z,416µmcomp=Z,65µmcomp=Z,2µm,2.1s
NLAI Namlea 58.32 217 P **P** **02 59 10.5 +0.8**
comp=Z,408µmcomp=Z,42µmcomp=Z,1µm,1.1s
SUMG Summit 58.34 6 P **P** **02 59 10.1 +0.4**
SUMG Summit 58.34 6 P **P** **02 59 09.8 +0.1**
SUMG Summit 58.34 6 P **P** **02 59 09.8 +0.1**
SUMG pmax pmax
comp=Z,5µm,1.2s
SUMG Summit 58.34 6 ⇑P **P** **02 59 09.0 -0.7**
SUMG Summit 58.34 6 *i* P **P** **02 59 10.2 +0.6**
SUMG IAmb IAmb 02 59 15.9
comp=Z,2µm,1.2s
BNDI Bandanaira 58.44 213 P **P** **02 59 11.8 +1.3**
comp=Z,5µm,1.8s
BNDI Bandanaira 58.44 213 P **P** **02 59 11.8 +1.3**
BNDI Bandanaira 58.44 213 ⇑P **P** **02 59 10.0 -0.5**
NIAQ Niaqornat 58.54 12 *i* P **P** **02 59 10.5 0.0**
NIAQ IAmb IAmb 02 59 17.4
comp=Z,4µm,1.5s
APSI Ampana 58.55 224 P **P** **02 59 10.8 -0.5**
comp=Z,47µmcomp=Z,1µm,1.0s
SHBG Sahibganj 58.55 273 *e*P **P** **02 59 12.1 +0.8**
SHBG IAmb IAmb 02 59 45.5
comp=Z,19µm,1.8s
IUG Iuzhnay 58.57 299 *e*P **P** **02 59 11.7 +0.3**
comp=Z,1µm,1.1s
NVAR Mina Array Bea 58.70 66 P **P** **02 59 13.3 +0.8**
comp=Z,80nm,0.6s,baz=300,slow=7.3,SNR=391
NVAR S **S** **03 07 16.1 +2.6**
comp=Z,5.5nm,1.0s,baz=317,slow=1.0,SNR=1.6
NVAR LR LR 03 20 07.9
comp=Z,338µm,21.7s,baz=276,slow=31
NVAR PKPPKP **P'P'df** **03 28 49.6 -2.6**
comp=Z,9.7nm,1.0s,baz=118,slow=2.5,SNR=5.7
NVAR P4KPbc 03 36 17.0
comp=Z,0.8nm,0.6s,baz=308,slow=4.8,SNR=4.4
comp=Z,80nm,0.6s
NVAR Mina Array Bea 58.70 66 P **P** **02 59 12.9 +0.4**
CHM Chimkent 58.71 300 *e*P **P** **02 59 12.7 +0.4**
comp=Z,2µm,1.5s
CHM *e*S **S** **03 07 12.5 -0.7**
CHM LR LR 03 24 58.1
comp=Z,161µm,16.0s
YHL Hebgen Lake 58.73 56 P **P** **02 59 13.3 +0.6**
PMG Port Moresby 58.75 192 LR LR 03 20 49.1
comp=Z,164µm,21.6s,baz=10,slow=32
PMG Port Moresby 58.75 192 P **P** **02 59 13.2 +0.5**
PMG Port Moresby 58.75 192 P **P** **02 59 13.2 +0.5**
PMG pmax pmax
comp=Z,5µm,1.6s
SAATT Saattut 58.78 11 *i* P **P** **02 59 11.7 -0.5**
SAATT IAmb IAmb 02 59 18.2
comp=Z,3µm,1.3s
ELK Elko 59.05 62 LR LR 03 20 50.5
comp=Z,508µm,21.5s,baz=316,slow=32
ELK PKPPKP 03 28 47.5
comp=Z,12nm,1.1s,baz=94,slow=4.7,SNR=4.1
ELK Elko 59.05 62 P **P** **02 59 15.3 +0.4**
ELK Elko 59.05 62 P **P** **02 59 15.3 +0.4**
ELK pmax pmax
comp=Z,691nm,1.0s
STMR SITAMARHI 59.07 276 *e*P **P** **02 59 16.8 +1.9**
MMPI Merauke 59.08 200 P **P** **02 59 15.9 +1.0**
HNLY HANLEY 59.15 286 *e*P **P** **02 59 17.4 +1.3**
HNLY IAmb IAmb 02 59 52.1
comp=Z,7µm,1.6s
DRK Karamyk 59.24 296 P **P** **02 59 16.1 -0.2**
DRK Karamyk 59.24 296 P **P** **02 59 16.1 -0.2**
DRK pmax pmax
comp=Z,12µm,1.8s
ALCI Alchi Leh 59.34 288 *e*P **P** **02 59 18.3 +1.2**
ALCI IAmb IAmb 02 59 41.7
comp=Z,4µm,1.1s
ALCI IAMs_20 IAMs_20 03 16 40.5
comp=Z,61µm,24.3s
PCI Palu 59.39 226 P **P** **02 59 16.5 -0.6**
comp=Z,318µmcomp=Z,34µmcomp=Z,2µm,1.2s
BTK Batken 59.45 297 P **P** **02 59 17.6 +0.2**

BTK Batken 59.45 297 P **P** **02 59 17.6 +0.2**
BTK pmax pmax
comp=Z,7µm,1.2s
AB31 Akbulak array 59.45 311 P **P** **02 59 17.1 -0.1**
AB31 IAmb IAmb 02 59 35.2
comp=Z,2µm,0.9s
AB31 Akbulak array 59.45 311 P **P** **02 59 17.1 -0.1**
ABKAR Akbulak array 59.45 311 P **P** **02 59 17.0 -0.2**
SAQQ Saqqaq 59.49 11 *i* P **P** **02 59 16.7 -0.4**
SAQQ IAmb IAmb 02 59 22.9
comp=Z,2µm,1.8s
VLK Valmikinagar 59.49 278 *e*P **P** **02 59 19.2 +1.4**
VLK IAmb IAmb 02 59 57.0
comp=Z,10µm,1.3s
AKTO Aktyubinsk 59.62 313 P **P** **02 59 17.9 -0.4**
comp=Z,219nm,0.8s,baz=58,slow=6.4,SNR=145
AKTO S **S** **03 07 23.3 -1.4**
comp=Z,11nm,0.8s,baz=242,slow=3.1,SNR=0.6
AKTO PKPPKP 03 28 48.4
comp=Z,17nm,1.1s,baz=213,slow=8.7,SNR=4.0
AKTO P4KPbc 03 36 20.9
comp=Z,7.4nm,0.9s,baz=0.1,slow=0.8,SNR=8.3
comp=Z,219nm,0.8s
AKTO Aktyubinsk 59.62 313 P **P** **02 59 18.0 -0.4**
JMUI Jamui 59.69 274 *e*P **P** **02 59 19.5 +0.3**
JMUI IAmb IAmb 02 59 52.9
comp=Z,12µm,1.9s
JMUI IAMs_20 IAMs_20 03 17 48.9
comp=Z,55µm,18.1s
HVU Hansel Valley 59.81 60 P **P** **02 59 20.4 +0.4**
HVU IAmb IAmb 02 59 44.3
comp=Z,1µm,1.4s
HVU Hansel Valley 59.81 60 P **P** **02 59 20.4 +0.4**
HVU pmax pmax
comp=Z,1µm,1.4s
KLMR Klimovskoe 59.89 330*c i*P **P** **02 59 19.9 -0.1**
KLMR S **S** **03 07 25.9 -1.9**
KLMR SS **SS** **03 11 28.3 +4.6**
KLMR pmax pmax
comp=Z,4µm,1.4s
KLMR MLR MLR
comp=Z,186µm,17.0s
GDH Godhavn 59.98 12 *i* P **P** **02 59 20.5 0.0**
GDH IAmb IAmb 02 59 26.4
comp=Z,4µm,1.6s
JNW Jan Mayen West 60.02 355 *e*P **P** **02 59 21.5 +0.8**
JNW *ep*P **sP** **02 59 36.6 -0.6**
JNW IVmB_BB 02 59 47.5
comp=Z,92µm,3.5s
JNW *e*S **S** **03 07 30.1 +0.9**
JNW IVMs_BB IVMs_BB 03 19 18.5
comp=Z,70µm,32.9s
JNE Jan Mayen East 60.05 355 *e*P **P** **02 59 21.4 +0.5**
JNE *ep*P **sP** **02 59 36.9 -0.5**
JNE IVmB_BB 02 59 45.2
comp=Z,86µm,8.2s
JNE *e*S **S** **03 07 30.5 +1.0**
JNE IVMs_BB IVMs_BB 03 19 17.9
comp=Z,71µm,34.2s
JMIC Jan Mayen 60.06 355 LR LR 03 24 31.5
comp=Z,168µm,20.4s,baz=9.5,slow=35
JMIC Jan Mayen 60.06 355 *e*P **P** **02 59 21.5 +0.5**
JMIC IVmB_BB 02 59 47.9
comp=Z,88µm,3.4s
JMIC *e*S **S** **03 07 30.1 +0.4**
JMIC IVMs_BB IVMs_BB 03 19 19.4
comp=Z,72µm,36.6s
AHID Auburn Hatcher 60.12 58 P **P** **02 59 22.6 +0.4**
AHID IAmb IAmb 02 59 46.6
comp=Z,3µm,1.6s
JMI Jan Mayen 60.14 355 *e*P **P** **02 59 22.2 +0.7**
JMI *ep*P **sP** **02 59 37.4 -0.6**
JMI IVmB_BB 03 00 01.3
comp=Z,93µm,3.4s
JMI *e*S **S** **03 07 34.7 +4.0**
JMI IVMs_BB IVMs_BB 03 19 21.2
comp=Z,77µm,31.0s
FUNA Funafuti 60.16 155 P **P** **02 59 23.0 +0.6**
FUNA IAmb IAmb 02 59 50.2
comp=Z,3µm,1.6s
STEI Steigen 60.20 345 ⇑*i*P **P** **02 59 21.5 -0.4**
STEI *ep*P **sP** **02 59 37.3 -1.2**
STEI IAmb IAmb 02 59 51.7
comp=Z,2µm,1.2s
STEI *e*S **S** **03 07 31.1 -0.3**
STEI *e*SS **SS** **03 11 30.6 +2.4**
STEI IVMs_BB IVMs_BB 03 34 12.1
comp=Z,93µm,16.5s
LAO LASA Array 60.21 52 P **P** **02 59 23.4 +0.9**
JOSI Joshimath 60.24 283 *e*P **P** **02 59 23.8 +0.6**
JOSI IAmb IAmb 02 59 58.7
comp=Z,10µm,1.6s
JOSI IAMs_20 IAMs_20 03 16 15.0
comp=Z,97µm,19.8s
LOF Lofoten 60.31 345 ⇑*i*P **P** **02 59 22.0 -0.8**
LOF *ep*P **sP** **02 59 38.1 -1.2**
LOF IVmB_BB 02 59 47.6
comp=Z,68µm,4.3s
LOF *e*S **S** **03 07 33.4 +0.4**
LOF *e*SS **SS** **03 11 30.7 +0.7**
LOF *e* 03 14 10.4
LOF IVMs_BB IVMs_BB 03 23 39.6
comp=Z,76µm,23.2s
XMAS Kiritimati 60.33 126 P **P** **02 59 24.1 +0.5**
ILULI Ilulissat 60.34 11 P **P** **02 59 22.4 -0.6**
ILULI IAmb IAmb 03 00 06.7
comp=Z,843nm,0.7s
ILULI Ilulissat 60.34 11 P **P** **02 59 22.4 -0.6**
ILULI pmax pmax
comp=Z,843nm,0.7s
ILULI Ilulissat 60.34 11 ⇑P **P** **02 59 22.4 -0.6**
ILULI Ilulissat 60.34 11 *i* P **P** **02 59 22.2 -0.7**
ILULI IAmb IAmb 02 59 28.7
comp=Z,3µm,1.6s
SBUM Sibu 60.39 235 P **P** **02 59 25.2 +1.1**
comp=Z,379nm,1.4s
SBUM Sibu 60.39 235 P **P** **02 59 24.8 +0.8**
SBUM IAmb IAmb 02 59 58.3
comp=Z,2µm,1.8s
SBUM Sibu 60.39 235 P **P** **02 59 24.9 +0.9**
SBUM Sibu 60.39 235 ⇑P **P** **02 59 25.1 +1.1**
GAR Garm 60.42 296 P **P** **02 59 23.8 -0.4**
GAYA Gaya 60.43 275 *e*P **P** **02 59 24.9 +0.6**
GAYA IAmb IAmb 02 59 45.1
comp=Z,6µm,1.6s
GAYA IAMs_20 IAMs_20 03 08 02.8
comp=Z,87µm,16.6s
KLP Kalpa 60.43 285 *e*P **P** **02 59 24.5 -0.1**
KLP IAmb IAmb 02 59 48.3
comp=Z,3µm,0.9s
KLP IAMs_20 IAMs_20 03 15 45.8
comp=Z,117µm,21.5s
PTH Pithoragarh 60.47 282 *e*P **P** **02 59 24.9 +0.2**
PTH IAmb IAmb 02 59 55.0
comp=Z,5µm,1.2s
PTH IAMs_20 IAMs_20 03 16 01.5
comp=Z,103µm,19.0s
LGTI Lohaghat 60.67 282 *e*P **P** **02 59 25.8 -0.3**
LGTI IAmb IAmb 02 59 50.1
comp=Z,2µm,1.2s
LGTI IAMs_20 IAMs_20 03 16 48.0
comp=Z,81µm,20.9s
FAUS Fauske 60.68 344 ⇑*i*P **P** **02 59 24.9 -0.4**
FAUS *ep*P **sP** **02 59 40.7 -1.1**
FAUS IVmB_BB 02 59 56.1
comp=Z,53µm,3.6s
FAUS *e*S **S** **03 07 37.9 +0.3**
FAUS *e*SS **SS** **03 11 34.7 -1.0**
FAUS *e* 03 14 41.2
FAUS IVMs_BB IVMs_BB 03 21 47.3
comp=Z,82µm,29.6s
DUG Dugway, Tooele 60.81 61 P **P** **02 59 27.5 +0.6**
DUG IAmb IAmb 02 59 51.3
comp=Z,3µm,1.4s
DUG Dugway, Tooele 60.81 61 P **P** **02 59 27.5 +0.6**
DUG pmax pmax
comp=Z,3µm,1.5s
TSSA Tissa 60.90 288 *e*P **P** **02 59 27.9 +0.3**
BRCI Bahraich 60.92 280 *e*P **P** **02 59 28.9 +1.3**
BRCI IAmb IAmb 02 59 57.1
comp=Z,11µm,1.4s
BRCI IAMs_20 IAMs_20 03 14 59.9
comp=Z,186µm,18.9s
SRNI Srinagar 60.94 289 *e*P P 02 59 33.0 +5.2
BW06 Boulder Array 60.98 57 P **P** **02 59 28.2 +0.1**

BW06 IAmb IAmb 02 59 55.6
comp=Z,1μm,1.1s
PDAR Pinedale Array 60.98 57 P **P** **02 59 28.4 +0.3**
comp=Z,227nm,0.9s,baz=309,slow=3.1,SNR=600
PDAR S **S** **03 07 47.0 +4.3**
comp=Z,2.7nm,0.8s,baz=209,slow=2.1,SNR=1.0
PDAR LR LR 03 21 46.3
comp=Z,151μm,21.8s,baz=324,slow=32
PDAR PKPPKP 03 28 43.2
comp=Z,6.7nm,0.9s,baz=127,slow=3.9,SNR=6.4
PDAR P4KPbc 03 36 27.1
comp=Z,1.4nm,1.1s,baz=321,slow=3.3,SNR=2.3
comp=Z,227nm,0.9s
PDAR Pinedale Array 60.98 57 P **P** **02 59 28.3 +0.2**
SCO Scoresbysund 60.98 360 P **P** **02 59 27.5 +0.3**
SCO Scoresbysund 60.98 360 P **P** **02 59 27.5 +0.3**
SCO pmax pmax
comp=Z,5μm,2.0s
SCO Scoresbysund 60.98 360 ⇑P **P** **02 59 27.6 +0.3**
SCO Scoresbysund 60.98 360 *i* P **P** **02 59 28.1 +0.8**
SCO IAmb IAmb 02 59 36.2
comp=Z,2μm,1.6s
BKB Balikpapan 61.12 228 P **P** **02 59 28.9 0.0**
comp=Z,3μm,1.7s
BKB Balikpapan 61.12 228 P **P** **02 59 29.2 +0.3**
BKB Balikpapan 61.12 228 P **P** **02 59 29.9 +1.0**
comp=Z,86μmcomp=Z,3μm,1.7s
BKB Balikpapan 61.12 228 ⇑P **P** **02 59 29.8 +0.8**
SAUI Saumlaki 61.17 210 P **P** **02 59 31.5 +2.2**
comp=Z,6μm,1.6s
SAUI Saumlaki 61.17 210 P **P** **02 59 30.5 +1.2**
SAUI Saumlaki 61.17 210 P **P** **02 59 31.2 +1.9**
SAUI Saumlaki 61.17 210 ⇑P **P** **02 59 30.9 +1.6**
DHRM DHARAMSHALA 61.19 287 IAMs_20 IAMs_20 03 15 55.4
comp=Z,162μm,27.3s
TTSI Tana Toraja 61.27 224 P **P** **02 59 29.7 -0.3**
comp=Z,71μmcomp=Z,2μm,1.1s
DDI Dehra Dun 61.36 284 *e*P **P** **02 59 30.9 +0.3**
DDI IAmb IAmb 02 59 54.7
comp=Z,6μm,1.0s
DDI IAMs_20 IAMs_20 03 15 55.4
comp=Z,122μm,22.2s
MMSI Mamuju 61.39 226 P **P** **02 59 30.2 -0.6**
comp=Z,297μmcomp=Z,47μmcomp=Z,2μm,1.4s
SMLA Simla 61.39 285 *e*P **P** **02 59 30.7 0.0**
SMLA IAmb IAmb 02 59 54.4
comp=Z,14μm,1.3s
THN Thein Dam 61.41 288 *e*P **P** **02 59 31.3 +0.5**
THN IAmb IAmb 03 00 01.0
comp=Z,7μm,1.4s
KKSI Kolaka, Sulawe 61.44 222 P **P** **02 59 32.6 +1.5**
comp=Z,43μmcomp=Z,2μm,2.0s
VAR Varanasi 61.58 277 *e*P **P** **02 59 32.0 -0.1**
VAGH Vaagaholmen 61.62 345 *e*P **P** **02 59 31.4 -0.3**
VAGH *e*pP **sP** **02 59 47.1 -1.0**
VAGH IVmB_BB 02 59 54.6
comp=Z,59μm,8.1s
VAGH *e*S **S** **03 07 48.2 -1.4**
VAGH *e*SS **SS** **03 11 52.7 +2.3**
VAGH *e* 03 15 13.8
VAGH IVMs_BB IVMs_BB 03 27 43.6
comp=Z,80μm,20.8s
TKRD Thakurdwara 61.64 283 *e*P **P** **02 59 33.1 +0.7**
BHK Bhakra 61.71 286 *e*P **P** **02 59 33.1 +0.2**
BHK IAmb IAmb 02 59 56.9
comp=Z,7μm,1.1s
BHK IAMs_20 IAMs_20 03 16 48.0
comp=Z,122μm,27.4s
RAUS Rausandaksla 61.74 344 *e*P **P** **02 59 32.0 -0.5**
RAUS *e*pP **sP** **02 59 47.7 -1.3**
RAUS IVmB_BB 02 59 59.6
comp=Z,66μm,4.5s
RAUS *e*S **S** **03 07 49.1 -2.2**
RAUS *e*SS **SS** **03 11 52.7 +0.2**
RAUS *e* 03 15 17.4
RAUS IVMs_BB IVMs_BB 03 24 52.9
comp=Z,102μm,23.2s
JMU Jammu 61.76 288 *e*P **P** **02 59 34.0 +0.8**
JMU IAmb IAmb 02 59 57.9
comp=Z,5μm,1.0s
JMU IAMs_20 IAMs_20 03 16 29.2
comp=Z,124μm,18.0s
MTKI Muara Teweh, K 61.84 230 P **P** **02 59 33.4 -0.5**
comp=Z,357μmcomp=Z,71μmcomp=Z,1μm,0.9s
CGRH CHANDIGARH 61.90 285 *e*P **P** **02 59 35.1 +0.9**
CGRH IAmb IAmb 02 59 58.4
comp=Z,16μm,1.4s
MOR8 Moi Rana 61.91 344 ⇑*i*P **P** **02 59 32.3 -1.4**
MOR8 *e*pP **pP** **02 59 47.6 +2.3**
MOR8 IVmB_BB 02 59 55.5
comp=Z,61μm,8.2s
MOR8 *e*S **S** **03 07 51.6 -1.9**
MOR8 *e*SS **SS** **03 11 54.1 -1.1**
MOR8 *e* 03 15 25.1
MOR8 IVMs_BB IVMs_BB 03 22 17.7
comp=Z,97μm,34.1s
LKN LUCKNOW 61.94 279 *e*P **P** **02 59 34.9 +0.5**
LKN IAmb IAmb 02 59 54.7
comp=Z,19μm,1.3s
FRB Frobisher Bay 62.00 21 LR LR 03 30 11.0
comp=Z,427μm,20.5s,baz=326,slow=40
STOK Stokkvaagen 62.02 345 *e*P **P** **02 59 34.6 +0.3**
STOK *e*pP **sP** **02 59 49.6 -1.2**
STOK IVmB_BB 02 59 57.6
comp=Z,48μm,7.4s
STOK *e*S **S** **03 07 53.5 -1.2**
STOK *e*SS **SS** **03 11 58.7 +2.0**
STOK IVMs_BB IVMs_BB 03 24 44.5
comp=Z,83μm,23.2s
PMSI Majene 62.09 225 P **P** **02 59 35.3 -0.3**
comp=Z,328μmcomp=Z,47μmcomp=Z,2μm,1.6s
SPSI Sidrap Palu 62.11 224 P **P** **02 59 35.3 -0.3**
comp=Z,346μmcomp=Z,73μmcomp=Z,2μm,1.3s
NIL Nilore 62.17 290 P **P** **02 59 36.0 0.0**
NIL Nilore 62.17 290 P **P** **02 59 36.0 0.0**
NIL pmax pmax
comp=Z,9μm,1.2s
NIL Nilore 62.17 290 ⇑P **P** **02 59 36.5 +0.6**
LEIR Leirfjorden 62.20 345 *e*P **P** **02 59 35.7 +0.1**
LEIR *e*pP **sP** **02 59 51.1 -1.0**
LEIR IVmB_BB 03 00 00.7
comp=Z,52μm,4.6s
LEIR *e*S **S** **03 07 57.2 +0.2**
LEIR *e*SS **SS** **03 12 02.3 +2.7**
LEIR *e* 03 15 38.3
LEIR IVMs_BB IVMs_BB 03 22 13.2
comp=Z,89μm,31.8s
KSM Kuching 62.24 236 P **P** **02 59 34.9 -1.7**
ALBI Allahabad 62.33 278 *e*P **P** **02 59 36.6 -0.4**
ALBI IAmb IAmb 02 59 58.0
comp=Z,8μm,1.4s
ALBI IAMs_20 IAMs_20 03 16 31.2
comp=Z,67μm,21.9s
FRKB FARRUKHABAD 62.36 281 *e*P **P** **02 59 37.7 +0.5**
FRKB IAmb IAmb 03 00 05.7
comp=Z,3μm,1.0s
FRKB IAMs_20 IAMs_20 03 15 28.4
comp=Z,133μm,17.2s
KKR Kurukshetra 62.40 285 *e*P **P** **02 59 40.6 +3.1**
KKR IAmb IAmb 03 00 01.1
comp=Z,5μm,1.1s
KKR IAMs_20 IAMs_20 03 16 41.5
comp=Z,56μm,19.3s
MERT Meerut 62.48 283 *e*P **P** **02 59 38.0 0.0**
MERT IAMs_20 IAMs_20 03 17 03.6
comp=Z,96μm,21.7s
SFJD Kangerlussuaq 62.49 12 LR LR 03 31 53.3
comp=Z,318μm,18.1s,baz=342,slow=41
SFJD Kangerlussuaq 62.49 12 P **P** **02 59 37.1 -0.4**
SFJD IAmb IAmb 02 59 59.7
comp=Z,1μm,1.1s
SFJD Kangerlussuaq 62.49 12 P **P** **02 59 37.1 -0.4**
SFJD pmax pmax
comp=Z,1μm,1.2s
SFJD Kangerlussuaq 62.49 12 *i* P **P** **02 59 36.6 -0.9**
SFJD IAmb IAmb 02 59 43.4
comp=Z,2μm,1.5s
ASOR Ausora 62.60 283 *e*P **P** **02 59 39.4 +0.6**
ASOR IAmb IAmb 03 00 09.0
comp=Z,6μm,1.0s
ASOR IAMs_20 IAMs_20 03 16 43.0
comp=Z,98μm,20.8s
SHAA Shahritus 62.67 297 P **P** **02 59 39.2 -0.1**
SHAA IAmb IAmb 03 00 17.6
comp=Z,15μm,1.5s

ULM Lac du Bonnet 62.86 44 P **P** **02 59 40.0 -0.3**
comp=Z,173nm,0.8s,baz=312,slow=6.7,SNR=157
ULM PP **PP** **03 01 58.6 +0.2**
comp=Z,185nm,1.0s,baz=322,slow=14,SNR=1.8
ULM S **S** **03 08 08.3 +2.5**
comp=Z,36nm,1.0s,baz=60,slow=3.3,SNR=2.3
ULM LR LR 03 26 51.6
comp=Z,625μm,21.9s,baz=314,slow=36
ULM PKPPKP **P'P'df** **03 28 40.0 -6.3**
comp=Z,40nm,1.2s,baz=145,slow=2.0,SNR=7.9
ULM P4KPbc 03 36 35.5
comp=Z,1.0nm,0.6s,baz=326,slow=3.6,SNR=1.1
comp=Z,173nm,0.8s
ULM Lac du Bonnet 62.86 44 P **P** **02 59 40.0 -0.3**
BISR Bishrakh 62.94 283 *e*P **P** **02 59 40.9 -0.2**
BISR IAmb IAmb 03 00 05.5
comp=Z,7μm,0.7s
BISR IAMs_20 IAMs_20 03 16 59.3
comp=Z,97μm,19.7s
PFO Pinyon Flats O 62.99 69 LR LR 03 22 09.2
comp=Z,420μm,21.6s,baz=306,slow=31
PFO PKPPKP 03 28 42.5
comp=Z,12nm,1.0s,baz=167,slow=3.2,SNR=4.8
PFO Pinyon Flats O 62.99 69 P **P** **02 59 41.1 -0.4**
PFO IAmb IAmb 03 00 06.5
comp=Z,3μm,1.6s
PFO Pinyon Flats O 62.99 69*c* *i*P **P** **02 59 41.3 -0.2**
PFO pmax pmax
comp=Z,2μm,1.8s
PFO Pinyon Flats O 62.99 69 P **P** **02 59 41.9 +0.3**
PFO pP **pP** **02 59 55.8 +2.3**
PFO PcP **PcP** **03 00 18.1 -1.0**
BELG Belogornoye 63.00 320 P **P** **02 59 40.8 -0.3**
comp=Z,1μm,1.0s,baz=218,slow=1.0,SNR=118
BELG PKPPKP **P'P'df** **03 28 38.6 -7.5**
comp=Z,54nm,1.0s,baz=239,slow=1.4,SNR=5.4
BELG LR LR 03 29 24.2
comp=Z,197μm,20.7s,baz=19,slow=38
BELG P4KPbc 03 36 33.0
comp=Z,2.9nm,0.5s,baz=45,slow=1.4,SNR=1.3
comp=Z,1μm,1.0s
BELG Belogornoye 63.00 320*c* *i*P **P** **02 59 40.3 -0.8**
BELG pmax pmax
comp=Z,2μm,1.0s
NDI New Delhi 63.01 283 *e*P **P** **02 59 41.1 -0.4**
NDI IAmb IAmb 03 00 05.3
comp=Z,8μm,1.9s
NDI IAMs_20 IAMs_20 03 16 49.6
comp=Z,76μm,20.8s
NRLA Narela 63.02 284 *e*P **P** **02 59 42.3 +0.6**
NRLA IAmb IAmb 03 00 05.3
comp=Z,12μm,1.5s
NRLA IAMs_20 IAMs_20 03 16 50.2
comp=Z,86μm,19.4s
JMIU JAMIA UNIVERSI 63.04 283 *e*P **P** **02 59 41.5 -0.2**
JMIU IAmb IAmb 02 59 59.7
comp=Z,2μm,1.1s
JMIU IAMs_20 IAMs_20 03 08 48.0
comp=Z,84μm,14.5s
KAPI Kappang 63.04 223 P **P** **02 59 42.4 +0.6**
comp=Z,1μm,1.6s
KAPI Kappang 63.04 223 P **P** **02 59 42.5 +0.7**
KAPI Kappang 63.04 223*c* *i*P **P** **02 59 41.4 -0.4**
KAPI pmax pmax
comp=Z,2μm,1.5s
KAPI MLR MLR
comp=Z,71μm,20.0s
KAPI Kappang 63.04 223 P **P** **02 59 42.6 +0.7**
KAPI S **S** **03 08 10.2 +1.4**
KAPI Kappang 63.04 223 P **P** **02 59 42.1 +0.3**
comp=Z,264μmcomp=Z,1μm,1.6s
KAPI Kappang 63.04 223 ⇑P **P** **02 59 42.5 +0.7**
RSSD Black Hills 63.07 53 P **P** **02 59 42.0 0.0**
RSSD Black Hills 63.07 53 P **P** **02 59 42.0 0.0**
RSSD pmax pmax
comp=Z,9μm,2.0s
NPLP NPLP New Delhi 63.07 283 *e*P **P** **02 59 41.9 -0.1**
NPLP IAmb IAmb 03 00 11.4
comp=Z,937nm,0.9s
CPE Camp Elliot 63.07 70 P **P** **02 59 42.0 +0.1**
CPE IAmb IAmb 03 00 06.0
comp=Z,2μm,1.3s
LDR Lodi Road 63.07 283 *e*P P 02 59 51.0 +9.0
LDR IAmb IAmb 03 00 13.5
comp=Z,2μm,1.0s
LDR IAMs_20 IAMs_20 03 16 52.3
comp=Z,84μm,21.3s
BNDA BANDA 63.18 279 *e*P **P** **02 59 42.4 -0.3**
BNDA IAmb IAmb 03 00 06.9
comp=Z,5μm,1.1s
BHGR Bahadurgarh 63.18 284 *e*P **P** **02 59 42.8 0.0**
BHGR IAmb IAmb 03 00 07.1
comp=Z,4μm,0.9s
BHGR IAMs_20 IAMs_20 03 17 04.8
comp=Z,102μm,21.6s
AYAN Aya Nagar 63.20 283 IAMs_20 IAMs_20 03 17 05.5
comp=Z,72μm,20.4s
BWNR Bhubaneshwar 63.21 271 *e*P **P** **02 59 43.2 +0.2**
BWNR IAmb IAmb 03 00 12.9
comp=Z,1μm,0.9s
BWNR IAMs_20 IAMs_20 03 14 26.0
comp=Z,108μm,26.4s
RTK Rohtak 63.28 284 *e*P **P** **02 59 44.9 +1.5**
MKS Makassar 63.35 224 P **P** **02 59 44.6 +0.7**
comp=Z,379μmcomp=Z,60μmcomp=Z,3μm,1.5s
TJX Tijuana 63.36 70 P **P** **02 59 43.9 +0.1**
FIA1 FINESS Array S 63.42 336 P **P** **02 59 43.5 -0.3**
FINES FINESS Array B 63.42 336 P **P** **02 59 43.3 -0.5**
comp=Z,111nm,0.5s,baz=39,slow=8.3,SNR=243
FINES S **S** **03 08 15.9 +3.5**
comp=Z,18nm,0.9s,baz=134,slow=16,SNR=1.8
FINES PKPPKP **P'P'df** **03 28 39.5 -6.3**
comp=Z,23nm,0.8s,baz=163,slow=2.0,SNR=6.3
FINES LR LR 03 30 40.5
comp=Z,834μm,21.8s,baz=24,slow=39
FINES P4KPbc 03 36 33.4
comp=Z,7.5nm,1.0s,baz=336,slow=3.0,SNR=4.3
comp=Z,111nm,0.5s
FINES FINESS Array B 63.42 336 *i* P **P** **02 59 43.2 -0.5**
FINES pmax pmax
comp=Z,112nm,0.5s
JHJR Jhajjar 63.42 284 *e*P **P** **02 59 44.0 -0.3**
JHSG JHARSUGUGA 63.50 273 *e*P **P** **02 59 45.5 +0.5**
JHSG IAmb IAmb 03 00 30.9
comp=Z,7μm,1.2s
SALN Salton City 63.50 69 P **P** **02 59 44.9 +0.2**
W13A Hualapai Mount 63.56 66 P **P** **02 59 45.4 0.0**
PUL Pulkovo 63.61 333*c* *i*P **P** **02 59 45.2 +0.2**
PUL pmax pmax
comp=Z,1μm,0.9s
PUL MLR MLR
comp=Z,555μm,19.0s
PUL Pulkovo 63.61 333 ⇑P **P** **02 59 44.9 -0.1**
PUL Pulkovo 63.61 333 *e*P **P** **02 59 45.2 +0.2**
DGPR DIGLIPUR 63.66 260 *e*P **P** **02 59 47.4 +1.5**
DGPR IAmb IAmb 02 59 54.5
comp=Z,7μm,1.3s
DGPR IAMs_20 IAMs_20 03 16 06.5
comp=Z,102μm,22.2s
BSSI Bau Bau, Buton 63.71 222 P **P** **02 59 46.0 -0.3**
comp=Z,344μmcomp=Z,57μmcomp=Z,2μm,0.9s
I43RU DUBNA INFRASON 63.81 328 P **P** **02 59 46.0 -0.4**
baz=58,slow=7.8,SNR=1.5
KUDL Kundal 63.84 283 *e*P **P** **02 59 46.8 -0.2**
KUDL IAmb IAmb 03 00 11.0
comp=Z,5μm,1.1s
NSS Namsos 63.85 344 *e*P **P** **02 59 46.0 -0.5**
NSS *e*pP **sP** **03 00 01.8 -1.3**
NSS IVmB_BB 03 00 09.4
comp=Z,57μm,8.6s
NSS *e*S **S** **03 08 17.9 +0.3**
NSS *e*SS **SS** **03 12 27.0 +1.7**
NSS *e* 03 16 49.2
NSS IVMs_BB IVMs_BB 03 23 00.4
comp=Z,97μm,31.9s
COEN Coen 63.85 196 P **P** **02 59 48.1 +1.0**
comp=Z,2μm,1.7s
COEN Coen 63.85 196 P **P** **02 59 48.0 +1.0**
COEN Coen 63.85 196 ⇑P **P** **02 59 47.9 +0.8**
BBKI Banjar Baru 64.03 229 P **P** **02 59 46.7 -1.7**
KBL Kabul 64.15 294 P **P** **02 59 48.1 -1.2**
SRGN SRI GANGA NAGA 64.29 287 *e*P **P** **02 59 50.1 +0.1**
SRGN IAMs_20 IAMs_20 03 17 43.5
comp=Z,77μm,21.5s
JHNI Jhansi 64.32 280 *e*P **P** **02 59 49.7 -0.5**
JHNI IAmb IAmb 03 00 22.2
comp=Z,3μm,1.1s
JHNI IAMs_20 IAMs_20 03 16 02.2
comp=Z,104μm,22.3s
BLSP Bilaspur 64.32 275 *e*P **P** **02 59 49.8 -0.4**
BLSP IAmb IAmb 03 00 18.0
comp=Z,2μm,1.0s
MOS Moscow 64.43 327α *i*P **P** **02 59 49.9 -0.6**
MOS *e**PP **sP** **03 00 05.9 -1.0**
MOS *e* 03 02 11.2
MOS *e*PPP PPP 03 03 47.6
MOS *i* S **S** **03 08 22.7 -2.3**
MOS *e* 03 09 38.9
MOS pmax pmax
comp=Z,2μm,1.6s
MOS pmax pmax
comp=Z,10μm,2.2s
MOS smax smax
comp=E,104μm,10.0s
MOS smax smax
comp=N,104μm,9.0s
MOS MLR MLR
comp=Z,331μm,18.0s
MOS MLR MLR
comp=N,224μm,17.0s
CPBX Cerro Prieto 64.51 69 P **P** **02 59 51.4 0.0**
SANVU Saraoutou 64.56 170 P **P** **02 59 52.9 +1.2**
comp=N,2μm,1.9s
SANVU Saraoutou 64.56 170 P **P** **02 59 52.1 +0.4**
SANVU IAmb IAmb 03 00 20.1
comp=Z,3μm,1.3s
KULM Kulim 64.79 248 P **P** **02 59 54.4 +1.0**
comp=Z,2μm,1.4s
KULM Kulim 64.79 248 P **P** **02 59 53.7 +0.3**
KULM IAmb IAmb 03 00 15.8
comp=Z,2μm,1.2s
KULM Kulim 64.79 248 P **P** **02 59 54.0 +0.6**
comp=Z,56μmcomp=Z,2μm,1.4s
KULM Kulim 64.79 248 ⇑P **P** **02 59 54.3 +0.9**
PBA Port Blair 64.91 259 P **P** **02 59 54.1 -0.1**
PBA Port Blair 64.91 259 P **P** **02 59 54.8 +0.7**
SNR=23
PBA Port Blair 64.91 259 ⇑P **P** **02 59 54.1 -0.1**
PBA Port Blair 64.91 259 *e*P **P** **02 59 53.8 -0.4**
NUUK Nuuk 64.97 14 ⇑P **P** **02 59 54.0 +0.1**
NUUK Nuuk 64.97 14 *i* P **P** **02 59 54.2 +0.4**
NUUK IAmb IAmb 03 00 00.4
comp=Z,3μm,1.4s
ISCO Idaho Springs 65.17 57 P **P** **02 59 56.4 +0.4**
ISCO Idaho Springs 65.17 57 P **P** **02 59 56.4 +0.4**
ISCO pmax pmax
comp=Z,995nm,1.0s
MMRI Maumere 65.19 219 P **P** **02 59 56.1 +0.2**
comp=Z,3μm,2.1s
MMRI Maumere 65.19 219 P **P** **02 59 55.6 -0.2**
MMRI Maumere 65.19 219 P **P** **02 59 55.7 -0.2**
comp=Z,304μmcomp=Z,98μmcomp=Z,3μm,2.1s
MMRI Maumere 65.19 219 ⇑P **P** **02 59 55.7 -0.2**
ANGG Ammassalik, Gr 65.25 7 P **P** **02 59 54.8 -0.9**
ANGG IAmb IAmb 03 00 31.6
comp=Z,1μm,1.1s
ANGG Ammassalik, Gr 65.25 7 ⇑P **P** **02 59 55.1 -0.5**
ANGG Ammassalik, Gr 65.25 7 *i* P **P** **02 59 54.8 -0.9**
ANGG IAmb IAmb 03 00 01.5
comp=Z,1μm,1.2s
OBN Obninsk 65.29 327 P **P** **02 59 55.3 -0.8**
comp=Z,1μm,1.1s,baz=41,slow=2.6,SNR=84
OBN PKPPKP P'P'df 03 28 33.9 -8.6
comp=Z,12nm,0.5s,baz=47,slow=1.2,SNR=5.9
OBN LR LR 03 30 56.1
comp=Z,325μm,21.6s,baz=34,slow=38
comp=Z,1μm,1.1s
OBN Obninsk 65.29 327 ⇑P **P** **02 59 55.6 -0.5**
OBN Obninsk 65.29 327 P **P** **02 59 55.1 -0.9**
OBN Obninsk 65.29 327α *i*P **P** **02 59 55.2 -0.9**
OBN *i* *PP **sP** **03 00 11.2 -1.4**
OBN *i* 03 00 28.4
OBN *i* 03 02 18.6
OBN *i* PPP PPP 03 03 53.0
OBN *i* S **S** **03 08 34.8 -0.9**
OBN *i* *SS sS 03 09 05.3 +9.3
OBN *i* SS **SS** **03 12 43.5 -4.7**
OBN pmax pmax
comp=Z,7μm,1.6s
OBN MLR MLR
comp=Z,561μm,23.0s
OBN Obninsk 65.29 327 ⇑P **P** **02 59 55.3 -0.8**
OBN Obninsk 65.29 327 P **P** **02 59 55.2 -0.9**
comp=Z,91μmcomp=Z,4μm,1.5s
MVCO Mesa Verde 65.31 61 P **P** **02 59 56.9 0.0**
MVCO IAmb IAmb 03 00 29.6
comp=Z,6μm,1.9s
SOEI Soe 65.38 217 P **P** **02 59 57.3 +0.1**
SOEI Soe 65.38 217 P **P** **02 59 57.3 +0.1**
comp=Z,4μm,1.5s
SOEI Soe 65.38 217 P **P** **02 59 56.7 -0.5**
SOEI Soe 65.38 217 P **P** **02 59 56.9 -0.3**
comp=Z,352μmcomp=Z,4μm,1.5s
SOEI Soe 65.38 217 ⇑P **P** **02 59 57.1 -0.2**
DRS Darwin Rock St 65.48 209 P **P** **02 59 58.3 +0.6**
comp=Z,778nm,1.3s
RAGD RAYAGADA 65.49 272 *e*P **P** **02 59 58.4 +0.5**
MYKOM Kota Tinggi 65.65 242 P **P** **03 00 00.1 +1.1**
comp=Z,822nm,1.1s
MYKOM Kota Tinggi 65.65 242 P **P** **02 59 59.7 +0.7**
MYKOM IAmb IAmb 03 00 30.3
comp=Z,4μm,1.7s
MYKOM Kota Tinggi 65.65 242 P **P** **03 00 00.1 +1.1**
comp=Z,359μmcomp=Z,40μmcomp=Z,821nm,1.1s
MYKOM Kota Tinggi 65.65 242 ⇑P **P** **03 00 00.4 +1.4**
GUNA GUNA 65.71 280 *e*P **P** **02 59 59.0 -0.3**
GUNA IAmb IAmb 03 00 31.6
comp=Z,3μm,1.3s
VSU Vasula 65.74 334*c* *i*P **P** **02 59 57.8 -1.1**
VSU pmax pmax
comp=Z,2μm,1.4s
VSU MLR MLR
comp=Z,580μm,20.0s
VSU Vasula 65.74 334 ⇑P **P** **02 59 57.6 -1.3**
MTN Manton Dam 65.79 209 P **P** **02 59 60.0 +0.3**
MTN IAmb IAmb 03 00 29.9
comp=Z,5μm,1.5s
TPRI Tanjung Pinang 65.96 241 P **P** **03 00 02.6 +1.6**
comp=Z,362μmcomp=Z,71μmcomp=Z,2μm,1.2s
BKNR BIKANER 65.98 286 *e*P **P** **03 00 00.8 -0.2**
BKNR IAmb IAmb 03 00 25.6
comp=Z,6μm,1.1s
BKNR IAMs_20 IAMs_20 03 17 32.8
comp=Z,167μm,34.4s
Q24A Divide 66.01 58 P **P** **03 00 01.5 +0.1**
BATI Baumata 66.03 217 P **P** **03 00 00.9 -0.4**
comp=Z,261μmcomp=Z,55μmcomp=Z,1μm,1.0s
BTDF Bukit Timah Da 66.05 242 P **P** **03 00 02.7 +1.2**
comp=Z,455nm,2.0s
BTDF Bukit Timah Da 66.05 242 P **P** **03 00 02.9 +1.4**
LBFI Labuhan Bajo, 66.06 222 P **P** **02 59 59.7 -1.8**
AJM Ajmer 66.22 283 *e*P **P** **03 00 02.3 -0.3**
AJM IAmb IAmb 03 00 22.5
comp=Z,2μm,1.1s
AJM IAMs_20 IAMs_20 03 14 49.3
comp=Z,104μm,22.4s
VRH Novokhopyorsk 66.35 322*c* *i*P **P** **03 00 01.3 -1.6**
VRH *e**PP **sP** **03 00 17.9 -1.6**
VRH *e**SP **PcP** **03 00 28.9 -3.6**
VRH *i* S **S** **03 08 44.8 -3.8**
VRH pmax pmax
comp=Z,680nm,0.7s
VRH pmax pmax
comp=Z,1μm,0.8s
LPSR Galich'ya Gora 66.38 324*c* *i*P **P** **03 00 02.2 -0.9**
LPSR *e**SP **sP** **03 00 17.5 -2.1**
LPSR *e* 03 00 28.1
LPSR *e* 03 02 35.5
LPSR *i* S **S** **03 08 44.2 -4.8**
LPSR pmax pmax
comp=Z,725nm,0.9s
LPSR pmax pmax
comp=Z,2μm,1.3s
LPSR MLR MLR
comp=Z,222μm,17.0s
FUTU Fugatoga 66.42 154 P **P** **03 00 04.7 +1.0**
comp=Z,8μm,1.8s
FUTU Fugatoga 66.42 154 P **P** **03 00 05.1 +1.4**
FUTU IAmb IAmb 03 00 32.0
comp=Z,2μm,1.3s
MOL Molde 66.42 345 ⇑*i*P **P** **03 00 03.4 +0.1**

MOL ep P sP 03 00 19.0 -0.8
MOL IVmB_BB 03 00 28.8
comp=Z,55µm,3.8s
MOL eS S 03 08 48.2 -1.1
MOL eSS SS 03 13 05.8 +0.4
MOL e 03 17 47.5
MOL IVMs_BB IVMs_BB 03 25 39.8
comp=Z,71µm,25.3s
BHPL Bhopal 66.63 279 eP P 03 00 05.1 -0.2
DOMB Dombas 66.66 345⇑iP P 03 00 04.6 -0.2
DOMB epP sP 03 00 20.4 -1.0
DOMB IVmB_BB 03 00 30.5
comp=Z,57µm,4.1s
DOMB eS S 03 08 52.1 -0.1
DOMB eSS SS 03 13 10.1 +1.0
DOMB e 03 16 34.8
DOMB IVMs_BB IVMs_BB 03 26 43.6
comp=Z,99µm,25.3s
VIS Vishakhapatnam 66.66 270 eP P 03 00 06.0 +0.5
VIS IAmb IAmb 03 00 56.2
comp=Z,4µm,1.5s
BORG Borgarnes 66.74 360 LR LR 03 30 50.7
comp=Z,168µm,20.2s,baz=350,slow=37
BORG Borgarnes 66.74 360 P P 03 00 05.7 +0.5
BORG IAmb IAmb 03 00 44.1
comp=Z,3µm,1.2s
BORG Borgarnes 66.74 360 P P 03 00 05.7 +0.5
BORG pmax pmax
comp=Z,3µm,1.3s
BORG Borgarnes 66.74 360⇑P P 03 00 07.0 +1.7
DBNI Kabupaten Domp 66.78 223 P P 03 00 05.3 -0.8
comp=Z,242µmcomp=Z,56µmcomp=Z,871nm,1.7s
AKN Aaknes 66.88 346 eP P 03 00 06.2 0.0
AKN epP sP 03 00 22.0 -0.8
AKN IVmB_BB 03 00 31.9
comp=Z,58µm,3.4s
AKN eS S 03 08 55.8 +0.9
AKN eSS SS 03 13 14.4 +1.8
AKN IVMs_BB IVMs_BB 03 25 38.8
comp=Z,79µm,27.8s
DVP Devils Point 66.92 169 P P 03 00 08.0 +1.1
comp=Z,9µm,1.2s
WSI Waingapu 66.94 221 P P 03 00 06.4 -0.7
comp=Z,257µmcomp=Z,80µmcomp=Z,3µm,1.7s
NC303 NORSAR Array S 66.99 343 P P 03 00 06.2 -0.7
NC303 IAmb IAmb 03 00 44.2
comp=Z,3µm,1.1s
VORR Voronezh 66.99 324 eP P 03 00 06.2 -0.8
VORR pmax pmax
comp=Z,248nm,0.6s
RTV Rentapao 67.02 169 P P 03 00 08.6 +1.1
comp=Z,1µm,1.2s
NGP Nagpur 67.03 276 eP P 03 00 07.9 +0.1
DSRI Dabo 67.07 240 P P 03 00 09.3 +1.3
comp=Z,346µmcomp=Z,63µmcomp=Z,2µm,1.2s
LHMI Lhok Sumawe 67.12 251 P P 03 00 09.6 +1.2
comp=Z,3µm,1.4s
LHMI Lhok Sumawe 67.12 251 P P 03 00 09.3 +0.9
LHMI Lhok Sumawe 67.12 251 P P 03 00 11.2 +2.8
comp=Z,3µm,1.6s
ECSD EROS Data Cent 67.16 49 P P 03 00 07.6 -0.7
ECSD IAmb IAmb 03 00 35.9
comp=Z,3µm,1.2s
NRDN NARMADA NAGAR 67.17 279 eP P 03 00 13.5 +4.9
NRDN IAmb IAmb 03 00 35.0
comp=Z,2µm,1.1s
NB2 NORSAR Subarra 67.19 343 P P 03 00 08.2 0.0
comp=Z,967nm,1.2s,baz=24,slow=6.5
NB2 PKP2 03 28 15.6
comp=Z,633nm,2.0s,baz=185,slow=2.9
NB2 NORSAR Subarra 67.19 343 P P 03 00 08.2 0.0
NOA NORSAR Array B 67.19 343 P P 03 00 07.4 -0.8
comp=Z,693nm,1.2s,baz=219,slow=12,SNR=254
NOA S S 03 09 02.2 +3.5
comp=Z,5.5nm,0.9s,baz=328,slow=20,SNR=0.9
NOA PKPPKP **P'P'df** 03 28 41.5 +1.9
comp=Z,68nm,1.3s,baz=204,slow=3.3,SNR=7.9
NOA LR LR 03 34 35.9
comp=Z,272µm,20.0s,baz=20,slow=40
NOA P4KPbc 03 36 49.8
comp=Z,1.0nm,0.8s,baz=26,slow=3.0,SNR=2.2
comp=Z,693nm,1.2s
TPI Tanjungpandan 67.21 236 P P 03 00 09.2 +0.3
comp=Z,323µmcomp=Z,41µmcomp=Z,875nm,1.2s
PLAI Plampang 67.31 223 P P 03 00 08.2 -1.3
comp=Z,2µm,1.8s
PLAI Plampang 67.31 223 P P 03 00 08.0 -1.5
comp=Z,291µmcomp=Z,41µmcomp=Z,2µm,1.2s
WBSI Waikabubak, Su 67.31 222 P P 03 00 07.7 -1.8
comp=Z,242µmcomp=Z,52µmcomp=Z,1µm,1.0s
BASI Baing, Sumba 67.31 220 P P 03 00 09.2 -0.3
TUC Tucson 67.35 67 P P 03 00 09.8 0.0
TUC Tucson 67.35 67 P P 03 00 09.8 0.0
TUC pmax pmax
comp=Z,1µm,1.4s
VSR Storozhevoye 67.36 323 *i* P P 03 00 08.5 -0.9
VSR *e**PP **sP** 03 00 24.9 -1.0
VSR *e**SP **PcP** 03 00 34.9 -1.8
VSR *e*PPP PPP 03 04 14.3
VSR *i* S S 03 08 57.1 -3.8
VSR pmax pmax
comp=Z,710nm,1.2s
VSR pmax pmax
comp=Z,5µm,2.4s
NC602 NORSAR Array S 67.41 343 eP P 03 00 14.3 +4.8
TSI Tuntungan 67.47 248 P P 03 00 11.4 +0.9
comp=Z,59µmcomp=Z,2µm,1.3s
VORD Divnogorie 67.51 323 eP P 03 00 09.7 -0.6
VORD pmax pmax
comp=Z,590nm,0.9s
HFS Hagfors 67.52 341 P P 03 00 09.8 -0.5
comp=Z,582nm,1.2s,baz=35,slow=5.4,SNR=91
HFS PKPPKP **P'P'df** 03 28 40.3 +1.3
comp=Z,32nm,1.1s,baz=174,slow=5.8,SNR=5.9
HFS LR LR 03 33 14.0
comp=Z,396µm,20.7s,baz=18,slow=39
comp=Z,582nm,1.2s
KMMI Kalianget 67.56 228 P P 03 00 11.8 +0.8
comp=Z,341µmcomp=Z,86µmcomp=Z,1µm,1.9s
PPBI Pangkal Pinang 67.56 238 P P 03 00 12.9 +1.8
YSA Yasawairara 67.60 159 P P 03 00 12.1 +1.0
comp=Z,990nm,1.2s
TWSI Taliwang, Sumb 67.64 224 P P 03 00 10.2 -1.4
comp=Z,293µmcomp=Z,33µmcomp=Z,1µm,1.2s
CMBY CAMPBELL BAY 67.65 254 eP P 03 00 11.1 -0.7
CMBY IAMs_20 IAMs_20 03 15 09.4
comp=Z,69µm,25.6s
SLIT Slitere, Latvi 67.69 336⇑P P 03 00 10.8 -0.6
KLNI Mataram 67.73 225 P P 03 00 10.8 -1.3
comp=Z,291µmcomp=Z,39µmcomp=Z,1µm,1.3s
DGTI Dogotuki 67.74 157 P P 03 00 13.5 +1.4
comp=Z,2µm,2.3s
FOO Floro 67.75 346 eP P 03 00 11.7 +0.1
FOO epP sP 03 00 27.4 -0.9
FOO IVmB_BB 03 00 45.5
comp=Z,55µm,10.9s
FOO eS S 03 09 07.8 +2.6
FOO eSS SS 03 13 28.8 +3.0
FOO e 03 16 37.7
FOO IVMs_BB IVMs_BB 03 26 28.1
comp=Z,86µm,29.4s
MTSU Mount Surprise 67.75 194 P P 03 00 12.9 +0.8
comp=Z,463nm,0.8s
PSI Prapat 67.80 247 P P 03 00 13.1 +0.3
comp=Z,789nm,0.9s
PSI Prapat 67.80 247 P P 03 00 12.7 -0.1
PSI pmax pmax
comp=Z,823nm,1.0s
PSI Prapat 67.80 247 P P 03 00 12.6 -0.2
comp=Z,302µmcomp=Z,40µmcomp=Z,730nm,0.9s
SRBI Singaraja 67.85 226 P P 03 00 12.0 -0.9
comp=Z,358µmcomp=Z,71µmcomp=Z,2µm,2.1s
RPSI Rantau Prapat 67.88 247 P P 03 00 12.7 -0.5
KHKI Kahang-Kahang 67.91 226 P P 03 00 13.1 -0.1
comp=Z,290µmcomp=Z,90µmcomp=Z,2µm,1.3s
KCSI Kotacane, Aceh 67.94 249 P P 03 00 12.0 -1.5
BSI Banda Aceh 67.95 252 P P 03 00 12.6 -1.0
HYA Hoyanger 67.97 346 eP P 03 00 13.3 +0.2
HYA epP sP 03 00 28.9 -0.7
HYA IVmB_BB 03 00 37.1
comp=Z,46µm,6.8s
HYA eS S 03 09 08.5 +0.6
HYA eSS SS 03 13 32.6 +3.3
HYA e 03 16 43.5
HYA IVMs_BB IVMs_BB 03 33 29.7
comp=Z,68µm,17.4s

SKAR Skarslia 68.06 344 eP P 03 00 13.5 -0.3
SKAR epP sP 03 00 29.6 -0.8
SKAR IVmB_BB 03 00 37.8
comp=Z,55µm,8.2s
SKAR eS S 03 09 09.8 +0.6
SKAR eSS SS 03 13 32.3 +1.3
SKAR e 03 16 46.5
SKAR IVMs_BB IVMs_BB 03 27 25.4
comp=Z,97µm,27.5s
ABJI Asem Bagus 68.07 227 P P 03 00 14.5 +0.2
comp=Z,328µmcomp=Z,2µm,1.8s
ANMO Albuquerque 68.07 62 P P 03 00 14.6 +0.1
ANMO Albuquerque 68.07 62 P P 03 00 14.6 +0.1
ANMO pmax pmax
comp=Z,467nm,1.0s
UDPR Udaipur 68.10 283 eP P 03 00 14.4 -0.2
MLSI Meulaboh, Aceh 68.20 250 P P 03 00 14.4 -0.8
comp=Z,345µmcomp=Z,53µmcomp=Z,3µm,1.1s
TAVE Taveuni 68.22 157 P P 03 00 17.3 +2.2
comp=Z,2µm,1.2s
JASL Jaisalmer 68.25 286 eP P 03 00 15.2 -0.2
JASL IAmb IAmb 03 00 47.7
comp=Z,12µm,1.4s
SUE Sulen 68.30 346 eP P 03 00 15.5 +0.4
SUE epP sP 03 00 31.0 -0.7
SUE IVmB_BB 03 00 41.2
comp=Z,53µm,3.2s
SUE eS S 03 09 14.2 +2.5
SUE eSS SS 03 13 35.4 +0.9
SUE e 03 16 51.7
SUE IVMs_BB IVMs_BB 03 26 57.4
comp=Z,75µm,24.4s
OSL Oslo 68.30 343⇑*i*P P 03 00 15.4 +0.2
OSL epP sP 03 00 31.1 -0.6
OSL IVmB_BB 03 00 41.5
comp=Z,74µm,2.4s
OSL eS S 03 09 11.4 -0.4
OSL eSS SS 03 13 35.9 +1.4
OSL e 03 17 03.1
OSL IVMs_BB IVMs_BB 03 32 08.8
comp=Z,97µm,21.9s
HRA Herat 68.31 298 P P 03 00 15.8 -0.2
HRA IAmb IAmb 03 00 52.2
comp=Z,2µm,1.1s
RTBI Rangdo, Negare 68.31 226 P P 03 00 14.8 -1.0
comp=Z,312µmcomp=Z,63µmcomp=Z,2µm,1.4s
IVI Ivigtut 68.33 13 P P 03 00 15.2 0.0
IVI IAmb IAmb 03 00 21.2
comp=Z,2µm,1.2s
IVI Ivigtut 68.33 13⇑P P 03 00 15.2 0.0
IVI Ivigtut 68.33 13 *i* P P 03 00 15.2 0.0
IVI IAmb IAmb 03 00 20.9
comp=Z,1µm,1.0s
BLJI Banyuglugur 68.34 228 P P 03 00 15.7 -0.3
comp=Z,284µmcomp=Z,49µmcomp=Z,801nm,1.1s
DNP Denpasar 68.37 226 P P 03 00 15.2 -0.9
comp=Z,301µmcomp=Z,51µmcomp=Z,2µm,1.1s
DNP pP pP 03 00 29.7 +1.6
comp=Z,301µmcomp=Z,51µmcomp=Z,2µm,1.1s
BYJI Banyuwangi 68.38 227 P P 03 00 16.8 +0.6
comp=Z,69µmcomp=Z,1µm,1.2s
TBJI Tambak Boyo 68.42 230 P P 03 00 15.0 -1.4
comp=Z,327µmcomp=Z,91µmcomp=Z,1µm,1.7s
BKNI Bangkinang 68.49 244 P P 03 00 18.0 +1.1
BKNI Bangkinang 68.49 244 P P 03 00 18.2 +1.3
comp=Z,4µm,1.2s
BKNI Bangkinang 68.49 244 P P 03 00 17.7 +0.7
BKNI Bangkinang 68.49 244 P P 03 00 18.2 +1.3
BKNI Bangkinang 68.49 244⇑P P 03 00 18.1 +1.1
IGBI Denpasar 68.52 226 P P 03 00 15.2 -1.9
comp=Z,341µmcomp=Z,983nm,1.2s
JMBI JAMBI 68.55 240 P P 03 00 20.2 +2.9
comp=Z,79µmcomp=Z,3µm,1.0s
AKL Akola 68.69 277 eP P 03 00 18.8 +0.5
AKL IAmb IAmb 03 00 47.0
comp=Z,4µm,1.1s
AKL IAMs_20 IAMs_20 03 10 00.5
comp=Z,116µm,23.2s
JAGI Jajag, Banyuwa 68.70 227 P P 03 00 18.9 +0.7
comp=Z,565nm,1.9s
JAGI Jajag, Banyuwa 68.70 227 P P 03 00 16.0 -2.2
JAGI pP pP 03 00 31.3 +1.1
JAGI Jajag, Banyuwa 68.70 227⇑P P 03 00 15.7 -2.5
MSVF Nonsavu 68.70 159 LR LR 03 30 11.4
comp=Z,53µm,18.2s,baz=0.4,slow=36
MSVF Nonsavu 68.70 159 P P 03 00 19.9 +1.7
comp=Z,1µm,1.7s
MSVF Nonsavu 68.70 159 P P 03 00 20.0 +1.7
MSVF IAmb IAmb 03 00 52.6
comp=Z,3µm,1.6s
MSVF Nonsavu 68.70 159*c* *i*P P 03 00 20.6 +2.4
MSVF pmax pmax
comp=Z,2µm,1.6s
MSVF Nonsavu 68.70 159⇑P P 03 00 20.2 +2.0
MNK Minsk 68.72 331 *i* P P 03 00 17.9 0.0
comp=E,830nm,1.1s
MNK *i* P P 03 00 17.9 0.0
comp=N,335nm,1.2s
MNK *i* P P 03 00 17.9 0.0
comp=Z,1µm,1.0s,baz=33
MNK *i* pP **sP** 03 00 35.1 +0.6
MNK *i* PP **PP** 03 02 48.9 -0.5
MNK *i* PPP PPP 03 04 28.8
MNK *i* S S 03 09 16.5 -0.5
MNK *i* sS **sS** 03 09 45.0 +7.3
MNK *i* SS **SS** 03 13 41.6 +0.4
MNK *i* LQ LQ 03 24 09.7
MNK *i* LR LR 03 29 25.8
MNK *i* LRM MLR 03 33 05.1
comp=E,634µm,21.5s
MNK *i* LRM MLR 03 33 05.1
comp=N,314µm,19.0s
MNK *i* LRM MLR 03 33 05.1
comp=Z,772µm,22.3s
MNK Minsk 68.72 331 *i* P P 03 00 17.8 0.0
MNK *i* *PP **sP** 03 00 35.0 +0.6
MNK *i* 03 02 48.9
MNK *i* PPP PPP 03 04 28.8
MNK *i* S S 03 09 16.5 -0.5
MNK *i* *SS **sS** 03 09 44.9 +7.3
MNK *i* SS **SS** 03 13 41.6 +0.4
MNK pmax pmax
comp=N,335nm,1.2s
MNK pmax pmax
comp=Z,1µm,1.0s
MNK pmax pmax
comp=E,830nm,1.1s
MNK MLR MLR
comp=E,634µm,22.0s
MNK MLR MLR
comp=Z,772µm,22.0s
MNK MLR MLR
comp=N,314µm,19.0s
AUAYR Ayr State High 68.74 190 P P 03 00 19.2 +0.9
comp=N,1µm,1.8s
NRS Narsarsuaq 68.76 12 P P 03 00 17.5 -0.5
NRS IAmb IAmb 03 00 55.6
comp=Z,2µm,1.3s
NRS Narsarsuaq 68.76 12 P P 03 00 17.5 -0.5
NRS pmax pmax
comp=Z,2µm,1.3s
NRS Narsarsuaq 68.76 12 *i* P P 03 00 17.9 -0.1
NRS IAmb IAmb 03 00 23.3
comp=Z,2µm,1.4s
ASK Askoy 68.78 346 eP P 03 00 18.1 0.0
ASK epP sP 03 00 33.8 -0.9
ASK IVmB_BB 03 00 41.7
comp=Z,61µm,8.4s
ASK eS S 03 09 19.1 +1.6
ASK eSS SS 03 13 43.9 +2.1
ASK e 03 17 13.2
ASK IVMs_BB IVMs_BB 03 32 22.0
comp=Z,83µm,21.7s
KONO Kongsberg 68.79 343 P P 03 00 17.8 -0.4
KONO IAmb IAmb 03 00 51.2
comp=Z,5µm,1.5s
KONO Kongsberg 68.79 343 P P 03 00 17.8 -0.4
KONO pmax pmax
comp=Z,5µm,1.5s
BER Bergen 68.85 346⇑*i*P P 03 00 18.6 0.0
BER epP sP 03 00 34.2 -0.9
BER IVmB_BB 03 00 46.4
comp=Z,58µm,4.7s
BER eS S 03 09 17.9 -0.4

BER eSS SS 03 13 45.1 +2.2
BER e 03 17 12.9
BER IVMs_BB IVMs_BB 03 32 23.5
comp=Z,83µm,22.9s
PMBI Palembang 68.96 239 P P 03 00 22.1 +2.2
comp=Z,4µm,1.2s
PMBI Palembang 68.96 239 P P 03 00 20.8 +0.9
PMBI Palembang 68.96 239 P P 03 00 22.0 +2.2
MNSI Mandailing Nat 68.98 246 P P 03 00 19.1 -0.9
STRU Stroemstad 69.05 342 *i* P P 03 00 20.3 +0.5
PABE Paberze 69.06 334 *i* P P 03 00 19.5 -0.4
ODD1 Odda 69.08 345⇑*i*P P 03 00 20.1 0.0
ODD1 epP sP 03 00 36.2 -0.5
ODD1 IVmB_BB 03 00 46.4
comp=Z,58µm,3.3s
ODD1 eS S 03 09 21.3 +0.1
ODD1 eSS SS 03 13 47.8 +1.2
ODD1 e 03 17 11.9
ODD1 IVMs_BB IVMs_BB 03 37 14.1
comp=Z,103µm,18.2s
NGJI Ngawi 69.08 230 P P 03 00 21.8 +1.2
comp=Z,2µm,2.0s
KNRA Kununurra 69.21 210 P P 03 00 21.9 +0.7
KNRA IAmb IAmb 03 00 59.6
comp=Z,2µm,1.2s
SNJI Sawahan-Nganju 69.28 230 P P 03 00 22.1 +0.1
comp=Z,307µmcomp=Z,67µmcomp=Z,1µm,2.2s
VJD Vijayawada 69.30 272 eP P 03 00 22.5 +0.5
VJD IAmb IAmb 03 01 03.7
comp=Z,11µm,2.5s
SMRI Semarang 69.33 231 P P 03 00 22.9 +0.7
comp=Z,2µm,1.7s
SMRI Semarang 69.33 231 P P 03 00 22.6 +0.4
SMRI IAmb IAmb 03 01 06.5
comp=Z,3µm,1.2s
SMRI Semarang 69.33 231 P P 03 00 22.7 +0.5
comp=Z,344µmcomp=Z,2µm,1.7s
SMRI Semarang 69.33 231⇑P P 03 00 22.8 +0.7
CTA Charters Tower 69.39 192 P P 03 00 22.8 +0.5
CTAO Charters Tower 69.39 192 P P 03 00 22.6 +0.3
CTAO IAmb IAmb 03 00 51.4
comp=Z,3µm,1.4s
CTAO Charters Tower 69.39 192 P P 03 00 22.6 +0.3
CTAO pmax pmax
comp=Z,3µm,1.4s
PPI Padang Panjang 69.49 244 P P 03 00 22.8 -0.4
comp=Z,37µmcomp=Z,603nm,1.1s
BLS5 Blasjo 69.57 345 eP P 03 00 23.4 +0.3
BLS5 epP sP 03 00 38.9 -0.8
BLS5 IVmB_BB 03 00 47.2
comp=Z,56µm,8.5s
BLS5 eS S 03 09 27.4 +0.4
BLS5 eSS SS 03 13 57.3 +3.2
BLS5 e 03 16 54.7
BLS5 IVMs_BB IVMs_BB 03 37 37.3
comp=Z,105µm,17.8s
GSI Gunungsitoli 69.80 248 P P 03 00 25.5 +0.4
comp=Z,2µm,1.5s
GSI Gunungsitoli 69.80 248 P P 03 00 25.4 +0.4
GSI IAmb IAmb 03 00 57.7
comp=Z,5µm,1.5s
GSI Gunungsitoli 69.80 248 P P 03 00 25.6 +0.4
comp=Z,358µmcomp=Z,81µmcomp=Z,2µm,1.5s
GSI Gunungsitoli 69.80 248⇑P P 03 00 25.5 +0.4
PDSI Padang 69.82 244 P P 03 00 24.1 -1.1
TJOU Tjoern 69.88 342 *i* P P 03 00 25.1 +0.1
PCJI Pacitan 69.93 230 P P 03 00 24.6 -1.2
comp=Z,63µmcomp=Z,2µm,1.7s
CTJI Waduk Cacaban 69.95 232 P P 03 00 26.1 +0.1
comp=Z,256µmcomp=Z,47µmcomp=Z,957nm,1.3s
SRIG Santa Rosalia 69.96 71 P P 03 00 25.6 -0.3
SRIG IAmb IAmb 03 00 51.1
comp=Z,4µm,1.8s
SRIG Santa Rosalia 69.96 71⇑P P 03 00 25.9 0.0
LKBA Tubou, Lakemba 69.97 156 P P 03 00 26.7 +0.8
comp=Z,20nm,1.3s
KMY Karmoy 69.97 345⇑*i*P P 03 00 25.9 +0.4
KMY epP sP 03 00 41.4 -0.7
KMY IVmB_BB 03 00 49.5
comp=Z,56µm,8.3s
KMY eS S 03 09 32.5 +0.9
KMY eSS SS 03 14 02.4 +2.2
KMY e 03 17 02.6
KMY IVMs_BB IVMs_BB 03 27 34.9
comp=Z,70µm,33.0s
MAK Makhachkala 70.00 313*c* *i*P P 03 00 26.1 +0.1
MAK *e**PP **sP** 03 00 41.8 -0.6
MAK *e**SP **PcP** 03 00 49.3 +1.4
MAK *e* 03 03 06.0
MAK eS S 03 09 31.8 -0.6
MAK *e**SS **sS** 03 09 58.2 +5.2
MAK eSS SS 03 14 00.9 -0.6
MAK pmax pmax
comp=Z,2µm,1.6s
MAK pmax pmax
comp=Z,6µm,2.5s
BORU Boraas 70.00 341 *i* P P 03 00 25.1 -0.7
UGM Wanagama 70.02 231 P P 03 00 25.2 -1.2
comp=Z,1µm,1.6s
UGM Wanagama 70.02 231 P P 03 00 25.6 -0.9
UGM Wanagama 70.02 231 P P 03 00 25.6 -0.9
comp=Z,164µmcomp=Z,60µmcomp=Z,1µm,1.6s
LRW Lerwick 70.03 349 eP P 03 00 25.4 -0.4
LRW IAMs_20 IAMs_20 03 25 24.4
comp=Z,291µm,28.5s
LRW Lerwick 70.03 349⇓P P 03 00 26.1 +0.3
HYB Hyderabad 70.03 274 eP P 03 00 26.6 0.0
HYB IVmB_BB 03 00 34.6
comp=Z,12µm,8.8s
HYB epP sP 03 00 42.4 -0.6
HYB eSP PcP 03 00 49.4 +0.9
HYB IVMs_BB IVMs_BB 03 36 51.7
comp=Z,51µm,14.4s
HYB Hyderabad 70.03 274 eP P 03 00 26.4 -0.2
HYB IAmb IAmb 03 00 47.9
comp=Z,1µm,1.1s
YOGI Yogyakarta 70.06 231 P P 03 00 26.4 -0.2
comp=Z,278µmcomp=Z,58µmcomp=Z,2µm,1.9s
SCHQ Schefferville 70.11 26 P P 03 00 26.1 -0.4
comp=Z,832nm,0.9s,baz=346,slow=6.0,SNR=255
SCHQ PP PP 03 03 00.5 -0.9
comp=Z,112nm,1.0s,baz=319,slow=12,SNR=1.2
SCHQ S S 03 09 35.4 +1.9
comp=Z,21nm,1.0s,baz=141,slow=5.4,SNR=1.1
SCHQ PKPPKP **P'P'df** 03 28 30.3 -4.1
comp=Z,71nm,1.0s,baz=155,slow=6.7,SNR=14
SCHQ LR LR 03 33 53.3
comp=Z,353µm,21.9s,baz=329,slow=38
comp=Z,832nm,0.9s
KRJI Kerinci 70.18 242 P P 03 00 28.3 +0.8
HOMB Homborsund 70.28 343⇑*i*P P 03 00 27.5 +0.1
HOMB epP sP 03 00 43.2 -0.8
HOMB IVmB_BB 03 00 51.2
comp=Z,54µm,8.4s
HOMB eS S 03 09 34.5 -0.7
HOMB eSS SS 03 14 06.5 +1.5
HOMB e 03 17 30.4
HOMB IVMs_BB IVMs_BB 03 34 08.9
comp=Z,90µm,20.1s
HOMB Homborsund 70.28 343 *i* P P 03 00 27.8 +0.4
KPJI Karang Pucung 70.36 232 P P 03 00 27.3 -1.1
ONAU Onsala 70.41 341 *i* P P 03 00 27.8 -0.3
KLSI 70.43 238 P P 03 00 28.4 -0.5
PBSI Pulau Batu 70.44 246 P P 03 00 30.1 +1.1
comp=Z,97µmcomp=Z,2µm,1.1s
SNART Snartemo 70.46 344 eP P 03 00 28.7 +0.2
SNART IVmB_BB 03 00 52.4
comp=Z,105µm,8.2s
SNART eS S 03 09 37.5 +0.2
SNART Snartemo 70.46 344 *i* P P 03 00 29.1 +0.6
GOF Gofitskoye 70.49 317*c* *i*P P 03 00 29.0 0.0
GOF eS S 03 09 39.3 +1.1
KLI Kotabumi 70.50 237 P P 03 00 28.8 -0.5
comp=Z,255µmcomp=Z,36µmcomp=Z,2µm,1.0s
BLEU Blekinge 70.52 339 *i* P P 03 00 27.7 -1.2
SCJI Gunung Srandil 70.53 232 P P 03 00 27.2 -2.3
MDSI Maura Dua 70.57 238 P P 03 00 28.5 -1.3
comp=Z,311µmcomp=Z,41µmcomp=Z,988nm,1.0s
MASI Maura Aman, Be 70.58 241 P P 03 00 30.1 +0.2
SUW Suwalki 70.58 334 eP P 03 00 28.9 -0.5
SUW eS S 03 09 40.4 +1.5
SUW eL L 03 35 11.7
comp=Z,1008µm,20.6s
SUW Suwalki 70.58 334 P P 03 00 28.3 -1.0

SUW	Suwalki	70.58	334	P		P	03 00 28.3	-1.0	
SUW	Suwalki	70.58	334	⇑P		P	03 00 28.4	-0.9	
FABU	Falkenberg	70.60	341	*i* P		P	03 00 28.9	-0.4	
TNG	Tangerang	70.60	235	P		P	03 00 31.5	+1.6	
	comp=Z,307µmcomp=Z,80µmcomp=Z,3µm,1.5s								
TNG				P		P	03 00 31.5	+1.6	
MARNC	Mare, Loyalty	70.61	170	P		P	03 00 31.2	+1.5	
	comp=Z,11nm,2.3s								
MARNC	Mare, Loyalty	70.61	170	P		P	03 00 30.7	+1.0	
MARNC				IAmb		IAmb	03 00 50.2		
	comp=Z,5µm,1.4s								
MARNC	Mare, Loyalty	70.61	170	⇑P		P	03 00 31.7	+2.0	
LEM	Lembang	70.62	234	LR		LR	03 32 01.5		
	comp=Z,77µm,21.3s,baz=349,slow=36								
BLSI	Bandar Lampung	70.70	237	P		P	03 00 31.1	+0.5	
	comp=Z,258µmcomp=Z,32µmcomp=Z,728nm,1.3s								
KSI	Kapahiang	70.79	240	P		P	03 00 31.2	0.0	
	comp=Z,309µmcomp=Z,45µmcomp=Z,1µm,0.9s								
DEL	Delary	70.83	340	*i* P		P	03 00 30.0	-0.7	
OVD	Ostervraa, Den	70.84	342	*i* P		P	03 00 30.7	-0.1	
OVD				IAmb		IAmb	03 00 36.8		
	comp=Z,1µm,1.1s								
SBJI	Serang	70.84	236	P		P	03 00 30.6	-0.8	
	comp=Z,277µmcomp=Z,54µmcomp=Z,1µm,1.8s								
DBJI	Dramaga	70.86	235	P		P	03 00 30.7	-0.9	
	comp=Z,264µmcomp=Z,56µmcomp=Z,1µm,1.2s								
QIS	Mount Isa	70.97	198	P		P	03 00 31.1	-0.9	
	comp=Z,2µm,1.6s								
AKT	Akhty	71.01	312	*e* P		P	03 00 32.4	+0.1	
AKT				*i* *PP		sP	03 00 49.4	+0.6	
AKT				*e*			03 00 53.5		
AKT				*e*			03 03 13.1		
AKT				*e* PPP		PPP	03 04 51.3		
AKT				*e* S		S	03 09 43.4	-1.1	
AKT				*e*			03 10 30.4		
AKT				*e* SS		SS	03 14 21.2	+3.9	
AKT				pmax		pmax			
	comp=Z,1µm,1.2s								
AKT				pmax		pmax			
	comp=N,170nm,0.9s								
AKT				pmax		pmax			
	comp=E,187nm,0.7s								
AKT				pmax		pmax			
	comp=Z,5µm,2.1s								
AKT				smax		smax			
	comp=N,77µm,7.5s								
AKT				smax		smax			
	comp=E,41µm,8.6s								
MNTX	Cornudas Mount	71.02	64	P		P	03 00 32.1	-0.3	
DZM	Mont Dzumac	71.02	171	LR		LR	03 27 36.2		
	comp=E,141µm,20.4s,baz=0,slow=32								
NOUC	Port Laguerre	71.04	172	P		P	03 00 34.7	+2.3	
UBSI	University, Be	71.06	240	P		P	03 00 31.9	-0.9	
	comp=E,288µmcomp=E,71µmcomp=E,3µm,1.0s								
LWLI	Liwa	71.07	238	P		P	03 00 31.6	-1.4	
	comp=E,289µmcomp=E,44µmcomp=E,3µm,1.0s								
NOKA	Waynoka	71.11	56	P		P	03 00 32.2	-0.7	
NOKA				IAmb		IAmb	03 01 00.7		
	comp=Z,2µm,1.2s								
ERBR	Yeremizino-Bor	71.12	319*c*	*i* P		P	03 00 33.3	+0.6	
ERBR				*i* *PP		sP	03 00 48.7	-0.5	
ERBR				*i*			03 03 10.3		
ERBR				*i* S		S	03 09 45.6	+0.2	
ERBR				pmax		pmax			
	comp=Z,12µm,2.6s								
ERBR				pmax		pmax			
	comp=Z,2µm,1.3s								
ERBR				MLR		MLR			
	comp=E,142µm,14.0s								
ERBR				MLR		MLR			
	comp=Z,300µm,20.0s								
ERBR				MLR		MLR			
	comp=N,427µm,20.0s								
BBJI	Bungbulang	71.14	234	P		P	03 00 34.3	+1.0	
	comp=N,262nm,1.9s								
BBJI	Bungbulang	71.14	234	P		P	03 00 30.8	-2.5	
MNAI	Manna	71.16	239	P		P	03 00 32.1	-1.3	
	comp=N,1µm,1.7s								
MNAI	Manna	71.16	239	P		P	03 00 31.6	-1.8	
MNAI				IAmb		IAmb	03 01 14.4		
	comp=Z,3µm,1.2s								
MNAI	Manna	71.16	239	P		P	03 00 32.6	-0.8	
	comp=Z,277µmcomp=Z,56µmcomp=Z,1µm,1.6s								
MNAI	Manna	71.16	239	⇑P		P	03 00 31.9	-1.4	
KASI	Kota Agung	71.24	237	P		P	03 00 31.9	-1.9	
	comp=Z,220µmcomp=Z,756nm,1.0s								
ONTNC	Ouen Toro	71.26	171	P		P	03 00 35.5	+1.8	
	comp=Z,2µm,1.8s								
ONTNC	Ouen Toro	71.26	171	P		P	03 00 35.3	+1.6	
ONTNC				IAmb		IAmb	03 01 04.3		
	comp=Z,4µm,1.5s								
ONTNC	Ouen Toro	71.26	171	⇑P		P	03 00 35.6	+2.0	
SKJI	Sukabumi	71.34	235	P		P	03 00 32.1	-2.3	
	comp=Z,249µmcomp=Z,43µmcomp=Z,1µm,1.2s								
BJUU	Bjuv	71.38	240	*i* P		P	03 00 34.1	0.0	
OUENC	Ouen Island, N	71.41	171	P		P	03 00 36.5	+1.9	
	comp=Z,2µm,1.9s								
OUENC	Ouen Island, N	71.41	171	P		P	03 00 36.4	+1.9	
OUENC				IAmb		IAmb	03 01 06.4		
	comp=Z,5µm,1.6s								
WB0	Warramunga Arr	71.42	203	P		P	03 00 34.8	+0.1	
NCK	Nalchik	71.45	316*c*	*i* P		P	03 00 35.0	+0.2	
NCK				pmax		pmax			
	comp=Z,1µm,0.8s								
AK03	Malin Array Si	71.45	328	P		P	03 00 33.4	-1.3	
AK23	Malin Array Si	71.45	328	P		P	03 00 33.4	-1.3	
AK21	Malin Array Si	71.47	329	P		P	03 00 33.6	-1.2	
AKASG	Malin Array Be	71.47	328	P		P	03 00 33.7	-1.1	
	comp=Z,118nm,0.6s,baz=34,slow=6.0,SNR=364								
AKASG				S		S	03 09 49.1	-0.2	
	comp=Z,13nm,1.1s,baz=30,slow=12,SNR=4.9								
AKASG				PKPPKP		P'P'df	03 28 21.4	-10	
	comp=Z,14nm,1.0s,baz=227,slow=2.1,SNR=7.5								
AKASG				LR		LR	03 36 21.4		
	comp=Z,287µm,18.8s,baz=36,slow=40								
AKASG				P4KPbc			03 37 11.2		
	comp=Z,0.2nm,0.3s,baz=37,slow=3.1,SNR=5.0								
	comp=Z,118nm,0.6s								
AKASG	Malin Array Be	71.47	328	P		P	03 00 33.9	-0.9	
AKASG				IAmb		IAmb	03 01 01.7		
	comp=Z,3µm,1.1s								
AKASG	Malin Array Be	71.47	328	P		P	03 00 33.9	-0.9	
AKASG				pmax		pmax			
	comp=Z,3µm,1.2s								
AKBB	Malin Array Si	71.47	328	P		P	03 00 33.6	-1.2	
AKBB				IAmb		IAmb	03 01 01.6		
	comp=Z,5µm,1.2s								
AKBB	Malin Array Si	71.47	328*c*	*i* P		P	03 00 33.6	-1.2	
AKBB				pmax		pmax			
	comp=Z,2µm,1.4s								
AKBB				MLR		MLR			
	comp=Z,496µm,23.0s								
AKBB	Malin Array Si	71.47	328	P		P	03 00 33.6	-1.2	
AK04	Malin Array Si	71.47	328	P		P	03 00 33.7	-1.1	
CGJI	Cibinong	71.49	236	P		P	03 00 32.4	-2.9	
KVAR	Kislovodsk Arr	71.50	316	P		P	03 00 35.1	-0.2	
	comp=Z,268nm,1.2s,baz=90,slow=22,SNR=50								
KVAR				S		S	03 09 51.2	+1.0	
	comp=Z,268nm,1.2s								
KIV	Kislovodsk	71.51	316	⇓P		P	03 00 36.0	+0.7	
KIV	Kislovodsk	71.51	316	P		P	03 00 34.7	-0.6	
KIV				IAmb		IAmb	03 01 02.8		
	comp=Z,4µm,1.1s								
KIV	Kislovodsk	71.51	316	*i* P		P	03 00 35.5	+0.2	
	SNR=187								
KIV	Kislovodsk	71.51	316	*e* P		P	03 00 34.6	-0.7	
KIV				*e*			03 00 54.4		
KIV				*e*			03 03 13.6		
KIV				*e* PPP		PPP	03 04 58.2		
KIV				*e* S		S	03 09 46.3	-3.9	
KIV				*e* SSS		SSS	03 17 41.2		
KIV				pmax		pmax			
	comp=Z,2µm,4.3s								
KIV				pmax		pmax			
	comp=Z,694nm,1.0s								
KIV	Kislovodsk	71.51	316	P		P	03 00 35.3	+0.1	
KIV				S		S	03 09 51.0	+0.8	
KIV	Kislovodsk	71.51	316	⇑P		P	03 00 35.4	+0.1	
KIV	Kislovodsk	71.51	316	*e* P		P	03 00 34.6	-0.7	
PPSI	Pulau Pagai	71.57	243	P		P	03 00 36.6	+0.8	
KBZ	Khabaz	71.59	316	P		P	03 00 36.0	+0.4	
	comp=Z,536nm,1.0s,baz=60,slow=3.4,SNR=310								
KBZ				PKPPKP		P'P'df	03 28 19.6	-12	
	comp=Z,8.2nm,1.1s,baz=122,slow=3.9,SNR=5.6								
	comp=Z,536nm,1.0s								
KBZ	Khabaz	71.59	316*c*	*i* P		P	03 00 35.9	+0.4	
KBZ				pmax		pmax			
	comp=Z,2µm,1.5s								
WRAB	Tennant Creek	71.59	203	P		P	03 00 35.5	-0.2	
	comp=Z,2µm,1.3s								
WRAB	Tennant Creek	71.59	203	P		P	03 00 36.0	+0.2	
WRAB				IAmb		IAmb	03 00 55.5		
	comp=Z,4µm,1.1s								
WRAB	Tennant Creek	71.59	203*c*	*i* P		P	03 00 35.9	+0.2	
WRAB				pmax		pmax			
	comp=Z,2µm,1.0s								
WRAB				MLR		MLR			
	comp=Z,107µm,20.0s								
WRA	Warramunga Arr	71.60	203	P		P	03 00 35.9	+0.1	
	comp=Z,736nm,0.9s,baz=20,slow=6.1,SNR=354								
WRA				PP		PP	03 03 18.0	+2.4	
	comp=Z,145nm,1.1s,baz=12,slow=7.7,SNR=2.0								
WRA				S		S	03 09 53.0	+1.7	
	comp=Z,3.4nm,0.8s,baz=313,slow=5.6,SNR=0.9								
WRA				PKKP		PKKPdf	03 20 15.0	+3.5	
	comp=Z,2.1nm,1.0s,baz=199,slow=4.0,SNR=1.6								
WRA				PKPPKP		P'P'df	03 28 22.7	+0.2	
	comp=Z,9.3nm,1.1s,baz=180,slow=1.8,SNR=5.7								
WRA				LR		LR	03 32 01.5		
	comp=Z,80µm,19.4s,baz=5.0,slow=36								
WRA	Warramunga Arr	71.60	203	P		P	03 00 35.9	+0.1	
WRA	Warramunga Arr	71.60	203	P		P	03 00 35.9	+0.1	
WRA				pmax		pmax			
	comp=Z,532nm,1.1s								
WB1	Warramunga Ar.	71.61	203	P		P	03 00 36.8	+0.9	
	comp=Z,4µm,1.1s								
BHUJ	Bhuj	71.65	284	*e* P		P	03 00 36.6	+0.4	
BHUJ				IAmb		IAmb	03 00 56.0		
	comp=Z,2µm,1.2s								
BHUJ				IAMs_20		IAMs_20	03 15 46.9		
	comp=Z,125µm,29.0s								
BHUJ				IAMs_20		IAMs_20	03 16 20.2		
	comp=Z,175µm,37.5s								
LUNU	Lund	71.69	340	*i* P		P	03 00 35.9	-0.1	
SHA1	Shidzhatmaz	71.69	316*c*	*i* P		P	03 00 36.7	+0.2	
HAMD	Hammershus, De	71.71	339	*i* P		P	03 00 35.5	-0.6	
HAMD				IAmb		IAmb	03 00 42.2		
	comp=Z,1µm,1.3s								
MI28	Mi28,Pidlybu	71.81	329	P		P	03 00 35.1	-1.7	
BSD	Bornholm Skovb	71.82	339	⇑P		P	03 00 36.1	-0.6	
BSD	Bornholm Skovb	71.82	339	*i* P		P	03 00 37.0	+0.2	
BSD				IAmb		IAmb	03 00 42.6		
	comp=Z,490nm,1.2s								
MUD	Monsted U'grnd	71.85	342	*i* P		P	03 00 37.0	+0.1	
MUD				IAmb		IAmb	03 00 43.8		
	comp=Z,626nm,1.3s								
LABN	Labinsk	71.85	318*c*	*i* P		P	03 00 37.8	+0.6	
LABN				*i* *PP		sP	03 00 53.2	-0.5	
LABN				*i* S		S	03 09 54.6	+0.7	
LABN				pmax		pmax			
	comp=Z,8µm,2.3s								
LABN				pmax		pmax			
	comp=Z,894nm,1.0s								
COP	Copenhagen	71.87	340	*i* P		P	03 00 37.3	+0.2	
COP				IAmb		IAmb	03 00 43.0		
	comp=Z,1µm,1.0s								
BIGH	Upper Bighouse	71.96	350	*e* P		P	03 00 37.0	-0.5	
BIGH				IAMs_20		IAMs_20	03 27 21.4		
	comp=Z,324µm,26.3s								
RNPP9	Sopachiv	71.99	331	P		P	03 00 37.1	-0.8	
NEUR	Neytrino	72.04	316*c*	*i* P		P	03 00 36.9	-1.7	
NEUR				pmax		pmax			
	comp=Z,472nm,1.6s								
NEUR				MLR		MLR			
	comp=Z,324µm,22.0s								
RNPP8	Varash	72.06	331	P		P	03 00 37.7	-0.6	
MDRS	Chennai	72.07	269	*e* P		P	03 00 39.2	+0.3	
MDRS				IAmb		IAmb	03 01 17.3		
	comp=Z,879nm,1.0s								
RNPP5	Staryi Chortor	72.14	331	P		P	03 00 38.0	-0.8	
POO	Poona	72.32	278	*e* P		P	03 00 41.5	+1.1	
POO				IAmb		IAmb	03 01 09.4		
	comp=Z,12µm,1.7s								
EGSI	Enggano, Bengk	72.35	239	P		P	03 00 39.8	-0.7	
	comp=Z,287µmcomp=Z,40µmcomp=Z,1µm,1.0s								
WMOK	Wichita Mounta	72.59	57	P		P	03 00 41.3	-0.5	
WMOK	Wichita Mounta	72.59	57	P		P	03 00 41.3	-0.5	
WMOK				pmax		pmax			
	comp=Z,1µm,1.1s								
GD1S	Gladstone Soft	72.60	186	P		P	03 00 42.5	+0.8	
	comp=Z,1µm,1.1s								
LUBAR	Lubar, Ukraine	72.64	329	P		P	03 00 40.5	-1.3	
SSRD	Sdr. Stenderup	72.67	342	*i* P		P	03 00 42.6	+0.8	
SSRD				IAmb		IAmb	03 00 48.2		
	comp=Z,1µm,1.1s								
RGN	Rugen	72.71	339	P		P	03 00 42.1	0.0	
RGN	Rugen	72.71	339	*e* P		P	03 00 42.7	+0.6	
	comp=Z,5µm,1.1s,baz=22,slow=5.7								
RGN	Rugen	72.71	339	⇑P		P	03 00 42.5	+0.4	
R9F13	Warsaw-Wawer	72.75	334	*e* P		P	03 00 42.3	-0.1	
	comp=Z,66nm,0.6s								
R9F13				*e* S		SKiKP	03 10 21.1	+10	
MCD	Coleburn Disti	72.78	349	*e* P		P	03 00 42.2	-0.3	
MCD				IAMs_20		IAMs_20	03 28 11.6		
	comp=Z,256µm,26.1s								
GKP	Gorka Klasztor	72.90	336	*e* P		P	03 00 42.9	-0.4	
GKP				*e* S		S	03 10 06.3	+0.8	
GKP				*e* L		L	03 34 01.2		
	comp=Z,379µm,24.6s								
KAD	Karad	72.98	277	*e* P		P	03 00 44.4	+0.1	
KAD				IAmb		IAmb	03 01 13.3		
	comp=Z,13µm,1.7s								
SOC	Sochi	73.13	318*c*	*i* P		P	03 00 44.7	-0.1	
SOC				*e* *PP		PcP	03 01 00.3	-1.0	
SOC				*e* PPP		PPP	03 05 19.1		
SOC				*e* S		S	03 10 07.0	-1.5	
SOC				pmax		pmax			
	comp=Z,486nm,0.9s								
HDIL	Hopedale	73.14	47	P		P	03 00 44.2	-0.7	
HDIL				IAmb		IAmb	03 00 59.6		
	comp=Z,3µm,0.9s								
ANN	Anapa	73.15	320*d*	*i* P		P	03 00 44.0	-0.9	
ANN				*i* *PP		PcP	03 01 01.1	-0.2	
ANN				*i*			03 03 26.5		
ANN				*i* PPP		PPP	03 05 13.2		
ANN				*i* S		S	03 10 06.6	-2.1	
ANN				*i* SS		SS	03 14 52.8	+3.2	
ANN				pmax		pmax			
	comp=E,98nm,1.4s								
ANN				pmax		pmax			
	comp=N,62nm,1.4s								
ANN				pmax		pmax			
	comp=Z,327nm,1.2s								
ANN				pmax		pmax			
	comp=Z,3µm,2.4s								
BEL	Belsk	73.19	334	*e* P		P	03 00 45.8	+0.8	
BEL				*e* S		SKiKP	03 10 12.3	+0.3	
BEL				*e* L		L	03 34 21.9		
	comp=Z,625µm,23.6s								
KPL	Plockton	73.29	351	*e* P		P	03 00 45.3	-0.2	
KPL				IAMs_20		IAMs_20	03 27 58.4		
	comp=Z,320µm,25.2s								
DRUM	Mains of Drumt	73.33	349	*e* P		P	03 00 45.2	-0.5	
DRUM				IAMs_20		IAMs_20	03 27 11.2		
	comp=Z,275µm,29.4s								
LPIG	La Paz	73.47	72	LR		LR	03 29 29.1		
	comp=Z,88µm,20.0s,baz=307,slow=33								
GNI	Garni	73.49	313	P		P	03 00 48.3	+1.1	
	comp=Z,497nm,1.2s,baz=19,slow=1.6,SNR=159								
GNI				S		S	03 10 16.4	+3.4	
	comp=Z,62nm,1.2s,baz=106,slow=11,SNR=2.2								
GNI				PKPPKP			03 28 21.4		
	comp=Z,21nm,1.1s,baz=172,slow=7.1,SNR=5.1								
	comp=Z,497nm,1.2s								
GNI	Garni	73.49	313	P		P	03 00 47.4	+0.2	
GNI	Garni	73.49	313	P		P	03 00 47.4	+0.2	
GNI				pmax		pmax			
	comp=Z,9µm,1.3s								
NIUE	Niue	73.50	148	P		P	03 00 48.1	+1.0	
	comp=Z,2µm,2.2s								
NIUE	Niue	73.50	148	P		P	03 00 47.3	+0.2	
NIUE	Niue	73.50	148	P		P	03 00 51.6	+4.5	
NIUE	Niue	73.50	148	⇑P		P	03 00 48.0	+1.0	
BAL3X	Bal3x, Balta	73.66	327	P		P	03 00 46.2	-1.7	
TXAR	Lajitas Array	73.75	64	P		P	03 00 48.9	+0.1	
	comp=Z,103nm,0.7s,baz=299,slow=4.2,SNR=1299								
TXAR				PP		PP	03 03 33.9	+0.6	
	comp=Z,54nm,0.9s,baz=313,slow=7.3,SNR=1.1								
TXAR				S		S	03 10 17.1	+1.0	
	comp=Z,11nm,1.2s,baz=8.9,slow=8.9,SNR=1.9								
TXAR				PKKPbc		PKKPbc	03 20 23.6	+4.2	
	comp=Z,3.1nm,0.9s,baz=130,slow=1.8,SNR=4.1								
TXAR				PKPPKP		P'P'df	03 28 24.6	-2.2	
	comp=Z,3.4nm,0.9s,baz=151,slow=2.9,SNR=5.5								
	comp=Z,103nm,0.7s								
TXAR	Lajitas Array	73.75	64	P		P	03 00 48.6	-0.2	
TXAR	Lajitas Array	73.75	64	P		P	03 00 48.6	-0.2	
KARS	Kars	73.91	314	P		P	03 00 49.9	+0.2	
KARS	Kars	73.91	314	P		P	03 00 49.9	+0.2	
KARS				pmax		pmax			
	comp=Z,10µm,1.7s								
KARS	Kars	73.91	314	⇑P		P	03 00 50.5	+0.9	
SORM	Soroca	73.94	327	⇓P		P	03 00 48.8	-0.7	
SORM	Soroca	73.94	327	P		P	03 00 48.7	-0.7	
BSEG	Bad Segeberg	73.96	341	*e* P		P	03 00 49.7	+0.2	
	comp=Z,8µm,2.5s,baz=22,slow=5.7								
INVG	Invergeldie, C	74.00	350	*e* P		P	03 00 49.2	-0.5	
INVG				IAMs_20		IAMs_20	03 28 33.3		
	comp=Z,300µm,25.1s								
SLBS	Sierra La Lagu	74.00	72	P		P	03 00 50.3	-0.1	
SLBS				IAmb		IAmb	03 01 15.7		
	comp=Z,3µm,1.6s								
CCM	Cathedral Cave	74.10	50	P		P	03 00 49.6	-1.0	
CCM	Cathedral Cave	74.10	50	P		P	03 00 49.6	-1.0	
CCM				pmax		pmax			
	comp=Z,2µm,1.2s								
EIDS	Eidsvold	74.12	186	P		P	03 00 52.0	+1.3	
	comp=Z,2µm,1.5s								
EIDS	Eidsvold	74.12	186	P		P	03 00 51.5	+0.9	
EIDS				IAmb		IAmb	03 01 10.8		
	comp=Z,4µm,1.6s								
EIDS	Eidsvold	74.12	186	⇑P		P	03 00 51.9	+1.3	
KMPD	K-Podol'skiy	74.24	329	P		P	03 00 49.7	-1.5	
KMPD				P		P	03 00 50.2	-1.0	
EAB	Aberfoyle	74.27	350	*e* P		P	03 00 51.3	0.0	
HPIG		74.29	67	P		P	03 00 51.8	-0.3	
HPIG		74.29	67	⇑P		P	03 00 52.0	-0.2	
LAWE	Loch Awe, Argy	74.32	350	*e* P		P	03 00 51.5	0.0	
LAWE				IAMs_20		IAMs_20	03 28 40.6		
	comp=Z,286µm,25.0s								
SADO	Sadowa	74.34	38	LR		LR	03 37 51.7		
	comp=Z,104µm,19.2s,baz=358,slow=39								
EDI	Edinburgh	74.39	349	*e* P		P	03 00 51.6	-0.4	
EDI				IAMs_20		IAMs_20	03 27 40.9		
	comp=Z,289µm,28.2s								
SIM	Simferopol'	74.41	322	*e* P		P	03 00 51.5	-0.8	
SIM				*e* S		S	03 10 23.5	+0.6	
SIM				pmax		pmax			
	comp=Z,44µm,10.4s								
SALM	Salem	74.48	270	*e* P		P	03 00 53.0	-0.2	
SALM				IAmb		IAmb	03 01 21.6		
	comp=Z,364nm,0.9s								
DRBR	Darabani	74.49	328	⇑P		P	03 00 52.4	-0.3	
RUE	Ruedersdorf	74.50	338	*e* P		P	03 00 52.8	+0.1	
	comp=Z,4µm,1.2s,baz=22,slow=5.7								
RUE	Ruedersdorf	74.50	338	⇑P		P	03 00 52.6	0.0	
GOA	Goa	74.54	276	*e* P		P	03 00 53.8	+0.4	
GOA				IAmb		IAmb	03 01 37.7		
	comp=Z,3µm,1.0s								
KWP	Kalwaria Pacla	74.55	332	*e* P		P	03 00 54.0	+1.0	
KWP				*e* S		S	03 10 29.2	+4.9	
KWP				*e* L		L	03 36 35.8		
	comp=Z,687µm,22.8s								
KWP	Kalwaria Pacla	74.55	332	⇑P		P	03 00 53.0	0.0	
KWP	Kalwaria Pacla	74.55	332	P		P	03 00 53.3	+0.3	
GGERF	Dalmarnock	74.59	350	*e* P		P	03 00 53.1	0.0	
MORS	Morshin	74.60	331	P		P	03 00 53.1	-0.2	
GORT1	Trebel	74.62	340	*e* P		P	03 00 53.8	+0.6	
	comp=Z,10µm,1.9s,baz=22,slow=5.7								
LDAQ	Lac Daran	74.65	32	P		P	03 00 53.0	-0.7	
PGBU	Glenifferbraes	74.66	350	*e* P		P	03 00 53.6	+0.1	
PGBU				IAMs_20		IAMs_20	03 28 39.0		
	comp=Z,499µm,24.5s								
XMI	Christmas Isla	74.69	234	P		P	03 00 54.0	-0.2	
	comp=Z,1µm,2.2s								
XMI	Christmas Isla	74.69	234	⇑P		P	03 00 54.1	0.0	
SHIU	Shidnytsya	74.70	331	P		P	03 00 54.0	+0.1	
SHIU				pP		sP	03 01 09.9	-0.7	
KIS	Kishinev	74.74	327	⇓P		P	03 00 53.8	-0.3	
KIS	Kishinev	74.74	327	P		P	03 00 53.8	-0.3	
PURM	Purcari	74.75	326	⇑P		P	03 00 53.5	-0.5	
OJC	Ojcow	74.91	334	*e* P		P	03 00 55.5	+0.4	
OJC				*e* S		S	03 10 33.7	+5.3	
OJC				*e* L		L	03 35 12.6		
	comp=Z,549µm,24.1s								
OJC	Ojcow	74.91	334	P		P	03 00 54.8	-0.3	
OJC	Ojcow	74.91	334	P		P	03 00 54.8	-0.3	
OJC	Ojcow	74.91	334	⇑P		P	03 00 55.1	0.0	
TRQ	Mont Tremblant	74.93	35	P		P	03 00 54.0	-1.3	
EKA	Eskdalemuir Ar	74.96	349	P		P	03 00 55.1	-0.2	
	comp=Z,264nm,1.0s,baz=17,slow=5.4,SNR=149								
EKA				PP		PP	03 03 42.3	-0.3	
	comp=Z,42nm,0.9s,baz=6.8,slow=7.1,SNR=1.3								
EKA				PKKPbc		PKKPbc	03 20 22.5	+5.4	
	comp=Z,4.0nm,0.8s,baz=179,slow=2.8,SNR=2.7								
EKA				PKPPKP		P'P'df	03 28 18.5	-7.4	
	comp=Z,5.8nm,0.9s,baz=198,slow=1.7,SNR=

RAC eS S 03 10 36.8 +2.0
RAC MLR MLR
comp=Z,569µm,22.1s
BLO Bloomington 75.55 46 P P 03 00 57.9 -1.1
BLO Bloomington 75.55 46 P P 03 00 57.9 -1.1
BLO pmax pmax
comp=Z,2µm,1.2s
CLGH Cloghs, Cushen 75.56 351 eP P 03 00 58.7 0.0
CLGH IAMs_20 IAMs_20 03 29 04.8
comp=Z,289µm,25.3s
ASSE Asse, Remlinge 75.56 340 eP P 03 00 58.7 0.0
comp=Z,14µm,2.5s,baz=22,slow=5.7
GIRR Girov 75.61 328 ⇓P P 03 00 59.1 0.0
GAL1 Galloway 75.61 350 eP P 03 00 58.5 -0.5
GAL1 IAMs_20 IAMs_20 03 29 19.7
comp=Z,257µm,25.6s
KOPT Kop Dagi 75.61 315 P P 03 00 59.6 0.0
KOPT IAmb IAmb 03 01 36.0
comp=Z,3µm,1.0s
OSTC Ostas 75.62 336 eP P 03 00 59.5 +0.3
OSTC eS S 03 10 35.8 -0.4
OSTC ex x 03 16 02.4
OSTC AMS AMS 03 37 00.0
comp=Z,520µm,23.0s
OSTC Ostas 75.62 336 eP P 03 00 59.5 +0.3
OSTC eS S 03 10 35.8 -0.4
OSTC MLR MLR
comp=Z,520µm,23.0s
CHVC Chvalec 75.64 336 eP P 03 00 59.4 +0.1
CHVC eS S 03 10 37.9 +1.5
CHVC ex x 03 15 58.5
CHVC AMS AMS 03 36 40.0
comp=Z,480µm,21.5s
CHVC Chvalec 75.64 336 eP P 03 00 59.4 +0.1
CHVC eS S 03 10 37.9 +1.5
CHVC MLR MLR
comp=Z,480µm,21.5s
KESW Keswick, Cumbr 75.68 349 eP P 03 00 59.4 0.0
KESW IAMs_20 IAMs_20 03 28 18.8
comp=Z,260µm,27.2s
IDGL Inch Island, C 75.71 351 P P 03 00 59.6 +0.1
IDGL Inch Island, C 75.71 351 eP P 03 00 59.7 +0.1
UPC Upice 75.72 336 eP P 03 01 00.1 +0.3
UPC eS S 03 10 39.4 +2.1
UPC AMS AMS 03 41 30.0
comp=Z,641µm,16.5s
OKC Ostrava-Krasne 75.73 334 eP P 03 01 00.1 +0.3
OKC eS S 03 10 39.4 +2.0
OKC AMS AMS 03 36 20.0
comp=Z,429µm,21.4s
OKC Ostrava-Krasne 75.73 334 eP P 03 01 00.1 +0.3
OKC eS S 03 10 39.4 +2.0
OKC MLR MLR
comp=Z,429µm,21.4s
MNGI Mangalore 75.75 273 eP P 03 00 59.7 -0.6
MNGI IAmb IAmb 03 01 34.8
comp=Z,740nm,0.7s
STEB Steborice 75.75 335 eP P 03 01 00.2 +0.3
STEB eS S 03 10 42.9 +5.2
CLL Collm 75.77 338⇑ iP P 03 00 59.5 -0.5
CLL *i* *PP **sP** 03 01 16.0 -0.6
CLL eS S 03 10 37.0 -0.7
CLL pmax pmax
comp=Z,755nm,1.3s
CLL Collm 75.77 338⇑ *i*P P 03 00 59.5 -0.5
comp=Z,755nm,1.3s
CLL *e*Pmlp 03 01 02.0
comp=Z,49µm,23.7s
CLL *i* x x 03 01 04.6
comp=Z,926nm,1.2s
CLL *e*Pmax 03 01 08.0
CLL *i* pP **sP** 03 01 16.0 -0.6
comp=Z,2µm,1.5s
CLL *i* x x 03 01 21.4
comp=Z,1µm,1.1s
CLL *i* Pmax 03 01 26.9
comp=Z,2µm,1.1s
CLL *e*PP **PP** 03 03 47.0 -2.6
CLL *e*PPmax 03 04 07.0
CLL *e*PPP PPP 03 05 34.0
CLL *e*PPPmax 03 05 55.0
CLL *ex* x 03 09 35.0
CLL *e*S **S** 03 10 37.0 -0.7
comp=N,46µm,26.2s
CLL *e*S **S** 03 10 37.0 -0.7
comp=E,73µm,28.8s
CLL *e*S **S** 03 10 37.0 -0.7
comp=Z,70µm,34.5s
CLL *e*SKSac **SKKSac** 03 11 06.0 -0.2
CLL *e*PS **PnS** 03 11 20.0 +0.9
CLL *e*PPSmax 03 11 33.0
comp=N,114µm,28.9s
CLL *e*SS **SS** 03 15 31.0 +2.1
CLL *e*SSmax 03 16 10.0
CLL *ex* x 03 19 54.0
CLL *e*SSSS 03 20 48.0
CLL *e*PKPPKP P'P'df 03 28 05.0 -19
CLL *i* PKPPKPdf 03 28 19.3
comp=Z,736nm,3.2s
CLL AMS AMS 03 39 00.0
comp=Z,493µm,20.4s
CLL AMS AMS 03 39 42.0
CLL Collm 75.77 338 eP P 03 00 59.6 -0.3
comp=Z,2µm,1.1s,baz=22,slow=5.7
DPC Dobruska-Polom 75.78 336 eP P 03 01 00.7 +0.5
DPC eS S 03 10 37.9 -0.1
DPC ex x 03 16 02.7
DPC AMS AMS 03 41 10.0
comp=Z,486µm,16.7s
DPC Dobruska-Polom 75.78 336 eP P 03 01 00.7 +0.5
DPC eS S 03 10 37.9 -0.1
DPC MLR MLR
comp=Z,486µm,16.7s
BIR Birlad 75.79 327⇑P P 03 01 00.5 +0.2
BIR Birlad 75.79 327 P P 03 01 00.4 +0.2
MNTQ Montreal, Queb 75.89 35 P P 03 00 59.3 -1.5
CLZ Clausthal 75.90 340 eP P 03 01 01.2 +0.4
comp=Z,4µm,1.4s,baz=22,slow=5.7
KRLC Kraliky 75.90 335 eP P 03 01 01.3 +0.4
KRLC eS S 03 10 42.9 +3.5
KRLC ex x 03 16 06.8
KRLC AMS AMS 03 36 30.0
comp=Z,514µm,23.0s
KRLC Kraliky 75.90 335 eP P 03 01 01.3 +0.4
KRLC eS S 03 10 42.9 +3.5
KRLC MLR MLR
comp=Z,514µm,23.0s
BRG Berggiesshubel 75.93 337 eP P 03 01 00.7 -0.2
comp=Z,998nm,1.2s,baz=22,slow=5.7
TESR Tescani 75.93 328 ⇓P P 03 01 00.8 -0.3
MORC Moravsky Berou 75.96 335⇑P P 03 01 01.6 +0.4
MORC Moravsky Berou 75.96 335 P P 03 01 01.0 -0.2
MORC IAmb IAmb 03 01 34.0
comp=Z,3µm,1.2s
MORC Moravsky Berou 75.96 335 P P 03 01 01.6 +0.4
MORC Moravsky Berou 75.96 335⇑ iP P 03 01 01.2 0.0
MORC eS S 03 10 39.0 -1.0
MORC *e*PKPPKP 03 28 17.0
MORC Moravsky Berou 75.96 335⇑P P 03 01 01.4 +0.2
LANS Liptovska Anna 75.96 333 eP P 03 01 02.0 +0.8
LANS pmax pmax
comp=Z,403nm,1.1s
LANS Liptovska Anna 75.96 333 eP P 03 01 02.0 +0.8
KOD Kodaikanal 75.99 270 eP P 03 01 01.9 -0.2
KOD IAmb IAmb 03 01 30.3
comp=Z,3µm,1.3s
VLDR Vladesti 75.99 326⇑P P 03 01 01.3 0.0
VARL Varlezi 76.03 326⇓P P 03 01 01.6 +0.1
IBBN Ibbenburen 76.03 342 eP P 03 01 01.7 +0.3
comp=Z,3µm,1.3s,baz=22,slow=5.7
IBBN Ibbenburen 76.03 342⇑P P 03 01 01.5 +0.1
PALK Pallekele 76.04 265 LR LR 03 38 32.8
comp=Z,109µm,20.0s,baz=28,slow=39
PALK Pallekele 76.04 265 P P 03 01 01.7 -0.4
PALK IAmb IAmb 03 01 37.4
comp=Z,2µm,1.2s
PALK Pallekele 76.04 265 *i* P P 03 01 02.1 0.0
SNR=83
PALK Pallekele 76.04 265 P P 03 01 01.7 -0.4
PALK pmax pmax
comp=Z,2µm,1.2s
PALK Pallekele 76.04 265 P P 03 01 02.1 0.0
PALK S S 03 10 40.5 -1.3
PALK Pallekele 76.04 265 P P 03 01 01.8 -0.4
comp=Z,186µmcomp=Z,579nm,1.2s
GURO Guroymak-BITLI 76.04 313⇑P P 03 01 02.6 +0.6
GHRR 76.05 327⇓P P 03 01 02.4 +0.8
QLP Quilpie 76.06 192 P P 03 01 02.0 +0.3
comp=Z,4µm,1.4s
QLP Quilpie 76.06 192⇑P P 03 01 02.7 +1.0
PVCC Panska Ves 76.09 337 eP P 03 01 02.1 +0.3
PVCC eS S 03 10 42.9 +1.6
PVCC MLR MLR
comp=Z,367µm,24.0s
HPK Haverah Park 76.09 348 eP P 03 01 01.9 +0.1
ERPA Erie 76.15 40 P P 03 01 01.6 -0.7
ERPA IAmb IAmb 03 01 21.4
comp=Z,3µm,1.1s
NEUB Neuenburg 76.16 339 eP P 03 01 02.1 -0.1
comp=Z,11µm,2.1s,baz=22,slow=5.7
SCTR Scanteiesti 76.17 326⇑P P 03 01 02.5 +0.2
ONER Baraj Valea Uz 76.18 328⇑P P 03 01 02.6 +0.2
IOMK Kirk Michael 76.19 349 eP P 03 01 02.1 -0.2
IOMK IAMs_20 IAMs_20 03 29 36.5
comp=Z,119µm,26.9s
RICC Richard 76.19 337 eP P 03 01 02.9 +0.5
RICC eS S 03 10 47.1 +4.7
TATR Tatarca 76.21 326⇓P P 03 01 02.9 +0.3
TW1H Toowoomba 1 Ha 76.22 185 P P 03 01 04.5 +1.8
comp=Z,979nm,1.3s
GIUM Giurgiulesti 76.25 326⇑P P 03 01 03.2 +0.4
MAUC Maruska 76.25 334 eP P 03 01 03.5 +0.7
MAUC eS S 03 10 45.7 +2.5
KECS Kecovo 76.25 332 eP P 03 01 03.0 +0.2
KECS pmax pmax
comp=Z,329nm,1.1s
KECS Kecovo 76.25 332 eP P 03 01 03.0 +0.2
COSR Cosmesti PH 76.26 327⇓P P 03 01 04.0 +1.1
GTTG Gottingen 76.27 340 eP P 03 01 03.1 +0.3
comp=Z,4µm,1.6s,baz=22,slow=5.7
TLCR 76.28 326⇓P P 03 01 02.9 -0.1
TLCR 76.28 326 P P 03 01 02.8 -0.1
PANC Panciu 76.30 327⇓P P 03 01 04.1 +1.0
HSKC Hora Svate Kat 76.31 338 eP P 03 01 03.4 +0.3
HSKC eS S 03 10 47.1 +3.3
HSKC AMS AMS 03 34 00.0
comp=Z,383µm,24.8s
WIM Isle of Man 76.31 349 eP P 03 01 02.7 -0.4
NEGRR Negrea 76.33 326⇓P P 03 01 03.7 +0.5
CEI Carei 76.33 331⇑P P 03 01 04.4 +1.2
CEI Carei 76.33 331 P P 03 01 04.4 +1.2
GISR Galati 76.34 326⇑P P 03 01 03.8 +0.4
TUDR 76.35 326⇓P P 03 01 03.8 +0.4
ACSO Alum Creek Sta 76.36 43 P P 03 01 02.7 -0.9
ACSO IAmb IAmb 03 01 18.4
comp=Z,4µm,1.6s
IZVR Izvoarele 76.36 326⇓P P 03 01 03.9 +0.5
SCHL Schela 76.37 326⇑P P 03 01 03.5 0.0
LMK Market Rasen 76.39 347 eP P 03 01 03.2 -0.2
SCHLR Schela 76.40 326⇑P P 03 01 03.6 -0.1
WCI Wyandotte Cave 76.41 47 P P 03 01 03.3 -0.5
WCI IAmb IAmb 03 01 23.1
comp=Z,4µm,1.2s
WCI Wyandotte Cave 76.41 47 P P 03 01 03.3 -0.5
WCI pmax pmax
comp=Z,4µm,1.2s
ODBI Odobesti 76.43 327⇓P P 03 01 05.1 +1.3
VRI Vrincioaia 76.46 327⇓P P 03 01 04.1 0.0
VRI Vrincioaia 76.46 327 P P 03 01 05.3 +1.2
PLOR Plostina 76.50 327⇑P P 03 01 04.6 +0.2
PLOR Plostina 76.50 327 P P 03 01 04.5 +0.2
CFR Carcaliu 76.54 326⇓P P 03 01 04.4 0.0
CFR Carcaliu 76.54 326 P P 03 01 03.8 -0.6
TURR Turia 76.55 328⇑P P 03 01 05.3 +0.7
PRU Pruhonice 76.59 337 eP P 03 01 05.1 +0.4
PRU eS S 03 10 50.0 +3.2
PRU AMS AMS 03 35 30.0
comp=Z,403µm,24.1s
PRU Pruhonice 76.59 337 eP P 03 01 05.1 +0.4
PRU eS S 03 10 50.0 +3.2
PRU MLR MLR
comp=Z,403µm,24.1s
OZUR 76.60 328⇑P P 03 01 05.4 +0.6
JURR Jurilovca 76.61 325⇑P P 03 01 05.0 +0.2
ILTH Belurgan, Co L 76.62 350 P P 03 01 04.4 -0.3
ILTH Belurgan, Co L 76.62 350 eP P 03 01 04.2 -0.5
MESR Meseseni 76.64 330⇑P P 03 01 05.5 +0.5
LBWR Ladybower, Pea 76.65 348 eP P 03 01 04.8 -0.1
VRAC Vranov 76.65 335 P P 03 01 05.3 +0.3
comp=Z,334nm,1.2s,baz=21,slow=6.6,SNR=106
VRAC PKPPKP P'P'df 03 28 14.1 -8.7
comp=Z,7.7nm,0.9s,baz=231,slow=2.2,SNR=5.0
VRAC LR LR 03 39 05.4
comp=Z,515µm,20.1s,baz=16,slow=39
comp=Z,334nm,1.2s
VRAC Vranov 76.65 335⇑P P 03 01 05.6 +0.5
VRAC Vranov 76.65 335 P P 03 01 05.6 +0.5
VRAC Vranov 76.65 335⇑ iP P 03 01 05.2 +0.1
VRAC eS S 03 10 46.5 -1.0
VRAC *e*PKPPKP **P'P'df** 03 28 17.3 -5.5
BOSR Bodos 76.66 328⇑P P 03 01 05.7 +0.6
TGMR Targu Mures 76.66 329⇓P P 03 01 06.4 +1.3
COVR Voineasa-Covas 76.66 327⇑P P 03 01 05.6 +0.4
TPGR Topolog 76.70 326⇓P P 03 01 05.5 +0.1
MOX Moxa 76.72 339 eP P 03 01 05.4 0.0
comp=Z,16µm,2.9s,baz=22,slow=5.7
MOX *e*L L 03 38 35.3
comp=Z,492µm,21.8s
TANN Tannenbergstha 76.72 338 eP P 03 01 05.5 0.0
comp=Z,8µm,2.3s,baz=22,slow=5.7
PLN Plauen 76.73 338 eP P 03 01 05.6 +0.1
comp=Z,3µm,2.0s,baz=22,slow=5.7
JAVC Velka Javorina 76.75 334⇑ iP P 03 01 06.6 +0.9
JAVC eS S 03 10 47.5 -1.3
JAVC *e*PKPPKP **P'P'df** 03 28 16.6 -6.1
GC1S Gold Coast 1 S 76.75 184 P P 03 01 06.5 +0.9
comp=Z,421nm,1.2s
LTVH Ltavrtes, Hu 76.78 331⇑P P 03 01 07.5 +1.7
LTVH Ltavrtes, Hu 76.78 331⇑P P 03 01 06.1 +0.3
GRER 76.79 327⇑P P 03 01 07.7 +1.8
CJR Cluj-Napoca 76.81 330⇑P P 03 01 06.3 +0.3
CJR Cluj-Napoca 76.81 330 P P 03 01 06.3 +0.3
DOPR Dopca 76.85 328⇑P P 03 01 06.7 +0.5
H06N1 SOCORRO T-PHAS 76.85 76 P P 03 01 07.4 +0.8
SNR=6.5
BZK Bozkurt 76.92 320⇑P P 03 01 06.7 +0.1
BZK Bozkurt 76.92 320⇑P P 03 01 06.9 +0.2
KRUC Moravsky 76.93 335⇑ iP P 03 01 06.7 +0.1
KRUC eS S 03 10 49.9 -0.7
KRUC *e*PKPPKP **P'P'df** 03 28 16.1 -6.2
KASTN Kahler Asten 76.93 341 eP P 03 01 06.9 +0.3
comp=Z,4µm,1.6s,baz=22,slow=5.7
PSZ Piszkesteto 76.93 332⇓P P 03 01 07.3 +0.5
PSZ Piszkesteto 76.93 332 P P 03 01 06.3 -0.5
PSZ IAmb IAmb 03 01 39.7
comp=Z,4µm,1.4s
PSZ Piszkesteto 76.93 332 P P 03 01 06.3 -0.5
PSZ pmax pmax
comp=Z,4µm,1.4s
PSZ Piszkesteto 76.93 332⇑P P 03 01 06.8 +0.1
UBBA Unterbreizbach 76.94 340 eP P 03 01 06.6 +0.1
comp=Z,4µm,1.8s,baz=22,slow=5.7
HALK Hakmana 76.94 264⇑P P 03 01 07.2 +0.1
BUG Bochum--Univer 76.95 342 eP P 03 01 06.6 0.0
comp=Z,6µm,1.9s,baz=22,slow=5.7
NCB Newcomb 76.96 36 P P 03 01 05.3 -1.6
H06S1 SOCORRO T 76.96 77 P P 03 01 08.0 +0.8
SNR=140
TREC Trest 76.97 336 eP P 03 01 07.1 +0.2
TREC eS S 03 10 52.1 +1.1
TREC Trest 76.97 336 eP P 03 01 07.1 +0.2
TREC eS S 03 10 52.1 +1.1
NEHR Nehoiu 76.99 327⇑P P 03 01 08.2 +1.2
WME Myndd Eilian 77.00 349 eP P 03 01 06.2 -0.7
MARR Marisel-Cluj 77.00 330⇑P P 03 01 07.0 -0.2
STNC Stoke 77.02 348 eP P 03 01 07.2 +0.1
DRGR 77.04 330⇓P P 03 01 08.4 +1.0
DRGR 77.04 330 P P 03 01 08.4 +1.0
MDB Medias 77.04 329⇓P P 03 01 08.5 +1.1
MDB Medias 77.04 329 P P 03 01 08.4 +1.1
TIRR Tirgusor 77.05 325⇓P P 03 01 07.6 +0.2
TIRR Tirgusor 77.05 325 P P 03 01 06.4 -0.9
TIRR IAmb IAmb 03 01 29.1
comp=Z,1µm,0.9s
TIRR Tirgusor 77.05 325 P P 03 01 06.4 -0.9
TIRR pmax pmax
comp=Z,1µm,0.9s
TIRR Tirgusor 77.05 325⇑P P 03 01 06.9 -0.4
MLR Muntele Rosu 77.06 327 P P 03 01 07.0 -0.6
comp=Z,146nm,0.8s,baz=246,slow=1.2,SNR=129
MLR PKPPKP 03 28 19.8
comp=Z,46nm,1.2s,baz=202,slow=2.0,SNR=7.4
MLR LR LR 03 40 52.9
comp=Z,281µm,18.0s,baz=37,slow=40
comp=Z,146nm,0.8s
MLR Muntele Rosu 77.06 327⇑P P 03 01 08.7 +1.1
MLR Muntele Rosu 77.06 327 P P 03 01 08.7 +1.1
BORR Bors 77.08 331⇓P P 03 01 08.6 +1.1
WLF1 Llynfaes 77.12 349 eP P 03 01 07.0 -0.6
WLF1 IAMs_20 IAMs_20 03 28 59.0
comp=Z,562µm,29.6s
STBN Sutton Boningt 77.13 347 eP P 03 01 07.2 -0.4
SMOL Smolenice 77.13 334 eP P 03 01 08.4 +0.6
SMOL pmax pmax
comp=Z,289nm,1.1s
SMOL pmax pmax
comp=N,12nm,0.7s
ISR Istrita 77.17 327⇓P P 03 01 08.6 +0.5
ISR Istrita 77.17 327 P P 03 01 08.6 +0.5
ZVC Zvikov 77.18 337 eP P 03 01 08.6 +0.6
ZVC eS S 03 10 55.6 +2.3
ZVC ex x 03 16 22.0
ZVC AMS AMS 03 35 50.0
comp=N,466µm,23.2s
MANZ Manzenberg 77.21 338 eP P 03 01 08.3 +0.1
comp=N,1µm,2.2s,baz=22,slow=5.7
CWF Charnwood Fore 77.23 347 eP P 03 01 07.9 -0.3
YLL Llanberis 77.23 349 eP P 03 01 07.8 -0.5
MFTR Murfatlar 77.28 325⇓P P 03 01 08.8 +0.1
EFOR EFORIE 77.29 325⇑P P 03 01 09.6 +0.9
CVDA Cernavoda 77.29 326⇓P P 03 01 09.1 +0.4
MODS Modra-Piesok 77.30 334 eP P 03 01 09.4 +0.7
MODS pmax pmax
comp=Z,2µm,1.3s
MODS Modra-Piesok 77.30 334 eP P 03 01 09.4 +0.7
MODS *e*PP PP 03 04 21.6 +19
MODS eS S 03 10 58.3 +3.6
MODS *e*SS SS 03 16 14.0 +22
MODS eL L 03 37 54.7
WVT Waverly 77.31 49 P P 03 01 08.3 -0.6
WVT IAmb IAmb 03 01 42.9
comp=Z,4µm,1.9s
WVT Waverly 77.31 49 P P 03 01 08.3 -0.6
WVT pmax pmax
comp=Z,4µm,1.9s
AMRR Amara 77.32 326⇓P P 03 01 09.4 +0.5
AMRR Amara 77.32 326 P P 03 01 09.3 +0.5
ARPR Arapgir-MALATY 77.35 316 P P 03 01 09.1 -0.3
BSZH Besenyszg 77.37 332⇑P P 03 01 09.7 +0.6
ROTZ Rotzenmuhle 77.39 338 eP P 03 01 09.4 +0.3
comp=Z,2µm,1.9s,baz=22,slow=5.7
DSB Dublin 77.39 350 P P 03 01 09.2 +0.1
DSB Dublin 77.39 350 P P 03 01 09.1 0.0
DSB Dublin 77.39 350 P P 03 01 09.1 0.0
DSB IAmb IAmb 03 01 41.1
comp=Z,2µm,1.0s
DSB Dublin 77.39 350⇑P P 03 01 09.1 0.0
VOIR 77.42 328⇑P P 03 01 10.0 +0.4
VOIR 77.42 328 P P 03 01 10.0 +0.4
LLW Llanuwychllyn 77.45 349 eP P 03 01 09.1 -0.4
ELMS Elmsett, Ipswi 77.50 346 eP P 03 01 09.7 -0.1
SRO Srobarova 77.50 333 eP P 03 01 10.2 +0.4
SRO pmax pmax
comp=Z,970nm,1.2s
SRO Srobarova 77.50 333 eP P 03 01 10.2 +0.4
TNR Turnu Rosu 77.51 329⇓P P 03 01 10.5 +0.5
TNR Turnu Rosu 77.51 329 P P 03 01 10.5 +0.5
MBWA Marble Bar 77.51 216 P P 03 01 10.2 +0.1
MBWA IAmb IAmb 03 01 38.3
comp=Z,3µm,1.4s
MBWA Marble Bar 77.51 216 P P 03 01 10.6 +0.5
MBWA PcP pP 03 01 22.8 +0.4
IGLA Glengowla, Co 77.52 352 P P 03 01 09.6 -0.2
IGLA Glengowla, Co 77.52 352 eP P 03 01 09.6 -0.2
MANR Mangalia 77.53 325⇑P P 03 01 09.2 -0.8
PLAR PLOIESTI 77.53 327⇑P P 03 01 10.4 +0.4
ICOR Ion Corvin 77.57 326⇑P P 03 01 10.6 +0.3
TRD Trivandrum 77.59 269 eP P 03 01 11.1 +0.3
MTUR Matau 77.60 328⇑P P 03 01 11.0 +0.4
MTUR Matau 77.60 328 P P 03 01 10.9 +0.4
LEHL Lehliu 77.62 326⇓P P 03 01 10.7 +0.1
KHC Kasperske Hory 77.62 337 P P 03 01 10.5 0.0
KHC IAmb IAmb 03 01 46.8
comp=Z,3µm,1.4s
KHC Kasperske Hory 77.62 337 eP P 03 01 11.3 +0.7
KHC eS S 03 11 02.7 +4.5
KHC ex x 03 16 17.7
KHC *e*PKPPKP **P'P'df** 03 28 20.0 -1.1
KHC AMS AMS 03 35 10.0
comp=Z,412µm,26.4s
KHC Kasperske Hory 77.62 337 eP P 03 01 11.3 +0.7
KHC eS S 03 11 02.7 +4.5
KHC MLR MLR
comp=Z,412µm,26.4s
KHC Kasperske Hory 77.62 337⇑P P 03 01 10.9 +0.3
ARR Arges 77.63 328⇑P P 03 01 11.1 +0.4
SULR 77.65 327⇓P P 03 01 10.9 +0.2
DRLN Deer Lake 77.65 23⇑P P 03 01 08.6 -2.1
HLM1 Long Mynd 77.67 348 eP P 03 01 10.5 -0.2
GRF Grafenberg Arr 77.70 338 eP P 03 01 11.5 +0.5
comp=Z,3µm,1.2s,baz=22,slow=5.7
GRF *e*L L 03 38 41.9
comp=Z,518µm,21.7s
GRFO Grafenberg 77.70 338 P P 03 01 11.0 +0.1
GRFO IAmb IAmb 03 01 31.7
comp=Z,3µm,1.2s
GRFO Grafenberg 77.70 338 P P 03 01 11.0 +0.1
GRFO pmax pmax
comp=Z,3µm,1.2s
CKRC Cesky Krumlov 77.72 336 eP P 03 01 12.3 +1.2
CKRC eS S 03 11 04.0 +4.8
CKRC ex x 03 16 31.6
CKRC AMS AMS 03 36 10.0
comp=Z,453µm,24.3s
CKRC Cesky Krumlov 77.72 336 eP P 03 01 12.3 +1.2
CKRC eS S 03 11 04.0 +4.8
CKRC MLR MLR
comp=Z,453µm,24.3s
INKA Innaminka 77.75 195 P P 03 01 12.3 +1.1
DEV Deva 77.77 330⇑P P 03 01 11.3 -0.1
DEV Deva 77.77 330 P P 03 01 11.3 -0.1
WET Wettzell 77.79 337 eP P 03 01 12.0 +0.5
comp=Z,8µm,1.9s,baz=22,slow=5.7
HKT Hockley 77.82 58 P P 03 01 11.5 -0.3
HKT IAmb IAmb 03 01 37.5
comp=Z,2µm,1.6s
HKT Hockley 77.82 58 P P 03 01 11.5 -0.3
HKT pmax pmax
comp=Z,2µm,1.6s
PSA00 Pilbara Seismi 77.84 216 P P 03 01 12.2 +0.3
comp=Z,995nm,1.3s
PSA00 Pilbara Seismi 77.84 216 P P 03 01 11.7 -0.2
PSA00 IAmb IAmb 03 01 40.1
comp=Z,2µm,1.4s
TNS Taunus Mts 77.84 340 eP P 03 01 12.1 +0.3
comp=Z,5µm,1.8s,baz=22,slow=5.7
PSN Preselentsi 77.85 325 P P 03 01 11.1 -0.7
GEC2 GERESS Array S 77.86 337 P P 03 01 11.1 -0.8
GEC2 IAmb IAmb 03 01 42.9
comp=Z,4µm,1.9s
GEC2 GERESS Array S 77.86 337 eP P 03 01 12.0 +0.1
comp=Z,3µm,1.6s,baz=22,slow=5.7
GERES GERESS Array B 77.86 337 P P 03 01 11.8 -0.1
comp=Z,38nm,0.7s,baz=45,slow=4.0,SNR=67
GERES S S 03 11 03.3 +2.5
comp=Z,3.3nm,0.9s,baz=33,slow=5.1,SNR=1.5
GERES PKKPbc **PKKPbc** 03 20 12.8 +1.9
comp=Z,6.5nm,1.0s,baz=239,slow=3.1,SNR=7.3
GERES PKPPKP **P'P'df** 03 28 18.6 -2.1
comp=Z,5.0nm,0.8s,baz=193,slow=2.3,SNR=10
GERES LR LR 03 41 07.9
comp=Z,294µm,18.7s,baz=20,slow=40
comp=Z,38nm,0.7s
LOT Lotru 77.86 329⇓P P 03 01 11.5 -0.5
WINA Alland / Wiene 77.89 335 *i* P P 03 01 12.4 +0.5
comp=Z,3µm,2.7s,SNR=84

WINA eS S 03 11 03.5 +2.5
comp=Z,16µm,9.2s
BEBN Eben Emael 77.89 342 dP P 03 01 11.7 -0.2
comp=Z,169nm,1.2s
BEBN dS S 03 11 02.5 +1.7
STFAR Stefanesti-Arg 77.95 328 ⇑P P 03 01 13.0 +0.6
SHME Shamm 77.98 296 *i* P P 03 01 12.4 -0.5
SNR=80
SHME Shamm 77.98 296 P P 03 01 13.1 +0.2
SNR=64
SHME S S 03 10 58.8 -3.8
BANOM Banah 77.98 296 *i* P P 03 01 12.7 -0.2
SNR=16
BANOM Banah 77.98 296 P P 03 01 12.6 -0.2
BANOM S S 03 11 00.5 -2.2
BTNL Ternell 78.00 342 dP P 03 01 12.6 0.0
comp=Z,929nm,1.2s
MEM Membach 78.00 342 dP P 03 01 12.5 -0.1
comp=Z,2µm,1.1s
MEM dS S 03 11 03.8 +1.7
BUC1 Bucharest 78.02 327 ⇑P P 03 01 12.5 -0.2
BUC1 Bucharest 78.02 327 P P 03 01 12.5 -0.2
CONA Conrad Observa 78.11 335 eP P 03 01 13.9 +0.6
comp=Z,1µm,1.9s,SNR=107
CONA eSKS SKSac 03 11 17.4 -5.9
comp=Z,19µm,9.1s
BSTI Sart Tilman 78.11 342 dP P 03 01 13.5 +0.3
comp=Z,385nm,1.1s
UCC Uccle 78.14 343 dP P 03 01 13.0 -0.3
comp=Z,449nm,0.0s
UCC dS S 03 11 01.4 -2.1
SGRR Singureni 78.15 327 ⇑P P 03 01 13.2 -0.3
RONA Rosalia, Austr 78.19 335 eP P 03 01 14.5 +0.8
comp=Z,1µm,1.7s,SNR=152
RONA eS S 03 11 06.6 +2.2
comp=Z,18µm,8.7s
MCH1 Michaelchurch 78.20 348 eP P 03 01 13.1 -0.5
MCH1 IAMs_20 IAMs_20 03 31 31.7
comp=Z,200µm,25.5s
MCH1 Michaelchurch 78.20 348 ⇑P P 03 01 13.4 -0.2
MCWV Mont Chateau 78.23 42 P P 03 01 13.5 -0.5
MCWV IAmb IAmb 03 01 33.5
comp=Z,3µm,1.3s
HUMR Humele 78.24 328 ⇓P P 03 01 13.0 -1.0
BHOU Houvegnez 78.24 342 dP P 03 01 14.2 +0.3
comp=Z,1µm,1.2s
BHOU dS S 03 11 08.9 +4.2
GZR Gura Zlata 78.24 329 ⇑P P 03 01 13.6 -0.6
GZR Gura Zlata 78.24 329 P P 03 01 13.5 -0.6
IWEX Carrickbyrne, 78.30 350 P P 03 01 14.4 +0.3
IWEX Carrickbyrne, 78.30 350 eP P 03 01 14.1 0.0
STRD Stroud 78.30 347 eP P 03 01 14.2 0.0
BCLA Clavier 78.32 342 dP P 03 01 13.0 -1.3
comp=Z,950nm,1.1s
BCLA dx x 03 01 42.3
MONM Monmouth 78.33 348 eP P 03 01 14.5 +0.2
MONM IAMs_20 IAMs_20 03 31 35.6
comp=Z,183µm,25.1s
ELSH Elham, Standar 78.39 345 eP P 03 01 15.2 +0.5
ELSH IAMs_20 IAMs_20 03 32 12.5
comp=Z,412µm,27.7s
BGES Gesves 78.40 343 dP P 03 01 14.5 -0.3
comp=Z,721nm,1.1s
BGES dS S 03 11 15.7 +9.4
AULRC Lightning Ridg 78.41 189 P P 03 01 15.3 +0.4
comp=Z,1µm,1.6s
BZS Buzias 78.43 330 ⇓P P 03 01 15.0 0.0
BZS Buzias 78.43 330 P P 03 01 14.2 -0.8
MDH Madha 78.44 295 *i* P P 03 01 14.4 -1.0
SNR=53
MDH Madha 78.44 295 P P 03 01 15.0 -0.5
SNR=40
MDH S S 03 11 10.5 +2.9
TIM Timisoara 78.45 331 ⇑P P 03 01 15.3 +0.2
TIM Timisoara 78.45 331 P P 03 01 15.3 +0.2
RSBS Rosebush, Pemb 78.47 349 eP P 03 01 14.8 -0.3
RSBS IAMs_20 IAMs_20 03 29 37.7
comp=Z,278µm,30.0s
MASF Masafi 78.47 295 P P 03 01 15.7 +0.1
SNR=42
MASF S S 03 11 05.7 -2.3
MSFE Esma-Masafi 78.48 295 *i* P P 03 01 15.3 -0.4
SNR=57
COPA Copaceanca 78.50 327 ⇑P P 03 01 14.6 -0.8
SWN1 Swindon 78.50 347 eP P 03 01 15.5 +0.3
BUW Bucklebury Wes 78.51 347 eP P 03 01 15.0 -0.4
RAZG Razgrad 78.52 326 ⇑P P 03 01 15.8 +0.2
BMRD Maredsous 78.54 343 dP P 03 01 15.5 0.0
comp=Z,1µm,1.2s
BMRD dS S 03 11 11.6 +3.7
WSAR Wadi Sarin 78.57 292 P P 03 01 16.8 +0.6
SNR=58
WSAR S S 03 11 07.2 -1.9
RCHB Rochefort 78.59 342 dP P 03 01 15.5 -0.3
comp=Z,780nm,1.1s
RCHB dS S 03 11 10.6 +2.2
WOL Wolverton 78.61 347 eP P 03 01 15.8 -0.1
MOA Molln 78.62 336 *i* P P 03 01 16.4 +0.3
comp=Z,2µm,3.1s,SNR=56
MOA eSKS S 03 11 14.3 +5.4
comp=Z,13µm,8.6s
MOA ePKKP PKKPbc 03 20 08.9 -0.2
comp=Z,24nm,1.3s
GGN Saint George 78.63 30 P P 03 01 15.0 -1.1
UMQ Umm Al-Quwin 78.66 296 *i* P P 03 01 16.9 +0.4
SNR=27
UMQ Umm Al-Quwin 78.66 296 P P 03 01 18.7 +2.1
SNR=26
UMQ S S 03 11 05.1 -4.8
LOZB Loznitsa 78.66 326 ⇑P P 03 01 15.7 -0.6
BIDO Bidbid 78.67 293 P P 03 01 18.0 +1.3
SNR=48
BIDO S S 03 11 09.3 -0.7
BNN Bunyan 78.67 317 ⇑P P 03 01 16.5 -0.2
SRE Strehaia 78.74 329 ⇑P P 03 01 16.4 -0.4
SRE Strehaia 78.74 329 P P 03 01 16.3 -0.4
UOSS Minazif 78.77 295 P P 03 01 16.3 -0.9
UOSS IAmb IAmb 03 01 56.5
comp=Z,2µm,0.8s
UOSS Minazif 78.77 295 *i* P P 03 01 16.6 -0.6
SNR=115
UOSS Minazif 78.77 295 P P 03 01 17.2 -0.1
UOSS S S 03 11 10.7 -0.4
UOSS Minazif 78.77 295 ⇑P P 03 01 16.5 -0.8
DOU Dourbes 78.77 343 dP P 03 01 16.5 -0.3
comp=Z,509nm,1.1s
DOU dS S 03 11 10.4 +0.1
HMNX Herstmonceux 78.79 346 eP P 03 01 17.6 +0.7
BANR Banloc 78.80 330 ⇓P P 03 01 17.5 +0.5
HERR Herculane 78.81 329 ⇑P P 03 01 16.4 -0.7
ARSA Arzberg 78.82 335 *i* P P 03 01 17.7 +0.6
comp=Z,2µm,2.7s,SNR=71
ARSA eSKS SKSac 03 11 20.6 -7.7
comp=Z,28µm,12.2s
ARSA Arzberg 78.82 335 ⇑P P 03 01 17.4 +0.2
WBK Wadi Bani Khal 78.83 291 P P 03 01 19.0 +1.3
SNR=125
WBK S S 03 11 10.3 -1.6
MORH Mrgy, Hungar 78.84 332 ⇑P P 03 01 16.5 -0.8
MORH Mrgy, Hungar 78.84 332 ⇑*i*P P 03 01 16.2 -1.1
WLF Walferdange 78.86 342 P P 03 01 17.6 +0.3
WLF Walferdange 78.86 342 P P 03 01 16.9 -0.4
WLF IAmb IAmb 03 01 53.0
comp=Z,7µm,1.9s
WLF Walferdange 78.86 342 P P 03 01 16.9 -0.4
WLF pmax pmax
comp=Z,7µm,1.9s
WLF Walferdange 78.86 342 dP P 03 01 17.4 +0.1
comp=Z,552nm,1.8s
WLF dS S 03 11 15.3 +4.0
WLF Walferdange 78.86 342 eP P 03 01 17.7 +0.4
comp=Z,7µm,2.0s,baz=22,slow=5.7
WLF Walferdange 78.86 342 ⇑P P 03 01 17.4 +0.1
JLN Jalan Bani Buh 78.90 291 P P 03 01 19.0 +1.0
SNR=173
JLN S S 03 11 12.3 -0.2
HATD Hatta, Dubai 78.90 295 *i* P P 03 01 17.8 -0.2
SNR=134
HATD Hatta, Dubai 78.90 295 P P 03 01 18.0 0.0
SNR=164
HATD S S 03 11 11.4 -1.2
VLAD Vladila 78.90 328 ⇑P P 03 01 18.2 +0.6
RMGR Halanga-Turnu 78.91 329 ⇑P P 03 01 17.7 +0.1
BR131 Keskin Array S 78.92 319 P P 03 01 17.4 -0.7
BR131 Keskin Array S 78.92 319*c* P P 03 01 17.2 -0.8
BR131 Keskin Array S 78.92 319 P P 03 01 17.8 -0.2
SNR=90
BR131 S S 03 11 11.6 -1.0
BRTR Keskin Array B 78.92 319 P P 03 01 17.6 -0.4
comp=Z,99nm,1.0s,baz=50,slow=1.9,SNR=109
BRTR PKKPbc PKKPbc 03 20 09.8 +1.3
comp=Z,7.6nm,1.0s,baz=166,slow=5.0,SNR=6.0
BRTR PKPPKP P'P'df 03 28 10.4 -8.1
comp=Z,11nm,1.0s,baz=180,slow=4.9,SNR=6.9
comp=Z,99nm,1.0s
BRTR Keskin Array B 78.92 319 P P 03 01 17.3 -0.7
BRTR Keskin Array B 78.92 319 *i* P P 03 01 17.6 -0.4
BRTR pmax pmax
comp=Z,101nm,1.0s
BIOA Bad Ischl, Aus 78.93 336 *i* P P 03 01 18.1 +0.3
comp=Z,2µm,2.4s,SNR=126
BIOA eSKS S 03 11 16.7 +4.5
comp=Z,18µm,8.5s
DJES Djerdap 78.97 329 ⇑P P 03 01 16.9 -1.1
SZH Strazhitsa 78.97 326 P P 03 01 17.6 -0.5
SZH Strazhitsa 78.97 326 P P 03 01 17.5 -0.5
TAOE Nuku Hiva Isla 79.01 117 P P 03 01 19.5 +0.8
comp=Z,571nm,1.8s
TAOE Nuku Hiva Isla 79.01 117 P P 03 01 18.6 -0.1
TAOE Nuku Hiva Isla 79.01 117 ⇑P P 03 01 18.9 +0.2
STU Stuttgart 79.04 339 P P 03 01 18.0 -0.3
STU IAmb IAmb 03 01 49.3
comp=Z,2µm,1.0s
STU Stuttgart 79.04 339 P P 03 01 18.0 -0.3
STU pmax pmax
comp=Z,2µm,1.0s
STU Stuttgart 79.04 339 *e*P P 03 01 18.5 +0.2
comp=Z,4µm,1.0s,baz=22,slow=5.7
STU Stuttgart 79.04 339 ⇑P P 03 01 18.3 0.0
ASHO Ashiyiah 79.05 295 *i* P P 03 01 18.4 -0.4
SNR=171
ASHO Ashiyiah 79.05 295 P P 03 01 19.0 +0.1
SNR=155
ASHO S S 03 11 13.9 -0.3
NAZ Nazwa, Dubai 79.06 295 *i* P P 03 01 18.3 -0.6
SNR=94
NAZ Nazwa, Dubai 79.06 295 P P 03 01 19.0 +0.2
SNR=65
NAZ S S 03 11 08.9 -5.3
SMDO Samad 79.06 292 P P 03 01 19.1 +0.2
SNR=98
SMDO S S 03 11 12.3 -2.1
VAL Valentia 79.07 352 P P 03 01 18.9 +0.5
VAL Valentia 79.07 352 P P 03 01 18.7 +0.3
VAL Valentia 79.07 352 ⇑P P 03 01 18.7 +0.3
ARMA Armidale 79.10 185 P P 03 01 20.0 +1.2
comp=Z,2µm,1.3s
ARMA Armidale 79.10 185 P P 03 01 20.0 +1.2
ARMA IAmb IAmb 03 01 49.8
comp=Z,3µm,1.2s
ARMA Armidale 79.10 185 ⇑P P 03 01 20.3 +1.5
FUR Furstenfeldbru 79.10 338 *e*P P 03 01 19.1 +0.4
comp=Z,3µm,1.3s,baz=22,slow=5.7
HOQ Hoqain 79.12 293 P P 03 01 19.2 +0.1
SNR=64
HOQ S S 03 11 13.5 -1.4
MDVR Moldovita 79.14 330 ⇓P P 03 01 18.7 -0.3
SAHE Sakarya_HENDEK 79.14 322 ⇑P P 03 01 19.1 0.0
BEHE Becsehely 79.17 334 ⇑*i*P P 03 01 19.2 +0.1
SOHO SOHO 79.17 294 *i* P P 03 01 18.5 -0.9
SNR=118
SOHO SOHO 79.17 294 P P 03 01 18.9 -0.5
SOHO S S 03 11 15.4 0.0
HRV Adam Dziewonsk 79.22 35 P P 03 01 18.8 -0.6
HRV Adam Dziewonsk 79.22 35 P P 03 01 18.8 -0.6
HRV pmax pmax
comp=Z,1µm,1.2s
ZAIG Zacatecas 79.25 68 P P 03 01 20.3 0.0
ZAIG Zacatecas 79.25 68 ⇑P P 03 01 20.5 +0.3
FAQ Al Faqa, Dubai 79.28 295 *i* P P 03 01 19.4 -0.6
SNR=72
FAQ Al Faqa, Dubai 79.28 295 P P 03 01 20.0 -0.1
SNR=66
FAQ S S 03 11 17.6 +1.0
KIRS Kirsehir-Merke 79.29 319 ⇑P P 03 01 20.0 0.0
ELND Elena 79.30 326 ⇑P P 03 01 19.2 -0.7
MDUB Mudurnu 79.32 321 ⇑P P 03 01 19.9 -0.2
KOGS Kog 79.34 334 *i* P P 03 01 19.7 -0.3
KOGS *e*pP sP 03 01 36.6 -0.1
KOGS *e* 03 04 39.4
KOGS *i*S S 03 11 23.2 +6.6
PLVB Pleven 79.36 327 ⇑P P 03 01 19.9 -0.3
RAR Rarotonga 79.37 140 LR LR 03 29 41.1
comp=Z,57µm,21.8s,baz=332,slow=30
RAR Rarotonga 79.37 140 P P 03 01 20.7 +0.4
RAR Rarotonga 79.37 140 P P 03 01 20.7 +0.4
RAR pmax pmax
comp=Z,3µm,1.8s
HTL Hartland 79.38 349 *e*P P 03 01 20.4 +0.3
HTL IAMs_20 IAMs_20 03 30 04.2
comp=Z,276µm,28.6s
SILT Sile 79.38 323 ⇑P P 03 01 20.1 -0.2
PVL Pavlikeni 79.39 327 P P 03 01 19.5 -0.8
FRGS Fruska Gora 79.42 331 ⇑*i*P P 03 01 19.9 -0.6
GAZ Gaziantep 79.42 316 ⇑P P 03 01 21.0 +0.3
LESA Schwarzleotal 79.43 337 *i* P P 03 01 21.1 +0.5
comp=Z,5µm,3.1s,SNR=112
JMB Yambol 79.44 326 P P 03 01 20.1 -0.5
SOKA Soboth 79.48 335 *i* P P 03 01 21.1 +0.2
comp=Z,3µm,2.1s,SNR=121
SOKA eS S 03 11 17.2 -1.0
comp=Z,22µm,9.2s
SOKA ePKKP PKKPbc 03 20 11.0 +3.6
comp=Z,15nm,1.0s
SOKA eP'P' P'P'df 03 28 12.7 -5.0
comp=Z,63nm,1.7s
VALD Valchedram 79.51 328 P P 03 01 20.4 -0.6
ASUD Al Ashush, Dub 79.53 295 *i* P P 03 01 21.2 -0.1
SNR=49
ASUD Al Ashush, Dub 79.53 295 P P 03 01 22.0 +0.6
SNR=34
ASUD S S 03 11 19.8 +0.6
JMDO Jabal Madar 79.54 292 P P 03 01 22.0 +0.5
SNR=152
JMDO S S 03 11 19.9 +0.5
KBA Koelnbreinsper 79.57 336 *i* P P 03 01 22.1 +0.6
comp=Z,2µm,1.3s,SNR=292
KBA SKS S 03 11 27.1 +7.7
comp=Z,16µm,8.4s
KBA Koelnbreinsper 79.57 336 ⇑P P 03 01 21.9 +0.4
BFO Black Forest 79.65 340 *e*P P 03 01 21.7 0.0
comp=Z,8µm,2.1s,baz=22,slow=5.7
BFO Black Forest 79.65 340 ⇑P P 03 01 21.4 -0.3
TKL Tuckaleechee C 79.67 47 LR LR 03 36 51.4
comp=Z,553µm,20.9s,baz=331,slow=36
MPEP Malo Peshtene 79.70 328 P P 03 01 21.8 -0.2
ALNE Al Ain 79.70 295 *i* P P 03 01 22.2 -0.2
SNR=80
ALNE Al Ain 79.70 295 P P 03 01 22.3 -0.1
SNR=132
ALNE S S 03 11 21.6 +0.5
OBKA Obir 79.77 335 *i* P P 03 01 22.5 0.0
comp=Z,3µm,2.8s,SNR=34
OBKA eS S 03 11 20.2 -1.0
comp=Z,10µm,6.8s
OBKA ePKKP PKKPbc 03 20 09.3 +2.6
ARQ Araqi 79.78 294 P P 03 01 22.1 -0.7
SNR=203
ARQ S S 03 11 22.8 +0.9
AJN Ajban 79.78 296 *i* P P 03 01 21.9 -0.8
SNR=29
AJN Ajban 79.78 296 P P 03 01 22.3 -0.4
SNR=34
AJN S S 03 11 21.1 -0.7
WATA Walderalm 79.80 337 *i* P P 03 01 23.1 +0.4
comp=Z,4µm,2.4s,SNR=228
WATA SKS SKSac 03 11 34.5 -0.8
comp=Z,30µm,10.1s
WATA eP'P' P'P'df 03 28 11.4 -5.8
comp=Z,68nm,1.5s
BSY Bisya 79.81 293 P P 03 01 23.2 +0.2
SNR=196
BSY S S 03 11 21.4 -0.9
SBD Saint Breward 79.82 349 *e*P P 03 01 22.3 -0.2
AUPHS Peel High Scho 79.83 186 P P 03 01 23.1 +0.5
comp=Z,1µm,1.5s
UBR Ueberruh 79.84 338 *e*P P 03 01 22.9 +0.1
comp=Z,1µm,1.1s,baz=22,slow=5.7
WTTA Wattenberg 79.85 337 *i* P P 03 01 23.7 +0.7
comp=Z,4µm,2.3s,SNR=182
WTTA SKS SKSac 03 11 31.0 -4.8
comp=Z,18µm,7.5s
WTTA ePKKP PKKPbc 03 20 09.6 +2.9
comp=Z,19nm,1.0s
DYA Yadsworthy 79.85 348 *e*P P 03 01 22.7 0.0
RETA Reutte 79.86 338 *i* P P 03 01 23.1 +0.2
comp=Z,1µm,1.8s,SNR=104
RETA SKS S 03 11 25.0 +2.9
comp=Z,20µm,10.4s
RETA ePKKP PKKPbc 03 20 09.1 +2.6
comp=Z,11nm,0.6s
MYKA Terra Mystica 79.91 336 *i* P P 03 01 23.0 -0.2
comp=Z,2µm,3.0s,SNR=54
MYKA eS S 03 11 24.3 +1.6
comp=Z,18µm,9.4s
MYKA ePKKP PKKPbc 03 20 10.0 +3.6
MOTA Moosalm 79.91 338 *i* P P 03 01 23.6 +0.3
comp=Z,1µm,1.7s,SNR=224
MOTA eSKS S 03 11 26.6 +3.8
comp=Z,13µm,10.8s
MOTA ePKKP PKKPbc 03 20 08.2 +1.7
comp=Z,44nm,1.9s
SQTA Sankt Quirin 80.00 338 *i* P P 03 01 23.9 +0.1
comp=Z,1µm,1.6s,SNR=227
SQTA SKS S 03 11 29.1 +5.3
comp=Z,29µm,12.1s
LHI Lord Howe Isla 80.02 179 P P 03 01 24.2 +0.7
LHI IAmb IAmb 03 01 46.1
comp=Z,2µm,1.3s
LHI Lord Howe Isla 80.02 179 ⇑P P 03 01 25.1 +1.5
ECH Echery 80.02 341 P P 03 01 23.1 -0.6
ECH IAmb IAmb 03 01 53.6
comp=Z,2µm,1.2s
ECH Echery 80.02 341 P P 03 01 23.1 -0.6
ECH pmax pmax
comp=Z,2µm,1.2s
ECH Echery 80.02 341 ⇑P P 03 01 23.4 -0.3
GBN Guysborough 80.06 27 P P 03 01 23.2 -0.6
GBN IAmb IAmb 03 01 30.7
comp=Z,3µm,1.5s
ABTA Abfaltersbach 80.10 337 *i* P P 03 01 24.0 -0.2
comp=Z,3µm,2.9s,SNR=71
ABTA eP'P' 03 28 05.7
comp=Z,28nm,1.4s
DIM Dimitrovgrad 80.18 326 P P 03 01 24.1 -0.5
DIM Dimitrovgrad 80.18 326 P P 03 01 24.7 +0.1
PTCC Patocco-Chiusa 80.19 336 ⇑P P 03 01 23.8 -0.9
LJU Ljubljana 80.20 335 *i* P P 03 01 24.1 -0.6
LJU epP sP 03 01 41.0 -0.4
LJU *e* 03 04 46.5
LJU eS S 03 11 27.3 +1.7
LJU eSS SS 03 16 39.2 +3.5
DAVA Damuels 80.26 338 *i* P P 03 01 25.3 +0.1
comp=Z,714nm,1.3s,SNR=122
DAVA SKS SKSac 03 11 37.8 -0.8
comp=Z,8µm,7.6s
DAVA ePKKP PKKPbc 03 20 09.8 +4.0
comp=Z,48nm,0.9s
DAVA Damuels 80.26 338 ⇑P P 03 01 25.1 -0.1
CCA1 Carnmenellis 80.27 349 *e*P P 03 01 25.0 +0.1
CCA1 IAMs_20 IAMs_20 03 30 43.9
comp=Z,272µm,28.8s
PGB Panagyurishte 80.28 327 P P 03 01 25.0 -0.2
BLSH Balsha 80.30 328 P P 03 01 25.5 +0.2
FETA Feichten 80.30 338 *i* P P 03 01 25.9 +0.5
comp=Z,1µm,1.5s,SNR=139
FETA SKS SKSac 03 11 39.6 +0.7
comp=Z,17µm,8.4s
FETA ePKKP PKKPbc 03 20 09.1 +3.5
comp=Z,33nm,1.2s
FETA eP'P' P'P'df 03 28 11.0 -5.4
comp=Z,45nm,1.4s
M65A Busby, Falmout 80.38 35 P P 03 01 24.9 -0.8
baz=330
M65A S S 03 11 24.9 -2.7
baz=330
PLD Plovdiv 80.39 327 P P 03 01 25.3 -0.5
PLD Plovdiv 80.39 327 P P 03 01 25.7 -0.1
KBD Kabd 80.45 304 P P 03 01 26.3 0.0
KBD S S 03 11 24.5 -4.2
BOJS Bojanci 80.49 334 *i* P P 03 01 25.9 -0.3
BOJS epP sP 03 01 43.0 0.0
BOJS *e* 03 04 49.0
BOJS eS S 03 11 30.3 +1.6
BOJS eSS SS 03 16 47.6 +7.6
STAL STALIGIAL 80.50 336 P P 03 01 25.4 -0.9
CBN Corbin Frederi 80.51 41 P P 03 01 25.9 -0.5
CBN IAmb IAmb 03 01 45.8
comp=Z,2µm,1.1s
VTS Vitosha 80.52 328 P P 03 01 26.0 -0.7
VTS Vitosha 80.52 328 P P 03 01 26.6 -0.1
PLNA Plana 80.58 328 P P 03 01 27.4 +0.5
BLY Banja Luka 80.61 333 ⇓P P 03 01 26.5 -0.4
BLY Banja Luka 80.61 333 ⇑P P 03 01 26.0 -0.8
BLY Banja Luka 80.61 333 ⇑*i*P P 03 01 26.1 -0.8
BG3 Lake Jocassee 80.61 47 P P 03 01 26.7 -0.4
BG3 IAmb IAmb 03 01 46.7
comp=Z,4µm,1.5s
KDZ Kurdzhali 80.62 326 P P 03 01 26.5 -0.5
MHTO MHTO 80.65 291 P P 03 01 28.0 +0.5
SNR=463
MHTO S S 03 11 31.0 -0.1
BAND Balkesir-Ban 80.67 323 ⇓P P 03 01 27.3 0.0
BBLS Lazi&#263i 80.71 331 ⇑*i*P P 03 01 27.3 -0.2
RAO Raoul Island 80.74 159 P P 03 01 27.9 +0.4
RAO IAmb IAmb 03 01 54.7
comp=Z,6µm,1.9s
RAO Raoul Island 80.74 159 P P 03 01 27.9 +0.4
RAO pmax pmax
comp=Z,6µm,1.9s
DAVOX Davos/Dischmat 80.74 338 P P 03 01 28.2 +0.4
comp=Z,238nm,0.9s,baz=3.1,slow=3.4,SNR=83
DAVOX LR LR 03 40 26.3
comp=Z,375µm,21.7s,baz=9.0,slow=38
comp=Z,238nm,0.9s
CMSA Cobar Meteorol 80.75 190 P P 03 01 28.2 +0.7
comp=Z,1µm,1.5s
JRN Qarnain Island 80.76 297 P P 03 01 26.1 -1.9
SNR=35
JRN S S 03 11 30.5 -1.6
RZN Rozhen 80.79 326 P P 03 01 27.4 -0.7
FUORN Ofenpass-Fuorn 80.79 338 P P 03 01 28.3 +0.2
FUORN IAmb IAmb 03 01 60.0
comp=Z,2µm,0.8s
JSA Saint Aubin 80.82 347 *e*P P 03 01 28.1 +0.2
JSA Saint Aubin 80.82 347 ⇑P P 03 01 27.9 0.0
RUDO Rudo 80.94 331 *e*P P 03 01 26.9 -1.8
RDO Rodhopi 80.97 326 P P 03 01 28.5 -0.4
RDO IAmb IAmb 03 02 12.7
comp=Z,5µm,1.6s
RDO Rodhopi 80.97 326 P P 03 01 28.4 -0.4
RDO Rodhopi 80.97 326 ⇑P P 03 01 27.2 -1.7
PPT Papeete 80.97 130 P P 03 01 30.2 +1.1
comp=Z,311nm,0.9s,baz=5.0,slow=4.0,SNR=44
PPT LR LR 03 35 17.6
comp=Z,100µm,18.4s,baz=310,slow=34
comp=Z,311nm,0.9s
ALN Alexandroupoli 81.00 325 P P 03 01 28.3 -0.7
ALN Alexandroupoli 81.00 325 P P 03 01 28.6 -0.4
ALN Alexandroupoli 81.00 325 P P 03 01 28.3 -0.7
ALN pmax pmax
comp=Z,458nm,1.2s
ALN Alexandroupoli 81.00 325 ⇑P P 03 01 28.3 -0.7
PPTF Pamatai, Papee 81.00 130 P P 03 01 30.6 +1.3
comp=Z,2µm,1.1s
PPTF Pamatai, Papee 81.00 130 P P 03 01 30.4 +1.3
PPTF IAmb IAmb 03 02 00.1
comp=Z,2µm,1.1s
PPTF Pamatai, Papee 81.00 130 ⇑P P 03 01 30.5 +1.3
COCO West Island 81.00 240 P P 03 01 30.4 +1.2
comp=Z,1µm,1.3s
COCO West Island 81.00 240 P P 03 01 30.0 +0.8
COCO IAmb IAmb 03 01 51.9
comp=Z,4µm,1.2s
COCO West Island 81.00 240 P P 03 01 30.0 +0.8
COCO pmax pmax
comp=Z,4µm,1.3s
COCO West Island 81.00 240 P P 03 01 30.6 +1.4
COCO West Island 81.00 240 P P 03 01 30.4 +1.2
comp=Z,180µmcomp=Z,1µm,1.3s
COCO West Island 81.00 240 ⇑P P 03 01 30.4 +1.2
COCO West Island 81.00 240 P P 03 01 30.5 +1.2
COCO pP sP 03 01 47.1 +1.0
MZWR Madinat Zayed 81.04 296 P P 03 01 28.4 -1.1

MZWR S S 03 11 30.4 -4.7
SJES Sjenica 81.06 330 ⇑iP P 03 01 29.3 -0.2
UMZA Um Al Zommool 81.07 294 P P 03 01 29.6 0.0
UMZA S S 03 11 33.0 -2.3
GIRL Giralia 81.08 220 P P 03 01 30.3 +0.9
GIRL IAmb IAmb 03 01 51.5
comp=Z,2µm,1.3s
ENEZ Enez 81.09 325 P P 03 01 29.1 -0.5
AUDCS Dubbo College 81.13 188 P P 03 01 30.5 +1.0
comp=Z,1µm,1.3s
CAVK Edirne/Enez-Ca 81.13 325 ⇓P P 03 01 29.5 -0.2
TUE Stuetta 81.16 339 P P 03 01 30.2 +0.1
TUE IAmb IAmb 03 02 00.4
comp=Z,2µm,1.0s
TUE Stuetta 81.16 339 ⇑P P 03 01 30.4 +0.3
SHMA Al-Shehemyia 81.16 299 P P 03 01 30.0 -0.1
SNR=56
SHMA S S 03 11 33.4 -2.8
PLE Pljevlja 81.19 331 ⇑iP P 03 01 28.8 -1.4
CLF Chambon-Foret 81.20 344 ⇑P P 03 01 30.6 +0.6
KKB Krupnik 81.24 327 P P 03 01 29.8 -0.5
KKB Krupnik 81.24 327 P P 03 01 30.3 0.0
SAKB Bahrain 81.31 300 P P 03 01 30.5 -0.4
BALB Balikesir 81.37 323 ⇑P P 03 01 30.4 -0.6
HMDM Hanimaadhoo 81.37 270 P P 03 01 31.1 -0.2
HMDM IAmb IAmb 03 02 08.0
comp=Z,4µm,1.1s
HMDM Hanimaadhoo 81.37 270 P P 03 01 32.2 +0.8
SNR=74
HMDM Hanimaadhoo 81.37 270 P P 03 01 31.5 +0.1
comp=Z,63µmcomp=Z,2µm,1.1s
HMDM Hanimaadhoo 81.37 270 ⇑P P 03 01 31.7 +0.4
IVA Berane 81.44 330 ⇑iP P 03 01 30.7 -0.8
UPM Unac-Piva 81.46 331 ⇑iP P 03 01 30.5 -1.3
UPM Unac-Piva 81.46 331 eP P 03 01 30.4 -1.3
GHWR Ruwais 81.49 297 P P 03 01 31.2 -0.6
KOME Kolasin 81.58 330 ⇑iP P 03 01 31.4 -0.8
KLJNJ Klinje 81.60 331 eP P 03 01 27.0 -5.3
LOR Lormes 81.61 342 ⇑P P 03 01 32.0 -0.2
STKA Stephens Creek 81.65 194 P P 03 01 32.9 +0.6
comp=Z,238nm,0.8s,baz=349,slow=6.9,SNR=135
STKA S S 03 11 42.1 +1.5
comp=Z,9.6nm,1.2s,baz=346,slow=11,SNR=1.1
STKA PKKPbc PKKPbc 03 20 04.6 +0.1
comp=Z,7.5nm,0.9s,baz=283,slow=4.7,SNR=3.6
STKA PKPPKP P'P'df 03 28 10.3 +6.1
comp=Z,7.7nm,0.9s,baz=221,slow=1.9,SNR=5.7
STKA LR LR 03 36 34.0
comp=Z,97µm,20.2s,baz=15,slow=35
comp=Z,238nm,0.8s
STKA Stephens Creek 81.65 194 P P 03 01 32.3 0.0
comp=Z,184nm,1.2s
STKA Stephens Creek 81.65 194 P P 03 01 32.7 +0.5
STKA Stephens Creek 81.65 194 c iP P 03 01 32.8 +0.5
SALO Salr 81.66 337 ⇑P P 03 01 32.0 -0.5
PVY Plav 81.66 330 ⇑iP P 03 01 31.8 -0.9
SENIN Lac Senin/Sane 81.74 340 P P 03 01 32.7 -0.4
ROSF Rostrenen 81.81 347 ⇑P P 03 01 33.6 +0.4
ISP Isparta 81.84 320 P P 03 01 32.4 -1.3
ISP IAmb IAmb 03 02 01.9
comp=Z,4µm,1.9s
ISP Isparta 81.84 320 P P 03 01 32.4 -1.3
ISP pmax pmax
comp=Z,4µm,1.9s
ISP Isparta 81.84 320 ⇑P P 03 01 32.6 -1.1
NKME Niksic 81.84 331 ⇑iP P 03 01 32.3 -1.2
BRY Bratogost 81.85 331 ⇑iP P 03 01 32.3 -1.4
BRY Bratogost 81.85 331 ⇑iP P 03 01 32.4 -1.3
MZR Muzera 81.86 296 iP P 03 01 33.4 -0.4
SNR=260
MZR Muzera 81.86 296 P P 03 01 33.2 -0.6
SNR=135
TRNA Turayna 81.87 298 P P 03 01 33.0 -0.9
SNR=59
MGCD Mangrove Creek 81.91 186 P P 03 01 35.1 +1.5
comp=Z,808nm,1.1s
PDG Podgorica 82.04 330 ⇑P P 03 01 33.8 -0.8
PDG Podgorica 82.04 330 ⇑P P 03 01 33.5 -1.0
PDG Podgorica 82.04 330 ⇑iP P 03 01 33.7 -0.8
PDG Podgorica 82.04 330 ⇑iP P 03 01 33.6 -0.9
CEME Cevo 82.05 331 ⇑iP P 03 01 33.5 -1.1
TREB Trebinje 82.08 331 ⇑iP P 03 01 33.0 -1.7
SMRA Abu-Samra 82.09 299 P P 03 01 34.3 -0.8
SNR=108
AUKHS Kincumber High 82.14 185 P P 03 01 35.3 +0.5
comp=Z,2µm,1.3s
DKL Dikili 82.24 324 ⇑P P 03 01 34.5 -1.1
HCY Herceg Novi 82.28 331 ⇑iP P 03 01 34.5 -1.2
HCY Herceg Novi 82.28 331 eP P 03 01 34.9 -0.8
BUM Brajici-Budva 82.28 330 ⇑iP P 03 01 35.0 -0.8
DRME Dracevica, Mon 82.28 330 ⇑iP P 03 01 35.2 -0.6
DRME Dracevica, Mon 82.28 330 ⇑iP P 03 01 34.9 -0.9
HWQ Hawqa 82.38 315 eP P 03 01 35.9 -0.7
MOIG Morelia 82.42 69 P P 03 01 37.0 -0.2
MOIG IAmb IAmb 03 02 08.0
comp=Z,5µm,1.6s
ULC Ulcinj 82.47 330 ⇑iP P 03 01 35.6 -1.2
RIV Riverview 82.52 186 P P 03 01 37.5 +0.7
comp=Z,1µm,2.0s
RIV Riverview 82.52 186 ⇑P P 03 01 38.1 +1.4
BOB Bobbio (Coli) 82.73 338 ⇑P P 03 01 38.4 +0.2
BHL Bhannes 82.83 315 eP P 03 01 38.8 -0.1
MEEK Meekatharra 82.89 215 P P 03 01 38.3 -0.7
comp=Z,1µm,1.2s
MFF Saint Martin d 83.00 345 ⇑P P 03 01 39.8 +0.4
ELL Elmali 83.01 320 ⇑P P 03 01 38.8 -1.1
CSS Mathiatis 83.02 317 P P 03 01 38.7 -1.0
CSS IAmb IAmb 03 02 12.9
comp=Z,2µm,1.1s
CSS Mathiatis 83.02 317 ⇑P P 03 01 38.9 -0.9
VLC Villacollemand 83.06 337 P P 03 01 40.0 +0.2
VLC Villacollemand 83.06 337 ⇑P P 03 01 39.9 0.0
WOLH Wollongong Har 83.11 186 P P 03 01 41.1 +1.3
comp=Z,350nm,1.0s
BNI Bardonecchia 83.12 340 ⇑P P 03 01 40.8 +0.5
SSB Saint Sauveur 83.38 341 P P 03 01 41.6 +0.2
SSB Saint Sauveur 83.38 341 P P 03 01 41.6 +0.2
SSB pmax pmax
comp=Z,2µm,1.2s
SSB Saint Sauveur 83.38 341 ⇑P P 03 01 41.6 +0.2
GEM Giv'at Ha'Em 83.39 314 ⇑P P 03 01 41.6 0.0
PTPS Port Pirie 83.54 197 P P 03 01 43.2 +1.1
comp=Z,682nm,1.3s
BBOO Buckleboo 83.57 198 P P 03 01 42.6 +0.3
comp=Z,2µm,1.6s
BBOO Buckleboo 83.57 198 P P 03 01 42.7 +0.5
FORT Forrest 83.60 205 P P 03 01 43.1 +0.7
HTT Hallett 83.62 196 P P 03 01 42.9 +0.3
comp=Z,1µm,1.7s
HTT Hallett 83.62 196 ⇑P P 03 01 43.2 +0.6
ASF Jabal al Asfar 83.66 313 P P 03 01 43.2 0.0
comp=Z,72nm,1.0s,baz=36,slow=2.1,SNR=75
ASF S S 03 12 02.6 +0.8
comp=Z,15nm,1.1s,baz=55,slow=11,SNR=2.0
ASF PKPPKP P'P'df 03 28 06.0 -3.5
comp=Z,6.4nm,1.2s,baz=260,slow=3.2,SNR=3.4
comp=Z,72nm,1.0s
MMAI Mount Meron Ar 83.68 314 P P 03 01 43.2 -0.1
comp=Z,55nm,0.7s,baz=28,slow=11,SNR=63
comp=Z,55nm,0.7s
MGAB Montegabbione 83.76 335 ⇑P P 03 01 42.9 -0.6
AQU L'Aquila 83.91 334 P P 03 01 44.5 +0.2
AQU L'Aquila 83.91 334 ⇑P P 03 01 44.3 +0.1
AQU L'Aquila 83.91 334 ⇑iP P 03 01 44.5 +0.2
AGG Agios Georgios 84.02 327 ⇑P P 03 01 42.5 -2.3
AUDAR Daramalan Coll 84.08 187 P P 03 01 46.0 +1.2
comp=Z,580nm,1.5s
AUUHS Ulladulla High 84.09 186 P P 03 01 45.9 +1.1
comp=Z,886nm,1.6s
CNB Canberra Magne 84.13 187 P P 03 01 46.2 +1.1
comp=Z,498nm,1.7s
AUMTS Mt Stromlo 84.16 187 P P 03 01 46.4 +1.1
comp=Z,517nm,1.8s
CAN Canberra 84.16 187 P P 03 01 45.9 +0.6
comp=Z,699nm,1.7s
CAN Canberra 84.16 187 P P 03 01 46.1 +0.8
CAN Canberra 84.16 187 P P 03 01 46.1 +0.8
CAN pmax pmax
comp=Z,621nm,1.2s
CAN Canberra 84.16 187 ⇑P P 03 01 46.2 +0.9
AUMHS Melrose High S 84.19 187 P P 03 01 46.0 +0.6
comp=Z,494nm,1.2s
ARG Arkhangelos 84.21 321 ⇑P P 03 01 44.8 -1.0
MRVN Minervino Murg 84.26 332 ⇑P P 03 01 45.3 -0.7

KEK Kerkira 84.29 329 ⇑P P 03 01 45.0 -1.2
SHAO Shalim 84.33 291 iP P 03 01 46.2 -0.5
SNR=27
SHAO Shalim 84.33 291 P P 03 01 47.0 +0.3
SNR=34
MATE Matera 84.47 331 ⇓P P 03 01 47.0 0.0
MATE Matera 84.47 331 ⇑P P 03 01 46.5 -0.6
SALP Salfit 84.56 314 ⇑P P 03 01 46.9 -0.8
DOK Doka 84.80 292 P P 03 01 48.3 -0.8
SNR=134
OUZ Omahuta 84.88 167 P P 03 01 50.5 +1.7
OUZ Omahuta 84.88 167 ⇑P P 03 01 50.7 +1.9
PGF Pioggiola 84.92 337 ⇑P P 03 01 48.8 -0.6
DMTO DMTO 84.98 291 P P 03 01 49.1 -0.9
SNR=60
GHAJ Ghor Haditha 85.01 313 P P 03 01 49.1 -0.7
GHAJ IAmb IAmb 03 02 31.2
comp=Z,2µm,1.2s
MSBI Mazada 85.10 314 ⇑P P 03 01 49.9 -0.4
GHSS Government Hou 85.13 196 P P 03 01 51.2 +1.1
comp=Z,408nm,1.1s
AMAZ Amatzia 85.13 314 ⇑P P 03 01 50.2 -0.3
KARP Karpathos 85.18 322 ⇑P P 03 01 48.8 -2.0
AUMBR Murray Bridge 85.22 195 P P 03 01 51.4 +0.9
comp=Z,720nm,1.5s
AUSMG Snowy Mountain 85.28 187 P P 03 01 51.7 +0.8
comp=Z,623nm,1.3s
CUC Castrocucco 85.35 332 ⇑P P 03 01 50.3 -1.2
WHFO Wadi Hawf 85.55 292 P P 03 01 52.0 -0.9
SNR=94
RBK Rabkut 85.60 291 P P 03 01 52.1 -1.0
SNR=57
MTLF Montolieu 85.71 342 ⇑P P 03 01 53.1 -0.1
TIP Timpagrande 85.79 331 ⇑P P 03 01 53.7 0.0
TIP Timpagrande 85.79 331 ⇑P P 03 01 53.4 -0.4
ITM Ithomi 85.79 326 ⇑P P 03 01 52.0 -1.7
MILA Mila 85.87 187 ⇑P P 03 01 54.8 +1.0
KZIT Kziot 85.90 314 ⇑P P 03 01 53.7 -0.6
MORW Morawa 86.06 216 P P 03 01 54.2 -0.7
comp=Z,1µm,1.1s
MORW Morawa 86.06 216 P P 03 01 54.7 -0.1
MORW IAmb IAmb 03 02 22.8
comp=Z,2µm,1.4s
MORW Morawa 86.06 216 ⇑P P 03 01 54.8 -0.1
RAYN Ar Rayn 86.08 302 P P 03 01 54.6 -0.8
RAYN IAmb IAmb 03 02 27.8
comp=Z,1µm,0.9s
RAYN Ar Rayn 86.08 302 iP P 03 01 54.8 -0.7
SNR=245
RAYN Ar Rayn 86.08 302 P P 03 01 55.1 -0.3
RAYN Ar Rayn 86.08 302 ⇑P P 03 01 54.6 -0.8
KAAM Kaadhehdhoo 86.17 266 P P 03 01 55.7 -0.2
KAAM Kaadhehdhoo 86.17 266 P P 03 01 56.8 +0.9
SNR=67
KAAM Kaadhehdhoo 86.17 266 P P 03 01 56.2 +0.3
comp=Z,286µmcomp=Z,85µmcomp=Z,2µm,1.5s
KAAM Kaadhehdhoo 86.17 266 ⇑P P 03 01 56.3 +0.4
GRZ Great Barrier 86.18 166 P P 03 01 59.1 +3.9
ABTO Aybut 86.27 292 P P 03 01 56.0 -0.5
SNR=87
IDI Anoyia 86.32 323 P P 03 01 53.9 -2.6
IDI Anoyia 86.32 323 P P 03 01 54.4 -2.1
comp=Z,143nm,1.1s,baz=30,slow=9.3,SNR=39
IDI PKPPKP P'P'df 03 27 58.5 -6.3
comp=Z,6.5nm,0.9s,baz=241,slow=10,SNR=3.1
IDI LR LR 03 45 15.0
comp=Z,103µm,20.0s,baz=18,slow=39
comp=Z,143nm,1.1s
ABAZ Army Bay 86.42 166 P P 03 02 01.3 +4.9
EJON La Jonquera 86.43 342 P P 03 01 56.4 -0.4
EIL Elat 86.66 313 PKPPKP 03 27 59.2
comp=Z,4.4nm,0.9s,baz=177,slow=0.9,SNR=3.9
EIL LR LR 03 45 15.4
comp=Z,132µm,20.9s,baz=34,slow=39
EIL Elat 86.66 313 ⇑P P 03 01 57.4 -0.7
TOO Toolangi 86.73 190 P P 03 01 59.1 +1.1
TOO Toolangi 86.73 190 P P 03 01 59.1 +1.1
TOO pmax pmax
comp=Z,813nm,1.5s
TOO Toolangi 86.73 190 ⇑P P 03 01 59.1 +1.1
BRAT Ballarat 86.90 191 P P 03 01 59.9 +1.2
comp=Z,433nm,1.1s
CEL Celeste 86.91 331 ⇑P P 03 01 57.4 -1.9
AUMTC Mt Clear Colle 86.96 191 P P 03 01 59.7 +0.7
comp=Z,974nm,1.7s
MKAZ Moumakai 86.97 166 P P 03 02 00.4 +1.4
MLBS Spotswood, Mel 87.06 190 P P 03 02 00.6 +1.1
comp=Z,974nm,1.1s
BLDU Ballidu 87.19 215 P P 03 01 59.6 -0.8
comp=Z,767nm,1.7s
GEXS Deakin Univers 87.49 191 P P 03 02 02.4 +0.8
comp=Z,571nm,1.1s
MGBR Mount Gambier 87.54 194 P P 03 02 03.0 +1.1
MGBR IAmb IAmb 03 02 40.2
comp=Z,3µm,1.7s
TOZ Tahuroa Road 87.63 166 P P 03 02 03.0 +0.7
TOZ IAmb IAmb 03 02 33.1
comp=Z,3µm,1.8s
TOZ Tahuroa Road 87.63 166 P P 03 02 05.1 +2.9
AUHPC Hawkesdale P12 87.66 192 P P 03 02 03.4 +1.0
comp=Z,3µm,2.2s
KLBR Kellerberrin 87.68 213 P P 03 02 02.1 -0.6
comp=Z,1µm,1.3s
VSL Villasalto 87.69 336 ⇑P P 03 02 02.3 -0.6
KMRZ Kaimai 87.82 166 P P 03 02 05.3 +2.1
MXZ Matakaoa Point 87.95 164 P P 03 02 04.1 +0.3
comp=Z,506nm,2.0s
HAZ Te Kaha 88.05 164 P P 03 02 05.5 +1.2
VAE Valguarnera 88.09 332 P P 03 02 04.2 -0.8
comp=Z,28nm,1.1s,baz=299,slow=5.6,SNR=3.1
VAE LR LR 03 46 44.0
comp=Z,277µm,20.7s,baz=12,slow=39
comp=Z,28nm,1.1s
OMRZ Omania 88.14 165 P P 03 02 07.7 +2.9
PKGZ Pakihiroa 88.21 164 P P 03 02 08.8 +3.7
TLZ Tolley Road 88.22 166 P P 03 02 09.5 +4.3
RUGZ Raukumara Rang 88.23 164 P P 03 02 07.5 +2.2
CMIG Matias Romero 88.23 66 LR LR 03 36 18.3
comp=Z,159µm,21.5s,baz=314,slow=32
TARZ Mount Tarawera 88.29 165 P P 03 02 08.6 +3.0
HIZ Hauiti 88.30 167 P P 03 02 06.5 +1.1
HIZ Hauiti 88.30 167 P P 03 02 08.2 +2.7
CLTB Caltabellotta 88.37 333 ⇑P P 03 02 05.4 -0.9
URZ Urewera 88.42 165 LR LR 03 37 01.7
comp=Z,119µm,19.4s,baz=356,slow=32
URZ Urewera 88.42 165 P P 03 02 05.3 -0.7
URZ Urewera 88.42 165 ⇑P P 03 02 04.2 -1.8
PUZ Puketiti 88.44 164 P P 03 02 08.7 +2.6
TWGZ Tauwhareparae 88.49 164 P P 03 02 09.7 +3.3
AUKUL Kulin High Sch 88.52 213 P P 03 02 07.5 +0.9
comp=Z,1µm,1.5s
MWZ Matawai 88.56 165 P P 03 02 06.0 -0.7
ECAL Calabor 88.56 348 P P 03 02 06.4 -0.8
MUGZ Murupara 88.57 165 P P 03 02 08.9 +2.2
MAHO Mahon 88.57 340 P P 03 02 06.4 -0.7
MAHO Mahon 88.57 340 ⇑P P 03 02 07.8 +0.7
MUN Mundaring 88.60 214 P P 03 02 06.9 -0.2
comp=Z,726nm,1.5s
PBRG Braganca 88.70 348 ⇑eP P 03 02 06.8 -0.9
PBRG IAmb IAmb 03 02 35.5
comp=Z,1µm,1.7s
PBRG ePP PP 03 05 37.7 +1.8
RAGZ Rawiri 88.70 165 P P 03 02 08.9 +1.5
TKGZ Te Karaka 88.72 164 P P 03 02 14.1 +6.7
MTKN Mount Kenneth 88.72 215 P P 03 02 08.3 +0.7
comp=Z,443nm,1.1s
PGAV Gavieira, Arco 88.73 350 ⇑eP P 03 02 07.2 -0.8
PGAV iAmb IAmb 03 02 36.7
comp=Z,2µm,1.9s
PGAV eS S 03 12 52.6 +1.6
PGAV eSS SS 03 18 48.5 +7.1
PGAV eLQ LQ 03 27 34.2
PGAV eLR LR 03 32 11.7
PGAV iIAMs_20 IAMs_20 03 43 16.0
comp=Z,166µm,20.0s
RTZ Ruatahuna 88.74 165 P P 03 02 06.7 -0.9
CNGZ Carnagh Statio 88.83 164 P P 03 02 11.2 +3.3
MRHZ Matea Rd 88.86 166 P P 03 02 10.7 +2.5
VRZ Vera Road 88.88 167 P P 03 02 10.0 +1.9
RITZ Rihia Road 88.91 166 P P 03 02 11.8 +3.5
TWVZ Taurewa 88.93 166 P P 03 02 10.5 +2.0
KHEZ Kahui Hut 88.94 167 P P 03 02 09.8 +1.3
comp=Z,3µm,2.0s
KHEZ Kahui Hut 88.94 167 P P 03 02 10.6 +2.1

MTHZ Maungataniwha 88.95 165 P P 03 02 11.3 +2.7
PCAB Cabril 88.95 349 ⇑eP P 03 02 07.9 -1.0
PCAB iIAmb IAmb 03 02 38.6
comp=Z,2µm,1.6s
PCAB ePP PP 03 05 45.1 +7.2
RIGZ Rimuhau 88.97 164 P P 03 02 11.2 +2.6
WTVZ West Tongariro 89.00 166 P P 03 02 09.4 +0.5
ETOS Mallorca 89.02 341 P P 03 02 08.9 -0.4
TMVZ Te Maari 89.02 166 P P 03 02 09.0 +0.1
ETVZ East Tongariro 89.04 166 P P 03 02 08.6 -0.5
RAHZ Arahi 89.05 165 P P 03 02 11.6 +2.6
OTVZ Oturere 89.06 166 P P 03 02 11.8 +1.6
NGZ Ngauruhoe 89.06 166 P P 03 02 10.7 +1.4
COVZ Chateau Observ 89.08 166 P P 03 02 11.8 +2.6
NWAO Narrogin (SRO) 89.08 213 LR LR 03 45 52.8
comp=Z,60µm,18.6s,baz=6.5,slow=38
NWAO Narrogin (SRO) 89.08 213 P P 03 02 09.2 -0.1
NWAO Narrogin (SRO) 89.08 213 P P 03 02 09.2 -0.1
NWAO pmax pmax
comp=Z,2µm,1.5s
SNVZ South Ngauruho 89.08 166 P P 03 02 09.4 +0.1
FWVZ Far West T-bar 89.13 166 P P 03 02 12.0 +2.4
PKVZ Pokaka 89.13 166 P P 03 02 12.6 +3.1
WHVZ Whangaehu Hut 89.17 166 P P 03 02 12.5 +2.7
TRVZ Turoa 89.17 166 P P 03 02 11.8 +1.9
NMHZ Naumai 89.18 165 P P 03 02 10.5 +0.8
BKZ Black Stump Fm 89.20 166 P P 03 02 08.3 -1.4
comp=Z,1µm,1.7s
BKZ Black Stump Fm 89.20 166 P P 03 02 09.0 -0.8
WNVZ Wahianoa 89.21 166 P P 03 02 10.9 +1.0
POLO Lamas de Olo 89.26 349 ⇑eP P 03 02 09.4 -1.0
POLO iIAmb IAmb 03 02 38.3
comp=Z,925nm,1.6s
POLO ePP PP 03 06 01.5 +21
MOVZ Moawhango 89.31 166 P P 03 02 10.3 0.0
PVRL Vila Real 89.34 349 ⇑eP P 03 02 10.0 -0.8
PVRL iIAmb IAmb 03 02 38.5
comp=Z,2µm,1.5s
PVRL ePP PP 03 05 45.9 +4.8
MVO Moncorvo 89.37 349 ⇑eP P 03 02 10.0 -0.9
MVO iIAmb IAmb 03 02 38.7
comp=Z,2µm,1.6s
MVO ePP PP 03 05 53.7 +12
MVO eS S 03 12 51.8 -5.2
MVO eSS SS 03 19 00.9 +10
MVO eLQ LQ 03 27 43.1
MVO eLR LR 03 31 25.2
MVO iIAMs_20 IAMs_20 03 42 39.6
comp=Z,124µm,22.0s
ARHZ Aropaoanui 89.38 165 P P 03 02 11.2 +0.7
MHGZ Mahia Peninsul 89.42 164 P P 03 02 14.0 +3.3
KWHZ Kaweka Forest 89.44 166 P P 03 02 10.8 -0.1
WDD Wied Dalam 89.56 331 ⇑P P 03 02 11.1 -0.7
KRHZ Kereru 89.64 166 P P 03 02 12.1 +0.3
UCM Universidad Co 89.65 346 P P 03 02 11.6 -0.6
TEIG Tepich 89.65 59 P P 03 02 11.8 -0.7
AUHAR St Anne's Scho 89.71 214 P P 03 02 12.9 +0.7
comp=Z,579nm,1.3s
GLAD Gladstone 89.87 187 P P 03 02 14.2 +1.5
comp=Z,412nm,1.5s
PVIS Viseu 89.92 349 ⇑eP P 03 02 12.6 -0.9
PVIS ePP PP 03 05 47.2 +1.6
EIBI Ibiza 90.04 342 P P 03 02 13.5 -0.5
AUBRN Burnie High Sc 90.12 189 P P 03 02 14.9 +1.0
comp=Z,1µm,2.2s
MTE Manteigas 90.19 349 ⇑eP P 03 02 14.0 -0.8
MTE iIAmb IAmb 03 02 42.6
comp=Z,1µm,2.0s
MTE ePP PP 03 06 03.3 +16
MTE eS S 03 12 55.5 -9.0
MTE eSS SS 03 19 08.7 +6.2
MTE eLQ LQ 03 27 27.1
MTE eLR LR 03 32 53.2
MTE iIAMs_20 IAMs_20 03 52 06.8
comp=Z,122µm,20.0s
MTE Manteigas 90.19 349 ⇑P P 03 02 13.8 -1.0
QRZ Quartz Range 90.24 169 P P 03 02 14.5 0.0
ESDC Sonseca Array 90.38 346 P P 03 02 14.8 -0.8
comp=Z,320nm,1.1s,baz=3.2,slow=3.2,SNR=342
ESDC PP PP 03 05 49.6 +0.2
comp=Z,37nm,1.1s,baz=24,slow=5.4,SNR=1.8
ESDC PKKPbc PKKPbc 03 19 44.2 +2.3
comp=Z,8.5nm,0.9s,baz=221,slow=1.3,SNR=9.2
ESDC PKPPKP 03 27 51.5
comp=Z,6.7nm,1.0s,baz=199,slow=0.9,SNR=10
ESDC LR LR 03 49 50.1
comp=Z,231µm,20.1s,baz=17,slow=40
comp=Z,320nm,1.1s
ESDC Sonseca Array 90.38 346 P P 03 02 14.7 -1.0
ESDC IAmb IAmb 03 02 42.8
comp=Z,2µm,1.3s
SOR Soroa 90.49 54 P P 03 02 15.6 -0.8
SOR IAmb IAmb 03 02 50.1
comp=Z,953nm,1.3s
SOR Soroa 90.49 54 P P 03 02 15.6 -0.8
SOR pmax pmax
comp=Z,953nm,1.3s
CCIG Comitan 90.51 64 P P 03 02 16.2 -0.5
CCIG IAmb IAmb 03 02 43.2
comp=Z,2µm,1.9s
MRZ Mangatainoka R 90.51 167 P P 03 02 14.5 -1.3
PAB San Pablo 90.57 346 P P 03 02 15.5 -1.1
PAB IAmb IAmb 03 02 43.6
comp=Z,915nm,1.1s
PAB San Pablo 90.57 346 P P 03 02 15.5 -1.1
PAB pmax pmax
comp=Z,915nm,1.1s
BFZ Birch Farm 90.64 166 P P 03 02 16.2 -0.1
comp=Z,758nm,2.2s
BFZ Birch Farm 90.64 166 P P 03 02 15.4 -0.9
PCAS Casmilo, Conde 90.65 349 ⇑eP P 03 02 15.8 -1.1
PCAS iIAmb IAmb 03 02 44.3
comp=Z,1µm,1.4s
PCAS ePP PP 03 06 03.3 +12
PCBR Castelo Branco 90.73 349 ⇑eP P 03 02 16.1 -1.1
PCBR iIAmb IAmb 03 02 44.8
comp=Z,1µm,1.8s
PCBR etx tx 03 05 03.6
MRNZ Matariki Terra 90.84 169 P P 03 02 17.3 0.0
CAEH 'Ain El Ouahch 90.91 337 P P 03 02 17.6 -0.5
SNZO South Karori 91.02 167 P P 03 02 17.4 -0.6
PSARD Sardoal 91.05 349 ⇑eP P 03 02 17.5 -1.2
PSARD iIAmb IAmb 03 02 53.5
comp=Z,855nm,1.6s
PSARD ePP PP 03 06 06.5 +12
DSZ Denniston Nort 91.06 170 P P 03 02 19.4 +1.1
PMRV Marv??o 91.12 349 eP P 03 02 17.3 -1.7
PMRV iIAmb IAmb 03 02 46.7
comp=Z,993nm,1.7s
PMRV eS S 03 13 02.1 -11
PMRV eSS SS 03 19 20.8 +4.8
PMRV eLQ LQ 03 27 45.2
PMRV eLR LR 03 32 14.2
PMRV iIAMs_20 IAMs_20 03 51 43.5
comp=Z,138µm,20.0s
PSBE So Bento 91.21 350 ⇑eP P 03 02 18.5 -1.0
PSBE iIAmb IAmb 03 02 55.3
comp=Z,995nm,2.1s
PSBE ePP PP 03 06 09.3 +13
THZ Tophouse 91.21 169 P P 03 02 20.7 +1.6
KEST Kesra 91.22 335 P P 03 02 18.6 -1.0
comp=Z,126nm,1.0s,baz=49,slow=0.5,SNR=55
KEST LR LR 03 49 27.1
comp=Z,244µm,18.8s,baz=356,slow=40
comp=Z,126nm,1.0s
KEST Kesra 91.22 335 P P 03 02 18.4 -1.2
KEST IAmb IAmb 03 02 59.0
comp=Z,778nm,1.1s
KEST Kesra 91.22 335 P P 03 02 20.0 +0.3
SNR=25
CKFL Kef-Lekhel 91.30 337 P P 03 02 18.4 -1.7
DFRA Djebel Bou Aff 91.38 338 P P 03 02 20.3 -0.1
MOO Moorlands 91.38 188 P P 03 02 20.6 +0.8
comp=Z,846nm,2.1s
H07N1 FLORES T-PHASE 91.49 7 P P 03 02 21.1 +0.3
SNR=17
CASM Ain Smara 91.49 337 P P 03 02 19.8 -1.1
PMTG Montargil 91.58 349 ⇑eP P 03 02 19.8 -1.3
PMTG iIAmb IAmb 03 02 47.8
comp=Z,757nm,1.6s
PESTR Estremoz 91.70 349 P P 03 02 20.4 -1.4
PESTR Estremoz 91.70 349 P P 03 02 20.2 -1.5
PESTR IAmb IAmb 03 02 48.5
comp=Z,1µm,1.5s

PESTR Estremoz 91.70 349⇑ *eP* **P 03 02 20.6 -1.1**
PESTR *i* IAmb IAmb 03 02 49.1
comp=Z,991nm,1.5s
PESTR *e*PP PP 03 06 15.1 +15
PESTR Estremoz 91.70 349 ⇑P P 03 02 20.2 -1.5
H07S1 FLORES T-PHASE 91.79 7 P P 03 02 21.9 -0.3
SNR=24
PARRA Arraiolos 91.81 349⇑ *eP* **P 03 02 20.9 -1.4**
PARRA *i* IAmb IAmb 03 02 49.6
comp=Z,1µm,1.7s
PARRA *e*PP PP 03 06 22.3 +22
PMAFR Mafra 91.82 350 P P 03 02 21.0 -1.3
PMAFR Mafra 91.82 350⇑ *eP* **P 03 02 21.2 -1.1**
PMAFR *i* IAmb IAmb 03 02 49.0
comp=Z,972nm,1.7s
PMAFR *e*PP PP 03 06 11.4 +11
TAU Tasmania Unive 91.84 188 P P 03 02 22.8 +1.0
comp=Z,810nm,1.3s
TAU Tasmania Unive 91.84 188 P P 03 02 23.0 +1.2
TAU Tasmania Unive 91.84 188 P P 03 02 23.0 +1.2
TAU pmax pmax
comp=Z,2µm,1.5s
TAU Tasmania Unive 91.84 188 ⇑P P 03 02 23.4 +1.5
CART Cartagena 91.89 343 P P 03 02 20.8 -1.8
KHZ Kahutara 91.94 168 P P 03 02 24.9 +2.6
KHZ Kahutara 91.94 168 ⇓P P 03 02 25.1 +2.8
EADA Adamuz 91.95 346 P P 03 02 22.4 -0.6
TLOR Lorca, Murcia 91.96 344 P P 03 02 22.5 -0.5
H01W3 Cape Leeuwin H 91.97 215 P P 03 02 23.6 +1.2
baz=96,slow=6.0,SNR=18
CKHR Kef el Ahmar 91.97 338 P P 03 02 22.0 -1.2
H01W1 Cape Leeuwin H 91.97 215 P P 03 02 23.6 +1.2
baz=96,slow=6.0,SNR=16
H01W2 Cape Leeuwin H 91.98 215 P P 03 02 23.7 +1.2
baz=96,slow=6.0,SNR=18
EVO Evora 92.08 349 P P 03 02 22.4 -1.1
EVO Evora 92.08 349⇑ *eP* **P 03 02 22.6 -0.9**
EVO *i* IAmb IAmb 03 02 51.2
comp=Z,979nm,1.5s
EVO *e*PP PP 03 06 17.1 +14
MOE Montemor 92.14 349⇑ *eP* **P 03 02 22.6 -1.1**
MOE *i* IAmb IAmb 03 02 51.2
comp=Z,997nm,1.5s
MOE *e*PP PP 03 06 25.4 +22
LTZ Lake Taylor 92.14 169 P P 03 02 30.8 +7.5
ECAB El Cabril 92.17 347 P P 03 02 23.2 -0.8
PBAR Barrancos 92.31 348 P P 03 02 23.5 -1.0
PBAR Barrancos 92.31 348⇑ *eP* **P 03 02 23.5 -1.0**
PBAR *i* IAmb IAmb 03 03 00.5
comp=Z,2µm,1.6s
PBAR *e*PP PP 03 06 21.7 +17
SRBC Serra Branca 92.34 5 IAmb IAmb 03 02 34.7
comp=Z,2µm,1.2s
SRBC *e*PP PP 03 06 17.2 +13
SRBC *e*SS SS 03 19 59.8 +26
PGRA Graciosa 92.35 4 IAmb IAmb 03 02 32.9
comp=Z,2µm,1.7s
PGRA *e*PP PP 03 06 15.6 +11
PGRA *e*SS SS 03 20 06.2 +33
PGRA *e*LQ LQ 03 27 17.2
DGAR Diego Garcia 92.44 262 P P 03 02 24.3 -1.1
DGAR IAmb IAmb 03 03 22.1
comp=Z,1µm,1.2s
DGAR Diego Garcia 92.44 262 *c iP* **P 03 02 24.8 -0.6**
DGAR pmax pmax
comp=Z,318nm,1.1s
DGAR MLR MLR
comp=Z,120µm,21.0s
DGAR Diego Garcia 92.44 262 P P 03 02 24.9 -0.6
APG El Apazote 92.50 64 LR LR 03 41 15.2
comp=Z,12µm,21.0s,baz=71,slow=34
PBEJ Beja 92.56 349⇑ *eP* **P 03 02 24.7 -1.0**
PBEJ *i* IAmb IAmb 03 02 53.6
comp=Z,1µm,1.7s
PBEJ *e*PP **PP 03 06 10.8 +4.3**
H08S3 Diego Garcia H 92.58 261 P P 03 02 26.1 +0.3
baz=18,slow=9.8,SNR=41
H08S2 Diego Garcia H 92.59 261 P P 03 02 26.1 +0.3
baz=18,slow=9.8,SNR=52
H08S1 Diego Carcia H 92.60 261 P P 03 02 26.2 +0.3
baz=18,slow=9.8,SNR=55
FOZ Fox Glacier 92.61 171 P P 03 02 27.4 +2.1
PSBA Serra de Santa 92.64 4 IAmb IAmb 03 02 46.0
comp=Z,874nm,1.7s
PSBA *e*PP PP 03 06 16.8 +10
OXZ Oxford 92.65 170 P P 03 02 28.2 +2.6
ROSA Rosais 92.65 5 IAmb IAmb 03 02 34.1
comp=Z,1µm,1.7s
ROSA *e*PP PP 03 06 15.6 +8.5
ROSA *e*SS SS 03 20 11.7 +34
PAGU Agualva, Azore 92.65 4 IAmb IAmb 03 02 35.9
comp=Z,501nm,1.5s
PAGU *e*PP PP 03 06 17.2 +10
PAGU *e*SS SS 03 19 50.6 +13
PAGU *e*LQ LQ 03 27 09.4
EMIN Mina Concepcio 92.66 348 P P 03 02 25.4 -0.8
EQTA Presa de Quent 92.70 345 P P 03 02 25.5 -1.1
PCED Cedros 92.71 5 IAmb IAmb 03 02 45.7
comp=Z,907nm,1.0s
PCED *e*PP PP 03 06 18.0 +10
PSCM Serra do Cume 92.72 4 IAmb IAmb 03 02 34.6
comp=Z,388nm,1.0s
PSCM *e*PP PP 03 06 26.0 +18
PMAN Manadas 92.74 5 IAmb IAmb 03 02 36.1
comp=Z,1µm,1.4s
PMAN *e*PP **PP 03 06 15.2 +7.4**
CALA Caldeira 92.76 5 IAmb IAmb 03 02 36.1
comp=Z,752nm,1.8s
CALA *e*PP **PP 03 06 07.7 -0.4**
CALA *e*SS SS 03 20 12.6 +33
ADH Angra Heroismo 92.76 4 IAmb IAmb 03 02 34.7
comp=Z,725nm,1.6s
ADH *e*PP **PP 03 06 10.1 +2.1**
ADH *e*SS SS 03 19 47.0 +7.6
ADH *e*LQ LQ 03 27 01.5
MESJ Messejana 92.79 349 *eP* **P 03 02 25.8 -1.0**
MESJ *e*SKSac **SKSac 03 12 54.5 -1.8**
MESJ *e*SS **SS 03 19 40.9 +1.0**
MESJ IAMs_20 IAMs_20 03 39 09.5
comp=Z,248µm,32.1s
MESJ Messejana 92.79 349⇑ *eP* **P 03 02 25.8 -1.0**
MESJ *i* IAmb IAmb 03 02 54.8
comp=Z,938nm,1.7s
MESJ *e*PP PP 03 06 19.3 +11
MESJ Messejana 92.79 349 ⇑P P 03 02 25.7 -1.0
HOR Horta 92.82 5 IAmb IAmb 03 02 36.2
comp=Z,894nm,1.6s
HOR *e*PP **PP 03 06 02.9 -5.6**
HOR *e*SS SS 03 19 49.7 +10
HOR *e*LQ LQ 03 27 09.4
PFCBR Castelo Branco 92.82 5 *eP* **P 03 02 27.2 +0.4**
PFCBR IAmb IAmb 03 02 44.7
comp=Z,383nm,1.9s
PICO Pico 92.86 5 IAmb IAmb 03 02 34.9
comp=Z,983nm,1.9s
PICO *e*PP **PP 03 06 15.2 +6.4**
PICO *e*SS SS 03 19 58.9 +18
PCAN Candelaria 92.89 5 IAmb IAmb 03 02 40.0
comp=Z,581nm,1.7s
PCAN *e*PP PP 03 06 26.0 +17
PPNO Prainha do Nor 92.89 5 IAmb IAmb 03 02 45.4
comp=Z,438nm,1.3s
PPNO *e*PP **PP 03 06 14.8 +5.7**
EBER Berja 92.91 345 P P 03 02 25.8 -1.8
EGOR Sierra Gorda, 92.91 346 P P 03 02 26.6 -0.9
RPZ Rata Peaks 92.92 170 LR LR 03 40 26.5
comp=Z,141µm,19.7s,baz=359,slow=33
RPZ Rata Peaks 92.92 170 P P 03 02 32.0 +5.1
PID Ribeirinha 92.93 5 IAmb IAmb 03 02 35.4
comp=Z,1µm,1.9s
PID *e*PP PP 03 06 18.0 +8.7
PCVE Castro Verde 92.97 349 P P 03 02 26.9 -0.7
EGRO El Granado 93.00 348 P P 03 02 26.9 -0.8
JCZ Jackson Bay 93.04 172 P P 03 02 28.3 +0.8
comp=Z,514nm,1.3s
ELGU Los Guajares, 93.07 345 P P 03 02 27.0 -1.2
PTEO Sao Teotonio 93.15 349 *eP* **P 03 02 27.5 -0.9**
PTEO *i* IAmb IAmb 03 02 56.5
comp=Z,1µm,1.7s
PTEO *e*PP **PP 03 06 16.5 +5.4**
PVAQ Vaqueiros 93.16 348 P P 03 02 27.3 -1.2
PVAQ IAmb IAmb 03 03 03.0
comp=Z,924nm,1.4s
PVAQ Vaqueiros 93.16 348⇑ *eP* **P 03 02 27.7 -0.8**
PVAQ *i* IAmb IAmb 03 02 56.4
comp=Z,1µm,1.6s
PVAQ *e*PP **PP 03 06 18.9 +7.8**
PVAQ *e*S **S 03 13 24.4 -6.8**
PVAQ *e*SS **SS 03 19 48.5 +3.3**
PVAQ *e*LQ LQ 03 28 25.1
PVAQ *e*LR LR 03 34 29.0
PVAQ *i* IAMs_20 IAMs_20 03 46 01.5
comp=Z,181µm,20.0s
PVAQ Vaqueiros 93.16 348 ⇑P P 03 02 27.4 -1.0
EMAL Malaga-Limoner 93.30 346 P P 03 02 28.0 -1.1
PBDV Barranco-do-Ve 93.34 349 P P 03 02 28.8 -0.6
PBDV Barranco-do-Ve 93.34 349⇑ *eP* **P 03 02 28.7 -0.6**
PBDV *i* IAmb IAmb 03 03 05.2
comp=Z,1µm,1.7s
PBDV *e*PP **PP 03 06 18.2 +5.5**
MORF Marmelete 93.38 349 *eP* **P 03 02 28.7 -0.9**
MORF *e*SKSac **SKSac 03 12 57.9 -1.7**
MORF *e*SS **SS 03 19 49.4 +1.1**
MORF IAMs_20 IAMs_20 03 39 13.1
comp=Z,340µm,32.8s
MORF Marmelete 93.38 349 P P 03 02 28.3 -1.3
MORF IAmb IAmb 03 02 56.9
comp=Z,1µm,1.5s
MORF Marmelete 93.38 349⇑ *eP* **P 03 02 28.6 -0.9**
MORF *i* IAmb IAmb 03 02 57.6
comp=Z,1µm,1.6s
MORF *e*PP PP 03 06 27.9 +15
MORF Marmelete 93.38 349 *eP* **P 03 02 28.7 -0.9**
MORF *e* 03 12 57.9
MORF *e*SS SS 03 19 49.4 +1.0
MORF Marmelete 93.38 349 ⇑P P 03 02 28.5 -1.0
ESPR Espera 93.42 347 P P 03 02 29.2 -0.5
PFVI Vila Bisbo 93.57 349 P P 03 02 29.5 -0.9
PFVI Vila Bisbo 93.57 349⇑ *eP* **P 03 02 29.4 -0.9**
PFVI *i* IAmb IAmb 03 03 06.5
comp=Z,990nm,2.1s
PFVI *e*PP **PP 03 06 18.5 +4.2**
TMZ Timaru 93.57 171 P P 03 02 31.9 +2.0
PSET Sete Cidades 93.65 3 IAmb IAmb 03 02 40.4
comp=Z,1µm,1.7s
PSET *e*PP PP 03 06 06.0 -8.9
PSET *e*SS SS 03 20 20.9 +29
PSET *e*LQ LQ 03 27 18.3
PCALD Caldeiras da R 93.68 3 *eP* **P 03 02 28.8 -2.1**
PCALD *e*SS SS 03 20 09.0 +16
BART Pico Bartolome 93.71 2 IAmb IAmb 03 02 38.4
comp=Z,514nm,1.6s
BART *e*PP **PP 03 06 13.2 -2.3**
PGRON Lagoa das Cont 93.71 2 IAmb IAmb 03 02 38.6
comp=Z,850nm,1.6s
PGRON *e*PP **PP 03 06 10.1 -5.5**
CMLA Cha da Macela 93.71 3 P P 03 02 29.4 -1.6
CMLA IAmb IAmb 03 02 50.8
comp=Z,482nm,0.9s
CMLA Cha da Macela 93.71 3 P P 03 02 29.4 -1.6
CMLA pmax pmax
comp=Z,482nm,0.9s
CMLA Cha da Macela 93.71 3 IAmb IAmb 03 02 38.8
comp=Z,780nm,1.6s
CMLA *e*PP **PP 03 06 08.1 -7.4**
CMLA *e*LQ LQ 03 27 20.5
PDA Ponta Delgada 93.73 3 IAmb IAmb 03 02 50.9
comp=Z,2µm,1.4s
PDA *e*PP **PP 03 06 08.4 -7.1**
PDA *e*SS SS 03 20 03.5 +10
PDA *e*LQ LQ 03 27 17.2
ODZ Otahua Downs 94.19 171 ⇑P P 03 02 33.3 +0.7
ECEU Ceuta 94.30 346 P P 03 02 32.3 -1.4
WMELI Melilla 94.46 344 P P 03 02 33.1 -1.4
PSMN Pico do Norte, 94.49 2 *eP* **P 03 02 35.6 +1.0**
PSMN IAmb IAmb 03 02 41.5
comp=Z,876nm,1.9s
PSMN *e*SS SS 03 20 10.8 +6.7
PSMN *e*LQ LQ 03 27 37.3
TGUH Tegucigalpa,Un 95.13 62 P P 03 02 37.0 -1.0
RTC Rabat Centre 96.40 347 P P 03 02 42.4 -0.9
NMDO Nuevo Mundo 96.47 49 P P 03 02 42.9 -0.9
IFR Ifrane 96.59 346 P P 03 02 43.1 -1.4
SIUN Universidad Ur 96.85 60 P P 03 02 44.1 -1.6
ATD Arta Tunnel 97.10 296 P P 03 02 45.2 -1.7
ATD Arta Tunnel 97.10 296 P Pdif 03 02 47.4 +0.4
SNR=19
ATD Arta Tunnel 97.10 296 ⇑P P 03 02 46.5 -0.3
MTDJ Mount Denham 97.13 52 *i P* Pdif 03 02 47.5 +0.4
AVE Averroes 97.15 348 P P 03 02 46.2 -0.6
AVE Averroes 97.15 348 ⇑P P 03 02 46.1 -0.7
MDT Midelt 97.19 345 LR LR 03 51 26.1
comp=Z,93µm,20.4s,baz=28,slow=38
STH Stony Hill 97.63 51 *i P* **P 03 02 47.5 -1.6**
GWJ Greenwich 97.67 51 *i P* **P 03 02 47.5 -2.1**
PMPST Porto Santo, M 98.27 355 *eP* **P 03 02 50.5 -1.3**
PMPST *i* IAmb IAmb 03 03 10.8
comp=Z,572nm,1.4s
PMPST *e*PP **PP 03 06 57.5 +6.7**
PMPS Porto Santo 98.29 355 *eP* Pdif 03 02 53.6 +1.7
PMPS *i* IAmb IAmb 03 02 59.5
comp=Z,494nm,1.6s
PMOZ Porto Moniz, M 98.57 356 P P 03 02 52.6 -0.7
PMOZ Porto Moniz, M 98.57 356 *eP* **P 03 02 52.4 -0.9**
PMOZ *i* IAmb IAmb 03 03 19.9
comp=Z,553nm,1.5s
PMOZ *e*PP PP 03 07 01.5 +8.4
PMOZ *e*S S 03 13 58.8 -20
PMOZ *e*SS **SS 03 21 07.8 +5.7**
PMOZ *e*LQ LQ 03 30 44.3
PMOZ *e*LR LR 03 36 35.1
PMOZ *i* IAMs_20 IAMs_20 03 45 34.7
comp=Z,77µm,22.0s
PMAR Madeira 98.65 355 *eP* **P 03 02 52.5 -1.3**
PMAR *i* IAmb IAmb 03 03 15.2
comp=Z,887nm,1.7s
PMAR *e*PP PKiKP 03 07 09.5 -16
FUL Funchal 98.73 355 *eP* Pdif 03 02 59.3 +5.4
FUL *i* IAmb IAmb 03 03 36.0
comp=Z,580nm,1.7s
FUL *e*PP PKiKP 03 07 12.1 -13
TIO Tiouine 99.46 347 P Pdif 03 02 56.7 -0.7
JTS Las Juntas de 99.49 62 LR LR 03 49 45.5
comp=Z,56µm,20.2s,baz=326,slow=36
MSEY Mahe Island 101.58 276 *i P* **Pdif 03 03 06.2 -0.6**
SNR=6.3
MSEY Mahe Island 101.58 276 P Pdif 03 03 06.9 +0.1
SMRT St. Maarten 104.14 40 *eP* **Pdif 03 03 10.3 -7.8**
SMRT x x 03 07 40.9
SABA Saba 104.45 40 *eP* **Pdif 03 03 12.7 -6.8**
DHSZ Broadband at M 106.28 40 *eP* **Pdif 03 03 21.2 -6.5**
DHSZ x x 03 07 49.7
MMLZ Guadeloupe Bro 106.52 40 *eP* **Pdif 03 03 25.5 -3.2**
MMLZ x x 03 07 50.2
DWS Wesley 107.10 39 *eP* **Pdif 03 03 30.9 -0.4**
DWS x x 03 07 59.9
DSLB Salisbury 107.17 40 *eP* **Pdif 03 03 27.5 -4.2**
DSLB x x 03 08 04.5
DLPL La Plaine 107.34 40 *eP* **Pdif 03 03 31.7 -0.7**
DLPL x x 03 08 09.1
SVN Savane Anatole 107.81 40 *eP* **Pdif 03 03 28.1 -6.4**
SVN x x 03 07 56.8
BIM Bigot 108.14 40 *eP* **Pdif 03 03 32.5 -3.6**
BIM x x 03 08 00.8
SLBI Saint Lucia, B 108.62 40 *eP* **Pdif 03 03 32.4 -5.7**
SLBI x x 03 08 03.9
SLAC Saint Lucia, A 108.77 40 *eP* **Pdif 03 03 43.7 +4.9**
SLAC x x 03 07 44.0
MCLT Moule a Chique 108.92 40 *eP* **Pdif 03 03 35.2 -4.3**
MCLT x x 03 08 16.4
GRSS Sisters 109.89 41 *eP* **Pdif 03 03 47.4 +3.7**
GRSS x x 03 17 45.7
ROSC El Rosal 109.98 57 Pdiff **Pdif 03 03 43.0 -1.7**
comp=Z,2.5nm,0.4s,baz=36,slow=6.9,SNR=3.8
ROSC *e*PP **PP 03 08 16.8 -2.5**
comp=Z,54nm,1.0s,baz=44,slow=9.7,SNR=4.1
ROSC PKKPbc **PKKPbc 03 18 47.0 +0.4**
comp=Z,25nm,1.0s,baz=151,slow=19,SNR=1.9
KMBO Kilima Mbogo 110.48 293 Pdiff **Pdif 03 03 46.7 0.0**
KMBO PKiKP **PKiKP 03 07 47.9 +0.7**
baz=50,slow=2.9
KMBO PP **PP 03 08 25.1 +2.1**
baz=34,slow=7.9
KMBO PKKPbc **PKKPbc 03 18 45.0 +0.3**
baz=155,slow=3.5
TRN Trinidad (W) 111.45 42 *eP* **Pdif 03 03 47.5 -3.2**
TRN x x 03 17 49.8

MBAR Mbarara 113.92 299 PKiKP **PKiKP 03 07 54.9 +1.3**
comp=Z,4.1nm,0.5s,baz=135,slow=1.4,SNR=1.9
MBAR PP **PP 03 08 50.0 +2.7**
comp=Z,12nm,0.7s,baz=36,slow=6.4,SNR=3.8
TORD Torodi Ar. Bea 114.73 334 Pdiff **Pdif 03 04 04.6 -0.7**
comp=Z,4.0nm,0.9s,baz=3.6,slow=3.4,SNR=12
TORD PKP PKPdf 03 07 55.2 +0.2
comp=Z,17nm,0.8s,baz=323,slow=1.0,SNR=11
TORD PP **PP 03 08 50.5 -1.7**
comp=Z,86nm,1.2s,baz=349,slow=5.8,SNR=6.2
TORD PKKPbc **PKKPbc 03 18 30.6 +0.1**
comp=Z,16nm,0.8s,baz=188,slow=1.6,SNR=6.3
TORD SKKPbc SKKPbc 03 22 18.3 +10
comp=Z,41nm,1.1s,baz=198,slow=3.8,SNR=4.6
ABPO Ambohimpanom 117.54 272 PKPdf 03 07 59.5 -0.8
ABPO Ambohimpanom 117.54 272 PKiKP **PKPdf 03 07 59.5 -0.8**
BOAV Boa Vista 119.14 45 PKPdf 03 08 02.1 -1.4
VOI Vohitsoka 119.86 270 PKPdf 03 08 03.2 -1.5
VOI Vohitsoka 119.86 270 P **PKPdf 03 08 04.5 -0.2**
SNR=5.2
CASY Casey 120.34 200 PKPdf 03 08 03.6 -0.5
EDA Edea 120.49 322 PKPdf 03 08 04.8 -1.3
CZSB Cruzeiro do Su 121.14 63 PKPdf 03 08 05.8 -1.5
CZSB Cruzeiro do Su 121.14 63 *eP* **PKPdf 03 08 02.8 -4.5**
FOMA Nahampoana Res 121.86 268 PKPdf 03 08 07.5 -0.8
NNA Nana 121.96 70 PKPdf 03 08 07.3 -1.6
NNA Nana 121.96 70 PKiKP **PKPdf 03 08 07.3 -1.6**
TEFE Tefe 122.18 53 *eP* **PKPdf 03 08 04.8 -4.5**
DBIC Dimbokro 122.65 339 PKP **PKPdf 03 08 09.2 -1.0**
comp=Z,42nm,0.7s,baz=64,slow=1.8,SNR=14
DBIC PP **PP 03 09 46.4 -0.5**
comp=Z,37nm,0.7s,baz=36,slow=6.9,SNR=3.9
DBIC PKKPbc **PKKPbc 03 18 02.2 +0.3**
comp=Z,27nm,0.8s,baz=225,slow=3.6,SNR=7.8
DBIC SKKPbc SKKPbc 03 21 50.0 +6.8
comp=Z,41nm,1.0s,baz=194,slow=4.9,SNR=4.8
DBIC Dimbokro 122.65 339 PKPdf 03 08 08.6 -1.6
DBIC Dimbokro 122.65 339 PKiKP **PKPdf 03 08 08.6 -1.6**
MACA Manacapuru-AM 123.90 48 *eP* **PKPdf 03 08 08.5 -4.1**
VNDA Vanda 126.12 179 PKP **PKPdf 03 08 13.9 -1.0**
comp=Z,81nm,0.9s,baz=334,slow=4.1,SNR=14
VNDA PP **PP 03 10 11.9 +1.5**
comp=Z,13nm,0.7s,baz=354,slow=7.4,SNR=3.7
VNDA SKKPbc SKKPbc 03 21 36.9 -1.7
comp=Z,16nm,1.1s,baz=192,slow=1.4,SNR=4.2
VNDA Vanda 126.12 179 PKPdf 03 08 14.9 0.0
SBA Scott Base 126.55 178 PKiKP 03 08 16.5 +0.3
SBA Scott Base 126.55 178 PKiKP **PKiKP 03 08 16.5 +0.3**
LSZ Lusaka 127.06 291 PKP **PKPdf 03 08 18.0 -0.7**
comp=Z,33nm,0.8s,baz=25,slow=2.6,SNR=19
LSZ PP **PP 03 10 18.5 +1.0**
comp=Z,31nm,0.9s,baz=40,slow=6.4,SNR=1.3
LSZ SKKPbc SKKPbc 03 21 28.3 -2.0
comp=Z,14nm,0.9s,baz=184,slow=6.7,SNR=3.5
LSZ Lusaka 127.06 291 PKPdf 03 08 18.0 -0.7
ITTB Itaituba 127.31 44 *eP* **PKPdf 03 08 15.1 -4.0**
NPGB Novo Progresso 129.84 45 *eP* **PKPdf 03 08 19.3 -4.6**
LPAZ La Paz 130.60 65 PKP **PKPdf 03 08 25.6 -0.4**
comp=Z,90nm,0.9s,baz=0.1,slow=4.8,SNR=37
LPAZ PP **PP 03 10 41.9 +0.7**
comp=Z,45nm,1.0s,baz=357,slow=7.8,SNR=1.7
PB16 IPOC Station P 131.34 68 PKPdf 03 08 27.1 -0.2
PRPB Parauapebas 131.48 38 *eP* **PKPdf 03 08 22.3 -4.8**
H04N2 CROZET ISLAND3 131.76 244 PKP **PKiKP 03 08 27.5 +0.3**
baz=102,slow=3.4,SNR=6.2
H04N1 CROZET ISLAND3 131.77 244 PKP **PKiKP 03 08 27.5 +0.3**
baz=102,slow=3.4,SNR=5.2
H04N3 CROZET ISLAND3 131.78 244 PKP **PKPdf 03 08 26.6 +0.4**
baz=102,slow=3.4,SNR=3.5
CRZF Crozet Islands 131.86 243 PKPdf **PKPdf 03 08 26.2 -0.5**
H04S1 CROZET ISLAND3 132.05 243 PKP **PKiKP 03 08 27.4 -0.5**
H04S3 CROZET ISLAND3 132.06 243 PKP **PKiKP 03 08 27.4 -0.5**
H04S2 CROZET ISLAND3 132.06 243 PKP **PKiKP 03 08 27.4 -0.5**
NBMO Morrinhos-CE 132.14 24 *eP* **PKPdf 03 08 24.1 -4.2**
VILB Vilhena 132.45 54 *eP* **PKPdf 03 08 24.8 -4.0**
PILG Pilgrimsrest, 132.53 280 *eP* **PKPdf 03 08 25.3 -3.7**
NBPS Pedro II - PI 132.78 27 *eP* **PKPdf 03 08 25.3 -4.3**
TEMBE Tembe Elephant 132.86 277 *eP* **PKPdf 03 08 25.2 -4.0**
PB08 IPOC Station P 132.92 70 PKP **PKPdf 03 08 30.2 +0.2**
CLDB Colider 132.96 48 *eP* **PKPdf 03 08 25.7 -4.1**
PDRB Porto dos Gac 133.13 49 *eP* **PKPdf 03 08 25.4 -4.7**
PB02 IPOC Station P 133.33 71 PKPdf 03 08 30.1 -0.3
LEPH Lephalale, Lim 133.66 284 *eP* **PKPdf 03 08 26.1 -4.8**
SIV San Ignacio 134.47 58 PKhKP PKPpre 03 08 18.6
comp=Z,20nm,0.8s,baz=329,slow=2.1,SNR=31
SIV PKP **PKPdf 03 08 31.8 -0.8**
comp=Z,51nm,0.7s,baz=296,slow=1.1,SNR=28
SIV PP **PP 03 11 05.0 -0.1**
comp=Z,58nm,1.0s,baz=331,slow=14,SNR=3.1
LPHEP Lephephe 134.54 286 PKPdf **PKPdf 03 08 32.4 -0.2**
PTLB Pontes e Lacer 135.09 55 PKPdf 03 08 33.0 -0.6
HRAO HartRAO 135.16 282 *eP* **PKPdf 03 08 27.6 -6.2**
PB14 IPOC Station P 135.41 75 PKP **PKPdf 03 08 33.1 -1.4**
MAW Mawson 135.65 213 PKP **PKPdf 03 08 32.9 -0.2**
comp=Z,53nm,0.8s,baz=106,slow=6.9,SNR=16
MAW PP **PP 03 11 15.7 +3.4**
comp=Z,64nm,0.9s,baz=69,slow=9.1,SNR=4.4
MAW SKKPbc SKKPbc 03 21 07.0 +3.6
comp=Z,34nm,1.1s,baz=253,slow=2.7,SNR=4.3
H03N2 Juan Fernandez 135.65 91 PKP **PKPdf 03 08 32.5 -1.4**
H03N2 T T 05 39 57.4
baz=314,slow=77,SNR=353
H03N1 Juan Fernandez 135.67 91 PKP **PKPdf 03 08 32.6 -1.3**
baz=159,slow=15,SNR=12
H03N1 T T 05 39 59.1
baz=314,slow=77,SNR=284
H03N3 Juan Fernandez 135.67 91 PKP **PKPdf 03 08 32.5 -1.4**
baz=159,slow=15,SNR=13
H03N3 T T 05 39 58.9
baz=314,slow=77,SNR=284
WDLM Western Deep L 135.70 282 *eP* **PKPdf 03 08 28.4 -6.4**
PMBG Pietermaritzbu 135.76 276 *eP* **PKPdf 03 08 28.1 -6.6**
LBTB Lobatse 135.89 285 PKhKP PKPpre 03 08 21.6
comp=Z,19nm,0.9s,baz=44,slow=3.0,SNR=6.8
LBTB PKP **PKPdf 03 08 34.8 -0.3**
comp=Z,63nm,0.7s,baz=20,slow=1.3,SNR=23
LBTB PP **PP 03 11 16.7 +2.3**
comp=Z,33nm,1.0s,baz=34,slow=5.7,SNR=3.6
LBTB SKKPbc SKKPbc 03 21 03.5 +4.3
comp=Z,21nm,1.1s,baz=233,slow=5.6,SNR=2.9
LBTB Lobatse 135.89 285 PKPdf 03 08 34.6 -0.5
LBTB Lobatse 135.89 285 PKiKP **PKPdf 03 08 34.6 -0.5**
H03S2 Juan Fernandez 135.90 92 PKP **PKPdf 03 08 34.5 +0.1**
baz=202,slow=74,SNR=8.0
H03S3 Juan Fernandez 135.90 92 PKP **PKPdf 03 08 34.5 +0.1**
baz=202,slow=74,SNR=4.4
H03S1 Juan Fernandez 135.92 92 PKP **PKPdf 03 08 34.5 +0.1**
baz=202,slow=74,SNR=3.2
GRTLG Ghanzi 135.96 293 *i P* **PKPdf 03 08 33.6 -1.8**
GRTLG IAML 03 11 38.6
comp=N,156nm,7.4s
PRYS Parys 136.08 281 *eP* **PKPdf 03 08 29.9 -5.5**
TSUM Tsumeb 136.46 299 PKhKP PKPpre 03 08 24.4
comp=N,30nm,0.9s,baz=111,slow=2.8,SNR=13
TSUM PP **PP 03 11 21.1 +3.2**
comp=N,35nm,1.1s,baz=354,slow=9.2,SNR=2.0
KGCAE Kacgae 136.46 290 *i P* PKPpre 03 08 28.7
KGCAE IAML 03 12 48.5
comp=N,246nm,5.7s
MAKGR Makgori 136.96 285 *i P* PKPpre 03 08 25.1
MAKGR IAML 03 12 47.8
comp=N,149nm,4.1s
LKGWB Lokgwabe 138.00 290 PKPdf **PKPdf 03 08 37.5 -1.5**
GOBN Gobabis 138.16 294 *i P* PKPpre 03 08 31.4
KJAB KAMANJAB 138.35 301 *i P* PKPpre 03 08 35.9
QSPA South Pole Qui 138.59 180 PKhKP PKPpre 03 08 28.9
comp=N,68nm,1.0s,baz=208,slow=0.7,SNR=36
QSPA PP **PP 03 11 30.7 0.0**
comp=N,84nm,1.0s,baz=135,slow=1.2,SNR=3.2
BOSA Boshof 138.59 281 PKhKP PKPpre 03 08 29.2
comp=N,15nm,0.6s,baz=34,slow=3.3,SNR=10.0
BOSA PP **PP 03 11 33.3 +1.9**
comp=N,38nm,0.8s,baz=55,slow=6.5,SNR=2.3
BOSA SKKPbc SKKPbc 03 20 50.6 +1.5
comp=N,13nm,1.0s,baz=235,slow=6.4,SNR=2.2
BOSA Boshof 138.59 281 PKPdf 03 08 38.4 -1.6
BOSA Boshof 138.59 281 PKiKP **PKPdf 03 08 38.4 -1.6**
H10N2 ASCENSION HYDR 138.60 348 PKP **PKPdf 03 08 40.9 +1.0**
baz=160,slow=75,SNR=10
H10N3 ASCENSION HYDR 138.61 348 PKP **PKPdf 03 08 40.9 +1.0**
baz=160,slow=75,SNR=15
H10N1 ASCENSION HYDR 138.61 348 PKP **PKPdf 03 08 41.0 +1.0**
baz=160,slow=75,SNR=15
H10S3 ASCENSION HYDR 139.73 348 PKP **PKPdf 03 08 42.7 +0.7**
baz=26,slow=74,SNR=14

H10S2	**ASCENSION HYDR**	**39.73**	**348**	PKP		**PKPdf**	**03 08 42.7**	**+0.7**
	baz=194,slow=74,SNR=14							
BDFB	**Brasilia**	**140.74**	**41**	PKhKP	PKPpre		03 08 36.4	
	comp=N,44nm,1.1s,baz=6.3,slow=0.9,SNR=18							
BDFB				PP		**PP**	**03 11 42.4**	**-1.6**
	comp=N,90nm,0.9s,baz=342,slow=9.8,SNR=4.3							
BDFB	**Brasilia**	**140.74**	**41**	PKPdf		**PKPdf**	**03 08 43.5**	**-0.8**
BDFB	**Brasilia**	**140.74**	**41**	PKIKP		**PKPdf**	**03 08 43.5**	**-0.8**
GRHM	**Grahamstown, E**	**140.88**	**275**	*eP*		**PKPdf**	**03 08 37.8**	**-6.2**
PEL	**Peldehue**	**140.91**	**85**			**PKPdf**	**03 08 44.6**	**+0.7**
PEL	**Peldehue**	**140.91**	**85**	PKIKP		**PKPdf**	**03 08 44.7**	**+0.7**
MURT	**Porto Murtinho**	**140.95**	**59**	*eP*	PKPpre		03 08 37.0	
UPI	**Upington**	**141.00**	**285**	*eP*		**PKPdf**	**03 08 39.9**	**-4.5**
CFA	**Coronel Fontan**	**141.54**	**81**	PKhKP	PKPpre		03 08 38.0	
	comp=N,14nm,0.6s,baz=283,slow=2.8,SNR=35							
CFA				PP		**PP**	**03 11 51.5**	**+2.0**
	comp=N,14nm,0.9s,baz=338,slow=11,SNR=1.2							
BFON	**Badsfontein, M**	**141.71**	**279**	*eP*		**PKPdf**	**03 08 40.8**	**-4.8**
ARMS	**Ukamas**	**141.73**	**287**	*i P*		PKPpre	03 08 39.2	
JANB	**Januaria**	**141.74**	**36**	*eP*		PKPpre	03 08 42.2	
BO02	**Sierra Bellavi**	**141.85**	**87**	PKPdf		**PKPdf**	**03 08 45.5**	**-0.2**
BRAK	**Brakfontein**	**142.22**	**280**	*eP*		**PKPdf**	**03 08 41.2**	**-5.2**
ROOI	**Rooidraai Farm**	**142.24**	**278**	*eP*		**PKPdf**	**03 08 42.0**	**-4.5**
KROM	**Kromhout**	**142.56**	**275**	*eP*		**PKPdf**	**03 08 43.2**	**-3.6**
IPMB	**Ipameri, GO**	**142.71**	**43**	*eP*		PKPpre	03 08 43.3	
GRAN	**Grantham**	**143.02**	**280**	*eP*		PKPab	03 08 43.8	+0.6
ITRB	**Iturama**	**143.18**	**48**	*eP*		PKPbc	03 08 45.0	-0.4
FRAZ	**Fraserburg**	**143.28**	**281**	*eP*		PKPbc	03 08 45.4	-0.1
AMBA	**Amambai (Brazi**	**143.42**	**57**	*eP*		PKPab	03 08 45.2	+0.3
MERW	**Merweville**	**143.68**	**280**	*eP*		PKPbc	03 08 46.4	-0.3
CMC01	**Camacan, BA**	**143.72**	**29**	*eP*		PKPab	03 08 46.4	+0.1
SUR	**Sutherland**	**143.95**	**281**	PKhKP		PKPpre	03 08 47.2	
	comp=N,199nm,0.9s,baz=40,slow=2.9,SNR=52							
SUR				PP		**PP**	**03 12 07.1**	**+2.9**
	comp=N,64nm,0.9s,baz=36,slow=13,SNR=1.5							
SUR	**Sutherland**	**143.95**	**281**			PKPbc	03 08 47.9	+0.3
PMNB	**Patos De Minas**	**143.99**	**41**	*eP*		PKPab	03 08 46.5	-0.9
GO06	**Curarrehue**	**144.08**	**94**	PKPdf		**PKPab**	**03 08 46.7**	**-0.5**
SYO	**Syowa Base**	**144.36**	**213**	⇓*i* PKIKP		**PKPab**	**03 08 44.8**	**-2.3**
SYO	**Syowa Base**	**144.36**	**213**	⇑*i* PKiKP		**PKPab**	**03 08 46.6**	**-0.5**
KOMG	**Komaggas**	**144.37**	**288**	*i P*		PKPbc	03 08 49.2	+0.5
TRCB	**Terra Rica**	**144.59**	**54**	*eP*		**PKPab**	**03 08 47.8**	**-1.7**
MATJ	**Matjiesfontein**	**144.66**	**280**	*eP*		**PKPab**	**03 08 48.8**	**-0.7**
CPUP	**Villa Florida**	**144.72**	**63**	PKP		**PKPab**	**03 08 48.8**	**-0.9**
	comp=N,215nm,0.8s,baz=322,slow=3.8,SNR=258							
CPUP				PP		**PP**	**03 12 11.0**	**+2.8**
	comp=N,26nm,1.0s,baz=318,slow=11,SNR=0.9							
GUA01	**Guaratinga, BA**	**144.77**	**30**	*eP*		**PKPab**	**03 08 48.6**	**-1.5**
LL01	**San Ignacio de**	**144.85**	**99**			**PKPdf**	**03 08 50.4**	**-0.1**
DIAM	**Diamantina, MG**	**144.93**	**37**	*eP*		**PKPab**	**03 08 48.5**	**-2.4**
BB19B	**Bebedouro**	**145.23**	**46**	*eP*		**PKPbc**	**03 08 49.2**	**-2.5**
PLCA	**Paso Flores**	**145.28**	**95**	PKPbc		**PKPbc**	**03 08 51.0**	**-0.4**
	comp=N,212nm,0.8s,baz=292,slow=3.3,SNR=237							
PLCA				PP		**PP**	**03 12 14.2**	**+2.3**
	comp=N,65nm,1.0s,baz=299,slow=7.6,SNR=2.1							
PLCA	**Paso Flores**	**145.28**	**95**	PKIKP		**PKPbc**	**03 08 51.0**	**-0.4**
PRTV	**Porterville,We**	**145.50**	**282**	*eP*		**PKPdf**	**03 08 50.7**	**-1.4**
CER	**Ceres**	**145.56**	**281**	*eP*		**PKPdf**	**03 08 50.6**	**-1.6**
LL02	**Futaleuf**	**145.60**	**100**			**PKPdf**	**03 08 51.2**	**-0.7**
LDASE	**Londrina, Braz**	**145.88**	**52**	*eP*		**PKPdf**	**03 08 48.8**	**-4.2**
SJMB	**Sao Joao De Ma**	**146.25**	**34**	*eP*		**PKPdf**	**03 08 50.7**	**-3.0**
PTGB	**Pitanga**	**146.45**	**55**	*eP*		**PKPdf**	**03 08 51.2**	**-2.8**
BSFB	**Barra de Sao F**	**146.49**	**33**	*eP*		**PKPdf**	**03 08 50.9**	**-3.3**
FRTB	**Fartura**	**146.64**	**53**	*eP*		**PKPdf**	**03 08 51.3**	**-3.0**
RCLB	**Rio Claro- Sao**	**146.86**	**46**	*eP*		**PKPdf**	**03 08 52.1**	**-2.6**
BSCB	**Bom Sucesso**	**146.88**	**41**	*eP*		**PKPdf**	**03 08 52.1**	**-2.7**
RIB01	**Linhares ES**	**147.10**	**33**	*eP*		**PKPdf**	**03 08 52.4**	**-2.8**
GO08	**Villa O'Higgin**	**147.26**	**109**			**PKPdf**	**03 08 54.4**	**-0.1**
VAO	**Valinhos**	**147.63**	**46**	*eP*		**PKPdf**	**03 08 53.4**	**-2.6**
SPB	**Sao Paulo**	**147.90**	**47**	*eP*		**PKPdf**	**03 08 53.8**	**-2.6**
PSAL	**Palomas, Salto**	**147.98**	**69**	*eP*		**PKPdf**	**03 08 54.2**	**-2.0**
ALF01	**Guarapari-ES**	**148.17**	**34**	*eP*		**PKPdf**	**03 08 54.8**	**-2.0**
MG05	**Puerto Natales**	**148.26**	**114**			**PKPdf**	**03 08 55.4**	**-0.6**
ITAB	**Concordia**	**148.40**	**58**			**PKPdf**	**03 08 56.1**	**-0.9**
ITAB	**Concordia**	**148.40**	**58**	*eP*		**PKPdf**	**03 08 54.6**	**-2.4**
PARB	**Paraibuna**	**148.54**	**44**	*eP*		**PKPdf**	**03 08 54.9**	**-2.6**
PET01	**Itanhaem-SP**	**148.57**	**48**	*eP*		**PKPdf**	**03 08 52.9**	**-4.5**
DUB01	**Friburgo-RJ**	**148.85**	**38**	*eP*		**PKPdf**	**03 08 52.4**	**-5.6**
CAM01	**Campos-RJ**	**148.91**	**37**	*eP*		**PKPdf**	**03 08 54.0**	**-4.0**
ELIB	**Princess Elisa**	**149.03**	**206**	*d*PKPdf		**PKPdf**	**03 08 55.8**	**-1.1**
MG03	**Isla Dawson**	**149.95**	**118**			**PKPdf**	**03 08 57.7**	**-0.9**
MAJ01	**Sao Joao Batis**	**150.23**	**54**	*eP*		**PKPdf**	**03 08 56.1**	**-3.9**
LPA	**La Plata**	**150.30**	**75**	PKIKP		**PKPdf**	**03 08 54.6**	**-5.2**
LPA				PDIFF			03 06 37.9	
BELA	**Belgrano 2**	**150.48**	**175**	PKPdf		**PKPdf**	**03 08 57.7**	**-1.2**
CNLB	**Canela**	**150.71**	**59**	*eP*		**PKPdf**	**03 08 56.6**	**-4.1**
USHA	**Ushuaia**	**151.28**	**120**	PKPbc		**PKPbc**	**03 09 06.6**	**-0.1**
	comp=N,493nm,0.9s,baz=257,slow=1.9,SNR=20							
PMSA	**Palmer Station**	**152.79**	**141**	PKPbc		**PKPbc**	**03 09 09.8**	**+0.1**
	comp=N,262nm,0.8s,baz=213,slow=0.2,SNR=15							
PMSA				PP		**PP**	**03 12 58.7**	**+4.0**
	comp=N,59nm,1.1s,baz=85,slow=10,SNR=1.2							
PMSA	**Palmer Station**	**152.79**	**141**	PKPdf		**PKPdf**	**03 09 03.1**	**+0.5**
NVL	**N'Iazarevskaya**	**152.83**	**204**	*e*PKIKP		**PKPdf**	**03 09 04.0**	**+1.5**
NVL				*e*			03 12 56.7	
NVL				*e*			03 16 05.9	
NVL				*e*PPP		PPP	03 16 23.8	
NVL				*e*SS		SS	03 32 25.6	+3.4
NVL				*e*SSS		SSS	03 38 14.7	
NVL				pmax		pmax		
	comp=Z,798nm,1.2s							
TROLL	**Troll, Antarti**	**154.16**	**197**	PKPdf		**PKPdf**	**03 09 02.0**	**-2.6**
SNAA	**Sanae**	**155.41**	**195**	⇑PKPdf		**PKPdf**	**03 09 05.5**	**-0.7**
	comp=Z,6µm,0.9s							
SNAA	**Sanae**	**155.41**	**195**	PKP		**PKPdf**	**03 09 04.7**	**-1.5**
	comp=Z,30nm,1.0s,baz=105,slow=0.5,SNR=17							
SNAA				PKPbc		**pPKPdf**	**03 09 17.4**	**-1.9**
	comp=Z,85nm,0.9s,baz=159,slow=1.8,SNR=13							
SNAA				PP		**PP**	**03 13 11.7**	**+2.5**
	comp=Z,45nm,0.9s,baz=229,slow=12,SNR=1.6							
SNAA	**Sanae**	**155.41**	**195**			**PKPdf**	**03 09 04.5**	**-1.8**
ESPZ	**Base Esperanza**	**156.17**	**141**			**PKPdf**	**03 09 05.8**	**-1.5**
VNA2	**Neumayer--Watz**	**156.78**	**192**	⇑PKPdf		**PKPdf**	**03 09 11.3**	**+3.3**
	comp=Z,122nm,0.8s,baz=142,slow=1.2							
VNA3	**Neumayer Olymp**	**156.78**	**190**	⇑PKPdf		**PKPdf**	**03 09 06.9**	**-1.1**
	comp=Z,116nm,0.8s							
EFI	**East Falkland**	**157.07**	**111**			**PKPdf**	**03 09 07.5**	**-1.4**
EFI	**East Falkland**	**157.07**	**111**	PKIKP		**PKPdf**	**03 09 07.5**	**-1.4**
VNA1	**Neumayer--Stat**	**157.15**	**192**	⇑PKPdf		**PKPdf**	**03 09 13.5**	**+5.1**
	comp=Z,838nm,1.4s							
H09N1	**TRISTAN DA CUN**	**166.18**	**325**	PKPab		**PKPab**	**03 10 18.4**	**-1.4**
H09W1	**TRISTAN DA CUN**	**166.21**	**325**	PKPab		**PKPab**	**03 10 18.5**	**-1.4**
HOPE	**Hope Point**	**169.60**	**127**	PKPdf		**PKPdf**	**03 09 21.0**	**+0.4**
HOPE				PKPab		**PKPab**	**03 10 33.9**	**-0.7**
HOPE	**Hope Point**	**169.60**	**127**	PKIKP		**PKPdf**	**03 09 21.0**	**+0.4**
HOPE							03 10 33.9	

*IPEC **25** 02:57:02.0±0.1,50.°18N×18.°63E,h1km,ML2.5/6,Error ellipse: s-maj=1.7km s-min=0.8km az=175.0*
*PRU **25** 02:57:03.2,50.°19N×18.°56E,h0km*
ISC 25 02:57:01.8±0.9,50.°19N±0.°04×18.°59E±0.°03,h0km,n40,
σ0s78/72,4C-6D,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.28**	**248**	*e*PG	**Pb**	**02 57 08.9**	**-0.7**
RAC				*e*SG	**Sb**	**02 57 13.6**	**-1.2**
OKC	**Ostrava-Krasne**	**0.45**	**219**	*e*PG	**Pg**	**02 57 11.5**	**+1.1**
OKC				*e*SG	**Sg**	**02 57 17.9**	**+1.7**
	comp=Z,75nm,0.4s						
STEB	**Steborice**	**0.58**	**245**	*e*PG	**Pb**	**02 57 14.1**	**-0.8**
STEB				*e*SG	**Sg**	**02 57 21.2**	**+0.7**
	comp=Z,171nm,0.3s						
ANAC	**Anensky vrch**	**0.79**	**262**	*e*Pg	**Pb**	**02 57 17.8**	**-0.6**
	baz=82						
ANAC				*e*Sg	**Sg**	**02 57 27.5**	**+0.5**
	93nm,0.3s,baz=82						
MORC	**Moravsky Berou**	**0.79**	**239**	⇓P	**Pg**	**02 57 17.6**	**+0.7**
MORC				⇑S	**Sb**	**02 57 28.7**	**-1.0**
MORC	**Moravsky Berou**	**0.79**	**239**	*e*Pg	**Pg**	**02 57 17.4**	**+0.5**
	baz=60						
MORC				*e*Sg	**Sg**	**02 57 27.5**	**+0.4**
	106nm,0.4s,baz=60						
MAUC	**Maruska**	**0.96**	**211**	*e*PG	**Pb**	**02 57 21.0**	**-0.3**
MAUC				*e*SG	**Sb**	**02 57 33.5**	**-1.0**
LOSC	**Losov**	**0.97**	**235**	*e*Pg	**Pg**	**02 57 20.9**	**+0.6**
	baz=55						
LOSC				*e*Sg	**Sg**	**02 57 32.8**	**-0.1**
	86nm,0.4s,baz=55						
KRLC	**Kraliky**	**1.17**	**265**	*e*PG	**Pg**	**02 57 23.6**	**-0.5**
KRLC				*e*SG	**Sg**	**02 57 39.5**	**+0.2**
	comp=Z,80nm,0.3s						
LANS	**Liptovska Anna**	**1.19**	**151**	*e*PG	**Pg**	**02 57 24.6**	**+0.2**
LANS				*e*SG	**Sb**	**02 57 41.4**	**+0.4**
LANS				*e*LG	Lg	02 57 43.4	
LANS				*e*		03 28 17.9	
JAVC	**Velka Javorina**	**1.46**	**205**	*e*Pg	**Pn**	**02 57 28.9**	**-0.5**
	baz=25						
DPC	**Dobruska-Polom**	**1.47**	**277**	*e*PG	**Pn**	**02 57 29.7**	**+0.2**
DPC				*e*SG	**Sb**	**02 57 49.1**	**0.0**
	comp=Z,54nm,0.5s						
OSTC	**Ostas**	**1.56**	**285**	*e*PG	**Pn**	**02 57 31.2**	**+0.4**
OSTC				*e*SG	**Sg**	**02 57 52.2**	**+0.2**
VRAC	**Vranov**	**1.57**	**237**	⇑P	**Pn**	**02 57 30.3**	**-0.5**
VRAC				⇓S	**Sn**	**02 57 51.8**	**-0.1**
VRAC	**Vranov**	**1.57**	**237**	*e*Pn	**Pn**	**02 57 31.0**	**+0.2**
	baz=56						
VRAC				*e*Sg	**Sn**	**02 57 51.5**	**-0.3**
	54nm,0.6s,baz=56						
VRAC	**Vranov**	**1.57**	**237**	*e*PN	**Pn**	**02 57 31.1**	**+0.2**
VRAC				*e*SG	**Sn**	**02 57 51.6**	**-0.3**
CHVC	**Chvalec**	**1.67**	**285**	*e*PG	**Pn**	**02 57 32.6**	**+0.3**
CHVC				*e*SG	**Sg**	**02 57 55.4**	**0.0**
UPC	**Upice**	**1.68**	**282**	*e*PG	**Pb**	**02 57 33.3**	**-0.3**
UPC				*e*SG	**Sg**	**02 57 56.8**	**+1.0**
	comp=Z,18nm,0.5s						
KRUC	**Moravsky**	**1.82**	**233**	*e*Pn	**Pn**	**02 57 34.5**	**+0.3**
	baz=52						
KRUC				*e*Sg	**Sb**	**02 57 59.5**	**+0.4**
	31nm,0.5s,baz=52						
KRUC	**Moravsky**	**1.82**	**233**	*e*PN	**Pn**	**02 57 34.6**	**+0.3**
KRUC				*e*SG	**Sb**	**02 57 59.6**	**+0.4**
STHS	**Stebnicka Huta**	**1.88**	**113**	*e*PN	**Pn**	**02 57 35.7**	**+0.5**
STHS				*e*SG	**Sg**	**02 58 03.0**	**+0.7**
STHS				*e*LG	Lg	02 58 08.7	
MODS	**Modra-Piesok**	**2.01**	**206**	*e*PG	**Pg**	**02 57 40.3**	**+0.1**
MODS				*e*SG	**Sb**	**02 58 05.1**	**+0.4**
MODS				*e*		03 28 17.1	
KECS	**Kecovo**	**2.11**	**143**	*e*PN	**Pn**	**02 57 37.4**	**-0.9**
KECS				*e*PG	**Pg**	**02 57 41.9**	**-0.2**
KECS				*e*SN	**Sn**	**02 58 03.5**	**-1.7**
KECS				*e*SG	**Sg**	**02 58 08.5**	**-1.0**
KECS				*e*LG	Lg	02 58 12.3	
SRO	**Srobarova**	**2.38**	**184**	*e*SG	**Sg**	**02 58 20.4**	**+2.1**
SRO				*e*LG	Lg	02 58 21.0	
PVCC	**Panska Ves**	**2.60**	**279**	*e*PN	**Pn**	**02 57 45.4**	**+0.4**
PVCC				*e*PG	**Pb**	**02 57 50.2**	**+1.0**
PVCC				*e*SG	**Sg**	**02 58 24.4**	**-0.8**
	comp=Z,29nm,0.4s						
CONA	**Conrad Observa**	**2.89**	**219**	Pn	**Pn**	**02 57 49.1**	**+0.1**
	0.2nm,0.1s						
CONA				*e*Sg	**Sg**	**02 58 33.7**	**-0.7**
	4.1nm,0.4s						
ZVC	**Zvikov**	**2.95**	**257**	*e*PG	**Pb**	**02 57 56.6**	**+1.5**
ZVC				*e*SG	**Sg**	**02 58 35.2**	**-1.1**
	comp=Z,8.5nm,0.3s						
CKRC	**Cesky Krumlov**	**3.11**	**246**	*e*PG	**Pb**	**02 57 58.3**	**+0.4**
HSKC	**Hora Svate Kat**	**3.33**	**279**	*e*PG	**Pb**	**02 58 03.0**	**+1.4**
HSKC				*e*SG	**Sg**	**02 58 49.0**	**+0.4**
	comp=Z,7.3nm,0.4s						
KHC	**Kasperske Hory**	**3.42**	**254**	*e*PN	**Pn**	**02 57 56.5**	**+0.1**
KHC				*e*PG	**Pb**	**02 58 05.1**	**+1.8**
KHC				*e*SG	**Sg**	**02 58 50.6**	**-1.1**
	comp=Z,25nm,0.5s						
MOA	**Molln**	**3.68**	**232**	*i* Pn	**Pb**	**02 58 07.8**	**+0.1**
	0.3nm,0.1s						
CLL	**Collm**	**3.72**	**290**	*e*Pg	**Pg**	**02 58 13.0**	**0.0**
CLL				*e*Sg	**Sg**	**02 59 00.0**	**-1.2**
	comp=Z,16nm,0.6s						
BIOA	**Bad Ischl, Aus**	**4.11**	**234**	*e*Pn	**Pg**	**02 58 19.3**	**-1.2**
	comp=Z,1.7nm,0.3s						
DRGR		**4.37**	**140**	⇓P	**Pn**	**02 58 09.1**	**-0.3**
MARR	**Marisel-Cluj**	**4.63**	**138**	⇓P	**Pn**	**02 58 12.7**	**-0.3**
PTJ	**Puntijarka**	**4.63**	**203**	*e*Pg	**Pb**	**02 58 23.9**	**+0.1**
PTJ				Sg	Pg	02 58 25.1	-5.4
BURAR	**Bucovina Array**	**5.07**	**118**	⇑P	**Pn**	**02 58 19.0**	**-0.1**
MDVR	**Moldovita**	**5.81**	**157**	⇑P	**Pn**	**02 58 30.0**	**+0.8**
HERR	**Herculane**	**5.91**	**153**	⇓P	**Pn**	**02 58 31.2**	**+0.7**
VOIR		**6.44**	**135**	⇓P	**Pn**	**02 58 38.8**	**+0.9**

IDC 25 03:02:47.5±2.6,49.°26N×158.°53E,h0km,mb4.2/2,
mbtmp4.1/3,ML2.5/1,Error ellipse: s-maj=70.1km
s-min=40.8km az=15.0,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**3.88**	**353**	Pn	Pn	03 03 48.5	0.0
	1.6nm,0.3s,baz=150,slow=18,SNR=0.9						
	7.2nm,0.5s						
MKAR	**Makanchi Array**	**49.00**	**298**	P	P	03 11 35.6	-0.1
	5.1nm,0.9s,baz=47,slow=5.8,SNR=1.6						
	5.1nm,0.9s						
TXAR	**Lajitas Array**	**73.11**	**65**	P	P	03 14 19.8	0.0
	0.9nm,0.5s,baz=315,slow=4.2,SNR=5.4						
	0.9nm,0.5s						

*IDC **25** 03:03:16.5±1.2,49.°15N×158.°64E,h0km,mb4.4/3,*
mbtmp4.3/4,ML3.1/1,Error ellipse: s-maj=35.4km
s-min=32.7km az=116.0
*MOS **25** 03:03:18.7±1.1,49.°22N×158.°58E,h28km,mb4.0/1,Error ellipse: s-maj=36.2km s-min=7.1km az=94.9*
*KRSC **25** 03:03:19.6±1.6,49.°49N×158.°79E,h23km±40km,Ml4.7*
ISC 25 03:03:21.8±1.2,49.°30N±0.°08×158.°64E±0.°09,h35km,n30,
σ1s10/40,mb4.4/3,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.14**	**311**	PN	**Pn**	**03 03 53.8**	**-1.0**
SKR				S	**Sn**	**03 04 20.1**	**0.0**
SKR	**Severo-Kuril's**	**2.14**	**311**	*e*P	**Pn**	**03 03 53.8**	**-1.0**
SKR				*e*S	**Sn**	**03 04 20.2**	**0.0**
PAU	**Pauzhetka**	**2.46**	**332**	PN	**Pn**	**03 03 59.9**	**+0.5**
PAU				S	**Sn**	**03 04 28.7**	**+0.5**
PAU	**Pauzhetka**	**2.46**	**332**	*e*P	**Pn**	**03 03 59.9**	**+0.5**
PAU				*e*S	**Sn**	**03 04 28.7**	**+0.5**
KDTR	**Khodutka, Kamc**	**2.53**	**352**	PN	**Pn**	**03 03 58.5**	**-1.8**
KDTR				S	**Sn**	**03 04 28.5**	**-1.4**
KDTR	**Khodutka, Kamc**	**2.53**	**352**	*e*P	**Pn**	**03 03 58.6**	**-1.8**
KDTR				*e*S	**Sn**	**03 04 28.5**	**-1.4**
RUS	**Russkaya**	**3.13**	**359**	*e*S	**Sn**	**03 04 42.9**	**-1.9**
MTVR	**Mutnovka**	**3.20**	**355**	*e*S	**Sn**	**03 04 45.2**	**-1.3**
GRL	**Gorelyy**	**3.27**	**354**	*e*S	**Sn**	**03 04 47.7**	**-0.6**
KRMR	**Karymshinskiy**	**3.55**	**355**	PN	**Pn**	**03 04 14.5**	**+0.3**
KRMR	**Karymshinskiy**	**3.55**	**355**	*e*P	**Pn**	**03 04 14.6**	**+0.3**
KRMR				*e*S	**Sn**	**03 04 55.3**	**+0.4**
PET	**Petropavlovsk**	**3.73**	**0**	*e*PN	**Pn**	**03 04 15.0**	**-1.7**
PET	**Petropavlovsk**	**3.73**	**0**	*e*P	**Pn**	**03 04 16.4**	**-0.3**
PET				*e*S	**Sn**	**03 04 58.5**	**-0.8**
DALK	**Dalny**	**3.73**	**1**	PN	**Pn**	**03 04 16.4**	**-0.4**
DALK	**Dalny**	**3.73**	**1**	*e*P	**Pn**	**03 04 16.5**	**-0.4**
DALK				*e*S	**Sn**	**03 04 58.3**	**-1.2**
APC	**Apacha**	**3.75**	**346**	PN	**Pn**	**03 04 17.3**	**+0.4**
APC	**Apacha**	**3.75**	**346**	*e*P	**Pn**	**03 04 17.4**	**+0.4**
PETK	**Petropavlovsk-**	**3.86**	**352**	Pn	**Pn**	**03 04 19.0**	**+0.5**
	6.2nm,0.3s,baz=147,slow=12,SNR=6.0						
PETK					**Sn**	**03 05 04.7**	**+2.1**
	3.8nm,0.3s,baz=186,slow=12,SNR=1.5						
	11nm,0.4s						
PETK	**Petropavlovsk-**	**3.86**	**352**	PN	**Pn**	**03 04 19.0**	**+0.5**
KOK	**Koryaka**	**3.99**	**360**	PN	**Pn**	**03 04 21.3**	**+0.8**
KOK	**Koryaka**	**3.99**	**360**	*e*P	**Pn**	**03 04 21.3**	**+0.8**
KRER	**Koryakskii**	**4.01**	**1**	PN	**Pn**	**03 04 21.6**	**+0.8**
KRER	**Koryakskii**	**4.01**	**1**	*e*P	**Pn**	**03 04 21.6**	**+0.8**
KRX	**Arik**	**4.06**	**0**	PN	**Pn**	**03 04 22.9**	**+1.4**
KRX	**Arik**	**4.06**	**0**	*e*P	**Pn**	**03 04 22.9**	**+1.4**
GNL	**Ganaly**	**4.42**	**355**	PN	**Pn**	**03 04 28.1**	**+1.8**
GNL	**Ganaly**	**4.42**	**355**	*e*P	**Pn**	**03 04 28.1**	**+1.8**
MKAR	**Makanchi Array**	**49.05**	**298**	P	**P**	**03 12 05.5**	**+0.5**
	1.6nm,0.4s,baz=52,slow=6.5,SNR=8.1						
	1.6nm,0.4s						
WRA	**Warramunga Arr**	**72.25**	**204**	P	**P**	**03 14 42.5**	**-0.7**
	4.3nm,0.8s,baz=20,slow=6.2,SNR=6.0						
	4.3nm,0.8s						
TXAR	**Lajitas Array**	**73.02**	**65**	P	**P**	**03 14 48.8**	**+0.7**
	2.1nm,0.7s,baz=299,slow=5.5,SNR=9.7						
	2.1nm,0.7s						

*IDC **25** 03:11:07.8±2.3,49.°26N×158.°62E,h0km,mb4.2/6,*
mbtmp4.1/7,ML2.5/1,Error ellipse: s-maj=55.7km
s-min=35.6km az=8.0
*KRSC **25** 03:11:09.6±1.4,49.°43N×158.°96E,h38km±26km,Ml4.1*
*NEIC **25** 03:11:14.1±1.6,49.°5N±0.°1×158.°6E±0.°2,h37km±7km,*
mb4.5/8,Error ellipse: s-maj=19.6km s-min=16.3km
az=198.0
ISC 25 03:11:10.9±1.0,49.°4N±0.°1×158.°70E±0.°10,h18km,n39,
σ0s71/43,mb4.2/9,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**2.42**	**331**	*e*P	**Pn**	**03 11 50.0**	**+0.4**
KDTR	**Khodutka, Kamc**	**2.48**	**351**	*e*P	**Pn**	**03 11 49.5**	**-0.7**
KDTR				*e*S	**Sn**	**03 12 18.4**	**-1.6**
GRL	**Gorelyy**	**3.21**	**353**	*e*P	**Pn**	**03 12 00.8**	**+0.2**
GRL				*e*S	**Sn**	**03 12 37.3**	**-1.1**
KRMR	**Karymshinskiy**	**3.48**	**354**	*e*P	**Pn**	**03 12 05.5**	**+1.4**
KRMR				*e*S	**Sn**	**03 12 46.2**	**+1.3**
PET	**Petropavlovsk**	**3.66**	**360**	Pn	**Pn**	**03 12 06.3**	**-0.2**
PET	**Petropavlovsk**	**3.66**	**360**	*e*P	**Pn**	**03 12 06.4**	**-0.2**
APC	**Apacha**	**3.69**	**345**	*e*P	**Pn**	**03 12 07.3**	**+0.4**
PETK	**Petropavlovsk-**	**3.80**	**351**	Pn	**Pn**	**03 12 09.1**	**+0.6**
	1.8nm,0.3s,baz=183,slow=14,SNR=9.9						
PETK				Sn	**Sn**	**03 12 53.1**	**+0.5**
	0.5nm,0.3s,baz=95,slow=19,SNR=2.2						
	5.9nm,0.5s						
PETK	**Petropavlovsk-**	**3.80**	**351**		**Pn**	**03 12 08.8**	**+0.3**
SPN	**Mys Shipunski**	**3.83**	**12**	*e*P	**Pn**	**03 12 09.1**	**+0.2**
KOK	**Koryaka**	**3.93**	**359**	*e*P	**Pn**	**03 12 11.3**	**+1.0**
KRX	**Arik**	**4.00**	**360**	*e*P	**Pn**	**03 12 12.0**	**+0.7**
KBTR	**Krutoberegovo**	**7.29**	**18**	*e*P	**Pn**	**03 12 56.5**	**+0.2**
MA2	**Magadan**	**11.21**	**339**	Pn	**Pn**	**03 13 49.7**	**-0.3**
ADK	**Adak**	**15.80**	**71**	Pn	**P**	**03 14 54.7**	**-1.3**
ADK				IAmb	IAmb	03 15 06.0	
	comp=Z,62nm,1.0s						
GAMB	**Gambell**	**21.49**	**37**	P	**P**	**03 15 58.4**	**+0.2**
K15K	**Wolf Creek Mou**	**25.33**	**44**	P	**P**	**03 16 35.5**	**-0.8**
TIXI	**Tiksi**	**26.18**	**339**	P	**P**	**03 16 44.1**	**+0.2**
	comp=Z,2.3nm,0.2s,baz=100,slow=7.2,SNR=0.7						
	comp=Z,2.3nm,0.2s						
J17K	**VABM Dome**	**26.66**	**42**	P	**P**	**03 16 48.5**	**+0.2**
K20K

*AZER **25** 03:29:12.2, 38°.44N × 44°.47E, h10km, ml2.7*
*AFAD **25** 03:29:14.6, 38°.33N × 44°.51E, h7km, 3km, ML2.6*
ISC 25 03:29:13.7±1.4, **38°.35N**±0°.04 × **44°.53E**±0°.03, **h9**km±11km, **n21**, σ1**326**/33, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.52**	**307**	P	**Pb**	**03 29 24.3**	**-0.8**
OZAP				S	**Sb**	**03 29 33.1**	**+0.3**
OZAP				IAML		03 30 00.0	
	comp=E,498nm,1.9s						
OZAP				IAML		03 30 12.0	
	comp=N,315nm,4.4s						
YOVA	**Hakkari_Yksek**	**0.79**	**194**	P	**Pn**	**03 29 29.8**	**-1.3**
YOVA				IAML		03 29 30.0	
	comp=N,207nm,1.4s						
YOVA				S	**Sn**	**03 29 40.4**	**-2.6**
YOVA				IAML		03 29 54.0	
	comp=E,551nm,1.0s						
TVAN	**Van**	**0.90**	**282**	P	**Pn**	**03 29 31.9**	**-0.8**
VANB	**Van**	**0.93**	**286**	Pg	**Pn**	**03 29 31.5**	**-1.4**
VANB				Sg	**Sn**	**03 29 46.2**	**-0.2**
VMUR	**Van-Muradiye**	**0.98**	**311**	P	**Pn**	**03 29 33.8**	**0.0**
VMUR				IAML		03 29 36.0	
	comp=E,411nm,2.7s						
VMUR				IAML		03 29 42.0	
	comp=N,177nm,1.8s						
VMUR				S	**Sn**	**03 29 49.5**	**+1.6**
HAKT	**HAKKARI**	**1.02**	**220**	P	**Pn**	**03 29 33.6**	**-0.7**
HAKT	**HAKKARI**	**1.02**	**220**	P	**Pn**	**03 29 33.9**	**-0.4**
HAKT				S	**Sn**	**03 29 50.6**	**+1.7**
NAX	**Nakhchivan**	**1.12**	**42**	P	**Pn**	**03 29 35.9**	**+0.4**
NAX				S	**Sn**	**03 29 50.2**	**-0.9**
GEVA	**Gevas**	**1.16**	**269**	P	**Pn**	**03 29 36.2**	**0.0**
AKDM	**Akdamar-Van**	**1.22**	**269**	Pn	**Pn**	**03 29 36.9**	**-0.1**
AKDM				Sn	**Sn**	**03 29 55.5**	**+1.9**
ORD	**Ordubad**	**1.28**	**63**	P	**Pg**	**03 29 38.9**	**+0.6**
ORD				S	**Sn**	**03 29 58.0**	**+2.8**
SBZ	**Shahbuz**	**1.32**	**37**	P	**Pg**	**03 29 39.4**	**+0.4**
SBZ				S	**Sn**	**03 29 57.3**	**+1.3**
DYDN	**Diyadin**	**1.36**	**332**	P	**Pg**	**03 29 40.8**	**+1.1**
DYDN				S	**Sn**	**03 29 57.2**	**0.0**
DYDN				IAML		03 30 05.0	
	comp=N,72nm,1.0s						
DYDN				IAML		03 30 25.0	
	comp=E,288nm,1.9s						
HYR	**Heyderabad**	**1.39**	**10**	P	**Pg**	**03 29 39.7**	**-0.6**
HYR				S	**Sg**	**03 29 58.8**	**+0.4**
IGDI	**IGDIR**	**1.56**	**347**	P	**Pg**	**03 29 43.0**	**-0.5**
IGDI				S	**Sg**	**03 30 03.4**	**-0.4**
PERV	**Siirt/Pervari-**	**1.62**	**256**	P	**Pg**	**03 29 47.5**	**+2.9**
AGRB	**Hanur-Agry**	**1.71**	**316**	Pn	**Pg**	**03 29 45.9**	**-0.6**
DORK	**Agr/Tutak/Do**	**1.71**	**308**	P	**Pg**	**03 29 45.6**	**-0.9**
KOTA	**Agri, Merkez-K**	**1.78**	**325**	P	**Pg**	**03 29 48.8**	**+1.0**
GURO	**Guroymak-BITLI**	**1.97**	**277**	Pn	**Pb**	**03 29 48.7**	**-1.0**
SRTM	**Siirt_Merkez**	**2.08**	**261**	P	**Pg**	**03 29 54.4**	**+0.7**

*IDC **25** 03:32:39.8±0.8, 49°.15N × 158°.83E, h0km, mb3.8/10, mbtmp3.9/13, ML3.4/3, Error ellipse: s-maj=21.4km s-min=17.7km az=136.0*
*KRSC **25** 03:32:42.2±1.7, 49°.41N × 158°.94E, h32km±40km, Ml4.4*
*MOS **25** 03:32:43.0±0.7, 49°.23N × 158°.65E, h35km, mb4.3/1, Error ellipse: s-maj=18.6km s-min=4.6km az=92.2*
*NEIC **25** 03:32:45.2±1.8, 49°.23N±0°.10 × 158°.8E±0°.1, h34km±5km, mb4.7/24, Error ellipse: s-maj=14.3km s-min=9.6km az=177.0*
ISC 25 03:32:44.6±0.6, **49°.26N**±0°.07 × **158°.78E**±0°.05, **h35**km, **n100**, σ1**832**/119, **mb4.5**/22, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.23**	**311**	*e*PN	**Pn**	**03 33 17.2**	**-1.8**
SKR				*e*S	**Sn**	**03 33 42.6**	**-2.7**
SKR				pmax	pmax		
	comp=Z,289nm,0.7s						
SKR				smax	smax		
	comp=N,956nm,0.8s						
SKR				smax	smax		
	comp=E,636nm,0.5s						
SKR	**Severo-Kuril's**	**2.23**	**311**	*e*P	**Pn**	**03 33 17.6**	**-1.4**
SKR				*e*S	**Sn**	**03 33 43.9**	**-1.4**
PAU	**Pauzhetka**	**2.54**	**331**	PN	**Pn**	**03 33 23.5**	**+0.2**
PAU	**Pauzhetka**	**2.54**	**331**	*e*P	**Pn**	**03 33 23.5**	**+0.2**
KDTR	**Khodutka, Kamc**	**2.59**	**350**	PN	**Pn**	**03 33 23.0**	**-0.9**
KDTR				S	**Sn**	**03 33 52.6**	**-1.5**
KDTR	**Khodutka, Kamc**	**2.59**	**350**	*e*P	**Pn**	**03 33 23.1**	**-0.9**
KDTR				*e*S	**Sn**	**03 33 52.6**	**-1.5**
ASAK	**Asacha**	**3.18**	**350**	PN	**Pn**	**03 33 32.1**	**+0.1**
ASAK				S	**Sn**	**03 34 08.2**	**-0.5**
ASAK	**Asacha**	**3.18**	**350**	*e*P	**Pn**	**03 33 32.2**	**+0.1**
ASAK				*e*S	**Sn**	**03 34 08.3**	**-0.5**
RUS	**Russkaya**	**3.18**	**357**	PN	**Pn**	**03 33 31.5**	**-0.5**
RUS	**Russkaya**	**3.18**	**357**	*e*P	**Pn**	**03 33 31.5**	**-0.5**
RUS				*e*S	**Sn**	**03 34 06.8**	**-1.9**
MTVR	**Mutnovka**	**3.25**	**354**	PN	**Pn**	**03 33 32.7**	**-0.4**
MTVR	**Mutnovka**	**3.25**	**354**	*e*P	**Pn**	**03 33 32.8**	**-0.4**
MTVR				*e*S	**Sn**	**03 34 09.0**	**-1.6**
GRL	**Gorelyy**	**3.33**	**353**	PN	**Pn**	**03 33 34.2**	**0.0**
GRL				S	**Sn**	**03 34 11.6**	**-0.9**
GRL	**Gorelyy**	**3.33**	**353**	*e*P	**Pn**	**03 33 34.2**	**0.0**
GRL				*e*S	**Sn**	**03 34 11.7**	**-0.9**
KRMR	**Karymshinskiy**	**3.60**	**354**	PN	**Pn**	**03 33 38.2**	**+0.4**
KRMR				S	**Sn**	**03 34 18.9**	**-0.1**
KRMR	**Karymshinskiy**	**3.60**	**354**	*e*P	**Pn**	**03 33 38.2**	**+0.4**
KRMR				*e*S	**Sn**	**03 34 18.9**	**-0.1**
PET	**Petropavlovsk**	**3.77**	**359**	Pn	**Pn**	**03 33 40.0**	**-0.2**
PET	**Petropavlovsk**	**3.77**	**359**	*e*PN	**Pn**	**03 33 39.8**	**-0.3**
PET	**Petropavlovsk**	**3.77**	**359**	*e*P	**Pn**	**03 33 39.9**	**-0.2**
PET				*e*S	**Sn**	**03 34 22.2**	**-1.0**
DALK	**Dalny**	**3.78**	**360**	PN	**Pn**	**03 33 40.0**	**-0.2**
DALK	**Dalny**	**3.78**	**360**	*e*P	**Pn**	**03 33 40.0**	**-0.2**
DALK				*e*S	**Sn**	**03 34 22.7**	**-0.7**
APC	**Apacha**	**3.81**	**345**	PN	**Pn**	**03 33 40.9**	**+0.3**
APC	**Apacha**	**3.81**	**345**	*e*P	**Pn**	**03 33 41.0**	**+0.3**
PEA0B	**Petropavlovsk-**	**3.91**	**350**	Pn	**Pn**	**03 33 42.9**	**+0.6**
PEA0B	**Petropavlovsk-**	**3.91**	**350**	PN	**Pn**	**03 33 42.9**	**+0.6**
PETK	**Petropavlovsk-**	**3.91**	**350**	Pn	**Pn**	**03 33 42.0**	**-0.2**
	comp=E,1.9nm,0.3s,baz=142,slow=14,SNR=17						
PETK				Sn	**Sn**	**03 34 30.0**	**+3.2**
	comp=E,2.1nm,0.3s,baz=144,slow=18,SNR=4.2 comp=E,5.1nm,0.6s						
PETK	**Petropavlovsk-**	**3.91**	**350**		**Pn**	**03 33 42.6**	**+0.5**
SPN	**Mys Shipunski**	**3.92**	**11**	PN	**Pn**	**03 33 41.9**	**-0.3**
SPN	**Mys Shipunski**	**3.92**	**11**	*e*P	**Pn**	**03 33 42.0**	**-0.3**
SPN				*e*S	**Sn**	**03 34 25.5**	**-1.5**
UGLR	**Uglovaya**	**3.95**	**0**	PN	**Pn**	**03 33 44.1**	**+1.3**
UGLR	**Uglovaya**	**3.95**	**0**	*e*P	**Pn**	**03 33 44.2**	**+1.3**
SMAR	**Somma**	**4.01**	**0**	PN	**Pn**	**03 33 44.7**	**+1.1**
SMAR	**Somma**	**4.01**	**0**	*e*P	**Pn**	**03 33 44.7**	**+1.1**
AVH	**Avacha**	**4.01**	**360**	PN	**Pn**	**03 33 44.4**	**+0.9**
AVH	**Avacha**	**4.01**	**360**	*e*P	**Pn**	**03 33 44.5**	**+0.9**
KOK	**Koryaka**	**4.04**	**359**	PN	**Pn**	**03 33 44.7**	**+0.8**
KOK				S	**Sn**	**03 34 31.4**	**+1.4**
KOK	**Koryaka**	**4.04**	**359**	*e*P	**Pn**	**03 33 44.7**	**+0.8**
KOK				*e*S	**Sn**	**03 34 31.5**	**+1.4**
KRX	**Arik**	**4.11**	**359**	PN	**Pn**	**03 33 45.4**	**+0.5**
KRX	**Arik**	**4.11**	**359**	*e*P	**Pn**	**03 33 45.5**	**+0.5**
GNL	**Ganaly**	**4.47**	**354**	PN	**Pn**	**03 33 51.1**	**+1.2**
GNL	**Ganaly**	**4.47**	**354**	*e*P	**Pn**	**03 33 51.2**	**+1.2**
KII	**Karymskiy**	**4.80**	**5**	PN	**Pn**	**03 33 56.2**	**+1.8**
KII	**Karymskiy**	**4.80**	**5**	*e*P	**Pn**	**03 33 56.3**	**+1.8**
KBTR	**Krutoberegovo**	**7.38**	**18**	PN	**Pn**	**03 34 30.0**	**+0.4**
KBTR	**Krutoberegovo**	**7.38**	**18**	*e*P	**Pn**	**03 34 30.1**	**+0.4**
SHEM	**Shemya Is, Ala**	**10.26**	**64**	Pn	**Pn**	**03 35 08.8**	**-0.3**
	comp=E,1.8nm,0.3s,baz=66,slow=2.8,SNR=7.3						
SHEM				Sn	**Sn**	**03 36 54.7**	**-8.2**
	comp=E,2.6nm,0.3s,baz=79,slow=11,SNR=2.3 comp=E,10nm,0.5s						
SHEM	**Shemya Is, Ala**	**10.26**	**64**		**Pn**	**03 35 08.6**	**-0.6**
JKA	**Kamikawa-asahi**	**12.23**	**251**		**Pn**	**03 35 35.8**	**-0.4**
ASAJ	**Asahikawa**	**12.24**	**251**	Pn	**Pn**	**03 35 35.5**	**-0.7**
	comp=E,0.3nm,0.3s,baz=131,slow=15,SNR=4.3 comp=E,4.2nm,0.6s						
ASAJ	**Asahikawa**	**12.24**	**251**	PN	**Pn**	**03 35 35.8**	**-0.4**
AMKA	**Amchitka**	**13.28**	**73**	Pn	**Pn**	**03 35 49.0**	**-1.4**
YAK	**Yakutsk**	**20.58**	**319**	P	**P**	**03 37 20.6**	**+0.5**
YAK				IAmb	IAmb	03 37 20.9	
	comp=Z,17nm,0.5s						
KSRS	**Korea Array**	**25.17**	**254**	P	**P**	**03 38 08.7**	**+2.3**
	comp=Z,0.7nm,0.6s,baz=45,slow=11,SNR=4.9 comp=Z,0.7nm,0.6s						

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
INCN	**Inchon**	**25.96**	**255**	P	**P**	**03 38 13.1**	**-0.6**
INCN				IAmb	IAmb	03 38 15.4	
	comp=Z,28nm,1.1s						
INCN	**Inchon**	**25.96**	**255**	P	**P**	**03 38 13.1**	**-0.6**
INCN				pmax	pmax		
	comp=Z,28nm,1.2s						
TIXI	**Tiksi**	**26.30**	**339**	P	**P**	**03 38 17.2**	**+0.9**
	comp=Z,1.1nm,0.3s,baz=129,slow=9.7,SNR=3.9 comp=Z,1.1nm,0.3s						
TIXI	**Tiksi**	**26.30**	**339**	P	**P**	**03 38 16.1**	**-0.3**
TIXI				IAmb	IAmb	03 38 55.6	
	comp=Z,18nm,1.2s						
TIXI	**Tiksi**	**26.30**	**339**	P	**P**	**03 38 16.1**	**-0.3**
TIXI				pmax	pmax		
	comp=Z,18nm,1.2s						
F17K	**Baldwin Pennin**	**26.67**	**35**	P	**P**	**03 38 20.9**	**+1.2**
F17K				IAmb	IAmb	03 38 36.0	
	comp=Z,39nm,1.5s						
P16K	**Nushagak River**	**26.69**	**52**	P	**P**	**03 38 21.3**	**+1.4**
RDOG	**Red Dog Mine**	**26.71**	**31**	P	**P**	**03 38 19.9**	**-0.2**
K17K	**Iditarod**	**26.93**	**44**	P	**P**	**03 38 24.1**	**+1.9**
K17K				IAmb	IAmb	03 38 31.2	
	comp=Z,28nm,1.5s						
G18K	**Tagagawik**	**27.50**	**37**	P	**P**	**03 38 27.2**	**-0.1**
C18K	**Utukok River**	**27.53**	**31**	P	**P**	**03 38 27.7**	**+0.1**
C18K				IAmb	IAmb	03 38 36.8	
	comp=Z,22nm,1.4s						
F20K	**Avaraart Lake**	**28.95**	**35**	P	**P**	**03 38 39.4**	**-0.6**
OHAK	**Old Harbor**	**29.23**	**56**	P	**P**	**03 38 43.2**	**+0.6**
CUT	**Chulitna**	**30.60**	**45**	P	**P**	**03 38 55.7**	**+1.0**
TRF	**Thorofare Moun**	**30.63**	**43**	P	**P**	**03 38 55.6**	**+0.4**
TRF				IAmb	IAmb	03 38 57.1	
	comp=Z,25nm,1.4s						
SEW	**Seward**	**31.02**	**50**	P	**P**	**03 38 58.7**	**+0.2**
C23K	**Itkillik River**	**31.48**	**31**	P	**P**	**03 39 02.8**	**+0.3**
C23K				IAmb	IAmb	03 39 36.9	
	comp=Z,14nm,1.4s						
SML	**Sawmill**	**31.51**	**46**	P	**P**	**03 39 04.0**	**+1.1**
SML				IAmb	IAmb	03 39 18.5	
	comp=Z,18nm,1.4s						
CCB	**Clear Creek Bu**	**31.79**	**41**	P	**P**	**03 39 06.5**	**+1.3**
CCB				IAmb	IAmb	03 39 49.1	
	comp=Z,18nm,1.4s						
N25K	**Chitina, Valde**	**33.29**	**47**	P	**P**	**03 39 19.4**	**+0.8**
N25K				IAmb	IAmb	03 39 26.9	
	comp=Z,20nm,1.5s						
BARN	**Barnard Glacie**	**34.76**	**47**	P	**P**	**03 39 32.0**	**+0.6**
BARN				IAmb	IAmb	03 40 06.5	
	comp=Z,20nm,1.5s						
GRNC	**Granite Creek**	**34.76**	**48**	P	**P**	**03 39 31.3**	**-0.1**
YKA	**Yellowknife Ar**	**46.60**	**40**	P	**P**	**03 41 10.1**	**+1.5**
	comp=Z,0.6nm,0.9s,baz=297,slow=8.2,SNR=3.1 comp=Z,0.6nm,0.9s						
YKA	**Yellowknife Ar**	**46.60**	**40**	P	**P**	**03 41 09.6**	**+1.0**
YKA	**Yellowknife Ar**	**46.60**	**40**	P	**P**	**03 41 09.6**	**+1.0**
KURK	**Kurchatov**	**49.13**	**304**	P	**P**	**03 41 29.4**	**+1.0**
KURK	**Kurchatov**	**49.13**	**304**	P	**P**	**03 41 29.4**	**+1.0**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
MKAR	**Makanchi Array**	**49.15**	**298**	P	**P**	**03 41 29.7**	**+1.1**
	comp=Z,0.6nm,0.8s,baz=62,slow=9.4,SNR=4.2 comp=Z,0.6nm,0.8s						
MKAR	**Makanchi Array**	**49.15**	**298**	P	**P**	**03 41 28.9**	**+0.3**
KURBB	**Kurchatov Arra**	**49.22**	**304**	P	**P**	**03 41 29.7**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=62,slow=8.0,SNR=6.3 comp=Z,1.0nm,0.7s						
BVAR	**Borovoye Array**	**52.18**	**310**	P	**P**	**03 41 52.5**	**+1.2**
	comp=Z,1.1nm,0.7s,baz=63,slow=6.6,SNR=2.8 comp=Z,1.1nm,0.7s						
AB31	**Akbulak array**	**59.68**	**311**	P	**P**	**03 42 46.1**	**+1.0**
PDAR	**Pinedale Array**	**60.19**	**58**	P	**P**	**03 42 48.9**	**-0.1**
	comp=Z,0.8nm,1.0s,baz=318,slow=6.4,SNR=3.0 comp=Z,0.8nm,1.0s						
PDAR	**Pinedale Array**	**60.19**	**58**	P	**P**	**03 42 49.4**	**+0.4**
OBN	**Obninsk**	**65.31**	**328**	*e*P	**P**	**03 43 19.4**	**-3.1**
OBN				*e*		03 43 53.5	
OBN				*e*		03 45 43.9	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WRA	**Warramunga Arr**	**72.25**	**204**	P	**P**	**03 44 05.8**	**-0.3**
	comp=Z,2.9nm,0.8s,baz=21,slow=6.4,SNR=10 comp=Z,2.9nm,0.8s						
WRA	**Warramunga Arr**	**72.25**	**204**	P	**P**	**03 44 04.1**	**-1.9**
WRA	**Warramunga Arr**	**72.25**	**204**	P	**P**	**03 44 04.1**	**-1.9**
WRA				pmax	pmax		
	comp=Z,1.0nm,1.3s						
TXAR	**Lajitas Array**	**72.96**	**65**	P	**P**	**03 44 12.4**	**+1.8**
	comp=Z,1.0nm,0.8s,baz=303,slow=4.9,SNR=5.9 comp=Z,1.0nm,0.8s						
TXAR	**Lajitas Array**	**72.96**	**65**	P	**P**	**03 44 12.2**	**+1.7**
TXAR	**Lajitas Array**	**72.96**	**65**	P	**P**	**03 44 12.2**	**+1.7**
ASAR	**Alice Springs**	**75.91**	**203**	P	**P**	**03 44 26.6**	**-0.8**
	comp=Z,1.3nm,0.9s,baz=17,slow=5.3,SNR=6.0 comp=Z,1.3nm,0.9s						
ASAR	**Alice Springs**	**75.91**	**203**	P	**P**	**03 44 27.7**	**+0.3**
ASAR	**Alice Springs**	**75.91**	**203**	P	**P**	**03 44 27.7**	**+0.3**
QSPA	**South Pole Qui**	**139.00**	**180**	PKP	**PKPdf**	**03 52 07.3**	**+1.3**
	comp=Z,1.3nm,1.0s,baz=0.0,slow=2.0,SNR=1.6						
QSPA	**South Pole Qui**	**139.00**	**180**		**PKPdf**	**03 52 07.6**	**+1.6**
PLCA	**Paso Flores**	**144.64**	**95**	PKP	**PKPab**	**03 52 16.6**	**+1.0**
	comp=Z,2.1nm,1.0s,baz=338,slow=2.7,SNR=3.2						

*IDC **25** 03:33:50.0±0.9, 49°.19N × 158°.66E, h0km, mb3.8/11, mbtmp3.9/13, ML3.4/2, Error ellipse: s-maj=22.1km s-min=20.0km az=145.0*
*KRSC **25** 03:33:52.1±1.6, 49°.39N × 158°.92E, h31km±29km, Ml4.2*
*NEIC **25** 03:33:55.1±1.4, 49°.24N±0°.10 × 158°.9E±0°.2, h35km±6km, mb4.5/18, Error ellipse: s-maj=14.7km s-min=13.5km az=58.0*
ISC 25 03:33:55.0±0.7, **49°.27N**±0°.08 × **158°.87E**±0°.07, **h35**km, **n53**, σ1**907**/59, **mb4.2**/20, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.28**	**310**	*e*S	**Sn**	**03 34 54.3**	**-2.5**
KDTR	**Khodutka, Kamc**	**2.60**	**349**	*e*S	**Sn**	**03 35 03.0**	**-1.7**
RUS	**Russkaya**	**3.18**	**356**	*e*P	**Pn**	**03 34 41.5**	**-0.9**
RUS				*e*S	**Sn**	**03 35 17.3**	**-1.8**
GRL	**Gorelyy**	**3.33**	**352**	*e*P	**Pn**	**03 34 44.7**	**+0.1**
GRL				*e*S	**Sn**	**03 35 22.1**	**-0.9**
PET	**Petropavlovsk**	**3.77**	**358**	Pn	**Pn**	**03 34 50.1**	**-0.3**
PET	**Petropavlovsk**	**3.77**	**358**	*e*P	**Pn**	**03 34 50.2**	**-0.3**
DALK	**Dalny**	**3.77**	**359**	*e*P	**Pn**	**03 34 50.5**	**-0.1**
DALK				*e*S	**Sn**	**03 35 33.3**	**-0.4**
APC	**Apacha**	**3.82**	**344**	*e*P	**Pn**	**03 34 51.5**	**+0.3**
PEA0B	**Petropavlovsk-**	**3.92**	**350**	Pn	**Pn**	**03 34 52.9**	**+0.3**
PETK	**Petropavlovsk-**	**3.92**	**350**	Pn	**Pn**	**03 34 52.3**	**-0.3**
	2.4nm,0.3s,baz=137,slow=17,SNR=1.7						
PETK				Sn	**Sn**	**03 35 38.5**	**+1.2**
	0.5nm,0.3s,baz=96,slow=28,SNR=1.6 6.9nm,0.5s						
PETK	**Petropavlovsk-**	**3.92**	**350**		**Pn**	**03 34 51.7**	**-0.9**
PETK					**Sn**	**03 35 37.3**	**0.0**
KRX	**Arik**	**4.10**	**358**	*e*P	**Pn**	**03 34 56.8**	**+1.6**
KII	**Karymskiy**	**4.79**	**4**	*e*S	**Sn**	**03 36 00.2**	**+1.3**
KBTR	**Krutoberegovo**	**7.35**	**17**	*e*P	**Pn**	**03 35 40.5**	**+0.8**
SMKR	**Semkarok**	**7.50**	**11**	*e*P	**Pn**	**03 35 42.9**	**+1.2**
SHEM	**Shemya Is, Ala**	**10.20**	**64**	Pn	**Pn**	**03 36 19.1**	**+0.4**
	1.5nm,0.3s,baz=114,slow=19,SNR=1.8						
SHEM				Sn	**Sn**	**03 38 07.5**	**-4.3**
	0.9nm,0.3s,baz=67,slow=20,SNR=1.7 17nm,0.7s						
SHEM	**Shemya Is, Ala**	**10.20**	**64**		**Pn**	**03 36 18.2**	**-0.5**
M16K	**Timber Creek**	**26.32**	**48**	P	**P**	**03 39 27.4**	**+0.3**
M16K				IAmb	IAmb	03 39 53.3	
	comp=Z,30nm,1.4s						
TIXI	**Tiksi**	**26.32**	**339**	P	**P**	**03 39 26.6**	**-0.3**
	comp=Z,1.5nm,0.3s,baz=129,slow=8.3,SNR=1.4 comp=Z,1.5nm,0.3s						
TIXI	**Tiksi**	**26.32**	**339**	P	**P**	**03 39 27.7**	**+0.8**
TIXI				IAmb	IAmb	03 39 43.1	
	comp=Z,8.8nm,1.1s						
P16K	**Nushagak River**	**26.63**	**52**	P	**P**	**03 39 29.6**	**-0.2**
M17K	**Holitna River**	**27.09**	**47**	P	**P**	**03 39 34.8**	**+0.7**
M17K				IAmb	IAmb	03 39 58.6	
	comp=Z,19nm,1.5s						
ACHA	**Angle Creek He**	**28.02**	**54**	P	**P**	**03 39 42.1**	**-0.4**
ACHA				IAmb	IAmb	03 40 09.9	
	comp=Z,14nm,1.4s						
K20K	**Telida**	**28.88**	**43**	P	**P**	**03 39 49.2**	**-0.7**
G21K	**Allakaket**	**29.64**	**37**	P	**P**	**03 39 55.8**	**-0.8**
G21K				IAmb	IAmb	03 40 26.6	
	comp=Z,15nm,1.4s						

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
E24K	**Your Creek**	**31.84**	**34**	P	**P**	**03 40 16.7**	**+0.6**
E24K				IAmb	IAmb	03 40 41.6	
	comp=Z,6.4nm,1.4s						
ILAR	**Eielson Array**	**32.14**	**41**	P	**P**	**03 40 20.5**	**+1.8**
	comp=Z,0.9nm,0.8s,baz=267,slow=7.6,SNR=4.1 comp=Z,0.9nm,0.8s						
ILAR	**Eielson Array**	**32.14**	**41**	P	**P**	**03 40 19.7**	**+1.0**
S31K	**Pelican**	**38.05**	**52**	P	**P**	**03 41 10.3**	**+0.7**
P32M	**Atlin**	**38.88**	**48**	P	**P**	**03 41 17.0**	**+0.4**
P32M				IAmb	IAmb	03 41 34.4	
	comp=Z,9.4nm,1.4s						
YKA	**Yellowknife Ar**	**46.56**	**40**	P	**P**	**03 42 20.7**	**+2.0**
	comp=Z,0.3nm,0.7s,baz=252,slow=7.5,SNR=4.4 comp=Z,0.3nm,0.7s						
YKA	**Yellowknife Ar**	**46.56**	**40**	P	**P**	**03 42 19.2**	**+0.5**
KURK	**Kurchatov**	**49.18**	**304**	P	**P**	**03 42 38.6**	**-0.5**
KURK				IAmb	IAmb	03 42 49.7	
	comp=Z,7.4nm,1.4s						
MK31	**Makanchi Array**	**49.20**	**298**	P	**P**	**03 42 39.5**	**+0.1**
MKAR	**Makanchi Array**	**49.20**	**298**	P	**P**	**03 42 39.0**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=55,slow=7.1,SNR=8.7 comp=Z,0.6nm,0.5s						
MKAR	**Makanchi Array**	**49.20**	**298**	P	**P**	**03 42 38.7**	**-0.7**
KURBB	**Kurchatov Arra**	**49.27**	**304**	P	**P**	**03 42 39.5**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=65,slow=7.6,SNR=6.6 comp=Z,1.0nm,0.7s						
SPITS	**Spitsbergen Ar**	**50.79**	**351**	P	**P**	**03 42 51.2**	**+0.2**
	comp=Z,14nm,1.1s,baz=67,slow=8.0,SNR=1.6 comp=Z,14nm,1.1s						
BVAR	**Borovoye Array**	**52.22**	**310**	P	**P**	**03 43 02.1**	**0.0**
	comp=Z,0.9nm,0.5s,baz=60,slow=8.5,SNR=4.0 comp=Z,0.9nm,0.5s						
NVAR	**Mina Array Bea**	**57.86**	**67**	P	**P**	**03 43 44.5**	**+1.2**
	comp=Z,0.1nm,0.4s,baz=310,slow=5.2,SNR=1.4 comp=Z,0.1nm,0.4s						
NVAR	**Mina Array Bea**	**57.86**	**67**	P	**P**	**03 43 43.5**	**+0.3**
EVN	**Everest**	**57.93**	**277**	P	**P**	**03 43 43.8**	**-0.6**
EVN				IAmb	IAmb	03 43 55.1	
	comp=Z,6.6nm,1.5s						
AB31	**Akbulak array**	**59.72**	**311**	P	**P**	**03 43 56.2**	**+0.4**
ABKAR	**Akbulak array**	**59.72**	**311**	P	**P**	**03 43 57.1**	**+1.4**
MTPC	**Mountain Pass**	**61.45**	**68**	P	**P**	**03 44 06.8**	**-1.1**
WB0	**Warramunga Arr**	**72.09**	**204**	P	**P**	**03 45 15.0**	**-0.5**
WR8	**Warramunga Arr**	**72.24**	**204**	P	**P**	**03 45 16.1**	**-0.3**
WR8				IAmb	IAmb	03 45 20.4	
	comp=Z,10nm,1.3s						
WRA	**Warramunga Arr**	**72.28**	**204**	P	**P**	**03 45 15.7**	**-0.9**
	comp=Z,1.3nm,0.8s,baz=16,slow=6.0,SNR=4.5 comp=Z,1.3nm,0.8s						
WRA	**Warramunga Arr**	**72.28**	**204**	P	**P**	**03 45 15.3**	**-1.3**
TXAR	**Lajitas Array**	**72.90**	**65**	P	**P**	**03 45 21.7**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=310,slow=4.0,SNR=3.6 comp=Z,0.4nm,0.6s						
TXAR	**Lajitas Array**	**72.90**	**65**	P	**P**	**03 45 20.6**	**+0.1**
ASAR	**Alice Springs**	**75.94**	**204**	P	**P**	**03 45 38.4**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=26,slow=5.1,SNR=1.9 comp=Z,0.4nm,0.7s						
ASAR	**Alice Springs**	**75.94**	**204**	P	**P**	**03 45 37.8**	**-0.2**

*IDC **25** 03:48:38.1±0.8, 49°.04N × 157°.73E, h0km, mb4.0/16, mbtmp4.0/20, ML3.5/4, Error ellipse: s-maj=20.8km s-min=16.1km az=120.0*
*KRSC **25** 03:48:40.5±1.9, 49°.19N × 158°.47E, h40km±49km, Ml4.3*
*MOS **25** 03:48:41.2±1.2, 49°.07N × 157°.80E, h38km, mb4.2/8, Error ellipse: s-maj=12.9km s-min=3.9km az=88.2*
*NEIC **25** 03:48:43.0±1.6, 49°.03N±0°.09 × 157°.7E±0°.1, h30km±5km, mb4.3/37, Error ellipse: s-maj=15

AVH	**Avacha**	**4.25**	**7**	PN	**Pn**	**03 49 45.8**	**+1.5**
AVH	**Avacha**	**4.25**	**7**	*e*P	**Pn**	**03 49 45.8**	**+1.5**
AVH	**Avacha**	**4.25**	**7**	*e*P	**Pn**	**03 49 45.8**	**+1.5**
SMAR	**Somma**	**4.26**	**8**	PN	**Pn**	**03 49 45.6**	**+1.2**
SMAR	**Somma**	**4.26**	**8**	*e*P	**Pn**	**03 49 45.7**	**+1.2**
KOK	**Koryaka**	**4.27**	**6**	PN	**Pn**	**03 49 46.1**	**+1.5**
KOK				S	**Sn**	**03 50 34.2**	**+0.3**
KOK	**Koryaka**	**4.27**	**6**	*e*P	**Pn**	**03 49 46.1**	**+1.5**
KOK				*e*S	**Sn**	**03 50 34.2**	**+0.3**
KOK	**Koryaka**	**4.27**	**6**	*e*P	**Pn**	**03 49 46.1**	**+1.5**
SPN	**Mys Shipunski**	**4.27**	**18**	PN	**Pn**	**03 49 44.2**	**-0.3**
SPN	**Mys Shipunski**	**4.27**	**18**	*e*P	**Pn**	**03 49 44.3**	**-0.3**
SPN				*e*S	**Sn**	**03 50 30.0**	**-3.7**
KRX	**Arik**	**4.34**	**6**	PN	**Pn**	**03 49 46.7**	**+1.2**
KRX	**Arik**	**4.34**	**6**	*e*P	**Pn**	**03 49 46.7**	**+1.2**
GNL	**Ganaly**	**4.65**	**1**	PN	**Pn**	**03 49 50.9**	**+1.2**
GNL	**Ganaly**	**4.65**	**1**	*e*P	**Pn**	**03 49 51.0**	**+1.2**
KII	**Karymskiy**	**5.09**	**11**	PN	**Pn**	**03 49 57.0**	**+1.3**
KII	**Karymskiy**	**5.09**	**11**	*e*P	**Pn**	**03 49 57.1**	**+1.3**
KII				*e*S	**Sn**	**03 50 52.4**	**-1.5**
KBTR	**Krutoberegovo**	**7.78**	**21**	PN	**Pn**	**03 50 32.2**	**-0.3**
KBTR	**Krutoberegovo**	**7.78**	**21**	*e*P	**Pn**	**03 50 32.3**	**-0.3**
KBTR				*e*S	**Sn**	**03 51 55.6**	**-4.3**
KUR	**Kuril'sk**	**7.80**	**244**	*e*P	**Pn**	**03 50 35.6**	**+2.7**
KUR				AMB	AMB	03 50 52.0	
	comp=Z,30nm,0.3s						
BKI	**Bering**	**7.93**	**36**	PN	**Pn**	**03 50 33.4**	**-1.2**
BKI	**Bering**	**7.93**	**36**	*e*P	**Pn**	**03 50 33.4**	**-1.2**
BKI				*e*S	Sn	03 51 55.4	-8.3
SHEM	**Shemya Is, Ala**	**10.90**	**64**	Pn	**Pn**	**03 51 15.7**	**+0.4**
	comp=Z,3.0nm,0.3s,baz=268,slow=19,SNR=2.3						
SHEM				Sn	Sn	03 53 05.9	-11
	comp=Z,1.2nm,0.3s,baz=262,slow=23,SNR=1.8						
	comp=Z,19nm,0.7s						
SMY	**Shemya**	**10.90**	**64**	Pn	**Pn**	**03 51 15.9**	**+0.6**
SMY	**Shemya**	**10.90**	**64**	PN	**Pn**	**03 51 15.9**	**+0.6**
MA2	**Magadan**	**11.31**	**341**	Pn	**Pn**	**03 51 19.2**	**-1.7**
	comp=Z,0.9nm,0.3s,baz=140,slow=4.5,SNR=3.8						
JKA	**Kamikawa-asahi**	**11.59**	**251**		**Pn**	**03 51 23.5**	**-1.4**
ASAJ	**Asahikawa**	**11.59**	**251**	Pn	**Pn**	**03 51 22.8**	**-2.1**
	comp=Z,0.5nm,0.3s,baz=181,slow=28,SNR=3.8						
	comp=Z,2.2nm,0.6s						
ASAJ	**Asahikawa**	**11.59**	**251**	PN	**Pn**	**03 51 23.5**	**-1.4**
KIWB	**Kanaga Island**	**16.14**	**71**	Pn	**P**	**03 52 28.7**	**-0.6**
KLR	**Kul'dur**	**17.05**	**280**	Pn	**Pn**	**03 52 35.5**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=84,slow=11,SNR=4.2						
	comp=Z,0.4nm,0.3s						
KLR	**Kul'dur**	**17.05**	**280**	*i* P	**Pn**	**03 52 35.2**	**-2.5**
KLR	**Kul'dur**	**17.05**	**280**	*e*P	**Pn**	**03 52 35.2**	**-2.5**
BILL	**Bilibino**	**19.50**	**9**	*i* P	**P**	**03 53 06.5**	**+0.3**
BILL	**Bilibino**	**19.50**	**9**	*e*P	**P**	**03 53 07.0**	**+0.8**
YAK	**Yakutsk**	**20.34**	**320**	*i* P	**P**	**03 53 12.5**	**-2.9**
YAK				pmax	pmax		
	comp=Z,16nm,0.9s						
BNX	**BinXian**	**20.80**	**272**	ǁP	**P**	**03 53 20.5**	**0.0**
BNX				pmax	pmax		
	comp=Z,4.0nm,0.8s						
JMN	**Monobe**	**23.48**	**238**	P	**P**	**03 53 47.1**	**-1.8**
JMN				IAmb	IAmb	03 54 19.0	
	comp=Z,11nm,1.0s						
TNA	**Tin City**	**24.33**	**35**	P	**P**	**03 53 56.9**	**+0.3**
TNA				IAmb	IAmb	03 53 59.8	
	comp=Z,7.2nm,1.2s						
KSRS	**Korea Array**	**24.52**	**253**	P	**P**	**03 53 59.0**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=50,slow=11,SNR=5.0						
	comp=Z,0.4nm,0.4s						
ANM	**Nome**	**24.93**	**38**		**P**	**03 54 03.1**	**+1.0**
ANM				IAmb	IAmb	03 54 06.4	
	comp=Z,12nm,1.3s						
ANM	**Nome**	**24.93**	**38**	P	**P**	**03 54 03.1**	**+1.0**
ANM				pmax	pmax		
	comp=Z,12nm,1.3s						
TIXI	**Tiksi**	**26.28**	**340**	*i* P	**P**	**03 54 13.1**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TIXI	**Tiksi**	**26.28**	**340**	*e*P	**P**	**03 54 13.1**	**-1.1**
O15K	**Ungalikthiuk R**	**26.36**	**51**	P	**P**	**03 54 17.1**	**+2.0**
O15K				IAmb	IAmb	03 54 59.7	
	comp=Z,12nm,1.4s						
C16K	**Lisburne Hills**	**26.48**	**30**	P	**P**	**03 54 17.6**	**+1.6**
F17K	**Baldwin Pennin**	**27.19**	**35**	P	**P**	**03 54 24.7**	**+2.2**
N17K	**Nushagak Hills**	**27.77**	**49**	P	**P**	**03 54 29.4**	**+1.6**
N17K				IAmb	IAmb	03 55 00.6	
	comp=Z,4.3nm,1.3s						
C18K	**Utukok River**	**28.02**	**31**	P	**P**	**03 54 30.1**	**+0.1**
P18K	**Big Mountain,**	**28.72**	**51**	P	**P**	**03 54 38.1**	**+1.8**
P18K				IAmb	IAmb	03 54 38.9	
	comp=Z,16nm,1.4s						
C19K	**Lookout Ridge**	**28.74**	**30**	P	**P**	**03 54 38.0**	**+1.7**
P19K	**Oil Pt**	**29.73**	**51**	P	**P**	**03 54 45.6**	**+0.4**
B20K	**Meade River**	**29.86**	**29**	P	**P**	**03 54 47.7**	**+1.5**
IMAR	**Indian Mountai**	**30.01**	**38**	P	**P**	**03 54 49.0**	**+1.4**
H21K	**Melozitna Rive**	**30.34**	**39**	P	**P**	**03 54 52.4**	**+1.9**
BPAW	**Bear Paw Mtn.**	**30.93**	**42**		P	03 55 00.8	+5.0
E22K	**Anaktuvuk Pass**	**31.18**	**34**	P	**P**	**03 54 59.5**	**+1.5**
E22K				IAmb	IAmb	03 54 59.9	
	comp=Z,5.8nm,1.4s						
B22K	**Teshekpuk Lake**	**31.18**	**29**	P	**P**	**03 54 58.9**	**+1.1**
C23K	**Itkillik River**	**31.97**	**31**	P	**P**	**03 55 07.3**	**+2.5**
C23K				IAmb	IAmb	03 55 34.2	
	comp=Z,11nm,1.5s						
SML	**Sawmill**	**32.09**	**46**	P	**P**	**03 55 06.2**	**+0.2**
SML				IAmb	IAmb	03 55 19.4	
	comp=Z,7.7nm,1.1s						
E24K	**Your Creek**	**32.39**	**34**	P	**P**	**03 55 09.9**	**+1.3**
E24K				IAmb	IAmb	03 55 31.2	
	comp=Z,4.1nm,1.3s						
D25K	**Kavik River**	**33.34**	**32**	P	**P**	**03 55 18.5**	**+1.7**
D25K				IAmb	IAmb	03 55 19.2	
	comp=Z,4.9nm,1.1s						
BMAR	**Burnt Mountain**	**33.80**	**36**	P	**P**	**03 55 21.9**	**+0.9**
C27K	**Jago River**	**34.31**	**32**	P	**P**	**03 55 26.7**	**+1.5**
C27K				IAmb	IAmb	03 55 38.2	
	comp=Z,6.1nm,1.3s						
E27K	**Coleen River**	**34.97**	**35**	P	**P**	**03 55 33.2**	**+2.2**
L27K	**Beaver Creek,**	**35.03**	**44**	P	**P**	**03 55 32.9**	**+1.3**
L27K				IAmb	IAmb	03 55 58.0	
	comp=Z,4.6nm,1.2s						
E28M	**Babbage River**	**35.74**	**34**	P	**P**	**03 55 39.3**	**+1.7**
E28M				IAmb	IAmb	03 55 51.2	
	comp=Z,2.3nm,1.2s						
INK	**Inuvik**	**37.97**	**34**		**P**	**03 55 57.1**	**+0.6**
INK	**Inuvik**	**37.97**	**34**	P	**P**	**03 55 57.1**	**+0.6**
INK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
KNGR	**Kungurtug, Tuv**	**38.01**	**296**	*i* P	**P**	**03 55 54.3**	**-2.9**
KNGR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
YKA	**Yellowknife Ar**	**47.15**	**39**	P	**P**	**03 57 11.6**	**+0.6**
	comp=Z,0.4nm,0.9s,baz=297,slow=8.4,SNR=4.5						
	comp=Z,0.4nm,0.9s						
YKA	**Yellowknife Ar**	**47.15**	**39**	P	**P**	**03 57 12.7**	**+1.6**
YKA	**Yellowknife Ar**	**47.15**	**39**	*i* P	**P**	**03 57 13.1**	**+2.0**
MK31	**Makanchi Array**	**48.70**	**298**	*i* P	**P**	**03 57 22.9**	**-0.5**
MKAR	**Makanchi Array**	**48.70**	**298**	P	**P**	**03 57 23.8**	**+0.4**
	comp=Z,1.7nm,0.8s,baz=60,slow=7.2,SNR=14						
	comp=Z,1.7nm,0.8s						
MKAR	**Makanchi Array**	**48.70**	**298**	P	**P**	**03 57 23.3**	**-0.1**
MKAR	**Makanchi Array**	**48.70**	**298**	*i* P	**P**	**03 57 25.3**	**+1.9**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**48.70**	**298**	*e*P	**P**	**03 57 25.3**	**+1.9**
KURK	**Kurchatov**	**48.73**	**304**	P	**P**	**03 57 25.5**	**+2.0**
KURK				IAmb	IAmb	03 57 27.4	
	comp=Z,1.9nm,0.4s						
KURK	**Kurchatov**	**48.73**	**304**	*i* P	**P**	**03 57 22.6**	**-0.9**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURK	**Kurchatov**	**48.73**	**304**	*e*P	**P**	**03 57 22.6**	**-0.9**
KURBB	**Kurchatov Arra**	**48.83**	**304**	P	**P**	**03 57 24.1**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=58,slow=6.9,SNR=12						
	comp=Z,0.7nm,0.4s						
BVAR	**Borovoye Array**	**51.84**	**310**	P	**P**	**03 57 46.6**	**-0.4**
	comp=Z,0.8nm,0.4s,baz=48,slow=8.9,SNR=7.2						
	comp=Z,0.8nm,0.4s						
BORK	**Borovoye**	**51.87**	**310**	*i* P	**P**	**03 57 43.7**	**-3.5**
BORK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ARTI	**Arti**	**55.54**	**318**	*d* iP	**P**	**03 58 13.9**	**-0.2**
ARTI				S	**S**	**04 05 57.4**	**-0.7**
ARTI				SS	**SS**	**04 09 35.0**	**-7.4**
ARTI				pmax	pmax		
	comp=Z,12nm,1.2s						
AAK	**Ala-Archa**	**55.63**	**297**	*i* P	**P**	**03 58 13.6**	**-1.5**
AAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
AAK	**Ala-Archa**	**55.63**	**297**	*e*P	**P**	**03 58 13.6**	**-1.5**
CMAR	**Chiang Mai Arr**	**55.98**	**259**	P	**P**	**03 58 17.9**	**+0.2**
	comp=Z,1.2nm,0.3s,baz=51,slow=8.3,SNR=4.1						
	comp=Z,1.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**55.98**	**259**	P	**P**	**03 58 17.5**	**-0.2**
ARCES	**ARCESS Array B**	**56.69**	**342**	P	**P**	**03 58 21.4**	**-0.7**
	comp=Z,9.2nm,1.0s,baz=28,slow=5.5,SNR=5.6						
	comp=Z,9.2nm,1.0s						
ARCES	**ARCESS Array B**	**56.69**	**342**	P	**P**	**03 58 22.0**	**-0.1**
ARCES	**ARCESS Array B**	**56.69**	**342**	P	**P**	**03 58 22.0**	**-0.1**
ARCES				pmax	pmax		
	comp=Z,32nm,1.5s						
AB31	**Akbulak array**	**59.36**	**311**		**P**	**03 58 41.6**	**+0.6**
AB31				IAmb	IAmb	03 58 43.6	
	comp=Z,5.6nm,1.1s						
GMN	**Gold Mountain**	**59.92**	**67**	P	**P**	**03 58 46.1**	**+0.6**
GAR	**Garm**	**60.39**	**296**		**P**	**03 58 49.6**	**+1.2**
CHGR	**Chuyangaron**	**61.29**	**297**		**P**	**03 58 54.9**	**+0.3**
CHGR	**Chuyangaron**	**61.29**	**297**	P	**P**	**03 58 54.9**	**+0.3**
CHGR				pmax	pmax		
	comp=Z,15nm,1.0s						
FINES	**FINESS Array B**	**63.26**	**336**	P	**P**	**03 59 08.6**	**+1.4**
	comp=Z,4.0nm,0.9s,baz=33,slow=6.6,SNR=7.4						
	comp=Z,4.0nm,0.9s						
OBN	**Obninsk**	**65.15**	**327**	*e*P	**P**	**03 59 17.8**	**-1.9**
OBN				*e**PP	**pwP**	**03 59 32.6**	**-0.6**
OBN				*e*		03 59 48.0	
OBN				*e*		04 01 39.4	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
OBN	**Obninsk**	**65.15**	**327**	*e*P	**P**	**03 59 17.8**	**-1.9**
VRH	**Novokhopyorsk**	**66.22**	**322**	*e*P	**P**	**03 59 25.6**	**-1.1**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LPSR	**Galich'ya Gora**	**66.25**	**324**	*e*P	**P**	**03 59 27.1**	**+0.3**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VORR	**Voronezh**	**66.86**	**324**	*e*P	**P**	**03 59 33.3**	**+2.5**
VORR				pmax	pmax		
	comp=Z,100nm,0.4s						
NB2	**NORSAR Subarra**	**67.01**	**343**	P	**P**	**03 59 34.7**	**+3.0**
	comp=Z,0.9nm,0.6s,baz=22,slow=6.5						
NOA	**NORSAR Array B**	**67.01**	**343**	P	**P**	**03 59 32.9**	**+1.2**
	comp=Z,2.2nm,0.9s,baz=24,slow=6.6,SNR=4.5						
	comp=Z,2.2nm,0.9s						
VSR	**Storozhevoye**	**67.23**	**323**	*e*P	**P**	**03 59 33.3**	**+0.1**
VSR				pmax	pmax		
	comp=Z,20nm,2.5s						
HFS	**Hagfors**	**67.35**	**341**	P	**P**	**03 59 34.9**	**+1.2**
	comp=Z,7.2nm,1.0s,baz=56,slow=9.1,SNR=6.3						
	comp=Z,7.2nm,1.0s						
AKASG	**Malin Array Be**	**71.33**	**328**	P	**P**	**03 59 58.2**	**-0.3**
	comp=Z,1.2nm,0.4s,baz=34,slow=6.2,SNR=11						
	comp=Z,1.2nm,0.4s						
AKASG	**Malin Array Be**	**71.33**	**328**	P	**P**	**03 59 58.9**	**+0.4**
AKASG				IAmb	IAmb	04 00 24.6	
	comp=Z,2.7nm,1.4s						
AKASG	**Malin Array Be**	**71.33**	**328**	P	**P**	**03 59 58.9**	**+0.4**
AKASG				pmax	pmax		
	comp=Z,3.0nm,1.4s						
KBZ	**Khabaz**	**71.48**	**316**	P	**P**	**04 00 00.3**	**+0.7**
	comp=Z,2.2nm,0.8s,baz=137,slow=2.5,SNR=6.1						
	comp=Z,2.2nm,0.8s						
KBZ	**Khabaz**	**71.48**	**316**	*e*P	**P**	**04 00 03.0**	**+3.5**
WB0	**Warramunga Arr**	**71.63**	**203**	P	**P**	**04 00 02.3**	**+1.7**
WR8	**Warramunga Arr**	**71.78**	**203**	P	**P**	**04 00 03.4**	**+1.9**
WR8				IAmb	IAmb	04 00 10.4	
	comp=Z,9.0nm,1.3s						
WRA	**Warramunga Arr**	**71.81**	**203**	P	**P**	**04 00 02.2**	**+0.5**
	comp=Z,3.2nm,0.8s,baz=17,slow=6.0,SNR=12						
	comp=Z,3.2nm,0.8s						
WRA	**Warramunga Arr**	**71.81**	**203**	P	**P**	**04 00 01.1**	**-0.6**
WRA	**Warramunga Arr**	**71.81**	**203**	P	**P**	**04 00 01.1**	**-0.6**
TXAR	**Lajitas Array**	**73.60**	**64**	P	**P**	**04 00 13.5**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=307,slow=5.2,SNR=4.6						
	comp=Z,0.3nm,0.7s						
TXAR	**Lajitas Array**	**73.60**	**64**	P	**P**	**04 00 13.4**	**+0.8**
EKA	**Eskdalemuir Ar**	**74.77**	**349**	P	**P**	**04 00 20.7**	**+1.9**
	comp=Z,0.4nm,0.4s,baz=5.4,slow=5.5,SNR=4.7						
	comp=Z,0.4nm,0.4s						
ASAR	**Alice Springs**	**75.48**	**203**	P	**P**	**04 00 24.1**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=11,slow=5.9,SNR=6.4						
	comp=Z,0.8nm,0.7s						
ASAR	**Alice Springs**	**75.48**	**203**	P	**P**	**04 00 24.0**	**+0.8**
ASAR	**Alice Springs**	**75.48**	**203**	P	**P**	**04 00 24.0**	**+0.8**
GURO	**Guroymak-BITLI**	**75.95**	**313**		**P**	**04 00 26.1**	**+0.1**
GURO				IAmb	IAmb	04 00 31.4	
	comp=Z,6.6nm,0.9s						
H03N2	**Juan Fernandez**	**135.60**	**91**	T	T	06 38 30.0	
	baz=311,slow=77,SNR=7.5						
H03N1	**Juan Fernandez**	**135.61**	**91**	T	T	06 38 31.7	
	baz=311,slow=77,SNR=7.1						
H03N3	**Juan Fernandez**	**135.61**	**91**	T	T	06 38 30.7	
	baz=311,slow=77,SNR=6.4						
CPUP	**Villa Florida**	**144.57**	**63**	PKP	**PKPdf**	**04 08 15.3**	**-0.2**
	comp=Z,1.0nm,0.8s,baz=132,slow=6.1,SNR=3.1						
NVL	**N'lazarevskaya**	**153.04**	**204**	*e*PKIKP	**PKPdf**	**04 08 23.9**	**-3.8**
NVL				pmax	pmax		
	comp=Z,48nm,1.7s						

IDC ***25*** *03:58:40.5±1.4, 49.°00N×157.°83E, h0km, mb3.4/4, mbtmp3.4/5, ML2.5/1, Error ellipse: s-maj=38.1km s-min=29.6km az=92.0*

KRSC ***25*** *03:58:43.3±1.9, 49.°24N×158.°34E, h36km±36km, Ml3.8*

ISC 25 03:58:45.6±1.2, 49.°08N±0.°09×158.°0E±0.°1, h35km, n16, σ1§44/19, mb3.6/4, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.03**	**323**	*e*S		**Sn**		**03 59 40.3**	**-0.9**
PAU	**Pauzhetka**	**2.51**	**342**	*e*S		**Sn**		**03 59 53.0**	**-0.2**
KDTR	**Khodutka, Kamc**	**2.73**	**1**	*e*S		**Sn**		**03 59 56.6**	**-1.9**
PET	**Petropavlovsk**	**3.96**	**5**	*e*P		**Pn**		**03 59 43.4**	**-0.4**
DALK	**Dalny**	**3.98**	**6**	*e*P		**Pn**		**03 59 43.3**	**-0.7**
DALK				*e*S		**Sn**		**04 00 28.9**	**-0.5**
PETK	**Petropavlovsk-**	**4.04**	**357**	Pn		**Pn**		**03 59 44.8**	**0.0**
	1.4nm,0.3s,baz=154,slow=17,SNR=12								
PETK				Sn		**Sn**		**04 00 35.1**	**+4.3**
	0.3nm,0.3s,baz=113,slow=11,SNR=1.7								
	13nm,1.0s								
UGLR	**Uglovaya**	**4.16**	**7**	*e*P		**Pn**		**03 59 47.6**	**+1.0**
AVH	**Avacha**	**4.21**	**6**	*e*P		**Pn**		**03 59 48.1**	**+0.8**
SPN	**Mys Shipunski**	**4.21**	**17**	*e*P		**Pn**		**03 59 46.1**	**-1.1**
SPN				*e*S		**Sn**		**04 00 33.2**	**-1.9**
KOK	**Koryaka**	**4.23**	**5**	*e*P		**Pn**		**03 59 47.9**	**+0.3**
KRX	**Arik**	**4.30**	**5**	*e*P		**Pn**		**03 59 48.7**	**+0.2**
GNL	**Ganaly**	**4.62**	**359**	*e*P		**Pn**		**03 59 53.3**	**+0.4**
MKAR	**Makanchi Array**	**48.80**	**298**	P		**P**		**04 07 26.5**	**-0.5**
	0.4nm,0.7s,baz=59,slow=5.9,SNR=3.7								
	0.4nm,0.7s								
KURBB	**Kurchatov Arra**	**48.92**	**304**	P		**P**		**04 07 27.1**	**-0.7**
	0.3nm,0.5s,baz=68,slow=7.5,SNR=3.4								
	0.3nm,0.5s								
WRA	**Warramunga Arr**	**71.89**	**203**	P		**P**		**04 10 04.7**	**-0.2**
	0.7nm,0.9s,baz=17,slow=6.3,SNR=2.5								
	0.7nm,0.9s								
TXAR	**Lajitas Array**	**73.48**	**64**	P		**P**		**04 10 15.9**	**+1.3**
	0.1nm,0.6s,baz=320,slow=6.8,SNR=2.6								
	0.1nm,0.6s								

IDC ***25*** *04:02:57.5±0.6, 49.°18N×157.°86E, h0km, mb3.9/20, mbtmp3.9/25, ML3.6/5, Error ellipse: s-maj=16.6km s-min=12.4km az=145.0*

MOS ***25*** *04:03:01.4±1.1, 49.°10N×157.°97E, h47km, mb4.4/18, Error ellipse: s-maj=11.6km s-min=3.9km az=89.5*

KRSC ***25*** *04:03:02.9±1.8, 49.°39N×158.°45E, h38km±39km, Ml4.8, Felt at Severo-Kurilsk.*

NEIC ***25*** *04:03:03.2±1.5, 49.°13N±0.°02×158.°0E±0.°1, h40km±7km, mb4.4/31, Error ellipse: s-maj=12.2km s-min=2.7km az=88.0*

ISC 25 04:03:02.3±0.5, 49.°17N±0.°06×158.°03E±0.°05, h35km, n154, σ1§55/185, mb4.4/44, 10C-1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.96**	**322**	ǁ*i*P		N		**04 03 34.5**	**+1.5**
SKR				*i* S		**Sn**		**04 03 57.3**	**+1.0**
SKR				pmax	pmax				
	comp=Z,2μm,0.4s								
SKR				smax	smax				
	comp=N,10μm,0.6s								
SKR				smax	smax				
	comp=E,5μm,0.6s								
SKR	**Severo-Kuril's**	**1.96**	**322**	*e*P		**Pn**		**04 03 34.3**	**+1.2**
SKR				*e*S		**Sn**		**04 03 57.1**	**+0.8**
PAU	**Pauzhetka**	**2.43**	**342**	PN		**Pn**		**04 03 41.2**	**+1.7**
PAU				S		**Sn**		**04 04 09.6**	**+1.6**
PAU	**Pauzhetka**	**2.43**	**342**	*e*P		**Pn**		**04 03 41.3**	**+1.7**
PAU				*e*S		**Sn**		**04 04 09.7**	**+1.6**
KDTR	**Khodutka, Kamc**	**2.65**	**1**	PN		**Pn**		**04 03 43.6**	**+1.1**
KDTR				S		**Sn**		**04 04 12.8**	**-0.5**
KDTR	**Khodutka, Kamc**	**2.65**	**1**	*e*P		**Pn**		**04 03 43.6**	**+1.1**
KDTR				*e*S		**Sn**		**04 04 12.9**	**-0.5**
MIPR	**Malaya Ipel'ka**	**3.22**	**346**	*e*S		**Sn**		**04 04 29.6**	**+2.2**
ASAK	**Asacha**	**3.22**	**359**	PN		**Pn**		**04 03 52.2**	**+1.7**
ASAK	**Asacha**	**3.22**	**359**	*e*P		**Pn**		**04 03 52.2**	**+1.7**
RUS	**Russkaya**	**3.29**	**5**	PN		**Pn**		**04 03 52.0**	**+0.8**
RUS	**Russkaya**	**3.29**	**5**	*e*P		**Pn**		**04 03 52.1**	**+0.8**
RUS				*e*S		**Sn**		**04 04 27.3**	**-1.7**
MTVR	**Mutnovka**	**3.32**	**2**	PN		**Pn**		**04 03 53.4**	**+1.5**
MTVR				S		**Sn**		**04 04 29.4**	**-0.8**
MTVR	**Mutnovka**	**3.32**	**2**	*e*P		**Pn**		**04 03 53.4**	**+1.5**
MTVR				*e*S		**Sn**		**04 04 29.4**	**-0.8**
GRL	**Gorelyy**	**3.39**	**0**	PN		**Pn**		**04 03 54.5**	**+1.7**
GRL				S		**Sn**		**04 04 31.9**	**+0.1**
GRL	**Gorelyy**	**3.39**	**0**	*e*P		**Pn**		**04 03 54.5**	**+1.7**
GRL				*e*S		**Sn**		**04 04 32.0**	**+0.1**
KRMR	**Karymshinskiy**	**3.67**	**1**	PN		**Pn**		**04 03 58.5**	**+2.0**
KRMR				S		**Sn**		**04 04 39.0**	**+0.5**
KRMR	**Karymshinskiy**	**3.67**	**1**	*e*P		**Pn**		**04 03 58.5**	**+2.0**
KRMR				*e*S		**Sn**		**04 04 39.0**	**+0.5**
APC	**Apacha**	**3.81**	**352**	PN		**Pn**		**04 04 00.3**	**+1.9**
APC	**Apacha**	**3.81**	**352**	*e*P		**Pn**		**04 04 00.3**	**+1.9**
PET	**Petropavlovsk**	**3.88**	**6**	Pn		**Pn**		**04 03 59.5**	**+0.1**
PET	**Petropavlovsk**	**3.88**	**6**	*e*PN		**Pn**		**04 04 00.6**	**+1.1**
PET				pmax	pmax				
	comp=Z,37nm,0.6s								
PET	**Petropavlovsk**	**3.88**	**6**	*e*P		**Pn**		**04 04 00.9**	**+1.4**
PET				*e*S		**Sn**		**04 04 42.8**	**-0.9**
DALK	**Dalny**	**3.90**	**6**	PN		**Pn**		**04 04 01.0**	**+1.4**
DALK	**Dalny**	**3.90**	**6**	*e*P		**Pn**		**04 04 01.1**	**+1.4**
DALK				*e*S		**Sn**		**04 04 43.0**	**-1.1**
PEA0B	**Petropavlovsk-**	**3.95**	**357**			**Pn**		**04 04 01.6**	**+1.2**
PEA0B	**Petropavlovsk-**	**3.95**	**357**	PN		**Pn**		**04 04 03.0**	**+2.5**
PEA0B				S		**Sn**		**04 04 47.7**	**+2.1**
PETK	**Petropavlovsk-**	**3.95**	**357**	Pn		**Pn**		**04 04 00.9**	**+0.4**
	comp=Z,4.3nm,0.3s,baz=169,slow=13,SNR=43								
PETK				Sn		**Sn**		**04 04 48.8**	**+3.2**
	comp=Z,9.4nm,0.3s,baz=209,slow=6.9,SNR=6.8								
	comp=Z,8.2nm,0.4s								
PETK	**Petropavlovsk-**	**3.95**	**357**			**Pn**		**04 04 02.6**	**+2.2**
PETK						**Sn**		**04 04 47.5**	**+1.9**
UGLR	**Uglovaya**	**4.08**	**7**	PN		**Pn**		**04 04 04.3**	**+2.1**
UGLR	**Uglovaya**	**4.08**	**7**	*e*P		**Pn**		**04 04 04.4**	**+2.1**
UGLR				*e*S		**Sn**		**04 04 48.7**	**-0.1**
NLC	**Nalytchevo**	**4.10**	**11**	*e*S		**Sn**		**04 04 45.8**	**-3.2**
AVH	**Avacha**	**4.13**	**6**	PN		**Pn**		**04 04 05.4**	**+2.5**
AVH	**Avacha**	**4.13**	**6**	*e*P		**Pn**		**04 04 05.5**	**+2.5**
AVH				*e*S		**Sn**		**04 04 50.0**	**-0.2**
SMAR	**Somma**	**4.13**	**6**	PN		**Pn**		**04 04 04.8**	**+1.7**
**SMAR

comp=Z,0.2nm,0.6s,baz=256,slow=7.8,SNR=6.3
comp=Z,0.2nm,0.6s

ILAR	**Eielson Array**	**32.58**	**41**	P	**P**	**04 09 31.0**	**+1.1**
ILAR	**Eielson Array**	**32.58**	**41**	P	**P**	**04 09 31.0**	**+1.1**
KNGR	**Kungurtug, Tuv**	**38.06**	**296**	*i* P	**P**	**04 10 15.2**	**-2.2**
KNGR				pmax	pmax		

comp=Z,2.0nm,0.5s

NRIK	**Noril'sk**	**38.45**	**327**	P	**P**	**04 10 19.7**	**-0.5**

comp=Z,0.7nm,0.3s,baz=94,slow=4.1,SNR=3.6
comp=Z,0.7nm,0.3s

NRIK	**Noril'sk**	**38.45**	**327**	P	**P**	**04 10 19.9**	**-0.3**
NRIK				IAmb	IAmb	04 10 29.7	

comp=Z,1.6nm,0.7s

NRIK	**Noril'sk**	**38.45**	**327**	P	**P**	**04 10 19.9**	**-0.3**
NRIK				pmax	pmax		

comp=Z,2.0nm,0.7s

LZDM	**Lanzhou Array**	**41.28**	**272**	P	**P**	**04 10 43.9**	**-0.6**

comp=Z,1.2nm,0.3s,baz=74,slow=7.9,SNR=4.1
comp=Z,1.2nm,0.3s

GTA2	**Gaotai**	**41.84**	**279**	*e*P	**P**	**04 10 50.3**	**+1.4**
GTA2				pmax	pmax		

comp=Z,8.0nm,0.9s

ZALV	**Zalesovo Beam**	**43.90**	**305**	P	**P**	**04 11 04.2**	**-0.9**

comp=Z,0.8nm,0.4s,baz=64,slow=6.8,SNR=3.7
comp=Z,0.8nm,0.4s

ZALV	**Zalesovo Beam**	**43.90**	**305**	P	**P**	**04 11 04.4**	**-0.7**
YKA	**Yellowknife Ar**	**46.99**	**39**	P	**P**	**04 11 31.1**	**+1.7**

comp=Z,0.2nm,0.8s,baz=299,slow=8.2,SNR=19
comp=Z,0.2nm,0.8s

YKA	**Yellowknife Ar**	**46.99**	**39**	P	**P**	**04 11 30.8**	**+1.3**
MK31	**Makanchi Array**	**48.76**	**298**	*ce*P	**P**	**04 11 44.4**	**+1.0**
MKAR	**Makanchi Array**	**48.76**	**298**	P	**P**	**04 11 43.5**	**0.0**

comp=Z,2.2nm,0.8s,baz=60,slow=7.3,SNR=21
comp=Z,2.2nm,0.8s

MKAR	**Makanchi Array**	**48.76**	**298**	P	**P**	**04 11 42.8**	**-0.6**
MKAR	**Makanchi Array**	**48.76**	**298**	*i* P	**P**	**04 11 44.0**	**+0.6**
MKAR				pmax	pmax		

comp=Z,2.0nm,0.8s

KURK	**Kurchatov**	**48.77**	**304**	P	**P**	**04 11 43.8**	**+0.4**
KURK				IAmb	IAmb	04 11 44.7	

comp=Z,4.1nm,0.7s

KURK	**Kurchatov**	**48.77**	**304**	*ce*P	**P**	**04 11 44.4**	**+1.0**
KURK				pmax	pmax		

comp=Z,4.0nm,1.3s

KURBB	**Kurchatov Arra**	**48.87**	**304**	P	**P**	**04 11 44.6**	**+0.4**

comp=Z,3.4nm,0.8s,baz=64,slow=8.0,SNR=16
comp=Z,3.4nm,0.8s

SPITS	**Spitsbergen AR**	**50.80**	**350**	P	**P**	**04 11 59.5**	**+1.0**

comp=Z,24nm,1.2s,baz=72,slow=8.0,SNR=5.1

BVAR	**Borovoye Array**	**51.86**	**310**	P	**P**	**04 12 07.4**	**+0.6**

comp=Z,2.6nm,0.6s,baz=53,slow=8.2,SNR=12
comp=Z,2.6nm,0.6s

BORK	**Borovoye**	**51.88**	**310**	*ce*P	**P**	**04 12 08.0**	**+1.1**
BORK				pmax	pmax		

comp=Z,2.0nm,0.6s

ARTI	**Arti**	**55.54**	**318**	*c* P	**P**	**04 12 31.4**	**-2.2**
ARTI				S	**S**	**04 20 11.5**	**-4.8**
ARTI				SS	**SS**	**04 23 56.3**	**-4.4**
ARTI				pmax	pmax		

comp=Z,4.0nm,1.0s

AAK	**Ala-Archa**	**55.69**	**297**		**P**	**04 12 35.2**	**+0.1**
AAK				IAmb	IAmb	04 12 37.0	

comp=Z,5.7nm,1.1s

AAK	**Ala-Archa**	**55.69**	**297**	*ce*P	**P**	**04 12 36.9**	**+1.8**
AAK				pmax	pmax		

comp=Z,8.0nm,1.3s

SHL	**Shillong**	**55.70**	**270**	P	**P**	**04 12 35.2**	**-0.2**
SHL	**Shillong**	**55.70**	**270**	P	**P**	**04 12 35.2**	**-0.2**
SHL				pmax	pmax		

comp=Z,8.0nm,0.9s

CMAR	**Chiang Mai Arr**	**56.12**	**259**	P	**P**	**04 12 38.9**	**+0.6**

comp=Z,0.9nm,0.3s,baz=37,slow=8.3,SNR=5.2
comp=Z,0.9nm,0.3s

CMAR	**Chiang Mai Arr**	**56.12**	**259**	P	**P**	**04 12 37.6**	**-0.6**
CMAR	**Chiang Mai Arr**	**56.12**	**259**	*ce*P	**P**	**04 12 39.9**	**+1.6**
CMAR				pmax	pmax		

comp=Z,1.0nm,0.3s

ARCES	**ARCESS Array B**	**56.62**	**342**	P	**P**	**04 12 40.5**	**-0.7**

comp=Z,3.1nm,0.8s,baz=22,slow=9.9,SNR=1.6
comp=Z,3.1nm,0.8s

ARCES	**ARCESS Array B**	**56.62**	**342**	P	**P**	**04 12 41.0**	**-0.2**
ARCES	**ARCESS Array B**	**56.62**	**342**	P	**P**	**04 12 41.0**	**-0.2**
ARCES				pmax	pmax		

comp=Z,34nm,1.5s

EVN	**Everest**	**57.40**	**276**		**P**	**04 12 47.4**	**-0.6**
EVN				IAmb	IAmb	04 13 02.6	

comp=Z,5.9nm,1.0s

NVAR	**Mina Array Bea**	**58.41**	**66**	P	**P**	**04 12 57.0**	**+2.5**

comp=Z,2.0nm,0.5s,baz=302,slow=6.4,SNR=8.5
comp=Z,2.0nm,0.5s

NVAR	**Mina Array Bea**	**58.41**	**66**	P	**P**	**04 12 54.7**	**+0.2**
AB31	**Akbulak array**	**59.37**	**311**		**P**	**04 13 00.9**	**+0.1**
AB31				IAmb	IAmb	04 13 01.8	

comp=Z,2.7nm,0.8s

KLMR	**Klimovskoe**	**59.70**	**330**	*e*P	**P**	**04 13 01.8**	**-1.0**
KLMR				pmax	pmax		

comp=Z,18nm,1.5s

GAR	**Garm**	**60.45**	**296**	P	**P**	**04 13 09.2**	**+0.8**
PDAR	**Pinedale Array**	**60.66**	**58**	P	**P**	**04 13 09.4**	**-0.5**

comp=Z,0.5nm,0.9s,baz=248,slow=1.6,SNR=4.1
comp=Z,0.5nm,0.9s

CHGR	**Chuyangaron**	**61.35**	**297**	P	**P**	**04 13 14.7**	**+0.2**
CHGR	**Chuyangaron**	**61.35**	**297**	P	**P**	**04 13 14.7**	**+0.2**
CHGR				pmax	pmax		

comp=Z,10.0nm,0.7s

BELG	**Belogornoye**	**62.88**	**320**	*i* P	**P**	**04 13 22.5**	**-1.9**
BELG				pmax	pmax		

comp=Z,2.0nm,1.0s

FINES	**FINESS Array B**	**63.21**	**336**	P	**P**	**04 13 25.6**	**-0.8**

comp=Z,3.6nm,0.9s,baz=36,slow=6.7,SNR=10
comp=Z,3.6nm,0.9s

FINES	**FINESS Array B**	**63.21**	**336**	P	**P**	**04 13 26.6**	**+0.2**
FINES	**FINESS Array B**	**63.21**	**336**	*i* P	**P**	**04 13 26.3**	**-0.1**
FINES				pmax	pmax		

comp=Z,4.0nm,0.9s

OBN	**Obninsk**	**65.12**	**327**	*e*P	**P**	**04 13 36.8**	**-2.3**
OBN				*e**PP	**sP**	**04 13 52.3**	**+1.6**
OBN				*e*		04 14 09.8	
OBN				*e*		04 16 01.3	
OBN				pmax	pmax		

comp=Z,4.0nm,0.9s

NOA	**NORSAR Array B**	**66.94**	**343**	P	**P**	**04 13 50.3**	**-0.5**

comp=Z,1.0nm,0.8s,baz=33,slow=7.2,SNR=1.3
comp=Z,1.0nm,0.8s

SCHQ	**Schefferville**	**69.75**	**26**	P	**P**	**04 14 08.3**	**0.0**

comp=Z,2.1nm,0.9s,baz=301,slow=12,SNR=1.8
comp=Z,2.1nm,0.9s

SCHQ	**Schefferville**	**69.75**	**26**	P	**P**	**04 14 08.9**	**+0.5**
SCHQ				IAmb	IAmb	04 14 43.4	

comp=Z,7.1nm,1.2s

AKT	**Akhty**	**70.93**	**312**	*e*P	**P**	**04 14 16.2**	**+0.2**
AKT				pmax	pmax		

comp=Z,3.0nm,0.7s

AKASG	**Malin Array Be**	**71.30**	**328**	P	**P**	**04 14 16.9**	**-1.0**

comp=Z,0.3nm,0.4s,baz=30,slow=6.4,SNR=4.2
comp=Z,0.3nm,0.4s

AKASG	**Malin Array Be**	**71.30**	**328**	P	**P**	**04 14 17.2**	**-0.7**
AKASG				IAmb	IAmb	04 14 57.7	

comp=Z,2.6nm,1.2s

AKASG	**Malin Array Be**	**71.30**	**328**	*i* P	**P**	**04 14 18.1**	**+0.3**
KIV	**Kislovodsk**	**71.40**	**316**	*e*P	**P**	**04 14 18.6**	**-0.2**
KIV				pmax	pmax		

comp=Z,4.0nm,1.1s

WB0	**Warramunga Arr**	**71.78**	**203**	P	**P**	**04 14 20.8**	**-0.2**
WR0	**Warramunga Arr**	**71.92**	**203**	P	**P**	**04 14 22.3**	**+0.5**
WR0				IAmb	IAmb	04 14 23.1	

comp=Z,4.1nm,0.8s

WR8	**Warramunga Arr**	**71.93**	**203**	P	**P**	**04 14 22.2**	**+0.3**
WR8				IAmb	IAmb	04 14 23.2	

comp=Z,5.8nm,0.9s

WRAB	**Tennant Creek**	**71.95**	**203**	P	**P**	**04 14 21.8**	**-0.2**
WRAB				IAmb	IAmb	04 14 52.8	

comp=Z,5.7nm,0.8s

WRAB	**Tennant Creek**	**71.95**	**203**	P	**P**	**04 14 21.8**	**-0.2**
WRAB				pmax	pmax		

comp=Z,6.0nm,0.8s

WB2	**Warramunga Arr**	**71.96**	**203**	P	**P**	**04 14 22.6**	**+0.5**
WRA	**Warramunga Arr**	**71.96**	**203**	P	**P**	**04 14 22.1**	**-0.1**

comp=Z,4.6nm,0.7s,baz=17,slow=6.4,SNR=28
comp=Z,4.6nm,0.7s

WRA	**Warramunga Arr**	**71.96**	**203**	P	**P**	**04 14 20.9**	**-1.2**
WRA	**Warramunga Arr**	**71.96**	**203**	*ce*P	**P**	**04 14 22.3**	**+0.2**
WRA				pmax	pmax		

comp=Z,5.0nm,0.7s

TXAR	**Lajitas Array**	**73.45**	**64**	P	**P**	**04 14 32.0**	**+0.8**

comp=Z,0.3nm,0.5s,baz=305,slow=4.8,SNR=6.0
comp=Z,0.3nm,0.5s

TXAR	**Lajitas Array**	**73.45**	**64**	P	**P**	**04 14 31.1**	**0.0**
TXAR	**Lajitas Array**	**73.45**	**64**	P	**P**	**04 14 32.0**	**+0.8**
ASAR	**Alice Springs**	**75.63**	**203**	P	**P**	**04 14 43.7**	**+0.1**

comp=Z,1.3nm,0.7s,baz=14,slow=5.5,SNR=11
comp=Z,1.3nm,0.7s

NVL	**N'lazarevskaya**	**153.19**	**204**	*e*PKIKP	**PKPdf**	**04 22 48.0**	**+0.7**
NVL				pmax	pmax		

comp=Z,14nm,1.0s

KRSC 25 04:05:13.8±2.0, 49.50N×158.92E, h33km±50km, MI4.2, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.16**	**304**	*e*P		Pn	Pn	04 05 47.3	-0.1
SKR				*e*S		Sn	Sn	04 06 12.6	-0.3
KDTR	**Khodutka, Kamc**	**2.37**	**347**	*e*P		Pn	Pn	04 05 53.0	+2.7
KDTR				*e*S		Sb	Sb	04 06 21.7	-2.9
PAU	**Pauzhetka**	**2.38**	**326**	*e*S		Sb	Sb	04 06 22.4	-2.5
RUS	**Russkaya**	**2.95**	**355**	*e*P		Pn	Pn	04 06 01.4	+3.2
RUS				*e*S		Sn	Sn	04 06 36.3	+3.9
ASAK	**Asacha**	**2.96**	**348**	*e*S		Sn	Sn	04 06 36.6	+3.8
MTVR	**Mutnovka**	**3.02**	**351**	*e*P		Pn	Pn	04 06 02.9	+3.5
MTVR				*e*S		Sn	Sn	04 06 38.5	+4.0
GRL	**Gorelyy**	**3.10**	**350**	*e*P		Pn	Pn	04 06 04.1	+3.6
GRL				*e*S		Sn	Sn	04 06 41.0	+4.5
KRMR	**Karymshinskiy**	**3.37**	**352**	*e*P		Pn	Pn	04 06 08.0	+3.9
KRMR				*e*S		Sn	Sn	04 06 47.9	+5.0
PET	**Petropavlovsk**	**3.53**	**357**	*e*P		Pn	Pn	04 06 10.0	+3.8
PET				*e*S		Sn	Sn	04 06 51.0	+4.2
DALK	**Dalny**	**3.54**	**358**	*e*P		Pn	Pn	04 06 10.2	+3.9
DALK				*e*S		Sn	Sn	04 06 51.7	+4.7
SPN	**Mys Shipunski**	**3.67**	**10**	*e*P		Pn	Pn	04 06 12.0	+3.9
SPN				*e*S		Sn	Sn	04 06 54.8	+4.6
NLC	**Nalytchevo**	**3.68**	**4**	*e*S		Sn	Sn	04 06 54.3	+3.7
UGLR	**Uglovaya**	**3.71**	**359**	*e*P		Pb	Pb	04 06 15.2	-3.5
SMAR	**Somma**	**3.77**	**359**	*e*P		Pn	Pn	04 06 14.3	+4.6
AVH	**Avacha**	**3.77**	**358**	*e*S		Sb	Sb	04 06 59.0	-5.8
KOK	**Koryaka**	**3.80**	**357**	*e*P		Pn	Pn	04 06 15.0	+4.9
KRX	**Arik**	**3.87**	**358**	*e*P		Pn	Pn	04 06 15.6	+4.6
GNL	**Ganaly**	**4.24**	**352**	*e*P		Pb	Pb	04 06 22.0	-5.7
KII	**Karymskiy**	**4.55**	**4**	*e*P		Pn	Pn	04 06 26.2	+5.8
KBTR	**Krutoberegovo**	**7.12**	**18**	*e*P		Pn	Pn	04 07 00.1	+4.6

*MDD **25** 04:05:52.6±0.5, 37.02N×5.27W, h4km±5km, mb_Lg2.0/6, Error ellipse: s-maj=5.2km s-min=3.1km az=111.0*
*SFS **25** 04:05:53.5, 36.98N×5.30W, h19km, ML2.8/7, ML1.7/7, MLv1.2/7*
*INMG **25** 04:05:53.0±1.2, 36.98N×5.32W, h11km±4km, ML1.2, Error ellipse: s-maj=3.5km s-min=2.8km az=104.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE Sevilha (ESP)*

ISC 25 04:05:50.4±1.2, 36.89N±0.04×5.28W±0.03, h14km±9km, n20, σ1s03/34, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
E1302	**La Puebla de C**	**0.24**	**7**	Pg	**Pb**		**Pb**	**04 05 55.9**	**-0.8**
E1302				Sg	**Sg**		**Sg**	**04 05 59.5**	**+0.3**
E1302				*i* lVmb_Lg				04 06 01.2	
ESPR	**Espera**	**0.46**	**267**	Pg		**Pn**	**Pn**	**04 06 02.4**	**-0.3**
EJIF	**Jimena Fronter**	**0.46**	**199**	Pg		**Pn**	**Pn**	**04 06 02.9**	**+0.2**
EJIF				Sg		**Sn**	**Sn**	**04 06 12.5**	**+1.7**
EGOR	**Sierra Gorda,**	**0.96**	**76**	Pg		**Pn**	**Pn**	**04 06 10.7**	**+1.0**
ECAB	**El Cabril**	**1.19**	**355**	Pg		**Pg**	**Pg**	**04 06 13.0**	**-0.4**
ECAB				Sg		**Sb**	**Sb**	**04 06 27.9**	**-0.2**
ECAB	**El Cabril**	**1.19**	**355**	Pg		**Pg**	**Pg**	**04 06 12.9**	**-0.4**
ECAB				Sg		**Sb**	**Sb**	**04 06 27.4**	**-0.7**
ECAB				*i* lVmb_Lg				04 06 29.9	
EADA	**Adamuz**	**1.39**	**23**	Pn		**Pb**	**Pb**	**04 06 15.7**	**-0.6**
EADA				Sn		**Sn**	**Sn**	**04 06 32.3**	**-1.4**
EADA	**Adamuz**	**1.39**	**23**	Pg		**Pb**	**Pb**	**04 06 15.6**	**-0.6**
EADA				Sg		**Sn**	**Sn**	**04 06 32.7**	**-1.0**
EADA				*i* lVmb_Lg				04 06 36.0	
EMIN	**Mina Concepcio**	**1.41**	**309**	Pn		**Pb**	**Pb**	**04 06 16.2**	**-0.4**
PBAR	**Barrancos**	**1.90**	**313**	Pn		**Pn**	**Pn**	**04 06 22.7**	**+0.3**
PBAR	**Barrancos**	**1.90**	**313**	*e*Pg		**Pg**	**Pg**	**04 06 27.8**	**+1.0**
PBAR				*e*Sn		**Sn**	**Sn**	**04 06 45.6**	**-0.5**
PBAR				*i* IAML				04 06 51.1	
PBAR				*i* IAML				04 07 02.8	
EQES	**Quesada**	**1.98**	**62**	Pg		**Pg**	**Pg**	**04 06 27.9**	**-0.6**
EQES				Sg		**Sg**	**Sg**	**04 06 54.2**	**0.0**
EQES				*i* lVmb_Lg				04 07 06.8	
PVAQ	**Vaqueiros**	**2.01**	**285**	*e*Pn		**Pb**	**Pb**	**04 06 24.8**	**-2.0**
PVAQ				*e*Sn		**Sn**	**Sn**	**04 06 49.1**	**+0.1**
PVAQ				*e*Sg		**Sg**	**Sg**	**04 06 56.5**	**+1.3**
PVAQ				*i* IAML				04 07 04.9	
PBDV	**Barranco-do-Ve**	**2.15**	**280**	*e*Pn		**Pb**	**Pb**	**04 06 27.2**	**-2.0**
PBDV				*e*Sn		**Sn**	**Sn**	**04 06 51.9**	**-0.5**
PCVE	**Castro Verde**	**2.32**	**289**	Pn		**Pn**	**Pn**	**04 06 29.0**	**+0.7**
PCVE	**Castro Verde**	**2.32**	**289**	*e*Pn		**Pn**	**Pn**	**04 06 29.2**	**+0.9**
PAB	**San Pablo**	**2.75**	**15**	Pn		**Pn**	**Pn**	**04 06 36.0**	**+1.8**
PAB				Sn		**Sn**	**Sn**	**04 07 06.4**	**-0.9**
PAB				Sg		**Sb**	**Sb**	**04 07 14.5**	**+1.4**
PAB				*i* lVmb_Lg				04 08 29.9	
PTEO	**Sao Teotonio**	**2.83**	**284**	*e*Pn		**Pn**	**Pn**	**04 06 35.8**	**+0.7**
PARRA	**Arraiolos**	**2.91**	**312**	*e*Sn		**Sn**	**Sn**	**04 07 11.5**	**+0.4**
PMRV	**Marv??o**	**3.03**	**327**	*e*Pn		**Pn**	**Pn**	**04 06 39.6**	**+1.6**
PMRV				*e*Sn		**Sn**	**Sn**	**04 07 13.8**	**-0.3**

*IDC **25** 04:09:02.1±1.0, 49.04N×157.88E, h0km, mb3.8/8, mbtmp3.8/9, ML2.6/1, Error ellipse: s-maj=32.8km s-min=23.8km az=86.0*
*MOS **25** 04:09:04.7±0.8, 49.06N×158.04E, h33km, mb4.1/4, Error ellipse: s-maj=24.5km s-min=4.6km az=89.6*
*KRSC **25** 04:09:04.3±2.2, 49.21N×158.47E, h39km±51km, MI4.1*
*SKHL **25** 04:09:05.8±0.8, 49.10N±0.1×157.90E±0.2, h37km±6km, mb4.1/24, Error ellipse: s-maj=16.6km s-min=14.8km az=82.0*

ISC 25 04:09:07.1±0.7, 49.10N±0.07×158.06E±0.06, h35km, n102, σ1s20/126, mb4.0/20, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.02**	**322**	*i* PN		**Pn**	**Pn**	**04 09 36.8**	**-1.9**
SKR				*i* S		**Sn**	**Sn**	**04 09 59.9**	**-2.7**
SKR				pmax	pmax				

comp=Z,620nm,0.5s

SKR				smax	smax				

comp=N,908nm,0.7s

SKR				smax	smax				

comp=E,678nm,0.6s

SKR				MLR	MLR				

comp=Z,21μm,11.0s

SKR	**Severo-Kuril's**	**2.02**	**322**	*e*P		**Pn**	**Pn**	**04 09 36.7**	**-1.9**
SKR				*e*S		**Sn**	**Sn**	**04 10 01.0**	**-1.7**
SKR	**Severo-Kuril's**	**2.02**	**322**	*i* P		**Pn**	**Pn**	**04 09 36.7**	**-1.9**
SKR				AMB	AMB			04 09 37.1	

comp=Z,520nm,0.4s

SKR				*i* S		**Sn**	**Sn**	**04 10 00.0**	**-2.7**
SKR				A	A			04 10 01.8	

comp=Z,710nm,0.3s

SKR				A	A			04 10 01.8	

comp=Z,610nm,0.3s

PAU	**Pauzhetka**	**2.50**	**342**	PN		**Pn**	**Pn**	**04 09 44.3**	**-0.9**
PAU				S		**Sn**	**Sn**	**04 10 13.8**	**-0.7**
PAU	**Pauzhetka**	**2.50**	**342**	*e*P		**Pn**	**Pn**	**04 09 44.4**	**-0.9**
PAU				*e*S		**Sn**	**Sn**	**04 10 13.9**	**-0.7**
PAU	**Pauzhetka**	**2.50**	**342**	*e*P		**Pn**	**Pn**	**04 09 44.5**	**-0.8**
PAU				AMB	AMB			04 09 46.5	

comp=Z,80nm,0.3s

PAU				*e*S		**Sn**	**Sn**	**04 10 13.6**	**-0.9**
PAU				A	A			04 10 18.8	

comp=Z,380nm,0.4s

PAU				A	A			04 10 18.8	

comp=Z,350nm,0.4s

KDTR	**Khodutka, Kamc**	**2.71**	**0**	PN		**Pn**	**Pn**	**04 09 47.3**	**-0.8**
KDTR				S		**Sn**	**Sn**	**04 10 17.6**	**-2.1**
KDTR	**Khodutka, Kamc**	**2.71**	**0**	*e*P		**Pn**	**Pn**	**04 09 47.4**	**-0.8**
KDTR				*e*S		**Sn**	**Sn**	**04 10 17.7**	**-2.1**
KDTR	**Khodutka, Kamc**	**2.71**	**0**	*e*P		**Pn**	**Pn**	**04 09 47.3**	**-0.8**
KDTR				*e*S		**Sn**	**Sn**	**04 10 17.6**	**-2.1**
ASAK	**Asacha**	**3.29**	**358**	PN		**Pn**	**Pn**	**04 09 55.0**	**-1.1**
ASAK				S		**Sn**	**Sn**	**04 10 32.9**	**-1.1**
ASAK	**Asacha**	**3.29**	**358**	*e*P		**Pn**	**Pn**	**04 09 55.1**	**-1.1**
ASAK				*e*S		**Sn**	**Sn**	**04 10 33.0**	**-1.1**
RUS	**Russkaya**	**3.35**	**5**	PN		**Pn**	**Pn**	**04 09 56.0**	**-0.9**
RUS	**Russkaya**	**3.35**	**5**	*e*P		**Pn**	**Pn**	**04 09 56.0**	**-0.9**
RUS				*e*S		**Sn**	**Sn**	**04 10 33.9**	**-1.5**
MTVR	**Mutnovka**	**3.39**	**1**	PN		**Pn**	**Pn**	**04 09 57.1**	**-0.4**
MTVR	**Mutnovka**	**3.39**	**1**	*e*P		**Pn**	**Pn**	**04 09 57.2**	**-0.4**
MTVR				*e*S		**Sn**	**Sn**	**04 10 35.0**	**-1.6**
GRL	**Gorelyy**	**3.46**	**0**	PN		**Pn**	**Pn**	**04 09 58.5**	**0.0**
GRL				S		**Sn**	**Sn**	**04 10 37.3**	**-0.9**
GRL	**Gorelyy**	**3.46**	**0**	*e*P		**Pn**	**Pn**	**04 09 58.6**	**0.0**
GRL				*e*S		**Sn**	**Sn**	**04 10 37.4**	**-0.9**
KRMR	**Karymshinskiy**	**3.74**	**1**	PN		**Pn**	**Pn**	**04 10 02.9**	**+0.7**
KRMR				S		**Sn**	**Sn**	**04 10 45.7**	**+0.8**
KRMR	**Karymshinskiy**	**3.74**	**1**	*e*P		**Pn**	**Pn**	**04 10 03.0**	**+0.7**
KRMR				*e*S		**Sn**	**Sn**	**04 10 45.7**	**+0.8**
KRMR	**Karymshinskiy**	**3.74**	**1**	*e*P		**Pn**	**Pn**	**04 10 02.9**	**+0.7**
APC	**Apacha**	**3.87**	**352**	PN		**Pn**	**Pn**	**04 10 04.3**	**+0.2**
APC	**Apacha**	**3.87**	**352**	*e*P		**Pn**	**Pn**	**04 10 04.3**	**+0.2**
PET	**Petropavlovsk**	**3.95**	**5**	Pn		**Pn**	**Pn**	**04 10 05.0**	**-0.1**
PET	**Petropavlovsk**	**3.95**	**5**	*e*PN		**Pn**	**Pn**	**04 10 04.7**	**-0.4**
PET	**Petropavlovsk**	**3.95**	**5**	*e*P		**Pn**	**Pn**	**04 10 04.9**	**-0.1**
PET				*e*S		**Sn**	**Sn**	**04 10 49.7**	**-0.5**
PET	**Petropavlovsk**	**3.95**	**5**	*e*P		**Pn**	**Pn**	**04 10 05.0**	**-0.1**
PET				AMB	AMB			04 10 09.2	

comp=Z,50nm,0.2s

PET				*e*S		**Sn**	**Sn**	**04 10 49.1**	**-1.0**
PET				A	A			04 10 51.5	

comp=Z,50nm,0.3s

PET				A	A			04 10 51.5	

comp=Z,90nm,0.3s

DALK	**Dalny**	**3.96**	**6**	PN		**Pn**	**Pn**	**04 10 04.8**	**-0.5**
DALK	**Dalny**	**3.96**	**6**	*e*P		**Pn**	**Pn**	**04 10 04.9**	**-0.5**
DALK				*e*S		**Sn**	**Sn**	**04 10 49.4**	**-1.1**
DALK	**Dalny**	**3.96**	**6**	*e*P		**Pn**	**Pn**	**04 10 04.8**	**-0.5**
PEA0B	**Petropavlovsk-**	**4.02**	**357**	Pn		**Pn**	**Pn**	**04 10 05.8**	**-0.4**
PEA0B	**Petropavlovsk-**	**4.02**	**357**	PN		**Pn**	**Pn**	**04 10 05.8**	**-0.4**
PETK	**Petropavlovsk-**	**4.02**	**357**	Pn		**Pn**	**Pn**	**04 10 05.8**	**-0.4**

comp=Z,1.8nm,0.3s,baz=160,slow=14,SNR=5.2
comp=Z,4.0nm,0

mbtmp3.6/9,ML2.0/1, Error ellipse: s-maj=30.5km s-min=22.7km az=162.0

*KRSC **25** 04:10:21.2±1.9, 49°.35N×158°.89E, h40km±47km, Ml4.2*

ISC 25 04:10:24.6±0.9, 49°.27N±0°.08×158°.67E±0°.08, h35km, n24, σ0.98/30, mb3.8/8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.17**	**312**	*e*P		**Pn**	**04 10 57.2**	**-0.9**
SKR				*e*S		**Sn**	**04 11 23.2**	**-0.6**
PAU	**Pauzhetka**	**2.50**	**332**	*e*S		**Sn**	**04 11 33.6**	**+1.7**
KDTR	**Khodutka, Kamc**	**2.57**	**352**	*e*S		**Sn**	**04 11 32.5**	**-1.1**
ASAK	**Asacha**	**3.15**	**351**	*e*S		**Sn**	**04 11 47.6**	**-0.6**
RUS	**Russkaya**	**3.17**	**358**	*e*P		**Pn**	**04 11 12.0**	**+0.1**
RUS				*e*S		**Sn**	**04 11 46.9**	**-1.5**
MTVR	**Mutnovka**	**3.23**	**355**	*e*S		**Sn**	**04 11 49.1**	**-1.1**
GRL	**Gorelyy**	**3.31**	**354**	*e*P		**Pn**	**04 11 14.0**	**+0.1**
GRL				*e*S		**Sn**	**04 11 51.8**	**-0.3**
KRMR	**Karymshinskiy**	**3.58**	**355**	*e*S		**Sn**	**04 11 59.3**	**+0.7**
PET	**Petropavlovsk**	**3.76**	**360**	*e*P		**Pn**	**04 11 19.5**	**-0.5**
PET				*e*S		**Sn**	**04 12 01.4**	**-1.6**
DALK	**Dalny**	**3.77**	**1**	*e*P		**Pn**	**04 11 19.7**	**-0.4**
DALK				*e*S		**Sn**	**04 12 01.9**	**-1.2**
APC	**Apacha**	**3.78**	**346**	*e*P		**Pn**	**04 11 20.8**	**+0.5**
PETK	**Petropavlovsk-** 0.5nm,0.3s,baz=127,slow=17,SNR=1.3 4.4nm,0.5s	**3.89**	**351**	Pn		**Pn**	**04 11 22.9**	**+1.0**
SPN	**Mys Shipunski**	**3.93**	**12**	*e*P		**Pn**	**04 11 21.5**	**-0.8**
SPN				*e*S		**Sn**	**04 12 05.3**	**-1.8**
KRX	**Arik**	**4.09**	**360**	*e*P		**Pn**	**04 11 26.0**	**+1.2**
KII	**Karymskiy**	**4.80**	**6**	*e*S		**Sn**	**04 12 29.1**	**+0.5**
KBTR	**Krutoberegovo**	**7.39**	**18**	*e*P		**Pn**	**04 12 09.7**	**-0.1**
ILAR	**Eielson Array** 0.2nm,0.6s,baz=253,slow=7.1,SNR=5.1 0.2nm,0.6s	**32.23**	**41**	P		**P**	**04 16 48.5**	**-0.6**
YKA	**Yellowknife Ar** 0.4nm,0.8s,baz=298,slow=7.9,SNR=5.2 0.4nm,0.8s	**46.64**	**40**	P		**P**	**04 18 49.7**	**+0.7**
MKAR	**Makanchi Array** 0.6nm,0.7s,baz=69,slow=4.0,SNR=3.8 0.6nm,0.7s	**49.08**	**298**	P		**P**	**04 19 07.7**	**-0.4**
KURBB	**Kurchatov Arra** 0.8nm,0.6s,baz=62,slow=8.0,SNR=5.4 0.8nm,0.6s	**49.16**	**304**	P		**P**	**04 19 09.3**	**+0.7**
BVAR	**Borovoye Array** 0.6nm,0.5s,baz=46,slow=13,SNR=3.8 0.6nm,0.5s	**52.12**	**310**	P		**P**	**04 19 31.1**	**+0.2**
PDAR	**Pinedale Array** 1.2nm,1.1s,baz=24,slow=5.0,SNR=3.8 1.2nm,1.1s	**60.24**	**58**	P		**P**	**04 20 30.4**	**+1.0**
WRA	**Warramunga Arr** 1.3nm,0.8s,baz=19,slow=6.1,SNR=5.3 1.3nm,0.8s	**72.22**	**204**	P		**P**	**04 21 44.6**	**-1.4**
TXAR	**Lajitas Array** 0.4nm,0.6s,baz=285,slow=3.8,SNR=4.3 0.4nm,0.6s	**73.02**	**65**	P		**P**	**04 21 51.7**	**+0.8**

IDC 25 04:19:01.0±13.0, 1°.87N×101°.75W, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=598.6km s-min=224.5km az=93.0, Galapagos Triple Junction region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TXAR	**Lajitas Array** 0.6nm,0.9s,baz=171,slow=8.9,SNR=5.6 0.6nm,0.9s	**27.37**	**356**	P		P	04 24 48.2	+0.1
H03N2	**Juan Fernandez** baz=326,slow=77,SNR=26	**41.19**	**151**	T		T	05 10 53.4	
H03N1	**Juan Fernandez** baz=326,slow=77,SNR=32	**41.20**	**150**	T		T	05 10 54.4	
H03N3	**Juan Fernandez** baz=326,slow=77,SNR=28	**41.21**	**151**	T		T	05 10 54.3	
PDAR	**Pinedale Array** 0.6nm,0.8s,baz=157,slow=8.0,SNR=5.8 0.6nm,0.8s	**41.31**	**351**	P		P	04 26 48.4	-0.2
YKA	**Yellowknife Ar** 0.3nm,0.9s,baz=165,slow=6.3,SNR=4.4 0.3nm,0.9s	**61.24**	**353**	P		P	04 29 17.6	0.0

*IDC **25** 04:22:11.9±1.6, 49°.10N×158°.51E, h0km, mb3.6/3, mbtmp3.5/4, ML2.2/1, Error ellipse: s-maj=50.5km s-min=29.7km az=102.0*

*KRSC **25** 04:22:17.0±1.8, 49°.47N×158°.69E, h51km±51km, Ml4.0*

ISC 25 04:22:17.2±1.2, 49°.25N±0°.08×158°.52E±0°.09, h35km, n20, σ1.32/30, mb3.6/3, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.11**	**314**	*e*P		**Pn**	**04 22 49.1**	**-0.9**
SKR				*e*S		**Sn**	**04 23 13.8**	**-1.2**
PAU	**Pauzhetka**	**2.47**	**334**	*e*P		**Pn**	**04 22 55.6**	**+0.7**
PAU				*e*S		**Sn**	**04 23 24.2**	**+0.3**
KDTR	**Khodutka, Kamc**	**2.57**	**354**	*e*P		**Pn**	**04 22 56.3**	**0.0**
KDTR				*e*S		**Sn**	**04 23 24.7**	**-1.7**
ASAK	**Asacha**	**3.16**	**353**	*e*P		**Pn**	**04 23 05.7**	**+1.2**
RUS	**Russkaya**	**3.18**	**360**	*e*P		**Pn**	**04 23 04.9**	**+0.2**
RUS				*e*S		**Sn**	**04 23 39.6**	**-1.8**
MTVR	**Mutnovka**	**3.24**	**356**	*e*P		**Pn**	**04 23 06.0**	**+0.3**
MTVR				*e*S		**Sn**	**04 23 41.6**	**-1.5**
GRL	**Gorelyy**	**3.31**	**355**	*e*P		**Pn**	**04 23 07.2**	**+0.6**
GRL				*e*S		**Sn**	**04 23 44.2**	**-0.7**
KRMR	**Karymshinskiy**	**3.59**	**356**	*e*P		**Pn**	**04 23 11.4**	**+1.0**
KRMR				*e*S		**Sn**	**04 23 51.9**	**+0.5**
PET	**Petropavlovsk**	**3.78**	**1**	*e*S		**Sn**	**04 23 54.1**	**-1.9**
DALK	**Dalny**	**3.79**	**2**	*e*P		**Pn**	**04 23 54.5**	**-1.7**
DALK				*e*S		**Sn**	**04 23 54.5**	**-1.7**
PETK	**Petropavlovsk-** 0.7nm,0.3s,baz=156,slow=16,SNR=5.2	**3.89**	**353**	Pn		**Pn**	**04 23 16.4**	**+1.9**
PETK	0.8nm,0.3s,baz=228,slow=33,SNR=2.8 1.6nm,0.4s			Sn		**Sn**	**04 24 01.8**	**+2.8**
SPN	**Mys Shipunski**	**3.96**	**13**	*e*P		**Pn**	**04 23 15.4**	**0.0**
SPN				*e*S		**Sn**	**04 23 58.1**	**-2.5**
AVH	**Avacha**	**4.02**	**2**	*e*P		**Pn**	**04 23 18.0**	**+1.7**
SMAR	**Somma**	**4.02**	**2**	*e*P		**Pn**	**04 23 16.8**	**+0.3**
KOK	**Koryaka**	**4.04**	**1**	*e*P		**Pn**	**04 23 17.5**	**+0.8**
GNL	**Ganaly**	**4.46**	**356**	*e*P		**Pn**	**04 23 23.9**	**+1.5**
KBTR	**Krutoberegovo**	**7.44**	**19**	*e*P		**Pn**	**04 23 03.0**	**-0.1**
PDAR	**Pinedale Array** 0.1nm,0.3s,baz=314,slow=7.7,SNR=2.3 0.1nm,0.3s	**60.33**	**58**	P		**P**	**04 32 23.8**	**+1.2**
WRA	**Warramunga Arr** 0.5nm,0.7s,baz=16,slow=5.8,SNR=3.3 0.5nm,0.7s	**72.17**	**204**	P		**P**	**04 33 37.4**	**-0.8**
TXAR	**Lajitas Array** 0.6nm,0.7s,baz=310,slow=6.1,SNR=8.9 0.6nm,0.7s	**73.11**	**65**	P		**P**	**04 33 44.3**	**+0.2**

*NEIC **25** 04:23:00.5±1.2, 31°.23S±0°.06×69°.21W±0°.03, h118km±6km, mb4.0/3, Error ellipse: s-maj=8.6km s-min=4.1km az=190.0*

*SJA **25** 04:23:00.3±0.7, 31°.19S×69°.18W, h117km±3km, ML3.6, MW3.9*

*IDC **25** 04:23:01.7±2.1, 31°.20S×69°.04W, h115km±14km, mb3.5/2, mbtmp3.6/5, Error ellipse: s-maj=49.4km s-min=23.6km az=108.0*

ISC 25 04:23:00.8±0.7, 31°.19S±0°.03×69°.21W±0°.03, h117km±5km, n84, σ1.22/104, 4C, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ZON	**Zonda**	**0.57**	**128**	Pn		**Pn**	**04 23 18.6**	**-0.4**
ZON				*e*S		**Sn**	**04 23 31.9**	**-0.8**
ZON	**Zonda**	**0.57**	**128**	*e*P		**Pn**	**04 23 18.8**	**-0.2**
ZON				*e*S		**Sn**	**04 23 32.6**	**-0.1**
ZON	comp=Z,1μm,0.7s			IAML			04 23 33.6	
RTLS	**Leoncito**	**0.61**	**187**	*e*P		**Pn**	**04 23 19.4**	**-0.2**
RTLS	comp=Z,3μm,0.7s			IAML			04 23 34.2	
ACCO	**Cerro Coronel**	**0.62**	**11**	*e*P		**Pn**	**04 23 19.9**	**+0.2**
ACCO				*e*S		**Sn**	**04 23 35.2**	**+1.3**
RTLL	**Cerro Villicun**	**0.64**	**102**	*e*P		**Pn**	**04 23 19.3**	**-0.2**
RTLL				*e*S		**Sn**	**04 23 32.2**	**-1.3**
RTLL	comp=Z,3μm,0.5s			IAML			04 23 33.1	
SJA	**San Juan**	**0.64**	**121**	*e*P		**Pn**	**04 23 19.9**	**+0.4**
SJA	comp=Z,1μm,0.4s			IAML			04 23 37.1	
CFA	**Coronel Fontan**	**0.92**	**117**	P		**Pn**	**04 23 21.9**	**0.0**
	comp=Z,116nm,0.4s,baz=316,slow=12,SNR=1023							
CFA				S		**Sn**	**04 23 37.0**	**-0.9**
	comp=Z,589nm,0.5s,baz=292,slow=12,SNR=27							
CFA	**Coronel Fontan**	**0.92**	**117**	*e*P		**Pn**	**04 23 21.9**	**0.0**
CFA				*e*S		**Sn**	**04 23 38.0**	**+0.1**
CFA	comp=Z,943nm,0.6s			IAML			04 23 40.1	
ACDV	**Cuesta del Vie**	**1.02**	**4**	*e*P		**Pn**	**04 23 23.6**	**+0.5**
ACDV	comp=Z,412nm,0.4s			IAML			04 23 41.1	
AROD	**Rodeo**	**1.05**	**347**	*e*P		**Pn**	**04 23 24.1**	**+0.6**
CO03	**El Pedregal**	**1.32**	**285**	Pn		**Pn**	**04 23 26.3**	**+0.2**
CO03				Sn		**Sn**	**04 23 45.5**	**+0.2**
CO03	**El Pedregal**	**1.32**	**285**	⇑*i*P		**Pn**	**04 23 26.5**	**+0.4**
CO03				*e*S		**Sn**	**04 23 45.8**	**+0.4**
CO03	comp=E,4μm,0.4s			IAML			04 23 47.0	
CO03	**El Pedregal**	**1.32**	**285**	*e*P		Pn	04 23 21.0	-5.1
CO03				*e*P			04 23 26.5	
CO03				*e*S		**Sn**	**04 23 46.4**	**+1.0**
CO03	comp=Z,1μm,0.6s			IAML			04 23 46.6	
ASAL	**Salagasta**	**1.43**	**167**	*e*P		**Pn**	**04 23 28.1**	**+0.8**
ASAL				*e*S		**Sn**	**04 23 48.9**	**+1.4**
CO01	**Juntas del Tor**	**1.44**	**327**	*e*P		**Pn**	**04 23 28.9**	**+1.3**
CO01	**Juntas del Tor**	**1.44**	**327**	*i*P		**Pn**	**04 23 29.0**	**+1.4**
CO01				*e*S		**Sn**	**04 23 49.4**	**+1.6**
CO01	comp=E,597nm,0.3s			IAML			04 23 52.8	
CO01	**Juntas del Tor**	**1.44**	**327**	*e*P		**Pn**	**04 23 28.4**	**+0.8**
CO01				*e*S		**Sn**	**04 23 49.7**	**+1.9**
CO01	comp=Z,453nm,0.6s			IAML			04 23 52.4	
CO02	**Combarbal**	**1.54**	**269**			**Pn**	**04 23 28.6**	**0.0**
CO02	**Combarbal**	**1.54**	**269**	⇑*i*P		**Pn**	**04 23 28.6**	**0.0**
CO02				*e*S		**Sn**	**04 23 49.8**	**0.0**
CO02	**Combarbal**	**1.54**	**269**	*e*P		**Pn**	**04 23 28.7**	**0.0**
CO02				*e*S		**Sn**	**04 23 50.8**	**+1.0**
CO02	comp=Z,522nm,0.5s			IAML			04 23 54.8	
AVFE	**Valle Fertil**	**1.59**	**71**	*e*P		**Pn**	**04 23 29.6**	**+0.3**
AVFE				*e*S		**Sn**	**04 23 51.0**	**0.0**
AVFE	comp=Z,1μm,0.4s			IAML			04 23 51.9	
GO04	**Tololo Observa**	**1.71**	**306**			**Pn**	**04 23 30.8**	**-0.1**
GO04	**Tololo Observa**	**1.71**	**306**	*e*P		**Pn**	**04 23 30.6**	**-0.2**
GO04	**Tololo Observa**	**1.71**	**306**	*e*P		**Pn**	**04 23 30.8**	**-0.1**
GO04				*e*S		**Sn**	**04 23 54.2**	**+0.5**
GO04	comp=Z,1μm,0.4s			IAML			04 23 57.3	
CO04	**Los Peladeros**	**1.73**	**240**			**Pn**	**04 23 30.6**	**-0.5**
CO04	**Los Peladeros**	**1.73**	**240**	⇑*i*P		**Pn**	**04 23 30.8**	**-0.3**
CO04				*e*S		**Sn**	**04 23 53.4**	**-0.7**
CO04	comp=E,1μm,0.5s			IAML			04 23 57.0	
AAGR	**Agrelo**	**1.91**	**170**	*e*P		**Pn**	**04 23 34.1**	**+0.9**
AAGR				*e*S		**Sn**	**04 23 59.3**	**+1.4**
AAGR	comp=Z,297nm,0.7s			IAML			04 24 01.7	
VA03	**San Esteban**	**1.94**	**216**			**Pn**	**04 23 33.7**	**+0.2**
VA03	**San Esteban**	**1.94**	**216**	*e*P		**Pn**	**04 23 34.1**	**+0.6**
VA03				*e*S		**Sn**	**04 24 00.5**	**+2.0**
VA03	comp=Z,274nm,0.6s			IAML			04 24 01.8	
ACAN	**Cantantal**	**2.03**	**123**	*e*P		**Pn**	**04 23 34.5**	**0.0**
ACAN	comp=Z,1μm,0.6s			IAML			04 24 02.7	
CO06	**Fray Jorge**	**2.15**	**283**			**Pn**	**04 23 34.7**	**-1.4**
CO05	**La Serena**	**2.17**	**305**			**Pn**	**04 23 35.8**	**-0.5**
CO05	**La Serena**	**2.17**	**305**	⇑*i*P		**Pn**	**04 23 35.6**	**-0.6**
CO05				*e*S		**Sn**	**04 24 01.4**	**-1.9**
CO05	comp=E,2μm,0.4s			IAML			04 24 02.2	
ACHE	**Chepes**	**2.18**	**90**	*e*P		**Pn**	**04 23 37.1**	**+0.5**
VA06	**Catapilco**	**2.24**	**232**			**Pn**	**04 23 36.3**	**-0.9**
PEL	**Peldehue**	**2.31**	**212**			**Pn**	**04 23 38.3**	**+0.1**
PEL	**Peldehue**	**2.31**	**212**	*e*P		**Pn**	**04 23 38.5**	**+0.4**
PEL				*e*S		**Sn**	**04 24 07.2**	**+0.4**
MT04	**Ro Olivares**	**2.34**	**199**	*e*P		**Pn**	**04 23 40.0**	**+1.3**
MT04				*e*S		**Sn**	**04 24 11.8**	**+4.1**
MT08	**Bocatoma Ro**	**2.35**	**197**			**Pn**	**04 23 37.7**	**-1.1**
MT08	**Bocatoma Ro**	**2.35**	**197**	*e*P		**Pn**	**04 23 40.6**	**+1.8**
MT08				*e*S		**Sn**	**04 24 12.3**	**+4.4**
MT16	**CCHEN**	**2.49**	**206**			**Pn**	**04 23 41.2**	**+0.7**
AC05	**El Transito**	**2.53**	**338**			**Pn**	**04 23 42.1**	**+1.0**
AC05	**El Transito**	**2.53**	**338**	*e*P		**Pn**	**04 23 41.6**	**+0.6**
AC05				*e*S		**Sn**	**04 24 12.7**	**+0.8**
AC05	comp=Z,222nm,0.8s			IAML			04 24 14.3	
LCO	**Las Campanas**	**2.53**	**329**			**Pn**	**04 23 41.2**	**0.0**
MT03	**Universidad Ad**	**2.55**	**205**			**Pn**	**04 23 41.5**	**+0.3**
MT03	**Universidad Ad**	**2.55**	**205**	*e*P		**Pn**	**04 23 42.0**	**+0.7**
MT03				*e*S		**Sn**	**04 24 14.0**	**+1.8**
MT03	comp=Z,284nm,0.3s			IAML			04 24 15.8	
VCA	**Vinchina**	**2.60**	**20**	*e*P		**Pn**	**04 23 42.5**	**+0.6**
VCA				*e*S		**Sn**	**04 24 15.7**	**+2.2**
VCA	comp=Z,449nm,0.4s			IAML			04 24 18.2	
ACLC	**CERRO LA CRUZ**	**2.63**	**48**	*e*S		**Sn**	**04 24 15.0**	**+0.8**
ACLC	comp=Z,172nm,0.6s			IAML			04 24 16.8	
MT02	**Curacav**	**2.63**	**218**			**Pn**	**04 23 41.2**	**-1.0**
MT02	**Curacav**	**2.63**	**218**	IAML			04 24 13.9	
	comp=Z,88nm,1.1s							
MT13	**San Alfonso**	**2.70**	**199**			**Pn**	**04 23 44.0**	**+0.7**
MT13	**San Alfonso**	**2.70**	**199**	*e*S		**Sn**	**04 24 17.1**	**+1.3**
MT13	comp=Z,82nm,1.1s			IAML			04 24 21.8	
VA01	**Torpederas**	**2.76**	**228**			**Pn**	**04 23 42.4**	**-1.5**
VA01	**Torpederas**	**2.76**	**228**	IAML			04 24 20.2	
	comp=Z,94nm,0.8s							
MT09	**Talagante**	**2.98**	**210**			**Pn**	**04 23 46.0**	**-1.0**
BO04	**La Punta**	**3.03**	**203**			**Pn**	**04 23 47.2**	**-0.2**
AANI	**Anillaco**	**3.08**	**40**	*e*P		**Pn**	**04 23 44.5**	**-3.8**
MT01	**Popeta**	**3.17**	**212**			**Pn**	**04 23 48.1**	**-1.2**
MT01	**Popeta**	**3.17**	**212**	*e*P		**Pn**	**04 23 48.1**	**-1.2**
MT01				*e*S		**Sn**	**04 24 25.2**	**-1.6**
MT01	comp=Z,55nm,0.6s			IAML			04 24 29.1	
MT01	comp=Z,55nm,0.6s			IAML			04 24 29.1	
AC04	**Llanos de Chal**	**3.39**	**331**			**Pn**	**04 23 51.7**	**-0.5**
AC04	**Llanos de Chal**	**3.39**	**331**	*e*P		**Pn**	**04 23 52.1**	**-0.2**
AC04	comp=Z,94nm,0.5s			IAML			04 24 41.3	
BO01	**Tunca**	**3.56**	**206**			**Pn**	**04 23 52.9**	**-1.6**
BO02	**Sierra Bellavi**	**3.83**	**200**			**Pn**	**04 23 57.2**	**-0.9**
TCA	**Tanti**	**3.95**	**93**	IAML			04 25 23.4	
TCA	comp=Z,80nm,0.5s			IAML			04 25 23.4	
	comp=Z,80nm,0.5s							
AC06	**Mina Casimiro**	**3.95**	**345**			**Pn**	**04 23 59.5**	**-0.2**
AC02	**Maricunga**	**4.34**	**1**			**Pn**	**04 24 06.4**	**+1.0**
GO05	**Hualane**	**4.44**	**210**			**Pn**	**04 24 03.7**	**-2.5**
BI02	**San Fabin de**	**5.72**	**197**			**Pn**	**04 24 22.7**	**-0.8**
H03N1	**Juan Fernandez** baz=84,slow=73,SNR=26	**8.52**	**252**	T		T	04 32 04.1	
H03N3	**Juan Fernandez** baz=84,slow=73,SNR=32	**8.53**	**252**	T		T	04 32 02.3	
H03N2	**Juan Fernandez** baz=84,slow=73,SNR=21	**8.53**	**252**	T		T	04 32 03.0	
TRQA	**Tornquist**	**9.07**	**141**			**Pn**	**04 25 07.9**	**-0.8**
CPUP	**Villa Florida** comp=Z,1.8nm,0.9s,baz=239,slow=14,SNR=4.8	**11.49**	**68**	P		**Pn**	**04 25 38.8**	**-2.5**
LPAZ	**La Paz** comp=Z,0.6nm,0.8s,baz=84,slow=2.3,SNR=4.3	**14.87**	**4**	P		**Pn**	**04 26 26.3**	**+0.5**
ITAB	**Concordia**	**15.42**	**79**	Pn		**Pn**	**04 26 31.8**	**-0.3**
ITAB	comp=Z,21nm,1.5s			IAmb		IAmb	04 27 13.3	
SIV	**San Ignacio** comp=Z,0.9nm,0.9s,baz=221,slow=12,SNR=3.8	**16.86**	**28**	P		**P**	**04 26 50.3**	**+0.3**
PTLB	**Pontes e Lacer**	**18.18**	**33**	P		**P**	**04 27 02.2**	**-2.3**
PTLB	comp=Z,5.3nm,1.5s			IAmb		IAmb	04 27 06.4	
QSPA	**South Pole Qui** comp=Z,1.2nm,0.7s,baz=152,slow=2.2,SNR=6.4 comp=Z,1.2nm,0.7s	**59.04**	**180**	P		**P**	**04 32 49.4**	**+1.2**
QSPA	**South Pole Qui**	**59.04**	**180**	P		**P**	**04 32 49.6**	**+1.4**
QSPA	comp=Z,2.5nm,1.2s			IAmb		IAmb	04 33 27.8	
TORD	**Torodi Ar. Bea** comp=Z,0.6nm,0.6s,baz=266,slow=7.4,SNR=5.0 comp=Z,0.6nm,0.6s	**80.99**	**69**	P		**P**	**04 35 03.9**	**+1.1**
MHA	**Mahukona**	**97.50**	**289**	P		**P**	**04 36 20.5**	**-1.3**
ASAR	**Alice Springs** comp=Z,0.2nm,0.3s,baz=131,slow=0.9,SNR=2.3	**121.13**	**205**	PKP		**PKiKP**	**04 41 40.3**	**-0.2**
WRA	**Warramunga Arr** comp=Z,0.6nm,0.4s,baz=161,slow=1.7,SNR=18	**124.36**	**207**	PKP		**PKiKP**	**04 41 47.3**	**+0.4**
ZALV	**Zalesovo Beam** comp=Z,1.0nm,0.5s,baz=267,slow=3.0,SNR=5.2	**150.59**	**32**	PKPbc		**PKiKP**	**04 42 39.7**	**+0.6**

*IDC **25** 04:24:16.2±1.1, 49°.12N×158°.46E, h0km, mb3.6/6, mbtmp3.6/7, ML2.6/1, Error ellipse: s-maj=31.3km s-min=25.2km az=158.0*

*KRSC **25** 04:24:19.2±1.6, 49°.44N×158°.83E, h39km±40km, Ml4.4*

*MOS **25** 04:24:20.1±0.8, 49°.31N×158°.57E, h39km, mb4.2/4, Error ellipse: s-maj=27.0km s-min=5.0km az=91.6*

ISC 25 04:24:19.7±1.0, 49°.33N±0°.08×158°.59E±0°.07, h18km, n53, σ1.09/65, mb3.8/8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.09**	**311**	*e*PN		**Pn**	**04 24 54.4**	**+0.6**
SKR				*i* S		**Sn**	**04 25 18.4**	**-0.9**
SKR	comp=Z,233nm,1.0s			pmax		pmax		
SKR	comp=N,1μm,0.5s			smax		smax		
SKR	comp=E,1μm,0.6s			smax		smax		
SKR	comp=Z,13μm,13.0s			MLR		MLR		
SKR	**Severo-Kuril's**	**2.09**	**311**	*e*P		**Pn**	**04 24 53.4**	**-0.4**
SKR				*e*S		**Sn**	**04 25 18.4**	**-0.9**
PAU	**Pauzhetka**	**2.42**	**333**	*e*S		**Sn**	**04 25 27.8**	**+0.3**
KDTR	**Khodutka, Kamc**	**2.50**	**353**	PN		**Pn**	**04 24 58.7**	**-0.7**
KDTR				S		**Sn**	**04 25 27.9**	**-1.5**
KDTR	**Khodutka, Kamc**	**2.50**	**353**	*e*P		**Pn**	**04 24 58.7**	**-0.7**
KDTR				*e*S		**Sn**	**04 25 28.0**	**-1.5**
ASAK	**Asacha**	**3.09**	**352**	PN		**Pn**	**04 25 08.4**	**+0.9**
ASAK				S		**Sn**	**04 25 43.0**	**-1.0**
ASAK	**Asacha**	**3.09**	**352**	*e*P		**Pn**	**04 25 08.4**	**+0.9**
ASAK				*e*S		**Sn**	**04 25 43.1**	**-1.0**
RUS	**Russkaya**	**3.11**	**359**	PN		**Pn**	**04 25 07.7**	**0.0**
RUS				S		**Sn**	**04 25 42.4**	**-1.9**
RUS	**Russkaya**	**3.11**	**359**	*e*P		**Pn**	**04 25 07.7**	**0.0**
RUS				*e*S		**Sn**	**04 25 42.4**	**-1.9**
MTVR	**Mutnovka**	**3.17**	**355**	PN		**Pn**	**04 25 08.7**	**0.0**
MTVR				S		**Sn**	**04 25 44.6**	**-1.4**
MTVR	**Mutnovka**	**3.17**	**355**	*e*P		**Pn**	**04 25 08.7**	**0.0**
MTVR				*e*S		**Sn**	**04 25 44.7**	**-1.4**
GRL	**Gorelyy**	**3.24**	**354**	PN		**Pn**	**04 25 10.2**	**+0.5**
GRL				S		**Sn**	**04 25 47.1**	**-0.7**
GRL	**Gorelyy**	**3.24**	**354**	*e*P		**Pn**	**04 25 10.3**	**+0.5**
GRL				*e*S		**Sn**	**04 25 47.2**	**-0.7**
KRMR	**Karymshinskiy**	**3.52**	**355**	PN		**Pn**	**04 25 14.2**	**+0.9**
KRMR				S		**Sn**	**04 25 54.0**	**-0.4**
KRMR	**Karymshinskiy**	**3.52**	**355**	*e*P		**Pn**	**04 25 14.3**	**+0.9**
KRMR				*e*S		**Sn**	**04 25 54.1**	**-0.4**
PET	**Petropavlovsk**	**3.70**	**1**	*e*PN		**Pn**	**04 25 15.6**	**-0.2**
PET	comp=Z,36nm,0.6s			pmax		pmax		
PET	**Petropavlovsk**	**3.70**	**1**	*e*P		**Pn**	**04 25 15.9**	**+0.1**
PET				*e*S		**Sn**	**04 25 57.2**	**-1.7**
DALK	**Dalny**	**3.71**	**2**	PN		**Pn**	**04 25 16.0**	**+0.1**
DALK				S		**Sn**	**04 25 57.8**	**-1.3**
DALK	**Dalny**	**3.71**	**2**	*e*P		**Pn**	**04 25 16.0**	**+0.1**
DALK				*e*S		**Sn**	**04 25 57.8**	**-1.3**
APC	**Apacha**	**3.71**	**346**	PN		**Pn**	**04 25 16.7**	**+0.7**
APC	**Apacha**	**3.71**	**346**	*e*P		**Pn**	**04 25 16.7**	**+0.7**
PEA0B	**Petropavlovsk-**	**3.82**	**352**	*i* PN		**Pn**	**04 25 18.1**	**+0.5**
PETK	**Petropavlovsk-** comp=Z,1.9nm,0.3s,baz=147,slow=15,SNR=12	**3.82**	**352**	Pn		**Pn**	**04 25 18.5**	**+0.9**
PETK	comp=Z,2.5nm,0.3s,baz=347,slow=23,SNR=5.5 comp=Z,7.5nm,0.6s			Sn		**Sn**	**04 26 03.9**	**+1.8**
SPN	**Mys Shipunski**	**3.88**	**13**	PN		**Pn**	**04 25 17.9**	**-0.4**
SPN	**Mys Shipunski**	**3.88**	**13**	*e*P		**Pn**	**04 25 18.0**	**-0.4**
SPN				*e*S		**Sn**	**04 26 01.2**	**-2.1**
SMAR	**Somma**	**3.94**	**2**	PN		**Pn**	**04 25 21.1**	**+1.7**
SMAR	**Somma**	**3.94**	**2**	*e*P		**Pn**	**04 25 21.1**	**+1.7**
AVH	**Avacha**	**3.94**	**1**	PN		**Pn**	**04 25 20.6**	**+1.4**
AVH	**Avacha**	**3.94**	**1**	*e*P		**Pn**	**04 25 20.6**	**+1.4**
KOK	**Koryaka**	**3.97**	**0**	PN		**Pn**	**04 25 20.6**	**+1.0**
KOK	**Koryaka**	**3.97**	**0**	*e*P		**Pn**	**04 25 20.6**	**+1.0**
KRX	**Arik**	**4.03**	**0**	PN		**Pn**	**04 25 21.2**	**+0.6**
KRX	**Arik**	**4.03**	**0**	*e*P		**Pn**	**04 25 21.2**	**+0.6**
GNL	**Ganaly**	**4.39**	**355**	PN		**Pn**	**04 25 27.1**	**+1.7**
GNL	**Ganaly**	**4.39**	**355**	*e*P		**Pn**	**04 25 27.1**	**+1.7**
KII	**Karymskiy**	**4.74**	**6**	PN		**Pn**	**04 25 31.9**	**+1.7**
KII	**Karymskiy**	**4.74**	**6**	*e*P		**Pn**	**04 25 32.0**	**+1.7**
KBTR	**Krutoberegovo**

ASAK	**Asacha**	**3.25**	**357**	*eP*	Pn	04 35 24.3 +4.4
MTVR	**Mutnovka**	**3.35**	**360**	*eP*	Pn	04 35 25.6 +4.3
GRL	**Gorelyy**	**3.42**	**359**	*eP*	Pn	04 35 27.3 +5.0
DALK	**Dalny**	**3.92**	**5**	*eP*	Pn	04 35 33.7 +4.8
SPN	**Mys Shipunski**	**4.13**	**16**	*eP*	Pn	04 35 35.9 +4.0
AVH	**Avacha**	**4.15**	**5**	*eP*	Pn	04 35 36.7 +4.5
KOK	**Koryaka**	**4.17**	**4**	*eP*	Pn	04 35 37.1 +4.6
KRX	**Arik**	**4.24**	**4**	*eP*	Pn	04 35 37.8 +4.3
GNL	**Ganaly**	**4.57**	**358**	*eP*	Pn	04 35 42.7 +4.7
KBTR	**Krutoberegovo**	**7.62**	**20**	*eP*	Pn	04 36 24.3 +4.6

IDC 25 04:34:57.2±1.4, 49°14N×158°53E, h0km, mb3.6/3, mbtmp3.5/4, ML2.3/1, Error ellipse: s-maj=41.6km s-min=34.0km az=103.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**4.01**	**353**	Pn	Pn	04 36 00.1	+0.3
	1.0nm,0.3s,baz=135,slow=15,SNR=5.3						
	3.5nm,0.6s						
MKAR	**Makanchi Array**	**49.06**	**298**	P	P	04 43 45.6	-0.2
	0.3nm,0.6s,baz=48,slow=5.2,SNR=2.2						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**72.07**	**204**	P	P	04 46 23.1	+0.1
	0.9nm,0.7s,baz=19,slow=6.1,SNR=5.2						
	0.9nm,0.7s						
TXAR	**Lajitas Array**	**73.16**	**65**	P	P	04 46 29.7	0.0
	0.3nm,0.5s,baz=300,slow=4.4,SNR=4.4						
	0.3nm,0.5s						

KRSC 25 04:40:51.8±1.6, 49°48N×158°86E, h44km±41km, MI3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.14**	**305**	*eP*	Pn	04 41 25.9	+1.0
SKR				*eS*	Sn	04 41 50.9	+0.6
PAU	**Pauzhetka**	**2.39**	**327**	*eS*	Sn	04 42 00.3	+4.0
KDTR	**Khodutka, Kamc**	**2.39**	**348**	*eP*	Pn	04 41 30.6	+2.2
KDTR				*eS*	Sn	04 42 00.0	+3.6
ASAK	**Asacha**	**2.98**	**349**	*eP*	Pn	04 41 40.5	+4.0
ASAK				*eS*	Sn	04 42 14.9	+4.0
MTVR	**Mutnovka**	**3.04**	**352**	*eP*	Pn	04 41 40.7	+3.3
MTVR				*eS*	Sn	04 42 16.7	+4.0
GRL	**Gorelyy**	**3.12**	**351**	*eP*	Pn	04 41 42.2	+3.7
GRL				*eS*	Sn	04 42 19.1	+4.5
KRMR	**Karymshinskiy**	**3.39**	**352**	*eP*	Pn	04 41 46.1	+4.0
KRMR				*eS*	Sn	04 42 26.8	+5.7
PET	**Petropavlovsk**	**3.56**	**358**	*eP*	Pn	04 41 47.9	+3.6
PET				*eS*	Sn	04 42 28.9	+3.9
DALK	**Dalny**	**3.56**	**359**	*eP*	Pn	04 41 48.0	+3.6
DALK				*eS*	Sn	04 42 30.0	+4.8
APC	**Apacha**	**3.62**	**343**	*eP*	Pn	04 41 48.8	+3.6
SPN	**Mys Shipunski**	**3.70**	**11**	*eP*	Pn	04 41 50.0	+3.7
SPN				*eS*	Sn	04 42 32.9	+4.3
UGLR	**Uglovaya**	**3.74**	**360**	*eP*	Pn	04 41 51.0	+4.0
KOK	**Koryaka**	**3.83**	**358**	*eP*	Pn	04 41 52.9	+4.8
KRX	**Arik**	**3.89**	**358**	*eP*	Pn	04 41 53.0	+3.9
GNL	**Ganaly**	**4.26**	**353**	*eP*	Pn	04 41 59.3	+5.1
KII	**Karymskiy**	**4.58**	**4**	*eP*	Pn	04 42 04.0	+5.5
KBTR	**Krutoberegovo**	**7.16**	**18**	*eP*	Pn	04 42 38.0	+4.3

KRSC 25 04:50:30.9±1.9, 49°44N×158°89E, h41km±51km, MI3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**2.43**	**328**	*eS*	Sn	04 51 39.9	+3.4
ASAK	**Asacha**	**3.02**	**348**	*eP*	Pn	04 51 20.6	+4.4
ASAK				*eS*	Sn	04 51 54.8	+3.7
MTVR	**Mutnovka**	**3.08**	**352**	*eP*	Pn	04 51 20.7	+3.5
MTVR				*eS*	Sn	04 51 56.4	+3.5
GRL	**Gorelyy**	**3.16**	**351**	*eP*	Pn	04 51 22.0	+3.7
GRL				*eS*	Sn	04 51 58.9	+4.1
KRMR	**Karymshinskiy**	**3.43**	**352**	*eP*	Pn	04 51 24.2	+2.3
KRMR				*eS*	Sn	04 52 06.4	+5.2
DALK	**Dalny**	**3.60**	**359**	*eP*	Pn	04 51 28.2	+4.1
APC	**Apacha**	**3.66**	**343**	*eP*	Pn	04 51 27.1	+2.2
SPN	**Mys Shipunski**	**3.73**	**11**	*eP*	Pn	04 51 30.1	+4.1
SPN				*eS*	Sn	04 52 13.1	+4.4
KOK	**Koryaka**	**3.86**	**358**	*eP*	Pn	04 51 32.9	+5.0
KRX	**Arik**	**3.93**	**358**	*eP*	Pn	04 51 33.5	+4.6
GNL	**Ganaly**	**4.30**	**353**	*eP*	Pn	04 51 39.3	+5.3
KBTR	**Krutoberegovo**	**7.19**	**18**	*eP*	Pn	04 52 18.1	+4.7

*NEIC **25** 04:59:44.3±0.9, 56°2S±0°2×27°3W±0°2, h110km±7km, mb4.7/27, Error ellipse: s-maj=23.5km s-min=15.2km az=207.0*
*IDC **25** 04:59:45.9±7.8, 56°28S×27°30W, h130km±71km, mb3.4/3, mbtmp4.0/4, Error ellipse: s-maj=56.6km s-min=24.9km az=42.0*
ISC 25 04:59:44.0±0.6, 56°2S±0°1×27°3W±0°1, h112km, n45, σ0s70/45, mb4.7/17, 4D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.57**	**286**	Pn	**Pn**	**05 01 05.0**	**+0.5**
VNA1	**Neumayer--Stat**	**16.72**	**158**	⇓P	**P**	**05 03 32.1**	**+0.7**
	comp=Z,1.2nm,0.4s						
VNA3	**Neumayer Olymp**	**16.91**	**160**	⇓P	**Pn**	**05 03 33.8**	**+0.4**
	comp=Z,1.4nm,0.2s						
VNA2	**Neumayer--Watz**	**17.11**	**158**	⇓P	**Pn**	**05 03 36.4**	**+0.5**
	comp=Z,1.2nm,0.3s,baz=315,slow=13						
SNAA	**Sanae**	**18.67**	**156**	⇓P	**P**	**05 03 53.1**	**+0.1**
	comp=Z,107nm,0.4s						
SNAA	**Sanae**	**18.67**	**156**	P	**P**	**05 03 52.2**	**-0.7**
	comp=Z,8.3nm,0.5s,baz=301,slow=10,SNR=17						
SNAA	**Sanae**	**18.67**	**156**	P	**P**	**05 03 53.0**	**+0.1**
TROLL	**Troll, Antarti**	**20.18**	**153**	P	**P**	**05 04 09.4**	**0.0**
BELA	**Belgrano 2**	**21.95**	**184**	P	**P**	**05 04 27.1**	**-1.1**
MG02	**Cerro Sombrero**	**24.30**	**260**	P	**P**	**05 04 50.9**	**+0.2**
MG03	**Isla Dawson**	**24.55**	**257**	P	**P**	**05 04 52.7**	**-0.2**
MG03				IAmb	IAmb	05 05 01.6	
	comp=Z,47nm,1.2s						
TRQA	**Tornquist**	**29.30**	**293**	P	**P**	**05 05 33.5**	**-2.1**
QSPA	**South Pole Qui**	**34.08**	**180**	P	**P**	**05 06 17.8**	**+0.4**
BO01	**Tunca**	**36.85**	**288**	P	**P**	**05 06 40.4**	**-0.8**
BO01				IAmb	IAmb	05 07 20.6	
	comp=Z,10nm,1.3s						
BO04	**La Punta**	**36.91**	**288**	P	**P**	**05 06 41.7**	**-0.1**
BO04				IAmb	IAmb	05 06 59.7	
	comp=Z,20nm,1.5s						
MT01	**Popeta**	**37.35**	**288**	P	**P**	**05 06 43.8**	**-1.6**
MT01				IAmb	IAmb	05 06 57.2	
	comp=Z,15nm,1.4s						
MT02	**Curacav**	**37.75**	**289**	P	**P**	**05 06 48.1**	**-0.8**
MT02				IAmb	IAmb	05 07 12.0	
	comp=Z,15nm,1.2s						
VA03	**San Esteban**	**37.83**	**290**	P	**P**	**05 06 49.6**	**0.0**
VA03				IAmb	IAmb	05 07 05.1	
	comp=Z,16nm,1.2s						
CO02	**Combarbal**	**39.29**	**291**	P	**P**	**05 07 01.7**	**-0.1**
CO03	**El Pedregal**	**39.41**	**292**	P	**P**	**05 07 03.0**	**+0.2**
CO03				IAmb	IAmb	05 07 08.5	
	comp=Z,19nm,1.5s						
CO01	**Juntas del Tor**	**39.79**	**293**	P	**P**	**05 07 06.2**	**0.0**
CO01				IAmb	IAmb	05 07 15.2	
	comp=Z,16nm,1.4s						
AC05	**El Transito**	**40.80**	**294**	P	**P**	**05 07 14.4**	**0.0**
AC05				IAmb	IAmb	05 07 28.6	
	comp=Z,13nm,1.3s						
LCO	**Las Campanas**	**40.88**	**293**	P	**P**	**05 07 15.8**	**+0.6**
LCO				IAmb	IAmb	05 07 48.1	
	comp=Z,15nm,1.2s						
PB09	**IPOC Station P**	**46.15**	**301**	P	**P**	**05 07 57.5**	**+0.2**
PB07	**IPOC Station P**	**46.52**	**300**	P	**P**	**05 08 00.6**	**+0.4**
PB01	**IPOC Station P**	**46.91**	**301**	P	**P**	**05 08 03.3**	**+0.2**
PB01				IAmb	IAmb	05 08 12.2	
	comp=Z,23nm,1.5s						
PB08	**IPOC Station P**	**47.52**	**302**	P	**P**	**05 08 08.5**	**+0.2**
PB08				IAmb	IAmb	05 08 24.6	
	comp=Z,14nm,1.4s						
SIV	**San Ignacio**	**47.60**	**314**	P	**P**	**05 08 08.4**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=207,slow=14,SNR=2.1						
	comp=Z,0.2nm,0.3s						
GO01	**Chusmiza**	**47.94**	**302**	P	**P**	**05 08 12.6**	**+1.0**
GO01				IAmb	IAmb	05 08 26.6	
	comp=Z,17nm,1.4s						
PB11	**IPOC Station P**	**48.08**	**302**	P	**P**	**05 08 12.9**	**+0.5**
PB16	**IPOC Station P**	**49.24**	**303**	P	**P**	**05 08 22.7**	**+0.9**
PB16				IAmb	IAmb	05 08 23.6	
	comp=Z,10nm,1.3s						
LPAZ	**La Paz**	**50.38**	**305**	P	**P**	**05 08 31.2**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=130,slow=4.8,SNR=10						
	comp=Z,0.8nm,0.3s						
LPAZ	**La Paz**	**50.38**	**305**	P	**P**	**05 08 30.8**	**+0.4**
VOI	**Vohitsoka**	**63.28**	**90**	P	**P**	**05 10 00.7**	**-0.2**
VOI				IAmb	IAmb	05 10 27.0	
	comp=Z,12nm,1.0s						
BOAV	**Boa Vista**	**64.33**	**323**	P	**P**	**05 10 07.2**	**-0.3**
TORD	**Torodi Ar. Bea**	**73.19**	**30**	P	**P**	**05 11 03.1**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=204,slow=7.7,SNR=2.7						
	comp=Z,0.3nm,0.4s						
TORD	**Torodi Ar. Bea**	**73.19**	**30**	P	**P**	**05 11 02.6**	**+0.1**
FINES	**FINESS Array B**	**124.52**	**28**	PKP	**PKPdf**	**05 18 27.7**	**-0.8**
	comp=Z,4.4nm,1.0s,baz=174,slow=5.7,SNR=4.5						
FINES	**FINESS Array B**	**124.52**	**28**		**PKPdf**	**05 18 28.1**	**-0.4**
YKA	**Yellowknife Ar**	**136.21**	**318**	PKP	**PKPdf**	**05 18 50.8**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=134,slow=1.8,SNR=5.0						
YKA	**Yellowknife Ar**	**136.21**	**318**		**PKPdf**	**05 18 51.2**	**+0.6**
ILAR	**Eielson Array**	**150.14**	**312**	PKPbc	**PKPbc**	**05 19 19.5**	**-0.6**
	comp=Z,2.6nm,1.0s,baz=116,slow=1.2,SNR=17						
ILAR	**Eielson Array**	**150.14**	**312**	PKPdf	**PKPdf**	**05 19 16.5**	**+1.6**
SONM	**Songino Array**	**150.81**	**87**	PKPbc	**PKPbc**	**05 19 21.6**	**-0.8**
	comp=Z,0.8nm,0.7s,baz=242,slow=3.1,SNR=3.8						
SONM	**Songino Array**	**150.81**	**87**		**PKPbc**	**05 19 21.8**	**-0.6**

*IDC **25** 05:09:03.8±3.0, 6°26S×147°33E, h90km±27km, mb3.2/2, mbtmp3.7/5, Error ellipse: s-maj=39.1km s-min=22.0km az=79.0*
ISC 25 05:09:04.4±1.5, 6°3S±0°1×147°3E±0°2, h100km, n6, σ0s49/7, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.12**	**182**	P	**Pn**	**05 09 51.8**	**0.0**
	116nm,0.3s,baz=358,slow=5.8,SNR=63						
PMG				S	**Sn**	**05 10 28.2**	**-0.1**
	39nm,0.3s,baz=219,slow=23,SNR=6.1						
JAY	**Jayapura**	**7.55**	**299**	P	**Pn**	**05 10 51.8**	**-0.1**
	5.3nm,0.5s,baz=146,slow=5.8,SNR=5.5						
WRA	**Warramunga Arr**	**18.52**	**222**	P	**P**	**05 13 12.6**	**-0.5**
	0.6nm,0.4s,baz=39,slow=12,SNR=12						
ASAR	**Alice Springs**	**21.56**	**215**	P	**P**	**05 13 46.3**	**+0.3**
	0.6nm,0.4s,baz=50,slow=8.5,SNR=6.3						
	0.6nm,0.4s						
ILAR	**Eielson Array**	**85.62**	**23**	P	**P**	**05 21 31.2**	**-0.3**
	0.3nm,0.6s,baz=253,slow=5.0,SNR=7.8						
	0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**145.43**	**284**	PKPbc	**PKPab**	**05 28 33.0**	**+0.7**
	2.2nm,0.7s,baz=85,slow=3.3,SNR=16						

*IDC **25** 05:17:02.0±0.9, 49°.20N×158°.41E, h0km, mb3.7/7, mbtmp3.6/8, ML2.3/1, Error ellipse: s-maj=26.6km s-min=21.8km az=125.0*
*KRSC **25** 05:17:04.6±1.6, 49°45N×158°85E, h44km±43km, MI4.2*
ISC 25 05:17:05.1±1.0, 49°34N±0°08×158°60E±0°08, h18km, n23, σ1s35/35, mb3.8/7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.09**	**311**	*eP*	**Pn**	**05 17 38.8**	**-0.4**
SKR				*eS*	**Sn**	**05 18 04.0**	**-0.9**
PAU	**Pauzhetka**	**2.42**	**332**	*eP*	**Pn**	**05 17 44.2**	**+0.5**
PAU				*eS*	**Sn**	**05 18 13.6**	**+0.7**
KDTR	**Khodutka, Kamc**	**2.50**	**352**	*eP*	**Pn**	**05 17 44.1**	**-0.7**
KDTR				*eS*	**Sn**	**05 18 13.5**	**-1.3**
ASAK	**Asacha**	**3.08**	**352**	*eP*	**Pn**	**05 17 52.8**	**-0.1**
ASAK				*eS*	**Sn**	**05 18 28.2**	**-1.1**
RUS	**Russkaya**	**3.10**	**359**	*eP*	**Pn**	**05 17 52.6**	**-0.5**
RUS				*eS*	**Sn**	**05 18 28.0**	**-1.6**
MTVR	**Mutnovka**	**3.16**	**355**	*eP*	**Pn**	**05 17 53.4**	**-0.7**
MTVR				*eS*	**Sn**	**05 18 29.6**	**-1.7**
GRL	**Gorelyy**	**3.24**	**354**	*eP*	**Pn**	**05 17 55.3**	**+0.2**
GRL				*eS*	**Sn**	**05 18 32.8**	**-0.4**
KRMR	**Karymshinskiy**	**3.51**	**355**	*eP*	**Pn**	**05 17 59.7**	**+1.0**
KRMR				*eS*	**Sn**	**05 18 40.1**	**+0.4**
PET	**Petropavlovsk**	**3.69**	**0**	*eS*	**Sn**	**05 18 42.8**	**-1.4**
DALK	**Dalny**	**3.70**	**1**	*eP*	**Pn**	**05 18 01.5**	**+0.1**
DALK				*eS*	**Sn**	**05 18 43.3**	**-1.1**
PETK	**Petropavlovsk-**	**3.82**	**352**	Pn	**Pn**	**05 18 03.5**	**+0.5**
	1.1nm,0.3s,baz=149,slow=14,SNR=3.3						
PETK				Sn	**Sn**	**05 18 50.5**	**+3.1**
	1.4nm,0.3s,baz=205,slow=27,SNR=2.6						
	3.4nm,0.6s						
SPN	**Mys Shipunski**	**3.87**	**13**	*eP*	**Pn**	**05 18 03.6**	**-0.1**
SPN				*eS*	**Sn**	**05 18 46.8**	**-1.8**
AVH	**Avacha**	**3.93**	**1**	*eP*	**Pn**	**05 18 06.5**	**+1.8**
KOK	**Koryaka**	**3.96**	**0**	*eP*	**Pn**	**05 18 06.4**	**+1.3**
GNL	**Ganaly**	**4.38**	**355**	*eP*	**Pn**	**05 18 12.7**	**+1.9**
KBTR	**Krutoberegovo**	**7.34**	**19**	*eP*	**Pn**	**05 18 51.6**	**+0.3**
KBTR				*eS*	**Sn**	**05 20 10.6**	**-3.5**
YKA	**Yellowknife Ar**	**46.61**	**40**	P	**P**	**05 25 33.0**	**+1.3**
	0.2nm,0.8s,baz=298,slow=8.5,SNR=3.7						
	0.2nm,0.8s						
MKAR	**Makanchi Array**	**49.01**	**298**	P	**P**	**05 25 49.4**	**-1.1**
	0.6nm,0.8s,baz=52,slow=7.9,SNR=5.0						
	0.6nm,0.8s						
KURBB	**Kurchatov Arra**	**49.09**	**304**	P	**P**	**05 25 51.0**	**0.0**
	0.7nm,0.6s,baz=62,slow=7.5,SNR=5.7						
	0.7nm,0.6s						
PDAR	**Pinedale Array**	**60.24**	**58**	P	**P**	**05 27 13.7**	**+1.3**
	0.4nm,0.8s,baz=2.9,slow=3.0,SNR=4.3						
	0.4nm,0.8s						
WRA	**Warramunga Arr**	**72.27**	**204**	P	**P**	**05 28 27.9**	**-1.4**
	1.5nm,0.8s,baz=21,slow=6.4,SNR=6.0						
	1.5nm,0.8s						
TXAR	**Lajitas Array**	**73.03**	**65**	P	**P**	**05 28 34.6**	**+0.7**
	0.7nm,0.5s,baz=300,slow=5.1,SNR=17						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**75.94**	**203**	P	**P**	**05 28 49.5**	**-1.1**
	0.6nm,0.6s,baz=24,slow=3.9,SNR=4.7						
	0.6nm,0.6s						

KRSC 25 05:19:46.8±1.7, 49°17N×158°32E, h39km±39km, MI3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.08**	**318**	*eP*	Pn	05 20 20.1	+1.0
SKR				*eS*	Sn	05 20 44.1	+0.4
PAU	**Pauzhetka**	**2.49**	**338**	*eP*	Pn	05 20 27.6	+2.8
PAU				*eS*	Sn	05 20 57.4	+3.5
KDTR	**Khodutka, Kamc**	**2.64**	**357**	*eP*	Pn	05 20 29.3	+2.4
KDTR				*eS*	Sn	05 21 00.4	+2.7
ASAK	**Asacha**	**3.23**	**355**	*eP*	Pn	05 20 39.0	+4.0
RUS	**Russkaya**	**3.27**	**2**	*eP*	Pn	05 20 39.1	+3.7
RUS				*eS*	Sn	05 21 18.8	+5.8
MTVR	**Mutnovka**	**3.32**	**359**	*eP*	Pn	05 20 40.2	+4.0
MTVR				*eS*	Sn	05 21 19.6	+5.2
GRL	**Gorelyy**	**3.39**	**357**	*eP*	Pn	05 20 41.1	+3.9
GRL				*eS*	Sn	05 21 20.4	+4.3
KRMR	**Karymshinskiy**	**3.66**	**358**	*eP*	Pn	05 20 45.4	+4.5
KRMR				*eS*	Sn	05 21 28.0	+5.2
DALK	**Dalny**	**3.87**	**4**	*eP*	Pn	05 20 47.9	+4.1
UGLR	**Uglovaya**	**4.05**	**4**	*eP*	Pn	05 20 51.4	+5.0
SPN	**Mys Shipunski**	**4.08**	**15**	*eP*	Pn	05 20 50.4	+3.9
SPN				*eS*	Sn	05 21 38.3	+5.4
AVH	**Avacha**	**4.11**	**4**	*eP*	Pn	05 20 51.9	+4.8
SMAR	**Somma**	**4.11**	**4**	*eP*	Pn	05 20 52.5	+5.3
KOK	**Koryaka**	**4.13**	**3**	*eP*	Pn	05 20 52.7	+5.3
KRX	**Arik**	**4.20**	**3**	*eP*	Pn	05 20 53.1	+4.8
KBTR	**Krutoberegovo**	**7.56**	**19**	*eP*	Pn	05 21 38.7	+4.4

KRSC 25 05:21:39.1±1.6, 49°49N×158°81E, h49km±43km, MI3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.10**	**306**	*eP*	Pn	05 22 13.4	+1.6
SKR				*eS*	Sn	05 22 37.2	+0.4
PAU	**Pauzhetka**	**2.35**	**328**	*eS*	Sn	05 22 47.0	+4.1
KDTR	**Khodutka, Kamc**	**2.37**	**349**	*eP*	Pn	05 22 18.4	+3.0
KDTR				*eS*	Sn	05 22 46.3	+3.1
ASAK	**Asacha**	**2.95**	**349**	*eP*	Pn	05 22 27.5	+4.0
ASAK				*eS*	Sn	05 23 01.7	+4.0
RUS	**Russkaya**	**2.95**	**356**	*eP*	Pn	05 22 27.1	+3.7
RUS				*eS*	Sn	05 23 01.1	+3.6
MTVR	**Mutnovka**	**3.02**	**353**	*eP*	Pn	05 22 28.3	+3.7
MTVR				*eS*	Sn	05 23 03.1	+3.5
KRMR	**Karymshinskiy**	**3.37**	**353**	*eS*	Sn	05 23 12.8	+4.9
DALK	**Dalny**	**3.54**	**359**	*eS*	Sn	05 23 16.5	+4.4
SPN	**Mys Shipunski**	**3.69**	**11**	*eP*	Pn	05 22 36.6	+3.1
SPN				*eS*	Sn	05 23 20.1	+4.3
SMAR	**Somma**	**3.78**	**360**	*eP*	Pn	05 22 39.5	+4.5
AVH	**Avacha**	**3.78**	**359**	*eP*	Pn	05 22 39.0	+4.1
KOK	**Koryaka**	**3.81**	**358**	*eP*	Pn	05 22 39.6	+4.3
GNL	**Ganaly**	**4.24**	**353**	*eP*	Pn	05 22 45.8	+4.5
KBTR	**Krutoberegovo**	**7.15**	**18**	*eP*	Pn	05 23 24.8	+3.8

IDC 25 05:24:42.1±14.0, 18°01S×167°20E, h0km, mb3.9/3, mbtmp3.8/4, ML3.3/1, Error ellipse: s-maj=242.6km s-min=39.5km az=70.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.11**	**190**	Pn	Pn	05 25 45.7	-0.5
	1.7nm,0.3s,baz=154,slow=22,SNR=7.3						
DZM				Sn	Sn	05 26 34.6	-0.5
	1.7nm,0.3s,baz=60,slow=15,SNR=3.8						
	2.9nm,0.3s						
STKA	**Stephens Creek**	**26.93**	**234**	P	P	05 30 27.0	+1.7
	2.5nm,0.8s,baz=38,slow=6.5,SNR=3.4						
	2.5nm,0.8s						
WRA	**Warramunga Arr**	**31.11**	**261**	P	P	05 31 01.6	-1.0
	1.3nm,0.8s,baz=92,slow=9.1,SNR=6.0						
	1.3nm,0.8s						
ASAR	**Alice Springs**	**31.58**	**254**	P	P	05 31 06.6	-0.1
	1.0nm,0.7s,baz=80,slow=8.4,SNR=8.5						
	1.0nm,0.7s						

*IDC **25** 05:26:46.0±0.5, 24°.37N×46°.27W, h0km, mb4.2/23, mbtmp4.2/23, Error ellipse: s-maj=15.2km s-min=14.4km az=135.0*
*NEIC **25** 05:26:48.4±1.3, 24°.4N±0°.1×46°.2W±0°.1, h10km±1km, mb4.6/38, Error ellipse: s-maj=19.7km s-min=14.4km az=142.0*
ISC 25 05:26:47.6±0.5, 24°34N±0°10×46°24W±0°10, h10km, n73, σ0s69/61, mb4.5/45, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H05S1	**Guadeloupe/Mar**	**16.92**	**237**	T	T	05 48 05.3	
	SNR=6.1						
SCHQ	**Schefferville**	**34.07**	**339**	P	**P**	**05 33 31.8**	**-0.3**
	5.3nm,0.9s,baz=164,slow=7.7,SNR=5.7						
	5.3nm,0.9s						
BDFB	**Brasilia**	**39.78**	**183**	P	**P**	**05 34 21.0**	**0.0**
	2.3nm,0.8s,baz=354,slow=13,SNR=4.0						
	2.3nm,0.8s						
BDFB	**Brasilia**	**39.78**	**183**	IAmb	IAmb	05 34 31.0	
	comp=Z,12nm,1.4s						
CCM	**Cathedral Cave**	**40.47**	**301**	P	**P**	**05 34 27.7**	**+1.1**
FCAR	**Ozark Folk Cen**	**40.99**	**297**	P	**P**	**05 34 31.1**	**+0.2**
WHAR	**Wooly Hollow**	**41.09**	**296**	P	**P**	**05 34 32.4**	**+0.7**
DBIC	**Dimbokro**	**43.36**	**107**	P	**P**	**05 34 51.5**	**+1.1**
	comp=Z,1.8nm,0.8s,baz=315,slow=7.5,SNR=3.4						
	comp=Z,1.8nm,0.8s						
DBIC	**Dimbokro**	**43.36**	**107**	IAmb	IAmb	05 34 59.0	
	comp=Z,9.9nm,1.1s						
H10N2	**ASCENSION HYDR**	**44.52**	**132**	T	T	06 22 12.8	
	baz=317,slow=75,SNR=50						
H10N3	**ASCENSION HYDR**	**44.52**	**132**	T	T	06 22 12.8	
	baz=317,slow=75,SNR=55						
H10N1	**ASCENSION HYDR**	**44.54**	**132**	T	T	06 22 14.1	
	baz=317,slow=75,SNR=66						
H10S3	**ASCENSION HYDR**	**45.22**	**133**	T	T	06 23 10.5	
	baz=315,slow=74,SNR=63						
H10S2	**ASCENSION HYDR**	**45.24**	**133**	T	T	06 23 12.2	
	baz=265,slow=74,SNR=102						
AGMN	**Agassiz Nation**	**45.60**	**315**		**P**	**05 35 08.4**	**+0.5**
AGMN				IAmb	IAmb	05 35 09.2	
	comp=Z,8.2nm,0.9s						
LPAZ	**La Paz**	**45.69**	**210**	P	**P**	**05 35 09.8**	**+0.1**
	comp=Z,4.0nm,0.9s,baz=4.5,slow=7.4,SNR=10						
	comp=Z,4.0nm,0.9s						
LPAZ	**La Paz**	**45.69**	**210**	IAmb	IAmb	05 35 12.3	
	comp=Z,6.8nm,1.1s						
ULM	**Lac du Bonnet**	**46.09**	**317**	P	**P**	**05 35 11.8**	**0.0**
	comp=Z,10nm,1.0s,baz=88,slow=9.2,SNR=10						
	comp=Z,10nm,1.0s						
ULM	**Lac du Bonnet**	**46.09**	**317**	P	**P**	**05 35 11.9**	**+0.2**
WMOK	**Wichita Mounta**	**46.42**	**296**	P	**P**	**05 35 15.2**	**+0.5**
WMOK				IAmb	IAmb	05 35 16.2	
	comp=Z,6.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**46.53**	**95**	P	**P**	**05 35 15.4**	**-0.4**
	comp=Z,3.6nm,0.8s,baz=292,slow=8.1,SNR=20						
	comp=Z,3.6nm,0.8s						
BRDY	**Brady**	**46.81**	**291**

comp=Z,8.9nm,0.8s
BGU Big Grassy Mou 57.33 304 P **P** 05 36 36.9 +0.7
BGU IAmb IAmb 05 36 37.5
comp=Z,12nm,1.3s
YKA Yellowknife Ar 58.72 330 P **P** 05 36 44.6 -0.7
comp=Z,3.0nm,1.0s,baz=99,slow=6.9,SNR=29
comp=Z,3.0nm,1.0s
ARCES ARCESS Array B 61.04 22 P **P** 05 37 00.6 -0.6
comp=Z,7.7nm,1.0s,baz=269,slow=8.1,SNR=2.5
comp=Z,7.7nm,1.0s
NVAR Mina Array Bea 61.68 302 P **P** 05 37 05.7 -0.6
comp=Z,0.7nm,0.7s,baz=81,slow=6.8,SNR=5.4
comp=Z,0.7nm,0.7s
AKASG Malin Array Be 62.49 44 P **P** 05 37 10.1 -1.1
comp=Z,1.9nm,0.7s,baz=274,slow=6.3,SNR=14
comp=Z,1.9nm,0.7s
AKASG Malin Array Be 62.49 44 IAmb IAmb 05 37 11.2
comp=Z,3.8nm,1.2s
BRTR Keskin Array B 67.39 55 P **P** 05 37 43.4 -0.2
comp=Z,2.2nm,0.8s,baz=278,slow=5.8,SNR=6.6
comp=Z,2.2nm,0.8s
PLCA Paso Flores 68.58 200 P **P** 05 37 50.6 0.0
comp=Z,2.7nm,0.8s,baz=14,slow=6.3,SNR=7.2
comp=Z,2.7nm,0.8s
ILAR Eielson Array 72.66 334 P **P** 05 38 14.7 -0.5
comp=Z,2.4nm,0.9s,baz=75,slow=4.6,SNR=27
comp=Z,2.4nm,0.9s
ILAR Eielson Array 72.66 334 **P** 05 38 14.4 -0.9
KBZ Khabaz 73.01 49 P **P** 05 38 18.6 +0.9
comp=Z,2.4nm,0.8s,baz=306,slow=7.3,SNR=6.0
comp=Z,2.4nm,0.8s
BVAR Borovoye Array 85.43 33 P **P** 05 39 26.4 +1.0
comp=Z,1.9nm,0.8s,baz=305,slow=5.2,SNR=9.8
comp=Z,1.9nm,0.8s
KURK Kurchatov 90.86 31 **P** 05 39 50.4 -1.0
KURK IAmb IAmb 05 39 52.4
comp=Z,3.3nm,0.8s
KURBB Kurchatov Arra 90.88 32 P **P** 05 39 51.9 +0.4
comp=Z,2.0nm,0.9s,baz=314,slow=5.0,SNR=10.0
comp=Z,2.0nm,0.9s
ZALV Zalesovo Beam 91.35 26 P **P** 05 39 53.0 -0.6
comp=Z,0.7nm,0.4s,baz=316,slow=8.3,SNR=3.8
comp=Z,0.7nm,0.4s
CMAR Chiang Mai Arr 125.58 42 PKP **PKPdf** 05 45 49.6 -0.5
comp=Z,0.7nm,0.3s,baz=290,slow=3.0,SNR=4.6

*IDC **25** 05:27:07.6±1.2, 49.°19N×158.°25E, h0km, mb3.5/6, mbtmp3.5/7, ML2.5/1, Error ellipse: s-maj=28.3km s-min=27.1km az=162.0*
*KRSC **25** 05:27:09.4±1.7, 49.°38N×158.°70E, h45km±41km, Ml3.9*
ISC 25 05:27:10.5±1.1, 49.°30N±0.°08×158.°47E±0.°08, h18km, n22, σ1§35/31, mb3.7/6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.05**	**313**	*eP*		**Pn**	**05 27 43.4**	**-0.6**
SKR				*eS*		**Sn**	**05 28 08.4**	**-0.7**
PAU	**Pauzhetka**	**2.41**	**335**	*eS*		**Sn**	**05 28 19.5**	**+1.5**
KDTR	**Khodutka, Kamc**	**2.52**	**355**	*eP*		**Pn**	**05 27 50.0**	**-0.5**
KDTR				*eS*		**Sn**	**05 28 19.5**	**-1.3**
RUS	**Russkaya**	**3.13**	**1**	*eS*		**Sn**	**05 28 34.6**	**-1.3**
MTVR	**Mutnovka**	**3.19**	**357**	*eP*		**Pn**	**05 27 58.2**	**-1.7**
MTVR				*eS*		**Sn**	**05 28 36.6**	**-0.9**
GRL	**Gorelyy**	**3.26**	**356**	*eP*		**Pn**	**05 28 00.3**	**-0.6**
GRL				*eS*		**Sn**	**05 28 38.7**	**-0.5**
APC	**Apacha**	**3.72**	**348**	*eP*		**Pn**	**05 28 07.7**	**+0.7**
PET	**Petropavlovsk**	**3.73**	**2**	*eP*		**Pn**	**05 28 06.5**	**-0.6**
PET				*eS*		**Sn**	**05 28 48.2**	**-2.2**
DALK	**Dalny**	**3.74**	**3**	*eP*		**Pn**	**05 28 07.1**	**-0.1**
DALK				*eS*		**Sn**	**05 28 50.3**	**-0.4**
PETK	**Petropavlovsk-**	**3.84**	**353**	Pn		**Pn**	**05 28 08.7**	**0.0**
	1.5nm,0.3s,baz=133,slow=16,SNR=10							
PETK					Sn	**Sn**	**05 28 56.9**	**+3.6**
	0.6nm,0.3s,baz=213,slow=21,SNR=1.2							
	5.2nm,0.6s							
SPN	**Mys Shipunski**	**3.93**	**14**	*eP*		**Pn**	**05 28 09.5**	**-0.3**
SPN				*eS*		**Sn**	**05 28 53.6**	**-1.8**
SMAR	**Somma**	**3.97**	**3**	*eP*		**Pn**	**05 28 12.0**	**+1.4**
KOK	**Koryaka**	**4.00**	**1**	*eP*		**Pn**	**05 28 11.9**	**+1.0**
GNL	**Ganaly**	**4.41**	**356**	*eP*		**Pn**	**05 28 18.7**	**+1.6**
KII	**Karymskiy**	**4.78**	**7**	*eP*		**Pn**	**05 28 22.7**	**+1.1**
KBTR	**Krutoberegovo**	**7.40**	**19**	*eP*		**Pn**	**05 28 57.1**	**-0.4**
KBTR				*eS*		**Sn**	**05 30 19.2**	**-1.7**
YKA	**Yellowknife Ar**	**46.70**	**40**	P		**P**	**05 35 40.1**	**+2.4**
	0.1nm,0.7s,baz=309,slow=10.0,SNR=3.9							
	0.1nm,0.7s							
MKAR	**Makanchi Array**	**48.95**	**298**	P		**P**	**05 35 54.6**	**-0.8**
	0.1nm,0.4s,baz=59,slow=5.9,SNR=4.5							
	0.1nm,0.4s							
KURBB	**Kurchatov Arra**	**49.03**	**304**	P		**P**	**05 35 56.0**	**+0.1**
	0.4nm,0.5s,baz=61,slow=7.9,SNR=4.4							
	0.4nm,0.5s							
BVAR	**Borovoye Array**	**51.99**	**310**	P		**P**	**05 36 17.5**	**-0.8**
	1.0nm,0.5s,baz=63,slow=8.6,SNR=5.1							
	1.0nm,0.5s							
WRA	**Warramunga Arr**	**72.20**	**204**	P		**P**	**05 38 33.4**	**-0.8**
	0.5nm,0.7s,baz=19,slow=6.4,SNR=3.4							
	0.5nm,0.7s							
TXAR	**Lajitas Array**	**73.13**	**65**	P		**P**	**05 38 40.4**	**+0.5**
	0.4nm,0.5s,baz=307,slow=5.4,SNR=7.7							
	0.4nm,0.5s							

IDC 25 05:30:17.7±3.8, 24.°68N×46.°19W, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=172.3km s-min=32.1km az=26.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**44.70**	**132**	T		T	06 25 51.4	
	baz=317,slow=75,SNR=8.0							
H10N3	**ASCENSION HYDR**	**44.70**	**132**	T		T	06 25 43.2	
	baz=317,slow=75,SNR=8.3							
H10N1	**ASCENSION HYDR**	**44.72**	**132**	T		T	06 25 48.7	
	baz=317,slow=75,SNR=9.5							
H10S3	**ASCENSION HYDR**	**45.41**	**134**	T		T	06 26 38.4	
	baz=315,slow=74,SNR=12							
H10S2	**ASCENSION HYDR**	**45.43**	**133**	T		T	06 26 39.6	
	baz=265,slow=74,SNR=13							
TORD	**Torodi Ar. Bea**	**46.51**	**95**	P		P	05 38 47.1	-0.1
	1.1nm,0.7s,baz=294,slow=9.1,SNR=4.1							
	1.1nm,0.7s							
PDAR	**Pinedale Array**	**54.47**	**306**	P		P	05 39 47.1	-0.3
	0.6nm,0.9s,baz=110,slow=6.5,SNR=3.8							
	0.6nm,0.9s							
YKA	**Yellowknife Ar**	**58.46**	**330**	P		P	05 40 14.8	-0.3
	0.4nm,0.8s,baz=93,slow=6.7,SNR=5.2							
	0.4nm,0.8s							
ILAR	**Eielson Array**	**72.38**	**334**	P		P	05 41 45.6	+0.4
	0.4nm,0.8s,baz=61,slow=4.1,SNR=4.5							
	0.4nm,0.8s							

KRSC 25 05:46:26.7±1.1, 49.°58N×159.°13E, h21km±22km, Ml3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**2.33**	**344**	*eP*		Pb	05 47 06.1	-1.9
KDTR				*eS*		Sb	05 47 34.6	-1.7
PAU	**Pauzhetka**	**2.40**	**323**	*eS*		Sn	05 47 35.5	+2.0
RUS	**Russkaya**	**2.89**	**352**	*eP*		Pn	05 47 14.0	+2.6
RUS				*eS*		Sn	05 47 48.4	+2.9
ASAK	**Asacha**	**2.92**	**345**	*eP*		Pn	05 47 14.4	+2.5
ASAK				*eS*		Sn	05 47 49.0	+2.7
MTVR	**Mutnovka**	**2.97**	**349**	*eP*		Pn	05 47 15.4	+2.7
MTVR				*eS*		Sn	05 47 51.1	+3.3
GRL	**Gorelyy**	**3.05**	**348**	*eP*		Pn	05 47 16.9	+3.1
GRL				*eS*		Sb	05 47 53.6	-3.5
KRMR	**Karymshinskiy**	**3.32**	**349**	*eP*		Pn	05 47 20.6	+3.3
KRMR				*eS*		Sn	05 48 00.1	+4.0
PET	**Petropavlovsk**	**3.46**	**355**	*eP*		Pn	05 47 22.6	+3.2
PET				*eS*		Sn	05 48 02.7	+3.0
DALK	**Dalny**	**3.47**	**356**	*eP*		Pn	05 47 22.7	+3.3
DALK				*eS*		Sn	05 48 03.5	+3.7
SPN	**Mys Shipunski**	**3.57**	**9**	*eP*		Pn	05 47 24.7	+3.9
SPN				*eS*		Sb	05 48 07.3	-4.6
SMAR	**Somma**	**3.70**	**357**	*eP*		Pn	05 47 26.0	+3.2
AVH	**Avacha**	**3.70**	**356**	*eP*		Pb	05 47 27.2	-4.1
AVH				*eS*		Sb	05 48 11.5	-4.3
KOK	**Koryaka**	**3.73**	**355**	*eP*		Pn	05 47 27.5	+4.4
KOK				*eS*		Sn	05 48 10.9	+4.4
KRX	**Arik**	**3.80**	**356**	*eP*		Pn	05 47 27.3	+3.2
GNL	**Ganaly**	**4.19**	**350**	*eP*		Pn	05 47 34.0	+4.5
GNL				*eS*		Sn	05 48 22.1	+4.3
KII	**Karymskiy**	**4.47**	**2**	*eP*		Pn	05 47 38.4	+5.1
KII				*eS*		Sn	05 48 30.5	+5.8
KBTR	**Krutoberegovo**	**7.01**	**17**	*eP*		Pn	05 48 12.9	+4.9

*IDC **25** 05:51:19.3±1.2, 41.°65S×173.°92E, h0km, mb3.9/4, mbtmp3.9/6, ML3.9/2, Error ellipse: s-maj=28.0km s-min=24.3km az=122.0*
*NEIC **25** 05:51:20.7±1.9, 41.°95S±0.°02×174.°22E±0.°06, h10km±1km, mb4.8/9, Error ellipse: s-maj=7.5km s-min=3.2km az=80.0*
*NOU **25** 05:51:22.4, 42.°01S×174.°32E, h30km, MLv4.6/18, Off E. Coast of S. Island, N.Z.*
*WEL **25** 05:51:22.0±0.3, 42.°3S×17.°4E±.°, h10km±2km, M4.4/54, ML4.3/24, MLv4.4/54, Error ellipse: s-maj=3.9km s-min=2.2km az=139.1, confirmed*
ISC 25 05:51:21.7±0.7, 41.°89S±0.°02×174.°18E±0.°03, h17km±4km, n157, σ1§10/169, mb4.9/10, 1C, Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WDFS	**Ward Fire Stat**	**0.07**	**330**	P		**Pg**	**05 51 24.6**	**-0.3**
WDFS				S		**Sg**	**05 51 26.8**	**-0.3**
CMWZ	**Cape Campbell**	**0.14**	**10**			**Pb**	**05 51 26.5**	**+0.3**
CMWZ					Sg	**Sg**	**05 51 29.9**	**+1.5**
CMWZ	**Cape Campbell**	**0.14**	**10**	P		**Pg**	**05 51 26.2**	**+0.4**
CMWZ				S		**Sg**	**05 51 29.7**	**+1.3**
KEKS	**Kekerengu Vall**	**0.17**	**245**	P		**Pg**	**05 51 25.5**	**-0.6**
SDNS	**Seddon**	**0.22**	**351**	P		**Pb**	**05 51 27.2**	**-0.1**
SEDS	**Seddon Fire St**	**0.23**	**339**	P		**Pg**	**05 51 26.8**	**-0.2**
SEDS				S		**Sg**	**05 51 30.4**	**-0.1**
GLOS	**29 km south-we**	**0.27**	**276**	P		**Pg**	**05 51 26.7**	**-1.0**
GLOS				S		**Sg**	**05 51 30.3**	**-1.5**
MGCS	**Blenheim Marlb**	**0.42**	**335**	P		**Pg**	**05 51 29.9**	**-0.3**
MGCS				S		**Sg**	**05 51 35.9**	**-0.1**
TUWZ	**Tuamarina**	**0.49**	**338**			**Pg**	**05 51 31.6**	**+0.1**
TUWZ					Sg	**Sg**	**05 51 38.4**	**+0.3**
TUWZ	**Tuamarina**	**0.49**	**338**	P		**Pg**	**05 51 31.6**	**+0.1**
TUWZ				S		**Sg**	**05 51 38.3**	**+0.1**
BWRS	**Waikakaho Road**	**0.49**	**335**	P		**Pg**	**05 51 31.2**	**-0.3**
BWRS				S		**Sg**	**05 51 38.2**	**0.0**
LOKS	**Mount Lookout**	**0.54**	**256**	P		**Pg**	**05 51 32.0**	**-0.5**
LOKS				S		**Sg**	**05 51 39.5**	**-0.2**
QCCS	**Picton Queen C**	**0.62**	**349**	P		**Pg**	**05 51 33.7**	**-0.2**
KIKS	**Kaikoura**	**0.66**	**214**	P		**Pb**	**05 51 36.0**	**+1.4**
WVFS	**Wairau Valley**	**0.68**	**293**	P		**Pg**	**05 51 34.4**	**-0.6**
TCW	**Tory Channel**	**0.68**	**6**			**Pb**	**05 51 35.0**	**0.0**
TCW					Sg	**Sb**	**05 51 44.8**	**+0.8**
TCW	**Tory Channel**	**0.68**	**6**	P		**Pb**	**05 51 35.0**	**0.0**
TCW				S		**Sb**	**05 51 44.9**	**+0.8**
HAVS	**Havelock**	**0.68**	**334**	P		**Pg**	**05 51 34.4**	**-0.7**
SNZO	**South Karori**	**0.69**	**34**			**Pn**	**05 51 36.6**	**-0.1**
BHW	**Baring Head**	**0.70**	**48**			**Pn**	**05 51 37.0**	**+0.2**
BHW	**Baring Head**	**0.70**	**48**	P		**Pn**	**05 51 37.0**	**+0.2**
KHZ	**Kahutara**	**0.71**	**222**	P		**Pg**	**05 51 36.2**	**+0.6**
KHZ	**Kahutara**	**0.71**	**222**	S		**Sb**	**05 51 47.4**	**+2.3**
KHZ	**Kahutara**	**0.71**	**222**			**Pg**	**05 51 36.3**	**+0.6**
KHZ	**Kahutara**	**0.71**	**222**	P		**Pg**	**05 51 36.2**	**+0.6**
KHZ				S		**Sb**	**05 51 47.1**	**+2.0**
WEL	**Wellington**	**0.74**	**36**	P		**Pn**	**05 51 37.2**	**+0.2**
PLWZ	**Palliser**	**0.86**	**69**			**Pn**	**05 51 39.7**	**+0.7**
PLWZ	**Palliser**	**0.86**	**69**	P		**Pn**	**05 51 39.8**	**+0.7**
NNZ	**Nelson**	**0.90**	**318**			**Pg**	**05 51 38.4**	**-0.8**
NNZ	**Nelson**	**0.90**	**318**	P		**Pg**	**05 51 38.3**	**-0.9**
MSWZ	**Moikau Station**	**0.93**	**60**			**Pn**	**05 51 40.9**	**+1.0**
MSWZ	**Moikau Station**	**0.93**	**60**	P		**Pn**	**05 51 40.9**	**+1.0**
THZ	**Tophouse**	**0.96**	**277**			**Pg**	**05 51 39.6**	**-0.8**
THZ	**Tophouse**	**0.96**	**277**	P		**Pg**	**05 51 39.6**	**-0.8**
CAW	**Cannon Point**	**1.02**	**41**	P		**Pn**	**05 51 42.4**	**+1.2**
PAWZ	**Paruwai Farm**	**1.06**	**62**	P		**Pn**	**05 51 42.4**	**+0.7**
DUWZ	**D'Urville Isla**	**1.10**	**350**	P		**Pg**	**05 51 42.0**	**-0.9**
KIW	**Kapiti Island**	**1.16**	**28**	P		**Pn**	**05 51 44.2**	**+1.1**
MRNZ	**Matariki Terra**	**1.17**	**294**			**Pb**	**05 51 43.4**	**0.0**
MRNZ	**Matariki Terra**	**1.17**	**294**	P		**Pb**	**05 51 43.4**	**0.0**
MTW	**Mount Morrison**	**1.23**	**54**	P		**Pb**	**05 51 44.6**	**+0.2**
TRWZ	**Traveller**	**1.23**	**67**	P		**Pb**	**05 51 44.5**	**+0.1**
TKNZ	**Takaka Hill**	**1.25**	**312**			**Pn**	**05 51 44.5**	**+0.2**
TKNZ	**Takaka Hill**	**1.25**	**312**	P		**Pn**	**05 51 44.6**	**+0.2**
OGWZ	**Otaki Gorge**	**1.30**	**35**	P		**Pg**	**05 51 46.2**	**-0.5**
GVZ	**Greta Valley S**	**1.38**	**218**			**Pn**	**05 51 46.3**	**+0.2**
GVZ	**Greta Valley S**	**1.38**	**218**	P		**Pn**	**05 51 46.3**	**+0.2**
HOWZ	**Holdsworth Sta**	**1.41**	**46**	P		**Pn**	**05 51 47.1**	**+0.7**
TMWZ	**Te Maipa**	**1.50**	**59**	P		**Pn**	**05 51 48.1**	**+0.3**
MRZ	**Mangatainoka R**	**1.61**	**41**			**Pn**	**05 51 50.1**	**+0.8**
MRZ	**Mangatainoka R**	**1.61**	**41**	P		**Pn**	**05 51 50.1**	**+0.8**
QRZ	**Quartz Range**	**1.63**	**310**	P		**Pn**	**05 51 53.1**	**+1.7**
QRZ	**Quartz Range**	**1.63**	**310**	S		**Sb**	**05 52 12.6**	**+1.0**
QRZ	**Quartz Range**	**1.63**	**310**			**Pn**	**05 51 51.0**	**+1.5**
QRZ	**Quartz Range**	**1.63**	**310**	P		**Pn**	**05 51 51.1**	**+1.5**
LTZ	**Lake Taylor**	**1.68**	**237**			**Pn**	**05 51 50.6**	**+0.4**
LTZ	**Lake Taylor**	**1.68**	**237**	P		**Pn**	**05 51 50.6**	**+0.4**
TIWZ	**Tintock**	**1.69**	**50**	P		**Pn**	**05 51 50.7**	**+0.2**
AMCZ	**Amberley**	**1.72**	**221**	Pn		**Pn**	**05 51 51.0**	**+0.3**
AMCZ	**Amberley**	**1.72**	**221**	P		**Pn**	**05 51 50.6**	**-0.1**
DSZ	**Denniston Nort**	**1.78**	**274**			**Pn**	**05 51 53.0**	**+1.3**
DSZ	**Denniston Nort**	**1.78**	**274**	P		**Pn**	**05 51 53.0**	**+1.3**
CPWZ	**Castlepoint**	**1.81**	**58**	P		**Pn**	**05 51 52.6**	**+0.7**
OHWZ	**Ohakea**	**1.88**	**27**	P		**Pb**	**05 51 55.6**	**0.0**
PRWZ	**Pori Road**	**1.89**	**46**	P		**Pn**	**05 51 53.6**	**+0.4**
POWZ	**Post Office Ro**	**1.91**	**39**	P		**Pn**	**05 51 54.0**	**+0.6**
BFZ	**Birch Farm**	**1.97**	**53**			**Pn**	**05 51 53.8**	**-0.3**
BFZ	**Birch Farm**	**1.97**	**53**	P		**Pn**	**05 51 54.2**	**+0.1**
BFZ	**Birch Farm**	**1.97**	**53**	P		**Pn**	**05 51 54.0**	**-0.1**
OKCZ	**Okains Bay**	**2.02**	**204**	P		**Pn**	**05 51 54.4**	**-0.5**
MQZ	**McQueen's Vall**	**2.14**	**211**			**Pn**	**05 51 55.3**	**-1.3**
MQZ	**McQueen's Vall**	**2.14**	**211**	P		**Pn**	**05 51 55.2**	**-1.3**
OXZ	**Oxford**	**2.14**	**227**			**Pn**	**05 51 55.6**	**-0.9**
OXZ	**Oxford**	**2.14**	**227**	P		**Pn**	**05 51 55.7**	**-0.9**
DVHZ	**Dannevirke**	**2.18**	**44**	P		**Pn**	**05 51 57.0**	**-0.2**
AKCZ	**Akaroa Harbour**	**2.19**	**205**	P		**Pn**	**05 51 56.8**	**-0.5**
INZ	**Inchbonnie**	**2.20**	**247**			**Pn**	**05 51 57.4**	**+0.1**
INZ	**Inchbonnie**	**2.20**	**247**	P		**Pn**	**05 51 58.1**	**+0.8**
WAZ	**Wanganui**	**2.21**	**16**	P		**Pn**	**05 52 00.4**	**+0.8**
ANWZ	**Angora Road**	**2.24**	**51**	P		**Pn**	**05 51 57.3**	**-0.6**
TSZ	**Takapari Road**	**2.27**	**37**	P		**Pn**	**05 51 58.8**	**+0.5**
RACZ	**Rakaia**	**2.38**	**219**	P		**Pn**	**05 51 58.9**	**-0.9**
LREZ	**Lake Rotokare**	**2.43**	**4**	P		**Pb**	**05 52 04.5**	**-0.3**
PRHZ	**Porangahau**	**2.46**	**50**	P		**Pn**	**05 52 00.3**	**-0.7**
NMEZ	**Namu Road**	**2.48**	**355**	P		**Pb**	**05 52 06.1**	**+0.4**
PNHZ	**Pukenui**	**2.49**	**38**	P		**Pn**	**05 52 01.5**	**+0.1**
WPHZ	**Waipukurau**	**2.50**	**44**	P		**Pn**	**05 52 01.4**	**0.0**
MHCZ	**Mount Hutt**	**2.53**	**229**	P		**Pn**	**05 52 01.1**	**-0.9**
PREZ	**Palmer Road**	**2.54**	**360**	P		**Pb**	**05 52 06.3**	**-0.5**
KHEZ	**Kahui Hut**	**2.59**	**357**	P		**Pn**	**05 52 05.0**	**+2.2**
KHEZ	**Kahui Hut**	**2.59**	**357**	S		**Sb**	**05 52 37.3**	**-1.9**
KHEZ	**Kahui Hut**	**2.59**	**357**	P		**Pb**	**05 52 06.4**	**-1.3**
NBEZ	**Newall Road No**	**2.62**	**355**	P		**Pb**	**05 52 07.8**	**-0.3**
WACZ	**Wakanui South**	**2.68**	**219**	P		**Pn**	**05 52 03.2**	**-0.8**
MTVZ	**Mangateitei**	**2.68**	**22**	P		**Pn**	**05 52 07.0**	**+2.9**
DREZ	**Durham Road**	**2.69**	**0**	P		**Pn**	**05 52 08.0**	**+1.4**
PKVZ	**Pokaka**	**2.74**	**19**	P		**Pn**	**05 52 07.1**	**+2.2**
PXZ	**Pawanui**	**2.75**	**48**	P		**Pn**	**05 52 04.0**	**-0.9**
MOVZ	**Moawhango**	**2.75**	**26**	P		**Pn**	**05 52 06.1**	**+1.1**
WNVZ	**Wahianoa**	**2.77**	**23**	P		**Pn**	**05 52 07.3**	**+1.9**
TRVZ	**Turoa**	**2.79**	**22**	P		**Pn**	**05 52 07.8**	**+2.2**
KRHZ	**Kereru**	**2.79**	**37**	P		**Pn**	**05 52 05.4**	**0.0**
WHVZ	**Whangaehu Hut**	**2.81**	**23**	P		**Pn**	**05 52 08.0**	**+2.0**
WVZ	**Waitaha Valley**	**2.81**	**244**	P		**Pn**	**05 52 06.4**	**+0.6**
MAVZ	**Matarangi**	**2.82**	**22**	P		**Pn**	**05 52 08.4**	**+2.3**
FWVZ	**Far West T-bar**	**2.83**	**22**	P		**Pn**	**05 52 08.5**	**+2.3**
TUVZ	**Tukino**	**2.84**	**24**	P		**Pn**	**05 52 08.2**	**+1.8**
COVZ	**Chateau Observ**	**2.88**	**22**	P		**Pn**	**05 52 08.7**	**+2.0**
NGZ	**Ngauruhoe**	**2.91**	**22**	P		**Pn**	**05 52 09.3**	**+1.9**
SNVZ	**South Ngauruho**	**2.92**	**23**	P		**Pn**	**05 52 09.2**	**+1.8**
KAHZ	**Kahuranaki**	**2.92**	**45**	P		**Pn**	**05 52 06.7**	**-0.7**
RPZ	**Rata Peaks**	**2.94**	**230**	Pn		**Pn**	**05 52 07.1**	**-0.4**
	36nm,0.3s,baz=187,slow=0.2,SNR=79							
RPZ					Sn	**Sn**	**05 52 41.1**	**-1.3**
	38nm,0.3s,baz=161,slow=0.0,SNR=12							
	102nm,0.4s							
RPZ	**Rata Peaks**	**2.94**	**230**	P		**Pn**	**05 52 07.4**	**-0.2**
RPZ	**Rata Peaks**	**2.94**	**230**	S		**Sn**	**05 52 42.2**	**-0.2**
OTVZ	**Oturere**	**2.94**	**23**	P		**Pn**	**05 52 09.5**	**+1.7**
KWHZ	**Kaweka Forest**	**2.99**	**35**	P		**Pn**	**05 52 08.2**	**-0.1**
MCHZ	**McNeill Hill**	**3.10**	**39**	P		**Pn**	**05 52 09.5**	**-0.2**
BKZ	**Black Stump Fm**	**3.24**	**34**	P		**Pn**	**05 52 11.5**	**-0.2**
BKZ	**Black Stump Fm**	**3.24**	**34**			**Pn**	**05 52 11.7**	**0.0**
HIZ	**Hauiti**	**3.41**	**9**	P		**Pn**	**05 52 15.8**	**+1.8**
HIZ	**Hauiti**	**3.41**	**9**			**Pn**	**05 52 14.1**	**+0.2**
FOZ	**Fox Glacier**	**3.62**	**241**			**Pn**	**05 52 17.6**	**+0.8**
LBZ	**Lake Benmore**	**3.85**	**228**	Pn		**Pn**	**05 52 20.2**	**+0.2**
RTZ	**Ruatahuna**	**3.91**	**34**	Pn		**Pn**	**05 52 20.5**	**-0.4**
ODZ	**Otahua Downs**	**4.07**	**218**	P		**Pn**	**05 52 22.0**	**-1.1**
ODZ	**Otahua Downs**	**4.07**	**218**	S		**Sn**	**05 53 09.0**	**-1.4**
ODZ	**Otahua Downs**	**4.07**	**218**			**Pn**	**05 52 22.7**	**-0.4**
URZ	**Urewera**	**4.26**	**33**	Pn		**Pn**	**05 52 24.5**	**-1.1**
	3.9nm,0.3s,baz=232,slow=6.2,SNR=27							
URZ					Sn	**Sn**	**05 53 14.2**	**-0.8**
	8.8nm,0.3s,baz=53,slow=21,SNR=6.6							
	11nm,0.3s							
URZ	**Urewera**	**4.26**	**33**	P		**Pn**	**05 52 25.2**	**-0.5**
TOZ	**Tahuroa Road**	**4.27**	**14**			**Pn**	**05 52 25.8**	**0.0**
JCZ	**Jackson Bay**	**4.52**	**239**	P		**Pn**	**05 52 29.4**	**0.0**
WKZ	**Wanaka**	**4.78**	**230**	Pn		**Pn**	**05 52 32.6**	**-0.2**
MXZ	**Matakaoa Point**	**5.36**	**38**	P		**Pn**	**05 52 39.9**	**-0.9**
MXZ	**Matakaoa Point**	**5.36**	**38**	Pn		**Pn**	**05 52 39.3**	**-1.5**
MLZ	**Mavora Lakes**	**5.61**	**230**	Pn		**Pn**	**05 52 43.2**	**-1.0**
SYZ	**Scrubby Hill**	**5.89**	**216**	P		**Pn**	**05 52 46.9**	**-1.2**
WHZ	**Wether Hill Ro**	**6.03**	**226**	Pn		**Pn**	**05 52 49.1**	**-0.8**
DCZ	**Deep Cove**	**6.23**	**233**	Pn		**Pn**	**05 52 51.3**	**-1.4**
OUZ	**Omahuta**	**6.67**	**356**	P		**Pn**	**05 52 59.8**	**+1.0**
OUENC	**Ouen Island, N**	**20.36**	**340**	P		**P**	**05 55 56.5**	**-0.8**
OUENC					IAmb	IAmb	05 56 07.2	
	comp=Z,55nm,1.3s							
STKA	**Stephens Creek**	**27.77**	**280**	P		**P**	**05 57 08.6**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=96,slow=10,SNR=2.2							
	comp=Z,0.7nm,0.3s							
CTAO	**Charters Tower**	**32.09**	**304**	P		**P**	**05 57 47.5**	**-0.3**
CTAO					IAmb	IAmb	05 58 50.2	
	comp=Z,29nm,1.3s							
ASAR	**Alice Springs**	**38.02**	**286**	P		**P**	**05 58 37.4**	**-1.6**
	comp=Z,0.7nm,0.6s,baz=125,slow=6.8,SNR=8.6							
	comp=Z,0.7nm,0.6s							
COEN	**Coen**	**38.67**	**307**	P		**P**	**05 58 41.2**	**-3.2**
WRAB	**Tennant Creek**	**40.10**	**291**	P		P	05 58 51.9	-4.5
WRAB					IAmb	IAmb	06 00 03.3	
	comp=Z,17nm,0.8s							
WRA	**Warramunga Arr**	**40.10**	**291**	P		P	05 58 53.1	-3.3
	comp=Z,0.4nm,0.5s,baz=128,slow=8.5,SNR=10							
	comp=Z,0.4nm,0.5s							
WB0	**Warramunga Arr**	**40.18**	**291**	P		**P**	**05 58 55.1**	**-1.9**
MORW	**Morawa**	**48.20**	**266**	P		**P**	**06 00 01.3**	**+0.1**
MORW					IAmb	IAmb	06 00 34.3	
	comp=Z,29nm,2.0s							
QSPA	**South Pole Qui**	**48.24**	**180**	P		**P**	**06 00 03.2**	**+2.0**
	comp=Z,3.2nm,0.9s,ba

comp=E,2µm,0.3s
MT02 Curacav 3.15 39 Pn 05 54 08.7 -0.8
MT02 Curacav 3.15 39 ePn 05 54 08.6 -1.0
MT02 IAML 05 55 13.3
comp=E,358nm,0.3s
MT02 Curacav 3.15 39 iP Pn 05 54 08.9 -0.6
MT02 IAML 05 55 12.0
comp=Z,288nm,1.4s
MT15 Las Vizcachas 3.26 50 eP Pn 05 54 11.6 +0.5
MT15 IAML 05 55 11.8
comp=N,2µm,0.8s
LMEL Las Melosas 3.30 56 eP Pn 05 54 12.7 +0.9
LMEL IAML 05 55 13.6
comp=E,973nm,0.9s
MT13 San Alfonso 3.31 54 Pn 05 54 11.6 -0.2
MT13 San Alfonso 3.31 54 eP Pn 05 54 12.7 +0.9
MT13 IAML 05 55 10.3
comp=N,628nm,0.7s
MT13 San Alfonso 3.31 54 iP Pn 05 54 12.1 +0.3
MT13 IAML 05 55 15.4
comp=Z,509nm,0.6s
MT03 Universidad Ad 3.33 48 Pn 05 54 12.1 0.0
MT03 Universidad Ad 3.33 48 eP Pn 05 54 12.1 0.0
MT03 IAML 05 55 17.3
comp=N,699nm,0.4s
MT03 Universidad Ad 3.33 48 iP Pn 05 54 12.1 0.0
MT03 IAML 05 55 23.5
comp=Z,476nm,0.8s
MT16 CCHEN 3.37 47 Pn 05 54 12.6 +0.1
MT16 CCHEN 3.37 47 eP Pn 05 54 12.2 -0.3
MT16 IAML 05 55 16.8
comp=E,413nm,0.2s
MT14 Cerro Cal¡n 3.38 47 eP Pn 05 54 12.5 -0.2
MT14 IAML 05 55 25.8
comp=E,2µm,0.7s
LC01 Cunco 3.39 158 IAML 05 55 26.7
comp=E,876nm,1.1s
ROCH El Roble 3.45 37 eP Pn 05 54 13.6 -0.2
ROCH eP Pn **05 54 13.5 -0.3**
ROCH IAML 05 55 20.8
comp=N,905nm,0.4s
MT10 Hacienda Santa 3.47 45 eP Pn 05 54 14.0 0.0
MT10 IAML 05 55 23.2
comp=E,2µm,0.5s
PEL Peldehue 3.48 42 Pn 05 54 14.2 +0.1
PEL Peldehue 3.48 42 eP Pn 05 54 14.3 +0.2
PEL IAML 05 55 30.7
comp=E,392nm,0.4s
MT04 Ro Olivares 3.62 51 eP Pn 05 54 17.1 +0.9
MT04 Ro Olivares 3.62 51 iP Pn 05 54 15.8 -0.4
MT04 IAML 05 55 26.2
comp=Z,311nm,0.7s
VA06 Catapilco 3.67 30 Pn 05 54 16.0 -0.6
VA06 Catapilco 3.67 30 eP Pn 05 54 15.7 -0.8
MT08 Bocatoma Ro 3.67 52 Pn 05 54 17.0 +0.1
MT08 Bocatoma Ro 3.67 52 eP Pn 05 54 18.5 +1.6
MT08 Bocatoma Ro 3.67 52 iP Pn 05 54 17.9 +1.1
MT08 IAML 05 55 32.5
comp=Z,270nm,0.6s
VA03 San Esteban 3.85 40 Pn 05 54 19.1 0.0
VA03 San Esteban 3.85 40 iP Pn 05 54 19.2 0.0
VA03 San Esteban 3.85 40 iP Pn 05 54 18.9 -0.2
VA03 IAML 05 55 49.7
comp=Z,344nm,1.9s
LR04 Corral 4.12 179 Pn 05 54 21.5 -1.3
LR04 Corral 4.12 179 iP Pn 05 54 21.4 -1.4
LR04 IAML 05 55 48.2
comp=Z,195nm,1.7s
GO06 Curarrehue 4.14 158 Pn 05 54 24.0 +0.8
GO06 Curarrehue 4.14 158 eP Pn 05 54 24.1 +0.8
GO06 Curarrehue 4.14 158 iP Pn 05 54 23.4 +0.2
GO06 IAML 05 55 43.8
comp=Z,167nm,2.1s
RFA San Rafael 4.22 78 iP Pn 05 54 25.4 +1.1
RFA IAML 05 55 47.6
comp=Z,309nm,1.3s
CO04 Los Peladeros 4.25 30 Pn 05 54 23.9 -1.0
CO04 Los Peladeros 4.25 30 eP Pn 05 54 23.9 -1.0
LR05 Currie 4.62 166 Pn 05 54 30.7 +1.1
LR05 Currie 4.62 166 iP Pn 05 54 30.4 +0.8
LR05 IAML 05 56 06.0
comp=Z,327nm,1.4s
AAGR Agrelo 4.68 57 iP Pn 05 54 33.4 +2.8
H03S1 Juan Fernandez 4.85 292 T T 05 59 28.4
baz=113,slow=74,SNR=160
H03S3 Juan Fernandez 4.86 292 T T 05 59 32.0
baz=113,slow=74,SNR=95
H03S2 Juan Fernandez 4.87 292 T T 05 59 31.3
baz=113,slow=74,SNR=136
VA04 Juan Fernndez 4.88 294 Pn 05 54 33.4 +0.1
CO02 Combarbal 4.99 25 Pn 05 54 34.6 -0.3
CO02 Combarbal 4.99 25 iP Pn 05 54 34.3 -0.6
CO02 IAML 05 56 14.1
comp=Z,131nm,2.0s
H03N1 Juan Fernandez 5.04 296 T T 05 59 49.8
baz=109,slow=76,SNR=9.5
H03N3 Juan Fernandez 5.04 296 T T 05 59 48.4
baz=109,slow=76,SNR=17
H03N2 Juan Fernandez 5.05 296 T T 05 59 49.3
baz=109,slow=76,SNR=12
RTLS Leoncito 5.26 43 eP Pn 05 54 40.4 +1.5
RTLS iP Pn **05 54 40.6 +1.8**
RTLS IAML 05 56 20.0
comp=Z,384nm,2.2s
CO03 El Pedregal 5.43 26 Pn 05 54 40.5 -0.5
PLCA Paso Flores 5.48 156 P Pn **05 54 42.0 +0.5**
comp=Z,0.7nm,0.3s,baz=318,slow=11,SNR=13
comp=Z,3.4nm,0.5s
PLCA Paso Flores 5.48 156 Pn Pn **05 54 42.5 +0.9**
LL05 Los Muermos 5.64 180 Pn 05 54 43.1 -0.6
ZON Zonda 5.80 45 Pn 05 54 46.4 +0.3
GO04 Tololo Observa 6.01 23 Pn Pn **05 54 47.7 -1.3**
CFA Coronel Fontan 6.02 48 P Pn **05 54 49.8 +0.8**
comp=Z,7.7nm,0.3s,baz=225,slow=9.7,SNR=138
CFA S **Sn 05 55 57.8 0.0**
comp=Z,11nm,0.5s,baz=109,slow=18,SNR=2.0
comp=Z,18nm,0.3s
CO05 La Serena 6.12 19 Pn Pn **05 54 47.3 -3.0**
CO01 Juntas del Tor 6.43 27 Pn 05 54 53.8 -1.0
LL01 San Ignacio de 6.67 173 Pn 05 54 57.3 -0.4
LL07 Hotel Espejo d 7.07 180 Pn Pn **05 55 02.0 -1.3**
LCO Las Campanas 7.12 20 Pn Pn **05 55 03.1 -1.2**
GO07 Milladeo Hill, 7.35 181 Pn 05 56 06.6 -0.5
AC05 El Transito 7.41 22 Pn 05 55 07.7 -0.5
LL02 Futaleuf 7.53 171 Pn Pn **05 55 09.4 -0.2**
AC04 Llanos de Chal 7.80 16 Pn Pn **05 55 12.0 -1.4**
GO03 Copiapo 8.59 20 Pn Pn **05 55 23.4 -0.9**
AY01 Puyuhuapi 8.68 176 Pn 05 55 25.6 +0.3
AC06 Mina Casimiro 8.79 19 Pn Pn **05 55 26.1 -0.9**
TRQA Tornquist 9.50 107 Pn 05 55 37.9 +1.2
AC02 Maricunga 9.64 24 Pn 05 55 38.5 -0.6
COYC Coyhaique 9.87 174 Pn Pn **05 55 40.7 -1.0**
PB14 IPOC Station P 11.41 14 Pn Pn **05 56 01.9 -1.2**
AY03 Cochrane 11.51 177 Pn 05 56 05.4 +1.3
GO08 Villa O'Higgin 12.72 177 Pn Pn **05 56 20.0 -0.7**
CPUP Villa Florida 16.71 60 P Pn **05 57 13.3 -0.7**
comp=Z,0.2nm,0.3s,baz=248,slow=13,SNR=5.1
comp=Z,1.2nm,0.6s
CPUP Villa Florida 16.71 60 IAmb IAmb 05 57 15.8
comp=Z,7.3nm,1.5s
PB16 IPOC Station P 17.70 13 Pn Pn 05 57 26.1 -0.9
LPAZ La Paz 19.97 15 P Pn **05 57 56.5 +2.0**
comp=Z,3.0nm,0.9s,baz=175,slow=9.0,SNR=10
comp=Z,3.0nm,0.9s
ITAB Concordia 20.06 71 P P **05 57 53.9 +0.7**
ITAB IAmb IAmb 05 58 07.3
comp=Z,35nm,1.3s
ITAB Concordia 20.06 71 eP P 05 57 51.8 -1.3
AMBA Amambai (Brazi 20.53 56 eP P 05 57 59.1 +0.8
BDQN Bodoquena, MS 21.17 48 eP P 05 58 05.4 +0.1
PTGB Pitanga 21.48 65 eP P 05 58 08.9 +0.3
BBSD Serra de San D 21.75 35 eP P 05 58 11.6 +0.2
AQDB Aquidauana 21.80 50 P P **05 58 12.1 +0.1**
AQDB IAmb IAmb 05 58 12.8
comp=Z,16nm,1.1s
TRCB Terra Rica 22.25 60 P P **05 58 16.0 -0.9**
TRCB IAmb IAmb 05 58 19.4
comp=Z,49nm,1.2s
LDASE Londrina, Braz 22.96 64 eP P 05 58 24.1 -0.3
PTLB Pontes e Lacer 23.95 36 P P **05 58 33.0 -1.1**
PTLB IAmb IAmb 05 58 35.8
comp=Z,11nm,1.0s
PP1B Ponte de Pedra 24.48 47 eP P 05 58 39.2 +0.1
SALV Santo Antonio 25.36 43 eP P 05 58 46.7 -0.3

VILB Vilhena 25.67 31 P P **05 58 48.7 -1.2**
VILB IAmb IAmb 05 59 13.7
comp=Z,111nm,1.1s
RCLB Rio Claro- Sao 26.19 67 eP P 05 58 55.7 +1.0
BB19B Bebedouro 26.28 63 eP P 05 58 55.3 -0.1
VNA3 Neumayer Olymp 48.20 157 ⇓P P **06 02 01.7 +1.9**
comp=Z,7.4nm,0.9s
SNAA Sanae 50.42 157 ⇓P P **06 02 18.9 +2.0**
comp=Z,198nm,1.0s
SNAA Sanae 50.42 157 P P **06 02 17.1 +0.1**
comp=Z,7.8nm,0.9s,baz=238,slow=8.3,SNR=5.5
comp=Z,7.8nm,0.9s
SNAA Sanae 50.42 157 P P **06 02 17.8 +0.9**
SNAA IAmb IAmb 06 02 19.5
comp=Z,16nm,1.1s
TROLL Troll, Antarti 52.12 158 P P **06 02 31.5 +1.7**
ABD La Joyeuse, An 53.17 14 P P **06 02 36.2 -1.7**
QSPA South Pole Qui 54.48 180 P P **06 02 48.9 +1.7**
comp=Z,6.7nm,1.0s,baz=134,slow=3.9,SNR=8.8
comp=Z,6.7nm,1.0s
QSPA South Pole Qui 54.48 180 P P **06 02 49.2 +1.9**
QSPA IAmb IAmb 06 02 50.5
comp=Z,9.0nm,1.1s
QSPA PcP **PcP 06 03 50.2 -0.3**
TXAR Lajitas Array 70.71 332 P P 06 04 41.6 +5.8
comp=Z,0.4nm,0.6s,baz=144,slow=9.2,SNR=4.9
comp=Z,0.4nm,0.6s
DBIC Dimbokro 76.86 72 P P **06 05 12.9 +0.8**
comp=Z,8.4nm,1.0s,baz=197,slow=1.9,SNR=4.3
comp=Z,8.4nm,1.0s
DBIC Dimbokro 76.86 72 IAmb IAmb 06 05 13.7
comp=Z,13nm,1.1s
BOSA Boshof 80.30 118 P P **06 05 31.1 -0.1**
comp=Z,2.3nm,0.9s,baz=268,slow=6.4,SNR=3.8
comp=Z,2.3nm,0.9s
BOSA Boshof 80.30 118 IAmb IAmb 06 05 33.9
comp=Z,8.7nm,1.4s
NVAR Mina Array Bea 84.66 326 P P **06 05 56.6 +3.0**
comp=Z,0.3nm,0.7s,baz=160,slow=5.1,SNR=2.2
comp=Z,0.3nm,0.7s
PDAR Pinedale Array 84.80 334 P P 06 05 59.4 +5.2
comp=Z,1.5nm,1.2s,baz=143,slow=5.2,SNR=4.2
comp=Z,1.5nm,1.2s
TORD Torodi Ar. Bea 85.92 71 P P **06 05 59.5 -0.6**
comp=Z,2.3nm,1.1s,baz=239,slow=7.6,SNR=5.4
comp=Z,2.3nm,1.1s
ULM Lac du Bonnet 87.89 346 P P 06 06 14.4 +5.5
comp=Z,2.0nm,0.9s,baz=208,slow=9.8,SNR=2.9
comp=Z,2.0nm,0.9s
BVAR Borovoye Array 149.37 44 PKPbc **PKiKP 06 13 08.9 -0.4**
comp=Z,0.3nm,0.3s,baz=321,slow=2.1,SNR=4.1
ZALV Zalesovo Beam 156.34 33 PKPab **PKPab 06 13 43.8 +1.6**
comp=Z,0.7nm,0.4s,baz=303,slow=6.4,SNR=4.0
MKAR Makanchi Array 158.80 51 PKP **PKPdf 06 13 18.1 +0.8**
comp=Z,0.8nm,1.0s,baz=236,slow=0.4,SNR=4.6
NJ2 Nanjing 169.10 254 eP **PKPdf 06 13 25.8 -1.3**
NJ2 pmax pmax
comp=Z,22nm,0.6s
PZH PanZhiHua 169.91 155 PKP **PKPdf 06 13 26.8 -1.1**
HHC Hu-ho-hao-te 173.55 324 eP **PKPdf 06 13 26.8 -2.4**

ASRS ***25*** *05:54:56.0±1.7,51.59N×82.58E,h0km,M2.6(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
NNC ***25*** *05:54:57.0±1.2,51.86N×83.16E,h0km,mb3.1,mpv2.7, Error ellipse: s-maj=24.9km s-min=10.7km az=120.0, Suspected Mining explosion.*
IDC ***25*** *05:55:00.9±1.3,51.59N×82.57E,h0km,mbtmp2.9/2, ML2.4/2,Error ellipse: s-maj=15.8km s-min=11.5km az=130.0*
ISC 25 05:54:49.5±1.3,51.20N±0.05×83.37E±0.08,h0km,n8, σ1§08/8,5C-2D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**2.89**	**17**	⇑Pn	**Pn**	**05 55 35.5**	**-1.3**
	2.2nm,0.5s						
ZAA0				⇑Lg	Lg	05 56 12.1	
	2.6nm,0.5s						
ZALV	**Zalesovo Beam**	**2.89**	**17**	Pn	**Pg**	**05 55 45.5**	**+0.6**
	1.4nm,0.3s,baz=212,slow=15,SNR=15						
ZALV				Sn	**Sb**	**05 56 18.9**	**+1.0**
	1.3nm,0.3s,baz=207,slow=22,SNR=7.5						
ZALV				Lg	Lg	05 56 27.5	
	1.1nm,0.3s,baz=209,slow=26,SNR=5.8						
	4.4nm,0.4s						
I46RU	**ZALESOVO INFRA**	**2.89**	**17**	I	I	06 12 28.7	
	baz=212,slow=336,SNR=2.8						
KURK	**Kurchatov**	**3.04**	**263**	⇓Pn	**Pg**	**05 55 47.8**	**0.0**
	0.9nm,1.2s						
KURK				⇑Lg	Lg	05 56 31.6	
	5.0nm,0.7s						
KURBB	**Kurchatov Arra**	**3.12**	**261**	Pg	**Pg**	**05 55 50.0**	**+0.8**
	0.1nm,0.3s,baz=72,slow=18,SNR=6.4						
KURBB				Lg	Lg	05 56 25.2	
	0.3nm,0.3s,baz=71,slow=34,SNR=14						
MK31	**Makanchi Array**	**4.47**	**190**	Pn	**Pg**	**05 56 16.1**	**+1.1**
	1.0nm,0.6s,baz=13,slow=12,SNR=12						
MK31				⇓Lg	Lg	05 57 35.6	
	2.0nm,0.6s,baz=13,slow=26,SNR=9.1						
MKAR	**Makanchi Array**	**4.47**	**190**	Pn	**Pg**	**05 56 15.8**	**+0.8**
	0.3nm,0.3s,baz=6.6,slow=12,SNR=14						
MKAR				Lg	Lg	05 57 30.8	
	0.5nm,0.3s,baz=12,slow=29,SNR=16						
	1.1nm,0.6s						
MAKZ	**Makanchi**	**4.49**	**192**	⇑Pn	**Pg**	**05 56 15.0**	**-0.5**
	4.1nm,1.3s						
MAKZ				⇑Lg	Lg	05 57 37.0	
	4.8nm,1.4s						

KRSC 25 05:59:24.8±2.3,49.35N×158.95E,h31km±52km,MI3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.27**	**307**	eP	Pn	06 00 01.2	+1.2
SKR				eS	Sn	06 00 28.3	+1.4
PAU	**Pauzhetka**	**2.53**	**328**	eP	Pb	06 00 07.3	-2.1
KDTR	**Khodutka, Kamc**	**2.53**	**348**	eP	Pn	06 00 03.1	-0.5
KDTR				eS	Sn	06 00 35.9	+2.5
RUS	**Russkaya**	**3.10**	**355**	eP	Pn	06 00 15.0	+3.5
ASAK	**Asacha**	**3.11**	**348**	eP	Pb	06 00 15.9	-3.6
MTVR	**Mutnovka**	**3.18**	**351**	eP	Pn	06 00 16.2	+3.5
MTVR				eS	Sb	06 00 54.7	-4.2
GRL	**Gorelyy**	**3.26**	**351**	eP	Pb	06 00 17.9	-4.0
GRL				eS	Sn	06 00 55.4	+5.8
KRMR	**Karymshinskiy**	**3.53**	**352**	eP	Pb	06 00 21.9	-4.5
KRMR				eS	Sb	06 01 03.4	-5.3
SPN	**Mys Shipunski**	**3.82**	**10**	eP	Pn	06 00 25.7	+4.3
UGLR	**Uglovaya**	**3.87**	**359**	eP	Pb	06 00 27.9	-4.4
KOK	**Koryaka**	**3.96**	**357**	eP	Pn	06 00 28.5	+5.1
KRX	**Arik**	**4.02**	**357**	eP	Pb	06 00 30.0	-5.0
GNL	**Ganaly**	**4.40**	**352**	eP	Pn	06 00 34.7	+5.2
KBTR	**Krutoberegovo**	**7.26**	**17**	eP	Pn	06 01 13.3	+4.6

ASRS ***25*** *06:04:50.0±0.9,54.14N×86.46E,h0km,M2.5(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 25 06:04:52.7±2.6,54.12N×86.44E,h0km,mbtmp2.8/2, ML2.6/2,Error ellipse: s-maj=21.7km s-min=12.9km az=58.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.97**	**261**	I	I	06 11 30.0	
	baz=82,slow=325,SNR=1.3						
ZALV	**Zalesovo Beam**	**0.97**	**261**	Pg	Pg	06 05 10.0	-1.2
	0.7nm,0.3s,baz=81,slow=17,SNR=8.1						
ZALV				Lg	Lg	06 05 25.3	
	2.2nm,0.3s,baz=77,slow=30,SNR=9.9						
KURBB	**Kurchatov Arra**	**5.97**	**237**	Pn	Pn	06 06 22.9	+0.7
	0.1nm,0.3s,baz=54,slow=13,SNR=4.8						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**7.79**	**201**	Pn	Pn	06 06 48.5	+1.3
	0.2nm,0.3s,baz=24,slow=13,SNR=8.7						
	0.2nm,0.3s						

IDC ***25*** *06:11:09.5±1.4,49.23N×158.39E,h0km,mb3.3/3, mbtmp3.3/4,ML2.1/1,Error ellipse: s-maj=41.3km s-min=35.7km az=103.0*
KRSC ***25*** *06:11:12.4±1.8,49.40N×158.73E,h46km±53km,Ml4.0*
ISC 25 06:11:12.3±1.2,49.27N±0.09×158.48E±0.09,h18km,n20, σ1§09/27,mb3.4/3,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.08**	**314**	eP	**Pn**	**06 11 45.7**	**-0.5**
SKR				eS	**Sn**	**06 12 10.8**	**-0.8**
PAU	**Pauzhetka**	**2.44**	**335**	eP	**Pn**	**06 11 52.6**	**+1.3**
PAU				eS	**Sn**	**06 12 21.6**	**+0.9**
KDTR	**Khodutka, Kamc**	**2.55**	**354**	eS	**Sn**	**06 12 21.8**	**-1.5**
ASAK	**Asacha**	**3.14**	**354**	eS	**Sn**	**06 12 37.5**	**-0.4**
RUS	**Russkaya**	**3.17**	**0**	eP	**Pn**	**06 12 01.2**	**0.0**
RUS				eS	**Sn**	**06 12 36.2**	**-2.3**
MTVR	**Mutnovka**	**3.22**	**357**	eP	**Pn**	**06 12 03.4**	**+1.3**
MTVR				eS	**Sn**	**06 12 40.1**	**0.0**
GRL	**Gorelyy**	**3.29**	**356**	eP	**Pn**	**06 12 04.3**	**+1.2**
GRL				eS	**Sn**	**06 12 41.4**	**-0.4**
KRMR	**Karymshinskiy**	**3.57**	**357**	eP	**Pn**	**06 12 08.2**	**+1.5**
KRMR				eS	**Sn**	**06 12 48.7**	**+0.3**
PET	**Petropavlovsk**	**3.76**	**2**	eS	**Sn**	**06 12 52.1**	**-0.9**
DALK	**Dalny**	**3.77**	**3**	eP	**Pn**	**06 12 09.7**	**+0.3**
DALK				eS	**Sn**	**06 12 51.9**	**-1.4**
PETK	**Petropavlovsk-**	**3.87**	**353**	Pn	**Pn**	**06 12 11.4**	**+0.5**
	0.7nm,0.3s,baz=187,slow=16,SNR=8.0						
	1.1nm,0.3s						
UGLR	**Uglovaya**	**3.95**	**3**	eP	**Pn**	**06 12 12.5**	**+0.5**
SPN	**Mys Shipunski**	**3.95**	**14**	eP	**Pn**	**06 12 12.0**	**0.0**
KOK	**Koryaka**	**4.03**	**1**	eP	**Pn**	**06 12 14.4**	**+1.2**
KRX	**Arik**	**4.09**	**1**	eP	**Pn**	**06 12 15.7**	**+1.6**
GNL	**Ganaly**	**4.44**	**356**	eP	**Pn**	**06 12 20.7**	**+1.9**
KBTR	**Krutoberegovo**	**7.43**	**19**	eP	**Pn**	**06 12 59.9**	**+0.2**
MKAR	**Makanchi Array**	**48.97**	**298**	P	**P**	**06 19 56.8**	**-0.6**
	0.1nm,0.4s,baz=58,slow=5.2,SNR=1.8						
	0.1nm,0.4s						
WRA	**Warramunga Arr**	**72.17**	**204**	P	**P**	**06 22 35.9**	**0.0**
	0.6nm,0.8s,baz=15,slow=6.1,SNR=2.5						
	0.6nm,0.8s						
TXAR	**Lajitas Array**	**73.13**	**65**	P	**P**	**06 22 42.2**	**+0.4**
	0.2nm,0.5s,baz=320,slow=7.5,SNR=4.8						
	0.2nm,0.5s						

KRSC 25 06:16:19.7±1.9,49.48N×158.58E,h42km±48km,MI3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.99**	**308**	eP	Pn	06 16 51.2	+0.4
SKR				eS	Sn	06 17 15.4	+1.0
PAU	**Pauzhetka**	**2.28**	**331**	eS	Sn	06 17 25.1	+3.5
KDTR	**Khodutka, Kamc**	**2.35**	**352**	eP	Pn	06 16 58.5	+2.7
KDTR				eS	Sn	06 17 27.2	+3.9
ASAK	**Asacha**	**2.94**	**352**	eP	Pn	06 17 07.9	+4.1
RUS	**Russkaya**	**2.95**	**359**	eP	Pn	06 17 06.9	+2.9
RUS				eS	Sn	06 17 42.2	+4.0
MTVR	**Mutnovka**	**3.01**	**355**	eP	Pn	06 17 08.3	+3.3
MTVR				eS	Sn	06 17 44.1	+4.2
GRL	**Gorelyy**	**3.09**	**354**	eS	Sn	06 17 46.6	+4.9
KRMR	**Karymshinskiy**	**3.36**	**355**	eP	Pn	06 17 13.8	+4.2
SPN	**Mys Shipunski**	**3.73**	**14**	eP	Pn	06 17 17.7	+3.0
SPN				eS	Sn	06 18 01.3	+4.0
UGLR	**Uglovaya**	**3.73**	**2**	eP	Pn	06 17 20.4	+5.6
SMAR	**Somma**	**3.79**	**2**	eP	Pn	06 17 21.0	+5.3
AVH	**Avacha**	**3.79**	**1**	eP	Pn	06 17 20.5	+5.0
KOK	**Koryaka**	**3.81**	**1**	eP	Pn	06 17 20.8	+4.8
KRX	**Arik**	**3.88**	**1**	eP	Pn	06 17 21.0	+4.1
GNL	**Ganaly**	**4.24**	**355**	eP	Pn	06 17 26.3	+4.6
KBTR	**Krutoberegovo**	**7.21**	**19**	eP	Pn	06 18 06.6	+4.2

IDC 25 06:17:25.6±1.2,30.52N×140.73E,h0km,mb3.3/4, mbtmp3.3/6,ML3.1/2,Error ellipse: s-maj=48.6km s-min=24.3km az=95.0,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**6.36**	**341**	Pn	Pn	06 19 00.4	-0.2
	0.2nm,0.3s,baz=154,slow=12,SNR=5.6						
	1.4nm,0.5s						
KSRS	**Korea Array**	**12.67**	**306**	Pn	Pn	06 20 27.2	+0.2
	0.3nm,0.3s,baz=111,slow=14,SNR=4.0						
	0.5nm,0.4s						
H11N2	**WAKE ISLAND Hy 25.95**	**108**		T	T	06 50 27.1	
	baz=300,slow=75,SNR=52						
H11N1	**WAKE ISLAND Hy 25.96**	**108**		T	T	06 50 27.0	
	baz=300,slow=75,SNR=47						
H11N3	**WAKE ISLAND Hy 25.97**	**108**		T	T	06 50 28.0	
	baz=300,slow=75,SNR=55						
H11S3	**WAKE ISLAND Hy 26.41**	**111**		T	T	06 51 01.5	
	baz=302,slow=75,SNR=9.5						
H11S1	**WAKE ISLAND Hy 26.42**	**111**		T	T	06 51 05.1	
	baz=302,slow=75,SNR=11						
H11S2	**WAKE ISLAND Hy 26.43**	**111**		T	T	06 51 02.6	
	baz=302,slow=75,SNR=8.7						
WRA	**Warramunga Arr**	**50.55**	**188**	P	P	06 26 24.9	-1.0
	0.7nm,1.0s,baz=4.7,slow=7.6,SNR=2.2						
	0.7nm,1.0s						
ASAR	**Alice Springs**	**54.28**	**188**	P	P	06 26 54.4	+0.8
	0.3nm,1.0s,baz=17,slow=8.6,SNR=1.9						
	0.3nm,1.0s						
ILAR	**Eielson Array**	**55.36**	**30**	P	P	06 27 01.1	+0.2
	0.5nm,1.0s,baz=274,slow=5.7,SNR=4.8						
	0.5nm,1.0s						
YKA	**Yellowknife Ar**	**69.75**	**29**	P	P	06 28 36.8	-0.4
	0.2nm,0.9s,baz=301,slow=6.9,SNR=2.1						
	0.2nm,0.9s						

IDC ***25*** *06:20:08.2±1.3,30.40N×140.78E,h0km,mb3.4/4, mbtmp3.5/6,ML3.0/2,Error ellipse: s-maj=53.9km s-min=22.7km az=86.0*
JMA ***25*** *06:20:12.4±0.4,31°N±2°×14°1E±°,h0km,MV4.1/23,NEAR TORISHIMA IS*
ISC 25 06:20:16.0±1.5,30.96N±0.09×141.1E±0.2,h100km,n19, σ1§23/14,mb3.6/4,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAOM	**Aogashimamukai**	**1.91**	**322**	eS	**Sn**	**06 21 09.6**	**-1.8**
JHJ2	**Mitsune**	**2.43**	**333**	eS	**Sn**	**06 21 22.4**	**-1.0**
JHJ	**Hachijo jima 2**	**2.45**	**332**	Pn	**Pn**	**06 20 54.8**	**+0.4**
	11nm,0.3s,baz=54,slow=13,SNR=1.2						
JHJ				Sn	**Sn**	**06 21 22.3**	**-1.6**
	43nm,0.3s,baz=52,slow=23,SNR=5.8						
	78nm,0.8s						
BSO1	**Boso 1**	**3.69**	**358**	eP	**Pn**	**06 21 09.8**	**-0.6**
BSO3	**Boso 3**	**3.87**	**352**	eP	**Pn**	**06 21 13.4**	**+0.2**
BSO3				eS	**Sn**	**06 21 58.1**	**+0.6**
BSO4	**Boso 4**	**4.08**	**351**	eP	**Pn**	**06 21 16.0**	**-0.1**
BSO4				eS	**Sn**	**06 22 02.5**	**-0.3**
JNY	**Yasuok**	**5.18**	**329**	eP	**Pn**	**06 21 33.4**	**+2.2**
JHO	**Hitachi**	**5.66**	**355**	eP	**Pn**	**06 21 39.4**	**+1.7**
MJAR	**Matsushiro Arr**	**6.08**	**337**	Pn	**Pn**	**06 21 44.6**	**+1.2**
	0.2nm,0.3s,baz=151,slow=13,SNR=4.6						
	1.6nm,0.3s						
H11N2	**WAKE ISLAND Hy 25.76**	**110**		T	T	06 53 08.9	
	baz=300,slow=75,SNR=44						
H11N1	**WAKE ISLAND Hy 25.76**	**110**		T	T	06 53 10.0	
	baz=300,slow=75,SNR=37						
H11N3	**WAKE ISLAND Hy 25.77**	**110**		T	T	06 53 10.7	
	baz=300,slow=75,SNR=48						
H11S3	**WAKE ISLAND Hy 26.24**	**112**		T	T	06 53 41.6	
	baz=303,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy 26.24**	**112**		T	T	06 53 43.7	
	baz=303,slow=75,SNR=19						
H11S2	**WAKE ISLAND Hy 26.25**	**112**		T	T	06 53 43.7	
	baz=303,slow=75,SNR=14						
KURBB	**Kurchatov Arra**	**49.74**	**312**	P	P	06 29 03.5	+5.5
	0.2nm,0.6s,baz=82,slow=6.0,SNR=2.3						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**51.03**	**188**	P	**P**	**06 29 07.4**	**-0.5**
	0.8nm,0.8s,baz=1.1,slow=7.5,SNR=2.4						
	0.8nm,0.8s						
ASAR	**Alice Springs**	**54.75**	**188**	P	**P**	**06 29 35.3**	**0.0**
	0.2nm,0.3s,baz=8.9,slow=6.1,SNR=2.0						
	0.2nm,0.3s						
ILAR	**Eielson Array**	**54.80**	**30**	P	P	06 29 44.0	+8.8
	0.6nm,1.0s,baz=262,slow=5.9,

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**0.36**	**13**	*eP*	**Pn**	**06 26 45.4**	**+1.1**
THIG				*i* S	**Sn**	**06 26 56.0**	**-0.4**
THIG		**0.36**	**13**	*i* P	**Pn**	**06 26 45.5**	**+1.3**
THIG				*i* S	**Sn**	**06 26 56.0**	**-0.4**
SMCA	**Catarina**	**0.40**	**42**	*i* P	**Pn**	**06 26 45.5**	**+1.0**
SMCA				*i* S	**Sn**	**06 26 56.2**	**-0.6**
PATR	**El Naranjo**	**0.56**	**11**	*eP*	**Pn**	**06 26 45.9**	**+0.1**
PATR				*eS*	**Sn**	**06 26 56.5**	**-2.7**
CHUJ	**Union Juarez**	**0.58**	**24**	*eP*	**Pn**	**06 26 46.1**	**+0.2**
CHUJ				*eS*	**Sn**	**06 26 57.5**	**-1.9**
RTAL	**Retalhuleu**	**0.64**	**93**	*eP*	**Pn**	**06 26 49.0**	**+3.0**
RTAL				*eS*	**Sn**	**06 27 02.3**	**+2.7**
PAVE	**Pavencul**	**0.65**	**15**	*eP*	**Pn**	**06 26 46.8**	**+0.3**
PAVE				*eS*	**Sn**	**06 26 58.4**	**-1.9**
STG2	**El Palmar, Qui**	**0.95**	**97**	*i* P	**Pn**	**06 26 48.9**	**-0.1**
STG2				*i* S	**Sn**	**06 27 01.3**	**-3.5**
STG8	**El Palmar, Qui**	**0.97**	**96**	*i* P	**Pn**	**06 26 49.4**	**+0.1**
STG5	**El Palmar, Qui**	**0.98**	**99**	*i* P	**Pn**	**06 26 49.5**	**+0.2**
STG5				*i* S	**Sn**	**06 27 02.5**	**-2.8**
HUEH	**Huehuetenango**	**1.11**	**47**	*eP*	**Pn**	**06 26 52.6**	**+1.8**
HUEH				*i* S	**Sn**	**06 27 08.2**	**+0.2**
HUEH	**Huehuetenango**	**1.11**	**47**	*i* P	**Pn**	**06 26 52.7**	**+2.0**
HUEH				*i* S	**Sn**	**06 27 08.4**	**+0.4**
PCIG		**1.41**	**324**	*eP*	**Pn**	**06 26 55.5**	**+1.7**
PCIG				*i* S	**Sn**	**06 27 12.8**	**-0.7**
CCIG	**Comitan**	**1.73**	**7**	*eP*	**Pn**	**06 26 58.9**	**+1.1**
CCIG				*eS*	**Sn**	**06 27 18.6**	**-1.9**
CMIG	**Matias Romero**	**3.50**	**316**	*eP*	**Pn**	**06 27 19.7**	**-1.0**
CMIG				*eS*	**Sn**	**06 28 02.7**	**+1.2**

IDC ***25*** *06:30:10.5±4.8,27˚.25N×55˚.57E, h0km, mb3.8/10, mbtmp3.9/11, ML4.3/1, Error ellipse: s-maj=94.3km s-min=22.5km az=171.0*
TEH ***25*** *06:30:20.8,28˚.17N×55˚.32E, h18km±25km, ML3.9, Presumed earthquake*
DSN ***25*** *06:30:22.7±1.2,28˚.09N×55˚.41E, h15km, ML3.3/13, Error ellipse: s-maj=17.7km s-min=11.4km az=73.0*
OMAN ***25*** *06:30:24.0±1.2,27˚.98N×55˚.26E, h30km, mb3.5/9, ml3.6/18, Error ellipse: s-maj=11.2km s-min=4.9km az=24.0*

ISC 25 06:30:21.1±0.7**, 28˚.15N**±0˚.04×**55˚.38E**±0˚.04**, h22**km**, n75,**
σ1°**47**/105**, mb3.7**/10**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	**1.02**	**136**	Pg	**Pb**	**06 30 41.3**	**+1.0**
JHRM	**Jahrom**	**1.63**	**283**	Pg	**Pn**	**06 30 50.3**	**+1.7**
KHL1	**Khalili_Fars**	**1.91**	**255**	Pn	**Pn**	**06 30 54.2**	**+1.9**
LMD1	**Lamerd**	**2.12**	**248**	Pn	**Pn**	**06 30 56.7**	**+1.5**
SHME	**Shamm**	**2.20**	**162**	P	**Pn**	**06 30 57.8**	**+1.6**
SHME	**Shamm**	**2.20**	**162**	P	**Pn**	**06 30 57.5**	**+1.2**
SHME				S	**Sn**	**06 31 23.7**	**+0.9**
BANOM	**Banah** SNR=19	**2.36**	**159**	*eP*	**Pn**	**06 30 59.6**	**+1.0**
BANOM	**Banah**	**2.36**	**159**	P	**Pn**	**06 31 00.1**	**+1.5**
BANOM				S	**Sn**	**06 31 27.8**	**+0.9**
KHGB	**Koh Gabri**	**2.42**	**23**	Pn	**Pn**	**06 31 02.1**	**+2.5**
CHMN	**Cheshme madani**	**2.55**	**47**	Pn	**Pn**	**06 31 04.0**	**+2.6**
MASF	**Masafi** SNR=8.6	**2.85**	**166**	P	**Pn**	**06 31 06.7**	**+1.4**
MASF				S	**Sn**	**06 31 39.4**	**+0.4**
MSFE	**Esma-Masafi** SNR=8.7	**2.86**	**166**	*eP*	**Pn**	**06 31 06.9**	**+1.4**
KRM1	**Kerman Provinc**	**2.87**	**35**	Pn	**Pn**	**06 31 08.1**	**+2.3**
KBAM	**BAM**	**2.88**	**69**	Pn	**Pn**	**06 31 07.9**	**+2.1**
MDH	**Madha**	**2.95**	**164**	P	**Pn**	**06 31 07.8**	**+1.1**
MDH				S	**Sn**	**06 31 42.1**	**+0.7**
ZRDN	**Zarand Kerman**	**2.99**	**19**	Pn	**Pn**	**06 31 08.9**	**+1.5**
NAZ	**Nazwa, Dubai**	**3.15**	**175**	P	**Pn**	**06 31 11.4**	**+1.9**
NAZ	**Nazwa, Dubai**	**3.15**	**175**	P	**Pn**	**06 31 10.2**	**+0.7**
NAZ				S	**Sn**	**06 31 47.2**	**+0.7**
UOSS	**Minazif** SNR=6.2	**3.27**	**167**	*i* P	**Pn**	**06 31 12.8**	**+1.7**
UOSS	**Minazif**	**3.27**	**167**	P	**Pn**	**06 31 12.7**	**+1.7**
UOSS				S	**Sn**	**06 31 49.6**	**+0.2**
IMEH	**Mehriz**	**3.30**	**349**	Pn	**Pn**	**06 31 13.6**	**+1.9**
HATD	**Hatta, Dubai**	**3.38**	**168**	P	**Pn**	**06 31 14.8**	**+2.2**
HATD	**Hatta, Dubai** SNR=5.5	**3.38**	**168**	P	**Pn**	**06 31 13.8**	**+1.3**
HATD				S	**Sn**	**06 31 52.4**	**+0.5**
FAQ	**Al Faqa, Dubai**	**3.39**	**177**	P	**Pn**	**06 31 14.4**	**+1.7**
FAQ	**Al Faqa, Dubai**	**3.39**	**177**	P	**Pn**	**06 31 13.6**	**+0.9**
FAQ				S	**Sn**	**06 31 53.1**	**+0.8**
IBAF	**Bafgh**	**3.44**	**3**	Pn	**Pn**	**06 31 14.9**	**+1.5**
ASHO	**Ashiyiah** SNR=9.1	**3.50**	**170**	*i* P	**Pn**	**06 31 15.5**	**+1.2**
ASHO				S	**Sn**	**06 31 57.5**	**+2.4**
ASHO	**Ashiyiah** SNR=8.8	**3.50**	**170**	P	**Pn**	**06 31 15.7**	**+1.5**
ASHO				S	**Sn**	**06 31 55.8**	**+0.7**
ASUD	**Al Ashush, Dub** SNR=8.4	**3.50**	**181**	*i* P	**Pn**	**06 31 17.0**	**+2.7**
ASUD	**Al Ashush, Dub** SNR=8.4	**3.50**	**181**	P	**Pn**	**06 31 15.5**	**+1.2**
ASUD				S	**Sn**	**06 31 55.7**	**+0.6**
AJN	**Ajban**	**3.58**	**186**	P	**Pn**	**06 31 16.3**	**+0.9**
AJN				S	**Sn**	**06 31 57.4**	**+0.4**
DSBU	**Dashti - Bushe**	**3.64**	**274**	Pn	**Pn**	**06 31 17.3**	**+1.2**
TAFT	**Taft - Yazd**	**3.71**	**344**	Pn	**Pn**	**06 31 19.1**	**+1.7**
JRN	**Qarnain Island**	**3.91**	**216**	P	**Pn**	**06 31 20.7**	**+0.8**
SOHO	**SOHO**	**4.13**	**165**	P	**Pn**	**06 31 23.2**	**+0.4**
SOHO	**SOHO**	**4.13**	**165**	P	**Pn**	**06 31 24.2**	**+1.4**
SOHO				S	**Sn**	**06 32 11.1**	**+0.6**
KLNJ	**Kolanjah**	**4.36**	**312**	Pn	**Pn**	**06 31 27.6**	**+1.2**
IRAM	**Rameshesh**	**4.48**	**325**	Pn	**Pn**	**06 31 29.2**	**+1.4**
SHMA	**Al-Shehemyia** SNR=27	**4.55**	**241**	P	**Pn**	**06 31 29.1**	**+0.5**
SHMA	SNR=5.7			S	**Sn**	**06 32 21.8**	**+1.0**
HOQ	**Hoqain**	**4.87**	**159**	P	**Pn**	**06 31 34.5**	**+1.4**
HOQ				S	**Sn**	**06 32 29.9**	**+1.2**
ARQ	**Araqi** SNR=11	**4.90**	**168**	P	**Pn**	**06 31 35.3**	**+1.8**
ARQ				S	**Sn**	**06 32 31.2**	**+1.6**
TRNA	**Turayna**	**5.05**	**229**	P	**Pn**	**06 31 36.2**	**+0.7**
TRNA	SNR=9.2			S	**Sn**	**06 32 34.0**	**+0.9**
ANAR	**Anarak**	**5.22**	**345**	Pn	**Pn**	**06 31 39.6**	**+1.6**
BIDO	**Bidbid**	**5.23**	**151**	P	**Pn**	**06 31 38.5**	**+0.6**
BIDO				S	**Sn**	**06 32 38.3**	**+0.6**
SLWR	**Sila**	**5.24**	**220**	P	**Pn**	**06 31 39.1**	**+1.0**
SLWR				S	**Sn**	**06 32 38.2**	**+0.4**
SMRA	**Abu-Samra**	**5.30**	**231**	P	**Pn**	**06 31 39.1**	**+0.2**
SMRA				S	**Sn**	**06 32 39.6**	**+0.2**
MZR	**Muzera**	**5.40**	**199**	P	**Pn**	**06 31 41.0**	**+0.6**
MZR				S	**Sn**	**06 32 42.3**	**+0.4**
UMZA	**Um Al Zommool**	**5.41**	**182**	P	**Pn**	**06 31 42.1**	**+1.6**
UMZA				S	**Sn**	**06 32 42.7**	**+0.6**
IZEF	**Zefreh**	**5.42**	**332**	Pn	**Pn**	**06 31 42.0**	**+1.3**
SMDO	**Samad**	**5.61**	**154**	P	**Pn**	**06 31 44.7**	**+1.3**
SMDO				S	**Sn**	**06 32 48.7**	**+1.5**
BSY	**Bisya**	**5.62**	**163**	P	**Pn**	**06 31 44.4**	**+1.0**
BSY				S	**Sn**	**06 32 49.0**	**+1.6**
WSAR	**Wadi Sarin** SNR=9.2	**5.70**	**148**	P	**Pn**	**06 31 45.2**	**+0.7**
WSAR				S	**Sn**	**06 32 49.1**	**-0.2**
JMDO	**Jabal Madar**	**6.26**	**156**	P	**Pn**	**06 31 53.5**	**+1.4**
JMDO				S	**Sn**	**06 33 02.7**	**-0.3**
SRVN	**Saravan**	**6.26**	**95**	Pn	**Pn**	**06 31 54.9**	**+2.5**
AMIS	**Naft Sefid**	**6.34**	**305**	Pn	**Pn**	**06 31 54.3**	**+0.9**
WBK	**Wadi Bani Khal** SNR=8.9	**6.40**	**149**	P	**Pn**	**06 31 54.5**	**+0.4**
WBK				S	**Sn**	**06 33 04.2**	**-2.3**
JLN	**Jalan Bani Buh** SNR=7.5	**7.00**	**148**	P	**Pn**	**06 32 02.2**	**-0.1**
JLN				S	**Sn**	**06 33 17.4**	**-3.9**
MHTO	**MHTO**	**7.51**	**161**	P	**Pn**	**06 32 10.0**	**+0.7**
MHTO				S	**Sn**	**06 33 33.1**	**-0.6**
DOK	**Doka**	**9.55**	**187**	P	**Pn**	**06 32 37.3**	**-0.1**
DOK				S	**Sn**	**06 34 20.9**	**-3.2**
RAYN	**Ar Rayn**	**10.01**	**245**	P	**Pn**	**06 32 43.8**	**+0.1**
RAYN				S	Sn	06 34 29.7	-5.7
SHAO	**Shalim**	**10.08**	**179**	P	**Pn**	**06 32 44.5**	**-0.1**
SHAO				S	**Sn**	**06 34 32.6**	**-4.4**
WHFO	**Wadi Hawf** SNR=15	**10.29**	**189**	P	**Pn**	**06 32 47.1**	**-0.4**
DMTO	**DMTO**	**10.39**	**182**	P	**Pn**	**06 32 48.6**	**-0.2**
ABTO	**Aybut** SNR=6.6	**10.91**	**191**	P	**Pn**	**06 32 55.9**	**-0.2**
ASF	**Jabal al Asfar** 1.0nm,0.3s,baz=327,slow=5.4,SNR=9.6 2.0nm,0.4s	**16.48**	**289**	Pn	Pn	06 34 07.1	-3.9
AAK	**Ala-Archa** 2.9nm,0.5s,baz=220,slow=5.5,SNR=12 2.9nm,0.5s	**21.19**	**42**	P	**P**	**06 35 04.8**	**-0.4**
BRTR	**Keskin Array B** 1.3nm,0.6s,baz=134,slow=12,SNR=8.0 1.3nm,0.6s	**21.36**	**308**	P	**P**	**06 35 07.3**	**+0.3**
AKTO	**Aktyubinsk** 1.1nm,0.4s,baz=179,slow=9.4,SNR=4.4 1.1nm,0.4s	**22.35**	**4**	P	**P**	**06 35 20.1**	**+2.7**
BVAR	**Borovoye Array** 0.4nm,0.4s,baz=224,slow=6.0,SNR=1.8 0.4nm,0.4s	**27.23**	**20**	P	**P**	**06 36 03.2**	**-0.1**
MKAR	**Makanchi Array** 0.7nm,0.5s,baz=228,slow=9.7,SNR=9.2 0.7nm,0.5s	**28.12**	**41**	P	**P**	**06 36 09.0**	**-2.4**
KURBB	**Kurchatov Arra** 0.3nm,0.6s,baz=232,slow=8.6,SNR=4.4 0.3nm,0.6s	**28.49**	**32**	P	**P**	**06 36 12.8**	**-1.7**
ZALV	**Zalesovo Beam** 0.8nm,0.3s,baz=239,slow=8.6,SNR=4.1 0.8nm,0.3s	**33.59**	**32**	P	**P**	**06 36 57.1**	**-2.3**
FINES	**FINESS Array B** 1.2nm,0.6s,baz=119,slow=7.0,SNR=4.1 1.2nm,0.6s	**38.60**	**338**	P	**P**	**06 37 41.8**	**-0.4**
HFS	**Hagfors** 6.4nm,1.0s,baz=119,slow=9.3,SNR=7.6 6.4nm,1.0s	**42.58**	**331**	P	**P**	**06 38 14.3**	**-0.9**
ESDC	**Sonseca Array** 0.5nm,0.8s,baz=98,slow=9.7,SNR=1.9 0.5nm,0.8s	**49.76**	**300**	P	**P**	**06 39 10.9**	**-1.1**

IDC ***25*** *06:30:50.5±0.5,24˚.35N×46˚.23W, h0km, mb4.2/23, mbtmp4.3/23, MS4.7/1, Error ellipse: s-maj=16.3km s-min=13.1km az=113.0*
NEIC ***25*** *06:30:53.0±1.4,24˚.3N±0˚.1×46˚.10W±0˚.08, h10km±1km, mb4.7/34, Error ellipse: s-maj=18.3km s-min=11.5km az=162.0*

ISC 25 06:30:52.3±0.5**, 24˚.32N**±0˚.08×**46˚.09W**±0˚.10**, h10**km**, n65,**
σ0°**94**/52**, mb4.5**/37**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBGH	**Gun Hill**	**16.90**	**231**	P	**P**	**06 34 54.3**	**+3.2**
OBIP	**Obispado Ponce**	**20.12**	**256**	P	Pn	06 35 28.3	0.0
MDP	**Montagnes des** 15nm,0.9s,baz=131,slow=7.8,SNR=2.3 15nm,0.9s	**20.12**	**199**	P	**P**	**06 35 26.2**	**-0.4**
DR12	**Loma Pena Alta**	**22.34**	**260**		**P**	**06 35 52.1**	**+1.5**
BOAV	**Boa Vista**	**25.87**	**215**	P	**P**	**06 36 26.1**	**+1.6**
FRNY	**Flat Rock**	**30.29**	**319**	P	**P**	**06 37 04.8**	**+1.1**
FRNY	comp=Z,13nm,1.4s			IAmb	IAmb	06 37 08.2	
SCHQ	**Schefferville** comp=Z,4.8nm,0.9s,baz=118,slow=7.3,SNR=5.8 comp=Z,4.8nm,0.9s	**34.15**	**339**	P	**P**	**06 37 37.9**	**+0.5**
SCHQ	**Schefferville** comp=Z,8.4nm,1.0s	**34.15**	**339**	IAmb	IAmb	06 37 38.9	
KUQ	**Kuujjuuaa**	**37.34**	**341**	P	**P**	**06 38 05.6**	**+0.9**
KUQ	comp=Z,13nm,1.0s			IAmb	IAmb	06 38 06.0	
OTAV	**Otavalo**	**39.44**	**237**		**P**	**06 38 22.3**	**-1.1**
BDFB	**Brasilia** comp=Z,4.5nm,0.8s,baz=347,slow=9.2,SNR=6.8 comp=Z,4.5nm,0.8s	**39.76**	**183**	P	**P**	**06 38 25.6**	**0.0**
BDFB	**Brasilia** comp=Z,7.5nm,0.9s	**39.76**	**183**	IAmb	IAmb	06 38 28.0	
TBO	**Thunder Bay**	**41.70**	**317**	P	**P**	**06 38 41.5**	**+0.3**
TBO	comp=Z,29nm,1.3s			IAmb	IAmb	06 38 50.3	
ATAH	**Atahualpa** comp=Z,951nm,21.7s,baz=360,slow=36	**44.38**	**229**	LR	LR	06 57 43.7	
H10N2	**ASCENSION HYDR** baz=317,slow=75,SNR=43	**44.40**	**132**	T	T	07 26 15.8	
H10N3	**ASCENSION HYDR** baz=311,slow=75,SNR=42	**44.40**	**132**	T	T	07 26 15.7	
H10N1	**ASCENSION HYDR** baz=317,slow=75,SNR=56	**44.41**	**132**	T	T	07 26 17.1	
EPLO	**Experimental L** comp=Z,7.3nm,0.8s	**44.71**	**317**	P	**P**	**06 39 05.8**	**+0.2**
EPLO				IAmb	IAmb	06 39 06.0	
H10S3	**ASCENSION HYDR** baz=265,slow=74,SNR=29	**45.10**	**133**	T	T	07 27 10.8	
H10S2	**ASCENSION HYDR** baz=315,slow=74,SNR=24	**45.12**	**133**	T	T	07 27 11.3	
AGMN	**Agassiz Nation**	**45.72**	**315**		**P**	**06 39 13.8**	**+0.2**
AGMN	comp=Z,6.5nm,0.8s			IAmb	IAmb	06 39 14.0	
LPAZ	**La Paz** comp=Z,3.8nm,0.9s,baz=16,slow=8.5,SNR=15 comp=Z,3.8nm,0.9s	**45.73**	**210**	P	**P**	**06 39 14.8**	**+0.1**
LPAZ	**La Paz** comp=Z,5.7nm,1.0s	**45.73**	**210**	IAmb	IAmb	06 39 15.9	
ULM	**Lac du Bonnet** comp=Z,8.2nm,1.0s,baz=81,slow=8.0,SNR=8.9 comp=Z,8.2nm,1.0s	**46.20**	**317**	P	**P**	**06 39 16.0**	**-1.4**
TORD	**Torodi Ar. Bea** comp=Z,7.3nm,1.0s,baz=292,slow=9.2,SNR=22 comp=Z,7.3nm,1.0s	**46.39**	**95**	P	**P**	**06 39 20.1**	**+0.8**
BRDY	**Brady**	**46.95**	**291**		**P**	**06 39 22.9**	**-0.7**
BRDY	comp=Z,16nm,1.3s			IAmb	IAmb	06 39 32.0	
APMT	**Aspermont**	**47.74**	**294**		**P**	**06 39 29.8**	**+0.1**
SMWD	**Samnorwood**	**47.74**	**296**	P	**P**	**06 39 29.3**	**-0.5**
SMWD	comp=Z,8.5nm,0.8s			IAmb	IAmb	06 39 30.5	
FCC	**Fort Churchill**	**48.12**	**329**		**P**	**06 39 32.6**	**+0.5**
PB11	**IPOC Station P**	**49.46**	**210**	P	**P**	**06 39 42.1**	**-1.0**
TXAR	**Lajitas Array** comp=Z,0.7nm,0.7s,baz=97,slow=7.6,SNR=7.3 comp=Z,0.7nm,0.7s	**51.20**	**289**	P	**P**	**06 39 54.7**	**-1.5**
TX31	**Lajitas Ar. Si**	**51.20**	**289**	P	**P**	**06 39 55.3**	**-1.0**
BLKN	**Baker Lake** comp=Z,6.2nm,1.2s	**51.35**	**335**	P	**P**	**06 39 57.2**	**+0.5**
BLKN				IAmb	IAmb	06 39 58.0	
CPUP	**Villa Florida** comp=Z,2.4nm,0.8s,baz=13,slow=8.6,SNR=6.1 comp=Z,2.4nm,0.8s	**51.51**	**193**	P	**P**	**06 39 57.5**	**-0.7**
CPUP	**Villa Florida** comp=Z,5.2nm,1.1s	**51.51**	**193**	IAmb	IAmb	06 39 59.9	
AF01	**San Pedro de A**	**51.65**	**206**	P	**P**	**06 39 59.4**	**-0.4**
VHRN	**Van Horn**	**52.11**	**291**		**P**	**06 40 02.6**	**-0.5**
VHRN	comp=Z,11nm,1.4s			IAmb	IAmb	06 40 14.3	
GERES	**GERESS Array B** comp=Z,1.2nm,0.8s,baz=243,slow=5.8,SNR=7.6 comp=Z,1.2nm,0.8s	**52.36**	**46**	P	**P**	**06 40 04.9**	**+0.3**
121A	**Cookes Peak, D**	**54.23**	**294**	P	**P**	**06 40 19.9**	**+1.2**
121A	comp=Z,16nm,1.2s			IAmb	IAmb	06 40 30.8	
HFS	**Hagfors** comp=Z,4.6nm,1.0s,baz=222,slow=11,SNR=3.9 comp=Z,4.6nm,1.0s	**54.25**	**32**	P	**P**	**06 40 18.2**	**0.0**
PV01	**Paradox Valley**	**54.26**	**300**	P	**P**	**06 40 18.7**	**-0.2**
RLMT	**Red Lodge**	**54.51**	**309**		**P**	**06 40 21.4**	**+0.7**
RLMT	comp=Z,8.8nm,1.1s			IAmb	IAmb	06 40 21.9	
MODS	**Modra-Piesok**	**54.70**	**47**	*eP*	**P**	**06 40 22.4**	**+0.7**
PDAR	**Pinedale Array** comp=Z,2.5nm,0.9s,baz=91,slow=7.9,SNR=14 comp=Z,2.5nm,0.9s	**54.75**	**306**	P	**P**	**06 40 20.9**	**-1.5**
PDAR	**Pinedale Array**	**54.75**	**306**		**P**	**06 40 21.3**	**-1.2**
EGMT	**Eagleton** comp=Z,7.5nm,0.9s	**54.89**	**313**	IAmb	IAmb	06 40 23.9	
YNE	**Yellowstone No** comp=Z,5.3nm,0.9s	**55.03**	**309**	P	**P**	**06 40 24.1**	**-0.4**
YNE				IAmb	IAmb	06 40 25.4	
YKA	**Yellowknife Ar** comp=Z,1.9nm,1.0s,baz=98,slow=7.0,SNR=20 comp=Z,1.9nm,1.0s	**58.82**	**330**	P	**P**	**06 40 48.8**	**-1.9**
ELK	**Elko**	**59.14**	**304**		**P**	**06 40 52.7**	**-0.9**
ELK	comp=Z,3.2nm,0.8s			IAmb	IAmb	06 40 54.1	
PLID	**Pearl Lake** comp=Z,4.9nm,0.8s	**59.27**	**309**	P	**P**	**06 40 54.0**	**-0.4**
PLID				IAmb	IAmb	06 40 54.9	
FINES	**FINESS Array B** comp=Z,8.2nm,1.2s,baz=270,slow=1.9,SNR=3.8 comp=Z,8.2nm,1.2s	**60.44**	**32**	P	**P**	**06 41 01.8**	**0.0**
ARCES	**ARCESS Array B** comp=Z,6.1nm,0.9s,baz=308,slow=4.5,SNR=4.1 comp=Z,6.1nm,0.9s	**61.01**	**22**	P	**P**	**06 41 06.1**	**+0.4**
NVAR	**Mina Array Bea** comp=Z,0.7nm,0.7s,baz=110,slow=9.0,SNR=4.9 comp=Z,0.7nm,0.7s	**61.82**	**302**	P	**P**	**06 41 10.6**	**-1.3**
AKASG	**Malin Array Be** comp=Z,2.0nm,0.7s,baz=282,slow=5.5,SNR=9.0 comp=Z,2.0nm,0.7s	**62.41**	**44**	P	**P**	**06 41 15.1**	**-0.3**
BRTR	**Keskin Array B** comp=Z,2.3nm,1.0s,baz=258,slow=3.7,SNR=6.3 comp=Z,2.3nm,1.0s	**67.28**	**55**	P	**P**	**06 41 48.1**	**+0.5**
PLCA	**Paso Flores** comp=Z,5.4nm,0.9s,baz=9.8,slow=5.9,SNR=14 comp=Z,5.4nm,0.9s	**68.60**	**200**	P	**P**	**06 41 55.1**	**-0.4**
ILAR	**Eielson Array** comp=Z,2.7nm,1.1s,baz=70,slow=4.8,SNR=16 comp=Z,2.7nm,1.1s	**72.74**	**334**	P	**P**	**06 42 20.2**	**-0.2**
ILAR	**Eielson Array**	**72.74**	**334**	P	**P**	**06 42 20.0**	**-0.4**
KBZ	**Khabaz** comp=Z,2.1nm,0.8s,baz=312,slow=11,SNR=4.8 comp=Z,2.1nm,0.8s	**72.92**	**49**	P	**P**	**06 42 21.7**	**-0.1**
BVAR	**Borovoye Array** comp=Z,1.8nm,0.8s,baz=290,slow=4.4,SNR=9.0 comp=Z,1.8nm,0.8s	**85.37**	**33**	P	**P**	**06 43 29.4**	**-0.5**
KURK	**Kurchatov**	**90.81**	**32**	P	**P**	**06 43 55.5**	**-0.4**
KURK	**Kurchatov** comp=Z,5.2nm,1.3s	**90.81**	**32**	IAmb	IAmb	06 43 58.1	
KURBB	**Kurchatov Arra** comp=Z,2.3nm,1.0s,baz=307,slow=5.3,SNR=9.5 comp=Z,2.3nm,1.0s	**90.83**	**32**	P	**P**	**06 43 55.5**	**-0.5**
ZALV	**Zalesovo Beam** comp=Z,0.3nm,0.3s,baz=304,slow=3.3,SNR=4.1 comp=Z,0.3nm,0.3s	**91.31**	**27**	P	**P**	**06 43 58.3**	**+0.2**
ASAR	**Alice Springs** comp=Z,0.6nm,1.0s,baz=47,slow=3.1,SNR=4.2	**179.35**	**1**	PKP	**PKPdf**	**06 51 03.0**	**-0.9**

IDC ***25*** *06:31:52.6±1.5,11˚.05S×115˚.16E, h0km, mb3.7/6, mbtmp3.8/8, ML3.7/2, MS4.2/2, Error ellipse: s-maj=56.3km s-min=19.2km az=45.0*
NEIC ***25*** *06:31:53.8±1.9,11˚.15S±0˚.08×115˚.22E±0˚.09, h10km±1km, mb4.0/8, Error ellipse: s-maj=18.7km s-min=7.5km az=230.0*
DJA ***25*** *06:31:54.6±0.8,11˚.5S±8˚×11˚.5E±˚, h10km, M4.4/25, mB5.2/2, mb4.6/7, MLv4.2/25, Mw(mB)4.5/2*

ISC 25 06:31:53.7±0.8**, 11˚.18S**±0˚.09×**115˚.20E**±0˚.07**, h10**km**, n43,**
σ0°**95**/43**, mb4.1**/6**, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGBI	**Denpasar**	**2.34**	**359**	P	**Pn**	**06 32 31.5**	**-0.8**
DNP	**Denpasar**	**2.48**	**0**	P	**Pn**	**06 32 34.1**	**-0.1**
RTBI	**Rangdo, Negare**	**2.71**	**355**	P	**Pn**	**06 32 36.9**	**-0.5**
KHKI	**Kahang-Kahang**	**2.83**	**8**	P	**Pn**	**06 32 39.5**	**+0.6**
KLNI	**Mataram**	**2.88**	**18**	P	**Pn**	**06 32 40.0**	**+0.3**
JAGI	**Jajag, Banyuwa**	**2.88**	**339**		**Pn**	**06 32 38.6**	**-1.1**
JAGI	**Jajag, Banyuwa**	**2.88**	**339**	P	**Pn**	**06 32 38.3**	**-1.4**
TWSI	**Taliwang, Sumb**	**2.94**	**35**	P	**Pn**	**06 32 40.5**	**0.0**
BYJI	**Banyuwangi**	**3.06**	**344**	P	**Pn**	**06 32 42.0**	**-0.1**
SRBI	**Singaraja**	**3.07**	**0**	P	**Pn**	**06 32 42.6**	**+0.3**
GMJI	**Gumukmas**	**3.36**	**329**	P	**Pn**	**06 32 44.8**	**-1.5**
PLAI	**Plampang**	**3.45**	**48**	P	**Pn**	**06 32 47.7**	**+0.2**
ABJI	**Asem Bagus**	**3.49**	**344**	P	**Pn**	**06 32 47.7**	**-0.4**
BLJI	**Banyuglugur**	**3.76**	**335**	P	**Pn**	**06 32 52.0**	**+0.2**
DBNI	**Kabupaten Domp**	**4.06**	**49**	P	**Pn**	**06 32 57.0**	**+1.1**
WBSI	**Waikabubak, Su**	**4.40**	**70**	P	**Pn**	**06 33 00.5**	**-0.1**
SNJI	**Sawahan-Nganju**	**4.79**	**315**	P	**Pn**	**06 33 07.4**	**+1.4**
PCJI	**Pacitan**	**4.95**	**306**	P	**Pn**	**06 33 08.4**	**+0.3**
LBFI	**Labuhan Bajo,**	**5.34**	**60**	P	**Pn**	**06 33 12.9**	**-0.7**
UGM	**Wanagama**	**5.64**	**305**		**Pn**	**06 33 17.7**	**0.0**
UGM	**Wanagama**	**5.64**	**305**	P	**Pn**	**06 33 17.5**	**-0.1**
KPJI	**Karang Pucung**	**7.27**	**301**	P	**Pn**	**06 33 41.5**	**+1.5**
KAPI	**Kappang** 1.7nm,0.3s,baz=220,slow=12,SNR=6.8 5.1nm,0.3s	**7.60**	**37**	Pn	**Pn**	**06 33 45.2**	**+0.5**
KAPI	**Kappang**	**7.60**	**37**		**Pn**	**06 33 43.7**	**-0.9**
BBJI	**Bungbulang**	**8.31**	**296**	Pn	**Pn**	**06 33 55.5**	**+1.1**
MBWA	**Marble Bar**	**10.84**	**157**	Pn	**Pn**	**06 34 28.6**	**-0.4**
PSA00	**Pilbara Seismi**	**11.26**	**157**	Pn	**Pn**	**06 34 34.2**	**-0.5**
FITZ	**Fitzroy Crossi** 0.3nm,0.3s,baz=311,slow=13,SNR=7.4	**12.22**	**125**	Pn	**Pn**	**06 34 48.2**	**+0.3**
FITZ	0.4nm,0.3s,baz=172,slow=14,SNR=5.2 1.4nm,0.6s			Sn	Sn	06 36 56.8	-7.5
MNAI	**Manna**	**13.89**	**298**	Pn	**Pn**	**06 35 09.8**	**-0.9**
MORW	**Morawa**	**17.82**	**178**		**Pn**	**06 36 01.7**	**-0.2**
WB0	**Warramunga Arr**	**20.36**	**117**	P	**P**	**06 36 30.5**	**-0.1**
WB0	comp=Z,12nm,1.4s			IAmb	IAmb	06 36 45.5	
WRA	**Warramunga Arr** comp=Z,1.6nm,0.9s,baz=297,slow=11,SNR=7.7 comp=Z,1.6nm,0.9s	**20.38**	**118**	P	**P**	**06 36 32.5**	**+1.7**
WR8	**Warramunga Arr**	**20.52**	**118**	P	**P**	**06 36 34.1**	**+1.8**
WR8	comp=Z,7.9nm,1.2s			IAmb	IAmb	06 36 48.5	
WR0	**Warramunga Arr**	**20.56**	**117**	P	**P**	**06 36 33.8**	**+1.0**
WR0	comp=Z,11nm,1.4s		

PAU				*e*S		**Sn**	**06 34 46.3**	**-0.1**
PAU				A		A	06 34 48.6	
	comp=N,280nm,0.3s							
PAU				A		A	06 34 48.6	
	comp=N,260nm,0.3s							
KDTR	**Khodutka, Kamc**	**2.78**	**5**	PN		**Pn**	**06 34 20.3**	**-0.7**
KDTR				S		**Sn**	**06 34 51.8**	**-1.5**
KDTR	**Khodutka, Kamc**	**2.78**	**5**	*e*P		**Pn**	**06 34 20.3**	**-0.7**
KDTR				*e*S		**Sn**	**06 34 51.9**	**-1.5**
KDTR	**Khodutka, Kamc**	**2.78**	**5**	*e*P		**Pn**	**06 34 20.3**	**-0.7**
KDTR				*e*S		**Sn**	**06 34 51.8**	**-1.5**
ASAK	**Asacha**	**3.35**	**2**	PN		**Pn**	**06 34 28.7**	**-0.2**
ASAK				S		**Sn**	**06 35 07.1**	**-0.4**
ASAK	**Asacha**	**3.35**	**2**	*e*P		**Pn**	**06 34 28.7**	**-0.2**
ASAK				*e*S		**Sn**	**06 35 07.1**	**-0.4**
RUS	**Russkaya**	**3.44**	**8**	PN		**Pn**	**06 34 29.7**	**-0.3**
RUS				S		**Sn**	**06 35 08.2**	**-1.2**
RUS	**Russkaya**	**3.44**	**8**	*e*P		**Pn**	**06 34 29.7**	**-0.3**
RUS				*e*S		**Sn**	**06 35 08.2**	**-1.2**
RUS	**Russkaya**	**3.44**	**8**	*e*P		**Pn**	**06 34 27.9**	**-2.1**
MTVR	**Mutnovka**	**3.46**	**5**	PN		**Pn**	**06 34 30.3**	**-0.2**
MTVR				S		**Sn**	**06 35 10.0**	**-0.3**
MTVR	**Mutnovka**	**3.46**	**5**	*e*P		**Pn**	**06 34 30.4**	**-0.2**
MTVR				*e*S		**Sn**	**06 35 10.0**	**-0.3**
GRL	**Gorelyy**	**3.52**	**4**	PN		**Pn**	**06 34 31.3**	**0.0**
GRL				S		**Sn**	**06 35 11.9**	**+0.1**
GRL	**Gorelyy**	**3.52**	**4**	*e*P		**Pn**	**06 34 31.4**	**0.0**
GRL				*e*S		**Sn**	**06 35 12.0**	**+0.1**
KRMR	**Karymshinskiy**	**3.81**	**4**	PN		**Pn**	**06 34 35.4**	**+0.4**
KRMR	**Karymshinskiy**	**3.81**	**4**	*e*P		**Pn**	**06 34 35.5**	**+0.4**
KRMR	**Karymshinskiy**	**3.81**	**4**	*e*P		**Pn**	**06 34 35.4**	**+0.4**
APC	**Apacha**	**3.91**	**355**	PN		**Pn**	**06 34 37.1**	**+0.7**
APC	**Apacha**	**3.91**	**355**	*e*P		**Pn**	**06 34 37.1**	**+0.7**
PET	**Petropavlovsk**	**4.03**	**8**	Pn		**Pn**	**06 34 37.9**	**-0.4**
PET	**Petropavlovsk**	**4.03**	**8**	*e*Pn		**Pn**	**06 34 37.8**	**-0.4**
PET	**Petropavlovsk**	**4.03**	**8**	*e*P		**Pn**	**06 34 37.6**	**-0.6**
PET				*e*S		**Sn**	**06 35 23.1**	**-1.0**
PET	**Petropavlovsk**	**4.03**	**8**	*e*P		**Pn**	**06 34 37.8**	**-0.4**
PET				AMB		AMB	06 34 40.5	
	comp=N,30nm,0.3s							
PET				*e*S		**Sn**	**06 35 23.2**	**-1.0**
PET				A		A	06 35 27.2	
	comp=N,40nm,0.2s							
PET				A		A	06 35 27.2	
	comp=N,20nm,0.2s							
DALK	**Dalny**	**4.05**	**9**	PN		**Pn**	**06 34 38.0**	**-0.4**
DALK	**Dalny**	**4.05**	**9**	*e*P		**Pn**	**06 34 38.1**	**-0.4**
DALK				*e*S		**Sn**	**06 35 23.6**	**-1.0**
DALK	**Dalny**	**4.05**	**9**	*e*P		**Pn**	**06 34 38.0**	**-0.4**
PEA0B	**Petropavlovsk-**	**4.08**	**360**	Pn		**Pn**	**06 34 39.3**	**+0.5**
PEA0B	**Petropavlovsk-**	**4.08**	**360**	⇓*i*PN		**Pn**	**06 34 39.6**	**+0.8**
PETK	**Petropavlovsk-**	**4.08**	**360**	Pn		**Pn**	**06 34 38.5**	**-0.3**
	comp=N,2.1nm,0.3s,baz=146,slow=16,SNR=21							
PETK				Sn		**Sn**	**06 35 28.9**	**+3.6**
	comp=N,0.3nm,0.3s,baz=254,slow=11,SNR=1.5							
	comp=N,5.7nm,0.6s							
UGLR	**Uglovaya**	**4.23**	**9**	PN		**Pn**	**06 34 41.4**	**+0.3**
UGLR	**Uglovaya**	**4.23**	**9**	*e*P		**Pn**	**06 34 41.4**	**+0.3**
AVH	**Avacha**	**4.28**	**8**	PN		**Pn**	**06 34 42.0**	**+0.3**
AVH	**Avacha**	**4.28**	**8**	*e*P		**Pn**	**06 34 42.1**	**+0.3**
AVH	**Avacha**	**4.28**	**8**	*e*P		**Pn**	**06 34 42.0**	**+0.3**
SMAR	**Somma**	**4.29**	**9**	PN		**Pn**	**06 34 42.9**	**+1.1**
SMAR	**Somma**	**4.29**	**9**	*e*P		**Pn**	**06 34 43.0**	**+1.1**
KOK	**Koryaka**	**4.30**	**7**	PN		**Pn**	**06 34 42.7**	**+0.8**
KOK	**Koryaka**	**4.30**	**7**	*e*P		**Pn**	**06 34 42.7**	**+0.8**
KOK	**Koryaka**	**4.30**	**7**	*e*P		**Pn**	**06 34 42.7**	**+0.8**
SPN	**Mys Shipunski**	**4.32**	**19**	PN		**Pn**	**06 34 41.1**	**-1.0**
SPN	**Mys Shipunski**	**4.32**	**19**	*e*P		**Pn**	**06 34 41.1**	**-1.0**
SPN				*e*S		**Sn**	**06 35 28.6**	**-2.6**
KRX	**Arik**	**4.37**	**7**	PN		**Pn**	**06 34 43.3**	**+0.4**
KRX	**Arik**	**4.37**	**7**	*e*P		**Pn**	**06 34 43.4**	**+0.4**
GNL	**Ganaly**	**4.67**	**2**	PN		**Pn**	**06 34 47.8**	**+0.8**
GNL	**Ganaly**	**4.67**	**2**	*e*P		**Pn**	**06 34 47.9**	**+0.8**
KII	**Karymskiy**	**5.12**	**12**	PN		**Pn**	**06 34 53.9**	**+0.7**
KII	**Karymskiy**	**5.12**	**12**	*e*P		**Pn**	**06 34 53.9**	**+0.7**
KUR	**Kuril'sk**	**7.72**	**244**	⇓*e*PN		**Pn**	**06 35 30.5**	**+1.7**
KUR	**Kuril'sk**	**7.72**	**244**	*e*P		**Pn**	**06 35 30.5**	**+1.7**
KBTR	**Krutoberegovo**	**7.82**	**21**	PN		**Pn**	**06 35 29.4**	**-0.7**
KBTR	**Krutoberegovo**	**7.82**	**21**	*e*P		**Pn**	**06 35 29.5**	**-0.7**
SEY	**Seymchan**	**14.23**	**350**	LR		LR	06 43 08.8	
	comp=N,961nm,21.6s,baz=262,slow=40							
KLR	**Kul'dur**	**16.97**	**280**	⇓*e*P		**P**	**06 37 32.5**	**-2.6**
KLR	**Kul'dur**	**16.97**	**280**	*e*P		**P**	**06 37 32.5**	**-2.6**
ZEA	**Zeya**	**19.50**	**296**	*e*P		**Pn**	**06 38 07.3**	**+3.0**
ZEA				pmax		pmax		
	comp=Z,10.0nm,1.3s							
BILL	**Bilibino**	**19.54**	**10**	⇓*e*P		**Pn**	**06 38 03.7**	**-0.9**
BILL	**Bilibino**	**19.54**	**10**	*e*P		**Pn**	**06 38 03.7**	**-0.9**
TNA	**Tin City**	**24.40**	**35**	P		**P**	**06 38 56.2**	**+2.6**
TNA				IAmb		IAmb	06 38 56.5	
	comp=Z,4.6nm,0.9s							
ANM	**Nome**	**24.99**	**38**	P		**P**	**06 39 01.1**	**+2.0**
ANM				IAmb		IAmb	06 39 02.8	
	comp=Z,6.9nm,1.2s							
ANM	**Nome**	**24.99**	**38**	P		**P**	**06 39 01.1**	**+2.0**
ANM				pmax		pmax		
	comp=Z,7.0nm,1.2s							
B20K	**Meade River**	**29.92**	**29**	P		**P**	**06 39 44.0**	**+0.9**
B20K				IAmb		IAmb	06 40 02.5	
	comp=Z,3.6nm,1.4s							
IMAR	**Indian Mountai**	**30.08**	**38**	P		**P**	**06 39 46.1**	**+1.5**
H21K	**Melozitna Rive**	**30.41**	**39**	P		**P**	**06 39 49.0**	**+1.5**
H21K				IAmb		IAmb	06 39 51.8	
	comp=Z,2.5nm,1.2s							
E22K	**Anaktuvuk Pass**	**31.24**	**34**	P		**P**	**06 39 56.3**	**+1.5**
E24K	**Your Creek**	**32.45**	**34**	P		**P**	**06 40 07.3**	**+1.8**
ILAR	**Eielson Array**	**32.81**	**41**	P		**P**	**06 40 09.1**	**+0.4**
	comp=Z,0.2nm,0.8s,baz=297,slow=9.5,SNR=4.6							
	comp=Z,0.2nm,0.8s							
ILAR	**Eielson Array**	**32.81**	**41**	*e*P		**P**	**06 40 11.4**	**+2.8**
D25K	**Kavik River**	**33.40**	**32**	P		**P**	**06 40 15.1**	**+1.3**
D25K				IAmb		IAmb	06 40 15.8	
	comp=Z,1.2nm,0.5s							
BMAR	**Burnt Mountain**	**33.87**	**36**	P		**P**	**06 40 20.0**	**+2.2**
F28M	**Old Crow**	**35.68**	**36**	P		**P**	**06 40 35.3**	**+1.9**
F28M				IAmb		IAmb	06 40 36.3	
	comp=Z,2.4nm,0.9s							
I28M	**Miner Creek**	**35.74**	**39**	P		**P**	**06 40 35.4**	**+1.3**
G31M	**Satah River**	**37.90**	**37**	P		**P**	**06 40 54.1**	**+1.8**
YKA	**Yellowknife Ar**	**47.21**	**39**	P		**P**	**06 42 07.6**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=298,slow=8.8,SNR=3.7							
	comp=Z,0.3nm,0.8s							
YKA	**Yellowknife Ar**	**47.21**	**39**	*e*P		**P**	**06 42 09.1**	**+1.2**
YKA				pmax		pmax		
	comp=Z,1.0nm,1.0s							
MKAR	**Makanchi Array**	**48.63**	**298**	P		**P**	**06 42 16.9**	**-2.3**
	comp=Z,0.2nm,0.6s,baz=47,slow=6.9,SNR=3.8							
	comp=Z,0.2nm,0.6s							
MKAR	**Makanchi Array**	**48.63**	**298**	*e*P		**P**	**06 42 19.4**	**+0.2**
MKAR	**Makanchi Array**	**48.63**	**298**	*e*P		**P**	**06 42 19.4**	**+0.2**
KURK	**Kurchatov**	**48.67**	**304**	P		**P**	**06 42 18.2**	**-1.1**
KURK	**Kurchatov**	**48.67**	**304**	IAmb		IAmb	06 43 02.2	
	comp=Z,1.2nm,0.8s							
KURK	**Kurchatov**	**48.67**	**304**	⇓*e*P		**P**	**06 42 16.7**	**-2.6**
KURK				pmax		pmax		
	comp=Z,9.0nm,3.2s							
KURK	**Kurchatov**	**48.67**	**304**	*e*P		**P**	**06 42 16.7**	**-2.6**
KURBB	**Kurchatov Arra**	**48.77**	**304**	P		**P**	**06 42 18.2**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=65,slow=8.1,SNR=4.9							
	comp=Z,0.2nm,0.3s							
BORK	**Borovoye**	**51.81**	**310**	⇑*e*P		**P**	**06 42 40.0**	**-3.1**
BORK				pmax		pmax		
	comp=Z,12nm,3.8s							
BLKN	**Baker Lake**	**53.32**	**31**	P		**P**	**06 42 55.3**	**+1.3**
OBN	**Obninsk**	**65.12**	**327**	*e*P		**P**	**06 44 15.0**	**-0.7**
OBN				*e*			06 44 48.4	
OBN				*e*			06 46 36.1	
OBN				pmax		pmax		
	comp=Z,4.0nm,0.9s							
OBN	**Obninsk**	**65.12**	**327**	*e*P		**P**	**06 44 15.0**	**-0.7**
WRA	**Warramunga Arr**	**71.76**	**203**	P		**P**	**06 44 56.7**	**-0.9**
	comp=Z,1.1nm,1.0s,baz=18,slow=6.2,SNR=3.9							
	comp=Z,1.1nm,1.0s							
TXAR	**Lajitas Array**	**73.69**	**64**	P		**P**	**06 45 10.0**	**+0.8**
	comp=Z,0.4nm,0.8s,baz=289,slow=3.8,SNR=3.6							
	comp=Z,0.4nm,0.8s							
ASAR	**Alice Springs**	**75.44**	**202**	P		**P**	**06 45 18.4**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=26,slow=4.9,SNR=3.4							
	comp=Z,0.5nm,0.8s							
BFO	**Black Forest**	**79.46**	**340**	*i* P		**P**	**06 45 43.0**	**+1.5**

*IDC **25** 06:37:55.2±1.3, 49°.47N×158°.63E, h0km, mb3.4/4,*

mbtmp3.4/5, ML2.4/1, MS3.5/1, Error ellipse: s-maj=35.6km s-min=28.1km az=81.0
*KRSC **25** 06:37:57.3±1.8, 49°.44N×158°.60E, h31km±55km, Ml3.9*

ISC 25 06:37:58.3±1.2, 49°.36N±0°.09×158°.42E±0°.09, h18km, n22, σ1§08/34, mb3.5/4, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.99**	**313**	*e*P		**Pn**	**06 38 29.9**	**-1.0**
SKR				*e*S		**Sn**	**06 38 55.2**	**-0.1**
PAU	**Pauzhetka**	**2.34**	**335**	*e*P		**Pn**	**06 38 36.4**	**+0.6**
PAU				*e*S		**Sn**	**06 39 06.0**	**+1.9**
KDTR	**Khodutka, Kamc**	**2.46**	**355**	*e*P		**Pn**	**06 38 37.3**	**-0.1**
KDTR				*e*S		**Sn**	**06 39 06.6**	**-0.4**
ASAK	**Asacha**	**3.04**	**354**	*e*P		**Pn**	**06 38 46.4**	**+0.8**
ASAK				*e*S		**Sn**	**06 39 21.7**	**+0.2**
RUS	**Russkaya**	**3.07**	**1**	*e*P		**Pn**	**06 38 45.4**	**-0.4**
RUS				*e*S		**Sn**	**06 39 21.7**	**-0.4**
MTVR	**Mutnovka**	**3.13**	**357**	*e*P		**Pn**	**06 38 46.2**	**-0.6**
MTVR				*e*S		**Sn**	**06 39 23.1**	**-0.6**
GRL	**Gorelyy**	**3.20**	**356**	*e*P		**Pn**	**06 38 48.3**	**+0.5**
GRL				*e*S		**Sn**	**06 39 25.2**	**-0.2**
KRMR	**Karymshinskiy**	**3.48**	**357**	*e*P		**Pn**	**06 38 52.3**	**+0.9**
KRMR				*e*S		**Sn**	**06 39 31.8**	**-0.3**
PET	**Petropavlovsk**	**3.67**	**2**	*e*P		**Pn**	**06 38 54.0**	**-0.1**
PET				*e*S		**Sn**	**06 39 35.9**	**-0.9**
DALK	**Dalny**	**3.68**	**3**	*e*P		**Pn**	**06 38 54.1**	**-0.1**
DALK				*e*S		**Sn**	**06 39 36.1**	**-1.0**
PETK	**Petropavlovsk-**	**3.78**	**353**	Pn		**Pn**	**06 38 55.2**	**-0.4**
	1.3nm,0.3s,baz=149,slow=16,SNR=15							
PETK				Sn		**Sn**	**06 39 40.2**	**+0.7**
	0.6nm,0.3s,baz=24,slow=38,SNR=1.9							
	3.5nm,0.5s							
SPN	**Mys Shipunski**	**3.87**	**14**	*e*P		**Pn**	**06 38 58.0**	**+1.2**
SPN				*e*S		**Sn**	**06 39 39.7**	**-2.1**
AVH	**Avacha**	**3.91**	**3**	*e*P		**Pn**	**06 38 59.0**	**+1.5**
AVH				*e*S		**Sn**	**06 39 44.8**	**+1.8**
SMAR	**Somma**	**3.91**	**3**	*e*P		**Pn**	**06 38 59.6**	**+2.0**
KOK	**Koryaka**	**3.94**	**2**	*e*P		**Pn**	**06 38 58.9**	**+1.0**
KRX	**Arik**	**4.00**	**2**	*e*P		**Pn**	**06 39 00.5**	**+1.7**
GNL	**Ganaly**	**4.35**	**356**	*e*P		**Pn**	**06 39 04.7**	**+1.2**
MKAR	**Makanchi Array**	**48.89**	**298**	P		**P**	**06 46 42.4**	**-0.4**
	0.4nm,0.9s,baz=52,slow=9.3,SNR=2.5							
	0.4nm,0.9s							
KURBB	**Kurchatov Arra**	**48.97**	**304**	P		**P**	**06 46 42.6**	**-0.6**
	0.2nm,0.5s,baz=65,slow=8.4,SNR=2.5							
	0.2nm,0.5s							
YBH	**Yreka Blue Hor**	**53.40**	**66**	LR		LR	07 07 23.3	
	comp=Z,51nm,20.4s,baz=54,slow=33							
WRA	**Warramunga Arr**	**72.24**	**204**	P		**P**	**06 49 23.8**	**+1.5**
	0.5nm,0.8s,baz=20,slow=4.5,SNR=4.7							
	0.5nm,0.8s							
TXAR	**Lajitas Array**	**73.13**	**65**	P		**P**	**06 49 26.3**	**-1.4**
	0.3nm,0.6s,baz=298,slow=5.2,SNR=5.4							
	0.3nm,0.6s							

*IDC **25** 06:39:09.3±0.8, 30°.41N×140°.25E, h0km, mb3.8/10, mbtmp3.8/12, ML3.2/2, Error ellipse: s-maj=23.0km s-min=18.9km az=97.0*

ISC 25 06:39:14.7±0.9, 30°.5N±0°.1×140°.3E±0°.1, h35km, n21, σ0§91/12, mb3.8/10, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**6.30**	**345**	Pn		**Pn**	**06 40 44.3**	**-0.8**
	0.2nm,0.3s,baz=150,slow=12,SNR=8.7							
	0.5nm,0.8s							
KSRS	**Korea Array**	**12.38**	**308**	Pn		**Pn**	**06 42 09.2**	**+0.8**
	0.4nm,0.3s,baz=117,slow=12,SNR=13							
	0.4nm,0.4s							
H11N2	**WAKE ISLAND Hy**	**26.32**	**108**	T		T	07 12 08.0	
	baz=300,slow=75,SNR=189							
H11N1	**WAKE ISLAND Hy**	**26.33**	**108**	T		T	07 12 09.0	
	baz=300,slow=75,SNR=123							
H11N3	**WAKE ISLAND Hy**	**26.34**	**108**	T		T	07 12 11.2	
	baz=300,slow=75,SNR=183							
H11S3	**WAKE ISLAND Hy**	**26.77**	**110**	T		T	07 12 43.2	
	baz=302,slow=75,SNR=42							
H11S1	**WAKE ISLAND Hy**	**26.78**	**110**	T		T	07 12 44.1	
	baz=302,slow=75,SNR=46							
H11S2	**WAKE ISLAND Hy**	**26.79**	**110**	T		T	07 12 44.8	
	baz=302,slow=75,SNR=37							
CMAR	**Chiang Mai Arr**	**39.26**	**262**	P		**P**	**06 46 40.6**	**+0.6**
	1.8nm,0.3s,baz=57,slow=6.0,SNR=6.5							
	1.8nm,0.3s							
MKAR	**Makanchi Array**	**47.06**	**307**	P		**P**	**06 47 42.6**	**-0.2**
	0.3nm,0.6s,baz=88,slow=8.6,SNR=4.6							
	0.3nm,0.6s							
KURBB	**Kurchatov Arra**	**49.50**	**312**	P		**P**	**06 48 00.4**	**-1.2**
	0.7nm,0.9s,baz=93,slow=6.7,SNR=4.6							
	0.7nm,0.9s							
WRA	**Warramunga Arr**	**50.44**	**187**	P		**P**	**06 48 07.6**	**-1.3**
	2.1nm,0.8s,baz=6.7,slow=7.7,SNR=15							
	2.1nm,0.8s							
ASAR	**Alice Springs**	**54.16**	**187**	P		**P**	**06 48 36.4**	**-0.2**
	0.8nm,0.7s,baz=13,slow=13,SNR=9.1							
	0.8nm,0.7s							
BVAR	**Borovoye Array**	**54.44**	**316**	P		**P**	**06 48 37.7**	**-0.6**
	0.5nm,0.5s,baz=76,slow=6.1,SNR=3.5							
	0.5nm,0.5s							
ILAR	**Eielson Array**	**55.61**	**30**	P		**P**	**06 48 46.6**	**0.0**
	1.2nm,1.0s,baz=260,slow=5.4,SNR=8.5							
	1.2nm,1.0s							
YKA	**Yellowknife Ar**	**70.00**	**28**	P		**P**	**06 50 22.4**	**0.0**
	0.2nm,0.8s,baz=292,slow=6.5,SNR=5.2							
	0.2nm,0.8s							
NVAR	**Mina Array Bea**	**79.76**	**51**	P		**P**	**06 51 21.0**	**+1.5**
	0.8nm,0.8s,baz=279,slow=5.8,SNR=5.7							
	0.8nm,0.8s							
TXAR	**Lajitas Array**	**94.91**	**52**	P		**P**	**06 52 33.9**	**+0.2**
	1.0nm,0.9s,baz=241,slow=2.6,SNR=6.2							
	1.0nm,0.9s							
H03N2	**Juan Fernandez**	**146.75**	**106**	T		T	09 42 42.7	
	baz=280,slow=75,SNR=24							
H03N3	**Juan Fernandez**	**146.76**	**106**	T		T	09 42 43.9	
	baz=280,slow=75,SNR=21							
H03N1	**Juan Fernandez**	**146.76**	**106**	T		T	09 42 46.2	
	baz=280,slow=75,SNR=21							

KRSC 25 06:43:35.2±2.0, 49°.38N×158°.78E, h42km±54km, Ml3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.15**	**308**	*e*P		Pn	06 44 10.3	+1.8
SKR				*e*S		Sn	06 44 35.2	+1.2
PAU	**Pauzhetka**	**2.44**	**330**	*e*S		Sn	06 44 45.9	+4.9
KDTR	**Khodutka, Kamc**	**2.47**	**350**	*e*S		Sn	06 44 45.3	+3.4
ASAK	**Asacha**	**3.06**	**350**	*e*S		Sn	06 45 00.9	+4.4
RUS	**Russkaya**	**3.06**	**357**	*e*S		Sn	06 44 59.6	+3.3
MTVR	**Mutnovka**	**3.13**	**353**	*e*P		Pn	06 44 26.3	+4.2
MTVR				*e*S		Sn	06 45 02.1	+3.9
GRL	**Gorelyy**	**3.21**	**352**	*e*P		Pn	06 44 27.5	+4.4
GRL				*e*S		Sn	06 45 04.5	+4.3
KRMR	**Karymshinskiy**	**3.48**	**354**	*e*S		Sn	06 45 11.4	+4.8
KOK	**Koryaka**	**3.92**	**359**	*e*P		Pn	06 44 38.1	+5.2
KBTR	**Krutoberegovo**	**7.26**	**18**	*e*P		Pn	06 45 23.1	+4.5

*SDD **25** 06:45:36.7±2.0, 19°.10N×70°.77W, h18km±22km, MD2.9, ML1.8, MW2.4, Presumed earthquake*
*OSPL **25** 06:45:36.5±0.9, 19°.18N×70°.63W, h35km±9km, ML1.7, Presumed earthquake*

ISC 25 06:45:36.0±1.0, 19°.13N±0°.04×70°.74W±0°.03, h28km±10km, n10, σ1§03/19, 7C-4D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SC01	**Santiago de lo**	**0.30**	**2**	⇑*e*Pg		**Pb**	**06 45 43.2**	**-0.1**
SC01				⇑*e*Sg		**Sb**	**06 45 48.6**	**+0.3**
SC01				IAML			06 45 48.8	
	comp=N,59nm,0.1s							
SC01	**Santiago de lo**	**0.30**	**2**	*i* P		**Pb**	**06 45 43.1**	**-0.2**
SC01				*e*S		**Sb**	**06 45 48.6**	**+0.3**
SC01				IAML			06 45 49.8	
	comp=Z,1µm,0.2s							
SFDR	**San Fco. de Ma**	**0.49**	**71**	⇑*e*Pg		**Pb**	**06 45 46.6**	**+0.3**
SFDR				⇓*e*Sg		**Sn**	**06 45 54.4**	**-0.4**
SFDR				IAML			06 45 55.8	
	comp=N,75nm,0.2s							
MADR	**Mao Valverde**	**0.55**	**322**	⇑*e*Pg		**Pb**	**06 45 46.3**	**-1.0**
MADR				⇓*e*Sg		**Sb**	**06 45 53.7**	**-1.2**
MADR				IAML			06 45 55.8	
	comp=N,88nm,0.5s							
BANI	**BANI**	**0.82**	**154**	*e*Pg		**Pb**	**06 45 49.1**	**-2.6**
BANI				⇑*e*Sg		**Sb**	**06 46 02.1**	**-0.3**
LOPP1	**Punta Rusia, P**	**0.84**	**329**	*i* P		**Pb**	**06 45 50.9**	**-1.2**
LOPP1				*e*S		**Sb**	**06 46 02.2**	**-0.9**
LOPP1				IAML			06 46 03.3	
	comp=Z,43nm,3.0s							
LONE3	**El Aguacate, B**	**0.86**	**233**	*i* P		**Pb**	**06 45 52.5**	**0.0**
LONE3				*e*S		**Sb**	**06 46 04.7**	**+1.1**
LONE3				IAML			06 46 08.4	
	comp=Z,19nm,2.2s							
LODU1	**El Espartillar**	**1.04**	**222**	*i* P		**Pn**	**06 45 55.9**	**+1.2**
JIDR	**Jimani**	**1.23**	**239**	⇑*e*Pg		**Pb**	**06 45 57.8**	**+0.5**
JIDR				⇓*e*Sg		**Sn**	**06 46 13.5**	**+0.5**
HATOM	**Hato Mayor del**	**1.33**	**105**	⇑*e*Pg		**Pn**	**06 45 59.3**	**+0.6**
HATOM				⇓*e*Sg		**Sb**	**06 46 17.8**	**+0.8**
HATOM				IAML			06 46 27.5	
	comp=N,20nm,2.5s							

*SJA **25** 06:52:31.3±0.7, 35°.62S×74°.07W, h7km, ML5.1, MW5.1*
*IDC **25** 06:52:37.1±0.6, 35°.73S×73°.46W, h0km, mb4.4/11, mbtmp4.4/14, ML4.5/3, MS5.2/1, Error ellipse: s-maj=20.9km s-min=13.8km az=89.0*
*GUC **25** 06:52:38.6±0.6, 35°.70S×73°.62W, h24km±3km, ML4.9*
*NEIC **25** 06:52:38.9±2.0, 35°.75S±0°.02×73°.47W±0°.06, h10km±1km, mb5.0/62, Mwr5.1/59, Mwr5.2(GUC), Error ellipse: s-maj=8.2km s-min=2.7km az=289.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}1.73; $M_{\theta\theta}$-0.71; $M_{\phi\phi}$-1.01; $M_{r\theta}$-0.74; $M_{r\phi}$-2.09; $M_{\theta\phi}$-5.68; Fault plane solution: $M_0$6.28000×10^{16} NP1:ϕ_s190.24000°, δ81.60000°, λ72.13000°. NP2:ϕ_s75.86000°, δ19.69000°, λ154.30000°. Principal axes: T 6.2776, Plg50.0000°, Azm80.0000°; N 0.0110, Plg18.0000°, Azm193.0000°; P -6.2886, Plg34.0000°, Azm295.0000°;*
*NEIC **25** 06:52:38.5, 35°.75S×73°.51W, h10km*
*VAO **25** 06:52:49.7±1.9, 35°.37S×72°.72W, h42km±9km, mb4.8, Presumed earthquake*

ISC 25 06:52:40.9±2.0, 35°.70S±0°.03×73°.60W±0°.06, h27km±13km, n228, σ1§68/231, mb5.0/34, 22C-3D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BI05	**Punta Hualpn**	**1.09**	**163**			**Pn**	**06 52 57.7**	**-2.7**
BI05					Sg	**Sn**	**06 53 11.3**	**-3.4**
BI05	**Punta Hualpn**	**1.09**	**163**	⇑*e*P		**Pn**	**06 52 57.5**	**-2.9**
BI05				*e*S		**Sn**	**06 53 11.3**	**-3.4**
BI05				IAML			06 53 17.7	
	comp=E,36µm,0.4s							
BI05	**Punta Hualpn**	**1.09**	**163**	*e*P		**Pn**	**06 52 57.1**	**-3.4**
GO05	**Hualane**	**1.53**	**64**			**Pn**	**06 53 04.5**	**-2.0**
GO05						**Sn**	**06 53 25.0**	**-0.5**
GO05	**Hualane**	**1.53**	**64**	⇑*e*P		**Pn**	**06 53 04.3**	**-2.2**
GO05				*e*S		**Sn**	**06 53 23.7**	**-1.7**
GO05				IAML			06 53 32.9	
	comp=E,13µm,0.7s							
GO05	**Hualane**	**1.53**	**64**	*e*P		**Pn**	**06 53 04.6**	**-1.8**
GO05				*e*S		**Sb**	**06 53 31.4**	**+3.8**
GO05				IAML			06 53 33.0	
	comp=Z,24µm,0.8s							
ML02	**Panimavida**	**1.78**	**93**			**Pn**	**06 53 08.4**	**-1.4**
ML02					Sn	**Sn**	**06 53 29.9**	**-1.6**
ML02	**Panimavida**	**1.78**	**93**	⇑*e*P		**Pn**	**06 53 08.3**	**-1.5**
ML02				IAML			06 53 41.2

comp=Z,4µm,1.1s
MT04 Ro Olivares 3.66 52⇓ eP Pn 06 53 35.3 -0.6
MT04 Ro Olivares 3.66 52 eP Pn 06 53 35.4 -0.6
MT04 eS **Sb 06 54 23.4 -5.7**
MT04 IAML 06 54 41.1
comp=Z,2µm,1.4s
VA06 Catapilco 3.67 32 Pn 06 53 34.5 -1.3
VA06 Catapilco 3.67 32⇓ eP Pn 06 53 34.4 -1.3
MT08 Bocatoma Ro 3.72 54 Pn 06 53 35.8 -0.9
MT08 Bocatoma Ro 3.72 54⇓ eP Pn 06 53 36.7 0.0
MT08 Bocatoma Ro 3.72 54 eP Pn 06 53 36.6 -0.1
MT08 eS Sb 06 54 39.5 +8.8
MT08 IAML 06 54 41.9
comp=Z,3µm,1.2s
VA03 San Esteban 3.87 42 Pn 06 53 37.7 -1.0
VA03 San Esteban 3.87 42⇓ eP Pn 06 53 37.8 -0.9
VA03 San Esteban 3.87 42 eP Pn 06 53 37.5 -1.2
VA03 IAML 06 54 56.3
comp=Z,3µm,0.7s
LR04 Corral 4.17 178 Pn 06 53 39.9 -2.9
LR04 Corral 4.17 178 eP Pn 06 53 40.0 -2.7
GO06 Curarrehue 4.23 157 Pn 06 53 42.9 -0.7
GO06 Curarrehue 4.23 157⇓ eP Pn 06 53 42.6 -1.0
GO06 Curarrehue 4.23 157 eP Pn 06 53 42.2 -1.4
CO04 Los Peladeros 4.25 32 Pn 06 53 42.5 -1.6
CO04 Los Peladeros 4.25 32⇓ eP Pn 06 53 42.5 -1.6
RFA San Rafael 4.30 79 eP Pn 06 53 45.3 +0.7
RFA eS Sb 06 54 57.3 +10
RFA IAML 06 55 04.5
comp=Z,2µm,1.0s
LR05 Currie 4.69 165 Pn 06 53 48.9 -1.0
LR05 Currie 4.69 165 eP Pn 06 53 49.0 -0.9
LR05 eS **Sn 06 54 47.4 +4.0**
LR05 IAML 06 55 23.6
comp=Z,708nm,1.3s
AAGR Agrelo 4.73 58 eP Pn 06 53 52.0 +1.4
AAGR IAML 06 55 32.2
comp=Z,1µm,1.9s
H03S1 Juan Fernandez 4.74 291 T T 06 58 49.9
baz=112,slow=73,SNR=1354
H03S3 Juan Fernandez 4.75 292 T T 06 58 51.2
baz=112,slow=73,SNR=1383
H03S2 Juan Fernandez 4.76 291 T T 06 58 50.1
baz=112,slow=73,SNR=1660
VA04 Juan Fernndez 4.77 294 Pn 06 53 51.2 +0.2
CO02 Combarbal 4.99 27 Pn 06 53 52.9 -1.2
CO02 Combarbal 4.99 27 eP Pn 06 53 52.4 -1.6
CO02 eS **Sn 06 54 49.8 -1.1**
CO02 IAML 06 55 48.8
comp=Z,972nm,0.9s
CO03 El Pedregal 5.43 28 Pn 06 53 59.4 -0.7
PLCA Paso Flores 5.57 155 Pn **Pn 06 54 01.9 0.0**
comp=Z,3.2nm,0.3s,baz=326,slow=12,SNR=64
PLCA Lg Lg 06 55 31.4
comp=Z,6.8nm,0.3s,baz=255,slow=17,SNR=4.9
comp=Z,11nm,0.4s
PLCA Paso Flores 5.57 155 Pn **Pn 06 54 01.5 -0.5**
LL05 Los Muermos 5.70 179 Pn 06 54 01.6 -2.1
ZO01 Zonda 5.83 49 Pn 06 54 05.5 -0.1
GO04 Tololo Observa 6.00 24 Pn 06 54 07.2 -0.9
CFA Coronel Fontan 6.06 49 Pn **Pn 06 54 08.4 -0.2**
comp=Z,13nm,0.3s,baz=227,slow=11,SNR=204
CFA Sn **Sn 06 55 17.1 -0.1**
comp=Z,12nm,0.3s,baz=53,slow=10.0,SNR=4.8
CFA Lg Lg 06 55 47.4
comp=Z,2.3nm,0.3s,baz=86,slow=22,SNR=3.8
comp=Z,30nm,0.3s
CO05 La Serena 6.10 20 Pn 06 54 08.6 -0.6
CO01 Juntas del Tor 6.42 28 Pn 06 54 13.6 -0.3
LCO Las Campanas 7.11 21 Pn 06 54 21.8 -1.5
LL07 Hotel Espejo d 7.12 179 Pn **Pn 06 54 21.4 -1.8**
AC05 El Transito 7.40 23 Pn 06 54 26.4 -0.8
LL02 Futaleuf 7.60 170 Pn 06 54 28.6 -1.2
AC04 Llanos de Chal 7.78 17 Pn 06 54 30.2 -2.1
GO03 Copiapo 8.58 20 Pn 06 54 42.9 -0.4
AY01 Puyuhuapi 8.74 176 Pn **Pn 06 54 44.6 -0.7**
AC06 Mina Casimiro 8.77 19 Pn 06 54 44.8 -1.1
TRQA Tornquist 9.60 108 Pn 06 54 55.9 -1.4
AC02 Maricunga 9.63 25 Pn 06 54 56.7 -1.5
AC01 Pan de Azucar 9.87 16 Pn **Pn 06 54 58.5 -2.4**
PB14 IPOC Station P 11.38 15 Pn **Pn 06 55 19.4 -2.5**
AY03 Cochrane 11.57 177 Pn 06 55 22.6 -1.5
GO08 Villa O'Higgin 12.78 177 Pn **Pn 06 55 39.6 -1.0**
PB05 IPOC Station P 13.14 14 Pn **Pn 06 55 46.8 +0.9**
PB03 IPOC Station P 14.01 15 Pn Pn 06 55 53.7 -4.1
PSAL Palomas, Salto 14.13 76 eP **Pn 06 55 55.6 -3.6**
PB07 IPOC Station P 14.30 14 Pn **Pn 06 55 58.3 -3.4**
PB09 IPOC Station P 14.37 17 Pn **Pn 06 55 58.6 -4.1**
PB02 IPOC Station P 14.69 14 Pn **Pn 06 56 06.0 -1.0**
PATCX Punta Patache 15.13 12 Pn **Pn 06 56 12.1 -0.8**
PB11 IPOC Station P 16.26 13 Pn **Pn 06 56 27.1 -0.4**
PSGCX Pisagua 16.33 12 Pn **Pn 06 56 28.1 -0.4**
GO01 Chusmiza 16.44 15 Pn **Pn 06 56 28.4 -1.8**
CPUP Villa Florida 16.77 61 Pn **Pn 06 56 27.2 -6.6**
comp=Z,0.2nm,0.3s,baz=230,slow=5.8,SNR=6.8
PB16 IPOC Station P 17.68 13 Pn **Pn 06 56 42.7 -3.0**
CPSB Cacapava Do Su 17.70 78 eP Pn 06 56 43.1 -2.3
PB18 Visviri 18.41 13 P **P 06 56 53.5 -1.0**
PB18 IAmb IAmb 06 57 01.6
comp=Z,161nm,1.8s
EFI East Falkland 19.46 150 P P 06 57 03.5 -1.7
MURT Porto Murtinho 19.77 49 eP P 06 57 07.9 -1.0
LPAZ La Paz 19.94 16 P P 06 57 12.5 +1.1
comp=Z,0.5nm,0.3s,baz=186,slow=5.9,SNR=35
comp=Z,4.3nm,0.9s
LPAZ La Paz 19.94 16 IAmb IAmb 06 57 25.1
comp=Z,91nm,1.9s
ITAB Concordia 20.14 71 P P 06 57 12.0 -0.8
ITAB Concordia 20.14 71 eP P 06 57 12.4 -0.4
CNLB Canela 20.19 78 eP P 06 57 13.1 -0.4
AMBA Amambai (Brazi 20.58 57 eP P 06 57 18.3 +0.6
BDQN Bodoquena, MS 21.21 49 eP P 06 57 24.2 -0.3
PTGB Pitanga 21.55 65 eP P 06 57 27.1 -1.1
BBDS Serra de San D 21.76 35 eP P 06 57 30.2 -0.2
AQDB Aquidauana 21.84 51 P P 06 57 30.3 -1.0
AQDB IAmb IAmb 06 57 43.8
comp=Z,125nm,1.5s
AQDB Aquidauana 21.84 51 eP P 06 57 30.5 -0.8
TRCB Terra Rica 22.30 60 P P 06 57 35.8 -0.5
TRCB IAmb IAmb 06 57 47.8
comp=Z,58nm,0.7s
TRCB Terra Rica 22.30 60 eP P 06 57 35.6 -0.7
MAJ01 Sao Joao Batis 22.49 75 eP P 06 57 37.4 -0.9
SIV San Ignacio 22.59 33 LR LR 07 08 08.6
comp=Z,5µm,19.6s,baz=220,slow=41
LDASE Londrina, Braz 23.02 64 eP P 06 57 41.7 -2.2
PTLB Pontes e Lacer 23.96 36 P P 06 57 52.7 -0.3
PTLB IAmb IAmb 06 57 55.5
comp=Z,123nm,1.7s
PTLB Pontes e Lacer 23.96 36 eP P 06 57 53.1 +0.1
FRTB Fartura 24.20 66 eP P 06 57 55.7 +0.4
PP1B Ponte de Pedra 24.52 48 eP P 06 57 58.2 +0.1
C2SB Chapadao do Su 24.92 53 eP P 06 58 02.0 +0.2
PET01 Itanhaem-SP 25.40 71 eP P 06 58 07.6 +1.5
SPB Sao Paulo 25.66 69 P P 06 58 08.2 -0.2
VILB Vilhena 25.68 31 P P 06 58 08.2 -0.4
VILB IAmb IAmb 06 58 28.1
comp=Z,34nm,0.9s
VILB Vilhena 25.68 31 eP P 06 58 08.6 0.0
ITRB Iturama 25.93 58 eP P 06 58 10.3 -0.6
RCLB Rio Claro- Sao 26.26 67 eP P 06 58 13.4 -0.6
BB19B Bebedouro 26.34 63 eP P 06 58 14.9 +0.2
VAO Valinhos 26.35 69 P P 06 58 14.3 -0.5
VAO IAmb IAmb 06 58 24.6
comp=Z,32nm,1.1s
VAO Valinhos 26.35 69 eP P 06 58 14.8 0.0
CZSB Cruzeiro do Su 27.85 2 eP P 06 58 33.1 +4.9
PDRB Porto dos Gac 28.44 37 eP P 06 58 33.1 -0.3
BSCB Bom Sucesso 29.16 68 eP P 06 58 39.9 -0.1
BDFB Brasilia 30.35 55 P P 06 58 49.8 -0.8
comp=Z,5.1nm,0.8s,baz=223,slow=11,SNR=6.8
comp=Z,5.1nm,0.8s
BDFB Brasilia 30.35 55 P **P 06 58 49.9 -0.7**
BDFB IAmb IAmb 06 59 15.0
comp=Z,42nm,1.8s
JANB Januaria 33.30 59 eP P 06 59 14.8 -1.6
MACA Manacapuru-AM 34.52 23 P **P 06 59 27.5 +0.6**
MACA IAmb IAmb 06 59 47.1
comp=Z,24nm,1.0s
SDBA SAO DESIDERIO 34.76 55 eP P 06 59 28.9 -0.3
ITTB Itaituba 35.27 32 eP P 06 59 34.9 +1.4
SMTB Santa Maria do 35.73 48 eP P 06 59 36.7 -0.7
OTAV Otavalo 36.04 352 P **P 06 59 40.2 -0.3**

CMC01 Camacan, BA 36.55 65 eP P 06 59 44.7 +0.2
BOAV Boa Vista 39.83 21 P P 07 00 12.6 +0.6
NBMA Muriti-CE 42.56 57 eP P 07 00 34.9 +0.3
BELA Belgrano 2 45.44 169 P 07 00 57.8 +0.9
BELA IAmb IAmb 07 01 20.5
comp=Z,19nm,1.3s
RCBR Riachuelo 45.63 58 P **P 07 00 58.6 -0.5**
RCBR IAmb IAmb 07 02 02.8
comp=Z,36nm,1.8s
VNA3 Neumayer Olymp 48.28 157 ⇓P **P 07 01 20.2 +1.0**
comp=Z,13nm,0.7s
VNA2 Neumayer--Watz 48.96 156 ⇓P **P 07 01 25.0 +0.6**
comp=Z,12nm,0.7s,baz=283,slow=8.4
SNAA Sanae 50.51 157 ⇓P **P 07 01 38.2 +2.0**
comp=Z,371nm,0.9s
SNAA Sanae 50.51 157 P **P 07 01 35.1 -1.1**
comp=Z,13nm,0.9s,baz=284,slow=4.9,SNR=13
comp=Z,13nm,0.9s
SNAA Sanae 50.51 157 P P 07 01 35.5 -0.7
SNAA IAmb IAmb 07 01 38.9
comp=Z,15nm,0.8s
MPOM Morne Pois Mar 51.31 16 P P 07 01 42.2 -0.5
TROLL Troll, Antarti 52.20 158 P P 07 01 50.1 +1.1
MLPR Magueyes Islan 53.74 8 P P 07 02 00.9 +0.3
OBIP Obispado Ponce 53.86 8 P P 07 02 02.2 +0.7
OBIP IAmb IAmb 07 02 45.1
comp=Z,18nm,1.4s
CELP Cerrillos 53.89 8 P P 07 02 00.1 -1.7
ECPR Experimental S 54.16 8 P P 07 02 04.3 +0.6
QSPA South Pole Qui 54.54 180 P P 07 02 07.0 +0.8
comp=Z,11nm,0.9s,baz=165,slow=1.9,SNR=20
comp=Z,11nm,0.9s
QSPA South Pole Qui 54.54 180 P P 07 02 07.8 +1.6
QSPA IAmb IAmb 07 02 32.5
comp=Z,16nm,1.1s
TEIG Tepich 57.34 344 P P 07 02 28.7 +2.2
TEIG IAmb IAmb 07 03 12.7
comp=Z,33nm,1.4s
Z47A Carrollton 69.87 347 P P 07 03 50.1 +1.1
Z47A IAmb IAmb 07 03 52.9
comp=Z,11nm,0.7s
SAND Sanderson 70.61 334 P 07 03 54.7 +1.0
TXAR Lajitas Array 70.62 332 P P 07 03 56.5 +2.7
comp=Z,0.6nm,0.6s,baz=155,slow=8.9,SNR=8.1
comp=Z,0.6nm,0.6s
TXAR Lajitas Array 70.62 332 P P 07 03 55.1 +1.2
TX31 Lajitas Ar. Si 70.62 332 P P 07 03 55.5 +1.7
TX31 IAmb IAmb 07 04 01.5
comp=Z,25nm,1.9s
MAW Mawson 71.91 164 P P 07 04 01.4 +0.3
comp=Z,2.9nm,0.6s,baz=200,slow=4.7,SNR=4.4
comp=Z,2.9nm,0.6s
V48A Smith Brothers 72.14 349 P P 07 04 04.3 +1.5
V48A IAmb IAmb 07 04 32.0
comp=Z,32nm,1.4s
ABTX Abilene, Hawle 72.22 337 P P 07 04 05.0 +1.6
ABTX IAmb IAmb 07 04 34.1
comp=Z,27nm,1.6s
WVT Waverly 72.68 348 P 07 04 06.1 +0.1
ODSA Odessa 72.73 335 P **P 07 04 08.6 +2.1**
ODSA IAmb IAmb 07 04 40.0
comp=Z,16nm,1.0s
LCAR Lake Charles 73.25 345 P P 07 04 10.7 +1.4
OK048 Pawnee Station 74.97 341 IAmb IAmb 07 05 35.2
comp=Z,16nm,1.2s
CCM Cathedral Cave 75.19 346 P P 07 04 21.1 +0.5
CCM IAmb IAmb 07 04 59.9
comp=Z,15nm,1.1s
ANMO Albuquerque 76.68 333 P 07 04 30.7 +1.2
ANMO Albuquerque 76.68 333 IAmb IAmb 07 05 04.0
comp=Z,7.9nm,1.3s
P40A Paris 76.77 345 P P 07 04 30.8 +1.2
P40A IAmb IAmb 07 04 58.4
comp=Z,27nm,1.4s
DBIC Dimbokro 76.93 72 P P 07 04 32.1 +1.0
comp=Z,9.3nm,0.7s,baz=255,slow=5.1,SNR=14
comp=Z,9.3nm,0.7s
DBIC Dimbokro 76.93 72 IAmb IAmb 07 04 33.5
comp=Z,11nm,0.8s
N47A Urbana 77.02 351 P P 07 04 32.0 +1.1
HDIL Hopedale 77.25 348 P P 07 04 33.2 +1.0
BOSA Boshof 80.41 118 P P 07 04 51.2 +0.8
comp=Z,3.4nm,0.8s,baz=265,slow=3.6,SNR=7.0
comp=Z,3.4nm,0.8s
BOSA Boshof 80.41 118 IAmb IAmb 07 05 19.6
comp=Z,12nm,1.1s
PV18 Skein Mesa, Pa 80.51 333 IAmb IAmb 07 05 43.8
comp=Z,46nm,1.9s
HWUT Hardware Ranch 84.44 332 IAmb IAmb 07 05 24.7
comp=Z,25nm,1.8s
NVAR Mina Array Bea 84.56 326 P P 07 05 12.1 +0.5
comp=Z,1.6nm,0.9s,baz=150,slow=5.2,SNR=8.7
comp=Z,1.6nm,0.9s
PDAR Pinedale Array 84.72 334 P P 07 05 12.8 +0.5
comp=Z,0.4nm,0.9s,baz=150,slow=6.1,SNR=5.9
comp=Z,0.4nm,0.9s
TORD Torodi Ar. Bea 85.99 71 P P 07 05 18.5 -0.6
comp=Z,2.9nm,1.0s,baz=259,slow=3.1,SNR=8.9
comp=Z,2.9nm,1.0s
ULM Lac du Bonnet 87.82 346 P P 07 05 27.6 +0.6
comp=Z,1.9nm,0.5s,baz=175,slow=5.6,SNR=5.1
comp=Z,1.9nm,0.5s
ULM Lac du Bonnet 87.82 346 IAmb IAmb 07 06 08.1
comp=Z,18nm,1.5s
J08A Circle Bar Ran 88.67 329 P 07 05 33.0 +1.6
J08A IAmb IAmb 07 05 36.7
comp=Z,5.4nm,0.8s
PLID Pearl Lake 89.10 331 P P 07 05 34.5 +0.9
PLID IAmb IAmb 07 06 20.2
comp=Z,26nm,1.9s
CLL Collm 114.96 44 ePKiKP PKPdf 07 11 19.0 +0.4
H11N3 WAKE ISLAND Hyl 24.91 270 T T 09 29 06.9
baz=116,slow=78,SNR=4.5
H11N1 WAKE ISLAND Hyl 24.92 270 T T 09 29 09.0
baz=116,slow=78,SNR=5.3
H11N2 WAKE ISLAND Hyl 24.93 270 T T 09 29 10.1
baz=116,slow=78,SNR=3.8
AB31 Akbulak array 143.73 53 PKPbc 07 12 11.3 +0.8
ABKAR Akbulak array 143.73 53 PKPbc 07 12 11.4 +1.0
NRIK Noril'sk 144.74 11 PKP **PKPdf 07 12 15.0 +1.0**
comp=Z,5.7nm,0.8s,baz=2.2,slow=2.3,SNR=10
NRIK Noril'sk 144.74 11 PKPdf 07 12 14.7 +0.7
BORK Borovoye 149.35 44 PKiKP 07 12 29.4 +1.6
BVAR Borovoye Array 149.40 44 PKPbc **PKPbc 07 12 25.4 -1.4**
comp=Z,2.0nm,0.8s,baz=289,slow=4.5,SNR=8.6
KURBB Kurchatov Arra 154.98 45 PKP **PKPdf 07 12 30.2 -0.4**
comp=Z,1.2nm,1.1s,baz=299,slow=2.5,SNR=7.0
KURBB PKPbc **PKiKP 07 12 40.2 +0.8**
comp=Z,1.0nm,0.7s,baz=295,slow=2.8,SNR=7.6
KURK Kurchatov 154.99 44 PKPdf 07 12 30.2 -0.4
KURK **PKiKP 07 12 40.2 +0.8**
ZALV Zalesovo Beam 156.35 33 PKP **PKPdf 07 12 31.7 -0.7**
comp=Z,1.9nm,0.8s,baz=243,slow=1.7,SNR=6.9
ZALV PKPab **PKPab 07 13 00.2 -0.5**
comp=Z,4.9nm,0.7s,baz=301,slow=4.8,SNR=9.0
ZALV Zalesovo Beam 156.35 33 PKPdf 07 12 32.6 +0.2
MKAR Makanchi Array 158.84 51 PKP **PKPdf 07 12 35.8 0.0**
comp=Z,1.0nm,0.9s,baz=318,slow=1.6,SNR=7.1
MKAR PKPab **PKPab 07 13 11.7 -0.2**
comp=Z,0.6nm,0.7s,baz=308,slow=4.0,SNR=4.0
WMQ Urumqi 163.51 55 PKP **PKPdf 07 12 38.8 -2.1**
WMQ pPKP pPKPdf 07 12 50.8 +1.7
WMQ sPKP sPKPdf 07 12 55.5 +3.6
WMQ PKPab **PKPab 07 13 34.8 +2.4**
WMQ PP **PP 07 17 15.8 -2.3**
WMQ AMB AMB
comp=Z,290nm,5.1s
WMQ LR LR
comp=N,940nm,24.1s
WMQ LR LR
comp=E,820nm,23.9s
NJ2 Nanjing 169.03 254 eP **PKPdf 07 12 45.3 -0.2**
NJ2 pmax pmax
comp=Z,12nm,0.5s
PZH PanZhiHua 170.00 155 PKP **PKPdf 07 12 45.8 -0.6**
HHC Hu-ho-hao-te 173.45 323 eP **PKPdf 07 12 43.8 -3.8**

*IDC **25** 06:51:56.3±46.0, 23°.23S×174°.60W, h0km, mb4.4/3, mbtmp4.4/3, Error ellipse: s-maj=862.2km s-min=159.7km az=88.0*
*NEIC **25** 06:53:21.9±1.5, 24°.9S±0°.2×179°.5W±0°.3, h505km±23km, mb4.3/17, Error ellipse: s-maj=39.5km s-min=24.0km az=54.0*
ISC 25 06:53:21.8±5.8, 24°.9S±0°.4×179°.6W±0°.6, h500km, n26,
σ0s83/26, mb4.3/11, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**11.89**	**284**	P	**P**		**06 56 00.4**	**+1.1**
MXZ	**Matakaoa Point**	**12.71**	**188**		**P**		**06 56 07.4**	**-0.3**
TOZ	**Tahuroa Road**	**13.42**	**197**	P	**P**		**06 56 16.4**	**+1.2**
RTZ	**Ruatahuna**	**13.94**	**191**		**P**		**06 56 21.1**	**+0.4**
BKZ	**Black Stump Fm**	**14.57**	**192**		**P**		**06 56 27.8**	**+0.4**
BFZ	**Birch Farm**	**16.08**	**191**	P	**P**		**06 56 43.0**	**-0.1**
MRZ	**Mangatainoka R**	**16.19**	**193**	P	**P**		**06 56 43.1**	**-1.1**
QRZ	**Quartz Range**	**17.16**	**201**	P	**P**		**06 56 54.6**	**+0.5**
THZ	**Tophouse**	**17.90**	**199**	P	**P**		**06 57 01.3**	**+0.2**
LTZ	**Lake Taylor**	**19.02**	**199**	P	**P**		**06 57 11.8**	**+0.4**
EIDS	**Eidsvold**	**26.52**	**263**	P	**P**		**06 58 18.4**	**-0.5**
EIDS				IAmb	IAmb		06 58 19.1	
comp=Z,17nm,1.4s								
CTAO	**Charters Tower**	**31.86**	**272**	P	**P**		**06 59 05.7**	**+0.3**
CTAO				IAmb	IAmb		06 59 08.5	
comp=Z,22nm,1.4s								
STKA	**Stephens Creek**	**34.69**	**250**	P	**P**		**06 59 28.4**	**-0.7**
comp=Z,2.7nm,0.5s,baz=97,slow=7.8,SNR=7.6								
comp=Z,2.7nm,0.5s								
STKA	**Stephens Creek**	**34.69**	**250**	P	**P**		**06 59 29.4**	**+0.2**
BBOO	**Buckleboo**	**39.39**	**248**	P	**P**		**07 00 06.8**	**-1.0**
BBOO				IAmb	IAmb		07 00 15.8	
comp=Z,20nm,1.4s								
AS31	**Alice Springs**	**42.24**	**262**	P	**P**		**07 00 30.4**	**-0.3**
ASAR	**Alice Springs**	**42.24**	**262**	P	**P**		**07 00 29.3**	**-1.4**
comp=Z,1.4nm,0.3s,baz=93,slow=7.1,SNR=50								
comp=Z,1.4nm,0.3s								
ASAR	**Alice Springs**	**42.24**	**262**	P	**P**		**07 00 29.3**	**-1.4**
WR8	**Warramunga Arr**	**42.56**	**267**	P	**P**		**07 00 32.7**	**-0.6**
WB0	**Warramunga Arr**	**42.71**	**267**	P	**P**		**07 00 33.8**	**-0.7**
WB0				IAmb	IAmb		07 00 34.5	
comp=Z,4.4nm,0.6s								
WRA	**Warramunga Arr**	**42.71**	**267**	P	**P**		**07 00 33.8**	**-0.7**
comp=Z,3.4nm,0.4s,baz=101,slow=8.1,SNR=56								
comp=Z,3.4nm,0.4s								
WRA	**Warramunga Arr**	**42.71**	**267**	P	**P**		**07 00 33.3**	**-1.2**
FORT	**Forrest**	**46.30**	**250**	P	**P**		**07 01 01.1**	**-1.0**
FORT				IAmb	IAmb		07 01 13.2	
comp=Z,7.5nm,1.0s								
KNRA	**Kununurra**	**49.06**	**271**	P	**P**		**07 01 23.2**	**+0.2**
KNRA				IAmb	IAmb		07 01 23.4	
comp=Z,6.8nm,0.5s								
MBWA	**Marble Bar**	**55.56**	**261**	P	**P**		**07 02 09.2**	**-0.5**
MBWA				IAmb	IAmb		07 02 32.0	
comp=Z,13nm,1.1s								
CASY	**Casey**	**59.34**	**206**	P	**P**		**07 02 35.6**	**+0.9**
CASY				IAmb	IAmb		07 03 00.7	
comp=Z,19nm,1.5s								

*IDC **25** 06:55:14.8±1.2, 49°.10N×157°.97E, h0km, mb3.6/4, mbtmp3.6/5, ML2.4/1, Error ellipse: s-maj=42.9km s-min=29.6km az=104.0*
*KRSC **25** 06:55:18.0±1.9, 49°.34N×158°.57E, h50km±48km, Ml3.9*
ISC 25 06:55:19.9±1.2, 49°.23N±0°.08×158°.4E±0°.1, h35km, n15,
σ1s28/19, mb3.6/4, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.07**	**315**	eP	**Pn**		**06 55 52.2**	**0.0**
SKR				eS	**Sn**		**06 56 17.2**	**+0.5**
PAU	**Pauzhetka**	**2.46**	**336**	eS	**Sn**		**06 56 28.3**	**+2.1**
KDTR	**Khodutka, Kamc**	**2.59**	**355**	eS	**Sn**		**06 56 28.1**	**-1.3**
RUS	**Russkaya**	**3.20**	**1**	eS	**Sn**		**06 56 43.4**	**-1.2**
MTVR	**Mutnovka**	**3.26**	**358**	eP	**Pn**		**06 56 08.3**	**-0.2**
MTVR				eS	**Sn**		**06 56 45.0**	**-1.1**
GRL	**Gorelyy**	**3.33**	**357**	eP	**Pn**		**06 56 10.6**	**+1.0**
GRL				eS	**Sn**		**06 56 48.1**	**+0.3**
KRMR	**Karymshinskiy**	**3.60**	**357**	eS	**Sn**		**06 56 54.7**	**+0.2**
PET	**Petropavlovsk**	**3.80**	**2**	eS	**Sn**		**06 56 58.7**	**-0.6**
DALK	**Dalny**	**3.81**	**3**	eP	**Pn**		**06 56 16.2**	**+0.2**
DALK				eS	**Sn**		**06 56 57.9**	**-1.6**
PETK	**Petropavlovsk-**	**3.91**	**354**	Pn	**Pn**		**06 56 17.6**	**+0.3**
1.1nm,0.3s,baz=157,slow=5.3,SNR=5.3								
3.3nm,0.6s								
SPN	**Mys Shipunski**	**4.00**	**14**	eS	**Sn**		**06 57 04.4**	**+0.2**
KURBB	**Kurchatov Arra**	**49.04**	**304**	P	**P**		**07 04 01.9**	**-1.1**
0.2nm,0.5s,baz=69,slow=7.8,SNR=2.0								
0.2nm,0.5s								
WRA	**Warramunga Arr**	**72.12**	**204**	P	**P**		**07 06 38.1**	**-2.6**
0.8nm,0.7s,baz=15,slow=6.1,SNR=4.5								
0.8nm,0.7s								
TXAR	**Lajitas Array**	**73.19**	**65**	P	**P**		**07 06 49.3**	**+2.1**
0.6nm,0.7s,baz=293,slow=4.6,SNR=4.6								
0.6nm,0.7s								
ASAR	**Alice Springs**	**75.79**	**203**	P	**P**		**07 07 03.0**	**+0.9**
0.3nm,0.8s,baz=16,slow=4.5,SNR=2.7								
0.3nm,0.8s								

*IDC **25** 06:55:31.9±2.3, 21°.63N×143°.07E, h306km±19km, mb3.3/11, mbtmp4.0/13, Error ellipse: s-maj=22.5km s-min=19.0km az=76.0*
ISC 25 06:55:32.2±1.0, 21°.6N±0°.1×143°.1E±0°.2, h311km, n14,
σ0s57/15, mb3.5/10, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.50**	**352**	P	**Pn**		**06 56 55.2**	**-0.7**
32nm,0.3s,baz=186,slow=21,SNR=8.2								
JCJ				S	**S**		**06 58 03.4**	**0.0**
36nm,0.5s,baz=296,slow=22,SNR=1.4								
MJAR	**Matsushiro Arr**	**15.46**	**345**	P	**P**		**06 58 54.2**	**+0.6**

1.3nm,0.5s,baz=166,slow=9.7,SNR=4.2
KSRS Korea Array 20.52 324 P P 06 59 47.9 +0.4
1.0nm,0.5s,baz=149,slow=8.5,SNR=5.4
1.0nm,0.5s
KLR Kul'dur 28.98 345 P P 07 01 04.0 +0.4
1.3nm,0.5s,baz=154,slow=13,SNR=6.1
1.3nm,0.5s
WRA Warramunga Arr 42.19 192 P P 07 02 55.2 -0.2
0.6nm,0.6s,baz=15,slow=8.7,SNR=4.9
0.6nm,0.6s
ZALV Zalesovo Beam 54.21 322 P P 07 04 26.1 -0.1
0.5nm,0.4s,baz=112,slow=7.0,SNR=2.1
0.5nm,0.4s
MKAR Makanchi Array 54.68 313 P P 07 04 30.1 +0.4
0.2nm,0.3s,baz=103,slow=12,SNR=3.5
0.2nm,0.3s
KURBB Kurchatov Arra 57.51 317 P P 07 04 49.6 +0.2
1.4nm,0.6s,baz=94,slow=7.6,SNR=20
1.4nm,0.6s
ILAR Eielson Array 62.14 27 P P 07 05 20.1 -0.4
0.4nm,0.8s,baz=252,slow=5.6,SNR=8.0
0.4nm,0.8s
BVAR Borovoye Array 62.66 320 P P 07 05 24.7 +0.5
2.5nm,0.3s,baz=98,slow=7.9,SNR=20
2.5nm,0.3s
YKA Yellowknife Ar 76.56 28 P P 07 06 49.1 +0.8
0.4nm,0.6s,baz=296,slow=6.2,SNR=11
0.4nm,0.6s
FINES FINESS Array B 83.20 334 P P 07 07 23.0 -0.7
5.2nm,1.0s,baz=56,slow=3.3,SNR=9.1
5.2nm,1.0s
HFS Hagfors 88.76 337 P P 07 07 49.9 -0.8
2.6nm,0.7s,baz=91,slow=14,SNR=2.2
2.6nm,0.7s
LPAZ La Paz 150.04 85 PKPbc PKiKP 07 14 48.9 +0.5
0.6nm,0.5s,baz=327,slow=2.0,SNR=6.0

KRSC 25 06:57:54.1±1.8, 49°51N×158°80E, h47km±49km, Ml3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.09**	**305**	*eP*		Pn 06 58 27.5	+0.9
SKR				*eS*		Sn 06 58 52.0	+0.8
PAU	**Pauzhetka**	**2.33**	**328**	*eS*		Sn 06 59 01.1	+3.8
KDTR	**Khodutka, Kamc**	**2.34**	**349**	*eS*		Sn 06 59 00.9	+3.3
ASAK	**Asacha**	**2.93**	**349**	*eP*		Pn 06 58 41.8	+3.6
ASAK				*eS*		Sn 06 59 16.4	+4.3
RUS	**Russkaya**	**2.93**	**357**	*eP*		Pn 06 58 41.3	+3.2
RUS				*eS*		Sn 06 59 16.0	+4.0
MTVR	**Mutnovka**	**3.00**	**353**	*eP*		Pn 06 58 42.0	+2.8
MTVR				*eS*		Sn 06 59 17.3	+3.3
GRL	**Gorelyy**	**3.08**	**352**	*eP*		Pn 06 58 43.7	+3.4
GRL				*eS*		Sn 06 59 20.2	+4.3
KRMR	**Karymshinskiy**	**3.35**	**353**	*eP*		Pn 06 58 47.9	+4.0
KRMR				*eS*		Sn 06 59 26.9	+4.6
PET	**Petropavlovsk**	**3.52**	**359**	*eS*		Sn 06 59 29.6	+3.1
SPN	**Mys Shipunski**	**3.67**	**12**	*eS*		Sn 06 59 34.4	+4.2
SMAR	**Somma**	**3.76**	**0**	*eP*		Pn 06 58 54.4	+4.7
AVH	**Avacha**	**3.76**	**359**	*eP*		Pn 06 58 54.4	+4.9
KOK	**Koryaka**	**3.79**	**359**	*eP*		Pn 06 58 54.6	+4.7
KRX	**Arik**	**3.85**	**359**	*eP*		Pn 06 58 55.0	+4.0
GNL	**Ganaly**	**4.22**	**353**	*eP*		Pn 06 59 00.2	+4.2
KII	**Karymskiy**	**4.55**	**5**	*eS*		Sn 06 59 57.8	+5.9
KBTR	**Krutoberegovo**	**7.13**	**18**	*eP*		Pn 06 59 39.3	+3.5
KBTR				*eS*		Sn 07 00 58.6	+3.2

SKHL 25 07:14:38.6±0.3, 43°50N×148°30E, h50km±9km, mb4.0/3, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHO	**Shikotan**	**1.13**	**290**	A	A	07 15 25.4	
	530nm,0.4s						
SHO	**Shikotan**	**1.13**	**290**	*eP*	Pn	07 15 08.0	+10
SHO	**Shikotan**	**1.13**	**290**	AMB	AMB	07 15 09.6	
	100nm,0.4s						
SHO	**Shikotan**	**1.13**	**290**	*eS*	Sn	07 15 23.5	+11
SHO	**Shikotan**	**1.13**	**290**	A	A	07 15 25.4	
	350nm,0.4s						
KUR	**Kuril'sk**	**1.76**	**350**	A	A	07 15 30.5	
	70nm,0.5s						
KUR	**Kuril'sk**	**1.76**	**350**	*eP*	Pn	07 15 05.6	-1.0
KUR	**Kuril'sk**	**1.76**	**350**	AMB	AMB	07 15 07.6	
	50nm,0.5s						
KUR	**Kuril'sk**	**1.76**	**350**	*eS*	Sn	07 15 25.6	-2.3
KUR	**Kuril'sk**	**1.76**	**350**	A	A	07 15 30.5	
	60nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.85**	**288**	A	A	07 15 34.4	
	200nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.85**	**288**	*eP*	Pn	07 15 07.0	-0.8
YUK	**Yuzh-Kuril'sk**	**1.85**	**288**	AMB	AMB	07 15 08.4	
	80nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.85**	**288**	*eS*	Sn	07 15 28.1	-1.8
YUK	**Yuzh-Kuril'sk**	**1.85**	**288**	A	A	07 15 34.4	
	130nm,0.5s						
NMR	**Nemuro--Hokkai**	**1.88**	**267**	*eS*	Sn	07 15 28.7	-2.0
NMR	**Nemuro--Hokkai**	**1.88**	**267**	*eP*	Pn	07 15 06.9	-1.3
AKK	**Akkeshi**	**2.57**	**260**	*eP*	Pn	07 15 17.4	-0.3

*JMA **25** 07:15:29.9±0.5, 43°N×142°E×14°8E±°, h1km, MV3.8/21, E OFF HOKKAIDO*
*SKHL **25** 07:15:30.7±0.3, 43°40N×148°30E, h56km±9km, mb4.8/3*
*IDC **25** 07:15:41.1±2.2, 45°79N×147°20E, h0km, mb3.9/11, mbtmp3.9/12, ML3.0/1, MS4.2/1, Error ellipse: s-maj=58.1km s-min=21.7km az=164.0*
*NEIC **25** 07:15:44.3±1.1, 45°3N±0°1×147°2E±0°2, h35km±10km, mb4.2/34, Error ellipse: s-maj=21.1km s-min=15.3km az=169.0*

ISC 25 07:15:29.5±3.8, 43°52N±0°10×148°08E±0°08, h8km±23km, n69, σ0°85/70, mb4.1/28, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHO	**Shikotan**	**0.97**	**292**	*eP*	Pn	07 16 00.1	+11
SHO				AMB	AMB	07 16 02.4	
	800nm,0.5s						
SHO				*eS*	Sn	07 16 16.0	+13
SHO				A	A	07 16 18.1	
	3μm,0.5s						
SHO				A	A	07 16 18.1	
	4μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.69**	**289**	*eP*	**Pn**	**07 15 59.5**	**+0.3**
YUK				AMB	AMB	07 16 06.1	
	400nm,0.4s						
YUK				*i* S	**Sn**	**07 16 21.4**	**+0.5**
YUK				A	A	07 16 27.0	
	1μm,0.6s						
YUK				A	A	07 16 27.0	
	1μm,0.6s						
NEM2	**Nemuro 2**	**1.71**	**266**	*eP*	**Pn**	**07 15 59.8**	**+0.3**
NEM2				*eS*	**Sn**	**07 16 21.3**	**0.0**
NMR	**Nemuro--Hokkai**	**1.71**	**266**	*eP*	**Pn**	**07 15 59.7**	**+0.1**
NMR				*i* S	**Sn**	**07 16 21.4**	**-0.2**
KUR	**Kuril'sk**	**1.72**	**355**	*eP*	**Pn**	**07 15 59.8**	**+0.1**
KUR				AMB	AMB	07 16 02.9	
	70nm,0.3s						
KUR				*eS*	**Sn**	**07 16 21.4**	**-0.4**
KUR				A	A	07 16 26.8	
	460nm,0.3s						
KUR				A	A	07 16 26.8	
	360nm,0.3s						
GLVR	**Golovnino**	**1.87**	**278**	*eP*	**Pn**	**07 16 01.9**	**+0.2**
GLVR				AMB	AMB	07 16 02.7	
	100nm,0.3s						
GLVR				*eS*	**Sn**	**07 16 26.1**	**+0.7**
GLVR				A	A	07 16 35.9	
	810nm,0.5s						
GLVR				A	A	07 16 35.9	
	680nm,0.5s						
JKHN	**Kushirohamanak**	**2.17**	**259**	*eS*	**Sn**	**07 16 33.3**	**+0.4**
JRA	**Rausu**	**2.18**	**282**	*eP*	**Pn**	**07 16 06.8**	**+0.8**
JNSB	**Nemuroshibetsu**	**2.24**	**278**	*eP*	**Pn**	**07 16 08.3**	**+1.5**
AKK	**Akkeshi**	**2.41**	**259**	*eP*	**Pn**	**07 16 09.1**	**-0.1**
JNK	**Nakash**	**2.44**	**273**	*eP*	**Pn**	**07 16 10.1**	**+0.5**
JAK	**Akkeshi**	**2.52**	**259**	*eP*	**Pn**	**07 16 11.4**	**+0.8**
JAK				*eS*	**Sn**	**07 16 41.0**	**-0.6**
JTKR	**Abashiri--Toko**	**3.05**	**280**	*eP*	**Pn**	**07 16 19.3**	**+1.3**
JAR	**Ashorobuto**	**3.15**	**267**	*eS*	**Sn**	**07 16 57.6**	**+0.7**
JCH	**Churui**	**3.57**	**257**	*eP*	**Pn**	**07 16 25.5**	**+0.4**
JCH				*eS*	**Sn**	**07 17 06.6**	**-0.7**
JKA	**Kamikawa-asahi**	**4.01**	**280**		Pn	07 16 36.0	+4.9
ASAJ	**Asahikawa**	**4.01**	**280**	Pn	**Pb**	**07 16 39.9**	**-0.5**
	1.0nm,0.3s,baz=95,slow=16,SNR=4.9						
	5.8nm,0.5s						
YSS	**Yuzhno-Sakhali**	**5.09**	**314**	Pn	Pn	07 16 36.5	-9.4
SONM	**Songino Array**	**29.18**	**293**	P	**P**	**07 21 30.7**	**-0.6**
	1.0nm,0.6s,baz=86,slow=8.5,SNR=4.6						
	1.0nm,0.6s						
SONM	**Songino Array**	**29.18**	**293**	IAmb	IAmb	07 21 32.5	
	comp=Z,2.8nm,1.2s						
C16K	**Lisburne Hills**	**34.62**	**28**	P	**P**	**07 22 18.4**	**-0.2**
C16K				IAmb	IAmb	07 22 36.8	
	comp=Z,4.3nm,1.5s						
G16K	**Koyuk River**	**34.85**	**34**	P	**P**	**07 22 20.6**	**+0.1**
G16K				IAmb	IAmb	07 22 39.0	
	comp=Z,3.6nm,1.4s						
F17K	**Baldwin Pennin**	**35.55**	**32**	P	**P**	**07 22 27.3**	**+0.7**
F17K				IAmb	IAmb	07 22 28.7	
	comp=Z,3.7nm,0.9s						
E18K	**Tukpahlearik C**	**36.05**	**31**	P	**P**	**07 22 31.4**	**+0.5**
E18K				IAmb	IAmb	07 22 49.0	
	comp=Z,3.6nm,1.4s						
C18K	**Utukok River**	**36.19**	**29**	P	**P**	**07 22 32.5**	**+0.4**
C18K				IAmb	IAmb	07 22 45.0	
	comp=Z,1.9nm,0.8s						
G18K	**Tagagawik**	**36.46**	**34**	P	**P**	**07 22 35.0**	**+0.6**
G18K				IAmb	IAmb	07 22 48.0	
	comp=Z,2.3nm,0.8s						
F19K	**Shaleruckik Mo**	**36.99**	**32**	P	**P**	**07 22 39.7**	**+0.8**
D19K	**Kuna River**	**37.23**	**29**	P	**P**	**07 22 41.3**	**+0.3**
D19K				IAmb	IAmb	07 22 42.5	
	comp=Z,3.7nm,1.1s						
E19K	**Redstone River**	**37.33**	**31**	P	**P**	**07 22 42.6**	**+0.8**
E19K				IAmb	IAmb	07 22 43.7	
	comp=Z,4.5nm,1.1s						
D20K	**Etivluk River**	**37.82**	**29**	P	**P**	**07 22 46.4**	**+0.4**
D20K				IAmb	IAmb	07 22 47.1	
	comp=Z,3.8nm,0.9s						
B20K	**Meade River**	**37.94**	**27**	P	**P**	**07 22 47.2**	**+0.3**
IMAR	**Indian Mountai**	**38.46**	**34**	P	**P**	**07 22 52.6**	**+1.3**
B21K	**Ikpikpuk River**	**38.71**	**28**	P	**P**	**07 22 53.9**	**+0.5**
B22K	**Teshekpuk Lake**	**39.26**	**27**	P	**P**	**07 22 58.2**	**+0.2**
E22K	**Anaktuvuk Pass**	**39.47**	**31**	P	**P**	**07 23 00.7**	**+0.9**
BPAW	**Bear Paw Mtn.**	**39.50**	**37**	P	**P**	**07 22 59.4**	**-0.7**
C23K	**Itkillik River**	**40.12**	**28**	P	**P**	**07 23 05.9**	**+0.7**
C23K				IAmb	IAmb	07 23 33.2	
	comp=Z,7.6nm,1.5s						
E23K	**Chandalar**	**40.28**	**31**	P	**P**	**07 23 07.8**	**+1.2**
D24K	**Happy Valley**	**40.67**	**29**	P	**P**	**07 23 10.3**	**+0.6**
D24K				IAmb	IAmb	07 23 11.4	
	comp=Z,3.0nm,0.8s						
E24K	**Your Creek**	**40.71**	**31**	P	**P**	**07 23 11.0**	**+0.9**
E24K				IAmb	IAmb	07 23 12.3	
	comp=Z,3.8nm,1.1s						
ILAR	**Eielson Array**	**41.28**	**36**	P	**P**	**07 23 14.7**	**-0.1**
	comp=Z,0.3nm,0.8s,baz=269,slow=5.7,SNR=4.1						
ILAR				LR	LR	07 39 31.2	
	comp=Z,333nm,20.5s,baz=86,slow=36						
	comp=Z,0.3nm,0.8s						
D25K	**Kavik River**	**41.55**	**29**	P	**P**	**07 23 17.3**	**+0.2**
BMAR	**Burnt Mountain**	**42.17**	**32**	P	**P**	**07 23 24.1**	**+2.0**
MKAR	**Makanchi Array**	**45.29**	**298**	P	**P**	**07 23 46.4**	**-1.0**
	comp=Z,1.4nm,0.8s,baz=79,slow=9.1,SNR=11						
	comp=Z,1.4nm,0.8s						
MAKZ	**Makanchi**	**45.48**	**298**	P	**P**	**07 23 49.0**	**0.0**
F30M	**Barrier River**	**45.53**	**31**	P	**P**	**07 23 51.3**	**+2.2**
KURK	**Kurchatov**	**46.22**	**304**	P	**P**	**07 23 54.0**	**-0.6**
G31M	**Satah River**	**46.22**	**32**	P	**P**	**07 23 56.7**	**+2.3**
G31M				IAmb	IAmb	07 23 57.2	
	comp=Z,3.6nm,1.3s						
KURBB	**Kurchatov Arra**	**46.30**	**304**	P	**P**	**07 23 54.4**	**-0.9**
	comp=Z,1.2nm,0.6s,baz=75,slow=8.9,SNR=11						
	comp=Z,1.2nm,0.6s						
A36M	**Sachs Harbour**	**48.30**	**25**	P	**P**	**07 24 11.3**	**+0.7**
A36M				IAmb	IAmb	07 24 23.4	
	comp=Z,1.8nm,0.8s						
C36M	**Paulatuk**	**49.37**	**28**	P	**P**	**07 24 20.6**	**+1.8**
C36M				IAmb	IAmb	07 24 29.8	
	comp=Z,4.8nm,1.4s						
KK31	**Karatay Array**	**54.41**	**298**	P	**P**	**07 24 57.2**	**+0.3**
KK31				IAmb	IAmb	07 25 03.8	
	comp=Z,4.2nm,1.4s						
KKAR	**Karatay Array**	**54.41**	**298**	P	**P**	**07 24 57.0**	**+0.1**
RES	**Resolute Bay**	**55.00**	**17**	P	**P**	**07 25 00.7**	**+0.1**
YKA	**Yellowknife Ar**	**55.62**	**34**	P	**P**	**07 25 05.8**	**+0.6**
	comp=Z,0.2nm,0.9s,baz=303,slow=8.1,SNR=3.1						
	comp=Z,0.2nm,0.9s						
AB31	**Akbulak array**	**57.73**	**309**	P	**P**	**07 25 20.4**	**-0.1**
ABKAR	**Akbulak array**	**57.73**	**309**	P	**P**	**07 25 20.9**	**+0.4**
BLKN	**Baker Lake**	**61.38**	**27**	P	**P**	**07 25 45.9**	**+0.5**
ILON	**Igloolik, Nuna**	**61.61**	**18**	P	**P**	**07 25 46.2**	**-0.6**
ILON				IAmb	IAmb	07 26 23.7	
	comp=Z,2.9nm,1.2s						
FINES	**FINESS Array B**	**65.39**	**333**	P	**P**	**07 26 10.3**	**-1.6**
	comp=Z,5.4nm,0.9s,baz=22,slow=7.2,SNR=7.5						
	comp=Z,5.4nm,0.9s						
NC405	**NORSAR Array S**	**69.87**	**339**	P	**P**	**07 26 39.3**	**-1.0**
NB201	**NORSAR Array S**	**70.03**	**339**	P	**P**	**07 26 40.1**	**-1.2**
NB2	**NORSAR Subarra**	**70.06**	**339**	P	**P**	**07 26 40.9**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**70.06**	**339**	P	**P**	**07 26 41.0**	**-0.4**
	comp=Z,0.9nm,0.4s,baz=32,slow=6.6,SNR=7.4						
	comp=Z,0.9nm,0.4s						
HFS	**Hagfors**	**70.16**	**338**	P	**P**	**07 26 41.2**	**-0.8**
	comp=Z,3.1nm,0.5s,baz=36,slow=7.9,SNR=9.6						
	comp=Z,3.1nm,0.5s						
KBZ	**Khabaz**	**70.45**	**312**	P	**P**	**07 26 45.0**	**+0.9**
	comp=Z,2.4nm,0.8s,baz=99,slow=3.9,SNR=5.0						
	comp=Z,2.4nm,0.8s						
AKASG	**Malin Array Be**	**72.16**	**324**	P	**P**	**07 26 53.4**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=40,slow=6.4,SNR=4.8						
	comp=Z,0.5nm,0.5s						
AKASG	**Malin Array Be**	**72.16**	**324**	IAmb	IAmb	07 27 26.9	
	comp=Z,2.9nm,1.2s						
TXAR	**Lajitas Array**	**82.22**	**57**	P	P	07 28 01.4	+10
	comp=Z,0.1nm,0.6s,baz=299,slow=2.6,SNR=3.6						
	comp=Z,0.1nm,0.6s						

*IDC **25** 07:20:16.4±8.0, 36°23S×74°84W, h0km, mb3.7/2, mbtmp3.6/3, ML3.5/1, Error ellipse: s-maj=156.5km s-min=24.6km az=73.0*
*GUC **25** 07:20:21.1±0.8, 35°70S×73°52W, h25km±14km, ML3.8*

ISC 25 07:20:23.3±2.1, 35°80S±0°07×73°6W±0°2, h35km, n13, σ3°04/8, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BI05	**Punta Hualpn**	**1.00**	**161**	*eP*	**Pn**	**07 20 39.1**	**-1.7**
BI05				*eS*	**Sn**	**07 20 53.8**	**+0.1**
BI05				IAML		07 21 10.2	
	comp=E,3μm,0.4s						
GO05	**Hualane**	**1.57**	**60**	*eP*	**Pn**	**07 20 45.5**	**-3.2**
GO05				*eS*	**Sn**	**07 21 11.5**	**+3.8**
ML02	**Panimavida**	**1.77**	**89**	*eP*	**Pn**	**07 20 49.2**	**-2.1**
ML02				IAML		07 21 19.7	
	comp=E,2μm,0.5s						
BO03	**Pichilemu**	**1.86**	**46**	IAML		07 21 26.8	
	comp=E,943nm,0.6s						
BO02	**Sierra Bellavi**	**2.51**	**67**	IAML		07 21 53.1	
	comp=N,1μm,0.3s						
BI04	**Isla Mocha**	**2.62**	**185**	IAML		07 21 39.7	
	comp=N,373nm,0.3s						
MT01	**Popeta**	**2.73**	**46**	*eP*	**Pn**	**07 21 01.8**	**-2.8**
MT01				IAML		07 21 58.2	
	comp=E,215nm,0.6s						
MT09	**Talagante**	**2.94**	**47**	IAML		07 22 17.1	
	comp=E,538nm,0.8s						
MT15	**Las Vizcachas**	**3.36**	**50**	IAML		07 22 26.4	
	comp=N,397nm,0.9s						
LMEL	**Las Melosas**	**3.40**	**56**	IAML		07 22 21.1	
	comp=N,239nm,0.6s						
PLCA	**Paso Flores**	**5.48**	**155**	Pn	**Pn**	**07 21 41.8**	**-0.6**
	comp=N,0.3nm,0.3s,baz=331,slow=15,SNR=6.0						
PLCA				Lg	Lg	07 23 13.3	
	comp=N,0.6nm,0.3s,baz=338,slow=14,SNR=3.4						
	comp=N,0.7nm,0.4s						
LPAZ	**La Paz**	**20.03**	**15**	P	**Pn**	**07 24 58.2**	**+2.5**
	comp=N,1.1nm,0.9s,baz=192,slow=12,SNR=4.3						
	comp=N,1.1nm,0.9s						
BDFB	**Brasilia**	**30.40**	**55**	P	P	07 26 40.9	+8.5
	comp=N,3.2nm,1.0s,baz=229,slow=12,SNR=3.5						
	comp=N,3.2nm,1.0s						

KRSC 25 07:27:20.6±1.6, 49°45N×159°00E, h42km±47km, Ml4.1, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.23**	**305**	*eP*	Pn	07 27 55.7	+0.7
SKR				*eS*	Sn	07 28 21.7	+0.4
KDTR	**Khodutka, Kamc**	**2.44**	**346**	*eP*	Pn	07 28 00.8	+3.0
KDTR				*eS*	Sn	07 28 29.9	+3.6
PAU	**Pauzhetka**	**2.46**	**326**	*eP*	Pn	07 28 00.8	+2.7
PAU				*eS*	Sn	07 28 30.0	+3.1
RUS	**Russkaya**	**3.00**	**354**	*eP*	Pn	07 28 09.4	+3.8
RUS				*eS*	Sn	07 28 44.0	+3.7
ASAK	**Asacha**	**3.02**	**347**	*eP*	Pn	07 28 09.7	+3.8
ASAK				*eS*	Sn	07 28 44.4	+3.6
MTVR	**Mutnovka**	**3.08**	**351**	*eP*	Pn	07 28 10.3	+3.4
MTVR				*eS*	Sn	07 28 46.2	+3.7
GRL	**Gorelyy**	**3.16**	**350**	*eP*	Pn	07 28 11.5	+3.6
GRL				*eS*	Sn	07 28 48.7	+4.3
KRMR	**Karymshinskiy**	**3.43**	**351**	*eP*	Pn	07 28 15.7	+4.3
KRMR				*eS*	Sn	07 28 55.8	+5.0
PET	**Petropavlovsk**	**3.59**	**357**	*eS*	Sn	07 28 59.3	+4.6
DALK	**Dalny**	**3.59**	**358**	*eP*	Pn	07 28 17.4	+3.7
DALK				*eS*	Sn	07 28 59.1	+4.3
SPN	**Mys Shipunski**	**3.71**	**10**	*eP*	Pn	07 28 19.3	+4.0
SPN				*eS*	Sn	07 29 01.9	+4.2
UGLR	**Uglovaya**	**3.77**	**358**	*eS*	Sn	07 29 04.2	+4.9
SMAR	**Somma**	**3.82**	**358**	*eP*	Pn	07 28 22.2	+5.2
AVH	**Avacha**	**3.83**	**358**	*eP*	Pn	07 28 21.0	+4.0
AVH				*eS*	Sn	07 29 06.8	+6.1
KOK	**Koryaka**	**3.86**	**357**	*eP*	Pn	07 28 21.7	+4.3
KRX	**Arik**	**3.92**	**357**	*eP*	Pn	07 28 23.2	+4.8
KRX				*eS*	Sn	07 29 08.0	+4.8
GNL	**Ganaly**	**4.30**	**352**	*eP*	Pn	07 28 28.6	+5.0
TUMD	**Tumrok D**	**5.83**	**9**	*eS*	Sn	07 29 54.7	+4.8
KBTR	**Krutoberegovo**	**7.16**	**17**	*eP*	Pn	07 29 07.0	+4.5
KBTR				*eS*	Sn	07 30 25.0	+2.6

*IDC **25** 07:29:51.7±1.2, 49°24N×158°49E, h0km, mb3.6/5, mbtmp3.6/6, ML2.3/1, Error ellipse: s-maj=32.6km s-min=27.8km az=68.0*
*KRSC **25** 07:29:55.0±1.4, 49°48N×158°79E, h49km±44km, Ml3.9*

ISC 25 07:29:54.5±1.1, 49°34N±0°08×158°61E±0°09, h18km, n25, σ1°08/37, mb3.7/5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.10**	**311**	*eP*	**Pn**	**07 30 28.3**	**-0.5**
SKR				*eS*	**Sn**	**07 30 53.3**	**-1.1**
PAU	**Pauzhetka**	**2.42**	**332**	*eP*	**Pn**	**07 30 34.0**	**+0.9**
PAU				*eS*	**Sn**	**07 31 03.1**	**+0.7**
KDTR	**Khodutka, Kamc**	**2.50**	**352**	*eP*	**Pn**	**07 30 34.0**	**-0.2**
KDTR				*eS*	**Sn**	**07 31 02.8**	**-1.4**
ASAK	**Asacha**	**3.08**	**352**	*eP*	**Pn**	**07 30 43.0**	**+0.6**
ASAK				*eS*	**Sn**	**07 31 17.9**	**-0.9**
RUS	**Russkaya**	**3.10**	**359**	*eP*	**Pn**	**07 30 42.4**	**0.0**
RUS				*eS*	**Sn**	**07 31 17.1**	**-1.9**
MTVR	**Mutnovka**	**3.16**	**355**	*eP*	**Pn**	**07 30 43.7**	**+0.2**
MTVR				*eS*	**Sn**	**07 31 19.5**	**-1.3**
GRL	**Gorelyy**	**3.24**	**354**	*eP*	**Pn**	**07 30 45.2**	**+0.7**
GRL				*eS*	**Sn**	**07 31 22.0**	**-0.6**
KRMR	**Karymshinskiy**	**3.51**	**355**	*eP*	**Pn**	**07 30 49.0**	**+0.9**
KRMR				*eS*	**Sn**	**07 31 29.5**	**+0.4**
PET	**Petropavlovsk**	**3.69**	**0**	*eP*	**Pn**	**07 30 50.8**	**+0.2**
PET				*eS*	**Sn**	**07 31 31.9**	**-1.7**
DALK	**Dalny**	**3.70**	**1**	*eP*	**Pn**	**07 30 50.9**	**+0.2**
DALK				*eS*	**Sn**	**07 31 32.6**	**-1.2**
PETK	**Petropavlovsk-**	**3.82**	**352**	Pn	**Pn**	**07 30 53.6**	**+1.2**
	1.1nm,0.3s,baz=151,slow=17,SNR=9.6						
PETK				Sn	**Sn**	**07 31 39.1**	**+2.3**
	0.7nm,0.3s,baz=244,slow=20,SNR=3.7						
	1.8nm,0.3s						
SPN	**Mys Shipunski**	**3.87**	**13**	*eP*	**Pn**	**07 30 52.9**	**-0.2**
SPN				*eS*	**Sn**	**07 31 36.2**	**-1.8**
UGLR	**Uglovaya**	**3.88**	**2**	*eP*	**Pn**	**07 30 54.1**	**+0.8**
SMAR	**Somma**	**3.93**	**2**	*eP*	**Pn**	**07 30 55.6**	**+1.5**
AVH	**Avacha**	**3.93**	**1**	*eP*	**Pn**	**07 30 55.8**	**+1.8**
KOK	**Koryaka**	**3.96**	**0**	*eP*	**Pn**	**07 30 55.7**	**+1.3**
KRX	**Arik**	**4.03**	**0**	*eP*	**Pn**	**07 30 56.0**	**+0.6**
GNL	**Ganaly**	**4.38**	**355**	*eP*	**Pn**	**07 31 01.1**	**+0.8**
KII	**Karymskiy**	**4.74**	**6**	*eP*	**Pn**	**07 31 06.3**	**+1.3**
KBTR	**Krutoberegovo**	**7.34**	**19**	*eP*	**Pn**	**07 31 41.0**	**+0.3**
MKAR	**Makanchi Array**	**49.02**	**298**	P	**P**	**07 38 39.6**	**-0.3**
	0.2nm,0.4s,baz=55,slow=4.2,SNR=4.8						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**49.09**	**304**	P	**P**	**07 38 39.9**	**-0.6**
	0.4nm,0.5s,baz=61,slow=7.4,SNR=4.2						
	0.4nm,0.5s						
BVAR	**Borovoye Array**	**52.05**	**310**	P	**P**	**07 39 03.3**	**+0.6**
	0.6nm,0.4s,baz=54,slow=7.3,SNR=2.9						
	0.6nm,0.4s						
WRA	**Warramunga Arr**	**72.27**	**204**	P	**P**	**07 41 18.0**	**-0.6**
	1.0nm,0.9s,baz=16,slow=6.3,SNR=4.1						
	1.0nm,0.9s						
TXAR	**Lajitas Array**	**73.03**	**65**	P	**P**	**07 41 24.1**	**+0.8**
	0.3nm,0.5s,baz=298,slow=4.6,SNR=6.9						
	0.3nm,0.5s						

*ASRS **25** 07:30:18.0±1.1, 54°14N×87°18E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

3.8nm,0.6s
KURBB **Kurchatov Arra 6.69 247** Pn Pn 07 36 23.6 +0.7
baz=61,slow=14,SNR=4.6
0.5nm,0.6s
MKAR **Makanchi Array 7.85 211** Pn Pn 07 36 39.5 +0.7
baz=23,slow=12,SNR=2.2
0.2nm,0.4s

IDC ***25*** *07:35:54.4±1.5, 49.15°N×158.50°E, h0km, mb3.7/8, mbtmp3.7/10, ML3.0/2, MS4.1/1, Error ellipse: s-maj=40.2km s-min=19.0km az=1.0*
KRSC ***25*** *07:35:58.9±2.2, 49.39°N×158.87°E, h48km±57km, Ml4.3*
NEIC ***25*** *07:36:00.4±0.8, 49.2°N±0.1°×158.4°E±0.2, h37km±7km, mb4.1/9, Error ellipse: s-maj=19.1km s-min=16.9km az=99.0*
ISC 25 07:36:00.1±1.0,**49°22N**±0.09°×**158°62E**±0.07°,**h35**km,**n49,**
σ1§**10**/54,**mb4.0**/13,**East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.18**	**313**	*eP*	**Pn**	**07 36 32.2**	**-1.6**
SKR				*eS*	**Sn**	**07 36 58.2**	**-1.4**
PAU	**Pauzhetka**	**2.53**	**333**	*eP*	**Pn**	**07 36 39.7**	**+1.0**
PAU				*eS*	**Sn**	**07 37 10.7**	**+2.5**
KDTR	**Khodutka, Kamc**	**2.62**	**353**	*eP*	**Pn**	**07 36 39.0**	**-0.8**
KDTR				*eS*	**Sn**	**07 37 09.7**	**-0.6**
ASAK	**Asacha**	**3.20**	**352**	*eP*	**Pn**	**07 36 48.3**	**+0.4**
RUS	**Russkaya**	**3.22**	**359**	*eP*	**Pn**	**07 36 47.7**	**-0.4**
RUS				*eS*	**Sn**	**07 37 23.9**	**-1.3**
MTVR	**Mutnovka**	**3.28**	**355**	*eP*	**Pn**	**07 36 49.1**	**0.0**
MTVR				*eS*	**Sn**	**07 37 26.1**	**-0.8**
GRL	**Gorelyy**	**3.35**	**354**	*eP*	**Pn**	**07 36 50.4**	**+0.3**
GRL				*eS*	**Sn**	**07 37 28.6**	**-0.1**
KRMR	**Karymshinskiy**	**3.63**	**355**	*eP*	**Pn**	**07 36 54.5**	**+0.8**
KRMR				*eS*	**Sn**	**07 37 35.2**	**-0.1**
PET	**Petropavlovsk**	**3.81**	**0**	Pn	**Pn**	**07 36 56.2**	**0.0**
PET	**Petropavlovsk**	**3.81**	**0**	*eP*	**Pn**	**07 36 55.9**	**-0.3**
PET				*eS*	**Sn**	**07 37 38.8**	**-1.0**
DALK	**Dalny**	**3.82**	**1**	*eP*	**Pn**	**07 36 56.1**	**-0.2**
DALK				*eS*	**Sn**	**07 37 39.0**	**-0.9**
APC	**Apacha**	**3.82**	**347**	*eP*	**Pn**	**07 36 57.4**	**+1.0**
PEA0B	**Petropavlovsk-**	**3.94**	**352**	Pn	**Pn**	**07 36 58.4**	**+0.5**
PETK	**Petropavlovsk-**	**3.94**	**352**	Pn	**Pn**	**07 36 57.3**	**-0.7**
	2.1nm,0.3s,baz=145,slow=14,SNR=14						
PETK				Sn	**Sn**	**07 37 45.3**	**+2.4**
	2.1nm,0.3s,baz=108,slow=19,SNR=5.2						
	7.1nm,0.5s						
SPN	**Mys Shipunski**	**3.98**	**12**	*eP*	**Pn**	**07 36 58.1**	**-0.5**
SPN				*eS*	**Sn**	**07 37 43.1**	**-0.9**
NLC	**Nalytchevo**	**3.98**	**6**	*eS*	**Sn**	**07 37 41.4**	**-2.6**
UGLR	**Uglovaya**	**4.00**	**2**	*eP*	**Pn**	**07 37 00.3**	**+1.4**
SMAR	**Somma**	**4.05**	**2**	*eP*	**Pn**	**07 37 00.3**	**+0.6**
AVH	**Avacha**	**4.05**	**1**	*eP*	**Pn**	**07 37 00.3**	**+0.7**
KOK	**Koryaka**	**4.08**	**0**	*eP*	**Pn**	**07 37 01.0**	**+1.0**
KRX	**Arik**	**4.15**	**0**	*eP*	**Pn**	**07 37 01.3**	**+0.3**
GNL	**Ganaly**	**4.50**	**355**	*eP*	**Pn**	**07 37 07.7**	**+1.8**
KBTR	**Krutoberegovo**	**7.45**	**18**	*eP*	**Pn**	**07 37 45.8**	**-0.4**
KBTR				*eS*	**Sn**	**07 39 06.7**	**-2.6**
KLR	**Kul'dur**	**17.52**	**280**	P	**Pn**	**07 40 00.9**	**-0.5**
	0.1nm,0.3s,baz=55,slow=8.7,SNR=4.9						
	1.3nm,0.7s						
M17K	**Holitna River**	**27.25**	**47**	P	**P**	**07 41 42.0**	**+1.5**
M17K				IAmb	IAmb	07 42 04.6	
	comp=Z,12nm,1.5s						
H21K	**Melozitna Rive**	**29.89**	**39**	P	**P**	**07 42 05.0**	**+0.9**
H21K				IAmb	IAmb	07 42 16.6	
	comp=Z,3.9nm,1.5s						
H11N2	**WAKE ISLAND Hy**	**30.16**	**164**	T	T	08 13 29.6	
	baz=349,slow=76,SNR=10						
H11N3	**WAKE ISLAND Hy**	**30.18**	**164**	T	T	08 13 33.7	
	baz=349,slow=76,SNR=16						
H11N1	**WAKE ISLAND Hy**	**30.18**	**164**	T	T	08 13 32.3	
	baz=349,slow=76,SNR=12						
H11S1	**WAKE ISLAND Hy**	**31.32**	**165**	T	T	08 14 58.2	
	baz=350,slow=76,SNR=14						
H11S3	**WAKE ISLAND Hy**	**31.33**	**165**	T	T	08 15 00.3	
	baz=350,slow=76,SNR=15						
H11S2	**WAKE ISLAND Hy**	**31.34**	**165**	T	T	08 14 59.6	
	baz=350,slow=76,SNR=16						
SML	**Sawmill**	**31.61**	**46**	P	**P**	**07 42 20.1**	**+0.8**
ILAR	**Eielson Array**	**32.29**	**41**	P	**P**	**07 42 24.6**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=248,slow=7.4,SNR=13						
	comp=Z,0.5nm,0.7s						
DOT	**Dot Lake**	**33.52**	**43**	P	**P**	**07 42 36.1**	**+0.2**
L27K	**Beaver Creek,**	**34.56**	**44**	P	**P**	**07 42 46.8**	**+1.8**
L27K				IAmb	IAmb	07 43 02.6	
	comp=Z,4.4nm,1.4s						
BCAR	**Beaver Creek A**	**34.58**	**44**	P	**P**	**07 42 46.1**	**+1.0**
YKA	**Yellowknife Ar**	**46.70**	**40**	P	**P**	**07 44 25.5**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=299,slow=8.5,SNR=12						
	comp=Z,0.9nm,0.8s						
KURK	**Kurchatov**	**49.06**	**304**	P	**P**	**07 44 43.2**	**-0.2**
KURK	**Kurchatov**	**49.06**	**304**	IAmb	IAmb	07 44 43.5	
	comp=Z,1.7nm,0.7s						
MKAR	**Makanchi Array**	**49.08**	**298**	P	**P**	**07 44 42.2**	**-1.4**
	comp=Z,0.9nm,0.8s,baz=67,slow=6.8,SNR=7.3						
	comp=Z,0.9nm,0.8s						
KURBB	**Kurchatov Arra**	**49.16**	**304**	P	**P**	**07 44 43.2**	**-0.9**
	comp=Z,1.4nm,0.8s,baz=63,slow=7.9,SNR=10						
KURBB				LR	LR	08 08 07.7	
	comp=Z,182nm,19.5s,baz=40,slow=39						
	comp=Z,1.4nm,0.8s						
LON	**Longmire**	**50.96**	**61**	P	**P**	**07 44 57.1**	**-0.9**
BVAR	**Borovoye Array**	**52.12**	**310**	P	**P**	**07 45 05.9**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=70,slow=6.5,SNR=6.0						
	comp=Z,1.3nm,0.7s						
BLKN	**Baker Lake**	**52.86**	**32**	P	**P**	**07 45 12.4**	**+0.8**
FCC	**Fort Churchill**	**57.12**	**36**	P	**P**	**07 45 43.2**	**+0.6**
FCC				IAmb	IAmb	07 46 16.5	
	comp=Z,2.8nm,1.5s						
NVAR	**Mina Array Bea**	**58.03**	**67**	P	**P**	**07 45 50.0**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=311,slow=6.2,SNR=2.5						
	comp=Z,0.5nm,0.8s						
PDAR	**Pinedale Array**	**60.30**	**58**	P	**P**	**07 46 06.0**	**+0.7**
	comp=Z,1.2nm,1.1s,baz=321,slow=1.9,SNR=4.9						
	comp=Z,1.2nm,1.1s						
TXAR	**Lajitas Array**	**73.07**	**65**	P	**P**	**07 47 26.8**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=309,slow=5.3,SNR=6.8						
	comp=Z,0.4nm,0.6s						

IDC ***25*** *07:37:24.9±0.9, 18.31°S×172.69°W, h0km, mb4.2/9, mbtmp4.3/11, ML4.4/2, Error ellipse: s-maj=40.5km s-min=16.9km az=138.0*
NEIC ***25*** *07:37:25.2±2.0, 18.45°S±0.07°×172.33°W±0.06, h10km±1km, mb4.7/18, Error ellipse: s-maj=15.2km s-min=3.5km az=39.0*
ISC 25 07:37:25.2±0.5,**18°41S**±0.06°×**172°35W**±0.07,**h10**km,**n61,**
σ3§**08**/52,**mb4.6**/18,**Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**2.39**	**106**		**Pn**	**07 38 04.2**	**-0.2**
AFI	**Afiamalu**	**4.51**	**7**	Pn	**Pn**	**07 38 34.0**	**+0.3**
	27nm,0.3s,baz=190,slow=8.7,SNR=28						
AFI				Sn	**Sn**	**07 39 22.0**	**-4.3**
	74nm,0.3s,baz=179,slow=14,SNR=7.7						
	68nm,0.3s						
MSVF	**Nonsavu**	**9.15**	**273**	Pn	**Pn**	**07 39 38.6**	**+1.1**
	2.3nm,0.3s,baz=100,slow=10,SNR=27						
MSVF	**Nonsavu**	**9.15**	**273**		**Pn**	**07 39 40.7**	**+3.2**
GLKZ	**Green Lake**	**11.94**	**204**	P	**Pn**	**07 40 13.4**	**-2.1**
GLKZ				S	Sn	07 42 10.4	-18
RAR	**Rarotonga**	**12.16**	**105**	Pn	**Pn**	**07 40 18.1**	**-0.5**
	4.0nm,0.3s,baz=256,slow=6.0,SNR=12						
RAR	**Rarotonga**	**12.16**	**105**		**Pn**	**07 40 16.3**	**-2.3**
MARNC	**Mare, Loyalty**	**18.69**	**257**	P	**P**	**07 41 42.5**	**-1.2**
DZM	**Mont Dzumac**	**20.22**	**256**	P	**P**	**07 41 59.9**	**-0.8**
	0.8nm,0.3s,baz=77,slow=19,SNR=8.6						
	20nm,0.7s						
MXZ	**Matakaoa Point**	**20.76**	**201**	P	Pn	07 42 13.0	+4.4
WCZ	**Waipu Caves**	**21.05**	**211**	P	**P**	**07 42 12.2**	**+2.8**
PKGZ	**Pakihiroa**	**21.11**	**201**	P	P	07 42 17.2	+7.1
HAZ	**Te Kaha**	**21.12**	**202**	P	**P**	**07 42 14.9**	**+4.9**
RUGZ	**Raukumara Rang**	**21.34**	**202**	P	**P**	**07 42 19.2**	**+6.5**
TWGZ	**Tauwhareparae**	**21.43**	**201**	P	P	07 42 21.3	+7.8
CNGZ	**Carnagh Station**	**21.63**	**200**	P	**P**	**07 42 22.5**	**+6.9**
TKGZ	**Te Karaka**	**21.71**	**201**	P	**P**	**07 42 20.0**	**+3.7**
MWZ	**Matawai**	**21.73**	**202**	P	**P**	**07 42 21.6**	**+4.9**
URZ	**Urewera**	**21.81**	**203**	P	**P**	**07 42 18.6**	**+1.1**
	9.0nm,0.3s,baz=273,slow=3.1,SNR=20						
URZ				S	**S**	**07 46 12.4**	**-6.2**
	3.5nm,0.4s,baz=163,slow=20,SNR=9.2						
	9.0nm,0.3s						
URZ	**Urewera**	**21.81**	**203**	P	**P**	**07 42 21.3**	**+3.8**
KMRZ	**Kaimai**	**21.90**	**206**	P	**P**	**07 42 25.4**	**+6.8**
MUGZ	**Murupara**	**22.13**	**203**	P	**P**	**07 42 24.0**	**+3.0**
MTHZ	**Maungataniwha**	**22.43**	**203**	P	**P**	**07 42 30.3**	**+6.1**
NMHZ	**Naumai**	**22.66**	**202**	P	**P**	**07 42 32.5**	**+5.8**
BKZ	**Black Stump Fm**	**22.84**	**203**	P	**P**	**07 42 29.0**	**+0.5**
BKZ				IAmb	IAmb	07 43 00.1	
	comp=Z,26nm,1.4s						
BKZ	**Black Stump Fm**	**22.84**	**203**	P	**P**	**07 42 31.5**	**+2.9**
KWHZ	**Kaweka Forest**	**23.09**	**203**	P	**P**	**07 42 34.7**	**+3.6**
ETVZ	**East Tongariro**	**23.11**	**204**	P	**P**	**07 42 34.2**	**+2.8**
OTVZ	**Oturere**	**23.15**	**204**	P	**P**	**07 42 34.7**	**+2.8**
TUWZ	**Tuamarina**	**25.77**	**204**	P	**P**	**07 42 57.2**	**+1.1**
CTAO	**Charters Tower**	**39.05**	**261**	P	P	**07 44 50.8**	**-1.7**
CTAO				IAmb	IAmb	07 44 59.4	
	comp=Z,43nm,1.5s						
TOO	**Toolangi**	**41.42**	**234**	P	**P**	**07 45 12.7**	**+0.7**
STKA	**Stephens Creek**	**43.48**	**243**	P	**P**	**07 45 28.6**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=73,slow=12,SNR=3.5						
	comp=Z,1.3nm,0.5s						
STKA	**Stephens Creek**	**43.48**	**243**	IAmb	IAmb	07 45 33.3	
	comp=Z,12nm,0.8s						
BBOO	**Buckleboo**	**48.24**	**242**	P	**P**	**07 46 05.2**	**-1.2**
WR8	**Warramunga Arr**	**50.05**	**259**	P	**P**	**07 46 18.7**	**-1.8**
WR8				IAmb	IAmb	07 46 19.6	
	comp=Z,5.3nm,0.6s						
WB0	**Warramunga Arr**	**50.17**	**259**	P	**P**	**07 46 20.0**	**-1.4**
WB0				IAmb	IAmb	07 46 20.7	
	comp=Z,18nm,1.4s						
WB2	**Warramunga Arr**	**50.19**	**259**	P	**P**	**07 46 20.1**	**-1.4**
AS31	**Alice Springs**	**50.20**	**254**	P	**P**	**07 46 21.0**	**-0.6**
ASAR	**Alice Springs**	**50.20**	**254**	P	**P**	**07 46 20.4**	**-1.2**
	comp=Z,6.4nm,0.7s,baz=90,slow=8.3,SNR=70						
	comp=Z,6.4nm,0.7s						
WRA	**Warramunga Arr**	**50.20**	**259**	P	**P**	**07 46 19.6**	**-2.0**
	comp=Z,3.4nm,0.4s,baz=98,slow=8.6,SNR=48						
	comp=Z,3.4nm,0.4s						
WRA	**Warramunga Arr**	**50.20**	**259**	P	**P**	**07 46 19.5**	**-2.2**
FORT	**Forrest**	**55.01**	**245**	P	**P**	**07 46 55.3**	**-1.8**
FORT				IAmb	IAmb	07 47 15.9	
	comp=Z,6.2nm,0.8s						
MORW	**Morawa**	**65.54**	**246**	P	**P**	**07 48 09.4**	**+0.1**
NVAR	**Mina Array Bea**	**75.91**	**41**	P	**P**	**07 49 15.1**	**+2.6**
	comp=Z,1.0nm,0.8s,baz=232,slow=10,SNR=4.4						
	comp=Z,1.0nm,0.8s						
TXAR	**Lajitas Array**	**81.47**	**55**	P	**P**	**07 49 45.2**	**+2.1**
	comp=Z,1.0nm,0.9s,baz=222,slow=8.7,SNR=8.0						
	comp=Z,1.0nm,0.9s						
TXAR	**Lajitas Array**	**81.47**	**55**	P	**P**	**07 49 42.5**	**-0.6**
H03S2	**Juan Fernandez**	**82.72**	**123**	T	T	09 20 53.0	
	baz=250,slow=75,SNR=19						
H03S1	**Juan Fernandez**	**82.73**	**123**	T	T	09 20 54.1	
	baz=250,slow=75,SNR=20						
H03S3	**Juan Fernandez**	**82.73**	**123**	T	T	09 20 52.8	
	baz=250,slow=75,SNR=15						
H03N2	**Juan Fernandez**	**82.83**	**123**	T	T	09 20 56.9	
	baz=256,slow=73,SNR=14						
H03N3	**Juan Fernandez**	**82.83**	**123**	T	T	09 20 57.9	
	baz=256,slow=73,SNR=11						
H03N1	**Juan Fernandez**	**82.84**	**123**	T	T	09 20 57.5	
	baz=256,slow=73,SNR=16						
PDAR	**Pinedale Array**	**83.84**	**41**	P	**P**	**07 49 57.1**	**+1.8**
	comp=Z,0.3nm,0.6s,baz=268,slow=4.5,SNR=3.5						
	comp=Z,0.3nm,0.6s						
O30N	**Mendenhall**	**84.13**	**17**	P	**P**	**07 49 55.6**	**-0.5**
CCB	**Clear Creek Bu**	**84.92**	**10**	IAmb	IAmb	07 50 02.5	
	comp=Z,2.8nm,0.9s						
ILAR	**Eielson Array**	**85.20**	**11**	P	**P**	**07 50 02.5**	**+1.2**
	comp=Z,0.9nm,0.7s,baz=226,slow=5.6,SNR=16						
	comp=Z,0.9nm,0.7s						
L29M	**L29M**	**85.56**	**15**	P	**P**	**07 50 04.4**	**+1.2**
L29M				IAmb	IAmb	07 50 06.3	
	comp=Z,4.2nm,0.8s						
SEY	**Seymchan**	**85.67**	**345**	P	**P**	**07 50 04.7**	**+1.0**
	comp=Z,1.1nm,0.7s,baz=73,slow=23,SNR=4.8						
	comp=Z,1.1nm,0.7s						
E19K	**Redstone River**	**86.34**	**6**	P	**P**	**07 50 06.9**	**-0.2**
E19K				IAmb	IAmb	07 50 10.2	
	comp=Z,4.4nm,1.2s						
F31M	**Tsiigehtchic**	**90.19**	**14**	P	**P**	**07 50 25.4**	**+0.1**
F31M				IAmb	IAmb	07 50 28.0	
	comp=Z,3.9nm,0.8s						

IDC ***25*** *07:41:07.2±1.5, 7.63°S×118.66°E, h0km, mb3.3/3, mbtmp3.4/5, ML3.4/2, Error ellipse: s-maj=43.4km s-min=22.3km az=67.0*
DJA ***25*** *07:41:09.3±1.5, 8°S±2°×11°9E±°, h17km±14km, M3.7/6, MLv3.7/6*
ISC 25 07:41:11.3±0.9,**7°76S**±0.04°×**118°76E**±0.04°,**h35**km,**n28,**
σ1§**02**/29,**mb3.5**/3,**Flores Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DBNI	**Kabupaten Domp**	**0.85**	**211**	P	**Pn**	**07 41 26.1**	**-0.7**
LBFI	**Labuhan Bajo,**	**1.33**	**122**	P	**Pn**	**07 41 32.0**	**-1.3**
PLAI	**Plampang**	**1.43**	**222**	P	**Pn**	**07 41 34.9**	**+0.1**
WBSI	**Waikabubak, Su**	**1.97**	**161**	P	**Pn**	**07 41 42.1**	**-0.1**
TWSI	**Taliwang, Sumb**	**2.09**	**242**	P	**Pn**	**07 41 43.5**	**-0.3**
BSSI	**Bau Bau, Buton**	**2.36**	**47**	P	**Pn**	**07 41 47.2**	**-0.3**
WSI	**Waingapu**	**2.43**	**141**	P	**Pn**	**07 41 49.3**	**+0.8**
MKS	**Makassar**	**2.63**	**16**	P	**Pn**	**07 41 51.3**	**+0.1**
KLNI	**Mataram**	**2.71**	**256**	P	**Pn**	**07 41 51.4**	**-1.0**
KAPI	**Kappang**	**2.91**	**20**	Pn	**Pn**	**07 41 54.2**	**-0.8**
	5.5nm,0.3s,baz=207,slow=3.3,SNR=13						
KAPI				Sn	**Sn**	**07 42 27.5**	**-1.2**
	12nm,0.3s,baz=114,slow=22,SNR=11						
	11nm,0.3s						
KAPI	**Kappang**	**2.91**	**20**	P	**Pn**	**07 41 54.5**	**-0.5**
BASI	**Baing, Sumba**	**3.03**	**144**	P	**Pn**	**07 41 56.5**	**-0.3**
KHKI	**Kahang-Kahang**	**3.17**	**259**	P	**Pn**	**07 41 58.6**	**-0.1**
SRBI	**Singaraja**	**3.52**	**265**	P	**Pn**	**07 42 03.1**	**-0.4**
MMRI	**Maumere**	**3.55**	**104**	P	**Pn**	**07 42 03.8**	**-0.2**
IGBI	**Denpasar**	**3.72**	**253**	P	**Pn**	**07 42 04.9**	**-1.4**
RTBI	**Rangdo, Negare**	**3.84**	**259**	P	**Pn**	**07 42 08.0**	**+0.1**
SPSI	**Sidrap Palu**	**3.91**	**15**	P	**Pn**	**07 42 09.2**	**+0.4**
PMSI	**Majene**	**4.24**	**2**	P	**Pn**	**07 42 12.6**	**-0.8**
BYJI	**Banyuwangi**	**4.38**	**264**	P	**Pn**	**07 42 15.0**	**-0.3**
ABJI	**Asem Bagus**	**4.48**	**269**	P	**Pn**	**07 42 17.0**	**+0.3**
JAGI	**Jajag, Banyuwa**	**4.61**	**261**	P	**Pn**	**07 42 18.4**	**-0.1**
TTSI	**Tana Toraja**	**4.81**	**13**	P	**Pn**	**07 42 21.1**	**-0.1**
FITZ	**Fitzroy Crossi**	**12.27**	**148**	Sn	**Sn**	**07 46 15.9**	**-3.1**
	0.2nm,0.3s,baz=175,slow=19,SNR=6.1						
WRA	**Warramunga Arr**	**19.35**	**130**	P	**Pn**	**07 45 37.5**	**+2.2**
	0.1nm,0.3s,baz=306,slow=13,SNR=5.0						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**21.47**	**139**	P	**P**	**07 45 58.4**	**+1.4**
	0.9nm,0.8s,baz=316,slow=9.6,SNR=14						
	0.9nm,0.8s						
MKAR	**Makanchi Array**	**63.25**	**333**	P	**P**	**07 51 36.5**	**+0.2**
	0.4nm,0.7s,baz=122,slow=7.3,SNR=4.7						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**67.76**	**334**	P	**P**	**07 52 05.5**	**+0.2**
	0.2nm,0.5s,baz=136,slow=6.1,SNR=2.5						
	0.2nm,0.5s						

ASRS ***25*** *07:55:24.0±0.9, 54.28°N×86.16°E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 25 07:55:00.1±0.9,**53°95N×84°66E, h0km, mbtmp2.6**/2,
ML2.0/2,**Error ellipse: s-maj=5.4km s-min=1.2km az=92.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.09**	**91**	I	I	07 55 40.0	
	0.4nm,0.8s,baz=270,slow=332,SNR=2.8						
ZALV	**Zalesovo Beam**	**0.09**	**91**	Pg	Pg	07 55 01.7	-0.2
	21nm,0.3s,baz=273,slow=20,SNR=178						
ZALV				Lg	Lg	07 55 03.4	
	26nm,0.3s,baz=271,slow=37,SNR=149						
ZALV				I	I	07 55 39.9	
	baz=248,slow=42,SNR=14						
KURBB	**Kurchatov Arra**	**5.03**	**231**	Pn	Pn	07 56 18.3	+1.6
	baz=48,slow=13,SNR=5.8						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**7.32**	**193**	Pn	Pn	07 56 49.1	+0.8
	0.1nm,0.3s,baz=14,slow=13,SNR=3.2						
MKAR				Lg	Lg	07 58 49.9	
	baz=17,slow=27,SNR=2.2						
	0.2nm,0.4s						

IDC ***25*** *07:56:44.1±1.2, 49.23°N×158.59E, h0km, mb3.4/4, mbtmp3.4/5, ML2.3/1, Error ellipse: s-maj=39.8km s-min=26.8km az=95.0*
KRSC ***25*** *07:56:48.2±1.3, 49.54°N×158.81E, h50km±39km, Ml3.9*
ISC 25 07:56:46.9±1.1,**49°36N**±0.08°×**158°70E**±0.09,**h18**km,**n26,**
σ1§**33**/37,**mb3.5**/4,**East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.13**	**310**	*eP*	**Pn**	**07 57 21.8**	**+0.2**
SKR				*eS*	**Sn**	**07 57 46.3**	**-1.1**
PAU	**Pauzhetka**	**2.43**	**331**	*eP*	**Pn**	**07 57 26.6**	**+0.9**
PAU				*eS*	**Sn**	**07 57 54.4**	**-0.6**
KDTR	**Khodutka, Kamc**	**2.49**	**351**	*eP*	**Pn**	**07 57 27.1**	**+0.6**
KDTR				*eS*	**Sn**	**07 57 55.0**	**-1.4**
ASAK	**Asacha**	**3.07**	**351**	*eP*	**Pn**	**07 57 36.0**	**+1.4**
RUS	**Russkaya**	**3.08**	**358**	*eP*	**Pn**	**07 57 34.8**	**+0.2**
RUS				*eS*	**Sn**	**07 58 08.9**	**-2.1**
MTVR	**Mutnovka**	**3.15**	**354**	*eP*	**Pn**	**07 57 36.0**	**+0.3**
MTVR				*eS*	**Sn**	**07 58 11.3**	**-1.6**
MIPR	**Malaya Ipel'ka**	**3.17**	**338**	*eP*	**Pn**	**07 57 37.0**	**+1.1**
GRL	**Gorelyy**	**3.23**	**353**	*eP*	**Pn**	**07 57 37.5**	**+0.7**
GRL				*eS*	**Sn**	**07 58 13.6**	**-1.1**
KRMR	**Karymshinskiy**	**3.50**	**354**	*eP*	**Pn**	**07 57 41.3**	**+1.0**
KRMR				*eS*	**Sn**	**07 58 00.1**	**-1.2**
PET	**Petropavlovsk**	**3.67**	**360**	*eP*	**Pn**	**07 57 43.0**	**+0.3**
PET				*eS*	**Sn**	**07 58 23.6**	**-1.9**
DALK	**Dalny**	**3.68**	**1**	*eP*	**Pn**	**07 57 43.2**	**+0.3**
DALK				*eS*	**Sn**	**07 58 24.0**	**-1.7**
APC	**Apacha**	**3.70**	**345**	*eP*	**Pn**	**07 57 43.8**	**+0.6**
PETK	**Petropavlovsk-**	**3.81**	**351**	Pn	**Pn**	**07 57 45.1**	**+0.5**
	1.0nm,0.3s,baz=146,slow=14,SNR=4.5						
PETK				Sn	**Sn**	**07 58 32.6**	**+3.6**
	1.0nm,0.3s,baz=195,slow=28,SNR=2.0						
	2.6nm,0.5s						
SPN	**Mys Shipunski**	**3.84**	**12**	*eP*	**Pn**	**07 57 45.3**	**+0.3**
SPN				*eS*	**Sn**	**07 58 28.2**	**-1.5**
UGLR	**Uglovaya**	**3.86**	**1**	*eP*	**Pn**	**07 57 46.6**	**+1.2**
SMAR	**Somma**	**3.91**	**1**	*eP*	**Pn**	**07 57 47.9**	**+1.7**
AVH	**Avacha**	**3.92**	**0**	*eP*	**Pn**	**07 57 47.7**	**+1.6**
KOK	**Koryaka**	**3.94**	**359**	*eP*	**Pn**	**07 57 48.0**	**+1.4**
KRER	**Koryakskii**	**3.95**	**0**	*eP*	**Pn**	**07 57 47.9**	**+1.0**
KRX	**Arik**	**4.01**	**360**	*eP*	**Pn**	**07 57 47.9**	**+0.4**
GNL	**Ganaly**	**4.37**	**354**	*eP*	**Pn**	**07 57 54.5**	**+2.1**
KBTR	**Krutoberegovo**	**7.30**	**18**	*eP*	**Pn**	**07 58 33.3**	**+0.7**
MKAR	**Makanchi Array**	**49.05**	**298**	P	**P**	**08 05 32.9**	**+0.2**
	0.2nm,0.5s,baz=58,slow=5.3,SNR=2.1						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**72.31**	**204**	P	**P**	**08 08 09.6**	**-1.7**
	0.5nm,0.9s,baz=19,slow=5.8,SNR=2.1						
	0.5nm,0.9s						
TXAR	**Lajitas Array**	**72.97**	**65**	P	**P**	**08 08 16.4**	**+1.0**
	0.3nm,0.5s,baz=297,slow=5.1,SNR=5.3						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**75.98**	**203**	P	**P**	**08 08 32.5**	**-0.1**
	0.2nm,0.7s,baz=23,slow=5.0,SNR=1.6						
	0.2nm,0.7s						

ASRS ***25*** *08:00:23.0±1.2, 53.58°N×87.97E, h0km, M2.8(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC ***25*** *08:00:26.5±3.0, 53.48°N×87.78E, h0km, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=25.0km s-min=15.1km az=64.0*
NNC ***25*** *08:00:27.1±1.9, 53.46°N×87.65E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=14.7km s-min=7.7km az=80.0, Suspected Mining explosion.*
ISC 25 08:00:27.6±3.5,**53°5N**±0.1°×**87°6E**±0.2,**h0**km,**n9,**σ0§**94**/13,
4C-4D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.70**	**285**	I	I	08 12 10.0	
	0.2nm,0.9s,baz=102,slow=336

GRL	**Gorelyy**	**3.33**	**1**	PN	**Pn**	**08 02 09.5 +0.1**
GRL				S	**Sn**	**08 02 47.0 -0.7**
GRL	**Gorelyy**	**3.33**	**1**	*eP*	**Pn**	**08 02 09.5 +0.1**
GRL				*eS*	**Sn**	**08 02 47.1 -0.7**
KRMR	**Karymshinskiy**	**3.61**	**1**	PN	**Pn**	**08 02 13.1 0.0**
KRMR	**Karymshinskiy**	**3.61**	**1**	*eP*	**Pn**	**08 02 13.2 0.0**
APC	**Apacha**	**3.74**	**352**	PN	**Pn**	**08 02 15.2 +0.3**
APC	**Apacha**	**3.74**	**352**	*eP*	**Pn**	**08 02 15.3 +0.3**
PET	**Petropavlovsk**	**3.82**	**6**		**Pn**	**08 02 16.2 +0.1**
PET				Sn	**Sn**	**08 02 59.0 -0.7**
PET	**Petropavlovsk**	**3.82**	**6**	*eP*	**Pn**	**08 02 16.2 +0.1**
PET				*eS*	**Sn**	**08 02 59.9 +0.2**
PET				pmax	pmax	
	comp=Z,124nm,0.6s					
PET				smax	smax	
	comp=E,112nm,0.5s					
PET				smax	smax	
	comp=N,108nm,0.5s					
PET	**Petropavlovsk**	**3.82**	**6**	*eP*	**Pn**	**08 02 16.1 +0.1**
PET				*eS*	**Sn**	**08 02 58.8 -0.9**
DALK	**Dalny**	**3.84**	**7**	PN	**Pn**	**08 02 16.3 +0.1**
DALK				S	**Sn**	**08 02 59.0 -1.1**
DALK	**Dalny**	**3.84**	**7**	*eP*	**Pn**	**08 02 16.4 +0.1**
DALK				*eS*	**Sn**	**08 02 59.0 -1.1**
INSR	**Institute**	**3.86**	**5**	PN	**Pn**	**08 02 17.0 +0.4**
INSR				S	**Sn**	**08 03 00.0 -0.7**
INSR	**Institute**	**3.86**	**5**	*eP*	**Pn**	**08 02 17.0 +0.4**
INSR				*eS*	**Sn**	**08 03 00.0 -0.7**
PEA0B	**Petropavlovsk-**	**3.89**	**357**		**Pn**	**08 02 17.4 +0.4**
PEA0B	**Petropavlovsk-**	**3.89**	**357**	*eP*	**Pn**	**08 02 18.0 +1.0**
PETK	**Petropavlovsk-**	**3.89**	**357**	Pn	**Pn**	**08 02 17.7 +0.7**
	comp=N,4.2nm,0.3s,baz=162,slow=15,SNR=39					
	comp=N,26nm,0.7s					
UGLR	**Uglovaya**	**4.02**	**7**	PN	**Pn**	**08 02 19.3 +0.4**
UGLR	**Uglovaya**	**4.02**	**7**	*eP*	**Pn**	**08 02 19.4 +0.4**
NLC	**Nalytchevo**	**4.04**	**12**	PN	**Pn**	**08 02 17.8 -1.2**
NLC	**Nalytchevo**	**4.04**	**12**	*eP*	**Pn**	**08 02 17.9 -1.2**
AVH	**Avacha**	**4.07**	**6**	PN	**Pn**	**08 02 20.3 +0.8**
AVH	**Avacha**	**4.07**	**6**	*eP*	**Pn**	**08 02 20.4 +0.8**
SMAR	**Somma**	**4.07**	**7**	PN	**Pn**	**08 02 20.6 +0.9**
SMAR	**Somma**	**4.07**	**7**	*eP*	**Pn**	**08 02 20.7 +0.9**
SPN	**Mys Shipunski**	**4.08**	**17**	PN	**Pn**	**08 02 19.1 -0.4**
SPN	**Mys Shipunski**	**4.08**	**17**	*eP*	**Pn**	**08 02 19.2 -0.4**
SPN				*eS*	**Sn**	**08 03 04.1 -2.0**
KOK	**Koryaka**	**4.09**	**5**	PN	**Pn**	**08 02 20.8 +1.0**
KOK	**Koryaka**	**4.09**	**5**	*eP*	**Pn**	**08 02 20.8 +1.0**
KRER	**Koryakskii**	**4.11**	**6**	PN	**Pn**	**08 02 21.0 +0.8**
KRER	**Koryakskii**	**4.11**	**6**	*eP*	**Pn**	**08 02 21.1 +0.8**
KRX	**Arik**	**4.16**	**5**	PN	**Pn**	**08 02 21.7 +0.9**
KRX	**Arik**	**4.16**	**5**	*eP*	**Pn**	**08 02 21.8 +0.9**
GNL	**Ganaly**	**4.47**	**360**	PN	**Pn**	**08 02 26.0 +0.9**
GNL	**Ganaly**	**4.47**	**360**	*eP*	**Pn**	**08 02 26.1 +0.9**
KII	**Karymskiy**	**4.90**	**10**	PN	**Pn**	**08 02 31.8 +0.9**
KII	**Karymskiy**	**4.90**	**10**	*eP*	**Pn**	**08 02 31.9 +0.9**
KII				*eS*	**Sn**	**08 03 25.3 -1.0**
ESO	**Esso**	**6.72**	**3**	PN	**Pn**	**08 02 56.7 +0.8**
ESO	**Esso**	**6.72**	**3**	*eP*	**Pn**	**08 02 56.7 +0.8**
KBTR	**Krutoberegovo**	**7.58**	**21**	PN	**Pn**	**08 03 07.2 -0.4**
KBTR	**Krutoberegovo**	**7.58**	**21**	*eP*	**Pn**	**08 03 07.2 -0.4**
KBTR				*eS*	**Sn**	**08 04 29.4 -2.7**
KBG	**Krutoberegovo**	**7.59**	**20**	PN	**Pn**	**08 03 07.9 +0.1**
KBG	**Krutoberegovo**	**7.59**	**20**	*eP*	**Pn**	**08 03 07.9 +0.1**
SMKR	**Semkarok**	**7.66**	**15**	PN	**Pn**	**08 03 09.4 +0.7**
SMKR	**Semkarok**	**7.66**	**15**	*eP*	**Pn**	**08 03 09.4 +0.7**
BKI	**Bering**	**7.73**	**36**	PN	**Pn**	**08 03 08.9 -0.7**
BKI	**Bering**	**7.73**	**36**	*eP*	**Pn**	**08 03 09.0 -0.7**
BKI				*eS*	**Sn**	**08 04 28.8 -7.0**
YSS	**Yuzhno-Sakhali**	**10.45**	**263**	*eP*	**Pn**	**08 03 47.6 +0.6**
YSS				pmax	pmax	
	comp=Z,22nm,1.4s					
SHEM	**Shemya Is, Ala**	**10.74**	**65**	Pn	**Pn**	**08 03 49.9 -1.0**
	comp=Z,1.6nm,0.3s,baz=306,slow=21,SNR=2.1					
SHEM				Sn	Sn	08 05 39.8 -10
	comp=Z,2.8nm,0.3s,baz=274,slow=20,SNR=6.5					
	comp=Z,14nm,0.4s					
SMY	**Shemya**	**10.74**	**65**	Pn	**Pn**	**08 03 50.9 +0.1**
SMY	**Shemya**	**10.74**	**65**	PN	**Pn**	**08 03 50.9 +0.1**
MA2	**Magadan**	**11.18**	**341**	Pn	**Pn**	**08 03 56.3 -0.7**
	baz=134,slow=15					
MA2	**Magadan**	**11.18**	**341**	*i*PN	**Pn**	**08 03 57.6 +0.7**
MA2				pmax	pmax	
	comp=Z,4.0nm,0.7s					
JKA	**Kamikawa-asahi**	**11.74**	**250**	Pn	**Pn**	**08 04 03.0 -1.8**
ASAJ	**Asahikawa**	**11.75**	**250**	Pn	**Pn**	**08 04 01.6 -3.2**
	comp=Z,0.4nm,0.3s,baz=18,slow=20,SNR=2.5					
	comp=Z,5.4nm,0.7s					
ASAJ	**Asahikawa**	**11.75**	**250**	PN	**Pn**	**08 04 03.0 -1.7**
SEY	**Seymchan**	**14.08**	**349**	Pn	**Pn**	**08 04 37.6 +1.2**
	comp=Z,0.2nm,0.3s,baz=148,slow=11,SNR=8.7					
	comp=Z,0.2nm,0.3s					
SEY	**Seymchan**	**14.08**	**349**	*eP*	**Pn**	**08 04 36.6 +0.1**
SEY				pmax	pmax	
	comp=Z,12nm,3.3s					
KLR	**Kul'dur**	**17.12**	**280**	P	**Pn**	**08 05 15.0 -1.1**
	comp=Z,0.1nm,0.3s,baz=88,slow=15,SNR=5.1					
	comp=Z,0.9nm,0.5s					
KLR	**Kul'dur**	**17.12**	**280**	*eP*	**Pn**	**08 05 15.3 -0.8**
KLR				pmax	pmax	
	comp=Z,4.0nm,0.9s					
USRK	**Ussuriysk Ar.**	**18.49**	**264**	P	**P**	**08 05 32.9 +0.2**
	comp=Z,0.2nm,0.3s,baz=71,slow=14,SNR=1.0					
	comp=Z,1.3nm,0.7s					
MJAR	**Matsushiro Arr**	**19.19**	**236**	P	**P**	**08 05 38.3 -2.1**
	comp=Z,0.1nm,0.3s,baz=21,slow=11,SNR=1.3					
	comp=Z,1.0nm,0.3s					
MJAR	**Matsushiro Arr**	**19.19**	**236**	P	**P**	**08 05 38.3 -2.1**
MJAR				pmax	pmax	
	comp=Z,2.0nm,0.9s					
BILL	**Bilibino**	**19.32**	**9**	*eP*	**Pn**	**08 05 42.4 -0.3**
BILL				pmax	pmax	
	comp=Z,9.0nm,1.8s					
ZEA	**Zeya**	**19.59**	**295**	*eP*	**P**	**08 05 43.2 -1.4**
ZEA				pmax	pmax	
	comp=Z,10.0nm,0.5s					
YAK	**Yakutsk**	**20.27**	**320**	*eP*	**P**	**08 05 48.7 -3.3**
YAK				*e*		08 06 06.0
YAK				*eS*	**S**	**08 09 32.8 -4.4**
YAK				pmax	pmax	
	comp=Z,26nm,0.9s					
YAK				pmax	pmax	
	comp=N,3.0nm,1.0s					
YAK				pmax	pmax	
	comp=E,8.0nm,1.2s					
YAK				pmax	pmax	
	comp=E,141nm,5.3s					
YAK				pmax	pmax	
	comp=Z,110nm,3.5s					
YAK				pmax	pmax	
	comp=N,57nm,3.8s					
YAK				smax	smax	
	comp=E,152nm,8.0s					
YAK				smax	smax	
	comp=N,67nm,3.8s					
JGF	**Kuroka**	**20.35**	**236**	P	**P**	**08 05 53.0 -0.1**
TNA	**Tin City**	**24.13**	**35**	P	**P**	**08 06 33.0 +1.0**
KSRS	**Korea Array**	**24.67**	**253**	P	**P**	**08 06 36.6 -0.5**
	comp=N,1.1nm,0.6s,baz=48,slow=10,SNR=6.5					
	comp=N,1.1nm,0.6s					
KS19	**Wonju Array Si**	**24.68**	**253**	P	**P**	**08 06 37.5 +0.3**
KS19				IAmb	IAmb	08 07 18.1
	comp=Z,7.8nm,0.9s					
ANM	**Nome**	**24.73**	**38**		**P**	**08 06 38.1 +0.7**
ANM				IAmb	IAmb	08 06 41.7
	comp=Z,9.1nm,1.2s					
ANM	**Nome**	**24.73**	**38**	P	**P**	**08 06 38.1 +0.7**
ANM				pmax	pmax	
	comp=Z,9.0nm,1.2s					
HIA	**Hailar**	**24.80**	**285**	*eP*	**P**	**08 06 36.6 -1.7**
HIA				pmax	pmax	
	comp=Z,5.0nm,0.9s					
TIXI	**Tiksi**	**26.15**	**340**		**P**	**08 06 49.7 -0.5**
TIXI	**Tiksi**	**26.15**	**340**	*i*P	**P**	**08 06 49.3 -0.9**
TIXI				pmax	pmax	
	comp=Z,5.0nm,1.0s					
C16K	**Lisburne Hills**	**26.28**	**30**	P	**P**	**08 06 52.1 +0.7**
IMAR	**Indian Mountai**	**29.81**	**38**	P	**P**	**08 07 24.5 +1.5**
H21K	**Melozitna Rive**	**30.14**	**39**	P	**P**	**08 07 27.9 +1.9**
H11N2	**WAKE ISLAND Hy**	**30.29**	**163**	T	T	08 39 10.2
	baz=348,slow=76,SNR=7.9					
H11N3	**WAKE ISLAND Hy**	**30.30**	**163**	T	T	08 39 09.9
	baz=348,slow=76,SNR=6.4					
H11N1	**WAKE ISLAND Hy**	**30.30**	**163**	T	T	08 39 09.7
	baz=348,slow=76,SNR=6.8					
BPAW	**Bear Paw Mtn.**	**30.73**	**42**	P	**P**	**08 07 30.7 -0.5**
BPAW				IAmb	IAmb	08 07 37.4
	comp=Z,16nm,1.2s					
H11S1	**WAKE ISLAND Hy**	**31.44**	**164**	T	T	08 40 36.8
	baz=349,slow=76,SNR=7.7					
H11S3	**WAKE ISLAND Hy**	**31.45**	**164**	T	T	08 40 37.6
	baz=349,slow=76,SNR=9.0					
H11S2	**WAKE ISLAND Hy**	**31.46**	**164**	T	T	08 40 36.8
	baz=349,slow=76,SNR=8.4					
SML	**Sawmill**	**31.89**	**46**	P	**P**	**08 07 43.2 +1.8**
SML				IAmb	IAmb	08 08 07.8
	comp=Z,6.1nm,0.9s					
ILAR	**Eielson Array**	**32.54**	**41**	P	**P**	**08 07 47.8 +0.7**
	comp=Z,0.2nm,0.5s,baz=248,slow=7.7,SNR=6.9					
	comp=Z,0.2nm,0.5s					
ULN	**Ulaanbaatar**	**33.24**	**287**	*eP*	**P**	**08 07 55.1 +1.6**
ULN				pmax	pmax	
	comp=Z,6.0nm,2.8s					
HHC	**Hu-ho-hao-te**	**33.41**	**273**	*eP*	**P**	**08 07 57.0 +2.0**
HHC				pmax	pmax	
	comp=Z,10.0nm,0.6s					
BMAR	**Burnt Mountain**	**33.60**	**36**	P	**P**	**08 07 58.6 +2.3**
SONM	**Songino Array**	**33.66**	**288**	P	**P**	**08 07 56.8 -0.4**
	comp=Z,0.6nm,0.5s,baz=62,slow=9.3,SNR=3.3					
	comp=Z,0.6nm,0.5s					
SONM	**Songino Array**	**33.66**	**288**	P	**P**	**08 07 56.8 -0.4**
SONM				pmax	pmax	
	comp=Z,2.0nm,1.3s					
NJ2	**Nanjing**	**33.85**	**254**	*eP*	**P**	**08 07 59.0 +0.3**
NJ2				pmax	pmax	
	comp=Z,32nm,0.6s					
TLY	**Talaya**	**34.03**	**295**	*eP*	**P**	**08 07 59.6 -0.6**
TLY				pmax	pmax	
	comp=Z,7.0nm,1.6s					
ZAK	**Zakamensk**	**34.66**	**293**	*eP*	**P**	**08 08 04.2 -1.6**
ZAK				pmax	pmax	
	comp=Z,5.0nm,1.1s					
BCAR	**Beaver Creek A**	**34.85**	**44**	P	**P**	**08 08 09.3 +2.1**
INK	**Inuvik**	**37.77**	**34**	P	**P**	**08 08 34.1 +2.2**
INK	**Inuvik**	**37.77**	**34**	P	**P**	**08 08 34.1 +2.2**
INK				pmax	pmax	
	comp=Z,2.0nm,0.9s					
KNGR	**Kungurtug, Tuv**	**38.02**	**296**	*eP*	**P**	**08 08 33.2 -1.2**
KNGR				pmax	pmax	
	comp=Z,4.0nm,0.9s					
ZALV	**Zalesovo Beam**	**43.84**	**305**	P	**P**	**08 09 20.7 -1.4**
	comp=Z,1.2nm,0.4s,baz=74,slow=5.8,SNR=4.2					
	comp=Z,1.2nm,0.4s					
ZALV	**Zalesovo Beam**	**43.84**	**305**	*i* P	**P**	**08 09 22.5 +0.4**
ZALV				pmax	pmax	
	comp=Z,1.0nm,0.5s					
YKA	**Yellowknife Ar**	**46.95**	**39**	P	**P**	**08 09 47.5 +0.9**
	comp=Z,0.4nm,0.9s,baz=300,slow=8.6,SNR=5.1					
	comp=Z,0.4nm,0.9s					
YKA	**Yellowknife Ar**	**46.95**	**39**	*ce*P	**P**	**08 09 48.0 +1.4**
PZH	**PanZhiHua**	**48.59**	**263**	P	**P**	**08 10 02.0 +2.1**
MK31	**Makanchi Array**	**48.71**	**298**	*c i*P	**P**	**08 09 59.9 -0.6**
MKAR	**Makanchi Array**	**48.71**	**298**	P	**P**	**08 09 59.8 -0.7**
	comp=Z,1.3nm,0.4s,baz=55,slow=6.6,SNR=20					
	comp=Z,1.3nm,0.4s					
MKAR	**Makanchi Array**	**48.71**	**298**		**P**	**08 09 60.0 -0.5**
MKAR	**Makanchi Array**	**48.71**	**298**	P	**P**	**08 10 00.0 -0.5**
KURK	**Kurchatov**	**48.72**	**304**		**P**	**08 10 00.1 -0.4**
KURK	**Kurchatov**	**48.72**	**304**	*de*P	**P**	**08 09 59.6 -0.9**
KURK				pmax	pmax	
	comp=Z,3.0nm,0.5s					
KURBB	**Kurchatov Arra**	**48.82**	**304**	P	**P**	**08 10 00.5 -0.7**
	comp=Z,3.1nm,0.5s,baz=65,slow=8.1,SNR=39					
	comp=Z,3.1nm,0.5s					
MAKZ	**Makanchi**	**48.88**	**298**	P	**P**	**08 10 01.4 -0.4**
MAKZ				IAmb	IAmb	08 10 04.5
	comp=Z,1.4nm,0.7s					
MAKZ	**Makanchi**	**48.88**	**298**	P	**P**	**08 10 01.4 -0.4**
MAKZ				pmax	pmax	
	comp=Z,1.0nm,0.7s					
SPITS	**Spitsbergen Ar**	**50.73**	**350**	P	**P**	**08 10 15.6 +0.2**
	comp=Z,8.6nm,0.9s,baz=58,slow=5.4,SNR=2.2					
	comp=Z,8.6nm,0.9s					
SPB2	**Spitsbergen Ar**	**50.73**	**350**	P	**P**	**08 10 16.3 +0.9**
BVAR	**Borovoye Array**	**51.81**	**310**	P	**P**	**08 10 23.0 -0.8**
	comp=Z,2.0nm,0.4s,baz=55,slow=7.8,SNR=11					
	comp=Z,2.0nm,0.4s					
BVAR	**Borovoye Array**	**51.81**	**310**	P	**P**	**08 10 23.0 -0.8**
BORK	**Borovoye**	**51.83**	**310**		**P**	**08 10 23.9 -0.1**
BORK				IAmb	IAmb	08 10 24.8
	comp=Z,3.1nm,0.8s					
BORK	**Borovoye**	**51.83**	**310**	*i*P	**P**	**08 10 23.6 -0.4**
BORK				pmax	pmax	
	comp=Z,4.0nm,0.9s					
BLKN	**Baker Lake**	**53.06**	**32**	P	**P**	**08 10 34.0 +1.1**
BLKN				IAmb	IAmb	08 10 55.4
	comp=Z,6.8nm,1.4s					
TARG	**Taragay, Kyrgy**	**54.24**	**295**	P	**P**	**08 10 43.0 +0.5**
TARG				IAmb	IAmb	08 10 45.5
	comp=Z,3.1nm,0.6s					
TARG	**Taragay, Kyrgy**	**54.24**	**295**	P	**P**	**08 10 43.0 +0.5**
TARG				pmax	pmax	
	comp=Z,3.0nm,0.6s					
KDJ	**Kajisay**	**54.37**	**295**	P	**P**	**08 10 42.8 -0.3**
KDJ	**Kajisay**	**54.37**	**295**	P	**P**	**08 10 42.8 -0.3**
KDJ				pmax	pmax	
	comp=Z,42nm,1.5s					
BOOM	**Boomskoye usch**	**54.89**	**296**	P	**P**	**08 10 47.5 +0.7**
BOOM				IAmb	IAmb	08 10 49.1
	comp=Z,6.2nm,0.8s					
BOOM	**Boomskoye usch**	**54.89**	**296**	P	**P**	**08 10 47.5 +0.7**
BOOM				pmax	pmax	
	comp=Z,6.0nm,0.8s					
ARTI	**Arti**	**55.48**	**318**	P	**P**	**08 10 51.4 +0.8**
ARTI	**Arti**	**55.48**	**318**	*c i*P	**P**	**08 10 51.1 +0.5**
ARTI				*PP	**pwP**	**08 11 08.1 -0.5**
ARTI				S	**S**	**08 18 35.0 +2.1**
ARTI				SS	**SS**	**08 22 13.3 -3.9**
ARTI				pmax	pmax	
	comp=Z,5.0nm,0.8s					
AAK	**Ala-Archa**	**55.64**	**297**	P	**P**	**08 10 52.6 +0.4**
AAK				IAmb	IAmb	08 10 54.4
	comp=Z,1.9nm,0.8s					
AAK	**Ala-Archa**	**55.64**	**297**	P	**P**	**08 10 52.6 +0.4**
AAK				pmax	pmax	
	comp=Z,2.0nm,0.9s					
SHL	**Shillong**	**55.68**	**270**		**P**	**08 10 54.3 +1.6**
SHL				IAmb	IAmb	08 10 57.2
	comp=Z,3.7nm,0.6s					
SHL	**Shillong**	**55.68**	**270**	P	**P**	**08 10 54.3 +1.6**
SHL				pmax	pmax	
	comp=Z,4.0nm,0.6s					
CMAR	**Chiang Mai Arr**	**56.11**	**259**	P	**P**	**08 10 55.5 -0.2**
	comp=Z,1.5nm,0.3s,baz=23,slow=6.7,SNR=4.7					
	comp=Z,1.5nm,0.3s					
CMAR	**Chiang Mai Arr**	**56.11**	**259**	*ce*P	**P**	**08 10 56.0 +0.3**
CMAR				pmax	pmax	
	comp=Z,1.0nm,0.3s					
ARCES	**ARCESS Array B**	**56.55**	**342**	P	**P**	**08 10 58.8 +0.7**
	comp=Z,8.0nm,1.0s,baz=59,slow=7.2,SNR=3.7					
	comp=Z,8.0nm,1.0s					
ARCES	**ARCESS Array B**	**56.55**	**342**	P	**P**	**08 10 58.8 +0.7**
ARCES	**ARCESS Array B**	**56.55**	**342**	P	**P**	**08 10 58.8 +0.7**
ARCES				pmax	pmax	
	comp=Z,20nm,1.4s					
KSH2	**Kashi**	**57.19**	**293**	P	**P**	**08 11 05.3 +2.0**
FCC	**Fort Churchill**	**57.35**	**36**	P	**P**	**08 11 03.2 -0.7**
FCC				IAmb	IAmb	08 11 05.6
	comp=Z,5.2nm,1.2s					
FCC	**Fort Churchill**	**57.35**	**36**	P	**P**	**08 11 03.2 -0.7**
FCC				pmax	pmax	
	comp=Z,5.0nm,1.2s					
KKAR	**Karatay Array**	**57.64**	**300**	P	**P**	**08 11 06.7 +0.5**
KKAR	**Karatay Array**	**57.64**	**300**	P	**P**	**08 11 06.7 +0.5**
KVN	**Kaiserville**	**58.12**	**66**	P	**P**	**08 11 11.5 +1.6**
KVN	**Kaiserville**	**58.12**	**66**	P	**P**	**08 11 11.5 +1.6**
KVN				pmax	pmax	
	comp=Z,2.0nm,1.4s					
AB31	**Akbulak array**	**59.32**	**311**		**P**	**08 11 17.7 -0.1**
AB31				IAmb	IAmb	08 11 19.9
	comp=Z,2.8nm,0.8s					
ABKAR	**Akbulak array**	**59.32**	**311**		**P**	**08 11 18.2 +0.4**
BTK	**Batken**	**59.41**	**297**	P	**P**	**08 11 19.6 +0.9**
BTK				IAmb	IAmb	08 11 20.7
	comp=Z,9.1nm,1.1s					
BTK	**Batken**	**59.41**	**297**	P	**P**	**08 11 19.6 +0.9**
BTK				pmax	pmax	
	comp=Z,9.0nm,1.1s					
GAR	**Garm**	**60.40**	**296**	P	**P**	**08 11 26.3 +0.7**
CHGR	**Chuyangaron**	**61.30**	**297**	P	**P**	**08 11 32.3 +0.6**
CHGR	**Chuyangaron**	**61.30**	**297**	P	**P**	**08 11 32.3 +0.6**
CHGR				pmax	pmax	
	comp=Z,37nm,1.1s					
LCMT	**Little Creek M**	**62.35**	**65**	P	**P**	**08 11 39.9 +1.1**
LCMT				IAmb	IAmb	08 12 11.4
	comp=Z,3.8nm,1.4s					
FIA1	**FINESS Array S**	**63.14**	**336**	P	**P**	**08 11 44.3 +0.9**
FINES	**FINESS Array B**	**63.14**	**336**	P	**P**	**08 11 43.9 +0.5**
	comp=Z,1.4nm,0.5s,baz=46,slow=8.2,SNR=8.3					
	comp=Z,1.4nm,0.5s					
FINES	**FINESS Array B**	**63.14**	**336**	P	**P**	**08 11 44.7 +1.3**
OBN	**Obninsk**	**65.06**	**327**	*eP*	**P**	**08 11 55.9 -0.2**
OBN				*e*PPP	PPP	08 15 53.2
OBN				pmax	pmax	
	comp=Z,7.0nm,1.1s					
VRH	**Novokhopyorsk**	**66.15**	**322**	*eP*	**P**	**08 11 59.8 -3.4**
VRH				pmax	pmax	
	comp=Z,7.0nm,0.4s					
LPSR	**Galich'ya Gora**	**66.16**	**324**	*eP*	**P**	**08 12 03.0 -0.3**
LPSR				pmax	pmax	
	comp=Z,10.0nm,0.9s					
NC204	**NORSAR Array S**	**66.74**	**343**	P	**P**	**08 12 08.4 +1.4**
NB2	**NORSAR Subarra**	**66.87**	**343**	P	**P**	**08 12 09.0 +1.2**
	comp=Z,4.3nm,0.7s,baz=23,slow=6.9					
NOA	**NORSAR Array B**	**66.87**	**343**	P	**P**	**08 12 09.2 +1.4**
	comp=Z,1.4nm,0.7s,baz=24,slow=6.6,SNR=4.0					
	comp=Z,1.4nm,0.7s					
VSR	**Storozhevoye**	**67.15**	**323**	*eP*	**P**	**08 12 08.9 -0.7**
VSR				pmax	pmax	
	comp=Z,10.0nm,1.1s					
HFS	**Hagfors**	**67.21**	**342**	P	**P**	**08 12 11.9 +2.1**
	comp=Z,4.4nm,1.0s,baz=45,slow=8.6,SNR=6.3					
	comp=Z,4.4nm,1.0s					
AKASG	**Malin Array Be**	**71.23**	**328**	P	**P**	**08 12 35.6 +0.7**
	comp=Z,2.0nm,0.5s,baz=33,slow=6.4,SNR=8.7					
	comp=Z,2.0nm,0.5s					
AKBB	**Malin Array Si**	**71.23**	**328**	P	**P**	**08 12 36.5 +1.6**
AKBB				IAmb	IAmb	08 13 14.0
	comp=Z,12nm,1.5s					
AKBB	**Malin Array Si**	**71.23**	**328**	P	**P**	**08 12 36.5 +1.6**
AKBB				pmax	pmax	
	comp=Z,12nm,1.5s					
KIEV	**Kiev**	**71.24**	**328**	P	**P**	**08 12 36.5 +1.6**
KIEV				IAmb	IAmb	08 13 14.0
	comp=Z,11nm,1.5s					
KIEV	**Kiev**	**71.24**	**328**	P	**P**	**08 12 36.5 +1.6**
KIEV				pmax	pmax	
	comp=Z,11nm,1.5s					
KBZ	**Khabaz**	**71.42**	**316**	P	**P**	**08 12 36.8 +0.7**
	comp=Z,1.4nm,0.5s,baz=4.7,slow=5.4,SNR=5.3					
	comp=Z,1.4nm,0.5s					
PECS	**Pecos**	**71.83**	**63**	P	**P**	**08 12 39.8 +0.8**
PECS				IAmb	IAmb	08 13 15.1
	comp=Z,1.3nm,0.6s					
WRA	**Warramunga Arr**	**72.01**	**203**	P	**P**	**08 12 38.7 -1.2**
	comp=Z,7.1nm,0.7s,baz=20,slow=6.4,SNR=33					
	comp=Z,7.1nm,0.7s					
WRA	**Warramunga Arr**	**72.01**	**203**	P	**P**	**08 12 39.1 -0.8**
TXAR	**Lajitas Array**	**73.43**	**64**	P	**P**	**08 12 49.1 +0.6**
	comp=Z,0.5nm,0.7s,baz=297,slow=4.4,SNR=7.9					
	comp=Z,0.5nm,0.7s					
EKA	**Eskdalemuir Ar**	**74.62**	**349**	P	**P**	**08 12 56.0 +1.2**
	comp=Z,2.5nm,0.9s,baz=20,slow=5.6,SNR=3.9					
	comp=Z,2.5nm,0.9s					
STHS	**Stebnicka Huta**	**74.93**	**332**	*eP*	P	08 13 03.5 +6.7
STHS	**Stebnicka Huta**	**74.93**	**332**	*eP*	P	08 13 03.5 +6.7
ASAR	**Alice Springs**	**75.69**	**203**	P	**P**	**08 13 01.1 -0.3**
	comp=Z,2.2nm,0.8s,baz=16,slow=5.4,SNR=20					
	comp=Z,2.2nm,0.8s					
LANS	**Liptovska Anna**	**75.70**	**333**	*eP*	**P**	**08 13 05.5 +4.2**
LANS	**Liptovska Anna**	**75.70**	**333**	*eP*	**P**	**08 13 05.5 +4.2**
MODS	**Modra-Piesok**	**77.03**	**334**	*eP*	P	08 13 14.3 +5.5
MODS	**Modra-Piesok**	**77.03**	**334**	*eP*	P	08 13 14.3 +5.5
BRTR	**Keskin Array B**	**78.73**	**320**	P	**P**	**08 13 19.7 +1.1**
	comp=Z,0.7nm,0.6s,baz=12,slow=7.4,SNR=2.0					
	comp=Z,0.7nm,0.6s					
BFO	**Black Forest**	**79.35**	**340**	*i* P	**P**	**08 13 19.1 -2.6**

IDC 25 08:13:15.7±5.8, 18°52S×174°69W, h246km±52km,
mb3.5/3, mbtmp4.0/5, Error ellipse: s-maj=135.8km
s-min=32.6km az=155.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**5.37**	**32**	P	Pn	08 14 35.9	-0.1
	5.2nm,0.3s,baz=94,slow=7.2,SNR=4.2						
AFI				S	S	08 15 27.7	-12
	13nm,0.3s,baz=0.7,slow=20,SNR=7.3						
MSVF	**Nonsavu**	**6.95**	**275**	P	Pn	08 14 55.9	0.0
	5.0nm,0.7s,baz=117,slow=15,SNR=6.9						
STKA	**Stephens Creek**	**41.47**	**243**	P	P	08 20 40.3	+1.3
	2.0nm,0.9s,baz=82,slow=7.1,SNR=2.2						
	2.0nm,0.9s						
WRA	**Warramunga Arr**	**48.00**	**260**	P	P	08 21 29.6	-1.0
	0.4nm,0.4s,baz=97,slow=7.3,SNR=11						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**48.04**	**255**	P	P	08 21 30.8	0.0
	4.6nm,0.6s,baz=102,slow=7.9,S

SHO				*e*S		**Sn**	08 21 22.5	**+5.3**
SHO				A		A	08 21 26.9	
	1µm,0.5s							
SHO				A		A	08 21 26.9	
	900nm,0.5s							
NEM2	**Nemuro 2**	**1.84**	**277**	*e*S		**Sn**	**08 21 31.2**	**-0.6**
NMR	**Nemuro--Hokkai**	**1.85**	**277**	*e*P		Pn	08 21 02.7	-7.2
NMR				*i* S		**Sn**	**08 21 30.6**	**-1.5**
YUK	**Yuzh-Kuril'sk**	**1.94**	**297**	*e*P		Pn	08 21 02.2	-8.9
YUK				AMB		AMB	08 21 06.0	
	90nm,0.2s							
YUK				*i* S		**Sn**	**08 21 30.6**	**-3.6**
YUK				A		A	08 21 35.1	
	560nm,0.5s							
YUK				A		A	08 21 35.1	
	650nm,0.5s							
GLVR	**Golovnino**	**2.07**	**287**	*e*P		Pn	08 21 05.1	-7.8
GLVR				AMB		AMB	08 21 08.9	
	50nm,0.2s							
GLVR				*i* S		**Sn**	**08 21 34.8**	**-2.6**
GLVR				A		A	08 21 44.4	
	240nm,0.4s							
GLVR				A		A	08 21 44.4	
	460nm,0.4s							
KUR	**Kuril'sk**	**2.08**	**352**	*e*P		Pn	08 20 59.4	-14
KUR				AMB		AMB	08 21 01.6	
	40nm,0.2s							
KUR				*e*S		Sn	08 21 23.5	-14
KUR				A		A	08 21 28.6	
	150nm,0.3s							
KUR				A		A	08 21 28.6	
	140nm,0.3s							
JKHN	**Kushirohamanak**	**2.27**	**269**	*e*S		**Sn**	**08 21 43.2**	**+0.9**
AKK	**Akkeshi**	**2.50**	**268**	*e*P		Pn	08 21 12.9	-6.0
JNK	**Nakash**	**2.61**	**280**	*e*S		**Sn**	**08 21 50.1**	**-0.7**
JAK	**Akkeshi**	**2.61**	**267**	*e*P		**Pn**	**08 21 21.4**	**+1.1**
JAK				*e*S		**Sn**	**08 21 52.0**	**+1.2**
JTKR	**Abashiri--Toko**	**3.26**	**286**	*e*P		**Pn**	**08 21 30.0**	**+0.8**
JAR	**Ashorobuto**	**3.28**	**274**	*e*S		**Sn**	**08 22 07.6**	**+0.3**
JCH	**Churui**	**3.64**	**263**	*e*P		**Pn**	**08 21 36.5**	**+2.1**
SONM	**Songino Array**	**29.44**	**294**	P		**P**	**08 26 38.7**	**-2.2**
	0.4nm,0.4s,baz=82,slow=8.4,SNR=2.2 0.4nm,0.4s							
ILAR	**Eielson Array**	**41.48**	**36**	P		P	08 28 29.1	+5.2
	0.2nm,0.6s,baz=258,slow=6.5,SNR=5.2 0.2nm,0.6s							
MKAR	**Makanchi Array**	**45.56**	**299**	P		**P**	**08 28 57.4**	**+0.4**
	0.3nm,0.4s,baz=77,slow=8.6,SNR=6.2 0.3nm,0.4s							
INK	**Inuvik**	**46.50**	**30**	LR		LR	08 49 24.1	
	comp=Z,98nm,21.2s,baz=54,slow=38							
KURBB	**Kurchatov Arra**	**46.60**	**305**	P		**P**	**08 29 04.9**	**-0.1**
	0.6nm,0.6s,baz=73,slow=9.2,SNR=2.2 0.6nm,0.6s							
FINES	**FINESS Array B**	**65.75**	**334**	P		**P**	**08 31 21.2**	**-0.3**
	4.1nm,0.8s,baz=39,slow=11,SNR=2.3 4.1nm,0.8s							
NB2	**NORSAR Subarra**	**70.43**	**339**	P		**P**	**08 31 50.9**	**0.0**
	comp=Z,0.3nm,0.4s,baz=30,slow=6.2							
NOA	**NORSAR Array B**	**70.43**	**339**	P		**P**	**08 31 51.1**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=32,slow=6.6,SNR=5.3 comp=Z,0.5nm,0.4s							
HFS	**Hagfors**	**70.53**	**338**	P		**P**	**08 31 51.4**	**-0.1**
	comp=Z,1.4nm,0.4s,baz=28,slow=6.7,SNR=6.8 comp=Z,1.4nm,0.4s							
AKASG	**Malin Array Be**	**72.52**	**324**	P		**P**	**08 32 03.8**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=41,slow=6.1,SNR=2.4 comp=Z,0.3nm,0.4s							
TXAR	**Lajitas Array**	**82.30**	**57**	P		P	08 33 14.4	+16
	comp=Z,0.2nm,0.8s,baz=311,slow=4.5,SNR=1.8 comp=Z,0.2nm,0.8s							

*NEIC **25** 08:24:43.1±1.3, 12.°09N±0.°07×140.°80E±0.°09, h41km±3km, mb4.7/28, Error ellipse: s-maj=13.7km s-min=10.2km az=112.0*

*IDC **25** 08:24:46.3±2.5, 12.°06N×140.°99E, h80km±24km, mb4.1/17, mbtmp4.5/19, Error ellipse: s-maj=17.5km s-min=11.1km az=93.0*

ISC 25 08:24:41.6±0.4, 12.°07N±0.°06×140.°77E±0.°07, h34km, n54, σ1§96/56, mb4.7/31, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
GUMO	**Guam**	**4.27**	**69**	P		**Pn**	**08 25 46.2**	**+2.0**
	93nm,0.8s,baz=206,slow=16,SNR=4.2							
GUMO				S		**Sn**	**08 26 33.8**	**+0.8**
	61nm,0.6s,baz=303,slow=17,SNR=1.6							
GUMO	**Guam**	**4.27**	**69**			**Pn**	**08 25 45.7**	**+1.5**
JAY	**Jayapura**	**14.48**	**180**	P		**Pn**	**08 28 05.6**	**+1.3**
	21nm,0.4s,baz=324,slow=3.5,SNR=30							
FAKI	**Fak Fak**	**17.13**	**210**	Pn		**P**	**08 28 39.0**	**-0.9**
PATS	**Pohnpei**	**18.06**	**105**			**Pn**	**08 28 49.4**	**-0.6**
COEN	**Coen**	**25.96**	**175**	P		**P**	**08 30 11.4**	**+0.2**
COEN				IAmb		IAmb	08 30 46.6	
	comp=Z,21nm,1.4s							
MTN	**Manton Dam**	**26.53**	**201**	P		**P**	**08 30 15.8**	**-0.5**
KNRA	**Kununurra**	**30.02**	**204**	P		**P**	**08 30 47.1**	**-0.3**
KNRA				IAmb		IAmb	08 31 19.5	
	comp=Z,23nm,1.4s							
WB0	**Warramunga Arr**	**32.25**	**191**	P		**P**	**08 31 07.2**	**+0.1**
WB0				IAmb		IAmb	08 31 07.8	
	comp=Z,6.7nm,0.7s							
CTAO	**Charters Tower**	**32.40**	**170**	P		**P**	**08 31 08.8**	**+0.4**
WR8	**Warramunga Arr**	**32.41**	**191**	P		**P**	**08 31 09.0**	**+0.5**
WRAB	**Tennant Creek**	**32.42**	**191**	P		**P**	**08 31 08.9**	**+0.4**
WRAB				IAmb		IAmb	08 31 09.4	
	comp=Z,7.5nm,0.7s							
WRA	**Warramunga Arr**	**32.43**	**191**	P		**P**	**08 31 08.7**	**0.0**
	comp=Z,6.8nm,0.7s,baz=11,slow=9.8,SNR=60							
WRA				PcP		**PcP**	**08 33 55.2**	**-0.4**
	comp=Z,0.6nm,1.0s,baz=39,slow=2.9,SNR=2.8 comp=Z,6.8nm,0.7s							
WRA	**Warramunga Arr**	**32.43**	**191**	P		**P**	**08 31 08.0**	**-0.6**
AS31	**Alice Springs**	**36.14**	**191**	P		**P**	**08 31 41.8**	**+1.0**
ASAR	**Alice Springs**	**36.14**	**191**	P		**P**	**08 31 41.5**	**+0.7**
	comp=Z,2.0nm,0.7s,baz=19,slow=12,SNR=36							
ASAR				PcP		**PcP**	**08 34 05.8**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=41,slow=3.2,SNR=2.9 comp=Z,2.0nm,0.7s							
KLR	**Kul'dur**	**37.80**	**350**	P		**P**	**08 31 55.7**	**+1.1**
	comp=Z,2.8nm,0.6s,baz=145,slow=8.5,SNR=13 comp=Z,2.8nm,0.6s							
INKA	**Innaminka**	**39.57**	**180**	P		**P**	**08 32 09.8**	**+0.1**
CMAR	**Chiang Mai Arr**	**40.78**	**284**	P		**P**	**08 32 22.4**	**+2.5**
	comp=Z,4.7nm,0.8s,baz=87,slow=6.4,SNR=24 comp=Z,4.7nm,0.8s							
CMAR	**Chiang Mai Arr**	**40.78**	**284**			**P**	**08 32 18.9**	**-1.0**
STKA	**Stephens Creek**	**43.70**	**179**	P		**P**	**08 32 43.2**	**-0.1**
	comp=Z,6.9nm,0.6s,baz=1.3,slow=8.1,SNR=19 comp=Z,6.9nm,0.6s							
STKA	**Stephens Creek**	**43.70**	**179**			**P**	**08 32 43.3**	**-0.1**
FORT	**Forrest**	**44.32**	**196**	P		**P**	**08 32 48.5**	**+0.1**
FORT				IAmb		IAmb	08 32 49.9	
	comp=Z,7.7nm,0.8s							
BBOO	**Buckleboo**	**44.85**	**186**	P		**P**	**08 32 52.7**	**0.0**
BBOO				IAmb		IAmb	08 32 53.0	
	comp=Z,8.7nm,0.6s							
SONM	**Songino Array**	**45.78**	**328**	P		**P**	**08 33 01.5**	**+1.5**
	comp=Z,1.2nm,0.5s,baz=137,slow=6.6,SNR=6.0 comp=Z,1.2nm,0.5s							
SONM	**Songino Array**	**45.78**	**328**	P		**P**	**08 33 00.7**	**+0.7**
MSVF	**Nonsavu**	**47.24**	**128**	P		**P**	**08 33 11.7**	**0.0**
MSVF				IAmb		IAmb	08 33 12.2	
	comp=Z,6.5nm,0.8s							
MORW	**Morawa**	**47.36**	**210**			**P**	**08 33 12.7**	**+0.2**
MORW				IAmb		IAmb	08 33 13.1	
	comp=Z,7.6nm,0.8s							
SHL	**Shillong**	**47.93**	**294**			**P**	**08 33 18.3**	**+1.0**
SHL				IAmb		IAmb	08 33 19.1	
	comp=Z,5.0nm,0.8s							
MA2	**Magadan**	**48.01**	**7**	P		**P**	**08 33 17.0**	**0.0**
	comp=Z,4.2nm,0.5s,baz=186,slow=11,SNR=8.0 comp=Z,4.2nm,0.5s							
MA2	**Magadan**	**48.01**	**7**	P		**P**	**08 33 17.1**	**+0.1**
MA2				IAmb		IAmb	08 33 17.5	
	comp=Z,5.2nm,0.7s							
TOO	**Toolangi**	**49.57**	**175**	P		**P**	**08 33 28.1**	**-1.3**
TOO				IAmb		IAmb	08 33 30.1	
	comp=Z,8.1nm,1.4s							
SEY	**Seymchan**	**51.46**	**7**	P		**P**	**08 33 43.5**	**+0.2**
	comp=Z,5.6nm,0.7s,baz=188,slow=7.1,SNR=33 comp=Z,5.6nm,0.7s							
MKAR	**Makanchi Array**	**59.85**	**317**	P		**P**	**08 34 44.8**	**+0.9**
	comp=Z,5.0nm,0.9s,baz=104,slow=8.5,SNR=32 comp=Z,5.0nm,0.9s							
MKAR	**Makanchi Array**	**59.85**	**317**			**P**	**08 34 45.1**	**+1.2**
TIXI	**Tiksi**	**59.99**	**356**	P		**P**	**08 34 43.4**	**-0.9**
	comp=Z,3.5nm,0.3s,baz=148,slow=3.5,SNR=8.1 comp=Z,3.5nm,0.3s							
MAKZ	**Makanchi**	**60.06**	**317**	P		**P**	**08 34 45.7**	**+0.4**
MAKZ				IAmb		IAmb	08 34 57.9	
	comp=Z,6.7nm,1.0s							
ZAA0	**Zalesovo Array**	**60.58**	**326**	P		**P**	**08 34 48.0**	**-0.6**
ZAA0				IAmb		IAmb	08 35 00.2	
	comp=Z,4.0nm,0.7s							
ZALV	**Zalesovo Beam**	**60.58**	**326**	P		**P**	**08 34 48.9**	**+0.2**
	comp=Z,3.7nm,0.5s,baz=109,slow=7.3,SNR=16 comp=Z,3.7nm,0.5s							
ZALV	**Zalesovo Beam**	**60.58**	**326**			**P**	**08 34 48.5**	**-0.1**
KURK	**Kurchatov**	**63.20**	**321**			**P**	**08 35 07.0**	**+0.7**
KURBB	**Kurchatov Arra**	**63.24**	**321**	P		**P**	**08 35 07.2**	**+0.6**
	comp=Z,8.5nm,0.8s,baz=104,slow=7.0,SNR=63 comp=Z,8.5nm,0.8s							
NIL	**Nilore**	**64.75**	**302**			**P**	**08 35 17.3**	**+0.3**
NRIK	**Noril'sk**	**66.29**	**342**	P		**P**	**08 35 26.2**	**+0.1**
	comp=Z,2.9nm,0.6s,baz=124,slow=7.5,SNR=8.8 comp=Z,2.9nm,0.6s							
NRIK	**Noril'sk**	**66.29**	**342**	IAmb		IAmb	08 35 37.6	
	comp=Z,7.2nm,0.9s							
BVAR	**Borovoye Array**	**68.66**	**322**	P		**P**	**08 35 41.8**	**+0.3**
	comp=Z,1.8nm,0.4s,baz=100,slow=6.2,SNR=12 comp=Z,1.8nm,0.4s							
BORK	**Borovoye**	**68.71**	**322**			**P**	**08 35 42.4**	**+0.7**
ILAR	**Eielson Array**	**71.65**	**25**	P		**P**	**08 35 56.7**	**-2.8**
	comp=Z,0.2nm,0.7s,baz=251,slow=4.4,SNR=2.0							
AB31	**Akbulak array**	**74.99**	**318**	P		**P**	**08 36 19.3**	**-0.2**
AKTO	**Aktyubinsk**	**76.20**	**319**	P		**P**	**08 36 25.9**	**-0.5**
	comp=Z,1.6nm,0.8s,baz=6.0,slow=0.7,SNR=2.4 comp=Z,1.6nm,0.8s							
YKA	**Yellowknife Ar**	**86.03**	**27**	P		**P**	**08 37 18.6**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=271,slow=7.3,SNR=4.4							
FINES	**FINESS Array B**	**90.81**	**334**	P		**P**	**08 37 39.1**	**-2.1**
	comp=Z,4.4nm,0.8s,baz=132,slow=2.8,SNR=6.1 comp=Z,4.4nm,0.8s							
NVAR	**Mina Array Bea**	**90.98**	**50**	P		**P**	**08 37 41.1**	**-1.7**
	comp=Z,0.4nm,0.6s,baz=270,slow=4.4,SNR=3.1 comp=Z,0.4nm,0.6s							
LPAZ	**La Paz**	**151.68**	**102**	PKPbc		**PKPbc**	**08 44 33.3**	**-0.9**
	comp=Z,4.5nm,0.8s,baz=354,slow=2.5,SNR=15							

*IDC **25** 08:32:14.3±0.9, 49.°14N×157.°80E, h0km, mb3.7/11, mbtmp3.7/15, ML3.2/3, Error ellipse: s-maj=24.4km s-min=17.2km az=150.0*

*KRSC **25** 08:32:17.3±2.0, 49.°34N×158.°31E, h40km±39km, Ml4.2*

ISC 25 08:32:19.0±0.8, 49.°19N±0.°08×157.°97E±0.°07, h35km, n43, σ1§45/44, mb3.6/11, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
SKR	**Severo-Kuril's**	**1.92**	**322**	*e*P		**Pn**	**08 32 47.9**	**-1.2**
SKR				*e*S		**Sn**	**08 33 11.1**	**-0.8**
PAU	**Pauzhetka**	**2.40**	**342**	*e*P		**Pn**	**08 32 55.5**	**-0.2**
PAU				*e*S		**Sn**	**08 33 24.6**	**+0.7**
KDTR	**Khodutka, Kamc**	**2.63**	**1**	*e*P		**Pn**	**08 32 57.0**	**-1.8**
KDTR				*e*S		**Sn**	**08 33 27.3**	**-2.1**
MIPR	**Malaya Ipel'ka**	**3.19**	**347**	*e*P		**Pn**	**08 33 07.0**	**+0.4**
MIPR				*e*S		**Sn**	**08 33 43.9**	**+0.6**
RUS	**Russkaya**	**3.27**	**6**	*e*P		**Pn**	**08 33 07.0**	**-0.7**
RUS				*e*S		**Sn**	**08 33 43.9**	**-1.4**
MTVR	**Mutnovka**	**3.30**	**2**	*e*S		**Sn**	**08 33 44.0**	**-2.4**
GRL	**Gorelyy**	**3.37**	**1**	*e*P		**Pn**	**08 33 10.3**	**+1.1**
KRMR	**Karymshinskiy**	**3.65**	**2**	*e*P		**Pn**	**08 33 12.6**	**-0.3**
KRMR				*e*S		**Sn**	**08 33 54.0**	**-0.6**
APC	**Apacha**	**3.78**	**353**	*e*P		**Pn**	**08 33 15.0**	**+0.4**
PET	**Petropavlovsk**	**3.87**	**6**	*e*P		**Pn**	**08 33 16.1**	**+0.2**
DALK	**Dalny**	**3.88**	**7**	*e*P		**Pn**	**08 33 16.2**	**+0.2**
DALK				*e*S		**Sn**	**08 34 00.0**	**-0.3**
INSR	**Institute**	**3.91**	**6**	*e*P		**Pn**	**08 33 17.1**	**+0.7**
PETK	**Petropavlovsk-**	**3.93**	**358**	Pn		**Pn**	**08 33 17.6**	**+0.9**
	1.5nm,0.3s,baz=148,slow=17,SNR=12 2.5nm,0.3s							
UGLR	**Uglovaya**	**4.06**	**7**	*e*P		**Pn**	**08 33 19.0**	**+0.4**
AVH	**Avacha**	**4.11**	**6**	*e*P		**Pn**	**08 33 20.0**	**+0.7**
SMAR	**Somma**	**4.12**	**7**	*e*P		**Pn**	**08 33 20.5**	**+1.1**
SPN	**Mys Shipunski**	**4.12**	**17**	*e*P		**Pn**	**08 33 18.9**	**-0.4**
KOK	**Koryaka**	**4.13**	**6**	*e*P		**Pn**	**08 33 20.5**	**+0.9**
KRX	**Arik**	**4.20**	**6**	*e*P		**Pn**	**08 33 21.2**	**+0.6**
GNL	**Ganaly**	**4.51**	**360**	*e*P		**Pn**	**08 33 26.3**	**+1.4**
KII	**Karymskiy**	**4.94**	**10**	*e*P		**Pn**	**08 33 31.2**	**+0.5**
ESO	**Esso**	**6.76**	**3**	*e*P		**Pn**	**08 33 57.7**	**+2.0**
BKI	**Bering**	**7.77**	**36**	*e*S		**Sn**	**08 35 29.9**	**-6.2**
SHEM	**Shemya Is, Ala**	**10.77**	**65**	Pn		**Pn**	**08 34 49.9**	**-0.6**
	8.5nm,0.3s,baz=270,slow=2.0,SNR=1.5							
ASAJ	**Asahikawa**	**11.71**	**250**	Pn		**Pn**	**08 35 01.4**	**-2.1**
	0.4nm,0.3s,baz=79,slow=16,SNR=2.0 5.3nm,0.8s							
KLR	**Kul'dur**	**17.11**	**280**	P		**Pn**	**08 36 13.9**	**-1.3**
	0.1nm,0.3s,baz=78,slow=14,SNR=2.4 0.4nm,0.3s							
H11N2	**WAKE ISLAND Hy**	**30.25**	**163**	T		T	09 10 24.7	
	baz=349,slow=76,SNR=8.8							
H11N1	**WAKE ISLAND Hy**	**30.27**	**163**	T		T	09 10 31.5	
	baz=349,slow=76,SNR=7.1							
H11N3	**WAKE ISLAND Hy**	**30.27**	**163**	T		T	09 10 31.9	
	baz=349,slow=76,SNR=7.3							
H11S1	**WAKE ISLAND Hy**	**31.41**	**164**	T		T	09 11 57.0	
	baz=350,slow=76,SNR=6.7							
H11S3	**WAKE ISLAND Hy**	**31.42**	**164**	T		T	09 11 56.7	
	baz=350,slow=76,SNR=9.6							
H11S2	**WAKE ISLAND Hy**	**31.43**	**164**	T		T	09 11 59.1	
	baz=350,slow=76,SNR=8.0							
ILAR	**Eielson Array**	**32.59**	**41**	P		**P**	**08 38 47.6**	**+1.0**
	0.3nm,0.6s,baz=260,slow=7.1,SNR=7.0 0.3nm,0.6s							
INK	**Inuvik**	**37.82**	**34**	P		**P**	**08 39 33.6**	**+2.1**
	1.7nm,0.9s,baz=292,slow=8.2,SNR=6.8 1.7nm,0.9s							
ZALV	**Zalesovo Beam**	**43.85**	**305**	P		**P**	**08 40 21.0**	**-0.4**
	0.5nm,0.5s,baz=47,slow=6.5,SNR=2.5 0.5nm,0.5s							
YKA	**Yellowknife Ar**	**46.99**	**39**	P		**P**	**08 40 47.8**	**+1.6**
	0.4nm,0.7s,baz=302,slow=8.3,SNR=5.2 0.4nm,0.7s							
MKAR	**Makanchi Array**	**48.71**	**298**	P		**P**	**08 40 59.3**	**-0.4**
	0.9nm,0.7s,baz=53,slow=6.9,SNR=7.2 0.9nm,0.7s							
KURBB	**Kurchatov Arra**	**48.82**	**304**	P		**P**	**08 40 59.9**	**-0.5**
	0.8nm,0.5s,baz=65,slow=8.3,SNR=8.1 0.8nm,0.5s							
BVAR	**Borovoye Array**	**51.82**	**310**	P		**P**	**08 41 23.6**	**+0.5**
	0.6nm,0.4s,baz=52,slow=8.7,SNR=3.0 0.6nm,0.4s							
AKASG	**Malin Array Be**	**71.26**	**328**	P		**P**	**08 43 34.6**	**+0.4**
	0.2nm,0.3s,baz=33,slow=6.7,SNR=2.0 0.2nm,0.3s							
WRA	**Warramunga Arr**	**71.96**	**203**	P		**P**	**08 43 39.3**	**+0.5**
	1.4nm,0.8s,baz=20,slow=6.6,SNR=4.9 1.4nm,0.8s							
TXAR	**Lajitas Array**	**73.47**	**64**	P		**P**	**08 43 48.8**	**+0.8**
	0.2nm,0.5s,baz=303,slow=5.3,SNR=2.6 0.2nm,0.5s							
ASAR	**Alice Springs**	**75.64**	**203**	P		**P**	**08 44 00.9**	**+0.7**
	0.6nm,0.9s,baz=24,slow=6.2,SNR=4.1 0.6nm,0.9s							

*IDC **25** 08:32:43.1±0.9, 49.°09N×158.°63E, h0km, mb3.7/8, mbtmp3.7/9, ML2.7/1, Error ellipse: s-maj=25.9km s-min=21.2km az=119.0*

*KRSC **25** 08:32:45.0±1.2, 49.°36N×158.°79E, h44km±18km, Ml4.3*

ISC 25 08:32:46.5±1.0, 49.°28N±0.°09×158.°7E±0.°1, h18km, n16, σ1§68/18, mb3.8/8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
SKR	**Severo-Kuril's**	**2.16**	**312**	*e*S		**Sn**	**08 33 46.9**	**-1.0**
KDTR	**Khodutka, Kamc**	**2.56**	**352**	*e*S		**Sn**	**08 33 56.0**	**-1.8**
RUS	**Russkaya**	**3.16**	**358**	*e*S		**Sn**	**08 34 10.8**	**-1.9**
MTVR	**Mutnovka**	**3.23**	**355**	*e*S		**Sn**	**08 34 12.8**	**-1.6**
GRL	**Gorelyy**	**3.30**	**354**	*e*S		**Sn**	**08 34 15.5**	**-0.8**
PET	**Petropavlovsk**	**3.75**	**360**	*e*P		**Pn**	**08 33 43.2**	**-0.2**
PET				*e*S		**Sn**	**08 34 25.3**	**-1.8**
DALK	**Dalny**	**3.76**	**1**	*e*P		**Pn**	**08 33 43.5**	**-0.1**
DALK				*e*S		**Sn**	**08 34 25.9**	**-1.4**
PETK	**Petropavlovsk-**	**3.88**	**351**	Pn		**Pn**	**08 33 47.3**	**+2.0**
	2.3nm,0.3s,baz=171,slow=4.8							
PETK				Sn		**Sn**	**08 34 34.8**	**+4.3**
	1.0nm,0.3s,baz=245,slow=28,SNR=1.9 8.1nm,0.5s							
ILAR	**Eielson Array**	**32.23**	**41**	P		**P**	**08 39 13.7**	**+0.4**
	0.3nm,0.7s,baz=248,slow=7.3,SNR=4.9 0.3nm,0.7s							
YKA	**Yellowknife Ar**	**46.64**	**40**	P		**P**	**08 41 14.2**	**+0.9**
	0.5nm,0.8s,baz=298,slow=8.5,SNR=5.2 0.5nm,0.8s							
MKAR	**Makanchi Array**	**49.07**	**298**	P		**P**	**08 41 33.1**	**+0.7**
	0.6nm,0.7s,baz=49,slow=6.3,SNR=5.3 0.6nm,0.7s							
KURBB	**Kurchatov Arra**	**49.15**	**304**	P		**P**	**08 41 32.8**	**-0.1**
	1.3nm,0.9s,baz=60,slow=7.4,SNR=1.8 1.3nm,0.9s							
BVAR	**Borovoye Array**	**52.10**	**310**	P		**P**	**08 41 54.3**	**-0.9**
	0.7nm,0.5s,baz=72,slow=8.6,SNR=4.6 0.7nm,0.5s							
WRA	**Warramunga Arr**	**72.23**	**204**	P		P	08 44 08.5	-1.9
	1.6nm,0.8s,baz=20,slow=6.3,SNR=5.4 1.6nm,0.8s							
TXAR	**Lajitas Array**	**73.03**	**65**	P		**P**	**08 44 15.5**	**+0.1**
	0.7nm,0.7s,baz=295,slow=4.4,SNR=7.4 0.7nm,0.7s							
ASAR	**Alice Springs**	**75.89**	**203**	P		**P**	**08 44 30.8**	**-1.0**
	0.4nm,0.6s,baz=14,slow=5.7,SNR=4.5 0.4nm,0.6s							

*ISK **25** 08:34:43.2, 39.°17N×27.°80E, h11km, ML3.8/47*

*AFAD **25** 08:34:43.2, 39.°16N×27.°80E, h15km±1km, MW3.8*

*THE **25** 08:34:45.2, 39.°N±2.°×2.°8E±.°, h15km±17km, M3.6/11, MLh3.6/11*

*ATH **25** 08:34:46.6±0.5, 39.°29N×27.°55E, h10km, ML3.6/8, Latitude uncertainty: 2 km; Longitude uncertainty: 3 km*

*SOF **25** 08:34:49.8, 39.°6N±0.°1×27.°50E±0.°07, h15km±8km, MD3.8/5*

*CFUSG **25** 08:34:51.8, 39.°73N×28.°06E, h9km, Mb3.1/1, MD3.4/2, MSH3.1/2*

ISC 25 08:34:43.7±0.8, 39.°19N±0.°01×27.°79E±0.°01, h15km±6km, n154, σ1§23/202, 10C-9D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
SOMA	**Soma-Manisa**	**0.20**	**262**		Pg	**Pg**	**08 34 48.1**	**-0.3**
SOMA					Sg	**Sg**	**08 34 51.3**	**-0.2**
STEP	**BALIKESIR_Sava**	**0.20**	**344**		P	**Pb**	**08 34 48.6**	**-0.4**
STEP					IAML		08 34 52.0	
	comp=N,6µm,0.7s							
STEP					S	**Sg**	**08 34 52.0**	**+0.5**
STEP					IAML		08 34 53.0	
	comp=E,5µm,0.3s							
AKHS	**Akhisar**	**0.31**	**176**		P	**Pg**	**08 34 49.7**	**-0.5**
AKHS					S	**Sg**	**08 34 54.4**	**-0.2**
AKHS					IAML		08 34 55.0	
	comp=E,1µm,0.4s							
AKHS					IAML		08 34 55.0	
	comp=N,6.3nm,0.3s							
AKS	**Akhisar**	**0.31**	**176**		Pg	**Pg**	**08 34 49.6**	**-0.5**
AKS					Sg	**Sg**	**08 34 54.5**	**0.0**
GORD	**Gordes-Manisa**	**0.41**	**132**		Pg	**Pg**	**08 34 51.7**	**-0.3**
GORD					Sg	**Sg**	**08 34 57.3**	**-0.3**
BALB	**Balikesir**	**0.46**	**9**		Pg	**Pb**	**08 34 53.3**	**-0.2**
BALB					Sg	**Sb**	**08 35 00.5**	**+0.4**
GOMA	**Golmarmara-Man**	**0.49**	**168**		Pg	**Pg**	**08 34 52.9**	**-0.5**
GOMA					Sg	**Sg**	**08 34 59.8**	**-0.1**
KTTT	**Salihli**	**0.55**	**154**		P	**Pg**	**08 34 54.0**	**-0.6**
KTTT					IAML		08 35 01.0	
	comp=N,3µm,0.3s							
KTTT					S	**Sg**	**08 35 01.0**	**-0.9**
BKES	**Balkesir-Mer**	**0.56**	**11**		P	**Pb**	**08 34 54.9**	**-0.3**
BKES					S	**Sb**	**08 35 03.2**	**+0.2**
BKES					IAML		08 35 05.0	
	comp=E,2µm,0.1s							
BKES					IAML		08 35 06.0	
	comp=N,2µm,0.7s							
BALY	**Balya**	**0.57**	**347**		P	**Pb**	**08 34 55.5**	**+0.1**
BALY					S	**Sb**	**08 35 03.2**	**-0.2**
BALY					IAML		08 35 04.0	
	comp=E,5µm,0.3s							
BALY					IAML		08 35 08.0	
	comp=N,1µm,0.1s							
CAMT	**Merkez**	**0.57**	**220**		P	**Pb**	**08 34 55.0**	**-0.4**
CAMT					S	**Sb**	**08 35 04.4**	**+1.1**
CAMT					IAML		08 35 07.0	
	comp=N,3µm,0.5s							
CAMT					IAML		08 35 08.0	
	comp=E,4µm,0.2s							
ZEDA	**zmir-Bergama**	**0.59**	**249**		P	**Pb**	**08 34 55.7**	**-0.1**
ZEDA					S	**Sb**	**08 35 03.5**	**-0.4**
ZEDA					IAML		08 35

comp=N,1µm,0.6s
KARB IAML 08 35 24.0
comp=E,1µm,0.5s
BAND Balkesir-Ban 1.19 12 P **Pn** **08 35 05.9 0.0**
BAND S **Sn** **08 35 22.1 +0.3**
BAND IAML 08 35 25.0
comp=E,3µm,0.2s
BAND IAML 08 35 25.0
comp=N,3µm,0.2s
BIGA Biga-Canakkale 1.20 336 Pn **Pg** **08 35 06.6 -0.3**
EMET Ktahya-Emet 1.21 80 P **Pb** **08 35 06.1 -0.1**
EMET S **Sn** **08 35 22.5 +0.3**
EMET IAML 08 35 24.0
comp=E,1µm,0.3s
EMET IAML 08 35 25.0
comp=N,2µm,0.4s
ORLT Orhaneli 1.21 45 Pn **Pg** **08 35 06.7 -0.4**
ORLT Orhaneli 1.21 45 P **Pg** **08 35 06.6 -0.5**
AYDB Zeytinkoy-Aydi 1.24 176 Pn **Pn** **08 35 06.2 -0.4**
EZNE Ezine-Canakkal 1.24 298 Pn **Pg** **08 35 07.6 0.0**
URLA Izmir 1.24 229 Pn **Pn** **08 35 06.4 -0.1**
URLA Izmir 1.24 229 P **Pn** **08 35 05.5 -1.0**
URLA S **Sn** **08 35 23.2 +0.2**
URLA IAML 08 35 25.0
comp=E,1µm,0.7s
URLA IAML 08 35 30.0
comp=N,762nm,0.6s
KRBG Karabiga-Canak 1.26 343 Pn **Pg** **08 35 07.3 -0.8**
GEDZ Gediz 1.27 96 Pn **Pn** **08 35 07.1 +0.1**
NAZL Nazilli-Aydin 1.28 162 Pn **Pn** **08 35 06.5 -0.6**
LAPS Lapseki, ANA 1.29 326 P **Pb** **08 35 07.7 -0.1**
LAPS S **Sg** **08 35 25.3 -0.1**
LAPS IAML 08 35 27.0
comp=E,1µm,0.3s
EZN Ezine 1.30 300 P **Pg** **08 35 08.0 -0.7**
EZN S **Sg** **08 35 25.4 -0.3**
EZN Ezine 1.30 300 Pn **Pb** **08 35 07.8 0.0**
KOCA Canakkale, Ayv 1.32 284 P **Pn** **08 35 07.7 +0.1**
KOCA S **Sg** **08 35 25.6 -0.6**
KOCA IAML 08 35 28.0
comp=N,2µm,0.4s
KOCA IAML 08 35 28.0
comp=E,2µm,0.7s
GDZ Gediz 1.32 94 P **Pb** **08 35 08.4 +0.2**
GDZ S **Sn** **08 35 25.6 +0.5**
GDZ IAML 08 35 28.0
comp=E,1µm,0.2s
GDZ IAML 08 35 29.0
comp=N,1µm,0.6s
TVSB Tavsanli 1.32 78 Pn **Pn** **08 35 07.9 +0.2**
DGB zmir 1.33 212 P **Pn** **08 35 08.0 +0.3**
DGB S **Sn** **08 35 25.7 +0.5**
DGB IAML 08 35 28.0
comp=N,739nm,0.3s
DGB IAML 08 35 30.0
comp=E,703nm,0.3s
COMU Canakkale 1.36 312 Pn **Pg** **08 35 09.1 -0.9**
SULTU Buldan 1.37 145 P **Pn** **08 35 08.2 -0.1**
SULTU S **Sb** **08 35 26.3 0.0**
SULTU IAML 08 35 32.0
comp=E,350nm,0.5s
SULTU IAML 08 35 36.0
comp=N,377nm,0.7s
YYLC Yaylacik 1.37 35 P **Pb** **08 35 08.5 -0.5**
ZEYE Izmir, Urla-Ze 1.38 227 P **Pn** **08 35 07.8 -0.6**
ZEYE S **Sb** **08 35 27.1 +0.6**
ZEYE IAML 08 35 32.0
comp=E,769nm,0.3s
ZEYE IAML 08 35 35.0
comp=N,866nm,0.5s
CNKL anakkale-Mer 1.39 310 P **Pg** **08 35 09.7 -0.9**
MADA Marmara adas 1.41 353 P **Pb** **08 35 09.4 -0.3**
MADA S **Sg** **08 35 27.9 -1.4**
MADA IAML 08 35 31.0
comp=E,747nm,0.5s
MADA IAML 08 35 32.0
comp=N,763nm,0.4s
ULDT Uludag 1.41 47 P **Pn** **08 35 09.1 +0.1**
ULDT S **Sg** **08 35 28.6 -0.8**
ULDT IAML 08 35 31.0
comp=N,1µm,0.3s
MRMT Marmara Adasi 1.42 354 Pn **Pb** **08 35 09.9 -0.1**
LPK Lapseki 1.43 327 Pn **Pb** **08 35 09.9 -0.1**
MDNY Mudanya-Bursa 1.45 35 Pn **Pb** **08 35 09.9 -0.5**
EAG2 Marmaro, Chios 1.46 244 P **Pg** **08 35 11.5 -0.3**
EAG2 S **Sb** **08 35 29.3 +0.5**
SIGR SIGRI 1.50 272 P **Pn** **08 35 10.5 +0.5**
SIGR S **Sg** **08 35 31.1 -1.0**
SIGR SIGRI 1.50 272 Pn **Pn** **08 35 10.3 +0.3**
SIGR SIGRI 1.50 272 P **Pb** **08 35 10.7 -0.6**
SIGR S **Sn** **08 35 27.0 -2.3**
AYDN Tasoluk 1.52 177 P **Pn** **08 35 10.0 -0.4**
AYDN S **Sg** **08 35 33.6 +0.8**
AYDN IAML 08 35 34.0
comp=E,487nm,0.3s
AYDN IAML 08 35 35.0
comp=N,609nm,0.3s
GCAM G?zelcaml? 1.54 197 Pn **Pn** **08 35 11.1 +0.5**
CHOS Chios island 1.57 240 P **Pn** **08 35 11.3 +0.2**
CHOS Chios island 1.57 240 P **Pg** **08 35 13.0 -0.9**
CHOS S **Sg** **08 35 33.4 -1.0**
RKY Sarkoy-Tekirda 1.57 343 Pn **Pb** **08 35 11.9 -0.6**
GELI Tayfur-Gelibol 1.58 321 Pn **Pb** **08 35 12.2 -0.4**
DOMA Ktahya-Doman 1.59 67 P **Pb** **08 35 12.6 -0.3**
DOMA S **Sg** **08 35 34.4 -0.7**
DOMA IAML 08 35 37.0
comp=N,1µm,0.6s
DOMA IAML 08 35 41.0
comp=E,909nm,0.7s
GAZK Gazikoy-TEKIRD 1.60 347 Pn **Pb** **08 35 12.3 -0.6**
ARMT Armutlu 1.61 31 Pn **Pb** **08 35 12.6 -0.5**
SMG Samos 1.65 207 P **Pn** **08 35 12.5 +0.4**
SMG Samos 1.65 207 P **Pb** **08 35 13.9 +0.1**
ANDZ Kutahya, Merke 1.67 78 P **Pn** **08 35 12.9 +0.5**
ANDZ S **Sg** **08 35 37.4 -0.1**
ANDZ IAML 08 35 39.0
comp=E,1µm,0.3s
ANDZ IAML 08 35 40.0
comp=N,1µm,0.3s
KUTH Kutahya 1.75 82 P **Pg** **08 35 17.0 -0.2**
KUTH S **Sg** **08 35 40.8 +0.8**
GADA Gvkgeada 1.77 305 P **Pb** **08 35 14.8 -1.0**
GADA Gvkgeada 1.77 305 Pn **Pb** **08 35 14.7 -1.1**
ERIK Erikli-Kesan 1.78 327 Pn **Pb** **08 35 14.8 -1.2**
ALT Altintas 1.81 93 Pn **Pn** **08 35 14.8 +0.4**
MLSB Milas 1.89 180 Pn **Pb** **08 35 18.6 +0.8**
CAVK Edirne/Enez-Ca 1.95 321 ⇓P **Pg** **08 35 19.8 -1.4**
CAVK ⇓S **Sg** **08 35 44.8 -1.7**
ENEZ Enez 2.00 321 P **Pb** **08 35 18.4 -1.2**
APMY Acipayam-Deniz 2.08 145 Pn **Pn** **08 35 18.2 0.0**
YER Yerkesik 2.08 169 P **Pn** **08 35 18.1 0.0**
YER Yerkesik 2.08 169 Pn **Pn** **08 35 17.6 -0.5**
YKAV Yalikavak-Bodr 2.10 191 Pn **Pn** **08 35 18.9 +0.7**
LIA Limnos Island 2.14 290 P **Pn** **08 35 19.8 +1.1**
LIA Limnos Island 2.14 290 P **Pn** **08 35 19.6 +0.8**
BODT Bodrum 2.15 190 P **Pn** **08 35 20.1 +1.0**
BODT Bodrum 2.15 190 Pn **Pn** **08 35 19.3 +0.3**
SMTH Samothraki Isl 2.16 307 P **Pn** **08 35 20.4 +1.2**
SMTH Samothraki Isl 2.16 307 P **Pn** **08 35 20.1 +1.0**
ALN Alexandroupoli 2.17 323 P **Pn** **08 35 20.4 +1.1**
ALN Alexandroupoli 2.17 323 P **Pn** **08 35 19.9 +0.7**
BASM Basmaki-Afyon 2.18 125 Pn **Pn** **08 35 19.6 +0.2**
SFL1 Soufli 2.30 331 P **Pn** **08 35 21.7 +0.6**
SILT Sile 2.43 35 ⇑P **Pb** **08 35 28.0 +1.0**
SILT ⇑S **Sg** **08 35 60.0 -1.7**
RDO Rodhopi 2.61 319 P **Pn** **08 35 26.6 +1.4**
RDO Rodhopi 2.61 319 P **Pn** **08 35 25.9 +0.6**
THAS Thassos island 2.75 302 P **Pn** **08 35 27.6 +0.4**
KARY Karystos 2.87 247 P **Pn** **08 35 30.3 +1.5**
SAHE Sakarya_HENDEK 2.88 54 ⇑P **Pb** **08 35 34.4 -0.4**
SAHE ⇓S **Sb** **08 36 11.3 +1.4**
THS1 Thassos, Thass 2.92 303 P **Pn** **08 35 30.3 +0.8**
KYMI Kymi, Euboea I 2.93 260 P **Pn** **08 35 31.0 +1.3**
AOS2 Alonissos-2 3.07 271 P **Pn** **08 35 33.8 +2.2**
KAVA Kavala 3.10 307 P **Pn** **08 35 32.2 +0.2**
DION Dionisos Attik 3.21 251 P **Pn** **08 35 35.2 +1.6**
DIM Dimitrovgrad 3.32 330 P **Pn** **08 35 36.4 +1.4**
THERA Ancient Thera, 3.36 214 P **Pn** **08 35 38.9 +3.3**
ATHU Athens Univers 3.37 250 P **Pn** **08 35 37.5 +1.9**
VLY Voula,Athens 3.40 248 P **Pn** **08 35 37.9 +1.7**
RZN Rozhen 3.42 318 P **Pn** **08 35 38.1 +1.5**
JMB Yambol 3.44 344 P **Pn** **08 35 38.2 +1.5**

PLG Polygyros 3.55 291 P **Pn** **08 35 39.3 +1.0**
VIL2 Platees 3.67 256 P **Pn** **08 35 40.7 +0.8**
PLD Plovdiv 3.75 323 P **Pn** **08 35 42.5 +1.5**
MMB Musomishta 3.88 309 P **Pn** **08 35 44.7 +1.9**
ELND Elena 4.01 339 ⇓P **Pn** **08 35 47.7 +3.1**
AXAR Agios Charalam 4.02 266 P **Pn** **08 35 46.2 +1.5**
KKB Krupnik 4.43 308 P **Pn** **08 35 52.3 +1.9**
THL Klokotos Trika 4.49 277 P **Pn** **08 35 52.2 +1.1**
VLI Veliai 4.56 239 P **Pn** **08 35 54.5 +2.5**
KLV Kalavryta, Ach 4.56 257 P **Pn** **08 35 53.7 +1.5**
ANX Ano Chora 4.62 264 P **Pn** **08 35 54.5 +1.6**
KZN Kozani 4.77 285 P **Pn** **08 35 56.1 +1.0**
PLVB Pleven 4.83 331 ⇓P **Pn** **08 35 58.3 +2.5**
VTS Vitosha 4.86 316 P **Pn** **08 35 58.1 +1.7**
MLR Muntele Rosu 6.45 348 ⇑P **Pn** **08 36 21.7 +3.5**
VOIR 6.57 343 ⇓P **Pn** **08 36 23.5 +3.7**
ARR Arges 6.61 340 ⇑P **Pn** **08 36 23.8 +3.5**
PLOR Plostina 6.71 353 ⇑P **Pn** **08 36 25.8 +4.0**
VRI Vrincioaia 6.72 354 ⇓P **Pn** **08 36 25.7 +3.9**
COVR Voineasa-Covas 6.76 351 ⇑P **Pn** **08 36 26.3 +4.0**
SEV Sevastopol' 6.92 37 ⇓*i* P **Pn** **08 36 25.3 +0.8**
SEV pmax pmax 08 36 26.8
comp=Z,7.0nm,0.3s
SEV *e*S **Sn** **08 37 39.0 -4.0**
SEV smax smax 08 37 44.9
comp=N,4.0nm,0.3s
SEV smax smax 08 37 44.9
comp=E,1.0nm,0.3s
LOT Lotru 6.93 336 ⇑P **Pn** **08 36 28.0 +3.2**
HERR Herculane 6.95 327 ⇑P **Pn** **08 36 28.6 +3.6**
SUDU Sudak 7.83 41 *e*P **Pn** **08 36 37.3 +0.4**
SUDU pmax pmax 08 36 39.7
comp=Z,8.0nm,0.3s
SUDU *ex* x 08 38 00.3
SUDU smax smax 08 38 03.5
comp=N,16nm,0.3s,comp=E,7.0nm,0.3s
BZS Buzias 7.88 327 ⇑P **Pn** **08 36 40.3 +2.6**
BURAR Bucovina Array 8.63 348 ⇓P **Pn** **08 36 52.1 +4.0**

*IDC **25** 08:36:49.3±0.7,49.˚11N×157.˚80E,h0km,mb3.9/17, mbtmp3.9/22,ML3.4/5,Error ellipse: s-maj=18.4km s-min=15.4km az=129.0*
*NEIC **25** 08:36:50.8±0.9,49.˚07N±0.˚09×157.˚8E±0.˚1,h10km±5km, mb4.3/6,Error ellipse: s-maj=15.1km s-min=11.7km az=134.0*
*SKHL **25** 08:36:51.7±0.4,49.˚10N×158.˚00E,h44km±5km,mb5.3/2*
*MOS **25** 08:36:52.6±0.8,49.˚18N×157.˚82E,h39km,mb4.5/8,Error ellipse: s-maj=13.1km s-min=3.9km az=89.4*
*KRSC **25** 08:36:53.5±1.7,49.˚39N×158.˚22E,h47km±39km,Ml4.2*
ISC 25 08:36:51.4±4.1,49.˚16N±0.˚07×157.˚93E±0.˚06,h15km±27km, n113,σ1$39/129,mb4.2/22,4C-4D,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.92**	**323**	⇑*i*	PN	**Pn**		**08 37 23.4**	**-0.1**
SKR				*i*	S	**Sn**		**08 37 47.0**	**-0.4**
SKR					pmax	pmax			
	comp=Z,1µm,0.5s								
SKR					smax	smax			
	comp=E,4µm,0.4s								
SKR					smax	smax			
	comp=N,3µm,0.4s								
SKR	**Severo-Kuril's**	**1.92**	**323**	*e*P		**Pn**		**08 37 23.2**	**-0.2**
SKR				*e*S		**Sn**		**08 37 46.7**	**-0.7**
SKR	**Severo-Kuril's**	**1.92**	**323**	*i* P		**Pn**		**08 37 23.3**	**-0.2**
SKR					AMB	AMB		08 37 23.8	
	comp=N,1µm,0.5s								
SKR				*i*	S	**Sn**		**08 37 46.7**	**-0.7**
SKR					A	A		08 37 47.6	
	comp=N,2µm,0.4s								
SKR					A	A		08 37 47.6	
	comp=N,3µm,0.4s								
PAU	**Pauzhetka**	**2.42**	**343**		PN	**Pn**		**08 37 30.7**	**+0.4**
PAU					S	**Sn**		**08 37 57.0**	**-2.6**
PAU	**Pauzhetka**	**2.42**	**343**	*e*P		**Pn**		**08 37 30.8**	**+0.4**
PAU				*e*S		**Sn**		**08 37 57.1**	**-2.6**
PAU	**Pauzhetka**	**2.42**	**343**	*i* P		**Pn**		**08 37 31.7**	**+1.4**
PAU					AMB	AMB		08 37 33.4	
	comp=N,200nm,0.3s								
PAU				*i*	S	**Sn**		**08 38 00.4**	**+0.8**
PAU					A	A		08 38 02.0	
	comp=N,540nm,0.3s								
PAU					A	A		08 38 02.0	
	comp=N,700nm,0.3s								
KDTR	**Khodutka, Kamc**	**2.65**	**2**		PN	**Pn**		**08 37 33.1**	**-0.4**
KDTR					S	**Sn**		**08 38 02.1**	**-3.3**
KDTR	**Khodutka, Kamc**	**2.65**	**2**	*e*P		**Pn**		**08 37 33.2**	**-0.4**
KDTR				*e*S		**Sn**		**08 38 02.1**	**-3.3**
KDTR	**Khodutka, Kamc**	**2.65**	**2**	*e*P		**Pn**		**08 37 33.1**	**-0.4**
MIPR	**Malaya Ipel'ka**	**3.21**	**347**		PN	**Pn**		**08 37 42.5**	**+1.3**
MIPR					S	**Sn**		**08 38 18.4**	**-0.7**
MIPR	**Malaya Ipel'ka**	**3.21**	**347**	*e*P		**Pn**		**08 37 42.5**	**+1.3**
MIPR				*e*S		**Sn**		**08 38 18.4**	**-0.7**
ASAK	**Asacha**	**3.23**	**360**		PN	**Pn**		**08 37 42.2**	**+0.7**
ASAK	**Asacha**	**3.23**	**360**	*e*P		**Pn**		**08 37 42.2**	**+0.7**
RUS	**Russkaya**	**3.30**	**6**		PN	**Pn**		**08 37 42.6**	**+0.2**
RUS	**Russkaya**	**3.30**	**6**	*e*P		**Pn**		**08 37 42.6**	**+0.2**
RUS	**Russkaya**	**3.30**	**6**	*e*P		**Pn**		**08 37 42.6**	**+0.2**
MTVR	**Mutnovka**	**3.33**	**3**		PN	**Pn**		**08 37 43.6**	**+0.6**
MTVR					S	**Sn**		**08 38 20.1**	**-2.2**
MTVR	**Mutnovka**	**3.33**	**3**	*e*P		**Pn**		**08 37 43.6**	**+0.6**
MTVR				*e*S		**Sn**		**08 38 20.2**	**-2.2**
GRL	**Gorelyy**	**3.40**	**2**		PN	**Pn**		**08 37 44.9**	**+1.0**
GRL					S	**Sn**		**08 38 23.4**	**-0.5**
GRL	**Gorelyy**	**3.40**	**2**	*e*P		**Pn**		**08 37 45.0**	**+1.0**
GRL				*e*S		**Sn**		**08 38 23.5**	**-0.5**
KRMR	**Karymshinskiy**	**3.68**	**2**		PN	**Pn**		**08 37 48.4**	**+0.8**
KRMR	**Karymshinskiy**	**3.68**	**2**	*e*P		**Pn**		**08 37 48.4**	**+0.8**
KRMR	**Karymshinskiy**	**3.68**	**2**	*e*P		**Pn**		**08 37 48.4**	**+0.8**
APC	**Apacha**	**3.80**	**353**		PN	**Pn**		**08 37 50.4**	**+1.1**
APC	**Apacha**	**3.80**	**353**	*e*P		**Pn**		**08 37 50.4**	**+1.1**
PET	**Petropavlovsk**	**3.90**	**6**			**Pn**		**08 37 50.9**	**+0.2**
PET	**Petropavlovsk**	**3.90**	**6**	*e*PN		**Pn**		**08 37 50.8**	**+0.2**
PET				*e*S		**Sn**		**08 38 35.5**	**-0.5**
PET					pmax	pmax			
	comp=Z,86nm,0.5s								
PET					smax	smax			
	comp=N,114nm,0.9s								
PET					smax	smax			
	comp=E,77nm,0.6s								
PET	**Petropavlovsk**	**3.90**	**6**	*e*P		**Pn**		**08 37 51.0**	**+0.4**
PET				*e*S		**Sn**		**08 38 33.0**	**-3.1**
PET	**Petropavlovsk**	**3.90**	**6**	*i* P		**Pn**		**08 37 50.6**	**0.0**
PET					AMB	AMB		08 37 51.4	
	comp=E,70nm,0.3s								
PET				*i*	S	**Sn**		**08 38 35.1**	**-0.9**
PET					A	A		08 38 40.0	
	comp=E,50nm,0.3s								
PET					A	A		08 38 40.0	
	comp=E,60nm,0.3s								
DALK	**Dalny**	**3.91**	**7**		PN	**Pn**		**08 37 51.1**	**+0.3**
DALK	**Dalny**	**3.91**	**7**	*e*P		**Pn**		**08 37 51.2**	**+0.3**
DALK				*e*S		**Sn**		**08 38 33.7**	**-2.7**
DALK	**Dalny**	**3.91**	**7**	*e*P		**Pn**		**08 37 51.1**	**+0.3**
PEA0B	**Petropavlovsk-**	**3.96**	**358**		Pn	**Pn**		**08 37 53.2**	**+1.7**
PEA0B	**Petropavlovsk-**	**3.96**	**358**	*e*PN		**Pn**		**08 37 52.7**	**+1.2**
PETK	**Petropavlovsk-**	**3.96**	**358**		Pn	**Pn**		**08 37 52.7**	**+1.2**
	comp=E,2.0nm,0.3s,baz=154,slow=16,SNR=21								
PETK					Sn	**Sn**		**08 38 42.2**	**+4.6**
	comp=E,0.6nm,0.3s,baz=209,slow=15,SNR=1.0								
	comp=E,17nm,0.8s								
UGLR	**Uglovaya**	**4.09**	**8**		PN	**Pn**		**08 37 54.4**	**+1.0**
UGLR	**Uglovaya**	**4.09**	**8**	*e*P		**Pn**		**08 37 54.5**	**+1.0**
AVH	**Avacha**	**4.14**	**7**		PN	**Pn**		**08 37 55.2**	**+1.1**
AVH	**Avacha**	**4.14**	**7**	*e*P		**Pn**		**08 37 55.2**	**+1.1**
AVH	**Avacha**	**4.14**	**7**	*e*P		**Pn**		**08 37 55.2**	**+1.1**
SMAR	**Somma**	**4.14**	**7**		PN	**Pn**		**08 37 55.5**	**+1.2**
SMAR	**Somma**	**4.14**	**7**	*e*P		**Pn**		**08 37 55.5**	**+1.2**
SPN	**Mys Shipunski**	**4.16**	**18**		PN	**Pn**		**08 37 53.8**	**-0.5**
SPN	**Mys Shipunski**	**4.16**	**18**	*e*P		**Pn**		**08 37 53.8**	**-0.5**
SPN				*e*S		**Sn**		**08 38 38.5**	**-4.0**
KOK	**Koryaka**	**4.16**	**6**		PN	**Pn**		**08 37 55.6**	**+1.2**
KOK	**Koryaka**	**4.16**	**6**	*e*P		**Pn**		**08 37 55.7**	**+1.2**
KOK	**Koryaka**	**4.16**	**6**	*e*P		**Pn**		**08 37 55.6**	**+1.2**
KRER	**Koryakskii**	**4.18**	**7**		PN	**Pn**		**08 37 55.9**	**+1.2**
KRER	**Koryakskii**	**4.18**	**7**	*e*P		**Pn**		**08 37 56.0**	**+1.2**
KRX	**Arik**	**4.23**	**6**		PN	**Pn**		**08 37 56.3**	**+0.9**
KRX	**Arik**	**4.23**	**6**	*e*P		**Pn**		**08 37 56.3**	**+0.9**
GNL	**Ganaly**	**4.54**	**0**		PN	**Pn**		**08 38 01.0**	**+1.4**
GNL	**Ganaly**	**4.54**	**0**	*e*P		**Pn**		**08 38 01.0**	**+1.4**

KII Karymskiy 4.97 10 PN **Pn** **08 38 06.6 +1.1**
KII Karymskiy 4.97 10 *e*P **Pn** **08 38 06.7 +1.1**
ESO Esso 6.79 4 PN **Pn** **08 38 31.3 +0.9**
ESO Esso 6.79 4 *e*P **Pn** **08 38 31.3 +0.9**
KBTR Krutoberegovo 7.66 21 PN **Pn** **08 38 42.0 -0.2**
KBTR *e*S **Sn** **08 40 02.8 -5.8**
KBG Krutoberegovo 7.67 20 *e*P **Pn** **08 38 44.0 +1.5**
KBG *e*S **Sn** **08 40 07.0 -2.0**
KUR Kuril'sk 7.90 244 *e*PN **Pn** **08 38 45.1 -0.5**
KUR Kuril'sk 7.90 244 *e*P **Pn** **08 38 45.3 -0.3**
KUR *e*S **Sn** **08 40 10.5 -4.1**
SHEM Shemya Is, Ala 10.81 65 Pn **Pn** **08 39 26.3 +0.8**
comp=E,2.2nm,0.3s,baz=282,slow=19,SNR=1.1
comp=E,20nm,0.8s
MA2 Magadan 11.23 341 Pn **Pn** **08 39 31.0 -0.2**
comp=E,0.4nm,0.3s,baz=150,slow=14,SNR=4.2
MA2 Magadan 11.23 341 ⇓*e*PN **Pn** **08 39 30.7 -0.5**
MA2 pmax pmax
comp=Z,8.0nm,1.7s
MA2 Magadan 11.23 341 *e*P **Pn** **08 39 30.7 -0.5**
JKA Kamikawa-asahi 11.68 250 **Pn** **08 39 35.7 -1.6**
ASAJ Asahikawa 11.68 250 Pn **Pn** **08 39 35.7 -1.6**
comp=Z,0.4nm,0.3s,baz=334,slow=21,SNR=1.8
comp=Z,4.3nm,0.8s
KLR Kul'dur 17.09 280 P **Pn** **08 40 49.8 +0.3**
comp=Z,0.2nm,0.3s,baz=66,slow=8.2,SNR=4.2
comp=Z,0.4nm,0.3s
MAJO Matsushiro 19.11 236 ⇑*e*P **P** **08 41 13.2 -0.4**
MAJO pmax pmax
comp=Z,4.0nm,0.7s
MJAR Matsushiro Arr 19.11 236 P **P** **08 41 13.2 -0.4**
baz=37,slow=8.6,SNR=2.6
comp=Z,0.8nm,0.5s
YAK Yakutsk 20.30 320 ⇓*e*P **P** **08 41 24.9 -1.3**
YAK pmax pmax
comp=Z,15nm,0.6s
YAK Yakutsk 20.30 320 *e*P **P** **08 41 25.0 -1.3**
TIXI Tiksi 26.20 340 P **P** **08 42 24.4 -0.5**
comp=Z,5.3nm,0.4s,baz=140,slow=8.8,SNR=6.2
comp=Z,5.3nm,0.4s
TIXI Tiksi 26.20 340 ⇑*e*P **P** **08 42 24.2 -0.8**
TIXI pmax pmax
comp=Z,3.0nm,0.8s
TIXI Tiksi 26.20 340 *e*P **P** **08 42 24.2 -0.8**
C18K Utukok River 27.91 31 P **P** **08 42 42.5 +2.0**
C18K IAmb IAmb 08 42 57.3
comp=Z,2.5nm,1.1s
H11N2 WAKE ISLAND Hy 30.23 163 T T 09 14 44.3
baz=351,slow=74
H11N3 WAKE ISLAND Hy 30.25 163 T T 09 14 44.8
baz=351,slow=74
H11N1 WAKE ISLAND Hy 30.25 163 T T 09 14 49.1
baz=351
H11S1 WAKE ISLAND Hy 31.39 164 T T 09 16 14.9
baz=353,slow=74
H11S3 WAKE ISLAND Hy 31.40 164 T T 09 16 17.2
baz=353,slow=74
H11S2 WAKE ISLAND Hy 31.41 164 T T 09 16 14.9
baz=353
ILAR Eielson Array 32.63 41 P **P** **08 43 22.9 +0.8**
comp=Z,0.2nm,0.8s,baz=267,slow=7.6,SNR=2.3
comp=Z,0.2nm,0.8s
SONM Songino Array 33.63 288 P **P** **08 43 30.8 -0.5**
comp=Z,0.5nm,0.6s,baz=50,slow=7.7,SNR=2.1
comp=Z,0.5nm,0.6s
YKA Yellowknife Ar 47.03 39 P **P** **08 45 22.1 +0.4**
comp=Z,0.4nm,1.0s,baz=301,slow=7.3,SNR=3.6
comp=Z,0.4nm,1.0s
MK31 Makanchi Array 48.70 298 ⇓*i* P **P** **08 45 34.5 -0.4**
MKAR Makanchi Array 48.70 298 P **P** **08 45 34.5 -0.4**
comp=Z,1.2nm,0.6s,baz=52,slow=6.7,SNR=13
comp=Z,1.2nm,0.6s
KURK Kurchatov 48.72 304 **P** **08 45 34.9 0.0**
KURK IAmb IAmb 08 45 36.2
comp=Z,3.4nm,0.5s
KURK Kurchatov 48.72 304 P **P** **08 45 35.2 +0.3**
KURK 08 47 06.4
KURK Kurchatov 48.72 304 *e*P **P** **08 45 35.2 +0.3**
BVAR Borovoye Array 51.81 310 P **P** **08 45 58.6 +0.3**
comp=Z,0.3nm,0.4s,baz=60,slow=8.8,SNR=6.7
comp=Z,1.3nm,0.4s
BORK Borovoye 51.84 310 ⇓*e*P **P** **08 45 58.1 -0.4**
BORK pmax pmax
comp=Z,8.0nm,2.7s
ARTI Arti 55.50 318 P **P** **08 46 24.7 -0.6**
comp=Z,2.6nm,0.6s,baz=120,slow=8.1,SNR=3.7
comp=Z,2.6nm,0.6s
AAK Ala-Archa 55.63 297 P **P** **08 46 26.2 -0.4**
comp=Z,1.1nm,0.5s,baz=166,slow=4.2,SNR=4.4
comp=Z,1.1nm,0.5s
AAK Ala-Archa 55.63 297 IAmb IAmb 08 46 29.4
comp=Z,2.0nm,1.0s
AAK Ala-Archa 55.63 297 P **P** **08 46 26.2 -0.4**
AAK pmax pmax
comp=Z,2.0nm,1.0s
AKTO Aktyubinsk 59.49 313 P **P** **08 46 53.1 -0.3**
comp=Z,0.8nm,0.4s,baz=45,slow=8.6,SNR=4.3
comp=Z,0.8nm,0.4s
PDAR Pinedale Array 60.72 58 P **P** **08 47 04.3 +2.0**
comp=Z,0.1nm,0.5s,baz=306,slow=4.0,SNR=2.1
comp=Z,0.1nm,0.5s
FINES FINESS Array B 63.18 336 P **P** **08 47 19.1 +0.8**
comp=Z,5.3nm,1.0s,baz=46,slow=8.2,SNR=5.4
comp=Z,5.3nm,1.0s
FINES FINESS Array B 63.18 336 *i* P **P** **08 47 20.5 +2.3**
FINES pmax pmax
comp=Z,5.0nm,1.0s
OBN Obninsk 65.09 327 *e*P **P** **08 47 31.2 +0.4**
OBN *e* 08 48 04.2
OBN *e* 08 49 53.7
OBN *e*PPP PPP 08 51 26.7
OBN pmax pmax
comp=Z,5.0nm,0.9s
OBN Obninsk 65.09 327 *e*P **P** **08 47 31.2 +0.4**
NOA NORSAR Array B 66.92 343 P **P** **08 47 44.1 +1.4**
comp=Z,0.6nm,0.6s,baz=40,slow=7.8,SNR=1.6
comp=Z,0.6nm,0.6s
AKASG Malin Array Be 71.27 328 P **P** **08 48 10.4 +0.7**
comp=Z,0.7nm,0.4s,baz=33,slow=6.6,SNR=5.6
comp=Z,0.7nm,0.4s
AKASG Malin Array Be 71.27 328 *i* P **P** **08 48 10.3 +0.6**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
KBZ Khabaz 71.44 316 P **P** **08 48 11.0 +0.2**
comp=Z,1.7nm,0.8s,baz=56,slow=7.8,SNR=3.6
comp=Z,1.7nm,0.8s
WB0 Warramunga Arr 71.75 203 P **P** **08 48 12.1 -0.8**
WR8 Warramunga Arr 71.90 203 P **P** **08 48 13.1 -0.7**
WR8 IAmb IAmb 08 48 14.2
comp=Z,4.5nm,0.8s
WRA Warramunga Arr 71.93 203 P **P** **08 48 13.6 -0.4**
comp=Z,5.1nm,0.7s,baz=20,slow=6.3,SNR=23
comp=Z,5.1nm,0.7s
WRA Warramunga Arr 71.93 203 P **P** **08 48 12.9 -1.0**
TXAR Lajitas Array 73.51 64 P **P** **08 48 23.8 +0.3**
comp=Z,3.0nm,0.7s,baz=302,slow=6.1,SNR=4.1
comp=Z,0.3nm,0.7s
ASAR Alice Springs 75.60 203 P **P** **08 48 35.9 +0.4**
comp=Z,1.4nm,0.7s,baz=17,slow=5.3,SNR=18
comp=Z,1.4nm,0.7s

*SJA **25** 08:41:46.4±0.8,35.˚73S×73.˚93W,h20km±12km,ML3.5, MW3.9*
*GUC **25** 08:41:53.3±0.5,35.˚76S×73.˚56W,h33km±2km,ML3.5*
ISC 25 08:41:48.4±1.9,35.72S±0.˚03×73.76W±0.˚08,h5km±11km, n33,σ1$71/56,3C,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BI05	**Punta Hualpn**	**1.13**	**156**	⇑*e*P		**Pn**		**08 42 11.4**	**+0.6**
BI05				*e*S		**Sg**		**08 42 24.2**	**-0.5**
BI05					IAML			08 42 30.8	
	comp=E,2µm,0.1s								
BI05	**Punta Hualpn**	**1.13**	**156**	*e*P		**Pn**		**08 42 11.1**	**+0.2**
BI05				*e*S		**Sb**		**08 42 25.6**	**+0.3**
BI05					IAML			08 42 26.9	
	comp=Z,611nm,0.6s								
GO05	**Hualane**	**1.66**	**65**	*e*P		**Pn**		**08 42 17.9**	**-0.2**
GO05				*e*S		**Sn**		**08 42 38.3**	**-1.5**
GO05					IAML			08 42 46.8	
	comp=N,580nm,0.5s								
GO05	**Hualane**	**1.66**	**65**	*e*P		**Pn**		**08 42 18.0**	**-0.2**
GO05	

ML02	**Panimavida**	**1.91**	**92**	*e*P		**Pn**	**08 42 22.0**	**+0.4**
ML02				*i* S		**Sn**	**08 42 44.0**	**-2.0**
ML02				IAML			08 42 53.5	
	comp=N,1μm,0.6s							
ML02	**Panimavida**	**1.91**	**92**	*e*P		**Pn**	**08 42 21.3**	**-0.3**
ML02				*e*S		**Sb**	**08 42 48.3**	**+0.5**
ML02				IAML			08 42 59.4	
	comp=Z,534nm,0.6s							
BO03	**Pichilemu**	**1.92**	**51**	*i* P		**Pn**	**08 42 21.9**	**+0.3**
BO03				*e*S		**Sn**	**08 42 44.0**	**-2.1**
BO03				IAML			08 42 57.0	
	comp=N,416nm,0.4s							
BI02	**San Fabin de**	**2.23**	**116**⇑	*e*P		**Pn**	**08 42 26.5**	**+0.5**
BI02				*e*S		**Sn**	**08 42 52.0**	**-2.0**
BI02				IAML			08 43 00.3	
	comp=E,485nm,0.7s							
BI02	**San Fabin de**	**2.23**	**116**	*e*P		**Pn**	**08 42 26.2**	**+0.2**
BI02				*e*S		**Sb**	**08 42 57.1**	**+0.1**
BI02				IAML			08 43 00.2	
	comp=Z,358nm,0.5s							
BO01	**Tunca**	**2.56**	**60**	*e*P		**Pn**	**08 42 31.6**	**+1.0**
BO01				*e*S		**Sn**	**08 43 01.0**	**-1.2**
BO01				IAML			08 43 15.7	
	comp=N,183nm,0.4s							
BO01	**Tunca**	**2.56**	**60**	*e*P		**Pn**	**08 42 31.6**	**+1.0**
BO01				IAML			08 43 16.1	
	comp=Z,133nm,0.6s							
BO02	**Sierra Bellavi**	**2.61**	**70**⇑	*e*P		**Pn**	**08 42 31.9**	**+0.6**
BO02				*e*S		**Sn**	**08 43 02.0**	**-1.4**
BO02				IAML			08 43 17.3	
	comp=N,456nm,0.3s							
BO02	**Sierra Bellavi**	**2.61**	**70**	*e*P		**Pn**	**08 42 31.7**	**+0.5**
BO02				*e*S		**Sb**	**08 43 07.7**	**-0.4**
BO02				IAML			08 43 18.6	
	comp=Z,335nm,0.8s							
MT01	**Popeta**	**2.77**	**49**	*e*P		**Pg**	**08 42 40.5**	**-1.1**
MT01				*i* S		**Sg**	**08 43 17.1**	**-0.4**
MT01	**Popeta**	**2.77**	**49**	*e*P		**Pn**	**08 42 34.1**	**+0.6**
MT01				*e*S		**Sg**	**08 43 19.2**	**+1.7**
MT01				IAML			08 43 31.5	
	comp=Z,104nm,0.6s							
MT09	**Talagante**	**3.00**	**51**	*e*P		**Pn**	**08 42 37.4**	**+0.8**
BO04	**La Punta**	**3.11**	**57**	*e*P		**Pn**	**08 42 39.3**	**+1.1**
BO04				*i* S		**Sn**	**08 43 13.4**	**-2.4**
BO04				IAML			08 43 33.2	
	comp=E,199nm,0.7s							
MT02	**Curacav**	**3.27**	**42**	*e*P		**Pn**	**08 42 40.4**	**0.0**
MT02				IAML			08 43 44.5	
	comp=Z,57nm,0.6s							
LMEL	**Las Melosas**	**3.47**	**59**	*e*P		**Pn**	**08 42 44.8**	**+1.5**
LMEL				*i* S		**Sn**	**08 43 23.8**	**-1.0**
LMEL				IAML			08 43 42.8	
	comp=N,157nm,0.8s							
MT13	**San Alfonso**	**3.48**	**57**	*e*P		**Pn**	**08 42 39.7**	**-3.5**
MT13				*e*P		Pb	08 42 45.2	-5.3
MT13				*e*S		**Sg**	**08 43 39.7**	**-0.4**
MT13				IAML			08 43 51.8	
	comp=Z,88nm,0.6s							
MT03	**Universidad Ad**	**3.48**	**51**	*e*P		**Pn**	**08 42 44.6**	**+1.3**
MT03				*e*S		**Sn**	**08 43 25.3**	**+0.4**
MT03				IAML			08 43 59.2	
	comp=Z,81nm,0.7s							
LC01	**Cunco**	**3.51**	**155**	*e*P		**Pn**	**08 42 46.2**	**+2.6**
ROCH	**El Roble**	**3.56**	**41**	*e*P		**Pn**	**08 42 46.0**	**+1.5**
MT04	**Ro Olivares**	**3.78**	**53**	*e*P		**Pn**	**08 42 48.7**	**+1.2**
MT04				*e*S		**Sn**	**08 43 33.5**	**+1.0**
MT04				IAML			08 43 57.8	
	comp=Z,49nm,1.1s							
MT08	**Bocatoma Ro**	**3.83**	**55**	*e*P		**Pn**	**08 42 50.2**	**+1.9**
MT08				IAML			08 43 53.9	
	comp=Z,46nm,0.8s							
VA03	**San Esteban**	**3.97**	**43**	*e*P		**Pn**	**08 42 51.0**	**+1.0**
VA03				IAML			08 44 08.7	
	comp=Z,60nm,0.6s							
GO06	**Curarrehue**	**4.27**	**155**	*e*P		**Pn**	**08 42 56.0**	**+1.9**
GO06				*e*S		**Sg**	**08 44 03.6**	**-1.8**
CO04	**Los Peladeros**	**4.34**	**33**	*e*P		**Pn**	**08 42 56.0**	**+0.8**
CO04				*i* S		**Sn**	**08 43 43.5**	**-2.8**
RFA	**San Rafael**	**4.44**	**79**	*e*P		**Pn**	**08 42 58.2**	**+1.8**
RFA				*e*S		**Sb**	**08 44 05.7**	**+5.0**
RFA				IAML			08 44 11.3	
	comp=Z,39nm,0.9s							
LR05	**Currie**	**4.71**	**163**	*e*P		**Pn**	**08 43 03.0**	**+2.9**
LR05				IAML			08 44 38.2	
	comp=Z,30nm,1.2s							
AAGR	**Agrelo**	**4.85**	**59**	*e*P		**Pn**	**08 43 05.7**	**+3.5**
CO02	**Combarbal**	**5.06**	**28**	*e*P		**Pn**	**08 43 06.6**	**+1.6**
CO02				*i* S		**Sn**	**08 44 00.3**	**-3.5**
CO02	**Combarbal**	**5.06**	**28**	*e*P		**Pn**	**08 43 06.8**	**+1.8**
CO02				IAML			08 45 01.3	
	comp=Z,25nm,0.9s							

*ASRS **25** 08:43:31.0±1.5,53.77N×91.07E,h0km,M3.2(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
*IDC **25** 08:43:36.4±3.2,53.65N×90.78E,h0km,mbtmp3.2/3, ML2.8/3,Error ellipse: s-maj=26.8km s-min=23.4km az=61.0*
*NNC **25** 08:43:47.2±1.7,53.09N×90.09E,h0km,mb3.5,mpv3.2, Error ellipse: s-maj=11.7km s-min=7.2km az=87.0, Suspected Mining explosion.*

ISC 25 08:43:37.6±4.1,53.7N±0.1×90.6E±0.2,h0km,n11, σ1ℓ08/10,5C-4D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
I46RU	**ZALESOVO INFRA**	**3.46**	**277**	I		I	09 05 00.0	
	0.1nm,0.9s,baz=92,slow=332,SNR=1.9							
ZAA0	**Zalesovo Array**	**3.46**	**277**	⇓P	n	**Pb**	**08 44 38.6**	**-1.2**
ZAA0	9.2nm,1.0s			⇓Lg		Lg	08 45 28.7	
	35nm,1.1s							
ZALV	**Zalesovo Beam**	**3.46**	**277**	Pn		**Pn**	**08 44 34.2**	**+1.5**
ZALV	1.2nm,0.3s,baz=96,slow=14,SNR=13			Lg		Lg	08 45 28.2	
	4.3nm,0.3s,baz=95,slow=28,SNR=13							
	1.8nm,0.3s							
KURK	**Kurchatov**	**7.95**	**253**	⇑Sn		**Sn**	**08 47 05.5**	**+0.6**
KURK	1.8nm,1.0s			⇑Lg		Lg	08 47 48.7	
	7.1nm,0.9s							
KURBB	**Kurchatov Arra**	**8.04**	**253**	Pn		**Pn**	**08 45 35.1**	**-0.4**
	0.2nm,0.3s,baz=65,slow=8.1,SNR=28							
KURBB				Sn		**Sn**	**08 47 06.3**	**-0.8**
	0.1nm,0.3s,baz=67,slow=26,SNR=9.5							
KURBB				Lg		Lg	08 47 52.8	
	0.1nm,0.3s,baz=65,slow=28,SNR=6.1							
	1.5nm,0.5s							
KURBB	**Kurchatov Arra**	**8.04**	**253**	⇑Sn		**Sn**	**08 47 08.0**	**+0.8**
KURBB	9.3nm,0.9s			⇓Lg		Lg	08 47 51.9	
	10nm,0.7s							
TLY	**Talaya**	**8.15**	**99**	Lg		Lg	08 47 40.8	
MK31	**Makanchi Array**	**8.71**	**221**	⇓Sn		**Sn**	**08 47 24.8**	**+1.3**
MK31	1.9nm,0.9s			Lg		Lg	08 48 11.4	
	13nm,1.2s,baz=31,slow=23,SNR=4.1							
MKAR	**Makanchi Array**	**8.71**	**221**	Pn		**Pn**	**08 45 44.6**	**-0.1**
	0.2nm,0.3s,baz=33,slow=10,SNR=5.0							
MKAR				Sn		**Sn**	**08 47 24.5**	**+1.0**
	0.1nm,0.3s,baz=43,slow=24,SNR=3.6							
MKAR				Lg		Lg	08 48 11.6	
	0.1nm,0.3s,baz=42,slow=28,SNR=5.4							
	0.4nm,0.4s							
MAKZ	**Makanchi**	**8.82**	**222**	⇑Sn		**Sn**	**08 47 26.2**	**-0.1**
MAKZ	1.7nm,1.1s			⇑Lg		Lg	08 48 15.7	
	12nm,1.4s							
SONM	**Songino Array**	**11.55**	**114**	Lg		Lg	08 49 29.6	
	baz=300,slow=27							

KRSC 25 08:43:39.1±1.7,49.47N×158.85E,h47km±58km,MI3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SKR	**Severo-Kuril's**	**2.14**	**306**	*e*P		Pn	08 44 13.3	+1.1
SKR				*e*S		Sn	08 44 38.8	+1.3
PAU	**Pauzhetka**	**2.38**	**328**	*e*S		Sn	08 44 46.7	+3.2
KDTR	**Khodutka, Kamc**	**2.39**	**348**	*e*S		Sn	08 44 47.3	+3.6
RUS	**Russkaya**	**2.97**	**356**	*e*P		Pn	08 44 26.9	+3.2
RUS				*e*S		Sn	08 45 01.4	+3.4
ASAK	**Asacha**	**2.98**	**349**	*e*P		Pn	08 44 27.9	+4.1
MTVR	**Mutnovka**	**3.04**	**352**	*e*P		Pn	08 44 28.3	+3.5
MTVR				*e*S		Sn	08 45 04.0	+3.9
GRL	**Gorelyy**	**3.12**	**351**	*e*P		Pn	08 44 29.7	+3.8
GRL				*e*S		Sn	08 45 06.6	+4.6
KRMR	**Karymshinskiy**	**3.39**	**353**	*e*S		Sn	08 45 13.4	+5.0
DALK	**Dalny**	**3.56**	**359**	*e*P		Pn	08 44 35.6	+3.8
DALK				*e*S		Sn	08 45 16.4	+3.8
UGLR	**Uglovaya**	**3.74**	**360**	*e*P		Pn	08 44 39.2	+4.9
KOK	**Koryaka**	**3.83**	**358**	*e*P		Pn	08 44 40.2	+4.6
KRX	**Arik**	**3.89**	**358**	*e*P		Pn	08 44 40.6	+4.1
KBTR	**Krutoberegovo**	**7.16**	**18**	*e*P		Pn	08 45 24.5	+3.4

*IDC **25** 08:45:54.0±0.8,34.42N×85.88E,h0km,mb4.0/19, mbtmp4.1/25,ML3.4/5,MS3.8/1,Error ellipse: s-maj=20.9km s-min=14.8km az=19.0*
*NEIC **25** 08:45:56.1±1.6,34.49N±0.08×85.9E±0.1,h10km±1km, mb4.3/13,Error ellipse: s-maj=15.6km s-min=11.7km az=228.0*

ISC 25 08:45:55.6±0.5,34.39N±0.07×85.85E±0.06,h10km,n67, σ1ℓ62/65,mb4.2/24,1C-1D,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
EVN	**Everest**	**6.46**	**172**			**Pn**	**08 47 33.0**	**+1.7**
LSA	**Lhasa**	**6.48**	**135**	Pn		**Pn**	**08 47 32.5**	**+1.0**
LSA	**Lhasa**	**6.48**	**135**	P		Pn	08 47 38.5	+7.0
LSA				S		**Sg**	**08 49 19.3**	**-4.5**
LSA				LR		LR		
	comp=N,880nm,10.8s							
LSA				LR		LR		
	comp=E,970nm,12.2s							
GOMU	**GeErMu**	**7.55**	**74**	P		**Pn**	**08 47 49.5**	**+3.5**
GOMU				S		Sn	08 49 00.0	-12
GOMU				pmax		pmax		
	comp=Z,10.0nm,0.9s							
GOMU				LR		LR		
	comp=N,430nm,12.1s							
GOMU				LR		LR		
	comp=E,540nm,10.9s							
GOMU				LR		LR		
	comp=Z,76μm,11.6s							
WUS	**Wushi**	**8.59**	**324**			**Pn**	**08 47 57.4**	**-2.7**
KSH2	**Kashi**	**9.52**	**303**	P		**Pn**	**08 48 17.3**	**+4.4**
TARG	**Taragay, Kyrgy**	**9.69**	**322**	Pn		**Pn**	**08 48 14.0**	**-1.5**
SHL	**Shillong**	**10.22**	**148**			**Pn**	**08 48 23.1**	**+0.5**
NIL	**Nilore**	**10.49**	**270**			**Pn**	**08 48 25.4**	**-0.6**
BOOM	**Boomskoye usch**	**11.21**	**319**	Pn		**Pn**	**08 48 34.2**	**-1.9**
AAK	**Ala-Archa**	**12.12**	**316**	Pn		**Pn**	**08 48 48.6**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=71,slow=6.7,SNR=7.8							
	comp=Z,3.3nm,0.9s							
AAK	**Ala-Archa**	**12.12**	**316**			**Pn**	**08 48 47.3**	**-1.1**
ARSB	**Arslanbob**	**12.30**	**308**	Pn		**Pn**	**08 48 50.7**	**-0.2**
MKAR	**Makanchi Array**	**12.69**	**349**	Pn		**Pn**	**08 48 55.2**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=168,slow=12,SNR=5.1							
	comp=Z,3.9nm,1.0s							
BTK	**Batken**	**13.25**	**300**			**Pn**	**08 49 03.9**	**+0.1**
KBL	**Kabul**	**13.88**	**275**	Pn		**Pn**	**08 49 10.6**	**-1.9**
CHGR	**Chuyangaron**	**14.09**	**292**			**Pn**	**08 49 14.7**	**-0.6**
LZDM	**Lanzhou Array**	**14.68**	**79**	Pn		**Pn**	**08 49 23.5**	**-0.2**
	baz=264,slow=12							
	comp=Z,1.2nm,0.3s							
SHAA	**Shahritus**	**14.70**	**288**			**Pn**	**08 49 23.3**	**-0.4**
KURBB	**Kurchatov Arra**	**17.09**	**344**	P		**Pn**	**08 49 54.1**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=161,slow=11,SNR=20							
	comp=Z,22nm,1.1s							
KURK	**Kurchatov**	**17.15**	**344**			**Pn**	**08 49 54.1**	**-1.2**
KURK				IAmb		IAmb	08 49 59.7	
	comp=Z,29nm,1.0s							
XAN	**Xi'an**	**19.08**	**85**	⇓P		**Pn**	**08 50 19.5**	**+0.4**
XAN				pP		pP	08 50 24.0	+1.3
XAN				pmax		pmax		
	comp=Z,12nm,1.1s							
CHTO	**Chiang Mai**	**19.40**	**140**			**P**	**08 50 22.8**	**+1.0**
ZAA0	**Zalesovo Array**	**19.57**	**358**	P		**P**	**08 50 21.2**	**-2.3**
ZALV	**Zalesovo Beam**	**19.57**	**358**	P		**P**	**08 50 22.6**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=176,slow=8.9,SNR=12							
	comp=Z,6.3nm,0.9s							
ZALV	**Zalesovo Beam**	**19.57**	**358**			**P**	**08 50 22.1**	**-1.3**
CM31	**Chiang Mai Arr**	**19.69**	**140**	P		**P**	**08 50 26.7**	**+1.6**
CM31				IAmb		IAmb	08 50 31.6	
	comp=Z,19nm,1.0s							
CMAR	**Chiang Mai Arr**	**19.69**	**140**	P		**P**	**08 50 26.8**	**+1.7**
	comp=Z,8.5nm,0.7s,baz=325,slow=12,SNR=33							
CMAR	**Chiang Mai Ar**	**19.69**	**140**			**P**	**08 50 26.3**	**+1.3**
SONM	**Songino Array**	**20.41**	**43**	P		**P**	**08 50 33.6**	**+0.7**
	comp=Z,3.8nm,0.9s,baz=231,slow=12,SNR=5.9							
	comp=Z,3.8nm,0.9s							
SONM	**Songino Array**	**20.41**	**43**	P		**P**	**08 50 33.6**	**+0.7**
SONM				IAmb		IAmb	08 50 38.9	
	comp=Z,12nm,1.4s							
BVAR	**Borovoye Array**	**21.64**	**334**	P		**P**	**08 50 46.3**	**+0.3**
	comp=Z,6.7nm,0.9s,baz=131,slow=8.3,SNR=21							
	comp=Z,6.7nm,0.9s							
BORK	**Borovoye**	**21.69**	**334**			**P**	**08 50 44.9**	**-1.5**
BORK				IAmb		IAmb	08 50 49.6	
	comp=Z,9.3nm,0.9s							
LYN	**LuoYang**	**21.93**	**82**	P		**P**	**08 50 52.5**	**+3.4**
LYN				pmax		pmax		
	comp=Z,17nm,0.6s							
AB31	**Akbulak array**	**24.20**	**316**			**P**	**08 51 11.1**	**-1.1**
AB31				IAmb		IAmb	08 51 14.6	
	comp=Z,4.7nm,0.6s							
ABKAR	**Akbulak array**	**24.20**	**316**			**P**	**08 51 11.6**	**-0.7**
XLT	**XiLinHaoTe**	**25.18**	**59**	*e*P		**P**	**08 51 22.3**	**+1.1**
XLT				pmax		pmax		
	comp=Z,5.0nm,0.9s							
AKTO	**Aktyubinsk**	**25.86**	**317**	P		**P**	**08 51 28.9**	**+1.7**
	comp=Z,3.8nm,0.7s,baz=110,slow=8.2,SNR=10							
	comp=Z,3.8nm,0.7s							
BNX	**BinXian**	**33.41**	**58**	⇑P		**P**	**08 52 34.8**	**+0.5**
BNX				pmax		pmax		
	comp=Z,7.0nm,1.0s							
KIV	**Kislovodsk**	**34.47**	**299**	P		**P**	**08 52 47.8**	**+4.2**
	comp=Z,9.1nm,0.5s							
NRIK	**Noril'sk**	**35.02**	**1**	P		**P**	**08 52 47.2**	**-0.7**
	comp=Z,3.8nm,0.7s,baz=122,slow=5.0,SNR=7.0							
	comp=Z,3.8nm,0.7s							
NRIK	**Noril'sk**	**35.02**	**1**			**P**	**08 52 48.1**	**+0.1**
NRIK				IAmb		IAmb	08 52 51.8	
	comp=Z,3.8nm,0.8s							
USRK	**Ussuriysk Ar.**	**36.60**	**60**	P		**P**	**08 53 01.6**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=253,slow=8.4,SNR=1.7							
	comp=Z,1.4nm,0.8s							
KLR	**Kul'dur**	**36.69**	**52**	P		**P**	**08 53 02.6**	**+0.1**
	comp=Z,2.3nm,0.8s,baz=281,slow=9.2,SNR=7.8							
	comp=Z,2.3nm,0.8s							
KHAM	**Kharkiv**	**39.17**	**309**	P		**P**	**08 53 26.7**	**+3.2**
OBN	**Obninsk**	**39.64**	**317**	P		**P**	**08 53 29.5**	**+2.2**
	comp=Z,28nm,0.4s							
PLTM	**Poltava**	**40.25**	**308**	P		**P**	**08 53 34.5**	**+2.1**
BRTR	**Keskin Array B**	**41.53**	**293**	P		**P**	**08 53 44.3**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=90,slow=10,SNR=3.2							
	comp=Z,0.6nm,0.7s							
TIXI	**Tiksi**	**43.55**	**18**			**P**	**08 53 58.4**	**-0.7**
AK10	**Malin Array Si**	**43.67**	**310**	P		**P**	**08 54 01.4**	**+1.0**
AKASG	**Malin Array Be**	**43.69**	**310**	P		**P**	**08 54 01.7**	**+1.2**
	comp=Z,1.3nm,0.8s,baz=78,slow=8.2,SNR=6.8							
	comp=Z,1.3nm,0.8s							
ASAJ	**Asahikawa**	**44.22**	**60**	LR		LR	09 14 28.2	
	comp=Z,127nm,21.9s,baz=188,slow=39							
FINES	**FINESS Array B**	**46.13**	**325**	P		**P**	**08 54 19.5**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=153,slow=6.4,SNR=1.2							
	comp=Z,1.6nm,0.7s							
ARCES	**ARCESS Array B**	**47.92**	**336**	P		**P**	**08 54 33.1**	**-0.6**
	comp=Z,2.4nm,0.7s,baz=72,slow=7.8,SNR=4.4							
	comp=Z,2.4nm,0.7s							
SEY	**Seymchan**	**49.41**	**34**	P		**P**	**08 54 45.2**	**0.0**
	comp=Z,1.8nm,0.7s,baz=254,slow=10.0,SNR=9.7							
	comp=Z,1.8nm,0.7s							
HFS	**Hagfors**	**52.16**	**323**	P		**P**	**08 55 05.8**	**-0.1**
	comp=Z,2.6nm,0.7s,baz=88,slow=11,SNR=5.5							
	comp=Z,2.6nm,0.7s							
NB2	**NORSAR Subarra**	**53.29**	**324**	P		**P**	**08 55 15.4**	**+1.0**
	comp=Z,1.8nm,0.6s,baz=84,slow=7.9							
NOA	**NORSAR Array B**	**53.29**	**324**	P		**P**	**08 55 13.4**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=84,slow=7.3,SNR=4.0							
	comp=Z,0.8nm,0.5s							
GERES	**GERESS Array B**	**53.88**	**309**	P		**P**	**08 55 18.8**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=79,slow=6.9,SNR=6.8							
	comp=Z,0.9nm,0.6s							
ESDC	**Sonseca Array**	**68.93**	**304**	P		**P**	**08 57 00.4**	**-0.6**
	comp=Z,1.3nm,1.0s,baz=64,slow=6.7,SNR=3.2							
	comp=Z,1.3nm,1.0s							
ESDC	**Sonseca Array**	**68.93**	**304**	IAmb		IAmb	08 57 03.5	
	comp=Z,2.5nm,1.1s							
WRA	**Warramunga Arr**	**71.03**	**132**	P		**P**	**08 57 13.6**	**-0.3**
	comp=Z,2.3nm,0.8s,baz=317,slow=6.9,SNR=1.8							
	comp=Z,2.3nm,0.8s							
ILAR	**Eielson Array**	**72.94**	**21**	P		**P**	**08 57 23.8**	**-1.0**
	comp=Z,1.1nm,0.9s,baz=308,slow=5.3,SNR=12							
	comp=Z,1.1nm,0.9s							
TORD	**Toredi Ar. Bea**	**77.93**	**278**	P		**P**	**08 57 53.2**	**-1.0**
	comp=Z,1.2nm,0.7s,baz=54,slow=3.5,SNR=5.8							
	comp=Z,1.2nm,0.7s							
YKA	**Yellowknife Ar**	**82.06**	**9**	P		**P**	**08 58 14.4**	**-1.4**
	comp=Z,0.7nm,0.9s,baz=337,slow=5.8,SNR=11							
	comp=Z,0.7nm,0.9s							
YKAW1	**Yellowknife Wh**	**82.09**	**9**	P		**P**	**08 58 15.0**	**-0.9**
SIV	**San Ignacio**	**145.13**	**293**	PKPbc		**PKPbc**	**09 05 32.9**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=64,slow=1.6,SNR=9.2							

*IDC **25** 08:48:16.4±0.4,5.76S×148.26E,h137km±3km,mb4.3/27, mbtmp4.7/32,MS4.1/4,Error ellipse: s-maj=10.4km s-min=6.0km az=99.0*
*NEIC **25** 08:48:17.8±2.5,5.76S±0.05×148.21E±0.06,h140km±5km, mb4.7/200,Error ellipse: s-maj=9.2km s-min=7.4km az=84.0*
*DJA **25** 08:48:18.1±0.5,6.S±4×14.8E±,h153km±5km,M5.1/28, mb4.7/28,mB5.4/17,MLv5.9/1,Mw(mB)4.8/17*

ISC 25 08:48:16.7±0.3,5.73S±0.03×148.24E±0.04,h136km±3km, h136km:pP-P,n541,σ1ℓ16/492,mb4.7/130,2C-1D,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MANU	**Manus Island**	**3.76**	**347**			Pn	08 49 15.9	+2.4
MANU				Sn		**Sn**	**08 50 00.4**	**+2.8**
PMG	**Port Moresby**	**3.81**	**196**	P		**Pn**	**08 49 14.6**	**+0.5**
	307nm,0.4s,baz=31,slow=7.6,SNR=176							
PMG				S		**Sn**	**08 49 55.6**	**-3.0**
	2μm,0.6s,baz=324,slow=19,SNR=15							
PMG	**Port Moresby**	**3.81**	**196**	P		**Pn**	**08 49 14.8**	**+0.7**
PMG	**Port Moresby**	**3.81**	**196**	S		**Sn**	**08 49 59.5**	**+0.9**
PMG	**Port Moresby**	**3.81**	**196**	P		**Pn**	**08 49 14.7**	**+0.7**
PMG	**Port Moresby**	**3.81**	**196**	S		**Sn**	**08 49 59.6**	**+0.9**
PMG	**Port Moresby**	**3.81**	**196**			**Pn**	**08 49 14.8**	**+0.7**
PMG				Sn		**Sn**	**08 49 58.1**	**-0.5**
PMG	**Port Moresby**	**3.81**	**196**	P		**Pn**	**08 49 14.0**	**-0.1**
RABL	**Rabaul**	**4.20**	**69**			**Pn**	**08 49 19.8**	**+0.6**
JAY	**Jayapura**	**8.17**	**293**	P		**Pn**	**08 50 12.8**	**+0.3**
	16nm,0.4s,baz=146,slow=10,SNR=17							
JAY				S		**Sn**	**08 51 44.2**	**+0.9**
	16nm,0.9s,baz=90,slow=20,SNR=1.5							
JAY	**Jayapura**	**8.17**	**293**	P		**Pn**	**08 50 13.2**	**+0.7**
	33nm,0.9s							
MMPI	**Merauke**	**8.26**	**250**	P		**Pn**	**08 50 13.2**	**-0.5**
GENI	**Genyem**	**8.63**	**291**	P		**Pn**	**08 50 20.5**	**+1.8**
	3μm68nm,0.7s							
COEN	**Coen**	**9.58**	**211**	P		**Pn**	**08 50 32.2**	**+0.8**
COEN	**Coen**	**9.58**	**211**			**Pn**	**08 50 31.5**	**+0.1**
TATA	**Tatamba Isabel**	**11.78**	**104**	P		**P**	**08 51 05.2**	**-2.9**
HNR	**Honiara**	**12.17**	**108**	P		**Pn**	**08 51 06.2**	**+0.5**
	3.2nm,1.1s,baz=225,slow=15,SNR=9.1							
HNR				S		**Sn**	**08 53 22.9**	**+2.8**
	0.8nm,0.4s,baz=253,slow=11,SNR=1.3							
HNR	**Honiara**	**12.17**	**108**	P		**P**	**08 51 09.9**	**-2.6**
HNR	**Honiara**	**12.17**	**108**			**Pn**	**08 51 05.9**	**+0.2**
SRPI	**Serui, Papua**	**12.57**	**287**	P		**Pn**	**08 51 13.0**	**+2.0**
BAKI	**Biak**	**12.92**	**290**	P		**Pn**	**08 51 17.7**	**+2.2**
	90nm,1.2s							
NGOA	**Tingoa Renbel**	**13.04**	**117**	P		**P**	**08 51 20.8**	**-1.4**
HURO	**Huro Makira**	**14.32**	**110**	P		**P**	**08 51 36.8**	**+0.4**
CTA	**Charters Tower**	**14.40**	**188**	P		**Pn**	**08 51 34.2**	**-0.2**
	15nm,0.9s,baz=356,slow=12,SNR=8.8							
CTA				S		**Sn**	**08 54 15.7**	**+1.8**
	3.4nm,0.7s,baz=359,slow=22,SNR=1.2							
CTA	**Charters Tower**	**14.40**	**188**	P		**Pn**	**08 51 36.4**	**+2.0**
CTAO	**Charters Tower**	**14.40**	**188**	P		**Pn**	**08 51 36.4**	**+2.0**
CTAO	**Charters Tower**	**14.40**	**188**			**Pn**	**08 51 33.5**	**-0.9**
QIS	**Mount Isa**	**16.96**	**209**	P		**P**	**08 52 06.8**	**+1.1**
SAUI	**Saumlaki**	**16.97**	**261**	P		**P**	**08 52 06.4**	**+0.6**
SAUI	**Saumlaki**	**16.97**	**261**	P		**P**	**08 52 05.2**	**-0.6**
SIJI	**Sorong**	**17.62**	**285**	P		**P**	**08 52 13.2**	**+0.2**
	5.9nm,0.5s,baz=77,slow=18,SNR=1.8							
MTN	**Manton Dam**	**18.30**	**246**			**P**

comp=Z,13nm,1.1s
MBWA **Marble Bar** 31.60 238 P **P** 08 54 25.9 -0.9
MBWA **Marble Bar** 31.60 238 **P** 08 54 26.9 +0.1
PSA00 **Pilbara Seismi** 31.68 237 P **P** 08 54 26.8 -0.7
PSA00 **Pilbara Seismi** 31.68 237 P **P** 08 54 26.7 -0.8
DGTI **Dogotuki** 32.60 111 P **P** 08 54 35.7 +0.1
MEEK **Meekatharra** 35.07 230 P **P** 08 54 56.6 -0.3
MOO **Moorlands** 36.57 181 P **P** 08 55 11.2 +1.7
GIRL **Giralia** 36.87 239 P **P** 08 55 13.8 +1.5
OUZ **Omahuta** 37.52 145 P **P** 08 55 19.1 +1.6
OUZ **Omahuta** 37.52 145 P **P** 08 55 19.0 +1.5
JOW **Kunigami** 37.70 330 LR LR 09 09 23.6
comp=Z,172nm,20.1s,baz=236,slow=34
MORW **Morawa** 38.27 229 P **P** 08 55 23.7 -0.3
MORW **Morawa** 38.27 229 P **P** 08 55 24.7 +0.7
MORW IAmb IAmb 08 55 33.2
comp=Z,17nm,0.9s
KLBR **Kellerberrin** 38.42 224 P **P** 08 55 24.4 -0.8
BLDU **Ballidu** 38.61 226 P **P** 08 55 26.6 -0.2
GRZ **Great Barrier** 39.32 144 P **P** 08 55 35.9 +3.4
NACB **Ninganchiao** 39.47 320 P **P** 08 55 33.6 -0.3
NACB IAmb IAmb 08 56 07.5
comp=Z,18nm,0.9s
BBJI **Bungbulang** 40.35 265 P **P** 08 55 40.0 -1.5
BBJI **Bungbulang** 40.35 265 P **P** 08 55 39.8 -1.7
BBJI IAmb IAmb 08 55 40.5
comp=Z,9.7nm,0.7s
TOZ **Tahuroa Road** 40.38 146 P **P** 08 55 41.9 +0.6
TOZ IAmb IAmb 08 55 43.6
comp=Z,23nm,1.1s
VRZ **Vera Road** 40.98 148 P **P** 08 55 50.7 +4.4
QRZ **Quartz Range** 41.16 152 P **P** 08 55 49.5 +1.8
QRZ **Quartz Range** 41.16 152 P **P** 08 55 49.7 +2.0
PKVZ **Pokaka** 41.41 148 P **P** 08 55 52.2 +2.3
WTVZ **West Tongariro** 41.42 147 P **P** 08 55 53.1 +3.1
NTVZ **North Tongarir** 41.45 147 P **P** 08 55 52.2 +2.0
COVZ **Chateau Observ** 41.45 147 P **P** 08 55 52.5 +2.3
COVZ PcP **PP** 08 57 25.0 -3.8
NGZ **Ngauruhoe** 41.47 147 P **P** 08 55 53.6 +3.1
TMVZ **Te Maari** 41.48 147 P **P** 08 55 54.0 +3.5
SNVZ **South Ngauruho** 41.50 147 P **P** 08 55 53.1 +2.4
ETVZ **East Tongariro** 41.50 147 P **P** 08 55 53.7 +3.0
TKNZ **Takaka Hill** 41.53 152 P **P** 08 55 52.2 +1.5
DSZ **Denniston Nort** 41.55 153 P **P** 08 55 54.3 +3.3
WAZ **Wanganui** 41.57 148 P **P** 08 55 53.4 +2.4
WNVZ **Wahianoa** 41.58 148 P **P** 08 55 53.9 +2.6
URZ **Urewera** 41.66 145 P **P** 08 55 51.7 -0.1
comp=Z,8.5nm,0.3s,baz=275,slow=2.9,SNR=26
comp=Z,8.5nm,0.3s
URZ **Urewera** 41.66 145 P **P** 08 55 52.0 +0.2
URZ **Urewera** 41.66 145 P **P** 08 55 52.5 +0.8
HAZ **Te Kaha** 41.70 144 P **P** 08 55 53.4 +1.2
MOVZ **Moawhango** 41.72 147 P **P** 08 55 54.2 +1.8
MRNZ **Matariki Terra** 41.72 152 P **P** 08 55 53.8 +1.6
RUGZ **Raukumara Rang** 41.78 144 P **P** 08 55 54.0 +1.1
RTZ **Ruatahuna** 41.83 146 **P** 08 55 53.8 +0.6
RTZ **Ruatahuna** 41.83 146 P **P** 08 55 54.2 +0.9
NNZ **Nelson** 41.87 151 P **P** 08 55 55.9 +2.5
MXZ **Matakaoa Point** 41.88 143 P **P** 08 55 55.5 +1.9
MXZ **Matakaoa Point** 41.88 143 P **P** 08 55 55.0 +1.4
BKZ **Black Stump Fm** 41.95 147 P **P** 08 55 55.1 +0.9
BKZ **Black Stump Fm** 41.95 147 P **P** 08 55 54.8 +0.6
PKGZ **Pakihiroa** 41.95 144 P **P** 08 55 55.7 +1.5
JNU **Nakatsue** 42.01 338 P **P** 08 55 54.7 0.0
comp=Z,11nm,1.0s,baz=180,slow=6.1,SNR=4.8
comp=Z,11nm,1.0s
THZ **Tophouse** 42.07 152 P **P** 08 55 56.2 +1.1
THZ IAmb IAmb 08 55 58.7
comp=Z,20nm,1.0s
KWHZ **Kaweka Forest** 42.09 147 P **P** 08 55 56.7 +1.4
PUZ **Puketiti** 42.19 144 P **P** 08 55 56.4 +0.2
KRHZ **Kereru** 42.22 147 P **P** 08 55 57.2 +0.9
JCZ **Jackson Bay** 42.24 158 P **P** 08 55 58.2 +1.7
TCW **Tory Channel** 42.30 151 P **P** 08 55 58.0 +1.1
TSZ **Takapari Road** 42.30 148 P **P** 08 55 57.9 +0.9
TUWZ **Tuamarina** 42.30 151 P **P** 08 55 58.1 +1.1
JGF **Kuroka** 42.37 347 P **P** 08 55 58.0 +0.4
JGF IAmb IAmb 08 56 00.5
comp=Z,14nm,1.1s
CNGZ **Carnagh Statio** 42.44 144 P **P** 08 55 59.1 +0.9
MRZ **Mangatainoka R** 42.54 149 P **P** 08 55 59.6 +0.6
MRZ **Mangatainoka R** 42.54 149 P **P** 08 55 59.2 +0.3
PXZ **Pawanui** 42.76 147 P **P** 08 56 01.2 +0.5
KHZ **Kahutara** 42.88 152 P **P** 08 56 03.2 +1.7
KHZ **Kahutara** 42.88 152 P **P** 08 56 01.3 -0.2
KHZ **Kahutara** 42.88 152 P **P** 08 56 01.7 +0.2
BFZ **Birch Farm** 42.90 148 P **P** 08 56 02.1 +0.3
BFZ **Birch Farm** 42.90 148 P **P** 08 56 02.3 +0.5
BFZ **Birch Farm** 42.90 148 P **P** 08 56 02.1 +0.3
MSWZ **Moikau Station** 42.93 150 P **P** 08 56 02.8 +0.7
GVZ **Greta Valley S** 43.08 153 P **P** 08 56 03.3 +0.1
MJAR **Matsushiro Arr** 43.09 348 P **P** 08 56 03.3 -0.1
comp=Z,13nm,1.1s,baz=167,slow=8.5,SNR=21
MJAR pP **pwP** 08 56 35.2 -0.4
comp=Z,4.2nm,0.9s,baz=176,slow=7.4,SNR=3.0
comp=Z,13nm,1.1s
MJAR **Matsushiro Arr** 43.09 348 P **P** 08 56 03.2 -0.1
MJAR IAmb IAmb 08 56 04.2
comp=Z,25nm,1.4s
MAJO **Matsushiro** 43.09 348 P **P** 08 56 03.5 +0.2
MAJO IAmb IAmb 08 56 05.1
comp=Z,33nm,1.2s
MAJO pP **pwP** 08 56 35.5 -0.1
MJB9 **Matsu-Tunnel** 43.09 348 P **P** 08 56 03.7 +0.3
MJB9 IAmb IAmb 08 56 06.1
comp=Z,31nm,1.2s
MJB9 pP **pwP** 08 56 36.7 +1.0
NJ2 **Nanjing** 46.85 325 *e*P **P** 08 56 35.5 +2.3
NJ2 pmax pmax
comp=Z,22nm,0.6s
KSRS **Korea Array** 46.95 338 P **P** 08 56 34.5 +0.7
comp=Z,6.0nm,1.0s,baz=152,slow=9.3,SNR=18
KSRS pP **pwP** 08 57 06.6 0.0
comp=Z,3.6nm,1.0s,baz=148,slow=9.1,SNR=3.2
comp=Z,6.0nm,1.0s
KSAR **Wonju Array Be** 46.96 338 **P** 08 56 34.5 +0.6
USRK **Ussuriysk Ar.** 51.81 345 P **P** 08 57 12.0 +1.4
comp=Z,3.2nm,0.8s,baz=158,slow=7.6,SNR=7.2
USRK pP **pwP** 08 57 42.6 -1.2
comp=Z,6.3nm,0.8s,baz=172,slow=7.9,SNR=6.3
comp=Z,3.2nm,0.8s
HNS **HongShan** 53.09 327 ⇑P **P** 08 57 20.0 -0.1
HNS pmax pmax
comp=Z,8.0nm,1.2s
CMAR **Chiang Mai Arr** 54.22 297 pP pP 08 58 01.2 +0.9
comp=Z,2.8nm,0.6s,baz=115,slow=5.8,SNR=2.4
CMAR **Chiang Mai Arr** 54.22 297 pP 08 58 00.1 -0.2
BNX **BinXian** 54.51 342 ⇑P **P** 08 57 30.8 +0.4
BNX pmax pmax
comp=Z,20nm,1.1s
PZH **PanZhiHua** 55.26 308 P **P** 08 57 38.8 +2.5
KLR **Kul'dur** 56.59 347 P **P** 08 57 45.9 +0.7
comp=Z,11nm,1.1s,baz=148,slow=5.7,SNR=14
KLR pP **pwP** 08 58 18.7 -0.2
comp=Z,7.0nm,1.1s,baz=234,slow=6.0,SNR=3.8
comp=Z,11nm,1.1s
HHC **Hu-ho-hao-te** 57.26 327 *e*P **P** 08 57 54.0 +3.8
HHC pmax pmax
comp=Z,10.0nm,0.8s
HEH **HeiHe** 58.60 344 *e*P **P** 08 57 59.3 +0.1
HEH pP **pwP** 08 58 34.0 +0.9
HEH pmax pmax
comp=Z,10.0nm,0.9s
LZDM **Lanzhou Array** 58.84 318 pP pP 08 58 34.5 +1.2
comp=Z,1.0nm,0.3s,baz=108,slow=9.7,SNR=1.2
PETK **Petropavlovsk-** 59.16 7 P **P** 08 58 03.8 +0.8
comp=Z,24nm,1.0s,baz=154,slow=7.4,SNR=7.4
PETK pP **pwP** 08 58 36.5 +1.7
comp=Z,5.2nm,1.0s,baz=219,slow=7.4,SNR=1.3
comp=Z,24nm,1.0s
SONM **Songino Array** 64.78 330 P **P** 08 58 40.7 -0.1
comp=Z,1.1nm,0.7s,baz=152,slow=7.4,SNR=7.9
SONM pP **pwP** 08 59 13.9 -1.5
comp=Z,7.8nm,1.1s,baz=147,slow=4.6,SNR=7.9
comp=Z,1.1nm,0.7s
SONM **Songino Array** 64.78 330 **pP** 08 59 12.9 -0.2
SONM IAmb IAmb 08 59 17.3
comp=Z,11nm,1.2s
MA2 **Magadan** 65.13 1 P **P** 08 58 42.9 +0.2
comp=Z,14nm,0.9s,baz=174,slow=7.1,SNR=11
MA2 pP **pwP** 08 59 16.6 -0.5
comp=Z,1.5nm,0.3s,baz=184,slow=8.5,SNR=1.9
comp=Z,14nm,0.9s
MA2 **Magadan** 65.13 1 **P** 08 58 43.1 +0.4
SEY **Seymchan** 68.54 2 P **P** 08 59 04.3 +0.1
comp=Z,9.4nm,1.1s,baz=171,slow=7.0,SNR=16
SEY pP **pP** 08 59 38.0 +1.1
comp=Z,2.1nm,0.8s,baz=174,slow=4.0,SNR=2.4
comp=Z,9.4nm,1.1s
TLY **Talaya** 68.68 332 P **P** 08 59 05.0 -0.4
comp=Z,1.4nm,0.4s,baz=58,slow=7.9
TLY pP **pwP** 08 59 38.2 -2.2
baz=148,slow=8.6
comp=Z,1.4nm,0.4s
YAK **Yakutsk** 69.07 351 P **P** 08 59 06.9 -0.6
comp=Z,22nm,0.5s,baz=190,slow=1.8,SNR=5.3
YAK pP **pwP** 08 59 42.2 -0.1
comp=Z,11nm,0.3s,baz=151,slow=2.9,SNR=1.1
comp=Z,22nm,0.5s
YAK **Yakutsk** 69.07 351 IAmb IAmb 08 59 11.3
comp=Z,19nm,0.6s
SPIA **Saint Paul Isl** 71.18 22 P **P** 08 59 21.1 +0.7
baz=224
VNDA **Vanda** 72.11 177 P **P** 08 59 25.1 -0.7
comp=Z,4.3nm,0.9s,baz=341,slow=5.3,SNR=3.7
comp=Z,4.3nm,0.9s
VNDA **Vanda** 72.11 177 IAmb IAmb 08 59 47.2
comp=Z,17nm,1.5s
SBA **Scott Base** 72.74 176 P **P** 08 59 30.9 +1.4
WMQ **Urumqi** 73.40 319 *e*P P 08 59 38.5 +4.4
WMQ sP sP 09 00 31.0 +10
WMQ SKS SKiKP 09 09 18.0 +26
WMQ pmax pmax
comp=Z,16nm,0.7s
WMQ L L
comp=Z,1μm,24.1s
WMQ L L
comp=Z,740nm,24.0s
WMQ L L
comp=Z,240nm,24.1s
SDPT **Sand Point** 74.09 28 P **P** 08 59 38.6 +0.9
baz=234
CHNA **Chernabura Isl** 74.20 28 P **P** 08 59 39.3 +0.9
baz=235
M11K **Mekoryuk** 74.93 22 P **P** 08 59 42.9 +0.4
baz=227
S14K **Fog Glacier** 75.06 27 P **P** 08 59 44.1 +0.7
baz=234
GAMB **Gambell** 75.55 17 P **P** 08 59 46.6 +0.7
baz=221
CHGN **Chignik** 75.59 27 P **P** 08 59 47.1 +0.8
baz=236
M13K **Dall Lake** 76.01 22 IAmb IAmb 08 59 51.2
comp=Z,14nm,0.9s
M13K **Dall Lake** 76.01 22 P **P** 08 59 49.0 +0.4
baz=230
O14K **Tigyukauivet M** 76.10 24 P **P** 08 59 49.3 +0.1
baz=232
N14K **Kuskokwak Cree** 76.35 23 P **P** 08 59 50.7 +0.2
baz=232
K13K **Kusilvak Mount** 76.53 21 P **P** 08 59 52.2 +0.7
baz=229
CHIR **Chirikof Islan** 76.64 29 P **P** 08 59 52.7 +0.4
baz=238
O15K **Ungalikthiuk R** 76.65 25 IAmb IAmb 08 59 54.2
comp=Z,22nm,1.2s
O15K **Ungalikthiuk R** 76.65 25 P **P** 08 59 52.6 +0.4
baz=234
R16K **Pilot Point** 76.69 27 P **P** 08 59 53.3 +0.8
R16K **Pilot Point** 76.69 27 P **P** 08 59 52.4 -0.1
baz=236
M14K **Bethel** 76.76 23 IAmb IAmb 08 59 54.8
comp=Z,15nm,0.9s
M14K **Bethel** 76.76 23 P **P** 08 59 53.0 +0.2
baz=231
L14K **Kuka Creek** 76.86 22 IAmb IAmb 08 59 55.4
comp=Z,13nm,0.9s
L14K **Kuka Creek** 76.86 22 P **P** 08 59 53.9 +0.6
baz=230
N15K **Kwethluk River** 77.13 24 P **P** 08 59 55.3 +0.3
baz=233
M15K **Kasigluk River** 77.22 23 P **P** 08 59 55.3 -0.1
baz=232
R17L **Mt. Peulik Vol** 77.27 27 P **P** 08 59 55.4 -0.4
baz=237
P16K **Nushagak River** 77.33 25 P **P** 08 59 56.1 0.0
baz=235
L15K **Ungalak Mounta** 77.52 22 P **P** 08 59 56.6 -0.5
baz=232
O16K **Kokwok River B** 77.61 25 IAmb IAmb 08 59 58.4
comp=Z,14nm,1.4s
O16K **Kokwok River B** 77.61 25 P **P** 08 59 57.4 -0.2
baz=235
Q16K **King Salmon** 77.71 26 P **P** 08 59 57.9 -0.2
baz=237
SII **Sitkinak Islan** 77.71 29 P **P** 08 59 57.8 -0.5
baz=239
Q17K **Contact Creek** 77.82 27 P **P** 08 59 58.0 -1.0
baz=237
N16K **Nishlik Lake** 77.84 24 P **P** 08 59 58.6 -0.4
baz=234
K15K **Wolf Creek Mou** 77.89 22 P **P** 08 59 59.3 +0.2
baz=232,SNR=7.1
TNA **Tin City** 77.97 17 P **P** 09 00 00.2 +0.7
TNA **Tin City** 77.97 17 P **P** 08 59 60.0 +0.5
baz=225
ACHA **Angle Creek He** 78.05 27 **P** 09 00 00.3 +0.1
ANM **Nome** 78.05 19 **P** 09 00 00.6 +0.6
ANM **Nome** 78.05 19 P **P** 08 59 59.4 -0.6
baz=227,SNR=6.1
MKAR **Makanchi Array** 78.08 320 P **P** 08 59 59.1 -1.4
comp=Z,1.2nm,0.8s,baz=99,slow=7.5,SNR=9.5
MKAR pP **pP** 09 00 33.2 -0.7
comp=Z,1.8nm,0.9s,baz=101,slow=6.3,SNR=4.1
comp=Z,1.2nm,0.8s
MKAR **Makanchi Array** 78.08 320 **P** 08 59 59.9 -0.7
MKAR **pP** 09 00 33.7 -0.2
P17K **Kvichak River** 78.09 26 P **P** 09 00 00.0 -0.2
baz=237
M16K **Timber Creek** 78.09 23 IAmb IAmb 09 00 02.3
comp=Z,12nm,1.1s
M16K **Timber Creek** 78.09 23 P **P** 09 00 00.2 -0.1
baz=234
O17K **Koliganek Bris** 78.13 25 P **P** 09 00 00.3 -0.2
baz=236
MAKZ **Makanchi** 78.28 320 **P** 09 00 01.0 -0.7
F14K **Arctic Creek** 78.38 18 P **P** 09 00 01.7 -0.1
baz=226
Q18K **Katmai Hardscr** 78.42 27 P **P** 09 00 00.5 -1.8
baz=238
OHAK **Old Harbor** 78.47 28 P **P** 09 00 02.4 0.0
baz=240
N17K **Nushagak Hills** 78.52 24 P **P** 09 00 03.4 +0.8
baz=236
P18K **Big Mountain,** 78.72 26 P **P** 09 00 03.7 -0.1
baz=238
G15K **Niukluk** 78.77 19 P **P** 09 00 03.2 -0.7
baz=229
J16K **Anvik River** 78.83 21 P **P** 09 00 04.4 +0.1
baz=232
M17K **Holitna River** 78.91 23 P **P** 09 00 04.7 0.0
baz=235
O18K **Koktuh Hills** 78.97 25 P **P** 09 00 05.7 +0.6
O18K IAmb IAmb 09 00 28.9
comp=Z,16nm,1.4s
O18K **Koktuh Hills** 78.97 25 P **P** 09 00 05.0 -0.2
baz=238
L17K **Donlin** 79.00 23 P **P** 09 00 04.8 -0.5
baz=234
F15K **North Star Dit** 79.05 18 P **P** 09 00 05.1 -0.4
baz=228,SNR=7.2
KDAK **Kodiak Island** 79.08 28 P **P** 09 00 04.8 -0.9
baz=240
H16K **Elim** 79.12 19 P **P** 09 00 05.2 -0.6
baz=230
N18K **Kilae Creek** 79.14 25 P **P** 09 00 05.6 -0.5
baz=237
Q19K **Cape Douglas,** 79.17 27 P **P** 09 00 06.0 -0.3
baz=239
I17K **Unalakleet** 79.17 21 P **P** 09 00 06.6 +0.5
baz=232
K17K **Iditarod** 79.34 22 IAmb IAmb 09 00 08.4
comp=Z,17nm,1.4s
K17K **Iditarod** 79.34 22 P **P** 09 00 07.1 +0.1
baz=234
ZALV **Zalesovo Beam** 79.44 327 P **P** 09 00 05.9 -1.9
comp=Z,2.6nm,0.7s,baz=115,slow=5.1,SNR=10
ZALV pP **pP** 09 00 40.9 -0.4
comp=Z,5.1nm,0.9s,baz=107,slow=5.1,SNR=7.5
comp=Z,2.6nm,0.7s
ZALV **Zalesovo Beam** 79.44 327 **P** 09 00 06.6 -1.3
ZALV **pwP** 09 00 42.0 -1.5
J17K **VABM Dome** 79.45 21 IAmb IAmb 09 00 09.2
comp=Z,16nm,1.4s
J17K **VABM Dome** 79.45 21 P **P** 09 00 07.7 0.0
baz=234
O19K **Port Alsworth** 79.53 25 P **P** 09 00 08.0 -0.2
baz=238
G16K **Koyuk River** 79.57 19 IAmb IAmb 09 00 09.3
comp=Z,16nm,1.4s
G16K **Koyuk River** 79.57 19 P **P** 09 00 08.2 -0.1
baz=230
Q20K **Shuyak Island** 79.58 27 P **P** 09 00 08.4 0.0
baz=240
M18K **Stony River** 79.61 24 P **P** 09 00 08.7 +0.2
baz=237
L18K **Granite Mounta** 79.67 23 IAmb IAmb 09 00 10.2
comp=Z,16nm,1.4s
L18K **Granite Mounta** 79.67 23 P **P** 09 00 08.6 -0.3
baz=236
P19K **Oil Pt** 79.72 26 P **P** 09 00 09.1 -0.2
baz=240
N19K **Bonanza Creek** 79.79 25 P **P** 09 00 09.0 -0.7
baz=238
H17K **Granite Mounta** 80.09 20 P **P** 09 00 10.8 -0.3
baz=233
G17K **Kiwalik Mounta** 80.19 19 P **P** 09 00 11.4 -0.2
baz=232
J18K **Innoko River** 80.36 22 P **P** 09 00 12.1 -0.4
baz=236
L19K **White Mountain** 80.37 23 IAmb IAmb 09 00 13.7
comp=Z,16nm,1.3s
L19K **White Mountain** 80.37 23 P **P** 09 00 12.0 -0.7
baz=238
M19K **Big River Lodg** 80.40 24 P **P** 09 00 12.3 -0.6
baz=238
HOM **Homer** 80.43 27 P **P** 09 00 12.7 -0.3
baz=241
CNPM **China Poot** 80.55 27 **P** 09 00 14.4 +0.8
F17K **Baldwin Pennin** 80.59 18 P **P** 09 00 13.6 -0.1
baz=231
C16K **Lisburne Hills** 80.60 16 P **P** 09 00 13.8 +0.1
baz=227
H18K **Honhosa River** 80.74 20 P **P** 09 00 14.5 -0.1
baz=234
D17K **Noatak River** 80.84 17 P **P** 09 00 14.8 -0.2
baz=229
BRSE **Bradley Lake S** 80.87 27 P **P** 09 00 14.8 -0.6
baz=242
M20K **Styx River** 80.90 24 IAmb IAmb 09 00 16.3
comp=Z,15nm,1.3s
M20K **Styx River** 80.90 24 P **P** 09 00 15.1 -0.5
baz=239
N20K **Mount Spurr** 80.94 25 P **P** 09 00 15.2 -0.6
baz=240
SPCR **Spurr Chakacha** 80.94 25 P **P** 09 00 15.1 -0.7
baz=240
GCSA **Galena City Sc** 81.03 21 P **P** 09 00 15.7 -0.4
baz=236
J19K **Poorman** 81.06 22 P **P** 09 00 15.7 -0.6
baz=237
G18K **Tagagawik** 81.09 19 P **P** 09 00 16.1 -0.3
baz=234,SNR=8.1
RDOG **Red Dog Mine** 81.13 17 P **P** 09 00 16.2 -0.4
baz=229,SNR=5.9
CAPN **Captain Cook N** 81.18 26 P **P** 09 00 16.4 -0.5
baz=241
F18K **Selawik** 81.19 19 P **P** 09 00 16.1 -0.8
baz=233
K20K **Telida** 81.30 23 IAmb IAmb 09 00 18.6
comp=Z,18nm,1.4s
K20K **Telida** 81.30 23 P **P** 09 00 17.3 -0.3
baz=238,SNR=7.2
C17K **DeLong Mountai** 81.33 16 P **P** 09 00 17.3 -0.4
baz=229
E18K **Tukpahlearik C** 81.40 18 P **P** 09 00 17.7 -0.3
baz=232,SNR=6.8
SKT **Skwentna** 81.61 24 P **P** 09 00 18.5 -0.8
baz=241
SEW **Seward** 81.61 27 IAmb IAmb 09 00 20.1
comp=Z,22nm,1.1s
SEW **Seward** 81.61 27 P **P** 09 00 18.4 -0.9
baz=243
H19K **Roundabout Mou** 81.62 20 IAmb IAmb 09 00 20.0
comp=Z,20nm,1.4s
H19K **Roundabout Mou** 81.62 20 P **P** 09 00 18.4 -0.7
baz=236
J20K **Nowinta River** 81.70 22 P **P** 09 00 18.6 -1.0
baz=238,SNR=7.2
KURK **Kurchatov** 81.73 323 **P** 09 00 20.3 +0.2
KURK **pwP** 09 00 54.8 +0.8
G19K **Purcell Mounta** 81.75 20 IAmb IAmb 09 00 20.8
comp=Z,16nm,1.4s
G19K **Purcell Mounta** 81.75 20 P **P** 09 00 18.7 -1.2
baz=235,SNR=9.4
KURBB **Kurchatov Arra** 81.76 323 P **P** 09 00 18.6 -1.6
comp=Z,1.6nm,1.1s,baz=122,slow=4.7,SNR=5.9
KURBB pP **pP** 09 00 52.8 -1.3
comp=Z,3.6nm,1.1s,baz=104,slow=5.1,SNR=7.4
comp=Z,1.6nm,1.1s
I20K **Naaghedeneel** 81.91 21 P **P** 09 00 19.9 -0.8
baz=238
F19K **Shaleruckik Mo** 81.93 19 P **P** 09 00 19.8 -1.0
baz=234
RC01 **Rabbit Creek A** 81.94 26 **P** 09 00 19.8 -1.2
RC01 IAmb IAmb 09 00 20.8
comp=Z,22nm,1.2s
RC01 **Rabbit Creek A** 81.94 26 P **P** 09 00 19.7 -1.2
baz=243,SNR=6.3
C18K **Utukok River** 82.00 17 P **P** 09 00 20.2 -1.0
baz=231
M22K **Willow** 82.09 25 IAmb IAmb 09 00 22.1
comp=Z,25nm,1.1s
M22K **Willow** 82.09 25 P **P** 09 00 20.3 -1.4
baz=242
H20K **Anotleneega Mo** 82.14 21 P **P** 09 00 21.4 -0.6
baz=237
CHUM **Lake Minchumin** 82.24 23 P **P** 09 00 21.9 -0.6
baz=240,SNR=9.9
CUT **Chulitna** 82.33 24 P **P** 09 00 21.7 -1.3
baz=242
PMR **Palmer** 82.43 25 IAmb IAmb 09 00 23.2
comp=Z,19nm,1.4s
PMR **Palmer** 82.43 25 P **P** 09 00 22.5 -1.0
baz=243,SNR=5.4
E19K **Redstone River** 82.46 18 P **P** 09 00 23.1 -0.5
baz=235,SNR=15
P23K **Montague Islan** 82.49 27 P **P** 09 00 23.0 -0.8
baz=245
KTH **Kantishna Hill** 82.62 23 IAmb IAmb 09 00 24.4
comp=Z,8.8nm,0.9s
KNK **Knik Glacier** 82.64 26 IAmb IAmb 09 00 25.5
comp=Z,15nm,1.2s
KNK **Knik Glacier** 82.64 26 P **P** 09 00 24.0 -0.6
baz=244,SNR=6.0
F20K **Avaraart Lake** 82.71 19 P **P** 09 00 23.7 -1.1
baz=236
Q23K **Middleton Isla** 82.74 28 P **P** 09 00 23.8 -1.2
baz=246
C19K **Lookout Ridge** 82.74 17 IAmb IAmb 09 00 26.2
comp=Z,20nm,1.4s
C19K **Lookout Ridge** 82.74 17 P **P** 09 00 24.2 -0.8
baz=232
D19K **Kuna River** 82.80 17 P **P** 09 00 24.5 -0.8
baz=234
IMAR **Indian Mountai** 82.80 20 **P** 09 00 25.3 -0.1
TRF **Thorofare Moun** 82.82 23 P **P** 09 00 24.7 -1.0
baz=242
BPAW **Bear Paw Mtn.** 82.86 23 P **P** 09 00 24.7 -1.0
baz=241
SML **Sawmill** 82.87 25 P **P** 09 00 26.2 +0.4
SML **Sawmill** 82.87 25 P **P** 09 00 24.6 -1.2
baz=244,SNR=11
H21K **Melozitna Rive** 82.96 21 P **P** 09 00 24.8 -1.4
baz=239
MAW **Mawson** 82.97 203 P **P** 09 00 24.3 -1.9
comp=Z,2.4nm,0.9s,baz=170,slow=0.9,SNR=1.4
comp=Z,2.4nm,0.9s
GLI **Glacier Island** 83.00 26 IAmb IAmb 09 00 27.1
comp=Z,15nm,0.9s
GLI **Glacier Island** 83.00 26 P **P** 09 00 24.6 -1.9
baz=245
A19K **Wainwright** 83.02 15 P **P** 09 00 25.3 -1.0
baz=231
I21K **Tanana** 83.02 22 IAmb IAmb 09 00 29.4
comp=Z,11nm,1.0s
I21K **Tanana** 83.02 22 P **P** 09 00 25.7 -0.7
baz=240,SNR=15
M23K **Glacier View** 83.12 25 P **P** 09 00 25.7 -1.4
baz=244

G21K	Allakaket	83.17	20	P	P	09 00 26.0	-1.2	baz=238
WAT1	Susitna Watana	83.23	24	P	P	09 00 26.1	-1.6	baz=243
E20K	Nigu River	83.25	18	P	P	09 00 26.7	-1.0	baz=236
SCM	Sheep Creek Mo	83.31	26	P	P	09 00 26.4	-1.7	baz=245,SNR=7.2
RND	Reindeer	83.37	24	IAmb	IAmb	09 00 28.2		comp=Z,13nm,0.9s
D20K	Etivluk River	83.38	18	P	P	09 00 27.1	-1.2	baz=235
MLY	Manley	83.40	22	IAmb	IAmb	09 00 29.3		comp=Z,9.5nm,0.9s
MLY	Manley	83.40	22	P	P	09 00 27.3	-1.2	baz=241,SNR=13
WAT6	Susitna Watana	83.46	25	P	P	09 00 27.4	-1.6	baz=244,SNR=8.6
EYAK	Cordova Ski Ar	83.47	27	P	P	09 00 27.4	-1.4	baz=246
MCK	McKinley	83.49	23	P	P	09 00 27.0	-2.0	baz=243,SNR=16
F21K	Alatna River	83.55	19	P	P	09 00 28.2	-1.0	baz=238
H22K	Ishtalitna Cre	83.59	21	P	P	09 00 28.2	-1.2	baz=240
DIV	Divide	83.69	26	IAmb	IAmb	09 00 31.1		comp=Z,17nm,1.0s
KLU	Klutina	83.78	26	IAmb	IAmb	09 00 31.6		comp=Z,17nm,1.0s
KLU	Klutina	83.78	26	P	P	09 00 29.3	-1.2	baz=246,SNR=13
DHY	Denali Highway	83.82	24	P	P	09 00 30.0	-0.9	
DHY				IAmb	IAmb	09 00 31.4		comp=Z,12nm,1.0s
DHY	Denali Highway	83.82	24	P	P	09 00 29.0	-1.8	baz=244,SNR=12
NEA2	Nenana	83.83	23	IAmb	IAmb	09 00 30.5		comp=Z,10.0nm,1.0s
NEA2	Nenana	83.83	23	P	P	09 00 29.1	-1.6	baz=243,SNR=8.6
KAIM	Kayak Island	83.83	28	P	P	09 00 28.9	-1.8	baz=247
M24K	Tolsona, Glenn	83.92	26	IAmb	IAmb	09 00 32.4		comp=Z,16nm,0.8s
M24K	Tolsona, Glenn	83.92	26	P	P	09 00 29.6	-1.6	baz=246,SNR=6.6
B20K	Meade River	83.96	16	P	P	09 00 29.8	-1.3	baz=235
I23K	Minto, Yukon-K	83.97	22	P	P	09 00 30.6	-0.8	baz=242
E21K	Killik River	84.03	18	P	P	09 00 30.9	-0.8	baz=238
BMRM	Bremner River	84.15	27		P	09 00 32.0	-0.4	
BMRM				IAmb	IAmb	09 00 32.7		comp=Z,20nm,1.2s
BMRM	Bremner River	84.15	27	P	P	09 00 30.9	-1.6	baz=247,SNR=6.9
WRH	Wood River Hil	84.15	23	IAmb	IAmb	09 00 32.0		comp=Z,13nm,1.0s
C21K	Knifeblade Rid	84.17	18	P	P	09 00 31.2	-1.1	baz=237
H23K	Yukon River	84.22	21	P	P	09 00 31.7	-1.0	baz=242
QSPA	South Pole Qui	84.24	180	P	P	09 00 31.5	-1.4	comp=Z,12nm,1.0s,baz=340,slow=2.5,SNR=37
QSPA				pP	pP	09 01 05.0	-1.6	comp=Z,1.7nm,0.6s,baz=295,slow=1.2,SNR=1.8
QSPA	South Pole Qui	84.24	180		P	09 00 32.7	-0.2	comp=Z,12nm,1.0s
QSPA				IAmb	IAmb	09 00 33.6		comp=Z,17nm,1.1s
CCB	Clear Creek Bu	84.34	23	P	P	09 00 31.4	-1.8	
CCB				IAmb	IAmb	09 00 32.8		comp=Z,10nm,0.9s
N25K	Chitina, Valde	84.40	26		P	09 00 33.2	-0.5	
N25K	Chitina, Valde	84.40	26	P	P	09 00 32.7	-1.0	baz=247
COLA	College	84.42	23	P	P	09 00 32.2	-1.4	baz=244
G23K	Bananza Creek	84.47	21	IAmb	IAmb	09 00 35.0		comp=Z,7.7nm,0.8s
G23K	Bananza Creek	84.47	21	P	P	09 00 32.8	-1.1	baz=242,SNR=15
B21K	Ikpikpuk River	84.48	17	P	P	09 00 33.1	-0.7	baz=237
E22K	Anaktuvuk Pass	84.56	19	P	P	09 00 33.4	-1.0	baz=240
HDA	Harding Lake	84.57	23	P	P	09 00 33.2	-1.2	baz=245
PAX	Paxson	84.57	25	P	P	09 00 33.2	-1.4	baz=246
COLD	Coldfoot	84.65	20	IAmb	IAmb	09 00 37.1		comp=Z,8.0nm,0.9s
COLD	Coldfoot	84.65	20	P	P	09 00 34.0	-0.8	baz=242,SNR=18
GLB	Gilahina Butte	84.69	27	IAmb	IAmb	09 00 35.3		comp=Z,17nm,1.3s
POKR	Poker Plat Res	84.69	23	P	P	09 00 33.0	-2.0	baz=244
CRQM	Cirque	84.74	27	IAmb	IAmb	09 00 36.6		comp=Z,20nm,1.2s
ILAR	Eielson Array	84.75	23	P	P	09 00 33.2	-2.0	comp=Z,9.4nm,0.9s,baz=254,slow=4.4,SNR=54
ILAR				pP	pP	09 01 08.9	-0.4	comp=Z,1.5nm,0.7s,baz=251,slow=4.6,SNR=2.5
ILAR	Eielson Array	84.75	23		P	09 00 33.1	-2.2	comp=Z,9.4nm,0.9s
CRQE	Cirque	84.75	27	P	P	09 00 34.9	-0.7	baz=249,SNR=5.5
K24K	Donnelly Dome	84.78	24	IAmb	IAmb	09 00 38.2		comp=Z,9.5nm,0.9s
K24K	Donnelly Dome	84.78	24	P	P	09 00 34.7	-0.8	baz=246
H24K	Noodor Dome	84.84	22	P	P	09 00 35.4	-0.3	baz=244,SNR=9.1
A21K	Barrow	84.87	15	P	P	09 00 34.8	-0.9	baz=235,SNR=8.1
TGL	Tana Glacier	84.88	27	IAmb	IAmb	09 00 36.7		comp=Z,22nm,1.3s
KKAR	Karatay Array	84.99	314		P	09 00 36.8	-0.2	
MCARA	McCarthy VSAT	85.02	27	P	P	09 00 35.9	-0.8	baz=249
MESA	MESA	85.08	28	P	P	09 00 35.7	-1.6	baz=250
A22K	Sinclair Lake	85.13	16	P	P	09 00 36.1	-0.9	baz=237
RIDG	Independent Ri	85.14	24		P	09 00 37.6	+0.3	
RIDG				IAmb	IAmb	09 00 37.9		comp=Z,17nm,1.1s
RIDG	Independent Ri	85.14	24	P	P	09 00 35.9	-1.4	baz=247,SNR=13
B22K	Teshekpuk Lake	85.21	17	P	P	09 00 36.5	-0.9	baz=238
E23K	Chandalar	85.25	19	IAmb	IAmb	09 00 39.1		comp=Z,8.1nm,0.9s
E23K	Chandalar	85.25	19	P	P	09 00 36.3	-1.5	baz=242,SNR=12
J25K	Salcha River,	85.28	23	IAmb	IAmb	09 00 38.2		comp=Z,15nm,0.8s
J25K	Salcha River,	85.28	23	P	P	09 00 36.3	-1.7	baz=246,SNR=25
MENT	Mentasta	85.30	25	IAmb	IAmb	09 00 38.4		comp=Z,9.8nm,1.2s
D23K	Nanushuk River	85.34	18	P	P	09 00 37.0	-1.1	baz=241
G24K	Hadweenzic Riv	85.37	21	IAmb	IAmb	09 00 39.8		comp=Z,12nm,1.1s
G24K	Hadweenzic Riv	85.37	21	P	P	09 00 37.1	-1.2	baz=244,SNR=9.2
NRIK	Noril'sk	85.40	342	P	P	09 00 36.6	-1.8	comp=Z,7.4nm,1.0s,baz=112,slow=5.1,SNR=10
NRIK				pP	pP	09 01 13.2	+0.6	comp=Z,2.7nm,0.8s,baz=118,slow=5.1,SNR=3.0
M26K	Nabesna, AK	85.40	26	P	P	09 00 37.2	-1.5	comp=Z,7.4nm,1.0s
DOT	Dot Lake	85.42	24	IAmb	IAmb	09 00 39.8		baz=248
L26K	Log Cabin Wild	85.48	25	IAmb	IAmb	09 00 41.3		comp=Z,15nm,1.0s
L26K	Log Cabin Wild	85.48	25	P	P	09 00 37.4	-1.7	comp=Z,6.9nm,0.8s
BARN	Barnard Glacie	85.52	27	IAmb	IAmb	09 00 40.8		baz=248
TOLK	Toolik Lake Re	85.54	19	P	P	09 00 37.2	-2.0	comp=Z,12nm,1.0s
SCRK	Sand Creek	85.58	24	P	P	09 00 37.9	-1.7	baz=242,SNR=6.7
F24K	Squaw Lake	85.58	20	IAmb	IAmb	09 00 41.0		baz=248,SNR=8.3
F24K	Squaw Lake	85.58	20	P	P	09 00 38.1	-1.4	comp=Z,7.9nm,0.8s
PRP	Porcupine Dome	85.58	22	P	P	09 00 38.4	-1.2	baz=244,SNR=20
E24K	Your Creek	85.63	20	P	P	09 00 38.7	-1.0	baz=246
CTG	Chitna Glacier	85.63	27	P	P	09 00 37.9	-2.1	baz=243
LOGN	Logan Glacier	85.74	28	IAmb	IAmb	09 00 41.1		baz=250,SNR=13
C23K	Itkillik River	85.78	18	IAmb	IAmb	09 00 41.8		comp=Z,17nm,1.2s
C23K	Itkillik River	85.78	18	P	P	09 00 39.3	-1.0	comp=Z,12nm,1.0s
PINM	Pinnacle	85.85	28	P	P	09 00 39.4	-1.6	baz=241,SNR=10
M27K	Edge Creek, AK	85.88	26	P	P	09 00 39.5	-1.6	baz=251
G25K	Bearman Lake	85.89	21	P	P	09 00 40.4	-0.5	baz=250,SNR=26
D24K	Happy Valley	86.02	19	IAmb	IAmb	09 00 42.6		baz=245
D24K	Happy Valley	86.02	19	P	P	09 00 40.9	-0.6	comp=Z,16nm,1.5s
O28M	Mount Upton	86.10	28	IAmb	IAmb	09 00 43.7		baz=243
O28M	Mount Upton	86.10	28	P	P	09 00 41.2	-1.3	comp=Z,11nm,0.9s
FYU	Fort Yukon	86.12	22	IAmb	IAmb	09 00 43.1		baz=251,SNR=9.7
L27K	Beaver Creek,	86.14	25	IAmb	IAmb	09 00 43.6		comp=Z,15nm,1.0s
L27K	Beaver Creek,	86.14	25	P	P	09 00 41.6	-0.7	comp=Z,12nm,1.0s
BCAR	Beaver Creek A	86.16	25		P	09 00 43.7	+1.3	baz=250
YUK3	Moose Creek	86.31	27	P	P	09 00 42.5	-0.8	baz=250,SNR=10
C24K	Franklin Bluff	86.31	18	IAmb	IAmb	09 00 44.4		baz=251,SNR=16
C24K	Franklin Bluff	86.31	18	P	P	09 00 42.4	-0.5	comp=Z,14nm,1.1s
BVCY	Beaver Creek	86.34	26	P	P	09 00 43.0	-0.2	baz=243
K27K	Chicken	86.38	24	IAmb	IAmb	09 00 45.0		baz=250,SNR=10
F25K	Christian Rive	86.39	21	P	P	09 00 42.9	-0.6	comp=Z,14nm,1.0s
I26K	Coal Creek Min	86.42	23	P	P	09 00 42.6	-0.9	baz=246,SNR=6.0
YUK8	Steele Glacier	86.46	27	P	P	09 00 43.0	-1.1	baz=248
E25K	Arctic Village	86.64	20	P	P	09 00 44.2	-0.4	baz=252,SNR=12
BMAR	Burnt Mountain	86.70	21		P	09 00 44.5	-0.4	baz=246,SNR=5.6
O29M	Mount Kennedy	86.71	29	P	P	09 00 44.7	-0.6	
G26K	Porcupine Rive	86.80	21	IAmb	IAmb	09 00 46.9		baz=253,SNR=16
G26K	Porcupine Rive	86.80	21	P	P	09 00 45.0	-0.3	comp=Z,12nm,1.0s
D25K	Kak River	86.87	19	IAmb	IAmb	09 00 46.7		baz=248,SNR=15
D25K	Kavik River	86.87	19	P	P	09 00 45.0	-0.7	comp=Z,9.5nm,1.1s
F26K	Sheenjek River	86.96	21	IAmb	IAmb	09 00 47.8		baz=245
F26K	Sheenjek River	86.96	21	P	P	09 00 45.2	-1.0	comp=Z,11nm,1.1s
YUK4	Talbot Arm	86.99	28	P	P	09 00 45.9	-0.8	baz=247,SNR=16
YUK6	Outpost Mounta	87.00	28	P	P	09 00 45.9	-0.9	baz=252,SNR=15
I27K	Kandik River	87.12	23	P	P	09 00 46.5	-0.5	baz=253
S31K	Pelican	87.21	31	P	P	09 00 46.9	-0.5	baz=250,SNR=21
BVAR	Borovoye Array	87.28	324	P	P	09 00 45.7	-2.3	baz=255
BVAR				pP	pwP	09 01 23.0	+0.8	comp=Z,3.7nm,0.9s,baz=97,slow=4.8,SNR=9.9
HYT	Haines Junctio	87.37	28		P	09 00 48.8	+0.4	comp=Z,1.6nm,0.8s,baz=100,slow=5.0,SNR=3.9
HYT	Haines Junctio	87.37	28	P	P	09 00 47.4	-1.0	comp=Z,3.7nm,0.9s
H27K	Steamboat Moun	87.38	22	P	P	09 00 47.7	-0.5	baz=254,SNR=29
M29M	Somme Creek	87.41	26	IAmb	IAmb	09 00 49.8		baz=250
M29M	Somme Creek	87.41	26	P	P	09 00 47.5	-1.0	comp=Z,7.0nm,1.0s
P30M	Million Dollar	87.43	29	P	P	09 00 47.3	-1.3	baz=253,SNR=14
SIT	Sitka	87.45	32	P	P	09 00 47.7	-0.9	baz=254
G27K	Doyon Strip	87.53	22	P	P	09 00 48.0	-0.9	baz=256
R31K	City Hall, Gus	87.58	31	P	P	09 00 47.9	-1.3	baz=250,SNR=7.8
C26K	Camden Bay	87.59	19	P	P	09 00 48.6	-0.4	baz=255
I28M	Miner Creek	87.73	23	IAmb	IAmb	09 00 50.3		baz=246
I28M	Miner Creek	87.73	23	P	P	09 00 48.6	-1.4	comp=Z,12nm,1.3s
N30M	Aishikik Lake	87.74	28	IAmb	IAmb	09 00 50.8		baz=251,SNR=9.0
N30M	Aishikik Lake	87.74	28	P	P	09 00 49.1	-1.0	comp=Z,12nm,1.2s
L29M	L29M	87.75	26	P	P	09 00 48.7	-1.4	baz=254,SNR=11
C27K	Jago River	87.86	19	IAmb	IAmb	09 00 51.9		baz=253
C27K	Jago River	87.86	19	P	P	09 00 49.7	-0.7	comp=Z,10.0nm,1.1s
S32K	Killisnoo	87.95	32	P	P	09 00 50.2	-0.8	baz=248
O30N	Mendenhall	88.02	28	P	P	09 00 50.6	-0.7	baz=250,SNR=5.5
E27K	Coleen River	88.04	21	IAmb	IAmb	09 00 52.8		baz=255,SNR=15
E27K	Coleen River	88.04	21	P	P	09 00 50.7	-0.6	comp=Z,13nm,1.1s
SKAG	Skagway	88.05	30	P	P	09 00 50.9	-0.5	baz=250,SNR=18
J29N	Klondike Camp	88.11	25	P	P	09 00 51.2	-0.6	baz=255,SNR=5.5
R32K	Eaglecrest	88.17	31	IAmb	IAmb	09 00 52.9		baz=253,SNR=7.5
R32K	Eaglecrest	88.17	31	P	P	09 00 51.2	-0.9	comp=Z,11nm,1.2s
M30M	Minto, Yukon	88.19	27	P	P	09 00 51.0	-1.2	baz=256
K29M	Barlow Dome	88.23	25	P	P	09 00 51.2	-1.2	baz=254,SNR=7.8
CRAG	Craig	88.27	34	P	P	09 00 51.7	-0.9	baz=253
I29M	Ogilvie Camp,	88.35	24	IAmb	IAmb	09 00 53.5		baz=257
I29M	Ogilvie Camp,	88.35	24	P	P	09 00 51.9	-1.0	comp=Z,10.0nm,1.1s
N31M	Braeburn, Yuko	88.36	28	IAmb	IAmb	09 00 56.4		baz=253,SNR=9.2
N31M	Braeburn, Yuko	88.36	28	P	P	09 00 51.9	-1.1	comp=Z,7.8nm,1.0s
U33K	Whale Pass	88.42	33	P	P	09 00 51.9	-1.3	baz=255
F28M	Old Crow	88.46	21	P	P	09 00 52.2	-1.0	baz=257
WHY	Whitehorse	88.57	29	P	P	09 00 52.4	-1.6	baz=251,SNR=7.2
H29M	Whitestone	88.58	23	P	P	09 00 53.1	-0.8	baz=256,SNR=7.3
D27M	Malcolm River	88.62	20	P	P	09 00 53.2	-0.8	baz=252
T33K	Petersburg	88.66	33	P	P	09 00 53.6	-0.7	baz=250
MAYO	Mayo, Yukon	88.86	26	P	P	09 00 54.3	-0.9	baz=258
P32M	Atlin	88.88	30	P	P	09 00 54.4	-1.0	baz=255
E28M	Babbage River	88.90	20	IAmb	IAmb	09 00 56.6		baz=257
E28M	Babbage River	88.90	20	P	P	09 00 54.6	-0.7	comp=Z,8.0nm,1.3s
WRAK	Wrangell Islan	88.90	33	P	P	09 00 54.5	-1.0	baz=251
G29M	Pine Creek	88.92	22	IAmb	IAmb	09 00 55.8		baz=258
G29M	Pine Creek	88.92	22	P	P	09 00 54.4	-1.1	comp=Z,13nm,1.2s
J30M	Hart River	88.93	25	IAmb	IAmb	09 00 56.3		baz=253
J30M	Hart River	88.93	25	P	P	09 00 55.1	-0.6	comp=Z,9.3nm,1.2s
V35K	Ketchikan	89.08	34	P	P	09 00 55.7	-0.7	baz=254,SNR=7.6
I30M	Mount Dempster	89.09	24	IAmb	IAmb	09 00 57.0		baz=259
I30M	Mount Dempster	89.09	24	P	P	09 00 55.9	-0.6	comp=Z,8.3nm,1.2s
M31M	Drury Creek, Y	89.17	27	P	P	09 00 55.9	-0.8	baz=254,SNR=5.5
EPYK	Eagle Plains	89.27	23	IAmb	IAmb	09 00 57.8		baz=256
EPYK	Eagle Plains	89.27	23	P	P	09 00 56.4	-0.7	comp=Z,11nm,1.0s
D28M	Stokes Point	89.40	20	P	P	09 00 56.5	-1.1	baz=254,SNR=9.5
E29M	Blow River	89.41	21	P	P	09 00 57.2	-0.4	baz=252
P33M	Teslin, Yukon	89.46	29	P	P	09 00 57.6	-0.6	baz=253
Q32M	Nakina River	89.47	31	P	P	09 00 57.5	-0.9	baz=258
G30M	tAoh Zraii Nji	89.62	22	IAmb	IAmb	09 00 59.0		baz=258
G30M	tAoh Zraii Nji	89.62	22	P	P	09 00 57.8	-1.0	comp=Z,12nm,1.2s
S34M	Telegraph Cree	89.85	32	IAmb	IAmb	09 01 01.0		baz=254
S34M	Telegraph Cree	89.85	32	P	P	09 00 59.1	-0.8	comp=Z,13nm,1.2s
F30M	Barrier River	89.95	22	IAmb	IAmb	09 01 00.8		baz=259
F30M	Barrier River	89.95	22	P	P	09 00 59.3	-0.9	comp=Z,12nm,1.1s
H31M	Peel River	90.06	24	P	P	09 00 59.7	-1.1	baz=255
U35K	Hyder	90.08	34	P	P	09 01 00.6	-0.5	baz=256
T35M	Bob Quinn	90.14	33	P	P	09 01 01.0	-0.4	baz=260
R33M	Jennings River	90.21	30	IAmb	IAmb	09 01 03.2		baz=260
R33M	Jennings River	90.21	30	P	P	09 01 01.4	-0.4	comp=Z,12nm,1.4s
G31M	Satah River	90.35	23	P	P	09 01 01.9	-0.1	baz=259
DLBC	Dease Lake	90.52	31	P	P	09 01 02.8	-0.4	baz=256,SNR=6.5
F31M	Tsiigehtchic	90.67	22	IAmb	IAmb	09 01 03.6		baz=260
F31M	Tsiigehtchic	90.67	22	P	P	09 01 03.5	0.0	comp=Z,6.8nm,1.1s
INK	Inuvik	90.95	21	P	P	09 01 05.1	+0.3	baz=257
WTLY	Watson Lake, Y	91.42	30	IAmb	IAmb	09 01 09.3		baz=257
WTLY	Watson Lake, Y	91.42	30	P	P	09 01 07.0	-0.2	comp=E,8.1nm,1.1s
AB31	Akbulak array	93.18	319	P	P	09 01 13.4	-2.2	baz=261,SNR=8.2
M03C	McCloud	93.46	49	P	P	09 01 16.6	-0.6	
KOTAN	Kotaneelee Air	93.78	30	P	P	09 01 17.5	-0.6	baz=265
WRGLY	Wrigley	94.30	27	P	P	09 01 20.1	-0.3	baz=266
A36M	Sachs Harbour	94.32	18	P	P	09 01 20.4	+0.1	baz=265
C36M	Paulatuk	94.50	21	P	P	09 01 21.0	-0.2	baz=266
ELIB	Princess Elisa	94.78	195	dP	P	09 01 22.4	-0.3	
EPH	Ephrata	95.64	43	P	P	09 01 26.9	-0.1	
EPH				IAmb	IAmb	09 01 27.4		comp=Z,5.1nm,1.1s
NVAR	Mina Array Bea	96.23	52	P	P	09 01 28.9	-1.2	comp=Z,0.7nm,0.8s,baz=250,slow=7.4,SNR=4.4
YKA	Yellowknife Ar	98.36	28	P	P	09 01 37.6	-1.2	comp=Z,0.7nm,0.8s
PDAR	Pinedale Array	102.82	48	P	Pdif	09 01 57.5	-2.0	comp=Z,1.8nm,1.1s,baz=282,slow=5.5,SNR=14
M65A	Busby, Falmout	130.30	38	P	PKPdf	09 07 09.5	-1.7	comp=Z,1.8nm,1.1s
LPAZ	La Paz	137.89	122	PKP	PKPdf	09 07 26.7	-0.3	comp=Z,0.6nm,0.8s,baz=207,slow=1.7,SNR=4.3
SIV	San Ignacio	143.84	127	PKP	PKPab	09 07 33.7	-0.5	baz=305
TORD	Torodi Ar. Bea	146.22	285	PKPbc	PKPdf	09 07 41.0	0.0	comp=Z,2.6nm,1.0s,baz=240,slow=1.3,SNR=5.1
TORD				pPKPbc	pPKPdf	09 08 17.0	-0.4	comp=Z,2.9nm,0.8s,baz=98,slow=2.4,SNR=13
BDFB	Brasilia	153.35	143	PKPbc	PKPbc	09 07 59.5	-0.5	comp=Z,2.2nm,0.8s,baz=43,slow=3.9,SNR=3.4
BDFB				PKPab	PKPab	09 08 12.0	-0.4	comp=Z,6.9nm,0.8s,baz=281,slow=2.1,SNR=11
BDFB	Brasilia	153.35	143		PKPbc	09 07 58.6	-1.4	comp=Z,10nm,0.9s,baz=157,slow=2.7,SNR=8.3

LJU 25 08:49:30.9,45°89N×15°96E,h5km,ML0.5,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PTJ	Puntijarka	0.01	14	*i* Pg		Pg	08 49 31.7	-0.3
PTJ						Sg	08 49 32.7	+0.1
ZAG	Zagreb	0.07	166	*i* Pg		Pg	08 49 32.1	-0.3
ZAG						Sg	08 49 33.5	0.0
GCIS	Gornji Cirnik	0.24	264	*i* Pg		Pg	08 49 35.7	+0.2
GCIS				*i* Sg		Sg	08 49 39.0	+0.4
GCIS				IAML			08 49 39.4	
LOBO	Lobor	0.27	16	*e*Pg		Pg	08 49 36.4	+0.2
LOBO						Sg	08 49 40.2	+0.4
KALN	Kalnik	0.42	55			Sg	08 49 44.6	+0.1

VIE 25 08:49:50.1±0.8,47°54N×14°87E,h0km,mb1.6/1,ml1.2/4, Error ellipse: s-maj=5.8km s-min=2.4km az=178.0 2 km WSW of Eisenerz Mining explosion.,Austria

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
ARSA	Arzberg	0.53	123	*i* Pg		Pg	08 49 60.0	-0.3
ARSA	0.2nm,0.0s				Sg	Sg	08 50 06.6	-0.5
SOKA	Soboth	0.87	173	*e*Pg		Pg	08 50 07.3	+0.6
SOKA	0.5nm,0.3s			*e*Sg		Sb	08 50 20.5	+0.2
RONA	3.3nm,0.8s Rosalia, Austr	0.98	80	Sg		Sb	08 50 23.0	-0.5
KRUC	1.9nm,0.2s Moravsky	1.83	33	*e*PN		Pn	08 50 22.9	0.0
KRUC				*e*SG		Sn	08 50 47.1	+0.2

*JSN **25** 08:51:43.8±1.1, 19°38N×79°74W, h0km±59km, MD4.0, Presumed earthquake*

*SSNC **25** 08:51:45.0±1.3, 19°15N×80°08W, h25km±10km, MD3.4, ML2.6, Presumed earthquake*

ISC 25 08:51:43.9±2.1,19°17N±0°08×80°03W±0°08,h34km±4km, n13,σ0°99/21,1D,Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
LCCY	Blossom Villag	0.50	354	*i* P		Pb	08 51 54.1	-0.3
LCCY				*i* S		Sb	08 52 01.8	+0.1
LCCY				IAML			08 52 02.3	
LCCY	comp=N,664nm,0.2s			IAML			08 52 02.4	
CBCY	comp=E,330nm,0.2s The Bluff, Cay	0.62	24	*i* P		Pb	08 51 55.9	-0.5
CBCY				*i* S		Sb	08 52 05.2	+0.2
CBCY				IAML			08 52 06.4	
CBCY	comp=N,111nm,0.1s			IAML			08 52 06.6	
MTDJ	comp=E,53nm,0.2s Mount Denham	2.54	111	*i* P		Pn	08 52 23.3	+0.4
MTDJ				*i* S		Sn	08 52 52.2	-0.6
MTDJ				IAML			08 52 53.4	
	comp=E,65nm,0.2s							

MTDJ					IAML			08 52 53.4	
	comp=E,59nm,0.2s								
MGV	**Manicaragua**	**2.92**	**1**	*i* P		**Pn**		**08 52 28.0**	**0.0**
MGV				*i* S		**Sn**		**08 53 01.0**	**-1.0**
MGV					IAML			08 53 02.6	
	comp=E,11nm,0.1s								
MGV					IAML			08 53 03.4	
	comp=N,13nm,0.1s								
LMGC	**Las Mercedes**	**2.99**	**72**	*i* P		**Pn**		**08 52 30.7**	**+1.8**
LMGC				*i* S		**Sn**		**08 53 03.8**	**+0.3**
LMGC					IAML			08 53 06.6	
	comp=N,16nm,0.2s								
LMGC					IAML			08 53 06.8	
	comp=E,21nm,0.2s								
STH	**Stony Hill**	**3.24**	**109**	*i* P		**Pn**		**08 52 32.6**	**+0.2**
GWJ	**Greenwich**	**3.32**	**109**	*i* P		**Pn**		**08 52 33.9**	**+0.3**
HOJ	**Hope**	**3.32**	**110**	*i* P		**Pn**		**08 52 34.3**	**+0.8**
CHIV	**Chivirico**	**3.50**	**76**	*i* P		**Pn**		**08 52 36.6**	**+0.7**
CHIV				*i* S		**Sn**		**08 53 15.2**	**-1.0**
MARVS	**Santiago de Cu**	**3.98**	**77**	*i* P		**Pn**		**08 52 42.9**	**+0.4**
MARVS				*i* S		**Sn**		**08 53 27.5**	**-0.5**
RCC	**Rio Carpintero**	**4.17**	**78**	*i* P		**Pn**		**08 52 46.1**	**+1.0**
RCC				*i* S		**Sn**		**08 53 31.1**	**-1.6**
PINC	**Pinares de May**	**4.20**	**71**	*i* P		**Pn**		**08 52 47.5**	**+2.0**
SOR	**Soroa**	**4.55**	**323**	*i* P		**Pn**		**08 52 51.5**	**+1.1**

*IDC **25** 08:53:03.4±0.9,49.°02N×158.°47E,h0km,mb3.6/6,*
mbtmp3.8/9,ML3.3/3,Error ellipse: s-maj=29.2km
s-min=21.9km az=148.0
*KRSC **25** 08:53:06.8±2.1,49.°44N×158.°72E,h39km±56km,Ml3.9*
ISC 25 08:53:08.3±0.9,49.°26N±0.°08×158.°39E±0.°08,h35km,n33,
σ1§34/37,mb3.6/6,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
SKR	**Severo-Kuril's**	**2.04**	**315**	*eP*		**Pn**	**08**	**53**	**39.3**	**-0.8**
SKR				*eS*		**Sn**	**08**	**54**	**04.0**	**-0.4**
PAU	**Pauzhetka**	**2.43**	**336**	*eP*		**Pn**	**08**	**53**	**47.0**	**+1.6**
PAU				*eS*		**Sn**	**08**	**54**	**15.2**	**+1.4**
KDTR	**Khodutka, Kamc**	**2.56**	**356**	*eP*		**Pn**	**08**	**53**	**46.7**	**-0.4**
KDTR				*eS*		**Sn**	**08**	**54**	**14.3**	**-2.7**
ASAK	**Asacha**	**3.14**	**354**	*eP*		**Pn**	**08**	**53**	**55.4**	**+0.1**
RUS	**Russkaya**	**3.17**	**1**	*eP*		**Pn**	**08**	**53**	**55.4**	**-0.2**
RUS				*eS*		**Sn**	**08**	**54**	**30.7**	**-1.6**
MTVR	**Mutnovka**	**3.23**	**358**	*eP*		**Pn**	**08**	**53**	**56.6**	**0.0**
MTVR				*eS*		**Sn**	**08**	**54**	**32.2**	**-1.6**
GRL	**Gorelyy**	**3.30**	**357**	*eP*		**Pn**	**08**	**53**	**57.4**	**0.0**
GRL				*eS*		**Sn**	**08**	**54**	**34.6**	**-0.9**
KRMR	**Karymshinskiy**	**3.58**	**357**	*eP*		**Pn**	**08**	**54**	**01.8**	**+0.7**
KRMR				*eS*		**Sn**	**08**	**54**	**41.0**	**-1.1**
PET	**Petropavlovsk**	**3.77**	**2**	*eP*		**Pn**	**08**	**54**	**04.0**	**+0.2**
PET				*eS*		**Sn**	**08**	**54**	**45.9**	**-1.0**
DALK	**Dalny**	**3.78**	**3**	*eP*		**Pn**	**08**	**54**	**03.8**	**-0.1**
DALK				*eS*		**Sn**	**08**	**54**	**45.3**	**-1.8**
PETK	**Petropavlovsk-**	**3.87**	**354**	Pn		**Pn**	**08**	**54**	**06.3**	**+1.0**
	1.0nm,0.3s,baz=111,slow=21,SNR=7.4									
	5.8nm,0.8s									
UGLR	**Uglovaya**	**3.96**	**4**	*eP*		**Pn**	**08**	**54**	**06.7**	**+0.2**
AVH	**Avacha**	**4.01**	**3**	*eP*		**Pn**	**08**	**54**	**09.0**	**+1.7**
SMAR	**Somma**	**4.01**	**4**	*eP*		**Pn**	**08**	**54**	**07.7**	**+0.3**
KOK	**Koryaka**	**4.04**	**2**	*eP*		**Pn**	**08**	**54**	**08.5**	**+0.9**
KRER	**Koryakskii**	**4.05**	**3**	*eP*		**Pn**	**08**	**54**	**09.6**	**+1.7**
KRER				*eS*		**Sn**	**08**	**54**	**53.0**	**-1.2**
KRX	**Arik**	**4.10**	**2**	*eP*		**Pn**	**08**	**54**	**08.6**	**0.0**
GNL	**Ganaly**	**4.45**	**357**	*eP*		**Pn**	**08**	**54**	**14.6**	**+1.4**
KBTR	**Krutoberegovo**	**7.46**	**19**	*eP*		**Pn**	**08**	**54**	**53.9**	**-0.5**
SHEM	**Shemya Is, Ala**	**10.49**	**65**	Pn		**Pn**	**08**	**55**	**34.4**	**-1.5**
	2.2nm,0.3s,baz=276,slow=20,SNR=2.2									
	26nm,0.8s									
ASAJ	**Asahikawa**	**12.00**	**251**	Pn		**Pn**	**08**	**55**	**54.6**	**-2.1**
	0.2nm,0.3s,baz=85,slow=11,SNR=1.8									
	6.7nm,1.0s									
H11N2	**WAKE ISLAND Hy**	**30.25**	**164**	T		T	09	30	52.6	
	baz=349,slow=76,SNR=5.0									
H11N3	**WAKE ISLAND Hy**	**30.26**	**164**	T		T	09	30	55.1	
	baz=349,slow=76,SNR=5.4									
H11N1	**WAKE ISLAND Hy**	**30.26**	**164**	T		T	09	30	54.0	
	baz=349,slow=76,SNR=4.9									
H11S1	**WAKE ISLAND Hy**	**31.41**	**165**	T		T	09	32	22.2	
	baz=350,slow=76,SNR=8.0									
H11S3	**WAKE ISLAND Hy**	**31.42**	**165**	T		T	09	32	22.4	
	baz=350,slow=76,SNR=7.0									
H11S2	**WAKE ISLAND Hy**	**31.42**	**165**	T		T	09	32	23.1	
	baz=350,slow=76,SNR=7.5									
MKAR	**Makanchi Array**	**48.92**	**298**	P		**P**	**09**	**01**	**50.6**	**0.0**
	0.4nm,0.7s,baz=57,slow=6.0,SNR=1.6									
	0.4nm,0.7s									
KURBB	**Kurchatov Arra**	**49.01**	**304**	P		**P**	**09**	**01**	**54.6**	**+3.5**
	0.3nm,0.5s,baz=64,slow=7.9,SNR=4.2									
	0.3nm,0.5s									
PDAR	**Pinedale Array**	**60.40**	**58**	P		**P**	**09**	**03**	**16.4**	**+2.3**
	0.3nm,0.8s,baz=293,slow=6.1,SNR=3.1									
	0.3nm,0.8s									
WRA	**Warramunga Arr**	**72.15**	**204**	P		**P**	**09**	**04**	**28.2**	**-1.0**
	1.3nm,0.7s,baz=20,slow=6.2,SNR=6.4									
	1.3nm,0.7s									
TXAR	**Lajitas Array**	**73.19**	**65**	P		**P**	**09**	**04**	**36.1**	**+0.6**
	0.4nm,0.5s,baz=304,slow=5.1,SNR=7.8									
	0.4nm,0.5s									
ASAR	**Alice Springs**	**75.82**	**203**	P		**P**	**09**	**04**	**50.2**	**-0.4**
	0.4nm,0.7s,baz=17,slow=6.3,SNR=1.2									
	0.4nm,0.7s									

IDC 25 09:00:08.8±3.6,52.°39N×35.°22E,h0km,mbtmp3.9/2,
ML2.8/2,Error ellipse: s-maj=40.9km s-min=13.6km
az=115.0,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
AKASG	**Malin Array Be**	**4.11**	**248**	Pn		Pn	09	01	09.8	-3.0
	baz=60,slow=15									
AKASG				Pg		Pb	09	01	21.5	-0.4
	0.6nm,0.3s,baz=61,slow=17,SNR=4.4									
AKASG				Sn		Sn	09	01	59.2	-2.2
	1.7nm,0.3s,baz=62,slow=20,SNR=5.4									
AKASG				Lg		Lg	09	02	13.4	
	2.2nm,0.3s,baz=64,slow=30,SNR=5.2									
I43RU	**DUBNA INFRASON**	**4.49**	**14**	I		I	09	29	00.0	
	0.2nm,0.8s,baz=195,slow=332,SNR=2.7									
FINES	**FINESS Array B**	**10.35**	**335**	Pn		Pn	09	02	34.6	-3.6
	0.2nm,0.3s,baz=150,slow=13,SNR=4.7									
FINES				Sn		Sn	09	04	23.9	-11
	0.1nm,0.3s,baz=152,slow=22,SNR=1.1									
	2.7nm,0.9s									
ARCES	**ARCESS Array B**	**17.79**	**349**	P		Pn	09	04	16.1	-1.4
	0.1nm,0.3s,baz=160,slow=11,SNR=2.7									
	4.7nm,0.9s									

*KRSC **25** 09:13:48.8±2.0,49.°36N×158.°50E,h49km±51km,Ml3.8*
*IDC **25** 09:13:48.3±1.1,49.°22N×158.°63E,h0km,mb3.5/5,*
mbtmp3.4/6,ML2.3/1,Error ellipse: s-maj=33.0km
s-min=26.0km az=87.0
ISC 25 09:13:51.1±1.1,49.°34N±0.°08×158.°29E±0.°09,h18km,n28,
σ1§43/36,mb3.6/5,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
SKR	**Severo-Kuril's**	**1.95**	**315**	*eP*		**Pn**	**09**	**14**	**20.3**	**-2.9**
SKR				*eS*		**Sn**	**09**	**14**	**45.5**	**-1.6**
PAU	**Pauzhetka**	**2.33**	**337**	*eP*		**Pn**	**09**	**14**	**27.4**	**-1.1**
PAU				*eS*		**Sn**	**09**	**14**	**57.8**	**+1.1**
KDTR	**Khodutka, Kamc**	**2.48**	**357**	*eP*		**Pn**	**09**	**14**	**29.4**	**-1.2**
KDTR				*eS*		**Sn**	**09**	**14**	**59.5**	**-0.8**
ASAK	**Asacha**	**3.06**	**355**	*eP*		**Pn**	**09**	**14**	**37.9**	**-0.8**
ASAK				*eS*		**Sn**	**09**	**15**	**15.0**	**+0.2**
RUS	**Russkaya**	**3.10**	**2**	*eP*		**Pn**	**09**	**14**	**38.0**	**-1.1**
RUS				*eS*		**Sn**	**09**	**15**	**14.4**	**-1.3**
MTVR	**Mutnovka**	**3.15**	**359**	*eP*		**Pn**	**09**	**14**	**39.0**	**-0.9**
MTVR				*eS*		**Sn**	**09**	**15**	**16.1**	**-1.0**
GRL	**Gorelyy**	**3.22**	**358**	*eP*		**Pn**	**09**	**14**	**40.3**	**-0.6**
GRL				*eS*		**Sn**	**09**	**15**	**18.7**	**-0.1**
KRMR	**Karymshinskiy**	**3.50**	**358**	*eP*		**Pn**	**09**	**14**	**44.5**	**-0.1**
KRMR				*eS*		**Sn**	**09**	**15**	**26.3**	**+0.8**
APC	**Apacha**	**3.66**	**349**	*eP*		**Pn**	**09**	**14**	**46.2**	**-0.6**
PET	**Petropavlovsk**	**3.70**	**3**	*eS*		**Sn**	**09**	**15**	**29.0**	**-1.4**
DALK	**Dalny**	**3.71**	**4**	*eP*		**Pn**	**09**	**14**	**46.6**	**-0.9**
DALK				*eS*		**Sn**	**09**	**15**	**28.5**	**-2.2**
PETK	**Petropavlovsk-**	**3.79**	**355**	Pn		**Pn**	**09**	**14**	**49.2**	**+0.5**
	1.0nm,0.3s,baz=138,slow=16,SNR=2.4									
PETK				Sn		**Sn**	**09**	**15**	**36.0**	**+3.1**
	0.4nm,0.3s,baz=166,slow=15,SNR=1.6									
	3.9nm,0.6s									
UGLR	**Uglovaya**	**3.89**	**5**	*eP*		**Pn**	**09**	**14**	**50.8**	**+0.7**
SPN	**Mys Shipunski**	**3.92**	**15**	*eP*		**Pn**	**09**	**14**	**49.1**	**-1.2**
SPN				*eS*		**Sn**	**09**	**15**	**32.5**	**-3.4**
AVH	**Avacha**	**3.94**	**4**	*eP*		**Pn**	**09**	**14**	**51.4**	**+0.7**
SMAR	**Somma**	**3.94**	**4**	*eP*		**Pn**	**09**	**14**	**51.2**	**+0.3**
KOK	**Koryaka**	**3.97**	**3**	*eP*		**Pn**	**09**	**14**	**51.1**	**0.0**
KRX	**Arik**	**4.03**	**3**	*eP*		**Pn**	**09**	**14**	**51.9**	**-0.1**
GNL	**Ganaly**	**4.37**	**357**	*eP*		**Pn**	**09**	**14**	**58.0**	**+1.4**
KBTR	**Krutoberegovo**	**7.41**	**20**	*eP*		**Pn**	**09**	**15**	**37.9**	**-0.3**
H11S1	**WAKE ISLAND Hy**	**31.49**	**165**	T		T	09	53	12.7	
	baz=349									
H11S3	**WAKE ISLAND Hy**	**31.50**	**165**	T		T	09	53	15.7	
	baz=349									
H11S2	**WAKE ISLAND Hy**	**31.51**	**165**	T		T	09	53	10.0	
	baz=349									
MKAR	**Makanchi Array**	**48.83**	**298**	P		**P**	**09**	**22**	**38.2**	**+3.0**
	0.2nm,0.5s,baz=56,slow=7.4,SNR=2.5									
	0.2nm,0.5s									
KURBB	**Kurchatov Arra**	**48.92**	**304**	P		**P**	**09**	**22**	**37.1**	**+1.4**
	0.3nm,0.5s,baz=62,slow=7.4,SNR=4.0									
	0.3nm,0.5s									
WRA	**Warramunga Arr**	**72.19**	**204**	P		**P**	**09**	**25**	**14.2**	**-0.5**
	1.0nm,1.0s,baz=17,slow=6.2,SNR=3.4									
	1.0nm,1.0s									
TXAR	**Lajitas Array**	**73.22**	**65**	P		**P**	**09**	**25**	**20.6**	**-0.5**
	0.4nm,0.5s,baz=300,slow=5.6,SNR=8.8									
	0.4nm,0.5s									
ASAR	**Alice Springs**	**75.86**	**203**	P		**P**	**09**	**25**	**36.0**	**-0.2**
	0.1nm,0.6s,baz=16,slow=4.7,SNR=1.6									
	0.1nm,0.6s									

*SJA **25** 09:19:07.2±0.6,19.°71S×68.°93W,h118km±2km,ML3.6,*
MW3.7
*GUC **25** 09:19:10.9±0.9,19.°75S×69.°05W,h105km±3km,ML3.5*
ISC 25 09:19:09.1±1.4,19.°74S±0.°03×68.°99W±0.°06,h113km±8km,
n33,σ0§91/60,10C-2D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
GO01	**Chusmiza**	**0.20**	**290**	*eP*		**Pn**	**09**	**19**	**25.6**	**+0.1**
GO01				*eS*		**Sn**	**09**	**19**	**37.7**	**0.0**
GO01					IAML		09	19	38.1	
	comp=E,4μm,0.2s									
GO01	**Chusmiza**	**0.20**	**290**	*eP*		**Pn**	**09**	**19**	**25.0**	**-0.5**
GO01				*eS*		**Sn**	**09**	**19**	**38.0**	**+0.3**
GO01					IAML		09	19	38.4	
	comp=Z,968nm,0.4s									
PB08	**IPOC Station P**	**0.43**	**201**	*eP*		**Pn**	**09**	**19**	**26.7**	**+0.4**
PB08				*eS*		**Sn**	**09**	**19**	**39.1**	**-0.1**
PB08					IAML		09	19	39.9	
	comp=N,3μm,0.2s									
PB08	**IPOC Station P**	**0.43**	**201**	*eP*		**Pn**	**09**	**19**	**26.0**	**-0.3**
PB08				*eS*		**Sn**	**09**	**19**	**39.5**	**+0.2**
PB08					IAML		09	19	40.2	
	comp=Z,2μm,0.2s									
PB11	**IPOC Station P**	**0.63**	**268**	*eP*		**Pn**	**09**	**19**	**27.4**	**+0.1**
PB11				*eS*		**Sn**	**09**	**19**	**40.1**	**-1.0**
PB11					IAML		09	19	42.1	
	comp=E,4μm,0.2s									
PB11	**IPOC Station P**	**0.63**	**268**	*eP*		**Pn**	**09**	**19**	**27.1**	**-0.2**
PB11				*eS*		**Sn**	**09**	**19**	**41.7**	**+0.7**
PB11					IAML		09	19	42.6	
	comp=Z,2μm,0.1s									
PX03	**IPOC Station P**	**0.90**	**222**	*eP*		**Pn**	**09**	**19**	**28.8**	**-0.8**
PX03				*eS*		**Sn**	**09**	**19**	**44.0**	**-1.0**
PX03					IAML		09	19	47.1	
	comp=N,1μm,0.2s									
TA02	**Huaiquique**	**1.20**	**243**	*eP*		**Pn**	**09**	**19**	**32.8**	**+0.2**
TA02				*eS*		**Sn**	**09**	**19**	**49.7**	**-0.7**
TA02	**Huaiquique**	**1.20**	**243**	*eP*		**Pn**	**09**	**19**	**32.2**	**-0.3**
TA02					IAML		09	19	54.4	
	comp=Z,988nm,0.1s									
PX02	**IPOC Station P**	**1.37**	**304**	*eP*		**Pn**	**09**	**19**	**34.3**	**-0.4**
PX02				*eS*		**Sn**	**09**	**19**	**53.1**	**-1.0**
PX02					IAML		09	19	57.1	
	comp=N,489nm,0.3s									
PB01	**IPOC Station P**	**1.38**	**200**	*eP*		**Pn**	**09**	**19**	**35.2**	**+0.4**
PB01				*eS*		**Sn**	**09**	**19**	**53.9**	**-0.4**
PB01					IAML		09	19	55.9	
	comp=E,1μm,0.3s									
PB01	**IPOC Station P**	**1.38**	**200**	*eP*		**Pn**	**09**	**19**	**34.6**	**-0.2**
PB01				*eS*		**Sn**	**09**	**19**	**54.9**	**+0.7**
PB01					IAML		09	19	56.4	
	comp=Z,680nm,0.2s									
TA01	**Diego Aracena**	**1.39**	**233**	*eP*		**Pn**	**09**	**19**	**34.6**	**-0.2**
TA01				*eS*		**Sn**	**09**	**19**	**53.7**	**-0.5**
TA01					IAML		09	19	59.3	
	comp=E,499nm,0.2s									
TA01	**Diego Aracena**	**1.39**	**233**	*eP*		**Pn**	**09**	**19**	**34.7**	**0.0**
PB16	**IPOC Station P**	**1.48**	**341**	*eP*		**Pn**	**09**	**19**	**38.1**	**+1.6**
PB16				*eS*		**Sn**	**09**	**19**	**59.1**	**+2.0**
PB16					IAML		09	20	03.8	
	comp=N,278nm,0.2s									
PB16	**IPOC Station P**	**1.48**	**341**	*eP*		**Pn**	**09**	**19**	**37.5**	**+1.0**
PB16				*eS*		**Sn**	**09**	**19**	**59.3**	**+2.2**
PATCX	**Punta Patache**	**1.53**	**225**	*eP*		**Pn**	**09**	**19**	**36.6**	**0.0**
PATCX				*eS*		**Sn**	**09**	**19**	**56.9**	**-0.6**
PATCX					IAML		09	20	03.2	
	comp=E,627nm,0.3s									
PATCX	**Punta Patache**	**1.53**	**225**	*eP*		**Pn**	**09**	**19**	**36.4**	**-0.2**
PATCX				*eS*		**Sn**	**09**	**19**	**58.0**	**+0.6**
PATCX					IAML		09	20	05.7	
	comp=Z,332nm,0.4s									
PB12	**IPOC Station P**	**1.69**	**311**	*i* P		**Pn**	**09**	**19**	**38.4**	**-0.1**
PB12				*i* S		**Sn**	**09**	**20**	**00.1**	**-0.6**
PB12					IAML		09	20	09.8	
	comp=N,620nm,0.5s									
PB12	**IPOC Station P**	**1.69**	**311**	*eP*		**Pn**	**09**	**19**	**38.1**	**-0.4**
PB12				*eS*		**Sn**	**09**	**20**	**01.3**	**+0.6**
PB12					IAML		09	20	04.7	
	comp=Z,303nm,0.2s									
PB02	**IPOC Station P**	**1.79**	**208**	*eP*		**Pn**	**09**	**19**	**40.0**	**+0.3**
PB02				*eS*		**Sn**	**09**	**20**	**02.2**	**-0.8**
PB02					IAML		09	20	11.0	
	comp=E,1μm,0.2s									
PB02	**IPOC Station P**	**1.79**	**208**	*eP*		**Pn**	**09**	**19**	**39.7**	**0.0**
PB02				*eS*		**Sn**	**09**	**20**	**04.3**	**+1.3**
PB02					IAML		09	20	11.9	
	comp=Z,912nm,0.2s									
PB09	**IPOC Station P**	**2.06**	**186**	*eP*		**Pn**	**09**	**19**	**44.3**	**+1.1**
PB09				*eS*		**Sn**	**09**	**20**	**09.4**	**+0.2**
PB09					IAML		09	20	14.3	
	comp=N,314nm,0.5s									
PB09	**IPOC Station P**	**2.06**	**186**	*eP*		**Pn**	**09**	**19**	**43.7**	**+0.5**
PB09				*eS*		**Sn**	**09**	**20**	**12.1**	**+2.9**
PB09					IAML		09	20	13.8	
	comp=Z,254nm,0.7s									
PB07	**IPOC Station P**	**2.15**	**203**	*i* P		**Pn**	**09**	**19**	**44.9**	**+0.6**
PB07				*i* S		**Sn**	**09**	**20**	**10.9**	**-0.3**
PB07					IAML		09	20	19.7	
	comp=N,535nm,0.2s									
PB07	**IPOC Station P**	**2.15**	**203**	*eP*		**Pn**	**09**	**19**	**44.3**	**0.0**
PB07				*eS*		**Sn**	**09**	**20**	**11.8**	**+0.6**
PB07					IAML		09	20	19.2	
	comp=Z,330nm,0.4s									
PB03	**IPOC Station P**	**2.41**	**197**	*eP*		**Pn**	**09**	**19**	**48.3**	**+0.7**
PB03				*eS*		**Sn**	**09**	**20**	**15.8**	**-1.3**
PB03					IAML		09	20	25.3	
	comp=N,445nm,0.6s									
PB03	**IPOC Station P**	**2.41**	**197**	*eP*		**Pn**	**09**	**19**	**47.9**	**+0.3**
PB03				*eS*		**Sn**	**09**	**20**	**17.8**	**+0.7**
PB03					IAML		09	20	25.4	
	comp=Z,303nm,0.2s									
PB06	**IPOC Station P**	**3.00**	**190**	*i* P		**Pn**	**09**	**19**	**56.3**	**+0.9**
PB06				*i* S		**Sn**	**09**	**20**	**29.8**	**-1.2**
PB06					IAML		09	20	40.6	
	comp=E,191nm,0.3s									
PB06	**IPOC Station P**	**3.00**	**190**	*eP*		**Pn**	**09**	**19**	**56.2**	**+0.9**
PB06				*eS*		Sn	09	20	19.5	-12
PB06					IAML		09	20	39.4	
	comp=Z,163nm,0.3s									
PB05	**IPOC Station P**	**3.30**	**200**	*eP*		**Pn**	**09**	**19**	**59.5**	**+0.3**
PB05				*eS*		Sn	09	20	23.0	-15
PB05					IAML		09	20	48.2	
	comp=Z,99nm,0.9s									
LPAZ	**La Paz**	**3.53**	**14**	*eP*		**Pn**	**09**	**20**	**00.5**	**-2.3**
HJA	**Humahuaca**	**4.80**	**137**	*eP*		**Pn**	**09**	**20**	**18.5**	**-1.1**

*IDC **25** 09:28:52.6±0.9,49.°20N×158.°61E,h0km,mb3.5/7,*
mbtmp3.5/9,ML2.6/2,MS3.1/1,Error ellipse: s-maj=27.6km
s-min=21.3km az=118.0
*KRSC **25** 09:28:56.5±1.4,49.°52N×158.°91E,h47km±38km,Ml4.0*
*MOS **25** 09:28:57.2±1.1,49.°39N×158.°60E,h48km,mb4.4/4,Error*
ellipse: s-maj=19.2km s-min=4.6km az=92.4
ISC 25 09:28:55.6±0.8,49.°40N±0.°07×158.°68E±0.°06,h18km,n62,
σ1§51/78,mb3.9/11,2C-3D,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
SKR	**Severo-Kuril's**	**2.09**	**309**	*eP*		**Pn**	**09**	**29**	**30.2**	**+0.5**
SKR				*eS*		**Sn**	**09**	**29**	**55.2**	**0.0**
SKR				pmax		pmax				
	comp=Z,187nm,0.7s									
SKR				smax		smax				
	comp=N,1μm,0.5s									
SKR				smax		smax				
	comp=E,936nm,0.7s									
SKR	**Severo-Kuril's**	**2.09**	**309**	*eP*		**Pn**	**09**	**29**	**30.5**	**+0.8**
SKR				*eS*		**Sn**	**09**	**29**	**55.7**	**+0.5**
PAU	**Pauzhetka**	**2.39**	**331**	PN		**Pn**	**09**	**29**	**35.5**	**+1.7**
PAU				S		**Sn**	**09**	**30**	**03.7**	**+1.1**
PAU	**Pauzhetka**	**2.39**	**331**	*eP*		**Pn**	**09**	**29**	**35.5**	**+1.7**
PAU				*eS*		**Sn**	**09**	**30**	**03.7**	**+1.1**
KDTR	**Khodutka, Kamc**	**2.44**	**351**	PN		**Pn**	**09**	**29**	**35.0**	**+0.5**
KDTR				S		**Sn**	**09**	**30**	**04.1**	**+0.2**
KDTR	**Khodutka, Kamc**	**2.44**	**351**	*eP*		**Pn**	**09**	**29**	**35.1**	**+0.5**
KDTR				*eS*		**Sn**	**09**	**30**	**04.1**	**+0.2**
ASAK	**Asacha**	**3.03**	**351**	PN		**Pn**	**09**	**29**	**44.8**	**+2.2**
ASAK				S		**Sn**	**09**	**30**	**18.9**	**+0.5**
ASAK	**Asacha**	**3.03**	**351**	*eP*		**Pn**	**09**	**29**	**44.8**	**+2.2**
ASAK				*eS*		**Sn**	**09**	**30**	**18.9**	**+0.5**
RUS	**Russkaya**	**3.04**	**358**	PN		**Pn**	**09**	**29**	**43.9**	**+1.2**
RUS				S		**Sn**	**09**	**30**	**18.2**	**-0.3**
RUS	**Russkaya**	**3.04**	**358**	*eP*		**Pn**	**09**	**29**	**43.9**	**+1.2**
RUS				*eS*		**Sn**	**09**	**30**	**18.3**	**-0.3**
MTVR	**Mutnovka**	**3.10**	**354**	PN		**Pn**	**09**	**29**	**45.1**	**+1.4**
MTVR				S		**Sn**	**09**	**30**	**19.9**	**-0.5**
MTVR	**Mutnovka**	**3.10**	**354**	*eP*		**Pn**	**09**	**29**	**45.1**	**+1.4**
MTVR				*eS*		**Sn**	**09**	**30**	**19.9**	**-0.5**
MIPR	**Malaya Ipel'ka**	**3.13**	**338**	*eS*		**Sn**	**09**	**30**	**23.7**	**+2.9**
GRL	**Gorelyy**	**3.18**	**353**	PN		**Pn**	**09**	**29**	**46.3**	**+1.6**
GRL				S		**Sn**	**09**	**30**	**23.2**	**+1.0**
GRL	**Gorelyy**	**3.18**	**353**	*eP*		**Pn**	**09**	**29**	**46.4**	**+1.6**
GRL				*eS*		**Sn**	**09**	**30**	**23.2**	**+1.0**
KRMR	**Karymshinskiy**	**3.45**	**354**	PN		**Pn**	**09**	**29**	**49.5**	**+1.1**
KRMR				S		**Sn**	**09**	**30**	**29.0**	**+0.2**
KRMR	**Karymshinskiy**	**3.45**	**354**	*eP*		**Pn**	**09**	**29**	**49.5**	**+1.1**
KRMR				*eS*		**Sn**	**09**	**30**	**29.0**	**+0.2**
PET	**Petropavlovsk**	**3.63**	**360**	*ePN*		**Pn**	**09**	**29**	**49.2**	**-1.6**
PET				*eS*		**Sn**	**09**	**30**	**33.0**	**-0.1**
PET				smax		smax				
	comp=N,140nm,0.5s									
PET				smax		smax				
	comp=E,110nm,0.7s								

FCC				SN	Sn	09 38 45.7	-4.9	
FCC				LG	Lg	09 39 26.2		
FCC				Trac		09 39 28.5		
	comp=Z,31nm,0.4s							
FRB	**Frobisher Bay**	**8.61**	**89**	PN	Pn	09 37 57.3	-1.7	
FRB				SN	Sn	09 39 29.0	-6.4	
FRB				LG	Lg	09 40 22.3		
FRB				Trac		09 40 24.9		
	comp=Z,13nm,0.3s							
POIN	**Pond Inlet**	**8.62**	**21**	PN	Pn	09 37 57.8	-1.3	
POIN				SN	Sn	09 39 29.4	-6.3	
POIN				LG	Lg	09 40 23.9		
POIN				Trac		09 40 39.0		
	comp=Z,31nm,0.6s							
SAKN	**Sanikiluaq**	**9.49**	**148**	PN	Pn	09 38 10.0	-1.0	
SAKN				SN	Sn	09 39 50.6	-6.5	
SAKN				LG	Lg	09 40 52.1		
SAKN				Trac		09 40 54.6		
	comp=Z,3.2nm,0.1s							
RES	**Resolute Bay**	**10.06**	**350**	PN	Pn	09 38 17.6	-1.3	
RES				SN	Sn	09 40 03.6	-7.4	
RES				LG	Lg	09 41 08.0		
RES				Trac		09 41 31.8		
	comp=Z,105nm,1.9s							
KUKN	**Kugluktuk,NWT**	**11.12**	**297**	PN	Pn	09 38 32.8	-0.5	
KUKN				SN	Sn	09 40 28.7	-8.3	
KUKN				LG	Lg	09 41 39.3		
KUKN				Trac		09 41 40.7		
	comp=Z,13nm,0.4s							
YKAW1	**Yellowknife Wh**	**11.87**	**270**	PN	Pn	09 38 42.5	-1.1	
YKAW1				SN	Sn	09 40 46.7	-8.6	
YKAW1				LG	Lg	09 42 06.4		
YKAW3	**Yellowknife Wh**	**11.89**	**271**	PN	Pn	09 38 41.6	-2.2	
YKAW3				SN	Sn	09 40 45.3	-11	
YKAW3				LG	Lg	09 42 06.7		
PKLO	**Pickle Lake**	**13.52**	**186**	PN	Pn	09 39 04.2	-1.9	
PKLO				SN	Sn	09 41 24.2	-11	
PKLO				Trac		09 42 56.2		
	comp=E,45nm,1.2s							
ULM	**Lac du Bonnet**	**15.26**	**199**	SN	Sn	09 42 06.5	-12	

CATAC ***25*** *09:38:07.2±0.6,14°N±3°×9°1W±°, h24km±4km, M3.0/9, MLv3.0/9, Error ellipse: s-maj=8.1km s-min=3.2km az=31.2, confirmed*

GCG ***25*** *09:38:09.1±1.1, 14°07'N×91°23'W, h55km±9km, MD3.7, ML3.7, Presumed earthquake*

ISC 25 09:38:10.3±1.6, 14°04'N±0°09'×91°12'W±0°05, h64km±11km, n28, σ2§21/43, Guatemala

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
STG5	**El Palmar, Qui**	**0.43**	**329**	*i* P		**Pn**	**09 38 23.7**	**+1.6**
STG5				*i* S		**Sn**	**09 38 34.1**	**+3.5**
STG8	**El Palmar, Qui**	**0.47**	**331**	*i* P		**Pn**	**09 38 24.3**	**+1.6**
STG8				*i* S		**Sn**	**09 38 35.7**	**+4.2**
STG8				IAML			09 38 37.7	
	comp=E,2μm,0.1s							
STG2	**El Palmar, Qui**	**0.47**	**328**	*i* P		**Pn**	**09 38 24.4**	**+1.9**
STG2				*i* S		**Sn**	**09 38 35.4**	**+4.1**
FG8	**Yepocapa, Chim**	**0.58**	**68**	*i* P		**Pn**	**09 38 21.1**	**-2.6**
FG8				*i* S		**Sn**	**09 38 29.8**	**-3.6**
FG16	**Alotenango, Sa**	**0.64**	**68**	*i* P		**Pn**	**09 38 21.8**	**-2.5**
FG16				*i* S		**Sn**	**09 38 31.2**	**-3.3**
RTAL	**Retalhuleu**	**0.74**	**311**	P		**Pn**	**09 38 21.0**	**-4.3**
RTAL				S		**Sn**	**09 38 32.5**	**-3.8**
PCG5	**San Vicente Pa**	**0.74**	**76**	*i* P		**Pn**	**09 38 22.9**	**-2.6**
PCG5				*i* S		**Sn**	**09 38 33.1**	**-3.5**
PCG5				IAML			09 38 35.4	
	comp=N,2μm,0.4s							
ESSJ	**San Jos, E**	**0.77**	**128**	*i* P		Pn	09 38 19.8	-5.8
GCG4	**OSOP**	**0.79**	**46**	*i* P		**Pn**	**09 38 26.2**	**+0.1**
FAME	**Alcaldia de Sa**	**1.09**	**100**	P		**Pn**	**09 38 28.9**	**-0.8**
FAME				S		**Sn**	**09 38 45.0**	**+0.9**
APG	**El Apazote**	**1.15**	**33**	*i* P		**Pn**	**09 38 30.4**	**-0.4**
SMCA	**Catarina**	**1.23**	**311**	*i* P		**Pn**	**09 38 29.0**	**-2.6**
SLOZ	**Alcaldia de Sa**	**1.30**	**90**	P		**Pn**	**09 38 32.4**	**0.0**
SLOZ				S		**Sn**	**09 38 51.0**	**+2.0**
LOAL	**Lomas de Alarc**	**1.30**	**92**	P		**Pn**	**09 38 31.8**	**-0.8**
LOAL				S		**Sn**	**09 38 50.4**	**+1.3**
NUBE	**Las Nubes**	**1.31**	**96**	P		**Pn**	**09 38 32.7**	**0.0**
NUBE				S		**Sn**	**09 38 50.6**	**+1.2**
NUBE	**Las Nubes**	**1.31**	**96**	*i* P		**Pn**	**09 38 32.4**	**-0.3**
HUEH	**Huehuetenango**	**1.33**	**344**	P		**Pn**	**09 38 32.4**	**-0.7**
HUEH				S		**Sn**	**09 38 51.2**	**+1.2**
CEVE	**Cerro Verde**	**1.47**	**98**	P		**Pn**	**09 38 35.2**	**+0.2**
CEVE				S		**Sn**	**09 38 54.8**	**+1.4**
JAYA	**Jayaque - finc**	**1.67**	**103**	P		**Pn**	**09 38 37.2**	**-0.4**
JAYA				S		**Sn**	**09 38 58.7**	**+0.6**
JAYA	**Jayaque - finc**	**1.67**	**103**	*i* P		**Pn**	**09 38 37.2**	**-0.4**
MTO3	**Montecristo**	**1.74**	**78**	P		**Pn**	**09 38 38.0**	**-0.6**
MTO3				S		**Sn**	**09 39 01.9**	**+1.9**
ESQI	**Esquipulas**	**1.80**	**73**	P		**Pn**	**09 38 39.1**	**-0.1**
UDBS	**Universidad Do**	**1.94**	**99**	S		**Sn**	**09 39 06.3**	**+1.9**
COEG	**Centro de Oper**	**2.21**	**101**	S		**Sn**	**09 39 13.5**	**+2.3**
P5NO	**Presa 5 de nov**	**2.29**	**91**	P		**Pn**	**09 38 45.8**	**0.0**
P5NO				S		**Sn**	**09 39 15.7**	**+2.7**
TECO	**Alcaldia de Te**	**2.33**	**102**	S		**Sn**	**09 39 15.5**	**+1.7**
CNCH	**Conchagua**	**3.28**	**103**	P		**Pn**	**09 38 59.7**	**+0.2**
CNGN	**Cerro Negro**	**4.57**	**109**	P		**Pn**	**09 39 15.3**	**-1.7**

IDC ***25*** *09:49:43.3±0.6, 39°30'N×20°66'E, h0km, mb4.1/27, mbtmp4.0/41, ML3.8/12, MS3.3/1, Error ellipse: s-maj=11.0km s-min=10.1km az=163.0*

MOS ***25*** *09:49:43.5±1.0, 39°30'N×20°56'E, h13km, mb4.5/12, Error ellipse: s-maj=7.1km s-min=4.4km az=74.0*

THE ***25*** *09:49:45.1, 39°3'N±0°9'×2°1'E±°, h1km±1km, M4.0/11, MLh4.0/11*

ATH ***25*** *09:49:45.2, 39°28'N×20°62'E, h13km, Mw3.9, Moment Tensor Solution. s8 Moment tensor: Mrr6.17; Mθθ-0.72; Mϕϕ-5.45; Mrθ3.65; Mrϕ2.41; Mθϕ-2.82; Fault plane solution: NP1:φs141.00000°, δ63.00000°, λ74.00000°. NP2:φs353.00000°, δ31.00000°, λ118.00000°.*

PDG ***25*** *09:49:45.8±0.5, 39°28'N×20°56'E, h5km±1km, ML4.0/13 Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*

NEIC ***25*** *09:49:45.7±2.3, 39°32'N±0°05'×20°56'E±0°06, h10km±1km, mb4.3/21, Error ellipse: s-maj=10.4km s-min=4.6km az=217.0*

SOF ***25*** *09:49:58.3, 40°03'N±0°05'×21°43'E±0°04, h2km±8km, MD3.8/7*

NAO ***25*** *09:49:59.2, 40°41'N×18°92'E, h10km, MB3.9*

ISC 25 09:49:45.2±0.7, 39°28'N±0°02'×20°62'E±0°02, h12km±4km, n286, σ1§37/322, mb4.1/40, 34C-18D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
ART2	**Arta**	**0.32**	**114**	P		**Pg**	**09 49 51.7**	**+0.1**
ART2				S		**Sg**	**09 49 56.3**	**+0.4**
IGT	**Igoumenitsa**	**0.34**	**319**	P		**Pg**	**09 49 52.1**	**+0.1**
IGT				S		**Sg**	**09 49 57.1**	**+0.6**
IGT	**Igoumenitsa**	**0.34**	**319**	P		**Pg**	**09 49 52.0**	**0.0**
IGT				S		**Sg**	**09 49 57.1**	**+0.6**
JAN	**Janina**	**0.42**	**25**	P		**Pg**	**09 49 53.6**	**+0.2**
JAN				S		**Sb**	**09 50 00.1**	**-0.8**
PRMD	**Pramanda**	**0.45**	**56**	P		**Pg**	**09 49 54.3**	**+0.3**
PRMD				S		**Sg**	**09 49 59.5**	**-0.4**
TSLK	**Tsoukalades, L**	**0.46**	**176**	P		**Pg**	**09 49 54.4**	**+0.3**
LFKM	**Lefkimmi**	**0.46**	**291**	P		**Pb**	**09 49 55.0**	**-0.4**
LKD2	**Lefkada island**	**0.49**	**176**	P		**Pg**	**09 49 54.8**	**0.0**
LKD2	**Lefkada island**	**0.49**	**176**	P		**Pg**	**09 49 55.0**	**+0.2**
TETR	**Tetrakomo, Epi**	**0.51**	**83**	P		**Pg**	**09 49 54.8**	**-0.4**
TETR	**Tetrakomo, Epi**	**0.51**	**83**	P		**Pg**	**09 49 55.0**	**-0.2**
TETR				S		**Sg**	**09 50 01.9**	**-0.1**
NYDR	**Nydri-Lefkada**	**0.57**	**174**	P		**Pg**	**09 49 55.9**	**-0.3**
NYDR	**Nydri-Lefkada**	**0.57**	**174**	P		**Pg**	**09 49 56.0**	**-0.3**
NYDR				S		**Sg**	**09 50 03.6**	**-0.1**
AMPL	**Ampelaki**	**0.58**	**127**	P		**Pg**	**09 49 56.7**	**+0.1**
AMPL				S		**Sg**	**09 50 04.4**	**+0.1**
DRAG	**Dragano-Lefkad**	**0.60**	**183**	P		**Pg**	**09 49 56.3**	**-0.5**
DRAG	**Dragano-Lefkad**	**0.60**	**183**	P		**Pg**	**09 49 56.3**	**-0.5**
EVGI	**Lefkada island**	**0.66**	**177**	P		**Pg**	**09 49 57.4**	**-0.5**
EVGI				S		**Sb**	**09 50 08.4**	**+0.7**
EVGI	**Lefkada island**	**0.66**	**177**	P		**Pg**	**09 49 57.5**	**-0.4**
SRN	**Sarande**	**0.77**	**322**	P		**Pg**	**09 49 59.6**	**-0.4**
SRN				S		**Sg**	**09 50 10.3**	**+0.2**
KEK	**Kerkira**	**0.77**	**305**			**Pg**	**09 49 59.4**	**-0.6**
KEK	**Kerkira**	**0.77**	**305**	P		**Pg**	**09 49 59.5**	**-0.6**
KEK				S		**Sb**	**09 50 11.2**	**+0.2**
FSK	**Fiskardo**	**0.82**	**183**	P		**Pg**	**09 50 00.5**	**-0.5**
KPRO	**Kipourio**	**0.89**	**40**	P		**Pg**	**09 50 01.5**	**-0.8**
KPRO	**Kipourio**	**0.89**	**40**	P		**Pg**	**09 50 01.7**	**-0.6**
PVO	**Paravola**	**0.97**	**133**	P		**Pg**	**09 50 03.7**	**-0.1**
EVR	**Evrytania**	**0.99**	**111**	P		**Pg**	**09 50 03.5**	**-0.8**
EVR	**Evrytania**	**0.99**	**111**	P		**Pg**	**09 50 04.4**	**0.0**
PENT	**Pentalofos**	**1.00**	**23**	P		**Pg**	**09 50 04.3**	**-0.1**
DMLN	**Damoulianata-K**	**1.06**	**191**	P		**Pb**	**09 50 04.5**	**-0.9**
DMLN	**Damoulianata-K**	**1.06**	**191**	P		**Pb**	**09 50 04.4**	**-1.0**
VLS	**Valsamata**	**1.10**	**181**	P		**Pb**	**09 50 05.6**	**-0.6**
VLS	**Valsamata**	**1.10**	**181**	P		**Pb**	**09 50 05.3**	**-0.8**
MSL1	**Messolongi**	**1.10**	**145**	P		**Pb**	**09 50 05.5**	**-0.7**
ARG2	**Argostoli**	**1.10**	**185**	P		**Pb**	**09 50 06.1**	**-0.1**
KFL1	**Kefalonia,Entr**	**1.11**	**185**	P		**Pb**	**09 50 06.0**	**-0.4**
THL	**Klokotos Trika**	**1.12**	**75**	P		**Pb**	**09 50 06.4**	**-0.1**
THL	**Klokotos Trika**	**1.12**	**75**	P		**Pb**	**09 50 05.8**	**-0.7**
NEST	**Nestorio**	**1.18**	**16**	P		**Pb**	**09 50 07.4**	**-0.2**
NEST	**Nestorio**	**1.18**	**16**	P		**Pb**	**09 50 07.7**	**0.0**
MAKR	**Makrakomi, Fth**	**1.21**	**102**	P		**Pn**	**09 50 07.8**	**-0.1**
MAKR	**Makrakomi, Fth**	**1.21**	**102**	P		**Pn**	**09 50 07.5**	**-0.5**
RTZL	**Ratzakli, Kefa**	**1.21**	**174**	P		**Pn**	**09 50 07.1**	**-0.8**
ANX	**Ano Chora**	**1.23**	**124**	P		**Pn**	**09 50 08.0**	**-0.2**
ANX	**Ano Chora**	**1.23**	**124**	P		**Pn**	**09 50 08.1**	**-0.2**
AGRP	**Agrapidokambos**	**1.23**	**135**	P		**Pb**	**09 50 08.4**	**0.0**
AXS	**Araxos**	**1.23**	**151**	P		**Pn**	**09 50 07.8**	**-0.5**
EFP	**Efpalio**	**1.32**	**130**	P		**Pn**	**09 50 09.2**	**-0.2**
MALA	**Malamata, Dori**	**1.32**	**132**	P		**Pn**	**09 50 08.5**	**-1.0**
MG00	**Magoula, Dorid**	**1.35**	**129**	P		**Pb**	**09 50 10.3**	**-0.1**
AGG	**Agios Georgios**	**1.35**	**100**	P		**Pn**	**09 50 09.9**	**-0.1**
AGG	**Agios Georgios**	**1.35**	**100**	P		**Pn**	**09 50 10.1**	**+0.1**
KZN	**Kozani**	**1.36**	**40**	P		**Pb**	**09 50 10.4**	**-0.2**
KZN	**Kozani**	**1.36**	**40**	P		**Pn**	**09 50 10.2**	**+0.1**
RLS	**Riolos of Patr**	**1.39**	**151**	P		**Pn**	**09 50 10.7**	**+0.3**
RLS	**Riolos of Patr**	**1.39**	**151**	P		**Pn**	**09 50 10.4**	**0.0**
ZIRI	**Ziria, Aigial**	**1.42**	**133**	P		**Pg**	**09 50 12.6**	**+0.1**
ORTH	**Orthonies,Zaky**	**1.43**	**178**	P		**Pn**	**09 50 10.5**	**-0.5**
CLEM	**Kyllini,Ilia,G**	**1.44**	**164**	P		**Pn**	**09 50 11.5**	**+0.4**
LAM2	**Lamia**	**1.46**	**104**	P		**Pb**	**09 50 12.0**	**-0.3**
KALE	**Kalithea**	**1.48**	**126**	P		**Pb**	**09 50 12.6**	**-0.1**
AGEO	**AgiosGiorgios,**	**1.52**	**131**	P		**Pb**	**09 50 13.2**	**0.0**
AIOA	**Agios Ioannis,**	**1.56**	**133**	P		**Pb**	**09 50 14.2**	**+0.1**
LTHK	**Lithakia**	**1.58**	**174**	P		**Pb**	**09 50 13.9**	**-0.4**
LMS2	**Laimos Florina**	**1.60**	**14**	P		**Pg**	**09 50 15.5**	**-0.5**
AXAR	**Agios Charalam**	**1.67**	**107**	P		**Pn**	**09 50 15.0**	**+0.7**
ITM	**Ithomi**	**2.34**	**153**			**Pn**	**09 50 25.3**	**+1.8**
ULC	**Ulcinj**	**2.88**	**339**	*e*Pn		**Pn**	**09 50 32.1**	**+1.2**
ULC				*i* Sn		**Sn**	**09 51 06.8**	**+1.3**
TIP	**Timpagrande**	**3.00**	**269**	⇓P		**Pn**	**09 50 32.7**	**+0.1**
TIP				⇓S		**Sn**	**09 51 09.0**	**+0.4**
TIP	**Timpagrande**	**3.00**	**269**			**Pn**	**09 50 33.1**	**+0.4**
DRME	**Dracevica, Mon**	**3.10**	**340**	*e*Pn		**Pn**	**09 50 35.3**	**+1.3**
DRME				*i* Sn		**Sn**	**09 51 12.1**	**+1.1**
DRME	**Dracevica, Mon**	**3.10**	**340**	⇑*i*Pn		**Pn**	**09 50 35.2**	**+1.3**
KKB	**Krupnik**	**3.19**	**36**	P		**Pn**	**09 50 38.0**	**+2.7**
BUM	**Brajici-Budva**	**3.29**	**337**	*e*Pn		**Pn**	**09 50 37.6**	**+1.0**
BUM				*i* Sn		**Sn**	**09 51 16.5**	**+0.8**
MMB	**Musomishta**	**3.29**	**46**	P		**Pn**	**09 50 39.2**	**+2.6**
MATE	**Matera**	**3.31**	**296**	⇓P		**Pn**	**09 50 38.0**	**+1.2**
MATE				⇓S		**Sn**	**09 51 16.6**	**+0.7**
PDG	**Podgorica**	**3.31**	**342**	⇑P		**Pn**	**09 50 37.7**	**+0.8**
PDG	**Podgorica**	**3.31**	**342**			**Pn**	**09 50 37.5**	**+0.6**
PDG	**Podgorica**	**3.31**	**342**	*e*Pn		**Pn**	**09 50 38.2**	**+1.3**
PDG				*i* Sn		**Sn**	**09 51 17.2**	**+1.0**
PDG	**Podgorica**	**3.31**	**342**	⇑*i*Pn		**Pn**	**09 50 37.6**	**+0.8**
PVY	**Plav**	**3.35**	**352**	*e*Pn		**Pn**	**09 50 38.4**	**+1.3**
PVY				*i* Sn		**Sn**	**09 51 18.2**	**+0.9**
CEME	**Cevo**	**3.51**	**339**	*e*Pn		**Pn**	**09 50 40.3**	**+0.7**
CEME				*i* Sn		**Sn**	**09 51 21.7**	**+0.6**
HCY	**Herceg Novi**	**3.55**	**334**	*e*Pn		**Pn**	**09 50 40.8**	**+0.6**
HCY				*i* Sn		**Sn**	**09 51 22.8**	**+0.7**
HCY	**Herceg Novi**	**3.55**	**334**	*e*Pn		**Pn**	**09 50 40.5**	**+0.3**
IVA	**Berane**	**3.63**	**352**	*e*Pn		**Pn**	**09 50 42.6**	**+1.3**
IVA				*i* Sn		**Sn**	**09 51 24.9**	**+0.7**
KOME	**Kolasin**	**3.66**	**347**	*e*Pn		**Pn**	**09 50 43.0**	**+1.2**
KOME				*i* Sn		**Sn**	**09 51 25.5**	**+0.5**
NKME	**Niksic**	**3.71**	**341**	*e*Pn		**Pn**	**09 50 43.5**	**+1.2**
NKME				*i* Sn		**Sn**	**09 51 26.6**	**+0.6**
CUC	**Castrocucco**	**3.78**	**282**			**Pn**	**09 50 43.9**	**+0.5**
CEL	**Celeste**	**3.83**	**256**			**Pn**	**09 50 44.0**	**-0.1**
PLNA	**Plana**	**3.84**	**33**	P		**Pn**	**09 50 47.3**	**+3.1**
TREB	**Trebinje**	**3.84**	**334**	*e*Pn		**Pn**	**09 50 42.5**	**-1.6**
VTS	**Vitosha**	**3.88**	**30**	P		**Pn**	**09 50 47.1**	**+2.3**
BRY	**Bratogost**	**3.94**	**337**	*e*Pn		**Pn**	**09 50 46.8**	**+1.1**
BRY				*i* Sn		**Sn**	**09 51 32.2**	**+0.2**
BRY	**Bratogost**	**3.94**	**337**	⇑*i*Pn		**Pn**	**09 50 46.3**	**+0.6**
RZN	**Rozhen**	**3.96**	**51**	P		**Pn**	**09 50 48.8**	**+2.8**
SJES	**Sjenica**	**4.01**	**353**	⇑*i*Pn		**Pn**	**09 50 48.3**	**+1.8**
BLSH	**Balsha**	**4.10**	**29**	P		**Pn**	**09 50 50.8**	**+3.0**
UPM	**Unac-Piva**	**4.13**	**342**	*e*Pn		**Pn**	**09 50 49.5**	**+1.2**
UPM				*i* Sn		**Sn**	**09 51 36.6**	**0.0**
UPM	**Unac-Piva**	**4.13**	**342**	*e*Pn		**Pn**	**09 50 48.8**	**+0.5**
PLE	**Pljevlja**	**4.15**	**348**	*e*Pn		**Pn**	**09 50 49.8**	**+1.3**
PLE				*i* Sn		**Sn**	**09 51 37.3**	**+0.2**
KLINJ	**Klinje**	**4.18**	**339**	*e*Pn		**Pn**	**09 50 47.7**	**-1.2**
RDO	**Rodhopi**	**4.20**	**62**			**Pn**	**09 50 50.8**	**+1.7**
PGB	**Panagyurishte**	**4.21**	**39**	P		**Pn**	**09 50 52.2**	**+3.0**
RUDO	**Rudo**	**4.43**	**348**	*e*Pn		**Pn**	**09 50 52.6**	**+0.3**
SGRT	**San Giovanni R**	**4.46**	**305**			**Pn**	**09 50 52.9**	**+0.1**
ALN	**Alexandroupoli**	**4.46**	**67**			**Pn**	**09 50 54.6**	**+1.9**
ALN	**Alexandroupoli**	**4.46**	**67**	P		**Pn**	**09 50 54.6**	**+1.9**
BBLS	**Lazi&#263i**	**4.57**	**349**	⇑*i*Pn		**Pn**	**09 50 56.0**	**+0.4**
MPEP	**Malo Peshtene**	**4.70**	**29**	P		**Pn**	**09 50 58.7**	**+2.7**
PAOL	**Paolisi**	**4.96**	**293**			**Pn**	**09 50 59.4**	**-0.2**
PLVB	**Pleven**	**5.09**	**35**	⇓P		**Pn**	**09 51 04.0**	**+2.7**
VAE	**Valguarnera**	**5.20**	**252**	Pn		**Pn**	**09 51 04.4**	**+1.6**
	11nm,0.5s,baz=79,slow=10,SNR=1.2							
VAE				Sn		**Sn**	**09 52 05.0**	**+2.2**
	0.9nm,0.3s,baz=11,slow=22,SNR=1.9							
IDI	**Anoyia**	**5.24**	**138**	Pn		**Pn**	**09 51 03.2**	**-0.2**
	3.9nm,0.3s,baz=318,slow=11,SNR=13							
IDI				Sn		**Sn**	**09 52 04.1**	**+0.3**
	7.7nm,0.3s,baz=302,slow=19,SNR=10.0							
IDI	**Anoyia**	**5.24**	**138**	Pn		**Pn**	**09 51 04.3**	**+0.8**
RAFF	**Raffo Rosso**	**5.34**	**249**	Pn		**Pn**	**09 51 03.2**	**-1.5**
ELND	**Elena**	**5.39**	**46**	⇑P		**Pn**	**09 51 07.7**	**+2.3**
BALB	**Balikesir**	**5.63**	**84**			**Pn**	**09 51 09.9**	**+1.1**
HERR	**Herculane**	**5.75**	**13**	⇓P		**Pn**	**09 51 12.1**	**+1.7**
FRGS	**Fruska Gora**	**5.91**	**354**	⇑*i*Pn		**Pn**	**09 51 13.0**	**+0.5**
BLY	**Banja Luka**	**6.03**	**336**	⇓P		**Pn**	**09 51 15.0**	**+0.8**
BLY	**Banja Luka**	**6.03**	**336**			**Pn**	**09 51 14.1**	**-0.2**
BLY	**Banja Luka**	**6.03**	**336**	⇑*i*Pn		**Pn**	**09 51 15.1**	**+0.8**
HUMR	**Humele**	**6.17**	**30**	⇑P		**Pn**	**09 51 19.4**	**+3.3**
MANT	**Manisa**	**6.24**	**95**	Pn		**Pn**	**09 51 18.9**	**+1.6**
AQU	**L'Aquila**	**6.28**	**302**	⇑*i*Pn		Pb	09 51 26.7	-7.7
GZR	**Gura Zlata**	**6.32**	**14**	⇑P		**Pn**	**09 51 20.0**	**+1.8**
GZR	**Gura Zlata**	**6.32**	**14**	P		**Pn**	**09 51 20.0**	**+1.8**
BZS	**Buzias**	**6.38**	**6**	⇑P		**Pn**	**09 51 19.4**	**+0.5**
BZS				⇓S		**Sn**	**09 52 33.7**	**+2.0**
BZS	**Buzias**	**6.38**	**6**	P		**Pn**	**09 51 19.4**	**+0.5**
KARP	**Karpathos**	**6.40**	**124**	Pn		**Pn**	**09 51 21.1**	**+1.7**
LOT	**Lotru**	**6.59**	**20**	⇑P		**Pn**	**09 51 23.6**	**+1.5**
GUMA	**Gualdo di Mace**	**6.67**	**307**	Pn		**Pn**	**09 51 22.7**	**-0.3**
ARG	**Arkhangelos**	**6.69**	**115**	Pn		**Pn**	**09 51 25.8**	**+2.6**
ARG	**Arkhangelos**	**6.69**	**115**	P		**Pn**	**09 51 25.8**	**+2.6**
NRCA	**Norcia**	**6.69**	**304**			**Pn**	**09 51 24.2**	**+0.9**
ARR	**Arges**	**6.77**	**25**	⇑P		**Pn**	**09 51 26.5**	**+2.1**
FDMO	**Fiordimonte**	**6.81**	**306**			**Pn**	**09 51 25.6**	**+0.6**
VOIR		**6.97**	**27**	⇑P		**Pn**	**09 51 29.7**	**+2.4**
VOIR		**6.97**	**27**	P		**Pn**	**09 51 29.6**	**+2.4**
MORH	**Mrgy, Hungar**	**7.08**	**349**	⇓P		**Pn**	**09 51 29.9**	**+1.3**
MORH	**Mrgy, Hungar**	**7.08**	**349**	⇑*i*Pn		**Pn**	**09 51 29.5**	**+0.9**
MURB	**Monte Urbino**	**7.28**	**306**	Pn		**Pn**	**09 51 32.3**	**+0.9**
MLR	**Muntele Rosu**	**7.35**	**31**	Pn		**Pn**	**09 51 34.6**	**+2.1**
	3.0nm,0.3s,baz=254,slow=20,SNR=18							
MLR				Sn		**Sn**	**09 52 55.2**	**-0.7**
	0.1nm,0.3s,baz=144,slow=18,SNR=1.0 14nm,0.6s							
MLR	**Muntele Rosu**	**7.35**	**31**	⇑P		**Pn**	**09 51 35.5**	**+3.0**
MLR	**Muntele Rosu**	**7.35**	**31**			**Pn**	**09 51 35.0**	**+2.5**
NEHR	**Nehoiu**	**7.44**	**33**	⇑P		**Pn**	**09 51 36.2**	**+2.6**
DOPR	**Dopca**	**7.55**	**26**	⇑P		**Pn**	**09 51 38.1**	**+3.0**
BORA	**Eskisehir**	**7.62**	**82**	Pn		**Pn**	**09 51 39.6**	**+3.5**
AKAS	**Kas**	**7.74**	**110**	Pn		**Pn**	**09 51 40.5**	**+2.6**
COVR	**Voineasa-Covas**	**7.75**	**30**	⇑P		**Pn**	**09 51 39.5**	**+1.7**
TURR	**Turia**	**7.85**	**29**	⇓P		**Pn**	**09 51 41.6**	**+2.4**
ISP	**Isparta**	**7.90**	**98**			**Pn**	**09 51 42.0**	**+2.1**
ISP	**Isparta**	**7.90**	**98**	P		**Pn**	**09 51 42.0**	**+2.1**
PLOR	**Plostina**	**7.93**	**32**	⇓P		**Pn**	**09 51 43.5**	**+3.2**
PLOR	**Plostina**	**7.93**	**32**	P		**Pn**	**09 51 43.5**	**+3.2**
VRI	**Vrincioaia**	**7.97**	**32**	⇑P		**Pn**	**09 51 44.1**	**+3.1**
VRI	**Vrincioaia**	**7.97**	**32**	P		**Pn**	**09 51 44.0**	**+3.1**
TRI	**Trieste**	**8.18**	**324**	Pn		**Pn**	**09 51 43.4**	**-0.3**
TRI	**Trieste**	**8.18**	**324**	P		**Pn**	**09 51 43.4**	**-0.3**
ONER	**Baraj Valea Uz**	**8.23**	**29**	⇑P		**Pn**	**09 51 47.5**	**+3.1**
SOKA	**Soboth**	**8.45**	**333**	*e*Pn		**Pn**	**09 51 47.2**	**-0.3**
	3.2nm,0.3s							
OBKA	**Obir**	**8.49**	**330**	Pn		**Pn**	**09 51 48.8**	**+0.8**
	9.4nm,0.5s,SNR=6.2							
PSZ	**Piszkesteto**	**8.65**	**357**	⇑P		**Pn**	**09 51 50.9**	**+0.7**
PSZ	**Piszkesteto**	**8.65**	**357**			**Pn**	**09 51 50.5**	**+0.2**
PSZ	**Piszkesteto**	**8.65**	**357**	P		**Pn**	**09 51 50.9**	**+0.7**
BIR	**Birlad**	**8.68**	**34**	⇓P		**Pn**	**09 51 52.4**	**+1.9**
BIR	**Birlad**	**8.68**	**34**	P		**Pn**	**09 51 52.4**	**+1.9**
ARSA	**Arzberg**	**8.79**	**337**			**Pn**	**09 51 52.8**	**+0.7**
ARSA	**Arzberg**	**8.79**	**337**	*e*Pn		**Pn**	**09 51 53.3**	**+1.2**
	2.1nm,0.2s							
BURAR	**Bucovina Array**	**8.98**	**20**	⇑P		**Pn**	**09 51 57.7**	**+2.9**
BURAR	**Bucovina Array**	**8.98**	**20**	Pn		**Pn**	**09 51 56.4**	**+1.6**
BURAR	**Bucovina Array**	**8.98**	**20**	P		**Pn**	**09 51 57.6**	**+2.9**
TEOL	**Teolo**	**8.99**	**315**	Pn		**Pn**	**09 51 54.1**	**-0.7**
STAL	**STALIGIAL**	**9.08**	**323**	Pn		**Pn**	**09 51 55.3**	**-0.8**
CTI	**Castel Tesino**	**9.45**	**319**			**Pn**	**09 52 00.3**	**-0.9**
CTI	**Castel Tesino**	**9.45**	**319**	P		**Pn**	**09 52 00.3**	**-0.9**
KEST	**Kesra**	**9.63**	**

comp=Z,7.0nm,0.8s
EKA Eskdalemuir Ar 22.58 323 P P 09 54 45.2 -0.1
EKA pmax pmax
comp=Z,5.0nm,0.9s
ESK Eskdalemuir 22.60 323 P P 09 54 45.2 -0.3
ESK IAmb IAmb 09 55 12.6
comp=Z,14nm,1.1s
ESK Eskdalemuir 22.60 323 P P 09 54 45.2 -0.3
ESK pmax pmax
comp=Z,14nm,1.1s
BELG Belogornoye 22.77 46 e P P 09 54 48.2 +0.9
BELG pmax pmax
comp=Z,4.0nm,1.2s
AKTO Aktyubinsk 28.47 55 P P 09 55 38.6 -1.4
comp=Z,2.0nm,0.5s,baz=267,slow=7.0,SNR=5.2
comp=Z,2.0nm,0.5s
AB31 Akbulak array 29.57 57 P P 09 55 48.3 -1.4
ABKAR Akbulak array 29.57 57 P P 09 55 48.5 -1.2
ARTI Arti 30.09 43 P P 09 55 53.2 -1.0
comp=Z,9.0nm,0.6s,baz=249,slow=7.2,SNR=12
comp=Z,9.0nm,0.6s
ARTI Arti 30.09 43 P P 09 55 52.7 -1.5
ARTI Arti 30.09 43 c i P P 09 55 53.1 -1.1
ARTI 09 56 46.4
ARTI S S **10 00 52.8 +0.4**
ARTI SS SnSn **10 02 23.5 -1.2**
ARTI pmax pmax
comp=Z,7.0nm,0.6s
ARCES ARCESS Array B 30.43 3 P P 09 55 55.7 -1.4
comp=Z,1.3nm,0.4s,baz=190,slow=9.1,SNR=13
comp=Z,1.3nm,0.4s
ARCES ARCESS Array B 30.43 3 P P 09 55 55.8 -1.3
TORD Torodi Ar. Bea 30.94 218 P P 09 56 02.3 +0.2
comp=Z,2.2nm,0.6s,baz=29,slow=7.9,SNR=14
comp=Z,2.2nm,0.6s
BORK Borovoye 36.32 51 P P 09 56 48.1 -0.5
BORK IAmb IAmb 09 56 48.9
comp=Z,3.2nm,0.6s
BORK Borovoye 36.32 51 c e P P 09 56 48.3 -0.3
BORK pmax pmax
comp=Z,3.0nm,0.9s
BVAR Borovoye Array 36.36 51 P P 09 56 48.5 -0.5
comp=Z,2.2nm,0.6s,baz=289,slow=9.1,SNR=11
comp=Z,2.2nm,0.6s
KK31 Karatay Array 37.29 68 P 09 56 56.5 -0.6
KK31 IAmb IAmb 09 57 02.2
comp=Z,2.7nm,0.8s
KK31 Karatay Array 37.29 68 P P 09 56 56.5 -0.6
KK31 pmax pmax
comp=Z,3.0nm,0.8s
KKAR Karatay Array 37.29 68 P 09 56 56.9 -0.2
KKAR Karatay Array 37.29 68 P P 09 56 56.9 -0.2
CHGR Chuyangaron 37.38 75 P 09 56 58.0 +0.1
CHGR Chuyangaron 37.38 75 P P 09 56 58.1 +0.1
CHGR pmax pmax
comp=Z,20nm,0.8s
GAR Garm 38.15 74 P 09 57 04.7 +0.2
BTK Batken 38.23 72 P P 09 57 04.7 -0.4
BTK IAmb IAmb 09 57 09.5
comp=Z,5.1nm,0.9s
BTK Batken 38.23 72 P P 09 57 04.7 -0.4
BTK pmax pmax
comp=Z,5.0nm,0.9s
SPITS Spitsbergen Ar 39.05 359 P P 09 57 11.6 +0.1
comp=Z,7.9nm,0.9s,baz=158,slow=12,SNR=4.1
comp=Z,7.9nm,0.9s
DBIC Dimbokro 39.76 222 P P 09 57 19.3 +1.3
comp=Z,2.4nm,0.7s,baz=296,slow=3.8,SNR=2.0
comp=Z,2.4nm,0.7s
AAK Ala-Archa 40.25 67 P P 09 57 22.7 +0.6
comp=Z,0.9nm,0.4s,baz=292,slow=19,SNR=3.6
comp=Z,0.9nm,0.4s
AAK Ala-Archa 40.25 67 P P 09 57 22.5 +0.4
AAK Ala-Archa 40.25 67 e P P 09 57 22.0 -0.1
KURBB Kurchatov Arra 41.52 54 P P 09 57 31.1 -1.1
comp=Z,3.2nm,0.7s,baz=285,slow=9.2,SNR=22
comp=Z,3.2nm,0.7s
KURK Kurchatov 41.56 54 e P P 09 57 31.6 -0.9
KURK pmax pmax
comp=Z,5.0nm,1.1s
MAKZ Makanchi 44.45 59 P P 09 57 54.8 -1.3
MAKZ Makanchi 44.45 59 P P 09 57 54.8 -1.3
MAKZ pmax pmax
comp=Z,2.0nm,0.9s
MK31 Makanchi Array 44.67 59 c i P P 09 57 56.6 -1.2
MKAR Makanchi Array 44.67 59 P P 09 57 56.7 -1.1
comp=Z,6.0nm,0.5s,baz=282,slow=7.4,SNR=65
comp=Z,6.0nm,0.5s
ZALV Zalesovo Beam 44.91 49 P P 09 57 58.4 -1.1
comp=Z,12nm,0.4s,baz=276,slow=8.5,SNR=33
comp=Z,12nm,0.4s
ZALV Zalesovo Beam 44.91 49 P P 09 57 58.5 -1.0
NRIK Noril'sk 45.78 27 P P 09 58 07.0 +0.8
comp=Z,3.3nm,0.5s,baz=256,slow=5.1,SNR=10
comp=Z,3.3nm,0.5s
NRIK Noril'sk 45.78 27 i P P 09 58 07.3 +1.1
NRIK pmax pmax
comp=Z,7.0nm,0.9s
EVN Everest 55.17 80 P 09 59 17.3 -1.3
EVN IAmb IAmb 09 59 34.0
comp=Z,2.6nm,0.8s
SCHQ Schefferville 57.71 317 P P 09 59 35.4 -0.1
comp=Z,1.7nm,0.8s,baz=61,slow=8.6,SNR=1.8
comp=Z,1.7nm,0.8s
TIXI Tiksi 58.59 21 e P P 09 59 41.5 +0.1
TIXI pmax pmax
comp=Z,8.0nm,2.3s
SONM Songino Array 59.70 51 P P 09 59 48.6 -1.1
comp=Z,0.9nm,0.7s,baz=289,slow=7.5,SNR=5.2
comp=Z,0.9nm,0.7s
SONM Songino Array 59.70 51 P P 09 59 49.1 -0.6
SONM Songino Array 59.70 51 P P 09 59 49.1 -0.6
SONM pmax pmax
comp=Z,1.0nm,0.7s
A36M Sachs Harbour 66.46 349 P P 10 00 34.1 +0.2
A36M IAmb IAmb 10 00 35.1
comp=Z,2.8nm,0.8s
INK Inuvik 70.99 350 P P 10 01 01.8 -0.4
comp=Z,0.3nm,0.4s,baz=10,slow=8.1,SNR=4.3
comp=Z,0.3nm,0.4s
SEY Seymchan 71.08 21 P P 10 01 02.1 -0.7
comp=Z,0.6nm,0.3s,baz=279,slow=8.3,SNR=3.5
comp=Z,0.6nm,0.3s
F31M Tsiigehtchic 71.83 350 P P 10 01 07.3 0.0
F31M IAmb IAmb 10 01 18.0
comp=Z,2.1nm,0.8s
YKA Yellowknife Ar 72.38 340 P P 10 01 10.3 -0.4
comp=Z,0.5nm,0.8s,baz=27,slow=5.4,SNR=6.1
comp=Z,0.5nm,0.8s
YKA Yellowknife Ar 72.38 340 P P 10 01 10.7 0.0
G31M Satah River 72.39 350 P P 10 01 09.9 -0.8
G31M IAmb IAmb 10 01 10.8
comp=Z,1.8nm,0.8s
BMAR Burnt Mountain 73.02 354 P P 10 01 15.6 +1.1
ULM Lac du Bonnet 74.86 323 P P 10 01 25.9 +0.4
comp=Z,1.4nm,0.7s,baz=63,slow=2.3,SNR=2.7
comp=Z,1.4nm,0.7s
ILAR Eielson Array 75.82 355 P P 10 01 31.2 +0.5
comp=Z,0.3nm,0.7s,baz=358,slow=3.2,SNR=5.9
comp=Z,0.3nm,0.7s
KSRS Korea Array 78.57 51 P P 10 01 45.9 -0.8
comp=Z,1.0nm,0.6s,baz=314,slow=5.2,SNR=4.8
comp=Z,1.0nm,0.6s
MJAR Matsushiro Arr 85.16 46 P P 10 02 21.1 -0.3
comp=Z,0.8nm,0.7s,baz=328,slow=4.3,SNR=3.0
comp=Z,0.8nm,0.7s
PDAR Pinedale Array 86.68 326 P P 10 02 29.4 +0.2
comp=Z,0.2nm,0.6s,baz=17,slow=5.3,SNR=2.0
comp=Z,0.2nm,0.6s
TXAR Lajitas Array 94.27 314 P P 10 03 04.9 +0.2
comp=Z,0.4nm,0.8s,baz=44,slow=3.2,SNR=4.9
comp=Z,0.4nm,0.8s
ASAR Alice Springs 122.21 96 PKP PKPdf 10 08 39.0 -1.2
comp=Z,0.6nm,0.9s,baz=304,slow=2.0,SNR=6.1

*LDG **25** 09:49:55.8±0.1, 44°.53N×7°.21E, h10km, Md1.4/1, Ml1.4/2, Error ellipse: s-maj=1.4km s-min=0.8km az=60.0*
GEN 25 09:49:55.0, 44°.53N×7°.19E, h13km±1km, Ml0.4, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PZZ	**Stroppo**	**0.06**	**252**	P	Pg	09 49 58.5	+0.9
PZZ				S	Sg	09 50 00.1	+0.5
SURF	**Saint Ours**	**0.28**	**261**	P	Pb	09 50 02.0	0.0
SURF				S	Sb	09 50 05.9	-0.7
STV	**Saint Anna di V**	**0.29**	**161**	P	Pb	09 50 01.9	-0.3
STV				S	Sg	09 50 05.6	+0.4
BHB	**Bricherasio**	**0.32**	**9**	P	Pb	09 50 02.2	-0.5
BHB				S	Sg	09 50 06.2	+0.3
ENR	**Entracque**	**0.34**	**151**	P	Pn	09 50 04.7	-1.1
ENR				S	Sg	09 50 06.9	+0.4
ISO	**Isola**	**0.36**	**197**	P	Pb	09 50 03.7	+0.5
ISO				S	Sb	09 50 08.3	-0.5
MBDF	**Montbardon**	**0.36**	**304**	e Pg	Pb	09 50 03.3	-0.1
MBDF				e Sg	Sb	09 50 08.4	-0.7
	5.4nm,0.4s						
RRL	**Rocca Remolon**	**0.49**	**324**	P	Pb	09 50 05.5	-0.1
RRL				S	Sb	09 50 12.3	-0.6
RSP	**Reno Superiore**	**0.62**	**5**	P	Pg	09 50 07.1	-0.1
RSP				S	Sg	09 50 15.9	+0.4
ORIF	**Oris-en-Rattie**	**1.02**	**293**	e Pg	Pn	09 50 15.3	+0.2
ORIF				e Sg	Sg	09 50 27.8	0.0
	0.4nm,0.2s						
LMR	**La Mourre**	**1.29**	**203**	e Pg	Pg	09 50 19.8	+0.1
LMR				e Sg	Sg	09 50 36.5	0.0
	1.2nm,0.2s						

*ISK **25** 09:51:42.3, 39°.15N×27°.79E, h8km, ML2.7/34*
AFAD 25 09:51:42.4, 39°.17N×27°.80E, h7km±4km, ML2.4, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOMA	**Soma-Manisa**	**0.21**	**267**	Pg	Pg	09 51 46.9	+0.3
SOMA				Sg	Sg	09 51 50.3	+0.9
STEP	**BALIKESIR_Sava**	**0.22**	**343**	P	Pg	09 51 47.7	+0.9
STEP				IAML		09 51 51.0	
	comp=N,3μm,0.7s						
STEP				S	Sg	09 51 51.1	+1.4
STEP				IAML		09 51 52.0	
	comp=E,3μm,0.3s						
AKHS	**Akhisar**	**0.29**	**178**	P	Pg	09 51 48.8	+0.7
AKHS				S	Sb	09 51 53.7	-1.3
AKHS				IAML		09 51 55.0	
	comp=E,721nm,0.2s						
AKS	**Akhisar**	**0.29**	**178**	Pg	Pg	09 51 48.3	+0.2
AKS				Sg	Sg	09 51 52.6	+0.7
GORD	**Gordes-Manisa**	**0.39**	**132**	Pg	Pg	09 51 50.3	+0.3
GORD				Sg	Sg	09 51 56.1	+1.0
GOMA	**Golmarmara-Man**	**0.47**	**169**	Pg	Pg	09 51 51.5	+0.1
BALB	**Balikesir**	**0.47**	**7**	Pg	Pb	09 51 52.6	-0.5
KTTT	**Salihli**	**0.53**	**155**	P	Pg	09 51 53.0	+0.4
KTTT				S	Sg	09 52 00.6	+1.0
KTTT				IAML		09 52 01.0	
	comp=N,322nm,0.6s						
CAMT	**Merkez**	**0.57**	**223**	P	Pb	09 51 54.2	-0.4
CAMT				S	Sb	09 52 02.3	-0.7
CAMT				IAML		09 52 06.0	
	comp=N,236nm,0.5s						
BKES	**Balkesir-Mer**	**0.57**	**10**	P	Pg	09 51 54.1	+0.6
BKES				S	Sg	09 52 00.5	-0.5
BKES				IAML		09 52 09.0	
	comp=E,148nm,0.2s						
BKES				IAML		09 52 09.0	
	comp=N,91nm,0.1s						
BALY	**Balya**	**0.59**	**346**	P	Pg	09 51 54.4	+0.6
BALY				S	Sg	09 52 01.0	-0.4
BALY				IAML		09 52 03.0	
	comp=E,298nm,0.3s						
BALY				IAML		09 52 07.0	
	comp=N,293nm,0.6s						
ZEDA	**zmir-Bergama**	**0.60**	**251**	P	Pb	09 51 54.8	-0.4
ZEDA				S	Sg	09 52 02.6	+0.8
ZEDA				IAML		09 52 03.0	
	comp=N,361nm,0.2s						
BUHA	**Balikesir, Bur**	**0.65**	**301**	P	Pb	09 51 55.7	-0.5
BUHA				S	Sb	09 52 05.4	-0.1
BUHA				IAML		09 52 10.0	
	comp=E,90nm,0.3s						
DURS	**Dursunbey**	**0.68**	**50**	P	Pb	09 51 56.1	-0.5
DURS				S	Sg	09 52 04.8	+0.5
DURS				IAML		09 52 06.0	
	comp=E,155nm,0.3s						
DURS				IAML		09 52 12.0	
	comp=N,107nm,0.5s						
DKL	**Dikili**	**0.70**	**262**	Pg	Pg	09 51 56.2	+0.2
DST	**Dursunbey**	**0.77**	**55**	Pg	Pb	09 51 57.9	-0.2
SUSR	**Susurluk-Balik**	**0.82**	**15**	Pg	Pb	09 51 58.7	-0.3
CMHT	**Manyas**	**0.85**	**9**	P	Pg	09 51 59.0	+0.2
CMHT				S	Sg	09 52 09.8	-0.1
CMHT				IAML		09 52 13.0	
	comp=E,439nm,0.4s						
CMHT				IAML		09 52 15.0	
	comp=N,255nm,0.3s						
AYVA	**Ayvalik**	**0.88**	**280**	P	Pg	09 51 59.5	+0.3
AYVA				S	Sg	09 52 10.3	-0.3
AYVA				IAML		09 52 13.0	
	comp=E,173nm,0.5s						
AYVA				IAML		09 52 14.0	
	comp=N,152nm,0.5s						
GONE	**Gonen-Balikesi**	**0.88**	**354**	Pg	Pb	09 51 59.9	-0.1
YENI	**Yenice-Canakka**	**0.88**	**331**	Pg	Pb	09 51 59.8	-0.2
BAGT	**Foa**	**0.90**	**236**	P	Pb	09 52 00.2	-0.1
BAGT				S	Sg	09 52 11.8	+0.4
BAGT				IAML		09 52 14.0	
	comp=E,250nm,0.6s						
BAGT				IAML		09 52 15.0	
	comp=N,138nm,0.6s						
ODEM	**Odemis-Izmir**	**0.92**	**166**	Pg	Pg	09 52 00.1	+0.1
SMAA	**Simav-Kutahya**	**0.92**	**94**	Pg	Pb	09 52 00.5	-0.2
SIMA	**Simav-Kutahya**	**0.92**	**95**	Pg	Pb	09 52 00.5	-0.3
KULA	**Kula-Manisa**	**0.94**	**134**	Pg	Pg	09 52 00.6	+0.2
BLCB	**Balcova**	**0.98**	**218**	Pg	Pg	09 52 01.2	0.0
CANM	**Can-anakkale**	**1.02**	**326**	Pg	Pb	09 52 02.5	+0.1
SHAP	**Saphane-Kutahy**	**1.11**	**97**	Pn	Pb	09 52 04.1	+0.1
BAYC	**CANAKKALE_Bayr**	**1.13**	**301**	P	Pn	09 52 04.4	-0.2
BAYC				S	Sg	09 52 18.4	-0.4
BAYC				IAML		09 52 21.0	
	comp=N,56nm,0.2s						
KCTX	**Karacabey (Bur**	**1.18**	**21**	Pn	Pn	09 52 05.4	+0.1
EDC	**Edincik**	**1.18**	**2**	Pn	Pn	09 52 05.5	+0.2
BAND	**Balkesir-Ban**	**1.21**	**11**	P	Pg	09 52 05.5	0.0
BAND				S	Sg	09 52 19.1	-2.1
BAND				IAML		09 52 23.0	
	comp=E,175nm,0.2s						
BAND				IAML		09 52 24.0	
	comp=N,103nm,0.3s						
ORLT	**Orhaneli**	**1.22**	**44**	Pn	Pn	09 52 06.4	+0.5
AYDB	**Zeytinkoy-Aydi**	**1.22**	**177**	Pn	Pg	09 52 05.4	-0.4
BIGA	**Biga-Canakkale**	**1.22**	**336**	Pn	Pb	09 52 05.5	-0.3
URLA	**Izmir**	**1.24**	**230**	Pn	Pb	09 52 05.6	-0.6
GEDZ	**Gediz**	**1.26**	**95**	Pn	Pg	09 52 06.7	+0.2
EZNE	**Ezine-Canakkal**	**1.26**	**298**	Pn	Pg	09 52 06.7	+0.2
NAZL	**Nazilli-Aydin**	**1.26**	**162**	Pn	Pn	09 52 06.1	-0.4
LAPS	**Lapseki, ANA**	**1.31**	**326**	P	Pn	09 52 06.4	-0.8
LAPS				S	Sb	09 52 24.1	-0.3
LAPS				IAML		09 52 26.0	
	comp=N,52nm,0.2s						
LAPS				IAML		09 52 29.0	
	comp=E,56nm,0.6s						
TVSB	**Tavsanli**	**1.32**	**77**	Pn	Pg	09 52 07.7	0.0
EZN	**Ezine**	**1.32**	**300**	Pn	Pb	09 52 07.4	-0.1
COMU	**Canakkale**	**1.39**	**313**	Pn	Pn	09 52 08.3	+0.1
ULDT	**Uludag**	**1.42**	**46**	P	Pn	09 52 08.5	-0.2
ULDT				S	Sb	09 52 27.2	-0.4
ULDT				IAML		09 52 30.0	
	comp=N,89nm,0.3s						
ULDT				IAML		09 52 31.0	
	comp=E,56nm,0.2s						
MDNY	**Mudanya-Bursa**	**1.46**	**34**	Pn	Pn	09 52 09.1	-0.1
SIGR	**SIGRI**	**1.51**	**272**	Pn	Pn	09 52 10.0	+0.1
GCAM	**G?zelcaml?**	**1.53**	**197**	Pn	Pn	09 52 10.2	+0.1
RKY	**Sarkoy-Tekirda**	**1.59**	**343**	Pn	Pb	09 52 11.7	-0.5
GELI	**Tayfur-Gelibol**	**1.60**	**321**	Pn	Pn	09 52 11.4	+0.3
ARMT	**Armutlu**	**1.62**	**30**	Pn	Pb	09 52 12.4	-0.2
GAZK	**Gazikoy-TEKIRD**	**1.62**	**347**	Pn	Pn	09 52 11.6	+0.2
ERIK	**Erikli-Kesan**	**1.80**	**327**	Pn	Pn	09 52 14.6	+0.8

IDC 25 10:00:32.0±4.3, 5°.88S×149°.09E, h0km, mb3.0/2, mbtmp3.2/3, ML0.7/1, Error ellipse: s-maj=153.2km s-min=39.1km az=111.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.00**	**209**	Pn	Pn	10 01 36.1	+1.6
	0.4nm,0.3s,baz=68,slow=19,SNR=0.7						
PMG				Sn	Sn	10 02 25.1	+2.9
	2.4nm,0.3s,baz=56,slow=3.6,SNR=7.1						
	13nm,0.9s						
WRA	**Warramunga Arr**	**20.03**	**224**	P	P	10 05 06.9	+0.2
	0.6nm,0.7s,baz=48,slow=10,SNR=6.1						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**22.95**	**218**	P	P	10 05 36.2	-1.9
	0.4nm,0.9s,baz=59,slow=8.9,SNR=5.5						
	0.4nm,0.9s						
TORD	**Torodi Ar. Bea**	**147.07**	**285**	PKPbc	PKPbc	10 20 18.1	+0.1
	0.3nm,0.6s,baz=63,slow=2.7,SNR=1.6						

KRSC 25 10:08:11.5±1.7, 49°.30N×158°.42E, h40km±40km, Ml4.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.03**	**314**	e P	Pn	10 08 43.5	+0.4
SKR				e S	Sn	10 09 08.3	+1.1
PAU	**Pauzhetka**	**2.40**	**335**	e P	Pn	10 08 51.0	+2.8
PAU				e S	Sn	10 09 19.7	+3.4
KDTR	**Khodutka, Kamc**	**2.52**	**355**	e P	Pn	10 08 53.2	+3.3
KDTR				e S	Sn	10 09 23.1	+3.8
ASAK	**Asacha**	**3.10**	**354**	e P	Pn	10 09 01.8	+3.8
RUS	**Russkaya**	**3.14**	**1**	e P	Pn	10 09 01.9	+3.5
RUS				e S	Sn	10 09 38.2	+3.7
MIPR	**Malaya Ipel'ka**	**3.16**	**341**	e P	Pn	10 09 02.1	+3.5
MTVR	**Mutnovka**	**3.19**	**357**	e P	Pn	10 09 03.2	+4.0
MTVR				e S	Sn	10 09 40.2	+4.2
GRL	**Gorelyy**	**3.26**	**356**	e P	Pn	10 09 04.4	+4.2
GRL				e S	Sn	10 09 42.9	+5.1
KRMR	**Karymshinskiy**	**3.54**	**357**	e P	Pn	10 09 08.4	+4.5
APC	**Apacha**	**3.71**	**348**	e P	Pn	10 09 10.7	+4.4
PET	**Petropavlovsk**	**3.73**	**2**	e P	Pn	10 09 10.4	+4.0
DALK	**Dalny**	**3.74**	**3**	e P	Pn	10 09 10.7	+4.1
UGLR	**Uglovaya**	**3.92**	**4**	e P	Pn	10 09 14.0	+4.8
SPN	**Mys Shipunski**	**3.94**	**14**	e P	Pn	10 09 12.9	+3.7
SPN				e S	Sn	10 09 58.6	+4.4
AVH	**Avacha**	**3.98**	**3**	e P	Pn	10 09 14.5	+4.5
SMAR	**Somma**	**3.98**	**3**	e P	Pn	10 09 15.0	+4.9
KOK	**Koryaka**	**4.00**	**2**	e P	Pn	10 09 15.2	+4.9
KRER	**Koryakskii**	**4.01**	**3**	e P	Pn	10 09 15.0	+4.4
KRX	**Arik**	**4.07**	**2**	e P	Pn	10 09 15.7	+4.4
GNL	**Ganaly**	**4.41**	**356**	e P	Pn	10 09 20.6	+4.7
KBTR	**Krutoberegovo**	**7.42**	**19**	e P	Pn	10 10 01.0	+4.0

*IDC **25** 10:17:34.0±1.3, 15°.80S×72°.36W, h0km, mb3.5/3, mbtmp3.4/6, ML3.1/3, MS3.6/3, Error ellipse: s-maj=36.6km s-min=24.8km az=28.0*
ISC 25 10:17:46.5±1.3, 15°.95S±0°.2×72°.2W±0°.1, h100km, n9, σ0°.81/5, Southern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**3.94**	**96**	Pn	Pn	10 18 40.2	-5.2
	0.6nm,0.3s,baz=282,slow=8.2,SNR=8.3						
	0.8nm,0.4s						
NNA	**Nana**	**5.95**	**310**	Pn	Pn	10 19 02.9	-9.2
	0.9nm,0.3s,baz=134,slow=17,SNR=1.8						
	3.7nm,0.5s						
SIV	**San Ignacio**	**10.72**	**92**	Pn	Pn	10 20 10.5	-6.5
	baz=243,slow=17,SNR=5.8						
SIV				Sn	**Sn**	**10 22 14.8**	**-0.4**
	baz=298,slow=18,SNR=1.2						
SIV				LR	LR	10 24 44.7	
	comp=Z,472nm,18.4s,baz=300,slow=40						
	1.0nm,0.5s						
PLCA	**Paso Flores**	**24.77**	**177**	P	**P**	**10 22 58.9**	**-0.1**
	1.7nm,1.1s,baz=1.1,slow=11,SNR=4.3						
	1.7nm,1.1s						
SJG	**San Juan**	**34.34**	**10**	LR	LR	10 39 51.4	
	comp=Z,58nm,19.4s,baz=244,slow=39						
TORD	**Torodi Ar. Bea**	**78.57**	**73**	P	**P**	**10 29 38.5**	**+0.9**
	0.6nm,1.1s,baz=248,slow=4.1,SNR=1.5						
	0.6nm,1.1s						
MDT	**Midelt**	**80.70**	**52**	LR	LR	11 02 47.6	
	comp=Z,33nm,21.8s,baz=261,slow=34						
YKA	**Yellowknife Ar**	**84.92**	**342**	P	**P**	**10 30 09.6**	**-0.3**
	0.2nm,0.9s,baz=144,slow=3.5,SNR=3.6						
	0.2nm,0.9s						
SONM	**Songino Array**	**148.15**	**2**	PKPbc	**PKPbc**	**10 37 20.3**	**-0.5**
	0.7nm,0.7s,baz=347,slow=5.9,SNR=5.8						

*IDC **25** 10:19:43.9±0.9, 49°.26N×157°.89E, h0km, mb3.6/9, mbtmp3.6/11, ML2.6/2, Error ellipse: s-maj=23.7km s-min=18.2km az=136.0*
*MOS **25** 10:19:48.1±1.0, 49°.32N×157°.87E, h42km, mb4.0/5, Error ellipse: s-maj=19.5km s-min=4.8km az=86.9*
*KRSC **25** 10:19:48.7±1.6, 49°.52N×158°.34E, h42km±44km, Ml4.0*
ISC 25 10:19:49.2±0.8, 49°.31N±0°.07×158°.02E±0°.07, h35km, n64, σ1°.13/77, mb3.6/10, 1C, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.84**	**319**	e PN	**Pn**	**10 20 17.4**	**-0.8**
SKR				e S	**Sn**	**10 20 40.2**	**-0.1**
SKR				pmax	pmax		
	comp=Z,223nm,0.6s						
SKR				smax	smax		
	comp=N,2μm,0.4s						
SKR				smax	smax		
	comp=E,1μm,0.2s						
SKR	**Severo-Kuril's**	**1.84**	**319**	e P	**Pn**	**10 20 17.5**	**-0.8**
SKR				e S	**Sn**	**10 20 40.3**	**-0.1**
PAU	**Pauzhetka**	**2.29**	**341**	PN	**Pn**	**10 20 24.5**	**+0.1**
PAU				S	**Sn**	**10 20 52.3**	**+0.9**
PAU	**Pauzhetka**	**2.29**	**341**	e P	**Pn**	**10 20 24.5**	**+0.1**
PAU				e S	**Sn**	**10 20 52.4**	**+0.9**
KDTR	**Khodutka, Kamc**	**2.50**	**1**	PN	**Pn**	**10 20 26.5**	**-0.8**
KDTR				S	**Sn**	**10 20 55.0**	**-1.5**
KDTR	**Khodutka, Kamc**	**2.50**	**1**	e P	**Pn**	**10 20 26.6**	**-0.8**
KDTR				e S	**Sn**	**10 20 55.1**	**-1.5**
ASAK	**Asacha**	**3.08**	**359**	PN	**Pn**	**10 20 35.0**	**-0.3**
ASAK				S	**Sn**	**10 21 09.6**	**-1.3**
ASAK	**Asacha**	**3.08**	**359**	e P	**Pn**	**10 20 35.1**	**-0.3**
ASAK				e S	**Sn**	**10 21 09.6**	**-1.3**
RUS	**Russkaya**	**3.14**	**5**	PN	**Pn**	**10 20 35.9**	**-0.2**
RUS				S	**Sn**	**10 21 10.2**	**-2.1**
RUS	**Russkaya**	**3.14**	**5**	e P	**Pn**	**10 20 35.9**	**-0.2**
RUS				e S	**Sn**	**10 21 10.2**	**-2.1**
MTVR	**Mutnovka**	**3.18**	**2**	PN	**Pn**	**10 20 36.4**	**-0.3**
MTVR				S	**Sn**	**10 21 11.8**	**-1.6**
MTVR	**Mutnovka**	**3.18**	**2**	e P	**Pn**	**10 20 36.4**	**-0.3**
MTVR				e S	**Sn**	**10 21 11.8**	**-1.6**
GRL	**Gorelyy**	**3.24**	**1**	PN	**Pn**	**10 20 37.6**	**0.0**
GRL				S	**Sn**	**10 21 14.3**	**-0.7**
GRL	**Gorelyy**	**3.24**	**1**	e P	**Pn**	**10 20 37.6**	**0.0**
GRL				e S	**Sn**	**10 21 14.4**	**-0.7**
KRMR	**Karymshinskiy**	**3.52**	**1**	PN	**Pn**	**10 20 41.8**	**+0.5**
KRMR	**Karymshinskiy**	**3.52**	**1**	e P	**Pn**	**10 20 41.8**	**+0.5**
PET	**Petropavlovsk**	**3.74**	**6**	e PN	**Pn**	**10 20 45.2**	**+0.9**
PET				e S	**Sn**	**10 21 26.7**	**-0.3**
PET				pmax	pmax		
	comp=Z,31nm,0.3s						
PET				smax	smax		
	comp=N,85nm,0.5s						
PET				smax	smax		
	comp=E,59nm,0.6s						
PET	**Petropavlovsk**	**3.74**	**6**	e P	**Pn**	**10 20 44.8**	**+0.6**
PET				e S	**Sn**	**10 21 25.6**	**-1.4**
DALK	**Dalny**	**3.75**	**7**	PN	**Pn**	**10 20 44.7**	**+0.2**
DALK	**Dalny**	**3.75**	**7**	e P	**Pn**	**10 20 44.8**	**+0.2**
DALK				e S	**Sn**	**10 21 25.6**	**-1.8**
PETK	**Petropavlovsk-**	**3.81**	**357**	Pn	**Pn**	**10 20 45.8**	**+0.6**
	comp=E,0.9nm,0.3s,baz=204,slow=13,SNR=15						
PETK				Sn	**Sn**	**10 21 31.4**	**+2.7**
	comp=E,1.1nm,0.3s,baz=192

KRX	Arik	4.07	5	*e*P		Pn	10 20 50.1	+1.1	
GNL	Ganaly	4.39	359	PN		Pn	10 20 55.1	+1.7	
GNL	Ganaly	4.39	359	*e*P		Pn	10 20 55.1	+1.7	
KBTR	Krutoberegovo	7.49	21	PN		Pn	10 21 35.5	-0.3	
KBTR	Krutoberegovo	7.49	21	*e*P		Pn	10 21 35.5	-0.3	
SHEM	Shemya Is, Ala	10.69	65	Pn		Pn	10 22 17.9	-1.6	
	comp=E,1.5nm,0.3s,baz=268,slow=17,SNR=3.5								
SHEM				Sn		Sn	10 24 08.9	-9.0	
	comp=E,1.4nm,0.3s,baz=258,slow=20,SNR=1.7								
ASAJ	Asahikawa	11.79	250	Pn		Pn	10 22 33.2	-1.5	
	comp=E,0.1nm,0.3s,baz=52,slow=12,SNR=1.9								
	comp=E,14nm,1.3s								
H11N2	WAKE ISLAND Hy	30.36	163	T		T	10 57 49.0		
	baz=348,slow=76,SNR=4.8								
H11N3	WAKE ISLAND Hy	30.38	163	T		T	10 57 51.8		
	baz=348,slow=76,SNR=5.2								
H11N1	WAKE ISLAND Hy	30.38	163	T		T	10 57 50.9		
	baz=348,slow=76,SNR=4.7								
H11S1	WAKE ISLAND Hy	31.52	164	T		T	10 59 15.8		
	baz=349,slow=76,SNR=5.7								
H11S3	WAKE ISLAND Hy	31.53	164	T		T	10 59 15.5		
	baz=349,slow=76,SNR=6.4								
H11S2	WAKE ISLAND Hy	31.54	164	T		T	10 59 19.7		
	baz=349,slow=76,SNR=5.6								
COLA	College	32.06	41	⇑*i*P		P	10 26 13.7	+1.5	
ILAR	Eielson Array	32.47	41	P		P	10 26 15.0	-0.8	
	comp=E,0.3nm,0.6s,baz=248,slow=7.6,SNR=6.0								
	comp=E,0.3nm,0.6s								
ILAR	Eielson Array	32.47	41	P		P	10 26 15.0	-0.8	
ZALV	Zalesovo Beam	43.81	305	P		P	10 27 49.4	-1.8	
	comp=E,0.5nm,0.5s,baz=72,slow=6.2,SNR=1.9								
	comp=E,0.5nm,0.5s								
YKA	Yellowknife Ar	46.88	39	P		P	10 28 16.7	+1.3	
	comp=E,0.7nm,0.8s,baz=300,slow=8.0,SNR=9.9								
	comp=E,0.7nm,0.8s								
YKA	Yellowknife Ar	46.88	39	*i* P		P	10 28 17.1	+1.7	
YKA				pmax		pmax			
	comp=Z,1.0nm,0.8s								
MKAR	Makanchi Array	48.69	298	P		P	10 28 29.2	-0.5	
	comp=Z,0.3nm,0.4s,baz=52,slow=5.9,SNR=6.4								
	comp=Z,0.3nm,0.4s								
MKAR	Makanchi Array	48.69	298	*i* P		P	10 28 30.1	+0.4	
KURK	Kurchatov	48.69	304	P		P	10 28 29.5	-0.1	
KURBB	Kurchatov Arra	48.78	304	P		P	10 28 29.4	-0.9	
	comp=Z,0.3nm,0.5s,baz=65,slow=8.7,SNR=4.1								
	comp=Z,0.3nm,0.5s								
OBN	Obninsk	65.00	327	*e*P		P	10 30 26.6	+1.5	
OBN				*e*			10 32 48.5		
OBN				pmax		pmax			
	comp=Z,5.0nm,0.8s								
AKASG	Malin Array Be	71.17	328	P		P	10 31 04.2	+0.4	
	comp=Z,0.5nm,0.6s,baz=34,slow=6.9,SNR=4.2								
	comp=Z,0.5nm,0.6s								
AKASG	Malin Array Be	71.17	328	*i* P		P	10 31 05.0	+1.1	
WRA	Warramunga Arr	72.09	203	P		P	10 31 09.1	-0.7	
	comp=Z,0.9nm,0.7s,baz=18,slow=6.4,SNR=7.0								
	comp=Z,0.9nm,0.7s								
WRA	Warramunga Arr	72.09	203	*i* P		P	10 31 09.6	-0.1	
WRA				pmax		pmax			
	comp=Z,1.0nm,0.7s								
TXAR	Lajitas Array	73.39	64	P		P	10 31 19.1	+1.5	
	comp=Z,0.2nm,0.6s,baz=298,slow=4.7,SNR=5.6								
	comp=Z,0.2nm,0.6s								
ASAR	Alice Springs	75.77	203	P		P	10 31 31.1	-0.1	
	comp=Z,0.3nm,0.6s,baz=17,slow=5.6,SNR=4.4								
	comp=Z,0.3nm,0.6s								

IDC 25 10:31:28.4±2.1, 8.70S×127.82E, h0km, mb3.2/1, mbtmp3.3/4, ML3.1/3, Error ellipse: s-maj=65.6km s-min=25.8km az=74.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	9.58	193	Pn	Pn	10 33 48.8	+1.1
	0.1nm,0.3s,baz=15,slow=12,SNR=2.5						
FITZ				Sn	Sn	10 35 39.4	+3.3
	0.1nm,0.3s,baz=18,slow=12,SNR=2.4						
	2.2nm,1.0s						
WRA	Warramunga Arr	12.83	151	Pn	Pn	10 34 31.3	-0.9
	0.1nm,0.3s,baz=331,slow=9.9,SNR=5.4						
WRA				Sn	Sn	10 36 57.5	+1.6
	0.2nm,0.3s,baz=323,slow=24,SNR=9.0						
	0.1nm,0.4s						
ASAR	Alice Springs	15.98	159	Pn	Pn	10 35 13.6	-1.2
	0.2nm,0.3s,baz=340,slow=12,SNR=16						
	0.7nm,0.4s						
MKAR	Makanchi Array	68.49	328	P	P	10 42 32.6	0.0
	0.1nm,0.5s,baz=141,slow=7.1,SNR=1.7						
	0.1nm,0.5s						

*IDC **25** 10:35:41.4±0.8, 49.10N×157.86E, h0km, mb3.6/10, mbtmp3.6/12, ML3.3/3, MS3.6/1, Error ellipse: s-maj=22.8km s-min=19.0km az=118.0*
*KRSC **25** 10:35:44.1±1.5, 49.24N×158.28E, h35km±38km, Ml3.9*
*SKHL **25** 10:35:44.5±0.5, 49.00N×158.00E, h48km±4km, mb4.7/3*
*MOS **25** 10:35:46.2±0.7, 49.19N×157.86E, h48km, mb3.9/1, Error ellipse: s-maj=24.9km s-min=11.8km az=96.9*

ISC 25 10:35:46.4±0.8, 49.12N±0.08×158.02E±0.06, h35km, n53, σ1§21/59, mb3.8/11, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.99	323	*e*PN	Pn	10 36 16.6	-0.9
SKR				*e*S	Sn	10 36 40.3	-0.9
SKR				pmax	pmax		
	comp=Z,254nm,0.6s						
SKR				smax	smax		
	comp=E,848nm,0.8s						
SKR				smax	smax		
	comp=N,1µm,0.8s						
SKR	Severo-Kuril's	1.99	323	*e*P	Pn	10 36 16.6	-0.9
SKR				*e*S	Sn	10 36 40.3	-0.9
SKR	Severo-Kuril's	1.99	323	*e*P	Pn	10 36 16.6	-0.9
SKR				AMB	AMB	10 36 18.0	
	comp=N,160nm,0.5s						
SKR				*e*S	Sn	10 36 40.3	-0.9
SKR				A	A	10 36 41.5	
	comp=N,1µm,0.5s						
SKR				A	A	10 36 41.5	
	comp=N,780nm,0.5s						
PAU	Pauzhetka	2.48	342	*e*P	Pn	10 36 23.9	-0.3
PAU				*e*S	Sn	10 36 53.9	+0.7
PAU	Pauzhetka	2.48	342	*e*P	Pn	10 36 23.9	-0.3
PAU				AMB	AMB	10 36 24.8	
	comp=N,40nm,0.3s						
PAU				*e*S	Sn	10 36 53.5	+0.4
PAU				A	A	10 36 54.6	
	comp=N,370nm,0.3s						
PAU				A	A	10 36 54.6	
	comp=N,260nm,0.3s						
MIPR	Malaya Ipel'ka	3.26	346	*e*P	Pn	10 36 36.0	+1.1
ASAK	Asacha	3.27	359	*e*P	Pn	10 36 35.2	0.0
ASAK				*e*S	Sn	10 37 11.9	-0.9
RUS	Russkaya	3.33	5	*e*P	Pn	10 36 35.5	-0.4
MTVR	Mutnovka	3.37	2	*e*P	Pn	10 36 36.5	-0.1
MTVR				*e*S	Sn	10 37 14.0	-1.4
GRL	Gorelyy	3.44	1	*e*P	Pn	10 36 37.9	+0.5
GRL				*e*S	Sn	10 37 15.6	-1.4
KRMR	Karymshinskiy	3.72	1	*e*P	Pn	10 36 41.9	+0.7
KRMR				*e*S	Sn	10 37 24.2	+0.5
APC	Apacha	3.85	352	*e*P	Pn	10 36 43.7	+0.6
PET	Petropavlovsk	3.93	6	*e*PN	Pn	10 36 44.5	+0.4
PET				*e*S	Sn	10 37 29.4	+0.4
PET				pmax	pmax		
	comp=Z,84nm,0.6s						
PET				smax	smax		
	comp=N,76nm,0.5s						
PET	Petropavlovsk	3.93	6	*e*P	Pn	10 36 44.5	+0.4
PET	Petropavlovsk	3.93	6	*e*P	Pn	10 36 44.3	+0.2
PET				AMB	AMB	10 36 44.9	
	comp=N,70nm,0.3s						
PET				*e*S	Sn	10 37 28.7	-0.3
PET				A	A	10 37 31.4	
	comp=N,50nm,0.3s						
PET				A	A	10 37 31.4	
	comp=N,50nm,0.3s						
DALK	Dalny	3.94	6	*e*P	Pn	10 36 44.3	0.0
DALK				*e*S	Sn	10 37 29.1	-0.2
PETK	Petropavlovsk-	4.00	357	Pn	Pn	10 36 45.9	+0.8
	comp=N,2.6nm,0.3s,baz=126,slow=17,SNR=15						
PETK				Sn	Sn	10 37 33.6	+2.9
	baz=183,slow=15						
	comp=N,9.9nm,0.8s						
UGLR	Uglovaya	4.13	7	*e*P	Pn	10 36 47.3	+0.4
AVH	Avacha	4.18	6	*e*P	Pn	10 36 48.4	+0.8
SMAR	Somma	4.18	6	*e*P	Pn	10 36 48.5	+0.7
SPN	Mys Shipunski	4.18	17	*e*P	Pn	10 36 47.0	-0.5
SPN				*e*S	Sn	10 37 33.8	-1.3
KOK	Koryaka	4.20	5	*e*P	Pn	10 36 49.2	+1.3
KRER	Koryakskii	4.22	6	*e*P	Pn	10 36 49.3	+1.1
KRER				*e*S	Sn	10 37 37.1	+0.8
KRX	Arik	4.26	5	*e*P	Pn	10 36 49.8	+1.0
GNL	Ganaly	4.58	359	*e*P	Pn	10 36 54.4	+1.2
ESO	Esso	6.83	3	*e*P	Pn	10 37 24.7	+0.8
KBTR	Krutoberegovo	7.67	20	*e*P	Pn	10 37 35.0	-0.5
SHEM	Shemya Is, Ala	10.77	64	Pn	Pn	10 38 19.5	+1.6
	comp=N,1.4nm,0.3s,baz=270,slow=20,SNR=2.4						
SHEM				Sn	Sn	10 40 10.6	-6.4
	comp=N,1.1nm,0.3s,baz=277,slow=18,SNR=1.3						
KLR	Kul'dur	17.16	280	P	Pn	10 39 42.9	-0.3
	comp=N,0.1nm,0.3s,baz=44,slow=7.8,SNR=2.2						
	comp=N,0.4nm,0.5s						
H11N2	WAKE ISLAND Hy	30.17	163	T	T	11 13 35.4	
	baz=348,slow=76,SNR=5.5						
H11N1	WAKE ISLAND Hy	30.19	163	T	T	11 13 38.0	
	baz=348,slow=76,SNR=4.5						
H11N3	WAKE ISLAND Hy	30.19	163	T	T	11 13 36.8	
	baz=348,slow=76,SNR=4.2						
H11S1	WAKE ISLAND Hy	31.33	164	T	T	11 15 01.9	
	baz=349,slow=76,SNR=4.8						
H11S3	WAKE ISLAND Hy	31.34	164	T	T	11 15 03.4	
	baz=349,slow=76,SNR=5.8						
H11S2	WAKE ISLAND Hy	31.35	164	T	T	11 15 03.9	
	baz=349,slow=76,SNR=4.5						
ILAR	Eielson Array	32.62	41	P	P	10 42 14.6	+0.3
	comp=N,0.2nm,0.6s,baz=273,slow=8.8,SNR=2.3						
	comp=N,0.2nm,0.6s						
YKA	Yellowknife Ar	47.02	39	P	P	10 44 14.9	+1.2
	comp=N,0.2nm,0.6s,baz=292,slow=8.2,SNR=3.5						
	comp=N,0.2nm,0.6s						
YKA	Yellowknife Ar	47.02	39	P	P	10 44 15.0	+1.2
MKAR	Makanchi Array	48.77	298	P	P	10 44 26.6	-0.9
	comp=N,0.3nm,0.6s,baz=64,slow=6.6,SNR=6.1						
	comp=N,0.3nm,0.6s						
KURK	Kurchatov	48.80	304	P	P	10 44 27.6	0.0
KURK	Kurchatov	48.80	304	*e*P	P	10 44 27.6	0.0
KURBB	Kurchatov Arra	48.89	304	P	P	10 44 27.6	-0.7
	comp=N,0.8nm,0.4s,baz=65,slow=7.9,SNR=2.8						
BVAR	Borovoye Array	51.89	310	P	P	10 44 50.3	-0.7
	comp=N,0.6nm,0.5s,baz=60,slow=8.5,SNR=2.1						
	comp=N,0.6nm,0.5s						
AAK	Ala-Archa	55.71	297	LR	LR	11 10 57.9	
	comp=N,56nm,20.1s,baz=340,slow=38						
FINES	FINESS Array B	63.25	336	P	P	10 46 11.1	+0.3
	comp=N,1.6nm,0.7s,baz=67,slow=6.4,SNR=3.9						
	comp=N,1.6nm,0.7s						
HFS	Hagfors	67.32	342	P	P	10 46 37.2	+0.1
	comp=N,2.3nm,0.8s,baz=32,slow=4.1,SNR=1.9						
	comp=N,2.3nm,0.8s						
AKASG	Malin Array Be	71.33	328	P	P	10 47 02.1	0.0
	comp=N,0.8nm,0.5s,baz=31,slow=6.4,SNR=4.7						
	comp=N,0.8nm,0.5s						
WRA	Warramunga Arr	71.92	203	P	P	10 47 06.2	+0.3
	comp=N,0.7nm,0.7s,baz=22,slow=6.6,SNR=6.2						
	comp=N,0.7nm,0.7s						
TXAR	Lajitas Array	73.47	64	P	P	10 47 15.8	+0.4
	comp=N,0.1nm,0.5s,baz=323,slow=5.5,SNR=4.3						
	comp=N,0.1nm,0.5s						
ASAR	Alice Springs	75.59	203	P	P	10 47 27.9	+0.6
	comp=N,0.3nm,0.7s,baz=88,slow=7.8,SNR=9.0						
	comp=N,0.3nm,0.7s						
H03N2	Juan Fernandez	135.48	91	T	T	13 25 37.1	
	baz=311,slow=77,SNR=7.5						
H03N1	Juan Fernandez	135.50	91	T	T	13 25 39.7	
	baz=311,slow=77,SNR=12						
H03N3	Juan Fernandez	135.50	91	T	T	13 25 39.2	
	baz=311,slow=77,SNR=8.4						

KRSC 25 10:45:33.6±2.2, 49.32N×158.40E, h48km±56km, Ml3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.01	314	*e*P	Pn	10 46 04.3	-0.7
SKR				*e*S	Sn	10 46 28.4	-0.5
PAU	Pauzhetka	2.38	335	*e*P	Pn	10 46 12.4	+2.3
PAU				*e*S	Sn	10 46 42.0	+3.9
KDTR	Khodutka, Kamc	2.50	355	*e*P	Pn	10 46 15.0	+3.3
KDTR				*e*S	Sn	10 46 44.9	+3.9
ASAK	Asacha	3.08	354	*e*P	Pn	10 46 23.3	+3.4
ASAK				*e*S	Sn	10 47 00.7	+5.2
RUS	Russkaya	3.12	1	*e*P	Pn	10 46 23.5	+3.3
RUS				*e*S	Sn	10 47 00.9	+4.7
MTVR	Mutnovka	3.17	358	*e*P	Pn	10 46 24.4	+3.3
MTVR				*e*S	Sn	10 47 01.5	+3.8
GRL	Gorelyy	3.24	356	*e*P	Pn	10 46 25.8	+3.8
GRL				*e*S	Sn	10 47 04.2	+4.8
KRMR	Karymshinskiy	3.52	357	*e*P	Pn	10 46 30.1	+4.4
KRMR				*e*S	Sn	10 47 11.6	+5.6
APC	Apacha	3.69	348	*e*P	Pn	10 46 32.2	+4.0
PET	Petropavlovsk	3.71	2	*e*P	Pn	10 46 32.1	+3.8
DALK	Dalny	3.72	3	*e*P	Pn	10 46 32.2	+3.6
DALK				*e*S	Sn	10 47 14.4	+3.4
UGLR	Uglovaya	3.90	4	*e*P	Pn	10 46 35.4	+4.3
SPN	Mys Shipunski	3.92	14	*e*P	Pn	10 46 34.6	+3.4
SPN				*e*S	Sn	10 47 18.6	+2.7
AVH	Avacha	3.96	3	*e*P	Pn	10 46 36.8	+5.0
SMAR	Somma	3.96	3	*e*P	Pn	10 46 36.4	+4.5
KOK	Koryaka	3.98	2	*e*P	Pn	10 46 37.0	+4.8
KRER	Koryakskii	4.00	3	*e*P	Pn	10 46 37.1	+4.6
KRX	Arik	4.05	2	*e*P	Pn	10 46 37.3	+4.1
GNL	Ganaly	4.39	356	*e*P	Pn	10 46 42.1	+4.3
KBTR	Krutoberegovo	7.40	20	*e*P	Pn	10 47 22.1	+3.2

SDD 25 10:51:27.6±0.6, 17.71N×66.91W, h12km±10km, MD2.3, ML2.1, MW2.2, 3C-1D, Presumed earthquake, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLPR	Magueyes Islan	0.29	334	⇑*e*Pg	Pg	10 51 33.4	-0.1
MLPR				⇑*e*Sg	Sg	10 51 37.1	-0.4
MLPR				IAML		10 51 38.1	
	comp=N,55nm,0.3s						
CELP	Cerrillos	0.48	41	*e*Pg	Pg	10 51 36.1	-1.0
CELP				*e*Sg	Sg	10 51 43.4	-0.1
AOPR	Arecibo Observ	0.65	13	*e*Pg	Pg	10 51 39.4	-1.0
AOPR				⇓*e*Sg	Sg	10 51 48.1	-0.8
AGPR	Aguadilla, PR	0.78	346	*e*Pg	Pg	10 51 41.8	-0.9
AGPR				⇑*e*Sg	Sg	10 51 52.1	-0.8
AGPR				IAML		10 52 30.9	
	comp=N,60nm,1.1s						

*DJA **25** 10:54:35.9±0.2, 4.5S±2.3×13.9E±.°, h48km±6km, M4.7/19, mB5.2/7, mb4.6/19, MLv4.7/13, Mw(mB)4.7/7*
*IDC **25** 10:54:35.1±1.5, 4.48S×139.20E, h48km±15km, mb4.0/10, mbtmp4.3/17, ML4.3/6, MS3.2/2, Error ellipse: s-maj=17.4km s-min=11.5km az=110.0*
*NEIC **25** 10:54:36.3±1.0, 4.58S±0.09×139.13E±0.08, h52km±7km, mb4.4/37, Error ellipse: s-maj=13.6km s-min=10.9km az=202.0*

ISC 25 10:54:35.1±0.4, 4.64S±0.04×139.09E±0.05, h44km, n97, σ2§10/103, mb4.5/28, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	Genyem	2.30	28	P	Pn	10 55 08.3	-2.2
JAY	Jayapura	2.66	37	P	Pn	10 55 12.7	-2.8
	51nm,0.3s,baz=206,slow=8.2,SNR=187						
JAY				S	Sn	10 55 42.2	-4.3
	466nm,0.7s,baz=158,slow=19,SNR=11						
JAY				LR	LR	10 56 14.4	
	comp=Z,434nm,20.2s,baz=232,slow=40						
	104nm,0.3s						
JAY	Jayapura	2.66	37	P	Pn	10 55 12.4	-3.1
SRPI	Serui, Papua	3.96	314	P	Pn	10 55 33.3	0.0
MMPI	Merauke	4.01	161	P	Pn	10 55 38.8	+4.8
BAKI	Biak	4.54	319	P	Pn	10 55 39.2	-2.1
FAKI	Fak Fak	7.04	284	P	Pn	10 56 18.0	+2.4
	25nm,1.2s						
FAKI	Fak Fak	7.04	284		Pn	10 56 17.1	+1.5
FAKI	Fak Fak	7.04	284	P	Pn	10 56 17.2	+1.6
	0.1nm25nm,1.1s						
SAUI	Saumlaki	8.42	246	Pn	Pn	10 56 36.2	+1.6
MANU	Manus Island	8.66	73	Pn	Pn	10 56 38.4	+0.6
SIJI	Sorong	8.66	295	P	Pn	10 56 39.4	+1.4
	2.4nm,0.3s,baz=190,slow=19,SNR=6.4						
SIJI				S	Sn	10 58 09.3	-5.1
	4.4nm,0.4s,baz=162,slow=20,SNR=1.4						
	7.6nm,0.4s						
SIJI	Sorong	8.66	295	P	Pn	10 56 39.2	+1.2
	13nm,0.9s						
SWI	Sorong	8.67	295	P	Pn	10 56 39.2	+1.2
	22nm,0.6s						
PMG	Port Moresby	9.30	121	P	Pn	10 56 47.5	+0.9
	14nm,0.9s,baz=333,slow=21,SNR=1.5						
PMG				S	Sn	10 58 26.2	-3.8
	3.5nm,0.3s,baz=302,slow=18,SNR=1.2						
PMG	Port Moresby	9.30	121	Pn	Pn	10 56 47.1	+0.5
COEN	Coen	10.10	157	P	Pn	10 56 59.7	+2.1
	14nm,0.7s						
COEN	Coen	10.10	157		Pn	10 56 58.7	+1.1
DRS	Darwin Rock St	11.20	226	P	Pn	10 57 15.1	+2.5
	55nm,0.8s						
MTN	Manton Dam	11.32	223		Pn	10 57 16.3	+2.0
SANI	Sanana	13.33	281	P	Pn	10 57 43.6	+1.8
	8.2nm,0.6s						
MTSU	Mount Surprise	14.35	160	P	Pn	10 57 58.3	+2.6
	22nm,0.7s						
KNRA	Kununurra	14.94	222		Pn	10 58 04.6	+1.1
KNRA				IAmb	IAmb	10 58 15.8	
	comp=Z,38nm,1.0s						
SOEI	Soe	15.55	250		Pn	10 58 12.5	+0.8
SOEI	Soe	15.55	250	P	P	10 58 15.0	-0.3
	comp=Z,857nmcomp=Z,80nm,0.7s						
WB0	Warramunga Arr	15.72	197	Pn	Pn	10 58 13.1	-0.4
QIS	Mount Isa	15.83	178	P	Pn	10 58 17.4	+2.4
	comp=Z,12nm,0.4s						
WR8	Warramunga Arr	15.87	196	Pn	Pn	10 58 15.2	-0.3
WRAB	Tennant Creek	15.89	196	P	Pn	10 58 18.0	+2.3
	comp=Z,24nm,0.8s						
WRAB	Tennant Creek	15.89	196		Pn	10 58 16.8	+1.1
WRAB				IAmb	IAmb	10 58 22.6	
	comp=Z,27nm,0.7s						
WRA	Warramunga Arr	15.90	197	P	Pn	10 58 16.2	+0.3
	comp=Z,0.5nm,0.3s,baz=17,slow=13,SNR=37						
WRA				S	Sn	11 01 04.7	-6.5
	comp=Z,7.3nm,0.6s,baz=14,slow=22,SNR=7.4						
	comp=Z,1.2nm,0.3s						
WRA	Warramunga Arr	15.90	197	P	Pn	10 58 14.0	-1.9
BATI	Baumata	16.26	249	P	Pn	10 58 22.3	+1.7
	comp=Z,2.7nm,0.3s,baz=108,slow=6.4,SNR=1.4						
BATI				S	Sn	11 01 12.2	-7.8
	comp=Z,8.7nm,0.4s,baz=75,slow=13,SNR=1.4						
	comp=Z,13nm,0.3s						
CTA	Charters Tower	16.86	156	P	P	10 58 32.5	+2.8
	comp=Z,5.9nm,0.6s,baz=331,slow=13,SNR=9.8						
CTA				S	Sn	11 01 32.0	-2.6
	comp=Z,3.6nm,0.9s,baz=334,slow=20,SNR=1.6						
CTA	Charters Tower	16.86	156	P	P	10 58 31.6	+1.9
	comp=Z,0.4nm,1.7s						
CTAO	Charters Tower	16.86	156	P	P	10 58 31.7	+2.0
	comp=Z,4.6nm,1.7s						
GTOI	Gorontalo	16.90	288	P	P	10 58 32.5	+2.5
	comp=Z,13nm,1.0s						
FITZ	Fitzroy Crossi	18.76	223	P	P	10 58 51.8	+1.2
	comp=Z,1.4nm,0.3s,baz=41,slow=9.4,SNR=36						
FITZ				S	Sn	11 02 09.2	-11
	comp=Z,26nm,0.8s,baz=68,slow=19,SNR=8.7						
	comp=Z,4.9nm,0.5s						
TOLI2	Tolitoli	19.16	287	P	P	10 58 54.8	-0.2
TOLI2				IAmb	IAmb	10 58 58.4	
	comp=Z,36nm,1.2s						
AS31	Alice Springs	19.56	194	P	Pn	10 59 02.9	+2.0
ASAR	Alice Springs	19.57	194	P	Pn	10 59 02.3	+1.3
	comp=Z,2.4nm,0.3s,baz=23,slow=10,SNR=296						
ASAR				S	S	11 02 31.6	-6.5
	comp=Z,5.5nm,0.7s,baz=16,slow=29,SNR=7.8						
ASAR				LR	LR	11 07 10.8	
	comp=Z,89nm,20.5s,baz=88,slow=38						
	comp=Z,19nm,0.6s						
ASAR	Alice Springs	19.57	194	P	Pn	10 59 02.7	+1.7
TATA	Tatamba Isabel	20.91	101	P	Pn	10 59 18.2	+1.2
	comp=Z,44nm,0.9s						
PLAI	Plampang	21.57	258	P	P	10 59 23.7	+2.6
	comp=Z,19nm,0.9s						
INKA	Innaminka	23.03	176		P	10 59 37.4	+0.9
EIDS	Eidsvold	23.61	152	P	P	10 59 41.8	-0.4
EIDS				IAmb	IAmb	10 59 44.3	
	comp=Z,14nm,1.2s						
MBWA	Marble Bar	24.96	227	P	P	10 59 57.3	+2.7
	comp=Z,13nm,0.7s						
MBWA	Marble Bar	24.96	227		P	10 59 55.5	+1.0
PSA00	Pilbara Seismi	25.13	226	P	P	10 59 59.1	+2.9
	comp=Z,24nm,0.8s						
PSA00	Pilbara Seismi	25.13	226		P	10 59 57.0	+0.8
PSA00				IAmb	IAmb	10 59 59.8	
	comp=Z,8.9nm,0.7s						
KKM	Kota Kinabalu	25.19	295	P	P	10 59 56.9	+0.1
KKM				IAmb	IAmb	11 00 30.2	
	comp=Z,16nm,1.0s						
STKA	Stephens Creek	27.20	175	P	P	11 00 14.5	-0.2
	comp=Z,1.3nm,0.5s,baz=331,slow=10,SNR=3.5						
	comp=Z,1.3nm,0.5s						
STKA	Stephens Creek	27.20	175	P	P	11 00 14.7	0.0
FORT	Forrest	28.00	201	P	P	11 00 21.7	-0.2
FORT				IAmb	IAmb	11 00 39.5	
	comp=Z,12nm,1.1s						
BBOO	Buckleboo	28.17	185	P	P	11 00 23.7	+0.3
BBOO				IAmb	IAmb	11 01 04.7	
	comp=Z,22nm,1.4s						
ARMA	Armidale	28.24	157	P	P	11 00 24.1	0.0
ARMA				IAmb	IAmb	11 00 29.5	
	comp=Z,18nm,1.4s				

comp=Z,1.9nm,0.8s,baz=112,slow=6.1,SNR=4.0
comp=Z,1.9nm,0.8s
NRIK **Noril'sk** **81.67** **344** P **P** **11 06 47.9 -0.4**
NRIK IAmb IAmb 11 06 49.4
comp=Z,4.6nm,1.2s
J17K **VABM Dome** **81.95** **24** P **P** **11 06 50.0 +0.1**
E18K **Tukpahlearik C** **83.31** **20** **P** **11 06 56.8 -0.1**
E19K **Redstone River** **84.48** **20** P **P** **11 07 02.9 0.0**
E19K IAmb IAmb 11 07 18.1
comp=Z,5.7nm,1.4s
QSPA **South Pole Qui** **85.32** **180** P **P** **11 07 06.9 -0.4**
comp=Z,1.9nm,0.8s,baz=312,slow=1.6,SNR=8.1
comp=Z,1.9nm,0.8s
QSPA **South Pole Qui** **85.32** **180** P **P** **11 07 07.3 0.0**
QSPA IAmb IAmb 11 07 35.2
comp=Z,5.0nm,1.2s
ILAR **Eielson Array** **87.42** **24** P **P** **11 07 15.1 -2.4**
comp=Z,0.7nm,0.8s,baz=260,slow=4.7,SNR=9.0
comp=Z,0.7nm,0.8s
PLCA **Paso Flores** **127.31** **152** PKP **PKPdf** **11 13 35.6 +0.2**
comp=Z,1.2nm,0.9s,baz=198,slow=3.2,SNR=4.8
TORD **Torodi Ar. Bea** **137.12** **284** PKP **PKPdf** **11 13 53.5 -1.0**
comp=Z,0.2nm,0.3s,baz=89,slow=0.6,SNR=2.5
DBIC **Dimbokro** **144.07** **275** PKP **PKPab** **11 14 04.7 0.0**
comp=Z,5.6nm,0.7s,baz=135,slow=2.9,SNR=6.5
CPUP **Villa Florida** **145.34** **154** PKPbc **PKPbc** **11 14 08.4 -0.4**
comp=Z,2.4nm,0.7s,baz=220,slow=3.4,SNR=7.1
LPAZ **La Paz** **145.98** **128** PKPbc **PKPdf** **11 14 12.2 +1.2**
comp=Z,1.6nm,0.6s,baz=254,slow=3.1,SNR=7.2

IDC 25 11:09:55.3±54.0, 21°91'S×177°37'W, h0km, mb4.2/3, mbtmp4.2/3, Error ellipse: s-maj=994.4km s-min=166.7km az=85.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.73**	**246**	P	P	11 17 11.8	-1.2
	1.4nm,0.7s,baz=77,slow=14,SNR=2.0						
	1.4nm,0.7s						
ASAR	**Alice Springs**	**44.78**	**258**	P	P	11 18 10.9	-0.3
	2.4nm,0.8s,baz=98,slow=8.3,SNR=34						
	2.4nm,0.8s						
WRA	**Warramunga Arr**	**45.00**	**263**	P	P	11 18 13.5	+0.6
	2.9nm,0.4s,baz=97,slow=8.1,SNR=239						
	2.9nm,0.4s						

KRSC 25 11:10:59.4±1.8, 49°16N×158°09E, h42km±47km, MI3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.98**	**321**	*e*P	Pn	11 11 31.4	+1.0
SKR				*e*S	Sn	11 11 55.3	+1.2
PAU	**Pauzhetka**	**2.45**	**341**	*e*P	Pn	11 11 40.0	+3.2
PAU				*e*S	Sn	11 12 09.1	+3.6
KDTR	**Khodutka, Kamc**	**2.65**	**360**	*e*S	Sn	11 12 14.5	+4.0
ASAK	**Asacha**	**3.23**	**358**	*e*P	Pn	11 11 51.5	+3.9
RUS	**Russkaya**	**3.29**	**5**	*e*P	Pn	11 11 51.9	+3.6
RUS				*e*S	Sn	11 12 31.4	+5.3
MTVR	**Mutnovka**	**3.33**	**1**	*e*P	Pn	11 11 52.8	+3.8
GRL	**Gorelyy**	**3.40**	**360**	*e*P	Pn	11 11 53.8	+3.9
KRMR	**Karymshinskiy**	**3.67**	**0**	*e*P	Pn	11 11 57.7	+4.1
PET	**Petropavlovsk**	**3.88**	**5**	*e*P	Pn	11 12 00.5	+4.0
DALK	**Dalny**	**3.90**	**6**	*e*P	Pn	11 12 00.4	+3.7
UGLR	**Uglovaya**	**4.08**	**6**	*e*P	Pn	11 12 04.0	+4.6
AVH	**Avacha**	**4.13**	**5**	*e*P	Pn	11 12 04.7	+4.7
SMAR	**Somma**	**4.13**	**6**	*e*P	Pn	11 12 05.0	+4.8
KOK	**Koryaka**	**4.15**	**5**	*e*P	Pn	11 12 05.2	+4.9
KRX	**Arik**	**4.22**	**5**	*e*P	Pn	11 12 05.6	+4.4
GNL	**Ganaly**	**4.54**	**359**	*e*P	Pn	11 12 10.0	+4.4
KBTR	**Krutoberegovo**	**7.62**	**20**	*e*P	Pn	11 12 51.9	+4.1

IDC 25 11:12:03.3±0.8, 49°25N×158°40E, h0km, mb3.8/8, mbtmp3.8/12, ML3.6/3, Error ellipse: s-maj=21.7km s-min=17.7km az=102.0
KRSC 25 11:12:06.8±1.6, 49°47N×158°63E, h51km±43km, MI4.0
NEIC 25 11:12:09.3±1.0, 49°29N±0°08×158°3E±0°2, h36km±7km, mb4.0/7, Error ellipse: s-maj=19.9km s-min=3.9km az=124.0

ISC 25 11:12:06.4±0.7, 49°34N±0°06×158°39E±0°07, h18km, n46, σ1§28/48, mb3.9/12, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.99**	**313**	*e*P	**Pn**	**11 12 38.9**	**-0.2**
SKR				*e*S	**Sn**	**11 13 03.8**	**+0.3**
PAU	**Pauzhetka**	**2.36**	**335**	*e*P	**Pn**	**11 12 45.5**	**+1.3**
PAU				*e*S	**Sb**	**11 13 14.6**	**-2.5**
KDTR	**Khodutka, Kamc**	**2.48**	**356**	*e*P	**Pn**	**11 12 45.6**	**-0.3**
KDTR				*e*S	**Sn**	**11 13 14.2**	**-1.5**
ASAK	**Asacha**	**3.07**	**354**	*e*P	**Pn**	**11 12 54.6**	**+0.6**
RUS	**Russkaya**	**3.10**	**1**	*e*S	**Sn**	**11 13 28.9**	**-2.1**
MTVR	**Mutnovka**	**3.15**	**358**	*e*P	**Pn**	**11 12 56.3**	**+1.0**
MTVR				*e*S	**Sn**	**11 13 31.2**	**-1.3**
GRL	**Gorelyy**	**3.23**	**357**	*e*P	**Pn**	**11 12 56.9**	**+0.6**
GRL				*e*S	**Sn**	**11 13 33.9**	**-0.4**
KRMR	**Karymshinskiy**	**3.50**	**357**	*e*S	**Sn**	**11 13 40.1**	**-0.7**
APC	**Apacha**	**3.68**	**348**	*e*P	**Pn**	**11 13 03.4**	**+1.2**
PET	**Petropavlovsk**	**3.70**	**2**	Pn	**Pn**	**11 13 03.5**	**+0.9**
PET	**Petropavlovsk**	**3.70**	**2**	*e*P	**Pn**	**11 13 03.5**	**+0.9**
PET				*e*S	**Sn**	**11 13 44.3**	**-1.4**
DALK	**Dalny**	**3.71**	**3**	*e*P	**Pn**	**11 13 03.0**	**+0.3**
DALK				*e*S	**Sn**	**11 13 44.0**	**-1.9**
PEA0B	**Petropavlovsk-**	**3.80**	**354**	Pn	**Pn**	**11 13 05.2**	**+1.2**
PETK	**Petropavlovsk-**	**3.80**	**354**	Pn	**Pn**	**11 13 05.6**	**+1.6**
	4.7nm,0.7s,baz=186,slow=14,SNR=9.3						
PETK				Sn	**Sn**	**11 13 52.2**	**+3.9**
	1.1nm,0.3s,baz=137,slow=20,SNR=3.7						
PETK	**Petropavlovsk-**	**3.80**	**354**		**Pn**	**11 13 05.2**	**+1.2**
SPN	**Mys Shipunski**	**3.91**	**15**	*e*S	**Sn**	**11 13 48.8**	**-1.9**
KRX	**Arik**	**4.03**	**2**	*e*P	**Pn**	**11 13 09.3**	**+2.0**
GNL	**Ganaly**	**4.38**	**357**	*e*P	**Pn**	**11 13 13.4**	**+1.4**
KBTR	**Krutoberegovo**	**7.39**	**20**	*e*P	**Pn**	**11 13 53.2**	**-0.1**
SHEM	**Shemya Is, Ala**	**10.46**	**65**	Pn	**Pn**	**11 14 35.7**	**+0.4**
	1.5nm,0.3s,baz=301,slow=16,SNR=1.7						
	31nm,0.9s						
JKA	**Kamikawa-asahi**	**12.02**	**250**		**Pn**	**11 14 56.4**	**-0.3**
ASAJ	**Asahikawa**	**12.02**	**250**	Pn	**Pn**	**11 14 55.6**	**-1.1**
	0.5nm,0.3s,baz=124,slow=23,SNR=8.5						
	4.3nm,0.8s						
SEY	**Seymchan**	**14.03**	**349**	Pn	**Pn**	**11 15 26.1**	**+2.1**
	0.1nm,0.3s,baz=156,slow=8.5,SNR=7.7						
	0.4nm,0.3s						
YAK	**Yakutsk**	**20.36**	**319**	P	**P**	**11 16 41.4**	**-0.2**
YAK				IAmb	IAmb	11 16 43.2	
	comp=Z,20nm,0.9s						
C16K	**Lisburne Hills**	**26.06**	**30**	P	**P**	**11 17 39.5**	**+1.2**
C16K				IAmb	IAmb	11 17 41.3	
	comp=Z,4.8nm,1.5s						
TIXI	**Tiksi**	**26.14**	**339**		**P**	**11 17 39.5**	**+0.5**
TIXI				IAmb	IAmb	11 17 52.5	
	comp=Z,7.4nm,1.4s						
H11N2	**WAKE ISLAND Hy**	**30.32**	**164**	T	T	11 49 56.0	
	baz=349,slow=76,SNR=7.3						
H11N3	**WAKE ISLAND Hy**	**30.33**	**164**	T	T	11 50 01.6	
	baz=349,slow=76,SNR=6.4						
H11N1	**WAKE ISLAND Hy**	**30.33**	**164**	T	T	11 49 59.6	
	baz=349,slow=76,SNR=6.6						
H11S1	**WAKE ISLAND Hy**	**31.48**	**165**	T	T	11 51 26.4	
	baz=350,slow=76,SNR=7.9						
H11S3	**WAKE ISLAND Hy**	**31.49**	**165**	T	T	11 51 26.5	
	baz=350,slow=76,SNR=7.4						
H11S2	**WAKE ISLAND Hy**	**31.49**	**165**	T	T	11 51 27.8	
	baz=350,slow=76,SNR=7.8						
KURK	**Kurchatov**	**48.87**	**304**	P	**P**	**11 20 51.0**	**+0.3**
KURK				IAmb	IAmb	11 20 56.2	
	comp=Z,1.4nm,0.7s						
MKAR	**Makanchi Array**	**48.89**	**298**	P	**P**	**11 20 50.6**	**-0.2**
	comp=Z,0.1nm,0.4s,baz=46,slow=8.0,SNR=2.2						
	comp=Z,0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**48.97**	**304**	P	**P**	**11 20 51.9**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=60,slow=7.5,SNR=4.4						
	comp=Z,0.6nm,0.6s						
BVAR	**Borovoye Array**	**51.93**	**310**	P	**P**	**11 21 13.7**	**0.0**
	comp=Z,0.7nm,0.6s,baz=64,slow=9.5,SNR=4.0						
	comp=Z,0.7nm,0.6s						
BLKN	**Baker Lake**	**52.84**	**32**	P	**P**	**11 21 20.8**	**+0.6**
BLKN				IAmb	IAmb	11 21 21.0	
	comp=Z,1.3nm,1.0s						
AB31	**Akbulak array**	**59.44**	**311**	P	**P**	**11 22 08.8**	**+1.2**
ABKAR	**Akbulak array**	**59.44**	**311**	P	**P**	**11 22 08.8**	**+1.2**
PDAR	**Pinedale Array**	**60.37**	**58**	P	**P**	**11 22 13.1**	**-1.3**
	comp=Z,0.3nm,0.7s,baz=313,slow=6.6,SNR=2.7						
	comp=Z,0.3nm,0.7s						
NOA	**NORSAR Array B**	**66.84**	**343**	P	**P**	**11 22 56.6**	**-0.1**
	comp=Z,1.7nm,0.8s,baz=24,slow=6.6,SNR=2.5						
	comp=Z,1.7nm,0.8s						
WRA	**Warramunga Arr**	**72.21**	**204**	P	**P**	**11 23 29.2**	**-0.9**
	comp=Z,2.9nm,0.8s,baz=20,slow=6.3,SNR=12						
	comp=Z,2.9nm,0.8s						
WRA	**Warramunga Arr**	**72.21**	**204**	P	**P**	**11 23 28.7**	**-1.5**
TXAR	**Lajitas Array**	**73.16**	**65**	P	**P**	**11 23 36.6**	**+0.6**
	comp=Z,1.3nm,0.7s,baz=301,slow=4.5,SNR=19						
	comp=Z,1.3nm,0.7s						
TXAR	**Lajitas Array**	**73.16**	**65**	P	**P**	**11 23 36.5**	**+0.5**
ASAR	**Alice Springs**	**75.88**	**203**	P	**P**	**11 23 51.4**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=16,slow=5.9,SNR=7.7						
	comp=Z,0.8nm,0.7s						

IDC 25 11:13:34.6±0.7, 49°28N×158°48E, h0km, mb3.9/22, mbtmp3.9/26, ML2.8/3, Error ellipse: s-maj=16.3km s-min=13.7km az=139.0
MOS 25 11:13:38.9±0.7, 49°36N×158°51E, h43km, mb4.3/9, Error ellipse: s-maj=14.7km s-min=4.0km az=93.6
KRSC 25 11:13:38.3±2.1, 49°47N×158°89E, h63km±24km, MI4.4
NEIC 25 11:13:40.5±0.7, 49°36N±0°01×158°4E±0°2, h36km±6km, mb4.0/17, Error ellipse: s-maj=19.9km s-min=1.7km az=92.0

ISC 25 11:13:37.3±0.6, 49°31N±0°06×158°66E±0°05, h18km, n126, σ1§40/146, mb4.1/33, 3C-4D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.15**	**311**	*e*P	**Pn**	**11 14 11.7**	**-0.4**
SKR				*e*S	**Sn**	**11 14 36.5**	**-1.7**
SKR				pmax	pmax		
	comp=Z,229nm,0.5s						
SKR				smax	smax		
	comp=N,2μm,0.4s						
SKR				smax	smax		
	comp=E,1μm,0.4s						
SKR	**Severo-Kuril's**	**2.15**	**311**	*e*P	**Pn**	**11 14 11.7**	**-0.4**
SKR				*e*S	**Sn**	**11 14 36.7**	**-1.5**
PAU	**Pauzhetka**	**2.47**	**332**	PN	**Pn**	**11 14 17.4**	**+0.9**
PAU				S	**Sn**	**11 14 45.7**	**-0.5**
PAU	**Pauzhetka**	**2.47**	**332**	*e*P	**Pn**	**11 14 17.4**	**+0.9**
PAU				*e*S	**Sn**	**11 14 45.7**	**-0.5**
KDTR	**Khodutka, Kamc**	**2.54**	**352**	PN	**Pn**	**11 14 17.1**	**-0.3**
KDTR				S	**Sn**	**11 14 45.9**	**-1.9**
KDTR	**Khodutka, Kamc**	**2.54**	**352**	*e*P	**Pn**	**11 14 17.2**	**-0.3**
KDTR				*e*S	**Sn**	**11 14 45.9**	**-1.9**
ASAK	**Asacha**	**3.12**	**351**	PN	**Pn**	**11 14 26.7**	**+1.1**
ASAK				S	**Sn**	**11 15 00.9**	**-1.5**
ASAK	**Asacha**	**3.12**	**351**	*e*P	**Pn**	**11 14 26.7**	**+1.1**
ASAK				*e*S	**Sn**	**11 15 00.9**	**-1.5**
RUS	**Russkaya**	**3.13**	**358**	PN	**Pn**	**11 14 25.7**	**+0.1**
RUS				S	**Sn**	**11 15 00.3**	**-2.3**
RUS	**Russkaya**	**3.13**	**358**	*e*P	**Pn**	**11 14 25.8**	**+0.1**
RUS				*e*S	**Sn**	**11 15 00.4**	**-2.3**
MTVR	**Mutnovka**	**3.20**	**355**	PN	**Pn**	**11 14 26.8**	**+0.1**
MTVR				S	**Sn**	**11 15 02.4**	**-2.0**
MTVR	**Mutnovka**	**3.20**	**355**	*e*P	**Pn**	**11 14 26.8**	**+0.1**
MTVR				*e*S	**Sn**	**11 15 02.4**	**-2.0**
MIPR	**Malaya Ipel'ka**	**3.21**	**339**	*e*S	**Sn**	**11 15 04.0**	**-0.5**
GRL	**Gorelyy**	**3.27**	**354**	PN	**Pn**	**11 14 28.4**	**+0.7**
GRL				S	**Sn**	**11 15 05.0**	**-1.2**
GRL	**Gorelyy**	**3.27**	**354**	*e*P	**Pn**	**11 14 28.5**	**+0.7**
GRL				*e*S	**Sn**	**11 15 05.1**	**-1.2**
KRMR	**Karymshinskiy**	**3.55**	**355**	PN	**Pn**	**11 14 32.8**	**+1.5**
KRMR				S	**Sn**	**11 15 12.2**	**-0.5**
KRMR	**Karymshinskiy**	**3.55**	**355**	*e*P	**Pn**	**11 14 32.9**	**+1.5**
KRMR				*e*S	**Sn**	**11 15 12.3**	**-0.5**
PET	**Petropavlovsk**	**3.72**	**360**		**Pn**	**11 14 34.3**	**+0.5**
PET				Sn	**Sn**	**11 15 16.5**	**-0.6**
PET	**Petropavlovsk**	**3.72**	**360**	*e*PN	**Pn**	**11 14 34.2**	**+0.5**
PET				*e*S	**Sn**	**11 15 15.0**	**-2.1**
PET				pmax	pmax		
	comp=Z,131nm,0.5s						
PET				smax	smax		
	comp=N,183nm,0.4s						
PET				smax	smax		
	comp=E,280nm,0.5s						
PET	**Petropavlovsk**	**3.72**	**360**	*e*P	**Pn**	**11 14 34.2**	**+0.5**
PET				*e*S	**Sn**	**11 15 15.3**	**-1.9**
DALK	**Dalny**	**3.73**	**1**	PN	**Pn**	**11 14 34.1**	**+0.2**
DALK				S	**Sn**	**11 15 15.3**	**-2.0**
DALK	**Dalny**	**3.73**	**1**	*e*P	**Pn**	**11 14 34.1**	**+0.2**
DALK				*e*S	**Sn**	**11 15 15.4**	**-2.0**
APC	**Apacha**	**3.75**	**346**	PN	**Pn**	**11 14 35.0**	**+0.9**
APC	**Apacha**	**3.75**	**346**	*e*P	**Pn**	**11 14 35.1**	**+0.9**
INSR	**Institute**	**3.77**	**359**	*e*S	**Sn**	**11 15 17.5**	**-0.7**
PEA0B	**Petropavlovsk-**	**3.86**	**351**	Pn	**Pn**	**11 14 36.1**	**+0.5**
PEA0B	**Petropavlovsk-**	**3.86**	**351**	*e*PN	**Pn**	**11 14 36.7**	**+1.1**
PETK	**Petropavlovsk-**	**3.86**	**351**	Pn	**Pn**	**11 14 35.0**	**-0.6**
	comp=E,3.8nm,0.3s,baz=110,slow=17,SNR=11						
PETK				Sn	**Sn**	**11 15 21.7**	**+1.2**
	comp=E,3.1nm,0.3s,baz=149,slow=21,SNR=5.2						
	comp=E,11nm,0.5s						
PETK	**Petropavlovsk-**	**3.86**	**351**		**Pn**	**11 14 35.8**	**+0.2**
SPN	**Mys Shipunski**	**3.89**	**12**	PN	**Pn**	**11 14 36.1**	**0.0**
SPN	**Mys Shipunski**	**3.89**	**12**	*e*P	**Pn**	**11 14 36.1**	**0.0**
SPN				*e*S	**Sn**	**11 15 18.8**	**-2.6**
UGLR	**Uglovaya**	**3.91**	**1**	PN	**Pn**	**11 14 37.1**	**+0.6**
UGLR	**Uglovaya**	**3.91**	**1**	*e*P	**Pn**	**11 14 37.1**	**+0.6**
SMAR	**Somma**	**3.96**	**1**	PN	**Pn**	**11 14 38.9**	**+1.6**
SMAR	**Somma**	**3.96**	**1**	*e*P	**Pn**	**11 14 38.9**	**+1.6**
AVH	**Avacha**	**3.97**	**1**	PN	**Pn**	**11 14 39.4**	**+2.2**
AVH	**Avacha**	**3.97**	**1**	*e*P	**Pn**	**11 14 39.4**	**+2.2**
KOK	**Koryaka**	**3.99**	**360**	PN	**Pn**	**11 14 39.0**	**+1.4**
KOK	**Koryaka**	**3.99**	**360**	*e*P	**Pn**	**11 14 39.0**	**+1.4**
KRER	**Koryakskii**	**4.00**	**1**	PN	**Pn**	**11 14 38.3**	**+0.5**
KRER	**Koryakskii**	**4.00**	**1**	*e*P	**Pn**	**11 14 38.4**	**+0.5**
KRX	**Arik**	**4.06**	**360**	PN	**Pn**	**11 14 39.2**	**+0.7**
KRX	**Arik**	**4.06**	**360**	*e*P	**Pn**	**11 14 39.2**	**+0.7**
GNL	**Ganaly**	**4.42**	**354**	PN	**Pn**	**11 14 45.3**	**+1.9**
GNL	**Ganaly**	**4.42**	**354**	*e*P	**Pn**	**11 14 45.3**	**+1.9**
TUMD	**Tumrok D**	**6.00**	**10**	PN	**Pn**	**11 15 06.4**	**+1.3**
TUMD	**Tumrok D**	**6.00**	**10**	*e*P	**Pn**	**11 15 06.5**	**+1.3**
TUMD				*e*S	**Sn**	**11 16 10.9**	**-2.4**
ESO	**Esso**	**6.63**	**0**	PN	**Pn**	**11 15 14.9**	**+1.2**
ESO	**Esso**	**6.63**	**0**	*e*P	**Pn**	**11 15 14.9**	**+1.2**
BKI	**Bering**	**7.41**	**34**	PN	**Pn**	**11 15 23.4**	**-1.0**
BKI	**Bering**	**7.41**	**34**	*e*P	**Pn**	**11 15 23.4**	**-1.0**
BKI				*e*S	**Sn**	**11 16 40.8**	**-7.2**
SHEM	**Shemya Is, Ala**	**10.31**	**65**	Pn	**Pn**	**11 16 04.9**	**+0.8**
	comp=E,24nm,0.5s,baz=302,slow=1.0,SNR=7.5						
SHEM				Sn	**Sn**	**11 17 55.3**	**-3.8**
	comp=E,4.5nm,0.3s,baz=288,slow=20,SNR=8.4						
SHEM	**Shemya Is, Ala**	**10.31**	**65**		**Pn**	**11 16 05.2**	**+1.1**
SMY	**Shemya**	**10.31**	**65**	Pn	**Pn**	**11 16 05.0**	**+0.9**
SMY	**Shemya**	**10.31**	**65**	PN	**Pn**	**11 16 05.0**	**+0.9**
SEY	**Seymchan**	**14.09**	**348**	Pn	**Pn**	**11 16 58.5**	**+2.7**
	comp=E,0.2nm,0.3s,baz=152,slow=9.2,SNR=6.8						
	comp=E,0.5nm,0.3s						
BILL	**Bilibino**	**19.17**	**9**	*i*P	**Pn**	**11 18 01.8**	**+1.4**
MJAR	**Matsushiro Arr**	**19.60**	**237**	P	**P**	**11 18 02.3**	**-2.0**
	baz=23,slow=6.6,SNR=2.4						
	comp=E,1.2nm,1.1s						
MAJO	**Matsushiro**	**19.60**	**237**	*e*P	**Pn**	**11 18 05.7**	**0.0**
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
YAK	**Yakutsk**	**20.50**	**319**	*e*P	**P**	**11 18 12.4**	**-1.5**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.5s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
TNA	**Tin City**	**23.82**	**35**	P	**P**	**11 18 50.1**	**+1.3**
TNA				IAmb	IAmb	11 18 52.0	
	comp=Z,4.0nm,0.8s						
M13K	**Dall Lake**	**24.16**	**48**	P	**P**	**11 18 54.6**	**+2.6**
ANM	**Nome**	**24.40**	**38**	P	**P**	**11 18 57.2**	**+3.0**
ANM				IAmb	IAmb	11 18 58.4	
	comp=Z,3.1nm,0.8s						
ANM	**Nome**	**24.40**	**38**	P	**P**	**11 18 57.2**	**+3.0**
ANM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
J14K	**Nanvaranak Lak**	**24.59**	**43**	P	**P**	**11 18 57.4**	**+1.5**
N14K	**Kuskokwak Cree**	**24.91**	**50**	P	**P**	**11 19 00.3**	**+1.5**
KSRS	**Korea Array**	**25.11**	**253**	P	**P**	**11 19 00.6**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=66,slow=5.9,SNR=1.7						
	comp=Z,0.8nm,0.7s						
O15K	**Ungalikthiuk R**	**25.78**	**52**	P	**P**	**11 19 08.2**	**+1.5**
O15K				IAmb	IAmb	11 19 10.9	
	comp=Z,4.1nm,0.8s						
C16K	**Lisburne Hills**	**25.99**	**30**	P	**P**	**11 19 09.9**	**+1.4**
TIXI	**Tiksi**	**26.23**	**339**		**P**	**11 19 10.6**	**-0.1**
TIXI				IAmb	IAmb	11 19 14.3	
	comp=Z,5.8nm,1.1s						
TIXI	**Tiksi**	**26.23**	**339**	*e*P	**P**	**11 19 09.7**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.4s						
M16K	**Timber Creek**	**26.39**	**48**	P	**P**	**11 19 13.9**	**+1.6**
M16K				IAmb	IAmb	11 19 27.5	
	comp=Z,5.4nm,1.1s						
F17K	**Baldwin Pennin**	**26.68**	**35**	P	**P**	**11 19 16.5**	**+1.7**
H11N2	**WAKE ISLAND Hy**	**30.24**	**164**	T	T	11 51 32.1	
	baz=349,slow=76,SNR=8.4						
H11N3	**WAKE ISLAND Hy**	**30.25**	**164**	T	T	11 51 29.4	
	baz=349,slow=76,SNR=8.6						
H11N1	**WAKE ISLAND Hy**	**30.25**	**164**	T	T	11 51 33.9	
	baz=349,slow=76,SNR=9.1						
H11S1	**WAKE ISLAND Hy**	**31.40**	**165**	T	T	11 52 57.0	
	baz=350,slow=76,SNR=10						
H11S3	**WAKE ISLAND Hy**	**31.41**	**165**	T	T	11 53 03.8	
	baz=350,slow=76,SNR=10.0						
H11S2	**WAKE ISLAND Hy**	**31.42**	**165**	T	T	11 53 02.3	
	baz=350,slow=76,SNR=13						
ILAR	**Eielson Array**	**32.20**	**41**	P	**P**	**11 20 04.4**	**+0.6**
	comp=Z,0.3nm,0.9s,baz=251,slow=6.0,SNR=5.3						
	comp=Z,0.3nm,0.9s						
ILAR	**Eielson Array**	**32.20**	**41**	P	**P**	**11 20 04.7**	**+0.9**
VRDI	**Verde Repeater**	**33.90**	**47**	P	**P**	**11 20 20.2**	**+1.3**
VRDI				IAmb	IAmb	11 20 31.7	
	comp=Z,2.2nm,1.0s						
SONM	**Songino Array**	**34.05**	**288**	P	**P**	**11 20 19.6**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=116,slow=3.4,SNR=1.0						
	comp=Z,0.2nm,0.3s						
HYT	**Haines Junctio**	**36.82**	**47**	P	**P**	**11 20 45.1**	**+1.2**
HYT				IAmb	IAmb	11 20 47.5	
	comp=Z,2.7nm,0.8s						
NRIK	**Noril'sk**	**38.55**	**327**	P	**P**	**11 20 56.8**	**-1.5**
	comp=Z,0.9nm,0.4s,baz=99,slow=4.0,SNR=2.1						
	comp=Z,0.9nm,0.4s						
NRIK	**Noril'sk**	**38.55**	**327**	P	**P**	**11 20 57.0**	**-1.2**
NRIK				IAmb	IAmb	11 21 06.0	
	comp=Z,2.7nm,1.1s						
NRIK	**Noril'sk**	**38.55**	**327**	P	**P**	**11 20 57.1**	**-1.2**
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ZALV	**Zalesovo Beam**	**44.16**	**305**	P	**P**	**11 21 44.1**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=64,slow=6.6,SNR=2.7						
	comp=Z,0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**44.16**	**305**	P	**P**	**11 21 43.0**	**-1.4**
ZALV	**Zalesovo Beam**	**44.16**	**305**	P	**P**	**11 21 43.0**	**-1.4**
YKA	**Yellowknife Ar**	**46.61**	**40**	P	**P**	**11 22 04.7**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=298,slow=8.3,SNR=6.0						
	comp=Z,0.4nm,0.7s						
YKA	**Yellowknife Ar**	**46.61**	**40**	P	**P**	**11 22 05.0**	**+1.2**
YKA	**Yellowknife Ar**	**46.61**	**40**	*i*P	**P**	**11 22 04.6**	**+0.8**
KURK	**Kurchatov**	**49.04**	**304**	P	**P**	**11 22 21.6**	**-0.7**
KURK	**Kurchatov**	**49.04**	**304**	*i*P	**P**	**11 22 21.6**	**-1.2**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MK31	**Makanchi Array**	**49.06**	**298**	P	**P**	**11 22 22.6**	**-0.4**
MK31	**Makanchi Array**	**49.06**	**298**	P	**P**	**11 22 22.6**	**-0.4**
MK31				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**49.06**	**298**	P	**P**	**11 22 22.6**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=59,slow=5.9,SNR=12						
	comp=Z,0.6nm,0.4s						
MKAR	**Makanchi Array**	**49.06**	**298**	*e*P	**P**	**11 22 23.1**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURBB	**Kurchatov Arra**	**49.14**	**304**	P	**P**	**11 22 22.6**	**-0.9**
	comp=Z,1.5nm,0.6s,baz=62,slow=7.5,SNR=8.6						
	comp=Z,1.5nm,0.6s						
MAKZ	**Makanchi**	**49.23**	**298**	P	**P**	**11 22 23.5**	**-0.8**
MAKZ	**Makanchi**	**49.23**	**298**	P

KTHA	**Kythira Island**	**1.13**	**15**	P		**Pg**	**11 24 57.4**	**+2.3**
CHAN	**Chania**	**1.14**	**72**	P		**Pg**	**11 24 56.8**	**+1.4**
CHAN				S		**Sn**	**11 25 10.5**	**+0.6**
CHNB	**Souda**	**1.15**	**73**	P		**Pg**	**11 24 56.9**	**+1.4**
CHNB				S		**Sn**	**11 25 11.8**	**+1.7**
GVD	**Gavdhos**	**1.17**	**106**	P		**Pg**	**11 24 56.7**	**+0.7**
GVD				S		**Sn**	**11 25 13.4**	**+2.8**
GVD	**Gavdhos**	**1.17**	**106**	P		**Pg**	**11 24 56.2**	**+0.3**
GVD				S		**Sn**	**11 25 11.2**	**+0.5**
VAM	**Vamos**	**1.24**	**78**	P		**Pg**	**11 24 57.4**	**+0.1**
NPS1	**Neapolis Lacon**	**1.38**	**12**	P		**Pg**	**11 25 01.1**	**+1.3**
MNVA	**Monemvasia**	**1.54**	**10**	P		**Pg**	**11 25 03.9**	**+0.9**
VLI	**Veliai**	**1.56**	**7**	P		**Pg**	**11 25 04.6**	**+1.2**
VLI				S		**Sg**	**11 25 24.4**	**+0.7**
VLI	**Veliai**	**1.56**	**7**	P		**Pg**	**11 25 03.9**	**+0.6**
IDI	**Anoyia**	**1.79**	**85**	P		**Pb**	**11 25 05.2**	**-0.5**
	54nm,0.4s,baz=246,slow=12,SNR=94							
IDI				S		**Sn**	**11 25 25.2**	**-0.8**
	134nm,0.5s,baz=323,slow=22,SNR=7.9							
IDI	**Anoyia**	**1.79**	**85**			**Pn**	**11 25 03.6**	**+0.1**
IDI	**Anoyia**	**1.79**	**85**	P		**Pg**	**11 25 06.2**	**-1.4**
IDI	**Anoyia**	**1.79**	**85**	P		**Pg**	**11 25 06.0**	**-1.7**
PYL	**PYLOS**	**1.90**	**336**	P		**Pg**	**11 25 09.0**	**-0.8**
PYL1	**Pylos**	**1.93**	**335**	P		**Pg**	**11 25 10.6**	**+0.2**
MHLO	**Agia Marina, M**	**2.05**	**42**	P		**Pb**	**11 25 10.5**	**+0.4**
MILOS	**Milos**	**2.10**	**41**	P		**Pb**	**11 25 10.2**	**-0.9**
ITM	**Ithomi**	**2.11**	**343**	Pn		**Pn**	**11 25 08.1**	**+0.2**
ITM	**Ithomi**	**2.11**	**343**	P		**Pb**	**11 25 11.6**	**+0.4**
ITM	**Ithomi**	**2.11**	**343**	P		**Pg**	**11 25 12.3**	**-1.5**
NPS	**Neapolis**	**2.38**	**87**	P		**Pb**	**11 25 15.2**	**-0.5**
NPS	**Neapolis**	**2.38**	**87**	P		**Pb**	**11 25 14.0**	**-1.7**
MET3	**Ano Fanari,Met**	**2.44**	**10**	P		**Pb**	**11 25 15.7**	**-1.2**
THR9	**Santorini-Faro**	**2.46**	**60**	P		**Pb**	**11 25 15.8**	**-1.3**
THR9	**Santorini-Faro**	**2.46**	**60**	P		**Pb**	**11 25 15.5**	**-1.6**
MET1	**Methana Town,**	**2.47**	**13**	P		**Pb**	**11 25 16.1**	**-1.1**
MET6	**Megalochori,Me**	**2.48**	**12**	P		**Pb**	**11 25 16.8**	**-0.6**
THR6	**Thira Island,**	**2.49**	**61**	P		**Pb**	**11 25 15.5**	**-2.1**
SAP3	**Santorini-Thir**	**2.49**	**59**	P		**Pb**	**11 25 15.6**	**-2.0**
SAP3	**Santorini-Thir**	**2.49**	**59**	P		**Pn**	**11 25 14.8**	**+1.7**
MET2	**Kameni Chora,**	**2.49**	**11**	P		**Pb**	**11 25 16.8**	**-0.9**
AMT	**Artemida-Makis**	**2.50**	**341**	P		**Pb**	**11 25 18.6**	**+0.8**
MET5	**Makryloggos,Me**	**2.51**	**12**	P		**Pb**	**11 25 17.6**	**-0.4**
SNT5	**Nea Kammeni, S**	**2.51**	**60**	P		**Pb**	**11 25 15.7**	**-2.2**
THR3	**Thira Island,**	**2.51**	**60**	P		**Pb**	**11 25 15.4**	**-2.7**
MET4	**Agioi Theodoro**	**2.52**	**13**	P		**Pb**	**11 25 17.5**	**-0.6**
THERA	**Ancient Thera,**	**2.55**	**61**	P		**Pb**	**11 25 16.1**	**-2.5**
THERA	**Ancient Thera,**	**2.55**	**61**	P		**Pb**	**11 25 15.7**	**+1.8**
THR8	**Santorini-Mono**	**2.57**	**60**	P		**Pn**	**11 25 15.9**	**+1.7**
GUR	**Goura**	**2.78**	**354**	P		**Pb**	**11 25 22.3**	**-0.4**
VLY	**Voula,Athens**	**2.82**	**18**	P		**Pb**	**11 25 21.1**	**-2.2**
VLY	**Voula,Athens**	**2.82**	**18**	P		**Pb**	**11 25 21.2**	**-2.1**
LTK	**Loutraki**	**2.86**	**4**	P		**Pb**	**11 25 22.7**	**-1.3**
LTK	**Loutraki**	**2.86**	**4**	P		**Pb**	**11 25 22.2**	**-1.7**
ZKR	**Zakros**	**2.87**	**90**	P		**Pn**	**11 25 20.4**	**+2.0**
DRO	**Drossia**	**2.90**	**344**	P		**Pb**	**11 25 22.5**	**-2.1**
KLV	**Kalavryta, Ach**	**2.91**	**351**	P		**Pb**	**11 25 23.0**	**-1.8**
ATH	**Athens Observa**	**2.92**	**16**	P		**Pb**	**11 25 23.2**	**-1.7**
ATHU	**Athens Univers**	**2.93**	**17**	P		**Pb**	**11 25 22.8**	**-2.3**
ATHU	**Athens Univers**	**2.93**	**17**	P		**Pb**	**11 25 21.9**	**-3.2**
MAGU	**Magoula**	**2.98**	**12**	P		**Pb**	**11 25 24.1**	**-1.8**
PTL	**Penteli**	**3.02**	**18**	P		**Pb**	**11 25 23.4**	**-3.4**
RLS	**Riolos of Patr**	**3.06**	**341**	P		**Pb**	**11 25 24.9**	**-2.3**
DION	**Dionisos Attik**	**3.07**	**18**	P		**Pn**	**11 25 23.7**	**+2.6**
VIL2	**Platees**	**3.08**	**8**	P		**Pn**	**11 25 23.2**	**+2.0**
STFN	**Stefani**	**3.08**	**12**	P		**Pb**	**11 25 24.7**	**-3.0**
KARY	**Karystos**	**3.18**	**25**	P		**Pn**	**11 25 25.2**	**+2.6**
ANX	**Ano Chora**	**3.48**	**350**	P		**Pb**	**11 25 31.6**	**-3.0**
PVO	**Paravola**	**3.58**	**345**	P		**Pb**	**11 25 32.5**	**-3.6**
AXAR	**Agios Charalam**	**3.60**	**359**	P		**Pb**	**11 25 32.2**	**-4.3**
KARP	**Karpathos**	**3.66**	**83**			**Pn**	**11 25 29.4**	**+0.1**
KARP	**Karpathos**	**3.66**	**83**	P		**Pn**	**11 25 30.9**	**+1.8**
ARG	**Arkhangelos**	**4.53**	**75**	Pn		**Pn**	**11 25 40.2**	**-1.0**
AKAS	**Kas**	**5.71**	**77**	Pn		**Pn**	**11 25 56.4**	**-1.1**
ELL	**Elmali**	**6.05**	**73**	Pn		**Pn**	**11 26 01.7**	**-0.5**
ELL	**Elmali**	**6.05**	**73**	P		**Pn**	**11 26 01.7**	**-0.5**
TIP	**Timpagrande**	**6.22**	**312**	Pn		**Pn**	**11 26 04.9**	**+0.5**
CEL	**Celeste**	**6.29**	**301**	Pn		**Pn**	**11 26 05.5**	**+0.1**
ALN	**Alexandroupoli**	**6.30**	**24**	Pn		**Pn**	**11 26 06.1**	**+0.7**
RDO	**Rodhopi**	**6.37**	**20**	Pn		**Pn**	**11 26 06.6**	**+0.2**
RAFF	**Raffo Rosso**	**7.06**	**289**	Pn		**Pn**	**11 26 16.4**	**+0.6**
VAE	**Valguarnera**	**7.09**	**291**	P		**Pn**	**11 26 20.5**	**+4.2**
	20nm,0.8s,baz=38,slow=17,SNR=1.6							
CUC	**Castrocucco**	**7.29**	**313**	Pn		**Pn**	**11 26 18.8**	**-0.3**
PDG	**Podgorica**	**7.74**	**341**	Pn		**Pn**	**11 26 24.7**	**-0.5**
SGRT	**San Giovanni R**	**8.55**	**322**	Pn		**Pn**	**11 26 36.2**	**-0.3**
CSS	**Mathiatis**	**8.71**	**88**	Pn		**Pn**	**11 26 37.5**	**-1.1**
BRTR	**Keskin Array B**	**9.81**	**59**	P		**Pn**	**11 26 55.5**	**+1.8**
	0.2nm,0.3s,baz=228,slow=13,SNR=7.9							
BRTR				LR		LR	11 31 32.5	
	comp=Z,84nm,20.2s,baz=221,slow=43							
	2.2nm,0.8s							
BLY	**Banja Luka**	**10.47**	**338**	Pn		**Pn**	**11 27 02.6**	**0.0**
MLR	**Muntele Rosu**	**10.61**	**12**	P		**Pn**	**11 27 07.4**	**+2.8**
	0.2nm,0.3s,baz=163,slow=15,SNR=3.8							
	1.6nm,0.6s							
MLR	**Muntele Rosu**	**10.61**	**12**			**Pn**	**11 27 04.3**	**-0.4**
NRCA	**Norcia**	**10.69**	**319**	Pn		**Pn**	**11 27 06.1**	**+0.3**
MMAI	**Mount Meron Ar**	**10.74**	**98**	P		**Pn**	**11 27 05.6**	**-0.9**
	1.6nm,0.3s,baz=268,slow=17,SNR=3.0							
MMAI				S		**Sn**	**11 29 06.5**	**+0.1**
	0.8nm,0.3s,baz=277,slow=40,SNR=1.6							
	0.9nm,0.3s							
EIL	**Elat**	**11.70**	**115**	P		**Pn**	**11 27 18.9**	**-0.7**
	1.3nm,0.3s,baz=210,slow=9.4,SNR=5.1							
EIL				S		**Sn**	**11 29 34.8**	**+5.0**
	7.8nm,0.6s,baz=88,slow=20,SNR=4.3							
	3.6nm,0.4s							
ASF	**Jabal al Asfar**	**12.19**	**100**	P		**Pn**	**11 27 26.4**	**+0.1**
	0.3nm,0.3s,baz=208,slow=13,SNR=2.0							
ASF				S		**Sn**	**11 29 38.6**	**-3.3**
	1.7nm,0.7s,baz=119,slow=15,SNR=2.3							
	0.9nm,0.5s							
FUORN	**Ofenpass-Fuorn**	**14.80**	**324**	Pn		**Pn**	**11 28 00.6**	**-1.4**
DAVOX	**Davos/Dischmat**	**15.10**	**324**	P		**P**	**11 28 11.3**	**+0.2**
	1.9nm,0.6s,baz=341,slow=23,SNR=3.6							
DAVOX				S		**Sn**	**11 30 52.7**	**-0.1**
	2.8nm,0.8s,baz=213,slow=4.9,SNR=3.8							
TUE	**Stuetta**	**15.14**	**322**	Pn		**Pn**	**11 28 06.2**	**-0.4**
TUE				IAmb		IAmb	11 28 15.5	
	comp=Z,3.7nm,0.7s							
KHC	**Kasperske Hory**	**15.50**	**337**	Pn		**Pn**	**11 28 08.6**	**-2.4**
AKASG	**Malin Array Be**	**16.23**	**15**	P		**Pn**	**11 28 20.7**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=211,slow=10,SNR=4.1							
	comp=Z,0.4nm,0.5s							
KBZ	**Khabaz**	**17.75**	**55**	P		**P**	**11 28 40.8**	**+0.5**
	comp=Z,1.8nm,0.8s,baz=243,slow=12,SNR=3.8							
ESDC	**Sonseca Array**	**21.63**	**290**	P		**P**	**11 29 24.1**	**+1.4**
	comp=Z,1.0nm,0.6s,baz=84,slow=9.9,SNR=7.5							
	comp=Z,1.0nm,0.6s							
ESDC	**Sonseca Array**	**21.63**	**290**	P		**P**	**11 29 22.2**	**-0.5**
HFS	**Hagfors**	**25.66**	**350**	P		**P**	**11 30 02.1**	**0.0**
	comp=Z,4.2nm,0.8s,baz=140,slow=12,SNR=7.6							
	comp=Z,4.2nm,0.8s							
FINES	**FINESS Array B**	**26.39**	**4**	P		**P**	**11 30 07.5**	**-1.1**
	comp=Z,4.7nm,0.9s,baz=147,slow=11,SNR=3.5							
	comp=Z,4.7nm,0.9s							
FINES	**FINESS Array B**	**26.39**	**4**	P		**P**	**11 30 07.9**	**-0.7**
NC602	**NORSAR Array S**	**26.58**	**348**	P		**P**	**11 30 10.0**	**-0.4**
EKA	**Eskdalemuir Ar**	**26.91**	**327**	P		**P**	**11 30 13.4**	**0.0**
	comp=Z,0.5nm,0.4s,baz=138,slow=8.9,SNR=3.9							
	comp=Z,0.5nm,0.4s							
NB201	**NORSAR Array S**	**26.92**	**348**	P		**P**	**11 30 10.8**	**-2.7**
NB201				IAmb		IAmb	11 30 22.5	
	comp=Z,7.3nm,0.9s							
NOA	**NORSAR Array B**	**26.93**	**348**	P		**P**	**11 30 13.5**	**0.0**
	comp=Z,1.0nm,0.8s,baz=153,slow=8.8,SNR=3.4							
	comp=Z,1.0nm,0.8s							
TORD	**Torodi Ar. Bea**	**29.00**	**226**	P		**P**	**11 30 33.1**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=24,slow=7.4,SNR=9.6							
	comp=Z,0.9nm,0.5s							
ARCES	**ARCESS Array B**	**34.46**	**2**	P		**P**	**11 31 20.1**	**+0.2**
	comp=Z,6.5nm,1.0s,baz=188,slow=7.9,SNR=2.6							
	comp=Z,6.5nm,1.0s							
CHGR	**Chuyangaron**	**37.00**	**71**	P		**P**	**11 31 41.8**	**-0.3**
BVAR	**Borovoye Array**	**37.80**	**47**	P		**P**	**11 31 48.5**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=238,slow=8.5,SNR=2.5							
	comp=Z,0.4nm,0.4s							
GAR	**Garm**	**37.83**	**70**	P		**P**	**11 31 48.8**	**-0.5**
GAR				IAmb		IAmb	11 32 06.3	
	comp=Z,3.6nm,0.7s							
BOOM	**Boomskoye usch**	**41.53**	**63**	P		**P**	**11 32 19.6**	**-0.4**
NRN	**Naryn**	**41.73**	**65**	P		**P**	**11 32 19.8**	**-2.1**
KURBB	**Kurchatov Arra**	**42.68**	**51**	P		**P**	**11 32 28.4**	**-0.7**
	comp=Z,1.4nm,0.5s,baz=276,slow=8.7,SNR=20							
	comp=Z,1.4nm,0.5s							
KURK	**Kurchatov**	**42.73**	**51**	P		**P**	**11 32 28.1**	**-1.4**
KURK				IAmb		IAmb	11 32 29.9	
	comp=Z,1.3nm,0.7s							
MK31	**Makanchi Array**	**45.44**	**56**	P		**P**	**11 32 50.8**	**-0.6**
MK31				IAmb		IAmb	11 32 52.2	
	comp=Z,1.1nm,0.6s							
MKAR	**Makanchi Array**	**45.44**	**56**	P		**P**	**11 32 50.6**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=281,slow=6.5,SNR=18							
	comp=Z,1.2nm,0.5s							
MKAR	**Makanchi Array**	**45.44**	**56**	P		**P**	**11 32 50.9**	**-0.5**
ZALV	**Zalesovo Beam**	**46.45**	**46**	P		**P**	**11 32 57.9**	**-1.2**
	comp=Z,1.0nm,0.5s,baz=265,slow=7.7,SNR=6.4							
	comp=Z,1.0nm,0.5s							
ZALV	**Zalesovo Beam**	**46.45**	**46**	P		**P**	**11 32 57.5**	**-1.6**
SONM	**Songino Array**	**61.03**	**50**	P		**P**	**11 34 45.3**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=332,slow=4.9,SNR=2.1							
	comp=Z,0.2nm,0.3s							
ILON	**Igloolik, Nuna**	**62.40**	**337**	P		**P**	**11 34 55.1**	**+0.3**
A36M	**Sachs Harbour**	**70.80**	**350**	P		**P**	**11 35 49.2**	**+0.8**
A36M				IAmb		IAmb	11 35 51.9	
	comp=Z,1.6nm,0.8s							
INK	**Inuvik**	**75.32**	**351**	P		**P**	**11 36 15.7**	**+0.5**
YKA	**Yellowknife Ar**	**76.81**	**341**	P		**P**	**11 36 24.7**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=125,slow=10,SNR=4.9							
	comp=Z,0.2nm,0.5s							
ILAR	**Eielson Array**	**80.06**	**355**	P		**P**	**11 36 42.3**	**+0.6**
	comp=Z,0.2nm,0.9s,baz=328,slow=3.3,SNR=2.1							
	comp=Z,0.2nm,0.9s							

*IDC **25** 11:25:52.8±0.7,49.°02N×157.°72E,h0km,mb3.9/13, mbtmp3.9/19,ML3.3/5,Error ellipse: s-maj=16.7km s-min=10.3km az=135.0*

*KRSC **25** 11:25:55.9±2.8,49.°28N×158.°41E,h42km±68km,Ml4.4*

*NEIC **25** 11:25:56.7±1.2,48.°99N±0.°09×157.°7E±0.°1,h28km±6km, mb4.1/39,Error ellipse: s-maj=15.1km s-min=11.2km az=131.0*

*MOS **25** 11:25:57.1±1.1,49.°18N×157.°92E,h48km,mb4.4/10,Error ellipse: s-maj=13.4km s-min=3.7km az=87.8*

ISC 25 11:25:57.6±0.6,49.°10N±0.°06×157.°80E±0.°06,h35km,n139,
σ1§61/162,mb4.1/42,6C-3D,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.92**	**326**	**i**	P	**Pn**	**Pn**	**11 26 26.6**	**-1.2**
SKR				*i*	S	**Sn**	**Sn**	**11 26 50.0**	**-0.7**
SKR					pmax	pmax			
	comp=Z,567nm,0.3s								
SKR					smax	smax			
	comp=N,2μm,0.3s								
SKR					smax	smax			
	comp=E,1μm,0.2s								
SKR	**Severo-Kuril's**	**1.92**	**326**	*e*	P	**Pn**	**Pn**	**11 26 26.5**	**-1.2**
SKR				*e*	S	**Sn**	**Sn**	**11 26 50.1**	**-0.7**
PAU	**Pauzhetka**	**2.45**	**345**		PN	**Pn**	**Pn**	**11 26 34.6**	**-0.4**
PAU					S	**Sn**	**Sn**	**11 27 03.5**	**-0.3**
PAU	**Pauzhetka**	**2.45**	**345**	*e*	P	**Pn**	**Pn**	**11 26 34.7**	**-0.4**
PAU				*e*	S	**Sn**	**Sn**	**11 27 03.5**	**-0.3**
KDTR	**Khodutka, Kamc**	**2.72**	**4**		PN	**Pn**	**Pn**	**11 26 37.7**	**-1.0**
KDTR					S	**Sn**	**Sn**	**11 27 07.7**	**-2.6**
KDTR	**Khodutka, Kamc**	**2.72**	**4**	*e*	P	**Pn**	**Pn**	**11 26 37.8**	**-1.0**
KDTR				*e*	S	**Sn**	**Sn**	**11 27 07.7**	**-2.6**
MIPR	**Malaya Ipel'ka**	**3.25**	**349**		PN	**Pn**	**Pn**	**11 26 46.2**	**+0.2**
MIPR					S	**Sn**	**Sn**	**11 27 22.4**	**-1.0**
MIPR	**Malaya Ipel'ka**	**3.25**	**349**	*e*	P	**Pn**	**Pn**	**11 26 46.2**	**+0.2**
MIPR				*e*	S	**Sn**	**Sn**	**11 27 22.4**	**-1.0**
ASAK	**Asacha**	**3.29**	**1**		PN	**Pn**	**Pn**	**11 26 46.6**	**0.0**
ASAK					S	**Sn**	**Sn**	**11 27 23.8**	**-0.7**
ASAK	**Asacha**	**3.29**	**1**	*e*	P	**Pn**	**Pn**	**11 26 46.6**	**0.0**
ASAK				*e*	S	**Sn**	**Sn**	**11 27 23.8**	**-0.7**
RUS	**Russkaya**	**3.37**	**7**		PN	**Pn**	**Pn**	**11 26 46.9**	**-0.7**
RUS					S	**Sn**	**Sn**	**11 27 23.5**	**-2.8**
RUS	**Russkaya**	**3.37**	**7**	*e*	P	**Pn**	**Pn**	**11 26 47.0**	**-0.7**
RUS				*e*	S	**Sn**	**Sn**	**11 27 23.5**	**-2.8**
MTVR	**Mutnovka**	**3.40**	**4**		PN	**Pn**	**Pn**	**11 26 47.8**	**-0.4**
MTVR					S	**Sn**	**Sn**	**11 27 24.8**	**-2.5**
MTVR	**Mutnovka**	**3.40**	**4**	*e*	P	**Pn**	**Pn**	**11 26 47.8**	**-0.4**
MTVR				*e*	S	**Sn**	**Sn**	**11 27 24.8**	**-2.5**
GRL	**Gorelyy**	**3.46**	**3**		PN	**Pn**	**Pn**	**11 26 48.6**	**-0.4**
GRL					S	**Sn**	**Sn**	**11 27 27.5**	**-1.3**
GRL	**Gorelyy**	**3.46**	**3**	*e*	P	**Pn**	**Pn**	**11 26 48.7**	**-0.4**
GRL				*e*	S	**Sn**	**Sn**	**11 27 27.6**	**-1.3**
KRMR	**Karymshinskiy**	**3.74**	**3**		PN	**Pn**	**Pn**	**11 26 53.1**	**+0.3**
KRMR					S	**Sn**	**Sn**	**11 27 35.5**	**0.0**
KRMR	**Karymshinskiy**	**3.74**	**3**	*e*	P	**Pn**	**Pn**	**11 26 53.1**	**+0.3**
KRMR				*e*	S	**Sn**	**Sn**	**11 27 35.6**	**0.0**
APC	**Apacha**	**3.85**	**354**		PN	**Pn**	**Pn**	**11 26 54.8**	**+0.5**
APC	**Apacha**	**3.85**	**354**	*e*	P	**Pn**	**Pn**	**11 26 54.9**	**+0.5**
PET	**Petropavlovsk**	**3.97**	**7**				**Pn**	**11 26 55.8**	**-0.1**
PET	**Petropavlovsk**	**3.97**	**7**	*e*	PN	**Pn**	**Pn**	**11 26 55.8**	**-0.1**
PET				*e*	S	**Sn**	**Sn**	**11 27 39.9**	**-1.2**
PET					pmax	pmax			
	comp=Z,62nm,0.3s								
PET					smax	smax			
	comp=E,146nm,0.8s								
PET					smax	smax			
	comp=N,170nm,0.7s								
PET	**Petropavlovsk**	**3.97**	**7**	*e*	P	**Pn**	**Pn**	**11 26 55.7**	**-0.1**
PET				*e*	S	**Sn**	**Sn**	**11 27 39.5**	**-1.6**
DALK	**Dalny**	**3.98**	**8**		PN	**Pn**	**Pn**	**11 26 55.5**	**-0.6**
DALK					S	**Sn**	**Sn**	**11 27 38.5**	**-2.9**
DALK	**Dalny**	**3.98**	**8**	*e*	P	**Pn**	**Pn**	**11 26 55.5**	**-0.6**
DALK				*e*	S	**Sn**	**Sn**	**11 27 38.6**	**-2.9**
INSR	**Institute**	**4.00**	**7**		PN	**Pn**	**Pn**	**11 26 56.3**	**-0.1**
INSR					S	**Sn**	**Sn**	**11 27 41.1**	**-0.9**
INSR	**Institute**	**4.00**	**7**	*e*	P	**Pn**	**Pn**	**11 26 56.4**	**-0.1**
INSR				*e*	S	**Sn**	**Sn**	**11 27 41.2**	**-0.9**
PEA0B	**Petropavlovsk-**	**4.01**	**359**		Pn	**Pn**	**Pn**	**11 26 57.2**	**+0.6**
PEA0B	**Petropavlovsk-**	**4.01**	**359**	*e*	PN	**Pn**	**Pn**	**11 26 57.1**	**+0.5**
PETK	**Petropavlovsk-**	**4.01**	**359**		Pn	**Pn**	**Pn**	**11 26 57.1**	**+0.5**
	comp=N,3.6nm,0.3s,baz=146,slow=16,SNR=46								
PETK					Sn	**Sn**	**Sn**	**11 27 46.3**	**+4.0**
	comp=N,1.6nm,0.3s,baz=200,slow=11,SNR=1.9								
	comp=N,6.6nm,0.4s								
PETK	**Petropavlovsk-**	**4.01**	**359**		Pn	**Pn**	**Pn**	**11 26 57.3**	**+0.8**
UGLR	**Uglovaya**	**4.17**	**9**		PN	**Pn**	**Pn**	**11 26 58.9**	**+0.2**
UGLR	**Uglovaya**	**4.17**	**9**	*e*	P	**Pn**	**Pn**	**11 26 59.0**	**+0.2**
NLC	**Nalytchevo**	**4.19**	**13**		PN	**Pn**	**Pn**	**11 26 57.6**	**-1.3**
NLC	**Nalytchevo**	**4.19**	**13**	*e*	P	**Pn**	**Pn**	**11 26 57.7**	**-1.3**
NLC				*e*	S	**Sn**	**Sn**	**11 27 43.3**	**-3.3**
AVH	**Avacha**	**4.21**	**8**		PN	**Pn**	**Pn**	**11 27 00.0**	**+0.7**
AVH	**Avacha**	**4.21**	**8**	*e*	P	**Pn**	**Pn**	**11 27 00.0**	**+0.7**
SMAR	**Somma**	**4.22**	**8**		PN	**Pn**	**Pn**	**11 26 59.5**	**0.0**
SMAR					S	**Sn**	**Sn**	**11 27 49.5**	**+1.9**
SMAR	**Somma**	**4.22**	**8**	*e*	P	**Pn**	**Pn**	**11 26 59.5**	**0.0**
SMAR				*e*	S	**Sn**	**Sn**	**11 27 49.6**	**+1.9**
KOK	**Koryaka**	**4.23**	**7**		PN	**Pn**	**Pn**	**11 27 00.5**	**+0.9**
KOK	**Koryaka**	**4.23**	**7**	*e*	P	**Pn**	**Pn**	**11 27 00.5**	**+0.9**
SPN	**Mys Shipunski**	**4.24**	**18**		PN	**Pn**	**Pn**	**11 26 58.6**	**-1.0**
SPN	**Mys Shipunski**	**4.24**	**18**	*e*	P	**Pn**	**Pn**	**11 26 58.7**	**-1.0**
SPN				*e*	S	**Sn**	**Sn**	**11 27 43.7**	**-4.2**
KRER	**Koryakskii**	**4.25**	**8**		PN	**Pn**	**Pn**	**11 27 00.1**	**+0.1**
KRER					S	**Sn**	**Sn**	**11 27 46.0**	**-2.4**
KRER	**Koryakskii**	**4.25**	**8**	*e*	P	**Pn**	**Pn**	**11 27 00.2**	**+0.1**
KRER				*e*	S	**Sn**	**Sn**	**11 27 46.1**	**-2.4**
KRX	**Arik**	**4.30**	**7**		PN	**Pn**	**Pn**	**11 27 01.0**	**+0.5**
KRX	**Arik**	**4.30**	**7**	*e*	P	**Pn**	**Pn**	**11 27 01.1**	**+0.5**
GNL	**Ganaly**	**4.60**	**1**		PN	**Pn**	**Pn**	**11 27 05.6**	**+0.9**
GNL					S	**Sn**	**Sn**	**11 27 57.4**	**+0.5**
GNL	**Ganaly**	**4.60**	**1**	*e*	P	**Pn**	**Pn**	**11 27 05.6**	**+0.9**
GNL				*e*	S	**Sn**	**Sn**	**11 27 57.4**	**+0.5**
KII	**Karymskiy**	**5.05**	**11**		PN	**Pn**	**Pn**	**11 27 12.1**	**+1.3**
KII	**Karymskiy**	**5.05**	**11**	*e*	P	**Pn**	**Pn**	**11 27 12.1**	**+1.3**
ESO	**Esso**	**6.86**	**4**		PN	**Pn**	**Pn**	**11 27 36.1**	**+0.5**
ESO	**Esso**	**6.86**	**4**	*e*	P	**Pn**	**Pn**	**11 27 36.1**	**+0.5**
KBTR	**Krutoberegovo**	**7.75**	**21**		PN	**Pn**	**Pn**	**11 27 46.7**	**-1.0**
KBTR	**Krutoberegovo**	**7.75**	**21**	*e*	P	**Pn**	**Pn**	**11 27 46.7**	**-1.0**
KBTR				*e*	S	**Sn**	**Sn**	**11 29 07.5**	**-6.6**
KBG	**Krutoberegovo**	**7.76**	**21**		PN	**Pn**	**Pn**	**11 27 47.1**	**-0.8**
KBG	**Krutoberegovo**	**7.76**	**21**	*e*	P	**Pn**	**Pn**	**11 27 47.2**	**-0.8**
KBG				*e*	S	**Sn**	**Sn**	**11 29 07.1**	**-7.3**
BKI	**Bering**	**7.91**	**36**		PN	**Pn**	**Pn**	**11 27 47.5**	**-2.4**
BKI	**Bering**	**7.91**	**36**	*e*	P	**Pn**	**Pn**	**11 27 47.5**	**-2.4**
BKI				*e*	S	Sn		11 29 07.2	-11
SHEM	**Shemya Is, Ala**	**10.91**	**64**		Pn	**Pn**	**Pn**	**11 28 30.3**	**-0.8**
	comp=N,18nm,0.3s,baz=135,slow=3.5,SNR=10								
SHEM	**Shemya Is, Ala**	**10.91**	**64**				**Pn**	**11 28 30.7**	**-0.4**
SMY	**Shemya**	**10.91**	**64**		Pn	**Pn**	**Pn**	**11 28 30.3**	**-0.8**
SMY	**Shemya**	**10.91**	**64**		PN	**Pn**	**Pn**	**11 28 30.3**	**-0.8**
MA2	**Magadan**	**11.26**	**341**		Pn	**Pn**	**Pn**	**11 28 35.6**	**-0.3**
	comp=N,0.3nm,0.3s,baz=141,slow=22,SNR=1.3								
MA2					Sn	**Sn**	**Sn**	**11 30 44.6**	**+4.3**
	comp=N,0.4nm,0.3s,baz=312,slow=23,SNR=1.2								
JKA	**Kamikawa-asahi**	**11.57**	**250**				**Pn**	**11 28 37.4**	**-2.8**
ASAJ	**Asahikawa**	**11.58**	**250**		Pn	**Pn**	**Pn**	**11 28 37.8**	**-2.5**
	comp=N,0.5nm,0.3s,baz=76,slow=16,SNR=5.9								
	comp=N,3.8nm,0.6s								
SEY	**Seymchan**	**14.18**	**350**		Pn	**Pn**	**Pn**	**11 29 16.5**	**+0.8**
	comp=N,0.2nm,0.3s,baz=152,slow=11,SNR=3.7								
SEY					Sn	**Sn**	**Sn**	**11 31 52.4**	**+0.8**
	comp=N,0.2nm,0.3s,baz=9.0,slow=23,SNR=1.5								
	comp=N,0.3nm,0.4s								
KLR	**Kul'dur**	**17.01**	**280**		Pn

comp=Z,1.1nm,0.8s,baz=24,slow=4.4,SNR=2.6
comp=Z,1.1nm,0.8s
AKASG Malin Array Be 71.27 328 P **P** **11 37 13.2 +0.3**
comp=Z,0.3nm,0.4s,baz=34,slow=6.9,SNR=1.4
comp=Z,0.3nm,0.4s
KBZ Khabaz 71.43 316⇑*eP* **P** **11 37 15.1 +1.1**
KBZ pmax pmax
comp=Z,5.0nm,1.3s
WRA Warramunga Arr 71.84 203 P **P** **11 37 16.6 0.0**
comp=Z,3.1nm,0.9s,baz=26,slow=6.8,SNR=14
comp=Z,3.1nm,0.9s
WRA Warramunga Arr 71.84 203 P **P** **11 37 15.0 -1.6**
TXAR Lajitas Array 73.61 64 P **P** **11 37 28.4 +1.0**
comp=Z,0.5nm,0.6s,baz=308,slow=4.7,SNR=9.8
comp=Z,0.5nm,0.6s
TXAR Lajitas Array 73.61 64 P **P** **11 37 28.1 +0.7**
TXAR Lajitas Array 73.61 64 P **P** **11 37 28.1 +0.7**
ASAR Alice Springs 75.51 203 P **P** **11 37 38.1 -0.1**
comp=Z,0.6nm,0.4s,baz=16,slow=5.4,SNR=11
comp=Z,0.6nm,0.4s

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*IDC **25** 11:30:39.1±1.0,24.7°S×41.8°W,h0km,mb3.5/6, mbtmp3.7/8,ML4.1/2,Error ellipse: s-maj=33.1km s-min=24.2km az=2.0*
*VAO **25** 11:30:39.7±0.3,24.5°S×41.9°W,h0km,mb4.1, Presumed earthquake*
*OSUNB **25** 11:30:41.5±0.4,24.6°S×41.9°W,h10km,mR3.7/18,Error ellipse: s-maj=2.4km s-min=2.7km az=0.0*
ISC 25 11:30:40.2±0.7,**24.6°S**±0.6°×**41.8°W**±0.6°,**h10**km,**n73,**
σ1s70/101,mb3.6/4,South Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUB01	**Friburgo-RJ**	**2.59**	**350**	P	**Pb**	**11 31 24.5**	**-2.4**
DUB01				S	**Sn**	**11 31 55.0**	**+1.1**
DUB01	**Friburgo-RJ**	**2.59**	**350**	*eP*	**Pn**	**11 31 21.6**	**-0.7**
DUB01				*eS*	**Sn**	**11 31 53.5**	**-0.4**
CAM01	**Campos-RJ**	**2.81**	**4**	P	**Pn**	**11 31 26.9**	**+1.6**
CAM01	**Campos-RJ**	**2.81**	**4**	*eP*	**Pn**	**11 31 24.7**	**-0.6**
CAM01				*eS*	**Sn**	**11 31 59.2**	**0.0**
SIM2	**UHE Simplicio**	**2.85**	**342**	P	**Pn**	**11 31 27.7**	**+1.9**
SIM2				S	**Sn**	**11 32 01.6**	**+1.5**
PARB	**Paraibuna**	**3.67**	**290**	P	**Pn**	**11 31 39.1**	**+2.0**
PARB				S	**Sn**	**11 32 22.3**	**+1.9**
PARB	**Paraibuna**	**3.67**	**290**	*eP*	**Pn**	**11 31 37.4**	**+0.3**
PARB				*eS*	**Sn**	**11 32 19.5**	**-0.9**
ALF01	**Guarapari-ES**	**4.14**	**15**	P	**Pn**	**11 31 44.3**	**+0.7**
ALF01	**Guarapari-ES**	**4.14**	**15**	*eP*	**Pn**	**11 31 43.0**	**-0.7**
BSCB	**Bom Sucesso**	**4.51**	**323**	P	**Pn**	**11 31 51.1**	**+2.4**
BSCB	**Bom Sucesso**	**4.51**	**323**	*eP*	**Pn**	**11 31 48.0**	**-0.7**
BSCB				*eS*	**Sn**	**11 32 40.5**	**-0.8**
FABR	**Ouro Preto, Br**	**4.61**	**335**	*eP*	**Pn**	**11 31 49.2**	**-0.9**
FABR				*eS*	**Sn**	**11 32 42.8**	**-1.0**
FZND	**Mina de Fazend**	**4.70**	**342**	*eP*	**Pn**	**11 31 50.5**	**-0.8**
FZND				*eS*	**Sn**	**11 32 45.5**	**-0.6**
AGLP	**Mina gua Lim**	**4.85**	**345**	*eP*	**Pn**	**11 31 52.3**	**-1.1**
PET01	**Itanhaem-SP**	**4.93**	**273**	P	**Pn**	**11 31 56.5**	**+2.0**
PET01				S	**Sn**	**11 32 53.5**	**+1.9**
PET01	**Itanhaem-SP**	**4.93**	**273**	*eP*	**Pn**	**11 31 54.4**	**-0.1**
VAO	**Valinhos**	**4.94**	**288**	*eP*	**Pn**	**11 31 54.2**	**-0.4**
VAO				*eS*	**Sn**	**11 32 51.9**	**0.0**
VABB	**Valinhos**	**4.94**	**288**	P	**Pn**	**11 31 57.7**	**+3.0**
VABB				S	**Sn**	**11 32 53.1**	**+1.0**
SPB	**Sao Paulo**	**5.18**	**280**	*eP*	**Pn**	**11 31 57.4**	**-0.5**
SPB				*eS*	**Sn**	**11 32 58.2**	**+0.4**
RIB01	**Linhares ES**	**5.48**	**15**	P	**Pn**	**11 32 02.8**	**+0.8**
RIB01	**Linhares ES**	**5.48**	**15**	*eP*	**Pn**	**11 32 01.5**	**-0.4**
RCLB	**Rio Claro- Sao**	**5.64**	**292**	S	**Sn**	**11 33 12.5**	**+3.3**
RCLB	**Rio Claro- Sao**	**5.64**	**292**	*eP*	**Pn**	**11 32 03.7**	**-0.6**
RCLB				*eS*	**Sn**	**11 33 09.1**	**-0.1**
BSFB	**Barra de Sao F**	**5.86**	**10**	*eP*	**Pn**	**11 32 06.8**	**-0.4**
BSFB				*eS*	**Sn**	**11 33 14.1**	**-0.4**
SJMB	**Sao Joao De Ma**	**5.95**	**6**	*eP*	**Pn**	**11 32 07.9**	**-0.5**
SJMB				*eS*	**Sn**	**11 33 16.2**	**-0.4**
TIJ01	**Guaruva-PR**	**6.50**	**263**	P	**Pn**	**11 32 17.4**	**+1.2**
TIJ01				S	**Sn**	**11 33 29.6**	**-1.0**
DIAM	**Diamantina, MG**	**6.53**	**345**	P	**Pn**	**11 32 19.1**	**+2.5**
DIAM	**Diamantina, MG**	**6.53**	**345**	*eP*	**Pn**	**11 32 15.8**	**-0.8**
DIAM				*eS*	**Sn**	**11 33 30.5**	**-0.8**
MAJ01	**Sao Joao Batis**	**6.98**	**245**	P	**Pn**	**11 32 23.5**	**+0.9**
MAJ01				S	**Sn**	**11 33 39.2**	**-3.0**
MAJ01	**Sao Joao Batis**	**6.98**	**245**	*eP*	**Pn**	**11 32 23.1**	**+0.4**
BB19B	**Bebedouro**	**7.09**	**299**	*eP*	**Pn**	**11 32 23.6**	**-0.6**
BB19B				*eS*	**Sn**	**11 33 45.0**	**+0.1**
FRTB	**Fartura**	**7.15**	**279**	P	**Pn**	**11 32 27.3**	**+2.3**
FRTB	**Fartura**	**7.15**	**279**	*eP*	**Pn**	**11 32 24.7**	**-0.2**
FRTB				*eS*	**Sn**	**11 33 45.8**	**-0.5**
PMNB	**Patos De Minas**	**7.41**	**324**	P	**Pn**	**11 32 30.3**	**+1.6**
PMNB				S	**Sn**	**11 33 50.0**	**-2.8**
PMNB	**Patos De Minas**	**7.41**	**324**	*eP*	**Pn**	**11 32 27.9**	**-0.8**
GUA01	**Guaratinga, BA**	**8.25**	**14**	P	**Pn**	**11 32 41.6**	**+1.6**
GUA01	**Guaratinga, BA**	**8.25**	**14**	*eP*	**Pn**	**11 32 39.7**	**-0.3**
LDASE	**Londrina, Braz**	**8.54**	**276**	*eP*	**Pn**	**11 32 43.8**	**-0.3**
LDASE				*eS*	**Sn**	**11 34 20.1**	**-0.5**
IPMB	**Ipameri, GO**	**8.88**	**317**	*eP*	**Pn**	**11 32 47.9**	**-0.8**
IPMB				*eS*	**Sn**	**11 34 26.6**	**-2.2**
CNLB	**Canela**	**9.26**	**238**	P	**Pn**	**11 32 54.8**	**+0.8**
CNLB				S	**Sn**	**11 34 33.6**	**-4.6**
CNLB	**Canela**	**9.26**	**238**	*eP*	**Pn**	**11 32 54.5**	**+0.5**
PTGB	**Pitanga**	**9.27**	**267**	P	**Pn**	**11 32 55.8**	**+1.7**
PTGB				S	**Sn**	**11 34 36.5**	**-2.0**
PTGB	**Pitanga**	**9.27**	**267**	*eP*	**Pn**	**11 32 54.1**	**0.0**
CMC01	**Camacan, BA**	**9.50**	**14**	*eP*	**Pn**	**11 32 55.0**	**-2.1**
ITAB	**Concordia**	**9.59**	**252**	P	**Pn**	**11 32 59.5**	**+1.1**
ITAB				S	**Sn**	**11 34 42.1**	**-4.0**
ITAB	**Concordia**	**9.59**	**252**	*eP*	**Pn**	**11 32 58.5**	**+0.2**
JANB	**Januaria**	**9.81**	**346**	P	**Pn**	**11 33 01.8**	**+0.3**
JANB				S	**Sn**	**11 34 49.9**	**-1.9**
JANB	**Januaria**	**9.81**	**346**	*eP*	**Pn**	**11 33 00.7**	**-0.8**
BDFB	**Brasilia**	**10.65**	**326**	Pn	**Pn**	**11 33 13.6**	**+0.5**
	1.0nm,0.3s,baz=134,slow=7.5,SNR=7.8						
BDFB				Sn	**Sn**	**11 35 06.3**	**-6.2**
	2.1nm,0.3s,baz=9.9,slow=12,SNR=9.1						
BDFB				Lg	Lg	11 36 02.8	
	1.2nm,0.3s,baz=12,slow=19,SNR=3.9						
	4.4nm,0.5s						
CPSB	**Cacapava Do Su**	**11.76**	**238**	P	**Pn**	**11 33 27.2**	**-0.8**
CPSB	**Cacapava Do Su**	**11.76**	**238**	*eP*	**Pn**	**11 33 27.8**	**-0.2**
AMBA	**Amambai (Brazi**	**12.13**	**275**	*eP*	**Pn**	**11 33 33.1**	**-0.2**
SDBA	**SAO DESIDERIO**	**12.50**	**346**	*eP*	**Pn**	**11 33 37.4**	**-1.0**
ARAG	**Araguaiana, MT**	**12.88**	**312**	*eP*	**Pn**	**11 33 42.8**	**-0.7**
ARAG				*eS*	**Sn**	**11 36 06.8**	**-0.3**
CPUP	**Villa Florida**	**14.06**	**260**	Pn	**Pn**	**11 33 59.1**	**-0.4**
	0.1nm,0.3s,baz=58,slow=16,SNR=4.8						
CPUP				Sn	Sn	11 36 26.5	-9.2
	0.4nm,0.3s,baz=41,slow=19,SNR=4.2						
	1.2nm,0.7s						
CPUP	**Villa Florida**	**14.06**	**260**	*eP*	**Pn**	**11 33 59.5**	**0.0**
BDQN	**Bodoquena, MS**	**14.36**	**284**	*eP*	**Pn**	**11 34 03.3**	**-0.4**
MURT	**Porto Murtinho**	**14.78**	**278**	*eP*	**Pn**	**11 34 08.8**	**-0.5**
PSAL	**Palomas, Salto**	**15.31**	**242**	*eP*	**Pn**	**11 34 16.9**	**+0.3**
SIV	**San Ignacio**	**19.94**	**292**	P	**P**	**11 35 13.5**	**+1.0**
	0.3nm,0.3s,baz=120,slow=8.2,SNR=12						
SIV				S	**Sn**	**11 39 04.7**	**+6.1**
	0.2nm,0.3s,baz=64,slow=22,SNR=1.5						
	0.3nm,0.3s						
LPAZ	**La Paz**	**25.93**	**284**	P	**P**	**11 36 14.1**	**+0.5**
	0.4nm,0.5s,baz=148,slow=15,SNR=1.9						
	0.4nm,0.5s						
H10N3	**ASCENSION HYDR**	**31.04**	**62**	T	T	12 09 33.1	
	baz=233,slow=74,SNR=10						
H10N1	**ASCENSION HYDR**	**31.05**	**62**	T	T	12 09 19.4	
	baz=233,slow=74,SNR=21						
H10N2	**ASCENSION HYDR**	**31.06**	**62**	T	T	12 09 20.5	
	baz=233,slow=74,SNR=14						
TORD	**Torodi Ar. Bea**	**56.73**	**53**	P	**P**	**11 40 24.0**	**-0.6**
	0.3nm,0.6s,baz=232,slow=11,SNR=2.6						
	0.3nm,0.6s						
QSPA	**South Pole Qui**	**65.58**	**180**	P	**P**	**11 41 23.9**	**-0.1**
	1.9nm,1.1s,baz=359,slow=6.9,SNR=2.3						
	1.9nm,1.1s						
ESDC	**Sonseca Array**	**73.12**	**30**	P	**P**	**11 42 10.9**	**0.0**
	0.7nm,0.9s,baz=218,slow=5.7,SNR=4.6						
	0.7nm,0.9s						
TXAR	**Lajitas Array**	**80.01**	**309**	P	**P**	**11 42 52.8**	**+2.6**
	0.3nm,0.5s,baz=101,slow=5.2,SNR=1.6						
	0.3nm,0.5s						
ARMA	**Armidale**	**123.74**	**194**	P	**Pdif**	**11 46 14.1**	**+2.2**
KURBB	**Kurchatov Arra**	**127.81**	**44**	PKP	**PKiKP**	**11 49 46.4**	**0.0**
	0.2nm,0.3s,baz=311,slow=3.3,SNR=4.2						
MKAR	**Makanchi Array**	**130.72**	**49**	PKP	**PKPdf**	**11 49 51.5**	**0.0**
	0.5nm,0.8s,baz=225,slow=1.0,SNR=4.2						
PLAI	**Plampang**	**141.26**	**147**	P	**Pdif**	**11 47 25.3**	**-4.6**
SONM	**Songino Array**	**145.88**	**39**	PKPbc	**PKPab**	**11 50 20.7**	**+0.3**
	3.9nm,0.6s,baz=279,slow=3.3,SNR=34						

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*NOU **25** 11:41:35.0,33.88S×177.09W,h0km, MLv4.9/7, South of Kermadec Islands*
*WEL **25** 11:42:12.7±1.0,35°S±8°×178°W±1°,h165km±18km, M4.0/24,mB4.1/1,ML4.0/24,MLv4.0/24,Mw(mB)3.2/1, Error ellipse: s-maj=14.2km s-min=10.0km az=87.1, confirmed*
ISC 25 11:42:10.0±3.6,**35.3S**±0.1×**179.6W**±0.2,**h150**km,**n63,**
σ1s52/73,East of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**2.81**	**216**	P	**Pn**	**11 42 54.3**	**-0.7**
MXZ	**Matakaoa Point**	**2.81**	**216**	P	**Pn**	**11 42 54.2**	**-0.8**
WMGZ	**Waiomatatini S**	**2.97**	**212**	P	**Pn**	**11 42 58.0**	**+1.0**
WMGZ				S	**Sn**	**11 43 34.5**	**+1.2**
PKGZ	**Pakihiroa**	**3.16**	**215**	P	**Pn**	**11 42 59.8**	**+0.4**
HAZ	**Te Kaha**	**3.22**	**220**	P	**Pn**	**11 42 59.8**	**-0.3**
HAZ				S	**Sn**	**11 43 39.8**	**+0.7**
PUZ	**Puketiti**	**3.25**	**211**	P	**Pn**	**11 43 01.0**	**+0.4**
RUGZ	**Raukumara Rang**	**3.44**	**218**	P	**Pn**	**11 43 03.1**	**+0.1**
TWGZ	**Tauwhareparae**	**3.46**	**213**	P	**Pn**	**11 43 03.8**	**+0.5**
CNGZ	**Carnagh Statio**	**3.63**	**208**	P	**Pn**	**11 43 06.3**	**+1.0**
TKGZ	**Te Karaka**	**3.73**	**212**	P	**Pn**	**11 43 07.5**	**+0.8**
TKGZ				S	**Sn**	**11 43 50.4**	**-0.5**
MWZ	**Matawai**	**3.80**	**216**	P	**Pn**	**11 43 08.0**	**+0.4**
MWZ				S	**Sn**	**11 43 52.7**	**+0.3**
MYRZ	**Mayor Island**	**3.88**	**238**	P	**Pn**	**11 43 11.8**	**+3.1**
URZ	**Urewera**	**3.95**	**221**	P	**Pn**	**11 43 10.0**	**+0.4**
URZ	**Urewera**	**3.95**	**221**	P	**Pn**	**11 43 09.5**	**0.0**
URZ				S	**Sn**	**11 43 53.1**	**-2.8**
RAGZ	**Rawiri**	**3.98**	**216**	P	**Pn**	**11 43 11.3**	**+1.2**
RIGZ	**Rimuhau**	**4.00**	**211**	P	**Pn**	**11 43 11.1**	**+0.9**
MARZ	**Manawahe**	**4.01**	**227**	P	**Pn**	**11 43 11.5**	**+1.2**
TGRZ	**Tauranga**	**4.11**	**233**	P	**Pn**	**11 43 11.8**	**+0.1**
PRGZ	**Paritu Road**	**4.13**	**208**	P	**Pn**	**11 43 12.6**	**+0.6**
MKRZ	**Makatiti**	**4.23**	**227**	P	**Pn**	**11 43 15.7**	**+2.3**
OMRZ	**Omania**	**4.27**	**228**	P	**Pn**	**11 43 16.3**	**+2.5**
TARZ	**Mount Tarawera**	**4.27**	**226**	P	**Pn**	**11 43 16.3**	**+2.4**
RTZ	**Ruatahuna**	**4.29**	**218**	P	**Pn**	**11 43 14.5**	**+0.5**
KARZ	**Kaharoa**	**4.29**	**229**	P	**Pn**	**11 43 14.7**	**+0.7**
MUGZ	**Murupara**	**4.29**	**221**	P	**Pn**	**11 43 14.4**	**+0.3**
MUGZ				S	**Sn**	**11 44 03.1**	**-0.8**
MHGZ	**Mahia Peninsul**	**4.33**	**206**	P	**Pn**	**11 43 14.7**	**+0.2**
RRRZ	**Republican Roa**	**4.34**	**224**	P	**Pn**	**11 43 18.3**	**+3.6**
HLRZ	**Highlands Stat**	**4.38**	**226**	P	**Pn**	**11 43 17.7**	**+2.5**
NGRZ	**Ngongotaha**	**4.38**	**229**	P	**Pn**	**11 43 18.0**	**+2.7**
KMRZ	**Kaimai**	**4.38**	**233**	P	**Pn**	**11 43 15.7**	**+0.4**
MTHZ	**Maungataniwha**	**4.54**	**217**	P	**Pn**	**11 43 18.3**	**+1.0**
ALRZ	**Allen Road**	**4.59**	**224**	P	**Pn**	**11 43 20.7**	**+2.7**
TOZ	**Tahuroa Road**	**4.62**	**237**	P	**Pn**	**11 43 19.1**	**+0.8**
ETAZ	**East Tamaki Re**	**4.71**	**248**	P	**Pn**	**11 43 21.5**	**+2.0**
NMHZ	**Naumai**	**4.75**	**216**	P	**Pn**	**11 43 21.0**	**+0.9**
ARHZ	**Aropaoanui**	**4.79**	**213**	P	**Pn**	**11 43 21.2**	**+0.6**
BKZ	**Black Stump Fm**	**4.95**	**218**	P	**Pn**	**11 43 23.6**	**+0.8**
BKZ	**Black Stump Fm**	**4.95**	**218**	P	**Pn**	**11 43 23.3**	**+0.5**
WCZ	**Waipu Caves**	**4.96**	**261**	P	**Pn**	**11 43 22.7**	**-0.1**
AWAZ	**Awhitu Peninsu**	**4.96**	**248**	P	**Pn**	**11 43 25.0**	**+2.1**
MCHZ	**McNeill Hill**	**5.07**	**214**	P	**Pn**	**11 43 25.5**	**+1.1**
KWHZ	**Kaweka Forest**	**5.19**	**216**	P	**Pn**	**11 43 26.5**	**+0.6**
KATZ	**Kakaramea**	**5.24**	**224**	P	**Pn**	**11 43 29.0**	**+2.3**
KAHZ	**Kahuranaki**	**5.28**	**211**	P	**Pn**	**11 43 27.0**	**-0.1**
TMVZ	**Te Maari**	**5.33**	**223**	P	**Pn**	**11 43 28.1**	**+0.2**
NTVZ	**North Tongarir**	**5.34**	**223**	P	**Pn**	**11 43 28.3**	**+0.4**
ETVZ	**East Tongariro**	**5.34**	**223**	P	**Pn**	**11 43 28.8**	**+0.7**
KRHZ	**Kereru**	**5.38**	**215**	P	**Pn**	**11 43 28.5**	**0.0**
OTVZ	**Oturere**	**5.39**	**223**	P	**Pn**	**11 43 29.4**	**+0.7**
SNVZ	**South Ngauruho**	**5.42**	**223**	P	**Pn**	**11 43 29.7**	**+0.6**
NGZ	**Ngauruhoe**	**5.43**	**223**	P	**Pn**	**11 43 31.4**	**+2.1**
TWVZ	**Taurewa**	**5.45**	**225**	P	**Pn**	**11 43 30.8**	**+1.3**
HIZ	**Hauiti**	**5.47**	**232**	P	**Pn**	**11 43 32.9**	**+3.3**
HIZ	**Hauiti**	**5.47**	**232**	P	**Pn**	**11 43 31.0**	**+1.5**
MOVZ	**Moawhango**	**5.51**	**221**	P	**Pn**	**11 43 32.3**	**+2.1**
MOVZ				S	**Sn**	**11 44 30.1**	**-2.9**
OUZ	**Omahuta**	**5.55**	**269**	P	**Pn**	**11 43 29.5**	**-1.2**
OUZ	**Omahuta**	**5.55**	**269**	P	**Pn**	**11 43 29.6**	**-1.1**
PNHZ	**Pukenui**	**5.68**	**214**	P	**Pn**	**11 43 32.2**	**-0.3**
PNHZ				S	**Sn**	**11 44 35.5**	**-1.3**
PRHZ	**Porangahau**	**5.78**	**210**	P	**Pn**	**11 43 33.5**	**-0.2**
PRHZ				S	**Sn**	**11 44 38.1**	**-1.1**
DVHZ	**Dannevirke**	**6.00**	**212**	P	**Pn**	**11 43 34.1**	**+0.3**
DVHZ				S	**Sn**	**11 44 42.6**	**-2.0**
BFZ	**Birch Farm**	**6.29**	**210**	P	**Pn**	**11 43 41.0**	**+0.5**
KHEZ	**Kahui Hut**	**6.45**	**230**	P	**Pn**	**11 43 45.1**	**+2.3**
CTZ	**Chatham Island**	**8.74**	**166**	P	**Pn**	**11 44 16.6**	**+3.5**

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*WEL **25** 11:43:05.9±0.8,45°S±4°×166°E±°,h60km±7km, M3.1/10, ML3.1/8,MLv3.1/10,Error ellipse: s-maj=7.2km s-min=4.4km az=129.8,confirmed*
*NOU **25** 11:43:06.8,45.05S×167.91E,h32km,MLv3.6/10,South Island, New Zealand*
ISC 25 11:43:04.9±1.2,**44.96S**±0.03×**167.66E**±0.04,**h17**km±10km,
n37,σ2s34/47,South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSZ	**Milford Sound**	**0.34**	**34**	P	**Pn**	**11 43 18.1**	**+3.0**
MSZ				S	**Sn**	**11 43 28.4**	**+6.9**
TAFS	**Te Anau Fire S**	**0.46**	**175**	P	**Pn**	**11 43 18.3**	**+1.5**
TAFS				S	**Sn**	**11 43 28.7**	**+4.1**
MLZ	**Mavora Lakes**	**0.53**	**142**	P	**Pn**	**11 43 18.9**	**+1.2**
MLZ				S	**Sn**	**11 43 29.5**	**+3.3**
GLNY	**Glenorchy**	**0.54**	**81**	S	**Sn**	**11 43 30.6**	**+4.0**
DCZ	**Deep Cove**	**0.62**	**215**	P	**Pn**	**11 43 18.7**	**-0.2**
DCZ				S	**Sn**	**11 43 29.8**	**+1.3**
QTPS	**Queenstown Pol**	**0.72**	**97**	P	**Pn**	**11 43 21.3**	**+1.0**
QTPS				S	**Sn**	**11 43 33.4**	**+2.5**
MOSS	**Mossburn Schoo**	**0.82**	**150**	P	**Pg**	**11 43 22.1**	**+1.2**
WHZ	**Wether Hill Ro**	**0.96**	**168**	P	**Pb**	**11 43 22.9**	**-0.2**
WHZ				S	**Sb**	**11 43 36.4**	**+0.9**
WKZ	**Wanaka**	**0.98**	**83**	P	**Pg**	**11 43 24.6**	**+0.8**
WKZ				S	**Sg**	**11 43 38.8**	**+2.1**
JCZ	**Jackson Bay**	**1.20**	**43**	P	**Pg**	**11 43 27.3**	**-0.7**
JCZ	**Jackson Bay**	**1.20**	**43**	S	**Sg**	**11 43 42.6**	**-1.0**
JCZ	**Jackson Bay**	**1.20**	**43**	P	**Pg**	**11 43 28.8**	**+1.1**
JCZ				S	**Sg**	**11 43 45.5**	**+2.0**
RRKS	**Rarakau**	**1.20**	**186**	P	**Pn**	**11 43 25.9**	**-1.0**
EAZ	**Earnscleugh**	**1.20**	**104**	P	**Pb**	**11 43 26.9**	**-0.3**
EAZ				S	**Sn**	**11 43 43.1**	**+0.2**
PYZ	**Puysegur Point**	**1.39**	**209**	P	**Pg**	**11 43 30.1**	**-1.6**
PYZ	**Puysegur Point**	**1.39**	**209**	P	**Pb**	**11 43 29.5**	**-1.0**
TUZ	**Tuapeka**	**1.71**	**126**	P	**Pn**	**11 43 33.1**	**-0.9**
TUZ				S	**Sn**	**11 43 53.0**	**-2.4**
LBZ	**Lake Benmore**	**1.89**	**73**	P	**Pn**	**11 43 35.0**	**-1.5**
APZ	**The Paps**	**1.89**	**173**	P	**Pn**	**11 43 34.4**	**-2.0**
SYZ	**Scrubby Hill**	**1.89**	**147**	P	**Pn**	**11 43 34.6**	**-1.8**
SYZ	**Scrubby Hill**	**1.89**	**147**	P	**Pn**	**11 43 35.0**	**-1.4**
FOZ	**Fox Glacier**	**2.10**	**48**	P	**Pn**	**11 43 37.7**	**-1.6**
ODZ	**Otahua Downs**	**2.12**	**93**	P	**Pn**	**11 43 37.7**	**-1.9**
ODZ	**Otahua Downs**	**2.12**	**93**	S	**Sn**	**11 44 01.4**	**-4.1**
ODZ	**Otahua Downs**	**2.12**	**93**	P	**Pn**	**11 43 38.0**	**-1.5**
HHSZ	**Highcliff Hill**	**2.27**	**115**	P	**Pn**	**11 43 40.6**	**-1.1**
TMZ	**Timaru**	**2.46**	**78**	P	**Pn**	**11 43 41.8**	**-2.4**
GCSZ	**Gannet Creek Bo**	**2.53**	**50**	P	**Pn**	**11 43 43.3**	**-1.8**
ARCZ	**Arundel**	**2.71**	**69**	P	**Pn**	**11 43 45.1**	**-2.6**
RPZ	**Rata Peaks**	**2.73**	**64**	P	**Pn**	**11 43 45.4**	**-2.6**
RPZ	**Rata Peaks**	**2.73**	**64**	S	**Sn**	**11 44 17.8**	**-2.9**
RPZ	**Rata Peaks**	**2.73**	**64**	P	**Pn**	**11 43 45.4**	**-2.6**
WVZ	**Waitaha Valley**	**2.91**	**51**	P	**Pn**	**11 43 48.7**	**-1.7**
WACZ	**Wakanui South**	**3.16**	**73**	P	**Pn**	**11 43 51.0**	**-2.8**
OXZ	**Oxford**	**3.55**	**64**	P	**Pn**	**11 43 56.2**	**-3.0**
KHZ	**Kahutara**	**4.96**	**61**	P	**Pn**	**11 44 17.7**	**-0.9**
QRZ	**Quartz Range**	**5.46**	**43**	P	**Pn**	**11 44 24.8**	**-0.7**

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*NSSP **25** 11:47:01.8,38.53N×45.37E,h10km,Ms3.2*
*AZER **25** 11:48:00.5,38.48N×45.32E,h2km,ml3.3*
*TEH **25** 11:48:01.2,38.35N×45.31E,h6km±54km,ML3.3, Presumed earthquake*
*AFAD **25** 11:48:02.5,38.43N×45.31E,h5km±2km,ML2.5*
ISC 25 11:48:01.9±1.0,**38.44N**±0.02×**45.44E**±0.02,**h10**km±9km,
n54,σ1s32/94,5C-3D,Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ISHB	**Shabestar**	**0.21**	**139**	P	**Pg**	**11 48 06.2**	**-0.2**
ITBZ	**Tabriz**	**0.59**	**110**	P	**Pb**	**11 48 13.6**	**-0.8**
ORD	**Ordubad**	**0.65**	**41**	P	**Pn**	**11 48 16.1**	**-1.1**
ORD	**Ordubad**	**0.65**	**41**	P	**Pn**	**11 48 16.1**	**-1.1**
ORD				S	**Sn**	**11 48 26.8**	**-0.8**
NAX	**Nakhchivan**	**0.73**	**3**	Pg	**Pn**	**11 48 17.5**	**-0.9**
NAX	**Nakhchivan**	**0.73**	**3**	P	**Pn**	**11 48 17.6**	**-0.9**
NAX				S	**Sn**	**11 48 28.8**	**-0.9**
ALVK	**Alvank**	**0.87**	**55**⇑*iP*		**Pn**	**11 48 19.8**	**-0.4**
ALVK			⇑*iS*		**Sn**	**11 48 32.5**	**-0.4**
IAZR	**Azarshahr**	**0.87**	**151**	Pg	**Pb**	**11 48 18.2**	**-1.0**
SBZ	**Shahbuz**	**0.96**	**5**	P	**Pn**	**11 48 21.5**	**-0.1**
SBZ				S	**Sn**	**11 48 35.0**	**-0.3**
MAKU	**Maku**	**1.09**	**327**	Pg	**Pg**	**11 48 21.6**	**-1.3**
OZAP	**Van, Ozalp-Mer**	**1.16**	**281**	P	**Pg**	**11 48 23.6**	**-0.7**
OZAP				S	**Sb**	**11 48 40.0**	**+0.6**
OZAP				IAML		11 48 46.0	
	comp=N,212nm,0.7s						
OZAP				IAML		11 48 49.0	
	comp=E,166nm,0.8s						
EGVZ	**Egvard**	**1.16**	**47**⇑*iP*		**Pn**	**11 48 24.9**	**+0.6**
EGVZ			⇑*iS*		**Sn**	**11 48 41.3**	**+0.9**
YOVA	**Hakkari_Yksek**	**1.25**	**227**	P	**Pg**	**11 48 24.7**	**-1.2**
YOVA				S	**Sb**	**11 48 41.8**	**-0.1**
YOVA				IAML		11 48 48.0	
	comp=E,98nm,0.6s						
YOVA				IAML		11 48 58.0	
	comp=N,108nm,0.7s						
VAYK	**Vayk**	**1.25**	**359**⇓*eP*		**Pg**	**11 48 26.0**	**-0.1**
VAYK			⇓*eS*		**Sn**	**11 48 43.7**	**+1.2**
IHRS	**Heris**	**1.26**	**95**	Pg	**Pn**	**11 48 26.9**	**+1.1**
GRS	**Goris**	**1.27**	**33**⇓*iP*		Pn	11 48 21.0	-4.8
GRS			⇑*iS*		**Sg**	**11 48 39.0**	**-3.7**
HYR	**Heyderabad**	**1.36**	**340**	P	**Pb**	**11 48 27.3**	**-0.2**
HYR				S	**Sg**	**11 48 46.5**	**+0.9**
VMUR	**Van-Muradiye**	**1.56**	**291**	P	**Pn**	**11 48 30.4**	**+0.5**
VMUR				S	**Sb**	**11 48 50.9**	**0.0**
VMUR				IAML		11 48 58.0	
	comp=N,80nm,0.5s						
TVAN	**Van**	**1.60**	**274**	P	**Pn**	**11 48 30.5**	**+0.1**
TVAN				S	**Sg**	**11 48 55.5**	**+2.0**
TVAN				IAML		11 49 04.0	
	comp=N,122nm,0.6s						
TVAN				IAML		11 49 11.0	
	comp=E,104nm,0.8s						
HAKT	**HAKKARI**	**1.63**	**238**	P	**Pg**	**11 48 32.3**	**-

AYRK				eS		Sg	11 53 45.7	+1.6
HAKT	**HAKKARI**	**1.65**	**236**	Pg		Pg	11 53 22.1	-0.9
HAKT	**HAKKARI**	**1.65**	**236**	P		Pg	11 53 22.1	-0.9
HAKT				S		Sg	11 53 47.5	+3.2
IGDI	**IGDIR**	**1.73**	**323**	Pg		Pg	11 53 24.0	-0.4
IGDI	**IGDIR**	**1.73**	**323**	P		Pg	11 53 24.1	-0.4
IGDI				S		Sg	11 53 49.9	+3.1
GNI	**Garni**	**1.73**	**342**	eP		Pg	11 53 24.2	-0.4
GNI				eS		Sg	11 53 48.1	+1.0
GNI	**Garni**	**1.73**	**342**	Pn		Pg	11 53 24.6	0.0
MAHB	**Mahabad**	**1.74**	**173**	Pg		Pn	11 53 21.6	-1.2
QRD	**Qoradiz**	**1.76**	**56**	P		Pg	11 53 25.2	0.0
QRD				S		Sg	11 53 50.6	+2.6
IHSH	**Hashtrud**	**1.88**	**129**	Pn		Pn	11 53 24.8	-0.1
ISRB	**Sarab**	**1.89**	**110**	Pn		Pb	11 53 26.0	-0.7
KAPZ	**Kaputan**	**1.91**	**343**	eP		Pg	11 53 27.8	-0.2
KAPZ				eS		Sg	11 53 54.2	+1.5
BLQ	**Beylaqan**	**2.06**	**53**	P		Pg	11 53 31.0	+0.2
BLQ				S		Sg	11 54 00.0	+2.4
AGDM	**Agdam**	**2.07**	**39**	P		Pb	11 53 29.6	-0.2
AGDM				S		Sg	11 54 01.4	+3.5
AMBZ	**Amberd**	**2.10**	**335**	eP		Pb	11 53 29.7	-0.6
AMBZ				eS		Sg	11 53 57.5	-1.1
BRDA	**Brd**	**2.23**	**37**	P		Pg	11 53 33.1	-0.9
BRDA				S		Sg	11 54 07.2	+4.2
GDB	**GEDABAY**	**2.24**	**6**	P		Pg	11 53 33.3	-1.0
GDB				S		Sg	11 54 05.2	+1.9
YRD	**Yardimli**	**2.24**	**78**	P		Pb	11 53 33.1	+0.4
YRD				S		Sg	11 54 05.6	+2.2
GANJ	**Ganja**	**2.26**	**18**	P		Pg	11 53 34.0	-0.6
GANJ				S		Sg	11 54 06.1	+2.2
LRK	**Lerik**	**2.29**	**85**	P		Pg	11 53 34.2	+0.7
LRK				S		Sg	11 54 08.1	+3.2
LSVT	**Lusahovit**	**2.42**	**356**	eP		Pb	11 53 36.1	+0.3
LSVT				eS		Sg	11 54 08.8	-0.5
GLBA	**Clilabad**	**2.43**	**71**	P		Pb	11 53 36.8	+0.9
GLBA				S		Sg	11 54 11.3	+1.8
ZRD	**Zardab**	**2.50**	**44**	S		Sg	11 54 12.4	+0.8
QZX	**Qazax, Azerbai**	**2.56**	**359**	P		Pg	11 53 39.3	-1.2
QZX				S		Sg	11 54 13.6	0.0
MNGR	**Mingechevir, A**	**2.61**	**29**	P		Pb	11 53 38.6	-0.3
MNGR				S		Sg	11 54 13.6	-1.6
LKRN	**Lenkeran, Azer**	**2.64**	**84**	P		Pb	11 53 38.7	-0.6
LKRN				S		Sg	11 54 16.7	+0.7
ASTR	**Astara**	**2.64**	**88**	P		Pb	11 53 38.2	-1.2
ASTR				S		Sg	11 54 18.3	+2.1
VSHL	**Vashlovani**	**2.83**	**15**	P		Pg	11 53 46.3	+0.7
VSHL				S		Sg	11 54 28.4	+6.1
DGRG	**David-gareji**	**2.95**	**359**	P		Pg	11 53 46.1	-1.8
SEKA	**Sheki**	**3.03**	**26**	Pg		Pb	11 53 45.8	-0.4
SEKA				Sg		Sg	11 54 28.3	-0.5
QBL	**Gabala**	**3.07**	**36**	P		Pb	11 53 45.2	-1.7
QBL				S		Sb	11 54 24.0	-0.8
IML	**Ismayilli**	**3.13**	**42**	S		Sb	11 54 28.8	+2.3
TRLG	**Trialeti**	**3.21**	**342**	P		Pg	11 53 50.9	-1.9
XNQ	**Khinaliq**	**3.39**	**37**	P		Pb	11 53 50.3	-2.0
XNQ				S		Sb	11 54 34.5	+0.3
ATGJ	**Altiaghaj**	**3.59**	**48**	P		Pb	11 53 52.9	-2.9
ATGJ				S		Sb	11 54 40.2	+0.4
CHRG	**Chargali**	**3.85**	**354**	P		Pg	11 54 02.4	-2.7
SHTL	**Shatili**	**4.16**	**357**	P		Pb	11 54 06.7	+1.3

*IDC **25** 11:57:32.0±1.3, 38°.22N×123°.05W, h0km, mb3.4/4, mbtmp3.4/9, ML3.4/5, MS3.4/10, Error ellipse: s-maj=15.9km s-min=10.3km az=41.0*
*NEIC **25** 11:57:37.1±1.9, 38°.80N±0°.03×122°.64W±0°.05, h5km±2km, mb3.8/12, ML3.5/122, Mwr4.1/3(NCEDC), Error ellipse: s-maj=8.4km s-min=3.0km az=56.0*
*NCEDC **25** 11:57:38±3.4, 38°.79N±0°.02×122°.77W±0°.08, h2km±6km, Error ellipse: s-maj=9.6km s-min=1.8km az=74.0*

ISC 25 11:57:37.5±0.8, 38°.78N±0°.02×122°.76W±0°.02, h13km±5km, n169, σ1s13/157, mb3.6/4, MS3.5/6, Northern California

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
GDXM	**Geysers**	**0.04**	**314**			**Pg**	**11 57 38.8**	**-1.2**
GGPM	**Geyser Peak**	**0.07**	**255**			**Pg**	**11 57 39.6**	**-0.6**
GBGM	**Boggs Mountain**	**0.07**	**64**			**Pg**	**11 57 39.9**	**-0.4**
GSGM	**Seigler Mounta**	**0.09**	**25**			**Pg**	**11 57 40.4**	**0.0**
GPMM	**Pine Mountain**	**0.16**	**294**			**Pg**	**11 57 41.5**	**+0.1**
GRTM	**Round Top Moun**	**0.17**	**24**			**Pg**	**11 57 41.5**	**0.0**
GCVM	**Cloverdale**	**0.20**	**266**			**Pg**	**11 57 42.4**	**+0.5**
NMTM	**Middletown**	**0.25**	**84**			**Pg**	**11 57 43.2**	**+0.5**
MNRC	**McLaughlin Min**	**0.27**	**69**	Pg		**Pb**	**11 57 43.9**	**-0.2**
MNRC				IAML			11 57 46.1	
	comp=E,9μm,0.5s							
HOPS	**Hopland Field**	**0.32**	**311**			**Pb**	**11 57 44.6**	**-0.5**
HOPS				Sg		Sb	11 57 50.0	-0.2
NWRM	**Wright Ranch**	**0.34**	**197**			**Pb**	**11 57 45.2**	**-0.1**
GHGM	**Hogback Ridge**	**0.35**	**352**			**Pb**	**11 57 44.9**	**-0.7**
GSNM	**Snow Mountain**	**0.37**	**295**			**Pb**	**11 57 45.8**	**-0.2**
GDCM	**Dry Creek**	**0.38**	**268**			**Pb**	**11 57 45.9**	**-0.1**
NTYM	**Taylor**	**0.40**	**169**			**Pb**	**11 57 46.5**	**+0.2**
NIMB	**Iron Mountain**	**0.45**	**119**			**Pb**	**11 57 47.4**	**+0.2**
OAKV	**Oakville Exper**	**0.45**	**142**			**Pb**	**11 57 47.1**	**0.0**
CVS	**Carmenet Viney**	**0.50**	**151**			**Pb**	**11 57 47.8**	**-0.3**
CVS				Sg		Sb	11 57 54.9	-0.3
BONV	**Boonville, CA**	**0.50**	**294**			**Pb**	**11 57 48.4**	**+0.2**
NAPC	**Atlas Peak**	**0.53**	**131**			**Pb**	**11 57 48.5**	**-0.1**
QRDG	**Quail Ridge Na**	**0.57**	**122**			**Pb**	**11 57 49.7**	**+0.4**
GWRM	**Wonder Ranch**	**0.60**	**315**			**Pb**	**11 57 49.9**	**+0.1**
LOC	**Lincoln School**	**0.63**	**177**			**Pb**	**11 57 50.5**	**+0.2**
MCCM	**Marconi Confer**	**0.64**	**188**			**Pb**	**11 57 51.2**	**+0.7**
MCCM				IAML			11 58 08.1	
	comp=N,3μm,0.8s							
SNT	**Sears Point**	**0.65**	**158**			**Pb**	**11 57 50.5**	**0.0**
NGVM		**0.66**	**139**			**Pb**	**11 57 51.0**	**+0.3**
NDHM	**Dunnigan Hills**	**0.66**	**91**			**Pb**	**11 57 52.4**	**+1.5**
NADM	**Allendale**	**0.70**	**117**			**Pn**	**11 57 53.2**	**+0.2**
RUSS	**Russell Ranch**	**0.74**	**108**			**Pn**	**11 57 54.0**	**+0.4**
NOLM	**Olema**	**0.74**	**182**			**Pb**	**11 57 52.8**	**+0.6**
SVIN	**Saint Vincent'**	**0.77**	**166**			**Pg**	**11 57 52.6**	**+0.2**
GNAM	**Navarro Ridge**	**0.80**	**302**			**Pb**	**11 57 54.0**	**+0.8**
GCK	**Clark Valley**	**0.80**	**18**			**Pn**	**11 57 56.2**	**+1.7**
NPRM	**Point Reyes**	**0.81**	**194**			**Pb**	**11 57 54.2**	**+0.9**
NLHM	**Lake Herman**	**0.82**	**144**			**Pb**	**11 57 54.0**	**+0.4**
KRKM	**Rackout Spring**	**0.84**	**337**			**Pb**	**11 57 55.1**	**+1.0**
OSUM	**Sutter Buttes**	**0.86**	**55**			**Pb**	**11 57 54.3**	**+0.1**
CPMM	**Point Molate**	**0.88**	**161**			**Pb**	**11 57 54.9**	**+0.3**
SUTB	**Sutter Butte**	**0.88**	**59**			**Pg**	**11 57 53.8**	**-0.7**
SUTB				IAML			11 58 08.1	
	comp=N,2μm,0.7s							
SUTB				IAML			11 58 08.8	
	comp=E,2μm,0.3s							
C067	**Fleetwood El S**	**0.89**	**155**			**Pb**	**11 57 55.8**	**+1.1**
CSPM	**San Pablo Ridg**	**0.90**	**157**			**Pb**	**11 57 55.5**	**+0.7**
CPIM	**Pinole Ridge**	**0.90**	**151**			**Pb**	**11 57 55.5**	**+0.6**
C024	**33rd St Richmo**	**0.90**	**158**			**Pb**	**11 57 55.5**	**+0.5**
MNDO	**Woodland Fire**	**0.93**	**305**			**Pb**	**11 57 56.0**	**+0.5**
CTAM	**Taylor**	**0.95**	**142**			**Pn**	**11 57 57.1**	**+0.5**
AGC	**Angel Island**	**0.96**	**164**			**Pb**	**11 57 56.2**	**+0.4**
BRIB	**Briones**	**0.99**	**151**			**Pg**	**11 57 56.5**	**0.0**
BRK	**Berkeley--Havi**	**0.99**	**156**			**Pg**	**11 57 56.6**	**0.0**
VAK	**Adit at Lawren**	**0.99**	**156**			**Pg**	**11 57 56.6**	**0.0**
BL67	**Building 67, L**	**0.99**	**156**			**Pb**	**11 57 56.7**	**+0.2**
GVV	**Valley View**	**0.99**	**4**			**Pn**	**11 57 58.3**	**+1.1**
BKS	**Berkeley--Byer**	**0.99**	**155**			**Pg**	**11 57 56.4**	**-0.2**
JPRM	**Presidio of Sa**	**1.01**	**167**			**Pg**	**11 57 56.8**	**-0.2**
CYBM	**Yerba Buena Is**	**1.02**	**162**			**Pb**	**11 57 57.4**	**+0.5**
INGLE	**Inglenook, Smi**	**1.04**	**316**			**Pb**	**11 57 57.7**	**+0.3**
OSTM	**Stimpson Lane**	**1.08**	**57**			**Pg**	**11 57 57.1**	**-1.1**
BDM	**Black Diamond**	**1.09**	**139**			**Pg**	**11 57 58.0**	**-0.4**
TWIT	**Twitchell Isla**	**1.09**	**129**			**Pn**	**11 57 59.5**	**+1.1**
FARB	**Farallon Islan**	**1.10**	**190**			**Pg**	**11 57 57.9**	**-0.7**
FARB				IAML			11 58 16.5	
	comp=N,580nm,0.5s							
FARB				IAML			11 58 24.0	
	comp=E,1μm,0.8s							
CMCM	**Mills College**	**1.10**	**155**			**Pg**	**11 57 58.5**	**-0.1**
CRHM	**Round Hill Res**	**1.10**	**147**			**Pb**	**11 57 58.8**	**+0.4**
KCPM	**Cahto Peak**	**1.10**	**325**			**Pb**	**11 57 59.2**	**+0.6**
KCPM				IAML			11 58 22.5	
	comp=N,1μm,0.7s							
BGC	**Bolinger Road**	**1.11**	**150**			**Pg**	**11 57 58.3**	**-0.5**
GROM	**Round Mountain**	**1.14**	**3**			**Pn**	**11 58 00.6**	**+1.4**
OHCM	**Honcut**	**1.14**	**61**			**Pg**	**11 57 57.8**	**-1.6**
JSBM	**San Bruno Moun**	**1.14**	**165**			**Pg**	**11 57 58.9**	**-0.4**
KBNM	**Bluenose Ridge**	**1.16**	**343**			**Pn**	**11 58 00.6**	**+1.1**
JMGM	**Milagra Ridge**	**1.17**	**169**			**Pg**	**11 57 59.5**	**-0.3**
CSLM	**San Leandro Hi**	**1.17**	**154**			**Pg**	**11 57 59.4**	**-0.6**
PAM	**Palermo**	**1.17**	**55**			**Pg**	**11 57 58.4**	**-1.6**
SFRE	**Sierra Foothil**	**1.22**	**67**			**Pg**	**11 57 59.2**	**-1.6**
RVIT	**Round Valley I**	**1.22**	**337**			**Pn**	**11 58 01.6**	**+1.3**
SAC	**San Andreas**	**1.23**	**167**			**Pg**	**11 57 59.8**	**-1.2**
JCPM	**Coyote Point**	**1.24**	**164**			**Pg**	**11 58 00.8**	**-0.6**
OGOM	**Van Goodin Ran**	**1.25**	**45**			**Pg**	**11 57 59.3**	**-2.2**
ORV	**Oroville**	**1.25**	**51**			**Pg**	**11 57 59.3**	**-2.2**
JCHM	**Cahill Ridge**	**1.30**	**166**			**Pg**	**11 58 00.7**	**-1.8**
CBSNC	**Byron Hot Spri**	**1.30**	**137**			**Pg**	**11 58 01.4**	**-1.1**
CNIC	**Niles Canyon**	**1.33**	**152**			**Pg**	**11 58 01.7**	**-1.4**
CVLM	**Vallecito**	**1.36**	**147**			**Pn**	**11 58 02.9**	**+0.7**
O02D	**Mt. Diablo Mer**	**1.39**	**359**	Pn		**Pb**	**11 58 04.1**	**+0.7**
O02D				IAML			11 58 10.0	
	comp=N,436nm,0.7s							
AFDM	**Forest Hills D**	**1.41**	**83**			**Pn**	**11 58 02.2**	**-0.6**
JRSC	**Jasper Ridge**	**1.44**	**163**			**Pn**	**11 58 02.7**	**-0.5**
JRSC				IAML			11 58 32.9	
	comp=N,831nm,0.7s							
KMRM	**Mail Ridge**	**1.61**	**333**			**Pn**	**11 58 06.9**	**+1.2**
KMRM				IAML			11 58 39.2	
	comp=N,566nm,1.3s							
KMRM				IAML			11 58 50.5	
	comp=E,598nm,1.1s							
WELL	**Weller Preserv**	**1.63**	**102**			**Pn**	**11 58 06.1**	**+0.2**
WELL	**Weller Preserv**	**1.63**	**102**	IAML			11 58 35.3	
	comp=E,415nm,0.4s							
O03E	**Paynes Creek**	**1.68**	**26**			**Pn**	**11 58 06.3**	**-0.4**
MHC	**Mount Hamilton**	**1.69**	**148**			**Pn**	**11 58 06.8**	**+0.1**
MHC				IAML			11 58 45.7	
	comp=E,384nm,1.1s							
MHC				IAML			11 58 52.4	
	comp=N,471nm,1.2s							
KHBM	**Hayfork Bally**	**1.91**	**349**			**Pn**	**11 58 11.6**	**+1.7**
SIFF	**Sifford Mounta**	**1.92**	**32**			**Pn**	**11 58 11.0**	**+1.0**
KMPM	**Mount Pierce**	**1.94**	**328**			**Pb**	**11 58 12.4**	**-0.3**
KMPM				IAML			11 58 25.8	
	comp=N,358nm,1.0s							
KMPM				IAML			11 59 03.0	
	comp=E,354nm,1.5s							
HLPM	**Lions Peak**	**1.95**	**152**			**Pn**	**11 58 11.0**	**+0.7**
CMB	**Columbia Colle**	**2.01**	**111**			**Pn**	**11 58 11.7**	**+0.6**
CMB				IAML			11 58 39.8	
	comp=E,333nm,1.2s							
CMB				IAML			11 58 41.6	
	comp=N,382nm,0.9s							
BEKR	**Beckworth**	**2.15**	**59**			**Pn**	**11 58 14.8**	**+1.5**
BEKR				IAML			11 58 58.1	
	comp=E,237nm,0.8s							
MPK	**Martis Peak**	**2.19**	**76**			**Pn**	**11 58 15.6**	**+1.8**
N02D	**Trinity Center**	**2.19**	**1**	Pn		**Pn**	**11 58 14.8**	**+1.2**
KHMM	**Horse Mountain**	**2.22**	**341**	Pn		**Pn**	**11 58 14.4**	**+0.3**
KHMM				IAML			11 59 20.9	
	comp=E,256nm,1.8s							
KHMM				IAML			11 59 22.4	
	comp=N,198nm,1.5s							
HATC	**Hat Creek Radi**	**2.27**	**26**			**Pn**	**11 58 16.2**	**+1.5**
HATC				IAML			11 59 23.6	
	comp=N,211nm,1.8s							
HATC				IAML			11 59 32.5	
	comp=E,280nm,2.1s							
SAO	**San Andreas Ge**	**2.27**	**152**			**Pn**	**11 58 14.0**	**-0.6**
PNTR	**Pine Nut**	**2.48**	**82**			**Pn**	**11 58 19.8**	**+2.0**
M03C	**McCloud**	**2.54**	**11**			**Pn**	**11 58 20.4**	**+2.0**
M03C				IAML			11 59 22.8	
	comp=N,160nm,1.2s							
M03C				IAML			11 59 24.4	
	comp=E,253nm,2.2s							
BBGB	**Big Mountain B**	**2.59**	**148**			**Pn**	**11 58 19.5**	**+0.3**
M02C	**Callahan**	**2.61**	**358**			**Pn**	**11 58 21.4**	**+2.0**
PAHR	**Pah Rah Range**	**2.78**	**70**			**Pn**	**11 58 22.4**	**+0.6**
PAHR				IAML			11 59 05.6	
	comp=E,113nm,1.5s							
PAHR				IAML			11 59 11.2	
	comp=N,170nm,1.6s							
YBH	**Yreka Blue Hor**	**2.95**	**1**	Pn		**Pb**	**11 58 30.1**	**+0.2**
	comp=N,0.1nm,0.3s,baz=186,slow=10,SNR=9.2							
YBH					Sn	**Sg**	**11 59 10.2**	**-1.9**
	comp=N,0.1nm,0.3s,baz=7.6,slow=12,SNR=4.6							
YBH					LR	LR	12 00 13.4	
	comp=N,14nm,19.2s,baz=216,slow=46							
YBH	**Yreka Blue Hor**	**2.95**	**1**			**Pn**	**11 58 24.6**	**+0.6**
PMPB	**Monarch Peak**	**3.00**	**148**			**Pn**	**11 58 25.3**	**+0.5**
PMPB				IAML			11 59 35.8	
	comp=N,161nm,1.0s							
PMPB				IAML			12 00 06.4	
	comp=E,160nm,1.7s							
HULI	**Fort Hunter Li**	**3.01**	**156**			**Pn**	**11 58 24.8**	**-0.1**
HULI				IAML			11 59 27.3	
	comp=E,156nm,1.4s							
HULI				IAML			11 59 35.7	
	comp=N,180nm,1.5s							
MDPB	**Devils Postpil**	**3.12**	**110**			**Pn**	**11 58 28.5**	**+1.9**
PKD	**Bear Valley Ra**	**3.34**	**147**			**Pn**	**11 58 28.7**	**-0.7**
PKD				IAML			11 59 43.1	
	comp=N,81nm,1.1s							
PKD				IAML			12 00 01.5	
	comp=E,73nm,1.7s							
LHV	**Little Huntoon**	**3.38**	**98**			**Pn**	**11 58 31.0**	**+1.1**
L02F	**Cave Junction**	**3.39**	**350**			**Pn**	**11 58 32.4**	**+2.3**
NVAR	**Mina Array Bea**	**3.51**	**94**	Pn		**Pn**	**11 58 33.2**	**+1.3**
	comp=E,4.0nm,0.3s,baz=269,slow=15,SNR=56							
NVAR					Sn	**Sn**	**11 59 16.5**	**+3.1**
	comp=E,7.6nm,0.3s,baz=261,slow=6.6,SNR=4.5							
NVAR					Lg	Lg	11 59 31.5	
	comp=E,11nm,0.3s,baz=331,slow=21,SNR=5.8							
NVAR					LR	LR	12 00 07.1	
	comp=E,322nm,18.6s,baz=288,slow=40							
	comp=E,3.7nm,0.3s							
KVN	**Kaiserville**	**3.65**	**84**			**Pn**	**11 58 34.2**	**+0.5**
K04D	**Chiloquin, OR**	**3.91**	**11**			**Pn**	**11 58 39.0**	**+1.6**
K04D				IAML			12 00 12.1	
	comp=E,94nm,2.2s							
K04D				IAML			12 00 48.7	
	comp=N,92nm,1.9s							
K02D	**Willamette Mer**	**3.97**	**350**			**Pn**	**11 58 39.7**	**+1.6**
K02D				IAML			12 00 28.8	
	comp=E,49nm,3.9s							
DSP	**Deep Springs**	**4.04**	**109**			**Pn**	**11 58 40.3**	**+1.4**
DSP				IAML			11 59 44.3	
	comp=N,53nm,1.2s							
DSP				IAML			11 59 45.7	
	comp=E,81nm,1.2s							
BBOR	**Butler Butte**	**4.10**	**1**			**Pn**	**11 58 41.4**	**+1.4**
VES	**Vestal, Richgr**	**4.15**	**134**			**Pn**	**11 58 41.6**	**+1.1**
VES				IAML			11 59 50.2	
	comp=N,82nm,0.6s							
K05A	**Summer Lake**	**4.19**	**19**			**Pn**	**11 58 43.7**	**+2.5**
K05A				IAML			12 00 22.7	
	comp=N,46nm,2.1s							
K05A				IAML			12 00 49.1	
	comp=E,40nm,3.8s							
Q09A	**Carvers**	**4.36**	**88**	Pn		**Pn**	**11 58 44.0**	**+0.5**
CWC	**Cottonwood Cre**	**4.39**	**121**			**Pn**	**11 58 45.1**	**+1.2**
CWC				IAML			11 59 52.6	
	comp=E,54nm,1.2s							
GMN	**Gold Mountain**	**4.59**	**107**			**Pn**	**11 58 47.8**	**+1.0**
GMN				IAML			12 00 05.7	
	comp=E,29nm,1.1s							
GMN				IAML			12 00 21.0	
	comp=N,29nm,1.0s							
GRAC	**Grapevine Rang**	**4.62**	**111**			**Pn**	**11 58 48.9**	**+1.8**
ISA	**Isabella, Lake**	**4.63**	**131**			**Pn**	**11 58 47.0**	**-0.1**
ISA				IAML			12 00 01.9	
	comp=E,60nm,0.8s							
ISA				IAML			12 00 04.2	
	comp=N,35nm,1.1s							
WVOR	**Wild Horse Val**	**4.81**	**39**			**Pn**	**11 58 50.7**	**+1.0**
WVOR				IAML			12 00 49.3	
	comp=N,24nm,1.9s							
TPO	**Tropico Hills**	**5.33**	**136**			**Pn**	**11 58 58.2**	**+1.5**
TPO				IAML			12 01 02.1	
	comp=N,21nm,1.4s							
CCCA	**Chr Cany lake**	**5.40**	**125**	Pn		**Pn**	**11 58 59.6**	**+1.9**
MWC	**Mount Wilson**	**5.92**	**139**			**Pn**	**11 59 06.2**	**+1.2**
ELK	**Elko**	**6.12**	**69**	Pn		**Pn**	**11 59 10.1**	**+2.3**
	comp=N,0.4nm,0.3s,baz=257,slow=12,SNR=12							
ELK					Lg	Lg	12 00 55.6	
	comp=N,0.5nm,0.3s,baz=341,slow=5.2,SNR=3.6							
ELK					LR	LR	12 01 36.1	
	comp=N,210nm,21.6s,baz=240,slow=37							
	comp=N,1.7nm,0.4s							
ELK	**Elko**	**6.12**	**69**	Pn		**Pn**	**11 59 08.6**	**+0.8**
PSUT	**Pine Spring**	**6.97**	**89**	Pn		**Pn**	**11 59 20.7**	**+1.2**
DNR	**Dunn Ranch,Anz**	**7.19**	**135**	Pn		**Pn**	**11 59 23.5**	**+1.1**
PFO	**Pinyon Flats O**	**7.25**	**133**	Pn		**Pn**	**11 59 16.0**	**-7.2**
	comp=N,0.6nm,0.3s,baz=314,slow=12,SNR=6.0							
PFO					Lg	Lg	12 01 15.4	
	comp=N,0.1nm,0.3s,baz=271,slow=4.8,SNR=3.7							
	comp=N,1.2nm,0.8s							
PFO	**Pinyon Flats O**	**7.25**	**133**	Pn		**Pn**	**11 59 23.3**	**+0.1**
BMO	**Blue Mountains**	**7.30**	**32**	Pn		**Pn**	**11 59 25.8**	**+1.9**
BORC	**Borrego Spring**	**7.53**	**135**	Pn		**Pn**	**11 59 28.8**	**+1.8**
BC3	**Big Chuckawall**	**7.81**	**129**	Pn		**Pn**	**11 59 32.6**	**+1.7**
DUG	**Dugway, Tooele**	**7.82**	**76**	Pn		**Pn**	**11 59 33.5**	**+2.4**
NEW	**Newport**	**10.32**	**21**	LR		LR	12 04 10.5	
	comp=N,50nm,19.5s,baz=214,slow=36							
PDAR	**Pinedale Array**	**10.77**	**64**	Pn		Pn	12 00 18.4	+6.8
	baz=250,slow=12,SNR=20							
	comp=N,3.4nm,1.0s							
ANMO	**Albuquerque**	**13.60**	**101**	LR		LR	12 06 57.8	
	comp=N,75nm,19.1s,baz=291,slow=41							
KSCO	**Kaye Shedlock'**	**15.68**	**83**	Pn		**Pn**	**12 01 18.1**	**-0.1**
KSCO				IAmb		IAmb	12 01 31.1	
	comp=Z,7.3nm,1.0s							
CLNB	**Carlsbad**	**16.68**	**107**	Pn		**Pn**	**12 01 30.5**	**-0.4**
MSTX	**Muleshoe**	**16.79**	**100**	P		**Pn**	**12 01 34.0**	**+1.6**
MSTX				IAmb		IAmb	12 01 39.9	
	comp=Z,11nm,1.4s							
PECS	**Pecos**	**17.13**	**110**	P		**Pn**	**12 01 36.7**	**+0.1**
PECS				IAmb		IAmb	12 01 49.9	
	comp=Z,7.8nm,1.5s							
MNHN	**Monahans**	**17.96**	**108**	P		**P**	**12 01 49.2**	**+1.8**
E28A	**Huff**	**17.96**	**57**	P		**Pn**	**12 01 46.8**	**0.0**
TXAR	**Lajitas Array**	**18.39**	**115**	P		**Pn**	**12 01 49.8**	**-2.4**
	baz=296,slow=11,SNR=13							
	comp=Z,0.2nm,1.0s							
SAND	**Sanderson**	**19.15**	**111**	P		**P**	**12 01 59.4**	**-1.1**
OK038	**West end E0370**	**19.15**	**89**	P		**P**	**12 02 00.7**	**+0.2**
DLBC	**Dease Lake**	**20.23**	**349**	LR		LR	12 11 20.4	
	comp=Z,92nm,19.2s,baz=94,slow=40							
F33A	**5 Mile Ranch,**	**20.75**	**62**	P		**P**	**12 02 16.9**	**-0.9**
F33A				IAmb		IAmb	12 02 38.7	
	comp=Z,4.0nm,0.6s							
BRDY	**Brady**	**20.81**	**104**	P		**P**	**12 02 18.4**	**-0.2**
FFC	**Flin Flon**	**21.25**	**35**	P		**P**	**12 02 22.8**	**-0.3**
ULM	**Lac du Bonnet**	**22.21**	**50**	P		**P**	**12 02 35.2**	**+1.7**
	comp=Z,1.4nm,0.6s,baz=258,slow=8.7,SNR=3.5							
	comp=Z,1.4nm,0.6s							
YKA	**Yellowknife Ar**	**24.26**	**9**	P		**P**	**12 02 56.0**	**+2.0**
	comp=Z,0.4nm,1.0s,baz=193,slow=11,SNR=6.2							
YKA					LR	LR	12 14 17.6	
	comp=Z,98nm,19.2s,baz=80,slow=40							
	comp=Z,0.4nm,1.0s							
TKL	**Tuckaleechee C**	**31.04**	**83**	LR		LR	12 17 22.9	
	comp=Z,83nm,19.6s,baz=288,slow=38							
BORG	**Borgarnes**	**60.20**	**29**	LR		LR	12 35 18.0	
	comp=Z,92nm,20.0s,baz=59,slow=37							
H11N3	**WAKE ISLAND Hy**	**62.80**	**274**	T		T	13 15 37.9	
	baz=55,slow=74							
H11N2	**WAKE ISLAND Hy**	**62.80**	**274**	T		T	13 15 36.7	
	baz=55							
H11N1	**WAKE ISLAND Hy**	**62.82**	**274**	T		T	13 15 36.2	
	baz=55,slow=74							
H11S1	**WAKE ISLAND Hy**	**63.65**	**273**	T		T	13 16 39.8	
	baz=54,slow=75,SNR=7.9							
H11S2	**WAKE ISLAND Hy**	**

BLIS					IAML		12 07 12.0		
	comp=E,42nm,0.6s								
IHRS	**Heris**	**1.97**	**93**	Pn	**Pb**		**12 06 32.3**	**-0.3**	
GURO	**Guroymak-BITLI**	**1.97**	**274**	Pn	**Pn**		**12 06 30.4**	**+0.5**	
SRTM	**Siirt_Merkez**	**2.11**	**259**	P	**Pb**		**12 06 34.8**	**-0.1**	
SRTM				S	**Sg**		**12 07 03.4**	**-1.3**	
SRTM				IAML			12 07 13.0		
	comp=E,131nm,0.6s								
SRTM				IAML			12 07 14.0		
	comp=N,107nm,0.6s								
QRD	**Qoradiz**	**2.40**	**64**	P	**Pn**		**12 06 36.0**	**+0.3**	
QRD				S	**Sn**		**12 07 06.7**	**+1.9**	
IHSH	**Hashtrud**	**2.43**	**117**	Pn	**Pn**		**12 06 33.9**	**-2.6**	
KARS	**Kars**	**2.46**	**333**	Pn	**Pb**		**12 06 39.0**	**-1.9**	
GDB	**GEDABAY**	**2.46**	**22**	P	**Pn**		**12 06 37.3**	**+0.6**	
GDB				S	**Sb**		**12 07 11.0**	**-0.3**	
AGDM	**Agdam**	**2.60**	**49**	P	**Pn**		**12 06 38.3**	**-0.1**	
AGDM				S	**Sb**		**12 07 12.6**	**-2.4**	
GANJ	**Ganja**	**2.60**	**31**	P	**Pn**		**12 06 38.8**	**+0.3**	
GANJ				S	**Sn**		**12 07 11.6**	**+1.8**	
BLQ	**Beylaqan**	**2.67**	**60**	P	**Pn**		**12 06 39.1**	**-0.4**	
BLQ				S	**Sb**		**12 07 14.8**	**-2.4**	
QZX	**Qazax, Azerbai**	**2.69**	**14**	P	**Pn**		**12 06 40.5**	**+0.8**	
QZX				S	**Sb**		**12 07 16.3**	**-1.4**	
YRD	**Yardimli**	**2.94**	**80**	P	**Pn**		**12 06 43.9**	**+0.7**	
YRD				S	**Sb**		**12 07 24.4**	**-0.5**	
LRK	**Lerik**	**2.99**	**85**	P	**Pn**		**12 06 45.6**	**+1.7**	
LRK				S	**Sb**		**12 07 24.7**	**-1.6**	
ZRD	**Zardab**	**3.05**	**52**	P	**Pn**		**12 06 44.4**	**-0.2**	
ZRD				S	**Sb**		**12 07 24.9**	**-3.1**	
GLBA	**Clilabad**	**3.11**	**74**	P	**Pn**		**12 06 45.8**	**+0.3**	
GLBA				S	**Sb**		**12 07 26.8**	**-3.0**	
VSHL	**Vashlovani**	**3.13**	**27**	P	**Pb**		**12 06 50.1**	**-2.2**	
VSHL				S	**Sg**		**12 07 40.3**	**+2.8**	
ASTR	**Astara**	**3.34**	**87**	P	**Pn**		**12 06 48.5**	**-0.1**	
ASTR				S	**Sn**		**12 07 30.5**	**+2.5**	
SEKA	**Sheki**	**3.44**	**36**	P	**Pn**		**12 06 50.0**	**0.0**	
SEKA				S	**Sb**		**12 07 35.1**	**-4.2**	
QBL	**Gabala**	**3.57**	**44**	P	**Pn**		**12 06 51.6**	**-0.2**	
QBL				S	**Sn**		**12 07 37.3**	**+3.5**	
ZKTA	**Zakatala**	**3.57**	**26**	P	**Pn**		**12 06 51.2**	**-0.7**	
ZKTA				S	**Sn**		**12 07 36.4**	**+2.6**	
IML	**Ismayilli**	**3.67**	**49**	P	**Pn**		**12 06 53.0**	**-0.1**	
IML				S	**Sn**		**12 07 38.8**	**+2.6**	
XNQ	**Khinaliq**	**3.89**	**44**	P	**Pn**		**12 06 57.0**	**+0.6**	
XNQ				S	**Sb**		**12 07 47.4**	**-5.0**	
SHTL	**Shatili**	**4.24**	**6**	P	**Pb**		**12 07 13.6**	**+2.3**	

*IDC **25** 12:08:39.8±2.2,5°.27S×145°.36E,h86^{km}±20^{km},mb3.4/4, mbtmp3.9/8,Error ellipse: s-maj=31.9km s-min=11.9km az=52.0*
ISC 25 12:08:39.7±1.2,**5°.3S**±0°.1×**145°.4E**±0°.2,**h86**^{km},**n8,** σ1§**14**/10,**mb3.7**/4,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.49**	**157**	P	**Pn**	**12 09 46.5**	**+1.1**
	14nm,0.3s,baz=334,slow=4.2,SNR=18						
PMG				S	**Sn**	**12 10 36.6**	**+0.2**
	22nm,0.4s,baz=338,slow=19,SNR=9.8						
JAY	**Jayapura**	**5.38**	**300**	P	**Pn**	**12 09 56.9**	**-0.7**
	5.7nm,0.5s,baz=145,slow=12,SNR=5.9						
JAY				S	**Sn**	**12 11 00.2**	**+1.9**
	7.0nm,0.8s,baz=162,slow=20,SNR=1.1						
CTA	**Charters Tower**	**14.76**	**177**	P	**Pn**	**12 12 03.0**	**-1.0**
	6.1nm,1.1s,baz=350,slow=12,SNR=1.5						
WRA	**Warramunga Arr**	**18.10**	**215**	P	**P**	**12 12 43.9**	**-0.9**
	3.0nm,0.8s,baz=38,slow=11,SNR=15						
ASAR	**Alice Springs**	**21.36**	**210**	P	**P**	**12 13 19.9**	**-0.4**
	0.6nm,0.6s,baz=33,slow=13,SNR=18						
	0.6nm,0.6s						
CMAR	**Chiang Mai Arr**	**51.46**	**298**	P	**P**	**12 17 36.3**	**-0.4**
	0.4nm,0.3s,baz=113,slow=7.0,SNR=1.6						
	0.4nm,0.3s						
QSPA	**South Pole Qui**	**84.69**	**180**	P	**P**	**12 21 05.1**	**+1.1**
	1.8nm,0.7s,baz=352,slow=7.1,SNR=11						
	1.8nm,0.7s						
ILAR	**Eielson Array**	**85.46**	**23**	P	**P**	**12 21 07.1**	**-0.5**
	0.5nm,0.8s,baz=258,slow=5.1,SNR=5.1						
	0.5nm,0.8s						

KRSC 25 12:12:08.9±1.7,**49°.42N**×**158°.64E,h48**^{km}±45^{km},**MI3.6, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.06**	**309**	*e*P	Pn	12 12 41.4	+0.3
SKR				*e*S	Sn	12 13 06.3	+0.8
PAU	**Pauzhetka**	**2.36**	**331**	*e*P	Pn	12 12 47.4	+2.3
PAU				*e*S	Sn	12 13 17.1	+4.2
KDTR	**Khodutka, Kamc**	**2.42**	**352**	*e*P	Pn	12 12 48.1	+2.2
KDTR				*e*S	Sn	12 13 18.0	+3.7
ASAK	**Asacha**	**3.00**	**351**	*e*P	Pn	12 12 58.0	+3.9
RUS	**Russkaya**	**3.02**	**358**	*e*S	Sn	12 13 33.0	+4.0
MTVR	**Mutnovka**	**3.08**	**355**	*e*P	Pn	12 12 58.4	+3.3
MTVR				*e*S	Sn	12 13 34.5	+3.7
GRL	**Gorelyy**	**3.16**	**354**	*e*P	Pn	12 12 59.9	+3.8
GRL				*e*S	Sn	12 13 37.5	+4.9
KRMR	**Karymshinskiy**	**3.43**	**355**	*e*P	Pn	12 13 03.9	+4.1
KRMR				*e*S	Sn	12 13 44.3	+5.2
PET	**Petropavlovsk**	**3.61**	**0**	*e*P	Pn	12 13 05.9	+3.7
PET				*e*S	Sn	12 13 47.5	+4.0
DALK	**Dalny**	**3.62**	**1**	*e*P	Pn	12 13 06.0	+3.7
DALK				*e*S	Sn	12 13 47.7	+4.0
SPN	**Mys Shipunski**	**3.78**	**13**	*e*P	Pn	12 13 07.8	+3.1
SPN				*e*S	Sn	12 13 52.1	+4.3
AVH	**Avacha**	**3.85**	**1**	*e*P	Pn	12 13 10.8	+5.1
KOK	**Koryaka**	**3.88**	**360**	*e*P	Pn	12 13 10.6	+4.6
KRX	**Arik**	**3.94**	**0**	*e*P	Pn	12 13 11.5	+4.5
GNL	**Ganaly**	**4.30**	**354**	*e*P	Pn	12 13 16.8	+4.9
KBTR	**Krutoberegovo**	**7.25**	**19**	*e*P	Pn	12 13 56.1	+3.9

*IDC **25** 12:16:41.8±1.8,22°.86N×11°.83W,h0^{km},mb4.0/8, mbtmp3.9/11,ML4.0/2,MS4.1/1,Error ellipse: s-maj=53.4km s-min=26.3km az=82.0*
ISC 25 12:16:43.6±1.4,**22°.8N**±0°.1×**11°.5W**±0°.2,**h10**^{km},**n13,** σ1§**76**/14,**mb3.8**/8,**Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**15.78**	**125**	Pn	**Pn**	**12 20 28.7**	**+2.6**
	0.4nm,0.3s,baz=308,slow=12,SNR=10						
TORD				Sn	**Sn**	**12 23 16.9**	**-4.3**
	0.1nm,0.3s,baz=304,slow=29,SNR=3.5						
	0.7nm,0.4s						
DBIC	**Dimbokro**	**17.24**	**157**	P	**Pn**	**12 20 45.3**	**+0.6**
	0.6nm,0.3s,baz=333,slow=9.0,SNR=4.5						
DBIC				S	Sn	12 23 47.0	-10
	8.0nm,1.2s,baz=302,slow=9.5,SNR=2.2						
	1.8nm,0.4s						
ESDC	**Sonseca Array**	**18.03**	**19**	P	**P**	**12 20 54.5**	**-0.4**
	0.3nm,0.5s,baz=208,slow=8.6,SNR=1.8						
GERES	**GERESS Array B**	**32.80**	**31**	P	**P**	**12 23 16.8**	**-0.4**
	0.8nm,0.7s,baz=230,slow=8.9,SNR=2.8						
	0.8nm,0.7s						
HFS	**Hagfors**	**41.31**	**19**	P	**P**	**12 24 28.9**	**-0.3**
	1.9nm,0.5s,baz=218,slow=9.1,SNR=7.8						
HFS				LR	LR	12 44 29.9	
	comp=Z,260nm,20.3s,baz=22,slow=40						
	1.9nm,0.5s						
MMAI	**Mount Meron Ar**	**42.41**	**65**	P	**P**	**12 24 40.4**	**+1.7**
	0.5nm,0.2s,baz=262,slow=9.9,SNR=2.4						
	0.5nm,0.2s						
FINES	**FINESS Array B**	**46.46**	**24**	P	**P**	**12 25 10.4**	**0.0**
	1.7nm,0.7s,baz=221,slow=10,SNR=6.0						
	1.7nm,0.7s						
KURBB	**Kurchatov Arra**	**72.77**	**42**	P	**P**	**12 28 12.4**	**+0.2**
	1.6nm,0.2s,baz=282,slow=5.9,SNR=2.9						
	1.6nm,0.2s						
ZALV	**Zalesovo Beam**	**75.51**	**37**	P	**P**	**12 28 28.3**	**+0.1**
	0.3nm,0.3s,baz=308,slow=3.5,SNR=2.1						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**76.26**	**45**	P	**P**	**12 28 33.6**	**+1.0**
	0.5nm,0.5s,baz=285,slow=4.8,SNR=7.8						
	0.5nm,0.5s						
ILAR	**Eielson Array**	**86.21**	**342**	P	**P**	**12 29 23.4**	**-1.6**
	0.1nm,0.4s,baz=58,slow=2.2,SNR=2.9						
	0.1nm,0.4s						
WRA	**Warramunga Arr**	**148.11**	**91**	PKPbc	**PKPbc**	**12 36 30.9**	**+0.5**
	0.6nm,0.7s,baz=288,slow=2.5,SNR=7.1						
ASAR	**Alice Springs**	**148.25**	**99**	PKPbc	**PKiKP**	**12 36 31.5**	**-1.0**
	0.8nm,0.7s,baz=290,slow=2.3,SNR=11						

*MOS **25** 12:17:00.6±0.5,48°.82N×158°.81E,h24^{km},mb3.7/1,Error ellipse: s-maj=35.0km s-min=5.2km az=92.2*
*KRSC **25** 12:17:05.8±2.5,49°.32N×158°.97E,h41^{km}±69^{km},MI4.1*
ISC 25 12:17:07.1±3.3,**49°.1N**±0°.2×**158°.61E**±0°.08,**h35**^{km},**n40,** σ1§**05**/53,**East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.23**	**315**	*e*PN	**Pn**	**12 17 41.5**	**0.0**
SKR				pmax	pmax		
	comp=Z,202nm,0.3s						
SKR	**Severo-Kuril's**	**2.23**	**315**	*e*P	**Pn**	**12 17 41.0**	**-0.5**
SKR				*e*S	**Sn**	**12 18 06.7**	**-1.1**
PAU	**Pauzhetka**	**2.60**	**334**	PN	**Pn**	**12 17 47.6**	**+1.1**
PAU	**Pauzhetka**	**2.60**	**334**	*e*P	**Pn**	**12 17 47.6**	**+1.1**
PAU				*e*S	**Sn**	**12 18 17.1**	**+0.2**
KDTR	**Khodutka, Kamc**	**2.69**	**353**	PN	**Pn**	**12 17 47.5**	**-0.3**
KDTR	**Khodutka, Kamc**	**2.69**	**353**	*e*P	**Pn**	**12 17 47.6**	**-0.3**
KDTR				*e*S	**Sn**	**12 18 17.3**	**-1.9**
ASAK	**Asacha**	**3.28**	**352**	PN	**Pn**	**12 17 56.8**	**+0.9**
ASAK	**Asacha**	**3.28**	**352**	*e*P	**Pn**	**12 17 56.9**	**+0.9**
ASAK				*e*S	**Sn**	**12 18 33.8**	**+0.1**
RUS	**Russkaya**	**3.30**	**359**	PN	**Pn**	**12 17 56.4**	**+0.3**
RUS	**Russkaya**	**3.30**	**359**	*e*P	**Pn**	**12 17 56.4**	**+0.3**
RUS				*e*S	**Sn**	**12 18 32.3**	**-1.8**
MTVR	**Mutnovka**	**3.36**	**356**	PN	**Pn**	**12 17 57.4**	**+0.3**
MTVR	**Mutnovka**	**3.36**	**356**	*e*P	**Pn**	**12 17 57.5**	**+0.3**
MTVR				*e*S	**Sn**	**12 18 34.0**	**-1.8**
GRL	**Gorelyy**	**3.43**	**354**	PN	**Pn**	**12 17 59.0**	**+0.9**
GRL	**Gorelyy**	**3.43**	**354**	*e*P	**Pn**	**12 17 59.0**	**+0.9**
GRL				*e*S	**Sn**	**12 18 36.3**	**-1.3**
KRMR	**Karymshinskiy**	**3.71**	**355**	PN	**Pn**	**12 18 03.4**	**+1.7**
KRMR	**Karymshinskiy**	**3.71**	**355**	*e*P	**Pn**	**12 18 03.5**	**+1.7**
KRMR				*e*S	**Sn**	**12 18 44.6**	**+0.4**
PET	**Petropavlovsk**	**3.89**	**0**	*e*PN	**Pn**	**12 18 05.0**	**+0.8**
PET	**Petropavlovsk**	**3.89**	**0**	*e*P	**Pn**	**12 18 05.0**	**+0.8**
PET				*e*S	**Sn**	**12 18 48.5**	**-0.2**
DALK	**Dalny**	**3.90**	**1**	PN	**Pn**	**12 18 04.9**	**+0.5**
DALK	**Dalny**	**3.90**	**1**	*e*P	**Pn**	**12 18 04.9**	**+0.5**
DALK				*e*S	**Sn**	**12 18 48.0**	**-0.9**
SPN	**Mys Shipunski**	**4.06**	**12**	PN	**Pn**	**12 18 06.9**	**+0.3**
SPN	**Mys Shipunski**	**4.06**	**12**	*e*P	**Pn**	**12 18 07.0**	**+0.3**
SPN				*e*S	**Sn**	**12 18 50.6**	**-2.3**
UGLR	**Uglovaya**	**4.08**	**2**	PN	**Pn**	**12 18 07.6**	**+0.7**
UGLR	**Uglovaya**	**4.08**	**2**	*e*P	**Pn**	**12 18 07.6**	**+0.7**
SMAR	**Somma**	**4.13**	**2**	PN	**Pn**	**12 18 07.8**	**0.0**
SMAR	**Somma**	**4.13**	**2**	*e*P	**Pn**	**12 18 07.9**	**0.0**
AVH	**Avacha**	**4.13**	**1**	PN	**Pn**	**12 18 08.7**	**+1.1**
AVH	**Avacha**	**4.13**	**1**	*e*P	**Pn**	**12 18 08.8**	**+1.1**
KOK	**Koryaka**	**4.16**	**0**	PN	**Pn**	**12 18 09.3**	**+1.3**
KOK	**Koryaka**	**4.16**	**0**	*e*P	**Pn**	**12 18 09.3**	**+1.3**
KOK				*e*S	**Sn**	**12 18 56.6**	**+1.2**
KRER	**Koryakskii**	**4.17**	**1**	PN	**Pn**	**12 18 09.4**	**+1.1**
KRER	**Koryakskii**	**4.17**	**1**	*e*P	**Pn**	**12 18 09.4**	**+1.1**
KRX	**Arik**	**4.23**	**0**	PN	**Pn**	**12 18 09.9**	**+0.9**
KRX	**Arik**	**4.23**	**0**	*e*P	**Pn**	**12 18 09.9**	**+0.9**
GNL	**Ganaly**	**4.58**	**355**	PN	**Pn**	**12 18 15.5**	**+1.7**
GNL	**Ganaly**	**4.58**	**355**	*e*P	**Pn**	**12 18 15.6**	**+1.7**
KII	**Karymskiy**	**4.93**	**6**	PN	**Pn**	**12 18 20.2**	**+1.6**
KII	**Karymskiy**	**4.93**	**6**	*e*P	**Pn**	**12 18 20.2**	**+1.6**
KII				*e*S	**Sn**	**12 19 14.6**	**+0.2**
BKI	**Bering**	**7.57**	**34**	PN	**Pn**	**12 18 55.0**	**+0.3**
BKI	**Bering**	**7.57**	**34**	*e*P	**Pn**	**12 18 55.0**	**+0.3**
BKI				*e*S	Sn	12 20 10.8	-8.4

*SJA **25** 12:30:30.8±0.5,35°.70S×73°.72W,h13^{km}±7^{km},ML3.4, MW3.7*
*NEIC **25** 12:30:31.9±1.3,35°.82S±0°.06×73°.7W±0°.1,h10^{km}±2^{km}, mb4.1/8,ML3.4(GUC),Error ellipse: s-maj=19.9km s-min=4.9km az=241.0*
*GUC **25** 12:30:34.5±0.8,35°.75S×73°.63W,h31^{km}±5^{km},ML3.4*
ISC 25 12:30:32.7±1.9,**35°.77S**±0°.04×**73°.63W**±0°.09,**h14**^{km}±13^{km}, **n50,** σ1§**00**/56,**2C,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BI05	**Punta Hualpn**	**1.04**	**160**		**Pn**	**12 30 52.6**	**-0.3**
BI05				Sn	**Sb**	**12 31 05.5**	**-0.5**
BI05	**Punta Hualpn**	**1.04**	**160**	*e*P	**Pg**	**12 30 52.9**	**0.0**
BI05				*e*S	**Sb**	**12 31 05.8**	**-0.3**
BI05				IAML		12 31 12.3	
	comp=E,3µm,0.5s						
BI05	**Punta Hualpn**	**1.04**	**160**	*e*P	**Pb**	**12 30 52.4**	**-0.1**
BI05				*e*S	**Sn**	**12 31 07.8**	**+0.6**
BI05				IAML		12 31 11.4	
	comp=Z,855nm,0.7s						
GO05	**Hualane**	**1.58**	**62**		**Pn**	**12 31 00.5**	**+0.1**
GO05	**Hualane**	**1.58**	**62**	*e*P	**Pn**	**12 31 00.2**	**-0.1**
GO05				IAML		12 31 30.3	
	comp=E,389nm,0.8s						
ML02	**Panimavida**	**1.80**	**91**		**Pn**	**12 31 02.9**	**-0.4**
BO03	**Pichilemu**	**1.87**	**48**	*e*P	**Pn**	**12 31 04.6**	**+0.4**
BO03				IAML		12 31 39.8	
	comp=N,592nm,0.9s						
BI02	**San Fabin de**	**2.11**	**116**		**Pn**	**12 31 07.8**	**+0.2**
BI02	**San Fabin de**	**2.11**	**116**	*e*P	**Pn**	**12 31 08.6**	**+1.0**
BI02				IAML		12 31 42.5	
	comp=N,454nm,0.5s						
BI02	**San Fabin de**	**2.11**	**116**	*e*P	**Pb**	**12 31 09.5**	**-1.2**
BO01	**Tunca**	**2.50**	**57**		**Pn**	**12 31 13.2**	**+0.2**
BO01	**Tunca**	**2.50**	**57**	*e*P	**Pn**	**12 31 14.0**	**+1.1**
BO01				*e*S	**Sn**	**12 31 43.6**	**+0.4**
BO01				IAML		12 31 59.1	
	comp=N,114nm,0.6s						
BO01	**Tunca**	**2.50**	**57**	*e*P	**Pn**	**12 31 13.7**	**+0.7**
BO02	**Sierra Bellavi**	**2.53**	**68**		**Pn**	**12 31 14.4**	**+1.1**
BO02	**Sierra Bellavi**	**2.53**	**68**	*e*P	**Pn**	**12 31 14.3**	**+0.9**
BO02				*e*S	**Sn**	**12 31 44.8**	**+0.8**
BO02	**Sierra Bellavi**	**2.53**	**68**	*e*P	**Pn**	**12 31 14.6**	**+1.2**
MT01	**Popeta**	**2.73**	**47**		**Pn**	**12 31 16.5**	**+0.5**
MT09	**Talagante**	**2.94**	**48**		**Pn**	**12 31 19.9**	**+0.7**
MT09	**Talagante**	**2.94**	**48**	*e*P	**Pn**	**12 31 20.2**	**+1.0**
MT09				*e*S	**Sn**	**12 31 54.4**	**0.0**
MT09				IAML		12 32 21.1	
	comp=N,179nm,0.6s						
BO04	**La Punta**	**3.05**	**55**		**Pn**	**12 31 20.9**	**+0.3**
BO04	**La Punta**	**3.05**	**55**	*e*P	**Pn**	**12 31 21.9**	**+1.2**
BO04				IAML		12 32 16.9	
	comp=E,182nm,0.7s						
VA01	**Torpederas**	**3.19**	**32**	Pn	**Pn**	**12 31 22.8**	**+0.4**
MT02	**Curacav**	**3.24**	**40**		**Pn**	**12 31 23.1**	**0.0**
MT13	**San Alfonso**	**3.41**	**55**		**Pn**	**12 31 26.7**	**+1.0**
MT03	**Universidad Ad**	**3.43**	**50**		**Pn**	**12 31 26.6**	**+0.7**
MT03	**Universidad Ad**	**3.43**	**50**	*e*P	**Pn**	**12 31 27.3**	**+1.5**
MT16	**CCHEN**	**3.47**	**49**	Pn	**Pn**	**12 31 27.5**	**+1.2**
PEL	**Peldehue**	**3.57**	**44**		**Pn**	**12 31 28.6**	**+0.8**
VA06	**Catapilco**	**3.74**	**32**	Pn	**Pn**	**12 31 29.9**	**0.0**
VA03	**San Esteban**	**3.93**	**41**		**Pn**	**12 31 33.6**	**+0.8**
VA03	**San Esteban**	**3.93**	**41**	*e*P	**Pn**	**12 31 34.0**	**+1.2**
GO06	**Curarrehue**	**4.18**	**156**		**Pn**	**12 31 38.0**	**+1.9**
GO06	**Curarrehue**	**4.18**	**156**	*e*P	**Pn**	**12 31 38.8**	**+2.6**
CO04	**Los Peladeros**	**4.32**	**32**		**Pn**	**12 31 38.3**	**0.0**
RFA	**San Rafael**	**4.34**	**78**	*e*P	**Pn**	**12 31 41.0**	**+2.7**
LR05	**Currie**	**4.64**	**164**		**Pn**	**12 31 44.1**	**+1.8**
CO02	**Combarbal**	**5.05**	**27**		**Pn**	**12 31 48.5**	**+0.3**
CO03	**El Pedregal**	**5.50**	**27**		**Pn**	**12 31 55.3**	**+1.1**
CO01	**Juntas del Tor**	**6.49**	**28**		**Pn**	**12 32 06.9**	**-1.2**
LCO	**Las Campanas**	**7.18**	**21**	Pn	**Pn**	**12 32 18.0**	**+0.5**
AC05	**El Transito**	**7.47**	**23**	Pn	**Pn**	**12 32 22.1**	**+0.7**
TRQA	**Tornquist**	**9.61**	**107**	Pn	**Pn**	**12 32 50.5**	**-0.1**
TA01	**Diego Aracena**	**15.45**	**12**	Pn	**Pn**	**12 34 11.1**	**+0.9**
HMBC	**Humberstone**	**15.78**	**13**	Pn	**Pn**	**12 34 15.7**	**+1.0**
PB12	**IPOC Station P**	**17.33**	**11**	P	**P**	**12 34 35.1**	**-0.6**
PB12				IAmb	IAmb	12 34 36.3	
	comp=Z,9.7nm,0.7s						
PB18	**Visviri**	**18.48**	**13**	P	**P**	**12 34 47.5**	**-1.3**
PB18				IAmb	IAmb	12 34 59.3	
	comp=Z,9.2nm,0.6s						
AQDB	**Aquidauana**	**21.90**	**51**	P	**P**	**12 35 25.3**	**-0.2**
PTLB	**Pontes e Lacer**	**24.03**	**36**	P	**P**	**12 35 48.0**	**+0.7**
PTLB				IAmb	IAmb	12 35 50.1	
	comp=Z,4.2nm,1.0s						
SNAA	**Sanae**	**50.46**	**157**	P	**P**	**12 39 29.2**	**-0.4**
QSPA	**South Pole Qui**	**54.47**	**180**	P	**P**	**12 39 58.4**	**-1.2**
QSPA				IAmb	IAmb	12 40 07.2	
	comp=Z,3.2nm,1.1s						

KRSC 25 12:31:09.1±2.3,**49°.47N**×**158°.86E,h50**^{km}±69^{km},**MI4.2, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.14**	**306**	*e*P	Pn	12 31 42.4	+0.1
SKR				*e*S	Sn	12 32 06.9	-0.7
KDTR	**Khodutka, Kamc**	**2.39**	**348**	*e*P	Pn	12 31 49.1	+3.4
KDTR				*e*S	Sn	12 32 17.5	+3.7
RUS	**Russkaya**	**2.97**	**356**	*e*P	Pn	12 31 57.3	+3.7
RUS				*e*S	Sn	12 32 31.7	+3.7
ASAK	**Asacha**	**2.98**	**349**	*e*P	Pn	12 31 58.9	+5.1
MTVR	**Mutnovka**	**3.05**	**352**	*e*P	Pn	12 31 58.8	+4.0
MTVR				*e*S	Sn	12 32 34.0	+4.0
MIPR	**Malaya Ipel'ka**	**3.11**	**335**	*e*P	Pn	12 31 59.5	+4.0
GRL	**Gorelyy**	**3.12**	**351**	*e*P	Pn	12 31 59.8	+3.9
GRL				*e*S	Sn	12 32 36.9	+4.9
KRMR	**Karymshinskiy**	**3.39**	**353**	*e*P	Pn	12 32 03.9	+4.4
KRMR				*e*S	Sn	12 32 43.4	+5.0
PET	**Petropavlovsk**	**3.56**	**358**	*e*P	Pn	12 32 05.5	+3.8
PET				*e*S	Sn	12 32 46.9	+4.5
DALK	**Dalny**	**3.56**	**359**	*e*P	Pn	12 32 04.0	+2.2
DALK				*e*S	Sn	12 32 46.9	+4.3
AVH	**Avacha**	**3.80**	**359**	*e*P	Pn	12 32 09.2	+4.2
KOK	**Koryaka**	**3.83**	**358**	*e*P	Pn	12 32 08.1	+2.6
KRX	**Arik**	**3.90**	**358**	*e*P	Pn	12 32 10.1	+3.6
GNL	**Ganaly**	**4.27**	**353**	*e*P	Pn	12 32 16.5	+5.0
KBTR	**Krutoberegovo**	**7.16**	**18**	*e*P	Pn	12 32 54.4	+3.4

KRSC 25 12:33:48.5±1.9,**49°.19N**×**158°.34E,h40**^{km}±26^{km},**MI3.5, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.07**	**317**	*e*P	Pn	12 34 21.6	+0.8
SKR				*e*S	Sn	12 34 45.8	+0.5
PAU	**Pauzhetka**	**2.48**	**337**	*e*S	Sn	12 34 58.0	+2.6
KDTR	**Khodutka, Kamc**	**2.63**	**356**	*e*S	Sn	12 35 01.8	+2.8
ASAK	**Asacha**	**3.21**	**355**	*e*P	Pn	12 34 40.6	+4.1
MTVR	**Mutnovka**	**3.30**	**358**	*e*P	Pn	12 34 41.8	+4.1
MTVR				*e*S	Sn	12 35 20.6	+4.8
GRL	**Gorelyy**	**3.37**	**357**	*e*P	Pn	12 34 43.0	+4.3
KRMR	**Karymshinskiy**	**3.65**	**358**	*e*P	Pn	12 34 47.5	+5.2
DALK	**Dalny**	**3.85**	**4**	*e*P	Pn	12 34 49.2	+4.0
DALK				*e*S	Sn	12 35 34.0	+4.8
UGLR	**Uglovaya**	**4.04**	**4**	*e*P	Pn	12 34 52.3	+4.5
AVH	**Avacha**	**4.09**	**3**	*e*P	Pn	12 34 53.2	+4.7
SMAR	**Somma**	**4.09**	**4**	*e*P	Pn	12 34 53.8	+5.2
KOK	**Koryaka**	**4.11**	**2**	*e*P	Pn	12 34 54.0	+5.1
KRER	**Koryakskii**	**4.13**	**3**	*e*P	Pn	12 34 53.7	+4.6
KRX	**Arik**	**4.18**	**3**	*e*P	Pn	12 34 54.5	+4.7
GNL	**Ganaly**	**4.52**	**357**	*e*P	Pn	12 34 59.3	+4.8
KBTR	**Krutoberegovo**	**7.54**	**19**	*e*P	Pn	12 35 40.1	+4.4
BKI	**Bering**	**7.63**	**35**	*e*P	Pn	12 35 41.1	+4.1

*IDC **25** 12:33:51.5±3.6,4°.42S×103°.97E,h194^{km}±26^{km},mb3.3/7, mbtmp3.8/8,Error ellipse: s-maj=79.3km s-min=14.7km az=54.0*
*DJA **25** 12:33:52.2±0.2,4°.5S±3°×10°.4E±°,h180^{km}±2^{km},M4.3/48, mB5.0/4,mb4.5/7,MLv4.2/48,Mw(mB)4.4/4*
ISC 25 12:33:51.3±0.7,**4°.39S**±0°.06×**104°.14E**±0°.07,**h190**^{km}±

EOS4	**EOS4**	**0.65 207**	*eP*	**Pn**	**12 41 26.6 +0.5**
EOS4			*eS*	**Sn**	**12 41 39.0 +0.9**
TWB1	**Santiao Chiao**	**0.67 298**	*i P*	**Pn**	**12 41 26.3 -0.5**
TWB1			*i S*	**Sn**	**12 41 38.3 -0.8**
TWC	**Suao**	**0.72 263**	*eP*	**Pn**	**12 41 26.6 -0.6**
TWC			*eS*	**Sn**	**12 41 39.4 -0.7**
TIPB	**Shuangxi**	**0.79 290**	*i P*	**Pn**	**12 41 27.5 -0.4**
TIPB			*i S*	**Sn**	**12 41 40.4 -0.9**
SXI1	**Grass Mountain**	**0.80 300**	P	**Pn**	**12 41 27.6 -0.4**
SXI1			*eS*	**Sn**	**12 41 41.5 +0.1**
ILA	**Ilan**	**0.81 275**	*eS*	**Sn**	**12 41 42.1 +0.5**
EWUT	**Wuta**	**0.82 252**	*eP*	**Pn**	**12 41 28.2 -0.1**
EWUT			*eS*	**Sn**	**12 41 41.5 -0.3**
NDS	**Dongshan**	**0.84 266**	*i P*	**Pn**	**12 41 28.4 -0.1**
NDS			S	**Sn**	**12 41 41.8 -0.4**
ENA	**Nanau**	**0.86 252**	*eP*	**Pn**	**12 41 29.3 +0.6**
ENA			*eS*	**Sn**	**12 41 42.7 +0.2**
NWF	**Wu-fen Shan**	**0.86 296**	*i P*	**Pn**	**12 41 28.4 -0.4**
NWF			*i S*	**Sn**	**12 41 42.2 -0.5**
WFSB	**Wu-fen Shan**	**0.86 296**	P	**Pn**	**12 41 28.3 -0.3**
WFSB			S	**Sn**	**12 41 42.1 -0.5**
TWE	**Neicheng**	**0.88 272**	*i P*	**Pn**	**12 41 28.6 -0.3**
TWE			*eS*	**Sn**	**12 41 42.7 -0.2**
EAHA	**Aohua**	**0.90 246**	*eP*	**Pn**	**12 41 28.8 -0.3**
EAHA			*eS*	**Sn**	**12 41 43.8 +0.6**
FUSB	**Fushanzhiwuyua**	**0.96 274**	*i P*	**Pn**	**12 41 29.5 -0.3**
FUSB			*eS*	**Sn**	**12 41 44.8 +0.3**
ENTT	**Nioudou**	**0.98 267**	*i P*	**Pn**	**12 41 30.1 +0.1**
ENTT			*i S*	**Sn**	**12 41 45.2 +0.4**
TWA	**Mucha**	**1.00 286**	*eP*	**Pn**	**12 41 29.9 -0.3**
LATG	**Datong**	**1.02 261**	*i P*	**Pn**	**12 41 30.6 0.0**
LATG			S	**Sn**	**12 41 46.5 +0.5**
NDT	**Datong Townshi**	**1.03 265**	P	**Pn**	**12 41 30.9 +0.4**
NDT			S	**Sn**	**12 41 46.3 +0.5**
NWLT	**Wulai**	**1.04 275**	*i P*	**Pn**	**12 41 30.3 -0.3**
NWLT			*i S*	**Sn**	**12 41 45.3 -0.7**
IRIF	**Iriomote-Funau**	**1.06 110**	P	**Pn**	**12 41 30.3 -0.5**
IRIF			S	**Sn**	**12 41 46.4 +0.1**
PCYT	**Pengchaiyu**	**1.06 331**	*eP*	**Pn**	**12 41 31.1 +0.2**
YM01	**YM01**	**1.07 295**	P	**Pn**	**12 41 30.4 -0.5**
YM01			S	**Sn**	**12 41 45.8 -0.8**
YM08	**YM08**	**1.07 297**	*eP*	**Pn**	**12 41 30.4 -0.6**
TATO	**Taipei**	**1.08 285**	P	**Pn**	**12 41 30.4 -0.6**
TATO			*eS*	**Sn**	**12 41 47.0 +0.2**
NACB	**Ninganchiao**	**1.09 241**	*eP*	**Pn**	**12 41 30.2 -0.9**
NACB			*eS*	**Sn**	**12 41 46.6 -0.3**
ZUZH	**Zhuzihu**	**1.09 295**	P	**Pn**	**12 41 30.8 -0.5**
ZUZH			S	**Sn**	**12 41 46.6 -0.5**
TWY	**Chenhua**	**1.10 302**	*eP*	**Pn**	**12 41 31.2 -0.1**
TWY			*eS*	**Sn**	**12 41 47.5 +0.2**
ANP	**Anpu**	**1.12 296**	*eP*	**Pn**	**12 41 31.2 -0.4**
TWD	**Chiawan**	**1.13 237**	*eP*	**Pn**	**12 41 31.0 -0.7**
TWD			*eS*	**Sn**	**12 41 47.1 -0.7**
YHNB	**Yeheng**	**1.15 269**	*i P*	**Pn**	**12 41 31.7 -0.2**
YHNB			*i S*	**Sn**	**12 41 48.0 -0.4**
ETLH	**Xiulin Townshi**	**1.16 245**	*eP*	**Pn**	**12 41 31.6 -0.6**
ETLH			*eS*	**Sn**	**12 41 48.7 0.0**
NSK	**Sanguang**	**1.17 269**	*i P*	**Pn**	**12 41 31.9 -0.2**
NSK			*i S*	**Sn**	**12 41 48.3 -0.4**
NNSB	**Datong**	**1.18 257**	*i P*	**Pn**	**12 41 32.1 -0.2**
NNSB			*eS*	**Sn**	**12 41 48.4 -0.6**
NNSH	**Datong**	**1.18 257**	*eP*	**Pn**	**12 41 31.7 -0.6**
NNSH			*eS*	**Sn**	**12 41 48.3 -0.7**
NTST	**Danshui**	**1.18 293**	*eP*	**Pn**	**12 41 32.0 -0.1**
NTST			*eS*	**Sn**	**12 41 48.7 -0.1**
TWS1	**Kuangyinshan**	**1.18 290**	*eP*	**Pn**	**12 41 31.9 -0.2**
TWS1			*eS*	**Sn**	**12 41 48.9 +0.4**
NNS	**Nan Shan**	**1.18 258**	*eP*	**Pn**	**12 41 32.0 -0.3**
NNS			*eS*	**Sn**	**12 41 48.8 -0.3**
HWA	**Hwalien**	**1.19 233**	*eS*	**Sn**	**12 41 49.3 +0.4**
TEYL	**Yanliau Villag**	**1.26 229**	*eS*	**Sn**	**12 41 50.1 -0.4**
ETM	**Tongmen**	**1.27 235**	*eP*	**Pn**	**12 41 32.5 -0.9**
ETM			*eS*	**Sn**	**12 41 49.6 -1.2**
LXIB	**Xiulin Townshi**	**1.31 239**	*eP*	**Pn**	**12 41 33.1 -0.8**
LXIB			*eS*	**Sn**	**12 41 50.8 -1.0**
JKRS	**Kuro-shima**	**1.33 110**	P	**Pn**	**12 41 33.9 -0.1**
JKRS			S	**Sn**	**12 41 52.5 +0.4**
KSHI	**Guanxi Townshi**	**1.33 274**	P	**Pn**	**12 41 34.1 0.0**
KSHI			*eS*	**Sn**	**12 41 52.4 +0.3**
SHUL	**Shoufeng**	**1.34 227**	*eS*	**Sn**	**12 41 52.0 -0.2**
FUSS	**Fushou**	**1.35 251**	P	**Pn**	**12 41 34.6 +0.1**
FUSS			S	**Sn**	**12 41 52.6 -0.2**
WHF	**Hehuan Shan**	**1.37 246**	P	**Pn**	**12 41 34.9 0.0**
WHF			S	**Sn**	**12 41 52.9 -0.7**
NFF	**Wufeng Townshi**	**1.39 268**	P	**Pn**	**12 41 34.6 -0.2**
NFF			S	**Sn**	**12 41 53.2 -0.2**
TWT	**Tachien**	**1.41 252**	*eP*	**Pn**	**12 41 36.0 +0.8**
TWT			*eS*	**Sn**	**12 41 54.3 +0.3**
ESL	**Shilin**	**1.41 232**	*eP*	**Pn**	**12 41 34.6 -0.4**
ESL			*eS*	**Sn**	**12 41 52.8 -1.0**
JJJ	**Ishigaki jima**	**1.41 103**	P	**Pn**	**12 41 34.6 -0.4**
JJJ			S	**Sn**	**12 41 53.1 -0.7**
TDCB	**Techi**	**1.42 252**	*eP*	**Pn**	**12 41 35.6 +0.3**
TDCB			S	**Sn**	**12 41 53.9 -0.3**
LIOB	**Emei**	**1.48 268**	*eP*	**Pn**	**12 41 35.8 -0.1**
LIOB			S	**Sn**	**12 41 54.9 -0.4**
NSTT	**Nanjuang**	**1.49 268**	*eP*	**Pn**	**12 41 35.9 -0.1**
NSTT			*eS*	**Sn**	**12 41 55.4 -0.2**
WARBT	**Fenglin Townsh**	**1.50 230**	P	**Pn**	**12 41 35.1 -1.1**
WARBT			*eS*	**Sn**	**12 41 54.4 -1.5**
JISG	**Ishigakijimahi**	**1.53 94**	*eP*	**Pn**	**12 41 36.1 -0.3**
JISG			*eS*	**Sn**	**12 41 56.7 +0.4**
OWD	**Renai**	**1.53 241**	*eP*	**Pn**	**12 41 36.2 -0.4**
OWD			*eS*	**Sn**	**12 41 55.7 -0.9**
WUSB	**Renai**	**1.56 243**	P	**Pn**	**12 41 37.0 0.0**
WUSB			S	**Sn**	**12 41 57.1 -0.2**
WHP	**Taichung City**	**1.60 255**	*eP*	**Pn**	**12 41 38.0 +0.5**
WHP			*eS*	**Sn**	**12 41 58.9 +0.8**
VWDT	**VWDT**	**1.66 236**	P	**Pn**	**12 41 38.0 -0.1**
VWDT			S	**Sn**	**12 41 58.9 -0.5**
EHYH	**Wanrong**	**1.69 225**	*eP*	**Pn**	**12 41 38.4 -0.1**
EHY	**Hungye**	**1.69 226**	*eP*	**Pn**	**12 41 38.3 -0.3**
EHY			*eS*	**Sn**	**12 41 58.8 -1.4**
DPDB	**Guoxing**	**1.70 247**	*eP*	**Pn**	**12 41 40.1 +1.4**
DPDB			*eS*	**Sn**	**12 42 01.7 +1.4**
WCS	**Beigang Elemen**	**1.70 248**	*eP*	**Pn**	**12 41 39.3 +0.6**
WCS			*eS*	**Sn**	**12 42 00.9 +0.6**
NSY	**Sanyi**	**1.73 261**	*eP*	**Pn**	**12 41 39.6 +0.6**
TWQ1	**Liyutan**	**1.73 259**	*eP*	**Pn**	**12 41 39.0 -0.1**
TWQ1			*eS*	**Sn**	**12 42 00.0 -0.2**
SMLT	**Sun Moon Lake**	**1.78 243**	P	**Pn**	**12 41 40.8 +1.0**
SMLT			*eS*	**Sn**	**12 42 03.5 +1.1**
SSLB	**Suanglung**	**1.79 240**	*eP*	**Pn**	**12 41 40.6 +0.8**
SSLB			*eS*	**Sn**	**12 42 02.8 +0.5**
YULB	**Yu-li**	**1.79 224**	*eP*	**Pn**	**12 41 38.7 -1.1**
YULB			*eS*	**Sn**	**12 42 00.2 -2.2**
TYC	**Yuchr**	**1.81 244**	P	**Pn**	**12 41 41.0 +1.0**
TYC			*eS*	**Sn**	**12 42 03.1 +0.3**
TWF1	**Yuli**	**1.82 223**	*eP*	**Pn**	**12 41 40.0 -0.1**
JTJ	**Tarama**	**1.88 91**	P	**Pn**	**12 41 40.7 -0.2**
JTJ			*eS*	**Sn**	**12 42 04.1 -0.2**
CHKH	**Chenggong**	**1.88 217**	*eS*	**Sn**	**12 42 03.4 -1.1**
WHYT	**Xinyi Township**	**1.91 239**	*eP*	**Pn**	**12 41 42.2 +0.8**
WHYT			*eS*	**Sn**	**12 42 06.4 +1.1**
YUS	**Yu-Shan**	**1.96 232**	*eP*	**Pn**	**12 41 42.6 +0.2**
YUS			*eS*	**Sn**	**12 42 06.4 -0.5**
CHKT	**Chengkung**	**1.97 216**	*eP*	**Pn**	**12 41 39.4 -2.8**
CHKT			*eS*	**Sn**	**12 42 06.5 -1.1**
EHD	**Haiduan**	**2.02 221**	*eP*	**Pn**	**12 41 43.0 +0.1**
CHN5	**Tsauling**	**2.10 239**	*eP*	**Pn**	**12 41 45.3 +1.4**
CHN5			*eS*	**Sn**	**12 42 11.2 +1.5**
ELDTW	**Lidau**	**2.11 225**	*eP*	**Pn**	**12 41 43.6 -0.5**
ELDTW			*eS*	**Sn**	**12 42 08.6 -1.4**
WRL	**Guolierlin Hig**	**2.21 249**	*eP*	**Pn**	**12 41 45.4 +0.1**
WRL			*eS*	**Sn**	**12 42 11.0 -1.1**
WCKO	**Fanlu**	**2.24 236**	*eP*	**Pn**	**12 41 47.5 +1.8**
WCKO			*eS*	**Sn**	**12 42 14.7 +1.7**
STYH	**Taoyuan**	**2.29 229**	*eP*	**Pn**	**12 41 47.6 +1.3**
STYH			*eS*	**Sn**	**12 42 14.6 +0.7**
CHN4	**Tsaushan**	**2.30 235**	*eP*	**Pn**	**12 41 47.7 +1.1**
CHN4			*eS*	**Sn**	**12 42 16.6 +2.3**
STYT	**Tauyuan**	**2.30 229**	*eP*	**Pn**	**12 41 47.5 +1.0**
STYT			*eS*	**Sn**	**12 42 15.6 +1.2**
TPUB	**Ta-pu**	**2.31 233**	*eP*	**Pn**	**12 41 47.4 +0.9**
TPUB			*eS*	**Sn**	**12 42 16.0 +1.5**
TWGBT	**Beinan**	**2.36 218**	*eP*	**Pn**	**12 41 47.0 -0.2**
TWGBT			S	**Sn**	**12 42 14.2 -1.4**
JIKM	**Ikemajima**	**2.38 84**	*eP*	**Pn**	**12 41 47.7 +0.2**
JIKM			*eS*	**Sn**	**12 42 16.5 +0.4**

KRSC 25 13:27:10.9±1.5, 49°45N×158°88E, h43km±45km, MI3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.17**	**306**	*eP*	**Pn**		13 27 45.0	+0.6
SKR				*eS*	**Sn**		13 28 11.4	+1.4
PAU	**Pauzhetka**	**2.41**	**328**	*eP*	**Pn**		13 27 51.0	+3.2
PAU				*eS*	**Sn**		13 28 20.2	+4.1
KDTR	**Khodutka, Kamc**	**2.42**	**348**	*eP*	**Pn**		13 27 50.4	+2.5
KDTR				*eS*	**Sn**		13 28 20.0	+3.9
RUS	**Russkaya**	**3.00**	**356**	*eP*	**Pn**		13 27 58.8	+3.0
RUS				*eS*	**Sn**		13 28 34.0	+3.6
ASAK	**Asacha**	**3.00**	**348**	*eP*	**Pn**		13 27 59.9	+4.0
MTVR	**Mutnovka**	**3.07**	**352**	*eP*	**Pn**		13 28 00.2	+3.2
MTVR				*eS*	**Sn**		13 28 36.5	+4.0
GRL	**Gorelyy**	**3.15**	**351**	*eP*	**Pn**		13 28 01.6	+3.6
GRL				*eS*	**Sn**		13 28 39.1	+4.8
KRMR	**Karymshinskiy**	**3.42**	**352**	*eP*	**Pn**		13 28 05.6	+4.0
KRMR				*eS*	**Sn**		13 28 46.6	+5.8
PET	**Petropavlovsk**	**3.58**	**358**	*eP*	**Pn**		13 28 07.3	+3.5
PET				*eS*	**Sn**		13 28 49.5	+4.7
DALK	**Dalny**	**3.59**	**359**	*eP*	**Pn**		13 28 07.1	+3.2
DALK				*eS*	**Sn**		13 28 49.2	+4.2
APC	**Apacha**	**3.64**	**343**	*eP*	**Pn**		13 28 08.7	+4.0
SPN	**Mys Shipunski**	**3.72**	**11**	*eS*	**Sn**		13 28 53.2	+4.8
UGLR	**Uglovaya**	**3.76**	**359**	*eP*	**Pn**		13 28 10.9	+4.4
SMAR	**Somma**	**3.82**	**359**	*eP*	**Pn**		13 28 12.7	+5.4
AVH	**Avacha**	**3.82**	**359**	*eP*	**Pn**		13 28 11.8	+4.6
KOK	**Koryaka**	**3.85**	**358**	*eP*	**Pn**		13 28 12.3	+4.6
KRX	**Arik**	**3.92**	**358**	*eP*	**Pn**		13 28 12.8	+4.2
GNL	**Ganaly**	**4.29**	**353**	*eP*	**Pn**		13 28 18.5	+4.8
KBTR	**Krutoberegovo**	**7.18**	**18**	*eP*	**Pn**		13 28 57.0	+3.9

IDC 25 13:42:45.8±7.9, 26°55N×126°22E, h145km±98km, mb3.0/3, mbtmp3.5/3, Error ellipse: s-maj=140.4km s-min=25.7km az=64.0, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JOW	**Kunigami**	**1.86**	**81**	P	**Pn**		13 43 19.5	+0.5
	12nm,0.8s,baz=288,slow=16,SNR=1.5							
JOW				S	**Sn**		13 43 44.5	+0.1
	8.3nm,0.7s,baz=307,slow=20,SNR=1.7							
ZALV	**Zalesovo Beam**	**40.91**	**323**	P	P		13 50 13.5	-0.2
	0.8nm,0.4s,baz=119,slow=8.9,SNR=2.0							
	0.8nm,0.4s							
WRA	**Warramunga Arr**	**46.88**	**170**	P	P		13 51 00.8	-0.9
	0.1nm,0.3s,baz=342,slow=7.7,SNR=4.6							
	0.1nm,0.3s							
ASAR	**Alice Springs**	**50.47**	**171**	P	P		13 51 29.5	+0.5
	0.1nm,0.4s,baz=341,slow=8.7,SNR=7.4							
	0.1nm,0.4s							

*NOU **25** 13:48:24.4, 40°30S×175°69E, h79km, MLv4.0/17, North Island, New Zealand*
*WEL **25** 13:48:26.0±0.1, 40°S±1°×17°6E±°, h35km±2km, M3.9/77, ML3.9/50, MLv3.9/77, Error ellipse: s-maj=2.0km s-min=1.9km az=104.4, confirmed*
ISC 25 13:48:26.7±1.2, 40°22S±0°02×175°57E±0°02, h41km±5km, n142, σ1§06/177, North Island

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
FAHS	**Feilding Agric**	**0.01**	**31**	P	**Pn**		13 48 33.0	-0.3
FAHS				S	**Sn**		13 48 39.0	+1.2
PNBS	**Palmerston Nor**	**0.13**	**167**	P	**Pn**		13 48 33.4	-0.3
PNBS				S	**Sn**		13 48 39.3	+0.8
PNMS	**Monrad Interme**	**0.14**	**173**	P	**Pn**		13 48 33.6	-0.2
PNMS				S	**Sn**		13 48 39.7	+1.0
OHWZ	**Ohakea**	**0.20**	**274**	P	**Pn**		13 48 33.5	-0.6
OHWZ				S	**Sn**		13 48 39.7	+0.5
POWZ	**Post Office Ro**	**0.23**	**139**	P	**Pn**		13 48 33.9	-0.6
POWZ				S	**Sn**		13 48 39.9	0.0
WDPS	**Woodville Poli**	**0.26**	**117**	P	**Pn**		13 48 34.4	-0.3
WDPS				S	**Sn**		13 48 41.0	+0.8
TSZ	**Takapari Road**	**0.34**	**62**	P	**Pn**		13 48 35.0	-0.6
TSZ				S	**Sn**		13 48 41.7	-0.1
FXBS	**Foxton Beach S**	**0.36**	**227**	P	**Pn**		13 48 35.3	-0.4
FXBS				S	**Sn**		13 48 42.7	+0.7
DVHS	**Dannevirke Hig**	**0.41**	**88**	P	**Pn**		13 48 36.6	+0.2
MRZ	**Mangatainoka R**	**0.44**	**179**	P	**Pn**		13 48 36.2	-0.5
MRZ				S	**Sn**		13 48 44.1	+0.3
EKTS	**Eketahuna Scho**	**0.44**	**166**	P	**Pn**		13 48 36.5	-0.3
MNGS	**Mangaweka Scho**	**0.45**	**23**	P	**Pn**		13 48 36.1	-0.7
PRWZ	**Pori Road**	**0.46**	**138**	P	**Pn**		13 48 37.0	+0.1
PRWZ				S	**Sn**		13 48 45.5	+1.4
HOCS	**Levin Horowhen**	**0.46**	**209**	P	**Pn**		13 48 36.4	-0.5
DVHZ	**Dannevirke**	**0.46**	**100**	P	**Pn**		13 48 37.0	-0.1
DVHZ				S	**Sn**		13 48 45.8	+1.4
WCDS	**Wanganui Civil**	**0.49**	**305**	P	**Pn**		13 48 37.0	-0.4
TRMS	**Tiraumea**	**0.56**	**145**	P	**Pn**		13 48 38.5	+0.2
TRMS				S	**Sn**		13 48 48.4	+2.0
THHS	**Taihape Hospit**	**0.57**	**18**	P	**Pn**		13 48 37.7	-0.7
THHS				S	**Sn**		13 48 46.3	-0.4
PNHZ	**Pukenui**	**0.57**	**58**	P	**Pn**		13 48 38.1	-0.4
PNHZ				S	**Sn**		13 48 47.5	+0.6
WBFS	**Weber Fire Sta**	**0.60**	**108**	P	**Pn**		13 48 39.1	+0.3
WBFS				S	**Sn**		13 48 49.8	+2.4
TIWZ	**Tintock**	**0.61**	**157**	P	**Pn**		13 48 38.8	-0.2
TIWZ				S	**Sn**		13 48 49.1	+1.4
OTKS	**Otaki School**	**0.63**	**211**	P	**Pn**		13 48 38.1	-0.3
WAZ	**Wanganui**	**0.65**	**316**	P	**Pn**		13 48 39.0	-0.5
WAZ				S	**Sn**		13 48 48.7	+0.1
OGWZ	**Otaki Gorge**	**0.67**	**207**	P	**Pn**		13 48 39.4	-0.4
OGWZ				S	**Sn**		13 48 49.5	+0.3
HOWZ	**Holdsworth Sta**	**0.68**	**183**	P	**Pn**		13 48 39.6	-0.3
HOWZ				S	**Sn**		13 48 50.3	+0.8
WPHZ	**Waipukurau**	**0.69**	**77**	P	**Pn**		13 48 40.0	0.0
WPHZ				S	**Sn**		13 48 51.8	+2.2
WAKS	**Wakarara Rangi**	**0.69**	**50**	P	**Pn**		13 48 40.1	0.0
BFZ	**Birch Farm**	**0.69**	**132**	P	**Pn**		13 48 40.1	0.0
BFZ	**Birch Farm**	**0.69**	**132**	S	**Sn**		13 48 51.1	+1.4
BFZ	**Birch Farm**	**0.69**	**132**	P	**Pn**		13 48 39.7	-0.5
ANWZ	**Angora Road**	**0.73**	**109**	P	**Pn**		13 48 40.6	-0.1
ANWZ				S	**Sn**		13 48 51.9	+1.3
WRCS	**Masterton Wair**	**0.73**	**175**	P	**Pn**		13 48 40.6	0.0
PGFS	**Porangahau Fir**	**0.80**	**96**	P	**Pn**		13 48 41.2	-0.4
ORCS	**Ohakune Ruapeh**	**0.81**	**351**	P	**Pn**		13 48 40.9	-0.9
KIW	**Kapiti Island**	**0.81**	**218**	P	**Pn**		13 48 41.3	-0.4
KIW				S	**Sn**		13 48 52.6	-0.1
PAPS	**Paraparaumu Pr**	**0.82**	**212**	P	**Pn**		13 48 41.6	-0.2
PRHZ	**Porangahau**	**0.82**	**94**	P	**Pn**		13 48 41.4	-0.4
MOVZ	**Moawhango**	**0.82**	**10**	P	**Pn**		13 48 40.9	-1.1
WPWS	**Waipawa Distri**	**0.83**	**71**	P	**Pn**		13 48 41.5	-0.4
MTVZ	**Mangateitei**	**0.84**	**355**	P	**Pn**		13 48 41.4	-0.7
MTVZ				S	**Sn**		13 48 53.9	+0.6
CPFS	**Castlepoint Fi**	**0.84**	**144**	P	**Pn**		13 48 43.1	+1.0
CPWZ	**Castlepoint**	**0.84**	**145**	P	**Pn**		13 48 42.9	+0.8
KRHZ	**Kereru**	**0.84**	**47**	P	**Pn**		13 48 42.0	-0.2
KRHZ				S	**Sn**		13 48 54.9	+1.5
WNVZ	**Wahianoa**	**0.89**	**1**	P	**Pn**		13 48 42.1	-0.9
TMDS	**Te Marua Water**	**0.91**	**200**	P	**Pn**		13 48 42.9	-0.2
FTPS	**Featherston Pr**	**0.92**	**191**	P	**Pn**		13 48 43.2	0.0
TRVZ	**Turoa**	**0.92**	**359**	P	**Pn**		13 48 42.7	-0.7
TMWZ	**Te Maipa**	**0.92**	**165**	P	**Pn**		13 48 43.5	+0.3
WHVZ	**Whangaehu Hut**	**0.94**	**1**	P	**Pn**		13 48 42.9	-0.8
MTW	**Mount Morrison**	**0.94**	**183**	P	**Pn**		13 48 42.8	-0.7
PKVZ	**Pokaka**	**0.94**	**349**	P	**Pn**		13 48 42.9	-0.7
MAVZ	**Matarangi**	**0.95**	**360**	P	**Pn**		13 48 43.2	-0.7
TUVZ	**Tukino**	**0.95**	**4**	P	**Pn**		13 48 43.3	-0.5
FWVZ	**Far West T-bar**	**0.96**	**359**	P	**Pn**		13 48 43.3	-0.7
CAW	**Cannon Point**	**0.97**	**203**	P	**Pn**		13 48 43.2	-0.7
UHSS	**Upper Hutt Pri**	**0.98**	**203**	P	**Pn**		13 48 43.6	-0.4
PXZ	**Pawanui**	**1.01**	**80**	P	**Pn**		13 48 43.7	-0.7
COVZ	**Chateau Observ**	**1.02**	**359**	P	**Pn**		13 48 44.1	-0.6
KWHZ	**Kaweka Forest**	**1.03**	**40**	P	**Pn**		13 48 44.5	-0.2
SNVZ	**South Ngauruho**	**1.03**	**3**	P	**Pn**		13 48 44.4	-0.5
NGZ	**Ngauruhoe**	**1.04**	**1**	P	**Pn**		13 48 44.6	-0.4
OTVZ	**Oturere**	**1.06**	**4**	P	**Pn**		13 48 44.8	-0.4
ETVZ	**East Tongariro**	**1.09**	**6**	P	**Pn**		13 48 45.2	-0.4
KAHZ	**Kahuranaki**	**1.09**	**68**	P	**Pn**		13 48 45.2	-0.4
WTVZ	**West Tongariro**	**1.10**	**1**	P	**Pn**		13 48 45.5	-0.3
TMVZ	**Te Maari**	**1.11**	**5**	P	**Pn**		13 48 45.5	-0.4
NTVZ	**North Tongarir**	**1.12**	**4**	P	**Pn**		13 48 45.8	-0.3
KRVZ	**Karewarewa**	**1.12**	**3**	P	**Pn**		13 48 45.9	-0.2
TWVZ	**Taurewa**	**1.15**	**355**	P	**Pn**		13 48 45.7	-0.7
MCHZ	**McNeill Hill**	**1.16**	**49**	P	**Pn**		13 48 46.3	-0.3
PAWZ	**Paruwai Farm**	**1.17**	**185**	P	**Pn**		13 48 45.5	-1.1
LREZ	**Lake Rotokare**	**1.18**	**310**	P	**Pn**		13 48 46.5	-0.2
LREZ				S	**Sn**		13 49 02.8	+1.3
TRWZ	**Traveller**	**1.18**	**176**	P	**Pn**		13 48 46.6	-0.2
MSWZ	**Moikau Station**	**1.22**	**191**	P	**Pn**		13 48 46.1	-1.3
WEL	**Wellington**	**1.23**	**209**	P	**Pn**		13 48 46.4	-0.9
KATZ	**Kakaramea**	**1.25**	**5**	P	**Pn**		13 48 47.8	0.0
RITZ	**Rihia Road**	**1.26**	**10**	P	**Pn**		13 48 48.0	+0.1
VRZ	**Vera Road**	**1.26**	**330**	P	**Pn**		13 48 47.2	-0.7
VRZ				S	**Sn**		13 49 04.7	+1.2
BKZ	**Black Stump Fm**	**1.27**	**34**	P	**Pn**		13 48 48.0	-0.1
BKZ	**Black Stump Fm**	**1.27**	**34**	P	**Sn**		13 49 05.5	+1.6
BKZ	**Black Stump Fm**	**1.27**	**34**	P	**Pn**		13 48 47.6	-0.4
SNZO	**South Karori**	**1.27**	**211**	P	**Pn**		13 48 47.6	-0.4
SNZO	**South Karori**	**1.27**	**211**	P	**Sn**		13 49 04.3	+0.4
CKHZ	**Cape Kidnapper**	**1.29**	**65**	P	**Pn**		13 48 47.6	-0.7
CKHZ				S	**Sn**		13 49 05.1	+0.8
BHW	**Baring Head**	**1.30**	**204**	P	**Pn**		13 48 47.1	-1.3
RATZ	**Rangitukua**	**1.36**	**7**	P	**Pn**		13 48 49.1	-0.2
PLWZ	**Palliser**	**1.37**	**190**	P	**Pn**		13 48 47.9	-1.5
DUWZ	**D'Urville Isla**	**1.38**	**245**	P	**Pn**		13 48 48.4	-1.1
PREZ	**Palmer Road**	**1.40**	**308**	P	**Pn**		13 48 50.0	+0.2
PREZ				S	**Sn**		13 49 09.5	+2.5
TCW	**Tory Channel**	**1.40**	**224**	P	**Pn**		13 48 48.5	-1.2
TCW				S	**Sn**		13 49 06.5	-0.4
ARHZ	**Aropaoanui**	**1.46**	**50**	P	**Pn**		13 48 49.7	-0.8
NMHZ	**Naumai**	**1.47**	**41**	P	**Pn**		13 48 50.4	-0.4
DREZ	**Durham Road**	**1.47**	**314**	P	**Pn**		13 48 50.8	0.0
DREZ				S	**Sn**		13 49 10.2	+1.4
MHEZ	**Mangahewa**	**1.49**	**319**	P	**Pn**		13 48 51.4	+0.3
MHEZ				S	**Sn**		13 49 11.4	+2.1
KHEZ	**Kahui Hut**	**1.51**	**307**	P	**Pn**		13 48 51.8	+0.4
KHEZ	**Kahui Hut**	**1.51**	**307**	S	**Sn**		13 49 11.9	+2.0
KHEZ	**Kahui Hut**	**1.51**	**307**	P	**Pn**		13 48 51.7	+0.4
KHEZ				S	**Sn**		13 49 11.4	+1.5
WATZ	**Wairara**	**1.52**	**5**	P	**Pn**		13 48 51.0	-0.4
MRHZ	**Matea Rd**	**1.53**	**26**	P	**Pn**		13 48 50.9	-0.7
NMEZ	**Namu Road**	**1.53**	**301**	P	**Pn**		13 48 51.9	+0.4
NMEZ				S	**Sn**		13 49 12.2	+1.9
WHTZ	**Whakaora**	**1.58**	**11**	P	**Pn**		13 48 52.2	-0.1
NBEZ	**Newall Road No**	**1.62**	**305**

KNZ	Kokohu	1.54	27	P		Pn	14 10 33.4	-0.1
MTHZ	Maungataniwha	1.55	2	P		Pn	14 10 34.2	+0.6
NTVZ	North Tongariro	1.56	326	P		Pb	14 10 35.0	-0.1
PKVZ	Pokaka	1.57	315	P		Pb	14 10 35.1	-0.2
KRVZ	Karewarewa	1.58	326	P		Pb	14 10 35.6	+0.2
WTVZ	West Tongariro	1.58	324	P		Pb	14 10 35.4	-0.2
MRHZ	Matea Rd	1.59	350	P		Pb	14 10 35.2	-0.5
RITZ	Rihia Road	1.59	333	P		Pb	14 10 36.2	+0.5
PLWZ	Palliser	1.64	224	P		Pn	14 10 34.3	-0.5
KATZ	Kakaramea	1.66	329	P		Pb	14 10 36.9	+0.1
TWVZ	Taurewa	1.69	322	P		Pb	14 10 36.8	-0.5
PRGZ	Paritu Road	1.71	30	P		Pn	14 10 36.0	+0.2
RATZ	Rangitukua	1.72	333	P		Pb	14 10 38.2	+0.3
BHW	Baring Head	1.76	235	P		Pn	14 10 36.0	-0.5
WEL	Wellington	1.76	239	P		Pn	14 10 36.4	+0.1
SNZO	South Karori	1.82	240	P		Pn	14 10 37.0	-0.2
WHTZ	Whakaora	1.85	340	P		Pg	14 10 41.1	-0.9
RIGZ	Rimuhau	1.86	24	P		Pn	14 10 38.0	+0.1
ALRZ	Allen Road	1.87	349	P		Pn	14 10 38.6	+0.5
WATZ	Wairara	1.88	334	P		Pb	14 10 40.2	-0.4
MUGZ	Murupara	1.93	360	P		Pn	14 10 39.1	+0.4
PRRZ	Plateau Road	1.93	351	P		Pn	14 10 39.3	+0.5
WPRZ	Whakapapatarin	1.94	345	P		Pb	14 10 42.4	+0.7
RAGZ	Rawiri	1.97	15	P		Pn	14 10 39.8	+0.4
VRZ	Vera Road	2.02	309	P		Pb	14 10 41.3	-1.6
HRRZ	Handcock Road	2.05	349	P		Pn	14 10 41.3	+0.8
KUTZ	Kaahu Road	2.05	338	P		Pn	14 10 41.2	+0.7
LREZ	Lake Rotokare	2.06	297	P		Pb	14 10 42.2	-1.3
TCW	Tory Channel	2.07	246	P		Pn	14 10 40.2	-0.5
TKGZ	Te Karaka	2.13	23	P		Pn	14 10 41.6	+0.1
HSRZ	Hossack Road	2.13	349	P		Pn	14 10 42.1	+0.5
MWZ	Matawai	2.15	16	P		Pn	14 10 41.8	0.0
URZ	Urewera	2.16	7	P		Pn	14 10 41.9	0.0
URZ	Urewera	2.16	7	P		Pn	14 10 42.1	+0.1
TARZ	Mount Tarawera	2.18	354	P		Pn	14 10 43.0	+0.7
CNGZ	Carnagh Statio	2.21	30	P		Pn	14 10 42.9	+0.2
DUWZ	D'Urville Isla	2.21	259	P		Pn	14 10 43.4	+0.6
PREZ	Palmer Road	2.28	297	P		Pb	14 10 45.6	-1.8
TLZ	Tolley Road	2.29	335	P		Pn	14 10 44.3	+0.5
DREZ	Durham Road	2.33	301	P		Pb	14 10 46.1	-2.2
TUWZ	Tuamarina	2.38	244	P		Pn	14 10 44.5	-0.6
KHEZ	Kahui Hut	2.40	297	P		Pn	14 10 46.6	+1.2
KHEZ	Kahui Hut	2.40	297	P		Pb	14 10 47.4	-2.1
HIZ	Hauiti	2.41	321	P		Pn	14 10 47.1	+1.7
HIZ	Hauiti	2.41	321	P		Pb	14 10 49.3	-0.2
TWGZ	Tauwhareparae	2.41	23	P		Pn	14 10 46.4	+0.9
NMEZ	Namu Road	2.44	293	P		Pb	14 10 47.8	-2.4
NBEZ	Newall Road No	2.52	296	P		Pn	14 10 48.7	+1.9
RUGZ	Raukumara Rang	2.53	16	P		Pn	14 10 47.2	0.0
OPRZ	Ohinepanea	2.56	356	P		Pn	14 10 48.6	+1.0
PUZ	Puketiti	2.60	27	P		Pn	14 10 47.1	-0.9
NNZ	Nelson	2.71	251	P		Pn	14 10 49.2	-0.3
PKGZ	Pakihiroa	2.73	22	P		Pn	14 10 49.4	-0.4
HAZ	Te Kaha	2.76	17	P		Pn	14 10 50.3	+0.1
WMGZ	Waiomatatini S	2.88	27	P		Pn	14 10 51.8	0.0
TKNZ	Takaka Hill	2.97	257	P		Pn	14 10 53.6	+0.4
MXZ	Matakaoa Point	3.08	23	P		Pn	14 10 54.1	-0.5
MXZ	Matakaoa Point	3.08	23	P		Pn	14 10 54.5	-0.1
KHZ	Kahutara	3.16	229	P		Pn	14 10 55.0	-0.7
KHZ	Kahutara	3.16	229	P		Pn	14 10 54.2	-1.5
MRNZ	Matariki Terra	3.21	251	P		Pn	14 10 56.5	+0.1
THZ	Tophouse	3.23	244	P		Pn	14 10 55.3	-1.4
QRZ	Quartz Range	3.27	261	P		Pn	14 10 57.1	-0.1
QRZ	Quartz Range	3.27	261	P		Pn	14 10 57.1	-0.1
MKAZ	Moumakai	3.53	338	P		Pn	14 11 01.7	+0.8
DSZ	Denniston Nort	4.00	249	P		Pn	14 11 06.3	-1.0
LTZ	Lake Taylor	4.13	233	P		Pn	14 11 07.4	-1.8
AKCZ	Akaroa Harbour	4.50	218	P		Pn	14 11 13.9	-0.3
MQZ	McQueen's Vall	4.51	222	P		Pn	14 11 12.6	-1.6
INZ	Inchbonnie	4.63	238	P		Pn	14 11 14.0	-1.9
MHCZ	Mount Hutt	4.99	230	P		Pn	14 11 19.7	-1.1
WACZ	Wakanui South	5.10	224	P		Pn	14 11 21.2	-1.1
ARCZ	Arundel	5.47	228	P		Pn	14 11 27.2	-0.2
OUZ	Omahuta	5.76	333	P		Pn	14 11 33.7	+2.2
TMZ	Timaru	5.84	225	P		Pn	14 11 31.3	-1.2
CTZ	Chatham Island	5.93	126	P		Pn	14 11 36.7	+2.9
ODZ	Otahua Downs	6.47	222	P		Pn	14 11 42.6	+1.4
ODZ	Otahua Downs	6.47	222	P		Pn	14 11 40.5	-0.8
PYZ	Puysegur Point	9.35	229	P		Pn	14 12 21.9	+1.3

IDC ***25*** *14:32:43.1±1.0, 49°.14N×158°.67E, h0km, mb3.4/8, mbtmp3.4/8, Error ellipse: s-maj=30.8km s-min=23.7km az=147.0*

KRSC ***25*** *14:32:46.0±1.6, 49°.40N×158°.91E, h32km±52km, Ml3.7*

ISC 25 14:32:46.2±1.0**, 49°.26N**±0°.08×**158°.63E**±0°.09**, h18**km**, n28,** σ1°**.01/31, mb3.5/8, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.16**	**312**	*eP*	**Pn**	**14 33 21.6**	**+0.3**
SKR				*eS*	**Sn**	**14 33 47.1**	**-0.5**
ASAK	**Asacha**	**3.17**	**352**	*eP*	**Pn**	**14 33 35.1**	**-0.1**
ASAK				*eS*	**Sn**	**14 34 11.0**	**-1.5**
MIPR	**Malaya Ipel'ka**	**3.25**	**339**	*eS*	**Sn**	**14 34 15.7**	**+1.2**
GRL	**Gorelyy**	**3.32**	**354**	*eP*	**Pn**	**14 33 38.2**	**+0.9**
GRL				*eS*	**Sn**	**14 34 16.0**	**-0.4**
KRMR	**Karymshinskiy**	**3.59**	**355**	*eP*	**Pn**	**14 33 42.2**	**+1.2**
KRMR				*eS*	**Sn**	**14 34 23.1**	**+0.2**
PET	**Petropavlovsk**	**3.77**	**0**	*eP*	**Pn**	**14 33 43.8**	**+0.4**
PET				*eS*	**Sn**	**14 34 25.7**	**-1.6**
DALK	**Dalny**	**3.78**	**1**	*eP*	**Pn**	**14 33 43.8**	**+0.2**
DALK				*eS*	**Sn**	**14 34 25.6**	**-1.9**
UGLR	**Uglovaya**	**3.96**	**2**	*eP*	**Pn**	**14 33 46.9**	**+0.8**
SMAR	**Somma**	**4.01**	**1**	*eP*	**Pn**	**14 33 47.9**	**+0.9**
AVH	**Avacha**	**4.01**	**1**	*eP*	**Pn**	**14 33 47.8**	**+0.9**
KOK	**Koryaka**	**4.04**	**0**	*eP*	**Pn**	**14 33 48.6**	**+1.4**
KRER	**Koryakskii**	**4.05**	**1**	*eP*	**Pn**	**14 33 48.6**	**+1.1**
KRER				*eS*	**Sn**	**14 34 33.4**	**-1.2**
KRX	**Arik**	**4.11**	**0**	*eP*	**Pn**	**14 33 48.9**	**+0.7**
KRX				*eS*	**Sn**	**14 34 34.0**	**-1.8**
KII	**Karymskiy**	**4.81**	**6**	*eP*	**Pn**	**14 33 59.5**	**+1.7**
KII				*eS*	**Sn**	**14 34 52.4**	**-0.8**
H11N2	**WAKE ISLAND Hy** baz=349,slow=76,SNR=3.9	**30.20**	**164**	T	T	15 10 27.3	
H11N3	**WAKE ISLAND Hy** baz=349,slow=76,SNR=4.8	**30.21**	**164**	T	T	15 10 29.9	
H11N1	**WAKE ISLAND Hy** baz=349,slow=76,SNR=4.1	**30.21**	**164**	T	T	15 10 28.8	
H11S1	**WAKE ISLAND Hy** baz=350	**31.36**	**165**	T	T	15 11 53.8	
H11S3	**WAKE ISLAND Hy** baz=350	**31.37**	**165**	T	T	15 11 57.6	
H11S2	**WAKE ISLAND Hy** baz=350,SNR=4.8	**31.38**	**165**	T	T	15 11 57.1	
ILAR	**Eielson Array** 0.2nm,0.6s,baz=266,slow=8.4,SNR=6.8 0.2nm,0.6s	**32.25**	**41**	P	**P**	**14 39 13.8**	**+0.5**
YKA	**Yellowknife Ar** 0.2nm,0.5s,baz=298,slow=8.3,SNR=3.8 0.2nm,0.5s	**46.66**	**40**	P	**P**	**14 41 13.2**	**+0.1**
MKAR	**Makanchi Array** 0.3nm,0.7s,baz=52,slow=5.7,SNR=4.6 0.3nm,0.7s	**49.06**	**298**	P	**P**	**14 41 32.3**	**+0.2**
KURBB	**Kurchatov Arra** 0.6nm,0.6s,baz=63,slow=8.1,SNR=5.2 0.6nm,0.6s	**49.15**	**304**	P	**P**	**14 41 32.5**	**0.0**
BVAR	**Borovoye Array** 0.5nm,0.6s,baz=45,slow=8.4,SNR=3.8 0.5nm,0.6s	**52.11**	**310**	P	**P**	**14 41 55.4**	**+0.5**
WRA	**Warramunga Arr** 0.5nm,0.7s,baz=16,slow=6.1,SNR=4.1 0.5nm,0.7s	**72.20**	**204**	P	**P**	**14 44 09.0**	**-1.0**
TXAR	**Lajitas Array** 0.2nm,0.5s,baz=335,slow=6.2,SNR=3.8 0.2nm,0.5s	**73.05**	**65**	P	**P**	**14 44 15.0**	**-0.2**
ASAR	**Alice Springs** 0.2nm,0.5s,baz=11,slow=6.8,SNR=2.0 0.2nm,0.5s	**75.87**	**203**	P	**P**	**14 44 31.0**	**-0.4**

IDC ***25*** *15:03:44.0±1.2, 49°.16N×158°.30E, h0km, mb3.4/6, mbtmp3.4/6, MS3.1/2, Error ellipse: s-maj=36.1km s-min=31.0km az=53.0*

KRSC ***25*** *15:03:47.2±1.5, 49°.45N×158°.63E, h33km±42km, Ml3.9*

ISC 25 15:03:46.8±1.1**, 49°.29N**±0°.08×**158°.39E**±0°.10**, h18**km**, n31,** σ0°**.96/34, mb3.4/6, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.02**	**314**	*eP*	**Pn**	**15 04 19.8**	**-0.3**
SKR				*eS*	**Sn**	**15 04 44.5**	**-0.4**
PAU	**Pauzhetka**	**2.40**	**336**	*eP*	**Pn**	**15 04 26.4**	**+1.2**
PAU				*eS*	**Sn**	**15 04 54.8**	**+0.6**
KDTR	**Khodutka, Kamc**	**2.53**	**356**	*eP*	**Pn**	**15 04 27.1**	**+0.1**
KDTR				*eS*	**Sn**	**15 04 56.3**	**-1.1**
ASAK	**Asacha**	**3.11**	**354**	*eP*	**Pn**	**15 04 36.0**	**+0.9**
ASAK				*eS*	**Sn**	**15 05 11.1**	**-0.7**
RUS	**Russkaya**	**3.15**	**1**	*eP*	**Pn**	**15 04 35.9**	**+0.5**
RUS				*eS*	**Sn**	**15 05 11.0**	**-1.6**
MTVR	**Mutnovka**	**3.20**	**358**	*eP*	**Pn**	**15 04 36.6**	**+0.2**
MTVR				*eS*	**Sn**	**15 05 13.1**	**-1.0**
GRL	**Gorelyy**	**3.27**	**357**	*eP*	**Pn**	**15 04 38.0**	**+0.7**
GRL				*eS*	**Sn**	**15 05 15.2**	**-0.6**
KRMR	**Karymshinskiy**	**3.55**	**357**	*eP*	**Pn**	**15 04 42.3**	**+1.3**
KRMR				*eS*	**Sn**	**15 05 22.6**	**+0.2**
PET	**Petropavlovsk**	**3.75**	**2**	*eP*	**Pn**	**15 04 43.9**	**+0.3**
PET				*eS*	**Sn**	**15 05 26.0**	**-1.2**
DALK	**Dalny**	**3.75**	**3**	*eP*	**Pn**	**15 04 44.0**	**+0.2**
DALK				*eS*	**Sn**	**15 05 25.6**	**-1.8**
UGLR	**Uglovaya**	**3.94**	**4**	*eP*	**Pn**	**15 04 46.9**	**+0.5**
AVH	**Avacha**	**3.99**	**3**	*eP*	**Pn**	**15 04 48.6**	**+1.5**
SMAR	**Somma**	**3.99**	**4**	*eP*	**Pn**	**15 04 48.0**	**+0.8**
KOK	**Koryaka**	**4.01**	**2**	*eP*	**Pn**	**15 04 48.6**	**+1.1**
KRER	**Koryakskii**	**4.03**	**3**	*eP*	**Pn**	**15 04 48.6**	**+0.8**
KRER				*eS*	**Sn**	**15 05 33.8**	**-0.8**
KRX	**Arik**	**4.08**	**2**	*eP*	**Pn**	**15 04 49.2**	**+0.8**
GNL	**Ganaly**	**4.42**	**357**	*eP*	**Pn**	**15 04 55.2**	**+2.1**
H11N2	**WAKE ISLAND Hy** baz=349	**30.27**	**164**	T	T	15 41 38.6	
H11N3	**WAKE ISLAND Hy** baz=349	**30.28**	**164**	T	T	15 41 39.9	
H11N1	**WAKE ISLAND Hy** baz=349	**30.29**	**164**	T	T	15 41 40.6	
H11S1	**WAKE ISLAND Hy** baz=348	**31.43**	**165**	T	T	15 43 06.2	
H11S3	**WAKE ISLAND Hy** baz=348,slow=74	**31.44**	**165**	T	T	15 43 07.1	
H11S2	**WAKE ISLAND Hy** baz=348,slow=74	**31.45**	**165**	T	T	15 43 07.7	
MKAR	**Makanchi Array** 0.1nm,0.4s,baz=59,slow=8.4,SNR=2.3 0.1nm,0.4s	**48.91**	**298**	P	**P**	**15 12 31.7**	**+0.3**
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=57,slow=6.6,SNR=1.6 0.1nm,0.3s	**49.00**	**304**	P	**P**	**15 12 32.2**	**+0.1**
BVAR	**Borovoye Array** 0.4nm,0.5s,baz=54,slow=7.8,SNR=3.6 0.4nm,0.5s	**51.97**	**310**	P	**P**	**15 12 54.2**	**-0.2**
NVAR	**Mina Array Bea** comp=Z,6.3nm,19.0s,baz=90,slow=35	**58.14**	**67**	LR	LR	15 37 30.6	
FINES	**FINESS Array B** comp=Z,41nm,19.3s,baz=227,slow=42	**63.19**	**337**	LR	LR	15 47 59.3	
WRA	**Warramunga Arr** 0.7nm,0.7s,baz=15,slow=6.0,SNR=6.4 0.7nm,0.7s	**72.17**	**204**	P	**P**	**15 15 09.2**	**-1.1**
TXAR	**Lajitas Array** 0.4nm,0.6s,baz=292,slow=3.7,SNR=5.0 0.4nm,0.6s	**73.18**	**65**	P	**P**	**15 15 17.3**	**+0.7**
ASAR	**Alice Springs** 0.2nm,0.7s,baz=17,slow=6.2,SNR=1.9 0.2nm,0.7s	**75.84**	**203**	P	**P**	**15 15 31.4**	**-0.3**

BGSI 25 15:17:15.6±1.2**, 25°.50S**×**29°.46E, h38**km±118**km, ML2.9, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPHEP	**Lephephe**	**3.91**	**302**	*i* P	Pn	15 18 12.8	-0.5
LPHEP				IAML		15 19 12.5	
	comp=E,11nm,0.6s						
LPHEP	**Lephephe**	**3.91**	**302**	*i* P	Pn	15 18 12.5	-0.8
LPHEP				*i* S	Sn	15 18 53.7	-4.4
LPHEP				IAML		15 19 12.5	
	comp=E,70nm,0.5s						
MAKGR	**Makgori**	**4.22**	**265**	*i* P	Pn	15 18 15.6	-1.8
MAKGR				*i* S	Sn	15 19 02.9	-2.7
MAKGR				IAML		15 19 11.1	
	comp=N,126nm,0.6s						
MAKGR	**Makgori**	**4.22**	**265**	*i* P	Pn	15 18 16.1	-1.3
MAKGR				*i* S	Sn	15 19 01.1	-4.4
MAKGR				IAML		15 19 11.0	
	comp=N,125nm,0.6s						
BROLN	**Tlhalogang**	**4.80**	**336**	*i* P	Pn	15 18 23.4	-2.0
BROLN				*i* S	Sn	15 19 18.7	-1.2
BROLN				IAML		15 19 47.7	
	comp=E,19nm,0.7s						
BROLN	**Tlhalogang**	**4.80**	**336**	*i* P	Pn	15 18 23.3	-2.1
BROLN				*i* S	Sn	15 19 14.6	-5.3
BROLN				IAML		15 19 47.7	
	comp=E,19nm,0.7s						
KDWAN	**Kaudwane**	**4.86**	**295**	*i* P	Pn	15 18 25.6	-0.7
KDWAN				IAML		15 19 43.4	
	comp=E,20nm,0.7s						
SOOWA	**Sowa**	**5.75**	**328**	*i* P	Pn	15 18 37.4	-1.2
SOOWA				*i* S	Sn	15 19 41.2	-2.2
SOOWA				IAML		15 20 15.3	
	comp=E,42nm,0.7s						
SOOWA	**Sowa**	**5.75**	**328**	*i* P	Pn	15 18 37.5	-1.0
SOOWA				*i* S	Sn	15 19 37.5	-5.8
SOOWA				IAML		15 20 15.3	
	comp=E,42nm,0.6s						
KGCAE	**Kacgae**	**7.13**	**290**	*i* P	Pn	15 18 55.5	-2.0

KRSC 25 15:21:21.7±2.7**, 49°.53N**×**159°.08E, h40**km±26**km, Ml3.9, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.23**	**302**	*eS*	Sn	15 22 20.6	-1.7
KDTR	**Khodutka, Kamc**	**2.37**	**345**	*eP*	Pn	15 21 58.3	+0.3
KDTR				*eS*	Sn	15 22 29.4	+3.6
PAU	**Pauzhetka**	**2.42**	**324**	*eS*	Sn	15 22 29.4	+2.4
RUS	**Russkaya**	**2.93**	**353**	*eP*	Pn	15 22 09.0	+3.3
RUS				*eS*	Sn	15 22 44.1	+4.4
ASAK	**Asacha**	**2.96**	**346**	*eS*	Sn	15 22 44.4	+4.0
MTVR	**Mutnovka**	**3.01**	**350**	*eP*	Pn	15 22 11.1	+4.1
MTVR				*eS*	Sn	15 22 46.0	+4.1
GRL	**Gorelyy**	**3.09**	**349**	*eP*	Pn	15 22 11.6	+3.6
GRL				*eS*	Sn	15 22 48.0	+4.1
KRMR	**Karymshinskiy**	**3.36**	**350**	*eS*	Sn	15 22 55.5	+5.4
PET	**Petropavlovsk**	**3.51**	**356**	*eS*	Sn	15 22 59.4	+5.5
DALK	**Dalny**	**3.52**	**357**	*eP*	Pn	15 22 17.3	+3.6
SPN	**Mys Shipunski**	**3.62**	**9**	*eP*	Pn	15 22 18.6	+3.4
SPN				*eS*	Sn	15 23 00.8	+4.1
UGLR	**Uglovaya**	**3.69**	**358**	*eP*	Pn	15 22 21.0	+4.7
SMAR	**Somma**	**3.75**	**357**	*eP*	Pn	15 22 24.0	+7.0
AVH	**Avacha**	**3.75**	**357**	*eP*	Pn	15 22 21.6	+4.6
KOK	**Koryaka**	**3.78**	**356**	*eP*	Pn	15 22 22.3	+4.9
KRER	**Koryakskii**	**3.79**	**357**	*eP*	Pn	15 22 22.3	+4.6
KRX	**Arik**	**3.85**	**356**	*eP*	Pn	15 22 22.7	+4.3
GNL	**Ganaly**	**4.23**	**351**	*eP*	Pn	15 22 28.6	+4.9
KBTR	**Krutoberegovo**	**7.07**	**17**	*eP*	Pn	15 23 07.1	+4.8

SOME ***25*** *15:21:34.5, 42°.32N×70°.87E, h0km*

KRNET ***25*** *15:21:35.8±0.1, 42°.29N×70°.87E, h19km, mb3.6*

ISU ***25*** *15:21:36, 42°.23N×70°.79E, h5km*

NNC ***25*** *15:21:36.2±0.8, 42°.43N×70°.76E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=7.2km s-min=2.3km az=41.0*

ISC 25 15:21:35.5±1.1**, 42°.33N**±0°.02×**70°.84E**±0°.02**, h19**km±3km**, n74,** σ2°**.44/118, 33C-22D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSK	**Pskem**	**0.53**	**221**	P	**Pg**	**15 21 45.8**	**-0.3**
PSK				S	**Sg**	**15 21 52.9**	**-0.4**
IUG	**Iuzhnay** 224nm,0.2s	**0.62**	**254**	*eP*	**Pb**	**15 21 45.2**	**-2.5**
IUG				*eS*	**Sb**	**15 21 53.7**	**-2.4**
	5μm,0.4s						
DZA	**Taraz** 143nm,0.2s	**0.67**	**33**	*eP*	**Pb**	**15 21 48.4**	**-0.2**
DZA				*eS*	**Sg**	**15 21 59.0**	**+1.2**
	2μm,0.2s						
KK31	**Karatay Array** 36nm,0.1s,baz=52,slow=21,SNR=2677	**0.81**	**343**	⇓P	**Pb**	**15 21 49.6**	**-1.4**
KK31				⇑S	**Sb**	**15 21 59.6**	**-2.0**
	145nm,0.3s,baz=177,slow=30,SNR=20						
TRKS	**Terek-Say**	**0.83**	**164**	⇑*i*P	**Pn**	**15 21 51.9**	**-0.3**
TRKS				⇑*i*S	**Sn**	**15 22 03.8**	**-0.2**
CHM	**Chimkent** 125nm,0.2s	**0.92**	**270**	*eP*	**Pb**	**15 21 50.9**	**-1.9**
CHM				*eS*	**Sb**	**15 22 03.3**	**-1.2**
	1μm,0.3s						
CHRV	**Charvak**	**0.95**	**224**	P	**Pn**	**15 21 53.8**	**-0.1**
CHRV				S	**Sn**	**15 22 06.8**	**-0.1**
TVKS	**Tavaksay**	**1.16**	**230**	P	**Pg**	**15 21 57.7**	**-0.2**
TVKS				S	**Sg**	**15 22 13.6**	**+0.5**
MNAS	**Manas**	**1.25**	**82**	⇑*i*P	**Pb**	**15 21 58.6**	**+0.2**
MNAS				⇑*i*S	**Sg**	**15 22 15.3**	**-0.6**
CHDK	**Chadak**	**1.35**	**183**	P	**Pg**	**15 22 01.1**	**-0.5**
CHDK				S	**Sg**	**15 22 19.6**	**+0.3**
NZBK	**Nazarbek**	**1.69**	**230**	P	**Pb**	**15 22 06.6**	**+0.6**
NZBK				S	**Sg**	**15 22 29.3**	**-0.8**
MRKS	**Merke** 67nm,0.4s	**1.81**	**76**	*eP*	**Pg**	**15 22 09.9**	**-0.5**
MRKS				*eS*	**Sg**	**15 22 36.0**	**+2.0**
	138nm,0.3s						
MINT	**Mingtut**	**1.86**	**177**	P	**Pg**	**15 22 10.3**	**-0.9**
MINT				S	**Sg**	**15 22 35.4**	**0.0**
ARSB	**Arslanbob**	**1.89**	**121**	⇑*i*P	**Pb**	**15 22 09.5**	**+0.1**
ARSB				⇑*i*S	**Sg**	**15 22 34.1**	**-2.3**
FRG	**Fergana**	**2.08**	**160**	P	**Pg**	**15 22 14.4**	**-0.9**
FRG				S	**Sg**	**15 22 42.4**	**+0.1**
TSTA	**Tashata**	**2.14**	**144**	P	**Pg**	**15 22 15.5**	**-1.0**
TSTA				S	**Sg**	**15 22 44.8**	**+0.5**
EKS2	**Erkin-Say** SNR=21	**2.20**	**80**	P	**Pb**	**15 22 16.0**	**+1.3**
EKS2	**Erkin-Say**	**2.20**	**80**	⇑*i*P	**Pb**	**15 22 14.3**	**-0.4**
EKS2				⇑*i*S	**Sb**	**15 22 42.3**	**+0.7**
BTK	**Batken**	**2.27**	**180**	⇓*i*P	**Pb**	**15 22 14.7**	**-1.1**
BTK				⇓*i*S	**Sb**	**15 22 43.2**	**-0.3**
OHH	**Osh**	**2.32**	**140**	⇑*i*P	**Pb**	**15 22 15.5**	**-1.2**
OHH				⇑*i*S	**Sb**	**15 22 44.4**	**-0.6**
ARLS	**Aral**	**2.64**	**99**	⇑*i*P	**Pb**	**15 22 20.1**	**-2.0**
ARLS				⇑*i*S	**Sb**	**15 22 52.3**	**-1.9**
SALK	**Salom-Alik**	**2.66**	**122**	⇓*i*P	**Pb**	**15 22 20.4**	**-2.2**
SALK				⇓*i*S	**Sb**	**15 22 52.7**	**-2.2**
AAK	**Ala-Archa** SNR=28	**2.72**	**82**	P	**Pb**	**15 22 23.8**	**+0.2**
AAK	**Ala-Archa** 4.8nm,0.5s	**2.72**	**82**	⇓Pn	**Pb**	**15 22 23.3**	**-0.3**
AAK				⇑Lg	Lg	15 23 03.3	
	12nm,0.5s						
AAK	**Ala-Archa**	**2.72**	**82**	⇓*i*P	**Pb**	**15 22 21.4**	**-2.2**
AAK				⇓*i*S	**Sb**	**15 22 54.8**	**-1.9**
UCH	**Uchtor** SNR=31	**2.73**	**91**	P	**Pb**	**15 22 25.7**	**+1.8**
UCH	**Uchtor**	**2.73**	**91**	⇓*i*P	**Pb**	**15 22 21.6**	**-2.3**
UCH				⇓*i*S	**Sb**	**15 22 55.1**	**-2.1**
FRU1	**Bishkek**	**2.84**	**79**	⇑*i*P	**Pb**	**15 22 23.0**	**-2.6**
FRU1				⇑*i*S	**Sb**	**15 22 57.5**	**-2.6**
USP	**Ospenovka**	**2.85**	**70**	⇑*i*P	**Pn**	**15 22 23.1**	**+3.1**
USP				⇑*i*S	**Sb**	**15 22 57.9**	**-2.5**
DRK	**Karamyk**	**2.94**	**165**	⇑*i*P	**Pn**	**15 22 24.0**	**+2.6**
DRK				⇑*i*S	**Sb**	**15 22 59.4**	**-3.5**
CHMS	**Chumysh** SNR=6.5	**2.96**	**76**	P	**Pg**	**15 22 30.1**	**-2.2**
CHMS	**Chumysh**	**2.96**	**76**	⇓*i*P	**Pn**	**15 22 24.7**	**+3.2**
CHMS				⇓*i*S	**Sb**	**15 23 00.4**	**-3.1**
KBK	**Karagaybulak** SNR=18	**3.06**	**82**	P	**Pb**	**15 22 29.6**	**+0.2**
KBK	**Karagaybulak**	**3.06**	**82**	⇓*i*P	**Pn**	**15 22 26.1**	**+3.2**
KBK				⇓*i*S	**Sb**	**15 23 02.8**	**-3.6**
SFK	**Sufi-Kurgan**	**3.06**	**138**	⇑*i*P	**Pn**	**15 22 25.8**	**+2.7**
SFK				⇑*i*S	**Sb**	**15 23 02.4**	**-4.2**
GAR	**Garm**	**3.35**	**187**	⇑*i*P	**Pn**	**15 22 29.9**	**+3.1**
GAR				⇑*i*S	**Sn**	**15 23 09.2**	**+3.1**
TKM2	**Tokmak 2**	**3.56**	**79**	⇑*i*P	**Pn**	**15 22 30.2**	**+3.3**
TKM2				⇑*i*S	**Sn**	**15 23 15.1**	**+3.5**
BTLS	**Baital** 6.1nm,0.1s	**3.58**	**40**	Pg	**Pg**	**15 22 41.9**	**-2.0**
BTLS				Lg	Lg	15 23 29.2	
	112nm,0.6s						
BTLS	**Baital** 5.7nm,0.1s	**3.58**	**40**	*eP*	**Pb**	**15 22 40.6**	**+2.5**
BTLS				*eS*	**Sg**	**15 23 28.2**	**-2.1**
	79nm,0.6s						
DGS	**Degeres** 21nm,0.5s	**3.75**	**74**	Pg	**Pg**	**15 22 45.2**	**-2.0**
DGS				Lg	Lg	15 23 33.1	
	22nm,0.5s						
DGS	**Degeres** 24nm,0.5s	**3.75**	**74**	*eP*

SATY	**Saty**	**5.63**	**80**	*eP*	**Pg**	**15 23 19.0**	**-4.1**
	0.4nm,0.1s							
SATY				*eS*	**Sg**	**15 24 33.9**	**-2.1**
	16nm,0.5s							
BLB	**Baldybastay**	**5.86**	**70**	Pg	**Pg**	**15 23 24.1**	**-3.4**
	22nm,0.5s							
BLB				Lg	Lg	15 24 38.9		
	27nm,0.6s							
KPKS	**Kokpek**	**5.88**	**76**	Pg	Pg	15 23 22.7	-5.2	
	4.0nm,0.7s							
KPKS				Lg	Lg	15 24 38.8		
	16nm,0.6s							
KPKS	**Kokpek**	**5.88**	**76**	*eP*	**Pb**	**15 23 21.8**	**+4.5**
	0.3nm,0.2s							
KPKS				*eS*	**Sg**	**15 24 38.6**	**-5.3**
	16nm,0.6s							
UZB	**Uzynbulak**	**6.08**	**79**	*eP*	Pg	15 23 26.8	-5.0	
	2.1nm,0.2s							
UZB				*eS*	**Sg**	**15 24 47.4**	**-3.2**
	6.3nm,0.5s							
TDK	**Taldyqorghan**	**6.11**	**61**	*eP*	Pg	15 23 27.2	-5.1	
	12nm,0.3s							
TDK				*eS*	**Sg**	**15 24 48.0**	**-3.3**
	50nm,0.6s							
PDGK	**Podgornoye**	**6.44**	**78**	⇑Lg	Lg	15 25 03.9		
	12nm,0.8s							
KURBB	**Kurchatov Arra**	**9.85**	**30**	⇑Lg	Lg	15 26 47.4		
	12nm,0.7s							
KURK	**Kurchatov**	**9.95**	**30**	⇑Lg	Lg	15 26 50.0		
	7.9nm,1.2s							

IDC 25 15:22:58.5±2.0,7°15S×129°03E,h0km,mb3.3/2, mbtmp3.3/5,ML3.1/3,Error ellipse: s-maj=104.7km s-min=27.1km az=75.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.37**	**197**	Pn	Pn	15 25 42.0	-0.2
	0.1nm,0.3s,baz=24,slow=12,SNR=1.5						
FITZ				Sn	Sn	15 27 35.4	-15
	0.3nm,0.3s,baz=355,slow=21,SNR=9.0						
	1.0nm,0.8s						
WRA	**Warramunga Arr**	**13.72**	**158**	Pn	Pn	15 26 14.9	+0.4
	0.2nm,0.3s,baz=336,slow=14,SNR=6.9						
WRA				Sn	Sn	15 28 35.7	-12
	0.2nm,0.3s,baz=323,slow=27,SNR=7.0						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**17.07**	**165**	P	Pn	15 26 58.6	-0.1
	0.1nm,0.3s,baz=348,slow=12,SNR=15						
ASAR				S	Sn	15 29 59.1	-10
	0.5nm,0.9s,baz=316,slow=16,SNR=4.6						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**67.83**	**327**	P	P	15 33 59.4	+0.9
	0.1nm,0.5s,baz=119,slow=7.9,SNR=2.2						
	0.1nm,0.5s						
KURBB	**Kurchatov Arra**	**72.14**	**329**	P	P	15 34 24.0	-0.9
	0.2nm,0.6s,baz=127,slow=5.2,SNR=2.1						
	0.2nm,0.6s						

KRSC 25 15:32:35.7±1.8,49°12N×158°27E,h34km±46km,MI3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.09**	**319**	*eP*	Pn	15 33 09.5	+1.1
SKR				*eS*	Sn	15 33 33.6	+0.4
PAU	**Pauzhetka**	**2.53**	**339**	*eP*	Pn	15 33 17.0	+2.6
PAU				*eS*	Sb	15 33 47.6	-3.5
KDTR	**Khodutka, Kamc**	**2.70**	**357**	*eS*	Sb	15 33 52.2	-3.6
ASAK	**Asacha**	**3.28**	**356**	*eP*	Pn	15 33 28.8	+4.1
ASAK				*eS*	Sb	15 34 08.0	-4.7
RUS	**Russkaya**	**3.32**	**3**	*eP*	Pn	15 33 29.2	+3.9
RUS				*eS*	Sn	15 34 08.7	+5.2
MTVR	**Mutnovka**	**3.37**	**359**	*eP*	Pn	15 33 29.8	+3.7
MTVR				*eS*	Sn	15 34 09.1	+4.2
GRL	**Gorelyy**	**3.44**	**358**	*eP*	Pn	15 33 31.0	+4.1
GRL				*eS*	Sn	15 34 11.3	+4.7
KRMR	**Karymshinskiy**	**3.72**	**359**	*eP*	Pn	15 33 35.4	+4.8
KRMR				*eS*	Sb	15 34 19.6	-5.6
APC	**Apacha**	**3.88**	**350**	*eP*	Pn	15 33 37.3	+4.5
DALK	**Dalny**	**3.93**	**4**	*eP*	Pn	15 33 37.7	+4.1
DALK				*eS*	Sn	15 34 23.2	+4.7
UGLR	**Uglovaya**	**4.11**	**5**	*eP*	Pn	15 33 40.8	+4.6
AVH	**Avacha**	**4.16**	**4**	*eP*	Pn	15 33 42.5	+5.7
SMAR	**Somma**	**4.16**	**4**	*eP*	Pb	15 33 42.7	-5.6
KOK	**Koryaka**	**4.19**	**3**	*eP*	Pn	15 33 42.6	+5.4
KRX	**Arik**	**4.25**	**3**	*eP*	Pn	15 33 42.8	+4.7
GNL	**Ganaly**	**4.59**	**358**	*eP*	Pn	15 33 48.0	+5.2
KBTR	**Krutoberegovo**	**7.62**	**20**	*eP*	Pn	15 34 28.5	+4.3

KRSC 25 15:37:06.0±2.4,49°42N×158°76E,h40km±65km,MI3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.12**	**308**	*eP*	Pn	15 37 39.3	+0.4
SKR				*eS*	Sn	15 38 03.7	-0.4
PAU	**Pauzhetka**	**2.40**	**329**	*eP*	Pn	15 37 45.4	+2.7
PAU				*eS*	Sn	15 38 15.3	+4.4
KDTR	**Khodutka, Kamc**	**2.43**	**350**	*eP*	Pn	15 37 45.2	+2.1
KDTR				*eS*	Sn	15 38 14.8	+3.1
ASAK	**Asacha**	**3.02**	**350**	*eP*	Pn	15 37 55.5	+4.2
ASAK				*eS*	Sn	15 38 30.7	+4.5
RUS	**Russkaya**	**3.02**	**357**	*eS*	Sn	15 38 30.1	+4.0
MTVR	**Mutnovka**	**3.09**	**353**	*eP*	Pn	15 37 56.2	+3.9
MTVR				*eS*	Sn	15 38 31.2	+3.2
GRL	**Gorelyy**	**3.17**	**352**	*eP*	Pn	15 37 57.4	+4.0
GRL				*eS*	Sn	15 38 34.0	+4.1
KRMR	**Karymshinskiy**	**3.44**	**354**	*eP*	Pn	15 38 02.1	+5.1
KRMR				*eS*	Sn	15 38 42.6	+6.2
DALK	**Dalny**	**3.62**	**360**	*eP*	Pn	15 38 03.2	+3.7
DALK				*eS*	Sn	15 38 44.9	+4.1
UGLR	**Uglovaya**	**3.79**	**1**	*eP*	Pn	15 38 07.1	+5.1
SMAR	**Somma**	**3.85**	**0**	*eP*	Pn	15 38 07.9	+5.0
AVH	**Avacha**	**3.85**	**360**	*eP*	Pn	15 38 08.3	+5.6
KOK	**Koryaka**	**3.88**	**359**	*eP*	Pn	15 38 08.1	+4.9
KRX	**Arik**	**3.94**	**359**	*eP*	Pn	15 38 08.5	+4.4
GNL	**Ganaly**	**4.31**	**353**	*eP*	Pn	15 38 13.5	+4.4
KBTR	**Krutoberegovo**	**7.23**	**18**	*eP*	Pn	15 38 52.3	+3.3

IDC 25 15:42:37.8±2.1,62°11S×161°12E,h0km,mb3.9/3, mbtmp4.0/4,ML4.0/1,MS3.9/36,Error ellipse: s-maj=113.3km s-min=26.0km az=72.0,Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**15.49**	**179**	Pn	Pn	15 46 15.7	-1.5
	0.6nm,0.3s,baz=354,slow=15,SNR=7.2						
VNDA				LR	LR	15 51 23.9	
	comp=Z,978nm,19.2s,baz=4.5,slow=34						
	1.8nm,0.4s						
RPZ	**Rata Peaks**	**19.33**	**22**	LR	LR	15 53 46.3	
	comp=Z,597nm,18.5s,baz=190,slow=35						
URZ	**Urewera**	**25.83**	**30**	LR	LR	15 57 14.5	
	comp=Z,491nm,19.2s,baz=182,slow=34						
QSPA	**South Pole Qui**	**27.98**	**180**	P	P	15 48 30.9	+0.9
	0.8nm,0.8s,baz=45,slow=1.4,SNR=3.1						
QSPA				LR	LR	15 58 14.3	
	comp=Z,517nm,21.0s,baz=22,slow=34						
	0.8nm,0.8s						
STKA	**Stephens Creek**	**32.77**	**328**	LR	LR	16 00 31.3	
	comp=Z,569nm,19.5s,baz=189,slow=33						
RAO	**Raoul Island**	**35.63**	**32**	LR	LR	16 02 54.2	
	comp=Z,81nm,19.0s,baz=184,slow=34						
MAW	**Mawson**	**37.88**	**218**	LR	LR	16 05 49.0	
	comp=Z,311nm,19.2s,baz=124,slow=37						
H01W1	**Cape Leeuwin H**	**39.97**	**291**	T	T	16 33 12.3	
	baz=146,slow=75,SNR=106						
H01W2	**Cape Leeuwin H**	**39.98**	**291**	T	T	16 33 12.6	
	baz=146,slow=75,SNR=111						
H01W3	**Cape Leeuwin H**	**39.99**	**291**	T	T	16 33 13.6	
	baz=146,slow=75,SNR=114						
DZM	**Mont Dzumac**	**40.17**	**8**	LR	LR	16 03 59.8	
	comp=Z,188nm,21.4s,baz=176,slow=32						
NWAO	**Narrogin (SRO)**	**40.31**	**296**	LR	LR	16 03 10.4	
	comp=Z,187nm,18.8s,baz=132,slow=31						
ASAR	**Alice Springs**	**42.63**	**322**	P	P	15 50 36.2	+0.4
	3.8nm,0.9s,baz=162,slow=8.6,SNR=22						
ASAR				LR	LR	16 07 30.3	
	comp=Z,101nm,19.1s,baz=128,slow=35						
	3.8nm,0.9s						

CTA	**Charters Tower**	**43.23**	**339**	LR	LR	16 07 12.5	
	comp=Z,199nm,18.1s,baz=156,slow=34						
MSVF	**Nonsavu**	**45.89**	**23**	LR	LR	16 06 32.6	
	comp=Z,217nm,21.4s,baz=183,slow=31						
WRA	**Warramunga Arr**	**46.04**	**324**	P	P	15 51 02.4	-0.6
	1.4nm,1.0s,baz=148,slow=9.8,SNR=5.0						
	1.4nm,1.0s						
SNAA	**Sanae**	**46.04**	**187**	LR	LR	16 10 00.1	
	comp=Z,250nm,20.5s,baz=192,slow=36						
RAR	**Rarotonga**	**48.85**	**51**	LR	LR	16 06 02.5	
	comp=Z,69nm,21.1s,baz=214,slow=29						
PMSA	**Palmer Station**	**49.06**	**156**	LR	LR	16 08 49.0	
	comp=Z,162nm,18.6s,baz=309,slow=32						
FITZ	**Fitzroy Crossi**	**50.45**	**314**	LR	LR	16 10 33.4	
	comp=Z,177nm,19.6s,baz=198,slow=33						
AFI	**Afiamalu**	**51.88**	**34**	LR	LR	16 10 56.5	
	comp=Z,27nm,21.0s,baz=179,slow=33						
HNR	**Honiara**	**52.58**	**359**	LR	LR	16 09 53.1	
	comp=Z,13nm,20.2s,baz=290,slow=31						
PMG	**Port Moresby**	**53.58**	**343**	LR	LR	16 12 09.5	
	comp=Z,123nm,18.5s,baz=172,slow=33						
PPT	**Papeete**	**56.13**	**61**	LR	LR	16 09 14.6	
	comp=Z,52nm,20.5s,baz=152,slow=28						
KRVT	**Keravat (AS076**	**58.07**	**349**	LR	LR	16 15 35.4	
	comp=Z,7.0nm,18.6s,baz=59,slow=34						
BATI	**Baumata**	**58.48**	**315**	LR	LR	16 15 21.7	
	comp=Z,124nm,21.9s,baz=186,slow=34						
JAY	**Jayapura**	**61.39**	**337**	LR	LR	16 19 31.6	
	comp=Z,106nm,19.5s,baz=198,slow=36						
KAPI	**Kappang**	**64.64**	**313**	LR	LR	16 18 35.2	
	comp=Z,82nm,21.7s,baz=165,slow=33						
SIJI	**Sorong**	**65.09**	**327**	LR	LR	16 22 58.4	
	comp=Z,114nm,18.4s,baz=56,slow=37						
RPN	**Rapa Nui**	**66.20**	**103**	LR	LR	16 15 26.4	
	comp=Z,53nm,19.7s,baz=136,slow=30						
LEM	**Lemang**	**67.54**	**300**	LR	LR	16 18 12.7	
	comp=Z,40nm,22.0s,baz=163,slow=32						
PLCA	**Paso Flores**	**69.39**	**140**	LR	LR	16 17 13.6	
	comp=Z,102nm,21.4s,baz=194,slow=30						
H03S2	**Juan Fernandez**	**72.92**	**131**	T	T	17 14 21.0	
	baz=203,slow=74,SNR=42						
H03S1	**Juan Fernandez**	**72.92**	**131**	T	T	17 14 22.4	
	baz=203,slow=74,SNR=54						
H03S3	**Juan Fernandez**	**72.94**	**131**	T	T	17 14 21.4	
	baz=203,slow=74,SNR=41						
H03N3	**Juan Fernandez**	**73.27**	**131**	T	T	17 14 48.1	
	baz=195						
H03N2	**Juan Fernandez**	**73.28**	**131**	T	T	17 14 42.2	
	baz=195						
H03N1	**Juan Fernandez**	**73.28**	**131**	T	T	17 14 46.2	
	baz=195						
DAV	**Davao City (W)**	**74.22**	**323**	LR	LR	16 28 30.1	
	comp=Z,56nm,18.4s,baz=147,slow=37						
SUR	**Sutherland**	**80.55**	**213**	LR	LR	16 30 37.5	
	comp=Z,139nm,18.1s,baz=166,slow=36						
H08S2	**Diego Garcia H**	**82.66**	**268**	T	T	17 26 49.7	
	baz=152,slow=76,SNR=31						
H08S1	**Diego Carcia H**	**82.67**	**268**	T	T	17 26 49.4	
	baz=152,slow=76,SNR=35						
H08S3	**Diego Garcia H**	**82.68**	**268**	T	T	17 26 51.0	
	baz=152,slow=76,SNR=28						
BOSA	**Boshof**	**82.90**	**218**	LR	LR	16 30 28.8	
	comp=Z,65nm,18.9s,baz=182,slow=35						
LBTB	**Lobatse**	**86.18**	**220**	LR	LR	16 30 34.9	
	comp=Z,117nm,20.1s,baz=161,slow=33						
CPUP	**Villa Florida**	**86.63**	**146**	LR	LR	16 30 54.8	
	comp=Z,92nm,18.7s,baz=254,slow=33						
PALK	**Pallekele**	**91.91**	**282**	LR	LR	16 30 35.4	
	comp=Z,39nm,19.9s,baz=138,slow=31						
TSUM	**Tsumeb**	**93.95**	**214**	LR	LR	16 36 44.3	
	comp=Z,124nm,20.1s,baz=155,slow=35						
LSZ	**Lusaka**	**94.48**	**225**	LR	LR	16 35 22.4	
	comp=Z,53nm,18.3s,baz=155,slow=34						
JHJ	**Hachijo jima 2**	**96.45**	**342**	LR	LR	16 37 55.1	
	comp=Z,32nm,18.7s,baz=121,slow=34						
ILAR	**Eielson Array**	**132.32**	**27**	PKP	PKPdf	16 01 50.7	-1.3
	0.8nm,1.0s,baz=235,slow=2.9,SNR=5.3						

IDC 25 15:48:49.1±2.6,26°04S×29°18E,h0km,mb3.5/1, mbtmp3.5/5,ML2.9/3,Error ellipse: s-maj=27.2km s-min=20.6km az=122.0
PRE 25 15:48:51.7±1.0,26°03S×29°15E,h0km,ML2.9,Suspected explosion
BGSI 25 15:48:59.4±1.1,25°37S×29°54E,h189km±51km,ML3.7
ISC 25 15:48:49.7±0.8,25°83S±0°03×28°95E±0°04,h0km,n26, σ2°72/49,South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRYS	**Parys**	**1.80**	**232**	*eP*	**Pg**	**15 49 25.3**	**+1.0**
PRYS				*eS*	**Sg**	**15 49 49.6**	**+2.0**
PRYS				IAML		15 49 51.5	
	comp=Z,286nm,0.6s						
PILG	**Pilgrimsrest,**	**1.82**	**61**	*eP*	**Pn**	**15 49 24.1**	**+1.5**
PILG				*eS*	**Sn**	**15 49 48.3**	**+1.9**
PILG				IAML		15 49 48.8	
	comp=Z,128nm,0.5s						
LEPH	**Lephalale, Lim**	**2.22**	**332**	*eP*	**Pg**	**15 49 33.5**	**+1.1**
LEPH				*eS*	**Sg**	**15 50 05.6**	**+4.3**
LEPH				IAML		15 50 18.4	
	comp=Z,85nm,0.4s						
SNKL	**Senekal, Frees**	**2.66**	**203**	*eP*	**Pn**	**15 49 34.4**	**+0.3**
SNKL				*eS*	**Sn**	**15 50 07.7**	**+0.6**
SNKL				IAML		15 50 18.0	
	comp=Z,128nm,0.6s						
LBTB	**Lobatse**	**3.14**	**284**	Pn	**Pb**	**15 49 45.6**	**-1.0**
	comp=Z,1.0nm,0.3s,baz=103,slow=14,SNR=14						
LBTB				Pg	**Pg**	**15 49 51.9**	**+1.9**
	comp=Z,7.4nm,0.3s,baz=108,slow=18,SNR=122						
LBTB				Sn	**Sb**	**15 50 26.4**	**+0.9**
	comp=Z,5.4nm,0.3s,baz=69,slow=13,SNR=4.7						
LBTB				Lg	Lg	15 50 35.8	
	comp=Z,24nm,0.3s,baz=12,slow=23,SNR=25						
	comp=Z,3.0nm,0.4s						
LBTB	**Lobatse**	**3.14**	**284**	*eP*	**Pb**	**15 49 46.7**	**+0.2**
LBTB				*eS*	**Sb**	**15 50 27.0**	**+1.6**
LBTB				IAML		15 50 41.5	
	comp=Z,88nm,0.5s						
MUSN	**Musina, Limpop**	**3.62**	**13**	*eP*	**Pb**	**15 49 52.4**	**-2.2**
MUSN				*eS*	**Sb**	**15 50 36.9**	**-2.3**
MUSN				IAML		15 50 51.6	
	comp=Z,27nm,0.4s						
LPHEP	**Lephephe**	**3.73**	**310**	*i* P	**Pb**	**15 49 58.0**	**+1.4**
LPHEP				*i* S	**Sb**	**15 50 41.0**	**-1.5**
LPHEP				IAML		15 50 58.1	
	comp=E,60nm,0.5s						
MAKGR	**Makgori**	**3.74**	**269**	*i* P	**Pg**	**15 50 01.7**	**+0.2**
MAKGR				*i* S	**Sg**	**15 50 49.8**	**-0.3**
MAKGR				IAML		15 51 01.4	
	comp=N,693nm,0.5s						
PMBG	**Pietermaritzbu**	**3.92**	**160**	*eP*	**Pn**	**15 49 51.2**	**-0.1**
PMBG				*eS*	**Sn**	**15 50 34.3**	**-3.8**
PMBG				IAML		15 50 45.5	
	comp=Z,40nm,0.3s						
BOSA	**Boshof**	**4.31**	**229**	Pn	**Pn**	**15 49 55.9**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=54,slow=14,SNR=4.6						
BOSA				Pg	**Pb**	**15 50 06.7**	**+0.3**
	comp=Z,0.7nm,0.3s,baz=59,slow=12,SNR=11						
BOSA				Sn	**Sn**	**15 50 44.3**	**-3.3**
	comp=Z,1.4nm,0.3s,baz=340,slow=17,SNR=4.9						
BOSA				Lg	Lg	15 51 05.5	
	comp=Z,20nm,0.3s,baz=140,slow=14,SNR=21						
	comp=Z,0.9nm,0.5s						
I47ZA	**BOSHOF INFRASO**	**4.32**	**229**	I	I	16 16 55.0	
	baz=52,slow=322,SNR=2.2						
KDWAN	**Kaudwane**	**4.60**	**301**	*i* P	**Pb**	**15 50 10.0**	**-1.5**
KDWAN				*i* S	**Sb**	**15 51 01.7**	**-5.9**
KDWAN				IAML		15 51 26.1	
	comp=E,710nm,0.5s						
KSTD	**Kokstad**	**4.78**	**176**	*eP*	**Pn**	**15 50 04.1**	**+0.9**
KSTD				*eS*	**Sn**	**15 50 55.7**	**-3.8**
KSTD				IAML		15 51 25.6	
	comp=Z,15nm,0.4s						
BROLN	**Tlhalogang**	**4.94**	**342**	*i* P	**Pn**	**15 50 08.0**	**+2.8**
BROLN				*i* S	**Sn**	**15 50 57.9**	**-5.3**
BROLN				IAML		15 51 34.6	
	comp=E,49nm,0.5s						
SOOWA	**Sowa**	**5.81**	**334**	*i* P	**Pn**	**15 50 20.0**	**+2.7**
SOOWA				*i* S	**Sn**	**15 51 19.3**	**-5.5**
SOOWA				IAML		15 52 07.5	
	comp=N,743nm,0.5s						
GRAF	**Camdeboo Natio**	**7.52**	**210**	*eP*	**Pn**	**15 50 42.5**	**+1.7**
GRAF				*eS*	**Sn**	**15 50 53.5**	**-3.4**
GRAF				IAML		15 52 48.9	
	comp=Z,14nm,0.6s						

BRAK	**Brakfontein**	**7.96**	**220**	*eP*	**Pn**	**15 50 49.6**	**+2.7**
BRAK				*eS*	**Sn**	**15 52 14.9**	**-2.8**
BRAK				IAML		15 52 27.4	
	comp=Z,5.5nm,0.7s						
ROOI	**Rooidraai Farm**	**8.15**	**214**	*eP*	**Pn**	**15 50 51.7**	**+2.3**
ROOI				*eS*	**Sn**	**15 52 19.2**	**-3.1**
ROOI				IAML		15 52 34.3	
	comp=Z,5.5nm,0.7s						
GRAN	**Grantham**	**8.76**	**221**	*eP*	**Pn**	**15 51 00.1**	**+2.3**
GRAN				*eS*	**Sn**	**15 52 34.2**	**-3.1**
GRAN				IAML		15 53 30.8	
	comp=Z,19nm,0.6s						
FRAZ	**Fraserburg**	**8.98**	**226**	*eP*	**Pn**	**15 51 04.1**	**+3.2**
FRAZ				*eS*	**Sn**	**15 52 40.2**	**-2.6**
FRAZ				IAML		15 52 55.4	
	comp=Z,2.9nm,0.5s						
SUR	**Sutherland**	**9.66**	**226**	Pn	**Pn**	**15 51 10.8**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=48,slow=9.7,SNR=7.4						
SUR				Sn	**Sn**	**15 52 53.9**	**-5.6**
	comp=Z,0.6nm,0.3s,baz=185,slow=23,SNR=1.7						
SUR				Lg	Lg	15 53 49.3	
	comp=Z,1.6nm,0.3s,baz=332,slow=22,SNR=6.9						
	comp=Z,8.9nm,1.1s						
SUR	**Sutherland**	**9.66**	**226**	*eP*	**Pn**	**15 51 13.2**	**+3.0**
SUR				*eS*	**Sn**	**15 52 56.2**	**-3.3**
SUR				IAML		15 53 27.8	
	comp=Z,4.5nm,0.6s						
LSZ	**Lusaka**	**10.52**	**356**	Pn	**Pn**	**15 51 22.9**	**+0.9**
	comp=Z,2.1nm,0.5s,baz=171,slow=7.8,SNR=5.3						
LSZ				Sn	**Sn**	**15 53 18.4**	**-2.3**
	comp=Z,0.5nm,0.3s,baz=72,slow=16,SNR=7.1						
LSZ				Lg	Lg	15 54 20.2	
	comp=Z,0.4nm,0.3s,baz=52,slow=20,SNR=4.1						
TSUM	**Tsumeb**	**12.40**	**300**	Lg	Lg	15 55 25.4	
	comp=Z,0.4nm,0.3s,baz=253,slow=22,SNR=4.8						
TORD	**Torodi Ar. Bea**	**46.96**	**322**	P	**P**	**15 57 23.9**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=155,slow=8.3,SNR=2.5						
	comp=Z,0.4nm,0.6s						

IDC 25 15:52:11.8±1.2,49°25N×158°42E,h0km,mb3.4/6, mbtmp3.4/6,Error ellipse: s-maj=35.1km s-min=30.0km az=37.0
KRSC 25 15:52:15.1±1.5,49°49N×158°86E,h41km±26km,Ml4.1
ISC 25 15:52:14.1±1.0,49°38N±0°07×158°56E±0°08,h18km,n34, σ1°88/38,mb3.5/7,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.04**	**311**	*eP*	**Pn**	**15 52 48.7**	**+1.1**
SKR				*eS*	**Sn**	**15 53 14.2**	**+1.6**
PAU	**Pauzhetka**	**2.37**	**333**	*eP*	**Pb**	**15 52 54.0**	**-2.2**
PAU				*eS*	**Sn**	**15 53 22.8**	**+2.2**
KDTR	**Khodutka, Kamc**	**2.45**	**353**	*eP*	**Pn**	**15 52 54.1**	**+0.9**
KDTR				*eS*	**Sn**	**15 53 23.0**	**+0.4**
ASAK	**Asacha**	**3.04**	**352**	*eP*	**Pb**	**15 53 03.9**	**-3.7**
ASAK				*eS*	**Sn**	**15 53 38.1**	**+0.9**
RUS	**Russkaya**	**3.06**	**359**	*eP*	**Pn**	**15 53 02.9**	**+1.4**
RUS				*eS*	**Sn**	**15 53 37.9**	**+0.3**
MTVR	**Mutnovka**	**3.12**	**356**	*eP*	**Pn**	**15 53 04.2**	**+1.8**
MTVR				*eS*	**Sn**	**15 53 39.4**	**+0.2**
MIPR	**Malaya Ipel'ka**	**3.12**	**339**	*eP*	**Pb**	**15 53 05.3**	**-3.7**
GRL	**Gorelyy**	**3.19**	**355**	*eP*	**Pn**	**15 53 05.1**	**+1.7**
GRL				*eS*	**Sn**	**15 53 42.2**	**+1.2**
KRMR	**Karymshinskiy**	**3.46**	**356**	*eP*	**Pn**	**15 53 09.9**	**+2.7**
KRMR				*eS*	**Sn**	**15 53 49.6**	**+1.9**
PET	**Petropavlovsk**	**3.65**	**1**	*eS*	**Sn**	**15 53 52.2**	**+0.1**
DALK	**Dalny**	**3.66**	**2**	*eP*	**Pn**	**15 53 11.2**	**+1.4**
DALK				*eS*	**Sn**	**15 53 52.3**	**-0.1**
NLC	**Nalytchevo**	**3.83**	**7**	*eS*	**Sn**	**15 53 57.8**	**+1.2**
SPN	**Mys Shipunski**	**3.83**	**13**	*eP*	**Pn**	**15 53 13.3**	**+1.1**
SPN				*eS*	**Sn**	**15 53 55.8**	**-0.9**
UGLR	**Uglovaya**	**3.84**	**2**	*eP*	**Pn**	**15 53 14.7**	**+2.3**
AVH	**Avacha**	**3.89**	**2**	*eP*	**Pn**	**15 53 15.6**	**+2.5**
SMAR	**Somma**	**3.89**	**2**	*eP*	**Pn**	**15 53 15.6**	**+2.4**
KOK	**Koryaka**	**3.92**	**1**	*eP*	**Pn**	**15 53 16.0**	**+2.5**
KRER	**Koryakskii**	**3.93**	**2**	*eP*	**Pn**	**15 53 16.2**	**+2.5**
KRX	**Arik**	**3.98**	**1**	*eP*	**Pn**	**15 53 16.5**	**+2.1**
GNL	**Ganaly**	**4.34**	**355**	*eP*	**Pn**	**15 53 22.5**	**+3.2**
KBTR	**Krutoberegovo**	**7.31**	**19**	*eP*	**Pn**	**15 54 01.3**	**+1.4**
H11N2	**WAKE ISLAND Hy**	**30.33**	**164**	T	T	16 30 06.4	
	baz=352						
H11N1	**WAKE ISLAND Hy**	**30.34**	**164**	T	T	16 30 08.3	
	baz=352						
H11N3	**WAKE ISLAND Hy**	**30.34**	**164**	T	T	16 30 08.7	
	baz=352						
H11S1	**WAKE ISLAND Hy**	**31.49**	**165**	T	T	16 31 37.7	
	baz=352						
H11S3	**WAKE ISLAND Hy**	**31.50**	**165**	T	T	16 31 34.3	
	baz=352						
H11S2	**WAKE ISLAND Hy**	**31.51**	**165**	T	T	16 31 35.3	
	baz=352						
LZDM	**Lanzhou Array**	**41.61**	**272**	P	**P**	**15 59 59.3**	**-2.1**
	4.0nm,0.4s,baz=38,slow=7.8,SNR=2.6						
MKAR	**Makanchi Array**	**48.96**	**298**	P	**P**	**16 01 00.3**	**+1.2**
	0.1nm,0.4s,baz=64,slow=6.6,SNR=2.0						
	0.1nm,0.4s			

ASAK	Asacha	3.31	1	PN	Pn	15 59 48.3	+0.4		
ASAK	Asacha	3.31	1	eP	Pn	15 59 48.3	+0.4		
RUS	Russkaya	3.40	7	PN	Pn	15 59 48.8	-0.1		
RUS				S	Sn	16 00 26.3	-1.6		
RUS	Russkaya	3.40	7	eP	Pn	15 59 48.8	-0.1		
RUS				eS	Sn	16 00 26.3	-1.6		
RUS	Russkaya	3.40	7	eP	Pn	15 59 48.8	-0.1		
MTVR	Mutnovka	3.42	4	PN	Pn	15 59 49.5	+0.1		
MTVR				S	Sn	16 00 27.4	-1.4		
MTVR	Mutnovka	3.42	4	eP	Pn	15 59 49.6	+0.1		
MTVR				eS	Sn	16 00 27.4	-1.4		
GRL	Gorelyy	3.49	3	PN	Pn	15 59 50.7	+0.4		
GRL				S	Sn	16 00 28.6	-1.8		
GRL	Gorelyy	3.49	3	eP	Pn	15 59 50.7	+0.4		
GRL				eS	Sn	16 00 28.6	-1.8		
KRMR	Karymshinskiy	3.77	3	PN	Pn	15 59 55.0	+1.0		
KRMR	Karymshinskiy	3.77	3	eP	Pn	15 59 55.0	+1.0		
KRMR	Karymshinskiy	3.77	3	eP	Pn	15 59 55.0	+1.0		
APC	Apacha	3.88	354	PN	Pn	15 59 56.5	+1.0		
APC	Apacha	3.88	354	eP	Pn	15 59 56.6	+1.0		
PET	Petropavlovsk	3.99	7	ePN	Pn	15 59 57.5	+0.4		
PET				eS	Sn	16 00 42.9	+0.3		
PET				pmax	pmax				
	comp=Z,35nm,0.3s								
PET				smax	smax				
	comp=N,36nm,0.5s								
PET				smax	smax				
	comp=E,52nm,0.8s								
PET	Petropavlovsk	3.99	7	eP	Pn	15 59 57.5	+0.4		
PET				AMB	AMB	15 59 58.0			
	comp=E,80nm,0.3s								
PET				eS	Sn	16 00 41.1	-1.5		
PET				A	A	16 00 44.8			
	comp=E,40nm,0.2s								
PET				A	A	16 00 44.8			
	comp=E,50nm,0.2s								
DALK	Dalny	4.01	8	PN	Pn	15 59 57.5	+0.2		
DALK	Dalny	4.01	8	eP	Pn	15 59 57.6	+0.2		
DALK	Dalny	4.01	8	eP	Pn	15 59 57.5	+0.2		
INSR	Institute	4.03	7	PN	Pn	15 59 58.4	+0.8		
INSR	Institute	4.03	7	eP	Pn	15 59 58.5	+0.8		
UGLR	Uglovaya	4.19	9	PN	Pn	16 00 00.6	+0.7		
UGLR	Uglovaya	4.19	9	eP	Pn	16 00 00.7	+0.7		
AVH	Avacha	4.24	8	PN	Pn	16 00 01.8	+1.2		
AVH	Avacha	4.24	8	eP	Pn	16 00 01.8	+1.2		
AVH	Avacha	4.24	8	eP	Pn	16 00 01.8	+1.2		
SMAR	Somma	4.24	8	PN	Pn	16 00 01.3	+0.6		
SMAR	Somma	4.24	8	eP	Pn	16 00 01.3	+0.6		
KOK	Koryaka	4.26	7	PN	Pn	16 00 02.3	+1.5		
KOK	Koryaka	4.26	7	eP	Pn	16 00 02.4	+1.5		
KOK	Koryaka	4.26	7	eP	Pn	16 00 02.3	+1.5		
SPN	Mys Shipunski	4.27	18	PN	Pn	16 00 00.7	-0.2		
SPN	Mys Shipunski	4.27	18	eP	Pn	16 00 00.8	-0.2		
SPN				eS	Sn	16 00 46.5	-3.0		
SPN	Mys Shipunski	4.27	18	eP	Pn	16 00 00.7	-0.2		
KRER	Koryakskii	4.28	8	PN	Pn	16 00 02.3	+1.1		
KRER	Koryakskii	4.28	8	eP	Pn	16 00 02.3	+1.1		
KRX	Arik	4.33	7	PN	Pn	16 00 02.8	+1.0		
KRX	Arik	4.33	7	eP	Pn	16 00 02.9	+1.0		
GNL	Ganaly	4.63	1	PN	Pn	16 00 07.3	+1.4		
GNL	Ganaly	4.63	1	eP	Pn	16 00 07.4	+1.4		
KBTR	Krutoberegovo	7.77	21	PN	Pn	16 00 48.9	0.0		
KBTR	Krutoberegovo	7.77	21	eP	Pn	16 00 48.9	0.0		
KBG	Krutoberegovo	7.79	21	PN	Pn	16 00 49.6	+0.5		
KBG	Krutoberegovo	7.79	21	eP	Pn	16 00 49.7	+0.5		
KBG	Krutoberegovo	7.79	21	eP	Pn	16 00 50.3	+1.2		
BKI	Bering	7.93	36	PN	Pn	16 00 50.7	-0.4		
BKI	Bering	7.93	36	eP	Pn	16 00 50.7	-0.4		
BKI				eS	Sn	16 02 13.9	-5.6		
MA2	Magadan	11.29	341	LR	LR	16 06 02.8			
	comp=E,21nm,19.4s,baz=202,slow=38								
ASAJ	Asahikawa	11.57	250	Pn	Pn	16 01 38.5	-2.5		
	comp=E,0.3nm,0.3s,baz=66,slow=10.0,SNR=2.1								
	comp=E,8.4nm,1.1s								
KLR	Kul'dur	17.02	280	Pn	Pn	16 02 52.5	-1.0		
	comp=E,0.1nm,0.3s,baz=39,slow=12,SNR=4.1								
	comp=E,0.9nm,0.5s								
MJAR	Matsushiro Arr	18.99	236	P	P	16 03 16.1	-0.8		
	baz=32,slow=12,SNR=2.2								
	comp=E,1.4nm,0.9s								
KSRS	Korea Array	24.50	253	P	P	16 04 14.5	+0.3		
	comp=E,0.6nm,0.5s,baz=42,slow=12,SNR=2.6								
	comp=E,0.6nm,0.5s								
H11N2	WAKE ISLAND Hy	30.18	163	T	T	16 36 50.4			
	baz=351,slow=74								
H11N3	WAKE ISLAND Hy	30.19	163	T	T	16 36 51.1			
	baz=351								
H11N1	WAKE ISLAND Hy	30.19	163	T	T	16 36 51.8			
	baz=351,slow=74								
H11S1	WAKE ISLAND Hy	31.33	164	T	T	16 38 16.7			
	baz=351								
H11S3	WAKE ISLAND Hy	31.34	164	T	T	16 38 19.1			
	baz=351								
H11S2	WAKE ISLAND Hy	31.35	164	T	T	16 38 18.1			
	baz=351								
ILAR	Eielson Array	32.75	41	P	P	16 05 28.9	+1.3		
	comp=E,0.3nm,0.5s,baz=259,slow=7.0,SNR=12								
	comp=E,0.3nm,0.5s								
YKA	Yellowknife Ar	47.16	39	P	P	16 07 28.2	+1.3		
	comp=E,0.7nm,0.9s,baz=299,slow=8.4,SNR=6.5								
	comp=E,0.7nm,0.9s								
MKAR	Makanchi Array	48.66	298	P	P	16 07 38.2	-0.7		
	comp=E,0.3nm,0.5s,baz=61,slow=12,SNR=2.6								
MKAR				LR	LR	16 28 49.1			
	comp=E,38nm,18.9s,baz=332,slow=37								
	comp=E,0.3nm,0.5s								
KURK	Kurchatov	48.70	304	P	P	16 07 39.3	+0.3		
KURK	Kurchatov	48.70	304	eP	P	16 07 39.3	+0.3		
KURBB	Kurchatov Arra	48.79	304	P	P	16 07 39.3	-0.4		
	comp=E,1.2nm,0.7s,baz=66,slow=8.2,SNR=6.5								
	comp=E,1.2nm,0.7s								
SPITS	Spitsbergen Ar	50.86	350	P	P	16 07 56.2	+1.1		
	comp=E,2.1nm,0.6s,baz=26,slow=11,SNR=4.1								
	comp=E,2.1nm,0.6s								
BVAR	Borovoye Array	51.80	310	P	P	16 08 02.2	-0.2		
	comp=E,0.6nm,0.5s,baz=56,slow=8.1,SNR=5.4								
	comp=E,0.6nm,0.5s								
FINES	FINESS Array B	63.23	336	P	P	16 09 22.8	+0.1		
	comp=E,1.3nm,0.8s,baz=39,slow=7.3,SNR=3.8								
	comp=E,1.3nm,0.8s								
WRA	Warramunga Arr	71.81	203	P	P	16 10 17.4	0.0		
	comp=E,1.7nm,0.8s,baz=20,slow=6.2,SNR=7.9								
	comp=E,1.7nm,0.8s								
LPIG	La Paz	73.38	72	LR	LR	16 37 47.7			
	comp=E,28nm,20.2s,baz=208,slow=32								
TXAR	Lajitas Array	73.62	64	P	P	16 10 29.8	+1.4		
	comp=E,0.2nm,0.5s,baz=316,slow=7.0,SNR=3.8								
TXAR				LR	LR	16 42 06.4			
	comp=E,27nm,18.7s,baz=170,slow=35								
	comp=E,0.2nm,0.5s								
ASAR	Alice Springs	75.49	203	P	P	16 10 40.0	+1.1		
	comp=E,0.4nm,0.7s,baz=17,slow=5.3,SNR=9.3								
	comp=E,0.4nm,0.7s								
ASAR	Alice Springs	75.49	203	P	P	16 10 40.0	+1.1		
H03N2	Juan Fernandez	135.63	91	T	T	18 48 59.4			
	baz=313								
H03N1	Juan Fernandez	135.65	91	T	T	18 49 00.7			
	baz=313,slow=74								
H03N3	Juan Fernandez	135.65	91	T	T	18 49 00.6			
	baz=313,slow=74								

*NOU **25** 15:59:21.1,35˚.65S×179˚.29W,h168km,mb4.2/6,East of North Island, N.Z.*
*WEL **25** 15:59:31.8±1.1,36˚S±6˚×18˚0E±1˚,h12km,M3.3/13, ML3.3/19,MLv3.3/13,Error ellipse: s-maj=13.8km s-min=8.2km az=96.4,confirmed*

ISC 25 15:59:30.4±3.7,35˚.8S±0˚.1×179˚.9E±0˚.2,h35km,n38, σ0s97/44,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MXZ	Matakaoa Point	2.20	216	P		Pn	16 00 06.0	+1.6
MXZ	Matakaoa Point	2.20	216	P		Pn	16 00 04.5	+0.1
WMGZ	Waiomatatini S	2.36	211	P		Pn	16 00 08.5	+1.9
PKGZ	Pakihiroa	2.55	215	P		Pn	16 00 10.6	+1.4
HAZ	Te Kaha	2.61	221	P		Pn	16 00 11.4	+1.4
HAZ				S		Sn	16 00 41.8	+1.3
PUZ	Puketiti	2.64	210	P		Pn	16 00 11.7	+1.2
RUGZ	Raukumara Rang	2.82	219	P		Pn	16 00 14.0	+0.8
RUGZ				S		Sn	16 00 45.8	-0.1
TWGZ	Tauwhareparae	2.85	213	P		Pn	16 00 14.5	+1.2
TWGZ				S		Sn	16 00 47.2	+0.7
CNGZ	Carnagh Statio	3.02	207	P		Pn	16 00 17.0	+1.3
TKGZ	Te Karaka	3.12	212	P		Pn	16 00 17.5	+0.4
TKGZ				S		Sn	16 00 52.9	-0.2
MWZ	Matawai	3.18	217	P		Pn	16 00 18.4	+0.4
MWZ				S		Sn	16 00 55.5	+0.8
URZ	Urewera	3.34	222	P		Pn	16 00 20.2	+0.1
URZ	Urewera	3.34	222	P		Pn	16 00 20.1	+0.1
URZ				S		Sn	16 00 56.2	-2.3
RAGZ	Rawiri	3.37	216	P		Pn	16 00 20.8	+0.3
RIGZ	Rimuhau	3.38	210	P		Pn	16 00 21.1	+0.4
OPRZ	Ohinepanea	3.40	232	P		Pn	16 00 21.1	+0.2
PRGZ	Paritu Road	3.52	207	P		Pn	16 00 23.1	+0.5
TGRZ	Tauranga	3.53	236	P		Pn	16 00 22.8	+0.2
GRZ	Great Barrier	3.66	262	P		Pn	16 00 25.2	+0.7
MUGZ	Murupara	3.68	222	P		Pn	16 00 24.3	-0.5
KNZ	Kokohu	3.69	209	P		Pn	16 00 24.7	-0.2
KARZ	Kaharoa	3.70	232	P		Pn	16 00 25.3	+0.2
MHGZ	Mahia Peninsul	3.72	205	P		Pn	16 00 25.2	-0.1
RAHZ	Arahi	3.86	215	P		Pn	16 00 27.7	+0.5
MTHZ	Maungataniwha	3.92	218	P		Pn	16 00 28.0	-0.2
TOZ	Tahuroa Road	4.05	240	P		Pn	16 00 30.2	+0.3
MKAZ	Moumakai	4.07	250	P		Pn	16 00 30.4	+0.4
NMHZ	Naumai	4.13	216	P		Pn	16 00 31.5	+0.4
ARHZ	Aropaoanui	4.18	213	P		Pn	16 00 31.0	-0.6
BKZ	Black Stump Fm	4.34	218	P		Pn	16 00 32.6	-1.2
BKZ	Black Stump Fm	4.34	218	P		Pn	16 00 32.7	-1.2
MCHZ	McNeill Hill	4.46	214	P		Pn	16 00 35.1	-0.4
KAHZ	Kahuranaki	4.67	210	P		Pn	16 00 36.9	-1.5
ETVZ	East Tongariro	4.74	224	P		Pn	16 00 39.0	-0.4
OUZ	Omahuta	5.20	274	P		Pn	16 00 45.6	-0.1
OUZ	Omahuta	5.20	274	P		Pn	16 00 45.5	-0.2
BFZ	Birch Farm	5.68	210	P		Pn	16 00 49.8	-2.4
KHEZ	Kahui Hut	5.86	232	P		Pn	16 00 54.1	-0.7

*BGSI **25** 16:12:03.9±1.5,27˚.81S×22˚.89E,h0km±3.83km,ML2.5*
*IDC **25** 16:12:04.5±2.7,27˚.73S×23˚.05E,h0km,mbtmp3.1/2, ML2.4/2,Error ellipse: s-maj=23.0km s-min=16.2km az=106.0*
*PRE **25** 16:12:05.5±0.7,27˚.64S×23˚.00E,h0km,ML2.3,Suspected explosion*

ISC 25 16:12:04.6±0.8,27˚.62S±0˚.04×22˚.89E±0˚.04,h0km,n26, σ1s43/46,South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
UPI	Upington	1.63	243	*i* P		Pg	16 12 36.8	+1.0
UPI				*i* S		Sn	16 12 54.5	-1.8
I47ZA	BOSHOF INFRASO	2.30	116	I		I	16 26 05.0	
	0.1nm,1.1s,baz=292,slow=297,SNR=3.6							
BOSA	Boshof	2.31	116	Pg		Pn	16 12 43.5	-0.5
	0.9nm,0.3s,baz=294,slow=16,SNR=19							
BOSA				Lg		Lg	16 13 12.6	
	3.7nm,0.3s,baz=202,slow=21,SNR=5.4							
BOSA	Boshof	2.31	116	eP		Pn	16 12 43.9	-0.1
BOSA				eS		Sn	16 13 12.4	-0.8
BOSA				IAML			16 13 15.4	
	comp=Z,15nm,0.3s							
AUGR	Augrabies	2.46	246	*i* P		Pn	16 12 32.4	-14
AUGR				IAML			16 12 43.4	
	comp=Z,8.5nm,0.4s							
AUGR				*i* S		Sn	16 13 18.9	+2.1
MAKGR	Makgori	2.48	44	*i* P		Pn	16 12 45.9	-0.5
MAKGR				*i* S		Sn	16 13 17.6	+0.1
MAKGR				IAML			16 13 30.5	
	comp=E,61nm,0.5s							
ARMS	Ukamas	2.82	261	*i* P		Pb	16 12 54.5	-1.4
ARMS				*i* S		Sb	16 13 30.0	-1.1
ARMS				IAML			16 13 33.4	
	comp=Z,113nm,0.4s							
LBTB	Lobatse	3.55	44	Pn		Pn	16 13 00.2	-0.9
	comp=Z,0.2nm,0.3s,baz=302,slow=17,SNR=1.8							
LBTB				Pg		Pb	16 13 09.9	+1.6
	comp=Z,0.7nm,0.3s,baz=218,slow=14,SNR=9.7							
LBTB				Sn		Sn	16 13 43.0	-0.9
	comp=Z,1.2nm,0.3s,baz=325,slow=22,SNR=9.8							
LBTB				Lg		Lg	16 13 56.0	
	comp=Z,3.8nm,0.3s,baz=128,slow=20,SNR=15							
	comp=Z,0.6nm,0.3s							
LBTB	Lobatse	3.55	44	eP		Pn	16 13 02.0	+0.9
LBTB				eS		Sn	16 13 43.4	-0.5
LBTB				IAML			16 14 01.1	
	comp=Z,8.5nm,0.3s							
LKGWB	Lokgwabe	3.80	336	*i* P		Pn	16 13 03.9	-0.7
LKGWB				*i* S		Sn	16 13 49.9	-0.1
LKGWB				IAML			16 14 12.3	
	comp=E,141nm,0.5s							
PRYS	Parys	4.04	81	eP		Pn	16 13 08.4	+0.6
PRYS				eS		Sn	16 13 54.5	-1.4
PRYS				IAML			16 14 21.6	
	comp=Z,5.6nm,0.3s							
BRAK	Brakfontein	4.15	180	eP		Pn	16 13 10.2	+0.9
BRAK				eS		Sn	16 13 57.9	-0.6
BRAK				IAML			16 14 16.0	
	comp=Z,9.9nm,0.3s							
BFON	Badsfontein, M	4.22	171	eP		Pn	16 13 11.8	+1.4
BFON				eS		Sn	16 13 59.8	-0.7
BFON				IAML			16 14 16.7	
	comp=Z,8.0nm,0.3s							
FRAZ	Fraserburg	4.49	196	eP		Pn	16 13 16.2	+2.2
FRAZ				eS		Sn	16 14 06.7	-0.3
FRAZ				IAML			16 14 26.8	
	comp=Z,9.8nm,0.4s							
KDWAN	Kaudwane	4.51	21	*i* P		Pn	16 13 13.7	-0.6
KDWAN				*i* S		Sn	16 14 05.3	-2.3
KDWAN				IAML			16 14 11.0	
	comp=E,13nm,0.3s							
GRAN	Grantham	4.71	187	eP		Pn	16 13 18.9	+1.9
GRAN				eS		Sn	16 14 12.8	+0.4
GRAN				IAML			16 14 36.5	
	comp=Z,13nm,0.4s							
GRAF	Camdeboo Natio	4.85	164	eP		Pn	16 13 19.6	+0.7
GRAF				eS		Sn	16 14 14.5	-1.2
GRAF				IAML			16 14 41.3	
	comp=Z,7.9nm,0.5s							
ROOI	Rooidraai Farm	4.89	173	eP		Pn	16 13 21.1	+1.6
ROOI				eS		Sn	16 14 15.5	-1.4
ROOI				IAML			16 14 36.4	
	comp=Z,7.2nm,0.5s							
LPHEP	Lephephe	5.01	33	*i* P		Pn	16 13 21.1	-0.1
LPHEP				*i* S		Sn	16 14 16.8	-3.1
LPHEP				IAML			16 14 48.8	
	comp=N,2.6nm,0.4s							
SUR	Sutherland	5.08	200	Pn		Pn	16 13 22.0	-0.1
	comp=N,0.2nm,0.3s,baz=292,slow=12,SNR=2.7							
SUR				Sn		Sn	16 14 20.7	-0.9
	comp=N,0.5nm,0.3s,baz=122,slow=21,SNR=1.4							
SUR				Lg		Lg	16 14 38.6	
	comp=N,1.8nm,0.3s,baz=114,slow=23,SNR=12							
	comp=N,13nm,1.1s							
SUR	Sutherland	5.08	200	eP		Pn	16 13 24.0	+1.9
SUR				eS		Sn	16 14 21.5	-0.1
SUR				IAML			16 14 48.5	
	comp=Z,8.3nm,0.3s							
LEPH	Lephalale, Lim	5.79	51	eP		Pn	16 13 33.2	+1.3
LEPH				eS		Sn	16 14 36.4	-2.8
LEPH				IAML			16 15 45.8	
	comp=Z,1.8nm,0.7s							
PRTV	Porterville,We	6.34	210	eP		Pn	16 13 41.4	+1.9
PRTV				eS		Sn	16 14 52.6	0.0
PRTV				IAML			16 15 43.8	
	comp=Z,3.3nm,0.8s							
PMBG	Pietermaritzbu	6.96	108	eP		Pn	16 13 48.6	+0.7
PMBG				eS		Sn	16 15 04.2	-3.6
PMBG				IAML			16 15 35.7	
	comp=Z,4.3nm,0.7s							
PILG	Pilgrimsrest,	7.51	71	eP		Pn	16 13 56.7	+1.1
PILG				IAML			16 14 35.7	
	comp=Z,46nm,0.5s							
I35NA	TSUMEB INFRASO	9.70	329	I		I	17 17 50.0	
	baz=158,slow=306,SNR=1.6							

KRSC 25 16:17:55.0±2.5,49˚.49N×158˚.54E,h49km±24km,MI3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SKR	Severo-Kuril's	1.96	308	eP		Pn	16 18 25.7	0.0
SKR				eS		Sn	16 18 48.7	-0.4
PAU	Pauzhetka	2.26	331	eP		Pn	16 18 32.3	+2.5
PAU				eS		Sn	16 18 60.0	+3.5
KDTR	Khodutka, Kamc	2.34	353	eP		Pn	16 18 33.1	+2.3
KDTR				eS		Sn	16 19 01.4	+3.1
ASAK	Asacha	2.92	352	eP		Pn	16 18 42.4	+3.4
RUS	Russkaya	2.94	360	eP		Pn	16 18 42.0	+2.9
RUS				eS		Sn	16 19 16.9	+3.7
MTVR	Mutnovka	3.00	356	eP		Pn	16 18 43.5	+3.4
MTVR				eS		Sn	16 19 20.2	+5.3
GRL	Gorelyy	3.08	355	eP		Pn	16 18 44.8	+3.7
GRL				eS		Sn	16 19 22.3	+5.6
KRMR	Karymshinskiy	3.35	356	eP		Pn	16 18 48.7	+4.0
DALK	Dalny	3.54	2	eP		Pn	16 18 51.3	+3.9
DALK				eS		Sn	16 19 33.0	+5.0
UGLR	Uglovaya	3.72	3	eP		Pn	16 18 54.0	+4.0
AVH	Avacha	3.78	2	eP		Pn	16 18 55.0	+4.3
SMAR	Somma	3.78	2	eP		Pn	16 18 55.4	+4.6
KOK	Koryaka	3.80	1	eP		Pn	16 18 55.8	+4.7
KRER	Koryakskii	3.82	2	eP		Pn	16 18 55.6	+4.2
KRX	Arik	3.87	1	eP		Pn	16 18 56.2	+4.1
GNL	Ganaly	4.22	355	eP		Pn	16 19 02.0	+5.2
KBTR	Krutoberegovo	7.21	19	eP		Pn	16 19 41.6	+4.0
BKI	Bering	7.31	36	eS		Sn	16 21 01.5	+1.1

KRSC 25 16:23:34.5±1.6,49˚.51N×158˚.89E,h41km±26km,MI3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SKR	Severo-Kuril's	2.14	304	eP		Pn	16 24 08.0	+0.4
SKR				eS		Sn	16 24 33.9	+1.0
KDTR	Khodutka, Kamc	2.36	348	eS		Sn	16 24 42.0	+3.6
PAU	Pauzhetka	2.37	327	eS		Sn	16 24 42.2	+3.6
RUS	Russkaya	2.94	355	eP		Pn	16 24 22.1	+3.5
RUS				eS		Sn	16 24 56.2	+3.6
ASAK	Asacha	2.94	348	eP		Pn	16 24 22.1	+3.4
ASAK				eS		Sn	16 24 57.0	+4.2
MTVR	Mutnovka	3.01	352	eP		Pn	16 24 22.8	+3.1
MTVR				eS		Sn	16 24 59.0	+4.4
MIPR	Malaya Ipel'ka	3.08	335	eP		Pn	16 24 24.6	+4.0
GRL	Gorelyy	3.09	351	eP		Pn	16 24 24.3	+3.5
GRL				eS		Sn	16 25 01.6	+5.0
KRMR	Karymshinskiy	3.36	352	eP		Pn	16 24 28.0	+3.7
KRMR				eS		Sn	16 25 07.8	+4.9
DALK	Dalny	3.53	359	eP		Pn	16 24 30.2	+3.5
DALK				eS		Sn	16 25 11.7	+4.6
SPN	Mys Shipunski	3.66	11	eP		Pn	16 24 32.0	+3.5
SPN				eS		Sn	16 25 14.9	+4.5
UGLR	Uglovaya	3.70	359	eP		Pn	16 24 33.5	+4.2
SMAR	Somma	3.76	359	eP		Pn	16 24 36.1	+6.1
AVH	Avacha	3.76	359	eP		Pn	16 24 34.3	+4.3
KOK	Koryaka	3.79	358	eP		Pn	16 24 34.8	+4.4
KRER	Koryakskii	3.80	359	eP		Pn	16 24 35.2	+4.6
KRX	Arik	3.86	358	eP		Pn	16 24 35.1	+3.7
GNL	Ganaly	4.23	352	eP		Pn	16 24 41.5	+5.0
KII	Karymskiy	4.55	4	eP		Pn	16 24 46.1	+5.4
KBTR	Krutoberegovo	7.12	18	eP		Pn	16 25 20.2	+4.3

KRSC 25 16:33:03.1±1.7,49˚.46N×158˚.71E,h45km±25km,MI4.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SKR	Severo-Kuril's	2.07	307	eP		Pn	16 33 35.2	-0.1
SKR				eS		Sn	16 34 00.2	+0.3
PAU	Pauzhetka	2.35	330	eP		Pn	16 33 42.3	+3.1
PAU				eS		Sn	16 34 11.1	+4.4
KDTR	Khodutka, Kamc	2.39	351	eP		Pn	16 33 42.1	+2.9
KDTR				eS		Sn	16 34 11.4	+3.8
ASAK	Asacha	2.97	350	eP		Pn	16 33 51.6	+3.8
RUS	Russkaya	2.98	358	eP		Pn	16 33 50.8	+3.0
RUS				eS		Sn	16 34 26.1	+3.9
MTVR	Mutnovka	3.05	354	eP		Pn	16 33 52.1	+3.3
MTVR				eS		Sn	16 34 28.1	+4.0
MIPR	Malaya Ipel'ka	3.08	337	eP		Pn	16 33 53.4	+4.3
GRL	Gorelyy	3.12	353	eP		Pn	16 33 53.6	+3.7
GRL				eS		Sn	16 34 30.2	+4.2
KRMR	Karymshinskiy	3.40	354	eP		Pn	16 33 57.5	+4.0
KRMR				eS		Sn	16 34 37.5	+5.0
PET	Petropavlovsk	3.57	359	eP		Pn	16 33 59.8	+3.9
DALK	Dalny	3.58	0	eP		Pn	16 33 59.4	+3.4
DALK				eS		Sn	16 34 40.4	+3.4
APC	Apacha	3.61	345	eP		Pn	16 34 00.3	+3.9
SPN	Mys Shipunski	3.74	12	eP		Pn	16 34 02.0	+3.8
SPN				eS		Sn	16 34 45.0	+4.2
UGLR	Uglovaya	3.76	1	eP		Pn	16 34 02.1	+3.5
SMAR	Somma	3.81	1	eP		Pn	16 34 02.9	+3.5
AVH	Avacha	3.81	0	eP		Pn	16 34 03.8	+4.5
KOK	Koryaka	3.84	359	eP		Pn	16 34 04.1	+4.4
KRER	Koryakskii	3.85	0	eP		Pn	16 34 04.1	+4.2
KRX	Arik	3.91	359	eP		Pn	16 34 05.1	+4.5
GNL	Ganaly	4.27	354	eP		Pn	16 34 10.4	+4.8
KII	Karymskiy	4.61	5	eP

0.3nm,0.3s,baz=254,slow=7.4,SNR=3.0
16nm,0.9s

KAPI	**Kappang**	**10.69**	**269**	Pn	**Pn**	**16 45 24.1**	**0.0**
	4.3nm,0.3s,baz=26,slow=8.6,SNR=3.7						
KAPI				LR	LR	16 49 23.2	
	comp=Z,240nm,19.6s,baz=92,slow=37						
KAPI	**Kappang**	**10.69**	**269**		**Pn**	**16 45 26.0**	**+1.8**
KNRA	**Kununurra**	**10.77**	**189**	Pn	**Pn**	**16 45 26.1**	**+0.8**
PLAI	**Plampang**	**13.18**	**252**	P	**Pn**	**16 46 01.6**	**+3.4**
FITZ	**Fitzroy Crossi**	**13.88**	**200**	Pn	**Pn**	**16 46 05.6**	**-2.2**
	0.9nm,0.3s,baz=33,slow=9.2,SNR=22						
FITZ				Sn	**Sn**	**16 48 35.5**	**-6.6**
	1.0nm,0.3s,baz=187,slow=16,SNR=5.7						
FITZ				LR	LR	16 51 42.5	
	comp=Z,168nm,20.8s,baz=11,slow=38						
	4.8nm,0.6s						
WB0	**Warramunga Arr**	**15.19**	**166**	Pn	**Pn**	**16 46 20.9**	**-4.7**
WB0				IAmb	IAmb	16 46 35.8	
	comp=Z,17nm,1.2s						
WRAB	**Tennant Creek**	**15.34**	**166**	Pn	**Pn**	**16 46 23.0**	**-4.6**
WRAB				IAmb	IAmb	16 46 46.7	
	comp=Z,8.9nm,0.7s						
WRA	**Warramunga Arr**	**15.35**	**166**	Pn	**Pn**	**16 46 23.2**	**-4.5**
	comp=Z,0.7nm,0.3s,baz=341,slow=14,SNR=42						
WRA				Sn	Sn	16 49 07.1	-11
	comp=Z,1.7nm,0.3s,baz=341,slow=25,SNR=13						
WRA	**Warramunga Arr**	**15.35**	**166**	Pn	**Pn**	**16 46 22.9**	**-4.8**
COEN	**Coen**	**15.37**	**126**	Pn	**Pn**	**16 46 23.0**	**-5.0**
COEN				IAmb	IAmb	16 46 34.6	
	comp=Z,16nm,0.7s						
WR8	**Warramunga Arr**	**15.40**	**166**	Pn	**Pn**	**16 46 23.5**	**-4.9**
PMG	**Port Moresby**	**17.12**	**106**	P	**Pn**	**16 46 49.2**	**-1.2**
	comp=Z,14nm,0.9s,baz=270,slow=9.1,SNR=3.7						
PMG				LR	LR	16 55 17.3	
	comp=Z,78nm,20.8s,baz=290,slow=44						
PMG	**Port Moresby**	**17.12**	**106**	P	**Pn**	**16 46 51.4**	**+0.9**
PMG				IAmb	IAmb	16 46 53.6	
	comp=Z,24nm,1.0s						
AS31	**Alice Springs**	**18.88**	**170**	P	**P**	**16 47 10.4**	**-1.1**
ASAR	**Alice Springs**	**18.88**	**170**	P	**P**	**16 47 10.9**	**-0.6**
	comp=Z,1.2nm,0.3s,baz=16,slow=13,SNR=60						
ASAR				S	Sn	16 50 31.9	-12
	comp=Z,4.2nm,0.7s,baz=348,slow=23,SNR=6.9						
ASAR				LR	LR	16 55 06.6	
	comp=Z,78nm,20.0s,baz=320,slow=39						
	comp=Z,4.8nm,0.7s						
ASAR	**Alice Springs**	**18.88**	**170**	P	**P**	**16 47 11.9**	**+0.4**
PSA00	**Pilbara Seismi**	**19.46**	**211**	P	**P**	**16 47 19.3**	**+1.4**
CTA	**Charters Tower**	**21.48**	**136**	P	**P**	**16 47 40.8**	**+1.0**
	comp=Z,5.9nm,0.7s,baz=302,slow=14,SNR=3.6						
	comp=Z,5.9nm,0.7s						
LEM	**Lembang**	**22.82**	**264**	LR	LR	16 56 46.1	
	comp=Z,85nm,19.9s,baz=92,slow=37						
INKA	**Innaminka**	**24.66**	**158**	P	**P**	**16 48 13.2**	**+1.3**
INKA				IAmb	IAmb	16 48 15.3	
	comp=Z,11nm,0.8s						
FORT	**Forrest**	**25.77**	**185**	P	**P**	**16 48 23.0**	**+1.0**
FORT				IAmb	IAmb	16 49 00.8	
	comp=Z,8.3nm,0.8s						
BBOO	**Buckleboo**	**28.18**	**170**	P	**P**	**16 48 44.2**	**+0.6**
STKA	**Stephens Creek**	**28.72**	**160**	P	**P**	**16 48 47.9**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=356,slow=9.9,SNR=5.8						
STKA				LR	LR	17 02 55.7	
	comp=Z,66nm,18.2s,baz=346,slow=42						
	comp=Z,1.1nm,0.3s						
STKA	**Stephens Creek**	**28.72**	**160**	P	**P**	**16 48 48.4**	**-0.1**
JCJ	**Chichijima**	**33.83**	**19**	LR	LR	17 00 32.6	
	comp=Z,23nm,21.7s,baz=56,slow=31						
JNU	**Nakatsue**	**27.88**	**1**	LR	LR	17 03 25.8	
	comp=Z,37nm,20.1s,baz=172,slow=33						
CMAR	**Chiang Mai Arr**	**38.84**	**308**	P	**P**	**16 50 15.6**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=146,slow=7.5,SNR=8.3						
CMAR				ScP	**ScP**	**16 56 16.5**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=142,slow=3.7,SNR=7.2						
CMAR				LR	LR	17 09 35.0	
	comp=Z,11nm,18.1s,baz=125,slow=41						
	comp=Z,0.3nm,0.4s						
CMAR	**Chiang Mai Arr**	**38.84**	**308**	P	**P**	**16 50 16.1**	**-0.3**
JHJ	**Hachijo jima 2**	**38.90**	**12**	LR	LR	17 03 25.9	
	comp=Z,38nm,21.8s,baz=185,slow=32						
MJAR	**Matsushiro Arr**	**41.92**	**9**	LR	LR	17 04 27.7	
	comp=Z,29nm,21.9s,baz=206,slow=31						
KSRS	**Korea Array**	**42.27**	**357**	LR	LR	17 08 41.3	
	comp=Z,12nm,20.3s,baz=155,slow=37						
HHC	**Hu-ho-hao-te**	**48.78**	**341**	*e*P	**P**	**16 51 40.0**	**+3.7**
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
USRK	**Ussuriysk Ar.**	**48.96**	**1**	P	**P**	**16 51 37.6**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=174,slow=7.1,SNR=4.1						
	comp=Z,0.6nm,0.5s						
XLT	**XiLinHaoTe**	**50.35**	**346**	*e*P	P	16 51 55.5	+7.4
XLT				pmax	pmax		
	comp=Z,4.0nm,0.6s						
PALK	**Pallekele**	**51.14**	**283**	LR	LR	17 14 37.2	
	comp=Z,27nm,18.1s,baz=122,slow=37						
SONM	**Songino Array**	**56.69**	**341**	P	**P**	**16 52 35.6**	**+1.0**
	comp=Z,1.2nm,0.8s,baz=155,slow=6.5,SNR=6.9						
	comp=Z,1.2nm,0.8s						
SONM	**Songino Array**	**56.69**	**341**	P	**P**	**16 52 36.9**	**+2.2**
SONM				IAmb	IAmb	16 52 46.7	
	comp=Z,3.4nm,1.3s						
WMQ	**Urumqi**	**61.98**	**326**	*e*P	**P**	**16 53 12.5**	**+1.3**
WMQ				pP	sP	16 53 16.3	+2.3
WMQ				S	**S**	**17 01 31.8**	**-3.9**
WMQ				pmax	pmax		
	comp=Z,11nm,1.1s						
MKAR	**Makanchi Array**	**66.81**	**326**	P	**P**	**16 53 43.0**	**+0.2**
	comp=Z,2.6nm,0.8s,baz=119,slow=8.5,SNR=22						
	comp=Z,2.6nm,0.8s						
MKAR	**Makanchi Array**	**66.81**	**326**	P	**P**	**16 53 42.8**	**0.0**
MAKZ	**Makanchi**	**66.99**	**326**	P	**P**	**16 53 43.9**	**-0.1**
MAKZ				IAmb	IAmb	16 53 49.1	
	comp=Z,5.7nm,1.3s						
KURBB	**Kurchatov Array**	**71.05**	**328**	P	**P**	**16 54 08.9**	**-0.2**
	comp=Z,3.2nm,0.9s,baz=128,slow=5.2,SNR=31						
	comp=Z,3.2nm,0.9s						
KURK	**Kurchatov**	**71.05**	**328**	P	**P**	**16 54 09.2**	**+0.1**
VNDA	**Vanda**	**74.39**	**173**	LR	LR	17 25 31.0	
	comp=Z,36nm,20.0s,baz=319,slow=34						
BVAR	**Borovoye Array**	**76.62**	**327**	P	**P**	**16 54 41.6**	**0.0**
	comp=Z,2.3nm,1.0s,baz=123,slow=5.5,SNR=9.2						
	comp=Z,2.3nm,1.0s						
NRIK	**Noril'sk**	**79.72**	**346**	P	**P**	**16 54 58.5**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=139,slow=4.1,SNR=5.3						
	comp=Z,1.3nm,0.6s						
ABKAR	**Akbulak array**	**81.23**	**321**	P	**P**	**16 55 08.7**	**+1.6**
QSPA	**South Pole Qui**	**84.99**	**180**	P	**P**	**16 55 27.1**	**+0.7**
	comp=Z,0.9nm,0.8s,baz=225,slow=0.2,SNR=1.6						
	comp=Z,0.9nm,0.8s						
QSPA	**South Pole Qui**	**84.99**	**180**	P	**P**	**16 55 26.1**	**-0.3**
LPAZ	**La Paz**	**151.98**	**139**	PKPbc	**PKiKP**	**17 02 49.4**	**+0.9**
	comp=Z,1.2nm,0.6s,baz=225,slow=3.8,SNR=5.4						

KRSC 25 16:56:19.7±2.1, 49°23N×158°30E, h40km±26km, MI3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.03**	**317**	*e*P		Pn	16 56 51.8	+0.5
SKR				*e*S		Sn	16 57 15.2	-0.2
PAU	**Pauzhetka**	**2.43**	**337**	*e*S		Sn	16 57 28.7	+3.3
KDTR	**Khodutka, Kamc**	**2.58**	**357**	*e*S		Sn	16 57 31.4	+2.3
ASAK	**Asacha**	**3.17**	**356**	*e*P		Pn	16 57 11.2	+4.1
MIPR	**Malaya Ipel'ka**	**3.20**	**343**	*e*P		Pn	16 57 12.4	+4.9
RUS	**Russkaya**	**3.21**	**2**	*e*S		Sn	16 57 49.7	+5.2
MTVR	**Mutnovka**	**3.26**	**359**	*e*P		Pn	16 57 11.9	+3.5
GRL	**Gorelyy**	**3.33**	**358**	*e*P		Pn	16 57 13.7	+4.3
KRMR	**Karymshinskiy**	**3.61**	**358**	*e*P		Pn	16 57 17.4	+4.4
KRMR				*e*S		Sn	16 58 00.3	+6.0
PET	**Petropavlovsk**	**3.81**	**3**	*e*P		Pn	16 57 19.8	+4.1
DALK	**Dalny**	**3.82**	**4**	*e*P		Pn	16 57 19.8	+3.9
UGLR	**Uglovaya**	**4.00**	**4**	*e*P		Pn	16 57 23.1	+4.6
SPN	**Mys Shipunski**	**4.02**	**15**	*e*P		Pn	16 57 22.7	+4.0
AVH	**Avacha**	**4.05**	**4**	*e*P		Pn	16 57 23.6	+4.4
SMAR	**Somma**	**4.05**	**4**	*e*P		Pn	16 57 24.8	+5.5
KOK	**Koryaka**	**4.07**	**3**	*e*P		Pn	16 57 24.3	+4.8
KRX	**Arik**	**4.14**	**3**	*e*P		Pn	16 57 24.9	+4.4
GNL	**Ganaly**	**4.48**	**357**	*e*P		Pn	16 57 29.9	+4.8
KBTR	**Krutoberegovo**	**7.51**	**20**	*e*P		Pn	16 58 11.1	+4.6

NEIC ***25*** *17:08:29.5±1.4, 24°.9S±0°.1×179°.5W±0°.1, h482km±9km, mb4.4/19, Error ellipse: s-maj=18.8km s-min=13.2km az=129.0*
NOU ***25*** *17:08:30.6, 24°.80S×179°.45W, h506km, mb4.1/24, South of Fiji Islands*
IDC ***25*** *17:08:31.2±2.0, 24°.73S×179°.80W, h482km±20km, mb3.6/13, mbtmp4.5/15, Error ellipse: s-maj=20.0km s-min=17.7km az=147.0*

2020 MAR

ISC 25 17:08:29.9±0.5, 24°.84S±0°.06×179°.56W±0°.07, h482km, n116, σ1§31/124, mb4.4/22, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.42**	**342**	P		**P**	**17 10 20.5**	**+0.6**
	12nm,0.5s,baz=246,slow=12,SNR=46							
MSVF	**Nonsavu**	**7.42**	**342**	P		**P**	**17 10 20.6**	**+0.6**
MSVF	**Nonsavu**	**7.42**	**342**	P		**P**	**17 10 20.1**	**+0.1**
TAVE	**Taveuni**	**8.10**	**358**	P		**P**	**17 10 28.7**	**+1.7**
DGTI	**Dogotuki**	**8.52**	**355**	P		**P**	**17 10 32.4**	**+0.9**
FUTU	**Fugatoga**	**10.57**	**8**	P		**P**	**17 10 52.5**	**-0.8**
NIUE	**Niue**	**10.62**	**59**	P		**P**	**17 10 53.1**	**-0.7**
NIUE	**Niue**	**10.62**	**59**	P		P	17 10 59.6	+5.9
NIUE				S		**S**	**17 12 55.6**	**+3.4**
MARNC	**Mare, Loyalty**	**11.90**	**284**	P		**P**	**17 11 08.8**	**+1.3**
MARNC	**Mare, Loyalty**	**11.90**	**284**	P		**P**	**17 11 08.8**	**+1.3**
OUZ	**Omahuta**	**11.92**	**208**	P		**P**	**17 11 09.8**	**+2.3**
OUZ	**Omahuta**	**11.92**	**208**	P		**P**	**17 11 09.4**	**+1.9**
WCZ	**Waipu Caves**	**12.25**	**204**	P		**P**	**17 11 13.8**	**+2.9**
OUENC	**Ouen Island, N**	**12.70**	**278**	P		**P**	**17 11 16.1**	**+0.1**
YATNC	**Mamie plateau,**	**12.75**	**280**	P		**P**	**17 11 18.3**	**+1.8**
MXZ	**Matakaoa Point**	**12.81**	**188**	P		**P**	**17 11 18.9**	**+1.9**
MXZ	**Matakaoa Point**	**12.81**	**188**	P		**P**	**17 11 17.4**	**+0.4**
MXZ	**Matakaoa Point**	**12.81**	**188**	P		**P**	**17 11 18.1**	**+1.1**
MXZ				S		**S**	**17 13 36.5**	**+1.7**
RVAZ	**Riverhead Bore**	**12.91**	**202**	P		**P**	**17 11 19.2**	**+1.2**
MKAZ	**Moumakai**	**13.03**	**199**	P		**P**	**17 11 20.4**	**+1.0**
WMGZ	**Waiomatatini S**	**13.05**	**187**	P		**P**	**17 11 17.4**	**-2.2**
WMGZ				S		**S**	**17 13 37.6**	**-2.0**
HAZ	**Te Kaha**	**13.07**	**189**	P		**P**	**17 11 19.7**	**-0.1**
HAZ				S		**S**	**17 13 39.4**	**-0.5**
AFI	**Afiamalu**	**13.11**	**35**	P		**P**	**17 11 18.9**	**-1.7**
	73nm,0.8s,baz=36,slow=4.4,SNR=14							
AFI				S		**S**	**17 13 39.5**	**-1.9**
	22nm,0.6s,baz=66,slow=21,SNR=5.0							
DZM	**Mont Dzumac**	**13.14**	**279**	P		**P**	**17 11 20.6**	**-0.3**
	14nm,0.8s,baz=85,slow=11,SNR=7.9							
PUZ	**Puketiti**	**13.32**	**188**	P		**P**	**17 11 22.5**	**+0.1**
PUZ				S		**S**	**17 13 43.0**	**-1.9**
TOZ	**Tahuroa Road**	**13.52**	**197**	P		**P**	**17 11 25.7**	**+1.1**
URZ	**Urewera**	**13.67**	**191**	P		**P**	**17 11 24.3**	**-1.8**
	12nm,0.4s,baz=283,slow=1.4,SNR=21							
URZ				S		**S**	**17 13 52.3**	**+0.6**
	7.1nm,0.5s,baz=74,slow=22,SNR=22							
URZ	**Urewera**	**13.67**	**191**	P		**P**	**17 11 26.4**	**+0.2**
URZ	**Urewera**	**13.67**	**191**	P		**P**	**17 11 24.2**	**-2.0**
URZ				S		**S**	**17 13 51.3**	**-0.3**
MWZ	**Matawai**	**13.68**	**190**	P		**P**	**17 11 24.1**	**-2.2**
MWZ				S		**S**	**17 13 47.8**	**-4.0**
CNGZ	**Carnagh Statio**	**13.73**	**187**	P		**P**	**17 11 26.7**	**-0.1**
RAGZ	**Rawiri**	**13.85**	**190**	P		**P**	**17 11 28.1**	**-0.1**
MUGZ	**Murupara**	**13.95**	**192**	P		**P**	**17 11 30.9**	**+1.8**
RTZ	**Ruatahuna**	**14.04**	**191**	P		**P**	**17 11 29.2**	**-1.0**
TLZ	**Tolley Road**	**14.08**	**196**	P		**P**	**17 11 31.3**	**+0.8**
MTHZ	**Maungataniwha**	**14.30**	**191**	P		**P**	**17 11 33.6**	**+0.7**
RAHZ	**Arahi**	**14.32**	**191**	P		**P**	**17 11 34.5**	**+1.5**
HIZ	**Hauiti**	**14.43**	**198**	P		**P**	**17 11 35.8**	**+1.6**
RATZ	**Rangitukua**	**14.53**	**195**	P		**P**	**17 11 36.5**	**+1.1**
BKZ	**Black Stump Fm**	**14.67**	**192**	P		**P**	**17 11 35.9**	**-0.9**
BKZ	**Black Stump Fm**	**14.67**	**192**	S		**S**	**17 14 12.4**	**+1.4**
BKZ	**Black Stump Fm**	**14.67**	**192**	P		**P**	**17 11 36.0**	**-0.7**
BKZ	**Black Stump Fm**	**14.67**	**192**	P		**P**	**17 11 35.9**	**-0.9**
TMVZ	**Te Maari**	**14.79**	**195**	P		**P**	**17 11 36.6**	**-1.5**
ETVZ	**East Tongariro**	**14.80**	**195**	P		**P**	**17 11 37.6**	**-0.7**
TWVZ	**Taurewa**	**14.81**	**195**	P		**P**	**17 11 41.3**	**+3.0**
OTVZ	**Oturere**	**14.84**	**195**	P		**P**	**17 11 38.4**	**-0.3**
SNVZ	**South Ngauruho**	**14.87**	**195**	P		**P**	**17 11 39.8**	**+0.8**
MCHZ	**McNeill Hill**	**14.90**	**191**	P		**P**	**17 11 39.2**	**0.0**
WNVZ	**Wahianoa**	**15.01**	**195**	P		**P**	**17 11 41.0**	**+0.5**
VRZ	**Vera Road**	**15.03**	**197**	P		**P**	**17 11 39.7**	**-0.8**
KAHZ	**Kahuranaki**	**15.21**	**191**	P		**P**	**17 11 43.8**	**+1.4**
PXZ	**Pawanui**	**15.44**	**190**	P		**P**	**17 11 46.9**	**+2.0**
PNHZ	**Pukenui**	**15.45**	**192**	P		**P**	**17 11 43.6**	**-1.4**
TSZ	**Takapari Road**	**15.63**	**193**	P		**P**	**17 11 46.8**	**-0.1**
PRHZ	**Porangahau**	**15.71**	**191**	P		**P**	**17 11 50.4**	**+2.8**
DVHZ	**Dannevirke**	**15.83**	**192**	P		**P**	**17 11 47.3**	**-1.6**
BFZ	**Birch Farm**	**16.18**	**192**	P		**P**	**17 11 52.9**	**+0.3**
BFZ	**Birch Farm**	**16.18**	**192**	S		**S**	**17 14 41.6**	**+1.6**
BFZ	**Birch Farm**	**16.18**	**192**	P		**P**	**17 11 51.9**	**-0.8**
MRZ	**Mangatainoka R**	**16.29**	**193**	P		**P**	**17 11 53.5**	**-0.3**
OGWZ	**Otaki Gorge**	**16.53**	**194**	P		**P**	**17 11 53.9**	**-2.4**
HOWZ	**Holdsworth Sta**	**16.53**	**193**	P		**P**	**17 11 55.7**	**-0.6**
MSWZ	**Moikau Station**	**17.09**	**193**	P		**P**	**17 11 59.9**	**-2.2**
MSWZ	**Moikau Station**	**17.09**	**193**	P		**P**	**17 12 02.0**	**-0.1**
QRZ	**Quartz Range**	**17.26**	**201**	P		**P**	**17 12 04.7**	**+0.9**
QRZ	**Quartz Range**	**17.26**	**201**	P		**P**	**17 12 03.3**	**-0.5**
TKNZ	**Takaka Hill**	**17.31**	**199**	P		**P**	**17 12 03.5**	**-0.9**
THZ	**Tophouse**	**18.00**	**199**			**P**	**17 12 10.5**	**-0.6**
THZ				IAmb		IAmb	17 12 18.3	
	comp=Z,16nm,0.9s							
KHZ	**Kahutara**	**18.44**	**196**	P		**P**	**17 12 14.3**	**-0.7**
LTZ	**Lake Taylor**	**19.12**	**199**			**P**	**17 12 19.9**	**-1.5**
INZ	**Inchbonnie**	**19.32**	**200**			**P**	**17 12 22.8**	**-0.3**
OXZ	**Oxford**	**19.69**	**198**	P		**P**	**17 12 25.3**	**-1.1**
RPZ	**Rata Peaks**	**20.34**	**200**	P		**P**	**17 12 32.8**	**+0.4**
JCZ	**Jackson Bay**	**21.42**	**204**	P		**P**	**17 12 41.3**	**-1.0**
ODZ	**Otahua Downs**	**21.67**	**199**	P		**P**	**17 12 44.7**	**+0.3**
CMSA	**Cobar Meteorol**	**31.26**	**250**	P		**P**	**17 14 09.0**	**-0.2**
CTA	**Charters Tower**	**31.90**	**272**	P		**P**	**17 14 14.9**	**+0.1**
CTAO	**Charters Tower**	**31.90**	**272**	P		**P**	**17 14 14.9**	**+0.1**
CTAO	**Charters Tower**	**31.90**	**272**			**P**	**17 14 14.8**	**-0.1**
CTAO				IAmb		IAmb	17 14 16.7	
	comp=Z,24nm,0.9s							
QLP	**Quilpie**	**32.61**	**259**	P		**P**	**17 14 20.5**	**-0.3**
STKA	**Stephens Creek**	**34.76**	**249**	P		**P**	**17 14 38.9**	**-0.1**
	comp=Z,1.6nm,0.4s,baz=113,slow=10,SNR=9.5							
	comp=Z,1.6nm,0.4s							
STKA	**Stephens Creek**	**34.76**	**249**	P		**P**	**17 14 38.9**	**-0.1**
STKA	**Stephens Creek**	**34.76**	**249**	P		**P**	**17 14 38.5**	**-0.4**
STKA				IAmb		IAmb	17 14 43.1	
	comp=Z,15nm,1.0s							
INKA	**Innaminka**	**35.61**	**257**			**P**	**17 14 46.2**	**+0.2**
HTT	**Hallett**	**37.07**	**247**	P		**P**	**17 14 58.1**	**-0.1**
AS31	**Alice Springs**	**42.29**	**262**			**P**	**17 15 39.7**	**-0.7**
ASAR	**Alice Springs**	**42.29**	**262**	P		**P**	**17 15 39.6**	**-0.9**
	comp=Z,4.9nm,0.7s,baz=94,slow=8.0,SNR=94							
	comp=Z,4.9nm,0.7s							
ASAR	**Alice Springs**	**42.29**	**262**			**P**	**17 15 39.3**	**-1.2**
WR8	**Warramunga Arr**	**42.61**	**267**			**P**	**17 15 41.8**	**-1.2**
WR8				IAmb		IAmb	17 15 43.2	
	comp=Z,13nm,1.1s							
WRAB	**Tennant Creek**	**42.75**	**267**	P		**P**	**17 15 42.9**	**-1.2**
WRAB				IAmb		IAmb	17 15 44.3	
	comp=Z,17nm,1.1s							
WB0	**Warramunga Arr**	**42.75**	**267**			**P**	**17 15 43.0**	**-1.2**
WB0				IAmb		IAmb	17 15 44.3	
	comp=Z,11nm,0.8s							
WRA	**Warramunga Arr**	**42.76**	**267**	P		**P**	**17 15 42.8**	**-1.4**
	comp=Z,7.8nm,0.5s,baz=101,slow=8.0,SNR=133							
WRA				ScP		**ScP**	**17 20 31.6**	**+1.9**
	comp=Z,1.9nm,1.0s,baz=105,slow=3.7,SNR=7.2							
	comp=Z,7.8nm,0.5s							
WRA	**Warramunga Arr**	**42.76**	**267**	P		**P**	**17 15 42.6**	**-1.6**
JAY	**Jayapura**	**44.26**	**294**	P		**P**	**17 15 55.0**	**-1.0**
	comp=Z,9.9nm,0.7s,baz=121,slow=5.9,SNR=5.1							
	comp=Z,9.9nm,0.7s							
KNRA	**Kununurra**	**49.09**	**270**	P		**P**	**17 16 32.0**	**-0.6**
KNRA				IAmb		IAmb	17 16 33.4	
	comp=Z,19nm,1.0s							
FITZ	**Fitzroy Crossi**	**51.17**	**266**	P		**P**	**17 16 47.6**	**-0.3**
	comp=Z,9.7nm,0.8s,baz=97,slow=7.7,SNR=15							
	comp=Z,9.7nm,0.8s							
FAKI	**Fak Fak**	**51.25**	**287**	P		**P**	**17 16 47.2**	**-1.3**
FAKI				IAmb		IAmb	17 17 08.9	
	comp=Z,19nm,1.1s							
SIJI	**Sorong**	**53.12**	**289**	P		**P**	**17 17 01.1**	**-1.0**
	comp=Z,20nm,0.9s,baz=74,slow=7.1,SNR=13							
	comp=Z,20nm,0.9s							
SOEI	**Soe**	**55.33**	**275**	P		**P**	**17 17 16.1**	**-1.8**
SOEI				IAmb		IAmb	17 17 29.1	
	comp=Z,25nm,1.1s							
BATI	**Baumata**	**55.70**	**275**	P		**P**	**17 17 20.9**	**+0.6**
	comp=Z,13nm,0.6s,baz=111,slow=8.6,SNR=4.1							
	comp=Z,13nm,0.6s							
MORW	**Morawa**	**56.94**	**250**	P		**P**	**17 17 27.9**	**-0.7**
MORW				IAmb		IAmb	17 18 08.4	
	comp=Z,15nm,1.4s							
MMRI	**Maumere**	**57.61**	**276**	P		**P**	**17 17 32.5**	**-0.9**
MMRI				IAmb		IAmb	17 17 34.7	
	comp=Z,12nm,0.9s							
QSPA	**South Pole Qui**	**65.25**	**180**	P		**P**	**17 18 25.1**	**+2.2**
	comp=Z,2.0nm,0.7s,baz=5.9,slow=12,SNR=12							
	comp=Z,2.0nm,0.7s							
QSPA	**South Pole Qui**	**65.25**	**180**	P		**P**	**17 18 23.5**	**+0.6**
LEM	**Lembang**	**71.60**	**271**	P		**P**	**17 19 02.6**	**+0.2**
	comp=Z,8.1nm,0.5s,baz=156,slow=20,SNR=4.1							
	comp=Z,8.1nm,0.5s							
KSRS	**Korea Array**	**79.23**	**320**	P		**P**	**17 19 44.5**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=123,slow=6.4,SNR=3.4							
	comp=Z,0.8nm,0.8s							
CMAR	**Chiang Mai Arr**	**90.23**	**290**	P		**P**	**17 20 40.5**	**+1.7**
	comp=Z,1.2nm,0.9s,baz=152,slow=4.2,SNR=9.1							
	comp=Z,1.2nm,0.9s							
TXAR	**Lajitas Array**	**90.58**	**58**	P		**P**	**17 20 42.6**	**+2.2**
	comp=Z,0.6nm,0.8s,baz=208,slow=5.1,SNR=5.8							
	comp=Z,0.6nm,0.8s							
TXAR	**Lajitas Array**	**90.58**	**58**	P		**P**	**17 20 40.2**	**-0.2**
ILAR	**Eielson Array**	**92.85**	**13**	P		**P**	**17 20 50.3**	**+0.6**
	comp=Z,0.1nm,0.6s,baz=204,slow=4.0,SNR=1.4							
	comp=Z,0.1nm,0.6s							
ILAR	**Eielson Array**	**92.85**	**13**	P		**P**	**17 20 48.9**	**-0.9**
HFS	**Hagfors**	**143.54**	**349**	PKP		PKPab	17 27 06.5	-0.4
	comp=Z,2.4nm,0.5s,baz=41,slow=2.5,SNR=15							
AKASG	**Malin Array Be**	**145.98**	**327**	PKPbc		**PKPbc**	**17 27 13.9**	**-0.8**
	comp=Z,0.8nm,0.4s,baz=45,slow=4.2,SNR=8.1							
MMAI	**Mount Meron Ar**	**148.45**	**293**	PKPbc		**PKiKP**	**17 27 22.5**	**-0.7**
	comp=Z,1.0nm,0.4s,baz=83,slow=4.8,SNR=5.2							
BRTR	**Keskin Array B**	**148.46**	**306**	PKPbc		**PKPbc**	**17 27 22.0**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=110,slow=2.7,SNR=2.1							

NEIC ***25*** *17:17:03.2±1.9, 47°.55N±0°.02×92°.76W±0°.04, h0km±1km, ML2.9/12, Error ellipse: s-maj=4.8km s-min=3.3km az=73.0*
IDC ***25*** *17:17:05.9±4.5, 47°.60N×92°.82W, h0km, mbtmp3.0/1, ML3.7/1, Error ellipse: s-maj=43.8km s-min=18.1km az=88.0*

ISC 25 17:17:01.9±0.9, 47°.64N±0°.04×92°.68W±0°.04, h0km, n11, σ0§79/15, Minnesota

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EYMN	**Ely**	**0.85**	**69**			**Pn**	**17 17 21.2**	**0.0**
EYMN						**Sg**	**17 17 31.0**	**+1.6**
EYMN				IAML			17 17 38.4	
	223nm,1.1s							
E38A	**The Farm, Brul**	**1.29**	**143**			**Pg**	**17 17 25.9**	**-0.8**
E38A				IAML			17 17 47.6	
	248nm,0.5s							
E38A				IAML			17 17 47.7	
	231nm,0.6s							
EPLO	**Experimental L**	**2.15**	**342**

APC eS Sn 17 23 23.5 -1.2
PET Petropavlovsk 3.83 4 Pn 17 22 42.1 0.0
PET Sn Sn 17 23 23.3 -2.6
PET Petropavlovsk 3.83 4k *i* PN Pn 17 22 42.3 +0.1
PET eS Sn 17 23 24.8 -1.1
PET pmax pmax
comp=Z,5μm,0.5s
PET smax smax
comp=N,7μm,0.8s
PET smax smax
comp=E,7μm,0.7s
PET smax smax
comp=N,8μm,0.6s
PET smax smax
comp=E,8μm,0.9s
PET MLR MLR
comp=Z,2μm,13.0s
PET MLR MLR
comp=Z,2μm,12.0s
PET Petropavlovsk 3.83 4 *e*P Pn 17 22 42.3 +0.1
PET eS Sn 17 23 24.1 -1.8
PET Petropavlovsk 3.83 4 P Pn 17 22 42.3 +0.1
DALK Dalny 3.84 5 PN Pn 17 22 42.5 +0.2
DALK S Sn 17 23 24.5 -1.7
DALK Dalny 3.84 5 *e*P Pn 17 22 42.6 +0.2
DALK eS Sn 17 23 24.5 -1.7
INSR Institute 3.87 4 PN Pn 17 22 43.2 +0.5
INSR S Sn 17 23 25.3 -1.6
INSR Institute 3.87 4 *e*P Pn 17 22 43.2 +0.5
INSR eS Sn 17 23 25.3 -1.6
UGLR Uglovaya 4.02 5 PN Pn 17 22 45.2 +0.3
UGLR Uglovaya 4.02 5 *e*P Pn 17 22 45.3 +0.3
NLC Nalytchevo 4.03 10 PN Pn 17 22 43.8 -1.1
NLC Nalytchevo 4.03 10 *e*P Pn 17 22 43.8 -1.1
SPN Mys Shipunski 4.05 16 PN Pn 17 22 44.7 -0.6
SPN Mys Shipunski 4.05 16 *e*P Pn 17 22 44.7 -0.6
SPN eS Sn 17 23 29.0 -2.6
AVH Avacha 4.07 5 PN Pn 17 22 46.4 +0.8
AVH Avacha 4.07 5 *e*P Pn 17 22 46.4 +0.8
SMAR Somma 4.07 5 PN Pn 17 22 45.9 +0.2
SMAR Somma 4.07 5 *e*P Pn 17 22 46.0 +0.2
KOK Koryaka 4.09 4 PN Pn 17 22 46.8 +0.9
KOK S Sn 17 23 31.8 -0.8
KOK Koryaka 4.09 4 *e*P Pn 17 22 46.9 +0.9
KOK eS Sn 17 23 31.9 -0.8
KRER Koryakskii 4.11 5 PN Pn 17 22 46.9 +0.6
KRER Koryakskii 4.11 5 *e*P Pn 17 22 46.9 +0.6
KRX Arik 4.16 4 PN Pn 17 22 47.5 +0.6
KRX Arik 4.16 4 *e*P Pn 17 22 47.5 +0.6
GNL Ganaly 4.49 358 PN Pn 17 22 52.9 +1.5
GNL Ganaly 4.49 358 *e*P Pn 17 22 53.0 +1.5
KII Karymskiy 4.89 9 PN Pn 17 22 57.9 +1.0
KII Karymskiy 4.89 9 *e*P Pn 17 22 58.0 +1.0
TUMD Tumrok D 6.15 12 PN Pn 17 23 14.5 +0.4
TUMD Tumrok D 6.15 12 *e*P Pn 17 23 14.6 +0.4
TUMD eS Sn 17 24 20.8 -2.4
KMNR Kamenistaya 6.67 10 PN Pn 17 23 22.9 +1.6
KMNR Kamenistaya 6.67 10 *e*P Pn 17 23 23.0 +1.6
ESO Esso 6.73 2 PN Pn 17 23 23.5 +1.5
ESO Esso 6.73 2 *e*P Pn 17 23 23.5 +1.5
BZP Bezymyannyi-Pe 6.86 11 PN Pn 17 23 25.4 +1.5
BZP Bezymyannyi-Pe 6.86 11 *e*P Pn 17 23 25.5 +1.5
BZWR Bezymyannyi-We 6.90 11 PN Pn 17 23 26.3 +1.8
BZWR Bezymyannyi-We 6.90 11 *e*P Pn 17 23 26.4 +1.8
KOZ Kozyrevsk 6.93 8 PN Pn 17 23 25.4 +0.6
KOZ Kozyrevsk 6.93 8 *e*P Pn 17 23 25.4 +0.6
SRDR Sredinnyy 7.17 7 PN Pn 17 23 28.7 +0.5
SRDR Sredinnyy 7.17 7 *e*P Pn 17 23 28.8 +0.5
KLY Klyuchi 7.26 11 PN Pn 17 23 30.9 +1.6
KLY Klyuchi 7.26 11 *e*P Pn 17 23 30.9 +1.6
KLY eS Sn 17 24 49.9 -0.6
KBTR Krutoberegovo 7.54 20 PN Pn 17 23 33.0 -0.1
KBTR Krutoberegovo 7.54 20 *e*P Pn 17 23 33.1 -0.1
KBTR eS Sn 17 24 52.9 -4.5
KBG Krutoberegovo 7.56 19 PN Pn 17 23 33.0 -0.4
KBG Krutoberegovo 7.56 19 *e*P Pn 17 23 33.1 -0.4
KBG eS Sn 17 24 54.7 -3.2
SMKR Semkarok 7.64 14 PN Pn 17 23 35.2 +0.6
SMKR Semkarok 7.64 14 *e*P Pn 17 23 35.2 +0.6
BKI Bering 7.66 36 PN Pn 17 23 33.5 -1.3
BKI Bering 7.66 36 *e*P Pn 17 23 33.5 -1.3
KUR Kuril'sk 8.08 244 *e*PN Pn 17 23 39.1 -1.5
KUR pmax pmax
comp=Z,326nm,0.7s
KUR pmax pmax
comp=E,80nm,1.0s
KUR pmax pmax
comp=N,41nm,0.6s
SHO Shikotan 9.48 240 PN Pn 17 24 05.0 +5.2
SHO Shikotan 9.48 240 *e*P Pn 17 24 05.1 +5.3
PALN Palana 9.95 5 PN Pn 17 24 06.5 +0.4
PALN Palana 9.95 5 *e*P Pn 17 24 06.6 +0.4
TYV Tymovskoe 10.14 285 *e*PN Pn 17 24 11.0 +2.2
TYV pmax pmax
comp=Z,28nm,1.1s
TYV pmax pmax
comp=Z,300nm,3.0s
TYV MLR MLR
comp=Z,3μm,15.0s
OSSR Ossora 10.45 14 PN Pn 17 24 11.8 -1.1
OSSR Ossora 10.45 14 *e*P Pn 17 24 11.8 -1.1
OKH Okha 10.48 300 *de*PN Pn 17 24 11.3 -2.1
OKH MLR MLR
comp=N,1μm,14.0s
OKH MLR MLR
comp=E,1μm,14.0s
OKH MLR MLR
comp=Z,1μm,15.0s
UGL Uglegorsk 10.58 275 *e*PN Pn 17 24 17.6 +2.9
UGL pmax pmax
comp=Z,257nm,0.8s
UGL MLR MLR
comp=Z,2μm,13.0s
UGL MLR MLR
comp=E,4μm,13.0s
YSS Yuzhno-Sakhali 10.58 264 Pn 17 24 15.2 +0.4
YSS Yuzhno-Sakhali 10.58 264⇑ *e*PN Pn 17 24 15.8 +1.0
YSS pmax pmax
comp=Z,100nm,1.0s
YSS pmax pmax
comp=Z,400nm,4.3s
YSS pmax pmax
comp=N,300nm,3.9s
YSS pmax pmax
comp=E,200nm,4.6s
YSS MLR MLR
comp=N,900nm,15.0s
YSS MLR MLR
comp=Z,900nm,15.0s
SHEM Shemya Is, Ala 10.62 65 Pn Pn 17 24 14.1 -1.3
comp=Z,232nm,0.4s,baz=144,slow=2.0,SNR=54
SHEM Sn Sn 17 26 01.9 -11
comp=Z,23nm,0.3s,baz=291,slow=19,SNR=18
SHEM LR LR 17 27 52.1
comp=Z,721nm,20.5s,baz=288,slow=35
SMY Shemya 10.62 65 Pn 17 24 13.7 -1.7
SMY Sn Sn 17 26 04.2 -8.8
MA2 Magadan 11.24 340 Pn Pn 17 24 24.0 +0.2
comp=Z,6.1nm,0.3s,baz=146,slow=8.5,SNR=37
MA2 LR LR 17 29 17.0
comp=Z,1μm,19.6s,baz=166,slow=40
MA2 Magadan 11.24 340 Pn 17 24 23.3 -0.5
MA2 Magadan 11.24 340 *d* iPN Pn 17 24 23.6 -0.2
MA2 pmax pmax
comp=Z,66nm,1.0s
MA2 Magadan 11.24 340 P Pn 17 24 24.3 +0.5
comp=Z,1μmcomp=Z,89nm,0.8s
JKA Kamikawa-asahi 11.86 250 Pn 17 24 30.7 -1.7
ASAJ Asahikawa 11.87 250 Pn Pn 17 24 31.4 -1.0
comp=Z,1.3nm,0.3s,baz=76,slow=13,SNR=27
ASAJ LR LR 17 29 49.1
comp=Z,470nm,18.1s,baz=56,slow=41
comp=Z,33nm,0.7s
AMKA Amchitka 13.66 73 Pn 17 24 55.7 -1.1
GRNR Gornyy 14.09 285⇑ *i*P Pn 17 25 02.9 +0.1
GRNR pmax pmax
comp=Z,6.0nm,1.2s
GRNR MLR MLR
comp=E,790nm,14.0s
GRNR MLR MLR
comp=Z,920nm,14.0s
GRNR MLR MLR
comp=N,720nm,12.0s

SEY Seymchan 14.12 349 Pn Pn 17 25 03.6 +0.5
comp=N,0.8nm,0.3s,baz=151,slow=10,SNR=23
SEY LR LR 17 31 12.3
comp=N,951nm,20.5s,baz=151,slow=40
comp=N,29nm,1.1s
SEY Seymchan 14.12 349⇓ *e*P Pn 17 25 03.0 -0.1
SEY pmax pmax
comp=Z,41nm,1.3s
JTM Tenmabayashi 14.74 242 Pn Pn 17 25 03.0 -8.6
TEY Ternei 15.27 262 *e*P Pn 17 25 17.4 -1.2
KIWB Kanaga Island 15.87 71 Pn Pn 17 25 25.6 -0.8
ADK Adak 16.16 71 Pn 17 25 29.4 -0.6
ADK IAmb IAmb 17 25 30.3
comp=Z,168nm,1.6s
KLR Kul'dur 17.25 280 P Pn 17 25 43.7 -0.2
comp=Z,0.5nm,0.3s,baz=77,slow=12,SNR=18
KLR LR LR 17 32 54.1
comp=Z,972nm,18.8s,baz=86,slow=39
comp=Z,12nm,0.7s
KLR Kul'dur 17.25 280 *c i*P Pn 17 25 44.0 +0.2
USRK Ussuriysk Ar. 18.62 264 P P 17 25 58.2 -1.9
comp=Z,1.0nm,0.3s,baz=65,slow=11,SNR=20
comp=Z,24nm,0.9s
VLA Vladivostok 19.16 261⇓ *e*P P 17 26 05.3 -0.8
MAJO Matsushiro 19.29 236 P P 17 26 04.1 -3.5
MAJO IAmb IAmb 17 26 13.5
comp=Z,77nm,1.1s
MAJO Matsushiro 19.29 236 *c i*P P 17 26 05.7 -1.9
MAJO pmax pmax
comp=Z,86nm,1.1s
MJAR Matsushiro Arr 19.29 236 P P 17 26 05.5 -2.1
comp=Z,0.2nm,0.3s,baz=38,slow=8.5,SNR=22
comp=Z,11nm,1.0s
MJAR Matsushiro Arr 19.29 236 P 17 26 04.1 -3.5
MJB9 Matsu-Tunnel 19.29 236 P P 17 26 04.5 -3.1
MJB9 IAmb IAmb 17 26 14.5
comp=Z,82nm,1.1s
BILL Bilibino 19.31 9 P 17 26 07.1 -0.4
BILL IAmb IAmb 17 26 16.6
comp=Z,74nm,0.8s
BILL Bilibino 19.31 9 *d i*P P 17 26 07.8 +0.3
BILL pmax pmax
comp=Z,82nm,0.8s
BILL MLR MLR
comp=Z,421nm,13.0s
BILL Bilibino 19.31 9 *e*P P 17 26 07.8 +0.3
ZEA Zeya 19.71 295 *e*P P 17 26 10.9 -1.1
ZEA *e* 17 29 48.6
ZEA pmax pmax
comp=E,20nm,1.0s
ZEA pmax pmax
comp=N,10.0nm,0.7s
ZEA pmax pmax
comp=Z,40nm,0.8s
HEH HeiHe 19.86 285 *e*P P 17 26 12.5 -1.2
HEH pP Pn 17 26 17.5 +2.0
HEH S S 17 29 50.5 -4.8
HEH pmax pmax
comp=Z,21nm,1.3s
HEH L L
comp=Z,1μm,13.0s
HEH L L
comp=Z,680nm,14.2s
HEH L L
comp=Z,2μm,13.0s
MDJ Mudanjiang 20.02 268 P P 17 26 13.0 -2.4
MDJ pP sP 17 26 25.8 -0.2
MDJ S S 17 29 55.0 -3.5
MDJ pmax pmax
comp=Z,130nm,3.5s
MDJ L L
comp=Z,340nm,14.6s
MDJ L L
comp=Z,590nm,16.3s
MDJ L L
comp=Z,900nm,16.5s
PSTR Posyet 20.09 261⇑ *e*P P 17 26 16.5 +0.3
SPIA Saint Paul Isl 20.36 55 P P 17 26 18.8 -0.2
baz=261
YAK Yakutsk 20.37 320 P P 17 26 17.2 -1.9
comp=Z,262nm,0.8s,baz=108,slow=4.2,SNR=131
YAK LR LR 17 34 21.4
comp=Z,786nm,19.9s,baz=116,slow=37
comp=Z,262nm,0.8s
YAK Yakutsk 20.37 320 P 17 26 16.9 -2.2
YAK Yakutsk 20.37 320 *d i*P P 17 26 17.0 -2.2
YAK *e**PP pwP 17 26 33.1 -2.2
YAK *e*S S 17 30 01.9 -3.4
YAK *e**SS pS 17 30 24.4 +4.2
YAK pmax pmax
comp=Z,301nm,0.8s
YAK pmax pmax
comp=N,48nm,1.6s
YAK pmax pmax
comp=E,150nm,2.1s
YAK smax smax
comp=E,452nm,3.1s
YAK smax smax
comp=N,330nm,2.8s
JGF Kuroka 20.45 236 P 17 26 18.4 -1.8
INU Inuyama 20.82 236 P 17 26 21.9 -2.3
BNX BinXian 21.03 272 ⇓P P 17 26 25.8 -0.6
BNX pmax pmax
comp=N,32nm,0.8s
JHJ Hachijo jima 2 21.14 227 LR LR 17 33 07.1
comp=N,80nm,22.0s,baz=6.5,slow=33
GAMB Gambell 21.81 37 P 17 26 34.0 -0.5
GAMB Gambell 21.81 37 P P 17 26 35.2 +0.7
baz=242
M11K Mekoryuk 23.06 48 P P 17 26 48.6 +0.8
M11K Mekoryuk 23.06 48 P P 17 26 49.0 +1.1
baz=257,SNR=6.6
CN2 Changchun 23.07 269 P P 17 26 44.0 -4.1
CN2 S S 17 30 49.0 -7.6
CN2 pmax pmax
comp=N,30nm,0.9s
CN2 pmax pmax
comp=N,200nm,6.0s
CN2 L L
comp=N,600nm,14.0s
CN2 L L
comp=N,400nm,14.0s
CN2 L L
comp=N,500nm,16.0s
FALS False Pass 24.05 62 P P 17 26 57.6 +0.2
baz=273
TNA Tin City 24.07 35 P P 17 26 58.6 +1.1
TNA IAmb IAmb 17 27 01.2
comp=Z,66nm,1.0s
TNA Tin City 24.07 35 P P 17 26 58.8 +1.3
baz=244,SNR=17
K13K Kusilvak Mount 24.16 44 P P 17 26 59.4 +1.1
baz=265,SNR=24
M13K Dall Lake 24.45 48 P P 17 27 02.5 +1.4
baz=260,SNR=7.4
F14K Arctic Creek 24.64 36 P P 17 27 04.3 +1.6
baz=246,SNR=20
ANM Nome 24.66 38 P P 17 27 03.6 +0.6
ANM Nome 24.66 38 P P 17 27 04.3 +1.4
baz=249,SNR=48
KSRS Korea Array 24.79 253 P P 17 27 04.6 +0.3
comp=Z,17nm,0.9s,baz=52,slow=9.7,SNR=35
KSRS LR LR 17 37 31.0
comp=Z,324nm,18.4s,baz=50,slow=38
comp=Z,17nm,0.9s
KS19 Wonju Array Si 24.80 253 P P 17 27 02.7 -1.7
KS19 IAmb IAmb 17 27 14.1
comp=Z,54nm,1.1s
KSAR Wonju Array Be 24.82 253 P P 17 27 03.8 -0.9
J14K Nanvaranak Lak 24.86 43 P P 17 27 05.8 +1.0
baz=255
L14K Kuka Creek 24.94 46 P P 17 27 06.8 +1.3
baz=259,SNR=10.0
M14K Bethel 25.18 48 P P 17 27 08.2 +0.6
M14K Bethel 25.18 48 P P 17 27 08.7 +1.0
baz=261,SNR=9.3
N14K Kuskokwak Cree 25.20 50 IAmb IAmb 17 27 14.8
comp=Z,55nm,0.8s
N14K Kuskokwak Cree 25.20 50 P P 17 27 09.1 +1.3
baz=263,SNR=8.1
O14K Tigyukauivet M 25.34 51 P P 17 27 10.1 +1.0
baz=266,SNR=8.2
G15K Niukluk 25.35 37 P P 17 27 10.3 +1.1
baz=250
F15K North Star Dit 25.37 36 P P 17 27 10.7 +1.4
baz=248,SNR=22

L15K Ungalak Mounta 25.57 46 P P 17 27 11.9 +0.7
baz=260
INCN Inchon 25.59 255 P P 17 27 10.8 -0.8
INCN IAmb IAmb 17 27 18.5
comp=Z,36nm,0.8s
INCN Inchon 25.59 255 P P 17 27 11.7 +0.1
K15K Wolf Creek Mou 25.67 44 P P 17 27 13.6 +1.4
baz=258,SNR=9.2
SDPT Sand Point 25.71 60 P P 17 27 13.3 +0.8
baz=274
M15K Kasigluk River 25.79 48 P P 17 27 14.2 +0.9
baz=262,SNR=24
TJN Taejon 25.81 252 P P 17 27 12.4 -1.2
JNU Nakatsue 25.91 242 LR LR 17 38 58.1
comp=Z,158nm,18.2s,baz=34,slow=40
H16K Elim 25.96 39 P P 17 27 15.4 +0.7
baz=253,SNR=26
N15K Kwethluk River 26.02 49 P P 17 27 16.4 +1.1
baz=264,SNR=8.2
O15K Ungalikthiuk R 26.07 52 P P 17 27 16.6 +0.8
baz=266,SNR=8.9
G16K Koyuk River 26.15 37 P P 17 27 16.9 +0.5
baz=251,SNR=5.7
TIXI Tiksi 26.21 339 LR LR 17 39 52.4
comp=Z,405nm,19.4s,baz=144,slow=42
TIXI Tiksi 26.21 339 P P 17 27 15.3 -1.6
TIXI Tiksi 26.21 339 *de*P P 17 27 16.4 -0.5
TIXI pmax pmax
comp=Z,81nm,0.7s
TIXI MLR MLR
comp=Z,733nm,15.0s
C16K Lisburne Hills 26.22 30 P P 17 27 17.6 +0.6
baz=242
CHNA Chernabura Isl 26.26 61 P P 17 27 18.4 +0.9
baz=275
J16K Anvik River 26.30 42 P P 17 27 19.1 +1.3
baz=257,SNR=11
I17K Unalakleet 26.40 41 P P 17 27 19.8 +1.1
I17K Unalakleet 26.40 41 P P 17 27 19.8 +1.1
baz=256,SNR=5.2
L16K Owhat River 26.52 46 P P 17 27 20.2 +0.4
baz=262,SNR=7.0
M16K Timber Creek 26.68 48 P P 17 27 21.9 +0.7
baz=263,SNR=10
N16K Nishlik Lake 26.71 49 P P 17 27 22.2 +0.7
baz=265,SNR=15
D17K Noatak River 26.73 32 P P 17 27 22.8 +1.1
baz=246,SNR=76
CHGN Chignik 26.82 58 P P 17 27 23.5 +1.1
baz=273
G17K Kiwalik Mounta 26.86 37 P P 17 27 23.9 +1.1
baz=253,SNR=20
F17K Baldwin Pennin 26.93 35 P P 17 27 24.6 +1.2
baz=250,SNR=28
E17K Hotham Inlet 26.94 34 P P 17 27 25.0 +1.5
baz=248
RDOG Red Dog Mine 26.94 31 P P 17 27 23.1 -0.4
RDOG IAmb IAmb 17 27 25.7
comp=Z,52nm,1.0s
RDOG Red Dog Mine 26.94 31 P P 17 27 24.6 +1.1
baz=245,SNR=16
O16K Kokwok River B 26.98 51 P P 17 27 24.3 +0.3
baz=267
J17K VABM Dome 27.00 42 P P 17 27 24.8 +0.7
baz=259
H17K Granite Mounta 27.00 39 P P 17 27 24.9 +0.8
baz=255,SNR=14
P16K Nushagak River 27.01 52 IAmb IAmb 17 27 26.8
comp=Z,38nm,1.0s
P16K Nushagak River 27.01 52 P P 17 27 25.1 +0.9
baz=268
C17K DeLong Mountai 27.03 30 P P 17 27 25.3 +1.0
baz=244,SNR=50
L17K Donlin 27.13 45 P P 17 27 26.5 +1.2
baz=262,SNR=9.6
BOD Bodaibo 27.21 305 *e*P P 17 27 25.1 -0.9
BOD pmax pmax
comp=Z,32nm,1.2s
K17K Iditarod 27.22 44 P P 17 27 27.0 +0.9
baz=261
M17K Holitna River 27.45 47 P P 17 27 29.3 +1.2
baz=264,SNR=17
N17K Nushagak Hills 27.50 49 P P 17 27 29.4 +0.8
baz=266
O17K Koliganek Bris 27.50 50 P P 17 27 29.2 +0.6
baz=268
E18K Tukpahlearik C 27.51 33 P P 17 27 29.9 +1.3
baz=249,SNR=29
F18K Selawik 27.58 35 P P 17 27 30.4 +1.1
baz=252,SNR=33
H18K Honhosa River 27.69 39 P P 17 27 31.1 +0.8
baz=256,SNR=19
G18K Tagagawik 27.77 37 P P 17 27 31.7 +0.7
baz=254,SNR=21
C18K Utukok River 27.77 31 P P 17 27 31.9 +0.9
baz=246,SNR=81
P17K Kvichak River 27.82 52 P P 17 27 31.1 -0.3
P17K IAmb IAmb 17 27 51.1
comp=Z,128nm,1.8s
P17K Kvichak River 27.82 52 P P 17 27 32.0 +0.6
baz=269
L18K Granite Mounta 27.89 45 P P 17 27 33.4 +1.3
baz=263,SNR=7.4
DL2 Dalian 27.98 262 P P 17 27 34.3 +1.2
DL2 S S 17 32 20.5 +5.6
DL2 pmax pmax
comp=Z,45nm,0.8s
DL2 pmax pmax
comp=Z,300nm,3.9s
DL2 L L
comp=Z,580nm,13.4s
DL2 L L
comp=Z,410nm,13.0s
DL2 L L
comp=Z,470nm,12.1s
J18K Innoko River 28.05 43 P P 17 27 34.1 +0.5
baz=261
Q17K Contact Creek 28.11 54 P P 17 27 34.7 +0.5
baz=272
CIT Chita 28.13 293 *e*P P 17 27 34.5 +0.1
CIT *e* 17 27 46.9
CIT *e* 17 27 54.3
CIT *e* 17 28 30.8
CIT *e* 17 28 43.7
CIT pmax pmax
comp=Z,95nm,1.2s
N18K Kilae Creek 28.14 49 P P 17 27 35.7 +1.3
baz=267,SNR=10
GCSA Galena City Sc 28.22 40 P P 17 27 34.9 0.0
baz=258
M18K Stony River 28.23 47 P P 17 27 35.9 +0.8
baz=266,SNR=7.1
F19K Shaleruckik Mo 28.37 35 P P 17 27 36.7 +0.4
baz=254,SNR=17
P18K Big Mountain, 28.44 51 P P 17 27 37.3 +0.2
P18K Big Mountain, 28.44 51 P P 17 27 37.5 +0.4
baz=270
G19K Purcell Mounta 28.45 37 P P 17 27 37.4 +0.4
baz=256,SNR=9.2
O18K Koktuh Hills 28.45 50 P P 17 27 36.9 -0.2
O18K IAmb IAmb 17 28 10.7
comp=Z,37nm,1.4s
O18K Koktuh Hills 28.45 50 P P 17 27 37.3 +0.1
baz=269
A19K Wainwright 28.46 28 P P 17 27 38.4 +1.3
baz=244,SNR=134
C19K Lookout Ridge 28.48 30 P P 17 27 38.2 +0.9
baz=248
H19K Roundabout Mou 28.56 38 P P 17 27 38.9 +0.9
baz=258,SNR=16
Q18K Katmai Hardscr 28.56 53 P P 17 27 38.1 -0.1
baz=272
J19K Poorman 28.62 42 P P 17 27 38.4 -0.2
baz=261,SNR=20
L19K White Mountain 28.75 45 P P 17 27 40.5 +0.8
baz=265,SNR=5.7
E19K Redstone River 28.75 34 P P 17 27 40.5 +0.8
baz=253
D19K Kuna River 28.76 32 P P 17 27 40.7 +0.9
baz=250
N19K Bonanza Creek 28.84 48 P P 17 27 41.2 +0.5
baz=268
O19K Port Alsworth 28.91 50 P P 17 27 39.7 -1.4
O19K Port Alsworth 28.91 50 P P 17 27 41.4 +0.3
baz=269
M19K Big River Lodg 28.94 46 P P 17 27 42.5 +1.1
baz=266

XLT	XiLinHaoTe	29.16	276	eP		P		17 27 44.5	+0.8
XLT				pP		pP		17 27 48.5	-2.5
XLT				S		S		17 32 36.0	+2.4
XLT				pmax		pmax			
	comp=Z,36nm,0.9s								
XLT				pmax		pmax			
	comp=Z,250nm,5.0s								
XLT				L		L			
	comp=Z,97nm,13.6s								
XLT				L		L			
	comp=Z,760nm,14.8s								
XLT				L		L			
	comp=Z,660nm,17.9s								
H20K	Anotleneega Mo	29.19	39	P		P		17 27 44.1	+0.5
	baz=259,SNR=9.0								
F20K	Avaraart Lake	29.20	35	P		P		17 27 44.1	+0.5
	baz=256,SNR=8.7								
K20K	Telida	29.22	43	P		P		17 27 44.4	+0.5
	baz=264,SNR=15								
I20K	Naaghedeneel	29.24	40	P		P		17 27 44.4	+0.4
	baz=261								
Q19K	Cape Douglas,	29.26	52	P		P		17 27 44.4	+0.1
	baz=272								
J20K	Nowinta River	29.29	41	P		P		17 27 45.3	+0.9
	baz=262,SNR=17								
D20K	Etivluk River	29.35	32	P		P		17 27 45.8	+0.8
	baz=252,SNR=50								
E20K	Nigu River	29.36	33	P		P		17 27 46.1	+0.9
	baz=253,SNR=26								
P19K	Oil Pt	29.45	51	P		P		17 27 46.7	+0.6
	baz=271								
ILSW	Iliamna Southw	29.49	50	P		P		17 27 48.1	+1.6
M20K	Styx River	29.54	46	P		P		17 27 48.0	+1.2
	baz=267,SNR=5.3								
OHAK	Old Harbor	29.56	56	P		P		17 27 44.6	-2.3
OHAK				IAmb		IAmb		17 27 52.4	
	comp=Z,31nm,1.1s								
OHAK	Old Harbor	29.56	56	P		P		17 27 47.4	+0.4
	baz=276								
B20K	Meade River	29.61	29	P		P		17 27 48.5	+1.2
	baz=249,SNR=93								
IMAR	Indian Mountai	29.74	38	P		P		17 27 48.4	-0.1
KDAK	Kodiak Island	29.89	54	P		P		17 27 49.2	-0.6
KDAK				IAmb		IAmb		17 27 52.6	
	comp=Z,19nm,0.8s								
KDAK	Kodiak Island	29.89	54	P		P		17 27 49.3	-0.6
	baz=275								
Q20K	Shuyak Island	29.93	53	P		P		17 27 50.7	+0.5
	baz=274								
G21K	Allakaket	29.94	37	P		P		17 27 51.1	+0.8
	baz=259,SNR=9.8								
SPCR	Spurr Chakacha	29.96	48	P		P		17 27 51.2	+0.7
	baz=269								
N20K	Mount Spurr	29.96	48	P		P		17 27 50.9	+0.4
	baz=269								
CHUM	Lake Minchumin	30.05	42	P		P		17 27 52.1	+0.8
	baz=265								
H21K	Melozitna Rive	30.07	39	P		P		17 27 52.4	+0.9
	baz=261,SNR=18								
F21K	Alatna River	30.09	35	P		P		17 27 52.1	+0.5
	baz=258,SNR=9.3								
C21K	Knifeblade Rid	30.12	31	P		P		17 27 53.1	+1.3
	baz=253,SNR=56								
E21K	Killik River	30.20	33	P		P		17 27 53.1	+0.5
	baz=255								
H11N2	WAKE ISLAND Hy	30.23	164	T		T		17 59 37.5	
	baz=352								
H11N3	WAKE ISLAND Hy	30.25	164	T		T		17 59 37.5	
	baz=352								
H11N1	WAKE ISLAND Hy	30.25	164	T		T		17 59 37.5	
	baz=352								
A21K	Barrow	30.27	27	P		P		17 27 54.0	+1.0
	baz=247,SNR=7.6								
SKT	Skwentna	30.30	46	P		P		17 27 53.8	+0.3
	baz=269								
B21K	Ikpikpuk River	30.32	31	P		P		17 27 54.8	+1.3
	baz=252								
I21K	Tanana	30.34	40	P		P		17 27 54.8	+1.0
	baz=263,SNR=12								
CAPN	Captain Cook N	30.47	48	P		P		17 27 56.2	+1.2
	baz=271								
A22K	Sinclair Lake	30.65	28	P		P		17 27 57.7	+1.3
	baz=250,SNR=181								
BPAW	Bear Paw Mtn.	30.66	42	P		P		17 27 56.4	-0.2
BPAW	Bear Paw Mtn.	30.66	42	P		P		17 27 57.1	+0.5
	baz=266								
H22K	Ishtalitna Cre	30.69	38	P		P		17 27 58.2	+1.3
	baz=262,SNR=11								
BRSE	Bradley Lake S	30.71	50	P		P		17 27 58.2	+1.0
	baz=273								
MLY	Manley	30.85	40	P		P		17 27 59.2	+0.9
	baz=264,SNR=8.3								
CUT	Chulitna	30.90	45	P		P		17 27 59.0	+0.3
	baz=269								
E22K	Anaktuvuk Pass	30.91	34	P		P		17 27 59.7	+0.8
	baz=258								
TRF	Thorofare Moun	30.92	43	P		P		17 27 59.6	+0.5
	baz=267								
B22K	Teshekpuk Lake	30.93	29	P		P		17 27 59.8	+0.9
	baz=253								
BJI2	Beijing	30.95	269	P		P		17 28 02.8	+3.4
BJI2				pmax		pmax			
	comp=Z,4.0nm,0.8s								
O22K	Cooper Landing	31.18	49	P		P		17 28 00.9	-0.3
O22K	Cooper Landing	31.18	49	P		P		17 28 00.9	-0.3
	baz=273								
SEW	Seward	31.34	50	P		P		17 28 03.3	+0.7
	baz=274								
G23K	Bananza Creek	31.34	37	P		P		17 28 03.3	+0.6
	baz=262,SNR=13								
COLD	Coldfoot	31.35	36	P		P		17 28 03.3	+0.6
	baz=261,SNR=11								
H11S1	WAKE ISLAND Hy	31.39	164	T		T		18 01 03.3	
	baz=355								
H11S3	WAKE ISLAND Hy	31.40	164	T		T		18 01 03.3	
	baz=355								
H11S2	WAKE ISLAND Hy	31.41	164	T		T		18 01 03.3	
	baz=355								
PMR	Palmer	31.44	47	P		P		17 28 04.3	+0.9
	baz=271								
I23K	Minto, Yukon-K	31.44	40	IAmb		IAmb		17 28 06.9	
	comp=Z,41nm,1.8s								
I23K	Minto, Yukon-K	31.44	40	P		P		17 28 04.5	+1.0
	baz=265,SNR=5.4								
D23K	Nanushuk River	31.50	33	P		P		17 28 05.1	+1.2
	baz=258								
NEA2	Nenana	31.52	41	P		P		17 28 05.1	+0.8
	baz=267,SNR=11								
GHO	Glory Hole Cre	31.53	46	IAmb		IAmb		17 28 07.0	
	comp=Z,38nm,1.5s								
MCK	McKinley	31.54	43	IAmb		IAmb		17 28 06.4	
	comp=Z,33nm,1.1s								
MCK	McKinley	31.54	43	P		P		17 28 04.4	0.0
	baz=268,SNR=19								
RND	Reindeer	31.57	43	IAmb		IAmb		17 28 05.8	
	comp=Z,28nm,1.0s								
WAT1	Susitna Watana	31.70	44	P		P		17 28 05.7	-0.1
	baz=270								
E23K	Chandalar	31.71	34	P		P		17 28 07.2	+1.3
	baz=260								
C23K	Itkillik River	31.72	31	P		P		17 28 07.0	+1.2
	baz=256,SNR=70								
KNK	Knik Glacier	31.76	47	IAmb		IAmb		17 28 07.5	
	comp=Z,36nm,1.0s								
KNK	Knik Glacier	31.76	47	P		P		17 28 06.4	0.0
	baz=272,SNR=9.1								
SML	Sawmill	31.81	46	P		P		17 28 07.0	+0.2
	baz=272,SNR=19								
TOLK	Toolik Lake Re	31.83	33	P		P		17 28 07.9	+1.0
	baz=260,SNR=20								
COLA	College	32.06	41	P		P		17 28 08.6	-0.3
COLA	College	32.06	41	*d i* P		P		17 28 09.6	+0.7
COLA				pmax		pmax			
	comp=Z,32nm,1.1s								
COLA	College	32.06	41	P		P		17 28 09.5	+0.7
COLA				pP		sP		17 28 19.9	+0.2
COLA				sP		pwP		17 28 24.3	-0.7
WAT6	Susitna Watana	32.07	45	P		P		17 28 09.6	+0.4
	baz=271,SNR=7.2								
M23K	Glacier View	32.10	46	P		P		17 28 10.6	+1.3
	baz=272,SNR=5.6								
H24K	Noodor Dome	32.11	39	P		P		17 28 10.8	+1.3
	baz=266,SNR=7.7								
E24K	Your Creek	32.13	34	P		P		17 28 10.8	+1.2
	baz=262,SNR=62								
D24K	Happy Valley	32.19	32	P		P		17 28 11.1	+1.1
	baz=260,SNR=36								
DHY	Denali Highway	32.23	44	IAmb		IAmb		17 28 11.9	
	comp=Z,23nm,1.0s								
DHY	Denali Highway	32.23	44	P		P		17 28 10.7	+0.1
	baz=271,SNR=17								
POKR	Poker Plat Res	32.25	40	P		P		17 28 11.7	+1.1
	baz=267								
F24K	Squaw Lake	32.28	36	P		P		17 28 11.6	+0.7
	baz=263,SNR=13								
SCM	Sheep Creek Mo	32.29	46	IAmb		IAmb		17 28 13.0	
	comp=Z,38nm,1.2s								
SCM	Sheep Creek Mo	32.29	46	P		P		17 28 11.4	+0.4
	baz=273,SNR=7.2								
C24K	Franklin Bluff	32.34	31	IAmb		IAmb		17 28 13.4	
	comp=Z,46nm,1.0s								
C24K	Franklin Bluff	32.34	31	P		P		17 28 12.3	+1.0
	baz=259,SNR=35								
G24K	Hadweenzic Riv	32.35	37	P		P		17 28 12.6	+1.1
	baz=265,SNR=34								
P23K	Montague Islan	32.37	50	P		P		17 28 13.2	+1.4
	baz=275								
HDA	Harding Lake	32.43	41	P		P		17 28 13.4	+1.2
	baz=269,SNR=8.8								
ILAR	Eielson Array	32.47	41	P		P		17 28 12.3	-0.2
	comp=Z,4.3nm,0.9s,baz=256,slow=9.1,SNR=33								
ILAR				LR		LR		17 42 09.9	
	comp=Z,242nm,19.5s,baz=264,slow=38								
	comp=Z,4.3nm,0.9s								
ILAR	Eielson Array	32.47	41	P		P		17 28 11.6	-0.9
M24K	Tolsona, Glenn	32.82	46	IAmb		IAmb		17 28 17.7	
	comp=Z,33nm,0.9s								
M24K	Tolsona, Glenn	32.82	46	P		P		17 28 16.6	+0.9
	baz=273,SNR=6.0								
G25K	Bearman Lake	32.90	37	P		P		17 28 17.7	+1.5
	baz=266,SNR=9.4								
K24K	Donnelly Dome	32.94	43	IAmb		IAmb		17 28 18.2	
	comp=Z,38nm,1.0s								
K24K	Donnelly Dome	32.94	43	P		P		17 28 16.7	0.0
	baz=271,SNR=12								
Q23K	Middleton Isla	32.97	51	P		P		17 28 17.4	+0.6
	baz=277								
KLU	Klutina	32.98	47	IAmb		IAmb		17 28 18.6	
	comp=Z,21nm,0.9s								
KLU	Klutina	32.98	47	P		P		17 28 17.7	+0.6
	baz=274,SNR=9.4								
PRP	Porcupine Dome	33.07	39	P		P		17 28 18.7	+0.8
	baz=268,SNR=9.5								
DIV	Divide	33.08	48	IAmb		IAmb		17 28 19.4	
	comp=Z,18nm,0.8s								
D25K	Kavik River	33.08	32	P		P		17 28 18.7	+0.9
	baz=262								
PAX	Paxson	33.10	44	P		P		17 28 18.9	+0.7
	baz=272,SNR=11								
J25K	Salcha River,	33.12	41	P		P		17 28 18.7	+0.5
	baz=270,SNR=7.7								
EYAK	Cordova Ski Ar	33.14	49	P		P		17 28 19.8	+1.4
	baz=276								
F25K	Christian Rive	33.14	36	P		P		17 28 20.0	+1.6
	baz=265,SNR=15								
E25K	Arctic Village	33.22	35	IAmb		IAmb		17 28 21.9	
	comp=Z,54nm,1.5s								
E25K	Arctic Village	33.22	35	P		P		17 28 20.7	+1.6
	baz=264,SNR=34								
HNS	HongShan	33.34	266	⇓P		P		17 28 20.8	+0.5
HNS				S		S		17 33 41.8	+3.1
HNS				pmax		pmax			
	comp=Z,28nm,1.3s								
HNS				L		L			
	comp=Z,380nm,13.5s								
HNS				L		L			
	comp=Z,240nm,15.9s								
HNS				L		L			
	comp=Z,290nm,16.7s								
RIDG	Independent Ri	33.36	43	IAmb		IAmb		17 28 21.9	
	comp=Z,35nm,1.1s								
RIDG	Independent Ri	33.36	43	P		P		17 28 20.2	-0.2
	baz=272,SNR=18								
ULN	Ulaanbaatar	33.37	288	P		P		17 28 19.9	-0.8
ULN				IAmb		IAmb		17 28 24.5	
	comp=Z,15nm,0.8s								
ULN	Ulaanbaatar	33.37	288	P		P		17 28 20.5	-0.2
ULN	Ulaanbaatar	33.37	288	P		P		17 28 20.3	-0.4
ULN	Ulaanbaatar	33.37	288	P		P		17 28 20.9	+0.2
ULN	Ulaanbaatar	33.37	288	P		P		17 28 21.0	+0.2
ULN				pP		sP		17 28 31.6	-0.2
ULN				PcP		PcP		17 31 01.6	-0.2
BMAR	Burnt Mountain	33.54	36	P		P		17 28 22.4	+0.5
HHC	Hu-ho-hao-te	33.54	274	⇓ *i* P		P		17 28 24.0	+1.7
HHC				sP		sP		17 28 35.5	+2.2
HHC				S		S		17 33 44.5	+2.4
HHC				pmax		pmax			
	comp=Z,12nm,1.1s								
HHC				L		L			
	comp=Z,410nm,13.1s								
HHC				L		L			
	comp=Z,590nm,14.1s								
HHC				L		L			
	comp=Z,650nm,13.1s								
N25K	Chitina, Valde	33.60	47	P		P		17 28 23.4	+0.9
	baz=275,SNR=8.8								
IRK	Irkutsk	33.61	296	eP		P		17 28 19.9	-2.8
IRK				pmax		pmax			
	comp=Z,50nm,1.4s								
BMRM	Bremner River	33.66	48	IAmb		IAmb		17 28 24.7	
	comp=Z,21nm,1.0s								
BMRM	Bremner River	33.66	48	P		P		17 28 23.8	+0.8
	baz=276,SNR=5.2								
C26K	Camden Bay	33.67	31	P		P		17 28 24.8	+1.9
	baz=262,SNR=84								
F26K	Sheenjek River	33.72	36	P		P		17 28 25.1	+1.6
	baz=266,SNR=15								
SCRK	Sand Creek	33.73	42	P		P		17 28 23.5	-0.2
	baz=272,SNR=18								
SONM	Songino Array	33.79	288	P		P		17 28 24.4	0.0
	comp=Z,4.2nm,0.7s,baz=72,slow=8.8,SNR=33								
SONM				LR		LR		17 43 10.3	
	comp=Z,322nm,18.2s,baz=76,slow=38								
	comp=Z,4.2nm,0.7s								
SONM	Songino Array	33.79	288	P		P		17 28 23.7	-0.6
G26K	Porcupine Rive	33.82	37	P		P		17 28 25.8	+1.5
	baz=268,SNR=37								
KAIM	Kayak Island	33.87	50	P		P		17 28 26.4	+1.6
	baz=278								
NJ2	Nanjing	33.97	254	eP		P		17 28 26.0	+0.1
NJ2				pP		pP		17 28 32.3	-1.1
NJ2				S		S		17 33 53.0	+4.4
NJ2				pmax		pmax			
	comp=Z,39nm,0.7s								
NJ2				pmax		pmax			
	comp=Z,300nm,3.8s								
NJ2				L		L			
	comp=Z,860nm,16.6s								
NJ2				L		L			
	comp=Z,930nm,15.6s								
NJ2				L		L			
	comp=Z,1μm,15.2s								
GLB	Gilahina Butte	33.99	47	IAmb		IAmb		17 28 28.6	
	comp=Z,37nm,1.5s								
C27K	Jago River	34.05	32	P		P		17 28 27.7	+1.5
	baz=264,SNR=55								
TLY	Talaya	34.15	295	LR		LR		17 43 20.8	
	comp=Z,346nm,19.2s,baz=54,slow=38								
TLY	Talaya	34.15	295	P		P		17 28 26.3	-1.0
TLY				IAmb		IAmb		17 28 32.0	
	comp=Z,20nm,0.8s								
TLY	Talaya	34.15	295	*c i* P		P		17 28 28.2	+0.9
TLY				pmax		pmax			
	comp=Z,68nm,1.7s								
TLY				MLR		MLR			
	comp=Z,419nm,13.0s								
TLY	Talaya	34.15	295	P		P		17 28 26.1	-1.3
VRDI	Verde Repeater	34.19	47	IAmb		IAmb		17 28 29.5	
	comp=Z,13nm,0.8s								
M26K	Nabesna, AK	34.28	45	P		P		17 28 29.7	+1.3
	baz=275,SNR=27								
MCARA	McCarthy VSAT	34.37	47	IAmb		IAmb		17 28 57.1	
	comp=Z,14nm,0.9s								
MCARA	McCarthy VSAT	34.37	47	P		P		17 28 30.2	+1.1
	baz=277								
CRQE	Cirque	34.42	48	P		P		17 28 30.6	+1.0
	baz=278,SNR=9.3								
TGL	Tana Glacier	34.55	48	IAmb		IAmb		17 28 32.8	
	comp=Z,21nm,1.0s								
G27K	Doyon Strip	34.66	37	P		P		17 28 33.2	+1.6
	baz=270,SNR=9.7								
BTO2	Baotou	34.70	275	eP		P		17 28 33.8	+1.5
BTO2				pP		pP		17 28 38.3	-1.5
BTO2				sP		sP		17 28 40.8	-2.6
BTO2				S		S		17 34 02.0	+2.0
BTO2				sS		pS		17 34 10.5	+1.7
BTO2				SS		SnSn		17 36 13.3	-0.8
BTO2				pmax		pmax			
	comp=Z,13nm,1.0s								
BTO2				pmax		pmax			
	comp=Z,310nm,4.9s								
BTO2				L		L			
	comp=Z,2μm,15.5s								
BTO2				L		L			
	comp=Z,890nm,14.3s								
BTO2				L		L			
	comp=Z,1μm,17.1s								
E27K	Coleen River	34.71	35	P		P		17 28 33.4	+1.4
	baz=268,SNR=27								
H27K	Steamboat Moun	34.72	38	P		P		17 28 33.5	+1.4
	baz=271,SNR=10								
L27K	Beaver Creek,	34.76	44	P		P		17 28 34.0	+1.5
	baz=275,SNR=46								
BCAR	Beaver Creek A	34.77	44	P		P		17 28 32.9	+0.3
ZAK	Zakamensk	34.79	293	eP		P		17 28 33.2	+0.2
ZAK				pmax		pmax			
	comp=Z,36nm,1.3s								
M27K	Edge Creek, AK	34.80	45	P		P		17 28 34.5	+1.5
	baz=276,SNR=12								
D27M	Malcolm River	34.98	33	P		P		17 28 36.0	+1.6
	baz=267,SNR=22								
MESA	MESA	35.06	49	P		P		17 28 36.5	+1.2
	baz=279								
BARN	Barnard Glacie	35.07	47	IAmb		IAmb		17 28 37.6	
	comp=Z,18nm,0.8s								
GRNC	Granite Creek	35.07	48	IAmb		IAmb		17 28 37.6	
	comp=Z,33nm,0.9s								
CTG	Chitna Glacier	35.24	47	P		P		17 28 38.1	+1.4
	baz=279,SNR=13								
CTGM	Chitina Glacie	35.24	47	IAmb		IAmb		17 28 39.0	
	comp=Z,24nm,0.8s								
BVCY	Beaver Creek	35.27	45	P		P		17 28 38.3	+1.4
	baz=277,SNR=7.7								
F28M	Old Crow	35.35	36	IAmb		IAmb		17 28 40.5	
	comp=Z,34nm,1.1s								
F28M	Old Crow	35.35	36	P		P		17 28 39.3	+1.7
	baz=270,SNR=27								
I28M	Miner Creek	35.40	39	P		P		17 28 38.7	+0.6
	baz=274,SNR=18								
LOGN	Logan Glacier	35.42	48	IAmb		IAmb		17 28 44.1	
	comp=Z,21nm,0.8s								
E28M	Babbage River	35.48	34	P		P		17 28 40.2	+1.6
	baz=269,SNR=26								
YUK3	Moose Creek	35.54	46	P		P		17 28 40.3	+0.9
	baz=278,SNR=26								
D28M	Stokes Point	35.78	33	P		P		17 28 42.2	+1.1
	baz=269								
O28M	Mount Upton	35.82	48	P		P		17 28 43.0	+1.0
	baz=280,SNR=14								
PCA	Pinnacle	35.91	49	IAmb		IAmb		17 28 44.2	
	comp=Z,19nm,1.0s								
PINM	Pinnacle	35.91	49	P		P		17 28 43.1	+0.6
	baz=281								
YUK8	Steele Glacier	35.94	47	P		P		17 28 44.4	+1.4
	baz=280,SNR=5.7								
H29M	Whitestone	36.00	38	P		P		17 28 44.5	+1.4
	baz=274								
E29M	Blow River	36.09	34	P		P		17 28 45.7	+1.9
	baz=271,SNR=48								
I29M	Ogilvie Camp,	36.09	40	P		P		17 28 44.7	+0.9
	baz=275,SNR=8.2								
G29M	Pine Creek	36.09	37	P		P		17 28 45.5	+1.6
	baz=273								
J29N	Klondike Camp	36.21	41	P		P		17 28 46.1	+1.1
	baz=276								
M29M	Somme Creek	36.37	44	IAmb		IAmb		17 28 49.0	
	comp=Z,14nm,0.9s								
M29M	Somme Creek	36.37	44	P		P		17 28 47.6	+1.3
	baz=279,SNR=17								
L29M	L29M	36.42	43	P		P		17 28 48.7	+1.9
	baz=278,SNR=38								
YUK4	Talbot Arm	36.46	46	P		P		17 28 48.5	+1.1
	baz=280,SNR=9.6								
K29M	Barlow Dome	36.59	42	P		P		17 28 49.6	+1.3
	baz=278,SNR=24								
EPYK	Eagle Plains	36.65	38	P		P		17 28 50.1	+1.4
	baz=275,SNR=6.7								
YUK6	Outpost Mounta	36.67	47	P		P		17 28 50.1	+0.9
	baz=281								
O29M	Mount Kennedy	36.70	48	P		P		17 28 50.3	+1.1
	baz=282								
G30M	tAoh Zraii Nji	36.80	37	P		P		17 28 50.9	+1.0
	baz=275								
I30M	Mount Dempster	36.91	40	P		P		17 28 51.7	+0.7
	baz=277,SNR=18								
F30M	Barrier River	36.92	36	P		P		17 28 52.6	+1.8
	baz=274,SNR=14								
J30M	Hart River	37.01	41	P		P		17 28 52.8	+1.0
	baz=278,SNR=5.5								
HYT	Haines Junctio	37.11	47	IAmb		IAmb		17 28 55.3	
	comp=Z,27nm,0.9s								
HYT	Haines Junctio	37.11	47	P		P		17 28 54.1	+1.4
	baz=282,SNR=26								
M30M	Minto, Yukon	37.11	44	P		P		17 28 54.1	+1.4
	baz=280,SNR=12								
N30M	Aishikik Lake	37.18	46	P		P		17 28 53.3	0.0
	baz=281								
GUMO	Guam	37.18	202	LR		LR		17 41 49.0	
	comp=Z,122nm,20.6s,baz=25,slow=33								
P30M	Million Dollar	37.52	48	P		P		17 28 57.4	+1.2
	baz=283								
G31M	Satah River	37.57	37	IAmb		IAmb		17 28 58.7	
	comp=Z,39nm,1.1s								
G31M	Satah River	37.57	37	P		P		17 28 57.5	+1.2
	baz=276,SNR=28								
H31M	Peel River	37.67	39	P		P		17 28 58.5	+1.2
	baz=278,SNR=21								
INK	Inuvik	37.71	34	IAmb		IAmb		17 29 00.3	
	comp=Z,40nm,0.9s								
INK	Inuvik	37.71	34	P		P		17 28 59.2	+1.7
	baz=275,SNR=55								
F31M	Tsiigehtchic	37.72	36	IAmb		IAmb		17 28 60.0	
	comp=Z,40nm,0.9s								
F31M	Tsiigehtchic	37.72	36	P		P		17 28 58.9	+1.3
	baz=276,SNR=29								
N31M	Braeburn, Yuko	37.79	46	IAmb		IAmb		17 29 01.5	
	comp=Z,16nm,0.8s								
N31M	Braeburn, Yuko	37.79	46	P		P		17 29 00.2	+1.8
	baz=282,SNR=10.0								
O30N	Mendenhall	37.80	47	P		P		17 28 60.0	+1.5
	baz=283,SNR=13								
WHN	Wuhan	37.84	257	P		P		17 28 54.3	-4.7
WHN				pmax		pmax			
	comp=Z,28nm,0.7s								
KNGR	Kungurtug, Tuv	38.15	296	⇓ *i* P		P		17 29 04.0	+2.4
KNGR				pmax		pmax			
	comp=Z,21nm,1.1s								
M31M	Drury Creek, Y	38.28	44	IAmb		IAmb		17 29 05.5	
	comp=Z,26nm,1.1s								
M31M	Drury Creek, Y	38.28	44	P		P		17 29 04.2	+1.8
	baz=282,SNR=23								
WHY	Whitehorse	38.40	47	IAmb		IAmb		17 29 06.6	
	comp=Z,36nm,0.9s								
WHY	Whitehorse	38.40	47	P		P		17 29 05.6	+1.9

XAN L L
comp=Z,530nm,15.1s
SIT Sitka 39.16 52 P **P** **17 29 11.7 +1.9**
baz=288
R32K Eaglecrest 39.21 50 P **P** **17 29 12.3 +2.0**
baz=287,SNR=6.1
P32M Atlin 39.24 48 P **P** **17 29 11.9 +1.3**
baz=286
S32K Killisnoo 39.42 52 P **P** **17 29 13.7 +1.7**
baz=288
P33M Teslin, Yukon 39.51 47 IAmb IAmb 17 29 15.7
comp=Z,25nm,1.0s
P33M Teslin, Yukon 39.51 47 P **P** **17 29 14.7 +1.8**
baz=286,SNR=33
A36M Sachs Harbour 40.10 28 P **P** **17 29 18.4 +1.0**
A36M Sachs Harbour 40.10 28 P **P** **17 29 19.4 +2.0**
baz=278,SNR=80
Q32M Nakina River 40.13 49 P **P** **17 29 20.3 +2.2**
baz=288,SNR=7.4
CNSH ChangSha 40.35 256 P **P** **17 29 20.0 -0.1**
CNSH S **S** **17 35 27.0 +1.3**
CNSH pmax pmax
comp=Z,35nm,0.8s
CNSH L L
comp=Z,370nm,13.7s
CNSH L L
comp=Z,210nm,15.1s
CNSH L L
comp=Z,310nm,15.1s
U33K Whale Pass 40.62 53 P **P** **17 29 24.3 +2.3**
baz=290
R33M Jennings River 40.64 48 P **P** **17 29 24.2 +1.9**
baz=288,SNR=30
CRAG Craig 40.85 54 P **P** **17 29 25.4 +1.5**
baz=291
WRAK Wrangell Islan 40.92 53 P **P** **17 29 26.6 +2.2**
baz=290
C36M Paulatuk 40.95 32 P **P** **17 29 25.6 +1.1**
baz=282,SNR=49
S34M Telegraph Cree 41.03 50 P **P** **17 29 27.6 +2.2**
baz=290,SNR=7.2
ENH Enshi 41.15 261 P **P** **17 29 26.1 -0.6**
ENH PcP **PcP** **17 31 25.4 -0.2**
LZH Lanzhou 41.21 272 *e*P **P** **17 29 28.8 +1.5**
LZH pmax pmax
comp=Z,57nm,1.3s
LZH pmax pmax
comp=Z,360nm,5.2s
LZH L L
comp=Z,600nm,14.4s
LZH L L
comp=Z,450nm,14.4s
LZH L L
comp=Z,480nm,14.8s
TGTN Hyland Airport 41.26 44 P **P** **17 29 29.1 +1.8**
baz=288,SNR=8.9
LZDM Lanzhou Array 41.39 272 P **P** **17 29 29.6 +0.7**
comp=Z,4.8nm,0.4s,baz=48,slow=2.2,SNR=5.6
comp=Z,4.8nm,0.4s
DLBC Dease Lake 41.41 49 P **P** **17 29 31.1 +2.5**
baz=290,SNR=14
WTLY Watson Lake, Y 41.45 46 P **P** **17 29 30.8 +1.9**
baz=289,SNR=12
T35M Bob Quinn 41.81 51 P **P** **17 29 34.5 +2.7**
baz=291,SNR=16
GTA2 Gaotai 41.95 279 *e*P **P** **17 29 34.3 +1.0**
GTA2 S **S** **17 35 52.5 +3.0**
GTA2 pmax pmax
comp=Z,47nm,1.1s
GTA2 L L
comp=Z,430nm,15.5s
GTA2 L L
comp=Z,350nm,15.2s
GTA2 L L
comp=Z,860nm,16.2s
WRGLY Wrigley 42.85 41 P **P** **17 29 42.3 +2.2**
baz=289,SNR=6.4
CD2 Chengdu 44.47 267 P **P** **17 29 52.8 -0.8**
CD2 S **S** **17 36 29.5 +3.1**
CD2 pmax pmax
comp=Z,10.0nm,0.3s
CD2 pmax pmax
comp=Z,230nm,3.9s
CD2 L L
comp=Z,370nm,11.4s
CD2 L L
comp=Z,530nm,13.3s
CD2 L L
comp=Z,400nm,16.5s
BBB Bella Bella 44.90 57 LR LR 17 47 35.1
comp=Z,131nm,18.6s,baz=9.0,slow=35
GYA Guiyang 45.56 259 ⇑P **P** **17 30 02.3 -0.1**
GYA S **S** **17 36 40.8 -1.6**
GYA pmax pmax
comp=Z,16nm,1.0s
GYA L L
comp=Z,280nm,13.5s
YKAW3 Yellowknife Wh 46.84 39 IAmb IAmb 17 30 14.3
comp=Z,32nm,1.5s
YKA Yellowknife Ar 46.88 39 P **P** **17 30 13.2 +1.1**
YKA comp=Z,3.1nm,0.8s,baz=302,slow=8.0,SNR=37
PcP **PcP** **17 31 44.9 +0.5**
comp=Z,0.8nm,0.8s,baz=302,slow=4.5,SNR=3.7
comp=Z,3.1nm,0.8s
YKA Yellowknife Ar 46.88 39 P **P** **17 30 12.3 +0.2**
ALE Alert 46.92 7 P **P** **17 30 13.4 +1.1**
YKAW1 Yellowknife Wh 46.93 39 IAmb IAmb 17 30 14.9
comp=Z,22nm,1.4s
ZSN Zaisan 46.99 297 *e*P **P** **17 30 13.9 +0.6**
GOMU GeErMu 47.04 279 P **P** **17 30 13.3 -0.9**
GOMU sP sP 17 30 25.0 -0.3
GOMU pmax pmax
comp=Z,28nm,0.9s
GOMU L L
comp=Z,300nm,13.2s
GOMU L L
comp=Z,320nm,13.1s
WMQ Urumqi 47.21 292 ⇓P **P** **17 30 16.8 +1.7**
WMQ pP sP 17 30 27.3 +0.9
WMQ PcP **PcP** **17 31 47.8 +1.7**
WMQ PP **PP** **17 32 06.5 +0.4**
WMQ pmax pmax
comp=Z,27nm,0.9s
WMQ pmax pmax
comp=Z,230nm,4.9s
WMQ L L
comp=Z,550nm,21.1s
WMQ L L
comp=Z,200nm,24.1s
RES Resolute Bay 47.38 20 LR LR 17 52 41.8
comp=Z,118nm,21.2s,baz=356,slow=39
RES Resolute Bay 47.38 20 IAmb IAmb 17 30 18.5
comp=Z,16nm,0.9s
PZH PanZhiHua 48.72 264 P **P** **17 30 27.0 0.0**
CLRS Cowichan Lake 48.77 59 IAmb IAmb 17 30 41.4
comp=Z,17nm,0.9s
MK31 Makanchi Array 48.83 298*d* iP **P** **17 30 27.5 -0.1**
MKAR Makanchi Array 48.83 298 P **P** **17 30 27.7 +0.1**
comp=Z,26nm,0.8s,baz=56,slow=7.0,SNR=137
MKAR LR LR 17 52 02.6
comp=Z,634nm,20.6s,baz=34,slow=37
comp=Z,26nm,0.8s
MKAR Makanchi Array 48.83 298 P **P** **17 30 27.3 -0.3**
KURK Kurchatov 48.84 304 **PcP** **17 31 52.0 +0.3**
KURK Kurchatov 48.84 304 P **P** **17 30 27.5 0.0**
KURK Kurchatov 48.84 304*d* iP **P** **17 30 27.4 0.0**
KURK pmax pmax
comp=Z,109nm,1.7s
KURK MLR MLR
comp=Z,526nm,15.0s
KURK Kurchatov 48.84 304 P **P** **17 30 27.6 0.0**
KURBB Kurchatov Arra 48.94 304 P **P** **17 30 28.3 +0.1**
comp=Z,29nm,0.9s,baz=63,slow=7.8,SNR=134
KURBB PcP **PcP** **17 31 52.0 0.0**
comp=Z,7.8nm,0.8s,baz=63,slow=3.2,SNR=5.6
KURBB S **S** **17 37 27.4 -2.3**
comp=Z,0.6nm,0.9s,baz=60,slow=13,SNR=4.2
KURBB LR LR 17 52 29.6
comp=Z,246nm,19.3s,baz=162,slow=38
comp=Z,29nm,0.9s
QIZ Qiongzhong 48.94 250 P **P** **17 30 27.0 -1.6**
QIZ PcP **PcP** **17 31 52.8 +0.3**
QIZ S **S** **17 37 31.5 +1.1**
QIZ pmax pmax
comp=Z,140nm,8.6s
QIZ L L
comp=Z,150nm,13.6s
QIZ L L
comp=Z,210nm,15.1s
QIZ L L
comp=Z,270nm,14.6s
KMI2 Kunming 49.00 262 ⇑P **P** **17 30 29.5 +0.2**
KMI2 S **S** **17 37 31.5 -0.1**
KMI2 SS **SS** **17 40 56.5 -6.0**
KMI2 pmax pmax
comp=Z,20nm,0.9s
KMI2 pmax pmax
comp=Z,96nm,4.2s
KMI2 L L
comp=Z,160nm,14.1s
KMI2 L L
comp=Z,260nm,14.3s
KMI2 L L
comp=Z,250nm,15.0s
MAKZ Makanchi 49.01 298 P **P** **17 30 28.4 -0.5**
MAKZ Makanchi 49.01 298 P **P** **17 30 28.7 -0.2**
NOR Nord 49.40 359 *i* P **P** **17 30 32.7 +1.2**
NOR IAmb IAmb 17 30 38.1
comp=Z,16nm,1.0s
NLWA Neilton Lookou 49.67 61 IAmb IAmb 17 30 39.9
comp=Z,15nm,0.8s
KBS Kingsbay 50.56 352 P **P** **17 30 40.9 +0.7**
KBS Kingsbay 50.56 352 *e*P **P** **17 30 41.2 +1.0**
KBS IAmb IAmb 17 30 43.7
comp=Z,60nm,0.8s
KBS Kingsbay 50.56 352 *i* P **P** **17 30 41.4 +1.2**
KBS Kingsbay 50.56 352 P **P** **17 30 41.1 +1.0**
SPA0 Spitsbergen Ar 50.77 351 *e*P **P** **17 30 42.6 +0.8**
SPITS Spitsbergen Ar 50.77 351 P **P** **17 30 42.2 +0.4**
comp=Z,40nm,0.8s,baz=59,slow=8.1,SNR=51
SPITS LR LR 17 53 22.2
comp=Z,101nm,20.0s,baz=28,slow=37
comp=Z,40nm,0.8s
SPB2 Spitsbergen Ar 50.77 351 P **P** **17 30 40.8 -1.1**
TULEG Thule 51.01 13 *i* P **P** **17 30 43.9 +0.3**
TULEG IAmb IAmb 17 30 52.1
comp=Z,12nm,0.9s
LTY Liberty 51.56 59 IAmb IAmb 17 30 53.3
comp=Z,29nm,1.8s
TNCH TengChong 51.83 265 *e*P **P** **17 30 50.8 +0.1**
TNCH pP pP 17 30 57.8 -0.7
TNCH S **S** **17 38 11.8 +0.9**
TNCH pmax pmax
comp=Z,51nm,1.3s
TNCH pmax pmax
comp=Z,280nm,4.3s
TNCH L L
comp=Z,160nm,14.8s
TNCH L L
comp=Z,170nm,13.4s
TNCH L L
comp=Z,320nm,21.6s
HSPB Hornsund (broa 51.88 350 *e*P P 17 30 55.3 +5.2
BVA0 Borovoye Array 51.92 310 *i* P **P** **17 30 50.4 -0.4**
BVAR Borovoye Array 51.92 310 P **P** **17 30 50.9 +0.1**
comp=Z,21nm,0.6s,baz=57,slow=7.7,SNR=168
BVAR PcP **PcP** **17 32 03.5 +0.5**
comp=Z,10nm,0.7s,baz=64,slow=3.4,SNR=6.5
BVAR S **S** **17 38 07.0 -4.1**
comp=Z,1.6nm,0.9s,baz=64,slow=13,SNR=4.7
BVAR LR LR 17 54 53.9
comp=Z,266nm,20.3s,baz=53,slow=38
comp=Z,21nm,0.6s
BORK Borovoye 51.94 310 P **P** **17 30 50.2 -0.8**
BORK Borovoye 51.94 310*d* iP **P** **17 30 51.0 +0.1**
BORK pmax pmax
comp=Z,73nm,1.5s
TDK Taldyqorghan 52.09 298 ⇓*i*P **P** **17 30 52.9 +0.7**
HOOD Mount Hood Mea 52.10 62 IAmb IAmb 17 30 58.5
comp=Z,18nm,0.9s
EPH Ephrata 52.11 59 IAmb IAmb 17 30 57.0
comp=Z,7.9nm,1.0s
EDM Edmonton 52.13 50 IAmb IAmb 17 30 55.1
comp=Z,15nm,0.8s
H04A Detroit Lake 52.16 63 IAmb IAmb 17 30 58.2
comp=Z,16nm,0.9s
NEEM North Greenlan 52.30 8 *i* P **P** **17 30 54.2 +0.6**
NEEM IAmb IAmb 17 31 01.5
comp=Z,37nm,1.1s
POIN Pond Inlet 52.33 18 IAmb IAmb 17 30 55.2
comp=Z,25nm,1.4s
G05A Wamic 52.34 62 IAmb IAmb 17 31 05.5
comp=Z,25nm,0.8s
PDGK Podgornoye 52.42 295 P **P** **17 30 54.8 0.0**
E07A Sunnyside 52.42 60 IAmb IAmb 17 31 01.6
comp=Z,38nm,1.7s
BRZS Berezniki 52.44 306 *e*P **P** **17 30 55.4 +0.7**
SHLS Shalkode 52.54 295 ⇓*i*P **P** **17 30 54.3 -1.3**
comp=Z,14nm,0.6s
WIFE Three Sisters- 52.74 63 IAmb IAmb 17 31 03.1
comp=Z,19nm,0.8s
UZB Uzynbulak 52.80 296 ⇓*i*P **P** **17 30 58.1 +0.5**
comp=Z,7.8nm,0.5s
KPKS Kokpek 52.81 296 *e*P **P** **17 30 58.3 +0.6**
ARXS Arharly 52.88 297 *e*P **P** **17 30 58.4 +0.3**
NEW Newport 52.96 56 LR LR 17 52 08.4
comp=Z,42nm,20.2s,baz=311,slow=34
NEW Newport 52.96 56 IAmb IAmb 17 31 12.7
comp=Z,25nm,1.8s
BLKN Baker Lake 53.00 32 P **P** **17 30 58.2 -0.3**
J04A Umpqua Nationa 53.05 64 P **P** **17 31 01.0 +1.4**
SATY Saty 53.22 296 ⇓*i*P **P** **17 31 01.5 +0.8**
comp=Z,24nm,1.0s
PINE Pine Mountain 53.41 63 IAmb IAmb 17 31 26.8
comp=Z,44nm,1.9s
LSA Lhasa 53.51 275 P **P** **17 31 03.0 -0.4**
LSA pmax pmax
comp=Z,9.0nm,0.7s
KMPM Mount Pierce 53.53 68 IAmb IAmb 17 31 10.1
comp=Z,37nm,1.1s
J05D Fort Rock, OR 53.54 64 IAmb IAmb 17 31 09.8
comp=Z,26nm,1.0s
KRVT Keravat (AS076 53.57 188 LR LR 17 51 08.9
comp=Z,22nm,19.3s,baz=297,slow=33
YBH Yreka Blue Hor 53.59 66 LR LR 17 50 23.4
comp=Z,8.5nm,21.1s,baz=290,slow=32
YBH Yreka Blue Hor 53.59 66 P **P** **17 31 05.3 +1.9**
YBH IAmb IAmb 17 31 10.3
comp=Z,17nm,1.1s
WUS Wushi 53.85 293 P **P** **17 31 06.2 +0.9**
WUS pP **sP** **17 31 16.7 -0.1**
WUS PcP **PcP** **17 32 11.2 +0.5**
ILON Igloolik, Nuna 53.85 22 P **P** **17 31 04.6 -0.1**
MDOK Medeo 53.96 297 *e*P **P** **17 31 06.7 +0.5**
AAA Alma-Ata 54.01 297 *e*P **P** **17 31 06.9 +0.5**
comp=Z,24nm,0.9s
N02D Trinity Center 54.05 67 P **P** **17 31 08.5 +1.7**
N02D IAmb IAmb 17 31 13.7
comp=Z,23nm,1.3s
K05A Summer Lake 54.07 64 IAmb IAmb 17 31 22.5
comp=Z,31nm,1.1s
TNSS Tian-Shan 54.09 297 *e*P **P** **17 31 07.8 +0.4**
KULLO Kullorsuaq 54.23 11 *i* P **P** **17 31 08.0 +0.5**
KULLO IAmb IAmb 17 31 08.8
comp=Z,25nm,0.8s
DAG Danmarks Havn 54.27 359 *i* P **P** **17 31 08.9 +1.2**
DAG IAmb IAmb 17 31 14.0
comp=Z,26nm,0.9s
SVE Sverdlovsk 54.32 318*c**e*P **P** **17 31 08.9 +0.5**
SVE pmax pmax
comp=Z,57nm,1.3s
TARG Taragay, Kyrgy 54.37 295 IAmb IAmb 17 31 12.0
comp=Z,19nm,0.9s
TKM2 Tokmak 2 54.95 297 P **P** **17 31 14.3 +0.9**
SNR=30
ULHL Ulahol 54.98 296 P **P** **17 31 15.2 +1.5**
SNR=5.2
SWI Sorong 55.02 214 P **P** **17 31 14.7 +0.8**
comp=Z,30nm,1.1s
SIJI Sorong 55.03 214 LR LR 17 49 31.8
comp=Z,106nm,21.9s,baz=20,slow=30
SIJI Sorong 55.03 214 P **P** **17 31 14.6 +0.6**
comp=Z,24nm,1.1s
J08A Circle Bar Ran 55.10 62 IAmb IAmb 17 31 20.4
comp=Z,12nm,0.8s
SGDS Sogindy 55.19 298 *e*P **P** **17 31 15.6 +0.6**
VADS Vadso 55.34 341 *e*P **P** **17 31 16.6 +1.1**
VADS IAmb IAmb 17 31 20.4
comp=Z,87nm,1.2s
USP Ospenovka 55.38 298 P **P** **17 31 17.4 +1.1**
SNR=36
CHMS Chumysh 55.40 298 P **P** **17 31 17.2 +0.8**
SNR=28
PLID Pearl Lake 55.47 59 IAmb IAmb 17 31 22.6
comp=Z,12nm,0.9s
KBK Karagaybulak 55.49 297 P **P** **17 31 18.2 +0.9**
SNR=28
WVOR Wild Horse Val 55.57 63 IAmb IAmb 17 31 23.8
comp=Z,26nm,0.8s
ARTI Arti 55.58 318 LR LR 17 58 42.1
comp=Z,225nm,18.4s,baz=46,slow=40
ARTI Arti 55.58 318 P **P** **17 31 16.6 -0.9**
ARTI Arti 55.58 318*d* iP **P** **17 31 17.5 0.0**
ARTI *PP **pwP** **17 31 33.3 -1.6**
ARTI 17 32 14.1
ARTI 17 33 20.5
ARTI S **S** **17 38 58.6 -1.9**
ARTI SS **SS** **17 42 38.4 -6.6**
ARTI pmax pmax
comp=Z,76nm,1.0s
ARTI Arti 55.58 318 P **P** **17 31 17.2 -0.2**
ARTI sP **sP** **17 31 31.8 +3.0**
NRN Naryn 55.62 295 IAmb IAmb 17 31 20.6
comp=Z,11nm,0.9s
ORV Oroville 55.65 67 IAmb IAmb 17 31 23.3
comp=Z,15nm,0.8s
AAK Ala-Archa 55.77 297 LR LR 17 56 33.1
comp=Z,424nm,18.8s,baz=48,slow=38
AAK Ala-Archa 55.77 297 P **P** **17 31 19.9 +0.7**
SNR=37
AAK Ala-Archa 55.77 297 P **P** **17 31 19.4 +0.1**
AAK Ala-Archa 55.77 297 *i* P **P** **17 31 20.1 +0.9**
SNR=52
AAK Ala-Archa 55.77 297 P **P** **17 31 19.8 +0.5**
SHL Shillong 55.81 271 P **P** **17 31 19.1 -0.7**
SHL Shillong 55.81 271 P **P** **17 31 19.9 +0.1**
SNR=50
LVZ Lovozero 55.83 338 P **P** **17 31 19.1 0.0**
LVZ Lovozero 55.83 338 ⇑*i*P **P** **17 31 18.0 -1.1**
LVZ pmax pmax
comp=Z,102nm,1.6s
CHTO Chiang Mai 55.98 259 P **P** **17 31 21.0 +0.2**
CHTO Chiang Mai 55.98 259 P **P** **17 31 21.2 +0.4**
comp=Z,32nm,0.8s
UPNV Upernavik 55.98 12 *i* P **P** **17 31 20.6 +0.5**
UPNV IAmb IAmb 17 31 21.2
comp=Z,16nm,0.9s
UCH Uchtor 56.01 297 P **P** **17 31 22.8 +1.4**
SNR=6.2
BEKR Beckworth 56.14 66 IAmb IAmb 17 31 27.4
comp=Z,14nm,0.9s
EKS2 Erkin-Say 56.17 298 P **P** **17 31 23.1 +1.0**
SNR=38
CM31 Chiang Mai Arr 56.24 259 IAmb IAmb 17 31 32.1
comp=Z,15nm,0.8s
CM31 Chiang Mai Arr 56.24 259 P **P** **17 31 23.1 +0.4**
SNR=13
CMAR Chiang Mai Arr 56.24 259 P **P** **17 31 23.1 +0.4**
comp=Z,5.1nm,0.9s,baz=30,slow=7.4,SNR=33
comp=Z,5.1nm,0.9s
CMAR Chiang Mai Arr 56.24 259 P **P** **17 31 22.5 -0.2**
CMAR Chiang Mai Arr 56.24 259 *i* P **P** **17 31 23.6 +0.9**
CMAR pmax pmax
comp=Z,6.0nm,0.9s
APA Apatity 56.39 338 ⇓*e*P **P** **17 31 19.0 -4.1**
APA *e* 17 33 26.2
APA *e*S S 17 38 59.6 -11
APA *e*SS **SS** **17 43 03.0 +5.7**
APA pmax pmax
comp=Z,27nm,1.2s
MFID Camas Ranch 56.59 61 IAmb IAmb 17 31 30.7
comp=Z,13nm,0.8s
ARA0 ARCESS Array S 56.61 342 *e*P **P** **17 31 25.6 +0.9**
ARA0 IAmb IAmb 17 31 29.2
comp=Z,110nm,1.2s
ARCES ARCESS Array B 56.61 342 P **P** **17 31 24.8 +0.1**
comp=Z,48nm,1.1s,baz=45,slow=7.7,SNR=32
ARCES LR LR 18 00 24.5
comp=Z,436nm,20.2s,baz=28,slow=41
comp=Z,48nm,1.1s
ARCES ARCESS Array B 56.61 342 P **P** **17 31 23.9 -0.8**
FFC Flin Flon 56.63 43 P **P** **17 31 25.2 +0.3**
FFC Flin Flon 56.63 43 P **P** **17 31 25.7 +0.7**
FFC pP **sP** **17 31 35.8 -0.3**
FFC sP **pwP** **17 31 40.8 -1.3**
FFC PcP **PcP** **17 32 21.2 +0.2**
DBG Daneborg 56.77 359 *i* P **P** **17 31 26.4 +0.7**
DBG IAmb IAmb 17 31 33.1
comp=Z,9.5nm,0.7s
PAHR Pah Rah Range 56.83 66 IAmb IAmb 17 31 32.4
comp=Z,12nm,0.8s
FCC Fort Churchill 57.29 36 IAmb IAmb 17 31 31.2
comp=Z,27nm,1.2s
HLID Hailey 57.30 60 IAmb IAmb 17 31 44.5
comp=Z,13nm,1.0s
KSH2 Kashi 57.31 294 P **P** **17 31 31.3 +1.0**
KSH2 sP pwP 17 31 46.5 -1.3
KSH2 pmax pmax
comp=Z,35nm,1.4s
KSH2 L L
comp=Z,300nm,12.0s
KSH2 L L
comp=Z,260nm,13.1s
KSH2 L L
comp=Z,480nm,15.8s
DZA Taraz 57.43 299 *e*P **P** **17 31 31.5 +0.6**
KTK1 Kautokeino 57.50 342 *e*P **P** **17 31 33.0 +2.0**
KTK1 IAmb IAmb 17 31 35.8
comp=Z,236nm,1.6s
NUUG Nuugaatsiaq 57.50 11 *i* P **P** **17 31 32.4 +1.5**
BOZ Bozeman (W) 57.57 56 IAmb IAmb 17 31 37.7
comp=Z,13nm,0.8s
JETT Jettan, Norway 57.58 344 *e*P **P** **17 31 32.3 +0.8**
JETT IAmb IAmb 17 31 36.5
comp=Z,168nm,1.2s
KK31 Karatay Array 57.76 300 *i* P **P** **17 31 33.5 +0.3**
KKAR Karatay Array 57.76 300 P **P** **17 31 33.1 -0.1**
TRO Tromso 57.78 344 *e*P **P** **17 31 33.4 +0.6**
TRO IAmb IAmb 17 31 38.4
comp=Z,2µm,3.3s
ADZR Andozero 57.81 333 *e*P **P** **17 31 31.1 -2.0**
ADZR pmax pmax
comp=Z,130nm,1.3s
BBGB Big Mountain B 57.81 70 IAmb IAmb 17 31 44.9
comp=Z,22nm,0.8s
KIRV Kirov 57.82 324 LR LR 17 58 25.4
comp=Z,204nm,18.3s,baz=38,slow=38
KIRV Kirov 57.82 324*d* iP **P** **17 31 33.8 +0.5**
SUMG Summit 57.95 6 *i* P **P** **17 31 35.8 +1.2**
SUMG IAmb IAmb 17 31 43.8
comp=Z,25nm,0.8s
BRDH Bariadhala 57.97 268 LR LR 17 57 04.5
comp=Z,134nm,20.9s,baz=44,slow=37
SANI Sanana 58.15 219 P **P** **17 31 35.0 -1.2**
comp=Z,32nm,0.8s
BRLS Boroldav 58.19 300 *e*P **P** **17 31 38.4 +2.1**
LHV Little Huntoon 58.28 67 IAmb IAmb 17 31 51.8
comp=Z,19nm,1.0s
NVAR Mina Array Bea 58.29 67 P **P** **17 31 38.4 +1.2**
comp=Z,10nm,0.8s,baz=291,slow=7.6,SNR=30
NVAR LR LR 17 53 02.3
comp=Z,54nm,21.8s,baz=272,slow=32
comp=Z,10nm,0.8s
YHL Hebgen Lake 58.29 57 IAmb IAmb 17 31 43.9
comp=Z,21nm,1.3s
KRAI Karang Ratu 58.35 216 P **P** **17 31 39.3 +1.7**
SAATT Saattut 58.37 11 *i* P **P** **17 31 37.9 +0.9**
SAATT IAmb IAmb 17 31 38.3
comp=Z,43nm,1.1s
HNR Honiara 58.41 178 LR LR 17 53 58.9
comp=Z,15nm,20.0s,baz=86,slow=33
ELK Elko 58.62 63 LR LR 17 54 06.3
comp=Z,102nm,19.9s,baz=274,slow=33
ELK Elko 58.62 63 IAmb IAmb 17 31 46.9
comp=Z,13nm,0.8s
IUG Iuzhnay 58.65 299 ⇓*i*P **P** **17 31 40.3 +0.8**
comp=Z,17nm,0.9s
YNR Norris Junctio 58.65 57 IAmb IAmb 17 31 46.3
comp=Z,12nm,1.0s
CHM Chimkent 58.78 300 *e*P **P** **17 31 41.1 +0.7**
comp=Z,20nm,1.0s
YNE Yellowstone No 58.83 56 IAmb IAmb 17 31 46.8
comp=Z,10nm,0.9s
YPP Pitchstone Pla 58.87 57 IAmb IAmb 17 32 03.6
comp=Z,12nm,1.1s
H17A Grant Village 58.91 57 IAmb IAmb 17 31 49.0
comp=Z,18nm,0.9s
FLWY Flagg Ranch 59.05 57 IAmb IAmb 17 31 59.5
comp=Z,22nm,1.1s

RLMT Red Lodge 59.16 55 IAmb IAmb 17 31 50.1
comp=Z,23nm,1.2s
PMG Port Moresby 59.17 193 LR LR 17 54 15.5
comp=Z,174nm,20.6s,baz=348,slow=33
DSP Deep Springs 59.17 67 IAmb IAmb 17 31 49.7
comp=Z,11nm,0.9s
LOHW Long Hollow 59.40 58 IAmb IAmb 17 31 51.3
comp=Z,16nm,1.1s
AB31 Akbulak array 59.43 311 *i* P **P** **17 31 44.7 0.0**
ABKAR Akbulak array 59.43 311 P **P** **17 31 44.2 -0.4**
AKTO Aktyubinsk 59.58 313 LR LR 17 58 39.1
comp=Z,107nm,21.6s,baz=302,slow=37
AHID Auburn Hatcher 59.68 59 IAmb IAmb 17 31 52.7
comp=Z,12nm,1.2s
KLMR Klimovskoe 59.72 330 *e*P **P** **17 31 45.1 -1.4**
KLMR *e**PP **sP** **17 32 00.2 +2.4**
KLMR pmax pmax
comp=Z,124nm,1.0s
KLMR MLR MLR
comp=Z,536nm,13.0s
STEI Steigen 59.92 345 *e*P **P** **17 31 49.1 +1.3**
LOF Lofoten 60.03 346 *e*P **P** **17 31 49.4 +0.9**
HWUT Hardware Ranch 60.17 60 IAmb IAmb 17 31 56.0
comp=Z,8.4nm,0.8s
DUG Dugway, Tooele 60.38 62 P **P** **17 31 52.4 +0.9**
DUG IAmb IAmb 17 31 57.4
comp=Z,16nm,0.8s
FAUS Fauske 60.40 344 *e*P **P** **17 31 51.8 +0.7**
FAUS IAmb IAmb 17 31 56.9
comp=Z,35nm,0.8s
CLC China Lake 60.42 68 IAmb IAmb 17 31 57.0
comp=Z,12nm,0.9s
TPNV Topopah Spring 60.49 67 IAmb IAmb 17 31 58.4
comp=Z,16nm,0.9s
GAR Garm 60.52 297 P **P** **17 31 51.7 -0.8**
BW06 Boulder Array 60.53 58 IAmb IAmb 17 31 58.8
comp=Z,16nm,0.9s
PD31 Pinedale Array 60.53 58 IAmb IAmb 17 31 58.8
comp=Z,18nm,1.0s
PDAR Pinedale Array 60.53 58 P **P** **17 31 53.4 +0.7**
comp=Z,10nm,0.8s,baz=274,slow=2.7,SNR=27
PDAR LR LR 17 57 53.0
comp=Z,43nm,19.5s,baz=324,slow=36
comp=Z,10nm,0.8s
PDAR Pinedale Array 60.53 58 P **P** **17 31 52.2 -0.5**
SCO Scoresbysund 60.62 0 P **P** **17 31 53.5 +1.1**
SCO IAmb IAmb 17 32 01.7
comp=Z,28nm,1.2s
SCO Scoresbysund 60.62 0 *i* P **P** **17 31 54.6 +2.2**
SCO IAmb IAmb 17 32 01.5
comp=Z,24nm,1.1s
GWY Greenwater Val 60.74 68 IAmb IAmb 17 31 59.3
comp=Z,12nm,0.9s
QSM Queen of Sheba 60.76 68 IAmb IAmb 17 33 52.1
comp=Z,7.9nm,0.7s
SBUM Sibu 60.84 235 P **P** **17 31 55.9 +1.2**
GSC Goldstone, Bar 61.24 68 IAmb IAmb 17 32 02.5
comp=Z,9.5nm,0.8s
BSUT Blindstream Ca 61.33 60 IAmb IAmb 17 32 12.6
comp=Z,12nm,1.1s
CHGR Chuyangaron 61.43 297 P **P** **17 31 58.9 +0.2**
RAUS Rausandaksla 61.47 344 *e*P **P** **17 31 59.1 +0.7**
RAUS IAmb IAmb 17 32 03.7
comp=Z,3μm,4.1s
FRB Frobisher Bay 61.55 22 LR LR 18 01 23.2
comp=Z,132nm,20.4s,baz=336,slow=39
MOR8 Moi Rana 61.64 344 *e*P **P** **17 31 59.0 -0.5**
CCUT Cedar City 61.81 64 IAmb IAmb 17 32 07.1
comp=Z,15nm,0.8s
MMSI Mamuju 61.85 226 P **P** **17 32 01.6 0.0**
comp=Z,20nm,1.0s
LEIR Leirfjorden 61.93 345 *e*P **P** **17 32 01.8 +0.4**
ELS Elsinore Mount 61.96 70 IAmb IAmb 17 32 07.3
comp=Z,12nm,0.9s
SFJD Kangerlussuaq 62.07 12 LR LR 18 03 34.3
comp=Z,180nm,18.1s,baz=5.0,slow=40
P18A Preston Nutter 62.23 61 IAmb IAmb 17 32 09.5
comp=Z,12nm,1.2s
NIL Nilore 62.32 290 P **P** **17 32 04.1 -0.5**
NIL Nilore 62.32 290 P **P** **17 32 05.5 +0.9**
ULM Lac du Bonnet 62.40 44 P **P** **17 32 05.0 +0.2**
comp=Z,3.9nm,0.8s,baz=304,slow=5.7,SNR=7.8
ULM LR LR 17 59 56.2
comp=Z,147nm,20.4s,baz=354,slow=37
comp=Z,3.9nm,0.8s
ULM Lac du Bonnet 62.40 44 P **P** **17 32 04.4 -0.4**
ULM IAmb IAmb 17 32 18.1
comp=Z,8.1nm,0.9s
KNB Kanab 62.49 64 IAmb IAmb 17 32 11.9
comp=Z,21nm,0.9s
SPSI Sidrap Palu 62.57 224 P **P** **17 32 06.2 -0.2**
comp=Z,806nmcomp=Z,29nm,1.2s
PFO Pinyon Flats O 62.58 70 LR LR 17 53 50.4
comp=Z,77nm,21.9s,baz=216,slow=31
RSSD Black Hills 62.61 53 P **P** **17 32 06.7 0.0**
RSSD IAmb IAmb 17 32 12.1
comp=Z,16nm,0.8s
E28A Huff 62.65 50 IAmb IAmb 17 32 08.9
comp=Z,26nm,1.2s
SHAA Shahritus 62.77 297 IAmb IAmb 17 32 13.3
comp=Z,71nm,0.9s
BELG Belogornoye 62.91 320 LR LR 18 03 21.7
comp=Z,240nm,18.6s,baz=78,slow=40
BELG Belogornoye 62.91 320*d* *i* P **P** **17 32 08.4 +0.2**
BELG pmax pmax
comp=Z,22nm,0.9s
IRM Iron Mountain 63.02 68 IAmb IAmb 17 32 14.6
comp=Z,13nm,0.8s
O20A White River Ci 63.03 59 IAmb IAmb 17 32 32.2
comp=Z,10nm,1.0s
W13A Hualapai Mount 63.15 67 IAmb IAmb 17 32 15.5
comp=Z,8.2nm,0.8s
U15A North Rim 63.20 65 IAmb IAmb 17 32 16.6
comp=Z,10nm,0.8s
FIA1 FINESS Array S 63.21 336 P **P** **17 32 10.0 +0.1**
FINES FINESS Array B 63.21 336 P **P** **17 32 10.2 +0.2**
comp=Z,20nm,0.8s,baz=37,slow=7.4,SNR=54
FINES LR LR 18 02 13.9
comp=Z,258nm,21.3s,baz=50,slow=38
comp=Z,20nm,0.8s
FINES FINESS Array B 63.21 336 P **P** **17 32 08.0 -2.0**
FINES FINESS Array B 63.21 336 *i* P **P** **17 32 10.6 +0.6**
FINES pmax pmax
comp=Z,20nm,0.8s
PUL Pulkovo 63.42 333‖ *e*P **P** **17 32 12.3 +0.9**
PUL pmax pmax
comp=Z,102nm,0.4s
BLYC Blythe 63.67 68 IAmb IAmb 17 32 18.9
comp=Z,13nm,0.8s
AGMN Agassiz Nation 63.78 46 IAmb IAmb 17 32 28.0
comp=Z,11nm,0.9s
PV22 Blue Mesa, Par 63.81 61 IAmb IAmb 17 32 20.5
comp=Z,18nm,0.7s
PV16 Nyswonger Mesa 63.89 61 IAmb IAmb 17 32 20.6
comp=Z,22nm,0.8s
PV03 Paradox Valley 63.96 61 IAmb IAmb 17 32 21.1
comp=Z,22nm,0.9s
KBL Kabul 64.27 294 P **P** **17 32 15.6 -2.1**
KBL Kabul 64.27 294 P **P** **17 32 17.0 -0.7**
SNR=31
MOS Moscow 64.28 327 *e*P **P** **17 32 16.7 -0.4**
MOS pmax pmax
comp=Z,133nm,1.2s
MOS pmax pmax
comp=N,75nm,1.1s
COEN Coen 64.28 196 P **P** **17 32 21.4 +3.8**
comp=Z,18nm,1.0s
Y14A Wickenburg 64.47 67 IAmb IAmb 17 32 24.2
comp=Z,8.4nm,0.7s
BBKI Banjar Baru 64.49 229 P **P** **17 32 19.1 0.0**
comp=Z,4μmcomp=Z,68nm,1.0s
ISCO Idaho Springs 64.73 58 IAmb IAmb 17 32 26.8
comp=Z,16nm,0.9s
MVCO Mesa Verde 64.88 62 IAmb IAmb 17 32 35.6
comp=Z,16nm,1.0s
X16A Lo Mia Camp, P 65.08 66 IAmb IAmb 17 32 28.8
comp=Z,12nm,0.8s
OBN Obninsk 65.14 327 LR LR 18 02 05.4
comp=Z,204nm,21.9s,baz=5.5,slow=37
OBN Obninsk 65.14 327 P **P** **17 32 21.9 -0.8**
OBN Obninsk 65.14 327*d* *i* P **P** **17 32 22.6 -0.1**
OBN *e**PP **sP** **17 32 36.4 +2.2**
OBN *e**SP **pwP** **17 32 44.7 +4.4**
OBN *i* 17 32 55.0
OBN *e* 17 34 49.6
OBN *e*PPP PPP 17 36 19.0
OBN *e*S **S** **17 41 03.2 +0.3**
OBN *e*SS **SS** **17 45 12.5 -2.1**
OBN pmax pmax
comp=Z,115nm,1.3s
OBN MLR MLR
comp=Z,375nm,6.0s
OBN Obninsk 65.14 327 P **P** **17 32 23.1 +0.3**
comp=Z,117nm,1.4s
OBN Obninsk 65.14 327 P **P** **17 32 22.7 -0.1**
OBN pP **sP** **17 32 33.9 -0.3**
F33A 5 Mile Ranch, 65.34 48 IAmb IAmb 17 32 25.4
comp=Z,15nm,1.3s
VSU Vasula 65.54 334‖ *e*P **P** **17 32 25.3 0.0**
VSU pmax pmax
comp=Z,137nm,1.6s
KDU Kakadu 65.69 208 P **P** **17 32 27.0 +0.3**
comp=Z,11nm,0.8s
SOEI Soe 65.84 217 P **P** **17 32 27.1 -0.8**
MOL Molde 66.14 346 *e*P **P** **17 32 29.7 +0.6**
MOL IAmb IAmb 17 32 33.2
comp=Z,24nm,0.9s
VRH Novokhopyorsk 66.24 322 *e*P **P** **17 32 29.7 -0.2**
VRH pmax pmax
comp=Z,70nm,0.6s
LPSR Galich'ya Gora 66.25 324 *e*P **P** **17 32 30.0 0.0**
LPSR pmax pmax
comp=Z,108nm,0.8s
KUQ Kuujjuuaa 66.38 25 P **P** **17 32 29.7 -0.9**
KUQ IAmb IAmb 17 32 43.7
comp=Z,20nm,1.3s
DOMB Dombas 66.38 345 *e*P **P** **17 32 31.1 +0.3**
DOMB IAmb IAmb 17 33 12.8
comp=Z,984nm,3.3s
AKN Aaknes 66.60 346 *e*P **P** **17 32 33.9 +1.7**
AKN IAmb IAmb 17 32 39.0
comp=Z,44nm,0.5s
ECSD EROS Data Cent 66.70 50 IAmb IAmb 17 32 34.1
comp=Z,18nm,1.2s
VORR Voronezh 66.87 324 *e*P **P** **17 32 33.6 -0.4**
VORR pmax pmax
comp=Z,48nm,0.5s
NB2 NORSAR Subarra 66.93 343 P **P** **17 32 35.0 +0.8**
comp=Z,7.9nm,0.8s,baz=24,slow=6.5
NB2 NORSAR Subarra 66.93 343 P **P** **17 32 35.0 +0.8**
NOA NORSAR Array B 66.93 343 P **P** **17 32 34.6 +0.4**
comp=Z,16nm,0.9s,baz=22,slow=6.5,SNR=38
NOA LR LR 18 06 36.6
comp=Z,164nm,19.2s,baz=20,slow=40
comp=Z,16nm,0.9s
TUC Tucson 66.94 67 P **P** **17 32 35.0 +0.1**
E38A The Farm, Brul 67.02 45 IAmb IAmb 17 32 48.8
comp=Z,15nm,1.0s
NC602 NORSAR Array S 67.15 343 IAmb IAmb 17 32 40.8
comp=Z,27nm,1.1s
NC602 NORSAR Array S 67.15 343 *e*P **P** **17 32 35.2 -0.4**
VSR Storozhevoye 67.25 323 *e*P **P** **17 32 36.4 +0.1**
VSR pmax pmax
comp=Z,20nm,0.7s
T25A Trinidad 67.26 59 IAmb IAmb 17 32 51.0
comp=Z,14nm,1.0s
HFS Hagfors 67.27 342 P **P** **17 32 36.3 -0.1**
comp=Z,9.5nm,0.7s,baz=43,slow=5.7,SNR=38
HFS LR LR 18 06 31.4
comp=Z,220nm,19.1s,baz=16,slow=40
comp=Z,9.5nm,0.7s
VORD Divnogorie 67.39 323 *e*P **P** **17 32 37.2 -0.1**
VORD pmax pmax
comp=Z,30nm,0.7s
SPMN Marine on St. 67.46 46 IAmb IAmb 17 32 39.0
comp=Z,13nm,0.9s
ANMO Albuquerque 67.64 62 LR LR 17 59 21.6
comp=Z,68nm,21.1s,baz=316,slow=33
ANMO Albuquerque 67.64 62 P **P** **17 32 39.9 +0.4**
ANMO Albuquerque 67.64 62 IAmb IAmb 17 32 53.4
comp=Z,7.2nm,0.9s
ANMO Albuquerque 67.64 62‖ *e*P **P** **17 32 39.4 0.0**
ANMO pmax pmax
comp=Z,8.0nm,0.9s
HYA Hoyanger 67.69 346 *e*P **P** **17 32 39.7 +0.7**
HYA IAmb IAmb 17 32 40.9
comp=Z,39nm,1.1s
SKAR Skjerslia 67.79 345 *e*P **P** **17 32 43.0 +3.3**
AFI Afiamalu 68.22 148 LR LR 18 02 02.4
comp=Z,105nm,18.4s,baz=342,slow=36
HRA Herat 68.40 298 IAmb IAmb 17 32 52.4
comp=Z,26nm,0.9s
319A Douglas 68.50 67 IAmb IAmb 17 32 50.8
comp=Z,29nm,1.0s
KONO Kongsberg 68.52 343 *e*P **P** **17 32 45.7 +1.5**
NACGM Naroch 68.54 332 *e*P **P** **17 32 45.3 +0.9**
comp=Z,72nm,1.0s,baz=32
MNK Minsk 68.54 331 *i* P **P** **17 32 45.8 +1.3**
comp=E,56nm,1.1s
MNK *i* P **P** **17 32 45.8 +1.3**
comp=N,16nm,0.9s
MNK *i* P **P** **17 32 45.8 +1.3**
comp=Z,76nm,0.8s,baz=32
MNK *i* pP **pwP** **17 32 59.4 -2.6**
MNK *i* PP **PP** **17 35 17.6 +2.3**
MNK *i* PPP PPP 17 36 56.7
MNK *i* S **S** **17 41 45.1 +1.0**
MNK *i* SS **SS** **17 46 10.2 +3.0**
MNK *i* SSS SSS 17 49 27.6
MNK *i* LQ LQ 17 58 23.3
MNK *i* LR LR 18 04 02.2
MNK Minsk 68.54 331 *i* P **P** **17 32 45.7 +1.3**
MNK *i* *PP **pwP** **17 32 59.4 -2.6**
MNK *i* 17 35 17.6
MNK *i* PPP PPP 17 36 56.7
MNK *i* S **S** **17 41 45.0 +1.0**
MNK *i* SS **SS** **17 46 10.2 +3.0**
MNK pmax pmax
comp=E,56nm,1.1s
MNK pmax pmax
comp=Z,76nm,0.8s
MNK pmax pmax
comp=N,16nm,0.9s
MNK MLR MLR
comp=N,171nm,14.0s
MNK MLR MLR
comp=Z,417nm,17.0s
MNK MLR MLR
comp=E,289nm,16.0s
BER Bergen 68.57 346 *e*P **P** **17 32 45.7 +1.2**
RTBA Rita Blanca 68.70 59 IAmb IAmb 17 32 58.9
comp=Z,10nm,0.8s
ODD1 Odda 68.80 345 *e*P **P** **17 32 47.1 +1.1**
MSVF Nonsavu 68.94 160 LR LR 17 58 08.2
comp=Z,96nm,21.6s,baz=356,slow=32
BLS5 Blasjo 69.29 345 *e*P **P** **17 32 51.8 +2.7**
SCHQ Schefferville 69.65 26 P **P** **17 32 51.4 0.0**
comp=Z,20nm,0.8s,baz=346,slow=6.2,SNR=35
SCHQ LR LR 18 05 23.9
comp=Z,66nm,21.4s,baz=359,slow=38
comp=Z,20nm,0.8s
CTA Charters Tower 69.81 192 LR LR 17 58 20.5
comp=Z,79nm,20.1s,baz=22,slow=32
MAK Makhachkala 69.97 313*c* *i* P **P** **17 32 54.4 +1.0**
MAK *e* 17 35 26.9
MAK *e*PPP PPP 17 37 17.4
MAK *e*S **S** **17 42 05.3 +4.2**
MAK pmax pmax
comp=Z,168nm,2.1s
SNART Snartemo 70.19 344 *e*P **P** **17 32 55.9 +1.4**
MSTX Muleshoe 70.46 61 IAmb IAmb 17 33 10.9
comp=Z,15nm,0.9s
L40A Anamosa 70.59 48 IAmb IAmb 17 32 57.8
comp=Z,27nm,1.3s
KLSI 70.87 238 P **P** **17 32 59.0 -0.3**
AKT Akhty 70.98 312 *e*P **P** **17 32 59.5 -0.4**
AKT *e* 17 33 19.4
AKT *e* 17 35 35.9
AKT pmax pmax
comp=Z,31nm,0.8s
MDSI Maura Dua 71.01 239 P **P** **17 32 59.3 -0.8**
ERBR Yeremizino-Bor 71.03 319 *e*P **P** **17 32 59.5 -0.4**
ERBR *e**PP **pwP** **17 33 14.9 -2.7**
ERBR *e*S **S** **17 42 12.3 -1.2**
ERBR pmax pmax
comp=Z,28nm,0.9s
SMWD Samnorwood 71.06 58 IAmb IAmb 17 33 05.8
comp=Z,24nm,0.9s
KSI Kapahiang 71.22 240 P **P** **17 33 02.1 +0.6**
P38A Dawn 71.29 51 IAmb IAmb 17 33 02.2
comp=Z,11nm,0.8s
AK03 Malin Array Si 71.29 329 P **P** **17 33 01.2 -0.2**
AK23 Malin Array Si 71.30 329 P **P** **17 33 01.0 -0.4**
AK21 Malin Array Si 71.31 329 P **P** **17 33 01.1 -0.4**
AKASG Malin Array Be 71.31 329 P **P** **17 33 01.1 -0.4**
comp=Z,12nm,0.6s,baz=32,slow=6.2,SNR=35
AKASG LR LR 18 08 30.6
comp=Z,201nm,18.3s,baz=36,slow=39
comp=Z,12nm,0.6s
AKASG Malin Array Be 71.31 329 P **P** **17 33 01.5 0.0**
AKBB Malin Array Si 71.31 329*d* *e*P **P** **17 33 01.2 -0.3**
AKBB pmax pmax
comp=Z,19nm,0.6s
AKBB Malin Array Si 71.31 329 P **P** **17 33 01.1 -0.4**
AK04 Malin Array Si 71.32 329 P **P** **17 33 01.1 -0.4**
AK22 Malin Array Si 71.32 329 P **P** **17 33 01.1 -0.4**
KIEV Kiev 71.33 329 ⇓P **P** **17 33 01.9 +0.2**
KIEV Kiev 71.33 329 P **P** **17 33 00.4 -1.1**
KIEV Kiev 71.33 329 *i* P **P** **17 33 01.3 -0.3**
SNR=17
KIEV Kiev 71.33 329 P **P** **17 33 01.8 +0.2**
KIEV Kiev 71.33 329 P **P** **17 33 01.1 -0.5**
comp=Z,149nm,1.0s
AK01 Malin Array Si 71.33 329 P **P** **17 33 01.2 -0.4**
DZM Mont Dzumac 71.34 172 LR LR 17 57 19.0
comp=Z,226nm,20.4s,baz=8.0,slow=30
AK18 Malin Array Si 71.35 329 P **P** **17 33 01.3 -0.4**
AK20 Malin Array Si 71.35 329 P **P** **17 33 01.3 -0.5**
AK11 Malin Array Si 71.35 329 P **P** **17 33 01.3 -0.5**
AK15 Malin Array Si 71.35 329 P **P** **17 33 01.3 -0.5**
AK02 Malin Array Si 71.36 329 P **P** **17 33 01.3 -0.5**
AK08 Malin Array Si 71.36 328 P **P** **17 33 01.4 -0.4**
AK09 Malin Array Si 71.37 328 P **P** **17 33 01.4 -0.4**
AK19 Malin Array Si 71.37 329 P **P** **17 33 01.4 -0.5**
AK16 Malin Array Si 71.38 329 P **P** **17 33 01.5 -0.4**
AK17 Malin Array Si 71.39 329 P **P** **17 33 01.5 -0.5**
L42A Oliver, Polo 71.39 47 IAmb IAmb 17 33 02.4
comp=Z,18nm,1.1s
AK12 Malin Array Si 71.39 329 P **P** **17 33 01.5 -0.5**
AK05 Malin Array Si 71.39 329 P **P** **17 33 01.5 -0.5**
NCK Nalchik 71.39 316 ⇓ *i* P **P** **17 33 03.2 +1.0**
NCK pmax pmax
comp=Z,58nm,0.9s
AK10 Malin Array Si 71.39 328 P **P** **17 33 01.6 -0.4**
AK14 Malin Array Si 71.41 329 P **P** **17 33 01.7 -0.4**
AK06 Malin Array Si 71.42 328 P **P** **17 33 01.7 -0.5**
KVAR Kislovodsk Arr 71.44 317 LR LR 18 06 46.8
comp=Z,156nm,19.7s,baz=263,slow=38
KIV Kislovodsk 71.44 317 ⇓P **P** **17 33 03.5 +0.9**
KIV Kislovodsk 71.44 317 P **P** **17 33 02.9 +0.3**
KIV Kislovodsk 71.44 317 *i* P **P** **17 33 03.8 +1.3**
SNR=8.9
KIV Kislovodsk 71.44 317 *e*P **P** **17 33 02.9 +0.3**
KIV pmax pmax
comp=Z,28nm,1.0s
KIV Kislovodsk 71.44 317 P **P** **17 33 04.3 +1.7**
KIV Kislovodsk 71.44 317 P **P** **17 33 03.4 +0.9**
comp=Z,465nmcomp=Z,30nm,0.8s
AK13 Malin Array Si 71.45 329 P **P** **17 33 01.9 -0.4**
AK07 Malin Array Si 71.45 328 P **P** **17 33 01.9 -0.4**
VHRN Van Horn 71.48 64 IAmb IAmb 17 33 17.4
comp=Z,16nm,1.0s
KBZ Khabaz 71.53 316 P **P** **17 33 03.3 +0.4**
comp=Z,12nm,0.8s,baz=54,slow=2.4,SNR=32
KBZ LR LR 18 06 46.2
comp=Z,137nm,19.8s,baz=26,slow=38
comp=Z,12nm,0.8s
KBZ Khabaz 71.53 316*d* *i* P **P** **17 33 03.7 +0.8**
KBZ pmax pmax
comp=Z,47nm,0.9s
SHA1 Shidzhatmaz 71.63 316*d* *i* P **P** **17 33 04.6 +0.7**
MI28 Mi28_Pidlybu 71.64 330 P **P** **17 33 02.6 -0.9**
DKNS Dickens 71.74 60 IAmb IAmb 17 33 18.1
comp=Z,11nm,0.8s
LABN Labinsk 71.78 318 *e*P **P** **17 33 01.0 -3.4**
LABN *e**PP **sP** **17 33 15.2 -0.8**
LABN *e*S **S** **17 42 14.7 -7.5**
LABN pmax pmax
comp=Z,19nm,0.6s
VLDQ Val d'Or 71.79 36 IAmb IAmb 17 33 04.7
comp=Z,18nm,1.3s
RNPP9 Sopachiv 71.81 331 P **P** **17 33 04.7 +0.2**
RNPP8 Varash 71.89 331 P **P** **17 33 04.9 -0.1**
CGJI Cibinong 71.93 236 P **P** **17 33 03.5 -2.2**
RNPP5 Staryi Chortor 71.97 331 P **P** **17 33 05.8 +0.3**
WRAB Tennant Creek 72.04 204 P **P** **17 33 05.5 -0.6**
WRAB Tennant Creek 72.04 204*d* *i* P **P** **17 33 05.3 -0.8**
WRAB pmax pmax
comp=Z,53nm,0.9s
WRAB Tennant Creek 72.04 204 P **P** **17 33 05.8 -0.3**
WRAB PcP **PcP** **17 33 26.4 +2.0**
WRA Warramunga Arr 72.05 204 P **P** **17 33 05.4 -0.9**
comp=Z,36nm,0.7s,baz=20,slow=6.3,SNR=70
comp=Z,36nm,0.7s
WRA Warramunga Arr 72.05 204 P **P** **17 33 04.7 -1.5**
WRA Warramunga Arr 72.05 204 *i* P **P** **17 33 05.5 -0.7**
WRA pmax pmax
comp=Z,33nm,0.7s
WMOK Wichita Mounta 72.14 57 IAmb IAmb 17 33 20.9
comp=Z,14nm,0.9s
APMT Aspermont 72.44 59 IAmb IAmb 17 33 13.5
comp=Z,23nm,0.9s
LUBAR Lubar, Ukraine 72.48 329 P **P** **17 33 07.4 -1.1**
HDIL Hopedale 72.68 48 IAmb IAmb 17 33 10.7
comp=Z,27nm,0.8s
R40A Maddies Statio 72.94 51 IAmb IAmb 17 33 16.6
comp=Z,16nm,0.8s
FITZ Fitzroy Crossi 72.99 212 P **P** **17 33 11.3 -0.5**
comp=Z,21nm,0.9s,baz=31,slow=6.8,SNR=24
comp=Z,21nm,0.9s
VSLR Vesyoloye 73.02 318*c* *i* P **P** **17 33 12.9 +1.0**
VSLR pmax pmax
comp=Z,35nm,0.9s
SOC Sochi 73.06 318 *e*P **P** **17 33 16.4 +4.3**
SOC *e**PP **sP** **17 33 24.7 +1.1**
SOC *e* 17 35 52.1
SOC *e*PPP PPP 17 37 45.3
SOC *e*S **SKiKP** **17 42 40.3 -1.2**
SOC SS **SS** **17 47 16.6 -0.4**
SOC pmax pmax
comp=Z,21nm,0.7s
SOC MLR MLR
comp=Z,169nm,18.0s
ANN Anapa 73.06 320 *e*P **P** **17 33 10.8 -1.2**
ANN *e**PP **sP** **17 33 25.5 +1.9**
ANN *e*S **S** **17 42 33.3 -3.5**
ANN pmax pmax
comp=Z,57nm,1.4s
ABTX Abilene, Hawle 73.23 59 IAmb IAmb 17 33 18.5
comp=Z,22nm,1.1s
TXAR Lajitas Array 73.32 64 P **P** **17 33 14.6 +0.6**
comp=Z,13nm,0.7s,baz=314,slow=5.7,SNR=8.1
comp=Z,13nm,0.7s
TXAR Lajitas Array 73.32 64 P **P** **17 33 13.8 -0.2**
GNI Garni 73.45 313 LR LR 18 10 56.0
comp=Z,183nm,18.2s,baz=36,slow=40
GNI Garni 73.45 313 P **P** **17 33 12.7 -2.0**
GNI IAmb IAmb 17 33 23.0
comp=Z,32nm,1.1s
GNI Garni 73.45 313*d* *i* P **P** **17 33 16.4 +1.7**
GNI pmax pmax
comp=Z,49nm,1.3s
GNI MLR MLR
comp=Z,148nm,16.0s
GNI Garni 73.45 313 P **P** **17 33 15.6 +0.9**
HORU Horodok 73.53 329 P **P** **17 33 14.4 -0.4**
NDNU Novodnistrovsk 73.74 328 P **P** **17 33 16.0 0.0**
SORM Soroca 73.79 328 ⇓P **P** **17 33 16.8 +0.5**
SORM Soroca 73.79 328 P **P** **17 33 16.8 +0.5**
SORM Soroca 73.79 328 P **P** **17 33 16.0 -0.3**
comp=Z,41nm,0.8s
SADO Sadowa 73.87 39 LR LR 18 07 39.3
comp=Z,92nm,21.0s,baz=324,slow=37
KARS Kars 73.87 314 IAmb IAmb 17 33 25.1
comp=Z,32nm,1.1s
KMPD K-Podol'skiy 74.08 329 P **P** **17 33 17.7 -0.3**
KMPD P **P** **17 33 17.7 -0.3**
ICQ Pointe Anglais 74.16 29 P **P** **17 33 18.2 -0.2**
ICQ IAmb IAmb 17 33 20.0
comp=Z,26nm,1.2s
LDAQ Lac Daran 74.19 32 IAmb IAmb 17 33 19.8
comp=Z,36nm,1.4s
SIM Simferopol' 74.30 322 *e*P **P** **17 33 23.6 +4.2**
SIM pmax pmax
comp=Z,28nm,0.9s
KWP Kalwaria Pacla 74.36 332 P **P** **17 33 20.7 +1.0**
comp=Z,87nm,1.1s

TRQ	**Mont Tremblant**	**74.47**	**35**	IAmb	IAmb	17 33 20.8			
	comp=Z,36nm,1.3s								
SHIU	**Shidnytsya**	**74.52**	**331**	P	**P**	**17 33 21.7**	**+1.1**		
BRDY	**Brady**	**74.59**	**60**	IAmb	IAmb	17 36 05.4			
	comp=Z,27nm,1.4s								
STNU	**Starunia**	**74.60**	**330**	P	**P**	**17 33 21.8**	**+0.7**		
EKA	**Eskdalemuir Ar**	**74.66**	**349**	P	**P**	**17 33 21.6**	**+0.4**		
	comp=Z,3.2nm,0.3s,baz=19,slow=5.2,SNR=42								
EKA				LR	LR	18 07 51.0			
	comp=Z,57nm,18.6s,baz=25,slow=37								
	comp=Z,3.2nm,0.3s								
OJC	**Ojcow**	**74.72**	**334**	P	**P**	**17 33 22.3**	**+0.6**		
	comp=Z,33nm,1.1s								
JCT	**Junction City**	**74.73**	**61**	IAmb	IAmb	17 33 35.6			
	comp=Z,33nm,1.4s								
KSV	**Kosov**	**74.76**	**330**	P	**P**	**17 33 22.1**	**+0.1**		
FCAR	**Ozark Folk Cen**	**74.85**	**52**	IAmb	IAmb	17 33 27.7			
	comp=Z,11nm,0.8s								
STHS	**Stebnicka Huta**	**75.00**	**333**	*e*P	**P**	**17 33 23.7**	**+0.3**		
STHS				pmax	pmax				
	comp=Z,24nm,1.0s								
STHS	**Stebnicka Huta**	**75.00**	**333**	*e*P	**P**	**17 33 23.7**	**+0.3**		
MIAR	**Mount Ida**	**75.11**	**54**	IAmb	IAmb	17 33 37.6			
	comp=Z,26nm,1.3s								
PRAR	**RASCA**	**75.19**	**328**	⇓P	**P**	**17 33 25.7**	**+1.2**		
NIE	**Niedzica**	**75.28**	**333**	P	**P**	**17 33 25.8**	**+0.8**		
BUR08	**Bucovina Ar. S**	**75.30**	**329**	IAmb	IAmb	17 33 32.2			
	comp=Z,23nm,0.8s								
BURAR	**Bucovina Array**	**75.32**	**329**	⇓P	**P**	**17 33 25.9**	**+0.6**		
BURAR	**Bucovina Array**	**75.32**	**329**	P	**P**	**17 33 25.6**	**+0.3**		
BURAR				IAmb	IAmb	17 33 32.2			
	comp=Z,25nm,0.8s								
BURAR	**Bucovina Array**	**75.32**	**329**	P	**P**	**17 33 25.9**	**+0.6**		
IDGL	**Inch Island, C**	**75.39**	**352**	P	**P**	**17 33 26.4**	**+0.9**		
BRIU	**Brid**	**75.40**	**331**	P	**P**	**17 33 25.5**	**-0.2**		
MUKU	**Mukachevo**	**75.41**	**331**	P	**P**	**17 33 26.5**	**+0.8**		
HOLU	**Holmets**	**75.44**	**331**	P	**P**	**17 33 26.7**	**+0.9**		
GIRR	**Girov**	**75.45**	**328**	⇑P	**P**	**17 33 27.0**	**+1.0**		
KORU	**Korolevo**	**75.53**	**331**	P	**P**	**17 33 26.1**	**-0.3**		
CLL	**Collm**	**75.54**	**338**	IAmb	IAmb	17 33 33.3			
	comp=Z,25nm,1.0s								
CLL	**Collm**	**75.54**	**338**	*i* P	**P**	**17 33 26.7**	**+0.3**		
CLL				pmax	pmax				
	comp=Z,26nm,1.1s								
CLL				MLR	MLR				
	comp=Z,400nm,18.6s								
CLL	**Collm**	**75.54**	**338**	*i* P	**P**	**17 33 26.7**	**+0.3**		
	comp=Z,26nm,1.1s								
CLL				*i* pP	**pP**	**17 33 32.2**	**-2.2**		
	comp=Z,26nm,1.0s								
CLL				AMS	AMS	18 05 00.0			
	comp=N,300nm,20.5s								
CLL				AMS	AMS	18 05 00.0			
	comp=E,400nm,20.9s								
CLL				AMS	AMS	18 12 00.0			
	comp=Z,400nm,18.6s								
CLL	**Collm**	**75.54**	**338**	P	**P**	**17 33 26.7**	**+0.3**		
	comp=Z,30nm,1.2s								
STEB	**Steborice**	**75.55**	**335**	*e*P	**P**	**17 33 27.7**	**+1.2**		
KOPT	**Kop Dagi**	**75.56**	**315**	IAmb	IAmb	17 33 35.8			
	comp=Z,24nm,0.9s								
DPC	**Dobruska-Polom**	**75.57**	**336**	*e*P	**P**	**17 33 28.0**	**+1.3**		
DPC				*ex*	x	17 33 33.2			
DPC	**Dobruska-Polom**	**75.57**	**336**	*e*P	**P**	**17 33 28.0**	**+1.3**		
DPC				*e*		17 33 33.2			
DPC	**Dobruska-Polom**	**75.57**	**336**	P	**P**	**17 33 28.0**	**+1.3**		
	comp=Z,13nm,1.3s								
BERU	**Beregovo**	**75.61**	**331**	P	**P**	**17 33 28.2**	**+1.3**		
TRSU	**Trosnyk**	**75.64**	**331**	P	**P**	**17 33 28.5**	**+1.5**		
BIR	**Birlad**	**75.65**	**327**	⇓P	**P**	**17 33 28.8**	**+1.6**		
BIR	**Birlad**	**75.65**	**327**	P	**P**	**17 33 28.7**	**+1.6**		
KRLC	**Kraliky**	**75.69**	**336**	AMS	AMS	18 11 50.0			
	comp=Z,500nm,17.3s								
ASAR	**Alice Springs**	**75.72**	**203**	P	**P**	**17 33 26.1**	**-1.7**		
	comp=Z,5.8nm,0.9s,baz=18,slow=5.3,SNR=58								
ASAR				LR	LR	18 04 10.3			
	comp=Z,72nm,21.9s,baz=15,slow=34								
	comp=Z,5.8nm,0.9s								
ASAR	**Alice Springs**	**75.72**	**203**	P	**P**	**17 33 26.0**	**-1.7**		
MORC	**Moravsky Berou**	**75.76**	**335**	⇑P	**P**	**17 33 29.0**	**+1.2**		
MORC	**Moravsky Berou**	**75.76**	**335**	IAmb	IAmb	17 33 35.2			
	comp=Z,20nm,0.8s								
MORC	**Moravsky Berou**	**75.76**	**335**	P	**P**	**17 33 28.9**	**+1.2**		
MORC	**Moravsky Berou**	**75.76**	**335**	*e*P	**P**	**17 33 28.3**	**+0.6**		
LANS	**Liptovska Anna**	**75.77**	**333**	*e*P	**P**	**17 33 29.4**	**+1.6**		
LANS	**Liptovska Anna**	**75.77**	**333**	*e*P	**P**	**17 33 29.3**	**+1.5**		
TESR	**Tescani**	**75.78**	**328**	⇑P	**P**	**17 33 28.5**	**+0.6**		
TESR	**Tescani**	**75.78**	**328**	P	**P**	**17 33 28.4**	**+0.5**		
	comp=Z,59nm,1.0s								
VLDR	**Vladesti**	**75.85**	**327**	⇑P	**P**	**17 33 29.1**	**+0.8**		
PVCC	**Panska Ves**	**75.86**	**337**	*e*pP	pP	17 33 35.2	-1.1		
PVCC	**Panska Ves**	**75.86**	**337**	*e*P	P	17 33 35.2	+6.9		
GHRR		**75.90**	**327**	⇓P	**P**	**17 33 30.1**	**+1.6**		
E62A	**Clayton Lake**	**75.94**	**32**	IAmb	IAmb	17 33 30.0			
	comp=Z,34nm,1.2s								
WCI	**Wyandotte Cave**	**75.94**	**47**	P	**P**	**17 33 29.0**	**+0.1**		
RICC	**Richard**	**75.97**	**337**	*e*P	**P**	**17 33 30.2**	**+1.3**		
ONER	**Baraj Valea Uz**	**76.02**	**328**	⇑P	**P**	**17 33 30.1**	**+0.8**		
KECS	**Kecovo**	**76.06**	**333**	*e*P	**P**	**17 33 30.9**	**+1.5**		
KECS				pmax	pmax				
	comp=Z,19nm,1.1s								
KECS	**Kecovo**	**76.06**	**333**	*e*P	**P**	**17 33 30.9**	**+1.5**		
HSKC	**Hora Svate Kat**	**76.08**	**338**	*e*P	**P**	**17 33 30.8**	**+1.3**		
HSKC				AMS	AMS	18 12 20.0			
	comp=Z,600nm,17.3s								
ODBI	**Odobesti**	**76.28**	**327**	⇓P	**P**	**17 33 32.2**	**+1.5**		
PAOC	**Oil Creek Stat**	**76.31**	**41**	IAmb	IAmb	17 33 44.4			
	comp=Z,24nm,1.1s								
VRI	**Vrincioaia**	**76.31**	**327**	⇓P	**P**	**17 33 32.0**	**+1.0**		
VRI	**Vrincioaia**	**76.31**	**327**	P	**P**	**17 33 31.9**	**+1.0**		
PLOR	**Plostina**	**76.35**	**327**	⇓P	**P**	**17 33 31.8**	**+0.6**		
PLOR	**Plostina**	**76.35**	**327**	P	**P**	**17 33 31.8**	**+0.6**		
PALK	**Pallekele**	**76.36**	**265**	P	**P**	**17 33 31.6**	**-0.1**		
PALK	**Pallekele**	**76.36**	**265**	P	**P**	**17 33 29.5**	**-2.2**		
PALK	**Pallekele**	**76.36**	**265**	P	**P**	**17 33 32.0**	**+0.3**		
PRU	**Pruhonice**	**76.37**	**337**	*e*P	**P**	**17 33 32.8**	**+1.7**		
PRU				AMS	AMS	18 13 30.0			
PRU	**Pruhonice**	**76.37**	**337**	*e*P	**P**	**17 33 32.8**	**+1.7**		
PRU				MLR	MLR				
	comp=N,500nm,18.1s								
CFR	**Carcaliu**	**76.40**	**326**	⇓P	**P**	**17 33 32.6**	**+1.2**		
CFR	**Carcaliu**	**76.40**	**326**	P	**P**	**17 33 32.5**	**+1.2**		
TURR	**Turia**	**76.40**	**328**	⇓P	**P**	**17 33 32.8**	**+1.3**		
OZUR		**76.44**	**328**	⇓P	**P**	**17 33 33.0**	**+1.3**		
VRAC	**Vranov**	**76.44**	**335**	LR	LR	18 12 29.9			
	comp=N,393nm,18.5s,baz=24,slow=40								
VRAC	**Vranov**	**76.44**	**335**	⇑P	**P**	**17 33 33.1**	**+1.4**		
VRAC	**Vranov**	**76.44**	**335**	P	**P**	**17 33 33.0**	**+1.4**		
VRAC	**Vranov**	**76.44**	**335**	*e*P	**P**	**17 33 32.5**	**+0.9**		
MESR	**Meseseni**	**76.47**	**330**	⇓P	**P**	**17 33 33.0**	**+1.3**		
MOX	**Moxa**	**76.48**	**339**	*e*L	L	18 13 03.9			
	comp=N,293nm,18.2s								
COVR	**Voineasa-Covas**	**76.51**	**328**	⇑P	**P**	**17 33 33.3**	**+1.3**		
JAVC	**Velka Javorina**	**76.55**	**334**	*e*P	**P**	**17 33 34.0**	**+1.7**		
TPGR	**Topolog**	**76.57**	**326**	⇑P	**P**	**17 33 32.9**	**+0.5**		
CJR	**Cluj-Napoca**	**76.64**	**330**	⇓P	**P**	**17 33 33.7**	**+0.9**		
CJR	**Cluj-Napoca**	**76.64**	**330**	P	**P**	**17 33 33.7**	**+0.9**		
DOPR	**Dopca**	**76.69**	**328**	⇓P	**P**	**17 33 34.2**	**+1.1**		
KRUC	**Moravsky**	**76.72**	**335**	*e*P	**P**	**17 33 34.0**	**+0.8**		
PSZ	**Piszkesteto**	**76.75**	**333**	⇑P	**P**	**17 33 34.5**	**+1.0**		
PSZ	**Piszkesteto**	**76.75**	**333**	IAmb	IAmb	17 33 41.6			
	comp=Z,15nm,1.1s								
PSZ	**Piszkesteto**	**76.75**	**333**	P	**P**	**17 33 34.4**	**+1.0**		
TREC	**Trest**	**76.75**	**336**	*e*P	**P**	**17 33 35.1**	**+1.7**		
TREC	**Trest**	**76.75**	**336**	*e*P	**P**	**17 33 35.1**	**+1.7**		
G62A	**West of Eustis**	**76.80**	**33**	IAmb	IAmb	17 33 35.4			
	comp=Z,33nm,1.1s								
MARR	**Marisel-Cluj**	**76.83**	**330**	⇑P	**P**	**17 33 34.4**	**+0.4**		
MDB	**Medias**	**76.88**	**329**	⇓P	**P**	**17 33 34.9**	**+0.7**		
MDB	**Medias**	**76.88**	**329**	P	**P**	**17 33 34.8**	**+0.7**		
MLR	**Muntele Rosu**	**76.91**	**328**	LR	LR	18 10 32.1			
	comp=Z,246nm,19.6s,baz=74,slow=38								
MLR	**Muntele Rosu**	**76.91**	**328**	⇑P	**P**	**17 33 35.3**	**+0.8**		
MLR	**Muntele Rosu**	**76.91**	**328**	P	**P**	**17 33 35.2**	**+0.8**		
SMOL	**Smolenice**	**76.93**	**334**	*e*P	**P**	**17 33 36.3**	**+1.9**		
ZVC	**Zvikov**	**76.96**	**337**	AMS	AMS	18 13 50.0			
	comp=Z,600nm,16.5s								
DSB	**Dublin**	**77.08**	**351**	P	**P**	**17 33 36.2**	**+1.1**		
MODS	**Modra-Piesok**	**77.10**	**334**	*e*P	**P**	**17 33 37.0**	**+1.7**		
MODS				pmax	pmax				
	comp=Z,191nm,2.3s								
MODS	**Modra-Piesok**	**77.10**	**334**	*e*P	**P**	**17 33 37.0**	**+1.7**		
IGLA	**Glengowla, Co**	**77.20**	**352**	P	**P**	**17 33 36.4**	**+0.7**		
VOIR		**77.27**	**328**	⇓P	**P**	**17 33 37.5**	**+1.0**		
VOIR		**77.27**	**328**	P	**P**	**17 33 37.4**	**+1.0**		
VOIR		**77.27**	**328**	P	**P**	**17 33 37.2**	**+0.8**		
	comp=Z,31nm,0.9s								
SRO	**Srobarova**	**77.31**	**334**	*e*P	**P**	**17 33 38.8**	**+2.3**		
SRO				pmax	pmax				
	comp=Z,35nm,1.3s								
SRO	**Srobarova**	**77.31**	**334**	*e*P	**P**	**17 33 38.8**	**+2.3**		
KHC	**Kasperske Hory**	**77.40**	**337**	IAmb	IAmb	17 33 43.2			
	comp=Z,17nm,0.9s								
KHC	**Kasperske Hory**	**77.40**	**337**	*e*P	**P**	**17 33 38.4**	**+1.3**		
KHC				*ex*	x	17 33 41.9			
KHC				AMS	AMS	18 14 20.0			
	comp=Z,700nm,18.6s								
KHC	**Kasperske Hory**	**77.40**	**337**	*de*P	**P**	**17 33 38.1**	**+1.0**		
KHC				pmax	pmax				
	comp=Z,21nm,1.0s								
KHC	**Kasperske Hory**	**77.40**	**337**	P	**P**	**17 33 37.9**	**+0.8**		
	comp=Z,22nm,1.1s								
ICOR	**Ion Corvin**	**77.43**	**326**	⇓P	**P**	**17 33 38.2**	**+1.0**		
GRF	**Grafenberg Arr**	**77.47**	**339**	*e*P	**P**	**17 33 38.4**	**+1.0**		
	comp=Z,19nm,0.9s,baz=23,slow=5.1								
GRF				*e*L	L	18 13 42.9			
	comp=Z,345nm,18.3s								
ARR	**Arges**	**77.47**	**328**	⇑P	**P**	**17 33 38.8**	**+1.2**		
CKRC	**Cesky Krumlov**	**77.50**	**336**	*e*P	**P**	**17 33 39.4**	**+1.8**		
CKRC				*ex*	x	17 33 42.8			
CKRC	**Cesky Krumlov**	**77.50**	**336**	*e*P	**P**	**17 33 39.4**	**+1.8**		
CKRC				*e*		17 33 42.8			
BEBN	**Eben Emael**	**77.63**	**343**	*d*P	**P**	**17 33 39.1**	**+0.9**		
	comp=Z,28nm,0.8s								
GEC2	**GERESS Array S**	**77.64**	**337**	IAmb	IAmb	17 33 48.4			
	comp=Z,40nm,1.9s								
GERES	**GERESS Array B**	**77.64**	**337**	P	**P**	**17 33 38.9**	**+0.4**		
	comp=Z,2.4nm,0.6s,baz=359,slow=6.9,SNR=6.7								
GERES				LR	LR	18 13 15.8			
	comp=Z,234nm,18.3s,baz=50,slow=40								
	comp=Z,2.4nm,0.6s								
BTNL	**Ternell**	**77.74**	**342**	*d*P	**P**	**17 33 39.7**	**+0.8**		
	comp=Z,11nm,0.8s								
MEM	**Membach**	**77.74**	**342**	*d*P	**P**	**17 33 38.9**	**+0.1**		
	comp=Z,22nm,1.0s								
BSTI	**Sart Tilman**	**77.85**	**343**	*d*P	**P**	**17 33 40.8**	**+1.3**		
	comp=Z,4.4nm,1.0s								
CONA	**Conrad Observa**	**77.90**	**335**	*i* pP	**P**	**17 33 41.6**	**+1.7**		
	comp=Z,23nm,1.1s								
CONA				*e*PcP	**pP**	**17 33 48.0**	**0.0**		
	comp=Z,23nm,1.1s								
HBVL	**Hebbronville**	**77.94**	**63**	IAmb	IAmb	17 33 55.5			
	comp=Z,22nm,0.9s								
MBWA	**Marble Bar**	**77.98**	**216**	P	**P**	**17 33 39.1**	**-1.3**		
MBWA				IAmb	IAmb	17 33 53.3			
	comp=Z,17nm,1.0s								
IWEX	**Carrickbyrne,**	**77.98**	**351**	P	**P**	**17 33 41.3**	**+1.2**		
RONA	**Rosalia, Austr**	**77.99**	**335**	*e*pP	**P**	**17 33 42.1**	**+1.8**		
	comp=Z,20nm,0.9s								
BCLA	**Clavier**	**78.06**	**343**	*d*P	**P**	**17 33 39.3**	**-1.4**		
	comp=Z,12nm,0.0s								
GZR	**Gura Zlata**	**78.08**	**330**	⇓P	**P**	**17 33 41.7**	**+0.8**		
GZR	**Gura Zlata**	**78.08**	**330**	P	**P**	**17 33 41.7**	**+0.8**		
SHME	**Shamm**	**78.08**	**296**	*i* P	**P**	**17 33 40.6**	**-0.5**		
	SNR=6.7								
SHME	**Shamm**	**78.08**	**296**	P	**P**	**17 33 41.0**	**-0.1**		
BANOM	**Banah**	**78.08**	**296**	*i* P	**P**	**17 33 42.0**	**+0.8**		
	SNR=14								
BANOM	**Banah**	**78.08**	**296**	P	**P**	**17 33 41.8**	**+0.6**		
MPLH	**Magyarpolny**	**78.12**	**334**	P	**P**	**17 33 42.0**	**+1.0**		
BGES	**Gesves**	**78.14**	**343**	*d*P	**P**	**17 33 41.5**	**+0.5**		
	comp=Z,10.0nm,0.9s								
INKA	**Innaminka**	**78.18**	**196**	P	**P**	**17 33 41.7**	**+0.4**		
BZS	**Buzias**	**78.26**	**330**	⇑P	**P**	**17 33 42.5**	**+0.7**		
BZS	**Buzias**	**78.26**	**330**	P	**P**	**17 33 42.5**	**+0.7**		
BMRD	**Maredsous**	**78.28**	**343**	*d*P	**P**	**17 33 42.4**	**+0.6**		
	comp=Z,17nm,0.9s								
PSA00	**Pilbara Seismi**	**78.31**	**216**	P	**P**	**17 33 41.5**	**-0.7**		
PSA00				IAmb	IAmb	17 33 55.2			
	comp=Z,16nm,1.1s								
RCHB	**Rochefort**	**78.33**	**343**	*d*P	**P**	**17 33 42.6**	**+0.5**		
	comp=Z,10.0nm,0.9s								
COPA	**Copaceanca**	**78.35**	**327**	⇓P	**P**	**17 33 42.6**	**+0.3**		
MOA	**Molln**	**78.41**	**336**	*e*pP	**P**	**17 33 43.9**	**+1.3**		
	comp=Z,4.5nm,0.9s								
MOA				*e*PcP	**pP**	**17 33 50.3**	**-0.4**		
	comp=Z,14nm,0.9s								
DOU	**Dourbes**	**78.51**	**343**	*d*P	**P**	**17 33 41.7**	**-1.4**		
	comp=Z,10nm,1.1s								
MDH	**Madha**	**78.55**	**295**	P	**P**	**17 33 43.7**	**-0.1**		
MDH	**Madha**	**78.55**	**295**	P	**P**	**17 33 44.1**	**+0.3**		
MSFE	**Esma-Masafi**	**78.59**	**295**	P	**P**	**17 33 44.4**	**+0.4**		
BNN	**Bunyan**	**78.60**	**318**	IAmb	IAmb	17 33 51.7			
	comp=Z,20nm,1.0s								
ARSA	**Arzberg**	**78.61**	**335**	IAmb	IAmb	17 33 54.0			
	comp=Z,14nm,1.0s								
ARSA	**Arzberg**	**78.61**	**335**	*e*pP	**P**	**17 33 45.3**	**+1.5**		
	comp=Z,20nm,1.4s								
HERR	**Herculane**	**78.65**	**330**	⇑P	**P**	**17 33 44.3**	**+0.3**		
MORH	**Mrgy, Hungar**	**78.65**	**333**	⇑P	**P**	**17 33 44.3**	**+0.4**		
WSAR	**Wadi Sarin**	**78.70**	**292**	P	**P**	**17 33 45.6**	**+1.0**		
BIOA	**Bad Ischl, Aus**	**78.72**	**336**	*e*pP	**P**	**17 33 46.0**	**+1.7**		
	comp=Z,20nm,1.1s								
VLAD	**Vladila**	**78.75**	**328**	⇓P	**P**	**17 33 45.4**	**+0.9**		
BIDO	**Bidbid**	**78.80**	**293**	P	**P**	**17 33 46.0**	**+0.9**		
BR131	**Keskin Array S**	**78.83**	**320**	IAmb	IAmb	17 33 52.8			
	comp=Z,23nm,1.2s								
BR131	**Keskin Array S**	**78.83**	**320**	⇓*i* P	**P**	**17 33 45.5**	**+0.2**		
BR131	**Keskin Array S**	**78.83**	**320**	P	**P**	**17 33 46.4**	**+1.1**		
BRTR	**Keskin Array B**	**78.83**	**320**	P	**P**	**17 33 45.8**	**+0.5**		
	comp=Z,4.6nm,1.1s,baz=71,slow=2.2,SNR=14								
BRTR				LR	LR	18 13 15.6			
	comp=Z,76nm,19.1s,baz=54,slow=39								
	comp=Z,4.6nm,1.1s								
BRTR	**Keskin Array B**	**78.83**	**320**	P	**P**	**17 33 44.4**	**-0.9**		
UOSS	**Minazif**	**78.88**	**295**	P	**P**	**17 33 45.1**	**-0.5**		
UOSS	**Minazif**	**78.88**	**295**	*i* P	**P**	**17 33 45.7**	**+0.1**		
	SNR=17								
UOSS	**Minazif**	**78.88**	**295**	P	**P**	**17 33 45.7**	**+0.1**		
WBK	**Wadi Bani Khal**	**78.97**	**292**	P	**P**	**17 33 47.2**	**+1.1**		
HATD	**Hatta, Dubai**	**79.01**	**295**	*i* P	**P**	**17 33 47.0**	**+0.7**		
	SNR=17								
HATD	**Hatta, Dubai**	**79.01**	**295**	P	**P**	**17 33 47.1**	**+0.8**		
	SNR=9.5								
JLN	**Jalan Bani Buh**	**79.04**	**291**	P	**P**	**17 33 47.4**	**+0.9**		
ASHO	**Ashiyiah**	**79.16**	**295**	*i* P	**P**	**17 33 46.5**	**-0.6**		
	SNR=13								
ASHO	**Ashiyiah**	**79.16**	**295**	P	**P**	**17 33 46.7**	**-0.4**		
	SNR=8.6								
NAZ	**Nazwa, Dubai**	**79.17**	**296**	*i* P	**P**	**17 33 47.1**	**0.0**		
	SNR=11								
NAZ	**Nazwa, Dubai**	**79.17**	**296**	P	**P**	**17 33 47.6**	**+0.4**		
	SNR=5.3								
SMDO	**Samad**	**79.19**	**293**	P	**P**	**17 33 48.1**	**+0.7**		
KIRS	**Kirsehir-Merke**	**79.21**	**319**	⇑P	**P**	**17 33 47.9**	**+0.6**		
PLVB	**Pleven**	**79.21**	**327**	⇓P	**P**	**17 33 47.9**	**+0.8**		
LESA	**Schwarzleotal**	**79.21**	**337**	*e*pP	**P**	**17 33 48.9**	**+1.8**		
	comp=Z,32nm,1.4s								
HOQ	**Hoqain**	**79.24**	**293**	P	**P**	**17 33 48.1**	**+0.5**		
	SNR=5.8								
SOKA	**Soboth**	**79.27**	**335**	*e*pP	**P**	**17 33 48.7**	**+1.2**		
	comp=Z,22nm,1.7s								
SOHO	**SOHO**	**79.29**	**294**	*i* P	**P**	**17 33 47.2**	**-0.6**		
	SNR=9.6								
KBA	**Koelnbreinsper**	**79.36**	**336**	*e*pP	**P**	**17 33 49.7**	**+1.6**		
	comp=Z,68nm,0.8s								
GAZ	**Gaziantep**	**79.37**	**316**	IAmb	IAmb	17 33 55.3			
	comp=Z,52nm,1.8s								
FAQ	**Al Faqa, Dubai**	**79.39**	**295**	P	**P**	**17 33 48.8**	**+0.5**		
BFO	**Black Forest**	**79.41**	**340**	P	**P**	**17 33 47.4**	**-0.7**		
BFO				IAmb	IAmb	17 33 56.0			
	comp=Z,12nm,0.6s								
RAR	**Rarotonga**	**79.46**	**141**	LR	LR	18 01 22.2			
	comp=Z,117nm,20.7s,baz=306,slow=30								
ARMA	**Armidale**	**79.49**	**186**	P	**P**	**17 33 49.5**	**+0.9**		
ARMA				IAmb	IAmb	17 33 54.5			
	comp=Z,41nm,1.4s								
WATA	**Walderalm**	**79.57**	**338**	*e*pP	**P**	**17 33 50.8**	**+1.6**		
	comp=Z,33nm,1.3s								
WTTA	**Wattenberg**	**79.62**	**338**	*e*pP	**P**	**17 33 51.0**	**+1.5**		
	comp=Z,39nm,1.0s								
ASUD	**Al Ashush, Dub**	**79.64**	**296**	P	**P**	**17 33 49.5**	**-0.2**		
ASUD	**Al Ashush, Dub**	**79.64**	**296**	P	**P**	**17 33 49.8**	**+0.1**		
JMDO	**Jabal Madar**	**79.67**	**292**	P	**P**	**17 33 50.6**	**+0.6**		
	SNR=8.6								
MOTA	**Moosalm**	**79.68**	**338**	*e*pP	**P**	**17 33 51.1**	**+1.3**		
	comp=Z,45nm,1.1s								
SQTA	**Sankt Quirin**	**79.77**	**338**	*i* pP	**P**	**17 33 51.7**	**+1.5**		
	comp=Z,14nm,1.0s								
ECH	**Echery**	**79.77**	**341**	IAmb	IAmb	17 33 58.2			
	comp=Z,18nm,1.0s								
ALNE	**Al Ain**	**79.82**	**295**	*i* P	**P**	**17 33 50.6**	**-0.1**		
	SNR=12								
ALNE	**Al Ain**	**79.82**	**295**	P	**P**	**17 33 51.0**	**+0.3**		
	SNR=12								
ABTA	**Abfaltersbach**	**79.88**	**337**	*e*pP	**P**	**17 33 51.7**	**+0.9**		
	comp=Z,22nm,0.8s								
AJN	**Ajban**	**79.89**	**296**	P	**P**	**17 33 51.3**	**+0.3**		
PRED	**Cave del Predi**	**79.89**	**336**	IAmb	IAmb	17 33 58.6			
	comp=Z,16nm,0.8s								
ARQ	**Araqi**	**79.90**	**294**	P	**P**	**17 33 51.3**	**+0.1**		
	SNR=7.8								
BSY	**Bisya**	**79.94**	**293**	P	**P**	**17 33 51.9**	**+0.5**		
	SNR=9.3								
DAVA	**Damuels**	**80.03**	**339**	*i* pP	**P**	**17 33 53.0**	**+1.3**		
	comp=Z,32nm,0.9s,SNR=4.1								
FETA	**Feichten**	**80.08**	**338**	*i* pP	**P**	**17 33 53.4**	**+1.5**		
	comp=Z,26nm,1.1s								
KBD	**Kabd**	**80.49**	**304**	P	**P**	**17 33 54.4**	**+0.1**		
DAVOX	**Davos/Dischmat**	**80.51**	**339**	LR	LR	18 15 30.8			
	comp=Z,212nm,18.6s,baz=73,slow=40								
FUORN	**Ofenpass-Fuorn**	**80.56**	**338**	IAmb	IAmb	17 34 02.9			
	comp=Z,18nm,0.9s								
MHTO	**MHTO**	**80.80**	**291**	P	**P**	**17 33 57.0**	**+1.0**		
	SNR=27								
TUE	**Stuetta**	**80.92**	**339**	IAmb	IAmb	17 34 05.5			
	comp=Z,26nm,0.8s								
PPT	**Papeete**	**80.98**	**130**	LR	LR	18 05 14.8			
	comp=Z,137nm,19.3s,baz=352,slow=32								
UMZA	**Um Al Zommool**	**81.19**	**294**	P	**P**	**17 33 58.1**	**0.0**		
PDG	**Podgorica**	**81.87**	**331**	⇑P	**P**	**17 34 01.4**	**+0.1**		
MZR	**Muzera**	**81.96**	**296**	*i* P	**P**	**17 34 01.9**	**-0.3**		
	SNR=14								
MZR	**Muzera**	**81.96**	**296**	P	**P**	**17 34 02.4**	**+0.2**		
	SNR=5.7								
MANT	**Manisa**	**81.97**	**322**	IAmb	IAmb	17 34 09.8			
	comp=Z,16nm,0.8s								
STKA	**Stephens Creek**	**82.08**	**194**	P	**P**	**17 34 01.4**	**-0.9**		
	comp=Z,4.6nm,1.0s,baz=319,slow=7.6,SNR=4.9								
STKA				LR	LR	18 09 26.4			
	comp=Z,84nm,19.8s,baz=25,slow=35								
	comp=Z,4.6nm,1.0s								
BNI	**Bardonecchia**	**82.88**	**340**	IAmb	IAmb	17 34 42.1			
	comp=Z,19nm,1.1s								
ELL	**Elmali**	**82.91**	**321**	IAmb	IAmb	17 34 18.1			
	comp=Z,17nm,1.1s								
CSS	**Mathiatis**	**82.95**	**317**	IAmb	IAmb	17 34 15.9			
	comp=Z,12nm,0.8s								
SSB	**Saint Sauveur**	**83.12**	**342**	IAmb	IAmb	17 34 10.2			
	comp=Z,22nm,1.2s								
AKAS	**Kas**	**83.48**	**321**	IAmb	IAmb	17 34 25.6			
	comp=Z,18nm,1.0s								
ASF	**Jabal al Asfar**	**83.62**	**313**	LR	LR	18 16 04.5			
	comp=Z,82nm,19.3s,baz=25,slow=39			

16nm,0.3s,baz=266,slow=23,SNR=6.6
JHJ Sn **Sn** **17 44 55.4 +0.8**
52nm,0.3s,baz=50,slow=24,SNR=6.9
28nm,0.3s
JMKN Mikurajimanish 3.45 349 *eS* **Sn** **17 45 11.7 -2.3**
JMYK Miyake Tsubota 3.62 349 *eS* **Sn** **17 45 16.5 -1.7**
CBIJ Chichi jima 3.74 155 *eP* **Pn** **17 44 39.2 +0.7**
JCJ Chichijima 3.74 155 Pn **Pn** **17 44 38.6 +0.2**
9.4nm,0.3s,baz=322,slow=19,SNR=5.5
JCJ Sn **Sn** **17 45 20.5 -0.8**
9.8nm,0.3s,baz=315,slow=23,SNR=1.6
JCJ LR LR 17 46 08.2
comp=Z,661nm,19.9s,baz=339,slow=40
27nm,0.4s
JCJ Chichijima 3.74 155 **Pn** **17 44 36.5 -2.0**
BSO1 Boso 1 4.16 6 *eP* **Pn** **17 44 41.6 -2.1**
BSO1 *eS* **Sn** **17 45 26.5 -4.4**
BSO3 Boso 3 4.28 1 *eS* **Sn** **17 45 29.9 -4.4**
TTO1 TONANKAI O.B.S 4.37 316 *eS* **Sn** **17 45 36.5 0.0**
BSO4 Boso 4 4.47 359 *eS* **Sn** **17 45 35.7 -3.4**
JSG Sagara 4.56 336 Pn **Pn** **17 44 48.0 -1.7**
JOD2 Odawara 2 4.87 347 *eS* **Sn** **17 45 48.5 -0.6**
INU Inuyama 5.61 330 Pn **Pn** **17 45 03.8 -0.3**
JGF Kuroka 5.69 334 Pn **Pn** **17 45 05.3 +0.1**
MJAR Matsushiro Arr 6.29 344 Pn **Pn** **17 45 14.2 +0.6**
0.2nm,0.3s,baz=152,slow=13,SNR=17
MJAR Sn **Sn** **17 46 26.2 +2.0**
0.2nm,0.3s,baz=195,slow=18,SNR=4.4
MJAR LR LR 17 47 44.9
comp=Z,541nm,19.3s,baz=136,slow=39
5.2nm,0.8s
MJAR Matsushiro Arr 6.29 344 **Pn** **17 45 13.9 +0.3**
MAJO Matsushiro 6.29 344 **Pn** **17 45 12.8 -0.8**
MJB9 Matsu-Tunnel 6.30 344 **Pn** **17 45 13.9 +0.3**
JNU Nakatsue 8.52 290 Pn **Pn** **17 45 42.9 -1.2**
0.1nm,0.3s,baz=98,slow=15,SNR=1.1
JNU LR LR 17 48 38.8
comp=Z,230nm,18.5s,baz=106,slow=36
1.6nm,0.7s
JOW Kunigami 11.27 254 LR LR 17 50 05.5
comp=Z,512nm,21.7s,baz=173,slow=35
KSRS Korea Array 12.46 307 Pn **Pn** **17 46 38.0 0.0**
0.1nm,0.3s,baz=116,slow=14,SNR=8.0
0.6nm,0.7s
ASAJ Asahikawa 13.70 7 Pn Pn 17 46 50.8 -4.0
0.3nm,0.3s,baz=211,slow=12,SNR=4.1
ASAJ LR LR 17 53 15.9
comp=Z,334nm,19.9s,baz=181,slow=42
JKA Kamikawa-asahi 13.70 7 Pn 17 46 50.1 -4.7
GUMO Guam 17.33 165 LR LR 17 53 42.8
comp=Z,55nm,19.3s,baz=356,slow=35
KLR Kul'dur 19.82 343 P **P** **17 48 12.1 +1.4**
0.2nm,0.3s,baz=147,slow=6.5,SNR=5.9
KLR LR LR 17 55 27.1
comp=Z,155nm,20.3s,baz=108,slow=36
1.2nm,0.5s
HEH HeiHe 22.01 337 *eP* **P** **17 48 35.3 +1.0**
H11N2 WAKE ISLAND Hy 26.21 108 T T 18 16 42.0
baz=300,slow=75,SNR=51
H11N1 WAKE ISLAND Hy 26.21 108 T T 18 16 42.4
baz=300,slow=75,SNR=41
H11N3 WAKE ISLAND Hy 26.23 108 T T 18 16 43.4
baz=300,slow=75,SNR=55
H11S3 WAKE ISLAND Hy 26.66 111 T T 18 17 16.0
baz=303,slow=75,SNR=53
H11S1 WAKE ISLAND Hy 26.67 111 T T 18 17 16.0
baz=303,slow=75,SNR=68
H11S2 WAKE ISLAND Hy 26.68 111 T T 18 17 16.0
baz=303,slow=75,SNR=39
DAV Davao City (W) 27.15 214 LR LR 17 58 12.2
comp=Z,134nm,20.9s,baz=59,slow=32
MA2 Magadan 29.90 11 LR LR 18 02 15.6
comp=Z,70nm,19.5s,baz=199,slow=37
SONM Songino Array 31.21 313 P **P** **17 49 59.2 -0.1**
0.4nm,0.4s,baz=111,slow=7.9,SNR=4.1
SONM LR LR 18 01 47.9
comp=Z,82nm,18.9s,baz=72,slow=35
0.4nm,0.4s
SONM Songino Array 31.21 313 P **P** **17 49 58.4 -0.9**
YAK Yakutsk 32.30 351 LR LR 18 04 40.9
comp=Z,79nm,19.6s,baz=144,slow=39
SIJI Sorong 32.40 197 LR LR 18 00 01.8
comp=Z,98nm,20.9s,baz=350,slow=30
SHEM Shemya Is, Ala 33.10 38 LR LR 18 00 40.4
comp=Z,110nm,21.7s,baz=306,slow=31
TLY Talaya 34.34 319 LR LR 18 03 30.4
comp=Z,116nm,18.2s,baz=110,slow=35
KRVT Keravat (AS076 36.36 160 LR LR 18 05 13.9
comp=Z,111nm,18.5s,baz=302,slow=36
CHTO Chiang Mai 39.24 263 P **P** **17 51 07.0 -1.5**
CHTO IAmb IAmb 17 51 18.6
comp=Z,4.8nm,1.1s
CMAR Chiang Mai Arr 39.39 262 P **P** **17 51 08.8 -0.9**
comp=Z,1.3nm,0.9s,baz=67,slow=8.2,SNR=7.8
CMAR LR LR 18 08 01.2
comp=Z,59nm,18.6s,baz=75,slow=37
comp=Z,1.3nm,0.9s
KAPI Kappang 40.48 213 LR LR 18 07 52.1
comp=Z,34nm,19.6s,baz=25,slow=36
TIXI Tiksi 41.67 355 LR LR 18 09 05.9
comp=Z,74nm,19.6s,baz=180,slow=37
MKAR Makanchi Array 47.14 307 P **P** **17 52 11.4 -0.6**
comp=Z,0.6nm,0.8s,baz=87,slow=8.9,SNR=7.0
comp=Z,0.6nm,0.8s
NRIK Noril'sk 48.91 338 P **P** **17 52 24.5 -0.8**
comp=Z,1.5nm,0.6s,baz=110,slow=9.3,SNR=3.8
comp=Z,1.5nm,0.6s
NRIK Noril'sk 48.91 338 IAmb IAmb 17 52 50.5
comp=Z,4.6nm,1.1s
C16K Lisburne Hills 48.96 24 IAmb IAmb 17 52 30.8
comp=Z,3.5nm,1.1s
KURK Kurchatov 49.51 313 P **P** **17 52 29.5 -0.7**
KURBB Kurchatov Arra 49.57 312 P **P** **17 52 29.5 -1.2**
comp=Z,1.1nm,1.0s,baz=92,slow=8.1,SNR=5.8
comp=Z,1.1nm,1.0s
J17K VABM Dome 50.04 31 P **P** **17 52 34.0 0.0**
WRA Warramunga Arr 50.50 187 P **P** **17 52 37.4 -0.5**
comp=Z,2.5nm,1.0s,baz=2.1,slow=7.6,SNR=15
WRA PcP **PcP** **17 53 57.0 +1.3**
comp=Z,0.4nm,0.7s,baz=4.7,slow=3.8,SNR=2.1
comp=Z,2.5nm,1.0s
WRA Warramunga Arr 50.50 187 IAmb IAmb 17 52 38.3
comp=Z,0.6nm,1.4s
C19K Lookout Ridge 51.22 23 IAmb IAmb 17 52 49.7
comp=Z,4.7nm,1.1s
D20K Etivluk River 52.16 24 IAmb IAmb 17 52 56.8
comp=Z,3.9nm,1.1s
B20K Meade River 52.29 23 IAmb IAmb 17 52 58.0
comp=Z,3.4nm,0.9s
B21K Ikpikpuk River 53.06 23 IAmb IAmb 17 52 59.0
comp=Z,5.5nm,1.2s
H21K Melozitna Rive 53.08 28 IAmb IAmb 17 53 00.1
comp=Z,5.8nm,1.3s
ASAR Alice Springs 54.23 187 P **P** **17 53 05.0 -0.6**
comp=Z,0.5nm,0.7s,baz=0.0,slow=6.2,SNR=15
comp=Z,0.5nm,0.7s
BVAR Borovoye Array 54.50 316 P **P** **17 53 07.7 +0.4**
comp=Z,0.6nm,0.7s,baz=124,slow=7.7,SNR=3.7
BVAR LR LR 18 17 20.0
comp=Z,72nm,18.4s,baz=19,slow=37
comp=Z,0.6nm,0.7s
E23K Chandalar 54.61 26 IAmb IAmb 17 53 13.2
comp=Z,4.4nm,1.1s
ILAR Eielson Array 55.50 30 P **P** **17 53 15.0 +0.7**
comp=Z,2.1nm,1.0s,baz=270,slow=6.3,SNR=9.0
comp=Z,2.1nm,1.0s
F25K Christian Rive 56.08 26 IAmb IAmb 17 53 26.8
comp=Z,2.6nm,0.9s
E25K Arctic Village 56.13 26 IAmb IAmb 17 53 24.9
comp=Z,5.2nm,1.2s
F26K Sheenjek River 56.66 26 IAmb IAmb 17 53 30.5
comp=Z,2.7nm,0.9s
SCRK Sand Creek 56.77 31 P **P** **17 53 25.2 +1.6**
SCRK IAmb IAmb 17 53 29.9
comp=Z,2.8nm,1.0s
PALK Pallekele 60.30 260 LR LR 18 20 36.5
comp=Z,32nm,19.0s,baz=12,slow=37
INK Inuvik 60.60 25 LR LR 18 22 19.5
comp=Z,30nm,20.4s,baz=324,slow=38
YKA Yellowknife Ar 69.89 29 P **P** **17 54 51.7 +1.4**
comp=Z,0.8nm,1.1s,baz=304,slow=6.4,SNR=5.0
comp=Z,0.8nm,1.1s
FINES FINESS Array B 74.21 333 LR LR 18 32 11.4
comp=Z,78nm,18.0s,baz=30,slow=39
YBH Yreka Blue Hor 75.07 50 LR LR 18 20 23.2
comp=Z,8.2nm,21.9s,baz=286,slow=29
AKASG Malin Array Be 78.96 323 P **P** **17 55 43.5 +0.4**
comp=Z,0.3nm,0.4s,baz=56,slow=4.2,SNR=5.4
AKASG LR LR 18 34 55.0
comp=Z,145nm,18.1s,baz=30,slow=39
comp=Z,0.3nm,0.4s
NVAR Mina Array Bea 79.63 52 P **P** **17 55 48.7 +1.3**
comp=Z,0.8nm,0.8s,baz=306,slow=4.7,SNR=1.9
comp=Z,0.8nm,0.8s
NOA NORSAR Array B 79.87 337 LR LR 18 33 15.6
comp=Z,54nm,18.4s,baz=5.0,slow=37
PDAR Pinedale Array 82.88 44 P **P** **17 56 06.5 +2.0**
comp=Z,0.2nm,0.6s,baz=321,slow=2.3,SNR=2.7
PDAR LR LR 18 36 03.2
comp=Z,10nm,18.1s,baz=342,slow=38
comp=Z,0.2nm,0.6s
PFO Pinyon Flats O 83.41 55 LR LR 18 27 50.2
comp=Z,38nm,20.2s,baz=224,slow=32
ANMO Albuquerque 89.46 49 LR LR 18 29 37.2
comp=Z,76nm,21.1s,baz=321,slow=31
LPIG La Paz 93.17 60 LR LR 18 29 10.8
comp=Z,29nm,21.0s,baz=311,slow=29
TXAR Lajitas Array 94.78 52 P **P** **17 57 03.6 +2.0**
comp=Z,0.9nm,1.0s,baz=312,slow=3.0,SNR=5.5
TXAR LR LR 18 34 37.0
comp=Z,43nm,19.5s,baz=322,slow=32
comp=Z,0.9nm,1.0s
TXAR Lajitas Array 94.78 52 P **P** **17 57 02.7 +1.0**
H03N2 Juan Fernandez 146.63 105 T T 20 47 16.6
baz=281,slow=75,SNR=17
H03N3 Juan Fernandez 146.64 105 T T 20 47 18.5
baz=281,slow=75,SNR=14
H03N1 Juan Fernandez 146.65 105 T T 20 47 15.0
baz=281,slow=75,SNR=15

*IDC **25** 17:46:29.1±1.3,35.31N×22.70E,h0km,mb3.7/9,*
mbtmp3.7/13,ML3.3/4,MS3.2/3,Error ellipse:
s-maj=27.1km s-min=19.6km az=9.0
*GII **25** 17:46:33.1±0.0,34.781N±0.005×23.153E±0.002,h0km,*
Mws3.5,confirmed
*THE **25** 17:46:33.8,35.5N±5.2×3.3E±,h9km±11km,M3.1/9,*
MLh3.1/9
*ATH **25** 17:46:34.6,35.20N×22.86E,h9km±2km,ML3.2/7,Latitude*
uncertainty: 1 km; Longitude uncertainty: 2 km
ISC 25 17:46:31.9±1.7,35.12N±0.06×22.71E±0.05,h17km±9km,
n70,σ2.9 04/69,mb3.8/8,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KNDR	**Palaiochora Ch**	**0.76**	**81**	P		**Pg**	**17 46 46.4**	**-0.4**
KNDR				S		**Sg**	**17 46 54.9**	**-1.9**
ANKY	**Antikythira Is**	**0.89**	**33**	P		**Pg**	**17 46 49.4**	**+0.2**
ANKY				S		**Sb**	**17 47 02.3**	**+1.9**
ANKY	**Antikythira Is**	**0.89**	**33**	P		**Pg**	**17 46 49.2**	**0.0**
ANKY				S		**Sg**	**17 46 59.1**	**-1.8**
IMMV	**Iera Moni Meta**	**1.09**	**72**	P		**Pg**	**17 46 53.5**	**+0.4**
IMMV				S		**Sn**	**17 47 10.0**	**+2.8**
IMMV	**Iera Moni Meta**	**1.09**	**72**	P		**Pg**	**17 46 53.3**	**+0.2**
IMMV				S		**Sg**	**17 47 05.3**	**-2.1**
CHAN	**Chania**	**1.16**	**70**	P		**Pb**	**17 46 55.0**	**+1.5**
GVD	**Gavdhos**	**1.17**	**104**	P		**Pb**	**17 46 55.5**	**+1.9**
GVD				S		**Sn**	**17 47 12.8**	**+3.9**
GVD	**Gavdhos**	**1.17**	**104**	P		**Pb**	**17 46 55.0**	**+1.4**
CHNB	**Souda**	**1.17**	**71**	P		**Pb**	**17 46 54.4**	**+0.8**
KTHA	**Kythira Island**	**1.17**	**14**	P		**Pg**	**17 46 54.9**	**+0.4**
VAM	**Vamos**	**1.25**	**76**	P		**Pn**	**17 46 56.0**	**+1.4**
VAM				S		**Sg**	**17 47 13.5**	**+1.0**
VLI	**Veliai**	**1.60**	**7**	P		**Pb**	**17 47 02.5**	**+1.4**
IDI	**Anoyia**	**1.79**	**84**	Pn		**Pn**	**17 47 03.4**	**+1.3**
	7.3nm,0.3s,baz=234,slow=8.0,SNR=47							
IDI				Sn		**Sn**	**17 47 28.0**	**+3.5**
	12nm,0.3s,baz=328,slow=17,SNR=5.9							
IDI	**Anoyia**	**1.79**	**84**	P		**Pn**	**17 47 04.1**	**+2.0**
PYL	**PYLOS**	**1.94**	**336**	P		**Pn**	**17 47 05.2**	**+1.2**
PYL	**PYLOS**	**1.94**	**336**	P		**Pn**	**17 47 05.4**	**+1.4**
NPS	**Neapolis**	**2.38**	**86**	P		**Pn**	**17 47 12.8**	**+2.6**
THR9	**Santorini-Faro**	**2.48**	**59**	P		**Pn**	**17 47 13.3**	**+1.8**
THR5	**Thira Island,**	**2.50**	**58**	P		**Pn**	**17 47 13.8**	**+2.0**
THR6	**Thira Island,**	**2.51**	**60**	P		**Pn**	**17 47 14.2**	**+2.3**
MET6	**Megalochori,Me**	**2.52**	**12**	P		**Pn**	**17 47 14.1**	**+2.0**
SNT5	**Nea Kammeni, S**	**2.53**	**59**	P		**Pn**	**17 47 13.5**	**+1.3**
THR3	**Thira Island,**	**2.54**	**59**	P		**Pn**	**17 47 14.1**	**+1.8**
MET5	**Makryloggos,Me**	**2.55**	**12**	P		**Pn**	**17 47 15.1**	**+2.6**
THERA	**Ancient Thera,**	**2.57**	**60**	P		**Pn**	**17 47 14.1**	**+1.4**
THERA	**Ancient Thera,**	**2.57**	**60**	P		**Pn**	**17 47 13.9**	**+1.2**
THR8	**Santorini-Mono**	**2.59**	**60**	P		**Pn**	**17 47 14.7**	**+1.7**
GUR	**Goura**	**2.82**	**354**	P		**Pn**	**17 47 18.7**	**+2.4**
GUR	**Goura**	**2.82**	**354**	P		**Pn**	**17 47 19.5**	**+3.2**
VLY	**Voula,Athens**	**2.86**	**17**	P		**Pn**	**17 47 19.2**	**+2.4**
VLY	**Voula,Athens**	**2.86**	**17**	P		**Pn**	**17 47 19.1**	**+2.3**
ZKR	**Zakros**	**2.88**	**89**	P		**Pn**	**17 47 19.5**	**+2.5**
ZKR	**Zakros**	**2.88**	**89**	P		**Pn**	**17 47 19.5**	**+2.5**
LTK	**Loutraki**	**2.90**	**4**	P		**Pn**	**17 47 19.2**	**+1.8**
LTK	**Loutraki**	**2.90**	**4**	P		**Pn**	**17 47 20.2**	**+2.8**
DRO	**Drossia**	**2.94**	**344**	P		**Pn**	**17 47 21.0**	**+3.1**
KLV	**Kalavryta, Ach**	**2.95**	**351**	P		**Pn**	**17 47 21.1**	**+3.1**
ATHU	**Athens Univers**	**2.97**	**17**	P		**Pn**	**17 47 20.4**	**+2.2**
ATHU	**Athens Univers**	**2.97**	**17**	P		**Pn**	**17 47 20.4**	**+2.2**
PTL	**Penteli**	**3.06**	**17**	P		**Pn**	**17 47 21.6**	**+2.0**
PTL	**Penteli**	**3.06**	**17**	P		**Pn**	**17 47 21.6**	**+2.0**
VILL	**Villia**	**3.07**	**9**	P		**Pn**	**17 47 21.5**	**+1.8**
DION	**Dionisos Attik**	**3.11**	**18**	P		**Pn**	**17 47 22.3**	**+2.1**
DION	**Dionisos Attik**	**3.11**	**18**	P		**Pn**	**17 47 22.1**	**+1.9**
VIL2	**Platees**	**3.12**	**8**	P		**Pn**	**17 47 21.6**	**+1.3**
KARY	**Karystos**	**3.22**	**25**	P		**Pn**	**17 47 23.8**	**+2.1**
CSS	**Mathiatis**	**8.71**	**88**	P		**Pn**	17 48 34.6	-2.5
CSS				S		**Sn**	**17 50 09.5**	**-5.4**
BRTR	**Keskin Array B**	**9.83**	**59**	Pn		**Pn**	**17 48 51.0**	**-1.5**
	0.1nm,0.3s,baz=220,slow=11,SNR=6.8							
BRTR				LR		LR	17 53 39.9	
	comp=Z,43nm,20.3s,baz=272,slow=44							
	1.2nm,1.1s							
KZIT	**Kziot**	**10.67**	**110**	P		Pn	17 48 60.0	-4.0
MMAI	**Mount Meron Ar**	**10.74**	**98**	Pn		**Pn**	**17 49 04.6**	**-0.3**
	0.6nm,0.3s,baz=290,slow=11,SNR=2.2							
	0.3nm,0.3s							
SALP	**Salfit**	**10.85**	**103**	P		Pn	17 49 02.4	-4.0
SALP				S		Sn	17 50 59.5	-7.8
HMDT	**Nahal Hemdat**	**11.05**	**101**	P		Pn	17 49 04.9	-4.3
HMDT				S		Sn	17 51 05.0	-7.4
DSI	**Dead Sea**	**11.17**	**105**	P		Pn	17 49 08.3	-2.5
DSI				S		Sn	17 51 07.7	-7.6
MSBI	**Mazada**	**11.25**	**106**	P		Pn	17 49 08.5	-3.4
MSBI				S		Sn	17 51 06.9	-10
PRNI	**Paran**	**11.39**	**111**	P		Pn	17 49 09.9	-3.9
PRNI				S		Sn	17 51 11.6	-9.1
GHAJ	**Ghor Haditha**	**11.42**	**106**	P		Pn	17 49 10.5	-3.7
GHAJ				S		Sn	17 51 13.8	-7.5
EIL	**Elat**	**11.68**	**114**	Pn		**Pn**	**17 49 17.7**	**-0.1**
	0.4nm,0.3s,baz=67,slow=6.9,SNR=2.4							
	3.9nm,0.8s							
AKASG	**Malin Array Be**	**16.27**	**15**	Pn		**Pn**	**17 50 18.6**	**-0.9**
	0.4nm,0.3s,baz=217,slow=11,SNR=4.1							
KBZ	**Nabaz**	**17.77**	**55**	P		**Pn**	**17 50 37.8**	**-0.6**
	0.1nm,0.3s,baz=231,slow=4.6,SNR=4.4							
	1.2nm,0.8s							
HFS	**Hagfors**	**25.70**	**350**	P		**P**	**17 51 59.6**	**-1.3**
	1.7nm,0.5s,baz=160,slow=11,SNR=7.9							
	1.7nm,0.5s							
FINES	**FINESS Array B**	**26.43**	**4**	P		**P**	**17 52 05.9**	**-1.6**
	2.2nm,0.8s,baz=178,slow=11,SNR=0.9							
	2.2nm,0.8s							
EKA	**Eskdalemuir Ar**	**26.94**	**327**	P		**P**	**17 52 10.5**	**-1.6**
	0.9nm,0.7s,baz=125,slow=8.0,SNR=4.1							
	0.9nm,0.7s							
TORD	**Torodi Ar. Bea**	**28.97**	**226**	P		**P**	**17 52 31.4**	**+0.8**
	0.6nm,0.6s,baz=38,slow=8.4,SNR=2.5							
	0.6nm,0.6s							
BVAR	**Borovoye Array**	**37.83**	**47**	P		**P**	**17 53 46.4**	**-1.0**
	0.3nm,0.5s,baz=269,slow=7.1,SNR=2.7							
	0.3nm,0.5s							
KURBB	**Kurchatov Arra**	**42.70**	**51**	P		**P**	**17 54 26.1**	**-1.6**
	1.0nm,0.6s,baz=276,slow=8.7,SNR=13							
	1.0nm,0.6s							
MKAR	**Makanchi Array**	**45.47**	**56**	P		**P**	**17 54 48.3**	**-1.7**
	0.7nm,0.5s,baz=265,slow=8.3,SNR=12							
	0.7nm,0.5s							
ZALV	**Zalesovo Beam**	**46.48**	**46**	P		**P**	**17 54 56.0**	**-1.8**
	0.8nm,0.7s,baz=272,slow=8.6,SNR=2.9							
	0.8nm,0.7s							
OPO	**Ambohidratompo**	**58.24**	**152**	LR		LR	18 23 20.8	
	comp=Z,15nm,18.2s,baz=198,slow=38							
SONM	**Songino Array**	**61.05**	**50**	P		**P**	**17 56 43.9**	**-0.9**
	0.2nm,0.5s,baz=295,slow=7.6,SNR=1.9							
	0.2nm,0.5s							
ULM	**Lac du Bonnet**	**79.20**	**325**	LR		LR	18 36 40.1	
	comp=Z,50nm,18.3s,baz=23,slow=38							

KRSC 25 17:54:13.0±1.7,49.38N×158.90E,h40km±26km,Ml3.9,
East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.22**	**307**	*eP*		Pn	17 54 48.1	+0.9
SKR				*eS*		Sn	17 55 14.1	+0.8
PAU	**Pauzhetka**	**2.48**	**328**	*eP*		Pn	17 54 53.6	+2.7
PAU				*eS*		Sn	17 55 23.0	+3.2
KDTR	**Khodutka, Kamc**	**2.48**	**348**	*eP*		Pn	17 54 53.9	+3.0
KDTR				*eS*		Sn	17 55 23.1	+3.1
RUS	**Russkaya**	**3.06**	**356**	*eP*		Pn	17 55 03.3	+4.4
RUS				*eS*		Sn	17 55 37.7	+3.5
ASAK	**Asacha**	**3.07**	**348**	*eP*		Pn	17 55 03.0	+3.9
MTVR	**Mutnovka**	**3.14**	**352**	*eP*		Pn	17 55 03.6	+3.5
MTVR				*eS*		Sn	17 55 39.0	+2.7
GRL	**Gorelyy**	**3.22**	**351**	*eP*		Pn	17 55 05.2	+4.1
GRL				*eS*		Sn	17 55 42.2	+4.0
KRMR	**Karymshinskiy**	**3.49**	**352**	*eP*		Pn	17 55 08.8	+4.1
KRMR				*eS*		Sn	17 55 51.3	+6.7
DALK	**Dalny**	**3.65**	**359**	*eP*		Pn	17 55 10.9	+3.9
APC	**Apacha**	**3.71**	**343**	*eP*		Pn	17 55 11.9	+4.1
SPN	**Mys Shipunski**	**3.79**	**10**	*eP*		Pn	17 55 12.9	+4.1
SPN				*eS*		Sn	17 55 56.5	+4.5
UGLR	**Uglovaya**	**3.83**	**359**	*eP*		Pn	17 55 13.5	+4.0
SMAR	**Somma**	**3.89**	**359**	*eP*		Pn	17 55 15.7	+5.3
AVH	**Avacha**	**3.89**	**359**	*eP*		Pn	17 55 15.1	+4.8
KOK	**Koryaka**	**3.92**	**358**	*eP*		Pn	17 55 15.4	+4.7
KRER	**Koryakskii**	**3.93**	**359**	*eP*		Pn	17 55 15.7	+4.8
KRX	**Arik**	**3.98**	**358**	*eP*		Pn	17 55 15.8	+4.1
GNL	**Ganaly**	**4.36**	**352**	*eP*		Pn	17 55 22.1	+5.4
KII	**Karymskiy**	**4.67**	**4**	*eP*		Pn	17 55 26.4	+5.4
KBTR	**Krutoberegovo**	**7.24**	**18**	*eP*		Pn	17 56 01.0	+4.9
BKI	**Bering**	**7.26**	**34**	*eP*		Pn	17 56 00.5	+4.0

*AEIC **25** 17:54:14.7±2.0,63.391N±0.010×145.13W±0.03,*
h4km±5km,Error ellipse: s-maj=2.2km s-min=0.8km
az=53.0
NEIC 25 17:54:14.9±2.0,63.35N±0.01×145.14W±0.03,h10km±1km,
ML3.7/232,ML3.5(AEIC),Error ellipse: s-maj=2.9km
s-min=2.6km az=63.0,Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PAX	**Paxson**	**0.41**	**202**			Pg	17 54 23.0	0.0
PAX	**Paxson**	**0.41**	**202**			Sg	17 54 28.8	+0.5
RIDG	**Independent Ri**	**0.41**	**18**			Pg	17 54 22.8	-0.3
RIDG					IAML		17 54 29.9	
	comp=N,8μm,0.5s							
RIDG					IAML		17 54 30.1	
	comp=E,5μm,0.5s							
RIDG	**Independent Ri**	**0.41**	**18**			Sg	17 54 28.6	0.0
K24K	**Donnelly Dome**	**0.54**	**328**			Pg	17 54 25.8	+0.4
K24K					IAML		17 54 33.8	
	comp=N,6μm,0.6s							
K24K	**Donnelly Dome**	**0.54**	**328**			Sg	17 54 33.3	+0.8
DOT	**Dot Lake**	**0.57**	**58**			Pg	17 54 25.4	-0.5
DOT					IAML		17 54 33.3	
	comp=E,4μm,0.5s							
DOT					IAML		17 54 34.4	
	comp=N,3μm,0.4s							
DOT	**Dot Lake**	**0.57**	**58**			Sg	17 54 33.0	-0.4
MENT	**Mentasta**	**0.76**	**122**			Pg	17 54 29.3	-0.3
MENT					IAML		17 54 46.9	
	comp=N,3μm,0.4s							
MENT					IAML		17 54 47.7	
	comp=E,3μm,0.2s							
MENT	**Mentasta**	**0.76**	**122**			Sg	17 54 39.4	-0.2
SCRK	**Sand Creek**	**0.81**	**39**			Pg	17 54 29.9	-0.7
SCRK					IAML		17 54 43.9	
	comp=E,3μm,0.5s							
SCRK					IAML		17 54 45.0	
	comp=N,2μm,0.3s							
SCRK	**Sand Creek**	**0.81**	**39**			Sg	17 54 40.5	-0.7
L26K	**Log Cabin Wild**	**0.87**	**111**			Pg	17 54 31.1	-0.5
DHY	**Denali Highway**	**1.05**	**256**			Pg	17 54 33.8	-1.2
DHY	**Denali Highway**	**1.05**	**256**			Sg	17 54 48.1	-0.7
J25K	**Salcha River,**	**1.27**	**355**			Pn	17 54 38.4	-0.4
J25K					IAML		17 54 57.2	
	comp=N,1μm,0.4s							
J25K					IAML		17 54 58.0	
	comp=E,2μm,0.3s							
J25K	**Salcha River,**	**1.27**	**355**			Sb	17 54 55.4	-0.1
HDA	**Harding Lake**	**1.33**	**324**			Pn	17 54 38.8	-0.7
HDA	**Harding Lake**	**1.33**	**324**			Sb	17 54 56.9	-0.2
M24K	**Tolsona, Glenn**	**1.33**	**201**			Pb	17 54 39.9	-0.1
M24K					IAML		17 55 01.6	
	comp=E,2μm,0.7s							
M24K					IAML		17 55 02.6	
	comp=N,1μm,0.9s							
WAZA	**Wrangell Mount**	**1.36**	**160**			Pn	17 54 39.4	-0.7
WAZA						Pb	17 54 39.7	-0.8
M26K	**Nabesna, AK**	**1.37**	**133**			Pn	17 54 39.2	-0.9
M26K					IAML		17 55 02.0	
	comp=E,1μm,0.5s							
M26K					IAML		17 55 03.8	
	comp=N,1μm,0.4s							
M26K	**Nabesna, AK**	**1.37**	**133**			Sb	17 54 57.6	-0.4
WASW	**Wrangell South**	**1.49**	**162**			Pn	17 54 41.5	-0.5
K27K	**Chicken**	**1.52**	**62**			Pn	17 54 41.5	-0.7
K27K						Pb	17 54 42.4	-0.9
K27K						Sn	17 55 01.3	-0.7
K27K	**Chicken**	**1.52**	**62**		IAML		17 55 04.0	
	comp=N,642nm,0.5s							
K27K					IAML		17 55 06.0	
	comp=E,640nm,0.5s							
L27K	**Beaver Creek,**	**1.53**	**99**			Pn	17 54 41.5	-0.7
L27K					IAML		17 55 07.4	
	comp=N,1μm,0.1s							
L27K					IAML		17 55 08.2	
	comp=E,951nm,0.2s							
L27K	**Beaver Creek,**	**1.53**	**99**			Sn	17 55 01.8	-0.4
BCAR	**Beaver Creek A**	**1.54**	**99**			Pn	17 54 41.7	-0.8
BC04	**Beaver Creek A**	**1.55**	**98**			Pn	17 54 42.1	-0.4
IL31		**1.62**	**332**			Pn	17 54 42.5	-1.0
ILAR	**Eielson Array**	**1.62**	**332**			Pn	17 54 42.5	-1.0
WAT1	**Susitna Watana**	**1.64**	**253**			Pn	17 54 43.8	0.0
RND	**Reindeer**	**1.68**	**274**			Pb	17 54 45.6	-0.2
RND					IAML		17 55 14.2	
	comp=E,673nm,0.9s							
WRH	**Wood River Hil**	**1.73**	**312**			Pn	17 54 44.8	-0.1

MDM					Sb	17 55 20.1	+0.7		
NEA2	**Nenana**	**2.14**	**308**		Pn	17 54 50.7	+0.1		
SML	**Sawmill**	**2.14**	**225**		Pn	17 54 52.0	+1.3		
SML				IAML		17 55 23.1			
	comp=E,397nm,0.5s								
SML				IAML		17 55 25.3			
	comp=N,457nm,0.6s								
I26K	**Coal Creek Min**	**2.15**	**23**		Pn	17 54 50.5	-0.2		
I26K	**Coal Creek Min**	**2.15**	**23**	IAML		17 55 26.2			
	comp=E,594nm,0.9s								
BVCY	**Beaver Creek**	**2.17**	**114**		Pn	17 54 50.7	-0.4		
PRP	**Porcupine Dome**	**2.18**	**356**		Pn	17 54 51.3	-0.1		
MCARA	**McCarthy VSAT**	**2.20**	**153**		Pb	17 54 53.4	-1.4		
MCARA	**McCarthy VSAT**	**2.20**	**153**	IAML		17 55 24.0			
	comp=N,305nm,0.4s								
MCARA				IAML		17 55 24.5			
	comp=E,316nm,0.6s								
DIV	**Divide**	**2.25**	**188**		Pn	17 54 53.5	+1.4		
DIV				IAML		17 55 24.9			
	comp=E,362nm,0.3s								
DIV				IAML		17 55 26.0			
	comp=N,530nm,0.6s								
VRDI	**Verde Repeater**	**2.27**	**159**		Pn	17 54 54.2	+1.7		
TRF	**Thorofare Moun**	**2.32**	**275**		Pb	17 54 55.1	-1.7		
TRF	**Thorofare Moun**	**2.32**	**275**	IAML		17 55 30.5			
	comp=E,394nm,0.9s								
TRF				IAML		17 55 35.0			
	comp=N,503nm,0.7s								
GHO	**Glory Hole Cre**	**2.36**	**230**		Pn	17 54 55.5	+1.7		
GHO				IAML		17 55 34.6			
	comp=N,351nm,0.6s								
GHO				IAML		17 55 37.0			
	comp=E,393nm,1.0s								
BMRM	**Bremner River**	**2.40**	**174**		Pn	17 54 55.6	+1.3		
KNK	**Knik Glacier**	**2.48**	**220**		Pb	17 54 57.6	-2.0		
PTPK	**Patty Peak**	**2.50**	**149**		Pb	17 54 57.9	-2.1		
CUT	**Chulitna**	**2.54**	**250**		Pn	17 54 57.8	+1.8		
CUT					Pb	17 54 58.0	-2.5		
PMR	**Palmer**	**2.56**	**228**		Pn	17 54 58.2	+1.9		
PMR				IAML		17 55 33.9			
	comp=N,203nm,0.8s								
I23K	**Minto, Yukon-K**	**2.58**	**316**		Pn	17 54 57.1	+0.4		
I23K				IAML		17 55 36.5			
	comp=E,330nm,0.6s								
I23K				IAML		17 55 38.9			
	comp=N,353nm,0.6s								
KTH	**Kantishna Hill**	**2.61**	**277**		Pn	17 54 58.2	+1.1		
GLI	**Glacier Island**	**2.64**	**201**		Pn	17 54 59.8	+2.3		
GLI	**Glacier Island**	**2.64**	**201**	IAML		17 55 37.6			
	comp=N,196nm,0.5s								
GLI				IAML		17 55 38.8			
	comp=E,268nm,0.5s								
YUK3	**Moose Creek**	**2.68**	**124**		Pn	17 54 58.5	+0.3		
L22K	**Petersville**	**2.71**	**255**	Pn	Pn	17 55 00.6	+2.1		
L22K				IAML		17 55 43.1			
	comp=N,240nm,0.7s								
L22K				IAML		17 55 43.7			
	comp=E,181nm,0.6s								
BPAW	**Bear Paw Mtn.**	**2.71**	**289**		Pn	17 54 58.5	0.0		
BPAW				IAML		17 55 47.1			
	comp=N,186nm,0.5s								
I27K	**Kandik River**	**2.73**	**32**		Pn	17 54 58.5	-0.3		
KIAG	**Kiagna River**	**2.76**	**151**		Pn	17 55 00.9	+1.6		
KIAG					Pb	17 55 01.6	-2.8		
H24K	**Noodor Dome**	**2.76**	**336**		Pn	17 54 59.4	+0.1		
H24K				IAML		17 55 47.6			
	comp=E,295nm,1.0s								
H24K				IAML		17 55 49.8			
	comp=N,263nm,0.9s								
CRQM	**Cirque**	**2.77**	**159**		Pn	17 55 01.1	+1.7		
GOAT	**Goat Mountain**	**2.79**	**176**		Pb	17 55 02.2	-2.5		
BARN	**Barnard Glacie**	**2.82**	**143**		Pn	17 55 01.5	+1.4		
TGL	**Tana Glacier**	**2.82**	**156**		Pn	17 55 02.3	+2.2		
EYAK	**Cordova Ski Ar**	**2.83**	**186**		Pn	17 55 02.3	+2.3		
MLY	**Manley**	**2.98**	**307**		Pn	17 55 02.0	-0.2		
RAGM	**Ragged Mountai**	**2.98**	**176**		Pn	17 55 04.7	+2.5		
CTGM	**Chitina Glacie**	**2.98**	**142**		Pn	17 55 04.0	+1.7		
HIN	**Hinchinbrook I**	**3.03**	**193**		Pn	17 55 05.3	+2.4		
HIN	**Hinchinbrook I**	**3.03**	**193**	IAML		17 55 52.7			
	comp=E,190nm,0.7s								
BERG	**Berg Lake**	**3.04**	**166**		Pn	17 55 05.4	+2.3		
BERG	**Berg Lake**	**3.04**	**166**	IAML		17 55 57.1			
	comp=N,140nm,0.7s								
BERG				IAML		17 55 58.7			
	comp=E,146nm,0.6s								
GRNC	**Granite Creek**	**3.07**	**147**		Pb	17 55 06.8	-2.9		
I28M	**Miner Creek**	**3.09**	**45**		Pn	17 55 03.9	+0.1		
I28M	**Miner Creek**	**3.09**	**45**	IAML		17 55 58.9			
	comp=N,221nm,0.6s								
RC01	**Rabbit Creek A**	**3.13**	**226**		Pb	17 55 08.4	-2.1		
M29M	**Somme Creek**	**3.19**	**104**	IAML		17 55 58.2			
	comp=E,295nm,0.4s								
LOGN	**Logan Glacier**	**3.19**	**141**		Pn	17 55 08.1	+2.8		
BARK	**Barkley Ridge**	**3.21**	**156**		Pn	17 55 08.4	+3.0		
FYU	**Fort Yukon**	**3.23**	**359**		Pn	17 55 05.9	+0.3		
J29N	**Klondike Camp**	**3.25**	**67**		Pn	17 55 06.7	+0.8		
SKT	**Skwentna**	**3.25**	**248**		Pn	17 55 08.7	+2.7		
SKT				IAML		17 55 56.2			
	comp=E,231nm,0.8s								
H27K	**Steamboat Moun**	**3.28**	**26**		Pn	17 55 06.7	+0.4		
H27K	**Steamboat Moun**	**3.28**	**26**	IAML		17 56 08.4			
	comp=E,150nm,1.0s								
H27K				IAML		17 56 11.5			
	comp=N,132nm,0.7s								
KAIM	**Kayak Island**	**3.45**	**174**		Pn	17 55 11.2	+2.6		
I21K	**Tanana**	**3.51**	**305**		Pn	17 55 09.2	-0.2		
G24K	**Hadweenzic Riv**	**3.51**	**345**		Pn	17 55 09.3	-0.1		
G24K	**Hadweenzic Riv**	**3.51**	**345**	IAML		17 56 09.9			
	comp=E,164nm,0.8s								
G24K				IAML		17 56 14.8			
	comp=N,160nm,1.1s								
P23K	**Montague Islan**	**3.53**	**199**		Pn	17 55 11.4	+1.7		
P23K				IAML		17 56 08.9			
	comp=N,141nm,0.9s								
P23K				IAML		17 56 12.8			
	comp=E,115nm,0.7s								
I29M	**Ogilvie Camp,**	**3.59**	**53**		Pn	17 55 10.0	-0.6		
I29M				IAML		17 56 14.6			
	comp=E,185nm,0.7s								
STLK	**Strandline Lak**	**3.62**	**242**		Pb	17 55 15.5	-3.5		
STLK				IAML		17 56 06.1			
	comp=E,83nm,0.5s								
STLK				IAML		17 56 09.8			
	comp=N,110nm,0.6s								
H22K	**Ishtalitna Cre**	**3.71**	**316**		Pn	17 55 12.4	+0.3		
SLKM	**Skilak Lake**	**3.73**	**222**	IAML		17 56 16.0			
	comp=N,125nm,0.9s								
G27K	**Doyon Strip**	**3.77**	**21**		Pn	17 55 13.7	+0.6		
G27K	**Doyon Strip**	**3.77**	**21**	IAML		17 56 18.4			
	comp=E,92nm,0.8s								
M30M	**Minto, Yukon**	**3.89**	**98**		Pn	17 55 14.0	-0.7		
M30M	**Minto, Yukon**	**3.89**	**98**	IAML		17 56 20.9			
	comp=E,132nm,0.6s								
G23K	**Bananza Creek**	**3.96**	**331**		Pn	17 55 15.6	0.0		
G23K	**Bananza Creek**	**3.96**	**331**	IAML		17 56 20.9			
	comp=E,85nm,1.0s								
G23K				IAML		17 56 22.2			
	comp=N,115nm,0.8s								
M20K	**Styx River**	**3.98**	**252**	IAML		17 56 14.3			
	comp=N,124nm,0.6s								
M20K				IAML		17 56 19.7			
	comp=E,98nm,0.7s								
PCA	**Pinnacle**	**4.00**	**142**	IAML		17 56 39.5			
	comp=E,71nm,0.8s								
PCA				IAML		17 56 39.9			
	comp=N,72nm,0.9s								
H21K	**Melozitna Rive**	**4.04**	**308**		Pn	17 55 16.8	0.0		
H21K	**Melozitna Rive**	**4.04**	**308**	IAML		17 56 21.0			
	comp=E,58nm,0.6s								
YUK5	**Granite Creek**	**4.07**	**120**		Pn	17 55 16.8	-0.4		
H29M	**Whitestone**	**4.08**	**42**		Pn	17 55 17.3	0.0		
H29M	**Whitestone**	**4.08**	**42**	IAML		17 56 38.7			
	comp=N,104nm,0.9s								
J20K	**Nowinta River**	**4.09**	**286**		Pn	17 55 17.6	+0.2		
J20K	**Nowinta River**	**4.09**	**286**	IAML		17 56 28.3			
	comp=E,61nm,0.7s								
J20K				IAML		17 56 34.3			
	comp=N,64nm,0.6s								
BMAR	**Burnt Mountain**	**4.11**	**3**		Pn	17 55 17.9	+0.3		
BM01	**Burnt Mountain**	**4.13**	**3**		Pn	17 55 18.1	+0.2		
MAYO	**Mayo, Yukon**	**4.16**	**82**		Pn	17 55 18.2	-0.1		
N30M	**Aishikik Lake**	**4.20**	**113**	IAML		17 56 35.7			
	comp=E,65nm,0.6s								
I30M	**Mount Dempster**	**4.25**	**60**		Pn	17 55 19.9	+0.2		
I30M	**Mount Dempster**	**4.25**	**60**	IAML		17 56 33.7			
	comp=E,102nm,0.8s								
F25K	**Christian Rive**	**4.27**	**357**		Pn	17 55 20.4	+0.5		
F25K	**Christian Rive**	**4.27**	**357**	IAML		17 56 27.4			
	comp=E,93nm,0.5s								
F25K				IAML		17 56 33.8			
	comp=N,62nm,0.6s								
F24K	**Squaw Lake**	**4.34**	**346**	IAML		17 56 39.6			
	comp=E,96nm,0.7s								
F24K				IAML		17 56 42.6			
	comp=N,71nm,0.8s								
F26K	**Sheenjek River**	**4.38**	**5**		Pn	17 55 21.9	+0.5		
F26K	**Sheenjek River**	**4.38**	**5**	IAML		17 56 14.4			
	comp=N,55nm,0.6s								
RDT	**Redoubt**	**4.42**	**234**		Pn	17 55 24.9	+2.9		
COLD	**Coldfoot**	**4.44**	**334**		Pn	17 55 22.5	+0.4		
COLD				IAML		17 56 33.2			
	comp=E,92nm,0.6s								
COLD				IAML		17 56 35.4			
	comp=N,84nm,0.8s								
BRSE	**Bradley Lake S**	**4.50**	**219**		Pn	17 55 25.0	+1.9		
DFR	**Drift River**	**4.51**	**236**		Pn	17 55 26.0	+2.8		
M19K	**Big River Lodg**	**4.51**	**255**		Pn	17 55 25.7	+2.5		
M19K	**Big River Lodg**	**4.51**	**255**	IAML		17 56 40.2			
	comp=N,73nm,1.0s								
M19K				IAML		17 56 43.0			
	comp=E,60nm,0.5s								
IM05	**Indian Mountai**	**4.54**	**309**		Pn	17 55 24.0	+0.5		
IM01	**Indian Mountai**	**4.54**	**310**		Pn	17 55 23.8	+0.1		
IMAR	**Indian Mountai**	**4.55**	**309**		Pn	17 55 24.1	+0.4		
L19K	**White Mountain**	**4.62**	**260**	IAML		17 56 44.8			
	comp=N,66nm,1.1s								
G29M	**Pine Creek**	**4.67**	**37**		Pn	17 55 26.2	+0.9		
J19K	**Poorman**	**4.71**	**283**		Pn	17 55 26.8	+0.9		
J19K	**Poorman**	**4.71**	**283**	IAML		17 56 49.9			
	comp=N,50nm,1.0s								
J19K				IAML		17 56 54.8			
	comp=E,41nm,0.9s								
N31M	**Braeburn, Yuka**	**4.73**	**109**		Pn	17 55 26.1	-0.2		
H20K	**Anotleneega Mo**	**4.74**	**301**		Pn	17 55 26.6	+0.3		
G21K	**Allakaket**	**4.77**	**315**		Pn	17 55 27.8	+1.1		
G21K	**Allakaket**	**4.77**	**315**	IAML		17 56 46.0			
	comp=E,38nm,0.7s								
E25K	**Arctic Village**	**4.80**	**358**		Pn	17 55 27.8	+0.6		
E25K	**Arctic Village**	**4.80**	**358**	IAML		17 56 59.9			
	comp=N,44nm,1.2s								
F28M	**Old Crow**	**4.81**	**25**		Pn	17 55 27.4	+0.1		
F28M				IAML		17 56 54.8			
	comp=N,51nm,1.1s								
F28M				IAML		17 56 56.5			
	comp=E,60nm,1.1s								
CNPM	**China Poot**	**4.82**	**220**		Pn	17 55 29.7	+2.2		
CNPM	**China Poot**	**4.82**	**220**	IAML		17 56 49.4			
	comp=E,63nm,1.1s								
CNPM				IAML		17 56 51.8			
	comp=N,46nm,1.1s								
E24K	**Your Creek**	**4.94**	**345**	IAML		17 56 50.6			
	comp=N,37nm,0.7s								
E24K				IAML		17 56 50.8			
	comp=E,40nm,0.8s								
O30N	**Mendenhall**	**4.98**	**117**	IAML		17 56 57.9			
	comp=E,64nm,0.6s								
E27K	**Coleen River**	**5.07**	**15**		Pn	17 55 31.4	+0.5		
E27K	**Coleen River**	**5.07**	**15**	IAML		17 57 02.6			
	comp=N,29nm,1.2s								
E27K				IAML		17 57 07.1			
	comp=E,29nm,1.1s								
N19K	**Bonanza Creek**	**5.08**	**244**		Pn	17 55 32.9	+1.9		
N19K				IAML		17 57 03.0			
	comp=N,30nm,1.1s								
E23K	**Chandalar**	**5.08**	**341**		Pn	17 55 31.9	+0.9		
E23K	**Chandalar**	**5.08**	**341**	IAML		17 56 55.8			
	comp=N,49nm,0.7s								
E23K				IAML		17 57 00.2			
	comp=E,38nm,1.0s								
J18K	**Innoko River**	**5.21**	**276**		Pn	17 55 33.5	+0.7		
J18K	**Innoko River**	**5.21**	**276**	IAML		17 57 05.1			
	comp=E,32nm,1.0s								
J18K				IAML		17 57 11.3			
	comp=N,32nm,1.0s								
F21K	**Alatna River**	**5.23**	**322**		Pn	17 55 34.0	+0.9		
G30M	**tAoh Zraii Nji**	**5.23**	**42**		Pn	17 55 33.2	+0.1		
G30M	**tAoh Zraii Nji**	**5.23**	**42**	IAML		17 57 16.5			
	comp=N,52nm,1.2s								
H31M	**Peel River**	**5.26**	**57**		Pn	17 55 33.2	-0.3		
M18K	**Stony River**	**5.30**	**254**		Pn	17 55 36.5	+2.5		
P19K	**Oil Pt**	**5.36**	**230**		Pn	17 55 36.7	+1.8		
P19K	**Oil Pt**	**5.36**	**230**	IAML		17 56 56.7			
	comp=E,51nm,1.0s								
H19K	**Roundabout Mou**	**5.36**	**299**		Pn	17 55 35.2	+0.4		
H19K	**Roundabout Mou**	**5.36**	**299**	IAML		17 57 18.0			
	comp=N,23nm,1.1s								
O19K	**Port Alsworth**	**5.38**	**238**	IAML		17 57 05.6			
	comp=E,51nm,0.5s								
O19K				IAML		17 57 14.8			
	comp=N,51nm,0.6s								
L18K	**Granite Mounta**	**5.42**	**263**		Pn	17 55 37.6	+2.0		
WHY	**Whitehorse**	**5.53**	**115**		Pn	17 55 37.3	0.0		
E22K	**Anaktuvuk Pass**	**5.54**	**333**		Pn	17 55 38.5	+1.2		
N18K	**Kilae Creek**	**5.73**	**247**		Pn	17 55 41.8	+1.9		
E28M	**Babbage River**	**5.75**	**21**		Pn	17 55 40.7	+0.5		
F30M	**Barrier River**	**5.78**	**38**		Pn	17 55 41.1	+0.5		
F20K	**Avaraart Lake**	**5.80**	**314**		Pn	17 55 42.0	+1.2		
G31M	**Satah River**	**5.82**	**47**		Pn	17 55 40.7	-0.3		
G19K	**Purcell Mounta**	**5.83**	**304**		Pn	17 55 41.3	0.0		
E29M	**Blow River**	**5.86**	**27**		Pn	17 55 42.2	+0.5		
O18K	**Koktuh Hills**	**5.95**	**238**		Pn	17 55 45.2	+2.3		
D24K	**Happy Valley**	**6.02**	**347**		Pn	17 55 45.9	+2.1		
K17K	**Iditarod**	**6.03**	**270**		Pn	17 55 45.8	+1.9		
H18K	**Honhosa River**	**6.04**	**293**		Pn	17 55 45.1	+1.0		
M17K	**Holitna River**	**6.05**	**257**		Pn	17 55 46.3	+2.1		
Q19K	**Cape Douglas,**	**6.05**	**227**		Pn	17 55 46.9	+2.5		
D23K	**Nanushuk River**	**6.07**	**341**		Pn	17 55 46.4	+1.8		
D27M	**Malcolm River**	**6.15**	**14**		Pn	17 55 46.8	+1.0		
C27K	**Jago River**	**6.33**	**5**		Pn	17 55 49.7	+1.6		
G18K	**Tagagawik**	**6.35**	**300**		Pn	17 55 49.0	+0.6		
N17K	**Nushagak Hills**	**6.35**	**249**		Pn	17 55 50.1	+1.6		
MMPY	**Sheldon Lake,**	**6.37**	**90**		Pn	17 55 48.5	-0.2		
F19K	**Shaleruckik Mo**	**6.38**	**309**		Pn	17 55 49.6	+0.8		
C24K	**Franklin Bluff**	**6.55**	**349**		Pn	17 55 52.8	+1.6		
C26K	**Camden Bay**	**6.60**	**1**		Pn	17 55 53.2	+1.4		
P33M	**Teslin, Yukon**	**6.63**	**113**		Pn	17 55 52.3	0.0		
H17K	**Granite Mounta**	**6.66**	**290**		Pn	17 55 53.9	+1.3		
O17K	**Koliganek Bris**	**6.74**	**243**		Pn	17 55 55.8	+2.1		
C23K	**Itkillik River**	**6.87**	**344**		Pn	17 55 56.7	+1.2		
INK	**Inuvik**	**6.88**	**39**		Pn	17 55 55.9	+0.2		
F18K	**Selawik**	**6.96**	**304**		Pn	17 55 57.2	+0.5		
J16K	**Anvik River**	**6.97**	**276**		Pn	17 55 58.1	+1.3		
G17K	**Kiwalik Mounta**	**7.05**	**295**		Pn	17 55 58.6	+0.6		
D20K	**Etivluk River**	**7.12**	**324**		Pn	17 56 00.7	+1.7		
B21K	**Ikpikpuk River**	**7.34**	**333**		Pn	17 56 02.7	+0.8		
F17K	**Baldwin Pennin**	**7.52**	**301**		Pn	17 56 05.4	+1.0		
E18K	**Tukpahlearik C**	**7.63**	**309**		Pn	17 56 07.2	+1.3		
B22K	**Teshekpuk Lake**	**7.73**	**339**		Pn	17 56 07.8	+0.5		
G16K	**Koyuk River**	**7.74**	**293**		Pn	17 56 08.2	+0.8		
R33M	**Jennings River**	**7.87**	**114**		Pn	17 56 09.2	-0.2		
E17K	**Hotham Inlet**	**7.94**	**305**		Pn	17 56 10.6	+0.5		
D17K	**Noatak River**	**8.61**	**308**		Pn	17 56 20.9	+1.5		
C36M	**Paulatuk**	**10.33**	**45**		Pn	17 56 42.2	-0.7		
M22K	**Willow**	**0.70**	**130**	IAML		17 55 08.8			
	comp=E,210nm,0.5s								
M22K				IAML		17 55 09.9			
	comp=N,185nm,0.6s								
STLK	**Strandline Lak**	**0.77**	**202**		Pn	17 54 36.3	-0.1		
STLK					Sn	17 54 48.8	+0.2		
M20K	**Styx River**	**0.95**	**251**	Pn	Pn	17 54 38.0	-0.4		
M20K					Sn	17 54 52.3	0.0		
M20K				IAML		17 55 22.5			
	comp=E,37nm,0.6s								
SPCG	**Spurr Capps Gl**	**0.99**	**202**		Pn	17 54 39.0	0.0		
SPCG					Sn	17 54 53.8	+0.6		
SPNN	**North Nagishla**	**1.09**	**220**		Pn	17 54 40.6	+0.4		
PMR	**Palmer**	**1.18**	**121**	Pn	Pn	17 54 40.7	-0.4		
PMR				IAML		17 55 34.7			
	comp=E,164nm,0.6s								
GHO	**Glory Hole Cre**	**1.18**	**111**		Pn	17 54 41.2	0.0		
WAT7	**Susitna Watana**	**1.28**	**60**		Pn	17 54 42.4	-0.1		
RC01	**Rabbit Creek A**	**1.34**	**147**		Pn	17 54 42.7	-0.4		
RC01	**Rabbit Creek A**	**1.34**	**147**	IAML		17 55 10.1			
	comp=E,126nm,0.5s								
RC01				IAML		17 55 15.2			
	comp=N,154nm,0.7s								
KNK	**Knik Glacier**	**1.55**	**120**		Pn	17 54 45.4	-0.5		
KNK	**Knik Glacier**	**1.55**	**120**	IAML		17 55 34.6			
	comp=E,369nm,0.6s								
KNK				IAML		17 55 36.4			
	comp=N,448nm,0.6s								

*AEIC **25** 17:54:20.3±0.8, 62°22N±0°05×151°29W±0°08, h80km±4km, Error ellipse: s-maj=7.4km s-min=3.9km az=149.0*
NEIC 25 17:54:19.9±0.5, 62°21N±0°04×151°25W±0°08, h81km±4km, ML2.6/20, **ML1.8**(AEIC), **Error ellipse: s-maj=6.8km s-min=4.3km az=148.0, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKT	**Skwentna**	**0.27**	**210**		Pn	17 54 32.1	0.0
SKT				IAML		17 54 41.6	
	comp=N,213nm,0.2s						
SKT				IAML		17 54 41.9	
	comp=E,99nm,0.2s						
SKT	**Skwentna**	**0.27**	**210**		Sn	17 54 41.5	+0.4
L22K	**Petersville**	**0.39**	**35**		Pn	17 54 32.8	-0.1
L22K	**Petersville**	**0.39**	**35**		Sn	17 54 42.6	+0.1
CUT	**Chulitna**	**0.50**	**66**		Pn	17 54 33.7	+0.1
CUT					Sn	17 54 44.4	+0.6
CUT	**Chulitna**	**0.50**	**66**	IAML		17 55 07.5	
	comp=N,110nm,0.4s						
CUT				IAML		17 55 08.5	
	comp=E,175nm,0.7s						
M22K	**Willow**	**0.70**	**130**		Pn	17 54 35.5	-0.1
M22K					Sn	17 54 47.7	+0.5

*IDC **25** 17:55:21.6±1.1, 49°15N×158°69E, h0km, mb3.6/5, mbtmp3.6/5, MS3.3/2, Error ellipse: s-maj=43.2km s-min=29.0km az=131.0*
*KRSC **25** 17:55:24.4±2.4, 49°43N×158°80E, h34km±61km, Ml4.2*
ISC 25 17:55:24.7±1.1, 49°33N±0°07×158°50E±0°08, h18km, n31, σ1°66/31, mb3.7/5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.05**	**312**	*e*P	Pn	**17 55 58.2**	**0.0**
SKR				*e*S	Sb	**17 56 25.4**	**-1.0**
PAU	**Pauzhetka**	**2.40**	**334**	*e*S	Sb	**17 56 33.9**	**-2.6**
KDTR	**Khodutka, Kamc**	**2.50**	**354**	*e*P	Pn	**17 56 04.7**	**+0.3**
KDTR				*e*S	Sn	**17 56 34.0**	**-0.3**
ASAK	**Asacha**	**3.08**	**353**	*e*S	Sn	**17 56 48.4**	**-0.4**
RUS	**Russkaya**	**3.11**	**0**	*e*P	Pn	**17 56 13.7**	**+1.0**
RUS				*e*S	Sn	**17 56 47.9**	**-1.5**
MIPR	**Malaya Ipel'ka**	**3.15**	**340**	*e*P	Pn	**17 56 15.6**	**+2.2**
MTVR	**Mutnovka**	**3.16**	**356**	*e*S	Sn	**17 56 50.6**	**-0.4**
GRL	**Gorelyy**	**3.24**	**355**	*e*P	Pn	**17 56 16.8**	**+2.2**
GRL				*e*S	Sn	**17 56 53.2**	**+0.4**
KRMR	**Karymshinskiy**	**3.51**	**356**	*e*P	Pn	**17 56 20.5**	**+2.2**
KRMR				*e*S	Sn	**17 56 59.8**	**+0.4**
APC	**Apacha**	**3.70**	**347**	*e*P	Pn	**17 56 22.3**	**+1.5**
DALK	**Dalny**	**3.71**	**2**	*e*P	Pn	**17 56 21.6**	**+0.5**
DALK				*e*S	Sn	**17 57 03.2**	**-1.0**
INSR	**Institute**	**3.74**	**1**	*e*S	Sn	**17 57 05.4**	**+0.3**
SPN	**Mys Shipunski**	**3.89**	**14**	*e*P	Pn	**17 56 23.0**	**-0.5**
SPN				*e*S	Sn	**17 57 05.5**	**-3.3**
AVH	**Avacha**	**3.94**	**2**	*e*P	Pn	**17 56 28.3**	**+3.9**
AVH				*e*S	Sn	**17 57 13.1**	**+3.0**
KRX	**Arik**	**4.04**	**1**	*e*P	Pn	**17 56 27.0**	**+1.3**
GNL	**Ganaly**	**4.38**	**356**	*e*P	Pn	**17 56 32.8**	**+2.3**
KBTR	**Krutoberegovo**	**7.37**	**19**	*e*P	Pn	**17 57 11.6**	**+0.3**
BKI	**Bering**	**7.45**	**35**	*e*P	Pn	**17 57 13.6**	**+1.2**
H11N2	**WAKE ISLAND Hy** baz=350	**30.29**	**164**	T	T	18 33 15.8	
H11N3	**WAKE ISLAND Hy** baz=350	**30.30**	**164**	T	T	18 33 14.1	
H11N1	**WAKE ISLAND Hy** baz=350	**30.31**	**164**	T	T	18 33 17.1	
H11S1	**WAKE ISLAND Hy** baz=350	**31.45**	**165**	T	T	18 34 37.1	
H11S3	**WAKE ISLAND Hy** baz=350	**31.46**	**165**	T	T	18 34 39.6	
H11S2	**WAKE ISLAND Hy** baz=350	**31.47**	**165**	T	T	18 34 41.0	
ILAR	**Eielson Array** comp=Z,32nm,21.8s,baz=224,slow=37	**32.25**	**41**	LR	LR	18 15 02.9	
YKA	**Yellowknife Ar** 0.3nm,0.7s,baz=296,slow=8.2,SNR=2.9 0.3nm,0.7s	**46.66**	**40**	P	**P**	**18 03 52.1**	**+0.5**
MKAR	**Makanchi Array** 0.7nm,0.7s,baz=62,slow=8.4,SNR=5.3 0.7nm,0.7s	**48.95**	**298**	P	**P**	**18 04 10.6**	**+0.9**
ARCES	**ARCESS Array B** comp=Z,50nm,19.5s,baz=60,slow=40	**56.

	comp=E,179nm,0.1s						
DR08	**Loma La Naviza**	**0.75**	**235**⇑	*e*Pg	**Pn**	**18 11 11.8**	**+0.1**
DR08			⇑	*e*Sg	**Sn**	**18 11 23.1**	**-2.2**
DR08				IAML		18 11 23.6	
	comp=E,10μm,0.2s						
DR08				IAML		18 11 23.8	
	comp=N,19μm,0.2s						
SFDR	**San Fco. de Ma**	**0.82**	**262**⇓	*e*Sg	**Sn**	**18 11 26.1**	**-0.3**
SFDR				IAML		18 11 26.4	
	comp=N,2μm,0.3s						
SFDR				IAML		18 11 27.1	
	comp=E,2μm,0.3s						
HIDR	**Higuey Centro**	**1.02**	**142**	*e*Pg	**Pn**	**18 11 16.4**	**+2.0**
HIDR			⇑	*e*Sg	**Sn**	**18 11 30.6**	**+0.6**
HIDR				IAML		18 11 31.4	
	comp=E,2μm,0.3s						
HIDR				IAML		18 11 31.4	
	comp=N,1μm,0.3s						
SDD	**Santo Domingo**	**1.07**	**209**	*e*Sg	**Sn**	**18 11 29.2**	**-1.7**
SDD				IAML		18 11 32.4	
	comp=N,94nm,0.2s						
SDD				IAML		18 11 33.0	
	comp=E,68nm,0.5s						
SDD	**Santo Domingo**	**1.07**	**209**	*i* P	**Pn**	**18 11 15.8**	**+0.9**
SDD				*e*S	**Sn**	**18 11 29.4**	**-1.5**
SDD				IAML		18 11 31.6	
	comp=Z,2μm,0.2s						
SODR	**Sosua Marina B**	**1.18**	**287**⇑	*e*Sg	**Sn**	**18 11 35.1**	**+1.8**
SODR				IAML		18 11 35.8	
	comp=N,397nm,0.3s						
SODR				IAML		18 11 36.1	
	comp=E,372nm,0.7s						
SC01	**Santiago de lo**	**1.27**	**271**⇑	*e*Pg	**Pn**	**18 11 19.9**	**+2.6**
SC01				IAML		18 11 37.9	
	comp=E,355nm,0.2s						
SC01				IAML		18 11 45.5	
	comp=N,198nm,0.3s						
SC01	**Santiago de lo**	**1.27**	**271**	*i* P	**Pn**	**18 11 19.8**	**+2.5**
SC01				*e*S	**Sn**	**18 11 36.4**	**+1.2**
SC01				IAML		18 11 39.4	
	comp=Z,151nm,0.3s						
ABDR	**Alto Bandera**	**1.32**	**244**⇑	*e*Pg	**Pn**	**18 11 19.7**	**+1.5**
ABDR				IAML		18 11 38.4	
	comp=E,3.3nm,0.2s						
ABDR				IAML		18 12 09.5	
	comp=N,0.2nm,0.3s						
BANI	**BANI**	**1.37**	**223**⇑	*e*Pg	**Pn**	**18 11 20.1**	**+1.6**
BANI				*e*Sg	**Sn**	**18 11 37.4**	**+0.1**
BANI				IAML		18 11 38.5	
	comp=E,460nm,0.2s						
BANI				IAML		18 11 38.9	
	comp=N,588nm,0.2s						
LUDR	**Luperon**	**1.56**	**289**	*e*Pg	**Pn**	**18 11 25.2**	**+4.5**
LUDR			⇑	*e*Sg	**Sn**	**18 11 42.8**	**+1.4**
LUDR				IAML		18 11 44.8	
	comp=E,942nm,0.3s						
MADR	**Mao Valverde**	**1.64**	**276**	IAML		18 11 48.2	
	comp=E,502nm,0.6s						
MADR				IAML		18 11 49.2	
	comp=N,373nm,0.6s						
LOPP1	**Punta Rusia, P**	**1.78**	**285**	*i* P	**Pn**	**18 11 25.6**	**+2.2**
LOPP1				*e*S	**Sn**	**18 11 47.0**	**+1.0**
LOPP1				IAML		18 11 47.8	
	comp=Z,108nm,0.4s						
SDDR	**Presa de Saban**	**1.85**	**257**⇓	*e*Pg	**Pn**	**18 11 26.9**	**+2.4**
SDDR			⇑	*e*Sg	**Sn**	**18 11 49.3**	**+1.4**
SDDR				IAML		18 11 50.7	
	comp=N,127nm,1.1s						
SDDR				IAML		18 11 52.5	
	comp=E,123nm,0.4s						
SDDR	**Presa de Saban**	**1.85**	**257**	*i* P	**Pn**	**18 11 26.7**	**+2.2**
SDDR				*e*S	**Sn**	**18 11 48.5**	**+0.6**
SDDR				IAML		18 11 53.4	
	comp=Z,1μm,0.5s						
SDDR	**Presa de Saban**	**1.85**	**257**	*e*P	**Pn**	**18 11 26.8**	**+2.2**
SDDR				*e*S	**Sn**	**18 11 48.4**	**+0.4**
SDDR				IAML		18 11 51.9	
	comp=Z,141nm,0.4s						
SDDR				IAML		18 11 52.8	
	comp=Z,126nm,0.5s						
REDR	**Restauracion**	**1.92**	**263**⇑	*e*Pg	Pn	18 11 30.1	+4.9
REDR				IAML		18 11 55.8	
	comp=E,222nm,0.2s						
REDR				IAML		18 11 56.2	
	comp=N,321nm,0.2s						
LONE3	**El Aguacate, B**	**2.12**	**248**	*i* P	**Pn**	**18 11 30.1**	**+2.0**
LONE3				IAML		18 12 01.8	
	comp=Z,23nm,0.6s						
PODR	**Polo**	**2.18**	**236**	*e*Pg	**Pn**	**18 11 31.2**	**+2.4**
PODR				IAML		18 11 59.5	
	comp=E,86nm,1.4s						
PODR				IAML		18 12 00.2	
	comp=N,74nm,0.7s						
PODR	**Polo**	**2.18**	**236**	*i* P	**Pn**	**18 11 31.4**	**+2.5**
PODR				IAML		18 11 58.1	
	comp=Z,216nm,0.3s						
LODU1	**El Espartillar**	**2.24**	**243**	*i* P	**Pn**	**18 11 31.6**	**+2.1**
LODU1				IAML		18 12 13.5	
	comp=Z,48nm,1.8s						
LOVI	**El Cajuil, Ovi**	**2.47**	**230**	*i* P	**Pn**	**18 11 34.4**	**+1.9**
LOVI				*e*S	**Sn**	**18 12 02.0**	**-0.2**
LOBH	**Bahia de las A**	**2.63**	**235**	*i* P	**Pn**	**18 11 37.0**	**+2.4**
LOBH				IAML		18 12 11.4	
	comp=Z,39nm,1.4s						
GRTK	**Grand Turk**	**2.67**	**322**	*e*Pg	**Pn**	**18 11 36.9**	**+1.9**
GRTK				IAML		18 12 08.9	
	comp=E,52nm,0.2s						
GRTK				IAML		18 12 10.5	
	comp=N,41nm,1.9s						
GRTK	**Grand Turk**	**2.67**	**322**	*i* P	**Pn**	**18 11 36.7**	**+1.7**
GRTK				*e*S	**Sn**	**18 12 07.1**	**+0.2**
GRTK				IAML		18 12 08.7	
	comp=Z,50nm,1.4s						
GRTK	**Grand Turk**	**2.67**	**322**	*e*P	**Pn**	**18 11 36.8**	**+1.7**
GRTK				*e*S	**Sn**	**18 12 07.0**	**+0.2**
GRTK				IAML		18 12 08.9	
	comp=Z,54nm,0.2s						
GRTK				IAML		18 12 09.3	
	comp=Z,38nm,0.2s						
MASC	**Masc**	**4.63**	**280**	*e*P	**Pn**	**18 12 00.3**	**-1.1**
MASC				*e*P		18 12 00.8	
MASC				*e*S	**Sn**	**18 12 50.0**	**-4.2**
QMBU	**Quimbuelo**	**5.18**	**280**	*e*S	**Sn**	**18 13 00.6**	**-6.8**
NMDO	**Nuevo Mundo**	**5.40**	**283**	*e*P	**Pn**	**18 12 11.0**	**-0.8**
NMDO				*e*S	**Sn**	**18 13 05.1**	**-7.6**

KRSC 25 18:27:25.2±1.6, 49°23N×158°34E, h40km±37km, MI3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.04**	**316**	*e*P		Pn	18 27 57.6	+0.5
SKR				*e*S		Sn	18 28 21.8	+0.5
PAU	**Pauzhetka**	**2.44**	**337**	*e*S		Sn	18 28 35.6	+4.4
KDTR	**Khodutka, Kamc**	**2.59**	**356**	*e*S		Sn	18 28 37.4	+2.7
ASAK	**Asacha**	**3.17**	**355**	*e*P		Pn	18 28 16.2	+3.5
RUS	**Russkaya**	**3.21**	**2**	*e*P		Pn	18 28 16.8	+3.7
RUS				*e*S		Sn	18 28 53.8	+3.8
MIPR	**Malaya Ipel'ka**	**3.21**	**342**	*e*P		Pn	18 28 16.9	+3.8
MTVR	**Mutnovka**	**3.26**	**358**	*e*P		Pn	18 28 17.9	+4.0
MTVR				*e*S		Sn	18 28 57.2	+5.7
GRL	**Gorelyy**	**3.33**	**357**	*e*P		Pn	18 28 19.0	+4.1
GRL				*e*S		Sn	18 28 57.8	+4.6
KRMR	**Karymshinskiy**	**3.61**	**358**	*e*P		Pn	18 28 22.9	+4.4
KRMR				*e*S		Sn	18 29 05.9	+6.1
PET	**Petropavlovsk**	**3.80**	**3**	*e*P		Pn	18 28 24.8	+3.6
PET				*e*S		Sn	18 29 09.1	+4.4
DALK	**Dalny**	**3.81**	**4**	*e*P		Pn	18 28 25.3	+3.9
DALK				*e*S		Sn	18 29 10.4	+5.5
UGLR	**Uglovaya**	**3.99**	**4**	*e*P		Pn	18 28 28.2	+4.2
SPN	**Mys Shipunski**	**4.01**	**15**	*e*P		Pn	18 28 28.7	+4.5
AVH	**Avacha**	**4.05**	**3**	*e*P		Pn	18 28 29.5	+4.9
SMAR	**Somma**	**4.05**	**4**	*e*P		Pn	18 28 29.0	+4.2
KOK	**Koryaka**	**4.07**	**2**	*e*P		Pn	18 28 29.9	+4.9
KRER	**Koryakskii**	**4.09**	**3**	*e*P		Pn	18 28 29.6	+4.3
KRX	**Arik**	**4.14**	**3**	*e*P		Pn	18 28 30.4	+4.4
GNL	**Ganaly**	**4.48**	**357**	*e*P		Pn	18 28 35.2	+4.6
KII	**Karymskiy**	**4.86**	**8**	*e*P		Pn	18 28 40.8	+5.0
KBTR	**Krutoberegovo**	**7.50**	**20**	*e*P		Pn	18 29 15.9	+4.0

KRSC 25 18:32:51.4±1.6, 49°96N×158°95E, h49km±36km, MI3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**1.93**	**344**	*e*P		Pn	18 33 24.4	+2.7
KDTR				*e*S		Sn	18 33 47.4	+2.6
SKR	**Severo-Kuril's**	**1.95**	**293**	*e*P		Pn	18 33 23.5	+1.5
SKR				*e*S		Sn	18 33 45.4	+0.1
PAU	**Pauzhetka**	**2.03**	**319**	*e*P		Pn	18 33 25.9	+2.9
PAU				*e*S		Sn	18 33 49.9	+2.8
ASAK	**Asacha**	**2.51**	**345**	*e*P		Pn	18 33 32.8	+3.1
ASAK				*e*S		Sn	18 34 02.6	+3.4
MTVR	**Mutnovka**	**2.57**	**349**	*e*P		Pn	18 33 33.7	+3.1
MTVR				*e*S		Sn	18 34 03.4	+2.7
GRL	**Gorelyy**	**2.65**	**348**	*e*P		Pn	18 33 35.3	+3.6
GRL				*e*S		Sn	18 34 06.4	+3.7
SPN	**Mys Shipunski**	**3.21**	**12**	*e*P		Pn	18 33 42.2	+2.9
SPN				*e*S		Sn	18 34 19.0	+2.8
UGLR	**Uglovaya**	**3.25**	**359**	*e*P		Pn	18 33 44.2	+4.2
SMAR	**Somma**	**3.31**	**358**	*e*P		Pn	18 33 45.5	+4.7
AVH	**Avacha**	**3.31**	**358**	*e*P		Pn	18 33 44.2	+3.5
KOK	**Koryaka**	**3.34**	**357**	*e*P		Pn	18 33 45.4	+4.3
KRER	**Koryakskii**	**3.35**	**358**	*e*P		Pn	18 33 44.8	+3.4
KRX	**Arik**	**3.41**	**357**	*e*P		Pn	18 33 45.4	+3.3
GNL	**Ganaly**	**3.79**	**351**	*e*P		Pn	18 33 51.2	+3.9
KII	**Karymskiy**	**4.09**	**4**	*e*P		Pn	18 33 55.6	+4.2
KBTR	**Krutoberegovo**	**6.68**	**19**	*e*P		Pn	18 34 30.2	+3.5

*IDC **25** 18:38:55.0±0.9, 2°.58S×134°.24E, h0km, mb3.8/6, mbtmp3.8/10, ML3.3/4, MS2.8/2, Error ellipse: s-maj=30.1km s-min=18.0km az=64.0*
*DJA **25** 18:38:58.2±0.2, 3°.5S×2°×13°4E±°, h10km, M4.1/14, mB4.6/1, mb4.3/2, MLv4.0/14, Mw(mB)3.8/1*
ISC 25 18:39:00.3±0.7, 2°.58S±0°.05×134°.28E±0°.05, h35km, n21, σ1°29/24, mb3.7/5, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**1.07**	**355**	P		**Pn**	**18 39 17.0**	**-1.7**
RKPI				S		**Sn**	**18 39 33.0**	**+0.7**
KMPI	**Kaimana, Papua**	**1.22**	**208**	P		**Pn**	**18 39 21.4**	**+0.6**
KMPI				S		**Sn**	**18 39 37.6**	**+1.5**
MWPI	**Manokwari, Pap**	**1.66**	**352**	P		**Pn**	**18 39 28.1**	**+1.3**
FAKI	**Fak Fak**	**2.06**	**260**	P		**Pn**	**18 39 31.5**	**-0.8**
FAKI				S		**Sn**	**18 39 59.2**	**+2.4**
SRPI	**Serui, Papua**	**2.08**	**70**	P		**Pn**	**18 39 32.8**	**+0.1**
BAKI	**Biak**	**2.29**	**53**	P		**Pn**	**18 39 36.9**	**+1.4**
SIJI	**Sorong**	**3.46**	**299**	Pn		**Pn**	**18 39 51.2**	**-0.5**
	4.7nm,0.3s,baz=241,slow=23,SNR=32							
SIJI				Sn		**Sn**	**18 40 33.4**	**+1.9**
	4.4nm,0.3s,baz=95,slow=14,SNR=3.7 14nm,0.4s							
SIJI	**Sorong**	**3.46**	**299**	P		**Pn**	**18 39 51.5**	**-0.1**
SWI	**Sorong**	**3.47**	**299**	P		**Pn**	**18 39 51.8**	**+0.1**
BNDI	**Bandanaira**	**4.77**	**246**	P		**Pn**	**18 40 10.3**	**+0.6**
JAY	**Jayapura**	**6.42**	**90**	Pn		**Pn**	**18 40 32.8**	**+0.4**
	0.2nm,0.3s,baz=273,slow=17,SNR=1.3 6.4nm,0.9s							
KAPI	**Kappang**	**14.70**	**260**	LR		LR	18 48 55.0	
	comp=Z,21nm,19.9s,baz=48,slow=41							
WRA	**Warramunga Arr**	**17.26**	**180**	P		**Pn**	**18 42 56.2**	**-2.5**
	0.1nm,0.3s,baz=359,slow=11,SNR=6.1 1.0nm,0.8s							
FITZ	**Fitzroy Crossi**	**17.60**	**208**	P		**Pn**	**18 43 00.8**	**-2.1**
	0.2nm,0.3s,baz=50,slow=9.9,SNR=5.9 4.4nm,1.2s							
ASAR	**Alice Springs**	**20.97**	**181**	P		**P**	**18 43 40.4**	**-0.1**
	3.8nm,0.8s,baz=7.0,slow=11,SNR=29							
ASAR				LR		LR	18 52 09.5	
	comp=Z,47nm,20.9s,baz=98,slow=38 3.8nm,0.8s							
STKA	**Stephens Creek**	**29.95**	**167**	P		**P**	**18 45 05.2**	**-0.1**
	2.7nm,1.0s,baz=312,slow=12,SNR=2.9 2.7nm,1.0s							
MKAR	**Makanchi Array**	**67.03**	**324**	P		**P**	**18 49 50.5**	**+0.6**
	0.8nm,0.6s,baz=115,slow=7.9,SNR=12 0.8nm,0.6s							
KURBB	**Kurchatov Arra**	**71.11**	**326**	P		**P**	**18 50 13.8**	**-1.3**
	0.5nm,0.7s,baz=114,slow=5.9,SNR=4.6 0.5nm,0.7s							
BVAR	**Borovoye Array**	**76.71**	**326**	P		**P**	**18 50 48.1**	**+0.3**
	0.4nm,0.6s,baz=77,slow=7.6,SNR=2.5 0.4nm,0.6s							
ILAR	**Eielson Array**	**87.56**	**25**	P		**P**	**18 51 43.6**	**-0.8**
	0.3nm,0.8s,baz=256,slow=4.5,SNR=2.6 0.3nm,0.8s							
LPAZ	**La Paz**	**150.99**	**131**	PKPbc		**PKiKP**	**18 58 52.8**	**+0.9**
	1.0nm,0.8s,baz=211,slow=3.5,SNR=3.9							

KRSC 25 18:46:03.4±1.2, 49°45N×158°92E, h40km±27km, MI3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.19**	**305**	*e*P		Pn	18 46 38.5	+1.2
SKR				*e*S		Sn	18 47 03.8	+0.6
KDTR	**Khodutka, Kamc**	**2.43**	**348**	*e*P		Pn	18 46 43.4	+2.9
KDTR				*e*S		Sn	18 47 12.2	+3.3
PAU	**Pauzhetka**	**2.43**	**327**	*e*P		Pn	18 46 43.6	+3.0
PAU				*e*S		Sn	18 47 12.6	+3.5
RUS	**Russkaya**	**3.00**	**355**	*e*P		Pn	18 46 52.3	+3.9
RUS				*e*S		Sn	18 47 26.3	+3.2
ASAK	**Asacha**	**3.01**	**348**	*e*P		Pn	18 46 52.5	+3.8
ASAK				*e*S		Sn	18 47 27.4	+3.9
MTVR	**Mutnovka**	**3.08**	**352**	*e*P		Pn	18 46 52.9	+3.3
MTVR				*e*S		Sn	18 47 29.0	+3.7
MIPR	**Malaya Ipel'ka**	**3.15**	**335**	*e*P		Pn	18 46 55.1	+4.6
MIPR				*e*S		Sn	18 47 31.2	+4.4
GRL	**Gorelyy**	**3.16**	**351**	*e*P		Pn	18 46 54.5	+3.8
GRL				*e*S		Sn	18 47 31.2	+4.1
KRMR	**Karymshinskiy**	**3.43**	**352**	*e*P		Pn	18 46 58.2	+3.9
KRMR				*e*S		Sn	18 47 38.1	+4.6
PET	**Petropavlovsk**	**3.59**	**357**	*e*P		Pn	18 47 00.4	+4.0
DALK	**Dalny**	**3.59**	**358**	*e*P		Pn	18 47 00.3	+3.7
UGLR	**Uglovaya**	**3.77**	**359**	*e*P		Pn	18 47 03.5	+4.4
SMAR	**Somma**	**3.82**	**359**	*e*P		Pn	18 47 04.7	+4.7
AVH	**Avacha**	**3.83**	**358**	*e*P		Pn	18 47 04.2	+4.4
KOK	**Koryaka**	**3.86**	**357**	*e*P		Pn	18 47 04.9	+4.6
KRER	**Koryakskii**	**3.87**	**358**	*e*P		Pn	18 47 05.2	+4.7
KRER				*e*S		Sn	18 47 49.7	+5.0
KRX	**Arik**	**3.92**	**358**	*e*P		Pn	18 47 05.2	+4.0
GNL	**Ganaly**	**4.30**	**352**	*e*P		Pn	18 47 11.4	+5.0
GNL				*e*S		Sn	18 48 00.5	+5.2
KBTR	**Krutoberegovo**	**7.17**	**18**	*e*P		Pn	18 47 50.1	+4.5
KBTR				*e*S		Sn	18 49 10.2	+4.4

KRSC 25 18:49:53.7±1.7, 49°38N×158°98E, h44km±53km, MI3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.26**	**306**	*e*P		Pn	18 50 29.7	+1.2
SKR				*e*S		Sn	18 50 55.1	0.0
KDTR	**Khodutka, Kamc**	**2.50**	**347**	*e*S		Sn	18 51 04.7	+3.6
PAU	**Pauzhetka**	**2.51**	**327**	*e*S		Sn	18 51 04.9	+3.7
RUS	**Russkaya**	**3.07**	**355**	*e*P		Pn	18 50 42.9	+3.3
RUS				*e*S		Sn	18 51 18.8	+3.7
ASAK	**Asacha**	**3.09**	**348**	*e*P		Pn	18 50 43.3	+3.3
ASAK				*e*S		Sn	18 51 19.8	+4.2
MTVR	**Mutnovka**	**3.15**	**351**	*e*P		Pn	18 50 44.3	+3.4
MTVR				*e*S		Sn	18 51 21.2	+4.0
MIPR	**Malaya Ipel'ka**	**3.23**	**335**	*e*P		Pn	18 50 45.8	+4.1
GRL	**Gorelyy**	**3.23**	**350**	*e*P		Pn	18 50 45.6	+3.7
GRL				*e*S		Sn	18 51 23.5	+4.4
KRMR	**Karymshinskiy**	**3.50**	**352**	*e*P		Pn	18 50 49.7	+4.3
KRMR				*e*S		Sn	18 51 30.9	+5.3
PET	**Petropavlovsk**	**3.66**	**357**	*e*P		Pn	18 50 51.1	+3.4
PET				*e*S		Sn	18 51 33.7	+4.3
DALK	**Dalny**	**3.66**	**358**	*e*P		Pn	18 50 51.4	+3.7
DALK				*e*S		Sn	18 51 33.8	+4.2
SPN	**Mys Shipunski**	**3.78**	**10**	*e*P		Pn	18 50 53.4	+4.1
UGLR	**Uglovaya**	**3.84**	**359**	*e*P		Pn	18 50 54.4	+4.1
SMAR	**Somma**	**3.89**	**358**	*e*P		Pn	18 50 55.7	+4.6
AVH	**Avacha**	**3.90**	**358**	*e*P		Pn	18 50 54.7	+3.6
KOK	**Koryaka**	**3.93**	**357**	*e*P		Pn	18 50 55.9	+4.4
KRER	**Koryakskii**	**3.94**	**358**	*e*P		Pn	18 50 56.1	+4.4
KRX	**Arik**	**3.99**	**357**	*e*P		Pn	18 50 56.5	+4.1
GNL	**Ganaly**	**4.37**	**352**	*e*P		Pn	18 51 02.6	+5.0
KII	**Karymskiy**	**4.67**	**3**	*e*P		Pn	18 51 07.7	+6.0
KBTR	**Krutoberegovo**	**7.23**	**17**	*e*P		Pn	18 51 41.2	+4.6
BKI	**Bering**	**7.24**	**34**	*e*P		Pn	18 51 40.8	+4.0

*IDC **25** 18:53:15.8±1.1, 28°.10N×105°.06E, h0km, mb3.5/6, mbtmp3.5/7, ML3.4/1, MS2.5/1, Error ellipse: s-maj=38.3km s-min=19.9km az=55.0*
ISC 25 18:53:20.9±1.2, 28°.2N±0°.2×105°.2E±0°.2, h35km, n8, σ0°56/7, mb3.5/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**11.24**	**212**	LR	LR		19 00 52.2	
	comp=Z,23nm,18.1s,baz=135,slow=41							
SONM	**Songino Array**	**19.64**	**2**	P		**Pn**	**18 57 48.1**	**0.0**
	0.1nm,0.3s,baz=182,slow=12,SNR=3.5 0.4nm,0.5s							
KSRS	**Korea Array**	**21.21**	**58**	P		**P**	**18 58 03.8**	**+0.3**
	1.1nm,0.8s,baz=241,slow=9.9,SNR=5.0 1.1nm,0.8s							
MKAR	**Makanchi Array**	**25.81**	**322**	P		**P**	**18 58 48.5**	**-0.1**
	1.2nm,0.8s,baz=133,slow=10.0,SNR=9.9 1.2nm,0.8s							
KURBB	**Kurchatov Arra**	**30.13**	**325**	P		**P**	**18 59 26.5**	**-0.7**
	0.2nm,0.2s,baz=133,slow=9.3,SNR=2.1 0.2nm,0.2s							
WRA	**Warramunga Arr**	**55.55**	**146**	P		**P**	**19 02 52.5**	**-0.4**
	0.5nm,0.8s,baz=336,slow=8.1,SNR=7.2 0.5nm,0.8s							
ASAR	**Alice Springs**	**58.53**	**149**	P		**P**	**19 03 14.1**	**+0.1**
	0.2nm,0.6s,baz=335,slow=7.3,SNR=5.7 0.2nm,0.6s							
BRTR	**Keskin Array B**	**59.00**	**301**	P		**P**	**19 03 18.0**	**+0.7**
	0.5nm,0.8s,baz=59,slow=12,SNR=2.7 0.5nm,0.8s							

KRSC 25 18:55:33.4±1.6, 49°.43N×158°.62E, h50km±46km, MI3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.04**	**309**	*e*P		Pn	18 56 05.8	+0.5
SKR				*e*S		Sn	18 56 30.5	+0.9
PAU	**Pauzhetka**	**2.34**	**331**	*e*P		Pn	18 56 12.0	+2.6
PAU				*e*S		Sn	18 56 41.7	+4.7
KDTR	**Khodutka, Kamc**	**2.41**	**352**	*e*P		Pn	18 56 12.5	+2.3
KDTR				*e*S		Sn	18 56 42.3	+3.8
ASAK	**Asacha**	**2.99**	**351**	*e*P		Pn	18 56 21.8	+3.5
ASAK				*e*S		Sn	18 56 57.9	+4.8
RUS	**Russkaya**	**3.01**	**359**	*e*P		Pn	18 56 22.5	+4.0
RUS				*e*S		Sn	18 56 57.8	+4.5
MTVR	**Mutnovka**	**3.07**	**355**	*e*P		Pn	18 56 22.8	+3.3
MTVR				*e*S		Sn	18 56 58.0	+2.9
MIPR	**Malaya Ipel'ka**	**3.08**	**338**	*e*S		Sn	18 57 00.1	+4.9
GRL	**Gorelyy**	**3.15**	**354**	*e*P		Pn	18 56 24.4	+3.9
GRL				*e*S		Sn	18 57 00.4	+3.6
KRMR	**Karymshinskiy**	**3.42**	**355**	*e*P		Pn	18 56 28.1	+3.9
KRMR				*e*S		Sn	18 57 07.6	+4.2
PET	**Petropavlovsk**	**3.60**	**0**	*e*P		Pn	18 56 30.3	+3.7
PET				*e*S		Sn	18 57 11.4	+3.6
DALK	**Dalny**	**3.61**	**1**	*e*P		Pn	18 56 30.4	+3.7
DALK				*e*S		Sn	18 57 11.6	+3.6
SPN	**Mys Shipunski**	**3.78**	**13**	*e*S		Sn	18 57 15.8	+3.7
UGLR	**Uglovaya**	**3.79**	**2**	*e*P		Pn	18 56 34.2	+4.9
SMAR	**Somma**	**3.84**	**2**	*e*P		Pn	18 56 34.3	+4.2
AVH	**Avacha**	**3.84**	**1**	*e*P		Pn	18 56 35.0	+5.0
KOK	**Koryaka**	**3.87**	**0**	*e*P		Pn	18 56 34.5	+4.1
KRX	**Arik**	**3.94**	**0**	*e*P		Pn	18 56 35.7	+4.3
GNL	**Ganaly**	**4.29**	**355**	*e*P		Pn	18 56 39.9	+3.7
KBTR	**Krutoberegovo**	**7.25**	**19**	*e*P		Pn	18 57 20.1	+3.5

*IDC **25** 19:08:06.8±2.2, 7°.53S×129°.02E, h115km±26km, mb3.7/1, mbtmp4.1/6, MS3.3/1, Error ellipse: s-maj=36.3km s-min=21.6km az=94.0*
ISC 25 19:08:06.0±0.9, 7°.60S±0°.06×129°.18E±0°.10, h131km, n7, σ3°19/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.04**	**244**	P		**Pn**	**19 09 32.4**	**-0.7**
	17nm,0.4s,baz=57,slow=6.2,SNR=7.6							
BATI				S		**Sn**	**19 10 40.6**	**-0.5**
	30nm,0.3s,baz=112,slow=23,SNR=9.7							
SIJI	**Sorong**	**7.00**	**17**	P		**Pn**	**19 09 46.6**	**+0.6**
	1.8nm,0.3s,baz=196,slow=22,SNR=10							
SIJI				S		**Sn**	**19 10 59.7**	**-4.5**
	3.2nm,0.3s,baz=290,slow=23,SNR=9.1							
FITZ	**Fitzroy Crossi**	**10.99**	**198**	P		**Pn**	**19 10 41.2**	**+1.6**
	3.9nm,0.8s,baz=18,slow=11,SNR=33							
FITZ				S		**Sn**	**19 12 36.4**	**-4.5**
	6.2nm,0.3s,baz=277,slow=21,SNR=9.7							
WRA	**Warramunga Arr**	**13.25**	**158**	P		**Pn**	**19 11 11.2**	**+2.0**
	2.0nm,0.4s,baz=331,slow=13,SNR=42							
WRA				S		**Sn**	**19 13 32.3**	**-3.2**
	5.2nm,0.4s,baz=334,slow=23,SNR=15							
ASAR	**Alice Springs**	**16.61**	**165**	P		**P**	**19 11 54.9

	comp=E,944nm,0.1s							
TEZP					IAML		19 19 29.9	
	comp=N,944nm,0.1s							
ITAN	**ITANAGAR**	**2.84**	**344**	*e*P	**Pn**	**19 18 58.5**	**+0.2**	
ITAN				*e*S	**Sn**	**19 19 30.4**	**-1.6**	
ITAN				IAML		19 19 34.2		
	comp=E,990nm,0.2s							
ITAN				IAML		19 19 34.3		
	comp=N,836nm,0.3s							
BELO	**BELONIA**	**3.10**	**249**	*e*S	**Sn**	**19 19 37.4**	**-0.8**	
BELO				IAML		19 19 39.0		
	comp=N,424nm,0.2s							
GUWA	**GUWAHATI**	**3.18**	**305**	*e*P	**Pn**	**19 19 04.8**	**+2.1**	
GUWA				*e*S	**Sn**	**19 19 38.4**	**-1.5**	
GUWA				IAML		19 19 39.3		
	comp=E,863nm,0.2s							
GUWA				IAML		19 19 39.7		
	comp=N,239nm,0.3s							
ZIRO	**ZIRO**	**3.18**	**348**	*e*P	**Pn**	**19 19 02.8**	**-0.2**	
ZIRO				*e*S	**Sn**	**19 19 37.6**	**-2.7**	
ZIRO				IAML		19 19 40.2		
	comp=N,536nm,0.3s							
ZIRO				IAML		19 19 41.1		
	comp=E,966nm,0.3s							
BRDH	**Bariadhala**	**3.21**	**238**	Lg	Lg	19 19 40.5		
	comp=E,46nm,0.3s,baz=218,slow=22,SNR=13							
TAWA	**Tawang**	**4.02**	**323**	*e*P	**Pn**	**19 19 15.4**	**+1.1**	
TAWA				*e*S	**Sn**	**19 19 59.2**	**-1.4**	
TAWA				IAML		19 20 01.8		
	comp=N,415nm,0.2s							
TAWA				IAML		19 20 02.6		
	comp=E,766nm,0.3s							
DHUB	**DHUBRI**	**4.47**	**292**	*e*P	**Pn**	**19 19 19.9**	**-0.2**	
DHUB				*e*S	**Sn**	**19 20 08.1**	**-2.9**	
DHUB				IAML		19 20 10.0		
	comp=N,189nm,0.2s							
DHUB				IAML		19 20 10.8		
	comp=E,160nm,0.1s							
LSA	**Lhasa**	**6.11**	**331**	Pn	**Pn**	**19 19 42.5**	**-0.2**	
LSA				Sn	Sn	19 20 37.0	-14	
LSA				smax	smax			
	comp=N,19nm,0.5s							
LSA				smax	smax			
	comp=E,12nm,0.5s							
GTK	**Tadong**	**6.13**	**300**	*e*P	**Pn**	**19 19 44.6**	**+1.9**	
GTK				*e*S	**Sn**	**19 20 50.4**	**-1.2**	
GTK				IAML		19 20 53.4		
	comp=N,26nm,0.3s							
CMAR	**Chiang Mai Arr**	**7.17**	**145**	Lg	Lg	19 21 44.9		
	baz=324,slow=32							
MKAR	**Makanchi Array**	**24.42**	**339**	P	**P**	**19 23 25.3**	**+2.1**	
	comp=N,1.3nm,0.6s,baz=146,slow=9.0,SNR=17							
	comp=N,1.3nm,0.6s							
SONM	**Songino Array**	**25.19**	**19**	P	**P**	**19 23 30.5**	**+0.1**	
	comp=N,0.4nm,0.6s,baz=208,slow=8.2,SNR=3.9							
	comp=N,0.4nm,0.6s							
BVAR	**Borovoye Array**	**33.93**	**334**	P	**P**	**19 24 48.7**	**+1.1**	
	comp=N,0.3nm,0.6s,baz=144,slow=10,SNR=2.0							
	comp=N,0.3nm,0.6s							
WRA	**Warramunga Arr**	**58.65**	**135**	P	**P**	**19 27 59.8**	**-1.3**	
	comp=N,0.4nm,0.5s,baz=323,slow=7.3,SNR=6.0							
	comp=N,0.4nm,0.5s							
ASAR	**Alice Springs**	**61.13**	**138**	P	**P**	**19 28 17.1**	**-1.0**	
	comp=N,0.2nm,0.5s,baz=318,slow=6.8,SNR=6.3							
	comp=N,0.2nm,0.5s							

DJA 25 19:23:38.1±0.3, 8°S±2°×10°6E±°, h10km, M4.1/34, mb4.6/1, MLv3.8/34, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGJI	**Cibinong**	**0.98**	**347**	P	Pb	19 23 57.1	0.0
CGJI				S	Sg	19 24 09.8	+0.2
DBJI	**Dramaga**	**1.30**	**39**	P	Pn	19 24 01.8	-0.6
SBJI	**Serang**	**1.46**	**8**	P	Pn	19 24 04.2	-0.3
SBJI				S	Sg	19 24 25.5	+0.5
LEM	**Lembang**	**1.84**	**66**	P	Pb	19 24 11.8	-0.1
KASI	**Kota Agung**	**2.48**	**325**	P	Pn	19 24 17.5	-1.0
KPJI	**Karang Pucung**	**3.00**	**86**	P	Pn	19 24 26.8	+1.1
KLSI		**3.10**	**337**	P	Pn	19 24 27.2	+0.1
LWLI	**Liwa**	**3.14**	**324**	P	Pn	19 24 27.2	-0.6
CTJI	**Waduk Cacaban**	**3.29**	**80**	P	Pn	19 24 29.3	-0.4
MDSI	**Maura Dua**	**3.52**	**330**	P	Pn	19 24 33.3	+0.4
UGM	**Wanagama**	**4.57**	**95**	P	Pn	19 24 48.2	+0.8
KSI	**Kapahiang**	**5.11**	**319**	P	Pn	19 24 54.2	-0.6
PCJI	**Pacitan**	**5.25**	**97**	P	Pn	19 24 54.8	-1.8

IDC 25 19:28:31.1±1.4, 47.47N×151.81E, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=53.1km s-min=30.7km az=104.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11N2	**WAKE ISLAND Hy**	**30.28**	**151**	T	T	20 06 27.8	
	baz=340,slow=76,SNR=8.3						
H11N1	**WAKE ISLAND Hy**	**30.29**	**151**	T	T	20 06 34.6	
	baz=340,slow=76,SNR=9.8						
H11N3	**WAKE ISLAND Hy**	**30.29**	**151**	T	T	20 06 32.9	
	baz=340,slow=76,SNR=5.4						
H11S1	**WAKE ISLAND Hy**	**31.36**	**152**	T	T	20 07 50.5	
	baz=340,slow=76,SNR=9.9						
H11S3	**WAKE ISLAND Hy**	**31.36**	**152**	T	T	20 07 54.8	
	baz=340,slow=76,SNR=8.1						
H11S2	**WAKE ISLAND Hy**	**31.37**	**152**	T	T	20 07 53.3	
	baz=340,slow=76,SNR=6.8						
ILAR	**Eielson Array**	**36.54**	**39**	P	P	19 35 37.9	-0.1
	0.2nm,0.5s,baz=269,slow=6.5,SNR=7.5						
	0.2nm,0.5s						
FINES	**FINESS Array B**	**63.00**	**334**	P	P	19 38 59.8	+0.6
	3.5nm,0.9s,baz=22,slow=7.3,SNR=6.0						
	3.5nm,0.9s						
HFS	**Hagfors**	**67.47**	**339**	P	P	19 39 27.5	-0.7
	6.5nm,1.1s,baz=46,slow=6.2,SNR=4.3						
	6.5nm,1.1s						
ASAR	**Alice Springs**	**72.62**	**197**	P	P	19 40 00.3	0.0
	0.3nm,0.6s,baz=14,slow=6.4,SNR=5.3						
	0.3nm,0.6s						

*DJA **25** 19:29:45.6±0.1,1°S±1°×12°1E±°, h10km, M4.2/38, mB4.6/5, mb4.5/8, MLv4.3/38, Mw(mB)3.8/5, MwMwp4.6/1, Mwp5.0/1*
*NEIC **25** 19:29:48.8±2.4,0.°95S±0.°07×120.°84E±0.°06, h42km±7km, mb4.2/11, Error ellipse: s-maj=10.1km s-min=9.3km az=203.0*
*IDC **25** 19:29:50.9±2.8,1.°19S×120.°78E, h63km±29km, mb3.4/9, mbtmp3.8/12, ML4.0/3, MS3.2/5, Error ellipse: s-maj=32.6km s-min=16.2km az=63.0*

ISC 25 19:29:47.9±0.6, 0.°99S±0.°05×120.°75E±0.°05, h35km, n48, σ1s50/49, mb4.0/15, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	**Ampana**	**0.90**	**85**	P	**Pn**	**19 30 03.6**	**-0.5**
PCI	**Palu**	**0.92**	**275**	P	**Pn**	**19 30 03.0**	**-1.3**
PCI				S	**Sn**	**19 30 15.7**	**-0.6**
MPSI	**Mapaga**	**1.57**	**327**	P	**Pn**	**19 30 11.0**	**-2.3**
MRSI	**Marisa**	**1.88**	**39**	P	**Pn**	**19 30 17.7**	**+0.1**
LUWI	**Luwuk**	**2.02**	**91**		**Pn**	**19 30 19.2**	**-0.3**
LUWI	**Luwuk**	**2.02**	**91**	P	**Pn**	**19 30 22.2**	**+2.7**
TOLI2	**Tolitoli**	**2.09**	**1**		**Pn**	**19 30 20.1**	**-0.4**
TTSI	**Tana Toraja**	**2.24**	**205**	P	**Pn**	**19 30 23.0**	**+0.4**
MMSI	**Mamuju**	**2.50**	**227**	P	**Pn**	**19 30 26.8**	**+0.7**
GTOI	**Gorontalo**	**2.78**	**54**	P	**Pn**	**19 30 31.2**	**+1.2**
PMSI	**Majene**	**3.09**	**216**	P	**Pn**	**19 30 35.6**	**+1.3**
SPSI	**Sidrap Palu**	**3.11**	**198**	P	**Pn**	**19 30 35.0**	**+0.5**
KKSI	**Kolaka, Sulawe**	**3.29**	**164**	P	**Pn**	**19 30 37.5**	**+0.6**
BKB	**Balikpapan**	**3.86**	**266**		**Pn**	**19 30 46.7**	**+1.8**
BKB	**Balikpapan**	**3.86**	**266**	P	**Pn**	**19 30 44.8**	**-0.1**
KAPI	**Kappang**	**4.12**	**194**	P	**Pn**	**19 30 48.6**	**+0.2**
	10.0nm,0.3s,baz=1.8,slow=7.4,SNR=31						
KAPI				S	**Sn**	**19 31 34.8**	**-0.6**
	23nm,0.5s,baz=204,slow=20,SNR=3.9						
	50nm,0.7s						
KAPI	**Kappang**	**4.12**	**194**		**Pn**	**19 30 48.7**	**+0.3**
KAPI	**Kappang**	**4.12**	**194**	P	**Pn**	**19 30 48.7**	**+0.3**
MKS	**Makassar**	**4.39**	**197**	P	**Pn**	**19 30 52.9**	**+0.8**
BSSI	**Bau Bau, Buton**	**5.12**	**183**	P	**Pn**	**19 31 01.5**	**-0.7**
	0.2nm574nm54nm,0.7s						
SANI	**Sanana**	**5.34**	**101**	P	**Pn**	**19 31 04.4**	**-0.8**
	0.1nm507nm26nm,0.7s						
BBKI	**Banjar Baru**	**6.39**	**247**	P	**Pn**	**19 31 20.7**	**+1.0**
DBNI	**Kabupaten Domp**	**7.85**	**198**	P	**Pn**	**19 31 40.5**	**+0.9**
DAV	**Davao City (W)**	**9.35**	**31**	LR	LR	19 35 48.1	

	comp=Z,144nm,20.1s,baz=230,slow=38							
BATI	**Baumata**	**9.60**	**163**	P	**Pn**	**19 32 05.0**	**+1.3**	
	2.1nm,0.3s,baz=273,slow=3.7,SNR=3.7							
BATI				LR	LR	19 36 17.0		
	comp=Z,257nm,20.8s,baz=355,slow=41							
	13nm,0.5s							
SIJI	**Sorong**	**10.52**	**89**	P	**Pn**	**19 32 18.8**	**+2.5**	
	0.6nm,0.3s,baz=276,slow=7.7,SNR=3.9							
	2.7nm,0.5s							
FAKI	**Fak Fak**	**11.65**	**100**	Pn	**Pn**	**19 32 30.9**	**-0.9**	
LEM	**Lembang**	**14.32**	**246**	LR	LR	19 39 29.4		
	comp=Z,93nm,18.4s,baz=350,slow=41							
WRAB	**Tennant Creek**	**23.05**	**146**	P	**P**	**19 34 46.9**	**-3.6**	
WRAB				IAmb	IAmb	19 34 59.3		
	comp=Z,5.3nm,1.1s							
WRA	**Warramunga Arr**	**23.06**	**146**	P	**P**	**19 34 47.9**	**-2.6**	
	comp=Z,1.3nm,1.0s,baz=327,slow=10,SNR=6.6							
	comp=Z,1.3nm,1.0s							
WR8	**Warramunga Arr**	**23.16**	**145**	P	**P**	**19 34 47.9**	**-3.6**	
WR8				IAmb	IAmb	19 34 52.2		
	comp=Z,7.5nm,1.1s							
AS31	**Alice Springs**	**25.90**	**151**	P	**P**	**19 35 14.5**	**-2.4**	
ASAR	**Alice Springs**	**25.90**	**151**	P	**P**	**19 35 16.0**	**-0.8**	
	comp=Z,0.4nm,0.8s,baz=344,slow=15,SNR=6.4							
ASAR				PcP	**PcP**	**19 38 45.5**	**+0.1**	
	comp=Z,0.2nm,0.7s,baz=354,slow=2.4,SNR=2.3							
ASAR				LR	LR	19 45 55.7		
	comp=Z,34nm,18.3s,baz=118,slow=38							
	comp=Z,0.4nm,0.8s							
CMAR	**Chiang Mai Arr**	**28.87**	**313**	P	**P**	**19 35 46.1**	**+2.6**	
	comp=Z,0.5nm,0.7s,baz=126,slow=8.4,SNR=4.9							
CMAR				LR	LR	19 49 04.3		
	comp=Z,31nm,19.4s,baz=145,slow=40							
	comp=Z,0.5nm,0.7s							
CMAR	**Chiang Mai Arr**	**28.87**	**313**	P	**P**	**19 35 44.5**	**+1.0**	
STKA	**Stephens Creek**	**36.49**	**149**	P	**P**	**19 36 48.5**	**-1.4**	
	comp=Z,1.9nm,0.8s,baz=328,slow=12,SNR=3.5							
	comp=Z,1.9nm,0.8s							
KSRS	**Korea Array**	**38.83**	**9**	P	**P**	**19 37 11.9**	**+2.4**	
	comp=Z,1.0nm,0.7s,baz=197,slow=10,SNR=3.6							
	comp=Z,1.0nm,0.7s							
SONM	**Songino Array**	**50.22**	**347**	P	**P**	**19 38 41.7**	**+1.2**	
	comp=Z,0.3nm,0.4s,baz=168,slow=7.7,SNR=7.2							
	comp=Z,0.3nm,0.4s							
SONM	**Songino Array**	**50.22**	**347**	P	**P**	**19 38 41.6**	**+1.1**	
SONM				IAmb	IAmb	19 38 45.5		
	comp=Z,1.7nm,1.4s							
MKAR	**Makanchi Array**	**58.30**	**330**	P	**P**	**19 39 40.5**	**+1.1**	
	comp=Z,0.8nm,0.9s,baz=120,slow=7.2,SNR=5.3							
	comp=Z,0.8nm,0.9s							
MKAR	**Makanchi Array**	**58.30**	**330**	P	**P**	**19 39 40.1**	**+0.8**	
KURBB	**Kurchatov Arra**	**62.72**	**331**	P	**P**	**19 40 09.4**	**+0.1**	
	comp=Z,0.6nm,0.2s,baz=136,slow=6.1,SNR=5.1							
	comp=Z,0.6nm,0.2s							
KURK	**Kurchatov**	**62.73**	**331**		**P**	**19 40 11.0**	**+1.5**	
KURK				IAmb	IAmb	19 40 13.3		
	comp=Z,2.3nm,0.9s							
BVAR	**Borovoye Array**	**68.19**	**330**	P	**P**	**19 40 45.2**	**+0.5**	
	comp=Z,0.3nm,0.7s,baz=108,slow=4.7,SNR=2.2							
	comp=Z,0.3nm,0.7s							
TIXI	**Tiksi**	**72.71**	**3**	P	**P**	**19 41 09.9**	**-2.0**	
TIXI				IAmb	IAmb	19 41 17.1		
	comp=Z,7.4nm,1.4s							
NRIK	**Noril'sk**	**73.69**	**348**	P	**P**	**19 41 16.1**	**-1.7**	
NRIK				IAmb	IAmb	19 41 19.4		
	comp=Z,1.9nm,1.0s							
CRZF	**Crozet Islands**	**74.84**	**222**	P	**P**	**19 41 24.9**	**0.0**	
K13K	**Kusilvak Mount**	**83.66**	**27**	P	**P**	**19 42 12.8**	**+0.1**	
K13K				IAmb	IAmb	19 42 16.8		
	comp=Z,10nm,1.4s							

*NEIC **25** 19:37:31.7±1.1, 18.°72N±0.°10×81.°36W±0.°08, h10km±2km, mb4.0/1, Error ellipse: s-maj=17.4km s-min=12.1km az=198.0*
*JSN **25** 19:37:35.9±1.5, 19.°23N×81.°10W, h15km±999km, MD4.3, Presumed earthquake*
*SSNC **25** 19:37:36.7±2.2, 18.°85N×81.°24W, h20km±29km, mb4.3, MD3.9, ML3.8, Presumed earthquake*

ISC 25 19:37:31.3±1.1, 18.83N±0.°07×81.28W±0.°06, h10km, n30, σ2s34/44, 3C, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBCY	**The Bluff, Cay**	**1.70**	**58**	*e*P	**Pn**	**19 38 01.2**	**+0.2**
CBCY				*e*S	**Sn**	**19 38 20.1**	**-2.7**
CBCY				IAML		19 38 30.4	
	comp=N,848nm,1.0s						
CBCY				IAML		19 38 30.7	
	comp=E,804nm,0.1s						
MGV	**Manicaragua**	**3.48**	**20**	*e*P	**Pn**	**19 38 25.9**	**+0.4**
MGV				*e*S	**Sn**	**19 39 05.9**	**-1.0**
MGV				IAML		19 39 08.1	
	comp=E,156nm,0.3s						
MGV				IAML		19 39 11.5	
	comp=N,122nm,0.4s						
MTDJ	**Mount Denham**	**3.61**	**99**	Pn	**Pn**	**19 38 28.4**	**+1.0**
MTDJ				Sn	**Sn**	**19 39 09.4**	**-0.6**
MTDJ	**Mount Denham**	**3.61**	**99**	*e*P	**Pn**	**19 38 28.7**	**+1.4**
MTDJ				*e*S	**Sn**	**19 39 07.4**	**-2.7**
CAIB	**Caibarien**	**4.02**	**25**	Pn	**Pn**	**19 38 34.2**	**+1.3**
CAIB				Sn	**Sn**	**19 39 20.0**	**-0.1**
CAIB	**Caibarien**	**4.02**	**25**	*e*P	**Pn**	**19 38 36.1**	**+3.2**
CAIB				*e*S	**Sn**	**19 39 20.7**	**+0.6**
CCCC	**Cccc**	**4.06**	**54**	*e*P	**Pb**	**19 38 39.9**	**-3.1**
CCCC				*e*S	**Sn**	**19 39 25.7**	**+4.6**
LMGC	**Las Mercedes**	**4.22**	**72**	*e*P	**Pn**	**19 38 37.9**	**+2.2**
LMGC				*e*S	**Sn**	**19 39 23.4**	**-1.6**
LMGC				*e*Sg	Sb	19 39 26.7	-10
SOR	**Soroa**	**4.26**	**338**	Pn	**Pn**	**19 38 38.5**	**+2.2**
SOR	**Soroa**	**4.26**	**338**	*e*P	**Pn**	**19 38 39.6**	**+3.4**
SOR				*e*S	**Sn**	**19 39 23.2**	**-2.9**
STH	**Stony Hill**	**4.31**	**99**	*i*P	**Pn**	**19 38 39.4**	**+2.4**
STH	**Stony Hill**	**4.31**	**99**	*e*P	**Pn**	**19 38 39.2**	**+2.2**
STH				*e*S	**Sn**	**19 39 28.4**	**+1.0**
HOJ	**Hope**	**4.38**	**100**	*i*P	**Pn**	**19 38 40.4**	**+2.5**
GWJ	**Greenwich**	**4.39**	**99**	*i*P	**Pn**	**19 38 40.3**	**+2.2**
CHIV	**Chivirico**	**4.73**	**75**	Pn	**Pn**	**19 38 44.3**	**+1.5**
CHIV	**Chivirico**	**4.73**	**75**	*e*P	**Pn**	**19 38 45.2**	**+2.5**
YAR	**Yar**	**4.89**	**71**	*e*P	**Pn**	**19 38 48.9**	**+4.0**
YAR				*e*S	**Sn**	**19 39 43.2**	**+1.7**
MARVS	**Santiago de Cu**	**5.21**	**76**	*e*P	**Pn**	**19 38 52.4**	**+3.1**
MARVS				*e*S	**Sn**	**19 39 47.0**	**-2.5**
HLGC	**Holguin**	**5.33**	**66**	*e*P	**Pn**	**19 38 54.4**	**+3.5**
GTBY	**Guantanamo Bay**	**5.93**	**78**	*e*P	**Pn**	**19 39 02.9**	**+3.7**
GTBY				*e*S	**Sn**	**19 40 05.3**	**-1.9**
NMDO	**Nuevo Mundo**	**6.18**	**73**	Pn	**Pn**	**19 39 05.1**	**+2.5**
QMBU	**Quimbuelo**	**6.25**	**76**	*e*P	**Pn**	**19 39 05.5**	**+1.8**
QMBU				*e*S	**Sn**	**19 40 12.1**	**-3.1**
TEIG	**Tepich**	**6.74**	**283**	Pn	**Pn**	**19 39 09.8**	**-0.6**
061Z	**Ochoppi**	**7.01**	**3**	Pn	**Pn**	**19 39 15.8**	**+1.7**
SDDR	**Presa de Saban**	**9.46**	**87**	Pn	**Pn**	**19 39 49.9**	**+2.1**
BANI	**BANI**	**10.37**	**91**	Pn	**Pn**	**19 40 00.8**	**+0.6**
DR12	**Loma Pena Alta**	**11.27**	**88**	Pn	**Pn**	**19 40 15.0**	**+2.4**
553A	**Crawfordville**	**11.67**	**346**	Pn	**Pn**	**19 40 18.9**	**+1.1**
SDV	**Santo Domingo**	**14.29**	**132**	Pn	**Pn**	**19 40 55.0**	**+0.9**
TKL	**Tuckaleechee C**	**16.91**	**353**	Pn	**P**	**19 41 29.6**	**-0.5**
TKL				IAmb	IAmb	19 41 57.8	
	comp=Z,13nm,1.1s						

*SDD **25** 19:39:40.8±0.9, 18.°48N×71.°43W, h70km±13km, MD2.9, ML1.9, MW2.8, Presumed earthquake*
*OSPL **25** 19:39:44.0±0.9, 18.°60N×71.°56W, h18km±5km, ML2.0, Presumed earthquake*

ISC 25 19:39:44.5±1.3, 18.58N±0.°03×71.4W±0.°1, h15km±9km, n7, σ0s76/13, 1C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LONE3	**El Aguacate, B**	**0.06**	**290**	*i*P	**Pg**	**19 39 47.2**	**-0.5**
LONE3				*e*S	**Sg**	**19 39 49.9**	**+0.2**
LONE3				IAML		19 39 50.5	
	comp=Z,200nm,0.1s						
LODU1	**El Espartillar**	**0.24**	**198**	*i*P	**Pg**	**19 39 49.8**	**0.0**
LODU1				*e*S	**Sg**	**19 39 53.6**	**+0.2**
LODU1				IAML		19 39 54.7	
	comp=Z,158nm,0.4s						
SDDR	**Presa de Saban**	**0.41**	**14**	*e*Pg	**Pg**	**19 39 52.6**	**-0.3**
SDDR				*e*Sg	**Sn**	**19 40 02.5**	**-0.9**
SDDR				IAML		19 40 04.0	
	comp=E,7.5nm,0.5s						
SDDR				IAML		19 40 44.0	
	comp=N,19nm,2.8s						

SDDR	**Presa de Saban**	**0.41**	**14**	*i*P	**Pg**	**19 39 52.3**	**-0.5**	
SDDR				*e*S	**Sg**	**19 39 59.4**	**+1.0**	
SDDR				IAML		19 40 03.9		
	comp=Z,171nm,0.2s							
PODR	**Polo**	**0.43**	**165**	*e*Pg	**Pg**	**19 39 52.2**	**-1.0**	
PODR				*e*Sg	**Sg**	**19 39 59.6**	**+0.5**	
PODR				IAML		19 40 01.0		
	comp=E,84nm,0.4s							
PODR				IAML		19 40 01.2		
	comp=N,98nm,0.2s							
PODR	**Polo**	**0.43**	**165**	*i*P	**Pg**	**19 39 53.0**	**-0.2**	
PODR				*e*S	**Sg**	**19 40 00.2**	**+1.1**	
PODR				IAML		19 40 00.8		
	comp=Z,917nm,0.2s							
REDR	**Restauracion**	**0.58**	**0**	*e*Sg	**Sn**	**19 40 08.1**	**+0.7**	
REDR				IAML		19 40 08.2		
	comp=E,40nm,0.2s							
REDR				IAML		19 40 08.4		
	comp=N,57nm,0.1s							

*ISK **25** 19:49:45.8, 38.°26N×44.°46E, h12km, ML2.7/4*
*AZER **25** 19:49:46.9, 38.°54N×44.°32E, h16km, ml2.5*
*AFAD **25** 19:49:47.5, 38.°57N×44.°45E, h6km±6km, ML2.1*

ISC 25 19:49:47.8±1.5, 38.40N±0.°06×44.34E±0.°03, h5km±10km, n15, σ1s08/23, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.38**	**314**	P	**Pg**	**19 49 54.4**	**-0.9**
OZAP				S	**Sg**	**19 50 01.2**	**+0.9**
OZAP				IAML		19 50 07.0	
	comp=N,843nm,0.6s						
OZAP				IAML		19 50 08.0	
	comp=E,707nm,0.7s						
VANB	**Van**	**0.77**	**285**	Pg	**Pg**	**19 50 02.9**	**+0.2**
VANB				Sg	**Sb**	**19 50 15.4**	**+0.8**
YOVA	**Hakkari_Yksek**	**0.81**	**183**	P	Pn	19 50 07.6	+1.5
YOVA				S	Sn	19 50 24.4	+5.8
YOVA				IAML		19 50 34.0	
	comp=N,32nm,0.7s						
YOVA				IAML		19 50 35.0	
	comp=E,34nm,1.0s						
VMUR	**Van-Muradiye**	**0.84**	**315**	P	**Pg**	**19 50 03.0**	**-1.0**
VMUR				S	**Sg**	**19 50 16.0**	**+1.1**
VMUR				IAML		19 50 18.0	
	comp=E,63nm,0.6s						
VMUR				IAML		19 50 23.0	
	comp=N,89nm,1.0s						
HAKT	**HAKKARI**	**0.98**	**211**	P	Pn	19 50 09.8	+1.4
HAKT				S	Sn	19 50 27.5	+4.8
HAKT				IAML		19 50 31.0	
	comp=N,36nm,0.3s						
HAKT				IAML		19 50 37.0	
	comp=E,37nm,0.6s						
HAKT	**HAKKARI**	**0.98**	**211**	P	Pn	19 50 09.7	+1.3
HAKT				S	Sn	19 50 27.3	+4.5
GEVA	**Gevas**	**1.01**	**265**	P	**Pb**	**19 50 06.9**	**-1.0**
GEVA				S	**Sn**	**19 50 23.1**	**-0.4**
GEVA				IAML		19 50 24.0	
	comp=N,113nm,0.5s						
GEVA				IAML		19 50 27.0	
	comp=E,71nm,0.6s						
AKDM	**Akdamar-Van**	**1.07**	**267**	Pn	**Pg**	**19 50 08.3**	**-0.1**
AKDM				Sn	**Sn**	**19 50 25.2**	**+0.2**
NAX	**Nakhchivan**	**1.19**	**49**	P	**Pg**	**19 50 10.3**	**-0.4**
NAX				S	**Sn**	**19 50 28.6**	**+0.9**
SBZ	**Shahbuz**	**1.37**	**43**	P	**Pg**	**19 50 12.7**	**-1.5**
SBZ				S	**Sg**	**19 50 33.0**	**+0.9**
HYR	**Heyderabad**	**1.38**	**17**	P	**Pg**	**19 50 13.7**	**-0.4**
ORD	**Ordubad**	**1.40**	**67**	P	**Pg**	**19 50 13.7**	**-0.9**
ORD				S	**Sg**	**19 50 35.3**	**+2.5**
IGDI	**IGDIR**	**1.48**	**352**	P	**Pn**	**19 50 13.6**	**-1.6**
IGDI				S	**Sn**	**19 50 34.7**	**-0.3**
AGRB	**Hanur-Agry**	**1.57**	**319**	Pn	**Pn**	**19 50 16.7**	**+0.1**
AGRB				Sn	**Sb**	**19 50 39.2**	**+1.4**
GNI	**Garni**	**1.77**	**10**	Pn	**Pn**	**19 50 19.1**	**-0.2**
GNI				Sn	**Sn**	**19 50 43.0**	**+0.7**

*BJI **25** 19:56:03.6, 55.°67N×160.°68E, h192km, mB4.9/27, mb4.7/64*
*MOS **25** 19:56:06.6±0.9, 55.°87N×160.°36E, h195km, mb5.2/48, Error ellipse: s-maj=7.0km s-min=3.4km az=87.9*
*KRSC **25** 19:56:06.0±0.8, 55.°80N×160.°59E, h192km±9km, Mc5.1, Ml5.4, Felt [III-IV] at kordon Kronoki.*
*NEIC **25** 19:56:07.4±1.6, 55.°89N±0.°08×160.°3E±0.°1, h187km±4km, mb5.0/494, Error ellipse: s-maj=13.1km s-min=10.0km az=140.0*
*IDC **25** 19:56:07.9±0.4, 55.°89N×160.°26E, h190km±3km, mb4.7/41, mbtmp5.2/46, MS3.7/11, Error ellipse: s-maj=7.0km s-min=5.9km az=136.0*
*GCMT **25** 19:56:09.4±0.3, 55.°85N±0.°02×160.°58E±0.°03, h189km±2km, MW5.1/106, Moment Tensor Solution. s29,c35; s106,c147; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr-3.23±.20; Mθθ3.58±.21; Mφφ-0.34±.19; Mrθ-0.04±.17; Mrφ-1.88±.16; Mθr-3.94±.15; Best double couple: M≈5.40700×10^{16} NP1:φs85.00000°, δ42.00000°, λ-144.00000°. NP2:φs327.00000°, δ67.00000°, λ-54.00000°. Principal axes: T 4.7000, Plg14.0000°, Azm31.0000°; N 1.4210, Plg33.0000°, Azm130.0000°; P -6.1140, Plg53.0000°, Azm281.0000°; nsta1 refers to body waves, cutoff=40s. nsta2

MKZ	**Mys Kozlova**	**1.49**	**149**	*e*P		**Pn**	**19 56 38.9**	**-1.3**
KII	**Karymskiy**	**1.88**	**197**	PN		**Pn**	**19 56 44.8**	**+0.8**
KII				S		**Sn**	**19 57 13.9**	**+1.6**
KII	**Karymskiy**	**1.88**	**197**	*e*P		**Pn**	**19 56 44.9**	**+0.8**
KII				*e*S		**Sn**	**19 57 13.9**	**+1.6**
TIGL	**Tigil**	**2.16**	**335**	PN		**Pn**	**19 56 47.0**	**+0.2**
TIGL				S		**Sn**	**19 57 17.9**	**+0.3**
TIGL	**Tigil**	**2.16**	**335**	*e*P		**Pn**	**19 56 47.1**	**+0.2**
TIGL				*e*S		**Sn**	**19 57 17.9**	**+0.3**
GNL	**Ganaly**	**2.57**	**215**	PN		**Pn**	**19 56 52.9**	**+1.3**
GNL	**Ganaly**	**2.57**	**215**	*e*P		**Pn**	**19 56 52.9**	**+1.3**
KRX	**Arik**	**2.68**	**203**	PN		**Pn**	**19 56 53.9**	**+1.0**
KRX	**Arik**	**2.68**	**203**	*e*P		**Pn**	**19 56 54.0**	**+1.0**
KRER	**Koryakskii**	**2.71**	**201**	PN		**Pn**	**19 56 54.3**	**+1.0**
KRER				S		**Sn**	**19 57 30.6**	**+1.7**
KRER	**Koryakskii**	**2.71**	**201**	*e*P		**Pn**	**19 56 54.3**	**+1.0**
KRER				*e*S		**Sn**	**19 57 30.7**	**+1.7**
NLC	**Nalytchevo**	**2.73**	**193**	PN		**Pn**	**19 56 53.0**	**-0.4**
NLC				S		**Sn**	**19 57 27.7**	**-1.4**
NLC	**Nalytchevo**	**2.73**	**193**	*e*P		**Pn**	**19 56 53.0**	**-0.4**
NLC				*e*S		**Sn**	**19 57 27.7**	**-1.4**
SMAR	**Somma**	**2.73**	**201**	PN		**Pn**	**19 56 54.4**	**+0.8**
SMAR				S		**Sn**	**19 57 30.3**	**+0.7**
SMAR	**Somma**	**2.73**	**201**	*e*P		**Pn**	**19 56 54.5**	**+0.8**
SMAR				*e*S		**Sn**	**19 57 30.3**	**+0.7**
KOK	**Koryaka**	**2.74**	**203**	PN		**Pn**	**19 56 54.8**	**+1.2**
KOK	**Koryaka**	**2.74**	**203**	*e*P		**Pn**	**19 56 54.8**	**+1.2**
AVH	**Avacha**	**2.75**	**201**	PN		**Pn**	**19 56 54.7**	**+1.1**
AVH				S		**Sn**	**19 57 30.6**	**+1.0**
AVH	**Avacha**	**2.75**	**201**	*e*P		**Pn**	**19 56 54.8**	**+1.1**
AVH				*e*S		**Sn**	**19 57 30.6**	**+1.0**
SPN	**Mys Shipunski**	**2.75**	**185**	PN		**Pn**	**19 56 51.8**	**-1.8**
SPN	**Mys Shipunski**	**2.75**	**185**	*e*P		**Pn**	**19 56 51.8**	**-1.8**
SPN				*e*S		**Sn**	**19 57 25.2**	**-4.2**
UGLR	**Uglovaya**	**2.78**	**200**	PN		**Pn**	**19 56 54.8**	**+0.7**
UGLR				S		**Sn**	**19 57 31.2**	**+0.8**
UGLR	**Uglovaya**	**2.78**	**200**	*e*P		**Pn**	**19 56 54.9**	**+0.7**
UGLR				*e*S		**Sn**	**19 57 31.2**	**+0.8**
UGLR				*e*P			19 59 09.3	
INSR	**Institute**	**2.96**	**201**	PN		**Pn**	**19 56 56.6**	**+0.5**
INSR				S		**Sn**	**19 57 33.5**	**-0.4**
INSR	**Institute**	**2.96**	**201**	*e*P		**Pn**	**19 56 56.7**	**+0.5**
INSR				*e*S		**Sn**	**19 57 33.6**	**-0.4**
DALK	**Dalny**	**2.96**	**200**	PN		**Pn**	**19 56 56.4**	**+0.3**
DALK				S		**Sn**	**19 57 33.0**	**-1.0**
DALK	**Dalny**	**2.96**	**200**	*e*P		**Pn**	**19 56 56.4**	**+0.3**
DALK				*e*S		**Sn**	**19 57 33.1**	**-1.0**
PET	**Petropavlovsk**	**2.99**	**201**			**Pn**	**19 56 56.6**	**+0.3**
PET	**Petropavlovsk**	**2.99**	**201**	*α i*PN		**Pn**	**19 56 56.8**	**+0.4**
PET				*e*S		**Sn**	**19 57 34.4**	**-0.2**
PET					pmax	pmax		
	comp=Z,3μm,0.7s							
PET					smax	smax		
	comp=N,3μm,0.7s							
PET					smax	smax		
	comp=E,4μm,0.6s							
PET					MLR	MLR		
	comp=Z,2μm,9.0s							
PET					MLR	MLR		
	comp=Z,1μm,8.0s							
PET	**Petropavlovsk**	**2.99**	**201**	*e*P		**Pn**	**19 56 56.7**	**+0.3**
PET				*e*S		**Sn**	**19 57 33.9**	**-0.6**
PET	**Petropavlovsk**	**2.99**	**201**	P		**Pn**	**19 56 56.7**	**+0.3**
BKI	**Bering**	**3.23**	**99**	PN		**Pn**	**19 56 58.2**	**-1.1**
BKI				S		**Sn**	**19 57 36.0**	**-3.7**
BKI	**Bering**	**3.23**	**99**	*e*P		**Pn**	**19 56 58.3**	**-1.1**
BKI				*e*S		**Sn**	**19 57 36.0**	**-3.7**
PALN	**Palana**	**3.28**	**356**	PN		**Pn**	**19 57 00.1**	**+0.3**
PALN				S		**Sn**	**19 57 40.1**	**-0.7**
PALN	**Palana**	**3.28**	**356**	*e*P		**Pn**	**19 57 00.1**	**+0.3**
PALN				*e*S		**Sn**	**19 57 40.1**	**-0.7**
KRMR	**Karymshinskiy**	**3.29**	**205**	PN		**Pn**	**19 57 00.5**	**+0.5**
KRMR				S		**Sn**	**19 57 40.0**	**-1.0**
KRMR	**Karymshinskiy**	**3.29**	**205**	*e*P		**Pn**	**19 57 00.6**	**+0.5**
KRMR				*e*S		**Sn**	**19 57 40.1**	**-1.0**
APC	**Apacha**	**3.47**	**214**	PN		**Pn**	**19 57 04.1**	**+1.8**
APC	**Apacha**	**3.47**	**214**	*e*P		**Pn**	**19 57 04.1**	**+1.8**
GRL	**Gorelyy**	**3.56**	**204**	PN		**Pn**	**19 57 04.2**	**+0.8**
GRL				S		**Sn**	**19 57 47.8**	**+0.6**
GRL	**Gorelyy**	**3.56**	**204**	*e*P		**Pn**	**19 57 04.3**	**+0.8**
GRL				*e*S		**Sn**	**19 57 47.8**	**+0.6**
RUS	**Russkaya**	**3.58**	**199**	PN		**Pn**	**19 57 02.6**	**-1.0**
RUS				S		**Sn**	**19 57 44.0**	**-3.5**
RUS	**Russkaya**	**3.58**	**199**	*e*P		**Pn**	**19 57 02.7**	**-1.0**
RUS				*e*S		**Sn**	**19 57 44.0**	**-3.5**
MTVR	**Mutnovka**	**3.60**	**202**	PN		**Pn**	**19 57 04.3**	**+0.3**
MTVR				S		**Sn**	**19 57 48.4**	**+0.3**
MTVR	**Mutnovka**	**3.60**	**202**	*e*P		**Pn**	**19 57 04.3**	**+0.3**
MTVR				*e*S		**Sn**	**19 57 48.5**	**+0.3**
OSSR	**Ossora**	**3.72**	**22**	PN		**Pn**	**19 57 05.7**	**+0.5**
OSSR				S		**Sn**	**19 57 50.4**	**-0.1**
OSSR	**Ossora**	**3.72**	**22**	*e*P		**Pn**	**19 57 05.7**	**+0.5**
OSSR				*e*S		**Sn**	**19 57 50.4**	**-0.1**
ASAK	**Asacha**	**3.75**	**204**	PN		**Pn**	**19 57 06.5**	**+0.6**
ASAK				S		**Sn**	**19 57 50.9**	**-0.6**
ASAK	**Asacha**	**3.75**	**204**	*e*P		**Pn**	**19 57 06.6**	**+0.6**
ASAK				*e*S		**Sn**	**19 57 50.9**	**-0.6**
MIPR	**Malaya Ipel'ka**	**4.16**	**213**	PN		**Pn**	**19 57 11.6**	**+0.7**
MIPR	**Malaya Ipel'ka**	**4.16**	**213**	*e*P		**Pn**	**19 57 11.6**	**+0.7**
KDTR	**Khodutka, Kamc**	**4.26**	**200**	PN		**Pn**	**19 57 10.8**	**-1.3**
KDTR				S		**Sn**	**19 57 58.2**	**-4.5**
KDTR	**Khodutka, Kamc**	**4.26**	**200**	*e*P		**Pn**	**19 57 10.8**	**-1.3**
KDTR				*e*S		**Sn**	**19 57 58.3**	**-4.5**
PAU	**Pauzhetka**	**4.86**	**207**	PN		**Pn**	**19 57 20.1**	**+0.3**
PAU	**Pauzhetka**	**4.86**	**207**	*e*P		**Pn**	**19 57 20.2**	**+0.3**
PAU				*e*S		**Sn**	**19 58 10.7**	**-6.0**
TILK	**Tilichiki**	**5.54**	**31**	PN		**Pn**	**19 57 29.5**	**+1.1**
TILK	**Tilichiki**	**5.54**	**31**	*e*P		**Pn**	**19 57 29.6**	**+1.1**
SKR	**Severo-Kuril's**	**5.76**	**208**	*e*PN		**Pn**	**19 57 31.0**	**-0.4**
SKR				*e*S		**Sn**	**19 58 34.4**	**-3.2**
SKR					pmax	pmax		
	comp=Z,1μm,0.7s							
SKR					smax	smax		
	comp=E,1μm,0.6s							
SKR					smax	smax		
	comp=N,1μm,0.6s							
SKR					MLR	MLR		
	comp=Z,400nm,11.0s							
SKR	**Severo-Kuril's**	**5.76**	**208**	*e*P		**Pn**	**19 57 31.0**	**-0.4**
SKR				*e*S		**Sn**	**19 58 35.1**	**-2.4**
MA2	**Magadan**	**6.38**	**310**	P		**Pn**	**19 57 40.0**	**+0.5**
	comp=Z,246nm,0.7s,baz=113,slow=10,SNR=231							
MA2				S		**Sn**	**19 58 52.3**	**+0.2**
	comp=Z,16nm,0.7s,baz=198,slow=17,SNR=0.8							
MA2	**Magadan**	**6.38**	**310**	P		**Pn**	**19 57 40.6**	**+1.2**
MA2	**Magadan**	**6.38**	**310**			**Pn**	**19 57 40.8**	**+1.3**
MA2	**Magadan**	**6.38**	**310**	*d i*PN		**Pn**	**19 57 40.7**	**+1.3**
MA2					pmax	pmax		
	comp=Z,377nm,1.0s							
MA2	**Magadan**	**6.38**	**310**	*e*P		**Pn**	**19 57 40.9**	**+1.5**
MA2				*e*S		**Sn**	**19 58 51.3**	**-0.7**
KMSK	**Kamenskaya**	**7.29**	**22**	PN		**Pn**	**19 57 52.7**	**+1.4**
KMSK	**Kamenskaya**	**7.29**	**22**	*e*P		**Pn**	**19 57 52.7**	**+1.4**
SEY	**Seymchan**	**8.21**	**333**	P		**Pn**	**19 58 05.7**	**+2.4**
	comp=Z,29nm,0.7s,baz=128,slow=13,SNR=149							
SEY	**Seymchan**	**8.21**	**333**	*i*PN		**Pn**	**19 58 04.8**	**+1.5**
SEY					pmax	pmax		
	comp=Z,74nm,1.3s							
SHEM	**Shemya Is, Ala**	**8.60**	**105**	P		**Pn**	**19 58 08.8**	**+0.3**
	comp=Z,37nm,0.3s,baz=312,slow=5.5,SNR=13							
SHEM				S		**Sn**	**19 59 41.1**	**-3.6**
	comp=Z,263nm,1.0s,baz=290,slow=16,SNR=5.1							
SHEM				LR		LR	20 00 56.1	
	comp=Z,553nm,18.7s,baz=296,slow=33							
SMY	**Shemya**	**8.60**	**105**	P		**Pn**	**19 58 08.8**	**+0.3**
SMY	**Shemya**	**8.60**	**105**			**Pn**	**19 58 08.2**	**-0.2**
SMY	**Shemya**	**8.60**	**105**	PN		**Pn**	**19 58 08.7**	**+0.3**
OKH	**Okha**	**10.36**	**265**	*ce*PN		**Pn**	**19 58 30.8**	**-0.6**
OKH				*e*S		**S**	**20 00 28.4**	**+1.0**
OKH					pmax	pmax		
	comp=Z,100nm,12.6s							
OKH					smax	smax		
	comp=N,500nm,13.8s							
OKH					MLR	MLR		
	comp=N,200nm,12.0s							
OKH					MLR	MLR		
	comp=Z,100nm,13.0s							
OKH					MLR	MLR		
	comp=E,300nm,12.0s							
TYV	**Tymovskoe**	**11.70**	**252**	*e*PN		**Pn**	**19 58 52.2**	**+3.5**
TYV				*e*S		**S**	**20 01 02.8**	**+1.3**
TYV					pmax	pmax		
	comp=Z,113nm,1.0s							
TYV					pmax	pmax		
	comp=Z,300nm,2.2s							
TYV					smax	smax		
	comp=E,14nm,1.3s							
TYV					smax	smax		
	comp=N,400nm,3.6s							
TYV					smax	smax		
	comp=E,500nm,3.6s							
TYV	**Tymovskoe**	**11.70**	**252**	*e*P		**Pn**	**19 58 51.9**	**+3.2**
NKL	**Nikolayevsk**	**11.77**	**265**	*e*PN		**Pn**	**19 58 50.6**	**+1.1**
NKL				*e*S		**S**	**20 01 02.8**	**-0.3**
NKL					pmax	pmax		
	comp=E,398nm,1.3s							
NKL					pmax	pmax		
	comp=N,1μm,1.2s							
NKL					pmax	pmax		
	comp=Z,2μm,1.2s							
NKL					smax	smax		
	comp=E,528nm,3.4s							
NKL					smax	smax		
	comp=N,89nm,2.6s							
AMKA	**Amchitka**	**12.07**	**104**			**Pn**	**19 58 54.2**	**+0.9**
BILL	**Bilibino**	**12.55**	**10**			**Pn**	**19 58 59.7**	**+0.3**
BILL	**Bilibino**	**12.55**	**10**	*c i*PN		**Pn**	**19 59 00.7**	**+1.3**
BILL					pmax	pmax		
	comp=Z,146nm,0.8s							
BILL	**Bilibino**	**12.55**	**10**	*e*P		**Pn**	**19 59 00.6**	**+1.3**
UGL	**Uglegorsk**	**13.04**	**246**	*e*PN		**Pn**	**19 59 08.0**	**+2.3**
UGL				*e*S		**S**	**20 01 33.9**	**+0.8**
UGL					pmax	pmax		
	comp=Z,1μm,2.5s							
UGL					pmax	pmax		
	comp=Z,200nm,0.8s							
UGL					smax	smax		
	comp=E,800nm,5.8s							
UGL					smax	smax		
	comp=N,2μm,5.4s							
KUR	**Kuril'sk**	**13.24**	**222**	*e*PN		**Pn**	**19 59 08.2**	**-0.1**
KUR				S		**Sn**	**20 01 35.6**	**-0.1**
KUR					pmax	pmax		
	comp=Z,71nm,0.3s							
KUR					smax	smax		
	comp=N,171nm,0.8s							
KUR					smax	smax		
	comp=E,77nm,0.4s							
KIWB	**Kanaga Island**	**13.82**	**97**			**Pn**	**19 59 13.9**	**-1.5**
ADK	**Adak**	**14.07**	**97**	P		**Pn**	**19 59 18.6**	**+0.1**
ADK	**Adak**	**14.07**	**97**			**Pn**	**19 59 18.2**	**-0.3**
ADK	**Adak**	**14.07**	**97**	P		**Pn**	**19 59 18.1**	**-0.4**
YSS	**Yuzhno-Sakhali**	**14.11**	**238**	P		**P**	**19 59 21.6**	**+0.5**
YSS	**Yuzhno-Sakhali**	**14.11**	**238**			**Pn**	**19 59 20.3**	**+1.2**
YSS	**Yuzhno-Sakhali**	**14.11**	**238**	‖ *e*P		**P**	**19 59 21.9**	**+0.8**
YSS				*e*S		**Sn**	**20 01 55.9**	**-0.5**
YSS					pmax	pmax		
	comp=Z,400nm,3.6s							
YSS					pmax	pmax		
	comp=Z,120nm,0.7s							
YSS					smax	smax		
	comp=N,1μm,5.3s							
YSS					smax	smax		
	comp=N,30nm,1.1s							
YSS					smax	smax		
	comp=E,30nm,1.4s							
YSS	**Yuzhno-Sakhali**	**14.11**	**238**	*e*P		**P**	**19 59 21.8**	**+0.8**
GSTR	**Great Sitkin T**	**14.33**	**95**			**Pn**	**19 59 22.0**	**+0.2**
SHO	**Shikotan**	**14.79**	**222**	P		**P**	**19 59 32.5**	**+3.9**
SHO	**Shikotan**	**14.79**	**222**	*e*P		**P**	**19 59 32.5**	**+3.9**
GRNR	**Gornyy**	**15.16**	**261**	‖ *i*P		**P**	**19 59 34.1**	**+1.4**
GRNR					pmax	pmax		
	comp=E,70nm,0.8s							
GRNR					pmax	pmax		
	comp=N,40nm,0.7s							
GRNR					pmax	pmax		
	comp=Z,100nm,0.7s							
GRNR					MLR	MLR		
	comp=E,180nm,15.0s							
GAMB	**Gambell**	**16.01**	**49**	P		**P**	**19 59 42.4**	**+0.5**
	baz=254,SNR=10							
SPIA	**Saint Paul Isl**	**16.21**	**73**	P		**P**	**19 59 44.1**	**0.0**
SPIA	**Saint Paul Isl**	**16.21**	**73**	P		**Pn**	**19 59 45.6**	**+1.1**
	baz=278							
JKA	**Kamikawa-asahi**	**16.32**	**232**	P		**Pn**	**19 59 48.4**	**+2.3**
JKA	**Kamikawa-asahi**	**16.32**	**232**			**S**	**20 02 47.1**	**+0.8**
ASAJ	**Asahikawa**	**16.33**	**232**	P		**P**	**19 59 46.4**	**+0.9**
	comp=E,84nm,0.5s,baz=58,slow=9.3,SNR=119							
ASAJ				S		**S**	**20 02 47.1**	**+0.8**
	comp=E,30nm,0.9s,baz=315,slow=20,SNR=2.6							
ASAJ	**Asahikawa**	**16.33**	**232**	P		**Pn**	**19 59 48.4**	**+2.3**
ASAJ				S		**S**	**20 02 47.1**	**+0.8**
YAK	**Yakutsk**	**16.90**	**304**	P		**P**	**19 59 51.4**	**-0.3**
	comp=E,755nm,0.8s,baz=41,slow=0.6,SNR=265							
YAK	**Yakutsk**	**16.90**	**304**			**P**	**19 59 51.0**	**-0.7**
YAK	**Yakutsk**	**16.90**	**304**	*e*P		**P**	**19 59 51.3**	**-0.3**
YAK				*e*S		**S**	**20 02 58.7**	**+0.7**
YAK					pmax	pmax		
	comp=Z,751nm,0.8s							
YAK					pmax	pmax		
	comp=N,123nm,1.5s							
YAK					pmax	pmax		
	comp=E,200nm,0.8s							
YAK					smax	smax		
	comp=N,268nm,3.7s							
YAK					smax	smax		
	comp=E,113nm,1.8s							
YAK	**Yakutsk**	**16.90**	**304**	*e*P		**P**	**19 59 51.4**	**-0.3**
JEM	**Erimo**	**17.80**	**226**	P		**P**	**20 00 02.6**	**+0.9**
NIKH	**Nikolski High**	**18.05**	**86**	P		**P**	**20 00 04.7**	**+0.4**
NIKH	**Nikolski High**	**18.05**	**86**	P		**P**	**20 00 05.2**	**+0.9**
	baz=292,SNR=6.0							
M11K	**Mekoryuk**	**18.10**	**62**			**P**	**20 00 06.6**	**+1.9**
M11K	**Mekoryuk**	**18.10**	**62**	P		**Pn**	**20 00 06.7**	**-0.1**
	baz=271,SNR=68							
M11K					ScP	**ScP**	**20 07 47.5**	**+1.2**
	baz=271							
TNA	**Tin City**	**18.10**	**45**	P		**P**	**20 00 06.0**	**+1.3**
TNA	**Tin City**	**18.10**	**45**	P		**P**	**20 00 06.3**	**+1.6**
	baz=253,SNR=114							
TEY	**Ternei**	**18.51**	**244**	*e*P		**P**	**20 00 09.4**	**0.0**
KLR	**Kul'dur**	**18.55**	**261**	P		**P**	**20 00 10.1**	**+0.4**
	comp=E,88nm,1.0s,baz=61,slow=11,SNR=99							
KLR					PcP	**PcP**	**20 04 29.6**	**-0.6**
	comp=E,6.6nm,0.6s,baz=40,slow=3.6,SNR=6.1							
KLR					ScP	**ScP**	**20 07 48.9**	**+1.4**
	comp=E,5.9nm,0.7s,baz=69,slow=2.8,SNR=8.2							
KLR	**Kul'dur**	**18.55**	**261**	*de*P		**P**	**20 00 09.7**	**0.0**
KLR					pmax	pmax		
	comp=Z,145nm,1.1s							
F14K	**Arctic Creek**	**18.71**	**46**	P		**P**	**20 00 13.1**	**+1.7**
	baz=255,SNR=131							
F14K					ScP	**ScP**	**20 07 48.3**	**+0.7**
	baz=255							
K13K	**Kusilvak Mount**	**18.89**	**57**	P		**P**	**20 00 14.2**	**+0.9**
	baz=267,SNR=107							
K13K					ScP	**ScP**	**20 07 48.7**	**+0.7**
	baz=267							
ANM	**Nome**	**18.89**	**49**	P		**P**	**20 00 13.7**	**+0.3**
ANM	**Nome**	**18.89**	**49**	P		**P**	**20 00 13.7**	**+0.3**
ANM	**Nome**	**18.89**	**49**	P		**P**	**20 00 14.9**	**+1.5**
	baz=259,SNR=92							
ANM					ScP	**ScP**	**20 07 49.1**	**+1.1**
	baz=259,SNR=17							
ZEA	**Zeya**	**19.13**	**278**	*e*P		**P**	**20 00 15.7**	**-0.3**
ZEA				*e*S		**S**	**20 03 32.1**	**-10**
ZEA					pmax	pmax		
	comp=Z,40nm,0.7s							
ZEA					pmax	pmax		
	comp=Z,200nm,4.0s							
ZEA					smax	smax		
	comp=E,200nm,6.3s							
LVA	**Lava Point**	**19.23**	**81**	P		**P**	**20 00 17.9**	**+0.9**
AKUT	**Akutan**	**19.38**	**81**	P		**P**	**20 00 19.8**	**+1.1**
AKUT	**Akutan**	**19.38**	**81**			**P**	**20 00 19.0**	**+0.3**
F15K	**North Star Dit**	**19.45**	**45**	P		**P**	**20 00 21.3**	**+2.0**
	baz=256,SNR=235							
F15K					ScP	**ScP**	**20 07 50.0**	**+0.7**
	baz=256							
J14K	**Nanvaranak Lak**	**19.45**	**54**	P		**P**	**20 00 20.3**	**+1.0**
	baz=266							
J14K					ScP	**ScP**	**20 07 50.0**	**+0.8**
	baz=266							
M13K	**Dall Lake**	**19.51**	**61**	P		**P**	**20 00 21.7**	**+1.7**
	baz=273							
M13K					ScP	**ScP**	**20 07 50.2**	**+0.8**
	baz=273							
G15K	**Niukluk**	**19.54**	**48**	P		**P**	**20 00 21.6**	**+1.3**
	baz=259,SNR=96							
G15K					ScP	**ScP**	**20 07 49.6**	**+0.1**
	baz=259							
JTM	**Tenmabayashi**	**19.69**	**228**	P		**P**	**20 00 22.0**	**-0.1**
L14K	**Kuka Creek**	**19.81**	**59**	P		**P**	**20 00 24.5**	**+1.2**
	baz=271,SNR=87							
L14K					PcP	**PcP**	**20 04 33.4**	**+1.2**
	baz=271							
L14K					ScP	**ScP**	**20 07 50.4**	**+0.3**
	baz=271							
C16K	**Lisburne Hills**	**19.97**	**38**	P		**P**	**20 00 25.0**	**+0.1**
	baz=249,SNR=132							
C16K					PcP	**PcP**	**20 04 33.3**	**+0.9**
	baz=249							
C16K					ScP	**ScP**	**20 07 50.9**	**+0.6**
	baz=249							
M14K	**Bethel**	**20.18**	**60**	P		**P**	**20 00 28.3**	**+1.2**
	baz=273,SNR=121							
M14K					ScP	**ScP**	**20 07 51.2**	**+0.2**
	baz=273,SNR=10							
H16K	**Elim**	**20.24**	**49**	P		**P**	**20 00 28.7**	**+0.9**
	baz=262,SNR=142							
H16K					PcP	**PcP**	**20 04 34.5**	**+1.5**
	baz=262							
H16K					ScP	**ScP**	**20 07 52.0**	**+0.9**
	baz=262,SNR=16							
G16K	**Koyuk River**	**20.31**	**47**	P		**P**	**20 00 29.1**	**+0.5**
	baz=260							
G16K					ScP	**ScP**	**20 07 52.3**	**+1.1**
	baz=260,SNR=12							
K15K	**Wolf Creek Mou**	**20.37**	**56**	P		**P**	**20 00 30.3**	**+1.2**
	baz=269,SNR=67							
K15K					ScP	**ScP**	**20 07 52.3**	**+0.9**
	baz=269							
N14K	**Kuskokwak Cree**	**20.38**	**63**	P		**P**	**20 00 30.1**	**+0.9**
	baz=276,SNR=19							
L15K	**Ungalak Mounta**	**20.38**	**58**	P		**P**	**20 00 30.3**	**+0.9**
	baz=271							
L15K					PcP	**PcP**	**20 04 34.7**	**+1.4**
	baz=271							
L15K					ScP	**ScP**	**20 07 52.2**	**+0.7**
	baz=271							
FALS	**False Pass**	**20.46**	**78**	P		**P**	**20 00 30.1**	**-0.1**
FALS	**False Pass**	**20.46**	**78**	P		**P**	**20 00 29.9**	**-0.3**
	baz=288,SNR=9.3							
HEH	**HeiHe**	**20.47**	**268**	*e*P		**P**	**20 00 28.8**	**-1.5**
HEH				S		**S**	**20 04 07.5**	**-1.2**
HEH				SS		Sn	20 04 58.0	+31
HEH				ScP		**ScP**	**20 07 52.5**	**+0.6**
HEH				PcS		**PcS**	**20 08 10.3**	**-1.0**
HEH				ScS		**ScS**	**20 11 34.8**	**-0.1**
D17K	**Noatak River**	**20.58**	**40**	P		**P**	**20 00 31.8**	**+0.4**
	baz=253,SNR=156							
D17K					PcP	**PcP**	**20 04 34.9**	**+1.4**
	baz=253							
D17K					ScP	**ScP**	**20 07 52.8**	**+1.0**
	baz=253,SNR=8.7							
O14K	**Tigyukauivet M**	**20.66**	**65**	P		**P**	**20 00 33.0**	**+0.7**
	baz=278,SNR=28							
O14K					ScP	**ScP**	**20 07 52.7**	**+0.5**
	baz=278							
TIXI	**Tiksi**	**20.70**	**332**	P		**P**	**20 00 32.9**	**+0.3**
	comp=E,156nm,0.7s,baz=132,slow=10,SNR=524							
TIXI					PcP	**PcP**	**20 04 33.4**	**-0.3**
	comp=E,14nm,0.5s,baz=126,slow=2.4,SNR=8.6							
TIXI					ScP	**ScP**	**20 07 52.6**	**+0.5**
	comp=E,2.3nm,0.5s,baz=116,slow=2.3,SNR=5.0							
	comp=E,156nm,0.7s							
TIXI	**Tiksi**	**20.70**	**332**			**P**	**20 00 32.4**	**-0.2**
TIXI	**Tiksi**	**20.70**	**332**	*d i*P		**P**	**20 00 33.1**	**+0.5**
TIXI					pmax	pmax		
	comp=Z,222nm,0.8s							
RDOG	**Red Dog Mine**	**20.75**	**39**			**P**	**20 00 33.4**	**+0.1**
RDOG	**Red Dog Mine**	**20.75**	**39**	P		**P**	**20 00 33.6**	**+0.4**
	baz=252,SNR=79							
RDOG					ScP	**ScP**	**20 07 53.0**	**+0.7**
	baz=252							
C17K	**DeLong Mountai**	**20.79**	**38**	P		**P**	**20 00 33.9**	**+0.3**
	baz=251,SNR=157							
C17K					ScP	**ScP**	**20 07 53.2**	**+0.8**
	baz=251,SNR=7.7							
M15K	**Kasigluk River**	**20.81**	**60**	P		**P**	**20 00 34.4**	**+0.6**
	baz=274,SNR=131							
M15K					ScP	**ScP**	**20 07 52.9**	**+0.3**
	baz=274,SNR=10.0							
I17K	**Unalakleet**	**20.82**	**51**	P		**P**	**20 00 34.9**	**+1.0**
I17K	**Unalakleet**	**20.82**	**51**	P		**P**	**20 00 35.0**	**+1.0**
	baz=266,SNR=66							
I17K					ScP	**ScP**	**20 07 53.6**	**+1.1**
	baz=266,SNR=5.5							
J16K	**Anvik River**	**20.83**	**53**	P		**P**	**20 00 34.9**	**+0.8**
	baz=267,SNR=35							
J16K					ScP	**ScP**	**20 07 53.5**	**+1.0**
	baz=267							
E17K	**Hotham Inlet**	**20.88**	**42**	P		**P**	**20 00 35.4**	**+0.9**
	baz=256							
E17K					PcP	**PcP**	**20 04 35.5**	**+1.3**
	baz=256							
E17K					ScP	**ScP**	**20 07 53.6**	**+1.0**
	baz=256							
F17K	**Baldwin Pennin**	**20.96**	**44**	P		**P**	**20 00 36.2**	**+0.8**
	baz=258							
F17K					ScP	**ScP**	**20 07 53.8

	baz=276								
K17K	**Iditarod**	**21.87**	**55**	P	**P**	**20 00 45.6 +0.7**
	baz=271,SNR=84								
K17K				ScP	**ScP**	**20 07 55.9 +0.8**
	baz=271								
L17K	**Donlin**	**21.88**	**56**	P	**P**	**20 00 45.7 +0.7**
	baz=272,SNR=64								
L17K				ScP	**ScP**	**20 07 56.2 +1.0**
	baz=272,SNR=8.0								
G18K	**Tagagawik**	**21.91**	**46**	P	**P**	**20 00 45.9 +0.7**
	baz=263,SNR=121								
G18K				ScP	**ScP**	**20 07 55.7 +0.5**
	baz=263								
H18K	**Honhosa River**	**21.94**	**48**	P	**P**	**20 00 46.4 +0.8**
	baz=265								
H18K				PcP	**PcP**	**20 04 37.8 +1.5**
	baz=265								
H18K				ScP	**ScP**	**20 07 56.2 +0.9**
	baz=265								
A19K	**Wainwright**	**22.09**	**34**	P	**P**	**20 00 47.1 +0.1**
	baz=250								
A19K				PcP	**PcP**	**20 04 38.0 +1.6**
	baz=250								
A19K				ScP	**ScP**	**20 07 57.0 +1.5**
	baz=250								
S14K	**Fog Glacier**	**22.15**	**72**	P	**P**	**20 00 48.7 +0.9**
	baz=286								
O16K	**Kokwok River B**	**22.22**	**63**	P	**P**	**20 00 48.1 -0.2**
	baz=279,SNR=24								
O16K				PcP	**PcP**	**20 04 38.3 +1.4**
	baz=279								
O16K				ScP	**ScP**	**20 07 56.5 +0.4**
	baz=279								
C19K	**Lookout Ridge**	**22.23**	**38**	P	**P**	**20 00 48.7 +0.3**
	baz=254								
C19K				PcP	**PcP**	**20 04 38.4 +1.5**
	baz=254								
C19K				ScP	**ScP**	**20 07 56.8 +0.8**
	baz=254								
VLA	**Vladivostok**	**22.28**	**247**	*de*P	**P**	**20 00 47.3 -1.7**
VLA				pmax	pmax	
	comp=Z,31nm,1.0s								
M17K	**Holitna River**	**22.33**	**58**	P	**P**	**20 00 50.3 +0.9**
	baz=275,SNR=84								
M17K				ScP	**ScP**	**20 07 57.4 +1.1**
	baz=275								
P16K	**Nushagak River**	**22.36**	**65**	P	**P**	**20 00 50.1 +0.5**
	baz=280								
P16K				ScP	**ScP**	**20 07 57.3 +0.9**
	baz=280								
F19K	**Shaleruckik Mo**	**22.39**	**44**	P	**P**	**20 00 49.9 +0.1**
	baz=261								
F19K				PcP	**PcP**	**20 04 38.4 +1.2**
	baz=261								
F19K				ScP	**ScP**	**20 07 56.9 +0.5**
	baz=261								
MDJ	**Mudanjiang**	**22.48**	**253**	P	**P**	**20 00 49.2 -1.7**
MDJ	**Mudanjiang**	**22.48**	**253**	P	**P**	**20 00 49.0 -1.9**
MDJ				S	**S**	**20 04 46.5 +3.5**
MDJ				pmax	pmax	
	comp=Z,22nm,0.7s								
MDJ				pmax	pmax	
	comp=Z,260nm,4.2s								
GCSA	**Galena City Sc**	**22.54**	**49**	P	**P**	**20 00 51.1 -0.1**
	baz=267,SNR=12								
N17K	**Nushagak Hills**	**22.54**	**60**	P	**P**	**20 00 51.7 +0.5**
	baz=277								
N17K				PcP	**PcP**	**20 04 39.4 +1.9**
	baz=277								
N17K				ScP	**ScP**	**20 07 58.0 +1.1**
	baz=277								
CHNA	**Chernabura Isl**	**22.57**	**76**	P	**P**	**20 00 50.4 -1.1**
CHNA	**Chernabura Isl**	**22.57**	**76**	P	**P**	**20 00 50.4 -1.1**
	baz=289,SNR=10								
G19K	**Purcell Mounta**	**22.57**	**46**	P	**P**	**20 00 51.6 +0.1**
	baz=264,SNR=60								
G19K				PcP	**PcP**	**20 04 39.3 +1.7**
	baz=264								
G19K				ScP	**ScP**	**20 07 57.8 +0.9**
	baz=264								
J18K	**Innoko River**	**22.58**	**53**	P	**P**	**20 00 52.0 +0.4**
	baz=270								
J18K				ScP	**ScP**	**20 07 57.4 +0.4**
	baz=270								
D19K	**Kuna River**	**22.59**	**39**	P	**P**	**20 00 52.0 +0.3**
	baz=257								
D19K				ScP	**ScP**	**20 07 57.6 +0.6**
	baz=257								
L18K	**Granite Mounta**	**22.63**	**56**	P	**P**	**20 00 53.2 +1.2**
	baz=274								
L18K				ScP	**ScP**	**20 07 57.8 +0.6**
	baz=274								
O17K	**Koliganek Bris**	**22.69**	**62**	P	**P**	**20 00 53.4 +0.8**
	baz=279								
O17K				ScP	**ScP**	**20 07 58.0 +0.7**
	baz=279								
E19K	**Redstone River**	**22.71**	**42**	P	**P**	**20 00 53.1 +0.4**
	baz=260								
E19K				PcP	**PcP**	**20 04 39.0 +1.2**
	baz=260								
E19K				ScP	**ScP**	**20 07 57.5 +0.3**
	baz=260								
CHGN	**Chignik**	**22.76**	**72**		**P**	**20 00 52.4 -0.8**
CHGN	**Chignik**	**22.76**	**72**	P	**P**	**20 00 53.7 +0.5**
	baz=286								
H19K	**Roundabout Mou**	**22.77**	**47**	P	**P**	**20 00 54.1 +0.8**
	baz=266,SNR=358								
H19K				ScP	**ScP**	**20 07 58.3 +0.8**
	baz=266,SNR=20								
R16K	**Pilot Point**	**22.88**	**68**	P	**P**	**20 00 54.8 +0.5**
	baz=284								
BNX	**BinXian**	**22.96**	**258**	⇑P	**P**	**20 00 53.5 -1.7**
BNX				sP	PP	20 01 50.5 -0.9
BNX				PcP	**PcP**	**20 04 39.0 +0.3**
BNX				S	**S**	**20 04 49.3 -1.5**
BNX				pmax	pmax	
	comp=Z,14nm,0.8s								
BNX				pmax	pmax	
	comp=Z,190nm,4.7s								
J19K	**Poorman**	**23.07**	**51**	P	**P**	**20 00 56.1 +0.1**
	baz=270								
J19K				ScP	**ScP**	**20 07 59.1 +0.9**
	baz=270								
M18K	**Stony River**	**23.10**	**58**	P	**P**	**20 00 57.2 +1.0**
	baz=276								
M18K				ScP	**ScP**	**20 07 59.1 +0.8**
	baz=276								
Q16K	**King Salmon**	**23.11**	**65**	P	**P**	**20 00 57.1 +0.8**
	baz=282,SNR=18								
P17K	**Kvichak River**	**23.12**	**64**	P	**P**	**20 00 57.5 +1.0**
	baz=281,SNR=27								
P17K				ScP	**ScP**	**20 07 59.0 +0.6**
	baz=281								
N18K	**Kilae Creek**	**23.16**	**60**	P	**P**	**20 00 57.8 +0.9**
	baz=278,SNR=58								
N18K				ScP	**ScP**	**20 07 59.3 +0.7**
	baz=278								
PSTR	**Posyet**	**23.17**	**248**	⇓*de*P	**P**	**20 00 55.4 -1.7**
D20K	**Etivluk River**	**23.18**	**39**	P	**P**	**20 00 57.4 +0.5**
	baz=258								
D20K				ScP	**ScP**	**20 07 59.2 +0.7**
	baz=258								
F20K	**Avaraart Lake**	**23.22**	**44**	P	**P**	**20 00 57.7 +0.4**
	baz=263,SNR=37								
F20K				PcP	**PcP**	**20 04 40.0 +1.1**
	baz=263								
F20K				ScP	**ScP**	**20 07 59.5 +0.9**
	baz=263,SNR=7.6								
E20K	**Nigu River**	**23.24**	**40**	P	**P**	**20 00 58.1 +0.6**
	baz=260								
E20K				PcP	**PcP**	**20 04 40.4 +1.4**
	baz=260								
E20K				ScP	**ScP**	**20 07 59.6 +0.9**
	baz=260								
B20K	**Meade River**	**23.30**	**36**	P	**P**	**20 00 58.6 +0.6**
	baz=255,SNR=424								
B20K				ScP	**ScP**	**20 07 59.5 +0.7**
	baz=255								
H20K	**Anotleneega Mo**	**23.43**	**48**	P	**P**	**20 00 59.7 +0.5**
	baz=267,SNR=67								
H20K				PcP	**PcP**	**20 04 40.9 +1.6**
	baz=267								
H20K				ScP	**ScP**	**20 08 00.1 +0.8**
	baz=267,SNR=12								
L19K	**White Mountain**	**23.49**	**56**	P	**P**	**20 01 00.4 +0.5**
	baz=275,SNR=60								
L19K				ScP	**ScP**	**20 08 00.1 +0.7**
	baz=275								
R17L	**Mt. Peulik Vol**	**23.50**	**68**	P	**P**	**20 01 00.3 +0.3**
	baz=284								
I20K	**Naaghedeneel**	**23.57**	**49**	P	**P**	**20 01 01.2 +0.7**
	baz=269,SNR=30								
Q17K	**Contact Creek**	**23.59**	**66**	P	**P**	**20 01 01.1 +0.2**
	baz=283								
Q17K				ScP	**ScP**	**20 07 59.4 -0.5**
	baz=283								
O18K	**Koktuh Hills**	**23.62**	**62**	P	**P**	**20 01 02.1 +1.0**
	baz=280,SNR=45								
O18K				ScP	**ScP**	**20 07 59.8 0.0**
	baz=280								
P18K	**Big Mountain,**	**23.69**	**63**	P	**P**	**20 01 02.4 +0.7**
	baz=281,SNR=50								
P18K				ScP	**ScP**	**20 07 59.7 -0.4**
	baz=281								
J20K	**Nowinta River**	**23.71**	**51**	P	**P**	**20 01 02.4 +0.5**
	baz=271,SNR=276								
J20K				ScP	**ScP**	**20 08 00.9 +0.9**
	baz=271								
M19K	**Big River Lodg**	**23.74**	**57**	P	**P**	**20 01 02.9 +0.8**
	baz=276								
M19K				ScP	**ScP**	**20 08 00.5 +0.4**
	baz=276								
K20K	**Telida**	**23.77**	**53**	P	**P**	**20 01 02.9 +0.5**
	baz=273								
K20K				ScP	**ScP**	**20 08 00.7 +0.5**
	baz=273								
N19K	**Bonanza Creek**	**23.82**	**59**	P	**P**	**20 01 04.0 +1.0**
	baz=278								
N19K				ScP	**ScP**	**20 08 00.6 +0.1**
	baz=278								
A21K	**Barrow**	**23.86**	**33**	P	**P**	**20 01 03.3 +0.3**
	baz=252,SNR=93								
A21K				PcP	**PcP**	**20 04 41.5 +1.3**
	baz=252								
A21K				ScP	**ScP**	**20 08 00.7 +0.4**
	baz=252,SNR=17								
ACHA	**Angle Creek He**	**23.89**	**66**	IAmb	IAmb	20 01 05.8
	comp=Z,58nm,0.7s								
C21K	**Knifeblade Rid**	**23.91**	**38**	P	**P**	**20 01 04.4 +0.8**
	baz=259,SNR=265								
C21K				PcP	**PcP**	**20 04 42.0 +1.6**
	baz=259								
C21K				ScP	**ScP**	**20 08 01.4 +1.0**
	baz=259								
Q18K	**Katmai Hardscr**	**23.96**	**65**	P	**P**	**20 01 04.5 +0.3**
	baz=283,SNR=55								
Q18K				ScP	**ScP**	**20 08 00.4 -0.5**
	baz=283								
O19K	**Port Alsworth**	**24.00**	**61**	P	**P**	**20 01 05.3 +0.8**
	baz=280,SNR=39								
G21K	**Allakaket**	**24.05**	**45**	P	**P**	**20 01 05.4 +0.5**
	baz=266								
G21K				ScP	**ScP**	**20 08 01.4 +0.5**
	baz=266								
B21K	**Ikpikpuk River**	**24.07**	**37**	P	**P**	**20 01 05.8 +0.8**
	baz=258								
B21K				PcP	**PcP**	**20 04 42.1 +1.5**
	baz=258								
B21K				ScP	**ScP**	**20 08 01.7 +0.8**
	baz=258								
E21K	**Killik River**	**24.08**	**40**	P	**P**	**20 01 05.4 +0.2**
	baz=282								
F21K	**Alatna River**	**24.11**	**43**	IAmb	IAmb	20 01 06.8
	comp=Z,66nm,0.8s								
F21K	**Alatna River**	**24.11**	**43**	P	**P**	**20 01 05.7 +0.2**
	baz=265,SNR=78								
F21K				ScP	**ScP**	**20 08 01.5 +0.4**
	baz=265,SNR=24								
A22K	**Sinclair Lake**	**24.27**	**34**	P	**P**	**20 01 07.3 +0.5**
	baz=255,SNR=318								
A22K				ScP	**ScP**	**20 08 02.2 +0.9**
	baz=255,SNR=21								
H21K	**Melozitna Rive**	**24.29**	**47**	P	**P**	**20 01 07.3 +0.2**
	baz=269								
H21K				ScP	**ScP**	**20 08 02.4 +0.8**
	baz=269								
M20K	**Styx River**	**24.33**	**56**	P	**P**	**20 01 08.7 +1.1**
	baz=277								
M20K				ScP	**ScP**	**20 08 02.7 +0.9**
	baz=277								
CHIR	**Chirikof Islan**	**24.40**	**72**	P	**P**	**20 01 08.0 -0.1**
CHIR	**Chirikof Islan**	**24.40**	**72**	P	**P**	**20 01 08.7 +0.5**
	baz=289,SNR=5.5								
MAJO	**Matsushiro**	**24.47**	**227**	P	**P**	**20 01 09.9 +0.9**
MAJO	**Matsushiro**	**24.47**	**227**	P	**P**	**20 01 08.4 -0.5**
MAJO	**Matsushiro**	**24.47**	**227**	*de*P	**P**	**20 01 09.8 +0.8**
MAJO				pmax	pmax	
	comp=Z,67nm,0.7s								
MJAR	**Matsushiro Arr**	**24.47**	**227**	P	**P**	**20 01 09.5 +0.5**
	comp=Z,39nm,0.7s,baz=27,slow=7.8,SNR=118								
MJAR				PcP	**PcP**	**20 04 41.8 -0.4**
	comp=Z,14nm,0.6s,baz=20,slow=4.2,SNR=22								
MJAR				ScP	**ScP**	**20 08 02.8 +0.2**
	comp=Z,3.0nm,0.8s,baz=59,slow=3.3,SNR=6.8								
	comp=Z,39nm,0.7s								
MJAR	**Matsushiro Arr**	**24.47**	**227**	P	**P**	**20 01 08.0 -1.0**
MJAR				IAmb	IAmb	20 01 11.2
	comp=Z,39nm,0.7s								
MJAR					**PcP**	**20 04 41.9 -0.2**
MJAR					**ScP**	**20 08 02.7 +0.1**
CHUM	**Lake Minchumin**	**24.53**	**52**	P	**P**	**20 01 10.1 +0.9**
	baz=273,SNR=53								
CHUM				ScP	**ScP**	**20 08 03.0 +0.7**
	baz=273								
Q19K	**Cape Douglas,**	**24.59**	**64**	P	**P**	**20 01 11.0 +1.1**
	baz=283,SNR=16								
B22K	**Teshekpuk Lake**	**24.62**	**36**	P	**P**	**20 01 10.1 +0.1**
B22K	**Teshekpuk Lake**	**24.62**	**36**	P	**P**	**20 01 10.3 +0.4**
	baz=258,SNR=264								
B22K				PcP	**PcP**	**20 04 43.1 +1.3**
	baz=258								
B22K				ScP	**ScP**	**20 08 02.8 +0.5**
	baz=258								
ILSW	**Iliamna Southw**	**24.62**	**61**	IAmb	IAmb	20 01 11.8
	comp=Z,92nm,1.2s								
I21K	**Tanana**	**24.63**	**48**	P	**P**	**20 01 10.8 +0.6**
	baz=271,SNR=128								
I21K				PcP	**PcP**	**20 04 43.3 +1.4**
	baz=271								
I21K				ScP	**ScP**	**20 08 03.4 +0.9**
	baz=271,SNR=17								
P19K	**Oil Pt**	**24.64**	**62**	P	**P**	**20 01 11.1 +0.8**
	baz=282,SNR=5.5								
F22K	**John River**	**24.64**	**43**	P	**P**	**20 01 10.9 +0.6**
	baz=266,SNR=86								
F22K				ScP	**ScP**	**20 08 03.6 +1.1**
	baz=266,SNR=23								
E22K	**Anaktuvuk Pass**	**24.84**	**41**	P	**P**	**20 01 12.6 +0.5**
	baz=264								
E22K				PcP	**PcP**	**20 04 44.0 +1.6**
	baz=264								
E22K				ScP	**ScP**	**20 08 03.6 +0.5**
	baz=264								
N20K	**Mount Spurr**	**24.86**	**58**	P	**P**	**20 01 13.4 +1.0**
	baz=279,SNR=41								
N20K				ScP	**ScP**	**20 08 03.1 -0.2**
	baz=279,SNR=7.9								
SPCR	**Spurr Chakacha**	**24.86**	**58**	P	**P**	**20 01 13.4 +1.0**
	baz=279,SNR=22								
H22K	**Ishtalitna Cre**	**24.89**	**47**	P	**P**	**20 01 13.1 +0.6**
	baz=270								
H22K				ScP	**ScP**	**20 08 04.1 +0.8**
	baz=270								
SII	**Sitkinak Islan**	**24.93**	**69**	P	**P**	**20 01 12.4 -0.6**
	baz=288								
SPU	**Mount Spurr**	**24.94**	**58**	IAmb	IAmb	20 01 15.2
	comp=Z,76nm,1.2s								
SKT	**Skwentna**	**25.07**	**56**	IAmb	IAmb	20 01 19.6
	comp=Z,34nm,0.9s								
SKT	**Skwentna**	**25.07**	**56**	P	**P**	**20 01 14.6 +0.4**
	baz=278,SNR=14								
SKT				ScP	**ScP**	**20 08 02.7 -1.1**
	baz=278								
BOD	**Bodaibo**	**25.08**	**294**	⇑*i*P	**P**	**20 01 13.7 -0.6**
BOD				pmax	pmax	
	comp=Z,256nm,0.9s								
BPAW	**Bear Paw Mtn.**	**25.10**	**51**	IAmb	IAmb	20 01 15.9
	comp=Z,44nm,0.9s								
BPAW	**Bear Paw Mtn.**	**25.10**	**51**	P	**P**	**20 01 15.0 +0.6**
	baz=274,SNR=17								
BPAW				ScP	**ScP**	**20 08 04.4 +0.5**
	baz=274								
MLY	**Manley**	**25.16**	**49**	IAmb	IAmb	20 01 56.5
	comp=Z,74nm,1.1s								
MLY	**Manley**	**25.16**	**49**	P	**P**	**20 01 15.6 +0.5**
	baz=272,SNR=44								
MLY				PcP	**PcP**	**20 04 44.2 +1.0**
	baz=272								
MLY				ScP	**ScP**	**20 08 05.1 +1.0**
	baz=272,SNR=32								
OHAK	**Old Harbor**	**25.21**	**67**	P	**P**	**20 01 14.5 -0.9**
OHAK	**Old Harbor**	**25.21**	**67**	IAmb	IAmb	20 01 18.0
	comp=Z,39nm,0.7s								
OHAK	**Old Harbor**	**25.21**	**67**	P	**P**	**20 01 14.6 -0.9**
	baz=287,SNR=8.4								
OHAK				ScP	**ScP**	**20 08 05.1 +0.9**
	baz=287								
CN2	**Changchun**	**25.27**	**256**	P	**P**	**20 01 12.3 -3.8**
CN2				pmax	pmax	
	comp=Z,10.0nm,0.6s								
HIA	**Hailar**	**25.28**	**272**	P	**P**	**20 01 16.3 +0.1**
Q20K	**Shuyak Island**	**25.30**	**64**	P	**P**	**20 01 15.8 -0.4**
	baz=285,SNR=12								
D23K	**Nanushuk River**	**25.34**	**39**	P	**P**	**20 01 17.1 +0.6**
	baz=264,SNR=94								
D23K				PcP	**PcP**	**20 04 45.7 +2.2**
	baz=264								
D23K				ScP	**ScP**	**20 08 05.9 +1.5**
	baz=264								
COLD	**Coldfoot**	**25.39**	**44**	IAmb	IAmb	20 01 18.2
	comp=Z,89nm,1.1s								
COLD	**Coldfoot**	**25.39**	**44**	P	**P**	**20 01 17.2 +0.2**
	baz=268,SNR=104								
COLD				PcP	**PcP**	**20 04 45.1 +1.5**
	baz=268								
COLD				ScP	**ScP**	**20 08 05.5 +0.9**
	baz=268,SNR=9.0								
KDAK	**Kodiak Island**	**25.41**	**66**	LR	LR	20 12 02.2
	comp=Z,129nm,18.4s,baz=266,slow=38								
KDAK	**Kodiak Island**	**25.41**	**66**	P	**P**	**20 01 16.2 -1.1**
KDAK				IAmb	IAmb	20 01 19.6
	comp=Z,52nm,0.7s								
KDAK	**Kodiak Island**	**25.41**	**66**	*c i*P	**P**	**20 01 15.8 -1.5**
KDAK				pmax	pmax	
	comp=Z,61nm,0.6s								
KDAK	**Kodiak Island**	**25.41**	**66**	P	**P**	**20 01 16.3 -1.0**
	baz=286								
KDAK				ScP	**ScP**	**20 08 05.4 +0.6**
	baz=286								
HOM	**Homer**	**25.43**	**61**	P	**P**	**20 01 17.1 -0.3**
	baz=283								
CAPN	**Captain Cook N**	**25.44**	**59**	P	**P**	**20 01 16.1 -1.4**
	baz=281								
G23K	**Baranza Creek**	**25.44**	**45**	IAmb	IAmb	20 01 19.1
	comp=Z,35nm,0.8s								
G23K	**Bananza Creek**	**25.44**	**45**	P	**P**	**20 01 17.4 -0.1**
	baz=269,SNR=63								
G23K				ScP	**ScP**	**20 08 05.8 +1.0**
	baz=269,SNR=15								
TRF	**Thorofare Moun**	**25.46**	**52**	P	**P**	**20 01 18.3 +0.4**
	baz=276								
C23K	**Itkillik River**	**25.48**	**37**	P	**P**	**20 01 18.2 +0.5**
	baz=262,SNR=140								
C23K				ScP	**ScP**	**20 08 05.7 +0.9**
	baz=262								
CUT	**Chulitna**	**25.60**	**55**	P	**P**	**20 01 18.8 -0.1**
	baz=278,SNR=35								
CUT				ScP	**ScP**	**20 08 05.6 +0.3**
	baz=278								
JGF	**Kuroka**	**25.63**	**228**	P	**P**	**20 01 20.2 +0.7**
JGF	**Kuroka**	**25.63**	**228**	P	**P**	**20 01 19.1 -0.4**
JGF				IAmb	IAmb	20 01 21.9
	comp=Z,27nm,0.7s								
E23K	**Chandalar**	**25.65**	**42**	P	**P**	**20 01 20.0 +0.6**
	baz=267								
E23K				PcP	**PcP**	**20 04 46.2 +1.8**
	baz=267								
E23K				ScP	**ScP**	**20 08 06.6 +1.1**
	baz=267,SNR=20								
TOLK	**Toolik Lake Re**	**25.71**	**40**	P	**P**	**20 01 20.3 +0.4**
	baz=266,SNR=85								
TOLK				PcP	**PcP**	**20 04 46.2 +1.8**
	baz=266								
TOLK				ScP	**ScP**	**20 08 06.5 +0.9**
	baz=266								
I23K	**Minto, Yukon-K**	**25.74**	**48**	P	**P**	**20 01 20.7 +0.6**
	baz=273,SNR=47								
I23K				PcP	**PcP**	**20 04 45.6 +1.1**
	baz=273								
I23K				ScP	**ScP**	**20 08 06.5 +0.8**
	baz=273,SNR=14								
M22K	**Willow**	**25.76**	**56**	P	**P**	**20 01 19.7 -0.7**
	baz=280								
BRSE	**Bradley Lake S**	**25.86**	**61**	P	**P**	**20 01 20.6 -0.6**
	baz=283,SNR=14								
BRSE				ScP	**ScP**	**20 08 06.2 +0.1**
	baz=283								
NEA2	**Nenana**	**25.90**	**50**	IAmb	IAmb	20 01 25.7
	comp=Z,34nm,0.6s								
NEA2	**Nenana**	**25.90**	**50**	P	**P**	**20 01 21.7 0.0**
	baz=275,SNR=25								
NEA2				ScP	**ScP**	**20 08 06.3 +0.2**
	baz=275,SNR=5.6								
SLKM	**Skilak Lake**	**25.95**	**59**	IAmb	IAmb	20 01 28.2
	comp=Z,24nm,0.6s								
INU	**Inuyama**	**25.98**	**228**	P	**P**	**20 01 23.3 +0.7**
INU	**Inuyama**	**25.98**	**228**	IAmb	IAmb	20 01 26.1
	comp=Z,20nm,0.6s								
D24K	**Happy Valley**	**26.02**	**39**	P	**P**	**20 01 23.1 +0.4**
	baz=265								
D24K				ScP	**ScP**	**20 08 07.4 +1.0**
	baz=265								
MCK	**McKinley**	**26.04**	**52**	IAmb	IAmb	20 01 24.2
	comp=Z,54nm,0.8s								
MCK	**McKinley**	**26.04**	**52**	P	**P**	**20 01 22.8 -0.1**
	baz=276,SNR=30								
MCK				ScP	**ScP**	**20 08 06.8 +0.2**
	baz=276,SNR=12								
RC01	**Rabbit Creek A**	**26.06**	**58**	IAmb	IAmb	20 01 26.6
	comp=Z,24nm,0.7s								
RC01	**Rabbit Creek A**	**26.06**	**58**	P	**P**	**20 01 23.0 -0.1**
	baz=281,SNR=10								
RC01				ScP	**ScP**	**20 08 07.0 +0.3**
	baz=281,SNR=10								
E24K	**Your Creek**	**26.08**	**42**	P	**P**	**20 01 23.9 +0.6**
	baz=268,SNR=296								
E24K				ScP	**ScP**	**20 08 07.3 +0.6**
	baz=268,SNR=5.5								
C24K	**Franklin Bluff**	**26.12**	**38**	PcP	**PcP**	**20 04 46.8 +1.5**
	baz=264								
C24K				ScP	**ScP**	**20 08 07.6 +0.9**
	baz=264								
O22K	**Cooper Landing**	**26.19**	**59**	P	**P**	**20 01 23.9 -0.3**
	baz=282,SNR=26								
PMR	**Palmer**	**26.26**	**56**	P	**P**	**20 01 24.7 -0.1**
PMR	**Palmer**	**26.26**	**56**	IAmb	IAmb	20 01 27.5
	comp=Z,27nm,0.6s								
PMR	**Palmer**	**26.26**	**56**	P	**P**	**20 01 23.6 -1.2**
	baz=281,SNR=11								
PMR				ScP	**ScP**	**20 08 07.3 +0.1**
	baz=281,SNR=8.3								
F24K	**Squaw Lake**	**26.29**	**43**	IAmb	IAmb	20 01 27.4
	comp=Z,37nm,0.6s								
F24K	**Squaw Lake**	**26.29**	**43**	P	**P**	**20 01 25.3 +0.2**
	baz=270,SNR=121								
F24K				ScP	**ScP**	**20 08 08.6 +1.3**
	baz=270,SNR=29								
WAT1	**Susitna Watana**	**26.32**	**54**	P	**P**	**20 01 24.9 -0.6**
	baz=279								
WAT1				ScP	**ScP**	**20 08 07.5 0.0**
	baz=279								
H24K	**Noodor Dome**	**26.33**	**47**	P	**P**	**20 01 26.1 +0.7**
	baz=273								
H24K				PcP	**PcP**	**20 04 47.3 +1.4**
	baz=273								
H24K				ScP	**ScP**	**20 08 08.2 +0.7**
	baz=273								
COLA	**College**	**26.40**	**49**	P	**P**	**20 01 26.3 +0.2**
COLA	**College**	**26.40**	**49**	P	**P**	**20 01 25.9 -0.1**
COLA	**College**	**26.40**	**49**	*c i*P	**P**	**20 01 26.2 +0.2**
COLA				pmax	pmax	
	comp=Z,41nm,0.6s								
COLA	**College**	**26.40**	**49**	P	**P**	**20 01 26.3 +0.2**
	baz=275								
SEW	**Seward**	**26.41**	**60**	P	**P**	**20 01 25.6 -0.5**
	baz=283,SNR=16								
G24K	**Hadweenzic Riv**	**26.46**	**45**	P	**P**	**20 01 27.4 +0.8**
	baz=272,SNR=271								
G24K				ScP	**ScP**	**20 08 08.7 +0.9**
	baz=272,SNR=7.6								
POKR	**Poker Plat Res**	**26.56**	**48**	P	**P**	**20 01 28.0 +0.5**
	baz=275								
POKR				ScP	**ScP**	**20

SML	**Sawmill**	**26.59**	**56**	P	**P**	**20 01 27.9**	**0.0**
	baz=281,SNR=76						
SML				ScP	**ScP**	**20 08 08.4**	**+0.1**
	baz=281,SNR=5.4						
KNK	**Knik Glacier**	**26.61**	**57**	P	**P**	**20 01 28.1**	**+0.1**
	baz=281,SNR=101						
KNK				ScP	**ScP**	**20 08 08.7**	**+0.3**
	baz=281,SNR=6.1						
WAT6	**Susitna Watana**	**26.73**	**54**	P	**P**	**20 01 28.5**	**-0.7**
	baz=280,SNR=57						
WAT6				PcP	**PcP**	**20 04 48.1**	**+1.1**
	baz=280						
WAT6				ScP	**ScP**	**20 08 09.2**	**+0.3**
	baz=280						
DHY	**Denali Highway**	**26.82**	**53**	P	**P**	**20 01 29.5**	**-0.5**
	baz=279,SNR=60						
DHY				ScP	**ScP**	**20 08 09.5**	**+0.4**
	baz=279,SNR=14						
ILAR	**Eielson Array**	**26.82**	**49**	P	**P**	**20 01 29.6**	**-0.2**
	comp=Z,42nm,0.5s,baz=260,slow=7.5,SNR=1037						
ILAR				PcP	**PcP**	**20 04 46.1**	**-0.9**
	comp=Z,3.1nm,0.6s,baz=294,slow=3.4,SNR=6.1						
ILAR				ScP	**ScP**	**20 08 07.2**	**-1.6**
	comp=Z,5.4nm,0.8s,baz=283,slow=3.3,SNR=20						
ILAR				PKiKP	**PKiKP**	**20 12 22.6**	**-1.7**
	comp=Z,0.3nm,0.5s,baz=312,slow=3.2,SNR=6.0 comp=Z,42nm,0.5s						
ILAR	**Eielson Array**	**26.82**	**49**	P	**P**	**20 01 29.3**	**-0.5**
HDA	**Harding Lake**	**26.83**	**50**	P	**P**	**20 01 29.4**	**-0.6**
	baz=277,SNR=74						
JHJ	**Hachijo jima 2**	**26.85**	**221**	P	**P**	**20 01 30.6**	**+0.2**
	comp=Z,96nm,0.6s,baz=73,slow=19,SNR=4.1 comp=Z,96nm,0.6s						
M23K	**Glacier View**	**26.88**	**56**	P	**P**	**20 01 30.3**	**0.0**
	baz=281,SNR=67						
M23K				PcP	**PcP**	**20 04 48.2**	**+1.0**
	baz=281						
D25K	**Kavik River**	**26.91**	**39**	P	**P**	**20 01 30.8**	**+0.2**
	baz=267,SNR=318						
D25K				PcP	**PcP**	**20 04 48.1**	**+0.8**
	baz=267						
D25K				ScP	**ScP**	**20 08 09.5**	**+0.3**
	baz=267						
G25K	**Bearman Lake**	**27.00**	**45**	P	**P**	**20 01 32.0**	**+0.7**
	baz=273,SNR=47						
G25K				ScP	**ScP**	**20 08 10.5**	**+1.1**
	baz=273,SNR=5.1						
SCM	**Sheep Creek Mo**	**27.06**	**56**	P	**P**	**20 01 32.4**	**+0.3**
	baz=281,SNR=45						
SCM				PcP	**PcP**	**20 04 48.9**	**+1.1**
	baz=281						
SCM				ScP	**ScP**	**20 08 10.1**	**+0.3**
	baz=281						
F25K	**Christian Rive**	**27.15**	**43**	P	**P**	**20 01 33.6**	**+0.8**
	baz=272,SNR=84						
F25K				ScP	**ScP**	**20 08 10.8**	**+0.9**
	baz=272						
E25K	**Arctic Village**	**27.17**	**42**	IAmb	IAmb	20 01 34.8	
	comp=Z,41nm,0.7s						
E25K	**Arctic Village**	**27.17**	**42**	P	**P**	**20 01 33.9**	**+0.9**
	baz=271,SNR=107						
E25K				PcP	**PcP**	**20 04 49.3**	**+1.4**
	baz=271						
E25K				ScP	**ScP**	**20 08 10.9**	**+0.9**
	baz=271,SNR=15						
PRP	**Porcupine Dome**	**27.32**	**47**	P	**P**	**20 01 35.0**	**+0.6**
	baz=276,SNR=128						
PRP				ScP	**ScP**	**20 08 10.1**	**-0.5**
	baz=276						
GLI	**Glacier Island**	**27.37**	**58**	P	**P**	**20 01 34.5**	**-0.2**
	baz=283						
K24K	**Donnelly Dome**	**27.42**	**51**	P	**P**	**20 01 34.6**	**-0.6**
	baz=279,SNR=26						
K24K				PcP	**PcP**	**20 04 49.5**	**+1.0**
	baz=279						
K24K				ScP	**ScP**	**20 08 11.5**	**+0.8**
	baz=279,SNR=7.9						
P23K	**Montague Islan**	**27.43**	**60**	P	**P**	**20 01 35.2**	**-0.1**
	baz=285,SNR=5.7						
C26K	**Camden Bay**	**27.45**	**38**	P	**P**	**20 01 36.3**	**+1.0**
	baz=268,SNR=121						
C26K				PcP	**PcP**	**20 04 50.4**	**+2.0**
	baz=268						
C26K				ScP	**ScP**	**20 08 12.2**	**+1.6**
	baz=268						
J25K	**Salcha River,**	**27.49**	**49**	P	**P**	**20 01 34.8**	**-1.1**
	baz=278,SNR=62						
J25K				PcP	**PcP**	**20 04 49.3**	**+0.5**
	baz=278						
J25K				ScP	**ScP**	**20 08 11.0**	**0.0**
	baz=278						
M24K	**Tolsona, Glenn**	**27.54**	**55**	P	**P**	**20 01 37.2**	**+0.9**
	baz=282,SNR=35						
BMAR	**Burnt Mountain**	**27.57**	**43**	P	**P**	**20 01 36.9**	**+0.5**
PAX	**Paxson**	**27.69**	**53**	IAmb	IAmb	20 01 41.3	
	comp=Z,22nm,0.8s						
PAX	**Paxson**	**27.69**	**53**	P	**P**	**20 01 37.8**	**0.0**
	baz=281,SNR=32						
PAX				PcP	**PcP**	**20 04 50.7**	**+1.4**
	baz=281						
PAX				ScP	**ScP**	**20 08 12.2**	**+0.5**
	baz=281,SNR=15						
F26K	**Sheenjek River**	**27.72**	**43**	IAmb	IAmb	20 01 39.7	
	comp=Z,40nm,0.8s						
F26K	**Sheenjek River**	**27.72**	**43**	P	**P**	**20 01 38.9**	**+1.0**
	baz=273,SNR=92						
F26K				ScP	**ScP**	**20 08 12.4**	**+0.8**
	baz=273,SNR=9.5						
KLU	**Klutina**	**27.78**	**56**	P	**P**	**20 01 38.8**	**+0.3**
	baz=283,SNR=56						
KLU				ScP	**ScP**	**20 08 12.6**	**+0.6**
	baz=283						
RIDG	**Independent Ri**	**27.84**	**51**	P	**P**	**20 01 38.2**	**-0.7**
	baz=280,SNR=44						
RIDG				ScP	**ScP**	**20 08 12.2**	**+0.2**
	baz=280,SNR=10						
C27K	**Jago River**	**27.86**	**38**	P	**P**	**20 01 39.7**	**+0.7**
	baz=269,SNR=149						
C27K				ScP	**ScP**	**20 08 13.0**	**+1.1**
	baz=269						
G26K	**Porcupine Rive**	**27.90**	**44**	P	**P**	**20 01 40.5**	**+1.1**
	baz=274,SNR=105						
G26K				ScP	**ScP**	**20 08 13.1**	**+1.0**
	baz=274,SNR=15						
EYAK	**Cordova Ski Ar**	**28.09**	**58**	P	**P**	**20 01 41.8**	**+0.7**
EYAK	**Cordova Ski Ar**	**28.09**	**58**	IAmb	IAmb	20 01 42.4	
	comp=Z,93nm,1.4s						
EYAK	**Cordova Ski Ar**	**28.09**	**58**	P	**P**	**20 01 41.5**	**+0.5**
	baz=285,SNR=12						
EYAK				ScP	**ScP**	**20 08 13.5**	**+0.8**
	baz=285						
Q23K	**Middleton Isla**	**28.10**	**60**	P	**P**	**20 01 41.1**	**-0.1**
	baz=286						
MID	**Middleton Isla**	**28.10**	**60**	P	**P**	**20 01 41.6**	**+0.4**
SCRK	**Sand Creek**	**28.18**	**50**	P	**P**	**20 01 41.3**	**-0.7**
	baz=280,SNR=153						
SCRK				ScP	**ScP**	**20 08 13.7**	**+0.5**
	baz=280,SNR=12						
I26K	**Coal Creek Min**	**28.33**	**48**	P	**P**	**20 01 42.2**	**-1.0**
	baz=278						
I26K				ScP	**ScP**	**20 08 13.6**	**+0.2**
	baz=278						
N25K	**Chitina, Valde**	**28.38**	**55**	P	**P**	**20 01 44.5**	**+0.7**
	baz=284,SNR=90						
N25K				ScP	**ScP**	**20 08 14.6**	**+0.8**
	baz=284,SNR=5.8						
MENT	**Mentasta**	**28.49**	**53**	P	**P**	**20 01 44.8**	**+0.1**
KS19	**Wonju Array Si**	**28.50**	**244**	P	**P**	**20 01 43.1**	**-1.9**
KSRS	**Korea Array**	**28.51**	**244**	P	**P**	**20 01 44.3**	**-0.7**
	comp=Z,11nm,0.5s,baz=33,slow=9.2,SNR=35						
KSRS				pP	**pP**	**20 02 25.4**	**+1.5**
	comp=Z,9.5nm,1.0s,baz=37,slow=9.2,SNR=3.2						
KSRS				PcP	**PcP**	**20 04 52.2**	**+0.6**
	comp=Z,20nm,0.7s,baz=19,slow=2.3,SNR=42						
KSRS				ScP	**ScP**	**20 08 16.1**	**+1.7**
	comp=Z,1.9nm,0.8s,baz=43,slow=4.0,SNR=5.6 comp=Z,11nm,0.5s						
BMRM	**Bremner River**	**28.53**	**57**	P	**P**	**20 01 45.7**	**+0.7**
	baz=285,SNR=84						
BMRM				ScP	**ScP**	**20 08 14.7**	**+0.4**
	baz=285,SNR=9.3						
KSAR	**Wonju Array Be**	**28.54**	**244**	P	**P**	**20 01 43.6**	**-1.7**
L26K	**Log Cabin Wild**	**28.63**	**52**	IAmb	IAmb	20 01 52.0	
	comp=Z,21nm,0.6s						
L26K	**Log Cabin Wild**	**28.63**	**52**	P	**P**	**20 01 46.0**	**0.0**
	baz=282,SNR=11						
E27K	**Coleen River**	**28.66**	**41**	IAmb	IAmb	20 01 47.9	
	comp=Z,74nm,1.7s						
E27K	**Coleen River**	**28.66**	**41**	P	**P**	**20 01 46.8**	**+0.7**
	baz=274,SNR=33						
E27K				ScP	**ScP**	**20 08 15.0**	**+0.5**
	baz=274						
G27K	**Doyon Strip**	**28.75**	**44**	IAmb	IAmb	20 01 49.2	
	comp=Z,25nm,0.8s						
G27K	**Doyon Strip**	**28.75**	**44**	P	**P**	**20 01 47.9**	**+0.9**
	baz=276,SNR=54						
G27K				ScP	**ScP**	**20 08 15.6**	**+0.8**
	baz=276						
D27M	**Malcolm River**	**28.83**	**39**	P	**P**	**20 01 48.3**	**+0.7**
	baz=273,SNR=18						
D27M				ScP	**ScP**	**20 08 16.1**	**+1.0**
	baz=273						
H27K	**Steamboat Moun**	**28.87**	**45**	P	**P**	**20 01 49.4**	**+1.3**
	baz=278,SNR=87						
H27K				ScP	**ScP**	**20 08 16.1**	**+0.8**
	baz=278						
KAIM	**Kayak Island**	**28.90**	**59**	P	**P**	**20 01 49.3**	**+1.1**
	baz=287,SNR=5.5						
I27K	**Kandik River**	**28.93**	**47**	P	**P**	**20 01 48.4**	**-0.1**
	baz=279						
I27K				ScP	**ScP**	**20 08 16.1**	**+0.6**
	baz=279						
M26K	**Nabesna, AK**	**28.93**	**54**	P	**P**	**20 01 49.8**	**+1.2**
	baz=283,SNR=100						
M26K				ScP	**ScP**	**20 08 16.2**	**+0.7**
	baz=283						
MCARA	**McCarthy VSAT**	**29.16**	**56**	P	**P**	**20 01 51.6**	**+1.0**
	baz=285,SNR=53						
CRQE	**Cirque**	**29.30**	**57**	P	**P**	**20 01 52.8**	**+0.8**
	baz=286,SNR=43						
CRQE				ScP	**ScP**	**20 08 17.6**	**+0.8**
	baz=286,SNR=5.1						
L27K	**Beaver Creek,**	**29.30**	**52**	P	**P**	**20 01 52.7**	**+0.8**
	baz=283,SNR=94						
L27K				ScP	**ScP**	**20 08 17.4**	**+0.7**
	baz=283						
BCAR	**Beaver Creek A**	**29.32**	**52**	P	**P**	**20 01 52.4**	**+0.4**
F28M	**Old Crow**	**29.36**	**42**	P	**P**	**20 01 53.2**	**+1.0**
	baz=276,SNR=53						
F28M				ScP	**ScP**	**20 08 16.9**	**+0.1**
	baz=276,SNR=10						
BGLC	**Bering Glacier**	**29.39**	**58**	P	**P**	**20 01 53.2**	**+0.6**
	baz=287						
E28M	**Babbage River**	**29.39**	**40**	P	**P**	**20 01 53.2**	**+0.7**
	baz=275,SNR=31						
E28M				ScP	**ScP**	**20 08 17.4**	**+0.6**
	baz=275,SNR=11						
TGL	**Tana Glacier**	**29.42**	**57**	IAmb	IAmb	20 01 54.7	
	comp=Z,39nm,0.8s						
M27K	**Edge Creek, AK**	**29.44**	**53**	P	**P**	**20 01 54.8**	**+1.5**
	baz=284,SNR=121						
M27K				ScP	**ScP**	**20 08 18.0**	**+0.7**
	baz=284						
D28M	**Stokes Point**	**29.62**	**39**	P	**P**	**20 01 55.0**	**+0.5**
	baz=274						
I28M	**Miner Creek**	**29.64**	**47**	IAmb	IAmb	20 01 57.7	
	comp=Z,27nm,0.7s						
I28M	**Miner Creek**	**29.64**	**47**	P	**P**	**20 01 55.5**	**+0.6**
	baz=280,SNR=51						
I28M				ScP	**ScP**	**20 08 18.0**	**+0.2**
	baz=280						
BVCY	**Beaver Creek**	**29.89**	**53**	P	**P**	**20 01 58.3**	**+1.3**
	baz=285,SNR=34						
BVCY				ScP	**ScP**	**20 08 19.7**	**+1.2**
	baz=285,SNR=9.4						
MESA	**MESA**	**30.00**	**58**	P	**P**	**20 01 59.4**	**+1.2**
	baz=288,SNR=21						
E29M	**Blow River**	**30.01**	**41**	IAmb	IAmb	20 01 59.4	
	comp=Z,23nm,0.7s						
E29M	**Blow River**	**30.01**	**41**	P	**P**	**20 01 59.0**	**+1.0**
	baz=277,SNR=34						
E29M				ScP	**ScP**	**20 08 19.3**	**+0.5**
	baz=277						
CTG	**Chitna Glacier**	**30.06**	**56**	P	**P**	**20 01 59.8**	**+1.1**
	baz=287,SNR=79						
H29M	**Whitestone**	**30.14**	**45**	P	**P**	**20 02 00.3**	**+1.1**
	baz=280,SNR=74						
H29M				ScP	**ScP**	**20 08 19.5**	**+0.2**
	baz=280						
G29M	**Pine Creek**	**30.16**	**44**	P	**P**	**20 02 00.7**	**+1.3**
	baz=279						
G29M				ScP	**ScP**	**20 08 19.5**	**+0.1**
	baz=279						
YUK3	**Moose Creek**	**30.24**	**54**	P	**P**	**20 02 01.0**	**+0.7**
	baz=286,SNR=36						
YUK3				ScP	**ScP**	**20 08 20.2**	**+0.2**
	baz=286						
I29M	**Ogilvie Camp,**	**30.33**	**47**	P	**P**	**20 02 01.4**	**+0.6**
	baz=282,SNR=53						
I29M				ScP	**ScP**	**20 08 20.3**	**+0.3**
	baz=282,SNR=23						
J29N	**Klondike Camp**	**30.56**	**48**	P	**P**	**20 02 03.1**	**+0.2**
	baz=283,SNR=5.6						
JNU	**Nakatsue**	**30.57**	**234**	P	**P**	**20 02 02.6**	**-0.7**
	comp=Z,9.6nm,0.8s,baz=340,slow=3.7,SNR=10.0						
JNU				PcP	**PcP**	**20 04 56.5**	**-0.5**
	comp=Z,8.6nm,0.8s,baz=29,slow=3.9,SNR=4.1						
JNU				ScP	**ScP**	**20 08 21.7**	**+0.4**
	comp=Z,7.1nm,0.9s,baz=54,slow=3.1,SNR=4.2 comp=Z,9.6nm,0.8s						
O28M	**Mount Upton**	**30.66**	**56**	P	**P**	**20 02 04.9**	**+0.8**
	baz=288,SNR=99						
YUK8	**Steele Glacier**	**30.70**	**55**	P	**P**	**20 02 05.2**	**+0.8**
	baz=287,SNR=32						
YUK8				ScP	**ScP**	**20 08 22.2**	**+0.7**
	baz=287,SNR=5.9						
DL2	**Dalian**	**30.72**	**253**	P	**P**	**20 02 02.8**	**-1.7**
DL2				pmax	pmax		
	comp=Z,36nm,0.6s						
EPYK	**Eagle Plains**	**30.77**	**45**	P	**P**	**20 02 05.4**	**+0.6**
	baz=281						
EPYK				ScP	**ScP**	**20 08 21.6**	**+0.2**
	baz=281,SNR=18						
PINM	**Pinnacle**	**30.84**	**57**	P	**P**	**20 02 06.4**	**+1.0**
	baz=289,SNR=76						
G30M	**tAoh Zrail Nji**	**30.85**	**43**	P	**P**	**20 02 06.0**	**+0.5**
	baz=281,SNR=52						
G30M				ScP	**ScP**	**20 08 21.6**	**0.0**
	baz=281,SNR=20						
F30M	**Barrier River**	**30.91**	**42**	P	**P**	**20 02 07.3**	**+1.4**
	baz=280,SNR=108						
F30M				ScP	**ScP**	**20 08 22.4**	**+0.6**
	baz=280,SNR=17						
L29M	**L29M**	**30.93**	**51**	P	**P**	**20 02 07.5**	**+1.4**
	baz=286,SNR=72						
L29M				ScP	**ScP**	**20 08 23.2**	**+1.2**
	baz=286,SNR=23						
M29M	**Somme Creek**	**30.96**	**52**	P	**P**	**20 02 07.9**	**+1.4**
	baz=286,SNR=99						
M29M				ScP	**ScP**	**20 08 23.3**	**+1.1**
	baz=286						
K29M	**Barlow Dome**	**31.00**	**50**	P	**P**	**20 02 07.0**	**+0.1**
	baz=285,SNR=16						
K29M				ScP	**ScP**	**20 08 23.0**	**+0.7**
	baz=285,SNR=14						
I30M	**Mount Dempster**	**31.15**	**47**	P	**P**	**20 02 08.6**	**+0.4**
	baz=283,SNR=102						
I30M				ScP	**ScP**	**20 08 23.1**	**+0.3**
	baz=283,SNR=12						
YUK4	**Talbot Arm**	**31.20**	**54**	P	**P**	**20 02 09.6**	**+0.9**
	baz=288,SNR=41						
YUK4				ScP	**ScP**	**20 08 24.1**	**+1.0**
	baz=288						
J30M	**Hart River**	**31.32**	**48**	P	**P**	**20 02 10.0**	**+0.2**
	baz=284,SNR=21						
J30M				ScP	**ScP**	**20 08 24.2**	**+0.8**
	baz=284,SNR=30						
YUK6	**Outpost Mounta**	**31.45**	**55**	P	**P**	**20 02 12.0**	**+1.0**
	baz=289,SNR=50						
YUK6				ScP	**ScP**	**20 08 24.8**	**+0.7**
	baz=289						
O29M	**Mount Kennedy**	**31.56**	**56**	P	**P**	**20 02 12.8**	**+0.9**
	baz=290,SNR=51						
JCJ	**Chichijima**	**31.59**	**212**	P	**P**	**20 02 13.1**	**+0.8**
	comp=Z,109nm,0.8s,baz=59,slow=2.8,SNR=5.2 comp=Z,109nm,0.8s						
G31M	**Satah River**	**31.62**	**43**	IAmb	IAmb	20 02 14.2	
	comp=Z,24nm,0.8s						
G31M	**Satah River**	**31.62**	**43**	P	**P**	**20 02 12.2**	**+0.2**
	baz=282,SNR=23						
G31M				ScP	**ScP**	**20 08 24.5**	**+0.4**
	baz=282,SNR=14						
INK	**Inuvik**	**31.63**	**40**	IAmb	IAmb	20 02 13.9	
	comp=Z,34nm,0.7s						
INK	**Inuvik**	**31.63**	**40**	P	**P**	**20 02 12.9**	**+0.7**
	baz=281,SNR=53						
INK				ScP	**ScP**	**20 08 24.5**	**+0.4**
	baz=281,SNR=10						
M30M	**Minto, Yukon**	**31.66**	**52**	IAmb	IAmb	20 02 14.4	
	comp=Z,22nm,0.7s						
M30M	**Minto, Yukon**	**31.66**	**52**	P	**P**	**20 02 13.9**	**+1.3**
	baz=287,SNR=33						
M30M				PcP	**PcP**	**20 05 00.9**	**+1.5**
	baz=287						
M30M				ScP	**ScP**	**20 08 25.4**	**+0.9**
	baz=287,SNR=18						
F31M	**Tsiigehtchic**	**31.71**	**42**	P	**P**	**20 02 13.5**	**+0.6**
	baz=282,SNR=31						
F31M				ScP	**ScP**	**20 08 24.6**	**+0.1**
	baz=282,SNR=14						
MAYO	**Mayo, Yukon**	**31.76**	**50**	P	**P**	**20 02 14.1**	**+0.7**
	baz=286						
H31M	**Peel River**	**31.84**	**45**	IAmb	IAmb	20 02 15.4	
	comp=Z,21nm,0.9s						
H31M	**Peel River**	**31.84**	**45**	P	**P**	**20 02 14.3**	**+0.2**
	baz=284,SNR=22						
H31M				ScP	**ScP**	**20 08 25.4**	**+0.4**
	baz=284,SNR=12						
N30M	**Aishikik Lake**	**31.87**	**54**	P	**P**	**20 02 15.2**	**+0.7**
	baz=289,SNR=19						
N30M				PcP	**PcP**	**20 05 02.0**	**+1.9**
	baz=289						
N30M				ScP	**ScP**	**20 08 26.3**	**+1.1**
	baz=289,SNR=9.8						
HYT	**Haines Junctio**	**31.89**	**55**	P	**P**	**20 02 15.8**	**+1.1**
	baz=290,SNR=87						
HYT				ScP	**ScP**	**20 08 26.2**	**+0.8**
	baz=290,SNR=5.5						
P30M	**Million Dollar**	**32.38**	**56**	P	**P**	**20 02 20.3**	**+1.4**
	baz=291						
IRK	**Irkutsk**	**32.38**	**288**	*e*P	**P**	**20 02 16.9**	**-2.1**
IRK				*e*		20 03 34.7	
IRK				pmax	pmax		
	comp=Z,58nm,2.2s						
N31M	**Braeburn, Yuko**	**32.46**	**53**	IAmb	IAmb	20 02 22.1	
	comp=Z,43nm,0.8s						
N31M	**Braeburn, Yuko**	**32.46**	**53**	P	**P**	**20 02 21.2**	**+1.6**
	baz=290,SNR=26						
N31M				ScP	**ScP**	**20 08 28.1**	**+1.0**
	baz=290,SNR=5.6						
O30N	**Mendenhall**	**32.56**	**55**	IAmb	IAmb	20 02 22.7	
	comp=Z,54nm,0.7s						
O30N	**Mendenhall**	**32.56**	**55**	P	**P**	**20 02 21.8**	**+1.3**
	baz=290,SNR=60						
O30N				ScP	**ScP**	**20 08 28.2**	**+0.6**
	baz=290,SNR=9.4						
M31M	**Drury Creek, Y**	**32.84**	**52**	P	**P**	**20 02 24.4**	**+1.5**
	baz=289,SNR=101						
M31M				ScP	**ScP**	**20 08 28.8**	**+0.3**
	baz=289,SNR=13						
BJI2	**Beijing**	**32.93**	**260**	P	**P**	**20 02 25.5**	**+1.7**
BJI2				PcP	**PcP**	**20 05 03.5**	**+0.2**
BJI2				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BJT	**Baijiatuau**	**32.93**	**260**	P	**P**	**20 02 23.7**	**-0.2**
TLY	**Talaya**	**33.00**	**287**	P	**P**	**20 02 23.2**	**-1.2**
TLY	**Talaya**	**33.00**	**287**	*d* iP	**P**	**20 02 24.5**	**+0.1**
TLY				pmax	pmax		
	comp=Z,11nm,0.7s						
TLY	**Talaya**	**33.00**	**287**	P	**P**	**20 02 24.7**	**+0.4**
TLY	**Talaya**	**33.00**	**287**	P	**P**	**20 02 24.7**	**+0.4**
ULN	**Ulaanbaatar**	**33.15**	**279**	P	**P**	**20 02 24.1**	**-1.7**
ULN	**Ulaanbaatar**	**33.15**	**279**	*d* iP	**P**	**20 02 25.6**	**-0.3**
ULN				pmax	pmax		
	comp=Z,13nm,1.0s						
ULN	**Ulaanbaatar**	**33.15**	**279**	P	**P**	**20 02 25.9**	**+0.1**
ULN	**Ulaanbaatar**	**33.15**	**279**	P	**P**	**20 02 25.6**	**-0.3**
	comp=Z,69nm,1.0s						
WHY	**Whitehorse**	**33.16**	**55**	P	**P**	**20 02 27.4**	**+1.7**
	baz=291,SNR=98						
WHY				ScP	**ScP**	**20 08 30.4**	**+0.7**
	baz=291,SNR=6.5						
SKAG	**Skagway**	**33.39**	**57**	P	**P**	**20 02 29.5**	**+1.9**
SKAG	**Skagway**	**33.39**	**57**	P	**P**	**20 02 29.4**	**+1.8**
	baz=293,SNR=13						
SONM	**Songino Array**	**33.54**	**279**	P	**P**	**20 02 29.0**	**-0.2**
	comp=Z,21nm,0.7s,baz=62,slow=7.4,SNR=105						
SONM				PP	**PP**	**20 03 52.8**	**+4.0**
	comp=Z,3.5nm,0.8s,baz=58,slow=7.0,SNR=4.2						
SONM				PcP	**PcP**	**20 05 04.9**	**-0.2**
	comp=Z,15nm,0.6s,baz=82,slow=1.7,SNR=21						
SONM				ScP	**ScP**	**20 08 31.2**	**-0.1**
	comp=Z,7.3nm,0.9s,baz=67,slow=2.5,SNR=13						
SONM				PKiKP	**PKiKP**	**20 12 28.5**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=189,slow=1.6,SNR=4.0 comp=Z,21nm,0.7s						
SONM	**Songino Array**	**33.54**	**279**		**ScP**	**20 08 32.2**	**+0.9**
SONM	**Songino Array**	**33.54**	**279**	P	**P**	**20 02 28.2**	**-1.0**
SONM				IAmb	IAmb	20 02 31.9	
	comp=Z,17nm,0.7s						
S31K	**Pelican**	**33.56**	**60**	IAmb	IAmb	20 02 31.4	
	comp=Z,32nm,0.9s						
S31K	**Pelican**	**33.56**	**60**	P	**P**	**20 02 30.3**	**+1.3**
	baz=294,SNR=5.1						
R31K	**City Hall, Gus**	**33.61**	**59**	P	**P**	**20 02 31.1**	**+1.6**
	baz=294						
A36M	**Sachs Harbour**	**33.70**	**33**	P	**P**	**20 02 30.1**	**0.0**
A36M				IAmb	IAmb	20 02 32.2	
	comp=Z,50nm,0.8s						
A36M	**Sachs Harbour**	**33.70**	**33**	P	**P**	**20 02 31.2**	**+1.1**
	baz=282,SNR=58						
A36M				PcP	**PcP**	**20 05 05.3**	**+0.4**
	baz=282						
NRIK	**Norilʹsk**	**33.80**	**322**	P	**P**	**20 02 30.8**	**-0.2**
	comp=Z,18nm,0.9s,baz=85,slow=8.8,SNR=25						
NRIK				PP	**PP**	**20 03 54.8**	**+3.5**
	comp=Z,20nm,1.1s,baz=92,slow=10,SNR=6.5						
NRIK				PcP	**PcP**	**20 05 05.5**	**+0.2**
	comp=Z,13nm,0.5s,baz=74,slow=1.2,SNR=8.1 comp=Z,18nm,0.9s						
NRIK	**Norilʹsk**	**33.80**	**322**	P	**P**	**20 02 30.3**	**-0.7**
NRIK				IAmb	IAmb	20 02 31.9	
	comp=Z,47nm,1.2s						
NRIK	**Norilʹsk**	**33.80**	**322**	*d* iP	**P**	**20 02 30.5**	**-0.5**
NRIK				pmax	pmax		
	comp=Z,42nm,1.2s						
ZAK	**Zakamensk**	**33.86**	**285**	*e*P	**P**	**20 02 31.7**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,19nm,1.2s						
MMPY	**Sheldon Lake,**	**34.07**	**50**	IAmb	IAmb	20 02 36.1	
	comp=Z,42nm,1.0s						
MMPY	**Sheldon Lake,**	**34.07**	**50**	P	**P**	**20 02 35.1**	**+1.7**
	baz=291,SNR=46						
MMPY				ScP	**ScP**	**20 08 33.6**	**+0.7**
	baz=291,SNR=16						
P32M	**Atlin**	**34.10**	**56**	P	**P**	**20 02 35.2**	**+1.4**
	baz=294,SNR=10						
P32M				ScP	**ScP**	**20 08 33.9**	**+0.9**
	baz=294,SNR=8.7						
R32K	**Eaglecrest**	**34.26**	**58**	IAmb	IAmb	20 02 38.5	
	comp=Z,52nm,0.8s						
R32K	**Eaglecrest**	**34.26**	**58**	P	**P**	**20 02 36.8**	**+1.8**
	baz=295,SNR=31						
P33M	**Teslin,

TIA pmax pmax
comp=Z,18nm,0.6s
R33M Jennings River 35.46 55 IAmb IAmb 20 02 48.6
comp=Z,42nm,0.7s
R33M Jennings River 35.46 55 P **P 20 02 47.7 +2.2**
baz=295,SNR=52
R33M ScP **ScP 20 08 39.1 +1.1**
baz=295,SNR=9.5
HNS HongShan 35.59 258 ⇑P **P 20 02 46.0 -0.7**
HNS pmax pmax
comp=Z,12nm,1.3s
HNS L L
comp=Z,180nm,16.2s
HNS L L
comp=Z,190nm,14.7s
HNS L L
comp=Z,210nm,13.5s
TGTN Hyland Airport 35.79 51 P **P 20 02 49.6 +1.4**
baz=294,SNR=38
TGTN ScP **ScP 20 08 39.8 +0.8**
baz=294,SNR=7.7
U33K Whale Pass 35.90 61 P **P 20 02 51.1 +2.0**
baz=298
BTO2 Baotou 35.97 267 *eP* **P 20 02 49.3 -0.7**
BTO2 pP **pP 20 03 29.0 -0.8**
BTO2 sP **sP 20 03 52.0 +0.5**
BTO2 PP **PnPn 20 04 17.5 0.0**
BTO2 S **S 20 08 19.3 +5.1**
BTO2 sS **sS 20 09 23.0 -1.7**
BTO2 SS **SS 20 10 51.0 -7.9**
BTO2 pmax pmax
comp=Z,39nm,0.8s
BTO2 pmax pmax
comp=Z,220nm,5.0s
BTO2 L L
comp=Z,310nm,12.7s
BTO2 L L
comp=Z,340nm,15.6s
BTO2 L L
comp=Z,310nm,14.5s
S34M Telegraph Cree 36.03 58 IAmb IAmb 20 02 53.5
comp=Z,28nm,1.1s
S34M Telegraph Cree 36.03 58 P **P 20 02 52.4 +2.2**
baz=297,SNR=15
S34M ScP **ScP 20 08 41.4 +1.5**
baz=297,SNR=9.3
WRAK Wrangell Islan 36.14 60 IAmb IAmb 20 02 55.2
comp=Z,31nm,0.5s
WRAK Wrangell Islan 36.14 60 P **P 20 02 53.1 +2.0**
baz=298
WTLY Watson Lake, Y 36.15 53 IAmb IAmb 20 02 53.5
comp=E,48nm,0.6s
WTLY Watson Lake, Y 36.15 53 P **P 20 02 52.6 +1.3**
baz=296,SNR=11
CRAG Craig 36.21 62 P **P 20 02 53.9 +2.3**
baz=299
DLBC Dease Lake 36.32 56 P **P 20 02 55.1 +2.4**
baz=297,SNR=39
DLBC ScP **ScP 20 08 42.1 +1.0**
baz=297,SNR=6.8
KNGR Kungurtug, Tuv 36.85 289⇓ *iP* **P 20 02 58.8 +1.4**
KNGR pmax pmax
comp=Z,22nm,0.9s
T35M Bob Quinn 36.89 59 P **P 20 03 00.5 +3.0**
baz=299,SNR=23
T35M ScP **ScP 20 08 44.5 +1.3**
baz=299,SNR=5.2
V35K Ketchikan 37.02 62 P **P 20 03 00.5 +1.9**
baz=300,SNR=5.4
JOW Kunigami 37.09 232 P **P 20 02 59.0 -0.5**
comp=Z,19nm,0.4s,baz=49,slow=8.1,SNR=5.4
comp=Z,19nm,0.4s
JOW Kunigami 37.09 232 IAmb IAmb 20 03 00.1
comp=Z,33nm,0.8s
NJ2 Nanjing 37.38 248 *eP* **P 20 03 00.5 -1.4**
NJ2 pmax pmax
comp=Z,29nm,0.7s
U35K Hyder 37.52 60 P **P 20 03 04.8 +2.1**
baz=300
DIB Dawson Inlet, 37.68 65 IAmb IAmb 20 03 06.7
comp=Z,24nm,0.8s
KOTAN Kotaneelee Air 38.26 52 P **P 20 03 10.7 +1.7**
baz=298,SNR=7.9
LYN LuoYang 38.91 257 ⇑P **P 20 03 13.8 -0.8**
LYN pP pP 20 03 58.3 +3.3
LYN PcP **PcP 20 05 21.5 +0.3**
LYN pmax pmax
comp=Z,26nm,0.7s
BBB Bella Bella 40.46 64 P **P 20 03 26.7 -0.5**
BBB IAmb IAmb 20 03 29.9
comp=Z,29nm,0.8s
RES Resolute Bay 40.72 23 P **P 20 03 29.6 +0.5**
RES Resolute Bay 40.72 23 P **P 20 03 29.6 +0.5**
RES pmax pmax
comp=Z,12nm,1.4s
WHN Wuhan 40.94 251 P **P 20 03 29.5 -1.9**
WHN PcP **PcP 20 05 28.0 +0.2**
WHN pmax pmax
comp=Z,30nm,0.8s
YKA Yellowknife Ar 41.06 45 P **P 20 03 32.4 +0.5**
comp=Z,34nm,0.7s,baz=309,slow=7.9,SNR=591
YKA pP **pP 20 04 12.8 +0.4**
comp=Z,4.1nm,0.8s,baz=312,slow=7.4,SNR=1.9
YKA PcP **PcP 20 05 27.8 +0.1**
comp=Z,3.3nm,0.7s,baz=326,slow=3.8,SNR=6.5
YKA ScP **ScP 20 08 59.3 +0.2**
comp=Z,2.0nm,0.7s,baz=50,slow=10,SNR=16
YKA PKiKP **PKiKP 20 12 33.1 -1.7**
comp=Z,0.1nm,0.7s,baz=286,slow=2.8,SNR=3.5
comp=Z,34nm,0.7s
YKAW1 Yellowknife Wh 41.11 45 IAmb IAmb 20 03 34.1
comp=Z,45nm,0.7s
HOLB Holberg 41.34 66 P **P 20 03 33.6 -0.9**
HOLB IAmb IAmb 20 03 36.8
comp=Z,46nm,0.8s
GTA2 Gaotai 42.52 274 *eP* **P 20 03 44.0 -0.3**
GTA2 pP pP 20 04 27.0 +1.8
GTA2 PcP **PP 20 05 28.0 +1.4**
GTA2 S **S 20 09 54.5 +2.4**
GTA2 pmax pmax
comp=Z,11nm,0.7s
LZH Lanzhou 42.60 267 *eP* **P 20 03 46.3 +1.3**
LZH pP pP 20 04 29.5 +3.5
LZH sP sP 20 04 48.5 +1.1
LZH PcP **PcP 20 05 34.5 +1.0**
LZH pmax pmax
comp=Z,23nm,1.3s
LZH pmax pmax
comp=Z,110nm,4.5s
LZH L L
comp=Z,180nm,14.1s
LZH L L
comp=Z,130nm,13.1s
LZH L L
comp=Z,170nm,13.4s
LZDM Lanzhou Array 42.78 267 P **P 20 03 46.1 -0.5**
comp=Z,4.6nm,0.4s,baz=35,slow=5.4,SNR=4.5
LZDM PcP **PcP 20 05 33.4 -0.8**
comp=Z,16nm,0.7s,baz=29,slow=3.4,SNR=6.8
comp=Z,4.6nm,0.4s
NOR Nord 42.80 359 *iP* **P 20 03 45.2 -0.6**
NOR IAmb IAmb 20 03 46.9
comp=Z,2.8nm,0.7s
SSLB Suanglung 43.09 238 P **P 20 03 47.9 -1.0**
SSLB IAmb IAmb 20 03 57.2
comp=Z,77nm,1.9s
CBB Campbell River 43.13 65 P **P 20 03 48.5 -0.3**
YULB Yu-li 43.26 238 P **P 20 03 47.1 -3.1**
ENH Enshi 43.79 256 P **P 20 03 52.7 -1.7**
ENH Enshi 43.79 256 P **P 20 03 52.6 -1.8**
ENH pP **pP 20 04 33.4 -2.2**
ENH PcP **PcP 20 05 37.3 -0.1**
TWG Pinlang 43.85 238 P **P 20 03 54.0 -0.9**
TWG IAmb IAmb 20 03 57.5
comp=Z,20nm,0.7s
KBS Kingsbay 44.19 352 *iP* **P 20 03 57.1 +0.2**
TULEG Thule 44.25 15 *iP* **P 20 03 57.5 +0.1**
TULEG IAmb IAmb 20 03 58.5
comp=Z,10nm,0.9s
SPITS Spitsbergen Ar 44.46 350 P **P 20 03 59.1 0.0**
comp=Z,70nm,0.9s,baz=54,slow=9.3,SNR=81
SPITS pP **pP 20 04 41.3 +1.0**
comp=Z,13nm,1.0s,baz=120,slow=12,SNR=0.9
comp=Z,70nm,0.9s
SPITS Spitsbergen Ar 44.46 350 P **P 20 03 58.9 -0.2**
SPITS pmax pmax
comp=Z,104nm,1.1s
SPB2 Spitsbergen Ar 44.46 350 P **P 20 03 58.6 -0.5**
SPB2 IAmb IAmb 20 04 00.9
comp=Z,72nm,0.9s
CLRS Cowichan Lake 44.51 66 IAmb IAmb 20 04 02.4
comp=Z,45nm,1.2s
LLLB Lillooet 44.54 63 IAmb IAmb 20 04 02.8
comp=Z,40nm,0.9s
PGC Sidney 44.97 66 IAmb IAmb 20 04 05.6
comp=Z,53nm,1.5s
B04A Port Angeles 45.32 66 IAmb IAmb 20 04 08.8
comp=Z,77nm,1.5s
ZSN Zaisan 45.41 293⇓ *iP* **P 20 04 06.6 -0.4**
NEEM North Greenlan 45.55 9 *iP* **P 20 04 07.7 -0.3**
NEEM IAmb IAmb 20 04 08.7
comp=Z,33nm,1.1s
WMQ Urumqi 46.28 287 ⇓P **P 20 04 14.5 +0.6**
WMQ PcP **PcP 20 05 42.3 -3.6**
WMQ PP **PP 20 06 08.0 +2.9**
WMQ ScP **ScP 20 09 18.0 -2.9**
WMQ pmax pmax
comp=Z,25nm,1.1s
WMQ pmax pmax
comp=Z,240nm,3.7s
WMQ L L
comp=Z,180nm,24.2s
WMQ Urumqi 46.28 287 P **P 20 04 14.4 +0.5**
WMQ PcP **PcP 20 05 45.5 -0.4**
CD2 Chengdu 46.47 262 P **P 20 04 14.3 -1.2**
CD2 PcP **PcP 20 05 46.8 0.0**
CD2 pmax pmax
comp=Z,20nm,0.7s
KURK Kurchatov 46.48 300 P **P 20 04 15.5 +0.3**
KURK Kurchatov 46.48 300*d iP* **P 20 04 14.6 -0.6**
KURK pmax pmax
comp=Z,330nm,1.1s
KURK Kurchatov 46.48 300 P **P 20 04 15.0 -0.2**
KURK Kurchatov 46.48 300 P **P 20 04 14.7 -0.6**
KURK pP **pP 20 04 55.4 -1.3**
KURK PcP **PcP 20 05 45.8 -0.6**
KURBB Kurchatov Arra 46.58 300 P **P 20 04 15.5 -0.5**
comp=Z,142nm,0.6s,baz=56,slow=7.9,SNR=1126
KURBB PcP **PcP 20 05 46.1 -0.7**
comp=Z,18nm,0.6s,baz=39,slow=3.4,SNR=8.4
KURBB PP **PP 20 06 06.2 -1.4**
comp=Z,30nm,0.9s,baz=51,slow=10,SNR=9.6
KURBB S **S 20 10 42.4 -7.6**
comp=Z,2.0nm,1.0s,baz=52,slow=13,SNR=5.3
comp=Z,142nm,0.6s
D05A Enumclaw 46.66 66 IAmb IAmb 20 04 19.5
comp=Z,64nm,1.4s
BLKN Baker Lake 46.74 36 P **P 20 04 17.0 -0.1**
BLKN IAmb IAmb 20 04 18.0
comp=Z,56nm,0.5s
MK31 Makanchi Array 47.17 294*d iP* **P 20 04 19.6 -1.1**
MKAR Makanchi Array 47.17 294 P **P 20 04 19.7 -1.0**
comp=Z,28nm,0.4s,baz=49,slow=6.6,SNR=565
MKAR PP **PP 20 06 12.8 -0.2**
comp=Z,7.0nm,0.7s,baz=50,slow=9.7,SNR=3.6
MKAR S **S 20 10 54.3 -4.2**
comp=Z,1.8nm,0.9s,baz=51,slow=16,SNR=4.0
comp=Z,28nm,0.4s
MKAR Makanchi Array 47.17 294 P **P 20 04 19.4 -1.3**
MKAR Makanchi Array 47.17 294 P **P 20 04 19.4 -1.3**
ILON Igloolik, Nuna 47.25 25 P **P 20 04 21.2 +0.3**
B08A Colville Reser 47.25 64 IAmb IAmb 20 04 23.3
comp=Z,36nm,1.1s
LTY Liberty 47.29 65 IAmb IAmb 20 04 23.6
comp=Z,60nm,1.7s
KULLO Kullorsuaq 47.47 13 *i P* **P 20 04 22.6 0.0**
KULLO IAmb IAmb 20 04 23.2
comp=Z,45nm,1.1s
GOMU GeErMu 47.61 274 P **P 20 04 24.0 -0.7**
GOMU PcP **PcP 20 05 50.5 -0.7**
GOMU pmax pmax
comp=Z,37nm,0.8s
DAG Danmarks Havn 47.66 360 *i* P **P 20 04 23.0 -1.0**
DAG IAmb IAmb 20 04 25.6
comp=Z,8.0nm,0.8s
HOOD Mount Hood Mea 48.07 68 IAmb IAmb 20 04 29.9
comp=Z,49nm,0.8s
WAH2 Wahluke Slope 48.19 65 IAmb IAmb 20 04 29.8
comp=Z,22nm,0.6s
I03D Drain, OR 48.27 71 IAmb IAmb 20 04 35.9
comp=Z,102nm,1.8s
GYA Guiyang 48.31 255 ⇑P **P 20 04 30.5 +0.7**
GYA pmax pmax
comp=Z,9.0nm,0.6s
F07A Phinny Hill Vi 48.58 66 IAmb IAmb 20 04 33.6
comp=Z,42nm,0.7s
SZP Santa 48.69 235 P **P 20 04 34.1 +1.6**
I04A Tendick Farm, 48.70 70 IAmb IAmb 20 04 34.5
comp=Z,78nm,1.7s
BVAR Borovoye Array 48.86 307 P **P 20 04 33.0 -0.5**
comp=Z,74nm,0.7s,baz=54,slow=7.7,SNR=447
BVAR PcP **PcP 20 05 54.4 -0.5**
comp=Z,14nm,0.6s,baz=61,slow=2.7,SNR=6.0
BVAR PP **PP 20 06 28.7 +0.5**
comp=Z,16nm,0.7s,baz=54,slow=10,SNR=6.5
BVAR ScP **ScP 20 09 30.4 -1.1**
comp=Z,3.8nm,0.7s,baz=66,slow=3.6,SNR=6.7
BVAR LR LR 20 25 54.4
comp=Z,61nm,19.9s,baz=17,slow=37
comp=Z,74nm,0.7s
BORK Borovoye 48.88 307*d iP* **P 20 04 33.1 -0.5**
BORK pmax pmax
comp=Z,107nm,0.8s
UPNV Upernavik 49.22 14 *i P* **P 20 04 35.5 -0.5**
UPNV IAmb IAmb 20 04 36.4
comp=Z,14nm,0.7s
J04A Umpqua Nationa 49.24 70 IAmb IAmb 20 04 39.2
comp=Z,44nm,0.6s
J05D Fort Rock, OR 49.68 70 IAmb IAmb 20 04 42.3
comp=Z,27nm,0.6s
BRZS Berezniki 49.83 302 *eP* **P 20 04 40.8 -0.1**
L04D Klamath Falls 49.84 71 IAmb IAmb 20 04 43.3
comp=Z,28nm,0.6s
KHMM Horse Mountain 50.01 74 IAmb IAmb 20 04 46.9
comp=Z,28nm,0.8s
DBG Daneborg 50.14 0 *i P* **P 20 04 42.4 -0.5**
DBG IAmb IAmb 20 04 43.0
comp=Z,6.4nm,0.9s
TDK Taldygorghan 50.38 294⇓ *iP* **P 20 04 44.8 -0.3**
comp=Z,40nm,0.7s
SVE Sverdlovsk 50.43 315*c iP* **P 20 04 45.4 +0.2**
SVE pmax pmax
comp=Z,75nm,0.7s
KMRM Mail Ridge 50.48 74 IAmb IAmb 20 04 49.2
comp=Z,27nm,0.7s
ARA0 ARCESS Array S 50.74 341 *eP* **P 20 04 46.6 -0.8**
ARCES ARCESS Array B 50.74 341 P **P 20 04 46.8 -0.6**
comp=Z,2.0nm,0.4s,baz=43,slow=9.6,SNR=12
ARCES PcP **PcP 20 06 01.4 -0.1**
comp=Z,7.9nm,0.7s,baz=29,slow=4.3,SNR=14
comp=Z,2.0nm,0.4s
ARCES ARCESS Array B 50.74 341 IAmb IAmb 20 06 17.6
comp=Z,110nm,1.9s
APA Apatity 50.80 337⇓ *eP* **P 20 04 45.4 -2.4**
APA *e**PP **pP 20 05 25.5 -4.5**
APA *e* 20 06 42.7
APA pmax pmax
comp=Z,8.0nm,1.4s
APA MLR MLR
comp=Z,1µm,5.3s
PZH PanZhiHua 50.99 260 P **P 20 04 50.3 +0.3**
FFC Flin Flon 51.02 48 P **P 20 04 50.4 +0.7**
FFC pP **pP 20 05 32.0 +0.2**
FFC PcP **PcP 20 06 03.4 +0.6**
SHLS Shalkode 51.12 292 *eP* **P 20 04 48.6 -2.2**
PLID Pearl Lake 51.15 65 IAmb IAmb 20 04 53.0
comp=Z,20nm,0.7s
SUMG Summit 51.22 7 IAmb IAmb 20 04 52.9
comp=Z,28nm,1.1s
SUMG Summit 51.22 7 *i P* **P 20 04 51.6 +0.2**
SUMG IAmb IAmb 20 04 52.6
comp=Z,27nm,1.1s
ARXS Arharly 51.23 294 *eP* **P 20 04 50.7 -0.8**
FCC Fort Churchill 51.25 40 IAmb IAmb 20 04 52.5
comp=Z,75nm,1.4s
KPKS Kokpek 51.31 293 *eP* **P 20 04 51.9 -0.3**
UZB Uzynbulak 51.35 292 *eP* **P 20 04 52.0 -0.5**
comp=Z,24nm,0.9s
KMI2 Kunming 51.50 258 P **P 20 04 55.8 +1.9**
KMI2 PcP **PcP 20 06 05.3 -0.1**
KMI2 pmax pmax
comp=Z,7.0nm,0.8s
JETT Jettan, Norway 51.60 343 *eP* **P 20 04 53.4 -0.5**
KTK1 Kautokeino 51.60 342 *eP* **P 20 04 53.5 -0.3**
SAATT Saattut 51.61 13 *i P* **P 20 04 53.2 -0.6**
SAATT IAmb IAmb 20 04 55.3
comp=Z,17nm,1.0s
ARTI Arti 51.62 316 LR LR 20 29 05.7
comp=Z,124nm,18.7s,baz=37,slow=38
ARTI Arti 51.62 316*d iP* **P 20 04 53.6 -0.5**
ARTI *PP **pP 20 05 36.3 -0.1**
ARTI 20 06 03.3
ARTI S **S 20 12 01.0 +1.0**
ARTI SS **SS 20 15 39.7 +1.8**
ARTI pmax pmax
comp=Z,82nm,0.6s
ARTI Arti 51.62 316 P **P 20 04 53.7 -0.5**
ARTI pP **pP 20 05 36.0 -0.4**
ARTI PcP **PcP 20 06 04.2 -0.8**
SATY Saty 51.74 292⇓ *iP* **P 20 04 54.8 -0.5**
comp=Z,19nm,0.6s
TRO Tromso 51.77 344 *eP* **P 20 04 54.4 -0.6**
EGMT Eagleton 52.20 58 IAmb IAmb 20 05 00.2
comp=Z,22nm,0.8s
MDOK Medeo 52.37 293 *eP* **P 20 04 59.5 -0.5**
KNDC Almaty 52.37 294 P **P 20 04 59.4 -0.6**
AAA Alma-Ata 52.41 294 *eP* **P 20 04 59.8 -0.4**
comp=Z,44nm,0.7s
CVS Carmenet Viney 52.50 75 IAmb IAmb 20 05 48.2
comp=Z,35nm,1.2s
TNSS Tian-Shan 52.51 293 *eP* **P 20 05 00.6 -0.8**
QIZ Qiongzhong 52.65 247 P **P 20 05 01.3 -0.9**
QIZ S **S 20 12 15.3 +0.5**
QIZ sS **sS 20 13 26.5 -2.8**
QIZ pmax pmax
comp=Z,190nm,3.6s
QIZ L L
comp=Z,120nm,14.5s
QIZ L L
comp=Z,120nm,16.0s
QIZ L L
comp=Z,67nm,14.5s
TARG Taragay, Kyrgy 52.99 292 IAmb IAmb 20 05 18.9
comp=Z,24nm,0.8s
PAHR Pah Rah Range 53.18 72 IAmb IAmb 20 05 08.1
comp=Z,15nm,0.7s
TKM2 Tokmak 2 53.29 294 P **P 20 05 06.1 -0.7**
SNR=66
KIRV Kirov 53.31 322*d iP* **P 20 05 06.2 -0.2**
SGDS Sogindy 53.41 295 *eP* **P 20 05 07.1 -0.4**
ULHL Ulahol 53.44 293 P **P 20 05 09.1 +1.1**
SNR=10
PNTR Pine Nut 53.51 72 IAmb IAmb 20 05 12.6
comp=Z,48nm,0.6s
USP Ospenovka 53.61 295 P **P 20 05 08.8 -0.1**
SNR=68
CHMS Chumysh 53.67 295 P **P 20 05 09.1 -0.3**
SNR=46
YHB Horse Butte 53.81 62 IAmb IAmb 20 05 13.8
comp=Z,24nm,0.8s
KBK Karagaybulak 53.81 294 P **P 20 05 09.9 -0.7**
SNR=86
STEI Steigen 53.89 344 *eP* **P 20 05 10.1 -0.4**
LOF Lofoten 53.95 345 *eP* **P 20 05 10.6 -0.4**
AAK Ala-Archa 54.06 295 LR LR 20 32 01.7
comp=Z,43nm,18.3s,baz=40,slow=40
AAK Ala-Archa 54.06 295 P **P 20 05 12.0 -0.4**
SNR=126
AAK Ala-Archa 54.06 295 *i P* **P 20 05 12.2 -0.2**
SNR=173
AAK Ala-Archa 54.06 295*d iP* **P 20 05 11.9 -0.4**
AAK pmax pmax
comp=Z,94nm,0.9s
AAK Ala-Archa 54.06 295 P **P 20 05 12.4 0.0**
NRN Naryn 54.15 293 IAmb IAmb 20 05 15.1
comp=Z,21nm,0.8s
YFT Old Faithful 54.20 62 IAmb IAmb 20 05 17.4
comp=Z,28nm,0.7s
YNE Yellowstone No 54.22 61 IAmb IAmb 20 05 15.8
comp=Z,22nm,0.8s
YMP Mirror Lake Pl 54.34 61 IAmb IAmb 20 05 17.2
comp=Z,18nm,0.9s
UCH Uchtor 54.34 294 P **P 20 05 14.9 +0.1**
SNR=28
H17A Grant Village 54.38 62 IAmb IAmb 20 05 18.6
comp=Z,31nm,1.0s
FAUS Fauske 54.38 344 *eP* **P 20 05 13.6 -0.5**
EKS2 Erkin-Say 54.41 295 P **P 20 05 14.8 0.0**
SNR=93
RLMT Red Lodge 54.50 60 IAmb IAmb 20 05 18.3
comp=Z,47nm,0.9s
FLWY Flagg Ranch 54.54 62 IAmb IAmb 20 05 19.0
comp=Z,16nm,0.7s
ZIRO ZIRO 54.62 268 *eP* **P 20 05 17.6 +1.0**
KLMR Klimovskoe 54.68 329 *eP* **P 20 05 14.9 -1.4**
KLMR *e**PP **pP 20 05 58.2 -0.9**
KLMR *e* 20 07 19.1
KLMR pmax pmax
comp=Z,108nm,1.0s
NVAR Mina Array Bea 54.69 72 P **P 20 05 18.5 +1.5**
comp=Z,15nm,0.7s,baz=302,slow=7.3,SNR=101
NVAR pP **pP 20 05 59.4 -0.2**
comp=Z,15nm,0.8s,baz=295,slow=7.4,SNR=7.2
NVAR ScP **ScP 20 09 58.2 +0.9**
comp=Z,1.0nm,0.8s,baz=300,slow=4.1,SNR=4.1
comp=Z,15nm,0.7s
NVAR Mina Array Bea 54.69 72 P **P 20 05 18.8 +1.8**
LHV Little Huntoon 54.71 72 IAmb IAmb 20 05 20.4
comp=Z,23nm,0.9s
LAO LASA Array 54.84 57 IAmb IAmb 20 05 20.3
comp=Z,35nm,0.9s
MDPB Devils Postpil 54.85 73 IAmb IAmb 20 06 04.0
comp=Z,18nm,0.9s
LOHW Long Hollow 54.93 63 IAmb IAmb 20 05 21.6
comp=Z,19nm,1.1s
SNOW Snow King Moun 54.96 63 IAmb IAmb 20 07 01.4
comp=Z,15nm,0.5s
MOKO MOKOCHONG 55.18 266 *eP* **P 20 05 20.0 -0.6**
MOKO IAML 20 06 25.1
comp=N,12nm,0.8s
MOKO IAML 20 06 25.4
comp=E,15nm,0.5s
VAGH Vaagaholmen 55.29 345 *eP* **P 20 05 19.3 -1.3**
SFJD Kangerlussuaq 55.31 14 P **P 20 05 19.9 -0.9**
SFJD IAmb IAmb 20 05 20.5
comp=Z,15nm,0.6s
SFJD Kangerlussuaq 55.31 14 P **P 20 05 19.9 -0.9**
SFJD pmax pmax
comp=Z,15nm,0.6s
RAUS Rausandaksla 55.45 344 *eP* **P 20 05 21.1 -0.7**
DZA Taraz 55.48 297 *eP* **P 20 05 22.1 -0.4**
KONS Konsvik 55.53 345 *eP* **P 20 05 22.0 -0.4**
MOR8 Moi Rana 55.64 344 *eP* **P 20 05 21.3 -1.9**
SPUT South Promonto 55.66 66 IAmb IAmb 20 05 26.7
comp=Z,38nm,1.3s
TAWA Tawang 55.69 269 *eP* **P 20 05 25.7 +1.2**
TAWA IAmb IAmb 20 05 40.9
comp=Z,17nm,0.9s
KK31 Karatay Array 55.74 298 *iP* **P 20 05 23.3 -0.9**
KKAR Karatay Array 55.74 298 P **P 20 05 23.1 -1.1**
KKAR Karatay Array 55.74 298 P **P 20 05 23.2 -1.1**
ARSB Arslanbob 55.79 295 IAmb IAmb 20 05 27.3
comp=Z,35nm,0.6s
KOHI KOHIMA 55.87 266 *eP* **P 20 05 25.9 +0.4**
KOHI IAmb IAmb 20 05 29.8
comp=Z,20nm,0.5s
LEIR Leirfjorden 55.89 345 *eP* **P 20 05 24.3 -0.6**
TEZP TEZPUR 55.92 268 *eP* **P 20 05 25.1 -0.6**
KSH2 Kashi 56.04 291 P **P 20 05 26.3 -0.3**
KSH2 pmax pmax
comp=Z,44nm,0.9s
BW06 Boulder Array 56.07 63 IAmb IAmb 20 05 29.1
comp=Z,39nm,1.2s
PD31 Pinedale Array 56.07 63 IAmb IAmb 20 05 29.1
comp=Z,39nm,1.2s
PDAR Pinedale Array 56.07 63 P **P 20 05 28.1 +1.3**
comp=Z,14nm,0.7s,baz=333,slow=2.4,SNR=148
PDAR pP **pP 20 06 09.7 +0.1**
comp=Z,8.1nm,0.8s,baz=321,slow=3.8,SNR=4.8
PDAR ScP **ScP 20 10 04.4 +1.1**
comp=Z,1.2nm,1.0s,baz=48,slow=2.2,SNR=4.9
comp=Z,14nm,0.7s
PDAR Pinedale Array 56.07 63 P **P 20 05 27.3 +0.5**
BRLS Borolday 56.13 298 *eP* **P 20 05 28.5 +1.5**
comp=Z,14nm,0.8s
AB31 Akbulak array 56.18 309 P **P 20 05 26.8 -0.4**
AB31 Akbulak array 56.18 309 *eP* **P 20 05 26.7 -0.5**
GRAC Grapevine Rang 56.24 73 IAmb IAmb 20 06 47.0

comp=Z,17nm,0.6s
DUG Dugway, Tooele 56.29 67 IAmb IAmb 20 05 31.2
comp=Z,28nm,0.9s
TCUT Toone Canyon 56.34 65 IAmb IAmb 20 05 33.3
comp=Z,18nm,0.7s
S11A Rachel 56.63 71 IAmb IAmb 20 05 35.2
comp=Z,24nm,0.7s
IMP Imphal 56.66 266 *e*P P **20 05 29.7 -1.3**
IMP IAmb IAmb 20 05 35.1
comp=Z,12nm,0.7s
IMP IAML 20 06 30.4
comp=E,14nm,0.5s
IMP IAML 20 06 32.3
comp=N,13nm,0.5s
IUG luzhnay 56.68 297 *e*P P **20 05 30.7 -0.3**
comp=N,29nm,0.8s
CHM Chimkent 56.77 298 *e*P P **20 05 31.2 -0.3**
comp=N,31nm,0.9s
ULM Lac du Bonnet 56.84 48 P P **20 05 31.9 +0.1**
comp=N,4.9nm,0.4s,baz=323,slow=6.7,SNR=13
ULM pP **pP 20 06 15.1 +0.3**
comp=N,15nm,1.1s,baz=317,slow=9.0,SNR=4.1
ULM ScP **ScP 20 10 06.0 -0.2**
comp=N,5.2nm,0.8s,baz=288,slow=2.9,SNR=6.0
comp=N,4.9nm,0.4s
ULM Lac du Bonnet 56.84 48 **pP 20 06 15.2 +0.3**
ULM IAmb IAmb 20 06 16.8
comp=Z,33nm,1.2s
ULM **ScP 20 10 07.1 +0.9**
GUWA GUWAHATI 56.87 269 *e*P P **20 05 31.4 -0.9**
GUWA IAmb IAmb 20 05 34.5
comp=Z,19nm,1.0s
GUWA IAML 20 06 26.2
comp=N,13nm,0.6s
GUWA IAML 20 06 30.8
comp=E,13nm,0.6s
TPNV Topopah Spring 56.88 72 IAmb IAmb 20 06 26.9
comp=Z,19nm,0.9s
FURC Furnace Creek, 56.90 73 IAmb IAmb 20 06 18.4
comp=Z,42nm,1.0s
MPU Maple Canyon 57.03 66 IAmb IAmb 20 05 36.5
comp=Z,18nm,0.7s
GWY Greenwater Val 57.22 73 IAmb IAmb 20 05 37.4
comp=Z,16nm,0.8s
SHL Shillong 57.25 268 P P **20 05 33.4 -1.9**
SNR=5.6
SHL Shillong 57.25 268 *e*P P **20 05 33.3 -2.0**
SHL IAmb IAmb 20 05 35.6
comp=Z,11nm,0.6s
CCCA Chr Cany lake 57.33 74 IAmb IAmb 20 05 38.3
comp=Z,28nm,0.9s
TCRU Three Creeks R 57.66 68 IAmb IAmb 20 06 02.0
comp=Z,15nm,0.4s
FIA1 FINESS Array S 57.68 336 P P **20 05 36.6 -1.0**
FINES FINESS Array B 57.68 336 P P **20 05 37.0 -0.6**
comp=Z,19nm,0.6s,baz=30,slow=8.8,SNR=111
FINES PcP **PcP 20 06 27.6 -0.7**
comp=Z,7.2nm,0.6s,baz=55,slow=3.4,SNR=5.0
comp=Z,19nm,0.6s
FINES FINESS Array B 57.68 336 P P **20 05 36.8 -0.7**
GTK Tadong 57.74 272 *e*P P **20 05 39.5 +0.8**
DRK Karamyk 57.76 294 IAmb IAmb 20 05 40.6
comp=Z,31nm,0.7s
RSSD Black Hills 57.77 58 P P **20 05 39.8 +1.1**
RSSD Black Hills 57.77 58 P P **20 05 39.8 +1.1**
RSSD pmax pmax
comp=Z,53nm,0.7s
RSSD Black Hills 57.77 58 P P **20 05 39.8 +1.1**
RSSD pP **pP 20 06 22.1 +0.3**
UBPT Khong Chiam 58.05 249 P P **20 05 40.6 -0.1**
Q16A Castle Valley 58.09 67 IAmb IAmb 20 06 26.9
comp=Z,23nm,0.8s
EPLO Experimental L 58.17 47 IAmb IAmb 20 06 26.2
comp=Z,50nm,1.2s
EVN Everest 58.26 274 IAmb IAmb 20 05 46.1
comp=Z,27nm,0.7s
AGMN Agassiz Nation 58.33 50 IAmb IAmb 20 06 27.2
comp=Z,36nm,1.1s
PKCU Pink Cliffs 58.60 69 IAmb IAmb 20 05 58.1
comp=Z,16nm,0.9s
KNB Kanab 58.65 69 IAmb IAmb 20 06 34.3
comp=Z,18nm,1.1s
CHTO Chiang Mai 58.66 257 P P **20 05 44.9 -0.1**
CHTO Chiang Mai 58.66 257 P P **20 05 43.5 -1.5**
CHTO Chiang Mai 58.66 257 P P **20 05 43.5 -1.5**
CHTO pmax pmax
comp=Z,15nm,1.0s
CHTO Chiang Mai 58.66 257 P P **20 05 44.4 -0.6**
CHTO Chiang Mai 58.66 257 P P **20 05 44.9 -0.1**
BELG Belogornoye 58.76 319 *d* iP P **20 05 44.9 -0.2**
BELG pmax pmax
comp=Z,38nm,0.9s
ALCI Alchi Leh 58.84 286 *e*P P **20 05 47.5 +1.0**
CM31 Chiang Mai Arr 58.95 257 IAmb IAmb 20 06 35.2
comp=Z,35nm,0.7s
CM31 Chiang Mai Arr 58.95 257 P P **20 05 47.0 0.0**
CMAR Chiang Mai Arr 58.95 257 P P **20 05 47.0 0.0**
comp=Z,5.2nm,0.7s,baz=19,slow=7.1,SNR=46
CMAR PcP **PcP 20 06 33.2 -0.8**
comp=Z,22nm,0.7s,baz=14,slow=3.5,SNR=36
CMAR ScP **ScP 20 10 16.8 +0.7**
comp=Z,3.2nm,0.8s,baz=16,slow=4.1,SNR=12
comp=Z,5.2nm,0.7s
CMAR Chiang Mai Arr 58.95 257 P P **20 05 45.9 -1.1**
CMAR Chiang Mai Arr 58.95 257 *i* P P **20 05 46.5 -0.5**
CMAR pmax pmax
comp=Z,6.0nm,0.6s
SAIH SAIHA 59.04 265 *e*P P **20 05 46.9 -0.8**
SAIH IAmb IAmb 20 05 50.3
comp=Z,30nm,0.6s
SAIH IAML 20 06 37.3
comp=E,349nm,0.5s
SAIH IAML 20 06 40.6
comp=N,137nm,0.6s
PFO Pinyon Flats O 59.26 75⇑ *i* P P **20 05 49.9 +0.8**
PFO pmax pmax
comp=Z,7.0nm,0.6s
MOS Moscow 59.46 326 *e*P P **20 05 49.1 -0.8**
MOS *e* 20 06 33.6
MOS pmax pmax
comp=Z,61nm,0.8s
PV21 Cone Mtn., Par 59.49 65 IAmb IAmb 20 05 54.5
comp=Z,16nm,0.7s
IRM Iron Mountain 59.56 73 IAmb IAmb 20 06 37.0
comp=Z,26nm,1.2s
PV22 Blue Mesa, Par 59.61 65 IAmb IAmb 20 06 37.1
comp=Z,68nm,1.5s
PV07 Paradox Valley 59.75 65 IAmb IAmb 20 06 38.0
comp=Z,23nm,1.0s
SHBG Sahibganj 59.90 271 *e*P P **20 05 51.4 -2.0**
SHBG IAmb IAmb 20 05 57.6
comp=Z,52nm,0.7s
PV15 Paradox Valley 59.91 65 IAmb IAmb 20 06 39.1
comp=Z,30nm,0.9s
PV01 Paradox Valley 60.02 66 P P **20 05 54.2 -0.1**
PV01 IAmb IAmb 20 05 57.7
comp=Z,11nm,0.6s
F33A 5 Mile Ranch, 60.03 52 P P **20 05 53.8 -0.2**
F33A IAmb IAmb 20 06 38.6
comp=Z,53nm,1.1s
MOL Molde 60.05 346 *e*P P **20 05 53.8 -0.1**
CBX Cerro Bola 60.14 76 P P **20 05 56.6 +1.5**
CBX IAmb IAmb 20 05 57.3
comp=Z,17nm,0.8s
VSU Vasula 60.16 334 *d* iP P **20 05 53.0 -1.6**
VSU pmax pmax
comp=Z,70nm,1.6s
BAKI Biak 60.19 208 P P **20 05 55.1 -0.3**
comp=Z,62nm,1.2s
BLYC Blythe 60.21 73 IAmb IAmb 20 06 41.3
comp=Z,24nm,1.2s
KLP Kalpa 60.30 283 *e*P P **20 05 55.2 -1.2**
KLP IAmb IAmb 20 05 59.9
comp=Z,47nm,0.6s
OBN Obninsk 60.31 327 *de*P P **20 05 54.6 -1.1**
OBN *e* 20 06 38.3
OBN *e**PP **PcP 20 06 43.2 +4.4**
OBN *e**SP **sP 20 06 59.5 -0.6**
OBN *e*S S **20 13 47.7 -6.8**
OBN *e*SS **SS 20 17 56.9 +2.6**
OBN pmax pmax
comp=Z,77nm,1.2s
OBN Obninsk 60.31 327 P P **20 05 54.7 -1.0**
comp=Z,39nm,0.5s
JOSI Joshimath 60.32 281 *e*P P **20 05 56.1 -0.3**
JOSI IAmb IAmb 20 06 06.4
comp=Z,36nm,0.4s
DOMB Dombas 60.34 345 *e*P P **20 05 55.1 -0.8**
JAY Jayapura 60.35 203 P P **20 05 57.4 +0.9**
comp=Z,34nm,0.9s
EYMN Ely 60.44 47 IAmb IAmb 20 06 41.3
comp=Z,50nm,1.1s
TSSA Tissa 60.45 286 *e*P P **20 05 56.4 -0.9**
TSSA IAmb IAmb 20 05 59.1
comp=Z,62nm,0.6s
AKN Aaknes 60.50 346 *e*P P **20 05 56.9 -0.1**
MWPI Manokwari, Pap 60.51 211 P P **20 06 00.5 +2.9**
comp=Z,99nm,1.4s
GENI Genyem 60.54 203 P P **20 05 59.6 +1.9**
WUAZ Wupatki 60.55 69 IAmb IAmb 20 06 44.2
comp=Z,18nm,1.1s
GLA Glamis 60.57 74 IAmb IAmb 20 06 00.4
comp=Z,19nm,0.8s
PTH Pithoragarh 60.71 280 *e*P P **20 05 57.5 -1.5**
PTH IAmb IAmb 20 06 05.3
comp=Z,19nm,0.9s
KKM Kota Kinabalu 60.74 233 P P **20 06 00.8 +1.6**
KKM Kota Kinabalu 60.74 233 IAmb IAmb 20 06 01.9
comp=Z,46nm,0.9s
KKM Kota Kinabalu 60.74 233 P P **20 06 01.1 +1.9**
comp=Z,673nmcomp=Z,70nm,1.3s
MVCO Mesa Verde 60.76 66 IAmb IAmb 20 06 44.3
comp=Z,40nm,1.6s
NC303 NORSAR Array S 60.76 343 IAmb IAmb 20 07 51.6
comp=Z,81nm,1.7s
DHRM DHARAMSHALA 60.82 285 *e*P P **20 05 58.6 -1.2**
DHRM IAmb IAmb 20 06 03.3
comp=Z,122nm,0.6s
LGTI Lohaghat 60.91 280 *e*P P **20 05 58.3 -2.1**
NB2 NORSAR Subarra 60.96 343 P P **20 05 59.7 -0.4**
comp=Z,5.2nm,0.5s,baz=20,slow=6.9
NB2 PcP **PcP 20 06 40.8 -0.7**
comp=Z,3.7nm,0.7s,baz=26,slow=4.6
NB2 NORSAR Subarra 60.96 343 P P **20 05 59.7 -0.4**
NOA NORSAR Array B 60.96 343 P P **20 05 59.3 -0.8**
comp=Z,6.8nm,0.5s,baz=19,slow=6.9,SNR=44
NOA PcP **PcP 20 06 40.7 -0.8**
comp=Z,9.3nm,0.9s,baz=21,slow=2.9,SNR=8.2
comp=Z,6.8nm,0.5s
THN Thein Dam 60.97 286 *e*P P **20 05 59.6 -0.9**
THN IAmb IAmb 20 06 09.3
comp=Z,27nm,0.9s
RKPI Ransiki, Papua 61.03 210 P P **20 06 02.5 +1.5**
comp=Z,57nm,0.8s
NC602 NORSAR Array S 61.20 343 *e*P P **20 06 01.3 -0.3**
SMLA Simla 61.20 284 *e*P P **20 06 00.8 -1.3**
SMLA IAmb IAmb 20 06 03.5
comp=Z,55nm,0.5s
JMU Jammu 61.21 287 *e*P P **20 06 01.5 -0.6**
JMU IAmb IAmb 20 06 06.3
comp=Z,51nm,1.0s
SWI Sorong 61.29 214 P P **20 06 03.8 +1.0**
comp=Z,1μmcomp=Z,97nm,1.1s
SIJI Sorong 61.29 214 P P **20 06 03.8 +1.0**
comp=Z,676nmcomp=Z,85nm,0.9s
DDI Dehra Dun 61.33 282 *e*P P **20 06 02.3 -0.7**
DDI IAmb IAmb 20 06 05.5
comp=Z,68nm,0.6s
MNI Manado 61.34 221 P P **20 06 04.0 +0.8**
comp=Z,83nm,0.7s
NIL Nilore 61.39 288 P P **20 06 02.1 -1.3**
NIL Nilore 61.39 288 P P **20 06 02.1 -1.3**
NIL pmax pmax
comp=Z,41nm,0.6s
NIL Nilore 61.39 288 P P **20 06 03.2 -0.2**
HFS Hagfors 61.40 342 P P **20 06 01.8 -1.2**
comp=Z,9.7nm,0.5s,baz=42,slow=4.6,SNR=68
HFS PcP **PcP 20 06 42.5 -0.7**
comp=Z,8.4nm,0.6s,baz=70,slow=4.7,SNR=6.0
comp=Z,9.7nm,0.5s
BHK Bhakra 61.43 284 *e*P P **20 06 02.6 -1.0**
BHK IAmb IAmb 20 06 05.4
comp=Z,53nm,0.8s
E38A The Farm, Brul 61.48 48 IAmb IAmb 20 06 48.0
comp=Z,25nm,1.0s
ECSD EROS Data Cent 61.52 53 IAmb IAmb 20 06 48.5
comp=Z,24nm,1.1s
HYA Hoyanger 61.59 346 *e*P P **20 06 04.1 -0.1**
GAYA Gaya 61.59 273 *e*P P **20 06 03.7 -1.1**
GAYA IAmb IAmb 20 06 07.3
comp=Z,30nm,0.8s
LPSR Galich'ya Gora 61.67 324 *e*P P **20 06 04.1 -0.8**
LPSR pmax pmax
comp=Z,61nm,0.8s
W18A Petrified Fore 61.71 69 IAmb IAmb 20 06 52.1
comp=Z,17nm,1.1s
SKAR Skarslia 61.75 345 *e*P P **20 06 05.3 -0.1**
VRH Novokhopyorsk 61.87 321 *e*P P **20 06 04.8 -1.5**
VRH pmax pmax
comp=Z,20nm,0.6s
X18A Snowflake 62.05 69 IAmb IAmb 20 06 10.9
comp=Z,18nm,0.8s
OSL Oslo 62.09 343 *e*P P **20 06 07.5 0.0**
VORR Voronezh 62.35 323 *e*P P **20 06 07.0 -2.4**
VORR pmax pmax
comp=Z,20nm,0.5s
ASK Askoy 62.38 346 *e*P P **20 06 09.4 0.0**
BER Bergen 62.46 346 *e*P P **20 06 09.7 -0.2**
KONO Kongsberg 62.54 344 *e*P P **20 06 10.3 -0.2**
ODD1 Odda 62.73 345 *e*P P **20 06 11.8 -0.1**
VSR Storozhevoye 62.75 323 *e*P P **20 06 11.4 -0.7**
VSR pmax pmax
comp=Z,40nm,1.2s
T25A Trinidad 62.90 63 IAmb IAmb 20 06 59.5
comp=Z,78nm,1.7s
VORD Divnogorie 62.92 323 *e*P P **20 06 11.8 -1.4**
VORD pmax pmax
comp=Z,20nm,0.9s
FAKI Fak Fak 62.93 212 P P **20 06 14.8 +1.1**
FAKI Fak Fak 62.93 212 P P **20 06 14.8 +1.1**
comp=Z,688nmcomp=Z,51nm,1.2s
KBL Kabul 62.94 292 P P **20 06 12.0 -1.9**
KBL IAmb IAmb 20 06 14.2
comp=Z,33nm,0.7s
KBL Kabul 62.94 292 P P **20 06 12.0 -1.9**
KBL pmax pmax
comp=Z,33nm,0.7s
KBL Kabul 62.94 292 P P **20 06 11.9 -2.0**
SNR=15
NDI New Delhi 63.06 282 *e*P P **20 06 12.6 -1.9**
NDI IAmb IAmb 20 06 16.6
comp=Z,19nm,1.2s
NPLP NPLP New Delhi 63.12 282 *e*P P **20 06 13.2 -1.6**
ALBI Allahabad 63.12 276 *e*P P **20 06 12.8 -2.1**
ALBI IAmb IAmb 20 06 15.9
comp=Z,31nm,0.6s
SCHQ Schefferville 63.15 28 P P **20 06 13.9 -0.8**
comp=Z,7.2nm,0.7s,baz=13,slow=4.9,SNR=15
SCHQ pP **pP 20 06 58.0 -0.8**
comp=Z,6.8nm,0.7s,baz=357,slow=7.1,SNR=4.1
comp=Z,7.2nm,0.7s
SCHQ Schefferville 63.15 28 P P **20 06 14.0 -0.6**
TOLI2 Tolitoli 63.23 226 P P **20 06 15.9 +0.2**
TOLI2 Tolitoli 63.23 226 P P **20 06 15.0 -0.6**
BLS5 Blasjo 63.23 345 *e*P P **20 06 15.0 -0.2**
NACGM Naroch 63.31 332 *e*P P **20 06 15.8 +0.1**
comp=Z,20nm,0.9s,baz=27
TUC Tucson 63.32 71 P P **20 06 17.5 +1.2**
TUC Tucson 63.32 71 P P **20 06 17.5 +1.2**
TUC pmax pmax
comp=Z,28nm,0.5s
MRSI Marisa 63.34 224 P P **20 06 16.6 +0.2**
comp=Z,1μmcomp=Z,161nm,1.1s
MNK Minsk 63.37 331 *i* P P **20 06 15.6 -0.5**
comp=E,20nm,1.0s
MNK *i* P P **20 06 15.6 -0.5**
comp=N,14nm,1.0s
MNK *i* P P **20 06 15.6 -0.5**
comp=Z,28nm,0.9s,baz=28
MNK *i* pP **pP 20 07 01.2 +0.7**
MNK *i* PP **PP 20 08 37.3 +0.1**
MNK *i* PPP PPP 20 10 08.2
MNK *i* S **S 20 14 32.8 -0.1**
MNK *i* SS **SS 20 15 45.0 +4.0**
MNK *i* sS **ScS 20 15 54.1 +4.0**
MNK *i* SSS SSS 20 21 49.1
MNK *i* LRM MLR 20 37 47.7
comp=Z,49nm,10.0s
MNK *i* LRM MLR 20 37 48.8
comp=E,108nm,20.4s
MNK Minsk 63.37 331 *i* P P **20 06 15.5 -0.5**
MNK *i* *PP **pP 20 07 01.1 +0.7**
MNK *i* 20 08 37.3
MNK *i* PPP PPP 20 10 08.2
MNK *i* S **S 20 14 32.8 -0.1**
MNK *i* *SS **ScS 20 15 54.1 +4.0**
MNK *i* SS **SS 20 18 45.0 +3.1**
MNK pmax pmax
comp=Z,28nm,0.9s
MNK pmax pmax
comp=E,20nm,1.0s
MNK pmax pmax
comp=N,14nm,1.0s
MNK MLR MLR
comp=Z,49nm,10.0s
MNK MLR MLR
comp=E,108nm,20.0s
MNK MLR MLR
comp=N,109nm,15.0s
SONA Sohna 63.48 282 IAmb IAmb 20 06 18.3
comp=Z,16nm,0.6s
ANMO Albuquerque 63.55 66 P P **20 06 17.9 0.0**
ANMO Albuquerque 63.55 66 IAmb IAmb 20 07 03.3
comp=Z,12nm,1.0s
ANMO Albuquerque 63.55 66 *ce*P P **20 06 19.2 +1.3**
ANMO pmax pmax
comp=Z,7.0nm,0.8s
ANMO Albuquerque 63.55 66 P P **20 06 19.3 +1.3**
ANMO pP **pP 20 07 02.3 +0.5**
BNDA BANDA 63.82 277 *e*P P **20 06 17.5 -1.9**
KUDL Kundal 63.88 282 *e*P P **20 06 18.2 -1.6**
KUDL IAmb IAmb 20 06 21.2
comp=Z,34nm,0.6s
HOMB Homborsund 64.03 344 *e*P P **20 06 20.4 0.0**
DUN6 Lazy B Ranch 64.03 70 IAmb IAmb 20 06 23.6
comp=Z,21nm,0.8s
Y22A Socorro 64.08 67 IAmb IAmb 20 07 07.3
comp=Z,23nm,1.1s
SANI Sanana 64.16 219 P P **20 06 21.4 -0.3**
SANI Sanana 64.16 219 P P **20 06 21.5 -0.3**
comp=Z,1μmcomp=Z,104nm,0.8s
SNART Snartemo 64.16 345 *e*P P **20 06 21.4 +0.2**
MPSI Mapaga 64.29 226 P P **20 06 22.9 +0.3**
comp=Z,639nmcomp=Z,69nm,1.2s
RTBA Rita Blanca 64.29 63 IAmb IAmb 20 07 07.3
comp=Z,44nm,1.0s
LUWI Luwuk 64.41 223 P P **20 06 22.7 -0.7**
LUWI Luwuk 64.41 223 P P **20 06 23.1 -0.3**
comp=Z,889nmcomp=Z,95nm,0.7s
SCIA State Center 64.50 53 IAmb IAmb 20 07 09.1
comp=Z,52nm,1.0s
KRAI Karang Ratu 64.52 216 P P **20 06 25.9 +1.8**
comp=Z,66nm,0.9s
APSI Ampana 64.72 224 P P **20 06 25.7 +0.3**
121A Cookes Peak, D 64.74 69 IAmb IAmb 20 07 13.6
comp=Z,32nm,1.2s
JHNI Jhansi 64.80 279 *e*P P **20 06 22.8 -3.0**
JHNI IAmb IAmb 20 06 24.9
comp=Z,18nm,0.4s
NLAI Namlea 64.88 217 P P **20 06 28.1 +1.7**
comp=Z,676nmcomp=Z,73nm,0.8s
BNDI Bandanaira 65.16 214 P P **20 06 29.3 +1.1**
BNDI Bandanaira 65.16 214 P P **20 06 29.3 +1.1**
comp=Z,2μmcomp=Z,156nm,1.1s
BIGH Upper Bighouse 65.33 351 *e*P P **20 06 28.8 +0.1**
BIGH IAmb IAmb 20 06 29.6
comp=Z,13nm,0.7s
PCI Palu 65.44 226 P P **20 06 29.6 -0.4**
comp=Z,1μmcomp=Z,91nm,0.8s
VLDQ Val d'Or 65.70 39 P P **20 06 29.6 -1.6**
SBUM Sibu 65.73 235 P P **20 06 33.4 +1.5**
SBUM Sibu 65.73 235 P P **20 06 33.2 +1.3**
comp=Z,1μmcomp=Z,111nm,1.1s
BKNR BIKANER 65.74 284 *e*P P **20 06 30.2 -1.7**
PMG Port Moresby 65.93 194 P P **20 06 34.3 +1.3**
PMG Port Moresby 65.93 194 P P **20 06 33.9 +0.9**
PMG Port Moresby 65.93 194 P P **20 06 33.9 +0.9**
PMG pmax pmax
comp=Z,53nm,0.7s
PMG Port Moresby 65.93 194 P P **20 06 34.4 +1.4**
comp=Z,75nm,0.8s
GUNA GUNA 66.15 279 *e*P P **20 06 32.3 -2.3**
GUNA IAmb IAmb 20 06 35.7
comp=Z,17nm,0.9s
MCD Coleburn Disti 66.17 350 *e*P P **20 06 34.0 -0.2**
MCD IAmb IAmb 20 06 35.0
comp=Z,21nm,0.7s
MSTX Muleshoe 66.21 64 IAmb IAmb 20 07 20.5
comp=Z,40nm,1.2s
AJM Ajmer 66.25 282 *e*P P **20 06 33.5 -1.7**
AJM IAmb IAmb 20 06 36.7
comp=Z,18nm,0.7s
AK03 Malin Array Si 66.34 329 P P **20 06 34.0 -1.3**
AK21 Malin Array Si 66.35 329 P P **20 06 34.3 -1.1**
AK22 Malin Array Si 66.35 329 P P **20 06 34.3 -1.1**
AK04 Malin Array Si 66.36 329 P P **20 06 34.4 -1.0**
AKASG Malin Array Be 66.36 328 P P **20 06 34.5 -0.9**
comp=Z,8.0nm,0.4s,baz=31,slow=7.1,SNR=42
AKASG pP **pP 20 07 20.5 +0.5**
comp=Z,4.1nm,0.7s,baz=31,slow=6.2,SNR=2.0
AKASG LR LR 20 38 57.8
comp=Z,70nm,18.3s,baz=8.0,slow=39
comp=Z,8.0nm,0.4s
AKASG Malin Array Be 66.36 328 P P **20 06 34.3 -1.1**
AKASG Malin Array Be 66.36 328 P P **20 06 34.3 -1.1**
AKASG pmax pmax
comp=Z,13nm,1.4s
AKBB Malin Array Si 66.36 328 IAmb IAmb 20 06 36.7
comp=Z,32nm,1.4s
AKBB Malin Array Si 66.36 328 *d* iP P **20 06 34.4 -1.1**
AKBB pmax pmax
comp=Z,30nm,1.4s
AKBB Malin Array Si 66.36 328 P P **20 06 34.3 -1.2**
KIEV Kiev 66.37 329 ⇑P P **20 06 34.8 -0.7**
KIEV Kiev 66.37 329 P P **20 06 33.9 -1.6**
KIEV IAmb IAmb 20 06 36.7
comp=Z,29nm,1.4s
KIEV Kiev 66.37 329 *i* P P **20 06 34.2 -1.3**
SNR=7.9
KIEV Kiev 66.37 329 P P **20 06 33.9 -1.6**
KIEV pmax pmax
comp=Z,29nm,1.4s
KIEV Kiev 66.37 329 P P **20 06 34.3 -1.3**
AK01 Malin Array Si 66.37 329 P P **20 06 34.3 -1.2**
AK20 Malin Array Si 66.39 329 P P **20 06 34.4 -1.2**
AK18 Malin Array Si 66.39 329 P P **20 06 34.3 -1.3**
AK15 Malin Array Si 66.40 329 P P **20 06 34.4 -1.3**
AK11 Malin Array Si 66.40 329 P P **20 06 34.4 -1.3**
AK02 Malin Array Si 66.41 328 P P **20 06 34.4 -1.3**
AK19 Malin Array Si 66.41 329 P P **20 06 34.4 -1.3**
AK08 Malin Array Si 66.41 328 P P **20 06 34.5 -1.3**
AK09 Malin Array Si 66.42 328 P P **20 06 34.5 -1.3**
AK16 Malin Array Si 66.42 329 P P **20 06 34.6 -1.3**
AK17 Malin Array Si 66.42 329 P P **20 06 34.6 -1.3**
AK12 Malin Array Si 66.43 329 P P **20 06 34.6 -1.3**
AK05 Malin Array Si 66.44 328 P P **20 06 34.7 -1.3**
AK10 Malin Array Si 66.44 328 P P **20 06 34.7 -1.3**
AK14 Malin Array Si 66.46 329 P P **20 06 34.8 -1.3**
AK06 Malin Array Si 66.47 328 P P **20 06 34.9 -1.3**
AK13 Malin Array Si 66.49 329 P P **20 06 35.0 -1.3**
AK07 Malin Array Si 66.50 328 P P **20 06 35.1 -1.2**
GOF Gofitskoye 66.50 317 *ce*P P **20 06 36.4 -0.1**
HRA Herat 66.55 297 IAmb IAmb 20 06 38.7
comp=Z,22nm,0.9s
SMWD Samnorwood 66.58 62 IAmb IAmb 20 07 22.9
comp=Z,45nm,1.1s
MI28 Mi28,Pidlybu 66.61 330 P P **20 06 35.1 -1.9**
MNTX Cornudas Mount 66.65 68 IAmb IAmb 20 07 25.3
comp=Z,43nm,1.1s
RNPP5 Staryi Chortor 66.84 331 P P **20 06 38.0 -0.5**
BKB Balikpapan 66.97 228 P P **20 06 41.1 +1.3**
BKB Balikpapan 66.97 228 P P **20 06 41.1 +1.3**
RAGD RAYAGADA 66.98 271 *e*P P **20 06 39.6 -0.2**
RAGD IAmb IAmb 20 06 43.1
comp=Z,23nm,0.8s
BHPL Bhopal 67.20 278 *e*P P **20 06 39.6 -1.7**
BHPL IAmb IAmb 20 06 42.8
comp=Z,33nm,0.8s
DKNS Dickens 67.39 63 IAmb IAmb 20 07 28.1
comp=Z,100nm,1.9s
INVG Invergeldie, C 67.39 351 *e*P P **20 06 41.3 -0.6**
INVG IAmb IAmb 20 06 42.2
comp=Z,11nm,0.7s
MMSI Mamuju 67.44 226 P P **20 06 42.4 -0.3**
comp=Z,1μmcomp=Z,147nm,0.9s
LUBAR Lubar, Ukraine 67.49 329 P P **20 06 41.3 -1.3**
KIV Kislovodsk 67.57 316 ⇓P P **20 06 43.4 +0.1**

KIV Kislovodsk 67.57 316 P P 20 06 42.2 -1.2
KIV IAmb IAmb 20 06 48.0
comp=Z,20nm,0.6s
KIV Kislovodsk 67.57 316 *i* P P 20 06 43.5 +0.2
SNR=6.7
KIV Kislovodsk 67.57 316 *e*P P 20 06 43.1 -0.2
KIV pmax pmax
comp=Z,11nm,0.9s
KIV Kislovodsk 67.57 316 P P 20 06 43.3 0.0
comp=Z,330nmcomp=Z,18nm,0.6s
POST Post 67.57 64 IAmb IAmb 20 07 30.1
comp=Z,18nm,0.9s
AKT Akhty 67.58 311 *e*P P 20 06 43.4 -0.1
AKT *e* 20 07 08.1
AKT *e**PP **pP 20 07 31.7 +3.6**
AKT *eS* **S 20 15 22.9 -1.7**
AKT *e* 20 16 19.6
AKT pmax pmax
comp=Z,82nm,0.6s
VHRN Van Horn 67.58 68 IAmb IAmb 20 07 31.3
comp=Z,34nm,1.1s
NCK Nalchik 67.60 315⇓*i*P P 20 06 43.6 +0.2
NCK pmax pmax
comp=Z,20nm,1.1s
EAB Aberfoyle 67.65 351 *e*P P 20 06 43.6 +0.1
EAB IAmb IAmb 20 06 44.2
comp=Z,20nm,0.6s
LAWE Loch Awe, Argy 67.67 351 *e*P P 20 06 43.4 -0.2
LAWE IAmb IAmb 20 06 44.3
comp=Z,22nm,0.7s
KBZ Khabaz 67.68 316 P P 20 06 43.9 0.0
comp=Z,16nm,0.9s,baz=22,slow=4.6,SNR=36
comp=Z,16nm,0.9s
KBZ Khabaz 67.68 316*d*iP P 20 06 44.2 +0.4
KBZ pmax pmax
comp=Z,52nm,1.4s
PECS Pecos 67.70 67 IAmb IAmb 20 07 31.6
comp=Z,39nm,1.6s
KKSI Kolaka, Sulawe 67.71 222 P P 20 06 45.5 +1.1
comp=Z,628nmcomp=Z,70nm,0.8s
SHA1 Shidzhatmaz 67.76 316*d*iP P 20 06 44.9 +0.2
R40A Maddies Statio 67.84 54 IAmb IAmb 20 07 29.5
comp=Z,29nm,0.9s
JASL Jaisalmer 67.89 286 *e*P P 20 06 43.6 -1.9
JASL IAmb IAmb 20 06 47.5
comp=Z,25nm,0.9s
LDAQ Lac Daran 67.91 35 P P 20 06 44.7 -0.7
LDAQ IAmb IAmb 20 07 32.1
comp=Z,76nm,1.7s
PBA Port Blair 67.92 258 P P 20 06 45.4 -0.4
NGP Nagpur 67.94 275 *e*P P 20 06 44.1 -1.7
NGP IAmb IAmb 20 06 45.4
comp=Z,16nm,0.7s
SAUI Saumlaki 68.01 211 P P 20 06 47.6 +1.4
SAUI Saumlaki 68.01 211 P P 20 06 48.8 +2.6
PGBU Glenifferbraes 68.04 351 *e*P P 20 06 45.9 0.0
PGBU IAmb IAmb 20 06 47.2
comp=Z,74nm,0.8s
PMSI Majene 68.17 225 P P 20 06 48.1 +0.8
comp=Z,743nmcomp=Z,35nm,1.0s
UDPR Udaipur 68.21 282 *e*P P 20 06 46.1 -1.5
UDPR IAmb IAmb 20 06 49.2
comp=Z,12nm,0.8s
SPSI Sidrap Palu 68.25 224 P P 20 06 47.8 +0.1
comp=Z,785nmcomp=Z,94nm,0.9s
VIS Vishakhapatnam 68.28 270 *e*P P 20 06 47.5 -0.4
TRQ Mont Tremblant 68.33 38 IAmb IAmb 20 07 33.0
comp=Z,17nm,0.9s
TPB05 Hovey Rd 68.34 67 IAmb IAmb 20 07 35.8
comp=Z,33nm,1.0s
EKA Eskdalemuir Ar 68.39 350 P P 20 06 47.6 -0.5
comp=Z,12nm,0.6s,baz=17,slow=5.3,SNR=66
EKA pP **pP 20 07 33.8 +1.1**
comp=Z,2.6nm,0.7s,baz=14,slow=6.4,SNR=2.0
comp=Z,12nm,0.6s
ESK Eskdalemuir 68.41 350 *e*P P 20 06 48.1 -0.2
ESK IAmb IAmb 20 06 49.0
comp=Z,14nm,0.7s
ESK Eskdalemuir 68.41 350 P P 20 06 48.0 -0.2
ESK IAmb IAmb 20 06 49.1
comp=Z,26nm,0.9s
ESK Eskdalemuir 68.41 350 P P 20 06 48.0 -0.2
ESK pmax pmax
comp=Z,26nm,0.9s
ESK Eskdalemuir 68.41 350 P P 20 06 48.3 +0.1
ESK pP **pP 20 07 31.8 -1.0**
HORU Horodok 68.50 330 P P 20 06 48.1 -0.8
LMQ La Malbaie 68.57 34 IAmb IAmb 20 07 35.5
comp=Z,75nm,1.6s
ALPN Alpine 68.61 67 IAmb IAmb 20 07 37.3
comp=Z,24nm,1.0s
HHAR Hobbs 68.69 57 IAmb IAmb 20 07 34.7
comp=Z,34nm,1.0s
NEWG New Galloway 68.70 351 *e*P P 20 06 49.6 -0.4
NEWG IAmb IAmb 20 06 50.6
comp=Z,10nm,0.7s
MGMO Mountain Grove 68.77 55 IAmb IAmb 20 07 35.1
comp=Z,17nm,0.8s
NDNU Novodnistrovsk 68.79 329 P P 20 06 49.4 -1.3
SORM Soroca 68.91 328 ⇑P P 20 06 50.7 -0.7
SORM Soroca 68.91 328 P P 20 06 50.7 -0.7
SORM Soroca 68.91 328 P P 20 06 50.1 -1.3
FVM French Village 68.93 53 IAmb IAmb 20 07 36.5
comp=Z,22nm,0.9s
GAL1 Galloway 68.99 351 *e*P P 20 06 51.6 -0.2
GAL1 IAmb IAmb 20 06 52.3
comp=Z,8.9nm,0.8s
P46A Rosedale 69.00 50 IAmb IAmb 20 07 38.0
comp=Z,35nm,0.8s
IDGL Inch Island, C 69.02 353 P P 20 06 52.2 +0.2
IDGL Inch Island, C 69.02 353 *e*P P 20 06 52.0 +0.1
KMPD K-Podol'skiy 69.08 329 P P 20 06 51.2 -1.3
KMPD P P **20 06 51.2 -1.3**
KESW Keswick, Cumbr 69.12 350 *e*P P 20 06 52.4 -0.2
KESW IAmb IAmb 20 06 53.9
comp=Z,41nm,0.8s
KAPI Kappang 69.22 224 P P 20 06 54.4 +0.7
KAPI Kappang 69.22 224 P P 20 06 54.2 +0.6
KAPI IAmb IAmb 20 06 54.9
comp=Z,22nm,0.8s
KAPI Kappang 69.22 224 P P 20 06 54.3 +0.6
KAPI pmax pmax
comp=Z,22nm,0.8s
KAPI Kappang 69.22 224 P P 20 06 54.2 +0.6
KAPI Kappang 69.22 224 P P 20 06 54.2 +0.6
KAPI Kappang 69.22 224 P P 20 06 54.3 +0.6
KAPI PcP **PcP 20 07 17.9 +1.8**
KAPI sP **sP 20 07 58.6 +0.1**
O48B Farmland 69.35 48 IAmb IAmb 20 07 40.4
comp=Z,37nm,1.3s
OJC Ojcow 69.35 334 P P 20 06 53.7 -0.4
comp=Z,17nm,1.6s
TX31 Lajitas Ar. Si 69.42 68 IAmb IAmb 20 07 42.7
comp=Z,53nm,1.1s
TXAR Lajitas Array 69.42 68 P P 20 06 56.4 +1.3
comp=Z,9.7nm,0.6s,baz=298,slow=4.6,SNR=148
TXAR pP **pP 20 07 40.0 +0.3**
comp=Z,24nm,0.9s,baz=296,slow=3.9,SNR=12
TXAR LR LR 20 38 18.7
comp=Z,24nm,18.5s,baz=354,slow=36
comp=Z,9.7nm,0.6s
AKL Akola 69.45 277 *e*P P 20 06 54.0 -1.2
AKL IAmb IAmb 20 06 57.5
comp=Z,25nm,0.7s
STNU Starunia 69.50 331 P P 20 06 54.5 -0.6
MKS Makassar 69.51 224 P P 20 06 56.3 +0.8
comp=Z,1µmcomp=Z,136nm,1.0s
HPK Haverah Park 69.58 349 *e*P P 20 06 55.7 +0.2
HPK IAmb IAmb 20 06 56.7
comp=Z,28nm,0.9s
KSP Ksiaz 69.59 337 P P 20 06 55.2 -0.4
comp=Z,14nm,1.3s
E62A Clayton Lake 69.65 34 IAmb IAmb 20 07 42.3
comp=Z,26nm,0.9s
KSV Kosov 69.70 330 P P 20 06 55.8 -0.5
STHS Stebnicka Huta 69.73 333 *e*P P 20 06 56.1 -0.4
STHS pmax pmax
comp=Z,8.0nm,0.7s
STHS Stebnicka Huta 69.73 333 *e*P P 20 06 56.1 -0.4
SAND Sanderson 69.73 67 IAmb IAmb 20 07 44.1
comp=Z,24nm,1.1s
BBKI Banjar Baru 69.83 229 P P 20 06 57.4 -0.1
comp=Z,111nm,1.1s
CLL Collm 69.86 339 IAmb IAmb 20 06 58.1
comp=Z,35nm,1.3s
CLL Collm 69.86 339⇓*i*P P 20 06 56.9 -0.3
CLL *e**PP **pP 20 07 42.0 0.0**
CLL pmax pmax
comp=Z,39nm,1.3s
CLL Collm 69.86 339⇓*i*P P 20 06 56.9 -0.3
comp=Z,39nm,1.3s
CLL *i* PcP **PcP 20 07 17.7 -0.7**
CLL *e*pP **pP 20 07 42.0 0.0**
CLL Collm 69.86 339 P P 20 06 56.9 -0.3
comp=Z,24nm,1.3s
FCAR Ozark Folk Cen 69.86 56 IAmb IAmb 20 07 42.0
comp=Z,26nm,1.0s
ERPA Erie 69.87 44 IAmb IAmb 20 07 44.9
comp=Z,27nm,0.8s
OSTC Ostas 69.88 337 *e*P P 20 06 57.7 +0.3
OSTC Ostas 69.88 337 *e*P P 20 06 57.7 +0.3
GNI Garni 69.94 313 LR LR 20 42 00.6
comp=Z,62nm,19.3s,baz=22,slow=39
GNI Garni 69.94 313 P P 20 06 59.1 +1.0
GNI IAmb IAmb 20 07 00.4
comp=Z,39nm,0.8s
GNI Garni 69.94 313 P P 20 06 59.3 +1.2
GNI Garni 69.94 313*d*iP P 20 06 59.4 +1.2
GNI pmax pmax
comp=Z,90nm,1.7s
GNI Garni 69.94 313 P P 20 06 59.6 +1.5
GNI Garni 69.94 313 P P 20 06 58.3 +0.2
comp=Z,634nmcomp=Z,61nm,1.3s
BSSI Bau Bau, Buton 69.96 223 P P 20 06 57.8 -0.5
comp=Z,1µmcomp=Z,154nm,0.9s
ILTH Belurgan, Co L 69.96 352 P P 20 06 58.5 +0.8
UPC Upice 69.97 337 *e*P P 20 06 58.3 +0.4
UPC Upice 69.97 337 *e*P P 20 06 58.3 +0.4
DPC Dobruska-Polom 70.05 336 *e*P P 20 06 58.6 +0.2
DPC Dobruska-Polom 70.05 336 *e*P P 20 06 58.6 +0.2
DPC Dobruska-Polom 70.05 336 P P 20 06 58.6 +0.2
comp=Z,11nm,1.0s
STEB Steborice 70.10 335 *e*P P 20 06 58.6 -0.1
LBWR Ladybower, Pea 70.14 349 *e*P P 20 06 58.6 -0.3
LBWR IAmb IAmb 20 06 60.0
comp=Z,32nm,0.8s
LCAR Lake Charles 70.17 55 IAmb IAmb 20 09 31.8
comp=Z,48nm,0.9s
KRLC Kraliky 70.20 336 *e*P P 20 06 59.9 +0.5
KRLC Kraliky 70.20 336 *e*P P 20 06 59.9 +0.5
KARS Kars 70.22 314 IAmb IAmb 20 07 01.9
comp=Z,24nm,1.1s
PRAR RASCA 70.23 329 ⇓P P 20 06 58.9 -0.6
HOLU Holmets 70.25 332 P P 20 06 59.4 -0.2
PVCC Panska Ves 70.27 338 *e*P P 20 06 59.9 +0.2
PVCC Panska Ves 70.27 338 *e*P P 20 06 59.9 +0.2
WHAR Wooly Hollow 70.28 56 IAmb IAmb 20 07 46.4
comp=Z,36nm,0.9s
MIAR Mount Ida 70.28 57 IAmb IAmb 20 07 45.4
comp=Z,26nm,1.0s
BURAR Bucovina Array 70.30 330 ⇑P P 20 06 59.9 -0.2
BURAR Bucovina Array 70.30 330 P P 20 06 59.5 -0.5
BURAR IAmb IAmb 20 07 02.2
comp=Z,18nm,0.6s
BURAR Bucovina Array 70.30 330 P P 20 06 59.8 -0.2
MORC Moravsky Berou 70.30 335 ⇑P P 20 07 00.2 +0.1
MORC Moravsky Berou 70.30 335 P P 20 07 00.1 +0.1
MORC Moravsky Berou 70.30 335 *e*P P 20 07 00.1 +0.1
MYKOM Kota Tinggi 70.34 242 P P 20 07 01.2 +0.6
MYKOM Kota Tinggi 70.34 242 P P 20 07 00.7 +0.1
MYKOM IAmb IAmb 20 07 02.2
comp=Z,45nm,0.9s
MYKOM Kota Tinggi 70.34 242 P P 20 07 01.2 +0.6
comp=Z,696nmcomp=Z,64nm,0.9s
WME Myrudd Eilian 70.41 350 *e*P P 20 07 00.1 -0.4
LANS Liptovska Anna 70.42 334 *e*P P 20 07 02.0 +1.3
LANS *e* 20 07 52.7
LANS pmax pmax
comp=Z,9.0nm,0.6s
LANS Liptovska Anna 70.42 334 *e*P P 20 07 02.0 +1.3
LANS *e* 20 07 52.7
HSKC Hora Svate Kat 70.43 338 *e*P P 20 07 00.5 -0.3
BERU Beregovo 70.44 332 P P 20 07 00.4 -0.4
TRSU Trosnyk 70.49 331 P P 20 07 01.3 +0.2
PAOC Oil Creek Stat 70.50 44 IAmb IAmb 20 07 48.8
comp=Z,32nm,1.2s
WLF1 Llynfaes 70.53 350 *e*P P 20 07 00.7 -0.5
MAUC Maruska 70.62 335 *e*P P 20 07 02.3 +0.4
BTDF Bukit Timah Da 70.74 242 P P 20 07 03.9 +0.9
BTDF Bukit Timah Da 70.74 242 P P 20 07 04.1 +1.1
DSB Dublin 70.74 352 P P 20 07 02.2 -0.3
DSB Dublin 70.74 352 IAmb IAmb 20 07 03.4
comp=Z,25nm,1.0s
L56A Greenwood 70.78 42 IAmb IAmb 20 07 09.8
comp=Z,19nm,0.9s
PRU Pruhonice 70.78 337 *e*P P 20 07 02.7 -0.1
PRU Pruhonice 70.78 337 *e*P P 20 07 02.7 -0.1
KECS Kecovo 70.78 333 *e*P P 20 07 02.7 -0.2
KECS pmax pmax
comp=Z,12nm,1.1s
KECS Kecovo 70.78 333 *e*P P 20 07 02.7 -0.2
IGLA Glengowla, Co 70.79 354 P P 20 07 02.4 -0.4
BIR Birlad 70.80 327 ⇓P P 20 07 03.1 0.0
BIR Birlad 70.80 327 P P 20 07 03.0 0.0
FOEL Foel Wylfa 70.80 350 *e*P P 20 07 02.6 -0.3
FOEL IAmb IAmb 20 07 04.5
comp=Z,18nm,0.7s
TESR Tescani 70.88 328 ⇓P P 20 07 03.1 -0.4
TESR Tescani 70.88 328 P P 20 07 02.8 -0.7
comp=Z,24nm,1.5s
DRIO Del Rio 70.94 66 IAmb IAmb 20 07 50.8
comp=Z,38nm,0.8s
VRAC Vranov 70.96 336 ⇑P P 20 07 04.0 +0.1
VRAC Vranov 70.96 336 P P 20 07 04.0 +0.1
VRAC Vranov 70.96 336 *e*P P 20 07 04.3 +0.3
LHMI Lhok Sumawe 70.98 250 P P 20 07 06.0 +1.5
LHMI Lhok Sumawe 70.98 250 P P 20 07 04.4 -0.1
COEN Coen 71.01 198 P P 20 07 05.6 +1.1
COEN Coen 71.01 198 P P 20 07 05.3 +0.8
VLDR Vladesti 71.04 327 ⇓P P 20 07 03.9 -0.5
ELMS Elmsett, Ipswi 71.10 347 *e*P P 20 07 04.4 -0.3
ONER Baraj Valea Uz 71.11 328 ⇑P P 20 07 03.6 -1.3
JAVC Velka Javorina 71.13 335 *e*P P 20 07 06.2 +1.2
HLM1 Long Mynd 71.14 349 *e*P P 20 07 04.6 -0.4
HLM1 IAmb IAmb 20 07 06.1
comp=Z,12nm,0.9s
HYB Hyderabad 71.21 273 *e*P P 20 07 05.4 -0.6
HYB *e*pP **pP 20 07 49.5 -1.5**
HYB *e*sP **sP 20 08 10.7 -0.7**
HYB *eS* **S 20 16 07.6 +0.1**
HYB Hyderabad 71.21 273 *e*P P 20 07 04.7 -1.3
TREC Trest 71.23 337 *e*P P 20 07 05.7 +0.1
TREC Trest 71.23 337 *e*P P 20 07 05.7 +0.1
T47A Sharon Grove 71.23 51 IAmb IAmb 20 07 52.5
comp=Z,46nm,1.2s
KRUC Moravsky 71.24 336 *e*P P 20 07 05.8 +0.2
ZVC Zvikov 71.38 337 *e*P P 20 07 06.2 -0.2
TLCR 71.40 326 ⇓P P 20 07 06.3 -0.3
TLCR 71.40 326 P P 20 07 06.3 -0.3
ODBI Odobesti 71.43 328 ⇓P P 20 07 06.4 -0.3
VRI Vrincioaia 71.44 328 P P 20 07 06.9 +0.1
comp=Z,10nm,1.2s
TURR Turia 71.48 328 ⇓P P 20 07 07.1 0.0
SMOL Smolenice 71.51 335 *e*P P 20 07 08.6 +1.4
SMOL pmax pmax
comp=Z,11nm,1.0s
CJR Cluj-Napoca 71.58 330 ⇑P P 20 07 07.5 -0.2
CJR Cluj-Napoca 71.58 330 P P 20 07 07.5 -0.2
TSI Tuntungan 71.58 248 P P 20 07 07.4 -0.7
MMRI Maumere 71.61 220 P P 20 07 08.0 -0.2
MMRI Maumere 71.61 220 P P 20 07 07.9 -0.2
comp=Z,1µmcomp=Z,109nm,1.2s
COVR Voineasa-Covas 71.61 328 ⇑P P 20 07 07.4 -0.5
CFR Carcaliu 71.62 327 ⇓P P 20 07 07.5 -0.4
CFR Carcaliu 71.62 327 P P 20 07 07.5 -0.4
WVT Waverly 71.63 52 P P 20 07 08.2 +0.1
WVT IAmb IAmb 20 07 53.5
comp=Z,20nm,1.0s
WVT Waverly 71.63 52 P P 20 07 08.2 +0.1
WVT pmax pmax
comp=Z,20nm,1.0s
M57A Sunshine Farm, 71.63 42 IAmb IAmb 20 07 55.6
comp=Z,29nm,1.2s
IWEX Carrickbyrne, 71.64 352 P P 20 07 07.8 -0.1
MCH1 Michaelchurch 71.66 349 *e*P P 20 07 07.5 -0.6
MCH1 IAmb IAmb 20 07 09.0
comp=Z,17nm,0.7s
MODS Modra-Piesok 71.68 335 *e*P P 20 07 09.3 +1.0
MODS Modra-Piesok 71.68 335 *e*P P 20 07 09.3 +1.0
MARR Marisel-Cluj 71.74 331 ⇓P P 20 07 08.7 -0.1
GRA1 Grafenberg Arr 71.75 339 IAmb IAmb 20 07 10.3
comp=Z,21nm,0.8s
GRF Grafenberg Arr 71.75 339 *e*P P 20 07 08.4 -0.2
comp=Z,19nm,1.1s,baz=16,slow=5.2
KOPT Kop Dagi 71.77 315 P P 20 07 09.0 -0.3
KOPT IAmb IAmb 20 07 12.8
comp=Z,31nm,0.9s
KHC Kasperske Hory 71.80 338 *e*P P 20 07 09.3 +0.3
KHC Kasperske Hory 71.80 338*d*iP P 20 07 09.4 +0.4
KHC pmax pmax
comp=Z,21nm,1.3s
KHC Kasperske Hory 71.80 338 P P 20 07 09.3 +0.3
comp=Z,16nm,1.3s
MONM Monmouth 71.80 349 *e*P P 20 07 08.7 -0.2
MONM IAmb IAmb 20 07 09.6
comp=Z,23nm,0.7s
MEM Membach 71.81 343 *d*P P 20 07 08.9 -0.1
comp=Z,36nm,1.0s
BTNL Ternell 71.81 343 *d*P P 20 07 08.6 -0.5
comp=Z,24nm,1.0s
TPGR Topolog 71.82 326 ⇑P P 20 07 08.2 -1.0
RSBS Rosebush, Pemb 71.88 350 *e*P P 20 07 08.8 -0.5
RSBS IAmb IAmb 20 07 09.7
comp=Z,7.0nm,0.6s
BSTI Sart Tilman 71.91 343 *d*P P 20 07 10.0 +0.5
comp=Z,5.5nm,1.1s
SOEI Soe 71.93 218 P P 20 07 10.1 -0.1
SOEI Soe 71.93 218 P P 20 07 10.9 +0.7
comp=Z,92nm,0.9s
DSRI Dabo 71.93 240 P P 20 07 10.5 +0.3
comp=Z,672nmcomp=Z,63nm,1.0s
CKRC Cesky Krumlov 71.94 337 *e*P P 20 07 10.6 +0.8
CKRC Cesky Krumlov 71.94 337 *e*P P 20 07 10.6 +0.8
SRO Srobarova 71.95 334 *e*P P 20 07 11.0 +1.2
SRO Srobarova 71.95 334 *e*P P 20 07 11.0 +1.2
PSI Prapat 71.99 247 P P 20 07 10.4 -0.3
PSI Prapat 71.99 247 P P 20 07 10.1 -0.6
comp=Z,975nmcomp=Z,113nm,0.9s
MLR Muntele Rosu 72.01 328 ⇓P P 20 07 10.3 -0.2
MLR Muntele Rosu 72.01 328 IAmb IAmb 20 07 12.7
comp=Z,15nm,0.7s
MLR Muntele Rosu 72.01 328 P P 20 07 10.2 -0.2
MLR Muntele Rosu 72.01 328 P P 20 07 10.5 +0.1
comp=Z,26nm,0.7s
GERES GERESS Array B 72.04 338 P P 20 07 10.1 -0.4
comp=Z,1.9nm,0.5s,baz=24,slow=6.4,SNR=9.5
GERES pP **pP 20 07 56.4 +0.6**
comp=Z,1.4nm,0.7s,baz=56,slow=3.7,SNR=2.2
comp=Z,1.9nm,0.5s
BHOU Houvegnez 72.06 343 *d*P P 20 07 10.9 +0.4
comp=Z,12nm,1.1s
BGES Gesves 72.18 344 *d*P P 20 07 11.1 -0.1
comp=Z,9.4nm,1.1s
GEVA Gevas 72.19 313 IAmb IAmb 20 07 13.3
comp=Z,28nm,1.1s
BMRD Maredsous 72.31 344 *d*P P 20 07 11.8 -0.1
comp=Z,17nm,1.0s
VAL Valentia 72.32 354 P P 20 07 12.8 +0.9
VOIR 72.32 329 ⇑P P 20 07 11.5 -0.8
VOIR 72.32 329 P P 20 07 11.4 -0.8
VOIR 72.32 329 P P 20 07 12.1 -0.1
LBFI Labuhan Bajo, 72.34 222 P P 20 07 12.8 +0.3
RCHB Rochefort 72.38 344 *d*P P 20 07 11.8 -0.6
comp=Z,7.4nm,1.0s
GURO Guroymak-BITLI 72.41 314 IAmb IAmb 20 07 15.9
comp=Z,18nm,0.9s
CONA Conrad Observa 72.43 336 *e*P P 20 07 13.6 +0.8
comp=Z,1.2nm,0.4s
TPI Tanjungpandan 72.44 237 P P 20 07 13.6 +0.5
comp=Z,638nmcomp=Z,44nm,1.3s
ARR Arges 72.51 329 ⇑P P 20 07 13.4 +0.2
TPTI 72.51 249 P P 20 07 13.6 0.0
comp=Z,31nm,0.7s
DOU Dourbes 72.53 344 *d*P P 20 07 12.7 -0.6
comp=Z,8.8nm,0.0s
RONA Rosalia, Austr 72.54 335 *e*P P 20 07 14.4 +1.0
comp=Z,3.0nm,0.8s
BATI Baumata 72.56 218 P P 20 07 13.4 -0.4
comp=Z,121nm,0.9s
PPBI Pangkal Pinang 72.64 238 P P 20 07 14.9 +0.6
WLF Walferdange 72.70 343 *d*P P 20 07 14.5 +0.2
comp=Z,7.6nm,1.0s
POO Poona 72.96 278 *e*P P 20 07 15.2 -1.1
POO IAmb IAmb 20 07 18.4
comp=Z,23nm,0.7s
DBNI Kabupaten Domp 72.97 224 P P 20 07 15.9 -0.3
comp=Z,483nmcomp=Z,33nm,0.8s
BKNI Bangkinang 73.01 244 P P 20 07 17.4 +0.9
BZS Buzias 73.13 331 ⇓P P 20 07 16.6 -0.2
BZS Buzias 73.13 331 P P 20 07 16.3 -0.5
ARSA Arzberg 73.14 336 *e*P P 20 07 17.8 +0.9
comp=Z,0.8nm,0.3s
SWET Sewanee 73.23 52 IAmb IAmb 20 08 04.6
comp=Z,28nm,1.0s
DYA Yadsworthy 73.30 350 *e*P P 20 07 17.2 -0.6
DYA IAmb IAmb 20 07 18.2
comp=Z,20nm,0.6s
MNSI Mandailing Nat 73.35 246 P P 20 07 17.4 -1.1
comp=Z,44nm,0.7s
MORH Mrgy, Hungar 73.36 333 ⇑P P 20 07 17.3 -0.8
ARPR Arapgir-MALATY 73.42 317 IAmb IAmb 20 07 20.8
comp=Z,18nm,0.9s
KMMI Kalianget 73.42 229 P P 20 07 19.4 +0.5
ILGA Ilgaz 73.43 321 IAmb IAmb 20 07 34.0
comp=Z,21nm,1.0s
PLAI Plampang 73.47 224 P P 20 07 17.8 -1.4
PLAI Plampang 73.47 224 P P 20 07 17.9 -1.3
comp=Z,36nm,0.9s
HERR Herculane 73.58 330 ⇓P P 20 07 19.1 -0.4
WBSI Waikabubak, Su 73.59 222 P P 20 07 18.1 -1.8
comp=Z,624nmcomp=Z,69nm,0.8s
BFO Black Forest 73.61 341 P P 20 07 18.5 -1.1
BFO Black Forest 73.61 341 P P 20 07 18.5 -1.1
BFO pmax pmax
comp=Z,10.0nm,0.8s
LESA Schwarzleotal 73.61 338 *e*P P 20 07 20.6 +0.9
comp=Z,3.0nm,0.5s
KAD Karad 73.76 277 *e*P P 20 07 19.8 -1.2
KAD IAmb IAmb 20 07 23.1
comp=Z,42nm,0.7s
KBA Koelnbreinsper 73.79 337 *i*P P 20 07 22.1 +1.2
comp=Z,12nm,0.6s,SNR=6.0
TKL Tuckaleechee C 73.80 50 LR LR 20 41 30.0
comp=Z,61nm,18.5s,baz=96,slow=37
VLAD Vladila 73.82 329 ⇑P P 20 07 19.8 -1.1
KHKI Kahang-Kahang 73.92 227 P P 20 07 21.9 +0.1
comp=Z,58nm,0.9s
WATA Walderalm 73.93 339 *e*P P 20 07 22.1 +0.5
comp=Z,3.7nm,0.5s
ECH Echery 73.93 342 IAmb IAmb 20 07 23.1
comp=Z,24nm,1.1s
GSI Gunungsitoli 73.96 248 P P 20 07 22.1 0.0
GSI Gunungsitoli 73.96 248 P P 20 07 20.9 -1.2
PMBI Palembang 73.96 239 P P 20 07 23.4 +1.4
WTTA Wattenberg 73.98 338 *i*P P 20 07 22.8 +0.7
comp=Z,3.5nm,0.5s
MOTA Moosalm 74.01 339 *i*P P 20 07 22.6 +0.5
comp=Z,2.7nm,0.4s,SNR=5.2
OBKA Obir 74.06 336 *e*P P 20 07 23.2 +0.8
comp=Z,11nm,0.7s
SQTA Sankt Quirin 74.11 339 *i*P P 20 07 23.5 +0.8
comp=Z,8.3nm,0.7s,SNR=8.0
ABTA Abfaltersbach 74.29 338 *i*P P 20 07 24.0 +0.3
comp=Z,4.0nm,0.8s
DAVA Damuels 74.31 340 *e*P P 20 07 24.8 +0.9
comp=Z,2.7nm,0.6s
PLVB Pleven 74.32 328 ⇑P P 20 07 23.0 -0.7
PDSI Padang 74.36 244 P P 20 07 23.0 -1.4
comp=Z,704nmcomp=Z,55nm,0.8s
FETA Feichten 74.40 339 *i*P P 20 07 25.1 +0.7
comp=Z,8.4nm,0.8s,SNR=6.0
LRAL Lakeview Retre 74.59 54 IAmb IAmb 20 08 13.8
comp=Z,29nm,1.4s
BR131 Keskin Array S 74.62 320*d*iP P 20 07 25.6 -0.2
BR131 Keskin Array S 74.62 320 P P 20 07 25.7 -0.1
BRTR Keskin Array B 74.62 320 P P 20 07 25.6 -0.2
comp=Z,4.2nm,0.5s,baz=35,slow=3.0,SNR=50
BRTR PP **PP 20 10 14.6 +0.1**
comp=Z,3.6nm,1.1s,baz=72,slow=5.3,SNR=5.1
comp=Z,4.2nm,0.5s
BRTR Keskin Array B 74.62 320 P P 20 07 25.1 -0.7
BRTR Keskin Array B 74.62 320 P P 20 07 25.1 -0.7
PBSI Pulau Batu 74.75 246 P P 20 07 26.9 +0.3
MSVF Nonsavu 74.78 163 P P 20 07 28.6 +1.9
comp=Z,2.0nm,0.3s,baz=73,slow=6.7,SNR=5.8

	comp=Z,2.0nm,0.3s						
MSVF	**Nonsavu**	**74.78**	**163**	P	**P**	**20 07 28.7**	**+2.0**
KRJI	**Kerinci**	**74.87**	**242**	P	**P**	**20 07 27.3**	**-0.1**
FUORN	**Ofenpass-Fuorn**	**74.88**	**339**	IAmb	IAmb	20 07 29.1	
	comp=Z,32nm,1.4s						
CLF	**Chambon-Foret**	**74.91**	**345**	IAmb	IAmb	20 07 28.6	
	comp=Z,49nm,1.2s						
MTSU	**Mount Surprise**	**74.92**	**196**	P	**P**	**20 07 28.5**	**+1.1**
SNJI	**Sawahan-Nganju**	**75.02**	**230**	P	**P**	**20 07 28.0**	**-0.3**
	comp=Z,41nm,0.7s						
KIRS	**Kirsehir-Merke**	**75.05**	**320**	⇑P	**P**	**20 07 28.5**	**+0.3**
TUE	**Stuetta**	**75.20**	**340**	IAmb	IAmb	20 07 30.7	
	comp=Z,48nm,1.6s						
MASI	**Maura Aman, Be**	**75.39**	**241**	P	**P**	**20 07 29.6**	**-0.7**
	comp=Z,160nm,0.9s						
KLSI		**75.52**	**238**	P	**P**	**20 07 29.4**	**-1.6**
GAZ	**Gaziantep**	**75.52**	**316**	IAmb	IAmb	20 07 32.6	
	comp=Z,25nm,0.9s						
MDSI	**Maura Dua**	**75.60**	**239**	P	**P**	**20 07 28.8**	**-2.6**
KNRA	**Kununurra**	**76.05**	**211**	P	**P**	**20 07 34.1**	**+0.3**
KNRA				IAmb	IAmb	20 07 35.6	
	comp=Z,53nm,0.9s						
SALM	**Salem**	**76.09**	**270**	*e*P	**P**	**20 07 32.5**	**-1.8**
SALM				IAmb	IAmb	20 07 35.5	
	comp=Z,11nm,0.7s						
LWLI	**Liwa**	**76.12**	**239**	P	**P**	**20 07 31.8**	**-2.7**
DBJI	**Dramaga**	**76.19**	**235**	P	**P**	**20 07 34.7**	**-0.1**
KASI	**Kota Agung**	**76.35**	**238**	P	**P**	**20 07 33.6**	**-2.1**
SHME	**Shamm**	**76.37**	**296**	*i* P	**P**	**20 07 33.9**	**-1.9**
	SNR=6.1						
SHME	**Shamm**	**76.37**	**296**	P	**P**	**20 07 33.8**	**-1.9**
BANOM	**Banah**	**76.40**	**296**	*i* P	**P**	**20 07 34.8**	**-1.2**
	SNR=5.7						
BANOM	**Banah**	**76.40**	**296**	P	**P**	**20 07 34.0**	**-1.9**
CTA	**Charters Tower**	**76.56**	**194**	P	**P**	**20 07 37.3**	**+0.7**
	comp=Z,69nm,0.7s,baz=6.8,slow=7.3,SNR=30						
	comp=Z,69nm,0.7s						
CTA	**Charters Tower**	**76.56**	**194**	P	**P**	**20 07 37.4**	**+0.7**
CTAO	**Charters Tower**	**76.56**	**194**	P	**P**	**20 07 37.4**	**+0.7**
CTAO	**Charters Tower**	**76.56**	**194**	P	**P**	**20 07 37.2**	**+0.7**
CTAO	**Charters Tower**	**76.56**	**194**	P	**P**	**20 07 37.3**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,73nm,0.8s						
CTAO	**Charters Tower**	**76.56**	**194**	P	**P**	**20 07 37.4**	**+0.7**
CTAO				PcP	**PcP**	**20 07 48.2**	**+0.8**
CTAO				pP	**pP**	**20 08 23.4**	**+1.1**
PDG	**Podgorica**	**76.72**	**331**	⇑P	**P**	**20 07 37.0**	**-0.5**
PDG	**Podgorica**	**76.72**	**331**	IAmb	IAmb	20 07 38.5	
	comp=Z,19nm,1.0s						
CGJI	**Cibinong**	**76.74**	**236**	P	**P**	**20 07 34.5**	**-3.3**
MDH	**Madha**	**76.91**	**296**	P	**P**	**20 07 37.4**	**-1.4**
MDH	**Madha**	**76.91**	**296**	P	**P**	**20 07 37.3**	**-1.4**
MSFE	**Esma-Masafi**	**76.93**	**296**	P	**P**	**20 07 37.7**	**-1.2**
MNGI	**Mangalore**	**76.94**	**274**	*e*P	**P**	**20 07 37.4**	**-1.7**
SSB	**Saint Sauveur**	**77.22**	**343**	IAmb	IAmb	20 07 41.6	
	comp=Z,19nm,1.0s						
UOSS	**Minazif**	**77.25**	**296**	P	**P**	**20 07 38.6**	**-2.1**
UOSS				IAmb	IAmb	20 07 40.6	
	comp=Z,14nm,0.7s						
UOSS	**Minazif**	**77.25**	**296**	*i* P	**P**	**20 07 39.3**	**-1.4**
	SNR=8.3						
UOSS	**Minazif**	**77.25**	**296**	P	**P**	**20 07 38.8**	**-1.9**
HATD	**Hatta, Dubai**	**77.39**	**296**	*i* P	**P**	**20 07 41.0**	**-0.5**
	SNR=8.0						
HATD	**Hatta, Dubai**	**77.39**	**296**	P	**P**	**20 07 41.0**	**-0.5**
	SNR=6.2						
WSAR	**Wadi Sarin**	**77.40**	**293**	P	**P**	**20 07 40.9**	**-0.7**
BIDO	**Bidbid**	**77.43**	**293**	P	**P**	**20 07 40.6**	**-1.2**
NAZ	**Nazwa, Dubai**	**77.49**	**296**	*i* P	**P**	**20 07 40.7**	**-1.3**
	SNR=7.8						
NAZ	**Nazwa, Dubai**	**77.49**	**296**	P	**P**	**20 07 40.8**	**-1.3**
ASHO	**Ashiyiah**	**77.54**	**295**	*i* P	**P**	**20 07 40.9**	**-1.4**
	SNR=7.5						
ASHO	**Ashiyiah**	**77.54**	**295**	P	**P**	**20 07 41.2**	**-1.1**
	SNR=5.1						
KOD	**Kodaikanal**	**77.64**	**270**	*e*P	**P**	**20 07 42.2**	**-1.1**
KOD				IAmb	IAmb	20 07 43.7	
	comp=Z,25nm,0.8s						
FDMO	**Fiordimonte**	**77.69**	**336**	IAmb	IAmb	20 09 49.6	
	comp=Z,99nm,1.6s						
FAQ	**Al Faqa, Dubai**	**77.73**	**296**	*i* P	**P**	**20 07 41.9**	**-1.5**
	SNR=6.4						
FAQ	**Al Faqa, Dubai**	**77.73**	**296**	P	**P**	**20 07 41.4**	**-1.9**
WBK	**Wadi Bani Khal**	**77.74**	**292**	P	**P**	**20 07 42.4**	**-1.1**
SOHO	**SOHO**	**77.75**	**295**	*i* P	**P**	**20 07 41.8**	**-1.6**
	SNR=6.1						
SOHO	**SOHO**	**77.75**	**295**	P	**P**	**20 07 42.1**	**-1.3**
DZM	**Mont Dzumac**	**77.76**	**174**	P	**P**	**20 07 45.4**	**+2.0**
	comp=Z,37nm,0.8s,baz=219,slow=24,SNR=12						
	comp=Z,37nm,0.8s						
HOQ	**Hoqain**	**77.81**	**294**	P	**P**	**20 07 42.6**	**-1.2**
SMDO	**Samad**	**77.85**	**293**	P	**P**	**20 07 42.5**	**-1.7**
NRCA	**Norcia**	**77.87**	**336**	IAmb	IAmb	20 07 46.5	
	comp=Z,44nm,0.8s						
KBD	**Kabd**	**77.88**	**304**	P	**P**	**20 07 43.4**	**-0.8**
JLN	**Jalan Bani Buh**	**77.89**	**291**	P	**P**	**20 07 43.9**	**-0.4**
ASUD	**Al Ashush, Dub**	**77.96**	**296**	P	**P**	**20 07 43.6**	**-1.0**
ASUD	**Al Ashush, Dub**	**77.96**	**296**	P	**P**	**20 07 43.4**	**-1.2**
QIS	**Mount Isa**	**78.11**	**200**	P	**P**	**20 07 45.3**	**0.0**
AJN	**Ajban**	**78.18**	**296**	P	**P**	**20 07 44.3**	**-1.5**
ALNE	**Al Ain**	**78.22**	**295**	*i* P	**P**	**20 07 45.0**	**-1.1**
	SNR=6.8						
ALNE	**Al Ain**	**78.22**	**295**	P	**P**	**20 07 44.9**	**-1.1**
	SNR=6.1						
PALK	**Pallekele**	**78.23**	**266**	P	**P**	**20 07 45.0**	**-1.2**
PALK				IAmb	IAmb	20 07 46.1	
	comp=Z,23nm,0.7s						
PALK	**Pallekele**	**78.23**	**266**	*i* P	**P**	**20 07 45.7**	**-0.6**
	SNR=7.8						
PALK	**Pallekele**	**78.23**	**266**	P	**P**	**20 07 45.1**	**-1.2**
PALK				pmax	pmax		
	comp=Z,23nm,0.7s						
PALK	**Pallekele**	**78.23**	**266**	P	**P**	**20 07 45.7**	**-0.6**
PALK	**Pallekele**	**78.23**	**266**	P	**P**	**20 07 45.7**	**-0.6**
JMDO	**Jabal Madar**	**78.39**	**293**	P	**P**	**20 07 46.4**	**-0.6**
	SNR=6.6						
ARQ	**Araqi**	**78.41**	**294**	P	**P**	**20 07 46.1**	**-1.0**
	SNR=5.5						
BSY	**Bisya**	**78.55**	**294**	P	**P**	**20 07 47.2**	**-0.7**
	SNR=5.4						
WR8	**Warramunga Arr**	**78.62**	**205**	IAmb	IAmb	20 07 49.6	
	comp=Z,63nm,1.1s						
WRAB	**Tennant Creek**	**78.63**	**205**	P	**P**	**20 07 48.5**	**+0.3**
WRAB	**Tennant Creek**	**78.63**	**205**	P	**P**	**20 07 48.5**	**+0.3**
WRAB	**Tennant Creek**	**78.63**	**205**	*d* P	**P**	**20 07 48.7**	**+0.6**
WRAB				pmax	pmax		
	comp=Z,80nm,1.0s						
WRAB	**Tennant Creek**	**78.63**	**205**	P	**P**	**20 07 48.7**	**+0.6**
WRAB				pP	**pP**	**20 08 34.5**	**+0.6**
WRAB				x	x	20 08 45.7	
WRA	**Warramunga Arr**	**78.64**	**205**	P	**P**	**20 07 48.3**	**+0.1**
	comp=Z,44nm,0.8s,baz=18,slow=5.9,SNR=166						
WRA				PKiKP	**PKiKP**	**20 13 20.8**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=341,slow=1.7,SNR=4.7						
WRA				PKKPbc	**PKKPbc**	**20 26 41.0**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=215,slow=2.0,SNR=11						
	comp=Z,44nm,0.8s						
WRA	**Warramunga Arr**	**78.64**	**205**	P	**P**	**20 07 47.8**	**-0.4**
WRA	**Warramunga Arr**	**78.64**	**205**	P	**P**	**20 07 47.8**	**-0.4**
WRA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
JRN	**Qarnain Island**	**78.94**	**298**	P	**P**	**20 07 49.3**	**-0.6**
CSS	**Mathiatis**	**78.95**	**318**	IAmb	IAmb	20 07 50.7	
	comp=Z,21nm,1.0s						
AUNRC	**North Rockhamp**	**79.31**	**189**	P	**P**	**20 07 53.1**	**+1.4**
MHTO	**MHTO**	**79.60**	**292**	P	**P**	**20 07 53.0**	**-0.6**
	SNR=10						
UMZA	**Um Al Zommool**	**79.63**	**295**	P	**P**	**20 07 52.3**	**-1.4**
MMAI	**Mount Meron Ar**	**79.87**	**316**	P	**P**	**20 07 55.0**	**0.0**
	comp=Z,9.7nm,0.7s,baz=26,slow=12,SNR=28						
	comp=Z,9.7nm,0.7s						
ASF	**Jabal al Asfar**	**80.02**	**314**	LR	LR	20 47 59.5	
	comp=Z,32nm,18.5s,baz=11,slow=39						
SMRA	**Abu-Samra**	**80.11**	**300**	P	**P**	**20 07 54.5**	**-1.8**
MZR	**Muzera**	**80.24**	**297**	*i* P	**P**	**20 07 55.6**	**-1.4**
	SNR=16						
MZR	**Muzera**	**80.24**	**297**	P	**P**	**20 07 55.8**	**-1.2**
CEST	**Esterri de Car**	**80.36**	**345**	IAmb	IAmb	20 08 01.4	
	comp=Z,19nm,0.8s						
EIDS	**Eidsvold**	**81.26**	**189**	P	**P**	**20 08 03.7**	**+1.6**
EIDS	**Eidsvold**	**81.26**	**189**	IAmb	IAmb	20 08 04.5	
	comp=Z,24nm,0.8s						
PBRG	**Braganca**	**82.12**	**350**	*e*P	**P**	**20 08 06.8**	**+0.1**
PBRG				*i* IAmb	IAmb	20 08 11.7	
	comp=Z,23nm,1.9s						

ASAR	**Alice Springs**	**82.33**	**204**	P	**P**	**20 08 08.8**	**+1.0**
	comp=Z,25nm,0.6s,baz=16,slow=4.8,SNR=298						
ASAR				pP	**pP**	**20 08 55.1**	**+1.1**
	comp=Z,7.5nm,1.0s,baz=15,slow=5.0,SNR=2.5						
ASAR				PKKPbc	**PKKPbc**	**20 26 32.4**	**0.0**
	comp=Z,0.8nm,0.5s,baz=204,slow=2.3,SNR=15						
	comp=Z,25nm,0.6s						
ASAR	**Alice Springs**	**82.33**	**204**	P	**P**	**20 08 07.8**	**0.0**
PCAB	**Cabril**	**82.33**	**351**	*e*P	**P**	**20 08 07.9**	**+0.1**
AUALC	**St Philip's Co**	**82.36**	**204**	P	**P**	**20 08 08.7**	**+0.8**
POLO	**Lamas de Olo**	**82.65**	**351**	⇓*e*P	**P**	**20 08 09.7**	**+0.2**
POLO				*i* IAmb	IAmb	20 08 10.5	
	comp=Z,12nm,0.9s						
PVRL	**Vila Real**	**82.74**	**351**	⇓*e*P	**P**	**20 08 10.1**	**+0.2**
PVRL				*i* IAmb	IAmb	20 08 11.0	
	comp=Z,48nm,0.6s						
MVO	**Moncorvo**	**82.79**	**350**	⇓*e*P	**P**	**20 08 10.5**	**+0.3**
MVO				*i* IAmb	IAmb	20 08 12.8	
	comp=Z,40nm,1.1s						
HMDM	**Hanimaadhoo**	**82.88**	**272**	P	**P**	**20 08 10.9**	**0.0**
EIL	**Elat**	**83.00**	**314**	LR	LR	20 52 41.0	
	comp=Z,42nm,18.5s,baz=46,slow=41						
QLP	**Quilpie**	**83.23**	**195**	P	**P**	**20 08 13.4**	**+1.1**
PVIS	**Viseu**	**83.31**	**351**	*e*P	**P**	**20 08 13.2**	**+0.3**
DOK	**Doka**	**83.56**	**294**	P	**P**	**20 08 13.1**	**-1.3**
MTE	**Manteigas**	**83.59**	**351**	⇓*e*P	**P**	**20 08 14.8**	**+0.5**
MTE				*i* IAmb	IAmb	20 08 16.8	
	comp=Z,70nm,1.4s						
RAYN	**Ar Rayn**	**83.70**	**303**	P	**P**	**20 08 13.8**	**-1.3**
RAYN	**Ar Rayn**	**83.70**	**303**	*i* P	**P**	**20 08 14.4**	**-0.8**
	SNR=80						
RAYN	**Ar Rayn**	**83.70**	**303**	P	**P**	**20 08 13.8**	**-1.3**
RAYN				pmax	pmax		
	comp=Z,46nm,0.7s						
RAYN	**Ar Rayn**	**83.70**	**303**	P	**P**	**20 08 14.6**	**-0.5**
RAYN	**Ar Rayn**	**83.70**	**303**	P	**P**	**20 08 14.3**	**-0.8**
DMTO	**DMTO**	**83.89**	**292**	P	**P**	**20 08 14.5**	**-1.5**
ESBB	**Sonseca Array**	**83.94**	**348**	IAmb	IAmb	20 08 17.7	
	comp=Z,44nm,0.8s						
ESDC	**Sonseca Array**	**83.94**	**348**	P	**P**	**20 08 16.5**	**+0.5**
	comp=Z,37nm,0.8s,baz=0.7,slow=4.8,SNR=204						
	comp=Z,37nm,0.8s						
ESDC	**Sonseca Array**	**83.94**	**348**	P	**P**	**20 08 15.6**	**-0.5**
ESDC				IAmb	IAmb	20 08 17.7	
	comp=Z,46nm,0.9s						
PCAS	**Casmilo, Conde**	**84.02**	**351**	⇓*e*P	**P**	**20 08 16.8**	**+0.4**
PCAS				*i* IAmb	IAmb	20 08 18.0	
	comp=Z,107nm,1.3s						
MBWA	**Marble Bar**	**84.08**	**218**	P	**P**	**20 08 16.7**	**0.0**
MBWA	**Marble Bar**	**84.08**	**218**	P	**P**	**20 08 16.1**	**-0.6**
MBWA				IAmb	IAmb	20 08 17.5	
	comp=Z,49nm,0.9s						
MBWA	**Marble Bar**	**84.08**	**218**	P	**P**	**20 08 16.7**	**0.0**
MBWA				PcP	**PcP**	**20 08 20.8**	**+0.6**
MBWA				pP	**pP**	**20 09 02.8**	**-0.4**
PAB	**San Pablo**	**84.11**	**348**	P	**P**	**20 08 16.6**	**-0.3**
PAB				IAmb	IAmb	20 08 18.5	
	comp=Z,34nm,0.8s						
PAB	**San Pablo**	**84.11**	**348**	P	**P**	**20 08 16.6**	**-0.3**
PAB				pmax	pmax		
	comp=Z,34nm,0.8s						
PCBR	**Castelo Branco**	**84.14**	**351**	⇓*e*P	**P**	**20 08 17.4**	**+0.4**
PCBR				*i* IAmb	IAmb	20 08 18.1	
	comp=Z,78nm,0.8s						
WHFO	**Wadi Hawf**	**84.33**	**294**	P	**P**	**20 08 16.7**	**-1.6**
PSA00	**Pilbara Seismi**	**84.42**	**217**	P	**P**	**20 08 18.5**	**+0.1**
PSA00	**Pilbara Seismi**	**84.42**	**217**	P	**P**	**20 08 17.5**	**-0.9**
PSA00				IAmb	IAmb	20 08 19.2	
	comp=Z,47nm,1.1s						
PSARD	**Sardoal**	**84.44**	**351**	⇓*e*P	**P**	**20 08 18.4**	**-0.1**
PSARD				*i* IAmb	IAmb	20 08 19.9	
	comp=Z,60nm,1.2s						
PMRV	**Marv??o**	**84.54**	**351**	*e*P	**P**	**20 08 19.2**	**+0.2**
PMRV				*i* IAmb	IAmb	20 08 21.1	
	comp=Z,48nm,1.5s						
PSBE	**So Bento**	**84.58**	**352**	*e*P	**P**	**20 08 19.6**	**+0.3**
PSBE				*i* IAmb	IAmb	20 08 20.7	
	comp=Z,73nm,1.5s						
INKA	**Innaminka**	**84.91**	**197**	IAmb	IAmb	20 08 23.0	
	comp=Z,20nm,0.7s						
PMTG	**Montargil**	**84.97**	**351**	*e*P	**P**	**20 08 21.1**	**-0.1**
PMTG				*i* IAmb	IAmb	20 08 21.9	
	comp=Z,39nm,0.9s						
ABTO	**Aybut**	**85.05**	**294**	P	**P**	**20 08 20.4**	**-1.5**
PESTR	**Estremoz**	**85.12**	**351**	IAmb	IAmb	20 08 23.0	
	comp=Z,42nm,0.8s						
PESTR	**Estremoz**	**85.12**	**351**	*e*P	**P**	**20 08 22.0**	**+0.1**
PESTR				*i* IAmb	IAmb	20 08 23.9	
	comp=Z,65nm,1.4s						
PMAFR	**Mafra**	**85.17**	**352**	*e*P	**P**	**20 08 22.7**	**+0.5**
PMAFR				*i* IAmb	IAmb	20 08 24.1	
	comp=Z,112nm,1.6s						
PARRA	**Arraiolos**	**85.21**	**351**	⇓*e*P	**P**	**20 08 22.2**	**-0.1**
PARRA				*i* IAmb	IAmb	20 08 24.3	
	comp=Z,46nm,1.3s						
EVO	**Evora**	**85.49**	**351**	*e*P	**P**	**20 08 23.7**	**0.0**
KEST	**Kesra**	**85.51**	**337**	P	**P**	**20 08 23.9**	**-0.1**
	comp=Z,17nm,0.9s,baz=49,slow=1.7,SNR=12						
	comp=Z,17nm,0.9s						
KEST	**Kesra**	**85.51**	**337**	IAmb	IAmb	20 08 48.7	
	comp=Z,98nm,1.7s						
MOE	**Montemor**	**85.53**	**351**	*e*P	**P**	**20 08 23.9**	**0.0**
MOE				*i* IAmb	IAmb	20 08 27.6	
	comp=Z,49nm,1.7s						
AULRC	**Lightning Ridg**	**85.58**	**191**	P	**P**	**20 08 24.7**	**+0.7**
PBEJ	**Beja**	**85.97**	**351**	*e*P	**P**	**20 08 26.4**	**+0.2**
PBEJ				*i* IAmb	IAmb	20 08 29.9	
	comp=Z,31nm,1.9s						
MESJ	**Messejana**	**86.19**	**351**	*e*P	**P**	**20 08 26.7**	**-0.6**
MESJ	**Messejana**	**86.19**	**351**	*e*P	**P**	**20 08 26.6**	**-0.6**
PCVE	**Castro Verde**	**86.38**	**351**	*e*P	**P**	**20 08 27.9**	**-0.3**
PVAQ	**Vaqueiros**	**86.58**	**351**	IAmb	IAmb	20 08 29.8	
	comp=Z,14nm,0.7s						
PVAQ	**Vaqueiros**	**86.58**	**351**	⇓*e*P	**P**	**20 08 29.3**	**+0.2**
PVAQ				*i* IAmb	IAmb	20 08 36.7	
	comp=Z,40nm,1.5s						
PBDV	**Barranco-do-Ve**	**86.76**	**351**	*e*P	**P**	**20 08 30.6**	**+0.6**
MORF	**Marmelete**	**86.76**	**351**	*e*P	**P**	**20 08 29.5**	**-0.5**
MORF	**Marmelete**	**86.76**	**351**	*e*P	**P**	**20 08 29.9**	**-0.2**
MORF				*i* IAmb	IAmb	20 08 30.3	
	comp=Z,55nm,1.4s						
AUPHS	**Peel High Scho**	**86.96**	**188**	P	**P**	**20 08 32.9**	**+2.2**
CMSA	**Cobar Meteorol**	**87.92**	**193**	P	**P**	**20 08 36.6**	**+1.3**
AUDCS	**Dubbo College**	**88.28**	**190**	P	**P**	**20 08 38.8**	**+1.9**
STKA	**Stephens Creek**	**88.82**	**196**	P	**P**	**20 08 40.2**	**+0.7**
	comp=Z,8.2nm,0.7s,baz=347,slow=6.3,SNR=17						
	comp=Z,8.2nm,0.7s						
STKA	**Stephens Creek**	**88.82**	**196**	P	**P**	**20 08 40.6**	**+1.1**
MEEK	**Meekatharra**	**89.52**	**217**	P	**P**	**20 08 42.4**	**-0.5**
FORT	**Forrest**	**90.58**	**207**	IAmb	IAmb	20 08 48.8	
	comp=Z,23nm,0.7s						
BBOO	**Buckleboo**	**90.70**	**200**	P	**P**	**20 08 48.8**	**+0.5**
BBOO	**Buckleboo**	**90.70**	**200**	IAmb	IAmb	20 08 50.0	
	comp=Z,20nm,0.9s						
MD01	**Midelt array s**	**90.75**	**348**	P	**P**	**20 08 48.1**	**-0.9**
HTT	**Hallett**	**90.78**	**198**	P	**P**	**20 08 49.6**	**+0.9**
MORW	**Morawa**	**92.63**	**218**	P	**P**	**20 08 56.9**	**-0.4**
MORW	**Morawa**	**92.63**	**218**	IAmb	IAmb	20 08 57.6	
	comp=Z,15nm,0.9s						
TORD	**Torodi Ar. Bea**	**109.00**	**338**	PKiKP	**PKiKP**	**20 14 13.8**	**-0.8**
	comp=Z,0.8nm,0.5s,baz=314,slow=1.3,SNR=7.5						
TORD				PP	**PP**	**20 14 41.5**	**-2.7**
	comp=Z,0.9nm,0.6s,baz=10,slow=5.0,SNR=4.2						
DBIC	**Dimbokro**	**116.53**	**344**	PKP	**PKPdf**	**20 14 28.4**	**-0.5**
	comp=Z,3.7nm,0.5s,baz=16,slow=1.2,SNR=7.2						
ITTB	**Itaituba**	**121.12**	**43**	*e*P	**PKPdf**	**20 14 36.4**	**-1.3**
NPGB	**Novo Progresso**	**123.72**	**44**	*e*P	**PKPdf**	**20 14 42.4**	**-0.3**
PRPB	**Parauapebas**	**124.96**	**38**	*e*P	**PKPdf**	**20 14 45.2**	**+0.1**
NBMO	**Morrinhos-CE**	**125.11**	**25**	*e*P	**PKPdf**	**20 14 44.8**	**-0.5**
LSZ	**Lusaka**	**125.59**	**298**	PKP	**PKPdf**	**20 14 46.1**	**-0.2**
	comp=Z,5.7nm,0.6s,baz=38,slow=2.0,SNR=20						
LSZ	**Lusaka**	**125.59**	**298**		**PKPdf**	**20 14 46.8**	**+0.5**
LSZ	**Lusaka**	**125.59**	**298**	PKiKP	**PKPdf**	**20 14 46.8**	**+0.5**
LSZ	**Lusaka**	**125.59**	**298**	P	**PKPdf**	**20 14 46.7**	**+0.5**
NBPS	**Pedro II - PI**	**125.81**	**27**	*e*P	**PKPdf**	**20 14 46.3**	**-0.5**
LPAZ	**La Paz**	**126.08**	**63**	PKP	**PKPdf**	**20 14 47.8**	**0.0**
	comp=Z,3.1nm,0.6s,baz=294,slow=2.4,SNR=15						
VILB	**Vilhena**	**126.98**	**53**		**PKPdf**	**20 14 50.2**	**+1.3**
VILB	**Vilhena**	**126.98**	**53**	*e*P	**PKPdf**	**20 14 48.4**	**-0.5**
CLDB	**Colider**	**127.02**	**47**	*e*P	**PKPdf**	**20 14 48.1**	**-0.9**
NBPA	**Parau_RN**	**128.14**	**22**	*e*P	**PKPdf**	**20 14 50.6**	**-0.5**
SMTB	**Santa Maria do**	**128.22**	**36**	*e*P	**PKPdf**	**20 14 50.8**	**-0.5**
NBMA	**Muriti-CE**	**129.33**	**25**	*e*P	**PKPdf**	**20 14 52.8**	**-0.7**
PTLB	**Pontes e Lacer**	**129.66**	**53**		**PKPdf**	**20 14 54.6**	**+0.7**

BBSD	**Serra de San D**	**130.50**	**56**	*e*P	**PKPdf**	**20 14 55.1**	**-0.4**
SDBA	**SAO DESIDERIO**	**132.43**	**34**	*e*P	**PKPdf**	**20 14 58.9**	**-0.4**
VNDA	**Vanda**	**133.09**	**180**	PKP	**PKPdf**	**20 14 59.4**	**+0.8**
	comp=Z,3.4nm,0.6s,baz=13,slow=3.9,SNR=11						
PP1B	**Ponte de Pedra**	**133.43**	**49**	*e*P	**PKPdf**	**20 15 00.6**	**-0.4**
BDFB	**Brasilia**	**134.38**	**40**	PKhKP	PKPpre	20 14 53.5	
	comp=Z,2.0nm,0.6s,baz=243,slow=5.1,SNR=3.8						
BDFB				PKP	**PKPdf**	**20 15 03.2**	**+0.3**
	comp=Z,7.2nm,0.5s,baz=343,slow=11,SNR=11						
BDFB				SKPbc	**SKPbc**	**20 18 14.3**	**-0.3**
	comp=Z,6.4nm,0.7s,baz=346,slow=3.8,SNR=7.2						
BDFB	**Brasilia**	**134.38**	**40**		**PKPdf**	**20 15 03.8**	**+0.8**
KGCAE	**Kacgae**	**134.97**	**300**		**PKPdf**	**20 15 04.5**	**+0.6**
LBTB	**Lobatse**	**135.06**	**294**	PKhKP	PKPpre	20 14 54.7	
	comp=Z,1.4nm,0.6s,baz=320,slow=5.2,SNR=4.4						
LBTB				PKP	**PKPdf**	**20 15 03.5**	**-0.5**
	comp=Z,7.6nm,0.7s,baz=59,slow=1.5,SNR=12						
LBTB				SKPbc	**SKPbc**	**20 18 16.0**	**-0.6**
	comp=Z,2.7nm,1.0s,baz=73,slow=1.5,SNR=4.4						
LBTB	**Lobatse**	**135.06**	**294**		**PKPdf**	**20 15 03.6**	**-0.4**
JANB	**Januaria**	**135.10**	**35**	*e*P	**PKPdf**	**20 15 03.6**	**-0.6**
BDQN	**Bodoquena, MS**	**135.11**	**53**	*e*P	**PKPdf**	**20 15 03.8**	**-0.3**
CO01	**Juntas del Tor**	**136.21**	**75**		**PKPdf**	**20 15 08.0**	**+1.8**
IPMB	**Ipameri, GO**	**136.45**	**41**	*e*P	**PKPdf**	**20 15 06.4**	**-0.3**
CMC01	**Camacan, BA**	**136.81**	**29**	*e*P	**PKPdf**	**20 15 07.1**	**-0.2**
GUA01	**Guaratinga, BA**	**137.90**	**30**	*e*P	**PKPdf**	**20 15 08.0**	**-1.3**
AMBA	**Amambai (Brazi**	**138.06**	**53**	*e*P	**PKPdf**	**20 15 09.2**	**-0.3**
BOSA	**Boshof**	**138.16**	**292**	PKhKP	PKPpre	20 14 59.9	
	comp=Z,2.5nm,0.6s,baz=8.8,slow=1.9,SNR=9.2						
CPUP	**Villa Florida**	**139.88**	**58**	PKhKP	PKPpre	20 15 05.0	
	comp=Z,1.3nm,0.5s,baz=328,slow=5.7,SNR=4.9						
CPUP				SKPbc	**SKPbc**	**20 18 29.2**	**-1.2**
	comp=Z,6.7nm,0.9s,baz=135,slow=2.9,SNR=14						
LDASE	**Londrina, Braz**	**140.16**	**49**	*e*P	**PKPdf**	**20 15 12.2**	**-1.1**
MAW	**Mawson**	**142.27**	**218**	PKhKP	PKPpre	20 15 11.7	
	comp=Z,4.6nm,0.5s,baz=105,slow=5.8,SNR=17						
MAW	**Mawson**	**142.27**	**218**		PKPpre	20 15 12.5	
MAW	**Mawson**	**142.27**	**218**	PKiKP	**PKPdf**	**20 15 12.5**	**-3.1**
ITAB	**Concordia**	**143.07**	**53**		PKPab	20 15 16.0	+1.8
SUR	**Sutherland**	**143.47**	**293**	PKP	PKPab	20 15 16.9	+1.0
	comp=Z,15nm,0.6s,baz=92,slow=3.9,SNR=17						
SUR	**Sutherland**	**143.47**	**293**	P	PKPab	20 15 17.3	+1.4
PSAL	**Palomas, Salto**	**143.67**	**63**	*e*P	PKPab	20 15 17.4	+0.9
PLCA	**Paso Flores**	**143.78**	**87**	PKP	PKPab	20 15 18.1	+1.2
	comp=Z,11nm,0.9s,baz=302,slow=3.1,SNR=25						
PLCA				SKPbc	**SKPbc**	**20 18 36.7**	**-3.1**
	comp=Z,4.8nm,1.0s,baz=244,slow=1.7,SNR=3.5						
PLCA	**Paso Flores**	**143.78**	**87**		PKPab	20 15 18.0	+1.2
PLCA	**Paso Flores**	**143.78**	**87**	*e*P	PKPab	20 15 17.9	+1.1
MAJ01	**Sao Joao Batis**	**144.58**	**49**	*e*P	**PKPab**	**20 15 19.9**	**-0.2**
CPSB	**Cacapava Do Su**	**145.15**	**57**	*e*P	**PKPbc**	**20 15 21.7**	**-0.2**
CNLB	**Canela**	**145.43**	**53**	*e*P	**PKPdf**	**20 15 21.9**	**-0.5**
QSPA	**South Pole Qui**	**145.58**	**180**	PK

baz=242,slow=72,SNR=6.3
KURK Kurchatov 120.48 314 PKPdf PKPdf 20 33 25.9 -0.7
KURBB Kurchatov Arra 120.52 314 PKP PKPdf 20 33 25.9 -0.8
comp=Z,0.3nm,0.6s,baz=117,slow=1.9,SNR=4.3
FINES FINESS Array B 144.34 340 PKP PKPdf 20 34 10.8 0.0
comp=Z,2.2nm,0.6s,baz=38,slow=2.3,SNR=18
AKASG Malin Array Be 150.63 324 PKPbc PKPbc 20 34 27.6 +0.4
comp=Z,0.2nm,0.3s,baz=46,slow=3.0,SNR=5.3
EKA Eskdalemuir Ar 153.93 7 PKPab PKPab 20 34 47.6 -0.2
comp=Z,1.3nm,0.8s,baz=190,slow=4.2,SNR=3.9

*IDC **25** 20:21:04.2±0.7,49°.25N×158°.61E,h0km,mb3.8/16, mbtmp3.8/19,ML3.3/3,MS3.2/4,Error ellipse: s-maj=18.7km s-min=15.2km az=139.0*
*KRSC **25** 20:21:06.1±1.9,49°.41N×159°.07E,h41km±47km,Ml4.3 MOS **25** 20:21:08.1±0.7,49°.35N×158°.85E,h39km,mb4.3/9,Error ellipse: s-maj=14.0km s-min=4.0km az=92.6*
*NEIC **25** 20:21:09.7±1.5,49°.31N±0°.09×158°.5E±0°.1,h36km±3km, mb4.2/12,Error ellipse: s-maj=15.3km s-min=12.0km az=129.0*
ISC 25 20:21:08.7±0.6,49°.26N±0°.06×158°.79E±0°.05,h35km,n114, σ1s34/139,mb4.0/24,MS3.0/4,8C-1D,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.23	311	eP	Pn	20 21 41.7	-1.5
SKR				eS	Sn	20 22 07.5	-2.0
SKR				pmax	pmax		
	comp=Z,204nm,0.5s						
SKR				smax	smax		
	comp=N,2μm,0.4s						
SKR				smax	smax		
	comp=E,1μm,0.7s						
SKR	Severo-Kuril's	2.23	311	eP	Pn	20 21 42.1	-1.0
SKR				eS	Sn	20 22 08.2	-1.3
PAU	Pauzhetka	2.54	331	PN	Pn	20 21 47.0	-0.4
PAU				S	Sn	20 22 15.6	-1.5
PAU	Pauzhetka	2.54	331	eP	Pn	20 21 47.0	-0.4
PAU				eS	Sn	20 22 15.6	-1.5
KDTR	Khodutka, Kamc	2.59	350	PN	Pn	20 21 47.2	-0.8
KDTR				S	Sn	20 22 16.5	-1.7
KDTR	Khodutka, Kamc	2.59	350	eP	Pn	20 21 47.3	-0.8
KDTR				eS	Sn	20 22 16.6	-1.7
ASAK	Asacha	3.17	350	PN	Pn	20 21 56.7	+0.5
ASAK				S	Sn	20 22 31.1	-1.7
ASAK	Asacha	3.17	350	eP	Pn	20 21 56.7	+0.5
ASAK				eS	Sn	20 22 31.2	-1.7
RUS	Russkaya	3.18	357	PN	Pn	20 21 55.7	-0.4
RUS				S	Sn	20 22 30.6	-2.2
RUS	Russkaya	3.18	357	eP	Pn	20 21 55.7	-0.4
RUS				eS	Sn	20 22 30.6	-2.2
MTVR	Mutnovka	3.25	353	PN	Pn	20 21 56.8	-0.4
MTVR				S	Sn	20 22 33.0	-1.7
MTVR	Mutnovka	3.25	353	eP	Pn	20 21 56.9	-0.4
MTVR				eS	Sn	20 22 33.0	-1.7
MIPR	Malaya Ipel'ka	3.28	338	PN	Pn	20 21 57.8	+0.2
MIPR				S	Sn	20 22 34.9	-0.4
MIPR	Malaya Ipel'ka	3.28	338	eP	Pn	20 21 57.8	+0.2
MIPR				eS	Sn	20 22 35.0	-0.4
GRL	Gorelyy	3.32	352	PN	Pn	20 21 58.4	+0.2
GRL				S	Sn	20 22 35.6	-0.9
GRL	Gorelyy	3.32	352	eP	Pn	20 21 58.5	+0.2
GRL				eS	Sn	20 22 35.7	-0.9
KRMR	Karymshinskiy	3.60	354	PN	Pn	20 22 02.5	+0.6
KRMR				S	Sn	20 22 42.6	-0.5
KRMR	Karymshinskiy	3.60	354	eP	Pn	20 22 02.5	+0.6
KRMR				eS	Sn	20 22 42.6	-0.5
PET	Petropavlovsk	3.77	359		Pn	20 22 03.9	-0.3
PET					Sn	20 22 45.3	-1.9
PET	Petropavlovsk	3.77	359	ePN	Pn	20 22 04.1	-0.1
PET				eS	Sn	20 22 45.4	-1.9
PET				pmax	pmax		
	comp=Z,94nm,0.5s						
PET				smax	smax		
	comp=E,195nm,0.6s						
PET				smax	smax		
	comp=N,237nm,0.4s						
PET	Petropavlovsk	3.77	359	eP	Pn	20 22 03.9	-0.3
PET				eS	Sn	20 22 45.4	-1.9
DALK	Dalny	3.77	360	PN	Pn	20 22 03.9	-0.4
DALK	Dalny	3.77	360	eP	Pn	20 22 04.0	-0.4
DALK				eS	Sn	20 22 44.5	-2.9
APC	Apacha	3.81	345	PN	Pn	20 22 04.8	0.0
APC				S	Sn	20 22 48.7	+0.4
APC	Apacha	3.81	345	eP	Pn	20 22 04.8	0.0
APC				eS	Sn	20 22 48.7	+0.4
INSR	Institute	3.81	358	eS	Sn	20 22 47.6	-0.7
SPN	Mys Shipunski	3.92	11	PN	Pn	20 22 05.5	-0.8
SPN				S	Sn	20 22 48.5	-2.5
SPN	Mys Shipunski	3.92	11	eP	Pn	20 22 05.5	-0.8
SPN				eS	Sn	20 22 48.5	-2.5
UGLR	Uglovaya	3.95	0	PN	Pn	20 22 06.7	-0.1
UGLR	Uglovaya	3.95	0	eP	Pn	20 22 06.8	-0.1
SMAR	Somma	4.01	0	PN	Pn	20 22 08.0	+0.3
SMAR	Somma	4.01	0	eP	Pn	20 22 08.1	+0.3
AVH	Avacha	4.01	360	PN	Pn	20 22 07.9	+0.3
AVH	Avacha	4.01	360	eP	Pn	20 22 08.0	+0.3
KOK	Koryaka	4.04	359	PN	Pn	20 22 08.4	+0.4
KOK				S	Sn	20 22 54.1	0.0
KOK	Koryaka	4.04	359	eP	Pn	20 22 08.5	+0.4
KOK				eS	Sn	20 22 54.1	0.0
KRER	Koryakskii	4.05	360	PN	Pn	20 22 08.3	0.0
KRER				S	Sn	20 22 53.1	-1.4
KRER	Koryakskii	4.05	360	eP	Pn	20 22 08.3	0.0
KRER				eS	Sn	20 22 53.1	-1.4
KRX	Arik	4.10	359	PN	Pn	20 22 09.2	+0.2
KRX				S	Sn	20 22 55.7	-0.1
KRX	Arik	4.10	359	eP	Pn	20 22 09.3	+0.2
KRX				eS	Sn	20 22 55.7	-0.1
GNL	Ganaly	4.47	354	PN	Pn	20 22 15.1	+1.1
GNL	Ganaly	4.47	354	eP	Pn	20 22 15.1	+1.1
MKZ	Mys Kozlova	5.61	18	PN	Pn	20 22 28.2	-1.2
MKZ	Mys Kozlova	5.61	18	eP	Pn	20 22 28.3	-1.2
MKZ				eS	Sn	20 23 29.1	-3.5
TUMD	Tumrok D	6.03	9	eS	Sn	20 23 41.4	-1.7
ESO	Esso	6.67	360	PN	Pn	20 22 43.9	-0.2
ESO	Esso	6.67	360	eP	Pn	20 22 44.0	-0.2
KBTR	Krutoberegovo	7.37	18	PN	Pn	20 22 53.6	-0.1
KBTR	Krutoberegovo	7.37	18	eP	Pn	20 22 53.7	-0.1
KBTR				eS	Sn	20 24 13.6	-2.5
KBG	Krutoberegovo	7.39	17	PN	Pn	20 22 54.5	+0.5
KBG	Krutoberegovo	7.39	17	eP	Pn	20 22 54.5	+0.5
KBG				eS	Sn	20 24 14.9	-1.6
BKI	Bering	7.40	34	PN	Pn	20 22 53.0	-1.1
BKI	Bering	7.40	34	eP	Pn	20 22 53.0	-1.1
BKI				eS	Sn	20 24 10.2	-6.6
JKA	Kamikawa-asahi	12.24	251		Pn	20 23 58.4	-2.0
ASAJ	Asahikawa	12.24	251	Pn	Pn	20 23 58.7	-1.7
	comp=N,0.6nm,0.3s,baz=59,slow=10,SNR=5.8						
	comp=N,7.6nm,1.0s						
SEY	Seymchan	14.15	348	Pn	Pn	20 24 25.6	-0.7
	comp=N,0.1nm,0.3s,baz=152,slow=10,SNR=6.1						
	comp=N,0.2nm,0.3s						
KIWB	Kanaga Island	15.49	71		Pn	20 24 43.4	-0.9
ADK	Adak	15.78	71	Pn	Pn	20 24 48.0	0.0
ADK	Adak	15.78	71	P	Pn	20 24 48.0	0.0
ADK				pmax	pmax		
	comp=Z,41nm,1.2s						
GSTR	Great Sitkin T	16.17	70	Pn	P	20 24 55.9	0.0
KLR	Kul'dur	17.62	280	eP	P	20 25 13.5	+1.5
KLR				pmax	pmax		
	comp=Z,6.0nm,1.6s						
BILL	Bilibino	19.20	9	eP	Pn	20 25 31.6	+1.3
BILL				pmax	pmax		
	comp=Z,8.0nm,1.5s						
MJAR	Matsushiro Ar	19.64	237	P	P	20 25 32.1	-2.2
	baz=29,slow=9.5,SNR=1.9						
	comp=Z,0.4nm,0.6s						
YAK	Yakutsk	20.58	319	P	P	20 25 42.4	-1.8
	comp=Z,4.5nm,0.4s,baz=142,slow=15,SNR=5.8						
YAK				LR	LR	20 33 45.3	
	comp=Z,50nm,18.6s,baz=80,slow=37						
	comp=Z,4.5nm,0.4s						
YAK	Yakutsk	20.58	319	P	P	20 25 42.5	-1.8
YAK				IAmb	IAmb	20 25 45.7	
	comp=Z,8.0nm,0.8s						
YAK	Yakutsk	20.58	319	c iP	P	20 25 42.6	-1.6
YAK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BNX	BinXian	21.41	272	⇑P	P	20 25 51.8	-1.5
BNX				pmax	pmax		
	comp=Z,6.0nm,2.0s						
L14K	Kuka Creek	24.63	46	P	P	20 26 27.3	+1.9
L14K				IAmb	IAmb	20 26 29.9	
	comp=Z,8.1nm,1.1s						
KSRS	Korea Array	25.17	254	P	P	20 26 29.2	-1.4
	comp=Z,0.4nm,0.5s,baz=41,slow=11,SNR=1.7						
	comp=Z,0.4nm,0.5s						
TIXI	Tiksi	26.30	339	LR	LR	20 38 48.2	
	comp=Z,32nm,18.1s,baz=6.0,slow=40						
TIXI	Tiksi	26.30	339	P	P	20 26 40.2	-0.3
TIXI	Tiksi	26.30	339	⇑eP	P	20 26 41.1	+0.6
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
M17K	Holitna River	27.14	47	P	P	20 26 50.4	+2.3
M17K				IAmb	IAmb	20 26 54.3	
	comp=Z,8.6nm,0.9s						
H11N2	WAKE ISLAND Hy	30.18	165	T	T	20 58 49.7	
	baz=349,slow=76,SNR=5.8						
H11N3	WAKE ISLAND Hy	30.19	165	T	T	20 58 51.4	
	baz=349,slow=76,SNR=7.0						
H11N1	WAKE ISLAND Hy	30.19	165	T	T	20 58 49.5	
	baz=349,slow=76,SNR=7.2						
H11S1	WAKE ISLAND Hy	31.34	165	T	T	21 00 20.8	
	baz=350,slow=76,SNR=5.4						
H11S3	WAKE ISLAND Hy	31.35	165	T	T	21 00 23.4	
	baz=350,slow=76,SNR=4.7						
H11S2	WAKE ISLAND Hy	31.36	165	T	T	21 00 26.0	
	baz=350,slow=76,SNR=5.2						
COLA	College	31.77	41	⇓eP	P	20 27 28.4	-0.8
COLA				pmax	pmax		
	comp=Z,14nm,2.6s						
ILAR	Eielson Array	32.18	41	P	P	20 27 34.5	+1.7
	comp=Z,0.5nm,0.6s,baz=251,slow=7.2,SNR=8.4						
	comp=Z,0.5nm,0.6s						
SONM	Songino Array	34.14	288	P	P	20 27 48.9	-1.3
	comp=Z,0.4nm,0.9s,baz=68,slow=9.2,SNR=2.1						
	comp=Z,0.4nm,0.9s						
SONM	Songino Array	34.14	288	P	P	20 27 47.6	-2.6
SONM	Songino Array	34.14	288	P	P	20 27 47.6	-2.6
SONM				pmax	pmax		
	comp=Z,2.0nm,1.4s						
YKA	Yellowknife Ar	46.59	40	P	P	20 29 33.7	+1.0
	comp=Z,0.5nm,0.6s,baz=300,slow=7.6,SNR=10						
	comp=Z,0.5nm,0.6s						
KURK	Kurchatov	49.13	304	P	P	20 29 52.9	+0.4
KURK				IAmb	IAmb	20 29 55.1	
	comp=Z,1.7nm,0.7s						
KURK	Kurchatov	49.13	304	⇑eP	P	20 29 53.4	+0.9
KURK				pmax	pmax		
	comp=Z,14nm,3.6s						
MK31	Makanchi Array	49.15	298	c iP	P	20 29 53.6	+0.8
MKAR	Makanchi Array	49.15	298	P	P	20 29 53.5	+0.7
	comp=Z,0.9nm,0.7s,baz=54,slow=5.8,SNR=11						
	comp=Z,0.9nm,0.7s						
MKAR	Makanchi Array	49.15	298	P	P	20 29 52.4	-0.5
KURBB	Kurchatov Arra	49.23	304	P	P	20 29 54.1	+0.9
	comp=Z,1.6nm,0.7s,baz=63,slow=7.8,SNR=11						
	comp=Z,1.6nm,0.7s						
SPITS	Spitsbergen Ar	50.78	351	P	P	20 30 06.1	+1.4
	comp=Z,6.3nm,0.9s,baz=54,slow=7.7,SNR=4.7						
	comp=Z,6.3nm,0.9s						
BVAR	Borovoye Array	52.18	310	P	P	20 30 16.7	+1.2
	comp=Z,1.5nm,0.5s,baz=63,slow=7.4,SNR=10						
	comp=Z,1.5nm,0.5s						
BORK	Borovoye	52.20	310	P	P	20 30 15.4	-0.3
BORK				IAmb	IAmb	20 30 19.9	
	comp=Z,1.7nm,0.7s						
BORK	Borovoye	52.20	310	P	P	20 30 15.4	-0.3
BORK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AAK	Ala-Archa	56.08	298	LR	LR	20 57 16.5	
	comp=Z,19nm,20.1s,baz=26,slow=39						
AAK	Ala-Archa	56.08	298	⇑eP	P	20 30 44.5	+0.2
AAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BRDH	Bariadhala	58.36	269	LR	LR	20 57 25.6	
	comp=Z,32nm,18.2s,baz=236,slow=38						
PDAR	Pinedale Array	60.18	58	P	P	20 31 14.9	+1.8
	comp=Z,0.4nm,0.8s,baz=281,slow=8.8,SNR=3.9						
	comp=Z,0.4nm,0.8s						
PDAR	Pinedale Array	60.18	58	P	P	20 31 14.3	+1.2
FINES	FINESS Array B	63.31	337	P	P	20 31 34.1	+0.6
	comp=Z,6.0nm,1.1s,baz=28,slow=6.7,SNR=1.9						
	comp=Z,6.0nm,1.1s						
OBN	Obninsk	65.31	328	eP	P	20 31 47.1	+0.5
OBN				e		20 32 17.7	
OBN				e		20 34 11.5	
OBN				ePPP	PPP	20 35 45.5	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NOA	NORSAR Array B	66.99	344	P	P	20 31 58.7	+1.3
	comp=Z,0.8nm,0.8s,baz=22,slow=6.8,SNR=2.0						
	comp=Z,0.8nm,0.8s						
AKASG	Malin Array Be	71.47	329	P	P	20 32 25.3	0.0
	comp=Z,0.7nm,0.5s,baz=34,slow=6.7,SNR=4.3						
	comp=Z,0.7nm,0.5s						
AKASG	Malin Array Be	71.47	329	IAmb	IAmb	20 32 55.4	
	comp=Z,3.2nm,1.2s						
AKASG	Malin Array Be	71.47	329	i P	P	20 32 26.7	+1.4
WRA	Warramunga Arr	72.25	204	P	P	20 32 30.6	+0.3
	comp=Z,1.2nm,0.7s,baz=20,slow=6.2,SNR=8.4						
	comp=Z,1.2nm,0.7s						
WRA	Warramunga Arr	72.25	204	i P	P	20 32 32.0	+1.8
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR	Lajitas Array	72.95	65	P	P	20 32 35.9	+1.3
	comp=Z,0.5nm,0.5s,baz=298,slow=4.5,SNR=9.1						
	comp=Z,0.5nm,0.5s						
TXAR	Lajitas Array	72.95	65	P	P	20 32 36.0	+1.4
ASAR	Alice Springs	75.92	203	P	P	20 32 52.6	+1.1
	comp=Z,0.7nm,0.7s,baz=12,slow=5.1,SNR=6.9						
	comp=Z,0.7nm,0.7s						
ASAR	Alice Springs	75.92	203	P	P	20 32 52.0	+0.4
ASAR	Alice Springs	75.92	203	P	P	20 32 52.0	+0.4
PLCA	Paso Flores	144.64	95	PKP	PKPbc	20 40 40.8	+0.9
	comp=Z,0.7nm,0.9s,baz=291,slow=3.2,SNR=1.4						

*IDC **25** 20:23:13.3±1.3,49°.11N×157°.83E,h0km,mb3.4/6, mbtmp3.4/6,Error ellipse: s-maj=39.9km s-min=31.1km az=57.0*
*KRSC **25** 20:23:16.1±1.6,49°.28N×158°.15E,h43km±42km,Ml3.8*
ISC 25 20:23:18.5±1.1,49°.19N±0°.09×157°.9E±0°.1,h35km,n14, σ0s84/16,mb3.5/6,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.89	323	eP	Pn	20 23 47.5	-0.6
SKR				eS	Sn	20 24 11.2	+0.5
PAU	Pauzhetka	2.38	344	eS	Sn	20 24 24.6	+1.5
KDTR	Khodutka, Kamc	2.63	3	eS	Sn	20 24 27.4	-1.6
MTVR	Mutnovka	3.31	3	eP	Pn	20 24 07.5	-0.4
MTVR				eS	Sn	20 24 45.1	-0.8
GRL	Gorelyy	3.37	2	eP	Pn	20 24 09.7	+1.0
PET	Petropavlovsk	3.87	7	eP	Pn	20 24 15.3	-0.1
DALK	Dalny	3.89	8	eP	Pn	20 24 15.3	-0.4
KOK	Koryaka	4.14	6	eP	Pn	20 24 20.0	+0.8
MKAR	Makanchi Array	48.66	298	P	P	20 31 58.7	-0.2
	0.2nm,0.5s,baz=49,slow=6.6,SNR=2.7						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	48.78	304	P	P	20 31 59.6	0.0
	0.3nm,0.5s,baz=65,slow=7.8,SNR=5.1						
	0.3nm,0.5s						
BVAR	Borovoye Array	51.78	310	P	P	20 32 22.3	0.0
	0.2nm,0.3s,baz=62,slow=8.0,SNR=1.9						
	0.2nm,0.3s						
WRA	Warramunga Arr	71.94	203	P	P	20 34 37.6	-0.6
	0.6nm,0.7s,baz=21,slow=6.3,SNR=4.9						
	0.6nm,0.7s						
TXAR	Lajitas Array	73.52	64	P	P	20 34 48.4	+0.6
	0.1nm,0.7s,baz=319,slow=5.4,SNR=1.6						
	0.1nm,0.7s						
ASAR	Alice Springs	75.62	203	P	P	20 34 59.8	+0.1
	0.3nm,0.8s,baz=14,slow=5.4,SNR=1.9						
	0.3nm,0.8s						

KRSC 25 20:28:35.7±1.7,49°.44N×158°.96E,h38km±47km,Ml3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.22	305	eP	Pn	20 29 10.8	+0.9
SKR				eS	Sn	20 29 36.8	+0.9
KDTR	Khodutka, Kamc	2.44	347	eP	Pn	20 29 15.7	+2.8
KDTR				eS	Sn	20 29 45.2	+3.7
PAU	Pauzhetka	2.45	327	eP	Pn	20 29 16.0	+2.9
PAU				eS	Sn	20 29 45.6	+3.8
RUS	Russkaya	3.01	355	eP	Pn	20 29 24.2	+3.4
RUS				eS	Sn	20 29 59.0	+3.4
ASAK	Asacha	3.03	348	eP	Pn	20 29 25.3	+4.3
ASAK				eS	Sn	20 30 00.3	+4.3
MTVR	Mutnovka	3.09	351	eP	Pn	20 29 25.6	+3.6
MTVR				eS	Sn	20 30 01.2	+3.5
GRL	Gorelyy	3.17	350	eP	Pn	20 29 27.1	+4.0
GRL				eS	Sn	20 30 04.3	+4.6
KRMR	Karymshinskiy	3.44	352	eP	Pn	20 29 30.3	+3.7
KRMR				eS	Sn	20 30 10.4	+4.3
DALK	Dalny	3.60	358	eP	Pn	20 29 32.4	+3.5
DALK				eS	Sn	20 30 15.0	+5.0
SPN	Mys Shipunski	3.73	10	eP	Pn	20 29 34.7	+4.1
SPN				eS	Sn	20 30 18.0	+4.8
UGLR	Uglovaya	3.78	359	eP	Pn	20 29 35.9	+4.5
SMAR	Somma	3.83	359	eP	Pn	20 29 37.6	+5.4
AVH	Avacha	3.84	358	eP	Pn	20 29 37.2	+5.0
KOK	Koryaka	3.87	357	eP	Pn	20 29 37.6	+5.0
KRX	Arik	3.93	357	eP	Pn	20 29 38.5	+5.0
GNL	Ganaly	4.31	352	eP	Pn	20 29 44.5	+5.8
KBTR	Krutoberegovo	7.17	18	eP	Pn	20 30 22.5	+4.6

KRSC 25 20:55:11.9±1.4,49°.45N×158°.96E,h41km±39km,Ml3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.21	305	eP	Pn	20 55 47.0	+0.9
SKR				eS	Sn	20 56 12.9	+0.7
KDTR	Khodutka, Kamc	2.43	347	eP	Pn	20 55 51.9	+2.8
KDTR				eS	Sn	20 56 21.3	+3.8
PAU	Pauzhetka	2.44	327	eP	Pn	20 55 52.2	+2.9
PAU				eS	Sn	20 56 21.5	+3.6
RUS	Russkaya	3.00	355	eP	Pn	20 56 00.5	+3.5
RUS				eS	Sn	20 56 35.3	+3.7
ASAK	Asacha	3.01	348	eP	Pn	20 56 01.2	+4.0
ASAK				eS	Sn	20 56 36.4	+4.3
MTVR	Mutnovka	3.08	351	eP	Pn	20 56 01.6	+3.4
MTVR				eS	Sn	20 56 37.2	+3.5
MIPR	Malaya Ipel'ka	3.16	335	eP	Pn	20 56 02.9	+3.8
GRL	Gorelyy	3.16	350	eP	Pn	20 56 03.1	+3.9
GRL				eS	Sn	20 56 40.4	+4.7
KRMR	Karymshinskiy	3.43	352	eP	Pn	20 56 07.0	+4.2
KRMR				eS	Sn	20 56 47.6	+5.5
DALK	Dalny	3.59	358	eP	Pn	20 56 08.6	+3.6
DALK				eS	Sn	20 56 51.3	+5.1
SPN	Mys Shipunski	3.71	10	eP	Pn	20 56 10.7	+4.0
SPN				eS	Sn	20 56 53.6	+4.4
UGLR	Uglovaya	3.77	359	eP	Pn	20 56 11.9	+4.3
SMAR	Somma	3.82	359	eP	Pn	20 56 13.5	+5.1
AVH	Avacha	3.82	358	eP	Pn	20 56 13.5	+5.2
KOK	Koryaka	3.85	357	eP	Pn	20 56 13.5	+4.7
KRX	Arik	3.92	357	eP	Pn	20 56 13.9	+4.2
GNL	Ganaly	4.30	352	eP	Pn	20 56 20.2	+5.3
MKZ	Mys Kozlova	5.39	17	eP	Pn	20 56 34.1	+4.4
KBTR	Krutoberegovo	7.16	18	eP	Pn	20 56 58.6	+4.6
KBTR				eS	Sn	20 58 19.0	+5.0

*SJA **25** 21:12:33.2±0.5,35°.86S×73°.74W,h15km,ML3.5,MW3.7*
*GUC **25** 21:12:38.2±0.8,35°.72S×73°.53W,h40km±4km,ML3.3*
ISC 25 21:12:35.9±2.7,35°.68S±0°.04×73°.58W±0°.10,h4km±15km, n27,σ1s88/38,1C,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BI05	Punta Hualpn	1.11	164	eP	Pb	21 12 57.0	-0.6
BI05				eS	Sb	21 13 09.4	-2.9
BI05				IAML		21 13 18.8	
	comp=N,913nm,0.3s						
GO05	Hualane	1.50	64	⇑iP	Pn	21 13 03.1	-0.5
GO05				eS	Sg	21 13 26.9	+2.7
GO05				IAML		21 13 32.7	
	comp=E,747nm,0.4s						
ML02	Panimavida	1.76	93	eP	Pn	21 13 07.0	-0.1
ML02				eS	Sn	21 13 29.0	-0.9
ML02				IAML		21 13 39.2	
	comp=N,778nm,0.6s						
BO03	Pichilemu	1.78	49	eP	Pb	21 13 07.5	-1.5
BO03				IAML		21 13 45.3	
	comp=E,356nm,0.6s						
BI02	San Fabin de	2.10	118	eP	Pn	21 13 12.0	0.0
BO01	Tunca	2.42	58	eP	Pb	21 13 17.4	-2.6
BO01				IAML		21 14 02.1	
	comp=N,150nm,0.7s						
BO01	Tunca	2.42	58	eP	Pb	21 13 18.2	-1.7
BO01				eS	Sg	21 13 51.5	-2.0
BO01				IAML		21 14 01.3	
	comp=Z,122nm,0.5s						
BO02	Sierra Bellavi	2.45	70	eP	Pn	21 13 17.4	+0.6
BO02				IAML		21 14 01.3	
	comp=E,585nm,0.5s						
BO02	Sierra Bellavi	2.45	70	eP	Pn	21 13 17.3	+0.6
BO02				eS	Sb	21 13 51.0	-0.2
BO02				IAML		21 14 01.9	
	comp=Z,403nm,0.6s						
MT01	Popeta	2.64	47	eP	Pn	21 13 19.4	+0.1
MT01				IAML		21 14 16.6	
	comp=N,82nm,0.2s						
MT09	Talagante	2.86	49	eP	Pn	21 13 22.8	+0.5
MT09				IAML		21 14 16.9	
	comp=N,194nm,0.6s						
BO04	La Punta	2.97	56	eP	Pn	21 13 24.6	+0.8
BO04				IAML		21 14 21.7	
	comp=N,138nm,0.4s						
CANA	Caviahue	2.98	138	eP	Pn	21 13 22.5	-1.7
CANA				eS	Sg	21 14 13.5	+1.7
MT03	Universidad Ad	3.34	50	eP	Pn	21 13 31.0	+2.0
MT03				eS	Sn	21 14 09.7	+0.5
MT03				IAML		21 14 30.7	
	comp=Z,112nm,0.8s						
PEL	Peldehue	3.48	44	eP	Pn	21 13 32.2	+1.3
PEL				eS	Sn	21 14 13.7	+1.1
PEL				IAML		21 14 36.6	
	comp=Z,63nm,0.8s						
VA03	San

KRMR	**Karymshinskiy**	**3.39**	**352**	*eS*	Sn	21 14 57.1	+4.8
DALK	**Dalny**	**3.55**	**359**	*eP*	Pn	21 14 19.3	+3.6
UGLR	**Uglovaya**	**3.73**	**359**	*eP*	Pn	21 14 23.4	+5.1
AVH	**Avacha**	**3.79**	**358**	*eP*	Pn	21 14 23.8	+4.8
KOK	**Koryaka**	**3.82**	**358**	*eP*	Pn	21 14 23.5	+4.1
KRX	**Arik**	**3.88**	**358**	*eP*	Pn	21 14 24.2	+3.8
KBTR	**Krutoberegovo**	**7.14**	**18**	*eP*	Pn	21 15 08.9	+4.0

KRSC 25 21:21:50.8±2.4, 49°24′N×158°31′E, h40km±60km, MI3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.02**	**316**	*eP*	Pn	21 22 22.2	0.0
SKR				*eS*	Sn	21 22 46.2	-0.1
PAU	**Pauzhetka**	**2.42**	**337**	*eP*	Pn	21 22 30.2	+2.4
PAU				*eS*	Sn	21 22 59.0	+2.8
KDTR	**Khodutka, Kamc**	**2.57**	**357**	*eS*	Sn	21 23 03.3	+3.5
ASAK	**Asacha**	**3.15**	**355**	*eP*	Pn	21 22 42.5	+4.6
RUS	**Russkaya**	**3.20**	**2**	*eP*	Pn	21 22 41.9	+3.5
RUS				*eS*	Sn	21 23 19.6	+4.4
MTVR	**Mutnovka**	**3.24**	**359**	*eP*	Pn	21 22 42.8	+3.6
MTVR				*eS*	Sn	21 23 21.2	+4.6
GRL	**Gorelyy**	**3.32**	**357**	*eP*	Pn	21 22 44.4	+4.2
GRL				*eS*	Sn	21 23 24.0	+5.7
KRMR	**Karymshinskiy**	**3.59**	**358**	*eP*	Pn	21 22 48.5	+4.6
APC	**Apacha**	**3.76**	**349**	*eP*	Pn	21 22 50.3	+4.2
UGLR	**Uglovaya**	**3.98**	**4**	*eP*	Pn	21 22 54.0	+4.7
SPN	**Mys Shipunski**	**4.01**	**15**	*eP*	Pn	21 22 53.1	+3.6
AVH	**Avacha**	**4.04**	**4**	*eP*	Pn	21 22 54.5	+4.5
SMAR	**Somma**	**4.04**	**4**	*eP*	Pn	21 22 55.9	+5.7
KOK	**Koryaka**	**4.06**	**3**	*eP*	Pn	21 22 55.3	+5.0
KRER	**Koryakskii**	**4.08**	**4**	*eP*	Pn	21 22 56.5	+5.8
KRX	**Arik**	**4.13**	**3**	*eP*	Pn	21 22 55.8	+4.5
GNL	**Ganaly**	**4.46**	**357**	*eP*	Pn	21 23 01.0	+5.1
MKZ	**Mys Kozlova**	**5.72**	**20**	*eP*	Pn	21 23 16.5	+3.4
KBTR	**Krutoberegovo**	**7.49**	**20**	*eP*	Pn	21 23 41.4	+4.1

*IDC **25** 21:35:23.6±1.2, 49.°13N×158.°29E, h0km, mb3.8/6, mbtmp3.8/6, MS3.2/1, Error ellipse: s-maj=34.9km s-min=28.3km az=27.0*
*KRSC **25** 21:35:26.3±2.0, 49.°39N×158.°78E, h42km±47km, Ml4.2*
ISC 25 21:35:28.3±1.1, 49°26N±0.°08×158°59E±0.°07, h35km, n32, σ1s28/47, mb3.7/6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.14**	**313**	*eP*	**Pn**	**21 35 59.7**	**-1.8**
SKR				*eS*	**Sn**	**21 36 24.9**	**-1.8**
PAU	**Pauzhetka**	**2.48**	**333**	*eP*	**Pn**	**21 36 06.0**	**-0.2**
PAU				*eS*	**Sn**	**21 36 35.3**	**0.0**
KDTR	**Khodutka, Kamc**	**2.57**	**353**	*eP*	**Pn**	**21 36 06.4**	**-0.9**
KDTR				*eS*	**Sn**	**21 36 36.1**	**-1.2**
ASAK	**Asacha**	**3.15**	**352**	*eP*	**Pn**	**21 36 16.0**	**+0.5**
ASAK				*eS*	**Sn**	**21 36 51.8**	**+0.1**
RUS	**Russkaya**	**3.17**	**359**	*eP*	**Pn**	**21 36 15.5**	**-0.2**
RUS				*eS*	**Sn**	**21 36 50.9**	**-1.4**
MIPR	**Malaya Ipel'ka**	**3.23**	**340**	*eP*	**Pn**	**21 36 17.2**	**+0.7**
MIPR				*eS*	**Sn**	**21 36 54.5**	**+0.7**
MTVR	**Mutnovka**	**3.23**	**356**	*eP*	**Pn**	**21 36 16.5**	**-0.2**
MTVR				*eS*	**Sn**	**21 36 52.8**	**-1.2**
GRL	**Gorelyy**	**3.31**	**355**	*eP*	**Pn**	**21 36 18.1**	**+0.4**
GRL				*eS*	**Sn**	**21 36 55.3**	**-0.5**
KRMR	**Karymshinskiy**	**3.58**	**356**	*eP*	**Pn**	**21 36 22.2**	**+0.9**
KRMR				*eS*	**Sn**	**21 37 03.1**	**+0.7**
PET	**Petropavlovsk**	**3.77**	**1**	*eP*	**Pn**	**21 36 23.7**	**-0.1**
PET				*eS*	**Sn**	**21 37 05.6**	**-1.2**
DALK	**Dalny**	**3.77**	**2**	*eP*	**Pn**	**21 36 24.0**	**+0.1**
DALK				*eS*	**Sn**	**21 37 05.8**	**-1.3**
APC	**Apacha**	**3.78**	**347**	*eP*	**Pn**	**21 36 24.1**	**+0.2**
PETK	**Petropavlovsk-** comp=Z,31nm,21.1s,baz=43,slow=44	**3.89**	**352**	LR	LR	21 38 19.4	
NLC	**Nalytchevo**	**3.94**	**7**	*eS*	**Sn**	**21 37 10.5**	**-0.7**
SPN	**Mys Shipunski**	**3.94**	**13**	*eP*	**Pn**	**21 36 26.4**	**+0.1**
SPN				*eS*	**Sn**	**21 37 10.0**	**-1.3**
UGLR	**Uglovaya**	**3.95**	**2**	*eP*	**Pn**	**21 36 27.7**	**+1.2**
UGLR				*eS*	**Sn**	**21 37 12.0**	**+0.3**
SMAR	**Somma**	**4.01**	**2**	*eP*	**Pn**	**21 36 29.1**	**+1.7**
AVH	**Avacha**	**4.01**	**1**	*eP*	**Pn**	**21 36 28.8**	**+1.6**
AVH				*eS*	**Sn**	**21 37 13.4**	**+0.4**
KOK	**Koryaka**	**4.04**	**0**	*eP*	**Pn**	**21 36 28.8**	**+1.2**
KRX	**Arik**	**4.10**	**1**	*eP*	**Pn**	**21 36 28.9**	**+0.3**
KRX				*eS*	**Sn**	**21 37 15.8**	**+0.4**
GNL	**Ganaly**	**4.46**	**355**	*eP*	**Pn**	**21 36 34.7**	**+1.3**
MKZ	**Mys Kozlova**	**5.65**	**19**	*eS*	**Sn**	**21 37 50.5**	**-2.6**
TUMD	**Tumrok D**	**6.05**	**10**	*eS*	**Sn**	**21 38 03.2**	**0.0**
KBTR	**Krutoberegovo**	**7.41**	**19**	*eP*	**Pn**	**21 37 14.6**	**+0.8**
KBTR				*eS*	**Sn**	**21 38 34.9**	**-1.7**
KBG	**Krutoberegovo**	**7.43**	**18**	*eS*	**Sn**	**21 38 34.2**	**-2.9**
BKI	**Bering**	**7.48**	**34**	*eS*	**Sn**	**21 38 34.1**	**-4.1**
TIXI	**Tiksi** 1.5nm,0.3s,baz=136,slow=9.4,SNR=3.6 1.5nm,0.3s	**26.25**	**339**	P	**P**	**21 41 00.1**	**+0.4**
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=52,slow=6.3,SNR=6.0 0.2nm,0.4s	**49.03**	**298**	P	**P**	**21 44 11.2**	**-0.4**
KURBB	**Kurchatov Arra** 0.4nm,0.7s,baz=62,slow=7.4,SNR=4.1 0.4nm,0.7s	**49.12**	**304**	P	**P**	**21 44 11.9**	**-0.1**
BVAR	**Borovoye Array** 0.4nm,0.5s,baz=66,slow=6.7,SNR=5.6 0.4nm,0.5s	**52.08**	**310**	P	**P**	**21 44 34.4**	**0.0**
WRA	**Warramunga Arr** 1.5nm,0.8s,baz=19,slow=6.2,SNR=5.1 1.5nm,0.8s	**72.20**	**204**	P	**P**	**21 46 49.0**	**-0.5**
TXAR	**Lajitas Array** 0.7nm,0.7s,baz=305,slow=4.6,SNR=12 0.7nm,0.7s	**73.07**	**65**	P	**P**	**21 46 57.1**	**+2.2**

*NEIC **25** 21:38:01.9±1.7, 24.°45N±0.°07×123.°26E±0.°07, h66km±7km, mb4.3/21, Error ellipse: s-maj=9.7km s-min=9.1km az=164.0*
*JMA **25** 21:38:02.8±0.1, 25.°1N±1.°2×123.°2E±0.°4, h65km±1km, MD4.0/17, MV3.8/17, NW OFF ISHIGAKIJIMA IS*
*IDC **25** 21:38:04.4±2.8, 24.°59N×123.°25E, h90km±26km, mb3.5/14, mbtmp3.8/16, MS2.9/7, Error ellipse: s-maj=19.6km s-min=12.7km az=59.0*
ISC 25 21:38:02.1±0.6, 24°46N±0.°05×123°16E±0.°02, h69km±5km, n87, σ0s97/103, mb4.1/23, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.14**	**270**	P	**Pn**	**21 38 12.6**	**+0.2**
YOJ	**Yonaguni jima**	**0.14**	**270**	*S*	**Sn**	**21 38 20.1**	**+0.2**
YOJ	**Yonaguni jima**	**0.14**	**270**		**Pn**	**21 38 12.7**	**+0.3**
YOJ					Sn	**21 38 19.9**	**0.0**
YOJ	**Yonaguni jima**	**0.14**	**270**	*i* P	**Pn**	**21 38 12.7**	**+0.3**
YOJ				A	A	21 38 12.7	
	comp=N,46nm,1.1s,comp=E,33nm,0.5s						
YOJ				S	**Sn**	**21 38 19.4**	**-0.4**
JYNG	**Yonagunijimaku**	**0.20**	**267**	*i* P	**Pn**	**21 38 13.0**	**+0.4**
JYNG				A	A	21 38 13.0	
	comp=N,57nm,0.5s,comp=E,48nm,0.4s						
JYNG				S	**Sn**	**21 38 20.5**	**+0.2**
IRIF	**Iriomote-Funau**	**0.54**	**103**	*i* P	**Pn**	**21 38 15.4**	**+0.2**
IRIF				A	A	21 38 15.4	
	comp=N,38nm,0.7s,comp=E,22nm,0.5s						
IRIF				S	**Sn**	**21 38 24.6**	**-0.2**
HATJ	**Hateruma jima**	**0.71**	**124**	*i* P	**Pn**	**21 38 17.7**	**+0.6**
HATJ				A	A	21 38 17.7	
	comp=N,15nm,3.0s,comp=E,12nm,1.3s						
HATJ				S	**Sn**	**21 38 29.0**	**+0.9**
JKRS	**Kuro-shima**	**0.81**	**106**	*i* P	**Pn**	**21 38 18.8**	**+0.6**
JKRS				A	A	21 38 18.8	
	comp=N,13nm,1.4s,comp=E,14nm,0.7s						
JKRS				S	**Sn**	**21 38 30.8**	**+0.7**
JIJ	**Ishigaki jima**	**0.90**	**96**	*i* P	**Pn**	**21 38 19.4**	**+0.1**
JIJ				A	A	21 38 19.4	
	comp=N,5.0nm,1.1s,comp=E,7.0nm,1.2s						
JIJ				S	**Sn**	**21 38 31.9**	**-0.2**
JISG	**Ishigakijimahi**	**1.06**	**83**	*i* P	**Pn**	**21 38 21.3**	**+0.1**
JISG				S	**Sn**	**21 38 35.3**	**-0.2**
JTJ	**Tarama**	**1.42**	**82**	P	**Pn**	**21 38 26.4**	**+0.5**
JTJ				S	**Sn**	**21 38 44.1**	**+0.3**
NACB	**Ninganchiao**	**1.46**	**259**	P	**Pn**	**21 38 27.0**	**+0.5**
NACB	**Ninganchiao**	**1.46**	**259**	S	**Sn**	**21 38 45.4**	**+0.6**
NACB	**Ninganchiao**	**1.46**	**259**		**Pn**	**21 38 26.8**	**+0.4**
NACB					Sn	**21 38 44.6**	**-0.2**
TATO	**Taipei**	**1.60**	**289**	P	**Pn**	**21 38 29.9**	**+1.5**
TATO	**Taipei**	**1.60**	**289**	*S*	**Sn**	**21 38 49.8**	**+1.5**
TATO	**Taipei**	**1.60**	**289**		**Pn**	**21 38 29.6**	**+1.2**
TATO					Sn	**21 38 49.0**	**+0.7**
YHNB	**Yeheng**	**1.64**	**278**	P	**Pn**	**21 38 30.5**	**+1.5**
YHNB	**Yeheng**	**1.64**	**278**	*S*	**Sn**	**21 38 50.6**	**+1.3**
YHNB	**Yeheng**	**1.64**	**278**		**Pn**	**21 38 30.3**	**+1.3**
YHNB					Sn	**21 38 49.6**	**+0.3**
JIKM	**Ikemajima**	**1.95**	**76**	P	**Pn**	**21 38 34.2**	**+1.1**
JMJ	**Miyako jima 2**	**1.97**	**79**	P	**Pn**	**21 38 35.7**	**+2.3**
JMJ2	**Miyako jima3**	**1.99**	**82**	*eP*	**Pn**	**21 38 34.9**	**+1.2**
JMJ2				*eS*	**Sn**	**21 38 58.9**	**+1.2**
YULB	**Yu-li**	**2.01**	**238**	P	**Pn**	**21 38 33.9**	**+0.1**
YULB	**Yu-li**	**2.01**	**238**	*S*	**Sn**	**21 38 57.5**	**-0.6**
YULB	**Yu-li**	**2.01**	**238**		**Pn**	**21 38 34.0**	**+0.1**
YULB					Sn	**21 38 56.8**	**-1.3**
JOGS	**Gusukube**	**2.07**	**81**	*eP*	**Pn**	**21 38 36.8**	**+2.2**
SSLB	**Suanglung**	**2.12**	**252**	P	**Pn**	**21 38 36.2**	**+0.7**
SSLB	**Suanglung**	**2.12**	**252**	*S*	**Sn**	**21 39 00.7**	**-0.2**
SSLB	**Suanglung**	**2.12**	**252**		**Pn**	**21 38 36.3**	**+0.9**
SSLB					Sn	**21 38 59.8**	**-1.1**
TWGBT	**Beinan**	**2.51**	**230**	P	**Pn**	**21 38 40.3**	**-0.4**
TWGBT	**Beinan**	**2.51**	**230**	*S*	**Sn**	**21 39 09.8**	**-0.5**
TWG	**Pinlang**	**2.52**	**230**		**Pn**	**21 38 40.3**	**-0.4**
TWG					Sn	**21 39 07.9**	**-2.5**
TPUB	**Ta-pu**	**2.59**	**244**	P	**Pn**	**21 38 44.0**	**+2.3**
TPUB	**Ta-pu**	**2.59**	**244**	*S*	**Sn**	**21 39 13.8**	**+1.6**
TPUB	**Ta-pu**	**2.59**	**244**		**Pn**	**21 38 43.5**	**+1.8**
TPUB					Sn	**21 39 13.5**	**+1.4**
KNMB	**Chin-men Tao**	**4.35**	**271**	Pn	**Pn**	**21 39 06.1**	**+0.4**
JOW	**Kunigami** comp=E,15nm,0.3s,baz=104,slow=24,SNR=14	**5.18**	**62**	P	**Pn**	**21 39 16.4**	**-0.7**
JOW				*S*	**Sn**	**21 40 16.0**	**+0.4**
	comp=E,15nm,0.6s,baz=107,slow=26,SNR=1.3						
JOW	**Kunigami**	**5.18**	**62**		**Pn**	**21 39 15.7**	**-1.4**
GQP	**Guinayangan**	**10.52**	**184**	*eP*	**Pn**	**21 40 34.1**	**+3.9**
KSRS	**Korea Array** comp=E,0.8nm,0.6s,baz=196,slow=12,SNR=9.7	**13.58**	**16**	P	**Pn**	**21 41 11.1**	**-0.4**
KSRS				LR	LR	21 46 37.1	
	comp=E,29nm,20.4s,baz=200,slow=38						
JCJ	**Chichijima** comp=E,27nm,18.1s,baz=282,slow=35	**17.34**	**77**	LR	LR	21 48 08.3	
MJAR	**Matsushiro Arr** comp=E,41nm,19.7s,baz=220,slow=37	**17.67**	**44**	LR	LR	21 48 54.8	
KKM	**Kota Kinabalu**	**19.49**	**201**	P	**P**	**21 42 23.5**	**-0.2**
KKM				IAmb	IAmb	21 42 54.5	
	comp=Z,26nm,1.2s						
LZDM	**Lanzhou Array** comp=Z,0.9nm,0.4s,baz=108,slow=9.5,SNR=4.0	**20.31**	**309**	P	Pn	21 42 34.0	-1.4
	comp=Z,0.9nm,0.4s						
GUMO	**Guam** comp=Z,21nm,21.4s,baz=75,slow=30	**23.16**	**114**	LR	LR	21 49 29.1	
CMAR	**Chiang Mai Arr** comp=Z,1.8nm,0.3s,baz=58,slow=7.3,SNR=5.7	**23.30**	**260**	P	**P**	**21 43 05.5**	**+1.3**
	comp=Z,1.8nm,0.3s						
SBUM	**Sibu**	**24.30**	**207**	P	**P**	**21 43 13.6**	**+0.4**
ASAJ	**Asahikawa** comp=Z,31nm,19.0s,baz=274,slow=35	**25.23**	**34**	LR	LR	21 52 46.2	
SONM	**Songino Array** comp=Z,0.4nm,0.4s,baz=158,slow=9.5,SNR=5.2	**26.85**	**335**	P	**P**	**21 43 35.8**	**-0.5**
SONM				LR	LR	21 53 57.8	
	comp=Z,37nm,19.5s,baz=124,slow=36						
	comp=Z,0.4nm,0.4s						
SONM	**Songino Array**	**26.85**	**335**	P	**P**	**21 43 34.9**	**-1.3**
SHL	**Shillong**	**28.33**	**279**	P	**P**	**21 43 50.0**	**+0.2**
TLY	**Talaya** comp=Z,41nm,18.1s,baz=80,slow=38	**31.02**	**336**	LR	LR	21 57 46.7	
MK31	**Makanchi Array**	**39.41**	**315**	P	**P**	**21 45 24.3**	**-0.8**
MKAR	**Makanchi Array** comp=Z,0.4nm,0.5s,baz=106,slow=10,SNR=5.6	**39.41**	**315**	P	**P**	**21 45 25.1**	**-0.1**
	comp=Z,0.4nm,0.5s						
MKAR	**Makanchi Array**	**39.41**	**315**	P	**P**	**21 45 24.6**	**-0.6**
COEN	**Coen**	**42.90**	**151**	P	**P**	**21 45 54.7**	**+0.7**
KURBB	**Kurchatov Arra** comp=Z,0.3nm,0.5s,baz=114,slow=9.4,SNR=7.6	**43.07**	**319**	P	**P**	**21 45 54.7**	**-0.3**
KURBB				PcP	**PcP**	**21 47 42.9**	**-1.0**
	comp=Z,0.2nm,0.6s,baz=101,slow=1.9,SNR=2.2						
	comp=Z,0.3nm,0.5s						
WB0	**Warramunga Arr**	**45.30**	**165**	P	**P**	**21 46 13.4**	**+0.2**
WB0				IAmb	IAmb	21 46 14.7	
	comp=Z,6.3nm,0.9s						
WRA	**Warramunga Arr** comp=Z,4.1nm,0.8s,baz=347,slow=8.8,SNR=18	**45.46**	**165**	P	**P**	**21 46 15.2**	**+0.8**
WRA				PcP	**PcP**	**21 47 52.5**	**0.0**
	comp=Z,0.3nm,0.5s,baz=346,slow=2.6,SNR=2.0						
	comp=Z,4.1nm,0.8s						
WRA	**Warramunga Arr**	**45.46**	**165**	P	**P**	**21 46 14.1**	**-0.3**
MBWA	**Marble Bar**	**45.47**	**184**	P	**P**	**21 46 13.6**	**-0.9**
PSA00	**Pilbara Seismi**	**45.87**	**184**	P	**P**	**21 46 17.5**	**-0.2**
PSA00				IAmb	IAmb	21 46 18.6	
	comp=Z,10nm,0.9s						
PSA00	**Pilbara Seismi**	**45.87**	**184**	P	**P**	**21 46 17.3**	**-0.4**
PSA00				IAmb	IAmb	21 46 18.7	
	comp=Z,16nm,0.9s						
BVAR	**Borovoye Array** comp=Z,0.6nm,0.5s,baz=98,slow=7.4,SNR=5.6	**48.61**	**320**	P	**P**	**21 46 38.7**	**0.0**
BVAR				PcP	**PcP**	**21 48 02.6**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=84,slow=5.9,SNR=1.8						
	comp=Z,0.6nm,0.5s						
BORK	**Borovoye**	**48.66**	**320**	P	**P**	**21 46 38.4**	**-0.6**
BORK				IAmb	IAmb	21 47 11.9	
	comp=Z,1.1nm,0.6s						
ASAR	**Alice Springs** comp=Z,1.7nm,0.8s,baz=348,slow=8.0,SNR=15	**48.96**	**167**	P	**P**	**21 46 43.2**	**+1.5**
ASAR				PcP	**PcP**	**21 48 04.7**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=356,slow=3.7,SNR=4.4						
	comp=Z,1.7nm,0.8s						
ASAR	**Alice Springs**	**48.96**	**167**	P	**P**	**21 46 42.4**	**+0.7**
MORW	**Morawa**	**53.66**	**188**	P	**P**	**21 47 16.7**	**0.0**
MORW				IAmb	IAmb	21 47 17.7	
	comp=Z,5.3nm,0.7s						
AB31	**Akbulak array**	**54.54**	**314**	P	**P**	**21 47 22.2**	**-0.8**
AB31				IAmb	IAmb	21 47 24.4	
	comp=Z,1.1nm,0.7s						
ABKAR	**Akbulak array**	**54.54**	**314**	P	**P**	**21 47 22.4**	**-0.5**
FORT	**Forrest**	**55.13**	**175**	P	**P**	**21 47 28.2**	**+0.9**
NWAO	**Narrogin (SRO)**	**57.35**	**186**	P	**P**	**21 47 43.5**	**+0.5**
STKA	**Stephens Creek** comp=Z,1.4nm,0.5s,baz=316,slow=4.9,SNR=4.4	**58.73**	**162**	P	**P**	**21 47 53.2**	**+0.4**
	comp=Z,1.4nm,0.5s						
L14K	**Kuka Creek**	**61.27**	**32**	P	**P**	**21 48 09.4**	**-0.4**
L14K				IAmb	IAmb	21 48 34.9	
	comp=Z,5.1nm,1.1s						
J19K	**Poorman**	**64.47**	**29**	P	**P**	**21 48 30.6**	**-0.5**
J19K				IAmb	IAmb	21 49 05.1	
	comp=Z,3.7nm,1.2s						
B22K	**Teshekpuk Lake**	**64.99**	**22**	P	**P**	**21 48 33.9**	**-0.3**
B22K				IAmb	IAmb	21 48 35.8	
	comp=Z,5.3nm,1.4s						
F24K	**Squaw Lake**	**67.26**	**25**	P	**P**	**21 48 48.8**	**-0.2**
F24K				IAmb	IAmb	21 49 13.1	
	comp=Z,2.2nm,1.2s						
F25K	**Christian Rive**	**68.10**	**24**	P	**P**	**21 48 54.2**	**0.0**
F25K				IAmb	IAmb	21 49 07.0	
	comp=Z,3.2nm,1.4s						
ILAR	**Eielson Array** comp=Z,0.2nm,0.7s,baz=273,slow=6.2,SNR=1.2	**68.14**	**28**	P	**P**	**21 48 53.5**	**-1.0**
	comp=Z,0.2nm,0.7s						
FINES	**FINESS Array B** comp=Z,5.5nm,1.1s,baz=45,slow=4.1,SNR=4.7	**72.11**	**330**	P	**P**	**21 49 17.5**	**-1.3**
	comp=Z,5.5nm,1.1s						
FINES	**FINESS Array B**	**72.11**	**330**	P	**P**	**21 49 18.3**	**-0.5**
BRTR	**Keskin Array B** comp=Z,0.3nm,0.5s,baz=55,slow=5.5,SNR=1.7	**74.45**	**307**	P	**P**	**21 49 33.6**	**+0.4**
	comp=Z,0.3nm,0.5s						
HFS	**Hagfors** comp=Z,2.2nm,0.8s,baz=91,slow=6.2,SNR=1.8	**78.20**	**331**	P	**P**	**21 49 53.7**	**-0.1**
	comp=Z,2.2nm,0.8s						
YKA	**Yellowknife Ar** comp=Z,0.4nm,0.6s,baz=44,slow=10.0,SNR=9.5	**82.01**	**23**	P	**P**	**21 50 13.8**	**-0.5**
	comp=Z,0.4nm,0.6s						
YKA	**Yellowknife Ar**	**82.01**	**23**	P	**P**	**21 50 13.7**	**-0.7**
CPUP	**Villa Florida** comp=Z,8.2nm,0.8s,baz=124,slow=3.6,SNR=20	**178.09**	**167**	PKP	**PKPdf**	**21 58 03.8**	**-1.3**

*IDC **25** 21:38:10.2±5.1, 34.°32N×23.°84E, h0km, mb3.8/4, mbtmp3.6/6, ML3.3/2, MS3.4/1, Error ellipse: s-maj=92.1km s-min=35.6km az=23.0*
*NEIC **25** 21:38:14.9±0.9, 34.°3N±0.°1×23.°58E±0.°08, h35km±12km, mb4.1/4, Error ellipse: s-maj=18.9km s-min=4.0km az=208.0*
*THE **25** 21:38:16.9, 34.°N±7.°2×4.°4E±.°, h17km±14km, M3.1/13, MLh3.1/13*
*ATH **25** 21:38:18.4, 34.°54N×23.°93E, h29km±3km, ML3.2/6,*

Latitude uncertainty: 3 km; Longitude uncertainty: 2 km
ISC 25 21:38:14.4±1.9, 34°37N±0.°09×23°66E±0.°06, h28km±11km, n55, σ1s04/65, mb3.7/5, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**0.59**	**37**	P	**Pb**	**21 38 26.7**	**+0.5**
GVD				S	**Sb**	**21 38 33.8**	**-0.4**
GVD	**Gavdhos**	**0.59**	**37**	P	**Pb**	**21 38 26.4**	**+0.1**
GVD				S	**Sb**	**21 38 31.5**	**-2.7**
KNDR	**Palaiochora Ch**	**0.86**	**358**	P	**Pb**	**21 38 32.3**	**+1.5**
KNDR				S	**Sb**	**21 38 42.9**	**+0.9**
IMMV	**Iera Moni Meta**	**1.12**	**14**	P	**Pn**	**21 38 35.3**	**+1.0**
IMMV				S	**Sb**	**21 38 50.0**	**+0.6**
IMMV	**Iera Moni Meta**	**1.12**	**14**	P	**Pn**	**21 38 35.2**	**+1.0**
IMMV				S	**Sn**	**21 38 47.8**	**-0.9**
VAM	**Vamos**	**1.12**	**23**	P	**Pn**	**21 38 34.8**	**+0.5**
VAM				S	**Sn**	**21 38 49.8**	**+0.9**
VAM	**Vamos**	**1.12**	**23**	P	**Pn**	**21 38 35.0**	**+0.7**
VAM				S	**Sn**	**21 38 47.3**	**-1.6**
CHAN	**Chania**	**1.19**	**15**	P	**Pb**	**21 38 36.4**	**0.0**
IDI	**Anoyia**	**1.36**	**48**		**Pb**	**21 38 39.1**	**-0.3**
IDI				Sn	**Sb**	**21 38 57.2**	**+0.7**
IDI	**Anoyia**	**1.36**	**48**	P	**Pb**	**21 38 39.3**	**-0.1**
IDI				S	**Sb**	**21 38 56.9**	**+0.4**
IDI	**Anoyia**	**1.36**	**48**	P	**Pn**	**21 38 38.0**	**+0.4**
ANKY	**Antikythira Is**	**1.52**	**349**	P	**Pb**	**21 38 42.7**	**+0.7**
NPS	**Neapolis**	**1.84**	**61**	P	**Pb**	**21 38 46.3**	**-1.1**
NPS	**Neapolis**	**1.84**	**61**	P	**Pn**	**21 38 44.9**	**+0.7**
VLI	**Veliai**	**2.41**	**346**	P	**Pb**	**21 38 55.4**	**-1.8**
THR9	**Santorini-Faro**	**2.42**	**35**	P	**Pn**	**21 38 53.5**	**+1.4**
THR9	**Santorini-Faro**	**2.42**	**35**	P	**Pn**	**21 38 53.3**	**+1.2**
THR6	**Thira Island,**	**2.44**	**35**	P	**Pn**	**21 38 53.0**	**+0.6**
THR5	**Thira Island,**	**2.46**	**34**	P	**Pn**	**21 38 53.1**	**+0.3**
SNT5	**Nea Kammeni, S**	**2.48**	**35**	P	**Pn**	**21 38 53.6**	**+0.8**
SNT5	**Nea Kammeni, S**	**2.48**	**35**	P	**Pn**	**21 38 53.2**	**+0.3**
SAP3	**Santorini-Thir**	**2.48**	**33**	P	**Pn**	**21 38 53.0**	**+0.1**
SAP3	**Santorini-Thir**	**2.48**	**33**	P	**Pn**	**21 38 53.1**	**+0.2**
THR3	**Thira Island,**	**2.48**	**35**	P	**Pn**	**21 38 53.7**	**+0.8**
THERA	**Ancient Thera,**	**2.48**	**36**	P	**Pn**	**21 38 53.3**	**+0.3**
THERA	**Ancient Thera,**	**2.48**	**36**	P	**Pn**	**21 38 53.1**	**+0.1**
THR8	**Santorini-Mono**	**2.52**	**36**	P	**Pn**	**21 38 53.7**	**+0.3**
THR8	**Santorini-Mono**	**2.52**	**36**	P	**Pn**	**21 38 53.8**	**+0.3**
KARP	**Karpathos**	**3.11**	**67**		**Pn**	**21 39 04.1**	**+2.4**
KARP				Sn	**Sn**	**21 39 40.0**	**+2.2**
KARP	**Karpathos**	**3.11**	**67**	P	**Pn**	**21 39 04.4**	**+2.8**
KARP	**Karpathos**	**3.11**	**67**	P	**Pn**	**21 39 03.1**	**+1.5**
ITM	**Ithomi**	**3.14**	**334**	Pn	**Pn**	**21 39 02.6**	**+0.6**
DION	**Dionisos Attik**	**3.71**	**3**	P	**Pn**	**21 39 09.9**	**+0.1**
KARY	**Karystos**	**3.71**	**10**	P	**Pn**	**21 39 09.8**	**-0.1**
GUR	**Goura**	**3.71**	**344**	P	**Pn**	**21 39 11.7**	**+1.7**
VILL	**Villia**	**3.79**	**356**	P	**Pn**	**21 39 11.2**	**+0.1**
ARG	**Arkhangelos**	**4.09**	**62**	Pn	**Pn**	**21 39 16.1**	**+1.0**
AKAS	**Kas**	**5.21**	**67**	Pn	**Pn**	**21 39 31.0**	**+0.4**
ELL	**Elmali**	**5.62**	**63**	Pn	**Pn**	**21 39 37.1**	**+0.9**
KEK	**Kerkira**	**6.16**	**331**	Pn	**Pn**	**21 39 43.9**	**+0.3**
TIP	**Timpagrande**	**7.32**	**313**	Pn	**Pn**	**21 39 59.7**	**+0.2**
CSS	**Mathiatis**	**7.99**	**83**	Pn	**Pn**	**21 40 07.4**	**-1.3**
BRTR	**Keskin Array B** baz=234,slow=12,SNR=2.6 0.7nm,0.9s	**9.60**	**53**	Pn	**Pn**	**21 40 29.6**	**-1.2**
GHAJ	**Ghor Haditha**	**10.47**	**104**	Pn

0.1nm,0.3s,baz=38,slow=11,SNR=9.3
1.1nm,0.5s
ASAJ Asahikawa 5.44 2 P **Pn 21 42 13.0 +1.8**
0.3nm,0.3s,baz=233,slow=12,SNR=1.0
ASAJ S **Sn 21 43 12.8 0.0**
8.7nm,0.8s,baz=261,slow=32,SNR=2.4
4.0nm,0.9s
JHJ Hachijo jima 2 5.92 201 P **Pn 21 42 19.1 +1.1**
6.4nm,0.3s,baz=51,slow=19,SNR=2.3
75nm,0.7s
USRK Ussuriysk Ar. 9.52 309 P **Pn 21 43 11.0 +3.8**
0.1nm,0.3s,baz=119,slow=13,SNR=5.0
2.5nm,0.7s
H11N2 WAKE ISLAND Hy 28.43 125 T T 22 17 01.0
baz=316,slow=76,SNR=23
H11N1 WAKE ISLAND Hy 28.44 125 T T 22 17 05.3
baz=316,slow=76,SNR=19
H11N3 WAKE ISLAND Hy 28.45 125 T T 22 17 06.0
baz=318,slow=76,SNR=18
H11S1 WAKE ISLAND Hy 29.20 127 T T 22 18 03.4
baz=318,slow=76,SNR=15
H11S3 WAKE ISLAND Hy 29.21 127 T T 22 18 02.6
baz=318,slow=76,SNR=15
H11S2 WAKE ISLAND Hy 29.22 127 T T 22 18 04.6
baz=318,slow=76,SNR=14
MKAR Makanchi Array 43.88 301 P **P 21 48 55.5 -0.5**
0.2nm,0.6s,baz=88,slow=7.4,SNR=2.1
0.2nm,0.6s
KURBB Kurchatov Arra 45.58 307 P **P 21 49 08.7 -0.7**
0.7nm,0.5s,baz=80,slow=8.1,SNR=7.0
0.7nm,0.5s
BVAR Borovoye Array 50.01 311 P **P 21 49 43.2 -0.5**
0.4nm,0.6s,baz=67,slow=8.0,SNR=2.6
0.4nm,0.6s

*PDG **25** 21:43:30.2±0.2, 43.°19N×18.°03E, h0km±11km, ML2.5/13, Error ellipse: s-maj=0.3km s-min=0.4km az=0.0*
*RHSSO **25** 21:43:30.9±0.4, 43.°18N×18.°10E, h8km±3km, ML2.4/8*
*BEO **25** 21:43:30.1±0.3, 43.°19N×17.°99E, h11km±3km, ML2.2/9*
ISC 25 21:43:28.8±1.0, 43°21N±0.°02×17°97E±0.°02, h12km±8km, n52, σ1§11/100, 16C-3D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STON	**Ston**	**0.39**	**210**	*i* Pg	**Pb**	**21 43 37.5**	**-0.1**
STON				Sg	**Sb**	**21 43 44.1**	**+0.4**
STON	**Ston**	**0.39**	**210**	*e*Pg	**Pb**	**21 43 37.5**	**-0.1**
STON				*e*Sg	**Sb**	**21 43 44.2**	**+0.6**
KLINJ	**Klinje**	**0.46**	**95**	*e*Pg	**Pg**	**21 43 37.8**	**0.0**
KLINJ				*e*Sg	**Sg**	**21 43 43.5**	**-0.4**
BRY	**Bratogost**	**0.52**	**126**	⇑*i*Pg	**Pg**	**21 43 38.6**	**-0.5**
BRY				*i* Sg	**Sg**	**21 43 46.4**	**+0.4**
BRY	**Bratogost**	**0.52**	**126**	*e*Pg	**Pg**	**21 43 38.5**	**-0.5**
BRY				*e*Sg	**Sg**	**21 43 46.0**	**0.0**
DBRK	**Dubrovnik**	**0.56**	**166**	*i* Pg	**Pg**	**21 43 39.8**	**+0.1**
DBRK				Sg	**Sb**	**21 43 48.0**	**-0.4**
TREB	**Trebinje**	**0.57**	**150**	*e*Pg	**Pg**	**21 43 39.5**	**-0.5**
TREB				*e*Sg	**Sg**	**21 43 48.0**	**+0.6**
TREB	**Trebinje**	**0.57**	**150**	⇑*i*Pg	**Pg**	**21 43 39.4**	**-0.5**
TREB				*e*Sg	**Sg**	**21 43 47.7**	**+0.3**
RICI	**Ricice**	**0.67**	**295**	*i* Pg	**Pn**	**21 43 43.2**	**-0.9**
RICI				Sg	**Sn**	**21 43 54.8**	**+0.2**
UPM	**Unac-Piva**	**0.69**	**90**	⇓*i*Pg	**Pg**	**21 43 42.2**	**0.0**
UPM				*i* Sg	**Sg**	**21 43 52.1**	**+0.8**
UPM	**Unac-Piva**	**0.69**	**90**	*e*Pg	**Pg**	**21 43 41.9**	**-0.3**
UPM				*e*Sg	**Sg**	**21 43 50.8**	**-0.5**
MAKA	**Makarska**	**0.69**	**277**	*e*Pg	**Pn**	**21 43 43.5**	**-1.0**
MAKA				Sg	**Sn**	**21 43 55.5**	**+0.3**
NKME	**Niksic**	**0.85**	**121**	⇓*i*Pg	**Pg**	**21 43 44.3**	**-0.9**
NKME				*i* Sg	**Sb**	**21 43 57.2**	**+0.3**
HCY	**Herceg Novi**	**0.86**	**153**	⇑*i*Pg	**Pg**	**21 43 44.9**	**-0.5**
HCY				*i* Sg	**Sb**	**21 43 57.7**	**+0.6**
HCY	**Herceg Novi**	**0.86**	**153**	⇑*i*Pg	**Pg**	**21 43 45.3**	**-0.1**
HCY				*e*Sg	**Sg**	**21 43 57.1**	**+0.6**
LSTV	**Lastovo**	**0.90**	**241**	*e*Pg	**Pn**	**21 43 47.5**	**+0.2**
LSTV				Sg	**Sn**	**21 44 00.4**	**+0.1**
CEME	**Cevo**	**0.96**	**133**	⇑*i*Pg	**Pb**	**21 43 46.2**	**-1.3**
CEME				*i* Sg	**Sg**	**21 44 00.6**	**+0.6**
PLE	**Pljevlja**	**1.05**	**83**	⇑*i*Pg	**Pb**	**21 43 48.6**	**-0.4**
PLE				*i* Sg	**Sn**	**21 44 03.8**	**-0.2**
RUDO	**Rudo**	**1.10**	**68**	*e*Pg	**Pb**	**21 43 49.0**	**-0.8**
RUDO				*e*Sg	**Sb**	**21 44 04.0**	**-0.2**
RUDO	**Rudo**	**1.10**	**68**	*e*Pg	**Pb**	**21 43 48.6**	**-1.2**
RUDO				*e*Sg	**Sb**	**21 44 02.8**	**-1.4**
BUM	**Brajici-Budva**	**1.14**	**143**	⇓*i*Pg	**Pb**	**21 43 49.9**	**-0.6**
BUM				*i* Sg	**Sn**	**21 44 07.1**	**+0.9**
KOME	**Kolasin**	**1.19**	**107**	⇑*i*Pg	**Pn**	**21 43 51.1**	**-0.3**
KOME				*i* Sg	**Sn**	**21 44 07.7**	**+0.1**
PDG	**Podgorica**	**1.23**	**129**	*e*Pg	**Pn**	**21 43 51.6**	**-0.2**
PDG				*e*Sg	**Sg**	**21 44 09.1**	**+0.7**
PDG	**Podgorica**	**1.23**	**129**	⇑*i*Pg	**Pn**	**21 43 51.3**	**-0.5**
PDG				*i* Sg	**Sg**	**21 44 08.9**	**+0.5**
PDG	**Podgorica**	**1.23**	**129**	*e*Pg	**Pn**	**21 43 50.9**	**-0.9**
PDG				*e*Sg	**Sb**	**21 44 07.6**	**-0.1**
BBLS	**Lazi&#263i**	**1.23**	**57**	*e*Pg	**Pb**	**21 43 52.4**	**+0.3**
BBLS				*e*Sg	**Sg**	**21 44 09.2**	**+0.5**
BBLS	**Lazi&#263i**	**1.23**	**57**	⇑*i*Pg	**Pn**	**21 43 51.7**	**-0.3**
BBLS				*e*Sg	**Sb**	**21 44 08.3**	**+0.2**
DRME	**Dracevica, Mon**	**1.36**	**138**	⇑*i*Pg	**Pb**	**21 43 54.3**	**+0.1**
DRME				*i* Sg	**Sg**	**21 44 13.1**	**+0.4**
DRME	**Dracevica, Mon**	**1.36**	**138**	⇑*i*Pg	**Pb**	**21 43 54.1**	**-0.1**
DRME				*e*Sg	**Sn**	**21 44 10.8**	**-0.8**
KIJV	**Kijevo**	**1.38**	**306**	*e*Pn	**Pg**	**21 43 56.9**	**+1.5**
KIJV				Sg	**Sg**	**21 44 18.2**	**+4.8**
IVA	**Berane**	**1.45**	**103**	⇑*i*Pg	**Pb**	**21 43 55.8**	**-0.1**
IVA				*i* Sg	**Sg**	**21 44 16.8**	**+1.2**
SJES	**Sjenica**	**1.47**	**87**	*e*Pg	**Pg**	**21 43 57.0**	**0.0**
SJES				*e*Sg	**Sg**	**21 44 16.4**	**+0.3**
SJES	**Sjenica**	**1.47**	**87**	⇑*i*Pg	**Pn**	**21 43 55.7**	**+0.5**
SJES				*e*Sg	**Sn**	**21 44 14.4**	**0.0**
ULC	**Ulcinj**	**1.56**	**142**	⇑*i*Pg	**Pn**	**21 43 57.1**	**+0.6**
ULC				*i* Sg	**Sb**	**21 44 18.6**	**+1.1**
PVY	**Plav**	**1.59**	**112**	⇑*i*Pg	**Pb**	**21 43 58.0**	**-0.2**
PVY				*i* Sg	**Sb**	**21 44 19.4**	**+1.1**
IVAS	**Ivanjica**	**1.64**	**76**	*e*Pg	**Pn**	**21 43 58.0**	**+0.5**
IVAS				*e*Sg	**Sg**	**21 44 21.7**	**+0.2**
BLY	**Banja Luka**	**1.64**	**340**	*e*Pg	**Pg**	**21 44 01.5**	**+1.2**
BLY				*e*Sg	**Sg**	**21 44 23.8**	**+2.3**
BLY	**Banja Luka**	**1.64**	**340**	⇑*i*Pn	**Pg**	**21 44 00.9**	**+0.6**
BLY				*e*Sn	**Sg**	**21 44 22.7**	**+1.2**
DIVS	**Divibare**	**1.72**	**58**	*e*Pg	**Pb**	**21 44 00.5**	**+0.1**
DIVS				*e*Sg	**Sg**	**21 44 25.8**	**+1.7**
ZIRJ	**Zirje**	**1.75**	**285**	*e*Pn	**Pg**	**21 44 01.8**	**-0.5**
ZIRJ				Sn	**Sg**	**21 44 26.6**	**+1.6**
TEKS	**Tekeris**	**1.75**	**40**	*e*Pn	**Pn**	**21 43 59.6**	**+0.5**
MORI	**Morici**	**1.77**	**293**	*e*Pn	**Pg**	**21 44 02.6**	**-0.2**
MORI				Sn	**Sg**	**21 44 27.4**	**+1.7**
UDBI	**Udbina**	**2.07**	**310**	*e*Pn	**Pg**	**21 44 07.7**	**-0.8**
UDBI				Sn	**Sg**	**21 44 35.7**	**+0.4**
GRUS	**Gruza**	**2.11**	**70**	*e*Pn	**Pb**	**21 44 05.6**	**-1.4**
DUGI	**Dugi Otok**	**2.25**	**291**	*i* Pn	**Pb**	**21 44 09.1**	**-0.3**
DUGI				Sn	**Sg**	**21 44 39.6**	**-1.5**
SELS	**Selova**	**2.31**	**89**	*e*Pn	**Pn**	**21 44 08.3**	**+1.6**
FRGS	**Fruska Gora**	**2.36**	**34**	*e*Pn	**Pb**	**21 44 10.2**	**-1.0**
FRGS				*e*Sn	**Sb**	**21 44 38.4**	**-1.9**
VIRC	**Vir**	**2.37**	**298**	*e*Pn	**Pb**	**21 44 11.8**	**+0.3**
VIRC				Sn	**Sg**	**21 44 43.1**	**-1.9**
PLIT	**Plitvice**	**2.37**	**315**	*e*Pn	**Pb**	**21 44 11.9**	**+0.4**
PLIT				Sn	**Sg**	**21 44 42.8**	**-2.3**
NVLJ	**Novalja**	**2.61**	**302**	*e*Pn	**Pb**	**21 44 13.5**	**-2.1**
NVLJ				Sn	**Sg**	**21 44 49.3**	**-3.5**
MORH	**Mrgy, Hungar**	**3.04**	**9**	*e*Pn	**Pb**	**21 44 20.1**	**-2.8**
MORH				*e*Sn	**Sn**	**21 44 55.6**	**+2.5**
ZAGS	**Zajecar**	**3.16**	**78**	*e*Pn	**Pn**	**21 44 18.9**	**+0.5**

*SDD **25** 21:45:55.1±1.9, 18.°34N×71.°44W, h27km±12km, MD3.0, ML2.1, MW2.8, Presumed earthquake*
*OSPL **25** 21:45:55.8±1.7, 18.°38N×71.°47W, h11km±4km, ML2.0, Presumed earthquake*
ISC 25 21:45:53.3±1.1, 18°32N±0.°04×71°58W±0.°06, h16km±6km, n11, σ1§00/19, 4C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LODU1	**El Espartillar**	**0.11**	**74**	*i* P	**Pg**	**21 45 57.0**	**+0.2**
LODU1				*e*S	**Sg**	**21 45 59.2**	**0.0**
LODU1				IAML		21 45 59.5	
	comp=Z,785nm,0.2s						
NEDR	**Neiba UASD**	**0.22**	**44**	*e*Sg	**Sg**	**21 46 02.8**	**+0.8**
NEDR				IAML		21 46 08.3	
	comp=N,617nm,4.1s						
JIDR	**Jimani**	**0.30**	**303**	⇑*e*Pg	**Pn**	**21 46 02.1**	**-0.9**
JIDR				*e*Sg	**Sn**	**21 46 10.8**	**+1.7**
JIDR				IAML		21 46 14.0	
	comp=E,151nm,0.2s						
JIDR				IAML		21 46 17.3	
	comp=N,97nm,0.3s						
LONE3	**El Aguacate, B**	**0.30**	**23**	*i* P	**Pg**	**21 45 60.0**	**+0.1**
LONE3				*e*S	**Sg**	**21 46 04.7**	**+0.3**
LONE3				IAML		21 46 05.7	
	comp=Z,263nm,0.4s						
PODR	**Polo**	**0.33**	**118**	⇑*e*Pg	**Pg**	**21 46 00.7**	**+0.4**
PODR				⇑*e*Sg	**Sb**	**21 46 06.0**	**0.0**
PODR				IAML		21 46 06.4	
	comp=N,611nm,0.2s						
PODR				IAML		21 46 06.4	
	comp=N,610nm,0.2s						
PODR				IAML		21 46 09.0	
	comp=E,859nm,0.2s						
PODR	**Polo**	**0.33**	**118**	*i* P	**Pg**	**21 46 00.7**	**+0.4**
PODR				*e*S	**Sb**	**21 46 06.0**	**0.0**
PODR				IAML		21 46 06.6	
	comp=Z,8μm,0.1s						
LOBH	**Bahia de las A**	**0.46**	**187**	*i* P	**Pn**	**21 46 05.0**	**-0.1**
LOBH				*e*S	**Sn**	**21 46 13.9**	**+0.9**
LOBH				IAML		21 46 16.9	
	comp=Z,73nm,2.6s						
BRH1	**Barahona**	**0.48**	**104**	*e*Sg	**Sg**	**21 46 07.8**	**-1.6**
SDDR	**Presa de Saban**	**0.71**	**23**	*e*Sg	**Sb**	**21 46 16.1**	**-0.8**
SDDR				IAML		21 46 19.3	
	comp=E,20nm,0.6s						
SDDR				IAML		21 46 19.4	
	comp=N,27nm,0.6s						
SDDR				IAML		21 46 19.5	
	comp=N,27nm,0.6s						
SDDR	**Presa de Saban**	**0.71**	**23**	*i* P	**Pb**	**21 46 06.5**	**-0.9**
SDDR				*e*S	**Sb**	**21 46 15.5**	**-1.5**
SDDR				IAML		21 46 18.8	
	comp=Z,452nm,0.1s						
REDR	**Restauracion**	**0.86**	**12**	*e*Pg	**Pn**	**21 46 11.4**	**+0.8**
REDR				⇑*e*Sg	**Sn**	**21 46 24.4**	**+1.6**
REDR				IAML		21 46 25.2	
	comp=E,74nm,0.1s						
REDR				IAML		21 46 26.9	
	comp=N,87nm,0.2s						
REDR				IAML		21 46 26.9	
	comp=N,87nm,0.2s						

*SJA **25** 22:01:23.3±0.7, 22.°50S×66.°31W, h267km±4km, ML4.1, MW3.8*
*GUC **25** 22:01:24.7±0.6, 22.°52S×66.°39W, h260km±6km, ML4.6*
*NEIC **25** 22:01:25.2±1.7, 22.°49S±0.°06×66.°3W±0.°1, h249km±15km, mb4.3/3, Mwr4.3(GUC), Error ellipse: s-maj=19.9km s-min=8.6km az=81.0*
*IDC **25** 22:01:28.1±1.7, 22.°16S×66.°45W, h294km±20km, mb3.4/2, mbtmp3.7/6, Error ellipse: s-maj=25.4km s-min=18.7km az=92.0*
ISC 25 22:01:24.4±0.7, 22°50S±0.°05×66°41W±0.°04, h256km±7km, n82, σ1§03/115, 14C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YJA	**Yavi**	**0.89**	**69**	*e*P	**Pn**	**22 02 00.3**	**+0.3**
YJA	**Yavi**	**0.89**	**69**	*e*P	**Pn**	**22 02 00.1**	**+0.1**
YJA				*e*S	S	22 02 25.2	-2.8
HJA	**Humahuaca**	**1.16**	**128**	*e*P	**Pn**	**22 02 01.7**	**+0.2**
HJA				*e*S	**S**	**22 02 29.9**	**-0.8**
AF01	**San Pedro de A**	**1.70**	**254**		**Pn**	**22 02 06.0**	**+0.8**
SALTA		**1.72**	**178**	*e*P	**Pn**	**22 02 06.3**	**+0.7**
SALTA				*e*S	**S**	**22 02 38.1**	**0.0**
SALTA		**1.72**	**178**	*e*P	**Pn**	**22 02 06.0**	**+0.4**
SALTA				*e*S	**S**	**22 02 37.8**	**-0.3**
PB09	**IPOC Station P**	**2.72**	**284**		**Pn**	**22 02 15.9**	**+1.4**
PB09				Sn	**S**	**22 02 53.5**	**-0.7**
PB09	**IPOC Station P**	**2.72**	**284**	⇑*e*P	**Pn**	**22 02 16.2**	**+1.7**
PB09				*e*S	**S**	**22 02 54.8**	**+0.6**
PB09				IAML		22 02 59.5	
	comp=N,170nm,0.4s						
PB09	**IPOC Station P**	**2.72**	**284**	*e*P	**Pn**	**22 02 16.2**	**+1.7**
PB09				*e*S	**S**	**22 02 54.2**	**+0.1**
PB06	**IPOC Station P**	**2.93**	**265**		**Pn**	**22 02 17.9**	**+1.1**
PB06				Sn	**S**	**22 02 57.6**	**-0.5**
PB06	**IPOC Station P**	**2.93**	**265**	⇑*e*P	**Pn**	**22 02 18.1**	**+1.4**
PB06				*e*S	**S**	**22 02 58.1**	**0.0**
PB06				IAML		22 02 59.7	
	comp=E,552nm,0.1s						
PB06	**IPOC Station P**	**2.93**	**265**	*e*P	**Pn**	**22 02 17.7**	**+1.0**
PB06				*e*S	**S**	**22 02 58.0**	**-0.1**
PB06				IAML		22 03 02.2	
	comp=Z,260nm,0.3s						
PB03	**IPOC Station P**	**3.13**	**278**		**Pn**	**22 02 19.9**	**+1.1**
PB03				Sn	**S**	**22 03 00.9**	**-1.1**
PB03	**IPOC Station P**	**3.13**	**278**	⇑*e*P	**Pn**	**22 02 19.8**	**+0.9**
PB03				*e*S	**S**	**22 03 01.3**	**-0.7**
PB03	**IPOC Station P**	**3.13**	**278**	*e*P	**Pn**	**22 02 19.8**	**+0.9**
PB03				*e*S	**S**	**22 03 01.5**	**-0.5**
PB03				IAML		22 03 05.9	
	comp=Z,464nm,0.2s						
PB01	**IPOC Station P**	**3.21**	**296**		**Pn**	**22 02 20.6**	**+1.0**
PB01				Sn	**S**	**22 03 02.8**	**-0.6**
PB01	**IPOC Station P**	**3.21**	**296**	⇑*e*P	**Pn**	**22 02 20.6**	**+1.0**
PB01				*e*S	**S**	**22 03 03.1**	**-0.3**
PB01				IAML		22 03 05.1	
	comp=E,535nm,0.3s						
PB01	**IPOC Station P**	**3.21**	**296**	*e*P	**Pn**	**22 02 20.7**	**+1.0**
PB01				*e*S	**S**	**22 03 02.6**	**-0.8**
PB01				IAML		22 03 04.7	
	comp=Z,161nm,0.2s						
PB07	**IPOC Station P**	**3.32**	**283**		**Pn**	**22 02 22.1**	**+1.1**
PB07				Sn	**S**	**22 03 04.5**	**-1.3**
PB07	**IPOC Station P**	**3.32**	**283**	⇑*e*P	**Pn**	**22 02 22.0**	**+1.1**
PB07				*e*S	**S**	**22 03 04.4**	**-1.3**
PB07				IAML		22 03 05.5	
	comp=N,508nm,0.3s						
PB07	**IPOC Station P**	**3.32**	**283**	*e*P	**Pn**	**22 02 22.0**	**+1.1**
PB07				*e*S	**S**	**22 03 05.3**	**-0.4**
PB07				IAML		22 03 05.7	
	comp=Z,319nm,0.3s						
PB02	**IPOC Station P**	**3.45**	**289**		**Pn**	**22 02 23.2**	**+0.9**
PB02				Sn	**S**	**22 03 06.7**	**-1.5**
PB02	**IPOC Station P**	**3.45**	**289**	⇑*e*P	**Pn**	**22 02 23.1**	**+0.9**
PB02				*e*S	**S**	**22 03 07.0**	**-1.2**
PB02				IAML		22 03 09.1	
	comp=N,371nm,0.4s						
PB02	**IPOC Station P**	**3.45**	**289**	*e*P	**Pn**	**22 02 23.2**	**+0.9**
PB02				*e*S	**S**	**22 03 07.3**	**-0.9**
PB02				IAML		22 03 12.0	
	comp=Z,378nm,0.4s						
PB08	**IPOC Station P**	**3.47**	**312**		**Pn**	**22 02 24.7**	**+1.8**
PB08	**IPOC Station P**	**3.47**	**312**	⇑*e*P	**Pn**	**22 02 24.6**	**+1.8**
PB08				*e*S	**S**	**22 03 09.5**	**+0.3**
PB08				IAML		22 03 11.6	
	comp=N,253nm,0.8s						
PB08	**IPOC Station P**	**3.47**	**312**	*e*P	**Pn**	**22 02 24.6**	**+1.8**
PB05	**IPOC Station P**	**3.52**	**264**		**Pn**	**22 02 24.1**	**+1.0**
PB05	**IPOC Station P**	**3.52**	**264**	⇑*e*P	**Pn**	**22 02 24.2**	**+1.0**
PB05				*e*S	**S**	**22 03 09.0**	**-0.7**
PB05				IAML		22 03 10.9	
	comp=E,295nm,0.2s						
PB05	**IPOC Station P**	**3.52**	**264**	*e*P	**Pn**	**22 02 24.1**	**+1.0**
PB05				*e*S	**S**	**22 03 09.0**	**-0.7**
PB05				IAML		22 03 12.2	
	comp=Z,208nm,0.7s						
GO01	**Chusmiza**	**3.83**	**317**		**Pn**	**22 02 28.5**	**+1.4**
GO01	**Chusmiza**	**3.83**	**317**	⇑*e*P	**Pn**	**22 02 28.3**	**+1.2**
GO01	**Chusmiza**	**3.83**	**317**	*e*P	**Pn**	**22 02 28.2**	**+1.1**
PATCX	**Punta Patache**	**3.86**	**295**		**Pn**	**22 02 27.9**	**+0.9**
PATCX	**Punta Patache**	**3.86**	**295**	⇑*e*P	**Pn**	**22 02 27.7**	**+0.7**
PATCX	**Punta Patache**	**3.86**	**295**	*e*P	**Pn**	**22 02 28.0**	**+1.0**
PATCX				*e*S	**S**	**22 03 15.4**	**-1.4**
PATCX				IAML		22 03 17.8	
	comp=Z,222nm,0.3s						
HMBC	**Humberstone**	**3.92**	**304**		**Pn**	**22 02 28.1**	**+0.3**
HMBC	**Humberstone**	**3.92**	**304**	⇓*e*P	**Pn**	**22 02 27.7**	**-0.1**
HMBC	**Humberstone**	**3.92**	**304**	*e*P	**Pn**	**22 02 28.0**	**+0.3**
HMBC				*e*S	**S**	**22 03 16.7**	**-1.4**
HMBC				IAML		22 03 18.1	
	comp=Z,204nm,0.5s						
PB10	**IPOC Station P**	**3.95**	**254**		**Pn**	**22 02 29.2**	**+1.3**
PB10	**IPOC Station P**	**3.95**	**254**	*e*P	**Pn**	**22 02 28.3**	**+0.4**
PB10				*e*S	**S**	**22 03 17.1**	**-1.4**
PB10				IAML		22 03 18.7	
	comp=Z,201nm,0.4s						
TA01	**Diego Aracena**	**4.00**	**298**		**Pn**	**22 02 28.8**	**+0.2**
TA01	**Diego Aracena**	**4.00**	**298**	*e*P	**Pn**	**22 02 28.7**	**+0.2**
TA01	**Diego Aracena**	**4.00**	**298**	*e*P	**Pn**	**22 02 29.2**	**+0.6**
TA01				*e*S	**S**	**22 03 17.4**	**-2.2**
TA01				IAML		22 03 18.6	
	comp=Z,94nm,0.3s						
PB11	**IPOC Station P**	**4.08**	**311**		**Pn**	**22 02 30.1**	**+0.4**
PB11	**IPOC Station P**	**4.08**	**311**	⇑*e*P	**Pn**	**22 02 29.9**	**+0.4**
PB11	**IPOC Station P**	**4.08**	**311**	*e*P	**Pn**	**22 02 30.0**	**+0.4**
PB11				*e*S	**S**	**22 03 19.9**	**-1.4**
PB11				IAML		22 03 23.6	
	comp=Z,114nm,0.3s						
PB14	**IPOC Station P**	**4.24**	**239**		**Pn**	**22 02 32.2**	**+0.6**
PB14	**IPOC Station P**	**4.24**	**239**	⇑*e*P	**Pn**	**22 02 32.2**	**+0.6**
PB14	**IPOC Station P**	**4.24**	**239**	*e*P	**Pn**	**22 02 32.2**	**+0.6**
PB14				*e*S	**S**	**22 03 23.2**	**-1.7**
PB14				IAML		22 03 25.5	
	comp=Z,250nm,0.4s						
PSGCX	**Pisagua**	**4.51**	**309**		**Pn**	**22 02 34.5**	**-0.1**
PSGCX	**Pisagua**	**4.51**	**309**	*e*P	**Pn**	**22 02 34.2**	**-0.5**
PSGCX	**Pisagua**	**4.51**	**309**	*e*P	**Pn**	**22 02 34.4**	**-0.2**
PSGCX				*e*S	**S**	**22 03 28.5**	**-2.1**
PSGCX				IAML		22 03 30.8	
	comp=Z,80nm,0.3s						
AC02	**Maricunga**	**4.98**	**209**		**Pn**	**22 02 41.5**	**+0.8**
AC02	**Maricunga**	**4.98**	**209**	⇑*e*P	**Pn**	**22 02 41.4**	**+0.8**
AC02	**Maricunga**	**4.98**	**209**	*e*P	**Pn**	**22 02 41.2**	**+0.6**
AC02				*e*S	**S**	**22 03 38.4**	**-2.9**
PB16	**IPOC Station P**	**5.06**	**324**		**Pn**	**22 02 43.4**	**+1.7**
AC01	**Pan de Azucar**	**5.28**	**226**	Pn	**Pn**	**22 02 43.1**	**-0.6**
AC01	**Pan de Azucar**	**5.28**	**226**	*e*P	**Pn**	**22 02 43.1**	**-0.6**
AC01	**Pan de Azucar**	**5.28**	**226**	*e*P	**Pn**	**22 02 43.3**	**-0.5**
AC01				IAML		22 03 45.9	
	comp=Z,69nm,0.1s						
PB12	**IPOC Station P**	**5.33**	**316**	*e*P	**Pn**	**22 02 43.9**	**-0.7**
PB12				IAML		22 03 50.1	
	comp=Z,41nm,0.5s						
PB18	**Visviri**	**5.67**	**329**		**Pn**	**22 02 49.5**	**+0.3**
AC06	**Mina Casimiro**	**6.02**	**216**	Pn	**Pn**	**22 02 52.1**	**-0.8**
AC06	**Mina Casimiro**	**6.02**	**216**	*e*P	**Pn**	**22 02 52.0**	**-0.9**
LPAZ	**La Paz**	**6.39**	**345**	P	**Pn**	**22 02 59.1**	**+1.0**
	comp=Z,2.5nm,0.5s,baz=174,slow=9.1,SNR=20						
LPAZ				S	**S**	**22 04 11.4**	**-1.8**
	comp=Z,2.4nm,0.7s,baz=218,slow=20,SNR=4.1						
LPAZ	**La Paz**	**6.39**	**345**		**Pn**	**22 02 58.2**	**0.0**
LCO	**Las Campanas**	**7.55**	**210**	Pn	**Pn**	**22 03 10.8**	**-1.5**
CPUP	**Villa Florida**	**9.11**	**117**	P	**P**	**22 03 39.3**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=299,slow=19,SNR=4.4						
CO03	**El Pedregal**	**9.15**	**204**	Pn	**Pn**	**22 03 32.1**	**-0.2**
CO04	**Los Peladeros**	**10.34**	**202**	Pn	**Pn**	**22 03 46.9**	**-0.5**
MT13	**San Alfonso**	**11.71**	**196**	P	**P**	**22 04 07.2**	**-0.4**
MT01	**Popeta**	**12.10**	**200**	Pn	**P**	**22 04 10.9**	**-0.8**
ITAB	**Concordia**	**13.79**	**113**		**Pn**	**22 04 29.2**	**-0.6**
SPB	**Sao Paulo**	**17.50**	**97**	P	**P**	**22 05 12.5**	**+1.2**
SPB				IAmb	IAmb	22 05 19.4	
	comp=Z,13nm,1.3s						
VAO	**Valinhos**	**17.94**	**95**	P	**P**	**22 05 15.4**	**-0.7**
VAO				IAmb	IAmb	22 05 16.4	
	comp=Z,11nm,0.7s						
PLCA	**Paso Flores**	**18.52**	**190**	P	**Pn**	**22 05 26.3**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=35,slow=16,SNR=2.9						
BDFB	**Brasilia**	**18.66**	**72**	P	**P**	**22 05 23.8**	**-0.2**
	comp=Z,5.8nm,0.8s,baz=236,slow=10,SNR=9.2						
BDFB	**Brasilia**	**18.66**	**72**		**P**	**22 05 23.4**	**-0.7**
BDFB				IAmb	IAmb	22 05 24.7	
	comp=Z,7.6nm,0.9s						
QSPA	**South Pole Qui**	**67.70**	**180**	P	**P**	**22 11 55.9**	**+1.8**
	comp=Z,1.0nm,0.8s,baz=69,slow=8.6,SNR=5.8						
	comp=Z,1.0nm,0.8s						
QSPA	**South Pole Qui**	**67.70**	**180**	P	**P**	**22 11 56.1**	**+2.0**
TORD	**Torodi Ar. Bea**	**75.52**	**69**	P	**P**	**22 12 40.5**	**-0.8**
	comp=Z,0.9nm,0.4s,baz=249,slow=6.5,SNR=14						
	comp=Z,0.9nm,0.4s						
MKAR	**Makanchi Array**	**145.02**	**39**	PKP	**PKPab**	**22 20 31.0**	**-0.4**
	comp=Z,1.4nm,1.0s,baz=316,slow=3.3,SNR=5.7						

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FAKI				S	Sn	22 13 43.8	-3.6
NLAI	Namlea	4.08	312	P	Pn	22 13 06.9	+0.5
KMPI	Kaimana, Papua	4.23	57	P	Pn	22 13 08.9	+0.5
SIJI	Sorong	5.20	13	P	Pn	22 13 18.9	-1.9
	103nm,0.3s,baz=209,slow=11,SNR=137						
SIJI				S	Sn	22 14 15.3	-6.3
	115nm,0.3s,baz=229,slow=19,SNR=20						
SIJI				LR	LR	22 15 26.3	
	comp=Z,32nm,21.6s,baz=20,slow=40						
SIJI	Sorong	5.20	13	P	Pn	22 13 19.0	-1.7
	1.7nm11μm160nm,0.7s						
SWI	Sorong	5.21	12	P	Pn	22 13 19.2	-1.5
SANI	Sanana	5.70	313	P	Pn	22 13 26.5	-0.5
	0.2nm59nm,0.8s						
RKPI	Ransiki, Papua	6.00	42	P	Pn	22 13 30.6	-0.3
MWPI	Manokwari, Pap	6.35	38	P	Pn	22 13 36.4	+0.9
	1.1nm3μm300nm,0.8s						
MTN	Manton Dam	6.89	172		Pn	22 13 43.0	+0.6
SOEI	Soe	6.92	237		Pn	22 13 42.9	-0.1
SOEI	Soe	6.92	237	P	Pn	22 13 45.2	+2.2
	0.7nm1μm55nm,0.6s						
BATI	Baumata	7.66	236	P	Pn	22 13 52.0	-0.6
	76nm,0.5s,baz=119,slow=3.0,SNR=26						
BATI				S	Sn	22 15 14.4	-4.9
	48nm,0.4s,baz=49,slow=20,SNR=8.3						
BATI	Baumata	7.66	236	P	Pn	22 13 52.7	+0.1
	0.4nm1μm119nm,0.7s						
MMRI	Maumere	8.27	251		Pn	22 13 57.8	-2.7
KNRA	Kununurra	9.73	188	Pn	Pn	22 14 19.3	-0.1
JAY	Jayapura	11.08	72	P	Pn	22 14 35.9	-1.1
	16nm,1.1s,baz=170,slow=12,SNR=2.9						
WBSI	Waikabubak, Su	11.25	250	P	Pn	22 14 39.6	+0.5
	33nm,0.7s						
DBNI	Kabupaten Domp	12.00	257	P	P	22 14 52.9	-0.4
	21nm,0.6s						
FITZ	Fitzroy Crossi	12.82	200	P	Pn	22 14 58.1	-0.8
	10nm,0.3s,baz=29,slow=11,SNR=53						
FITZ				S	S	22 17 13.1	-8.8
	36nm,0.8s,baz=100,slow=9.9,SNR=10						
WB0	Warramunga Arr	14.31	164		Pn	22 15 17.2	-0.3
WRA	Warramunga Arr	14.46	164	P	Pn	22 15 18.6	-0.8
	2.3nm,0.5s,baz=349,slow=11,SNR=26						
WRA				S	S	22 17 53.9	-6.4
	4.3nm,0.4s,baz=326,slow=25,SNR=11						
WRA	Warramunga Arr	14.46	164		Pn	22 15 17.1	-2.2
COEN	Coen	15.08	123		P	22 15 28.1	+0.6
COEN				IAmb	IAmb	22 15 30.4	
	comp=Z,11nm,0.6s						
JAGI	Jajag, Banyuwa	16.05	260		P	22 15 36.4	-1.9
PMG	Port Moresby	17.20	102	P	P	22 15 50.5	-0.4
	comp=Z,4.0nm,0.3s,baz=278,slow=14,SNR=2.2						
AS31	Alice Springs	17.95	169		Pn	22 16 01.2	+0.1
AS31				IAmb	IAmb	22 16 04.7	
	comp=Z,9.2nm,0.5s						
ASAR	Alice Springs	17.95	169	P	Pn	22 16 01.6	+0.4
	comp=Z,18nm,0.5s,baz=347,slow=11,SNR=199						
ASAR				S	S	22 19 14.5	-0.2
	comp=Z,7.4nm,0.7s,baz=351,slow=20,SNR=23						
ASAR				ScP	ScP	22 23 42.0	+0.4
	comp=Z,0.6nm,0.7s,baz=313,slow=1.8,SNR=3.5						
MBWA	Marble Bar	18.15	213	P	P	22 16 02.2	+1.0
MBWA				IAmb	IAmb	22 16 05.1	
	comp=Z,14nm,0.9s						
PSA00	Pilbara Seismi	18.43	212	P	P	22 16 05.8	+1.6
PSA00	Pilbara Seismi	18.43	212	P	P	22 16 05.4	+1.2
PSA00				IAmb	IAmb	22 16 06.6	
	comp=Z,14nm,0.7s						
BBJI	Bungbulang	22.38	265	P	P	22 16 45.7	0.0
BBJI				IAmb	IAmb	22 16 49.8	
	comp=Z,7.4nm,0.8s						
STKA	Stephens Creek	27.90	159	P	P	22 17 36.6	+1.6
	comp=Z,3.4nm,0.8s,baz=342,slow=9.6,SNR=4.1						
	comp=Z,3.4nm,0.8s						
NJ2	Nanjing	39.32	345	*e*P	P	22 19 15.8	+2.4
NJ2				pmax	pmax		
	comp=Z,21nm,0.5s						
PZH	PanZhiHua	42.43	321	P	P	22 19 41.8	+2.7
SHL	Shillong	48.63	312	P	P	22 20 27.7	0.0
HHC	Hu-ho-hao-te	49.63	342	*e*P	P	22 20 39.3	+4.3
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
EVN	Everest	53.72	311	P	P	22 21 05.9	-0.2
SONM	Songino Array	57.53	341	P	P	22 21 32.8	+0.6
	comp=Z,0.3nm,0.5s,baz=146,slow=5.8,SNR=3.3						
	comp=Z,0.3nm,0.5s						
SONM	Songino Array	57.53	341	P	P	22 21 32.9	+0.6
WMQ	Urumqi	62.63	327	pmax	pmax		
	comp=Z,9.0nm,0.7s						
MKAR	Makanchi Array	67.46	327	P	P	22 22 38.8	+0.9
	comp=Z,0.9nm,0.5s,baz=126,slow=7.3,SNR=24						
	comp=Z,0.9nm,0.5s						
MKAR	Makanchi Array	67.46	327	P	P	22 22 38.5	+0.6
KURBB	Kurchatov Arra	71.72	328	P	P	22 23 04.3	+0.5
	comp=Z,0.8nm,0.6s,baz=122,slow=5.1,SNR=8.0						
	comp=Z,0.8nm,0.6s						
TIXI	Tiksi	77.48	360	P	P	22 23 36.6	+0.1
TIXI				IAmb	IAmb	22 23 37.3	
	comp=Z,2.7nm,0.5s						
ABKAR	Akbulak array	81.81	321		P	22 24 00.6	+0.4
L16K	Owhat River	86.10	27	P	P	22 24 23.0	+1.4
L16K				IAmb	IAmb	22 24 33.1	
	comp=Z,6.9nm,1.4s						
N19K	Bonanza Creek	88.12	28	P	P	22 24 31.8	+0.3
D19K	Kuna River	88.93	21	P	P	22 24 35.1	0.0
D19K				IAmb	IAmb	22 24 36.6	
	comp=Z,3.6nm,1.4s						
ILAR	Eielson Array	92.37	25	P	P	22 24 50.0	-1.1
	comp=Z,0.3nm,0.6s,baz=263,slow=4.7,SNR=6.2						
	comp=Z,0.3nm,0.6s						
BMAR	Burnt Mountain	93.67	23	P	P	22 24 57.4	+0.3
LPAZ	La Paz	151.42	141	PKPbc	PKPbc	22 31 36.0	+0.5
	comp=Z,0.5nm,0.5s,baz=198,slow=3.2,SNR=2.3						

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*TEH **25** 22:12:50.7, 33°.84N×45°.51E, h28km±38km, ML2.8, Presumed earthquake*
*ISN **25** 22:12:50.1±0.6, 33°.95N×45°.17E, h5km±8km, ML2.9, Presumed earthquake*
ISC 25 22:12:53.0±1.3**, 33°.86N**±0°.06×**45°.60E**±0°.06**, h10**km**, n6,** σ**1**s**21**/9**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLG1	Gilan-e-Gharb	0.37	45	Pg	Pg	22 12 59.8	-0.5
GLG1				Sg	Sg	22 13 06.5	+1.3
IKRK	Kirkuk	1.86	326	*e*Pg	Pn	22 13 26.0	+1.2
	baz=155						
IKRK				*e*Sg	Sg	22 13 51.0	-1.6
SNQR	Sonqor, Kerman	1.96	59	Pn	Pn	22 13 25.6	-0.9
IDOB	Doab	2.15	91	Pn	Pn	22 13 28.4	-0.7
RAFI	Al-Rafai	2.17	168	*e*Pn	Pn	22 13 29.0	-0.1
RAFI				*e*Sn	Sn	22 13 57.0	+0.9
RAFI				AML	AML	22 13 59.5	
	comp=E,101nm,0.4s						
RAFI				AML	AML	22 14 01.1	
	comp=N,76nm,0.0s						
IALM	Almabolaq	2.35	64	Pn	Pn	22 13 32.7	+0.8

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*NIED **25** 22:18:21.4, 38°.65N×142°.15E, h40km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.32; $M_{\theta\theta}$-0.41; $M_{\phi\phi}$-3.91; $M_{r\theta}$2.84; $M_{\theta\phi}$-1.16; $M_{\phi r}$4.01; Fault plane solution: $M_0$6.52000×10^{14} NP1: ϕ_s185.00000°, δ22.00000°, λ66.00000°. NP2:ϕ_s30.00000°, δ70.00000°, λ99.00000°.*
*JMA **25** 22:18:21.4±0.1, 38°.7N±0°.2×142°.2E±0°.6, h40km±1km, MV3.8/39, E OFF MIYAGI PREF*
JMA Felt I J1 at E OFF MIYAGI PREF .
*NEIC **25** 22:18:22.2±1.4, 38°.62N±0°.05×142°.3E±0°.1, h53km±8km, mb4.1/14, Error ellipse: s-maj=13.4km s-min=7.4km az=87.0*
*IDC **25** 22:18:23.0±1.9, 38°.65N×142°.18E, h59km±16km, mb3.5/17, mbtmp3.8/23, MS2.7/2, Error ellipse: s-maj=18.8km s-min=11.0km az=116.0*
ISC 25 22:18:21.2±1.4**, 38°.62N**±0°.04×**142°.19E**±0°.08**, h42**km±11km**, n68,** σ**1**s**11**/74**, mb3.9**/26**, 13D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKMT	Kesennumamotoy	0.59	289	⇓*i*P	Pn	22 18 32.9	-0.4
JKMT				⇓S	Sn	22 18 40.8	-0.9
OFUJ	Ofunato	0.61	319	⇓*i*P	Pn	22 18 33.1	-0.5
OFUJ				⇓S	Sn	22 18 41.3	-1.1
JIKH	Ishinomakikobu	0.64	242	⇓*i*P	Pn	22 18 33.8	-0.2
JIKH				⇓S	Sn	22 18 42.4	-0.6
JIO	Ouri	0.68	256	*i*P	Pn	22 18 34.1	-0.3
JIO				S	Sn	22 18 43.0	-0.8
JMK	Ichinoseki	0.83	294	⇓*i*P	Pn	22 18 36.2	-0.2
JMK				⇓S	Sn	22 18 47.0	-0.5
JOM	Ohasama	1.10	321	⇓*i*P	Pn	22 18 40.2	-0.1
JOM				⇓S	Sn	22 18 52.0	-2.3
JOU	Okura	1.22	259	⇓*i*P	Pn	22 18 42.0	+0.2
JMM	Marumori	1.33	236	⇓P	Pn	22 18 43.1	-0.1
JMM				⇓S	Sn	22 18 59.4	-0.4
JRG	Rokugo	1.44	303	P	Pn	22 18 45.0	+0.2
JYK	Kaneyama	1.46	282	*i*P	Pn	22 18 45.4	+0.3
JTM	Tenmabayashi	2.33	339		Pn	22 18 57.5	+0.5
JTM				Sn	Sn	22 19 25.8	+1.3
MJAR	Matsushiro Arr	3.78	238	P	Pn	22 19 19.2	+2.2
	7.0nm,0.4s,baz=34,slow=13,SNR=41						
MJAR				S	Sn	22 20 02.8	+2.6
	7.7nm,0.7s,baz=73,slow=14,SNR=4.5						
MJAR				LR	LR	22 21 07.0	
	comp=Z,92nm,19.1s,baz=112,slow=43						
MJAR	Matsushiro Arr	3.78	238	Pn	Pn	22 19 19.0	+2.0
MJB9	Matsu-Tunnel	3.78	238	Pn	Pn	22 19 19.9	+2.9
JGF	Kuroka	4.89	234	Pn	Pn	22 19 34.3	+2.0
INU	Inuyama	5.27	233	Pn	Pn	22 19 40.1	+2.6
JKA	Kamikawa-asahi	5.50	3		Pn	22 19 41.7	+1.1
ASAJ	Asahikawa	5.50	3	P	Pn	22 19 42.0	+1.4
	2.7nm,0.3s,baz=172,slow=2.4,SNR=6.8						
ASAJ				S	Sn	22 20 43.4	+0.8
	8.3nm,0.6s,baz=174,slow=33,SNR=1.9						
JHJ2	Mitsune	5.82	200	Pn	Pn	22 19 45.5	+0.5
JHJ	Hachijo jima 2	5.82	200	P	Pn	22 19 45.7	+0.6
	36nm,0.4s,baz=86,slow=18,SNR=1.7						
JHJ				S	Sn	22 20 48.5	-2.0
	32nm,0.4s,baz=58,slow=22,SNR=1.3						
JMN	Monobe	8.30	237	Pn	Pn	22 20 20.0	+0.9
USRK	Ussuriysk Ar.	9.47	309	P	Pn	22 20 36.8	+1.8
	6.0nm,0.6s,baz=118,slow=14,SNR=13						
KSRS	Korea Array	11.31	269	P	Pn	22 21 03.3	+3.1
	0.9nm,0.5s,baz=75,slow=15,SNR=2.3						
KSRS				LR	LR	22 24 59.0	
	comp=Z,34nm,19.8s,baz=155,slow=35						
KLR	Kul'dur	12.99	328	P	Pn	22 21 25.3	+2.2
	0.3nm,0.3s,baz=141,slow=9.0,SNR=4.1						
CN2	Changchun	13.62	298	P	Pn	22 21 30.3	-1.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	Hu-ho-hao-te	23.60	285	*e*P	P	22 23 27.5	-0.8
HHC				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SONM	Songino Array	27.45	301	P	P	22 24 03.5	+0.2
	comp=Z,0.3nm,0.5s,baz=102,slow=8.3,SNR=2.8						
	comp=Z,0.3nm,0.5s						
H11N2	WAKE ISLAND Hy	28.48	124	T	T	22 54 29.6	
	baz=316,slow=75,SNR=116						
H11N1	WAKE ISLAND Hy	28.49	124	T	T	22 54 31.9	
	baz=316,slow=75,SNR=172						
H11N3	WAKE ISLAND Hy	28.50	124	T	T	22 54 32.8	
	baz=316,slow=75,SNR=219						
H11S1	WAKE ISLAND Hy	29.25	126	T	T	22 55 31.2	
	baz=318,slow=76,SNR=49						
H11S3	WAKE ISLAND Hy	29.25	126	T	T	22 55 31.1	
	baz=318,slow=76,SNR=65						
H11S2	WAKE ISLAND Hy	29.27	126	T	T	22 55 32.3	
	baz=318,slow=76,SNR=39						
LZDM	Lanzhou Array	30.59	277	P	P	22 24 31.0	-0.5
	comp=Z,0.7nm,0.3s,baz=119,slow=12,SNR=1.8						
	comp=Z,0.7nm,0.3s						
LZDM	Lanzhou Array	30.59	277	P	P	22 24 31.0	-0.5
C16K	Lisburne Hills	41.02	27	P	P	22 25 59.9	+0.1
ZAA0	Zalesovo Array	41.32	311	P	P	22 26 02.2	-0.3
ZALV	Zalesovo Beam	41.32	311	P	P	22 26 02.2	-0.3
	comp=Z,1.0nm,0.4s,baz=95,slow=7.1,SNR=2.5						
	comp=Z,1.0nm,0.4s						
CMAR	Chiang Mai Arr	42.50	254	P	P	22 26 12.4	-0.2
	comp=Z,0.6nm,0.3s,baz=56,slow=9.0,SNR=4.5						
	comp=Z,0.6nm,0.3s						
C18K	Utukok River	42.59	27	P	P	22 26 13.5	+0.7
MKAR	Makanchi Array	43.81	301	P	P	22 26 22.9	0.0
	comp=Z,1.4nm,0.7s,baz=85,slow=8.8,SNR=11						
	comp=Z,1.4nm,0.7s						
MKAR	Makanchi Array	43.81	301	P	P	22 26 22.6	-0.4
SHL	Shillong	44.05	268	P	P	22 26 24.8	-0.5
SHL				IAmb	IAmb	22 26 42.7	
	comp=Z,4.0nm,1.5s						
KURK	Kurchatov	45.45	307	P	P	22 26 35.7	-0.2
KURK				IAmb	IAmb	22 26 37.1	
	comp=Z,3.1nm,0.6s						
KURBB	Kurchatov Arra	45.53	307	P	P	22 26 36.2	-0.3
	comp=Z,3.4nm,0.6s,baz=81,slow=8.1,SNR=36						
	comp=Z,3.4nm,0.6s						
EVN	Everest	46.87	274	P	P	22 26 48.6	+0.5
EVN				IAmb	IAmb	22 27 11.2	
	comp=Z,2.5nm,1.1s						
WUS	Wushi	47.43	294	P	P	22 26 52.0	+0.3
WUS				IAmb	IAmb	22 26 55.8	
	comp=Z,4.0nm,1.3s						
ILAR	Eielson Array	47.83	33	P	P	22 26 54.5	+0.1
	comp=Z,0.2nm,0.6s,baz=268,slow=5.9,SNR=5.2						
	comp=Z,0.2nm,0.6s						
D25K	Kavik River	47.97	27	P	P	22 26 55.9	+0.5
D25K				IAmb	IAmb	22 26 59.0	
	comp=Z,3.1nm,1.4s						
KDJ	Kajisay	48.58	296	P	P	22 27 01.3	+0.7
KDJ				IAmb	IAmb	22 27 17.6	
	comp=Z,4.1nm,1.1s						
BOOM	Boomskoye usch	49.33	297	P	P	22 27 06.6	+0.2
BVAR	Borovoye Array	49.97	311	P	P	22 27 10.6	-0.3
	comp=Z,0.7nm,0.5s,baz=75,slow=8.4,SNR=6.0						
BVAR				PcP	PcP	22 28 30.3	-0.1
	comp=Z,0.6nm,0.5s,baz=68,slow=4.0,SNR=3.1						
	comp=Z,0.7nm,0.5s						
AAK	Ala-Archa	50.29	297	P	P	22 27 14.2	+0.5
AAK				IAmb	IAmb	22 27 26.8	
	comp=Z,2.4nm,1.4s						
ARTI	Arti	55.70	318	P	P	22 27 52.7	-0.3
	comp=Z,1.7nm,0.4s,baz=93,slow=7.8,SNR=6.7						
	comp=Z,1.7nm,0.4s						
ARTI	Arti	55.70	318	P	P	22 27 52.8	-0.3
AB31	Akbulak array	57.40	310	P	P	22 28 04.8	-0.4
AB31				IAmb	IAmb	22 28 20.2	
	comp=Z,1.2nm,0.8s						
ABKAR	Akbulak array	57.40	310	P	P	22 28 04.8	-0.4
WB0	Warramunga Arr	58.53	189	P	P	22 28 12.6	-0.9
WRA	Warramunga Arr	58.71	189	P	P	22 28 14.5	-0.2
	comp=Z,0.4nm,0.6s,baz=7.0,slow=7.0,SNR=2.5						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	62.44	189	P	P	22 28 40.6	+0.5
	comp=Z,0.2nm,0.8s,baz=11,slow=6.2,SNR=1.7						
	comp=Z,0.2nm,0.8s						
FINES	FINESS Array B	67.70	332	P	P	22 29 13.2	-0.5
	comp=Z,2.5nm,0.8s,baz=42,slow=15,SNR=1.7						
	comp=Z,2.5nm,0.8s						
KBZ	Khabaz	70.34	311	P	P	22 29 30.1	-0.3
	comp=Z,1.1nm,0.8s,baz=51,slow=6.5,SNR=3.6						
	comp=Z,1.1nm,0.8s						
AKASG	Malin Array Be	73.42	322	P	P	22 29 48.2	-0.6
	comp=Z,0.5nm,0.4s,baz=46,slow=5.5,SNR=5.1						
	comp=Z,0.5nm,0.4s						
NVAR	Mina Array Bea	73.56	54	P	P	22 29 51.1	+0.9
	comp=Z,0.3nm,0.5s,baz=345,slow=3.6,SNR=1.2						
	comp=Z,0.3nm,0.5s						
PDAR	Pinedale Array	76.13	46	P	P	22 30 03.9	-1.1
	comp=Z,0.2nm,0.7s,baz=279,slow=4.2,SNR=1.8						
	comp=Z,0.2nm,0.7s						
PDAR	Pinedale Array	76.13	46	P	P	22 30 03.4	-1.5
BRTR	Keskin Array B	78.26	312	P	P	22 30 17.1	+0.3
	comp=Z,0.3nm,0.4s,baz=12,slow=7.4,SNR=4.4						
	comp=Z,0.3nm,0.4s						
BRTR	Keskin Array B	78.26	312	P	P	22 30 16.7	-0.1

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*IDC **25** 22:24:37.4±1.2, 39°.22N×20°.32E, h0km, mb3.6/12, mbtmp3.5/20, ML3.1/7, MS3.1/2, Error ellipse: s-maj=20.5km s-min=16.0km az=15.0*
*THE **25** 22:24:40.1, 39°.3N±1°.0×2°1E±°, h17km±5km, M3.3/16, MLh3.3/16*
*ATH **25** 22:24:40.2, 39°.24N×20°.61E, h8km±1km, ML3.4/26, Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*
ISC 25 22:24:40.2±0.9**, 39°.24N**±0°.02×**20°.54E**±0°.02**, h15**km±6km**, n112,** σ**1**s**44**/128**, mb3.6**/11**, 8C-10D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRGA	Parga	0.12	294	P	Pg	22 24 44.0	+0.2
PRGA				S	Sb	22 24 47.0	+0.2
IGT	Igoumenitsa	0.34	331	P	Pg	22 24 47.0	-0.2
IGT				S	Sb	22 24 52.8	-0.3
IGT	Igoumenitsa	0.34	331	P	Pg	22 24 47.3	+0.1
IGT				S	Sb	22 24 52.8	-0.3
ARTB	Arta	0.35	103	P	Pg	22 24 46.3	-1.0
ART2	Arta	0.36	104	P	Pg	22 24 46.5	-1.1
TSLK	Tsoukalades, L	0.42	168	P	Pg	22 24 49.1	+0.4
TSLK				S	Sb	22 24 56.2	+0.8
TSLK	Tsoukalades, L	0.42	168	P	Pg	22 24 48.9	+0.2
TSLK				S	Sg	22 24 54.4	0.0
LKD2	Lefkada island	0.46	169	P	Pg	22 24 49.4	+0.1
LKD2				S	Sb	22 24 57.4	+1.0
LKD2	Lefkada island	0.46	169	P	Pg	22 24 49.2	-0.1
JAN	Janina	0.48	29	P	Pg	22 24 49.3	-0.5
JAN				S	Sb	22 24 57.1	-0.1
JAN	Janina	0.48	29	P	Pg	22 24 49.1	-0.7
JAN				S	Sg	22 24 55.6	-0.7
PRMD	Pramanda	0.52	56	P	Pg	22 24 50.1	-0.4
PRMD	Pramanda	0.52	56	P	Pg	22 24 49.8	-0.7
NYDR	Nydri-Lefkada	0.54	167	P	Pg	22 24 50.7	-0.1
NYDR				S	Sb	22 24 59.8	+1.1
NYDR	Nydri-Lefkada	0.54	167	P	Pg	22 24 50.6	-0.1
NYDR				S	Sg	22 24 58.3	+0.4
DRAG	Dragano-Lefkad	0.55	177	P	Pg	22 24 51.0	-0.1
DRAG	Dragano-Lefkad	0.55	177	P	Pg	22 24 50.3	-0.8
TETR	Tetrakomo, Epi	0.58	79	P	Pg	22 24 50.7	-0.9
TETR				S	Sb	22 25 00.4	+0.3
TETR	Tetrakomo, Epi	0.58	79	P	Pg	22 24 50.4	-1.2
AMPL	Ampelaki	0.61	121	P	Pg	22 24 51.8	-0.4
AMPL	Ampelaki	0.61	121	P	Pg	22 24 51.7	-0.5
EVGI	Lefkada island	0.62	172	P	Pg	22 24 52.0	-0.4
EVGI				S	Sb	22 25 02.6	+1.4
EVGI	Lefkada island	0.62	172	P	Pg	22 24 51.8	-0.6
KEK	Kerkira	0.75	310	P	Pb	22 24 54.5	-0.3
SRN	Sarande	0.77	327	P	Pb	22 24 54.9	-0.2
FSK	Fiskardo	0.78	179	P	Pb	22 24 54.4	-0.9
FSK	Fiskardo	0.78	179	P	Pb	22 24 54.4	-0.9
AST1	Astakos	0.81	148	P	Pb	22 24 55.5	-0.5
KPRO	Kipourio	0.96	41	P	Pb	22 24 57.3	-1.1
KPRO	Kipourio	0.96	41	P	Pb	22 24 57.6	-0.9
PVO	Paravola	0.98	129	P	Pb	22 24 58.9	+0.1
PVO	Paravola	0.98	129	P	Pb	22 24 59.0	+0.1
DMLN	Damoulianata-K	1.01	188	P	Pn	22 24 59.7	0.0
EVR	Evrytania	1.03	108	P	Pb	22 24 59.7	-0.1
ARG2	Argostoli	1.06	182	P	Pg	22 25 01.1	+0.5
VLS	Valsamata	1.06	178	P	Pn	22 25 00.5	0.0
PENT	Pentalofos	1.06	25	P	Pn	22 25 00.6	0.0
KFL1	Kefalonia,Entr	1.07	182	P	Pg	22 25 01.1	+0.2
RTZL	Ratzakli, Kefa	1.17	171	P	Pn	22 25 01.3	-0.6
RTZL	Ratzakli, Kefa	1.17	171	P	Pn	22 25 01.7	-0.2
THL	Klokotos Trika	1.19	74	P	Pn	22 25 01.8	-0.3
THL	Klokotos Trika	1.19	74	P	Pb	22 25 02.5	+0.2
AXS	Araxos	1.23	148	P	Pn	22 25 02.9	+0.2
NEST	Nestorio	1.24	18	P	Pn	22 25 02.9	-0.1
AGRP	Agrapidokambos	1.25	132	P	Pb	22 25 03.2	-0.1
ANX	Ano Chora	1.25	120	P	Pg	22 25 04.1	-0.2
ANX	Ano Chora	1.25	120	P	Pb	22 25 03.6	+0.1
MAKR	Makrakomi, Fth	1.25	100	P	Pb	22 25 03.4	-0.1
MAKR	Makrakomi, Fth	1.25	100	P	Pb	22 25 03.8	+0.3
EFP	Efpalio	1.34	127	P	Pb	22 25 05.0	+0.1
MG00	Magoula, Dorid	1.37	126	P	Pb	22 25 05.2	-0.2
RLS	Riolos of Patr	1.38	148	P	Pb	22 25 05.4	-0.3
ORTH	Orthonies,Zaky	1.39	175	P	Pg	22 25 07.0	+0.1
AGG	Agios Georgios	1.41	98	P	Pb	22 25 06.2	+0.1
CLEM	Kyllini,Ilia,G	1.42	161	P	Pb	22 25 06.2	-0.1
KZN	Kozani	1.43	41	P	Pb	22 25 06.4	-0.1
KYPS	Kipseli, Zakin	1.43	171	P	Pn	22 25 05.8	+0.3
SERG	Sergoula	1.44	124	P	Pb	22 25 07.1	+0.4
TIP	Timpagrande	2.94	270	⇓P	Pn	22 25 27.8	+1.4
TIP				⇓S	Sn	22 26 02.1	+0.7
DRME	Dracevica, Mon	3.12	341	*e*Pn	Pn	22 25 30.0	+1.2
MATE	Matera	3.27	297	⇑P	Pn	22 25 32.1	+1.3
MATE				⇓S	Sn	22 26 09.2	-0.2
PDG	Podgorica	3.34	343	⇓P	Pn	22 25 33.3	+1.6
PDG				⇓S	Sn	22 26 12.0	+1.0
PDG	Podgorica	3.34	343	*e*Pn	Pn	22 25 33.5	+1.8
HCY	Herceg Novi	3.56	335	*e*Pn	Pn	22 25 36.3	+1.4
TREB	Trebinje	3.85	335	*e*Pn	Pn	22 25 38.9	+0.1
BRY	Bratogost	3.96	338	*e*Pn	Pn	22 25 38.9	-1.6
SJES	Sjenica	4.04	354	*e*Pn	Pn	22 25 43.8	+2.2
KLINJ	Klinje	4.20	340	*e*Pn	Pn	22 25 45.9	+2.2
RUDO	Rudo	4.46	349	*e*Pn	Pn	22 25 48.3	+1.0
BBLS	Lazi&#263i	4.70	350	*e*Pn	Pn	22 25 52.2	+1.6
PLVB	Pleven	5.16	35	⇑P	Pn	22 26 01.2	+4.5
IDI	Anoyia	5.25	137	Sn	Sn	22 26 57.4	-0.9
	0.7nm,0.3s,baz=302,slow=19,SNR=1.7						
ELND	Elena	5.46	46	⇑P	Pn	22 26 04.6	+3.7
FRGS	Fruska Gora	5.94	355	*e*Pn	Pn	22 26 07.4	-0.1
BLY	Banja Luka	6.05	337	⇑P	Pn	22 26 10.4	+1.5
BLY	Banja Luka	6.05	337	*e*Pn	Pn	22 26 09.5	+0.5
BZS	Buzias	6.42	7	⇑P	Pn	22 26 16.4	+2.3
ARR	Arges	6.83	25	⇓P	Pn	22 26 23.0	+3.2
VOIR		7.04	27	⇓P	Pn	22 26 26.6	+4.0
MORH	Mrgy, Hungar	7.11	349	⇑P	Pn	22 26 25.4	+1.8
MORH	Mrgy, Hungar	7.11	349	*e*Pn	Pn	22 26 23.3	-0.3
ZAG	Zagreb	7.39	334	*i* Pg	Pb	22 26 49.1	+1.1
ZAG				Sg	Pb	22 26 50.8	+2.8
MLR	Muntele Rosu	7.42	31	Pn	Pn	22 26 29.7	+1.8
	0.3nm,0.3s,baz=262,slow=14,SNR=3.7						
	1.7nm,0.5s						
MLR	Muntele Rosu	7.42	31	⇓P	Pn	22 26 31.7	+3.8
PTJ	Puntijarka	7.47	335	*i* Pg	Pb	22 26 48.3	-1.1
PTJ				Sg	Pb	22 26 49.4	-0.1
DOPR	Dopca	7.62	26	⇑P	Pn	22 26 34.2	+3.7
LOBO	Lobor	7.66	336	*i* Pg	Pb	22 26 52.6	0.0
LOBO				Sg	Pb	22 26 56.5	+4.0
MARR	Marisel-Cluj	7.67	13	⇓P	Pn	22 26 34.2	+2.9
PLOR	Plostina	8.00	32	⇑P	Pn	22 26 39.8	+4.0
VRI	Vrincioaia	8.04	33	⇓P	Pn	22 26 40.3	+3.9
SOKA	Soboth	8.46	333	*e*Pn	Pn	22 26 43.0	+0.8
	1.4nm,0.3s						
SOKA				*e*Sn	Sn	22 28 15.9	-1.5
	1.5nm,0.6s						
BRTR	Keskin Array B	10.14	83	Pn	Pn	22 27 10.3	+5.1
	baz=275,slow=12,SNR=1.7						
	0.8nm,0.9s						
VRAC	Vranov	10.46	346	LR	LR	22 31 54.7	
	comp=Z,45nm,21.6s,baz=138,slow=42						
GERES	GERESS Array B	10.79	335	Pn	Pn	22 27 13.4	-0.7
	baz=152,slow=15,SNR=1.9						
	0.3nm,0.5s						
DAVOX	Davos/Dischmat	10.85	317	Pn	Pn	22 27 13.9	-1.0
	0.1nm,0.3s,baz=94,slow=13,SNR=2.0						
	1.3nm,0.9s						
MMAI	Mount Meron Ar	13.51	113	Pn	Pn	22 27 51.1	-0.2
	0.1nm,0.2s,baz=306,slow=12,SNR=1.2						
EIL	Elat	15.22	124	Pn	Pn	22 28 14.4	-0.1
	0.1nm,0.3s,baz=333,slow=6.8,SNR=1.6						
	2.6nm,0.8s						
KVAR	Kislovodsk Arr	17.21	67	P	Pn	22 28 39.6	-0.4
	baz=339,slow=7.4						
	2.1nm,0.9s						
ESDC	Sonseca Array	18.92	279	P	P	22 28 56.8	-3.5
	baz=75,slow=8.9,SNR=1.2						
	0.1nm,0.5s						
HFS	Hagfors	21.36	351	P	P	22 29 25.2	-1.4
	1.9nm,0.6s,baz=186,slow=8.9,SNR=4.8						
	1.9nm,0.6s						
FINES	FINESS Array B	22.50	7	P	P	22 29 38.1	-0.6
	2.7nm,0.9s,baz=178,slow=12,SNR=6.3						
	2.7nm,0.9s						
EKA	Eskdalemuir Ar	22.58	323	P	P	22 29 37.4	-2.3
	2.1nm,0.9s,baz=112,slow=10.0,SNR=5.1						
	2.1nm,0.9s						
NOA	NORSAR Array B	22.59	348	P	P	22 29 39.9	+0.1
	0.3nm,0.6s,baz=160,slow=11,SNR=1.6						
	0.3nm,0.6s						
BELG	Belogornoye	22.84	46	P	P	22 29 44.4	+1.9
	3.2nm,0.5s,baz=205,slow=14,SNR=1.9						
	3.2nm,0.5s						
KIRV	Kirov	26.77	34	LR	LR	22 42 00.8	
	comp=Z,96nm,18.4s,baz=12,slow=39						
AKTO	Aktyubinsk	28.54	55	P	P	22 30 36.3	+1.3
	0.4nm,0.4s,baz=277,slow=8.1,SNR=1.7						
	0.4nm,0.4s						
ARTI	Arti	30.16	43	P	P	22 30 50.7	+1.4
	0.7nm,0.3s,baz=247,slow=7.7,SNR=3.6						
	0.7nm,0.3s						
TORD	Torodi Ar. Bea	30.87	218	P	P	22 30 55.0	-1.0
	0.5nm,0.6s,baz=34,slow=7.6,SNR=3.7						
	0.5nm,0.6s						

BVAR	**Borovoye Array**	**36.43**	**51**	P		**P**		**22 31 45.4**	**+1.4**
	0.5nm,0.6s,baz=298,slow=3.1,SNR=2.4								
	0.5nm,0.6s								
KURBB	**Kurchatov Arra**	**41.59**	**54**	P		**P**		**22 32 27.1**	**0.0**
	0.4nm,0.6s,baz=286,slow=9.3,SNR=3.8								
	0.4nm,0.6s								
MKAR	**Makanchi Array**	**44.74**	**59**	P		**P**		**22 32 52.6**	**-0.1**
	0.8nm,0.5s,baz=283,slow=7.7,SNR=15								
	0.8nm,0.5s								
SONM	**Songino Array**	**59.78**	**51**	P		**P**		**22 34 46.1**	**+1.5**
	0.2nm,0.6s,baz=297,slow=6.3,SNR=2.3								
	0.2nm,0.6s								

KRSC 25 22:30:31.1±2.4, 49°41N×158°88E, h28km±53km, MI3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**2.45**	**328**	*eP*		Pn	22 31 09.9	+0.8
PAU				*eS*		Sn	22 31 39.4	+1.3
KDTR	**Khodutka, Kamc**	**2.46**	**348**	*eP*		Pn	22 31 11.1	+1.9
KDTR				*eS*		Sb	22 31 41.5	-2.7
RUS	**Russkaya**	**3.04**	**356**	*eS*		Sn	22 31 56.7	+4.1
ASAK	**Asacha**	**3.04**	**349**	*eP*		Pn	22 31 20.3	+2.9
ASAK				*eS*		Sb	22 31 57.7	-3.4
MTVR	**Mutnovka**	**3.11**	**352**	*eP*		Pn	22 31 19.9	+1.5
MTVR				*eS*		Sn	22 31 56.5	+1.9
MIPR	**Malaya Ipel'ka**	**3.17**	**336**	*eS*		Sn	22 31 59.9	+3.9
GRL	**Gorelyy**	**3.19**	**351**	*eP*		Pn	22 31 21.5	+2.1
GRL				*eS*		Sn	22 32 00.6	+4.0
KRMR	**Karymshinskiy**	**3.46**	**352**	*eP*		Pn	22 31 27.1	+4.1
KRMR				*eS*		Sb	22 32 08.7	-4.3
DALK	**Dalny**	**3.63**	**359**	*eP*		Pb	22 31 30.2	-4.2
SPN	**Mys Shipunski**	**3.76**	**11**	*eS*		Sb	22 32 16.7	-5.1
UGLR	**Uglovaya**	**3.80**	**359**	*eP*		Pb	22 31 33.6	-3.9
SMAR	**Somma**	**3.86**	**359**	*eP*		Pb	22 31 34.3	-4.2
AVH	**Avacha**	**3.86**	**359**	*eP*		Pb	22 31 33.9	-4.5
KOK	**Koryaka**	**3.89**	**358**	*eP*		Pb	22 31 34.6	-4.3
KRX	**Arik**	**3.96**	**358**	*eP*		Pb	22 31 35.3	-4.8
GNL	**Ganaly**	**4.33**	**353**	*eP*		Pn	22 31 40.3	+5.2
KBTR	**Krutoberegovo**	**7.21**	**18**	*eP*		Pn	22 32 18.6	+4.0

*IDC **25** 22:32:06.7±2.2, 4°.59S×144°.67E, h94km±19km, mb3.3/5, mbtmp3.7/8, Error ellipse: s-maj=29.1km s-min=12.6km az=51.0*

ISC 25 22:32:07.2±1.1, 4°.6S±0°.1×144°.7E±0°.1, h100km, n8, σ0°98/10, mb3.4/5, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**4.44**	**297**	P		**Pn**	**22 33 11.0**	**-1.4**
	3.5nm,0.4s,baz=124,slow=7.3,SNR=6.5							
JAY				S		**Sn**	**22 34 04.2**	**+1.2**
	12nm,0.7s,baz=74,slow=19,SNR=2.0							
PMG	**Port Moresby**	**5.41**	**153**	P		**Pn**	**22 33 26.1**	**+0.6**
	8.1nm,0.4s,baz=333,slow=14,SNR=2.9							
PMG				S		**Sn**	**22 34 25.5**	**-0.9**
	5.5nm,0.4s,baz=264,slow=18,SNR=1.3							
WRA	**Warramunga Arr**	**18.28**	**212**	P		**P**	**22 36 13.1**	**-0.1**
	2.1nm,0.9s,baz=36,slow=13,SNR=7.3							
ASAR	**Alice Springs**	**21.62**	**208**	P		**P**	**22 36 49.3**	**-0.1**
	0.9nm,0.8s,baz=35,slow=9.9,SNR=6.3							
	0.9nm,0.8s							
FITZ	**Fitzroy Crossi**	**22.94**	**233**	P		**P**	**22 37 02.6**	**-0.5**
	3.6nm,0.8s,baz=70,slow=9.5,SNR=3.3							
	3.6nm,0.8s							
MKAR	**Makanchi Array**	**74.92**	**321**	P		**P**	**22 43 38.1**	**+0.7**
	0.3nm,0.5s,baz=118,slow=5.5,SNR=4.9							
	0.3nm,0.5s							
ILAR	**Eielson Array**	**85.11**	**24**	P		**P**	**22 44 31.1**	**-0.6**
	0.3nm,0.9s,baz=254,slow=4.8,SNR=2.5							
	0.3nm,0.9s							
QSPA	**South Pole Qui**	**85.38**	**180**	P		**P**	**22 44 34.2**	**+0.9**
	1.6nm,1.0s,baz=344,slow=7.4,SNR=6.0							
	1.6nm,1.0s							

*WEL **25** 22:39:32.0±0.4, 39°S±2°×17°8E±°, h21km±3km, M2.9/26, ML3.1/19, MLv2.9/26, Error ellipse: s-maj=5.1km s-min=3.1km az=103.6, confirmed*

ISC 25 22:39:31.5±1.2, 38°60S±0°.03×177°87E±0°.03, h21km±1km, n45, σ0°87/51, North Island

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RIGZ	**Rimuhau**	**0.13**	**219**	P		**Pb**	**22 39 37.4**	**-0.3**
RIGZ				S		**Sb**	**22 39 41.8**	**-0.2**
TKGZ	**Te Karaka**	**0.17**	**355**	P		**Pb**	**22 39 37.9**	**+0.6**
TKGZ				S		**Sb**	**22 39 42.6**	**+1.2**
CNGZ	**Carnagh Statio**	**0.29**	**66**	P		**Pn**	**22 39 40.7**	**+0.2**
PRGZ	**Paritu Road**	**0.32**	**178**	P		**Pn**	**22 39 40.1**	**-0.8**
RAGZ	**Rawiri**	**0.37**	**287**	P		**Pb**	**22 39 40.2**	**+0.9**
RAGZ				S		**Sn**	**22 39 46.5**	**-1.8**
MWZ	**Matawai**	**0.38**	**315**	P		**Pb**	**22 39 40.4**	**+1.0**
MWZ				S		**Sn**	**22 39 47.0**	**-1.5**
TWGZ	**Tauwhareparae**	**0.44**	**12**	P		**Pn**	**22 39 42.5**	**-0.1**
TWGZ				S		**Sn**	**22 39 51.2**	**+1.3**
KNZ	**Kokohu**	**0.44**	**200**	P		**Pb**	**22 39 41.5**	**+1.0**
KNZ				S		**Sn**	**22 39 49.0**	**-1.0**
MHGZ	**Mahia Peninsul**	**0.55**	**177**	P		**Pb**	**22 39 43.4**	**+0.9**
PUZ	**Puketiti**	**0.61**	**30**	P		**Pn**	**22 39 44.7**	**-0.3**
RUGZ	**Raukumara Rang**	**0.66**	**347**	P		**Pb**	**22 39 44.9**	**+0.5**
WHHZ	**Waihua**	**0.68**	**226**	P		**Pn**	**22 39 45.5**	**-0.5**
RAHZ	**Arahi**	**0.69**	**243**	P		**Pn**	**22 39 45.5**	**-0.5**
URZ	**Urewera**	**0.69**	**300**	P		**Pb**	**22 39 45.0**	**+0.2**
URZ	**Urewera**	**0.69**	**300**	P		**Pb**	**22 39 45.1**	**+0.3**
RTZ	**Ruatahuna**	**0.69**	**269**	P		**Pb**	**22 39 45.3**	**+0.3**
PKGZ	**Pakihiroa**	**0.76**	**13**	P		**Pn**	**22 39 46.9**	**0.0**
MTHZ	**Maungataniwha**	**0.84**	**253**	P		**Pb**	**22 39 47.7**	**+0.3**
HAZ	**Te Kaha**	**0.85**	**355**	P		**Pb**	**22 39 47.9**	**+0.4**
MUGZ	**Murupara**	**0.87**	**278**	P		**Pn**	**22 39 48.3**	**-0.2**
WMGZ	**Waiomatatini S**	**0.90**	**29**	P		**Pb**	**22 39 47.7**	**-0.5**
ARHZ	**Aropaoanui**	**0.95**	**226**	P		**Pb**	**22 39 49.5**	**+0.3**
NMHZ	**Naumai**	**0.96**	**239**	P		**Pn**	**22 39 50.0**	**+0.1**
EDRZ	**Edgecumbe**	**1.02**	**299**	P		**Pn**	**22 39 50.7**	**+0.1**
WHRZ	**Whale Island**	**1.03**	**316**	P		**Pn**	**22 39 51.0**	**+0.4**
MXZ	**Matakaoa Point**	**1.10**	**19**	P		**Pb**	**22 39 52.2**	**+0.5**
MARZ	**Manawahe**	**1.12**	**303**	P		**Pb**	**22 39 52.8**	**+0.6**
TARZ	**Mount Tarawera**	**1.13**	**289**	P		**Pb**	**22 39 52.8**	**+0.4**
WIZ	**White Island**	**1.20**	**333**	P		**Pb**	**22 39 54.3**	**+0.8**
BKZ	**Black Stump Fm**	**1.21**	**242**	P		**Pn**	**22 39 53.1**	**-0.1**
BKZ	**Black Stump Fm**	**1.21**	**242**	P		**Pb**	**22 39 53.6**	**-0.1**
MCHZ	**McNeill Hill**	**1.24**	**227**	P		**Pn**	**22 39 53.1**	**-0.5**
OMRZ	**Omania**	**1.28**	**292**	P		**Pn**	**22 39 53.0**	**-1.1**
OPRZ	**Ohinepanea**	**1.28**	**306**	P		**Pn**	**22 39 53.7**	**-0.4**
HSRZ	**Hossack Road**	**1.31**	**282**	P		**Pb**	**22 39 55.9**	**+0.6**
KWHZ	**Kaweka Forest**	**1.39**	**234**	P		**Pn**	**22 39 55.1**	**-0.7**
KAHZ	**Kahuranaki**	**1.42**	**213**	P		**Pn**	**22 39 55.1**	**-0.9**
KRHZ	**Kereru**	**1.56**	**228**	P		**Pn**	**22 39 57.4**	**-0.7**
TMVZ	**Te Maari**	**1.77**	**253**	P		**Pb**	**22 40 02.4**	**-0.8**
NTVZ	**North Tongarir**	**1.78**	**253**	P		**Pb**	**22 40 03.7**	**+0.2**
OTVZ	**Oturere**	**1.81**	**251**	P		**Pb**	**22 40 04.9**	**+0.9**
WTVZ	**West Tongariro**	**1.85**	**253**	P		**Pb**	**22 40 05.4**	**+0.8**
NGZ	**Ngauruhoe**	**1.86**	**251**	P		**Pb**	**22 40 05.9**	**+1.1**
WNVZ	**Wahianoa**	**1.91**	**247**	P		**Pb**	**22 40 08.9**	**+3.2**
BFZ	**Birch Farm**	**2.42**	**211**	P		**Pn**	**22 40 09.7**	**-0.2**

KRSC 25 22:47:07.6±1.1, 49°44N×159°28E, h30km±20km, MI3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**2.50**	**343**	*eP*		Pn	22 47 48.2	+2.1
KDTR				*eS*		Sn	22 48 18.0	+2.5
RUS	**Russkaya**	**3.04**	**351**	*eP*		Pn	22 47 56.4	+2.8
RUS				*eS*		Sn	22 48 32.1	+3.2
ASAK	**Asacha**	**3.08**	**344**	*eP*		Pn	22 47 57.6	+3.4
MTVR	**Mutnovka**	**3.13**	**348**	*eP*		Pn	22 47 58.3	+3.4
MTVR				*eS*		Sn	22 48 35.4	+4.1
GRL	**Gorelyy**	**3.21**	**347**	*eP*		Pn	22 47 59.7	+3.6
GRL				*eS*		Sn	22 48 37.4	+4.0
MIPR	**Malaya Ipel'ka**	**3.26**	**332**	*eP*		Pn	22 47 59.3	+2.6
KRMR	**Karymshinskiy**	**3.48**	**348**	*eP*		Pn	22 48 03.9	+4.3
KRMR				*eS*		Sb	22 48 45.3	-4.8
DALK	**Dalny**	**3.62**	**355**	*eP*		Pn	22 48 05.2	+3.7
SMAR	**Somma**	**3.84**	**356**	*eP*		Pn	22 48 09.4	+4.5
KOK	**Koryaka**	**3.88**	**354**	*eP*		Pn	22 48 09.7	+4.4
KRX	**Arik**	**3.95**	**354**	*eP*		Pn	22 48 10.5	+4.2
GNL	**Ganaly**	**4.35**	**349**	*eP*		Pn	22 48 16.6	+5.0
KBTR	**Krutoberegovo**	**7.11**	**16**	*eP*		Pn	22 48 54.9	+5.4

*IDC **25** 22:52:07.5±1.3, 49°.04N×159°.08E, h0km, mb3.4/7, mbtmp3.4/7, Error ellipse: s-maj=39.0km s-min=25.4km az=163.0*

*KRSC **25** 22:52:13.1±1.1, 49°.36N×159°.09E, h40km±32km, MI3.9*

ISC 25 22:52:13.0±1.0, 49°13N±0°.08×158°92E±0°.09, h35km, n32, σ1°14/37, mb3.4/7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**2.71**	**331**	*eP*		**Pn**	**22 52 54.4**	**+0.4**
PAU				*eS*		**Sn**	**22 53 24.5**	**-0.9**
KDTR	**Khodutka, Kamc**	**2.74**	**349**	*eP*		**Pn**	**22 52 54.6**	**+0.1**
KDTR				*eS*		**Sn**	**22 53 24.7**	**-1.6**
RUS	**Russkaya**	**3.32**	**356**	*eP*		**Pn**	**22 53 03.4**	**+1.0**
RUS				*eS*		**Sn**	**22 53 40.1**	**-0.6**
ASAK	**Asacha**	**3.33**	**349**	*eP*		**Pn**	**22 53 03.2**	**+0.6**
ASAK				*eS*		**Sn**	**22 53 39.9**	**-1.0**
MTVR	**Mutnovka**	**3.40**	**352**	*eP*		**Pn**	**22 53 04.0**	**+0.4**
MTVR				*eS*		**Sn**	**22 53 41.4**	**-1.2**
MIPR	**Malaya Ipel'ka**	**3.44**	**337**	*eP*		**Pn**	**22 53 05.0**	**+0.9**
MIPR				*eS*		**Sn**	**22 53 43.5**	**-0.2**
GRL	**Gorelyy**	**3.47**	**351**	*eP*		**Pn**	**22 53 05.6**	**+0.9**
GRL				*eS*		**Sn**	**22 53 44.2**	**-0.4**
KRMR	**Karymshinskiy**	**3.74**	**353**	*eP*		**Pn**	**22 53 09.8**	**+1.6**
KRMR				*eS*		**Sn**	**22 53 51.7**	**+0.7**
DALK	**Dalny**	**3.91**	**359**	*eP*		**Pn**	**22 53 11.3**	**+0.7**
DALK				*eS*		**Sn**	**22 53 54.6**	**-0.5**
APC	**Apacha**	**3.96**	**344**	*eP*		**Pn**	**22 53 12.4**	**+1.1**
SPN	**Mys Shipunski**	**4.04**	**9**	*eP*		**Pn**	**22 53 13.2**	**+0.9**
SPN				*eS*		**Sn**	**22 53 57.3**	**-1.0**
UGLR	**Uglovaya**	**4.09**	**359**	*eP*		**Pn**	**22 53 14.7**	**+1.6**
SMAR	**Somma**	**4.14**	**359**	*eP*		**Pn**	**22 53 16.1**	**+2.2**
AVH	**Avacha**	**4.15**	**358**	*eP*		**Pn**	**22 53 15.5**	**+1.7**
KOK	**Koryaka**	**4.18**	**358**	*eP*		**Pn**	**22 53 15.2**	**+1.0**
KOK				*eS*		**Sn**	**22 54 00.5**	**-1.4**
KRX	**Arik**	**4.24**	**358**	*eP*		**Pn**	**22 53 16.7**	**+1.4**
GNL	**Ganaly**	**4.62**	**353**	*eP*		**Pn**	**22 53 22.3**	**+1.9**
BKI	**Bering**	**7.47**	**33**	*eP*		**Pn**	**22 54 00.4**	**+1.0**
KBTR	**Krutoberegovo**	**7.48**	**17**	*eP*		**Pn**	**22 54 01.1**	**+1.6**
H11N2	**WAKE ISLAND Hy**	**30.02**	**165**	T		T	23 29 48.0	
	baz=352							
H11N3	**WAKE ISLAND Hy**	**30.03**	**165**	T		T	23 29 45.9	
	baz=352							
H11N1	**WAKE ISLAND Hy**	**30.04**	**165**	T		T	23 29 50.8	
	baz=352							
H11S1	**WAKE ISLAND Hy**	**31.18**	**166**	T		T	23 31 11.7	
	baz=354							
H11S3	**WAKE ISLAND Hy**	**31.19**	**166**	T		T	23 31 17.3	
	baz=354							
H11S2	**WAKE ISLAND Hy**	**31.20**	**166**	T		T	23 31 14.3	
	baz=354							
ILAR	**Eielson Array**	**32.23**	**41**	P		**P**	**22 58 36.1**	**-1.4**
	0.2nm,0.6s,baz=267,slow=8.7,SNR=5.3							
	0.2nm,0.6s							
YKA	**Yellowknife Ar**	**46.65**	**40**	P		**P**	**23 00 38.2**	**+0.7**
	0.2nm,0.6s,baz=304,slow=7.5,SNR=5.8							
	0.2nm,0.6s							
MKAR	**Makanchi Array**	**49.29**	**298**	P		**P**	**23 00 58.2**	**0.0**
	0.2nm,0.6s,baz=55,slow=6.0,SNR=1.8							
	0.2nm,0.6s							
KURBB	**Kurchatov Arra**	**49.38**	**304**	P		**P**	**23 00 59.4**	**+0.7**
	0.3nm,0.2s,baz=64,slow=8.0,SNR=2.3							
	0.3nm,0.2s							
BVAR	**Borovoye Array**	**52.34**	**310**	P		**P**	**23 01 21.9**	**+0.9**
	0.4nm,0.6s,baz=64,slow=5.6,SNR=1.6							
	0.4nm,0.6s							
WRA	**Warramunga Arr**	**72.16**	**204**	P		**P**	**23 03 33.8**	**-0.2**
	0.4nm,0.9s,baz=25,slow=5.8,SNR=2.1							
	0.4nm,0.9s							
TXAR	**Lajitas Array**	**72.93**	**65**	P		**P**	**23 03 37.9**	**-0.9**
	0.2nm,0.4s,baz=316,slow=6.3,SNR=4.5							
	0.2nm,0.4s							

KRSC 25 23:05:43.7±2.0, 49°38N×158°98E, h38km±38km, MI3.5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**2.50**	**347**	*eP*		Pn	23 06 24.5	+2.7
KDTR				*eS*		Sn	23 06 53.6	+2.6
PAU	**Pauzhetka**	**2.51**	**327**	*eS*		Sn	23 06 52.8	+1.6
RUS	**Russkaya**	**3.07**	**355**	*eP*		Pn	23 06 33.9	+4.3
RUS				*eS*		Sn	23 07 09.9	+4.8
ASAK	**Asacha**	**3.09**	**348**	*eP*		Pn	23 06 33.8	+3.8
MTVR	**Mutnovka**	**3.15**	**351**	*eP*		Pn	23 06 34.2	+3.4
MTVR				*eS*		Sn	23 07 10.9	+3.7
MIPR	**Malaya Ipel'ka**	**3.23**	**335**	*eP*		Pn	23 06 34.6	+2.9
GRL	**Gorelyy**	**3.23**	**350**	*eP*		Pn	23 06 35.6	+3.7
GRL				*eS*		Sn	23 07 13.2	+4.0
KRMR	**Karymshinskiy**	**3.50**	**351**	*eS*		Sn	23 07 21.5	+6.0
AVH	**Avacha**	**3.90**	**358**	*eP*		Pn	23 06 47.2	+6.1
KOK	**Koryaka**	**3.93**	**357**	*eP*		Pn	23 06 46.2	+4.8
KRX	**Arik**	**3.99**	**357**	*eP*		Pn	23 06 46.6	+4.2
GNL	**Ganaly**	**4.37**	**352**	*eP*		Pn	23 06 52.6	+5.0
KBTR	**Krutoberegovo**	**7.22**	**17**	*eP*		Pn	23 07 31.1	+4.5

*NEIC **25** 23:11:35.4±1.1, 17°.80N±0°.03×66°.87W±0°.01, h10km±2km, ML3.9/39, Md3.5/18(RSPR), Error ellipse: s-maj=4.5km s-min=2.9km az=14.0*

*OSPL **25** 23:11:36.0±0.3, 17°.79N×66°.88W, h11km±6km, ML4.0, Presumed earthquake*

*SDD **25** 23:11:36.0±1.7, 17°.81N×66°.89W, h15km±14km, MD3.7, ML3.5, MW3.5, Presumed earthquake*

ISC 25 23:11:35.1±0.8, 17°81N±0°.05×66°88W±0°.02, h23km, n41, σ1°29/62, 12C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.17**	**1**			**Pb**	**23 11 39.6**	**-0.5**
GBPR						**Sb**	**23 11 42.3**	**-1.2**
MLPR	**Magueyes Islan**	**0.22**	**316**			**Pb**	**23 11 40.6**	**-0.2**
MLPR					Sg	**Sb**	**23 11 43.8**	**-0.9**
MLPR					IAML		23 11 44.6	
	28µm,0.7s							
MLPR					IAML		23 11 44.7	
	14µm,0.4s							
MLPR	**Magueyes Islan**	**0.22**	**316**	↑*eP*g		**Pb**	**23 11 40.6**	**-0.2**
MLPR				*eS*g		**Sb**	**23 11 43.9**	**-0.8**
MLPR				IAML			23 11 44.4	
	comp=N,10µm,0.6s							
CRPR	**Cabo Rojo, PR**	**0.29**	**312**	*i* P		**Pb**	**23 11 41.8**	**0.0**
CRPR				*eS*		**Sb**	**23 11 45.9**	**-0.5**
CRPR				IAML			23 11 46.5	
	comp=Z,12µm,0.6s							
OBIP	**Obispado Ponce**	**0.35**	**49**			**Pb**	**23 11 42.5**	**-0.2**
OBIP						**Sb**	**23 11 47.4**	**-0.6**
OBIP	**Obispado Ponce**	**0.35**	**49**	*i* P		**Pb**	**23 11 42.6**	**-0.2**
OBIP				*eS*		**Sb**	**23 11 47.7**	**-0.3**
OBIP				IAML			23 11 49.2	
	comp=Z,16µm,0.3s							
CELP	**Cerrillos**	**0.39**	**48**			**Pb**	**23 11 43.2**	**-0.2**
CELP					Sg	**Sb**	**23 11 48.7**	**-0.5**
CELP	**Cerrillos**	**0.39**	**48**	↑*eP*g		**Pb**	**23 11 43.2**	**-0.2**
CELP				↑*eS*g		**Sb**	**23 11 49.0**	**-0.1**
CELP				IAML			23 11 50.5	
	comp=N,1µm,0.2s							
LSP	**Las Mesas**	**0.41**	**332**			**Pb**	**23 11 43.7**	**-0.1**
LSP						**Sb**	**23 11 49.8**	**+0.1**
UUPR	**Utuado, UPR, P**	**0.47**	**19**			**Pb**	**23 11 44.2**	**-0.5**
UUPR					Sg	**Sb**	**23 11 50.1**	**-1.2**
PRSN	**Puerto Rico Se**	**0.48**	**329**			**Pb**	**23 11 44.6**	**-0.2**
PRSN					Sg	**Sb**	**23 11 50.8**	**-0.6**
PRSN					IAML		23 11 55.4	
	comp=N,8µm,0.4s							
PRSN					IAML		23 11 55.7	
	comp=N,13µm,0.3s							
PRSN	**Puerto Rico Se**	**0.48**	**329**	↑*eP*g		**Pb**	**23 11 44.6**	**-0.2**
PRSN				↑*eS*g		**Sb**	**23 11 51.0**	**-0.5**
PRSN				IAML			23 11 55.6	
	comp=N,8µm,0.4s							
AOPR	**Arecibo Observ**	**0.55**	**13**			**Pb**	**23 11 45.5**	**-0.5**
AOPR					Sg	**Sb**	**23 11 52.4**	**-1.2**
AOPR					IAML		23 11 55.2	
	comp=N,7µm,0.3s							
AOPR	**Arecibo Observ**	**0.55**	**13**	↓*eP*g		**Pb**	**23 11 45.6**	**-0.5**
AOPR				↑*eS*g		**Sb**	**23 11 52.7**	**-0.9**
AOPR				IAML			23 11 55.1	
	comp=N,6µm,0.3s							
AGPR	**Aguadilla, PR**	**0.69**	**342**			**Pb**	**23 11 48.2**	**-0.3**
AGPR						**Sb**	**23 11 57.0**	**-0.5**
AGPR					IAML		23 11 57.5	
	comp=N,3µm,0.4s							
AGPR	**Aguadilla, PR**	**0.69**	**342**	↑*eP*g		**Pb**	**23 11 48.2**	**-0.3**
AGPR				↑*eS*g		**Sb**	**23 11 57.3**	**-0.3**
AGPR				IAML			23 11 57.4	
	comp=N,2µm,0.3s							
ECPR	**Experimental S**	**0.71**	**44**			**Pb**	**23 11 48.3**	**-0.4**
ECPR					IAML		23 12 03.2	
	comp=N,3µm,0.2s							
EMPR	**Esperanza - Ma**	**0.74**	**27**			**Pb**	**23 11 49.5**	**+0.1**
EMPR						**Sb**	**23 11 59.2**	**+0.1**
IGPR	**InterUniversit**	**0.76**	**78**			**Pb**	**23 11 49.8**	**+0.3**
IGPR						**Sb**	**23 12 01.7**	**+2.3**
SJG	**San Juan**	**0.76**	**67**	Pg		**Pb**	**23 11 49.5**	**-0.1**
SJG	**San Juan**	**0.76**	**67**	IAML			23 12 02.9	
	comp=N,4µm,0.4s							
SJG				IAML			23 12 02.9	
	comp=N,7µm,0.5s							
SJG	**San Juan**	**0.76**	**67**	↓*eP*g		**Pb**	**23 11 49.5**	**-0.1**
SJG				↑*eS*g		**Sb**	**23 12 00.5**	**+0.9**
SJG	**San Juan**	**0.76**	**67**	*i* P		**Pb**	**23 11 49.6**	**-0.1**
SJG				IAML			23 12 02.8	
	comp=Z,45µm,0.5s							
IDE	**Isla Desecheo**	**0.80**	**316**			**Pb**	**23 11 50.4**	**0.0**
HUMP	**Col San Antoni**	**1.04**	**71**			**Pn**	**23 11 54.0**	**-0.2**
HUMP						**Sb**	**23 12 08.3**	**+0.8**
HUMP				IAML			23 12 10.8	
	comp=Z,2µm,0.3s							
HUMP				IAML			23 12 11.0	
	comp=Z,2µm,0.9s							
CUPR	**Culebra, Puert**	**1.60**	**72**			**Pn**	**23 12 03.8**	**+1.8**
HIDR	**Higuey Centro**	**1.91**	**294**	↑*eP*g		**Pn**	**23 12 08.6**	**+2.4**
HIDR				IAML			23 12 41.3	
	comp=N,345nm,0.4s							
DR12	**Loma Pena Alta**	**2.56**	**293**			**Pn**	**23 12 17.3**	**+2.0**
HATOM	**Hato Mayor del**	**2.56**	**293**	↑*eP*g		**Pn**	**23 12 18.3**	**+3.0**
HATOM				IAML			23 13 05.4	
	comp=N,157nm,0.9s							
SMDR	**Samana, DR**	**2.64**	**304**	↑*eP*g		**Pb**	**23 12 22.1**	**+0.5**
SMDR				↑*eS*g		**Sb**	**23 12 55.5**	**+2.0**
SMDR				IAML			23 13 09.5	
	comp=N,213nm,0.6s							
BANI	**BANI**	**3.35**	**280**			**Pn**	**23 12 28.8**	**+2.6**
SABA	**Saba**	**3.48**	**93**	Pn		**Pn**	**23 12 29.5**	**+1.7**
SMRT	**St. Maarten**	**3.63**	**86**			**Pn**	**23 12 30.9**	**+0.9**
SC01	**Santiago de lo**	**3.98**	**294**			**Pn**	**23 12 36.7**	**+1.9**
SDDR	**Presa de Saban**	**4.34**	**286**			**Pn**	**23 12 41.9**	**+2.1**
SDDR				IAML			23 13 57.9	
	comp=N,82nm,1.8s							
SDDR				IAML			23 14 01.8	
	comp=N,98nm,0.8s							
GDHS	**Morne Mazeau,**	**5.13**	**107**	Pn		**Pn**	**23 12 51.5**	**+1.0**
CBE	**Ff, Capester**	**5.34**	**108**	Pn		**Pn**	**23 12 54.5**	**+1.1**
BIM	**Bigot**	**6.47**	**120**	Pn		**Pn**	**23 13 08.9**	**-0.1**
URIC	**Uribia, Colomb**	**7.83**	**220**	P		**Pn**	**23 13 26.4**	**-1.2**
	comp=N,13nm,1.5s							
URIC				S		**Sn**	**23 14 49.9**	**-5.7**
	comp=N,13nm,1.5s							
SDV	**Santo Domingo**	**9.59**	**203**	Pn		**Pn**	**23 13 53.1**	**+1.1**
SJCC	**San Jacinto, C**	**11.26**	**227**	P		**Pn**	**23 14 14.6**	**-0.1**
SJCC				S		Sn	23 16 12.5	-7.4

*IDC **25** 23:15:15.5±0.7, 2°.21N×101°.56W, h0km, mb4.2/13, mbtmp4.1/14, ML3.0/2, MS3.6/22, Error ellipse: s-maj=27.1km s-min=13.7km az=64.0*

*NEIC **25** 23:15:18.5±1.0, 2°.30N±0°.10×101°.3W±0°.1, h10km±1km, mb4.6/63, Error ellipse: s-maj=21.6km s-min=16.6km az=78.0*

ISC 25 23:15:17.3±0.6, 2°29N±0°.08×101°3W±0°.1, h10km, n118, σ0°89/97, mb4.5/42, MS3.6/21, Galapagos Triple Junction region

| Code | Station Name | Δ° | AZ° | Phase ID | Op | IS

PB11	**IPOC Station P**	**38.04**	**127**	P	**P**	**23**	**22**	**37.5 +1.1**
PB11				IAmb	IAmb	23	22	56.1
	comp=Z,16nm,1.1s							
MPU	**Maple Canyon**	**38.70**	**347**	P	**P**	**23**	**22**	**42.7 +1.0**
MPU				IAmb	IAmb	23	22	51.0
	comp=Z,10nm,1.2s							
NVAR	**Mina Array Bea**	**39.18**	**339**	P	**P**	**23**	**22**	**46.7 +0.9**
	comp=Z,1.7nm,0.9s,baz=174,slow=8.1,SNR=4.3							
	comp=Z,1.7nm,0.9s							
NVAR	**Mina Array Bea**	**39.18**	**339**	P	**P**	**23**	**22**	**46.4 +0.6**
HDIL	**Hopedale**	**39.62**	**14**	P	**P**	**23**	**22**	**50.0 +0.9**
HWUT	**Hardware Ranch**	**40.21**	**348**		**P**	**23**	**22**	**54.8 +0.4**
HWUT				IAmb	IAmb	23	23	03.3
	comp=Z,16nm,1.4s							
HVU	**Hansel Valley**	**40.64**	**347**	P	**P**	**23**	**22**	**58.8 +1.0**
HVU				IAmb	IAmb	23	23	06.8
	comp=Z,14nm,1.4s							
BOAV	**Boa Vista**	**40.77**	**89**	P	**P**	**23**	**22**	**59.0 -0.1**
PD31	**Pinedale Array**	**40.97**	**351**	P	**P**	**23**	**23**	**00.9 +0.3**
PD31				IAmb	IAmb	23	23	08.9
	comp=Z,9.8nm,1.1s							
PDAR	**Pinedale Array**	**40.97**	**351**	P	**P**	**23**	**23**	**01.4 +0.9**
	comp=Z,2.6nm,0.8s,baz=157,slow=7.9,SNR=17							
PDAR				PcP	**PcP**	**23**	**25**	**00.1 -0.7**
	comp=Z,0.2nm,0.6s,baz=161,slow=2.2,SNR=2.3							
PDAR				LR	LR	23	37	47.4
	comp=Z,46nm,19.2s,baz=166,slow=33							
	comp=Z,2.6nm,0.8s							
PDAR	**Pinedale Array**	**40.97**	**351**		**P**	**23**	**23**	**00.9 +0.3**
H03N2	**Juan Fernandez**	**41.36**	**151**	T	T	00	07	15.2
	baz=326,slow=77,SNR=56							
H03N1	**Juan Fernandez**	**41.36**	**151**	T	T	00	07	23.1
	baz=326,slow=77,SNR=78							
H03N3	**Juan Fernandez**	**41.36**	**151**	T	T	00	07	26.7
	baz=326,slow=77,SNR=77							
ECSD	**EROS Data Cent**	**41.48**	**5**		**P**	**23**	**23**	**04.8 +0.3**
ECSD				IAmb	IAmb	23	23	12.2
	comp=Z,11nm,1.1s							
RSSD	**Black Hills**	**41.72**	**357**		**P**	**23**	**23**	**07.4 +0.7**
RSSD				IAmb	IAmb	23	23	15.7
	comp=Z,8.3nm,1.1s							
LOHW	**Long Hollow**	**41.97**	**350**		**P**	**23**	**23**	**09.2 +0.5**
LOHW				IAmb	IAmb	23	23	17.0
	comp=Z,15nm,1.4s							
AC02	**Maricunga**	**42.47**	**135**	P	**P**	**23**	**23**	**13.2 -0.2**
AC02				IAmb	IAmb	23	23	16.9
	comp=Z,8.4nm,1.0s							
HLID	**Hailey**	**42.71**	**346**	P	**P**	**23**	**23**	**15.9 +1.1**
LCO	**Las Campanas**	**42.78**	**139**	P	**P**	**23**	**23**	**16.0 +0.4**
LCO				IAmb	IAmb	23	23	19.0
	comp=Z,14nm,1.1s							
AC05	**El Transito**	**42.95**	**138**	P	**P**	**23**	**23**	**17.1 +0.3**
BCYI	**Bear Canyon**	**43.19**	**347**	P	**P**	**23**	**23**	**20.0 +1.3**
QLMT	**Earthquake Lak**	**43.29**	**350**	P	**P**	**23**	**23**	**20.2 +0.6**
CO06	**Fray Jorge**	**43.30**	**142**	P	**P**	**23**	**23**	**19.6 +0.1**
VILB	**Vilhena**	**43.54**	**111**	P	**P**	**23**	**23**	**21.8 +0.1**
VILB				IAmb	IAmb	23	23	23.7
	comp=Z,20nm,1.2s							
MCMT	**McKenzie Canyo**	**43.56**	**348**		**P**	**23**	**23**	**22.6 +0.8**
SIV	**San Ignacio**	**43.73**	**116**	P	**P**	**23**	**23**	**24.2 +0.9**
	comp=Z,1.1nm,0.8s,baz=303,slow=7.4,SNR=5.0							
	comp=Z,1.1nm,0.8s							
CO03	**El Pedregal**	**44.01**	**141**	P	**P**	**23**	**23**	**26.5 +1.1**
PLID	**Pearl Lake**	**44.54**	**345**		**P**	**23**	**23**	**29.5 -0.1**
PLID				IAmb	IAmb	23	23	37.9
	comp=Z,11nm,1.4s							
PTLB	**Pontes e Lacer**	**45.30**	**114**		**P**	**23**	**23**	**35.8 +0.1**
SADO	**Sadowa**	**46.61**	**22**	LR	LR	23	43	32.0
	comp=Z,36nm,18.4s,baz=256,slow=36							
EPLO	**Experimental L**	**47.65**	**7**		**P**	**23**	**23**	**53.4 -0.4**
ULM	**Lac du Bonnet**	**48.01**	**5**	P	**P**	**23**	**23**	**56.3 -0.2**
	comp=Z,4.5nm,1.0s,baz=207,slow=8.2,SNR=3.8							
ULM				LR	LR	23	43	46.0
	comp=Z,60nm,18.5s,baz=190,slow=36							
	comp=Z,4.5nm,1.0s							
CPUP	**Villa Florida**	**51.13**	**127**	P	**P**	**23**	**24**	**22.1 +1.4**
	comp=Z,5.9nm,0.9s,baz=299,slow=9.7,SNR=17							
	comp=Z,5.9nm,0.9s							
CPUP	**Villa Florida**	**51.13**	**127**	P	**P**	**23**	**24**	**21.3 +0.6**
CPUP				IAmb	IAmb	23	24	23.1
	comp=Z,7.1nm,0.9s							
PLCA	**Paso Flores**	**51.20**	**150**	P	**P**	**23**	**24**	**21.9 +0.8**
	comp=Z,4.7nm,1.1s,baz=318,slow=7.6,SNR=4.3							
PLCA				LR	LR	23	41	06.0
	comp=Z,114nm,18.9s,baz=322,slow=30							
	comp=Z,4.7nm,1.1s							
EDM	**Edmonton**	**51.73**	**351**		**P**	**23**	**24**	**25.7 +0.9**
BDFB	**Brasilia**	**55.63**	**111**	P	**P**	**23**	**24**	**54.0 -0.2**
	comp=Z,5.3nm,0.8s,baz=292,slow=7.8,SNR=6.1							
	comp=Z,5.3nm,0.8s							
BDFB	**Brasilia**	**55.63**	**111**	P	**P**	**23**	**24**	**54.0 -0.2**
BDFB				IAmb	IAmb	23	24	55.4
	comp=Z,7.9nm,1.1s							
SCHQ	**Schefferville**	**59.41**	**22**	P	**P**	**23**	**25**	**19.4 -0.6**
	comp=Z,3.0nm,0.9s,baz=189,slow=6.8,SNR=3.8							
	comp=Z,3.0nm,0.9s							
YKA	**Yellowknife Ar**	**60.88**	**353**	P	**P**	**23**	**25**	**28.9 -0.9**
	comp=Z,1.6nm,1.0s,baz=157,slow=6.1,SNR=15							
YKA				LR	LR	23	50	18.4
	comp=Z,67nm,20.9s,baz=264,slow=34							
	comp=Z,1.6nm,1.0s							
YKA	**Yellowknife Ar**	**60.88**	**353**	P	**P**	**23**	**25**	**29.6 -0.3**
FRB	**Frobisher Bay**	**65.85**	**15**	LR	LR	23	55	29.4
	comp=Z,45nm,18.0s,baz=116,slow=37							
L29M	**L29M**	**66.47**	**343**	P	**P**	**23**	**26**	**07.0 +0.1**
BCAR	**Beaver Creek A**	**67.57**	**341**	P	**P**	**23**	**26**	**14.6 +0.8**
ILON	**Igloolik, Nuna**	**68.23**	**7**	P	**P**	**23**	**26**	**17.9 +0.2**
ILON				IAmb	IAmb	23	26	25.4
	comp=Z,5.4nm,1.1s							
INK	**Inuvik**	**69.44**	**348**	LR	LR	23	57	19.2
	comp=Z,59nm,18.4s,baz=334,slow=36							
INK	**Inuvik**	**69.44**	**348**		**P**	**23**	**26**	**25.3 -0.1**
INK				IAmb	IAmb	23	26	33.1
	comp=Z,6.1nm,1.1s							
RND	**Reindeer**	**70.18**	**339**	P	**P**	**23**	**26**	**30.6 +0.5**
ILAR	**Eielson Array**	**70.39**	**341**	P	**P**	**23**	**26**	**31.1 -0.1**
	comp=Z,0.9nm,0.6s,baz=148,slow=5.0,SNR=15							
	comp=Z,0.9nm,0.6s							
PRP	**Porcupine Dome**	**70.45**	**342**		**P**	**23**	**26**	**32.7 +0.9**
PRP				IAmb	IAmb	23	26	39.4
	comp=Z,8.2nm,1.2s							
MLY	**Manley**	**71.83**	**340**	P	**P**	**23**	**26**	**40.8 +0.8**
MLY				IAmb	IAmb	23	26	48.3
	comp=Z,7.6nm,1.2s							
RDOG	**Red Dog Mine**	**77.55**	**340**	P	**P**	**23**	**27**	**14.1 +0.9**
BORG	**Borgarnes**	**83.67**	**25**	LR	LR	00	03	27.1
	comp=Z,35nm,18.9s,baz=259,slow=34							
H11N3	**WAKE ISLAND Hy**	**90.90**	**290**	T	T	01	08	51.2
	baz=88,slow=75							
H11N2	**WAKE ISLAND Hy**	**90.91**	**290**	T	T	01	08	52.4
	baz=88,slow=75							
H11N1	**WAKE ISLAND Hy**	**90.91**	**290**	T	T	01	08	51.2
	baz=88,slow=75							
H11S2	**WAKE ISLAND Hy**	**91.15**	**288**	T	T	01	09	07.5
	baz=92,slow=74							
H11S1	**WAKE ISLAND Hy**	**91.15**	**288**	T	T	01	09	09.4
	baz=92,slow=74							
H11S3	**WAKE ISLAND Hy**	**91.17**	**288**	T	T	01	09	09.0
	baz=92,slow=74							
QSPA	**South Pole Qui**	**92.30**	**180**	P	**P**	**23**	**28**	**28.5 +0.8**
	comp=Z,3.0nm,1.1s,baz=174,slow=6.2,SNR=3.5							
QSPA				LR	LR	00	03	32.9
	comp=Z,67nm,19.2s,baz=223,slow=31							
	comp=Z,3.0nm,1.1s							
QSPA	**South Pole Qui**	**92.30**	**180**	P	**P**	**23**	**28**	**28.2 +0.5**
SPITS	**Spitsbergen Ar**	**93.26**	**11**	LR	LR	00	10	31.7
	comp=Z,41nm,19.1s,baz=176,slow=36							
MDT	**Midelt**	**94.42**	**57**	LR	LR	00	04	17.1
	comp=Z,26nm,20.8s,baz=327,slow=31							
NOA	**NORSAR Array B**	**98.73**	**27**	LR	LR	00	11	47.9
	comp=Z,17nm,19.2s,baz=260,slow=34							
TIXI	**Tiksi**	**99.50**	**346**	LR	LR	00	17	31.2
	comp=Z,16nm,18.4s,baz=13,slow=38							
ASAR	**Alice Springs**	**122.57**	**243**	PKP	**PKPdf**	**23**	**34**	**12.7 -1.4**
	comp=Z,0.4nm,0.7s,baz=85,slow=2.0,SNR=3.4							
BOSA	**Boshof**	**122.86**	**123**	PKP	**PKPdf**	**23**	**34**	**13.2 -1.5**
	comp=Z,1.7nm,0.8s,baz=180,slow=1.0,SNR=1.5							
BOSA	**Boshof**	**122.86**	**123**	PKPdf	**PKPdf**	**23**	**34**	**13.6 -1.1**
WRA	**Warramunga Arr**	**122.93**	**248**	PKP	**PKPdf**	**23**	**34**	**14.0 -0.9**
	comp=Z,0.3nm,0.4s,baz=97,slow=1.9,SNR=2.6							
WRA	**Warramunga Arr**	**122.93**	**248**	PKP	**PKPdf**	**23**	**34**	**13.8 -1.0**
BVAR	**Borovoye Array**	**124.45**	**6**	PKP	**PKPdf**	**23**	**34**	**16.8 -0.1**
	comp=Z,0.3nm,0.5s,baz=15,slow=1.6,SNR=2.3							
SONM	**Songino Array**	**124.51**	**338**	PKP	**PKPdf**	**23**	**34**	**15.9 -1.5**
	comp=Z,0.4nm,0.9s,baz=29,slow=3.3,SNR=2.1							
KURBB	**Kurchatov Arra**	**127.29**	**0**	PKP	**PKPdf**	**23**	**34**	**20.7 -1.6**
	comp=Z,0.5nm,0.8s,baz=337,slow=2.1,SNR=4.9							

HHC	**Hu-ho-hao-te**	**127.64**	**329**	*eP*	**PKPdf**	**23**	**34**	**21.3 -2.2**
NJ2	**Nanjing**	**128.85**	**315**	*eP*	**PKPdf**	**23**	**34**	**26.3 +0.4**
NJ2				pmax	pmax			
	comp=Z,16nm,0.5s							
MKAR	**Makanchi Array**	**131.02**	**357**	PKP	**PKPdf**	**23**	**34**	**29.3 -0.4**
	comp=Z,0.3nm,0.8s,baz=11,slow=1.5,SNR=3.6							
CMAR	**Chiang Mai Arr**	**151.31**	**317**	PKPbc	**PKPbc**	**23**	**35**	**12.8 +0.5**
	comp=Z,0.6nm,0.3s,baz=3.0,slow=2.5,SNR=8.0							
CMAR	**Chiang Mai Arr**	**151.31**	**317**		**PKPbc**	**23**	**35**	**12.1 -0.2**

*ISK **25** 23:18:04.7, 38°.12N×44°.56E, h18km, ML2.9/5*
*AZER **25** 23:18:04.7, 38°.43N×44°.56E, h8km, ml3.0*
*AFAD **25** 23:18:05.1, 38°.48N×44°.61E, h7km±2km, ML2.8*
*TEH **25** 23:18:08.0, 38°.53N×44°.71E, h4km±175km, ML2.6, Presumed earthquake*

ISC 25 23:18:05.3±1.2, 38°.30N±0°.04×44°.54E±0°.02, h6km±10km, n50, σ2s05/88, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.56**	**310**	P	**Pg**		**23 18 15.1**	**-1.0**
OZAP				S	**Sg**		**23 18 23.5**	**0.0**
OZAP				IAML			23 18 24.0	
	comp=E,1μm,0.4s							
OZAP				IAML			23 18 30.0	
	comp=N,2μm,0.6s							
YOVA	**Hakkari_Yksek**	**0.74**	**196**	P	Pn		23 18 23.2	+0.7
YOVA				S	Sn		23 18 36.4	+2.3
YOVA				IAML			23 18 41.0	
	comp=E,219nm,0.5s							
YOVA				IAML			23 18 42.0	
	comp=N,340nm,0.5s							
ISHB	**Shabestar**	**0.85**	**91**	Pg	**Pn**		**23 18 22.6**	**-1.3**
TVAN	**Van**	**0.92**	**285**	P	**Pb**		**23 18 22.4**	**-1.4**
TVAN				S	**Sb**		**23 18 32.4**	**-4.0**
TVAN				IAML			23 18 42.0	
	comp=N,343nm,0.8s							
TVAN				IAML			23 18 51.0	
	comp=E,458nm,0.9s							
HAKT	**HAKKARI**	**0.99**	**222**	P	**Pn**		**23 18 26.5**	**+0.5**
HAKT				S	Sn		23 18 44.2	+3.8
HAKT				IAML			23 18 46.0	
	comp=E,330nm,0.4s							
HAKT				IAML			23 18 48.0	
	comp=N,226nm,0.4s							
HAKT	**HAKKARI**	**0.99**	**222**	P	**Pn**		**23 18 26.8**	**+0.8**
HAKT				S	Sn		23 18 44.8	+4.4
VMUR	**Van-Muradiye**	**1.02**	**312**	P	**Pn**		**23 18 23.8**	**-2.6**
VMUR				S	**Sb**		**23 18 36.9**	**-2.4**
VMUR				IAML			23 18 41.0	
	comp=N,289nm,0.5s							
VMUR				IAML			23 18 42.0	
	comp=E,249nm,0.8s							
MAKU	**Maku**	**1.06**	**6**	Pg	**Pn**		**23 18 23.7**	**-3.1**
MAKU				Sg	**Sb**		**23 18 35.2**	**-5.1**
NAX	**Nakhchivan**	**1.15**	**40**	P	**Pn**		**23 18 27.1**	**-0.8**
NAX				S	**Sb**		**23 18 43.1**	**+0.4**
GEVA	**Gevas**	**1.17**	**271**	P	**Pn**		**23 18 26.6**	**-1.7**
GEVA				S	**Sg**		**23 18 45.9**	**+3.1**
AKDM	**Akdamar-Van**	**1.23**	**272**	Pn	**Pb**		**23 18 31.1**	**-0.4**
AKDM				Sn	**Sg**		**23 18 45.2**	**+0.4**
ITBZ	**Tabriz**	**1.27**	**93**	Pg	**Pg**		**23 18 30.2**	**+0.6**
IAZR	**Azarshahr**	**1.29**	**118**	Pg	**Pg**		**23 18 32.8**	**+2.7**
ORD	**Ordubad**	**1.30**	**61**	P	**Pb**		**23 18 30.4**	**+0.3**
ORD				S	**Sb**		**23 18 47.6**	**+0.5**
SBZ	**Shahbuz**	**1.35**	**35**	P	**Pn**		**23 18 30.6**	**-0.1**
SBZ				S	**Sn**		**23 18 49.5**	**+0.4**
HYR	**Heyderabad**	**1.44**	**10**	P	**Pn**		**23 18 31.7**	**-0.2**
HYR				S	**Sn**		**23 18 52.5**	**+1.4**
ADCV	**BITLIS_Adilcev**	**1.51**	**290**	P	**Pb**		**23 18 33.2**	**-0.6**
ADCV				S	**Sg**		**23 18 56.6**	**+2.7**
ADCV				IAML			23 18 58.0	
	comp=E,103nm,0.7s							
ADCV				IAML			23 18 59.0	
	comp=N,98nm,0.7s							
IGDI	**IGDIR**	**1.61**	**347**	P	**Pn**		**23 18 34.4**	**+0.1**
IGDI				S	**Sb**		**23 18 58.3**	**+2.4**
IGDI	**IGDIR**	**1.61**	**347**	P	**Pn**		**23 18 35.2**	**+0.9**
IGDI				S	**Sn**		**23 18 57.4**	**+2.1**
DORK	**Agr/Tutak/Do**	**1.75**	**309**	P	**Pn**		**23 18 36.5**	**+0.2**
DORK				IAML			23 19 03.0	
	comp=N,80nm,0.8s							
DORK				IAML			23 19 18.0	
	comp=E,58nm,1.3s							
AGRB	**Hanur-Agry**	**1.75**	**317**	Pn	**Pn**		**23 18 37.1**	**+0.7**
AGRB				Sn	**Sn**		**23 19 01.2**	**+2.0**
MLAZ	**Malazgirt-MUS**	**1.77**	**299**	Pn	**Pn**		**23 18 36.9**	**+0.3**
MLAZ				Sn	**Sn**		**23 19 00.2**	**+0.7**
GNI	**Garni**	**1.85**	**5**	Pn	**Pn**		**23 18 39.3**	**+1.6**
GNI				Sn	**Sn**		**23 19 04.1**	**+2.5**
IHRS	**Heris**	**1.97**	**89**	Pn	**Pg**		**23 18 43.2**	**+0.2**
IHSH	**Hashtrud**	**2.37**	**114**	Pn	**Pg**		**23 18 52.0**	**+1.2**
QRD	**Qoradiz**	**2.46**	**61**	P	**Pn**		**23 18 46.9**	**+1.0**
QRD				S	**Sb**		**23 19 18.3**	**-2.1**
KARS	**Kars**	**2.58**	**334**	Pn	**Pn**		**23 18 49.1**	**+1.3**
GDB	**GEDABAY**	**2.59**	**21**	P	**Pn**		**23 18 48.5**	**+0.6**
GDB				S	**Sn**		**23 19 19.9**	**+0.1**
AGDM	**Agdam**	**2.69**	**47**	P	**Pn**		**23 18 50.0**	**+0.9**
AGDM				S	**Sn**		**23 19 23.1**	**+1.1**
GANJ	**Ganja**	**2.72**	**30**	P	**Pn**		**23 18 50.3**	**+0.8**
GANJ				S	**Sn**		**23 19 24.2**	**+1.5**
BLQ	**Beylaqan**	**2.75**	**58**	P	**Pn**		**23 18 51.0**	**+1.2**
BLQ				S	**Sn**		**23 19 25.4**	**+2.0**
SENK	**Senkaya-Erzuru**	**2.82**	**324**	Pn	**Pn**		**23 18 52.8**	**+1.7**
QZX	**Qazax, Azerbai**	**2.83**	**13**	P	**Pn**		**23 18 51.7**	**+0.7**
QZX				S	**Sn**		**23 19 26.0**	**+0.6**
BRDA	**Brd**	**2.83**	**45**	P	**Pn**		**23 18 51.9**	**+0.9**
BRDA				S	**Sn**		**23 19 26.9**	**+1.4**
YRD	**Yardimli**	**2.96**	**77**	P	**Pb**		**23 18 55.0**	**-3.6**
YRD				S	**Sb**		**23 19 32.2**	**-2.9**
LRK	**Lerik**	**3.00**	**82**	P	**Pb**		**23 18 55.1**	**-4.1**
LRK				S	**Sb**		**23 19 33.7**	**-2.5**
ZRD	**Zardab**	**3.14**	**50**	P	**Pn**		**23 18 57.3**	**+2.1**
ZRD				S	**Sn**		**23 19 36.6**	**+3.7**
GLBA	**Clilabad**	**3.15**	**71**	P	**Pn**		**23 18 57.2**	**+1.8**
GLBA				S	**Sb**		**23 19 36.7**	**-3.7**
MNGR	**Mingechevir, A**	**3.16**	**38**	P	**Pn**		**23 18 56.9**	**+1.4**
MNGR				S	**Sn**		**23 19 36.9**	**+3.5**
ASTR	**Astara**	**3.35**	**84**	P	**Pb**		**23 19 00.5**	**-4.5**
ASTR				S	**Sb**		**23 19 42.1**	**-3.9**
LKRN	**Lenkeran, Azer**	**3.35**	**82**	P	**Pn**		**23 19 00.1**	**+2.0**
LKRN				S	**Sb**		**23 19 42.8**	**-3.2**
SEKA	**Sheki**	**3.55**	**34**	P	**Pn**		**23 19 01.9**	**+1.9**
SEKA				S	**Sn**		**23 19 45.9**	**+2.5**
QBL	**Gabala**	**3.67**	**43**	P	**Pn**		**23 19 04.1**	**+1.5**
QBL				S	**Sn**		**23 19 49.5**	**+3.4**
ZKTA	**Zakatala**	**3.70**	**25**	P	**Pn**		**23 19 04.6**	**+1.7**
ZKTA				S	**Sn**		**23 19 49.0**	**+2.2**
IML	**Ismayilli**	**3.76**	**47**	P	**Pn**		**23 19 05.0**	**+1.3**
IML				S	**Sn**		**23 19 49.2**	**+0.9**
XNQ	**Khinaliq**	**3.99**	**43**	P	**Pn**		**23 19 08.7**	**+1.5**
XNQ				S	**Sn**		**23 19 56.0**	**+1.6**
PQL	**Pirkuli**	**4.00**	**50**	P	**Pn**		**23 19 08.7**	**+1.5**
PQL				S	**Sn**		**23 19 55.0**	**+0.6**
QSAR	**Qusar**	**4.30**	**41**	P	**Pn**		**23 19 12.3**	**+1.0**
QSAR				S	**Sn**		**23 20 02.8**	**+1.0**
QUBA	**Quba, Azerbaij**	**4.31**	**44**	P	**Pn**		**23 19 12.6**	**+1.3**
QUBA				S	**Sn**		**23 20 04.8**	**+2.9**
SIZA	**Siyzn**	**4.36**	**49**	P	**Pn**		**23 19 13.6**	**+1.6**
SIZA				S	**Sn**		**23 20 03.2**	**0.0**
DALK				*eS*	Sn		23 22 24.6	+4.2
SMAR	**Somma**	**3.86**	**358**	*eP*	Pn		23 21 47.4	+5.1
AVH	**Avacha**	**3.86**	**358**	*eP*	Pn		23 21 46.2	+4.0
KOK	**Koryaka**	**3.89**	**357**	*eP*	Pn		23 21 47.6	+4.9
KRX	**Arik**	**3.96**	**357**	*eP*	Pn		23 21 48.1	+4.5
GNL	**Ganaly**	**4.34**	**352**	*eP*	Pn		23 21 53.5	+4.6
KBTR	**Krutoberegovo**	**7.19**	**17**	*eP*	Pn		23 22 32.5	+4.7

KRSC 25 23:20:45.4±1.5, 49°.41N×159°.01E, h38km±36km, MI3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**2.47**	**346**	*eP*	Pn		23 21 26.2	+3.1
KDTR				*eS*	Sn		23 21 55.1	+3.2
PAU	**Pauzhetka**	**2.49**	**326**	*eP*	Pn		23 21 24.9	+1.6
PAU				*eS*	Sn		23 21 53.7	+1.3
RUS	**Russkaya**	**3.04**	**354**	*eP*	Pn		23 21 34.6	+3.7
RUS				*eS*	Sn		23 22 10.4	+4.4
ASAK	**Asacha**	**3.06**	**347**	*eP*	Pn		23 21 34.6	+3.4
MTVR	**Mutnovka**	**3.12**	**351**	*eP*	Pn		23 21 35.5	+3.4
MTVR				*eS*	Sn		23 22 12.6	+4.5
GRL	**Gorelyy**	**3.20**	**350**	*eP*	Pn		23 21 36.8	+3.6
GRL				*eS*	Sn		23 22 14.6	+4.5
KRMR	**Karymshinskiy**	**3.47**	**351**	*eP*	Pn		23 21 41.5	+4.8
KRMR				*eS*	Sn		23 22 22.4	+5.9
DALK	**Dalny**	**3.63**	**358**	*eP*	Pn		23 21 43.4	+4.5
DALK				*eS*	Sn		23 22 24.6	+4.2
SMAR	**Somma**	**3.86**	**358**	*eP*	Pn		23 21 47.4	+5.1
AVH	**Avacha**	**3.86**	**358**	*eP*	Pn		23 21 46.2	+4.0
KOK	**Koryaka**	**3.89**	**357**	*eP*	Pn		23 21 47.6	+4.9
KRX	**Arik**	**3.96**	**357**	*eP*	Pn		23 21 48.1	+4.5
GNL	**Ganaly**	**4.34**	**352**	*eP*	Pn		23 21 53.5	+4.6
KBTR	**Krutoberegovo**	**7.19**	**17**	*eP*	Pn		23 22 32.5	+4.7

KRSC 25 23:33:10.7±1.3, 49°.16N×156°.49E, h46km±29km, MI3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**2.32**	**5**	*eP*		Pn	23 33 49.3	+3.0
PAU				*eS*		Sn	23 34 16.8	+3.3
KDTR	**Khodutka, Kamc**	**2.84**	**20**	*eP*		Pn	23 33 57.0	+3.6
KDTR				*eS*		Sn	23 34 30.4	+4.1
MIPR	**Malaya Ipel'ka**	**3.12**	**3**	*eP*		Pn	23 33 59.8	+2.5
ASAK	**Asacha**	**3.35**	**15**	*eP*		Pn	23 34 04.5	+4.0
MTVR	**Mutnovka**	**3.50**	**17**	*eP*		Pn	23 34 06.5	+3.9
MTVR				*eS*		Sn	23 34 46.9	+4.2
RUS	**Russkaya**	**3.52**	**21**	*eP*		Pn	23 34 06.0	+3.2
RUS				*eS*		Sn	23 34 46.4	+3.3
GRL	**Gorelyy**	**3.54**	**16**	*eP*		Pn	23 34 07.4	+4.2
GRL				*eS*		Sn	23 34 49.3	+5.4
DALK	**Dalny**	**4.13**	**19**	*eS*		Sn	23 35 03.0	+4.9
KOK	**Koryaka**	**4.35**	**17**	*eP*		Pn	23 34 19.3	+5.0
KBTR	**Krutoberegovo**	**8.04**	**26**	*eP*		Pn	23 35 08.9	+4.2

*IDC **25** 23:36:52.4±1.1, 48°.96N×158°.26E, h0km, mb3.6/7, mbtmp3.6/7, Error ellipse: s-maj=35.7km s-min=27.7km az=78.0*
*KRSC **25** 23:36:55.8±1.4, 49°.34N×158°.44E, h33km±35km, MI3.9*

ISC 25 23:36:57.9±1.1, 49°.19N±0°.08×158°.25E±0°.09, h35km, n33, σ1s03/40, mb3.5/7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.03**	**318**	*eP*		**Pn**	**23 37 28.3**	**-1.3**
SKR				*eS*		**Sn**	**23 37 53.1**	**-0.7**
PAU	**Pauzhetka**	**2.46**	**339**	*eP*		**Pn**	**23 37 35.3**	**-0.2**
PAU				*eS*		**Sn**	**23 38 05.2**	**+0.9**
KDTR	**Khodutka, Kamc**	**2.63**	**358**	*eP*		**Pn**	**23 37 36.6**	**-1.1**
KDTR				*eS*		**Sn**	**23 38 06.7**	**-1.6**
ASAK	**Asacha**	**3.21**	**356**	*eP*		**Pn**	**23 37 45.5**	**-0.3**
ASAK				*eS*		**Sn**	**23 38 21.9**	**-0.9**
MIPR	**Malaya Ipel'ka**	**3.23**	**344**	*eP*		**Pn**	**23 37 46.6**	**+0.5**
RUS	**Russkaya**	**3.25**	**3**	*eP*		**Pn**	**23 37 45.8**	**-0.6**
MTVR	**Mutnovka**	**3.30**	**359**	*eP*		**Pn**	**23 37 46.8**	**-0.4**
MTVR				*eS*		**Sn**	**23 38 23.7**	**-1.5**
GRL	**Gorelyy**	**3.37**	**358**	*eP*		**Pn**	**23 37

	12nm,0.3s							
SATY				*e*S		**Sg**	**23 47 09.2**	**-1.7**
	31nm,0.3s							
KPKS	**Kokpek**	**0.90**	**327**	P		**Pg**	**23 47 02.0**	**-1.0**
	0.6nm,0.3s							
KPKS				S		**Sg**	**23 47 13.0**	**-1.7**
	25nm,0.3s							
KPKS	**Kokpek**	**0.90**	**327**	*e*P		**Pg**	**23 47 02.0**	**-1.0**
	0.6nm,0.3s							
KPKS				*e*S		**Sg**	**23 47 13.0**	**-1.7**
	25nm,0.3s							
KTMS	**Ketmen**	**1.04**	**45**	P		**Pg**	**23 47 04.5**	**-1.1**
	20nm,0.1s							
KTMS				S		**Sg**	**23 47 17.4**	**-1.8**
	21nm,0.1s							
KTMS	**Ketmen**	**1.04**	**45**	*e*P		**Pg**	**23 47 04.5**	**-1.1**
	20nm,0.1s							
KTMS				*e*S		**Sg**	**23 47 17.4**	**-1.8**
	21nm,0.1s							
KURS	**Kuram**	**1.16**	**312**	P		**Pb**	**23 47 06.9**	**-1.0**
	4.7nm,0.3s							
KURS				S		**Sg**	**23 47 21.2**	**-1.9**
	11nm,0.2s							
TARG	**Taragay, Kyrgy**	**1.51**	**230**	⇑*i*P		**Pn**	**23 47 13.2**	**+0.1**
TARG				⇑*i*S		**Sb**	**23 47 33.2**	**-0.2**
BLB	**Baldybastay**	**1.53**	**336**	P		**Pb**	**23 47 13.5**	**-0.6**
	355nm,0.1s							
BLB				S		**Sb**	**23 47 32.9**	**-0.6**
	141nm,0.3s							
DJR	**Jarkent**	**1.65**	**11**	P		**Pb**	**23 47 15.3**	**-1.0**
	24nm,0.2s							
DJR				S		**Sb**	**23 47 36.1**	**-1.0**
	18nm,0.1s							
DJR	**Jarkent**	**1.65**	**11**	*e*P		**Pb**	**23 47 15.3**	**-1.0**
	24nm,0.2s							
DJR				*e*S		**Sb**	**23 47 36.1**	**-1.0**
	18nm,0.1s							
KNOS	**Konyrlen**	**1.65**	**356**	P		**Pb**	**23 47 15.6**	**-0.7**
	30nm,0.1s							
KNOS				S		**Sb**	**23 47 36.1**	**-1.1**
	18nm,0.2s							
KDJ	**Kajisay**	**1.71**	**251**	⇑*i*P		**Pb**	**23 47 17.2**	**-0.1**
KDJ				⇑*i*S		**Sg**	**23 47 39.7**	**-0.9**
KOTS	**Kotyrbulak**	**1.73**	**288**	P		**Pb**	**23 47 17.2**	**-0.4**
	6.0nm,0.2s							
KOTS				S		**Sb**	**23 47 39.1**	**-0.3**
	40nm,0.2s							
KOTS	**Kotyrbulak**	**1.73**	**288**	*e*P		**Pb**	**23 47 17.2**	**-0.4**
	6.0nm,0.2s							
KOTS				*e*S		**Sb**	**23 47 39.1**	**-0.3**
	40nm,0.2s							
MDOK	**Medeo**	**1.75**	**286**	Pg		**Pb**	**23 47 17.5**	**-0.5**
	5.6nm,0.2s							
MDOK				Lg		Lg	23 47 39.9	
	25nm,0.3s							
ARXS	**Arharly**	**1.87**	**324**	P		**Pb**	**23 47 19.1**	**-0.8**
	27nm,0.2s							
ARXS				S		**Sb**	**23 47 42.8**	**-0.6**
	44nm,0.2s							
ARXS	**Arharly**	**1.87**	**324**	*e*P		**Pb**	**23 47 19.1**	**-0.8**
	27nm,0.2s							
ARXS				*e*S		**Sb**	**23 47 42.8**	**-0.6**
	44nm,0.2s							
IZV	**Izvestkoviy**	**2.04**	**280**	Pg		**Pb**	**23 47 22.7**	**-0.2**
	7.4nm,0.1s							
IZV				Lg		Lg	23 47 48.7	
	27nm,0.2s							
IZV	**Izvestkoviy**	**2.04**	**280**	*e*P		**Pb**	**23 47 22.7**	**-0.2**
	7.4nm,0.1s							
IZV				*e*S		**Sb**	**23 47 48.7**	**+0.3**
	27nm,0.2s							
KTBS	**Karatobe**	**2.19**	**298**	Pg		**Pb**	**23 47 25.3**	**-0.2**
	4.7nm,0.2s							
KTBS				Lg		Lg	23 47 52.8	
	18nm,0.2s							
KTBS	**Karatobe**	**2.19**	**298**	*e*P		**Pb**	**23 47 25.3**	**-0.2**
	4.7nm,0.2s							
KTBS				*e*S		**Sb**	**23 47 52.9**	**+0.1**
	18nm,0.2s							
ULHL	**Ulahol**	**2.35**	**260**	⇑*i*P		**Pb**	**23 47 27.1**	**-1.1**
ULHL				⇑*i*S		**Sb**	**23 47 57.7**	**+0.4**
TDK	**Taldyqorghan**	**2.39**	**344**	Pg		**Pb**	**23 47 29.2**	**+0.4**
	53nm,0.3s							
TDK				Lg		Lg	23 47 59.7	
	30nm,0.2s							
TDK	**Taldyqorghan**	**2.39**	**344**	*e*P		**Pb**	**23 47 29.2**	**+0.4**
	53nm,0.3s							
TDK				*e*S		**Sg**	**23 47 59.7**	**-2.7**
	30nm,0.2s							
KST	**Kastek**	**2.51**	**279**	Pg		**Pb**	**23 47 31.6**	**+0.6**
	5.7nm,0.1s							
KST				Lg		Lg	23 48 04.1	
	23nm,0.4s							
KST	**Kastek**	**2.51**	**279**	*e*P		**Pb**	**23 47 31.6**	**+0.6**
	5.7nm,0.1s							
KST				*e*S		**Sg**	**23 48 04.1**	**-2.3**
	23nm,0.4s							
BOOM	**Boomskoye usch**	**2.53**	**266**	⇓*i*P		**Pb**	**23 47 30.1**	**-1.1**
BOOM				⇓*i*S		**Sb**	**23 48 02.5**	**0.0**
KAPS	**Kapalarasan**	**2.57**	**0**	Pg		**Pb**	**23 47 31.5**	**-0.4**
	22nm,0.3s							
KAPS				Lg		Lg	23 48 04.1	
	53nm,0.1s							
DGS	**Degeres**	**2.68**	**283**	Pg		**Pb**	**23 47 33.9**	**+0.2**
	3.6nm,0.3s							
DGS				Lg		Lg	23 48 08.3	
	32nm,0.4s							
DGS	**Degeres**	**2.68**	**283**	*e*P		**Pb**	**23 47 33.9**	**+0.2**
	3.6nm,0.3s							
DGS				*e*S		**Sb**	**23 48 08.3**	**+1.5**
	32nm,0.4s							
TKM2	**Tokmak 2**	**2.77**	**276**	⇓*i*P		**Pb**	**23 47 33.7**	**-1.7**
TKM2				⇓*i*S		**Sb**	**23 48 08.7**	**-0.8**
NRN	**Naryn**	**2.80**	**244**	⇑*i*P		**Pb**	**23 47 33.7**	**-2.3**
NRN				⇑*i*S		**Sb**	**23 48 08.4**	**-2.1**
KRBS	**Karabastau**	**2.86**	**291**	Pg		**Pb**	**23 47 36.8**	**-0.1**
	1.6nm,0.3s							
KRBS				Lg		Lg	23 48 12.8	
	13nm,0.3s							
KRBS	**Karabastau**	**2.86**	**291**	*e*P		**Pb**	**23 47 36.8**	**-0.1**
	1.6nm,0.3s							
KRBS				*e*S		**Sb**	**23 48 12.8**	**+0.8**
	13nm,0.3s							
SGDS	**Sogindy**	**3.54**	**284**	Pg		**Pb**	**23 47 49.8**	**+1.4**
	1.9nm,0.5s							
SGDS				Lg		Lg	23 48 35.0	
	3.6nm,0.3s							
AAK	**Ala-Archa**	**3.58**	**270**	⇑Pn		**Pb**	**23 47 48.2**	**-1.0**
	0.4nm,0.6s							
AAK				⇓Lg		Lg	23 48 41.9	
	1.3nm,0.5s							
ARLS	**Aral**	**3.83**	**259**	⇓*i*P		**Pn**	**23 47 47.7**	**+2.9**
ARLS				⇓*i*S		**Sn**	**23 48 33.2**	**+3.3**
MAKZ	**Makanchi**	**4.50**	**24**	⇑Pn		**Pn**	**23 47 56.7**	**+2.8**
	0.9nm,0.2s							
MAKZ				⇑Sn		**Sn**	**23 48 49.5**	**+3.2**
	1.2nm,0.5s							
MAKZ				⇑Lg		Lg	23 49 06.4	
	1.0nm,0.7s							
MRKS	**Merke**	**4.51**	**273**	Pg		**Pb**	**23 48 07.7**	**+2.7**
	0.7nm,0.2s							
MRKS				Lg		Lg	23 49 06.1	
	4.5nm,0.3s							
MRKS	**Merke**	**4.51**	**273**	*e*P		**Pb**	**23 48 07.7**	**+2.7**
	0.7nm,0.2s							
MRKS				*e*S		**Sg**	**23 49 06.1**	**-4.4**
	4.5nm,0.3s							
MK31	**Makanchi Array**	**4.59**	**26**	⇓Pn		**Pn**	**23 47 57.2**	**+2.1**
	0.3nm,0.2s,baz=208,slow=12,SNR=38							
MK31				⇑Sn		**Sn**	**23 48 50.4**	**+2.0**
	0.8nm,0.5s							
MK31				Lg		Lg	23 49 09.1	
	1.5nm,0.6s,baz=206,slow=28,SNR=4.3							
KK31	**Karatay Array**	**6.50**	**276**	⇑Lg		Lg	23 50 14.6	
	0.8nm,0.5s,baz=89,slow=30,SNR=5.9							
KURBB	**Kurchatov Arra**	**7.94**	**356**	⇓Lg		Lg	23 50 54.9	
	3.7nm,0.7s							
KURK	**Kurchatov**	**8.02**	**357**	⇑Lg		Lg	23 50 58.1	
	1.8nm,1.2s							

*SOME **25** 23:58:21.9, 41˚.98N×79˚.22E, h0km*
*KRNET **25** 23:58:21.1±0.1, 41˚.86N×79˚.30E, mb2.7*
*NNC **25** 23:58:22.5±1.5, 41˚.94N×79˚.38E, h0km, mb3.6, mpv3.5, Error ellipse: s-maj=10.0km s-min=5.9km az=151.0*
ISC 25 23:58:20.7±2.0, **41˚.87N**±0˚.07×**79˚.30E**±0˚.05, **h4**km±12km,
n26, σ0**9**7/46, **8C-8D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
TARG	**Taragay, Kyrgy**	**1.12**	**264**	⇓*i*P		**Pg**	**23 58 42.7**	**+0.5**
TARG				⇓*i*S		**Sb**	**23 58 58.6**	**+0.6**
SHLS	**Shalkode**	**1.30**	**5**	P		**Pg**	**23 58 46.8**	**+1.2**
	54nm,0.1s							
SHLS				S		**Sn**	**23 59 04.8**	**+1.3**
	87nm,0.2s							
SHLS	**Shalkode**	**1.30**	**5**	*e*P		**Pg**	**23 58 46.8**	**+1.2**
	54nm,0.1s							
SHLS				*e*S		**Sn**	**23 59 04.8**	**+1.3**
	87nm,0.2s							
UZB	**Uzynbulak**	**1.30**	**351**	P		**Pg**	**23 58 45.6**	**0.0**
UZB				S		**Sn**	**23 59 02.5**	**-1.0**
UZB	**Uzynbulak**	**1.30**	**351**	*e*P		**Pg**	**23 58 45.6**	**0.0**
UZB				*e*S		**Sn**	**23 59 02.5**	**-1.0**
PDGK	**Podgornoye**	**1.47**	**6**	⇓P		**Pb**	**23 58 48.3**	**-0.4**
	11nm,0.3s							
PDGK				⇑S		**Sg**	**23 59 07.8**	**-0.2**
	6.2nm,0.2s							
KDJ	**Kajisay**	**1.60**	**280**	⇓*i*P		**Pb**	**23 58 51.2**	**+0.3**
KDJ				⇓*i*S		**Sg**	**23 59 13.0**	**+0.9**
KPKS	**Kokpek**	**1.66**	**344**	P		**Pg**	**23 58 52.3**	**-0.2**
	9.4nm,0.1s							
KPKS				S		**Sg**	**23 59 14.0**	**-0.1**
	27nm,0.3s							
KPKS	**Kokpek**	**1.66**	**344**	*e*P		**Pg**	**23 58 52.3**	**-0.2**
	9.4nm,0.1s							
KPKS				*e*S		**Sg**	**23 59 14.0**	**-0.1**
	27nm,0.3s							
KTMS	**Ketmen**	**1.76**	**26**	P		**Pb**	**23 58 53.1**	**-0.5**
	4.2nm,0.1s							
KTMS				S		**Sb**	**23 59 15.5**	**-0.6**
	14nm,0.2s							
KTMS	**Ketmen**	**1.76**	**26**	*e*P		**Pb**	**23 58 53.1**	**-0.5**
	4.2nm,0.1s							
KTMS				*e*S		**Sb**	**23 59 15.5**	**-0.6**
	14nm,0.2s							
KOTS	**Kotyrbulak**	**2.12**	**311**	Pg		**Pb**	**23 59 00.5**	**+0.8**
	5.1nm,0.2s							
KOTS				Lg		Lg	23 59 28.2	
	40nm,0.1s							
KOTS	**Kotyrbulak**	**2.12**	**311**	*e*P		**Pb**	**23 59 00.5**	**+0.8**
	5.1nm,0.2s							
KOTS				*e*S		**Sg**	**23 59 28.2**	**-0.4**
	40nm,0.1s							
KNDC	**Almaty**	**2.19**	**309**	⇓Pn		**Pb**	**23 59 00.0**	**-0.8**
	11nm,0.6s							
KNDC				⇑Sn		**Sg**	**23 59 31.5**	**+0.5**
	127nm,0.6s							
IZV	**Izvestkoviy**	**2.30**	**301**	Pg		**Pb**	**23 59 03.7**	**+0.8**
	4.8nm,0.2s							
IZV				Lg		Lg	23 59 33.6	
	29nm,0.2s							
IZV	**Izvestkoviy**	**2.30**	**301**	*e*P		**Pb**	**23 59 03.7**	**+0.8**
	4.8nm,0.2s							
IZV				*e*S		**Sg**	**23 59 33.5**	**-1.1**
	29nm,0.2s							
ULHL	**Ulahol**	**2.31**	**280**	⇑*i*P		**Pb**	**23 59 02.8**	**-0.1**
ULHL				⇑*i*S		**Sb**	**23 59 33.1**	**+1.3**
BLB	**Baldybastay**	**2.31**	**345**	Pg		**Pb**	**23 59 03.8**	**+0.8**
	8.1nm,0.3s							
BLB				Lg		Lg	23 59 34.0	
	45nm,0.3s							
KNOS	**Konyrlen**	**2.49**	**358**	Pg		**Pb**	**23 59 06.7**	**+0.6**
	5.1nm,0.1s							
KNOS				Lg		Lg	23 59 38.9	
	36nm,0.2s							
NRN	**Naryn**	**2.51**	**261**	⇓*i*P		**Pb**	**23 59 05.7**	**-0.7**
NRN				⇓*i*S		**Sb**	**23 59 38.2**	**+0.5**
BOOM	**Boomskoye usch**	**2.57**	**285**	⇑*i*P		**Pb**	**23 59 06.4**	**-1.0**
BOOM				⇑*i*S		**Sb**	**23 59 39.4**	**0.0**
ARXS	**Arharly**	**2.58**	**336**	Pg		**Pb**	**23 59 08.5**	**+1.0**
	1.4nm,0.2s							
ARXS				Lg		Lg	23 59 41.9	
	48nm,0.4s							
ARXS	**Arharly**	**2.58**	**336**	*e*P		**Pb**	**23 59 08.5**	**+1.0**
	1.4nm,0.2s							
ARXS				*e*S		**Sg**	**23 59 41.9**	**-1.7**
	48nm,0.4s							
KTBS	**Karatobe**	**2.67**	**315**	Pg		**Pb**	**23 59 10.0**	**+1.0**
	2.7nm,0.1s							
KTBS				Lg		Lg	23 59 44.5	
	14nm,0.3s							
KTBS	**Karatobe**	**2.67**	**315**	*e*P		**Pb**	**23 59 10.0**	**+1.0**
	2.7nm,0.1s							
KTBS				*e*S		**Sg**	**23 59 44.5**	**-1.8**
	14nm,0.3s							
TKM2	**Tokmak 2**	**2.94**	**292**	⇑*i*P		**Pb**	**23 59 11.4**	**-2.3**
TKM2				⇑*i*S		**Sb**	**23 59 48.3**	**-1.7**

*IDC **26** 00:02:17.1±1.0, 49˚.04N×158˚.44E, h0km, mb3.7/7, mbtmp3.7/7, Error ellipse: s-maj=29.3km s-min=27.6km az=146.0*
*MOS **26** 00:02:22.1±0.6, 49˚.33N×158˚.54E, h59km, mb4.2/1, Error ellipse: s-maj=30.2km s-min=5.3km az=93.0*
*KRSC **26** 00:02:22.6±1.3, 49˚.51N×158˚.62E, h50km±36km, Ml4.2*
ISC 26 00:02:22.7±1.0, **49˚.29N**±0˚.08×**158˚.53E**±0˚.07, **h35**km, **n44**, σ1**9**02/63, **mb3.7/7, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
SKR	**Severo-Kuril's**	**2.09**	**313**	*e*PN		**Pn**	**00 02 54.3**	**-0.8**
SKR				*e*S		**Sn**	**00 03 18.6**	**-1.2**
SKR				pmax		pmax		
	comp=Z,59nm,0.3s							
SKR				smax		smax		
	comp=N,1μm,0.6s							
SKR				smax		smax		
	comp=E,2μm,0.5s							
SKR	**Severo-Kuril's**	**2.09**	**313**	*e*P		**Pn**	**00 02 54.7**	**-0.4**
SKR				*e*S		**Sn**	**00 03 18.8**	**-1.0**
PAU	**Pauzhetka**	**2.44**	**334**	PN		**Pn**	**00 03 00.2**	**+0.3**
PAU				S		**Sn**	**00 03 28.9**	**+0.4**
PAU	**Pauzhetka**	**2.44**	**334**	*e*P		**Pn**	**00 03 00.3**	**+0.3**
PAU				*e*S		**Sn**	**00 03 28.9**	**+0.4**
KDTR	**Khodutka, Kamc**	**2.53**	**354**	PN		**Pn**	**00 03 00.8**	**-0.5**
KDTR				S		**Sn**	**00 03 29.4**	**-1.5**
KDTR	**Khodutka, Kamc**	**2.53**	**354**	*e*P		**Pn**	**00 03 00.8**	**-0.5**
KDTR				*e*S		**Sn**	**00 03 29.4**	**-1.5**
ASAK	**Asacha**	**3.12**	**353**	PN		**Pn**	**00 03 09.8**	**+0.5**
ASAK	**Asacha**	**3.12**	**353**	*e*P		**Pn**	**00 03 09.9**	**+0.5**
RUS	**Russkaya**	**3.14**	**360**	PN		**Pn**	**00 03 09.2**	**-0.4**
RUS				S		**Sn**	**00 03 43.8**	**-2.0**
RUS	**Russkaya**	**3.14**	**360**	*e*P		**Pn**	**00 03 09.3**	**-0.4**
RUS				*e*S		**Sn**	**00 03 43.9**	**-2.0**
MIPR	**Malaya Ipel'ka**	**3.19**	**340**	PN		**Pn**	**00 03 10.8**	**+0.5**
MIPR	**Malaya Ipel'ka**	**3.19**	**340**	*e*P		**Pn**	**00 03 10.9**	**+0.5**
MTVR	**Mutnovka**	**3.20**	**356**	PN		**Pn**	**00 03 10.9**	**+0.4**
MTVR				S		**Sn**	**00 03 46.2**	**-1.3**
MTVR	**Mutnovka**	**3.20**	**356**	*e*P		**Pn**	**00 03 11.0**	**+0.4**
MTVR				*e*S		**Sn**	**00 03 46.3**	**-1.3**
GRL	**Gorelyy**	**3.27**	**355**	PN		**Pn**	**00 03 11.7**	**+0.1**
GRL				S		**Sn**	**00 03 48.9**	**-0.4**
GRL	**Gorelyy**	**3.27**	**355**	*e*P		**Pn**	**00 03 11.7**	**+0.1**
GRL				*e*S		**Sn**	**00 03 48.9**	**-0.4**
KRMR	**Karymshinskiy**	**3.55**	**356**	PN		**Pn**	**00 03 15.9**	**+0.7**
KRMR				S		**Sn**	**00 03 55.9**	**0.0**
KRMR	**Karymshinskiy**	**3.55**	**356**	*e*P		**Pn**	**00 03 16.0**	**+0.7**
KRMR				*e*S		**Sn**	**00 03 55.9**	**0.0**
PET	**Petropavlovsk**	**3.74**	**1**	*e*PN		**Pn**	**00 03 17.3**	**-0.5**
PET				*e*S		**Sn**	**00 03 58.7**	**-1.8**
PET				smax		smax		
	comp=E,69nm,0.6s							
PET				smax		smax		
	comp=N,68nm,0.4s							
DALK	**Dalny**	**3.75**	**2**	PN		**Pn**	**00 03 17.9**	**0.0**
DALK				S		**Sn**	**00 03 58.9**	**-1.8**
DALK	**Dalny**	**3.75**	**2**	*e*P		**Pn**	**00 03 17.9**	**0.0**
DALK				*e*S		**Sn**	**00 03 59.0**	**-1.8**
SPN	**Mys Shipunski**	**3.92**	**13**	PN		**Pn**	**00 03 20.3**	**0.0**
SPN				S		**Sn**	**00 03 59.4**	**-1.7**
SPN	**Mys Shipunski**	**3.92**	**13**	*e*P		**Pn**	**00 03 20.4**	**0.0**
SPN				*e*S		**Sn**	**00 04 03.5**	**-1.7**
UGLR	**Uglovaya**	**3.92**	**3**	PN		**Pn**	**00 03 21.4**	**+1.0**
UGLR	**Uglovaya**	**3.92**	**3**	*e*P		**Pn**	**00 03 21.5**	**+1.0**
SMAR	**Somma**	**3.98**	**2**	PN		**Pn**	**00 03 21.8**	**+0.5**
SMAR	**Somma**	**3.98**	**2**	*e*P		**Pn**	**00 03 21.9**	**+0.5**
AVH	**Avacha**	**3.98**	**2**	PN		**Pn**	**00 03 22.6**	**+1.4**
AVH	**Avacha**	**3.98**	**2**	*e*P		**Pn**	**00 03 22.7**	**+1.4**
KOK	**Koryaka**	**4.00**	**1**	PN		**Pn**	**00 03 22.6**	**+0.6**
KOK	**Koryaka**	**4.00**	**1**	*e*P		**Pn**	**00 03 22.2**	**+0.6**
KRER	**Koryakskii**	**4.02**	**2**	PN		**Pn**	**00 03 23.0**	**+1.2**
KRER	**Koryakskii**	**4.02**	**2**	*e*P		**Pn**	**00 03 23.1**	**+1.2**
KRX	**Arik**	**4.07**	**1**	PN		**Pn**	**00 03 22.6**	**+0.1**
KRX	**Arik**	**4.07**	**1**	*e*P		**Pn**	**00 03 22.7**	**+0.1**
GNL	**Ganaly**	**4.42**	**355**	PN		**Pn**	**00 03 28.6**	**+1.3**
GNL	**Ganaly**	**4.42**	**355**	*e*P		**Pn**	**00 03 28.6**	**+1.3**
TIXI	**Tiksi**	**26.21**	**339**	P		**P**	**00 07 55.3**	**+1.6**
	comp=N,1.0nm,0.3s,baz=123,slow=8.0,SNR=1.3 comp=N,1.0nm,0.3s							
MKAR	**Makanchi Array**	**48.99**	**298**	P		**P**	**00 11 05.0**	**-0.5**
	comp=N,0.2nm,0.4s,baz=52,slow=5.7,SNR=4.8 comp=N,0.2nm,0.4s							
BVAR	**Borovoye Array**	**52.03**	**310**	P		**P**	**00 11 29.3**	**+0.9**
	comp=N,0.4nm,0.4s,baz=47,slow=8.7,SNR=2.2 comp=N,0.4nm,0.4s							
PDAR	**Pinedale Array**	**60.31**	**58**	P		**P**	**00 12 29.1**	**+1.2**
	comp=N,0.5nm,0.9s,baz=301,slow=3.1,SNR=3.5 comp=N,0.5nm,0.9s							
WRA	**Warramunga Arr**	**72.21**	**204**	P		**P**	**00 13 42.0**	**-1.9**
	comp=N,1.0nm,0.8s,baz=20,slow=6.2,SNR=4.5 comp=N,1.0nm,0.8s							
TXAR	**Lajitas Array**	**73.09**	**65**	P		**P**	**00 13 50.0**	**+0.5**
	comp=N,0.6nm,0.5s,baz=302,slow=4.9,SNR=8.1 comp=N,0.6nm,0.5s							
ASAR	**Alice Springs**	**75.88**	**203**	P		**P**	**00 14 04.4**	**-0.9**
	comp=N,0.2nm,0.4s,baz=12,slow=6.1,SNR=2.4 comp=N,0.2nm,0.4s							

*IDC **26** 00:03:52.9±5.2, 36˚.13N×70˚.52E, h133km±40km, mb3.4/9, mbtmp3.8/14, Error ellipse: s-maj=54.7km s-min=30.4km az=150.0*
*NNC **26** 00:04:00.1±3.8, 36˚.78N×70˚.27E, h160km±56km, mb3.1, mpv3.9, Error ellipse: s-maj=35.0km s-min=23.5km az=47.0*
ISC 26 00:03:55.5±0.6, **36˚.43N**±0˚.05×**70˚.38E**±0˚.07, **h150**km, **n38**, σ2**9**38/55, **mb3.7/8, 2C-6D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
JMU	**Jammu**	**5.16**	**133**	*e*P		**Pn**	**00 05 14.1**	**+3.0**
JMU				*e*S		**Sn**	**00 06 11.7**	**+1.6**
JMU				IAML			00 06 16.4	
	comp=N,142nm,0.4s							
JMU				IAML			00 06 17.1	
	comp=E,64nm,0.3s							
TSSA	**Tissa**	**5.95**	**125**	*e*P		**Pn**	**00 05 23.0**	**+1.2**
TSSA				*e*S		**Sn**	**00 06 27.6**	**-1.5**
TSSA				IAML			00 06 31.1	
	comp=E,120nm,0.3s							
TSSA				IAML			00 06 34.9	
	comp=N,114nm,0.5s							
THN	**Thein Dam**	**5.96**	**130**	*e*P		**Pn**	**00 05 23.1**	**+1.3**
THN				*e*S		**Sn**	**00 06 28.0**	**-1.2**
THN				IAML			00 06 32.1	
	comp=N,50nm,0.2s							
THN				IAML			00 06 33.0	
	comp=E,45nm,0.3s							
ALCI	**Alchi Leh**	**5.98**	**110**	*e*P		**Pn**	**00 05 22.9**	**+0.6**
ALCI				*e*S		**Sn**	**00 06 29.4**	**-0.7**
ALCI				IAML			00 06 31.4	
	comp=E,300nm,0.2s							
ALCI				IAML			00 06 31.8	
	comp=N,252nm,0.4s							
DHRM	**DHARAMSHALA**	**6.42**	**129**	*e*P		**Pn**	**00 05 29.1**	**+1.0**
DHRM				*e*S		**Sn**	**00 06 40.3**	**-0.2**
DHRM				IAML			00 06 42.3	
	comp=E,192nm,0.3s							
DHRM				IAML			00 06 43.9	
	comp=N,103nm,0.2s							
UCH	**Uchtor**	**6.62**	**28**	P		**Pn**	**00 05 31.3**	**+0.4**
	SNR=14							
KK31	**Karatay Array**	**6.67**	**1**	⇓P		**Pn**	**00 05 31.6**	**+0.5**
	comp=N,8.3nm,0.3s,baz=174,slow=11,SNR=381							
KK31				⇓S		**Sn**	**00 06 43.1**	**-3.0**
	comp=N,4.6nm,0.3s,baz=181,slow=17,SNR=6.6							
EKS2	**Erkin-Say**	**6.76**	**22**	P		**Pn**	**00 05 33.0**	**+0.7**
	SNR=15							
AAK	**Ala-Archa**	**6.97**	**26**	P		**Pn**	**00 05 36.1**	**+0.9**
	comp=N,6.2nm,0.4s,baz=207,slow=6.2,SNR=36							
AAK				S		**Sn**	**00 06 50.6**	**-2.8**
	comp=N,7.6nm,0.5s,baz=343,slow=22,SNR=16							
AAK	**Ala-Archa**	**6.97**	**26**	P		**Pn**	**00 05 36.0**	**+0.9**
	SNR=12							
AAK	**Ala-Archa**	**6.97**	**26**	⇑P		**Pn**	**00 05 35.5**	**+0.2**
	comp=N,1.7nm,0.5s							
AAK				⇓S		**Sn**	**00 06 52.1**	**-1.3**
	comp=N,4.8nm,0.6s							
BHK	**Bhakra**	**7.07**	**133**	*e*P		**Pn**	**00 05 40.2**	**+3.6**
BHK				IAML			00 06 57.4	
	comp=N,33nm,0.4s							
BHK				IAML			00 06 58.4	
	comp=E,29nm,0.1s							
BHK				*e*S		**Sn**	**00 06 59.3**	**+3.5**
KBK	**Karagaybulak**	**7.15**	**28**	P		**Pn**	**00 05 38.9**	**+1.2**
	SNR=6.8							
CHMS	**Chumysh**	**7.38**	**26**	P		**Pn**	**00 05 40.7**	**+0.2**
	SNR=13							
USP	**Ospenovka**	**7.53**	**24**	P		**Pn**	**00 05 42.2**	**-0.3**
	SNR=9.5							
TKM2	**Tokmak 2**	**7.63**	**30**	P		**Pn**	**00 05 44.3**	**+0.3**
	SNR=14							
SMLA	**Simla**	**7.73**	**131**	*e*P		**Pn**	**00 05 45.8**	**+0.5**
SMLA				*e*S		**Sn**	**00 07 10.0**	**-1.6**
SMLA				IAML			00 07 11.8	
	comp=E,99nm,0.2s							

NOA	NORSAR Array B	44.14	323	P		P		00 11 49.7	+0.9
	comp=Z,0.7nm,0.6s,baz=98,slow=7.9,SNR=5.1								
	comp=Z,0.7nm,0.6s								
SPITS	Spitsbergen Ar	47.45	347	P		P		00 12 16.8	+2.3
	comp=Z,0.6nm,0.3s,baz=106,slow=11,SNR=5.6								
	comp=Z,0.6nm,0.3s								
TORD	Torodi Ar. Bea	65.22	268	P		P		00 14 20.6	-0.6
	comp=Z,0.3nm,0.6s,baz=46,slow=4.6,SNR=2.8								
	comp=Z,0.3nm,0.6s								
YKA	Yellowknife Ar	81.34	2	P		P		00 15 55.4	+0.5
	comp=Z,0.1nm,0.7s,baz=349,slow=6.0,SNR=3.0								
	comp=Z,0.1nm,0.7s								

IDC ***26*** *00:10:31.3±1.2, 49°.13N×157°.82E, h0km, mb3.4/6, mbtmp3.4/6, ML4.3/1, MS2.7/1, Error ellipse: s-maj=37.9km s-min=24.0km az=157.0*
KRSC ***26*** *00:10:35.4±1.1, 49°.33N×158°.27E, h39km±25km, Ml4.1*
MOS ***26*** *00:10:36.1±0.9, 49°.23N×157°.77E, h50km, mb4.3/1, Error ellipse: s-maj=24.1km s-min=4.8km az=87.8*

ISC 26 00:10:36.4±1.0, 49°.17N±0°.08×157°.86E±0°.08, h35km, n52, σ0s85/63, mb3.4/6, 1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.89	324	*e*PN		Pn	00 11 05.4	-0.7
SKR				*e*S		Sn	00 11 28.6	0.0
SKR				pmax		pmax		
	comp=Z,290nm,0.3s							
SKR				smax		smax		
	comp=E,563nm,0.5s							
SKR				smax		smax		
	comp=N,835nm,0.3s							
PAU	Pauzhetka	2.40	344	PN		Pn	00 11 13.3	+0.2
PAU				S		Sn	00 11 41.7	+0.5
PAU	Pauzhetka	2.40	344	*e*P		Pn	00 11 13.4	+0.2
PAU				*e*S		Sn	00 11 41.8	+0.5
KDTR	Khodutka, Kamc	2.65	3	PN		Pn	00 11 16.0	-0.5
KDTR				S		Sn	00 11 46.1	-1.3
KDTR	Khodutka, Kamc	2.65	3	*e*P		Pn	00 11 16.1	-0.5
KDTR				*e*S		Sn	00 11 46.1	-1.3
MIPR	Malaya Ipel'ka	3.19	348	PN		Pn	00 11 25.2	+1.2
MIPR	Malaya Ipel'ka	3.19	348	*e*P		Pn	00 11 25.3	+1.2
ASAK	Asacha	3.22	0	PN		Pn	00 11 25.4	+0.9
ASAK	Asacha	3.22	0	*e*P		Pn	00 11 25.5	+0.9
RUS	Russkaya	3.29	7	PN		Pn	00 11 25.2	-0.2
RUS	Russkaya	3.29	7	*e*P		Pn	00 11 25.2	-0.2
MTVR	Mutnovka	3.33	3	PN		Pn	00 11 26.0	0.0
MTVR				S		Sn	00 12 03.9	-0.4
MTVR	Mutnovka	3.33	3	*e*P		Pn	00 11 26.1	0.0
MTVR				*e*S		Sn	00 12 03.9	-0.4
GRL	Gorelyy	3.39	2	PN		Pn	00 11 27.1	+0.2
GRL				S		Sn	00 12 05.7	-0.2
GRL	Gorelyy	3.39	2	*e*P		Pn	00 11 27.2	+0.2
GRL				*e*S		Sn	00 12 05.8	-0.2
KRMR	Karymshinskiy	3.67	3	PN		Pn	00 11 31.3	+0.7
KRMR				S		Sn	00 12 12.7	+0.1
KRMR	Karymshinskiy	3.67	3	*e*P		Pn	00 11 31.3	+0.7
KRMR				*e*S		Sn	00 12 12.7	+0.1
APC	Apacha	3.79	354	PN		Pn	00 11 32.3	+0.1
APC	Apacha	3.79	354	*e*P		Pn	00 11 32.4	+0.1
PET	Petropavlovsk	3.89	7	*e*PN		Pn	00 11 33.3	-0.4
PET				*e*S		Sn	00 12 18.7	+0.6
PET				pmax		pmax		
	comp=Z,33nm,0.3s							
PET				smax		smax		
	comp=E,39nm,0.3s							
PET				smax		smax		
	comp=N,67nm,0.5s							
PET	Petropavlovsk	3.89	7	*e*P		Pn	00 11 34.3	+0.6
DALK	Dalny	3.91	8	PN		Pn	00 11 34.1	+0.3
DALK	Dalny	3.91	8	*e*P		Pn	00 11 34.2	+0.3
UGLR	Uglovaya	4.09	8	PN		Pn	00 11 37.9	+1.4
UGLR	Uglovaya	4.09	8	*e*P		Pn	00 11 38.0	+1.4
AVH	Avacha	4.14	7	PN		Pn	00 11 38.0	+0.9
AVH	Avacha	4.14	7	*e*P		Pn	00 11 38.1	+0.9
SMAR	Somma	4.14	8	PN		Pn	00 11 38.0	+0.7
SMAR	Somma	4.14	8	*e*P		Pn	00 11 38.1	+0.7
KOK	Koryaka	4.16	6	PN		Pn	00 11 38.7	+1.3
KOK	Koryaka	4.16	6	*e*P		Pn	00 11 38.8	+1.3
SPN	Mys Shipunski	4.16	18	PN		Pn	00 11 37.1	-0.2
SPN	Mys Shipunski	4.16	18	*e*P		Pn	00 11 37.2	-0.2
KRER	Koryakskii	4.18	7	PN		Pn	00 11 39.3	+1.5
KRER	Koryakskii	4.18	7	*e*P		Pn	00 11 39.3	+1.5
KRX	Arik	4.22	6	PN		Pn	00 11 39.3	+0.9
KRX	Arik	4.22	6	*e*P		Pn	00 11 39.4	+0.9
GNL	Ganaly	4.53	1	PN		Pn	00 11 44.0	+1.4
GNL	Ganaly	4.53	1	*e*P		Pn	00 11 44.1	+1.4
KBTR	Krutoberegovo	7.67	21	PN		Pn	00 12 25.3	-0.1
KBTR	Krutoberegovo	7.67	21	*e*P		Pn	00 12 25.4	-0.1
SHEM	Shemya Is, Ala	10.85	65	Pn		Pn	00 13 07.2	-1.8
	comp=N,2.0nm,0.3s,baz=270,slow=18,SNR=2.8							
MA2	Magadan	11.21	341	LR		LR	00 18 27.8	
	comp=N,33nm,18.6s,baz=88,slow=42							
YAK	Yakutsk	20.26	320	*e*P		P	00 15 06.3	-2.1
YAK				pmax		pmax		
	comp=Z,11nm,0.7s							
ILAR	Eielson Array	32.65	41	P		P	00 17 04.7	+0.1
	comp=Z,0.1nm,0.5s,baz=269,slow=7.5,SNR=2.0							
	comp=Z,0.1nm,0.5s							
YKA	Yellowknife Ar	47.05	39	P		P	00 19 04.5	+0.5
	comp=Z,0.2nm,0.7s,baz=298,slow=8.1,SNR=4.3							
	comp=Z,0.2nm,0.7s							
MKAR	Makanchi Array	48.66	298	P		P	00 19 16.7	0.0
	comp=Z,0.3nm,0.5s,baz=51,slow=7.8,SNR=4.0							
	comp=Z,0.3nm,0.5s							
MKAR	Makanchi Array	48.66	298	*i* P		P	00 19 17.6	+0.9
KURK	Kurchatov	48.68	304	P		P	00 19 17.4	+0.6
KURBB	Kurchatov Arra	48.77	304	P		P	00 19 17.4	-0.1
	comp=Z,0.6nm,0.5s,baz=63,slow=7.8,SNR=6.3							
	comp=Z,0.6nm,0.5s							
WRA	Warramunga Arr	71.92	203	P		P	00 21 55.8	-0.2
	comp=Z,1.1nm,0.8s,baz=21,slow=6.1,SNR=5.0							
	comp=Z,1.1nm,0.8s							
TXAR	Lajitas Array	73.55	64	P		P	00 22 06.8	+1.0
	comp=Z,0.1nm,0.6s,baz=325,slow=7.4,SNR=1.8							
	comp=Z,0.1nm,0.6s							

IDC ***26*** *00:14:54.9±3.8, 2°.03N×96°.50E, h0km, mb3.4/3, mbtmp3.6/4, ML4.7/1, MS3.0/2, Error ellipse: s-maj=128.7km s-min=32.4km az=61.0*
DJA ***26*** *00:15:03.1±0.5, 3°.7N±3°×9°.7E±°, h11km±4km, M3.6/18, MLv3.6/18*

ISC 26 00:14:58.2±1.4, 2°.31N±0°.09×96°.7E±0°.1, h10km, n21, σ1s29/11, mb3.6/3, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
TPTI		1.07	28	P		Pb	00 15 18.4	-0.4
GSI	Gunungsitoli	1.34	138	P		Pg	00 15 26.5	+2.5
KCSI	Kotacane, Aceh	1.62	42	P		Pn	00 15 27.2	+0.2
MLSI	Meulaboh, Aceh	1.96	352	P		Pb	00 15 33.8	-0.3
TSI	Tuntungan	2.22	58	P		Pn	00 15 36.3	+1.1
PSI	Prapat	2.30	78	P		Pn	00 15 36.4	+0.1
MNSI	Mandailing Nat	3.27	117	P		Pb	00 15 54.9	-1.4
CMAR	Chiang Mai Arr	16.20	8	Pn		P	00 18 48.9	-0.4
	1.0nm,0.3s,baz=190,slow=11,SNR=4.7							
CMAR				LR		LR	00 25 02.0	
	comp=Z,14nm,19.0s,baz=190,slow=37							
	1.6nm,0.3s							
H08S2	Diego Garcia H	26.08	247	T		T	00 47 26.2	
	baz=69,slow=76,SNR=14							
H08S3	Diego Garcia H	26.08	248	T		T	00 47 30.1	
	baz=69,slow=76,SNR=10.0							
H08S1	Diego Garcia H	26.09	248	T		T	00 47 30.2	
	baz=69,slow=76,SNR=11							
WRA	Warramunga Arr	43.06	123	P		P	00 22 57.0	-1.8
	0.2nm,0.6s,baz=297,slow=8.4,SNR=1.2							
	0.2nm,0.6s							
MKAR	Makanchi Array	46.05	346	P		P	00 23 22.5	+0.3
	0.4nm,0.6s,baz=166,slow=9.2,SNR=6.1							
	0.4nm,0.6s							
SONM	Songino Array	46.12	9	P		P	00 23 22.5	-0.3
	0.2nm,0.3s,baz=190,slow=9.1,SNR=3.3							
	0.2nm,0.3s							
KLR	Kul'dur	55.51	27	LR		LR	00 51 21.5	
	comp=Z,38nm,18.2s,baz=27,slow=39							
H04N2	CROZET ISLANDS	62.40	214	T		T	01 32 57.6	
	baz=53,slow=75,SNR=124							
H04N1	CROZET ISLANDS	62.41	214	T		T	01 32 54.0	
	baz=53,slow=75,SNR=130							
H04N3	CROZET ISLANDS	62.42	214	T		T	01 33 01.2	
	baz=53,slow=75,SNR=121							
H04S1	CROZET ISLANDS	62.75	213	T		T	01 33 18.2	
	baz=52,slow=74,SNR=4.3							
H04S3	CROZET ISLANDS	62.76	213	T		T	01 33 18.9	
	baz=52,slow=74,SNR=6.0							
H04S2	CROZET ISLANDS	62.77	213	T		T	01 33 19.0	
	baz=52,slow=74,SNR=4.5							

UPP 26 00:25:43.1±0.0, 67°.87N×20°.13E, h0km, ML2.2, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
KUA	Kurravaara	0.11	44	P		Pg	00 25 45.6	+0.3
	baz=242							
KUA				S		Sg	00 25 47.6	+0.9
RATU	Laukkuluspa	0.21	257	P		Pg	00 25 47.4	+0.3
RATU				S		Sg	00 25 50.5	+0.8
KOVU	Salmi	0.35	2	P		Pg	00 25 49.9	+0.1
KOVU				S		Sg	00 25 54.8	+0.4
NIKU	Nikkaluokta	0.41	270	P		Pg	00 25 51.0	0.0
NIKU				S		Sg	00 25 56.8	+0.4
DUNU	Dundret	0.77	167	S		Sg	00 26 08.1	+0.2
SALU	Saltoluokta	0.79	232	P		Pg	00 25 57.8	-0.5
SALU				S		Sg	00 26 09.3	+0.8
MASU	Masugnsbyn	0.83	119	P		Pg	00 25 58.7	-0.3

IDC ***26*** *00:37:32.3±1.3, 30°.36N×141°.40E, h0km, mb3.6/4, mbtmp3.6/6, ML3.0/2, MS2.4/1, Error ellipse: s-maj=49.8km s-min=21.9km az=77.0*

ISC 26 00:37:36.0±1.0, 30°.3N±0°.1×141°.4E±0°.3, h28km, n7, σ0s96/7, mb3.8/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
JCJ	Chichijima	3.31	168	Pn		Pn	00 38 25.5	-0.4
	3.1nm,0.3s,baz=317,slow=19,SNR=0.9							
JCJ				Sn		Sn	00 39 03.7	-0.6
	3.4nm,0.3s,baz=332,slow=19,SNR=1.3							
	12nm,0.3s							
MJAR	Matsushiro Arr	6.73	338	Pn		Pn	00 39 11.8	-1.1
	0.2nm,0.3s,baz=156,slow=11,SNR=5.8							
	1.1nm,0.3s							
KSRS	Korea Array	13.24	306	LR		LR	00 45 58.0	
	comp=Z,17nm,18.6s,baz=340,slow=38							
MKAR	Makanchi Array	47.91	307	P		P	00 46 12.8	+1.1
	0.4nm,0.6s,baz=85,slow=9.1,SNR=5.0							
	0.4nm,0.6s							
KURBB	Kurchatov Arra	50.31	313	P		P	00 46 29.8	-0.2
	0.2nm,0.4s,baz=99,slow=6.5,SNR=4.9							
	0.2nm,0.4s							
WRA	Warramunga Arr	50.45	189	P		P	00 46 31.9	+0.6
	0.9nm,0.4s,baz=8.5,slow=7.6,SNR=15							
	0.9nm,0.4s							
INK	Inuvik	60.39	25	P		P	00 47 42.9	+0.6
	1.0nm,1.0s,baz=262,slow=7.1,SNR=3.0							
	1.0nm,1.0s							

UPP ***26*** *00:42:51.1±0.0, 67°.85N×20°.22E, h0km, ML2.2, Suspected explosion*
HEL ***26*** *00:42:51.4±0.2, 67°.84N×20°.19E, h0km, ML1.6, Suspected explosion*
IDC ***26*** *00:42:52.4±1.2, 67°.77N×20°.64E, h0km, mbtmp2.9/3, ML2.0/3, Error ellipse: s-maj=18.5km s-min=8.6km az=117.0*

ISC 26 00:42:51.1±0.8, 67°.84N±0°.02×20°.21E±0°.02, h0km, n36, σ1s34/61, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
KUA	Kurravaara	0.13	22	P		Pg	00 42 53.6	+0.1
KUA				S		Sg	00 42 55.4	+0.2
RATU	Laukkuluspa	0.23	267	P		Pg	00 42 55.9	+0.3
RATU				S		Sg	00 42 59.1	+0.5
KOVU	Salmi	0.39	357	P		Pg	00 42 58.4	-0.1
KOVU				S		Sg	00 43 03.5	0.0
NIKU	Nikkaluokta	0.45	274	P		Pg	00 42 59.7	+0.1
NIKU				S		Sg	00 43 05.8	+0.5
LANU	Lannavaara	0.71	72	P		Pg	00 43 04.4	-0.2
LANU				S		Sg	00 43 13.7	-0.1
LANU	Lannavaara	0.71	72	PG		Pg	00 43 04.6	-0.1
	baz=257							
LANU				SG		Sg	00 43 13.0	-0.8
DUNU	Dundret	0.73	169	P		Pg	00 43 04.9	-0.2
DUNU				S		Sg	00 43 15.0	+0.4
MASU	Masugnsbyn	0.78	118	P		Pg	00 43 06.0	-0.1
MASU				S		Sg	00 43 17.0	+0.8
SALU	Saltoluokta	0.80	236	*e*P		Pg	00 43 05.3	-0.5
SALU	Saltoluokta	0.80	236	P		Pg	00 43 06.2	-0.1
SALU				S		Sg	00 43 17.4	+0.8
HEF	Hetta	1.41	65	*e*P		Pn	00 43 17.4	-0.7
HEF	Hetta	1.41	65	PG		Pn	00 43 17.1	-1.0
	baz=248							
HEF				smax		smax	00 43 34.2	
	comp=Z,3.7nm,0.2s							
HEF				SB		Sg	00 43 35.3	-1.2
ERTU	Ertsjaerv	1.50	148	P		Pn	00 43 18.6	-0.7
ERTU				S		Sb	00 43 39.6	+0.2
ERTU	Ertsjaerv	1.50	148	PG		Pn	00 43 18.4	-0.9
ERTU				SN		Sb	00 43 39.6	+0.2
KLF	Kolari	1.56	111	PG		Pn	00 43 19.8	-0.3
KLF				smax		smax	00 43 38.6	
	comp=Z,4.1nm,0.2s							
KLF				SN		Sg	00 43 41.4	+0.1
KTK1	Kautokeino	1.63	42	PG		Pn	00 43 20.6	-0.3
KTK1				SN		Sn	00 43 42.6	0.0
HARU	Harads	1.71	170	P		Pn	00 43 22.1	0.0
TRO	Tromso	1.86	346	PG		Pn	00 43 24.8	+0.6
TRO				SN		Sn	00 43 48.9	+0.5
KALU	Kalix	2.34	146	PB		Pn	00 43 31.9	+1.1
KALU				SG		Sb	00 44 02.8	-0.8
TOF	Tornio	2.40	136	PG		Pn	00 43 33.0	+1.5
TOF				smax		smax	00 44 02.4	
	comp=Z,2.8nm,0.2s							
TOF				SG		Sb	00 44 05.5	+0.5
RNF	Rovaniemi	2.57	116	PB		Pn	00 43 35.8	+1.9
RNF				SG		Sb	00 44 10.2	0.0
ARA0	ARCESS Array S	2.58	46	PB		Pn	00 43 35.5	+1.4
ARA0				SB		Sb	00 44 08.5	-1.9
ARCES	ARCESS Array B	2.58	46	Pn		Pn	00 43 34.4	+0.3
	comp=Z,0.6nm,0.3s,baz=232,slow=14,SNR=16							
ARCES				Sn		Sn	00 44 07.8	+1.7
	comp=Z,1.4nm,0.3s,baz=227,slow=25,SNR=12							
	comp=Z,1.2nm,0.3s							
RAJF	Raja-Jooseppi	3.10	74	PN		Pn	00 43 42.3	+1.2
RAJF				SB		Sb	00 44 24.5	-0.7
KEV	Kevo	3.13	49	SN		Sn	00 44 20.5	+0.9
RANF	Ranua	3.17	122	PB		Pn	00 43 43.5	+1.3
RANF				SG		Sb	00 44 28.4	+1.0
VRF	Varrio	3.57	87	SG		Sb	00 44 39.5	+0.7
OUL	Oulu	3.58	138	SG		Sb	00 44 40.4	+1.2
KU2	Taivalkoski	3.83	120	PN		Pn	00 43 52.5	+1.3
OLKF	Oulanka, Finla	3.91	109	PN		Pn	00 43 53.4	+1.2
UMAU	Umeaa	3.98	177	PN		Pn	00 43 55.1	+1.9
	baz=2.0							
MSF	Maaselka	3.98	115	PN		Pn	00 43 54.8	+1.5
KU6	Riekki	4.22	111	PN		Pn	00 43 56.2	-0.4
KU6				SG		Sb	00 45 01.7	+4.2
KU1	Kurvinen	4.36	117	PN		Pn	00 44 00.8	+2.4
FINES	FINESS Array B	6.89	156	Pn		Pn	00 44 33.4	+0.1
	comp=Z,0.1nm,0.3s,baz=348,slow=13,SNR=1.4							
FINES				Sn		Sn	00 45 48.6	-3.7
	comp=Z,0.1nm,0.3s,baz=348,slow=26,SNR=2.1							
FINES				Lg		Lg	00 46 24.9	
	comp=Z,0.3nm,0.3s,baz=334,slow=28,SNR=5.4							
	comp=Z,2.6nm,1.0s							
NOA	NORSAR Array B	7.85	214	Pn		Pn	00 44 47.8	+1.5
	baz=21,slow=11,SNR=3.4							
NOA				Sn		Sn	00 46 10.8	-5.0
	baz=31,slow=12,SNR=1.5							
NOA				Lg		Lg	00 47 00.8	
	baz=313,slow=26,SNR=4.1							
	comp=Z,0.6nm,0.9s							

IDC ***26*** *00:46:46.3±1.4, 49°.03N×157°.64E, h0km, mb3.7/5, mbtmp3.7/5, MS3.3/3, Error ellipse: s-maj=42.7km s-min=32.3km az=39.0*
KRSC ***26*** *00:46:46.6±1.0, 49°.14N×158°.16E, h40km±18km, Ml3.8*

ISC 26 00:46:51.2±1.2, 49°.15N±0°.09×157°.9E±0°.1, h35km, n26, σ0s72/27, mb3.9/5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.90	325	*e*P		Pn	00 47 20.2	-0.9
SKR				*e*S		Sn	00 47 44.2	+0.5
PAU	Pauzhetka	2.42	344	*e*P		Pn	00 47 27.9	-0.2
PAU				*e*S		Sn	00 47 57.3	+0.8
KDTR	Khodutka, Kamc	2.67	3	*e*P		Pn	00 47 30.4	-1.3
KDTR				*e*S		Sn	00 48 01.8	-0.9
MIPR	Malaya Ipel'ka	3.21	348	*e*P		Pn	00 47 38.7	-0.4
ASAK	Asacha	3.24	1	*e*P		Pn	00 47 38.9	-0.7
RUS	Russkaya	3.32	7	*e*P		Pn	00 47 39.5	-1.0
MTVR	Mutnovka	3.35	4	*e*P		Pn	00 47 40.7	-0.4
MTVR				*e*S		Sn	00 48 20.1	+0.5
GRL	Gorelyy	3.41	2	*e*P		Pn	00 47 41.6	-0.4
KRMR	Karymshinskiy	3.69	3	*e*P		Pn	00 47 45.6	-0.1
APC	Apacha	3.81	354	*e*P		Pn	00 47 47.8	+0.6
DALK	Dalny	3.93	8	*e*P		Pn	00 47 48.3	-0.6
SMAR	Somma	4.16	8	*e*P		Pn	00 47 51.8	-0.6
KOK	Koryaka	4.18	7	*e*P		Pn	00 47 52.4	-0.1
SPN	Mys Shipunski	4.19	18	*e*P		Pn	00 47 51.4	-1.1
KRER	Koryakskii	4.20	7	*e*P		Pn	00 47 52.8	-0.1
KRX	Arik	4.25	6	*e*P		Pn	00 47 53.3	-0.2
GNL	Ganaly	4.55	1	*e*P		Pn	00 47 57.7	0.0
KBTR	Krutoberegovo	7.69	21	*e*P		Pn	00 48 40.1	-0.4
MA2	Magadan	11.23	341	LR		LR	00 53 46.2	
	comp=Z,23nm,20.7s,baz=43,slow=37							
MKAR	Makanchi Array	48.66	298	P		P	00 55 31.6	0.0
	0.3nm,0.5s,baz=48,slow=6.5,SNR=5.5							
	0.3nm,0.5s							
KURBB	Kurchatov Arra	48.78	304	P		P	00 55 32.5	+0.1
	0.7nm,0.5s,baz=65,slow=8.0,SNR=9.4							
	0.7nm,0.5s							
BVAR	Borovoye Array	51.78	310	P		P	00 55 54.4	-0.7
	0.5nm,0.4s,baz=55,slow=9.3,SNR=5.2							
	0.5nm,0.4s							
PFO	Pinyon Flats O	62.82	69	LR		LR	01 23 43.5	
	comp=Z,19nm,18.6s,baz=184,slow=35							
DZM	Mont Dzumac	71.31	172	LR		LR	01 21 21.6	
	comp=Z,210nm,20.2s,baz=136,slow=29							
WRA	Warramunga Arr	71.90	203	P		P	00 58 10.1	-0.5
	1.1nm,0.7s,baz=22,slow=6.4,SNR=5.9							
	1.1nm,0.7s							
TXAR	Lajitas Array	73.56	64	P		P	00 58 22.4	+1.7
	0.4nm,1.0s,baz=306,slow=5.3,SNR=2.3							
	0.4nm,1.0s							

IDC 26 00:59:08.5±22.0, 24°.91S×178°.04E, h698km±207km, mb3.1/5, mbtmp4.3/5, Error ellipse: s-maj=202.7km s-min=96.9km az=88.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
CTA	Charters Tower	29.72	273	P		P	01 04 23.6	-0.1
	5.2nm,0.5s,baz=90,slow=8.1,SNR=7.8							
	5.2nm,0.5s							
STKA	Stephens Creek	32.69	249	P		P	01 04 48.2	-0.3
	1.8nm,0.6s,baz=78,slow=9.3,SNR=3.8							
	1.8nm,0.6s							
ASAR	Alice Springs	40.12	262	P		P	01 05 49.0	+0.3
	0.7nm,0.4s,baz=96,slow=8.4,SNR=7.4							
	0.7nm,0.4s							
WRA	Warramunga Arr	40.57	268	P		P	01 05 52.0	-0.4
	3.0nm,0.5s,baz=104,slow=8.1,SNR=17							
	3.0nm,0.5s							
FITZ	Fitzroy Crossi	48.98	267	P		P	01 06 56.2	+0.4
	2.6nm,0.6s,baz=121,slow=12,SNR=3.0							
	2.6nm,0.6s							
HFS	Hagfors	143.16	347	PKhKP		PKPpre	01 17 15.7	
	0.9nm,0.4s,baz=68,slow=5.0,SNR=8.6							
MMAI	Mount Meron Ar	146.47	293	PKPbc		PKPdf	01 17 32.6	+0.6
	0.7nm,0.4s,baz=63,slow=6.6,SNR=5.4							
BRTR	Keskin Array B	146.73	305	PKPbc		PKiKP	01 17 36.7	-0.5
	0.3nm,0.7s,baz=94,slow=3.0,SNR=2.1							

DJA ***26*** *00:59:48.0±0.6, 8°.5±9°×12°.1E±°, h198km±5km, M3.5/12, MLv3.5/12*
IDC ***26*** *00:59:49.7±1.8, 8°.37S×121°.46E, h200km±20km, mb3.8/1, mbtmp3.7/6, Error ellipse: s-maj=91.7km s-min=16.6km az=52.0*

ISC 26 00:59:48.6±1.1, 8°.58S±0°.09×121°.26E±0°.06, h200km, n14, σ1s16/19, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
MMRI	Maumere	0.97	93	P		Pn	01 00 18.3	+0.2
MMRI				S		Sn	01 00 40.5	-0.4
LBFI	Labuhan Bajo,	1.36	274	P		Pn	01 00 21.0	-0.1
WSI	Waingapu	1.44	221	P		Pn	01 00 22.4	+0.7
WBSI	Waikabubak, Su	2.12	290	P		Pn	01 00 29.1	+0.7
BATI	Baumata	2.87	124	P		Pn	01 00 37.0	+0.2
	76nm,0.3s,baz=101,slow=4.1,SNR=19							
BATI				S		Sn	01 01 15.6	+1.2
	76nm,0.3s,baz=334,slow=21,SNR=8.1							
BATI	Baumata	2.87	124	P		Pn	01 00 37.4	+0.7
DBNI	Kabupaten Domp	2.92	271	P		Pn	01 00 37.9	+0.6
DBNI				S		Sn	01 01 14.8	-0.4
SOEI	Soe	3.19	112	P		Pn	01 00 41.0	+0.4
PLAI	Plampang	3.45	266	P		Pn	01 00 44.5	+0.9
KAPI	Kappang	3.85	337	P		Pn	01 00 48.5	0.0
	8.4nm,0.7s,baz=153,slow=11,SNR=6.6							
FIT

UEES	**Universidad Ev**	**1.30**	**321**	P	**Pn**	**01 05 30.2**	**-0.2**
UEES				S	**Sn**	**01 05 47.4**	**+0.4**
P5NO	**Presa 5 de nov**	**1.32**	**344**	P	**Pn**	**01 05 30.1**	**-0.5**
P5NO				S	**Sn**	**01 05 47.0**	**-0.4**
PMON	**Piamonte**	**1.35**	**318**	P	**Pn**	**01 05 31.2**	**+0.2**
PMON	**Piamonte**	**1.35**	**318**	*i* P	**Pn**	**01 05 31.2**	**+0.2**
PMON				*e*S	**Sn**	**01 05 48.0**	**-0.1**
JAYA	**Jayaque - finc**	**1.40**	**313**	P	**Pn**	**01 05 31.5**	**-0.3**
JAYA				S	**Sn**	**01 05 48.9**	**-0.6**
JAYA	**Jayaque - finc**	**1.40**	**313**	*e*P	**Pn**	**01 05 31.1**	**-0.7**
JAYA				IAML		01 05 50.3	
	comp=E,1μm,0.2s						
JAYA	**Jayaque - finc**	**1.40**	**313**	*e*S	**Sn**	**01 05 50.0**	**+0.5**
CEDA	**San Andres**	**1.47**	**318**	P	**Pn**	**01 05 32.7**	**+0.1**
CEDA				S	**Sn**	**01 05 51.2**	**+0.2**
ALEN	**Leon**	**1.50**	**99**	P	**Pn**	**01 05 33.1**	**0.0**
ALEN				S	**Sn**	**01 05 51.4**	**-0.4**
HERN	**Volcan Telica**	**1.52**	**93**	P	**Pn**	**01 05 33.3**	**-0.1**
HERN				S	**Sn**	**01 05 52.3**	**-0.2**
POLN	**Al Sur del Vol**	**1.54**	**92**	P	**Pn**	**01 05 33.5**	**-0.1**
POLN				S	**Sn**	**01 05 52.0**	**-0.8**
LLGN	**La Laguna**	**1.55**	**340**	P	**Pn**	**01 05 33.8**	**0.0**
PACN	**Al O del Volca**	**1.57**	**97**	P	**Pn**	**01 05 34.4**	**+0.3**
PACN				S	**Sn**	**01 05 53.5**	**0.0**
ROCN	**Rota Cerro Neg**	**1.62**	**96**	P	**Pn**	**01 05 34.3**	**-0.3**
ROCN				S	**Sn**	**01 05 54.0**	**-0.6**
CEVE	**Cerro Verde**	**1.64**	**313**	P	**Pn**	**01 05 35.0**	**-0.2**
CEVE				S	**Sn**	**01 05 56.1**	**+0.5**
CEVE	**Cerro Verde**	**1.64**	**313**	*i* P	**Pb**	**01 05 38.1**	**+0.5**
CNGA	**Al SSO del Vol**	**1.66**	**97**	P	**Pn**	**01 05 35.1**	**-0.2**
CNGA				S	**Sn**	**01 05 55.9**	**+0.1**
CNGN	**Cerro Negro**	**1.66**	**97**	P	**Pn**	**01 05 35.3**	**0.0**
CNGN				S	**Sn**	**01 05 55.9**	**0.0**
UNIC	**Universidad Ca**	**1.70**	**319**	P	**Pn**	**01 05 35.7**	**-0.1**
UNIC				S	**Sn**	**01 05 57.3**	**+0.5**
NUBE	**Las Nubes**	**1.80**	**311**	P	**Pn**	**01 05 37.2**	**-0.1**
NUBE				S	**Sn**	**01 05 59.5**	**0.0**
NUBE	**Las Nubes**	**1.80**	**311**	*e*P	**Pn**	**01 05 37.3**	**-0.1**
NUBE				*i* S	**Sn**	**01 05 57.4**	**-2.1**
MOMN	**Momotombo**	**1.83**	**99**	P	**Pn**	**01 05 37.5**	**-0.1**
COPN	**Copaltepe**	**1.83**	**106**	P	**Pn**	**01 05 37.3**	**-0.3**
MOM3	**MOM3**	**1.84**	**96**	P	**Pn**	**01 05 37.9**	**+0.2**
MOM2	**El Cardon**	**1.88**	**98**	P	**Pn**	**01 05 38.1**	**-0.1**
MOM2				S	**Sn**	**01 06 01.8**	**+0.7**
SLOZ	**Alcaldia de Sa**	**1.89**	**314**	P	**Pn**	**01 05 38.5**	**+0.1**
SLOZ				S	**Sn**	**01 06 02.0**	**+0.6**
MTO3	**Montecristo**	**1.93**	**331**	P	**Pn**	**01 05 39.0**	**-0.2**
MTO3				S	**Sn**	**01 06 03.1**	**+0.4**
MTO3	**Montecristo**	**1.93**	**331**	*e*P	**Pn**	**01 05 38.9**	**-0.2**
FAME	**Alcaldia de Sa**	**1.94**	**306**	P	**Pn**	**01 05 39.0**	**-0.2**
FAME				S	**Sn**	**01 06 03.3**	**+0.6**
YUSH	**Yuscaran**	**1.95**	**50**	P	**Pn**	**01 05 39.1**	**-0.3**
LIMN	**Finca el Limon**	**2.00**	**80**	P	**Pn**	**01 05 40.0**	**-0.1**
LIMN				S	**Sn**	**01 06 04.1**	**-0.3**
APQ3	**Volcan Apoyequ**	**2.02**	**102**	P	**Pn**	**01 05 40.5**	**+0.3**
APQ3				S	**Sn**	**01 06 04.6**	**0.0**
ESQI	**Esquipulas**	**2.06**	**333**	P	**Pn**	**01 05 41.0**	**+0.1**
APQ2	**Apoyeque**	**2.08**	**104**	P	**Pn**	**01 05 40.7**	**-0.2**
APQ2				S	**Sn**	**01 06 06.1**	**0.0**
OCON	**Estacion meteo**	**2.08**	**63**	P	**Pn**	**01 05 40.9**	**-0.1**
OCON				S	**Sn**	**01 06 06.0**	**-0.1**
SARH	**Santa Rosa de**	**2.09**	**350**	P	**Pn**	**01 05 40.9**	**-0.3**
SARH				S	**Sn**	**01 06 06.9**	**+0.4**
MAS3	**Al N del Volca**	**2.27**	**107**	P	**Pn**	**01 05 43.2**	**-0.4**
RCFN	**Al S de San Ju**	**2.27**	**69**	P	**Pn**	**01 05 44.1**	**+0.3**
RCFN				S	**Sn**	**01 06 11.1**	**0.0**
RCON	**San Juan de Ri**	**2.31**	**70**	P	**Pn**	**01 05 44.3**	**0.0**
RCON				S	**Sn**	**01 06 12.7**	**+0.7**
RCVN	**Varillal2**	**2.31**	**68**	P	**Pn**	**01 05 44.2**	**-0.1**
RCVN				S	**Sn**	**01 06 12.5**	**+0.5**
NANN	**Nandasmo**	**2.34**	**109**	P	**Pn**	**01 05 44.7**	**+0.1**
NANN				S	**Sn**	**01 06 13.3**	**+0.7**
RCPN	**Sur Rio San Ju**	**2.38**	**70**	P	**Pn**	**01 05 45.3**	**0.0**
MATN	**Matagalpa**	**2.41**	**84**	P	**Pn**	**01 05 44.5**	**-1.2**

IDC 26 01:33:08.2±2.7, 11°30S×113°95E, h0km, mb3.1/3, mbtmp3.4/4, ML3.3/1, Error ellipse: s-maj=119.4km s-min=27.4km az=45.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**13.17**	**122**	Pn	Pn	01 36 15.4	-1.2
	0.1nm,0.3s,baz=306,slow=19,SNR=1.5						
FITZ				Sn	Sn	01 38 39.4	-4.5
	0.1nm,0.3s,baz=164,slow=22,SNR=2.0						
	2.5nm,1.1s						
WRA	**Warramunga Arr**	**21.41**	**116**	P	P	01 37 57.9	0.0
	0.4nm,0.4s,baz=290,slow=11,SNR=5.4						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**22.62**	**126**	P	P	01 38 11.0	+0.1
	0.4nm,0.5s,baz=302,slow=9.6,SNR=12						
	0.4nm,0.5s						
H08S2	**Diego Garcia H**	**41.03**	**271**	T	T	02 24 04.1	
	baz=96						
H08S3	**Diego Garcia H**	**41.04**	**271**	T	T	02 24 05.5	
	baz=96						
H08S1	**Diego Carcia H**	**41.05**	**271**	T	T	02 24 15.4	
	baz=96						
MKAR	**Makanchi Array**	**64.39**	**336**	P	P	01 43 46.2	+0.1
	0.1nm,0.4s,baz=134,slow=8.1,SNR=1.4						
	0.1nm,0.4s						

*IDC **26** 01:46:00.7±3.6, 19°54S×12°08W, h0km, mb3.8/4, mbtmp3.8/4, MS3.5/20, Error ellipse: s-maj=139.6km s-min=26.2km az=146.0*
*NEIC **26** 01:46:03.3±1.5, 19°6S±0°.1×12°.0W±0°.1, h10km±1km, mb4.7/17, Error ellipse: s-maj=22.1km s-min=19.6km az=157.0*
ISC 26 01:46:02.3±0.7, 19°6S±0°.1×12°.1W±0°.1, h10km, n40, σ0s89/22, mb4.5/11, MS3.5/20, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCBR	**Riachuelo**	**26.93**	**297**	LR	LR	02 00 34.6	
	comp=Z,23nm,19.6s,baz=89,slow=32						
DBIC	**Dimbokro**	**27.04**	**16**	LR	LR	01 59 48.7	
	comp=Z,57nm,19.1s,baz=187,slow=31						
TSUM	**Tsumeb**	**27.95**	**94**	LR	LR	02 00 50.3	
	comp=Z,140nm,20.6s,baz=292,slow=32						
SUR	**Sutherland**	**32.04**	**120**	LR	LR	02 02 36.8	
	comp=Z,77nm,19.6s,baz=310,slow=31						
BDFB	**Brasilia**	**34.46**	**271**	P	**P**	**01 52 50.6**	**0.0**
	2.7nm,0.9s,baz=102,slow=12,SNR=3.8						
BDFB				LR	LR	02 04 37.9	
	comp=Z,90nm,20.2s,baz=31,slow=32						
	2.7nm,0.9s						
BDFB	**Brasilia**	**34.46**	**271**	P	**P**	**01 52 51.4**	**+0.7**
BDFB				IAmb	IAmb	01 53 07.0	
	comp=Z,7.2nm,1.2s						
BOSA	**Boshof**	**35.11**	**112**	LR	LR	02 05 06.2	
	comp=Z,57nm,18.3s,baz=264,slow=33						
BOSA	**Boshof**	**35.11**	**112**	P	**P**	**01 52 55.4**	**-0.8**
BOSA				IAmb	IAmb	01 53 02.5	
	comp=Z,40nm,1.8s						
LBTB	**Lobatse**	**35.17**	**106**	LR	LR	02 05 18.0	
	comp=Z,100nm,20.1s,baz=267,slow=33						
LBTB	**Lobatse**	**35.17**	**106**	P	**P**	**01 52 56.8**	**0.0**
LBTB				IAmb	IAmb	01 53 02.1	
	comp=Z,31nm,1.6s						
TORD	**Torodi Ar. Bea**	**35.23**	**24**	P	**P**	**01 52 56.5**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=203,slow=10,SNR=12						
	comp=Z,0.6nm,0.5s						
SACV	**Santiago Islan**	**36.17**	**341**	P	**P**	**01 53 04.8**	**-0.4**
GRHM	**Grahamstown, E**	**36.80**	**120**	P	**P**	**01 53 10.8**	**+0.3**
LSZ	**Lusaka**	**38.57**	**90**	LR	LR	02 07 12.9	
	comp=Z,65nm,21.1s,baz=276,slow=33						
AQDB	**Aquidauana**	**40.92**	**261**	P	**P**	**01 53 45.4**	**+0.2**
AQDB				IAmb	IAmb	01 53 51.3	
	comp=Z,16nm,1.8s						
CPUP	**Villa Florida**	**42.06**	**252**	P	**P**	**01 53 54.1**	**-0.4**
	comp=Z,1.7nm,1.0s,baz=90,slow=9.1,SNR=3.1						
CPUP				LR	LR	02 09 04.5	
	comp=Z,48nm,18.3s,baz=77,slow=33						
	comp=Z,1.7nm,1.0s						
CPUP	**Villa Florida**	**42.06**	**252**	P	**P**	**01 53 54.6**	**+0.1**
TAM	**Tamanrasset**	**45.48**	**23**	P	**P**	**01 54 22.5**	**+0.4**
MBAR	**Mbarara**	**45.95**	**71**	LR	LR	02 10 37.4	
	comp=Z,36nm,20.3s,baz=248,slow=32						
VILB	**Vilhena**	**46.56**	**271**	P	**P**	**01 54 31.8**	**+1.0**
VILB				IAmb	IAmb	01 54 37.8	
	comp=Z,9.4nm,1.2s						
SIV	**San Ignacio**	**46.69**	**266**	LR	LR	02 12 01.8	
	comp=Z,130nm,19.3s,baz=114,slow=33						
MDP	**Montagnes des**	**46.86**	**297**	LR	LR	02 14 08.8	
	comp=Z,28nm,18.3s,baz=132,slow=36						
TRQA	**Tornquist**	**46.86**	**236**	P	**P**	**01 54 32.9**	**+0.1**
TRQA				IAmb	IAmb	01 54 39.2	
	comp=Z,17nm,1.4s						
MD31	**MD31**	**52.62**	**8**	P	**P**	**01 55 17.2**	**+0.6**
MD01	**Midelt array s**	**52.62**	**8**	P	**P**	**01 55 17.4**	**+0.8**
MT08	**Bocatoma Ro**	**53.06**	**242**	P	**P**	**01 55 22.0**	**+1.8**
MT08				IAmb	IAmb	01 55 25.9	
	comp=Z,4.6nm,0.8s						
LPAZ	**La Paz**	**53.26**	**264**	LR	LR	02 17 23.9	
	comp=Z,101nm,18.1s,baz=80,slow=35						
LPAZ	**La Paz**	**53.26**	**264**	P	**P**	**01 55 19.7**	**-2.6**
PB06	**IPOC Station P**	**53.45**	**256**	P	**P**	**01 55 23.0**	**-0.2**
PB06				IAmb	IAmb	01 55 40.4	
	comp=Z,12nm,1.0s						
PB08	**IPOC Station P**	**53.47**	**259**	P	**P**	**01 55 23.9**	**+0.4**
PB08				IAmb	IAmb	01 55 30.5	
	comp=Z,5.6nm,0.9s						
PLCA	**Paso Flores**	**53.77**	**233**	LR	LR	02 17 02.9	
	comp=Z,22nm,18.1s,baz=136,slow=35						
SDV	**Santo Domingo**	**64.24**	**291**	LR	LR	02 23 58.5	
	comp=Z,56nm,18.0s,baz=106,slow=36						
ATAH	**Atahualpa**	**65.38**	**271**	LR	LR	02 23 24.2	
	comp=Z,65nm,20.1s,baz=137,slow=34						
ROSC	**El Rosal**	**65.84**	**285**	LR	LR	02 23 55.3	
	comp=Z,75nm,19.2s,baz=187,slow=35						
MAW	**Mawson**	**66.31**	**156**	LR	LR	02 20 19.4	
	comp=Z,29nm,20.1s,baz=284,slow=31						
WLF	**Walferdange**	**70.81**	**12**	P	**P**	**01 57 19.2**	**+0.3**
BRTR	**Keskin Array B**	**72.80**	**35**	P	**P**	**01 57 31.3**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=227,slow=6.1,SNR=4.5						
	comp=Z,0.5nm,0.8s						
BRTR	**Keskin Array B**	**72.80**	**35**	P	**P**	**01 57 30.7**	**-0.5**
JTS	**Las Juntas de**	**77.66**	**286**	LR	LR	02 30 34.8	
	comp=Z,43nm,21.3s,baz=126,slow=34						
PALK	**Pallekele**	**94.99**	**84**	LR	LR	02 36 13.9	
	comp=Z,48nm,19.9s,baz=258,slow=32						

*IDC **26** 01:46:21.4±0.9, 33°42S×179°17W, h0km, mb3.9/4, mbtmp4.1/6, ML4.4/2, MS3.3/4, Error ellipse: s-maj=31.7km s-min=22.1km az=114.0*
*WEL **26** 01:46:22.3±0.8, 34°S±6°×17°9W±1°.4, h12km, M4.7/15, mB5.3/10, ML4.5/18, MLv4.7/15, Mw(mB)4.7/10, Error ellipse: s-maj=19.5km s-min=4.8km az=108.3, confirmed*
*NEIC **26** 01:46:27.0±1.5, 33°51S±0°.9×179°.0W±0°.2, h35km±1km, mb4.4/8, Error ellipse: s-maj=27.2km s-min=12.9km az=291.0*
ISC 26 01:46:22.3±0.6, 33°57S±0°.06×178°7W±0°.1, h10km, n66, σ1s31/65, mb4.3/7, MS3.4/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.35**	**10**	P	**Pn**	**01 47 28.2**	**-0.2**
GLKZ				S	**Sn**	**01 48 17.9**	**-1.2**
RAO	**Raoul Island**	**4.36**	**10**	Pn	**Pn**	**01 47 29.0**	**+0.5**
	30nm,0.3s,baz=46,slow=23,SNR=1.3						
RAO				Sn	**Sn**	**01 48 20.3**	**+0.9**
	24nm,0.3s,baz=96,slow=23,SNR=1.1						
	120nm,0.3s						
RAO	**Raoul Island**	**4.36**	**10**		**Pn**	**01 47 29.1**	**+0.5**
MXZ	**Matakaoa Point**	**4.66**	**210**	Pn	**Pn**	**01 47 32.6**	**-0.1**
MXZ	**Matakaoa Point**	**4.66**	**210**	P	**Pn**	**01 47 32.9**	**+0.2**
MXZ				S	**Sn**	**01 48 26.6**	**-0.2**
WMGZ	**Waiomatatini S**	**4.83**	**208**	P	**Pn**	**01 47 36.4**	**+1.4**
WMGZ				S	**Sn**	**01 48 31.3**	**+0.2**
PKGZ	**Pakihiroa**	**5.01**	**210**	P	**Pn**	**01 47 38.2**	**+0.7**
HAZ	**Te Kaha**	**5.05**	**213**	P	**Pn**	**01 47 38.6**	**+0.6**
PUZ	**Putiti**	**5.12**	**209**	P	**Pn**	**01 47 39.4**	**+0.4**
RUGZ	**Raukumara Rang**	**5.27**	**213**	P	**Pn**	**01 47 41.9**	**+0.7**
TWGZ	**Tauwhareparae**	**5.31**	**209**	P	**Pn**	**01 47 42.5**	**+0.8**
TWGZ				S	**Sn**	**01 48 43.1**	**0.0**
GRZ	**Great Barrier**	**5.47**	**239**	P	**Pn**	**01 47 45.1**	**+1.3**
CNGZ	**Carnagh Statio**	**5.49**	**206**	P	**Pn**	**01 47 44.7**	**+0.5**
WHRZ	**Whale Island**	**5.52**	**218**	P	**Pn**	**01 47 46.9**	**+2.4**
MWZ	**Matawai**	**5.64**	**211**	P	**Pn**	**01 47 46.1**	**-0.1**
OPRZ	**Ohinepanea**	**5.73**	**221**	P	**Pn**	**01 47 49.5**	**+2.1**
URZ	**Urewera**	**5.77**	**215**	Pn	**Pn**	**01 47 47.5**	**-0.4**
	6.8nm,0.3s,baz=264,slow=3.5,SNR=77						
URZ				Sn	**Sn**	**01 48 51.8**	**-2.3**
	8.6nm,0.3s,baz=238,slow=22,SNR=6.5						
	19nm,0.3s						
URZ	**Urewera**	**5.77**	**215**	P	**Pn**	**01 47 47.8**	**-0.1**
RAGZ	**Rawiri**	**5.82**	**211**	P	**Pn**	**01 47 49.4**	**+0.6**
RIGZ	**Rimuhau**	**5.86**	**208**	P	**Pn**	**01 47 50.8**	**+1.6**
KMRZ	**Kaimai**	**6.08**	**224**	P	**Pn**	**01 47 54.6**	**+2.4**
MUGZ	**Murupara**	**6.10**	**215**	P	**Pn**	**01 47 52.5**	**0.0**
MKAZ	**Moumakai**	**6.11**	**233**	P	**Pn**	**01 47 54.7**	**+2.2**
RTZ	**Ruatahuna**	**6.11**	**213**		**Pn**	**01 47 51.2**	**-1.6**
RTZ	**Ruatahuna**	**6.11**	**213**	P	**Pn**	**01 47 53.6**	**+0.8**
WCZ	**Waipu Caves**	**6.16**	**245**	P	**Pn**	**01 47 55.1**	**+1.8**
KNZ	**Kokohu**	**6.17**	**207**	P	**Pn**	**01 47 53.1**	**-0.2**
MHGZ	**Mahia Peninsul**	**6.20**	**205**	P	**Pn**	**01 47 52.9**	**-0.9**
TOZ	**Tahuroa Road**	**6.26**	**227**		**Pn**	**01 47 56.1**	**+1.4**
TOZ	**Tahuroa Road**	**6.26**	**227**	P	**Pn**	**01 47 57.5**	**+2.8**
OUZ	**Omahuta**	**6.54**	**253**	P	**Pn**	**01 47 59.7**	**+1.1**
BKZ	**Black Stump Fm**	**6.78**	**213**		**Pn**	**01 48 00.8**	**-1.1**
BKZ	**Black Stump Fm**	**6.78**	**213**	P	**Pn**	**01 48 01.0**	**-0.9**
HIZ	**Hauili**	**7.16**	**225**	Pn	**Pn**	**01 48 08.3**	**+1.2**
STKA	**Stephens Creek**	**33.27**	**262**	LR	LR	02 03 58.7	
	comp=Z,59nm,20.5s,baz=84,slow=32						
CTA	**Charters Tower**	**33.83**	**284**	LR	LR	02 03 33.0	
	comp=Z,26nm,20.7s,baz=212,slow=31						
COEN	**Coen**	**39.65**	**290**	P	**P**	**01 53 53.7**	**-0.8**
COEN				IAmb	IAmb	01 54 12.9	
	comp=Z,8.4nm,1.1s						
ASAR	**Alice Springs**	**42.41**	**271**	P	**P**	**01 54 15.3**	**-2.0**
	comp=Z,1.0nm,0.7s,baz=114,slow=7.5,SNR=10						
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**42.41**	**271**	P	**P**	**01 54 15.4**	**-1.8**
WR8	**Warramunga Arr**	**43.55**	**276**	P	**P**	**01 54 25.5**	**-1.0**
WRA	**Warramunga Arr**	**43.69**	**276**	P	**P**	**01 54 25.8**	**-1.8**
	comp=Z,0.8nm,0.3s,baz=118,slow=7.7,SNR=27						
WRA				PcP	**PcP**	**01 56 13.4**	**-1.3**
	comp=Z,0.2nm,0.6s,baz=143,slow=4.7,SNR=1.3						
	comp=Z,0.8nm,0.3s						
WRA	**Warramunga Arr**	**43.69**	**276**	P	**P**	**01 54 25.6**	**-2.0**
WRA					**PcP**	**01 56 14.0**	**-0.7**
WB0	**Warramunga Arr**	**43.73**	**276**	P	**P**	**01 54 26.0**	**-1.9**
WB0				IAmb	IAmb	01 54 31.7	
	comp=Z,16nm,1.5s						
KNRA	**Kununurra**	**50.40**	**277**	P	**P**	**01 55 18.8**	**-1.3**
CASY	**Casey**	**52.06**	**209**	P	**P**	**01 55 32.0**	**+0.2**
CASY				IAmb	IAmb	01 55 51.1	
	comp=Z,4.3nm,1.1s						
QSPA	**South Pole Qui**	**56.55**	**180**	P	**P**	**01 56 07.0**	**+2.2**
	comp=Z,2.7nm,0.9s,baz=86,slow=2.0,SNR=5.5						
	comp=Z,2.7nm,0.9s						
QSPA	**South Pole Qui**	**56.55**	**180**	P	**P**	**01 56 06.5**	**+1.8**
QSPA				IAmb	IAmb	01 56 25.2	
	comp=Z,4.9nm,1.1s						
H03S2	**Juan Fernandez**	**79.25**	**123**	T	T	03 26 50.7	
	baz=234						
H03S1	**Juan Fernandez**	**79.26**	**123**	T	T	03 26 47.0	
	baz=234						
H03S3	**Juan Fernandez**	**79.27**	**123**	T	T	03 26 43.4	
	baz=234						
H03N3	**Juan Fernandez**	**79.46**	**123**	T	T	03 27 03.1	
	baz=239,slow=72,SNR=17						
H03N2	**Juan Fernandez**	**79.46**	**123**	T	T	03 27 01.7	
	baz=239,slow=72,SNR=12						
H03N1	**Juan Fernandez**	**79.48**	**123**	T	T	03 27 02.0	
	baz=239,slow=72,SNR=24						
NVAR	**Mina Array Bea**	**90.98**	**43**	P	**P**	**01 59 29.3**	**+2.6**
	comp=Z,0.3nm,0.6s,baz=257,slow=5.6,SNR=2.6						
NVAR				LR	LR	02 41 19.4	
	comp=Z,24nm,18.0s,baz=273,slow=36						
	comp=Z,0.3nm,0.6s						
CHGN	**Chignik**	**91.17**	**11**	P	**P**	**01 59 27.3**	**+0.5**
PDAR	**Pinedale Array**	**98.85**	**44**	LR	LR	02 47 08.2	
	comp=Z,17nm,18.0s,baz=151,slow=37						
ILAR	**Eielson Array**	**101.14**	**13**	PP	**PP**	**02 04 20.8**	**-0.5**
	comp=Z,0.1nm,0.5s,baz=225,slow=5.0,SNR=4.4						
KURK	**Kurchatov**	**122.75**	**312**		**PKPdf**	**02 05 18.1**	**+0.2**
KURBB	**Kurchatov Arra**	**122.78**	**312**	PKP	**PKPdf**	**02 05 17.6**	**-0.4**
	comp=Z,0.1nm,0.4s,baz=121,slow=2.0,SNR=2.0						
FINES	**FINESS Array B**	**147.86**	**338**	PKPbc	**PKPbc**	**02 06 06.5**	**-0.3**
	comp=Z,2.3nm,0.8s,baz=26,slow=3.9,SNR=8.2						
FINES	**FINESS Array B**	**147.86**	**338**		**PKPbc**	**02 06 06.2**	**-0.6**
MMAI	**Mount Meron Ar**	**151.53**	**278**	PKPbc	**PKPbc**	**02 06 16.2**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=99,slow=3.6,SNR=2.0						
NOA	**NORSAR Array B**	**151.76**	**350**	PKPbc	**PKPbc**	**02 06 16.7**	**+0.3**
	comp=Z,0.7nm,0.9s,baz=19,slow=2.5,SNR=2.2						
HFS	**Hagfors**	**152.19**	**347**	PKPbc	**PKPbc**	**02 06 15.9**	**-1.4**
	comp=Z,1.3nm,0.7s,baz=151,slow=3.3,SNR=1.2						
BRTR	**Keskin Array B**	**153.40**	**293**	PKPbc	**PKPbc**	**02 06 19.1**	**-1.8**
	comp=Z,0.2nm,0.4s,baz=150,slow=3.9,SNR=1.9						
TORD	**Torodi Ar. Bea**	**159.67**	**181**	PKPab	**PKPab**	**02 07 01.3**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=189,slow=5.2,SNR=3.7						

SCB 26 01:48:07.2±1.2, 21°38S×67°77W, h140km±18km, MB5.5, ML3.4/2, Error ellipse: s-maj=4.4km s-min=3.2km az=1.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**1.43**	**253**	P	Pn	01 48 36.6	+1.2
PB01	**IPOC Station P**	**1.63**	**281**	P	Pn	01 48 38.6	+1.0
PB08	**IPOC Station P**	**1.78**	**313**	P	Pn	01 48 40.4	+0.8
PB02	**IPOC Station P**	**1.98**	**271**	P	Pn	01 48 42.7	+1.1
PB02				S	Sn	01 49 08.8	+0.9
PB02				IAML		01 49 09.4	
	111nm,0.2s						
MOCB	**Mochara**	**2.00**	**87**	P	Pn	01 48 43.0	+0.9
PB06	**IPOC Station P**	**2.13**	**231**	P	Pn	01 48 44.3	+0.8
GO01	**Chusmiza**	**2.16**	**322**	P	Pn	01 48 44.7	+0.6
YJA	**Yavi**	**2.25**	**111**	P	Pn	01 48 46.3	+1.2
PB11	**IPOC Station P**	**2.39**	**312**	P	Pn	01 48 47.1	+0.5
PB11				S	Sn	01 49 17.1	+0.2
PB11				IAML		01 49 19.0	
	233nm,0.2s						
SOEO	**Opoqueri**	**2.80**	**358**	P	Pn	01 48 53.2	+1.1
PB16	**IPOC Station P**	**3.44**	**331**	P	Pn	01 49 01.5	+1.1
SOET	**ToroToro**	**3.73**	**30**	P	Pn	01 49 04.4	+0.3
PB14	**IPOC Station P**	**4.04**	**216**	P	Pn	01 49 08.4	+0.3
SOEJ	**Jacaque**	**4.39**	**355**	P	Pn	01 49 13.5	+0.5
BBOE	**La Paz, Chanca**	**4.54**	**357**	P	Pn	01 49 15.8	+0.9
BBOD	**La Paz, Gloria**	**4.78**	**350**	P	Pn	01 49 18.9	+0.9
LPAZ	**La Paz**	**5.07**	**356**	P	Pn	01 49 22.4	+0.4
SIV	**San Ignacio**	**8.30**	**51**	P	Pn	01 50 01.3	-3.5

*SNET **26** 01:48:46.8±8.2, 13°56N×90°52W, h64km, ML2.8, Presumed earthquake*
*CATAC **26** 01:48:48.8±0.8, 14°N±5°×9°1W±1°, h25km±4km, M3.0/15, MLv3.0/15, Error ellipse: s-maj=11.9km s-min=4.5km az=18.5, confirmed*
*GCG **26** 01:48:49.3±1.6, 13°58N×90°55W, h36km±635km, MD3.6, ML3.5, Presumed earthquake*
ISC 26 01:48:51.7±1.6, 13°53N±0°.09×90°38W±0°.04, h35km±3km, n29, σ0s89/44, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAME	**Alcaldia de Sa**	**0.47**	**49**	P	**Pb**	**01 49 01.4**	**-0.6**
FAME				S	**Sn**	**01 49 10.9**	**+1.7**
PCG5	**San Vicente Pa**	**0.68**	**1**	*e*P	**Pb**	**01 49 04.6**	**-0.8**
NUBE	**Las Nubes**	**0.69**	**58**	P	**Pn**	**01 49 04.5**	**-0.7**
NUBE	**Las Nubes**	**0.69**	**58**	*e*P	**Pn**	**01 49 04.4**	**-0.8**
NUBE				*e*S	**Sn**	**01 49 15.6**	**+0.8**
FG8	**Yepocapa, Chim**	**0.74**	**347**	*e*P	**Pb**	**01 49 06.5**	**0.0**
FG16	**Alotenango, Sa**	**0.74**	**350**	*e*P	**Pb**	**01 49 06.4**	**-0.2**
FG16				IAML		01 49 24.4	
	comp=N,2μm,0.2s						
LOAL	**Lomas de Alarc**	**0.74**	**52**	P	**Pn**	**01 49 05.6**	**-0.3**
SLOZ	**Alcaldia de Sa**	**0.76**	**50**	P	**Pn**	**01 49 05.5**	**-0.5**
SLOZ				S	**Sb**	**01 49 18.1**	**+1.3**
SLOZ	**Alcaldia de Sa**	**0.76**	**50**	*i* P	**Pn**	**01 49 05.1**	**-0.9**
CEVE	**Cerro Ver

PACN				S	**Sn**	**01 56 37.2**	**+1.3**
POLN	**Al Sur del Vol**	**2.63**	**73**	P	**Pn**	**01 56 03.5**	**-0.3**
POLN				S	**Sn**	**01 56 37.2**	**+0.8**
ESQI	**Esquipulas**	**2.65**	**1**	⇓P	**Pn**	**01 56 05.2**	**+0.9**
ESQI				S	**Sn**	**01 56 37.5**	**+0.4**
ROCN	**Rota Cerro Neg**	**2.66**	**76**	P	**Pn**	**01 56 03.2**	**-1.1**
ROCN				S	**Sn**	**01 56 37.5**	**+0.3**
CNGA	**Al SSO del Vol**	**2.69**	**77**	⇓P	**Pn**	**01 56 04.7**	**-0.1**
CNGA				S	**Sn**	**01 56 38.9**	**+0.8**
CNGN	**Cerro Negro**	**2.70**	**77**	P	**Pn**	**01 56 05.6**	**+0.7**
CNGN				S	**Sb**	**01 56 39.8**	**-3.2**
COPN	**Copaltepe**	**2.75**	**84**	⇑P	**Pn**	**01 56 05.3**	**-0.2**
MOM3	**MOM3**	**2.87**	**77**	⇑P	**Pn**	**01 56 06.9**	**-0.3**
MOM3				S	**Sn**	**01 56 43.5**	**+1.0**
MOM2	**El Cardon**	**2.89**	**79**	⇑P	**Pn**	**01 56 07.9**	**+0.4**
SARH	**Santa Rosa de**	**2.93**	**12**	⇓P	**Pn**	**01 56 10.0**	**+1.9**
TGUH	**Tegucigalpa,Un**	**2.98**	**44**	⇑P	**Pn**	**01 56 09.6**	**+0.8**
LIMN	**Finca el Limon**	**3.17**	**68**	P	**Pn**	**01 56 10.9**	**-0.6**
LIMN				S	**Sn**	**01 56 50.0**	**0.0**
NANN	**Nandasmo**	**3.20**	**89**	P	**Pn**	**01 56 13.1**	**+1.4**
NANN				S	**Sn**	**01 56 51.0**	**+0.4**
YUSH	**Yuscaran**	**3.22**	**50**	⇑P	**Pn**	**01 56 12.7**	**+0.6**
APG	**El Apazote**	**3.26**	**341**	Pn	**Pn**	**01 56 14.2**	**+1.4**
	0.3nm,0.3s,baz=162,slow=12,SNR=12						
APG				Sn	**Sn**	**01 56 50.8**	**-1.6**
	0.2nm,0.3s,baz=150,slow=9.8,SNR=9.7						
RCON	**San Juan de Ri**	**3.53**	**63**	P	**Pn**	**01 56 17.1**	**+0.7**
RCON				S	**Sn**	**01 57 01.0**	**+2.2**
RCVN	**Varillal2**	**3.54**	**61**	P	**Pn**	**01 56 16.8**	**+0.2**
RCVN				S	**Sn**	**01 57 00.1**	**+0.9**
RCPN	**Sur Rio San Ju**	**3.60**	**63**	P	**Pn**	**01 56 17.8**	**+0.4**
RCPN				S	**Sn**	**01 57 00.8**	**+0.2**
ELI1	**Hacienda Flor**	**3.96**	**108**	P	**Pn**	**01 56 24.0**	**+1.8**
ELI1				S	**Sn**	**01 57 09.2**	**-0.2**
CMARA	**Lajas Hojancha**	**4.32**	**115**	P	**Pn**	**01 56 27.7**	**+0.5**
CMARA				S	**Sn**	**01 57 14.4**	**-3.8**
JTS	**Las Juntas de**	**4.64**	**110**	Pn	**Pn**	**01 56 32.4**	**+0.9**
	6.5nm,0.3s,baz=312,slow=15,SNR=27						
JTS				Sn	**Sn**	**01 57 24.5**	**-1.6**
	3.7nm,0.3s,baz=37,slow=18,SNR=3.5 13nm,0.3s						
JTS	**Las Juntas de**	**4.64**	**110**	P	**Pn**	**01 56 32.8**	**+1.3**
JTS				S	**Sn**	**01 57 25.9**	**-0.1**
CMIG	**Matias Romero**	**7.42**	**315**	Pn	**Pn**	**01 57 09.7**	**0.0**
	0.4nm,0.3s,baz=142,slow=12,SNR=5.4						
CMIG				Sn	**Sn**	**01 58 30.4**	**-4.2**
	0.2nm,0.3s,baz=358,slow=8.7,SNR=1.6 1.6nm,0.5s						
TEIG	**Tepich**	**8.35**	**7**	Pn	**Pn**	**01 57 22.0**	**-0.5**
	6.9nm,0.3s,baz=197,slow=11,SNR=4.5						
TXAR	**Lajitas Array**	**21.86**	**325**	P	**P**	**02 00 16.0**	**+1.4**
	1.0nm,0.7s,baz=145,slow=11,SNR=14 1.0nm,0.7s						
NVAR	**Mina Array Bea**	**36.90**	**321**	P	**P**	**02 02 32.6**	**+1.7**
	0.5nm,0.6s,baz=155,slow=6.5,SNR=5.8 0.5nm,0.6s						
YKA	**Yellowknife Ar**	**53.66**	**346**	P	**P**	**02 04 42.6**	**-0.6**
	0.3nm,0.8s,baz=148,slow=6.5,SNR=3.8 0.3nm,0.8s						
ILAR	**Eielson Array**	**65.77**	**337**	P	**P**	**02 06 07.7**	**+1.0**
	0.9nm,1.2s,baz=125,slow=7.8,SNR=4.1 0.9nm,1.2s						
TORD	**Torodi Ar. Bea**	**88.38**	**77**	P	**P**	**02 08 14.3**	**-0.5**
	0.4nm,0.8s,baz=258,slow=3.3,SNR=1.9 0.4nm,0.8s						

IDC 26 02:01:30.9±2.0, 7°43S×131°06E, h0km, mb3.7/2, mbtmp3.7/4, ML3.8/2, MS3.2/1, Error ellipse: s-maj=127.0km s-min=30.2km az=71.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**12.84**	**166**	Pn	Pn	02 04 34.5	-0.4
	0.5nm,0.3s,baz=349,slow=13,SNR=16						
WRA				Sn	Sn	02 06 54.1	-4.6
	0.4nm,0.3s,baz=342,slow=25,SNR=6.1 1.0nm,0.5s						
ASAR	**Alice Springs**	**16.38**	**171**	Pn	Pn	02 05 22.8	+0.4
	0.6nm,0.3s,baz=356,slow=11,SNR=29						
ASAR				Sn	Sn	02 08 15.6	-9.3
	0.1nm,0.3s,baz=350,slow=25,SNR=2.2 0.6nm,0.4s						
TGY	**Tagaytay City**	**23.63**	**335**	LR	LR	02 17 58.1	
	comp=Z,70nm,21.9s,baz=244,slow=42						
MKAR	**Makanchi Array**	**69.16**	**325**	P	P	02 12 39.4	+0.1
	0.5nm,0.5s,baz=124,slow=7.0,SNR=9.2 0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**73.42**	**328**	P	P	02 13 04.8	-0.2
	0.2nm,0.4s,baz=123,slow=4.7,SNR=2.3 0.2nm,0.4s						

*IDC **26** 02:41:10.0±1.2, 37°59N×77°16E, h0km, mb3.6/5, mbtmp3.6/8, ML3.3/3, MS2.9/1, Error ellipse: s-maj=26.1km s-min=18.6km az=72.0*

ISC 26 02:41:12.3±0.6, 37°69N±0°04×77°27E±0°09, h10km, n19, σ2°09/29, mb3.4/4, 2C-3D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALCI	**Alchi Leh**	**3.47**	**181**	*e*P	**Pb**	**02 42 11.9**	**-2.1**
ALCI				*e*S	**Sb**	**02 42 57.4**	**+1.0**
ALCI				IAML		02 43 00.3	
	comp=E,501nm,0.2s						
ALCI				IAML		02 43 02.3	
	comp=N,128nm,0.2s						
TSSA	**Tissa**	**4.93**	**191**	*e*P	**Pn**	**02 42 28.8**	**+2.2**
TSSA				*e*S	**Sn**	**02 43 25.9**	**+2.1**
TSSA				IAML		02 43 47.0	
	comp=N,72nm,0.2s						
TSSA				IAML		02 43 54.4	
	comp=E,70nm,0.8s						
HNLY	**HANLEY**	**5.10**	**164**	*e*P	**Pn**	**02 42 30.4**	**+1.2**
AAK	**Ala-Archa**	**5.38**	**338**	Pn	**Pn**	**02 42 37.0**	**+4.3**
	comp=E,2.0nm,0.3s,baz=157,slow=8.6,SNR=26						
AAK				Pg	**Pg**	**02 42 52.5**	**-2.8**
	comp=E,3.8nm,0.3s,baz=136,slow=8.5,SNR=19						
AAK				Lg	Lg	02 44 03.4	
	comp=E,2.5nm,0.3s,baz=348,slow=18,SNR=1.9 comp=E,6.1nm,0.5s						
AAK	**Ala-Archa**	**5.38**	**338**	⇑Pn	**Pn**	**02 42 36.9**	**+4.1**
	comp=E,2.5nm,0.6s						
AAK				⇓Pg	**Pg**	**02 42 53.4**	**-1.9**
	comp=E,20nm,0.6s						
AAK				⇓Lg	Lg	02 44 08.7	
	comp=E,38nm,1.0s						
DHRM	**DHARAMSHALA**	**5.49**	**189**	*e*P	**Pn**	**02 42 36.4**	**+2.1**
DHRM				*e*S	**Sn**	**02 43 38.2**	**+0.7**
KLP	**Kalpa**	**6.20**	**172**	*e*P	**Pn**	**02 42 45.3**	**+1.2**
KLP				*e*S	**Sn**	**02 43 58.4**	**+3.3**
KLP				IAML		02 44 16.8	
	comp=E,25nm,0.4s						
BHK	**Bhakra**	**6.32**	**187**	*e*P	**Pn**	**02 42 46.6**	**+1.0**
BHK				*e*S	**Sn**	**02 43 55.2**	**-2.6**
SMLA	**Simla**	**6.55**	**181**	*e*P	**Pn**	**02 42 48.7**	**+0.1**
SMLA				*e*S	**Sn**	**02 44 01.6**	**-1.8**
SMLA				IAML		02 44 06.6	
	comp=N,161nm,0.2s						
SMLA				IAML		02 44 07.5	
	comp=E,121nm,0.3s						
KK31	**Karatay Array**	**7.47**	**318**	⇓Pn	**Pn**	**02 43 02.7**	**+1.4**
	comp=E,0.9nm,0.3s,baz=133,slow=14,SNR=15						
KK31				⇑Sn	**Sn**	**02 44 27.1**	**+1.0**
	comp=E,2.0nm,0.5s,baz=136,slow=23						
MKAR	**Makanchi Array**	**9.83**	**21**	Pn	**Pn**	**02 43 34.4**	**+0.8**
	comp=E,0.6nm,0.3s,baz=192,slow=12,SNR=24						
MKAR				Sn	**Sn**	**02 45 22.6**	**-1.4**
	comp=E,0.1nm,0.3s,baz=197,slow=24,SNR=2.7 comp=E,1.0nm,0.4s						
AJM	**Ajmer**	**11.45**	**192**	*e*P	**Pn**	**02 43 53.4**	**-2.6**
AJM				*e*S	Sn	02 45 56.4	-7.5
AJM				IAML		02 46 07.9	
	comp=E,10nm,0.5s						
AJM				IAML		02 46 08.0	
	comp=N,6.6nm,0.6s						
KURBB	**Kurchatov Arra**	**12.96**	**4**	Pn	**Pn**	**02 44 16.7**	**+0.3**
	baz=188,slow=12,SNR=16						
KURBB				Lg	Lg	02 48 04.8	
	baz=195,slow=39,SNR=1.8 comp=N,1.6nm,0.7s						
BVAR	**Borovoye Array**	**16.07**	**345**	Pn	**Pn**	**02 44 60.0**	**+1.8**
	comp=N,0.1nm,0.3s,baz=155,slow=11,SNR=12						
BVAR				Lg	Lg	02 49 42.4	
	baz=154,slow=37,SNR=1.8						
BVAR				LR	LR	02 51 43.8	
	comp=N,39nm,19.0s,baz=140,slow=39						
SONM	**Songino Array**	**23.54**	**55**	P	**P**	**02 46 22.4**	**-0.3**
	comp=N,0.2nm,0.3s,baz=254,slow=9.9,SNR=3.8 comp=N,0.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**26.96**	**129**	P	**P**	**02 46 54.8**	**+0.7**
	comp=N,1.7nm,0.3s,baz=309,slow=9.3,SNR=4.3 comp=N,1.7nm,0.3s						
FINES	**FINESS Array B**	**39.39**	**324**	P	**P**	**02 48 42.4**	**+0.6**
	comp=N,0.8nm,0.5s,baz=119,slow=11,SNR=4.3 comp=N,0.8nm,0.5s						
TORD	**Torodi Ar. Bea**	**70.72**	**272**	P	**P**	**02 52 26.8**	**-2.0**
	comp=N,0.2nm,0.3s,baz=47,slow=4.9,SNR=8.2 comp=N,0.2nm,0.3s						
YKA	**Yellowknife Ar**	**79.70**	**6**	P	**P**	**02 53 18.9**	**-0.9**
	comp=N,0.1nm,0.5s,baz=346,slow=5.8,SNR=7.0 comp=N,0.1nm,0.5s						

KRSC 26 02:43:24.8±2.2, 49°49N×158°85E, h46km±51km, Ml3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.13**	**305**	*e*S	Sn	02 44 23.1	+0.2
PAU	**Pauzhetka**	**2.37**	**327**	*e*S	Sn	02 44 32.7	+3.8
KDTR	**Khodutka, Kamc**	**2.37**	**348**	*e*S	Sn	02 44 32.8	+3.8
RUS	**Russkaya**	**2.96**	**356**	*e*P	Pn	02 44 12.1	+2.9
RUS				*e*S	Sn	02 44 46.3	+3.0
ASAK	**Asacha**	**2.96**	**349**	*e*P	Pn	02 44 13.4	+4.1
ASAK				*e*S	Sn	02 44 47.9	+4.4
MTVR	**Mutnovka**	**3.03**	**352**	*e*P	Pn	02 44 13.6	+3.3
MTVR				*e*S	Sn	02 44 49.3	+4.0
GRL	**Gorelyy**	**3.10**	**351**	*e*P	Pn	02 44 15.0	+3.6
GRL				*e*S	Sn	02 44 51.4	+4.1
KRMR	**Karymshinskiy**	**3.38**	**353**	*e*P	Pn	02 44 19.0	+4.1
KRMR				*e*S	Sn	02 44 58.2	+4.5
DALK	**Dalny**	**3.55**	**359**	*e*P	Pn	02 44 19.5	+2.2
APC	**Apacha**	**3.60**	**343**	*e*P	Pn	02 44 20.2	+2.2
SPN	**Mys Shipunski**	**3.69**	**11**	*e*P	Pn	02 44 23.0	+3.8
SPN				*e*S	Sn	02 45 04.8	+3.4
SMAR	**Somma**	**3.78**	**360**	*e*P	Pn	02 44 25.1	+4.4
AVH	**Avacha**	**3.78**	**359**	*e*P	Pn	02 44 25.4	+4.8
KOK	**Koryaka**	**3.81**	**358**	*e*P	Pn	02 44 25.6	+4.7
KRER	**Koryakskii**	**3.82**	**359**	*e*P	Pn	02 44 26.5	+5.2
KRX	**Arik**	**3.88**	**358**	*e*P	Pn	02 44 25.8	+3.9
KRX				*e*S	Sn	02 45 10.2	+3.9
GNL	**Ganaly**	**4.25**	**353**	*e*P	Pn	02 44 32.1	+5.1
KBTR	**Krutoberegovo**	**7.14**	**18**	*e*P	Pn	02 45 10.9	+4.3

*GCG **26** 02:57:14.5±2.2, 13°58N×90°73W, h43km±34km, MD4.2, ML4.2, Presumed earthquake*
*CATAC **26** 02:57:14.6, 14°N±1°×9°1W±°, h30km±395km, M4.1/17, MLv4.1/17, confirmed*
*SNET **26** 02:57:15.2±2.6, 13°54N×90°68W, h62km, ML3.9, ML3.9, Presumed earthquake*

ISC 26 02:57:15.1±1.6, 13°50N±0°08×90°71W±0°05, h55km±13km, n52, σ1°29/74, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESSJ	**San Jos, E**	**0.21**	**72**	*i* P	**Pn**	**02 57 25.3**	**+1.2**
FAME	**Alcaldia de Sa**	**0.76**	**63**	P	**Pn**	**02 57 28.1**	**-1.7**
FAME				S	**Sn**	**02 57 38.9**	**-1.6**
FG8	**Yepocapa, Chim**	**0.77**	**11**	*i* P	**Pn**	**02 57 30.7**	**+0.5**
FG8				*i* S	**Sn**	**02 57 41.9**	**+0.8**
PCG5	**San Vicente Pa**	**0.79**	**24**	*i* P	**Pn**	**02 57 29.3**	**-1.1**
FG16	**Alotenango, Sa**	**0.80**	**14**	*i* P	**Pn**	**02 57 30.7**	**+0.2**
FG16				IAML		02 57 45.8	
	comp=E,12μm,0.2s						
NUBE	**Las Nubes**	**0.99**	**66**	P	**Pn**	**02 57 31.5**	**-1.4**
NUBE	**Las Nubes**	**0.99**	**66**	*i* P	**Pn**	**02 57 31.5**	**-1.4**
NUBE				*e*S	**Sn**	**02 57 44.0**	**-2.1**
NUBE				IAML		02 57 47.1	
	comp=E,948nm,0.3s						
LOAL	**Lomas de Alarc**	**1.03**	**61**	P	**Pn**	**02 57 32.6**	**-0.8**
LOAL				S	**Sn**	**02 57 46.4**	**-0.6**
SLOZ	**Alcaldia de Sa**	**1.04**	**59**	P	**Pn**	**02 57 32.6**	**-1.0**
SLOZ				S	**Sn**	**02 57 47.4**	**+0.1**
SLOZ	**Alcaldia de Sa**	**1.04**	**59**	*i* P	**Pn**	**02 57 33.9**	**+0.3**
STG5	**El Palmar, Qui**	**1.10**	**325**	*i* P	**Pn**	**02 57 37.1**	**+2.7**
GCG4	**OSOP**	**1.10**	**9**	*i* P	**Pn**	**02 57 33.5**	**-1.0**
CEVE	**Cerro Verde**	**1.10**	**72**	P	**Pn**	**02 57 33.7**	**-0.9**
CEVE				S	**Sn**	**02 57 48.1**	**-0.9**
RTR	**El Retiro**	**1.11**	**69**	*i* P	**Pn**	**02 57 33.5**	**-1.1**
STG8	**El Palmar, Qui**	**1.14**	**327**	*i* P	**Pn**	**02 57 38.3**	**+3.2**
STG8				IAML		02 57 59.5	
	comp=N,4μm,0.2s						
STG2	**El Palmar, Qui**	**1.14**	**325**	*i* P	**Pn**	**02 57 38.2**	**+3.2**
STG2				IAML		02 58 00.0	
	comp=E,11μm,0.2s						
UNIC	**Universidad Ca**	**1.23**	**67**	P	**Pn**	**02 57 35.1**	**-0.9**
JAYA	**Jayaque - finc**	**1.23**	**82**	P	**Pn**	**02 57 35.2**	**-1.0**
JAYA	**Jayaque - finc**	**1.23**	**82**	*i* P	**Pn**	**02 57 35.2**	**-1.0**
JAYA				*i* S	**Sn**	**02 57 50.1**	**-1.9**
JAYA				IAML		02 57 51.8	
	comp=N,10μm,0.3s						
JAYA	**Jayaque - finc**	**1.23**	**82**	*i* P	**Pn**	**02 57 35.4**	**-0.8**
JAYA				*e*S	**Sn**	**02 57 51.0**	**-1.1**
JAYA				IAML		02 57 52.1	
	comp=Z,4μm,0.3s						
CEDA	**San Andres**	**1.31**	**76**	P	**Pn**	**02 57 36.6**	**-0.6**
CEDA	**San Andres**	**1.31**	**76**	*i* P	**Pn**	**02 57 38.1**	**+0.9**
CEDA				*e*S	**Sn**	**02 57 53.6**	**-0.1**
LALI	**Alcalda de L**	**1.35**	**90**	*i* P	**Pn**	**02 57 37.3**	**-0.4**
PMON	**Piamonte**	**1.37**	**81**	P	**Pn**	**02 57 37.5**	**-0.6**
PMON				S	**Sn**	**02 57 55.6**	**+0.4**
PMON	**Piamonte**	**1.37**	**81**	*i* P	**Pn**	**02 57 37.4**	**-0.6**
PMON				*e*S	**Sn**	**02 57 54.9**	**-0.3**
MAGS	**Ministerio de**	**1.39**	**82**	*e*S	**Sn**	**02 57 55.6**	**-0.2**
RTAL	**Retalhuleu**	**1.40**	**317**	P	**Pn**	**02 57 36.6**	**-1.8**
RTAL				S	**Sn**	**02 57 53.3**	**-2.5**
BOQS	**Boqueron**	**1.41**	**80**	*i* P	**Pn**	**02 57 38.1**	**-0.6**
BOQS				IAML		02 57 59.2	
	comp=Z,737nm,0.4s						
QUEZ	**Alcaldia de Qu**	**1.44**	**76**	*e*S	**Sn**	**02 57 56.9**	**+0.2**
UEES	**Universidad Ev**	**1.44**	**81**	P	**Pn**	**02 57 38.7**	**-0.4**
UEES				S	**Sn**	**02 57 57.4**	**+0.4**
SEMO	**Seminario San**	**1.46**	**82**	P	**Pn**	**02 57 39.1**	**-0.1**
SEMO				S	**Sn**	**02 57 57.1**	**-0.2**
UTEC	**Universidad Te**	**1.48**	**82**	P	**Pn**	**02 57 39.4**	**-0.1**
UTEC				S	**Sn**	**02 57 58.2**	**+0.4**
SOKI	**Kika Raxquin**	**1.48**	**333**	*i* P	**Pn**	**02 57 38.9**	**-0.9**
PANCS	**Alcalda de**	**1.49**	**85**	P	**Pn**	**02 57 39.4**	**-0.2**
PANCS				S	**Sn**	**02 57 57.6**	**-0.5**
LOMA	**Loma Larga**	**1.50**	**84**	*i* P	**Pn**	**02 57 39.9**	**0.0**
LOMA				*e*S	**Sn**	**02 57 58.9**	**+0.5**
APG	**El Apazote**	**1.52**	**9**	*i* P	**Pn**	**02 57 40.0**	**-0.2**
APG				*i* S	**Sn**	**02 57 59.3**	**+0.3**
LFU	**La Fuente**	**1.57**	**81**	*i* P	**Pn**	**02 57 40.5**	**-0.2**
QUEO	**Labor Ovalle**	**1.58**	**330**	*i* S	**Sn**	**02 57 58.5**	**-2.0**
MTO3	**Montecristo**	**1.59**	**55**	P	**Pn**	**02 57 40.6**	**-0.5**
MTO3				S	**Sn**	**02 58 02.1**	**+1.5**
MTO3	**Montecristo**	**1.59**	**55**	*i* P	**Pn**	**02 57 40.6**	**-0.5**
ESQI	**Esquipulas**	**1.70**	**51**	*i* P	**Pn**	**02 57 43.0**	**+0.5**
ESQI				*e*S	**Sn**	**02 58 06.0**	**+2.9**
ZAFR2	**Estanzuela, Za**	**1.70**	**51**	*i* P	**Pn**	**02 57 44.0**	**+1.5**
PAVA	**Las Pavas**	**1.73**	**83**	P	**Pn**	**02 57 42.9**	**-0.1**
PAVA	**Las Pavas**	**1.73**	**83**	*i* P	**Pn**	**02 57 43.2**	**+0.2**
COEG	**Centro de Oper**	**1.78**	**86**	*i* P	**Pn**	**02 57 43.6**	**0.0**
COEG				*e*S	**Sn**	**02 58 08.9**	**+3.7**
COEG				IAML		02 58 12.1	
	comp=Z,937nm,0.4s						
SMCA	**Catarina**	**1.90**	**316**	*i* P	**Pn**	**02 57 43.3**	**-1.9**
P5NO	**Presa 5 de nov**	**1.96**	**75**	P	**Pn**	**02 57 44.7**	**-1.2**
P5NO				S	**Sn**	**02 58 11.3**	**+1.9**
HUEH	**Huehuetenango**	**1.97**	**337**	*i* P	**Pn**	**02 57 46.9**	**+0.6**
HUEH				IAML		02 58 17.0	
	comp=N,970nm,0.7s						
HUEH	**Huehuetenango**	**1.97**	**337**	*i* P	**Pn**	**02 57 47.4**	**+1.1**
TECA	**Tecapa**	**2.15**	**90**	*i* P	**Pn**	**02 57 49.0**	**+0.3**
SARH	**Santa Rosa de**	**2.28**	**56**	*i* P	**Pn**	**02 57 50.5**	**+0.2**
LCND	**La Caada**	**2.75**	**94**	*i* P	**Pn**	**02 57 57.8**	**+1.1**

*IDC **26** 02:58:35.2±0.6, 49°25N×157°94E, h0km, mb4.0/26, mbtmp4.0/31, ML3.5/3, MS3.3/19, Error ellipse: s-maj=17.5km s-min=12.0km az=154.0*
*KRSC **26** 02:58:40.0±1.6, 49°52N×158°13E, h49km±35km, Ml4.3*
*MOS **26** 02:58:41.2±0.9, 49°45N×157°83E, h52km, mb4.5/15, Error ellipse: s-maj=12.8km s-min=4.1km az=89.6*
*NEIC **26** 02:58:41.9±1.5, 49°30N±0°09×157°9E±0°1, h38km±6km, mb4.4/68, Error ellipse: s-maj=14.7km s-min=10.7km az=136.0*

ISC 26 02:58:41.2±0.7, 49°30N±0°06×157°99E±0°05, h43km±4km, n414, σ1°20/348, mb4.3/64, MS3.6/17, 5C-10D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.83**	**320**	*e*PN	**Pn**	**02 59 08.3**	**-1.8**
SKR				*e*S	**Sn**	**02 59 31.0**	**-1.1**
SKR				pmax	pmax		
	comp=Z,1μm,0.7s						
SKR				smax	smax		
	comp=N,5μm,0.6s						
SKR				smax	smax		
	comp=E,4μm,0.4s						
SKR	**Severo-Kuril's**	**1.83**	**320**	*e*P	**Pn**	**02 59 08.3**	**-1.8**
SKR				*e*S	**Sn**	**02 59 30.5**	**-1.7**
PAU	**Pauzhetka**	**2.29**	**341**	PN	**Pn**	**02 59 15.3**	**-1.2**
PAU				S	**Sn**	**02 59 42.5**	**-0.9**
PAU	**Pauzhetka**	**2.29**	**341**	*e*P	**Pn**	**02 59 15.4**	**-1.2**
PAU				*e*S	**Sn**	**02 59 42.6**	**-0.9**
KDTR	**Khodutka, Kamc**	**2.51**	**1**	PN	**Pn**	**02 59 17.4**	**-2.0**
KDTR				S	**Sn**	**02 59 46.2**	**-2.5**
KDTR	**Khodutka, Kamc**	**2.51**	**1**	*e*P	**Pn**	**02 59 17.5**	**-2.0**
KDTR				*e*S	**Sn**	**02 59 46.2**	**-2.5**
ASAK	**Asacha**	**3.08**	**359**	PN	**Pn**	**02 59 26.8**	**-0.6**
ASAK	**Asacha**	**3.08**	**359**	*e*P	**Pn**	**02 59 26.8**	**-0.6**
RUS	**Russkaya**	**3.15**	**6**	PN	**Pn**	**02 59 26.9**	**-1.3**
RUS				S	**Sn**	**03 00 01.1**	**-3.5**
RUS	**Russkaya**	**3.15**	**6**	*e*P	**Pn**	**02 59 27.0**	**-1.3**
RUS				*e*S	**Sn**	**03 00 01.2**	**-3.5**
MTVR	**Mutnovka**	**3.19**	**2**	PN	**Pn**	**02 59 28.0**	**-0.9**
MTVR				S	**Sn**	**03 00 03.2**	**-2.4**
MTVR	**Mutnovka**	**3.19**	**2**	*e*P	**Pn**	**02 59 28.0**	**-0.9**
MTVR				*e*S	**Sn**	**03 00 03.3**	**-2.4**
GRL	**Gorelyy**	**3.25**	**1**	PN	**Pn**	**02 59 28.7**	**-1.1**
GRL				S	**Sn**	**03 00 04.5**	**-2.8**
GRL	**Gorelyy**	**3.25**	**1**	*e*P	**Pn**	**02 59 28.8**	**-1.1**
GRL				*e*S	**Sn**	**03 00 04.6**	**-2.8**
KRMR	**Karymshinskiy**	**3.53**	**1**	PN	**Pn**	**02 59 32.6**	**-0.9**
KRMR				S	**Sn**	**03 00 12.4**	**-1.6**
KRMR	**Karymshinskiy**	**3.53**	**1**	*e*P	**Pn**	**02 59 32.6**	**-0.9**
KRMR				*e*S	**Sn**	**03 00 12.4**	**-1.6**
APC	**Apacha**	**3.67**	**352**	PN	**Pn**	**02 59 34.7**	**-0.6**
APC	**Apacha**	**3.67**	**352**	*e*P	**Pn**	**02 59 34.7**	**-0.6**
PET	**Petropavlovsk**	**3.75**	**6**		**Pn**	**02 59 35.7**	**-0.8**
PET				Sn	**Sn**	**03 00 17.8**	**-1.5**
PET	**Petropavlovsk**	**3.75**	**6**	*e*PN	**Pn**	**02 59 35.6**	**-0.8**
PET				*e*S	**Sn**	**03 00 16.3**	**-3.0**
PET				pmax	pmax		
	comp=Z,86nm,0.5s						
PET				smax	smax		
	comp=N,222nm,0.5s						
PET				smax	smax		
	comp=E,143nm,0.5s						
PET				MLR	MLR		
	comp=Z,300nm,17.0s						
PET	**Petropavlovsk**	**3.75**	**6**	*e*P	**Pn**	**02 59 35.4**	**-1.0**
PET				*e*S	**Sn**	**03 00 16.8**	**-2.5**
DALK	**Dalny**	**3.77**	**7**	PN	**Pn**	**02 59 35.9**	**-0.7**
DALK				S	**Sn**	**03 00 16.6**	**-3.0**
DALK	**Dalny**	**3.77**	**7**	*e*P	**Pn**	**02 59 35.9**	**-0.7**
DALK				*e*S	**Sn**	**03 00 16.7**	**-3.0**
UGLR	**Uglovaya**	**3.95**	**7**	PN	**Pn**	**02 59 39.1**	**-0.2**
UGLR	**Uglovaya**	**3.95**	**7**	*e*P	**Pn**	**02 59 39.1**	**-0.2**
AVH	**Avacha**	**4.00**	**6**	PN	**Pn**	**02 59 39.5**	**-0.4**
AVH				S	**Sn**	**03 00 22.9**	**-2.6**
AVH	**Avacha**	**4.00**	**6**	*e*P	**Pn**	**02 59 39.5**	**-0.4**
AVH				*e*S	**Sn**	**03 00 22.9**	**-2.6**
SMAR	**Somma**	**4.00**	**7**	PN	**Pn**	**02 59 40.0**	**-0.1**
SMAR	**Somma**	**4.00**	**7**	*e*P	**Pn**	**02 59 40.0**	**-0.1**
SPN	**Mys Shipunski**	**4.01**	**18**	PN	**Pn**	**02 59 38.4**	**-1.6**
SPN	**Mys Shipunski**	**4.01**	**18**	*e*P	**Pn**	**02 59 38.4**	**-1.6**
SPN				*e*S	**Sn**	**03 00 21.2**	**-4.5**
KOK	**Koryaka**	**4.02**	**6**	PN	**Pn**	**02 59 40.4**	**+0.2**
KOK	**Koryaka**	**4.02**	**6**	*e*P	**Pn**	**02 59 40.4**	**+0.2**
KRER	**Koryakskii**	**4.04**	**7**	PN	**Pn**	**02 59 40.6**	**+0.1**
KRER				S	**Sn**	**03 00 26.0**	**-0.6**
KRER	**Koryakskii**	**4.04**	**7**	*e*P

baz=243
M11K **Mekoryuk** 23.10 48 P P 03 03 41.4 -1.5
baz=258
TNA **Tin City** 24.08 35 P P 03 03 53.0 +0.8
baz=244
FALS **False Pass** 24.13 62 P P 03 03 52.8 +0.1
baz=273
K13K **Kusilvak Mount** 24.19 44 P P 03 03 53.4 +0.1
K13K IAmb IAmb 03 03 56.0
comp=Z,10nm,1.4s
K13K **Kusilvak Mount** 24.19 44 P P 03 03 54.0 +0.8
baz=256
M13K **Dall Lake** 24.50 48 P P 03 03 56.5 +0.5
baz=261
F14K **Arctic Creek** 24.64 36 P P 03 03 58.2 +0.8
baz=246
ANM **Nome** 24.68 38 P 03 03 59.1 +1.5
ANM IAmb IAmb 03 04 01.5
comp=Z,18nm,1.2s
ANM **Nome** 24.68 38 P P 03 03 59.1 +1.5
ANM pmax pmax
comp=Z,18nm,1.2s
ANM **Nome** 24.68 38 P P 03 03 58.6 +0.9
baz=250,SNR=13
KSRS **Korea Array** 24.68 253 P P 03 03 58.0 +0.1
comp=Z,0.7nm,0.3s,baz=48,slow=8.7,SNR=2.3
KSRS LR LR 03 14 12.5
comp=Z,33nm,18.4s,baz=30,slow=38
comp=Z,0.7nm,0.3s
KSRS **Korea Array** 24.68 253 P P 03 03 58.0 +0.1
J14K **Nanvaranak Lak** 24.89 43 P P 03 04 00.8 +1.2
baz=255
L14K **Kuka Creek** 24.98 46 P P 03 04 01.3 +0.8
baz=259
M14K **Bethel** 25.23 48 P P 03 04 03.6 +1.0
baz=261
N14K **Kuskokwak Cree** 25.25 50 P P 03 04 03.7 +0.8
baz=263
G15K **Niukluk** 25.36 38 P P 03 04 04.7 +0.9
baz=250
F15K **North Star Dit** 25.38 36 P 03 04 05.0 +1.0
F15K **North Star Dit** 25.38 36 P P 03 04 05.0 +1.0
baz=248
L15K **Ungalak Mounta** 25.61 46 P P 03 04 06.9 +0.8
baz=260
K15K **Wolf Creek Mou** 25.70 44 P P 03 04 07.6 +0.6
baz=259
SDPT **Sand Point** 25.79 61 P P 03 04 08.9 +1.1
baz=274
M15K **Kasigluk River** 25.84 48 P P 03 04 08.9 +0.7
baz=263
H16K **Elim** 25.98 39 P P 03 04 10.2 +0.7
baz=253,SNR=5.5
N15K **Kwethluk River** 26.07 49 P P 03 04 11.0 +0.7
baz=264
TIXI **Tiksi** 26.08 339 LR LR 03 14 55.3
comp=Z,49nm,18.8s,baz=144,slow=38
TIXI **Tiksi** 26.08 339 P 03 04 09.6 -0.6
TIXI IAmb IAmb 03 04 24.2
comp=Z,3.7nm,0.6s
TIXI **Tiksi** 26.08 339 *e*P P 03 04 08.8 -1.5
TIXI pmax pmax
comp=Z,7.0nm,1.7s
TIXI MLR MLR
comp=Z,47nm,17.0s
O15K **Ungalikthiuk R** 26.13 52 P P 03 04 11.5 +0.6
baz=267
G16K **Koyuk River** 26.16 37 P P 03 04 11.9 +0.8
baz=252
C16K **Lisburne Hills** 26.22 30 P 03 04 12.2 +0.6
C16K **Lisburne Hills** 26.22 30 P P 03 04 12.4 +0.9
baz=242
S14K **Fog Glacier** 26.25 58 P P 03 04 12.7 +0.5
baz=273
J16K **Anvik River** 26.33 42 P P 03 04 13.3 +0.6
baz=258
CHNA **Chernabura Isl** 26.34 62 P P 03 04 13.6 +0.8
baz=276
I17K **Unalakleet** 26.43 41 P P 03 04 14.3 +0.8
baz=256
L16K **Owhat River** 26.56 46 P P 03 04 15.3 +0.6
baz=262
M16K **Timber Creek** 26.72 48 P P 03 04 16.7 +0.6
baz=264
D17K **Noatak River** 26.73 32 P P 03 04 17.1 +0.9
baz=246
N16K **Nishlik Lake** 26.76 49 P P 03 04 17.0 +0.5
baz=265
G17K **Kiwalik Mounta** 26.88 38 P P 03 04 18.3 +0.8
baz=253
CHGN **Chignik** 26.89 58 P P 03 04 18.4 +0.7
baz=274
F17K **Baldwin Pennin** 26.94 35 P 03 04 18.6 +0.6
F17K IAmb IAmb 03 04 20.4
comp=Z,6.5nm,0.9s
F17K **Baldwin Pennin** 26.94 35 P P 03 04 18.9 +0.8
baz=251
RDOG **Red Dog Mine** 26.94 32 P P 03 04 19.2 +1.1
baz=246
E17K **Hotham Inlet** 26.94 34 P P 03 04 18.9 +0.8
baz=249
H17K **Granite Mounta** 27.02 39 P P 03 04 19.6 +0.8
baz=255
C17K **DeLong Mountai** 27.03 31 P P 03 04 19.4 +0.6
baz=245
J17K **VABM Dome** 27.03 42 P P 03 04 19.7 +0.8
baz=259
O16K **Kokwok River B** 27.04 51 P P 03 04 19.6 +0.6
baz=267
L17K **Donlin** 27.17 45 P P 03 04 20.8 +0.6
baz=262
K17K **Iditarod** 27.25 44 P P 03 04 21.2 +0.3
baz=261
M17K **Holitna River** 27.49 47 P P 03 04 23.8 +0.7
baz=265
E18K **Tukpahlearik C** 27.51 34 P P 03 04 24.1 +0.9
baz=250
N17K **Nushagak Hills** 27.54 49 P P 03 04 24.1 +0.6
baz=266
O17K **Koliganek Bris** 27.55 51 P P 03 04 24.2 +0.6
baz=268
F18K **Selawik** 27.59 36 P P 03 04 25.1 +1.2
baz=252,SNR=6.3
H18K **Honhosa River** 27.71 39 P P 03 04 26.6 +1.5
H18K **Honhosa River** 27.71 39 P P 03 04 25.9 +0.9
baz=256
C18K **Utukok River** 27.76 31 P 03 04 26.2 +0.7
C18K **Utukok River** 27.76 31 P P 03 04 26.5 +0.9
baz=247
G18K **Tagagawik** 27.78 37 P P 03 04 26.4 +0.7
baz=255
L18K **Granite Mounta** 27.93 45 P P 03 04 27.6 +0.6
baz=264
R17L **Mt. Peulik Vol** 27.94 55 P P 03 04 27.6 +0.4
baz=273
J18K **Innoko River** 28.08 43 P P 03 04 29.2 +0.8
baz=261
Q17K **Contact Creek** 28.17 54 P P 03 04 30.0 +0.7
baz=272
N18K **Kilae Creek** 28.19 49 P P 03 04 30.2 +0.8
baz=267
GCSA **Galena City Sc** 28.24 40 P P 03 04 30.5 +0.8
baz=259
M18K **Stony River** 28.27 47 P P 03 04 30.8 +0.8
baz=266
F19K **Shaleruckik Mo** 28.38 36 P P 03 04 31.7 +0.8
baz=254
A19K **Wainwright** 28.45 28 P P 03 04 32.8 +1.2
baz=244
G19K **Purcell Mounta** 28.46 37 P P 03 04 32.0 +0.3
baz=256
C19K **Lookout Ridge** 28.48 31 P P 03 04 32.9 +1.1
baz=248
P18K **Big Mountain,** 28.49 51 P P 03 04 32.8 +0.7
baz=270
O18K **Koktuh Hills** 28.50 50 P P 03 04 32.6 +0.4
baz=270
H19K **Roundabout Mou** 28.58 38 P P 03 04 34.0 +1.3
H19K IAmb IAmb 03 04 34.6
comp=Z,6.7nm,1.0s
H19K **Roundabout Mou** 28.58 38 P P 03 04 33.3 +0.6
baz=258
Q18K **Katmai Hardscr** 28.62 53 P P 03 04 33.7 +0.4
baz=272
J19K **Poorman** 28.65 42 P P 03 04 34.1 +0.7
baz=262
E19K **Redstone River** 28.75 34 P P 03 04 35.4 +1.1
E19K **Redstone River** 28.75 34 P P 03 04 35.5 +1.2
baz=254
D19K **Kuna River** 28.76 32 P P 03 04 35.2 +0.8
baz=251
L19K **White Mountain** 28.78 46 P P 03 04 35.0 +0.4
baz=266
N19K **Bonanza Creek** 28.89 48 P P 03 04 36.1 +0.4
baz=268
O19K **Port Alsworth** 28.95 50 P P 03 04 36.7 +0.6
baz=270
M19K **Big River Lodg** 28.98 46 P P 03 04 37.1 +0.7
baz=266
H20K **Anotleneega Mo** 29.21 39 P P 03 04 39.2 +0.9
baz=260
F20K **Avaraart Lake** 29.21 36 P P 03 04 39.2 +0.9
baz=256
K20K **Telida** 29.25 43 P P 03 04 39.6 +0.8
baz=264
J20K **Nowinta River** 29.31 42 P P 03 04 40.9 +1.6
J20K **Nowinta River** 29.31 42 P P 03 04 39.9 +0.6
baz=263
D20K **Etivluk River** 29.35 32 P P 03 04 40.6 +1.0
D20K IAmb IAmb 03 04 57.4
comp=Z,4.7nm,1.1s
D20K **Etivluk River** 29.35 32 P P 03 04 40.6 +1.0
baz=252
E20K **Nigu River** 29.36 33 P P 03 04 40.6 +0.8
baz=253
M20K **Styx River** 29.58 46 P P 03 04 42.3 +0.6
baz=268
B20K **Meade River** 29.60 29 P 03 04 43.0 +1.3
B20K **Meade River** 29.60 29 P P 03 04 43.1 +1.3
baz=249
G21K **Allakaket** 29.95 37 P P 03 04 45.8 +0.8
baz=259
Q20K **Shuyak Island** 29.99 53 P P 03 04 45.9 +0.7
baz=274
SPCR **Spurr Chakacha** 30.00 48 P P 03 04 45.1 -0.4
baz=270
CHUM **Lake Minchumin** 30.08 42 P P 03 04 46.9 +0.8
baz=265
H21K **Melozitna River** 30.09 39 P P 03 04 47.4 +1.2
H21K IAmb IAmb 03 04 48.1
comp=Z,5.0nm,0.8s
H21K **Melozitna River** 30.09 39 P P 03 04 47.0 +0.9
baz=261,SNR=5.3
F21K **Alatna River** 30.10 36 P P 03 04 47.2 +0.9
baz=258
C21K **Knifeblade Rid** 30.12 32 P P 03 04 47.9 +1.5
baz=253
E21K **Killik River** 30.21 33 P P 03 04 48.2 +1.0
baz=256
A21K **Barrow** 30.26 27 P P 03 04 48.7 +1.2
baz=248
B21K **Ikpikpuk River** 30.31 31 P 03 04 49.5 +1.5
B21K IAmb IAmb 03 04 50.4
comp=Z,4.9nm,1.1s
B21K **Ikpikpuk River** 30.31 31 P P 03 04 49.0 +1.0
baz=253
HOM **Homer** 30.31 51 P P 03 04 49.0 +0.9
baz=273
SKT **Skwentna** 30.34 46 P P 03 04 49.0 +0.6
baz=269
I21K **Tanana** 30.36 40 P P 03 04 49.3 +0.8
baz=263
A22K **Sinclair Lake** 30.64 28 P P 03 04 51.9 +1.0
baz=255
F22K **John River** 30.66 35 P P 03 04 51.9 +0.8
baz=259
BPAW **Bear Paw Mtn.** 30.68 42 P P 03 04 52.0 +0.6
baz=266
H22K **Ishtalitna Cre** 30.71 38 P P 03 04 52.2 +0.7
baz=262
BRSE **Bradley Lake S** 30.77 51 P P 03 04 52.8 +0.6
baz=274
MLY **Manley** 30.87 40 P P 03 04 53.8 +0.7
baz=265
B22K **Teshekpuk Lake** 30.92 30 P P 03 04 54.4 +1.1
baz=253
E22K **Anaktuvuk Pass** 30.92 34 P P 03 04 54.8 +1.3
E22K **Anaktuvuk Pass** 30.92 34 P P 03 04 54.2 +0.8
baz=258
CUT **Chulitna** 30.93 45 P P 03 04 54.7 +1.2
baz=269
TRF **Tatotofare Moun** 30.95 43 P P 03 04 54.3 +0.3
baz=268
RC01 **Rabbit Creek A** 31.20 48 P P 03 04 56.6 +0.6
baz=272
O22K **Cooper Landing** 31.23 49 P P 03 04 56.9 +0.6
baz=273
G23K **Bananza Creek** 31.36 37 P P 03 04 58.3 +1.0
baz=262
COLD **Coldfoot** 31.36 36 P P 03 04 58.3 +0.9
baz=262
SEW **Seward** 31.39 50 P P 03 04 58.4 +0.8
baz=274
I23K **Minto, Yukon-K** 31.46 40 P P 03 04 59.1 +0.9
baz=266
PMR **Palmer** 31.48 47 P P 03 04 59.1 +0.8
baz=272
D23K **Nanushuk River** 31.50 33 P P 03 04 59.9 +1.4
D23K IAmb IAmb 03 05 00.7
comp=Z,7.4nm,1.4s
D23K **Nanuk River** 31.50 33 P P 03 04 59.6 +1.1
baz=258
MCK **McKinley** 31.57 43 P P 03 04 59.9 +0.6
baz=268
C23K **Itkillik River** 31.71 31 P P 03 05 01.6 +1.3
baz=257
E23K **Chandalar** 31.71 34 P 03 05 02.2 +1.7
E23K **Chandalar** 31.71 34 P P 03 05 01.7 +1.1
baz=261
WAT1 **Susitna Watana** 31.73 45 P P 03 05 01.5 +0.8
baz=270
KNK **Knik Glacier** 31.81 47 P P 03 05 01.9 +0.6
baz=273
TOLK **Toolik Lake Re** 31.83 33 P P 03 05 02.7 +1.2
baz=260
SML **Sawmill** 31.85 46 P P 03 05 02.7 +0.9
SML **Sawmill** 31.85 46 P P 03 05 02.4 +0.7
baz=272,SNR=5.6
COLA **College** 32.09 41 *de*P P 03 05 04.7 +1.0
COLA pmax pmax
comp=Z,16nm,1.8s
H24K **Noodor Dome** 32.13 39 P P 03 05 04.9 +0.8
baz=266
E24K **Your Creek** 32.14 35 P P 03 05 05.5 +1.3
E24K IAmb IAmb 03 05 06.5
comp=Z,4.3nm,0.8s
E24K **Your Creek** 32.14 35 P P 03 05 05.1 +0.9
baz=262
M23K **Glacier View** 32.14 46 P P 03 05 04.9 +0.7
baz=273
DHY **Denali Highway** 32.27 44 P P 03 05 06.1 +0.6
baz=271
POKR **Poker Plat Res** 32.27 40 P P 03 05 06.5 +1.1
baz=268
F24K **Squaw Lake** 32.29 36 P P 03 05 06.6 +1.1
F24K **Squaw Lake** 32.29 36 P P 03 05 06.6 +1.1
baz=263
SCM **Sheep Creek Mo** 32.33 46 P P 03 05 06.9 +0.9
baz=273
C24K **Franklin Bluff** 32.34 32 P P 03 05 06.8 +1.0
baz=259
G24K **Hadweenzic Riv** 32.36 37 P P 03 05 08.0 +1.8
G24K IAmb IAmb 03 05 08.7
comp=Z,5.9nm,0.8s
G24K **Hadweenzic Riv** 32.36 37 P P 03 05 07.1 +1.0
baz=265
HDA **Harding Lake** 32.46 42 P P 03 05 07.7 +0.7
baz=269
IL31 32.49 41 P P 03 05 07.9 +0.7
ILAR **Eielson Array** 32.49 41 P P 03 05 07.8 +0.5
comp=Z,0.8nm,0.7s,baz=248,slow=7.9,SNR=28
comp=Z,0.8nm,0.7s
ILAR **Eielson Array** 32.49 41 P P 03 05 07.6 +0.3
ILAR **Eielson Array** 32.49 41 P P 03 05 07.6 +0.3
GLI **Glacier Island** 32.50 48 P P 03 05 08.0 +0.6
baz=275
G25K **Bearman Lake** 32.91 37 P P 03 05 11.8 +0.9
baz=266
KLU **Klutina** 33.02 47 P P 03 05 12.6 +0.6
baz=275
Q23K **Middleton Isla** 33.02 51 P P 03 05 12.7 +0.8
baz=277
D25K **Kavik River** 33.08 32 P P 03 05 13.6 +1.2
D25K IAmb IAmb 03 05 14.3
comp=Z,4.6nm,0.7s
D25K **Kavik River** 33.08 32 P P 03 05 13.3 +0.9
baz=262
PRP **Porcupine Dome** 33.09 40 P P 03 05 13.5 +0.9
baz=269
J25K **Salcha River,** 33.14 41 P P 03 05 13.7 +0.6
baz=270
F25K **Christian Rive** 33.15 36 P P 03 05 13.9 +0.8
baz=265
EYAK **Cordova Ski Ar** 33.19 49 P P 03 05 14.2 +0.9
baz=276
E25K **Arctic Village** 33.23 35 P 03 05 14.2 +0.4
E25K IAmb IAmb 03 05 16.2
comp=Z,2.5nm,0.9s
E25K **Arctic Village** 33.23 35 P P 03 05 14.6 +0.9
baz=265
FYU **Fort Yukon** 33.25 38 P 03 05 15.4 +1.6
RIDG **Independent Ri** 33.39 43 P P 03 05 15.9 +0.7
baz=272
BMAR **Burnt Mountain** 33.55 36 P 03 05 18.2 +1.6
SONM **Songino Array** 33.63 288 PcP PcP 03 07 55.9 -0.9
comp=Z,0.4nm,0.4s,baz=64,slow=3.4,SNR=2.8
SONM LR LR 03 20 18.0
comp=Z,32nm,18.9s,baz=326,slow=39
SONM **Songino Array** 33.63 288 P P 03 05 18.3 +0.8
SONM **Songino Array** 33.63 288 P P 03 05 18.3 +0.8
SONM pmax pmax
comp=Z,1.0nm,1.4s
N25K **Chitina, Valde** 33.64 47 P P 03 05 18.4 +0.9
baz=276
C26K **Camden Bay** 33.67 32 P P 03 05 18.7 +1.2
baz=263
BMRM **Bremner River** 33.70 48 P P 03 05 18.4 +0.5
baz=276
F26K **Sheenjek River** 33.73 36 P P 03 05 18.7 +0.6
baz=267
SCRK **Sand Creek** 33.76 42 P P 03 05 18.7 +0.2
SCRK **Sand Creek** 33.76 42 P P 03 05 19.2 +0.7
baz=272
G26K **Porcupine Rive** 33.84 37 P P 03 05 20.5 +1.6
G26K **Porcupine Rive** 33.84 37 P P 03 05 19.8 +0.8
baz=268
KAIM **Kayak Island** 33.92 50 P P 03 05 20.4 +0.6
baz=278
TLY **Talaya** 33.99 295 LR LR 03 18 56.2
comp=Z,37nm,21.0s,baz=54,slow=36
C27K **Jago River** 34.05 32 P P 03 05 22.4 +1.6
C27K IAmb IAmb 03 05 22.6
comp=Z,3.2nm,0.7s
C27K **Jago River** 34.05 32 P P 03 05 21.7 +1.0
baz=264
I26K **Coal Creek Min** 34.08 40 P P 03 05 22.1 +1.0
baz=271
L26K **Log Cabin Wild** 34.10 44 P P 03 05 22.0 +0.6
baz=274
M26K **Nabesna, AK** 34.32 45 P P 03 05 24.0 +0.7
baz=276
MCARA **McCarthy VSAT** 34.41 47 P P 03 05 24.7 +0.6
baz=277
CRQE **Cirque** 34.46 48 P P 03 05 25.1 +0.5
baz=278
K27K **Chicken** 34.60 42 P P 03 05 27.0 +1.4
K27K IAmb IAmb 03 05 28.4
comp=Z,8.3nm,1.3s
G27K **Doyon Strip** 34.67 37 P P 03 05 27.2 +0.9
G27K **Doyon Strip** 34.67 37 P P 03 05 27.1 +0.9
baz=270
I27K **Kandik River** 34.72 39 P P 03 05 27.6 +1.0
baz=272
E27K **Coleen River** 34.72 35 P 03 05 28.1 +1.5
E27K IAmb IAmb 03 05 29.1
comp=Z,3.9nm,0.8s
E27K **Coleen River** 34.72 35 P P 03 05 27.5 +0.9
baz=268
H27K **Steamboat Moun** 34.73 38 P 03 05 28.4 +1.7
H27K IAmb IAmb 03 05 29.5
comp=Z,2.9nm,0.7s
H27K **Steamboat Moun** 34.73 38 P P 03 05 27.8 +1.0
baz=271
L27K **Beaver Creek,** 34.79 44 P P 03 05 28.8 +1.5
L27K **Beaver Creek,** 34.79 44 P P 03 05 28.3 +1.0
baz=276
BCAR **Beaver Creek A** 34.81 44 P P 03 05 29.0 +1.6
D27M **Malcolm River** 34.99 33 P P 03 05 30.0 +1.0
baz=268
MESA **MESA** 35.11 49 P P 03 05 30.7 +0.4
baz=280
CTG **Chitna Glacier** 35.28 47 P P 03 05 32.1 +0.5
baz=279
F28M **Old Crow** 35.36 36 P 03 05 33.5 +1.3
F28M **Old Crow** 35.36 36 P P 03 05 33.3 +1.1
baz=271,SNR=11
I28M **Miner Creek** 35.42 40 P P 03 05 34.2 +1.4
I28M IAmb IAmb 03 05 35.4
comp=Z,2.6nm,0.7s
I28M **Miner Creek** 35.42 40 P P 03 05 33.6 +0.8
baz=274
E28M **Babbage River** 35.49 34 P P 03 05 34.8 +1.6
baz=270
YUK3 **Moose Creek** 35.58 46 P P 03 05 34.9 +0.6
baz=279
O28M **Mount Upton** 35.87 48 P P 03 05 37.9 +1.1
baz=280
PINM **Pinnacle** 35.96 49 P P 03 05 38.3 +0.9
baz=281
H29M **Whitestone** 36.01 38 P 03 05 39.5 +1.8
H29M IAmb IAmb 03 06 00.3
comp=Z,9.3nm,1.5s
H29M **Whitestone** 36.01 38 P P 03 05 38.7 +1.0
baz=274
E29M **Blow River** 36.09 34 P 03 05 40.4 +2.0
E29M IAmb IAmb 03 05 41.3
comp=Z,4.1nm,0.8s
E29M **Blow River** 36.09 34 P P 03 05 39.4 +1.0
baz=272
G29M **Pine Creek** 36.11 37 P P 03 05 40.4 +1.9
G29M **Pine Creek** 36.11 37 P P 03 05 39.6 +1.1
baz=274
I29M **Ogilvie Camp,** 36.11 40 P P 03 05 39.5 +0.9
baz=275
M29M **Somme Creek** 36.40 45 P P 03 05 42.8 +1.5
M29M IAmb IAmb 03 06 11.0
comp=Z,5.9nm,1.5s
M29M **Somme Creek** 36.40 45 P P 03 05 41.7 +0.5
baz=279
L29M **L29M** 36.45 43 P P 03 05 43.5 +1.9
L29M **L29M** 36.45 43 P P 03 05 42.1 +0.5
baz=279
YUK4 **Talbot Arm** 36.50 46 P P 03 05 43.5 +1.2
baz=280
K29M **Barlow Dome** 36.62 42 P P 03 05 43.7 +0.6
baz=278
EPYK **Eagle Plains** 36.66 38 P P 03 05 45.0 +1.7
EPYK **Eagle Plains** 36.66 38 P P 03 05 44.1 +0.7
baz=275,SNR=7.4
YUK6 **Outpost Mounta** 36.72 47 P P 03 05 44.8 +0.8
baz=281
G30M **tAoh Zraii Nji** 36.81 37 P P 03 05 46.2 +1.7
G30M IAmb IAmb 03 05 46.4
comp=Z,3.7nm,0.7s
G30M **tAoh Zraii Nji** 36.81 37 P P 03 05 45.7 +1.2
baz=275
F30M **Barrier River** 36.93 36 P P 03 05 47.1 +1.7
baz=274
I30M **Mount Dempster** 36.93 40 P 03 05 47.4 +1.7
I30M IAmb IAmb 03 05 47.8
comp=Z,3.0nm,0.9s
I30M **Mount Dempster** 36.93 40 P P 03 05 46.3 +0.6
baz=277
M30M **Minto, Yukon** 37.15 44 P P 03 05 48.4 +0.9
baz=280
HYT **Haines Junctio** 37.15 47 P P 03 05 48.0 +0.4
baz=282
MAYO **Mayo, Yukon** 37.37 42 P P 03 05 50.3 +1.0
baz=280
G31M **Satah River** 37.58 37 P 03 05 52.7 +1.7
G31M **Satah River** 37.58 37 P P 03 05 51.9 +0.9
baz=277,SNR=5.9
H31M **Peel River** 37.69 39 P 03 05 54.0 +2.0
H31M IAmb IAmb 03 05 54.3
comp=Z,4.4nm,0.8s
H31M **Peel River** 37.69 39 P P 03 05 53.0 +1.0
baz=278
INK **Inuvik** 37.72 34 P 03 05 53.9 +1.8
INK IAmb IAmb 03 05 54.3
comp=Z,3.9nm,0.7s
INK **Inuvik** 37.72 34 P P 03 05 53.9 +1.8
INK pmax pmax
comp=Z,4.0nm,0.7s

INK	**Inuvik**	**37.72**	**34**	P		P	03 05 54.0	+1.9
	baz=276,SNR=5.5							
F31M	**Tsiigehtchic**	**37.73**	**36**			P	03 05 53.7	+1.5
F31M	**Tsiigehtchic**	**37.73**	**36**	P		**P**	**03 05 52.8**	**+0.6**
	baz=276,SNR=6.6							
N31M	**Braeburn, Yuko**	**37.83**	**46**	P		**P**	**03 05 53.9**	**+0.6**
	baz=282							
O30N	**Mendenhall**	**37.84**	**47**	P		**P**	**03 05 54.0**	**+0.7**
	baz=283							
KNGR	**Kungurtug, Tuv**	**37.98**	**296**	⇑*e*P		**P**	**03 05 56.3**	**+1.6**
KNGR					pmax	pmax		
	comp=Z,3.0nm,1.0s							
M31M	**Drury Creek, Y**	**38.32**	**44**	P		P	03 05 58.5	+1.2
	baz=283							
NRIK	**Noril'sk**	**38.32**	**327**	LR		LR	03 23 37.0	
	comp=Z,72nm,18.1s,baz=33,slow=39							
WHY	**Whitehorse**	**38.44**	**47**	P		**P**	**03 05 59.2**	**+0.7**
	baz=284							
S31K	**Pelican**	**38.48**	**51**	P		**P**	**03 05 59.7**	**+1.0**
	baz=287							
SIT	**Sitka**	**39.22**	**53**	P		**P**	**03 06 06.1**	**+1.2**
	baz=288							
P32M	**Atlin**	**39.29**	**48**	P		P	03 06 06.7	+1.2
	baz=286							
S32K	**Killisnoo**	**39.48**	**52**	P		P	03 06 08.3	+1.3
	baz=288							
P33M	**Teslin, Yukon**	**39.55**	**47**	P		P	03 06 08.9	+1.2
	baz=286							
A36M	**Sachs Harbour**	**40.09**	**28**	P		P	03 06 13.6	+1.8
	baz=278							
R33M	**Jennings River**	**40.68**	**48**	P		**P**	**03 06 17.5**	**+0.4**
	baz=288							
U33K	**Whale Pass**	**40.68**	**53**	P		**P**	**03 06 18.1**	**+1.1**
	baz=291							
C36M	**Paulatuk**	**40.95**	**32**			P	03 06 21.0	+2.0
C36M					IAmb	IAmb	03 06 21.5	
	comp=Z,15nm,1.3s							
C36M	**Paulatuk**	**40.95**	**32**	P		**P**	**03 06 19.5**	**+0.5**
	baz=282							
WRAK	**Wrangell Islan**	**40.98**	**53**	P		**P**	**03 06 20.6**	**+1.2**
	baz=291							
LZDM	**Lanzhou Array**	**41.24**	**272**	P		**P**	**03 06 23.0**	**+0.7**
	comp=Z,1.1nm,0.3s,baz=57,slow=14,SNR=1.6							
	comp=Z,1.1nm,0.3s							
WTLY	**Watson Lake, Y**	**41.49**	**46**	P		**P**	**03 06 24.8**	**+1.1**
	baz=289							
V35K	**Ketchikan**	**41.77**	**54**	P		**P**	**03 06 27.1**	**+1.2**
	baz=292							
T35M	**Bob Quinn**	**41.86**	**51**	P		P	03 06 28.1	+1.4
	baz=291							
WRGLY	**Wrigley**	**42.87**	**41**	P		P	03 06 36.4	+1.6
	baz=290							
YKAW3	**Yellowknife Wh**	**46.87**	**39**			P	03 07 08.2	+1.7
YKAW3					IAmb	IAmb	03 07 08.9	
	comp=Z,4.1nm,0.7s							
YKA	**Yellowknife Ar**	**46.90**	**39**	P		P	03 07 08.4	+1.6
	comp=Z,1.9nm,0.6s,baz=303,slow=7.4,SNR=38							
YKA					PcP	**PcP**	**03 08 37.4**	**-1.4**
	comp=Z,0.2nm,0.6s,baz=316,slow=3.9,SNR=3.0							
	comp=Z,1.9nm,0.6s							
YKA	**Yellowknife Ar**	**46.90**	**39**	P		P	03 07 08.3	+1.5
YKAW1	**Yellowknife Wh**	**46.95**	**39**			P	03 07 08.9	+1.6
YKAW1					IAmb	IAmb	03 07 09.6	
	comp=Z,4.2nm,0.9s							
RES	**Resolute Bay**	**47.34**	**20**	P		P	03 07 12.1	+2.0
RES	**Resolute Bay**	**47.34**	**20**	P		P	03 07 12.1	+2.0
RES					pmax	pmax		
	comp=Z,2.0nm,1.0s							
MK31	**Makanchi Array**	**48.67**	**298**	⇓*e*P		**P**	**03 07 20.2**	**-0.6**
MKAR	**Makanchi Array**	**48.67**	**298**	P		**P**	**03 07 20.1**	**-0.8**
	comp=Z,1.2nm,0.4s,baz=49,slow=6.0,SNR=20							
MKAR					LR	LR	03 27 33.8	
	comp=Z,58nm,20.0s,baz=22,slow=36							
	comp=Z,1.2nm,0.4s							
MKAR	**Makanchi Array**	**48.67**	**298**	P		**P**	**03 07 20.5**	**-0.3**
MKAR	**Makanchi Array**	**48.67**	**298**	P		**P**	**03 07 20.5**	**-0.3**
KURK	**Kurchatov**	**48.67**	**304**			**P**	**03 07 20.0**	**-0.7**
KURK					IAmb	IAmb	03 07 32.3	
	comp=Z,3.0nm,0.6s							
KURK	**Kurchatov**	**48.67**	**304**	P		**P**	**03 07 20.0**	**-0.7**
KURK					pmax	pmax		
	comp=Z,3.0nm,0.6s							
KURBB	**Kurchatov Arra**	**48.77**	**304**	P		**P**	**03 07 20.7**	**-0.8**
	comp=Z,1.6nm,0.4s,baz=61,slow=7.9,SNR=30							
	comp=Z,1.6nm,0.4s							
SPITS	**Spitsbergen Ar**	**50.66**	**350**	P		**P**	**03 07 36.1**	**+0.5**
	comp=Z,11nm,0.9s,baz=39,slow=9.4,SNR=4.0							
	comp=Z,11nm,0.9s							
BVAR	**Borovoye Array**	**51.75**	**310**	P		**P**	**03 07 43.5**	**-0.5**
	comp=Z,0.9nm,0.4s,baz=61,slow=9.6,SNR=9.8							
	comp=Z,0.9nm,0.4s							
BORK	**Borovoye**	**51.78**	**310**	P		**P**	**03 07 43.6**	**-0.5**
BORK					IAmb	IAmb	03 07 55.9	
	comp=Z,2.4nm,0.7s							
BORK	**Borovoye**	**51.78**	**310**	⇑*i*P		**P**	**03 07 43.5**	**-0.7**
BORK					pmax	pmax		
	comp=Z,6.0nm,2.4s							
BLKN	**Baker Lake**	**53.00**	**32**			P	03 07 54.6	+1.6
ARTI	**Arti**	**55.42**	**318**	LR		LR	03 36 26.3	
	comp=Z,48nm,18.8s,baz=208,slow=41							
AAK	**Ala-Archa**	**55.60**	**297**	LR		LR	03 34 41.2	
	comp=Z,49nm,18.4s,baz=44,slow=39							
AAK	**Ala-Archa**	**55.60**	**297**			**P**	**03 08 12.9**	**+0.3**
AAK					IAmb	IAmb	03 08 25.7	
	comp=Z,2.2nm,0.8s							
AAK	**Ala-Archa**	**55.60**	**297**	⇓*e*P		**P**	**03 08 13.0**	**+0.5**
AAK					pmax	pmax		
	comp=Z,8.0nm,2.3s							
AAK					MLR	MLR		
	comp=Z,49nm,16.0s							
SHL	**Shillong**	**55.67**	**270**			**P**	**03 08 13.7**	**+0.4**
SHL	**Shillong**	**55.67**	**270**	P		**P**	**03 08 13.7**	**+0.4**
SHL					pmax	pmax		
	comp=Z,5.0nm,0.8s							
CMAR	**Chiang Mai Arr**	**56.12**	**259**	P		**P**	**03 08 16.3**	**0.0**
	comp=Z,0.6nm,0.3s,baz=40,slow=7.4,SNR=1.7							
CMAR					LR	LR	03 34 02.3	
	comp=Z,9.0nm,18.7s,baz=200,slow=38							
	comp=Z,0.6nm,0.3s							
CMAR	**Chiang Mai Arr**	**56.12**	**259**	P		**P**	**03 08 17.2**	**+0.9**
CMAR	**Chiang Mai Arr**	**56.12**	**259**	P		**P**	**03 08 17.2**	**+0.9**
ARCES	**ARCESS Array B**	**56.48**	**342**	P		**P**	**03 08 18.2**	**0.0**
	comp=Z,10.0nm,1.0s,baz=35,slow=7.6,SNR=2.2							
	comp=Z,10.0nm,1.0s							
ARCES	**ARCESS Array B**	**56.48**	**342**	P		**P**	**03 08 19.1**	**+0.9**
ARCES	**ARCESS Array B**	**56.48**	**342**	P		**P**	**03 08 19.1**	**+0.9**
ARCES					pmax	pmax		
	comp=Z,71nm,1.5s							
EVN	**Everest**	**57.35**	**276**			**P**	**03 08 25.7**	**-0.1**
EVN					IAmb	IAmb	03 08 39.7	
	comp=Z,4.1nm,0.8s							
NVAR	**Mina Array Bea**	**58.38**	**66**	P		**P**	**03 08 32.3**	**0.0**
	comp=Z,0.3nm,0.4s,baz=308,slow=7.1,SNR=1.4							
	comp=Z,0.3nm,0.4s							
NVAR	**Mina Array Bea**	**58.38**	**66**	P		**P**	**03 08 33.5**	**+1.2**
PDAR	**Pinedale Array**	**60.60**	**58**	P		**P**	**03 08 48.2**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=313,slow=6.7,SNR=6.5							
	comp=Z,0.8nm,0.8s							
ULM	**Lac du Bonnet**	**62.43**	**44**	P		**P**	**03 08 59.9**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=306,slow=7.0,SNR=3.2							
	comp=Z,0.9nm,0.5s							
ULM	**Lac du Bonnet**	**62.43**	**44**	P		**P**	**03 09 00.3**	**+0.8**
ULM	**Lac du Bonnet**	**62.43**	**44**	P		**P**	**03 09 00.3**	**+0.8**
ULM					pmax	pmax		
	comp=Z,8.0nm,1.4s							
FINES	**FINESS Array B**	**63.07**	**336**	P		**P**	**03 09 03.2**	**-0.3**
	comp=Z,2.6nm,0.8s,baz=24,slow=10,SNR=6.6							
	comp=Z,2.6nm,0.8s							
FINES	**FINESS Array B**	**63.07**	**336**	P		**P**	**03 09 04.0**	**+0.5**
FINES	**FINESS Array B**	**63.07**	**336**	*i* P		**P**	**03 09 05.3**	**+1.8**
FINES					pmax	pmax		
	comp=Z,3.0nm,0.8s							
NB2	**NORSAR Subarra**	**66.80**	**343**	P		**P**	**03 09 28.2**	**+0.3**
	comp=Z,2.5nm,0.8s,baz=23,slow=6.5							
NOA	**NORSAR Array B**	**66.80**	**343**	P		**P**	**03 09 28.4**	**+0.5**
	comp=Z,1.2nm,0.6s,baz=23,slow=6.4,SNR=8.2							
	comp=Z,1.2nm,0.6s							
HFS	**Hagfors**	**67.14**	**342**	P		**P**	**03 09 29.8**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=38,slow=5.4,SNR=4.8							
HFS					LR	LR	03 43 12.5	
	comp=Z,36nm,18.0s,baz=43,slow=40							
	comp=Z,2.0nm,0.8s							
MNK	**Minsk**	**68.40**	**331**	*i* P		**P**	**03 09 37.5**	**-0.5**
	comp=E,15nm,0.9s							
MNK				*i* P		**P**	**03 09 37.5**	**-0.5**
	comp=N,11nm,0.8s							
MNK				*i* P		**P**	**03 09 37.5**	**-0.5**
	comp=Z,8.0nm,0.8s,baz=32							
MNK				*i* pP		**sP**	**03 09 51.6**	**-1.0**
MNK				*i* PP		**PP**	**03 12 08.8**	**+0.2**
MNK				*i* PPP		PPP	03 13 48.1	
MNK				*i* S		**S**	**03 18 35.9**	**0.0**
MNK				*i* sS		**sS**	**03 19 00.2**	**+6.4**
MNK				*i* SS		**SS**	**03 22 58.9**	**0.0**
MNK				*i* SSS		SSS	03 26 18.0	
MNK				*i* LQ		LQ	03 33 34.7	
MNK				*i* LR		LR	03 40 07.6	
MNK				*i* LRM		MLR	03 41 16.3	
	comp=Z,58nm,16.7s							
MNK				*i* LRM		MLR	03 42 13.3	
	comp=N,201nm,17.9s							
MNK				*i* LRM		MLR	03 42 17.0	
	comp=E,169nm,17.5s							
MNK	**Minsk**	**68.40**	**331**	*i* P		**P**	**03 09 37.4**	**-0.5**
MNK				*i* *PP		**sP**	**03 09 51.6**	**-1.0**
MNK				*i*			03 12 08.7	
MNK				*i* PPP		PPP	03 13 48.0	
MNK				*i* S		**S**	**03 18 35.9**	**0.0**
MNK				*i* *SS		**sS**	**03 19 00.2**	**+6.4**
MNK				*i* SS		**SS**	**03 22 58.8**	**0.0**
MNK					pmax	pmax		
	comp=N,11nm,0.8s							
MNK					pmax	pmax		
	comp=Z,8.0nm,0.8s							
MNK					pmax	pmax		
	comp=E,15nm,0.9s							
MNK					MLR	MLR		
	comp=Z,58nm,17.0s							
MNK					MLR	MLR		
	comp=N,201nm,18.0s							
MNK					MLR	MLR		
	comp=E,169nm,17.0s							
SCHQ	**Schefferville**	**69.64**	**26**	P		**P**	**03 09 46.1**	**+0.4**
	comp=E,0.6nm,0.4s,baz=315,slow=10.0,SNR=1.9							
	comp=E,0.6nm,0.4s							
SCHQ	**Schefferville**	**69.64**	**26**	P		**P**	**03 09 46.4**	**+0.7**
AKASG	**Malin Array Be**	**71.17**	**328**	P		**P**	**03 09 54.9**	**-0.2**
	comp=E,2.0nm,0.5s,baz=33,slow=6.3,SNR=9.0							
AKASG					LR	LR	03 43 05.2	
	comp=E,29nm,18.7s,baz=14,slow=38							
	comp=E,2.0nm,0.5s							
AKASG	**Malin Array Be**	**71.17**	**328**	P		**P**	**03 09 55.9**	**+0.9**
AKASG					IAmb	IAmb	03 10 36.9	
	comp=Z,5.9nm,1.5s							
AKASG	**Malin Array Be**	**71.17**	**328**	P		**P**	**03 09 55.9**	**+0.9**
AKASG					pmax	pmax		
	comp=Z,6.0nm,1.5s							
NCK	**Nalchik**	**71.23**	**316**	⇑*e*P		**P**	**03 09 55.4**	**-0.2**
NCK					pmax	pmax		
	comp=Z,52nm,3.6s							
KIV	**Kislovodsk**	**71.28**	**316**	*e*P		**P**	**03 09 56.1**	**+0.1**
KIV					pmax	pmax		
	comp=Z,4.0nm,1.1s							
KBZ	**Khabaz**	**71.37**	**316**	P		**P**	**03 09 56.0**	**-0.4**
	comp=Z,2.2nm,0.9s,baz=96,slow=5.3,SNR=5.4							
	comp=Z,2.2nm,0.9s							
KBZ	**Khabaz**	**71.37**	**316**	⇓*e*P		**P**	**03 09 54.0**	**-2.4**
KBZ					pmax	pmax		
	comp=Z,6.0nm,0.9s							
KBZ					MLR	MLR		
	comp=Z,32nm,15.0s							
SHA1	**Shidzhatmaz**	**71.47**	**316**	⇓*e*P		**P**	**03 09 58.5**	**+1.2**
WB0	**Warramunga Arr**	**71.89**	**203**	P		**P**	**03 09 59.3**	**-0.4**
WR0	**Warramunga Arr**	**72.04**	**203**	P		**P**	**03 10 00.2**	**-0.3**
WRA	**Warramunga Arr**	**72.08**	**203**	P		**P**	**03 10 00.2**	**-0.5**
	comp=Z,3.5nm,0.7s,baz=20,slow=6.3,SNR=23							
	comp=Z,3.5nm,0.7s							
WRA	**Warramunga Arr**	**72.08**	**203**	P		**P**	**03 10 00.3**	**-0.5**
WRA	**Warramunga Arr**	**72.08**	**203**	P		**P**	**03 10 00.3**	**-0.5**
WRA					pmax	pmax		
	comp=Z,1.0nm,1.3s							
GNI	**Garni**	**73.29**	**313**	LR		LR	03 44 46.7	
	comp=Z,20nm,21.6s,baz=314,slow=38							
TXAR	**Lajitas Array**	**73.41**	**64**	P		**P**	**03 10 09.8**	**+0.9**
	comp=Z,0.9nm,0.6s,baz=302,slow=4.8,SNR=17							
	comp=Z,0.9nm,0.6s							
TXAR	**Lajitas Array**	**73.41**	**64**	P		**P**	**03 10 10.0**	**+1.0**
EKA	**Eskdalemuir Ar**	**74.55**	**349**	P		P	03 10 17.5	+2.5
	comp=Z,0.2nm,0.5s,baz=19,slow=6.0,SNR=4.2							
	comp=Z,0.2nm,0.5s							
ASAR	**Alice Springs**	**75.75**	**203**	P		**P**	**03 10 22.6**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=15,slow=5.2,SNR=14							
	comp=Z,1.1nm,0.7s							
ASAR	**Alice Springs**	**75.75**	**203**	P		**P**	**03 10 22.4**	**+0.1**
GERES	**GERESS Array B**	**77.50**	**337**	LR		LR	03 49 41.8	
	comp=Z,32nm,18.6s,baz=43,slow=40							
BMRD	**Maredsous**	**78.15**	**343**	*d*PP		PP	03 13 39.4	+7.9
DOU	**Dourbes**	**78.38**	**343**	*d*P		P	03 10 49.6	+13
BRTR	**Keskin Array B**	**78.67**	**320**	P		**P**	**03 10 41.1**	**+2.3**
	comp=Z,0.4nm,0.7s,baz=19,slow=6.1,SNR=2.3							
	comp=Z,0.4nm,0.7s							
DAVOX	**Davos/Dischmat**	**80.37**	**338**	LR		LR	03 50 37.2	
	comp=Z,28nm,18.4s,baz=84,slow=39							
MMAI	**Mount Meron Ar**	**83.47**	**315**	P		**P**	**03 11 06.1**	**+1.8**
	comp=Z,0.5nm,0.4s,baz=5.7,slow=7.2,SNR=4.4							
	comp=Z,0.5nm,0.4s							
ESDC	**Sonseca Array**	**89.98**	**346**	P		**P**	**03 11 37.9**	**+1.9**
	comp=Z,0.2nm,0.8s,baz=22,slow=6.3,SNR=1.7							
	comp=Z,0.2nm,0.8s							
CPUP	**Villa Florida**	**144.38**	**63**	PKP		**PKPdf**	**03 18 10.8**	**-1.6**
	comp=Z,0.7nm,0.7s,baz=27,slow=2.3,SNR=2.3							
CPUP	**Villa Florida**	**144.38**	**63**			**PKPdf**	**03 18 11.0**	**-1.5**
PLCA	**Paso Flores**	**145.16**	**95**	PKPbc		**PKPdf**	**03 18 12.3**	**-1.2**
	comp=Z,2.3nm,0.9s,baz=300,slow=4.5,SNR=3.6							
ELIB	**Princess Elisa**	**149.51**	**206**	*d*PKPdf		**PKPab**	**03 18 30.8**	**+1.2**

*FUNV **26** 03:10:33.8, 10.05N×62.11W, h108km, MW4.1, Presumed earthquake*
*TRN **26** 03:10:36.0, 10.14N×62.07W, h89km, MD3.6, Gulf of Paria.*
ISC 26 03:10:37.5±4.1, 10.2N±0.2×62.1W±0.3, h84km±29km, n12, σ0.98/22, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPP	**Pointe-a-Pierr**	**0.63**	**83**	*e*P	**Pn**	**03 10 52.8**	**0.0**
PSMG	**Mucurapo Girls**	**0.69**	**51**	*e*P	**Pn**	**03 10 52.0**	**-1.4**
PSMG				*e*S	**Sn**	**03 11 05.5**	**+0.2**
DMDM	**Guralp CMG5TDE**	**0.69**	**49**	*e*P	**Pn**	**03 10 53.6**	**+0.2**
DMDM				*e*S	**Sn**	**03 11 05.9**	**+0.6**
PSQC	**Port of Spain**	**0.70**	**52**	*e*P	**Pn**	**03 10 52.6**	**-0.9**
PSQC				*e*S	**Sn**	**03 11 06.0**	**+0.7**
TRN	**Trinidad (W)**	**0.78**	**58**	*e*P	**Pn**	**03 10 53.7**	**-0.7**
TRN				*e*S	**Sn**	**03 11 08.1**	**+1.2**
TRN	**Trinidad (W)**	**0.78**	**58**	*e*P	**Pn**	**03 10 53.5**	**-0.8**
TRN				*e*S	**Sn**	**03 11 06.9**	**0.0**
GRFF	**Grenada Fort F**	**1.83**	**11**	*e*P	**Pn**	**03 11 07.0**	**-0.4**
GRFF				*e*S	**Sn**	**03 11 31.3**	**+1.3**
GRGR	**Grenville**	**1.93**	**13**	*e*P	**Pn**	**03 11 07.5**	**-1.1**
GRGR				*e*S	**Sn**	**03 11 32.6**	**+0.3**
GRGR	**Grenville**	**1.93**	**13**	*e*P	**Pn**	**03 11 08.4**	**-0.2**
GRGR				*e*S	**Sn**	**03 11 31.9**	**-0.4**
GCMP	**Grenada, Carri**	**2.33**	**16**	*e*S	**Sn**	**03 11 41.2**	**-0.5**
GCMP	**Grenada, Carri**	**2.33**	**16**	*e*P	**Pn**	**03 11 14.3**	**+0.4**
GCMP				*e*S	**Sn**	**03 11 42.7**	**+1.0**
SLBI	**Saint Lucia, B**	**3.92**	**16**	*e*P	**Pn**	**03 11 36.7**	**+1.3**
SLBI				*e*S	**Sn**	**03 12 18.1**	**-2.1**

*NEIC **26** 03:31:28.2±0.7, 19.11N±0.05×67.71W±0.04, h10km±2km, ML2.6/33, Md3.2/10(RSPR), Error ellipse: s-maj=9.6km s-min=4.8km az=36.0*
*SDD **26** 03:31:30.9±2.5, 19.13N×67.61W, h15km±122km, MD3.5, ML2.4, MW2.7, Presumed earthquake*
ISC 26 03:31:29.2±1.4, 19.11N±0.07×67.66W±0.04, h15km±9km, n26, σ0.67/43, 13C-1D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.75**	**166**		**Pg**	**03 31 43.8**	**0.0**
IDE					**Sg**	**03 31 53.7**	**+0.1**
AGPR	**Aguadilla, PR**	**0.83**	**141**		**Pg**	**03 31 45.2**	**-0.1**
AGPR				Sn	**Sg**	**03 31 56.4**	**+0.2**
AGPR				IAML		03 31 56.7	
	145nm,0.3s						
AGPR				IAML		03 31 57.9	
	217nm,0.3s						
AGPR	**Aguadilla, PR**	**0.83**	**141**	⇑*e*Pg	**Pg**	**03 31 45.3**	**-0.1**
AGPR				⇑*e*Sg	**Sg**	**03 31 56.5**	**+0.3**
AGPR				IAML		03 31 59.6	
	comp=N,107nm,0.2s						
PRSN	**Puerto Rico Se**	**1.02**	**151**	Pn	**Pb**	**03 31 48.4**	**-0.2**
PRSN				Sn	**Sb**	**03 32 02.4**	**+0.6**
PRSN				IAML		03 32 06.6	
	comp=N,252nm,0.3s						
PRSN	**Puerto Rico Se**	**1.02**	**151**	⇑*e*Sg	**Sg**	**03 32 03.0**	**+0.8**
PRSN				IAML		03 32 07.3	
	comp=N,276nm,0.2s						
LSP	**Las Mesas**	**1.08**	**150**		**Pb**	**03 31 49.3**	**-0.4**
LSP					**Sb**	**03 32 03.2**	**-0.4**
HIDR	**Higuey Centro**	**1.12**	**243**	⇓*e*Sg	**Sb**	**03 32 04.4**	**-0.5**
HIDR				IAML		03 32 06.4	
	comp=N,160nm,0.2s						
AOPR	**Arecibo Observ**	**1.15**	**131**	Pn	**Pb**	**03 31 50.5**	**-0.4**
AOPR	**Arecibo Observ**	**1.15**	**131**	⇑*e*Pg	**Pb**	**03 31 49.4**	**-1.5**
AOPR				⇑*e*Sg	**Sb**	**03 32 03.8**	**-1.9**
AOPR				IAML		03 32 08.4	
	comp=N,71nm,0.3s						
UUPR	**Utuado, UPR, P**	**1.24**	**134**		**Pn**	**03 31 51.4**	**-0.7**
UUPR				Sn	**Sb**	**03 32 07.5**	**-0.6**
EMPR	**Esperanza - Ma**	**1.25**	**120**		**Pg**	**03 31 53.3**	**0.0**
EMPR					**Sb**	**03 32 08.7**	**+0.3**
MLPR	**Magueyes Islan**	**1.28**	**153**	Pn	**Pn**	**03 31 52.4**	**-0.2**
MLPR				Sn	**Sb**	**03 32 09.0**	**-0.4**
MLPR	**Magueyes Islan**	**1.28**	**153**	⇑*e*Pg	**Pn**	**03 31 52.5**	**-0.2**
MLPR				⇑*e*Sg	**Sb**	**03 32 10.1**	**+0.7**
MLPR				IAML		03 32 12.6	
	comp=N,24nm,0.4s						
SMDR	**Samana, DR**	**1.45**	**277**		**Pn**	**03 31 53.9**	**-1.1**
SMDR	**Samana, DR**	**1.45**	**277**	⇑*e*Pg	**Pb**	**03 31 56.7**	**+0.7**
SMDR				⇑*e*Sg	**Sg**	**03 32 16.6**	**+0.6**
SMDR				IAML		03 32 22.2	
	comp=N,41nm,0.8s						
CELP	**Cerrillos**	**1.46**	**135**		**Pn**	**03 31 55.1**	**0.0**
CELP				Sn	**Sn**	**03 32 14.2**	**+0.3**
CELP				IAML		03 32 19.4	
	comp=N,68nm,0.2s						
CELP				IAML		03 32 20.6	
	comp=N,69nm,0.3s						
CELP	**Cerrillos**	**1.46**	**135**	⇑*e*Pg	**Pn**	**03 31 55.4**	**+0.3**
CELP				*e*Sg	**Sn**	**03 32 14.2**	**+0.3**
CELP				IAML		03 32 19.3	
	comp=N,26nm,0.3s						
OBIP	**Obispado Ponce**	**1.46**	**137**		**Pn**	**03 31 55.0**	**-0.2**
OBIP				Sn	**Sn**	**03 32 14.2**	**+0.1**
ECPR	**Experimental S**	**1.46**	**122**		**Pn**	**03 31 54.9**	**-0.3**
ECPR				Sn	**Sn**	**03 32 14.4**	**+0.2**
ECPR				IAML		03 32 19.0	
	comp=N,136nm,0.2s						
HATOM	**Hato Mayor del**	**1.66**	**259**	⇑*e*Pg	**Pg**	**03 32 01.0**	**-0.1**
HATOM				⇑*e*Sg	**Sg**	**03 32 22.9**	**+0.2**
HATOM				IAML		03 32 25.1	
	comp=N,49nm,0.2s						
SJG	**San Juan**	**1.75**	**125**	Pn	**Pn**	**03 31 58.1**	**-1.0**
SJG				IAML		03 32 25.8	
	comp=N,47nm,0.3s						
SJG				IAML		03 32 28.6	
	comp=N,42nm,0.2s						
SJG	**San Juan**	**1.75**	**125**	⇑*e*Pg	**Pb**	**03 32 01.3**	**+0.2**
IGPR	**InterUniversit**	**1.87**	**127**		**Pn**	**03 32 01.9**	**+1.2**
IGPR					**Sn**	**03 32 25.0**	**+1.0**
HUMP	**Col San Antoni**	**1.97**	**119**		**Pn**	**03 32 01.9**	**-0.3**
HUMP	**Col San Antoni**	**1.97**	**119**		**Sn**	**03 32 28.4**	**+1.4**
CUPR	**Culebra, Puert**	**2.40**	**109**	Pn	**Pn**	**03 32 08.0**	**+0.1**

KRSC 26 03:34:27.8±1.5, 49.17N×158.19E, h30km±28km, MI3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**2.46**	**339**	*e*P	Pn	03 35 07.6	+1.8
PAU				*e*S	Sn	03 35 37.8	+3.0
KDTR	**Khodutka, Kamc**	**2.64**	**358**	*e*S	Sn	03 35 42.7	+3.4
ASAK	**Asacha**	**3.22**	**357**	*e*P	Pn	03 35 20.0	+3.7
RUS	**Russkaya**	**3.27**	**3**	*e*P	Pn	03 35 20.3	+3.3
RUS				*e*S	Sb	03 35 59.9	-4.5
MTVR	**Mutnovka**	**3.31**	**360**	*e*P	Pn	03 35 21.5	+3.7
MTVR				*e*S	Sn	03 35 59.6	+3.4
GRL	**Gorelyy**	**3.38**	**359**	*e*P	Pn	03 35 22.6	+3.9
KRMR	**Karymshinskiy**	**3.66**	**359**	*e*P	Pn	03 35 26.3	+4.0
DALK	**Dalny**	**3.88**	**5**	*e*P	Pn	03 35 29.3	+4.0
DALK				*e*S	Sn	03 36 15.5	+5.7
UGLR	**Uglovaya**	**4.06**	**5**	*e*P	Pn	03 35 33.2	+5.2
AVH	**Avacha**	**4.11**	**5**	*e*P	Pn	03 35 34.0	+5.4
SMAR	**Somma**	**4.11**	**5**	*e*P	Pn	03 35 33.5	+4.7
KOK	**Koryaka**	**4.13**	**4**	*e*P	Pn	03 35 33.8	+4.9
GNL	**Ganaly**	**4.53**	**358**	*e*P	Pn	03 35 38.0	+3.6
KBTR	**Krutoberegovo**	**7.58**

baz=166,slow=74,SNR=4.8
H10S3 ASCENSION HYDR 11.13 346 T T 04 09 40.0
baz=54,slow=74,SNR=4.6
DBIC Dimbokro 27.21 15 P **P** **04 01 22.1 +0.5**
2.1nm,0.8s,baz=214,slow=11,SNR=1.7
2.1nm,0.8s
DBIC Dimbokro 27.21 15 P **P** **04 01 20.9 -0.7**
GRTLG Ghanzi 30.98 99 P **P** **04 01 53.6 -1.7**
GRTLG IAmb IAmb 04 02 06.4
comp=Z,8.3nm,1.0s
BDFB Brasilia 34.64 271 P **P** **04 02 27.0 -0.4**
comp=Z,6.9nm,1.0s,baz=92,slow=4.0,SNR=4.0
comp=Z,6.9nm,1.0s
BDFB Brasilia 34.64 271 P **P** **04 02 27.4 0.0**
BDFB IAmb IAmb 04 02 28.4
comp=Z,11nm,1.1s
LBTB Lobatse 34.94 106 P **P** **04 02 29.2 -0.7**
TORD Torodi Ar. Bea 35.37 23 P **P** **04 02 33.9 +0.5**
comp=Z,6.6nm,1.0s,baz=204,slow=9.2,SNR=11
comp=Z,6.6nm,1.0s
ITAB Concordia 37.53 251 P **P** **04 02 52.0 +0.1**
ITAB IAmb IAmb 04 02 54.2
comp=Z,19nm,1.2s
AQDB Aquidauana 41.07 261 P **P** **04 03 21.6 +0.1**
AQDB IAmb IAmb 04 03 23.3
comp=Z,11nm,1.1s
CPUP Villa Florida 42.16 252 P **P** **04 03 30.4 -0.1**
comp=Z,4.5nm,0.9s,baz=91,slow=9.3,SNR=9.3
comp=Z,4.5nm,0.9s
CPUP Villa Florida 42.16 252 P **P** **04 03 30.7 +0.3**
PTLB Pontes e Lacer 45.15 268 P **P** **04 03 54.9 +0.3**
PTLB IAmb IAmb 04 03 56.4
comp=Z,5.5nm,0.9s
SIV San Ignacio 46.85 266 P **P** **04 04 08.7 +0.6**
comp=Z,2.0nm,0.8s,baz=109,slow=9.1,SNR=6.6
comp=Z,2.0nm,0.8s
TRQA Tornquist 46.88 236 P **P** **04 04 08.2 +0.1**
TRQA IAmb IAmb 04 04 09.1
comp=Z,10nm,0.9s
VNA3 Neumayer Olymp 51.45 179 ⇑P P 04 04 52.0 +10
comp=Z,4.4nm,0.8s
CFA Coronel Fontan 51.64 245 P **P** **04 04 43.1 -1.4**
comp=Z,2.3nm,0.9s,baz=87,slow=9.3,SNR=5.9
comp=Z,2.3nm,0.9s
MD01 Midelt array s 52.83 8 P **P** **04 04 54.8 +1.5**
TROLL Troll, Antarti 52.86 174 P **P** **04 04 53.7 +0.6**
CO01 Juntas del Tor 53.30 247 P **P** **04 04 57.5 +0.3**
CO01 IAmb IAmb 04 04 59.5
comp=Z,8.7nm,0.8s
LPAZ La Paz 53.41 264 P **P** **04 04 57.6 -0.9**
comp=Z,1.8nm,1.0s,baz=112,slow=10,SNR=4.3
comp=Z,1.8nm,1.0s
LPAZ La Paz 53.41 264 P **P** **04 04 58.2 -0.3**
BO02 Sierra Bellavi 53.74 241 P **P** **04 05 00.3 +0.2**
BO02 IAmb IAmb 04 05 25.7
comp=Z,23nm,1.5s
CO03 El Pedregal 53.77 246 P **P** **04 05 00.7 +0.3**
CO03 IAmb IAmb 04 05 28.5
comp=Z,16nm,1.4s
PB03 IPOC Station P 53.84 257 P **P** **04 05 01.0 -0.1**
PB03 IAmb IAmb 04 05 01.4
comp=Z,17nm,1.0s
MT09 Talagante 53.92 242 P **P** **04 05 01.0 -0.5**
BO01 Tunca 53.99 241 P **P** **04 05 01.4 -0.5**
BO01 IAmb IAmb 04 05 18.3
comp=Z,8.3nm,0.9s
PB07 IPOC Station P 54.01 257 P **P** **04 05 02.5 +0.1**
PB05 IPOC Station P 54.13 256 P **P** **04 05 03.1 0.0**
MT01 Popeta 54.14 242 P **P** **04 05 02.2 -0.7**
MT01 IAmb IAmb 04 05 20.8
comp=Z,16nm,1.4s
PB16 IPOC Station P 54.27 261 P **P** **04 05 04.1 -0.7**
PB16 IAmb IAmb 04 05 05.0
comp=Z,6.7nm,1.1s
GO08 Villa O'Higgin 56.06 224 P **P** **04 05 16.8 +0.2**
KEST Kesra 58.79 20 P **P** **04 05 36.4 +0.5**
BELA Belgrano 2 59.14 185 P **P** **04 05 38.0 +0.2**
BELA IAmb IAmb 04 05 38.7
comp=Z,5.9nm,0.7s
ESDC Sonseca Array 59.64 7 P **P** **04 05 42.2 +0.5**
comp=Z,0.7nm,0.8s,baz=192,slow=5.9,SNR=4.8
comp=Z,0.7nm,0.8s
ESDC Sonseca Array 59.64 7 P **P** **04 05 41.9 +0.1**
CZSB Cruzeiro do Su 60.02 272 P **P** **04 05 44.5 -0.4**
MAW Mawson 66.03 156 P **P** **04 06 24.5 +0.6**
comp=Z,2.7nm,0.7s,baz=304,slow=7.3,SNR=2.8
comp=Z,2.7nm,0.7s
MAW Mawson 66.03 156 P **P** **04 06 23.8 -0.1**
ROSC El Rosal 66.07 285 P **P** **04 06 25.9 +0.4**
comp=Z,2.7nm,0.3s,baz=117,slow=7.2,SNR=4.2
comp=Z,2.7nm,0.3s
ROSC El Rosal 66.07 285 P **P** **04 06 24.9 -0.6**
OTAV Otavalo 68.12 279 P **P** **04 06 37.9 -0.8**
OTAV IAmb IAmb 04 06 48.1
comp=Z,4.1nm,1.1s
MMAI Mount Meron Ar 69.27 41 P **P** **04 06 46.5 +1.5**
comp=Z,0.2nm,0.3s,baz=195,slow=8.7,SNR=1.9
comp=Z,0.2nm,0.3s
QSPA South Pole Qui 70.37 180 P **P** **04 06 52.7 +1.3**
comp=Z,3.7nm,0.8s,baz=208,slow=1.1,SNR=7.1
comp=Z,3.7nm,0.8s
QSPA South Pole Qui 70.37 180 P **P** **04 06 51.2 -0.2**
QSPA IAmb IAmb 04 07 11.3
comp=Z,6.3nm,1.1s
BRTR Keskin Array B 72.88 35 P **P** **04 07 06.7 -0.1**
comp=Z,1.4nm,1.0s,baz=212,slow=6.7,SNR=7.0
comp=Z,1.4nm,1.0s
AKASG Malin Array Be 78.98 25 P **P** **04 07 40.4 -0.7**
comp=Z,0.8nm,0.4s,baz=222,slow=5.2,SNR=4.8
comp=Z,0.8nm,0.4s
AKASG Malin Array Be 78.98 25 P **P** **04 07 40.1 -1.1**
VNDA Vanda 82.80 179 P **P** **04 08 01.8 +0.4**
comp=Z,1.9nm,0.8s,baz=244,slow=5.8,SNR=4.3
comp=Z,1.9nm,0.8s
VNDA Vanda 82.80 179 P **P** **04 08 01.8 +0.4**
VNDA IAmb IAmb 04 08 09.9
comp=Z,11nm,1.4s
FINES FINESS Array B 86.49 17 P **P** **04 08 20.1 +0.2**
comp=Z,3.9nm,1.0s,baz=186,slow=1.9,SNR=6.7
comp=Z,3.9nm,1.0s
FINES FINESS Array B 86.49 17 P **P** **04 08 20.3 +0.4**
ASAR Alice Springs 125.39 141 PKP **PKPdf** **04 14 38.9 -0.5**
comp=Z,0.5nm,0.8s,baz=190,slow=2.3,SNR=4.6
ASAR Alice Springs 125.39 141 **PKPdf** **04 14 39.1 -0.3**
ILAR Eielson Array 126.15 338 PKP **PKPdf** **04 14 39.1 -0.4**
comp=Z,0.3nm,0.7s,baz=49,slow=1.7,SNR=4.5
ILAR Eielson Array 126.15 338 **PKPdf** **04 14 39.3 -0.2**
WRA Warramunga Arr 128.45 138 PKP **PKPdf** **04 14 44.6 -0.7**
comp=Z,0.4nm,0.7s,baz=241,slow=2.4,SNR=4.7
WRA Warramunga Arr 128.45 138 **PKPdf** **04 14 45.1 -0.2**
MJAR Matsushiro Arr 148.97 51 PKPbc **PKPbc** **04 15 26.0 0.0**
comp=Z,2.3nm,0.8s,baz=281,slow=1.5,SNR=2.7

*IDC **26** 03:57:16.5±0.9, 19°.64S×12°.09W, h0km, mb3.9/8, mbtmp3.9/8, MS4.1/2, Error ellipse: s-maj=47.8km s-min=20.4km az=122.0*
*NEIC **26** 03:57:18.9±1.0, 19°.7S±0°.1×11°.9W±0°.1, h10km±1km, mb4.7/14, Error ellipse: s-maj=24.0km s-min=19.4km az=143.0*

ISC 26 03:57:18.2±0.6, 19°.7S±0°.1×12°.0W±0°.1, h10km, n26, σ0s66/25, mb4.5/13, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DBIC	**Dimbokro**	**27.09**	**16**	P	**P**	**04 03 01.6**	**+0.3**
	2.9nm,1.1s,baz=219,slow=11,SNR=1.6						
	2.9nm,1.1s						
DBIC	**Dimbokro**	**27.09**	**16**	P	**P**	**04 03 01.4**	**+0.2**
SUR	**Sutherland**	**31.94**	**120**	P	**P**	**04 03 44.5**	**0.0**
BOSA	**Boshof**	**35.01**	**112**	P	**P**	**04 04 10.6**	**-0.6**
BOSA				IAmb	IAmb	04 04 14.9	
	comp=Z,20nm,1.4s						
TORD	**Torodi Ar. Bea**	**35.27**	**23**	P	**P**	**04 04 13.6**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=202,slow=10,SNR=7.4						
	comp=Z,1.1nm,0.7s						
HOPE	**Hope Point**	**39.31**	**203**	P	**P**	**04 04 47.7**	**+0.5**
CPUP	**Villa Florida**	**42.11**	**252**	P	**P**	**04 05 10.2**	**-0.5**
	comp=Z,2.3nm,1.0s,baz=93,slow=8.2,SNR=3.0						
	comp=Z,2.3nm,1.0s						
CPUP	**Villa Florida**	**42.11**	**252**	P	**P**	**04 05 10.8**	**0.0**
CPUP				IAmb	IAmb	04 05 48.7	
	comp=Z,8.9nm,1.1s						
PTLB	**Pontes e Lacer**	**45.05**	**268**	P	**P**	**04 05 34.7**	**+0.1**
PTLB				IAmb	IAmb	04 05 36.2	
	comp=Z,12nm,1.3s						
VILB	**Vilhena**	**46.64**	**271**	P	**P**	**04 05 47.1**	**-0.1**
VILB				IAmb	IAmb	04 06 10.6	
	comp=Z,11nm,1.1s						
CFA	**Coronel Fontan**	**51.61**	**245**	P	**P**	**04 06 23.4**	**-1.8**
	comp=Z,0.6nm,0.8s,baz=61,slow=10,SNR=1.3						
	comp=Z,0.6nm,0.8s						
AF01	**San Pedro de A**	**52.20**	**256**	P	**P**	**04 06 29.1**	**-0.8**
AF01				IAmb	IAmb	04 06 36.2	
	comp=Z,25nm,1.1s						
CO01	**Juntas del Tor**	**53.26**	**247**	P	**P**	**04 06 38.2**	**+0.5**
CO01				IAmb	IAmb	04 07 15.7	
	comp=Z,7.8nm,1.0s						
BO04	**La Punta**	**53.58**	**242**	P	**P**	**04 06 40.0**	**+0.3**
BO04				IAmb	IAmb	04 07 01.8	
	comp=Z,11nm,1.1s						
PB07	**IPOC Station P**	**53.95**	**257**	P	**P**	**04 06 42.9**	**+0.2**
ESDC	**Sonseca Array**	**59.50**	**7**	P	**P**	**04 07 22.1**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=188,slow=7.1,SNR=7.1						
ESDC				LR	LR	04 31 31.0	
	comp=Z,144nm,21.8s,baz=158,slow=34						
	comp=Z,0.2nm,0.6s						
ESDC	**Sonseca Array**	**59.50**	**7**	P	**P**	**04 07 21.7**	**+0.2**
QSPA	**South Pole Qui**	**70.53**	**180**	P	**P**	**04 08 34.1**	**+0.9**
	comp=Z,2.4nm,1.1s,baz=305,slow=2.3,SNR=5.0						
	comp=Z,2.4nm,1.1s						
QSPA	**South Pole Qui**	**70.53**	**180**	P	**P**	**04 08 33.2**	**+0.1**
QSPA				IAmb	IAmb	04 08 42.3	
	comp=Z,6.8nm,1.2s						
BRTR	**Keskin Array B**	**72.81**	**35**	P	**P**	**04 08 47.7**	**+0.4**
	comp=Z,0.6nm,1.0s,baz=197,slow=5.6,SNR=5.5						
	comp=Z,0.6nm,1.0s						
BRTR	**Keskin Array B**	**72.81**	**35**	P	**P**	**04 08 47.2**	**0.0**
EKA	**Eskdalemuir Ar**	**75.07**	**5**	LR	LR	04 41 30.1	
	comp=Z,146nm,18.6s,baz=201,slow=35						
AKASG	**Malin Array Be**	**78.88**	**25**	P	**P**	**04 09 21.0**	**-0.5**
	comp=Z,2.4nm,0.8s,baz=225,slow=6.1,SNR=6.5						
	comp=Z,2.4nm,0.8s						
AKASG	**Malin Array Be**	**78.88**	**25**	P	**P**	**04 09 21.4**	**0.0**
MJAR	**Matsushiro Arr**	**148.95**	**51**	PKPbc	**PKPbc**	**04 17 05.2**	**-1.6**
	comp=Z,1.0nm,0.4s,baz=253,slow=1.8,SNR=4.3						
MJAR	**Matsushiro Arr**	**148.95**	**51**		**PKPdf**	**04 17 03.0**	**+0.3**

*IDC **26** 03:58:03.2±0.5, 19°.83S×11°.96W, h0km, mb4.3/22, mbtmp4.3/22, MS4.6/2, Error ellipse: s-maj=21.8km s-min=13.3km az=138.0*
*NEIC **26** 03:58:05.0±1.8, 19°.95S±0°.09×12°.18W±0°.10, h10km±1km, mb4.9/26, Error ellipse: s-maj=15.5km s-min=14.2km az=296.0*

ISC 26 03:58:05.5±0.4, 19°.89S±0°.09×12°.13W±0°.08, h16km, n68, σ1s20/64, mb4.6/30, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHEL	**Horse Pasture**	**7.23**	**58**	Pn	**Pn**	**03 59 51.4**	**+0.8**
H10S2	**ASCENSION HYDR 11.13 347**			T	T	04 11 59.7	
	baz=166,slow=74,SNR=8.2						
H10S3	**ASCENSION HYDR 11.14 347**			T	T	04 12 00.9	
	baz=54,slow=74,SNR=5.6						
ASCN	**Ascension**	**12.08**	**349**	Pn	**Pn**	**04 00 57.3**	**+0.2**
DBIC	**Dimbokro**	**27.35**	**16**	P	**P**	**04 03 48.7**	**-1.2**
	5.8nm,1.1s,baz=198,slow=9.7,SNR=3.0						
	5.8nm,1.1s						
DBIC	**Dimbokro**	**27.35**	**16**	P	**P**	**04 03 50.4**	**+0.4**
WIN	**Windhoek**	**27.36**	**101**	P	**P**	**04 03 49.4**	**-1.0**
WIN				IAmb	IAmb	04 04 00.6	
	comp=Z,24nm,1.2s						
ACRG	**Accra**	**27.95**	**26**	P	**P**	**04 03 57.0**	**+1.6**
ACRG				IAmb	IAmb	04 04 27.9	
	comp=Z,23nm,1.3s						
BDFB	**Brasilia**	**34.39**	**271**	P	**P**	**04 04 53.9**	**+1.5**
	comp=Z,3.3nm,0.9s,baz=90,slow=8.1,SNR=5.6						
	comp=Z,3.3nm,0.9s						
BDFB	**Brasilia**	**34.39**	**271**	P	**P**	**04 04 51.1**	**-1.2**
BDFB				IAmb	IAmb	04 05 02.4	
	comp=Z,20nm,1.2s						
KHWEE	**KHWEE**	**35.11**	**100**	P	**P**	**04 04 57.0**	**-1.5**
TORD	**Torodi Ar. Bea**	**35.54**	**24**	P	**P**	**04 05 00.9**	**-1.2**
	comp=Z,7.0nm,0.9s,baz=202,slow=10,SNR=8.5						
	comp=Z,7.0nm,0.9s						
LSZ	**Lusaka**	**38.65**	**90**	P	**P**	**04 05 27.1**	**-1.6**
LSZ				IAmb	IAmb	04 05 35.0	
	comp=Z,40nm,1.8s						
AQDB	**Aquidauana**	**40.80**	**261**	P	**P**	**04 05 45.0**	**-1.5**
AQDB				IAmb	IAmb	04 05 56.7	
	comp=Z,20nm,1.1s						
CPUP	**Villa Florida**	**41.90**	**252**	P	**P**	**04 05 57.3**	**+1.9**
	comp=Z,3.9nm,1.0s,baz=97,slow=12,SNR=3.9						
	comp=Z,3.9nm,1.0s						
CPUP	**Villa Florida**	**41.90**	**252**	P	**P**	**04 05 54.3**	**-1.1**
TAM	**Tamanrasset**	**45.79**	**23**	P	**P**	**04 06 27.6**	**+0.8**
MBAR	**Mbarara**	**46.12**	**71**	P	**P**	**04 06 30.7**	**+1.0**
MBAR				IAmb	IAmb	04 06 32.7	
	comp=Z,17nm,1.2s						
SIV	**San Ignacio**	**46.60**	**267**	P	**P**	**04 06 36.0**	**+2.8**
	comp=Z,2.1nm,0.8s,baz=104,slow=12,SNR=4.8						
SIV				PcP	**PcP**	**04 08 08.1**	**+0.9**
	comp=Z,3.6nm,1.1s,baz=66,slow=2.1,SNR=3.2						
SIV				LR	LR	04 23 35.9	
	comp=Z,2μm,20.6s,baz=120,slow=33						
	comp=Z,2.1nm,0.8s						
CFA	**Coronel Fontan**	**51.38**	**245**	P	**P**	**04 07 10.7**	**+0.9**
	comp=Z,1.6nm,0.9s,baz=100,slow=12,SNR=3.7						
CFA				LR	LR	04 26 13.6	
	comp=Z,230nm,21.8s,baz=76,slow=33						
	comp=Z,1.6nm,0.9s						
KMBO	**Kilima Mbogo**	**51.75**	**75**	P	**P**	**04 07 13.3**	**+0.3**
	baz=238,slow=11						
LODK	**Lodwar**	**52.07**	**69**	P	**P**	**04 07 16.5**	**+1.3**
SNAA	**Sanae**	**52.07**	**176**	P	**P**	**04 07 14.2**	**-0.1**
	comp=Z,5.3nm,1.1s,baz=266,slow=10,SNR=4.0						
	comp=Z,5.3nm,1.1s						
SNAA	**Sanae**	**52.07**	**176**	P	**P**	**04 07 14.5**	**+0.1**
SNAA				IAmb	IAmb	04 07 22.4	
	comp=Z,45nm,1.6s						
AC02	**Maricunga**	**52.42**	**251**	P	**P**	**04 07 15.2**	**-2.9**
AC02				IAmb	IAmb	04 07 29.0	
	comp=Z,23nm,1.2s						
MD31	**MD31**	**52.93**	**8**	P	**P**	**04 07 22.3**	**+1.2**
MD31				IAmb	IAmb	04 07 31.1	
	comp=Z,15nm,1.4s						
CO01	**Juntas del Tor**	**53.04**	**247**	P	**P**	**04 07 20.6**	**-1.8**
CO01				IAmb	IAmb	04 07 33.6	
	comp=Z,18nm,1.2s						
LPAZ	**La Paz**	**53.15**	**264**	P	**P**	**04 07 24.6**	**+0.9**
	comp=Z,2.0nm,0.9s,baz=94,slow=8.4,SNR=3.7						
	comp=Z,2.0nm,0.9s						
LPAZ	**La Paz**	**53.15**	**264**	P	**P**	**04 07 23.0**	**-0.8**
PLCA	**Paso Flores**	**53.53**	**234**	P	**P**	**04 07 26.4**	**+0.8**
	comp=Z,2.4nm,1.0s,baz=50,slow=13,SNR=3.2						
	comp=Z,2.4nm,1.0s						
ESDC	**Sonseca Array**	**59.74**	**7**	P	**P**	**04 08 09.6**	**0.0**
	comp=Z,1.5nm,0.9s,baz=184,slow=6.7,SNR=6.1						
	comp=Z,1.5nm,0.9s						
ESDC	**Sonseca Array**	**59.74**	**7**	P	**P**	**04 08 11.1**	**+1.5**
ESDC				IAmb	IAmb	04 08 17.7	
	comp=Z,9.1nm,1.4s						
CZSB	**Cruzeiro do Su**	**59.77**	**273**	P	**P**	**04 08 09.7**	**-0.6**
SDV	**Santo Domingo**	**64.28**	**291**	P	**P**	**04 08 39.9**	**-0.9**
SDV				IAmb	IAmb	04 08 50.5	
	comp=Z,13nm,1.1s						
IDI	**Anoyia**	**65.16**	**33**	P	**P**	**04 08 45.9**	**0.0**
	comp=Z,16nm,1.0s,baz=112,slow=21,SNR=1.4						
	comp=Z,16nm,1.0s						
IDI	**Anoyia**	**65.16**	**33**	P	**P**	**04 08 47.4**	**+1.5**
ATAH	**Atahualpa**	**65.31**	**271**	P	**P**	**04 08 50.2**	**+2.4**
	comp=Z,4.4nm,1.1s,baz=295,slow=15,SNR=2.8						
	comp=Z,4.4nm,1.1s						
ROSC	**El Rosal**	**65.84**	**285**	P	**P**	**04 08 53.7**	**+2.4**
	comp=Z,3.1nm,0.5s,baz=107,slow=8.7,SNR=3.9						
	comp=Z,3.1nm,0.5s						
ROSC	**El Rosal**	**65.84**	**285**	P	**P**	**04 08 50.0**	**-1.2**
ROSC				IAmb	IAmb	04 09 02.9	
	comp=Z,19nm,1.2s						
CESX	**Cesi**	**66.23**	**20**	P	**P**	**04 08 53.2**	**+0.5**
MMAI	**Mount Meron Ar**	**69.49**	**41**	P	**P**	**04 09 13.4**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=9.6,slow=10,SNR=4.0						
	comp=Z,0.9nm,0.6s						
QSPA	**South Pole Qui**	**70.30**	**180**	P	**P**	**04 09 19.1**	**+1.0**
	comp=Z,6.6nm,1.1s,baz=141,slow=4.5,SNR=3.3						
	comp=Z,6.6nm,1.1s						
QSPA	**South Pole Qui**	**70.30**	**180**	P	**P**	**04 09 18.2**	**+0.1**
BRTR	**Keskin Array B**	**73.08**	**35**	P	**P**	**04 09 35.1**	**-0.1**
	comp=Z,2.1nm,0.9s,baz=193,slow=5.1,SNR=3.8						
	comp=Z,2.1nm,0.9s						
BRTR	**Keskin Array B**	**73.08**	**35**	P	**P**	**04 09 35.9**	**+0.7**
AKASG	**Malin Array Be**	**79.15**	**25**	P	**P**	**04 10 07.9**	**-1.3**
	comp=Z,1.6nm,0.6s,baz=221,slow=5.1,SNR=4.3						
	comp=Z,1.6nm,0.6s						
AKASG	**Malin Array Be**	**79.15**	**25**	P	**P**	**04 10 08.9**	**-0.4**
HFS	**Hagfors**	**82.46**	**13**	P	**P**	**04 10 26.7**	**-0.1**
	comp=Z,3.3nm,0.9s,baz=226,slow=5.8,SNR=2.3						
	comp=Z,3.3nm,0.9s						
VNDA	**Vanda**	**82.73**	**179**	P	**P**	**04 10 29.4**	**+1.3**
	comp=Z,3.4nm,1.1s,baz=188,slow=9.1,SNR=3.0						
	comp=Z,3.4nm,1.1s						
VNDA	**Vanda**	**82.73**	**179**	P	**P**	**04 10 29.0**	**+0.9**
VNDA				IAmb	IAmb	04 12 45.7	
	comp=Z,36nm,1.9s						
NOA	**NORSAR Array B**	**82.81**	**11**	P	**P**	**04 10 28.9**	**+0.3**
	comp=Z,1.9nm,1.1s,baz=199,slow=5.7,SNR=3.1						
	comp=Z,1.9nm,1.1s						
FINES	**FINESS Array B**	**86.63**	**17**	P	**P**	**04 10 46.5**	**-1.3**
	comp=Z,1.4nm,0.8s,baz=163,slow=2.0,SNR=5.4						
	comp=Z,1.4nm,0.8s						
FINES	**FINESS Array B**	**86.63**	**17**	P	**P**	**04 10 47.2**	**-0.5**
SCHQ	**Schefferville**	**87.78**	**332**	P	**P**	**04 10 52.2**	**-1.3**
	comp=Z,2.8nm,1.0s,baz=149,slow=5.9,SNR=2.2						
	comp=Z,2.8nm,1.0s						
SCHQ	**Schefferville**	**87.78**	**332**	P	**P**	**04 10 52.1**	**-1.4**
TBI	**Tubuai**	**120.17**	**226**	eLR	LR	04 53 23.3	
	comp=Z,468nm,27.2s						
TAOE	**Nuku Hiva Isla**	**121.40**	**246**	eLR	LR	04 54 42.6	
	comp=Z,84nm,24.8s						
SONM	**Songino Array**	**123.56**	**45**	PKP	**PKPdf**	**04 17 02.1**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=259,slow=3.7,SNR=2.5						
PPT2	**Papeete2**	**124.03**	**231**	eLR	LR	04 55 41.8	
	comp=Z,134nm,31.0s						
PPT2				eLR	LR	04 55 46.8	
	comp=Z,148nm,23.0s						
ASAR	**Alice Springs**	**125.50**	**141**	PKP	**PKPdf**	**04 17 06.0**	**-0.7**
	comp=Z,0.7nm,0.9s,baz=237,slow=1.4,SNR=4.8						
ASAR	**Alice Springs**	**125.50**	**141**		**PKPdf**	**04 17 05.0**	**-1.7**
ILAR	**Eielson Array**	**126.12**	**338**	PKP	**PKPdf**	**04 17 06.4**	**-0.1**
	comp=Z,0.6nm,0.9s,baz=325,slow=2.1,SNR=5.0						
ILAR	**Eielson Array**	**126.12**	**338**		**PKPdf**	**04 17 06.7**	**+0.1**
I23K	**Minto, Yukon-K**	**126.76**	**339**		**PKPdf**	**04 17 07.7**	**-0.1**
WRA	**Warramunga Arr**	**128.56**	**138**	PKP	**PKPdf**	**04 17 12.3**	**-0.4**
	comp=Z,1.0nm,1.0s,baz=237,slow=1.9,SNR=4.0						
WRA	**Warramunga Arr**	**128.56**	**138**		**PKPdf**	**04 17 11.6**	**-1.0**
MJAR	**Matsushiro Arr**	**149.21**	**51**	PKPbc	**PKPbc**	**04 17 53.7**	**0.0**
	comp=Z,3.5nm,0.8s,baz=295,slow=2.7,SNR=5.5						
MJAR	**Matsushiro Arr**	**149.21**	**51**		**PKPbc**	**04 17 52.8**	**-0.9**

KRSC 26 04:11:00.7±1.7, 49°.15N×158°.22E, h31km±35km, MI3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.05**	**319**	eS	Sn	04 11 57.8	+0.4
PAU	**Pauzhetka**	**2.49**	**339**	eP	Pb	04 11 41.9	-2.8
PAU				eS	Sb	04 12 12.0	-2.9
KDTR	**Khodutka, Kamc**	**2.66**	**358**	eP	Pb	04 11 44.8	-2.8
KDTR				eS	Sb	04 12 16.8	-3.1
ASAK	**Asacha**	**3.24**	**357**	eP	Pn	04 11 52.9	+3.4
RUS	**Russkaya**	**3.29**	**3**	eP	Pn	04 11 53.6	+3.5
RUS				eS	Sn	04 12 31.2	+3.1
MTVR	**Mutnovka**	**3.34**	**360**	eP	Pn	04 11 54.6	+3.8
MTVR				eS	Sn	04 12 33.8	+4.3
GRL	**Gorelyy**	**3.41**	**359**	eP	Pn	04 11 55.9	+4.1
GRL				eS	Sn	04 12 35.9	+4.7
APC	**Apacha**	**3.84**	**350**	eP	Pn	04 12 01.7	+4.1
PET	**Petropavlovsk**	**3.89**	**4**	eP	Pn	04 12 02.6	+4.3
PET				eS	Sb	04 12 49.6	-5.4
DALK	**Dalny**	**3.90**	**5**	eP	Pn	04 12 02.5	+4.0
DALK				eS	Sn	04 12 48.9	+5.7
UGLR	**Uglovaya**	**4.08**	**5**	eP	Pn	04 12 06.7	-5.2
AVH	**Avacha**	**4.13**	**4**	eP	Pn	04 12 07.1	+5.4
GNL	**Ganaly**	**4.55**	**358**	eP	Pn	04 12 12.0	+4.4
KBTR	**Krutoberegovo**	**7.60**	**20**	eP	Pn	04 12 53.4	+4.2

*IDC **26** 04:22:07.1±1.9, 35°.95N×71°.28E, h0km, mb4.0/12, mbtmp4.0/17, ML3.7/5, MS3.9/4, Error ellipse: s-maj=34.2km s-min=17.6km az=153.0*
*NEIC **26** 04:22:21.5±1.5, 36°.44N±0°.07×71°.24E±0°.09, h102km±7km, mb4.1/14, Error ellipse: s-maj=11.3km s-min=9.4km az=65.0*
*NNC **26** 04:22:23.8±4.7, 36°.70N×70°.73E, h111km±85km, mb3.9, mpv4.6, Error ellipse: s-maj=37.9km s-min=30.4km az=41.0*

ISC 26 04:22:20.0±0.5, 36°.31N±0°.05×71°.39E±0°.06, h100km, n84, σ2s16/97, mb4.0/12, 3C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.61**	**228**		**Pn**	**04 23 01.3**	**+0.6**
NIL	**Nilore**	**3.06**	**150**		**Pn**	**04 23 09.9**	**+3.3**
DRK	**Karamyk**	**3.18**	**6**		**Pn**	**04 23 09.4**	**+1.0**
BTK	**Batken**	**3.77**	**353**		**Pn**	**04 23 16.1**	**0.0**
JMU	**Jammu**	**4.52**	**140**	eP	**Pn**	**04 23 26.7**	**+0.4**
JMU				eS	**Sn**	**04 24 18.5**	**+0.8**
JMU				IAML		04 24 30.4	
	comp=E,120nm,0.7s						
JMU				IAML		04 24 33.1	
	comp=N,185nm,0.8s						
ARSB	**Arslanbob**	**5.16**	**13**		**Pn**	**04 23 34.6**	**-0.3**
ALCI	**Alchi Leh**	**5.18**	**112**	eP	**Pn**	**04 23 36.2**	**+0.8**
ALCI				eS	**Sn**	**04 24 35.0**	**+0.9**
ALCI				IAML		04 24 37.4	
	comp=E,113nm,0.2s						
ALCI				IAML		04 24 38.1	
	comp=N,190nm,0.3s						
TSSA	**Tissa**	**5.24**	**130**	eP	**Pn**	**04 23 37.7**	**+1.7**
TSSA				eS	**Sn**	**04 24 35.4**	**+0.1**
TSSA				IAML		04 24 39.1	
	comp=N,140nm,0.3s						
TSSA				IAML		04 24 41.0	
	comp=E,139nm,0.2s						
THN	**Thein Dam**	**5.29**	**136**	eP	**Pn**	**04 23 39.1**	**+2.5**
THN				eS	**Sn**	**04 24 37.0**	**+0.7**
THN

comp=E,113nm,0.2s
BOOM Boomskoye usch 7.10 28 Pn **Pn** **04 24 02.3 +0.9**
CHMS Chumysh 7.16 20 P **Pn** **04 24 02.7 +0.6**
SNR=30
HNLY HANLEY 7.18 117 *e*P **Pn** **04 24 04.8 +2.0**
HNLY *e*S **Sn** **04 25 22.7 -0.3**
HNLY IAML 04 25 26.1
comp=N,125nm,0.4s
HNLY IAML 04 25 30.5
comp=E,123nm,0.9s
KDJ Kajisay 7.34 36 Pn **Pn** **04 24 04.8 +0.1**
USP Ospenovka 7.35 18 P **Pn** **04 24 04.7 +0.2**
SNR=7.1
TKM2 Tokmak 2 7.35 25 P **Pn** **04 24 05.9 +1.1**
SNR=9.1
TARG Taragay, Kyrgy 7.36 41 **Pn** **04 24 05.5 +0.4**
KLP Kalpa 7.43 128 *e*P **Pn** **04 24 06.4 +0.4**
KLP *e*S **Sn** **04 25 24.4 -4.4**
KLP IAML 04 25 29.1
comp=E,207nm,0.5s
KLP IAML 04 25 35.5
comp=N,176nm,0.9s
HRA Herat 7.72 258 **Pn** **04 24 10.1 +0.3**
WUS Wushi 7.82 49 **Pn** **04 24 12.6 +1.5**
DDI Dehra Dun 8.17 135 *e*P **Pn** **04 24 17.5 +1.7**
DDI *e*S **Sn** **04 25 43.4 -3.0**
DDI IAML 04 25 50.0
comp=E,202nm,0.5s
DDI IAML 04 25 50.9
comp=N,160nm,0.4s
PRZ Przheval'sk 8.21 39 **Pn** **04 24 17.1 +0.8**
JOSI Joshimath 8.91 128 *e*P **Pn** **04 24 27.8 +1.7**
JOSI *e*S **Sn** **04 26 00.2 -4.6**
JOSI IAML 04 26 09.4
comp=N,156nm,0.7s
JOSI IAML 04 26 10.7
comp=E,140nm,0.7s
LDR Lodi Road 9.14 146 *e*S **Sn** **04 26 04.8 -5.3**
KUDL Kundal 9.21 151 *e*P **Pn** **04 24 29.0 -1.0**
KUDL *e*S **Sn** **04 26 06.6 -5.2**
KUDL IAML 04 26 10.6
comp=E,195nm,0.3s
KUDL IAML 04 26 12.3
comp=N,105nm,0.3s
LGTI Lohaghat 10.04 131 *e*S **Sn** **04 26 26.9 -5.5**
AJM Ajmer 10.24 163 *e*P **Pn** **04 24 43.0 -0.9**
AJM *e*S Sn 04 26 28.4 -8.4
AJM IAML 04 26 37.9
comp=E,131nm,0.2s
AJM IAML 04 26 40.0
comp=N,171nm,0.3s
JHNI Jhansi 12.47 148 *e*P **Pn** **04 25 11.8 -2.0**
JHNI *e*S Sn 04 27 21.9 -9.0
JHNI IAML 04 27 28.4
comp=E,167nm,0.2s
JHNI IAML 04 27 28.4
comp=N,130nm,0.1s
MKAR Makanchi Array 13.26 34 Pn **Pn** **04 25 22.1 -2.1**
comp=N,0.1nm,0.3s,baz=220,slow=14,SNR=8.5
comp=N,1.3nm,0.8s
MKAR Makanchi Array 13.26 34 **Pn** **04 25 25.1 +0.9**
BHPL Bhopal 14.03 157 *e*P **Pn** **04 25 32.6 -1.8**
BHPL IAML 04 28 04.8
comp=N,70nm,0.2s
BHPL IAML 04 28 05.6
comp=E,88nm,0.2s
BHPL *ex* x 04 28 10.1
KURBB Kurchatov Arra 15.20 18 Pn **Pn** **04 25 45.3 -3.8**
comp=E,0.2nm,0.3s,baz=206,slow=11,SNR=8.8
comp=E,0.2nm,0.3s
KURK Kurchatov 15.31 18 **Pn** **04 25 49.9 -0.5**
AB31 Akbulak array 15.40 331 **Pn** **04 25 48.0 -3.5**
AB31 IAmb IAmb 04 25 49.1
comp=Z,7.8nm,0.3s
AB31 Akbulak array 15.40 331 ⇓P **Pn** **04 25 47.9 -3.6**
comp=Z,1.9nm,0.3s,baz=143,slow=12,SNR=217
AB31 ⇓S Sn 04 28 28.8 -13
comp=Z,3.6nm,0.5s,baz=154,slow=24,SNR=7.0
ABKAR Akbulak array 15.40 331 **Pn** **04 25 48.1 -3.5**
EVN Everest 15.48 118 **Pn** **04 25 51.5 -1.9**
EVN IAmb IAmb 04 25 59.8
comp=Z,6.4nm,0.6s
AKL Akola 16.31 161 *e*P **Pn** **04 26 04.0 +0.9**
BVAR Borovoye Array 16.73 358 P **Pn** **04 26 05.9 -2.1**
comp=Z,0.1nm,0.3s,baz=164,slow=12,SNR=9.0
comp=Z,3.2nm,0.6s
AKTO Aktyubinsk 17.10 330 P **Pn** **04 26 10.9 -1.7**
comp=Z,1.0nm,0.3s,baz=142,slow=13,SNR=16
AKTO S Sn 04 29 06.1 -16
comp=Z,3.4nm,0.6s,baz=150,slow=20,SNR=4.1
comp=Z,3.6nm,0.4s
AKTO Aktyubinsk 17.10 330 ⇓P **Pn** **04 26 10.1 -2.4**
comp=Z,6.2nm,0.9s
AKTO ⇓S Sn 04 29 09.3 -13
comp=Z,5.1nm,0.8s
ZAA0 Zalesovo Array 19.96 24 **P** **04 26 44.3 +0.4**
ZAA0 IAmb IAmb 04 26 45.8
comp=Z,4.9nm,0.6s
ZALV Zalesovo Beam 19.96 24 P **P** **04 26 44.3 +0.4**
comp=Z,3.0nm,0.3s,baz=208,slow=10,SNR=5.3
comp=Z,3.0nm,0.3s
SHL Shillong 20.54 116 **P** **04 26 52.8 +2.1**
SHL IAmb IAmb 04 26 57.3
comp=Z,8.7nm,0.7s
GNI Garni 21.25 288 P **P** **04 26 54.4 -3.7**
comp=Z,3.3nm,0.4s,baz=52,slow=17,SNR=6.4
comp=Z,3.3nm,0.4s
GNI Garni 21.25 288 P **P** **04 26 59.5 +1.3**
ARTI Arti 21.93 340 P **P** **04 27 06.1 +1.1**
comp=Z,2.3nm,0.7s,baz=143,slow=6.9,SNR=4.6
comp=Z,2.3nm,0.7s
ARTI Arti 21.93 340 P **P** **04 27 05.7 +0.7**
ARTI IAmb IAmb 04 27 16.5
comp=Z,16nm,1.3s
KBZ Khabaz 22.97 298 P **P** **04 27 15.1 -0.7**
comp=Z,1.4nm,0.8s,baz=82,slow=7.1,SNR=4.1
KBZ S **S** **04 31 25.7 +7.5**
comp=Z,0.5nm,0.5s,baz=163,slow=14,SNR=1.9
comp=Z,1.4nm,0.8s
AKASG Malin Array Be 33.31 309 P **P** **04 28 49.4 +1.4**
comp=Z,1.0nm,0.5s,baz=85,slow=6.9,SNR=15
comp=Z,1.0nm,0.5s
AKASG Malin Array Be 33.31 309 P **P** **04 28 48.2 +0.3**
AKASG IAmb IAmb 04 29 03.2
comp=Z,3.4nm,1.3s
BURAR Bucovina Array 35.65 303 P **P** **04 29 09.1 +0.7**
BURAR IAmb IAmb 04 29 11.5
comp=Z,1.5nm,0.8s
FINES FINESS Array B 37.82 326 P **P** **04 29 27.6 +1.3**
comp=Z,4.0nm,1.0s,baz=111,slow=8.5,SNR=7.1
FINES LR LR 04 47 40.0
comp=Z,167nm,18.4s,baz=215,slow=40
comp=Z,4.0nm,1.0s
FINES FINESS Array B 37.82 326 P **P** **04 29 26.8 +0.4**
ARCES ARCESS Array B 41.44 338 P **P** **04 29 57.2 +0.9**
comp=Z,6.4nm,1.1s,baz=117,slow=8.6,SNR=5.9
comp=Z,6.4nm,1.1s
ARCES ARCESS Array B 41.44 338 P **P** **04 29 57.0 +0.7**
HFS Hagfors 43.41 322 P **P** **04 30 12.4 0.0**
comp=Z,2.7nm,0.6s,baz=90,slow=12,SNR=10
comp=Z,2.7nm,0.6s
NB2 NORSAR Subarra 44.72 323 P **P** **04 30 23.6 +0.7**
comp=Z,0.8nm,0.5s,baz=96,slow=7.9
NOA NORSAR Array B 44.72 323 P **P** **04 30 23.5 +0.7**
comp=Z,1.4nm,0.7s,baz=96,slow=7.9,SNR=6.7
comp=Z,1.4nm,0.7s
EKA Eskdalemuir Ar 52.64 316 P **P** **04 31 25.5 +2.0**
comp=Z,0.7nm,0.7s,baz=83,slow=8.2,SNR=4.2
comp=Z,0.7nm,0.7s
ESK Eskdalemuir 52.67 316 P **P** **04 31 21.5 -2.2**
KAPI Kappang 61.09 122 LR LR 05 04 58.0
comp=Z,72nm,18.9s,baz=252,slow=42
TORD Torodi Ar. Bea 66.03 269 P **P** **04 32 55.1 -1.1**
comp=Z,1.6nm,0.5s,baz=47,slow=4.2,SNR=17
comp=Z,1.6nm,0.5s
BATI Baumata 67.50 123 LR LR 05 06 23.4
comp=Z,150nm,18.1s,baz=277,slow=39
M29M Somme Creek 78.69 14 P **P** **04 34 11.5 +0.6**
M29M IAmb IAmb 04 34 37.4
comp=Z,3.5nm,1.3s
BLKN Baker Lake 79.21 354 P **P** **04 34 14.4 +1.0**
YKA Yellowknife Ar 81.42 3 P **P** **04 34 26.1 +0.7**
comp=Z,0.2nm,0.6s,baz=352,slow=5.7,SNR=7.3
comp=Z,0.2nm,0.6s
YKA Yellowknife Ar 81.42 3 P **P** **04 34 25.5 +0.1**
YKAW1 Yellowknife Wh 81.43 3 P **P** **04 34 26.3 +0.9**
STKA Stephens Creek 94.42 127 LR LR 05 25 00.2

comp=Z,34nm,19.0s,baz=29,slow=40

*IDC **26** 04:23:47.8±7.2,49°.28N×157°.90E, h31km±53km, mb3.7/19, mbtmp3.9/21, ML3.0/2, MS3.7/1, Error ellipse: s-maj=19.7km s-min=13.1km az=157.0*
*KRSC **26** 04:23:47.0±2.4, 49°.50N×158°.40E, h46km±49km, Ml4.3*
*NEIC **26** 04:23:48.6±1.6, 49°.2N±0°.1×157°.9E±0°.2, h39km±7km, mb4.3/26, Error ellipse: s-maj=17.3km s-min=13.6km az=146.0*
*MOS **26** 04:23:48.2±0.9, 49°.41N×157°.91E, h50km, mb4.3/10, Error ellipse: s-maj=13.4km s-min=4.3km az=88.6*

ISC 26 04:23:47.7±0.6, **49°.31N**±0°.07×**158°.08E**±0°.05, **h35**km, **n136,** σ1§**49**/152, **mb4.2**/37, **6C-3D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	h m s	Res
SKR	**Severo-Kuril's**	**1.87**	**318**	*e*PN		**Pn**	**04 24 16.0**	**-1.1**
SKR				*e*S		**Sn**	**04 24 38.7**	**-0.8**
SKR				pmax		pmax		
	comp=Z,421nm,0.5s							
SKR				smax		smax		
	comp=E,1μm,0.3s							
SKR				smax		smax		
	comp=N,3μm,0.5s							
SKR	**Severo-Kuril's**	**1.87**	**318**	*e*P		**Pn**	**04 24 16.0**	**-1.1**
SKR				*e*S		**Sn**	**04 24 38.6**	**-0.8**
PAU	**Pauzhetka**	**2.30**	**340**	PN		**Pn**	**04 24 23.1**	**0.0**
PAU				S		**Sn**	**04 24 50.3**	**+0.1**
PAU	**Pauzhetka**	**2.30**	**340**	*e*P		**Pn**	**04 24 23.2**	**0.0**
PAU				*e*S		**Sn**	**04 24 50.4**	**+0.1**
KDTR	**Khodutka, Kamc**	**2.50**	**360**	PN		**Pn**	**04 24 25.2**	**-0.6**
KDTR				S		**Sn**	**04 24 53.3**	**-1.7**
KDTR	**Khodutka, Kamc**	**2.50**	**360**	*e*P		**Pn**	**04 24 25.2**	**-0.6**
KDTR				*e*S		**Sn**	**04 24 53.3**	**-1.7**
ASAK	**Asacha**	**3.08**	**358**	PN		**Pn**	**04 24 33.8**	**0.0**
ASAK	**Asacha**	**3.08**	**358**	*e*P		**Pn**	**04 24 33.9**	**0.0**
MIPR	**Malaya Ipel'ka**	**3.08**	**345**	PN		**Pn**	**04 24 35.4**	**+1.6**
MIPR	**Malaya Ipel'ka**	**3.08**	**345**	*e*P		**Pn**	**04 24 35.4**	**+1.6**
RUS	**Russkaya**	**3.13**	**5**	PN		**Pn**	**04 24 33.9**	**-0.6**
RUS				S		**Sn**	**04 25 08.4**	**-2.3**
RUS	**Russkaya**	**3.13**	**5**	*e*P		**Pn**	**04 24 34.0**	**-0.6**
RUS				*e*S		**Sn**	**04 25 08.4**	**-2.3**
MTVR	**Mutnovka**	**3.17**	**1**	PN		**Pn**	**04 24 35.0**	**-0.2**
MTVR				S		**Sn**	**04 25 10.8**	**-1.1**
MTVR	**Mutnovka**	**3.17**	**1**	*e*P		**Pn**	**04 24 35.1**	**-0.2**
MTVR				*e*S		**Sn**	**04 25 10.8**	**-1.1**
GRL	**Gorelyy**	**3.24**	**360**	PN		**Pn**	**04 24 36.4**	**+0.3**
GRL				S		**Sn**	**04 25 13.3**	**-0.2**
GRL	**Gorelyy**	**3.24**	**360**	*e*P		**Pn**	**04 24 36.4**	**+0.3**
GRL				*e*S		**Sn**	**04 25 13.3**	**-0.2**
KRMR	**Karymshinskiy**	**3.52**	**0**	PN		**Pn**	**04 24 40.4**	**+0.6**
KRMR	**Karymshinskiy**	**3.52**	**0**	*e*P		**Pn**	**04 24 40.4**	**+0.6**
APC	**Apacha**	**3.66**	**351**	PN		**Pn**	**04 24 43.5**	**+1.8**
APC	**Apacha**	**3.66**	**351**	*e*P		**Pn**	**04 24 43.5**	**+1.8**
PET	**Petropavlovsk**	**3.73**	**5**			**Pn**	**04 24 43.8**	**+1.1**
PET	**Petropavlovsk**	**3.73**	**5**	*e*PN		**Pn**	**04 24 43.5**	**+0.8**
PET				*e*S		**Sn**	**04 25 24.1**	**-1.3**
PET				pmax		pmax		
	comp=Z,62nm,0.5s							
PET				smax		smax		
	comp=N,158nm,0.5s							
PET				smax		smax		
	comp=E,100nm,0.5s							
PET	**Petropavlovsk**	**3.73**	**5**	*e*P		**Pn**	**04 24 43.5**	**+0.8**
PET				*e*S		**Sn**	**04 25 23.9**	**-1.5**
DALK	**Dalny**	**3.75**	**6**	PN		**Pn**	**04 24 43.5**	**+0.6**
DALK				S		**Sn**	**04 25 23.9**	**-1.8**
DALK	**Dalny**	**3.75**	**6**	*e*P		**Pn**	**04 24 43.5**	**+0.6**
DALK				*e*S		**Sn**	**04 25 24.0**	**-1.8**
UGLR	**Uglovaya**	**3.93**	**7**	PN		**Pn**	**04 24 46.8**	**+1.3**
UGLR	**Uglovaya**	**3.93**	**7**	*e*P		**Pn**	**04 24 46.9**	**+1.3**
AVH	**Avacha**	**3.98**	**6**	PN		**Pn**	**04 24 47.3**	**+1.1**
AVH	**Avacha**	**3.98**	**6**	*e*P		**Pn**	**04 24 47.3**	**+1.1**
SMAR	**Somma**	**3.98**	**6**	PN		**Pn**	**04 24 47.3**	**+1.0**
SMAR	**Somma**	**3.98**	**6**	*e*P		**Pn**	**04 24 47.4**	**+1.0**
SPN	**Mys Shipunski**	**3.98**	**17**	PN		**Pn**	**04 24 45.8**	**-0.3**
SPN	**Mys Shipunski**	**3.98**	**17**	*e*P		**Pn**	**04 24 45.9**	**-0.3**
KOK	**Koryaka**	**4.00**	**5**	PN		**Pn**	**04 24 48.0**	**+1.5**
KOK	**Koryaka**	**4.00**	**5**	*e*P		**Pn**	**04 24 48.1**	**+1.5**
KRER	**Koryakskii**	**4.02**	**6**	PN		**Pn**	**04 24 48.1**	**+1.3**
KRER	**Koryakskii**	**4.02**	**6**	*e*P		**Pn**	**04 24 48.2**	**+1.3**
KRX	**Arik**	**4.07**	**5**	PN		**Pn**	**04 24 48.6**	**+1.2**
KRX	**Arik**	**4.07**	**5**	*e*P		**Pn**	**04 24 48.7**	**+1.2**
GNL	**Ganaly**	**4.39**	**359**	PN		**Pn**	**04 24 53.4**	**+1.5**
GNL	**Ganaly**	**4.39**	**359**	*e*P		**Pn**	**04 24 53.4**	**+1.5**
KII	**Karymskiy**	**4.80**	**10**	PN		**Pn**	**04 24 59.8**	**+2.2**
KII	**Karymskiy**	**4.80**	**10**	*e*P		**Pn**	**04 24 59.8**	**+2.2**
TUMD	**Tumrok D**	**6.07**	**13**	*e*S		**Sn**	**04 26 23.1**	**+0.2**
KBTR	**Krutoberegovo**	**7.48**	**21**	PN		**Pn**	**04 25 34.0**	**-0.1**
KBTR	**Krutoberegovo**	**7.48**	**21**	*e*P		**Pn**	**04 25 34.1**	**-0.1**
KBTR				*e*S		**Sn**	**04 26 53.1**	**-4.5**
BKI	**Bering**	**7.63**	**36**	PN		**Pn**	**04 25 35.5**	**-0.6**
BKI	**Bering**	**7.63**	**36**	*e*P		**Pn**	**04 25 35.6**	**-0.6**
BKI				*e*S		**Sn**	**04 26 54.3**	**-7.0**
SHEM	**Shemya Is, Ala**	**10.65**	**65**	Pn		**Pn**	**04 26 18.1**	**+0.5**
	comp=E,3.6nm,0.3s,baz=265,slow=12,SNR=4.3							
SMY	**Shemya**	**10.65**	**65**	Pn		**Pn**	**04 26 17.1**	**-0.5**
SMY	**Shemya**	**10.65**	**65**	PN		**Pn**	**04 26 17.1**	**-0.5**
MA2	**Magadan**	**11.12**	**340**	LR		LR	04 31 10.9	
	comp=E,33nm,19.7s,baz=122,slow=40							
KLR	**Kul'dur**	**17.16**	**280**	P		**Pn**	**04 27 43.4**	**-1.1**
	baz=77,slow=14,SNR=1.9							
KLR				LR		LR	04 34 02.5	
	comp=E,39nm,21.0s,baz=230,slow=36							
	comp=E,0.4nm,0.3s							
KLR	**Kul'dur**	**17.16**	**280**	⇓*e*P		**Pn**	**04 27 44.2**	**-0.3**
KLR				pmax		pmax		
	comp=Z,9.0nm,2.2s							
VLA	**Vladivostok**	**19.10**	**261**	⇑*e*P		**P**	**04 28 04.9**	**-2.3**
VLA				pmax		pmax		
	comp=Z,18nm,0.7s							
BILL	**Bilibino**	**19.22**	**9**	⇓*e*P		**P**	**04 28 06.8**	**-1.6**
BILL				pmax		pmax		
	comp=Z,9.0nm,2.1s							
MAJO	**Matsushiro**	**19.28**	**236**	⇑*e*P		**P**	**04 28 08.8**	**-0.5**
MAJO				pmax		pmax		
	comp=Z,8.0nm,1.0s							
MJAR	**Matsushiro Arr**	**19.28**	**236**	P		**P**	**04 28 08.5**	**-0.8**
	baz=33,slow=8.0,SNR=6.0							
	comp=Z,1.6nm,0.6s							
MJAR	**Matsushiro Arr**	**19.28**	**236**	P		**P**	**04 28 07.1**	**-2.2**
MJAR	**Matsushiro Arr**	**19.28**	**236**	P		**P**	**04 28 07.1**	**-2.2**
MJAR				pmax		pmax		
	comp=Z,5.0nm,1.3s							
YAK	**Yakutsk**	**20.25**	**320**	LR		LR	04 37 30.8	
	comp=Z,52nm,19.2s,baz=36,slow=41							
BNX	**BinXian**	**20.95**	**272**	⇑P		**P**	**04 28 27.0**	**-0.3**
BNX				pmax		pmax		
	comp=Z,4.0nm,0.9s							
ANM	**Nome**	**24.63**	**38**			**P**	**04 29 06.4**	**+2.0**
ANM				IAmb		IAmb	04 29 09.1	
	comp=Z,8.2nm,1.2s							
ANM	**Nome**	**24.63**	**38**	P		**P**	**04 29 06.4**	**+2.0**
ANM				pmax		pmax		
	comp=Z,8.0nm,1.2s							
KSRS	**Korea Array**	**24.75**	**253**	P		**P**	**04 29 07.4**	**+1.7**
	comp=Z,1.2nm,0.6s,baz=53,slow=10.0,SNR=4.5							
	comp=Z,1.2nm,0.6s							
F15K	**North Star Dit**	**25.33**	**36**			**P**	**04 29 12.8**	**+2.0**
TIXI	**Tiksi**	**26.09**	**339**	⇑*e*P		**P**	**04 29 17.4**	**-0.2**
TIXI				pmax		pmax		
	comp=Z,6.0nm,1.8s							
C19K	**Lookout Ridge**	**28.44**	**30**	P		**P**	**04 29 40.0**	**+1.3**
C19K				IAmb		IAmb	04 30 03.4	
	comp=Z,5.8nm,1.4s							
H19K	**Roundabout Mou**	**28.53**	**38**	P		**P**	**04 29 41.0**	**+1.5**
E22K	**Anaktuvuk Pass**	**30.87**	**34**	P		**P**	**04 30 01.6**	**+1.3**
H11S1	**WAKE ISLAND Hy**	**31.51**	**164**	T		T	05 04 48.4	
	baz=347							
H11S3	**WAKE ISLAND Hy**	**31.52**	**164**	T		T	05 04 47.8	
	baz=347,slow=74,SNR=3.7							
H11S2	**WAKE ISLAND Hy**	**31.53**	**164**	T		T	05 04 50.9	
	baz=347,slow=74,SNR=4.4							
E23K	**Chandalar**	**31.67**	**34**			**P**	**04 30 08.5**	**+1.2**
E23K				IAmb		IAmb	04 30 10.6	
	comp=Z,8.5nm,1.4s							
COLA	**College**	**32.04**	**41**	⇑*e*P		**P**	**04 30 12.4**	**+1.9**
COLA				pmax		pmax		
	comp=Z,5.0nm,0.9s							
E24K	**Your Creek**	**32.09**	**35**	P		**P**	**04 30 12.5**	**+1.5**
E24K				IAmb		IAmb	04 30 14.1	
	comp=Z,3.2nm,0.8s							
G24K	**Hadweenzic Riv**	**32.32**	**37**	P		**P**	**04 30 15.3**	**+2.3**
G24K				IAmb		IAmb	04 30 15.9	
	comp=Z,3.7nm,0.8s							
ILAR	**Eielson Array**	**32.45**	**41**	P		**P**	**04 30 15.0**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=269,slow=8.2,SNR=18							
ILAR				PcP		**PcP**	**04 32 59.2**	**-1.2**
	comp=Z,0.3nm,1.0s,baz=287,slow=3.1,SNR=1.8							
	comp=Z,0.5nm,0.7s							
ILAR	**Eielson Array**	**32.45**	**41**	P		**P**	**04 30 16.1**	**+2.0**
D25K	**Kavik River**	**33.04**	**32**	P		**P**	**04 30 21.1**	**+1.8**
D25K				IAmb		IAmb	04 30 21.9	
	comp=Z,2.6nm,0.6s							
FYU	**Fort Yukon**	**33.20**	**38**			**P**	**04 30 22.8**	**+2.2**
SONM	**Songino Array**	**33.69**	**288**	P		**P**	**04 30 24.5**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=79,slow=7.5,SNR=1.3							
SONM				PcP		**PcP**	**04 33 01.9**	**-2.4**
	comp=Z,0.4nm,0.5s,baz=80,slow=1.6,SNR=2.1							
	comp=Z,0.3nm,0.5s							
SONM	**Songino Array**	**33.69**	**288**	P		**P**	**04 30 25.0**	**-0.2**
SONM						**PcP**	**04 33 01.8**	**-2.6**
SONM	**Songino Array**	**33.69**	**288**	P		**P**	**04 30 25.0**	**-0.2**
SONM							04 33 01.8	
SONM				pmax		pmax		
	comp=Z,2.0nm,1.2s							
G26K	**Porcupine Rive**	**33.79**	**37**	P		**P**	**04 30 27.8**	**+2.0**
TLY	**Talaya**	**34.04**	**295**	⇓*e*P		**P**	**04 30 27.0**	**-1.1**
TLY				pmax		pmax		
	comp=Z,9.0nm,2.9s							
F28M	**Old Crow**	**35.32**	**36**			**P**	**04 30 41.2**	**+2.2**
F28M				IAmb		IAmb	04 30 42.2	
	comp=Z,2.8nm,0.7s							
I28M	**Miner Creek**	**35.37**	**40**	P		**P**	**04 30 41.2**	**+1.6**
I28M				IAmb		IAmb	04 31 10.4	
	comp=Z,4.2nm,1.4s							
E29M	**Blow River**	**36.05**	**34**	P		**P**	**04 30 47.2**	**+2.0**
E29M				IAmb		IAmb	04 30 48.8	
	comp=Z,3.2nm,0.9s							
G29M	**Pine Creek**	**36.06**	**37**	P		**P**	**04 30 46.5**	**+1.1**
EPYK	**Eagle Plains**	**36.62**	**38**	P		**P**	**04 30 51.1**	**+1.0**
G31M	**Satah River**	**37.53**	**37**	P		**P**	**04 30 59.9**	**+2.0**
G31M				IAmb		IAmb	04 31 00.9	
	comp=Z,3.0nm,0.6s							
INK	**Inuvik**	**37.67**	**34**			**P**	**04 31 01.2**	**+2.2**
INK	**Inuvik**	**37.67**	**34**	P		**P**	**04 31 01.2**	**+2.2**
INK				pmax		pmax		
	comp=Z,7.0nm,1.3s							
F31M	**Tsiigehtchic**	**37.68**	**36**			**P**	**04 31 01.4**	**+2.4**
F31M				IAmb		IAmb	04 31 02.0	
	comp=Z,3.8nm,0.7s							
NRIK	**Noril'sk**	**38.34**	**327**	*i* P		**P**	**04 31 01.8**	**-2.8**
NRIK				pmax		pmax		
	comp=Z,2.0nm,0.6s							
C36M	**Paulatuk**	**40.90**	**32**			**P**	**04 31 28.3**	**+2.4**
C36M				IAmb		IAmb	04 31 29.2	
	comp=Z,8.8nm,1.3s							
ZALV	**Zalesovo Beam**	**43.84**	**305**	P		**P**	**04 31 50.1**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=63,slow=8.5,SNR=3.3							
	comp=Z,0.9nm,0.5s							
YKA	**Yellowknife Ar**	**46.85**	**39**	P		**P**	**04 32 15.9**	**+2.2**
	comp=Z,1.5nm,0.7s,baz=298,slow=8.2,SNR=26							
YKA				PcP		**PcP**	**04 33 47.5**	**+1.4**
	comp=Z,0.1nm,0.7s,baz=275,slow=4.7,SNR=2.2							
	comp=Z,1.5nm,0.7s							
YKA	**Yellowknife Ar**	**46.85**	**39**	P		**P**	**04 32 15.7**	**+2.0**
YKAW1	**Yellowknife Wh**	**46.90**	**39**			**P**	**04 32 16.3**	**+2.1**
KURK	**Kurchatov**	**48.72**	**304**	P		**P**	**04 32 28.0**	**-0.4**
KURK	**Kurchatov**	**48.72**	**304**	P		**P**	**04 32 28.0**	**-0.4**
KURK				pmax		pmax		
	comp=Z,3.0nm,0.5s							
MK31	**Makanchi Array**	**48.72**	**298**	⇑*e*P		**P**	**04 32 28.5**	**0.0**
MKAR	**Makanchi Array**	**48.72**	**298**	P		**P**	**04 32 28.0**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=55,slow=7.1,SNR=10							
	comp=Z,0.7nm,0.4s							
MKAR	**Makanchi Array**	**48.72**	**298**	P		**P**	**04 32 27.1**	**-1.3**
MKAR	**Makanchi Array**	**48.72**	**298**	*i* P		**P**	**04 32 29.3**	**+0.8**
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.4s							
KURBB	**Kurchatov Arra**	**48.81**	**304**	P		**P**	**04 32 28.3**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=64,slow=8.2,SNR=6.1							
	comp=Z,0.9nm,0.5s							
BVAR	**Borovoye Array**	**51.79**	**310**	P		**P**	**04 32 52.1**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=58,slow=8.2,SNR=2.9							
	comp=Z,0.6nm,0.3s							
CMAR	**Chiang Mai Arr**	**56.18**	**259**	P		**P**	**04 33 25.2**	**+1.2**
	comp=Z,2.0nm,0.3s,baz=33,slow=9.7,SNR=1.1							
	comp=Z,2.0nm,0.3s							
CMAR	**Chiang Mai Arr**	**56.18**	**259**	P		**P**	**04 33 23.9**	**-0.2**
NVAR	**Mina Array Bea**	**58.32**	**67**	P		**P**	**04 33 41.9**	**+2.6**
	comp=Z,0.3nm,0.5s,baz=315,slow=6.7,SNR=2.3							
	comp=Z,0.3nm,0.5s							
NVAR	**Mina Array Bea**	**58.32**	**67**	P		**P**	**04 33 40.5**	**+1.3**
AB31	**Akbulak array**	**59.30**	**311**			**P**	**04 33 45.7**	**+0.1**
AB31				IAmb		IAmb	04 33 46.5	
	comp=Z,2.2nm,0.7s							
ABKAR	**Akbulak array**	**59.30**	**311**	P		**P**	**04 33 45.0**	**-0.6**
AKTO	**Aktyubinsk**	**59.46**	**313**	P		**P**	**04 33 46.7**	**+0.1**
	comp=Z,1.4nm,0.5s,baz=65,slow=10,SNR=3.0							
	comp=Z,1.4nm,0.5s							
PDAR	**Pinedale Array**	**60.55**	**58**	P		**P**	**04 33 56.3**	**+1.8**
	comp=Z,0.8nm,0.8s,baz=294,slow=10,SNR=4.1							
	comp=Z,0.4nm,0.8s							
PDAR	**Pinedale Array**	**60.55**	**58**	P		**P**	**04 33 55.9**	**+1.4**
FINES	**FINESS Array B**	**63.08**	**336**	P		**P**	**04 34 13.5**	**+2.5**
	comp=Z,3.3nm,1.1s,baz=48,slow=5.5,SNR=3.3							
	comp=Z,3.3nm,1.1s							
FINES	**FINESS Array B**	**63.08**	**336**	P		**P**	**04 34 11.7**	**+0.8**
FINES	**FINESS Array B**	**63.08**	**336**	P		**P**	**04 34 11.7**	**+0.8**
NB2	**NORSAR Subarra**	**66.81**	**343**	P		**P**	**04 34 36.0**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=22,slow=6.5							
NOA	**NORSAR Array B**	**66.81**	**343**	P		**P**	**04 34 35.6**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=27,slow=6.5,SNR=4.2							
	comp=Z,0.5nm,0.6s							
AKASG	**Malin Array Be**	**71.19**	**328**	P		**P**	**04 35 02.3**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=32,slow=6.6,SNR=5.1							
	comp=Z,1.3nm,0.6s							
AKASG	**Malin Array Be**	**71.19**	**328**	P		**P**	**04 35 03.

ISC 26 04:26:37.3±0.6, 8°89S±0.09×108°6W±0.1, **h15**km, **n151**, σ0°68/94, **mb4.6**/65, **MS4.2**/35, **Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**18.15**	**182**	LR	LR	04 35 52.5	
	comp=Z,714nm,20.9s,baz=12,slow=31						
TLIG	**Tlapa**	**28.09**	**21**	P	**P**	**04 32 29.4**	**+0.6**
TLIG				IAmb	IAmb	04 32 32.8	
	comp=Z,6.4nm,0.7s						
JUD3	**Juan Diaz 3**	**29.76**	**51**	P	**P**	**04 32 42.9**	**-0.7**
APG	**El Apazote**	**29.78**	**37**	LR	LR	04 42 15.3	
	comp=Z,83nm,19.8s,baz=286,slow=32						
BOAB	**BOACO BROADBAN**	**31.13**	**47**	P	**P**	**04 32 55.5**	**-0.2**
OTAV	**Otavalo**	**31.37**	**75**	P	**P**	**04 32 57.3**	**-1.1**
PETF	**Flores**	**31.64**	**36**	P	**P**	**04 32 59.8**	**-0.2**
ZAIG	**Zacatecas**	**32.02**	**11**	P	**P**	**04 33 04.0**	**+0.4**
ZAIG				IAmb	IAmb	04 33 08.1	
	comp=Z,7.5nm,1.1s						
LPIG	**La Paz**	**32.84**	**357**	LR	LR	04 43 06.9	
	comp=Z,483nm,21.4s,baz=173,slow=30						
HPIG		**35.73**	**4**	P	**P**	**04 33 36.7**	**+0.9**
SRIG	**Santa Rosalia**	**36.17**	**355**	P	**P**	**04 33 38.6**	**-0.7**
H03N2	**Juan Fernandez**	**36.67**	**136**	T	T	05 12 37.8	
	baz=308,slow=77,SNR=147						
H03N1	**Juan Fernandez**	**36.68**	**136**	T	T	05 12 39.1	
	baz=308,slow=77,SNR=227						
H03N3	**Juan Fernandez**	**36.68**	**136**	T	T	05 12 38.6	
	baz=308,slow=77,SNR=169						
ROSC	**El Rosal**	**36.80**	**70**	LR	LR	04 45 12.7	
	comp=Z,657nm,19.7s,baz=257,slow=30						
833A	**Chaparral WMA,**	**38.05**	**13**	P	**P**	**04 33 56.4**	**+1.1**
833A				IAmb	IAmb	04 34 04.2	
	comp=Z,12nm,0.9s						
TX31	**Lajitas Ar. Si**	**38.30**	**7**		**P**	**04 33 58.5**	**+0.9**
TXAR	**Lajitas Array**	**38.30**	**7**	P	**P**	**04 33 58.0**	**+0.5**
	comp=Z,2.6nm,1.1s,baz=191,slow=9.7,SNR=12						
TXAR				S	S	04 39 42.2	-9.2
	comp=Z,0.3nm,0.9s,baz=178,slow=14,SNR=2.5						
TXAR				LR	LR	04 47 14.5	
	comp=Z,203nm,19.0s,baz=188,slow=32						
	comp=Z,2.6nm,1.1s						
DRIO	**Del Rio**	**38.86**	**11**	P	**P**	**04 34 02.1**	**0.0**
PB16	**IPOC Station P**	**39.06**	**108**	P	**P**	**04 34 05.2**	**+0.5**
SAND	**Sanderson**	**39.12**	**9**		**P**	**04 34 05.0**	**+0.7**
ALPN	**Alpine**	**39.32**	**7**		**P**	**04 34 06.3**	**+0.1**
PB01	**IPOC Station P**	**39.56**	**112**	P	**P**	**04 34 09.4**	**+1.2**
VHRN	**Van Horn**	**39.60**	**5**	P	**P**	**04 34 08.7**	**+0.2**
319A	**Douglas**	**40.04**	**359**	P	**P**	**04 34 12.6**	**+0.5**
319A				IAmb	IAmb	04 34 24.1	
	comp=Z,13nm,1.1s						
JCT	**Junction City**	**40.05**	**12**	P	**P**	**04 34 12.3**	**+0.3**
LPAZ	**La Paz**	**40.12**	**105**	P	**P**	**04 34 15.2**	**+1.6**
	comp=Z,2.1nm,0.8s,baz=282,slow=6.9,SNR=8.7						
LPAZ				LR	LR	04 46 46.3	
	comp=Z,187nm,21.7s,baz=262,slow=30						
	comp=Z,2.1nm,0.8s						
LPAZ	**La Paz**	**40.12**	**105**		**P**	**04 34 13.1**	**-0.5**
MNTX	**Cornudas Mount**	**40.48**	**4**		**P**	**04 34 15.7**	**+0.1**
PIX	**Pinacate**	**40.49**	**354**	P	**P**	**04 34 15.3**	**-0.3**
PPT	**Papeete**	**40.73**	**253**	LR	LR	04 46 41.1	
	comp=Z,355nm,20.6s,baz=94,slow=30						
BRDY	**Brady**	**41.00**	**13**	P	**P**	**04 34 19.3**	**-0.6**
SGCY	**Sterling City**	**41.20**	**10**	P	**P**	**04 34 21.3**	**-0.3**
SGCY				IAmb	IAmb	04 34 29.4	
	comp=Z,18nm,1.0s						
DUN6	**Lazy B Ranch**	**41.22**	**359**	P	**P**	**04 34 21.8**	**0.0**
DUN6				IAmb	IAmb	04 34 30.5	
	comp=Z,17nm,1.0s						
SDV	**Santo Domingo**	**41.74**	**66**	LR	LR	04 50 22.4	
	comp=Z,318nm,18.1s,baz=234,slow=34						
ABTX	**Abilene, Hawle**	**42.16**	**11**	P	**P**	**04 34 29.5**	**+0.1**
ABTX				IAmb	IAmb	04 34 32.3	
	comp=Z,23nm,1.4s						
Y22A	**Socorro**	**42.62**	**2**		**P**	**04 34 33.7**	**+0.4**
Y22A				IAmb	IAmb	04 34 45.6	
	comp=Z,13nm,1.2s						
PFO	**Pinyon Flats O**	**42.92**	**350**	LR	LR	04 48 03.9	
	comp=Z,458nm,20.7s,baz=194,slow=30						
MT13	**San Alfonso**	**43.04**	**131**	P	**P**	**04 34 36.7**	**-0.1**
MT13				IAmb	IAmb	04 34 45.8	
	comp=Z,8.9nm,0.8s						
IRM	**Iron Mountain**	**43.26**	**352**	P	**P**	**04 34 39.3**	**+1.0**
ANMO	**Albuquerque**	**43.65**	**3**	LR	LR	04 49 56.9	
	comp=Z,325nm,21.7s,baz=179,slow=32						
CFA	**Coronel Fontan**	**43.74**	**127**	LR	LR	04 48 52.7	
	comp=Z,241nm,20.6s,baz=305,slow=30						
W13A	**Hualapai Mount**	**44.04**	**354**	P	**P**	**04 34 44.9**	**+0.1**
Z41A	**Richland Creek**	**44.53**	**19**	P	**P**	**04 34 49.0**	**+0.5**
MIAR	**Mount Ida**	**45.49**	**17**		**P**	**04 34 56.0**	**-0.1**
MIAR				IAmb	IAmb	04 35 03.3	
	comp=Z,11nm,1.0s						
SHPR	**Sheep Range**	**45.57**	**353**		**P**	**04 34 57.3**	**+0.3**
MVCO	**Mesa Verde**	**45.86**	**0**		**P**	**04 34 58.2**	**-1.1**
MVCO				IAmb	IAmb	04 35 15.2	
	comp=Z,8.4nm,1.1s						
LL01	**San Ignacio de**	**46.05**	**143**	P	**P**	**04 35 02.0**	**+1.5**
WCT	**Wildcat Mounta**	**46.06**	**351**	P	**P**	**04 35 01.1**	**+0.3**
WCT				IAmb	IAmb	04 35 05.0	
	comp=Z,11nm,1.5s						
TPNV	**Topopah Spring**	**46.16**	**352**	P	**P**	**04 35 01.9**	**+0.3**
TPNV				IAmb	IAmb	04 35 09.5	
	comp=Z,6.2nm,1.1s						
PLCA	**Paso Flores**	**46.28**	**140**	P	**P**	**04 35 03.5**	**+1.0**
	comp=Z,3.2nm,1.1s,baz=304,slow=9.2,SNR=3.4						
PLCA				LR	LR	04 49 40.6	
	comp=Z,451nm,19.2s,baz=322,slow=30						
	comp=Z,3.2nm,1.1s						
LL02	**Futaleuf**	**46.86**	**143**		**P**	**04 35 06.5**	**-0.4**
FCAR	**Ozark Folk Cen**	**47.17**	**18**	P	**P**	**04 35 09.2**	**-0.1**
FCAR				IAmb	IAmb	04 35 15.7	
	comp=Z,6.0nm,0.9s						
VILB	**Vilhena**	**47.65**	**99**	P	**P**	**04 35 13.1**	**-0.3**
LHV	**Little Huntoon**	**47.80**	**349**	P	**P**	**04 35 14.6**	**+0.5**
NVAR	**Mina Array Bea**	**47.94**	**350**	P	**P**	**04 35 17.0**	**+1.5**
	comp=Z,2.8nm,0.9s,baz=172,slow=6.6,SNR=15						
NVAR				LR	LR	04 51 10.4	
	comp=Z,434nm,19.2s,baz=105,slow=31						
	comp=Z,2.8nm,0.9s						
NVAR	**Mina Array Bea**	**47.94**	**350**	P	**P**	**04 35 16.1**	**+0.6**
MACA	**Manacapuru-AM**	**47.96**	**86**	P	**P**	**04 35 15.7**	**-0.2**
MGMO	**Mountain Grove**	**48.30**	**18**		**P**	**04 35 17.9**	**-0.2**
ISCO	**Idaho Springs**	**48.52**	**3**	P	**P**	**04 35 19.8**	**-0.4**
ISCO				IAmb	IAmb	04 35 31.5	
	comp=Z,6.0nm,1.1s						
PTLB	**Pontes e Lacer**	**48.71**	**103**	P	**P**	**04 35 21.1**	**-0.6**
PTLB				IAmb	IAmb	04 35 28.1	
	comp=Z,6.1nm,1.2s						
MPU	**Maple Canyon**	**48.74**	**357**	P	**P**	**04 35 22.2**	**+0.5**
MPU				IAmb	IAmb	04 35 33.8	
	comp=Z,11nm,1.2s						
DUG	**Dugway, Tooele**	**48.99**	**356**		**P**	**04 35 23.4**	**-0.2**
DUG				IAmb	IAmb	04 35 39.7	
	comp=Z,12nm,1.4s						
CCM	**Cathedral Cave**	**49.44**	**18**	P	**P**	**04 35 26.9**	**+0.1**
SJG	**San Juan**	**49.76**	**57**	LR	LR	04 52 32.7	
	comp=Z,132nm,20.7s,baz=239,slow=31						
P38A	**Dawn**	**50.26**	**15**	IAmb	IAmb	04 35 38.8	
	comp=Z,5.9nm,0.8s						
HWUT	**Hardware Ranch**	**50.32**	**357**	IAmb	IAmb	04 35 49.2	
	comp=Z,11nm,1.4s						
RAR	**Rarotonga**	**50.70**	**250**	LR	LR	04 53 09.0	
	comp=Z,145nm,18.1s,baz=102,slow=32						
PDAR	**Pinedale Array**	**51.42**	**359**	P	**P**	**04 35 41.5**	**-0.5**
	comp=Z,1.1nm,0.9s,baz=183,slow=8.3,SNR=6.7						
PDAR				LR	LR	04 54 36.1	
	comp=Z,166nm,18.3s,baz=156,slow=33						
	comp=Z,1.1nm,0.9s						
PDAR	**Pinedale Array**	**51.42**	**359**	P	**P**	**04 35 42.4**	**+0.5**
CPUP	**Villa Florida**	**51.50**	**117**	P	**P**	**04 35 42.5**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=302,slow=9.5,SNR=4.3						
CPUP				LR	LR	04 53 51.1	
	comp=Z,212nm,20.2s,baz=290,slow=32						
	comp=Z,1.1nm,0.8s						
WVOR	**Wild Horse Val**	**51.90**	**351**	IAmb	IAmb	04 36 00.9	
	comp=Z,12nm,1.4s						
YBH	**Yreka Blue Hor**	**52.01**	**347**	LR	LR	04 52 53.0	
	comp=Z,28nm,20.1s,baz=136,slow=30						
FXWY	**Fox Creek**	**52.33**	**358**	IAmb	IAmb	04 35 59.6	
	comp=Z,12nm,1.4s						
MFID	**Camas Ranch**	**52.47**	**353**	IAmb	IAmb	04 35 52.3	
	comp=Z,12nm,1.1s						
FLWY	**Flagg Ranch**	**52.76**	**358**	IAmb	IAmb	04 36 07.2	
	comp=Z,13nm,1.1s						
J08A	**Circle Bar Ran**	**52.77**	**351**	IAmb	IAmb	04 36 07.9	
	comp=Z,9.7nm,1.2s						
RSSD	**Black Hills**	**52.92**	**4**		**P**	**04 35 52.8**	**-0.4**
RSSD				IAmb	IAmb	04 35 55.7	
	comp=Z,13nm,1.5s						
BCYI	**Bear Canyon**	**53.13**	**356**	IAmb	IAmb	04 36 10.6	
	comp=Z,10nm,1.3s						
YHL	**Hebgen Lake**	**53.54**	**358**	IAmb	IAmb	04 36 01.1	
	comp=Z,14nm,1.3s						
I07A	**Izee**	**53.64**	**350**	IAmb	IAmb	04 36 14.5	
	comp=Z,8.1nm,1.2s						
G08A	**Pilot Rock**	**54.73**	**351**	IAmb	IAmb	04 36 17.9	
	comp=Z,8.4nm,1.2s						
G06A	**Carlson Farm,**	**54.96**	**350**	P	**P**	**04 36 08.5**	**+0.7**
G06A				IAmb	IAmb	04 36 47.3	
	comp=Z,11nm,1.4s						
F10A	**Beach Ranch, E**	**55.16**	**353**	IAmb	IAmb	04 36 32.4	
	comp=Z,9.1nm,1.3s						
C09A	**Chrisman Ranch**	**57.09**	**352**	IAmb	IAmb	04 36 38.1	
	comp=Z,11nm,1.2s						
NEW	**Newport**	**57.40**	**353**	LR	LR	04 56 50.4	
	comp=Z,196nm,21.7s,baz=170,slow=32						
NEW	**Newport**	**57.40**	**353**	IAmb	IAmb	04 36 39.8	
	comp=Z,7.3nm,1.4s						
MDP	**Montagnes des**	**57.49**	**78**	LR	LR	04 58 56.0	
	comp=Z,171nm,20.2s,baz=274,slow=34						
BDFB	**Brasilia**	**59.43**	**103**	LR	LR	05 00 27.0	
	comp=Z,199nm,21.6s,baz=115,slow=34						
SADO	**Sadowa**	**59.66**	**24**	LR	LR	05 01 37.0	
	comp=Z,115nm,18.6s,baz=224,slow=35						
ULM	**Lac du Bonnet**	**59.93**	**9**	P	**P**	**04 36 42.8**	**+0.1**
	comp=Z,3.5nm,0.7s,baz=198,slow=8.1,SNR=6.0						
	comp=Z,3.5nm,0.7s						
AFI	**Afiamalu**	**61.98**	**259**	LR	LR	04 57 29.4	
	comp=Z,152nm,20.7s,baz=98,slow=30						
EDM	**Edmonton**	**62.00**	**357**		**P**	**04 36 56.8**	**0.0**
PMSA	**Palmer Station**	**63.87**	**160**	LR	LR	04 59 58.0	
	comp=Z,176nm,18.6s,baz=21,slow=31						
RAO	**Raoul Island**	**67.69**	**242**	LR	LR	04 58 31.0	
	comp=Z,298nm,21.0s,baz=172,slow=28						
FCC	**Fort Churchill**	**68.44**	**8**		**P**	**04 37 38.8**	**+0.4**
FCC				IAmb	IAmb	04 37 45.0	
	comp=Z,5.6nm,0.9s						
YKA	**Yellowknife Ar**	**71.32**	**357**	P	**P**	**04 37 55.4**	**-0.7**
	comp=Z,0.8nm,0.9s,baz=178,slow=5.4,SNR=9.3						
	comp=Z,0.8nm,0.9s						
YKA	**Yellowknife Ar**	**71.32**	**357**	P	**P**	**04 37 56.4**	**+0.3**
MSVF	**Nonsavu**	**71.56**	**254**	LR	LR	05 01 35.5	
	comp=Z,213nm,20.1s,baz=99,slow=29						
URZ	**Urewera**	**72.22**	**233**	LR	LR	05 04 58.3	
	comp=Z,224nm,18.8s,baz=124,slow=32						
BKZ	**Black Stump Fm**	**72.74**	**232**	P	**P**	**04 38 05.0**	**-0.3**
KDAK	**Kodiak Island**	**75.45**	**337**	LR	LR	05 05 01.8	
	comp=Z,362nm,18.2s,baz=127,slow=31						
L27K	**Beaver Creek,**	**76.13**	**345**	IAmb	IAmb	04 38 31.1	
	comp=Z,4.5nm,1.1s						
RPZ	**Rata Peaks**	**76.94**	**227**	LR	LR	05 03 25.3	
	comp=Z,302nm,20.3s,baz=163,slow=29						
K27K	**Chicken**	**77.00**	**346**	IAmb	IAmb	04 38 44.3	
	comp=Z,5.3nm,1.2s						
L22K	**Petersville**	**78.25**	**341**		**P**	**04 38 37.0**	**+0.7**
L22K				IAmb	IAmb	04 38 42.8	
	comp=Z,6.0nm,0.9s						
F31M	**Tsiigehtchic**	**78.26**	**350**	IAmb	IAmb	04 38 52.4	
	comp=Z,7.2nm,1.3s						
ILAR	**Eielson Array**	**78.83**	**344**	P	**P**	**04 38 38.6**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=122,slow=6.7,SNR=9.6						
ILAR				LR	LR	05 06 44.5	
	comp=Z,94nm,18.9s,baz=96,slow=31						
	comp=Z,0.5nm,0.8s						
ILAR	**Eielson Array**	**78.83**	**344**	P	**P**	**04 38 39.7**	**+0.3**
WRH	**Wood River Hil**	**78.93**	**344**	IAmb	IAmb	04 38 53.7	
	comp=Z,6.4nm,1.0s						
INK	**Inuvik**	**79.01**	**351**	LR	LR	05 09 51.8	
	comp=Z,207nm,21.3s,baz=136,slow=33						
I23K	**Minto, Yukon-K**	**79.80**	**344**	IAmb	IAmb	04 39 01.4	
	comp=Z,13nm,1.5s						
K20K	**Telida**	**79.90**	**341**	IAmb	IAmb	04 38 51.0	
	comp=Z,7.4nm,0.9s						
ILON	**Igloolik, Nuna**	**80.27**	**9**		**P**	**04 38 47.7**	**+0.7**
ILON				IAmb	IAmb	04 39 01.7	
	comp=Z,16nm,1.4s						
J20K	**Nowinta River**	**80.50**	**342**		**P**	**04 38 48.6**	**+0.2**
J20K				IAmb	IAmb	04 39 07.7	
	comp=Z,6.9nm,1.3s						
F26K	**Sheenjek River**	**80.50**	**347**	P	**P**	**04 38 48.9**	**+0.4**
E25K	**Arctic Village**	**81.17**	**347**		**P**	**04 38 52.7**	**+0.7**
E25K				IAmb	IAmb	04 38 55.8	
	comp=Z,7.4nm,1.3s						
QSPA	**South Pole Qui**	**81.19**	**180**	P	**P**	**04 38 52.8**	**+0.5**
	comp=Z,2.6nm,0.7s,baz=112,slow=2.9,SNR=5.5						
QSPA				LR	LR	05 07 39.1	
	comp=Z,187nm,19.8s,baz=114,slow=30						
	comp=Z,2.6nm,0.7s						
QSPA	**South Pole Qui**	**81.19**	**180**	P	**P**	**04 38 52.5**	**+0.1**
A36M	**Sachs Harbour**	**81.45**	**355**	P	**P**	**04 38 53.2**	**-0.2**
A36M				IAmb	IAmb	04 39 02.1	
	comp=Z,10.0nm,1.4s						
COLD	**Coldfoot**	**81.59**	**345**	P	**P**	**04 38 54.8**	**+0.5**
COLD				IAmb	IAmb	04 39 09.7	
	comp=Z,8.0nm,1.1s						
IMAR	**Indian Mountai**	**81.66**	**343**	P	**P**	**04 38 54.4**	**-0.2**
DZM	**Mont Dzumac**	**82.07**	**249**	LR	LR	05 09 24.8	
	comp=Z,898nm,19.3s,baz=318,slow=31						
E23K	**Chandalar**	**82.07**	**346**	P	**P**	**04 38 57.6**	**+0.8**
E23K				IAmb	IAmb	04 39 25.4	
	comp=Z,8.3nm,1.4s						
H19K	**Roundabout Mou**	**82.15**	**342**	P	**P**	**04 38 57.3**	**+0.2**
H19K				IAmb	IAmb	04 39 11.6	
	comp=Z,8.2nm,1.2s						
D25K	**Kavik River**	**82.31**	**347**	P	**P**	**04 38 58.4**	**+0.4**
F20K	**Avaraart Lake**	**82.97**	**343**	P	**P**	**04 39 01.9**	**+0.5**
F20K				IAmb	IAmb	04 39 18.9	
	comp=Z,4.9nm,1.1s						
E19K	**Redstone River**	**83.68**	**343**	P	**P**	**04 39 05.1**	**0.0**
E19K				IAmb	IAmb	04 39 22.4	
	comp=Z,7.0nm,1.2s						
G16K	**Koyuk River**	**83.96**	**340**	P	**P**	**04 39 06.5**	**0.0**
G16K				IAmb	IAmb	04 39 13.9	
	comp=Z,3.7nm,1.0s						
F17K	**Baldwin Pennin**	**84.24**	**341**		**P**	**04 39 07.5**	**-0.4**
B21K	**Ikpikpuk River**	**84.46**	**345**	P	**P**	**04 39 08.6**	**-0.4**
B21K				IAmb	IAmb	04 39 24.3	
	comp=Z,6.7nm,1.1s						
D19K	**Kuna River**	**84.62**	**344**		**P**	**04 39 10.0**	**+0.1**
B22K	**Teshekpuk Lake**	**84.68**	**346**	P	**P**	**04 39 10.4**	**+0.3**
F15K	**North Star Dit**	**84.92**	**340**	P	**P**	**04 39 11.4**	**0.0**
B20K	**Meade River**	**85.37**	**345**	P	**P**	**04 39 14.1**	**+0.6**
B20K				IAmb	IAmb	04 39 29.3	
	comp=Z,3.7nm,0.9s						
C18K	**Utukok River**	**85.59**	**343**		**P**	**04 39 15.2**	**+0.4**
C18K				IAmb	IAmb	04 39 30.7	
	comp=Z,5.4nm,1.1s						
SNAA	**Sanae**	**86.52**	**162**	LR	LR	05 12 15.8	
	comp=Z,101nm,19.3s,baz=188,slow=32						
H11S2	**WAKE ISLAND Hy**	**87.80**	**289**	T	T	06 16 16.6	
	baz=101,slow=75,SNR=101						
H11S1	**WAKE ISLAND Hy**	**87.81**	**289**	T	T	06 16 16.4	
	baz=101,slow=75,SNR=61						
H11S3	**WAKE ISLAND Hy**	**87.82**	**289**	T	T	06 16 17.6	
	baz=101,slow=75,SNR=65						
H11N3	**WAKE ISLAND Hy**	**87.83**	**290**	T	T	06 16 17.9	
	baz=101,slow=74,SNR=12						
H11N2	**WAKE ISLAND Hy**	**87.84**	**290**	T	T	06 16 18.4	
	baz=101,slow=74,SNR=14						
H11N1	**WAKE ISLAND Hy**	**87.84**	**290**	T	T	06 16 19.2	
	baz=101,slow=74,SNR=11						
SHEM	**Shemya Is, Ala**	**89.41**	**324**	LR	LR	05 10 55.3	
	comp=Z,178nm,21.9s,baz=116,slow=30						
HNR	**Honiara**	**89.98**	**261**	LR	LR	05 12 54.1	
	comp=Z,5.4nm,18.2s,baz=201,slow=31						
NJ2	**Nanjing**	**130.42**	**305**	*eP*	**PKiKP**	**04 45 48.5**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,19nm,0.6s						
HHC	**Hu-ho-hao-te**	**132.29**	**319**	*eP*	**PKPdf**	**04 45 47.8**	**-3.6**
XAN	**Xi'an**	**137.42**	**312**	PKP	**PKiKP**	**04 46 03.5**	**+0.5**
PZH	**PanZhiHua**	**146.34**	**305**	PKPbc	**PKPdf**	**04 46 16.8**	**-0.5**
CMAR	**Chiang Mai Arr**	**151.63**	**292**	PKPbc	**PKPbc**	**04 46 32.2**	**+0.1**
	comp=Z,3.9nm,0.8s,baz=91,slow=4.3,SNR=5.1						
CMAR	**Chiang Mai Arr**	**151.63**	**292**		**PKPbc**	**04 46 31.8**	**-0.3**

MOS **26** *04:44:29.9±1.1, 40°79N×70°41E, h10km, mb5.2/46, MS4.4/11, Error ellipse: s-maj=4.1km s-min=3.7km az=114.6*

MOS Felt (IV) at Namagan, Farg'ona;(III-IV) at Tashkent;(III) at Andizhan; (II) at Buxoro, Samarqand, Termiz.

BJI **26** *04:44:29.5, 40°82N×70°58E, h9km, mB4.8/13, mb4.7/46, ML4.9/5, Ms4.5/45, Ms7 4.3/44*

IDC **26** *04:44:29.1±0.5, 40°70N×70°52E, h0km, mb4.6/36, mbtmp4.6/42, ML4.7/7, MS4.1/42, Error ellipse: s-maj=10.7km s-min=6.7km az=171.0*

SOME **26** *04:44:31.1, 40°73N×70°68E, h5km*

NEIC **26** *04:44:31.3±1.9, 40°76N±0°04×70°42E±0°08, h10km±1km, mb4.9/246, Mwr4.6/14, Error ellipse: s-maj=10.3km s-min=5.5km az=247.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr5.41; Mθθ0.51; Mφφ-5.92; Mrθ5.71; Mrφ-2.71; Mθφ2.60; Fault plane solution: M₀8.89000×10¹⁵ NP1:φ±174.33000°, δ33.19000°, λ40.23000°. NP2:φ±49.03000°, δ69.29000°, λ116.54000°. Principal axes: T 9.2105, Plg57.0000°, Azm355.0000°; N -0.6731, Plg25.0000°, Azm219.0000°; P -8.5375, Plg20.0000°, Azm119.0000°;*

NEIC **26** *04:44:31.3, 40°76N×70°42E, h10km*

ISU **26** *04:44:32, 40°74N×70°53E, h5km*

KRNET **26** *04:44:32.8±0.1, 40°74N×70°81E, h14km, mb5.2*

NNC **26** *04:44:33.5±1.9, 40°83N×70°63E, h8km±9km, mb5.4, mpv5.1, Error ellipse: s-maj=12.9km s-min=5.4km az=23.0*

ISC 26 04:44:31.8±0.5, **40°79N**±0°02×**70°58E**±0°02, **h14**km±3km, **n1012**, σ1°867/977, **mb4.9**/278, **MS4.3**/60, **72C-67D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken**	**0.75**	**166**		**Pg**	**04 44 46.0**	**-0.4**
BTK				Sg	**Sg**	**04 44 56.1**	**-0.2**
BTK	**Batken**	**0.75**	**166**	PG	**Pg**	**04 44 46.0**	**-0.4**
BTK						04 44 56.2	
BTK	**Batken**	**0.75**	**166**	⇑*i*P	**Pg**	**04 44 45.9**	**-0.5**
BTK				⇑*i*S	**Sg**	**04 44 55.0**	**-1.3**
TRKS	**Terek-Say**	**0.85**	**29**	*e*PG	**Pg**	**04 44 47.8**	**-0.6**
TRKS	**Terek-Say**	**0.85**	**29**	⇑*e*P	**Pg**	**04 44 47.8**	**-0.6**
TRKS				⇑*i*S	**Sg**	**04 44 58.3**	**-1.3**
TAS	**Tashkent**	**1.11**	**299**	P	**Pg**	**04 44 52.8**	**-0.5**
TAS				S	**Sn**	**04 45 08.2**	**+0.1**
NZBK	**Nazarbek**	**1.19**	**292**	P	**Pg**	**04 44 55.5**	**+0.7**
NZBK				S	**Sn**	**04 45 12.5**	**+2.5**
IUG	**luzhnay**	**1.42**	**343**	P	**Pg**	**04 44 59.3**	**+0.1**
	25μm,0.3s						
IUG				S	**Sg**	**04 45 18.3**	**+0.6**
	29μm,0.3s						
IUG	**luzhnay**	**1.42**	**343**	*e*P	**Pg**	**04 44 59.0**	**-0.2**
IUG				*e*S	**Sb**	**04 45 16.5**	**+0.4**
IUG	**luzhnay**	**1.42**	**343**	*e*P	**Pg**	**04 44 59.0**	**-0.2**
	25μm,0.3s						
IUG				*e*S	**Sg**	**04 45 17.9**	**+0.3**
	29μm,0.3s						
ARK	**Arkit**	**1.45**	**45**	*i* P*	**Pb**	**04 44 58.6**	**0.0**
ARK	**Arkit**	**1.45**	**45**	⇑*i*P	**Pb**	**04 44 58.6**	**0.0**
ARK				⇑*i*S	**Sn**	**04 45 16.9**	**+0.4**
TSTA	**Tashata**	**1.46**	**98**	P	**Pb**	**04 44 59.3**	**+0.6**
TSTA				S	**Sg**	**04 45 20.3**	**+1.6**
DRK	**Karamyk**	**1.60**	**144**		**Pb**	**04 45 01.7**	**+0.3**
DRK	**Karamyk**	**1.60**	**144**	PN	**Pb**	**04 45 01.7**	**+0.3**
DRK	**Karamyk**	**1.60**	**144**	⇑*i*P	**Pn**	**04 45 00.3**	**+0.3**
DRK				⇑*i*S	**Sn**	**04 45 20.1**	**-0.5**
OHH	**Osh**	**1.69**	**98**	⇓*e*P	**Pn**	**04 45 00.6**	**-0.4**
OHH				⇓*i*S	**Sn**	**04 45 21.4**	**-1.1**
CHM	**Chimkent**	**1.70**	**335**	*e*P	**Pg**	**04 45 03.5**	**-1.0**
CHM				*e*S	**Sb**	**04 45 24.5**	**+0.5**
CHM	**Chimkent**	**1.70**	**335**	*e*P	**Pg**	**04 45 04.9**	**+0.4**
	12μm,0.3s						
CHM				*e*S	**Sg**	**04 45 27.9**	**+1.4**
	98μm,0.7s						
DZA	**Taraz**	**2.17**	**15**	Pg	**Pb**	**04 45 11.1**	**+0.2**
	2μm,0.4s						
DZA				Lg	Lg	04 45 38.4	
	10μm,0.4s						
DZA	**Taraz**	**2.17**	**15**	*e*P	**Pb**	**04 45 10.6**	**-0.3**
DZA	**Taraz**	**2.17**	**15**	*e*P	**Pb**	**04 45 11.1**	**+0.2**
	2μm,0.4s						
DZA				*e*S	**Sb**	**04 45 38.4**	**+0.6**
	10μm,0.4s						
MNAS	**Manas**	**2.23**	**40**	*e*PN	**Pb**	**04 45 11.3**	**-0.6**
MNAS	**Manas**	**2.23**	**40**	⇑*e*P	**Pb**	**04 45 11.2**	**-0.6**
MNAS				⇑*i*S	**Sb**	**04 45 39.1**	**-0.2**
BRLS	**Boroldaу**	**2.31**	**346**	Pg	**Pb**	**04 45 11.8**	**-1.5**
	696nm,0.6

JNKS **Jany-Kuch** 3.83 84 ⇓*iP* Pn 04 45 32.5 +2.0
JNKS ⇓*iS* Sn 04 46 16.0 +0.6
SGDS Sogindy 4.02 47 Pg Pg 04 45 46.3 -2.5
comp=Z,43nm,0.3s
SGDS Lg Lg 04 46 38.8
comp=Z,1μm,0.5s
SGDS Sogindy 4.02 47 *e*P Pn 04 45 36.3 +3.3
NRN Naryn 4.14 79 Pn Pn 04 45 36.5 +1.6
NRN Naryn 4.14 79 PN Pn 04 45 36.5 +1.6
KSH2 Kashi 4.17 112 Pn Pn 04 45 37.3 +2.2
KSH2 Sn **Sb** 04 46 30.3 -4.9
KSH2 SMN
comp=Z,3μm,0.9s
KSH2 SME
comp=Z,2μm,0.9s
TKM2 Tokmak 2 4.31 59 P Pn 04 45 40.0 +3.0
SNR=70
TKM2 Tokmak 2 4.31 59 *e*PN Pn 04 45 39.5 +2.4
TKM2 Tokmak 2 4.31 59⇓*eP* Pn 04 45 39.5 +2.4
TKM2 ⇑*iS* Sn 04 46 27.9 +0.7
BOOM Boomskoye usch 4.36 65 Pn Pn 04 45 40.1 +2.4
BOOM Boomskoye usch 4.36 65 PN Pn 04 45 40.1 +2.4
BOOM Boomskoye usch 4.36 65⇑*iP* Pn 04 45 40.0 +2.3
BOOM ⇑*iS* Sn 04 46 28.9 +0.5
ULHL Ulahol 4.49 69 P Pn 04 45 42.4 +2.8
SNR=6.5
ULHL Ulahol 4.49 69 *i* PN Pn 04 45 41.8 +2.2
ULHL Ulahol 4.49 69⇑*iP* Pn 04 45 41.8 +2.2
ULHL ⇑*iS* Sn 04 46 31.9 +0.2
DGS Degeres 4.58 56 Pg Pb 04 45 54.8 +2.9
comp=Z,230nm,0.5s
DGS Lg Lg 04 46 54.4
comp=Z,1μm,0.6s
DGS Degeres 4.58 56 *e*P Pb 04 45 54.8 +2.9
comp=Z,230nm,0.5s
DGS *e*S Sg 04 46 54.4 -4.4
comp=Z,1μm,0.6s
KRBS Karabastau 4.77 51 Pg Pg 04 45 59.7 -3.4
comp=Z,121nm,0.4s
KRBS Lg Lg 04 47 02.2
comp=Z,202nm,0.5s
KRBS Karabastau 4.77 51 *e*P Pg 04 45 59.8 -3.4
comp=Z,121nm,0.4s
KRBS *e*S Sg 04 47 02.2 -2.6
comp=Z,202nm,0.5s
BTLS Baital 4.95 30 *e*P Pn 04 45 48.5 +2.8
BTLS Baital 4.95 30 *e*P Pb 04 46 01.8 +3.5
comp=Z,24nm,0.3s
BTLS *e*S Sg 04 47 05.9 -4.8
comp=Z,902nm,0.4s
IZV Izvestkoviy 5.03 61 Pg Pb 04 46 03.4 +3.7
comp=Z,146nm,0.6s
IZV Lg Lg 04 47 08.6
comp=Z,779nm,0.9s
IZV Izvestkoviy 5.03 61 *e*P Pb 04 46 03.4 +3.7
comp=Z,146nm,0.6s
IZV *e*S Sg 04 47 08.6 -4.7
comp=Z,779nm,0.9s
KDJ Kajisay 5.13 73 Pn Pn 04 45 51.1 +2.7
KDJ Kajisay 5.13 73 PN Pn 04 45 51.1 +2.7
KDJ Kajisay 5.13 73⇑*iP* Pn 04 45 50.7 +2.3
KDJ ⇑*iS* Sn 04 46 47.3 -0.2
TNSS Tian-Shan 5.25 63 Pg Pb 04 46 07.2 +3.6
comp=Z,59nm,0.5s
TNSS Lg Lg 04 47 15.6
comp=Z,259nm,1.2s
TNSS Tian-Shan 5.25 63 *e*P Pn 04 45 53.6 +3.4
TNSS Tian-Shan 5.25 63 *e*P Pb 04 46 07.2 +3.6
comp=Z,59nm,0.5s
TNSS *e*S Sg 04 47 15.6 -4.9
comp=Z,259nm,1.2s
AAA Alma-Ata 5.30 61 *e*P Pn 04 45 54.0 +3.4
KNDC Almaty 5.34 61 ⇓Pn Pn 04 45 54.0 +2.9
comp=Z,160nm,0.7s
KNDC ⇑Lg Lg 04 47 22.2
comp=Z,5μm,1.4s
KNDC Almaty 5.34 61 PN Pn 04 45 53.9 +2.9
MDOK Medeo 5.37 62 *e*P Pn 04 45 54.7 +3.1
MDOK *e*S Sn 04 46 57.6 +4.3
MDOK *e*LQ LQ 04 47 25.2
KOTS Kotyrbulak 5.44 61 Pg Pb 04 46 10.6 +3.9
comp=Z,168nm,0.6s
KOTS Lg Lg 04 47 21.4
comp=Z,870nm,0.6s
KOTS Kotyrbulak 5.44 61 *e*P Pb 04 46 10.6 +3.9
comp=Z,168nm,0.6s
KOTS *e*S Sg 04 47 21.4 -5.1
comp=Z,870nm,0.6s
TARG Taragay, Kyrgy 5.52 78 Pn Pn 04 45 55.9 +2.0
TARG Taragay, Kyrgy 5.52 78 PN Pn 04 45 55.9 +2.0
TARG Taragay, Kyrgy 5.52 78⇓*iP* Pn 04 45 55.7 +1.8
TARG ⇓*iS* Sn 04 46 56.4 -1.0
SATY Saty 6.26 66 *e*P Pn 04 46 07.4 +3.6
comp=Z,10nm,0.7s
SATY *e*LQ LQ 04 47 54.1
KBL Kabul 6.36 192 Pn Pn 04 46 07.3 +2.1
KBL Kabul 6.36 192 PN Pn 04 46 07.3 +2.1
KBL Kabul 6.36 192 P Pn 04 46 07.8 +2.6
SNR=30
KBL S Sn 04 47 23.1 +5.4
WUS Wushi 6.55 84 Pn 04 46 09.0 +1.2
UZB Uzynbulak 6.72 67 *e*P Pn 04 46 13.4 +3.4
SHLS Shalkode 7.03 67 *e*P Pn 04 46 21.8 +7.5
comp=Z,6.0nm,0.6s
PDGK Podgornoye 7.10 66 ⇓Pn Pn 04 46 17.3 +2.0
comp=Z,20nm,0.7s
PDGK ⇓Lg Lg 04 48 17.7
comp=Z,566nm,0.9s
PDGK Podgornoye 7.10 66 P Pn 04 46 17.3 +2.0
TDK Taldygorghan 7.12 51 *e*P Pn 04 46 18.5 +3.0
comp=Z,10nm,0.7s
NIL Nilore 7.43 163 Pn Pn 04 46 21.6 +1.7
NIL Nilore 7.43 163 P Pn 04 46 21.6 +1.7
NIL Nilore 7.43 163 P Pn 04 46 22.6 +2.7
ALCI Alchi Leh 8.40 139 *e*P Pn 04 46 33.3 -0.1
ALCI *e*S Sn 04 48 04.7 -3.4
ALCI IAML 04 48 20.6
comp=E,195nm,0.6s
ALCI IAML 04 48 32.1
comp=N,170nm,0.6s
JMU Jammu 8.69 156 *e*P Pn 04 46 34.4 -2.6
TSSA Tissa 9.10 149 *e*P Pn 04 46 41.6 -1.3
TSSA *e*S Sn 04 48 18.4 -6.8
TSSA IAML 04 48 44.1
comp=N,617nm,0.8s
TSSA IAML 04 48 44.5
comp=E,515nm,0.8s
HRA Herat 9.20 229 Pn Pn 04 46 43.4 -0.8
THN Thein Dam 9.31 152 *e*P Pn 04 46 45.1 -0.5
THN *e*S Sn 04 48 25.5 -4.6
THN IAML 04 48 43.5
comp=E,228nm,0.8s
THN IAML 04 48 44.9
comp=N,246nm,0.4s
MAKZ Makanchi 10.20 50 Pn Pn 04 46 58.3 +0.6
MAKZ Makanchi 10.20 50 ⇑Pn Pn 04 46 58.3 +0.6
comp=N,6.8nm,0.6s
MAKZ ⇑Lg Lg 04 49 56.8
comp=N,170nm,1.2s
MAKZ Makanchi 10.20 50 P Pn 04 46 58.3 +0.6
MK31 Makanchi Array 10.37 51 ⇑Pn Pn 04 47 01.4 +1.4
comp=N,6.4nm,0.5s,baz=237,slow=14,SNR=78
MK31 ⇑Lg Lg 04 50 04.2
comp=N,192nm,1.1s,baz=225,slow=29,SNR=4.0
MK31 Makanchi Array 10.37 51 ⇓*iP* Pn 04 47 00.8 +0.7
MKAR Makanchi Array 10.37 51 Pn Pn 04 47 00.7 +0.6
comp=N,2.0nm,0.3s,baz=237,slow=15,SNR=73
MKAR Sn Sn 04 48 59.5 +3.5
baz=234,slow=20
MKAR Lg Lg 04 49 59.5
comp=N,3.6nm,0.3s,baz=234,slow=25,SNR=4.8
MKAR LR LR 04 51 28.6
comp=N,357nm,21.4s,baz=238,slow=40
comp=N,13nm,0.6s
MKAR Makanchi Array 10.37 51 *i* P Pn 04 47 01.6 +1.5
MKAR pmax pmax
comp=Z,14nm,0.6s
HNLY HANLEY 10.44 137 *e*P Pn 04 47 00.9 -0.7
HNLY *e*S Sn 04 48 56.9 -1.7
BHK Bhakra 10.48 152 *e*P Pn 04 47 01.4 -0.2
SMLA Simla 11.01 149 *e*P Pn 04 47 06.8 -2.0
KLP Kalpa 11.12 144 *e*P Pn 04 47 08.7 -1.9
KLP *e*S Sn 04 49 11.1 -3.7
KLP IAML 04 49 20.8
comp=E,293nm,0.5s
KLP IAML 04 49 26.6
comp=N,326nm,0.8s
KURBB Kurchatov Arra 11.29 27 Pn Pn 04 47 11.4 -1.2
comp=N,2.4nm,0.5s,baz=215,slow=13,SNR=16
KURBB Lg Lg 04 50 28.8
comp=N,1.6nm,0.3s,baz=219,slow=31,SNR=8.7
KURBB Kurchatov Arra 11.29 27 ⇑Pn Pn 04 47 10.8 -1.8
comp=N,24nm,0.9s
KURBB ⇓Lg Lg 04 50 30.1
comp=N,485nm,0.8s
KURBB Kurchatov Arra 11.29 27 P Pn 04 47 10.7 -1.8
AB31 Akbulak array 11.32 322 Pn Pn 04 47 11.2 -1.8
AB31 Akbulak array 11.32 322 Pn Pn 04 47 11.5 -1.6
comp=N,80nm,0.6s,baz=137,slow=11,SNR=1646
AB31 ⇑Sn Sn 04 49 18.8 -0.4
comp=N,77nm,0.6s,baz=256,slow=111,SNR=3.7
AB31 ⇑Lg Lg 04 50 30.5
comp=N,150nm,0.7s,baz=0.0,slow=0.1,SNR=5.5
AB31 Akbulak array 11.32 322 *e*P Pn 04 47 11.4 -1.6
AB31 04 49 11.4
ABKAR Akbulak array 11.32 322 Pn Pn 04 47 11.3 -1.7
KURK Kurchatov 11.40 27 Pn Pn 04 47 13.0 -1.0
KURK Kurchatov 11.40 27⇑*eP* Pn 04 47 13.3 -0.7
KURK pmax pmax
comp=Z,7.0nm,1.3s
KURK Kurchatov 11.40 27 P Pn 04 47 12.2 -1.8
KURK P Pn 04 47 12.2 -1.8
ZSN Zaisan 12.22 52 *e*P Pn 04 47 28.7 +3.3
BVA0 Borovoye Array 12.24 359 ⇓Pn Pn 04 47 24.7 -0.9
comp=Z,23nm,0.5s,baz=164,slow=12,SNR=180
BVA0 ⇑Lg Lg 04 50 58.0
comp=Z,214nm,1.1s,baz=268,slow=78,SNR=4.8
BVA0 Borovoye Array 12.24 359 *i* P Pn 04 47 24.8 -0.8
BVAR Borovoye Array 12.24 359 Pn Pn 04 47 24.7 -0.9
comp=Z,1.8nm,0.3s,baz=174,slow=13,SNR=160
BVAR Lg Lg 04 50 55.6
comp=Z,0.8nm,0.3s,baz=183,slow=20,SNR=1.9
BVAR LR LR 04 52 23.2
comp=Z,2μm,19.3s,baz=191,slow=38
comp=Z,68nm,0.8s
BORK Borovoye 12.27 359 Pn Pn 04 47 24.9 -1.0
BORK Borovoye 12.27 359*c* *i*P Pn 04 47 24.6 -1.3
BORK pmax pmax
comp=Z,94nm,1.0s
JOSI Joshimath 12.54 142 *e*P Pn 04 47 28.1 -1.9
JOSI *e*S Sn 04 49 44.1 -5.4
JOSI IAML 04 49 57.4
comp=E,231nm,0.8s
JOSI IAML 04 50 02.4
comp=N,170nm,0.7s
WMQ Urumqi 13.03 71 *e*P Pn 04 47 35.5 -0.9
WMQ S Sn 04 50 08.5 +7.5
WMQ pmax pmax
comp=N,15nm,1.1s
WMQ L L
comp=N,520nm,15.5s
AKTO Aktyubinsk 13.04 322 Pn Pn 04 47 34.8 -1.6
comp=N,11nm,0.3s,baz=135,slow=14,SNR=458
AKTO Sn Sn 04 49 55.2 -6.0
comp=N,5.5nm,0.3s,baz=144,slow=19,SNR=3.5
AKTO Lg Lg 04 51 22.6
comp=N,2.1nm,0.3s,baz=174,slow=19,SNR=1.3
AKTO LR LR 04 53 07.1
comp=N,2μm,19.4s,baz=127,slow=40
AKTO Aktyubinsk 13.04 322 ⇑Pn Pn 04 47 35.2 -1.3
comp=N,143nm,0.8s
AKTO ⇓Sn Sn 04 50 01.5 +0.3
comp=N,70nm,0.7s
AKTO ⇑Lg Lg 04 51 27.3
comp=N,176nm,1.0s
NDI New Delhi 13.24 154 *e*P Pn 04 47 36.4 -3.0
KUDL Kundal 13.52 157 *e*P Pn 04 47 39.7 -3.3
KUDL IAmb IAmb 04 47 57.1
comp=Z,24nm,0.7s
SONA Sohna 13.60 155 *e*P Pn 04 47 40.6 -3.6
LGTI Lohaghat 13.76 143 *e*P Pn 04 47 46.0 -0.6
LGTI IAmb IAmb 04 47 57.7
comp=Z,14nm,0.4s
JASL Jaisalmer 13.83 179 *e*P Pn 04 47 44.2 -3.2
JASL IAmb IAmb 04 47 52.9
comp=Z,29nm,0.9s
AJM Ajmer 14.71 166 *e*P Pn 04 47 55.4 -4.1
AJM IAmb IAmb 04 48 03.2
comp=Z,17nm,0.8s
ZALV Zalesovo Beam 16.27 31 LR LR 04 55 02.5
comp=Z,390nm,20.2s,baz=272,slow=39
UDPR Udaipur 16.37 170 *e*P Pn 04 48 19.1 -2.1
JHNI Jhansi 16.69 154 *e*P Pn 04 48 21.7 -3.5
JHNI IAmb IAmb 04 48 34.0
comp=Z,22nm,0.7s
GUNA GUNA 17.06 159 *e*P Pn 04 48 24.8 -5.1
NGCH Negor - Chabah 17.29 210 P P 04 48 37.9 +3.9
SVE Sverdlovsk 17.30 341 *e*P Pn 04 48 30.7 -2.0
SVE *e*S Sn 04 51 45.5 +0.6
SVE pmax pmax
comp=Z,90nm,1.1s
SVE MLR MLR
comp=Z,2μm,12.0s
MAK Makhachkala 17.32 285*c* *i*P Pn 04 48 30.0 -3.0
MAK *e*S Sn 04 51 40.0 -5.3
MAK pmax pmax
comp=Z,102nm,1.1s
MAK MLR MLR
comp=Z,2μm,13.0s
BHUJ Bhuj 17.50 183 *e*P Pn 04 48 33.0 -2.4
ARTI Arti 17.53 337 P Pn 04 48 34.0 -1.5
comp=Z,6.4nm,0.3s,baz=155,slow=9.1,SNR=187
ARTI S Sn 04 51 40.9 -9.4
comp=Z,17nm,0.6s,baz=173,slow=16,SNR=2.3
ARTI Lg Lg 04 53 43.0
comp=Z,0.8nm,0.3s,baz=174,slow=18,SNR=4.2
ARTI Arti 17.53 337 Pn Pn 04 48 33.1 -2.4
ARTI Arti 17.53 337*c* *i*P Pn 04 48 33.4 -2.1
ARTI S Sn 04 51 44.3 -6.0
ARTI pmax pmax
comp=Z,214nm,0.8s
ARTI MLR MLR
comp=Z,1μm,16.0s
ALBI Allahabad 18.05 145 *e*P Pn 04 48 41.7 -0.5
BHPL Bhopal 18.42 160 *e*P P 04 48 42.9 -3.7
BHPL IAmb IAmb 04 48 53.3
comp=Z,24nm,0.5s
EVN Everest 18.49 129 P 04 48 44.3 -3.8
EVN IAmb IAmb 04 48 57.6
comp=Z,62nm,0.5s
NRDN NARMADA NAGAR 18.85 161 *e*P Pn 04 48 52.8 +0.8
SHME Shamm 18.97 224 P Pn 04 48 58.9 +5.5
BANOM Banah 18.99 223 P Pn 04 48 59.5 +5.8
GOMU GeErMu 19.49 96 P P 04 48 59.5 +0.8
GOMU S S 04 52 39.5 +0.7
GOMU pmax pmax
comp=Z,19nm,1.0s
GOMU L L
comp=Z,320nm,8.3s
GOMU L L
comp=Z,340nm,10.3s
GOMU L L
comp=Z,570nm,10.2s
BELG Belogornoye 19.49 314 P P 04 48 56.2 -2.0
comp=Z,7.2nm,0.3s,baz=120,slow=20,SNR=30
BELG S Sn 04 52 30.7 -7.1
comp=Z,42nm,1.0s,baz=119,slow=19,SNR=1.9
BELG LR LR 04 57 39.7
comp=Z,908nm,18.9s,baz=105,slow=40
comp=Z,144nm,0.7s
BELG Belogornoye 19.49 314*ce*P P 04 48 57.0 -1.2
BELG pmax pmax
comp=Z,27nm,0.8s
GNI Garni 19.66 277 P Pn 04 49 01.1 -0.5
comp=Z,2.1nm,0.3s,baz=22,slow=3.6,SNR=40
GNI LR LR 04 58 04.6
comp=Z,299nm,19.3s,baz=109,slow=42
comp=Z,84nm,0.8s
GNI Garni 19.66 277 P Pn 04 49 00.8 -0.9
GNI Garni 19.66 277 P Pn 04 49 00.8 -0.9
GNI pmax pmax
comp=Z,169nm,0.9s
GNI Garni 19.66 277 P Pn 04 49 04.2 +2.5
GNI P Pn 04 49 04.2 +2.5
GTK Tadong 20.03 127 *e*P Pn 04 49 06.5 +0.3
GTK IAmb IAmb 04 49 17.5
comp=Z,38nm,0.6s
LSA Lhasa 20.06 117 P P 04 49 05.0 -0.1
LSA S S 04 52 51.0 +0.5
LSA pmax pmax
comp=Z,11nm,0.8s
LSA L L
comp=Z,310nm,14.4s
LSA L L
comp=Z,450nm,15.1s
LSA L L
comp=Z,750nm,16.2s
NAZ Nazwa, Dubai 20.08 223 P Pn 04 49 05.9 -0.7
GAYA Gaya 20.10 138 *e*P P 04 49 05.0 0.0
GAYA IAmb IAmb 04 49 12.3
comp=Z,25nm,0.9s
ASHO Ashiyiah 20.13 222 P Pn 04 49 08.1 +0.8
SNR=5.0
NCK Nalchik 20.16 287⇑*eP* P 04 49 05.9 +0.3
NCK pmax pmax
comp=Z,140nm,0.7s
WSAR Wadi Sarin 20.18 214 P Pn 04 49 09.7 +1.8
SOHO SOHO 20.36 220 P Pn 04 49 13.5 +3.6
HOQ Hoqain 20.46 217 P Pn 04 49 12.8 +1.6
ASUD Al Ashush, Dub 20.55 223 P Pn 04 49 13.0 +0.8
GOF Gofitskoye 20.57 291*ce*P P 04 49 09.8 -0.2
SMDO Samad 20.59 215 P Pn 04 49 14.5 +1.7
WBK Wadi Bani Khal 20.61 212 P Pn 04 49 13.0 +0.1
SNR=9.4
KBZ Khabaz 20.66 287 P P 04 49 08.8 -2.2
comp=Z,8.9nm,0.7s,baz=100,slow=6.1,SNR=25
KBZ S S 04 52 56.8 -4.5
comp=Z,16nm,0.9s,baz=73,slow=17,SNR=2.7
KBZ LR LR 04 59 24.6
comp=Z,768nm,18.2s,baz=86,slow=43
comp=Z,8.9nm,0.7s
KBZ Khabaz 20.66 287*de*P P 04 49 10.1 -0.9
KBZ pmax pmax
comp=Z,70nm,0.9s
AKL Akola 20.76 163 *e*P P 04 49 11.3 -0.9
AKL IAmb IAmb 04 49 22.0
comp=Z,43nm,0.9s
KVAR Kislovodsk Arr 20.81 288 P P 04 49 13.0 +0.3
comp=Z,6.4nm,0.6s,baz=0.0,slow=4.0
KVAR S S 04 52 55.1 -9.3
comp=Z,20nm,0.7s,baz=144,slow=19,SNR=3.3
comp=Z,6.4nm,0.6s
ALNE Al Ain 20.81 221 P Pn 04 49 13.9 -1.3
SNR=8.8
KIV Kislovodsk 20.81 288 ⇓P P 04 49 12.1 -0.6
KIV Kislovodsk 20.81 288 P P 04 49 11.6 -1.1
KIV Kislovodsk 20.81 288 *e*P P 04 49 12.2 -0.6
KIV *e*S S 04 53 04.4 -0.1
KIV pmax pmax
comp=Z,129nm,1.0s
KIV MLR MLR
comp=Z,247nm,14.0s
KIV Kislovodsk 20.81 288 P Pn 04 49 14.2 -1.0
KIV P Pn 04 49 14.2 -1.0
KARS Kars 20.82 279 P P 04 49 10.6 -2.4
KARS IAmb IAmb 04 49 27.8
comp=Z,80nm,1.2s
KARS Kars 20.82 279 P P 04 49 10.6 -2.4
KARS pmax pmax
comp=Z,80nm,1.2s
NGP Nagpur 20.84 157 *e*P P 04 49 11.9 -1.1
NGP IAmb IAmb 04 49 19.4
comp=Z,41nm,0.9s
SHA1 Shidzhatmaz 20.84 287*de*P P 04 49 12.4 -0.8
JLN Jalan Bani Buh 20.85 210 P P 04 49 13.9 +0.8
SNR=7.2
SHBG Sahibganj 21.04 132 *e*P P 04 49 15.2 0.0
SHBG IAmb IAmb 04 49 22.8
comp=Z,35nm,0.8s
ARQ Araqi 21.04 218 P P 04 49 17.8 +2.6
BLSP Bilaspur 21.06 149 *e*P P 04 49 15.4 0.0
BLSP IAmb IAmb 04 49 19.9
comp=Z,47nm,0.8s
KNGR Kungurtug, Tuv 21.11 53⇓*iP* P 04 49 19.1 +3.1
KNGR pmax pmax
comp=Z,69nm,0.9s
JMDO Jabal Madar 21.18 214 P P 04 49 17.4 +0.7
BSY Bisya 21.24 216 P P 04 49 22.6 +5.2
GEVA Gevas 21.34 272 P P 04 49 17.5 -1.0
KNTI KHUNTI 21.58 141 *e*P P 04 49 16.9 -4.2
KNTI IAmb IAmb 04 49 28.3
comp=Z,24nm,0.9s
DHUB DHUBRI 21.83 126 *e*P P 04 49 23.3 -0.4
DHUB IAmb IAmb 04 49 31.2
comp=Z,23nm,0.9s
KBD Kabd 21.98 245 P P 04 49 28.2 +3.0
MZWR Madinat Zayed 22.02 225 P P 04 49 31.0 +5.3
LABN Labinsk 22.21 290 *e*P P 04 49 28.5 +0.8
LABN *e*S S 04 53 33.7 +1.9
LABN pmax pmax
comp=Z,80nm,0.9s
SAKB Bahrain 22.25 235 P P 04 49 30.8 +2.6
KIRV Kirov 22.30 330 P P 04 49 28.4 0.0
comp=Z,54nm,0.7s,baz=139,slow=20,SNR=14
comp=Z,54nm,0.7s
KIRV Kirov 22.30 330*c* *i*P P 04 49 27.9 -0.5
GTA2 Gaotai 22.30 84 *e*P P 04 49 30.0 +1.1
GTA2 sP sP 04 49 37.5 +2.4
GTA2 S S 04 53 36.3 +2.5
GTA2 pmax pmax
comp=Z,24nm,0.9s
GTA2 L L
comp=Z,580nm,12.4s
GTA2 L L
comp=Z,1μm,15.1s
GTA2 L L
comp=Z,1μm,15.1s
POO Poona 22.36 172 *e*P P 04 49 29.3 -0.1
POO IAmb IAmb 04 49 40.2
comp=Z,32nm,1.0s
ERBR Yeremizino-Bor 22.40 293 *e*P P 04 49 29.6 -0.1
ERBR *e*S S 04 53 37.6 +2.4
ERBR pmax pmax
comp=Z,166nm,1.2s
GHWR Ruwais 22.40 227 P P 04 49 36.2 +6.3
VRH Novokhopyorsk 22.45 307 *e*P P 04 49 29.8 -0.4
VRH *e*S S 04 53 34.9 -1.2
VRH pmax pmax
comp=Z,170nm,0.8s
VRH smax smax
comp=N,200nm,1.0s
MHTO MHTO 22.47 212 P P 04 49 34.8 +4.2
GUWA GUWAHATI 22.76 123 *e*P P 04 49 33.1 -0.5
GUWA IAmb IAmb 04 49 41.4
comp=Z,51nm,0.9s
MZR Muzera 22.85 224 P P 04 49 40.6 +6.0
SNR=6.3
KOPT Kop Dagi 22.88 278 P P 04 49 34.0 -1.1
KOPT IAmb IAmb 04 49 50.8
comp=Z,59nm,1.3s
SOC Sochi 22.98 287 *e*P P 04 49 36.2 +0.4
SOC *e**PP pP 04 49 40.1 -0.2
SOC *e* 04 50 00.0
SOC *e*S S 04 53 47.5 +1.9
SOC *e*SS SnSn 04 54 23.1 +5.7
SOC pmax pmax
comp=Z,12nm,0.7s
SOC MLR MLR
comp=Z,358nm,18.0s
SMRA Abu-Samra 22.98 232 P P 04 49 42.0 +6.0
SLWR Sila 22.99 229 P P 04 49 38.7 +2.7
TEZP TEZPUR 23.18 121 *e*P P 04 49 38.2 +0.2
TEZP IAmb IAmb 04 49 46.3
comp=Z,49nm,0.6s
ZIRO ZIRO 23.27 117 *e*P P 04 49 39.4 +0.2
ZIRO IAmb IAmb 04 49 47.4
comp=Z,48nm,0.7s
SHL Shillong 23.33 124 P P 04 49 38.6 -1.1
SHL Shillong 23.33 124 P P 04 49 38.6 -1.1
SHL pmax pmax
comp=Z,92nm,1.0s
SHL Shillong 23.33 124 P P 04 49 39.1 -0.6
SNR=35
SHL Shillong 23.33 124 *e*P P 04 49 38.7 -1.1
SHL IAmb IAmb 04 49 47.3
comp=Z,33nm,0.8s
MARD Mardin 23.35 271 P P 04 49 37.9 -1.9
ITAN ITANAGAR 23.44 118 *e*P P 04 49 43.2 +2.6
ITAN IAmb IAmb 04 50 00.5
comp=Z,39nm,0.8s
MOY Mondy 23.51 52 *e*P P 04 49 44.4 +3.1
MOY pmax pmax
comp=Z,30nm,2.6s
KAD Karad 23.61 171 *e*P P 04 49 39.3 -3.0
VORD Divnogorie 23.88 306 *e*P P 04 49 44.4 -0.2
VORD pmax pmax

comp=Z,70nm,0.8s
PASG PASIGHAT 23.94 114 *e*P **P 04 49 49.1 +3.6**
PASG IAmb IAmb 04 50 02.8
comp=Z,42nm,0.8s
VSR Storozhevoye 24.01 306 *e*P **P 04 49 44.4 -1.5**
VSR pmax pmax
comp=Z,30nm,1.2s
VSR MLR MLR
comp=Z,920nm,17.0s
VORR Voronezh 24.10 307 *e*P **P 04 49 46.4 -0.3**
VORR pmax pmax
comp=Z,58nm,0.4s
RAGD RAYAGADA 24.14 149 *e*P **P 04 49 47.3 0.0**
BWNR Bhubaneshwar 24.25 143 *e*P **P 04 49 48.3 0.0**
BWNR IAmb IAmb 04 49 56.2
comp=Z,46nm,0.7s
SILR SILCHAR 24.47 124 *e*P **P 04 49 52.9 +2.6**
LPSR Galich'ya Gora 24.51 309 *e*P **P 04 49 49.4 -1.1**
LPSR *e*S **S 04 54 04.2 -6.0**
LPSR pmax pmax
comp=Z,70nm,0.7s
LPSR smax smax
comp=E,400nm,3.6s
MOKO MOKOCHONG 24.51 119 IAmb IAmb 04 50 13.9
comp=Z,48nm,0.9s
ANN Anapa 24.55 290 *e*P **P 04 49 50.5 -0.4**
ANN *e**PP **pP 04 49 55.8 +0.2**
ANN *e*S **S 04 54 13.6 +2.5**
ANN pmax pmax
comp=Z,84nm,0.8s
ANN MLR MLR
comp=N,4µm,24.0s
ZAK Zakamensk 24.64 56 *e*P **P 04 49 56.8 +5.0**
ZAK pmax pmax
comp=Z,16nm,1.3s
KOHI KOHIMA 24.65 120 *e*P **P 04 49 52.8 +0.7**
KOHI IAmb IAmb 04 50 08.3
comp=Z,43nm,1.1s
ARPR Arapgir-MALATY 24.71 277 **P 04 49 50.7 -2.0**
ARPR IAmb IAmb 04 50 13.6
comp=Z,35nm,1.1s
TLY Talaya 25.12 53 LR LR 05 00 15.7
comp=Z,384nm,18.7s,baz=256,slow=38
TLY Talaya 25.12 53 *ce*P **P 04 49 58.9 +2.9**
TLY pmax pmax
comp=Z,7.0nm,0.9s
TLY Talaya 25.12 53 P **P 04 49 52.7 -3.3**
IMP Imphal 25.16 122 *e*P **P 04 49 58.3 +1.7**
IMP IAmb IAmb 04 50 07.3
comp=Z,22nm,0.8s
BRDH Bariadhala 25.32 129 LR LR 05 02 04.0
comp=Z,877nm,18.9s,baz=287,slow=42
VIS Vishakhapatnam 25.48 151 *e*P **P 04 49 58.9 -0.6**
VIS IAmb IAmb 04 50 08.7
comp=Z,32nm,0.8s
DOK Doka 26.23 217 P **P 04 50 06.4 +0.1**
MOS Moscow 26.23 316 *e*P **P 04 50 05.6 -0.4**
MOS *e* 04 50 47.1
MOS pmax pmax
comp=Z,83nm,0.8s
MOS MLR MLR
comp=Z,2µm,15.0s
SAIH SAIHA 26.27 127 *e*P **P 04 50 08.7 +1.9**
SAIH IAmb IAmb 04 50 15.5
comp=Z,46nm,1.1s
LZDM Lanzhou Array 26.31 90 P **P 04 50 08.0 +0.7**
comp=Z,1.0nm,0.3s,baz=295,slow=4.4,SNR=3.6
LZDM LR LR 05 02 25.9
comp=Z,401nm,20.3s,baz=50,slow=41
comp=Z,1.0nm,0.3s
LZH Lanzhou 26.38 89 *e*P **P 04 50 09.3 +1.5**
LZH sP sP 04 50 15.8 +1.5
LZH pmax pmax
comp=Z,15nm,1.3s
LZH L L
comp=Z,590nm,13.7s
LZH L L
comp=Z,570nm,13.7s
LZH L L
comp=Z,840nm,13.1s
SONM Songino Array 26.40 62 P **P 04 50 08.4 +0.6**
comp=Z,1.7nm,0.8s,baz=273,slow=9.7,SNR=6.8
comp=Z,1.7nm,0.8s
SONM Songino Array 26.40 62 P **P 04 50 07.4 -0.4**
OBN Obninsk 26.59 314 P **P 04 50 08.8 -0.4**
comp=Z,25nm,0.5s,baz=97,slow=8.1,SNR=9.8
OBN LR LR 05 02 01.0
comp=Z,392nm,19.4s,baz=110,slow=40
comp=Z,25nm,0.5s
OBN Obninsk 26.59 314 ⇓P **P 04 50 09.7 +0.5**
OBN Obninsk 26.59 314 P **P 04 50 07.7 -1.5**
OBN Obninsk 26.59 314 *ce*P **P 04 50 08.8 -0.4**
OBN *e* 04 50 51.2
OBN *e*PPP PPP 04 51 00.0
OBN pmax pmax
comp=Z,73nm,1.2s
OBN MLR MLR
comp=Z,891nm,16.0s
OBN Obninsk 26.59 314 P **P 04 50 09.1 -0.2**
comp=Z,60nm,0.9s
DMTO DMTO 26.65 215 P **P 04 50 13.3 +3.2**
ULN Ulaanbaatar 26.84 62 P **P 04 50 12.5 +0.6**
ULN Ulaanbaatar 26.84 62 ⇓*e*P **P 04 50 12.9 +1.1**
ULN pmax pmax
comp=Z,16nm,1.2s
ULN Ulaanbaatar 26.84 62 P **P 04 50 13.1 +1.3**
comp=Z,48nm,1.1s
SIM Simferopol' 26.90 291 *e*P **P 04 50 12.0 -0.2**
SIM *e*S **S 04 54 44.3 -4.1**
SIM pmax pmax
comp=Z,97nm,1.1s
RAYN Ar Rayn 27.19 238 P **P 04 50 15.1 +0.1**
RAYN Ar Rayn 27.19 238 P **P 04 50 15.1 +0.1**
RAYN pmax pmax
comp=Z,16nm,0.9s
RAYN Ar Rayn 27.19 238 P **P 04 50 15.7 +0.7**
KLMR Klimovskoe 27.65 327 *e*P **P 04 50 20.9 +2.2**
KLMR pmax pmax
comp=Z,26nm,1.4s
KLMR MLR MLR
comp=Z,475nm,11.0s
ABTO Aybut 27.71 218 P **P 04 50 23.4 +3.7**
ILGA Ilgaz 27.73 283 P **P 04 50 19.1 -0.9**
ILGA IAmb IAmb 04 50 29.3
comp=Z,31nm,1.0s
BR131 Keskin Array S 28.09 280 **P 04 50 21.3 -1.7**
BR131 Keskin Array S 28.09 280 P **P 04 50 21.3 -1.7**
BR131 pmax pmax
comp=Z,12nm,0.9s
BR131 Keskin Array S 28.09 280 P **P 04 50 22.9 -0.1**
SNR=5.3
BRTR Keskin Array B 28.09 280 P **P 04 50 22.1 -0.9**
comp=Z,7.9nm,0.8s,baz=87,slow=6.2,SNR=31
BRTR LR LR 05 03 42.2
comp=Z,138nm,18.5s,baz=76,slow=41
comp=Z,7.9nm,0.8s
BRTR Keskin Array B 28.09 280 P **P 04 50 21.9 -1.1**
BRTR Keskin Array B 28.09 280 *i* P **P 04 50 22.7 -0.3**
BRTR pmax pmax
comp=Z,8.0nm,0.8s
BR104 Keskin Array S 28.09 280 P **P 04 50 23.1 0.0**
comp=Z,108nmcomp=Z,14nm,1.1s
BR106 Keskin Array S 28.10 280 P **P 04 50 22.9 -0.3**
comp=Z,96nmcomp=Z,13nm,0.9s
BR105 Keskin Array S 28.10 280 P **P 04 50 23.2 0.0**
comp=Z,121nmcomp=Z,15nm,0.9s
ASF Jabal al Asfar 28.28 263 LR LR 05 05 20.9
comp=Z,114nm,18.1s,baz=38,slow=44
CD2 Chengdu 28.49 100 P **P 04 50 26.5 -0.1**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 L L
comp=Z,470nm,15.2s
CD2 L L
comp=Z,600nm,16.5s
CD2 L L
comp=Z,620nm,14.0s
MMAI Mount Meron Ar 29.04 266 P **P 04 50 30.5 -1.0**
comp=Z,0.3nm,0.3s,baz=62,slow=13,SNR=1.3
MMAI LR LR 05 05 04.0
comp=Z,127nm,18.1s,baz=42,slow=43
PZH PanZhiHua 29.41 109 P **P 04 50 37.0 +2.1**
PURM Purcari 29.76 295 P **P 04 50 38.1 +0.5**
comp=Z,50nm,1.0s
CSS Mathiatis 29.82 271 P **P 04 50 38.5 +0.2**
comp=Z,4.6nm,0.9s

NRIK Noril'sk 29.99 12 P **P 04 50 40.4 +1.0**
comp=Z,12nm,1.0s,baz=198,slow=6.4,SNR=13
NRIK LR LR 05 04 07.9
comp=Z,377nm,21.3s,baz=215,slow=39
comp=Z,12nm,1.0s
NRIK Noril'sk 29.99 12 P **P 04 50 39.3 -0.1**
NRIK IAmb IAmb 04 50 50.5
comp=Z,18nm,1.0s
NRIK Noril'sk 29.99 12 *c* P **P 04 50 40.5 +1.1**
NRIK pmax pmax
comp=Z,20nm,1.0s
AK09 Malin Array Si 30.12 303 P **P 04 50 40.6 -0.2**
AK08 Malin Array Si 30.14 303 P **P 04 50 40.7 -0.2**
AK10 Malin Array Si 30.14 303 P **P 04 50 40.7 -0.2**
AKASG Malin Array Be 30.16 303 P **P 04 50 40.3 -0.8**
comp=Z,2.2nm,0.7s,baz=81,slow=7.9,SNR=21
AKASG LR LR 05 05 20.8
comp=Z,435nm,19.3s,baz=102,slow=42
comp=Z,2.2nm,0.7s
AKASG Malin Array Be 30.16 303 P **P 04 50 39.7 -1.4**
AKASG Malin Array Be 30.16 303 *i* P **P 04 50 40.7 -0.4**
AKASG pmax pmax
comp=Z,7.0nm,0.8s
AKBB Malin Array Si 30.16 303 **P 04 50 39.5 -1.7**
AKBB IAmb IAmb 04 51 14.3
comp=Z,15nm,0.7s
AKBB Malin Array Si 30.16 303 *d* P **P 04 50 40.9 -0.2**
AKBB pmax pmax
comp=Z,10.0nm,0.8s
AKBB Malin Array Si 30.16 303 P **P 04 50 40.9 -0.2**
AK03 Malin Array Si 30.16 303 P **P 04 50 40.9 -0.3**
AK07 Malin Array Si 30.16 303 P **P 04 50 41.2 0.0**
AK01 Malin Array Si 30.17 303 P **P 04 50 40.6 -0.6**
AK05 Malin Array Si 30.17 303 P **P 04 50 40.9 -0.3**
AK02 Malin Array Si 30.17 303 P **P 04 50 40.9 -0.3**
KIEV Kiev 30.17 303 ⇑P **P 04 50 41.2 0.0**
KIEV Kiev 30.17 303 P **P 04 50 40.5 -0.7**
KIEV IAmb IAmb 04 51 14.3
comp=Z,14nm,0.7s
KIEV Kiev 30.17 303 P **P 04 50 40.5 -0.7**
KIEV pmax pmax
comp=Z,14nm,0.7s
KIEV Kiev 30.17 303 P **P 04 50 40.9 -0.3**
comp=Z,78nm,1.0s
AK06 Malin Array Si 30.17 303 P **P 04 50 40.9 -0.3**
AK11 Malin Array Si 30.19 303 P **P 04 50 41.1 -0.3**
AK04 Malin Array Si 30.20 303 P **P 04 50 41.3 -0.2**
AK12 Malin Array Si 30.20 303 P **P 04 50 41.2 -0.3**
AK15 Malin Array Si 30.22 303 P **P 04 50 41.4 -0.3**
AK23 Malin Array Si 30.23 303 P **P 04 50 41.2 -0.5**
AK14 Malin Array Si 30.23 303 P **P 04 50 41.5 -0.3**
AK16 Malin Array Si 30.23 303 P **P 04 50 41.5 -0.3**
AK13 Malin Array Si 30.26 303 P **P 04 50 41.5 -0.5**
AK22 Malin Array Si 30.26 303 P **P 04 50 41.6 -0.4**
AK18 Malin Array Si 30.26 303 P **P 04 50 41.6 -0.4**
AK17 Malin Array Si 30.26 303 P **P 04 50 41.6 -0.5**
AK21 Malin Array Si 30.28 303 P **P 04 50 41.7 -0.5**
AK19 Malin Array Si 30.30 303 P **P 04 50 41.9 -0.4**
AK20 Malin Array Si 30.30 303 P **P 04 50 41.8 -0.6**
BORA Eskisehir 30.42 282 **P 04 50 41.4 -2.3**
BORA IAmb IAmb 04 50 53.0
comp=Z,21nm,1.1s
SORM Soroca 30.71 298 ⇓P **P 04 50 45.8 -0.2**
SORM Soroca 30.71 298 P **P 04 50 45.8 -0.2**
SORM Soroca 30.71 298 P **P 04 50 45.2 -0.8**
HHC Hu-ho-hao-te 30.81 76 *e*P **P 04 50 48.3 +1.1**
HHC S **S 04 55 49.5 -0.7**
HHC pmax pmax
comp=Z,15nm,0.7s
HHC pmax pmax
comp=Z,52nm,6.6s
HHC L L
comp=Z,290nm,12.1s
HHC L L
comp=Z,350nm,12.9s
HHC L L
comp=Z,380nm,14.2s
EIL Elat 30.95 260 LR LR 05 05 44.0
comp=Z,128nm,20.5s,baz=64,slow=41
XAN Xi'an 31.00 90 ⇓P **P 04 50 49.0 +0.2**
XAN pP pP 04 50 53.5 +0.1
XAN sP sP 04 50 55.8 +0.4
XAN pmax pmax
comp=Z,13nm,0.8s
XAN L L
comp=Z,400nm,13.1s
XAN L L
comp=Z,420nm,19.2s
XAN L L
comp=Z,400nm,14.4s
MI28 Mi28,Pidlybu 31.16 304 P **P 04 50 48.8 -1.1**
MNK Minsk 31.34 310 *i* P **P 04 50 52.1 +0.5**
comp=E,20nm,0.7s
MNK *i* P **P 04 50 52.1 +0.5**
comp=N,21nm,0.7s
MNK *i* P **P 04 50 52.1 +0.5**
comp=Z,46nm,0.9s,baz=98
MNK *i* PP **PnPn 04 51 54.1 +0.2**
MNK *i* PPP PPP 04 52 03.1
MNK *i* S **S 04 55 59.6 +1.6**
MNK *i* SS **SnSn 04 57 43.6 +2.2**
MNK *i* SSS SSS 04 57 58.7
MNK *i* LQ LQ 05 01 05.5
MNK *i* LR LR 05 03 28.3
MNK *i* LRM MLR 05 04 19.9
comp=E,160nm,15.7s
MNK *i* LRM MLR 05 04 49.9
comp=N,470nm,16.3s
MNK *i* LRM MLR 05 04 49.9
comp=Z,731nm,18.3s
MNK Minsk 31.34 310 *e*P **P 04 50 52.0 +0.5**
NDNU Novodnistrovsk 31.35 299 P **P 04 50 50.9 -0.8**
PANC Panciu 31.70 294 ⇓P **P 04 50 55.2 +0.4**
VRI Vrincioaia 32.00 294 ⇑P **P 04 50 58.1 +0.7**
VRI Vrincioaia 32.00 294 P **P 04 50 58.1 +0.7**
NACGM Naroch 32.03 311 *e*P **P 04 50 57.6 0.0**
comp=E,27nm,0.9s
JOF Joensuu 32.05 327 *e*P **P 04 50 57.8 +0.2**
PLOR Plostina 32.05 294 ⇑P **P 04 50 58.7 +0.8**
PLOR Plostina 32.05 294 P **P 04 50 58.7 +0.8**
ONER Baraj Valea Uz 32.17 295 ⇑P **P 04 50 58.9 -0.1**
RNPP5 Staryi Chortor 32.29 304 P **P 04 50 59.6 -0.3**
RNPP9 Sopachiv 32.29 304 P **P 04 50 59.6 -0.3**
RNPP8 Varash 32.31 304 P **P 04 50 59.9 -0.2**
BOD Bodaibo 32.34 43 *e*P **P 04 51 00.6 +0.3**
BOD pmax pmax
comp=Z,12nm,0.9s
COVR Voineasa-Covas 32.36 294 ⇑P **P 04 51 01.7 +1.1**
TURR Turia 32.47 294 ⇑P **P 04 51 02.6 +1.0**
ISAL Salakas 32.50 312 *e*P **P 04 51 01.6 0.0**
MLR Muntele Rosu 32.59 293 P **P 04 51 02.3 -0.4**
comp=Z,9.3nm,0.7s,baz=108,slow=20,SNR=7.7
MLR LR LR 05 06 31.2
comp=Z,392nm,19.4s,baz=80,slow=41
comp=Z,9.3nm,0.7s
MLR Muntele Rosu 32.59 293 ⇑P **P 04 51 03.0 +0.2**
MLR Muntele Rosu 32.59 293 **P 04 51 01.9 -0.9**
MLR Muntele Rosu 32.59 293 P **P 04 51 01.9 -0.9**
MLR pmax pmax
comp=Z,24nm,0.9s
VSU Vasula 32.71 318 *d* P **P 04 51 02.6 -0.8**
VSU pmax pmax
comp=Z,39nm,0.8s
VSU Vasula 32.71 318 *e*P **P 04 51 02.6 -0.8**
BURAR Bucovina Array 32.85 297 ⇑P **P 04 51 05.0 0.0**
BURAR Bucovina Array 32.85 297 P **P 04 51 05.0 0.0**
BUR08 Bucovina Ar. S 32.86 297 **P 04 51 02.9 -2.1**
DOPR Dopca 32.91 294 ⇓P **P 04 51 05.4 0.0**
CMAR Chiang Mai Arr 32.96 124 P **P 04 51 05.5 -0.6**
comp=Z,1.4nm,0.3s,baz=318,slow=8.2,SNR=4.3
CMAR LR LR 05 07 21.7
comp=Z,215nm,19.0s,baz=295,slow=42
comp=Z,1.4nm,0.3s
CMAR Chiang Mai Arr 32.96 124 P **P 04 51 04.5 -1.7**
ELND Elena 33.08 289 ⇓P **P 04 51 07.4 +0.5**
VOIR 33.22 293 ⇓P **P 04 51 08.2 -0.1**
VOIR 33.22 293 P **P 04 51 08.1 -0.1**
ARBE Arbavere 33.32 319 *e*P **P 04 51 09.1 +0.4**
LYN LuoYang 33.49 87 *e*P **P 04 51 10.3 -0.3**
LYN S **S 04 56 28.5 -3.3**
LYN pmax pmax
comp=Z,16nm,0.8s
LYN L L
comp=Z,1µm,16.2s
LYN L L
comp=Z,820nm,16.8s
LYN L L
comp=Z,1µm,16.2s
ARR Arges 33.52 293 ⇓P **P 04 51 10.8 0.0**
APA Apatity 33.58 335 *e*P **P 04 51 11.3 +0.3**
APA *e* 04 52 24.1
APA pmax pmax
comp=Z,7.0nm,1.2s
APA MLR MLR
comp=Z,869nm,3.8s
PABE Paberze 33.71 312 **P 04 51 10.5 -1.7**
PABE Paberze 33.71 312 *e*P **P 04 51 12.7 +0.5**
VSVD Vaisvydziai 33.78 313 *e*P **P 04 51 13.4 +0.6**
FIA1 FINESS Array S 33.81 323 P **P 04 51 11.7 -1.4**
FINES FINESS Array B 33.81 323 P **P 04 51 13.1 0.0**
comp=Z,6.4nm,0.6s,baz=106,slow=7.9,SNR=36
FINES LR LR 05 05 49.9
comp=Z,817nm,19.9s,baz=106,slow=38
comp=Z,6.4nm,0.6s
FINES FINESS Array B 33.81 323 P **P 04 51 12.1 -1.0**
SUW Suwalki 34.04 309 *e*P **P 04 51 15.4 +0.2**
SUW Suwalki 34.04 309 **P 04 51 14.2 -0.9**
SUW Suwalki 34.04 309 P **P 04 51 14.3 -0.9**
CJR Cluj-Napoca 34.04 296 ⇓P **P 04 51 16.4 +1.0**
CJR Cluj-Napoca 34.04 296 P **P 04 51 16.3 +1.0**
LOT Lotru 34.11 294 ⇑P **P 04 51 15.9 -0.1**
HNS HongShan 34.14 81 ⇓P **P 04 51 17.3 +1.1**
HNS pmax pmax
comp=Z,11nm,1.2s
HNS L L
comp=Z,350nm,16.7s
HNS L L
comp=Z,340nm,15.0s
HNS L L
comp=Z,350nm,16.4s
SUF Sumiainen 34.17 325 *e*P **P 04 51 15.7 -0.5**
MTSE Matsula 34.26 318 *e*P **P 04 51 16.1 -0.8**
MARR Marisel-Cluj 34.38 296 ⇓P **P 04 51 19.3 +1.0**
KEF Keuruu 34.57 324 *e*P **P 04 51 19.6 0.0**
PALK Pallekele 34.57 162 LR LR 05 06 07.4
comp=Z,335nm,18.4s,baz=348,slow=38
DRGR 34.64 296 ⇓P **P 04 51 21.4 +0.9**
DRGR 34.64 296 P **P 04 51 21.4 +0.9**
GZR Gura Zlata 34.81 294 ⇓P **P 04 51 22.2 +0.1**
GZR Gura Zlata 34.81 294 P **P 04 51 22.1 +0.1**
PBUR Paburge 34.90 313 *e*P **P 04 51 22.5 -0.1**
HERR Herculane 35.15 293 ⇓P **P 04 51 24.3 -0.5**
STHS Stebnicka Huta 35.32 301 *e*P **P 04 51 27.0 +0.7**
STHS Stebnicka Huta 35.32 301 *e*P **P 04 51 27.0 +0.7**
VAF Ylistaro 35.79 325 *e*P **P 04 51 30.6 +0.5**
KECS Kecovo 35.92 300 *e*P **P 04 51 33.0 +1.6**
KECS Kecovo 35.92 300 *e*P **P 04 51 33.0 +1.6**
NIE Niedzica 35.94 301 *e*P **P 04 51 32.9 +1.3**
IDI Anoyia 36.09 276 P **P 04 51 33.0 -0.1**
comp=Z,8.4nm,0.8s,baz=90,slow=9.1,SNR=7.4
IDI LR LR 05 09 13.1
comp=Z,110nm,19.1s,baz=112,slow=41
comp=Z,8.4nm,0.8s
OJC Ojcow 36.19 303 *e*P **P 04 51 33.8 0.0**
OJC Ojcow 36.19 303 **P 04 51 32.2 -1.4**
OJC Ojcow 36.19 303 P **P 04 51 32.3 -1.4**
VADS Vadso 36.21 338 IAmb IAmb 04 51 33.5
comp=Z,73nm,1.2s
VADS *e*P **P 04 51 34.1 +0.5**
TIA Tai'an 36.38 82 P **P 04 51 37.0 +1.5**
TIA pmax pmax
comp=Z,11nm,0.8s
PSZ Piszkesteto 36.38 299 ⇓P **P 04 51 36.5 +1.0**
PSZ Piszkesteto 36.38 299 P **P 04 51 36.4 +1.0**
WHN Wuhan 36.67 92 P **P 04 51 37.3 -0.7**
ARA0 ARCESS Array S 37.09 336 *e*P **P 04 51 41.7 +0.6**
ARCES ARCESS Array B 37.09 336 P **P 04 51 41.4 +0.2**
comp=Z,25nm,1.1s,baz=116,slow=9.5,SNR=17
ARCES LR LR 05 07 49.2
comp=Z,1µm,19.4s,baz=118,slow=38
comp=Z,25nm,1.1s
ARCES ARCESS Array B 37.09 336 P **P 04 51 40.6 -0.5**
ARCES ARCESS Array B 37.09 336 P **P 04 51 40.6 -0.5**
ARCES pmax pmax
comp=Z,44nm,1.2s
SRO Srobarova 37.45 299 *e*P **P 04 51 45.7 +1.2**
SRO *e* 04 53 12.0
SRO Srobarova 37.45 299 *e*P **P 04 51 45.7 +1.2**
SRO *e*PP **PnPn 04 53 12.0 +1.5**
MORH Mrgy, Hungar 37.50 296 ⇑P **P 04 51 45.2 +0.2**
GKP Gorka Klasztor 37.58 308 *e*P **P 04 51 46.0 +0.6**
GKP Gorka Klasztor 37.58 308 *e*P **P 04 51 45.0 -0.4**
KTK1 Kautokeino 37.59 334 *e*P **P 04 51 45.4 -0.1**
KTK1 IAmb IAmb 04 51 48.5
comp=Z,108nm,1.7s
MORC Moravsky Berou 37.68 302 ⇓P **P 04 51 47.3 +0.8**
MORC Moravsky Berou 37.68 302 **P 04 51 46.8 +0.3**
MORC Moravsky Berou 37.68 302 P **P 04 51 46.8 +0.3**
MORC pmax pmax
comp=Z,16nm,1.2s
MORC Moravsky Berou 37.68 302 *e*P **P 04 51 46.4 -0.1**
JAVC Velka Javorina 37.72 301 *e*P **P 04 51 47.8 +1.0**
SMOL Smolenice 37.93 300 *e*P **P 04 51 51.1 +2.6**
MODS Modra-Piesok 38.05 300 *e*P **P 04 51 49.9 +0.3**
MODS *e* 04 53 19.9
MODS Modra-Piesok 38.05 300 *e*P **P 04 51 49.9 +0.3**
MODS *e*PP **PnPn 04 53 19.9 +2.1**
KRLC Kraliky 38.13 303 *e*P **P 04 51 50.6 +0.3**
KRLC AMS AMS 05 10 20.0
comp=Z,500nm,15.5s
KRLC Kraliky 38.13 303 *e*P **P 04 51 50.6 +0.3**
KRLC MLR MLR
comp=Z,500nm,15.5s
HAMF Hammerfest 38.14 337 IAmb IAmb 04 51 50.8
comp=Z,155nm,1.3s
HAMF *e*P **P 04 51 50.9 +0.9**
BLEU Blekinge 38.33 313 *i* P **P 04 51 51.2 -0.6**
KSP Ksiaz 38.35 304 *e*P **P 04 51 52.7 +0.7**
VRAC Vranov 38.35 301 P **P 04 51 51.7 -0.4**
comp=Z,3.5nm,0.7s,baz=82,slow=12,SNR=5.5
VRAC PP **PP 04 53 18.9 -0.8**
comp=Z,1.2nm,0.4s,baz=76,slow=12,SNR=3.4
comp=Z,3.5nm,0.7s
VRAC Vranov 38.35 301 ⇓P **P 04 51 53.1 +0.9**
VRAC Vranov 38.35 301 *e*P **P 04 51 52.6 +0.5**
DPC Dobruska-Polom 38.39 303 *e*P **P 04 51 53.2 +0.7**
DPC Dobruska-Polom 38.39 303 *e*P **P 04 51 53.2 +0.7**
KRUC Moravsky 38.52 301 *e*P **P 04 51 54.0 +0.5**
CHVC Chvalec 38.53 304 AMS AMS 05 09 50.0
comp=Z,400nm,13.7s
UPC Upice 38.57 303 *e*P **P 04 51 54.4 +0.5**
UPC Upice 38.57 303 *e*P **P 04 51 54.4 +0.5**
JETT Jettan, Norway 38.73 334 *e*P **P 04 51 55.5 +0.5**
DL2 Dalian 38.78 76 P **P 04 51 58.5 +2.7**
DL2 *e*S **S 04 57 59.0 +6.3**
DL2 pmax pmax
comp=Z,71nm,1.0s
DL2 L L
comp=Z,380nm,18.4s
DL2 L L
comp=Z,430nm,19.5s
DL2 L L
comp=Z,620nm,20.1s
RONA Rosalia, Austr 38.81 299 *e*P **P 04 51 56.4 +0.3**
comp=Z,8.1nm,1.1s
BLY Banja Luka 38.82 294 ⇑P **P 04 51 56.8 +0.8**
BSD Bornholm Skovb 38.86 311 *e*P **P 04 51 54.0 -2.2**
CONA Conrad Observa 39.06 299 *i* pP **P 04 51 58.7 +0.6**
comp=Z,14nm,1.2s,SNR=6.5
TRO Tromso 39.24 334 *e*P **P 04 51 59.7 +0.4**
TRO IAmb IAmb 04 52 06.4
comp=Z,187nm,1.9s
NJ2 Nanjing 39.39 87 *e*P **P 04 52 01.8 +0.8**
NJ2 pmax pmax
comp=Z,20nm,0.5s
DEL Delary 39.41 313 *i* P **P 04 52 00.6 -0.2**
PVCC Panska Ves 39.48 304 AMS AMS 05 11 10.0
comp=Z,600nm,7.4s
HFS Hagfors 39.56 319 P **P 04 52 01.9 -0.1**
comp=Z,25nm,0.7s,baz=106,slow=10.0,SNR=67
HFS PP **PP 04 53 31.4 -1.3**
comp=Z,22nm,1.0s,baz=95,slow=8.0,SNR=2.3
HFS LR LR 05 09 17.5
comp=Z,906nm,18.0s,baz=100,slow=38
comp=Z,25nm,0.7s
LUNU Lund 39.68 312 *i* P **P 04 52 03.1 0.0**
SOKA Soboth 39.86 298 *e*P **P 04 52 04.9 +0.1**
comp=Z,8.5nm,0.9s,SNR=7.1

ZVC **Zvikov** 39.89 302 *e*P P 04 52 04.9 0.0
FAUS **Fauske** 39.89 330 *e*P P 04 52 05.0 +0.4
FAUS IAmb IAmb 04 52 06.6
comp=Z,40nm,1.2s
BJUU **Bjuv** 39.90 312 *i* P P 04 52 04.6 -0.3
QIZ **Qiongzhong** 39.91 111 P P 04 52 05.3 -0.1
QIZ S S 04 58 11.3 +1.4
QIZ L L
comp=Z,270nm,12.9s
QIZ L L
comp=Z,340nm,13.5s
QIZ L L
comp=Z,460nm,13.4s
CKRC **Cesky Krumlov** 39.92 301 *e*P P 04 52 06.2 +1.0
CKRC AMS AMS 05 12 10.0
comp=Z,600nm,17.3s
CKRC **Cesky Krumlov** 39.92 301 *e*P P 04 52 06.2 +1.0
CKRC MLR MLR
comp=Z,600nm,17.3s
MOR8 **Moi Rana** 39.96 328 *e*P P 04 52 04.7 -0.6
MOR8 IAmb IAmb 04 52 07.7
comp=Z,36nm,1.2s
BORU **Boraas** 39.99 315 *i* P P 04 52 05.5 -0.1
FABU **Falkenberg** 40.03 314 *i* P P 04 52 05.5 -0.5
HEH **HeiHe** 40.03 57 *e*P P 04 52 09.3 +3.2
HEH L L
comp=Z,230nm,10.4s
HEH L L
comp=Z,360nm,9.2s
HEH L L
comp=Z,430nm,9.7s
CN2 **Changchun** 40.07 67 *e*P P 04 52 07.5 +1.0
CN2 *es*P sP 04 52 14.0 +0.9
CN2 *e*S S 04 58 12.5 +0.5
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,100nm,5.0s
CN2 L L
comp=Z,100nm,11.0s
CN2 L L
comp=Z,200nm,11.0s
CN2 L L
comp=Z,200nm,12.0s
MOA **Molln** 40.13 300 *i* P P 04 52 07.0 0.0
comp=Z,13nm,1.5s,SNR=4.1
RAUS **Rausandaksla** 40.17 329 *e*P P 04 52 07.3 +0.3
RAUS IAmb IAmb 04 52 09.1
comp=Z,82nm,1.4s
GEC2 **GERESS Array S** 40.31 301 P 04 52 08.4 -0.1
GERES **GERESS Array B** 40.31 301 P P 04 52 08.6 +0.1
comp=Z,6.6nm,0.8s,baz=81,slow=6.7,SNR=14
GERES PP PP 04 53 40.9 -0.3
comp=Z,6.5nm,1.0s,baz=79,slow=10,SNR=5.3
comp=Z,6.6nm,0.8s
KHC **Kasperske Hory** 40.34 302 P P 04 52 08.6 -0.1
KHC **Kasperske Hory** 40.34 302 *e*P P 04 52 09.1 +0.4
KHC *ex* x 04 52 16.5
KHC AMS AMS 05 12 20.0
comp=Z,500nm,14.2s
KHC **Kasperske Hory** 40.34 302 *ce*P P 04 52 09.0 +0.4
KHC pmax pmax
comp=Z,15nm,0.9s
CLL **Collm** 40.35 305 P 04 52 08.7 0.0
CLL **Collm** 40.35 305⇑ *i*P P 04 52 08.3 -0.4
CLL *i* *PP sP 04 52 14.7 -0.7
CLL pmax pmax
comp=Z,16nm,1.1s
CLL MLR MLR
comp=Z,800nm,19.6s
CLL **Collm** 40.35 305⇑ *i*P P 04 52 08.3 -0.4
comp=Z,16nm,1.1s
CLL *i* pP sP 04 52 14.7 -0.7
CLL *i* sP pP 04 52 16.7 +3.2
comp=Z,23nm,1.1s
CLL *ex* x 04 53 32.0
CLL *e*PP PP 04 53 42.0 +0.5
comp=Z,19nm,1.0s
CLL *ex* x 04 53 51.0
CLL AMS AMS 05 10 00.0
comp=N,200nm,19.9s
CLL AMS AMS 05 10 00.0
comp=E,600nm,19.9s
CLL AMS AMS 05 10 00.0
comp=Z,800nm,19.6s
ONAU **Onsala** 40.46 315 *i* P P 04 52 08.2 -1.3
LEIR **Leirfjorden** 40.48 328 *e*P P 04 52 10.0 +0.4
LEIR IAmb IAmb 04 52 10.3
comp=Z,41nm,1.0s
VAGH **Vaagaholmen** 40.53 329 *e*P P 04 52 10.4 +0.5
VAGH IAmb IAmb 04 52 19.0
comp=Z,56nm,1.0s
KONS **Konsvik** 40.55 329 *e*P P 04 52 10.6 +0.5
STOK **Stokkvaagen** 40.56 328 *e*P P 04 52 10.4 +0.2
BIOA **Bad Ischl, Aus** 40.57 299 *e*P P 04 52 10.0 -0.6
comp=Z,7.0nm,0.8s
NC405 **NORSAR Array S** 40.58 320 P P 04 52 10.2 -0.3
NC405 IAmb IAmb 04 52 17.2
comp=Z,39nm,1.1s
NC602 **NORSAR Array S** 40.65 320 IAmb IAmb 04 52 20.4
comp=Z,24nm,0.9s
NC602 **NORSAR Array S** 40.65 320 *e*P P 04 52 09.1 -2.0
YAK **Yakutsk** 40.73 38 *e*P P 04 52 11.9 +0.2
YAK *e* 04 53 47.4
YAK *e* 04 54 12.8
YAK *e*S S 04 58 23.1 +1.7
YAK *e*SS SS 05 01 24.5 +2.7
YAK *e*SSS SSS 05 01 51.8
YAK *e* 05 02 18.2
YAK pmax pmax
comp=Z,78nm,0.9s
YAK pmax pmax
comp=N,8.0nm,1.0s
YAK pmax pmax
comp=Z,206nm,4.1s
YAK pmax pmax
comp=E,50nm,2.5s
YAK pmax pmax
comp=N,82nm,4.6s
YAK smax smax
comp=N,57nm,2.2s
YAK smax smax
comp=E,37nm,2.4s
NB201 **NORSAR Array S** 40.78 320 P P 04 52 11.5 -0.7
NB201 IAmb IAmb 04 52 21.7
comp=Z,31nm,1.1s
STRU **Stroemstad** 40.81 317 *i* P P 04 52 11.9 -0.5
NB2 **NORSAR Subarra** 40.82 320 P P 04 52 11.8 -0.7
comp=Z,8.6nm,0.7s,baz=92,slow=8.6
NB2 **NORSAR Subarra** 40.82 320 P P 04 52 11.8 -0.7
NOA **NORSAR Array B** 40.82 320 P P 04 52 11.9 -0.6
comp=Z,14nm,0.8s,baz=90,slow=8.3,SNR=55
NOA PP PP 04 53 46.0 -0.4
comp=Z,2.4nm,0.7s,baz=94,slow=8.4,SNR=3.7
NOA LR LR 05 09 48.3
comp=Z,590nm,19.7s,baz=90,slow=37
comp=Z,14nm,0.8s
BNX **BinXian** 40.93 63 ⇑P P 04 52 14.5 +0.9
BNX pmax pmax
comp=Z,3.0nm,0.4s
NAO01 **NORSAR Array S** 40.98 320 IAmb IAmb 04 52 23.0
comp=Z,35nm,0.9s
NBO00 **NORSAR Array S** 41.03 320 IAmb IAmb 04 52 23.6
comp=Z,27nm,0.9s
OSL **Oslo** 41.05 318 *e*P P 04 52 14.6 +0.3
NC204 **NORSAR Array S** 41.05 321 P P 04 52 14.1 -0.3
LESA **Schwarzleotal** 41.27 299 *e*P P 04 52 16.2 -0.2
comp=Z,15nm,1.1s,SNR=6.1
MOX **Moxa** 41.32 304 *e*L L 05 11 36.1
comp=Z,555nm,20.1s
BSI **Banda Aceh** 41.53 141 P P 04 52 17.4 -1.4
comp=Z,43nm,0.7s
KONO **Kongsberg** 41.62 318 P P 04 52 18.5 -0.5
KONO IAmb IAmb 04 52 25.5
comp=Z,33nm,1.0s
KONO **Kongsberg** 41.62 318 *e*P P 04 52 18.9 -0.2
KONO **Kongsberg** 41.62 318⇓ *i*P P 04 52 19.1 +0.1
KONO pmax pmax
comp=Z,37nm,1.0s
GRA1 **Grafenberg Arr** 41.74 303 IAmb IAmb 04 52 22.2
comp=Z,20nm,0.9s
GRF **Grafenberg Arr** 41.74 303 *e*P P 04 52 21.0 +0.7
comp=Z,16nm,0.9s,baz=84,slow=6.8
GRF *e*L L 05 12 11.2
comp=Z,196nm,18.8s
DOMB **Dombas** 41.88 322 *e*P P 04 52 21.1 -0.1
DOMB IAmb IAmb 04 52 31.6
comp=Z,518nm,2.5s
TIXI **Tiksi** 41.95 24 LR LR 05 12 30.9
comp=Z,162nm,18.9s,baz=345,slow=40
TIXI **Tiksi** 41.95 24 P P 04 52 22.0 +0.4
TIXI IAmb IAmb 04 52 28.9
comp=Z,19nm,0.7s
TIXI **Tiksi** 41.95 24⇑ *i*P P 04 52 21.9 +0.3
TIXI pmax pmax
comp=Z,23nm,0.9s
WTTA **Wattenberg** 41.99 299 *e*P P 04 52 21.8 -0.7
comp=Z,20nm,1.1s,SNR=7.7
WATA **Walderalm** 42.02 299 *e*P P 04 52 22.3 -0.4
comp=Z,13nm,1.0s,SNR=4.2
HOMB **Homborsund** 42.24 316 *e*P P 04 52 24.2 +0.1
HOMB IAmb IAmb 04 52 28.8
comp=Z,206nm,1.9s
HOMB **Homborsund** 42.24 316 *i* P P 04 52 22.5 -1.6
SKAR **Skarsla** 42.24 320 *e*P P 04 52 24.9 +0.7
SQTA **Sankt Quirin** 42.29 299 *e*P P 04 52 24.3 -0.6
comp=Z,8.7nm,0.7s,SNR=5.8
MOTA **Moosalm** 42.33 300 *i* P P 04 52 24.9 -0.3
comp=Z,16nm,0.9s
TEOL **Teolo** 42.45 297 P P 04 52 25.9 -0.1
MOL **Molde** 42.59 322 *e*P P 04 52 27.2 +0.3
FETA **Feichten** 42.65 299 *e*P P 04 52 27.6 -0.3
comp=Z,8.5nm,1.1s
AKN **Aaknes** 42.85 322 *e*P P 04 52 29.2 +0.1
SNART **Snartemo** 42.92 316 *e*P P 04 52 30.0 +0.4
SNART **Snartemo** 42.92 316 *i* P P 04 52 28.7 -0.9
KLR **Kul'dur** 42.99 57⇓ *e*P P 04 52 30.0 -0.4
KLR pmax pmax
comp=Z,22nm,3.5s
FUORN **Ofenpass-Fuorn** 43.06 299 P 04 52 30.6 -0.7
ODD1 **Odda** 43.11 319 *e*P P 04 52 31.8 +0.6
DAVA **Damuels** 43.15 300 *i* P P 04 52 31.5 -0.4
comp=Z,30nm,1.1s,SNR=11
BLS5 **Blasjo** 43.23 318 *e*P P 04 52 32.5 +0.4
SPB2 **Spitsbergen Ar** 43.25 346 P 04 52 33.5 +1.3
SPA0 **Spitsbergen Ar** 43.26 346 *e*P P 04 52 33.1 +0.9
SPITS **Spitsbergen Ar** 43.26 346 P P 04 52 33.3 +1.1
comp=Z,8.8nm,0.7s,baz=116,slow=13,SNR=38
SPITS LR LR 05 12 47.1
comp=Z,331nm,18.7s,baz=124,slow=39
comp=Z,8.8nm,0.7s
SPITS **Spitsbergen Ar** 43.26 346 P P 04 52 33.5 +1.3
SPITS pmax pmax
comp=Z,43nm,1.0s
HYA **Hoyanger** 43.26 320 *e*P P 04 52 32.5 +0.2
DAVOX **Davos/Dischmat** 43.28 299 P P 04 52 32.3 -0.7
comp=Z,10nm,0.7s,baz=83,slow=10,SNR=26
comp=Z,10nm,0.7s
ASK **Askoy** 43.78 319 *e*P P 04 52 36.6 +0.1
BFO **Black Forest** 43.90 302 P P 04 52 37.1 -0.7
BFO **Black Forest** 43.90 302 P P 04 52 37.1 -0.7
BFO pmax pmax
comp=Z,9.0nm,0.8s
KSRS **Korea Array** 43.93 75 P P 04 52 38.1 0.0
comp=Z,0.6nm,0.4s,baz=282,slow=7.4,SNR=5.2
comp=Z,0.6nm,0.4s
KBS **Kingsbay** 44.37 346 P P 04 52 42.0 +0.9
KBS **Kingsbay** 44.37 346 *e*P P 04 52 41.8 +0.7
KBS **Kingsbay** 44.37 346 P P 04 52 42.0 +0.9
KBS pmax pmax
comp=Z,33nm,0.9s
KBS **Kingsbay** 44.37 346 *i* P P 04 52 41.1 0.0
USRK **Ussuriysk Ar.** 44.48 64 P P 04 52 40.9 -1.5
comp=Z,1.0nm,0.6s,baz=282,slow=9.1,SNR=7.5
comp=Z,1.0nm,0.6s
BTNL **Ternell** 44.76 305 *d*P P 04 52 44.9 +0.3
BTNL *dx* x 04 52 53.5
MEM **Membach** 44.83 305 *d*P P 04 52 45.3 +0.2
MEM *dx* x 04 52 51.2
BHOU **Houvegnez** 44.89 305 *d*P P 04 52 46.8 +1.1
WLF **Walferdange** 44.96 304 *d*P P 04 52 46.9 +0.7
comp=Z,1nm,0.9s
WLF *dx* x 04 52 52.8
WLF *d*PP PP 04 54 29.6 -1.4
SENIN **Lac Senin/Sane** 45.10 299 P 04 52 47.2 -0.5
SENIN IAmb IAmb 04 52 47.7
comp=Z,13nm,0.8s
RCHB **Rochefort** 45.42 305 *d*P P 04 52 49.7 -0.1
BGES **Gesves** 45.45 305 *d*P P 04 52 50.6 +0.6
BGES *dx* x 04 52 58.6
BMRD **Maredsous** 45.67 305 *d*P P 04 52 52.0 +0.2
UCC **Uccle** 45.80 306 *d*P P 04 52 52.8 0.0
DOU **Dourbes** 45.83 305 *d*P P 04 52 53.3 +0.3
comp=Z,8.1nm,1.1s
DOU *d*PcP PcP 04 54 29.5 -0.7
KEST **Kesra** 47.50 285 P P 04 53 05.2 -1.2
comp=Z,6.2nm,0.9s,baz=16,slow=7.4,SNR=4.2
comp=Z,6.2nm,0.9s
ELMS **Elmsett, Ipswi** 47.51 308 *e*P P 04 53 06.2 0.0
DRUM **Mains of Drumt** 48.29 315 *e*P P 04 53 12.2 +0.1
DRUM IAmb IAmb 04 53 13.1
comp=Z,8.0nm,0.8s
EDMD **Edmundbyers** 48.51 313 *e*P P 04 53 13.2 -0.7
EDMD IAmb IAmb 04 53 14.4
comp=Z,11nm,0.7s
HPK **Haverah Park** 48.54 311 *e*P P 04 53 13.9 -0.3
HPK IAmb IAmb 04 53 15.1
comp=Z,17nm,0.7s
JMIC **Jan Mayen** 48.55 335 LR LR 05 13 52.4
comp=Z,317nm,19.8s,baz=69,slow=36
BIGH **Upper Bighouse** 48.67 318 *e*P P 04 53 14.9 -0.1
BIGH IAmb IAmb 04 53 16.3
comp=Z,11nm,0.9s
EKA **Eskdalemuir Ar** 49.04 313 P P 04 53 17.1 -0.9
comp=Z,9.6nm,0.8s,baz=71,slow=7.6,SNR=39
EKA LR LR 05 16 13.2
comp=Z,427nm,19.2s,baz=66,slow=39
comp=Z,9.6nm,0.8s
EKA **Eskdalemuir Ar** 49.04 313 P P 04 53 17.5 -0.5
EKA pmax pmax
comp=Z,25nm,1.1s
ESK **Eskdalemuir** 49.07 313 *e*P P 04 53 17.5 -0.7
ESK IAmb IAmb 04 53 18.6
comp=Z,7.5nm,0.8s
ESK **Eskdalemuir** 49.07 313 P P 04 53 17.4 -0.8
ESK **Eskdalemuir** 49.07 313 P P 04 53 17.4 -0.8
ESK pmax pmax
comp=Z,27nm,1.1s
KESW **Keswick, Cumbr** 49.21 312 *e*P P 04 53 19.0 -0.3
KESW IAmb IAmb 04 53 20.1
comp=Z,14nm,0.7s
INVG **Invergeldie, C** 49.24 315 *e*P P 04 53 18.9 -0.5
INVG IAmb IAmb 04 53 20.7
comp=Z,5.2nm,0.8s
TYV **Tymovskoe** 49.34 53 *e*P P 04 53 24.2 +3.9
TYV pmax pmax
comp=Z,11nm,1.7s
TYV pmax pmax
comp=Z,600nm,4.4s
EAB **Aberfoyle** 49.46 315 *e*P P 04 53 20.5 -0.7
EAB IAmb IAmb 04 53 21.9
comp=Z,6.9nm,0.8s
NOR **Nord** 49.53 349 *i* P P 04 53 21.7 +0.3
NOR IAmb IAmb 04 53 24.8
comp=Z,12nm,1.5s
PDSI **Padang** 49.61 139 P P 04 53 21.7 -1.1
comp=Z,36nm,0.7s
PGBU **Glenifferbraes** 49.64 314 *e*P P 04 53 22.2 -0.3
PGBU IAmb IAmb 04 53 23.5
comp=Z,25nm,0.7s
NEWG **New Galloway** 49.69 313 *e*P P 04 53 22.7 -0.2
NEWG IAmb IAmb 04 53 23.7
comp=Z,11nm,0.8s
MONM **Monmouth** 49.83 309 *e*P P 04 53 22.9 -1.1
MONM IAmb IAmb 04 53 24.2
comp=Z,11nm,0.7s
MCH1 **Michaelchurch** 49.90 309 *e*P P 04 53 23.7 -0.8
MCH1 IAmb IAmb 04 53 24.9
comp=Z,9.6nm,0.7s
GAL1 **Galloway** 50.03 313 *e*P P 04 53 24.9 -0.5
GAL1 IAmb IAmb 04 53 26.1
comp=Z,9.3nm,0.8s
DAG **Danmarks Havn** 50.54 343 *i* P P 04 53 27.9 -1.1
DAG IAmb IAmb 04 53 37.0
comp=Z,18nm,0.7s
YSS **Yuzhno-Sakhali** 50.70 57 *e*P P 04 53 27.4 -3.3
YSS pmax pmax
comp=Z,20nm,1.2s
RSBS **Rosebush, Pemb** 50.94 310 *e*P P 04 53 31.9 -0.6
RSBS IAmb IAmb 04 53 33.1
comp=Z,9.1nm,0.9s
SEY **Seymchan** 51.08 36⇓ *e*P P 04 53 35.4 +2.1
SEY pmax pmax
comp=Z,9.0nm,1.3s
DBG **Daneborg** 51.44 340 *i* P P 04 53 35.4 -0.5
DBG IAmb IAmb 04 53 37.7
comp=Z,10.0nm,1.4s
MAJO **Matsushiro** 51.79 71 *de*P P 04 53 39.2 +0.2
MAJO pmax pmax
comp=Z,6.0nm,0.6s
MJAR **Matsushiro Arr** 51.79 71 P P 04 53 39.2 +0.2
comp=Z,2.3nm,0.6s,baz=295,slow=9.3,SNR=7.3
comp=Z,2.3nm,0.6s
MJAR **Matsushiro Arr** 51.79 71 P P 04 53 40.1 +1.0
MJAR **Matsushiro Arr** 51.79 71 P P 04 53 40.1 +1.0
MJAR pmax pmax
comp=Z,4.0nm,0.9s
KIBK **Kibwezi** 52.18 223 P 04 53 41.1 -1.1
MASI **Maura Aman, Be** 52.41 139 P P 04 53 42.5 -1.4
BILL **Bilibino** 54.92 27 P 04 54 02.6 +1.1
BILL **Bilibino** 54.92 27⇓ *i*P P 04 54 02.9 +1.3
BILL pmax pmax
comp=Z,9.0nm,1.1s
ESBB **Sonseca Array** 55.25 295 IAmb IAmb 04 54 04.9
comp=Z,17nm,0.9s
ESDC **Sonseca Array** 55.25 295 P P 04 54 03.7 -0.8
comp=Z,12nm,0.8s,baz=65,slow=7.1,SNR=88
ESDC LR LR 05 21 56.2
comp=Z,148nm,19.2s,baz=300,slow=41
comp=Z,12nm,0.8s
ESDC **Sonseca Array** 55.25 295 P P 04 54 03.5 -1.0
ESDC IAmb IAmb 04 54 04.9
comp=Z,9.4nm,1.0s
PAB **San Pablo** 55.58 295 P 04 54 05.9 -1.0
PAB IAmb IAmb 04 54 07.3
comp=Z,12nm,0.8s
PAB **San Pablo** 55.58 295 P P 04 54 05.9 -1.0
PAB pmax pmax
comp=Z,12nm,0.9s
PBRG **Braganca** 56.17 299 *e*P P 04 54 10.9 -0.1
MVO **Moncorvo** 56.66 298 *e*P P 04 54 14.7 +0.2
NEEM **North Greenlan** 56.78 347 *i* P P 04 54 14.1 -1.1
NEEM IAmb IAmb 04 54 16.3
comp=Z,9.0nm,0.9s
TAM **Tamanrasset** 56.90 273 P 04 54 15.4 -1.2
TAM **Tamanrasset** 56.90 273 P P 04 54 15.4 -1.2
TAM pmax pmax
comp=Z,29nm,0.2s
SUMG **Summit** 56.91 340 IAmb IAmb 04 54 24.3
comp=Z,22nm,1.1s
SUMG **Summit** 56.91 340 *i* P P 04 54 16.4 +0.1
SUMG IAmb IAmb 04 54 24.3
comp=Z,11nm,0.9s
PVRL **Vila Real** 57.06 298 *e*P P 04 54 17.7 +0.3
PCAB **Cabril** 57.07 299 *e*P P 04 54 17.9 +0.5
PCAB *i* IAmb IAmb 04 54 19.1
comp=Z,46nm,1.1s
POLO **Lamas de Olo** 57.07 299 *e*P P 04 54 17.6 +0.1
PGAV **Gavieira, Arco** 57.11 299 *e*P P 04 54 17.5 -0.3
PGAV *i* IAmb IAmb 04 54 28.2
comp=Z,46nm,1.7s
MTE **Manteigas** 57.36 297 *e*P P 04 54 20.1 +0.6
PVIS **Viseu** 57.44 298 *e*P P 04 54 20.3 +0.2
PCBR **Castelo Branco** 57.58 297 *e*P P 04 54 21.3 +0.3
PCBR *i* IAmb IAmb 04 54 22.9
comp=Z,22nm,1.8s
PMRV **Marv??o** 57.71 296 *e*P P 04 54 21.9 -0.1
PMRV *i* IAmb IAmb 04 54 23.0
comp=Z,32nm,1.0s
PBAR **Barrancos** 58.08 295 *e*P P 04 54 24.4 -0.1
PBAR *i* IAmb IAmb 04 54 25.5
comp=Z,33nm,1.6s
PESTR **Estremoz** 58.12 296 *e*P P 04 54 24.9 +0.1
PSARD **Sardoal** 58.15 297 *e*P P 04 54 25.4 +0.3
PSARD *i* IAmb IAmb 04 54 26.2
comp=Z,25nm,1.7s
PCAS **Casmilo, Conde** 58.16 297 *e*P P 04 54 25.5 +0.4
PARRA **Arraiolos** 58.45 296 *e*P P 04 54 28.1 +1.0
PMTG **Montargil** 58.45 296 *e*P P 04 54 27.1 0.0
PSBE **So Bento** 58.62 297 *e*P P 04 54 28.5 +0.1
PBEJ **Beja** 58.72 295 *e*P P 04 54 29.2 +0.2
MOE **Montemor** 58.80 296 *e*P P 04 54 29.1 -0.5
PVAQ **Vaqueiros** 58.92 294 *e*P P 04 54 30.4 0.0
MDT **Midelt** 59.04 288 LR LR 05 22 43.4
comp=Z,64nm,21.8s,baz=317,slow=39
MESJ **Messejana** 59.05 295 *e*P P 04 54 31.7 +0.4
MD01 **Midelt array s** 59.12 288 P 04 54 30.9 -1.2
PBDV **Barranco-do-Ve** 59.15 294 *e*P P 04 54 32.5 +0.5
MPSI **Mapaga** 60.08 119 P P 04 54 39.5 +0.9
comp=Z,793nmcomp=Z,15nm,1.1s
TULEG **Thule** 60.16 350 IAmb IAmb 04 54 39.3
comp=Z,7.0nm,0.9s
TULEG **Thule** 60.16 350 *i* P P 04 54 37.5 -0.9
TULEG IAmb IAmb 04 54 39.5
comp=Z,7.0nm,0.9s
ANGG **Ammassalik, Gr** 60.43 333 *i* P P 04 54 39.5 -0.8
ANGG IAmb IAmb 04 54 41.3
comp=Z,22nm,0.9s
A19K **Wainwright** 63.17 17 P P 04 54 59.6 +0.9
baz=318
A21K **Barrow** 63.27 15 P P 04 54 60.0 +0.7
baz=322
C16K **Lisburne Hills** 63.54 20 IAmb IAmb 04 55 02.6
comp=Z,9.0nm,0.9s
C16K **Lisburne Hills** 63.54 20 P P 04 55 01.6 +0.5
baz=315,SNR=12
A22K **Sinclair Lake** 63.85 15 P P 04 55 03.8 +0.7
baz=323
C17K **DeLong Mountai** 63.95 19 P P 04 55 04.7 +0.7
baz=317
B20K **Meade River** 64.19 16 P P 04 55 06.3 +0.9
baz=321
C18K **Utukok River** 64.31 19 IAmb IAmb 04 55 07.8
comp=Z,11nm,1.0s
C18K **Utukok River** 64.31 19 P P 04 55 06.8 +0.4
baz=319,SNR=13
RDOG **Red Dog Mine** 64.33 20 P P 04 55 06.8 +0.4
baz=318
C19K **Lookout Ridge** 64.34 18 IAmb IAmb 04 55 14.7
comp=Z,7.2nm,0.7s
C19K **Lookout Ridge** 64.34 18 P P 04 55 07.3 +0.8
baz=320
D17K **Noatak River** 64.55 20 P P 04 55 08.3 +0.5
baz=317,SNR=33
B22K **Teshekpuk Lake** 64.69 15 P P 04 55 09.4 +0.7
baz=324
POIN **Pond Inlet** 64.71 350 P 04 55 09.1 +0.3
TNA **Tin City** 64.74 23 P P 04 55 09.8 +0.7
baz=314
GAMB **Gambell** 64.78 26 P P 04 55 10.3 +0.9
baz=312
B21K **Ikpikpuk River** 65.03 16 P P 04 55 11.8 +0.9
baz=324
D19K **Kuna River** 65.16 18 P P 04 55 12.3 +0.4
baz=321
F14K **Arctic Creek** 65.27 23 P P 04 55 13.4 +0.9
baz=316
D20K **Etivluk River** 65.33 17 IAmb IAmb 04 55 14.6
comp=Z,14nm,1.1s
D20K **Etivluk River** 65.33 17 P P 04 55 13.3 +0.4
baz=322,SNR=14
E17K **Hotham Inlet** 65.33 20 P P 04 55 13.2 +0.3
baz=319
C21K **Knifeblade Rid** 65.37 16 P P 04 55 14.0 +0.8
baz=324
E18K **Tukpahlearik C** 65.39 19 IAmb IAmb 04 55 20.9
comp=Z,8.0nm,0.7s
E18K **Tukpahlearik C** 65.39 19 P P 04 55 13.7 +0.4
baz=320
TORD **Torodi Ar. Bea** 65.58 266 P P 04 55 14.0 -1.3
comp=Z,6.4nm,0.8s,baz=51,slow=4.6,SNR=38
comp=Z,6.4nm,0.8s
F15K **North Star Dit** 65.59 22 IAmb IAmb 04 55 16.5
comp=Z,11nm,1.0s
F15K **North Star Dit** 65.59 22 P P 04 55 15.2 +0.6
baz=317
C23K **Itkillik River** 65.65 15 P P 04 55 15.9 +1.0
baz=327
E20K **Nigu River** 65.79 17 P P 04 55 16.6 +0.6
baz=323
F17K **Baldwin Pennin** 65.97 20 P P 04 55 17.8 +0.8
baz=319
C24K **Franklin Bluff** 66.11 14 P P 04 55 18.7 +0.9
baz=328
E21K **Killik River** 66.13 16 IAmb IAmb 04 55 19.4
comp=Z,12nm,0.9s
E21K **Killik River** 66.13 16 P P 04 55 18.4 +0.3

baz=324,SNR=8.8
E19K **Redstone River** 66.18 18 IAmb IAmb 04 55 20.4
comp=Z,7.9nm,1.0s
E19K **Redstone River** 66.18 18 P P **04 55 18.7 +0.2**
baz=322
ANM **Nome** 66.21 23 IAmb IAmb 04 55 20.8
comp=Z,7.6nm,1.0s
ANM **Nome** 66.21 23 P P **04 55 19.5 +0.9**
baz=317,SNR=5.5
F18K **Selawik** 66.26 20 P P **04 55 19.3 +0.4**
baz=320,SNR=15
G15K **Niukluk** 66.28 22 P P **04 55 19.7 +0.6**
baz=318
D23K **Nanushuk River** 66.37 15 IAmb IAmb 04 55 21.5
comp=Z,11nm,1.0s
D23K **Nanushuk River** 66.37 15 P P **04 55 20.3 +0.6**
baz=327
G16K **Koyuk River** 66.46 21 IAmb IAmb 04 55 22.1
comp=Z,7.1nm,1.0s
G16K **Koyuk River** 66.46 21 P P **04 55 20.8 +0.6**
baz=319
F19K **Shaleruckik Mo** 66.55 19 P P **04 55 20.4 -0.3**
baz=322
D24K **Happy Valley** 66.57 14 P P **04 55 21.5 +0.6**
baz=328
C26K **Camden Bay** 66.60 13 P P **04 55 22.1 +1.1**
baz=331,SNR=6.1
E22K **Anaktuvuk Pass** 66.84 16 IAmb IAmb 04 55 24.0
comp=Z,12nm,1.0s
E22K **Anaktuvuk Pass** 66.84 16 P P **04 55 22.9 +0.3**
baz=326
G17K **Kiwalik Mounta** 66.84 21 P P **04 55 23.2 +0.6**
baz=320,SNR=7.7
F20K **Avaraart Lake** 66.86 18 P P **04 55 22.7 0.0**
baz=323
TOLK **Toolik Lake Re** 66.86 15 P P **04 55 23.6 +0.7**
baz=328,SNR=21
D25K **Kavik River** 66.87 13 IAmb IAmb 04 55 24.9
comp=Z,11nm,0.9s
D25K **Kavik River** 66.87 13 P P **04 55 23.7 +0.8**
baz=330
A36M **Sachs Harbour** 66.97 5 P P **04 55 23.9 +0.5**
baz=347,SNR=19
C27K **Jago River** 67.06 12 IAmb IAmb 04 55 26.3
comp=Z,10nm,1.1s
C27K **Jago River** 67.06 12 P P **04 55 24.6 +0.6**
baz=332
G18K **Tagagawik** 67.06 20 IAmb IAmb 04 55 25.9
comp=Z,12nm,1.5s
G18K **Tagagawik** 67.06 20 P P **04 55 24.1 0.0**
baz=321,SNR=6.0
H16K **Elim** 67.06 22 P P **04 55 24.8 +0.7**
baz=319,SNR=6.6
F21K **Alatna River** 67.23 17 IAmb IAmb 04 55 26.6
comp=Z,8.4nm,0.9s
F21K **Alatna River** 67.23 17 P P **04 55 25.7 +0.5**
baz=325,SNR=8.5
G19K **Purcell Mounta** 67.26 19 P P **04 55 25.5 +0.2**
baz=323
E23K **Chandalar** 67.35 15 IAmb IAmb 04 55 27.6
comp=Z,9.8nm,0.9s
E23K **Chandalar** 67.35 15 P P **04 55 26.4 +0.5**
baz=328
H17K **Granite Mounta** 67.48 21 IAmb IAmb 04 55 37.7
comp=Z,7.7nm,0.8s
H17K **Granite Mounta** 67.48 21 P P **04 55 27.4 +0.7**
baz=321,SNR=7.7
E24K **Your Creek** 67.56 15 IAmb IAmb 04 55 35.2
comp=Z,6.5nm,0.7s
E24K **Your Creek** 67.56 15 P P **04 55 27.8 +0.6**
baz=329,SNR=13
H18K **Honhosa River** 67.72 20 P P **04 55 28.5 +0.2**
baz=322
G21K **Allakaket** 67.81 18 IAmb IAmb 04 55 29.7
comp=Z,6.0nm,0.9s
G21K **Allakaket** 67.81 18 P P **04 55 28.8 0.0**
baz=325
D27M **Malcolm River** 67.83 12 P P **04 55 29.0 0.0**
baz=335
H19K **Roundabout Mou** 67.91 19 IAmb IAmb 04 55 37.1
comp=Z,6.2nm,0.7s
H19K **Roundabout Mou** 67.91 19 P P **04 55 29.9 +0.5**
baz=323,SNR=6.8
COLD **Coldfoot** 67.94 16 P P **04 55 30.3 +0.7**
baz=328,SNR=24
E25K **Arctic Village** 68.07 14 IAmb IAmb 04 55 32.0
comp=Z,6.7nm,0.9s
E25K **Arctic Village** 68.07 14 P P **04 55 31.1 +0.7**
baz=331,SNR=12
I17K **Unalakleet** 68.08 22 IAmb IAmb 04 56 07.4
comp=Z,6.9nm,0.9s
I17K **Unalakleet** 68.08 22 P P **04 55 31.4 +1.0**
baz=320
D28M **Stokes Point** 68.08 11 P P **04 55 31.3 +0.9**
baz=336
J14K **Nanvaranak Lak** 68.10 24 IAmb IAmb 04 55 32.5
comp=Z,10nm,1.0s
J14K **Nanvaranak Lak** 68.10 24 P P **04 55 31.4 +0.8**
baz=319
F24K **Squaw Lake** 68.16 15 P P **04 55 31.5 +0.5**
baz=330,SNR=7.0
IMAR **Indian Mountai** 68.19 18 P P **04 55 30.9 -0.3**
ILON **Igloolik, Nuna** 68.28 350 P **04 55 31.1 -0.6**
ILON IAmb IAmb 04 55 32.4
comp=Z,7.3nm,0.9s
H20K **Anotleneega Mo** 68.33 19 P P **04 55 32.3 +0.2**
baz=324
K13K **Kusilvak Mount** 68.37 25 P P **04 55 33.1 +0.8**
baz=318
G23K **Bananza Creek** 68.42 16 P P **04 55 33.1 +0.5**
baz=328,SNR=7.1
GCSA **Galena City Sc** 68.43 20 P P **04 55 33.1 +0.4**
baz=323
F25K **Christian Rive** 68.52 14 IAmb IAmb 04 55 35.5
comp=Z,8.1nm,0.9s
F25K **Christian Rive** 68.52 14 P P **04 55 34.4 +1.2**
baz=331
J16K **Anvik River** 68.57 22 P P **04 55 34.5 +0.9**
baz=321,SNR=8.2
E28M **Babbage River** 68.63 11 P P **04 55 34.8 +0.9**
baz=336
H21K **Melozitna Rive** 68.69 18 IAmb IAmb 04 55 35.7
comp=Z,10nm,1.1s
H21K **Melozitna Rive** 68.69 18 P P **04 55 34.8 +0.5**
baz=326,SNR=8.0
E27K **Coleen River** 68.69 12 IAmb IAmb 04 55 36.3
comp=Z,12nm,1.1s
E27K **Coleen River** 68.69 12 P P **04 55 35.0 +0.7**
baz=334,SNR=12
F26K **Sheenjek River** 68.70 13 P P **04 55 35.2 +0.8**
baz=332,SNR=6.7
SIJI **Sorong** 68.78 111 P P **04 55 34.5 -1.1**
comp=Z,2µmcomp=Z,24nm,0.9s
H22K **Ishtalitna Cre** 68.81 17 P P **04 55 35.6 +0.5**
baz=327,SNR=5.9
BMAR **Burnt Mountain** 68.86 14 P P **04 55 35.6 +0.3**
J17K **VABM Dome** 68.91 22 IAmb IAmb 04 55 37.4
comp=Z,13nm,1.3s
J17K **VABM Dome** 68.91 22 P P **04 55 36.5 +0.8**
baz=322
G24K **Hadweenzic Riv** 68.95 15 IAmb IAmb 04 55 37.9
comp=Z,10nm,1.0s
G24K **Hadweenzic Riv** 68.95 15 P P **04 55 36.7 +0.7**
baz=330,SNR=9.0
I20K **Naaghedeneel** 69.00 19 P P **04 55 37.0 +0.8**
baz=325
M11K **Mekoryuk** 69.01 26 P P **04 55 37.2 +0.9**
baz=317
K15K **Wolf Creek Mou** 69.06 23 IAmb IAmb 04 55 38.9
comp=Z,7.4nm,1.0s
K15K **Wolf Creek Mou** 69.06 23 P P **04 55 37.6 +0.9**
baz=320
E29M **Blow River** 69.07 11 IAmb IAmb 04 55 38.7
comp=Z,11nm,1.1s
E29M **Blow River** 69.07 11 P P **04 55 37.5 +0.9**
baz=337,SNR=12
G25K **Bearman Lake** 69.16 15 P P **04 55 38.3 +1.1**
baz=331
I21K **Tanana** 69.28 18 IAmb IAmb 04 55 39.4
comp=Z,7.5nm,1.0s
I21K **Tanana** 69.28 18 P P **04 55 38.3 +0.3**
baz=327
J19K **Poorman** 69.36 20 P P **04 55 39.1 +0.6**
baz=324,SNR=7.5
G26K **Porcupine Rive** 69.43 14 IAmb IAmb 04 56 09.5
comp=Z,14nm,1.5s
G26K **Porcupine Rive** 69.43 14 P P **04 55 39.6 +0.8**
baz=333
L14K **Kuka Creek** 69.44 24 IAmb IAmb 04 55 47.4
comp=Z,7.2nm,0.8s
L14K **Kuka Creek** 69.44 24 P P **04 55 39.9 +0.9**
baz=320
F28M **Old Crow** 69.49 12 IAmb IAmb 04 55 41.3
comp=Z,7.9nm,1.1s
F28M **Old Crow** 69.49 12 P P **04 55 39.8 +0.6**
baz=336,SNR=9.5
J18K **Innoko River** 69.50 21 IAmb IAmb 04 55 41.1
comp=Z,8.1nm,1.1s
J18K **Innoko River** 69.50 21 P P **04 55 40.0 +0.5**
baz=324
L15K **Ungalak Mounta** 69.55 24 P P **04 55 39.9 +0.3**
baz=320
J20K **Nowinta River** 69.59 19 P P **04 55 40.1 +0.2**
baz=325
H24K **Noodor Dome** 69.61 16 P P **04 55 40.8 +0.7**
baz=330,SNR=7.3
C36M **Paulatuk** 69.65 5 P P **04 55 40.1 0.0**
baz=348,SNR=7.8
K17K **Iditarod** 69.67 22 IAmb IAmb 04 55 42.3
comp=Z,13nm,1.0s
K17K **Iditarod** 69.67 22 P P **04 55 41.2 +0.8**
baz=322,SNR=7.9
MLY **Manley** 69.69 17 IAmb IAmb 04 55 51.1
comp=Z,5.4nm,0.8s
MLY **Manley** 69.69 17 P P **04 55 41.1 +0.6**
baz=328
INK **Inuvik** 69.73 9 IAmb IAmb 04 56 08.4
comp=Z,11nm,0.9s
INK **Inuvik** 69.73 9 P P **04 55 41.4 +0.7**
baz=341,SNR=10
SPIA **Saint Paul Isl** 69.87 30 P P **04 55 42.6 +0.9**
baz=315
I23K **Minto, Yukon-K** 69.89 17 IAmb IAmb 04 55 43.6
comp=Z,13nm,1.0s
I23K **Minto, Yukon-K** 69.89 17 P P **04 55 42.9 +1.1**
baz=329,SNR=8.3
G27K **Doyon Strip** 69.93 13 IAmb IAmb 04 55 44.3
comp=Z,9.8nm,1.1s
G27K **Doyon Strip** 69.93 13 P P **04 55 43.1 +1.0**
baz=334
M13K **Dall Lake** 69.93 25 P P **04 55 43.1 +1.1**
baz=319
F30M **Barrier River** 70.09 10 IAmb IAmb 04 56 10.7
comp=Z,9.0nm,0.8s
F30M **Barrier River** 70.09 10 P P **04 55 43.7 +0.8**
baz=339,SNR=5.6
M14K **Bethel** 70.12 24 P P **04 55 44.0 +0.9**
baz=320
L16K **Owhat River** 70.13 23 IAmb IAmb 04 55 54.9
comp=Z,8.3nm,0.8s
L16K **Owhat River** 70.13 23 P P **04 55 43.6 +0.4**
baz=322
L17K **Donlin** 70.13 22 P P **04 55 44.0 +0.7**
baz=323
CHUM **Lake Minchumin** 70.28 19 P P **04 55 44.7 +0.6**
baz=327
K20K **Telida** 70.28 20 P P **04 55 44.9 +0.6**
baz=326
POKR **Poker Plat Res** 70.33 16 P P **04 55 45.0 +0.5**
baz=330
PRP **Porcupine Dome** 70.37 15 P P **04 55 45.1 +0.2**
baz=332
BPAW **Bear Paw Mtn.** 70.42 18 IAmb IAmb 04 55 46.1
comp=Z,12nm,1.1s
BPAW **Bear Paw Mtn.** 70.42 18 P P **04 55 45.0 0.0**
baz=328,SNR=7.7
G29M **Pine Creek** 70.42 12 IAmb IAmb 04 55 46.8
comp=Z,8.1nm,0.9s
G29M **Pine Creek** 70.42 12 P P **04 55 45.6 +0.6**
baz=337
NEA2 **Nenana** 70.44 17 IAmb IAmb 04 55 46.3
comp=Z,13nm,1.0s
NEA2 **Nenana** 70.44 17 P P **04 55 45.2 +0.1**
baz=329,SNR=10
COLA **College** 70.46 16 P P **04 55 45.4 +0.3**
COLA **College** 70.46 16 *d* P P **04 55 46.0 +0.8**
COLA pmax pmax
comp=Z,23nm,0.9s
COLA **College** 70.46 16 P P **04 55 45.7 +0.5**
baz=330
BATI **Baunata** 70.46 123 LR LR 05 30 47.8
comp=Z,144nm,18.2s,baz=322,slow=39
H27K **Steamboat Moun** 70.48 13 IAmb IAmb 04 55 47.5
comp=Z,10.0nm,1.0s
H27K **Steamboat Moun** 70.48 13 P P **04 55 46.1 +0.7**
baz=335,SNR=10
L18K **Granite Mounta** 70.52 21 IAmb IAmb 04 55 53.7
comp=Z,7.1nm,0.8s
L18K **Granite Mounta** 70.52 21 P P **04 55 46.3 +0.7**
baz=324
F31M **Tsiigehtchic** 70.53 10 P P **04 55 45.9 +0.4**
baz=341,SNR=14
M15K **Kasigluk River** 70.56 24 P P **04 55 46.8 +0.9**
baz=321
G30M **tAoh Zraii Nji** 70.62 11 IAmb IAmb 04 55 48.3
comp=Z,13nm,1.1s
G30M **tAoh Zraii Nji** 70.62 11 P P **04 55 47.4 +1.2**
baz=339
IL31 70.75 16 IAmb IAmb 04 55 47.8
comp=Z,8.1nm,0.9s
ILAR **Eielson Array** 70.75 16 P P **04 55 46.6 -0.4**
comp=Z,5.9nm,0.9s,baz=332,slow=6.2,SNR=77
ILAR LR LR 05 30 30.1
comp=Z,93nm,18.8s,baz=296,slow=39
comp=Z,5.9nm,0.9s
ILAR **Eielson Array** 70.75 16 P **04 55 46.8 -0.2**
ILAR **Eielson Array** 70.75 16 P P **04 55 46.8 -0.2**
M16K **Timber Creek** 70.83 23 P P **04 55 48.7 +1.1**
baz=322
N14K **Kuskokwak Cree** 70.84 25 P P **04 55 48.6 +1.0**
baz=321
G31M **Satah River** 70.95 10 IAmb IAmb 04 55 49.4
comp=Z,12nm,1.0s
G31M **Satah River** 70.95 10 P P **04 55 48.5 +0.3**
baz=340,SNR=6.9
M17K **Holitna River** 70.97 22 IAmb IAmb 04 55 57.1
comp=Z,14nm,0.9s
M17K **Holitna River** 70.97 22 P P **04 55 49.4 +1.0**
baz=323
H29M **Whitestone** 71.01 12 IAmb IAmb 04 55 50.5
comp=Z,11nm,0.8s
H29M **Whitestone** 71.01 12 P P **04 55 49.4 +0.8**
baz=337
I26K **Coal Creek Min** 71.02 14 P P **04 55 49.3 +0.7**
baz=334
I27K **Kandik River** 71.03 14 IAmb IAmb 04 55 50.5
comp=Z,7.9nm,1.0s
I27K **Kandik River** 71.03 14 P P **04 55 49.5 +0.7**
baz=335
L19K **White Mountain** 71.05 21 IAmb IAmb 04 55 50.8
comp=Z,9.1nm,1.1s
L19K **White Mountain** 71.05 21 P P **04 55 49.6 +0.7**
baz=325
HDA **Harding Lake** 71.06 16 P P **04 55 49.2 +0.3**
baz=331,SNR=6.2
EPYK **Eagle Plains** 71.12 11 P P **04 55 50.0 +0.7**
baz=338
TRF **Thorofare Moun** 71.14 18 P P **04 55 49.9 +0.3**
baz=328
N15K **Kwethluk River** 71.16 24 P P **04 55 50.8 +1.2**
baz=322
J25K **Salcha River,** 71.20 16 P P **04 55 50.2 +0.3**
baz=332,SNR=8.1
MCK **McKinley** 71.21 17 P P **04 55 50.0 +0.1**
baz=329
N16K **Nishlik Lake** 71.32 23 P P **04 55 51.6 +1.1**
baz=323
M18K **Stony River** 71.35 22 P P **04 55 51.3 +0.6**
baz=325
M19K **Big River Lodg** 71.40 21 P P **04 55 51.7 +0.6**
baz=326
I28M **Miner Creek** 71.46 13 IAmb IAmb 04 55 52.7
comp=Z,7.4nm,0.9s
I28M **Miner Creek** 71.46 13 P P **04 55 51.6 +0.2**
baz=336
O14K **Tigyukauivet M** 71.50 25 P P **04 55 52.2 +0.6**
baz=321
N17K **Nushagak Hills** 71.75 23 P P **04 55 53.5 +0.4**
baz=324
M20K **Styx River** 71.75 20 P P **04 55 53.4 +0.1**
baz=327
L22K **Petersville** 71.81 19 IAmb IAmb 04 56 00.4
comp=Z,8.9nm,0.7s
I29M **Ogilvie Camp,** 71.81 12 IAmb IAmb 04 55 54.5
comp=Z,11nm,0.9s
I29M **Ogilvie Camp,** 71.81 12 P P **04 55 53.6 +0.2**
baz=337,SNR=6.7
K24K **Donnelly Dome** 71.83 16 P P **04 55 53.3 -0.3**
baz=332,SNR=9.7
H31M **Peel River** 71.99 11 IAmb IAmb 04 55 55.7
comp=Z,10nm,0.8s
H31M **Peel River** 71.99 11 P P **04 55 54.7 +0.2**
baz=340
N18K **Kilae Creek** 72.00 22 P P **04 55 55.0 +0.4**
baz=325
O15K **Ungalikthiuk R** 72.02 25 P P **04 55 55.6 +0.8**
baz=322
SCRK **Sand Creek** 72.05 15 IAmb IAmb 04 55 56.5
comp=Z,12nm,1.0s
SCRK **Sand Creek** 72.05 15 P P **04 55 55.2 +0.2**
baz=333,SNR=16
WAT1 **Susitna Watana** 72.08 18 P P **04 55 54.7 -0.4**
baz=330
SKT **Skwentna** 72.08 19 P P **04 55 54.7 -0.4**
baz=328,SNR=12
RIDG **Independent Ri** 72.09 16 IAmb IAmb 04 55 55.9
comp=Z,16nm,1.1s
RIDG **Independent Ri** 72.09 16 P P **04 55 55.0 -0.2**
baz=332,SNR=5.1
DHY **Denali Highway** 72.13 17 IAmb IAmb 04 56 03.8
comp=Z,8.6nm,0.6s
DHY **Denali Highway** 72.13 17 P P **04 55 55.9 +0.3**
baz=331
O16K **Kokwok River B** 72.23 24 IAmb IAmb 04 55 58.4
comp=Z,10.0nm,1.1s
O16K **Kokwok River B** 72.23 24 P P **04 55 56.7 +0.7**
baz=323
I30M **Mount Dempster** 72.25 12 IAmb IAmb 04 55 57.4
comp=Z,9.4nm,0.9s
I30M **Mount Dempster** 72.25 12 P P **04 55 56.5 +0.3**
baz=339
N19K **Bonanza Creek** 72.28 21 P P **04 55 56.7 +0.3**
baz=326
K27K **Chicken** 72.37 14 IAmb IAmb 04 55 58.6
comp=Z,9.7nm,1.0s
O17K **Koliganek Bris** 72.38 23 P P **04 55 57.8 +0.9**
baz=324
WAT6 **Susitna Watana** 72.48 18 P P **04 55 58.2 +0.6**
baz=330
SPCR **Spur Chakacha** 72.57 20 P P **04 55 58.1 0.0**
baz=327
N20K **Mount Spurr** 72.57 20 P P **04 55 58.2 +0.1**
baz=327
M22K **Willow** 72.63 19 P P **04 55 58.7 +0.4**
baz=329
PAX **Paxson** 72.64 16 IAmb IAmb 04 55 59.5
comp=Z,9.1nm,1.0s
PAX **Paxson** 72.64 16 P P **04 55 58.5 -0.1**
baz=332,SNR=9.6
J29N **Klondike Camp** 72.67 13 P P **04 55 59.0 +0.3**
baz=338
P16K **Nushagak River** 72.71 24 P P **04 55 59.3 +0.5**
baz=324
O19K **Port Alsworth** 72.84 22 P P **04 56 00.5 +0.9**
baz=326
J30M **Hart River** 72.86 12 P P **04 56 00.4 +0.5**
baz=339
O18K **Koktuh Hills** 72.87 22 P P **04 56 00.8 +1.0**
baz=325
GHO **Glory Hole Cre** 72.91 18 IAmb IAmb 04 56 10.7
comp=Z,12nm,0.8s
PMR **Palmer** 73.01 19 IAmb IAmb 04 56 08.1
comp=Z,8.9nm,0.8s
PMR **Palmer** 73.01 19 P P **04 56 00.6 0.0**
baz=330
SML **Sawmill** 73.02 18 P P **04 56 00.7 -0.1**
baz=330
L26K **Log Cabin Wild** 73.03 15 IAmb IAmb 04 56 02.5
comp=Z,14nm,1.3s
L26K **Log Cabin Wild** 73.03 15 P P **04 56 01.2 +0.5**
baz=334,SNR=6.1
P17K **Kvichak River** 73.05 23 P P **04 56 01.8 +1.0**
baz=325
M23K **Glacier View** 73.17 18 P P **04 56 01.6 0.0**
baz=331,SNR=6.3
CAPN **Captain Cook N** 73.21 20 P P **04 56 02.1 +0.3**
baz=328
SCM **Sheep Creek Mo** 73.23 18 P P **04 56 02.1 +0.1**
baz=331
P18K **Big Mountain,** 73.24 23 P P **04 56 02.7 +0.6**
baz=325
M24K **Tolsona, Glenn** 73.25 17 P P **04 56 02.5 +0.4**
baz=332,SNR=7.1
RC01 **Rabbit Creek A** 73.30 19 IAmb IAmb 04 56 09.5
comp=Z,12nm,0.8s
RC01 **Rabbit Creek A** 73.30 19 P P **04 56 02.1 -0.2**
baz=329,SNR=6.7
L27K **Beaver Creek,** 73.30 15 P P **04 56 03.0 +0.6**
baz=335
BCAR **Beaver Creek A** 73.30 15 P P **04 56 02.9 +0.5**
KNK **Knik Glacier** 73.33 18 P P **04 56 03.1 +0.6**
baz=330,SNR=8.0
K29M **Barlow Dome** 73.35 13 P P **04 56 03.4 +0.6**
baz=338
Q16K **King Salmon** 73.41 24 P P **04 56 03.9 +1.0**
baz=324
P19K **Oil Pt** 73.60 21 P P **04 56 04.8 +0.6**
baz=327
M26K **Nabesna, AK** 73.67 16 P P **04 56 05.4 +0.8**
baz=334
O22K **Cooper Landing** 73.82 19 P P **04 56 06.3 +0.9**
baz=329
MAYO **Mayo, Yukon** 73.85 12 P P **04 56 06.5 +0.9**
baz=339
KLU **Klutina** 73.85 17 IAmb IAmb 04 56 07.8
comp=Z,10nm,1.0s
KLU **Klutina** 73.85 17 P P **04 56 06.4 +0.7**
baz=332,SNR=5.9
Q18K **Katmai Hardscr** 73.92 23 P P **04 56 07.0 +0.8**
baz=326
M27K **Edge Creek, AK** 73.93 15 IAmb IAmb 04 56 08.8
comp=Z,12nm,1.0s
M27K **Edge Creek, AK** 73.93 15 P P **04 56 07.0 +0.8**
baz=335
L29M **L29M** 73.93 13 IAmb IAmb 04 56 08.0
comp=Z,15nm,1.2s
L29M **L29M** 73.93 13 P P **04 56 06.8 +0.7**
baz=338
Q17K **Contact Creek** 73.98 23 P P **04 56 07.6 +1.1**
baz=325
N25K **Chitina, Valde** 74.04 17 P P **04 56 07.5 +0.6**
baz=333
BVCY **Beaver Creek** 74.08 15 P P **04 56 07.5 +0.6**
baz=336
Q19K **Cape Douglas,** 74.09 22 P P **04 56 07.6 +0.6**
baz=327
GLI **Glacier Island** 74.12 18 P P **04 56 07.2 +0.1**
baz=331
FALS **False Pass** 74.16 29 P P **04 56 08.1 +0.6**
baz=320
BRSE **Bradley Lake S** 74.20 20 P P **04 56 07.8 +0.1**
baz=329
SEW **Seward** 74.22 20 P P **04 56 08.5 +0.8**
baz=330
R17L **Mt. Peulik Vol** 74.35 24 P P **04 56 09.1 +0.5**
baz=325
S14K **Fog Glacier** 74.41 26 P P **04 56 09.3 +0.3**
baz=323
M29M **Somme Creek** 74.49 14 P P **04 56 10.2 +0.8**
baz=338
MCARA **McCarthy VSAT** 74.58 16 P P **04 56 10.7 +0.9**
baz=334
BMRM **Bremner River** 74.61 17 P P **04 56 11.3 +1.2**
baz=333
DBIC **Dimbokro** 74.65 266 P P **04 56 10.9 0.0**
comp=Z,1.8nm,0.7s,baz=63,slow=6.6,SNR=5.9
comp=Z,1.8nm,0.7s
DBIC **Dimbokro** 74.65 266 P P **04 56 09.9 -1.1**
DBIC **Dimbokro** 74.65 266 P P **04 56 09.9 -1.1**
DBIC pmax pmax
comp=Z,5.0nm,0.7s
M30M **Minto, Yukon** 74.66 13 P P **04 56 11.3 +1.0**
baz=339
EYAK **Cordova Ski Ar** 74.73 18 P P **04 56 11.0 +0.4**
baz=332
YUK3 **Moose Creek** 74.74 15 P P **04 56 11.3 +0.3**
baz=336,SNR=9.0
CHGN **Chignik** 74.78 26 P P **04 56 11.5 +0.5**
baz=324
P23K **Montague Islan** 74.82 19 P P **04 56 11.5 +0.3**
baz=331
SDPT **Sand Point** 74.84 27 P P **04 56 12.2 +0.9**
baz=322
CRQE **Cirque** 75.13 16 P P **04 56 13.7 +0.5**

baz=334
BARN **Barnard Glacie** 75.15 16 IAmb IAmb 04 56 15.9
comp=Z,16nm,1.3s
CTG **Chitna Glacier** 75.31 15 P **P** **04 56 14.7 +0.5**
baz=336
YUK8 **Steele Glacier** 75.32 15 P **P** **04 56 14.8 +0.3**
baz=337
KDAK **Kodiak Island** 75.36 22 P **P** **04 56 15.0 +0.7**
baz=326
M31M **Drury Creek, Y** 75.40 12 IAmb IAmb 04 56 16.3
comp=Z,9.7nm,1.0s
M31M **Drury Creek, Y** 75.40 12 P **P** **04 56 15.3 +0.7**
baz=341,SNR=8.9
YUK4 **Talbot Arm** 75.48 14 P **P** **04 56 15.5 +0.2**
baz=338
LOGN **Logan Glacier** 75.50 15 IAmb IAmb 04 56 20.2
comp=Z,16nm,1.2s
KAIM **Kayak Island** 75.58 17 P **P** **04 56 16.2 +0.6**
baz=333
OHAK **Old Harbor** 75.62 23 P **P** **04 56 16.5 +0.6**
baz=327
N30M **Aishikik Lake** 75.65 13 P **P** **04 56 16.4 +0.3**
baz=339
BGLC **Bering Glacier** 75.66 17 P **P** **04 56 16.8 +0.8**
baz=334
KUQ **Kuujjuaa** 75.68 339 IAmb IAmb 04 56 17.3
comp=Z,24nm,1.4s
O28M **Mount Upton** 75.71 15 P **P** **04 56 17.0 +0.3**
baz=336
WRGLY **Wrigley** 75.72 7 IAmb IAmb 04 56 28.5
comp=Z,14nm,0.9s
WRGLY **Wrigley** 75.72 7 P **P** **04 56 17.2 +0.9**
baz=349
N31M **Braeburn, Yuko** 75.85 13 IAmb IAmb 04 56 19.3
comp=Z,10nm,0.9s
N31M **Braeburn, Yuko** 75.85 13 P **P** **04 56 17.8 +0.6**
baz=340,SNR=6.4
MESA **MESA** 75.90 16 P **P** **04 56 17.9 +0.2**
baz=335
YUK6 **Outpost Mounta** 75.90 14 P **P** **04 56 18.1 +0.4**
baz=338
SII **Sitkinak Islan** 75.91 24 P **P** **04 56 18.1 +0.6**
baz=327
HYT **Haines Junctio** 76.17 14 IAmb IAmb 04 56 21.2
comp=Z,8.1nm,0.9s
HYT **Haines Junctio** 76.17 14 P **P** **04 56 19.6 +0.4**
baz=338,SNR=9.5
PINM **Pinnacle** 76.32 15 P **P** **04 56 20.3 +0.4**
baz=336
O29M **Mount Kennedy** 76.46 14 P **P** **04 56 21.0 +0.2**
baz=338
O30N **Mendenhall** 76.47 13 P **P** **04 56 21.1 +0.4**
baz=340,SNR=7.1
WHY **Whitehorse** 76.78 13 IAmb IAmb 04 56 23.3
comp=Z,9.4nm,0.9s
WHY **Whitehorse** 76.78 13 P **P** **04 56 22.4 -0.2**
baz=340
YKAW3 **Yellowknife Wh** 76.91 2 IAmb IAmb 04 56 34.2
comp=Z,15nm,1.0s
P30M **Million Dollar** 76.92 14 P **P** **04 56 23.7 +0.3**
baz=339
YKA **Yellowknife Ar** 76.98 2 P **P** **04 56 23.5 0.0**
comp=Z,5.2nm,0.9s,baz=350,slow=6.2,SNR=60
YKA LR LR 05 35 25.9
comp=Z,122nm,19.0s,baz=24,slow=40
comp=Z,5.2nm,0.9s
YKA **Yellowknife Ar** 76.98 2 P **P** **04 56 23.2 -0.3**
YKAW1 **Yellowknife Wh** 77.00 2 IAmb IAmb 04 56 34.8
comp=Z,12nm,0.8s
P33M **Teslin, Yukon** 77.53 12 IAmb IAmb 04 56 27.9
comp=Z,9.6nm,1.0s
P33M **Teslin, Yukon** 77.53 12 P **P** **04 56 27.0 +0.2**
baz=342,SNR=8.6
LBTB **Lobatse** 77.67 221 LR LR 05 30 49.2
comp=Z,90nm,21.0s,baz=222,slow=36
SKAG **Skagway** 77.83 13 P **P** **04 56 28.6 +0.2**
baz=340
P32M **Atlin** 77.98 12 P **P** **04 56 29.6 +0.3**
baz=341
SCHQ **Schefferville** 78.03 336 P **P** **04 56 28.9 -0.7**
comp=Z,5.5nm,1.0s,baz=33,slow=6.3,SNR=8.5
SCHQ LR LR 05 30 38.8
comp=Z,143nm,18.3s,baz=23,slow=36
comp=Z,5.5nm,1.0s
WTLY **Watson Lake, Y** 78.20 10 P **P** **04 56 30.8 +0.4**
baz=345
R33M **Jennings River** 78.59 11 P **P** **04 56 33.0 +0.3**
baz=344
Q32M **Nakina River** 78.81 12 P **P** **04 56 34.4 +0.4**
baz=343
S31K **Pelican** 79.08 14 P **P** **04 56 35.9 +0.7**
baz=340
R32K **Eaglecrest** 79.10 13 P **P** **04 56 36.0 +0.6**
baz=341
DLBC **Dease Lake** 79.65 11 LR LR 05 36 01.0
comp=Z,62nm,20.3s,baz=313,slow=39
DLBC **Dease Lake** 79.65 11 P **P** **04 56 39.7 +1.3**
baz=344
S32K **Killisnoo** 79.85 13 P **P** **04 56 40.9 +1.4**
baz=341
S34M **Telegraph Cree** 79.99 12 P **P** **04 56 41.4 +1.1**
baz=344,SNR=5.7
SIT **Sitka** 80.10 14 P **P** **04 56 41.9 +1.1**
baz=340
T35M **Bob Quinn** 81.02 11 P **P** **04 56 46.7 +0.9**
baz=344
WRAK **Wrangell Islan** 81.23 13 P **P** **04 56 48.0 +1.2**
baz=343
U33K **Whale Pass** 81.39 13 P **P** **04 56 48.8 +1.1**
baz=342
WB0 **Warramunga Arr** 84.44 122 IAmb IAmb 04 57 05.5
comp=Z,7.8nm,0.9s
WRA **Warramunga Arr** 84.53 122 P **P** **04 57 03.8 -0.7**
comp=Z,6.8nm,0.8s,baz=314,slow=5.4,SNR=53
comp=Z,6.8nm,0.8s
WRA **Warramunga Arr** 84.53 122 P **P** **04 57 03.6 -0.9**
WRA **Warramunga Arr** 84.53 122 P **P** **04 57 03.6 -0.9**
FFC **Flin Flon** 84.65 356 P **P** **04 57 05.0 +0.4**
FFC **Flin Flon** 84.65 356 P **P** **04 57 05.0 +0.4**
FFC pmax pmax
comp=Z,22nm,1.0s
WR8 **Warramunga Arr** 84.65 122 IAmb IAmb 04 57 11.8
comp=Z,10nm,0.9s
BBB **Bella Bella** 85.99 11 LR LR 05 42 16.7
comp=Z,55nm,18.0s,baz=26,slow=40
ASAR **Alice Springs** 86.97 125 P **P** **04 57 15.8 -0.8**
comp=Z,6.6nm,0.8s,baz=319,slow=5.3,SNR=74
comp=Z,6.6nm,0.8s
ASAR **Alice Springs** 86.97 125 **P** **04 57 15.3 -1.2**
ASAR **Alice Springs** 86.97 125 P **P** **04 57 15.3 -1.2**
LLLB **Lillooet** 88.33 8 IAmb IAmb 04 57 28.6
comp=Z,6.6nm,1.1s
ULM **Lac du Bonnet** 88.56 351 P **P** **04 57 23.4 -0.5**
comp=Z,6.8nm,0.9s,baz=14,slow=4.6,SNR=10
ULM LR LR 05 39 19.0
comp=Z,168nm,19.4s,baz=13,slow=37
comp=Z,6.8nm,0.9s
FORT **Forrest** 88.85 133 P **P** **04 57 25.3 0.0**
AGMN **Agassiz Nation** 90.49 351 IAmb IAmb 04 57 33.7
comp=Z,10nm,0.9s
SADO **Sadowa** 90.59 339 LR LR 05 38 14.2
comp=Z,131nm,19.9s,baz=60,slow=36
B08A **Colville Reser** 90.80 7 IAmb IAmb 04 57 35.8
comp=Z,5.5nm,1.0s
NEW **Newport** 91.07 5 LR LR 05 42 29.3
comp=Z,57nm,20.4s,baz=353,slow=38
GNW **Green Mountain** 91.23 9 IAmb IAmb 04 57 38.7
comp=Z,8.1nm,1.0s
C09A **Chrisman Ranch** 91.44 6 IAmb IAmb 04 57 38.9
comp=Z,8.2nm,1.1s
D08A **Wollman Farm,** 92.13 6 IAmb IAmb 04 57 49.5
comp=Z,6.8nm,1.2s
LON **Longmire** 92.15 8 IAmb IAmb 04 57 42.2
comp=Z,4.2nm,0.8s
MXC **Moxie City** 92.48 7 IAmb IAmb 04 57 43.8
comp=Z,4.4nm,0.8s
E08A **Dider Farm, El** 92.68 7 IAmb IAmb 04 57 44.8
comp=Z,5.2nm,0.9s
E09A **Wood Farm, Sta** 92.73 6 IAmb IAmb 04 57 45.0
comp=Z,6.9nm,1.0s
LAO **LASA Array** 92.86 358 IAmb IAmb 04 57 47.5
comp=Z,7.2nm,1.2s
PLID **Pearl Lake** 94.30 5 IAmb IAmb 04 57 52.4
comp=Z,4.1nm,0.8s
YNE **Yellowstone No** 94.59 0 IAmb IAmb 04 58 03.5
comp=Z,4.2nm,0.9s
ECSD **EROS Data Cent** 95.07 351 P **P** **04 57 53.3 -0.9**
ECSD IAmb IAmb 04 57 55.2

comp=Z,5.2nm,0.8s
PDAR **Pinedale Array** 96.83 0 P **P** **04 58 02.3 -0.2**
comp=Z,0.8nm,0.8s,baz=355,slow=4.7,SNR=6.9
PDAR LR LR 05 46 23.5
comp=Z,77nm,18.5s,baz=351,slow=38
comp=Z,0.8nm,0.8s
PDAR **Pinedale Array** 96.83 0 P **P** **04 58 01.2 -1.3**
STKA **Stephens Creek** 97.57 126 P **P** **04 58 04.3 -1.2**
comp=Z,2.0nm,0.8s,baz=334,slow=16,SNR=3.5
comp=Z,2.0nm,0.8s
QSPA **South Pole Qui** 130.58 180 PKP **PKPdf** **05 03 41.1 +0.1**
comp=Z,1.4nm,1.0s,baz=270,slow=2.0,SNR=3.5
QSPA **South Pole Qui** 130.58 180 **PKPdf** **05 03 40.2 -0.8**
CPUP **Villa Florida** 134.89 272 PKP **PKPdf** **05 03 50.9 +0.5**
comp=Z,0.7nm,0.6s,baz=54,slow=5.9,SNR=3.5
CFA **Coronel Fontan** 145.79 272 PKPbc **PKPdf** **05 04 09.2 -0.8**
comp=Z,3.0nm,0.9s,baz=80,slow=5.4,SNR=9.4

*JMA **26** 04:46:58.3±0.1, 43.0°N±0.5°×145.4°E±0.6°, h47km, MV2.9/34, OFF NEMURO PENINSULA*
*SKHL **26** 04:46:59.2±0.2, 43.00°N×145.40°E, h35km±5km, mb3.7/2*
ISC 26 04:46:58.3±1.9, 42.95°N±0.09°×145.42°E±0.06°, h43km±11km, n15, σ0.39/24, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKHN	**Kushirohamanak**	0.23	305	P	**Pn**	**04 47 06.4**	**+0.4**
JKHN				eS	**Sn**	**04 47 11.6**	**+0.1**
AKK	**Akkeshi**	0.42	279	eP	**Pn**	**04 47 08.2**	**0.0**
NMR	**Nemuro--Hokkai**	0.47	29	eP	**Pn**	**04 47 08.6**	**-0.2**
NMR				eS	**Sn**	**04 47 15.8**	**-0.4**
NEM2	**Nemuro 2**	0.48	30	P	**Pn**	**04 47 08.6**	**-0.2**
NEM2				eS	**Sn**	**04 47 15.9**	**-0.4**
JAK	**Akkeshi**	0.53	275	P	**Pn**	**04 47 09.5**	**0.0**
JAK				eS	**Sn**	**04 47 17.8**	**+0.3**
JNK	**Nakash**	0.81	321	eP	**Pn**	**04 47 12.9**	**-0.3**
JNK				eS	**Sn**	**04 47 23.3**	**-0.9**
JNSB	**Nemuroshibetsu**	0.87	340	eP	**Pn**	**04 47 14.1**	**0.0**
JNSB				eS	**Sn**	**04 47 25.5**	**-0.2**
JRA	**Rausu**	1.01	348	eP	**Pn**	**04 47 16.0**	**+0.1**
JRA				eS	**Sn**	**04 47 29.0**	**+0.1**
YUK	**Yuzh-Kuril'sk**	1.13	17	eP	**Pn**	**04 47 17.8**	**+0.2**
YUK				AMB	AMB	04 47 19.8	
	50nm,0.4s						
YUK				eS	**Sn**	**04 47 31.6**	**-0.3**
YUK				A	A	04 47 33.2	
	160nm,0.4s						
YUK				A	A	04 47 33.2	
	220nm,0.4s						
JOB	**Onbets**	1.16	268	P	**Pn**	**04 47 18.0**	**-0.1**
JOB				eS	**Sn**	**04 47 32.5**	**-0.1**
JAR	**Ashorobuto**	1.25	286	P	**Pn**	**04 47 19.4**	**+0.1**
JAR				eS	**Sn**	**04 47 35.0**	**+0.1**
SHO	**Shikotan**	1.38	48	eP	Pn	04 47 31.6	+11
SHO				AMB	AMB	04 47 33.6	
	10.0nm,0.2s						
SHO				eS	Sn	04 47 48.4	+10
SHO				A	A	04 47 49.4	
	40nm,0.3s						
SHO				A	A	04 47 49.4	
	70nm,0.3s						
JTKR	**Abashiri--Toko**	1.50	313	eP	**Pn**	**04 47 23.2**	**+0.6**
JCH	**Churui**	1.55	258	eP	**Pn**	**04 47 23.0**	**-0.4**
KUR	**Kuril'sk**	2.88	37	eS	**Sn**	**04 48 15.9**	**+0.9**
KUR				A	A	04 48 18.5	
	40nm,0.5s						
KUR				A	A	04 48 18.5	
	20nm,0.5s						

KRSC 26 04:55:35.4±2.2, 49.44°N×158.80°E, h40km±55km, MI4.3, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	2.13	307	eP	Pn	04 56 08.7	+0.3
SKR				eS	Sn	04 56 32.8	-0.7
PAU	**Pauzhetka**	2.39	329	eP	Pn	04 56 16.5	+4.5
PAU				eS	Sn	04 56 44.7	+4.6
KDTR	**Khodutka, Kamc**	2.42	349	eS	Sn	04 56 44.4	+3.7
ASAK	**Asacha**	3.00	349	eP	Pn	04 56 24.9	+4.5
ASAK				eS	Sn	04 56 59.6	+4.4
RUS	**Russkaya**	3.00	357	eP	Pn	04 56 23.5	+3.2
RUS				eS	Sn	04 56 58.4	+3.4
MTVR	**Mutnovka**	3.07	353	eP	Pn	04 56 25.2	+3.7
MTVR				eS	Sn	04 57 00.9	+3.9
GRL	**Gorelyy**	3.15	352	eP	Pn	04 56 26.3	+3.8
GRL				eS	Sn	04 57 03.5	+4.6
KRMR	**Karymshinskiy**	3.42	353	eP	Pn	04 56 30.6	+4.4
KRMR				eS	Sn	04 57 10.5	+5.2
PET	**Petropavlovsk**	3.59	359	eP	Pn	04 56 31.9	+3.5
PET				eS	Sn	04 57 13.5	+3.9
DALK	**Dalny**	3.60	360	eP	Pn	04 56 32.0	+3.5
DALK				eS	Sn	04 57 13.5	+3.8
APC	**Apacha**	3.64	344	eP	Pn	04 56 32.6	+3.5
SPN	**Mys Shipunski**	3.74	11	eS	Sn	04 57 18.1	+4.8
SMAR	**Somma**	3.83	0	eP	Pn	04 56 36.8	+4.9
AVH	**Avacha**	3.83	359	eP	Pn	04 56 36.7	+4.9
KOK	**Koryaka**	3.86	359	eP	Pn	04 56 37.1	+4.9
KRX	**Arik**	3.92	359	eP	Pn	04 56 37.2	+4.0
GNL	**Ganaly**	4.29	353	eP	Pn	04 56 43.0	+4.7
GNL				eS	Sn	04 57 34.0	+7.0
KBTR	**Krutoberegovo**	7.20	18	eP	Pn	04 57 22.3	+4.3

*VAO **26** 04:59:17.1±2.1, 19.90°S×70.71°W, h10km, mb4.1, Presumed earthquake*
*SJA **26** 04:59:41.5±0.7, 19.44°S×69.22°W, h117km±2km, ML3.5, MW3.6*
*NEIC **26** 04:59:42.4±1.4, 19.45°S±0.03°×69.20°W±0.08°, h115km±5km, mb4.2/14, ML3.6(GUC), Error ellipse: s-maj=10.4km s-min=4.8km az=89.0*
*GUC **26** 04:59:43.4±0.8, 19.43°S×69.17°W, h108km±4km, ML3.6*
*IDC **26** 04:59:46.8±2.0, 19.40°S×68.72°W, h140km±20km, mb3.4/6, mbtmp3.9/8, MS3.4/1, Error ellipse: s-maj=24.8km s-min=19.7km az=110.0*
ISC 26 04:59:41.9±0.6, 19.45S±0.03°×69.14W±0.05, h107km±6km, n90, σ1.46/128, mb4.0/5, 6C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GO01	**Chusmiza**	0.22	193	Pn	**Pn**	**04 59 58.9**	**+1.2**
GO01				Sn	**Sn**	**05 00 10.8**	**+1.4**
GO01	**Chusmiza**	0.22	193	iP	**Pn**	**04 59 58.9**	**+1.2**
GO01				eS	**Sn**	**05 00 10.7**	**+1.4**
GO01				IAML		05 00 12.9	
	comp=E,3μm,0.1s						
GO01	**Chusmiza**	0.22	193	eP	**Pn**	**04 59 58.9**	**+1.2**
GO01				eS	**Sn**	**05 00 12.3**	**+2.9**
GO01				IAML		05 00 13.7	
	comp=Z,1μm,0.5s						
PB11	**IPOC Station P**	0.58	237		**Pn**	**05 00 00.1**	**+1.0**
PB11				Sn	**Sn**	**05 00 13.2**	**+1.1**
PB11	**IPOC Station P**	0.58	237	iP	**Pn**	**05 00 00.1**	**+1.0**
PB11				eS	**Sn**	**05 00 13.2**	**+1.1**
PB11				IAML		05 00 13.8	
	comp=N,7μm,0.2s						
PB11	**IPOC Station P**	0.58	237	eP	Pn	04 59 44.9	-14
PB11				IAML		05 00 13.7	
	comp=Z,2μm,0.2s						
PB11				eS	**Sn**	**05 00 13.8**	**+1.7**
PB08	**IPOC Station P**	0.69	181		**Pn**	**05 00 01.5**	**+1.2**
PB08				Sn	**Sn**	**05 00 15.9**	**+1.8**
PB08	**IPOC Station P**	0.69	181	iP	**Pn**	**05 00 01.8**	**+1.4**
PB08				*i* S	**Sn**	**05 00 16.1**	**+2.0**
PB08				IAML		05 00 18.2	
	comp=E,2μm,0.2s						
PB08	**IPOC Station P**	0.69	181	eP	**Pn**	**05 00 01.5**	**+1.2**
PB08				eS	**Sn**	**05 00 16.6**	**+2.4**
PB08				IAML		05 00 17.7	
	comp=Z,1μm,0.2s						
PSGCX	**Pisagua**	0.94	261		**Pn**	**05 00 02.7**	**+0.4**
PSGCX				Sn	**Sn**	**05 00 18.0**	**+0.2**
PSGCX	**Pisagua**	0.94	261	iP	**Pn**	**05 00 02.7**	**+0.4**
PSGCX				*i* S	**Sn**	**05 00 18.1**	**+0.4**
PSGCX	**Pisagua**	0.94	261	eP	**Pn**	**05 00 02.0**	**-0.3**
PSGCX				eS	**Sn**	**05 00 18.6**	**+0.8**
PSGCX				IAML		05 00 19.7	
	comp=Z,446nm,0.3s						
PB16	**IPOC Station P**	1.16	342		**Pn**	**05 00 06.7**	**+1.4**
PB16				Sn	**Sn**	**05 00 23.9**	**+1.2**

PB16 **IPOC Station P** 1.16 342 iP **Pn** **05 00 06.9 +1.7**
PB16 *i* S **Sn** **05 00 24.9 +2.1**
PB16 IAML 05 00 26.8
comp=N,1μm,0.4s
PB16 **IPOC Station P** 1.16 342 eP **Pn** **05 00 06.3 +1.1**
PB16 eS **Sn** **05 00 26.1 +3.3**
PB16 IAML 05 00 27.8
comp=Z,716nm,0.6s
TA02 **Huaiquique** 1.24 229 eP **Pn** **05 00 06.0 +0.5**
TA02 eS **Sn** **05 00 23.9 +0.6**
TA02 IAML 05 00 27.4
comp=N,2μm,0.2s
TA02 **Huaiquique** 1.24 229 eP **Pn** **05 00 05.8 +0.3**
TA02 eS **Sn** **05 00 25.0 +1.6**
TA02 IAML 05 00 27.1
comp=Z,566nm,0.1s
PB12 **IPOC Station P** 1.40 306 **Pn** **05 00 07.8 +0.4**
PB12 Sn **Sn** **05 00 26.1 -0.7**
PB12 **IPOC Station P** 1.40 306 iP **Pn** **05 00 07.8 +0.4**
PB12 eS **Sn** **05 00 26.4 -0.3**
PB12 IAML 05 00 27.6
comp=N,1μm,0.2s
PB12 **IPOC Station P** 1.40 306 eP **Pn** **05 00 07.8 +0.4**
PB12 eS **Sn** **05 00 27.0 +0.2**
PB12 IAML 05 00 27.2
comp=Z,343nm,0.3s
TA01 **Diego Aracena** 1.48 221 **Pn** **05 00 08.8 +0.5**
TA01 Sn **Sn** **05 00 28.0 -0.4**
TA01 **Diego Aracena** 1.48 221 iP **Pn** **05 00 08.8 +0.5**
TA01 *i* S **Sn** **05 00 28.2 -0.2**
TA01 IAML 05 00 31.1
comp=N,514nm,0.2s
TA01 **Diego Aracena** 1.48 221 eP **Pn** **05 00 08.9 +0.5**
TA01 eS **Sn** **05 00 29.3 +1.0**
TA01 IAML 05 00 32.1
comp=Z,353nm,0.4s
AP01 **Chacalluta** 1.56 313 Pn **Pn** **05 00 10.0 +0.7**
AP01 Sn **Sn** **05 00 30.4 +0.3**
AP01 **Chacalluta** 1.56 313 eP **Pn** **05 00 10.0 +0.7**
AP01 *i* S **Sn** **05 00 30.3 +0.1**
AP01 **Chacalluta** 1.56 313 eP **Pn** **05 00 09.8 +0.5**
AP01 eS Sn 05 00 10.5 -20
AP01 IAML 05 00 41.0
comp=Z,1μm,0.2s
PB01 **IPOC Station P** 1.62 192 **Pn** **05 00 11.2 +1.0**
PB01 Sn **Sn** **05 00 32.7 +1.1**
PB01 **IPOC Station P** 1.62 192 iP **Pn** **05 00 11.3 +1.2**
PB01 *i* S **Sn** **05 00 32.6 +1.1**
PB01 IAML 05 00 33.7
comp=E,2μm,0.3s
PB01 **IPOC Station P** 1.62 192 eP **Pn** **05 00 10.7 +0.6**
PB01 IAML 05 00 33.3
comp=Z,556nm,0.3s
PATCX **Punta Patache** 1.66 215 **Pn** **05 00 11.1 +0.4**
PATCX Sn **Sn** **05 00 32.5 0.0**
PATCX **Punta Patache** 1.66 215 eP **Pn** **05 00 11.2 +0.6**
PATCX eS **Sn** **05 00 32.5 0.0**
PATCX IAML 05 00 38.5
comp=E,659nm,0.6s
PATCX **Punta Patache** 1.66 215 eP Pn 05 00 05.8 -4.8
PATCX eP 05 00 11.3
PATCX eS **Sn** **05 00 33.3 +0.8**
PATCX IAML 05 00 37.0
comp=Z,534nm,0.7s
PB18 **Visviri** 1.88 350 **Pn** **05 00 16.1 +2.3**
PB18 Sn **Sn** **05 00 40.0 +2.1**
PB18 **Visviri** 1.88 350 eP **Pn** **05 00 16.8 +3.0**
PB02 **IPOC Station P** 1.99 201 **Pn** **05 00 15.6 +0.8**
PB02 Sn **Sn** **05 00 39.7 -0.2**
PB02 **IPOC Station P** 1.99 201 eP **Pn** **05 00 15.5 +0.8**
PB02 eS **Sn** **05 00 39.0 -0.8**
PB02 IAML 05 00 48.3
comp=E,788nm,0.2s
PB02 **IPOC Station P** 1.99 201 eP **Pn** **05 00 15.5 +0.8**
PB02 eS **Sn** **05 00 42.1 +2.2**
PB02 IAML 05 00 48.8
comp=Z,572nm,0.4s
PB09 **IPOC Station P** 2.34 182 **Pn** **05 00 21.1 +1.8**
PB09 Sn **Sn** **05 00 46.5 -1.4**
PB09 **IPOC Station P** 2.34 182 eP **Pn** **05 00 20.6 +1.2**
PB09 eS **Sn** **05 00 50.8 +2.9**
PB09 IAML 05 00 58.3
comp=Z,209nm,0.4s
PB07 **IPOC Station P** 2.37 197 **Pn** **05 00 21.1 +1.4**
PB07 Sn **Sn** **05 00 48.2 -0.5**
PB07 **IPOC Station P** 2.37 197 eP **Pn** **05 00 20.8 +1.0**
PB07 eS **Sn** **05 00 50.9 +2.2**
PB07 IAML 05 00 59.3
comp=Z,222nm,0.3s
PB03 **IPOC Station P** 2.65 192 **Pn** **05 00 24.3 +1.0**
PB03 **IPOC Station P** 2.65 192 eP **Pn** **05 00 24.4 +1.0**
PB03 eS Sn 05 00 45.8 -9.4
PB03 IAML 05 01 07.4
comp=Z,156nm,0.3s
PB06 **IPOC Station P** 3.27 187 **Pn** **05 00 32.6 +1.0**
PB06 **IPOC Station P** 3.27 187 eP **Pn** **05 00 32.6 +1.0**
PB06 eS **Sn** **05 01 10.8 +1.0**
PB06 IAML 05 01 20.4
comp=Z,98nm,0.5s
LPAZ **La Paz** 3.29 17 P **Pn** **05 00 35.5 +3.2**
comp=Z,6.0nm,0.4s,baz=198,slow=4.8,SNR=42
LPAZ S **Sn** **05 01 15.7 +4.7**
comp=Z,3.4nm,0.8s,baz=182,slow=17,SNR=0.9
LPAZ **La Paz** 3.29 17 **Pn** **05 00 34.2 +2.0**
LPAZ **La Paz** 3.29 17 eP **Pn** **05 00 35.9 +3.6**
PB05 **IPOC Station P** 3.53 196 **Pn** **05 00 36.0 +1.0**
PB05 **IPOC Station P** 3.53 196 eP **Pn** **05 00 35.8 +0.8**
PB05 IAML 05 01 31.1
comp=Z,53nm,0.6s
AF01 **San Pedro de A** 3.60 166 **Pn** **05 00 37.8 +1.6**
PB10 **IPOC Station P** 4.25 198 Pn **Pn** **05 00 44.7 +0.1**
PB14 **IPOC Station P** 5.28 193 Pn **Pn** **05 00 58.0 -0.8**
AC01 **Pan de Azucar** 6.80 191 Pn **Pn** **05 01 17.0 -2.1**
AC02 **Maricunga** 7.35 180 Pn **Pn** **05 01 27.2 +0.1**
BBSD **Serra de San D** 8.41 76 eP **Pn** **05 01 39.6 -1.4**
SIV **San Ignacio** 8.42 67 P **Pn** **05 01 39.3 -1.9**
comp=Z,9.7nm,0.5s,baz=236,slow=15,SNR=70
SIV S **Sn** **05 03 09.6 -5.0**
comp=Z,0.7nm,0.6s,baz=300,slow=20,SNR=1.0
PTLB **Pontes e Lacer** 10.34 69 **Pn** **05 02 06.1 -1.1**
VILB **Vilhena** 10.74 54 **Pn** **05 02 12.2 -0.5**
VILB **Vilhena** 10.74 54 eP **Pn** **05 02 12.0 -0.7**
MURT **Porto Murtinho** 11.02 103 eP **Pn** **05 02 14.2 -2.3**
BDQN **Bodoquena, MS** 11.69 97 eP **Pn** **05 02 23.6 -1.8**
MT02 **Curacav** 13.87 187 Pn **Pn** **05 02 53.5 -0.3**
MT01 **Popeta** 14.48 187 Pn **Pn** **05 03 01.4 -0.3**
BO02 **Sierra Bellavi** 15.35 185 **Pn** **05 03 13.2 +0.4**
BO02 IAmb IAmb 05 03 48.9
comp=Z,11nm,1.4s
TRCB **Terra Rica** 15.76 105 P **P** **05 03 19.6 0.0**
BI02 **San Fabin de** 17.25 186 P **P** **05 03 35.9 -0.3**
ITAB **Concordia** 17.42 120 P **Pn** **05 03 39.1 +0.8**
ITAB IAmb IAmb 05 03 53.4
comp=Z,16nm,1.3s
SNDB **Serra Nova Dou** 18.71 69 eP **P** **05 03 51.7 -0.5**
BB19B **Bebedouro** 19.41 98 eP **P** **05 03 58.9 -0.9**
TRQA **Tornquist** 19.56 163 P **P** **05 04 01.6 +0.3**
TRQA IAmb IAmb 05 04 43.8
comp=Z,15nm,1.5s
ITTB **Itaituba** 19.89 43 eP **P** **05 04 03.8 -1.2**
GO06 **Curarrehue** 20.17 185 P **P** **05 04 09.2 +1.2**
BDFB **Brasilia** 20.49 83 P **P** **05 04 11.6 0.0**
comp=Z,2.8nm,0.6s,baz=256,slow=4.2,SNR=5.8
comp=Z,2.8nm,0.6s
BDFB **Brasilia** 20.49 83 P **P** **05 04 11.8 +0.1**
VAO **Valinhos** 20.96 104 P **P** **05 04 15.4 -1.3**
VAO IAmb IAmb 05 04 43.3
comp=Z,26nm,1.5s
PLCA **Paso Flores** 21.25 183 P **P** **05 04 23.0 +3.5**
comp=Z,5.4nm,0.9s,baz=3.1,slow=4.0,SNR=8.9
comp=Z,5.4nm,0.9s
PLCA **Paso Flores** 21.25 183 P **P** **05 04 19.5 0.0**
PLCA IAmb IAmb 05 04 34.4
comp=Z,9.8nm,0.9s
LL01 **San Ignacio de** 23.03 186 P **P** **05 04 37.3 -0.4**
LL01 IAmb IAmb 05 04 41.1
comp=Z,8.4nm,1.1s
BOAV **Boa Vista** 23.30 22 P **P** **05 04 39.7 -0.8**
JANB **Januaria** 24.10 83 eP **P** **05 04 46.9 -1.0**
SDBA **SAO DESIDERIO** 24.32 77 eP **P** **05 04 49.2 -0.6**
SDV **Santo Domingo** 28.20 357 LR LR 05 18 06.9
comp=Z,86nm,21.0s,baz=98,slow=39
PMSA **Palmer Station** 45.42 177 P **P** **05 07 50.5 +0.9**

DBIC	**Dimbokro**	**68.37**	**74**	P	**P**	**05 10 31.8**	**-0.7**
	comp=Z,2.5nm,0.8s,baz=252,slow=6.4,SNR=4.3						
	comp=Z,2.5nm,0.8s						
DBIC	**Dimbokro**	**68.37**	**74**	P	**P**	**05 10 31.1**	**-1.4**
DBIC				IAmb	IAmb	05 10 32.1	
	comp=Z,8.4nm,1.2s						
QSPA	**South Pole Qui**	**70.73**	**180**	P	**P**	**05 10 47.6**	**+1.3**
	comp=Z,1.0nm,1.1s,baz=80,slow=14,SNR=1.2						
	comp=Z,1.0nm,1.1s						
QSPA	**South Pole Qui**	**70.73**	**180**	P	**P**	**05 10 46.2**	**-0.1**
QSPA				IAmb	IAmb	05 11 01.9	
	comp=Z,7.0nm,1.5s						
TORD	**Torodi Ar. Bea**	**76.88**	**71**	P	**P**	**05 11 21.3**	**-1.5**
	comp=Z,0.7nm,0.7s,baz=246,slow=5.1,SNR=4.2						
	comp=Z,0.7nm,0.7s						
YKA	**Yellowknife Ar**	**89.19**	**341**	P	**P**	**05 12 26.1**	**+1.0**
	comp=Z,0.1nm,0.5s,baz=132,slow=4.4,SNR=2.1						
	comp=Z,0.1nm,0.5s						

*IDC **26** 05:03:51.4±1.6,21°.58S×66°.55W,h198km±19km,mb3.3/1, mbtmp3.9/4,MS3.8/2,Error ellipse: s-maj=28.8km s-min=15.7km az=101.0*
*SCB **26** 05:03:52.5±1.3,21°.52S×66°.85W,h218km±11km,ML3.7/3, Error ellipse: s-maj=4.6km s-min=3.3km az=0.0*

ISC 26 05:03:49.3±0.9,21°.59S±0°.05×66°.80W±0°.06,h250km,n33, σ2s08/36,Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOCB	**Mochara**	**1.13**	**73**	P	**Pn**	**05 04 26.4**	**+0.8**
YJA	**Yavi**	**1.33**	**116**	P	**Pn**	**05 04 28.3**	**+1.4**
AOVT	**TarijaAcel**	**1.95**	**89**	P	**Pn**	**05 04 33.0**	**+1.5**
PB09	**IPOC Station P**	**2.28**	**264**	P	**Pn**	**05 04 36.1**	**+1.5**
PB01	**IPOC Station P**	**2.56**	**282**	P	**Pn**	**05 04 38.8**	**+1.5**
PB01				S	**S**	**05 05 12.6**	**-2.6**
PB01				IAML		05 05 14.3	
	94nm,0.2s						
PB08	**IPOC Station P**	**2.63**	**303**	P	**Pn**	**05 04 39.5**	**+1.2**
PB03	**IPOC Station P**	**2.78**	**260**	P	**Pn**	**05 04 41.3**	**+1.7**
PB06	**IPOC Station P**	**2.80**	**246**	P	**Pn**	**05 04 41.8**	**+2.0**
PB07	**IPOC Station P**	**2.88**	**267**	P	**Pn**	**05 04 41.7**	**+1.1**
PB02	**IPOC Station P**	**2.90**	**275**	P	**Pn**	**05 04 42.3**	**+1.5**
PB02				S	**S**	**05 05 18.6**	**-2.9**
PB02				IAML		05 05 27.6	
	120nm,0.2s						
GO01	**Chusmiza**	**2.95**	**310**	P	**Pn**	**05 04 42.8**	**+1.1**
SOEO	**Opoqueri**	**3.18**	**341**	P	**Pn**	**05 04 45.7**	**+1.4**
PB11	**IPOC Station P**	**3.23**	**304**	P	**Pn**	**05 04 45.5**	**+1.0**
PB11				S	**S**	**05 05 24.9**	**-3.4**
PB11				IAML		05 05 27.4	
	262nm,0.2s						
PB05	**IPOC Station P**	**3.40**	**248**	P	**Pn**	**05 04 48.5**	**+2.3**
SOET	**ToroToro**	**3.58**	**15**	P	**Pn**	**05 04 50.2**	**+1.6**
PSGC	**Pisagua**	**3.69**	**302**	P	**Pn**	**05 04 50.4**	**+0.8**
AOEA	**Aiguile**	**3.70**	**24**	P	**Pn**	**05 04 51.0**	**+1.1**
PB10	**IPOC Station P**	**3.96**	**240**	P	**Pn**	**05 04 54.8**	**+2.2**
PB16	**IPOC Station P**	**4.12**	**321**	P	**Pn**	**05 04 56.7**	**+1.6**
PB14	**IPOC Station P**	**4.49**	**227**	P	**Pn**	**05 05 02.1**	**+2.9**
SOEJ	**Jacaque**	**4.78**	**344**	P	**Pn**	**05 05 04.8**	**+1.9**
BBOE	**La Paz, Chanca**	**4.88**	**347**	P	**Pn**	**05 05 07.0**	**+2.8**
BBOE	**La Paz, Gloria**	**5.21**	**341**	P	**Pn**	**05 05 10.8**	**+2.5**
LPAZ	**La Paz**	**5.42**	**346**	P	**Pn**	**05 05 13.2**	**+2.3**
	10nm,0.3s,baz=159,slow=19,SNR=77						
LPAZ				S	**S**	**05 06 15.9**	**-0.1**
	1.7nm,0.6s,baz=290,slow=13,SNR=0.9						
LPAZ	**La Paz**	**5.42**	**346**	P	**Pn**	**05 05 13.0**	**+2.1**
BBSD	**Serra de San D**	**7.30**	**54**	P	**Pn**	**05 05 35.9**	**+2.1**
SIV	**San Ignacio**	**7.77**	**45**	P	**Pn**	**05 05 40.5**	**+0.7**
	2.6nm,0.5s,baz=240,slow=10,SNR=15						
SIV				S	**S**	**05 07 04.6**	**-4.2**
	0.8nm,0.3s,baz=145,slow=20,SNR=1.6						
SIV	**San Ignacio**	**7.77**	**45**	P	**Pn**	**05 05 41.4**	**+1.6**
CFA	**Coronel Fontan**	**10.06**	**187**	P	**P**	**05 06 13.3**	**-0.9**
	1.1nm,0.3s,baz=6.3,slow=9.8,SNR=34						
CFA				S	**S**	**05 08 00.7**	**-1.0**
	0.6nm,0.5s,baz=354,slow=20,SNR=2.0						
JTS	**Las Juntas de**	**36.35**	**329**	LR	LR	05 27 17.5	
	comp=Z,64nm,19.3s,baz=34,slow=39						
TKL	**Tuckaleechee C**	**59.16**	**344**	LR	LR	05 43 58.6	
	comp=Z,196nm,18.4s,baz=27,slow=41						
TORD	**Torodi Ar. Bea**	**75.54**	**69**	P	P	05 15 13.3	+6.4
	0.5nm,0.5s,baz=249,slow=6.4,SNR=6.4						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**144.53**	**37**	PKP	**PKiKP**	**05 23 03.0**	**+3.4**
	0.6nm,0.7s,baz=313,slow=2.9,SNR=5.1						

IDC 26 05:14:47.0±6.0,22°.80S×148°.37E,h0km,mbtmp3.1/3, ML2.9/3,Error ellipse: s-maj=53.5km s-min=33.3km az=95.0,Queensland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**3.34**	**324**	Pn	Pn	05 15 40.2	-0.3
	2.3nm,0.3s,baz=145,slow=18,SNR=24						
CTA				Pg	Pg	05 15 49.4	-1.7
	3.0nm,0.3s,baz=145,slow=17,SNR=13						
CTA				Lg	Lg	05 16 33.1	
	3.9nm,0.3s,baz=33,slow=21,SNR=8.7						
	6.6nm,0.2s						
ASAR	**Alice Springs**	**13.33**	**263**	Pn	Pn	05 17 57.4	-0.2
	baz=83,slow=12,SNR=1.9						
ASAR				Lg	Lg	05 21 51.1	
	0.1nm,0.3s,baz=84,slow=28,SNR=4.2						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**13.38**	**280**	Pn	Pn	05 17 57.0	-1.3
	baz=102,slow=11,SNR=1.3						
	0.2nm,0.6s						
I22FR	**PORTLAGUERRE I**	**17.09**	**91**	I	I	06 54 40.0	
	baz=262,slow=316,SNR=1.3						

*TRN **26** 05:16:38.3,10°.87N×61°.99W,h97km,MD0.0,North of the Paria peninsula.*
*FUNV **26** 05:16:39.6,10°.85N×62°.21W,h28km,MW3.7,Presumed earthquake*

ISC 26 05:16:37.8±4.2,10°.9N±0°.1×62°.3W±0°.3,h28km±19km,n15, σ0s95/27,1C,Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSMG	**Mucurapo Girls**	**0.82**	**106**	*e*P	**Pn**	**05 16 54.3**	**+0.9**
PSMG				*e*S	**Sn**	**05 17 04.8**	**+0.2**
PSQC	**Port of Spain**	**0.83**	**106**	*e*P	**Pn**	**05 16 54.5**	**+0.9**
PSQC				*e*S	**Sn**	**05 17 04.8**	**-0.2**
PSWS	**West Secondary**	**0.83**	**106**	*e*P	**Pn**	**05 16 54.0**	**+0.4**
PSWS				*e*S	**Sn**	**05 17 04.5**	**-0.4**
TRN	**Trinidad (W)**	**0.94**	**105**	*e*P	**Pb**	**05 16 55.5**	**0.0**
TRN				*e*S	**Sn**	**05 17 06.2**	**-1.6**
TRN	**Trinidad (W)**	**0.94**	**105**	*i*P	**Pb**	**05 16 55.3**	**-0.2**
TRN				*e*S	**Sn**	**05 17 07.1**	**-0.7**
GRFF	**Grenada Fort F**	**1.28**	**27**	*e*P	**Pn**	**05 17 00.4**	**+0.4**
GRFF				*e*S	**Sn**	**05 17 16.8**	**+0.6**
GRGR	**Grenville**	**1.40**	**28**	*e*P	**Pn**	**05 17 02.1**	**+0.6**
GRGR				*e*S	**Sn**	**05 17 19.9**	**+1.0**
GRGR	**Grenville**	**1.40**	**28**	*e*P	**Pn**	**05 17 02.0**	**+0.6**
GRGR				*e*S	**Sn**	**05 17 19.8**	**+0.8**
GRW	**Mount Saint Ca**	**1.42**	**28**	*e*P	**Pn**	**05 17 02.1**	**+0.3**
GRW				*e*S	**Sn**	**05 17 20.7**	**+1.1**
GRIC	**Isle de Caille**	**1.56**	**28**	*e*P	**Pn**	**05 17 03.8**	**+0.1**
GRSS	**Sisters**	**1.56**	**27**	*e*P	**Pn**	**05 17 04.5**	**+0.8**
GRSS				*e*S	**Sn**	**05 17 24.0**	**+0.9**
GCMP	**Grenada, Carri**	**1.81**	**29**	*e*S	**Sn**	**05 17 29.1**	**-0.1**
GCMP	**Grenada, Carri**	**1.81**	**29**	*e*P	**Pn**	**05 17 07.2**	**0.0**
GCMP				*e*S	**Sn**	**05 17 28.7**	**-0.5**
SVB	**Belmont**	**2.59**	**24**	*e*S	**Sn**	**05 17 48.0**	**-0.4**
SVB	**Belmont**	**2.59**	**24**	*e*P	**Pn**	**05 17 16.7**	**-1.2**
SVB				*e*S	**Sn**	**05 17 45.5**	**-2.8**

KRSC 26 05:19:41.0±2.2,49°.21N×158°.38E,h40km±44km,MI3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.08**	**316**	*e*S	Sn	05 20 37.1	-0.8
PAU	**Pauzhetka**	**2.48**	**337**	*e*S	Sn	05 20 50.8	+3.1
KDTR	**Khodutka, Kamc**	**2.61**	**356**	*e*S	Sn	05 20 55.8	+4.8
ASAK	**Asacha**	**3.19**	**355**	*e*P	Pn	05 20 31.9	+3.2
RUS	**Russkaya**	**3.23**	**1**	*e*P	Pn	05 20 32.6	+3.5
RUS				*e*S	Sn	05 21 11.0	+4.8
MIPR	**Malaya Ipel'ka**	**3.24**	**342**	*e*P	Pn	05 20 33.6	+4.3
MTVR	**Mutnovka**	**3.28**	**358**	*e*P	Pn	05 20 33.6	+3.6
MTVR				*e*S	Sn	05 21 12.7	+4.9
GRL	**Gorelyy**	**3.35**	**357**	*e*P	Pn	05 20 34.8	+3.9
GRL				*e*S	Sn	05 21 15.0	+5.5
KRMR	**Karymshinskiy**	**3.63**	**358**	*e*P	Pn	05 20 38.5	+3.9
PET	**Petropavlovsk**	**3.82**	**2**	*e*P	Pn	05 20 40.8	+3.6
PET				*e*S	Sn	05 21 26.1	+5.2
DALK	**Dalny**	**3.83**	**3**	*e*P	Pn	05 20 41.3	+3.9
SMAR	**Somma**	**4.07**	**4**	*e*P	Pn	05 20 45.2	+4.4
KOK	**Koryaka**	**4.09**	**2**	*e*P	Pn	05 20 46.1	+5.1
KRER	**Koryakskii**	**4.11**	**3**	*e*P	Pn	05 20 46.7	+5.4
KRX	**Arik**	**4.16**	**2**	*e*P	Pn	05 20 47.0	+5.0
GNL	**Ganaly**	**4.50**	**357**	*e*P	Pn	05 20 51.1	+4.5
KBTR	**Krutoberegovo**	**7.51**	**19**	*e*P	Pn	05 21 32.3	+4.5

*IDC **26** 05:22:04.8±0.5,48°.92N×157°.82E,h0km,mb4.3/25, mbtmp4.3/30,ML4.2/5,MS3.3/9,Error ellipse: s-maj=13.5km s-min=12.4km az=151.0*
*MOS **26** 05:22:08.3±0.9,48°.78N×157°.87E,h39km,mb4.8/34,Error ellipse: s-maj=8.1km s-min=3.7km az=90.5*
*NEIC **26** 05:22:10.6±0.8,48°.91N±0°.08×157°.8E±0°.1,h34km±2km, mb4.5/161,Error ellipse: s-maj=13.2km s-min=10.3km az=131.0*
*KRSC **26** 05:22:10.5±1.4,49°.10N×158°.24E,h40km±43km,Ml5.1*
*SKHL **26** 05:22:11.5±0.1,48°.90N×158°.00E,h62km±8km,mb5.5/3*

ISC 26 05:22:11.9±0.6,48°.90N±0°.05×157°.88E±0°.04,h49km±4km, n566,σ1s03/548,mb4.5/132,MS3.3/7,11C-13D,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.12**	**328**	*e*PN	**Pn**	**05 22 44.2**	**-0.5**
SKR				*e*S	**Sn**	**05 23 08.6**	**-1.2**
SKR				pmax	pmax		
	comp=Z,7μm,0.4s						
SKR				smax	smax		
	comp=E,3μm,0.4s						
SKR				smax	smax		
	comp=N,7μm,0.5s						
SKR	**Severo-Kuril's**	**2.12**	**328**	*e*P	**Pn**	**05 22 44.1**	**-0.6**
SKR				*e*S	**Sn**	**05 23 08.7**	**-1.1**
SKR	**Severo-Kuril's**	**2.12**	**328**	*e*P	**Pn**	**05 22 44.1**	**-0.6**
SKR				AMB	AMB	05 22 44.6	
	comp=N,7μm,0.5s						
SKR				*e*S	**Sn**	**05 23 08.6**	**-1.2**
SKR				A	A	05 23 10.0	
	comp=N,5μm,0.4s						
SKR				A	A	05 23 10.0	
	comp=N,3μm,0.4s						
PAU	**Pauzhetka**	**2.66**	**345**	PN	**Pn**	**05 22 51.9**	**-0.2**
PAU				S	**Sn**	**05 23 23.0**	**0.0**
PAU	**Pauzhetka**	**2.66**	**345**	*e*P	**Pn**	**05 22 51.9**	**-0.2**
PAU				*e*S	**Sn**	**05 23 23.1**	**0.0**
PAU	**Pauzhetka**	**2.66**	**345**	*e*P	**Pn**	**05 22 51.9**	**-0.2**
PAU				AMB	AMB	05 22 54.3	
	comp=N,750nm,0.6s						
PAU				*e*S	**Sn**	**05 23 22.1**	**-1.0**
PAU				A	A	05 23 23.9	
	comp=N,3μm,0.5s						
PAU				A	A	05 23 23.9	
	comp=N,3μm,0.5s						
KDTR	**Khodutka, Kamc**	**2.91**	**2**	PN	**Pn**	**05 22 54.8**	**-0.8**
KDTR	**Khodutka, Kamc**	**2.91**	**2**	*e*P	**Pn**	**05 22 54.9**	**-0.8**
KDTR				*e*S	**Sn**	**05 23 27.4**	**-2.0**
KDTR	**Khodutka, Kamc**	**2.91**	**2**	*e*P	**Pn**	**05 22 54.8**	**-0.8**
MIPR	**Malaya Ipel'ka**	**3.45**	**349**	PN	**Pn**	**05 23 03.1**	**0.0**
MIPR	**Malaya Ipel'ka**	**3.45**	**349**	*e*P	**Pn**	**05 23 03.1**	**0.0**
MIPR				*e*S	**Sn**	**05 23 41.5**	**-1.1**
ASAK	**Asacha**	**3.48**	**0**	PN	**Pn**	**05 23 03.4**	**-0.2**
ASAK	**Asacha**	**3.48**	**0**	*e*P	**Pn**	**05 23 03.4**	**-0.2**
ASAK				*e*S	**Sn**	**05 23 42.2**	**-1.4**
RUS	**Russkaya**	**3.56**	**6**	PN	**Pn**	**05 23 03.7**	**-0.8**
RUS	**Russkaya**	**3.56**	**6**	*e*P	**Pn**	**05 23 03.7**	**-0.8**
RUS				*e*S	**Sn**	**05 23 42.8**	**-2.5**
RUS	**Russkaya**	**3.56**	**6**	*e*P	**Pn**	**05 23 03.7**	**-0.8**
MTVR	**Mutnovka**	**3.59**	**3**	PN	**Pn**	**05 23 04.8**	**-0.3**
MTVR	**Mutnovka**	**3.59**	**3**	*e*P	**Pn**	**05 23 04.9**	**-0.3**
MTVR				*e*S	**Sn**	**05 23 44.2**	**-2.0**
GRL	**Gorelyy**	**3.66**	**2**	PN	**Pn**	**05 23 06.1**	**+0.2**
GRL	**Gorelyy**	**3.66**	**2**	*e*P	**Pn**	**05 23 06.2**	**+0.2**
GRL				*e*S	**Sn**	**05 23 46.6**	**-1.3**
KRMR	**Karymshinskiy**	**3.94**	**2**	PN	**Pn**	**05 23 09.7**	**+0.1**
KRMR	**Karymshinskiy**	**3.94**	**2**	*e*P	**Pn**	**05 23 09.8**	**+0.1**
KRMR				*e*S	**Sn**	**05 23 53.6**	**-0.9**
KRMR	**Karymshinskiy**	**3.94**	**2**	*e*P	**Pn**	**05 23 09.7**	**+0.1**
APC	**Apacha**	**4.05**	**354**	PN	**Pn**	**05 23 11.4**	**+0.2**
APC	**Apacha**	**4.05**	**354**	*e*P	**Pn**	**05 23 11.4**	**+0.2**
PET	**Petropavlovsk**	**4.16**	**6**		**Pn**	**05 23 11.7**	**-1.0**
PET				Sn	**Sn**	**05 23 58.2**	**-1.7**
PET	**Petropavlovsk**	**4.16**	**6**	*e*PN	**Pn**	**05 23 12.3**	**-0.4**
PET				pmax	pmax		
	comp=Z,97nm,0.5s						
PET				MLR	MLR		
	comp=Z,300nm,19.0s						
PET	**Petropavlovsk**	**4.16**	**6**	*e*P	**Pn**	**05 23 12.8**	**+0.2**
PET				*e*S	**Sn**	**05 23 57.6**	**-2.3**
PET	**Petropavlovsk**	**4.16**	**6**	*e*P	**Pn**	**05 23 12.6**	**-0.1**
PET				AMB	AMB	05 23 13.9	
	comp=Z,70nm,0.3s						
PET				*e*S	**Sn**	**05 23 57.4**	**-2.5**
PET				A	A	05 24 00.2	
	comp=Z,420nm,0.4s						
PET				A	A	05 24 00.2	
	comp=Z,440nm,0.4s						
DALK	**Dalny**	**4.17**	**7**	PN	**Pn**	**05 23 12.4**	**-0.5**
DALK	**Dalny**	**4.17**	**7**	*e*P	**Pn**	**05 23 12.5**	**-0.5**
DALK				*e*S	**Sn**	**05 23 57.7**	**-2.6**
DALK	**Dalny**	**4.17**	**7**	*e*P	**Pn**	**05 23 12.4**	**-0.5**
INSR	**Institute**	**4.19**	**6**	PN	**Pn**	**05 23 13.7**	**+0.5**
INSR	**Institute**	**4.19**	**6**	*e*P	**Pn**	**05 23 13.8**	**+0.5**
INSR				*e*S	**Sn**	**05 23 59.0**	**-1.8**
UGLR	**Uglovaya**	**4.35**	**8**	PN	**Pn**	**05 23 16.3**	**+0.8**
UGLR	**Uglovaya**	**4.35**	**8**	*e*P	**Pn**	**05 23 16.4**	**+0.8**
UGLR				*e*S	**Sn**	**05 24 04.6**	**-0.4**
NLC	**Nalytchevo**	**4.37**	**12**	*e*S	**Sn**	**05 24 02.3**	**-3.0**
AVH	**Avacha**	**4.40**	**7**	PN	**Pn**	**05 23 17.2**	**+1.1**
AVH	**Avacha**	**4.40**	**7**	*e*P	**Pn**	**05 23 17.3**	**+1.1**
AVH	**Avacha**	**4.40**	**7**	*e*P	**Pn**	**05 23 17.2**	**+1.1**
SMAR	**Somma**	**4.41**	**7**	PN	**Pn**	**05 23 16.8**	**+0.5**
SMAR	**Somma**	**4.41**	**7**	*e*P	**Pn**	**05 23 16.8**	**+0.5**
KOK	**Koryaka**	**4.42**	**6**	PN	**Pn**	**05 23 17.0**	**+0.6**
KOK	**Koryaka**	**4.42**	**6**	*e*P	**Pn**	**05 23 17.1**	**+0.6**
KOK	**Koryaka**	**4.42**	**6**	*e*P	**Pn**	**05 23 17.0**	**+0.6**
KRER	**Koryakskii**	**4.44**	**7**	PN	**Pn**	**05 23 17.3**	**+0.5**
KRER	**Koryakskii**	**4.44**	**7**	*e*P	**Pn**	**05 23 17.3**	**+0.5**
KRX	**Arik**	**4.49**	**6**	PN	**Pn**	**05 23 17.8**	**+0.4**
KRX	**Arik**	**4.49**	**6**	*e*P	**Pn**	**05 23 17.9**	**+0.4**
GNL	**Ganaly**	**4.80**	**0**	PN	**Pn**	**05 23 22.0**	**+0.4**
GNL	**Ganaly**	**4.80**	**0**	*e*P	**Pn**	**05 23 22.1**	**+0.4**
KUR	**Kuril'sk**	**7.76**	**246**	PN	**Pn**	**05 23 58.1**	**-4.0**
KUR				pmax	pmax		
	comp=Z,153nm,0.7s						
KUR	**Kuril'sk**	**7.76**	**246**	*e*P	**Pn**	**05 24 04.1**	**+2.0**
KUR				*e*S	**Sn**	**05 25 27.4**	**-1.1**
KUR				A	A	05 25 27.8	
	comp=Z,110nm,0.6s						
KUR				A	A	05 25 27.8	
	comp=Z,60nm,0.6s						
KBTR	**Krutoberegovo**	**7.91**	**20**	PN	**Pn**	**05 24 03.4**	**-0.7**
KBTR	**Krutoberegovo**	**7.91**	**20**	*e*P	**Pn**	**05 24 03.4**	**-0.7**
KBG	**Krutoberegovo**	**7.93**	**20**	*e*P	**Pn**	**05 24 04.7**	**+0.4**
KBG				*e*S	**Sn**	**05 25 29.6**	**-2.9**
SMKR	**Semkarok**	**7.99**	**14**	PN	**Pn**	**05 24 05.7**	**+0.4**
SMKR	**Semkarok**	**7.99**	**14**	*e*P	**Pn**	**05 24 05.7**	**+0.4**
BKI	**Bering**	**8.04**	**35**	PN	**Pn**	**05 24 04.9**	**-0.9**
BKI	**Bering**	**8.04**	**35**	*e*P	**Pn**	**05 24 05.0**	**-0.9**
YUK	**Yuzh-Kuril'sk**	**9.61**	**244**	*e*P	**Pn**	**05 24 28.1**	**+0.7**
TYV	**Tymovskoe**	**10.02**	**287**	*e*PN	**Pn**	**05 24 33.7**	**+0.7**
TYV				pmax	pmax		
	comp=Z,15nm,1.1s						
TYV				pmax	pmax		
	comp=Z,500nm,5.3s						
TYV	**Tymovskoe**	**10.02**	**287**	*e*P	**Pn**	**05 24 33.8**	**+0.7**
YSS	**Yuzhno-Sakhali**	**10.34**	**265**	*e*PN	**Pn**	**05 24 39.0**	**+1.6**
YSS				MLR	MLR		
	comp=Z,400nm,13.0s						
YSS	**Yuzhno-Sakhali**	**10.34**	**265**	*e*P	**Pn**	**05 24 39.0**	**+1.6**
YSS				*e*S	**Sn**	**05 26 29.1**	**-2.6**
OKH	**Okha**	**10.46**	**302**	*de*PN	**Pn**	**05 24 38.5**	**-0.5**
OKH				MLR	MLR		
	comp=N,200nm,15.0s						
OKH				MLR	MLR		
	comp=Z,100nm,13.0s						
OKH				MLR	MLR		
	comp=E,300nm,13.0s						
OKH	**Okha**	**10.46**	**302**	*e*P	**Pn**	**05 24 38.5**	**-0.5**
SHEM	**Shemya Is, Ala**	**10.95**	**63**	Pn	**Pn**	**05 24 44.6**	**-1.1**
	comp=E,2.1nm,0.3s,baz=285,slow=3.6,SNR=4.1						
SHEM				Sn	**Sn**	**05 26 40.4**	**-6.2**
	comp=E,12nm,0.3s,baz=243,slow=14,SNR=10.0						
SHEM				LR	LR	05 28 24.7	
	comp=E,113nm,20.5s,baz=100,slow=35						
	comp=E,77nm,1.0s						
SHEM	**Shemya Is, Ala**	**10.95**	**63**	Pn	**Pn**	**05 24 45.3**	**-0.4**
SMY	**Shemya**	**10.95**	**63**	Pn	**Pn**	**05 24 45.4**	**-0.3**
SMY	**Shemya**	**10.95**	**63**	PN	**Pn**	**05 24 45.4**	**-0.3**
MA2	**Magadan**	**11.46**	**342**	Pn	**Pn**	**05 24 51.9**	**-0.8**
	comp=E,1.0nm,0.3s,baz=145,slow=9.1,SNR=7.5						
MA2				LR	LR	05 29 22.0	
	comp=E,92nm,21.5s,baz=196,slow=38						
	comp=E,5.6nm,0.5s						
MA2	**Magadan**	**11.46**	**342**	Pn	**Pn**	**05 24 50.4**	**-2.3**
MA2	**Magadan**	**11.46**	**342**	*ce*PN	**Pn**	**05 24 50.9**	**-1.8**
MA2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MA2	**Magadan**	**11.46**	**342**	*e*P	**Pn**	**05 24 50.9**	**-1.8**
JKA	**Kamikawa-asahi**	**11.56**	**251**	Pn	**Pn**	**05 24 52.2**	**-1.9**
ASAJ	**Asahikawa**	**11.56**	**251**	LR	LR	05 30 04.3	
	comp=Z,211nm,18.9s,baz=50,slow=42						
ASAJ	**Asahikawa**	**11.56**	**251**	PN	**Pn**	**05 24 52.2**	**-1.9**
NKL	**Nikolayevsk**	**11.63**	**298**	*e*P	**Pn**	**05 24 54.4**	**-0.5**
JEW	**Eniwo**	**12.94**	**248**	Pn	**Pn**	**05 25 10.0**	**-3.0**
SEY	**Seymchan**	**14.39**	**350**	Pn	**Pn**	**05 25 31.3**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=149,slow=12,SNR=6.0						
	comp=Z,1.7nm,0.6s						
SEY	**Seymchan**	**14.39**	**350**	*i*eP	**Pn**	**05 25 31.6**	**-0.8**
SEY				pmax	pmax		
	comp=Z,12nm,2.5s						
SEY				MLR	MLR		
	comp=Z,122nm,17.0s						
SEY	**Seymchan**	**14.39**	**350**	*e*P	**Pn**	**05 25 31.6**	**-0.8**
KLR	**Kul'dur**	**17.10**	**281**	P	**Pn**	**05 26 06.7**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=81,slow=10,SNR=13						
KLR				LR	LR	05 33 08.6	
	comp=Z,190nm,19.3s,baz=89,slow=39						
	comp=Z,7.8nm,0.7s						
KLR	**Kul'dur**	**17.10**	**281**	*de*P	**Pn**	**05 26 06.8**	**-0.4**
KLR				pmax	pmax		
	comp=Z,4.0nm,1.7s						
KLR				MLR	MLR		
	comp=Z,136nm,15.0s						
KLR	**Kul'dur**	**17.10**	**281**	*e*P	**Pn**	**05 26 06.8**	**-0.4**
MJAR	**Matsushiro Arr**	**18.94**	**237**	P	**P**	**05 26 26.7**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=27,slow=14,SNR=4.4						
MJAR				LR	LR	05 33 43.9	
	comp=Z,62nm,20.4s,baz=56,slow=37						
	comp=Z,1.1nm,0.3s						
MJAR	**Matsushiro Arr**	**18.94**	**237**	P	**P**	**05 26 27.0**	**-1.8**
MJAR	**Matsushiro Arr**	**18.94**	**237**	P	**P**	**05 26 27.0**	**-1.8**
MJAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BILL	**Bilibino**	**19.65**	**9**		**P**	**05 26 36.5**	**+0.3**
BILL	**Bilibino**	**19.65**	**9**	*ci*P	**Pn**	**05 26 38.0**	**+0.1**
BILL				pmax	pmax		
	comp=Z,12nm,0.7s						
BILL	**Bilibino**	**19.65**	**9**	*e*P	**Pn**	**05 26 38.0**	**+0.1**
ZEA	**Zeya**	**19.65**	**296**	*e*P	**P**	**05 26 34.8**	**-1.5**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.4s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ZEA	**Zeya**	**19.65**	**296**	*e*P	**P**	**05 26 34.8**	**-1.5**
HEH	**HeiHe**	**19.74**	**285**	*e*P	**P**	**05 26 36.0**	**-1.3**
HEH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MDJ	**Mudanjiang**	**19.79**	**268**	P	**P**	**05 26 36.8**	**-1.1**
YAK	**Yakutsk**	**20.48**	**320**	P	**P**	**05 26 43.1**	**-2.0**
	comp=Z,92nm,0.8s,baz=102,slow=2.7,SNR=21						
YAK				LR	LR	05 34 40.9	
	comp=Z,104nm,19.5s,baz=77,slow=37						
	comp=Z,92nm,0.8s						
YAK	**Yakutsk**	**20.48**	**320

baz=262
H16K Elim 26.34 39 P P 05 27 43.2 +0.5
baz=252
N15K Kwethluk River 26.39 49 P P 05 27 43.8 +0.4
baz=264
TIXI Tiksi 26.43 340 P 05 27 43.0 -0.5
TIXI IAmb IAmb 05 27 43.5
comp=Z,17nm,0.8s
TIXI Tiksi 26.43 340 ⇓eP P 05 27 42.5 -1.0
TIXI pmax pmax
comp=Z,18nm,0.8s
TIXI Tiksi 26.43 340 eP P 05 27 42.5 -1.0
O15K Ungalikthiuk R 26.43 51 P P 05 27 44.5 +0.8
baz=266
G16K Koyuk River 26.53 37 P P 05 27 45.3 +0.8
baz=251
S14K Fog Glacier 26.53 58 P P 05 27 44.9 +0.1
baz=272
CHNA Chernabura Isl 26.60 61 P P 05 27 44.8 -0.4
baz=275
C16K Lisburne Hills 26.60 30 P 05 27 45.2 +0.1
C16K IAmb IAmb 05 27 46.3
comp=Z,10nm,0.8s
C16K Lisburne Hills 26.60 30 P P 05 27 45.4 +0.3
baz=242,SNR=20
J16K Anvik River 26.68 42 P P 05 27 44.5 -1.3
J16K Anvik River 26.68 42 P P 05 27 46.0 +0.2
baz=257
I17K Unalakleet 26.78 41 P P 05 27 46.8 +0.1
baz=256
L16K Owhat River 26.89 46 P P 05 27 47.9 +0.1
L16K Owhat River 26.89 46 P P 05 27 47.4 -0.4
baz=261
M16K Timber Creek 27.04 47 P P 05 27 48.8 -0.4
M16K IAmb IAmb 05 27 53.8
comp=Z,19nm,1.5s
M16K Timber Creek 27.04 47 P P 05 27 48.8 -0.4
baz=263
N16K Nishlik Lake 27.08 48 P P 05 27 49.5 0.0
baz=264
D17K Noatak River 27.11 32 P P 05 27 49.9 +0.2
baz=246,SNR=11
CHGN Chignik 27.16 58 P P 05 27 50.4 +0.2
baz=273
G17K Kiwalik Mounta 27.24 37 P P 05 27 51.3 +0.4
baz=253
F17K Baldwin Pennin 27.30 35 P 05 27 52.4 +1.0
F17K IAmb IAmb 05 28 17.3
comp=Z,10nm,1.1s
F17K Baldwin Pennin 27.30 35 P P 05 27 51.9 +0.5
baz=250,SNR=7.4
E17K Hotham Inlet 27.32 33 P P 05 27 51.9 +0.4
baz=248
RDOG Red Dog Mine 27.32 31 P P 05 27 51.6 0.0
baz=245
J17K VABM Dome 27.37 42 P P 05 27 52.6 +0.5
baz=258
P16K Nushagak River 27.37 52 P P 05 27 52.1 0.0
baz=268
H17K Granite Mounta 27.38 38 P P 05 27 51.9 -0.3
baz=255
C17K DeLong Mountai 27.41 30 P P 05 27 52.2 -0.2
baz=244
L17K Donlin 27.50 45 P P 05 27 53.2 -0.1
baz=262
K17K Iditarod 27.59 44 P P 05 27 54.7 +0.6
K17K IAmb IAmb 05 28 01.4
comp=Z,11nm,1.1s
K17K Iditarod 27.59 44 P P 05 27 54.4 +0.3
baz=260
M17K Holitna River 27.82 46 P P 05 27 55.8 -0.3
baz=264
N17K Nushagak Hills 27.86 48 P P 05 27 55.8 -0.7
baz=266
O17K Koliganek Bris 27.86 50 P P 05 27 55.4 -1.0
baz=267
E18K Tukpahlearik C 27.88 33 P 05 27 56.7 +0.1
E18K Tukpahlearik C 27.88 33 P P 05 27 57.4 +0.8
baz=249
F18K Selawik 27.96 35 P P 05 27 57.7 +0.4
baz=252,SNR=6.6
Q16K King Salmon 28.06 52 P P 05 27 58.3 +0.1
baz=270
H18K Honhosa River 28.07 38 P P 05 27 58.8 +0.5
baz=256
G18K Tagagawik 28.14 37 P P 05 27 59.6 +0.6
baz=254
C18K Utukok River 28.14 31 P 05 27 59.3 +0.2
C18K IAmb IAmb 05 28 00.5
comp=Z,12nm,1.2s
C18K Utukok River 28.14 31 P P 05 27 59.2 +0.2
baz=246
P17K Kvichak River 28.18 51 P P 05 27 58.4 -0.9
baz=269
R17L Mt. Peulik Vol 28.23 55 P P 05 27 59.4 -0.5
baz=272
L18K Granite Mounta 28.27 45 P P 05 27 59.3 -0.8
baz=263
J18K Innoko River 28.43 42 P P 05 28 01.5 0.0
baz=261
Q17K Contact Creek 28.47 53 P P 05 28 01.4 -0.7
baz=271
N18K Kilae Creek 28.51 48 P P 05 28 01.1 -1.2
baz=267
GCSA Galena City Sc 28.59 40 P P 05 28 02.4 -0.5
baz=258
M18K Stony River 28.60 46 P P 05 28 02.5 -0.6
baz=265
F19K Shaleruckik Mo 28.74 35 P P 05 28 04.5 +0.2
baz=254
P18K Big Mountain, 28.80 51 P P 05 28 04.7 -0.2
baz=270
O18K Koktuh Hills 28.82 50 P P 05 28 05.2 +0.1
baz=269
G19K Purcell Mounta 28.82 37 P P 05 28 05.8 +0.7
baz=256
A19K Wainwright 28.84 28 P P 05 28 05.5 +0.4
baz=244
C19K Lookout Ridge 28.86 30 P 05 28 05.6 +0.3
C19K IAmb IAmb 05 28 07.2
comp=Z,13nm,1.2s
C19K Lookout Ridge 28.86 30 P P 05 28 05.5 +0.2
baz=248,SNR=11
Q18K Katmai Hardscr 28.92 52 P P 05 28 06.4 +0.3
baz=271
H19K Roundabout Mou 28.93 38 P P 05 28 06.4 +0.4
baz=257
J19K Poorman 28.99 41 P P 05 28 07.0 +0.5
baz=261
L19K White Mountain 29.12 45 P P 05 28 07.4 -0.3
baz=265
E19K Redstone River 29.13 34 P P 05 28 07.1 -0.6
baz=253
D19K Kuna River 29.14 32 P 05 28 08.4 +0.6
D19K IAmb IAmb 05 28 22.6
comp=Z,9.9nm,1.2s
D19K Kuna River 29.14 32 P P 05 28 07.9 +0.1
baz=250,SNR=6.4
N19K Bonanza Creek 29.21 48 P P 05 28 07.9 -0.6
baz=268
O19K Port Alsworth 29.27 49 P P 05 28 09.3 +0.3
baz=269
M19K Big River Lodg 29.31 46 P P 05 28 09.6 +0.2
baz=266
SII Sitkinak Islan 29.49 57 P P 05 28 10.7 -0.3
baz=276
H20K Anotleneega Mo 29.57 38 P P 05 28 11.9 +0.2
baz=259
F20K Avaraart Lake 29.58 35 P P 05 28 11.9 +0.2
baz=255
K20K Telida 29.59 43 P P 05 28 11.5 -0.4
baz=264
I20K Naaghedeneel 29.61 40 P P 05 28 11.6 -0.4
baz=261
Q19K Cape Douglas, 29.62 52 P P 05 28 12.3 +0.1
baz=272
J20K Nowinta River 29.66 41 P P 05 28 12.0 -0.4
baz=262
D20K Etivluk River 29.73 32 IAmb IAmb 05 28 14.0
comp=Z,5.9nm,0.7s
D20K Etivluk River 29.73 32 P P 05 28 12.5 -0.5
baz=252
E20K Nigu River 29.74 33 P P 05 28 13.2 0.0
baz=253,SNR=5.9
P19K Oil Pt 29.82 50 P P 05 28 13.8 -0.1
baz=271
M20K Styx River 29.91 46 P P 05 28 14.7 0.0
baz=267
OHAK Old Harbor 29.91 55 P P 05 28 14.7 0.0
baz=275
B20K Meade River 29.99 29 IAmb IAmb 05 28 17.2
comp=Z,9.3nm,0.7s
B20K Meade River 29.99 29 P P 05 28 15.7 +0.5
baz=249
H11N2 WAKE ISLAND Hy 30.00 163 T T 05 59 13.0
baz=348,slow=76,SNR=6.2
H11N3 WAKE ISLAND Hy 30.01 163 T T 05 59 13.0
baz=348,slow=76,SNR=7.2
H11N1 WAKE ISLAND Hy 30.01 163 T T 05 59 17.9
baz=348,slow=76,SNR=7.8
KDAK Kodiak Island 30.25 54 LR LR 05 43 08.1
comp=Z,64nm,18.2s,baz=288,slow=42
KDAK Kodiak Island 30.25 54 P P 05 28 17.9 +0.2
baz=275
Q20K Shuyak Island 30.29 52 P P 05 28 18.3 +0.2
baz=273
G21K Allakaket 30.32 37 P P 05 28 18.5 +0.2
baz=259
CHUM Lake Minchumin 30.43 42 P P 05 28 19.5 +0.3
baz=264
H21K Melozitna Rive 30.45 38 P P 05 28 19.4 0.0
baz=261
F21K Alatna River 30.47 35 P P 05 28 19.6 0.0
baz=258
C21K Knifeblade Rid 30.50 31 P P 05 28 19.6 -0.2
baz=253,SNR=9.6
E21K Killik River 30.58 33 P P 05 28 20.7 +0.1
baz=255
A21K Barrow 30.65 27 P P 05 28 21.3 +0.2
baz=247
SKT Skwentna 30.66 46 P P 05 28 21.1 -0.2
baz=268
B21K Ikpikpuk River 30.69 30 IAmb IAmb 05 28 23.3
comp=Z,11nm,0.9s
B21K Ikpikpuk River 30.69 30 P P 05 28 21.4 0.0
baz=252
I21K Tanana 30.72 39 P P 05 28 21.6 -0.1
baz=262
A22K Sinclair Lake 31.03 28 P P 05 28 24.4 0.0
baz=250
BPAW Bear Paw Mtn. 31.03 42 P P 05 28 24.6 0.0
baz=265
H22K Ishtalitna Cre 31.06 38 P P 05 28 24.9 +0.1
baz=262
H11S1 WAKE ISLAND Hy 31.15 164 T T 06 00 50.7
baz=350
H11S3 WAKE ISLAND Hy 31.16 164 T T 06 00 35.2
baz=350,slow=74,SNR=18
H11S2 WAKE ISLAND Hy 31.17 164 T T 06 00 39.0
baz=350,slow=74,SNR=17
MLY Manley 31.22 40 P P 05 28 25.8 -0.5
baz=264
E22K Anaktuvuk Pass 31.29 34 IAmb IAmb 05 28 28.5
comp=Z,7.4nm,0.9s
E22K Anaktuvuk Pass 31.29 34 P P 05 28 26.9 +0.1
baz=258
TRF Thorofare Moun 31.30 43 P P 05 28 27.0 -0.1
baz=267
B22K Teshekpuk Lake 31.30 29 IAmb IAmb 05 28 27.8
comp=Z,6.9nm,0.7s
B22K Teshekpuk Lake 31.30 29 P P 05 28 27.1 +0.3
baz=253
M22K Willow 31.33 46 P P 05 28 27.2 +0.1
baz=270
RC01 Rabbit Creek A 31.52 47 P P 05 28 28.9 0.0
baz=271
O22K Cooper Landing 31.55 49 P P 05 28 29.5 +0.4
baz=272
SEW Seward 31.70 49 P P 05 28 30.6 +0.1
baz=273
G23K Bananza Creek 31.72 37 P P 05 28 31.4 +0.8
baz=262
COLD Coldfoot 31.73 36 P 05 28 31.1 +0.5
COLD Coldfoot 31.73 36 P P 05 28 30.8 +0.2
baz=261
I23K Minto, Yukon-K 31.82 40 P P 05 28 32.3 +0.9
baz=265
D23K Nanushuk River 31.87 32 IAmb IAmb 05 28 33.7
comp=Z,10nm,1.4s
D23K Nanushuk River 31.87 32 P P 05 28 32.9 +1.0
baz=258,SNR=7.4
NEA2 Nenana 31.90 41 P P 05 28 32.9 +0.7
baz=266
MCK McKinley 31.91 42 P P 05 28 32.6 +0.3
baz=268
WAT1 Susitna Watana 32.07 44 P P 05 28 33.3 -0.4
baz=270
E23K Chandalar 32.09 34 P 05 28 34.7 +0.9
E23K IAmb IAmb 05 28 35.7
comp=Z,9.3nm,0.9s
E23K Chandalar 32.09 34 P P 05 28 33.5 -0.4
baz=260,SNR=11
C23K Itkillik River 32.09 31 P P 05 28 33.2 -0.6
baz=256,SNR=11
KNK Knik Glacier 32.13 47 P P 05 28 35.0 +0.7
KNK Knik Glacier 32.13 47 P P 05 28 34.2 -0.1
baz=272
SML Sawmill 32.18 46 P P 05 28 34.9 +0.2
SML Sawmill 32.18 46 P P 05 28 34.7 0.0
baz=271
TOLK Toolik Lake Re 32.20 33 P P 05 28 35.0 +0.1
baz=259,SNR=7.6
COLA College 32.44 40 P P 05 28 37.4 +0.6
COLA IAmb IAmb 05 28 59.8
comp=Z,4.9nm,0.8s
COLA College 32.44 40 dⅈP P 05 28 37.2 +0.4
COLA pmax pmax
comp=Z,17nm,2.1s
COLA College 32.44 40 P P 05 28 37.2 +0.4
baz=267
WAT6 Susitna Watana 32.44 45 P P 05 28 37.4 +0.2
baz=271
CCB Clear Creek Bu 32.45 41 P P 05 28 36.8 -0.2
M23K Glacier View 32.47 46 P P 05 28 37.6 +0.4
baz=272
H24K Noodor Dome 32.49 38 P P 05 28 37.2 -0.2
baz=266
E24K Your Creek 32.51 34 IAmb IAmb 05 28 39.5
comp=Z,9.0nm,0.9s
E24K Your Creek 32.51 34 P P 05 28 37.2 -0.4
baz=261
D24K Happy Valley 32.57 32 IAmb IAmb 05 28 39.5
comp=Z,7.9nm,0.7s
D24K Happy Valley 32.57 32 P P 05 28 38.4 +0.4
baz=259
DHY Denali Highway 32.60 44 P P 05 28 38.7 +0.1
DHY IAmb IAmb 05 28 47.1
comp=Z,5.5nm,0.7s
DHY Denali Highway 32.60 44 P P 05 28 38.7 +0.1
baz=270
POKR Poker Flat Res 32.63 40 P P 05 28 39.1 +0.6
baz=267
F24K Squaw Lake 32.66 35 P P 05 28 39.0 +0.2
baz=263
SCM Sheep Creek Mo 32.66 46 P P 05 28 39.6 +0.6
baz=272
C24K Franklin Bluff 32.72 31 IAmb IAmb 05 28 40.8
comp=Z,7.3nm,0.9s
C24K Franklin Bluff 32.72 31 P P 05 28 39.5 +0.2
baz=259
G24K Hadweenzic Riv 32.73 37 IAmb IAmb 05 28 41.7
comp=Z,10.0nm,1.1s
G24K Hadweenzic Riv 32.73 37 P P 05 28 39.4 0.0
baz=264
HDA Harding Lake 32.81 41 P P 05 28 40.3 +0.1
HDA Harding Lake 32.81 41 P P 05 28 40.1 0.0
baz=269
GLI Glacier Island 32.82 48 P P 05 28 40.3 0.0
baz=274
IL31 32.84 40 P P 05 28 40.6 +0.2
ILAR Eielson Array 32.84 40 P P 05 28 39.2 -1.2
comp=Z,0.7nm,0.6s,baz=254,slow=6.8,SNR=14
ILAR PcP PcP 05 31 22.1 -1.9
comp=Z,0.1nm,0.6s,baz=272,slow=4.0,SNR=4.2
comp=Z,0.7nm,0.6s
M24K Tolsona, Glenn 33.19 45 P P 05 28 43.7 +0.2
baz=273
ULN Ulaanbaatar 33.26 288 ⇓eP P 05 28 44.0 -0.4
ULN pmax pmax
comp=Z,3.0nm,1.3s
ULN Ulaanbaatar 33.26 288 eP P 05 28 44.0 -0.4
G25K Bearman Lake 33.27 37 P P 05 28 44.5 +0.4
baz=266
K24K Donnelly Dome 33.32 42 P P 05 28 44.7 +0.1
baz=271
Q23K Middleton Isla 33.33 50 P P 05 28 44.5 -0.1
baz=277
KLU Klutina 33.34 46 P P 05 28 44.6 -0.3
baz=274
HHC Hu-ho-hao-te 33.35 274 eP P 05 28 45.5 +0.3
HHC pmax pmax
comp=Z,10.0nm,0.7s
PRP Porcupine Dome 33.44 39 P P 05 28 45.4 -0.4
baz=268
D25K Kavik River 33.45 32 P P 05 28 46.4 +0.7
D25K Kavik River 33.45 32 P P 05 28 45.6 -0.2
baz=262,SNR=30
PAX Paxson 33.48 44 P P 05 28 45.8 -0.3
baz=272
J25K Salcha River, 33.49 41 P P 05 28 46.6 +0.4
baz=270
EYAK Cordova Ski Ar 33.51 48 P P 05 28 46.1 -0.1
baz=276
F25K Christian Rive 33.52 35 P P 05 28 47.2 +0.8
F25K Christian Rive 33.52 35 P P 05 28 46.5 +0.1
baz=265
E25K Arctic Village 33.60 34 P 05 28 47.5 +0.5
E25K IAmb IAmb 05 28 49.2
comp=Z,4.5nm,1.0s
E25K Arctic Village 33.60 34 P P 05 28 47.2 +0.2
baz=264
NJ2 Nanjing 33.68 255 eP P 05 28 48.5 +0.5
NJ2 pmax pmax
comp=Z,14nm,0.6s
RIDG Independent Ri 33.73 42 P P 05 28 48.1 -0.1
baz=272
BMAR Burnt Mountain 33.92 36 P P 05 28 50.6 +0.8
N25K Chitina, Valde 33.97 46 P P 05 28 50.2 -0.1
baz=275
BMRM Bremner River 34.02 47 P P 05 28 51.1 +0.3
baz=276
C26K Camden Bay 34.05 31 P P 05 28 51.6 +0.8
baz=262
TLY Talaya 34.09 296 ceP P 05 28 51.8 +0.3
TLY pmax pmax
comp=Z,7.0nm,1.0s
TLY MLR MLR
comp=Z,70nm,16.0s
TLY Talaya 34.09 296 eP P 05 28 51.8 +0.3
F26K Sheenjek River 34.10 35 P P 05 28 51.9 +0.5
baz=266
SCRK Sand Creek 34.11 42 P P 05 28 52.0 +0.5
SCRK Sand Creek 34.11 42 P P 05 28 51.8 +0.2
baz=272
G26K Porcupine Rive 34.20 37 P P 05 28 52.4 +0.2
baz=268
KAIM Kayak Island 34.24 49 P P 05 28 53.0 +0.4
baz=278
C27K Jago River 34.42 32 P P 05 28 54.6 +0.4
baz=264,SNR=12
I26K Coal Creek Min 34.43 40 P P 05 28 54.5 +0.3
baz=271
L26K Log Cabin Wild 34.44 44 P P 05 28 54.5 +0.2
baz=274
M26K Nabesna, AK 34.65 45 P P 05 28 56.6 +0.4
baz=275
ZAK Zakamensk 34.72 294 eP P 05 28 56.2 -0.8
ZAK pmax pmax
comp=Z,7.0nm,1.3s
MCARA McCarthy VSAT 34.74 46 P P 05 28 57.1 +0.2
baz=276
CRQE Cirque 34.78 48 P P 05 28 57.6 +0.1
baz=277
I27K Kandik River 35.07 39 P P 05 29 00.1 +0.3
baz=272
E27K Coleen River 35.09 34 IAmb IAmb 05 29 02.0
comp=Z,5.1nm,0.9s
E27K Coleen River 35.09 34 P P 05 29 00.1 +0.2
baz=268
H27K Steamboat Moun 35.09 38 IAmb IAmb 05 29 26.6
comp=Z,5.3nm,1.1s
H27K Steamboat Moun 35.09 38 P P 05 29 00.2 +0.2
baz=271
L27K Beaver Creek, 35.13 43 P P 05 29 00.5 +0.2
baz=275
M27K Edge Creek, AK 35.17 45 P P 05 29 00.8 0.0
baz=276
D27M Malcolm River 35.36 33 P P 05 29 01.9 -0.4
baz=267
CTG Chitna Glacier 35.60 47 P P 05 29 04.2 -0.3
baz=278
BVCY Beaver Creek 35.64 44 P P 05 29 04.4 -0.3
baz=277
F28M Old Crow 35.73 35 IAmb IAmb 05 29 07.8
comp=Z,8.3nm,1.1s
F28M Old Crow 35.73 35 P P 05 29 05.5 +0.1
baz=270,SNR=10
I28M Miner Creek 35.78 39 IAmb IAmb 05 29 32.0
comp=Z,5.0nm,1.2s
I28M Miner Creek 35.78 39 P P 05 29 05.1 -0.8
baz=273
E28M Babbage River 35.86 34 P 05 29 07.5 +1.1
E28M IAmb IAmb 05 29 08.1
comp=Z,4.1nm,0.9s
E28M Babbage River 35.86 34 P P 05 29 06.5 0.0
baz=269,SNR=7.2
YUK3 Moose Creek 35.91 46 P P 05 29 06.8 -0.4
baz=278
D28M Stokes Point 36.16 33 P P 05 29 09.3 +0.3
baz=269
O28M Mount Upton 36.19 47 P P 05 29 08.6 -1.1
baz=280
YUK8 Steele Glacier 36.31 46 P P 05 29 10.3 -0.4
baz=279
H29M Whitestone 36.37 38 P P 05 29 10.8 0.0
baz=274
I29M Ogilvie Camp, 36.46 39 P P 05 29 11.7 +0.1
baz=275
E29M Blow River 36.46 34 IAmb IAmb 05 29 14.2
comp=Z,11nm,1.1s
E29M Blow River 36.46 34 P P 05 29 11.9 +0.2
baz=271
G29M Pine Creek 36.47 37 IAmb IAmb 05 29 14.5
comp=Z,11nm,1.0s
G29M Pine Creek 36.47 37 P P 05 29 12.5 +0.8
baz=273
M29M Somme Creek 36.74 44 P P 05 29 13.8 -0.3
baz=279
L29M L29M 36.80 43 IAmb IAmb 05 29 19.4
comp=Z,11nm,1.4s
L29M L29M 36.80 43 P P 05 29 14.4 -0.1
baz=278
YUK4 Talbot Arm 36.83 46 P P 05 29 15.2 +0.2
baz=280
K29M Barlow Dome 36.97 42 IAmb IAmb 05 29 18.1
comp=Z,6.6nm,1.3s
K29M Barlow Dome 36.97 42 P P 05 29 16.1 0.0
baz=278
EPYK Eagle Plains 37.03 37 P P 05 29 17.4 +0.9
EPYK Eagle Plains 37.03 37 P P 05 29 16.0 -0.4
baz=275,SNR=5.7
O29M Mount Kennedy 37.06 48 P P 05 29 16.0 -1.0
baz=281
G30M tAoh Zraii Nji 37.17 36 IAmb IAmb 05 29 34.3
comp=Z,6.2nm,1.2s
G30M tAoh Zraii Nji 37.17 36 P P 05 29 17.4 -0.3
baz=274
I30M Mount Dempster 37.28 39 P P 05 29 18.6 -0.2
baz=277
F30M Barrier River 37.29 35 P P 05 29 18.4 -0.3
baz=274
J30M Hart River 37.38 40 P P 05 29 19.5 -0.1
baz=278
HYT Haines Junctio 37.48 47 P P 05 29 20.0 -0.4
baz=282
M30M Minto, Yukon 37.48 44 P P 05 29 19.8 -0.6
baz=280
N30M Aishikik Lake 37.55 46 P P 05 29 20.7 -0.3
baz=281
P30M Million Dollar 37.89 48 P P 05 29 23.2 -0.7
baz=283
G31M Satah River 37.94 36 IAmb IAmb 05 29 25.9
comp=Z,9.3nm,1.1s
G31M Satah River 37.94 36 P P 05 29 24.0 -0.1
baz=276,SNR=5.3
H31M Peel River 38.05 38 IAmb IAmb 05 29 27.0
comp=Z,8.8nm,1.2s
H31M Peel River 38.05 38 P P 05 29 25.5 +0.3
baz=278
INK Inuvik 38.09 34 IAmb IAmb 05 29 27.6
comp=Z,10nm,1.1s
INK Inuvik 38.09 34 P P 05 29 25.6 +0.2
baz=275,SNR=7.5
KNGR Kungurtug, Tuv 38.09 296 ⇓eP P 05 29 27.6 +1.9

KNGR pmax pmax
comp=Z,11nm,1.1s
F31M Tsiigehtchic 38.09 36 P P 05 29 26.5 +1.2
F31M IAmb IAmb 05 29 27.2
comp=Z,8.6nm,0.9s
F31M Tsiigehtchic 38.09 36 P **P 05 29 25.6 +0.2**
baz=276,SNR=7.9
N31M Braeburn, Yuko 38.16 45 P **P 05 29 25.9 -0.2**
baz=282
O30N Mendenhall 38.16 47 P **P 05 29 26.1 -0.1**
baz=283
NRIK Noril'sk 38.62 328 P **P 05 29 29.0 -0.8**
comp=Z,1.5nm,0.5s,baz=110,slow=5.6,SNR=5.7
comp=Z,1.5nm,0.5s
NRIK Noril'sk 38.62 328 P 05 29 29.3 -0.5
NRIK IAmb IAmb 05 29 31.5
comp=Z,7.5nm,1.2s
NRIK Noril'sk 38.62 328⇓ *e*P **P 05 29 30.4 +0.6**
NRIK MLR MLR
comp=Z,72nm,17.0s
M31M Drury Creek, Y 38.65 44 P **P 05 29 30.5 +0.3**
baz=282
WHY Whitehorse 38.77 46 P **P 05 29 30.9 -0.4**
baz=284
S31K Pelican 38.79 51 P **P 05 29 31.2 -0.1**
baz=286
XAN Xi'an 38.88 266 P P 05 29 26.0 -6.5
XAN pmax pmax
comp=Z,5.0nm,0.8s
SIT Sitka 39.52 52 P **P 05 29 37.5 +0.1**
baz=288
R32K Eaglecrest 39.58 50 P **P 05 29 37.3 -0.6**
baz=287
P33M Teslin, Yukon 39.87 47 P **P 05 29 41.0 +0.5**
baz=286
A36M Sachs Harbour 40.47 28 P 05 29 46.3 +1.2
A36M IAmb IAmb 05 29 47.7
comp=Z,9.2nm,0.8s
A36M Sachs Harbour 40.47 28 P **P 05 29 45.5 +0.3**
baz=278,SNR=10
LZH Lanzhou 41.01 273 *e*P **P 05 29 50.0 -0.3**
LZH sP pP 05 29 57.3 -3.6
LZH pmax pmax
comp=Z,19nm,1.3s
C36M Paulatuk 41.32 32 IAmb IAmb 05 29 54.0
comp=Z,16nm,1.1s
C36M Paulatuk 41.32 32 P **P 05 29 52.2 +0.1**
baz=282,SNR=10
DLBC Dease Lake 41.78 49 P **P 05 29 56.6 +0.5**
baz=290
T35M Bob Quinn 42.17 51 P **P 05 30 00.7 +1.4**
baz=291
WRGLY Wrigley 43.23 40 P **P 05 30 08.6 +0.9**
baz=289
YKAW3 Yellowknife Wh 47.22 39 IAmb IAmb 05 30 41.1
comp=Z,3.3nm,0.8s
YKA Yellowknife Ar 47.25 39 P **P 05 30 38.6 -1.0**
comp=Z,2.2nm,0.9s,baz=302,slow=7.7,SNR=21
comp=Z,2.2nm,0.9s
YKA Yellowknife Ar 47.25 39 *i* P **P 05 30 40.0 +0.4**
YKA pmax pmax
comp=Z,4.0nm,1.1s
YKAW1 Yellowknife Wh 47.31 39 P 05 30 40.8 +0.8
YKAW1 IAmb IAmb 05 30 41.7
comp=Z,3.2nm,0.9s
PZH PanZhiHua 48.47 264 P **P 05 30 50.8 +1.1**
MK31 Makanchi Array 48.79 298 *c* i P **P 05 30 51.7 -0.1**
MKAR Makanchi Array 48.79 298 P **P 05 30 50.9 -0.9**
comp=Z,4.6nm,0.8s,baz=63,slow=7.8,SNR=28
comp=Z,4.6nm,0.8s
MKAR Makanchi Array 48.79 298 P 05 30 51.5 -0.3
MKAR Makanchi Array 48.79 298 P **P 05 30 51.5 -0.3**
MKAR Makanchi Array 48.79 298 *e*P **P 05 30 51.5 -0.3**
KURK Kurchatov 48.84 304 P **P 05 30 51.8 -0.2**
KURK Kurchatov 48.84 304 *de*P **P 05 30 51.5 -0.5**
KURK pmax pmax
comp=Z,9.0nm,0.8s
KURK Kurchatov 48.84 304 *e*P **P 05 30 51.5 -0.5**
KURBB Kurchatov Arra 48.93 304 P **P 05 30 52.7 -0.1**
comp=Z,8.1nm,0.8s,baz=63,slow=8.0,SNR=29
comp=Z,8.1nm,0.8s
SPITS Spitsbergen Ar 51.04 350 P **P 05 31 09.1 +0.6**
comp=Z,6.5nm,0.9s,baz=46,slow=9.6,SNR=8.0
comp=Z,6.5nm,0.9s
BVAR Borovoye Array 51.95 310 P **P 05 31 15.7 +0.2**
comp=Z,2.9nm,0.7s,baz=61,slow=7.0,SNR=7.6
comp=Z,2.9nm,0.7s
BORK Borovoye 51.98 310 *d* i P **P 05 31 15.4 -0.3**
BORK pmax pmax
comp=Z,7.0nm,1.1s
EDM Edmonton 52.49 49 P **P 05 31 19.6 +0.1**
EDM IAmb IAmb 05 31 20.2
comp=Z,5.8nm,0.7s
EDM Edmonton 52.49 49 P **P 05 31 19.7 +0.1**
EDM pmax pmax
comp=Z,6.0nm,0.7s
NEEM North Greenlan 52.64 8 *i* P **P 05 31 20.5 -0.1**
NEEM IAmb IAmb 05 31 27.0
comp=Z,8.0nm,0.9s
J04A Umpqua Nationa 53.38 64 P **P 05 31 27.1 +0.7**
J04A IAmb IAmb 05 31 28.6
comp=Z,5.4nm,0.7s
BLKN Baker Lake 53.38 31 P 05 31 26.1 +0.2
ILON Igloolik, Nuna 54.22 22 P 05 31 32.4 +0.4
ILON IAmb IAmb 05 31 33.2
comp=Z,6.6nm,1.0s
TARG Taragay, Kyrgy 54.31 295 P **P 05 31 32.6 -0.9**
TARG IAmb IAmb 05 31 35.9
comp=Z,4.1nm,0.7s
TARG Taragay, Kyrgy 54.31 295 P **P 05 31 32.6 -0.9**
TARG pmax pmax
comp=Z,4.0nm,0.7s
N02D Trinity Center 54.37 66 P **P 05 31 34.1 +0.5**
K05A Summer Lake 54.40 64 P **P 05 31 34.9 +0.9**
I07A Izee 54.41 62 P **P 05 31 33.9 0.0**
I07A IAmb IAmb 05 31 58.5
comp=Z,5.0nm,1.5s
DAG Danmarks Havn 54.58 359 *i* P **P 05 31 34.4 -0.1**
DAG IAmb IAmb 05 31 38.8
comp=Z,4.0nm,0.7s
BOOM Boomskoye usch 54.96 297 P **P 05 31 36.0 -2.0**
BOOM Boomskoye usch 54.96 297 P **P 05 31 36.0 -2.0**
BOOM pmax pmax
comp=Z,10.0nm,1.0s
HATC Hat Creek Radi 55.21 66 P **P 05 31 39.9 +0.2**
O03E Paynes Creek 55.33 66 P 05 31 41.1 +0.6
J08A Circle Bar Ran 55.44 62 P **P 05 31 42.2 +0.9**
J08A IAmb IAmb 05 31 43.4
comp=Z,8.8nm,1.3s
SHL Shillong 55.60 270 P **P 05 31 42.4 -0.3**
SHL IAmb IAmb 05 32 03.6
comp=Z,5.5nm,0.9s
SHL Shillong 55.60 270 P **P 05 31 42.4 -0.3**
SHL pmax pmax
comp=Z,6.0nm,0.9s
ARTI Arti 55.67 318 P 05 31 42.4 -0.2
ARTI Arti 55.67 318 *d* i P **P 05 31 42.6 0.0**
ARTI 05 32 37.8
ARTI S **S 05 39 24.7 -0.2**
ARTI SS **SS 05 43 07.7 -2.2**
ARTI pmax pmax
comp=Z,6.0nm,0.8s
AAK Ala-Archa 55.72 297 P 05 31 43.0 -0.4
AAK IAmb IAmb 05 32 03.5
comp=Z,5.6nm,1.2s
AAK Ala-Archa 55.72 297 *c* i P **P 05 31 44.4 +1.0**
AAK pmax pmax
comp=Z,9.0nm,2.3s
AAK Ala-Archa 55.72 297 *e*P **P 05 31 44.4 +1.0**
PLID Pearl Lake 55.81 59 P 05 31 44.4 +0.3
PLID IAmb IAmb 05 31 45.6
comp=Z,4.7nm,0.8s
WVOR Wild Horse Val 55.91 63 P **P 05 31 45.5 +0.8**
WVOR IAmb IAmb 05 31 46.8
comp=Z,4.2nm,0.9s
WVOR Wild Horse Val 55.91 63 P **P 05 31 45.5 +0.8**
WVOR pmax pmax
comp=Z,4.0nm,1.0s
ORV Oroville 55.96 67 P **P 05 31 45.4 +0.4**
ORV IAmb IAmb 05 31 46.3
comp=Z,4.4nm,1.1s
ORV Oroville 55.96 67 P **P 05 31 45.4 +0.4**
ORV pmax pmax
comp=Z,4.0nm,1.1s
CMAR Chiang Mai Arr 55.97 259 P **P 05 31 45.2 0.0**
comp=Z,0.6nm,0.3s,baz=36,slow=6.3,SNR=1.2
comp=Z,0.6nm,0.3s
BEKR Beckworth 56.46 66 IAmb IAmb 05 32 14.4
comp=Z,7.1nm,1.5s
ARCES ARCESS Array B 56.84 342 P **P 05 31 51.7 +0.9**
comp=Z,3.9nm,0.9s,baz=46,slow=6.9,SNR=3.6
comp=Z,3.9nm,0.9s
ARCES ARCESS Array B 56.84 342 P **P 05 31 51.3 +0.5**
ARCES ARCESS Array B 56.84 342 P **P 05 31 51.3 +0.5**
ARCES pmax pmax
comp=Z,41nm,1.5s
DBG Daneborg 57.07 359 *i* P **P 05 31 51.7 -0.7**
DBG IAmb IAmb 05 31 56.4
comp=Z,2.4nm,1.0s
KSH2 Kashi 57.24 294 P **P 05 31 53.8 -0.5**
KSH2 pmax pmax
comp=Z,9.0nm,0.4s
EVN Everest 57.33 276 P **P 05 31 55.6 +0.1**
EVN IAmb IAmb 05 32 15.6
comp=Z,3.9nm,0.8s
LRM Limekiln Ridge 57.33 56 P **P 05 31 54.6 -0.3**
PNTR Pine Nut 57.41 66 P **P 05 31 56.3 +0.8**
PNTR IAmb IAmb 05 31 57.0
comp=Z,4.1nm,0.8s
EGMT Eagleton 57.41 53 P **P 05 31 55.4 +0.2**
EGMT IAmb IAmb 05 31 56.3
comp=Z,3.1nm,0.8s
HLID Hailey 57.65 59 P 05 31 57.3 +0.3
FCC Fort Churchill 57.67 36 P **P 05 31 56.8 +0.1**
FCC Fort Churchill 57.67 36 P **P 05 31 56.8 +0.1**
FCC pmax pmax
comp=Z,2.0nm,0.9s
MCMT McKenzie Canyo 57.73 57 P **P 05 31 58.4 +0.6**
KKAR Karatay Array 57.74 300 P **P 05 31 57.7 +0.2**
KKAR Karatay Array 57.74 300 P **P 05 31 57.7 +0.2**
BCYI Bear Canyon 57.74 58 P **P 05 31 58.5 +0.7**
BCYI IAmb IAmb 05 31 59.0
comp=Z,2.1nm,0.6s
BOZ Bozeman (W) 57.92 56 IAmb IAmb 05 32 00.6
comp=Z,4.6nm,0.8s
SUMG Summit 58.28 6 P **P 05 32 02.1 +0.7**
SUMG Summit 58.28 6 P **P 05 32 02.1 +0.7**
SUMG pmax pmax
comp=Z,12nm,1.1s
SUMG Summit 58.28 6 *i* P **P 05 32 02.0 +0.7**
SUMG IAmb IAmb 05 32 03.4
comp=Z,7.4nm,1.0s
KVN Kaiserville 58.33 65 IAmb IAmb 05 32 03.9
comp=Z,6.3nm,1.4s
QLMT Earthquake Lak 58.52 57 P **P 05 32 03.7 +0.6**
NVAR Mina Array Bea 58.61 66 P **P 05 32 04.8 +0.9**
comp=Z,1.5nm,0.6s,baz=299,slow=7.3,SNR=13
comp=Z,1.5nm,0.6s
NVAR Mina Array Bea 58.61 66 P **P 05 32 03.6 -0.3**
YHL Hebgen Lake 58.64 56 IAmb IAmb 05 32 05.5
comp=Z,3.0nm,0.7s
YNE Yellowstone No 59.18 56 IAmb IAmb 05 32 09.5
comp=Z,2.9nm,0.8s
H17A Grant Village 59.26 56 IAmb IAmb 05 32 11.9
comp=Z,4.8nm,0.9s
AB31 Akbulak array 59.47 311 P 05 32 09.9 +0.5
AB31 IAmb IAmb 05 32 29.7
comp=Z,6.0nm,0.9s
ABKAR Akbulak array 59.47 311 P 05 32 09.9 +0.5
FXWY Fox Creek 59.50 57 P **P 05 32 11.2 +1.1**
RLMT Red Lodge 59.51 55 IAmb IAmb 05 32 12.8
comp=Z,3.5nm,0.8s
MOOW Moose Ponds 59.58 57 P 05 32 11.8 +1.2
SNOW Snow King Moun 59.76 57 IAmb IAmb 05 32 14.1
comp=Z,3.2nm,0.8s
KLMR Klimovskoe 59.88 330 *e*P **P 05 32 11.2 -0.9**
KLMR pmax pmax
comp=Z,11nm,0.9s
CLC China Lake 60.73 68 IAmb IAmb 05 32 19.9
comp=Z,5.4nm,1.1s
TPNV Topopah Spring 60.81 66 IAmb IAmb 05 32 20.6
comp=Z,6.1nm,1.2s
BW06 Boulder Array 60.88 57 IAmb IAmb 05 32 21.0
comp=Z,3.2nm,1.0s
PD31 Pinedale Array 60.88 57 IAmb IAmb 05 32 21.0
comp=Z,3.3nm,1.0s
PDAR Pinedale Array 60.88 57 P **P 05 32 20.0 +0.5**
comp=Z,2.6nm,0.8s,baz=289,slow=2.3,SNR=22
comp=Z,2.6nm,0.8s
NIL Nilore 62.23 290 P 05 32 28.0 -0.4
NIL Nilore 62.23 290 P **P 05 32 28.0 -0.4**
NIL pmax pmax
comp=Z,9.0nm,0.8s
RDMU Red Mountain 62.33 59 P **P 05 32 30.1 +0.8**
LCMT Little Creek M 62.57 64 P **P 05 32 31.8 +1.0**
SRU San Rafael Swe 62.76 61 IAmb IAmb 05 32 34.6
comp=Z,3.6nm,0.8s
ULM Lac du Bonnet 62.77 44 P **P 05 32 31.2 -0.5**
comp=Z,2.4nm,0.8s,baz=228,slow=4.4,SNR=4.0
comp=Z,2.4nm,0.8s
KNB Kanab 62.81 64 IAmb IAmb 05 32 34.8
comp=Z,7.9nm,1.2s
RSSD Black Hills 62.97 53 P 05 32 33.7 +0.2
RSSD Black Hills 62.97 53 P **P 05 32 33.7 +0.2**
RSSD pmax pmax
comp=Z,7.0nm,0.9s
BELG Belogornoye 63.01 320 *c* i P **P 05 32 34.1 +0.8**
BELG pmax pmax
comp=Z,3.0nm,1.1s
FINES FINESS Array B 63.41 336 P **P 05 32 35.3 -0.4**
comp=Z,2.4nm,0.8s,baz=38,slow=9.6,SNR=6.2
comp=Z,2.4nm,0.8s
FINES FINESS Array B 63.41 336 P **P 05 32 35.9 +0.1**
FINES FINESS Array B 63.41 336 *i* P **P 05 32 36.7 +0.9**
FINES pmax pmax
comp=Z,2.0nm,0.8s
ISCO Idaho Springs 65.07 58 IAmb IAmb 05 32 48.9
comp=Z,3.7nm,0.9s
X16A Lo Mia Camp, P 65.40 65 IAmb IAmb 05 32 51.6
comp=Z,3.6nm,1.1s
VRH Novokhopyorsk 66.35 322 *e*P **P 05 32 53.9 -1.2**
VRH pmax pmax
comp=Z,10.0nm,0.7s
LPSR Galich'ya Gora 66.38 324 *e*P **P 05 32 55.6 +0.4**
LPSR pmax pmax
comp=Z,10.0nm,0.7s
VORR Voronezh 67.00 324 *e*P **P 05 32 59.6 +0.4**
VORR pmax pmax
comp=Z,40nm,0.4s
NB2 NORSAR Subarra 67.16 343 P **P 05 33 00.0 -0.2**
comp=Z,3.7nm,1.0s,baz=23,slow=6.5
NOA NORSAR Array B 67.16 343 P **P 05 33 00.2 0.0**
comp=Z,1.6nm,0.7s,baz=23,slow=6.4,SNR=6.4
comp=Z,1.6nm,0.7s
VSR Storozhevoye 67.37 323 *e*P **P 05 33 01.4 -0.1**
VSR pmax pmax
comp=Z,4.0nm,0.5s
HFS Hagfors 67.50 342 P **P 05 33 01.9 -0.4**
comp=Z,1.4nm,0.6s,baz=72,slow=9.5,SNR=4.9
comp=Z,1.4nm,0.6s
VORD Divnogorie 67.51 323 *e*P **P 05 33 02.0 -0.4**
VORD pmax pmax
comp=Z,5.0nm,0.5s
ANMO Albuquerque 67.98 62⇑ *e*P **P 05 33 05.1 -0.8**
MNK Minsk 68.72 331 *i* P **P 05 33 10.4 +0.4**
comp=E,40nm,0.8s
MNK *i* P **P 05 33 10.4 +0.4**
comp=N,6.0nm,0.6s
MNK *i* P **P 05 33 10.4 +0.4**
comp=Z,8.0nm,0.7s,baz=33
MNK *i* pP **sP 05 33 24.6 -1.6**
MNK *i* PP **PP 05 35 42.3 +0.9**
MNK *i* PPP PPP 05 37 22.1
MNK *i* S **S 05 42 10.3 +1.1**
MNK *i* sS **sS 05 42 34.6 +5.7**
MNK *i* SS **SS 05 46 36.6 +3.2**
MNK *i* SSS SSS 05 49 53.6
MNK *i* LQ LQ 05 59 08.4
MNK *i* LR LR 06 03 48.3
MNK Minsk 68.72 331 *i* P **P 05 33 10.3 +0.4**
MNK *i* *PP **sP 05 33 24.5 -1.6**
MNK *i* 05 33 34.7
MNK *i* 05 35 42.3
MNK *i* PPP PPP 05 37 22.1
MNK *i* S **S 05 42 10.2 +1.1**
MNK *i* *SS **sS 05 42 34.6 +5.7**
MNK *i* 05 43 05.9
MNK *i* SS **SS 05 46 36.5 +3.2**
MNK pmax pmax
comp=Z,8.0nm,0.7s
MNK pmax pmax
comp=E,40nm,0.8s
MNK pmax pmax
comp=N,6.0nm,0.6s
MNK MLR MLR
comp=E,135nm,17.0s
MNK MLR MLR
comp=N,168nm,21.0s
MNK MLR MLR
comp=Z,58nm,15.0s
SCHQ Schefferville 70.03 26 P **P 05 33 17.7 -0.4**
comp=Z,2.5nm,0.8s,baz=344,slow=7.6,SNR=4.3
comp=Z,2.5nm,0.8s
SCHQ Schefferville 70.03 26 P **P 05 33 17.9 -0.1**
MNTX Cornudas Mount 70.92 64 P 05 33 24.6 +0.7
AKT Akhty 71.03 312 *e*P **P 05 33 24.5 -0.1**
AKASG Malin Array Be 71.47 328 P **P 05 33 26.1 -0.8**
comp=Z,2.3nm,0.6s,baz=33,slow=6.3,SNR=11
comp=Z,2.3nm,0.6s
AKASG Malin Array Be 71.47 328 *i* P **P 05 33 28.7 +1.8**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
WB0 Warramunga Arr 71.50 203 P **P 05 33 27.1 -0.2**
KIV Kislovodsk 71.53 316 *e*P **P 05 33 27.8 +0.3**
KIV pmax pmax
comp=Z,4.0nm,0.9s
KIV Kislovodsk 71.53 316 *e*P **P 05 33 27.8 +0.3**
KBZ Khabaz 71.60 316 P **P 05 33 28.6 +0.8**
comp=Z,1.7nm,0.6s,baz=59,slow=5.8,SNR=6.3
comp=Z,1.7nm,0.6s
KBZ Khabaz 71.60 316⇓ *e*P **P 05 33 28.3 +0.5**
KBZ pmax pmax
comp=Z,8.0nm,1.0s
KBZ Khabaz 71.60 316 *e*P **P 05 33 28.3 +0.5**
WR8 Warramunga Arr 71.65 203 P **P 05 33 27.8 -0.5**
WRAB Tennant Creek 71.67 203⇑ *e*P **P 05 33 27.5 -0.8**
WRAB pmax pmax
comp=Z,17nm,1.0s
WRA Warramunga Arr 71.68 203 P **P 05 33 27.8 -0.6**
comp=Z,8.3nm,0.8s,baz=20,slow=6.3,SNR=29
comp=Z,8.3nm,0.8s
WRA Warramunga Arr 71.68 203 P **P 05 33 27.8 -0.6**
SHA1 Shidzhatmaz 71.71 316⇓ *e*P **P 05 33 30.0 +1.3**
MNHN Monahans 72.72 62 IAmb IAmb 05 33 35.3
comp=Z,3.1nm,0.8s
APMT Aspermont 72.78 59 P 05 33 35.3 +0.2
APMT IAmb IAmb 05 33 35.8
comp=Z,6.2nm,0.7s
TX31 Lajitas Ar. Si 73.65 64 P **P 05 33 40.8 +0.4**
TX31 IAmb IAmb 05 33 41.2
comp=Z,4.8nm,0.9s
TXAR Lajitas Array 73.65 64 P **P 05 33 40.5 +0.2**
comp=Z,3.1nm,0.8s,baz=299,slow=4.6,SNR=34
comp=Z,3.1nm,0.8s
EKA Eskdalemuir Ar 74.92 349 P **P 05 33 47.2 0.0**
comp=Z,0.9nm,0.6s,baz=18,slow=5.4,SNR=7.0
comp=Z,0.9nm,0.6s
STHS Stebnicka Huta 75.18 332 *e*P P 05 33 57.0 +8.2
STHS Stebnicka Huta 75.18 332 *e*P P 05 33 57.0 +8.2
AS31 Alice Springs 75.35 203 P **P 05 33 50.0 0.0**
ASAR Alice Springs 75.35 203 P **P 05 33 50.1 +0.2**
comp=Z,2.5nm,0.8s,baz=12,slow=5.8,SNR=20
comp=Z,2.5nm,0.8s
ASAR Alice Springs 75.35 203 P **P 05 33 50.2 +0.3**
ASAR Alice Springs 75.35 203 P **P 05 33 50.3 +0.3**
DRIO Del Rio 75.38 62 P 05 33 50.9 +0.7
DRIO IAmb IAmb 05 33 51.2
comp=Z,6.6nm,1.2s
BUR08 Bucovina Ar. S 75.46 329 P 05 33 50.3 -0.2
BUR08 IAmb IAmb 05 33 56.5
comp=Z,4.2nm,0.9s
BURAR Bucovina Array 75.48 329 P **P 05 33 50.8 +0.1**
STEB Steborice 75.74 335 *e*P **P 05 33 56.6 +4.6**
CLL Collm 75.75 338 *e*P **P 05 33 52.0 0.0**
CLL Collm 75.75 338 *e*P **P 05 33 52.0 0.0**
DPC Dobruska-Polom 75.77 336 *e*P **P 05 33 56.7 +4.5**
DPC Dobruska-Polom 75.77 336 *e*P **P 05 33 56.7 +4.5**
KHC Kasperske Hory 77.61 337 *e*P **P 05 34 06.6 +4.0**
KHC Kasperske Hory 77.61 337 *e*P **P 05 34 06.6 +4.0**
BRTR Keskin Array B 78.93 319 P **P 05 34 11.7 +1.5**
comp=Z,0.9nm,0.8s,baz=358,slow=5.0,SNR=3.7
comp=Z,0.9nm,0.8s
H03N2 Juan Fernandez 135.57 91 T T 08 12 47.8
baz=314,slow=77,SNR=5.4
H03N1 Juan Fernandez 135.59 91 T T 08 12 52.5
baz=314,slow=77,SNR=4.2
H03N3 Juan Fernandez 135.59 91 T T 08 12 48.4
baz=314,slow=77,SNR=5.1
QSPA South Pole Qui 138.64 180 PKP **PKPdf 05 41 30.3 -0.6**
comp=Z,1.7nm,0.7s,baz=279,slow=1.5,SNR=8.9
QSPA South Pole Qui 138.64 180 PKPdf 05 41 32.0 +1.1
CPUP Villa Florida 144.62 63 PKP **PKPab 05 41 40.8 -0.7**
comp=Z,2.2nm,0.7s,baz=277,slow=2.4,SNR=8.2
CPUP Villa Florida 144.62 63 PKPab 05 41 41.1 -0.4
CPUP Villa Florida 144.62 63 PKIKP **PKPab 05 41 41.1 -0.4**
PLCA Paso Flores 145.20 95 PKPbc **PKPbc 05 41 42.6 -0.6**
comp=Z,3.7nm,0.9s,baz=268,slow=4.9,SNR=7.7
PLCA Paso Flores 145.20 95 PKPbc 05 41 43.0 -0.2
ELIB Princess Elisa 149.12 206 *d*PKPdf **PKPdf 05 41 51.8 +2.7**
NVL N'lazarevskaya 152.91 204 *e*PKIKP **PKPdf 05 41 56.8 +2.0**
NVL pmax pmax
comp=Z,92nm,2.5s

IDC 26 05:25:33.2±5.3, 22.08S×148.13E, h0km, mbtmp3.1/3, ML2.9/3, Error ellipse: s-maj=43.6km s-min=31.3km az=90.0, Queensland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**2.64**	**318**	Pn	Pn	05 26 18.0	+0.9
	1.1nm,0.3s,baz=136,slow=12,SNR=13						
CTA				Pg	Pb	05 26 21.7	+0.3
	4.1nm,0.3s,baz=139,slow=18,SNR=6.5						
CTA				Lg	Lg	05 26 57.2	
	6.9nm,0.3s,baz=44,slow=20,SNR=8.6						
	4.8nm,0.3s						
WRA	**Warramunga Arr**	**13.05**	**277**	Pn	Pn	05 28 38.7	-1.4
	0.1nm,0.3s,baz=98,slow=13,SNR=2.4						
WRA				Lg	Lg	05 32 26.6	
	baz=112,slow=28,SNR=2.4						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**13.21**	**260**	Pn	Pn	05 28 41.4	-0.8
	0.1nm,0.3s,baz=86,slow=14,SNR=1.4						
ASAR				Lg	Lg	05 32 33.4	
	0.1nm,0.3s,baz=73,slow=27,SNR=4.7						
	0.1nm,0.3s						
I22FR	**PORTLAGUERRE I**	**17.35**	**94**	I	I	07 02 40.0	
	baz=266,slow=321,SNR=2.9						

*SDD **26** 05:26:23.9±2.2, 18.50N×72.29W, h20km±23km, MD2.5, ML1.9, MW2.4, Presumed earthquake*
*OSPL **26** 05:26:26.5±0.9, 18.50N×72.13W, h24km±5km, ML1.9, Presumed earthquake*

ISC 26 05:26:23.7±2.9, 18.56N±0.06×72.2W±0.1, h31km±10km, n10, σ0.84/18, 4C-3D, Haiti region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIDR	**Jimani**	**0.34**	**102⇑**	*e*Pg	**Pb**	**05 26 31.9**	**0.0**
JIDR				⇑*e*Sg	**Sb**	**05 26 36.2**	**-1.1**
JIDR				IAML		05 26 37.0	
	comp=N,88nm,0.3s						
LONE3	**El Aguacate, B**	**0.71**	**86**	*i* P	**Pn**	**05 26 37.7**	**0.0**
LONE3				*e*S	**Sb**	**05 26 47.2**	**0.0**
LONE3				IAML		05 26 48.6	
	comp=Z,17nm,0.6s						
LODU1	**El Espartillar**	**0.72**	**107**	*i* P	**Pn**	**05 26 37.7**	**-0.1**
LODU1				*e*S	**Sn**	**05 26 47.4**	**-0.5**
LODU1				IAML		05 26 47.9	
	comp=Z,52nm,0.2s						
NEDR	**Neiba UASD**	**0.75**	**96⇓**	*e*Pg	**Pb**	**05 26 38.6**	**+0.3**
NEDR				*e*Sg	**Sb**	**05 26 49.3**	**+1.1**
NEDR				IAML		05 26 56.7	
	comp=N,28nm,0.3s						
LOBH	**Bahia de las A**	**0.88**	**142**	*i* P	**Pn**	**05 26 40.1**	**+0.2**
LOBH				*e*S	**Sn**	**05 26 50.8**	**-0.9**
LOBH				IAML		05 26 52.5	
	comp=Z,29nm,3.8s						
PODR	**Polo**	**0.96**	**114**	*e*Pg	**Pn**	**05 26 41.5**	**+0.3**
PODR				⇑*e*Sg	**Sb**	**05 26 54.7**	**+0.3**
PODR				IAML		05 27 04.3	
	comp=N,44nm,1.2s						
PODR	**Polo**	**0.96**	**114⇓**	*i* P	**Pn**	**05 26 41.5**	**+0.3**
PODR				IAML		05 26 56.2	
	comp=Z,243nm,0.1s						
SDDR	**Presa de Saban**	**0.96**	**64**	*i* P	**Pn**	**05 26 41.1**	**-0.1**

SDDR					*e*Sg		**Sb**	**05 26 56.0**	**+1.6**
REDR	**Restauracion**	**0.97**	**52**	⇓	*e*Pg		**Pn**	**05 26 41.8**	**+0.5**
REDR				⇑	*e*Sg		**Sn**	**05 26 52.5**	**-1.6**
REDR					IAML			05 26 57.5	
	comp=N,29nm,0.1s								
LOVI	**El Cajuil, Ovi**	**1.10**	**134**	*i*	P		**Pn**	**05 26 43.8**	**+0.8**
LOVI					IAML			05 26 58.5	
	comp=Z,51nm,1.1s								

*SDD **26** 05:31:43.7±2.5, 18˚.46N×71˚.45W, h14km±10km, MD3.2, ML1.9, MW2.7, Presumed earthquake*
*OSPL **26** 05:31:44.4±1.6, 18˚.38N×71˚.50W, h12km±4km, ML1.9, Presumed earthquake*
ISC 26 05:31:43.4±1.0, 18˚42N±0'.03×71˚47W±0'.04, h13km±6km, n11, σ1§11/22, 8C-1D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LODU1	**El Espartillar**	**0.06**	**184**	*i*	P	**Pg**	**05 31 45.8**	**-0.2**
LODU1				*e*	S	**Sg**	**05 31 48.1**	**+0.3**
LODU1					IAML		05 31 48.2	
	comp=Z,681nm,0.2s							
NEDR	**Neiba UASD**	**0.08**	**36**	*e*	Sg	**Sg**	**05 31 47.2**	**-0.9**
NEDR				⇓	*e*Pg	**Sg**	**05 31 47.3**	**-0.9**
NEDR					IAML		05 32 20.1	
	comp=N,733nm,3.9s							
LONE3	**El Aguacate, B**	**0.19**	**3**	*i*	P	**Pg**	**05 31 48.7**	**+0.9**
LONE3				*e*	S	**Sb**	**05 31 53.4**	**+0.9**
LONE3					IAML		05 31 54.2	
	comp=Z,168nm,0.4s							
PODR	**Polo**	**0.31**	**144**	⇑	*e*Pg	**Pg**	**05 31 49.4**	**-0.4**
PODR				⇑	*e*Sg	**Sg**	**05 31 54.7**	**+0.6**
PODR					IAML		05 31 55.2	
	comp=N,404nm,0.2s							
PODR	**Polo**	**0.31**	**144**	*i*	P	**Pg**	**05 31 49.4**	**-0.4**
PODR				*e*	S	**Sg**	**05 31 54.7**	**+0.6**
PODR					IAML		05 31 55.3	
	comp=Z,6µm,0.1s							
JIDR	**Jimani**	**0.37**	**282**	⇑	*e*Pg	**Pg**	**05 31 50.8**	**-0.1**
JIDR				⇑	*e*Sg	**Sg**	**05 31 55.4**	**-0.5**
JIDR					IAML		05 31 59.1	
	comp=N,68nm,0.5s							
LOBH	**Bahia de las A**	**0.57**	**196**	*i*	P	**Pg**	**05 31 53.8**	**-0.9**
LOBH				*e*	S	**Sg**	**05 32 01.8**	**-0.5**
LOBH					IAML		05 32 05.1	
	comp=Z,47nm,2.6s							
SDDR	**Presa de Saban**	**0.59**	**17**	⇑	*e*Pg	**Pg**	**05 31 54.6**	**-0.4**
SDDR				⇑	*e*Sg	**Sg**	**05 31 59.2**	**-3.7**
SDDR					IAML		05 32 11.6	
	comp=N,18nm,0.8s							
SDDR	**Presa de Saban**	**0.59**	**17**	*i*	P	**Pg**	**05 31 55.5**	**+0.6**
SDDR				*e*	S	**Sb**	**05 32 04.9**	**+0.9**
SDDR					IAML		05 32 07.5	
	comp=Z,207nm,0.3s							
LOVI	**El Cajuil, Ovi**	**0.62**	**171**	*i*	P	**Pg**	**05 31 54.6**	**-1.0**
LOVI				*e*	S	**Sg**	**05 32 04.2**	**+0.4**
LOVI					IAML		05 32 04.8	
	comp=Z,55nm,1.0s							
REDR	**Restauracion**	**0.75**	**5**	⇑	*e*Pg	**Pn**	**05 32 00.1**	**+0.3**
REDR				⇑	*e*Sg	**Sb**	**05 32 09.4**	**+0.8**
REDR					IAML		05 32 14.7	
	comp=N,59nm,0.1s							

*THR **26** 05:39:10.6±2.7, 38˚.93N×43˚.60E, h10km, ML4.6, Presumed earthquake*
*ISK **26** 05:39:15.0, 38˚.10N×44˚.79E, h9km, ML4.5/10*
*AZER **26** 05:39:15.3, 38˚.44N×44˚.53E, h5km, ml4.6*
*TIF **26** 05:39:16.8, 38˚.41N×44˚.49E, h1km±1km*
*NSSP **26** 05:39:16.3, 38˚.38N×44˚.65E, h10km, Ms4.3*
*AFAD **26** 05:39:16.0, 38˚.45N×44˚.69E, h7km±5km, MW4.4*
*TEH **26** 05:39:17.6, 38˚.44N×44˚.56E, h6km, ML4.3, Presumed earthquake*
*IDC **26** 05:39:18.8±0.7, 38˚.48N×44˚.55E, h0km, mb4.1/21, mbtmp4.2/30, ML3.3/8, MS3.7/16, Error ellipse: s-maj=13.9km s-min=9.7km az=157.0*
*MOS **26** 05:39:19.4±1.3, 38˚.39N×44˚.45E, h16km, mb4.6/30, Error ellipse: s-maj=6.7km s-min=4.0km az=98.6*
*NEIC **26** 05:39:20.9±1.3, 38˚.46N±0'.05×44˚.41E±0'.08, h10km±1km, mb4.4/51, Error ellipse: s-maj=10.4km s-min=7.6km az=252.0*
*MCSM **26** 05:39:20.6±3.2, 38˚N±7'×4˚4E±˚, h9km±25km, mb4.4, mB5.2, MLv4.5, Mw(mB)4.6*
*GII **26** 05:39:59.6±0.0, 38˚.227N±0'.003×44˚.369E±0'.001, h0km, Mws4.4, confirmed*
ISC 26 05:39:18.6±0.9, 38˚42N±0'.02×44˚56E±0'.02, h2km±6km, n389, σ2§09/426, mb4.4/63, MS3.6/11, 27C-11D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.50**	**299**	P		**Pg**	**05 39 27.4**	**-1.0**
OZAP				S		**Sb**	**05 39 36.1**	**-2.2**
OZAP					IAML		05 39 40.0	
	comp=E,3µm,0.7s							
OZAP					IAML		05 39 44.0	
	comp=N,3µm,0.7s							
OZAP	**Van, Ozalp-Mer**	**0.50**	**299**	Pg		**Pg**	**05 39 27.3**	**-1.0**
ISHB	**Shabestar**	**0.84**	**99**	Pg		**Pg**	**05 39 33.3**	**-1.6**
YOVA	**Hakkari_Yksek**	**0.86**	**194**	P		**Pg**	**05 39 34.5**	**-0.6**
YOVA				S		**Sb**	**05 39 47.4**	**-1.0**
YOVA					IAML		05 39 52.0	
	comp=N,6µm,1.2s							
YOVA					IAML		05 39 52.0	
	comp=E,4µm,0.6s							
YOVA	**Hakkari_Yksek**	**0.86**	**194**	Pg		**Pg**	**05 39 34.4**	**-0.6**
TVAN	**Van**	**0.91**	**277**	P		**Pg**	**05 39 34.4**	**-1.7**
TVAN					IAML		05 40 01.0	
	comp=E,9µm,1.4s							
TVAN					IAML		05 40 09.0	
	comp=N,1µm,2.3s							
VANB	**Van**	**0.93**	**281**	Pg		**Pg**	**05 39 34.9**	**-1.6**
MAKU	**Maku**	**0.94**	**6**	Pg		**Pg**	**05 39 34.8**	**-1.9**
VMUR	**Van-Muradiye**	**0.96**	**307**	P		**Pb**	**05 39 36.2**	**-2.0**
VMUR				S		**Sn**	**05 39 51.6**	**-2.1**
VMUR					IAML		05 39 55.0	
	comp=E,5µm,0.6s							
VMUR					IAML		05 40 17.0	
	comp=N,3µm,1.1s							
VMUR	**Van-Muradiye**	**0.96**	**307**	Pg		**Pb**	**05 39 36.1**	**-2.0**
NAX	**Nakhchivan**	**1.05**	**44**	P		**Pb**	**05 39 38.2**	**-1.5**
NAX				S		**Sn**	**05 39 55.1**	**-0.8**
HAKT	**HAKKARI**	**1.09**	**218**	P		**Pg**	**05 39 37.9**	**-1.6**
HAKT				S		**Sn**	**05 39 58.2**	**+1.2**
HAKT					IAML		05 40 06.0	
	comp=E,9µm,0.8s							
HAKT					IAML		05 40 15.0	
	comp=N,4µm,0.9s							
HAKT	**HAKKARI**	**1.09**	**218**	Pg		**Pg**	**05 39 37.9**	**-1.6**
HAKT	**HAKKARI**	**1.09**	**218**	P		**Pg**	**05 39 38.1**	**-1.4**
HAKT				S		**Sn**	**05 39 56.0**	**-1.0**
ERCV	**ERCIS-VAN**	**1.13**	**303**	Pn		**Pn**	**05 39 42.4**	**+0.8**
GEVA	**Gevas**	**1.18**	**265**	Pn		**Pg**	**05 39 38.3**	**-2.9**
GEVA	**Gevas**	**1.18**	**265**	P		**Pg**	**05 39 38.5**	**-2.8**
GEVA				S		**Sn**	**05 39 59.5**	**+0.4**
GEVA					IAML		05 40 04.0	
	comp=N,4µm,0.5s							
GEVA					IAML		05 40 04.0	
	comp=E,3µm,0.6s							
ORD	**Ordubad**	**1.23**	**65**	P		**Pn**	**05 39 41.3**	**-1.7**
ORD				P		**Pb**	**05 39 41.4**	**-1.4**
AKDM	**Akdamar-Van**	**1.24**	**266**	Pn		**Pg**	**05 39 41.2**	**-1.2**
SBZ	**Shahbuz**	**1.25**	**38**	P		**Pn**	**05 39 41.1**	**-2.2**
SBZ				S		**Sn**	**05 39 59.5**	**-1.3**
ITBZ	**Tabriz**	**1.27**	**98**	Pg		**Pn**	**05 39 41.1**	**-2.4**
DYDN	**Diyadin**	**1.31**	**329**	P		**Pn**	**05 39 41.5**	**-2.7**
DYDN				S		**Sn**	**05 40 05.5**	**+3.1**
DYDN					IAML		05 40 07.0	
	comp=E,5µm,0.7s							
DYDN					IAML		05 40 08.0	
	comp=N,6µm,0.9s							
HYR	**Heyderabad**	**1.32**	**10**	P		**Pb**	**05 39 42.3**	**-1.9**
HYR				S		**Sn**	**05 40 04.0**	**+1.5**
IAZR	**Azarshahr**	**1.35**	**123**	Pg		**Pb**	**05 39 43.5**	**-1.3**
VAYK	**Vayk**	**1.44**	**28**	⇓	*e*P	**Pb**	**05 39 44.5**	**-1.8**
VAYK				⇓	*e*S	**Sg**	**05 40 05.5**	**+0.5**
ADCV	**BITLIS_Adilcev**	**1.49**	**286**	P		**Pb**	**05 39 45.0**	**-2.1**
ADCV				S		**Sg**	**05 40 09.6**	**+3.3**
ADCV					IAML		05 40 12.0	
	comp=N,2µm,0.7s							
ADCV					IAML		05 40 15.0	
	comp=E,2µm,1.2s							
IGDI	**IGDIR**	**1.49**	**346**	P		**Pb**	**05 39 45.1**	**-2.1**
IGDI				S		**Sg**	**05 40 10.6**	**+3.9**
IGDI					IAML		05 40 11.0	
	comp=N,2µm,1.2s							
IGDI					IAML		05 40 11.0	
	comp=E,3µm,1.0s							
IGDI	**IGDIR**	**1.49**	**346**	P		**Pg**	**05 39 45.7**	**-1.5**
IGDI				S		**Sg**	**05 40 10.6**	**+3.9**
ALVK	**Alvank**	**1.50**	**69**	*e*P		**Pn**	**05 39 45.3**	**-1.4**
ALVK				*e*S		**Sg**	**05 40 05.9**	**-0.8**
PERV	**Siirt/Pervari-**	**1.66**	**254**	P		**Pb**	**05 39 47.9**	**-2.1**
PERV				S		**Sg**	**05 40 15.3**	**+3.5**
PERV					IAML		05 40 25.0	
	comp=N,6µm,0.8s							
PERV					IAML		05 40 25.0	
	comp=E,7µm,1.0s							
AGRB	**Hanur-Agry**	**1.68**	**314**	Pn		**Pg**	**05 39 50.4**	**-0.4**
AGRB				Sn		**Sg**	**05 40 16.2**	**+3.6**
DORK	**Agr/Tutak/Do**	**1.69**	**305**	P		**Pb**	**05 39 48.7**	**-1.9**
DORK				S		**Sg**	**05 40 14.1**	**+1.2**
DORK					IAML		05 40 21.0	
	comp=E,2µm,0.9s							
DORK					IAML		05 40 36.0	
	comp=N,2µm,0.9s							
MLAZ	**Malazgirt-MUS**	**1.73**	**295**	Pn		**Pg**	**05 39 50.5**	**-1.2**
MLAZ				Sn		**Sg**	**05 40 16.4**	**+2.3**
GNI	**Garni**	**1.73**	**5**	Pn		**Pg**	**05 39 50.1**	**-1.7**
	134nm,0.3s,baz=262,slow=2.1,SNR=386							
GNI				Sn		**Sg**	**05 40 16.6**	**+2.2**
	144nm,0.3s,baz=319,slow=19,SNR=9.9							
GNI	**Garni**	**1.73**	**5**	P		**Pb**	**05 39 49.7**	**-1.6**
GNI	**Garni**	**1.73**	**5**	Pn		**Pg**	**05 39 50.6**	**-1.3**
GNI				Sn		**Sg**	**05 40 16.4**	**+2.0**
GNI	**Garni**	**1.73**	**5**	⇓	*i*P	**Pb**	**05 39 49.8**	**-1.6**
GNI				⇑	*i*S	**Sg**	**05 40 15.0**	**+0.6**
GNI	**Garni**	**1.73**	**5**	*d*	*i*PN	**Pb**	**05 39 49.5**	**-1.8**
GNI					pmax	pmax		
	comp=Z,3µm,0.8s							
GNI	**Garni**	**1.73**	**5**	P		**Pg**	**05 39 51.0**	**-0.9**
GNI				S		**Sg**	**05 40 16.9**	**+2.5**
GNI	**Garni**	**1.73**	**5**	P		**Pg**	**05 39 50.8**	**-1.1**
KOTA	**Agri, Merkez-K**	**1.73**	**323**	P		**Pg**	**05 39 49.8**	**-2.1**
KOTA				S		**Sg**	**05 40 16.1**	**+1.7**
KOTA					IAML		05 40 21.0	
	comp=Z,1µm,1.6s							
KOTA					IAML		05 40 22.0	
	comp=Z,1µm,1.3s							
EGVZ	**Egvard**	**1.75**	**62**	*e*P		**Pb**	**05 39 49.9**	**-1.7**
EGVZ				*e*S		**Sg**	**05 40 13.2**	**-1.6**
GRS	**Goris**	**1.76**	**52**	⇓	*i*P	**Pn**	**05 39 46.0**	**-4.3**
GRS				⇑	*i*S	**Sn**	**05 40 10.0**	**-3.3**
VNNZ	**Vanand**	**1.77**	**342**	*e*P		**Pg**	**05 39 52.1**	**-0.6**
VNNZ				*e*S		**Sg**	**05 40 17.4**	**+1.7**
MAHB	**Mahabad**	**1.89**	**151**	Pn		**Pb**	**05 39 52.7**	**-1.1**
ARUZ	**Aruch**	**1.90**	**349**	*e*P		**Pb**	**05 39 52.4**	**-1.7**
ARUZ				*e*S		**Sg**	**05 40 18.8**	**-0.8**
KAPZ	**Kaputan**	**1.90**	**3**	*e*P		**Pb**	**05 39 52.9**	**-1.4**
KAPZ				*e*S		**Sg**	**05 40 18.9**	**-0.9**
BLIS	**Bitlis-Merkez**	**1.92**	**271**	P		**Pb**	**05 39 52.1**	**-2.3**
BLIS				S		**Sg**	**05 40 22.6**	**+2.4**
BLIS					IAML		05 40 30.0	
	comp=Z,2µm,0.8s							
BLIS					IAML		05 40 32.0	
	comp=Z,1µm,1.0s							
AYRK	**Ayrk**	**1.94**	**29**	*e*P		**Pb**	**05 39 53.4**	**-1.5**
AYRK				*e*S		**Sg**	**05 40 19.8**	**-1.4**
IHRS	**Heris**	**1.96**	**92**	Pn		**Pb**	**05 39 53.4**	**-1.8**
AMBZ	**Amberd**	**1.98**	**353**	*e*P		**Pb**	**05 39 54.0**	**-1.6**
AMBZ				*e*S		**Sg**	**05 40 20.4**	**-1.8**
SRSL	**SARDASHT**	**2.31**	**162**	*e*Pn		**Pb**	**05 40 00.1**	**-1.1**
SRSL					IAML		05 40 26.1	
	comp=Z,1µm,1.0s							
QRD	**Qoradiz**	**2.39**	**63**	P		**Pn**	**05 39 57.6**	**-1.3**
QRD				S		**Sb**	**05 40 29.9**	**-2.6**
IHSH	**Hashtrud**	**2.41**	**117**	Pn		**Pb**	**05 40 00.1**	**-2.9**
GDB	**GEDABAY**	**2.48**	**22**	P		**Pn**	**05 39 59.4**	**-0.8**
GDB				S		**Sb**	**05 40 31.8**	**-3.3**
KARS	**Kars**	**2.48**	**333**			**Pb**	**05 40 00.4**	**-3.7**
KARS	**Kars**	**2.48**	**333**	Pn		**Pb**	**05 40 01.8**	**-2.3**
KARS	**Kars**	**2.48**	**333**	PN		**Pb**	**05 40 00.4**	**-3.7**
ISRB	**Sarab**	**2.52**	**103**	Pn		**Pn**	**05 40 01.4**	**+0.5**
VRTB	**Varto-Mus**	**2.53**	**288**	Pn		**Pb**	**05 40 01.6**	**-3.3**
LSVT	**Lusahovit**	**2.54**	**11**	*e*P		**Pb**	**05 40 02.4**	**-2.6**
LSVT				*e*S		**Sb**	**05 40 36.3**	**-0.6**
AGDM	**Agdam**	**2.60**	**49**	P		**Pn**	**05 40 00.6**	**-1.2**
AGDM				S		**Sb**	**05 40 35.0**	**-3.5**
GANJ	**Ganja**	**2.61**	**31**	P		**Pn**	**05 40 01.4**	**-0.5**
GANJ				S		**Sb**	**05 40 35.4**	**-3.3**
SRTK	**Saratovka**	**2.65**	**356**	*e*P		**Pb**	**05 40 03.6**	**-3.3**
SRTK				*e*S		**Sb**	**05 40 37.7**	**-2.3**
BLQ	**Beylaqan**	**2.67**	**60**	P		**Pn**	**05 40 01.9**	**-0.9**
BLQ				S		**Sb**	**05 40 37.6**	**-2.9**
QZX	**Qazax, Azerbai**	**2.71**	**13**	P		**Pn**	**05 40 02.6**	**-0.7**
QZX				S		**Sb**	**05 40 37.7**	**-3.9**
SENK	**Senkaya-Erzuru**	**2.74**	**322**	Pn		**Pb**	**05 40 05.6**	**-2.8**
BRDA	**Brd**	**2.74**	**47**	P		**Pn**	**05 40 03.2**	**-0.5**
BRDA				S		**Sb**	**05 40 40.3**	**-2.2**
KARO	**Karliova-Bingo**	**2.88**	**289**	Pn		**Pb**	**05 40 06.5**	**-4.3**
YRD	**Yardimli**	**2.93**	**79**	P		**Pn**	**05 40 05.9**	**-0.5**
YRD				S		**Sb**	**05 40 45.0**	**-3.0**
BGD	**Bogdanovka**	**2.94**	**346**	P		**Pb**	**05 40 09.7**	**-2.1**
KZRT	**Kazreti**	**2.97**	**358**	P		**Pb**	**05 40 09.7**	**-2.6**
LRK	**Lerik**	**2.98**	**85**	P		**Pn**	**05 40 06.5**	**-0.5**
LRK				S		**Sb**	**05 40 44.9**	**-4.5**
ZRD	**Zardab**	**3.06**	**52**	P		**Pn**	**05 40 07.6**	**-0.4**
ZRD				S		**Sb**	**05 40 47.5**	**-4.0**
MNGR	**Mingechevir, A**	**3.06**	**39**	P		**Pn**	**05 40 07.5**	**-0.5**
MNGR				S		**Sb**	**05 40 46.1**	**-5.4**
BNGB	**Bingl**	**3.09**	**282**	Pn		**Pn**	**05 40 09.1**	**+0.6**
DGRG	**David-gareji**	**3.09**	**11**	P		**Pb**	**05 40 10.7**	**-3.7**
DGRG				S		**Sg**	**05 41 00.7**	**+2.7**
AKH	**Akhalkalaki**	**3.10**	**345**	P		**Pg**	**05 40 14.8**	**-3.2**
GLBA	**Clilabad**	**3.11**	**73**	P		**Pn**	**05 40 08.3**	**-0.4**
GLBA				S		**Sb**	**05 40 49.3**	**-3.7**
TRLG	**Trialeti**	**3.14**	**354**	P		**Pn**	**05 40 10.1**	**+0.8**
VSHL	**Vashlovani**	**3.15**	**26**	P		**Pb**	**05 40 11.6**	**-3.7**
VSHL				S		**Sg**	**05 40 59.8**	**+0.1**
MARD	**Mardin**	**3.19**	**251**			**Pn**	**05 40 10.9**	**+0.9**
DDFL	**Dedoflistskaro**	**3.25**	**21**	P		**Pb**	**05 40 14.3**	**-2.9**
TBLG	**Delisi**	**3.31**	**2**	P		**Pn**	**05 40 12.7**	**+1.2**
LKRN	**Lenkeran, Azer**	**3.32**	**84**	P		**Pn**	**05 40 11.8**	**+0.2**
LKRN				S		**Sb**	**05 40 55.1**	**-4.1**
ASTR	**Astara**	**3.33**	**86**	P		**Pn**	**05 40 12.0**	**+0.3**
ASTR				S		**Sb**	**05 40 55.5**	**-3.8**
SAAT	**Saatly**	**3.33**	**63**	P		**Pn**	**05 40 11.6**	**-0.2**
SAAT				S		**Sn**	**05 40 53.1**	**+1.1**
KDMR	**Kurdemir**	**3.42**	**54**	P		**Pn**	**05 40 12.7**	**-0.4**
KDMR				S		**Sb**	**05 40 56.4**	**-5.7**
SEKA	**Sheki**	**3.45**	**35**	P		**Pn**	**05 40 13.8**	**+0.3**
SEKA				S		**Sb**	**05 40 58.7**	**-4.3**
QBL	**Gabala**	**3.58**	**44**	P		**Pn**	**05 40 15.2**	**0.0**
QBL				S		**Sb**	**05 41 00.2**	**-6.3**
ZKTA	**Zakatala**	**3.58**	**26**	P		**Pn**	**05 40 15.4**	**+0.1**
ZKTA				S		**Sb**	**05 41 00.7**	**-6.0**
LGD	**Lagodekhi**	**3.65**	**20**	P		**Pn**	**05 40 17.8**	**+1.7**
LGD				S		**Sg**	**05 41 13.5**	**-2.3**
IML	**Ismayilli**	**3.67**	**49**	P		**Pn**	**05 40 16.7**	**+0.2**
IML				S		**Sb**	**05 41 03.5**	**-5.8**
ZNJK	**Zanjan**	**3.72**	**117**	*e*Pn		**Pn**	**05 40 18.9**	**+1.6**
ZNJK					IAML		05 40 46.8	
	comp=Z,4.1nm,1.0s							
ALIG	**Mtskhetisjvari**	**3.75**	**350**	P		Pb	05 40 20.5	-5.1
ALIG				S		**Sg**	**05 41 20.9**	**+2.0**
ALIB	**&Aumlli-Bayram**	**3.78**	**65**	P		**Pn**	**05 40 18.4**	**+0.4**
ALIB				S		**Sn**	**05 41 05.2**	**+2.1**
XNQ	**Khinaliq**	**3.90**	**44**	P		**Pn**	**05 40 20.1**	**+0.3**
XNQ				S		**Sn**	**05 41 07.0**	**+0.8**
AKT	**Akhty**	**3.91**	**38**	*e*PN		**Pb**	**05 40 26.9**	**-1.5**
AKT				*e*			05 40 32.5	
AKT				*e*			05 40 37.8	
AKT				*e*S		**Sb**	**05 41 12.8**	**-3.4**
AKT				*e*			05 41 26.1	
AKT				*e*			05 41 36.2	
AKT					pmax	pmax		
	comp=Z,119nm,0.7s							
AKT					smax	smax		
	comp=E,270nm,0.8s							
AKT					smax	smax		
	comp=E,220nm,0.7s							
AKT					smax	smax		
	comp=N,134nm,1.0s							
AKT					MLR	MLR		
	comp=Z,2µm,4.0s							
PQL	**Pirkuli**	**3.92**	**52**	P		**Pn**	**05 40 20.2**	**+0.2**
PQL				S		**Sn**	**05 41 07.6**	**+1.0**
CHRG	**Chargali**	**3.92**	**4**	P		**Pn**	**05 40 21.6**	**+1.6**
CHRG				S		**Sg**	**05 41 21.4**	**-3.1**
GBS	**Qobustan**	**4.00**	**57**	P		**Pn**	**05 40 21.5**	**+0.4**
GBS				S		**Sn**	**05 41 09.8**	**+1.3**
ATGJ	**Altiaghaj**	**4.17**	**53**	P		**Pn**	**05 40 24.0**	**+0.6**
ATGJ				S		**Sn**	**05 41 13.2**	**+0.4**
QSAR	**Qusar**	**4.20**	**41**	P		**Pn**	**05 40 24.4**	**+0.5**
QSAR				S		**Sn**	**05 41 14.4**	**+0.8**
QUBA	**Quba, Azerbaij**	**4.21**	**45**	P		**Pn**	**05 40 24.8**	**+0.8**
QUBA				S		**Sn**	**05 41 15.4**	**+1.6**
SHTL	**Shatili**	**4.26**	**6**	P		**Pb**	**05 40 34.1**	**-0.2**
SIZA	**Siyzn**	**4.27**	**50**	P		**Pn**	**05 40 25.5**	**+0.7**
SIZA				S		**Sn**	**05 41 17.3**	**+2.0**
GLG1	**Gilan-e-Gharb**	**4.43**	**165**	Pn		**Pn**	**05 40 27.7**	**+0.7**
GIDE	**GILAN DEYLAMAN**	**4.50**	**108**	*e*Pn		**Pn**	**05 40 30.4**	**+2.3**
GIDE					IAML		05 42 10.3	
	comp=E,650nm,1.0s							
ARPR	**Arapgir-MALATY**	**4.91**	**280**	Pn		**Pn**	**05 40 32.1**	**-1.5**
MAK	**Makhachkala**	**5.06**	**25**	*d*	iPN	**Pn**	**05 40 34.5**	**-1.0**
MAK					pmax	pmax		
	comp=Z,28nm,0.4s							
MAK					MLR	MLR		
	comp=Z,856nm,7.0s							
NCK	**Nalchik**	**5.12**	**352**	⇑	*e*PN	**Pn**	**05 40 38.9**	**+2.5**
KBZ	**Khabaz**	**5.45**	**347**		Pn	Pn	05 40 44.0	+3.2
	comp=Z,0.1nm,0.3s,baz=159,slow=10,SNR=13							
KBZ					LR	LR	05 43 07.7	
	comp=Z,1µm,20.4s,baz=161,slow=42 comp=Z,4.5nm,0.8s							
KBZ	**Khabaz**	**5.45**	**347**	⇑	*i*P	**Pn**	**05 40 42.9**	**+2.0**
SHA1	**Shidzhatmaz**	**5.50**	**345**	⇑	*i*P	**Pn**	**05 40 44.3**	**+2.4**
KIV	**Kislovodsk**	**5.71**	**346**	Pn		**Pn**	**05 40 44.9**	**+0.4**
KIV	**Kislovodsk**	**5.71**	**346**	*e*P		**Pn**	**05 40 46.9**	**+2.4**
KIV					pmax	pmax		
	comp=Z,28nm,1.1s							
KIV					MLR	MLR		
	comp=Z,271nm,10.0s							
KIV	**Kislovodsk**	**5.71**	**346**	P		**Pn**	**05 40 45.0**	**+0.5**
	comp=Z,0.2nmcomp=Z,497nmcomp=Z,43nm,1.0s							
GAZ	**Gaziantep**	**5.95**	**260**	Pn		**Pn**	**05 40 48.4**	**+0.5**
SOC	**Sochi**	**6.33**	**326**	*e*P		**Pn**	**05 40 54.5**	**+1.6**
SOC				*e*S		**Sn**	**05 42 06.2**	**+0.5**
SOC					pmax	pmax		
	comp=Z,22nm,0.8s							
SOC					MLR	MLR		
	comp=Z,634nm,13.0s							
GOF	**Gofitskoye**	**6.73**	**351**	*c*	eP	Pn	05 41 02.1	+3.6
GOF				*e*	S	**Sn**	**05 42 16.6**	**+0.9**
BNN	**Bunyan**	**6.83**	**276**	Pn		**Pn**	**05 41 01.0**	**+1.0**
GTMR	**Gotvand**	**7.00**	**147**	*e*Pn		Pn	05 41 05.7	+3.4
GTMR					IAML		05 43 26.2	
	comp=Z,72nm,1.0s							
BR131	**Keskin Array S**	**8.59**	**282**	Pn		**Pn**	**05 41 20.5**	**-3.7**
BR131	**Keskin Array S**	**8.59**	**282**	P		**Pn**	**05 41 20.5**	**-3.7**
BRTR	**Keskin Array B**	**8.59**	**282**	Pn		Pn	05 41 27.3	+3.1
	comp=Z,0.1nm,0.3s,baz=120,slow=12,SNR=6.0							
BRTR					LR	LR	05 45 20.0	
	comp=Z,508nm,18.6s,baz=16,slow=42 comp=Z,0.7nm,0.4s							
BRTR	**Keskin Array B**	**8.59**	**282**	Pn		**Pn**	**05 41 22.6**	**-1.5**
ASF	**Jabal al Asfar**	**8.83**	**227**	Pn		**Pn**	**05 41 27.5**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=39,slow=11,SNR=10							
ASF					Lg	Lg	05 44 05.8	
	comp=Z,0.3nm,0.3s,baz=33,slow=22,SNR=6.0							
ASF					LR	LR	05 45 36.2	
	comp=Z,258nm,19.2s,baz=37,slow=43 comp=Z,3.6nm,0.5s							
KSHT	**Keshet**	**8.94**	**235**	P		**Pg**	**05 42 07.2**	**-2.7**
KSHT				S		Sg	05 43 46.8	-19
MRVT	**Maraveh tapeh**	**9.13**	**91**	*e*Pn		**Pn**	**05 41 32.1**	**+0.6**
MMA0B	**Mount Meron ar**	**9.19**	**237**	P		Pn	05 42 10.1	+38
MMAI	**Mount Meron Ar**	**9.19**	**237**	Pn		**Pn**	**05 41 33.3**	**+1.0**
	comp=Z,1.3nm,0.3s,baz=65,slow=16,SNR=10							
MMAI					LR	LR	05 45 42.1	
	comp=Z,921nm,18.0s,baz=54,slow=42 comp=Z,3.9nm,0.6s

AK01 Malin Array Si 16.39 323 P **P** 05 43 09.7 -3.0
AKASG Malin Array Be 16.39 323 Pn **P** 05 43 10.1 -2.7
comp=Z,0.4nm,0.3s,baz=135,slow=12,SNR=35
AKASG LR LR 05 51 12.4
comp=Z,205nm,18.5s,baz=139,slow=44
comp=Z,22nm,1.1s
AKASG Malin Array Be 16.39 323 **P** 05 43 10.0 -2.7
AKASG Malin Array Be 16.39 323 P **P** 05 43 10.0 -2.7
AKASG pmax pmax
comp=Z,11nm,1.3s
AKBB Malin Array Si 16.39 323 **P** 05 43 09.7 -3.0
AKBB IAmb IAmb 05 43 12.3
comp=Z,26nm,1.1s
AKBB Malin Array Si 16.39 323⇑ *e*P **P** 05 43 09.6 -3.1
AKBB pmax pmax
comp=Z,52nm,1.5s
AKBB Malin Array Si 16.39 323 P **P** 05 43 09.7 -3.0
KIEV Kiev 16.40 323 ⇑P **P** 05 43 11.0 -1.7
KIEV Kiev 16.40 323 **P** 05 43 09.7 -3.0
KIEV Kiev 16.40 323 P **P** 05 43 09.7 -3.0
KIEV pmax pmax
comp=Z,23nm,1.1s
KIEV Kiev 16.40 323 P **P** 05 43 09.7 -3.0
comp=Z,109nm,1.4s
AK14 Malin Array Si 16.40 323 P **P** 05 43 09.8 -3.0
AK11 Malin Array Si 16.41 323 P **P** 05 43 09.9 -2.9
AK13 Malin Array Si 16.41 323 P **P** 05 43 10.0 -2.9
AK03 Malin Array Si 16.41 323 P **P** 05 43 10.0 -2.9
AK16 Malin Array Si 16.43 323 P **P** 05 43 10.2 -2.9
MDH Madha 16.43 139 P **P** 05 43 16.0 +2.7
SNR=5.9
AK04 Malin Array Si 16.44 323 P **P** 05 43 10.3 -2.9
AK15 Malin Array Si 16.44 323 P **P** 05 43 10.3 -2.9
ASUD Al Ashush, Dub 16.52 143 P **P** 05 43 16.5 +2.3
SNR=5.4
ASUD S **S** 05 46 26.1 -1.5
AK21 Malin Array Si 16.53 323 P **P** 05 43 11.7 -2.5
FAQ Al Faqa, Dubai 16.54 142 P **P** 05 43 17.9 +3.4
SNR=5.5
FAQ S **S** 05 46 30.8 +2.7
KMPD K-Podol'skiy 16.55 314 P **P** 05 43 11.8 -2.6
KMPD P pP 05 43 12.3 -3.2
LUBAR Lubar, Ukraine 16.61 319 P **P** 05 43 12.7 -2.4
UOSS Minazif 16.67 140 **P** 05 43 17.0 +1.0
HATD Hatta, Dubai 16.74 141 P **P** 05 43 18.0 +1.3
SNR=9.7
HATD P **P** 05 43 18.0 +1.3
SNR=9.7
ASHO Ashiyiah 16.82 141 P **P** 05 43 18.7 +1.0
SNR=10.0
BURAR Bucovina Array 16.83 309 P **P** 05 43 16.7 -1.0
BURAR IAmb IAmb 05 43 20.8
comp=Z,20nm,0.8s
BUR08 Bucovina Ar. S 16.85 309 P **P** 05 43 18.2 +0.3
MI29 MI29, Kamyanyy 16.87 321 P **P** 05 43 16.0 -2.0
MI30 MI30,Zelenitsa 16.92 322 P **P** 05 43 15.7 -2.8
comp=Z,29nm,0.8s
MZR Muzera 17.16 151 P **P** 05 43 21.7 +0.3
SNR=7.1
SOHO SOHO 17.51 141 P **P** 05 43 27.2 +2.0
OBN Obninsk 17.55 345 P **P** 05 43 24.1 -1.4
comp=Z,28nm,0.4s,baz=173,slow=22,SNR=9.5
OBN LR LR 05 51 32.0
comp=Z,128nm,18.5s,baz=150,slow=42
OBN Obninsk 17.55 345 **P** 05 43 24.1 -1.4
OBN Obninsk 17.55 345⇓ *e*P **P** 05 43 23.7 -1.8
OBN pmax pmax
comp=Z,83nm,1.1s
OBN MLR MLR
comp=Z,334nm,16.0s
MOS Moscow 17.94 347 *e*P **P** 05 43 27.8 -2.0
MOS pmax pmax
comp=Z,200nm,1.3s
MOS pmax pmax
comp=Z,124nm,1.1s
HOQ Hoqain 18.36 140 P P 05 43 40.3 +5.6
SRVN Saravan 18.54 121 *e*Pn **Pn** 05 43 38.2 +1.3
BIDO Bidbid 18.83 138 P **Pn** 05 43 43.2 +2.9
BSY Bisya 19.01 142 P **Pn** 05 43 42.8 +0.3
SNR=5.7
SMDO Samad 19.17 139 P **Pn** 05 43 45.7 +1.2
SNR=11
SMDO P **Pn** 05 43 45.7 +1.2
SNR=11
WSAR Wadi Sarin 19.33 137 P **Pn** 05 43 50.0 +3.7
MNK Minsk 19.68 330 *i* P **Pn** 05 43 48.7 -1.5
comp=E,30nm,0.8s
MNK *i* P **Pn** 05 43 48.7 -1.5
comp=N,20nm,0.8s
MNK *i* P **Pn** 05 43 48.7 -1.5
comp=Z,22nm,0.9s,baz=138
MNK *i* PP **PnPn** 05 44 03.4 -0.2
MNK *i* PPP PPP 05 44 11.2
MNK *i* S **Sn** 05 47 29.9 -1.7
MNK *i* SS **SnSn** 05 47 46.4 +0.6
MNK *i* SSS SSS 05 47 59.4
MNK *i* LQ LQ 05 49 42.5
MNK *i* LR LR 05 51 18.7
MNK *i* LRM MLR 05 52 30.9
comp=E,95nm,15.0s
MNK *i* LRM MLR 05 52 35.6
comp=N,114nm,16.4s
MNK *i* LRM MLR 05 52 35.6
comp=Z,176nm,17.6s
MNK Minsk 19.68 330 *i* P **Pn** 05 43 48.7 -1.5
MNK *i* S **Sn** 05 47 29.9 -1.7
MNK pmax pmax
comp=E,30nm,0.8s
MNK pmax pmax
comp=N,20nm,0.8s
MNK pmax pmax
comp=Z,22nm,0.9s
MNK MLR MLR
comp=E,95nm,15.0s
MNK MLR MLR
comp=Z,176nm,18.0s
MNK MLR MLR
comp=N,114nm,16.0s
JMDO Jabal Madar 19.77 140 P **Pn** 05 43 51.8 +0.2
WBK Wadi Bani Khal 20.02 138 P Pn 05 43 57.1 +2.5
WBK P Pn 05 43 57.1 +2.5
KBL Kabul 20.05 94 P Pn 05 43 55.6 +0.6
KBL Kabul 20.05 94 P Pn 05 43 55.6 +0.6
KBL pmax pmax
comp=Z,16nm,1.2s
KBL Kabul 20.05 94 P Pn 05 43 57.4 +2.3
SNR=7.3
KBL P Pn 05 43 57.4 +2.3
SNR=7.3
KK31 Karatay Array 20.18 68 Pn 05 43 55.9 -0.4
KK31 IAmb IAmb 05 44 02.4
comp=Z,19nm,0.9s
KK31 Karatay Array 20.18 68 P Pn 05 43 55.9 -0.4
KK31 pmax pmax
comp=Z,19nm,1.0s
KKAR Karatay Array 20.18 68 Pn 05 43 55.9 -0.4
KKAR Karatay Array 20.18 68 P Pn 05 43 55.9 -0.4
ARTI Arti 20.20 23 P Pn 05 43 54.2 -2.2
comp=Z,15nm,0.8s,baz=222,slow=6.5,SNR=10.0
comp=Z,15nm,0.8s
ARTI Arti 20.20 23 Pn 05 43 55.6 -0.7
ARTI Arti 20.20 23*d i*P Pn 05 43 56.7 +0.3
ARTI 05 44 12.5
ARTI S Sn 05 47 45.3 +1.3
ARTI SS **SnSn** 05 48 03.5 +5.1
ARTI pmax pmax
comp=Z,29nm,1.0s
PSZ Piszkesteto 20.26 306 ⇑P Pn 05 43 57.8 +0.5
PSZ Piszkesteto 20.26 306 P Pn 05 43 54.7 -2.6
PSZ IAmb IAmb 05 44 03.8
comp=Z,22nm,1.2s
PSZ Piszkesteto 20.26 306 P Pn 05 43 54.7 -2.6
PSZ pmax pmax
comp=Z,21nm,1.2s
PSZ Piszkesteto 20.26 306 *e*P Pn 05 43 56.6 -0.7
BTK Batken 20.39 77 Pn 05 43 58.7 -0.1
BTK Batken 20.39 77 P Pn 05 43 58.7 -0.1
BTK pmax pmax
comp=Z,11nm,0.9s
NACGM Naroch 20.41 330 *e*P Pn 05 43 56.1 -2.7
comp=Z,6.0nm,0.5s,baz=136
KIRV Kirov 20.43 7 LR LR 05 52 53.0
comp=Z,264nm,19.1s,baz=197,slow=40
KIRV Kirov 20.43 7*ce*P Pn 05 43 57.3 -1.7
JLN Jalan Bani Buh 20.63 138 P Pn 05 44 00.2 -1.5

MHTO MHTO 20.88 143 P Pn 05 44 04.8 +0.3
SNR=6.2
OJC Ojcow 21.17 312 P **P** 05 44 06.2 +1.1
OJC Ojcow 21.17 312 P **P** 05 44 06.2 +1.1
DRK Karamyk 21.19 79 P **P** 05 44 08.2 +2.5
DRK IAmb IAmb 05 44 12.5
comp=Z,36nm,1.4s
DRK Karamyk 21.19 79 P **P** 05 44 08.2 +2.5
DRK pmax pmax
comp=Z,36nm,1.4s
SVE Sverdlovsk 21.27 25 *e*P **P** 05 44 07.2 +1.1
SVE pmax pmax
comp=Z,32nm,1.1s
SUW Suwalki 21.36 324 **P** 05 44 06.5 -0.5
SUW Suwalki 21.36 324 P **P** 05 44 06.6 -0.5
SUW Suwalki 21.36 324 *e*P **P** 05 44 08.3 +1.2
DOK Doka 21.42 154 P **P** 05 44 08.8 +0.9
WHFO Wadi Hawf 21.95 156 P **P** 05 44 13.3 -0.5
ARSB Arslanbob 21.97 73 P **P** 05 44 16.6 +2.7
ARSB Arslanbob 21.97 73 P **P** 05 44 16.6 +2.7
ARSB pmax pmax
comp=Z,64nm,1.4s
JAVC Velka Javorina 21.97 307 *e*P **P** 05 44 16.3 +2.5
PABE Paberze 21.98 328 **P** 05 44 13.9 +0.1
PABE Paberze 21.98 328 *e*P **P** 05 44 14.3 +0.6
SMOL Smolenice 22.02 306 *e*P **P** 05 44 17.7 +3.5
MODS Modra-Piesok 22.07 306 *e*P **P** 05 44 18.6 +3.8
MODS Modra-Piesok 22.07 306 *e*P **P** 05 44 18.6 +3.8
ABTO Aybut 22.34 158 P **P** 05 44 18.4 +0.5
ABTO P **P** 05 44 18.4 +0.5
MORC Moravsky Berou 22.35 309 P **P** 05 44 15.8 -2.0
MORC Moravsky Berou 22.35 309 P **P** 05 44 15.8 -2.0
MORC pmax pmax
comp=Z,9.0nm,1.2s
MORC Moravsky Berou 22.35 309 *e*P **P** 05 44 20.3 +2.4
RONA Rosalia, Austr 22.53 303 *e*P **P** 05 44 22.3 +2.5
comp=Z,19nm,1.5s
DMTO DMTO 22.54 153 P **P** 05 44 20.3 +0.3
KLMR Klimovskoe 22.68 354 *e*P **P** 05 44 21.3 +0.2
KLMR *e* 05 44 45.4
KLMR pmax pmax
comp=Z,43nm,1.1s
VRAC Vranov 22.78 308 P **P** 05 44 23.8 +1.4
comp=Z,5.3nm,0.9s,baz=99,slow=10,SNR=5.3
VRAC LR LR 05 53 35.6
comp=Z,30nm,21.2s,baz=94,slow=38
comp=Z,5.3nm,0.9s
VRAC Vranov 22.78 308 *e*P **P** 05 44 23.4 +1.0
KRUC Moravsky 22.83 307 *e*P **P** 05 44 24.4 +1.5
CONA Conrad Observa 22.87 304 *e*P **P** 05 44 24.9 +1.5
comp=Z,9.4nm,1.1s
KRLC Kraliky 22.92 310 *e*P **P** 05 44 27.6 +3.8
KRLC Kraliky 22.92 310 *e*P **P** 05 44 27.6 +3.8
ARSA Arzberg 22.94 302 *e*pP pP 05 44 26.7 +1.5
comp=Z,13nm,1.4s
BORK Borovoye 23.01 42 **P** 05 44 25.3 +0.6
BORK IAmb IAmb 05 44 36.6
comp=Z,8.5nm,0.8s
BORK Borovoye 23.01 42*ce*P **P** 05 44 27.9 +3.2
BORK pmax pmax
comp=Z,10.0nm,1.0s
BVAR Borovoye Array 23.04 42 P **P** 05 44 26.1 +1.0
comp=Z,2.9nm,0.7s,baz=248,slow=7.8,SNR=12
comp=Z,2.9nm,0.7s
AAK Ala-Archa 23.08 70 **P** 05 44 28.3 +2.5
AAK IAmb IAmb 05 44 36.8
comp=Z,8.5nm,0.9s
AAK Ala-Archa 23.08 70*ce*P **P** 05 44 28.8 +3.0
AAK pmax pmax
comp=Z,13nm,1.7s
AAK Ala-Archa 23.08 70 P **P** 05 44 28.5 +2.8
AAK P **P** 05 44 28.5 +2.8
VSU Vasula 23.14 336*ce*P **P** 05 44 26.5 +0.5
VSU pmax pmax
comp=Z,61nm,1.7s
DPC Dobruska-Polom 23.29 310 *e*P **P** 05 44 30.0 +2.3
DPC Dobruska-Polom 23.29 310 *e*P **P** 05 44 30.0 +2.3
NIL Nilore 23.64 93 P **P** 05 44 33.0 +1.7
NIL IAmb IAmb 05 44 41.6
comp=Z,15nm,0.9s
NIL Nilore 23.64 93 P **P** 05 44 33.0 +1.7
NIL pmax pmax
comp=Z,15nm,1.0s
MOA Molln 23.90 303 *e*P **P** 05 44 35.3 +1.6
comp=Z,12nm,1.1s
CKRC Cesky Krumlov 24.09 305 *e*P **P** 05 44 37.7 +2.2
CKRC Cesky Krumlov 24.09 305 *e*P **P** 05 44 37.7 +2.2
KSH2 Kashi 24.13 79 P **P** 05 44 39.3 +3.2
BOOM Boomskoye usch 24.15 70 P **P** 05 44 37.8 +1.5
BOOM IAmb IAmb 05 44 39.4
comp=Z,12nm,1.0s
BOOM Boomskoye usch 24.15 70 P **P** 05 44 37.8 +1.5
BOOM pmax pmax
comp=Z,12nm,1.0s
NRN Naryn 24.23 73 IAmb IAmb 05 44 40.6
comp=Z,11nm,1.0s
ZVC Zvikov 24.32 307 *e*P **P** 05 44 38.5 +0.9
KBA Koelnbreinsper 24.37 301 *e*P **P** 05 44 39.2 +0.9
comp=Z,13nm,1.2s
GERES GERESS Array B 24.49 305 P **P** 05 44 39.6 +0.4
comp=Z,2.6nm,0.8s,baz=101,slow=14,SNR=3.7
GERES LR LR 05 55 32.3
comp=Z,97nm,20.2s,baz=344,slow=40
comp=Z,2.6nm,0.8s
KHC Kasperske Hory 24.63 306 P **P** 05 44 40.1 -0.3
KHC IAmb IAmb 05 44 57.5
comp=Z,7.9nm,1.1s
KHC Kasperske Hory 24.63 306 *e*P **P** 05 44 40.6 +0.1
KHC Kasperske Hory 24.63 306*ce*P **P** 05 44 41.8 +1.3
KHC pmax pmax
comp=Z,16nm,2.5s
LESA Schwarzleotal 24.87 302 *e*P **P** 05 44 44.1 +1.4
comp=Z,8.9nm,0.9s
WTTA Wattenberg 25.55 301 *e*P **P** 05 44 49.6 +0.7
comp=Z,11nm,1.1s
TARG Taragay, Kyrgy 25.57 72 IAmb IAmb 05 45 24.1
comp=Z,7.9nm,1.2s
CLL Collm 25.59 310 *e*P **P** 05 44 50.0 +1.0
CLL *e* 05 44 59.0
CLL Collm 25.59 310 *e*P **P** 05 44 50.0 +1.0
CLL *ex* x 05 44 59.0
CLL AMS AMS 05 56 00.0
comp=N,200nm,20.5s
CLL AMS AMS 05 56 00.0
comp=E,100nm,19.7s
WATA Walderalm 25.60 301 P **P** 05 44 50.1 +0.7
comp=E,3.4nm,0.6s
FINES FINESS Array B 25.75 339 P **P** 05 44 49.9 -0.5
comp=E,4.7nm,0.8s,baz=154,slow=12,SNR=13
FINES LR LR 05 55 29.4
comp=E,251nm,19.0s,baz=153,slow=38
comp=E,4.7nm,0.8s
FINES FINESS Array B 25.75 339 P **P** 05 44 49.6 -0.7
FINES FINESS Array B 25.75 339*ce*P **P** 05 44 51.5 +1.1
FINES pmax pmax
comp=Z,4.0nm,0.7s
ZCCA Zocca 25.76 294 P **P** 05 44 49.9 -0.8
JOF Joensuu 25.82 346 *e*P **P** 05 44 52.3 +1.3
SQTA Sankt Quirin 25.83 301 *i* P **P** 05 44 52.2 +0.8
comp=Z,4.4nm,0.7s
MOTA Moosalm 25.92 301 P **P** 05 44 52.7 +0.4
comp=Z,7.9nm,0.9s
FUORN Ofenpass-Fuorn 26.41 299 P **P** 05 44 56.3 -0.5
FUORN IAmb IAmb 05 45 33.4
comp=Z,11nm,1.3s
DAVOX Davos/Dischmat 26.68 299 P **P** 05 44 59.5 +0.3
comp=Z,4.6nm,0.7s,baz=316,slow=23,SNR=10
DAVOX LR LR 05 58 11.8
comp=Z,100nm,19.0s,baz=86,slow=42
comp=Z,4.6nm,0.7s
DAVA Damuels 26.74 301 *e*P **P** 05 45 00.3 +0.7
comp=Z,8.4nm,0.9s
ATD Arta Tunnel 26.82 184 LR LR 05 56 08.4
comp=Z,5.5nm,18.5s,baz=56,slow=38
KURBB Kurchatov Arra 26.88 52 P **P** 05 45 01.5 +0.8
comp=Z,4.5nm,0.7s,baz=263,slow=9.2,SNR=39
comp=Z,4.5nm,0.7s
KURK Kurchatov 26.95 52 **P** 05 45 02.4 +1.1
KURK IAmb IAmb 05 45 03.9
comp=Z,6.2nm,0.8s
KURK Kurchatov 26.95 52*ce*P **P** 05 45 03.3 +1.9
KURK pmax pmax
comp=Z,12nm,1.3s
KURK Kurchatov 26.95 52 P **P** 05 45 02.8 +1.5
TUE Stuetta 27.02 299 P **P** 05 45 02.2 -0.1

VSL Villasalto 27.27 283 P **P** 05 45 03.6 -0.8
KEST Kesra 28.12 276 P **P** 05 45 13.1 +1.0
comp=Z,10.0nm,1.1s,baz=23,slow=3.3,SNR=5.2
comp=Z,10.0nm,1.1s
SENIN Lac Senin/Sane 28.43 298 P **P** 05 45 15.2 +0.2
SENIN IAmb IAmb 05 45 29.4
comp=Z,8.7nm,1.3s
MAKZ Makanchi 28.57 61 P **P** 05 45 16.1 +0.2
MAKZ IAmb IAmb 05 45 31.1
comp=Z,6.6nm,0.6s
MAKZ Makanchi 28.57 61 P **P** 05 45 16.1 +0.2
MAKZ pmax pmax
comp=Z,7.0nm,0.6s
MK31 Makanchi Array 28.78 61*ce*P **P** 05 45 19.9 +2.1
MKAR Makanchi Array 28.78 61 P **P** 05 45 19.2 +1.4
comp=Z,3.4nm,0.7s,baz=269,slow=6.9,SNR=23
comp=Z,3.4nm,0.7s
MKAR Makanchi Array 28.78 61 **P** 05 45 17.9 +0.1
MKAR Makanchi Array 28.78 61*ce*P **P** 05 45 19.2 +1.4
MKAR pmax pmax
comp=Z,4.0nm,0.7s
BNI Bardonecchia 28.84 296 P **P** 05 45 17.0 -1.4
BNI IAmb IAmb 05 45 50.1
comp=Z,11nm,1.3s
BNI Bardonecchia 28.84 296 P **P** 05 45 17.0 -1.4
BNI pmax pmax
comp=Z,11nm,1.3s
HFS Hagfors 29.16 328 P **P** 05 45 21.5 +0.5
comp=Z,4.8nm,0.9s,baz=163,slow=16,SNR=3.9
HFS LR LR 05 58 10.6
comp=Z,177nm,19.9s,baz=116,slow=39
comp=Z,4.8nm,0.9s
WLF Walferdange 29.50 305 P **P** 05 45 25.3 +1.2
WLF Walferdange 29.50 305 P **P** 05 45 25.3 +1.2
WLF pmax pmax
comp=Z,16nm,1.2s
NOA NORSAR Array B 30.68 328 P **P** 05 45 35.1 +0.6
comp=Z,0.3nm,0.7s,baz=123,slow=8.0,SNR=3.3
NOA LR LR 05 59 08.9
comp=Z,179nm,19.3s,baz=130,slow=39
comp=Z,0.3nm,0.7s
ZALV Zalesovo Beam 31.41 47 P **P** 05 45 40.9 0.0
comp=Z,2.0nm,0.4s,baz=258,slow=10
comp=Z,2.0nm,0.4s
WMQ Urumqi 32.66 67 *e*P P 05 45 55.5 +3.4
WMQ pmax pmax
comp=Z,11nm,0.9s
ARCES ARCESS Array B 32.81 348 LR LR 05 59 54.1
comp=Z,235nm,18.7s,baz=112,slow=38
EKA Eskdalemuir Ar 35.92 314 P **P** 05 46 19.6 -0.6
comp=Z,6.1nm,0.8s,baz=104,slow=8.8,SNR=16
EKA LR LR 06 04 15.9
comp=Z,86nm,18.8s,baz=112,slow=42
comp=Z,6.1nm,0.8s
EKB Eskdalemuir 35.94 314 P **P** 05 46 20.5 +0.2
EVN Everest 36.60 94 **P** 05 46 26.9 -0.1
ESBB Sonseca Array 37.34 288 P **P** 05 46 30.1 -2.5
ESBB IAmb IAmb 05 47 02.7
comp=Z,9.0nm,1.4s
ESDC Sonseca Array 37.34 288 P **P** 05 46 31.6 -0.9
comp=Z,1.1nm,0.5s,baz=68,slow=8.4,SNR=21
comp=Z,1.1nm,0.5s
ESDC Sonseca Array 37.34 288 P **P** 05 46 30.8 -1.7
NRIK Noril'sk 38.52 23 P **P** 05 46 41.7 -0.3
comp=Z,5.6nm,0.9s,baz=238,slow=4.0,SNR=9.4
comp=Z,5.6nm,0.9s
NRIK Noril'sk 38.52 23 **P** 05 46 42.9 +0.9
NRIK IAmb IAmb 05 46 46.8
comp=Z,6.8nm,1.0s
NRIK Noril'sk 38.52 23 *i* P **P** 05 46 43.3 +1.3
NRIK pmax pmax
comp=Z,6.0nm,0.9s
SHL Shillong 41.71 94 **P** 05 47 09.9 +0.7
SHL IAmb IAmb 05 47 10.5
comp=Z,15nm,1.4s
SHL Shillong 41.71 94 P **P** 05 47 10.0 +0.7
SHL pmax pmax
comp=Z,15nm,1.4s
TLY Talaya 42.65 52*ce*P **P** 05 47 18.5 +2.0
TLY pmax pmax
comp=Z,7.0nm,1.7s
ULN Ulaanbaatar 45.43 57 P **P** 05 47 40.7 +1.7
ULN IAmb IAmb 05 47 42.4
comp=Z,9.4nm,1.2s
ULN Ulaanbaatar 45.43 57*ce*P **P** 05 47 41.4 +2.4
ULN pmax pmax
comp=Z,12nm,1.7s
TORD Torodi Ar. Bea 45.51 248 P **P** 05 47 40.8 +1.0
comp=Z,0.5nm,0.6s,baz=37,slow=12,SNR=4.5
comp=Z,0.5nm,0.6s
PZH PanZhiHua 48.99 86 P P 05 48 10.3 +3.3
HHC Hu-ho-hao-te 50.51 65 *e*P **P** 05 48 20.0 +1.6
HHC pmax pmax
comp=Z,15nm,0.7s
CHTO Chiang Mai 50.83 97 **P** 05 48 21.4 +0.5
CHTO IAmb IAmb 05 48 22.5
comp=Z,4.6nm,0.9s
CHTO Chiang Mai 50.83 97 P **P** 05 48 21.4 +0.5
CHTO pmax pmax
comp=Z,5.0nm,0.9s
CMAR Chiang Mai Arr 51.03 97 P **P** 05 48 23.1 +0.6
comp=Z,2.7nm,0.7s,baz=301,slow=8.4,SNR=19
comp=Z,2.7nm,0.7s
CMAR Chiang Mai Arr 51.03 97 P **P** 05 48 23.3 +0.9
CMAR Chiang Mai Arr 51.03 97 P **P** 05 48 23.3 +0.9
TIXI Tiksi 52.29 23 **P** 05 48 33.1 +2.0
TIXI IAmb IAmb 05 48 33.8
comp=Z,4.4nm,0.8s
TIXI Tiksi 52.29 23*ce*P **P** 05 48 33.4 +2.3
TIXI pmax pmax
comp=Z,4.0nm,1.0s
DBIC Dimbokro 54.62 248 P **P** 05 48 48.8 -0.2
comp=Z,1.4nm,0.6s,baz=60,slow=9.1,SNR=3.8
comp=Z,1.4nm,0.6s
HEH HeiHe 57.51 49 *e*P **P** 05 49 10.8 +1.6
POIN Pond Inlet 62.34 343 P **P** 05 49 42.9 +0.8
POIN IAmb IAmb 05 49 46.4
comp=Z,4.1nm,1.2s
KSRS Korea Array 63.45 62 P **P** 05 49 49.3 -0.7
comp=Z,1.4nm,0.8s,baz=288,slow=6.6,SNR=4.9
comp=Z,1.4nm,0.8s
SEY Seymchan 63.88 29*ce*P **P** 05 49 54.4 +2.0
SEY pmax pmax
comp=Z,11nm,1.0s
MA2 Magadan 65.10 33*ce*P **P** 05 50 00.3 -0.2
MA2 pmax pmax
comp=Z,16nm,2.5s
BILL Bilibino 65.29 21*ce*P **P** 05 50 02.8 +1.2
BILL pmax pmax
comp=Z,5.0nm,1.0s
ILON Igloolik, Nuna 65.57 342 **P** 05 50 03.5 +0.2
A36M Sachs Harbour 69.66 357 P **P** 05 50 29.7 +0.6
B20K Meade River 70.72 8 P **P** 05 50 36.7 +1.0
B20K IAmb IAmb 05 50 38.9
comp=Z,5.3nm,1.1s
C18K Utukok River 71.53 10 P **P** 05 50 41.6 +0.9
BMAR Burnt Mountain 74.25 4 P **P** 05 50 58.1 +1.3
IMAR Indian Mountai 74.97 8 P **P** 05 51 01.4 +0.5
ILAR Eielson Array 76.75 5 P **P** 05 51 10.9 -0.3
comp=Z,0.7nm,1.0s,baz=337,slow=5.6,SNR=5.5
ILAR PP **PP** 05 53 58.8 -4.1
comp=Z,0.4nm,1.0s,baz=359,slow=7.7,SNR=4.8
comp=Z,0.7nm,1.0s
FCC Fort Churchill 77.24 339 P **P** 05 51 14.7 +0.8
FCC IAmb IAmb 05 51 16.3
comp=Z,4.3nm,1.0s
FCC Fort Churchill 77.24 339 P **P** 05 51 14.7 +0.8
FCC pmax pmax
comp=Z,4.0nm,1.0s
YKAW3 Yellowknife Wh 77.97 350 P **P** 05 51 17.6 -0.5
YKA Yellowknife Ar 78.04 350 P **P** 05 51 17.3 -1.1
comp=Z,1.4nm,1.0s,baz=23,slow=6.6,SNR=14
comp=Z,1.4nm,1.0s

KRSC 26 05:41:10.2±1.8, 49°45N×158°45E, h49km±40km, MI3.5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.94**	**310**	*e*S		Sn	05 42 04.0	+0.1
PAU	**Pauzhetka**	**2.27**	**333**	*e*P		Pn	05 41 48.6	+3.4
PAU				*e*S		Sn	05 42 16.0	+4.0
KDTR	**Khodutka, Kamc**	**2.37**	**354**	*e*S		Sn	05 42 17.6	+3.2
ASAK	**Asacha**	**2.95**	**353**	*e*P		Pn	05 41 58.0	+3.4
ASAK				*e*S		Sn	05 42 32.8	+3.9

RUS	**Russkaya**	**2.98**	**1**	*e*S	Sn	05 42 33.3	+3.9
MIPR	**Malaya Ipel'ka**	**3.02**	**340**	*e*P	Pn	05 41 58.6	+3.0
MIPR				*e*S	Sn	05 42 35.8	+5.3
MTVR	**Mutnovka**	**3.04**	**357**	*e*P	Pn	05 41 58.9	+3.0
MTVR				*e*S	Sn	05 42 35.8	+4.7
GRL	**Gorelyy**	**3.11**	**356**	*e*P	Pn	05 41 59.5	+2.6
GRL				*e*S	Sn	05 42 36.0	+3.2
KRMR	**Karymshinskiy**	**3.39**	**357**	*e*S	Sn	05 42 43.9	+4.5
PET	**Petropavlovsk**	**3.58**	**2**	*e*P	Pn	05 42 06.3	+3.1
PET				*e*S	Sn	05 42 47.1	+3.0
DALK	**Dalny**	**3.59**	**3**	*e*P	Pn	05 42 06.6	+3.3
UGLR	**Uglovaya**	**3.77**	**3**	*e*P	Pn	05 42 10.7	+4.8
SPN	**Mys Shipunski**	**3.78**	**15**	*e*P	Pn	05 42 10.9	+5.0
AVH	**Avacha**	**3.82**	**3**	*e*P	Pn	05 42 10.3	+3.7
SMAR	**Somma**	**3.82**	**3**	*e*P	Pn	05 42 11.6	+4.9
KOK	**Koryaka**	**3.84**	**2**	*e*P	Pn	05 42 11.1	+4.2
KRX	**Arik**	**3.91**	**2**	*e*P	Pn	05 42 11.2	+3.3
GNL	**Ganaly**	**4.26**	**356**	*e*P	Pn	05 42 17.3	+4.7
KBTR	**Krutoberegovo**	**7.26**	**20**	*e*P	Pn	05 42 57.7	+4.0
KBTR				*e*S	Sn	05 44 18.4	+3.8

BJI ***26*** *05:52:45.9, 22˚.51N× 143˚.48E, h125km, mB5.3/46, mb5.3/90*

JMA ***26*** *05:52:47.7± 0.4, 23˚N-2˚× 14˚3E± ˚, h152km, MD5.8/31, MV6.2/31, IOTO ISLANDS REGION*

JMA Felt I J1 at IOTO ISLANDS REGION .

IDC ***26*** *05:52:47.9± 0.4, 22˚.66N× 143˚.25E, h113km± 3km, mb5.0/33, mbtmp5.3/39, MS4.1/37, Error ellipse: s-maj=11.1km s-min=8.1km az=68.0*

MOS ***26*** *05:52:47.1± 0.9, 22˚.67N× 143˚.16E, h116km, mb5.6/67, MS4.6/6, Error ellipse: s-maj=8.1km s-min=4.1km az=115.3*

NEIC ***26*** *05:52:48.8, 22˚.69N× 143˚.24E, h112km*

NEIC ***26*** *05:52:48.8± 1.7, 22˚.69N± 0˚.06× 143˚.24E± 0˚.10, h112km± 4km, mb5.5/620, Mww5.4/39, Error ellipse: s-maj=12.9km s-min=8.2km az=80.0*

NEIC ***26*** *05:52:49.2, 22˚.79N× 143˚.34E, h110km, Moment Tensor Solution. Duration: 2≌5 Moment tensor: Scale 10^17 Nm; Mrr 1.05; Mθθ -0.73; Mφφ -0.32; Mrθ -0.37; Mθφ -0.92; Mφr 0.41; Fault plane solution: M0 1.43000×10^17 NP1:♎≌24.58000°, δ51.50000°, λ50.22000°. NP2:♎≌257.79000°, δ53.03000°, λ128.81000°. Principal axes: T 1.3753, Plg60.0000°, Azm230.0000°; N 0.0991, Plg30.0000°, Azm52.0000°; P -1.4743, Plg1.0000°, Azm321.0000°;*

GFZ ***26*** *05:52:50.9, 22˚.69N× 143˚.29E, h113km, MW5.3, Moment Tensor Solution. s100 Moment tensor: Mrr 0.99; Mθθ -0.68; Mφφ -0.30; Mrθ -0.29; Mθφ -0.78; Mφr 0.41; Fault plane solution: NP1:♎≌26.00000°, δ51.00000°, λ53.00000°. NP2:♎≌257.00000°, δ50.00000°, λ127.00000°.*

GCMT ***26*** *05:52:50.0± 0.1, 22˚.72N± 0˚.01× 143˚.26E± 0˚.01, h123km, MW5.4/157, Moment Tensor Solution. s122, c191; s157, c284; Duration: 1≌2 Moment tensor: Scale 10^17 Nm; Mrr 1.25±.02; Mθθ -0.89±.02; Mφφ -0.36±.03; Mrθ -0.36±.02; Mθφ -1.13±.02; Mφr 0.45±.02; Best double couple: M0 1.67800×10^17 NP1:♎≌26.00000°, δ52.00000°, λ52.00000°. NP2:♎≌257.00000°, δ52.00000°, λ128.00000°. Principal axes: T 1.5730, Plg61.0000°, Azm231.0000°; N 0.2130, Plg29.0000°, Azm52.0000°; P -1.7840, Plg0.0000°, Azm322.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 05:52:49.4± 0.2, 22˚.70N± 0˚.03× 143˚.24E± 0˚.03, h126km± 1km, h126km: pP-P, n1448, σ1≌51/1370, mb5.5/512, 64C-23D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**4.03**	**346**	⇓P		**Pn**	**05 53 49.7**	**+0.3**
JHH2					A	A	05 53 49.7	
	comp=N,62nm,0.6s,comp=E,72nm,0.4s							
JHH2				⇓S		**Sn**	**05 54 35.4**	**-0.5**
CBIJ	**Chichi jima**	**4.48**	**348**	⇓P		**Pn**	**05 53 55.0**	**-0.4**
CBIJ					A	A	05 53 55.0	
	comp=N,40nm,2.1s,comp=E,43nm,3.3s							
CBIJ				⇓S		**Sn**	**05 54 45.9**	**-0.7**
JCJ	**Chichijima**	**4.48**	**348**	P		**Pn**	**05 53 54.8**	**-0.6**
	comp=E,4μm,0.6s,baz=58,slow=2.5,SNR=369							
JCJ				S		**Sn**	**05 54 45.0**	**-1.7**
	comp=E,8μm,0.5s,baz=123,slow=23,SNR=14							
JCJ	**Chichijima**	**4.48**	**348**	P		**Pn**	**05 53 56.4**	**+1.0**
JCJ	**Chichijima**	**4.48**	**348**	S		**Sn**	**05 54 47.0**	**+0.3**
JCJ	**Chichijima**	**4.48**	**348**			**Pn**	**05 53 55.0**	**-0.4**
JCJ				Sn		**Sn**	**05 54 44.0**	**-2.6**
GUMO	**Guam**	**9.20**	**170**	P		**Pn**	**05 55 00.3**	**+1.3**
	comp=E,2μm,1.0s,baz=187,slow=3.2,SNR=26							
GUMO	**Guam**	**9.20**	**170**	P		**Pn**	**05 55 01.5**	**+2.5**
GUMO	**Guam**	**9.20**	**170**			**Pn**	**05 55 01.6**	**+2.6**
GUMO	**Guam**	**9.20**	**170**	P		**Pn**	**05 55 01.6**	**+2.6**
JHJ2	**Mitsune**	**10.80**	**344**	P		**Pn**	**05 55 21.1**	**+0.7**
JHJ2	**Mitsune**	**10.80**	**344**	S		**Sn**	**05 57 20.0**	**+0.6**
JHJ2	**Mitsune**	**10.80**	**344**			**Pn**	**05 55 18.1**	**-2.3**
JHJ2	**Mitsune**	**10.80**	**344**	P		**Pn**	**05 55 19.0**	**-1.4**
JHJ2				*e*S		**Sn**	**05 57 14.6**	**-4.8**
JHJ	**Hachijo jima 2**	**10.81**	**344**	P		**Pn**	**05 55 18.4**	**-2.2**
	comp=E,430nm,0.6s,baz=240,slow=23,SNR=21							
JHJ				S		**Sn**	**05 57 17.2**	**-2.6**
	comp=E,446nm,0.8s,baz=45,slow=19,SNR=3.8							
JMZ	**Minamidaito 2**	**11.39**	**288**	P		**Pn**	**05 55 31.0**	**+2.6**
JMZ	**Minamidaito 2**	**11.39**	**288**			**Pn**	**05 55 27.1**	**-1.2**
JMZ	**Minamidaito 2**	**11.39**	**288**	*e*P		**P**	**05 55 33.4**	**-3.7**
JMKN	**Mikurajimanish**	**11.60**	**345**	*e*P		**Pn**	**05 55 28.5**	**-2.5**
JMYK	**Miyake Tsubota**	**11.77**	**345**	P		**Pn**	**05 55 30.9**	**-2.4**
TTO1	**TONANKAI O.B.S**	**12.27**	**334**	*e*P		**Pn**	**05 55 39.5**	**0.0**
JSG	**Sagara**	**12.72**	**341**	P		**Pn**	**05 55 46.1**	**+0.4**
JSG	**Sagara**	**12.72**	**341**	Pn		**Pn**	**05 55 45.6**	**-0.1**
JTNC	**Tanabenakahech**	**12.95**	**330**	P		**Pn**	**05 55 48.5**	**-0.2**
JIE	**Ise**	**12.98**	**335**	*e*P		**Pn**	**05 55 47.6**	**-1.5**
JOD2	**Odawara 2**	**13.03**	**345**	P		**Pn**	**05 55 46.9**	**-2.8**
JOD2				*e*S		**Sn**	**05 58 07.0**	**-6.4**
JTO	**Tosashimizu**	**13.69**	**320**	P		**Pn**	**05 55 59.5**	**+1.2**
INU	**Inuyama**	**13.72**	**338**	P		**Pn**	**05 55 57.6**	**-1.0**
INU	**Inuyama**	**13.72**	**338**			**Pn**	**05 55 57.2**	**-1.4**
JMN	**Monobe**	**13.73**	**325**	P		**Pn**	**05 56 00.1**	**+1.3**
JMN	**Monobe**	**13.73**	**325**			**Pn**	**05 55 59.3**	**+0.5**
JRY	**Ryogami san**	**13.79**	**345**	P		**Pn**	**05 55 56.7**	**-2.8**
JRY				*e*S		Sn	05 58 22.4	-9.4
JGF	**Kuroka**	**13.84**	**340**	P		**Pn**	**05 55 58.6**	**-1.5**
JGF	**Kuroka**	**13.84**	**340**			**Pn**	**05 55 58.1**	**-2.0**
JAMN	**Amaminishikomi**	**13.85**	**296**	*e*P		**P**	**05 56 03.4**	**-1.0**
JOW	**Kunigami**	**14.20**	**290**	P		**Pn**	**05 56 04.6**	**-0.3**
	comp=E,64nm,0.9s,baz=127,slow=8.8,SNR=13							
JOW				S		**Sn**	**05 58 44.0**	**+2.3**
	comp=E,9.4nm,0.3s,baz=120,slow=26,SNR=6.5							
JOW				LR		LR	06 00 42.3	
	comp=E,1μm,20.4s,baz=134,slow=33							
JOW	**Kunigami**	**14.20**	**290**	P		**Pn**	**05 56 06.6**	**+1.8**
JOW	**Kunigami**	**14.20**	**290**			**P**	**05 56 06.8**	**-1.5**
JSU	**Suzuyama**	**14.36**	**310**	P		**Pn**	**05 56 08.3**	**+1.5**
JSU	**Suzuyama**	**14.36**	**310**			**Pn**	**05 56 06.3**	**-0.5**
MJAR	**Matsushiro Arr**	**14.46**	**344**	P		**Pn**	**05 56 05.5**	**-2.6**
	comp=E,67nm,0.6s,baz=161,slow=11,SNR=112							
MJAR				LR		LR	06 01 34.2	
	comp=E,887nm,20.7s,baz=148,slow=36							
MAJO	**Matsushiro**	**14.46**	**344**	P		**Pn**	**05 56 06.6**	**-1.5**
MAJO	**Matsushiro**	**14.46**	**344**			**Pn**	**05 56 05.5**	**-2.6**
MAJO	**Matsushiro**	**14.46**	**344**	P		**Pn**	**05 56 05.5**	**-2.6**
JSJ	**Shimokoshiki**	**14.98**	**310**	*e*P		**Pn**	**05 56 15.7**	**+1.1**
JNU	**Nakatsue**	**15.06**	**316**	P		**Pn**	**05 56 16.1**	**+0.5**
	comp=E,220nm,0.9s,baz=120,slow=6.2,SNR=79							
JNU				LR		LR	06 01 25.1	
	comp=E,702nm,20.0s,baz=149,slow=34							
JHS	**Saijyo**	**15.11**	**326**	*e*P		**Pn**	**05 56 16.5**	**+0.2**
JOI	**OKI**	**16.08**	**330**	P		**Pn**	**05 56 28.2**	**+0.1**
JMK	**Ichinoseki**	**16.29**	**354**	P		**Pn**	**05 56 30.8**	**0.0**
JMK				*e*S		**Sn**	**05 59 24.2**	**-7.6**
JTU	**Tsushima**	**16.90**	**317**	P		**Pn**	**05 56 39.6**	**+1.3**
JTU	**Tsushima**	**16.90**	**317**	*e*P		**Pn**	**05 56 39.7**	**+1.4**
JTM	**Tenmabayashi**	**18.12**	**355**	P		**Pn**	**05 56 54.5**	**+1.6**
JTM	**Tenmabayashi**	**18.12**	**355**	P		**P**	**05 56 51.2**	**-0.4**
YOJ	**Yonaguni jima**	**18.62**	**279**	P		**Pn**	**05 57 00.4**	**+1.4**
YOJ	**Yonaguni jima**	**18.62**	**279**	P		**P**	**05 56 56.4**	**-0.8**
YOJ	**Yonaguni jima**	**18.62**	**279**	P		**P**	**05 56 56.4**	**-0.8**
JEM	**Erimo**	**19.26**	**360**	P		**Pn**	**05 57 07.9**	**+1.7**
TJN	**Taejon**	**19.36**	**318**	P		**P**	**05 57 05.9**	**+0.7**
TJN	**Taejon**	**19.36**	**318**			**P**	**05 57 05.8**	**+0.7**
TJN	**Taejon**	**19.36**	**318**	P		**P**	**05 57 05.8**	**+0.6**
KSRS	**Korea Array**	**19.75**	**322**	P		**P**	**05 57 09.7**	**+0.4**
	comp=E,40nm,0.9s,baz=131,slow=11,SNR=110							
KSRS				S		**Sn**	**06 00 52.4**	**-2.5**
	comp=E,64nm,1.1s,baz=153,slow=15,SNR=22							
KSRS				PcP		**PcP**	**06 01 23.8**	**+1.2**
	comp=E,5.7nm,0.9s,baz=207,slow=1.6,SNR=4.1							
KSRS				LR		LR	06 04 29.2	
	comp=E,1μm,19.7s,baz=135,slow=35							
KSRS				ScP		**ScP**	**06 04 46.9**	**-0.2**
	comp=E,9.3nm,1.1s,baz=138,slow=2.2,SNR=9.2							
KSAR	**Wonju Array Be**	**19.77**	**321**			**P**	**05 57 08.9**	**-0.6**
KSAR	**Wonju Array Be**	**19.77**	**321**	P		**P**	**05 57 08.9**	**-0.6**
KS19	**Wonju Array Si**	**19.82**	**322**	P		**P**	**05 57 09.6**	**-0.4**
NACB	**Ninganchiao**	**19.91**	**278**	P		**Pn**	**05 57 13.4**	**-0.7**
NACB	**Ninganchiao**	**19.91**	**278**	P		**P**	**05 57 10.0**	**-1.3**
TATO	**Taipei**	**20.02**	**281**	P		**Pn**	05 57 13.9	-1.5
TATO	**Taipei**	**20.02**	**281**	P		**P**	**05 57 09.5**	**-2.9**
YHNB	**Yeheng**	**20.12**	**280**	P		**Pn**	05 57 15.5	-1.1
YHNB	**Yeheng**	**20.12**	**280**	P		**P**	**05 57 10.9**	**-2.6**
YULB	**Yu-li**	**20.20**	**276**	P		**Pn**	05 57 16.3	-1.2
YULB	**Yu-li**	**20.20**	**276**	P		**Pn**	05 57 17.1	-0.4
TWGBT	**Beinan**	**20.44**	**275**	P		**P**	**05 57 18.4**	**+1.5**
TWG	**Pinlang**	**20.44**	**275**	P		**Pn**	05 57 18.9	-1.4
SSLB	**Suanglung**	**20.51**	**277**	P		**Pn**	05 57 20.5	-0.6
SSLB	**Suanglung**	**20.51**	**277**			**Pn**	05 57 21.5	+0.4
INCN	**Inchon**	**20.53**	**320**	P		**P**	**05 57 18.2**	**+0.5**
INCN	**Inchon**	**20.53**	**320**	P		**P**	**05 57 17.5**	**-0.2**
INCN	**Inchon**	**20.53**	**320**	P		**P**	**05 57 17.5**	**-0.2**
INCN	**Inchon**	**20.53**	**320**	P		**P**	**05 57 17.9**	**+0.1**
INCN				S		**S**	**06 00 56.9**	**-3.7**
TPUB	**Ta-pu**	**20.82**	**276**	P		**Pn**	05 57 23.4	-1.4
TPUB	**Ta-pu**	**20.82**	**276**	P		**Pn**	05 57 23.1	-1.6
PLP	**Palo**	**20.87**	**240**	*e*P		**P**	**05 57 23.5**	**+1.9**
TSSP	**Tandag City**	**21.25**	**233**	*i* P		**P**	**05 57 26.6**	**+1.0**
SSE	**Sheshan**	**21.34**	**298**	P		**P**	**05 57 27.3**	**+0.8**
SSE				S		**S**	**06 01 17.0**	**+0.8**
SSE					pmax	pmax		
	comp=E,82nm,0.9s							
SSE					pmax	pmax		
	comp=E,120nm,3.5s							
SSE					L	L		
	comp=E,240nm,17.6s							
SSE					L	L		
	comp=E,260nm,18.6s							
ASAJ	**Asahikawa**	**21.36**	**359**	P		**P**	**05 57 27.6**	**+1.0**
	comp=E,109nm,1.1s,baz=221,slow=18,SNR=6.4							
JKA	**Kamikawa-asahi**	**21.36**	**359**			**P**	**05 57 29.1**	**+2.5**
PATS	**Pohnpei**	**21.44**	**135**	P		**P**	**05 57 29.1**	**+1.4**
PATS	**Pohnpei**	**21.44**	**135**	P		**P**	**05 57 28.0**	**+0.3**
PATS	**Pohnpei**	**21.44**	**135**			**P**	**05 57 28.1**	**+0.3**
GQP	**Guinayangan**	**21.57**	**250**	*i* P		**P**	**05 57 30.7**	**+1.6**
PIP	**Pasuquin**	**21.62**	**263**	*e*P		P	05 57 21.1	-8.5
AUQP	**San Andres**	**21.64**	**248**	*e*P		**P**	**05 57 33.4**	**+3.5**
CDOP	**Cateel, Davao**	**21.93**	**230**	*i* P		**P**	**05 57 33.1**	**+0.2**
SZP	**Santa**	**21.99**	**261**	P		**P**	**05 57 34.5**	**+1.1**
LLP	**Lapu-Lapu**	**22.17**	**239**	*e*P		**P**	**05 57 35.0**	**-0.3**
H11N1	**WAKE ISLAND Hy**	**22.24**	**93**	T		T	06 21 50.7	
	baz=282,slow=74,SNR=79							
H11N2	**WAKE ISLAND Hy**	**22.25**	**93**	T		T	06 21 54.8	
	baz=282,slow=74,SNR=108							
H11N3	**WAKE ISLAND Hy**	**22.26**	**93**	T		T	06 21 55.8	
	baz=282,slow=74,SNR=45							
H11S3	**WAKE ISLAND Hy**	**22.34**	**96**	T		T	06 21 06.3	
	baz=284,slow=75,SNR=45							
H11S1	**WAKE ISLAND Hy**	**22.34**	**96**	T		T	06 21 05.7	
	baz=284,slow=75,SNR=32							
H11S2	**WAKE ISLAND Hy**	**22.35**	**96**	T		T	06 21 04.3	
	baz=284,slow=75,SNR=47							
VLA	**Vladivostok**	**22.44**	**338**	*c i* P		**P**	**05 57 39.2**	**+1.5**
QZH2	**Quanzhou**	**22.64**	**281**	⇑*i* P		**P**	**05 57 40.5**	**+0.5**
QZH2					pP	**pwP**	**05 58 06.5**	**+0.3**
QZH2					S	**S**	**06 01 35.0**	**-3.6**
QZH2					sS	**sS**	**06 02 24.5**	**+4.7**
QZH2					pmax	pmax		
	comp=E,190nm,1.0s							
QZH2					pmax	pmax		
	comp=E,350nm,2.6s							
QZH2					L	L		
	comp=E,2μm,19.2s							
QZH2					L	L		
	comp=E,1μm,19.2s							
QZH2					L	L		
	comp=E,2μm,24.4s							
CGP	**Cagayan de Oro**	**22.76**	**234**	*i* P		**P**	**05 57 47.7**	**+6.5**
CGP	**Cagayan de Oro**	**22.76**	**234**	*i* P		P	05 57 49.2	+8.1
KNMB	**Chin-men Tao**	**22.84**	**279**			**P**	**05 57 42.3**	**+0.5**
TEY	**Ternei**	**22.93**	**348**	*e*P		**P**	**05 57 43.7**	**+1.2**
USRK	**Ussuriysk Ar.**	**23.36**	**339**	P		**P**	**05 57 47.9**	**+1.4**
	comp=E,288nm,0.8s,baz=157,slow=10,SNR=271							
	comp=E,288nm,0.8s							
NJ2	**Nanjing**	**23.53**	**299**	⇑P		**P**	**05 57 48.5**	**+0.4**
NJ2					pP	**pP**	**05 58 12.5**	**-0.1**
NJ2					sP	**sP**	**05 58 27.3**	**-0.6**
NJ2					PcP	**PcP**	**06 01 31.0**	**+0.9**
NJ2					S	**S**	**06 01 51.8**	**-0.9**
NJ2					pmax	pmax		
	comp=E,100nm,0.7s							
YSS	**Yuzhno-Sakhali**	**24.20**	**359**	P		**P**	**05 57 57.4**	**+3.4**
YSS	**Yuzhno-Sakhali**	**24.20**	**359**			**P**	**05 57 55.0**	**+1.0**
YSS	**Yuzhno-Sakhali**	**24.20**	**359**	*e*P		**P**	**05 57 57.2**	**+3.2**
YSS				*e**PP		**pP**	**05 58 21.5**	**+2.8**
YSS				*e**SP		**sP**	**05 58 33.9**	**+0.5**
YSS				*e*S		**S**	**06 02 04.5**	**+1.4**
YSS				*e*SS		**SnSn**	**06 02 59.3**	**-1.3**
YSS					pmax	pmax		
	comp=Z,80nm,0.8s							
YSS					pmax	pmax		
	comp=Z,400nm,2.6s							
YSS					pmax	pmax		
	comp=N,300nm,3.2s							
YSS					smax	smax		
	comp=E,500nm,4.8s							
YSS					MLR	MLR		
	comp=Z,800nm,12.0s							
YSS					MLR	MLR		
	comp=N,600nm,13.0s							
DL2	**Dalian**	**24.51**	**316**	P		**P**	**05 57 58.5**	**+1.5**
DL2					pP	**pwP**	**05 58 29.3**	**+2.7**
DL2					PcP	**PcP**	**06 01 31.5**	**-0.6**
DL2					S	**S**	**06 02 11.8**	**+3.5**
DL2					pmax	pmax		
	comp=N,490nm,0.7s							
DL2					pmax	pmax		
	comp=N,910nm,3.7s							
MDJ	**Mudanjiang**	**24.56**	**336**	P		**P**	**05 57 59.5**	**+2.1**
MDJ	**Mudanjiang**	**24.56**	**336**	P		**P**	**05 57 58.4**	**+1.0**
MDJ	**Mudanjiang**	**24.56**	**336**	P		**P**	**05 57 59.5**	**+2.1**
MDJ				S		**S**	**06 02 11.5**	**+2.5**
MDJ					pmax	pmax		
	comp=N,76nm,1.3s							
MDJ					L	L		
	comp=N,410nm,14.1s							
MDJ					L	L		
	comp=N,770nm,16.1s							
MDJ					L	L		
	comp=N,560nm,15.1s							
BAKI	**Biak**	**24.75**	**197**	P		**P**	**05 58 01.6**	**+2.3**
MANU	**Manus Island**	**24.92**	**170**	P		**P**	**05 58 01.2**	**+0.3**
SMPI	**Sarmi**	**24.94**	**191**	P		**P**	**05 58 04.5**	**+3.5**
JAY	**Jayapura**	**25.19**	**186**	P		**P**	**05 58 05.8**	**+2.4**
SNY	**Shenyang**	**25.19**	**324**	⇓P		**P**	**05 58 03.5**	**+0.4**
SNY				S		**S**	**06 02 25.8**	**+6.8**
SNY					pmax	pmax		
	comp=N,200nm,1.0s							
SNY					pmax	pmax		
	comp=N,610nm,3.6s							
SNY					L	L		
	comp=N,360nm,14.8s							
SNY					L	L		
	comp=N,570nm,10.8s							
SNY					L	L		
	comp=N,830nm,13.7s							
GENI	**Genyem**	**25.32**	**187**	P		P	05 58 29.1	+25
GAMI	**Galela, Maluku**	**25.60**	**218**	P		**P**	**05 58 07.0**	**-0.1**
	comp=N,3μmcomp=N,193nm,1.1s							
CN2	**Changchun**	**25.66**	**329**	⇓P		**P**	**05 58 09.5**	**+2.1**
CN2					*e*pP	pwP	05 58 36.0	-1.4
CN2					*e*S	**S**	**06 02 27.5**	**+1.0**
CN2					pmax	pmax		
	comp=N,20nm,0.7s							
CN2					pmax	pmax		
	comp=N,300nm,5.0s							
SWI	**Sorong**	**26.17**	**208**	P		**P**	**05 58 12.3**	**+0.1**
SIJI	**Sorong**	**26.18**	**208**	LR		LR	06 07 13.6	
	comp=N,203nm,19.2s,baz=47,slow=33							
SIJI	**Sorong**	**26.18**	**208**	P		**P**	**05 58 12.8**	**+0.5**
TIA	**Tai'an**	**26.33**	**307**	P		**P**	**05 58 14.8**	**+1.3**
TIA					PcP	**PcP**	**06 01 37.0**	**+0.7**
TIA					S	**S**	**06 02 35.8**	**-1.3**
TIA					ScP	**ScP**	**06 05 04.5**	**-0.1**
TIA					ScS	**ScS**	**06 08 55.0**	**+0.1**
TIA					pmax	pmax		
	comp=N,220nm,0.7s							
TIA					pmax	pmax		
	comp=N,500nm,4.1s							
TIA					L	L		
	comp=N,640nm,8.3s							
TIA					L	L		
	comp=N,450nm,8.2s							
TIA					L	L		
	comp=N,770nm,15.8s							
BNX	**BinXian**	**26.35**	**334**	⇑P		**P**	**05 58 15.5**	**+2.0**
BNX					sP	**sP**	**05 58 53.5**	**-0.3**
BNX					S	**S**	**06 02 37.3**	**+0.1**
BNX					pmax	pmax		
	comp=N,59nm,0.9s							
BNX					pmax	pmax		
	comp=N,480nm,4.2s							
BNX					L	L		
	comp=N,370nm,14.6s							
BNX					L	L		
	comp=N,560nm,13.8s							
BNX					L	L		
	comp=N,630nm,14.0s							
TNTI	**Ternate**	**26.71**	**217**	P		**P**	**05 58 16.7**	**-0.4**
TNTI	**Ternate**	**26.71**	**217**	P		**P**	**05 58 16.6**	**-0.5**
PPR	**Puerto Princes**	**26.76**	**245**	*i* P		**P**	**05 58 19.4**	**+1.9**
HKPS	**Hong Kong Po S**	**26.87**	**275**	P		**P**	**05 58 19.7**	**+1.2**
WHN	**Wuhan**	**26.93**	**293**	P		**P**	**05 58 20.0**	**+1.1**
WHN					PcP	**PcP**	**06 01 38.5**	**+0.7**
WHN					S	**S**	**06 02 43.5**	**-3.2**
WHN					ScP	**ScP**	**06 05 06.0**	**-0.5**
WHN					ScS	**ScS**	**06 08 57.0**	**-0.6**
WHN					pmax	pmax		
	comp=N,190nm,0.6s							
FAKI	**Fak Fak**	**27.64**	**204**	P		**P**	**05 58 24.9**	**-0.4**
FAKI	**Fak Fak**	**27.64**	**204**			**P**	**05 58 25.1**	**-0.1**
FAKI	**Fak Fak**	**27.64**	**204**	P		**P**	**05 58 25.2**	**-0.1**
MNI	**Manado**	**27.68**	**223**	P		**P**	**05 58 27.1**	**+1.3**
	comp=N,354nm,1.0s							
KMPI	**Kaimana, Papua**	**27.81**	**201**	P		**P**	**05 58 25.3**	**-1.6**
	comp=N,111nm,0.6s							
KLR	**Kul'dur**	**27.99**	**344**	*ce*P		**P**	**05 58 30.2**	**+2.1**
KLR					pmax	pmax		
	comp=Z,15nm,1.7s							
TYV	**Tymovskoe**	**28.11**	**359**	*e*P		P	05 58 37.2	+8.0
TYV					pmax	pmax		
	comp=Z,36nm,0.8s							
TYV					pmax	pmax		
	comp=Z,100nm,2.8s							
KRVT	**Keravat (AS076**	**28.19**	**161**	LR		LR	06 07 51.3	
	comp=Z,48nm,21.3s,baz=226,slow=32							
GRNR	**Gornyy**	**28.52**	**351**	⇑*i* P		**P**	**05 58 35.5**	**+2.7**
GRNR					pmax	pmax		
	comp=Z,3.0nm,0.7s							
HNS	**HongShan**	**28.57**	**307**	⇑P		**P**	**05 58 34.3**	**+0.8**
HNS					PP	**PnPn**	**05 59 32.5**	**+2.2**
HNS					PcP	**PcP**	**06 01 42.5**	**+0.8**
HNS					S	**S**	**06 03 05.8**	**-6.7**
HNS					ScP	**ScP**	**06 05 11.8**	**+0.4**
HNS					ScS	**ScS**	**06 09 04.5**	**-0.3**
HNS					pmax	pmax		
	comp=Z,41nm,1.2s							
HNS					L	L		
	comp=Z,670nm,15.3s							
HNS					L	L		
	comp=Z,880nm,17.6s							
HNS					L	L		
	comp=Z,510nm,20.0s							
BJI2	**Beijing**	**28.68**	**313**	P		**P**	**05 58 35.3**	**+0.9**
BJI2					PcP	**PcP**	**06 01 42.8**	**+0.9**
BJI2					S	**S**	**06 03 12.5**	**-1.7**
BJI2					pmax	pmax		
	comp=Z,25nm,0.8s							
BJT	**Baijiatuao**	**28.69**	**313**	P		**P**	**05 58 36.1**	**+1.7**
BJT	**Baijiatuao**	**28.69**	**313**	P		**P**	**05 58 34.4**	**0.0**
BJT	**Baijiatuao**	**28.69**	**313**	P		**P**	**05 58 34.4**	**0.0**
BJT					pmax	pmax		
	comp=Z,40nm,0.7s							
LYN	**LuoYang**	**29.36**	**301**	P		**P**	**05 58 41.0**	**+0.5**
LYN					PcP	**PcP**	**06 01 44.8**	**+1.0**
LYN					S	**S**	**06 03 18.8**	**-6.1**
LYN					sS	sS	06 04 09.8	-1.2
LYN					ScP	**ScP**	**06 05 14.3**	**+0.3**
LY

APSI Ampana 31.52 225 P **P** **05 58 58.8 -0.9**
comp=Z,2µmcomp=Z,226nm,1.1s
MPSI Mapaga 31.78 229 P **P** **05 59 02.3 +0.3**
comp=Z,1µmcomp=Z,51nm,1.0s
XAN Xi'an 32.10 298 ⇑P **P** **05 59 05.0 +0.3**
XAN PP **PP** **06 00 17.5 -2.1**
XAN S **S** **06 04 06.5 -1.3**
XAN SS **SnSn** **06 06 15.5 +3.1**
XAN pmax pmax
comp=Z,23nm,1.1s
XAN pmax pmax
comp=Z,96nm,4.0s
XAN L L
comp=Z,1µm,15.1s
XAN L L
comp=Z,870nm,15.5s
XAN L L
comp=Z,790nm,13.1s
PMG Port Moresby 32.14 173 P **P** **05 59 04.9 -0.2**
PMG Port Moresby 32.14 173 **P** **05 59 04.7 -0.3**
PMG Port Moresby 32.14 173*ce*P **P** **05 59 05.3 +0.2**
PMG pmax pmax
comp=Z,42nm,1.0s
PMG Port Moresby 32.14 173 P **P** **05 59 04.5 -0.6**
comp=Z,42nm,1.0s
HHC Hu-ho-hao-te 32.20 312 ⇓*i*P **P** **05 59 06.8 +1.3**
HHC PP **PP** **06 00 16.5 -4.2**
HHC S **S** **06 04 10.3 +1.0**
HHC pmax pmax
comp=Z,20nm,0.7s
HHC pmax pmax
comp=Z,110nm,6.6s
HIA Hailar 32.36 331 P **P** **05 59 08.2 +1.5**
HIA Hailar 32.36 331 P **P** **05 59 07.2 +0.5**
HIA Hailar 32.36 331 P **P** **05 59 07.2 +0.5**
HIA pmax pmax
comp=Z,23nm,0.8s
PCI Palu 32.72 227 P **P** **05 59 11.1 +0.9**
comp=Z,145nm,0.9s
ZEA Zeya 33.27 343 *e*P **P** **05 59 16.4 +1.8**
ZEA *e* 05 59 52.0
ZEA *e*S **S** **06 04 23.2 -2.2**
ZEA pmax pmax
comp=Z,60nm,0.8s
ZEA smax smax
comp=N,300nm,3.1s
ZEA smax smax
comp=E,300nm,3.4s
BTO2 Baotou 33.33 310 *e*P **P** **05 59 16.8 +1.4**
BTO2 pP **pwP** **05 59 44.5 -1.2**
BTO2 sP **sP** **05 59 59.3 +3.1**
BTO2 S **S** **06 04 29.3 +2.4**
BTO2 sS **sS** **06 05 15.8 +2.4**
BTO2 SS **SnSn** **06 06 39.8 -2.4**
BTO2 pmax pmax
comp=E,40nm,1.9s
BTO2 pmax pmax
comp=E,470nm,4.9s
BTO2 L L
comp=E,1µm,16.5s
BTO2 L L
comp=E,1µm,15.1s
BTO2 L L
comp=E,980nm,21.9s
GYA Guiyang 33.40 284 ⇓P **P** **05 59 17.5 +1.3**
GYA PcP **PcP** **06 01 56.0 +1.1**
GYA S **S** **06 04 25.0 -3.3**
GYA pmax pmax
comp=E,63nm,0.9s
GYA L L
comp=E,340nm,12.4s
GYA L L
comp=E,410nm,18.5s
GYA L L
comp=E,850nm,27.3s
KKSI Kolaka, Sulawe 34.04 221 P **P** **05 59 22.3 +0.7**
comp=E,5µmcomp=E,361nm,1.2s
MMSI Mamuju 34.65 226 P **P** **05 59 26.6 -0.3**
comp=E,1µmcomp=E,138nm,0.7s
BKB Balikpapan 35.02 231 P **P** **05 59 32.1 +2.0**
BKB Balikpapan 35.02 231 **P** **05 59 29.4 -0.7**
BKB Balikpapan 35.02 231 P **P** **05 59 31.8 +1.7**
SPSI Sidrap Palu 35.05 224 P **P** **05 59 30.7 +0.4**
comp=E,4µmcomp=E,367nm,1.1s
PMSI Majene 35.25 225 P **P** **05 59 33.4 +1.3**
comp=E,951nmcomp=E,69nm,1.0s
SAVO Savo Central 35.58 151 P **P** **05 59 33.5 -1.3**
KAPI Kappang 35.87 223 P **P** **05 59 38.0 +0.7**
KAPI Kappang 35.87 223 **P** **05 59 38.3 +1.0**
KAPI Kappang 35.87 223 P **P** **05 59 38.3 +1.0**
KAPI pmax pmax
comp=Z,382nm,1.5s
KAPI Kappang 35.87 223 P **P** **05 59 38.5 +1.2**
KAPI Kappang 35.87 223 P **P** **05 59 37.9 +0.7**
comp=Z,1µmcomp=Z,121nm,1.2s
KAPI Kappang 35.87 223 P **P** **05 59 38.5 +1.2**
HNR Honiara 35.89 151 LR LR 06 14 14.2
comp=Z,14nm,18.9s,baz=46,slow=36
CD2 Chengdu 36.03 292 ⇑P **P** **05 59 39.0 +0.4**
CD2 pP pP 06 00 03.0 -2.8
CD2 S **S** **06 05 05.5 -2.9**
CD2 sS sS 06 05 59.0 +3.8
CD2 pmax pmax
comp=Z,110nm,0.9s
CD2 pmax pmax
comp=Z,250nm,3.5s
CD2 L L
comp=Z,550nm,11.4s
CD2 L L
comp=Z,810nm,13.3s
CD2 L L
comp=Z,870nm,14.0s
MKS Makassar 36.20 223 P **P** **05 59 41.7 +1.6**
comp=Z,4µmcomp=Z,432nm,1.3s
SBUM Sibu 36.20 241 P **P** **05 59 41.5 +1.3**
SBUM Sibu 36.20 241 **P** **05 59 41.7 +1.5**
SBUM IAmb IAmb 05 59 42.7
comp=Z,71nm,0.7s
SBUM Sibu 36.20 241 P **P** **05 59 41.4 +1.3**
comp=Z,867nmcomp=Z,98nm,0.8s
BSSI Bau Bau, Buton 36.30 221 P **P** **05 59 41.3 +0.3**
comp=Z,4µmcomp=Z,344nm,0.9s
COEN Coen 36.44 180 P **P** **05 59 42.7 +0.6**
comp=Z,46nm,1.0s
COEN Coen 36.44 180 P **P** **05 59 42.9 +0.8**
COEN Coen 36.44 180 **P** **05 59 42.3 +0.2**
COEN IAmb IAmb 06 00 17.6
comp=Z,41nm,0.7s
LZH Lanzhou 36.58 300 *e*P **P** **05 59 44.5 +1.1**
LZH sP sP 06 00 22.0 -2.7
LZH PcP **PcP** **06 02 05.5 +1.4**
LZH S **S** **06 05 15.0 -1.9**
LZH sS sS 06 06 05.0 +1.2
LZH pmax pmax
comp=Z,72nm,1.3s
LZH pmax pmax
comp=Z,220nm,4.5s
LZH L L
comp=Z,730nm,14.1s
LZH L L
comp=Z,500nm,14.1s
LZH L L
comp=Z,880nm,13.7s
LZDM Lanzhou Array 36.67 300 P **P** **05 59 44.8 +0.4**
comp=Z,24nm,0.6s,baz=141,slow=7.5,SNR=39
LZDM PcP **PcP** **06 02 05.8 +1.2**
comp=Z,6.6nm,0.5s,baz=96,slow=3.0,SNR=4.7
LZDM ScP **ScP** **06 05 40.1 +0.3**
comp=Z,1.5nm,0.3s,baz=85,slow=4.9,SNR=3.7
LZDM LR LR 06 16 59.2
comp=Z,271nm,18.7s,baz=165,slow=40
comp=Z,24nm,0.6s
KDU Kakadu 36.72 198 P **P** **05 59 43.6 -0.9**
comp=Z,14nm,1.0s
KMI2 Kunming 37.00 282 ⇑P **P** **05 59 48.8 +1.6**
KMI2 pP pP 06 00 13.5 -0.4
KMI2 sP sP 06 00 29.0 +1.1
KMI2 PcP **PcP** **06 02 07.0 +1.3**
KMI2 S **S** **06 05 20.0 -3.7**
KMI2 SS **SS** **06 07 59.0 -12**
KMI2 pmax pmax
comp=Z,54nm,1.0s
KMI2 pmax pmax
comp=Z,180nm,4.1s
KMI2 L L
comp=Z,780nm,16.8s
KMI2 L L
comp=Z,250nm,13.4s
KMI2 L L
comp=Z,540nm,22.2s
MA2 Magadan 37.23 6 P **P** **05 59 49.1 +0.7**
comp=Z,15nm,0.7s,baz=184,slow=7.8,SNR=15
comp=Z,15nm,0.7s
MA2 Magadan 37.23 6 P **P** **05 59 50.0 +1.7**
MA2 Magadan 37.23 6 **P** **05 59 49.2 +0.9**
MA2 Magadan 37.23 6*ce*P **P** **05 59 50.2 +1.9**
MA2 pmax pmax
comp=Z,18nm,0.7s
MA2 Magadan 37.23 6 P **P** **05 59 49.0 +0.7**
comp=Z,23nm,0.9s
MA2 Magadan 37.23 6 P **P** **05 59 50.4 +2.0**
MA2 x x 06 00 39.0
SOEI Soe 37.23 212 P **P** **05 59 48.0 -1.0**
SOEI Soe 37.23 212 **P** **05 59 48.2 -0.8**
SOEI IAmb IAmb 06 00 15.7
comp=Z,86nm,1.0s
SOEI Soe 37.23 212 P **P** **05 59 48.4 -0.6**
comp=Z,1µmcomp=Z,75nm,0.7s
MTN Manton Dam 37.27 200 P **P** **05 59 48.6 -0.5**
MTN IAmb IAmb 05 59 50.3
comp=Z,74nm,1.2s
MMRI Maumere 37.33 216 P **P** **05 59 50.0 +0.3**
MMRI Maumere 37.33 216 **P** **05 59 49.8 +0.1**
MMRI Maumere 37.33 216 P **P** **05 59 51.4 +1.7**
comp=Z,4µmcomp=Z,190nm,2.0s
PZH PanZhiHua 37.80 284 P **P** **05 59 54.8 +1.0**
PZH S **S** **06 05 33.0 -2.7**
PZH pmax pmax
comp=Z,40nm,0.9s
PZH pmax pmax
comp=Z,250nm,4.7s
PZH L L
comp=Z,600nm,23.2s
PZH L L
comp=Z,440nm,19.8s
PZH L L
comp=Z,450nm,21.5s
BATI Baumata 37.92 212 P **P** **05 59 53.6 -1.1**
comp=Z,2µmcomp=Z,174nm,1.1s
BBKI Banjar Baru 38.02 230 P **P** **05 59 56.4 +0.9**
comp=Z,261nm,1.4s
SHEM Shemya Is, Ala 38.12 30 LR LR 06 20 25.2
comp=Z,110nm,18.0s,baz=106,slow=43
ULN Ulaanbaatar 38.23 320 **P** **05 59 58.3 +1.2**
ULN Ulaanbaatar 38.23 320*ce*P **P** **05 59 58.5 +1.3**
ULN pmax pmax
comp=Z,42nm,1.3s
ULN Ulaanbaatar 38.23 320 P **P** **05 59 58.4 +1.2**
ULN S **S** **06 05 37.7 -3.8**
ULN Ulaanbaatar 38.23 320 P **P** **05 59 58.1 +1.0**
comp=Z,126nm,1.5s
ULN Ulaanbaatar 38.23 320 P **P** **05 59 58.5 +1.3**
ULN pP **pP** **06 00 23.1 -1.1**
ULN x x 06 00 31.0
ULN x x 06 01 55.8
ULN x x 06 02 08.9
LBFI Labuhan Bajo, 38.52 219 P **P** **05 59 58.8 -0.9**
SONM Songino Array 38.60 320 P **P** **06 00 01.2 +1.0**
comp=Z,19nm,0.6s,baz=129,slow=8.6,SNR=60
SONM PcP **PcP** **06 02 10.1 0.0**
comp=Z,22nm,0.9s,baz=129,slow=2.8,SNR=9.5
SONM ScP **S** **06 05 47.2 0.0**
comp=Z,5.1nm,1.0s,baz=132,slow=4.2,SNR=8.4
SONM LR LR 06 16 49.6
comp=Z,599nm,18.5s,baz=114,slow=37
comp=Z,19nm,0.6s
WSI Waingapu 39.25 217 P **P** **06 00 02.2 -3.6**
comp=Z,6µmcomp=Z,274nm,1.0s
DBNI Kabupaten Domp 39.47 221 P **P** **06 00 08.3 +0.7**
comp=Z,1µmcomp=Z,80nm,0.6s
WBSI Waikabubak, Su 39.74 219 P **P** **06 00 08.1 -1.8**
comp=Z,2µmcomp=Z,203nm,0.7s
PLAI Plampang 40.05 221 P **P** **06 00 11.2 -1.2**
PLAI Plampang 40.05 221 P **P** **06 00 11.8 -0.6**
comp=Z,4µmcomp=Z,547nm,1.0s
YAK Yakutsk 40.39 350 *e*P **P** **06 00 16.2 +1.6**
YAK *e**PP **pP** **06 00 42.6 +0.9**
YAK *e* 06 01 58.9
YAK *e* 06 02 15.8
YAK *e*S **S** **06 06 16.3 +3.2**
YAK *e**SS **sS** **06 07 05.0 +4.4**
YAK *e* 06 10 03.3
YAK pmax pmax
comp=Z,49nm,0.9s
YAK pmax pmax
comp=N,4.0nm,1.0s
YAK pmax pmax
comp=E,3.0nm,1.1s
YAK pmax pmax
comp=Z,149nm,1.8s
YAK pmax pmax
comp=E,81nm,2.1s
YAK pmax pmax
comp=N,130nm,1.7s
YAK smax smax
comp=N,198nm,2.3s
YAK smax smax
comp=E,34nm,1.5s
GTA2 Gaotai 40.40 305 P **P** **06 00 16.0 +0.8**
GTA2 PcP **PcP** **06 02 17.0 +1.0**
GTA2 ScP **ScP** **06 05 54.0 +0.3**
GTA2 S **S** **06 06 13.5 -0.7**
GTA2 pmax pmax
comp=E,30nm,1.2s
GTA2 L L
comp=E,670nm,15.5s
GTA2 L L
comp=E,440nm,13.1s
GTA2 L L
comp=E,550nm,14.8s
MTSU Mount Surprise 40.60 178 P **P** **06 00 18.1 +1.2**
SEY Seymchan 40.68 6 P **P** **06 00 17.9 +0.8**
comp=E,22nm,0.9s,baz=185,slow=6.7,SNR=55
SEY ScP **ScP** **06 05 52.5 -1.6**
comp=E,5.7nm,0.6s,baz=165,slow=4.0,SNR=5.3
comp=E,22nm,0.9s
SEY Seymchan 40.68 6*ce*P **P** **06 00 19.2 +2.1**
SEY pmax pmax
comp=Z,31nm,1.0s
KNRA Kununurra 40.69 202 P **P** **06 00 17.7 +0.1**
comp=Z,98nm,1.2s
KNRA Kununurra 40.69 202 **P** **06 00 17.5 -0.1**
KNRA IAmb IAmb 06 00 18.4
comp=Z,72nm,0.8s
TNCH TengChong 40.83 282 P **P** **06 00 19.8 +0.8**
TNCH S **S** **06 06 21.0 0.0**
TNCH pmax pmax
comp=Z,320nm,1.7s
BOD Bodaibo 40.94 336 *e*P **P** **06 00 19.3 +0.1**
BOD pmax pmax
comp=Z,20nm,1.3s
KHKI Kahang-Kahang 41.06 224 P **P** **06 00 21.6 +0.9**
KMMI Kalianget 41.17 227 P **P** **06 00 22.6 +0.9**
CHTO Chiang Mai 41.49 273 P **P** **06 00 24.9 +0.6**
CHTO Chiang Mai 41.49 273 P **P** **06 00 24.9 +0.6**
CHTO IAmb IAmb 06 00 26.0
comp=Z,70nm,1.0s
CHTO Chiang Mai 41.49 273 P **P** **06 00 24.9 +0.6**
CHTO pmax pmax
comp=Z,70nm,1.0s
CHTO Chiang Mai 41.49 273 P **P** **06 00 25.1 +0.8**
CHTO S **S** **06 06 25.9 -4.8**
CHTO Chiang Mai 41.49 273 P **P** **06 00 24.7 +0.4**
comp=Z,75nm,0.8s
ABJI Asem Bagus 41.54 226 P **P** **06 00 26.2 +1.6**
DNP Denpasar 41.55 224 P **P** **06 00 27.7 +3.0**
comp=Z,391nm,0.9s
RTBI Rangdo, Negare 41.56 225 P **P** **06 00 23.9 -1.0**
comp=Z,5µmcomp=Z,268nm,0.6s
CM31 Chiang Mai Arr 41.57 273 P **P** **06 00 26.2 +1.3**
SNR=12
CMAR Chiang Mai Arr 41.57 273 P **P** **06 00 25.4 +0.4**
comp=Z,28nm,0.6s,baz=59,slow=8.4,SNR=146
CMAR PcP **PcP** **06 02 20.9 +0.9**
comp=Z,8.3nm,0.9s,baz=96,slow=2.3,SNR=7.6
CMAR ScP **ScP** **06 05 57.6 -0.9**
comp=Z,1.2nm,0.3s,baz=92,slow=1.5,SNR=7.6
CMAR PKiKP **PKiKP** **06 09 26.6 -0.3**
comp=Z,1.0nm,0.3s,baz=245,slow=1.7,SNR=5.1
comp=Z,28nm,0.6s
CMAR Chiang Mai Arr 41.57 273*ce*P **P** **06 00 26.0 +1.0**
CMAR pmax pmax
comp=Z,30nm,0.6s
ZAK Zakamensk 41.59 322 *e*P **P** **06 00 25.1 +0.3**
ZAK pmax pmax
comp=Z,40nm,1.2s
IGBI Denpasar 41.70 224 P **P** **06 00 25.2 -0.7**
comp=Z,2µmcomp=Z,227nm,0.8s
IRK Irkutsk 41.92 325 *e*P **P** **06 00 27.9 +0.6**
IRK *e*S **S** **06 06 36.4 +0.3**
IRK pmax pmax
comp=Z,43nm,1.3s
BLJI Banyuglugur 41.93 227 P **P** **06 00 29.0 +1.2**
TLY Talaya 41.98 324 LR LR 06 19 22.7
comp=Z,400nm,18.4s,baz=118,slow=38
TLY Talaya 41.98 324 **P** **06 00 28.9 +1.0**
TLY Talaya 41.98 324*ce*P **P** **06 00 29.6 +1.7**
TLY pmax pmax
comp=Z,30nm,1.7s
TLY Talaya 41.98 324 P **P** **06 00 24.8 -3.1**
TLY S **S** **06 06 37.3 +0.1**
JAGI Jajag, Banyuwa 42.09 226 P **P** **06 00 28.6 -0.6**
JAGI Jajag, Banyuwa 42.09 226 P **P** **06 00 28.5 -0.6**
comp=Z,3µmcomp=Z,336nm,1.1s
ADK Adak 42.34 36 P **P** **06 00 32.0 +1.3**
CTA Charters Tower 42.63 176 P **P** **06 00 34.0 +0.6**
CTAO Charters Tower 42.63 176 P **P** **06 00 34.0 +0.6**
CTAO Charters Tower 42.63 176 **P** **06 00 33.6 +0.2**
CTAO Charters Tower 42.63 176 P **P** **06 00 33.6 +0.2**
CTAO pmax pmax
comp=Z,52nm,1.1s
TPI Tanjungpandan 42.96 239 P **P** **06 00 35.9 -0.3**
comp=Z,2µmcomp=Z,187nm,1.0s
NGJI Ngawi 43.14 230 P **P** **06 00 38.8 +1.2**
comp=Z,417nm,0.9s
QIS Mount Isa 43.15 185 P **P** **06 00 37.3 -0.3**
SNJI Sawahan-Nganju 43.22 229 P **P** **06 00 39.5 +1.0**
comp=Z,259nm,1.3s
WRAB Tennant Creek 43.26 192 P **P** **06 00 37.5 -1.0**
WRAB Tennant Creek 43.26 192 P **P** **06 00 38.1 -0.4**
WRAB IAmb IAmb 06 00 39.3
comp=Z,53nm,0.7s
WRAB Tennant Creek 43.26 192*ce*P **P** **06 00 38.3 -0.2**
WRAB pmax pmax
comp=Z,99nm,1.3s
WRA Warramunga Arr 43.27 192 P **P** **06 00 37.5 -1.0**
comp=Z,56nm,0.8s,baz=13,slow=8.7,SNR=212
WRA PcP **PcP** **06 02 25.5 0.0**
comp=Z,15nm,0.6s,baz=11,slow=4.3,SNR=7.0
WRA ScP **ScP** **06 06 04.8 -0.4**
comp=Z,28nm,1.1s,baz=11,slow=4.2,SNR=23
WRA S **S** **06 06 51.7 -4.8**
comp=Z,7.3nm,1.1s,baz=16,slow=14,SNR=5.7
WRA PKiKP **PKiKP** **06 09 26.9 -1.5**
comp=Z,2.1nm,0.8s,baz=327,slow=1.5,SNR=5.1
comp=Z,56nm,0.8s
WRA Warramunga Arr 43.27 192*ce*P **P** **06 00 37.5 -1.0**
WRA pmax pmax
comp=Z,48nm,0.7s
WB1 Warramunga Ar. 43.28 192 P **P** **06 00 37.9 -0.8**
PASG PASIGHAT 43.40 287 *e*P **P** **06 00 43.4 +3.7**
TPRI Tanjung Pinang 43.40 246 P **P** **06 00 42.3 +2.5**
comp=Z,85nm,0.4s
MOY Mondy 43.45 322 *e*P **P** **06 00 40.4 +0.6**
MOY pmax pmax
comp=Z,28nm,2.1s
MYKOM Kota Tinggi 43.51 247 P **P** **06 00 42.3 +1.6**
MYKOM Kota Tinggi 43.51 247 IAmb IAmb 06 00 43.7
comp=Z,179nm,1.4s
MYKOM Kota Tinggi 43.51 247 P **P** **06 00 42.4 +1.7**
comp=Z,1µmcomp=Z,93nm,1.2s
SMRI Semarang 43.64 231 P **P** **06 00 42.1 +0.4**
SMRI Semarang 43.64 231 P **P** **06 00 42.3 +0.6**
comp=Z,3µmcomp=Z,149nm,0.9s
PPBI Pangkal Pinang 43.81 241 P **P** **06 00 44.2 +1.1**
GOMU GeErMu 43.84 299 P **P** **06 00 43.8 +0.3**
GOMU PcP **PP** **06 02 28.3 +0.4**
GOMU S **S** **06 07 05.5 +0.1**
GOMU pmax pmax
comp=Z,160nm,1.0s
GOMU L L
comp=Z,230nm,13.3s
GOMU L L
comp=Z,150nm,14.1s
GOMU L L
comp=Z,25µm,15.7s
PCJI Pacitan 43.92 229 P **P** **06 00 43.5 -0.3**
DSRI Dabo 44.12 244 P **P** **06 00 46.4 +0.8**
comp=Z,7µmcomp=Z,187nm,1.3s
UGM Wanagama 44.18 230 P **P** **06 00 46.1 +0.1**
UGM Wanagama 44.18 230 **P** **06 00 45.7 -0.3**
UGM Wanagama 44.18 230 P **P** **06 00 46.8 +0.8**
comp=Z,192nm,1.1s
MOKO MOKOCHONG 44.28 285 *e*P **P** **06 00 46.2 -0.6**
MOKO IAmb IAmb 06 00 48.7
comp=Z,42nm,0.5s
YOGI Yogyakarta 44.28 231 P **P** **06 00 46.7 0.0**
CTJI Waduk Cacaban 44.53 232 P **P** **06 00 49.2 +0.5**
comp=Z,131nm,1.2s
SANVU Saraoutou 44.59 146 P **P** **06 00 49.8 +0.7**
SANVU Saraoutou 44.59 146 **P** **06 00 49.0 -0.2**
KULM Kulim 44.59 254 P **P** **06 00 50.5 +1.2**
KULM Kulim 44.59 254 **P** **06 00 49.7 +0.4**
KULM IAmb IAmb 06 00 51.4
comp=Z,59nm,0.7s
KOHI KOHIMA 44.71 284 *e*P **P** **06 00 49.0 -1.3**
KOHI IAmb IAmb 06 01 11.5
comp=Z,27nm,1.0s
ZIRO ZIRO 44.75 287 *e*P **P** **06 00 51.5 +0.8**
ITAN ITANAGAR 44.90 286 *e*P **P** **06 00 52.6 +1.0**
KPJI Karang Pucung 44.93 232 P **P** **06 00 51.7 -0.2**
comp=Z,3µmcomp=Z,329nm,1.0s
IMP Imphal 44.97 283 *e*P **P** **06 00 50.6 -1.7**
IMP IAmb IAmb 06 01 00.2
comp=Z,13nm,0.9s
JMBI JAMBI 45.54 243 P **P** **06 01 01.3 +4.5**
LEM Lembang 45.57 234 LR LR 06 23 07.0
comp=Z,89nm,18.4s,baz=139,slow=40
TEZP TEZPUR 45.77 286 *e*P **P** **06 00 58.7 +0.2**
TEZP IAmb IAmb 06 01 00.5
comp=Z,76nm,0.5s
BBJI Bungbulang 45.96 233 P **P** **06 00 58.9 -1.2**
BBJI Bungbulang 45.96 233 P **P** **06 00 58.6 -1.5**
comp=Z,1µmcomp=Z,121nm,1.3s
DBJI Dramaga 46.04 235 P **P** **06 01 00.9 +0.2**
comp=Z,10µmcomp=Z,596nm,1.4s
SAIH SAIHA 46.21 280 *e*P **P** **06 01 01.5 -0.6**
SAIH IAmb IAmb 06 01 05.8
comp=Z,89nm,0.6s
SBJI Serang 46.24 236 P **P** **06 01 03.0 +0.8**
comp=Z,477nm,1.2s
KLSI 46.45 239 P **P** **06 01 03.3 -0.6**
TAWA Tawang 46.49 287 *e*P **P** **06 01 05.7 +1.1**
BKNI Bangkinang 46.67 247 P **P** **06 01 07.0 +1.4**
BKNI Bangkinang 46.67 247 P **P** **06 01 08.1 +2.5**
comp=Z,302nm,1.0s
SHL Shillong 46.72 284 **P** **06 01 05.8 -0.4**
SHL IAmb IAmb 06 02 39.0
comp=Z,82nm,1.0s
SHL Shillong 46.72 284 P **P** **06 01 05.8 -0.4**
SHL pmax pmax
comp=Z,82nm,1.0s
SHL Shillong 46.72 284 P **P** **06 01 06.1 -0.1**
SNR=25
SHL Shillong 46.72 284 *e*P **P** **06 01 06.0 -0.1**
SHL IAmb IAmb 06 01 06.9
comp=Z,89nm,1.3s
MDSI Maura Dua 46.76 240 P **P** **06 01 05.3 -1.0**
comp=Z,1µmcomp=Z,101nm,1.7s
GUWA GUWAHATI 46.81 285 *e*P **P** **06 01 05.7 -0.9**
GUWA IAmb IAmb 06 01 08.1
comp=Z,24nm,0.8s
CGJI Cibinong 46.89 236 P **P** **06 01 05.3 -2.0**
LSA Lhasa 46.94 290 P **P** **06 01 07.8 -0.3**
LSA IAmb IAmb 06 01 11.9
comp=Z,44nm,0.6s
LSA Lhasa 46.94 290 P **P** **06 01 07.8 -0.3**
LSA pmax pmax
comp=Z,44nm,0.6s
LSA Lhasa 46.94 290 P **P** **06 01 07.5 -0.6**
LSA S **S** **06 07 47.3 -3.0**
LSA pmax pmax
comp=Z,29nm,0.7s
LSA L L
comp=Z,480nm,23.7s
LSA L L

LSA L L
comp=Z,200nm,21.6s
comp=Z,510nm,22.5s
AS31 Alice Springs 46.98 192 P **P** **06 01 06.9 -0.9**
ASAR Alice Springs 46.98 192 P **P** **06 01 06.5 -1.3**
comp=Z,200nm,0.7s,baz=11,slow=8.4,SNR=159
ASAR pP **pP** **06 01 35.0 -0.9**
comp=Z,9.5nm,0.6s,baz=16,slow=13,SNR=5.3
ASAR PcP **PcP** **06 02 38.5 +0.3**
comp=Z,7.2nm,0.8s,baz=16,slow=4.0,SNR=5.1
ASAR ScP **ScP** **06 06 20.1 -0.3**
comp=Z,13nm,0.9s,baz=11,slow=4.0,SNR=19
ASAR S **S** **06 07 45.3 -4.6**
comp=Z,6.7nm,0.9s,baz=20,slow=20,SNR=15
ASAR PKiKP **PKiKP** **06 09 30.6 -1.4**
comp=Z,0.7nm,0.6s,baz=27,slow=0.7,SNR=5.4
ASAR LR LR 06 20 18.6
comp=Z,233nm,20.4s,baz=7.5,slow=35
ASAR PKPPKP **P'P'df** **06 32 21.1 -2.5**
comp=Z,0.8nm,0.8s,baz=188,slow=1.5,SNR=4.1
ASAR P4KPbc 06 38 50.6
comp=Z,0.7nm,1.0s,baz=29,slow=2.9,SNR=4.5
comp=Z,20nm,0.7s
KASI Kota Agung 47.14 238 P **P** **06 01 07.6 -1.6**
comp=Z,55nm,1.2s
LWLI Liwa 47.18 239 P **P** **06 01 08.5 -1.2**
comp=Z,167nm,0.8s
PSI Prapat 47.27 252 P **P** **06 01 11.3 +0.9**
PSI Prapat 47.27 252 P **P** **06 01 10.7 +0.3**
PSI pmax pmax
comp=Z,211nm,1.5s
PSI Prapat 47.27 252 P **P** **06 01 10.5 +0.1**
comp=Z,1µmcomp=Z,108nm,1.3s
RPSI Rantau Prapat 47.32 252 **P** **06 01 10.7 0.0**
BILL Bilibino 47.53 12 **P** **06 01 12.8 +1.2**
BILL Bilibino 47.53 12 *ce*P **P** **06 01 13.0 +1.5**
BILL pmax pmax
comp=Z,51nm,1.7s
MASI Maura Aman, Be 47.55 243 P **P** **06 01 13.0 +0.5**
KSI Kapahiang 47.55 242 P **P** **06 01 12.8 +0.3**
PPI Padang Panjang 47.62 247 P **P** **06 01 13.9 +0.9**
comp=Z,3µmcomp=Z,171nm,1.2s
MNAI Manna 47.67 241 P **P** **06 01 12.8 -0.6**
MNAI Manna 47.67 241 **P** **06 01 12.4 -1.0**
MNAI Manna 47.67 241 P **P** **06 01 12.7 -0.6**
comp=Z,4µmcomp=Z,415nm,1.2s
MNSI Mandailing Nat 47.68 249 P **P** **06 01 14.1 +0.6**
comp=Z,158nm,1.2s
PDSI Padang 47.81 246 P **P** **06 01 14.3 -0.2**
comp=Z,2µmcomp=Z,118nm,0.9s
UBSI University, Be 47.87 242 P **P** **06 01 15.8 +0.9**
comp=Z,5µmcomp=Z,386nm,1.3s
LHMI Lhok Sumawe 47.92 256 P **P** **06 01 17.7 +2.4**
KCSI Kotacane, Aceh 47.95 253 P **P** **06 01 15.0 -0.6**
comp=Z,867nmcomp=Z,69nm,1.5s
SPIA Saint Paul Isl 48.09 32 P **P** **06 01 17.7 +1.7**
baz=244
DHUB DHUBRI 48.34 285 *e*P **P** **06 01 18.4 0.0**
EIDS Eidsvold 48.39 170 P **P** **06 01 18.0 -0.6**
EIDS IAmb IAmb 06 02 34.6
comp=Z,118nm,1.8s
TPTI 48.59 253 P **P** **06 01 19.6 -0.9**
comp=Z,81nm,0.8s
MLSI Meulaboh, Aceh 48.83 255 P **P** **06 01 22.5 +0.2**
comp=Z,83nm,0.7s
QLP Quilpie 49.01 179 P **P** **06 01 22.9 -0.4**
GSI Gunungsitoli 49.17 251 P **P** **06 01 25.3 +0.4**
GSI Gunungsitoli 49.17 251 **P** **06 01 24.9 +0.1**
GSI Gunungsitoli 49.17 251 P **P** **06 01 25.1 +0.2**
comp=Z,4µmcomp=Z,267nm,0.6s
PPSI Pulau Pagai 49.18 245 P **P** **06 01 25.4 +0.4**
comp=Z,8µmcomp=Z,575nm,1.3s
MBWA Marble Bar 49.26 209 P **P** **06 01 25.4 0.0**
MBWA Marble Bar 49.26 209 **P** **06 01 24.8 -0.6**
MBWA Marble Bar 49.26 209 P **P** **06 01 25.7 +0.3**
MBWA Marble Bar 49.26 209 P **P** **06 01 25.5 +0.2**
MBWA x x 06 01 54.6
AKUT Akutan 49.28 37 P **P** **06 01 26.6 +1.4**
BSI Banda Aceh 49.29 257 P **P** **06 01 25.7 -0.1**
comp=Z,42nm,0.8s
XMI Christmas Isla 49.38 232 P **P** **06 01 25.6 -0.9**
GTK Tadong 49.41 287 *e*P **P** **06 01 27.1 +0.4**
GTK IAmb IAmb 06 01 29.8
comp=Z,50nm,0.8s
PSA00 Pilbara Seismi 49.56 209 P **P** **06 01 27.9 +0.2**
PSA00 Pilbara Seismi 49.56 209 **P** **06 01 27.5 -0.2**
TIXI Tiksi 49.66 354 **P** **06 01 27.9 +0.2**
TIXI Tiksi 49.66 354 *ce*P **P** **06 01 28.5 +0.8**
TIXI pmax pmax
comp=Z,40nm,1.3s
TIXI Tiksi 49.66 354 P **P** **06 01 28.6 +0.8**
WMQ Urumqi 49.99 309 *e*P **P** **06 01 32.0 +1.2**
WMQ PcP **PcP** **06 02 49.8 +0.7**
WMQ S **S** **06 08 32.5 +0.5**
WMQ ScS **ScS** **06 11 06.5 -3.1**
WMQ pmax pmax
comp=Z,110nm,1.3s
WMQ pmax pmax
comp=Z,300nm,3.7s
WMQ L L
comp=Z,700nm,21.5s
WMQ L L
comp=Z,290nm,21.5s
WMQ L L
comp=Z,430nm,23.9s
INKA Innaminka 50.21 183 **P** **06 01 31.7 -0.7**
INKA IAmb IAmb 06 01 33.6
comp=Z,36nm,0.9s
SHBG Sahibganj 50.57 285 *e*P **P** **06 01 36.0 +0.7**
GAMB Gambell 50.68 24 IAmb IAmb 06 02 12.4
comp=Z,51nm,0.9s
GAMB Gambell 50.68 24 P **P** **06 01 37.3 +1.8**
baz=238,SNR=20
FALS False Pass 50.81 37 P **P** **06 01 37.6 +1.0**
baz=253
EVN Everest 50.90 288 **P** **06 01 39.4 +0.9**
M11K Mekoryuk 51.36 29 P **P** **06 01 42.5 +1.9**
baz=246
AULRC Lightning Ridg 52.03 175 P **P** **06 01 45.3 -0.7**
ZSN Zaisan 52.38 313⇑ *i*P **P** **06 01 50.0 +1.5**
comp=Z,21nm,0.8s
SDPT Sand Point 52.57 37 P **P** **06 01 50.7 +0.9**
SDPT Sand Point 52.57 37 P **P** **06 01 49.9 +0.2**
SDPT Sand Point 52.57 37 P **P** **06 01 50.1 +0.3**
baz=255
MSVF Nonsavu 52.67 137 LR LR 06 21 46.3
comp=Z,85nm,21.0s,baz=337,slow=33
MSVF Nonsavu 52.67 137 P **P** **06 01 53.3 +2.3**
K13K Kusilvak Mount 52.67 28 IAmb IAmb 06 02 27.6
comp=Z,60nm,0.9s
K13K Kusilvak Mount 52.67 28 P **P** **06 01 52.5 +2.1**
baz=246,SNR=44
M13K Dall Lake 52.67 30 P **P** **06 01 52.6 +2.2**
baz=249,SNR=20
DGTI Dogotuki 52.71 134 P **P** **06 01 52.4 +1.1**
FUTU Fugatoga 52.77 131 P **P** **06 01 53.9 +2.1**
CNBA Chernabura Isl 52.94 38 P **P** **06 01 53.0 +0.6**
CNBA IAmb IAmb 06 02 27.4
comp=Z,69nm,0.9s
CHNA Chernabura Isl 52.94 38 P **P** **06 01 53.7 +1.2**
CHNA Chernabura Isl 52.94 38 P **P** **06 01 53.3 +0.8**
baz=256
TNA Tin City 53.00 23 IAmb IAmb 06 02 31.4
comp=Z,105nm,1.6s
TNA Tin City 53.00 23 P **P** **06 01 54.6 +1.8**
baz=240,SNR=26
BWNR Bhubaneshwar 53.20 279 *e*P **P** **06 01 55.4 +0.4**
TAVE Taveuni 53.24 134 P **P** **06 01 55.9 +0.7**
O14K Tigyukauivet M 53.27 32 P **P** **06 01 56.1 +1.3**
O14K IAmb IAmb 06 03 03.2
comp=Z,46nm,1.0s
O14K Tigyukauivet M 53.27 32 P **P** **06 01 56.3 +1.4**
baz=252,SNR=7.8
N14K Kuskokwak Cree 53.29 31 IAmb IAmb 06 01 57.7
comp=Z,77nm,1.0s
N14K Kuskokwak Cree 53.29 31 P **P** **06 01 56.5 +1.6**
baz=251,SNR=11
S14K Fog Glacier 53.31 36 P **P** **06 01 57.0 +1.7**
baz=256
L14K Kuka Creek 53.32 29 IAmb IAmb 06 02 32.4
comp=Z,53nm,1.1s
L14K Kuka Creek 53.32 29 P **P** **06 01 57.1 +2.0**
baz=249
M14K Bethel 53.44 30 P **P** **06 01 57.9 +1.9**
baz=250,SNR=28
ZAA0 Zalesovo Array 53.46 321 P **P** **06 01 56.5 +0.2**
ZAA0 IAmb IAmb 06 03 02.2
comp=Z,45nm,0.9s
ZALV Zalesovo Beam 53.46 321 LR LR 06 26 33.0
comp=Z,188nm,18.2s,baz=96,slow=38
J14K Nanvaranak Lak 53.47 27 IAmb IAmb 06 01 59.4
comp=Z,65nm,1.1s
J14K Nanvaranak Lak 53.47 27 P **P** **06 01 58.1 +1.9**
baz=247
ANM Nome 53.49 25 IAmb IAmb 06 02 32.4
comp=Z,40nm,0.8s
ANM Nome 53.49 25 P **P** **06 01 58.3 +1.9**
baz=244,SNR=47
VLK Valmikinagar 53.51 288 *e*P **P** **06 01 58.5 +1.4**
F14K Arctic Creek 53.54 24 P **P** **06 01 59.0 +2.3**
baz=242,SNR=91
O15K Ungalikthiuk R 53.96 32 IAmb IAmb 06 02 02.5
comp=Z,61nm,1.1s
O15K Ungalikthiuk R 53.96 32 P **P** **06 02 01.4 +1.6**
baz=253,SNR=14
L15K Ungalak Mounta 53.97 29 P **P** **06 02 01.1 +1.2**
baz=250
CMSA Cobar Meteorol 53.98 177 P **P** **06 02 01.0 +0.7**
M15K Kasigluk River 54.01 30 P **P** **06 02 01.5 +1.3**
baz=251
MK31 Makanchi Array 54.06 312 *ce*P **P** **06 02 01.9 +1.0**
MKAR Makanchi Array 54.06 312 P **P** **06 02 01.9 +1.1**
comp=Z,51nm,0.8s,baz=93,slow=9.7,SNR=231
MKAR pP **pP** **06 02 29.4 -0.3**
comp=Z,18nm,0.6s,baz=85,slow=10,SNR=5.4
MKAR ScP **ScP** **06 06 50.2 -0.5**
comp=Z,7.0nm,1.0s,baz=88,slow=7.4,SNR=5.3
MKAR S **S** **06 09 27.9 +0.5**
comp=Z,6.1nm,0.9s,baz=92,slow=17,SNR=9.9
MKAR LR LR 06 26 17.7
comp=Z,259nm,18.2s,baz=74,slow=37
MKAR PKPPKP **P'P'df** **06 32 13.1 -4.7**
comp=Z,0.8nm,1.1s,baz=316,slow=3.3,SNR=3.9
comp=Z,51nm,0.8s
N15K Kwethluk River 54.12 31 IAmb IAmb 06 02 03.9
comp=Z,70nm,0.9s
N15K Kwethluk River 54.12 31 P **P** **06 02 02.9 +1.8**
baz=252,SNR=28
K15K Wolf Creek Mou 54.17 28 IAmb IAmb 06 02 38.5
comp=Z,59nm,1.0s
K15K Wolf Creek Mou 54.17 28 P **P** **06 02 03.1 +1.8**
baz=249,SNR=25
G15K Niukluk 54.19 25 P **P** **06 02 03.2 +1.8**
baz=245,SNR=31
F15K North Star Dit 54.27 24 IAmb IAmb 06 02 05.2
comp=Z,45nm,0.9s
F15K North Star Dit 54.27 24 P **P** **06 02 04.1 +2.0**
baz=244,SNR=47
MAKZ Makanchi 54.28 312 P **P** **06 02 03.2 +0.8**
MAKZ Makanchi 54.28 312 P **P** **06 02 03.2 +0.8**
MAKZ pmax pmax
comp=Z,128nm,1.1s
MAKZ Makanchi 54.28 312 P **P** **06 02 03.9 +1.4**
MAKZ pP **pP** **06 02 31.3 0.0**
MAKZ x x 06 02 34.2
MAKZ x x 06 02 38.0
MAKZ x x 06 02 39.5
MAKZ PcP **PcP** **06 03 03.9 -1.2**
STKA Stephens Creek 54.30 182 P **P** **06 02 02.2 -0.3**
comp=Z,70nm,0.9s,baz=348,slow=8.1,SNR=96
comp=Z,70nm,0.9s
STKA Stephens Creek 54.30 182 P **P** **06 02 02.6 0.0**
STKA Stephens Creek 54.30 182 P **P** **06 02 02.3 -0.3**
MEEK Meekatharra 54.53 207 P **P** **06 02 04.1 -0.4**
H16K Elim 54.75 25 P **P** **06 02 06.8 +1.3**
baz=247,SNR=26
P16K Nushagak River 54.83 33 P **P** **06 02 07.6 +1.5**
baz=255
N16K Nishlik Lake 54.84 31 P **P** **06 02 07.9 +1.7**
baz=253,SNR=49
AUDCS Dubbo College 54.87 174 P **P** **06 02 07.3 +0.6**
L16K Owhat River 54.89 29 IAmb IAmb 06 02 09.1
comp=Z,56nm,1.4s
L16K Owhat River 54.89 29 P **P** **06 02 07.7 +1.1**
baz=252,SNR=18
M16K Timber Creek 54.91 30 IAmb IAmb 06 02 09.5
comp=Z,58nm,1.1s
M16K Timber Creek 54.91 30 P **P** **06 02 08.2 +1.5**
baz=253
J16K Anvik River 54.92 27 IAmb IAmb 06 02 44.0
comp=Z,46nm,0.8s
J16K Anvik River 54.92 27 P **P** **06 02 08.8 +2.0**
baz=250
O16K Kokwok River B 54.92 32 IAmb IAmb 06 02 09.5
comp=Z,58nm,1.1s
O16K Kokwok River B 54.92 32 P **P** **06 02 08.3 +1.5**
baz=255,SNR=29
G16K Koyuk River 55.00 25 IAmb IAmb 06 03 45.8
comp=Z,64nm,1.6s
G16K Koyuk River 55.00 25 P **P** **06 02 08.4 +1.1**
baz=246,SNR=7.7
I17K Unalakleet 55.09 27 IAmb IAmb 06 02 11.1
comp=Z,60nm,0.9s
I17K Unalakleet 55.09 27 P **P** **06 02 09.8 +1.8**
baz=249,SNR=14
FORT Forrest 55.14 196 **P** **06 02 08.5 -0.2**
FORT IAmb IAmb 06 02 09.3
comp=Z,38nm,0.7s
C16K Lisburne Hills 55.21 21 P **P** **06 02 10.3 +1.6**
baz=242,SNR=92
R17L Mt. Peulik Vol 55.33 35 P **P** **06 02 11.3 +1.4**
baz=258
CHIR Chirikof Islan 55.36 37 P **P** **06 02 11.6 +1.6**
baz=259
Q16K King Salmon 55.41 33 P **P** **06 02 12.0 +1.7**
baz=256
O17K Koliganek Bris 55.46 32 P **P** **06 02 12.2 +1.5**
baz=255
L17K Donlin 55.55 29 P **P** **06 02 13.2 +2.0**
baz=253,SNR=44
J17K VABM Dome 55.60 27 IAmb IAmb 06 02 14.9
comp=Z,53nm,1.0s
J17K VABM Dome 55.60 27 P **P** **06 02 13.5 +1.9**
baz=251,SNR=29
RAGD RAYAGADA 55.61 278 *e*P **P** **06 02 13.2 +0.8**
RAGD IAmb IAmb 06 02 15.4
comp=Z,60nm,1.1s
N17K Nushagak Hills 55.61 31 IAmb IAmb 06 02 14.9
comp=Z,50nm,0.9s
N17K Nushagak Hills 55.61 31 P **P** **06 02 13.8 +2.0**
baz=255,SNR=20
BBOO Buckleboo 55.63 187 P **P** **06 02 12.1 -0.1**
BBOO Buckleboo 55.63 187 **P** **06 02 12.0 -0.1**
P17K Kvichak River 55.64 33 P **P** **06 02 12.8 +0.9**
baz=256
G17K Kiwalik Mounta 55.70 25 P **P** **06 02 13.9 +1.6**
baz=248
D17K Noatak River 55.70 22 P **P** **06 02 14.2 +1.9**
baz=244,SNR=82
Q17K Contact Creek 55.71 34 P **P** **06 02 12.3 -0.3**
baz=258
K17K Iditarod 55.72 28 P **P** **06 02 14.7 +2.2**
baz=252,SNR=60
M17K Holitna River 55.73 30 IAmb IAmb 06 02 15.8
comp=Z,62nm,0.9s
M17K Holitna River 55.73 30 P **P** **06 02 14.6 +2.0**
baz=254
ALBI Allahabad 55.75 286 *e*P **P** **06 02 12.8 -0.5**
H17K Granite Mounta 55.78 26 IAmb IAmb 06 02 15.9
comp=Z,47nm,0.9s
H17K Granite Mounta 55.78 26 P **P** **06 02 14.9 +1.9**
baz=249
F17K Baldwin Pennin 55.84 24 IAmb IAmb 06 02 16.4
comp=Z,57nm,0.9s
F17K Baldwin Pennin 55.84 24 P **P** **06 02 15.2 +2.0**
baz=247,SNR=56
E17K Hotham Inlet 55.88 23 P **P** **06 02 15.5 +1.9**
baz=246
PDGK Podgornoye 55.91 308 P **P** **06 02 15.2 +0.8**
RDOG Red Dog Mine 55.92 21 P **P** **06 02 15.8 +1.9**
baz=244,SNR=27
SHLS Shalkode 55.94 308⇑ *i*P **P** **06 02 13.5 -1.0**
comp=Z,13nm,0.5s
HTT Hallett 55.97 184 P **P** **06 02 14.4 -0.3**
C17K DeLong Mountai 56.01 21 P **P** **06 02 16.6 +2.1**
baz=244
BLSP Bilaspur 56.09 282 *e*P **P** **06 02 15.5 -0.3**
VIS Vishakhapatnam 56.13 277 *e*P **P** **06 02 16.6 +0.5**
WUS Wushi 56.15 305 IAmb IAmb 06 02 19.1
comp=Z,65nm,1.2s
Q18K Katmai Hardscr 56.24 34 P **P** **06 02 16.3 -0.1**
baz=258,SNR=10.0
UZB Uzynbulak 56.26 308 *e*P **P** **06 02 18.0 +1.1**
comp=Z,20nm,0.7s
N18K Kilae Creek 56.27 31 IAmb IAmb 06 02 19.4
comp=Z,34nm,0.9s
N18K Kilae Creek 56.27 31 P **P** **06 02 18.2 +1.7**
baz=256,SNR=10
SII Sitkinak Islan 56.29 36 P **P** **06 02 18.1 +1.4**
SII Sitkinak Islan 56.29 36 P **P** **06 02 17.7 +1.1**
baz=260
P18K Big Mountain, 56.29 33 P **P** **06 02 17.4 +0.7**
baz=257
L18K Granite Mounta 56.30 29 IAmb IAmb 06 02 19.9
comp=Z,85nm,1.3s
L18K Granite Mounta 56.30 29 P **P** **06 02 18.4 +1.8**
baz=254,SNR=29
O18K Koktuh Hills 56.41 32 P **P** **06 02 19.1 +1.6**
baz=257,SNR=31
E18K Tukpahlearik C 56.45 23 P **P** **06 02 19.6 +2.0**
baz=247,SNR=120
H18K Honhosa River 56.48 26 IAmb IAmb 06 02 20.4
comp=Z,39nm,0.9s
H18K Honhosa River 56.48 26 P **P** **06 02 19.3 +1.4**
baz=251,SNR=42
F18K Selawik 56.49 24 P **P** **06 02 19.4 +1.6**
baz=248,SNR=40
M18K Stony River 56.50 30 P **P** **06 02 19.9 +1.8**
baz=256,SNR=24
KPKS Kokpek 56.50 308 *e*P **P** **06 02 19.7 +1.2**
LGTI Lohaghat 56.54 291 *e*P **P** **06 02 19.1 0.0**
G18K Tagagawik 56.61 25 IAmb IAmb 06 02 21.4
comp=Z,52nm,0.9s
G18K Tagagawik 56.61 25 P **P** **06 02 20.3 +1.5**
baz=250
J18K Innoko River 56.63 28 P **P** **06 02 20.3 +1.3**
baz=253
TDK Taldyqorghan 56.70 310 *e*P **P** **06 02 21.1 +1.3**
comp=Z,20nm,0.7s
SATY Saty 56.71 307⇑ *i*P **P** **06 02 21.2 +1.2**
comp=Z,25nm,0.9s
C18K Utukok River 56.75 21 P **P** **06 02 21.3 +1.5**
baz=246
KURK Kurchatov 56.78 317 **P** **06 02 20.8 +0.5**
KURK Kurchatov 56.78 317 *ce*P **P** **06 02 20.6 +0.4**
KURK pmax pmax
comp=Z,176nm,1.3s
KURK Kurchatov 56.78 317 P **P** **06 02 20.9 +0.7**
KURK S **S** **06 10 00.1 -3.3**
KURK Kurchatov 56.78 317 P **P** **06 02 20.9 +0.7**
KURK pP **pP** **06 02 47.6 -1.4**
JOSI Joshimath 56.82 293 *e*P **P** **06 02 21.8 +0.6**
JOSI IAmb IAmb 06 02 27.1
comp=Z,61nm,0.9s
KURBB Kurchatov Arra 56.83 317 P **P** **06 02 21.1 +0.5**
comp=Z,102nm,0.9s,baz=94,slow=7.7,SNR=477
KURBB S **S** **06 10 02.5 -1.6**
comp=Z,11nm,1.3s,baz=99,slow=15,SNR=15
KURBB LR LR 06 27 50.6
comp=Z,497nm,18.2s,baz=190,slow=37
KURBB PKPPKP **P'P'df** **06 32 11.0 -2.4**
comp=Z,1.6nm,1.0s,baz=266,slow=3.0,SNR=6.2
comp=Z,102nm,0.9s
KURBB Kurchatov Arra 56.83 317 P **P** **06 02 20.7 +0.1**
OHAK Old Harbor 56.88 36 P **P** **06 02 21.8 +1.0**
OHAK Old Harbor 56.88 36 P **P** **06 02 21.6 +0.9**
baz=261,SNR=5.7
O19K Port Alsworth 56.91 32 P **P** **06 02 22.5 +1.5**
baz=258,SNR=33
GCSA Galena City Sc 56.95 26 P **P** **06 02 22.1 +1.0**
baz=252,SNR=16
N19K Bonanza Creek 56.97 31 IAmb IAmb 06 02 24.4
comp=Z,47nm,0.9s
N19K Bonanza Creek 56.97 31 P **P** **06 02 22.9 +1.4**
baz=257,SNR=22
Q19K Cape Douglas, 57.00 33 P **P** **06 02 22.3 +0.6**
baz=259
HNLY HANLEY 57.01 295 *e*P **P** **06 02 24.2 +1.4**
NRIK Noril'sk 57.08 340 P **P** **06 02 22.4 +0.4**
comp=Z,29nm,0.9s,baz=111,slow=8.6,SNR=44
NRIK ScP **ScP** **06 07 02.3 -1.2**
comp=Z,11nm,0.9s,baz=129,slow=5.2,SNR=4.2
NRIK SKKP **SKKPdf** **06 27 13.0 +2.5**
comp=Z,1.8nm,0.8s,baz=13,slow=2.4,SNR=3.8
NRIK LR LR 06 27 36.0
comp=Z,231nm,18.3s,baz=109,slow=37
comp=Z,29nm,0.9s
NRIK Noril'sk 57.08 340 IAmb IAmb 06 02 59.0
comp=Z,47nm,0.8s
NRIK Noril'sk 57.08 340 *i*P **P** **06 02 22.1 +0.1**
NRIK pmax pmax
comp=Z,34nm,0.9s
ARXS Arharly 57.11 309 *e*P **P** **06 02 23.8 +1.0**
L19K White Mountain 57.12 30 IAmb IAmb 06 02 25.2
comp=Z,44nm,1.0s
L19K White Mountain 57.12 30 P **P** **06 02 24.2 +1.7**
baz=256,SNR=26
AFI Afiamalu 57.14 125 P **P** **06 02 23.0 -0.3**
comp=Z,5.5nm,0.3s,baz=246,slow=11,SNR=3.8
AFI LR LR 06 25 06.6
comp=Z,108nm,18.3s,baz=301,slow=34
comp=Z,5.5nm,0.3s
COCO West Island 57.17 237 P **P** **06 02 24.2 +0.8**
COCO West Island 57.17 237 P **P** **06 02 23.0 -0.4**
COCO West Island 57.17 237 P **P** **06 02 23.0 -0.4**
COCO pmax pmax
comp=Z,283nm,1.0s
COCO West Island 57.17 237 P **P** **06 02 23.6 +0.1**
COCO West Island 57.17 237 P **P** **06 02 24.2 +0.8**
comp=Z,203nm,1.2s
TARG Taragay, Kyrgy 57.19 306 IAmb IAmb 06 02 26.8
comp=Z,66nm,1.0s
J19K Poorman 57.25 27 IAmb IAmb 06 02 26.0
comp=Z,65nm,1.0s
J19K Poorman 57.25 27 P **P** **06 02 24.8 +1.5**
baz=254,SNR=72
M19K Big River Lodg 57.26 30 P **P** **06 02 25.1 +1.6**
baz=257
F19K Shalerochkik Mo 57.27 24 P **P** **06 02 24.4 +1.0**
baz=250,SNR=28
G19K Purcell Mounta 57.30 25 P **P** **06 02 25.0 +1.3**
baz=251
P19K Oil Pt 57.34 33 P **P** **06 02 24.6 +0.6**
baz=259,SNR=5.3
KDAK Kodiak Island 57.35 35 LR LR 06 26 33.2
comp=Z,248nm,20.2s,baz=239,slow=35
KDAK Kodiak Island 57.35 35 P **P** **06 02 24.6 +0.6**
baz=261
H19K Roundabout Mou 57.36 25 IAmb IAmb 06 02 27.0
comp=Z,61nm,0.9s
H19K Roundabout Mou 57.36 25 P **P** **06 02 25.8 +1.8**
baz=252
A19K Wainwright 57.44 20 P **P** **06 02 26.9 +2.4**
baz=245,SNR=7.7
C19K Lookout Ridge 57.47 21 P **P** **06 02 26.9 +2.1**
baz=247,SNR=100
Q20K Shuyak Island 57.58 34 P **P** **06 02 26.2 +0.5**
baz=260
E19K Redstone River 57.68 23 IAmb IAmb 06 02 29.3
comp=Z,59nm,1.1s
E19K Redstone River 57.68 23 P **P** **06 02 28.1 +1.8**
baz=250,SNR=55
MDOK Medeo 57.70 308 *e*P **P** **06 02 28.2 +1.2**
RED Redoubt Volcan 57.72 32 IAmb IAmb 06 02 28.2
comp=Z,51nm,1.1s
D19K Kuna River 57.73 22 P **P** **06 02 28.2 +1.5**
baz=249,SNR=51
K20K Telida 57.75 28 IAmb IAmb 06 02 30.1
comp=Z,75nm,1.0s
K20K Telida 57.75 28 P **P** **06 02 28.8 +1.9**
baz=256,SNR=45
MORW Morawa 57.76 208 P **P** **06 02 26.8 -0.5**
MORW Morawa 57.76 208 **P** **06 02 27.2 -0.1**
TNSS Tian-Shan 57.78 307 *e*P **P** **06 02 28.9 +0.9**
KLP Kalpa 57.78 294 *e*P **P** **06 02 28.4 +0.3**
KLP IAmb IAmb 06 02 31.3
comp=Z,43nm,0.7s
AAA Alma-Ata 57.80 308 *e*P **P** **06 02 29.0 +1.4**
M20K Styx River 57.84 30 IAmb IAmb 06 02 30.6
comp=Z,41nm,1.2s
M20K Styx River 57.84 30 P **P** **06 02 29.4 +1.8**
baz=258,SNR=18
AUDAR Daramalan Coll 57.91 174 P **P** **06 02 29.6 +1.4**
J20K Nowinta River 57.92 27 P **P** **06 02 30.0 +2.0**
baz=255,SNR=98
I20K Naaghedeneel 57.95 27 P **P** **06 02 30.1 +1.9**
baz=255,SNR=8.2
AUMTS Mt Stromlo 57.96 174 P **P** **06 02 30.1 +1.4**
CAN Canberra 57.97 174 P **P** **06 02 30.1 +1.4**
CAN Canberra 57.97 174 IAmb IAmb 06 02 31.0

	comp=Z,81nm,1.1s								
CAN	**Canberra**	**57.97**	**174**		P	**P**	**06 02 29.9**	**+1.2**
CAN					sP	**sP**	**06 03 08.3**	**-2.9**
H20K	**Anotleneega Mo**	**57.97**	**26**		P	**P**	**06 02 30.1**	**+1.8**
	baz=254,SNR=62								
CNB	**Canberra Magne**	**57.99**	**174**		P	**P**	**06 02 30.2**	**+1.3**
AUMHS	**Melrose High S**	**58.01**	**174**		P	**P**	**06 02 30.4**	**+1.4**
F20K	**Avaraart Lake**	**58.10**	**24**		P	**P**	**06 02 30.9**	**+1.7**
	baz=252								
N20K	**Mount Spurr**	**58.13**	**31**		P	**P**	**06 02 30.7**	**+1.0**
	baz=259								
SPCR	**Spurr Chakacha**	**58.13**	**31**		P	**P**	**06 02 30.5**	**+0.8**
	baz=259,SNR=7.5								
DDI	**Dehra Dun**	**58.14**	**292**		*e*P	**P**	**06 02 31.0**	**+0.8**
HOM	**Homer**	**58.14**	**33**		P	**P**	**06 02 31.1**	**+1.6**
	baz=260								
ALCI	**Alchi Leh**	**58.31**	**297**		*e*P	**P**	**06 02 32.6**	**+0.9**
ALCI					IAmb	IAmb	06 02 45.2		
	comp=Z,74nm,1.4s								
E20K	**Nigu River**	**58.32**	**22**		P	**P**	**06 02 32.5**	**+1.7**
	baz=251,SNR=30								
D20K	**Etivluk River**	**58.32**	**22**		IAmb	IAmb	06 02 33.6		
	comp=Z,57nm,0.8s								
D20K	**Etivluk River**	**58.32**	**22**		P	**P**	**06 02 32.5**	**+1.7**
	baz=250,SNR=101								
ULHL	**Ulahol**	**58.33**	**307**		P	**P**	**06 02 33.2**	**+1.7**
	SNR=5.9								
BRLK	**Bradley Lake**	**58.53**	**33**		IAmb	IAmb	06 03 07.2		
	comp=Z,37nm,0.7s								
JHNI	**Jhansi**	**58.55**	**287**		*e*P	**P**	**06 02 31.9**	**-1.1**
JHNI					IAmb	IAmb	06 02 32.9		
	comp=Z,60nm,0.9s								
NRN	**Naryn**	**58.56**	**306**		IAmb	IAmb	06 02 36.5		
	comp=Z,61nm,1.2s								
B20K	**Meade River**	**58.60**	**20**		P	**P**	**06 02 34.5**	**+1.9**
	baz=249,SNR=95								
SKT	**Skwentna**	**58.60**	**30**		IAmb	IAmb	06 03 09.1		
	comp=Z,40nm,0.8s								
SKT	**Skwentna**	**58.60**	**30**		P	**P**	**06 02 33.1**	**+0.3**
	baz=259,SNR=28								
BRSE	**Bradley Lake S**	**58.60**	**33**		P	**P**	**06 02 32.9**	**0.0**
	baz=261,SNR=5.0								
CHUM	**Lake Minchumin**	**58.64**	**28**		P	**P**	**06 02 34.9**	**+1.9**
	baz=257,SNR=31								
SMLA	**Simla**	**58.76**	**294**		*e*P	**P**	**06 02 34.6**	**+0.2**
SMLA					IAmb	IAmb	06 02 35.7		
	comp=Z,90nm,0.5s								
TKM2	**Tokmak 2**	**58.77**	**307**		P	**P**	**06 02 36.2**	**+1.6**
	SNR=74								
G21K	**Allakaket**	**58.79**	**25**		IAmb	IAmb	06 02 37.1		
	comp=Z,65nm,1.1s								
G21K	**Allakaket**	**58.79**	**25**		P	**P**	**06 02 35.9**	**+1.9**
	baz=255,SNR=49								
BLDU	**Ballidu**	**58.82**	**207**		P	**P**	**06 02 34.1**	**-0.5**
H21K	**Melozitna Rive**	**58.85**	**26**		P	**P**	**06 02 36.3**	**+1.9**
	baz=256,SNR=102								
SLKM	**Skilak Lake**	**58.98**	**32**		IAmb	IAmb	06 03 10.4		
	comp=Z,28nm,0.7s								
F21K	**Alatna River**	**58.99**	**24**		P	**P**	**06 02 36.7**	**+1.3**
	baz=254								
AUSMG	**Snowy Mountain**	**59.02**	**175**		P	**P**	**06 02 37.1**	**+1.1**
L22K	**Petersville**	**59.05**	**30**		IAmb	IAmb	06 02 37.5		
	comp=Z,61nm,1.0s								
KSH2	**Kashi**	**59.06**	**303**		P	**P**	**06 02 38.5**	**+1.9**
KSH2					S	**S**	**06 10 37.5**	**+3.6**
KSH2					pmax	pmax			
	comp=Z,86nm,0.8s								
I21K	**Tanana**	**59.07**	**26**		P	**P**	**06 02 37.9**	**+2.0**
	baz=257								
C21K	**Knifeblade Rid**	**59.09**	**22**		P	**P**	**06 02 38.0**	**+1.9**
	baz=252,SNR=38								
NGP	**Nagpur**	**59.13**	**282**		*e*P	**P**	**06 02 37.5**	**+0.3**
E21K	**Killik River**	**59.16**	**23**		P	**P**	**06 02 38.1**	**+1.5**
	baz=253								
NPLP	**NPLP New Delhi**	**59.19**	**291**		*e*P	**P**	**06 02 37.6**	**+0.2**
O22K	**Cooper Landing**	**59.22**	**32**		P	**P**	**06 02 37.4**	**+0.4**
	baz=262,SNR=10								
M22K	**Willow**	**59.22**	**31**		P	**P**	**06 02 37.1**	**+0.1**
	baz=261								
A21K	**Barrow**	**59.24**	**19**		P	**P**	**06 02 38.7**	**+1.7**
	baz=249,SNR=59								
KLBR	**Kellerberrin**	**59.25**	**205**		P	**P**	**06 02 37.1**	**-0.5**
BPAW	**Bear Paw Mtn.**	**59.26**	**28**		P	**P**	**06 02 38.7**	**+1.4**
	baz=258,SNR=45								
CUT	**Chulitna**	**59.26**	**30**		IAmb	IAmb	06 03 25.4		
	comp=Z,45nm,0.8s								
CUT	**Chulitna**	**59.26**	**30**		P	**P**	**06 02 37.6**	**+0.3**
	baz=260,SNR=7.1								
KBK	**Karagaybulak**	**59.27**	**307**		P	**P**	**06 02 39.5**	**+1.6**
	SNR=31								
SEW	**Seward**	**59.30**	**33**		P	**P**	**06 02 37.9**	**+0.4**
	baz=262,SNR=14								
B21K	**Ikpikpuk River**	**59.30**	**21**		P	**P**	**06 02 39.2**	**+1.8**
	baz=252,SNR=54								
RC01	**Rabbit Creek A**	**59.30**	**31**		P	**P**	**06 02 37.9**	**+0.3**
	baz=261,SNR=21								
DHRM	**DHARAMSHALA**	**59.32**	**295**		*e*P	**P**	**06 02 38.3**	**-0.2**
DHRM					IAmb	IAmb	06 02 45.8		
	comp=Z,69nm,0.9s								
TSSA	**Tissa**	**59.35**	**296**		*e*P	**P**	**06 02 38.7**	**0.0**
TSSA					IAmb	IAmb	06 02 44.3		
	comp=Z,86nm,1.1s								
SONA	**Sohna**	**59.35**	**290**		*e*P	**P**	**06 02 38.2**	**-0.4**
BHK	**Bhakra**	**59.38**	**294**		*e*P	**P**	**06 02 39.0**	**+0.3**
BHK					IAmb	IAmb	06 02 47.5		
	comp=Z,79nm,0.8s								
CHMS	**Chumysh**	**59.39**	**308**		P	**P**	**06 02 39.9**	**+1.3**
	SNR=17								
TRF	**Thorofare Moun**	**59.44**	**29**		P	**P**	**06 02 39.4**	**+0.7**
	baz=260								
SGDS	**Sogindy**	**59.45**	**308**		*e*P	**P**	**06 02 40.1**	**+1.0**
H22K	**Ishtalitna Cre**	**59.48**	**26**		IAmb	IAmb	06 02 42.0		
	comp=Z,50nm,1.0s								
H22K	**Ishtalitna Cre**	**59.48**	**26**		P	**P**	**06 02 40.9**	**+2.1**
	baz=257,SNR=54								
MLY	**Manley**	**59.55**	**27**		P	**P**	**06 02 41.0**	**+1.7**
	baz=258,SNR=54								
USP	**Ospenovka**	**59.56**	**308**		P	**P**	**06 02 40.9**	**+1.2**
	SNR=26								
AAK	**Ala-Archa**	**59.60**	**307**		LR	LR	06 29 27.0		
	comp=Z,232nm,20.6s,baz=100,slow=37								
AAK	**Ala-Archa**	**59.60**	**307**		P	**P**	**06 02 41.5**	**+1.3**
	SNR=31								
AAK	**Ala-Archa**	**59.60**	**307**			**P**	**06 02 41.3**	**+1.1**
AAK					IAmb	IAmb	06 03 27.4		
	comp=Z,35nm,1.0s								
AAK	**Ala-Archa**	**59.60**	**307**	*i*	P	**P**	**06 02 41.4**	**+1.1**
	SNR=37								
AAK	**Ala-Archa**	**59.60**	**307**	*c*	*e*P	**P**	**06 02 41.4**	**+1.1**
AAK					pmax	pmax			
	comp=Z,68nm,1.7s								
AAK	**Ala-Archa**	**59.60**	**307**		P	**P**	**06 02 41.5**	**+1.3**
AAK	**Ala-Archa**	**59.60**	**307**		P	**P**	**06 02 41.2**	**+1.1**
AAK					pP	**pP**	**06 03 08.6**	**-1.0**
UCH	**Uchtor**	**59.62**	**307**		P	**P**	**06 02 42.5**	**+1.9**
	SNR=80								
A22K	**Sinclair Lake**	**59.63**	**20**		P	**P**	**06 02 41.7**	**+2.0**
	baz=251,SNR=76								
PMR	**Palmer**	**59.66**	**31**		P	**P**	**06 02 40.3**	**+0.2**
PMR	**Palmer**	**59.66**	**31**		P	**P**	**06 02 40.3**	**+0.2**
	baz=262,SNR=28								
MILA	**Mila**	**59.70**	**175**		P	**P**	**06 02 40.8**	**+0.2**
THN	**Thein Dam**	**59.74**	**295**		*e*P	**P**	**06 02 41.4**	**+0.2**
THN					IAmb	IAmb	06 02 43.2		
	comp=Z,73nm,0.6s								
BTLS	**Baital**	**59.79**	**310**		*e*P	**P**	**06 02 42.6**	**+1.3**
E22K	**Anaktuvuk Pass**	**59.85**	**23**		IAmb	IAmb	06 02 44.4		
	comp=Z,59nm,1.0s								
E22K	**Anaktuvuk Pass**	**59.85**	**23**		P	**P**	**06 02 43.3**	**+2.0**
	baz=255								
GUNA	**GUNA**	**59.86**	**286**		*e*P	**P**	**06 02 41.6**	**-0.5**
KUDL	**Kundal**	**59.87**	**290**		*e*P	**P**	**06 02 41.7**	**-0.3**
B22K	**Teshekpuk Lake**	**59.91**	**20**		P	**P**	**06 02 43.2**	**+1.6**
	baz=252,SNR=56								
BRAT	**Ballarat**	**59.94**	**179**		P	**P**	**06 02 42.9**	**+0.8**
KNK	**Knik Glacier**	**59.96**	**31**		P	**P**	**06 02 42.6**	**+0.5**
	baz=262,SNR=29								
TOO	**Toolangi**	**59.99**	**178**			**P**	**06 02 43.2**	**+0.6**
TOO	**Toolangi**	**59.99**	**178**		P	**P**	**06 02 43.2**	**+0.6**
TOO					pmax	pmax			
	comp=Z,26nm,0.9s								
AUMTC	**Mt Clear Colle**	**59.99**	**179**		P	**P**	**06 02 43.5**	**+1.0**
AUKUL	**Kulin High Sch**	**60.05**	**204**		P	**P**	**06 02 42.9**	**-0.2**
RND	**Reindeer**	**60.06**	**29**		IAmb	IAmb	06 03 19.0		
	comp=Z,33nm,0.8s								
SML	**Sawmill**	**60.07**	**31**		P	**P**	**06 02 43.6**	**+0.7**
	baz=262,SNR=38								
SML	**Sawmill**	**60.07**	**31**		P	**P**	**06 02 43.5**	**+0.5**
MCK	**McKinley**	**60.08**	**28**		P	**P**	**06 02 43.1**	**+0.2**
MCK	**McKinley**	**60.08**	**28**		P	**P**	**06 02 43.2**	**+0.2**
MCK					pmax	pmax			
	comp=Z,74nm,1.0s								
MCK	**McKinley**	**60.08**	**28**		P	**P**	**06 02 43.3**	**+0.4**
	baz=261,SNR=37								
BHPL	**Bhopal**	**60.10**	**285**		*e*P	**P**	**06 02 43.4**	**-0.4**
WAT1	**Susitna Watana**	**60.11**	**29**		P	**P**	**06 02 43.6**	**+0.4**
	baz=262								
EKS2	**Erkin-Say**	**60.13**	**307**		P	**P**	**06 02 45.0**	**+1.2**
	SNR=20								
I23K	**Minto, Yukon-K**	**60.15**	**27**		P	**P**	**06 02 44.7**	**+1.4**
	baz=259,SNR=38								
MGBR	**Mount Gambier**	**60.16**	**182**			**P**	**06 02 43.9**	**+0.3**
NEA2	**Nenana**	**60.17**	**27**		IAmb	IAmb	06 02 46.0		
	comp=Z,47nm,0.9s								
NEA2	**Nenana**	**60.17**	**27**		P	**P**	**06 02 44.3**	**+0.8**
	baz=260,SNR=47								
G23K	**Bananza Creek**	**60.19**	**25**		P	**P**	**06 02 45.7**	**+2.0**
	baz=258,SNR=83								
MUN	**Mundaring**	**60.21**	**206**		P	**P**	**06 02 44.4**	**+0.2**
COLD	**Coldfoot**	**60.23**	**24**		IAmb	IAmb	06 02 47.1		
	comp=Z,50nm,1.0s								
COLD	**Coldfoot**	**60.23**	**24**		P	**P**	**06 02 45.7**	**+1.8**
	baz=257,SNR=85								
P23K	**Montague Islan**	**60.30**	**33**		P	**P**	**06 02 45.6**	**+1.1**
	baz=264								
M23K	**Glacier View**	**60.35**	**31**		P	**P**	**06 02 45.4**	**+0.6**
	baz=263,SNR=16								
WAT6	**Susitna Watana**	**60.45**	**30**		P	**P**	**06 02 46.2**	**+0.6**
	baz=262,SNR=43								
NRDN	**NARMADA NAGAR**	**60.45**	**284**		*e*P	P	06 02 51.2	+5.1
D23K	**Nanushuk River**	**60.46**	**22**		P	**P**	**06 02 47.7**	**+2.3**
	baz=256								
JMU	**Jammu**	**60.46**	**296**		*e*P	**P**	**06 02 47.0**	**+0.9**
SCM	**Sheep Creek Mo**	**60.54**	**31**		P	**P**	**06 02 47.2**	**+1.0**
	baz=263,SNR=31								
GLI	**Glacier Island**	**60.55**	**32**		P	**P**	**06 02 46.9**	**+0.7**
	baz=264								
WRH	**Wood River Hil**	**60.57**	**28**		IAmb	IAmb	06 04 06.6		
	comp=Z,46nm,1.2s								
HYB	**Hyderabad**	**60.59**	**278**		*e*P	**P**	**06 02 47.5**	**+0.3**
HYB					*e*pP	**pP**	**06 03 15.3**	**-1.1**
HYB					*e*S	**S**	**06 10 55.1**	**+1.4**
HYB	**Hyderabad**	**60.59**	**278**		*e*P	**P**	**06 02 47.1**	**-0.1**
HYB					IAmb	IAmb	06 02 48.0		
	comp=Z,86nm,1.7s								
E23K	**Chandalar**	**60.63**	**23**		P	**P**	**06 02 49.0**	**+2.3**
	baz=258,SNR=119								
NWAO	**Narrogin (SRO)**	**60.63**	**205**		P	**P**	**06 02 47.4**	**+0.4**
NWAO	**Narrogin (SRO)**	**60.63**	**205**			**P**	**06 02 46.9**	**-0.1**
NWAO					IAmb	IAmb	06 02 48.0		
	comp=Z,79nm,1.1s								
NWAO	**Narrogin (SRO)**	**60.63**	**205**		P	**P**	**06 02 46.9**	**-0.1**
NWAO					pmax	pmax			
	comp=Z,79nm,1.1s								
NWAO	**Narrogin (SRO)**	**60.63**	**205**		P	**P**	**06 02 47.1**	**+0.1**
DHY	**Denali Highway**	**60.68**	**29**		P	**P**	**06 02 48.1**	**+0.9**
	baz=262,SNR=10.0								
C23K	**Itkillik River**	**60.70**	**21**		P	**P**	**06 02 48.9**	**+1.9**
	baz=256,SNR=188								
COLA	**College**	**60.73**	**27**		P	**P**	**06 02 48.5**	**+1.2**
COLA	**College**	**60.73**	**27**		P	**P**	**06 02 48.0**	**+0.7**
COLA					IAmb	IAmb	06 03 29.3		
	comp=Z,20nm,0.6s								
COLA	**College**	**60.73**	**27**		P	**P**	**06 02 48.0**	**+0.7**
COLA					pmax	pmax			
	comp=Z,20nm,0.6s								
COLA	**College**	**60.73**	**27**		P	**P**	**06 02 47.9**	**+0.7**
	baz=261								
COLA	**College**	**60.73**	**27**		P	**P**	**06 02 48.4**	**+1.2**
COLA					sP	**sP**	**06 03 28.4**	**-0.7**
TOLK	**Toolik Lake Re**	**60.77**	**23**		P	**P**	**06 02 49.6**	**+2.0**
	baz=257,SNR=33								
Q23K	**Middleton Isla**	**60.78**	**33**		P	**P**	**06 02 48.3**	**+0.6**
	baz=265								
H24K	**Noodor Dome**	**60.88**	**26**		IAmb	IAmb	06 02 51.1		
	comp=Z,38nm,0.9s								
H24K	**Noodor Dome**	**60.88**	**26**		P	**P**	**06 02 49.8**	**+1.5**
	baz=260,SNR=73								
POKR	**Poker Flat Res**	**60.94**	**27**		P	**P**	**06 02 49.3**	**+0.5**
	baz=261								
HDA	**Harding Lake**	**61.05**	**28**		P	**P**	**06 02 49.4**	**-0.1**
	baz=262,SNR=25								
E24K	**Your Creek**	**61.05**	**23**		IAmb	IAmb	06 03 26.3		
	comp=Z,75nm,1.1s								
E24K	**Your Creek**	**61.05**	**23**		P	**P**	**06 02 51.4**	**+1.9**
	baz=259,SNR=84								
AKL	**Akola**	**61.09**	**282**		*e*P	**P**	**06 02 51.0**	**+0.5**
M24K	**Tolsona, Glenn**	**61.12**	**30**		IAmb	IAmb	06 03 34.5		
	comp=Z,50nm,0.8s								
M24K	**Tolsona, Glenn**	**61.12**	**30**		P	**P**	**06 02 51.3**	**+1.3**
	baz=264,SNR=5.5								
ILAR	**Eielson Array**	**61.12**	**27**		P	**P**	**06 02 50.1**	**+0.1**
	comp=Z,38nm,1.0s,baz=260,slow=5.6,SNR=274								
ILAR					pP	**pP**	**06 03 17.8**	**-0.9**
	comp=Z,17nm,0.8s,baz=261,slow=5.5,SNR=6.0								
ILAR					LR	LR	06 30 11.0		
	comp=Z,98nm,18.6s,baz=266,slow=37								
ILAR					PKPPKP	**P'P'df**	**06 32 07.8**	**+1.7**
	comp=Z,1.2nm,0.9s,baz=71,slow=1.3,SNR=6.0								
	comp=Z,38nm,1.0s								
D24K	**Happy Valley**	**61.15**	**22**		P	**P**	**06 02 51.6**	**+1.5**
D24K	**Happy Valley**	**61.15**	**22**		P	**P**	**06 02 52.1**	**+2.0**
	baz=258								
F24K	**Squaw Lake**	**61.17**	**24**		IAmb	IAmb	06 02 53.5		
	comp=Z,34nm,0.9s								
F24K	**Squaw Lake**	**61.17**	**24**		P	**P**	**06 02 52.4**	**+2.1**
	baz=260,SNR=44								
KLU	**Klutina**	**61.17**	**31**		IAmb	IAmb	06 03 26.3		
	comp=Z,42nm,0.7s								
KLU	**Klutina**	**61.17**	**31**		P	**P**	**06 02 51.7**	**+1.2**
	baz=265,SNR=23								
EYAK	**Cordova Ski Ar**	**61.18**	**32**		P	**P**	**06 02 51.8**	**+1.4**
EYAK	**Cordova Ski Ar**	**61.18**	**32**		IAmb	IAmb	06 03 26.4		
	comp=Z,32nm,0.7s								
EYAK	**Cordova Ski Ar**	**61.18**	**32**		P	**P**	**06 02 51.5**	**+1.2**
	baz=265,SNR=9.9								
G24K	**Hadweenzic Riv**	**61.18**	**25**		IAmb	IAmb	06 02 53.6		
	comp=Z,64nm,1.0s								
G24K	**Hadweenzic Riv**	**61.18**	**25**		P	**P**	**06 02 52.3**	**+1.9**
	baz=260								
DIV	**Divide**	**61.21**	**32**		IAmb	IAmb	06 03 26.6		
	comp=Z,32nm,0.7s								
AUHAR	**St Anne's Scho**	**61.31**	**206**		P	**P**	**06 02 52.4**	**+0.8**
C24K	**Franklin Bluff**	**61.31**	**22**		P	**P**	**06 02 52.7**	**+1.5**
	baz=258								
K24K	**Donnelly Dome**	**61.48**	**29**		IAmb	IAmb	06 02 55.4		
	comp=Z,47nm,0.9s								
K24K	**Donnelly Dome**	**61.48**	**29**		P	**P**	**06 02 53.0**	**+0.5**
	baz=264,SNR=20								
PAX	**Paxson**	**61.53**	**29**		IAmb	IAmb	06 02 55.1		
	comp=Z,70nm,1.3s								
PAX	**Paxson**	**61.53**	**29**		P	**P**	**06 02 53.7**	**+0.9**
	baz=264,SNR=33								
NIL	**Nilore**	**61.62**	**297**		P	**P**	**06 02 54.9**	**+1.0**
NIL	**Nilore**	**61.62**	**297**		P	**P**	**06 02 54.9**	**+1.0**
NIL					pmax	pmax			
	comp=Z,175nm,0.9s								
NIL	**Nilore**	**61.62**	**297**		P	**P**	**06 02 55.1**	**+1.2**
G25K	**Bearman Lake**	**61.73**	**25**		P	**P**	**06 02 56.0**	**+2.0**
	baz=262,SNR=18								
J25K	**Salcha River,**	**61.75**	**28**		P	**P**	**06 02 53.9**	**-0.4**
	baz=264,SNR=30								
BMRM	**Bremner River**	**61.77**	**32**		P	**P**	**06 02 55.7**	**+1.3**
	baz=266,SNR=29								
NIUE	**Niue**	**61.78**	**128**		P	**P**	**06 02 56.0**	**+1.0**
PRP	**Porcupine Dome**	**61.79**	**27**		P	**P**	**06 02 54.1**	**-0.5**
	baz=263,SNR=16								
KAIM	**Kayak Island**	**61.80**	**33**		P	**P**	**06 02 55.8**	**+1.2**
	baz=267,SNR=6.8								
N25K	**Chitina, Valde**	**61.82**	**31**		IAmb	IAmb	06 03 37.9		
	comp=Z,101nm,1.6s								
N25K	**Chitina, Valde**	**61.82**	**31**		P	**P**	**06 02 56.0**	**+1.2**
	baz=266,SNR=12								
AJM	**Ajmer**	**61.84**	**289**		*e*P	**P**	**06 02 55.4**	**-0.1**
RIDG	**Independent Ri**	**61.89**	**29**		IAmb	IAmb	06 02 57.0		
	comp=Z,69nm,1.0s								
RIDG	**Independent Ri**	**61.89**	**29**		P	**P**	**06 02 55.8**	**+0.6**
	baz=264,SNR=41								
DZA	**Taraz**	**61.90**	**308**		*e*P	**P**	**06 02 56.8**	**+1.1**
	comp=Z,16nm,0.9s								
PALK	**Pallekele**	**61.92**	**266**		P	**P**	**06 02 55.9**	**-0.3**
PALK					IAmb	IAmb	06 02 57.7		
	comp=Z,65nm,1.3s								
PALK	**Pallekele**	**61.92**	**266**	*i*	P	**P**	**06 02 56.1**	**-0.1**
	SNR=5.2								
PALK	**Pallekele**	**61.92**	**266**		P	**P**	**06 02 55.9**	**-0.3**
PALK					pmax	pmax			
	comp=Z,65nm,1.3s								
PALK	**Pallekele**	**61.92**	**266**		P	**P**	**06 02 56.9**	**+0.7**
PALK	**Pallekele**	**61.92**	**266**		P	**P**	**06 02 56.9**	**+0.7**
BVA0	**Borovoye Array**	**61.95**	**319**	*i*	P	**P**	**06 02 56.4**	**+0.7**
BVAR	**Borovoye Array**	**61.95**	**319**		P	**P**	**06 02 56.0**	**+0.3**
	comp=Z,152nm,0.9s,baz=91,slow=7.4,SNR=327								
BVAR					pP	**pP**	**06 03 24.1**	**-1.1**
	comp=Z,39nm,0.5s,baz=87,slow=6.9,SNR=3.3								
BVAR					S	**S**	**06 11 09.3**	**-0.5**
	comp=Z,3.7nm,0.8s,baz=95,slow=12,SNR=7.3								
BVAR					LR	LR	06 32 00.3		
	comp=Z,260nm,18.9s,baz=76,slow=38								
BVAR					PKPPKP	**P'P'df**	**06 32 05.6**	**+0.2**
	comp=Z,2.3nm,1.0s,baz=259,slow=3.0,SNR=6.3								
	comp=Z,152nm,0.9s								
BORK	**Borovoye**	**61.99**	**319**		P	**P**	**06 02 56.6**	**+0.6**
BORK	**Borovoye**	**61.99**	**319**		P	**P**	**06 02 56.6**	**+0.6**
BORK					pmax	pmax			
	comp=Z,179nm,1.0s								
BORK	**Borovoye**	**61.99**	**319**		P	**P**	**06 02 57.0**	**+1.0**
BORK					pP	**pP**	**06 03 25.0**	**-0.5**
BORK					PcP	**PcP**	**06 03 35.9**	**+0.5**
F25K	**Christian Rive**	**62.03**	**24**		P	**P**	**06 02 58.4**	**+2.3**
	baz=262,SNR=68								
D25K	**Kavik River**	**62.04**	**22**		P	**P**	**06 02 58.0**	**+1.8**
	baz=260,SNR=111								
E25K	**Arctic Village**	**62.14**	**24**		P	**P**	**06 02 59.0**	**+2.3**
	baz=261,SNR=60								
LATR	**Latur**	**62.15**	**279**		*e*P	**P**	**06 02 57.4**	**-0.3**
GLB	**Gilahina Butte**	**62.18**	**31**		IAmb	IAmb	06 02 59.5		
	comp=Z,57nm,1.1s								
DOT	**Dot Lake**	**62.23**	**29**		IAmb	IAmb	06 02 59.3		
	comp=Z,54nm,0.9s								
SCRK	**Sand Creek**	**62.29**	**28**		P	**P**	**06 02 58.5**	**+0.6**
	baz=265,SNR=110								
MENT	**Mentasta**	**62.32**	**30**		P	**P**	**06 02 59.7**	**+1.6**
MENT	**Mentasta**	**62.32**	**30**		IAmb	IAmb	06 03 34.2		
	comp=Z,99nm,1.8s								
BGLC	**Bering Glacier**	**62.37**	**33**		P	**P**	**06 03 00.2**	**+1.8**
	baz=268								
CRQM	**Cirque**	**62.47**	**32**		IAmb	IAmb	06 03 01.6		
	comp=Z,74nm,0.9s								
KK31	**Karatay Array**	**62.48**	**308**		P	**P**	**06 03 00.3**	**+0.9**
KK31	**Karatay Array**	**62.48**	**308**		P	**P**	**06 03 00.4**	**+0.9**
KK31					pmax	pmax			
	comp=Z,119nm,1.0s								
CRQE	**Cirque**	**62.49**	**32**		P	**P**	**06 03 00.4**	**+1.0**
	baz=268,SNR=19								
L26K	**Log Cabin Wild**	**62.50**	**30**		P	**P**	**06 03 00.5**	**+1.3**
	baz=266,SNR=17								
MCARA	**McCarthy VSAT**	**62.56**	**31**		IAmb	IAmb	06 03 39.9		
	comp=Z,45nm,0.7s								
MCARA	**McCarthy VSAT**	**62.56**	**31**		P	**P**	**06 03 00.7**	**+1.1**
	baz=267,SNR=24								
BTK	**Batken**	**62.61**	**305**		IAmb	IAmb	06 03 02.3		
	comp=Z,49nm,1.2s								
F26K	**Sheenjek River**	**62.61**	**24**		IAmb	IAmb	06 03 37.1		
	comp=Z,83nm,1.1s								
F26K	**Sheenjek River**	**62.61**	**24**		P	**P**	**06 03 02.1**	**+2.2**
	baz=263								
M26K	**Nabesna, AK**	**62.62**	**30**		P	**P**	**06 03 01.2**	**+1.1**
	baz=267,SNR=19								
TGL	**Tana Glacier**	**62.62**	**32**		IAmb	IAmb	06 03 02.4		
	comp=Z,62nm,1.1s								
C26K	**Camden Bay**	**62.64**	**22**		P	**P**	**06 03 02.6**	**+2.6**
	baz=261,SNR=173								
G26K	**Porcupine Rive**	**62.66**	**25**		P	**P**	**06 03 02.2**	**+2.0**
	baz=264								
I26K	**Coal Creek Min**	**62.76**	**27**		P	**P**	**06 03 00.8**	**-0.1**
	baz=265								
IUG	**Iuzhnay**	**62.94**	**307**	*e*	P	**P**	**06 03 03.9**	**+1.2**
IUG	**Iuzhnay**	**62.94**	**307**	*i*	*e*P	**P**	**06 03 03.8**	**+1.2**
	comp=Z,34nm,0.9s								
BRLS	**Boroldoy**	**62.98**	**308**		*e*P	**P

I29M	**Ogilvie Camp,**	**64.79**	**27**	P		**P**	**06 03 15.3 +1.1**
	baz=270,SNR=39						
YUK6	**Outpost Mounta**	**64.81**	**32**	P		**P**	**06 03 16.5 +1.8**
	baz=272,SNR=14						
J29N	**Klondike Camp**	**64.83**	**28**	IAmb		IAmb	06 03 17.4
	comp=Z,54nm,1.1s						
J29N	**Klondike Camp**	**64.83**	**28**	P		**P**	**06 03 16.2 +1.6**
	baz=270,SNR=9.9						
L29M	**L29M**	**64.88**	**29**	IAmb		IAmb	06 03 18.0
	comp=Z,70nm,0.9s						
L29M	**L29M**	**64.88**	**29**	P		**P**	**06 03 16.8 +2.0**
	baz=271,SNR=48						
KBL	**Kabul**	**64.90**	**299**	P		**P**	**06 03 16.1 +0.4**
KBL	**Kabul**	**64.90**	**299**	P		**P**	**06 03 16.1 +0.4**
KBL				pmax		pmax	
	comp=Z,165nm,0.9s						
KBL	**Kabul**	**64.90**	**299**	P		**P**	**06 03 16.5 +0.7**
KBL				S		**S**	**06 11 45.3 -2.2**
G29M	**Pine Creek**	**64.93**	**25**	P		**P**	**06 03 17.0 +1.9**
	baz=269						
JASL	**Jaisalmer**	**64.97**	**290**	*e*P		**P**	**06 03 15.8 -0.2**
JASL				IAmb		IAmb	06 03 48.8
	comp=Z,57nm,1.0s						
E29M	**Blow River**	**65.00**	**24**	IAmb		IAmb	06 03 52.3
	comp=Z,109nm,1.4s						
E29M	**Blow River**	**65.00**	**24**	P		**P**	**06 03 17.3 +1.7**
	baz=269						
K29M	**Barlow Dome**	**65.14**	**29**	IAmb		IAmb	06 03 19.4
	comp=Z,53nm,0.9s						
K29M	**Barlow Dome**	**65.14**	**29**	P		**P**	**06 03 18.3 +1.7**
	baz=271,SNR=55						
BHV	**Bhavnagar**	**65.19**	**284**	*e*P		**P**	**06 03 18.2 +0.6**
HYT	**Haines Junctio**	**65.23**	**32**	IAmb		IAmb	06 03 20.4
	comp=Z,63nm,1.0s						
HYT	**Haines Junctio**	**65.23**	**32**	P		**P**	**06 03 18.9 +1.6**
	baz=272,SNR=43						
WCZ	**Waipu Caves**	**65.33**	**153**	P		**P**	**06 03 19.7 +1.7**
TAU	**Tasmania Unive**	**65.39**	**177**	P		**P**	**06 03 19.1 +0.9**
TAU	**Tasmania Unive**	**65.39**	**177**	P		**P**	**06 03 18.9 +0.7**
TAU	**Tasmania Unive**	**65.39**	**177**	P		**P**	**06 03 18.9 +0.7**
TAU				pmax		pmax	
	comp=Z,119nm,1.2s						
N30M	**Aishikik Lake**	**65.41**	**31**	IAmb		IAmb	06 03 21.2
	comp=Z,40nm,0.9s						
N30M	**Aishikik Lake**	**65.41**	**31**	P		**P**	**06 03 20.1 +1.8**
	baz=272,SNR=41						
EPYK	**Eagle Plains**	**65.44**	**26**	P		**P**	**06 03 19.8 +1.4**
	baz=271,SNR=83						
M30M	**Minto, Yukon**	**65.50**	**30**	P		**P**	**06 03 20.6 +1.7**
	baz=272,SNR=25						
P30M	**Million Dollar**	**65.54**	**33**	P		**P**	**06 03 21.2 +2.0**
	baz=273						
I30M	**Mount Dempster**	**65.60**	**27**	P		**P**	**06 03 20.8 +1.1**
	baz=271,SNR=33						
G30M	**tAoh Zraii Nji**	**65.64**	**25**	P		**P**	**06 03 20.9 +1.2**
	baz=271,SNR=66						
J30M	**Hart River**	**65.64**	**28**	P		**P**	**06 03 21.3 +1.4**
	baz=272,SNR=6.7						
F30M	**Barrier River**	**65.80**	**25**	P		**P**	**06 03 22.4 +1.8**
	baz=271						
MAYO	**Mayo, Yukon**	**65.87**	**29**	P		**P**	**06 03 22.9 +1.7**
	baz=273,SNR=19						
O30N	**Mendenhall**	**65.93**	**32**	IAmb		IAmb	06 03 58.1
	comp=Z,61nm,1.4s						
O30N	**Mendenhall**	**65.93**	**32**	P		**P**	**06 03 23.1 +1.4**
	baz=274,SNR=18						
N31M	**Braeburn, Yuko**	**66.04**	**31**	IAmb		IAmb	06 03 25.3
	comp=Z,68nm,0.9s						
N31M	**Braeburn, Yuko**	**66.04**	**31**	P		**P**	**06 03 24.2 +1.9**
	baz=274,SNR=36						
S31K	**Pelican**	**66.06**	**35**	P		**P**	**06 03 24.0 +1.5**
	baz=275						
GRZ	**Great Barrier**	**66.07**	**152**	P		**P**	**06 03 23.9 +1.1**
G31M	**Satah River**	**66.41**	**25**	P		**P**	**06 03 25.6 +1.1**
	baz=273,SNR=119						
SKAG	**Skagway**	**66.41**	**33**	P		**P**	**06 03 26.3 +1.6**
	baz=275						
H31M	**Peel River**	**66.43**	**26**	P		**P**	**06 03 26.0 +1.2**
	baz=273,SNR=75						
WHY	**Whitehorse**	**66.53**	**32**	IAmb		IAmb	06 04 02.3
	comp=Z,71nm,0.9s						
WHY	**Whitehorse**	**66.53**	**32**	P		**P**	**06 03 27.2 +1.6**
	baz=275,SNR=20						
F31M	**Tsiigehtchic**	**66.59**	**25**	IAmb		IAmb	06 04 01.4
	comp=Z,53nm,0.9s						
F31M	**Tsiigehtchic**	**66.59**	**25**	P		**P**	**06 03 26.4 +0.8**
	baz=273,SNR=46						
INK	**Inuvik**	**66.63**	**24**	IAmb		IAmb	06 03 27.9
	comp=Z,57nm,0.9s						
INK	**Inuvik**	**66.63**	**24**	P		**P**	**06 03 26.8 +0.9**
	baz=273,SNR=76						
SIT	**Sitka**	**66.64**	**36**	P		**P**	**06 03 27.7 +1.5**
	baz=276						
M31M	**Drury Creek, Y**	**66.64**	**30**	IAmb		IAmb	06 03 28.6
	comp=Z,43nm,1.0s						
M31M	**Drury Creek, Y**	**66.64**	**30**	P		**P**	**06 03 27.4 +1.3**
	baz=274,SNR=32						
BESE	**Bessie Mountai**	**66.73**	**34**	IAmb		IAmb	06 03 29.6
	comp=Z,63nm,1.0s						
R32K	**Eaglecrest**	**66.94**	**35**	IAmb		IAmb	06 03 31.0
	comp=Z,42nm,1.0s						
R32K	**Eaglecrest**	**66.94**	**35**	P		**P**	**06 03 29.7 +1.6**
	baz=276						
S32K	**Killisnoo**	**67.00**	**36**	P		**P**	**06 03 29.8 +1.4**
	baz=276,SNR=5.2						
JIS	**Juneau Island**	**67.01**	**35**	P		**P**	**06 03 29.9 +1.4**
P32M	**Atlin**	**67.22**	**33**	P		**P**	**06 03 31.2 +1.4**
	baz=276,SNR=20						
SVE	**Sverdlovsk**	**67.30**	**324**	*de*P		**P**	**06 03 30.9 +0.5**
SVE				pmax		pmax	
	comp=Z,105nm,1.1s						
TOZ	**Tahuroa Road**	**67.34**	**153**	P		**P**	**06 03 31.3 +0.5**
TOZ				IAmb		IAmb	06 03 32.7
	comp=Z,82nm,1.4s						
N32M	**Quiet Lake**	**67.36**	**31**	IAmb		IAmb	06 04 07.9
	comp=Z,92nm,1.3s						
N32M	**Quiet Lake**	**67.36**	**31**	P		**P**	**06 03 31.9 +1.2**
	baz=276						
P33M	**Teslin, Yukon**	**67.59**	**32**	IAmb		IAmb	06 04 08.9
	comp=Z,60nm,1.2s						
P33M	**Teslin, Yukon**	**67.59**	**32**	P		**P**	**06 03 33.7 +1.4**
	baz=277,SNR=27						
HIZ	**Hauiti**	**67.73**	**154**	P		**P**	**06 03 34.0 +0.8**
U33K	**Whale Pass**	**67.96**	**37**	P		**P**	**06 03 36.0 +1.4**
	baz=278						
OMRZ	**Omania**	**68.03**	**152**	P		**P**	**06 03 36.2 +1.1**
Q32M	**Nakina River**	**68.03**	**34**	IAmb		IAmb	06 04 12.1
	comp=Z,80nm,1.6s						
Q32M	**Nakina River**	**68.03**	**34**	P		**P**	**06 03 37.1 +1.9**
	baz=278,SNR=11						
CRAG	**Craig**	**68.05**	**38**	P		**P**	**06 03 36.3 +1.2**
	baz=278						
VRZ	**Vera Road**	**68.21**	**154**	P		**P**	**06 03 37.3 +1.0**
WRAK	**Wrangell Islan**	**68.34**	**37**	P		**P**	**06 03 38.2 +1.3**
	baz=279,SNR=6.3						
HAZ	**Te Kaha**	**68.35**	**151**	P		**P**	**06 03 36.2 -0.9**
MXZ	**Matakaoa Point**	**68.43**	**151**	P		**P**	**06 03 36.3 -1.3**
KATZ	**Kakaramea**	**68.47**	**153**	P		**P**	**06 03 39.6 +1.6**
URZ	**Urewera**	**68.47**	**152**	LR		LR	06 32 40.9
	comp=Z,84nm,18.0s,baz=317,slow=35						
URZ	**Urewera**	**68.47**	**152**	P		**P**	**06 03 37.3 -0.5**
RUGZ	**Raukumara Rang**	**68.48**	**151**	P		**P**	**06 03 36.8 -1.3**
WTVZ	**West Tongariro**	**68.55**	**153**	P		**P**	**06 03 39.1 +0.6**
ARTI	**Arti**	**68.59**	**323**	P		**P**	**06 03 38.6 +0.1**
ARTI				IAmb		IAmb	06 03 39.6
	comp=Z,80nm,0.9s						
ARTI	**Arti**	**68.59**	**323**	*c i*P		**P**	**06 03 38.6 +0.1**
ARTI							06 04 01.2
ARTI				*PP		**pP**	**06 04 19.6 -1.6**
ARTI				*SP		**sP**	**06 04 19.6 -2.0**
ARTI							06 06 07.4
ARTI				S		**S**	**06 12 30.3 -0.5**
ARTI				pmax		pmax	
	comp=Z,99nm,1.0s						
ARTI	**Arti**	**68.59**	**323**	P		**P**	**06 03 38.7 +0.2**
ARTI				pP		**pP**	**06 04 07.2 -1.1**
ARTI				x		x	06 04 10.2
TMVZ	**Te Maari**	**68.59**	**153**	P		**P**	**06 03 39.5 +0.7**
COVZ	**Chateau Observ**	**68.60**	**154**	P		**P**	**06 03 39.2 +0.5**
NGZ	**Ngauruhoe**	**68.60**	**153**	P		**P**	**06 03 39.5 +0.6**
ETVZ	**East Tongariro**	**68.61**	**153**	P		**P**	**06 03 39.6 +0.7**
R33M	**Jennings River**	**68.63**	**33**	P		**P**	**06 03 40.4 +1.6**
	baz=279						
RTZ	**Ruatahuna**	**68.71**	**152**	P		**P**	**06 03 38.8 -0.7**
MWZ	**Matawai**	**68.72**	**152**	P		**P**	**06 03 39.1 -0.4**
S34M	**Telegraph Cree**	**68.77**	**35**	IAmb		IAmb	06 03 42.6
	comp=Z,45nm,0.9s						
S34M	**Telegraph Cree**	**68.77**	**35**	P		**P**	**06 03 41.5 +2.0**
	baz=279,SNR=20						
DIB	**Dawson Inlet,**	**68.78**	**40**	P		**P**	**06 03 40.0 +0.3**
RAGZ	**Rawiri**	**68.80**	**152**	P		**P**	**06 03 40.1 +0.1**
MTHZ	**Maungataniwha**	**68.85**	**152**	P		**P**	**06 03 39.3 -0.9**
MOVZ	**Moawhango**	**68.86**	**153**	P		**P**	**06 03 40.3 -0.1**
AB31	**Akbulak array**	**68.87**	**316**	P		**P**	**06 03 40.7 +0.4**
AB31	**Akbulak array**	**68.87**	**316**	*i* P		**P**	**06 03 40.5 +0.2**
V35K	**Ketchikan**	**68.92**	**38**	P		**P**	**06 03 41.7 +1.2**
	baz=280						
BKZ	**Black Stump Fm**	**68.97**	**153**	P		**P**	**06 03 39.7 -1.3**
BKZ	**Black Stump Fm**	**68.97**	**153**	IAmb		IAmb	06 03 41.3
	comp=Z,88nm,1.0s						
BKZ	**Black Stump Fm**	**68.97**	**153**	P		**P**	**06 03 40.4 -0.5**
NMHZ	**Naumai**	**69.04**	**153**	P		**P**	**06 03 42.5 +1.0**
A36M	**Sachs Harbour**	**69.08**	**19**	IAmb		IAmb	06 03 43.4
	comp=Z,79nm,0.9s						
A36M	**Sachs Harbour**	**69.08**	**19**	P		**P**	**06 03 42.2 +1.0**
	baz=279,SNR=92						
RIGZ	**Rimuhau**	**69.13**	**152**	P		**P**	**06 03 41.4 -0.6**
CNGZ	**Carnagh Statio**	**69.14**	**151**	P		**P**	**06 03 41.4 -0.6**
KWHZ	**Kaweka Forest**	**69.15**	**153**	P		**P**	**06 03 42.5 +0.3**
DLBC	**Dease Lake**	**69.26**	**34**	P		**P**	**06 03 44.5 +1.8**
	baz=280,SNR=29						
T35M	**Bob Quinn**	**69.40**	**36**	P		**P**	**06 03 45.3 +1.8**
	baz=280,SNR=17						
NNZ	**Nelson**	**69.48**	**156**	P		**P**	**06 03 43.3 -0.7**
WTLY	**Watson Lake, Y**	**69.60**	**32**	IAmb		IAmb	06 04 22.1
	comp=Z,65nm,1.0s						
WTLY	**Watson Lake, Y**	**69.60**	**32**	P		**P**	**06 03 46.2 +1.6**
	baz=280,SNR=26						
THZ	**Tophouse**	**69.78**	**157**	P		**P**	**06 03 46.2 +0.3**
MRZ	**Mangatainoka R**	**69.85**	**154**	IAmb		IAmb	06 03 46.4
	comp=Z,75nm,1.1s						
AKTO	**Aktyubinsk**	**69.87**	**317**	LR		LR	06 36 22.2
	comp=Z,207nm,18.4s,baz=142,slow=37						
AKTO	**Aktyubinsk**	**69.87**	**317**	P		**P**	**06 03 46.0 -0.5**
RUBB	**Prince Rupert**	**69.88**	**39**	IAmb		IAmb	06 03 48.8
	comp=Z,70nm,1.3s						
C36M	**Paulatuk**	**69.91**	**22**	P		**P**	**06 03 47.0 +0.6**
	baz=281,SNR=47						
BFZ	**Bin Farm**	**70.14**	**154**	P		**P**	**06 03 47.7 -0.4**
LTZ	**Lake Taylor**	**70.44**	**158**	IAmb		IAmb	06 03 57.4
	comp=Z,110nm,1.8s						
JCZ	**Jackson Bay**	**70.46**	**161**	P		**P**	**06 03 51.8 +1.7**
KHZ	**Kahutara**	**70.58**	**157**	IAmb		IAmb	06 03 50.0
	comp=Z,75nm,1.1s						
RAR	**Rarotonga**	**70.65**	**124**	P		**P**	**06 03 51.8 +0.2**
	comp=Z,21nm,0.8s,baz=212,slow=3.8,SNR=4.3						
RAR				LR		LR	06 27 03.2
	comp=Z,145nm,20.0s,baz=306,slow=29						
	comp=Z,21nm,0.8s						
OXZ	**Oxford**	**70.84**	**158**	IAmb		IAmb	06 03 53.7
	comp=Z,90nm,1.4s						
RPZ	**Rata Peaks**	**70.86**	**159**	P		**P**	**06 03 51.7 -0.6**
RPZ	**Rata Peaks**	**70.86**	**159**	P		**P**	**06 03 50.6 -1.8**
GVZ	**Greta Valley S**	**70.88**	**157**	P		**P**	**06 03 51.7 -0.8**
WRGLY	**Wrigley**	**71.45**	**28**	P		**P**	**06 03 57.3 +1.5**
	baz=284,SNR=36						
BBB	**Bella Bella**	**71.59**	**40**	LR		LR	06 27 18.9
	comp=Z,68nm,21.6s,baz=32,slow=29						
ODZ	**Otahua Downs**	**71.91**	**160**	P		**P**	**06 03 58.6 -0.1**
KOTAN	**Kotaneelee Air**	**71.92**	**32**	P		**P**	**06 03 59.9 +1.2**
	baz=284						
KIRV	**Kirov**	**72.86**	**327**	LR		LR	06 39 28.6
	comp=Z,334nm,18.6s,baz=107,slow=38						
KIRV	**Kirov**	**72.86**	**327**	*ce*P		**P**	**06 04 04.8 +0.6**
CBB	**Campbell River**	**73.81**	**42**	P		**P**	**06 04 11.1 +1.0**
NGCH	**Negor - Chabah**	**73.84**	**291**	P		**P**	**06 04 11.9 +1.2**
ALE	**Alert**	**74.27**	**3**	P		**P**	**06 04 13.4 +1.2**
ALE				pP		**pP**	**06 04 42.2 +0.1**
HOPEN	**Hopen**	**74.31**	**348**	*e*P		**P**	**06 04 14.5 +2.1**
SPITS	**Spitsbergen Ar**	**74.85**	**350**	P		**P**	**06 04 15.9 +0.3**
	comp=Z,5.1nm,0.8s,baz=84,slow=7.6,SNR=6.9						
SPITS				LR		LR	06 37 20.6
	comp=Z,122nm,20.8s,baz=22,slow=36						
	comp=Z,5.1nm,0.8s						
CLRS	**Cowichan Lake**	**74.93**	**43**	P		**P**	**06 04 17.5 +1.0**
KBS	**Kingsbay**	**75.01**	**351**	*e*P		**P**	**06 04 17.8 +1.4**
KBS	**Kingsbay**	**75.01**	**351**	*i* P		**P**	**06 04 14.6 -1.8**
DGAR	**Diego Garcia**	**75.39**	**255**	*ce*P		**P**	**06 04 20.9 +1.2**
DGAR				pmax		pmax	
	comp=Z,144nm,1.7s						
NOR	**Nord**	**75.40**	**357**	*i* P		**P**	**06 04 18.7 0.0**
NOR				IAmb		IAmb	06 04 20.0
	comp=Z,22nm,1.3s						
YKAW3	**Yellowknife Wh**	**75.52**	**28**	P		**P**	**06 04 20.0 +0.4**
YKA	**Yellowknife Ar**	**75.55**	**28**	P		**P**	**06 04 20.3 +0.5**
	comp=Z,37nm,1.0s,baz=299,slow=5.7,SNR=296						
YKA				pP		**pP**	**06 04 48.4 -1.2**
	comp=Z,3.7nm,0.5s,baz=29,slow=7.3,SNR=5.1						
	comp=Z,37nm,1.0s						
BELG	**Belogornoye**	**75.65**	**321**	LR		LR	06 39 05.2
	comp=Z,212nm,20.8s,baz=99,slow=37						
BELG	**Belogornoye**	**75.65**	**321**	*c i*P		**P**	**06 04 20.6 +0.1**
BELG				pmax		pmax	
	comp=Z,60nm,1.0s						
WISH	**Wishkah**	**75.67**	**45**	IAmb		IAmb	06 05 00.4
	comp=Z,158nm,1.4s						
RES	**Resolute Bay**	**76.09**	**13**	LR		LR	06 42 40.3
	comp=Z,67nm,18.6s,baz=308,slow=39						
RES	**Resolute Bay**	**76.09**	**13**	IAmb		IAmb	06 04 24.6
	comp=Z,59nm,0.9s						
GNW	**Green Mountain**	**76.15**	**44**	IAmb		IAmb	06 04 26.5
	comp=Z,61nm,1.0s						
ADZR	**Andozero**	**76.17**	**334**	*e*P		**P**	**06 04 22.3 -1.0**
ADZR				pmax		pmax	
	comp=Z,58nm,1.0s						
F03A	**Seaside**	**76.18**	**46**	IAmb		IAmb	06 04 26.7
	comp=Z,102nm,1.0s						
JLN	**Jalan Bani Buh**	**76.36**	**288**	P		**P**	**06 04 25.4 +0.3**
	SNR=8.6						
APA	**Apatity**	**76.46**	**338**	*je* P		**P**	**06 04 23.7 -1.2**
APA				*PP		**pP**	**06 04 55.1 0.0**
APA				pmax		pmax	
	comp=Z,48nm,0.9s						
APA				MLR		MLR	
	comp=Z,828nm,4.1s						
WBK	**Wadi Bani Khal**	**76.59**	**289**	P		**P**	**06 04 27.0 +0.5**
	SNR=13						
G03D	**McMinnville, O**	**76.61**	**46**	IAmb		IAmb	06 05 03.8
	comp=Z,169nm,1.6s						
WSAR	**Wadi Sarin**	**76.68**	**290**	P		**P**	**06 04 27.5 +0.5**
	SNR=11						
COR	**Corvallis**	**76.78**	**47**	P		**P**	**06 04 27.9 +0.8**
COR				IAmb		IAmb	06 04 30.5
	comp=Z,162nm,1.4s						
COR	**Corvallis**	**76.78**	**47**	P		**P**	**06 04 27.9 +0.8**
COR				pmax		pmax	
	comp=Z,162nm,1.4s						
D05A	**Enumclaw**	**76.81**	**44**	IAmb		IAmb	06 05 04.6
	comp=Z,47nm,0.8s						
J01E	**Myrtle Point**	**76.81**	**49**	IAmb		IAmb	06 04 30.2
	comp=Z,59nm,1.0s						
KLMR	**Klimovskoe**	**76.86**	**331**	*e*P		**P**	**06 04 26.4 -0.8**
KLMR				pmax		pmax	
	comp=Z,101nm,1.3s						
PPT	**Papeete**	**76.91**	**115**	P		**P**	**06 04 28.4 +0.1**
	comp=Z,61nm,1.0s,baz=15,slow=5.0,SNR=7.9						
PPT				LR		LR	06 31 33.6
	comp=Z,156nm,19.0s,baz=298,slow=30						
	comp=Z,61nm,1.0s						
PPT2	**Papeete2**	**76.92**	**115**	*e*P		**P**	**06 04 26.5 -1.9**
	comp=Z,50nm,24.8s						
PPT2				*e*S		**S**	**06 13 59.9 -6.6**
	comp=Z,272nm,27.8s						
PPT2				*e*LQ		LQ	06 24 28.3
	comp=Z,472nm,30.5s						
PPT2				*e*LR		LR	06 28 01.7
	comp=Z,583nm,37.8s						
PPT2				*e*LR		LR	06 28 09.7
	comp=Z,1µm,36.0s						
PPTF	**Pamatai, Papee**	**76.93**	**115**	P		**P**	**06 04 31.0 +2.6**
BIDO	**Bidbid**	**77.03**	**290**	P		**P**	**06 04 30.0 +1.1**
	SNR=26						
I03D	**Drain, OR**	**77.04**	**48**	IAmb		IAmb	06 04 31.6
	comp=Z,65nm,1.0s						
BUCK	**Buck Mountain**	**77.12**	**47**	IAmb		IAmb	06 05 06.6
	comp=Z,97nm,0.9s						
G04A	**Mulino**	**77.13**	**46**	IAmb		IAmb	06 04 34.1
	comp=Z,109nm,0.9s						
H04D	**Lebanon**	**77.18**	**47**	IAmb		IAmb	06 04 32.4
	comp=Z,85nm,1.3s						
SMDO	**Samad**	**77.25**	**290**	P		**P**	**06 04 30.6 +0.3**
	SNR=9.5						
JMDO	**Jabal Madar**	**77.43**	**289**	P		**P**	**06 04 31.5 +0.3**
	SNR=12						
H04A	**Detroit Lake**	**77.50**	**47**	IAmb		IAmb	06 04 33.6
	comp=Z,75nm,1.1s						
KMPM	**Mount Pierce**	**77.56**	**51**	IAmb		IAmb	06 04 34.9
	comp=Z,77nm,1.0s						
HOOD	**Mount Hood Mea**	**77.64**	**46**	IAmb		IAmb	06 04 34.8
	comp=Z,77nm,1.1s						
I04A	**Tendick Farm,**	**77.65**	**48**	IAmb		IAmb	06 04 34.4
	comp=Z,61nm,1.1s						
KHMM	**Horse Mountain**	**77.69**	**51**	IAmb		IAmb	06 04 35.7
	comp=Z,69nm,1.0s						
HOQ	**Hoqain**	**77.71**	**291**	P		**P**	**06 04 33.3 +0.6**
	SNR=32						
BANOM	**Banah**	**77.80**	**293**	*i* P		**P**	**06 04 33.9 +0.7**
	SNR=23						
SHME	**Shamm**	**77.90**	**293**	*i* P		**P**	**06 04 34.4 +0.7**
	SNR=27						
SHME	**Shamm**	**77.90**	**293**	P		**P**	**06 04 34.7 +1.0**
	SNR=13						
WIFE	**Three Sisters-**	**77.96**	**47**	IAmb		IAmb	06 04 36.7
	comp=Z,64nm,1.0s						
ARA0	**ARCESS Array S**	**77.99**	**341**	*e*P		**P**	**06 04 34.0 +0.6**
ARCES	**ARCESS Array B**	**77.99**	**341**	P		**P**	**06 04 33.7 +0.3**
	comp=Z,38nm,0.9s,baz=60,slow=7.2,SNR=16						
ARCES				pP		**pP**	**06 05 04.1 +0.3**
	comp=Z,19nm,0.8s,baz=71,slow=8.2,SNR=3.9						
	comp=Z,38nm,0.9s						
ARCES	**ARCESS Array B**	**77.99**	**341**	*e*P		**P**	**06 04 32.6 -0.8**
MHTO	**MHTO**	**78.01**	**288**	P		**P**	**06 04 34.7 +0.3**
	SNR=23						
MDH	**Madha**	**78.01**	**292**	*i* P		**P**	**06 04 33.8 -0.5**
	SNR=5.9						
J04A	**Umpqua Nationa**	**78.04**	**48**	IAmb		IAmb	06 05 11.3
	comp=Z,67nm,0.7s						
BSY	**Bisya**	**78.09**	**290**	P		**P**	**06 04 35.4 +0.6**
	SNR=19						
B08A	**Colville Reser**	**78.09**	**43**	IAmb		IAmb	06 05 10.9
	comp=Z,47nm,0.8s						
MASF	**Masafi**	**78.11**	**293**	P		**P**	**06 04 35.8 +0.9**
	SNR=18						
MSFE	**Esma-Masafi**	**78.11**	**293**	*i* P		**P**	**06 04 35.8 +0.8**
	SNR=13						
I05D	**Terrebonne, OR**	**78.19**	**47**	IAmb		IAmb	06 04 37.7
	comp=Z,155nm,1.9s						
KCPM	**Cahto Peak**	**78.19**	**52**	IAmb		IAmb	06 04 38.1
	comp=Z,94nm,1.0s						
SOHO	**SOHO**	**78.20**	**291**	*i* P		**P**	**06 04 35.5 +0.1**
	SNR=45						
SOHO	**SOHO**	**78.20**	**291**	P		**P**	**06 04 36.1 +0.7**
UOSS	**Minazif**	**78.21**	**292**	P		**P**	**06 04 35.2 -0.2**
UOSS				IAmb		IAmb	06 04 37.3
	comp=Z,65nm,1.0s						
UOSS	**Minazif**	**78.21**	**292**	*i* P		**P**	**06 04 35.5 +0.1**
	SNR=11						
UOSS	**Minazif**	**78.21**	**292**	P		**P**	**06 04 36.0 +0.6**
L04D	**Klamath Falls**	**78.25**	**49**	IAmb		IAmb	06 05 12.2
	comp=Z,45nm,0.7s						
EPH	**Ephrata**	**78.28**	**44**	IAmb		IAmb	06 05 11.8
	comp=Z,70nm,1.4s						
HATD	**Hatta, Dubai**	**78.31**	**292**	*i* P		**P**	**06 04 36.6 +0.6**
	SNR=32						
HATD	**Hatta, Dubai**	**78.31**	**292**	P		**P**	**06 04 37.0 +0.9**
	SNR=33						
ASHO	**Ashiyiah**	**78.42**	**292**	*i* P		**P**	**06 04 37.1 +0.5**
	SNR=51						
ASHO	**Ashiyiah**	**78.42**	**292**	P		**P**	**06 04 37.1 +0.5**
	SNR=25						
ARQ	**Araqi**	**78.48**	**291**	P		**P**	**06 04 37.9 +0.9**
	SNR=25						
K04D	**Chiloquin, OR**	**78.50**	**49**	IAmb		IAmb	06 04 39.5
	comp=Z,86nm,1.0s						
WAH2	**Wahluke Slope**	**78.51**	**44**	IAmb		IAmb	06 05 13.4
	comp=Z,43nm,0.6s						
J05D	**Fort Rock, OR**	**78.62**	**48**	IAmb		IAmb	06 04 40.4
	comp=Z,66nm,0.9s						
PINE	**Pine Mountain**	**78.65**	**47**	IAmb		IAmb	06 04 40.7
	comp=Z,114nm,1.0s						
NAZ	**Nazwa, Dubai**	**78.66**	**292**	*i* P		**P**	**06 04 38.2 +0.3**
	SNR=10						
NAZ	**Nazwa, Dubai**	**78.66**	**292**	P		**P**	**06 04 38.5 +0.6**
	SNR=22						
M03C	**McCloud**	**78.70**	**50**	IAmb		IAmb	06 04 40.5
	comp=Z,92nm,1.0s						
FAQ	**Al Faqa, Dubai**	**78.80**	**292**	*i* P		**P**	**06 04 38.9 +0.2**
	SNR=8.0						
FAQ	**Al Faqa, Dubai**	**78.80**	**292**	P		**P**	**06 04 38.9 +0.2**
	SNR=9.9						
MAK	**Makhachkala**	**78.88**	**312**	*e*P		**P**	**06 04 37.6 -1.2**
MAK				*e*PP		**pP**	**06 05 09.5 +0.2**
MAK				*e*SP		**sP**	**06 05 22.5 +0.1**
MAK				*e*			06 07 39.7
MAK				*e*PPP		PPP	06 09 27.0
MAK				*e*S		**S**	**06 14 24.4 -2.3**
MAK				*e*SS		**sS**	**06 15 22.9 +3.1**
MAK				pmax		pmax	
	comp=Z,89nm,0.7s						
MAK				MLR		MLR	
	comp=Z,507nm,18.0s						
ALNE	**

MOS	**Moscow**	**79.87**	**326**	*e*P		**P**		**06 04 43.6**	**-0.2**
MOS				*e**PP		**pP**		**06 05 12.5**	**-1.9**
MOS				*e*S		**S**		**06 14 32.4**	**-4.3**
MOS				*e*				06 14 45.3	
MOS				pmax	pmax				
	comp=Z,95nm,1.2s								
UMZA	**Um Al Zommool**	**79.87**	**290**	P		**P**		**06 04 44.8**	**+0.3**
DAG	**Danmarks Havn**	**80.14**	**356**	*i* P		**P**		**06 04 44.0**	**-0.9**
DAG				IAmb	IAmb			06 04 45.8	
	comp=Z,25nm,1.1s								
MHC	**Mount Hamilton**	**80.44**	**54**	IAmb	IAmb			06 04 49.9	
	comp=Z,84nm,1.2s								
BEKR	**Beckworth**	**80.46**	**51**	IAmb	IAmb			06 05 24.4	
	comp=Z,50nm,0.7s								
J08A	**Circle Bar Ran**	**80.47**	**47**	IAmb	IAmb			06 05 24.4	
	comp=Z,51nm,0.8s								
LPSR	**Galich'ya Gora**	**80.51**	**323**	*e*P		**P**		**06 04 47.5**	**+0.1**
LPSR				*e*S		**S**		**06 14 39.6**	**-3.9**
LPSR				pmax	pmax				
	comp=Z,200nm,1.0s								
LPSR				pmax	pmax				
	comp=Z,141nm,0.9s								
LPSR				smax	smax				
	comp=N,700nm,4.4s								
MZWR	**Madinat Zayed**	**80.61**	**292**	P		**P**		**06 04 48.7**	**+0.2**
OBN	**Obninsk**	**80.68**	**326**	*ce*P		**P**		**06 04 48.1**	**-0.1**
OBN				*e**PP		**pP**		**06 05 21.1**	**+2.2**
OBN				*e*				06 07 51.8	
OBN				*i* S		**S**		**06 14 42.4**	**-2.8**
OBN				pmax	pmax				
	comp=Z,219nm,2.5s								
OBN	**Obninsk**	**80.68**	**326**	P		**P**		**06 04 47.7**	**-0.5**
	comp=Z,81nm,1.0s								
VORR	**Voronezh**	**80.74**	**322**	*e*P		**P**		**06 04 49.0**	**+0.4**
VORR				pmax	pmax				
	comp=Z,117nm,0.5s								
POIN	**Pond Inlet**	**80.89**	**12**	IAmb	IAmb			06 04 50.7	
	comp=Z,52nm,0.9s								
MPK	**Martis Peak**	**80.90**	**51**	IAmb	IAmb			06 04 52.6	
	comp=Z,94nm,1.1s								
VSR	**Storozhevoye**	**80.96**	**322**	*i* P		**P**		**06 04 50.0**	**+0.2**
VSR				pmax	pmax				
	comp=Z,110nm,1.0s								
VORD	**Divnogorie**	**80.99**	**322**	*e*P		**P**		**06 04 49.9**	**-0.1**
VORD				pmax	pmax				
	comp=Z,90nm,1.0s								
GOF	**Gofitskoye**	**81.09**	**315**	*ce*P		**P**		**06 04 51.2**	**+0.6**
SHAO	**Shalim**	**81.11**	**286**	*i* P		**P**		**06 04 51.5**	**+0.3**
	SNR=6.7								
SHAO	**Shalim**	**81.11**	**286**	P		**P**		**06 04 51.6**	**+0.4**
CMB	**Columbia Colle**	**81.11**	**53**	IAmb	IAmb			06 05 27.9	
	comp=Z,54nm,0.7s								
BBGB	**Big Mountain B**	**81.16**	**54**	IAmb	IAmb			06 04 54.0	
	comp=Z,72nm,0.9s								
MZR	**Muzera**	**81.22**	**291**	*i* P		**P**		**06 04 52.1**	**+0.4**
	SNR=45								
MZR	**Muzera**	**81.22**	**291**	P		**P**		**06 04 52.4**	**+0.7**
	SNR=39								
HULI	**Fort Hunter Li**	**81.22**	**55**	IAmb	IAmb			06 04 54.5	
	comp=Z,131nm,1.1s								
TAOE	**Nuku Hiva Isla**	**81.22**	**103**	*e*S		**S**		**06 14 57.1**	**+4.8**
	comp=Z,205nm,27.7s								
TAOE				*e*SS		**SS**		**06 20 09.4**	**-1.4**
	comp=Z,55nm,26.5s								
TAOE				*e*LR		LR		06 30 15.8	
	comp=Z,157nm,22.8s								
PNTR	**Pine Nut**	**81.29**	**51**	IAmb	IAmb			06 05 30.0	
	comp=Z,47nm,0.7s								
GHWR	**Ruwais**	**81.39**	**292**	P		**P**		**06 04 53.4**	**+0.7**
KBZ	**Khabaz**	**81.71**	**314**	P		**P**		**06 04 54.9**	**+1.0**
	comp=Z,194nm,0.9s,baz=84,slow=3.7,SNR=364								
KBZ				LR		LR		06 44 14.4	
	comp=Z,242nm,20.0s,baz=74,slow=38								
KBZ	**Khabaz**	**81.71**	**314**	*ce*P		**P**		**06 04 54.7**	**+0.8**
KIV	**Kislovodsk**	**81.76**	**314**	⇓P		**P**		**06 04 55.6**	**+1.3**
KIV	**Kislovodsk**	**81.76**	**314**	P		**P**		**06 04 54.7**	**+0.4**
KIV	**Kislovodsk**	**81.76**	**314**	*i* P		**P**		**06 04 54.9**	**+0.6**
	SNR=26								
KIV	**Kislovodsk**	**81.76**	**314**	*e*P		**P**		**06 04 54.6**	**+0.3**
KIV				*e*S		**S**		**06 14 56.9**	**-0.2**
KIV				pmax	pmax				
	comp=Z,37nm,2.8s								
KIV				pmax	pmax				
	comp=Z,160nm,1.0s								
KIV				MLR	MLR				
	comp=Z,214nm,19.0s								
KIV	**Kislovodsk**	**81.76**	**314**	P		**P**		**06 04 54.9**	**+0.6**
KIV	**Kislovodsk**	**81.76**	**314**	P		**P**		**06 04 54.3**	**0.0**
	comp=Z,2µcomp=Z,170nm,1.1s								
KIV	**Kislovodsk**	**81.76**	**314**	P		**P**		**06 04 55.5**	**+1.2**
PKD	**Bear Valley Ra**	**81.77**	**55**	IAmb	IAmb			06 05 31.6	
	comp=Z,65nm,0.7s								
DMTO	**DMTO**	**81.82**	**286**	P		**P**		**06 04 55.3**	**+0.4**
	SNR=9.2								
GNI	**Garni**	**81.84**	**310**	P		**P**		**06 04 55.9**	**+1.0**
GNI				IAmb	IAmb			06 04 58.5	
	comp=Z,127nm,1.2s								
GNI	**Garni**	**81.84**	**310**	*ce*P		**P**		**06 04 56.7**	**+1.7**
GNI				pmax	pmax				
	comp=Z,188nm,1.7s								
GNI	**Garni**	**81.84**	**310**	P		**P**		**06 04 56.6**	**+1.7**
SHA1	**Shidzhatmaz**	**81.87**	**314**	*ce*P		**P**		**06 04 55.8**	**+0.7**
STEI	**Steigen**	**81.92**	**342**	*e*P		**P**		**06 04 54.4**	**-0.1**
BLKN	**Baker Lake**	**81.97**	**22**	IAmb	IAmb			06 05 30.8	
	comp=Z,92nm,1.3s								
KULLO	**Kullorsuaq**	**82.05**	**5**	*i* P		**P**		**06 04 55.4**	**+0.3**
KULLO				IAmb	IAmb			06 04 56.5	
	comp=Z,64nm,1.0s								
DOK	**Doka**	**82.22**	**287**	P		**P**		**06 04 57.0**	**0.0**
	SNR=18								
MFID	**Camas Ranch**	**82.23**	**46**	IAmb	IAmb			06 04 59.2	
	comp=Z,64nm,1.0s								
FAUS	**Fauske**	**82.28**	**342**	*e*P		**P**		**06 04 57.4**	**+1.0**
FINES	**FINESS Array B**	**82.30**	**334**	P		**P**		**06 04 56.0**	**-0.7**
	comp=Z,19nm,0.7s,baz=66,slow=4.8,SNR=54								
FINES				pP		**pP**		**06 05 25.1**	**-2.1**
	comp=Z,16nm,0.5s,baz=64,slow=5.3,SNR=5.7								
	comp=Z,19nm,0.7s								
SLWR	**Sila**	**82.37**	**293**	P		**P**		**06 04 58.1**	**+0.4**
ERBR	**Yeremizino-Bor**	**82.47**	**316**	*e*P		**P**		**06 04 58.3**	**+0.4**
ERBR				*e**PP		**pP**		**06 05 28.6**	**-0.2**
ERBR				*e*S		**S**		**06 15 02.5**	**-1.6**
ERBR				pmax	pmax				
	comp=Z,383nm,0.9s								
NVAR	**Mina Array Bea**	**82.48**	**52**	P		**P**		**06 04 59.0**	**+0.7**
	comp=Z,30nm,0.9s,baz=267,slow=5.7,SNR=153								
NVAR				pP		**pP**		**06 05 26.4**	**-2.4**
	comp=Z,11nm,0.7s,baz=275,slow=5.7,SNR=5.0								
	comp=Z,30nm,0.9s								
TRNA	**Turayna**	**82.53**	**294**	P		**P**		**06 04 58.7**	**+0.1**
	SNR=5.7								
RBK	**Rabkut**	**82.56**	**286**	P		**P**		**06 04 58.9**	**+0.1**
	SNR=12								
DBG	**Daneborg**	**82.63**	**356**	*i* P		**P**		**06 04 58.0**	**-0.1**
DBG				IAmb	IAmb			06 04 58.5	
	comp=Z,15nm,1.0s								
SAKB	**Bahrain**	**82.65**	**295**	P		**P**		**06 04 59.4**	**+0.3**
LABN	**Labinsk**	**82.77**	**315**	*e*P		**P**		**06 04 59.3**	**-0.1**
LABN				*e**PP		**pP**		**06 05 29.4**	**-0.9**
LABN				*e*S		**S**		**06 15 07.0**	**-0.1**
LABN				pmax	pmax				
	comp=Z,101nm,1.1s								
WHFO	**Wadi Hawf**	**82.79**	**286**	P		**P**		**06 04 60.0**	**-0.1**
	SNR=9.2								
SMRA	**Abu-Samra**	**82.86**	**294**	P		**P**		**06 05 00.4**	**+0.1**
	SNR=8.1								
RAUS	**Rausandaksla**	**83.30**	**342**	*e*P		**P**		**06 05 01.2**	**-0.5**
MOR8	**Moi Rana**	**83.36**	**341**	*e*P		**P**		**06 05 00.9**	**-1.2**
ABTO	**Aybut**	**83.42**	**286**	P		**P**		**06 05 03.4**	**+0.1**
	SNR=16								
VSU	**Vasula**	**83.69**	**332**	*ce*P		**P**		**06 05 02.6**	**-1.2**
VSU				pmax	pmax				
	comp=Z,78nm,1.0s								
LEIR	**Leirfjorden**	**83.79**	**342**	*e*P		**P**		**06 05 05.4**	**+1.2**
KBD	**Kabd**	**83.80**	**299**	P		**P**		**06 05 05.4**	**+0.4**
UPNV	**Upernavik**	**83.86**	**6**	*i* P		**P**		**06 05 05.0**	**+0.6**
UPNV				IAmb	IAmb			06 05 05.9	
	comp=Z,43nm,1.0s								
SOC	**Sochi**	**83.87**	**315**	*e*P		**P**		**06 05 04.3**	**-0.8**
SOC				*e**PP		**pP**		**06 05 35.1**	**-1.0**
SOC				*e*S		**SKSac**		**06 15 10.0**	**-6.6**
SOC				*e*SS		**SS**		**06 20 51.8**	**+3.9**
SOC				pmax	pmax				
	comp=Z,48nm,0.8s								
SOC				MLR	MLR				
	comp=Z,181nm,15.0s								
TPO	**Tropico Hills**	**83.92**	**55**	IAmb	IAmb			06 05 08.2	
	comp=Z,60nm,1.1s								
EGMT	**Eagleton**	**84.08**	**40**	IAmb	IAmb			06 05 08.3	
	comp=Z,63nm,1.2s								
LRMC	**Laurel Mtn Rad**	**84.10**	**54**	IAmb	IAmb			06 05 43.5	
	comp=Z,46nm,0.7s								
FURC	**Furnace Creek,**	**84.31**	**53**	IAmb	IAmb			06 05 09.9	
	comp=Z,106nm,1.3s								
TPNV	**Topah Spring**	**84.56**	**52**	IAmb	IAmb			06 05 11.2	
	comp=Z,61nm,1.1s								
S11A	**Rachel**	**84.64**	**51**	IAmb	IAmb			06 05 11.8	
	comp=Z,72nm,1.3s								
YHL	**Hebgen Lake**	**84.64**	**43**	IAmb	IAmb			06 05 12.3	
	comp=Z,77nm,1.0s								
YHB	**Horse Butte**	**84.68**	**44**	IAmb	IAmb			06 05 12.4	
	comp=Z,75nm,1.0s								
ANN	**Anapa**	**84.81**	**317**	*e*P		**P**		**06 05 09.7**	**-0.1**
ANN				*e**PP		**pP**		**06 05 41.1**	**+0.5**
ANN				*e*S		**SKSac**		**06 15 22.2**	**-0.3**
ANN				pmax	pmax				
	comp=Z,68nm,1.0s								
YMR	**Madison River**	**84.86**	**44**	IAmb	IAmb			06 05 13.5	
	comp=Z,82nm,0.9s								
FFC	**Flin Flon**	**84.95**	**32**	P		**P**		**06 05 11.4**	**+1.1**
FFC				pP		**pP**		**06 05 40.2**	**-0.6**
FFC				x	x			06 05 46.4	
FFC				sP		**sP**		**06 05 52.0**	**-1.6**
SUMG	**Summit**	**84.96**	**1**	*i* P		**P**		**06 05 11.0**	**+0.5**
SUMG				IAmb	IAmb			06 05 15.6	
	comp=Z,35nm,0.9s								
HVU	**Hansel Valley**	**84.96**	**47**	IAmb	IAmb			06 05 13.5	
	comp=Z,64nm,1.2s								
SHOC	**Shoshone, Teco**	**84.97**	**53**	IAmb	IAmb			06 05 13.0	
	comp=Z,67nm,1.1s								
YNM	**Yellowstone No**	**85.00**	**43**	IAmb	IAmb			06 05 15.3	
	comp=Z,92nm,1.1s								
YNR	**Norris Junctio**	**85.03**	**43**	IAmb	IAmb			06 05 14.9	
	comp=Z,77nm,1.1s								
YFT	**Old Faithful**	**85.05**	**44**	IAmb	IAmb			06 05 15.6	
	comp=Z,50nm,0.9s								
H17A	**Grant Village**	**85.24**	**44**	IAmb	IAmb			06 05 16.6	
	comp=Z,74nm,1.3s								
NSS	**Namsos**	**85.26**	**341**	*e*P		**P**		**06 05 11.8**	**+0.2**
FLWY	**Flagg Ranch**	**85.30**	**44**	IAmb	IAmb			06 05 50.3	
	comp=Z,48nm,0.8s								
NUUG	**Nuugaatsiaq**	**85.32**	**5**	*i* P		**P**		**06 05 12.3**	**+0.5**
NUUG				IAmb	IAmb			06 05 13.3	
	comp=Z,29nm,1.0s								
YMP	**Mirror Lake Pl**	**85.34**	**43**	IAmb	IAmb			06 05 16.2	
	comp=Z,67nm,0.9s								
MNK	**Minsk**	**85.35**	**328**	*i* P		**P**		**06 05 13.0**	**+0.7**
	comp=E,51nm,0.8s								
MNK				*i* P		**P**		**06 05 13.0**	**+0.7**
	comp=N,30nm,0.9s								
MNK				*i* P		**P**		**06 05 13.0**	**+0.7**
	comp=Z,111nm,1.0s,baz=57								
MNK				*i* pP		**pP**		**06 05 43.7**	**+0.4**
MNK				*i* PP		**PP**		**06 08 32.7**	**+1.3**
MNK				*i* PPP		PPP		06 10 26.5	
MNK				*i* S		**SKSac**		**06 15 26.0**	**+0.4**
MNK				*i* sS		**sS**		**06 16 22.0**	**-4.1**
MNK				*i* SS		**SS**		**06 21 13.7**	**+4.7**
MNK				*i* SSS		SSS		06 24 45.6	
MNK				*i* LR		LR		06 42 07.6	
MNK	**Minsk**	**85.35**	**328**	*i* P		**P**		**06 05 12.9**	**+0.7**
MNK				*i* *PP		**pP**		**06 05 43.7**	**+0.4**
MNK				*i*				06 08 32.6	
MNK				*i* PPP		PPP		06 10 26.5	
MNK				*i* S		**SKSac**		**06 15 25.9**	**+0.4**
MNK				*i* SS		**SS**		**06 21 13.6**	**+4.7**
MNK				*i* SSS		SSS		06 24 45.5	
MNK				pmax	pmax				
	comp=E,51nm,0.8s								
MNK				pmax	pmax				
	comp=Z,111nm,1.0s								
MNK				pmax	pmax				
	comp=N,30nm,0.9s								
MNK				MLR	MLR				
	comp=Z,262nm,16.0s								
MNK				MLR	MLR				
	comp=N,197nm,18.0s								
MNK				MLR	MLR				
	comp=E,144nm,16.0s								
SPUT	**South Promonto**	**85.39**	**47**	IAmb	IAmb			06 05 15.4	
	comp=Z,48nm,1.1s								
SNOW	**Snow King Moun**	**85.55**	**45**	IAmb	IAmb			06 05 51.0	
	comp=Z,69nm,1.7s								
PSUT	**Pine Spring**	**85.62**	**50**	IAmb	IAmb			06 05 16.3	
	comp=Z,45nm,1.0s								
DUG	**Dugway, Tooele**	**85.63**	**48**	IAmb	IAmb			06 05 16.4	
	comp=Z,48nm,0.9s								
NACGM	**Naroch**	**85.66**	**329**	*e*P		**P**		**06 05 14.0**	**+0.2**
	comp=Z,147nm,0.9s,baz=56								
DNR	**Dunn Ranch,Anz**	**85.67**	**56**	IAmb	IAmb			06 05 16.6	
	comp=Z,69nm,1.2s								
MTPC	**Mountain Pass**	**85.68**	**53**	IAmb	IAmb			06 05 16.9	
	comp=Z,50nm,1.3s								
RLMT	**Red Lodge**	**85.73**	**43**	IAmb	IAmb			06 05 17.5	
	comp=Z,56nm,0.8s								
PFO	**Pinyon Flats O**	**85.78**	**55**	LR	LR			06 39 44.2	
	comp=Z,125nm,18.7s,baz=222,slow=33								
PFO	**Pinyon Flats O**	**85.78**	**55**	P		**P**		**06 05 15.4**	**+0.4**
PFO				IAmb	IAmb			06 05 17.1	
	comp=Z,55nm,1.1s								
PFO	**Pinyon Flats O**	**85.78**	**55**	P		**P**		**06 05 15.4**	**+0.4**
PFO				pmax	pmax				
	comp=Z,55nm,1.1s								
PFO	**Pinyon Flats O**	**85.78**	**55**	P		**P**		**06 05 15.6**	**+0.5**
PFO				pP		**pP**		**06 05 43.4**	**-2.2**
PFO				x	x			06 05 47.4	
PFO				x	x			06 05 50.7	
PFO				sP		**sP**		**06 05 56.2**	**-2.2**
PMD	**Palm Desert**	**85.82**	**55**	IAmb	IAmb			06 05 17.0	
	comp=Z,50nm,1.0s								
HWUT	**Hardware Ranch**	**85.85**	**47**	IAmb	IAmb			06 05 17.5	
	comp=Z,62nm,1.0s								
NIAQ	**Niaqornat**	**86.01**	**6**	*i* P		**P**		**06 05 15.8**	**+0.6**
NIAQ				IAmb	IAmb			06 05 16.2	
	comp=Z,128nm,1.5s								
V12A	**Nelson**	**86.10**	**53**	IAmb	IAmb			06 05 19.0	
	comp=Z,58nm,1.1s								
CBX	**Cerro Bola**	**86.15**	**57**	IAmb	IAmb			06 05 18.8	
	comp=Z,54nm,1.1s								
SAATT	**Saattut**	**86.15**	**5**	*i* P		**P**		**06 05 16.4**	**+0.5**
SAATT				IAmb	IAmb			06 05 17.7	
	comp=Z,55nm,1.0s								
TCUT	**Toone Canyon**	**86.18**	**47**	IAmb	IAmb			06 05 53.5	
	comp=Z,36nm,0.7s								
CCUT	**Cedar City**	**86.40**	**51**	IAmb	IAmb			06 05 20.7	
	comp=Z,56nm,1.3s								
SCO	**Scoresbysund**	**86.48**	**355**	*i* P		**P**		**06 05 17.8**	**+0.3**
SCO				IAmb	IAmb			06 05 18.9	
	comp=Z,62nm,1.7s								
MPU	**Maple Canyon**	**86.52**	**48**	IAmb	IAmb			06 05 20.7	
	comp=Z,39nm,1.1s								
BC3	**Big Chuckawall**	**86.52**	**55**	IAmb	IAmb			06 05 20.9	
	comp=Z,57nm,1.0s								
IRM	**Iron Mountain**	**86.54**	**54**	IAmb	IAmb			06 05 20.9	
	comp=Z,45nm,1.2s								
YUH	**Yuha Desert**	**86.58**	**56**	IAmb	IAmb			06 05 20.8	
	comp=Z,39nm,1.1s								
PDAR	**Pinedale Array**	**86.64**	**45**	P		**P**		**06 05 19.1**	**-0.2**
	comp=Z,7.9nm,0.9s,baz=267,slow=3.2,SNR=45								
PDAR				pP		**pP**		**06 05 49.1**	**-0.8**
	comp=Z,4.2nm,0.7s,baz=292,slow=4.3,SNR=6.0								
PDAR				PP		**PP**		**06 08 42.2**	**-0.3**
	comp=Z,2.3nm,1.0s,baz=318,slow=4.2,SNR=4.1								
PDAR				PKKPbc		**PKKPbc**		**06 23 13.4**	**-0.8**
	comp=Z,1.0nm,1.0s,baz=124,slow=2.7,SNR=5.0								
	comp=Z,7.9nm,0.9s								
LCMT	**Little Creek M**	**86.72**	**51**	P		**P**		**06 05 20.7**	**+1.1**
LCMT				IAmb	IAmb			06 05 22.0	
	comp=Z,40nm,1.0s								
AKASG	**Malin Array Be**	**86.72**	**324**	P		**P**		**06 05 17.9**	**-1.1**
	comp=Z,11nm,0.7s,baz=51,slow=5.0,SNR=67								
AKASG				pP		**pP**		**06 05 47.1**	**-3.1**
	comp=Z,8.0nm,0.5s,baz=53,slow=4.9,SNR=6.1								
AKASG				PKKPbc		**PKKPbc**		**06 23 11.8**	**-2.1**
	comp=Z,1.2nm,0.7s,baz=266,slow=1.9,SNR=5.0								
	comp=Z,11nm,0.7s								
AKBB	**Malin Array Si**	**86.72**	**324**	*ce*P		**P**		**06 05 18.3**	**-0.8**
AKBB				pmax	pmax				
	comp=Z,24nm,0.9s								
KIEV	**Kiev**	**86.73**	**324**	⇑P		**P**		**06 05 18.2**	**-1.0**
KIEV	**Kiev**	**86.73**	**324**	P		**P**		**06 05 18.0**	**-1.1**
KIEV	**Kiev**	**86.73**	**324**	*i* P		**P**		**06 05 18.1**	**-1.0**
	SNR=14								
KIEV	**Kiev**	**86.73**	**324**	P		**P**		**06 05 18.0**	**-1.1**
KIEV				pmax	pmax				
	comp=Z,21nm,0.9s								
KIEV	**Kiev**	**86.73**	**324**	P		**P**		**06 05 18.0**	**-1.1**
KIEV				pP		**pP**		**06 05 46.2**	**-4.0**
ESJX	**Sierra Juarez**	**86.83**	**57**	IAmb	IAmb			06 05 22.6	
	comp=Z,50nm,1.2s								
SAQQ	**Saqqaq**	**86.91**	**5**	*i* P		**P**		**06 05 19.9**	**+0.3**
SAQQ				IAmb	IAmb			06 05 21.1	
	comp=Z,76nm,1.2s								
BLYC	**Blythe**	**87.18**	**55**	IAmb	IAmb			06 05 24.1	
	comp=Z,60nm,1.2s								
PKCU	**Pink Cliffs**	**87.19**	**51**	IAmb	IAmb			06 05 25.3	
	comp=Z,99nm,1.5s								
VTX	**Valle De La Tr**	**87.22**	**57**	IAmb	IAmb			06 05 24.3	
	comp=Z,48nm,1.3s								
GLA	**Glamis**	**87.25**	**55**	IAmb	IAmb			06 05 24.5	
	comp=Z,69nm,0.9s								
Q16A	**Castle Valley**	**87.33**	**49**	IAmb	IAmb			06 06 00.5	
	comp=Z,42nm,0.8s								
P17A	**Butcher Ranch,**	**87.38**	**48**	IAmb	IAmb			06 05 25.0	
	comp=Z,52nm,1.0s								
TOKA	**Tokat**	**87.49**	**313**	IAmb	IAmb			06 05 24.1	
	comp=Z,53nm,1.4s								
U15A	**North Rim**	**87.66**	**51**	IAmb	IAmb			06 06 02.0	
	comp=Z,25nm,0.7s								
RDMU	**Red Mountain**	**87.67**	**47**	IAmb	IAmb			06 05 26.4	
	comp=Z,54nm,1.1s								
RAYN	**Ar Rayn**	**87.81**	**294**	P		**P**		**06 05 24.9**	**0.0**
RAYN	**Ar Rayn**	**87.81**	**294**	*i* P		**P**		**06 05 25.1**	**+0.2**
	SNR=85								
RAYN	**Ar Rayn**	**87.81**	**294**	P		**P**		**06 05 24.9**	**0.0**
RAYN				pmax	pmax				
	comp=Z,90nm,0.9s								
RAYN	**Ar Rayn**	**87.81**	**294**	P		**P**		**06 05 25.2**	**+0.2**
RAYN	**Ar Rayn**	**87.81**	**294**	P		**P**		**06 05 25.2**	**+0.2**
RAYN				pP		**pP**		**06 05 54.3**	**-2.0**
HFS	**Hagfors**	**87.82**	**337**	P		**P**		**06 05 22.6**	**-1.6**
	comp=Z,15nm,0.7s,baz=81,slow=4.7,SNR=21								
HFS				pP		**pP**		**06 05 52.0**	**-3.3**
	comp=Z,10nm,0.5s,baz=83,slow=4.6,SNR=6.2								
	comp=Z,15nm,0.7s								
SUW	**Suwalki**	**87.89**	**329**	*e*P		**P**		**06 05 24.4**	**-0.2**
DOMB	**Dombas**	**87.98**	**340**	*e*P		**P**		**06 05 24.6**	**-0.3**
NB2	**NORSAR Subarra**	**88.03**	**339**	P		**P**		**06 05 23.5**	**-1.7**
	comp=Z,43nm,0.9s,baz=52,slow=5.1								
NB2	**NORSAR Subarra**	**88.03**	**339**	P		**P**		**06 05 23.5**	**-1.7**
NOA	**NORSAR Array B**	**88.03**	**339**	P		**P**		**06 05 23.8**	**-1.5**
	comp=Z,22nm,0.9s,baz=52,slow=4.3,SNR=57								
NOA				pP		**pP**		**06 05 52.9**	**-3.2**
	comp=Z,11nm,0.9s,baz=52,slow=4.3,SNR=5.7								
NOA				LR	LR			06 49 23.0	
	comp=Z,118nm,18.6s,baz=30,slow=38								
	comp=Z,22nm,0.9s								
MOL	**Molde**	**88.05**	**341**	*e*P		**P**		**06 05 25.6**	**+0.5**
SFX	**San Felipe**	**88.09**	**57**	IAmb	IAmb			06 05 28.2	
	comp=Z,61nm,1.2s								
RNPP8	**Varash**	**88.14**	**326**	P		**P**		**06 05 24.9**	**-1.0**
113A	**Mohawk Valley,**	**88.18**	**55**	IAmb	IAmb			06 05 28.7	
	comp=Z,42nm,1.0s								
RNPP5	**Staryi Chortor**	**88.19**	**326**	P		**P**		**06 05 25.1**	**-1.0**
Y14A	**Wickenburg**	**88.24**	**54**	IAmb	IAmb			06 05 29.2	
	comp=Z,57nm,0.9s								
GAZ	**Gaziantep**	**88.44**	**310**	P		**P**		**06 05 27.9**	**+0.1**
AKN	**Aaknes**	**88.51**	**341**	*e*P		**P**		**06 05 27.3**	**-0.1**
SORM	**Soroca**	**88.59**	**323**	⇓P		**P**		**06 05 27.0**	**-1.1**
SORM	**Soroca**	**88.59**	**323**	⇓P		**P**		**06 05 27.0**	**-1.1**
O20A	**White River Ci**	**88.77**	**47**	IAmb	IAmb			06 05 31.2	
	comp=Z,40nm,1.2s								
PIX	**Pinacate**	**88.94**	**56**	IAmb	IAmb			06 05 32.3	
	comp=Z,43nm,1.2s								
ILGA	**Ilgaz**	**88.99**	**315**	IAmb	IAmb			06 05 31.4	
	comp=Z,39nm,1.0s								
PV21	**Cone Mtn., Par**	**89.02**	**48**	IAmb	IAmb			06 05 32.7	
	comp=Z,47nm,1.0s								
PV14	**Lion Creek, Pa**	**89.08**	**48**	IAmb	IAmb			06 05 32.9	
	comp=Z,56nm,0.9s								
DRV	**Dumont d'Urvil**	**89.13**	**181**	P		**P**		**06 05 30.7**	**+0.8**
PV22	**Blue Mesa, Par**	**89.16**	**48**	IAmb	IAmb			06 05 33.4	
	comp=Z,43nm,1.

comp=Z,39nm,1.1s
SDCO Great Sand Dun 91.80 48 IAmb IAmb 06 05 45.8
comp=Z,23nm,0.9s
OJC Ojcow 91.88 328 *e*P **P** **06 05 43.1 -0.2**
VOIR 91.98 322 ⇓P **P** **06 05 48.5 +4.4**
VOIR 91.98 322 ⇓P **P** **06 05 48.5 +4.4**
EPLO Experimental L 92.02 33 IAmb IAmb 06 05 45.4
comp=Z,33nm,1.0s
CASY Casey 92.10 193 P **P** **06 05 44.1 +0.4**
NIE Niedzica 92.14 327 *e*P **P** **06 05 45.2 +0.6**
MUD Monsted U'grnd 92.14 336 *i* P **P** **06 05 43.5 -0.9**
MUD IAmb IAmb 06 05 44.1
comp=Z,20nm,0.9s
319A Douglas 92.20 55 IAmb IAmb 06 05 48.1
comp=Z,29nm,1.0s
ARR Arges 92.26 322 ⇑P **P** **06 05 45.0 -0.3**
MARR Marisel-Cluj 92.34 323 ⇓P **P** **06 05 45.4 -0.2**
DRGR 92.49 324 ⇑P **P** **06 05 46.5 +0.1**
DRGR 92.49 324 ⇑P **P** **06 05 46.5 +0.1**
ANMO Albuquerque 92.54 50 P **P** **06 05 47.0 0.0**
ANMO IAmb IAmb 06 05 49.3
comp=Z,23nm,1.1s
ANMO Albuquerque 92.54 50 IAmb IAmb 06 05 49.4
comp=Z,32nm,1.2s
ANMO Albuquerque 92.54 50 IAmb IAmb 06 05 49.4
comp=Z,30nm,1.2s
ANMO Albuquerque 92.54 50 *ce*P **P** **06 05 48.3 +1.3**
ANMO pmax pmax
comp=Z,44nm,1.7s
NUUK Nuuk 92.62 7 *i* P **P** **06 05 47.0 +0.5**
NUUK IAmb IAmb 06 05 47.9
comp=Z,48nm,1.1s
KECS Kecovo 92.63 326 *e*P **P** **06 05 46.9 0.0**
KECS pmax pmax
comp=Z,31nm,1.4s
KECS Kecovo 92.63 326 *e*P **P** **06 05 46.9 0.0**
Y22A Socorro 92.68 52 IAmb IAmb 06 05 50.1
comp=Z,20nm,1.1s
ELND Elena 92.94 319 ⇑P **P** **06 05 48.7 +0.3**
STEB Steborice 93.06 328 *e*P **P** **06 05 47.7 -1.1**
KSP Ksiaz 93.16 330 *e*P **P** **06 05 49.5 +0.2**
VLAD Vladila 93.20 321 ⇑P **P** **06 05 49.5 0.0**
MORC Moravsky Berou 93.27 328 ⇓P **P** **06 05 48.7 -1.2**
MORC Moravsky Berou 93.27 328 IAmb IAmb 06 05 50.5
comp=Z,17nm,1.9s
MORC Moravsky Berou 93.27 328 ⇓P **P** **06 05 48.7 -1.2**
MORC Moravsky Berou 93.27 328 *e*P **P** **06 05 48.6 -1.3**
PSZ Piszkesteto 93.30 326 ⇑P **P** **06 05 50.4 +0.4**
PSZ Piszkesteto 93.30 326 P **P** **06 05 49.2 -0.8**
PSZ IAmb IAmb 06 05 50.8
comp=Z,36nm,1.3s
PSZ Piszkesteto 93.30 326 ⇑P **P** **06 05 50.4 +0.4**
DPC Dobruska-Polom 93.48 329 *e*P **P** **06 05 50.4 -0.4**
DPC Dobruska-Polom 93.48 329 *e*P **P** **06 05 50.4 -0.4**
MANT Manisa 93.71 314 P **P** **06 05 51.8 -0.6**
MANT IAmb IAmb 06 05 52.4
comp=Z,24nm,1.2s
JAVC Velka Javorina 93.82 327 *e*P **P** **06 05 52.1 -0.3**
VRAC Vranov 94.05 328 ⇑P **P** **06 05 53.8 +0.4**
VRAC Vranov 94.05 328 ⇑P **P** **06 05 53.8 +0.4**
VRAC Vranov 94.05 328 *e*P **P** **06 05 52.8 -0.6**
ECSD EROS Data Cent 94.12 39 IAmb IAmb 06 05 55.2
comp=Z,34nm,1.2s
SMOL Smolenice 94.17 327 *e*P **P** **06 05 54.3 +0.4**
SMOL pmax pmax
comp=Z,11nm,1.2s
SRO Srobarova 94.18 326 *e*P **P** **06 05 54.1 +0.1**
SRO Srobarova 94.18 326 *e*P **P** **06 05 54.1 +0.1**
KRUC Moravsky 94.31 328 *e*P **P** **06 05 53.9 -0.7**
MODS Modra-Piesok 94.33 327 *e*P **P** **06 05 54.7 0.0**
MODS pmax pmax
comp=Z,140nm,2.0s
MODS Modra-Piesok 94.33 327 *e*P **P** **06 05 54.7 0.0**
CLL Collm 94.34 331 IAmb IAmb 06 05 54.6
comp=Z,14nm,0.9s
CLL Collm 94.34 331 *i* P **P** **06 05 53.4 -1.2**
CLL *e**PP **pP** **06 06 23.0 -2.8**
CLL pmax pmax
comp=Z,17nm,1.0s
CLL Collm 94.34 331 *i* P **P** **06 05 53.4 -1.2**
comp=Z,17nm,1.0s
CLL *e*pP **pP** **06 06 23.0 -2.8**
CLL *ex* x 06 06 40.0
CLL *e*SKSac **SKSac** **06 16 18.0 0.0**
CLL *e*SKKSac **SKKSac** **06 16 36.0 -3.7**
CLL *e*SP SP 06 18 12.0 +1.5
CLL *e*PPS PPS 06 19 12.0
CLL *e*SS SS 06 23 06.0 -13
CLL *es*SS 06 24 12.0
CLL *e*SSS SSS 06 27 06.0
CLL *e*SSSS 06 30 24.0
CLL AMS AMS 06 56 00.0
comp=Z,300nm,19.8s
MNTX Cornudas Mount 94.95 53 IAmb IAmb 06 06 00.2
comp=Z,30nm,1.4s
MORH Mrgy, Hungar 95.04 325 ⇑P **P** **06 05 57.8 -0.1**
ZVC Zvikov 95.11 329 *e*P **P** **06 05 57.2 -1.0**
E38A The Farm, Brul 95.11 34 IAmb IAmb 06 05 59.3
comp=Z,16nm,1.2s
RONA Rosalia, Austr 95.27 327 *e*PcP **P** **06 05 58.6 -0.5**
comp=Z,9.6nm,1.2s
L34A Svendsen Farm, 95.32 40 IAmb IAmb 06 06 00.2
comp=Z,30nm,1.1s
CONA Conrad Observa 95.34 328 *e*PcP **P** **06 05 59.0 -0.4**
comp=Z,8.5nm,1.0s
SPMN Marine on St. 95.34 36 IAmb IAmb 06 09 18.7
comp=Z,17nm,0.6s
PH02 Texas Public H 95.47 48 IAmb IAmb 06 09 39.8
comp=Z,12nm,0.6s
KHC Kasperske Hory 95.61 329 *e*P **P** **06 05 58.8 -1.8**
KHC Kasperske Hory 95.61 329 *ce*P **P** **06 06 00.5 -0.1**
KHC pmax pmax
comp=Z,5.0nm,1.3s
VHRN Van Horn 95.70 53 IAmb IAmb 06 06 03.8
comp=Z,30nm,1.5s
GERES GERESS Array B 95.75 329 P **P** **06 06 00.3 -0.9**
comp=Z,2.7nm,0.8s,baz=80,slow=15,SNR=5.5
GERES pP **pP** **06 06 29.1 -3.3**
comp=Z,2.3nm,0.6s,baz=57,slow=4.9,SNR=4.6
comp=Z,2.7nm,0.8s
AMTX Amarillo 95.93 48 IAmb IAmb 06 06 05.7
comp=Z,16nm,0.8s
R32A Long Quarter, 95.94 44 IAmb IAmb 06 06 03.4
comp=Z,17nm,1.0s
ARSA Arzberg 95.96 327 *e*PcP **P** **06 06 02.5 +0.3**
comp=Z,9.9nm,1.3s
PECS Pecos 96.23 52 IAmb IAmb 06 06 05.7
comp=Z,32nm,1.8s
TPB01 Permian Basin 96.51 53 IAmb IAmb 06 06 06.7
comp=Z,23nm,1.8s
TPB06 Permian Basin 96.56 52 IAmb IAmb 06 06 07.3
comp=Z,13nm,0.9s
128A Castleberry Fa 96.57 51 IAmb IAmb 06 06 20.2
comp=Z,4.3nm,0.8s
SOKA Soboth 96.60 327 *e*PcP **P** **06 06 04.7 -0.5**
comp=Z,13nm,1.3s
G40A Rib Lake 96.70 35 IAmb IAmb 06 06 54.6
comp=Z,26nm,1.7s
ALPN Alpine 96.91 53 IAmb IAmb 06 06 08.9
comp=Z,18nm,1.6s
EKA Eskdalemuir Ar 97.15 341 P **P** **06 06 06.3 -1.0**
comp=Z,2.9nm,0.8s,baz=28,slow=4.3,SNR=8.0
comp=Z,2.9nm,0.8s
229A Bryant Ranch, 97.40 51 IAmb IAmb 06 06 10.8
comp=Z,8.6nm,0.9s
TXAR Lajitas Array 97.42 54 P Pdif 06 06 10.0 +0.7
comp=Z,3.0nm,0.9s,baz=312,slow=3.1,SNR=34
TXAR PP **PP** **06 10 08.1 +0.7**
comp=Z,0.3nm,0.8s,baz=288,slow=5.2,SNR=4.0
TXAR PKKPbc **PKKPdf** **06 22 47.2 -0.4**
comp=Z,0.8nm,0.8s,baz=130,slow=4.6,SNR=10
comp=Z,3.0nm,0.9s
SCHQ Schefferville 98.59 17 P **P** **06 06 13.7 -0.1**
comp=Z,4.1nm,0.9s,baz=356,slow=4.1,SNR=5.4
comp=Z,4.1nm,0.9s
SCHQ Schefferville 98.59 17 IAmb IAmb 06 08 52.7
comp=Z,32nm,1.7s
FUORN Ofenpass-Fuorn 98.97 329 IAmb IAmb 06 06 15.8
comp=Z,8.6nm,0.9s
ESDC Sonseca Array 110.80 333 PP **PP** **06 11 46.4 +0.6**
comp=Z,2.2nm,1.0s,baz=25,slow=6.8,SNR=6.8
ESDC PKKPbc **PKKPbc** **06 22 07.4 +0.5**
comp=Z,1.4nm,0.9s,baz=222,slow=2.2,SNR=4.9
QSPA South Pole Qui 112.50 180 PKiKP **PKiKP** **06 11 09.6 -0.4**
comp=Z,6.8nm,0.7s,baz=204,slow=0.7,SNR=29
QSPA South Pole Qui 112.50 180 **PKiKP** **06 11 09.8 -0.2**

LSZ Lusaka 118.55 264 **PKiKP** **06 11 23.7 +0.5**
LSZ Lusaka 118.55 264 PKIKP **PKiKP** **06 11 23.7 +0.5**
LSZ Lusaka 118.55 264 P **PKiKP** **06 11 23.8 +0.6**
TAM Tamanrasset 118.86 315 **PKPdf** **06 11 23.7 -0.1**
TAM Tamanrasset 118.86 315 PKIKP **PKPdf** **06 11 23.7 -0.1**
BOSA Boshof 124.32 250 PKP **PKiKP** **06 11 34.2 -0.1**
comp=Z,12nm,1.0s,baz=242,slow=2.7,SNR=5.8
NVL N'lazarevskaya 124.37 198 *i* PKIKP **PKiKP** **06 11 39.8 +6.9**
NVL *e* 06 13 25.1
NVL *e*PPP PPP 06 16 03.8
NVL *e*PS PS 06 23 23.9 +3.5
NVL *e*SS SS 06 30 18.8 +17
TROLL Troll, Antarti 125.94 194 P **PKPdf** **06 11 36.0 +0.1**
KGCAE Kacgae 125.97 258 **PKiKP** **06 11 38.0 +0.3**
SNAA Sanae 127.34 193 ⇑P **PKPdf** **06 11 38.6 +0.1**
comp=Z,525nm,1.2s
SNAA Sanae 127.34 193 PKP **PKPdf** **06 11 37.8 -0.6**
comp=Z,36nm,1.1s,baz=97,slow=3.1,SNR=11
SNAA Sanae 127.34 193 **PKPdf** **06 11 38.0 -0.4**
SNAA Sanae 127.34 193 *c* iPKIKP **PKPdf** **06 11 38.4 0.0**
SNAA pmax pmax
comp=Z,59nm,1.3s
TORD Torodi Ar. Bea 128.15 310 PKP **PKPdf** **06 11 41.0 -0.6**
comp=Z,27nm,1.0s,baz=356,slow=1.0,SNR=69
TORD PP **PP** **06 13 44.8 -1.0**
comp=Z,3.8nm,0.9s,baz=41,slow=5.1,SNR=5.0
VNA2 Neumayer--Watz 128.83 192 ⇑P **PKiKP** **06 11 42.2 +0.3**
comp=Z,38nm,0.8s,baz=95,slow=2.4
VNA3 Neumayer Olymp 128.98 191 ⇑P **PKPdf** **06 11 41.1 -0.4**
comp=Z,18nm,0.8s
VNA1 Neumayer--Stat 129.22 192 ⇑P **PKiKP** **06 11 42.7 +0.1**
comp=Z,47nm,1.0s
HUMP Col San Antoni 130.43 37 **PKPdf** **06 11 46.1 +0.3**
OTAV Otavalo 133.47 66 PKPpre 06 11 43.1
OTAV **PKPdf** **06 11 52.5 +0.3**
OTAV Otavalo 133.47 66 PKHKP PKPpre 06 11 43.1
OTAV 06 11 52.6
ROSC El Rosal 134.21 58 PKP **PKPdf** **06 11 53.3 -0.3**
comp=Z,7.6nm,0.7s,baz=59,slow=5.9,SNR=6.3
SDV Santo Domingo 134.32 50 PKPpre 06 11 46.9
SDV Santo Domingo 134.32 50 *e*P **PKPdf** **06 11 52.4 -1.1**
DBIC Dimbokro 137.26 309 PKhKP PKPpre 06 11 50.9
comp=Z,6.3nm,0.8s,baz=23,slow=3.7,SNR=5.9
DBIC PKP **PKPdf** **06 11 58.9 +0.1**
comp=Z,29nm,0.9s,baz=84,slow=2.4,SNR=29
DBIC SKPbc **SKPbc** **06 15 20.2 -0.3**
comp=Z,9.7nm,1.1s,baz=62,slow=2.6,SNR=6.6
CZSB Cruzeiro do Su 142.39 72 *e*P **PKPdf** **06 12 05.9 -2.2**
BOAV Boa Vista 145.94 46 *e*P **PKPdf** **06 12 14.4 +0.2**
PLCA Paso Flores 146.37 130 PKPbc **PKPbc** **06 12 15.3 -0.5**
comp=Z,157nm,1.1s,baz=231,slow=3.7,SNR=37
EFI East Falkland 146.72 156 **PKPbc** **06 12 16.7 +0.5**
EFI East Falkland 146.72 156 *c* iPKP2 **PKPab** **06 12 17.1 -0.6**
EFI pmax pmax
comp=Z,250nm,1.3s
TEFE Tefe 146.94 59 *e*P **PKPdf** **06 12 15.4 -0.5**
HOPE Hope Point 148.47 180 **PKPbc** **06 12 21.1 +0.2**
HOPE Hope Point 148.47 180 PKP2 **PKPbc** **06 12 21.1 +0.2**
MACA Manacapuru-AM 149.75 53 *e*P **PKPdf** **06 12 20.4 -0.2**
LPAZ La Paz 149.79 83 PKP **PKPdf** **06 12 21.7 +0.5**
comp=Z,69nm,1.3s,baz=330,slow=3.1,SNR=42
LPAZ PKPbc **PKiKP** **06 12 27.0 0.0**
comp=Z,75nm,1.0s,baz=348,slow=4.3,SNR=56
TRQA Tornquist 153.52 131 **PKPdf** **06 12 24.9 -0.6**
TRQA PKPbc **PKiKP** **06 12 33.6 +0.2**
TRQA **PKPab** **06 12 47.1 +1.0**
TRQA Tornquist 153.52 131 PKIKP **PKPdf** **06 12 24.9 -0.6**
ITTB Itaituba 154.13 48 *e*P **PKPdf** **06 12 27.0 -0.1**
VILB Vilhena 155.70 70 PKPab **PKPab** **06 12 56.3 +0.2**
VILB Vilhena 155.70 70 *e*P **PKPdf** **06 12 30.2 +1.1**
BBSD Serra de San D 156.93 81 *e*P **PKPdf** **06 12 30.7 0.0**
PTLB Pontes e Lacer 157.67 75 **PKPdf** **06 12 31.8 +0.2**
PTLB PKPab **pPKPdf** **06 13 04.3 -0.1**
PTLB Pontes e Lacer 157.67 75 *e*P **PKPdf** **06 12 31.5 -0.1**
PDRB Porto dos Gac 157.99 63 *e*P **PKPdf** **06 12 32.2 +0.1**
CLDB Colider 158.34 60 *e*P **PKPdf** **06 12 32.8 +0.3**
PRPB Parauapebas 159.29 39 *e*P **PKPdf** **06 12 34.0 +0.3**
PSAL Palomas, Salto 159.64 119 *e*P **PKPdf** **06 12 34.5 +1.0**
MURT Porto Murtinho 160.66 91 *e*P **PKPdf** **06 12 34.5 -0.4**
SALV Santo Antonio 160.90 73 *e*P **PKPdf** **06 12 35.2 -0.2**
CPUP Villa Florida 160.94 105 PKP **PKPdf** **06 12 35.1 0.0**
comp=Z,2.6nm,0.8s,baz=284,slow=1.7,SNR=8.2
CPUP PKPab **PKPab** **06 13 18.2 -0.3**
comp=Z,8.2nm,0.9s,baz=270,slow=5.0,SNR=12
CPUP Villa Florida 160.94 105 **PKPdf** **06 12 35.4 +0.3**
NBPS Pedro II - PI 161.24 15 *e*P **PKPdf** **06 12 35.2 -0.8**
BDQN Bodoquena, MS 161.27 87 *e*P **PKPdf** **06 12 36.1 +0.5**
AQDB Aquidauana 162.25 86 **PKPdf** **06 12 36.5 -0.2**
AQDB Aquidauana 162.25 86 *e*P **PKPdf** **06 12 36.8 +0.1**
PP1B Ponte de Pedra 162.25 77 *e*P **PKPdf** **06 12 37.0 +0.2**
SNDB Serra Nova Dou 162.51 55 *e*P **PKPdf** **06 12 37.8 +0.7**
SMTB Santa Maria do 162.75 39 *e*P **PKPdf** **06 12 37.3 -0.1**
NBPA Parau_RN 163.14 1 *e*P **PKPdf** **06 12 38.1 +0.3**
AMBA Amambai (Brazi 163.19 94 *e*P **PKPdf** **06 12 38.0 +0.5**
CPSB Cacapava Do Su 163.23 121 *e*P **PKPdf** **06 12 38.0 +0.6**
NBPV Pedro Velho 163.75 355 *e*P **PKPdf** **06 12 33.5 -4.8**
ARAG Araguaiana, MT 164.18 67 *e*P **PKPdf** **06 12 39.3 +0.7**
C2SB Chapadao do Su 164.46 78 *e*P **PKPdf** **06 12 39.5 +0.8**
NBMA Muriti-CE 164.63 8 *e*P **PKPdf** **06 12 39.3 +0.1**
ITAB Concordia 165.35 111 **PKPdf** **06 12 40.0 +0.7**
ITAB Concordia 165.35 111 *e*P **PKPdf** **06 12 39.9 +0.5**
TRCB Terra Rica 165.35 93 *e*P **PKPdf** **06 12 40.0 +0.5**
PTGB Pitanga 165.84 101 *e*P **PKPdf** **06 12 40.2 +0.3**
LDASE Londrina, Braz 166.76 96 *e*P **PKPdf** **06 12 40.7 0.0**
ITRB Iturama 166.97 79 *e*P **PKPdf** **06 12 41.5 +0.6**
SDBA SAO DESIDERIO 167.16 38 *e*P **PKPdf** **06 12 41.0 -0.2**
BDFB Brasilia 167.26 59 PKP **PKPdf** **06 12 40.7 -0.5**
comp=Z,6.4nm,0.9s,baz=201,slow=2.5,SNR=4.8
BDFB PKPab **PKPab** **06 13 46.1 -0.5**
comp=Z,12nm,1.1s,baz=343,slow=10,SNR=4.6
FRTB Fartura 168.19 96 *e*P **PKPdf** **06 12 42.3 +0.6**
IPMB Ipameri, GO 168.28 68 *e*P **PKPdf** **06 12 42.1 +0.3**
JANB Januaria 169.57 45 *e*P **PKPdf** **06 12 41.0 -1.8**
PMNB Patos De Minas 170.04 67 *e*P **PKPdf** **06 12 43.1 +0.1**
RCLB Rio Claro- Sao 170.04 90 *e*P **PKPdf** **06 12 43.6 +0.7**
SPB Sao Paulo 170.14 97 *e*P **PKPdf** **06 12 43.9 +1.1**
PET01 Itanhaem-SP 170.22 101 *e*P **PKPdf** **06 12 43.9 +1.1**
DIAM Diamantina, MG 172.18 57 *e*P **PKPdf** **06 12 44.1 0.0**
CMC01 Camacan, BA 172.24 20 *e*P **PKPdf** **06 12 44.8 +0.8**
BSCB Bom Sucesso 172.37 79 *e*P **PKPdf** **06 12 44.6 +0.5**
SJMB Sao Joao De Ma 174.26 47 *e*P **PKPdf** **06 12 44.6 -0.1**

*IDC **26** 05:53:30.6±16.0, 48.°90N×157.°86E, h0km, mb3.3/4, mbtmp3.3/4, MS4.0/1, Error ellipse: s-maj=425.3km s-min=105.5km az=88.0*
*KRSC **26** 05:53:34.1±2.3, 49.°33N×158.°22E, h37km±4.7km, Ml4.0*
ISC 26 05:53:37.6±1.5, 49.°3N±0.°1×157.°90E±0.°10, h35km±5.1km, n25, σ0s89/29, mb3.3/4, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.82**	**321**	*e*P	**Pn**	**05 54 05.1**	**-1.2**
SKR				*e*S	**Sn**	**05 54 27.7**	**-0.3**
PAU	**Pauzhetka**	**2.30**	**343**	*e*P	**Pn**	**05 54 13.0**	**0.0**
PAU				*e*S	**Sn**	**05 54 41.7**	**+1.8**
KDTR	**Khodutka, Kamc**	**2.54**	**2**	*e*P	**Pn**	**05 54 15.1**	**-1.0**
KDTR				*e*S	**Sn**	**05 54 44.4**	**-1.4**
MIPR	**Malaya Ipel'ka**	**3.09**	**347**	*e*P	**Pn**	**05 54 23.2**	**-0.5**
ASAK	**Asacha**	**3.11**	**360**	*e*P	**Pn**	**05 54 24.1**	**-0.1**
RUS	**Russkaya**	**3.18**	**7**	*e*P	**Pn**	**05 54 24.4**	**-0.6**
RUS				*e*S	**Sn**	**05 55 01.7**	**0.0**
MTVR	**Mutnovka**	**3.21**	**3**	*e*P	**Pn**	**05 54 25.1**	**-0.5**
MTVR				*e*S	**Sn**	**05 55 01.1**	**-1.6**
GRL	**Gorelyy**	**3.28**	**2**	*e*P	**Pn**	**05 54 26.2**	**-0.3**
KRMR	**Karymshinskiy**	**3.56**	**2**	*e*P	**Pn**	**05 54 31.1**	**+0.8**
PET	**Petropavlovsk**	**3.78**	**7**	*e*P	**Pn**	**05 54 33.2**	**-0.1**
DALK	**Dalny**	**3.79**	**8**	*e*P	**Pn**	**05 54 33.4**	**-0.1**
UGLR	**Uglovaya**	**3.98**	**8**	*e*P	**Pn**	**05 54 36.4**	**+0.3**
AVH	**Avacha**	**4.03**	**7**	*e*P	**Pn**	**05 54 37.5**	**+0.8**
SMR	**Somma**	**4.03**	**8**	*e*P	**Pn**	**05 54 37.3**	**+0.4**
KOK	**Koryaka**	**4.04**	**6**	*e*P	**Pn**	**05 54 37.9**	**+0.9**
SPN	**Mys Shipunski**	**4.05**	**18**	*e*P	**Pn**	**05 54 36.1**	**-0.8**
KRER	**Koryakskii**	**4.07**	**7**	*e*P	**Pn**	**05 54 38.6**	**+1.2**
KRX	**Arik**	**4.11**	**6**	*e*P	**Pn**	**05 54 38.6**	**+0.6**
GNL	**Ganaly**	**4.42**	**0**	*e*P	**Pn**	**05 54 43.6**	**+1.4**
KBTR	**Krutoberegovo**	**7.55**	**21**	*e*P	**Pn**	**05 55 24.3**	**-0.7**
KLR	**Kul'dur**	**17.05**	**280**	LR	LR	06 04 10.9	
	comp=Z,486nm,19.1s,baz=256,slow=38						
ILAR	**Eielson Array**	**32.55**	**41**	P	**P**	**06 00 05.1**	**+0.2**
	0.2nm,0.5s,baz=261,slow=7.1,SNR=8.6						
	0.2nm,0.5s						
YKA	**Yellowknife Ar**	**46.95**	**39**	P	**P**	**06 02 05.4**	**+1.0**
	0.2nm,0.7s,baz=301,slow=9.6,SNR=4.0						
	0.2nm,0.7s						
PDAR	**Pinedale Array**	**60.66**	**58**	P	**P**	**06 03 45.6**	**+0.4**
	0.2nm,0.5s,baz=290,slow=5.2,SNR=2.4						
	0.2nm,0.5s						
TXAR	**Lajitas Array**	**73.47**	**64**	P	**P**	**06 05 05.6**	**-0.9**
	0.2nm,0.8s,baz=316,slow=7.0,SNR=3.7						
	0.2nm,0.8s						

*OSPL **26** 05:57:46.6±0.3, 18.°31N×71.°66W, h2km±999km, ML0.9, Presumed earthquake*
*SDD **26** 05:57:47.8±1.8, 18.°36N×71.°55W, h12km±19km, MD2.7, ML1.1, MW1.5, Presumed earthquake*
ISC 26 05:57:47.0±1.3, 18.°35N±0.°05×71.°59W±0.°05, h11km±9km, n7, σ0s58/13, 4C-1D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LODU1	**El Espartillar**	**0.11**	**86**	*i* P	**Pg**	**05 57 49.9**	**+0.1**
LODU1				*e*S	**Sg**	**05 57 52.1**	**+0.4**
LODU1				IAML		05 57 52.3	
	comp=Z,29nm,0.2s						
NEDR	**Neiba UASD**	**0.21**	**49**	⇓*e*Pg	**Pg**	**05 57 51.3**	**-0.1**
NEDR				*e*Sg	**Sg**	**05 57 53.2**	**-1.3**
NEDR				IAML		05 57 55.3	
	comp=N,30nm,0.2s						
LONE3	**El Aguacate, B**	**0.29**	**25**	*i* P	**Pg**	**05 57 52.7**	**-0.1**
LONE3				*e*S	**Sg**	**05 57 57.5**	**+0.7**
LONE3				IAML		05 57 58.0	
	comp=Z,8.4nm,0.5s						
JIDR	**Jimani**	**0.29**	**300**	⇑*e*Pg	**Pg**	**05 57 52.5**	**-0.3**
JIDR				⇑*e*Sg	**Sb**	**05 57 59.4**	**+0.4**
JIDR				IAML		05 58 25.6	
	comp=N,27nm,2.6s						
PODR	**Polo**	**0.34**	**121**	⇑*e*Pg	**Pg**	**05 57 53.5**	**-0.4**
PODR				*e*Sg	**Sg**	**05 57 58.8**	**+0.3**
PODR				IAML		05 58 20.7	
	comp=N,30nm,3.2s						
PODR	**Polo**	**0.34**	**121**	*i* P	**Pg**	**05 57 53.5**	**-0.4**
PODR				*e*S	**Sg**	**05 57 58.8**	**+0.3**
PODR				IAML		05 57 59.4	
	comp=Z,270nm,0.1s						
REDR	**Restauracion**	**0.84**	**13**	⇑*e*Sg	**Sn**	**05 58 17.1**	**0.0**
REDR				IAML		05 58 37.2	
	comp=N,10nm,3.6s						

KRSC 26 05:58:06.6±1.8, 49.°23N×158.°09E, h47km±42km, Ml3.9, 1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.93**	**320**	*e*S	Sn	05 59 01.9	+1.9
SKR	**Severo-Kuril's**	**1.93**	**320**	*e*P	Pn	05 58 38.7	+1.7
SKR				*e*S	Sn	05 59 02.2	+2.2
SKR	**Severo-Kuril's**	**1.93**	**320**	pmax	pmax		
	comp=Z,79nm,0.4s						
SKR	**Severo-Kuril's**	**1.93**	**320**	⇓*e*P	Pn	05 58 38.6	+1.7
PAU	**Pauzhetka**	**2.38**	**340**	*e*P	Pn	05 58 46.1	+3.0
PAU				*e*S	Sn	05 59 14.7	+3.6
KDTR	**Khodutka, Kamc**	**2.58**	**360**	*e*P	Pn	05 58 48.9	+3.0
KDTR				*e*S	Sn	05 59 19.5	+3.5
ASAK	**Asacha**	**3.16**	**358**	*e*P	Pn	05 58 57.2	+3.4
MIPR	**Malaya Ipel'ka**	**3.17**	**345**	*e*P	Pn	05 58 58.0	+4.2
RUS	**Russkaya**	**3.22**	**5**	*e*P	Pn	05 58 57.6	+3.0
MTVR	**Mutnovka**	**3.26**	**1**	*e*P	Pn	05 58 58.6	+3.3
MTVR				*e*S	Sn	05 59 36.6	+3.8
GRL	**Gorelyy**	**3.33**	**360**	*e*P	Pn	05 59 00.4	+4.2
KRMR	**Karymshinskiy**	**3.61**	**0**	*e*P	Pn	05 59 04.1	+4.2
PET	**Petropavlovsk**	**3.82**	**5**	IAmb	IAmb	05 59 41.5	
	comp=Z,202nm,1.9s						
PET	**Petropavlovsk**	**3.82**	**5**	*e*P	Pn	05 59 06.5	+3.7
PET	**Petropavlovsk**	**3.82**	**5**	P	Pn	05 59 06.7	+3.9
DALK	**Dalny**	**3.83**	**6**	*e*P	Pn	05 59 07.0	+4.0
UGLR	**Uglovaya**	**4.01**	**6**	*e*P	Pn	05 59 09.5	+4.0
SPN	**Mys Shipunski**	**4.06**	**17**	*e*P	Pn	05 59 09.1	+2.9
AVH	**Avacha**	**4.06**	**6**	*e*P	Pn	05 59 10.6	+4.3
SMAR	**Somma**	**4.06**	**6**	*e*P	Pn	05 59 10.2	+3.9
KOK	**Koryaka**	**4.08**	**5**	*e*P	Pn	05 59 11.1	+4.6
KRER	**Koryakskii**	**4.10**	**6**	*e*P	Pn	05 59 11.6	+4.7
KRX	**Arik**	**4.15**	**5**	*e*P	Pn	05 59 11.8	+4.3
GNL	**Ganaly**	**4.47**	**359**	*e*P	Pn	05 59 13.7	+1.8

*IDC **26** 05:58:31.2±0.7, 19.°76S×11.°94W, h0km, mb4.2/11, mbtmp4.2/11, MS4.5/3, Error ellipse: s-maj=28.6km s-min=17.0km az=124.0*
*NEIC **26** 05:58:34.0±1.2, 19.°8S±0.°1×11.°8W±0.°1, h10km±1km, mb5.0/34, Error ellipse: s-maj=22.2km s-min=17.8km az=344.0*
*GCMT **26** 05:58:36.0±0.2, 19.°88S±0.°02×11.°96W±0.°01, h12km, MW5.2/134, Moment Tensor Solution. s49,c58; s134,c209; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr=0.66±.01; Mθθ=0.05±.01; Mφφ=0.60±.01; Mrθ=0.52±.05; Mθφ=0.03±.01; Mφr=0.21±.04; Best double couple: M0=0.80300×10^17 NP1:φ=201.00000°, δ=40.00000°, λ=-48.00000°. NP2:φ=332.00000°, δ=61.00000°, λ=-119.00000°. Principal axes: T 0.6470, Plg=12.0000°, Azm=83.0000°; N 0.3110, Plg=25.0000°, Azm=347.0000°; P =0.9580, Plg=62.0000°, Azm=195.0000°; nsta=1 refers to body waves, cutoff=40s. nsta=2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 26 05:58:33.9±0.4, 19.°77S±0.°10×11.°85W±0.°08, h16km, n64, σ1s24/58, mb5.0/26, MS4.6/5, 1D, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H10S2	**ASCENSION HYDR**	**1.08**	**345**	T	T	06 12 43.1	
	baz=166,slow=74,SNR=28						
H10S3	**ASCENSION HYDR**	**1.09**	**345**	T	T	06 12 44.5	
	baz=54,slow=74,SNR=22						
DBIC	**Dimbokro**	**27.16**	**15**	P	**P**	**06 04 16.8**	**+0.1**
	1.4nm,0.6s,baz=219,slow=8.4,SNR=3.3						
DBIC				LR	LR	06 12 23.3	
	comp=Z,769nm,20.4s,baz=206,slow=31						
	1.4nm,0.6s						
DBIC	**Dimbokro**	**27.16**	**15**	P	**P**	**06 04 16.5**	**-0.2**
DBIC				IAmb	IAmb	06 04 26.4	
	comp=Z,35nm,1.9s						
RCBR	**Riachuelo**	**27.19**	**297**	LR	LR	06 12 10.3	
	comp=Z,618nm,21.8s,baz=116,slow=30						
RCBR	**Riachuelo**	**27.19**	**297**	P	**P**	**06 04 17.6**	**+0.5**
ACRG	**Accra**	**27.73**	**26**	P	**P**	**06 04 20.6**	**-1.2**
TSUM	**Tsumeb**	**27.74**	**94**	LR	LR	06 13 34.9	
	comp=Z,2μm,20.0s,baz=276,slow=32						
TSUM	**Tsumeb**	**27.74**	**94**	P	**P**	**06 04 20.1**	**-2.0**
GRTLG	**Ghanzi**	**30.96**	**99**	P	**P**	**06 04 50.1**	**-0.7**
GRTLG				IAmb	IAmb	06 05 09.9	
	comp=Z,62nm,1.9s						
BDFB	**

LODK	**Lodwar**	**51.78**	**69**	P	**P**	**06 07 40.5**	**-0.9**
SNAA	**Sanae**	**52.18**	**176**	P	**P**	**06 07 43.8**	**+0.2**
SNAA				IAmb	IAmb	06 09 15.2	
	comp=Z,61nm,2.0s						
AC02	**Maricunga**	**52.72**	**251**		**P**	**06 07 50.2**	**+1.4**
AC02				IAmb	IAmb	06 08 02.5	
	comp=Z,32nm,1.6s						
MT08	**Bocatoma Ro**	**53.15**	**243**	P	**P**	**06 07 53.8**	**+2.2**
MT08				IAmb	IAmb	06 08 08.0	
	comp=Z,39nm,1.8s						
LPAZ	**La Paz**	**53.43**	**264**	P	**P**	**06 07 53.6**	**-0.7**
	comp=Z,1.3nm,0.8s,baz=122,slow=4.6,SNR=5.1						
	comp=Z,1.3nm,0.8s						
LPAZ	**La Paz**	**53.43**	**264**	P	**P**	**06 07 53.2**	**-1.1**
AC05	**El Transito**	**53.56**	**248**	P	**P**	**06 07 54.8**	**+0.2**
AC05				IAmb	IAmb	06 08 02.9	
	comp=Z,25nm,1.3s						
PB08	**IPOC Station P**	**53.63**	**259**	P	**P**	**06 07 55.9**	**+0.5**
PB08				IAmb	IAmb	06 08 03.0	
	comp=Z,19nm,1.2s						
AC06	**Mina Casimiro**	**53.76**	**250**	P	**P**	**06 07 57.0**	**+1.1**
AC06				IAmb	IAmb	06 08 04.2	
	comp=Z,22nm,1.1s						
PB03	**IPOC Station P**	**53.87**	**257**	P	**P**	**06 07 57.9**	**+1.0**
PB03				IAmb	IAmb	06 08 04.3	
	comp=Z,23nm,1.2s						
LCO	**Las Campanas**	**53.92**	**248**	P	**P**	**06 07 58.9**	**+1.5**
MT09	**Talagante**	**53.96**	**242**	P	**P**	**06 07 56.7**	**-0.7**
PB07	**IPOC Station P**	**54.04**	**257**	P	**P**	**06 07 58.9**	**+0.7**
PB05	**IPOC Station P**	**54.16**	**256**	P	**P**	**06 07 59.4**	**+0.4**
MT01	**Popeta**	**54.17**	**242**	P	**P**	**06 07 59.7**	**+0.9**
MT01				IAmb	IAmb	06 08 07.9	
	comp=Z,20nm,1.2s						
ELIB	**Princess Elisa**	**55.98**	**167**	*d*P	**P**	**06 08 11.7**	**+0.3**
BELA	**Belgrano 2**	**59.19**	**185**	P	**P**	**06 08 33.6**	**-0.2**
BELA				IAmb	IAmb	06 08 37.7	
	comp=Z,30nm,1.7s						
ESDC	**Sonseca Array**	**59.59**	**7**	P	**P**	**06 08 37.5**	**+0.5**
	comp=Z,1.4nm,0.9s,baz=188,slow=6.8,SNR=8.9						
	comp=Z,1.4nm,0.9s						
CZSB	**Cruzeiro do Su**	**60.04**	**272**		**P**	**06 08 39.8**	**-0.8**
OTAV	**Otavalo**	**68.13**	**279**		**P**	**06 09 34.0**	**-0.3**
OTAV				IAmb	IAmb	06 11 55.0	
	comp=Z,16nm,1.2s						
QSPA	**South Pole Qui**	**70.42**	**180**	P	**P**	**06 09 48.0**	**+0.7**
	comp=Z,3.6nm,0.9s,baz=239,slow=2.5,SNR=7.9						
	comp=Z,3.6nm,0.9s						
QSPA	**South Pole Qui**	**70.42**	**180**	P	**P**	**06 09 48.2**	**+0.9**
QSPA				IAmb	IAmb	06 11 12.6	
	comp=Z,25nm,1.4s						
BRTR	**Keskin Array B**	**72.83**	**35**	P	**P**	**06 10 04.2**	**+2.1**
	comp=Z,1.8nm,0.8s,baz=187,slow=6.0,SNR=4.5						
	comp=Z,1.8nm,0.8s						
EKA	**Eskdalemuir Ar**	**75.17**	**5**	P	**P**	**06 10 14.4**	**-0.8**
	comp=Z,0.8nm,0.7s,baz=42,slow=9.3,SNR=3.5						
	comp=Z,0.8nm,0.7s						
AKASG	**Malin Array Be**	**78.93**	**25**	P	**P**	**06 10 35.4**	**-1.1**
	comp=Z,2.8nm,0.8s,baz=224,slow=5.7,SNR=11						
	comp=Z,2.8nm,0.8s						
VNDA	**Vanda**	**82.85**	**179**	P	**P**	**06 10 58.0**	**+0.9**
	comp=Z,2.8nm,0.9s,baz=245,slow=6.1,SNR=4.8						
	comp=Z,2.8nm,0.9s						
WMQ	**Urumqi**	**110.18**	**50**	PKP	**PKiKP**	**06 17 08.0**	**+2.8**
WMQ				PP	**PP**	**06 17 43.3**	**+3.8**
WMQ				AMB	AMB		
	comp=Z,95nm,5.5s						
WMQ				LR	LR		
	comp=Z,190nm,22.3s						
PZH	**PanZhiHua**	**119.14**	**70**	PKP	**PKiKP**	**06 17 23.8**	**+0.8**
TBI	**Tubuai**	**120.45**	**226**	*e*LR	LR	06 54 15.0	
	comp=Z,1μm,35.5s						
TAOE	**Nuku Hiva Isla**	**121.70**	**246**	*e*LR	LR	06 54 59.1	
	comp=Z,125nm,27.2s						
PPT2	**Papeete2**	**124.32**	**231**	*e*LR	LR	06 56 02.1	
	comp=Z,140nm,24.0s						
PPT2				*e*LR	LR	06 56 02.5	
	comp=Z,225nm,24.0s						
QIZ	**Qiongzhong**	**125.24**	**80**	PKP	**PKiKP**	**06 17 34.8**	**-0.2**
QIZ				PP	**PP**	**06 19 24.3**	**-0.5**
QIZ	**Qiongzhong**	**125.24**	**80**	SS	SS	06 36 27.5	+5.1
QIZ				LR	LR		
	comp=N,330nm,15.5s						
QIZ				LR	LR		
	comp=E,370nm,14.3s						
QIZ				LR	LR		
	comp=Z,560nm,20.3s						
ASAR	**Alice Springs**	**125.42**	**141**	PKP	**PKPdf**	**06 17 34.4**	**-0.7**
	comp=Z,0.6nm,0.9s,baz=200,slow=1.5,SNR=5.3						
XAN	**Xi'an**	**125.97**	**62**	PKP	**PKiKP**	**06 17 36.5**	**+0.4**
ILAR	**Eielson Array**	**126.11**	**338**	PKP	**PKPdf**	**06 17 33.2**	**-1.8**
	comp=Z,0.4nm,0.8s,baz=343,slow=3.3,SNR=5.5						
HHC	**Hu-ho-hao-te**	**127.77**	**53**	*e*P	**PKPdf**	**06 17 36.5**	**-2.5**
WRA	**Warramunga Arr**	**128.47**	**138**	PKP	**PKPdf**	**06 17 38.7**	**-2.3**
	comp=Z,0.6nm,0.9s,baz=237,slow=2.1,SNR=4.6						
CN2	**Changchun**	**137.14**	**46**	*e*P	**PKPdf**	**06 17 55.0**	**-1.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MJAR	**Matsushiro Arr**	**148.93**	**51**	PKPbc	**PKPbc**	**06 18 20.4**	**-1.1**
	comp=Z,3.1nm,0.7s,baz=275,slow=1.8,SNR=8.5						

IDC ***26*** *06:11:21.5±0.7, 19.°91S×11.°78W, h0km, mb4.2/11, mbtmp4.2/11, MS4.5/4, Error ellipse: s-maj=33.0km s-min=18.1km az=127.0*

NEIC ***26*** *06:11:23.5±1.3, 19.°9S±0.°1×11.°96W±0.°02, h10km±1km, mb4.5/23, Error ellipse: s-maj=24.2km s-min=3.9km az=176.0*

ISC 26 06:11:23.8±0.5, 19.°9S±0.°1×11.°95W±0.°10, h16km, n41, σ0s81/36, mb4.3/20, MS4.6/4, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H10S2	**ASCENSION HYDR**	**11.06**	**346**	T	T	06 25 26.4	
	baz=166,slow=74,SNR=15						
H10S3	**ASCENSION HYDR**	**11.17**	**346**	T	T	06 25 24.7	
	baz=54,slow=74,SNR=14						
DBIC	**Dimbokro**	**27.29**	**16**	P	**P**	**06 17 08.0**	**+0.3**
	4.1nm,0.8s,baz=211,slow=12,SNR=3.1						
	4.1nm,0.8s						
DBIC	**Dimbokro**	**27.29**	**16**	P	**P**	**06 17 07.0**	**-0.7**
DBIC				IAmb	IAmb	06 17 12.9	
	comp=Z,6.0nm,0.9s						
GRTLG	**Ghanzi**	**31.05**	**99**	P	**P**	**06 17 41.9**	**+0.5**
GRTLG				IAmb	IAmb	06 17 42.2	
	comp=Z,4.5nm,0.8s						
VAO	**Valinhos**	**32.70**	**258**	P	**P**	**06 17 54.8**	**-1.0**
VAO				IAmb	IAmb	06 18 11.4	
	comp=Z,6.6nm,0.8s						
BDFB	**Brasilia**	**34.56**	**271**		**P**	**06 18 11.5**	**-0.6**
BDFB				IAmb	IAmb	06 18 29.4	
	comp=Z,5.8nm,1.0s						
BOSA	**Boshof**	**34.91**	**112**	P	**P**	**06 18 15.8**	**+0.8**
KHWEE	**KHWEE**	**34.94**	**100**	P	**P**	**06 18 14.9**	**-0.4**
LBTB	**Lobatse**	**35.00**	**105**	P	**P**	**06 18 14.2**	**-1.6**
LPHEP	**Lephephe**	**35.26**	**103**	P	**P**	**06 18 17.1**	**-0.9**
TORD	**Torodi Ar. Bea**	**35.46**	**23**	P	**P**	**06 18 19.9**	**+0.3**
	comp=Z,9.4nm,0.7s,baz=203,slow=10,SNR=37						
	comp=Z,9.4nm,0.7s						
LSZ	**Lusaka**	**38.47**	**90**	P	**P**	**06 18 45.2**	**-0.4**
LSZ				IAmb	IAmb	06 18 47.9	
	comp=Z,4.6nm,0.7s						
AQDB	**Aquidauana**	**40.98**	**261**	P	**P**	**06 19 06.0**	**-0.2**
AQDB				IAmb	IAmb	06 19 08.8	
	comp=Z,6.6nm,1.0s						
CPUP	**Villa Florida**	**42.07**	**252**	P	**P**	**06 19 16.6**	**+1.6**
	comp=Z,3.8nm,1.1s,baz=82,slow=12,SNR=4.8						
	comp=Z,3.8nm,1.1s						
CPUP	**Villa Florida**	**42.07**	**252**	P	**P**	**06 19 14.7**	**-0.4**
PTLB	**Pontes e Lacer**	**45.07**	**268**	P	**P**	**06 19 38.3**	**-1.0**
PTLB				IAmb	IAmb	06 19 47.7	
	comp=Z,3.2nm,0.8s						
MBAR	**Mbarara**	**45.95**	**71**	P	**P**	**06 19 46.5**	**0.0**
MBAR				IAmb	IAmb	06 19 52.6	
	comp=Z,10.0nm,1.1s						
TRQA	**Tornquist**	**46.78**	**236**		**P**	**06 19 52.5**	**-0.2**
CFA	**Coronel Fontan**	**51.54**	**245**	P	**P**	**06 20 30.1**	**+0.8**
	comp=Z,1.5nm,0.8s,baz=68,slow=6.9,SNR=5.3						
	comp=Z,1.5nm,0.8s						
MD31	**MD31**	**52.90**	**8**	P	**P**	**06 20 39.5**	**+0.3**
MD31				IAmb	IAmb	06 20 42.9	
	comp=Z,3.7nm,0.8s						
CO01	**Juntas del Tor**	**53.20**	**247**	P	**P**	**06 20 42.2**	**+0.4**
CO01				IAmb	IAmb	06 20 50.7	
	comp=Z,5.5nm,0.7s						
LPAZ	**La Paz**	**53.33**	**264**	P	**P**	**06 20 45.4**	**+2.0**
	comp=Z,1.5nm,0.8s,baz=76,slow=7.4,SNR=3.9						
	comp=Z,1.5nm,0.8s						
LPAZ	**La Paz**	**53.33**	**264**	P	**P**	**06 20 42.2**	**-1.2**
PLCA	**Paso Flores**	**53.68**	**234**	LR	LR	06 43 56.1	
	comp=Z,304nm,18.0s,baz=66,slow=36						
AC01	**Pan de Azucar**	**53.97**	**252**	P	**P**	**06 20 47.3**	**0.0**
MT01	**Popeta**	**54.04**	**242**	P	**P**	**06 20 47.9**	**+0.3**
ESDC	**Sonseca Array**	**59.71**	**7**	P	**P**	**06 21 28.2**	**+0.5**
	comp=Z,1.4nm,0.7s,baz=188,slow=7.3,SNR=12						
	comp=Z,1.4nm,0.7s						
CZSB	**Cruzeiro do Su**	**59.95**	**273**	P	**P**	**06 21 29.2**	**-0.5**
VAE	**Valguarnera**	**62.22**	**24**	LR	LR	06 49 55.4	
	comp=Z,813nm,18.2s,baz=165,slow=37						
MAW	**Mawson**	**66.01**	**156**	P	**P**	**06 22 09.4**	**+0.2**
	comp=Z,2.7nm,0.9s,baz=282,slow=20,SNR=2.2						
	comp=Z,2.7nm,0.9s						
BRTR	**Keskin Array B**	**72.97**	**35**	P	**P**	**06 22 54.1**	**+1.3**
	comp=Z,1.8nm,0.8s,baz=193,slow=5.1,SNR=7.3						
BRTR				LR	LR	06 55 24.8	
	comp=Z,106nm,19.9s,baz=164,slow=36						
	comp=Z,1.8nm,0.8s						
KIEV	**Kiev**	**79.06**	**25**		**P**	**06 23 27.0**	**0.0**
KIEV				IAmb	IAmb	06 23 28.8	
	comp=Z,4.5nm,0.8s						
AKASG	**Malin Array Be**	**79.07**	**25**	P	**P**	**06 23 26.6**	**-0.4**
	comp=Z,3.1nm,0.7s,baz=225,slow=5.6,SNR=23						
	comp=Z,3.1nm,0.7s						
HFS	**Hagfors**	**82.41**	**13**	P	**P**	**06 23 43.9**	**-0.9**
	comp=Z,1.3nm,0.6s,baz=169,slow=8.5,SNR=1.8						
	comp=Z,1.3nm,0.6s						
FINES	**FINESS Array B**	**86.57**	**17**	P	**P**	**06 24 05.3**	**-0.5**
	comp=Z,1.8nm,0.6s,baz=213,slow=6.6,SNR=4.4						
	comp=Z,1.8nm,0.6s						
CMIG	**Matas Romero**	**89.31**	**288**	LR	LR	07 06 20.9	
	comp=Z,379nm,19.5s,baz=124,slow=37						
ASAR	**Alice Springs**	**125.40**	**141**	PKP	**PKPdf**	**06 30 24.8**	**0.0**
	comp=Z,0.4nm,0.6s,baz=202,slow=1.1,SNR=6.9						
ILAR	**Eielson Array**	**126.18**	**338**	PKP	**PKiKP**	**06 30 24.9**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=355,slow=2.9,SNR=5.5						
WRA	**Warramunga Arr**	**128.46**	**138**	PKP	**PKPdf**	**06 30 29.8**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=243,slow=2.1,SNR=7.1						
MJAR	**Matsushiro Arr**	**149.07**	**51**	PKPbc	**PKPbc**	**06 31 11.8**	**+0.1**
	comp=Z,2.6nm,0.7s,baz=282,slow=3.7,SNR=7.0						

IDC ***26*** *06:13:06.7±0.7, 19.°63S×11.°85W, h0km, mb4.2/15, mbtmp4.2/15, MS4.6/15, Error ellipse: s-maj=26.3km s-min=15.6km az=135.0*

NEIC ***26*** *06:13:08.4±1.2, 19.°6S±0.°1×11.°69W±0.°10, h10km±1km, mb4.8/31, Error ellipse: s-maj=18.4km s-min=15.1km az=160.0*

GCMT ***26*** *06:13:11.4±0.1, 20.°01S±0.°01×11.°95W±0.°01, h12km, MW5.3/143, Moment Tensor Solution. s61,c75; s143,c249; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr=0.88±.01; Mθθ=0.05±.01; Mϕϕ=0.83±.01; Mrθ=0.28±.06; Mϕθ=-0.03±.01; Mϕr=-0.39±.04; Best double couple: M=0.98300×10^17 NP1:ϕs=190.00000°, δ=34.00000°, λ=-68.00000°. NP2:ϕs=343.00000°, δ=59.00000°, λ=-104.00000°. Principal axes: T 0.9300, Plg=13.0000°, Azm=83.0000°; N 0.1080, Plg=12.0000°, Azm=351.0000°; P -1.0360, Plg=72.0000°, Azm=219.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 06:13:07.8±0.5, 19.°65S±0.°09×11.°70W±0.°08, h10km, n62, σ0s87/49, mb4.7/27, MS4.6/15, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHEL	**Horse Pasture**	**6.75**	**58**	Pn	**Pn**	**06 14 45.5**	**-1.6**
H10S2	**ASCENSION HYDR**	**11.00**	**345**	T	T	06 27 16.8	
	baz=54,slow=74,SNR=22						
H10S3	**ASCENSION HYDR**	**11.01**	**344**	T	T	06 27 16.6	
	baz=166,slow=74,SNR=20						
DBIC	**Dimbokro**	**27.00**	**15**	P	**P**	**06 18 51.5**	**+1.4**
	3.9nm,0.8s,baz=200,slow=8.0,SNR=4.4						
DBIC				LR	LR	06 26 58.7	
	comp=Z,1μm,20.3s,baz=204,slow=31						
	3.9nm,0.8s						
DBIC	**Dimbokro**	**27.00**	**15**	P	**P**	**06 18 50.0**	**-0.1**
RCBR	**Riachuelo**	**27.25**	**297**	LR	LR	06 26 56.8	
	comp=Z,837nm,20.8s,baz=115,slow=31						
RCBR	**Riachuelo**	**27.25**	**297**		**P**	**06 18 51.5**	**-1.0**
RCBR				IAmb	IAmb	06 19 09.7	
	comp=Z,27nm,1.5s						
TSUM	**Tsumeb**	**27.61**	**94**	LR	LR	06 28 09.9	
	comp=Z,3μm,19.7s,baz=274,slow=32						
TSUM	**Tsumeb**	**27.61**	**94**	P	**P**	**06 18 55.8**	**0.0**
GRTLG	**Ghanzi**	**30.85**	**99**	P	**P**	**06 19 23.7**	**-0.8**
GRTLG				IAmb	IAmb	06 19 29.1	
	comp=Z,15nm,1.3s						
SUR	**Sutherland**	**31.72**	**120**	LR	LR	06 29 36.0	
	comp=Z,2μm,20.8s,baz=279,slow=31						
KHWEE	**KHWEE**	**34.75**	**100**	P	**P**	**06 19 57.9**	**-0.8**
BOSA	**Boshof**	**34.77**	**112**	P	**P**	**06 20 01.8**	**+3.0**
	comp=Z,8.6nm,1.1s,baz=232,slow=6.7,SNR=3.1						
BOSA				LR	LR	06 31 46.2	
	comp=Z,1μm,20.7s,baz=282,slow=32						
	comp=Z,8.6nm,1.1s						
BOSA	**Boshof**	**34.77**	**112**	P	**P**	**06 19 58.5**	**-0.3**
BOSA				IAmb	IAmb	06 20 03.1	
	comp=Z,17nm,1.2s						
BDFB	**Brasilia**	**34.79**	**271**	P	**P**	**06 19 59.7**	**+0.7**
	comp=Z,3.3nm,0.8s,baz=153,slow=8.1,SNR=3.6						
BDFB				LR	LR	06 31 37.7	
	comp=Z,2μm,19.5s,baz=117,slow=32						
	comp=Z,3.3nm,0.8s						
BDFB	**Brasilia**	**34.79**	**271**	P	**P**	**06 19 58.8**	**-0.2**
BDFB				IAmb	IAmb	06 20 08.1	
	comp=Z,14nm,1.1s						
LBTB	**Lobatse**	**34.84**	**106**	LR	LR	06 32 17.8	
	comp=Z,2μm,19.8s,baz=264,slow=33						
LBTB	**Lobatse**	**34.84**	**106**	P	**P**	**06 19 58.2**	**-1.2**
LBTB				IAmb	IAmb	06 20 21.9	
	comp=Z,16nm,1.1s						
LPHEP	**Lephephe**	**35.08**	**103**	P	**P**	**06 20 01.4**	**-0.1**
LPHEP				IAmb	IAmb	06 20 15.8	
	comp=Z,20nm,1.2s						
TORD	**Torodi Ar. Bea**	**35.16**	**23**	P	**P**	**06 20 03.0**	**+1.1**
	comp=Z,4.7nm,0.7s,baz=204,slow=9.8,SNR=16						
TORD				LR	LR	06 31 45.3	
	comp=Z,2μm,20.8s,baz=192,slow=32						
	comp=Z,4.7nm,0.7s						
SACV	**Santiago Islan**	**36.34**	**340**		**P**	**06 20 11.4**	**-0.8**
ITAB	**Concordia**	**37.73**	**251**	P	**P**	**06 20 24.4**	**+0.4**
ITAB				IAmb	IAmb	06 20 52.6	
	comp=Z,24nm,1.5s						
TRCB	**Terra Rica**	**38.20**	**258**	P	**P**	**06 20 28.0**	**0.0**
TRCB				IAmb	IAmb	06 20 54.1	
	comp=Z,8.0nm,0.6s						
LSZ	**Lusaka**	**38.24**	**90**	LR	LR	06 34 23.2	
	comp=Z,1μm,21.7s,baz=253,slow=33						
AQDB	**Aquidauana**	**41.25**	**261**		**P**	**06 20 53.9**	**+0.5**
AQDB				IAmb	IAmb	06 21 03.2	
	comp=Z,29nm,1.4s						
CPUP	**Villa Florida**	**42.36**	**252**	P	**P**	**06 21 01.9**	**-0.5**
	comp=Z,3.4nm,0.9s,baz=78,slow=8.2,SNR=6.5						
	comp=Z,3.4nm,0.9s						
CPUP	**Villa Florida**	**42.36**	**252**	P	**P**	**06 21 02.0**	**-0.4**
PTLB	**Pontes e Lacer**	**45.31**	**267**	P	**P**	**06 21 26.6**	**+0.4**
PTLB				IAmb	IAmb	06 21 36.8	
	comp=Z,9.3nm,1.1s						
TAM	**Tamanrasset**	**45.41**	**23**	P	**P**	**06 21 26.7**	**-0.3**
MBAR	**Mbarara**	**45.65**	**71**	P	**P**	**06 21 28.5**	**-0.6**
MBAR				IAmb	IAmb	06 21 45.3	
	comp=Z,16nm,1.3s						
VILB	**Vilhena**	**46.90**	**270**	P	**P**	**06 21 38.5**	**-0.4**
TRQA	**Tornquist**	**47.11**	**236**	P	**P**	**06 21 39.7**	**-0.5**
KIBK	**Kibwezi**	**51.53**	**77**	P	**P**	**06 22 13.8**	**-0.6**
LODK	**Lodwar**	**51.60**	**69**	P	**P**	**06 22 15.0**	**+0.1**
CFA	**Coronel Fontan**	**51.85**	**245**	P	**P**	**06 22 14.8**	**-1.7**
	comp=Z,1.4nm,0.8s,baz=92,slow=11,SNR=4.4						
	comp=Z,1.4nm,0.8s						
SNAA	**Sanae**	**52.29**	**176**	LR	LR	06 39 41.4	
	comp=Z,187nm,19.6s,baz=11,slow=30						
SNAA	**Sanae**	**52.29**	**176**	P	**P**	**06 22 19.4**	**+0.2**
SNAA				IAmb	IAmb	06 22 32.2	
	comp=Z,24nm,1.5s						
MDT	**Midelt**	**52.60**	**8**	LR	LR	06 42 25.8	
	comp=Z,543nm,21.9s,baz=186,slow=33						
MD31	**MD31**	**52.64**	**7**	P	**P**	**06 22 22.0**	**-0.2**
MD31				IAmb	IAmb	06 22 33.2	
	comp=Z,11nm,1.3s						
CO01	**Juntas del Tor**	**53.51**	**247**	P	**P**	**06 22 28.3**	**-0.7**
CO01				IAmb	IAmb	06 22 36.6	
	comp=Z,9.0nm,0.9s						
LPAZ	**La Paz**	**53.58**	**264**	P	**P**	**06 22 29.4**	**-0.8**
	comp=Z,1.3nm,0.8s,baz=43,slow=5.9,SNR=4.6						
	comp=Z,1.3nm,0.8s						
LPAZ	**La Paz**	**53.58**	**264**	P	**P**	**06 22 28.9**	**-1.4**
AC05	**El Transito**	**53.74**	**248**	P	**P**	**06 22 31.0**	**+0.3**
PLCA	**Paso Flores**	**54.01**	**233**	P	**P**	**06 22 32.4**	**+0.1**
	comp=Z,2.6nm,1.1s,baz=52,slow=6.7,SNR=3.2						
	comp=Z,2.6nm,1.1s						
BO01	**Tunca**	**54.21**	**241**	P	**P**	**06 22 34.7**	**+0.9**
OPO	**Ambohidratompo**	**55.41**	**99**	LR	LR	06 42 54.2	
	comp=Z,307nm,21.3s,baz=344,slow=32						
BELA	**Belgrano 2**	**59.33**	**185**	P	**P**	**06 23 09.1**	**-0.4**
ESDC	**Sonseca Array**	**59.45**	**7**	P	**P**	**06 23 10.1**	**-0.7**
	comp=Z,1.5nm,0.9s,baz=188,slow=7.5,SNR=8.0						
ESDC				LR	LR	06 47 08.7	
	comp=Z,252nm,21.1s,baz=138,slow=34						
	comp=Z,1.5nm,0.9s						
CZSB	**Cruzeiro do Su**	**60.17**	**272**	P	**P**	**06 23 16.6**	**+0.3**
SDV	**Santo Domingo**	**64.58**	**290**	P	**P**	**06 23 45.7**	**-0.2**
SDV				IAmb	IAmb	06 23 54.2	
	comp=Z,7.2nm,1.0s						
IDI	**Anoyia**	**64.73**	**33**	LR	LR	06 50 43.7	
	comp=Z,133nm,22.0s,baz=260,slow=35						
MAW	**Mawson**	**66.12**	**156**	LR	LR	06 47 10.7	
	comp=Z,380nm,18.5s,baz=295,slow=31						
QSPA	**South Pole Qui**	**70.54**	**180**	P	**P**	**06 24 23.2**	**+0.4**
	comp=Z,3.3nm,1.0s,baz=216,slow=7.0,SNR=4.2						
	comp=Z,3.3nm,1.0s						
QSPA	**South Pole Qui**	**70.54**	**180**	IAmb	IAmb	06 24 48.1	
	comp=Z,15nm,1.4s						
BRTR	**Keskin Array B**	**72.65**	**35**	P	**P**	**06 24 36.6**	**+0.8**
	comp=Z,1.6nm,0.8s,baz=179,slow=7.0,SNR=4.9						
	comp=Z,1.6nm,0.8s						
AKASG	**Malin Array Be**	**78.76**	**25**	P	**P**	**06 25 10.9**	**+0.6**
	comp=Z,2.3nm,0.7s,baz=224,slow=5.6,SNR=10						
	comp=Z,2.3nm,0.7s						
HFS	**Hagfors**	**82.14**	**13**	P	**P**	**06 25 28.7**	**+0.4**
	comp=Z,1.7nm,0.7s,baz=181,slow=12,SNR=2.2						
	comp=Z,1.7nm,0.7s						
FINES	**FINESS Array B**	**86.28**	**17**	P	**P**	**06 25 50.7**	**+1.4**
	comp=Z,1.8nm,0.8s,baz=191,slow=6.8,SNR=4.6						
	comp=Z,1.8nm,0.8s						
SCHQ	**Schefferville**	**87.76**	**332**	P	**P**	**06 25 58.2**	**+1.4**
	comp=Z,2.4nm,1.0s,baz=174,slow=10,SNR=1.4						
	comp=Z,2.4nm,1.0s						
E29M	**Blow River**	**121.11**	**340**		**PKPdf**	**06 31 59.5**	**-0.6**
WRA	**Warramunga Arr**	**128.47**	**138**	PKP	**PKPdf**	**06 32 15.8**	**0.0**
	comp=Z,0.7nm,0.9s,baz=244,slow=1.8,SNR=4.7						
MJAR	**Matsushiro Arr**	**148.74**	**51**	PKPbc	**PKPbc**	**06 32 56.1**	**+0.3**
	comp=Z,4.0nm,0.6s,baz=289,slow=3.6,SNR=10						

ASRS ***26*** *06:18:31.0±1.6, 53.°70N×91.°03E, h0km, M3.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC ***26*** *06:18:37.5±3.1, 53.°64N×90.°70E, h0km, mbtmp3.5/3, ML2.9/3, Error ellipse: s-maj=26.0km s-min=22.0km az=53.0*

NNC ***26*** *06:18:43.1±4.9, 53.°31N×90.°42E, h8km±25km, mb3.9, mpv3.6, Error ellipse: s-maj=29.9km s-min=25.8km az=82.0, Suspected Mining explosion.*

ISC 26 06:18:39.4±3.9, 53.°6N±0.°1×90.°4E±0.°2, h0km, n10, σ1s42/14, 6C-6D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVINFRA**	**3.35**	**279**	I	I	06 40 45.0	
	0.1nm,1.3s,baz=91,slow=328,SNR=4.6						
ZAA0	**Zalesovo Array**	**3.35**	**279**	Pn	**Pb**	**06 19 38.2**	**-1.4**
	14nm,0.8s						
ZAA0				⇓Lg	Lg	06 20 31.1	
	90nm,0.8s						
ZALV	**Zalesovo Beam**	**3.35**	**279**	Pn	**Pn**	**06 19 35.2**	**+2.3**
	2.2nm,0.3s,baz=95,slow=14,SNR=12						
ZALV				Lg	Lg	06 20 26.9	
	2.5nm,0.3s,baz=95,slow=26,SNR=5.1						
	3.7nm,0.3s						
KURK	**Kurchatov**	**7.80**	**253**	⇑Pn	**Pn**	**06 20 33.0**	**-1.1**
	1.3nm,0.8s						
KURK				⇓Sn	**Sn**	**06 22 03.2**	**+0.2**
	3.2nm,0.8s						
KURK				⇓Lg	Lg	06 22 50.3	
	19nm,1.4s						
KURBB	**Kurchatov Arra**	**7.89**	**253**	Pn	**Pn**	**06 20 35.6**	**+0.3**
	0.1nm,0.3s,baz=66,slow=15,SNR=11						
KURBB					Sn	**Sn**	**06 22 05.5**	**+0.2**
	0.1nm,0.3s,baz=68,slow=27,SNR=15						
KURBB					Lg	Lg	06 22 54.1	
	0.1nm,0.3s,baz=70

ISC 26 06:49:18.4±0.3,2°89'S±0'.04×139°19'E±0'.04,h46^{km},n291,
σ1°45/238,mb4.8/112,MS4.4/41,4C-1D,Near north coast
of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**1.01**	**331**	P	**Pn**	**06 49 34.5**	**-1.7**
SMPI				S	**Sn**	**06 49 48.1**	**-1.2**
GENI	**Genyem**	**1.01**	**73**	P	**Pn**	**06 49 36.1**	**-0.1**
GENI	**Genyem**	**1.01**	**73**	P	**Pn**	**06 49 35.4**	**-0.8**
GENI				S	**Sn**	**06 49 48.1**	**-1.3**
WAMI	**Wamena**	**1.10**	**206**	P	**Pn**	**06 49 41.0**	**+3.6**
JAY	**Jayapura**	**1.55**	**76**	Pg	**Pn**	**06 49 41.4**	**-2.3**
	107nm,0.3s,baz=237,slow=10,SNR=300						
JAY				Lg	Lg	06 50 01.0	
	357nm,0.3s,baz=127,slow=12,SNR=7.4						
JAY				LR	LR	06 50 30.7	
	comp=Z,7μm,20.0s,baz=22,slow=50						
JAY	**Jayapura**	**1.55**	**76**	P	**Pn**	**06 49 41.9**	**-1.7**
SRPI	**Serui, Papua**	**3.12**	**289**	P	**Pn**	**06 50 04.7**	**-0.4**
BAKI	**Biak**	**3.52**	**299**	P	**Pn**	**06 50 11.8**	**+1.3**
RKPI	**Ransiki, Papua**	**5.20**	**285**	P	**Pn**	**06 50 33.7**	**+0.1**
	2.1nm4μm295nm,0.6s						
MWPI	**Manokwari, Pap**	**5.51**	**291**	P	**Pn**	**06 50 39.1**	**+1.2**
KMPI	**Kaimana, Papua**	**5.54**	**262**	P	**Pn**	**06 50 39.9**	**+1.6**
	1.7nm5μm407nm,0.8s						
MMPI	**Merauke**	**5.67**	**168**	P	**Pn**	**06 50 43.4**	**+3.3**
FAKI	**Fak Fak**	**6.94**	**270**	P	**Pn**	**06 50 58.0**	**+0.5**
FAKI	**Fak Fak**	**6.94**	**270**		**Pn**	**06 50 54.9**	**-2.6**
FAKI				Sn	**Sn**	**06 52 14.3**	**-0.9**
FAKI	**Fak Fak**	**6.94**	**270**	P	**Pn**	**06 50 57.7**	**+0.2**
	3μm2μm151nm,0.8s						
SIJI	**Sorong**	**8.17**	**284**	Pn	**Pn**	**06 51 12.0**	**-2.5**
	17nm,0.3s,baz=100,slow=23,SNR=17						
SIJI				Sn	**Sn**	**06 52 43.4**	**-2.2**
	5.0nm,0.3s,baz=263,slow=22,SNR=6.3						
SIJI				LR	LR	06 55 22.6	
	comp=Z,2μm,20.2s,baz=104,slow=46						
	33nm,0.2s						
SIJI	**Sorong**	**8.17**	**284**	P	**Pn**	**06 51 15.3**	**+0.8**
	1μm41nm,0.9s						
SWI	**Sorong**	**8.18**	**284**	P	**Pn**	**06 51 15.2**	**+0.6**
	2μm93nm,0.8s						
MANU	**Manus Island**	**8.21**	**84**		**Pn**	**06 51 17.8**	**+2.9**
SAUI	**Saumlaki**	**9.35**	**237**	Pn	**Pn**	**06 51 27.2**	**-3.3**
SAUI	**Saumlaki**	**9.35**	**237**	P	**Pn**	**06 51 33.2**	**+2.6**
BNDI	**Bandanaira**	**9.41**	**260**	P	**Pn**	**06 51 33.7**	**+2.2**
PMG	**Port Moresby**	**10.23**	**130**	Pn	**Pn**	**06 51 41.8**	**-0.8**
	4.1nm,0.4s,baz=304,slow=20,SNR=9.0						
PMG				LR	LR	06 56 57.7	
	comp=Z,916nm,19.2s,baz=332,slow=45						
PMG	**Port Moresby**	**10.23**	**130**	Pn	**Pn**	**06 51 42.2**	**-0.4**
PMG	**Port Moresby**	**10.23**	**130**	P	**Pn**	**06 51 43.6**	**+1.0**
	67nm,0.8s						
MSAI	**Masohi**	**10.26**	**267**	P	**Pn**	**06 51 44.5**	**+1.4**
	3μm192nm,0.8s						
KRAI	**Karang Ratu**	**10.79**	**267**	P	**Pn**	**06 51 49.2**	**-1.2**
	6μm44nm,0.7s						
AAI	**Ambon**	**11.01**	**266**	P	**Pn**	**06 51 53.3**	**-0.1**
	77nm,0.7s						
COEN	**Coen**	**11.68**	**161**	P	**Pn**	**06 52 03.5**	**+1.0**
	comp=Z,49nm,0.7s						
COEN	**Coen**	**11.68**	**161**	P	**Pn**	**06 52 03.3**	**+0.8**
COEN	**Coen**	**11.68**	**161**		**Pn**	**06 52 02.2**	**-0.3**
KDU	**Kakadu**	**11.79**	**214**	P	**Pn**	**06 52 02.7**	**-1.4**
	comp=Z,142nm,1.0s						
NLAI	**Namlea**	**12.08**	**268**	P	**Pn**	**06 52 09.0**	**+1.0**
	comp=Z,2μmcomp=Z,2μmcomp=Z,162nm,0.6s						
GAMI	**Galela, Maluku**	**12.33**	**292**	P	**Pn**	**06 52 11.5**	**+0.1**
	comp=Z,59nm,1.0s						
TNTI	**Ternate**	**12.37**	**287**	P	**Pn**	**06 52 12.1**	**+0.2**
	comp=Z,44nm,1.0s						
MTN	**Manton Dam**	**12.71**	**218**	P	**Pn**	**06 52 15.2**	**-1.4**
	comp=Z,98nm,0.5s,comp=Z,0.0nm						
MTN	**Manton Dam**	**12.71**	**218**		**Pn**	**06 52 13.7**	**-2.9**
KRVT	**Keravat (AS076**	**12.88**	**97**	LR	LR	06 56 13.4	
	comp=Z,54nm,21.5s,baz=201,slow=33						
RABL	**Rabaul**	**13.01**	**96**	Pn	**P**	**06 52 26.9**	**-3.1**
SANI	**Sanana**	**13.22**	**273**	P	**Pn**	**06 52 22.2**	**-1.4**
	comp=Z,2μmcomp=Z,174nm,1.1s						
MNI	**Manado**	**14.98**	**287**	P	**Pn**	**06 52 47.9**	**+0.6**
	comp=Z,14μmcomp=Z,152nm,0.8s						
SGSI	**Sangihe**	**15.14**	**295**	P	**Pn**	**06 52 49.8**	**+0.5**
MTSU	**Mount Surprise**	**15.96**	**162**	P	**Pn**	**06 53 00.9**	**+0.9**
	comp=Z,20nm,0.7s						
SOEI	**Soe**	**16.32**	**245**	P	**P**	**06 53 06.4**	**-0.6**
SOEI	**Soe**	**16.32**	**245**		**Pn**	**06 53 03.8**	**-0.8**
SOEI	**Soe**	**16.32**	**245**	P	**P**	**06 53 07.3**	**+0.3**
KNRA	**Kununurra**	**16.34**	**218**	P	**Pn**	**06 53 03.5**	**-1.2**
	comp=Z,117nm,0.7s						
KNRA	**Kununurra**	**16.34**	**218**		**Pn**	**06 53 02.8**	**-2.0**
LUWI	**Luwuk**	**16.51**	**276**		**Pn**	**06 53 03.6**	**-3.3**
LUWI				IAmb	IAmb	06 53 28.0	
	comp=Z,103nm,1.1s						
LUWI	**Luwuk**	**16.51**	**276**	P	**P**	**06 53 08.4**	**-0.6**
	comp=Z,2μmcomp=Z,122nm,1.4s						
GTOI	**Gorontalo**	**16.55**	**282**	P	**P**	**06 53 08.7**	**-0.7**
	comp=Z,37nm,0.8s						
KDI	**Kendari**	**16.58**	**266**	P	**Pn**	**06 53 08.3**	**+0.5**
DAV	**Davao City (W)**	**16.81**	**306**	LR	LR	07 00 14.8	
	comp=Z,433nm,19.4s,baz=152,slow=40						
DAV	**Davao City (W)**	**16.81**	**306**	P	**Pn**	**06 53 10.0**	**-0.6**
BATI	**Baumata**	**17.05**	**244**	P	**Pn**	**06 53 11.9**	**-1.7**
	comp=Z,94nm,0.9s,baz=204,slow=0.9,SNR=10						
BATI	**Baumata**	**17.05**	**244**	P	**P**	**06 53 16.3**	**+1.4**
BATI				pP	**pP**	**06 53 24.8**	**-0.9**
GUMO	**Guam**	**17.31**	**19**	LR	LR	06 59 51.5	
	comp=Z,763nm,18.8s,baz=192,slow=37						
WB0	**Warramunga Arr**	**17.42**	**195**	P	**Pn**	**06 53 14.9**	**-3.3**
WB0				IAmb	IAmb	06 53 33.9	
	comp=Z,60nm,0.8s						
KKSI	**Kolaka, Sulawe**	**17.56**	**265**	P	**P**	**06 53 21.4**	**+0.9**
	comp=Z,90nm,0.5s						
MRSI	**Marisa**	**17.57**	**281**	P	**P**	**06 53 21.2**	**+0.6**
	comp=Z,46nm,1.1s						
QIS	**Mount Isa**	**17.57**	**179**	P	**Pn**	**06 53 18.6**	**-1.4**
	comp=Z,65nm,0.7s						
QIS	**Mount Isa**	**17.57**	**179**	P	**Pn**	**06 53 18.9**	**-1.1**
WR8	**Warramunga Arr**	**17.57**	**195**	P	**Pn**	**06 53 17.3**	**-2.8**
WR8				IAmb	IAmb	06 53 39.9	
	comp=Z,57nm,0.6s						
WRAB	**Tennant Creek**	**17.59**	**195**	Pn	**Pn**	**06 53 17.8**	**-2.5**
WRA	**Warramunga Arr**	**17.60**	**195**	P	**Pn**	**06 53 17.3**	**-3.1**
	comp=Z,3.2nm,0.3s,baz=1.5,slow=13,SNR=59						
WRA				S	Sn	06 56 24.0	-12
	comp=Z,6.8nm,0.6s,baz=14,slow=22,SNR=3.0						
WRA				LR	LR	07 00 36.1	
	comp=Z,4μm,20.0s,baz=39,slow=39						
	comp=Z,5.0nm,0.3s						
APSI	**Ampana**	**17.64**	**276**	P	**P**	**06 53 22.2**	**+0.7**
	comp=Z,2μmcomp=Z,129nm,1.5s						
MMRI	**Maumere**	**17.80**	**251**	P	**P**	**06 53 23.4**	**+0.1**
CTA	**Charters Tower**	**18.43**	**159**	P	**P**	**06 53 28.2**	**-2.0**
	comp=Z,0.6nm,0.3s,baz=333,slow=12,SNR=6.3						
CTA				LR	LR	07 01 06.7	
	comp=Z,3μm,19.0s,baz=332,slow=39						
	comp=Z,3.8nm,0.9s						
CTA	**Charters Tower**	**18.43**	**159**	P	**Pn**	**06 53 30.9**	**+0.3**
TOLI2	**Tolitoli**	**18.83**	**282**		**P**	**06 53 33.1**	**-1.4**
BSSI	**Bau Bau, Buton**	**18.92**	**260**	P	**Pn**	**06 53 36.5**	**-0.1**
	comp=Z,1μmcomp=Z,64nm,0.8s						
SPSI	**Sidrap Palu**	**19.42**	**266**	P	**P**	**06 53 41.4**	**+0.4**
	comp=Z,4μmcomp=Z,31nm,0.8s						
PCI	**Palu**	**19.45**	**275**	P	**P**	**06 53 41.6**	**+0.3**
	comp=Z,3μmcomp=Z,73nm,0.9s						
KAPI	**Kappang**	**19.51**	**263**	P	**P**	**06 53 41.0**	**-0.9**
	comp=Z,2.8nm,0.3s,baz=66,slow=10,SNR=4.4						
	comp=Z,4.9nm,0.3s						
KAPI	**Kappang**	**19.51**	**263**	P	**P**	**06 53 40.4**	**-1.6**
KAPI	**Kappang**	**19.51**	**263**	P	**Pn**	**06 53 42.9**	**-0.7**
MPSI	**Mapaga**	**19.55**	**279**	P	**P**	**06 53 42.9**	**+0.4**
MKS	**Makassar**	**19.81**	**263**	P	**P**	**06 53 45.9**	**+0.6**
	comp=Z,40nm,0.7s						
BASI	**Baing, Sumba**	**19.87**	**248**	P	**P**	**06 53 46.7**	**+0.8**
	comp=Z,135nm,1.0s						
WSI	**Waingapu**	**19.95**	**249**	P	**Pn**	**06 53 47.9**	**-0.8**
LBFI	**Labuhan Bajo,**	**19.99**	**253**	P	**P**	**06 53 48.1**	**+0.9**
FITZ	**Fitzroy Crossi**	**20.13**	**220**	P	**P**	**06 53 47.8**	**-0.9**
	comp=Z,12nm,0.5s,base=38,slow=11,SNR=21						
FITZ				LR	LR	07 02 22.9	
	comp=Z,3μm,18.6s,base=33,slow=39						
	comp=Z,12nm,0.5s						
PMSI	**Majene**	**20.26**	**268**	P	**P**	**06 53 50.6**	**+0.4**
	comp=Z,1μmcomp=Z,49nm,1.0s						
MMSI	**Mamuju**	**20.26**	**270**	P	**P**	**06 53 50.4**	**+0.2**
	comp=Z,967nmcomp=Z,57nm,0.8s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**20.79**	**250**	P	**P**	**06 53 53.7**	**-2.2**
	comp=Z,75nm,0.8s						
AS31	**Alice Springs**	**21.28**	**193**	P	**P**	**06 54 00.3**	**-0.8**
ASAR	**Alice Springs**	**21.28**	**193**	P	**P**	**06 54 00.3**	**-0.8**
	comp=Z,26nm,0.5s,baz=20,slow=9.7,SNR=117						
ASAR				S	**S**	**06 57 54.6**	**-0.7**
	comp=Z,13nm,0.9s,baz=18,slow=26,SNR=4.4						
ASAR				LR	LR	07 02 58.2	
	comp=Z,4μm,18.7s,baz=3.0,slow=39						
	comp=Z,26nm,0.5s						
DBNI	**Kabupaten Domp**	**21.51**	**254**	P	**P**	**06 54 04.3**	**+0.7**
SGKI	**Sangatta, Kali**	**21.71**	**276**	P	**P**	**06 54 07.3**	**+1.5**
PLAI	**Plampang**	**22.10**	**254**	P	**P**	**06 54 10.8**	**+0.8**
	comp=Z,39nm,0.8s						
BKB	**Balikpapan**	**22.34**	**274**	P	**P**	**06 54 12.9**	**+0.3**
	comp=Z,131nm,0.5s						
NGOA	**Tingoa Renbel**	**22.40**	**114**	P	**P**	**06 54 14.0**	**+0.8**
TWSI	**Taliwang, Sumb**	**22.94**	**254**	P	**P**	**06 54 19.7**	**+0.8**
	comp=Z,29nm,0.9s						
KLNI	**Maram**	**23.63**	**256**	P	**P**	**06 54 23.5**	**-2.1**
	comp=Z,2μmcomp=Z,197nm,1.2s						
QLP	**Quilpie**	**24.05**	**169**	P	**P**	**06 54 31.7**	**+2.4**
	comp=Z,72nm,1.0s						
QLP	**Quilpie**	**24.05**	**169**	P	**P**	**06 54 31.2**	**+1.8**
KHKI	**Kahang-Kahang**	**24.09**	**256**	P	**P**	**06 54 29.6**	**-0.2**
	comp=Z,1μmcomp=Z,63nm,1.0s						
BBKI	**Banjar Baru**	**24.32**	**268**	P	**P**	**06 54 33.3**	**+1.3**
	comp=Z,9μmcomp=Z,184nm,1.1s						
MTKI	**Muara Teweh, K**	**24.36**	**274**	P	**P**	**06 54 32.4**	**0.0**
WRKA	**Warakurna**	**24.40**	**205**	P	**P**	**06 54 31.2**	**-1.4**
SRBI	**Singaraja**	**24.42**	**257**	P	**P**	**06 54 32.3**	**-0.5**
	comp=Z,985nmcomp=Z,38nm,1.4s						
KKM	**Kota Kinabalu**	**24.60**	**291**	P	**P**		
KKM				IAmb	IAmb	06 54 33.3	-1.4
	comp=Z,17nm,0.9s					06 55 03.1	
KKM	**Kota Kinabalu**	**24.60**	**291**	P	**P**	**06 54 34.3**	**-0.4**
	comp=Z,21nm,0.8s						
IGBI	**Denpasar**	**24.63**	**255**	P	**P**	**06 54 33.6**	**-1.2**
	comp=Z,2μmcomp=Z,1μmcomp=Z,103nm,1.1s						
RTBI	**Rangdo, Negare**	**24.75**	**256**	P	**P**	**06 54 36.7**	**+0.8**
	comp=Z,80nm,1.0s						
TGY	**Tagaytay City**	**24.75**	**313**	LR	LR	07 04 37.5	
	comp=Z,549nm,20.8s,baz=160,slow=38						
INKA	**Innaminka**	**24.76**	**177**	P	**P**	**06 54 34.8**	**-1.0**
INKA				IAmb	IAmb	06 54 59.0	
	comp=Z,17nm,0.6s						
EIDS	**Eidsvold**	**25.11**	**154**	P	**P**	**06 54 40.6**	**+1.6**
EIDS	**Eidsvold**	**25.11**	**154**	P	**P**	**06 54 39.4**	**+0.3**
EIDS				IAmb	IAmb	06 54 57.0	
	comp=Z,26nm,1.0s						
BYJI	**Banyuwangi**	**25.27**	**257**	P	**P**	**06 54 40.4**	**-0.2**
	comp=Z,125nm,1.8s						
ABJI	**Asem Bagus**	**25.32**	**258**	P	**P**	**06 54 41.7**	**+0.7**
	comp=Z,57nm,0.9s						
KMMI	**Kalianget**	**25.46**	**260**	P	**P**	**06 54 43.3**	**+0.9**
	comp=Z,2μmcomp=Z,110nm,1.3s						
JAGI	**Jajag, Banyuwa**	**25.52**	**256**	P	**P**	**06 54 40.1**	**-2.8**
JAGI				IAmb	IAmb	06 55 06.5	
	comp=Z,36nm,1.1s						
JAGI	**Jajag, Banyuwa**	**25.52**	**256**	P	**P**	**06 54 44.3**	**+1.4**
	comp=Z,26nm,0.7s						
BLJI	**Banyuglugur**	**25.93**	**258**	P	**P**	**06 54 47.3**	**+0.7**
	comp=Z,1μmcomp=Z,36nm,0.4s						
GMJI	**Gumukmas**	**26.17**	**257**	P	**P**	**06 54 49.9**	**+1.1**
	comp=Z,49nm,1.0s						
MBWA	**Marble Bar**	**26.25**	**225**	P	**P**	**06 54 49.3**	**0.0**
	comp=Z,38nm,0.7s						
MBWA	**Marble Bar**	**26.25**	**225**	P	**P**	**06 54 49.6**	**+0.2**
MBWA	**Marble Bar**	**26.25**	**225**	P	**P**	**06 54 47.6**	**-1.8**
PSAC2	**Pilbara Seismi**	**26.39**	**224**	P	**P**	**06 54 52.9**	**+2.2**
	comp=Z,29nm,0.7s						
PSAC1	**Pilbara Seismi**	**26.44**	**224**	P	**P**	**06 54 51.6**	**+0.4**
	comp=Z,51nm,1.1s						
PSA00	**Pilbara Seismi**	**26.44**	**224**	P	**P**	**06 54 53.0**	**+1.8**
	comp=Z,33nm,0.7s						
PSA00	**Pilbara Seismi**	**26.44**	**224**	P	**P**	**06 54 53.1**	**+2.0**
PSA00	**Pilbara Seismi**	**26.44**	**224**	P	**P**	**06 54 49.5**	**-1.7**
PSA00				IAmb	IAmb	06 54 55.9	
	comp=Z,12nm,0.7s						
PSAB3	**Pilbara Seismi**	**26.45**	**224**	P	**P**	**06 54 52.7**	**+1.5**
	comp=Z,42nm,0.7s						
STKA	**Stephens Creek**	**28.93**	**176**	P	**P**	**06 55 12.5**	**-0.8**
	comp=Z,2.5nm,0.4s,baz=338,slow=9.7,SNR=12						
STKA				LR	LR	07 07 53.4	
	comp=Z,3μm,19.5s,baz=348,slow=39						
	comp=Z,2.5nm,0.4s						
STKA	**Stephens Creek**	**28.93**	**176**	P	**P**	**06 55 12.3**	**-0.9**
STKA	**Stephens Creek**	**28.93**	**176**	P	**P**	**06 55 11.9**	**-1.3**
CMSA	**Cobar Meteorol**	**29.15**	**169**	P	**P**	**06 55 17.0**	**+1.8**
FORT	**Forrest**	**29.67**	**200**	P	**P**	**06 55 18.8**	**-1.1**
FORT				IAmb	IAmb	06 55 37.9	
	comp=Z,10nm,0.8s						
ARMA	**Armidale**	**29.81**	**158**	P	**P**	**06 55 21.8**	**+0.6**
ARMA				IAmb	IAmb	06 55 33.9	
	comp=Z,13nm,1.1s						
BBOO	**Buckleboo**	**29.91**	**185**	P	**P**	**06 55 22.4**	**+0.4**
BBOO	**Buckleboo**	**29.91**	**185**	P	**P**	**06 55 22.2**	**+0.2**
JCJ	**Chichijima**	**29.95**	**5**	LR	LR	07 05 53.9	
	comp=Z,446nm,20.8s,baz=177,slow=34						
HTT	**Hallett**	**30.39**	**180**	P	**P**	**06 55 27.1**	**+0.9**
JOW	**Kunigami**	**31.37**	**341**	LR	LR	07 05 27.6	
	comp=Z,587nm,21.4s,baz=140,slow=31						
BBJI	**Bungbulang**	**31.73**	**261**	P	**P**	**06 55 36.2**	**-2.2**
BBJI				IAmb	IAmb	06 55 58.3	
	comp=Z,11nm,0.9s						
SSLB	**Suanglung**	**31.91**	**327**		**P**	**06 55 40.1**	**+0.3**
YHNB	**Yeheng**	**32.40**	**329**	P	**P**	**06 55 45.5**	**+1.4**
SYDH	**Sydney Hard Ro**	**32.56**	**162**	P	**P**	**06 55 45.7**	**+0.5**
DZM	**Mont Dzumac**	**32.62**	**128**	LR	LR	07 08 57.2	
	comp=Z,408nm,19.6s,baz=316,slow=36						
CAN	**Canberra**	**33.53**	**165**	P	**P**	**06 55 53.6**	**-0.2**
CAN				IAmb	IAmb	06 56 09.9	
	comp=Z,15nm,1.0s						
ARPS	**Mount Arapiles**	**33.81**	**176**	P	**P**	**06 55 56.6**	**+0.5**
	comp=Z,11nm,1.1s						
MORW	**Morawa**	**34.10**	**218**	P	**P**	**06 55 59.1**	**+0.3**
	comp=Z,20nm,1.3s						
MORW	**Morawa**	**34.10**	**218**	P	**P**	**06 55 58.8**	**0.0**
MORW	**Morawa**	**34.10**	**218**	P	**P**	**06 55 56.9**	**-1.9**
MORW				IAmb	IAmb	06 56 23.0	
	comp=Z,11nm,0.8s						
BLDU	**Ballidu**	**34.82**	**215**	P	**P**	**06 56 04.5**	**-0.5**
KLBR	**Kellerberrin**	**34.98**	**213**	P	**P**	**06 56 05.8**	**-0.5**
TOO	**Toolangi**	**35.00**	**171**	P	**P**	**06 55 56.9**	**-0.6**
MILA	**Mila**	**35.22**	**166**	P	**P**	**06 56 11.7**	**+3.2**
	comp=Z,19nm,1.5s						
JHJ	**Hachijo jima 2**	**35.81**	**1**	LR	LR	07 07 45.6	
	comp=Z,612nm,20.1s,baz=132,slow=31						
QIZ	**Qiongzhong**	**36.16**	**308**	P	**P**	**06 56 18.8**	**+2.1**
QIZ				PP	**PP**	**06 57 42.5**	**+2.9**
QIZ				S	**S**	**07 01 54.5**	**+0.9**
QIZ				L	L		
	comp=Z,190nm,12.4s						
QIZ				L	L		
	comp=Z,340nm,17.8s						
QIZ				L	L		
	comp=Z,460nm,19.9s						
NWAO	**Narrogin (SRO)**	**36.28**	**212**	LR	LR	07 12 13.7	
	comp=Z,4μm,18.2s,baz=33,slow=38						
NWAO	**Narrogin (SRO)**	**36.28**	**212**	P	**P**	**06 56 18.4**	**+0.9**
JNU	**Nakatsue**	**36.67**	**348**	LR	LR	07 08 46.7	
	comp=Z,508nm,21.3s,baz=171,slow=32						
JMN	**Monobe**	**36.76**	**353**	P	**P**	**06 56 22.4**	**+0.8**
JMN				IAmb	IAmb	06 56 49.4	
	comp=Z,16nm,0.9s						
MASI	**Maura Aman, Be**	**36.90**	**269**	P	**P**	**06 56 23.5**	**+0.4**
PDSI	**Padang**	**38.76**	**272**	P	**P**	**06 56 37.9**	**-0.9**
	comp=Z,32nm,0.8s						
PPI	**Padang Panjang**	**38.85**	**273**	P	**P**	**06 56 39.1**	**-0.4**
	comp=Z,52nm,0.9s						
MJAR	**Matsushiro Arr**	**39.24**	**359**	P	**P**	**06 56 41.5**	**-0.9**
	comp=Z,2.0nm,0.7s,baz=180,slow=9.1,SNR=5.8						
MJAR				LR	LR	07 10 59.2	
	comp=Z,425nm,20.2s,baz=172,slow=33						
	comp=Z,2.0nm,0.7s						
MAJO	**Matsushiro**	**39.24**	**359**	P	**P**	**06 56 43.1**	**+0.7**
NJ2	**Nanjing**	**39.75**	**333**	⇑P	**P**	**06 56 48.0**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,45nm,0.7s						
FUNA	**Funafuti**	**40.17**	**100**	P	**P**	**06 56 51.6**	**+1.0**
PSI	**Prapat**	**40.65**	**278**	P	**P**	**06 56 53.7**	**-0.9**
	comp=Z,29nm,1.2s						
WHN	**Wuhan**	**40.83**	**326**	P	**P**	**06 56 56.0**	**+0.3**
WHN				S	**S**	**07 03 05.5**	**+1.7**
WHN				L	L		
	comp=Z,1μm,26.0s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**41.48**	**346**	P	**P**	**06 56 59.4**	**-1.5**
	comp=Z,1.4nm,0.7s,baz=158,slow=8.1,SNR=5.4						
KSRS				LR	LR	07 11 24.4	
	comp=Z,306nm,21.6s,baz=175,slow=32						
	comp=Z,1.4nm,0.7s						
KCSI	**Kotacane, Aceh**	**41.89**	**278**	P	**P**	**06 57 03.6**	**-1.1**
	comp=Z,595nmcomp=Z,15nm,0.8s						
CMAR	**Chiang Mai Arr**	**44.95**	**300**	P	**P**	**06 57 27.6**	**-1.7**
	comp=Z,2.2nm,0.7s,baz=118,slow=6.7,SNR=14						
	comp=Z,2.2nm,0.7s						
HNS	**HongShan**	**46.09**	**333**	⇑P	**P**	**06 57 38.5**	**+0.6**
HNS				S	**S**	**07 04 21.3**	**+0.9**
HNS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HNS				L	L		
	comp=Z,440nm,17.8s						
HNS				L	L		
	comp=Z,250nm,16.9s						
HNS				L	L		
	comp=Z,580nm,19.9s						
XAN	**Xi'an**	**46.50**	**325**	⇑P	**P**	**06 57 39.3**	**-2.0**
XAN				pP	pP	06 57 56.3	+2.1
XAN				S	**S**	**07 04 19.5**	**-7.1**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
XAN				pmax	pmax		
	comp=Z,84nm,3.6s						
XAN				L	L		
	comp=Z,220nm,16.5s						
XAN				L	L		
	comp=Z,220nm,17.2s						
XAN				L	L		
	comp=Z,570nm,24.7s						
PZH	**PanZhiHua**	**46.51**	**311**	P	**P**	**06 57 44.3**	**+2.7**
ASAJ	**Asahikawa**	**46.89**	**3**	LR	LR	07 15 26.0	
	comp=Z,295nm,21.9s,baz=176,slow=34						
USRK	**Ussuriysk Ar.**	**47.32**	**353**	P	**P**	**06 57 44.8**	**-2.7**
	comp=Z,5.3nm,0.8s,baz=172,slow=7.2,SNR=8.6						
	comp=Z,5.3nm,0.8s						
BJT	**Baijiatuan**	**47.63**	**336**	P	**P**	**06 57 49.3**	**-0.7**
BJT				IAmb	IAmb	06 57 51.6	
	comp=Z,8.1nm,0.8s						
RAO	**Raoul Island**	**48.41**	**127**	LR	LR	07 17 35.2	
	comp=Z,98nm,20.4s,baz=12,slow=35						
URZ	**Urewera**	**49.37**	**140**	LR	LR	07 19 51.2	
	comp=Z,221nm,18.1s,baz=304,slow=37						
TUWZ	**Tuamarina**	**49.45**	**146**	P	**P**	**06 58 05.3**	**+1.3**
LTZ	**Lake Taylor**	**49.46**	**148**	P	**P**	**06 58 04.1**	**0.0**
RPZ	**Rata Peaks**	**49.49**	**150**	LR	LR	07 19 06.6	
	comp=Z,331nm,18.4s,baz=292,slow=36						
RPZ	**Rata Peaks**	**49.49**	**150**	P	**P**	**06 58 05.0**	**+0.7**
BNX	**BinXian**	**49.53**	**349**	⇑P	**P**	**06 58 05.0**	**+0.5**
BNX				pmax	pmax		
	comp=Z,22nm,1.0s						
AFI	**Afiamalu**	**49.62**	**106**	LR	LR	07 17 17.9	
	comp=Z,211nm,21.0s,baz=270,slow=34						
HHC	**Hu-ho-hao-te**	**50.31**	**333**	eP	**P**	**06 58 15.3**	**+4.7**
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
LZH	**Lanzhou**	**50.91**	**323**	eP	**P**	**06 58 17.8**	**+2.5**
LZH				pmax	pmax		
	comp=Z,20nm,1.4s						
LZH				L	L		
	comp=Z,250nm,18.3s						
LZH				L	L		
	comp=Z,350nm,19.5s						
LZH				L	L		
	comp=Z,490nm,20.9s						
LZDM	**Lanzhou Array**	**50.92**	**323**	LR	LR	07 19 04.4	
	comp=Z,224nm,21.8s,baz=195,slow=35						
BTO2	**Baotou**	**51.01**	**331**	eP	**P**	**06 58 17.8**	**+1.8**
BTO2				pP	**sP**	**06 58 33.5**	**-0.8**
BTO2				sP	pP	06 58 40.5	+12
BTO2				S	**S**	**07 05 31.0**	**+0.9**
BTO2				sS	sS	07 05 59.5	+7.9
BTO2				SS	**SS**	**07 09 05.0**	**-0.8**

	comp=Z,2.2nm,0.7s						
TIXI	**Tiksi**	**74.71**	**357**	P	**P**	**07 00 53.7**	**+0.9**
VNDA	**Vanda**	**75.56**	**175**	P	**P**	**07 00 58.5**	**+0.8**
	comp=Z,9.1nm,0.8s,baz=314,slow=6.4,SNR=22						
VNDA				LR	LR	07 32 50.8	
	comp=Z,501nm,21.1s,baz=356,slow=35						
	comp=Z,9.1nm,0.8s						
VNDA	**Vanda**	**75.56**	**175**	P	**P**	**07 00 58.1**	**+0.4**
VNDA				IAmb	IAmb	07 01 00.9	
	comp=Z,9.6nm,0.8s						
GAMB	**Gambell**	**75.78**	**20**	P	**P**	**07 00 59.6**	**+0.5**
K13K	**Kusilvak Mount**	**77.35**	**24**	IAmb	IAmb	07 01 11.3	
	comp=Z,5.8nm,0.8s						
L14K	**Kuka Creek**	**77.85**	**25**	IAmb	IAmb	07 01 29.7	
	comp=Z,12nm,1.0s						
BVAR	**Borovoye Array**	**79.73**	**325**	P	**P**	**07 01 21.4**	**0.0**
	comp=Z,6.9nm,0.6s,baz=116,slow=6.2,SNR=32						
	comp=Z,6.9nm,0.6s						
BORK	**Borovoye**	**79.78**	**325**		**P**	**07 01 21.5**	**-0.1**
BORK				IAmb	IAmb	07 01 24.2	
	comp=Z,5.9nm,0.6s						
NRIK	**Noril'sk**	**80.03**	**344**	P	**P**	**07 01 22.3**	**-0.3**
	comp=Z,2.1nm,0.5s,baz=100,slow=2.4,SNR=4.0						
NRIK				LR	LR	07 36 19.9	
	comp=Z,216nm,20.9s,baz=240,slow=35						
	comp=Z,2.1nm,0.5s						
J17K	**VABM Dome**	**80.31**	**24**	IAmb	IAmb	07 01 48.6	
	comp=Z,11nm,1.1s						
K17K	**Iditarod**	**80.32**	**24**	IAmb	IAmb	07 01 43.4	
	comp=Z,11nm,0.9s						
TAOE	**Nuku Hiva Isla**	**80.34**	**98**	*e*LR	LR	07 26 38.5	
	comp=Z,310nm,26.7s						
L19K	**White Mountain**	**81.56**	**26**	IAmb	IAmb	07 01 49.7	
	comp=Z,6.5nm,0.9s						
E18K	**Tukpahlearik C**	**81.63**	**20**	IAmb	IAmb	07 01 34.3	
	comp=Z,5.8nm,0.8s						
J19K	**Poorman**	**81.96**	**24**		**P**	**07 01 34.1**	**+1.1**
C18K	**Utukok River**	**82.04**	**19**		**P**	**07 01 34.2**	**+0.7**
MAW	**Mawson**	**82.14**	**202**	P	**P**	**07 01 33.3**	**-0.6**
	comp=Z,5.3nm,0.8s,baz=84,slow=6.1,SNR=8.1						
MAW				LR	LR	07 35 51.0	
	comp=Z,597nm,19.9s,baz=54,slow=34						
	comp=Z,5.3nm,0.8s						
MAW	**Mawson**	**82.14**	**202**	P	**P**	**07 01 33.1**	**-0.8**
M20K	**Styx River**	**82.20**	**26**	IAmb	IAmb	07 01 52.0	
	comp=Z,7.4nm,1.1s						
K20K	**Telida**	**82.35**	**25**	IAmb	IAmb	07 01 48.7	
	comp=Z,5.7nm,0.9s						
J20K	**Nowinta River**	**82.63**	**24**	IAmb	IAmb	07 01 39.8	
	comp=Z,6.4nm,0.8s						
C19K	**Lookout Ridge**	**82.77**	**18**	IAmb	IAmb	07 01 40.5	
	comp=Z,6.1nm,0.7s						
D19K	**Kuna River**	**82.97**	**19**	IAmb	IAmb	07 01 41.0	
	comp=Z,6.9nm,0.8s						
L22K	**Petersville**	**83.46**	**26**	IAmb	IAmb	07 01 57.3	
	comp=Z,10nm,1.1s						
D20K	**Etivluk River**	**83.56**	**19**	IAmb	IAmb	07 01 44.0	
	comp=Z,4.3nm,0.7s						
MLY	**Manley**	**84.31**	**24**	P	**P**	**07 01 46.8**	**+1.6**
MLY				IAmb	IAmb	07 02 04.2	
	comp=Z,5.7nm,1.2s						
SML	**Sawmill**	**84.33**	**27**	P	**P**	**07 01 45.8**	**+0.4**
RND	**Reindeer**	**84.57**	**25**	IAmb	IAmb	07 02 05.0	
	comp=Z,8.1nm,0.9s						
B21K	**Ikpikpuk River**	**84.58**	**19**	IAmb	IAmb	07 01 50.7	
	comp=Z,4.0nm,0.8s						
MCK	**McKinley**	**84.64**	**25**	IAmb	IAmb	07 02 03.6	
	comp=Z,8.0nm,1.1s						
I23K	**Minto, Yukon-K**	**84.90**	**24**	IAmb	IAmb	07 02 07.5	
	comp=Z,5.3nm,0.9s						
E22K	**Anaktuvuk Pass**	**84.97**	**21**	IAmb	IAmb	07 01 52.2	
	comp=Z,4.1nm,0.7s						
DHY	**Denali Highway**	**85.12**	**26**	IAmb	IAmb	07 02 08.2	
	comp=Z,7.9nm,1.0s						
WRH	**Wood River Hil**	**85.21**	**25**	P	**P**	**07 01 49.6**	**0.0**
COLD	**Coldfoot**	**85.24**	**22**		**P**	**07 01 52.0**	**+2.3**
COLD				IAmb	IAmb	07 01 53.8	
	comp=Z,3.8nm,0.7s						
DIV	**Divide**	**85.33**	**28**	P	**P**	**07 01 51.5**	**+1.0**
CCB	**Clear Creek Bu**	**85.38**	**24**	IAmb	IAmb	07 01 52.4	
	comp=Z,6.5nm,0.9s						
HDA	**Harding Lake**	**85.67**	**25**	IAmb	IAmb	07 02 20.1	
	comp=Z,5.8nm,1.0s						
H24K	**Noodor Dome**	**85.69**	**23**	IAmb	IAmb	07 01 54.9	
	comp=Z,3.4nm,0.9s						
ILAR	**Eielson Array**	**85.79**	**24**	P	**P**	**07 01 51.2**	**-1.3**
	comp=Z,3.8nm,0.8s,baz=262,slow=4.5,SNR=47						
	comp=Z,3.8nm,0.8s						
G24K	**Hadweenzic Riv**	**86.10**	**22**	IAmb	IAmb	07 02 06.9	
	comp=Z,3.9nm,0.9s						
F24K	**Squaw Lake**	**86.18**	**22**	IAmb	IAmb	07 02 12.9	
	comp=Z,5.3nm,0.9s						
GLB	**Gilahina Butte**	**86.32**	**28**		**P**	**07 01 56.0**	**+0.6**
GLB				IAmb	IAmb	07 01 57.4	
	comp=Z,4.2nm,0.8s						
J25K	**Salcha River,**	**86.38**	**25**	IAmb	IAmb	07 02 01.4	
	comp=Z,3.8nm,1.0s						
RIDG	**Independent Ri**	**86.39**	**26**	P	**P**	**07 01 56.8**	**+1.2**
RIDG				IAmb	IAmb	07 02 22.9	
	comp=Z,5.7nm,0.9s						
F25K	**Christian Rive**	**87.03**	**22**	IAmb	IAmb	07 02 23.5	
	comp=Z,5.2nm,1.1s						
QSPA	**South Pole Qui**	**87.06**	**180**	P	**P**	**07 01 58.6**	**-0.3**
	comp=Z,15nm,0.6s,baz=312,slow=2.2,SNR=83						
QSPA				LR	LR	07 40 11.0	
	comp=Z,586nm,21.6s,baz=3.5,slow=35						
	comp=Z,15nm,0.6s						
QSPA	**South Pole Qui**	**87.06**	**180**	P	**P**	**07 01 58.9**	**-0.1**
QSPA	**South Pole Qui**	**87.06**	**180**	P	**P**	**07 01 59.5**	**+0.6**
QSPA				x	x	07 02 06.1	
E25K	**Arctic Village**	**87.19**	**21**	IAmb	IAmb	07 02 23.6	
	comp=Z,7.8nm,1.1s						
BARN	**Barnard Glacie**	**87.26**	**29**	P	**P**	**07 02 01.0**	**+0.9**
BARN				IAmb	IAmb	07 02 18.0	
	comp=Z,5.3nm,0.9s						
CTGM	**Chitina Glacie**	**87.40**	**29**	P	**P**	**07 02 02.1**	**+1.4**
M27K	**Edge Creek, AK**	**87.41**	**27**	IAmb	IAmb	07 02 14.2	
	comp=Z,7.3nm,1.2s						
L27K	**Beaver Creek,**	**87.57**	**27**	IAmb	IAmb	07 02 05.8	
	comp=Z,3.1nm,0.8s						
K27K	**Chicken**	**87.65**	**26**	IAmb	IAmb	07 02 25.1	
	comp=Z,6.2nm,1.2s						
G27K	**Doyon Strip**	**88.37**	**23**	IAmb	IAmb	07 02 18.3	
	comp=Z,4.2nm,1.1s						
E27K	**Coleen River**	**88.66**	**22**	IAmb	IAmb	07 02 28.0	
	comp=Z,4.9nm,1.1s						
I28M	**Miner Creek**	**88.81**	**24**	IAmb	IAmb	07 02 35.1	
	comp=Z,3.8nm,0.8s						
HYT	**Haines Junctio**	**89.23**	**29**	IAmb	IAmb	07 02 13.6	
	comp=Z,6.5nm,1.1s						
I29M	**Ogilvie Camp,**	**89.47**	**25**	IAmb	IAmb	07 02 24.1	
	comp=Z,3.8nm,1.1s						
N30M	**Aishikik Lake**	**89.51**	**29**	IAmb	IAmb	07 02 14.4	
	comp=Z,4.4nm,0.9s						
K29M	**Barlow Dome**	**89.60**	**26**	IAmb	IAmb	07 02 30.0	
	comp=Z,6.1nm,1.1s						
BBB	**Bella Bella**	**93.92**	**38**	LR	LR	07 36 22.8	
	comp=Z,248nm,21.9s,baz=248,slow=30						
ELIB	**Princess Elisa**	**95.06**	**196**	*d*P	**P**	**07 02 35.4**	**-0.8**
	comp=Z,5.6nm,1.2s						
YBH	**Yreka Blue Hor**	**97.96**	**48**	LR	LR	07 39 23.0	
	comp=Z,30nm,21.1s,baz=292,slow=31						
YKA	**Yellowknife Ar**	**100.00**	**27**	PKKPbc	PKKPbc	07 19 25.3	+5.5
	comp=Z,0.2nm,0.8s,baz=93,slow=3.8,SNR=4.0						
ARCES	**ARCESS Array B**	**100.83**	**341**	P	**Pdif**	**07 03 00.1**	**-1.9**
	comp=Z,5.1nm,1.0s,baz=35,slow=6.5,SNR=3.9						
STHS	**Stebnicka Huta**	**110.10**	**322**	*e*PP	**PP**	**07 08 20.8**	**+1.9**
MODS	**Modra-Piesok**	**112.91**	**322**	*e*PP	**PP**	**07 08 39.9**	**+0.8**
TXAR	**Lajitas Array**	**114.97**	**59**	PKKPbc	PKKPbc	07 18 32.0	+0.1
	comp=Z,0.6nm,0.8s,baz=125,slow=6.1,SNR=7.6						
TORD	**Torodi Ar. Bea**	**136.77**	**286**	PKP	**PKPdf**	**07 08 36.5**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=35,slow=0.9,SNR=6.8						
DBIC	**Dimbokro**	**143.99**	**277**	PKP	PKPab	07 08 47.5	+0.2
	comp=Z,4.5nm,0.7s,baz=114,slow=4.5,SNR=8.9						
ROSC	**El Rosal**	**146.51**	**86**	PKPbc	**PKPdf**	**07 08 53.4**	**-1.4**
	comp=Z,3.0nm,0.4s,baz=260,slow=6.1,SNR=5.5						
CPUP	**Villa Florida**	**146.85**	**152**	PKPbc	**PKPdf**	**07 08 55.2**	**+0.6**
	comp=Z,3.5nm,0.9s,baz=213,slow=4.7,SNR=9.3						
LPAZ	**La Paz**	**146.95**	**126**	PKPbc	**PKPbc**	**07 08 57.5**	**-0.2**
	comp=Z,5.9nm,0.9s,baz=286,slow=0.8,SNR=22						

*MEX **26** 07:03:54.0±0.6,24.˚29N×106.˚02W,h5km,MD4.2*
*IDC **26** 07:03:54.4±3.6,24.˚68N×106.˚49W,h0km,mb3.1/1, mbtmp3.0/5,ML3.1/3,Error ellipse: s-maj=52.0km s-min=23.6km az=135.0*

ISC 26 07:03:51.9±1.7,24.˚26N±0.˙04×106.˚11W±0.˙05, h16km±14km,n13,σ1s56/21,Central Mexico

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDIG	**Papasquiaro**	**1.01**	**40**	*i* P	**Pb**	**07 04 09.9**	**-1.3**
PDIG				*i* S	**Sb**	**07 04 22.7**	**-1.7**
SSIG	**Sanalona**	**1.09**	**301**	*e*P	**Pb**	**07 04 12.5**	**+0.1**
SSIG				*e*S	**Sg**	**07 04 27.8**	**+0.5**
MAIG	**Mazatlaan**	**1.10**	**195**	*e*P	**Pb**	**07 04 12.7**	**+0.1**
MAIG				*e*S	**Sg**	**07 04 28.7**	**+1.0**
HPIG		**2.69**	**8**	*e*P	**Pn**	**07 04 35.4**	**+0.6**
HPIG				*e*S	**Sb**	**07 05 14.0**	**+1.2**
TSIG	**Topolobambo**	**2.98**	**297**	*e*P	**Pb**	**07 04 42.2**	**-2.4**
TSIG				*e*S	**Sn**	**07 05 15.2**	**+1.4**
BCIG	**La Boquilla**	**3.33**	**11**	*e*P	**Pb**	**07 04 52.8**	**+2.1**
BCIG				*e*S	**Sb**	**07 05 31.1**	**0.0**
ZAIG	**Zacatecas**	**3.57**	**114**	*e*P	**Pn**	**07 04 45.9**	**-1.1**
ZAIG				*e*S	**Sb**	**07 05 37.4**	**-0.8**
MCIG	**Muzquiz**	**5.50**	**48**	*e*P	**Pn**	**07 05 12.6**	**-0.6**
TXAR	**Lajitas Array**	**5.50**	**23**	Pn	**Pn**	**07 05 13.6**	**+0.2**
	0.3nm,0.3s,baz=206,slow=13,SNR=18						
TXAR				Pg	**Pb**	**07 05 28.8**	**+1.0**
	1.7nm,0.3s,baz=205,slow=15,SNR=15						
TXAR				Lg	Lg	07 06 40.5	
	3.1nm,0.3s,baz=206,slow=30,SNR=3.9						
	0.7nm,0.5s						
ANMO	**Albuquerque**	**10.65**	**358**	Pn	**Pn**	**07 06 20.9**	**-3.2**
	baz=173,slow=19,SNR=3.4						
ANMO				Lg	Lg	07 09 21.7	
	0.2nm,0.3s,baz=267,slow=20,SNR=3.6						
	0.2nm,0.3s						
NVAR	**Mina Array Bea**	**17.53**	**327**	Pn	**Pn**	**07 07 55.0**	**-0.8**
	0.1nm,0.3s,baz=137,slow=9.6,SNR=1.8						
	0.1nm,0.3s						
PDAR	**Pinedale Array**	**18.68**	**352**	P	**P**	**07 08 07.8**	**-1.8**
	0.3nm,0.7s,baz=170,slow=12,SNR=2.2						
ILAR	**Eielson Array**	**48.29**	**338**	P	**P**	**07 12 34.2**	**+2.2**
	0.2nm,0.9s,baz=122,slow=6.6,SNR=5.6						
	0.2nm,0.9s						

*NNC **26** 07:07:08.0±1.0,49.˚95N×78.˚66E,h0km,mb2.9,mpv2.5, Error ellipse: s-maj=23.9km s-min=4.1km az=77.0, Suspected Mining explosion.*
*IDC **26** 07:07:10.5±1.1,50.˚06N×78.˚73E,h0km,mbtmp2.5/2, ML1.7/1,Error ellipse: s-maj=12.9km s-min=6.8km az=64.0*

ISC 26 07:07:10.5±1.5,50.˚03N±0.˚07×78.˚7E±0.˚2,h0km,n16, σ0s83/27,14C-11D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.57**	**350**	⇑P	**Pg**	**07 07 20.4**	**-0.9**
KUR07				⇓S	**Sg**	**07 07 29.5**	**+0.9**
KUR06	**Kurchatov Arra**	**0.58**	**351**	⇓P	**Pg**	**07 07 20.9**	**-0.8**
KUR06				⇓S	**Sg**	**07 07 30.1**	**+0.8**
KUR14	**Kurchatov Arra**	**0.59**	**355**	⇓P	**Pg**	**07 07 20.9**	**-0.9**
KUR14				⇓S	**Sg**	**07 07 30.2**	**+0.7**
KUR15	**Kurchatov Arra**	**0.60**	**353**	⇓P	**Pg**	**07 07 21.0**	**-0.9**
KUR15				⇑S	**Sg**	**07 07 30.2**	**+0.5**
KURBB	**Kurchatov Arra**	**0.60**	**351**	Pg	**Pg**	**07 07 21.1**	**-1.0**
	0.6nm,0.3s,baz=165,slow=18,SNR=89						
KURBB				Lg	Lg	07 07 31.1	
	0.8nm,0.3s,baz=167,slow=33,SNR=11						
KURBB	**Kurchatov Arra**	**0.60**	**351**	⇑P	**Pg**	**07 07 21.1**	**-1.0**
	12nm,0.6s						
KURBB				⇓S	**Sg**	**07 07 31.1**	**+1.2**
	19nm,0.6s						
KUR16	**Kurchatov Arra**	**0.61**	**350**	⇑P	**Pg**	**07 07 21.2**	**-1.0**
KUR16				⇓S	**Sg**	**07 07 30.7**	**+0.5**
KUR17	**Kurchatov Arra**	**0.62**	**348**	⇑P	**Pg**	**07 07 21.7**	**-0.6**
KUR17				⇑S	**Sg**	**07 07 31.6**	**+1.2**
KUR05	**Kurchatov Arra**	**0.62**	**352**	⇓P	**Pg**	**07 07 21.5**	**-0.9**
KUR05				⇑S	**Sg**	**07 07 30.7**	**+0.2**
KUR04	**Kurchatov Arra**	**0.64**	**353**	⇓P	**Pg**	**07 07 21.9**	**-0.9**
KUR04				⇓S	**Sg**	**07 07 31.2**	**+0.1**
KURK	**Kurchatov**	**0.69**	**357**	⇑P	**Pg**	**07 07 22.8**	**-0.9**
	1.9nm,0.5s						
KURK				⇑S	**Sg**	**07 07 33.5**	**+0.8**
	6.9nm,0.9s						
MAKZ	**Makanchi**	**3.90**	**144**	⇑Pg	**Pn**	**07 08 12.8**	**+1.2**
	4.0nm,0.7s						
MAKZ				⇑Lg	Lg	07 09 10.8	
	10nm,1.2s						
MK31	**Makanchi Array**	**4.03**	**142**	⇑Pn	**Pn**	**07 08 13.7**	**+0.2**
	0.2nm,0.5s,baz=325,slow=9.9,SNR=3.5						
MK31				⇑Pg	**Pb**	**07 08 22.4**	**0.0**
	0.4nm,0.5s,baz=319,slow=15,SNR=6.9						
MK31				⇑Lg	Lg	07 09 16.4	
	5.8nm,0.8s,baz=348,slow=28,SNR=9.8						
MKAR	**Makanchi Array**	**4.03**	**142**	Pn	**Pn**	**07 08 13.4**	**-0.1**
	baz=321,slow=10,SNR=6.2						
MKAR				Pg	**Pb**	**07 08 22.1**	**-0.3**
	0.2nm,0.3s,baz=322,slow=16,SNR=8.0						
MKAR				Lg	Lg	07 09 16.7	
	0.6nm,0.3s,baz=340,slow=28,SNR=12						
	0.3nm,0.7s						
ZALV	**Zalesovo Beam**	**5.46**	**42**	Pn	**Pn**	**07 08 33.4**	**+0.3**
	0.7nm,0.4s,baz=226,slow=12						
I46RU	**ZALESOVO INFRA**	**5.46**	**42**	I	I	07 41 20.0	
	baz=228,slow=329,SNR=4.5						

*IDC **26** 07:09:23.4±0.4,35.˚82N×5.˚72E,h0km,mb4.7/35, mbtmp4.7/43,ML4.5/7,MS4.4/71,Error ellipse: s-maj=12.3km s-min=10.1km az=146.0*
*MOS **26** 07:09:23.9±1.0,35.˚86N×5.˚76E,h12km,mb5.2/59, MS4.5/14,Error ellipse: s-maj=6.0km s-min=3.4km az=64.5*
*BJI **26** 07:09:23.5,35.˚80N×5.˚70E,h10km,mB5.3/7,mb5.0/44, Ms4.9/20,Ms7 4.6/19*
*CRAAG **26** 07:09:24.5,35.˚83N×5.˚77E,Ml4.4,Algrie 02km SW Ouled-Sellam*
*NAO **26** 07:09:25.8,35.˚58N×5.˚27E,h33km,MB5.2*
*NEIC **26** 07:09:25.8±1.3,35.˚87N±0.˚07×5.˚76E±0.˚07,h10km±1km, mb5.2/433,Mww5.0/58,Error ellipse: s-maj=12.2km s-min=9.6km az=200.0*
*NEIC **26** 07:09:26.8,35.˚76N×5.˚79E,h12km,Moment Tensor Solution. Duration: 1s6 Moment tensor: Scale 10^16^Nm; Mrr=0.51; Mθθ=2.54; Mφφ3.05; Mrθ-1.40; Mθφ-1.53; Mφr-0.56; Fault plane solution: M0.55000×10^16^ NP1: φs123.57000°,δ69.99000°,λ-163.50000°. NP2: φs27.78000°,δ74.52000°,λ-20.80000°. Principal axes: T 3.4541, Plg3.0000°, Azm76.0000°; N 0.1886, Plg64.0000°, Azm173.0000°; P -3.6427, Plg26.0000°, Azm345.0000°;*
*GFZ **26** 07:09:26.6,35.˚77N×5.˚73E,h14km,MW4.9,Moment Tensor Solution. s117 Moment tensor: Mrr0.00; Mθθ-2.12; Mφφ2.12; Mrθ-1.44; Mθφ-0.80; Mφr-0.37; Fault plane solution: NP1:φs128.00000°,δ69.00000°, λ-163.00000°. NP2:φs31.00000°,δ74.00000°, λ-21.00000°. Principal axes: T 2.2700, Plg3.0000°, Azm80.0000°; N 0.7300, Plg63.0000°, Azm177.0000°; P -2.9900, Plg26.0000°, Azm349.0000°;*
*MED_RC **26** 07:09:26.0±0.4,35.˚68N×5.˚70E,h17km,MW5.1/61, Moment Tensor Solution.Mantle waves: s61,c82; Duration: 1s3 Moment tensor: Scale 10^16^Nm; Mrr-0.97±.20; Mθθ-3.59±.12; Mφφ4.56±.17; Mrθ-1.27±.27; Mθφ-1.99±.13; Mφr-0.68±.25; Best double couple: M◎4.82000×10^16^ NP1:φs124.00000°,δ73.00000°, λ-167.00000°. NP2:φs30.00000°,δ78.00000°, λ-18.00000°. Principal axes: T 5.0400, Plg4.0000°, Azm78.0000°; N -0.4600, Plg69.0000°, Azm177.0000°; P -4.5900, Plg21.0000°, Azm346.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*MDD **26** 07:09:26.7±0.5,35.˚63N×6.˚01E,h36km±28km,mb5.3/69 Error ellipse: s-maj=11.3km s-min=2.9km az=138.0*
*NEIC **26** 07:09:26.8,35.˚96N×5.˚79E,h12km*
*IGIL **26** 07:09:26.4,35.˚78N×5.˚73E,h10km,ms4.5*
*GCMT **26** 07:09:27.8±0.2,35.˚87N±0.˚01×5.˚69E±0.˚01,h27km, MW5.2/127,Moment Tensor Solution. s49,c60; s127,c198; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-0.72±.20; Mθθ-5.47±.16; Mφφ6.18±.17; Mrθ-1.59±.25; Mθφ-2.55±.13; Mφr0.07±.26; Best double couple: M◎6.57800×10^16^ NP1:φs32.00000°,δ77.00000°, λ-9.00000°. NP2:φs124.00000°,δ82.00000°, λ-167.00000°. Principal axes: T 6.7350, Plg3.0000°, Azm258.0000°; N -0.3220, Plg75.0000°, Azm157.0000°; P -6.4210, Plg15.0000°, Azm349.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 07:09:25.1±0.8,35.˚84N±0.˚02×5.˚73E±0.˚02,h8km±5km, n1299,σ1s44/1208,mb5.1/293,MS4.4/75,72C-56D, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CJSR	**Ain Djasser**	**0.18**	**82**	P	**Pg**	**07 09 28.8**	**-0.1**
CKHR	**Kef el Ahmar**	**0.25**	**316**	P	**Pg**	**07 09 31.2**	**+1.0**
SET	**Setif**	**0.45**	**324**	P	**Pb**	**07 09 35.0**	**-0.4**
CAZD	**Ain Tagrout**	**0.57**	**306**	P	**Pb**	**07 09 38.6**	**+1.1**
CTEI	**Djebel Teioual**	**0.60**	**67**	P	**Pg**	**07 09 36.5**	**-0.1**
CKTS	**El Kantara**	**0.61**	**183**	P	**Pg**	**07 09 37.5**	**+0.6**
DFRA	**Djebel Bou Aff**	**0.72**	**10**	P	**Pb**	**07 09 39.9**	**-0.1**
CTGD	**Timgad**	**0.72**	**115**	P	**Pg**	**07 09 39.2**	**+0.2**
CASM	**Ain Smara**	**0.75**	**55**	P	**Pb**	**07 09 40.2**	**-0.3**
CBHR	**Beni Haroun da**	**0.85**	**31**	P	**Pn**	**07 09 43.3**	**-0.1**
CSGS	**Sigus**	**0.85**	**69**	P	**Pb**	**07 09 42.4**	**+0.2**
CKFL	**Kef-Lekhel**	**0.98**	**55**	P	**Pg**	**07 09 44.0**	**0.0**
CTCHA	**Tamokra**	**1.05**	**305**	P	**Pn**	**07 09 47.3**	**+1.1**
CBOS	**Bilal Ibnou Ra**	**1.07**	**26**	P	**Pb**	**07 09 46.1**	**+0.2**
CBST	**Bordj Sabath**	**1.25**	**62**	P	**Pg**	**07 09 49.2**	**+0.1**
ABSD	**Ouled Sidi Bra**	**1.31**	**253**	P	**Pg**	**07 09 50.6**	**+0.4**
CAEH	**`Ain El Ouahch**	**1.31**	**44**	P	**Pn**	**07 09 49.0**	**-0.7**
CBBAR	**Babar**	**1.38**	**120**	P	**Pb**	**07 09 51.1**	**-0.2**
ABSA	**Djebel Ababsia**	**1.48**	**72**	P	**Pn**	**07 09 52.0**	**-0.2**
AKET	**Djebel Ketaf**	**1.51**	**279**	P	**Pg**	**07 09 55.6**	**+1.5**
CMAH	**Djebel Manchou**	**1.58**	**60**	P	**Pn**	**07 09 53.2**	**-0.3**
CNGR	**Negrine**	**2.00**	**132**	P	**Pb**	**07 10 00.8**	**-0.9**
AKED	**El Kharrouba**	**2.04**	**294**	P	**Pn**	**07 10 00.6**	**+0.8**
ADCK	**Dar Chioukh**	**2.08**	**244**	P	**Pn**	**07 10 01.9**	**+1.5**
ABRIN	**Birine**	**2.13**	**265**	P	**Pb**	**07 10 02.9**	**-1.1**
CBOGS	**Bougous**	**2.34**	**67**	P	**Pn**	**07 10 03.4**	**-0.5**
ABA	**Alger-Bouzarea**	**2.38**	**295**	P	**Pn**	**07 10 05.1**	**+0.6**
ADOR	**Douera**	**2.42**	**291**	P	**Pn**	**07 10 05.9**	**+0.7**
AFDJ	**Sidi Ladjel**	**2.60**	**261**	P	**Pn**	**07 10 08.2**	**+0.6**
ABKD	**Sidi Amar**	**2.85**	**285**	P	**Pn**	**07 10 11.2**	**+0.2**
EDDR	**Deurdeur**	**2.86**	**274**	P	**Pn**	**07 10 12.0**	**+0.9**
I48TN	**KESRA INFRASON**	**2.92**	**90**	I	I	07 20 20.0	
	baz=267,slow=323,SNR=1.0						
KEST	**Kesra**	**2.94**	**91**	Pn	**Pn**	**07 10 12.8**	**+0.5**
	49nm,0.3s,baz=282,slow=3.4,SNR=361						
KEST				Sn	**Sn**	**07 10 46.3**	**-1.6**
	95nm,0.3s,baz=221,slow=18,SNR=6.5						
	2µm,1.0s						
KEST	**Kesra**	**2.94**	**91**		**Pn**	**07 10 12.9**	**+0.7**
KEST	**Kesra**	**2.94**	**91**	P	**Pn**	**07 10 13.2**	**+0.9**
	SNR=151						
EHRZ	**Djelida**	**2.96**	**278**	P	**Pn**	**07 10 13.8**	**+1.4**
EZEK	**Zmalet El Emir**	**2.96**	**252**	P	**Pn**	**07 10 13.5**	**+1.0**
EARB	**Arib**	**3.05**	**280**	P	**Pn**	**07 10 14.8**	**+1.1**
EBGR	**Bougara**	**3.10**	**266**	P	**Pn**	**07 10 15.4**	**+1.0**
EBNR	**Beni Rached**	**3.43**	**279**	P	**Pn**	**07 10 20.4**	**+1.4**
EBNH	**Beni Haoua**	**3.44**	**283**	P	**Pn**	**07 10 20.2**	**+1.1**
EANR	**`Ain N'Sour**	**3.76**	**273**	P	**Pn**	**07 10 25.1**	**+1.6**
EASA	**Ain Sidi Ali**	**3.82**	**245**	P	**Pn**	**07 10 26.0**	**+1.6**
OJGS	**Djebel Guires**	**4.07**	**267**	P	**Pb**	**07 10 36.0**	**-1.0**
OKGL	**Djebel Kef Gue**	**4.13**	**274**	P	**Pb**	**07 10 35.0**	**-3.1**
MAHO	**Mahon**	**4.21**	**345**	P	**Pn**	**07 10 29.9**	**+0.2**
MAHO				S	**Sn**	**07 11 17.9**	**-1.2**
MAHO	**Mahon**	**4.21**	**345**		**Pn**	**07 10 29.8**	**+0.2**
OJBR	**Djebel Berber**	**4.39**	**268**	P	**Pb**	**07 10 38.0**	**-4.5**
ETOS	**Mallorca**	**4.55**	**330**	P	**Pn**	**07 10 36.0**	**+1.7**
ETOS	**Mallorca**	**4.55**	**330**	Pn	**Pn**	**07 10 36.1**	**+1.7**
ETOS				Sn	**Sn**	**07 11 28.5**	**+1.0**
VSL	**Villasalto**	**4.66**	**37**		**Pn**	**07 10 35.2**	**-0.6**
VSL	**Villasalto**	**4.66**	**37**	⇓P	**Pn**	**07 10 35.3**	**-0.6**
EIBI	**Ibiza**	**4.72**	**314**	P	**Pn**	**07 10 38.4**	**+1.7**
EIBI				S	**Sn**	**07 11 30.2**	**-1.5**
EIBI	**Ibiza**	**4.72**	**314**	Pn	**Pn**	**07 10 38.3**	**+1.6**
EIBI				Sn	**Sn**	**07 11 30.6**	**-1.1**
ODJA	**Bouhanifia**	**4.82**	**266**	P	**Pn**	**07 10 39.0**	**+1.0**
USTO	**Oran**	**5.10**	**271**	P	**Pn**	**07 10 45.0**	**+3.1**
EBEN2	**Beniarda presa**	**5.51**	**303**	Pn	**Pn**	**07 10 49.1**	**+

ETOR Sn **Sn** 07 12 45.6 -4.0
MTLF Montolieu 7.97 341 ⇑P **Pn** 07 11 21.5 +0.3
CASP Castiglione de 8.00 28 Pn **Pn** 07 11 22.0 +0.3
EGOR Sierra Gorda, 8.03 282 P **Pn** 07 11 24.7 +2.5
EGOR S **Sn** 07 12 54.9 +1.7
EGOR Sierra Gorda, 8.03 282 Pn **Pn** 07 11 24.8 +2.6
EGOR *i* IAmb IAmb 07 11 34.9
199nm,0.7s,SNR=28
EGOR Sn **Sn** 07 12 53.9 +0.6
ECHI Chisagues Biel 8.06 330 Pn **Pn** 07 11 26.0 +3.4
ECHI *i* IAmb IAmb 07 11 47.3
141nm,0.8s,SNR=16
PSIM Granatula de C 8.12 294 Pn **Pn** 07 11 25.0 +1.7
PSIM *i* IAmb IAmb 07 11 38.9
159nm,0.7s,SNR=27
PSIM Sn **Sn** 07 12 52.4 -3.1
EMAL Malaga-Limoner 8.25 279 P **Pn** 07 11 26.8 +1.7
UCM Universidad Co 8.36 305 P **Pn** 07 11 28.1 +1.4
UCM S **Sn** 07 12 58.5 -2.9
CEL Celeste 8.48 70 Pn **Pn** 07 11 28.1 -0.2
EADA Adamuz 8.57 289 Pn **Pn** 07 11 30.8 +1.3
EADA *i* IAmb IAmb 07 11 49.2
77nm,0.7s,SNR=12
EADA Sn **Sn** 07 13 07.7 +1.4
ESDC Sonseca Array 8.58 299 Pn **Pn** 07 11 30.7 +1.0
3.7nm,0.3s,baz=115,slow=14,SNR=118
ESDC Sn **Sn** 07 13 05.3 -1.4
3.5nm,0.3s,baz=109,slow=24,SNR=5.4
ESDC LR LR 07 14 27.2
comp=Z,1µm,21.2s,baz=110,slow=35
19nm,0.6s
CESX Cesi 8.60 36 **Pn** 07 11 29.0 -0.9
MGAB Montegabbione 8.62 33 ⇑P Pn 07 11 36.9 +6.7
PAOL Paolisi 8.66 51 **Pn** 07 11 31.3 +0.5
PAB San Pablo 8.80 298 **Pn** 07 11 34.3 +1.6
PAB San Pablo 8.80 298 Pn **Pn** 07 11 34.7 +1.9
PAB *i* IAmb IAmb 07 11 48.7
157nm,0.8s,SNR=26
PAB San Pablo 8.80 298 P **Pn** 07 11 34.3 +1.6
PAB San Pablo 8.80 298 ⇑P **Pn** 07 11 35.1 +2.3
AQU L'Aquila 8.83 40 Pn **Pn** 07 11 32.3 -0.7
AQU L'Aquila 8.83 40 P **Pn** 07 11 32.3 -0.7
EORO Oroz-Betelu 8.90 324 Pn **Pn** 07 11 37.7 +3.5
EORO Sn **Sn** 07 13 12.4 -2.3
PCP Piancastagn 8.96 13 Pn **Pn** 07 11 34.0 -0.8
PCP Sn **Sn** 07 13 07.7 -8.2
CUC Castrocucco 8.99 59 **Pn** 07 11 35.6 +0.3
CUC Castrocucco 8.99 59 ⇓P **Pn** 07 11 35.7 +0.5
NRCA Norcia 9.03 37 Pn **Pn** 07 11 36.4 +0.6
MDT Midelt 9.06 254 Pn **Pn** 07 11 36.3 0.0
3.8nm,0.3s,baz=78,slow=16,SNR=67
MDT LR LR 07 15 06.1
comp=Z,1µm,19.8s,baz=96,slow=38
35nm,0.7s
MD31 MD31 9.16 254 Pn **Pn** 07 11 38.5 +0.8
FDMO Fiordimonte 9.17 36 Pn **Pn** 07 11 37.6 -0.1
ECAB El Cabril 9.20 287 Pn **Pn** 07 11 38.9 +0.7
ECAB *i* IAmb IAmb 07 11 51.5
112nm,0.7s,SNR=19
ECAB Sn **Sn** 07 13 17.5 -4.3
BNI Bardonecchia 9.23 4 **Pn** 07 11 38.9 +0.2
BNI Bardonecchia 9.23 4 P **Pn** 07 11 38.9 +0.2
BNI Bardonecchia 9.23 4 ⇑P **Pn** 07 11 41.6 +2.9
IFR Ifrane 9.23 259 P **Pn** 07 11 38.2 -0.6
BOB Bobbio (Coli) 9.36 17 ⇑P **Pn** 07 11 45.0 +4.6
TIP Timpagrande 9.38 66 Pn **Pn** 07 11 39.8 -0.8
SSB Saint Sauveur 9.48 355 **Pn** 07 11 42.3 +0.3
SSB Saint Sauveur 9.48 355 P **Pn** 07 11 42.3 +0.3
SSB Saint Sauveur 9.48 355 ⇓P **Pn** 07 11 43.1 +1.2
CNIL Conil 9.55 277 P **Pn** 07 11 43.7 +0.8
PRMA PARMA 9.58 20 **Pn** 07 11 42.3 -0.9
SFS San Fernando 9.67 277 Pn **Pn** 07 11 45.8 +1.2
SFS San Fernando 9.67 277 P **Pn** 07 11 45.8 +1.2
SGRT San Giovanni R 9.80 50 Pn **Pn** 07 11 45.0 -1.4
EMIN Mina Concepcio 10.13 285 Pn **Pn** 07 11 52.2 +1.4
EMIN *i* IAmb IAmb 07 11 54.2
66nm,0.8s,SNR=9.6
ELAN Lanestosa 10.22 319 Pn **Pn** 07 11 54.5 +2.3
ELAN *i* IAmb IAmb 07 12 20.2
132nm,1.0s,SNR=4.6
EPLA Plasencia 10.23 298 Pn **Pn** 07 11 53.9 +1.5
EPLA *i* IAmb IAmb 07 12 21.3
51nm,0.8s,SNR=7.0
SALO Salr 10.43 19 Pn **Pn** 07 11 54.0 -0.9
SALO Salr 10.43 19 ⇑P Pn 07 12 00.9 +6.0
PBAR Barrancos 10.47 287 P **Pn** 07 11 56.7 +1.1
PBAR S **Sn** 07 13 51.0 -2.1
PBAR Barrancos 10.47 287 *e*P **Pn** 07 11 56.6 +1.1
PBAR *i* IAmb IAmb 07 12 23.0
63nm,1.1s
SENIN Lac Senin/Sane 10.58 6 Pn **Pn** 07 11 56.7 -0.5
EGRO El Granado 10.74 283 Pn **Pn** 07 12 00.1 +0.8
EGRO *i* IAmb IAmb 07 12 03.1
50nm,0.7s,SNR=5.7
PVAQ Vaqueiros 10.92 282 Pn **Pn** 07 12 02.5 +0.8
PVAQ Vaqueiros 10.92 282 *e*P **Pn** 07 12 02.9 +1.2
PVAQ *i* IAmb IAmb 07 12 17.2
133nm,1.9s
PVAQ *e*S **Sn** 07 14 01.3 -2.8
PVAQ *e*LQ LQ 07 14 46.0
PVAQ *e*LR LR 07 15 19.5
PVAQ *i* IAMs_20 IAMs_20 07 16 40.3
3µm,18.0s
PVAQ Vaqueiros 10.92 282 ⇑P **Pn** 07 12 02.3 +0.6
TUE Stuetta 10.97 13 Pn **Pn** 07 12 01.5 -1.0
TUE Stuetta 10.97 13 ⇑P Pn 07 12 08.3 +5.8
PMRV Marv??o 11.00 293 *e*P **Pn** 07 12 05.6 +2.8
PMRV *i* IAmb IAmb 07 12 12.3
116nm,1.5s
PMRV *e*LQ LQ 07 14 15.9
PMRV *e*S Sn 07 14 18.5 +12
PMRV *e*LR LR 07 15 40.7
PMRV *i* IAMs_20 IAMs_20 07 16 35.6
2µm,18.0s
PESTR Estremoz 11.02 290 P **Pn** 07 12 03.6 +0.4
PESTR Estremoz 11.02 290 Pn **Pn** 07 12 04.2 +1.1
PESTR Estremoz 11.02 290 *e*P **Pn** 07 12 04.1 +1.0
PESTR *i* IAmb IAmb 07 12 11.9
62nm,1.3s
PESTR *e*S **Sn** 07 14 08.0 +1.4
PESTR Estremoz 11.02 290 ⇓P **Pn** 07 12 04.7 +1.5
PBDV Barranco-do-Ve 11.08 281 P **Pn** 07 12 03.2 -0.7
PBDV S **Sn** 07 14 06.1 -2.0
PBDV Barranco-do-Ve 11.08 281 *e*P **Pn** 07 12 04.8 +0.9
PBDV *i* IAmb IAmb 07 12 17.8
105nm,2.1s
PBDV *e*S **Sn** 07 14 10.0 +2.0
PBDV *e*S **Sn** 07 14 10.4 +2.3
PBEJ Beja 11.10 285 *e*P **Pn** 07 12 05.0 +0.9
PBEJ *i* IAmb IAmb 07 12 22.8
91nm,1.8s
PBEJ *e*S **Sn** 07 14 08.3 -0.1
BRANT Les Verrieres 11.11 3 Pn **Pn** 07 12 05.3 +0.9
BRANT *i* IAmb IAmb 07 12 20.9
235nm,0.8s,SNR=5.1
AVE Averroes 11.13 261 Pn **Pn** 07 12 05.4 +0.9
CTI Castel Tesino 11.14 22 Pn **Pn** 07 12 02.5 -2.2
CTI Castel Tesino 11.14 22 P **Pn** 07 12 02.5 -2.2
PCBR Castelo Branco 11.18 295 *e*P **Pn** 07 12 08.3 +3.0
PCBR *i* IAmb IAmb 07 12 24.6
159nm,1.5s
PCBR *e*S **Sn** 07 14 13.3 +2.9
PCVE Castro Verde 11.19 283 P **Pn** 07 12 05.0 -0.4
PCVE S **Sn** 07 14 09.0 -1.8
PCVE Castro Verde 11.19 283 *e*P **Pn** 07 12 06.2 +0.7
PCVE *i* IAmb IAmb 07 12 28.9
88nm,1.4s
PCVE *e*S **Sn** 07 14 13.4 +2.6
EVO Evora 11.29 288 P **Pn** 07 12 06.2 -0.6
EVO S **Sn** 07 14 10.4 -2.7
EVO Evora 11.29 288 *e*P **Pn** 07 12 07.2 +0.5
EVO *i* IAmb IAmb 07 12 24.4
67nm,1.3s
MVO Moncorvo 11.32 302 *e*P **Pn** 07 12 09.5 +2.2
MVO *i* IAmb IAmb 07 12 21.1
129nm,1.2s
MVO *e*S **Sn** 07 14 16.1 +2.2
MVO *e*LQ LQ 07 15 03.2
MVO *e*LR LR 07 15 47.1
MVO *i* IAMs_20 IAMs_20 07 17 04.3
2µm,16.0s
MESJ Messejana 11.36 284 *e*P **Pn** 07 12 08.8 +1.1
MESJ IAMs_20 IAMs_20 07 16 23.1
comp=Z,5µm,14.5s
MESJ Messejana 11.36 284 *e*P **Pn** 07 12 07.8 +0.1
MESJ Messejana 11.36 284 *e*P **Pn** 07 12 08.4 +0.8
MESJ *i* IAmb IAmb 07 12 12.0
comp=Z,77nm,1.0s
MESJ *e*S **Sn** 07 14 16.5 +1.7
MESJ Messejana 11.36 284 *e*P **Pn** 07 12 08.8 +1.1
MESJ Messejana 11.36 284 ⇑P **Pn** 07 12 08.4 +0.8
PARRA Arraiolos 11.36 289 *e*P **Pn** 07 12 07.8 +0.1
DAVOX Davos/Dischmat 11.37 15 Pn **Pn** 07 12 08.0 0.0
comp=Z,0.6nm,0.3s,baz=191,slow=14,SNR=11
DAVOX LR LR 07 16 44.7
comp=Z,3µm,18.0s,baz=200,slow=39
DAVOX Davos/Dischmat 11.37 15 P **Pn** 07 12 08.0 0.0
MTE Manteigas 11.40 298 **Pn** 07 12 09.9 +1.5
MTE Manteigas 11.40 298 *e*P **Pn** 07 12 10.9 +2.6
MTE *i* IAmb IAmb 07 12 28.9
comp=Z,143nm,1.3s
MTE *e*LQ LQ 07 14 37.1
MTE *e*LR LR 07 15 24.4
MTE *i* IAMs_20 IAMs_20 07 16 52.2
comp=Z,2µm,14.0s
MTE Manteigas 11.40 298 ⇓P **Pn** 07 12 10.8 +2.5
PBRG Braganca 11.40 305 *e*P **Pn** 07 12 10.6 +2.3
PBRG *i* IAmb IAmb 07 12 18.7
comp=Z,130nm,1.0s
PBRG *e*S **Sn** 07 14 16.1 +0.2
ECAL Calabor 11.46 306 Pn **Pn** 07 12 11.4 +2.2
LOR Lormes 11.51 354 ⇓P **Pn** 07 12 12.8 +3.1
MOE Montemor 11.55 288 *e*P **Pn** 07 12 11.3 +1.0
MOE *i* IAmb IAmb 07 12 28.5
comp=Z,90nm,1.5s
PMTG Montargil 11.55 290 *e*P **Pn** 07 12 10.9 +0.6
PMTG *i* IAmb IAmb 07 12 46.1
comp=Z,125nm,1.5s
PSARD Sardoal 11.62 293 *e*P **Pn** 07 12 14.1 +2.7
PSARD *i* IAmb IAmb 07 12 38.0
comp=Z,83nm,1.3s
MFF Saint Martin d 11.62 340 ⇑P **Pn** 07 12 14.1 +2.8
MORF Marmelete 11.66 281 *e*P **Pn** 07 12 13.1 +1.3
MORF IAMs_20 IAMs_20 07 16 43.9
comp=Z,4µm,15.5s
MORF Marmelete 11.66 281 **Pn** 07 12 12.4 +0.6
MORF Marmelete 11.66 281 *e*P **Pn** 07 12 12.9 +1.1
MORF *i* IAmb IAmb 07 12 24.8
comp=Z,137nm,1.7s
MORF *e*S **Sn** 07 14 22.8 +0.6
MORF Marmelete 11.66 281 *e*P **Pn** 07 12 13.1 +1.3
MORF Marmelete 11.66 281 ⇑P **Pn** 07 12 13.1 +1.3
PTEO Sao Teotonio 11.73 283 *e*P **Pn** 07 12 13.5 +0.7
PTEO *i* IAmb IAmb 07 12 33.7
comp=Z,104nm,1.8s
PVIS Viseu 11.76 299 *e*P **Pn** 07 12 14.9 +1.7
FETA Feichten 11.79 17 *e*Pn Pn 07 12 18.5 +4.9
comp=Z,16nm,0.8s,SNR=9.3
PFVI Vila Bisbo 11.79 281 P **Pn** 07 12 13.2 -0.4
PFVI S **Sn** 07 14 26.0 +0.6
PFVI Vila Bisbo 11.79 281 Pn **Pn** 07 12 14.2 +0.7
PFVI Vila Bisbo 11.79 281 *e*P **Pn** 07 12 14.9 +1.3
PFVI *i* IAmb IAmb 07 12 26.6
comp=Z,169nm,1.9s
PVRL Vila Real 11.84 301 *e*P **Pn** 07 12 16.3 +2.0
PVRL *i* IAmb IAmb 07 12 48.6
comp=Z,93nm,1.6s
DAVA Damuels 11.85 14 *e*Pn Pn 07 12 22.5 +8.0
comp=Z,11nm,0.7s
DAVA Damuels 11.85 14 ⇑P Pn 07 12 22.4 +7.8
TIO Tiouine 11.91 249 P **Pn** 07 12 13.1 -2.3
POLO Lamas de Olo 11.93 302 *e*P **Pn** 07 12 17.5 +1.9
POLO *i* IAmb IAmb 07 12 23.4
comp=Z,48nm,1.1s
PCAS Casmilo, Conde 11.99 295 *e*P **Pn** 07 12 18.8 +2.4
PCAS *i* IAmb IAmb 07 12 34.5
comp=Z,113nm,1.4s
ABTA Abfaltersbach 12.03 23 *e*Pn **Pn** 07 12 21.2 +4.3
comp=Z,17nm,0.6s
GBAS Gorenja Brezov 12.04 30 *e*Pn **Pn** 07 12 21.8 +4.7
PSBE So Bento 12.08 292 *e*P **Pn** 07 12 19.8 +2.2
PSBE *i* IAmb IAmb 07 12 31.2
comp=Z,75nm,1.7s
SQTA Sankt Quirin 12.09 18 *e*Pn Pn 07 12 23.7 +5.9
comp=Z,15nm,0.6s,SNR=8.1
MOTA Moosalm 12.18 18 *e*Pn Pn 07 12 25.4 +6.4
comp=Z,21nm,0.8s,SNR=14
PCAB Cabril 12.23 303 *e*P **Pn** 07 12 22.5 +2.9
PCAB *i* IAmb IAmb 07 12 30.8
comp=Z,87nm,1.3s
RETA Reutte 12.23 16 *i* Pn Pn 07 12 26.3 +6.6
comp=Z,1.4nm,0.2s,SNR=9.0
WTTA Wattenberg 12.24 19 *i* Pn Pn 07 12 27.0 +7.1
comp=Z,20nm,0.8s,SNR=6.3
WATA Walderalm 12.29 19 *e*Pn Pn 07 12 25.7 +5.2
comp=Z,12nm,0.7s,SNR=6.8
MYKA Terra Mystica 12.31 26 *e*Pn Pn 07 12 28.8 +8.1
comp=Z,12nm,0.7s
ELOB Lobios 12.31 303 Pn **Pn** 07 12 23.4 +2.6
ELOB *i* IAmb IAmb 07 12 40.2
comp=Z,76nm,0.8s,SNR=8.6
PMAFR Mafra 12.34 289 P **Pn** 07 12 22.1 +1.0
PMAFR Mafra 12.34 289 *e*P **Pn** 07 12 22.6 +1.5
PMAFR *i* IAmb IAmb 07 12 51.5
comp=Z,102nm,1.8s
PDKS Podkum 12.38 32 *e*Pn Pn 07 12 26.7 +5.0
PDG Podgorica 12.39 54 Pn **Pn** 07 12 22.1 +0.4
ECH Echery 12.42 4 **Pn** 07 12 21.3 -0.8
ECH Echery 12.42 4 P **Pn** 07 12 21.3 -0.8
ECH Echery 12.42 4 ⇑P **Pn** 07 12 23.9 +1.7
EPON Pontenova 12.43 311 Pn **Pn** 07 12 25.1 +2.8
CLF Chambon-Foret 12.45 349 Pn **Pn** 07 12 22.6 0.0
CLF Chambon-Foret 12.45 349 ⇓P Pn 07 12 27.7 +5.2
BLY Banja Luka 12.47 41 Pn **Pn** 07 12 21.3 -1.5
PGAV Gavieira, Arco 12.50 304 *e*P **Pn** 07 12 25.2 +1.8
PGAV *i* IAmb IAmb 07 12 35.4
comp=Z,153nm,1.2s
PGAV *e*S **Sn** 07 14 44.2 +1.4
PGAV *e*LQ LQ 07 15 31.2
PGAV *e*LR LR 07 16 58.5
PGAV *i* IAMs_20 IAMs_20 07 17 50.4
comp=Z,2µm,16.0s
OBKA Obir 12.55 29 *e*Pn Pn 07 12 30.8 +6.7
comp=Z,2.8nm,0.4s
KBA Koelnbreinsper 12.59 25 *e*Pn Pn 07 12 34.7 +10
comp=Z,14nm,0.7s
BFO Black Forest 12.63 8 **Pn** 07 12 24.7 -0.4
BFO Black Forest 12.63 8 P **Pn** 07 12 24.7 -0.4
LESA Schwarzleotal 12.68 22 *e*Pn Pn 07 12 32.5 +6.6
comp=Z,13nm,0.6s
TAM Tamanrasset 13.00 181 **Pn** 07 12 28.4 -2.0
TAM Tamanrasset 13.00 181 P **Pn** 07 12 28.4 -2.0
TAM Tamanrasset 13.00 181 ⇑P **Pn** 07 12 28.8 -1.6
STU Stuttgart 13.18 10 **Pn** 07 12 34.2 +1.7
STU Stuttgart 13.18 10 P **Pn** 07 12 34.2 +1.7
BIOA Bad Ischl, Aus 13.22 24 *e*Pn **P** 07 12 45.0 +1.8
comp=Z,36nm,0.8s,SNR=17
ARSA Arzberg 13.55 30 **Pn** 07 12 38.9 +1.3
AGG Agios Georgios 13.57 72 ⇓P **Pn** 07 12 42.1 +4.2
MOA Molln 13.57 25 *i* Pn **P** 07 12 45.2 -1.9
comp=Z,53nm,0.9s,SNR=35
WLF Walferdange 13.82 1 P **Pn** 07 12 43.5 +2.2
WLF S **Sn** 07 15 12.0 -3.0
WLF Walferdange 13.82 1 **Pn** 07 12 41.8 +0.5
WLF Walferdange 13.82 1 P **Pn** 07 12 41.8 +0.5
WLF Walferdange 13.82 1 *d*P **Pn** 07 12 40.4 -0.9
comp=Z,53nm,0.9s
WLF Walferdange 13.82 1 ⇑P **P** 07 12 45.6 -4.2
ROSF Rostrenen 14.15 335 ⇓P **Pn** 07 12 47.9 +2.1
MORH Mrgy, Hungar 14.21 39 ⇓P **Pn** 07 12 49.6 +3.0
MORH Mrgy, Hungar 14.21 39 P **Pn** 07 12 47.0 +0.4
comp=Z,20nm,1.3s
RONA Rosalia, Austr 14.22 30 *e*Pn **Pn** 07 12 49.3 +2.5
comp=Z,10nm,1.0s
CONA Conrad Observa 14.23 29 *e*Pn **P** 07 12 51.6 -2.9
comp=Z,7.7nm,1.0s
GEC2 GERESS Array S 14.26 22 Pn **Pn** 07 12 48.8 +1.4
GERES GERESS Array B 14.26 22 Pn **Pn** 07 12 47.9 +0.5
comp=Z,0.2nm,0.3s,baz=206,slow=12,SNR=18
GERES LR LR 07 18 33.9
comp=Z,3µm,18.2s,baz=210,slow=39
comp=Z,4.4nm,1.0s
DOU Dourbes 14.28 357 *d*P **Pn** 07 12 47.8 +0.3
comp=Z,87nm,0.8s
RCHB Rochefort 14.32 359 *d*P **Pn** 07 12 51.4 +3.3
comp=Z,48nm,0.7s
GRA1 Grafenberg Arr 14.42 14 **Pn** 07 12 48.8 -0.7
GRF Grafenberg Arr 14.42 14 P **Pn** 07 12 48.8 -0.7
CKRC Cesky Krumlov 14.43 23 *e*P **P** 07 12 56.0 -0.6
CKRC AMS AMS 07 19 00.0
comp=Z,3µm,12.6s
CKRC Cesky Krumlov 14.43 23 *e*P **P** 07 12 56.0 -0.6
CKRC MLR MLR
comp=Z,3µm,12.6s
WINA Alland / Wiene 14.46 29 *i* P **P** 07 12 59.5 +2.6
SNR=5.2
BMRD Maredsous 14.48 358 *d*P **Pn** 07 12 53.2 +3.0
comp=Z,62nm,0.7s
KHC Kasperske Hory 14.48 21 **Pn** 07 12 50.2 -0.2
KHC Kasperske Hory 14.48 21 *e*P **Pn** 07 12 53.2 +2.8
KHC *e*pP **P** 07 12 57.5 +0.3
KHC AMS AMS 07 18 10.0
comp=Z,3µm,17.3s
KHC Kasperske Hory 14.48 21 *c*e**P** **Pn** 07 12 51.6 +1.2
KHC pmax pmax
comp=Z,57nm,1.7s
KHC Kasperske Hory 14.48 21 ⇑P **Pn** 07 12 52.8 +2.4
KHC Kasperske Hory 14.48 21 P **Pn** 07 12 51.3 +0.9
comp=Z,773nmcomp=Z,75nm,1.2s
BHOU Houvegnez 14.51 1 *d*P **Pn** 07 12 52.9 +2.2
comp=Z,33nm,0.9s
BGES Gesves 14.55 358 *d*P **Pn** 07 12 53.1 +1.9
comp=Z,40nm,0.8s
BCLA Clavier 14.58 359 *d*P **Pn** 07 12 51.6 0.0
comp=Z,22nm,0.9s
BSTI Sart Tilman 14.74 360 *d*P **P** 07 12 58.1 -1.9
comp=Z,14nm,0.9s
BSTI *d*S **Sn** 07 15 34.4 -2.9
BTNL Ternell 14.75 1 *d*P **P** 07 12 57.3 -2.8
comp=Z,36nm,1.0s
MEM Membach 14.77 1 *d*P **Pn** 07 12 53.6 -0.6
comp=Z,68nm,0.8s
MEM *d*S **Sn** 07 15 35.6 -2.3
KKB Krupnik 14.82 61 P **P** 07 12 59.3 -1.6
ZVC Zvikov 14.94 22 *e*P **P** 07 13 01.9 -0.3
ZVC AMS AMS 07 18 10.0
comp=Z,2µm,18.7s
BEBN Eben Emael 14.96 360 *d*P **P** 07 13 01.3 -1.1
UCC Uccle 14.99 357 **Pn** 07 12 56.7 -0.5
UCC Uccle 14.99 357 P **Pn** 07 12 56.7 -0.5
UCC Uccle 14.99 357 *d*P **Pn** 07 12 57.1 -0.1
comp=Z,35nm,0.9s
VTS Vitosha 15.15 58 P **P** 07 13 03.4 -1.4
MODS Modra-Piesok 15.16 31 *e*P **P** 07 13 07.9 +3.2
MODS Modra-Piesok 15.16 31 *e*P **P** 07 13 07.9 +3.2
MMB Musomishta 15.18 63 P **P** 07 13 03.1 -1.8
SMOL Smolenice 15.33 31 *e*P **P** 07 13 10.6 +4.0
KRUC Moravsky 15.36 27 *e*PN **Pn** 07 13 04.2 +2.0
KRUC Moravsky 15.36 27 *e*P **P** 07 13 08.7 +1.8
BZS Buzias 15.48 46 ⇑P **Pn** 07 13 05.9 +2.1
BZS Buzias 15.48 46 ⇑P **Pn** 07 13 05.9 +2.1
PRU Pruhonice 15.53 22 *e*P **P** 07 13 09.6 +0.8
PRU AMS AMS 07 18 40.0
PRU Pruhonice 15.53 22 *e*P **P** 07 13 09.6 +0.8
PRU MLR MLR
comp=N,2µm,18.8s
HERR Herculane 15.58 49 ⇓P **P** 07 13 09.6 +0.2
IDI Anoyia 15.61 86 Pn **Pn** 07 13 05.6 +0.1
comp=N,20nm,1.0s,baz=316,slow=12,SNR=31
IDI Anoyia 15.61 86 Pn **Pn** 07 13 05.0 -0.5
VRAC Vranov 15.64 27 Pn **Pn** 07 13 06.6 +0.8
comp=N,1.6nm,0.3s,baz=217,slow=11,SNR=66
VRAC LR LR 07 19 01.1
comp=N,816nm,19.9s,baz=212,slow=37
comp=N,15nm,0.9s
VRAC Vranov 15.64 27 ⇓P **P** 07 13 09.9 -0.2
VRAC Vranov 15.64 27 *e*PN **Pn** 07 13 07.8 +2.0
VRAC Vranov 15.64 27 *e*P **P** 07 13 11.8 +1.8
JAVC Velka Javorina 15.70 30 *e*PN **P** 07 13 08.9 -1.8
MPEP Malo Peshtene 15.77 56 P **P** 07 13 12.1 +0.6
PGB Panagyurishte 15.77 59 P **Pn** 07 13 00.6 -6.9
PSZ Piszkesteto 16.00 37 ⇓P **P** 07 13 13.9 -0.2
PSZ Piszkesteto 16.00 37 Pn **Pn** 07 13 09.9 -0.7
PSZ Piszkesteto 16.00 37 P **Pn** 07 13 09.9 -0.7
PSZ pmax pmax
comp=Z,28nm,0.8s
PSZ Piszkesteto 16.00 37 *e*P **P** 07 13 15.7 +1.5
PSZ Piszkesteto 16.00 37 ⇑P **P** 07 13 16.1 +1.9
GZR Gura Zlata 16.06 48 ⇑P **P** 07 13 13.2 -1.5
GZR Gura Zlata 16.06 48 ⇑P **P** 07 13 13.2 -1.5
PLD Plovdiv 16.06 61 P **Pn** 07 13 12.8 +1.5
CLL Collm 16.32 16 Pn **Pn** 07 13 14.1 -0.5
CLL Collm 16.32 16 P **Pn** 07 13 14.1 -0.5
CLL pmax pmax
comp=Z,45nm,1.2s
CLL Collm 16.32 16 *e*P **Pn** 07 13 16.0 +1.4
comp=Z,45nm,1.1s
CLL *i* x x 07 13 19.6
comp=Z,47nm,1.2s
CLL *i* x x 07 13 22.8
comp=Z,45nm,1.1s
CLL *i* x x 07 13 28.9
CLL *e*S **S** 07 16 25.0 -3.6
CLL AMS AMS 07 22 00.0
CLL Collm 16.32 16 P **Pn** 07 13 15.2 +0.6
comp=Z,642nmcomp=Z,40nm,1.0s
KRLC Kraliky 16.34 26 *e*P **P** 07 13 18.3 +0.4
KRLC AMS AMS 07 19 20.0
comp=Z,2µm,16.1s
KRLC Kraliky 16.34 26 *e*P **P** 07 13 18.3 +0.4
KRLC MLR MLR
comp=Z,2µm,16.1s
PLVB Pleven 16.38 57 ⇑P **P** 07 13 18.7 +0.5
MORC Moravsky Berou 16.38 28 ⇓P **P** 07 13 18.3 +0.1
MORC Moravsky Berou 16.38 28 P **P** 07 13 17.4 -0.8
MORC Moravsky Berou 16.38 28 P **P** 07 13 17.4 -0.8
MORC pmax pmax
comp=Z,72nm,1.0s
MORC Moravsky Berou 16.38 28 *e*PN **P** 07 13 17.6 -0.7
MORC Moravsky Berou 16.38 28 ⇓P **P** 07 13 17.8 -0.5
RDO Rodhopi 16.38 65 P **Pn** 07 13 16.7 +1.3
RDO Rodhopi 16.38 65 ⇓P **Pn** 07 13 16.4 +1.0
DPC Dobruska-Polom 16.41 25 *e*P **P** 07 13 19.2 +0.6
DPC AMS AMS 07 20 00.0
comp=Z,3µm,14.8s
DPC Dobruska-Polom 16.41 25 *e*P **P** 07 13 19.2 +0.6
DPC MLR MLR
comp=Z,3µm,14.8s
DPC Dobruska-Polom 16.41 25 P **Pn** 07 13 16.3 +0.5
comp=Z,49nm,1.3s
UPC Upice 16.45 24 *e*P **P** 07 13 21.5 +2.6
UPC AMS AMS 07 20 00.0
comp=Z,3µm,14.2s
UPC Upice 16.45 24 *e*P **P** 07 13 21.5 +2.6
UPC MLR MLR
comp=Z,3µm,14.2s
CHVC Chvalec 16.53 24 *e*P **P** 07 13 22.4 +2.5
CHVC AMS AMS 07 19 50.0
comp=Z,2µm,14.3s
CHVC Chvalec 16.53 24 *e*P **P** 07 13 22.4 +2.5
CHVC MLR MLR
comp=Z,2µm,14.3s
OSTC Ostas 16.55 24 *e*P **P** 07 13 21.9 +1.7
OSTC AMS AMS 07 20 00.0
comp=Z,2µm,13.5s
OSTC Ostas 16.55 24 *e*P **P** 07 13 21.9 +1.7
OSTC MLR MLR
comp=Z,2µm,13.5s
KECS Kecovo 16.68 36 *e*P **P** 07 13 24.3 +2.8
KECS Kecovo 16.68 36 *e*P **P** 07 13 24.3 +2.8
ALN Alexandroupoli 16.71 66 **Pn** 07 13 19.9 +0.4
ALN Alexandroupoli 16.71 66 P **Pn** 07 13 19.9 +0.4
ALN pmax pmax
comp=Z,61nm,1.4s
DRGR 16.77 44 ⇓P **P** 07 13 24.2 +1.6
DRGR 16.77 44 ⇓P **P** 07 13 24.2 +1.6
STRD Stroud 16.91 343 *e*P **P** 07 13 24.8 +0.8
STRD IAmb IAmb 07 13 27.4
comp=Z,79nm,0.9s
MARR Marisel-Cluj 16.94 45 ⇑P **P** 07 13 25.4 +0.9
FLTG Flechtingen 16.95 12 ⇑P **P** 07 13 26.2 +1.7
ELND Elena 17.09 59 ⇑P **P** 07 13 26.3 +0.2
MONM Monmouth 17.12 342 *e*P **P** 07 13 27.7 +1.3
MONM IAmb IAmb 07 13 29.4
comp=Z,93nm,1.7s
ARR Arges 17.19 51 ⇑P **P** 07 13 29.4 +2.1
CJR Cluj-Napoca 17.24 45 ⇓P **P** 07 13 29.9 +2.1
CJR Cluj-Napoca 17.24 45 ⇓P **P** 07 13 29.9 +2.1
MTUR Matau 17.40 51 ⇑P **P** 07 13 31.8 +2.2
MTUR Matau 17.40 51 ⇑P **P** 07 13 31.8 +2.2

KARP Karpathos 17.41 85 Pn 07 13 27.8 -0.7
KARP IAmb IAmb 07 13 32.8
comp=Z,112nm,0.8s
KARP Karpathos 17.41 85 eP P 07 13 30.5 +0.7
KARP Karpathos 17.41 85 ⇑P P 07 13 29.6 -0.3
KARP Karpathos 17.41 85 P Pn 07 13 28.2 -0.3
comp=Z,2µmcomp=Z,152nm,0.7s
OJC Ojcow 17.63 31 P P 07 13 32.8 +0.7
OJC Ojcow 17.63 31 P P 07 13 32.8 +0.7
STHS Stebnicka Huta 17.69 35 eP P 07 13 35.4 +2.7
STHS Stebnicka Huta 17.69 35 eP P 07 13 35.4 +2.7
RAZG Razgrad 17.73 58 ⇑P P 07 13 34.6 +1.4
RSBS Rosebush, Pemb 17.76 338 eP P 07 13 35.7 +2.3
RSBS IAmb IAmb 07 13 37.8
comp=Z,36nm,0.9s
HLM1 Long Mynd 17.76 343 eP P 07 13 34.8 +1.3
HLM1 IAmb IAmb 07 13 36.2
comp=Z,18nm,0.9s
BALB Balikesir 17.92 71 ⇓P P 07 13 38.1 +2.8
DOPR Dopca 17.94 50 ⇓P P 07 13 37.2 +1.7
MLR Muntele Rosu 18.07 52 P P 07 13 37.7 +0.6
comp=Z,1.0nm,0.3s,baz=132,slow=20,SNR=31
MLR LR LR 07 20 21.8
comp=Z,1µm,20.1s,baz=258,slow=36
comp=Z,29nm,0.7s
MLR Muntele Rosu 18.07 52 ⇓P P 07 13 39.8 +2.6
MLR Muntele Rosu 18.07 52 P Pn 07 13 35.7 -1.0
MLR Muntele Rosu 18.07 52 P Pn 07 13 35.7 -1.0
MLR pmax pmax
comp=Z,54nm,1.0s
ARG Arkhangelos 18.12 82 P Pn 07 13 35.4 -1.8
ARG IAmb IAmb 07 13 45.8
comp=Z,184nm,1.1s
ARG Arkhangelos 18.12 82 P Pn 07 13 35.4 -1.8
ARG pmax pmax
comp=Z,183nm,1.1s
FOEL Foel Wylfa 18.18 342 eP P 07 13 39.9 +1.8
FOEL IAmb IAmb 07 13 43.5
comp=Z,45nm,1.0s
LLW Llanuwchllyn 18.26 342 eP P 07 13 40.6 +1.6
LLW IAmb IAmb 07 13 41.9
comp=Z,9.1nm,0.9s
NEHR Nehoiu 18.27 52 ⇑P P 07 13 42.0 +2.8
RAKU Rahkiv 18.29 43 P P 07 13 40.6 +1.3
LBWR Ladybower, Pea 18.33 346 eP P 07 13 40.9 +1.2
LBWR IAmb IAmb 07 13 42.6
comp=Z,28nm,0.8s
MANT Manisa 18.38 75 P Pn 07 13 37.6 -3.0
COVR Voineasa-Covas 18.39 51 ⇓P P 07 13 43.0 +2.5
ONER Baraj Valea Uz 18.73 50 ⇓P Pn 07 13 46.3 +1.7
VRI Vrincioaia 18.73 51 ⇑P Pn 07 13 45.9 +1.3
VRI Vrincioaia 18.73 51 ⇑P Pn 07 13 45.9 +1.3
IWEX Carrickbyrne, 18.77 336 P Pn 07 13 47.9 +3.0
WLF1 Llynfaes 18.85 341 eP Pn 07 13 47.2 +1.3
WLF1 IAmb IAmb 07 13 50.0
comp=Z,30nm,0.8s
KSV Kosov 18.95 43 P Pn 07 13 47.3 +0.1
PMAR Madeira 18.96 267 eP Pn 07 13 49.2 +1.5
TESR Tescani 18.96 49 ⇓P Pn 07 13 49.6 +2.2
GDLE Glaisdale, N Y 19.13 348 eP Pn 07 13 50.0 +0.6
GDLE IAmb IAmb 07 13 51.4
comp=Z,79nm,0.9s
GKP Gorka Klasztor 19.22 21 eP Pn 07 13 52.1 +1.7
GHRR 19.24 51 P Pn 07 13 50.4 -0.4
AKAS Kas 19.31 82 P P 07 13 49.8 -1.0
AKAS IAmb IAmb 07 13 58.7
comp=Z,153nm,1.4s
TIRR Tirgusor 19.32 57 ⇓P Pn 07 13 51.5 -0.1
TIRR Tirgusor 19.32 57 ⇓P Pn 07 13 51.5 -0.1
DSB Dublin 19.38 338 P P 07 13 49.7 -1.6
DSB Dublin 19.38 338 P Pn 07 13 53.4 +1.1
DSB Dublin 19.38 338 P P 07 13 51.7 +0.5
DSB Dublin 19.38 338 ⇓P Pn 07 13 53.5 +1.2
RGN Rugen 19.44 13 P Pn 07 13 53.9 +0.8
RGN IAmb IAmb 07 13 56.0
comp=Z,138nm,1.1s
TPGR Topolog 19.45 55 ⇓P Pn 07 13 53.5 +0.2
ELL Elmali 19.51 80 P P 07 13 52.2 -0.7
ELL Elmali 19.51 80 P P 07 13 52.2 -0.7
ELL pmax pmax
comp=Z,29nm,0.9s
VAL Valentia 19.72 330 P P 07 13 48.1 -6.8
EDMD Edmundbyers 19.73 347 eP Pn 07 13 56.8 +0.3
EDMD IAmb IAmb 07 13 58.4
comp=Z,106nm,0.9s
KESW Keswick, Cumbr 19.73 345 eP Pn 07 13 56.0 -0.5
KESW IAmb IAmb 07 13 57.6
comp=Z,22nm,0.8s
VASR Vaslui 19.73 50 ⇓P Pn 07 13 57.4 +0.8
IOMK Kirk Michael 19.77 342 eP Pn 07 13 56.8 -0.2
IOMK IAmb IAmb 07 13 58.6
comp=Z,17nm,0.8s
TLCR 19.83 55 ⇑P Pn 07 13 57.3 -0.4
TLCR 19.83 55 ⇑P Pn 07 13 57.3 -0.4
SSRD Sdr. Stenderup 19.83 7 iP Pn 07 13 57.7 +0.1
SSRD IAmb IAmb 07 13 59.1
comp=Z,118nm,0.8s
KMPD K-Podol'skiy 19.86 44 P P 07 13 57.0 +0.5
BORA Eskisehir 19.92 71 P P 07 13 57.5 +0.2
BORA IAmb IAmb 07 14 05.1
comp=Z,327nm,1.9s
ISP Isparta 19.93 77 P Pn 07 13 59.0 -0.2
ISP Isparta 19.93 77 *ce*P **Pn 07 13 59.8 +0.6**
ISP pmax pmax
comp=Z,88nm,1.3s
HORU Horodok 20.20 42 P P 07 14 00.3 +0.1
MACI Morro de la Ar 20.28 254 P P 07 14 00.2 -1.3
MACI IAmb IAmb 07 14 11.1
comp=Z,81nm,0.9s
BSD Bornholm Skovb 20.29 15 eP Pn 07 14 02.5 -0.6
BSD Bornholm Skovb 20.29 15 ⇑P P 07 14 02.1 +0.9
BSD Bornholm Skovb 20.29 15 *i*P Pn 07 14 02.7 -0.4
BSD IAmb IAmb 07 14 03.7
comp=Z,31nm,0.7s
GAL1 Galloway 20.35 342 eP Pn 07 14 03.2 -0.6
GAL1 IAmb IAmb 07 14 04.7
comp=Z,26nm,0.9s
NDNU Novodnistrovsk 20.39 45 P P 07 14 02.5 +0.2
HAMD Hammershus, De 20.41 15 *i*P Pn 07 14 04.5 0.0
HAMD IAmb IAmb 07 14 05.5
comp=Z,74nm,0.8s
ESK Eskdalemuir 20.43 345 eP Pn 07 14 04.0 -0.7
ESK IAmb IAmb 07 14 08.1
comp=Z,29nm,0.8s
ESK Eskdalemuir 20.43 345 P P 07 14 03.6 +1.0
ESK Eskdalemuir 20.43 345 P P 07 14 03.6 +1.0
ESK pmax pmax
comp=Z,59nm,0.9s
ESK Eskdalemuir 20.43 345 ⇑P Pn 07 14 04.2 -0.5
EKA Eskdalemuir Ar 20.43 345 P P 07 14 03.4 +0.7
comp=Z,36nm,0.8s,baz=152,slow=11,SNR=45
EKA LR LR 07 22 03.5
comp=Z,522nm,19.0s,baz=170,slow=37
comp=Z,36nm,0.8s
EKA Eskdalemuir Ar 20.43 345 P P 07 14 03.0 +0.3
EKA pmax pmax
comp=Z,39nm,1.0s
EKB Eskdalemuir 20.44 345 P P 07 14 01.5 -1.3
NEWG New Galloway 20.47 343 eP Pn 07 14 04.3 -0.9
NEWG IAmb IAmb 07 14 05.2
comp=Z,12nm,0.8s
LUNU Lund 20.49 13 *i*P Pn 07 14 04.6 -0.8
MDUB Mudurnu 20.53 69 P P 07 14 02.9 -1.2
MDUB IAmb IAmb 07 14 11.4
comp=Z,115nm,1.0s
MDUB Mudurnu 20.53 69 ⇑P Pn 07 14 06.8 +0.6
IGLA Glengowla, Co 20.53 334 P Pn 07 14 05.4 -0.5
SORM Soroca 20.74 47 ⇑P P 07 14 07.1 +1.0
SORM Soroca 20.74 47 ⇑P P 07 14 07.1 +1.0
SORM Soroca 20.74 47 P P 07 14 05.8 -0.3
comp=Z,74nm,1.2s
MUD Monsted U'grnd 20.76 5 *i*P Pn 07 14 07.4 -1.1
MUD IAmb IAmb 07 14 08.4
comp=Z,256nm,1.1s
BJUU Bjuv 20.84 12 *i*P Pn 07 14 08.8 -0.7
CLGH Cloghs, Cushen 20.91 341 eP P 07 14 09.1 +1.2
CLGH IAmb IAmb 07 14 10.7
comp=Z,30nm,1.1s
EDI Edinburgh 20.99 346 eP Pn 07 14 10.2 -1.1
RNPP5 Staryi Chortor 21.11 37 P P 07 14 09.3 -0.8
PGBU Glenifferbraes 21.16 344 eP P 07 14 12.1 +1.6
PGBU IAmb IAmb 07 14 15.6
comp=Z,99nm,0.9s
RNPP8 Varash 21.17 37 P P 07 14 10.2 -0.5

RNPP9 Sopachiv 21.23 37 P P 07 14 10.6 -0.8
IDGL Inch Island, C 21.29 339 P P 07 14 13.3 +1.3
IDGL Inch Island, C 21.29 339 eP P 07 14 13.7 +1.8
LUBAR Lubar, Ukraine 21.31 42 P P 07 14 11.5 -0.7
DEL Delary 21.37 12 *i*P **P 07 14 14.2 +1.5**
EAB Aberfoyle 21.48 345 eP P 07 14 15.1 +1.2
EAB IAmb IAmb 07 14 18.4
comp=Z,58nm,1.0s
BLEU Blekinge 21.59 15 *i*P **P 07 14 15.3 +0.2**
INVG Invergeldie, C 21.64 345 eP P 07 14 17.4 +1.7
INVG IAmb IAmb 07 14 19.5
comp=Z,22nm,0.9s
FABU Falkenberg 21.69 10 *i*P **P 07 14 17.9 +1.7**
OVD Ostervraa, Den 21.70 7 *i*P **P 07 14 17.9 +1.7**
OVD IAmb IAmb 07 14 18.4
comp=Z,132nm,0.7s
DRUM Mains of Drumt 21.80 348 eP P 07 14 18.2 +0.8
DRUM IAmb IAmb 07 14 19.0
comp=Z,40nm,0.7s
MI28 Mi28,Pidlybu 21.83 39 P P 07 14 16.4 -1.4
SUW Suwalki 21.87 28 P P 07 14 16.9 -1.2
SUW Suwalki 21.87 28 P P 07 14 17.0 -1.2
SUW Suwalki 21.87 28 eP P 07 14 20.1 +1.9
ONAU Onsala 21.96 9 *i*P **P 07 14 20.6 +1.4**
BORU Boraas 22.31 10 *i*P **P 07 14 24.1 +1.2**
BR131 Keskin Array S 22.36 72 *di*P **P 07 14 25.8 +2.0**
BR131 Keskin Array S 22.36 72 P P 07 14 25.8 +2.0
SNR=30
BR131 S S 07 18 30.0 +0.2
BRTR Keskin Array B 22.36 72 P P 07 14 23.9 +0.2
comp=Z,28nm,0.8s,baz=257,slow=9.5,SNR=110
comp=Z,28nm,0.8s
BRTR Keskin Array B 22.36 72 *ce*P **P 07 14 25.2 +1.4**
BRTR pmax pmax
comp=Z,28nm,0.8s
AK13 Malin Array Si 22.39 41 P P 07 14 22.7 -1.1
AK19 Malin Array Si 22.42 41 P P 07 14 22.7 -1.4
AK14 Malin Array Si 22.42 41 P P 07 14 22.8 -1.4
AK17 Malin Array Si 22.43 41 P P 07 14 22.8 -1.4
AK20 Malin Array Si 22.43 41 P P 07 14 22.8 -1.4
AK07 Malin Array Si 22.43 42 P P 07 14 22.9 -1.4
AK16 Malin Array Si 22.44 41 P P 07 14 23.0 -1.4
AK06 Malin Array Si 22.45 42 P P 07 14 23.0 -1.4
AK18 Malin Array Si 22.45 41 P P 07 14 23.1 -1.4
AK12 Malin Array Si 22.46 42 P P 07 14 23.1 -1.4
AK15 Malin Array Si 22.47 41 P P 07 14 23.2 -1.4
AK21 Malin Array Si 22.47 41 P P 07 14 23.2 -1.4
AK05 Malin Array Si 22.47 42 P P 07 14 23.2 -1.5
ILGA Ilgaz 22.48 68 P P 07 14 24.2 -1.0
ILGA IAmb IAmb 07 14 33.7
comp=Z,190nm,1.8s
CSS Mathiatis 22.49 84 P P 07 14 25.5 +0.4
CSS IAmb IAmb 07 14 36.5
comp=Z,107nm,1.3s
CSS Mathiatis 22.49 84 ⇓P P 07 14 27.6 +2.5
KIEV Kiev 22.51 41 ⇑P P 07 14 23.9 -1.2
KIEV Kiev 22.51 41 P P 07 14 24.1 -1.0
KIEV IAmb IAmb 07 14 27.0
comp=Z,61nm,0.7s
KIEV Kiev 22.51 41 P P 07 14 24.1 -1.0
KIEV pmax pmax
comp=Z,61nm,0.7s
KIEV Kiev 22.51 41 ⇑P P 07 14 23.9 -1.2
KIEV Kiev 22.51 41 P P 07 14 23.7 -1.4
comp=Z,4µmcomp=Z,352nm,0.8s
HOMB Homborsund 22.52 4 eP P 07 14 25.5 +0.5
HOMB Homborsund 22.52 4 *i*P **P 07 14 26.3 +1.2**
AKASG Malin Array Be 22.52 41 P P 07 14 23.5 -1.7
comp=Z,54nm,0.7s,baz=240,slow=9.3,SNR=97
AKASG S S 07 18 28.2 -4.1
comp=Z,5.5nm,1.1s,baz=233,slow=19,SNR=5.5
AKASG LR LR 07 23 09.4
comp=Z,612nm,21.7s,baz=234,slow=37
comp=Z,54nm,0.7s
AKBB Malin Array Si 22.52 41 P P 07 14 24.0 -1.2
AKBB IAmb IAmb 07 14 27.0
comp=Z,69nm,0.7s
AKBB Malin Array Si 22.52 41 P P 07 14 24.0 -1.2
AKBB pmax pmax
comp=Z,69nm,0.7s
AKBB Malin Array Si 22.52 41 P P 07 14 23.7 -1.5
SNART Snartemo 22.54 2 eP P 07 14 25.8 +0.6
SNART Snartemo 22.54 2 *i*P **P 07 14 25.9 +0.6**
TJOU Tjoern 22.55 8 *i*P **P 07 14 26.1 +0.7**
MCD Coleburn Disti 22.57 347 eP P 07 14 25.7 +0.1
MCD IAmb IAmb 07 14 28.8
comp=Z,45nm,1.0s
KPL Plockton 22.83 344 eP P 07 14 28.7 +0.4
KPL IAmb IAmb 07 14 30.9
comp=Z,12nm,1.0s
TOA0 Torodi Ar. Sit 22.88 190 P P 07 14 31.0 +1.8
SNR=10
TORD Torodi Ar. Bea 22.88 190 P P 07 14 28.0 -1.2
comp=Z,38nm,0.8s,baz=352,slow=9.5,SNR=57
TORD LR LR 07 24 09.0
comp=Z,2µm,18.2s,baz=6.5,slow=39
comp=Z,38nm,0.8s
PABE Paberze 23.31 27 P P 07 14 32.3 -1.0
PABE Paberze 23.31 27 eP P 07 14 33.5 +0.2
KMY Karmoy 23.39 359 eP P 07 14 34.4 +0.3
STRU Stroemstad 23.49 7 *i*P **P 07 14 34.8 -0.2**
BIGH Upper Bighouse 23.55 347 eP P 07 14 35.3 -0.4
BIGH IAmb IAmb 07 14 39.7
comp=Z,36nm,0.7s
BLS5 Blasjo 23.61 1 eP P 07 14 36.5 +0.2
KONO Kongsberg 23.96 5 eP P 07 14 40.3 +0.6
KONO Kongsberg 23.96 5 *i*P **P 07 14 39.2 -0.5**
KONO pmax pmax
comp=Z,53nm,1.2s
NACGM Naroch 23.96 31 eP P 07 14 39.2 -0.5
comp=Z,101nm,1.1s,baz=226
BNN Bunyan 24.08 74 P P 07 14 41.6 +0.4
BNN Bunyan 24.08 74 ⇓P P 07 14 42.5 +1.3
ODD1 Odda 24.10 1 eP P 07 14 41.4 +0.3
MNK Minsk 24.16 33 *i*P **P 07 14 40.1 -1.5**
comp=E,71nm,1.0s
MNK *i*P **P 07 14 40.1 -1.5**
comp=N,42nm,1.0s
MNK *i*P **P 07 14 40.1 -1.5**
comp=Z,71nm,0.8s,baz=229
MNK *i*PP **PnPn 07 15 08.4 -2.4**
MNK *i*PPP PPP 07 15 16.2
MNK *i*PcP **PcP 07 18 22.2 0.0**
MNK *i*S **S 07 18 57.6 -2.0**
MNK *i*SS **SnSn 07 19 38.5 -2.4**
MNK *i*SSS SSS 07 19 51.9
MNK *i*LQ LQ 07 21 48.0
MNK *i*LR LR 07 23 55.4
MNK *i*LRM MLR 07 25 30.2
comp=E,726nm,15.6s
MNK *i*LRM MLR 07 25 35.9
comp=Z,866nm,15.3s
MNK *i*LRM MLR 07 25 39.1
comp=N,278nm,11.9s
MNK Minsk 24.16 33 *i*P **P 07 14 40.1 -1.5**
MNK *i*PPP PPP 07 15 16.2
MNK *i* 07 18 22.2
MNK *i*S **S 07 18 57.6 -2.0**
MNK *i*SSS SSS 07 19 51.9
MNK pmax pmax
comp=Z,71nm,0.8s
MNK pmax pmax
comp=N,42nm,1.0s
MNK pmax pmax
comp=E,71nm,1.0s
MNK MLR MLR
comp=E,726nm,16.0s
MNK MLR MLR
comp=Z,866nm,15.0s
MNK MLR MLR
comp=N,278nm,12.0s
OSL Oslo 24.33 6 eP P 07 14 43.2 +0.1
TOKA Tokat 24.55 70 P P 07 14 46.0 +0.6
TOKA IAmb IAmb 07 14 48.9
comp=Z,61nm,1.1s
MMAI Mount Meron Ar 24.60 88 P P 07 14 45.7 -0.2
comp=Z,4.2nm,0.5s,baz=336,slow=10.0,SNR=11
comp=Z,4.2nm,0.5s
ASK Askoy 24.67 359 eP P 07 14 46.2 +0.1
LRW Lerwick 24.72 352 ⇑P P 07 14 47.6 +0.9
HFS Hagfors 24.85 10 P P 07 14 46.7 -1.2
comp=Z,20nm,0.6s,baz=200,slow=11,SNR=58
HFS LR LR 07 25 03.1
comp=Z,1µm,18.9s,baz=198,slow=38
comp=Z,20nm,0.6s
SKAR Skarslia 24.92 3 *e*P **P 07 14 48.4 -0.1**
NC602 NORSAR Array S 25.20 7 P P 07 14 51.0 +0.1
NC602 NORSAR Array S 25.20 7 eP P 07 14 50.6 -0.3
GHAJ Ghor Haditha 25.22 92 P P 07 14 50.8 -0.6
GHAJ IAmb IAmb 07 15 18.9
comp=Z,58nm,1.0s
SUE Sulen 25.25 359 eP P 07 14 51.1 -0.2
EIL Elat 25.28 96 LR LR 07 27 39.8
comp=Z,1µm,18.0s,baz=293,slow=43
EIL Elat 25.28 96 ⇓P P 07 14 55.3 +3.3
GAZ Gaziantep 25.29 78 P P 07 14 52.4 +0.3
HYA Hoyanger 25.35 1 eP P 07 14 52.4 +0.1
NB2 NORSAR Subarra 25.47 6 P P 07 14 52.9 -0.5
comp=Z,69nm,1.2s,baz=191,slow=9.3
NB2 NORSAR Subarra 25.47 6 P P 07 14 52.9 -0.5
NOA NORSAR Array B 25.47 6 P P 07 14 52.7 -0.8
comp=Z,14nm,0.6s,baz=191,slow=8.9,SNR=84
NOA LR LR 07 25 41.8
comp=Z,873nm,18.4s,baz=195,slow=38
comp=Z,14nm,0.6s
NC405 NORSAR Array S 25.58 7 P P 07 14 54.1 -0.4
NC405 IAmb IAmb 07 15 08.0
comp=Z,43nm,1.0s
ANN Anapa 25.65 60 eP P 07 14 54.4 -0.8
ANN *e**PP **pP 07 14 57.6 -0.2**
ANN *eS* **S 07 19 23.7 +0.1**
ANN pmax pmax
comp=Z,52nm,1.0s
FOO Floro 25.79 359 eP P 07 14 56.4 +0.2
ARPR Arapgir-MALATY 26.01 73 P P 07 14 59.5 +0.8
AAL Aland 26.04 16 eP P 07 14 58.0 -0.6
DOMB Dombas 26.31 4 eP P 07 15 01.9 +0.8
AKN Aaknes 26.38 1 eP P 07 15 00.1 -1.6
VSU Vasula 26.55 25 *ce*P **P 07 15 03.0 -0.2**
VSU pmax pmax
comp=Z,9.0nm,0.6s
VSU Vasula 26.55 25 eP P 07 15 00.6 -2.5
MOL Molde 26.78 2 eP P 07 15 05.8 +0.6
ARBE Arbavere 27.05 23 eP P 07 15 07.3 -0.4
SOC Sochi 27.13 63 eP P 07 15 11.9 +3.3
SOC *e* 07 15 51.0
SOC *e*PPP PPP 07 16 05.4
SOC *eS* **S 07 19 51.3 +4.3**
SOC *e*SS **SnSn 07 21 02.9 +9.4**
SOC pmax pmax
comp=Z,132nm,1.0s
SOC MLR MLR
comp=Z,263nm,15.0s
RAF Rauma 27.20 17 eP P 07 15 10.0 +0.9
KOPT Kop Dagi 27.63 71 P P 07 15 14.0 +0.5
KOPT IAmb IAmb 07 15 34.0
comp=Z,39nm,1.0s
ERBR Yeremizino-Bor 27.92 59 eP P 07 15 16.0 +0.3
ERBR pmax pmax
comp=Z,13nm,0.6s
LABN Labinsk 27.95 61 eP P 07 15 15.9 -0.1
LABN pmax pmax
comp=Z,20nm,0.6s
MARD Mardin 28.09 76 P P 07 15 16.7 -0.8
VORD Divnogorie 28.39 47 eP P 07 15 17.5 -2.3
VORD pmax pmax
comp=Z,9.0nm,0.8s
VSR Storozhevoye 28.40 47 eP P 07 15 17.4 -2.5
VSR pmax pmax
comp=Z,9.0nm,0.9s
VORR Voronezh 28.59 46 eP P 07 15 20.6 -0.9
VORR pmax pmax
comp=Z,71nm,0.5s
OBN Obninsk 28.61 38 LR LR 07 26 40.1
comp=Z,776nm,21.7s,baz=224,slow=36
OBN Obninsk 28.61 38 P P 07 15 21.3 -0.4
OBN Obninsk 28.61 38⇑ *eP* **P 07 15 21.2 -0.4**
OBN *e* 07 16 14.4
OBN *eS* **S 07 20 07.6 -2.5**
OBN pmax pmax
comp=Z,114nm,1.7s
OBN MLR MLR
comp=Z,544nm,16.0s
FINES FINESS Array B 28.69 20 P P 07 15 20.9 -1.4
comp=Z,8.0nm,0.7s,baz=202,slow=7.0,SNR=41
FINES PcP **PcP 07 18 31.3 -1.3**
comp=Z,2.5nm,0.8s,baz=262,slow=1.3,SNR=3.4
FINES LR LR 07 27 36.9
comp=Z,761nm,20.3s,baz=212,slow=38
comp=Z,8.0nm,0.7s
LPSR Galich'ya Gora 28.76 44 eP P 07 15 21.4 -1.7
LPSR pmax pmax
comp=Z,38nm,0.6s
KEF Keuruu 28.96 19 eP P 07 15 23.8 -0.9
VAF Viistaro 29.18 16 eP P 07 15 27.3 +0.6
SHA1 Shidzhatmaz 29.27 63 *i*P **P 07 15 27.8 -0.2**
KIV Kislovodsk 29.30 63 eP P 07 15 28.9 +0.8
KIV pmax pmax
comp=Z,6.0nm,1.1s
KIV MLR MLR
comp=Z,150nm,15.0s
KBZ Khabaz 29.44 63 P P 07 15 28.8 -0.4
comp=Z,2.2nm,0.6s,baz=237,slow=16,SNR=8.3
KBZ LR LR 07 29 22.0
comp=Z,244nm,21.7s,baz=274,slow=41
comp=Z,2.2nm,0.6s
KBZ Khabaz 29.44 63 *ce*P **P 07 15 30.8 +1.6**
KBZ pmax pmax
comp=Z,5.0nm,1.1s
MOS Moscow 29.44 37 eP P 07 15 28.1 -1.0
MOS *eS* **S 07 20 17.4 -5.8**
MOS pmax pmax
comp=Z,113nm,1.2s
MOS MLR MLR
comp=Z,967nm,13.0s
GOF Gofitskoye 29.63 60 *ce*P P 07 15 43.2 +12
SUF Sumiainen 29.75 19 eP P 07 15 32.9 +1.2
GEVA Gevas 29.76 74 P P 07 15 30.8 -1.6
VRH Novokhopyorsk 29.93 48 eP P 07 15 32.4 -1.0
VRH pmax pmax
comp=Z,24nm,0.5s
ACRG Accra 30.54 192 P P 07 15 39.3 +0.2
DBIC Dimbokro 30.61 201 P P 07 15 39.3 -0.5
comp=Z,14nm,0.9s,baz=37,slow=10,SNR=13
DBIC LR LR 07 27 19.4
comp=Z,1µm,19.4s,baz=38,slow=35
comp=Z,14nm,0.9s
DBIC Dimbokro 30.61 201 P P 07 15 39.6 -0.1
DBIC Dimbokro 30.61 201 P P 07 15 39.6 -0.1
DBIC pmax pmax
comp=Z,20nm,0.9s
LEIR Leirfjorden 30.63 6 eP P 07 15 39.7 +0.2
MOR8 Moi Rana 30.80 7 eP P 07 15 41.8 +0.8
STOK Stokkvaagen 30.84 6 eP P 07 15 41.5 +0.2
GNI Garni 30.88 70 *i*P **P 07 15 42.1 -0.1**
GNI pmax pmax
comp=Z,26nm,1.6s
GNI Garni 30.88 70 P P 07 15 46.8 +4.6
RAUS Rausandaksla 31.03 6 eP P 07 15 43.7 +0.7
JOF Joensuu 31.39 22 eP P 07 15 47.2 +1.0
EDA Edea 32.16 172 P P 07 15 54.0 +0.6
STEI Steigen 32.59 7 eP P 07 15 56.5 -0.2
MAK Makhachkala 32.79 65 eP P 07 15 56.3 -2.5
MAK *e* 07 17 03.7
MAK *eS* **S 07 21 12.8 -3.1**
MAK *eSS* **SnSn 07 23 10.1 -1.4**
MAK pmax pmax
comp=Z,163nm,1.1s
KLMR Klimovskoe 32.98 30 eP P 07 15 58.8 -1.4
KLMR *e* 07 17 08.5
KLMR pmax pmax
comp=Z,97nm,1.3s
KLMR MLR MLR
comp=Z,662nm,12.0s
AKT Akhty 33.04 67 eP P 07 16 01.8 +0.7
AKT *e* 07 17 06.5
AKT *eS* **S 07 21 20.6 +0.6**
AKT pmax pmax
comp=Z,71nm,1.4s
AKT MLR MLR
comp=Z,158nm,13.0s
BORG Borgarnes 33.18 339 LR LR 07 29 21.3
comp=Z,233nm,18.2s,baz=143,slow=36
BELG Belogornoye 33.77 47 *i*P **P 07 16 07.2 0.0**
BELG pmax pmax
comp=Z,6.0nm,1.3s
KTK1 Kautokeino 34.62 11 eP P 07 16 13.5 -0.9
JETT Jettan, Norway 34.73 9 eP P 07 16 15.2 -0.1

ARA0 ARCESS Array S 35.46 12 *e*P **P 07 16 19.9 -1.7**
ARCES ARCESS Array B 35.46 12 P **P 07 16 20.6 -1.0**
comp=Z,6.3nm,0.5s,baz=188,slow=8.2,SNR=53
ARCES PcP **PcP 07 18 50.5 -0.5**
comp=Z,3.7nm,0.6s,baz=205,slow=3.0,SNR=8.5
ARCES LR LR 07 32 59.2
comp=Z,229nm,19.0s,baz=220,slow=40
comp=Z,6.3nm,0.5s
JMIC Jan Mayen 36.02 352 LR LR 07 32 12.5
comp=Z,224nm,18.0s,baz=160,slow=38
HAMF Hammerfest 36.17 10 *e*P **P 07 16 27.3 -0.3**
RAYN Ar Rayn 36.44 99 P **P 07 16 29.9 -0.6**
RAYN Ar Rayn 36.44 99 P **P 07 16 29.9 -0.6**
RAYN pmax pmax
comp=Z,4.0nm,0.6s
RAYN Ar Rayn 36.44 99 P **P 07 16 30.4 -0.1**
KIRV Kirov 36.46 38 LR LR 07 31 59.2
comp=Z,618nm,18.7s,baz=247,slow=37
KIRV Kirov 36.46 38*ce*P **P 07 16 29.7 -0.5**
SCO Scoresbysund 37.74 345 P **P 07 16 41.1 +0.1**
SCO IAmb IAmb 07 17 27.1
comp=Z,64nm,2.0s
SCO Scoresbysund 37.74 345 P **P 07 16 41.1 +0.1**
SCO pmax pmax
comp=Z,64nm,2.0s
SCO Scoresbysund 37.74 345 *i* P **P 07 16 42.5 +1.6**
SCO IAmb IAmb 07 16 43.5
comp=Z,7.8nm,0.8s
ANGG Ammassalik, Gr 39.15 333 *i* P **P 07 16 52.5 -0.3**
ANGG IAmb IAmb 07 16 54.4
comp=Z,35nm,1.1s
AKTO Aktyubinsk 40.01 52 LR LR 07 35 14.4
comp=Z,262nm,21.2s,baz=258,slow=39
AKTO Aktyubinsk 40.01 52 P **P 07 16 59.0 -1.3**
SMRA Abu-Samra 40.17 93 P **P 07 17 05.9 +4.0**
TRNA Turayna 40.49 93 P **P 07 17 07.9 +3.4**
DBG Daneborg 40.56 349 ⇑P **P 07 17 05.7 +1.1**
DBG Daneborg 40.56 349 *i* P **P 07 17 05.8 +1.3**
DBG IAmb IAmb 07 17 07.2
comp=Z,8.9nm,1.2s
ARTI Arti 40.66 43 LR LR 07 33 06.9
comp=Z,275nm,22.0s,baz=234,slow=35
ARTI Arti 40.66 43 P **P 07 17 05.0 -0.7**
ARTI Arti 40.66 43*d* iP **P 07 17 05.2 -0.4**
ARTI 07 18 37.1
ARTI S **S 07 23 17.4 +1.8**
ARTI SS **SS 07 26 13.9 -1.7**
ARTI pmax pmax
comp=Z,24nm,0.9s
ARTI MLR MLR
comp=Z,489nm,15.0s
ARTI Arti 40.66 43 ⇑P **P 07 17 05.0 -0.7**
NRS Narsarsuaq 40.80 325 *i* P **P 07 17 11.0 +4.3**
NRS IAmb IAmb 07 17 12.3
comp=Z,35nm,0.9s
AB31 Akbulak array 41.27 54 P **P 07 17 09.9 -0.8**
AB31 Akbulak array 41.27 54 *i* P **P 07 17 09.4 -1.3**
ATD Arta Tunnel 41.34 116 LR LR 07 34 07.6
comp=Z,45nm,20.9s,baz=320,slow=36
SVE Sverdlovsk 41.95 42 *e*P **P 07 17 16.4 +0.2**
SVE pmax pmax
comp=Z,52nm,1.1s
SVE MLR MLR
comp=Z,644nm,13.0s
IVI Ivigtut 42.11 324 *i* P **P 07 17 18.9 +1.5**
GHWR Ruwais 42.19 93 P **P 07 17 19.0 +0.5**
GHWR P **P 07 17 19.0 +0.5**
LODK Lodwar 42.30 133 P **P 07 17 19.6 -0.1**
LODK Lodwar 42.30 133 P **P 07 17 19.5 -0.1**
DAG Danmarks Havn 42.47 352 ⇓P **P 07 17 20.2 0.0**
DAG Danmarks Havn 42.47 352 *i* P **P 07 17 20.4 +0.3**
DAG IAmb IAmb 07 17 21.2
comp=Z,13nm,1.1s
SPITS Spitsbergen Ar 42.69 3 P **P 07 17 21.5 -0.5**
comp=Z,22nm,1.0s,baz=169,slow=9.2,SNR=16
SPITS LR LR 07 37 23.2
comp=Z,344nm,18.3s,baz=164,slow=39
comp=Z,22nm,1.0s
SUMG Summit 43.00 342 P **P 07 17 25.0 0.0**
SUMG IAmb IAmb 07 17 26.6
comp=Z,29nm,0.8s
SUMG Summit 43.00 342 P **P 07 17 25.0 0.0**
SUMG pmax pmax
comp=Z,29nm,0.8s
SUMG Summit 43.00 342 ⇓P **P 07 17 25.4 +0.4**
SUMG Summit 43.00 342 *i* P **P 07 17 25.6 +0.6**
SUMG IAmb IAmb 07 17 26.4
comp=Z,32nm,0.9s
MBAR Mbarara 43.09 142 LR LR 07 35 23.3
comp=Z,839nm,20.3s,baz=336,slow=36
MBAR Mbarara 43.09 142 *i* P **P 07 17 28.6 +2.5**
MBAR pmax pmax
comp=Z,14nm,1.1s
MZWR Madinat Zayed 43.09 93 P **P 07 17 26.8 +0.9**
MZWR P **P 07 17 26.8 +0.9**
MZR Muzera 43.12 94 P **P 07 17 26.6 +0.4**
SNR=11
MZR P **P 07 17 26.6 +0.4**
SNR=11
KBS Kingsbay 43.28 2 P **P 07 17 27.1 +0.4**
KBS IAmb IAmb 07 17 29.3
comp=Z,44nm,0.9s
KBS Kingsbay 43.28 2 P **P 07 17 27.1 +0.4**
KBS pmax pmax
comp=Z,44nm,0.9s
KBS Kingsbay 43.28 2 *i* P **P 07 17 28.1 +1.4**
ASUD Al Ashush, Dub 43.88 91 P P 07 17 37.0 +4.8
ASUD P P 07 17 37.0 +4.8
NAZ Nazwa, Dubai 43.99 90 P **P 07 17 32.2 -0.9**
SNR=6.8
NAZ P **P 07 17 32.2 -0.9**
SNR=6.8
BANOM Banah 44.10 88 P **P 07 17 37.9 +3.9**
BANOM P **P 07 17 37.9 +3.9**
MASF Masafi 44.22 89 P **P 07 17 38.5 +3.4**
MASF P **P 07 17 38.5 +3.4**
NUUK Nuuk 44.32 328 *i* P **P 07 17 35.3 +0.1**
NUUK IAmb IAmb 07 17 39.4
comp=Z,28nm,0.9s
MDH Madha 44.37 89 P **P 07 17 39.2 +3.1**
SNR=5.8
MDH P **P 07 17 39.2 +3.1**
SNR=5.8
HATD Hatta, Dubai 44.44 90 P **P 07 17 36.4 -0.4**
SNR=9.3
HATD P **P 07 17 36.4 -0.4**
SNR=9.3
ASHO Ashiyiah 44.45 90 P **P 07 17 36.2 -0.6**
SNR=7.2
ASHO P **P 07 17 36.2 -0.6**
SNR=7.2
UOSS Minazif 44.45 90 P **P 07 17 36.3 -0.5**
UOSS IAmb IAmb 07 17 57.6
comp=Z,31nm,0.9s
UOSS Minazif 44.45 90 P **P 07 17 36.9 +0.1**
UOSS P **P 07 17 36.9 +0.1**
ALNE Al Ain 44.48 91 P **P 07 17 36.9 -0.2**
SNR=7.3
ALNE P **P 07 17 36.9 -0.2**
SNR=7.3
SFJD Kangerlussuaq 44.53 332 LR LR 07 35 48.7
comp=Z,233nm,18.8s,baz=107,slow=36
SFJD Kangerlussuaq 44.53 332 P **P 07 17 37.1 +0.3**
SFJD IAmb IAmb 07 17 37.7
comp=Z,38nm,0.9s
SFJD Kangerlussuaq 44.53 332 P **P 07 17 37.1 +0.3**
SFJD pmax pmax
comp=Z,38nm,0.9s
SFJD Kangerlussuaq 44.53 332 ⇑P **P 07 17 36.9 0.0**
SFJD Kangerlussuaq 44.53 332 *i* P **P 07 17 36.8 0.0**
SFJD IAmb IAmb 07 17 37.5
comp=Z,37nm,0.9s
UMZA Um Al Zommool 44.62 93 P **P 07 17 37.6 -0.6**
UMZA P **P 07 17 37.6 -0.6**
SOHO SOHO 45.08 90 P **P 07 17 41.2 -0.6**
SOHO P **P 07 17 41.2 -0.6**
ARQ Araqi 45.44 91 P **P 07 17 45.0 +0.3**
SNR=9.1
ARQ P **P 07 17 45.0 +0.3**
SNR=9.1
HRA Herat 45.70 75 P **P 07 17 47.6 +0.7**
HRA IAmb IAmb 07 17 53.8
comp=Z,48nm,1.5s
DOK Doka 45.85 99 P **P 07 17 46.9 -1.1**
DOK P **P 07 17 46.9 -1.1**

ABTO Aybut 45.86 101 P **P 07 17 47.5 -0.7**
WHFO Wadi Hawf 45.94 100 P **P 07 17 48.2 -0.5**
WHFO P **P 07 17 48.2 -0.5**
HOQ Hoqain 45.96 91 P **P 07 17 48.2 -0.7**
SNR=7.6
HOQ P **P 07 17 48.2 -0.7**
SNR=7.6
BSY Bisya 46.27 92 P **P 07 17 50.7 -0.5**
SNR=14
BSY P **P 07 17 50.7 -0.5**
SNR=14
NOR Nord 46.61 356 ⇓P **P 07 17 53.0 -0.2**
NOR Nord 46.61 356 *i* P **P 07 17 52.5 -0.7**
NOR IAmb IAmb 07 17 53.5
comp=Z,8.9nm,1.0s
NIAQ Niaqornat 46.61 337 *i* P **P 07 17 54.0 +0.7**
NIAQ IAmb IAmb 07 17 54.5
comp=Z,47nm,1.0s
BIDO Bidbid 46.66 90 P **P 07 17 58.1 +3.8**
SNR=5.6
NUUG Nuugaatsiaq 46.68 338 *i* P **P 07 17 53.7 -0.1**
NUUG IAmb IAmb 07 17 54.5
comp=Z,25nm,1.1s
SMDO Samad 46.81 91 P **P 07 17 54.7 -0.9**
SNR=12
SMDO P **P 07 17 54.7 -0.9**
SNR=12
KMBO Kilima Mbogo 47.07 134 LR LR 07 38 14.6
comp=Z,420nm,19.0s,baz=328,slow=37
KMBO Kilima Mbogo 47.07 134 *i* P **P 07 17 59.0 +1.2**
DRLN Deer Lake 47.15 307 ⇓P **P 07 17 58.0 +0.2**
BORK Borovoye 47.53 48 P **P 07 18 00.5 -0.3**
BORK IAmb IAmb 07 18 11.7
comp=Z,27nm,1.1s
BORK Borovoye 47.53 48*ce*P **P 07 18 01.4 +0.6**
BORK pmax pmax
comp=Z,28nm,1.7s
BVA0 Borovoye Array 47.58 48 P **P 07 17 59.8 -1.3**
BVAR Borovoye Array 47.58 48 P **P 07 18 01.2 0.0**
comp=Z,3.7nm,0.5s,baz=285,slow=5.8,SNR=18
BVAR LR LR 07 37 57.0
comp=Z,302nm,21.3s,baz=289,slow=36
comp=Z,3.7nm,0.5s
MHTO MHTO 47.74 93 P **P 07 18 03.2 +0.4**
SNR=15
MHTO P **P 07 18 03.2 +0.4**
SNR=15
WBK Wadi Bani Khal 47.77 91 P **P 07 18 03.6 +0.5**
SNR=7.0
WBK P **P 07 18 03.6 +0.5**
SNR=7.0
NEEM North Greenlan 48.23 346 ⇑P **P 07 18 05.8 -0.4**
NEEM North Greenlan 48.23 346 *i* P **P 07 18 06.3 +0.1**
NEEM IAmb IAmb 07 18 08.0
comp=Z,29nm,0.9s
JLN Jalan Bani Buh 48.34 91 P **P 07 18 06.9 -0.5**
SNR=5.2
JLN P **P 07 18 06.9 -0.5**
SNR=5.2
KULLO Kullorsuaq 48.66 341 *i* P **P 07 18 09.1 -0.1**
KULLO IAmb IAmb 07 18 09.9
comp=Z,23nm,0.9s
BRLS Borolday 48.97 61 *e*P **P 07 18 12.1 +0.1**
CHM Chimkent 48.98 62 *e*P **P 07 18 12.8 +0.7**
IUG Iuzhnay 49.33 62 *e*P **P 07 18 15.5 +0.6**
comp=Z,8.2nm,0.9s
KK31 Karatay Array 49.43 61 P **P 07 18 15.2 -0.4**
KK31 Karatay Array 49.43 61 P **P 07 18 15.2 -0.4**
KK31 pmax pmax
comp=Z,9.0nm,0.8s
DZA Taraz 50.06 61 *e*P **P 07 18 20.1 -0.3**
comp=Z,10nm,1.2s
BTK Batken 50.48 64 P **P 07 18 23.5 -0.2**
BTK IAmb IAmb 07 18 30.7
comp=Z,20nm,0.7s
BTK Batken 50.48 64 P **P 07 18 23.5 -0.2**
BTK pmax pmax
comp=Z,20nm,0.7s
KBL Kabul 50.94 72 P **P 07 18 27.3 0.0**
KBL Kabul 50.94 72 P **P 07 18 27.3 0.0**
KBL pmax pmax
comp=Z,10.0nm,0.8s
KBL Kabul 50.94 72 P **P 07 18 27.6 +0.2**
KBL P **P 07 18 27.6 +0.2**
DRK Karamyk 51.38 65 P **P 07 18 29.7 -1.0**
DRK IAmb IAmb 07 18 39.8
comp=Z,22nm,0.9s
DRK Karamyk 51.38 65 P **P 07 18 29.7 -1.0**
DRK pmax pmax
comp=Z,22nm,0.9s
BTLS Baital 51.40 57 *e*P **P 07 18 31.2 +0.8**
comp=Z,8.4nm,1.2s
ARSB Arslanbob 51.68 62 P **P 07 18 32.9 +0.1**
ARSB IAmb IAmb 07 18 39.6
comp=Z,74nm,1.8s
ARSB Arslanbob 51.68 62 P **P 07 18 32.9 +0.1**
ARSB pmax pmax
comp=Z,74nm,1.8s
FRB Frobisher Bay 51.68 327 LR LR 07 39 10.7
comp=Z,453nm,19.1s,baz=76,slow=35
SCHQ Schefferville 51.95 316 P **P 07 18 33.8 -0.6**
comp=Z,14nm,0.7s,baz=78,slow=5.9,SNR=38
comp=Z,14nm,0.7s
SCHQ Schefferville 51.95 316 P **P 07 18 33.8 -0.6**
SCHQ IAmb IAmb 07 18 41.7
comp=Z,20nm,0.8s
SGDS Sogindy 52.23 59 *e*P **P 07 18 37.2 +0.5**
KUQ Kuujjuuaa 52.28 320 P **P 07 18 36.4 -0.3**
KUQ IAmb IAmb 07 18 44.0
comp=Z,32nm,1.3s
AAK Ala-Archa 52.37 60 LR LR 07 44 14.5
comp=Z,341nm,19.3s,baz=339,slow=40
AAK Ala-Archa 52.37 60 P **P 07 18 36.7 -1.2**
AAK Ala-Archa 52.37 60*ce*P **P 07 18 38.0 +0.1**
AAK pmax pmax
comp=Z,23nm,2.5s
AAK Ala-Archa 52.37 60 P **P 07 18 38.4 +0.5**
AAK P **P 07 18 38.4 +0.5**
FRU1 Bishkek 52.42 60 P **P 07 18 38.6 +0.5**
FRU1 Bishkek 52.42 60 P **P 07 18 38.6 +0.5**
FRU1 pmax pmax
comp=Z,40nm,0.9s
KURBB Kurchatov Arra 52.96 50 P **P 07 18 41.3 -0.6**
comp=Z,18nm,0.7s,baz=288,slow=8.1,SNR=106
KURBB LR LR 07 41 54.7
comp=Z,234nm,20.1s,baz=168,slow=37
comp=Z,18nm,0.7s
KURBB Kurchatov Arra 52.96 50 P **P 07 18 41.5 -0.4**
KURK Kurchatov 52.99 50 P **P 07 18 41.6 -0.6**
KURK IAmb IAmb 07 18 42.4
comp=Z,26nm,0.7s
KURK Kurchatov 52.99 50*ce*P **P 07 18 41.5 -0.6**
KURK pmax pmax
comp=Z,37nm,0.8s
KURK Kurchatov 52.99 50 P **P 07 18 41.5 -0.6**
KURK P **P 07 18 41.5 -0.6**
BATG Bathurst New B 53.14 306 P **P 07 18 43.6 +0.2**
BATG IAmb IAmb 07 18 52.6
comp=Z,33nm,1.1s
BOOM Boomskoye usch 53.44 60 P **P 07 18 44.8 -1.0**
BOOM Boomskoye usch 53.44 60 P **P 07 18 44.8 -1.0**
BOOM pmax pmax
comp=Z,15nm,1.1s
NRN Naryn 53.81 61 P **P 07 18 47.8 -0.9**
NRN IAmb IAmb 07 18 55.9
comp=Z,35nm,1.3s
NRN Naryn 53.81 61 P **P 07 18 47.8 -0.9**
NRN pmax pmax
comp=Z,35nm,1.3s
AAA Alma-Ata 53.90 59 *e*P **P 07 18 49.7 +0.7**
TNSS Tian-Shan 53.97 59 *e*P **P 07 18 50.2 +0.2**
MDOK Medeo 54.00 59 *e*P **P 07 18 50.3 +0.4**
NRIK Noril'sk 54.13 26 P **P 07 18 49.6 -0.7**
comp=Z,22nm,0.9s,baz=267,slow=4.7,SNR=26
comp=Z,22nm,0.9s
NRIK Noril'sk 54.13 26 IAmb IAmb 07 18 52.2
comp=Z,35nm,1.1s
NRIK Noril'sk 54.13 26 *i* P **P 07 18 50.7 +0.5**
NRIK pmax pmax
comp=Z,28nm,1.0s
KSH2 Kashi 54.25 64 P **P 07 18 52.8 +1.0**
KSH2 sP sP 07 18 58.0 +2.4
KSH2 pmax pmax
comp=Z,29nm,1.2s
POIN Pond Inlet 54.34 339 **P 07 18 51.8 0.0**

POIN IAmb IAmb 07 18 52.7
comp=Z,20nm,0.9s
TDK Taldyqorghan 54.38 56 *e*P **P 07 18 53.1 +0.7**
KDJ Kajisay 54.42 60 IAmb IAmb 07 19 02.0
comp=Z,17nm,0.8s
NIL Nilore 54.51 71 P **P 07 18 53.6 0.0**
NIL IAmb IAmb 07 18 59.0
comp=Z,25nm,0.8s
NIL Nilore 54.51 71 P **P 07 18 53.6 0.0**
NIL pmax pmax
comp=Z,25nm,0.8s
NIL Nilore 54.51 71 P **P 07 18 54.2 +0.6**
SATY Saty 54.98 59 *e*P **P 07 18 57.4 +0.3**
comp=Z,4.5nm,0.7s
LSZ Lusaka 55.10 153 LR LR 07 42 13.9
comp=Z,808nm,18.7s,baz=349,slow=36
LSZ Lusaka 55.10 153 P **P 07 18 57.5 -0.5**
LSZ IAmb IAmb 07 19 07.1
comp=Z,20nm,1.0s
LSZ Lusaka 55.10 153 P **P 07 18 57.5 -0.5**
LSZ pmax pmax
comp=Z,20nm,1.0s
LSZ Lusaka 55.10 153 P **P 07 18 58.0 0.0**
D62A Allapoint, All 55.16 307 P **P 07 18 58.1 +0.1**
UZB Uzynbulak 55.38 58 *e*P **P 07 19 00.6 +0.6**
comp=Z,9.6nm,1.0s
PDGK Podgornoye 55.64 58 P **P 07 19 01.3 -0.5**
SHLS Shalkode 55.68 58 *e*P **P 07 19 04.6 +2.5**
comp=Z,7.5nm,0.7s
ZAA0 Zalesovo Array 55.87 45 P **P 07 19 02.8 -0.2**
ZAA0 IAmb IAmb 07 19 03.3
comp=Z,15nm,0.7s
ZALV Zalesovo Beam 55.87 45 P **P 07 19 02.5 -0.6**
comp=Z,15nm,0.6s,baz=281,slow=8.0,SNR=50
ZALV LR LR 07 46 27.8
comp=Z,232nm,19.1s,baz=264,slow=40
comp=Z,15nm,0.6s
TSUM Tsumeb 55.88 166 LR LR 07 45 02.6
comp=Z,420nm,18.7s,baz=342,slow=38
ILON Igloolik, Nuna 56.13 335 **P 07 19 04.3 -0.3**
ILON IAmb IAmb 07 19 05.1
comp=Z,19nm,1.0s
WUS Wushi 56.17 61 IAmb IAmb 07 19 15.9
comp=Z,32nm,1.0s
MK31 Makanchi Array 56.41 53*ce*P **P 07 19 06.6 -0.5**
MKAR Makanchi Array 56.41 53 P **P 07 19 06.5 -0.6**
comp=Z,19nm,0.6s,baz=285,slow=6.1,SNR=112
comp=Z,19nm,0.6s
NBPA Parau_RN 57.67 233 *e*P **P 07 19 17.2 +0.9**
NBMO Morrinhos-CE 57.83 238 *e*P **P 07 19 18.2 +0.8**
ZSN Zaisan 57.86 52 *e*P **P 07 19 18.0 +0.7**
comp=Z,8.6nm,0.9s
RES Resolute Bay 58.53 342 LR LR 07 44 09.6
comp=Z,234nm,20.5s,baz=20,slow=36
RES Resolute Bay 58.53 342 **P 07 19 21.5 0.0**
RES Resolute Bay 58.53 342 P **P 07 19 21.5 0.0**
RES pmax pmax
comp=Z,13nm,0.9s
MNTQ Montreal, Queb 58.67 306 P **P 07 19 23.9 +0.9**
MNTQ IAmb IAmb 07 19 29.8
comp=Z,18nm,0.9s
GRTLG Ghanzi 58.75 163 P **P 07 19 24.2 +0.4**
WIN Windhoek 59.07 168 P **P 07 19 26.4 +0.3**
WIN Windhoek 59.07 168 P **P 07 19 26.4 +0.3**
WIN pmax pmax
comp=Z,18nm,0.6s
LONY Lake Ozonia 59.62 305 P **P 07 19 29.3 -0.3**
LONY IAmb IAmb 07 19 36.2
comp=Z,19nm,1.1s
LONY Lake Ozonia 59.62 305 ⇓P P 07 19 34.6 +5.0
KGCAE Kacgae 60.42 162 P **P 07 19 36.0 +0.7**
WMQ Urumqi 61.03 55 *e*P **P 07 19 42.5 +3.2**
WMQ pmax pmax
comp=Z,11nm,1.1s
WMQ L L
comp=Z,590nm,24.2s
WMQ L L
comp=Z,200nm,21.9s
MDP Montagnes des 61.58 255 LR LR 07 42 33.4
comp=Z,230nm,21.0s,baz=60,slow=32
SADO Sadowa 62.56 307 LR LR 07 46 26.4
comp=Z,235nm,18.0s,baz=82,slow=36
BLKN Baker Lake 63.09 331 P **P 07 19 52.2 -0.5**
BLKN IAmb IAmb 07 19 53.0
comp=Z,14nm,1.1s
LBTB Lobatse 63.37 160 LR LR 07 49 27.3
comp=Z,434nm,19.6s,baz=353,slow=38
ERPA Erie 64.24 305 P **P 07 20 00.5 -0.2**
FCC Fort Churchill 64.83 325 P **P 07 20 04.3 +0.1**
FCC IAmb IAmb 07 20 05.3
comp=Z,17nm,0.9s
FCC Fort Churchill 64.83 325 P **P 07 20 04.3 +0.1**
FCC pmax pmax
comp=Z,17nm,0.9s
SJG San Juan 65.14 275 LR LR 07 43 00.8
comp=Z,204nm,21.5s,baz=64,slow=31
M52A Chesterland 65.41 304 P **P 07 20 08.4 +0.1**
OBIP Obispado Ponce 65.54 275 P **P 07 20 10.6 +1.1**
OBIP IAmb IAmb 07 20 16.8
comp=Z,16nm,1.1s
TIXI Tiksi 65.66 17 LR LR 07 52 40.0
comp=Z,150nm,18.4s,baz=322,slow=40
TIXI Tiksi 65.66 17 P **P 07 20 09.1 -0.3**
TIXI IAmb IAmb 07 20 10.4
comp=Z,12nm,0.7s
TIXI Tiksi 65.66 17*ce*P **P 07 20 09.6 +0.2**
TIXI pmax pmax
comp=Z,17nm,1.0s
K50A Casco 65.69 306 P **P 07 20 09.5 -0.6**
MOY Mondy 65.82 43 *e*P **P 07 20 11.4 +0.4**
MOY pmax pmax
comp=Z,12nm,1.4s
MLPR Magueyes Islan 65.93 275 P **P 07 20 13.0 +1.0**
Q54A Coxs Mills 66.22 302 P **P 07 20 13.8 +0.2**
HYB Hyderabad 66.27 85 *e*P **P 07 20 14.4 +0.1**
HYB *e*PcP **PcP 07 20 43.6 -0.7**
CMC01 Camacan, BA 66.52 228 *e*P **P 07 20 15.9 +0.3**
BOSA Boshof 66.69 161 P **P 07 20 15.9 -0.8**
comp=Z,3.5nm,0.8s,baz=16,slow=5.6,SNR=5.9
BOSA LR LR 07 49 11.3
comp=Z,287nm,19.9s,baz=360,slow=36
comp=Z,3.5nm,0.8s
BOSA Boshof 66.69 161 P **P 07 20 16.5 -0.2**
BOSA Boshof 66.69 161 P **P 07 20 16.5 -0.2**
BOSA pmax pmax
comp=Z,54nm,1.7s
ACSO Alum Creek Sta 67.11 304 P **P 07 20 20.0 +0.8**
A36M Sachs Harbour 67.16 345 P **P 07 20 19.3 +0.3**
A36M Sachs Harbour 67.16 345 P **P 07 20 19.4 +0.4**
baz=42
TLY Talaya 67.27 42 LR LR 07 51 07.3
comp=Z,258nm,18.2s,baz=313,slow=37
TLY Talaya 67.27 42 P **P 07 20 20.1 0.0**
TLY Talaya 67.27 42*ce*P **P 07 20 20.9 +0.8**
TLY pmax pmax
comp=Z,15nm,1.3s
POGA Pongola 67.45 155 P **P 07 20 21.3 -0.1**
EVN Everest 67.47 71 P **P 07 20 21.9 -0.6**
GUA01 Guaratinga, BA 67.64 228 *e*P **P 07 20 23.9 +1.1**
ZAK Zakamensk 67.70 43 *e*P **P 07 20 22.3 -0.7**
ZAK pmax pmax
comp=Z,11nm,1.8s
SDBA SAO DESIDERIO 67.72 235 *e*P **P 07 20 24.2 +0.8**
O49A Covington 68.04 304 P **P 07 20 24.5 -0.7**
N47A Urbana 68.61 306 P **P 07 20 28.7 0.0**
N47A IAmb IAmb 07 20 36.6
comp=Z,23nm,1.2s
EYMN Ely 68.73 314 P **P 07 20 29.1 -0.2**
C36M Paulatuk 68.87 343 P **P 07 20 29.9 0.0**
C36M IAmb IAmb 07 20 30.9
comp=Z,26nm,1.2s
C36M Paulatuk 68.87 343 P **P 07 20 29.8 0.0**
baz=42
EPLO Experimental L 69.12 317 P **P 07 20 32.2 +0.5**
EPLO IAmb IAmb 07 20 46.8
comp=Z,24nm,1.1s
G40A Rib Lake 69.30 311 P **P 07 20 33.2 +0.2**
G40A IAmb IAmb 07 20 40.4
comp=Z,14nm,1.1s
GOMU GeErMu 69.32 60 P **P 07 20 35.5 +1.9**
GOMU sP sP 07 20 41.3 +3.8
GOMU pmax pmax
comp=Z,8.0nm,0.7s
SUR Sutherland 69.32 166 LR LR 07 52 09.7
comp=Z,699nm,19.0s,baz=14,slow=37

VOI Vohitsoka 69.35 139 P **P** **07 20 33.7 +0.2**
K43A Burlington 69.42 308 P **P** **07 20 33.4 -0.3**
E38A The Farm, Brul 69.44 313 P **P** **07 20 33.7 0.0**
BOAV Boa Vista 69.44 258 P **P** **07 20 34.9 +0.7**
BOAV IAmb IAmb 07 20 42.3
comp=Z,23nm,1.3s
BOAV Boa Vista 69.44 258 *e*P **P** **07 20 34.6 +0.4**
ULM Lac du Bonnet 70.00 318 P **P** **07 20 36.0 -1.1**
comp=Z,12nm,0.7s,baz=70,slow=6.4,SNR=14
ULM LR LR 07 47 57.0
comp=Z,272nm,20.0s,baz=314,slow=33
comp=Z,12nm,0.7s
ULM Lac du Bonnet 70.00 318 P **P** **07 20 36.8 -0.3**
ULM IAmb IAmb 07 20 43.1
comp=Z,19nm,0.8s
ULM Lac du Bonnet 70.00 318 P **P** **07 20 36.8 -0.3**
ULM pmax pmax
comp=Z,19nm,0.8s
FFC Flin Flon 70.64 324 P **P** **07 20 40.8 -0.2**
FFC Flin Flon 70.64 324 P **P** **07 20 40.8 -0.2**
FFC pmax pmax
comp=Z,9.0nm,1.0s
SONM Songino Array 70.77 45 P **P** **07 20 41.9 -0.2**
comp=Z,3.6nm,0.8s,baz=290,slow=5.8,SNR=13
SONM LR LR 07 56 16.2
comp=Z,227nm,18.3s,baz=274,slow=40
comp=Z,3.6nm,0.8s
SPMN Marine on St. 70.90 312 P **P** **07 20 43.2 +0.5**
SPMN IAmb IAmb 07 20 50.4
comp=Z,10.0nm,0.7s
YKAW3 Yellowknife Wh 70.95 335 P **P** **07 20 43.2 +0.6**
YKA Yellowknife Ar 70.99 335 P **P** **07 20 42.5 -0.5**
comp=Z,13nm,0.8s,baz=49,slow=6.6,SNR=162
comp=Z,13nm,0.8s
YKA Yellowknife Ar 70.99 335 *ce*P **P** **07 20 43.2 +0.3**
YKA pmax pmax
comp=Z,13nm,0.9s
AGMN Agassiz Nation 71.04 316 P **P** **07 20 43.4 -0.1**
ULN Ulaanbaatar 71.13 44 *ce*P **P** **07 20 44.5 +0.2**
ULN pmax pmax
comp=Z,3.0nm,0.8s
ULN Ulaanbaatar 71.13 44 P **P** **07 20 43.9 -0.4**
comp=Z,31nm,1.1s
OLIL Olney 71.29 305 P **P** **07 20 45.0 -0.2**
OLIL IAmb IAmb 07 20 52.8
comp=Z,25nm,1.0s
DIAM Diamantina, MG 71.31 230 *e*P **P** **07 20 46.6 +1.0**
KAAM Kaadhehdhoo 71.40 103 P **P** **07 20 47.1 +0.9**
T47A Sharon Grove 71.52 303 P **P** **07 20 45.5 -1.1**
T47A IAmb IAmb 07 20 54.6
comp=Z,26nm,0.9s
SNDB Serra Nova Dou 71.78 240 *e*P **P** **07 20 47.9 -0.5**
INK Inuvik 71.81 345 LR LR 07 54 02.4
comp=Z,223nm,18.4s,baz=328,slow=37
INK Inuvik 71.81 345 P **P** **07 20 47.7 -0.1**
INK IAmb IAmb 07 20 48.4
comp=Z,12nm,0.8s
INK Inuvik 71.81 345 P **P** **07 20 47.7 -0.1**
INK pmax pmax
comp=Z,12nm,0.9s
INK Inuvik 71.81 345 P **P** **07 20 47.5 -0.2**
baz=34,SNR=18
D28M Stokes Point 71.94 347 P **P** **07 20 49.5 +1.0**
baz=30
BDFB Brasilia 72.13 235 LR LR 07 51 16.3
comp=Z,314nm,19.8s,baz=66,slow=35
D27M Malcolm River 72.39 348 P **P** **07 20 52.4 +1.0**
D27M IAmb IAmb 07 20 53.3
comp=Z,12nm,0.8s
D27M Malcolm River 72.39 348 P **P** **07 20 52.3 +0.9**
baz=28
C26K Camden Bay 72.40 350 P **P** **07 20 52.7 +1.4**
baz=25,SNR=32
A21K Barrow 72.40 354 P **P** **07 20 52.4 +1.1**
baz=15,SNR=8.3
WVT Waverly 72.46 302 P **P** **07 20 51.7 -0.6**
WVT IAmb IAmb 07 22 04.1
comp=Z,54nm,2.0s
WVT Waverly 72.46 302 P **P** **07 20 51.7 -0.6**
WVT pmax pmax
comp=Z,54nm,2.0s
C27K Jago River 72.49 349 P **P** **07 20 53.3 +1.5**
C27K IAmb IAmb 07 20 54.0
comp=Z,27nm,0.9s
C27K Jago River 72.49 349 P **P** **07 20 53.0 +1.2**
baz=26
YAK Yakutsk 72.54 24 P **P** **07 20 52.0 -0.2**
comp=Z,20nm,0.5s,baz=192,slow=1.0,SNR=8.9
YAK LR LR 07 55 59.3
comp=Z,339nm,18.2s,baz=300,slow=38
comp=Z,20nm,0.5s
YAK Yakutsk 72.54 24 P **P** **07 20 52.0 -0.2**
YAK Yakutsk 72.54 24 *e*P **P** **07 20 52.4 +0.2**
YAK *e* 07 23 35.9
YAK *e*PPP PPP 07 25 19.9
YAK *e*S **S** **07 30 21.6 +5.0**
YAK *e* 07 31 00.8
YAK *e*SS **SS** **07 35 00.7 +6.4**
YAK pmax pmax
comp=Z,64nm,1.4s
YAK pmax pmax
comp=N,12nm,1.5s
YAK pmax pmax
comp=E,5.0nm,0.8s
YAK pmax pmax
comp=Z,94nm,3.2s
YAK pmax pmax
comp=N,52nm,3.8s
YAK pmax pmax
comp=E,61nm,3.3s
YAK smax smax
comp=N,67nm,3.9s
YAK smax smax
comp=E,46nm,3.5s
YAK MLR MLR
comp=Z,494nm,22.0s
YAK MLR MLR
comp=N,401nm,17.0s
YAK MLR MLR
comp=E,110nm,16.0s
A22K Sinclair Lake 72.57 353 P **P** **07 20 53.3 +1.1**
baz=16
F31M Tsiigehtchic 72.58 345 P **P** **07 20 52.3 -0.1**
F31M Tsiigehtchic 72.58 345 P **P** **07 20 52.5 +0.2**
baz=34
E29M Blow River 72.60 347 P **P** **07 20 53.0 +0.5**
baz=30
E28M Babbage River 72.71 347 P **P** **07 20 53.5 +0.3**
baz=29
F30M Barrier River 72.86 346 **P** **07 20 54.5 +0.3**
F30M IAmb IAmb 07 20 58.7
comp=Z,22nm,1.1s
F30M Barrier River 72.86 346 P **P** **07 20 54.3 +0.1**
baz=32,SNR=14
B22K Teshekpuk Lake 73.05 353 P **P** **07 20 56.4 +1.3**
baz=18
C24K Franklin Bluff 73.10 351 P **P** **07 20 56.7 +1.2**
baz=21
G31M Satah River 73.12 345 P **P** **07 20 55.5 -0.1**
baz=33,SNR=28
D25K Kavik River 73.15 350 P **P** **07 20 56.8 +0.9**
baz=23
C23K Itkillik River 73.22 352 P **P** **07 20 57.5 +1.3**
baz=20
FVM French Village 73.24 305 P **P** **07 20 56.7 -0.2**
FVM IAmb IAmb 07 21 02.4
comp=Z,19nm,1.1s
FVM French Village 73.24 305 P **P** **07 20 56.7 -0.2**
FVM pmax pmax
comp=Z,19nm,1.1s
WRGLY Wrigley 73.31 339 P **P** **07 20 57.6 +0.7**
baz=41
E27K Coleen River 73.44 348 P **P** **07 20 58.4 +0.8**
baz=27,SNR=17
G30M tAoh Zraii Nji 73.48 345 IAmb IAmb 07 21 05.3
comp=Z,39nm,1.9s
G30M tAoh Zraii Nji 73.48 345 P **P** **07 20 57.6 -0.2**
baz=31
PALK Pallekele 73.60 93 P **P** **07 20 58.9 -0.5**
comp=Z,7.4nm,0.8s,baz=326,slow=10,SNR=6.2
PALK LR LR 07 56 43.4
comp=Z,115nm,18.3s,baz=286,slow=39
comp=Z,7.4nm,0.8s
PALK Pallekele 73.60 93 P **P** **07 20 57.7 -1.7**
PALK Pallekele 73.60 93 P **P** **07 20 57.7 -1.7**
PALK pmax pmax
comp=Z,14nm,1.0s
PALK Pallekele 73.60 93 P **P** **07 21 00.6 +1.2**
F28M Old Crow 73.64 347 P **P** **07 20 58.6 -0.2**
F28M IAmb IAmb 07 20 59.9
comp=Z,15nm,0.8s
F28M Old Crow 73.64 347 P **P** **07 20 59.1 +0.3**
baz=28
D24K Happy Valley 73.64 351 P **P** **07 20 59.9 +1.2**
baz=21
B20K Meade River 73.73 354 P **P** **07 21 00.5 +1.4**
baz=14
CCM Cathedral Cave 73.74 305 P **P** **07 21 00.3 +0.4**
CCM IAmb IAmb 07 21 07.5
comp=Z,18nm,1.1s
CCM Cathedral Cave 73.74 305 P **P** **07 21 00.3 +0.4**
CCM pmax pmax
comp=Z,18nm,1.2s
SDV Santo Domingo 73.81 269 LR LR 07 49 15.8
comp=Z,103nm,21.1s,baz=29,slow=32
SDV Santo Domingo 73.81 269 P **P** **07 21 00.1 -0.7**
SDV IAmb IAmb 07 21 08.2
comp=Z,34nm,1.2s
SDV Santo Domingo 73.81 269 *e*P **P** **07 21 01.5 +0.7**
A19K Wainwright 73.83 355 P **P** **07 21 01.3 +1.6**
baz=11
B21K Ikpikpuk River 73.86 353 P **P** **07 21 01.5 +1.5**
baz=16
G29M Pine Creek 73.91 346 IAmb IAmb 07 21 01.5
comp=Z,15nm,0.8s
G29M Pine Creek 73.91 346 P **P** **07 21 00.2 -0.2**
baz=30
BRDH Bariadhala 73.92 73 LR LR 08 00 54.0
comp=Z,306nm,18.1s,baz=282,slow=42
D23K Nanushuk River 74.05 351 IAmb IAmb 07 21 03.7
comp=Z,23nm,0.9s
D23K Nanushuk River 74.05 351 P **P** **07 21 02.6 +1.5**
baz=20
H31M Peel River 74.08 344 IAmb IAmb 07 21 02.7
comp=Z,18nm,1.1s
H31M Peel River 74.08 344 P **P** **07 21 01.7 +0.3**
baz=33
EPYK Eagle Plains 74.11 345 IAmb IAmb 07 21 02.6
comp=Z,19nm,0.8s
EPYK Eagle Plains 74.11 345 P **P** **07 21 01.8 +0.2**
baz=31
E25K Arctic Village 74.14 349 IAmb IAmb 07 23 32.5
comp=Z,19nm,0.6s
E25K Arctic Village 74.14 349 P **P** **07 21 03.0 +1.3**
baz=24
T42A Van Buren 74.20 304 P **P** **07 21 02.4 -0.1**
TOLK Toolik Lake Re 74.22 351 P **P** **07 21 03.5 +1.3**
baz=21
R40A Maddies Statio 74.29 306 IAmb IAmb 07 21 06.4
comp=Z,58nm,1.9s
F26K Sheenjek River 74.31 349 IAmb IAmb 07 21 05.0
comp=Z,20nm,1.1s
F26K Sheenjek River 74.31 349 P **P** **07 21 04.0 +1.3**
baz=25,SNR=31
C21K Knifeblade Rid 74.33 353 P **P** **07 21 04.2 +1.5**
baz=16
P38A Dawn 74.38 308 P **P** **07 21 04.2 +0.7**
P38A IAmb IAmb 07 21 09.2
comp=Z,19nm,1.1s
H29M Whitestone 74.58 346 P **P** **07 21 04.6 +0.4**
baz=30,SNR=28
E24K Your Creek 74.61 350 P **P** **07 21 05.2 +0.8**
baz=21
F25K Chatitan Rive 74.64 349 P **P** **07 21 05.8 +1.2**
baz=24
G27K Doyon Strip 74.68 347 P **P** **07 21 05.7 +0.8**
baz=27,SNR=8.4
E28A Huff 74.72 317 P **P** **07 21 05.8 +0.4**
ARAG Araguaiana, MT 74.74 237 *e*P **P** **07 21 06.2 +0.4**
E23K Chandalar 74.78 351 P **P** **07 21 06.5 +1.0**
baz=20
C19K Lookout Ridge 74.81 355 IAmb IAmb 07 21 08.3
comp=Z,27nm,1.2s
C19K Lookout Ridge 74.81 355 P **P** **07 21 06.9 +1.4**
baz=12
L34A Svendsen Farm, 74.86 311 P **P** **07 21 06.0 -0.2**
L34A IAmb IAmb 07 21 28.1
comp=Z,24nm,1.0s
MGMO Mountain Grove 74.92 305 P **P** **07 21 06.5 -0.3**
G26K Porcupine Rive 74.93 348 P **P** **07 21 07.6 +1.4**
baz=25
D20K Etivluk River 74.94 353 P **P** **07 21 07.2 +0.9**
baz=15
E22K Anaktuvuk Pass 74.98 351 P **P** **07 21 07.4 +0.8**
baz=19
I30M Mount Dempster 75.03 344 IAmb IAmb 07 21 08.4
comp=Z,28nm,1.0s
I30M Mount Dempster 75.03 344 P **P** **07 21 07.4 +0.4**
baz=31
F24K Squaw Lake 75.04 350 P **P** **07 21 08.5 +1.6**
baz=22
H27K Steamboat Moun 75.18 347 IAmb IAmb 07 21 09.8
comp=Z,22nm,0.8s
H27K Steamboat Moun 75.18 347 P **P** **07 21 08.9 +1.1**
baz=27
D19K Kuna River 75.28 354 IAmb IAmb 07 22 52.0
comp=Z,22nm,0.8s
D19K Kuna River 75.28 354 P **P** **07 21 09.5 +1.2**
baz=13
I29M Ogilvie Camp, 75.32 345 IAmb IAmb 07 21 09.9
comp=Z,27nm,0.8s
I29M Ogilvie Camp, 75.32 345 P **P** **07 21 08.9 +0.4**
baz=29,SNR=26
S39A Bolivar 75.32 306 IAmb IAmb 07 21 15.0
comp=Z,17nm,0.8s
E20K Nigu River 75.34 353 P **P** **07 21 09.7 +1.0**
baz=15
C18K Utukok River 75.37 355 IAmb IAmb 07 21 11.2
comp=Z,26nm,1.1s
C18K Utukok River 75.37 355 P **P** **07 21 10.0 +1.2**
baz=11
BILL Bilibino 75.41 7 **P** **07 21 08.9 -0.1**
BILL Bilibino 75.41 7 *ce*P **P** **07 21 09.1 +0.1**
BILL pmax pmax
comp=Z,25nm,1.3s
PDRB Porto dos Gac 75.43 244 *e*P **P** **07 21 10.6 +0.7**
G25K Bearman Lake 75.47 349 P **P** **07 21 11.2 +1.8**
baz=23
FYU Fort Yukon 75.52 348 **P** **07 21 10.2 +0.6**
LZDM Lanzhou Array 75.56 56 P **P** **07 21 10.8 -0.1**
comp=Z,2.5nm,0.5s,baz=289,slow=4.5,SNR=11
comp=Z,2.5nm,0.5s
I28M Mir Creek 75.57 346 P **P** **07 21 10.3 +0.3**
baz=28
J30M Hart River 75.57 344 P **P** **07 21 10.9 +0.8**
baz=31
LZH Lanzhou 75.59 56 *e*P P 07 21 16.0 +5.2
LZH sP PcP 07 21 24.8 +1.1
LZH pmax pmax
comp=Z,47nm,1.3s
LZH L L
comp=Z,280nm,16.5s
LZH L L
comp=Z,300nm,16.1s
COLD Coldfoot 75.64 351 P **P** **07 21 11.2 +0.9**
baz=20,SNR=34
C17K DeLong Mountai 75.67 356 P **P** **07 21 11.9 +1.4**
baz=9.2,SNR=84
G24K Hadweenzic Riv 75.74 349 P **P** **07 21 12.4 +1.4**
baz=22
I27K Kandik River 75.75 347 IAmb IAmb 07 21 12.9
comp=Z,32nm,1.3s
I27K Kandik River 75.75 347 P **P** **07 21 11.8 +0.7**
baz=27
C16K Lisburne Hills 75.99 357 IAmb IAmb 07 21 14.2
comp=Z,25nm,1.1s
C16K Lisburne Hills 75.99 357 P **P** **07 21 13.1 +0.9**
baz=7.4
F21K Alatna River 76.05 352 P **P** **07 21 14.1 +1.4**
baz=17
RDOG Red Dog Mine 76.07 356 IAmb IAmb 07 21 14.6
comp=Z,12nm,0.8s
RDOG Red Dog Mine 76.07 356 P **P** **07 21 13.6 +0.8**
baz=9.4
J29N Klondike Camp 76.09 345 IAmb IAmb 07 21 15.1
comp=Z,14nm,0.8s
J29N Klondike Camp 76.09 345 P **P** **07 21 14.1 +1.1**
baz=29
G23K Bananza Creek 76.10 350 P **P** **07 21 14.1 +1.1**
baz=20
E19K Redstone River 76.22 353 P **P** **07 21 15.0 +1.3**
baz=14
I26K Coal Creek Min 76.31 347 P **P** **07 21 15.2 +1.1**
baz=26
MAYO Mayo, Yukon 76.31 343 P **P** **07 21 15.3 +1.1**
baz=31
D17K Noatak River 76.44 356 P **P** **07 21 15.8 +0.9**
baz=9.3
F20K Avaraart Lake 76.46 353 IAmb IAmb 07 21 17.4
comp=Z,32nm,1.6s
F20K Avaraart Lake 76.46 353 P **P** **07 21 16.2 +1.2**
baz=15
K29M Barlow Dome 76.47 344 IAmb IAmb 07 21 17.3
comp=Z,56nm,1.9s
K29M Barlow Dome 76.47 344 P **P** **07 21 16.1 +0.9**
baz=30
PRP Porcupine Dome 76.53 348 P **P** **07 21 16.9 +1.3**
baz=24
E18K Tukpahlearik C 76.54 355 IAmb IAmb 07 21 17.5
comp=Z,18nm,0.8s
E18K Tukpahlearik C 76.54 355 P **P** **07 21 16.6 +1.1**
baz=11
H24K Noodor Dome 76.61 349 IAmb IAmb 07 21 18.0
comp=Z,15nm,0.9s
H24K Noodor Dome 76.61 349 P **P** **07 21 16.9 +1.0**
baz=22
KSU1 Kansas State U 76.64 309 P **P** **07 21 16.1 -0.4**
KSU1 IAmb IAmb 07 21 31.9
comp=Z,12nm,0.8s
G21K Allakaket 76.73 352 IAmb IAmb 07 21 18.7
comp=Z,22nm,0.9s
G21K Allakaket 76.73 352 P **P** **07 21 17.7 +1.2**
baz=17
X40A Basin Creek Fa 76.78 303 IAmb IAmb 07 21 28.0
comp=Z,18nm,1.3s
EDM Edmonton 76.80 327 IAmb IAmb 07 21 26.0
comp=Z,24nm,1.1s
F19K Shaleruckik Mo 76.88 353 IAmb IAmb 07 21 19.0
comp=Z,26nm,1.1s
F19K Shaleruckik Mo 76.88 353 P **P** **07 21 18.0 +0.7**
baz=14
E17K Hotham Inlet 76.96 355 P **P** **07 21 18.6 +0.8**
baz=10
H22K Ishtalitna Cre 77.06 351 P **P** **07 21 19.6 +1.2**
baz=19
M31M Drury Creek, Y 77.14 342 IAmb IAmb 07 21 21.6
comp=Z,13nm,0.8s
M31M Drury Creek, Y 77.14 342 P **P** **07 21 20.6 +1.6**
baz=32
POKR Poker Plat Res 77.21 349 P **P** **07 21 20.3 +1.1**
baz=22
L29M L29M 77.25 344 P **P** **07 21 20.6 +1.0**
baz=29
F18K Selawik 77.27 354 P **P** **07 21 20.2 +0.7**
baz=12
J25K Salcha River, 77.33 348 P **P** **07 21 20.5 +0.5**
baz=24
WTLY Watson Lake, Y 77.34 339 IAmb IAmb 07 21 22.5
comp=Z,18nm,1.1s
WTLY Watson Lake, Y 77.34 339 P **P** **07 21 21.2 +1.1**
baz=36
M30M Minto, Yukon 77.40 343 P **P** **07 21 21.6 +1.2**
baz=30
ILAR Eielson Array 77.44 348 P **P** **07 21 21.2 +0.6**
comp=Z,9.0nm,1.0s,baz=6.3,slow=3.8,SNR=65
ILAR PKKPbc **PKKPbc** **07 40 22.9 -2.3**
comp=Z,0.3nm,0.7s,baz=220,slow=4.4,SNR=5.9
ILAR LR LR 07 58 47.6
comp=Z,196nm,19.4s,baz=14,slow=38
comp=Z,9.0nm,1.0s
H21K Melozitna Rive 77.47 351 IAmb IAmb 07 21 23.5
comp=Z,32nm,1.1s
H21K Melozitna Rive 77.47 351 P **P** **07 21 22.0 +1.3**
baz=18
I23K Minto, Yukon-K 77.48 349 P **P** **07 21 20.9 +0.2**
I23K Minto, Yukon-K 77.48 349 P **P** **07 21 21.9 +1.1**
baz=20,SNR=13
G19K Purcell Mounta 77.48 353 P **P** **07 21 21.9 +1.1**
baz=14
COLA College 77.50 349 P **P** **07 21 21.8 +0.9**
COLA College 77.50 349 P **P** **07 21 21.8 +0.9**
COLA pmax pmax
comp=Z,49nm,0.7s
COLA College 77.50 349 P **P** **07 21 22.0 +1.1**
baz=22
F17K Baldwin Pennin 77.55 355 IAmb IAmb 07 22 37.8
comp=Z,17nm,0.8s
F17K Baldwin Pennin 77.55 355 P **P** **07 21 22.2 +1.0**
baz=11
LAO LASA Array 77.66 319 P **P** **07 21 22.1 -0.2**
LAO IAmb IAmb 07 21 30.1
comp=Z,18nm,1.0s
SCRK Sand Creek 77.67 347 IAmb IAmb 07 21 24.2
comp=Z,21nm,0.8s
SCRK Sand Creek 77.67 347 P **P** **07 21 23.1 +1.1**
baz=25
N32M Quiet Lake 77.69 341 P **P** **07 21 23.2 +1.1**
baz=33
HHC Hu-ho-hao-te 77.79 48 *e*P **P** **07 21 22.3 -0.8**
HHC pmax pmax
comp=Z,12nm,0.8s
MLY Manley 77.79 350 IAmb IAmb 07 21 24.6
comp=Z,14nm,1.0s
MLY Manley 77.79 350 P **P** **07 21 23.3 +0.8**
baz=19,SNR=15
HDA Harding Lake 77.79 348 P **P** **07 21 23.1 +0.6**
baz=22
I21K Tanana 77.81 351 P **P** **07 21 23.9 +1.3**
baz=18
T35A Sooner Cattle 77.85 307 IAmb IAmb 07 21 32.3
comp=Z,18nm,0.9s
G18K Tagagawik 77.87 354 IAmb IAmb 07 22 45.1
comp=Z,14nm,0.7s
G18K Tagagawik 77.87 354 P **P** **07 21 24.0 +1.1**
baz=13
H20K Anotleneega Mo 77.88 352 P **P** **07 21 24.2 +1.2**
baz=16
M29M Somme Creek 77.90 344 IAmb IAmb 07 21 26.2
comp=Z,18nm,0.9s
M29M Somme Creek 77.90 344 P **P** **07 21 24.5 +1.2**
baz=29
WRH Wood River Hil 77.92 349 IAmb IAmb 07 21 24.6
comp=Z,23nm,1.0s
NEA2 Nenana 77.95 349 P **P** **07 21 23.8 +0.4**
baz=21,SNR=8.7
RIDG Independent Ri 78.04 347 P **P** **07 21 25.3 +1.3**
baz=24
L27K Beaver Creek, 78.08 346 P **P** **07 21 25.3 +1.2**
baz=26
RSSD Black Hills 78.08 316 P **P** **07 21 24.9 +0.1**
RSSD Black Hills 78.08 316 P **P** **07 21 24.9 +0.1**
RSSD pmax pmax
comp=Z,10.0nm,0.8s
N31M Braeburn, Yuko 78.10 342 P **P** **07 21 25.1 +0.8**
baz=31
K24K Donnelly Dome 78.15 348 P **P** **07 21 25.3 +0.8**
baz=23
P33M Teslin, Yukon 78.41 340 IAmb IAmb 07 21 28.4
comp=Z,20nm,0.9s
P33M Teslin, Yukon 78.41 340 P **P** **07 21 27.1 +1.0**
baz=33
L26K Log Cabin Wild 78.41 346 IAmb IAmb 07 21 28.5
comp=Z,19nm,0.9s
L26K Log Cabin Wild 78.41 346 P **P** **07 21 27.4 +1.4**
baz=25
OK048 Pawnee Station 78.42 307 IAmb IAmb 07 21 35.5
comp=Z,21nm,1.0s
G17K Kiwalik Mounta 78.43 354 P **P** **07 21 26.7 +0.7**
baz=11
N30M Aishikik Lake 78.44 343 IAmb IAmb 07 21 28.6
comp=Z,16nm,1.1s
N30M Aishikik Lake 78.44 343 P **P** **07 21 27.5 +1.2**
baz=30
BVCY Beaver Creek 78.46 345 P **P** **07 21 27.8 +1.5**
baz=27
I20K Naaghedeneel 78.50 351 P **P** **07 21 27.9 +1.5**
baz=16
F15K North Star Dit 78.51 356 IAmb IAmb 07 21 28.5
comp=Z,17nm,0.9s
F15K North Star Dit 78.51 356 P **P** **07 21 27.3 +0.8**
baz=7.9
XLT XiLinHaoTe 78.55 44 *e*P **P** **07 21 30.5 +3.3**
XLT pP PcP 07 21 35.5 -0.8
XLT pmax pmax
comp=Z,8.0nm,1.0s
R33M Jennings River 78.56 339 P **P** **07 21 29.0 +1.9**
baz=34
H18K Honhosa River 78.57 353 IAmb IAmb 07 22 45.0
comp=Z,15nm,0.6s
H18K Honhosa River 78.57 353 P **P** **07 21 28.4 +1.5**
baz=13
OK052 Battle Ridge R 78.58 306 IAmb IAmb 07 21 47.7

comp=Z,19nm,0.8s
WHY Whitehorse 78.58 341 P **P** 07 21 27.7 +0.6
WHY Whitehorse 78.58 341 P **P** 07 21 27.7 +0.6
baz=32
EGMT Eagleton 78.62 322 P **P** 07 21 28.1 +0.6
EGMT IAmb IAmb 07 21 34.8
comp=Z,14nm,0.8s
G16K Koyuk River 78.67 355 IAmb IAmb 07 21 29.6
comp=Z,15nm,0.9s
G16K Koyuk River 78.67 355 P **P** 07 21 28.4 +1.1
baz=9.8,SNR=20
BPAW Bear Paw Mtn. 78.70 350 P 07 21 28.0 +0.4
BPAW Bear Paw Mtn. 78.70 350 P **P** 07 21 28.4 +0.8
baz=19
M27K Edge Creek, AK 78.72 345 IAmb IAmb 07 21 30.5
comp=Z,29nm,1.1s
M27K Edge Creek, AK 78.72 345 P **P** 07 21 29.3 +1.4
baz=26
MCK McKinley 78.74 349 P **P** 07 21 28.2 +0.4
baz=21,SNR=13
O30N Mendenhall 78.79 342 P **P** 07 21 29.0 +0.8
baz=31
TNA Tin City 78.81 357 P **P** 07 21 28.6 +0.5
baz=5.2,SNR=25
GCSA Galena City Sc 78.82 352 P **P** 07 21 29.4 +1.3
baz=14
F14K Arctic Creek 78.83 357 P **P** 07 21 28.9 +0.7
baz=6.5
VILB Vilhena 78.86 245 P **P** 07 21 27.1 -2.0
VILB IAmb IAmb 07 21 38.0
comp=Z,32nm,1.2s
VILB Vilhena 78.86 245 *e*P **P** 07 21 29.6 +0.5
PAX Paxson 78.86 347 P **P** 07 21 29.2 +0.6
baz=23
M26K Nabesna, AK 78.91 346 IAmb IAmb 07 21 31.1
comp=Z,20nm,0.9s
M26K Nabesna, AK 78.91 346 P **P** 07 21 30.0 +1.1
baz=25
YUK4 Talbot Arm 78.91 343 P **P** 07 21 29.5 +0.5
baz=29
H17K Granite Mounta 78.93 354 IAmb IAmb 07 21 31.2
comp=Z,18nm,0.9s
H17K Granite Mounta 78.93 354 P **P** 07 21 30.1 +1.3
baz=12
YUK3 Moose Creek 78.94 344 P **P** 07 21 30.3 +1.1
baz=27,SNR=12
RND Reindeer 79.03 349 IAmb IAmb 07 23 20.0
comp=Z,19nm,0.7s
J20K Nowinta River 79.06 351 P **P** 07 21 30.4 +0.9
baz=16
DLBC Dease Lake 79.07 338 P **P** 07 21 31.5 +1.7
baz=35,SNR=7.6
HYT Haines Junctio 79.09 343 P **P** 07 21 31.0 +1.0
baz=30,SNR=13
CHUM Lake Minchumin 79.10 350 P **P** 07 21 30.2 +0.4
baz=18
DHY Denali Highway 79.10 348 P **P** 07 21 31.0 +1.0
baz=22,SNR=59
ROSC El Rosal 79.12 268 P **P** 07 21 31.0 -0.2
comp=Z,2.0nm,0.3s,baz=130,slow=19,SNR=5.3
ROSC LR LR 07 55 25.3
comp=Z,180nm,18.6s,baz=54,slow=35
comp=Z,2.0nm,0.3s
ROSC El Rosal 79.12 268 IAmb IAmb 07 21 39.6
comp=Z,47nm,1.7s
ROSC El Rosal 79.12 268 P **P** 07 21 31.0 -0.2
P32M Atlin 79.18 340 P **P** 07 21 31.7 +1.4
baz=32,SNR=6.4
G15K Niukluk 79.18 356 P **P** 07 21 31.0 +0.9
baz=8.4
YUK6 Outpost Mounta 79.20 343 P **P** 07 21 32.0 +1.4
baz=29,SNR=12
TRF Thorofare Moun 79.22 349 IAmb IAmb 07 21 31.7
comp=Z,20nm,0.9s
TRF Thorofare Moun 79.22 349 P **P** 07 21 30.6 -0.1
baz=20
YUK8 Steele Glacier 79.22 344 P **P** 07 21 31.6 +0.8
baz=28
Q32M Nakina River 79.30 339 IAmb IAmb 07 21 38.8
comp=Z,41nm,1.9s
Q32M Nakina River 79.30 339 P **P** 07 21 31.7 +0.5
baz=34
H16K Elim 79.41 355 P **P** 07 21 32.4 +1.0
baz=9.8,SNR=21
J19K Poorman 79.41 352 IAmb IAmb 07 22 53.9
comp=Z,14nm,0.7s
J19K Poorman 79.41 352 P **P** 07 21 32.4 +1.0
baz=15
PZH PanZhiHua 79.49 65 P **P** 07 21 33.3 +0.6
WAT1 Susitna Watana 79.53 348 P **P** 07 21 32.1 0.0
baz=21
P30M Million Dollar 79.57 342 P **P** 07 21 33.7 +1.2
baz=30
WAT6 Susitna Watana 79.62 348 P **P** 07 21 33.5 +0.7
baz=22,SNR=36
ANM Nome 79.69 356 P **P** 07 21 33.6 +0.7
baz=7.3,SNR=16
PTLB Pontes e Lacer 79.72 243 *e*P **P** 07 21 34.6 +0.9
O28M Mount Upton 79.77 344 IAmb IAmb 07 21 36.7
comp=Z,26nm,0.9s
O28M Mount Upton 79.77 344 P **P** 07 21 35.0 +1.1
baz=27
M24K Tolsona, Glenn 79.79 347 IAmb IAmb 07 22 11.8
comp=Z,17nm,0.9s
M24K Tolsona, Glenn 79.79 347 P **P** 07 21 34.6 +1.0
baz=23
O29M Mount Kennedy 79.81 343 P **P** 07 21 34.8 +1.0
baz=29,SNR=5.7
K20K Telida 79.83 351 IAmb IAmb 07 21 35.6
comp=Z,33nm,1.0s
K20K Telida 79.83 351 P **P** 07 21 34.6 +0.8
baz=16
MCARA McCarthy VSAT 79.84 345 P **P** 07 21 35.4 +1.6
MCARA IAmb IAmb 07 21 37.5
comp=Z,37nm,1.0s
MCARA McCarthy VSAT 79.84 345 P **P** 07 21 36.2 +2.4
baz=25,SNR=15
S34M Telegraph Cree 79.84 338 P **P** 07 21 35.5 +1.6
baz=34
CTGM Chitina Glacie 79.86 344 IAmb IAmb 07 21 36.4
comp=Z,18nm,0.9s
CTG Chitina Glacier 79.86 344 P **P** 07 21 35.3 +1.2
baz=26,SNR=6.9
LOGN Logan Glacier 79.91 344 IAmb IAmb 07 21 36.8
comp=Z,22nm,1.0s
N25K Chitina, Valde 79.95 346 IAmb IAmb 07 23 45.3
comp=Z,12nm,0.6s
N25K Chitina, Valde 79.95 346 P **P** 07 21 35.6 +1.1
baz=24,SNR=16
I17K Unalakleet 80.03 354 IAmb IAmb 07 21 37.4
comp=Z,26nm,1.1s
I17K Unalakleet 80.03 354 P **P** 07 21 36.3 +1.5
baz=11,SNR=5.7
J18K Innoko River 80.05 352 P **P** 07 21 36.0 +1.0
baz=14
GRNC Granite Creek 80.16 344 IAmb IAmb 07 21 38.6
comp=Z,42nm,1.1s
L22K Petersville 80.17 349 IAmb IAmb 07 23 18.9
comp=Z,11nm,0.6s
XAN Xi'an 80.17 55 ⇑P **P** 07 21 36.5 +0.3
XAN pP sP 07 21 40.5 +0.4
XAN pmax pmax
comp=Z,14nm,1.2s
XAN pmax pmax
comp=Z,97nm,3.8s
CUT Chulitna 80.20 349 P **P** 07 21 35.7 0.0
baz=20
SCM Sheep Creek Mo 80.25 347 P **P** 07 21 36.9 +0.8
baz=22,SNR=14
KLU Klutina 80.31 347 P **P** 07 21 37.4 +0.9
baz=23,SNR=21
T35M Bob Quinn 80.34 337 P **P** 07 21 38.2 +1.6
baz=35
M23K Glacier View 80.36 348 P **P** 07 21 37.5 +0.8
baz=22,SNR=10
J17K VABM Dome 80.36 353 IAmb IAmb 07 21 39.1
comp=Z,22nm,0.9s
J17K VABM Dome 80.36 353 P **P** 07 21 37.9 +1.3
baz=12
TGL Tana Glacier 80.37 345 IAmb IAmb 07 21 38.9
comp=Z,23nm,1.0s
PCA Pinnacle 80.39 343 IAmb IAmb 07 21 39.8
comp=Z,36nm,1.1s
PINM Pinnacle 80.39 343 P **P** 07 21 38.0 +1.1
baz=27
CRQE Cirque 80.42 345 P **P** 07 21 38.1 +0.9
baz=25,SNR=7.9
CRQM Cirque 80.43 345 IAmb IAmb 07 21 39.1
comp=Z,31nm,1.0s
SML Sawmill 80.45 348 P **P** 07 21 38.0 +0.8
baz=21,SNR=7.3
R32K Eaglecrest 80.52 340 P **P** 07 21 39.0 +1.4
baz=32
BMRM Bremner River 80.54 346 P 07 21 38.3 +0.6
BMRM Bremner River 80.54 346 P **P** 07 21 38.7 +1.0
baz=24,SNR=24
J16K Anvik River 80.61 354 P **P** 07 21 39.0 +1.0
baz=11
DIV Divide 80.61 346 IAmb IAmb 07 21 40.4
comp=Z,17nm,0.9s
MA2 Magadan 80.63 17 LR LR 08 01 58.1
comp=Z,168nm,18.1s,baz=302,slow=39
MA2 Magadan 80.63 17 *ce*P **P** 07 21 40.2 +2.1
MA2 pmax pmax
comp=Z,32nm,1.7s
MESA MESA 80.70 344 P **P** 07 21 38.0 -0.7
MESA MESA 80.70 344 P **P** 07 21 39.8 +1.1
baz=26
GAMB Gambell 80.70 359 P **P** 07 21 39.2 +0.8
baz=2.0,SNR=14
R31K City Hall, Gus 80.73 341 P **P** 07 21 40.0 +1.3
baz=31
YNE Yellowstone No 80.76 320 IAmb IAmb 07 21 47.5
comp=Z,20nm,1.0s
PMR Palmer 80.78 348 P **P** 07 21 39.4 +0.5
baz=23,SNR=5.7
M22K Willow 80.80 349 IAmb IAmb 07 21 51.8
comp=Z,25nm,0.9s
M22K Willow 80.80 349 P **P** 07 21 39.3 +0.4
baz=20
SKT Skwentna 80.80 349 P **P** 07 21 38.8 -0.2
baz=18,SNR=7.5
KNK Knik Glacier 80.84 348 P **P** 07 21 40.0 +0.8
baz=21,SNR=11
BERG Berg Lake 80.88 345 IAmb IAmb 07 21 41.8
comp=Z,25nm,0.9s
K17K Iditarod 80.95 353 P **P** 07 21 40.5 +0.7
baz=13
L19K White Mountain 81.07 351 P **P** 07 21 41.2 +0.7
baz=16
GLI Glacier Island 81.09 347 IAmb IAmb 07 21 42.4
comp=Z,17nm,0.8s
GLI Glacier Island 81.09 347 P **P** 07 21 41.3 +0.7
baz=22,SNR=5.4
M20K Styx River 81.12 350 P **P** 07 21 41.8 +0.9
baz=17
EYAK Cordova Ski Ar 81.15 346 P **P** 07 21 42.2 +1.4
baz=23,SNR=11
S32K Killisnoo 81.22 340 P **P** 07 21 43.0 +1.7
baz=32
S31K Pelican 81.25 341 IAmb IAmb 07 21 44.5
comp=Z,25nm,0.9s
S31K Pelican 81.25 341 P **P** 07 21 43.5 +2.1
baz=30,SNR=6.2
L18K Granite Mounta 81.26 352 IAmb IAmb 07 21 44.0
comp=Z,27nm,1.2s
L18K Granite Mounta 81.26 352 P **P** 07 21 42.8 +1.4
baz=14
PTGB Pitanga 81.29 231 *e*P **P** 07 21 43.4 +1.3
STLK Strandline Lak 81.30 349 IAmb IAmb 07 23 09.6
comp=Z,13nm,0.7s
RC01 Rabbit Creek A 81.36 348 P **P** 07 21 42.6 +0.6
baz=20
J14K Nanvaranak Lak 81.38 355 IAmb IAmb 07 22 21.5
comp=Z,13nm,0.7s
J14K Nanvaranak Lak 81.38 355 P **P** 07 21 41.4 -0.6
baz=8.7
BDQN Bodoquena, MS 81.39 237 *e*P **P** 07 21 42.2 -0.5
WRAK Wrangell Islan 81.45 338 P **P** 07 21 42.5 0.0
baz=33
KAIM Kayak Island 81.45 345 P **P** 07 21 41.9 -0.6
baz=24
SIV San Ignacio 81.47 243 LR LR 07 57 50.1
comp=Z,300nm,18.9s,baz=110,slow=36
YHL Hebgen Lake 81.48 320 IAmb IAmb 07 21 56.4
comp=Z,23nm,1.5s
MSO Missoula 81.51 323 P 07 21 43.1 -0.1
L17K Donlin 81.52 352 P **P** 07 21 42.0 -0.8
baz=13
TEIG Tepich 81.54 289 P **P** 07 21 43.1 -0.6
N20K Mount Spurr 81.64 349 P **P** 07 21 42.4 -1.2
baz=18
SPCR Spurr Chakacha 81.64 349 P **P** 07 21 42.7 -0.9
baz=18
K15K Wolf Creek Mou 81.67 354 P **P** 07 21 43.2 -0.4
baz=10,SNR=5.5
YPP Pitchstone Pla 81.68 319 IAmb IAmb 07 21 56.2
comp=Z,50nm,1.7s
ISCO Idaho Springs 81.73 314 P 07 21 43.4 -1.4
ISCO Idaho Springs 81.73 314 P **P** 07 21 43.4 -1.4
ISCO pmax pmax
comp=Z,10.0nm,1.0s
SIT Sitka 81.78 340 P **P** 07 21 44.1 -0.1
baz=31
HNS HongShan 81.83 50 ⇑P **P** 07 21 45.5 +0.6
HNS pmax pmax
comp=Z,14nm,0.9s
M18K Stony River 81.86 351 P **P** 07 21 44.0 -0.6
baz=15
CAPN Captain Cook N 81.89 349 P **P** 07 21 44.9 +0.2
baz=19
AMBA Amambai (Brazi 81.92 234 *e*P **P** 07 21 46.9 +1.4
BBSD Serra de San D 81.92 242 *e*P **P** 07 21 45.9 +0.3
O22K Cooper Landing 81.93 348 P **P** 07 21 44.9 -0.1
baz=20
CMAR Chiang Mai Arr 81.94 73 P **P** 07 21 44.8 -1.0
comp=Z,1.3nm,0.4s,baz=306,slow=7.8,SNR=10.0
CMAR LR LR 08 06 13.4
comp=Z,54nm,19.7s,baz=295,slow=42
comp=Z,1.3nm,0.4s
CMAR Chiang Mai Arr 81.94 73 *ce*P **P** 07 21 46.4 +0.6
CMAR pmax pmax
comp=Z,5.0nm,0.7s
U33K Whale Pass 81.94 338 P **P** 07 21 45.1 0.0
baz=32
P23K Montague Islan 81.97 347 P **P** 07 21 45.2 0.0
baz=22
SLKM Skilak Lake 81.99 348 IAmb IAmb 07 21 46.8
comp=Z,24nm,1.0s
NEW Newport 82.00 325 P **P** 07 21 45.3 -0.4
comp=Z,3.2nm,0.8s,baz=24,slow=5.9,SNR=4.2
NEW LR LR 07 57 35.5
comp=Z,298nm,18.0s,baz=348,slow=35
comp=Z,3.2nm,0.8s
NEW Newport 82.00 325 P 07 21 46.0 +0.3
NEW Newport 82.00 325 P **P** 07 21 46.0 +0.3
NEW pmax pmax
comp=Z,9.0nm,1.2s
PDAR Pinedale Array 82.02 318 P **P** 07 21 45.5 -0.7
comp=Z,2.8nm,0.7s,baz=61,slow=4.9,SNR=28
comp=Z,2.8nm,0.7s
L16K Owhat River 82.06 353 P **P** 07 21 44.9 -0.7
baz=12
V35K Ketchikan 82.14 337 P **P** 07 21 46.0 -0.1
baz=34
M17K Holitna River 82.14 352 IAmb IAmb 07 21 48.8
comp=Z,23nm,0.9s
M17K Holitna River 82.14 352 P **P** 07 21 46.7 +0.6
baz=14
LYN LuoYang 82.19 53 P **P** 07 21 46.5 -0.4
LYN pmax pmax
comp=Z,20nm,0.8s
SEW Seward 82.24 348 IAmb IAmb 07 21 48.7
comp=Z,23nm,1.0s
SEW Seward 82.24 348 P **P** 07 21 46.9 +0.3
baz=20,SNR=5.7
K13K Kusilvak Mount 82.26 355 IAmb IAmb 07 21 48.5
comp=Z,15nm,1.1s
K13K Kusilvak Mount 82.26 355 P **P** 07 21 46.8 +0.1
baz=7.8
L15K Ungalak Mounta 82.28 354 P **P** 07 21 46.3 -0.5
baz=10
Q23K Middleton Isla 82.30 346 P **P** 07 21 46.7 -0.2
baz=22
N19K Bonanza Creek 82.34 350 P **P** 07 21 46.7 -0.5
baz=16
APMT Aspermont 82.36 306 IAmb IAmb 07 21 59.9
comp=Z,17nm,0.8s
RED Redoubt Volcan 82.47 349 IAmb IAmb 07 21 48.8
comp=Z,13nm,1.0s
CRAG Craig 82.49 338 P **P** 07 21 48.0 0.0
baz=32
N18K Kilae Creek 82.65 351 IAmb IAmb 07 21 51.2
comp=Z,14nm,0.8s
N18K Kilae Creek 82.65 351 P **P** 07 21 47.8 -1.0
baz=15
M16K Timber Creek 82.68 353 IAmb IAmb 07 21 55.1
comp=Z,18nm,1.1s
M16K Timber Creek 82.68 353 P **P** 07 21 48.0 -0.9
baz=12,SNR=5.5
L14K Kuka Creek 82.71 354 P **P** 07 21 48.5 -0.5
baz=9.4
KLR Kul'dur 82.71 32 LR LR 08 01 27.0
comp=Z,263nm,18.5s,baz=324,slow=38
KLR Kul'dur 82.71 32 *i*P **P** 07 21 49.6 +0.3
KLR pmax pmax
comp=Z,3.0nm,0.9s
BRSE Bradley Lake S 82.80 348 P **P** 07 21 49.4 -0.2
baz=19
AHID Auburn Hatcher 82.86 319 P **P** 07 21 50.2 -0.3
AHID IAmb IAmb 07 21 58.2
comp=Z,12nm,1.0s
O19K Port Alsworth 82.91 350 IAmb IAmb 07 21 57.7
comp=Z,20nm,1.2s
O19K Port Alsworth 82.91 350 P **P** 07 21 49.8 -0.3
baz=16
B08A Colville Reser 82.94 327 IAmb IAmb 07 21 57.7
comp=Z,22nm,1.5s
N17K Nushagak Hills 82.96 352 IAmb IAmb 07 21 53.0
comp=Z,11nm,0.9s
N17K Nushagak Hills 82.96 352 P **P** 07 21 50.0 -0.4
baz=14
SDCO Great Sand Dun 82.99 312 IAmb IAmb 07 21 54.3
comp=Z,17nm,1.1s
BCYI Bear Canyon 83.00 321 IAmb IAmb 07 22 12.0
comp=Z,28nm,1.6s
M15K Kasigluk River 83.17 353 P **P** 07 21 50.5 -0.9
baz=11,SNR=9.9
N16K Nishlik Lake 83.19 352 P **P** 07 21 50.6 -1.0
baz=12
M14K Bethel 83.23 354 P **P** 07 21 51.2 -0.5
baz=10.0,SNR=7.7
BNX BinXian 83.27 37 ⇑P **P** 07 21 52.0 -0.2
BNX pmax pmax
comp=Z,17nm,0.8s
P19K Oil Pt 83.28 349 P **P** 07 21 51.2 -0.9
baz=17
O18K Koktuh Hills 83.36 350 P **P** 07 21 51.3 -1.2
baz=15
BBB Bella Bella 83.52 333 LR LR 07 58 02.1
comp=Z,114nm,18.1s,baz=70,slow=35
N15K Kwethluk River 83.63 353 P **P** 07 21 52.6 -1.3
baz=12
CN2 Changchun 83.66 39 *e*P **P** 07 21 55.0 +0.7
CN2 pmax pmax
comp=Z,10.0nm,0.7s
M13K Dall Lake 83.68 355 P **P** 07 21 53.4 -0.7
baz=8.8,SNR=6.4
O17K Koliganek Bris 83.69 351 P **P** 07 21 53.6 -0.5
baz=14
D08A Wollman Farm, 83.71 326 IAmb IAmb 07 22 01.9
comp=Z,15nm,1.3s
F10A Beach Ranch, E 83.72 324 P **P** 07 21 54.6 -0.1
E09A Wood Farm, Sta 83.75 325 IAmb IAmb 07 22 14.6
comp=Z,28nm,1.5s
PLID Pearl Lake 83.76 323 P 07 21 54.5 -0.6
PLID IAmb IAmb 07 22 41.7
comp=Z,37nm,2.0s
EPH Ephrata 83.80 326 IAmb IAmb 07 22 15.4
comp=Z,30nm,1.3s
P18K Big Mountain, 83.81 350 P **P** 07 21 53.8 -1.0
baz=15
M11K Mekoryuk 83.90 356 P **P** 07 21 54.2 -0.9
baz=6.5
HWUT Hardware Ranch 83.91 318 IAmb IAmb 07 22 13.7
comp=Z,8.7nm,0.8s
O16K Kokwok River B 83.98 352 P **P** 07 21 54.5 -1.1
baz=13
N14K Kuskokwak Cree 84.02 354 IAmb IAmb 07 22 19.2
comp=Z,23nm,1.1s
N14K Kuskokwak Cree 84.02 354 P **P** 07 21 55.0 -0.8
baz=10
Q19K Cape Douglas, 84.03 349 P **P** 07 21 55.3 -0.7
baz=17
HLID Hailey 84.05 321 IAmb IAmb 07 22 14.6
comp=Z,13nm,1.2s
TIA Tai'an 84.08 49 P **P** 07 21 56.8 +0.2
TIA pmax pmax
comp=Z,12nm,0.8s
Q20K Shuyak Island 84.15 349 P **P** 07 21 55.4 -1.1
baz=18
P17K Kvichak River 84.17 351 P **P** 07 21 56.0 -0.5
baz=14
WAH2 Wahluke Slope 84.23 326 P **P** 07 21 57.1 -0.1
WAH2 IAmb IAmb 07 22 03.7
comp=Z,11nm,0.6s
128A Castleberry Fa 84.35 306 IAmb IAmb 07 22 10.4
comp=Z,9.8nm,1.0s
PV22 Blue Mesa, Par 84.42 314 P **P** 07 21 57.9 -0.7
HVU Hansel Valley 84.44 319 IAmb IAmb 07 22 22.9
comp=Z,15nm,1.2s
HAWA Hanford 84.49 325 IAmb IAmb 07 22 18.0
comp=Z,24nm,1.6s
Q18K Katmai Hardscr 84.50 350 P **P** 07 21 57.5 -1.0
baz=16
P16K Nushagak River 84.52 352 P **P** 07 21 57.7 -0.6
baz=13
P18A Preston Nutter 84.52 316 IAmb IAmb 07 22 18.4
comp=Z,20nm,1.0s
O15K Ungalikthiuk R 84.58 353 IAmb IAmb 07 22 00.8
comp=Z,21nm,1.2s
O15K Ungalikthiuk R 84.58 353 P **P** 07 21 57.5 -1.2
baz=12
JTS Las Juntas de 84.61 279 LR LR 07 54 21.4
comp=Z,258nm,20.7s,baz=14,slow=32
O14K Tigyukauivet M 84.65 353 P **P** 07 21 58.2 -0.8
baz=10
Q16K King Salmon 84.70 351 P **P** 07 21 58.5 -0.8
baz=14
MFID Camas Ranch 84.88 321 IAmb IAmb 07 22 08.9
comp=Z,14nm,0.9s
P17A Butcher Ranch, 84.91 316 IAmb IAmb 07 22 20.8
comp=Z,11nm,0.9s
KDAK Kodiak Island 84.97 349 LR LR 08 02 48.3
comp=Z,134nm,20.8s,baz=358,slow=38
KDAK Kodiak Island 84.97 349 P **P** 07 21 59.9 -0.7
baz=17
ACHA Angle Creek He 84.97 350 IAmb IAmb 07 22 47.3
comp=Z,29nm,1.7s
Q17K Contact Creek 85.00 350 P **P** 07 21 59.9 -1.0
baz=15
SRU San Rafael Swe 85.03 316 IAmb IAmb 07 22 09.1
comp=Z,17nm,1.0s
GNW Green Mountain 85.07 328 IAmb IAmb 07 22 10.3
comp=Z,12nm,1.0s
OTAV Otavalo 85.13 267 IAmb IAmb 07 22 18.9
comp=Z,20nm,1.4s
OTAV Otavalo 85.13 267 *e*P **P** 07 22 03.3 +0.4
MVCO Mesa Verde 85.14 313 P 07 22 01.7 -0.5
MVCO IAmb IAmb 07 22 15.6
comp=Z,11nm,0.8s
CZSB Cruzeiro do Su 85.20 257 *e*P **P** 07 22 02.5 -0.1
LON Longmire 85.25 327 IAmb IAmb 07 22 10.9
comp=Z,12nm,0.9s
MNHN Monahans 85.34 305 IAmb IAmb 07 22 23.3
comp=Z,12nm,1.0s
ANMO Albuquerque 85.39 310 P **P** 07 22 02.3 -1.2
ANMO Albuquerque 85.39 310 IAmb IAmb 07 22 24.2
comp=Z,3.9nm,0.8s
ANMO Albuquerque 85.39 310 *ce*P **P** 07 22 03.9 +0.4
ANMO pmax pmax
comp=Z,4.0nm,1.3s
TPB06 Permian Basin 85.45 306 IAmb IAmb 07 22 24.4
comp=Z,19nm,0.8s
Q16A Castle Valley 85.53 316 IAmb IAmb 07 22 24.2
comp=Z,24nm,1.3s
OHAK Old Harbor 85.62 349 P **P** 07 22 03.4 -0.5
baz=17
R17L Mt. Peulik Vol 85.67 350 P **P** 07 22 03.4 -0.9
baz=14
SAND Sanderson 85.79 304 P **P** 07 22 05.5 0.0
SAND IAmb IAmb 07 22 17.2
comp=Z,16nm,1.0s
CPUP Villa Florida 85.80 233 P **P** 07 22 05.4 +0.2
comp=Z,1.1nm,0.9s,baz=48,slow=6.2,SNR=9.8
CPUP LR LR 08 00 10.7
comp=Z,362nm,19.0s,baz=69,slow=36
comp=Z,1.1nm,0.9s
CPUP Villa Florida 85.80 233 P **P** 07 22 04.6 -0.6
CPUP Villa Florida 85.80 233 P **P** 07 22 04.6 -0.6
CPUP pmax pmax
comp=Z,9.0nm,1.1s
Y22A Socorro 86.37 310 IAmb IAmb 07 22 33.4
comp=Z,20nm,1.4s

SII	**Sitkinak Islan**	**86.39**	**349**	P	**P**	**07 22 06.9**	**-0.9**
	baz=16						
TCRU	**Three Creeks R**	**86.47**	**316**	IAmb	IAmb	07 22 17.0	
	comp=Z,13nm,0.9s						
USRK	**Ussuriysk Ar.**	**86.60**	**36**	P	**P**	**07 22 08.3**	**-0.7**
	comp=Z,4.6nm,0.7s,baz=309,slow=3.9,SNR=4.4						
	comp=Z,4.6nm,0.7s						
LPAZ	**La Paz**	**86.88**	**248**	P	**P**	**07 22 10.8**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=230,slow=7.8,SNR=3.7						
LPAZ				LR	LR	08 00 45.3	
	comp=Z,170nm,18.8s,baz=56,slow=36						
	comp=Z,0.6nm,0.7s						
LPAZ	**La Paz**	**86.88**	**248**	P	**P**	**07 22 10.7**	**-0.8**
LPAZ	**La Paz**	**86.88**	**248**	P	**P**	**07 22 10.7**	**-0.8**
LPAZ				pmax	pmax		
	comp=Z,7.0nm,1.5s						
WVOR	**Wild Horse Val**	**87.00**	**322**	IAmb	IAmb	07 22 32.5	
	comp=Z,15nm,1.4s						
TX31	**Lajitas Ar. Si**	**87.22**	**304**	P	**P**	**07 22 11.1**	**-1.4**
TXAR	**Lajitas Array**	**87.22**	**304**	P	**P**	**07 22 13.9**	**+1.5**
	comp=Z,0.8nm,0.8s,baz=71,slow=5.7,SNR=8.8						
	comp=Z,0.8nm,0.8s						
TXAR	**Lajitas Array**	**87.22**	**304**	P	**P**	**07 22 14.0**	**+1.5**
CHGN	**Chignik**	**87.23**	**351**	P	**P**	**07 22 10.8**	**-1.1**
	baz=13						
SPIA	**Saint Paul Isl**	**87.28**	**358**	P	**P**	**07 22 11.2**	**-0.9**
	baz=3.2						
CHIR	**Chirikof Islan**	**87.32**	**350**	P	**P**	**07 22 11.1**	**-1.2**
	baz=15						
S14K	**Fog Glacier**	**87.39**	**352**	P	**P**	**07 22 12.1**	**-0.6**
	baz=12						
NJ2	**Nanjing**	**87.89**	**51**	*e*P	**P**	**07 22 14.0**	**-1.5**
NJ2				pmax	pmax		
	comp=Z,25nm,0.6s						
U15A	**North Rim**	**87.89**	**315**	IAmb	IAmb	07 22 32.8	
	comp=Z,15nm,1.4s						
SDPT	**Sand Point**	**88.41**	**352**	P	**P**	**07 22 16.9**	**-0.6**
	baz=11						
CMIG	**Matias Romero**	**88.44**	**290**	LR	LR	07 56 47.0	
	comp=Z,197nm,19.0s,baz=46,slow=32						
CHNA	**Chernabura Isl**	**88.82**	**352**	P	**P**	**07 22 18.8**	**-0.6**
	baz=12						
YSS	**Yuzhno-Sakhali**	**89.00**	**28**	*e*P	**P**	**07 22 16.4**	**-4.1**
PB16	**IPOC Station P**	**89.17**	**247**	IAmb	IAmb	07 22 29.8	
	comp=Z,12nm,1.0s						
FALS	**False Pass**	**89.19**	**354**	P	**P**	**07 22 18.7**	**-2.5**
	baz=8.7						
ATAH	**Atahualpa**	**89.39**	**261**	LR	LR	07 59 31.2	
	comp=Z,284nm,21.6s,baz=61,slow=34						
YBH	**Yreka Blue Hor**	**89.52**	**324**	P	**P**	**07 22 21.0**	**-2.1**
	comp=Z,0.1nm,0.8s,baz=164,slow=3.1,SNR=4.4						
YBH				LR	LR	08 01 40.1	
	comp=Z,11nm,19.4s,baz=36,slow=35						
YBH	**Yreka Blue Hor**	**89.52**	**324**	IAmb	IAmb	07 23 02.5	
	comp=Z,18nm,1.7s						
KSRS	**Korea Array**	**89.52**	**42**	LR	LR	08 03 44.8	
	comp=Z,116nm,18.2s,baz=335,slow=36						
M03C	**McCloud**	**89.58**	**323**	IAmb	IAmb	07 22 31.7	
	comp=Z,10.0nm,0.9s						
NVAR	**Mina Array Bea**	**89.79**	**319**	P	**P**	**07 22 23.4**	**-1.3**
	comp=Z,1.3nm,0.9s,baz=44,slow=3.2,SNR=9.8						
	comp=Z,1.3nm,0.9s						
GWY	**Greenwater Val**	**90.55**	**317**	IAmb	IAmb	07 22 47.7	
	comp=Z,25nm,1.6s						
BLYC	**Blythe**	**91.07**	**314**	IAmb	IAmb	07 22 43.0	
	comp=Z,16nm,1.2s						
ASAJ	**Asahikawa**	**91.31**	**30**	LR	LR	08 07 11.6	
	comp=Z,187nm,19.1s,baz=304,slow=38						
JNU	**Nakatsue**	**94.33**	**43**	LR	LR	08 09 54.8	
	comp=Z,225nm,18.3s,baz=333,slow=38						
LPIG	**La Paz**	**95.12**	**304**	LR	LR	08 06 01.8	
	comp=Z,170nm,18.1s,baz=301,slow=36						
MJAR	**Matsushiro Arr**	**95.53**	**37**	PP	**PP**	**07 26 42.6**	**+1.6**
	comp=Z,0.6nm,0.3s,baz=311,slow=8.1,SNR=4.8						
MJAR				LR	LR	08 09 43.8	
	comp=Z,243nm,18.2s,baz=332,slow=38						
JHJ	**Hachijo jima 2**	**99.04**	**38**	LR	LR	08 10 34.8	
	comp=Z,159nm,19.4s,baz=101,slow=37						
QSPA	**South Pole Qui**	**125.71**	**180**	PKP	**PKPdf**	**07 28 25.4**	**-0.9**
	comp=Z,3.6nm,0.6s,baz=277,slow=2.5,SNR=11						
ASAR	**Alice Springs**	**133.88**	**90**	PKP	**PKPdf**	**07 28 42.2**	**-0.9**
	comp=Z,1.0nm,0.9s,baz=328,slow=2.4,SNR=5.0						
TAOE	**Nuku Hiva Isla**	**138.93**	**302**	*e*LR	LR	08 14 07.6	
	comp=Z,159nm,26.0s						
STKA	**Stephens Creek**	**143.37**	**97**	PKP	PKPab	07 28 56.8	+0.5
	comp=Z,2.1nm,0.6s,baz=323,slow=2.4,SNR=6.8						
TOO	**Toolangi**	**147.86**	**105**	PKPbc	**PKPbc**	**07 29 10.8**	**0.0**
TOO	**Toolangi**	**147.86**	**105**	PKP2	**PKPbc**	**07 29 10.8**	**0.0**
PPT2	**Papeete2**	**151.55**	**303**	*e*LR	LR	08 19 43.8	
	comp=Z,122nm,25.0s						

MAN ***26*** *07:12:36.0,5.˚12N×128.˚13E,h30km,MS4.2*
NEIC ***26*** *07:12:40.4±1.8,5.˚32N±0.˚06×127.˚57E±0.˚08,h10km±1km, mb4.9/92, Error ellipse: s-maj=14.1km s-min=9.1km az=60.0*
BJI ***26*** *07:12:41.4,5.˚00N×127.˚70E,h48km,mB5.2/6,mb4.8/45, Ms4.5/11,Ms7 4.2/13*
IDC ***26*** *07:12:42.8±2.4,5.˚30N×127.˚58E,h32km±17km,mb4.3/26, mbtmp4.5/30,ML4.2/4,MS3.8/6, Error ellipse: s-maj=19.5km s-min=10.0km az=69.0*
DJA ***26*** *07:12:51.3±0.3,5.˚N±3.˚×12.˚7E±.˚,h55km±4km,M4.7/71, mB5.2/13,mb4.9/71,MLv4.9/9,Mw(mB)4.5/16, MwMwp5.0/1*
ISC 26 07:12:43.3±0.3,5.˚33N±0.˚04×127.˚73E±0.˚05,h35km,n217, σ1$50/203,mb4.8/82,MS4.1/12,2C-1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
DDMP	**Don Marcelino,**	**2.15**	**291**	*e*P	**Pn**	**07 13 16.8**	**+0.2**
DDMP				*e*S	**Sn**	**07 13 48.0**	**+6.0**
SGSI	**Sangihe**	**2.73**	**233**	P	**Pn**	**07 13 25.4**	**+0.7**
DAV	**Davao City (W)**	**2.75**	**309**	Pn	**Pn**	**07 13 24.3**	**-0.6**
	69nm,0.3s,baz=168,slow=0.4,SNR=5.0						
DAV				Sn	**Sn**	**07 13 56.1**	**-0.8**
	168nm,0.3s,baz=105,slow=23,SNR=9.5						
	251nm,0.4s						
DAV	**Davao City (W)**	**2.75**	**309**		**Pn**	**07 13 23.1**	**-1.8**
DAV	**Davao City (W)**	**2.75**	**309**	P	Pn	07 13 30.8	+5.9
CDOP	**Cateel, Davao**	**2.75**	**332**	*i* P	**Pn**	**07 13 24.7**	**-0.3**
CDOP				*i* S	**Sn**	**07 13 53.3**	**-3.7**
GSPH	**General Santos**	**2.86**	**285**	*i* P	**Pn**	**07 13 29.6**	**+3.0**
GSPH				*i* S	**Sn**	**07 14 01.9**	**+2.0**
GSPH	**General Santos**	**2.86**	**285**	*i* P	Pn	07 13 31.3	+4.7
BUKP	**Musuan**	**3.66**	**314**	*e*P	**Pn**	**07 13 38.6**	**+1.1**
BUKP				*e*S	Sn	07 14 28.6	+9.0
TSSP	**Tandag City**	**3.99**	**338**	*e*P	**Pn**	**07 13 41.6**	**-0.4**
TNTI	**Ternate**	**4.54**	**185**	Pn	**Pn**	**07 13 48.0**	**-1.6**
TNTI	**Ternate**	**4.54**	**185**	P	**Pn**	**07 13 53.8**	**+4.2**
MNI	**Manado**	**4.82**	**217**	P	**Pn**	**07 13 55.1**	**+1.7**
TBP	**Tagbilaran**	**5.78**	**319**	*e*P	**Pn**	**07 14 07.2**	**+0.5**
SNPH	**Sibulan**	**5.98**	**312**	*e*P	Pn	07 14 17.5	+8.1
LLP	**Lapu-Lapu**	**6.20**	**323**	*i* P	**Pn**	**07 14 13.3**	**+0.9**
LLP				*i* S	**Sn**	**07 15 21.8**	**-0.3**
PLP	**Palo**	**6.40**	**335**	*e*P	**Pn**	**07 14 16.4**	**+1.2**
GTOI	**Gorontalo**	**6.63**	**225**	P	**Pn**	**07 14 19.2**	**+0.9**
	0.4nm134nm,1.1s						
SWI	**Sorong**	**7.09**	**150**	P	Pn	07 14 31.0	+6.3
	0.3nm2µm38nm,0.4s						
SIJI	**Sorong**	**7.10**	**150**	Pn	**Pn**	**07 14 25.2**	**+0.3**
	4.5nm,0.3s,baz=154,slow=21,SNR=7.9						
SIJI				Sn	**Sn**	**07 15 41.5**	**-2.9**
	1.7nm,0.3s,baz=165,slow=23,SNR=1.5						
	10nm,0.4s						
SIJI	**Sorong**	**7.10**	**150**	P	Pn	07 14 32.4	+7.6
MRSI	**Marisa**	**7.52**	**230**	P	**Pn**	**07 14 31.5**	**+0.9**
	162nm,0.6s						
SANI	**Sanana**	**7.53**	**193**	P	**Pn**	**07 14 31.7**	**+0.9**
	0.3nm67nm,1.2s						
LUWI	**Luwuk**	**8.04**	**218**		**Pn**	**07 14 34.0**	**-3.6**
LUWI	**Luwuk**	**8.04**	**218**	P	**Pn**	**07 14 40.1**	**+2.5**
TOLI2	**Tolitoli**	**8.10**	**239**		**Pn**	**07 14 35.2**	**-3.3**
NLAI	**Namlea**	**8.54**	**184**	P	**Pn**	**07 14 47.7**	**+3.2**
	73nm,0.5s						
KRAI	**Karang Ratu**	**8.62**	**176**	P	Pn	07 14 50.5	+4.9
	24nm,0.7s						
APSI	**Ampana**	**8.68**	**225**	P	**Pn**	**07 14 49.4**	**+3.0**
	193nm,1.2s						
MSAI	**Masohi**	**8.70**	**172**	P	Pn	07 14 52.4	+5.6
	142nm,0.8s						
AAI	**Ambon**	**8.97**	**177**	P	**Pn**	**07 14 55.1**	**+4.6**
	69nm,0.7s						
MPSI	**Mapaga**	**9.26**	**238**	P	**Pn**	**07 14 58.0**	**+3.6**
	21nm,0.7s						

FAKI	**Fak Fak**	**9.36**	**151**	Pn	**Pn**	**07 14 55.8**	**0.0**
FAKI	**Fak Fak**	**9.36**	**151**	P	Pn	07 15 03.1	+7.3
BNDI	**Bandanaira**	**10.03**	**167**	P	Pn	07 15 10.8	+5.8
TARAI	**Tarakan**	**10.32**	**259**	P	**Pn**	**07 15 11.5**	**+2.5**
BAKI	**Biak**	**10.59**	**128**	P	Pn	07 15 21.6	+9.0
	55nm,0.9s						
KMPI	**Kaimana, Papua**	**10.74**	**146**	P	Pn	07 15 22.1	+7.3
SRPI	**Serui, Papua**	**11.11**	**130**	P	Pn	07 15 27.8	+7.9
KKSI	**Kolaka, Sulawe**	**11.22**	**213**	P	**Pn**	**07 15 21.8**	**+0.5**
	56nm,0.8s						
KKM	**Kota Kinabalu**	**11.48**	**274**	Pn	**Pn**	**07 15 21.4**	**-3.6**
KKM	**Kota Kinabalu**	**11.48**	**274**	P	**Pn**	**07 15 28.3**	**+3.4**
MMSI	**Mamuju**	**11.88**	**228**	P	**Pn**	**07 15 32.3**	**+2.0**
	59nm,1.9s						
SPSI	**Sidrap Palu**	**12.18**	**221**	P	**Pn**	**07 15 35.5**	**+1.0**
PMSI	**Majene**	**12.43**	**225**	P	**Pn**	**07 15 40.0**	**+2.1**
	962nm44nm,1.0s						
BKB	**Balikpapan**	**12.64**	**239**	P	**Pn**	**07 15 40.5**	**-0.3**
KAPI	**Kappang**	**13.00**	**218**	Pn	**Pn**	**07 15 43.9**	**-1.7**
	0.8nm,0.3s,baz=23,slow=12,SNR=7.2						
	2.0nm,0.3s						
KAPI	**Kappang**	**13.00**	**218**	Pn	**Pn**	**07 15 42.8**	**-2.9**
KAPI	**Kappang**	**13.00**	**218**	P	**Pn**	**07 15 46.9**	**+1.2**
SMPI	**Sarmi**	**13.16**	**123**	P	**P**	**07 15 57.7**	**+0.2**
	74nm,1.0s						
MKS	**Makassar**	**13.33**	**218**	P	**Pn**	**07 15 50.0**	**-0.2**
	37nm,1.0s						
BSSI	**Bau Bau, Buton**	**13.49**	**212**	P	**Pn**	**07 15 52.5**	**+0.1**
	21nm,0.6s						
MTKI	**Muara Teweh, K**	**14.25**	**244**	P	**Pn**	**07 16 03.9**	**+1.2**
GENI	**Genyem**	**14.71**	**122**	P	**P**	**07 16 18.0**	**+3.3**
	155nm,1.2s						
MMRI	**Maumere**	**14.91**	**202**	Pn	**Pn**	**07 16 10.0**	**-1.7**
MMRI	**Maumere**	**14.91**	**202**	P	**Pn**	**07 16 12.2**	**+0.5**
	85nm,0.8s						
JAY	**Jayapura**	**15.13**	**121**	Pn	**Pn**	**07 16 15.9**	**+1.3**
	1.0nm,0.3s,baz=266,slow=19,SNR=9.6						
	7.5nm,0.9s						
JAY	**Jayapura**	**15.13**	**121**	P	**P**	**07 16 22.3**	**+2.9**
	802nm53nm,0.8s						
SOEI	**Soe**	**15.38**	**193**	Pn	**Pn**	**07 16 17.3**	**-0.6**
SOEI	**Soe**	**15.38**	**193**	P	**P**	**07 16 20.0**	**-2.2**
	904nm87nm,1.0s						
BBKI	**Banjar Baru**	**15.55**	**236**	P	**P**	**07 16 22.1**	**-2.0**
	121nm,1.4s						
SBUM	**Sibu**	**15.73**	**260**	Pn	**Pn**	**07 16 20.8**	**-1.6**
SBUM	**Sibu**	**15.73**	**260**	P	**P**	**07 16 25.5**	**-0.5**
	29nm,0.8s						
LBFI	**Labuhan Bajo,**	**15.79**	**210**	P	**Pn**	**07 16 23.9**	**+0.7**
BATI	**Baumata**	**15.96**	**195**	P	**P**	**07 16 27.7**	**-0.9**
	43nm,0.5s						
WSI	**Waingapu**	**16.64**	**206**	P	**Pn**	**07 16 34.5**	**+0.5**
	95nm,0.6s						
DBNI	**Kabupaten Domp**	**16.64**	**214**	P	**Pn**	**07 16 34.8**	**+0.8**
	36nm,1.4s						
BASI	**Baing, Sumba**	**17.01**	**205**	P	**P**	**07 16 40.4**	**+0.2**
	77nm,1.0s						
WBSI	**Waikabubak, Su**	**17.04**	**209**	P	**P**	**07 16 39.7**	**-0.8**
	84nm,1.0s						
PLAI	**Plampang**	**17.21**	**215**	P	**Pn**	**07 16 40.7**	**-0.5**
	63nm,0.8s						
TWSI	**Taliwang, Sumb**	**17.67**	**218**	P	**Pn**	**07 16 46.3**	**-0.6**
	949nm42nm,1.0s						
PBKI	**Pangkalan Bun**	**17.91**	**244**	P	**P**	**07 16 51.8**	**+1.6**
KLNI	**Mataram**	**17.92**	**220**	P	**P**	**07 16 51.1**	**+0.8**
	34nm,0.5s						
KHKI	**Kahang-Kahang**	**18.20**	**222**	P	**P**	**07 16 54.6**	**+1.3**
	36nm,0.8s						
SRBI	**Singaraja**	**18.26**	**223**	P	**Pn**	**07 16 55.7**	**+1.6**
	40nm,1.3s						
MTN	**Manton Dam**	**18.37**	**169**		**P**	**07 16 53.9**	**-1.4**
KMMI	**Kalianget**	**18.43**	**228**	P	**Pn**	**07 16 58.1**	**+1.9**
	26nm,0.9s						
DNP	**Denpasar**	**18.69**	**222**	P	**Pn**	**07 17 00.9**	**+1.6**
	143nm,1.1s						
GUMO	**Guam**	**18.78**	**63**	LR	LR	07 23 47.5	
	comp=Z,244nm,18.2s,baz=243,slow=35						
IGBI	**Denpasar**	**18.84**	**222**	P	**Pn**	**07 17 01.8**	**+0.7**
	62nm,0.7s						
YULB	**Yu-li**	**19.00**	**342**	P	**P**	**07 17 00.6**	**-1.4**
TPUB	**Ta-pu**	**19.13**	**340**	P	**P**	**07 17 02.8**	**-0.8**
TPUB				IAmb	IAmb	07 17 11.2	
	comp=Z,155nm,2.0s						
JAGI	**Jajag, Banyuwa**	**19.27**	**225**	P	**P**	**07 17 03.5**	**-1.6**
SSLB	**Suanglung**	**19.48**	**341**		**P**	**07 17 05.9**	**-1.5**
KNRA	**Kununurra**	**20.90**	**177**		**P**	**07 17 22.8**	**0.0**
JOW	**Kunigami**	**21.39**	**1**	P	**P**	**07 17 28.8**	**+0.8**
	comp=Z,21nm,0.6s,baz=190,slow=16,SNR=4.1						
	comp=Z,21nm,0.6s						
JOW	**Kunigami**	**21.39**	**1**	P	**P**	**07 17 27.7**	**-0.3**
JOW				IAmb	IAmb	07 17 40.7	
	comp=Z,34nm,0.9s						
LEM	**Lembang**	**23.42**	**239**	LR	LR	07 28 50.4	
	comp=Z,240nm,18.3s,baz=143,slow=42						
BBJI	**Bungbulang**	**23.72**	**238**		**P**	**07 17 50.0**	**-2.5**
BBJI				IAmb	IAmb	07 17 52.1	
	comp=Z,17nm,0.7s						
MYKOM	**Kota Tinggi**	**24.08**	**262**		**P**	**07 17 54.8**	**-1.0**
PMG	**Port Moresby**	**24.28**	**127**	P	**P**	**07 17 56.3**	**-1.2**
COEN	**Coen**	**24.54**	**141**	P	**P**	**07 17 58.7**	**-1.3**
JCJ	**Chichijima**	**25.66**	**31**	P	**P**	**07 18 11.4**	**+1.4**
	comp=Z,38nm,0.6s,baz=72,slow=22,SNR=5.1						
	comp=Z,38nm,0.6s						
JCJ	**Chichijima**	**25.66**	**31**	P	**P**	**07 18 10.5**	**+0.6**
WB0	**Warramunga Arr**	**25.79**	**165**	P	**P**	**07 18 10.3**	**-0.9**
WB0				IAmb	IAmb	07 18 30.1	
	comp=Z,31nm,0.9s						
WRA	**Warramunga Arr**	**25.94**	**166**	P	**P**	**07 18 12.4**	**-0.2**
	comp=Z,3.9nm,0.8s,baz=343,slow=10,SNR=24						
WRA				ScP	**ScP**	**07 25 18.0**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=343,slow=3.3,SNR=7.5						
	comp=Z,3.9nm,0.8s						
WR8	**Warramunga Arr**	**26.00**	**165**	P	**P**	**07 18 12.7**	**-0.4**
WR8				IAmb	IAmb	07 18 42.2	
	comp=Z,43nm,1.4s						
KRVT	**Keravat (AS076**	**26.09**	**111**	LR	LR	07 27 49.4	
	comp=Z,46nm,19.2s,baz=172,slow=35						
MBWA	**Marble Bar**	**27.47**	**196**	P	**P**	**07 18 26.8**	**+0.4**
MBWA				IAmb	IAmb	07 19 04.3	
	comp=Z,35nm,1.3s						
PSA00	**Pilbara Seismi**	**27.83**	**196**	P	**P**	**07 18 27.5**	**-2.1**
PSA00				IAmb	IAmb	07 18 59.9	
	comp=Z,38nm,1.2s						
NJ2	**Nanjing**	**27.85**	**344**	*e*P	**P**	**07 18 32.5**	**+2.9**
NJ2				pmax	pmax		
	comp=Z,21nm,0.6s						
GYA	**Guiyang**	**29.09**	**318**	P	**P**	**07 18 43.3**	**+2.4**
GYA				pmax	pmax		
	comp=Z,27nm,0.8s						
GYA				L	L		
	comp=Z,560nm,15.6s						
AS31	**Alice Springs**	**29.44**	**168**	P	**P**	**07 18 45.0**	**+1.1**
ASAR	**Alice Springs**	**29.45**	**168**	P	**P**	**07 18 43.5**	**-0.5**
	comp=Z,1.3nm,0.5s,baz=351,slow=7.9,SNR=22						
ASAR				PcP	**PcP**	**07 21 49.4**	**0.0**
	comp=Z,1.5nm,0.5s,baz=344,slow=2.3,SNR=6.0						
ASAR				ScP	**ScP**	**07 25 28.3**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=354,slow=2.7,SNR=7.8						
	comp=Z,1.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**30.97**	**297**	P	**P**	**07 18 55.6**	**-2.0**
	comp=Z,1.6nm,0.5s,baz=110,slow=7.0,SNR=7.7						
CMAR				LR	LR	07 32 30.3	
	comp=Z,219nm,18.1s,baz=115,slow=38						
	comp=Z,1.6nm,0.5s						
KMI2	**Kunming**	**31.02**	**312**	P	**P**	**07 18 58.5**	**+0.4**
KMI2				pmax	pmax		
	comp=Z,18nm,0.6s						
INU	**Inuyama**	**31.08**	**15**		**P**	**07 18 59.4**	**+1.1**
INU				IAmb	IAmb	07 19 00.4	
	comp=Z,14nm,0.7s						
JGF	**Kuroka**	**31.40**	**15**	P	**P**	**07 19 02.1**	**+0.9**
JGF				IAmb	IAmb	07 19 03.9	
	comp=Z,13nm,0.7s						
KSRS	**Korea Array**	**31.97**	**0**	P	**P**	**07 19 05.8**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=178,slow=10,SNR=5.8						
	comp=Z,1.3nm,0.6s						
TIA	**Tai'an**	**32.24**	**344**	P	**P**	**07 19 10.0**	**+1.5**
TIA				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MAJO	**Matsushiro**	**32.52**	**16**	P	**P**	**07 19 10.2**	**-0.8**
MAJO				IAmb	IAmb	07 19 11.5	
	comp=Z,16nm,1.3s						
MJAR	**Matsushiro Arr**	**32.52**	**16**	P	**P**	**07 19 10.4**	**-0.5**
	comp=Z,1.9nm,0.6s,baz=182,slow=9.1,SNR=5.9						
MJAR				LR	LR	07 32 15.7	
	comp=Z,297nm,20.1s,baz=246,slow=36						
	comp=Z,1.9nm,0.6s						

MJB9	**Matsu-Tunnel**	**32.52**	**16**	P	**P**	**07 19 11.3**	**+0.4**
MJB9				IAmb	IAmb	07 19 12.5	
	comp=Z,15nm,1.3s						
PZH	**PanZhiHua**	**32.54**	**313**	P	**P**	**07 19 12.8**	**+1.4**
XAN	**Xi'an**	**33.47**	**331**	⇑P	**P**	**07 19 18.5**	**-0.9**
XAN				S	**S**	**07 24 37.8**	**-1.0**
XAN				pmax	pmax		
	comp=Z,18nm,0.7s						
XAN				pmax	pmax		
	comp=Z,140nm,3.9s						
XAN				L	L		
	comp=Z,270nm,13.7s						
XAN				L	L		
	comp=Z,320nm,11.0s						
XAN				L	L		
	comp=Z,200nm,13.7s						
CD2	**Chengdu**	**33.98**	**321**	P	**P**	**07 19 23.5**	**-0.3**
CD2				pmax	pmax		
	comp=Z,30nm,1.0s						
CD2				L	L		
	comp=Z,460nm,15.2s						
CD2				L	L		
	comp=Z,340nm,13.3s						
CD2				L	L		
	comp=Z,360nm,15.2s						
HNS	**HongShan**	**34.06**	**341**	⇓P	**P**	**07 19 24.5**	**+0.2**
HNS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
INKA	**Innaminka**	**35.20**	**160**		**P**	**07 19 34.0**	**-0.3**
HNR	**Honiara**	**35.30**	**114**	LR	LR	07 32 58.6	
	comp=Z,6.1nm,22.0s,baz=342,slow=34						
FORT	**Forrest**	**35.91**	**180**	P	**P**	**07 19 41.1**	**+0.8**
MORW	**Morawa**	**36.00**	**198**	P	**P**	**07 19 39.5**	**-1.6**
MORW				IAmb	IAmb	07 20 00.2	
	comp=Z,19nm,1.4s						
BJI2	**Beijing**	**36.07**	**345**	P	**P**	**07 19 44.3**	**+2.7**
BJI2				pmax	pmax		
	comp=Z,14nm,0.9s						
BJT	**Baijiatuau**	**36.07**	**345**	P	**P**	**07 19 41.5**	**-0.2**
BJT				IAmb	IAmb	07 19 53.4	
	comp=Z,23nm,0.9s						
JTM	**Tenmabayashi**	**37.28**	**17**	P	**P**	**07 19 51.1**	**-0.8**
LZDM	**Lanzhou Array**	**37.65**	**327**	P	**P**	**07 19 54.0**	**-1.4**
	comp=Z,1.0nm,0.3s,baz=168,slow=15,SNR=3.9						
	comp=Z,1.0nm,0.3s						
LZH	**Lanzhou**	**37.66**	**328**	*e*P	**P**	**07 19 55.3**	**-0.2**
LZH				pP	sP	07 20 10.0	+3.4
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LZH				L	L		
	comp=Z,320nm,14.1s						
LZH				L	L		
	comp=Z,400nm,13.4s						
LZH				L	L		
	comp=Z,430nm,13.4s						
EIDS	**Eidsvold**	**38.03**	**144**	P	**P**	**07 19 59.6**	**+1.1**
EIDS				IAmb	IAmb	07 20 15.1	
	comp=Z,24nm,1.2s						
HHC	**Hu-ho-hao-te**	**38.22**	**340**	*e*P	**P**	**07 20 02.0**	**+2.0**
HHC				sP	pwP	07 20 18.3	-0.2
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BBOO	**Buckleboo**	**38.75**	**169**	P	**P**	**07 20 04.8**	**+0.4**
BBOO				IAmb	IAmb	07 20 26.0	
	comp=Z,39nm,1.6s						
USRK	**Ussuriysk Ar.**	**38.89**	**5**	P	**P**	**07 20 05.8**	**+0.3**
	comp=Z,2.7nm,0.6s,baz=198,slow=5.6,SNR=4.6						
	comp=Z,2.7nm,0.6s						
MDJ	**Mudanjiang**	**39.16**	**2**	P	**P**	**07 20 07.1**	**-0.6**
MDJ				IAmb	IAmb	07 21 03.4	
	comp=Z,22nm,1.1s						
JEW	**Eniwo**	**39.28**	**16**	P	**P**	**07 20 08.8**	**+0.1**
STKA	**Stephens Creek**	**39.29**	**161**	P	**P**	**07 20 08.7**	**-0.3**
	comp=Z,6.7nm,0.5s,baz=343,slow=9.0,SNR=15						
STKA				LR	LR	07 38 27.1	
	comp=Z,203nm,19.3s,baz=359,slow=39						
	comp=Z,6.7nm,0.5s						
STKA	**Stephens Creek**	**39.29**	**161**	P	**P**	**07 20 08.9**	**0.0**
SHL	**Shillong**	**39.77**	**304**	P	**P**	**07 20 11.7**	**-1.6**
SHL				IAmb	IAmb	07 20 28.6	
	comp=Z,22nm,0.9s						
BNX	**BinXian**	**40.25**	**360**	⇑P	**P**	**07 20 17.3**	**+0.5**
BNX				pmax	pmax		
	comp=Z,9.0nm,2.5s						
LSA	**Lhasa**	**42.16**	**309**	P	**P**	**07 20 31.5**	**-1.8**
LSA				pmax	pmax		
	comp=Z,10.0nm,0.4s						
ARMA	**Armidale**	**42.28**	**149**	P	**P**	**07 20 33.2**	**-0.6**
ARMA				IAmb	IAmb	07 20 51.2	
	comp=Z,37nm,1.1s						
**GTA

BORK	**Borovoye**	**66.58**	**326**	P	**P**	**07 23 29.5**	**-0.4**
BORK				IAmb	IAmb	07 23 56.8	
	comp=Z,10nm,0.8s						
HRA	**Herat**	**66.82**	**305**	P	**P**	**07 23 31.2**	**-1.0**
HRA				IAmb	IAmb	07 23 32.4	
	comp=Z,5.3nm,0.7s						
NRIK	**Noril'sk**	**69.12**	**346**	P	**P**	**07 23 45.0**	**-0.6**
	comp=Z,2.5nm,0.7s,baz=170,slow=6.1,SNR=2.6						
	comp=Z,2.5nm,0.7s						
NRIK	**Noril'sk**	**69.12**	**346**	P	**P**	**07 23 45.1**	**-0.6**
NRIK				IAmb	IAmb	07 25 27.3	
	comp=Z,11nm,1.2s						
AB31	**Akbulak array**	**71.55**	**320**	P	**P**	**07 24 00.7**	**-0.2**
AB31				IAmb	IAmb	07 26 31.1	
	comp=Z,7.2nm,0.6s						
AKUT	**Akutan**	**72.05**	**35**	P	**P**	**07 24 05.6**	**+1.9**
CASY	**Casey**	**72.52**	**187**	P	**P**	**07 24 07.9**	**+1.7**
GAMB	**Gambell**	**72.54**	**24**	P	**P**	**07 24 08.2**	**+1.7**
K13K	**Kusilvak Mount**	**74.89**	**27**	P	**P**	**07 24 21.3**	**+1.0**
ANM	**Nome**	**75.41**	**24**	P	**P**	**07 24 25.5**	**+2.2**
L14K	**Kuka Creek**	**75.63**	**28**	P	**P**	**07 24 26.8**	**+2.3**
N14K	**Kuskokwak Cree**	**75.73**	**29**	P	**P**	**07 24 27.0**	**+1.8**
M14K	**Bethel**	**75.81**	**28**	P	**P**	**07 24 27.4**	**+1.8**
M14K				IAmb	IAmb	07 24 28.9	
	comp=Z,7.2nm,0.7s						
L16K	**Owhat River**	**77.21**	**28**	IAmb	IAmb	07 24 52.7	
	comp=Z,8.8nm,1.2s						
M20K	**Styx River**	**80.20**	**28**	IAmb	IAmb	07 25 32.2	
	comp=Z,26nm,1.8s						
RAYN	**Ar Rayn**	**80.78**	**293**	P	**P**	**07 24 53.2**	**-0.8**
RAYN				IAmb	IAmb	07 24 54.3	
	comp=Z,14nm,0.8s						
STLK	**Strandline Lak**	**80.78**	**29**	P	**P**	**07 24 53.2**	**0.0**
CNPM	**China Poot**	**80.88**	**31**	P	**P**	**07 24 53.7**	**0.0**
B22K	**Teshekpuk Lake**	**81.26**	**20**	IAmb	IAmb	07 24 58.3	
	comp=Z,7.1nm,0.8s						
L22K	**Petersville**	**81.37**	**28**	P	**P**	**07 24 56.7**	**+0.4**
L22K				IAmb	IAmb	07 24 58.4	
	comp=Z,11nm,0.6s						
BPAW	**Bear Paw Mtn.**	**81.42**	**26**	P	**P**	**07 24 57.8**	**+1.3**
SLKM	**Skilak Lake**	**81.47**	**30**	P	**P**	**07 24 56.8**	**-0.1**
MLY	**Manley**	**81.62**	**25**	P	**P**	**07 24 58.8**	**+1.2**
SEW	**Seward**	**81.82**	**30**	P	**P**	**07 24 59.7**	**+1.1**
COLD	**Coldfoot**	**82.04**	**23**	P	**P**	**07 25 00.4**	**+0.7**
COLD				IAmb	IAmb	07 25 03.2	
	comp=Z,6.5nm,0.7s						
G23K	**Bananza Creek**	**82.06**	**23**	IAmb	IAmb	07 25 03.4	
	comp=Z,5.7nm,0.8s						
BWN	**Browne**	**82.09**	**26**	P	**P**	**07 25 01.1**	**+1.1**
C23K	**Itkillik River**	**82.15**	**20**	IAmb	IAmb	07 25 03.3	
	comp=Z,11nm,0.8s						
I23K	**Minto, Yukon-K**	**82.21**	**25**	P	**P**	**07 25 01.7**	**+1.1**
I23K				IAmb	IAmb	07 25 18.1	
	comp=Z,11nm,1.3s						
MCK	**McKinley**	**82.30**	**26**	P	**P**	**07 25 02.2**	**+1.0**
MCK				IAmb	IAmb	07 25 19.4	
	comp=Z,8.1nm,1.0s						
KNK	**Knik Glacier**	**82.39**	**29**	P	**P**	**07 25 02.3**	**+0.7**
GEVA	**Gevas**	**82.54**	**308**	P	**P**	**07 25 02.7**	**-0.4**
GEVA				IAmb	IAmb	07 25 05.2	
	comp=Z,9.8nm,0.7s						
KBZ	**Khabaz**	**82.61**	**313**	P	**P**	**07 25 03.5**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=98,slow=6.9,SNR=4.5						
	comp=Z,1.1nm,0.7s						
D24K	**Happy Valley**	**82.71**	**21**	IAmb	IAmb	07 25 06.6	
	comp=Z,5.9nm,0.6s						
H24K	**Noodor Dome**	**82.87**	**24**	IAmb	IAmb	07 25 07.3	
	comp=Z,5.2nm,0.7s						
ILAR	**Eielson Array**	**83.24**	**25**	P	**P**	**07 25 06.2**	**+0.2**
	comp=Z,1.4nm,0.6s,baz=248,slow=5.3,SNR=6.9						
	comp=Z,1.4nm,0.6s						
VNDA	**Vanda**	**84.88**	**173**	P	**P**	**07 25 14.2**	**+0.2**
	comp=Z,1.8nm,0.9s,baz=314,slow=7.5,SNR=5.0						
	comp=Z,1.8nm,0.9s						
VNDA	**Vanda**	**84.88**	**173**	P	**P**	**07 25 14.8**	**+0.8**
I27K	**Kandik River**	**85.46**	**25**	IAmb	IAmb	07 25 21.2	
	comp=Z,5.6nm,0.7s						
I28M	**Miner Creek**	**86.17**	**25**	IAmb	IAmb	07 25 24.3	
	comp=Z,8.9nm,0.7s						
ARCES	**ARCESS Array B**	**89.30**	**340**	P	**P**	**07 25 34.5**	**-1.2**
	comp=Z,10nm,1.2s,baz=26,slow=6.7,SNR=4.0						
	comp=Z,10nm,1.2s						
BRTR	**Keskin Array B**	**89.77**	**310**	P	**P**	**07 25 37.0**	**-1.7**
	comp=Z,1.2nm,0.8s,baz=102,slow=5.2,SNR=5.4						
	comp=Z,1.2nm,0.8s						
FINES	**FINESS Array B**	**90.90**	**332**	P	**P**	**07 25 41.9**	**-1.4**
	comp=Z,1.7nm,0.9s,baz=111,slow=9.1,SNR=1.6						
	comp=Z,1.7nm,0.9s						
AKASG	**Malin Array Be**	**91.28**	**321**	P	**P**	**07 25 43.7**	**-1.6**
	comp=Z,0.3nm,0.4s,baz=70,slow=4.7,SNR=4.1						
	comp=Z,0.3nm,0.4s						
TXAR	**Lajitas Array**	**119.84**	**52**	PKP	**PKPdf**	**07 31 31.1**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=302,slow=2.6,SNR=3.1						
TORD	**Torodi Ar. Bea**	**123.35**	**289**	PKP	**PKPdf**	**07 31 37.1**	**-0.6**
	comp=Z,1.4nm,0.7s,baz=28,slow=0.7,SNR=6.3						
PLCA	**Paso Flores**	**141.12**	**158**	PKP	**PKPdf**	**07 32 11.0**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=215,slow=12,SNR=3.3						
BI02	**San Fabin de**	**144.28**	**153**	PKPdf	**PKPdf**	**07 32 15.7**	**-0.6**
ML02	**Panimavida**	**144.96**	**152**	PKPbc	**PKPab**	**07 32 15.4**	**-1.2**
BO02	**Sierra Bellavi**	**146.05**	**152**	PKPbc	**PKPab**	**07 32 20.8**	**0.0**
TRQA	**Tornquist**	**146.25**	**166**	PKPbc	**PKPbc**	**07 32 21.1**	**+0.4**
LPAZ	**La Paz**	**161.02**	**126**	PKP	**PKPdf**	**07 32 43.0**	**+1.2**
	comp=Z,0.8nm,0.8s,baz=115,slow=2.9,SNR=3.9						
LPAZ				PKPab	**PKPab**	**07 33 25.6**	**+1.0**
	comp=Z,1.4nm,0.9s,baz=34,slow=3.5,SNR=4.7						

*IDC **26** 07:16:57.6±0.8,49.°61N×154.°37E,h139km±7km,mb4.0/28, mbtmp4.5/34,MS4.2/2,Error ellipse: s-maj=11.4km s-min=9.5km az=149.0*

*KRSC **26** 07:16:57.1±2.0,49.°41N×155.°13E,h174km±24km,Ml4.9*

*MOS **26** 07:16:58.9±1.2,49.°64N×154.°58E,h160km,mb4.5/34, Error ellipse: s-maj=7.5km s-min=3.6km az=70.8*

*NEIC **26** 07:16:59.8±1.4,49.°72N±0.°08×154.°4E±0.°1,h149km±5km, mb4.7/174,Error ellipse: s-maj=13.8km s-min=9.1km az=138.0*

ISC 26 07:16:58.3±0.5,49.°56N±0.°05×154.°64E±0.°04,h143km±4km, h142km:pP-P,n595,σt̄39/618,mb4.7/153,3C-11D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SKR	**Severo-Kuril's**	**1.48**	**40**	*e*P		**Pn**	**07 17 27.9**	**+0.9**
SKR				*e*S		**Sn**	**07 17 50.4**	**+1.4**
SKR				pmax	pmax			
	comp=Z,2μm,0.6s							
SKR				smax	smax			
	comp=N,2μm,0.3s							
SKR				smax	smax			
	comp=E,2μm,0.6s							
SKR	**Severo-Kuril's**	**1.48**	**40**	*e*P		**Pn**	**07 17 27.7**	**+0.8**
SKR				*e*S		**Sn**	**07 17 50.8**	**+1.9**
PAU	**Pauzhetka**	**2.36**	**35**	PN		**Pn**	**07 17 38.0**	**+0.7**
PAU				S		**Sn**	**07 18 09.2**	**+1.9**
PAU	**Pauzhetka**	**2.36**	**35**	*e*P		**Pn**	**07 17 38.1**	**+0.7**
PAU				*e*S		**Sn**	**07 18 09.2**	**+1.9**
MIPR	**Malaya Ipel'ka**	**3.04**	**25**	PN		**Pn**	**07 17 47.1**	**+1.4**
MIPR				S		**Sn**	**07 18 24.5**	**+2.0**
MIPR	**Malaya Ipel'ka**	**3.04**	**25**	*e*P		**Pn**	**07 17 47.2**	**+1.4**
MIPR				*e*S		**Sn**	**07 18 24.5**	**+2.0**
KDTR	**Khodutka, Kamc**	**3.14**	**43**	PN		**Pn**	**07 17 46.4**	**-0.7**
KDTR				S		**Sn**	**07 18 23.4**	**-1.4**
KDTR	**Khodutka, Kamc**	**3.14**	**43**	*e*P		**Pn**	**07 17 46.5**	**-0.7**
KDTR				*e*S		**Sn**	**07 18 23.5**	**-1.4**
ASAK	**Asacha**	**3.50**	**35**	PN		**Pn**	**07 17 53.1**	**+1.3**
ASAK				S		**Sn**	**07 18 35.5**	**+2.2**
ASAK	**Asacha**	**3.50**	**35**	*e*P		**Pn**	**07 17 53.1**	**+1.3**
ASAK				*e*S		**Sn**	**07 18 35.6**	**+2.2**
MTVR	**Mutnovka**	**3.69**	**36**	PN		**Pn**	**07 17 55.4**	**+1.1**
MTVR				S		**Sn**	**07 18 39.3**	**+1.5**
MTVR	**Mutnovka**	**3.69**	**36**	*e*P		**Pn**	**07 17 55.5**	**+1.1**
MTVR				*e*S		**Sn**	**07 18 39.3**	**+1.5**
GRL	**Gorelyy**	**3.70**	**35**	PN		**Pn**	**07 17 56.4**	**+2.0**
GRL				S		**Sn**	**07 18 40.7**	**+2.7**
GRL	**Gorelyy**	**3.70**	**35**	*e*P		**Pn**	**07 17 56.5**	**+2.0**
GRL				*e*S		**Sn**	**07 18 40.8**	**+2.7**
APC	**Apacha**	**3.73**	**24**	PN		**Pn**	**07 17 55.7**	**+1.0**
APC				S		**Sn**	**07 18 38.9**	**+0.5**
APC	**Apacha**	**3.73**	**24**	*e*P		**Pn**	**07 17 55.7**	**+1.0**
APC				*e*S		**Sn**	**07 18 38.9**	**+0.5**
RUS	**Russkaya**	**3.78**	**39**	PN		**Pn**	**07 17 55.3**	**0.0**
RUS				S		**Sn**	**07 18 38.6**	**-1.0**
RUS	**Russkaya**	**3.78**	**39**	*e*P		**Pn**	**07 17 55.4**	**0.0**
RUS				*e*S		**Sn**	**07 18 38.7**	**-1.0**
KRMR	**Karymshinskiy**	**3.94**	**32**	PN		**Pn**	**07 17 58.6**	**+1.1**
KRMR				S		**Sn**	**07 18 44.9**	**+1.3**
KRMR	**Karymshinskiy**	**3.94**	**32**	*e*P		**Pn**	**07 17 58.7**	**+1.1**
KRMR				*e*S		**Sn**	**07 18 44.9**	**+1.3**
PET	**Petropavlovsk**	**4.29**	**34**			**Pn**	**07 18 02.8**	**+0.8**
PET				Sn		**Sn**	**07 18 52.2**	**+0.5**
PET	**Petropavlovsk**	**4.29**	**34**	*e*PN		**Pn**	**07 18 02.6**	**+0.5**
PET				*e*S		**Sn**	**07 18 51.5**	**-0.2**
PET				smax	smax			
	comp=N,415nm,0.5s							
PET				smax	smax			
	comp=E,297nm,0.8s							
PET	**Petropavlovsk**	**4.29**	**34**	*e*P		**Pn**	**07 18 02.2**	**+0.1**
PET				*e*S		**Sn**	**07 18 51.5**	**-0.2**
DALK	**Dalny**	**4.33**	**35**	PN		**Pn**	**07 18 02.8**	**+0.2**
DALK				S		**Sn**	**07 18 52.0**	**-0.7**
DALK	**Dalny**	**4.33**	**35**	*e*P		**Pn**	**07 18 02.9**	**+0.2**
DALK				*e*S		**Sn**	**07 18 52.0**	**-0.7**
UGLR	**Uglovaya**	**4.50**	**34**	PN		**Pn**	**07 18 06.7**	**+1.8**
UGLR				S		**Sn**	**07 18 58.2**	**+1.4**
UGLR	**Uglovaya**	**4.50**	**34**	*e*P		**Pn**	**07 18 06.8**	**+1.8**
UGLR				*e*S		**Sn**	**07 18 58.2**	**+1.4**
KOK	**Koryaka**	**4.50**	**32**	PN		**Pn**	**07 18 07.1**	**+2.2**
KOK				S		**Sn**	**07 18 58.6**	**+1.8**
KOK	**Koryaka**	**4.50**	**32**	*e*P		**Pn**	**07 18 07.2**	**+2.2**
KOK				*e*S		**Sn**	**07 18 58.6**	**+1.8**
AVH	**Avacha**	**4.51**	**33**	PN		**Pn**	**07 18 07.3**	**+2.2**
AVH				S		**Sn**	**07 18 59.0**	**+1.9**
AVH	**Avacha**	**4.51**	**33**	*e*P		**Pn**	**07 18 07.3**	**+2.2**
AVH				*e*S		**Sn**	**07 18 59.1**	**+1.9**
SMAR	**Somma**	**4.54**	**33**	PN		**Pn**	**07 18 06.9**	**+1.4**
SMAR				S		**Sn**	**07 18 58.2**	**+0.4**
SMAR	**Somma**	**4.54**	**33**	*e*P		**Pn**	**07 18 07.0**	**+1.4**
SMAR				*e*S		**Sn**	**07 18 58.2**	**+0.4**
KRER	**Koryakskii**	**4.55**	**33**	PN		**Pn**	**07 18 07.7**	**+2.0**
KRER				S		**Sn**	**07 18 59.4**	**+1.3**
KRER	**Koryakskii**	**4.55**	**33**	*e*P		**Pn**	**07 18 07.7**	**+2.0**
KRER				*e*S		**Sn**	**07 18 59.4**	**+1.3**
KRX	**Arik**	**4.56**	**32**	PN		**Pn**	**07 18 07.6**	**+1.8**
KRX	**Arik**	**4.56**	**32**	*e*P		**Pn**	**07 18 07.6**	**+1.8**
GNL	**Ganaly**	**4.63**	**25**	PN		**Pn**	**07 18 08.4**	**+1.8**
GNL	**Ganaly**	**4.63**	**25**	*e*P		**Pn**	**07 18 08.5**	**+1.8**
NLC	**Nalytchevo**	**4.67**	**37**	PN		**Pn**	**07 18 06.5**	**-0.5**
NLC				S		**Sn**	**07 18 57.1**	**-3.5**
NLC	**Nalytchevo**	**4.67**	**37**	*e*P		**Pn**	**07 18 06.6**	**-0.5**
NLC				*e*S		**Sn**	**07 18 57.2**	**-3.5**
SPN	**Mys Shipunski**	**4.90**	**42**	PN		**Pn**	**07 18 09.4**	**-0.7**
SPN				S		**Sn**	**07 19 01.9**	**-4.1**
SPN	**Mys Shipunski**	**4.90**	**42**	*e*P		**Pn**	**07 18 09.4**	**-0.7**
SPN				*e*S		**Sn**	**07 19 02.0**	**-4.1**
KUR	**Kuril'sk**	**6.31**	**229**	PN		**Pn**	**07 18 29.4**	**+0.4**
KUR				*i* S		**Sn**	**07 19 42.0**	**+2.1**
KUR				pmax	pmax			
	comp=Z,187nm,0.5s							
KUR				smax	smax			
	comp=N,107nm,0.7s							
KUR				smax	smax			
	comp=E,182nm,0.7s							
TUMD	**Tumrok D**	**6.66**	**30**	PN		**Pn**	**07 18 34.4**	**+0.7**
TUMD				S		**Sn**	**07 19 48.0**	**-0.3**
TUMD	**Tumrok D**	**6.66**	**30**	*e*P		**Pn**	**07 18 34.4**	**+0.7**
TUMD				*e*S		**Sn**	**07 19 48.1**	**-0.3**
ESO	**Esso**	**6.84**	**20**	PN		**Pn**	**07 18 37.9**	**+1.9**
ESO	**Esso**	**6.84**	**20**	*e*P		**Pn**	**07 18 37.9**	**+1.9**
KMNR	**Kamenistaya**	**7.08**	**27**	PN		**Pn**	**07 18 42.3**	**+3.0**
KMNR	**Kamenistaya**	**7.08**	**27**	*e*P		**Pn**	**07 18 42.3**	**+3.0**
KOZ	**Kozyrevsk**	**7.24**	**24**	PN		**Pn**	**07 18 43.9**	**+2.5**
KOZ	**Kozyrevsk**	**7.24**	**24**	*e*P		**Pn**	**07 18 44.0**	**+2.5**
SRDR	**Sredinnyy**	**7.43**	**22**	PN		**Pn**	**07 18 46.9**	**+2.9**
SRDR	**Sredinnyy**	**7.43**	**22**	*e*P		**Pn**	**07 18 46.9**	**+2.9**
TYV	**Tymovskoe**	**7.80**	**284**	*e*PN		**Pn**	**07 18 51.0**	**+2.1**
TYV				*e*S		**Sn**	**07 20 21.6**	**+5.9**
TYV				pmax	pmax			
	comp=Z,29nm,1.0s							
TYV				pmax	pmax			
	comp=Z,500nm,3.5s							
TYV				smax	smax			
	comp=N,9.0nm,1.1s							
TYV				smax	smax			
	comp=E,10.0nm,1.1s							
TYV				smax	smax			
	comp=N,300nm,4.4s							
TYV				smax	smax			
	comp=E,400nm,4.4s							
SHO	**Shikotan**	**7.82**	**226**	PN		Pn	07 18 54.3	+5.1
SHO				S		**Sn**	**07 20 16.3**	**+0.1**
SHO	**Shikotan**	**7.82**	**226**	*e*P		Pn	07 18 54.3	+5.1
SHO				*e*S		**Sn**	**07 20 16.3**	**+0.1**
YUK	**Yuzh-Kuril'sk**	**8.17**	**231**	*i* PN		**Pn**	**07 18 56.0**	**+2.1**
KBTR	**Krutoberegovo**	**8.29**	**33**	PN		**Pn**	**07 18 53.8**	**-1.7**
KBTR	**Krutoberegovo**	**8.29**	**33**	*e*P		**Pn**	**07 18 53.9**	**-1.7**
KBTR				*e*S		**Sn**	**07 20 19.6**	**-8.0**
OKH	**Okha**	**8.32**	**303**	*de*PN		**Pn**	**07 18 55.1**	**-0.7**
OKH				pmax	pmax			
	comp=Z,200nm,10.1s							
OKH				MLR	MLR			
	comp=Z,200nm,13.0s							
OKH				MLR	MLR			
	comp=N,200nm,15.0s							
YSS	**Yuzhno-Sakhali**	**8.35**	**256**	Pn		**Pn**	**07 18 56.3**	**+0.1**
YSS	**Yuzhno-Sakhali**	**8.35**	**256**	*e*PN		**Pn**	**07 18 57.6**	**+1.3**
YSS				pmax	pmax			
	comp=Z,20nm,1.0s							
BKI	**Bering**	**8.94**	**46**	PN		**Pn**	**07 19 02.3**	**-1.8**
BKI	**Bering**	**8.94**	**46**	*e*P		**Pn**	**07 19 02.4**	**-1.8**
BKI				*e*S		Sn	07 20 31.8	-11
JKA	**Kamikawa-asahi**	**9.88**	**241**			**Pn**	**07 19 16.5**	**-0.2**
ASAJ	**Asahikawa**	**9.88**	**241**	P		**Pn**	**07 19 15.6**	**-1.2**
	comp=Z,12nm,0.5s,baz=75,slow=8.7,SNR=13							
ASAJ	**Asahikawa**	**9.88**	**241**	PN		**Pn**	**07 19 16.5**	**-0.3**
MA2	**Magadan**	**10.29**	**349**	P		**Pn**	**07 19 21.5**	**-0.5**
	comp=Z,33nm,1.0s,baz=190,slow=14,SNR=34							
MA2	**Magadan**	**10.29**	**349**			**Pn**	**07 19 22.2**	**+0.2**
MA2	**Magadan**	**10.29**	**349**	*i* PN		**Pn**	**07 19 22.5**	**+0.5**
MA2				pmax	pmax			
	comp=Z,38nm,1.1s							
MA2	**Magadan**	**10.29**	**349**	*e*P		**Pn**	**07 19 22.2**	**+0.2**
SMY	**Shemya**	**12.62**	**68**	Pn		**Pn**	**07 19 55.3**	**+2.7**
SMY	**Shemya**	**12.62**	**68**	PN		**Pn**	**07 19 55.3**	**+2.7**
TEY	**Ternei**	**13.04**	**257**	*e*PN		**Pn**	**07 20 01.0**	**+2.8**
SEY	**Seymchan**	**13.47**	**356**	P		**Pn**	**07 20 02.9**	**-0.5**
	comp=Z,5.9nm,0.8s,baz=162,slow=9.8,SNR=13							
SEY	**Seymchan**	**13.47**	**356**	*i* PN		**Pn**	**07 20 04.6**	**+1.2**
SEY				pmax	pmax			
	comp=Z,10.0nm,1.0s							
KLR	**Kul'dur**	**14.90**	**277**	P		**Pn**	**07 20 19.9**	**-1.8**
	comp=Z,3.2nm,0.7s,baz=75,slow=14,SNR=9.2							
KLR	**Kul'dur**	**14.90**	**277**	*i* P		**Pn**	**07 20 22.4**	**+0.7**
KLR				pmax	pmax			
	comp=Z,4.0nm,0.9s							
AMKA	**Amchitka**	**15.79**	**74**	Pn		**Pn**	**07 20 33.4**	**+0.7**
AMKA				IAmb	IAmb		07 20 36.1	
	comp=Z,55nm,0.9s							
ZEA	**Zeya**	**17.45**	**294**	*e*P		**Pn**	**07 20 54.2**	**+1.4**
ZEA				pmax	pmax			
	comp=Z,20nm,1.3s							
MAJO	**Matsushiro**	**17.65**	**229**	*i* P		**P**	**07 20 55.1**	**+0.9**
MAJO				pmax	pmax			
	comp=Z,4.0nm,0.9s							
MJAR	**Matsushiro Arr**	**17.65**	**229**	P		**P**	**07 20 52.6**	**-1.6**
	comp=Z,2.2nm,0.6s,baz=23,slow=11,SNR=5.6							
MDJ	**Mudanjiang**	**17.72**	**263**	P		**P**	**07 20 51.7**	**-3.2**
KIWB	**Kanaga Island**	**17.97**	**72**	P		**P**	**07 20 58.1**	**+0.6**
KIWB				IAmb	IAmb		07 21 02.4	
	comp=Z,46nm,1.3s							
YAK	**Yakutsk**	**18.63**	**321**	P		**P**	**07 21 03.3**	**-1.3**
	comp=Z,124nm,0.9s,baz=120,slow=20,SNR=20							
YAK	**Yakutsk**	**18.63**	**321**	P		**P**	**07 21 01.8**	**-2.8**
YAK				IAmb	IAmb		07 21 08.9	
	comp=Z,215nm,1.1s							
YAK	**Yakutsk**	**18.63**	**321**	*e*P		**P**	**07 21 04.9**	**+0.3**
YAK				*e*S		**S**	**07 24 28.7**	**-0.4**
YAK				pmax	pmax			
	comp=Z,172nm,1.0s							
YAK				pmax	pmax			
	comp=E,104nm,1.3s							
YAK				pmax	pmax			
	comp=N,45nm,1.2s							
YAK				smax	smax			
	comp=N,195nm,1.5s							
YAK				smax	smax			
	comp=E,129nm,1.5s							

JGF	**Kuroka**	**18.82**	**229**	P	**P**	**07 21 06.3**	**-0.7**
INU	**Inuyama**	**19.18**	**229**	P	**P**	**07 21 10.5**	**-0.3**
BILL	**Bilibino**	**19.43**	**13**	P	**P**	**07 21 13.2**	**0.0**
BILL				IAmb	IAmb	07 21 14.0	
	comp=Z,18nm,1.0s						
BILL	**Bilibino**	**19.43**	**13**	*i* P	**P**	**07 21 10.1**	**-3.1**
BILL				pmax	pmax		
	comp=Z,16nm,0.9s						
HIA	**Hailar**	**22.59**	**283**	P	**P**	**07 21 45.4**	**-1.2**
HIA	**Hailar**	**22.59**	**283**	*i* P	**P**	**07 21 47.7**	**+1.0**
HIA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KSRS	**Korea Array**	**22.71**	**248**	P	**P**	**07 21 46.7**	**-1.1**
	comp=Z,0.9nm,0.4s,baz=47,slow=9.0,SNR=5.5						
KSRS				pP	**pP**	**07 22 12.5**	**-1.1**
	comp=Z,1.2nm,0.6s,baz=51,slow=9.9,SNR=2.3						
	comp=Z,0.9nm,0.4s						
KSRS	**Korea Array**	**22.71**	**248**	*e*P	**P**	**07 21 47.7**	**-0.1**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GAMB	**Gambell**	**22.97**	**39**	P	**P**	**07 21 50.5**	**+0.5**
GAMB				IAmb	IAmb	07 21 50.8	
	comp=Z,24nm,0.7s						
GAMB	**Gambell**	**22.97**	**39**	P	**P**	**07 21 50.5**	**+0.5**
	baz=248						
M11K	**Mekoryuk**	**24.57**	**49**	P	**P**	**07 22 05.4**	**+0.9**
	baz=262						
TIXI	**Tiksi**	**25.10**	**341**	P	**P**	**07 22 09.5**	**+0.3**
TIXI	**Tiksi**	**25.10**	**341**	*i* P	**P**	**07 22 10.2**	**+0.9**
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TNA	**Tin City**	**25.15**	**37**	P	**P**	**07 22 10.9**	**+1.2**
TNA				IAmb	IAmb	07 22 13.4	
	comp=Z,32nm,0.8s						
TNA	**Tin City**	**25.15**	**37**	P	**P**	**07 22 10.4**	**+0.7**
	baz=249						
K13K	**Kusilvak Mount**	**25.56**	**46**	P	**P**	**07 22 15.3**	**+1.8**
K13K	**Kusilvak Mount**	**25.56**	**46**	P	**P**	**07 22 14.3**	**+0.7**
	baz=260						
F14K	**Arctic Creek**	**25.74**	**37**	P	**P**	**07 22 15.9**	**+0.7**
	baz=251						
ANM	**Nome**	**25.85**	**40**	P	**P**	**07 22 17.4**	**+1.3**
ANM				IAmb	IAmb	07 22 21.2	
	comp=Z,10.0nm,0.7s						
ANM	**Nome**	**25.85**	**40**	P	**P**	**07 22 17.4**	**+1.3**
ANM				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ANM	**Nome**	**25.85**	**40**	P	**P**	**07 22 17.0**	**+0.8**
	baz=254						
M13K	**Dall Lake**	**25.98**	**49**	P	**P**	**07 22 19.0**	**+1.7**
M13K	**Dall Lake**	**25.98**	**49**	P	**P**	**07 22 18.3**	**+1.0**
	baz=265						
J14K	**Nanvaranak Lak**	**26.21**	**44**	P	**P**	**07 22 20.3**	**+0.9**
	baz=260						
L14K	**Kuka Creek**	**26.40**	**47**	P	**P**	**07 22 22.2**	**+1.1**
	baz=264						
F15K	**North Star Dit**	**26.48**	**37**	P	**P**	**07 22 22.6**	**+0.8**
	baz=253						
G15K	**Niukluk**	**26.52**	**39**	P	**P**	**07 22 22.8**	**+0.7**
	baz=255						
M14K	**Bethel**	**26.69**	**49**	P	**P**	**07 22 24.5**	**+0.8**
	baz=266						
N14K	**Kuskokwak Cree**	**26.77**	**51**	P	**P**	**07 22 25.4**	**+1.0**
	baz=267						
XLT	**XiLinHaoTe**	**26.81**	**273**	*e*P	**P**	**07 22 27.8**	**+2.7**
XLT				pP	pwP	07 22 58.3	+1.5
XLT				sP	sP	07 23 16.0	+5.1
XLT				pmax	pmax		
	comp=Z,9.0nm,1.0s						
O14K	**Tigyukauivet M**	**26.96**	**52**	P	**P**	**07 22 27.1**	**+1.0**
	baz=269						
L15K	**Ungalak Mounta**	**27.01**	**47**	P	**P**	**07 22 27.2**	**+0.6**
	baz=264						
K15K	**Wolf Creek Mou**	**27.07**	**45**	P	**P**	**07 22 27.7**	**+0.6**
	baz=263						
C16K	**Lisburne Hills**	**27.12**	**32**		**P**	**07 22 27.9**	**+0.4**
C16K				IAmb	IAmb	07 22 28.5	
	comp=Z,17nm,1.0s						
C16K	**Lisburne Hills**	**27.12**	**32**	P	**P**	**07 22 27.7**	**+0.2**
	baz

P17K	Kvichak River	29.44	52	P	P	07 22 48.9	+0.8
	baz=273						
F19K	Shaleruckik Mo	29.45	36	P	P	07 22 48.5	+0.3
	baz=258,SNR=5.2						
GCSA	Galena City Sc	29.46	41	P	P	07 22 48.9	+0.7
	baz=263						
G19K	Purcell Mounta	29.59	38	P	P	07 22 49.7	+0.3
	baz=260						
R17L	Mt. Peulik Vol	29.59	55	P	P	07 22 50.6	+1.0
	baz=276						
N18K	Kilae Creek	29.67	49	P	P	07 22 51.1	+0.9
	baz=271						
M18K	Stony River	29.70	47	P	P	07 22 51.5	+1.1
	baz=270						
D19K	Kuna River	29.72	33	P	P	07 22 51.1	+0.5
	baz=255,SNR=11						
Q17K	Contact Creek	29.79	54	P	P	07 22 52.1	+0.7
	baz=275						
E19K	Redstone River	29.80	35	P	P	07 22 51.9	+0.7
	baz=258						
J19K	Poorman	29.92	42	P	P	07 22 52.8	+0.5
	baz=266,SNR=10						
O18K	Koktuh Hills	30.03	51	P	P	07 22 54.4	+1.0
	baz=273						
P18K	Big Mountain,	30.05	52	P	P	07 22 54.4	+0.8
	baz=274						
L19K	White Mountain	30.18	46	P	P	07 22 55.2	+0.5
	baz=269						
Q18K	Katmai Hardscr	30.21	53	P	P	07 22 55.5	+0.4
	baz=275						
CHIR	Chirikof Islan	30.23	59	P	P	07 22 56.4	+1.2
	baz=280						
F20K	Avaraart Lake	30.29	36	P	P	07 22 55.9	+0.4
	baz=260						
D20K	Etivluk River	30.31	33	P	P	07 22 56.7	+0.9
D20K				IAmb	IAmb	07 22 57.2	
	comp=Z,39nm,0.8s						
D20K	Etivluk River	30.31	33	P	P	07 22 56.2	+0.4
	baz=256,SNR=24						
N19K	Bonanza Creek	30.36	49	P	P	07 22 57.3	+0.9
	baz=272						
E20K	Nigu River	30.36	34	P	P	07 22 56.7	+0.5
	baz=258,SNR=26						
H20K	Anotleneega Mo	30.39	39	P	P	07 22 57.1	+0.5
	baz=264,SNR=7.0						
O19K	Port Alsworth	30.46	50	P	P	07 22 58.5	+1.4
	baz=273						
B20K	Meade River	30.47	30	P	P	07 22 57.4	+0.3
	baz=254						
I20K	Naaghedeneel	30.49	41	P	P	07 22 58.0	+0.7
	baz=265						
K20K	Telida	30.57	44	P	P	07 22 59.4	+1.3
	baz=268						
J20K	Nowinta River	30.58	42		P	07 22 59.3	+1.1
J20K				IAmb	IAmb	07 22 59.8	
	comp=Z,12nm,0.6s						
J20K	Nowinta River	30.58	42	P	P	07 22 59.1	+0.9
	baz=267,SNR=9.3						
Q19K	Cape Douglas,	30.90	52	P	P	07 23 02.0	+0.9
	baz=276						
SII	Sitkinak Islan	30.91	57	P	P	07 23 02.2	+1.0
	baz=280						
M20K	Styx River	30.99	47	P	P	07 23 03.6	+1.7
M20K				IAmb	IAmb	07 23 04.2	
	comp=Z,6.3nm,0.6s						
M20K	Styx River	30.99	47	P	P	07 23 02.6	+0.7
	baz=271						
A21K	Barrow	31.04	28	P	P	07 23 02.3	+0.2
	baz=252,SNR=15						
P19K	Oil Pt	31.05	51	P	P	07 23 03.1	+0.8
	baz=275						
C21K	Knifeblade Rid	31.06	32	P	P	07 23 03.0	+0.7
	baz=258,SNR=28						
G21K	Aliakaket	31.08	38	P	P	07 23 03.2	+0.6
	baz=263,SNR=8.6						
F21K	Alatna River	31.18	36	P	P	07 23 03.9	+0.4
	baz=262						
HHC	Hu-ho-hao-te	31.20	270	*e*P	P	07 23 05.3	+1.3
HHC				pP	pP	07 23 33.3	-0.6
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,93nm,8.5s						
B21K	Ikpikpuk River	31.23	32		P	07 23 04.6	+0.9
B21K				IAmb	IAmb	07 23 05.5	
	comp=Z,77nm,0.7s						
B21K	Ikpikpuk River	31.23	32	P	P	07 23 04.5	+0.9
	baz=257,SNR=48						
H21K	Melozitna Rive	31.27	39	IAmb	IAmb	07 23 05.8	
	comp=Z,10nm,0.8s						
H21K	Melozitna Rive	31.27	39	P	P	07 23 04.9	+0.7
	baz=265,SNR=6.6						
OHAK	Old Harbor	31.29	56	P	P	07 23 05.4	+0.9
	baz=273						
H11N2	WAKE ISLAND Hy	31.33	157	T	T	07 55 35.5	
	baz=347,slow=74,SNR=59						
H11N1	WAKE ISLAND Hy	31.35	157	T	T	07 55 23.1	
	baz=347,slow=74,SNR=88						
H11N3	WAKE ISLAND Hy	31.35	157	T	T	07 55 27.3	
	baz=347						
CHUM	Lake Minchumin	31.37	43	P	P	07 23 05.5	+0.4
	baz=269						
N20K	Mount Spurr	31.45	48	P	P	07 23 06.7	+0.7
	baz=273						
SPCR	Spurr Chakacha	31.45	48	P	P	07 23 06.7	+0.8
	baz=273						
A22K	Sinclair Lake	31.46	29	P	P	07 23 06.0	+0.3
	baz=254,SNR=38						
SONM	Songino Array	31.46	286	P	P	07 23 05.1	-1.2
	comp=Z,0.6nm,0.4s,baz=75,slow=7.6,SNR=1.7						
SONM				PcP	PcP	07 25 55.4	-0.4
	comp=Z,1.6nm,0.8s,baz=64,slow=3.4,SNR=3.5						
	comp=Z,0.6nm,0.4s						
SPU	Mount Spurr	31.53	48	P	P	07 23 07.6	+1.1
SPU				IAmb	IAmb	07 23 15.1	
	comp=Z,11nm,1.0s						
I21K	Tanana	31.58	40	IAmb	IAmb	07 23 08.8	
	comp=Z,12nm,0.7s						
I21K	Tanana	31.58	40	P	P	07 23 07.7	+0.9
	baz=267						
Q20K	Shuyak Island	31.58	53	P	P	07 23 07.8	+0.9
	baz=277						
KDAK	Kodiak Island	31.59	55	P	P	07 23 08.3	+1.3
	baz=279						
SKT	Skwentna	31.74	46	P	P	07 23 08.8	+0.4
	baz=273						
B22K	Teshekpuk Lake	31.79	30	IAmb	IAmb	07 23 10.0	
	comp=Z,57nm,1.3s						
B22K	Teshekpuk Lake	31.79	30	P	P	07 23 08.9	+0.2
	baz=257,SNR=20						
HOM	Homer	31.85	51	P	P	07 23 10.4	+1.1
	baz=276						
NJ2	Nanjing	31.86	250	*e*P	P	07 23 11.0	+1.3
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
H22K	Ishtalitna Cre	31.88	39	IAmb	IAmb	07 23 11.5	
	comp=Z,12nm,0.8s						
H22K	Ishtalitna Cre	31.88	39	P	P	07 23 10.4	+0.9
	baz=266						
E22K	Anaktuvuk Pass	31.94	35	IAmb	IAmb	07 23 11.7	
	comp=Z,29nm,0.7s						
E22K	Anaktuvuk Pass	31.94	35	P	P	07 23 10.8	+0.7
	baz=262						
BPAW	Bear Paw Mtn.	31.96	42		P	07 23 11.0	+0.6
BPAW				IAmb	IAmb	07 23 12.5	
	comp=Z,12nm,0.8s						
BPAW	Bear Paw Mtn.	31.96	42	P	P	07 23 11.1	+0.8
	baz=270,SNR=10						
CAPN	Captain Cook N	31.99	49	P	P	07 23 11.3	+0.7
	baz=275						
MLY	Manley	32.09	41	P	P	07 23 12.7	+1.2
MLY				IAmb	IAmb	07 23 13.4	
	comp=Z,9.5nm,0.7s						
MLY	Manley	32.09	41	P	P	07 23 12.2	+0.7
	baz=268,SNR=9.7						
BRLK	Bradley Lake	32.22	51	P	P	07 23 12.7	+0.1
BRLK				IAmb	IAmb	07 23 19.4	
	comp=Z,13nm,1.0s						
TRF	Thorofare Moun	32.27	44	IAmb	IAmb	07 23 15.1	
	comp=Z,11nm,0.8s						
TRF	Thorofare Moun	32.27	44	P	P	07 23 13.8	+0.6
	baz=271						
BRSE	Bradley Lake S	32.29	51	P	P	07 23 14.1	+0.9
	baz=277						
CUT	Chulitna	32.31	46	P	P	07 23 14.2	+0.8
	baz=273						
M22K	Willow	32.42	47	P	P	07 23 15.1	+0.8
	baz=274						
COLD	Coldfoot	32.45	37	P	P	07 23 15.3	+0.8
COLD				IAmb	IAmb	07 23 16.1	
	comp=Z,22nm,0.6s						
COLD	Coldfoot	32.45	37	P	P	07 23 15.2	+0.7
	baz=265,SNR=19						
H11S1	WAKE ISLAND Hy	32.46	158	T	T	07 57 15.1	
	baz=345,slow=76,SNR=327						
H11S3	WAKE ISLAND Hy	32.47	158	T	T	07 57 18.9	
	baz=345,slow=76,SNR=299						
D23K	Nanushuk River	32.48	33	P	P	07 23 15.8	+1.1
D23K				IAmb	IAmb	07 23 16.6	
	comp=Z,17nm,0.9s						
D23K	Nanushuk River	32.48	33	P	P	07 23 15.4	+0.7
	baz=262,SNR=10						
G23K	Bananza Creek	32.48	38	P	P	07 23 15.2	+0.3
	baz=266,SNR=12						
H11S2	WAKE ISLAND Hy	32.48	158	T	T	07 57 16.5	
	baz=345,slow=76,SNR=249						
BWN	Browne	32.63	42	P	P	07 23 18.5	+2.4
BWN				IAmb	IAmb	07 23 19.2	
	comp=Z,45nm,0.8s						
C23K	Itkillik River	32.63	32	IAmb	IAmb	07 23 17.7	
	comp=Z,34nm,0.8s						
C23K	Itkillik River	32.63	32	P	P	07 23 16.7	+0.6
	baz=261,SNR=29						
RC01	Rabbit Creek A	32.66	48	P	P	07 23 17.1	+0.8
	baz=276						
I23K	Minto, Yukon-K	32.68	40	P	P	07 23 17.9	+1.4
I23K				IAmb	IAmb	07 23 18.4	
	comp=Z,10nm,0.7s						
I23K	Minto, Yukon-K	32.68	40	P	P	07 23 17.5	+1.0
	baz=270,SNR=12						
O22K	Cooper Landing	32.72	49	P	P	07 23 18.4	+1.6
	baz=276						
E23K	Chandalar	32.75	35	P	P	07 23 18.2	+1.0
	baz=265,SNR=32						
NEA2	Nenana	32.80	41	P	P	07 23 18.6	+1.0
NEA2				IAmb	IAmb	07 23 20.4	
	comp=Z,31nm,0.6s						
NEA2	Nenana	32.80	41	P	P	07 23 18.3	+0.7
	baz=271,SNR=33						
TOLK	Toolik Lake Re	32.83	34	P	P	07 23 18.6	+0.7
	baz=264,SNR=33						
MCK	McKinley	32.87	43		P	07 23 18.5	+0.2
MCK				IAmb	IAmb	07 23 20.0	
	comp=Z,15nm,0.8s						
MCK	McKinley	32.87	43	P	P	07 23 18.5	+0.2
MCK				pmax	pmax		
	comp=Z,15nm,0.8s						
MCK	McKinley	32.87	43	P	P	07 23 18.9	+0.6
	baz=272,SNR=9.6						
SEW	Seward	32.90	50	P	P	07 23 18.5	+0.1
	baz=277						
PMR	Palmer	32.90	47	P	P	07 23 19.5	+1.1
PMR	Palmer	32.90	47	P	P	07 23 19.5	+1.1
PMR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
PMR	Palmer	32.90	47	P	P	07 23 19.2	+0.7
	baz=275						
GHO	Glory Hole Cre	32.99	47	P	P	07 23 19.9	+0.6
GHO				IAmb	IAmb	07 23 23.0	
	comp=Z,8.0nm,0.6s						
WAT1	Susitna Watana	33.09	45	P	P	07 23 20.1	-0.1
	baz=274						
D24K	Happy Valley	33.16	33	IAmb	IAmb	07 23 22.2	
	comp=Z,48nm,0.6s						
D24K	Happy Valley	33.16	33	P	P	07 23 21.3	+0.7
	baz=264						
E24K	Your Creek	33.18	35	P	P	07 23 22.1	+1.2
E24K				IAmb	IAmb	07 23 22.9	
	comp=Z,44nm,0.7s						
E24K	Your Creek	33.18	35	P	P	07 23 21.9	+1.1
	baz=266,SNR=53						
WRH	Wood River Hil	33.23	42		P	07 23 22.0	+0.7
WRH				IAmb	IAmb	07 23 24.0	
	comp=Z,12nm,0.7s						
KNK	Knik Glacier	33.24	47	P	P	07 23 22.1	+0.6
KNK				IAmb	IAmb	07 23 22.8	
	comp=Z,24nm,0.7s						
KNK	Knik Glacier	33.24	47	P	P	07 23 22.3	+0.8
	baz=276,SNR=8.3						
SML	Sawmill	33.26	47	P	P	07 23 22.6	+0.9
	baz=276,SNR=17						
C24K	Franklin Bluff	33.27	32	IAmb	IAmb	07 23 23.1	
	comp=Z,28nm,0.9s						
C24K	Franklin Bluff	33.27	32	P	P	07 23 22.1	+0.5
	baz=263						
H24K	Noodor Dome	33.31	39	IAmb	IAmb	07 23 24.2	
	comp=Z,11nm,0.7s						
H24K	Noodor Dome	33.31	39	P	P	07 23 23.0	+1.0
	baz=270,SNR=11						
COLA	College	33.32	41	P	P	07 23 22.5	+0.4
COLA	College	33.32	41	P	P	07 23 22.5	+0.4
COLA				pmax	pmax		
	comp=Z,49nm,0.7s						
COLA	College	33.32	41	P	P	07 23 22.9	+0.8
	baz=271						
CCB	Clear Creek Bu	33.35	41	P	P	07 23 23.1	+0.8
CCB				IAmb	IAmb	07 23 24.3	
	comp=Z,14nm,0.6s						
F24K	Squaw Lake	33.37	36	P	P	07 23 23.4	+0.9
F24K				IAmb	IAmb	07 23 24.0	
	comp=Z,21nm,0.6s						
F24K	Squaw Lake	33.37	36	P	P	07 23 23.0	+0.5
	baz=267,SNR=31						
WAT6	Susitna Watana	33.48	45	P	P	07 23 24.1	+0.5
	baz=275						
G24K	Hadweenzic Riv	33.49	38	P	P	07 23 25.0	+1.5
G24K				IAmb	IAmb	07 23 25.8	
	comp=Z,42nm,0.7s						
G24K	Hadweenzic Riv	33.49	38	P	P	07 23 24.6	+1.1
	baz=269,SNR=32						
POKR	Poker Plat Res	33.50	41	P	P	07 23 24.7	+1.1
	baz=271						
M23K	Glacier View	33.55	47	P	P	07 23 24.7	+0.6
	baz=276						
DHY	Denali Highway	33.61	44	P	P	07 23 25.5	+0.7
	baz=274						
HDA	Harding Lake	33.72	42	P	P	07 23 26.2	+0.6
	baz=273,SNR=19						
SCM	Sheep Creek Mo	33.74	46	P	P	07 23 26.7	+0.9
	baz=276						
IL31		33.74	41	P	P	07 23 26.4	+0.8
IL31				IAmb	IAmb	07 23 28.8	
	comp=Z,11nm,0.7s						
ILAR	Eielson Array	33.74	41	P	P	07 23 25.9	+0.1
	comp=Z,7.4nm,0.7s,baz=261,slow=6.5,SNR=76						
	comp=Z,7.4nm,0.7s						
P23K	Montague Islan	33.93	50	P	P	07 23 28.2	+0.8
	baz=279						
GLI	Glacier Island	33.96	48	P	P	07 23 27.9	+0.3
	baz=278						
G25K	Bearman Lake	34.04	38	P	P	07 23 29.2	+0.9
	baz=270,SNR=7.8						
D25K	Kavik River	34.05	33	IAmb	IAmb	07 23 29.8	
	comp=Z,62nm,0.6s						
D25K	Kavik River	34.05	33	P	P	07 23 28.9	+0.5
	baz=266						
F25K	Christian Rive	34.23	36	IAmb	IAmb	07 23 31.8	
	comp=Z,8.6nm,0.7s						
F25K	Christian Rive	34.23	36	P	P	07 23 31.1	+1.1
	baz=269,SNR=14						
M24K	Tolsona, Glenn	34.25	46	P	P	07 23 30.6	+0.4
	baz=277						
K24K	Donnelly Dome	34.27	43	P	P	07 23 30.5	+0.2
	baz=275,SNR=11						
E25K	Arctic Village	34.27	35	P	P	07 23 31.4	+1.1
	baz=268,SNR=22						
PRP	Porcupine Dome	34.29	40	P	P	07 23 31.5	+0.9
	baz=272,SNR=35						
J25K	Salcha River,	34.40	41	IAmb	IAmb	07 23 32.3	
	comp=Z,16nm,0.7s						
J25K	Salcha River,	34.40	41	P	P	07 23 31.5	+0.1
	baz=274,SNR=21						
KLU	Klutina	34.44	47	P	P	07 23 33.1	+1.2
	baz=278						
PAX	Paxson	34.48	44	P	P	07 23 33.6	+1.3
	baz=276						
C26K	Camden Bay	34.60	32	P	P	07 23 34.3	+1.3
	baz=266,SNR=28						
EYAK	Cordova Ski Ar	34.66	49	P	P	07 23 34.2	+0.5
	baz=279						
RIDG	Independent Ri	34.69	43	P	P	07 23 34.4	+0.4
	baz=276,SNR=6.4						
F26K	Sheenjek River	34.80	36	P	P	07 23 36.4	+1.4
F26K				IAmb	IAmb	07 23 37.2	
	comp=Z,15nm,1.1s						
F26K	Sheenjek River	34.80	36	P	P	07 23 36.3	+1.4
	baz=270,SNR=15						
G26K	Porcupine Rive	34.95	37	IAmb	IAmb	07 23 38.5	
	comp=Z,39nm,0.6s						
G26K	Porcupine Rive	34.95	37	P	P	07 23 37.5	+1.4
	baz=272,SNR=31						
C27K	Jago River	35.00	32	P	P	07 23 37.3	+0.8
	baz=268						
SCRK	Sand Creek	35.05	42	P	P	07 23 37.5	+0.3
	baz=276,SNR=8.9						
N25K	Chitina, Valde	35.05	47	P	P	07 23 38.5	+1.3
	baz=279,SNR=8.3						
BMRM	Bremner River	35.15	48	P	P	07 23 39.0	+1.1
	baz=280						
I26K	Coal Creek Min	35.29	40	P	P	07 23 40.0	+1.0
	baz=275						
KAIM	Kayak Island	35.42	49	P	P	07 23 41.5	+1.3
	baz=281						
L26K	Log Cabin Wild	35.44	44	P	P	07 23 41.6	+1.2
	baz=278,SNR=8.2						
M26K	Nabesna, AK	35.69	45	IAmb	IAmb	07 23 45.3	
	comp=Z,11nm,0.8s						
M26K	Nabesna, AK	35.69	45	P	P	07 23 44.0	+1.5
	baz=279,SNR=12						
BERG	Berg Lake	35.69	49	P	P	07 23 43.7	+1.2
BERG				IAmb	IAmb	07 23 47.6	
	comp=Z,8.6nm,0.8s						
E27K	Coleen River	35.76	35		P	07 23 44.5	+1.5
E27K				IAmb	IAmb	07 23 45.1	
	comp=Z,12nm,0.7s						
E27K	Coleen River	35.76	35	P	P	07 23 44.3	+1.2
	baz=272,SNR=12						
G27K	Doyon Strip	35.80	37	P	P	07 23 44.6	+1.2
	baz=274,SNR=11						
MCARA	McCarthy VSAT	35.84	47	P	P	07 23 45.3	+1.5
	baz=280						
K27K	Chicken	35.88	42	IAmb	IAmb	07 23 46.3	
	comp=Z,18nm,0.8s						
H27K	Steamboat Moun	35.89	38	P	P	07 23 44.9	+0.7
H27K	Steamboat Moun	35.89	38	P	P	07 23 45.8	+1.6
	baz=275,SNR=24						
I27K	Kandik River	35.91	39	P	P	07 23 45.7	+1.4
	baz=276						
CRQE	Cirque	35.91	48	P	P	07 23 45.7	+1.2
	baz=281,SNR=7.8						
D27M	Malcolm River	35.97	33	P	P	07 23 46.0	+1.1
	baz=271						
L27K	Beaver Creek,	36.12	44	IAmb	IAmb	07 23 49.5	
	comp=Z,22nm,0.8s						
L27K	Beaver Creek,	36.12	44	P	P	07 23 47.6	+1.5
	baz=279						
M27K	Edge Creek, AK	36.21	45	IAmb	IAmb	07 23 56.0	
	comp=Z,14nm,0.8s						
M27K	Edge Creek, AK	36.21	45	P	P	07 23 48.5	+1.5
	baz=280,SNR=9.1						
F28M	Old Crow	36.44	36		P	07 23 50.4	+1.6
F28M	Old Crow	36.44	36	P	P	07 23 50.4	+1.6
	baz=274,SNR=35						
E28M	Babbage River	36.51	34	P	P	07 23 50.4	+1.1
	baz=273						
I28M	Miner Creek	36.62	40	IAmb	IAmb	07 23 52.8	
	comp=Z,19nm,0.7s						
I28M	Miner Creek	36.62	40	P	P	07 23 51.5	+1.1
	baz=277						
BVCY	Beaver Creek	36.66	45	P	P	07 23 52.2	+1.4
	baz=281,SNR=7.8						
CTG	Chitna Glacier	36.72	47	P	P	07 23 52.7	+1.3
	baz=282,SNR=10						
D28M	Stokes Point	36.76	33	P	P	07 23 52.5	+1.1
	baz=273						
NRIK	Noril'sk	36.92	327	P	P	07 23 51.0	-1.8
	comp=Z,2.8nm,0.5s,baz=80,slow=5.6,SNR=3.8						
	comp=Z,2.8nm,0.5s						
NRIK	Noril'sk	36.92	327	P	P	07 23 51.4	-1.4
NRIK				IAmb	IAmb	07 23 57.3	
	comp=Z,7.0nm,0.9s						
NRIK	Noril'sk	36.92	327	*c i*P	P	07 23 52.5	-0.3
NRIK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
YUK3	Moose Creek	36.97	46	P	P	07 23 55.0	+1.4
	baz=282,SNR=6.2						
E29M	Blow River	37.12	35	P	P	07 23 56.0	+1.4
	baz=275,SNR=18						
H29M	Whitestone	37.16	38	P	P	07 23 55.9	+0.9
H29M	Whitestone	37.16	38	P	P	07 23 56.4	+1.4
	baz=278,SNR=15						
G29M	Pine Creek	37.22	37	P	P	07 23 57.2	+1.8
	baz=277						
I29M	Ogilvie Camp,	37.31	40	P	P	07 23 57.3	+1.1
	baz=279,SNR=14						
O28M	Mount Upton	37.31	47	IAmb	IAmb	07 23 59.1	
	comp=Z,13nm,0.8s						
O28M	Mount Upton	37.31	47	P	P	07 23 57.6	+1.1
	baz=283,SNR=7.7						
TPUB	Ta-pu	37.36	238	P	P	07 23 56.4	-0.7
YUK8	Steele Glacier	37.40	46	P	P	07 23 58.5	+1.3
	baz=283						
PINM	Pinnacle	37.43	48	P	P	07 23 58.7	+1.3
	baz=284						
J29N	Klondike Camp	37.49	41	P	P	07 23 58.8	+1.1
	baz=280						
M29M	Somme Creek	37.75	44	P	P	07 24 01.5	+1.5
	baz=282,SNR=5.6						
L29M	L29M	37.77	43	IAmb	IAmb	07 24 09.2	
	comp=Z,15nm,0.9s						
L29M	L29M	37.77	43	P	P	07 24 01.9	+1.8
	baz=282,SNR=11						
EPYK	Eagle Plains	37.80	38	P	P	07 24 01.7	+1.4
	baz=279,SNR=12						
K29M	Barlow Dome	37.90	42	P	P	07 24 02.6	+1.4
	baz=281,SNR=7.3						
YUK4	Talbot Arm	37.91	46	P	P	07 24 02.9	+1.4
	baz=284						
G30M	tAoh Zraii Nji	37.91	37	P	P	07 24 02.3	+1.0
	baz=278,SNR=14						
F30M	Barrier River	38.00	36	P	P	07 24 03.3	+1.4
	baz=278						
I30M	Mount Dempster	38.13	40	P	P	07 24 04.4	+1.2
	baz=280,SNR=33						
YUK6	Outpost Mounta	38.14	47	P	P	07 24 04.7	+1.3
	baz=284						
O29M	Mount Kennedy	38.19	48	P	P	07 24 05.0	+1.2
	baz=285						
J30M	Hart River	38.27	41	P	P	07 24 05.6	+1.2
	baz=281						
M30M	Minto, Yukon	38.48	44	P	P	07 24 07.5	+1.4
	baz=284						
HYT	Haines Junctio	38.57	47	P	P	07 24 08.3	+1.4
	baz=285,SNR=6.3						
N30M	Aishikik Lake	38.61	46	P	P	07 24 08.7	+1.5
	baz=285						
MAYO	Mayo, Yukon	38.66	42	P	P	07 24 09.0	+1.5
	baz=283						
G31M	Satah River	38.68	37	P	P	07 24 08.5	+0.9
	baz=280,SNR=12						
INK	Inuvik	38.74	34	P	P	07 24 09.3	+1.2
	baz=279,SNR=20						
F31M	Tsiigehtchic	38.80	36	P	P	07 24 09.6	+1.1
	baz=280,SNR=14						
H31M	Peel River	38.85	38	IAmb	IAmb	07 24 12.2	
	comp=Z,12nm,0.8s						
H31M	Peel River	38.85	38	P	P	07 24 10.3	+1.2
	baz=281,SNR=10						
P30M	Million Dollar	39.02	48	P	P	07 24 12.3	+1.7
	baz=286						
N31M	Braeburn, Yuko	39.21	45		P	07 24 14.6	+2.5
N31M				IAmb	IAmb	07 24 15.4	
	comp=Z,14nm,0.8s						
N31M	Braeburn, Yuko	39.21	45	P	P	07 24 14.0	+1.9
	baz=286,SNR=7.9						
O30N	Mendenhall	39.26	47	P	P	07 24 14.6	+2.0
O30N				IAmb	IAmb	07 24 15.4	
	comp=Z,14nm,0.8s						
O30N	Mendenhall	39.26	47	P	P	07 24 14.3	+1.8
	baz=286,SNR=12						
M31M	Drury Creek, Y	39.66	44	P	P	07 24 17.5	+1.7
	baz=286,SNR=12						
WHY	Whitehorse	39.86	46	P	P	07 24 19.2	+1.6
	baz=287,SNR=11						
S31K	Pelican	40.03	51	P	P	07 24 20.3	+1.5
	baz=289						
N32M	Quiet Lake	40.55	45	P	P	07 24 24.7	+1.5
	baz=288						
P32M	Atlin	40.74	48	P	P	07 24 26.1	+1.3
	baz=

baz=290
SIT Sitka 40.79 52 P P 07 24 26.8 +1.7
baz=291
A36M Sachs Harbour 40.89 28 P P 07 24 26.5 +0.8
baz=282,SNR=27
P33M Teslin, Yukon 40.97 47 P P 07 24 28.1 +1.4
baz=289,SNR=12
S32K Killisnoo 41.03 51 P P 07 24 28.8 +1.7
baz=291
Q32M Nakina River 41.65 48 P P 07 24 33.9 +1.4
baz=291
ZALV Zalesovo Beam 41.85 304 P P 07 24 30.9 -2.9
comp=Z,1.7nm,0.5s,baz=62,slow=6.8,SNR=5.5
ZALV PcP PcP 07 26 26.5 -0.4
comp=Z,3.0nm,0.8s,baz=62,slow=2.8,SNR=5.1
comp=Z,1.7nm,0.5s
C36M Paulatuk 41.88 32 P P 07 24 34.8 +0.9
baz=286,SNR=22
R33M Jennings River 42.13 47 IAmb IAmb 07 24 39.6
comp=Z,20nm,0.8s
R33M Jennings River 42.13 47 P P 07 24 37.9 +1.8
baz=291,SNR=15
U33K Whale Pass 42.27 52 P P 07 24 39.3 +2.0
baz=293
CRAG Craig 42.53 53 P P 07 24 41.5 +2.2
baz=294
WRAK Wrangell Islan 42.55 52 P P 07 24 41.4 +2.0
baz=293
S34M Telegraph Cree 42.59 49 P P 07 24 41.8 +2.0
baz=293
WTLY Watson Lake, Y 42.89 46 P P 07 24 44.2 +1.9
baz=292,SNR=14
DLBC Dease Lake 42.93 48 P P 07 24 44.7 +2.1
baz=293,SNR=9.8
T35M Bob Quinn 43.39 50 IAmb IAmb 07 24 50.3
comp=Z,18nm,1.0s
T35M Bob Quinn 43.39 50 P P 07 24 48.9 +2.6
baz=294
WRGLY Wrigley 44.10 40 P P 07 24 53.3 +1.5
baz=292
WMQ Urumqi 44.91 289 *e*P P 07 24 55.8 -2.8
WMQ pP pP 07 25 35.8 +5.7
WMQ sP sP 07 25 47.0 +1.1
WMQ pmax pmax
comp=Z,14nm,0.7s
WMQ LR LR
comp=N,970nm,17.5s
WMQ LR LR
comp=E,570nm,17.5s
WMQ LR LR
comp=Z,220nm,20.3s
PZH PanZhiHua 46.46 260 P P 07 25 10.8 -0.2
MK31 Makanchi Array 46.60 296 *c i*P P 07 25 10.0 -1.8
MKAR Makanchi Array 46.60 296 P P 07 25 09.6 -2.1
comp=Z,4.4nm,0.8s,baz=62,slow=6.2,SNR=9.7
MKAR LR LR 07 44 26.8
comp=Z,290nm,20.2s,baz=300,slow=36
comp=Z,4.4nm,0.8s
MKAR Makanchi Array 46.60 296 *e*P P 07 25 15.3 +3.5
MKAR pmax pmax
comp=Z,3.0nm,0.8s
KURK Kurchatov 46.70 302 P 07 25 10.9 -1.5
KURK IAmb IAmb 07 25 12.1
comp=Z,30nm,1.4s
KURK Kurchatov 46.70 302 *d i*P P 07 25 10.8 -1.6
KURK pmax pmax
comp=Z,14nm,0.9s
MAKZ Makanchi 46.78 296 P P 07 25 11.4 -1.7
MAKZ Makanchi 46.78 296 P P 07 25 11.4 -1.7
MAKZ pmax pmax
comp=Z,14nm,1.4s
KURBB Kurchatov Arra 46.80 302 P P 07 25 11.6 -1.6
comp=Z,5.6nm,0.6s,baz=68,slow=8.3,SNR=19
KURBB pP pP 07 25 42.1 -2.9
comp=Z,1.1nm,0.6s,baz=65,slow=7.8,SNR=1.1
KURBB PcP PcP 07 26 42.9 -0.9
comp=Z,2.3nm,0.7s,baz=62,slow=3.1,SNR=6.0
comp=Z,5.6nm,0.6s
HOLB Holberg 47.40 58 P P 07 25 18.9 +1.0
HOLB IAmb IAmb 07 25 41.5
comp=Z,29nm,1.2s
RES Resolute Bay 47.85 20 P 07 25 21.4 +0.5
RES Resolute Bay 47.85 20 P P 07 25 21.4 +0.5
RES pmax pmax
comp=Z,6.0nm,0.7s
YKAW3 Yellowknife Wh 48.04 39 P P 07 25 23.9 +1.3
YKAW3 IAmb IAmb 07 25 24.8
comp=Z,12nm,0.8s
YKA Yellowknife Ar 48.08 39 P P 07 25 23.7 +0.8
comp=Z,8.4nm,0.7s,baz=22,slow=8.3,SNR=64
comp=Z,8.4nm,0.7s
KBS Kingsbay 49.88 351 P P 07 25 35.1 -1.3
KBS IAmb IAmb 07 25 53.4
comp=Z,20nm,1.2s
KBS Kingsbay 49.88 351 P P 07 25 35.1 -1.3
KBS pmax pmax
comp=Z,20nm,1.2s
BVAR Borovoye Array 49.89 308 P P 07 25 35.5 -1.3
comp=Z,2.7nm,0.5s,baz=51,slow=8.4,SNR=5.7
BVAR pP pP 07 26 07.8 -1.2
comp=Z,0.8nm,0.5s,baz=57,slow=6.9,SNR=1.6
BVAR PcP PcP 07 26 54.4 -0.7
comp=Z,1.1nm,0.3s,baz=74,slow=4.5,SNR=8.1
comp=Z,2.7nm,0.5s
BORK Borovoye 49.92 308 P P 07 25 36.3 -0.7
BORK Borovoye 49.92 308 *i*P P 07 25 36.1 -0.9
BORK pmax pmax
comp=Z,6.0nm,1.0s
SPITS Spitsbergen Ar 50.03 350 P P 07 25 36.0 -1.5
comp=Z,2.0nm,0.5s,baz=74,slow=8.9,SNR=13
SPITS PcP PcP 07 26 55.0 -0.2
comp=Z,8.6nm,0.9s,baz=124,slow=4.2,SNR=4.7
comp=Z,2.0nm,0.5s
LLLB Lillooet 50.80 55 P 07 25 45.0 +1.2
TULEG Thule 51.17 12 P 07 25 45.4 -0.6
TULEG IAmb IAmb 07 25 46.2
comp=Z,13nm,0.7s
TULEG Thule 51.17 12 *i*P P 07 25 45.1 -1.0
TULEG IAmb IAmb 07 25 45.9
comp=Z,12nm,0.7s
TARG Taragay, Kyrgy 52.10 293 P P 07 25 51.9 -2.1
TARG Taragay, Kyrgy 52.10 293 P P 07 25 51.9 -2.1
TARG pmax pmax
comp=Z,2.0nm,1.0s
KDJ Kajisay 52.24 293 P P 07 25 53.3 -1.5
KDJ Kajisay 52.24 293 P P 07 25 53.3 -1.5
KDJ pmax pmax
comp=Z,7.0nm,1.2s
NEEM North Greenlan 52.26 7 *i*P P 07 25 53.6 -0.9
NEEM IAmb IAmb 07 25 54.2
comp=Z,15nm,0.8s
POIN Pond Inlet 52.71 17 P 07 25 57.2 -0.3
BOOM Boomskoye usch 52.76 294 P P 07 25 56.8 -1.8
BOOM Boomskoye usch 52.76 294 P P 07 25 56.8 -1.8
BOOM pmax pmax
comp=Z,10.0nm,1.3s
B08A Colville Reser 53.45 56 P 07 26 03.8 +0.4
SHL Shillong 53.49 268 P P 07 26 03.5 -0.6
SHL IAmb IAmb 07 26 18.3
comp=Z,17nm,1.5s
SHL Shillong 53.49 268 P P 07 26 03.5 -0.6
SHL pmax pmax
comp=Z,17nm,1.5s
EDM Edmonton 53.66 48 P 07 26 05.3 +0.5
EDM Edmonton 53.66 48 P P 07 26 05.3 +0.5
EDM pmax pmax
comp=Z,21nm,0.8s
ARTI Arti 53.75 317 P P 07 26 03.6 -1.8
ARTI IAmb IAmb 07 26 05.5
comp=Z,14nm,0.7s
ARTI Arti 53.75 317 *c i*P P 07 26 04.0 -1.4
ARTI *PP pP 07 26 40.2 +2.2
ARTI 07 27 05.2
ARTI 07 28 04.0
ARTI S S 07 33 26.4 -1.9
ARTI SS SS 07 37 08.7 -1.6
ARTI pmax pmax
comp=Z,10.0nm,0.7s
CHTO Chiang Mai 53.78 256 P P 07 26 05.7 -0.4
CHTO Chiang Mai 53.78 256 P P 07 26 05.7 -0.4
CHTO pmax pmax
comp=Z,5.0nm,0.7s
DAG Danmarks Havn 53.88 358 *i*P P 07 26 03.7 -2.3
DAG IAmb IAmb 07 26 06.6
comp=Z,2.9nm,1.0s
BLKN Baker Lake 53.91 31 P 07 26 06.3 -0.1

HOOD Mount Hood Mea 53.97 60 P 07 26 07.9 +0.6
HOOD IAmb IAmb 07 26 10.0
comp=Z,18nm,1.1s
CMAR Chiang Mai Arr 54.04 256 P P 07 26 07.7 -0.3
comp=Z,1.7nm,0.3s,baz=30,slow=6.8,SNR=8.6
comp=Z,1.7nm,0.3s
CMAR Chiang Mai Arr 54.04 256 *e*P P 07 26 08.9 +0.9
CMAR pmax pmax
comp=Z,2.0nm,0.3s
KULLO Kullorsuaq 54.32 10 *i*P P 07 26 08.1 -1.1
KULLO IAmb IAmb 07 26 09.0
comp=Z,31nm,0.7s
ILON Igloolik, Nuna 54.40 21 P 07 26 09.3 -0.5
ILON IAmb IAmb 07 26 10.5
comp=Z,28nm,1.4s
I04A Tendick Farm, 54.46 62 P P 07 26 11.7 +0.9
I04A IAmb IAmb 07 26 12.6
comp=Z,8.8nm,0.9s
F07A Phinny Hill Vi 54.59 59 P 07 26 12.3 +0.7
F07A IAmb IAmb 07 26 13.7
comp=Z,11nm,0.8s
WIFE Three Sisters- 54.64 61 P 07 26 12.6 +0.4
WIFE IAmb IAmb 07 26 14.8
comp=Z,10.0nm,0.9s
NEW Newport 54.69 55 P 07 26 12.9 +0.5
NEW Newport 54.69 55 P P 07 26 12.9 +0.5
NEW pmax pmax
comp=Z,7.0nm,1.2s
BBOR Butler Butte 54.86 63 P 07 26 15.0 +1.2
BBOR IAmb IAmb 07 26 15.6
comp=Z,27nm,1.4s
J04A Umpqua Nationa 54.97 62 P 07 26 15.8 +1.1
E09A Wood Farm, Sta 55.20 57 IAmb IAmb 07 26 17.6
comp=Z,7.6nm,0.8s
PINE Pine Mountain 55.31 61 P P 07 26 19.6 +2.6
PINE IAmb IAmb 07 26 19.9
comp=Z,14nm,0.9s
ARCES ARCESS Array B 55.54 341 P P 07 26 15.9 -2.1
comp=Z,4.6nm,0.9s,baz=10,slow=7.4,SNR=4.2
comp=Z,4.6nm,0.9s
ARCES ARCESS Array B 55.54 341 P P 07 26 16.0 -2.1
UPNV Upernavik 56.09 11 *i*P P 07 26 20.7 -1.2
UPNV IAmb IAmb 07 26 21.5
comp=Z,19nm,0.6s
DBG Daneborg 56.38 358 *i*P P 07 26 22.4 -1.6
DBG IAmb IAmb 07 26 23.1
comp=Z,0.7nm,0.7s
NUUG Nuugaatsiaq 57.60 10 *i*P P 07 26 31.2 -1.3
NUUG IAmb IAmb 07 26 31.7
comp=Z,7.9nm,0.8s
ORV Oroville 57.64 66 P 07 26 34.1 +0.7
ORV Oroville 57.64 66 P P 07 26 34.1 +0.7
ORV pmax pmax
comp=Z,4.0nm,0.8s
SUMG Summit 57.82 5 P 07 26 34.1 -0.5
SUMG IAmb IAmb 07 26 35.4
comp=Z,16nm,1.1s
SUMG Summit 57.82 5 P P 07 26 34.1 -0.5
SUMG pmax pmax
comp=Z,16nm,1.1s
SUMG Summit 57.82 5 *i*P P 07 26 34.3 -0.3
SUMG IAmb IAmb 07 26 35.1
comp=Z,11nm,0.5s
FFC Flin Flon 57.95 42 P P 07 26 36.3 +1.1
FFC IAmb IAmb 07 26 37.2
comp=Z,12nm,0.8s
FFC Flin Flon 57.95 42 P P 07 26 36.3 +1.1
FFC pmax pmax
comp=Z,12nm,0.8s
KLMR Klimovskoe 58.24 329 *e*P P 07 26 34.0 -3.1
KLMR *e*PP pP 07 27 12.7 +2.5
KLMR pmax pmax
comp=Z,35nm,1.5s
FCC Fort Churchill 58.36 35 P P 07 26 38.5 +0.5
FCC Fort Churchill 58.36 35 P P 07 26 38.5 +0.5
FCC pmax pmax
comp=Z,17nm,0.5s
SAATT Saattut 58.46 10 *i*P P 07 26 37.6 -1.0
SAATT IAmb IAmb 07 26 38.5
comp=Z,42nm,0.7s
LRM Limekiln Ridge 58.71 55 P P 07 26 42.4 +1.4
DLMT Dillon 58.93 55 P P 07 26 43.8 +1.4
PNTR Pine Nut 59.07 65 P P 07 26 45.1 +1.5
PNTR IAmb IAmb 07 26 45.8
comp=Z,11nm,0.8s
SAQQ Saqqaq 59.18 10 *i*P P 07 26 42.5 -1.0
SAQQ IAmb IAmb 07 26 43.1
comp=Z,26nm,1.2s
BCYI Bear Canyon 59.18 57 P P 07 26 45.0 +0.7
BOZ Bozeman (W) 59.29 55 P P 07 26 46.4 +1.5
BOZ IAmb IAmb 07 26 47.2
comp=Z,12nm,0.8s
BOZ Bozeman (W) 59.29 55 P P 07 26 46.4 +1.5
BOZ pmax pmax
comp=Z,12nm,0.8s
QLMT Earthquake Lak 59.90 55 P P 07 26 50.2 +1.0
KVN Kaiserville 59.97 64 P 07 26 50.8 +1.1
KVN IAmb IAmb 07 26 51.9
comp=Z,7.3nm,1.0s
KVN Kaiserville 59.97 64 P P 07 26 50.8 +1.1
KVN pmax pmax
comp=Z,7.0nm,1.0s
YHL Hebgen Lake 60.02 55 P 07 26 50.7 +0.6
YHL IAmb IAmb 07 26 52.5
comp=Z,6.3nm,0.8s
ILULI Ilulissat 60.03 10 P P 07 26 49.4 +0.1
ILULI Ilulissat 60.03 10 P P 07 26 49.4 +0.1
ILULI pmax pmax
comp=Z,34nm,0.7s
NVAR Mina Array Bea 60.27 65 P P 07 26 53.0 +1.2
comp=Z,6.3nm,0.8s,baz=292,slow=7.3,SNR=41
comp=Z,6.3nm,0.8s
ELK Elko 60.51 61 P P 07 26 55.1 +1.7
ELK Elko 60.51 61 P P 07 26 55.1 +1.7
ELK pmax pmax
comp=Z,3.0nm,0.8s
FXWY Fox Creek 60.91 56 P P 07 26 57.7 +1.6
MOOW Moose Ponds 60.99 56 P P 07 26 58.5 +1.9
MOOW IAmb IAmb 07 26 59.5
comp=Z,6.4nm,1.1s
BELG Belogornoye 61.12 318 *i*P P 07 26 57.4 +0.4
BELG pmax pmax
comp=Z,2.0nm,1.0s
DSP Deep Springs 61.17 65 P P 07 26 59.2 +1.7
DSP IAmb IAmb 07 27 00.1
comp=Z,11nm,1.1s
GMN Gold Mountain 61.63 65 P P 07 27 02.5 +1.4
FINES FINESS Array B 61.93 335 P P 07 27 00.5 -1.8
comp=Z,3.0nm,0.4s,baz=33,slow=8.4,SNR=24
comp=Z,3.0nm,0.4s
FINES FINESS Array B 61.93 335 *e*P P 07 27 01.0 -1.3
FINES pmax pmax
comp=Z,3.0nm,0.4s
SFJD Kangerlussuaq 62.20 11 *i*P P 07 27 03.5 -0.5
SFJD IAmb IAmb 07 27 04.4
comp=Z,12nm,0.7s
S11A Rachel 62.29 64 P P 07 27 06.7 +1.4
PD31 Pinedale Array 62.29 56 P P 07 27 06.2 +0.9
PD31 IAmb IAmb 07 27 07.3
comp=Z,14nm,0.9s
PDAR Pinedale Array 62.29 56 P P 07 27 06.3 +0.9
comp=Z,9.1nm,0.8s,baz=318,slow=2.2,SNR=58
comp=Z,9.1nm,0.8s
CLC China Lake 62.43 66 P P 07 27 07.4 +1.2
CLC IAmb IAmb 07 27 07.8
comp=Z,9.1nm,0.9s
CLC China Lake 62.43 66 P P 07 27 07.4 +1.2
CLC pmax pmax
comp=Z,9.0nm,0.9s
GWY Greenwater Val 62.73 65 P P 07 27 09.1 +0.9
GWY IAmb IAmb 07 27 09.9
comp=Z,8.2nm,0.9s
CCCA Chr Cany lake 62.77 66 P P 07 27 08.7 +0.3
BSUT Blindstream Ca 63.16 58 P P 07 27 12.4 +1.1
BSUT IAmb IAmb 07 27 14.1
comp=Z,7.9nm,0.9s
OBN Obninsk 63.57 326 |*e*P P 07 27 13.4 +0.2
OBN *e*PP pP 07 27 41.6 -5.2
OBN *e* 07 29 33.0
OBN *e*PPP PPP 07 31 05.1
OBN *e*S S 07 35 40.2 +5.1
OBN *e*SS SS 07 39 48.3 +4.3
OBN pmax pmax
comp=Z,15nm,1.2s
ULM Lac du Bonnet 63.74 42 P P 07 27 14.2 -0.2
comp=Z,4.1nm,0.7s,baz=293,slow=7.4,SNR=10
comp=Z,4.1nm,0.7s
ULM Lac du Bonnet 63.74 42 *e*P P 07 27 14.9 +0.4
ULM pmax pmax
comp=Z,4.0nm,0.7s
MDND Maddock 63.78 46 P P 07 27 14.8 +0.1
P17A Butcher Ranch, 63.90 59 IAmb IAmb 07 27 18.1
comp=Z,11nm,1.1s
VSU Vasula 64.19 333 *i*P P 07 27 19.0 +1.8
VSU pmax pmax
comp=Z,49nm,2.7s
ANGG Ammassalik, Gr 64.77 6 *i*P P 07 27 19.8 -1.1
ANGG IAmb IAmb 07 27 20.6
comp=Z,16nm,0.6s
U15A North Rim 65.13 63 IAmb IAmb 07 27 26.3
comp=Z,8.8nm,1.1s
NB2 NORSAR Subarra 65.89 341 P P 07 27 26.6 -1.7
comp=Z,0.7nm,0.5s,baz=25,slow=6.2
NOA NORSAR Array B 65.89 341 P P 07 27 26.9 -1.4
comp=Z,0.8nm,0.5s,baz=26,slow=6.4,SNR=7.6
comp=Z,0.8nm,0.5s
PV15 Paradox Valley 65.95 59 IAmb IAmb 07 27 31.1
comp=Z,10.0nm,0.9s
HFS Hagfors 66.18 340 P P 07 27 28.5 -1.5
comp=Z,2.3nm,0.4s,baz=57,slow=5.5,SNR=17
comp=Z,2.3nm,0.4s
ANMO Albuquerque 69.52 60 P P 07 27 52.5 +0.9
ANMO Albuquerque 69.52 60 *i*P P 07 27 53.0 +1.4
ANMO pmax pmax
comp=Z,5.0nm,0.9s
KIV Kislovodsk 69.57 314 *e*P P 07 27 52.8 +1.2
KIV pmax pmax
comp=Z,6.0nm,1.0s
KBZ Khabaz 69.64 314 P P 07 27 51.3 -0.6
comp=Z,3.5nm,0.8s,baz=238,slow=0.1,SNR=6.1
comp=Z,3.5nm,0.8s
KBZ Khabaz 69.64 314 *i*P P 07 27 53.1 +1.2
KBZ pmax pmax
comp=Z,3.0nm,0.9s
SHA1 Shidzhatmaz 69.75 314 *i*P P 07 27 53.5 +0.6
AKASG Malin Array Be 69.78 326 P P 07 27 51.0 -1.7
comp=Z,2.5nm,0.4s,baz=35,slow=6.2,SNR=20
comp=Z,2.5nm,0.4s
AKBB Malin Array Si 69.78 326 *i*P P 07 27 53.1 +0.5
AKBB pmax pmax
comp=Z,8.0nm,0.9s
KIEV Kiev 69.79 326 P 07 27 51.3 -1.4
KIEV IAmb IAmb 07 27 53.6
comp=Z,7.6nm,0.8s
KIEV Kiev 69.79 326 P P 07 27 51.3 -1.4
KIEV pmax pmax
comp=Z,8.0nm,0.9s
SCHQ Schefferville 70.33 24 P P 07 27 55.2 -0.8
comp=Z,12nm,0.4s,baz=331,slow=5.0,SNR=120
comp=Z,12nm,0.4s
SCHQ Schefferville 70.33 24 P 07 27 56.0 0.0
GNI Garni 71.49 311 *i*P P 07 28 04.9 +1.5
GNI pmax pmax
comp=Z,5.0nm,0.9s
WRA Warramunga Arr 71.50 200 P P 07 28 01.9 -1.5
comp=Z,0.9nm,0.3s,baz=16,slow=6.4,SNR=17
WRA pP pP 07 28 35.8 -2.3
comp=Z,1.5nm,0.8s,baz=13,slow=5.9,SNR=4.4
comp=Z,0.9nm,0.3s
128A Castleberry Fa 73.46 59 IAmb IAmb 07 28 16.6
comp=Z,8.6nm,0.8s
EKA Eskdalemuir Ar 73.84 347 P P 07 28 15.1 -1.8
comp=Z,2.0nm,0.4s,baz=16,slow=4.9,SNR=38
EKA LR LR 08 00 48.7
comp=Z,159nm,21.9s,baz=49,slow=36
comp=Z,2.0nm,0.4s
EKA Eskdalemuir Ar 73.84 347 P P 07 28 16.3 -0.5
EKA pmax pmax
comp=Z,6.0nm,1.5s
MORC Moravsky Berou 74.42 333 P 07 28 19.6 -0.8
MORC Moravsky Berou 74.42 333 P P 07 28 19.6 -0.8
MORC pmax pmax
comp=Z,4.0nm,0.8s
R40A Maddies Statio 74.50 49 IAmb IAmb 07 28 21.1
comp=Z,8.2nm,0.8s
TUL3 Leonard 74.57 53 IAmb IAmb 07 28 22.4
comp=Z,12nm,0.6s
ASAR Alice Springs 75.20 200 P P 07 28 24.5 -0.5
comp=Z,1.5nm,0.6s,baz=11,slow=5.0,SNR=25
comp=Z,1.5nm,0.6s
TX31 Lajitas Ar. Si 75.25 62 P P 07 28 26.4 +0.9
TX31 IAmb IAmb 07 28 27.1
comp=Z,13nm,0.8s
TXAR Lajitas Array 75.25 62 P P 07 28 26.3 +0.7
comp=Z,9.6nm,0.6s,baz=299,slow=4.4,SNR=149
comp=Z,9.6nm,0.6s
MLR Muntele Rosu 75.34 325 P P 07 28 24.2 -1.6
MLR Muntele Rosu 75.34 325 P P 07 28 24.2 -1.6
MLR pmax pmax
comp=Z,7.0nm,1.1s
ARPR Arapgir-MALATY 75.40 314 P P 07 28 23.7 -2.6
ARPR IAmb IAmb 07 28 36.5
comp=Z,10nm,0.5s
FVM French Village 75.63 48 P P 07 28 27.5 0.0
FVM IAmb IAmb 07 28 28.0
comp=Z,7.4nm,0.7s
FVM French Village 75.63 48 P P 07 28 27.5 0.0
FVM pmax pmax
comp=Z,7.0nm,0.7s
MODS Modra-Piesok 75.75 332 *e*P P 07 28 29.9 +1.9
MODS Modra-Piesok 75.75 332 *e*P P 07 28 29.9 +1.9
HPIG 75.88 65 P P 07 28 29.8 +0.6
SRO Srobarova 75.93 331 *e*P P 07 28 30.0 +1.1
SRO Srobarova 75.93 331 *e*P P 07 28 30.0 +1.1
BTNL Ternell 76.66 340 *d*P P 07 28 32.3 -0.8
comp=Z,6.6nm,0.7s
MEM Membach 76.67 340 *d*P P 07 28 31.9 -1.2
WHAR Wooly Hollow 76.84 51 P P 07 28 34.5 +0.2
WHAR IAmb IAmb 07 28 35.1
comp=Z,20nm,1.2s
USIN University of 76.96 46 P P 07 28 35.0 +0.1
BCLA Clavier 77.00 340 *d*P P 07 28 34.6 -0.3
comp=Z,7.4nm,0.7s
BRTR Keskin Array B 77.03 317 P P 07 28 34.9 -0.7
comp=Z,1.0nm,0.6s,baz=66,slow=2.3,SNR=4.8
comp=Z,1.0nm,0.6s
BRTR Keskin Array B 77.03 317 *e*P P 07 28 37.0 +1.5
BRTR pmax pmax
comp=Z,1.0nm,0.7s
BMRD Maredsous 77.22 341 *d*P P 07 28 35.5 -0.7
RCHB Rochefort 77.26 340 *d*P P 07 28 36.0 -0.4
RCHB *dp*P pP 07 29 10.7 -0.5
LESA Schwarzleotal 77.95 335 *e*P P 07 28 40.9 +0.5
comp=Z,3.8nm,0.5s
KBA Koelnbreinsper 78.07 334 *e*P P 07 28 42.0 +0.8
comp=Z,15nm,0.5s
OBKA Obir 78.24 333 *e*P P 07 28 42.2 +0.2
comp=Z,1.9nm,0.3s
WTTA Wattenberg 78.38 335 *i*P P 07 28 43.2 +0.3
comp=Z,10.0nm,0.7s,SNR=5.6
MYKA Terra Mystica 78.39 334 *e*P P 07 28 42.9 0.0
comp=Z,2.4nm,0.4s
MOTA Moosalm 78.45 336 *e*P P 07 28 43.6 +0.4
comp=Z,3.4nm,0.5s
MLDN Muldoon 78.62 57 IAmb IAmb 07 28 45.7
comp=Z,19nm,0.8s
FETA Feichten 78.85 336 *e*P P 07 28 45.6 +0.2
comp=Z,3.0nm,0.6s
T50A Nancy 79.03 45 IAmb IAmb 07 28 47.5
comp=Z,14nm,0.9s
TUE Stuetta 79.72 336 P 07 28 50.4 +0.2
TUE IAmb IAmb 07 28 51.1
comp=Z,10nm,0.7s
ESDC Sonseca Array 89.16 344 P P 07 29 36.2 -1.4
comp=Z,0.8nm,0.6s,baz=0.3,slow=4.6,SNR=7.5
comp=Z,0.8nm,0.6s
KEST Kesra 89.68 332 P P 07 29 39.2 -0.9
comp=Z,3.5nm,0.6s,baz=336,slow=6.8,SNR=4.5
comp=Z,3.5nm,0.6s
QSPA South Pole Qui 139.29 180 PKP **PKPdf** 07 36 05.6 -1.4
comp=Z,2.9nm,0.9s,baz=142,slow=9.3,SNR=3.2
QSPA South Pole Qui 139.29 180 PKPdf **PKPdf** 07 36 08.0 +0.9
CPUP Villa Florida 146.16 59 PKPbc **PKPdf** 07 36 21.1 +0.8
comp=Z,5.7nm,0.8s,baz=328,slow=2.5,SNR=17
PLCA Paso Flores 147.36 92 PKPbc **PKPdf** 07 36 24.6 +2.6
comp=Z,6.0nm,0.8s,baz=279,slow=3.4,SNR=14
ELIB Princess Elisa 148.76 207 *d*PKPdf **PKPdf** 07 36 25.7 +2.2
ELIB *dp*PKPdf **pPKPbc** 07 37 05.5 +0.5
NVL N'lazarevskaya 152.61 206 *e*PKIKP **PKPbc** 07 36 37.1 +0.7
NVL pmax pmax
comp=Z,152nm,2.7s

SNET ***26*** *07:24:21.3±28.0, 11°.45N×86°.22W, h22km, ML3.6, Presumed earthquake*
UCR ***26*** *07:24:28.5±1.0, 11°.41N×86°.26W, h60km±7km, MW3.8, Presumed earthquake*
CATAC ***26*** *07:24:28.8±0.3, 11°.N±2°×8°.6W±°, h50km±3km, M3.7/35, MLv3.7/35, Error ellipse: s-maj=6.3km s-min=2.5km az=51.0, confirmed*

ISC 26 07:24:28.9±1.2, 11°.44N±0°.03×86°.24W±0°.04, h72km±7km, n116, σ0.978/185, 6C-29D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NADN	**Granada**	**0.36**	**33**	P			**Pn**	**07 24 40.5**	**-0.3**
NADN	**Granada**	**0.36**	**33**	↓*e*P			**Pn**	**07 24 40.4**	**-0.3**
NADN				*e*S			**Sn**	**07 24 49.6**	**+0.2**
NANN	**Nandasmo**	**0.51**	**13**	↓P			**Pn**	**07 24 42.6**	**+0.6**
MASN	**Masaya**	**0.55**	**9**	↓P			**Pn**	**07 24 42.4**	**-0.1**
MASN				S			**Sn**	**07 24 52.1**	**-0.2**
MASN	**Masaya**	**0.55**	**9**	*e*P			**Pn**	**07 24 42.3**	**-0.1**
MASN				*e*S			**Sn**	**07 24 52.1**	**-0.2**
JAPN	**Al SSO del Vol**	**0.55**	**81**	P			**Pn**	**07 24 42.5**	**+0.1**
JAPN				S			**Sn**	**07 24 52.6**	**+0.2**
JAPN	**Al SSO del Vol**	**0.55**	**81**	*e*P			**Pn**	**07 24 42.5**	**+0.1**
JAPN				*e*S			**Sn**	**07 24 52.8**	**+0.5**
MAS3	**Al N del Volca**	**0.58**	**6**	P			**Pn**	**07 24 42.4**	**-0.4**
MAS3				S			**Sn**	**07 24 52.3**	**-0.6**
MORN	**Al O del Volca**	**0.59**	**80**	↓P			**Pn**	**07 24 42.3**	**-0.5**
OMEN	**Al SSO del Vol**	**0.60**	**84**	P			**Pn**	**07 24 42.4**	**-0.5**
CONN	**Concepcion**	**0.61**	**79**	↓P			**Pn**	**07 24 42.5**	**-0.5**
CONN				S			**Sn**	**07 24 53.2**	**-0.2**
UNAN	**Cigeo UNAN**	**0.67**	**357**	↓P			**Pn**	**07 24 43.2**	**-0.4**
UNAN				S			**Sn**	**07 24 54.0**	**-0.4**
ABCN	**Banco Central**	**0.68**	**354**	P			**Pn**	**07 24 43.7**	**0.0**
ABCN				S			**Sn**	**07 24 55.2**	**+0.6**
LCRUZ	**La Cruz**	**0.70**	**121**	*e*P			**Pn**	**07 24 43.8**	**-0.1**
LCRUZ				*e*S			**Sn**	**07 24 54.9**	**-0.1**
TISN	**Laguna Tiscapa**	**0.70**	**357**	↓P			**Pn**	**07 24 43.5**	**-0.4**
MGAN	**Managua**	**0.70**	**359**	↓P			**Pn**	**07 24 43.5**	**-0.4**
MGAN				S			**Sn**	**07 24 56.0**	**+1.0**
MGAN	**Managua**	**0.70**	**359**	↓*i*P			**Pn**	**07 24 43.5**	**-0.4**
MGAN				*e*S			**Sn**	**07 24 54.8**	**-0.3**
ALLN	**Telcor Managua**	**0.71**	**357**	P			**Pn**	**07 24 43.9**	**-0.2**
ALLN				S			**Sn**	**07 24 55.5**	**+0.2**
WILN	**Americas 2**	**0.72**	**4**	↓P			**Pn**	**07 24 43.6**	**-0.6**
WILN				S			**Sn**	**07 24 55.7**	**+0.4**
CARN	**Rivas**	**0.74**	**110**	↓*e*P			**Pn**	**07 24 44.1**	**-0.4**
CARN				*e*S			**Sn**	**07 24 56.0**	**+0.1**
APQ2	**Apoyeque**	**0.76**	**353**	↓P			**Pn**	**07 24 44.0**	**-0.6**
APQ2				S			**Sn**	**07 24 56.0**	**-0.2**
COPN	**Copaltepe**	**0.81**	**335**	↓P			**Pn**	**07 24 44.6**	**-0.6**
COPN	**Copaltepe**	**0.81**	**335**	↓*i*P			**Pn**	**07 24 44.6**	**-0.6**
COPN				*e*S			**Sn**	**07 24 56.8**	**-0.6**
AMTN	**Mateare**	**0.81**	**346**	P			**Pn**	**07 24 45.0**	**-0.2**
AMTN				S			**Sn**	**07 24 57.6**	**+0.3**
APQ3	**Volcan Apoyequ**	**0.83**	**351**	↓P			**Pn**	**07 24 45.0**	**-0.5**
APQ3				S			**Sn**	**07 24 57.9**	**+0.1**
MOM2	**El Cardon**	**1.02**	**346**	↓P			**Pn**	**07 24 47.2**	**-0.5**
MOM2				S			**Sn**	**07 25 01.7**	**0.0**
LAPC	**Finca la Perla**	**1.04**	**130**	*e*P			**Pn**	**07 24 47.3**	**-0.6**
LAPC				*e*S			**Sn**	**07 25 01.3**	**-0.8**
ELI1	**Hacienda Flor**	**1.04**	**140**	P			**Pn**	**07 24 48.4**	**+0.4**
ELI1				S			**Sn**	**07 25 02.4**	**+0.2**
ELI1	**Hacienda Flor**	**1.04**	**140**	*e*P			**Pn**	**07 24 48.3**	**+0.4**
ELI1				*e*S			**Sn**	**07 25 03.4**	**+1.2**
BUAI	**Buenos Aires**	**1.05**	**122**	*e*P			Pn	07 24 40.0	-8.1
BUAI				*e*S			**Sn**	**07 25 02.0**	**-0.6**
PEJA	**Penjamo Buenos**	**1.06**	**121**	↑*i*P			**Pn**	**07 24 48.1**	**-0.2**
PEJA				*e*S			**Sn**	**07 25 02.9**	**+0.2**
VRLE	**La Escondida,**	**1.07**	**127**	*e*P			**Pn**	**07 24 48.0**	**-0.5**
ALIBA	**Liberia Airpor**	**1.08**	**141**	*e*P			**Pn**	**07 24 48.9**	**+0.4**
ALIBA				*e*S			**Sn**	**07 25 04.4**	**+1.2**
GPS3	**Bodega del ICE**	**1.09**	**129**	*e*P			**Pn**	**07 24 51.4**	**+2.7**
GPS3				*e*S			**Sn**	**07 25 05.7**	**+2.1**
MOM3	**MOM3**	**1.10**	**346**	P			**Pn**	**07 24 48.2**	**-0.5**
MOM3				S			**Sn**	**07 25 03.5**	**0.0**
GPS2	**Hotel Rincn d**	**1.11**	**128**	*e*P			**Pn**	**07 24 47.9**	**-1.0**
GPS2				*e*S			**Sn**	**07 25 02.5**	**-1.3**
ERIA	**Liberia**	**1.12**	**136**	*e*P			**Pn**	**07 24 49.4**	**+0.3**
ERIA				*e*S			**Sn**	**07 25 04.5**	**+0.4**
CNGA	**Al SSO del Vol**	**1.14**	**337**	↓P			**Pn**	**07 24 48.9**	**-0.4**
CNGA				S			**Sn**	**07 25 04.6**	**0.0**
CNGN	**Cerro Negro**	**1.14**	**337**	↓P			**Pn**	**07 24 48.9**	**-0.4**
CNGN				S			**Sn**	**07 25 04.7**	**0.0**
CNGN	**Cerro Negro**	**1.14**	**337**	↓*i*P			**Pn**	**07 24 48.9**	**-0.4**
CNGN				*e*S			**Sn**	**07 25 04.4**	**-0.2**
ACON	**Acoyapa**	**1.17**	**63**	P			**Pn**	**07 24 49.2**	**-0.3**
ACON				S			**Sn**	**07 25 04.7**	**-0.3**
ROCN	**Rota Cerro Neg**	**1.18**	**335**	↓P			**Pn**	**07 24 48.6**	**-1.2**
ROCN				S			**Sn**	**07 25 04.5**	**-0.9**
ALEN	**Leon**	**1.18**	**328**	P			**Pn**	**07 24 49.4**	**-0.4**
ALEN				S			**Sn**	**07 25 05.2**	**-0.3**
DELF	**Filadelfia**	**1.20**	**146**	*e*P			**Pn**	**07 24 50.2**	**+0.2**
DELF				*e*S			**Sn**	**07 25 05.4**	**-0.3**
CLARA	**Aguas Claras**	**1.23**	**122**	↓*e*P			**Pn**	**07 24 50.1**	**-0.4**
CLARA				*e*S			**Sn**	**07 25 06.7**	**0.0**
MESS	**Mesas**	**1.24**	**124**	↓*i*P			**Pn**	**07 24 50.2**	**-0.4**
MESS				*e*S			**Sn**	**07 25 07.3**	**+0.4**
HORNC	**Hornillas**	**1.27**	**125**	*e*P			**Pn**	**07 24 50.3**	**-0.7**
HORNC				*e*S			**Sn**	**07 25 07.6**	**+0.1**
VMAR	**Armenia, Volca**	**1.27**	**119**	↑*i*P			**Pn**	**07 24 50.6**	**-0.4**
VMAR				*e*S			**Sn**	**07 25 07.3**	**-0.2**
COLC	**Colonia**	**1.27**	**127**	*e*P			**Pn**	**07 24 50.7**	**-0.4**
COLC				*e*S			**Sn**	**07 25 07.6**	**+0.1**
CUI	**Cuipilapa**	**1.31**	**126**	↓*i*P			**Pn**	**07 24 51.3**	**-0.2**
CUI				*e*S			**Sn**	**07 25 08.7**	**+0.3**
UPAL	**Upala**	**1.32**	**114**	↓P			**Pn**	**07 24 50.5**	**-1.0**
UPAL				S			**Sn**	**07 25 08.2**	**-0.3**
UPAL	**Upala**	**1.32**	**114**	*e*P			**Pn**	**07 24 50.6**	**-1.0**
UPAL				*e*S			**Sn**	**07 25 07.9**	**-0.6**
BAGA	**Bagaces**	**1.32**	**133**	*e*P			**Pn**	**07 24 51.2**	**-0.4**
BAGA				*e*S			**Sn**	**07 25 08.9**	**+0.2**
POLN	**Al Sur del Vol**	**1.32**	**335**	↓P			**Pn**	**07 24 51.3**	**-0.4**
POLN				S			**Sn**	**07 25 08.5**	**-0.3**
SACU	**Santa Cruz**	**1.34**	**151**	*e*P			**Pn**	**07 24 51.4**	**-0.4**
SACU				*e*S			**Sn**	**07 25 07.7**	**-1.3**
PLVR	**Palo Verde**	**1.39**	**141**	*e*P			**Pn**	**07 24 53.2**	**+0.5**
PLVR				*e*S			**Sn**	**07 25 09.5**	**-1.0**
TENO	**El Achiote**	**1.44**	**121**	*e*P			**Pn**	**07 24 52.7**	**-0.5**
JUD3	**Juan Diaz 3**	**1.44**	**152**	*e*P			**Pn**	**07 24 52.8**	**-0.5**
JUD3				*e*S			**Sn**	**07 25 09.7**	**-1.8**
TIMP	**Tierras Morena**	**1.47**	**125**	*e*P			**Pn**	**07 24 52.9**	**-0.8**
TIMP				*e*S			**Sn**	**07 25 12.6**	**+0.4**
INVE	**Universidad In**	**1.50**	**130**	*e*P			**Pn**	**07 24 53.1**	**-0.9**
INVE				*e*S			**Sn**	**07 25 13.0**	**+0.1**
MATN	**Matagalpa**	**1.51**	**12**	↓P			**Pn**	**07 24 53.0**	**-1.2**
MATN				S			**Sn**	**07 25 13.1**	**-0.1**
NICO	**Nicoya**	**1.51**	**149**	*e*P			**Pn**	**07 24 53.7**	**-0.5**
NICO				*e*S			**Sn**	**07 25 11.7**	**-1.5**
LCHIL	**Los Chiles**	**1.55**	**105**	↓*i*P			**Pn**	**07 24 53.7**	**-0.8**
LCHIL				*e*S			**Sn**	**07 25 13.5**	**-0.4**
QUEB	**Quebradon, Cot**	**1.55**	**122**	*e*P			**Pn**	**07 24 54.0**	**-0.6**
TILA	**Tilaran**	**1.58**	**128**	*e*P			**Pn**	**07 24 54.5**	**-0.5**
LIMN	**Finca el Limon**	**1.61**	**356**	↑P			**Pn**	**07 24 55.4**	**-0.2**
LIMN				S			**Sn**	**07 25 14.8**	**-0.9**
CMARA	**Lajas Hojancha**	**1.62**	**150**	P			**Pn**	**07 24 55.2**	**-0.5**
CMARA				S			**Sn**	**07 25 14.2**	**-1.7**
CMARA	**Lajas Hojancha**	**1.62**	**150**	*e*P			**Pn**	**07 24 55.2**	**-0.5**
JTS	**Las Juntas de**	**1.70**	**132**	↓*e*P			**Pn**	**07 24 56.0**	**-0.7**
JTS				*e*S			**Sn**	**07 25 16.3**	**-1.4**
TABAC	**Tabacon**	**1.72**	**123**	*e*P			**Pn**	**07 24 56.9**	**0.0**
NYURE	**Nandayure**	**1.73**	**146**	*e*P			**Pn**	**07 24 55.8**	**-1.2**
MTEVE	**Monteverde**	**1.78**	**129**	*e*P			**Pn**	**07 24 57.4**	**-0.4**
MTEVE				*e*S			**Sn**	**07 25 18.7**	**-1.0**
CEDE	**Laguna Cedeo**	**1.78**	**122**	*e*P			**Pn**	**07 24 57.9**	**+0.2**
CEDE				*e*S			**Sn**	**07 25 21.2**	**+1.6**
ARE1	**Arenal 1**	**1.78**	**123**	↑*i*P			**Pn**	**07 24 57.9**	**+0.2**
ARE1				*e*S			**Sn**	**07 25 20.6**	**+1.0**
VARE2	**V. Arenal**	**1.78**	**123**	*e*P			**Pn**	**07 24 57.8**	**0.0**
CASO	**Castillo**	**1.78**	**124**	*e*P			**Pn**	**07 24 57.5**	**-0.3**
CASO				*e*S			**Sn**	**07 25 19.0**	**-0.7**
VACR	**Volcan Arenal**	**1.81**	**122**	*e*P			**Pn**	**07 24 58.1**	**+0.1**
COVE	**Coope Vega, Sa**	**1.94**	**112**	P			**Pn**	**07 24 58.8**	**-1.0**
CSGN	**Cosiguina Volc**	**2.00**	**320**	↓*i*P			**Pn**	**07 25 00.5**	**-0.1**
CSGN				*e*S			**Sn**	**07 25 24.6**	**-0.3**
RCON	**San Juan de Ri**	**2.03**	**2**	P			**Pn**	**07 25 01.4**	**+0.3**
PAQE	**Paquera**	**2.06**	**141**	*e*P			**Pn**	**07 25 02.2**	**+0.8**
RCPN	**Sur Rio San Ju**	**2.08**	**4**	P			**Pn**	**07 25 02.2**	**+0.4**
RCVN	**Varillal2**	**2.13**	**1**	P			**Pn**	**07 25 02.8**	**+0.3**
RCVN				S			**Sn**	**07 25 29.1**	**+1.0**
OCON	**Estacion meteo**	**2.19**	**354**	↑P			**Pn**	**07 25 03.7**	**+0.5**
OCON				S			**Sn**	**07 25 29.7**	**+0.3**
PALD	**Palmares**	**2.25**	**128**	↑*i*P			**Pn**	**07 25 04.2**	**+0.2**
PALD				*e*S			**Sn**	**07 25 30.5**	**-0.3**
ARTO	**Ro Cuarto**	**2.27**	**119**	*e*P			**Pn**	**07 25 04.1**	**-0.1**
SARCI	**Sarchi**	**2.29**	**126**	*e*P			**Pn**	**07 25 04.8**	**+0.2**
GREC	**Grecia**	**2.33**	**125**	*e*P			**Pn**	**07 25 05.4**	**+0.2**
LCND	**La Caada**	**2.46**	**319**	*i*P			**Pn**	**07 25 06.5**	**-0.3**
PURI	**Puriscal**	**2.47**	**130**	*e*P			**Pn**	**07 25 06.9**	**-0.1**
BELE	**Belen**	**2.49**	**126**	*e*P			**Pn**	**07 25 07.2**	**-0.1**
BELE				*e*S			**Sn**	**07 25 37.0**	**+0.4**
SANTA	**Santa Ana**	**2.51**	**126**	*e*P			**Pn**	**07 25 07.2**	**-0.5**
CENT	**San Jose**	**2.60**	**125**	*e*P			**Pn**	**07 25 09.7**	**+0.9**
LUJA	**Lujan**	**2.61**	**125**	*e*P			**Pn**	**07 25 08.9**	**0.0**
ACOS	**Acosta**	**2.61**	**129**	*e*P			**Pn**	**07 25 08.5**	**-0.6**
PICV	**PH. Pirrs**	**2.70**	**132**	*e*P			**Pn**	**07 25 10.2**	**+0.1**
PICV				*e*S			**Sn**	**07 25 43.6**	**+1.8**
VICA	**Volcano Irazu**	**2.76**	**121**	*e*P			**Pn**	**07 25 11.5**	**+0.2**
PCAYA	**Pacayas**	**2.83**	**122**	*e*P			**Pn**	**07 25 12.6**	**+0.6**
REPA	**Paraso**	**2.83**	**124**	*e*P			**Pn**	**07 25 12.3**	**+0.4**
ABRB	**Las Abras (San**	**2.86**	**120**	*e*P			**Pn**	**07 25 12.7**	**+0.2**
PACA	**Pacayal**	**2.87**	**315**	*i*P			**Pn**	**07 25 12.2**	**-0.2**
PIEC	**Cerro El Cedra**	**2.88**	**129**	*e*P			**Pn**	**07 25 13.2**	**+0.4**
VERB	**Verbena**	**2.91**	**121**	*e*P			**Pn**	**07 25 12.3**	**-0.7**
BUS1	**Rivas**	**3.08**	**127**	*e*P			**Pn**	**07 25 16.0**	**+0.3**
BUS1				*e*S			**Sn**	**07 25 50.2**	**-1.5**
TECO	**Alcaldia de Te**	**3.24**	**310**	*i*P			**Pn**	**07 25 18.4**	**+1.0**
VERH	**Veragua Rainfo**	**3.35**	**116**	*e*P			**Pn**	**07 25 18.2**	**-0.8**
COEG	**Centro de Oper**	**3.37**	**310**	*i*P			**Pn**	**07 25 20.0**	**+0.8**
SAJE	**San Jernim**	**3.40**	**128**	*e*P			**Pn**	**07 25 21.4**	**+1.7**
EDPE	**Pejibaye, P**	**3.47**	**131**	*e*P			**Pn**	**07 25 22.0**	**+1.4**
DRKG	**Durika**	**3.66**	**126**	*e*P			**Pn**	**07 25 20.3**	**-2.9**
FIMO	**Fila Mora**	**3.74**	**130**	*e*P			**Pn**	**07 25 26.5**	**+2.2**
PMON	**Piamonte**	**3.76**	**307**	*i*P			**Pn**	**07 25 24.9**	**+0.3**
VITO	**San Vito**	**4.14**	**129**	*e*P			**Pn**	**07 25 31.7**	**+1.9**
PIRO	**Carate, Puerto**	**4.16**	**136**	*e*P			**Pn**	**07 25 31.4**	**+1.4**
ALCO	**Alturas Coton,**	**4.17**	**126**	*e*P			**Pn**	**07 25 31.1**	**+0.9**
ALCO				*e*S			**Sn**	**07 26 15.3**	**-2.5**
CLLRA	**Cordillera,**	**4.46**	**127**	*e*P			**Pn**	**07 25 35.8**	**+1.6**

ASRS ***26*** *07:27:22.0±1.6, 49°.70N×81°.66E, h0km, M2.6(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
NNC ***26*** *07:27:25.7±2.0, 49°.63N×81°.80E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=28.5km s-min=5.1km az=55.0, Suspected Mining explosion.*
IDC ***26*** *07:27:26.6±1.3, 49°.69N×81°.57E, h0km, mbtmp2.5/2, ML2.0/2, Error ellipse: s-maj=18.2km s-min=9.5km az=55.0*

ISC 26 07:27:24.0±1.3, 50°.06N±0°.09×81°.97E±0°.06, h0km, n9, σ0.968/9, 8C, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**2.24**	**288**	↑Pn			**Pb**	**07 28 05.4**	**+0.1**
	5.0nm,0.8s								
KURK				↑Sn			**Sb**	**07 28 34.5**	**+1.0**
	8.1nm,0.6s								
KURBB	**Kurchatov Arra**	**2.27**	**286**	Pg			**Pb**	**07 28 05.7**	**-0.2**
	0.1nm,0.3s,baz=112,slow=19,SNR=29								
KURBB				Lg			Lg	07 28 35.2	
	0.5nm,0.3s,baz=116,slow=31,SNR=19								
KURBB	**Kurchatov Arra**	**2.27**	**286**	↑Pn			**Pb**	**07 28 05.6**	**-0.2**
	12nm,0.7s								
KURBB				↑Sn			**Sg**	**07 28 36.1**	**-0.8**
	49nm,0.7s								
MAKZ	**Makanchi**	**3.26**	**180**	↑Pg			**Pn**	**07 28 16.5**	**+0.2**
	2.8nm,0.5s								
MAKZ				↑Lg			Lg	07 28 55.8	
	7.5nm,0.9s								
MK31	**Makanchi Array**	**3.28**	**176**	↑Pg			**Pn**	**07 28 17.3**	**+0.6**
	0.7nm,0.5s,baz=354,slow=13,SNR=22								
MK31				↑Lg			Lg	07 28 57.9	
	10.0nm,0.8s,baz=353,slow=31,SNR=12								
MKAR	**Makanchi Array**	**3.28**	**176**	Pn			**Pn**	**07 28 15.9**	**-0.7**
	0.4nm,0.3s,baz=353,slow=12,SNR=13								
MKAR				Lg			Lg	07 28 57.6	
	0.7nm,0.3s,baz=354,slow=26,SNR=18								
	0.6nm,0.3s								
I46RU	**ZALESOVO INFRA**	**4.27**	**23**	I			I	07 57 20.0	
	baz=208,slow=330,SNR=2.9								
ZALV	**Zalesovo Beam**	**4.27**	**23**	Pn			**Pb**	**07 28 39.8**	**-0.1**
	0.2nm,0.3s,baz=212,slow=14,SNR=2.4								
ZALV				Lg			Lg	07 29 55.2	
	0.5nm,0.3s,baz=199,slow=27,SNR=9.3								
	0.5nm,0.2s								
BVAR	**Borovoye Array**	**7.80**	**297**	Lg			Lg	07 31 31.7	
	baz=108,slow=23,SNR=2.3								

NNC ***26*** *07:37:49.1±3.2, 48°.55N×78°.08E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=39.1km s-min=10.3km az=68.0, Suspected Mining explosion.*
IDC ***26*** *07:37:49.9±2.8, 48°.66N×77°.98E, h0km, mbtmp2.7/2, ML2.0/1, Error ellipse: s-maj=33.6km s-min=11.2km az=71.0*

ISC 26 07:37:46.5±3.1, 48°.4N±0°.1×77°.9E±0°.2, h0km, n8, σ1.904/10, 4C-4D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.27**	**10**	Pg			**Pn**	**07 38 25.9**	**+0.6**
	0.6nm,0.3s,baz=192,slow=16,SNR=52								
KURBB				Lg			Lg	07 38 53.7	
	0.5nm,0.3s,baz=194,slow=27,SNR=5.2								
KURBB	**Kurchatov Arra**	**2.27**	**10**	↑Pn			**Pn**	**07 38 25.6**	**+0.4**
	6.2nm,0.5s								
KURBB				↓Sn			**Sn**	**07 38 53.2**	**-0.7**
	19nm,0.6s								
KURK	**Kurchatov**	**2.37**	**11**	↑Pn			**Pn**	**07 38 26.8**	**+0.2**
	2.0nm,0.5s								
KURK				↑Sn			**Sn**	**07 38 55.8**	**-0.6**
	4.3nm,0.7s								
MAKZ	**Makanchi**	**3.19**	**118**	↓Pg			**Pg**	**07 38 48.0**	**+0.5**
	2.2nm,0.5s								
MAKZ				↓Lg			Lg	07 39 31.1	
	5.0nm,0.8s								
MK31	**Makanchi Array**	**3.38**	**117**	↓Pg			**Pb**	**07 38 46.9**	**-0.4**
	1.2nm,0.7s,baz=297,slow=12,SNR=5.0								
MK31				↑Lg			Lg	07 39 37.1	
	2.0nm,0.5s,baz=306,slow=28,SNR=12								
MKAR	**Makanchi Array**	**3.38**	**117**	Pn			**Pb**	**07 38 46.0**	**-1.3**
	0.1nm,0.3s,baz=304,slow=12,SNR=5.6								
MKAR				Lg			Lg	07 39 37.5	
	0.8nm,0.3s,baz=308,slow=28,SNR=11								
	0.6nm,0.6s								
ZALV	**Zalesovo Beam**	**7.06**	**35**	Pn			**Pn**	**07 39 32.8**	**+1.8**
	0.7nm,0.5s,baz=221,slow=17,SNR=2.1								
ZALV				Sn			**Sn**	**07 40 51.0**	**-0.9**
	0.4nm,0.3s,baz=220,slow=25,SNR=4.2								
ZALV				Lg			Lg	07 41 26.3	
	0.2nm,0.3s,baz=220,slow=39,SNR=1.5								
I46RU	**ZALESOVO INFRA**	**7.06**	**35**	I			I	08 22 10.0	
	baz=224,slow=328,SNR=0.1								

NAO ***26*** *07:38:07.1, 34°.89N×23°.15E, h33km, MB4.9*
IDC ***26*** *07:38:27.1±0.6, 37°.26N×20°.58E, h0km, mb4.1/20, mbtmp4.1/34, ML3.9/13, MS3.7/7, Error ellipse: s-maj=13.6km s-min=11.0km az=166.0*
MOS ***26*** *07:38:28.3±1.1, 37°.38N×20°.49E, h10km, mb4.4/21, Error ellipse: s-maj=7.0km s-min=4.0km az=77.3*
ATH ***26*** *07:38:29.6, 37°.24N×20°.39E, h8km±1km, ML4.3/10, Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*
NEIC ***26*** *07:38:30.3±1.2, 37°.36N±0°.04×20°.49E±0°.07, h10km±1km, mb4.5/67, Error ellipse: s-maj=9.1km s-min=6.5km az=84.0*
THE ***26*** *07:38:30.2, 37°.N±2°×2°.0E±°, h1km±1km, M4.2/24, MLh4.2/24*
PDG ***26*** *07:38:31.4±0.3, 37°.29N×20°.39E, h23km±1km, ML4.6/11, Error ellipse: s-maj=0.6km s-min=0.6km az=90.0*
MCSM ***26*** *07:38:31.2±0.7, 37°.N±5°×2°.0E±°, h11km±4km, mb4.5, mB4.0, MLv4.5, Mw(mB)3.0*

ISC 26 07:38:30.6±0.9, 37°.28N±0°.02×20°.44E±0°.03, h17km±5km, n451, σ1.946/493, mb4.4/73, MS3.7/5, 24C-19D, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LTHK	**Lithakia**	**0.53**	**36**	P			**Pg**	**07 38 40.9**	**-0.3**
LTHK				S			**Sb**	**07 38 50.3**	**+1.4**
LTHK	**Lithakia**	**0.53**	**36**	P			**Pg**	**07 38 41.1**	**-0.2**
LTHK				S			**Sg**	**07 38 48.6**	**+0.2**
ORTH	**Orthonies,Zaky**	**0.61**	**20**	P			**Pb**	**07 38 43.2**	**+0.4**
ORTH				S			**Sb**	**07 38 52.0**	**+1.0**
ORTH	**Orthonies,Zaky**	**0.61**	**20**	P			**Pb**	**07 38 43.0**	**+0.2**
ORTH				S			**Sg**	**07 38 51.6**	**+0.9**
KYPS	**Kipseli, Zakin**	**0.62**	**30**	P			**Pb**	**07 38 43.2**	**+0.2**
KYPS				S			**Sg**	**07 38 51.3**	**+0.2**
CLEM	**Kyllini,Ilia,G**	**0.82**	**42**	P			**Pg**	**07 38 46.3**	**-0.3**
CLEM				S			**Sb**	**07 38 58.6**	**+1.4**
RTZL	**Ratzakli, Kefa**	**0.84**	**18**	P			**Pb**	**07 38 46.2**	**-0.7**
RTZL				S			**Sg**	**07 39 00.8**	**+1.3**
RTZL	**Ratzakli, Kefa**	**0.84**	**18**	P			**Pg**	**07 38 46.5**	**-0.5**
RTZL				S			**Sg**	**07 38 58.4**	**+0.4**
KFL1	**Kefalonia,Entr**	**0.89**	**3**	P			**Pb**	**07 38 47.9**	**+0.3**
KFL1				S			**Sg**	**07 39 00.1**	**+0.5**
ARG2	**Argostoli**	**0.90**	**3**	P			**Pg**	**07 38 47.8**	**-0.3**
ARG2				S			**Sb**	**07 39 00.6**	**+1.2**
ARG2	**Argostoli**	**0.90**	**3**	P			**Pg**	**07 38 47.8**	**-0.3**
ARG2				S			**Sg**	**07 39 00.4**	**+0.5**
VLS	**Valsamata**	**0.90**	**8**	P			**Pg**	**07 38 47.3**	**-0.9**
VLS				S			**Sb**	**07 39 00.9**	**+1.3**
VLS	**Valsamata**	**0.90**	**8**	P			**Pg**	**07 38 48.0**	**-0.1**
VLS				S			**Sb**	**07 39 00.9**	**+1.3**
LXR1	**Lixouri, Cepha**	**0.92**	**0**	P			**Pn**	**07 38 49.0**	**+0.3**
LXR1				S			**Sb**	**07 39 01.8**	**+1.8**
LCHA	**Lechaina**	**0.93**	**45**	P			**Pb**	**07 38 49.1**	**+0.9**
LCHA				S			**Sg**	**07 39 01.4**	**+0.6**
DMLN	**Damoulianata-K**	**0.96**	**357**	P			**Pb**	**07 38 49.0**	**+0.3**
DMLN				S			**Sn**	**07 39 03.5**	**+0.9**
DMLN	**Damoulianata-K**	**0.96**	**357**	P			**Pb**	**07 38 49.1**	**+0.3**
DMLN				S			**Sg**	**07 38 58.7**	**+0.3**
ZARO	**Zacharo**	**0.99**	**78**	P			**Pb**	**07 38 49.8**	**+0.6**
ZARO				S			**Sg**	**07 39 02.9**	**+0.2**
AMT	**Artemida-Makis**	**1.04**	**76**	P			**Pb**	**07 38 50.7**	**+0.4**
AMT				S			**Sn**	**07 39 06.6**	**+1.9**
AMT	**Artemida-Makis**	**1.04**	**76**	P			**Pb**	**07 38 50.6**	**+0.4**
AMT				S			**Sb**	**07 39 05.1**	**+1.5**
PYL1	**Pylos**	**1.07**	**110**	P			**Pb**	**07 38 50.8**	**+0.1**
PYL1				S			**Sb**	**07 39 05.1**	**+0.7**
PYL	**PYLOS**	**1.11**	**110**	P			**Pg**	**07 38 51.0**	**

DRME Dracevica, Mon 5.00 349 *e*Pn Pn 07 39 44.7 -0.1
KKB Krupnik 5.01 24 *i* P Pn 07 39 45.9 +0.9
ZKR Zakros 5.15 113 *e*P Pn 07 39 49.9 +3.0
BUM Brajici-Budva 5.15 347⇓*i*Pn Pn 07 39 45.4 -1.6
BUM *i* Sn Sn 07 40 41.5 -4.6
PDG Podgorica 5.22 350⇑P Pn 07 39 46.6 -1.3
PDG Podgorica 5.22 350 Pn 07 39 47.0 -0.9
PDG Podgorica 5.22 350⇑*i*Pn Pn 07 39 47.3 -0.6
PDG *i* Sn Sn 07 40 44.3 -3.4
PDG Podgorica 5.22 350 *e*Pn Pn 07 39 46.8 -1.1
EZN Ezine 5.27 59 *e*P Pb 07 39 56.4 -5.8
EZN Ezine 5.27 59 P Pn 07 39 48.8 +0.3
0.2nm42nm,0.8s
PVY Plav 5.32 356⇓*i*Pn Pn 07 39 50.1 +0.7
PVY *i* Sn Sn 07 40 47.6 -2.7
HCY Herceg Novi 5.37 344⇓*i*Pn Pn 07 39 49.0 -1.0
HCY *i* Sn Sn 07 40 48.4 -3.0
HCY Herceg Novi 5.37 344 *e*Pn Pn 07 39 49.5 -0.5
CEME Cevo 5.39 348⇓*i*Pn Pn 07 39 48.8 -1.4
CEME *i* Sn Sn 07 40 48.8 -3.1
RZN Rozhen 5.52 36 *e*P Pn 07 39 53.0 +0.8
RDO Rodhopi 5.53 44 Pn 07 39 51.6 -0.6
RDO Rodhopi 5.53 44 *e*P Pn 07 39 51.5 -0.6
NKME Niksic 5.60 349⇓*i*Pn Pn 07 39 52.2 -0.9
NKME *i* Sn Sn 07 40 53.9 -3.1
IVA Berane 5.60 356⇓*i*Pn Pn 07 39 54.1 +0.9
IVA *i* Sn Sn 07 40 53.2 -4.0
KOME Kolasin 5.61 353⇑*i*Pn Pn 07 39 53.8 +0.5
KOME *i* Sn Sn 07 40 54.5 -2.9
GELI Tayfur-Gelibol 5.65 55 *e*Pn Pn 07 39 45.4 -8.3
TREB Trebinje 5.66 344 *e*Pn Pn 07 39 51.9 -2.0
ALN Alexandroupoli 5.66 49 Pn Pn 07 39 52.5 -1.4
ALN Alexandroupoli 5.66 49 P Pn 07 39 52.5 -1.4
PLNA Plana 5.68 23 *i* P Pn 07 39 55.5 +1.3
KARP Karpathos 5.69 106 Pn 07 39 54.9 +0.5
KARP Karpathos 5.69 106 *e*P Pn 07 39 55.3 +0.9
DAT Datca 5.74 93 *e*P Pn 07 39 56.4 +1.3
VTS Vitosha 5.75 21 *i* P Pn 07 39 55.9 +0.6
SGRT San Giovanni R 5.76 322 Pn Pn 07 39 55.2 -0.1
ERIK Erikli-Kesan 5.82 53 *e*P Pn 07 39 55.3 -0.8
PLD Plovdiv 5.89 33 *e*P Pn 07 39 59.5 +2.5
PLD Plovdiv 5.89 33 *e*P Pn 07 39 58.7 +1.7
PAOL Paolisi 5.90 311 Pn 07 39 57.2 0.0
PGB Panagyurishte 5.96 28 *e*P Pn 07 39 59.5 +1.4
BLSH Balsha 5.98 20 *i* P Pn 07 39 59.9 +1.5
SJES Sjenica 5.99 357 *e*Pn Pn 07 39 58.3 -0.2
UPM Unac-Piva 6.03 349 *e*Pn Pn 07 40 00.0 +0.8
KLINJ Klinje 6.05 347 *e*Pn Pn 07 39 57.9 -1.5
PLE Pljevlja 6.10 353 *e*Pn Pn 07 40 00.2 +0.2
PLE *i* Sn Sn 07 41 06.3 -3.1
UKOP Uzunkopru-Edir 6.16 49 *e*P Pn 07 40 00.1 -0.6
ARG Arkhangelos 6.26 97 Pn Pn 07 40 02.3 +0.1
ARG Arkhangelos 6.26 97 *e*P Pn 07 40 06.4 +4.2
ARG Arkhangelos 6.26 97 P Pn 07 40 02.3 +0.1
TURN Turunc 6.27 92 *e*P Pn 07 40 06.2 +4.0
BALB Balikesir 6.30 66 Pn Pn 07 40 01.5 -1.1
RUDO Rudo 6.38 353 *e*Pn Pn 07 40 01.9 -1.9
MANT Manisa 6.54 77 Pn Pn 07 40 06.0 -0.1
SUSR Susurluk-Balik 6.56 64 *e*P Pn 07 40 04.9 -1.4
MPEP Malo Peshtene 6.57 22 *i* P Pn 07 40 07.6 +1.2
DALY Dalyan (Mula) 6.59 92 *e*P Pn 07 40 10.5 +3.9
BBLS Lazi&#263i 6.63 354 *e*Pn Pn 07 40 06.5 -0.7
EDRB Edirne 6.67 45 *e*P Pn 07 40 09.3 +1.5
VALD Valchedram 6.80 19 *e*P Pn 07 40 09.7 +0.2
PLVB Pleven 6.89 26⇓P Pn 07 40 11.7 +1.0
ELND Elena 7.01 35⇑P Pn 07 40 13.6 +1.1
APMY Acipayam-Deniz 7.06 86 *e*P Pn 07 40 19.6 +6.4
CAME Cameli-Denizli 7.09 90 *e*P Pn 07 40 16.0 +2.3
AKAS Kas 7.43 95 Pn 07 40 18.5 +0.1
AKAS Kas 7.43 95 *e*P Pn 07 40 19.9 +1.5
ELL Elmali 7.60 91 Pn 07 40 21.6 +1.0
ELL Elmali 7.60 91 P Pn 07 40 21.6 +1.0
HERR Herculane 7.74 11⇑P Pn 07 40 22.9 +0.5
BLY Banja Luka 7.86 343 Pn Pn 07 40 23.8 -0.2
BLY Banja Luka 7.86 343 *e*Pn Pn 07 40 22.2 -1.8
FRGS Fruska Gora 7.88 357 *e*Pn Pn 07 40 22.2 -2.2
NRCA Norcia 7.89 317 Pn 07 40 25.8 +1.2
GUMA Gualdo di Mace 7.93 319 Pn Pn 07 40 24.9 -0.2
HUMR Humele 8.02 24⇑P Pn 07 40 26.5 +0.3
FDMO Fiordimonte 8.04 318 Pn Pn 07 40 27.2 +0.6
BORA Eskisehir 8.26 69 Pn Pn 07 40 29.8 +0.1
GZR Gura Zlata 8.29 12⇓P Pn 07 40 30.2 +0.1
GZR Gura Zlata 8.29 12 P Pn 07 40 30.2 +0.1
BZS Buzias 8.38 6⇑P Pn 07 40 30.6 -0.6
BZS Buzias 8.38 6 P Pn 07 40 30.5 -0.6
ARR Arges 8.67 20⇓P Pn 07 40 35.3 0.0
VSL Villasalto 8.96 288 Pn Pn 07 40 38.9 -0.3
MORH Mrgy, Hungar 9.03 352⇑P Pn 07 40 38.6 -1.5
MORH Mrgy, Hungar 9.03 352 P Pn 07 40 38.6 -1.5
11nm,0.6s
MORH Mrgy, Hungar 9.03 352 *e*Pn Pn 07 40 37.8 -2.3
KEST Kesra 9.06 264 Pn Pn 07 40 41.9 +1.2
0.9nm,0.3s,baz=99,slow=4.0,SNR=9.6
17nm,0.9s
MLR Muntele Rosu 9.19 25 Pn Pn 07 40 42.3 0.0
1.6nm,0.3s,baz=171,slow=5.7,SNR=23
MLR LR LR 07 45 10.8
comp=Z,560nm,21.9s,baz=206,slow=44
30nm,1.0s
MLR Muntele Rosu 9.19 25⇓P Pn 07 40 44.2 +1.8
MLR Muntele Rosu 9.19 25 Pn 07 40 40.5 -1.8
MLR Muntele Rosu 9.19 25 P Pn 07 40 44.1 +1.8
NEHR Nehoiu 9.25 27⇑P Pn 07 40 44.2 +1.0
BEHE Becsehely 9.58 345 Pn Pn 07 40 46.6 -1.1
BOSR Bodos 9.62 22⇓P Pn 07 40 49.5 +1.3
PLOR Plostina 9.74 27⇑P Pn 07 40 51.4 +1.5
PLOR Plostina 9.74 27 P Pn 07 40 51.4 +1.5
VRI Vrincioaia 9.78 27⇑P Pn 07 40 52.2 +1.7
VRI Vrincioaia 9.78 27 P Pn 07 40 52.1 +1.7
TRI Trieste 9.79 331 Pn Pn 07 40 50.0 -0.6
TRI Trieste 9.79 331 P Pn 07 40 50.0 -0.6
ZCCA Zocca 10.06 318 Pn Pn 07 40 53.3 -1.0
ONER Baraj Valea Uz 10.08 24⇓P Pn 07 40 56.4 +1.9
MPLH Magyarpolny 10.11 349 P Pn 07 40 54.4 -0.6
26nm,0.8s
OBKA Obir 10.21 336 *e*Pn Pn 07 40 57.0 +0.6
3.7nm,0.4s
OBKA *i* Sn Sn 07 42 45.2 -5.3
41nm,0.9s
SOKA Soboth 10.21 339 *e*Pn Pn 07 40 55.0 -1.5
7.3nm,0.4s
SOKA Sn Sn 07 42 42.1 -8.5
16nm,0.9s
PRED Cave del Predi 10.49 333 Pn Pn 07 40 59.6 -0.6
ARSA Arzberg 10.61 342 Pn 07 41 01.5 -0.2
ARSA Arzberg 10.61 342 *e*Pn Pn 07 41 01.1 -0.6
19nm,1.2s
BR105 Keskin Array S 10.61 73 P Pn 07 41 03.9 +1.9
4.9nm,0.9s
BR106 Keskin Array S 10.62 73 P Pn 07 41 03.9 +1.9
56nm4.8nm,1.0s
BR104 Keskin Array S 10.63 73 P Pn 07 41 04.1 +1.9
60nm4.4nm,1.0s
BR131 Keskin Array S 10.63 73 *i* P Pn 07 41 02.9 +0.7
BRTR Keskin Array B 10.63 73 Pn Pn 07 41 00.3 -1.9
0.2nm,0.3s,baz=255,slow=13,SNR=6.7
0.5nm,0.5s
BRTR Keskin Array B 10.63 73 *e*P Pn 07 41 05.7 +3.5
PSZ Piszkesteto 10.64 358 Pn 07 41 02.2 -0.1
PSZ Piszkesteto 10.64 358 P Pn 07 41 02.2 -0.1
STAL STALIGIAL 10.66 330 Pn Pn 07 41 01.6 -0.9
RONA Rosalia, Austr 10.85 345 Pn Pn 07 41 03.8 -1.2
3.0nm,0.7s
BUR08 Bucovina Ar. S 10.94 17 Pn Pn 07 41 04.8 -1.5
CTI Castel Tesino 10.95 326 Pn 07 41 05.3 -1.2
CTI Castel Tesino 10.95 326 P Pn 07 41 05.3 -1.2
BERU Beregovo 11.07 8 P Pn 07 41 08.3 +0.3
KBA Koelnbreinsper 11.11 334 *e*Pn Pn 07 41 11.4 +2.6
8.3nm,0.6s
KBA *e*Sn Sn 07 43 06.5 -6.1
13nm,0.9s
ABTA Abfaltersbach 11.14 331 Pn Pn 07 41 13.2 +4.1
4.5nm,0.7s
ABTA *e*Sn Sn 07 43 05.8 -7.5
22nm,1.0s
SALO Salr 11.16 321 Pn Pn 07 41 09.1 -0.2
KECS Kecovo 11.20 0 *e*P Pn 07 41 09.2 -0.6
KECS Kecovo 11.20 0 *e*PN Pn 07 41 09.2 -0.6
BRIU Brid 11.21 9 P Pn 07 41 10.1 +0.1
MUKU Mukachevo 11.29 8 P Pn 07 41 11.1 +0.1
HOLU Holmets 11.33 7 P Pn 07 41 10.9 -0.7
BZK Bozkurt 11.46 62 Pn Pn 07 41 12.4 -0.9

MOA Molln 11.50 339 *e*Pn Pn 07 41 15.1 +1.2
7.5nm,0.7s
BIOA Bad Ischl, Aus 11.55 336 Pn Pn 07 41 15.7 +1.1
13nm,0.9s
LESA Schwarzleotal 11.64 333 *e*Pn Pn 07 41 18.3 +2.3
4.7nm,0.3s
LESA *e*Sn Sn 07 43 19.5 -6.0
17nm,1.2s
STNU Starunia 11.80 13 P Pn 07 41 18.9 +0.8
WTTA Wattenberg 11.91 330 *e*Pn Pn 07 41 20.9 +1.2
1.1nm,0.2s
WTTA *e*Sn Sn 07 43 29.7 -2.5
15nm,0.8s
WATA Walderalm 11.99 330 *e*Pn Pn 07 41 32.7 +12
6.3nm,0.4s
FUORN Ofenpass-Fuorn 12.01 324 Pn 07 41 21.6 +0.5
SQTA Sankt Quirin 12.05 328 *e*Sn Sn 07 43 32.1 -3.4
16nm,1.2s
FETA Feichten 12.10 327 *e*Pn Pn 07 41 25.1 +2.8
1.6nm,0.6s
FETA *e*Sn Sn 07 43 31.9 -5.0
6.6nm,0.7s
KMPD K-Podol'skiy 12.11 19 P Pn 07 41 22.4 +0.2
NIE Niedzica 12.13 360 P Pn 07 41 22.1 -0.5
3.8nm,2.5s
STHS Stebnicka Huta 12.15 3 *e*P Pn 07 41 22.0 -0.8
STHS Stebnicka Huta 12.15 3 *e*PN Pn 07 41 22.0 -0.8
MOTA Moosalm 12.19 329 *e*Sn Sn 07 43 37.3 -1.8
6.6nm,0.6s
DAVOX Davos/Dischmat 12.31 324 Pn Pn 07 41 25.6 +0.4
0.6nm,0.3s,baz=146,slow=14,SNR=6.7
DAVOX Sn Sn 07 43 37.4 -4.5
0.6nm,0.3s,baz=308,slow=20,SNR=3.7
2.8nm,0.6s
TUE Stuetta 12.34 322 Pn 07 41 25.3 -0.4
GEC2 GERESS Array S 12.56 339 Pn Pn 07 41 28.2 -0.2
GERES GERESS Array B 12.56 339 Pn Pn 07 41 29.8 +1.3
baz=192,slow=12,SNR=1.7
0.8nm,0.4s
KHC Kasperske Hory 12.85 339 *e*PN Pn 07 41 38.1 +5.7
KHC *e*SN Sn 07 43 45.8 -9.2
KHC AMS AMS 07 49 20.0
comp=Z,400nm,10.1s
KHC Kasperske Hory 12.85 339 *ce*P Pn 07 41 31.6 -0.8
KHC pmax pmax
comp=Z,8.0nm,1.7s
MMAI Mount Meron Ar 12.96 105 Pn Pn 07 41 30.6 -3.5
comp=Z,2.1nm,0.3s,baz=318,slow=16,SNR=4.2
MMAI Sn Sn 07 43 50.2 -7.7
comp=Z,5.4nm,0.3s,baz=288,slow=24,SNR=5.2
comp=Z,0.8nm,0.3s
SENIN Lac Senin/Sane 13.34 317 Pn Pn 07 41 39.3 +0.1
LUBAR Lubar, Ukraine 13.69 20 P Pn 07 41 44.4 +0.5
GHAJ Ghor Haditha 13.85 111 Pn 07 41 46.2 +0.1
EIL Elat 14.28 118 Pn Pn 07 41 49.0 -3.1
comp=Z,1.5nm,0.3s,baz=11,slow=20,SNR=4.6
EIL Sn Sn 07 44 21.2 -8.9
comp=Z,2.2nm,0.3s,baz=41,slow=11,SNR=5.1
comp=Z,7.5nm,0.5s
ASF Jabal al Asfar 14.46 106 Pn Pn 07 41 51.8 -2.8
comp=Z,0.1nm,0.3s,baz=271,slow=11,SNR=2.2
comp=Z,1.0nm,0.5s
RNPP5 Staryi Chortor 14.48 14 P Pn 07 41 53.6 -0.9
MI28 Mi28,Pidlybu 14.59 18 P Pn 07 41 56.2 +0.1
RNPP9 Sopachiv 14.65 14 P Pn 07 41 57.0 +0.1
AK07 Malin Array Si 14.68 23 P Pn 07 41 57.5 +0.2
AK13 Malin Array Si 14.69 22 P Pn 07 41 57.0 -0.5
AK06 Malin Array Si 14.71 22 P Pn 07 41 56.8 -0.9
AK10 Malin Array Si 14.73 23 P Pn 07 41 58.0 -0.1
AK05 Malin Array Si 14.74 22 P Pn 07 41 58.0 -0.1
AK12 Malin Array Si 14.74 22 P Pn 07 41 58.1 -0.1
AK17 Malin Array Si 14.75 22 P Pn 07 41 58.2 -0.1
AK16 Malin Array Si 14.75 22 P Pn 07 41 58.2 -0.1
AK09 Malin Array Si 14.76 23 P Pn 07 41 58.3 -0.1
AK08 Malin Array Si 14.77 23 P Pn 07 41 58.1 -0.4
KIEV Kiev 14.81 22 Pn 07 41 58.2 -0.8
KIEV Kiev 14.81 22 P Pn 07 41 58.2 -0.8
AKASG Malin Array Be 14.82 22 Pn Pn 07 41 56.2 -2.9
comp=Z,3.4nm,0.3s,baz=211,slow=9.3,SNR=11
AKASG Sn Sn 07 44 43.2 +0.4
baz=206,slow=18,SNR=6.2
AKASG LR LR 07 49 06.6
comp=Z,494nm,20.8s,baz=178,slow=43
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 14.82 22 *e*P Pn 07 42 00.4 +1.2
AKASG pmax pmax
comp=Z,3.0nm,0.3s
AKBB Malin Array Si 14.82 22 Pn Pn 07 41 58.2 -1.0
AKBB Malin Array Si 14.82 22 *ce*P Pn 07 41 59.6 +0.4
CLL Collm 14.99 342 *e*P P 07 42 05.0 -1.9
CLL Collm 14.99 342 *e*P P 07 42 05.0 -1.9
CLL *i* x x 07 42 08.3
comp=Z,15nm,1.4s
CLL *i* x x 07 42 14.6
CLL *i* x x 07 42 17.5
CLL AMS AMS 08 00 00.0
comp=Z,200nm,20.6s
SOC Sochi 15.96 61 *e*P P 07 42 18.5 +0.8
SOC *e*S Sn 07 45 12.8 +2.1
SOC pmax pmax
comp=Z,6.0nm,0.6s
SOC MLR MLR
comp=Z,218nm,22.0s
WLF Walferdange 16.11 325 Pn Pn 07 42 16.2 0.0
WLF Walferdange 16.11 325 P Pn 07 42 16.2 0.0
WLF pmax pmax
comp=Z,29nm,1.2s
WLF Walferdange 16.11 325 *d*P P 07 42 21.5 +2.1
BTNL Ternell 16.79 327 *d*P P 07 42 27.9 +1.0
SUW Suwalki 16.84 6 Pn 07 42 24.8 -0.6
SUW Suwalki 16.84 6 P Pn 07 42 24.8 -0.6
RCHB Rochefort 16.88 324 *d*P P 07 42 31.7 +3.8
DOU Dourbes 17.14 323 *d*P P 07 42 34.2 +3.5
comp=Z,6.8nm,1.0s
BMRD Maredsous 17.20 324 *d*P Pn 07 42 30.6 +0.8
UCC Uccle 17.73 325 Pn 07 42 36.6 +0.1
UCC Uccle 17.73 325 P Pn 07 42 36.6 +0.1
UCC pmax pmax
comp=Z,11nm,0.7s
GEVA Gevas 17.91 80 Pn 07 42 37.5 -1.5
MNK Minsk 17.97 14 *i* P Pn 07 42 37.5 -1.9
comp=E,31nm,0.7s
MNK *i* P Pn 07 42 37.5 -1.9
comp=N,21nm,0.6s
MNK *i* P Pn 07 42 37.5 -1.9
comp=Z,23nm,0.7s,baz=199
MNK *i* PP pwP 07 42 48.2 -0.5
MNK *i* PPP PPP 07 42 55.9
MNK *i* S Sn 07 45 57.0 -2.3
MNK *i* SS SnSn 07 46 12.0 -0.9
MNK *i* SSS SSS 07 46 24.8
MNK *i* LQ LQ 07 47 55.5
MNK *i* LR LR 07 49 16.8
MNK *i* LRM MLR 07 51 05.2
comp=Z,168nm,14.2s
MNK *i* LRM MLR 07 51 07.7
comp=E,229nm,15.9s
MNK *i* LRM MLR 07 51 13.4
comp=N,98nm,15.1s
MNK Minsk 17.97 14 *i* P Pn 07 42 37.5 -1.9
MNK *i* S Sn 07 45 57.0 -2.3
MNK pmax pmax
comp=N,21nm,0.6s
MNK pmax pmax
comp=E,31nm,0.7s
MNK pmax pmax
comp=Z,23nm,0.7s
MNK MLR MLR
comp=Z,168nm,14.0s
MNK MLR MLR
comp=E,229nm,16.0s
MNK MLR MLR
comp=N,98nm,15.0s
SHA1 Shidzhatmaz 18.06 62 *ce*P P 07 42 42.2 +1.0
KIV Kislovodsk 18.13 61 *e*P Pn 07 42 41.7 +0.1
KIV pmax pmax
comp=Z,6.0nm,1.0s
NACGM Naroch 18.16 12 *e*P Pn 07 42 39.8 -1.8
comp=Z,28nm,0.9s,baz=197
KBZ Khabaz 18.23 62 P Pn 07 42 41.2 -1.4
comp=Z,0.5nm,0.3s,baz=250,slow=20,SNR=8.2
comp=Z,3.3nm,0.6s
KBZ Khabaz 18.23 62 *ce*P Pn 07 42 43.1 +0.5
KBZ pmax pmax
comp=Z,7.0nm,1.0s

PABE Paberze 18.39 6 P P 07 42 43.2 -1.3
PABE lAmb lAmb 07 42 43.7
comp=Z,66nm,0.9s
GNI Garni 19.17 74 P P 07 42 51.1 -2.3
comp=Z,1.3nm,0.3s,baz=63,slow=1.0,SNR=4.1
comp=Z,7.4nm,0.5s
GNI Garni 19.17 74 P P 07 42 53.0 -0.4
GNI lAmb lAmb 07 43 08.4
comp=Z,45nm,1.5s
GNI Garni 19.17 74 *ce*P P 07 42 53.1 -0.3
GNI pmax pmax
comp=Z,29nm,1.7s
VORD Divnogorie 19.17 38 *e*P P 07 42 51.7 -1.4
VORD pmax pmax
comp=Z,10.0nm,0.9s
ESDC Sonseca Array 19.24 285 P P 07 42 54.1 0.0
comp=Z,0.1nm,0.3s,baz=83,slow=11,SNR=14
comp=Z,3.1nm,1.0s
VSR Storozhevoye 19.26 38 *e*P P 07 42 52.0 -2.1
VSR pmax pmax
comp=Z,9.0nm,1.0s
PAB San Pablo 19.54 284 P Pn 07 42 58.4 -0.3
PAB San Pablo 19.54 284 P Pn 07 42 58.4 -0.3
PAB pmax pmax
comp=Z,10.0nm,1.1s
VORR Voronezh 19.57 37 *e*P P 07 42 56.6 -0.9
VORR pmax pmax
comp=Z,10.0nm,0.9s
LPSR Galich'ya Gora 20.06 34 *e*P P 07 43 01.6 -1.2
LPSR pmax pmax
comp=Z,50nm,0.7s
VRH Novokhopyorsk 20.54 41 *e*P P 07 43 06.7 -1.4
VRH pmax pmax
comp=Z,20nm,0.9s
OBN Obninsk 20.95 27 P P 07 43 11.9 -0.5
OBN Obninsk 20.95 27⇑*e*P P 07 43 13.4 +1.0
OBN *e* 07 43 32.1
OBN *e*S SnSn 07 47 26.3 +0.3
OBN pmax pmax
comp=Z,21nm,1.1s
OBN MLR MLR
comp=Z,280nm,16.0s
MDT Midelt 20.96 265 P P 07 43 11.4 -1.4
comp=Z,7.1nm,0.8s,baz=90,slow=12,SNR=20
comp=Z,7.1nm,0.8s
MD31 MD31 21.06 265 P P 07 43 15.2 +1.2
PBRG Braganca 21.40 291 *e*P P 07 43 17.9 +0.5
PBRG *i* lAmb lAmb 07 43 27.7
comp=Z,21nm,1.3s
MVO Moncorvo 21.59 289 *e*P P 07 43 19.8 +0.3
VSU Vasula 21.59 9 *ce*P P 07 43 18.0 -1.3
VSU pmax pmax
comp=Z,52nm,0.7s
MOS Moscow 21.82 27 *e*P P 07 43 21.7 0.0
MOS *e* 07 43 41.2
PMRV Marv??o 21.90 284 *e*P P 07 43 22.8 0.0
PMRV *i* lAmb lAmb 07 43 30.0
comp=Z,20nm,1.9s
MTE Manteigas 21.98 287 P P 07 43 24.1 +0.4
MTE lAmb lAmb 07 43 33.5
comp=Z,11nm,0.8s
PESTR Estremoz 22.09 283 *e*P P 07 43 24.8 -0.1
PESTR *i* lAmb lAmb 07 43 25.1
comp=Z,21nm,1.3s
PVIS Viseu 22.24 288 *e*P P 07 43 27.9 +1.3
PCAB Cabril 22.36 290 *e*P P 07 43 27.3 -0.5
PCAB *i* lAmb lAmb 07 43 39.0
comp=Z,38nm,1.6s
PBEJ Beja 22.39 281 *e*P P 07 43 28.6 +0.5
PARRA Arraiolos 22.45 283 *e*P P 07 43 27.5 -1.1
PARRA *i* lAmb lAmb 07 43 36.0
comp=Z,16nm,1.9s
PGAV Gavieira, Arco 22.55 291 *e*P P 07 43 33.3 +3.4
PCVE Castro Verde 22.58 280 *e*P P 07 43 32.0 +1.9
PCVE *i* lAmb lAmb 07 43 33.3
comp=Z,30nm,1.5s
MESJ Messejana 22.69 280 P P 07 43 32.3 +1.0
MESJ lAmb lAmb 07 43 35.5
comp=Z,17nm,1.2s
MESJ Messejana 22.69 280 P P 07 43 32.3 +1.0
MESJ pmax pmax
comp=Z,17nm,1.2s
HFS Hagfors 23.28 351 P P 07 43 35.1 -2.0
comp=Z,7.6nm,0.5s,baz=156,slow=11,SNR=27
comp=Z,7.6nm,0.5s
EKA Eskdalemuir Ar 24.13 326 P P 07 43 45.1 -0.2
comp=Z,2.1nm,0.6s,baz=128,slow=9.4,SNR=11
comp=Z,2.1nm,0.6s
ESK Eskdalemuir 24.14 326 P P 07 43 45.4 0.0
ESK lAmb lAmb 07 43 55.8
comp=Z,20nm,1.1s
ESK Eskdalemuir 24.14 326 P P 07 43 45.4 0.0
ESK pmax pmax
comp=Z,20nm,1.1s
EKB Eskdalemuir 24.14 326 P P 07 43 45.9 +0.4
EKB lAmb lAmb 07 43 54.2
comp=Z,16nm,1.2s
BELG Belogornoye 24.30 43 *i* P P 07 43 46.5 -0.4
BELG pmax pmax
comp=Z,9.0nm,0.8s
NAO01 NORSAR Array S 24.35 349 P P 07 43 47.2 -0.2
FINES FINESS Array B 24.45 7 P P 07 43 46.4 -1.8
comp=Z,4.2nm,0.6s,baz=176,slow=9.8,SNR=18
comp=Z,4.2nm,0.6s
FIA1 FINESS Array S 24.45 7 P P 07 43 47.8 -0.4
NB201 NORSAR Array S 24.48 349 P P 07 43 48.0 -0.5
NB2 NORSAR Subarra 24.48 349 P P 07 43 47.8 -0.8
comp=Z,20nm,1.1s,baz=158,slow=9.3
NOA NORSAR Array B 24.48 349 P P 07 43 48.1 -0.6
comp=Z,2.2nm,0.6s,baz=158,slow=9.0,SNR=15
NOA LR LR 07 55 12.9
comp=Z,103nm,18.8s,baz=35,slow=41
comp=Z,2.2nm,0.6s
RAYN Ar Rayn 25.51 115 P P 07 43 58.4 +0.2
RAYN Ar Rayn 25.51 115 P P 07 43 58.4 +0.2
RAYN pmax pmax
comp=Z,2.0nm,0.7s
KLMR Klimovskoe 26.50 21 *e*P P 07 44 04.9 -1.9
KLMR pmax pmax
comp=Z,23nm,1.1s
TORD Torodi Ar. Bea 29.29 220 P P 07 44 31.3 -0.8
comp=Z,2.3nm,0.5s,baz=30,slow=8.1,SNR=21
comp=Z,2.3nm,0.5s
AKTO Aktyubinsk 29.78 52 LR LR 07 59 57.6
comp=Z,176nm,19.6s,baz=48,slow=43
AB31 Akbulak array 30.81 54 P P 07 44 44.6 -0.8
ARTI Arti 31.67 41 P P 07 44 51.0 -1.8
ARTI Arti 31.67 41 *ce*P P 07 44 50.8 -2.0
ARTI pmax pmax
comp=Z,6.0nm,0.6s
ARCES ARCESS Array B 32.43 3 P P 07 44 57.8 -1.6
comp=Z,1.4nm,0.5s,baz=186,slow=9.0,SNR=11
comp=Z,1.4nm,0.5s
KEV Kevo 32.73 4 P P 07 45 01.2 -0.6
KEV Kevo 32.73 4 P P 07 45 01.3 -0.6
KEV pmax pmax
comp=Z,61nm,1.4s
BORK Borovoye 37.71 49 P P 07 45 44.9 -0.1
BORK Borovoye 37.71 49 P P 07 45 44.9 -0.1
BORK pmax pmax
comp=Z,3.0nm,0.9s
BVAR Borovoye Array 37.75 49 P P 07 45 44.2 -1.1
comp=Z,2.0nm,0.5s,baz=268,slow=8.0,SNR=9.7
comp=Z,2.0nm,0.5s
DBIC Dimbokro 38.19 223 P P 07 45 48.8 -0.6
comp=Z,5.9nm,0.7s,baz=45,slow=8.4,SNR=10
comp=Z,5.9nm,0.7s
DBIC Dimbokro 38.19 223 P P 07 45 50.1 +0.7
DBIC lAmb lAmb 07 45 58.6
comp=Z,10nm,0.8s
DBIC Dimbokro 38.19 223 P P 07 45 50.1 +0.7
DBIC pmax pmax
comp=Z,10.0nm,0.8s
KK31 Karatay Array 38.23 65 P P 07 45 50.2 +0.7
KK31 lAmb lAmb 07 45 50.3
comp=Z,3.1nm,0.5s
KK31 Karatay Array 38.23 65 P P 07 45 50.2 +0.7
KK31 pmax pmax
comp=Z,3.0nm,0.5s
BTK Batken 39.01 70 P P 07 45 56.0 -0.2
BTK Batken 39.01 70 P P 07 45 56.0 -0.2
BTK pmax pmax
comp=Z,7.0nm,1.4s
SPITS Spitsbergen Ar 41.04 359 P P 07 46 11.5 -1.0
comp=Z,3.9nm,0.8s,baz=157,slow=12,SNR=4.2
comp=Z,3.9nm,0.8s

AAK	**Ala-Archa**	**41.19**	**65**	P		**P**	**07 46 13.2**	**-1.1**
AAK	**Ala-Archa**	**41.19**	**65**	*ce*P		**P**	**07 46 13.8**	**-0.6**
AAK	comp=Z,8.0nm,2.6s			pmax		pmax		
KMBO	**Kilima Mbogo**	**41.27**	**154**	*i* P		**P**	**07 46 16.6**	**+1.3**
NIL	**Nilore**	**42.71**	**78**	P		**P**	**07 46 26.0**	**-0.7**
NIL	comp=Z,4.7nm,0.7s			IAmb		IAmb	07 46 46.7	
NIL	**Nilore**	**42.71**	**78**	P		**P**	**07 46 26.0**	**-0.7**
NIL	comp=Z,5.0nm,0.7s			pmax		pmax		
KURBB	**Kurchatov Arra**	**42.82**	**53**	P		**P**	**07 46 25.7**	**-1.6**
KURBB	comp=Z,3.0nm,0.5s,baz=281,slow=8.6,SNR=27 comp=Z,85nm,20.1s,baz=164,slow=39 comp=Z,3.0nm,0.5s			LR		LR	08 06 06.0	
KURK	**Kurchatov**	**42.87**	**53**	P		**P**	**07 46 26.4**	**-1.3**
KURK	comp=Z,12nm,1.1s			IAmb		IAmb	07 46 51.0	
KURK	**Kurchatov**	**42.87**	**53**	*ce*P		**P**	**07 46 27.0**	**-0.8**
KURK	comp=Z,3.0nm,0.8s			pmax		pmax		
TARG	**Taragay, Kyrgy**	**43.79**	**66**	P		**P**	**07 46 34.6**	**-1.2**
TARG	**Taragay, Kyrgy**	**43.79**	**66**	P		**P**	**07 46 34.6**	**-1.2**
TARG	comp=Z,5.0nm,1.2s			pmax		pmax		
SACV	**Santiago Islan**	**44.85**	**252**	P		**P**	**07 46 44.3**	**+0.2**
SUMG	**Summit**	**45.63**	**339**	P		**P**	**07 46 50.6**	**+0.5**
SUMG	comp=Z,11nm,1.3s			IAmb		IAmb	07 47 00.8	
SUMG	**Summit**	**45.63**	**339**	P		**P**	**07 46 50.6**	**+0.5**
SUMG	comp=Z,11nm,1.3s			pmax		pmax		
SUMG	**Summit**	**45.63**	**339**	*i* P		P	07 46 58.4	+8.3
SUMG	comp=Z,7.3nm,1.1s			IAmb		IAmb	07 47 01.1	
MK31	**Makanchi Array**	**45.83**	**58**	*de*P		**P**	**07 46 50.6**	**-1.0**
MKAR	**Makanchi Array**	**45.83**	**58**	P		**P**	**07 46 50.0**	**-1.5**
	comp=Z,2.3nm,0.5s,baz=274,slow=7.3,SNR=34 comp=Z,2.3nm,0.5s							
ZAA0	**Zalesovo Array**	**46.34**	**47**	P		**P**	**07 46 54.3**	**-1.2**
ZAA0	comp=Z,4.4nm,0.7s			IAmb		IAmb	07 47 11.3	
ZALV	**Zalesovo Beam**	**46.34**	**47**	P		**P**	**07 46 54.0**	**-1.5**
	comp=Z,5.0nm,0.6s,baz=276,slow=8.7,SNR=2.9 comp=Z,5.0nm,0.6s							
ZALV	**Zalesovo Beam**	**46.34**	**47**	P		**P**	**07 46 54.0**	**-1.5**
NRIK	**Noril'sk**	**47.63**	**26**	P		**P**	**07 47 05.6**	**+0.3**
NRIK	comp=Z,4.6nm,1.2s			IAmb		IAmb	07 47 16.1	
NRIK	**Noril'sk**	**47.63**	**26**	*i* P		**P**	**07 47 06.1**	**+0.8**
NRIK	comp=Z,2.0nm,0.9s			pmax		pmax		
WMQ	**Urumqi**	**50.26**	**60**	*e*P		**P**	**07 47 28.0**	**+2.1**
WMQ	comp=Z,14nm,0.7s			pmax		pmax		
TULEG	**Thule**	**53.93**	**343**	P		**P**	**07 47 53.2**	**+0.6**
TULEG	comp=Z,4.2nm,0.8s			IAmb		IAmb	07 48 02.9	
DRLN	**Deer Lake**	**55.61**	**309**	P		**P**	**07 48 05.5**	**+0.3**
EVN	**Everest**	**55.67**	**79**	P		**P**	**07 48 06.0**	**-0.7**
POIN	**Pond Inlet**	**57.27**	**339**	P		**P**	**07 48 17.2**	**+0.5**
POIN	comp=Z,2.7nm,0.8s			IAmb		IAmb	07 48 27.9	
GRTLG	**Ghanzi**	**58.33**	**179**	P		**P**	**07 48 26.3**	**+1.4**
GRTLG	comp=Z,12nm,1.3s			IAmb		IAmb	07 48 57.6	
SCHQ	**Schefferville**	**59.08**	**318**	P		**P**	**07 48 30.3**	**+0.7**
	comp=Z,1.6nm,0.7s,baz=43,slow=3.5,SNR=5.8 comp=Z,1.6nm,0.7s							
SCHQ	**Schefferville**	**59.08**	**318**	P		**P**	**07 48 29.6**	**0.0**
SCHQ	comp=Z,10nm,1.4s			IAmb		IAmb	07 49 01.1	
ILON	**Igloolik, Nuna**	**59.74**	**336**	P		**P**	**07 48 34.4**	**+0.5**
ILON	comp=Z,4.2nm,0.8s			IAmb		IAmb	07 48 43.2	
TIXI	**Tiksi**	**60.52**	**20**	*i* P		**P**	**07 48 41.9**	**+2.7**
TIXI	comp=Z,2.0nm,0.9s			pmax		pmax		
LPHEP	**Lephephe**	**60.53**	**174**	P		**P**	**07 48 41.6**	**+1.7**
RES	**Resolute Bay**	**60.61**	**344**	P		**P**	**07 48 41.1**	**+1.3**
RES	comp=Z,5.5nm,1.1s			IAmb		IAmb	07 48 50.2	
RES	**Resolute Bay**	**60.61**	**344**	P		**P**	**07 48 41.1**	**+1.3**
RES	comp=Z,6.0nm,1.1s			pmax		pmax		
SHL	**Shillong**	**60.78**	**79**	IAmb		IAmb	07 48 40.5	
SHL	comp=Z,3.6nm,0.6s			P		P	**07 48 40.5**	**-1.5**
SONM	**Songino Array**	**61.08**	**50**	P		**P**	**07 48 41.5**	**-2.1**
	comp=Z,0.6nm,0.6s,baz=276,slow=4.3,SNR=4.0 comp=Z,0.6nm,0.6s							
SONM	**Songino Array**	**61.08**	**50**	*e*P		**P**	**07 48 42.6**	**-1.0**
SONM	comp=Z,1.0nm,0.4s			pmax		pmax		
HAL	**Halifax**	**61.21**	**306**	P		**P**	**07 48 44.7**	**+0.3**
HAL	**Halifax**	**61.21**	**306**	P		**P**	**07 48 44.7**	**+0.3**
HAL	comp=Z,44nm,1.2s			pmax		pmax		
GGN	**Saint George**	**63.08**	**308**	P		**P**	**07 48 57.6**	**+0.7**
BLKN	**Baker Lake**	**67.16**	**335**	P		**P**	**07 49 23.3**	**+0.2**
BLKN	comp=Z,2.5nm,0.8s			IAmb		IAmb	07 49 32.4	
HHC	**Hu-ho-hao-te**	**67.60**	**55**	*e*P		**P**	**07 49 27.0**	**+0.6**
HHC	comp=Z,17nm,0.7s			pmax		pmax		
PZH	**PanZhiHua**	**67.93**	**73**	P		**P**	**07 49 30.3**	**+1.6**
A36M	**Sachs Harbour**	**68.39**	**349**	P		**P**	**07 49 30.8**	**+0.1**
A36M	comp=Z,6.5nm,0.9s			IAmb		IAmb	07 49 42.0	
XAN	**Xi'an**	**69.29**	**63**	||P		**P**	**07 49 36.0**	**-1.1**
XAN	comp=Z,6.0nm,0.7s			pmax		pmax		
CMAR	**Chiang Mai Arr**	**70.08**	**82**	P		**P**	**07 49 40.8**	**-1.3**
	comp=Z,1.0nm,0.3s,baz=311,slow=7.3,SNR=4.9 comp=Z,1.0nm,0.3s							
CMAR	**Chiang Mai Arr**	**70.08**	**82**	*e*P		**P**	**07 49 42.0**	**-0.1**
CMAR	comp=Z,1.0nm,0.4s			pmax		pmax		
HEH	**HeiHe**	**71.76**	**40**	*e*P		**P**	**07 49 52.0**	**+0.2**
BILL	**Bilibino**	**71.91**	**13**	*i* P		**P**	**07 49 54.2**	**+1.9**
BILL	comp=Z,1.0nm,1.2s			pmax		pmax		
E29M	**Blow River**	**73.41**	**352**	IAmb		IAmb	07 50 11.2	
F31M	**Tsiigehtchic**	**73.78**	**350**	IAmb		IAmb	07 50 12.5	
D23K	**Nanushuk River**	**73.86**	**357**	IAmb		IAmb	07 50 24.6	
YKA	**Yellowknife Ar**	**74.21**	**340**	P		**P**	**07 50 06.2**	**+0.1**
	comp=Z,0.4nm,1.0s,baz=41,slow=6.5,SNR=4.7 comp=Z,0.4nm,1.0s							
KLR	**Kul'dur**	**74.61**	**39**	*ce*P		**P**	**07 50 07.9**	**-0.7**
KLR	comp=Z,2.0nm,0.9s			pmax		pmax		
G29M	**Pine Creek**	**74.83**	**351**	IAmb		IAmb	07 50 19.6	
H29M	**Whitestone**	**75.54**	**351**	IAmb		IAmb	07 50 23.5	
E19K	**Redstone River**	**75.57**	**359**	IAmb		IAmb	07 50 23.9	
E18K	**Tukpahlearik C**	**75.62**	**0**	P		**P**	**07 50 15.0**	**+0.9**
E18K	comp=Z,2.8nm,0.9s			IAmb		IAmb	07 50 24.1	
H27K	**Steamboat Moun**	**75.88**	**353**	IAmb		IAmb	07 50 26.2	
I30M	**Mount Dempster**	**76.23**	**350**	IAmb		IAmb	07 50 27.4	
I29M	**Ogilvie Camp,**	**76.35**	**351**	IAmb		IAmb	07 50 27.8	
ULM	**Lac du Bonnet**	**76.38**	**324**	P		**P**	**07 50 18.8**	**0.0**
	comp=Z,0.5nm,0.5s,baz=43,slow=6.2,SNR=4.2 comp=Z,0.5nm,0.5s							
ULM	**Lac du Bonnet**	**76.38**	**324**	*e*P		**P**	**07 50 21.8**	**+3.0**
ULM	comp=Z,1.0nm,0.5s			pmax		pmax		
J30M	**Hart River**	**76.84**	**350**	IAmb		IAmb	07 50 31.6	
H21K	**Melozitna Rive**	**77.26**	**357**	P		**P**	**07 50 25.1**	**+1.6**
H21K	comp=Z,3.0nm,0.9s			IAmb		IAmb	07 50 34.2	
NJ2	**Nanjing**	**77.33**	**59**	*e*P		**P**	**07 50 24.5**	**+0.1**
NJ2	comp=Z,21nm,0.5s			pmax		pmax		
ILAR	**Eielson Array**	**77.80**	**354**	P		**P**	**07 50 26.8**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=347,slow=3.4,SNR=5.7							
ILAR	comp=Z,51nm,20.1s,baz=272,slow=37 comp=Z,0.2nm,0.5s			LR		LR	08 26 32.3	
M29M	**Somme Creek**	**79.17**	**350**	IAmb		IAmb	07 50 44.7	
KSRS	**Korea Array**	**79.95**	**50**	P		**P**	**07 50 37.7**	**-1.1**
	comp=Z,1.9nm,0.7s,baz=311,slow=5.0,SNR=7.2 comp=Z,1.9nm,0.7s							
KSRS	**Korea Array**	**79.95**	**50**	*e*P		**P**	**07 50 38.6**	**-0.2**
KSRS	comp=Z,2.0nm,0.7s			pmax		pmax		
PV03	**Paradox Valley**	**91.47**	**322**	P		**P**	**07 51 36.4**	**0.0**
WRA	**Warramunga Arr**	**120.57**	**93**	PKP		**PKPdf**	**07 57 20.9**	**-0.8**
	comp=Z,0.6nm,0.9s,baz=315,slow=2.5,SNR=4.5							
WRA	**Warramunga Arr**	**120.57**	**93**	*e*PKIKP		**PKiKP**	**07 57 24.6**	**+2.8**
WRA	comp=Z,1.0nm,0.9s			pmax		pmax		
ASAR	**Alice Springs**	**122.14**	**97**	PKP		**PKPdf**	**07 57 24.4**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=292,slow=1.5,SNR=4.4							

*IDC **26** 07:44:28.1±0.8,2°.57S×138°.31E,h0km,mb4.0/7, mbtmp3.9/10,ML3.7/3,Error ellipse: s-maj=23.5km s-min=19.3km az=85.0*
*NEIC **26** 07:44:33.2±1.9,2°.58S±0°.04×138°.40E±0°.06,h35km±2km, mb4.3/17,Error ellipse: s-maj=12.0km s-min=3.9km az=296.0*
*DJA **26** 07:44:33.7±0.6,2°.S±7°×13°.8E±°,h23km±8km,M4.2/10, mb4.4/2,MLv4.0/10*
ISC 26 07:44:31.8±0.6,**2°.52S**±0°.06×**138°.50E**±0°.06,**h32**km,**n36,** σ1§**17**/37,**mb4.3**/12,**Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.57**	**21**	P		**Pb**		**07 44 42.5**	**-1.0**
GENI	**Genyem**	**1.67**	**92**	P		**Pb**		**07 45 02.9**	**+1.0**
JAY	**Jayapura**	**2.20**	**90**	Pn		**Pb**		**07 45 09.1**	**-1.9**
	16nm,0.3s,baz=251,slow=6.9,SNR=24								
JAY				Sn		**Sb**		**07 45 38.0**	**+0.2**
	4.8nm,0.3s,baz=62,slow=14,SNR=4.6 36nm,0.3s								
JAY	**Jayapura**	**2.20**	**90**	P		**Pb**		**07 45 09.6**	**-1.4**
SRPI	**Serui, Papua**	**2.35**	**286**	P		**Pn**		**07 45 09.3**	**+1.0**
BAKI	**Biak**	**2.74**	**299**	P		**Pn**		**07 45 14.2**	**+0.7**
FAKI	**Fak Fak**	**6.26**	**266**			**Pn**		**07 46 03.0**	**+0.9**
FAKI	**Fak Fak**	**6.26**	**266**	P		**Pn**		**07 46 02.8**	**+0.8**
	0.1nm28nm,0.8s								
COEN	**Coen**	**12.26**	**158**	Pn		**Pn**		**07 47 25.3**	**+0.9**
MTN	**Manton Dam**	**12.58**	**215**	Pn		**Pn**		**07 47 28.5**	**-0.3**
SOEI	**Soe**	**15.87**	**242**	Pn		**Pn**		**07 48 11.4**	**-1.7**
KNRA	**Kununurra**	**16.21**	**216**	Pn		**Pn**		**07 48 16.7**	**-0.7**
KNRA	comp=Z,9.9nm,0.8s			IAmb		IAmb		07 48 28.9	
WB0	**Warramunga Arr**	**17.60**	**193**	Pn		**Pn**		**07 48 33.5**	**-1.4**
WR8	**Warramunga Arr**	**17.76**	**192**	Pn		**Pn**		**07 48 35.0**	**-1.8**
WR8	comp=Z,14nm,1.3s			IAmb		IAmb		07 49 00.1	
WRAB	**Tennant Creek**	**17.77**	**193**			**Pn**		**07 48 36.2**	**-0.7**
WRA	**Warramunga Arr**	**17.78**	**193**	P		**Pn**		**07 48 34.5**	**-2.5**
	comp=Z,0.4nm,0.3s,baz=4.1,slow=12,SNR=20 comp=Z,2.0nm,0.7s								
FITZ	**Fitzroy Crossi**	**19.97**	**218**	P		**P**		**07 49 00.1**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=41,slow=15,SNR=1.8 comp=Z,1.8nm,0.7s								
AS31	**Alice Springs**	**21.48**	**192**	P		**P**		**07 49 18.2**	**+0.2**
ASAR	**Alice Springs**	**21.48**	**192**	P		**P**		**07 49 17.9**	**-0.1**
	comp=Z,4.8nm,0.8s,baz=21,slow=11,SNR=57 comp=Z,4.8nm,0.8s								
MBWA	**Marble Bar**	**26.03**	**223**	P		**P**		**07 50 01.4**	**-0.8**
MBWA	comp=Z,24nm,1.2s			IAmb		IAmb		07 50 02.6	
PSA00	**Pilbara Seismi**	**26.23**	**222**	P		**P**		**07 50 03.6**	**-0.5**
PSA00	comp=Z,9.9nm,1.4s			IAmb		IAmb		07 50 25.8	
STKA	**Stephens Creek**	**29.34**	**175**	P		**P**		**07 50 31.2**	**-0.7**
STKA	comp=Z,20nm,1.3s			IAmb		IAmb		07 50 43.0	
LHI	**Lord Howe Isla**	**34.75**	**148**	P		**P**		**07 51 19.9**	**+0.6**
EVN	**Everest**	**58.16**	**305**	P		**P**		**07 54 23.2**	**-0.6**
EVN	comp=Z,2.5nm,0.8s			IAmb		IAmb		07 54 26.4	
SHEM	**Shemya Is, Ala**	**62.66**	**23**	P		**P**		**07 54 52.7**	**-0.5**
SMY	**Shemya**	**62.66**	**23**	P		**P**		**07 54 52.7**	**-0.5**
MKAR	**Makanchi Array**	**69.52**	**322**	P		**P**		**07 55 39.6**	**+2.1**
	comp=Z,2.3nm,0.7s,baz=113,slow=8.3,SNR=16 comp=Z,2.3nm,0.7s								
BOOM	**Boomskoye usch**	**71.88**	**316**	P		**P**		**07 55 53.5**	**+1.3**
BOOM	comp=Z,2.6nm,0.8s			IAmb		IAmb		07 55 55.3	
KURK	**Kurchatov**	**73.45**	**325**	P		**P**		**07 56 00.9**	**-0.1**
KURBB	**Kurchatov Arra**	**73.46**	**325**	P		**P**		**07 56 00.9**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=111,slow=5.2,SNR=4.7 comp=Z,0.6nm,0.8s								
VNDA	**Vanda**	**75.98**	**175**	P		**P**		**07 56 16.8**	**+1.6**
	comp=Z,1.1nm,0.7s,baz=324,slow=10,SNR=6.1 comp=Z,1.1nm,0.7s								
VNDA	**Vanda**	**75.98**	**175**	P		**P**		**07 56 15.9**	**+0.7**
VNDA	comp=Z,3.7nm,1.4s			IAmb		IAmb		07 56 56.6	
BVAR	**Borovoye Array**	**79.04**	**325**	P		**P**		**07 56 34.4**	**+1.6**
	comp=Z,0.4nm,0.4s,baz=114,slow=7.1,SNR=2.6 comp=Z,0.4nm,0.4s								
ILAR	**Eielson Array**	**85.75**	**24**	P		**P**		**07 57 07.9**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=273,slow=4.5,SNR=6.7 comp=Z,0.3nm,0.8s								
QSPA	**South Pole Qui**	**87.42**	**180**	P		**P**		**07 57 17.5**	**+1.6**
	comp=Z,3.1nm,0.9s,baz=304,slow=1.0,SNR=8.4 comp=Z,3.1nm,0.9s								
QSPA	**South Pole Qui**	**87.42**	**180**	P		**P**		**07 57 16.1**	**+0.2**
QSPA	comp=Z,9.4nm,1.4s			IAmb		IAmb		07 57 49.5	

*ASRS **26** 07:50:11.0±1.3,53°.82N×88°.22E,h0km,M2.5(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 26 07:50:13.3±3.6,**53.78N×88.19E**,**h0**km,**mbtmp2.6**/3, **ML2.2**/3,**Error ellipse: s-maj=35.4km s-min=20.8km az=49.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**2.00**	**276**	I		I		08 02 50.0	
	0.1nm,0.9s,baz=92,slow=336,SNR=5.6								
ZALV	**Zalesovo Beam**	**2.00**	**276**	Pn		Pb		07 50 49.5	-1.0
	1.1nm,0.3s,baz=93,slow=16,SNR=7.1								
ZALV				Lg		Lg		07 51 16.8	
	2.0nm,0.3s,baz=94,slow=25,SNR=10 1.6nm,0.3s								
KURBB	**Kurchatov Arra**	**6.72**	**246**	Pn		Pn		07 51 53.3	+0.1
	0.1nm,0.3s,baz=62,slow=14,SNR=6.3 0.3nm,0.3s								
MKAR	**Makanchi Array**	**7.94**	**211**	Pn		Pn		07 52 11.2	+1.2
	0.1nm,0.3s,baz=26,slow=18,SNR=1.7 0.2nm,0.5s								

*NOU **26** 07:51:45.0,37°.10S×176°.65E,h236km,MLv3.6/9,North Island, New Zealand*
*WEL **26** 07:51:46.5±1.1,37°.S±8°×17°.7E±°,h214km±9km,M2.5/11, ML2.3/10,MLv2.5/11,Error ellipse: s-maj=12.8km s-min=7.6km az=41.0,confirmed*
ISC 26 07:51:41.4±2.4,**37.01S**±0°.09×**176.89E**±0°.09, **h259**km±14km,**n69,**σ1§**61**/75,**North Island**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**1.03**	**137**	P		**Pn**		**07 52 18.2**	**+0.7**
HAZ				S		**S**		**07 52 43.2**	**-2.7**
RUGZ	**Raukumara Rang**	**1.14**	**147**	P		**Pn**		**07 52 18.7**	**+0.4**
RUGZ				S		**S**		**07 52 44.3**	**-3.1**
MXZ	**Matakaoa Point**	**1.26**	**116**	S		**S**		**07 52 46.4**	**-2.0**
URZ	**Urewera**	**1.26**	**172**	P		**Pn**		**07 52 19.7**	**+0.9**
URZ	**Urewera**	**1.26**	**172**	S		**S**		**07 52 46.7**	**-1.7**
URZ	**Urewera**	**1.26**	**172**	P		**Pn**		**07 52 19.9**	**+1.1**
URZ				S		**S**		**07 52 46.8**	**-1.6**
PKGZ	**Pakihiroa**	**1.28**	**132**	P		**Pn**		**07 52 20.6**	**+1.6**
PKGZ				S		**S**		**07 52 47.2**	**-1.4**
GRZ	**Great Barrier**	**1.38**	**303**	P		**Pn**		**07 52 20.1**	**+0.4**
MKAZ	**Moumakai**	**1.39**	**266**	P		**Pn**		**07 52 21.3**	**+1.6**
MWZ	**Matawai**	**1.42**	**159**	P		**Pn**		**07 52 21.4**	**+1.4**
MWZ				S		**S**		**07 52 49.1**	**-1.3**
WIAZ	**Waiheke Island**	**1.43**	**278**	P		**Pn**		**07 52 21.4**	**+1.4**
TWGZ	**Tauwhareparae**	**1.45**	**144**	P		**Pn**		**07 52 22.2**	**+2.0**
WMGZ	**Waiomatatini S**	**1.46**	**124**	P		**Pn**		**07 52 21.8**	**+1.6**
WMGZ				S		**S**		**07 52 49.4**	**-1.4**
MUGZ	**Murupara**	**1.47**	**184**	P		**Pn**		**07 52 21.7**	**+1.5**
PUZ	**Puketiti**	**1.52**	**135**	P		**Pn**		**07 52 22.0**	**+1.4**
RTZ	**Ruatahuna**	**1.60**	**178**	P		**Pn**		**07 52 22.7**	**+1.4**
MBAZ	**Motutapu North**	**1.62**	**278**	P		**Pn**		**07 52 23.1**	**+1.7**
TKGZ	**Te Karaka**	**1.62**	**152**	P		**Pn**		**07 52 23.1**	**+1.8**
AWAZ	**Awhitu Peninsu**	**1.80**	**268**	P		**Pn**		**07 52 24.6**	**+1.8**
CNGZ	**Carnagh Statio**	**1.80**	**145**	P		**Pn**		**07 52 25.2**	**+2.4**
RIGZ	**Rimuhau**	**1.83**	**158**	P		**Pn**		**07 52 25.5**	**+2.4**
MTHZ	**Maungataniwha**	**1.84**	**181**	P		**Pn**		**07 52 25.0**	**+1.8**
RAHZ	**Arahi**	**1.91**	**175**	P		**Pn**		**07 52 26.5**	**+2.7**
NMHZ	**Naumai**	**2.09**	**182**	P		**Pn**		**07 52 27.9**	**+2.5**
BKZ	**Black Stump Fm**	**2.18**	**188**	P		**Pn**		**07 52 27.3**	**+1.1**
BKZ	**Black Stump Fm**	**2.18**	**188**	S		**S**		**07 53 01.2**	**-0.5**
BKZ	**Black Stump Fm**	**2.18**	**188**	P		**Pn**		**07 52 27.4**	**+1.3**
ARHZ	**Aropaoanui**	**2.25**	**178**	P		**Pn**		**07 52 29.0**	**+2.2**
TMVZ	**Te Maari**	**2.30**	**204**	P		**Pn**		**07 52 30.0**	**+2.6**
WCZ	**Waipu Caves**	**2.31**	**297**	P		**Pn**		**07 52 28.7**	**+1.2**
OTVZ	**Oturere**	**2.36**	**204**	P		**Pn**		**07 52 30.5**	**+2.5**
MCHZ	**McNeill Hill**	**2.44**	**184**	P		**Pn**		**07 52 31.0**	**+2.4**
KWHZ	**Kaweka Forest**	**2.44**	**189**	P		**Pn**		**07 52 30.6**	**+2.0**
KRHZ	**Kereru**	**2.66**	**189**	P		**Pn**		**07 52 32.5**	**+1.6**
VRZ	**Vera Road**	**2.70**	**218**	P		**Pn**		**07 52 34.6**	**+3.4**
KAHZ	**Kahuranaki**	**2.78**	**180**	P		**Pn**		**07 52 34.1**	**+2.0**
PNHZ	**Pukenui**	**2.95**	**190**	P		**Pn**		**07 52 35.3**	**+1.4**
TSZ	**Takapari Road**	**3.13**	**193**	P		**Pn**		**07 52 37.6**	**+1.8**
OUZ	**Omahuta**	**3.21**	**303**	P		**Pn**		**07 52 38.4**	**+1.7**
OUZ	**Omahuta**	**3.21**	**303**	P		**Pn**		**07 52 38.3**	**+1.6**
PRHZ	**Porangahau**	**3.26**	**183**	P		**Pn**		**07 52 38.5**	**+1.4**
BFZ	**Birch Farm**	**3.70**	**188**	P		**Pn**		**07 52 44.2**	**+2.2**
BFZ	**Birch Farm**	**3.70**	**188**	P		**Pn**		**07 52 43.7**	**+1.7**
MRZ	**Mangatainoka R**	**3.79**	**195**	P		**Pn**		**07 52 43.8**	**+0.8**
HOWZ	**Holdsworth Sta**	**4.03**	**195**	P		**Pn**		**07 52 47.0**	**+1.1**
OGWZ	**Otaki Gorge**	**4.03**	**199**	P		**Pn**		**07 52 46.8**	**+0.9**
CAW	**Cannon Point**	**4.33**	**199**	P		**Pn**		**07 52 50.0**	**+0.7**
DUWZ	**D'Urville Isla**	**4.44**	**211**	P		**Pn**		**07 52 51.4**	**+0.8**
MSWZ	**Moikau Station**	**4.58**	**196**	P		**Pn**		**07 52 53.2**	**+0.9**
TCW	**Tory Channel**	**4.66**	**205**	P		**Pn**		**07 52 54.1**	**+0.8**
TUWZ	**Tuamarina**	**4.97**	**207**	P		**Pn**		**07 52 58.3**	**+1.4**
NNZ	**Nelson**	**5.01**	**212**	P		**Pn**		**07 52 57.9**	**+0.4**
TKNZ	**Takaka Hill**	**5.05**	**216**	P		**Pn**		**07 52 58.3**	**+0.3**
QRZ	**Quartz Range**	**5.11**	**220**	P		**Pn**		**07 52 57.7**	**-0.9**
QRZ	**Quartz Range**	**5.11**	**220**	P		**Pn**		**07 52 59.1**	**+0.4**
MRNZ	**Matariki Terra**	**5.43**	**215**	P		**Pn**		**07 53 03.8**	**+1.2**
THZ	**Tophouse**	**5.66**	**212**	P		**Pn**		**07 53 06.4**	**+0.9**
KHZ	**Kahutara**	**5.99**	**205**	P		**Pn**		**07 53 10.3**	**+0.9**
KHZ	**Kahutara**	**5.99**	**205**	S		**S**		**07 54 19.3**	**-0.6**
KHZ	**Kahutara**	**5.99**	**205**	P		**Pn**		**07 53 10.3**	**+0.9**
GVZ	**Greta Valley S**	**6.65**	**205**	P		**Pn**		**07 53 18.3**	**+0.7**
LTZ	**Lake Taylor**	**6.77**	**210**	P		**Pn**		**07 53 20.0**	**+0.8**
OKCZ	**Okains Bay**	**7.32**	**202**	P		**Pn**		**07 53 26.1**	**+0.1**
OXZ	**Oxford**	**7.32**	**209**	P		**Pn**		**07 53 26.6**	**+0.5**
MQZ	**McQueen's Vall**	**7.43**	**204**	P		**Pn**		**07 53 27.1**	**-0.3**
MHCZ	**Mount Hutt**	**7.68**	**210**	P		**Pn**		**07 53 31.2**	**+0.6**
ARCZ	**Arundel**	**8.18**	**210**	P		**Pn**		**07 53 37.4**	**+0.5**
TMZ	**Timaru**	**8.61**	**209**	P		**Pn**		**07 53 42.7**	**+0.4**
ODZ	**Otahua Downs**	**9.31**	**208**	P		**Pn**		**07 53 52.7**	**+1.7**

*IDC **26** 07:54:07.7±1.1,2°.87S×130°.08E,h0km,mb3.8/5, mbtmp3.8/7,ML3.6/2,Error ellipse: s-maj=33.2km s-min=18.3km az=80.0*
*NEIC **26** 07:54:09.7±1.7,2°.85S±0°.05×130°.04E±0°.08,h10km±1km, mb4.5/16,Error ellipse: s-maj=14.3km s-min=8.3km az=286.0*
*DJA **26** 07:54:12.2±0.7,3°.S±3°×13°.0E±°,h18km±7km,M3.7/18, MLv3.7/18*
ISC 26 07:54:11.4±0.5,**2°.91S**±0°.05×**130°.08E**±0°.05,**h25**km,**n38,** σ1§**05**/40,**mb4.3**/12,**Seram**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.23**	**249**	P		**Pb**		**07 54 35.7**	**+1.6**
BNDI	**Bandanaira**	**1.62**	**186**	P		**Pb**		**07 54 41.4**	**+0.8**
KRAI	**Karang Ratu**	**1.74**	**256**	P		**Pb**		**07 54 43.0**	**+0.4**
AAI	**Ambon**	**2.04**	**248**	P		**Pb**		**07 54 46.5**	**-1.3**
FAKI	**Fak Fak**	**2.16**	**90**			**Pn**		**07 54 46.5**	**+0.6**
FAKI	**Fak Fak**	**2.16**	**90**	P		**Pn**		**07 54 46.8**	**+0.9**
SIJI	**Sorong**	**2.34**	**30**	Pn		**Pn**		**07 54 47.0**	**-1.3**
	5.5nm,0.3s,baz=245,slow=23,SNR=9.6								
SIJI				Sn		**Sn**		**07 55 16.1**	**-0.3**
	7.2nm,0.3s,baz=42,slow=19,SNR=9.3 17nm,0.2s								
SIJI	**Sorong**	**2.34**	**30**	P		**Pn**		**07 54 48.5**	**+0.1**
SWI	**Sorong**	**2.34**	**30**	P		**Pn**		**07 54 48.5**	**+0.1**
NLAI	**Namlea**	**3.00**	**264**	P		**Pn**		**07 54 58.8**	**+1.4**
SANI	**Sanana**	**4.18**	**282**	P		**Pn**

KURBB Lg Lg 08 02 04.5
0.1nm,0.3s,baz=39,slow=32,SNR=6.4
0.5nm,0.5s
MKAR Makanchi Array 7.88 187 Pn Pn 08 01 16.2 +0.6
0.2nm,0.3s,baz=13,slow=13,SNR=6.0
MKAR Lg Lg 08 03 31.5
0.1nm,0.3s,baz=16,slow=33,SNR=2.4
0.2nm,0.3s
BVAR Borovoye Array 8.08 264 Pn Pn 08 01 17.9 -0.5
0.1nm,0.3s,baz=67,slow=17,SNR=4.3
0.7nm,0.4s

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*DJA **26** 08:02:15.7±0.6,3°S±4°×13°0E±°, h31km±10km, M3.1/11, MLv3.1/11*
*IDC **26** 08:02:16.3±4.5,2°49S×129°71E, h98km±80km, mb3.4/2, mbtmp3.6/5, ML3.3/3, Error ellipse: s-maj=135.4km s-min=41.9km az=133.0*
ISC 26 08:02:16.3±1.0,**2°90S**±0°07×**130°14E**±0°07,**h35**km,**n11,** σ0.**43**/12,**Seram**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.29**	**250**	P		**Pn**	**08 02 38.5**	**+0.7**
BNDI	**Bandanaira**	**1.63**	**188**	P		**Pn**	**08 02 42.6**	**+0.1**
KRAI	**Karang Ratu**	**1.80**	**257**	P		**Pn**	**08 02 44.4**	**-0.4**
FAKI	**Fak Fak**	**2.10**	**91**	P		**Pn**	**08 02 49.2**	**+0.2**
SIJI	**Sorong**	**2.31**	**29**	P		**Pn**	**08 02 51.6**	**-0.2**
	2.2nm,0.3s,baz=63,slow=23,SNR=14							
SIJI				S		**Sn**	**08 03 19.8**	**+0.8**
	7.1nm,0.3s,baz=230,slow=23,SNR=2.1							
	5.1nm,0.3s							
SIJI	**Sorong**	**2.31**	**29**	P		**Pn**	**08 02 51.4**	**-0.4**
SWI	**Sorong**	**2.31**	**29**	P		**Pn**	**08 02 51.9**	**+0.1**
FITZ	**Fitzroy Crossi**	**15.74**	**196**	P		**Pn**	**08 05 55.2**	**-0.2**
	0.1nm,0.3s,baz=22,slow=11,SNR=1.6							
	2.2nm,1.1s							
WRA	**Warramunga Arr**	**17.43**	**167**	P		**P**	**08 06 17.9**	**+0.1**
	0.3nm,0.3s,baz=346,slow=12,SNR=12							
	0.4nm,0.3s							
ASAR	**Alice Springs**	**20.96**	**170**	P		**P**	**08 06 56.3**	**-0.2**
	1.3nm,0.4s,baz=352,slow=11,SNR=33							
	1.3nm,0.4s							
STKA	**Stephens Creek**	**30.77**	**161**	P		**P**	**08 08 28.2**	**-0.3**
	0.4nm,0.4s,baz=344,slow=7.4,SNR=4.0							
	0.4nm,0.4s							

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*NNC **26** 08:03:38.1±4.1,38°09N×70°17E, h56km±122km, mb4.6, mpv4.3, Error ellipse: s-maj=31.1km s-min=27.0km az=166.0*
*IDC **26** 08:03:38.4±0.6,38°51N×70°82E, h0km, mb4.2/23, mbtmp4.2/30, ML3.9/7, MS3.3/5, Error ellipse: s-maj=12.7km s-min=10.5km az=2.0*
*BJI **26** 08:03:38.9,38°92N×70°42E, h22km, mB4.4/3, mb4.4/21, ML4.0/4, Ms3.6/5, Ms7 3.5/5*
*MOS **26** 08:03:40.1±1.5,38°70N×70°71E, h10km, mb4.5/21, Error ellipse: s-maj=6.5km s-min=4.6km az=78.8*
*NEIC **26** 08:03:41.0±1.8,38°64N±0°07×70°93E±0°08, h10km±1km, mb4.5/59, Error ellipse: s-maj=11.8km s-min=10.9km az=159.0*
ISC 26 08:03:41.2±0.3,**38°68N**±0°04×**70°77E**±0°03,**h10**km,**n216,** σ2.**17**/231,**mb4.4**/73,**MS3.3**/6,**17C-5D,**
Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.13**	**45**			**Pb**	**08 04 02.7**	**-0.4**
DRK				Sn		**Sb**	**08 04 17.3**	**-0.7**
DRK	**Karamyk**	**1.13**	**45**	PG		**Pb**	**08 04 02.7**	**-0.4**
DRK							08 04 17.3	
BTK	**Batken**	**1.38**	**2**			**Pn**	**08 04 06.2**	**-0.4**
BTK				Sn		**Sb**	**08 04 26.7**	**+1.8**
ARSB	**Arslanbob**	**3.14**	**32**	Pn		**Pn**	**08 04 33.9**	**+3.0**
ARSB	**Arslanbob**	**3.14**	**32**	PN		**Pn**	**08 04 33.9**	**+3.0**
IUG	**Iuzhnay**	**3.51**	**351**	*eP*		**Pn**	**08 04 38.5**	**+2.5**
IUG				*eS*		**Sn**	**08 05 20.4**	**+2.8**
CHM	**Chimkent**	**3.75**	**347**	*eP*		**Pn**	**08 04 41.9**	**+2.8**
KSH2	**Kashi**	**3.77**	**81**	Pn		**Pn**	**08 04 43.5**	**+4.0**
KSH2				Sn		**Sb**	**08 05 32.3**	**-1.4**
KSH2				SMN				
	600nm,0.8s							
KSH2				SME				
	500nm,0.8s							
DZA	**Taraz**	**4.23**	**6**	*eP*		**Pn**	**08 04 47.6**	**+1.8**
KBL	**Kabul**	**4.36**	**199**	Pn		**Pn**	**08 04 51.7**	**+4.0**
KBL	**Kabul**	**4.36**	**199**	PN		**Pn**	**08 04 51.7**	**+4.0**
BRLS	**Boroldaу**	**4.41**	**351**	*eP*		**Pn**	**08 04 47.5**	**-0.6**
BRLS				*eLQ*		LQ	08 05 55.9	
KK31	**Karatay Array**	**4.43**	**358**	Pn		**Pn**	**08 04 51.3**	**+2.9**
KK31	**Karatay Array**	**4.43**	**358**	⇑P		**Pn**	**08 04 51.5**	**+3.1**
	26nm,0.5s,baz=179,slow=12,SNR=335							
KK31				⇓S		**Sb**	**08 05 48.3**	**-4.2**
	86nm,0.8s,baz=175,slow=19,SNR=3.7							
KK31	**Karatay Array**	**4.43**	**358**	PN		**Pn**	**08 04 51.3**	**+2.9**
KKAR	**Karatay Array**	**4.43**	**358**	Pn		**Pn**	**08 04 51.3**	**+2.8**
KKAR	**Karatay Array**	**4.43**	**358**	PN		**Pn**	**08 04 51.3**	**+2.8**
UCH	**Uchtor**	**4.55**	**38**	P		**Pn**	**08 04 53.9**	**+3.4**
	SNR=68							
EKS2	**Erkin-Say**	**4.59**	**29**	P		Pn	08 04 56.0	+5.2
	SNR=50							
AAK	**Ala-Archa**	**4.87**	**34**	Pn		**Pn**	**08 04 57.6**	**+3.0**
	13nm,0.3s,baz=215,slow=7.9,SNR=77							
AAK				Sn		**Sn**	**08 05 55.4**	**+4.3**
	4.0nm,0.3s,baz=240,slow=13,SNR=4.2							
AAK				LR		LR	08 07 02.5	
	comp=Z,126nm,18.6s,baz=295,slow=41							
	51nm,0.6s							
AAK	**Ala-Archa**	**4.87**	**34**	P		**Pn**	**08 04 58.5**	**+3.9**
	SNR=109							
AAK	**Ala-Archa**	**4.87**	**34**			**Pn**	**08 04 58.1**	**+3.4**
AAK	**Ala-Archa**	**4.87**	**34**	⇑P		**Pn**	**08 04 57.7**	**+3.0**
	18nm,0.5s							
AAK				⇑S		**Sb**	**08 06 03.4**	**-1.8**
	83nm,0.9s							
AAK	**Ala-Archa**	**4.87**	**34**	*ce*P		**Pn**	**08 04 58.0**	**+3.4**
AAK				pmax	pmax			
	comp=Z,82nm,1.0s							
NRN	**Naryn**	**4.87**	**54**	Pn		**Pn**	**08 04 57.1**	**+2.3**
NRN	**Naryn**	**4.87**	**54**	PN		**Pn**	**08 04 57.1**	**+2.3**
FRU1	**Bishkek**	**5.06**	**34**	Pn		**Pn**	**08 05 01.6**	**+4.4**
FRU1	**Bishkek**	**5.06**	**34**	PN		**Pn**	**08 05 01.6**	**+4.4**
KBK	**Karagaybulak**	**5.09**	**37**	P		**Pn**	**08 05 02.0**	**+4.4**
	SNR=124							
CHMS	**Chumysh**	**5.27**	**34**	P		**Pn**	**08 05 03.7**	**+3.7**
	SNR=26							
USP	**Ospenovka**	**5.38**	**30**	P		Pn	08 05 06.8	+5.2
	SNR=72							
NIL	**Nilore**	**5.40**	**157**			**Pn**	**08 05 05.9**	**+4.0**
NIL	**Nilore**	**5.40**	**157**	PN		**Pn**	**08 05 05.9**	**+4.0**
BOOM	**Boomskoye usch**	**5.48**	**44**			**Pn**	**08 05 05.9**	**+2.9**
BOOM	**Boomskoye usch**	**5.48**	**44**	PN		**Pn**	**08 05 05.9**	**+2.9**
ULHL	**Ulahol**	**5.49**	**48**	P		**Pn**	**08 05 06.9**	**+3.7**
	SNR=8.3							
SGDS	**Sogindy**	**5.59**	**30**	*eP*		**Pn**	**08 05 05.8**	**+1.4**
SGDS				*eS*		**Sn**	**08 06 09.9**	**+1.1**
TKM2	**Tokmak 2**	**5.60**	**39**	P		**Pn**	**08 05 08.0**	**+3.2**
	SNR=52							
KDJ	**Kajisay**	**5.99**	**53**			**Pn**	**08 05 13.7**	**+3.7**
KDJ	**Kajisay**	**5.99**	**53**	PN		**Pn**	**08 05 13.7**	**+3.7**
TARG	**Taragay, Kyrgy**	**6.19**	**58**			**Pn**	**08 05 15.3**	**+2.3**
TARG	**Taragay, Kyrgy**	**6.19**	**58**	PN		**Pn**	**08 05 15.3**	**+2.3**
TNSS	**Tian-Shan**	**6.39**	**45**	*eP*		**Pn**	**08 05 16.9**	**+1.1**
MDOK	**Medeo**	**6.53**	**45**	*eP*		**Pn**	**08 05 19.1**	**+1.6**
JMU	**Jammu**	**6.75**	**149**	*eP*		**Pn**	**08 05 20.7**	**+0.4**
JMU				*eS*		**Sn**	**08 06 38.3**	**+1.1**
JMU				IAML			08 07 00.1	
	comp=N,198nm,0.7s							
JMU				IAML			08 07 09.0	
	comp=E,194nm,0.8s							
ALCI	**Alchi Leh**	**6.82**	**129**	*eP*		**Pn**	**08 05 21.7**	**0.0**
ALCI				*eS*		**Sn**	**08 06 45.6**	**+6.0**
ALCI				IAML			08 06 51.1	
	comp=N,388nm,0.2s							
ALCI				IAML			08 06 51.5	
	comp=E,407nm,0.3s							
PRZ	**Przheval'sk**	**6.94**	**54**	Pn		**Pn**	**08 05 26.7**	**+3.6**
PRZ	**Przheval'sk**	**6.94**	**54**	PN		**Pn**	**08 05 26.7**	**+3.6**
WUS	**Wushi**	**6.96**	**66**			**Pn**	**08 05 26.0**	**+2.6**
SATY	**Saty**	**7.25**	**50**	*eP*		**Pn**	**08 05 28.8**	**+1.4**
TSSA	**Tissa**	**7.28**	**141**	*eP*		**Pn**	**08 05 30.4**	**+2.5**
TSSA				*eS*		**Sn**	**08 06 53.2**	**+2.5**
TSSA				IAML			08 07 00.5	
	comp=E,1μm,0.3s							
TSSA				IAML			08 07 01.2	
	comp=N,2μm,0.4s							
THN	**Thein Dam**	**7.43**	**145**	*eP*		**Pn**	**08 05 32.8**	**+3.1**
THN				*eS*		**Sn**	**08 06 57.2**	**+3.1**
THN				IAML			08 07 05.7	
	comp=E,112nm,0.4s							
THN				IAML			08 07 08.1	
	comp=N,87nm,0.1s							
UZB	**Uzynbulak**	**7.68**	**52**	*eP*		**Pn**	**08 05 34.7**	**+1.5**
DHRM	**DHARAMSHALA**	**7.84**	**143**	*eP*		**Pn**	**08 05 36.4**	**+0.9**
DHRM				*eS*		**Sn**	**08 07 07.8**	**+3.4**
DHRM				IAML			08 07 14.7	
	comp=N,143nm,0.6s							
DHRM				IAML			08 07 14.9	
	comp=E,189nm,0.7s							
SHLS	**Shalkode**	**7.96**	**53**	*eP*		Pn	08 05 42.4	+5.3
HRA	**Herat**	**8.09**	**241**			**Pn**	**08 05 40.0**	**+1.1**
BHK	**Bhakra**	**8.60**	**146**	*eP*		**Pn**	**08 05 48.9**	**+3.2**
BHK				*eS*		**Sn**	**08 07 26.9**	**+4.1**
HNLY	**HANLEY**	**8.89**	**129**	*eP*		**Pn**	**08 05 50.2**	**0.0**
HNLY				*eS*		**Sn**	**08 07 31.5**	**+0.7**
HNLY				IAML			08 07 40.1	
	comp=N,9.3nm,1.1s							
HNLY				IAML			08 07 48.3	
	comp=E,12nm,1.1s							
SMLA	**Simla**	**9.18**	**143**	*eP*		**Pn**	**08 05 54.6**	**+1.0**
SMLA				*eS*		**Sn**	**08 07 36.0**	**-1.0**
SMLA				IAML			08 07 45.5	
	comp=E,66nm,0.4s							
SMLA				IAML			08 07 46.3	
	comp=N,64nm,0.5s							
KLP	**Kalpa**	**9.39**	**137**	*eP*		**Pn**	**08 05 57.5**	**+0.5**
KLP				*eS*		**Sn**	**08 07 40.9**	**-1.9**
KLP				IAML			08 07 54.7	
	comp=E,72nm,0.6s							
KLP				IAML			08 07 56.6	
	comp=N,61nm,0.7s							
JOSI	**Joshimath**	**10.86**	**136**	*eP*		**Pn**	**08 06 17.0**	**+0.1**
JOSI				*eS*		**Sn**	**08 08 16.5**	**-2.1**
JOSI				IAML			08 08 26.6	
	comp=N,82nm,0.5s							
JOSI				IAML			08 08 29.7	
	comp=E,64nm,0.5s							
KUDL	**Kundal**	**11.54**	**154**	*eP*		**Pn**	**08 06 25.6**	**-0.4**
KUDL				*eS*		**Sn**	**08 08 28.8**	**-6.1**
KUDL				IAML			08 08 39.3	
	comp=N,72nm,0.4s							
KUDL				IAML			08 08 45.0	
	comp=E,90nm,0.8s							
MAKZ	**Makanchi**	**11.56**	**42**	Pn		**Pn**	**08 06 24.8**	**-1.5**
MAKZ	**Makanchi**	**11.56**	**42**	P		**Pn**	**08 06 24.8**	**-1.5**
MK31	**Makanchi Array**	**11.72**	**43**	Pn		**Pn**	**08 06 30.7**	**+2.2**
MK31	**Makanchi Array**	**11.72**	**43**	*ce*P		**Pn**	**08 06 30.4**	**+2.0**
MKAR	**Makanchi Array**	**11.72**	**43**	Pn		**Pn**	**08 06 29.5**	**+1.1**
	comp=E,1.0nm,0.3s,baz=232,slow=14,SNR=76							
	comp=E,9.7nm,0.7s							
MKAR	**Makanchi Array**	**11.72**	**43**			**Pn**	**08 06 30.7**	**+2.2**
LGTI	**Lohaghat**	**12.05**	**137**	*eS*		**Sn**	**08 08 42.0**	**-5.6**
AB31	**Akbulak array**	**13.12**	**327**	Pn		**Pn**	**08 06 45.3**	**-2.3**
AB31	**Akbulak array**	**13.12**	**327**	⇓P		**Pn**	**08 06 45.8**	**-1.8**
	comp=E,9.3nm,0.5s,baz=133,slow=16,SNR=306							
AB31				⇑S		**Sn**	**08 09 09.2**	**-4.4**
	comp=E,10nm,0.7s,baz=153,slow=23,SNR=11							
ABKAR	**Akbulak array**	**13.12**	**327**			**Pn**	**08 06 45.5**	**-2.1**
KURBB	**Kurchatov Arra**	**13.15**	**22**	Pn		**Pn**	**08 06 44.6**	**-3.3**
	comp=E,0.1nm,0.3s,baz=215,slow=12,SNR=13							
KURBB				Sn		Sn	08 09 06.2	-7.9
	baz=218,slow=24,SNR=1.9							
KURBB				Lg		Lg	08 10 41.7	
	baz=203,slow=31,SNR=5.9							
	comp=E,1.1nm,0.7s							
KURK	**Kurchatov**	**13.26**	**22**			Pn	08 06 45.1	-4.3
KURK	**Kurchatov**	**13.26**	**22**	*ce*P		**Pn**	**08 06 49.2**	**-0.2**
KURK				pmax	pmax			
	comp=Z,5.0nm,1.0s							
ZSN	**Zaisan**	**13.51**	**45**	*eP*		**Pn**	**08 06 54.7**	**+1.8**
WMQ	**Urumqi**	**13.73**	**63**	*eP*		**Pn**	**08 06 56.8**	**+0.9**
WMQ				sP		P	08 07 05.3	+0.7
WMQ				pmax	pmax			
	comp=Z,16nm,0.8s							
BVAR	**Borovoye Array**	**14.35**	**359**	Pn		**Pn**	**08 07 02.8**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=176,slow=11,SNR=15							
	comp=Z,2.4nm,0.4s							
BORK	**Borovoye**	**14.38**	**359**			**Pn**	**08 07 04.5**	**-0.2**
BORK	**Borovoye**	**14.38**	**359**	*ce*P		**Pn**	**08 07 05.0**	**+0.4**
BORK				pmax	pmax			
	comp=Z,9.0nm,1.0s							
JHNI	**Jhansi**	**14.75**	**151**	IAML			08 09 49.9	
	comp=N,34nm,0.4s							
JHNI				IAML			08 09 51.6	
	comp=E,58nm,0.6s							
AKTO	**Aktyubinsk**	**14.83**	**327**	Pn		**Pn**	**08 07 09.3**	**-1.6**
	comp=E,1.9nm,0.3s,baz=122,slow=9.5,SNR=23							
AKTO				Sn		**Sn**	**08 09 52.1**	**-3.1**
	comp=E,0.8nm,0.3s,baz=57,slow=14,SNR=4.5							
AKTO				LR		LR	08 13 20.8	
	comp=E,118nm,19.5s,baz=178,slow=39							
	comp=E,5.5nm,0.3s							
AKTO	**Aktyubinsk**	**14.83**	**327**	⇓P		**Pn**	**08 07 09.5**	**-1.4**
	comp=E,8.2nm,0.6s							
AKTO				⇓S		**Sn**	**08 09 54.0**	**-1.2**
	comp=E,17nm,1.2s							
BHPL	**Bhopal**	**16.40**	**158**	*eP*		**Pn**	**08 07 31.1**	**-0.5**
EVN	**Everest**	**17.12**	**124**	Pn		**Pn**	**08 07 37.3**	**-4.0**
AKT	**Akhty**	**17.84**	**286**	*eP*		**P**	**08 07 51.7**	**+1.4**
AKT				pmax	pmax			
	comp=Z,15nm,1.4s							
ZAA0	**Zalesovo Array**	**18.04**	**28**			**Pn**	**08 07 51.7**	**-0.2**
ZALV	**Zalesovo Beam**	**18.04**	**28**	P		**Pn**	**08 07 50.8**	**-1.0**
	comp=Z,1.5nm,0.3s,baz=228,slow=13,SNR=14							
ZALV				S		**Sn**	**08 11 10.4**	**-2.6**
	comp=Z,0.6nm,0.5s,baz=218,slow=16,SNR=1.4							
	comp=Z,4.6nm,0.5s							
MAK	**Makhachkala**	**18.11**	**291**	*c iP*		**Pn**	**08 07 50.5**	**-2.2**
MAK				*eS*		**Sn**	**08 11 11.1**	**-3.6**
MAK				pmax	pmax			
	comp=Z,29nm,0.4s							
MAK				MLR	MLR			
	comp=Z,308nm,11.0s							
GOMU	**GeErMu**	**19.24**	**90**	P		**P**	**08 08 06.5**	**+0.5**
GOMU				pmax	pmax			
	comp=Z,5.0nm,0.6s							
ARTI	**Arti**	**19.54**	**339**	P		**P**	**08 08 08.9**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=152,slow=6.2,SNR=7.0							
	comp=Z,6.9nm,0.8s							
ARTI	**Arti**	**19.54**	**339**	P		**P**	**08 08 08.4**	**-0.3**
ARTI	**Arti**	**19.54**	**339**	*d iP*		**P**	**08 08 08.6**	**-0.1**
ARTI				S		**S**	**08 11 49.0**	**-0.2**
ARTI				pmax	pmax			
	comp=Z,6.0nm,0.8s							
GNI	**Garni**	**20.15**	**282**	P		**P**	**08 08 14.7**	**-0.9**
	comp=Z,5.2nm,0.7s,baz=208,slow=21,SNR=1.3							
GNI				LR		LR	08 17 32.1	
	comp=Z,84nm,19.0s,baz=72,slow=41							
	comp=Z,5.2nm,0.7s							
GNI	**Garni**	**20.15**	**282**	P		**P**	**08 08 15.8**	**+0.1**
GNI				IAmb	IAmb		08 08 28.9	
	comp=Z,17nm,0.9s							
GNI	**Garni**	**20.15**	**282**	*i* P		Pn	08 08 17.4	-0.1
GNI				pmax	pmax			
	comp=Z,23nm,1.0s							
BELG	**Belogornoye**	**21.11**	**318**	P		**P**	**08 08 25.6**	**-0.2**
	comp=Z,32nm,0.9s,baz=120,slow=1.9,SNR=9.5							
	comp=Z,32nm,0.9s							
KARS	**Kars**	**21.38**	**284**	P		**P**	**08 08 29.7**	**+0.7**
KARS				IAmb	IAmb		08 08 33.4	
	comp=Z,15nm,0.9s							
KARS	**Kars**	**21.38**	**284**	P		**P**	**08 08 29.7**	**+0.7**
KARS				pmax	pmax			
	comp=Z,15nm,0.9s							
KBZ	**Khabaz**	**21.52**	**292**	P		**P**	**08 08 28.3**	**-1.9**
	comp=Z,3.1nm,0.6s,baz=122,slow=9.0,SNR=8.0							
KBZ				LR		LR	08 18 49.3	
	comp=Z,97nm,18.9s,baz=57,slow=42							
	comp=Z,3.1nm,0.6s							
GEVA	**Gevas**	**21.67**	**278**	P		**P**	**08 08 30.3**	**-1.8**
KIV	**Kislovodsk**	**21.69**	**293**	P		**P**	**08 08 31.9**	**-0.3**
KIV	**Kislovodsk**	**21.69**	**293**	*eP*		**P**	**08 08 32.8**	**+0.6**
KIV				*eS*		**S**	**08 12 34.2**	**+1.9**
KIV				pmax	pmax			
	comp=Z,14nm,1.1s							
KIV				MLR	MLR			
	comp=Z,60nm,14.0s							
SHA1	**Shidzhatmaz**	**21.69**	**292**	*ce*P		**P**	**08 08 33.4**	**+1.0**
SHL	**Shillong**	**22.08**	**120**	P		**P**	**08 08 35.6**	**-1.1**
SHL				IAmb	IAmb		08 08 52.0	
	comp=Z,11nm,1.0s							
SHL	**Shillong**	**22.08**	**120**	P		**P**	**08 08 35.6**	**-1.1**
SHL				pmax	pmax			
	comp=Z,11nm,1.0s							
KNGR	**Kungurtug, Tuv**	**22.32**	**49**	*i* P		**P**	**08 08 38.9**	**-0.1**
KNGR				pmax	pmax			
	comp=Z,26nm,1.0s							
GTA2	**Gaotai**	**22.48**	**79**	*eP*		**P**	**08 08 41.0**	**+0.2**
GTA2				pP		sP	08 08 48.0	+1.7
GTA2				pmax	pmax			
	comp=Z,8.0nm,1.1s							
MARD	**Mardin**	**23.63**	**276**	P		**P**	**08 08 54.8**	**+2.2**
VRH	**Novokhopyorsk**	**23.90**	**311**	*eP*		**P**	**08 09 00.7**	**+5.8**
VRH				pmax	pmax			
	comp=Z,10.0nm,0.9s							
ARPR	**Arapgir-MALATY**	**25.18**	**281**	P		**P**	**08 09 07.1**	**+0.1**
ARPR				IAmb	IAmb		08 09 12.6	
	comp=Z,10.0nm,1.0s							
VORD	**Divnogorie**	**25.28**	**309**	*eP*		**P**	**08 09 07.8**	**+0.3**
VORD				pmax	pmax			
	comp=Z,7.0nm,1.0s							
VSR	**Storozhevoye**	**25.43**	**310**	*eP*		**P**	**08 09 08.4**	**-0.4**
VSR				pmax	pmax			
	comp=Z,10.0nm,1.0s							
VORR	**Voronezh**	**25.54**	**311**	*eP*		**P**	**08 09 10.8**	**+0.9**
VORR				pmax	pmax			
	comp=Z,87nm,0.4s							
ZAK	**Zakamensk**	**25.75**	**52**	*eP*		**P**	**08 09 12.0**	**0.0**
ZAK				pmax	pmax			
	comp=Z,6.0nm,1.7s							
LPSR	**Galich'ya Gora**	**26.00**	**313**	*eP*		**P**	**08 09 15.2**	**+1.1**
LPSR				pmax	pmax			
	comp=Z,20nm,0.6s							
RAYN	**Ar Rayn**	**26.27**	**242**	P		**P**	**08 09 17.4**	**+0.6**
RAYN	**Ar Rayn**	**26.27**	**242**	P		**P**	**08 09 17.4**	**+0.6**
RAYN				pmax	pmax			
	comp=Z,3.0nm,0.7s							
TLY	**Talaya**	**26.32**	**50**	P		**P**	**08 09 16.0**	**-1.0**
TLY	**Talaya**	**26.32**	**50**	*ce*P		**P**	**08 09 18.1**	**+1.1**
TLY				pmax	pmax			
	comp=Z,3.0nm,1.0s							
BNN	**Bunyan**	**27.14**	**281**			**P**	**08 09 24.1**	**-0.6**
BNN				IAmb	IAmb		08 09 40.2	
	comp=Z,5.7nm,0.4s							
SONM	**Songino Array**	**27.31**	**59**	P		**P**	**08 09 26.7**	**+0.7**
	comp=Z,1.3nm,0.8s,baz=255,slow=12,SNR=6.3							
	comp=Z,1.3nm,0.8s							
SONM	**Songino Array**	**27.31**	**59**	P		**P**	**08 09 24.8**	**-1.3**
SONM	**Songino Array**	**27.31**	**59**	P		**P**	**08 09 24.8**	**-1.3**
SONM				pmax	pmax			
	comp=Z,5.0nm,1.4s							
ULN	**Ulaanbaatar**	**27.75**	**59**	P		**P**	**08 09 30.4**	**+0.3**
ULN	**Ulaanbaatar**	**27.75**	**59**	*ce*P		**P**	**08 09 30.5**	**+0.4**
ULN				pmax	pmax			
	comp=Z,6.0nm,1.8s							
OBN	**Obninsk**	**28.20**	**317**	⇑*eP*		**P**	**08 09 34.6**	**+0.9**
OBN				*e*			08 10 22.5	
OBN				pmax	pmax			
	comp=Z,6.0nm,0.9s							
OBN				MLR	MLR			
	comp=Z,70nm,18.0s							
ILGA	**Ilgaz**	**28.41**	**287**	P		**P**	**08 09 35.4**	**-0.7**
ILGA				IAmb	IAmb		08 09 39.4	
	comp=Z,12nm,1.0s							
PZH	**PanZhiHua**	**28.64**	**106**	P		**P**	**08 09 39.8**	**+1.6**
BRTR	**Keskin Array B**	**28.66**	**284**	P		**P**	**08 09 38.5**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=120,slow=8.5,SNR=2.5							
	comp=Z,0.3nm,0.3s							
BRTR	**Keskin Array B**	**28.66**	**284**	P		**P**	**08 09 38.8**	**+0.5**
HHC	**Hu-ho-hao-te**	**31.24**	**73**	*eP*		**P**	**08 10 01.3**	**+0.3**
HHC				pmax	pmax			
	comp=Z,18nm,0.6s							
AKASG	**Malin Array Be**	**31.48**	**306**	P		**P**	**08 10 02.2**	**-0.6**
	comp=Z,1.3nm,0.5s,baz=85,slow=7.3,SNR=9.7							
	comp=Z,1.3nm,0.5s							
AKASG	**Malin Array Be**	**31.48**	**306**	P		**P**	**08 10 02.1**	**-0.8**
AKASG				IAmb	IAmb		08 10 04.7	
	comp=Z,4.0nm,1.2s							
AKASG	**Malin Array Be**	**31.48**	**306**	*ce*P		**P**	**08 10 03.9**	**+1.1**
AKASG				pmax	pmax			
	comp=Z,3.0nm,0.8s							
AKBB	**Malin Array Si**	**31.48**	**306**	P		**P**	**08 10 02.5**	**-0.4**
AKBB				IAmb	IAmb		08 10 04.5	
	comp=Z,5.7nm,0.9s							
AKBB	**Malin Array Si**	**31.48**	**306**	*ce*P		**P**	**08 10 04.2**	**+1.4**
AKBB				pmax	pmax			
	comp=Z,5.0nm,0.9s							
CMAR	**Chiang Mai Arr**	**31.70**	**121**	P		**P**	**08 10 02.2**	**-2.9**
	comp=Z,1.0nm,0.3s,baz=301,slow=9.8,SNR=4.1							
	comp=Z,1.0nm,0.3s							
CMAR	**Chiang Mai Arr**	**31.70**	**121**	P		**P**	**08 10 04.0**	**-1.1**
CMAR	**Chiang Mai Arr**	**31.70**	**121**	P		**P**	**08 10 04.0**	**-1.1**
TIRR	**Tirgusor**	**31.94**	**294**	P		**P**	**08 10 06.1**	**-0.9**
TIRR	**Tirgusor**	**31.94**	**294**	P		**P**	**08 10 06.1**	**-0.9**
TIRR				pmax	pmax			
	comp=Z,21nm,0.8s							
NRIK	**Noril'sk**	**32.03

	comp=Z,44nm,1.5s							
MODS	**Modra-Piesok**	**39.26**	**302**	*e*P		**P**	**08 11 13.5**	**+3.7**
MODS	**Modra-Piesok**	**39.26**	**302**	*e*P		**P**	**08 11 13.5**	**+3.7**
HEH	**HeiHe**	**41.11**	**55**	*e*P		**P**	**08 11 25.3**	**+0.2**
HFS	**Hagfors**	**41.26**	**320**	P		**P**	**08 11 25.8**	**-0.4**
	comp=Z,3.5nm,0.3s,baz=93,slow=10,SNR=34 comp=Z,3.5nm,0.3s							
NC405	**NORSAR Array S**	**42.31**	**322**	P		**P**	**08 11 34.7**	**-0.2**
YAK	**Yakutsk**	**42.32**	**37**	*e*P		**P**	**08 11 34.4**	**-0.4**
YAK				*e*			08 13 13.4	
YAK				*e*			08 13 27.8	
YAK				*e*S		**S**	**08 17 55.4**	**0.0**
YAK				*e*SS		**SS**	**08 21 04.8**	**+1.2**
YAK				*e*			08 21 40.1	
YAK	comp=Z,14nm,0.8s			pmax	pmax			
YAK	comp=E,4.0nm,1.0s			pmax	pmax			
YAK	comp=Z,85nm,3.2s			pmax	pmax			
YAK	comp=E,71nm,3.3s			pmax	pmax			
YAK	comp=N,37nm,3.5s			pmax	pmax			
YAK	comp=E,73nm,3.5s			smax	smax			
YAK	comp=N,39nm,3.3s			smax	smax			
NC602	**NORSAR Array S**	**42.37**	**321**	P		**P**	**08 11 35.0**	**-0.3**
NC602				IAmb		IAmb	08 11 43.4	
	comp=Z,21nm,1.4s							
NB2	**NORSAR Subarra**	**42.55**	**322**	P		**P**	**08 11 35.8**	**-1.0**
	comp=Z,1.6nm,0.5s,baz=93,slow=7.9							
NOA	**NORSAR Array B**	**42.55**	**322**	P		**P**	**08 11 36.3**	**-0.5**
	comp=Z,2.9nm,0.8s,baz=94,slow=8.0,SNR=10 comp=Z,2.9nm,0.8s							
NC204	**NORSAR Array S**	**42.78**	**322**	P		**P**	**08 11 38.2**	**-0.4**
NC204				IAmb		IAmb	08 11 59.4	
	comp=Z,15nm,1.2s							
TIXI	**Tiksi**	**43.83**	**23**			**P**	**08 11 47.1**	**+0.1**
TIXI				IAmb		IAmb	08 11 47.5	
	comp=Z,5.8nm,0.7s							
TIXI	**Tiksi**	**43.83**	**23**	*ce*P		**P**	**08 11 46.9**	**-0.1**
TIXI				pmax	pmax			
	comp=Z,6.0nm,0.8s							
KLR	**Kul'dur**	**44.04**	**56**	*i* P		**P**	**08 11 48.5**	**-0.4**
KLR				pmax	pmax			
	comp=Z,1.0nm,0.4s							
SALO	**Salr**	**44.28**	**299**	P		**P**	**08 11 51.2**	**+0.2**
KSRS	**Korea Array**	**44.38**	**73**	P		**P**	**08 11 49.9**	**-1.9**
	comp=Z,0.5nm,0.3s,baz=291,slow=7.6,SNR=5.2 comp=Z,0.5nm,0.3s							
DAVOX	**Davos/Dischmat**	**44.46**	**301**	LR		LR	08 34 27.3	
	comp=Z,63nm,19.8s,baz=50,slow=42							
SPITS	**Spitsbergen Ar**	**45.34**	**346**	P		**P**	**08 11 60.0**	**+1.1**
	comp=Z,8.2nm,0.9s,baz=106,slow=11,SNR=6.4 comp=Z,8.2nm,0.9s							
SPITS	**Spitsbergen Ar**	**45.34**	**346**	P		**P**	**08 12 00.0**	**+1.1**
EKA	**Eskdalemuir Ar**	**50.61**	**315**	P		**P**	**08 12 41.0**	**+1.0**
	comp=Z,0.3nm,0.4s,baz=84,slow=8.5,SNR=5.1 comp=Z,0.3nm,0.4s							
EKA	**Eskdalemuir Ar**	**50.61**	**315**	P		**P**	**08 12 41.0**	**+1.0**
MJAR	**Matsushiro Arr**	**52.35**	**70**	P		**P**	**08 12 52.3**	**-1.1**
	comp=Z,3.0nm,0.8s,baz=293,slow=9.5,SNR=8.3 comp=Z,3.0nm,0.8s							
MA2	**Magadan**	**52.78**	**39**	*ce*P		**P**	**08 12 55.3**	**-0.8**
MA2				pmax	pmax			
	comp=Z,6.0nm,1.1s							
ESDC	**Sonseca Array**	**56.30**	**297**	P		**P**	**08 13 22.8**	**+0.7**
	comp=Z,1.1nm,0.9s,baz=68,slow=7.9,SNR=5.7 comp=Z,1.1nm,0.9s							
BILL	**Bilibino**	**56.74**	**27**	*i* P		**P**	**08 13 24.0**	**-0.7**
BILL				pmax	pmax			
	comp=Z,2.0nm,0.9s							
SUMG	**Summit**	**58.95**	**341**			**P**	**08 13 40.9**	**+0.2**
SUMG	**Summit**	**58.95**	**341**	P		**P**	**08 13 40.9**	**+0.2**
SUMG				pmax	pmax			
	comp=Z,5.0nm,0.6s							
C16K	**Lisburne Hills**	**65.47**	**20**	P		**P**	**08 14 23.7**	**-0.2**
C16K				IAmb		IAmb	08 14 24.6	
	comp=Z,2.2nm,0.8s							
TORD	**Torodi Ar. Bea**	**65.61**	**268**	P		**P**	**08 14 24.1**	**-1.5**
	comp=Z,2.4nm,0.7s,baz=46,slow=4.4,SNR=12 comp=Z,2.4nm,0.7s							
B20K	**Meade River**	**66.17**	**16**			**P**	**08 14 28.9**	**+0.6**
B20K				IAmb		IAmb	08 14 29.6	
	comp=Z,2.9nm,0.8s							
C18K	**Utukok River**	**66.27**	**18**	IAmb		IAmb	08 14 29.9	
	comp=Z,2.6nm,0.8s							
C19K	**Lookout Ridge**	**66.31**	**18**			**P**	**08 14 30.2**	**+0.8**
C19K				IAmb		IAmb	08 14 32.7	
	comp=Z,2.2nm,0.7s							
D19K	**Kuna River**	**67.12**	**18**	IAmb		IAmb	08 14 35.3	
	comp=Z,3.6nm,0.7s							
D20K	**Etivluk River**	**67.30**	**17**	IAmb		IAmb	08 14 36.6	
	comp=Z,3.3nm,1.1s							
E18K	**Tukpahlearik C**	**67.33**	**19**	P		**P**	**08 14 36.1**	**+0.2**
E18K				IAmb		IAmb	08 14 36.3	
	comp=Z,2.8nm,0.6s							
F15K	**North Star Dit**	**67.49**	**22**	IAmb		IAmb	08 14 38.1	
	comp=Z,3.6nm,0.8s							
E19K	**Redstone River**	**68.14**	**18**	IAmb		IAmb	08 14 41.1	
	comp=Z,1.9nm,0.7s							
E22K	**Anaktuvuk Pass**	**68.83**	**16**	IAmb		IAmb	08 14 46.0	
	comp=Z,2.5nm,1.0s							
D25K	**Kavik River**	**68.89**	**13**	IAmb		IAmb	08 14 47.7	
	comp=Z,7.2nm,1.4s							
A36M	**Sachs Harbour**	**69.06**	**5**			**P**	**08 14 46.9**	**+0.3**
G19K	**Purcell Mounta**	**69.21**	**19**	IAmb		IAmb	08 14 50.8	
	comp=Z,2.4nm,0.8s							
E24K	**Your Creek**	**69.56**	**15**	IAmb		IAmb	08 14 50.8	
	comp=Z,2.1nm,0.7s							
COLD	**Coldfoot**	**69.93**	**16**	P		**P**	**08 14 52.5**	**+0.4**
COLD				IAmb		IAmb	08 14 53.2	
	comp=Z,2.6nm,0.8s							
F25K	**Christian River**	**70.53**	**14**	IAmb		IAmb	08 14 57.3	
	comp=Z,2.0nm,0.8s							
G24K	**Hadweenzic Riv**	**70.94**	**15**	P		**P**	**08 14 58.9**	**+0.6**
G24K				IAmb		IAmb	08 14 59.6	
	comp=Z,2.3nm,0.8s							
E29M	**Blow River**	**71.11**	**11**	IAmb		IAmb	08 15 03.4	
	comp=Z,4.6nm,1.4s							
F28M	**Old Crow**	**71.52**	**12**	P		**P**	**08 15 01.9**	**+0.1**
J20K	**Nowinta River**	**71.53**	**19**	IAmb		IAmb	08 15 02.9	
	comp=Z,2.9nm,0.8s							
C36M	**Paulatuk**	**71.73**	**5**	P		**P**	**08 15 02.9**	**-0.1**
INK	**Inuvik**	**71.79**	**9**			**P**	**08 15 03.8**	**+0.5**
INK				IAmb		IAmb	08 15 07.5	
	comp=Z,7.2nm,1.2s							
ILAR	**Eielson Array**	**72.74**	**16**	P		**P**	**08 15 07.9**	**-1.2**
	comp=Z,1.0nm,0.8s,baz=322,slow=5.1,SNR=15 comp=Z,1.0nm,0.8s							
ILAR	**Eielson Array**	**72.74**	**16**	P		**P**	**08 15 08.4**	**-0.7**
I28M	**Miner Creek**	**73.49**	**13**	IAmb		IAmb	08 15 17.3	
	comp=Z,2.6nm,0.9s							
FITZ	**Fitzroy Crossi**	**76.33**	**127**	P		**P**	**08 15 28.4**	**-2.2**
	comp=Z,9.5nm,1.2s,baz=338,slow=5.4,SNR=4.1 comp=Z,9.5nm,1.2s							
YKA	**Yellowknife Ar**	**79.08**	**3**	P		**P**	**08 15 44.9**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=35,slow=12,SNR=20 comp=Z,0.8nm,0.5s							
WB0	**Warramunga Arr**	**83.21**	**122**	P		**P**	**08 16 07.2**	**-0.7**
WRA	**Warramunga Arr**	**83.30**	**122**	P		**P**	**08 16 06.6**	**-1.7**
	comp=Z,2.8nm,0.9s,baz=324,slow=4.8,SNR=18 comp=Z,2.8nm,0.9s							
ASAR	**Alice Springs**	**85.65**	**125**	P		**P**	**08 16 19.4**	**-0.7**
	comp=Z,1.1nm,0.6s,baz=309,slow=4.9,SNR=25 comp=Z,1.1nm,0.6s							
ASAR	**Alice Springs**	**85.65**	**125**	P		**P**	**08 16 20.0**	**-0.2**

*ASRS **26** 08:15:03.0±1.5,53°.62N×88°.04E, h0km, M2.7(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 26 08:15:05.4±3.1, 53°.63N×87°.95E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=27.8km s-min=18.6km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.89**	**281**	I		I	08 26 50.0	
	0.2nm,0.6s,baz=97,slow=328,SNR=0.7							
ZALV	**Zalesovo Beam**	**1.89**	**281**	Pn		Pn	08 15 38.2	-0.6
	1.3nm,0.3s,baz=97,slow=15,SNR=14							
ZALV				Lg		Lg	08 16 05.3	
	1.5nm,0.3s,baz=102,slow=24,SNR=9.5							
KURBB	**Kurchatov Arra**	**6.54**	**246**	Pn		Pn	08 16 43.4	+0.7
	baz=60,slow=13,SNR=4.1							
KURBB				Lg		Lg	08 18 32.2	
	baz=64,slow=33,SNR=4.7 0.6nm,0.6s							
MKAR	**Makanchi Array**	**7.75**	**210**	Pn		Pn	08 17 00.5	+1.2
	0.1nm,0.3s,baz=29,slow=13,SNR=1.8							
MKAR				Lg		Lg	08 19 11.4	
	baz=37,slow=34,SNR=2.2 0.1nm,0.3s							

*IDC **26** 08:18:28.8±0.7,58°.57S×25°.34W, h0km, mb4.3/8, mbtmp4.3/9, ML4.7/1, MS3.8/14, Error ellipse: s-maj=28.5km s-min=18.5km az=76.0*
*NEIC **26** 08:18:34.7±1.2,58°.62S±0°.06×25°.2W±0°.2, h35km±1km, mb4.6/36, Error ellipse: s-maj=20.1km s-min=10.3km az=77.0*
ISC 26 08:18:34.0±0.5, 58°.67S±0°.08×25°.1W±0°.1, h35km, n77, σ1s11/62, mb4.6/21, MS3.7/12, 6C-1D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.68**	**300**	Pn		**Pn**	**08 20 22.5**	**-0.7**
VNA1	**Neumayer--Stat**	**13.94**	**156**	⇑P		**Pn**	**08 21 48.3**	**-0.2**
	comp=Z,10nm,0.4s							
VNA1				⇑S		**Sn**	**08 24 16.0**	**-5.8**
VNA3	**Neumayer Olymp**	**14.13**	**159**	⇑P		**Pn**	**08 21 50.3**	**-1.1**
	comp=Z,7.1nm,0.2s							
VNA3				⇑S		Sn	08 24 12.6	-14
VNA2	**Neumayer--Watz**	**14.33**	**156**	⇑P		**Pn**	**08 21 54.2**	**+0.2**
	comp=Z,9.1nm,0.2s,baz=304,slow=13							
VNA2				⇑S		Sn	08 24 21.8	-10
	baz=123,slow=15							
SNAA	**Sanae**	**15.88**	**154**	⇓P		**Pn**	**08 22 14.7**	**+0.1**
	comp=Z,209nm,0.4s							
SNAA	**Sanae**	**15.88**	**154**	P		**Pn**	**08 22 14.4**	**-0.1**
	comp=Z,3.0nm,0.3s,baz=324,slow=15,SNR=18							
SNAA				LR		LR	08 27 28.9	
	comp=Z,204nm,18.7s,baz=11,slow=34 comp=Z,6.2nm,0.4s							
SNAA	**Sanae**	**15.88**	**154**			**Pn**	**08 22 14.9**	**+0.3**
TROLL	**Troll, Antarti**	**17.39**	**151**	P		**P**	**08 22 35.2**	**+0.6**
PMSA	**Palmer Station**	**19.18**	**235**	LR		LR	08 28 58.7	
	comp=Z,179nm,21.1s,baz=148,slow=33							
BELA	**Belgrano 2**	**19.56**	**186**	P		**P**	**08 22 59.5**	**+1.3**
MG02	**Cerro Sombrero**	**25.16**	**264**	P		**P**	**08 23 54.9**	**-0.7**
MG05	**Puerto Natales**	**27.45**	**264**	P		**P**	**08 24 16.6**	**+0.3**
TRQA	**Tornquist**	**31.43**	**295**	P		**P**	**08 24 51.5**	**-0.2**
TRQA				IAmb		IAmb	08 25 17.7	
	comp=Z,17nm,1.4s							
QSPA	**South Pole Qui**	**31.57**	**180**	P		**P**	**08 24 54.2**	**+1.3**
	comp=Z,5.8nm,0.9s,baz=206,slow=3.9,SNR=13							
QSPA				LR		LR	08 37 36.7	
	comp=Z,143nm,19.6s,baz=226,slow=36 comp=Z,5.8nm,0.9s							
QSPA	**South Pole Qui**	**31.57**	**180**	P		**P**	**08 24 54.9**	**+2.0**
QSPA				IAmb		IAmb	08 24 55.6	
	comp=Z,7.6nm,1.0s							
PLCA	**Paso Flores**	**33.62**	**282**	P		**P**	**08 25 08.8**	**-2.1**
	comp=Z,2.6nm,1.0s,baz=170,slow=9.5,SNR=6.3							
PLCA				LR		LR	08 38 49.4	
	comp=Z,100nm,18.2s,baz=122,slow=36 comp=Z,2.6nm,1.0s							
PLCA	**Paso Flores**	**33.62**	**282**	P		**P**	**08 25 09.4**	**-1.5**
PLCA				IAmb		IAmb	08 25 14.5	
	comp=Z,10nm,1.1s							
LR05	**Currie**	**34.73**	**281**	P		**P**	**08 25 20.7**	**+0.2**
LR05				IAmb		IAmb	08 25 41.5	
	comp=Z,19nm,1.2s							
GO06	**Curarrehue**	**34.94**	**282**	P		**P**	**08 25 22.2**	**-0.2**
ITAB	**Concordia**	**36.63**	**317**	P		**P**	**08 25 36.4**	**-0.4**
ITAB				IAmb		IAmb	08 26 17.0	
	comp=Z,8.1nm,1.2s							
BI02	**San Fabin de**	**37.08**	**286**	P		**P**	**08 25 40.5**	**-0.2**
BI05	**Punta Hualpn**	**37.98**	**284**	P		**P**	**08 25 48.5**	**+0.3**
MT09	**Talagante**	**39.22**	**289**	P		**P**	**08 25 58.6**	**-0.2**
MT09				IAmb		IAmb	08 26 10.8	
	comp=Z,14nm,1.2s							
MT01	**Popeta**	**39.28**	**289**	P		**P**	**08 25 58.3**	**-0.8**
MT01				IAmb		IAmb	08 26 09.8	
	comp=Z,18nm,1.3s							
VA03	**San Esteban**	**39.82**	**290**	P		**P**	**08 26 03.9**	**+0.2**
VA03				IAmb		IAmb	08 26 31.6	
	comp=Z,12nm,1.0s							
ZON	**Zonda**	**39.91**	**293**	P		**P**	**08 26 04.1**	**-0.4**
SUR	**Sutherland**	**40.35**	**70**	LR		LR	08 38 35.9	
	comp=Z,93nm,20.9s,baz=250,slow=30							
CO04	**Los Peladeros**	**40.61**	**291**	P		**P**	**08 26 10.9**	**+0.3**
CO04				IAmb		IAmb	08 26 26.3	
	comp=Z,9.9nm,0.9s							
CO01	**Juntas del Tor**	**41.89**	**293**	P		**P**	**08 26 21.2**	**+0.3**
GO04	**Tololo Observa**	**42.06**	**292**	P		**P**	**08 26 22.1**	**-0.3**
GO04				IAmb		IAmb	08 26 22.9	
	comp=Z,14nm,0.7s							
AC05	**El Transito**	**42.92**	**294**	P		**P**	**08 26 28.8**	**-0.5**
AC05				IAmb		IAmb	08 26 39.2	
	comp=Z,14nm,1.1s							
LCO	**Las Campanas**	**42.98**	**293**	P		**P**	**08 26 29.6**	**-0.3**
LCO				IAmb		IAmb	08 26 41.5	
	comp=Z,21nm,1.4s							
VNDA	**Vanda**	**44.00**	**182**	P		**P**	**08 26 38.2**	**+1.0**
	comp=Z,5.4nm,0.8s,baz=187,slow=6.6,SNR=14							
VNDA				LR		LR	08 43 51.5	
	comp=Z,83nm,18.2s,baz=185,slow=34 comp=Z,5.4nm,0.8s							
VNDA	**Vanda**	**44.00**	**182**	P		**P**	**08 26 39.9**	**+2.7**
H04S2	**CROZET ISLANDS**	**45.50**	**110**	T		T	09 17 22.0	
	baz=226,slow=74,SNR=6.9							
H04S3	**CROZET ISLANDS**	**45.51**	**110**	T		T	09 17 22.4	
	baz=226,slow=74,SNR=8.5							
H04S1	**CROZET ISLANDS**	**45.52**	**110**	T		T	09 17 24.7	
	baz=226,slow=74,SNR=6.7							
BOSA	**Boshof**	**45.62**	**71**	LR		LR	08 43 10.4	
	comp=Z,92nm,19.0s,baz=204,slow=32							
BDFB	**Brasilia**	**46.20**	**329**	P		**P**	**08 26 54.8**	**-0.6**
	comp=Z,2.2nm,0.6s,baz=81,slow=4.1,SNR=3.3							
BDFB				LR		LR	08 44 47.0	
	comp=Z,89nm,19.1s,baz=240,slow=34 comp=Z,2.2nm,0.6s							
BDFB	**Brasilia**	**46.20**	**329**	P		**P**	**08 26 55.4**	**0.0**
BDFB				IAmb		IAmb	08 27 23.2	
	comp=Z,5.9nm,1.0s							
LBTB	**Lobatse**	**48.79**	**69**	LR		LR	08 43 54.6	
	comp=Z,124nm,19.8s,baz=241,slow=31							
PTLB	**Pontes e Lacer**	**49.97**	**315**	P		**P**	**08 27 24.1**	**-0.3**
TSUM	**Tsumeb**	**50.08**	**57**	LR		LR	08 43 47.8	
	comp=Z,83nm,20.6s,baz=271,slow=30							
H10S2	**ASCENSION HYDR**	**50.24**	**13**	T		T	09 21 41.5	
	baz=187,slow=74,SNR=18							
H10S3	**ASCENSION HYDR**	**50.24**	**13**	T		T	09 21 41.8	
	baz=33,slow=74,SNR=19							
GO01	**Chusmiza**	**50.29**	**302**	P		**P**	**08 27 26.3**	**-1.1**
GO01				IAmb		IAmb	08 27 35.7	
	comp=Z,7.8nm,1.3s							
H10N1	**ASCENSION HYDR**	**51.36**	**14**	T		T	09 23 06.1	
	baz=180,slow=71,SNR=8.4							
H10N3	**ASCENSION HYDR**	**51.36**	**13**	T		T	09 23 07.5	
	baz=180,slow=71,SNR=17							
H10N2	**ASCENSION HYDR**	**51.37**	**14**	T		T	09 23 07.1	
	baz=180,slow=71,SNR=10							
PB16	**IPOC Station P**	**51.60**	**302**	P		**P**	**08 27 37.1**	**-0.3**
PB16				IAmb		IAmb	08 28 19.4	
	comp=Z,14nm,1.5s							
VILB	**Vilhena**	**52.65**	**315**	P		**P**	**08 27 44.1**	**-0.5**
VILB				IAmb		IAmb	08 28 19.2	
	comp=Z,8.5nm,1.1s							
LPAZ	**La Paz**	**52.81**	**305**	P		**P**	**08 27 45.0**	**-1.4**
	comp=Z,0.8nm,0.4s,baz=110,slow=6.1,SNR=10 comp=Z,0.8nm,0.4s							
LPAZ	**La Paz**	**52.81**	**305**	P		**P**	**08 27 45.8**	**-0.6**
LSZ	**Lusaka**	**58.35**	**65**	LR		LR	08 50 15.2	
	comp=Z,116nm,19.4s,baz=171,slow=33							
BOAV	**Boa Vista**	**67.04**	**321**	P		**P**	**08 29 22.1**	**-1.3**
BOAV				IAmb		IAmb	08 29 55.0	
	comp=Z,4.8nm,1.1s							
DBIC	**Dimbokro**	**67.13**	**22**	P		**P**	**08 29 24.2**	**+0.3**
	comp=Z,1.5nm,0.5s,baz=214,slow=5.7,SNR=2.3 comp=Z,1.5nm,0.5s							
DBIC	**Dimbokro**	**67.13**	**22**	P		**P**	**08 29 24.4**	**+0.5**
DBIC				IAmb		IAmb	08 29 25.3	
	comp=Z,5.8nm,1.1s							
MBAR	**Mbarara**	**72.40**	**60**	LR		LR	08 59 03.1	
	comp=Z,57nm,18.2s,baz=209,slow=34							
TORD	**Torodi Ar. Bea**	**74.83**	**27**	P		**P**	**08 30 10.6**	**0.0**
	comp=Z,2.0nm,0.4s,baz=205,slow=7.4,SNR=24 comp=Z,2.0nm,0.4s							

SDV	**Santo Domingo**	**76.66**	**314**	LR		LR	09 05 20.2	
	comp=Z,64nm,19.9s,baz=154,slow=37							
TKNZ	**Takaka Hill**	**79.53**	**194**	P		**P**	**08 30 37.1**	**+0.3**
MRZ	**Mangatainoka R**	**79.54**	**196**	P		**P**	**08 30 37.3**	**+0.4**
BKZ	**Black Stump Fm**	**80.88**	**197**	P		**P**	**08 30 45.4**	**+1.3**
HDC	**Heredia**	**83.23**	**302**	P		**P**	**08 30 57.1**	**+0.4**
STKA	**Stephens Creek**	**89.11**	**169**	P		**P**	**08 31 25.4**	**0.0**
ASAR	**Alice Springs**	**96.14**	**161**	P		**P**	**08 31 57.8**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=212,slow=4.4,SNR=7.3							
ASAR				LR		LR	09 14 28.2	
	comp=Z,68nm,18.3s,baz=156,slow=35 comp=Z,0.9nm,0.8s							
NIUE	**Niue**	**97.30**	**213**	P		**P**	**08 32 03.7**	**+0.4**
NVAR	**Mina Array Bea**	**123.42**	**290**	PKP		**PKPdf**	**08 37 27.2**	**+0.4**
	comp=Z,0.4nm,0.9s,baz=111,slow=2.9,SNR=3.8							
BVAR	**Borovoye Array**	**135.21**	**59**	PKP		**PKPdf**	**08 37 49.3**	**+0.9**
	comp=Z,0.4nm,0.4s,baz=57,slow=5.3,SNR=1.7							
MKAR	**Makanchi Array**	**136.62**	**73**	PKP		**PKPdf**	**08 37 50.0**	**-1.3**
	comp=Z,0.5nm,0.9s,baz=259,slow=2.3,SNR=3.0							
YKA	**Yellowknife Ar**	**138.86**	**315**	PKP		**PKPdf**	**08 37 55.0**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=111,slow=3.3,SNR=19							
P33M	**Teslin, Yukon**	**144.90**	**304**	PKPdf		**PKPdf**	**08 38 06.2**	**+0.3**
S31K	**Pelican**	**145.27**	**299**	PKPbc		**PKPdf**	**08 38 07.1**	**+0.8**
C36M	**Paulatuk**	**145.70**	**322**	PKPdf		**PKPbc**	**08 38 07.7**	**+0.4**
M31M	**Drury Creek, Y**	**146.52**	**307**	PKPdf		**PKPbc**	**08 38 10.1**	**+0.1**
SONM	**Songino Array**	**149.69**	**89**	PKPbc		**PKPbc**	**08 38 19.3**	**+0.3**
	comp=Z,3.2nm,0.9s,baz=222,slow=2.0,SNR=13							
ILAR	**Eielson Array**	**152.66**	**308**	PKPbc		**PKPbc**	**08 38 25.4**	**+0.3**
	comp=Z,2.6nm,0.4s,baz=147,slow=2.0,SNR=59							

*CATAC **26** 08:20:15.5±0.4, 13°.N±3°.×8°.8W±°., h28km, M3.1/15, MLv3.1/15, Error ellipse: s-maj=8.3km s-min=3.1km az=29.2, confirmed*
*SNET **26** 08:20:17.0±2.1, 12°.66N×88°.33W, h32km, ML3.2, Presumed earthquake*
*GCG **26** 08:20:18.6±1.0, 12°.83N×88°.49W, h18km±9km, MD4.1, Presumed earthquake*
ISC 26 08:20:14.7±1.8, 12°.54N±0°.07×88°.35W±0°.04, h26km±14km, n32, σ0s93/52, 3C-7D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
INTP	**Intipuca**	**0.71**	**24**	*i* P		**Pb**	**08 20 28.8**	**+0.3**
INTP				*e*S		**Sn**	**08 20 38.3**	**-0.8**
LCND	**La Caada**	**0.88**	**30**	⇓P		**Pb**	**08 20 31.7**	**+0.3**
LCND	**La Caada**	**0.88**	**30**	*i* P		**Pb**	**08 20 31.0**	**-0.4**
LCND				*i* P		**Pn**	**08 20 32.6**	**+1.1**
CSGN	**Cosiguina Volc**	**0.88**	**61**	⇓P		**Pn**	**08 20 31.7**	**+0.2**
CNCH	**Conchagua**	**0.88**	**35**	⇓P		**Pb**	**08 20 31.7**	**+0.2**
CNCH				S		**Sn**	**08 20 43.5**	**-0.1**
CNCH	**Conchagua**	**0.88**	**35**	*i* P		**Pb**	**08 20 32.3**	**+0.8**
RANC	**El Ranchito**	**0.89**	**4**	P		**Pb**	**08 20 32.1**	**+0.5**
RANC				S		**Sn**	**08 20 43.8**	**+0.1**
PACA	**Pacayal**	**0.92**	**1**	⇓P		**Pb**	**08 20 32.5**	**+0.3**
PACA				S		**Sn**	**08 20 44.6**	**0.0**
TECO	**Alcaldia de Te**	**1.07**	**337**	*i* P		**Pb**	**08 20 37.0**	**+2.3**
TECO				*e*S		**Sn**	**08 20 47.2**	**-1.0**
COEG	**Centro de Oper**	**1.19**	**334**	P		**Pn**	**08 20 35.9**	**+0.2**
COEG				S		**Sn**	**08 20 49.9**	**-1.2**
SCLA	**Alcaldia de Sa**	**1.21**	**342**	⇑P		**Pn**	**08 20 36.7**	**+0.7**
SCLA				S		**Sb**	**08 20 51.4**	**-0.8**
SJTE	**Alcalda de S**	**1.24**	**329**	*i* P		**Pn**	**08 20 36.8**	**+0.3**
SJTE				*e*S		**Sn**	**08 20 52.3**	**-0.2**
PAVA	**Las Pavas**	**1.30**	**334**	P		**Pn**	**08 20 37.9**	**+0.7**
PAVA				S		**Sn**	**08 20 53.6**	**-0.1**
PAVA	**Las Pavas**	**1.30**	**334**	*i* P		**Pn**	**08 20 38.3**	**+1.1**
LOMA	**Loma Larga**	**1.36**	**324**	*i* P		**Pn**	**08 20 39.0**	**+0.9**
LOMA				*e*S		**Sn**	**08 20 54.5**	**-0.8**
LOMA				⇓			09 20 57.0	
HERN	**Volcan Telica**	**1.48**	**87**	⇓P		**Pn**	**08 20 40.1**	**+0.3**
HERN				S		**Sn**	**08 20 58.5**	**+0.1**
P5NO	**Presa 5 de nov**	**1.49**	**344**	P		**Pn**	**08 20 40.5**	**+0.8**
P5NO	**Presa 5 de nov**	**1.49**	**344**	*i* P		**Pn**	**08 20 41.0**	**+1.2**
P5NO				*e*S		**Sb**	**08 20 58.7**	**-1.5**
PMON	**Piamonte**	**1.50**	**321**	P		**Pn**	**08 20 40.6**	**+0.6**
PMON				S		**Sn**	**08 20 57.7**	**-1.0**
PMON	**Piamonte**	**1.50**	**321**	*i* P		**Pn**	**08 20 41.0**	**+1.0**
PMON				*e*S		**Sn**	**08 20 59.1**	**+0.5**
POLN	**Al Sur del Vol**	**1.50**	**86**	P		**Pn**	**08 20 40.5**	**+0.6**
POLN				S		**Sn**	**08 20 58.6**	**-0.1**
JAYA	**Jayaque - finc**	**1.54**	**316**	⇑P		**Pn**	**08 20 40.6**	**0.0**
JAYA				S		**Sn**	**08 20

ALIBA	**Liberia Airpor**	**0.97**	**107**	*e*P		**Pn**	**08 30 32.9**	**+0.1**
ALIBA				*e*S		**Sn**	**08 30 47.6**	**+0.9**
NADN	**Granada**	**0.97**	**27**	P		**Pb**	**08 30 32.4**	**+0.3**
NADN				S		**Sn**	**08 30 46.3**	**-0.5**
NADN	**Granada**	**0.97**	**27**	*e*P		**Pb**	**08 30 32.3**	**+0.2**
CARN	**Rivas**	**1.00**	**72**	⇑P		**Pb**	**08 30 32.5**	**0.0**
CARN				S		**Sn**	**08 30 48.8**	**+1.4**
CARN	**Rivas**	**1.00**	**72**	*e*P		**Pg**	**08 30 32.4**	**+0.2**
DELF	**Filadelfia**	**1.01**	**115**	*e*P		**Pn**	**08 30 33.4**	**0.0**
JAPN	**Al SSO del Vol**	**1.02**	**51**	P		**Pb**	**08 30 33.3**	**+0.4**
JAPN	**Al SSO del Vol**	**1.02**	**51**	*e*P		**Pb**	**08 30 33.3**	**+0.4**
LAPC	**Finca la Perla**	**1.04**	**96**	*e*P		**Pg**	**08 30 33.1**	**0.0**
OMEN	**Al SSO del Vol**	**1.05**	**53**	P		**Pb**	**08 30 33.8**	**+0.4**
MORN	**Al O del Volca**	**1.06**	**51**	P		**Pb**	**08 30 33.6**	**+0.1**
CONN	**Concepcion**	**1.08**	**51**	⇑P		**Pg**	**08 30 33.6**	**-0.3**
CONN				S		**Sb**	**08 30 48.8**	**+0.5**
VRLE	**La Escondida,**	**1.11**	**95**	*e*P		**Pg**	**08 30 34.5**	**+0.2**
NANN	**Nandasmo**	**1.11**	**19**	⇓P		**Pn**	**08 30 35.2**	**+0.3**
NANN				S		**Sn**	**08 30 50.4**	**+0.1**
BUAI	**Buenos Aires**	**1.14**	**90**	*e*P		**Pb**	**08 30 35.1**	**+0.2**
MASN	**Masaya**	**1.15**	**17**	P		**Pn**	**08 30 36.1**	**+0.7**
PEJA	**Penjamo Buenos**	**1.16**	**89**	*e*P		**Pb**	**08 30 35.1**	**-0.1**
JUD3	**Juan Diaz 3**	**1.17**	**127**	*e*P		**Pb**	**08 30 35.1**	**-0.4**
MAS3	**Al N del Volca**	**1.18**	**15**	P		**Pb**	**08 30 35.6**	**0.0**
MAS3				S		**Sg**	**08 30 50.6**	**-0.4**
UNAN	**Cigeo UNAN**	**1.24**	**10**	⇓P		**Pb**	**08 30 36.8**	**+0.1**
UNAN				S		**Sg**	**08 30 52.8**	**-0.2**
BAGA	**Bagaces**	**1.26**	**106**	⇑*i*P		**Pn**	**08 30 37.1**	**+0.3**
TISN	**Laguna Tiscapa**	**1.27**	**10**	P		**Pn**	**08 30 37.1**	**+0.1**
MESS	**Mesas**	**1.28**	**96**	*e*P		**Pn**	**08 30 36.9**	**-0.2**
MGAN	**Managua**	**1.28**	**11**	P		**Pb**	**08 30 37.3**	**0.0**
MGAN				S		**Sg**	**08 30 54.2**	**-0.1**
MGAN	**Managua**	**1.28**	**11**	*e*P		**Pb**	**08 30 36.6**	**-0.5**
CLARA	**Aguas Claras**	**1.29**	**94**	*e*P		**Pn**	**08 30 37.3**	**0.0**
COPN	**Copaltepe**	**1.30**	**356**	⇑P		**Pn**	**08 30 37.4**	**+0.1**
COPN	**Copaltepe**	**1.30**	**356**	⇑*e*P		**Pn**	**08 30 37.2**	**-0.2**
HORNC	**Hornillas**	**1.30**	**97**	*e*P		**Pn**	**08 30 37.1**	**-0.4**
WILN	**Americas 2**	**1.31**	**13**	P		**Pb**	**08 30 37.8**	**0.0**
WILN				S		**Sg**	**08 30 54.9**	**-0.2**
APQ2	**Apoyeque**	**1.32**	**7**	P		**Pn**	**08 30 37.4**	**-0.3**
APQ2				S		**Sb**	**08 30 54.4**	**-0.6**
CUI	**Cuipilapa**	**1.32**	**100**	*e*P		**Pb**	**08 30 38.1**	**+0.1**
CMARA	**Lajas Hojancha**	**1.35**	**129**	P		**Pb**	**08 30 38.8**	**+0.2**
CMARA				S		**Sb**	**08 30 54.4**	**-1.7**
VMAR	**Armenia, Volca**	**1.35**	**93**	*e*P		**Pn**	**08 30 38.4**	**+0.2**
APQ3	**Volcan Apoyequ**	**1.39**	**5**	S		**Sg**	**08 30 57.7**	**0.0**
UPAL	**Upala**	**1.45**	**89**	⇑P		**Pn**	**08 30 39.8**	**+0.4**
UPAL				S		**Sg**	**08 31 00.4**	**+0.7**
UPAL	**Upala**	**1.45**	**89**	*e*P		**Pn**	**08 30 39.9**	**+0.4**
INVE	**Universidad In**	**1.46**	**106**	*e*P		**Pn**	**08 30 40.1**	**+0.5**
TIMP	**Tierras Morena**	**1.48**	**101**	*e*P		**Pb**	**08 30 40.6**	**-0.1**
NYURE	**Nandayure**	**1.50**	**126**	*e*P		**Pb**	**08 30 41.2**	**+0.1**
MOM2	**El Cardon**	**1.55**	**0**	P		**Pn**	**08 30 41.2**	**+0.4**
MOM2				S		**Sn**	**08 31 00.6**	**-0.4**
TILA	**Tilaran**	**1.55**	**105**	*e*P		**Pb**	**08 30 41.6**	**-0.3**
QUEB	**Quebradon, Cot**	**1.59**	**99**	*e*P		**Pn**	**08 30 41.9**	**+0.5**
JTS	**Las Juntas de**	**1.62**	**111**	P		**Pb**	**08 30 42.8**	**-0.4**
JTS				S		**Sb**	**08 31 04.3**	**+0.6**
JTS	**Las Juntas de**	**1.62**	**111**	*e*P		**Pn**	**08 30 42.4**	**+0.5**
MOM3	**MOM3**	**1.62**	**359**	⇓P		**Pn**	**08 30 41.9**	**+0.1**
MOM3				S		**Sn**	**08 31 02.8**	**-0.1**
CNGN	**Cerro Negro**	**1.62**	**353**	P		**Pn**	**08 30 41.6**	**-0.2**
CNGN				S		**Sn**	**08 31 03.0**	**0.0**
ACON	**Acoyapa**	**1.68**	**50**	P		**Pn**	**08 30 41.8**	**-0.8**
ACON				S		**Sn**	**08 31 03.6**	**-0.7**
TABAC	**Tabacon**	**1.73**	**102**	*e*P		**Pb**	**08 30 45.2**	**+0.1**
BOAB	**BOACO BROADBAN**	**1.75**	**27**	P		**Pn**	**08 30 44.3**	**-0.3**
BOAB				S		**Sn**	**08 31 06.2**	**+0.1**
CASO	**Castillo**	**1.78**	**104**	*e*P		**Pb**	**08 30 45.6**	**-0.3**
POLN	**Al Sur del Vol**	**1.79**	**350**	P		**Pb**	**08 30 44.4**	**+0.3**
ARE1	**Arenal 1**	**1.79**	**103**	*e*P		**Pb**	**08 30 45.8**	**-0.2**
VARE2	**V. Arenal**	**1.79**	**103**	⇑*i*P		**Pb**	**08 30 46.0**	**-0.1**
COVE	**Coope Vega, Sa**	**2.06**	**94**	P		**Pn**	**08 30 46.6**	**-1.2**
MATN	**Matagalpa**	**2.11**	**15**	P		**Pn**	**08 30 47.8**	**-0.8**
LIMN	**Finca el Limon**	**2.17**	**3**	P		**Pn**	**08 30 49.7**	**+0.2**
LIMN				S		**Sn**	**08 31 14.7**	**-1.9**
CSGN	**Cosiguina Volc**	**2.33**	**333**	P		**Pn**	**08 30 52.3**	**+0.6**
CSGN				S		**Sn**	**08 31 21.2**	**+0.7**
RCON	**San Juan de Ri**	**2.61**	**7**	P		**Pn**	**08 30 56.3**	**+0.7**
RCPN	**Sur Rio San Ju**	**2.66**	**8**	P		**Pn**	**08 30 56.6**	**+0.4**
OCON	**Estacion meteo**	**2.73**	**0**	P		**Pn**	**08 30 58.3**	**+1.1**
YUSH	**Yuscaran**	**3.07**	**354**	P		**Pn**	**08 31 03.5**	**+1.6**
DRK0	**Durika**	**3.58**	**116**	*e*P		**Pn**	**08 31 07.7**	**-1.2**

*RSNC **26** 08:35:02.6±0.0, 6°N±1°×7°8W±°, h4km±2km, M2.9, mb3.8, ML2.6*
*IDC **26** 08:35:06.9±1.5, 6°.70N×77°.16W, h0km, mb3.3/2, mbtmp3.3/4, ML1.9/2, Error ellipse: s-maj=52.1km s-min=18.5km az=35.0*
ISC 26 08:35:01.7±1.6, 5°.61N±0°.03×77°.97W±0°.04, h1km±10km, n33, σ2$58/53, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOLC	**Bahia Solano**	**0.83**	**42**	P	**Pg**	**08 35 18.0**	**+0.3**
SOLC				S	**Sg**	**08 35 26.9**	**-1.6**
PIZC	**Pizarro, Choco**	**0.88**	**136**	P	**Pg**	**08 35 18.8**	**+0.1**
PIZC				S	**Sg**	**08 35 29.9**	**-0.2**
PTAC	**Punta Ardita,**	**1.54**	**6**	P	**Pn**	**08 35 28.3**	**-2.0**
PTAC				S	**Sn**	**08 35 45.3**	**-5.7**
PLMC	**San Jos del P**	**1.82**	**112**	P	**Pn**	**08 35 31.5**	**-2.8**
PLMC				S	**Sn**	**08 35 52.3**	**-5.7**
CBOC	**Ciudad Bolivar**	**1.97**	**82**	P	**Pn**	**08 35 34.0**	**-2.4**
CBOC				S	**Sn**	**08 35 55.6**	**-6.2**
DBBC	**Dabeiba**	**2.24**	**51**	P	**Pn**	**08 35 39.5**	**-0.6**
DBBC				S	**Sn**	**08 36 06.5**	**-2.0**
YOTC	**Yotoco, Valle**	**2.29**	**135**	P	**Pn**	**08 35 38.6**	**-2.1**
YOTC				S	**Sn**	**08 36 04.9**	**-4.7**
GUY2C	**Guyana, Caldas**	**2.62**	**98**	P	**Pn**	**08 35 44.8**	**-0.9**
GUY2C				S	**Sn**	**08 36 14.1**	**-4.3**
APAC	**Apartado, Choc**	**2.67**	**31**	P	**Pn**	**08 35 46.7**	**+0.9**
APAC				S	**Sn**	**08 36 17.9**	**-0.9**
JAMC	**Jamundi, Valle**	**2.71**	**151**	P	**Pn**	**08 35 44.7**	**-1.9**
JAMC				S	**Sn**	**08 36 15.3**	**-4.8**
ANIL	**Santa Ana**	**2.79**	**113**	P	**Pn**	**08 35 47.0**	**-0.8**
ANIL				S	**Sn**	**08 36 21.3**	**-1.0**
UREC	**San Jos de Ur**	**3.23**	**49**	P	**Pn**	**08 35 52.3**	**-1.3**
UREC				S	**Sn**	**08 36 31.5**	**-1.2**
POPC	**Popayan, Colom**	**3.31**	**157**	P	**Pn**	**08 35 54.4**	**-0.5**
POPC				S	**Sn**	**08 36 31.8**	**-3.2**
PRAC	**Prado**	**3.61**	**121**	P	**Pn**	**08 35 59.3**	**+0.5**
PRAC				S	**Sn**	**08 36 39.8**	**-2.3**
PTBC	**PUERTO BERRIO,**	**3.62**	**75**	P	**Pn**	**08 35 59.9**	**+1.0**
PTBC				S	**Sn**	**08 36 42.6**	**+0.3**
BBAC	**Balboa, Cauca**	**3.63**	**168**	P	**Pn**	**08 35 57.8**	**-1.5**
BBAC				S	**Sn**	**08 36 43.4**	**+0.4**
ROSC	**El Rosal**	**3.72**	**102**	Pn	**Pn**	**08 36 02.7**	**+2.1**
	2.3nm,0.3s,baz=157,slow=13,SNR=5.3						
ROSC				Lg	Lg	08 36 51.9	
	0.8nm,0.3s,baz=255,slow=22,SNR=4.5 3.2nm,0.4s						
BETC	**Betania**	**3.85**	**139**	P	**Pn**	**08 36 03.6**	**+1.4**
SPBC	**San Pablo de B**	**3.88**	**89**	P	**Pn**	**08 36 05.7**	**+3.0**
BCIP	**Isla Barro Col**	**3.99**	**333**	P	**Pn**	**08 36 02.6**	**-1.5**
BCIP				S	**Sn**	**08 36 50.4**	**-1.1**
GARC	**Garzon, Huila**	**4.20**	**144**	P	**Pn**	**08 36 08.2**	**+1.0**
URMC	**La Uribe, Meta**	**4.28**	**123**	P	**Pn**	**08 36 09.0**	**+0.9**
GCUF	**Volcan Galeras**	**4.40**	**172**	P	**Pn**	**08 36 10.5**	**+0.4**
VILC	**Villavicencio,**	**4.51**	**109**	P	**Pn**	**08 36 13.8**	**+2.4**
VILC				S	**Sn**	**08 37 06.2**	**+1.5**
FLOC	**Florencia**	**4.62**	**150**	P	**Pn**	**08 36 13.4**	**+0.7**
RUSC	**La Rusia**	**4.87**	**86**	P	**Pn**	**08 36 18.5**	**+1.9**
SJCC	**San Jacinto, C**	**5.08**	**33**	P	**Pn**	**08 36 19.3**	**+0.2**
	13nm,1.3s						
SJCC				S	**Sn**	**08 37 14.7**	**-3.8**
	13nm,1.3s						
OTAV	**Otavalo**	**5.35**	**185**	P	**Pn**	**08 36 22.6**	**-0.6**
OTAV				S	**Sn**	**08 37 20.8**	**-5.0**
PAMC	**Pamplona, Colo**	**5.52**	**72**	P	**Pn**	**08 36 27.0**	**+1.5**
PAMC				S	**Sn**	**08 37 28.2**	**-1.6**
SDV	**Santo Domingo**	**7.98**	**65**	Pn	Pn	08 36 49.6	-9.4
	0.3nm,0.3s,baz=225,slow=14,SNR=1.9 1.1nm,0.4s						
NVAR	**Mina Array Bea**	**49.01**	**318**	P	**P**	**08 43 52.7**	**+2.3**
	0.2nm,0.6s,baz=93,slow=6.3,SNR=2.2 0.2nm,0.6s						
YKA	**Yellowknife Ar**	**62.82**	**342**	P	**P**	**08 45 28.9**	**+0.1**
	0.4nm,0.8s,baz=131,slow=6.2,SNR=8.3 0.4nm,0.8s						

ASAR	**Alice Springs**	**144.46**	**236**	PKPbc		**PKiKP**	**08 54 48.7**	**+4.2**
	0.5nm,0.9s,baz=121,slow=3.6,SNR=3.0								

*ASRS **26** 08:45:03.0±1.2, 54°.31N×86°.86E, h0km, M2.8(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 26 08:45:06.8±3.0, 54°.30N×86°.68E, h0km, mbtmp2.8/2, ML2.7/2, Error ellipse: s-maj=24.8km s-min=16.0km az=52.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.15**	**253**	I	I	08 52 51.0	
	baz=75,slow=331,SNR=2.4						
ZALV	**Zalesovo Beam**	**1.15**	**253**	Pg	Pg	08 45 28.1	-0.8
	2.1nm,0.3s,baz=72,slow=16,SNR=11						
ZALV				Lg	Lg	08 45 44.2	
	2.3nm,0.3s,baz=69,slow=29,SNR=7.8						
KURBB	**Kurchatov Arra**	**6.19**	**237**	Pn	Pn	08 46 40.1	+0.7
	0.1nm,0.3s,baz=52,slow=13,SNR=6.3						
KURBB				Lg	Lg	08 48 26.2	
	baz=60,slow=33,SNR=1.8 0.6nm,0.5s						
MKAR	**Makanchi Array**	**8.01**	**202**	Pn	Pn	08 47 05.5	+1.1
	0.1nm,0.3s,baz=25,slow=14,SNR=6.1						
MKAR				Lg	Lg	08 49 22.6	
	0.1nm,0.3s,baz=12,slow=29,SNR=2.6 0.2nm,0.4s						

*JMA **26** 08:50:22.8±0.9, 45°N±5°×14°9E±°, h30km, MV3.7/10, SE OFF ETOROFU*
*SKHL **26** 08:50:23.9±0.3, 44°.40N×148°.80E, h41km±6km, mb4.1/3*
ISC 26 08:50:18.6±3.9, 44°.29N±0°.09×149°.3E±0°.2, h35km, n13, σ3$12/22, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.36**	**314**	*e*P	**Pn**	**08 50 41.6**	**+0.5**
KUR				AMB	AMB	08 50 42.9	
	70nm,0.4s						
KUR				*e*S	**Sn**	**08 50 54.7**	**-3.2**
KUR				A	A	08 50 58.3	
	300nm,0.4s						
KUR				A	A	08 50 58.3	
	140nm,0.4s						
SHO	**Shikotan**	**1.79**	**257**	*e*P	Pn	08 50 57.5	+10
SHO				AMB	AMB	08 50 59.9	
	30nm,0.3s						
SHO				*e*S	**Sn**	**08 51 14.0**	**+5.4**
SHO				A	A	08 51 21.1	
	280nm,0.3s						
SHO				A	A	08 51 21.1	
	270nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.45**	**265**	*e*P	**Pn**	**08 50 57.0**	**+0.9**
YUK				AMB	AMB	08 50 58.0	
	60nm,0.4s						
YUK				*e*S	**Sn**	**08 51 21.8**	**-3.0**
YUK				A	A	08 51 22.8	
	110nm,0.5s						
YUK				A	A	08 51 22.8	
	130nm,0.5s						
NEM2	**Nemuro 2**	**2.70**	**251**	*e*P	**Pn**	**08 51 00.5**	**+1.0**
NEM2				*e*S	**Sn**	**08 51 28.2**	**-2.8**
NMR	**Nemuro--Hokkai**	**2.71**	**251**	*e*P	**Pn**	**08 51 00.6**	**+1.0**
NMR				*e*S	**Sn**	**08 51 28.1**	**-3.1**
JRA	**Rausu**	**2.99**	**265**	*e*P	**Pn**	**08 51 05.3**	**+1.8**
JRA				*e*S	**Sn**	**08 51 36.8**	**-1.4**
AKK	**Akkeshi**	**3.44**	**250**	*e*P	**Pn**	**08 51 12.5**	**+2.8**
JAK	**Akkeshi**	**3.55**	**250**	*e*S	**Sn**	**08 51 48.3**	**-3.6**
JTKR	**Abashiri--Toko**	**3.86**	**267**	*e*P	**Pn**	**08 51 17.8**	**+2.4**
JTKR				*e*S	**Sn**	**08 52 02.0**	**+2.5**
JAR	**Ashorobuto**	**4.09**	**258**	*e*P	**Pn**	**08 51 21.2**	**+2.6**
JAR				*e*S	**Sn**	**08 52 03.7**	**-1.6**
JOB	**Onbets**	**4.17**	**252**	*e*P	**Pn**	**08 51 21.6**	**+1.9**
JOB				*e*S	**Sn**	**08 52 05.6**	**-1.6**
JCH	**Churui**	**4.60**	**251**	*e*P	**Pn**	**08 51 28.4**	**+2.8**
JCH				*e*S	**Sn**	**08 52 16.4**	**-1.5**
JANG	**Nango**	**6.94**	**238**	*e*S	**Sn**	**08 53 08.1**	**-7.3**

*NEIC **26** 08:52:41.8±0.8, 31°.707N±0°.010×104°.02W±0°.01, h5km±1km, mb4.0/30, mb_Lg3.9/173, ML4.2/72, Mwr3.8/45, Error ellipse: s-maj=2.7km s-min=2.1km az=66.0, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr=5.25; Mθθ=5.75; Mφφ=0.51; Mrθ=1.04; Mθφ=1.37; Mφr=1.65; Fault plane solution: M0=6.01000×10^14 NP1:φ=59.56000°, δ=44.80000°, λ=-118.24000°. NP2:φ=276.68000°, δ=51.63000°, λ=-64.83000°. Principal axes: T 6.0844, Plg=4.0000°, Azm=349.0000°; N -0.1471, Plg=19.0000°, Azm=80.0000°; P -5.9373, Plg=70.0000°, Azm=249.0000°;*
*TXNET **26** 08:52:41.9, 31°.71N±0°.5×104°.0W±0°.5, h6km±1km, ML4.1/14 Error ellipse: s-maj=0.9km s-min=0.6km az=49.7, final*
*NEIC **26** 08:52:41.9, 31°.71N×104°.02W, h5km*
*IDC **26** 08:52:42.2±0.8, 31°.70N×103°.96W, h0km, mb3.8/3, mbtmp3.7/11, ML3.2/8, MS3.3/9, Error ellipse: s-maj=23.3km s-min=6.5km az=74.0*
ISC 26 08:52:42.3±0.8, 31°.68N±0°.02×104°.04W±0°.02, h13km±5km, n190, σ1$33/151, mb3.6/3, MS3.4/5, 20C-2D, Western Texas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPB13	**Reeves - Culbe**	**0.20**	**127**		**Pg**	**08 52 47.3**	**+0.5**
TPB13	**Reeves - Culbe**	**0.20**	**127**	⇑P	**Pg**	**08 52 47.3**	**+0.5**
TPB13				S	**Sg**	**08 52 50.8**	**+0.8**
TPB09	**Culberson Coun**	**0.24**	**293**		**Pg**	**08 52 47.5**	**-0.1**
TPB09					**Sg**	**08 52 50.9**	**-0.2**
TPB09	**Culberson Coun**	**0.24**	**293**	⇑P	**Pg**	**08 52 47.5**	**-0.1**
TPB09				S	**Sg**	**08 52 50.9**	**-0.2**
TPB11	**China Draw**	**0.26**	**1**	⇑P	**Pg**	**08 52 47.3**	**-0.5**
TPB11				S	**Sg**	**08 52 50.7**	**-0.8**
TPB07	**Mentone**	**0.33**	**107**		**Pb**	**08 52 49.5**	**-0.6**
TPB07	**Mentone**	**0.33**	**107**	⇑P	**Pb**	**08 52 49.5**	**-0.6**
TPB07				S	**Sb**	**08 52 54.6**	**-0.8**
PECS	**Pecos**	**0.34**	**155**		**Pb**	**08 52 49.5**	**-0.7**
PECS	**Pecos**	**0.34**	**155**	⇑P	**Pb**	**08 52 49.5**	**-0.7**
TPB10	**Southeast of T**	**0.46**	**148**		**Pb**	**08 52 51.9**	**-0.5**
TPB10	**Southeast of T**	**0.46**	**148**	⇑P	**Pb**	**08 52 51.9**	**-0.5**
TPB12	**Southwest of T**	**0.47**	**172**		**Pb**	**08 52 52.0**	**-0.5**
TPB12	**Southwest of T**	**0.47**	**172**	⇑P	**Pb**	**08 52 52.0**	**-0.5**
TPB12				S	**Sb**	**08 52 58.9**	**-0.4**
PCOS	**Crockett Middl**	**0.52**	**121**		**Pb**	**08 52 53.0**	**-0.4**
PCOS					**Sb**	**08 53 01.0**	**+0.1**
PCOS	**Crockett Middl**	**0.52**	**121**	⇑P	**Pb**	**08 52 53.0**	**-0.4**
PCOS				S	**Sb**	**08 53 01.0**	**+0.1**
GDL2	**Guadalupe Moun**	**0.59**	**332**		**Pg**	**08 52 53.1**	**-0.8**
GDL2	**Guadalupe Moun**	**0.59**	**332**	⇑P	**Pg**	**08 52 53.1**	**-0.8**
CLNB	**Carlsbad**	**0.60**	**13**		**Pg**	**08 52 53.4**	**-0.6**
CLNB	**Carlsbad**	**0.60**	**13**	⇑P	**Pg**	**08 52 53.4**	**-0.6**
CLNB				S	**Sg**	**08 53 01.8**	**-0.2**
TPB03	**Saragosa**	**0.74**	**143**		**Pb**	**08 52 56.9**	**-0.2**
TPB03	**Saragosa**	**0.74**	**143**	⇑P	**Pb**	**08 52 56.9**	**-0.2**
TPB01	**Permian Basin**	**0.77**	**163**	⇑P	**Pg**	**08 52 57.0**	**-0.2**
TPB27	**North of Pyote**	**0.78**	**97**	⇑P	**Pg**	**08 52 57.3**	**-0.1**
TPB04	**Verhalen**	**0.82**	**127**		**Pb**	**08 52 58.2**	**-0.2**
TPB04	**Verhalen**	**0.82**	**127**	⇑P	**Pb**	**08 52 58.2**	**-0.2**
TPB04				S	**Sb**	**08 53 09.5**	**+0.1**
HTMS	**Hat Mesa**	**0.86**	**23**		**Pg**	**08 52 58.1**	**-0.9**
HTMS	**Hat Mesa**	**0.86**	**23**	⇑P	**Pg**	**08 52 58.2**	**-0.8**
TPB16	**Coyonosa**	**0.87**	**129**		**Pb**	**08 52 59.1**	**-0.2**
TPB16	**Coyonosa**	**0.87**	**129**	⇑P	**Pb**	**08 52 59.1**	**-0.2**
TPB16				S	**Sb**	**08 53 11.3**	**+0.4**
TPB19	**West of Imperi**	**0.88**	**115**		**Pg**	**08 52 59.1**	**-0.2**
TPB19	**West of Imperi**	**0.88**	**115**	⇑P	**Pg**	**08 52 59.1**	**-0.2**
TPB15	**Southwest of C**	**0.94**	**120**		**Pg**	**08 53 00.1**	**-0.3**
TPB15	**Southwest of C**	**0.94**	**120**	⇑P	**Pg**	**08 53 00.1**	**-0.3**
MNHN	**Monahans**	**1.14**	**107**		**Pg**	**08 53 03.0**	**-1.2**
MNHN	**Monahans**	**1.14**	**107**	⇑P	**Pg**	**08 53 03.2**	**-1.1**
MNTX	**Cornudas Mount**	**1.15**	**271**		**Pg**	**08 53 03.6**	**-0.7**
MNTX				lAmb_Lg		08 53 20.9	
	comp=Z,1μm,0.8s						
MNTX	**Cornudas Mount**	**1.15**	**271**	⇓P	**Pg**	**08 53 03.7**	**-0.7**
MNTX				S	**Sg**	**08 53 18.7**	**-0.6**
VHRN	**Van Horn**	**1.20**	**223**		**Pg**	**08 53 05.0**	**-0.5**
VHRN				IAML		08 53 26.7	
	comp=Z,3μm,0.4s						
VHRN	**Van Horn**	**1.20**	**223**	P	**Pg**	**08 53 04.8**	**-0.7**
VHRN				S	**Sn**	**08 53 22.5**	**+1.3**
TPB08	**Permian Basin**	**1.25**	**129**		**Pn**	**08 53 05.5**	**0.0**
TPB08	**Permian Basin**	**1.25**	**129**	⇑P	**Pn**	**08 53 05.5**	**0.0**
TPB08				S	**Sn**	**08 53 22.7**	**+0.5**
ODSA	**Odessa**	**1.34**	**70**		**Pn**	**08 53 06.7**	**-0.1**
ODSA				IAML		08 53 30.3	
	comp=Z,3μm,0.5s						
ODSA	**Odessa**	**1.34**	**70**	P	**Pn**	**08 53 06.7**	**-0.1**
ALPN	**Alpine**	**1.34**	**165**		**Pn**	**08 53 06.8**	**-0.1**
ALPN				lAmb_Lg		08 53 27.3	
	comp=Z,524nm,0.8s						
ALPN				IAML		08 53 30.4	
	comp=Z,2μm,0.3s						
ALPN				IAML		08 53 31.6	
	comp=Z,3μm,0.7s						
ALPN	**Alpine**	**1.34**	**165**	P	**Pn**	**08 53 06.9**	**0.0**
CPRX	**Cap Rock**	**1.36**	**6**		**Pb**	**08 53 06.8**	**-0.3**
CPRX	**Cap Rock**	**1.36**	**6**	P	**Pn**	**08 53 07.1**	**0.0**
TMB04	**Seminole**	**1.62**	**54**	P	**Pn**	**08 53 11.4**	**+0.8**
TMB02	**Rankin**	**1.77**	**105**		**Pb**	**08 53 14.4**	**-0.4**
TMB02	**Rankin**	**1.77**	**105**	P	**Pb**	**08 53 14.4**	**-0.4**
TMB06	**Greenwood**	**1.93**	**81**	P	**Pb**	**08 53 16.8**	**-0.5**
TMB05	**Klondike**	**2.08**	**62**	P	**Pb**	**08 53 19.2**	**-0.6**
TMB05				S	**Sb**	**08 53 46.4**	**+0.8**
EPT	**El Paso**	**2.11**	**273**		**Pb**	**08 53 19.8**	**-0.6**
EPT					**Sg**	**08 53 48.4**	**-1.6**
EPT				IAML		08 53 55.3	
	comp=E,1μm,0.9s						
EPT	**El Paso**	**2.11**	**273**	⇓P	**Pb**	**08 53 19.8**	**-0.6**
EPT				S	**Sg**	**08 53 48.4**	**-1.6**
TX31	**Lajitas Ar. Si**	**2.36**	**172**		**Pn**	**08 53 22.8**	**+1.9**
TX31	**Lajitas Ar. Si**	**2.36**	**172**	P	**Pb**	**08 53 23.0**	**-1.7**
TXAR	**Lajitas Array**	**2.36**	**172**	Pn	**Pb**	**08 53 22.9**	**-1.8**
	comp=E,75nm,0.3s,baz=351,slow=13,SNR=1013						
TXAR				Lg	Lg	08 53 57.0	
	comp=E,105nm,0.3s,baz=344,slow=26,SNR=14						
TXAR				LR	LR	08 54 24.2	
	comp=E,404nm,20.1s,baz=258,slow=43						
TXAR	**Lajitas Array**	**2.36**	**172**		**Pn**	**08 53 22.7**	**+1.8**
SAND	**Sanderson**	**2.38**	**136**		**Pn**	**08 53 22.7**	**+1.7**
SAND				IAML		08 53 58.2	
	comp=E,1μm,0.7s						
SAND				IAML		08 53 59.4	
	comp=E,1μm,0.7s						
SAND	**Sanderson**	**2.38**	**136**	P	**Pn**	**08 53 23.0**	**+1.9**
SGCY	**Sterling City**	**2.49**	**84**		**Pn**	**08 53 24.1**	**+1.5**
SGCY				IAML		08 54 00.5	
	comp=E,1μm,1.0s						
SGCY				IAML		08 54 00.6	
	comp=E,772nm,1.1s						
SGCY	**Sterling City**	**2.49**	**84**	P	**Pn**	**08 53 24.4**	**+1.8**
MSTX	**Muleshoe**	**2.52**	**25**		**Pn**	**08 53 24.5**	**+1.4**
POST	**Post**	**2.55**	**57**		**Pn**	**08 53 24.9**	**+1.4**
POST				IAML		08 54 05.1	
	comp=E,2μm,1.0s						
OZNA	**Ozona**	**2.60**	**106**		**Pn**	**08 53 25.6**	**+1.5**
OZNA				IAML		08 54 06.8	
	comp=E,1μm,0.8s						
OZNA				IAML		08 54 13.8	
	comp=E,2μm,0.9s						
CRNM	**Carthage**	**3.21**	**316**		**Pn**	**08 53 34.9**	**+2.2**
DKNS	**Dickens**	**3.29**	**52**		**Pn**	**08 53 35.4**	**+1.8**
DKNS				lAmb_Lg		08 54 30.5	
	comp=Z,491nm,0.8s						
121A	**Cookes Peak, D**	**3.29**	**286**		**Pn**	**08 53 35.8**	**+2.0**
121A				IAML		08 54 31.9	

comp=Z,204nm,0.9s
HBVL Hebbronville 6.56 133 IAmb_Lg 08 56 29.1
comp=Z,120nm,1.0s
FNO Franklin 6.59 55 **Pn** **08 54 20.6 +1.7**
FNO IAmb_Lg 08 56 12.8
comp=Z,188nm,0.8s
MVCO Mesa Verde 6.63 327 IAmb_Lg 08 56 16.1
comp=Z,102nm,1.0s
X16A Lo Mia Camp, P 6.79 296 Pn **Pn** **08 54 24.2 +2.3**
TREL Terrell 6.82 79 **Pn** **08 54 21.7 -0.3**
TREL IAmb_Lg 08 56 25.8
comp=Z,150nm,0.8s
OK029 Liberty Lake 6.85 51 IAmb_Lg 08 56 31.0
comp=Z,162nm,0.9s
W35A Tecumseh 6.92 58 **Pn** **08 54 23.8 +0.4**
W35A IAmb_Lg 08 56 31.3
comp=Z,121nm,0.9s
CROK Carrier 6.96 45 IAmb_Lg 08 56 25.4
comp=Z,186nm,1.1s
237A Washetta, Mont 7.01 85 **Pn** **08 54 24.4 -0.2**
WUAZ Wupatki 7.22 304 IAmb_Lg 08 56 37.3
comp=Z,107nm,0.9s
HKT Hockley 7.26 102 IAmb_Lg 08 56 48.9
comp=Z,74nm,1.1s
HNVL Huntsville, TX 7.40 95 IAmb_Lg 08 56 53.7
comp=Z,156nm,1.1s
OK052 Battle Ridge R 7.40 52 IAmb_Lg 08 56 52.0
comp=Z,88nm,0.8s
KSCO Kaye Shedlock' 7.41 9 IAmb_Lg 08 56 46.3
comp=Z,186nm,0.9s
PV01 Paradox Valley 7.44 331 IAmb_Lg 08 56 42.1
comp=Z,76nm,1.1s
KAN01 Argonia South 7.53 42 IAmb_Lg 08 56 57.2
comp=Z,78nm,0.9s
OK048 Pawnee Station 7.55 49 IAmb_Lg 08 56 51.6
comp=Z,70nm,0.8s
PV13 Radium Mtn., P 7.56 330 IAmb_Lg 08 56 46.5
comp=Z,119nm,0.8s
PV02 Paradox Valley 7.57 331 IAmb_Lg 08 56 58.0
comp=Z,157nm,1.0s
PV15 Paradox Valley 7.58 332 IAmb_Lg 08 56 46.6
comp=Z,74nm,1.0s
BLOK Blackwell 7.59 46 IAmb_Lg 08 56 58.3
comp=Z,164nm,1.3s
PV05 Paradox Valley 7.62 328 IAmb_Lg 08 56 49.9
comp=Z,121nm,1.0s
PV03 Paradox Valley 7.66 330 IAmb_Lg 08 56 48.2
comp=Z,165nm,1.2s
PV18 Skein Mesa, Pa 7.67 330 IAmb_Lg 08 56 48.8
comp=Z,147nm,0.7s
PV17 East Wray Mesa 7.72 330 IAmb_Lg 08 56 56.2
comp=Z,112nm,1.1s
PV07 Paradox Valley 7.73 332 IAmb_Lg 08 57 08.5
comp=Z,103nm,1.3s
PV16 Nyswonger Mesa 7.73 330 IAmb_Lg 08 56 50.6
comp=Z,155nm,1.0s
PV19 Morning Glory 7.76 330 IAmb_Lg 08 56 51.5
comp=Z,139nm,0.9s
PV04 Paradox Valley 7.80 331 IAmb_Lg 08 56 55.0
comp=Z,149nm,1.0s
Z38A Mt. Pleasant 7.81 76 IAmb_Lg 08 57 05.3
comp=Z,144nm,1.0s
PV14 Lion Creek, Pa 7.83 330 IAmb_Lg 08 56 57.6
comp=Z,67nm,0.8s
PV22 Blue Mesa, Par 7.87 332 IAmb_Lg 08 57 01.6
comp=Z,90nm,1.2s
PV21 Cone Mtn., Par 7.97 331 IAmb_Lg 08 56 54.8
comp=Z,101nm,1.1s
NATX Nacogdoches 7.99 87 IAmb_Lg 08 57 12.7
comp=Z,128nm,0.9s
R32A Long Quarter, 8.02 32 IAmb_Lg 08 57 13.7
comp=Z,129nm,0.9s
TUL3 Leonard 8.05 56 IAmb_Lg 08 57 07.0
comp=Z,168nm,1.1s
U15A North Rim 8.33 307 IAmb_Lg 08 57 27.9
comp=Z,80nm,1.3s
RLO Rose Lookout 8.72 57 IAmb_Lg 08 57 21.5
comp=Z,89nm,0.8s
PKCU Pink Cliffs 8.92 312 IAmb_Lg 08 57 29.8
comp=Z,78nm,1.0s
KNB Kanab 9.00 309 IAmb_Lg 08 57 43.9
comp=Z,96nm,1.1s
SRU San Rafael Swe 9.11 326 IAmb_Lg 08 57 44.6
comp=Z,60nm,1.0s
U38A Gravette 9.31 57 IAmb_Lg 08 57 53.5
comp=Z,62nm,0.8s
P17A Butcher Ranch, 9.50 327 IAmb_Lg 08 57 45.6
comp=Z,68nm,0.8s
PDAR Pinedale Array 11.91 340 Pn **Pn** **08 55 36.1 +4.1**
comp=Z,0.1nm,0.3s,baz=170,slow=7.6,SNR=3.1
PDAR Lg Lg 08 58 55.0
comp=Z,0.2nm,0.3s,baz=135,slow=31,SNR=3.1
PDAR LR LR 08 59 55.2
comp=Z,60nm,20.4s,baz=102,slow=36
comp=Z,0.4nm,0.6s
ELK Elko 12.78 318 Pn Pn 08 55 49.0 +5.0
baz=133,slow=8.1,SNR=6.8
ELK Lg Lg 08 59 24.1
comp=Z,0.1nm,0.3s,baz=205,slow=21,SNR=4.2
comp=Z,1.9nm,0.9s
NVAR Mina Array 13.48 304 Pn **P** **08 55 59.0 -3.8**
comp=Z,0.1nm,0.3s,baz=128,slow=12,SNR=11
NVAR LR LR 09 01 20.7
comp=Z,94nm,19.2s,baz=92,slow=39
comp=Z,2.3nm,0.9s
LAO LASA Array 15.08 354 Pn **Pn** **08 56 13.7 -1.5**
LAO IAmb IAmb 08 56 26.4
comp=Z,7.1nm,0.9s
DLMT Dillon 15.20 336 IAmb IAmb 08 56 52.2
comp=Z,10nm,1.5s
CLTN Cedars of Leba 15.35 69 IAmb IAmb 08 56 27.7
comp=Z,4.1nm,0.7s
SWET Sewanee 15.52 72 IAmb IAmb 08 56 27.3
comp=Z,10nm,0.8s
AFDM Forest Hills D 15.60 302 Pn **Pn** **08 56 21.8 -0.1**
AFDM IAmb IAmb 08 56 32.5
comp=Z,13nm,1.5s
JFWS Jewell Farm 15.67 40 Pn **Pn** **08 56 21.4 -1.3**
JFWS IAmb IAmb 08 56 58.9
comp=Z,8.7nm,0.7s
WCI Wyandotte Cave 15.94 61 Pn **Pn** **08 56 21.8 -4.4**
WCI **P** **08 56 26.4 -3.4**
WCI IAmb IAmb 08 56 36.6
comp=Z,27nm,1.4s
W50A Signal Mountai 16.02 72 Pn **Pn** **08 56 27.7 +0.3**
W50A IAmb IAmb 08 56 45.2
comp=Z,14nm,0.9s
CPCT Cooper Cave 16.69 72 Pn **Pn** **08 56 35.4 -0.6**
CPCT IAmb IAmb 08 56 43.1
comp=Z,22nm,1.3s
CMIG Matias Romero 16.73 148 Pn **P** **08 56 38.6 -0.2**
comp=Z,0.1nm,0.3s,baz=327,slow=7.9,SNR=4.2
comp=Z,1.7nm,0.8s
P48A Milroy 17.00 58 Pn **Pn** **08 56 39.1 -0.7**
TKL Tuckaleechee C 17.32 71 P **P** **08 56 45.7 +0.5**
comp=Z,0.2nm,0.3s,baz=209,slow=11,SNR=4.8
comp=Z,3.0nm,0.7s
TKL Tuckaleechee C 17.32 71 Pn **Pn** **08 56 42.0 -1.9**
TKL IAmb IAmb 08 56 47.2
comp=Z,13nm,1.2s
TZTN Tazewell 17.64 68 Pn **Pn** **08 56 46.9 -0.9**
TZTN IAmb IAmb 08 57 04.6
comp=Z,13nm,1.1s
YBH Yreka Blue Hor 17.99 309 P **P** **08 56 55.6 +3.0**
comp=Z,0.1nm,0.8s,baz=108,slow=3.4,SNR=6.7
V53A Saluda 18.10 72 Pn **Pn** **08 56 50.7 -2.9**
V53A IAmb IAmb 08 57 16.4
comp=Z,11nm,1.2s
NEW Newport 19.32 333 P **Pn** **08 57 09.6 +1.4**
comp=Z,0.1nm,0.3s,baz=152,slow=9.3,SNR=8.3
comp=Z,4.0nm,0.9s
I03D Drain, OR 19.38 314 P **P** **08 57 06.6 -1.1**
I03D IAmb IAmb 08 57 16.6
comp=Z,14nm,1.0s
V55A Taylorsville 19.41 71 P **P** **08 57 07.7 -0.6**
V55A IAmb IAmb 08 57 22.2
comp=Z,14nm,1.3s
ULM Lac du Bonnet 19.53 16 P **Pn** **08 57 11.0 +0.4**
comp=Z,0.1nm,0.3s,baz=206,slow=11,SNR=4.9
ULM LR LR 09 03 47.8
comp=Z,132nm,18.5s,baz=170,slow=34
comp=Z,2.7nm,0.9s
ULM Lac du Bonnet 19.53 16 P **P** **08 57 08.9 -0.5**
EPLO Experimental L 19.57 20 P **P** **08 57 09.3 -0.5**
EPLO IAmb IAmb 08 57 27.3
comp=Z,5.9nm,1.1s
R55A Marlinton 20.64 65 P **P** **08 57 19.7 -2.0**
Q56A Snyder Ridge, 21.52 63 P **P** **08 57 31.5 +0.4**

PAOC Oil Creek Stat 21.82 56 P **P** **08 57 34.6 +0.4**
CLRS Cowichan Lake 22.87 324 P **P** **08 57 46.1 +0.7**
L59A Walton 25.33 57 P **P** **08 58 08.9 +0.1**
FCC Fort Churchill 27.91 11 P **P** **08 58 33.0 +1.2**
YKAW1 Yellowknife Wh 31.54 351 P **P** **08 59 04.9 +0.9**
YKA Yellowknife Ar 31.57 351 P **P** **08 59 05.4 +1.2**
comp=Z,0.8nm,0.9s,baz=153,slow=8.4,SNR=13
comp=Z,0.8nm,0.9s
YKA Yellowknife Ar 31.57 351 P **P** **08 59 04.9 +0.7**
YKAW3 Yellowknife Wh 31.64 351 P **P** **08 59 04.0 -0.8**
DLBC Dease Lake 32.05 334 LR LR 09 13 13.4
comp=Z,136nm,19.7s,baz=89,slow=38
BLKN Baker Lake 33.05 6 P **P** **08 59 17.6 +0.5**
SJG San Juan 36.73 102 LR LR 09 18 36.7
comp=Z,30nm,19.0s,baz=174,slow=42
F30M Barrier River 40.49 342 P **P** **09 00 21.8 +1.2**
F28M Old Crow 41.63 340 P **P** **09 00 31.3 +1.5**
KDAK Kodiak Island 41.96 323 LR LR 09 19 08.0
comp=Z,49nm,18.1s,baz=105,slow=38
ILAR Eielson Array 42.26 334 P **P** **09 00 37.0 +1.9**
comp=Z,0.6nm,0.8s,baz=103,slow=8.0,SNR=8.8
comp=Z,0.6nm,0.8s
ILAR Eielson Array 42.26 334 P **P** **09 00 33.9 -1.2**
CPUP Villa Florida 72.90 137 P **P** **09 04 12.2 +1.0**
comp=Z,1.7nm,0.6s,baz=317,slow=5.5,SNR=6.1
comp=Z,1.7nm,0.6s
CPUP Villa Florida 72.90 137 P **P** **09 04 12.6 +1.4**
NOA NORSAR Array B 73.77 27 LR LR 09 36 24.7
comp=Z,17nm,18.5s,baz=35,slow=36
AKASG Malin Array Be 88.18 28 LR LR 09 49 13.0
comp=Z,27nm,19.0s,baz=82,slow=38

IDC 26 09:02:22.6±5.0, 16°48S×179°29W, h612km±36km, mb2.4/3, mbtmp3.3/4, Error ellipse: s-maj=291.8km s-min=34.4km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.84**	**243**	P	P	09 03 42.0	0.0
	4.0nm,0.5s,baz=38,slow=6.5,SNR=6.3						
WRA	**Warramunga Arr**	**44.08**	**258**	P	P	09 09 38.7	+0.2
	0.3nm,0.7s,baz=92,slow=7.1,SNR=7.4						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**44.39**	**253**	P	P	09 09 40.5	-0.3
	0.5nm,0.6s,baz=87,slow=8.5,SNR=11						
	0.5nm,0.6s						
ILAR	**Eielson Array**	**84.69**	**13**	P	P	09 13 52.8	0.0
	0.1nm,0.4s,baz=205,slow=4.8,SNR=1.5						
	0.1nm,0.4s						

TRN 26 09:05:07.3, 17°01N×61°16W, h6km, MD3.9, East of Antigua., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSDZ	**La Diserade, G**	**0.70**	**172**	*e*P	Pn	09 05 23.6	-0.1
DSDZ				*e*S	Sn	09 05 35.9	+1.0
ANWB	**Willy Bob**	**0.88**	**318**	*e*P	Pn	09 05 27.2	+1.0
ANWB				*e*S	Sn	09 05 42.1	+2.7
DHSZ	**Broadband at M**	**0.93**	**218**	*e*P	Pn	09 05 28.9	+2.0
DHSZ				*e*S	Sn	09 05 43.2	+2.6
MMLZ	**Guadeloupe Bro**	**1.07**	**207**	*e*P	Pn	09 05 30.9	+2.0
MMLZ				*e*S	Sn	09 05 49.1	+5.0
TBG	**Guadaloupe-3**	**1.24**	**202**	*e*P	Pn	09 05 33.6	+2.4
TBG				*e*S	Sn	09 05 52.0	+3.7
DWS	**Wesley**	**1.44**	**186**	*e*P	Pg	09 05 35.5	+0.6
DWS				*e*S	Sg	09 05 56.0	+2.3
SKI	**Saint Kitts**	**1.54**	**282**	*e*P	Pg	09 05 38.5	+1.6
SKI				*e*S	Sg	09 06 00.3	+3.5
DSLB	**Salisbury**	**1.58**	**189**	*e*P	Pg	09 05 38.2	+0.6
DSLB				*e*S	Sg	09 06 01.4	+3.2
DLPL	**La Plaine**	**1.67**	**183**	*e*S	Sg	09 06 04.2	+3.2
SMRT	**St. Maarten**	**2.10**	**300**	*e*P	Pb	09 05 46.0	+0.2
SMRT				*e*S	Sb	09 06 11.9	-0.2
BIM	**Bigot**	**2.48**	**178**	*e*P	Pb	09 05 50.4	-1.9
BIM				*e*S	Sb	09 06 21.6	-1.5
SLBI	**Saint Lucia, B**	**2.98**	**176**	*e*P	Pn	09 05 57.5	+2.5
SLBI				*e*S	Sn	09 06 33.2	+2.2

*VIE **26** 09:05:36.3±0.6, 45°87N×16°05E, h8km, ml1.8/2, Error ellipse: s-maj=4.1km s-min=2.6km az=122.0 8 km NNE of Zagreb*
*LJU **26** 09:05:37.1, 45°89N×15°97E, h6km, ML1.4*
*KRSZO **26** 09:05:37.0±1.7, 45°88N×15°99E, h0km±4km, ML2.5/5, Error ellipse: s-maj=11.4km s-min=5.2km az=75.0*
ISC 26 09:05:36.6±1.0, 45°86N±0°03×16°02E±0°03, h8km±5km, n23, σ0°33/33, 1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAG	**Zagreb**	**0.04**	**214**	*i* Pg	**Pg**	**09 05 38.4**	**+0.2**
ZAG				Sg	**Sg**	**09 05 39.7**	**+0.4**
ZAG	**Zagreb**	**0.04**	**214**	Pg	**Pg**	**09 05 38.4**	**+0.2**
ZAG				Lg	Lg	09 05 39.3	
PTJ	**Puntijarka**	**0.06**	**325**	*i* Pg	**Pg**	**09 05 38.1**	**-0.4**
PTJ				Sg	**Sg**	**09 05 39.2**	**-0.7**
PTJ	**Puntijarka**	**0.06**	**325**	Pg	**Pg**	**09 05 38.1**	**-0.4**
PTJ				Lg	Lg	09 05 39.2	
GCIS	**Gornji Cirnik**	**0.27**	**272**	*i* Pg	**Pg**	**09 05 42.1**	**+0.1**
GCIS				*e*Sg	**Sg**	**09 05 45.9**	**+0.3**
GCIS				IAML		09 05 46.1	
	comp=Z,34nm,0.1s						
LOBO	**Lobor**	**0.30**	**7**	*e*Pg	**Pg**	**09 05 42.6**	**+0.1**
LOBO				Sg	**Sg**	**09 05 46.6**	**+0.1**
GOLS	**Golise**	**0.31**	**299**	*i* Pg	**Pg**	**09 05 42.8**	**0.0**
GOLS				IAML		09 05 48.9	
	comp=Z,12nm,0.1s						
CRES	**Cresnjevec Ost**	**0.39**	**266**	*i* Pg	**Pg**	**09 05 44.2**	**-0.1**
CRES				IAML		09 05 51.2	
	comp=Z,16nm,0.1s						
CRES	**Cresnjevec Ost**	**0.39**	**266**	Pg	**Pg**	**09 05 44.1**	**-0.1**
CRES				Lg	Lg	09 05 50.0	
KALN	**Kalnik**	**0.41**	**48**	*e*Pg	**Pg**	**09 05 44.5**	**-0.1**
KALN				Sg	**Sg**	**09 05 50.0**	**0.0**
OZLJ	**Ozalj**	**0.46**	**238**	*e*Pg	**Pg**	**09 05 45.2**	**-0.2**
OZLJ				Sg	**Sg**	**09 05 51.5**	**+0.1**
DOBS	**Dobrina**	**0.48**	**308**	*i* Pg	**Pg**	**09 05 46.0**	**+0.1**
DOBS				IAML		09 05 54.9	
	comp=Z,11nm,0.1s						
LEGS	**Legarje**	**0.50**	**281**	*i* Pg	**Pg**	**09 05 46.3**	**+0.1**
LEGS				*e*Sg	**Sg**	**09 05 52.9**	**+0.2**
MOSL	**Moslavina**	**0.57**	**115**	*e*Pg	**Pg**	**09 05 47.4**	**-0.3**
MOSL				Sg	**Sg**	**09 05 55.1**	**0.0**
KOGS	**Kog**	**0.61**	**15**	*i* Pg	**Pg**	**09 05 48.9**	**+0.4**
KOGS	**Kog**	**0.61**	**15**	Pg	**Pg**	**09 05 48.8**	**+0.4**
KOGS				Lg	Lg	09 05 57.1	
GROS	**Grobnik**	**0.70**	**330**	*i* Pg	**Pg**	**09 05 50.0**	**-0.1**
GROS				IAML		09 06 00.3	
	comp=Z,7.4nm,0.1s						
PDKS	**Podkum**	**0.74**	**286**	*i* Pg	**Pg**	**09 05 50.8**	**0.0**
PDKS				IAML		09 06 04.8	
	comp=Z,7.9nm,0.1s						
BEHE	**Becsehely**	**0.81**	**40**	Lg	Lg	09 06 04.7	
PLIT	**Plitvice**	**1.02**	**196**	*e*Pg	**Pg**	**09 05 55.4**	**-0.7**
PLIT				Sg	**Sg**	**09 06 10.1**	**+0.7**
SOKA	**Soboth**	**1.07**	**321**	*e*Pg	**Pg**	**09 05 56.6**	**-0.5**
SOKA				*e*Sg	**Sb**	**09 06 11.3**	**-0.2**
	comp=Z,1.9nm,0.2s						
	comp=Z,0.5nm,0.1s						
OBKA	**Obir**	**1.21**	**303**	*e*Pg	**Pb**	**09 05 59.9**	**+0.1**
OBKA				*e*Sg	**Sn**	**09 06 16.5**	**-0.1**
	comp=Z,1.8nm,0.2s						
	comp=Z,5.2nm,0.3s						
OBKA	**Obir**	**1.21**	**303**	Pg	**Pb**	**09 05 59.9**	**+0.1**
OBKA				Lg	Lg	09 06 15.9	

*MOS **26** 09:16:31.4±0.7, 49°58N×158°17E, h8km, mb4.0/1, Error ellipse: s-maj=35.6km s-min=5.9km az=91.7*
*KRSC **26** 09:16:32.8±1.0, 49°65N×158°59E, h32km±20km, Ml4.1*
ISC 26 09:16:33.9±4.0, 49°5N±0°2×158°3E±0°1, h35km, n34, σ0°94/49, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.83**	**312**	*e*PN	**Pn**	**09 17 01.9**	**-0.8**
SKR				*e*S	**Sn**	**09 17 23.9**	**-0.7**
SKR				pmax	pmax		
	comp=Z,173nm,0.3s						
SKR				smax	smax		
	comp=E,1μm,0.4s						
SKR				smax	smax		
	comp=N,766nm,0.2s						
PAU	**Pauzhetka**	**2.19**	**336**	PN	**Pn**	**09 17 08.0**	**+0.3**
PAU				S	**Sn**	**09 17 34.0**	**+0.4**
PAU	**Pauzhetka**	**2.19**	**336**	*e*P	**Pn**	**09 17 08.1**	**+0.3**
PAU				*e*S	**Sn**	**09 17 34.1**	**+0.4**
KDTR	**Khodutka, Kamc**	**2.33**	**357**	PN	**Pn**	**09 17 09.2**	**-0.4**
KDTR				S	**Sn**	**09 17 36.0**	**-1.0**
KDTR	**Khodutka, Kamc**	**2.33**	**357**	*e*P	**Pn**	**09 17 09.3**	**-0.4**
KDTR				*e*S	**Sn**	**09 17 36.1**	**-1.0**
ASAK	**Asacha**	**2.91**	**356**	PN	**Pn**	**09 17 18.0**	**+0.3**
ASAK				S	**Sn**	**09 17 51.0**	**-0.3**
ASAK	**Asacha**	**2.91**	**356**	*e*P	**Pn**	**09 17 18.0**	**+0.3**
ASAK				*e*S	**Sn**	**09 17 51.2**	**-0.3**
MIPR	**Malaya Ipel'ka**	**2.95**	**342**	PN	**Pn**	**09 17 19.3**	**+1.1**
MIPR	**Malaya Ipel'ka**	**2.95**	**342**	*e*P	**Pn**	**09 17 19.4**	**+1.1**
RUS	**Russkaya**	**2.96**	**3**	PN	**Pn**	**09 17 18.0**	**-0.3**
RUS	**Russkaya**	**2.96**	**3**	*e*P	**Pn**	**09 17 18.0**	**-0.3**
RUS				*e*S	**Sn**	**09 17 50.8**	**-1.7**
MTVR	**Mutnovka**	**3.00**	**359**	PN	**Pn**	**09 17 19.0**	**0.0**
MTVR				S	**Sn**	**09 17 52.9**	**-0.9**
MTVR	**Mutnovka**	**3.00**	**359**	*e*P	**Pn**	**09 17 19.0**	**0.0**
MTVR				*e*S	**Sn**	**09 17 53.0**	**-0.9**
GRL	**Gorelyy**	**3.08**	**358**	PN	**Pn**	**09 17 20.4**	**+0.4**
GRL				S	**Sn**	**09 17 55.3**	**-0.3**
GRL	**Gorelyy**	**3.08**	**358**	*e*P	**Pn**	**09 17 20.4**	**+0.4**
GRL				*e*S	**Sn**	**09 17 55.3**	**-0.3**
KRMR	**Karymshinskiy**	**3.35**	**359**	PN	**Pn**	**09 17 24.5**	**+0.8**
KRMR				S	**Sn**	**09 18 02.3**	**+0.1**
KRMR	**Karymshinskiy**	**3.35**	**359**	*e*P	**Pn**	**09 17 24.5**	**+0.8**
KRMR				*e*S	**Sn**	**09 18 02.3**	**+0.1**
PET	**Petropavlovsk**	**3.55**	**4**	*e*PN	**Sn**	**09 17 26.4**	**-0.1**
PET	**Petropavlovsk**	**3.55**	**4**	*e*S	**Sn**	**09 18 07.3**	**+0.1**
DALK	**Dalny**	**3.57**	**5**	PN	**Pn**	**09 17 26.6**	**0.0**
DALK	**Dalny**	**3.57**	**5**	*e*P	**Pn**	**09 17 26.7**	**0.0**
DALK				*e*S	**Sn**	**09 18 06.2**	**-1.3**
UGLR	**Uglovaya**	**3.75**	**5**	PN	**Pn**	**09 17 30.8**	**+1.6**
UGLR	**Uglovaya**	**3.75**	**5**	*e*P	**Pn**	**09 17 30.9**	**+1.6**
SPN	**Mys Shipunski**	**3.79**	**16**	*e*S	**Sn**	**09 18 11.3**	**-1.6**
AVH	**Avacha**	**3.80**	**4**	PN	**Pn**	**09 17 31.6**	**+1.7**
AVH	**Avacha**	**3.80**	**4**	*e*P	**Pn**	**09 17 31.7**	**+1.7**
SMAR	**Somma**	**3.80**	**5**	PN	**Pn**	**09 17 31.2**	**+1.2**
SMAR	**Somma**	**3.80**	**5**	*e*P	**Pn**	**09 17 31.3**	**+1.2**
KOK	**Koryaka**	**3.82**	**3**	PN	**Pn**	**09 17 31.3**	**+1.1**
KOK	**Koryaka**	**3.82**	**3**	*e*P	**Pn**	**09 17 31.4**	**+1.1**
KRX	**Arik**	**3.89**	**3**	PN	**Pn**	**09 17 32.0**	**+0.8**
KRX	**Arik**	**3.89**	**3**	*e*P	**Pn**	**09 17 32.0**	**+0.8**
GNL	**Ganaly**	**4.22**	**357**	PN	**Pn**	**09 17 37.4**	**+1.6**
GNL	**Ganaly**	**4.22**	**357**	*e*P	**Pn**	**09 17 37.4**	**+1.6**

*IDC **26** 09:23:33.2±1.3, 6°54S×104°24E, h0km, mb3.7/8, mbtmp3.7/9, ML4.5/2, MS3.4/4, Error ellipse: s-maj=49.2km s-min=16.5km az=42.0*
*DJA **26** 09:23:36.6±0.3, 7°S±3°×10°4E±°, h10km, M4.5/45, mb4.5/8, mB5.7/3, MLv4.3/45, Mw(mB)5.2/3*
*NEIC **26** 09:23:38.4±1.6, 6°59S±0°08×104°28E±0°07, h35km±2km, mb4.4/11, Error ellipse: s-maj=15.4km s-min=9.7km az=211.0*
ISC 26 09:23:38.4±0.6, 6°67S±0°09×104°31E±0°06, h40km, n60, σ1°12/51, mb3.9/14, MS3.4/4, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**1.15**	**9**	P	**Pn**	**09 23 56.8**	**-1.2**
CGJI	**Cibinong**	**1.37**	**88**	P	**Pn**	**09 23 58.3**	**-2.7**
BLSI	**Bandar Lampung**	**1.59**	**36**	P	**Pn**	**09 24 03.0**	**-1.0**
LWLI	**Liwa**	**1.66**	**351**	P	**Pn**	**09 24 05.8**	**+0.7**
KLI	**Kotabumi**	**1.87**	**17**	P	**Pn**	**09 24 08.2**	**+0.3**
SBJI	**Serang**	**1.89**	**73**	P	**Pn**	**09 24 07.6**	**-0.5**
KLSI		**2.01**	**12**	P	**Pn**	**09 24 10.0**	**+0.2**
MDSI	**Maura Dua**	**2.17**	**356**	P	**Pn**	**09 24 13.0**	**+1.0**
EGSI	**Enggano, Bengk**	**2.41**	**303**	P	**Pn**	**09 24 16.4**	**+1.1**
DBJI	**Dramaga**	**2.42**	**87**	P	**Pn**	**09 24 15.0**	**-0.5**
MNAI	**Manna**	**2.66**	**329**	Pn	**Pn**	**09 24 16.1**	**-2.7**
MNAI	**Manna**	**2.66**	**329**	P	**Pn**	**09 24 20.0**	**+1.2**
LEM	**Lembang**	**3.28**	**93**	P	**Pn**	**09 24 27.4**	**-0.1**
	9.6nm,0.3s,baz=300,slow=20,SNR=4.7						
LEM				Sn	**Sn**	**09 25 07.9**	**+2.5**
	8.3nm,0.3s,baz=319,slow=20,SNR=3.6						
	31nm,0.5s						
LEM	**Lembang**	**3.28**	**93**	P	**Pn**	**09 24 28.1**	**+0.6**
BBJI	**Bungbulang**	**3.40**	**104**		**Pn**	**09 24 27.6**	**-1.4**
BBJI	**Bungbulang**	**3.40**	**104**	P	**Pn**	**09 24 28.7**	**-0.3**
KSI	**Kapahiang**	**3.45**	**330**	P	**Pn**	**09 24 30.2**	**+0.5**
UBSI	**University, Be**	**3.53**	**325**	P	**Pn**	**09 24 32.7**	**+1.9**
MASI	**Maura Aman, Be**	**4.07**	**329**	P	**Pn**	**09 24 39.2**	**+1.0**
TPI	**Tanjungpandan**	**5.12**	**41**	P	**Pn**	**09 24 52.2**	**-0.3**
PPSI	**Pulau Pagai**	**5.78**	**312**	P	**Pn**	**09 25 01.8**	**+0.1**
UGM	**Wanagama**	**6.28**	**102**	Pn	**Pn**	**09 25 09.0**	**+0.4**
UGM	**Wanagama**	**6.28**	**102**	P	**Pn**	**09 25 08.8**	**+0.2**
	0.3nm46nm,2.1s						
PDSI	**Padang**	**6.89**	**326**	P	**Pn**	**09 25 16.0**	**-0.9**
PCJI	**Pacitan**	**6.97**	**103**	P	**Pn**	**09 25 17.4**	**-0.6**
	64nm,0.9s						
SISI	**Saibi**	**7.44**	**315**	P	**Pn**	**09 25 23.3**	**-1.1**
SNJI	**Sawahan-Nganju**	**7.47**	**99**	P	**Pn**	**09 25 25.3**	**+0.3**
	0.1nm16nm,1.3s						
COCO	**West Island**	**9.19**	**233**	Pn	**Pn**	**09 25 48.7**	**+0.2**
JAGI	**Jajag, Banyuwa**	**9.92**	**101**	Pn	**Pn**	**09 25 57.5**	**-1.0**
BATI	**Baumata**	**19.46**	**102**	P	**Pn**	**09 28 04.3**	**+0.9**
	7.1nm,0.3s,baz=183,slow=4.1,SNR=2.1						
BATI				S	**S**	**09 31 39.5**	**-0.4**
	17nm,0.3s,baz=250,slow=17,SNR=1.7						
CMAR	**Chiang Mai Arr**	**25.52**	**348**	P	**P**	**09 29 01.4**	**-2.0**
	0.7nm,0.3s,baz=159,slow=10.0,SNR=4.9						
CMAR				LR	LR	09 39 43.7	
	comp=Z,29nm,18.0s,baz=95,slow=38						
	0.7nm,0.3s						
KNRA	**Kununurra**	**25.57**	**113**	P	**P**	**09 29 03.6**	**-0.3**
KNRA				IAmb	IAmb	09 29 15.9	
	comp=Z,16nm,1.2s						
TGY	**Tagaytay City**	**26.42**	**39**	LR	LR	09 42 21.9	
	comp=Z,173nm,18.3s,baz=184,slow=43						
H01W3	**Cape Leeuwin H**	**29.50**	**163**	T	T	10 00 49.3	
	baz=342						
H01W1	**Cape Leeuwin H**	**29.52**	**163**	T	T	10 00 45.5	
	baz=342						
H01W2	**Cape Leeuwin H**	**29.52**	**163**	T	T	10 00 45.6	
	baz=342						
H08S2	**Diego Garcia H**	**31.58**	**266**	T	T	10 03 40.8	
	baz=89,slow=76,SNR=6.0						
H08S3	**Diego Garcia H**	**31.59**	**266**	T	T	10 03 41.8	
	baz=89,slow=76,SNR=8.0						
H08S1	**Diego Garcia H**	**31.60**	**266**	T	T	10 03 39.1	
	baz=89,slow=76,SNR=6.4						
WB0	**Warramunga Arr**	**31.97**	**117**	P	**P**	**09 30 00.9**	**-0.1**
WB0				IAmb	IAmb	09 30 10.8	
	comp=Z,4.9nm,1.1s						
WRA	**Warramunga Arr**	**31.98**	**117**	P	**P**	**09 30 03.0**	**+2.0**
	comp=Z,0.5nm,0.8s,baz=290,slow=10,SNR=4.9						
	comp=Z,0.5nm,0.8s						
WRAB	**Tennant Creek**	**31.99**	**117**	P	**P**	**09 30 01.0**	**-0.1**
WRAB				IAmb	IAmb	09 30 36.0	
	comp=Z,7.7nm,1.4s						
WR8	**Warramunga Arr**	**32.13**	**117**	P	**P**	**09 30 02.5**	**+0.2**
**F

H04N1	**CROZET ISLANDS**	**59.81**	**220**	T	T	10 38 15.0		
	baz=66,slow=74,SNR=31							
H04N3	**CROZET ISLANDS**	**59.81**	**220**	T	T	10 38 13.7		
	baz=66,slow=74,SNR=22							
BVAR	**Borovoye Array**	**66.05**	**338**	P	**P**	**09 34 20.4**	**-0.5**	
	comp=Z,0.8nm,0.6s,baz=146,slow=11,SNR=1.5							
	comp=Z,0.8nm,0.6s							
AB31	**Akbulak array**	**67.78**	**330**		**P**	**09 34 31.7**	**-0.3**	
AB31				IAmb	IAmb	09 34 43.0		
	comp=Z,3.9nm,1.1s							
ABKAR	**Akbulak array**	**67.78**	**330**		**P**	**09 34 31.6**	**-0.4**	
BRTR	**Keskin Array B**	**79.62**	**312**	P	**P**	**09 35 43.3**	**+1.3**	
	comp=Z,0.7nm,0.8s,baz=94,slow=7.8,SNR=2.5							
	comp=Z,0.7nm,0.8s							
RAR	**Rarotonga**	**93.09**	**112**	LR	LR	10 19 26.8		
	comp=Z,24nm,18.3s,baz=231,slow=36							
TXAR	**Lajitas Array**	**145.30**	**46**	PKPbc	**PKPdf**	**09 43 12.7**	**0.0**	
	comp=Z,0.4nm,0.7s,baz=356,slow=2.0,SNR=7.1							

IDC 26 09:26:36.2±3.4,**33.84S**×**178.33W**,**h0**km,**mb3.6/2,**
mbtmp3.6/3,ML3.8/1,Error ellipse: s-maj=78.5km
s-min=37.3km az=120.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.75**	**219**	Pn	Pn	09 28 03.0	+0.2
	2.9nm,0.3s,baz=113,slow=13,SNR=27						
URZ				Sn	Sn	09 29 10.1	+0.5
	3.2nm,0.3s,baz=92,slow=21,SNR=11						
	4.8nm,0.3s						
ASAR	**Alice Springs**	**42.76**	**271**	P	P	09 34 35.8	+0.1
	0.5nm,0.5s,baz=112,slow=7.6,SNR=11						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**44.06**	**276**	P	P	09 34 45.7	-0.4
	0.4nm,0.6s,baz=118,slow=7.5,SNR=9.6						
	0.4nm,0.6s						
FINES	**FINESS Array B**	**148.25**	**338**	PKPbc	PKPbc	09 46 22.7	-0.7
	2.7nm,0.8s,baz=55,slow=5.3,SNR=3.5						

*IDC **26** 10:09:01.5±2.4,7.13S×155.50E,h105km±26km,mb3.4/10,*
mbtmp3.8/12,MS2.3/2,Error ellipse: s-maj=24.6km
s-min=16.5km az=179.0
ISC 26 10:09:01.1±0.7,**7.1S**±0.1×**155.48E**±0.09,**h100**km,**n20,**
σ0§89/14,mb3.5/10,Bougainville-Solomon Islands
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.99**	**118**	P	**Pn**	**10 10 12.8**	**-0.8**
	0.6nm,0.3s,baz=315,slow=9.5,SNR=1.1						
HNR				S	**Sn**	**10 11 11.8**	**+1.7**
	2.6nm,0.6s,baz=277,slow=7.0,SNR=1.9						
HNR				LR	LR	10 12 08.3	
	comp=Z,7.7nm,18.7s,baz=93,slow=38						
PMG	**Port Moresby**	**8.54**	**254**	P	**Pn**	**10 11 01.8**	**-0.2**
	5.7nm,0.6s,baz=63,slow=18,SNR=2.0						
JAY	**Jayapura**	**15.41**	**287**	P	**Pn**	**10 12 33.1**	**-0.1**
	2.4nm,0.3s,baz=158,slow=11,SNR=1.8						
CTA	**Charters Tower**	**15.70**	**214**	LR	LR	10 17 45.9	
	comp=Z,35nm,19.2s,baz=52,slow=33						
WRA	**Warramunga Arr**	**24.15**	**236**	P	**P**	**10 14 07.9**	**-0.1**
	0.4nm,0.5s,baz=60,slow=9.5,SNR=8.0						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**26.46**	**229**	P	**P**	**10 14 28.5**	**-0.5**
	0.4nm,0.9s,baz=45,slow=9.6,SNR=2.5						
	0.4nm,0.9s						
H11S3	**WAKE ISLAND Hy**	**27.74**	**23**	T	T	10 43 07.7	
	baz=200,slow=75						
H11S2	**WAKE ISLAND Hy**	**27.75**	**23**	T	T	10 43 01.1	
	baz=200,slow=75						
H11S1	**WAKE ISLAND Hy**	**27.76**	**23**	T	T	10 43 13.5	
	baz=200,slow=75						
H11N1	**WAKE ISLAND Hy**	**28.93**	**23**	T	T	10 44 40.7	
	baz=203						
H11N3	**WAKE ISLAND Hy**	**28.94**	**23**	T	T	10 44 42.4	
	baz=203						
H11N2	**WAKE ISLAND Hy**	**28.95**	**23**	T	T	10 44 46.6	
	baz=203						
USRK	**Ussuriysk Ar.**	**55.31**	**340**	P	**P**	**10 18 25.0**	**+0.8**
	1.1nm,0.6s,baz=133,slow=6.1,SNR=3.3						
	1.1nm,0.6s						
CMAR	**Chiang Mai Arr**	**61.27**	**295**	P	**P**	**10 19 07.7**	**+1.4**
	1.4nm,0.5s,baz=117,slow=4.8,SNR=7.4						
	1.4nm,0.5s						
SONM	**Songino Array**	**69.69**	**327**	P	**P**	**10 20 00.6**	**+0.4**
	0.5nm,0.4s,baz=134,slow=4.2,SNR=2.6						
	0.5nm,0.4s						
QSPA	**South Pole Qui**	**82.86**	**180**	P	**P**	**10 21 14.4**	**0.0**
	1.0nm,0.8s,baz=336,slow=9.0,SNR=1.7						
	1.0nm,0.8s						
ILAR	**Eielson Array**	**83.31**	**21**	P	**P**	**10 21 15.1**	**-1.4**
	0.2nm,0.4s,baz=243,slow=5.0,SNR=9.1						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**83.81**	**319**	P	**P**	**10 21 19.4**	**-0.1**
	0.3nm,0.6s,baz=97,slow=5.6,SNR=4.4						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**92.68**	**323**	P	**P**	**10 22 02.0**	**+0.2**
	0.3nm,0.4s,baz=68,slow=9.4,SNR=1.9						
	0.3nm,0.4s						
YKA	**Yellowknife Ar**	**96.22**	**28**	P	**P**	**10 22 17.1**	**-0.6**
	0.1nm,0.7s,baz=275,slow=4.5,SNR=2.3						
	0.1nm,0.7s						

IDC 26 10:36:14.9±6.3,**5.65S**×**139.36E**,**h0**km,**mb3.5/1,**
mbtmp3.1/3,ML2.8/2,MS3.1/1,Error ellipse:
s-maj=286.2km s-min=37.1km az=91.0,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.02**	**199**	Pn	Pn	10 39 49.0	+0.4
	baz=20,slow=12,SNR=1.4						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**18.67**	**196**	P	P	10 40 34.2	-0.5
	baz=16,slow=10,SNR=4.7						
ASAR				LR	LR	10 47 08.1	
	comp=Z,57nm,18.9s,baz=167,slow=35						
	0.1nm,0.5s						
KURBB	**Kurchatov Arra**	**76.49**	**325**	P	P	10 48 06.6	0.0
	0.3nm,0.6s,baz=121,slow=3.6,SNR=1.6						
	0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**137.62**	**283**	PKP	PKPdf	10 55 42.2	+0.1
	0.1nm,0.3s,baz=89,slow=1.9,SNR=1.6						

*MOS **26** 10:38:38.0±0.8,49.69N×156.38E,h63km,mb4.1/1,Error*
ellipse: s-maj=32.0km s-min=5.2km az=76.9
*KRSC **26** 10:38:40.6±1.9,49.99N×156.55E,h42km±23km,Ml4.2*
*IDC **26** 10:38:44.5±5.0,50.06N×155.71E,h116km±49km,mb2.9/8,*
mbtmp3.4/9,Error ellipse: s-maj=40.4km s-min=17.3km
az=132.0
ISC 26 10:38:39.7±1.6,**49.9N**±0.1×**156.3E**±0.1,**h56**km±17km,**n59,**
σ1§54/57,mb3.3/8,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.84**	**354**	*e*PN	**Pn**	**10 38 55.3**	**-0.1**
SKR				*e*S	**Sn**	**10 39 05.9**	**-1.1**
SKR				pmax	pmax		
	comp=Z,43nm,0.4s						
SKR				smax	smax		
	comp=N,875nm,0.3s						
SKR				smax	smax		
	comp=E,844nm,0.3s						
SKR	**Severo-Kuril's**	**0.84**	**354**	*e*P	**Pn**	**10 38 54.9**	**-0.5**
SKR				*e*S	**Sn**	**10 39 06.0**	**-0.9**
PAU	**Pauzhetka**	**1.66**	**12**	PN	**Pn**	**10 39 06.5**	**+0.2**
PAU				S	**Sn**	**10 39 26.1**	**-0.4**
PAU	**Pauzhetka**	**1.66**	**12**	*e*P	**Pn**	**10 39 06.6**	**+0.2**
PAU				*e*S	**Sn**	**10 39 26.1**	**-0.4**
KDTR	**Khodutka, Kamc**	**2.27**	**30**	PN	**Pn**	**10 39 14.6**	**-0.1**
KDTR				S	**Sn**	**10 39 40.4**	**-1.1**
KDTR	**Khodutka, Kamc**	**2.27**	**30**	*e*P	**Pn**	**10 39 14.6**	**-0.1**
KDTR				*e*S	**Sn**	**10 39 40.4**	**-1.1**
MIPR	**Malaya Ipel'ka**	**2.45**	**7**	PN	**Pn**	**10 39 17.2**	**+0.1**
MIPR				S	**Sn**	**10 39 45.0**	**-0.9**
MIPR	**Malaya Ipel'ka**	**2.45**	**7**	*e*P	**Pn**	**10 39 17.3**	**+0.1**
MIPR				*e*S	**Sn**	**10 39 45.0**	**-0.9**
ASAK	**Asacha**	**2.74**	**21**	PN	**Pn**	**10 39 22.5**	**+1.4**
ASAK	**Asacha**	**2.74**	**21**	*e*P	**Pn**	**10 39 22.6**	**+1.4**
MTVR	**Mutnovka**	**2.90**	**24**	PN	**Pn**	**10 39 24.5**	**+1.1**
MTVR				S	**Sn**	**10 39 57.7**	**+0.6**
MTVR	**Mutnovka**	**2.90**	**24**	*e*P	**Pn**	**10 39 24.5**	**+1.1**
MTVR				*e*S	**Sn**	**10 39 57.8**	**+0.6**
GRL	**Gorelyy**	**2.93**	**22**	PN	**Pn**	**10 39 25.4**	**+1.5**
GRL				S	**Sn**	**10 39 59.2**	**+1.3**
GRL	**Gorelyy**	**2.93**	**22**	*e*P	**Pn**	**10 39 25.4**	**+1.5**
GRL				*e*S	**Sn**	**10 39 59.3**	**+1.3**
RUS	**Russkaya**	**2.95**	**28**	*e*S	**Sn**	**10 39 56.6**	**-1.4**
APC	**Apacha**	**3.13**	**10**	PN	**Pn**	**10 39 28.0**	**+1.6**
APC	**Apacha**	**3.13**	**10**	*e*P	**Pn**	**10 39 28.0**	**+1.6**
KRMR	**Karymshinskiy**	**3.20**	**21**	PN	**Pn**	**10 39 29.5**	**+2.0**
KRMR	**Karymshinskiy**	**3.20**	**21**	*e*P	**Pn**	**10 39 29.5**	**+2.0**
PET	**Petropavlovsk**	**3.51**	**24**	*e*PN	**Pn**	**10 39 33.4**	**+1.7**
PET				*e*S	**Sn**	**10 40 12.1**	**+0.2**
PET				smax	smax		
	comp=E,71nm,0.4s						
PET				smax	smax		
	comp=N,53nm,0.4s						
DALK	**Dalny**	**3.54**	**25**	PN	**Pn**	**10 39 32.7**	**+0.6**
DALK				S	**Sn**	**10 40 12.2**	**-0.5**
DALK	**Dalny**	**3.54**	**25**	*e*P	**Pn**	**10 39 32.7**	**+0.6**
DALK				*e*S	**Sn**	**10 40 12.2**	**-0.5**
UGLR	**Uglovaya**	**3.72**	**24**	PN	**Pn**	**10 39 37.5**	**+2.8**
UGLR	**Uglovaya**	**3.72**	**24**	*e*P	**Pn**	**10 39 37.5**	**+2.8**
KOK	**Koryaka**	**3.75**	**22**	PN	Pn	10 39 38.3	+3.3
KOK	**Koryaka**	**3.75**	**22**	*e*P	Pn	10 39 38.3	+3.3
AVH	**Avacha**	**3.75**	**23**	PN	Pn	10 39 38.6	+3.6
AVH	**Avacha**	**3.75**	**23**	*e*P	Pn	10 39 38.6	+3.6
SMAR	**Somma**	**3.77**	**24**	PN	**Pn**	**10 39 38.4**	**+3.1**
SMAR	**Somma**	**3.77**	**24**	*e*P	**Pn**	**10 39 38.4**	**+3.1**
KRER	**Koryakskii**	**3.79**	**23**	PN	**Pn**	**10 39 38.5**	**+2.9**
KRER	**Koryakskii**	**3.79**	**23**	*e*P	**Pn**	**10 39 38.6**	**+2.9**
KRX	**Arik**	**3.81**	**22**	PN	**Pn**	**10 39 39.0**	**+3.0**
KRX	**Arik**	**3.81**	**22**	*e*P	**Pn**	**10 39 39.0**	**+3.0**
GNL	**Ganaly**	**3.99**	**14**	PN	**Pn**	**10 39 40.2**	**+1.9**
GNL	**Ganaly**	**3.99**	**14**	*e*P	**Pn**	**10 39 40.2**	**+1.9**
SPN	**Mys Shipunski**	**4.01**	**34**	PN	**Pn**	**10 39 38.6**	**+0.1**
SPN	**Mys Shipunski**	**4.01**	**34**	*e*P	**Pn**	**10 39 38.7**	**+0.1**
ASAJ	**Asahikawa**	**10.95**	**244**	P	**Pn**	**10 41 15.2**	**+1.7**
	comp=N,3.6nm,0.7s,baz=78,slow=10.0,SNR=4.9						
JHJ	**Hachijo jima 2**	**20.70**	**222**	P	**P**	**10 43 14.1**	**-1.0**
	comp=N,114nm,1.0s,baz=48,slow=14,SNR=3.5						
H11N2	**WAKE ISLAND Hy**	**31.23**	**160**	T	T	11 17 55.9	
	baz=347						
H11N1	**WAKE ISLAND Hy**	**31.25**	**160**	T	T	11 18 02.1	
	baz=347						
H11N3	**WAKE ISLAND Hy**	**31.25**	**160**	T	T	11 18 03.3	
	baz=347						
H11S1	**WAKE ISLAND Hy**	**32.37**	**161**	T	T	11 19 27.4	
	baz=348						
H11S3	**WAKE ISLAND Hy**	**32.38**	**161**	T	T	11 19 23.1	
	baz=348,slow=76						
H11S2	**WAKE ISLAND Hy**	**32.39**	**161**	T	T	11 19 21.3	
	baz=348						
ILAR	**Eielson Array**	**32.82**	**41**	P	**P**	**10 45 05.9**	**-1.4**
	comp=N,0.1nm,0.6s,baz=264,slow=6.4,SNR=4.5						
	comp=N,0.1nm,0.6s						
YKA	**Yellowknife Ar**	**47.18**	**39**	P	**P**	**10 47 06.0**	**-0.1**
	comp=N,0.3nm,0.8s,baz=300,slow=8.3,SNR=5.6						
	comp=N,0.3nm,0.8s						
YKA	**Yellowknife Ar**	**47.18**	**39**	P	**P**	**10 47 06.0**	**-0.1**
KURK	**Kurchatov**	**47.43**	**303**	P	P	10 47 04.4	-3.8
KURBB	**Kurchatov Arra**	**47.53**	**302**	P	P	10 47 04.4	-4.6
	comp=N,0.3nm,0.5s,baz=68,slow=8.2,SNR=1.5						
	comp=N,0.3nm,0.5s						
NVAR	**Mina Array Bea**	**59.18**	**66**	P	**P**	**10 48 35.7**	**+0.8**
	comp=N,0.1nm,0.4s,baz=317,slow=5.2,SNR=1.6						
	comp=N,0.1nm,0.4s						
PDAR	**Pinedale Array**	**61.25**	**57**	P	**P**	**10 48 48.7**	**-0.3**
	comp=N,0.1nm,0.4s,baz=292,slow=5.0,SNR=2.3						
	comp=N,0.1nm,0.4s						
WRA	**Warramunga Arr**	**72.15**	**202**	P	P	10 49 56.5	-1.7
	comp=N,0.2nm,0.5s,baz=20,slow=6.8,SNR=4.7						
	comp=N,0.2nm,0.5s						
TXAR	**Lajitas Array**	**74.17**	**63**	P	**P**	**10 50 09.5**	**-0.9**
	comp=N,0.3nm,0.7s,baz=305,slow=3.4,SNR=4.7						
	comp=N,0.3nm,0.7s						
ASAR	**Alice Springs**	**75.84**	**201**	P	P	10 50 18.4	-1.3
	comp=N,0.2nm,0.6s,baz=23,slow=5.0,SNR=2.2						
	comp=N,0.2nm,0.6s						
H03N2	**Juan Fernandez**	**136.63**	**89**	T	T	13 29 11.6	
	baz=308						
H03N1	**Juan Fernandez**	**136.65**	**89**	T	T	13 29 05.9	
	baz=308						
H03N3	**Juan Fernandez**	**136.65**	**89**	T	T	13 29 16.8	
	baz=308						

IDC 26 10:38:50.8±9.8,**49.37N**×**156.94E**,**h0**km,**mb3.5/4,**
mbtmp3.5/4,MS3.3/1,Error ellipse: s-maj=714.2km
s-min=29.2km az=132.0,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11N2	**WAKE ISLAND Hy**	**30.63**	**161**	T	T	11 18 40.8	
	baz=351,slow=76						
H11N1	**WAKE ISLAND Hy**	**30.65**	**161**	T	T	11 18 44.0	
	baz=351,slow=76						
H11N3	**WAKE ISLAND Hy**	**30.65**	**161**	T	T	11 18 41.7	
	baz=351,slow=76						
H11S1	**WAKE ISLAND Hy**	**31.78**	**162**	T	T	11 20 05.2	
	baz=347,slow=76						
H11S3	**WAKE ISLAND Hy**	**31.79**	**162**	T	T	11 20 07.4	
	baz=347						
H11S2	**WAKE ISLAND Hy**	**31.80**	**162**	T	T	11 20 05.9	
	baz=347,slow=76						
ARCES	**ARCESS Array B**	**56.20**	**341**	LR	LR	11 15 41.9	
	comp=Z,27nm,19.9s,baz=269,slow=39						
PDAR	**Pinedale Array**	**61.15**	**57**	P	P	10 49 07.2	+0.2
	0.6nm,0.8s,baz=354,slow=1.5,SNR=5.7						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**71.87**	**202**	P	P	10 50 15.4	0.0
	0.4nm,1.0s,baz=16,slow=7.6,SNR=2.1						
	0.4nm,1.0s						
TXAR	**Lajitas Array**	**74.00**	**64**	P	P	10 50 28.1	-0.2
	0.3nm,0.6s,baz=303,slow=5.9,SNR=4.0						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**75.55**	**202**	P	P	10 50 37.1	+0.2
	0.3nm,0.7s,baz=16,slow=5.6,SNR=5.0						
	0.3nm,0.7s						

*IDC **26** 10:43:43.0±1.1,49.12N×158.42E,h0km,mb3.5/6,*
mbtmp3.5/6,Error ellipse: s-maj=35.0km s-min=31.0km
az=50.0
*KRSC **26** 10:43:45.5±1.6,49.45N×158.65E,h30km±41km,Ml3.8*
ISC 26 10:43:45.9±1.1,**49.32N**±0.08×**158.46E**±0.09,**h18**km,**n31,**
σ1§12/38,mb3.5/6,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.04**	**313**	*e*P	**Pn**	**10 44 18.5**	**-0.8**
SKR				*e*S	**Sn**	**10 44 43.6**	**-0.6**
PAU	**Pauzhetka**	**2.40**	**334**	*e*P	**Pn**	**10 44 24.8**	**+0.6**
PAU				*e*S	**Sn**	**10 44 54.3**	**+1.2**
KDTR	**Khodutka, Kamc**	**2.50**	**354**	*e*P	**Pn**	**10 44 24.8**	**-0.9**
KDTR				*e*S	**Sn**	**10 44 54.3**	**-1.4**
ASAK	**Asacha**	**3.09**	**354**	*e*P	**Pn**	**10 44 34.1**	**+0.3**
ASAK				*e*S	**Sn**	**10 45 09.7**	**-0.5**
RUS	**Russkaya**	**3.12**	**1**	*e*P	**Pn**	**10 44 33.8**	**-0.3**
RUS				*e*S	**Sn**	**10 45 08.9**	**-1.9**
MTVR	**Mutnovka**	**3.17**	**357**	*e*P	**Pn**	**10 44 34.9**	**-0.1**
MTVR				*e*S	**Sn**	**10 45 10.9**	**-1.5**
GRL	**Gorelyy**	**3.25**	**356**	*e*P	**Pn**	**10 44 36.6**	**+0.6**
GRL				*e*S	**Sn**	**10 45 13.6**	**-0.6**
KRMR	**Karymshinskiy**	**3.52**	**357**	*e*P	**Pn**	**10 44 40.0**	**+0.4**
KRMR				*e*S	**Sn**	**10 45 19.7**	**-1.1**
APC	**Apacha**	**3.70**	**348**	*e*P	**Pn**	**10 44 42.9**	**+0.8**
PET	**Petropavlovsk**	**3.71**	**2**	*e*P	**Pn**	**10 44 42.3**	**+0.1**
PET				*e*S	**Sn**	**10 45 23.7**	**-1.8**
DALK	**Dalny**	**3.72**	**3**	*e*P	**Pn**	**10 44 42.4**	**0.0**
DALK				*e*S	**Sn**	**10 45 24.1**	**-1.6**
UGLR	**Uglovaya**	**3.90**	**3**	*e*P	**Pn**	**10 44 46.9**	**+1.9**
UGLR				*e*S	**Sn**	**10 45 31.0**	**+0.6**
SPN	**Mys Shipunski**	**3.91**	**14**	*e*S	**Sn**	**10 45 28.2**	**-2.1**
AVH	**Avacha**	**3.96**	**2**	*e*P	**Pn**	**10 44 47.2**	**+1.5**
AVH				*e*S	**Sn**	**10 45 32.3**	**+0.7**
SMAR	**Somma**	**3.96**	**3**	*e*P	**Pn**	**10 44 46.9**	**+1.1**
KOK	**Koryaka**	**3.98**	**1**	*e*P	**Pn**	**10 44 47.0**	**+0.9**
KOK				*e*S	**Sn**	**10 45 31.9**	**-0.4**
KRER	**Koryakskii**	**3.99**	**2**	*e*P	**Pn**	**10 44 47.3**	**+1.0**
KRX	**Arik**	**4.05**	**2**	*e*P	**Pn**	**10 44 47.5**	**+0.5**
GNL	**Ganaly**	**4.39**	**356**	*e*P	**Pn**	**10 44 53.6**	**+1.8**
H11N2	**WAKE ISLAND Hy**	**30.29**	**164**	T	T	11 21 35.8	
	baz=353						
H11N3	**WAKE ISLAND Hy**	**30.30**	**164**	T	T	11 21 33.7	
	baz=353						
H11N1	**WAKE ISLAND Hy**	**30.30**	**164**	T	T	11 21 38.3	
	baz=353						
H11S1	**WAKE ISLAND Hy**	**31.45**	**165**	T	T	11 23 01.5	
	baz=351						
H11S3	**WAKE ISLAND Hy**	**31.46**	**165**	T	T	11 23 04.1	
	baz=351						
H11S2	**WAKE ISLAND Hy**	**31.47**	**165**	T	T	11 23 03.1	
	baz=351						
MKAR	**Makanchi Array**	**48.94**	**298**	P	**P**	**10 52 30.5**	**-0.3**
	0.1nm,0.4s,baz=56,slow=6.7,SNR=2.2						
	0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**49.02**	**304**	P	**P**	**10 52 31.9**	**+0.6**
	0.3nm,0.7s,baz=59,slow=7.1,SNR=2.5						
	0.3nm,0.7s						
BVAR	**Borovoye Array**	**51.98**	**310**	P	**P**	**10 52 55.0**	**+1.4**
	0.6nm,0.5s,baz=60,slow=7.5,SNR=2.5						
	0.6nm,0.5s						
WRA	**Warramunga Arr**	**72.22**	**204**	P	**P**	**10 55 08.3**	**-1.3**
	0.9nm,0.8s,baz=20,slow=6.1,SNR=5.5						
	0.9nm,0.8s						
TXAR	**Lajitas Array**	**73.12**	**65**	P	**P**	**10 55 16.0**	**+0.7**
	0.4nm,0.7s,baz=306,slow=4.1,SNR=6.0						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**75.89**	**203**	P	**P**	**10 55 30.4**	**-0.6**
	0.3nm,0.8s,baz=15,slow=5.9,SNR=4.0						
	0.3nm,0.8s						

*AUST **26** 10:56:43.0±0.3,22°S×3°×13°1E±°,h10km,ML2.8/7,Error*
ellipse: s-maj=8.5km s-min=6.5km az=103.7
*IDC **26** 10:56:43.8±4.0,21.67S×130.98E,h0km,mbtmp3.0/3,*
ML2.8/3,Error ellipse: s-maj=30.3km s-min=17.3km
az=90.0
ISC 26 10:56:42.6±0.8,**21.61S**±0.06×**130.78E**±0.05,**h10**km,**n16,**
σ1§79/24,Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUALC	**St Philip's Co**	**3.54**	**127**	P	**Pn**	**10 57 38.7**	**+1.2**
ASAR	**Alice Springs**	**3.54**	**126**	Pn	**Pn**	**10 57 38.8**	**+1.2**
	0.6nm,0.3s,baz=303,slow=13,SNR=67						
ASAR				Sn	**Sn**	**10 58 19.0**	**-0.6**
	3.0nm,0.3s,baz=305,slow=27,SNR=13						
ASAR				Lg	Lg	10 58 28.4	
	4.5nm,0.3s,baz=308,slow=28,SNR=4.3						
	2.2nm,0.5s						
WRA	**Warramunga Arr**	**3.71**	**64**	Pn	**Pn**	**10 57 40.4**	**+0.4**
	0.3nm,0.3s,baz=238,slow=13,SNR=3.6						
WRA				Pg	**Pb**	**10 57 50.3**	**+2.0**
	0.3nm,0.3s,baz=244,slow=14,SNR=30						
WRA				Sn	**Sn**	**10 58 25.2**	**+1.3**
	2.2nm,0.3s,baz=243,slow=29,SNR=6.1						
WRA				Lg	Lg	10 58 37.7	
	7.5nm,0.3s,baz=241,slow=27,SNR=21						
	0.3nm,0.2s						
WRAB	**Tennant Creek**	**3.73**	**64**	P	**Pn**	**10 57 40.5**	**+0.3**
WRAB				S	**Sn**	**10 58 21.9**	**-2.3**
WB10	**Warramunga Arr**	**3.84**	**62**	P	**Pn**	**10 57 42.2**	**+0.4**
WRKA	**Warakurna**	**4.11**	**213**	P	**Pn**	**10 57 46.8**	**+1.3**
WRKA				S	**Sn**	**10 58 33.6**	**-0.1**
KNRA	**Kununurra**	**6.20**	**342**	P	**Pn**	**10 58 16.7**	**+2.5**
KNRA				S	**Sn**	**10 59 23.7**	**-1.5**
OOD	**Oodnadatta**	**7.60**	**145**	P	**Pn**	**10 58 35.3**	**+1.9**
	comp=Z,2.4nm,1.9s,comp=Z,0.0nm						
OOD				S	**Sn**	**10 59 56.0**	**-3.7**
QIS	**Mount Isa**	**8.30**	**84**	P	**Pn**	**10 58 43.9**	**+0.8**
	comp=Z,2.7nm,1.1s,comp=Z,0.0nm						
MTN	**Manton Dam**	**8.72**	**2**	P	**Pn**	**10 58 48.8**	**-0.1**
	comp=Z,12nm,1.9s,comp=Z,0.0nm						
KDU	**Kakadu**	**9.02**	**11**	P	**Pn**	**10 58 53.0**	**+0.1**
	comp=Z,4.0nm,1.3s,comp=Z,0.0nm						
KDU				S	**Sn**	**11 00 30.0**	**-4.6**
DRS	**Darwin Rock St**	**9.12**	**1**	P	**Pn**	**10 58 54.1**	**-0.2**
	comp=Z,11nm,0.8s,comp=Z,0.0nm						
MULG	**Mulgathing**	**9.13**	**162**	P	**Pn**	**10 58 55.1**	**+0.7**
	comp=Z,4.9nm,2.8s,comp=Z,0.0nm						
FORT	**Forrest**	**9.46**	**194**	P	**Pn**	**10 58 58.7**	**-0.2**
	comp=Z,6.7nm,1.0s,comp=Z,0.0nm						
PSAC2	**Pilbara Seismi**	**10.13**	**268**	P	**Pn**	**10 59 08.5**	**+0.4**
	comp=Z,14nm,1.7s,comp=Z,0.0nm						
STKA	**Stephens Creek**	**14.06**	**139**	Pn	**Pn**	**11 00 00.0**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=314,slow=17,SNR=1.7						
STKA				Lg	Lg	11 04 05.3	
	baz=320,slow=18,SNR=2.3						
	comp=Z,0.6nm,0.5s						

*UCR **26** 11:11:49.8±0.5,8.74N×84.12W,h0km±2km,MW3.5,*
Presumed earthquake
*UPA **26** 11:11:50.0±3.8,9.42N×84.05W,h10km±999km,ML2.6,*
Presumed earthquake
ISC 26 11:11:49.8±1.8,**8.85N**±0.07×**84.10W**±0.07,**h2**km±14km,
n27,σ0§66/33,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDPE	**Pejibaye, P**	**0.61**	**59**	*e*P	**Pb**	**11 12 03

ML02	**Panimavida**	**1.65**	**91**			**Pn**	**11 39 25.7**	**+0.6**
ML02	**Panimavida**	**1.65**	**91**	*i* P		**Pn**	**11 39 25.5**	**+0.4**
ML02					IAML		11 39 58.8	
	comp=E,2µm,0.6s							
BO03	**Pichilemu**	**1.76**	**44**⇑	*i* P		**Pn**	**11 39 25.7**	**-0.8**
BO03					IAML		11 39 60.0	
	comp=E,1µm,0.4s							
BI02	**San Fabín de**	**1.98**	**118**			**Pn**	**11 39 30.0**	**+0.3**
BI02	**San Fabín de**	**1.98**	**118**⇑	*i* P		**Pn**	**11 39 29.9**	**+0.3**
BI02				*i* S		**Sn**	**11 39 54.5**	**+0.1**
BI02					IAML		11 40 04.6	
	comp=E,864nm,0.5s							
BO01	**Tunca**	**2.38**	**55**			**Pn**	**11 39 36.1**	**+1.1**
BO01	**Tunca**	**2.38**	**55**⇓	*i* P		**Pn**	**11 39 35.1**	**+0.1**
BO01				*i* S		**Sb**	**11 40 06.5**	**-1.7**
BO01					IAML		11 40 17.0	
	comp=N,278nm,0.4s							
BO01	**Tunca**	**2.38**	**55**	*e*P		**Pn**	**11 39 35.6**	**+0.6**
BO01				*e*S		**Sg**	**11 40 10.5**	**-1.8**
BO01					IAML		11 40 20.1	
	comp=Z,278nm,0.8s							
BO02	**Sierra Bellavi**	**2.39**	**67**			**Pn**	**11 39 35.6**	**+0.3**
BO02	**Sierra Bellavi**	**2.39**	**67**	*i* P		**Pn**	**11 39 35.4**	**+0.1**
BO02				*i* S		**Sn**	**11 40 04.7**	**0.0**
BO02	**Sierra Bellavi**	**2.39**	**67**	*e*P		**Pn**	**11 39 35.7**	**+0.4**
BO02					IAML		11 40 18.6	
	comp=Z,888nm,1.1s							
MT01	**Popeta**	**2.62**	**44**			**Pn**	**11 39 38.0**	**-0.4**
MT01	**Popeta**	**2.62**	**44**	*e*P		**Pn**	**11 39 37.5**	**-0.9**
BI04	**Isla Mocha**	**2.67**	**187**	*e*S		**Sn**	**11 40 06.7**	**-4.6**
BI04					IAML		11 40 12.8	
	comp=E,445nm,0.2s							
MT09	**Talagante**	**2.84**	**46**			**Pn**	**11 39 41.4**	**0.0**
MT09	**Talagante**	**2.84**	**46**	*e*P		**Pn**	**11 39 41.6**	**+0.1**
CANA	**Caviahue**	**2.86**	**139**	*e*P		Pn	11 39 33.0	-8.8
CANA				*e*S		**Sg**	**11 40 29.4**	**+1.6**
BO04	**La Punta**	**2.93**	**54**			**Pn**	**11 39 43.2**	**+0.6**
BO04	**La Punta**	**2.93**	**54**	*e*P		**Pn**	**11 39 43.4**	**+0.7**
VA01	**Torpederas**	**3.12**	**29**			**Pn**	**11 39 44.3**	**-0.9**
VA01	**Torpederas**	**3.12**	**29**	*e*P		**Pn**	**11 39 43.7**	**-1.4**
MT12	**Pirque**	**3.13**	**51**	*i* P		**Pn**	**11 39 45.4**	**0.0**
MT02	**Curacav**	**3.15**	**38**			**Pn**	**11 39 44.8**	**-0.8**
MT02	**Curacav**	**3.15**	**38**	*e*P		**Pn**	**11 39 44.9**	**-0.7**
LMEL	**Las Melosas**	**3.29**	**55**	*e*P		**Pn**	**11 39 49.0**	**+1.4**
MT13	**San Alfonso**	**3.29**	**53**			**Pn**	**11 39 48.5**	**+0.7**
MT13	**San Alfonso**	**3.29**	**53**	*e*P		**Pn**	**11 39 47.8**	**+0.1**
EDS3	**Malargue**	**3.29**	**91**	*e*P		**Pn**	**11 39 48.0**	**+0.2**
MT03	**Universidad Ad**	**3.32**	**48**			**Pn**	**11 39 48.5**	**+0.4**
MT03	**Universidad Ad**	**3.32**	**48**	*e*P		**Pn**	**11 39 48.3**	**+0.2**
MT03	**Universidad Ad**	**3.32**	**48**	*e*P		**Pn**	**11 39 49.4**	**+1.3**
MT03				*e*S		**Sn**	**11 40 28.9**	**+1.3**
MT03					IAML		11 40 53.3	
	comp=Z,290nm,0.5s							
MT16	**CCHEN**	**3.36**	**47**			**Pn**	**11 39 49.0**	**+0.4**
LC01	**Cunco**	**3.37**	**159**	*e*P		**Pn**	**11 39 48.9**	**+0.2**
ROCH	**El Roble**	**3.44**	**37**	*i* P		**Pn**	**11 39 49.9**	**+0.1**
MT10	**Hacienda Santa**	**3.46**	**45**‖	*e*P		**Pn**	**11 39 50.3**	**+0.3**
PEL	**Peldehue**	**3.47**	**42**			**Pn**	**11 39 50.9**	**+0.8**
PEL	**Peldehue**	**3.47**	**42**	*e*P		**Pn**	**11 39 51.0**	**+0.8**
PEL				*e*S		**Sg**	**11 40 45.0**	**-2.5**
PEL					IAML		11 41 14.1	
	comp=Z,157nm,0.7s							
MT04	**Ro Olivares**	**3.61**	**50**	*e*P		**Pn**	**11 39 52.7**	**+0.6**
MT08	**Bocatoma Ro**	**3.66**	**52**			**Pn**	**11 39 53.9**	**+1.0**
VA06	**Catapilco**	**3.66**	**30**			**Pn**	**11 39 52.0**	**-0.7**
VA03	**San Esteban**	**3.84**	**40**⇓	*i* P		**Pn**	**11 39 55.5**	**+0.3**
VA03	**San Esteban**	**3.84**	**40**	*e*P		**Pn**	**11 39 55.8**	**+0.6**
VA03					IAML		11 41 12.6	
	comp=Z,148nm,1.2s							
GO06	**Curarrehue**	**4.12**	**158**			**Pn**	**11 40 00.3**	**+1.2**
GO06	**Curarrehue**	**4.12**	**158**⇑	*e*P		**Pn**	**11 40 00.1**	**+0.9**
GO06	**Curarrehue**	**4.12**	**158**	*e*P		**Pn**	**11 40 00.4**	**+1.2**
GO06					IAML		11 41 22.6	
	comp=Z,47nm,1.4s							
RFA	**San Rafael**	**4.20**	**78**	*e*P		**Pn**	**11 40 03.0**	**+2.9**
RFA				*e*S		**Sg**	**11 41 07.5**	**-3.3**
RFA					IAML		11 41 15.8	
	comp=Z,117nm,1.4s							
CO04	**Los Peladeros**	**4.24**	**30**			**Pn**	**11 39 60.0**	**-1.0**
CO04	**Los Peladeros**	**4.24**	**30**	*e*P		**Pn**	**11 39 59.9**	**-1.0**
LR05	**Currie**	**4.60**	**166**			**Pn**	**11 40 06.6**	**+1.0**
AAGR	**Agrelo**	**4.66**	**56**	*e*P		**Pn**	**11 40 09.6**	**+3.0**
AAGR					IAML		11 41 40.0	
	comp=Z,43nm,0.9s							
ARCO	**CERRO ARCO**	**4.74**	**53**	*e*P		**Pn**	**11 40 10.4**	**+2.7**
ARCO					IAML		11 41 37.1	
	comp=Z,49nm,0.9s							
H03S1	**Juan Fernandez**	**4.88**	**292**	T		T	11 45 09.1	
	baz=113,slow=73,SNR=306							
AUSP	**Uspallata**	**4.88**	**45**	*e*P		**Pn**	**11 40 12.0**	**+2.2**
H03S3	**Juan Fernandez**	**4.89**	**292**	T		T	11 45 07.0	
	baz=113,slow=73,SNR=242							
H03S2	**Juan Fernandez**	**4.90**	**292**	T		T	11 45 09.1	
	baz=113,slow=73,SNR=239							
H03N1	**Juan Fernandez**	**5.07**	**296**	T		T	11 45 25.7	
	baz=110,slow=76,SNR=23							
H03N3	**Juan Fernandez**	**5.07**	**295**	T		T	11 45 27.5	
	baz=110,slow=76,SNR=24							
H03N2	**Juan Fernandez**	**5.08**	**296**	T		T	11 45 27.1	
	baz=110,slow=76,SNR=15							
CO06	**Fray Jorge**	**5.30**	**17**	Pn		**Pn**	**11 40 14.7**	**-0.5**
PLCA	**Paso Flores**	**5.46**	**156**	Pn		**Pn**	**11 40 18.9**	**+1.4**
	comp=Z,0.5nm,0.3s,baz=332,slow=12,SNR=20							
PLCA					LR	LR	11 41 40.5	
	comp=Z,39nm,20.1s,baz=326,slow=31							
PLCA					Lg	Lg	11 41 43.5	
	comp=Z,0.6nm,0.3s,baz=303,slow=14,SNR=4.2							
	comp=Z,1.4nm,0.3s							
PLCA	**Paso Flores**	**5.46**	**156**			**Pn**	**11 40 19.1**	**+1.6**
PLCA	**Paso Flores**	**5.46**	**156**	*e*P		**Pn**	**11 40 19.4**	**+1.9**
PLCA				*e*S		**Sb**	**11 41 36.7**	**-0.4**
PLCA				*e*S		**Sg**	**11 41 45.0**	**-6.3**
PLCA					IAML		11 41 50.3	
	comp=Z,22nm,1.1s							
GO04	**Tololo Observa**	**6.00**	**23**	Pn		**Pn**	**11 40 25.2**	**+0.1**
CFA	**Coronel Fontan**	**6.01**	**48**	Pn		**Pn**	**11 40 25.8**	**+0.8**
	comp=Z,2.3nm,0.3s,baz=222,slow=10,SNR=50							
CFA					Sn	**Sn**	**11 41 33.6**	**-0.2**
	comp=Z,0.9nm,0.3s,baz=291,slow=23,SNR=1.5							
CFA					Lg	Lg	11 41 55.9	
	comp=Z,0.4nm,0.3s,baz=300,slow=20,SNR=3.7							
	comp=Z,5.8nm,0.3s							
RTLL	**Cerro Villicun**	**6.07**	**45**	*e*P		**Pn**	**11 40 27.2**	**+1.3**
RTLL				*e*S		**Sn**	**11 41 37.4**	**+2.1**
RTLL					IAML		11 42 00.8	
	comp=Z,31nm,1.3s							
CO01	**Juntas del Tor**	**6.42**	**27**			**Pn**	**11 40 31.2**	**+0.3**
AROD	**Rodeo**	**6.50**	**32**	*e*P		**Pn**	**11 40 33.6**	**+1.6**
AROD				*e*S		**Sn**	**11 41 51.7**	**+5.2**
ACDV	**Cuesta del Vie**	**6.66**	**34**	*e*P		**Pn**	**11 40 35.2**	**+1.1**
ACDV				*e*S		**Sn**	**11 41 52.5**	**+2.4**
ACDV					IAML		11 42 26.2	
	comp=Z,15nm,3.0s							
LCO	**Las Campanas**	**7.12**	**20**	Pn		**Pn**	**11 40 40.1**	**-0.4**
AVFE	**Valle Fertil**	**7.15**	**46**	*e*P		**Pn**	**11 40 40.8**	**+0.1**
AVFE				*e*S		**Sb**	**11 42 20.5**	**-5.2**
AVFE					IAML		11 42 26.3	
	comp=Z,16nm,0.9s							
ACHE	**Chepes**	**7.29**	**53**	*e*S		**Sn**	**11 42 04.7**	**-1.0**
CPUP	**Villa Florida**	**16.69**	**60**	LR		LR	11 49 53.4	
	comp=Z,124nm,19.6s,baz=244,slow=40							
LPAZ	**La Paz**	**19.97**	**15**	P		**Pn**	**11 43 31.4**	**+0.7**
	baz=165,slow=2.3,SNR=5.2							
	comp=Z,1.1nm,0.8s							
AQDB	**Aquidauana**	**21.79**	**50**	P		**P**	**11 43 48.0**	**-0.1**
AQDB					IAmb	IAmb	11 43 49.6	
	comp=Z,6.6nm,0.8s							
SIV	**San Ignacio**	**22.58**	**32**	LR		LR	11 54 34.7	
	comp=Z,131nm,19.6s,baz=101,slow=42							
PTLB	**Pontes e Lacer**	**23.94**	**36**	P		**P**	**11 44 09.1**	**-1.3**
PTLB					IAmb	IAmb	11 44 11.6	
	comp=Z,5.3nm,0.9s							
BOAB	**BOACO BROADBAN**	**40.32**	**344**	P		**P**	**11 47 43.6**	**-1.7**
QSPA	**South Pole Qui**	**54.48**	**180**	P		**P**	**11 48 25.1**	**+1.6**
	comp=Z,2.5nm,1.0s,baz=198,slow=3.3,SNR=1.1							
	comp=Z,2.5nm,1.0s							
QSPA	**South Pole Qui**	**54.48**	**180**	IAmb		IAmb	11 48 37.4	
	comp=Z,4.5nm,1.4s							
TXAR	**Lajitas Array**	**70.73**	**332**	P		**P**	**11 50 16.1**	**+3.8**
	comp=Z,0.3nm,0.9s,baz=156,slow=7.4,SNR=3.9							
TXAR					LR	LR	12 16 58.9	
	comp=Z,34nm,20.5s,baz=174,slow=32							
	comp=Z,0.3nm,0.9s							
TXAR	**Lajitas Array**	**70.73**	**332**	P		**P**	**11 50 12.8**	**+0.5**

DBIC	**Dimbokro**	**76.84**	**72**	P		**P**	**11 50 48.7**	**+0.3**
	comp=Z,1.9nm,0.7s,baz=262,slow=5.2,SNR=4.2							
DBIC					LR	LR	12 21 29.0	
	comp=Z,17nm,19.7s,baz=189,slow=33							
	comp=Z,1.9nm,0.7s							
DBIC	**Dimbokro**	**76.84**	**72**	IAmb		IAmb	11 50 50.1	
	comp=Z,3.3nm,0.8s							
TORD	**Torodi Ar. Bea**	**85.89**	**71**	P		**P**	**11 51 37.9**	**+1.5**
	comp=Z,0.8nm,1.0s,baz=234,slow=5.3,SNR=2.3							
	comp=Z,0.8nm,1.0s							
MKAR	**Makanchi Array**	**158.78**	**51**	PKPab		**PKPab**	**11 59 31.0**	**+1.5**
	comp=Z,0.4nm,0.9s,baz=280,slow=3.2,SNR=1.8							

*IDC **26** 11:39:12.3±0.9, 49.°08N×157.°62E, h0km, mb3.5/6, mbtmp3.5/6, Error ellipse: s-maj=34.6km s-min=22.3km az=128.0*
*SKHL **26** 11:39:15.8±0.2, 49.°00N×157.°90E, h46km±4km, mb4.7/3*
*MOS **26** 11:39:16.4±1.0, 49.°10N×157.°70E, h42km, mb4.5/1, Error ellipse: s-maj=26.4km s-min=4.6km az=86.9*
*KRSC **26** 11:39:16.2±1.6, 49.°25N×158.°14E, h38km±31km, Ml4.1*

ISC 26 11:39:21.4±1.4, 49.°28N±0.°08×157.°76E±0.°06, h66km±12km, n67, σ0.°971/52, mb3.3/7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.76**	**323**	*e*PN		Pn	11 39 46.3	-3.3
SKR				*e*S		**Sn**	**11 40 10.1**	**-0.8**
SKR				pmax		pmax		
	comp=Z,112nm,0.2s							
SKR				smax		smax		
	comp=N,371nm,0.5s							
SKR				smax		smax		
	comp=E,1µm,0.6s							
SKR	**Severo-Kuril's**	**1.76**	**323**	*e*P		Pn	11 39 46.8	-2.7
SKR				*e*S		**Sn**	**11 40 10.2**	**-0.8**
SKR	**Severo-Kuril's**	**1.76**	**323**	*e*P		Pn	11 39 46.9	-2.7
SKR				AMB		AMB	11 39 47.4	
	comp=E,110nm,0.2s							
SKR				*e*S		**Sn**	**11 40 10.1**	**-0.8**
SKR				A		A	11 40 10.8	
	comp=E,430nm,0.4s							
SKR				A		A	11 40 10.8	
	comp=E,780nm,0.4s							
PAU	**Pauzhetka**	**2.27**	**345**	PN		Pn	11 39 54.9	-1.6
PAU				S		**Sn**	**11 40 23.7**	**+0.4**
PAU	**Pauzhetka**	**2.27**	**345**	*e*P		Pn	11 39 54.9	-1.6
PAU				*e*S		**Sn**	**11 40 23.8**	**+0.4**
PAU	**Pauzhetka**	**2.27**	**345**	*e*P		Pn	11 39 55.1	-1.4
PAU				AMB		AMB	11 39 58.2	
	comp=E,40nm,0.2s							
PAU				*e*S		**Sn**	**11 40 23.8**	**+0.4**
PAU				A		A	11 40 25.3	
	comp=E,320nm,0.5s							
PAU				A		A	11 40 25.3	
	comp=E,200nm,0.5s							
KDTR	**Khodutka, Kamc**	**2.54**	**4**	PN		Pn	11 39 57.9	-2.2
KDTR				S		**Sn**	**11 40 28.3**	**-1.5**
KDTR	**Khodutka, Kamc**	**2.54**	**4**	*e*P		Pn	11 39 58.0	-2.2
KDTR				*e*S		**Sn**	**11 40 28.4**	**-1.5**
KDTR	**Khodutka, Kamc**	**2.54**	**4**	*e*P		Pn	11 39 57.9	-2.2
KDTR				*e*S		**Sn**	**11 40 28.3**	**-1.5**
MIPR	**Malaya Ipel'ka**	**3.06**	**348**	PN		**Pn**	**11 40 07.2**	**-0.1**
MIPR	**Malaya Ipel'ka**	**3.06**	**348**	*e*P		**Pn**	**11 40 07.2**	**-0.1**
ASAK	**Asacha**	**3.10**	**2**	PN		Pn	11 40 06.9	-1.0
ASAK	**Asacha**	**3.10**	**2**	*e*P		Pn	11 40 07.0	-1.0
RUS	**Russkaya**	**3.19**	**8**	PN		Pn	11 40 07.3	-1.7
RUS				S		**Sn**	**11 40 45.3**	**-0.5**
RUS	**Russkaya**	**3.19**	**8**	*e*P		Pn	11 40 07.3	-1.7
RUS				*e*S		**Sn**	**11 40 45.3**	**-0.5**
RUS	**Russkaya**	**3.19**	**8**	*e*P		Pn	11 40 07.3	-1.7
MTVR	**Mutnovka**	**3.21**	**5**	PN		Pn	11 40 07.9	-1.6
MTVR				S		**Sn**	**11 40 46.8**	**+0.2**
MTVR	**Mutnovka**	**3.21**	**5**	*e*P		Pn	11 40 08.0	-1.6
MTVR				*e*S		**Sn**	**11 40 46.9**	**+0.2**
GRL	**Gorelyy**	**3.28**	**3**	PN		Pn	11 40 09.4	-1.0
GRL	**Gorelyy**	**3.28**	**3**	*e*P		Pn	11 40 09.4	-1.0
KRMR	**Karymshinskiy**	**3.56**	**4**	PN		**Pn**	**11 40 13.9**	**-0.1**
KRMR	**Karymshinskiy**	**3.56**	**4**	*e*P		**Pn**	**11 40 14.0**	**-0.1**
KRMR	**Karymshinskiy**	**3.56**	**4**	*e*P		**Pn**	**11 40 13.9**	**-0.1**
APC	**Apacha**	**3.67**	**354**	PN		**Pn**	**11 40 15.2**	**-0.3**
APC	**Apacha**	**3.67**	**354**	*e*P		**Pn**	**11 40 15.2**	**-0.3**
PET	**Petropavlovsk**	**3.79**	**8**	*e*PN		Pn	11 40 16.0	-1.2
PET				*e*S		**Sn**	**11 41 00.7**	**+0.3**
PET				pmax		pmax		
	comp=Z,28nm,0.5s							
PET				smax		smax		
	comp=N,27nm,0.4s							
PET				smax		smax		
	comp=E,36nm,0.5s							
PET	**Petropavlovsk**	**3.79**	**8**	*e*P		Pn	11 40 15.9	-1.2
PET				*e*S		**Sn**	**11 41 00.7**	**+0.3**
PET	**Petropavlovsk**	**3.79**	**8**	*e*P		Pn	11 40 15.9	-1.2
PET				AMB		AMB	11 40 16.5	
	comp=E,30nm,0.3s							
PET				*e*S		**Sn**	**11 41 00.7**	**+0.3**
PET				A		A	11 41 04.1	
	comp=E,30nm,0.6s							
PET				A		A	11 41 04.1	
	comp=E,30nm,0.6s							
DALK	**Dalny**	**3.80**	**9**	PN		Pn	11 40 15.9	-1.5
DALK	**Dalny**	**3.80**	**9**	*e*P		Pn	11 40 15.9	-1.5
DALK				*e*S		**Sn**	**11 41 00.3**	**-0.6**
DALK	**Dalny**	**3.80**	**9**	*e*P		Pn	11 40 16.2	-1.2
UGLR	**Uglovaya**	**3.99**	**9**	PN		**Pn**	**11 40 19.4**	**-0.6**
UGLR	**Uglovaya**	**3.99**	**9**	*e*P		**Pn**	**11 40 19.5**	**-0.6**
AVH	**Avacha**	**4.03**	**8**	PN		**Pn**	**11 40 21.0**	**+0.4**
AVH	**Avacha**	**4.03**	**8**	*e*P		**Pn**	**11 40 21.1**	**+0.4**
AVH	**Avacha**	**4.03**	**8**	*e*P		**Pn**	**11 40 21.0**	**+0.4**
SMAR	**Somma**	**4.04**	**9**	PN		**Pn**	**11 40 21.3**	**+0.5**
SMAR	**Somma**	**4.04**	**9**	*e*P		**Pn**	**11 40 21.3**	**+0.5**
KOK	**Koryaka**	**4.05**	**7**	PN		**Pn**	**11 40 20.8**	**-0.1**
KOK	**Koryaka**	**4.05**	**7**	*e*P		**Pn**	**11 40 20.9**	**-0.1**
KOK	**Koryaka**	**4.05**	**7**	*e*P		**Pn**	**11 40 20.8**	**-0.1**
KRER	**Koryakskii**	**4.07**	**8**	PN		**Pn**	**11 40 21.5**	**+0.2**
KRER	**Koryakskii**	**4.07**	**8**	*e*P		**Pn**	**11 40 21.5**	**+0.2**
SPN	**Mys Shipunski**	**4.08**	**20**	PN		Pn	11 40 18.9	-2.2
SPN	**Mys Shipunski**	**4.08**	**20**	*e*P		Pn	11 40 19.0	-2.2
KRX	**Arik**	**4.12**	**7**	PN		**Pn**	**11 40 21.4**	**-0.4**
KRX	**Arik**	**4.12**	**7**	*e*P		**Pn**	**11 40 21.5**	**-0.4**
GNL	**Ganaly**	**4.42**	**1**	PN		**Pn**	**11 40 26.1**	**+0.2**
GNL	**Ganaly**	**4.42**	**1**	*e*P		**Pn**	**11 40 26.1**	**+0.2**
ESO	**Esso**	**6.68**	**5**	PN		**Pn**	**11 40 57.7**	**+1.1**
ESO	**Esso**	**6.68**	**5**	*e*P		**Pn**	**11 40 57.8**	**+1.1**
KBTR	**Krutoberegovo**	**7.58**	**22**	PN		Pn	11 41 07.2	-1.8
KBTR	**Krutoberegovo**	**7.58**	**22**	*e*P		Pn	11 41 07.3	-1.8
ASAJ	**Asahikawa**	**11.62**	**249**	Pn		Pn	11 41 53.9	-10
	comp=E,0.2nm,0.3s,baz=235,slow=10,SNR=2.0							
H11S1	**WAKE ISLAND Hy**	**31.54**	**164**	T		T	12 19 50.1	
	baz=347							
H11S3	**WAKE ISLAND Hy**	**31.55**	**164**	T		T	12 19 49.0	
	baz=347							
H11S2	**WAKE ISLAND Hy**	**31.56**	**164**	T		T	12 19 50.1	
	baz=347							
ILAR	**Eielson Array**	**32.61**	**41**	P		**P**	**11 45 47.7**	**+1.5**
	comp=E,0.2nm,0.6s,baz=278,slow=7.3,SNR=2.3							
	comp=E,0.2nm,0.6s							
YKA	**Yellowknife Ar**	**47.01**	**39**	P		**P**	**11 47 46.2**	**+0.7**
	comp=E,0.3nm,0.9s,baz=301,slow=7.3,SNR=4.0							
	comp=E,0.3nm,0.9s							
MKAR	**Makanchi Array**	**48.55**	**297**	P		**P**	**11 47 56.7**	**-0.9**
	comp=E,0.1nm,0.4s,baz=56,slow=8.9,SNR=2.0							
	comp=E,0.1nm,0.4s							
KURK	**Kurchatov**	**48.56**	**304**	P		**P**	**11 47 58.1**	**+0.5**
KURK	**Kurchatov**	**48.56**	**304**	*e*P		**P**	**11 47 58.1**	**+0.5**
KURBB	**Kurchatov Arra**	**48.66**	**304**	P		**P**	**11 47 58.1**	**-0.3**
	comp=E,0.7nm,0.3s,baz=46,slow=8.0,SNR=2.4							
WRA	**Warramunga Arr**	**72.00**	**203**	P		**P**	**11 50 36.2**	**-1.7**
	comp=E,1.9nm,0.7s,baz=22,slow=6.4,SNR=17							
	comp=E,1.9nm,0.7s							
TXAR	**Lajitas Array**	**73.55**	**64**	P		**P**	**11 50 48.0**	**+0.6**
	comp=E,0.2nm,0.5s,baz=313,slow=5.6,SNR=4.3							
	comp=E,0.2nm,0.5s							
TXAR	**Lajitas Array**	**73.55**	**64**	P		**P**	**11 50 48.0**	**+0.6**
ASAR	**Alice Springs**	**75.67**	**203**	P		**P**	**11 50 58.4**	**-0.9**
	comp=E,0.8nm,0.8s,baz=17,slow=5.2,SNR=12							
	comp=E,0.8nm,0.8s							

*IDC **26** 11:47:21.0±7.8, 32.°96N×71.°90E, h0km, mb4.0/4, mbtmp3.8/6, ML2.7/2, Error ellipse: s-maj=145.4km s-min=37.3km az=147.0*
*NNC **26** 11:48:02.5±4.9, 36.°53N×70.°39E, h91km±101km, mb3.1, mpv3.4, Error ellipse: s-maj=39.2km s-min=34.9km az=67.0*

ISC 26 11:48:01.6±1.9, 36.°5N±0.°1×70.°5E±0.°1, h100km, n10, σ1.966/14, mb4.1/3, 4C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.60**	**0**	⇑P		**Pn**	**11 49 36.8**	**+0.8**
	1.7nm,0.3s,baz=186,slow=18,SNR=24							
KK31				⇑S		**Sn**	**11 50 51.4**	**+1.6**
	5.1nm,0.4s,baz=183,slow=22,SNR=6.4							
AAK	**Ala-Archa**	**6.87**	**26**	⇓P		**Pn**	**11 49 40.0**	**+0.2**
	0.5nm,0.4s							
AAK				⇓S		**Sn**	**11 50 57.5**	**+0.9**
	3.4nm,0.5s							
MKAR	**Makanchi Array**	**13.54**	**37**	Pn		**Pn**	**11 51 07.1**	**-2.4**
	baz=211,slow=13,SNR=2.0							
MKAR				Lg		Lg	11 55 48.0	
	0.1nm,0.3s,baz=218,slow=26,SNR=1.5							
	0.3nm,0.7s							
AB31	**Akbulak array**	**14.90**	**332**	⇓P		**Pn**	**11 51 26.6**	**-0.3**
	1.3nm,0.6s,baz=158,slow=12,SNR=39							
AB31				⇑S		**Sn**	**11 54 08.3**	**-2.7**
	2.2nm,0.6s,baz=161,slow=21,SNR=7.9							
KURBB	**Kurchatov Arra**	**15.27**	**20**	P		**P**	**11 51 36.5**	**+2.5**
	baz=198,slow=13,SNR=1.4							
	0.3nm,0.3s							
AKTO	**Aktyubinsk**	**16.59**	**331**	⇑P		**P**	**11 51 50.6**	**+1.9**
	0.9nm,0.7s							
AKTO				⇓S		**Sn**	**11 54 50.7**	**-1.0**
	0.9nm,0.7s							
ZALV	**Zalesovo Beam**	**20.09**	**25**	P		**P**	**11 52 25.9**	**-1.1**
	1.4nm,0.3s,baz=221,slow=10,SNR=9.6							
	1.4nm,0.3s							
FINES	**FINESS Array B**	**37.26**	**326**	P		**P**	**11 55 04.3**	**+1.0**
	3.0nm,1.0s,baz=112,slow=7.3,SNR=1.4							
	3.0nm,1.0s							
ARCES	**ARCESS Array B**	**41.00**	**338**	P		**P**	**11 55 34.8**	**+0.5**
	3.5nm,1.0s,baz=120,slow=8.2,SNR=1.2							
	3.5nm,1.0s							
HFS	**Hagfors**	**42.82**	**322**	P		**P**	**11 55 48.8**	**-0.4**
	1.1nm,0.6s,baz=94,slow=12,SNR=1.9							
	1.1nm,0.6s							

*CNRM **26** 12:16:12.7, 35.°59N×3.°82W, h22km, ML1.8*
*SFS **26** 12:16:16.9, 35.°52N×3.°63W, h21km, ML2.7/4, ML2.3/5, MLv2.1/5*
*MDD **26** 12:16:18.2±1.2, 35.°72N×3.°40W, h20km, mb_Lg2.3/3, Error ellipse: s-maj=19.8km s-min=4.2km az=65.0*

ISC 26 12:16:14.0±1.4, 35.°51N±0.°03×3.°81W±0.°04, h20km±3km, n13, σ0.°97/24, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PALE	**Palemas**	**0.31**	**200**	P		**Pg**	**12 16 20.6**	**-0.2**
PALE				S		**Sg**	**12 16 25.5**	**+0.1**
WMELI	**Melilla**	**0.73**	**105**	Pg		**Pb**	**12 16 27.8**	**-0.1**
WMELI				Sg		**Sb**	**12 16 36.3**	**-1.2**
EALB	**Alboran**	**0.77**	**55**	Sg		**Sb**	**12 16 37.7**	**-1.0**
AKLM	**AKL**	**0.99**	**183**	P		**Pb**	**12 16 32.3**	**-0.3**
AKLM				S		**Sb**	**12 16 45.3**	**0.0**
SMIR	**Smir Dam**	**1.29**	**278**	P		**Pn**	**12 16 36.2**	**-0.8**
SMIR				S		**Sn**	**12 16 52.0**	**-1.7**
TAF	**Taforalt**	**1.34**	**121**	P		**Pn**	**12 16 37.0**	**-0.6**
TAF				S

ASAR	**Alice Springs**	**18.79**	**170**	P		Pn	12 24 37.3	-0.1
	0.1nm,0.3s,baz=350,slow=11,SNR=7.9								
	0.4nm,0.5s								
MKAR	**Makanchi Array**	**66.92**	**326**	P		P	12 31 10.2	+0.1
	0.3nm,0.7s,baz=130,slow=7.1,SNR=2.8								
	0.3nm,0.7s								

*AZER **26** 12:22:56.1,38°.61N×44°.16E,h2km,ml3.8*
*NSSP **26** 12:22:58.8,38°.50N×44°.42E,h10km,Ms3.3*
*ISK **26** 12:22:58.0,38°.42N×44°.28E,h10km,ML3.4/6*
*TEH **26** 12:22:59.8,38°.59N×44°.23E,h6km±41km,ML3.4, Presumed earthquake*
*AFAD **26** 12:22:59.5,38°.63N×44°.25E,h7km±5km,MW3.5*

ISC 26 12:22:59.2±1.1,38°.57N±0°.02×44°.25E±0°.01,h3km±9km, n76,σ1§88/128,3C-3D,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.22**	**294**	P		**Pg**		**12 23 03.9**	**+0.4**
OZAP				S		**Sg**		**12 23 06.9**	**+0.5**
OZAP	**Van, Ozalp-Mer**	**0.22**	**294**	Pg		**Pg**		**12 23 03.9**	**+0.4**
TVAN	**Van**	**0.66**	**266**	P		**Pg**		**12 23 11.6**	**-0.3**
TVAN				S		**Sb**		**12 23 23.6**	**+0.4**
TVAN	**Van**	**0.66**	**266**	Pg		**Pg**		**12 23 11.6**	**-0.3**
VMUR	**Van-Muradiye**	**0.67**	**308**	P		**Pb**		**12 23 12.5**	**-1.2**
VMUR				S		**Sb**		**12 23 22.1**	**-1.4**
VMUR	**Van-Muradiye**	**0.67**	**308**	Pg		**Pb**		**12 23 12.5**	**-1.2**
GEVA	**Gevas**	**0.97**	**255**	P		**Pg**		**12 23 16.5**	**-1.3**
GEVA				S		**Sg**		**12 23 30.0**	**-0.3**
YOVA	**Hakkari_Yksek**	**0.98**	**178**	P		**Pn**		**12 23 19.5**	**-0.7**
YOVA				S		**Sn**		**12 23 35.0**	**+0.3**
YOVA	**Hakkari_Yksek**	**0.98**	**178**	Pg		**Pn**		**12 23 19.4**	**-0.7**
AKDM	**Akdamar-Van**	**1.02**	**257**	Pg		**Pg**		**12 23 18.1**	**-0.8**
AKDM				Sg		**Sb**		**12 23 32.8**	**-0.8**
AKDM	**Akdamar-Van**	**1.02**	**257**	Pg		**Pb**		**12 23 19.4**	**-0.3**
HAKT	**HAKKARI**	**1.10**	**203**	P		**Pg**		**12 23 20.2**	**-0.1**
HAKT				S		**Sn**		**12 23 38.5**	**+1.0**
HAKT	**HAKKARI**	**1.10**	**203**	Pg		**Pg**		**12 23 20.2**	**-0.1**
HAKT	**HAKKARI**	**1.10**	**203**	P		**Pg**		**12 23 20.0**	**-0.3**
HAKT				S		**Sn**		**12 23 38.6**	**+1.0**
ISHB	**Shabestar**	**1.11**	**105**	Pg		**Pn**		**12 23 21.2**	**-0.8**
NAX	**Nakhchivan**	**1.15**	**58**	P		**Pn**		**12 23 22.2**	**0.0**
NAX				S		**Sn**		**12 23 39.8**	**+1.3**
ADCV	**BITLIS_Adilcev**	**1.21**	**282**	P		**Pb**		**12 23 22.2**	**-0.7**
ADCV				S		**Sn**		**12 23 40.6**	**+0.3**
HYR	**Heyderabad**	**1.24**	**22**	P		**Pn**		**12 23 23.4**	**-0.1**
HYR				S		**Sn**		**12 23 42.4**	**+1.7**
IGDI	**IGDIR**	**1.30**	**354**	P		**Pg**		**12 23 23.7**	**-0.5**
IGDI				S		**Sn**		**12 23 43.4**	**+1.1**
IGDI	**IGDIR**	**1.30**	**354**	Pg		**Pg**		**12 23 23.7**	**-0.5**
IGDI	**IGDIR**	**1.30**	**354**	P		**Pg**		**12 23 23.7**	**-0.5**
IGDI				S		**Sn**		**12 23 42.8**	**+0.6**
SBZ	**Shahbuz**	**1.31**	**51**	P		**Pg**		**12 23 25.2**	**+0.8**
SBZ				S		**Sn**		**12 23 44.5**	**+1.9**
AGRB	**Hanur-Agry**	**1.40**	**316**	Pn		**Pg**		**12 23 25.6**	**-0.5**
AGRB				Sn		**Sn**		**12 23 46.7**	**+1.8**
DORK	**Agr/Tutak/Do**	**1.40**	**306**	P		**Pg**		**12 23 25.7**	**-0.4**
DORK				S		**Sg**		**12 23 44.3**	**0.0**
ORD	**Ordubad**	**1.41**	**75**	P		**Pg**		**12 23 27.0**	**+0.7**
ORD				S		**Sg**		**12 23 48.2**	**+3.5**
VAYK	**Vayk**	**1.45**	**39**⇓	*e*P		**Pg**		**12 23 47.8**	**+0.6**
VAYK				⇓*e*S		**Sg**		**12 23 47.8**	**+2.0**
KOTA	**Agri, Merkez-K**	**1.47**	**327**	P		**Pg**		**12 23 27.1**	**-0.4**
KOTA				S		**Sg**		**12 23 47.8**	**+1.3**
PERV	**Siirt/Pervari-**	**1.48**	**246**	P		**Pg**		**12 23 29.2**	**+1.6**
PERV				S		**Sg**		**12 23 49.8**	**+3.0**
ITBZ	**Tabriz**	**1.53**	**102**	Pg		**Pg**		**12 23 28.4**	**-0.3**
GNI	**Garni**	**1.62**	**14**	Pn		**Pg**		**12 23 29.5**	**-0.8**
GNI				Sn		**Sg**		**12 23 52.4**	**+1.1**
GNI	**Garni**	**1.62**	**14**⇑	*i*P		**Pg**		**12 23 29.7**	**-0.7**
GNI				⇑*i*S		**Sg**		**12 23 51.3**	**0.0**
IAZR	**Azarshahr**	**1.63**	**123**	Pg		**Pg**		**12 23 31.0**	**+0.5**
ALVK	**Alvank**	**1.69**	**77**	*e*P		**Pg**		**12 23 31.7**	**+0.1**
ALVK				*e*S		**Sg**		**12 23 53.8**	**+0.4**
GRS	**Goris**	**1.87**	**60**⇓	*i*P		**Pg**		**12 23 34.0**	**-1.1**
GRS				⇑*i*S		**Sg**		**12 23 59.0**	**-0.4**
EGVZ	**Egvard**	**1.91**	**69**	*e*P		**Pg**		**12 23 35.4**	**-0.4**
EGVZ				*e*S		**Sg**		**12 24 01.0**	**+0.5**
AYRK	**Ayrk**	**1.95**	**37**	*e*P		**Pg**		**12 23 36.7**	**+0.1**
AYRK				*e*S		**Sg**		**12 24 03.4**	**+1.5**
MAHB	**Mahabad**	**2.14**	**147**	Pn		**Pb**		**12 23 38.8**	**0.0**
EAK	**Akyaka**	**2.17**	**347**	P		**Pg**		**12 23 39.9**	**-0.9**
EAK				S		**Sg**		**12 24 10.8**	**+1.9**
IHRS	**Heris**	**2.21**	**96**	Pn		**Pb**		**12 23 39.7**	**-0.3**
VRTB	**Varto-Mus**	**2.26**	**286**	Pn		**Pn**		**12 23 37.6**	**0.0**
GDB	**GEDABAY**	**2.44**	**28**	P		**Pn**		**12 23 40.8**	**+0.7**
GDB				S		**Sb**		**12 24 14.6**	**+0.2**
LSVT	**Lusahovit**	**2.45**	**17**	*e*P		**Pb**		**12 23 43.0**	**-1.0**
LSVT				*e*S		**Sg**		**12 24 19.2**	**+1.2**
SENK	**Senkaya-Erzuru**	**2.47**	**324**	Pn		**Pb**		**12 23 41.6**	**-2.7**
QRD	**Qoradiz**	**2.55**	**69**	P		**Pn**		**12 23 42.5**	**+1.0**
QRD				S		**Sb**		**12 24 18.0**	**+0.6**
GANJ	**Ganja**	**2.62**	**37**	P		**Pb**		**12 24 44.2**	**-2.6**
GANJ				S		**Sb**		**12 24 18.1**	**-1.3**
QZX	**Qazax, Azerbai**	**2.63**	**19**	P		**Pn**		**12 23 43.0**	**+0.5**
QZX				S		**Sb**		**12 24 17.4**	**-2.3**
AGDM	**Agdam**	**2.70**	**54**	P		**Pn**		**12 23 43.9**	**+0.4**
AGDM				S		**Sb**		**12 24 20.6**	**-1.0**
IHSH	**Hashtrud**	**2.70**	**117**	Pn		**Pb**		**12 23 46.5**	**-1.9**
ISRB	**Sarab**	**2.80**	**104**	Pn		**Pb**		**12 23 47.9**	**-2.1**
BLQ	**Beylaqan**	**2.82**	**65**	P		**Pb**		**12 23 47.0**	**-3.2**
BLQ				S		**Sb**		**12 24 23.9**	**-1.3**
BNGB	**Bingl**	**2.82**	**280**	Pn		**Pn**		**12 23 45.3**	**0.0**
BRDA	**Brd**	**2.83**	**52**	P		**Pn**		**12 23 46.5**	**+1.2**
BRDA				S		**Sb**		**12 24 24.6**	**-0.7**
TRLG	**Trialeti**	**2.96**	**358**	P		**Pb**		**12 23 52.4**	**-0.4**
DGRG	**David-gareji**	**3.00**	**16**	P		**Pb**		**12 23 50.5**	**-2.9**
DGRG				S		**Sg**		**12 24 38.8**	**+3.1**
YEDI	**Yedisu-Bingol**	**3.01**	**288**	Pn		**Pn**		**12 23 48.3**	**+0.3**
MNGR	**Mingechevir, A**	**3.10**	**44**	P		**Pn**		**12 23 50.0**	**+0.9**
MNGR				S		**Sb**		**12 24 29.8**	**-3.4**
VSHL	**Vashlovani**	**3.13**	**31**	P		**Pb**		**12 23 53.9**	**-1.6**
VSHL				S		**Sg**		**12 24 42.9**	**+3.1**
YRD	**Yardimli**	**3.14**	**83**	P		**Pb**		**12 23 51.6**	**+1.8**
YRD				S		**Sb**		**12 24 32.8**	**-1.8**
ZRD	**Zardab**	**3.16**	**56**	P		**Pn**		**12 23 50.9**	**+1.0**
ZRD				S		**Sb**		**12 24 32.2**	**-2.7**
LRK	**Lerik**	**3.21**	**87**	P		**Pn**		**12 23 52.0**	**+1.4**
LRK				S		**Sb**		**12 24 34.5**	**-2.0**
DDFL	**Dedoflistskaro**	**3.21**	**26**	P		**Pg**		**12 24 01.2**	**+0.4**
GLBA	**Clilabad**	**3.30**	**77**	P		**Pn**		**12 23 52.6**	**+0.8**
GLBA				S		**Sb**		**12 24 37.3**	**-1.7**
SEKA	**Sheki**	**3.48**	**40**	P		**Pn**		**12 23 56.6**	**+2.3**
SAAT	**Saatly**	**3.49**	**67**	S		**Sb**		**12 24 40.7**	**-3.6**
LKRN	**Lenkeran, Azer**	**3.55**	**86**	S		**Sb**		**12 24 44.1**	**-2.1**
ZKTA	**Zakatala**	**3.56**	**30**	P		**Pn**		**12 23 57.2**	**+1.8**
ZKTA				S		**Sb**		**12 24 43.4**	**-3.1**
ASTR	**Astara**	**3.56**	**89**	P		**Pn**		**12 23 57.4**	**+2.0**
ASTR				S		**Sb**		**12 24 43.8**	**-2.7**
QBL	**Gabala**	**3.64**	**48**	P		**Pn**		**12 23 58.3**	**+1.8**
QBL				S		**Sb**		**12 24 44.8**	**-4.1**
XNQ	**Khinaliq**	**3.96**	**48**	P		**Pn**		**12 24 02.2**	**+1.1**
XNQ				S		**Sb**		**12 24 54.1**	**-4.1**
PQL	**Pirkuli**	**4.02**	**55**	P		**Pn**		**12 24 02.7**	**+0.9**
PQL				S		**Sb**		**12 24 55.6**	**-4.1**
GBS	**Qobustan**	**4.12**	**60**	P		**Pn**		**12 24 04.2**	**+1.0**
GBS				S		**Sb**		**12 24 56.0**	**-6.8**
SHTL	**Shatili**	**4.14**	**9**	P		**Pb**		**12 24 14.4**	**+1.6**
QSAR	**Qusar**	**4.26**	**45**	P		**Pn**		**12 24 05.9**	**+0.9**
QSAR				S		**Sn**		**12 24 58.4**	**+3.2**
ATGJ	**Altiaghaj**	**4.28**	**56**	P		**Pn**		**12 24 06.9**	**+1.6**
ATGJ				S		**Sn**		**12 25 00.1**	**+4.3**
QUBA	**Quba, Azerbaij**	**4.29**	**48**	P		**Pn**		**12 24 05.9**	**+0.5**
QUBA				S		**Sb**		**12 25 00.6**	**-6.8**
SIZA	**Siyzn**	**4.37**	**54**	P		**Pn**		**12 24 07.6**	**+1.1**
SIZA				S		**Sn**		**12 25 02.1**	**+4.2**

*IDC **26** 12:28:20.3±0.7,49°.17N×158°.29E,h0km,mb3.7/12, mbtmp3.7/14,ML3.0/2,MS2.3/1,Error ellipse: s-maj=19.7km s-min=16.9km az=135.0*
*KRSC **26** 12:28:24.2±1.5,49°.46N×158°.59E,h50km±39km,Ml4.2*

ISC 26 12:28:25.8±0.8,49°.29N±0°.07×158°.37E±0°.07,h35km,n42, σ1§12/46,mb3.7/12,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.01**	**315**	*e*P		**Pn**		**12 28 55.9**	**-1.3**
SKR				*e*S		**Sn**		**12 29 21.0**	**-0.1**
PAU	**Pauzhetka**	**2.39**	**336**	*e*P		**Pn**		**12 29 02.5**	**0.0**
PAU				*e*S		**Sn**		**12 29 31.5**	**+1.0**
KDTR	**Khodutka, Kamc**	**2.53**	**356**	*e*P		**Pn**		**12 29 02.9**	**-1.4**
KDTR				*e*S		**Sn**		**12 29 32.0**	**-1.7**
ASAK	**Asacha**	**3.11**	**355**	*e*P		**Pn**		**12 29 12.5**	**+0.1**
RUS	**Russkaya**	**3.15**	**2**	*e*P		**Pn**		**12 29 12.1**	**-0.7**
RUS				*e*S		**Sn**		**12 29 47.3**	**-1.8**
MIPR	**Malaya Ipel'ka**	**3.16**	**342**	*e*P		**Pn**		**12 29 13.4**	**+0.4**
MTVR	**Mutnovka**	**3.20**	**358**	*e*P		**Pn**		**12 29 12.8**	**-0.8**
MTVR				*e*S		**Sn**		**12 29 48.8**	**-1.8**
GRL	**Gorelyy**	**3.27**	**357**	*e*P		**Pn**		**12 29 14.4**	**-0.2**
GRL				*e*S		**Sn**		**12 29 51.6**	**-0.7**
KRMR	**Karymshinskiy**	**3.54**	**358**	*e*P		**Pn**		**12 29 18.3**	**0.0**
KRMR				*e*S		**Sn**		**12 29 59.2**	**+0.3**
APC	**Apacha**	**3.72**	**349**	*e*P		**Pn**		**12 29 21.1**	**+0.4**
PET	**Petropavlovsk**	**3.74**	**3**	*e*P		**Pn**		**12 29 19.9**	**-1.0**
PET				*e*S		**Sn**		**12 30 01.4**	**-2.3**
DALK	**Dalny**	**3.75**	**4**	*e*P		**Pn**		**12 29 20.1**	**-1.0**
DALK				*e*S		**Sn**		**12 30 01.7**	**-2.2**
PETK	**Petropavlovsk-**	**3.84**	**354**	Pn		**Pn**		**12 29 22.4**	**-0.1**
	baz=146,slow=15								
UGLR	**Uglovaya**	**3.93**	**4**	*e*P		**Pn**		**12 29 23.7**	**0.0**
SPN	**Mys Shipunski**	**3.95**	**15**	*e*P		**Pn**		**12 29 22.9**	**-1.0**
SPN				*e*S		**Sn**		**12 30 05.6**	**-3.3**
AVH	**Avacha**	**3.98**	**3**	*e*P		**Pn**		**12 29 25.4**	**+1.0**
SMAR	**Somma**	**3.98**	**4**	*e*P		**Pn**		**12 29 24.0**	**-0.5**
KOK	**Koryaka**	**4.01**	**2**	*e*P		**Pn**		**12 29 24.6**	**-0.1**
KRX	**Arik**	**4.08**	**2**	*e*P		**Pn**		**12 29 25.4**	**-0.3**
GNL	**Ganaly**	**4.42**	**357**	*e*P		**Pn**		**12 29 31.0**	**+0.7**
KBTR	**Krutoberegovo**	**7.43**	**20**	*e*P		**Pn**		**12 30 12.4**	**+0.8**
MA2	**Magadan**	**11.20**	**340**	LR		LR		12 34 37.5	
	comp=Z,17nm,21.9s,baz=72,slow=33								
ASAJ	**Asahikawa**	**12.00**	**250**	Pn		**Pn**		**12 31 13.0**	**-1.2**
	0.1nm,0.3s,baz=284,slow=26,SNR=1.5								
	4.6nm,1.2s								
SEY	**Seymchan**	**14.06**	**349**	Pn		**Pn**		**12 31 44.2**	**+2.0**
	0.1nm,0.3s,baz=148,slow=9.7,SNR=5.7								
	0.3nm,0.3s								
H11N2	**WAKE ISLAND Hy**	**30.28**	**164**	T		T		13 06 13.6	
	baz=349								
H11N3	**WAKE ISLAND Hy**	**30.29**	**164**	T		T		13 06 14.0	
	baz=349,slow=74,SNR=4.0								
H11N1	**WAKE ISLAND Hy**	**30.29**	**164**	T		T		13 06 14.8	
	baz=349,slow=74,SNR=4.5								
H11S1	**WAKE ISLAND Hy**	**31.44**	**165**	T		T		13 07 40.7	
	baz=350,slow=76,SNR=4.7								
H11S3	**WAKE ISLAND Hy**	**31.45**	**165**	T		T		13 07 41.0	
	baz=350,slow=76,SNR=5.6								
H11S2	**WAKE ISLAND Hy**	**31.46**	**165**	T		T		13 07 42.5	
	baz=350,slow=76,SNR=6.3								
ILAR	**Eielson Array**	**32.34**	**41**	P		**P**		**12 34 51.8**	**+0.5**
	0.2nm,0.6s,baz=258,slow=7.4,SNR=5.3								
	0.2nm,0.6s								
ZALV	**Zalesovo Beam**	**44.01**	**305**	P		**P**		**12 36 29.0**	**-0.4**
	0.3nm,0.4s,baz=61,slow=10,SNR=1.9								
	0.3nm,0.4s								
YKA	**Yellowknife Ar**	**46.74**	**40**	P		**P**		**12 36 52.5**	**+1.5**
	0.1nm,0.5s,baz=294,slow=7.6,SNR=2.3								
	0.1nm,0.5s								
MKAR	**Makanchi Array**	**48.90**	**298**	P		**P**		**12 37 07.5**	**-0.4**
	0.3nm,0.5s,baz=46,slow=3.5,SNR=4.3								
	0.3nm,0.5s								
KURBB	**Kurchatov Arra**	**48.98**	**304**	P		**P**		**12 37 08.4**	**-0.1**
	0.2nm,0.4s,baz=61,slow=7.6,SNR=3.1								
KURBB				PcP		**PcP**		**12 38 31.6**	**-0.4**
	0.3nm,0.6s,baz=60,slow=2.9,SNR=2.3								
	0.2nm,0.4s								
SPITS	**Spitsbergen Ar**	**50.71**	**351**	P		**P**		**12 37 22.3**	**+1.0**
	4.3nm,0.9s,baz=111,slow=12,SNR=1.9								
	4.3nm,0.9s								
BVAR	**Borovoye Array**	**51.95**	**310**	P		**P**		**12 37 30.3**	**-0.6**
	0.9nm,0.6s,baz=68,slow=8.1,SNR=3.3								
	0.9nm,0.6s								
NVAR	**Mina Array Bea**	**58.15**	**67**	P		**P**		**12 38 16.7**	**+0.5**
	0.6nm,0.6s,baz=292,slow=7.5,SNR=5.7								
	0.6nm,0.6s								
PDAR	**Pinedale Array**	**60.40**	**58**	P		**P**		**12 38 31.8**	**+0.2**
	0.5nm,0.9s,baz=335,slow=2.1,SNR=5.1								
	0.5nm,0.9s								
WRA	**Warramunga Arr**	**72.17**	**204**	P		**P**		**12 39 45.5**	**-1.3**
	2.1nm,0.7s,baz=20,slow=6.3,SNR=14								
	2.1nm,0.7s								
TXAR	**Lajitas Array**	**73.19**	**65**	P		**P**		**12 39 53.6**	**+0.5**
	1.0nm,0.7s,baz=298,slow=4.7,SNR=15								
	1.0nm,0.7s								
ASAR	**Alice Springs**	**75.84**	**203**	P		**P**		**12 40 07.9**	**-0.3**
	0.5nm,0.4s,baz=17,slow=5.7,SNR=7.3								
	0.5nm,0.4s								

*NSSP **26** 12:59:40.9,38°.35N×44°.55E,h10km,Ms3.0*
*AZER **26** 12:59:41.3,38°.41N×44°.62E,h5km,ml2.7*
*ISK **26** 12:59:41.6,38°.15N×44°.61E,h13km,ML2.8/4*
*AFAD **26** 12:59:43.7,38°.40N×44°.44E,h7km±3km,ML2.6*
*TEH **26** 12:59:44.1,38°.45N×44°.59E,h6km±140km,ML2.6, Presumed earthquake*

ISC 26 12:59:43.1±1.3,38°.35N±0°.03×44°.49E±0°.02,h5km±11km, n33,σ1§40/60,1C-3D,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.50**	**309**	P		**Pg**		**12 59 51.9**	**-0.8**
OZAP				S		**Sg**		**12 59 59.8**	**+0.5**
OZAP					IAML			13 00 01.0	
	comp=E,1μm,0.4s								
OZAP					IAML			13 00 07.0	
	comp=N,1μm,0.7s								
YOVA	**Hakkari_Yksek**	**0.77**	**192**	P		**Pn**		**13 00 00.1**	**-0.8**
YOVA				S		**Sn**		**13 00 11.5**	**-1.5**
YOVA					IAML			13 00 19.0	
	comp=N,160nm,0.5s								
TVAN	**Van**	**0.87**	**283**	P		**Pb**		**12 59 58.8**	**-2.0**
TVAN				S		**Sb**		**13 00 11.6**	**-1.2**
TVAN					IAML			13 00 19.0	
	comp=N,286nm,0.4s								
TVAN					IAML			13 00 28.0	
	comp=E,303nm,0.9s								
ISHB	**Shabestar**	**0.89**	**94**	Pg		**Pb**		**12 59 59.5**	**-1.7**
VANB	**Van**	**0.90**	**287**	Pg		**Pb**		**13 00 01.5**	**+0.3**
VANB				Sg		**Sn**		**13 00 15.8**	**-0.2**
VMUR	**Van-Muradiye**	**0.96**	**312**	P		**Pb**		**13 00 01.3**	**-1.2**
VMUR				S		**Sb**		**13 00 14.2**	**-1.4**
VMUR					IAML			13 00 19.0	
	comp=N,203nm,0.3s								
VMUR					IAML			13 00 19.0	
	comp=E,204nm,0.4s								
HAKT	**HAKKARI**	**1.00**	**218**	P		**Pn**		**13 00 03.5**	**-0.5**
HAKT				S		**Sn**		**13 00 20.1**	**+1.5**
HAKT	**HAKKARI**	**1.00**	**218**	P		**Pn**		**13 00 03.4**	**-0.6**
HAKT				S		**Sn**		**13 00 20.9**	**+2.2**
MAKU	**Maku**	**1.02**	**9**	Pg		**Pb**		**13 00 00.7**	**-2.7**
MAKU				Sg		**Sb**		**13 00 14.3**	**-3.0**
GEVA	**Gevas**	**1.12**	**269**	P		**Pb**		**13 00 03.3**	**-1.8**
GEVA				S		**Sn**		**13 00 21.8**	**+0.1**
NAX	**Nakhchivan**	**1.14**	**43**	P		**Pn**		**13 00 03.7**	**-2.2**
NAX				S		**Sb**		**13 00 19.3**	**-1.3**
AKDM	**Akdamar-Van**	**1.18**	**270**	Pn		**Pn**		**13 00 05.1**	**-1.4**
AKDM				Sn		**Sg**		**13 00 23.8**	**+2.6**
ITBZ	**Tabriz**	**1.31**	**94**	Pg		**Pn**		**13 00 07.1**	**-1.2**
ORD	**Ordubad**	**1.32**	**63**	P		**Pn**		**13 00 07.3**	**-1.0**
ORD				S		**Sn**		**13 00 24.4**	**-1.9**
SBZ	**Shahbuz**	**1.34**	**38**	P		**Pn**		**13 00 07.4**	**-1.3**
SBZ				S		**Sn**		**13 00 26.5**	**-0.4**
IAZR	**Azarshahr**	**1.35**	**119**	Pg		**Pg**		**13 00 09.8**	**+0.7**
HYR	**Heyderabad**	**1.40**	**12**	P		**Pn**		**13 00 10.2**	**+0.8**
HYR				S		**Sb**		**13 00 29.5**	**+1.4**
VAYK	**Vayk**	**1.54**	**28**⇓	*e*P		**Pn**		**13 00 10.4**	**-0.9**
VAYK				⇓*e*S		**Sn**		**13 00 32.1**	**+0.4**
IGDI	**IGDIR**	**1.55**	**348**	P		**Pn**		**13 00 12.1**	**+0.6**
IGDI				S		**Sb**		**13 00 34.2**	**+1.7**
ALVK	**Alvank**	**1.58**	**67**	*e*P		**Pn**		**13 00 11.5**	**-0.3**
ALVK				*e*S		**Sn**		**13 00 32.0**	**-0.6**
AGRB	**Hanur-Agry**	**1.69**	**317**	Pn		**Pn**		**13 00 14.6**	**+1.0**
AGRB				Sn		**Sb**		**13 00 38.6**	**+2.0**
GNI	**Garni**	**1.81**	**6**	Pn		**Pn**		**13 00 15.9**	**+0.7**
GNI	**Garni**	**1.81**	**6**	*e*P		**Pn**		**13 00 16.2**	**+1.0**
GNI				*e*S		**Sb**		**13 00 42.1**	**+2.1**
EGVZ	**Egvard**	**1.83**	**61**	*e*P		**Pn**		**13 00 15.7**	**+0.3**
EGVZ				*e*S		**Sb**		**13 00 40.6**	**+0.1**
GRS	**Goris**	**1.85**	**51**⇓	*i*P		**Pn**		**13 00 15.0**	**-0.6**
GRS				⇑*i*S		**Sn**		**13 00 39.0**	**-0.4**
GURO	**Guroymak-BITLI**	**1.94**	**277**	Pn		**Pn**		**13 00 17.1**	**+0.2**
IHRS	**Heris**	**2.01**	**90**	Pn		**Pb**		**13 00 20.5**	**+0.2**
GDB	**GEDABAY**	**2.57**	**22**	P		**Pn**		**13 00 26.0**	**+0.4**
GDB				S		**Sb**		**13 01 00.9**	**-0.8**
GANJ	**Ganja**	**2.70**	**31**	P		**Pn**		**13 00 27.9**	**+0.6**
GANJ				S		**Sn**		**13 01 02.3**	**+1.9**
QZX	**Qazax, Azerbai**	**2.79**	**14**	P		**Pn**		**13 00 29.1**	**+0.6**
QZX				S		**Sb**		**13 01 06.5**	**-1.6**
YRD	**Yardimli**	**3.00**	**78**	P		**Pn**		**13 00 33.6**	**+2.1**
YRD				S		**Sn**		**13 01 10.1**	**+2.2**
LRK	**Lerik**	**3.04**	**83**	P		**Pn**		**13 00 33.1**	**+1.1**
LRK				S		**Sn**		**13 01 10.1**	**+1.1**
XNQ	**Khinaliq**	**3.99**	**44**	P		**Pn**		**13 00 46.3**	**+1.2**
XNQ				S		**Sn**		**13 01 34.2**	**+1.8**

IDC 26 13:30:50.5±6.5,15°.40S×173°.15W,h0km,mb3.5/3, mbtmp3.5/3,Error ellipse: s-maj=313.1km s-min=24.5km az=142.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.99**	**42**	Pn		Pn		13 31 25.7	+0.1
	28nm,0.3s,baz=211,slow=5.9,SNR=123								
AFI				S		Sn		13 31 47.9	-3.3
	199nm,0.3s,baz=46,slow=22,SNR=29								
WRA	**Warramunga Arr**	**50.08**	**257**	P		P		13 39 46.8	-0.9
	0.2nm,0.6s,baz=95,slow=7.3,SNR=1.5								
	0.2nm,0.6s								
ASAR	**Alice Springs**	**50.34**	**252**	P		P		13 39 50.1	+0.5
	1.0nm,0.8s,baz=88,slow=8.0,SNR=12								
	1.0nm,0.8s								
ILAR	**Eielson Array**	**82.40**	**11**	P		P		13 43 14.0	-0.1
	0.3nm,0.7s,baz=225,slow=6.0,SNR=6.1								
	0.3nm,0.7s								

*UCC **26** 13:33:44.8,50°.04N×0°.89E,h0km,ML3.0,Explosion.*
*STR **26** 13:33:46.2±0.8,50°.N±9°×±°,h0km,MLv2.9/7,LOCSAT earthModelID haslach_taup-2.11 preliminary*

ISC 26 13:33:44.5±1.2,50°.04N±0°.06×0°.90E±0°.04,h0km,n39, σ0§94/47,15D,United Kingdom

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CLEV	**Clevilliers**	**1.52**	**168**	Pn		**Pg**		**13 34 14.0**	**+0.3**
CLEV				Sn		**Sn**		**13 34 36.9**	**+3.5**
BARI	**Barisis-aux-bo**	**1.63**	**106**	Pn		**Pb**		**13 34 15.5**	**+0.1**
BOST	**Ostende**	**1.77**	**46**	*d*P		**Pn**		**13 34 16.6**	**+0.3**
SOMF	**Saint-Ouen-de-**	**1.83**	**198**	Pn		**Pn**		**13 34 17.4**	**+0.3**
SOMF				Pg		**Pg**		**13 34 19.9**	**+0.4**
LOUF	**Saint-Loup**	**1.98**	**227**	Pn		**Pn**		**13 34 19.4**	**+0.3**
BSKQ	**Steenkerk**	**2.12**	**72**	*d*P		**Pn**		**13 34 21.5**	**+0.3**
BRQR	**Ronquire**	**2.20**	**74**	*d*P		**Pn**		**13 34 22.2**	**-0.1**
TSDF	**Thoir-sur-Di**	**2.31**	**188**	Pn		**Pb**		**13 34 25.6**	**-1.3**
TSDF				Pg		**Pg**		**13 34 29.9**	**+1.2**
UCC	**Uccle**	**2.34**	**70**	*d*P		**Pn**		**13 34 23.9**	**-0.2**
DOU	**Dourbes**	**2.38**	**87**	Pn		**Pn**		**13 34 25.1**	**+0.4**
DOU	**

NIZB	**Nizh Angarsk**	**1.52**	**303**	*e*Pg	**Pb**	**13 51 53.7**	**0.0**
NIZB				*e*Sg	**Sg**	**13 52 14.1**	**-0.2**
SVKR	**Severomuysk**	**1.52**	**40**	*e*PN	**Pg**	**13 51 55.9**	**+1.3**
SVKR				*e*		13 52 18.1	
SVKR				pmax	pmax		
	comp=Z,304nm,0.3s						
SVKR				smax	smax		
	comp=E,2μm,0.5s						
SVKR	**Severomuysk**	**1.52**	**40**	*e*Pg	**Pg**	**13 51 56.7**	**+2.1**
SVKR				*e*Sg	**Sg**	**13 52 18.4**	**+4.1**
SVKR				Pmax			
	comp=E,321nm,0.3s						
SVKR				Smax			
	comp=E,2μm,0.5s						
SYVR	**Suvo**	**1.69**	**219**	*e*PG	**Pn**	**13 51 54.9**	**-0.3**
SYVR				*e*		13 52 16.1	
SYVR				pmax	pmax		
	comp=Z,305nm,0.7s						
SYVR				smax	smax		
	comp=E,1μm,0.4s						
SYVR	**Suvo**	**1.69**	**219**	*e*Pg	**Pn**	**13 51 54.8**	**-0.4**
SYVR				*e*		13 51 57.5	
SYVR				*e*Sg	**Sn**	**13 52 15.8**	**-1.1**
SYVR				*e*		13 52 19.1	
SYVR				max			
	comp=E,300nm,0.8s						
SYVR				max			
	comp=E,964nm,0.4s						
NLYR	**Nelyaty**	**2.67**	**54**	*e*PN	**Pb**	**13 52 11.4**	**-2.1**
NLYR				*e*		13 52 14.9	
NLYR				*e*		13 52 51.5	
NLYR				pmax	pmax		
	comp=Z,77nm,0.8s						
NLYR				smax	smax		
	comp=N,357nm,1.0s						
NLYR	**Nelyaty**	**2.67**	**54**	*e*Pn	**Pb**	**13 52 11.4**	**-2.1**
NLYR				*e*Pg	**Pg**	**13 52 15.6**	**-1.2**
NLYR				*e*Sg	**Sg**	**13 52 51.8**	**+0.4**
NLYR				*e*SgSg	Sb	13 52 59.4	+13
NLYR				Pmax			
	comp=N,78nm,0.5s						
NLYR				max			
	comp=N,616nm,1.3s						
OGRR	**Ongureny**	**2.81**	**243**	*e*Pn	**Pn**	**13 52 10.7**	**+0.2**
OGRR				*e*Pg	**Pb**	**13 52 14.3**	**-1.4**
OGRR				*e*Sn	**Sn**	**13 52 44.2**	**-0.1**
OGRR				*e*Sg	**Sb**	**13 52 50.5**	**+0.4**
OGRR				*e*		13 52 52.8	
OGRR				Pmax			
	comp=N,40nm,0.3s						
OGRR				max			
	comp=N,373nm,0.3s						
GORB	**Goryachinsk**	**2.88**	**228**	⇓*i*Pn	**Pn**	**13 52 11.7**	**+0.2**
GORB				*e*Pg	**Pb**	**13 52 15.5**	**-1.5**
GORB				*e*Sg	**Sb**	**13 52 52.6**	**+0.3**
UZR	**Uzur**	**2.91**	**237**	*e*Pn	**Pn**	**13 52 11.4**	**-0.5**
UZR				*e*Pg	**Pb**	**13 52 15.6**	**-1.9**
UZR				*e*Sn	**Sn**	**13 52 44.3**	**-2.6**
UZR				*e*Sg	**Sb**	**13 52 53.2**	**+0.1**
UZR				Pmax			
	comp=N,64nm,0.2s						
UZR				Smax			
	comp=N,380nm,0.5s						
BOD	**Bodaibo**	**3.10**	**22**	*e*PN	**Pb**	**13 52 18.8**	**-1.9**
BOD				*e*		13 52 24.6	
BOD				*e*		13 53 03.9	
BOD				pmax	pmax		
	comp=Z,25nm,0.5s						
BOD				smax	smax		
	comp=N,146nm,0.8s						
BOD	**Bodaibo**	**3.10**	**22**	*e*Pn	**Pb**	**13 52 17.2**	**-3.5**
BOD				*e*Pg	**Pg**	**13 52 23.4**	**-1.5**
BOD				*e*Sn	**Sb**	**13 52 55.6**	**-2.9**
BOD				*e*Sg	**Sg**	**13 53 04.7**	**-0.3**
BOD				*e*SgSg	Sn	13 53 11.9	+20
BOD				Pmax			
	comp=N,25nm,0.5s						
BOD				max			
	comp=N,267nm,0.9s						
KELR	**Kotokel**	**3.13**	**226**	*e*Pn	**Pn**	**13 52 15.0**	**+0.1**
KELR				*e*Pg	**Pb**	**13 52 19.9**	**-1.4**
KELR				*e*Sn	**Sn**	**13 52 51.0**	**-1.4**
KELR				*e*Sg	**Sb**	**13 53 00.5**	**+1.0**
CIT	**Chita**	**3.14**	**160**	*e*PN	**Pb**	**13 52 22.7**	**+1.2**
CIT				*e*		13 53 00.5	
CIT				pmax	pmax		
	comp=Z,103nm,1.0s						
CIT				smax	smax		
	comp=E,1μm,0.2s						
CIT	**Chita**	**3.14**	**160**	*e*Pg	**Pb**	**13 52 20.1**	**-1.4**
CIT				*e*Sg	**Sb**	**13 53 00.8**	**+1.0**
CIT				Pmax			
	comp=E,83nm,0.2s						
CIT				Smax			
	comp=E,1μm,0.2s						
ZRHB	**Zarechye**	**3.68**	**231**	*e*Pn	**Pn**	**13 52 22.9**	**+0.5**
ZRHB				*e*Pg	**Pb**	**13 52 30.2**	**-0.4**
ZRHB				*e*Sg	**Sb**	**13 53 17.3**	**+2.1**
ZRHB				Pmax			
	comp=E,66nm,0.8s						
ZRHB				Smax			
	comp=E,640nm,1.0s						
TRG	**Tyrgan**	**3.92**	**238**	*e*PN	**Pn**	**13 52 25.8**	**0.0**
TRG				*e*		13 52 34.2	
TRG				*e*S	**Sn**	**13 53 11.7**	**-0.2**
TRG				*e*		13 53 23.6	
TRG				pmax	pmax		
	comp=Z,31nm,0.5s						
TRG				smax	smax		
	comp=N,166nm,0.5s						
TRG	**Tyrgan**	**3.92**	**238**	*e*Pn	**Pn**	**13 52 25.9**	**+0.1**
TRG				*e*Pg	**Pb**	**13 52 33.8**	**-0.9**
TRG				*e*Sg	**Sb**	**13 53 23.6**	**+1.4**
TRG				Pmax			
	comp=N,31nm,0.5s						
TRG				Smax			
	comp=N,168nm,0.5s						
UUDB	**Ulan-Yde**	**3.98**	**220**	*e*Pn	**Pn**	**13 52 26.5**	**-0.1**
UUDB				*e*Pg	**Pb**	**13 52 35.5**	**-0.3**
UUDB				*e*		13 52 39.1	
UUDB				*e*Sg	**Sb**	**13 53 26.9**	**+2.9**
UUDB				max			
	comp=N,55nm,0.8s						
UUDB				Smax			
	comp=N,423nm,1.0s						
CRS	**Chara**	**4.11**	**59**	*e*PN	**Pg**	**13 52 42.5**	**-1.8**
CRS				*e*		13 53 36.7	
CRS				pmax	pmax		
	comp=Z,61nm,0.8s						
CRS				smax	smax		
	comp=E,201nm,0.6s						
CRS	**Chara**	**4.11**	**59**	*e*Pn	**Pn**	**13 52 31.8**	**+3.4**
CRS				*e*Pg	**Pg**	**13 52 41.5**	**-2.8**
CRS				*e*Sg	**Sg**	**13 53 36.7**	**-0.8**
CRS				Pmax			
	comp=E,63nm,0.9s						
CRS				Smax			
	comp=E,197nm,0.5s						
FFNB	**Fofonovo**	**4.20**	**228**	*e*Pg	**Pb**	**13 52 40.3**	**+0.7**
FFNB				*e*Sg	**Sb**	**13 53 33.6**	**+3.2**
KAB	**Kabansk**	**4.25**	**228**	*e*Pg	**Pb**	**13 52 41.3**	**+1.0**
KAB				*e*Sg	**Sb**	**13 53 35.1**	**+3.5**
KAB				Pmax			
	comp=E,122nm,0.2s						
KAB				Smax			
	comp=E,506nm,0.9s						
STDB	**Stepnoy Dvoret**	**4.29**	**231**	*e*Pg	**Pb**	**13 52 41.6**	**+0.5**
STDB				*e*Sg	**Sb**	**13 53 35.9**	**+3.0**
HRMR	**Khuramsha**	**4.44**	**223**	*e*Pn	**Pn**	**13 52 32.8**	**-0.1**
HRMR				*e*Pg	**Pb**	**13 52 44.2**	**+0.6**
HRMR				*e*		13 52 46.7	
HRMR				*e*		13 52 49.7	
HRMR				*e*Sg	**Sb**	**13 53 40.7**	**+3.5**
HRMR				max			
	comp=E,63nm,0.5s						
HRMR				Smax			
	comp=E,321nm,0.5s						
VTMR	**Vitim**	**4.49**	**5**	*e*Pg	**Pg**	**13 52 48.9**	**-2.6**
VTMR				*e*Sg	**Sg**	**13 53 48.5**	**-1.2**
VBR	**Suhoy Ruchey**	**4.71**	**230**	*e*Pg	**Pb**	**13 52 47.8**	**-0.3**
VBR				*e*Sg	**Sb**	**13 53 49.1**	**+4.3**
TUP	**Tupik**	**4.76**	**93**	*e*PN	**Pn**	**13 52 38.8**	**+1.5**
TUP				*e*		13 52 50.5	
TUP				*e*S	**Sn**	**13 53 32.5**	**0.0**
TUP				*e*		13 53 55.8	
TUP				pmax	pmax		
	comp=Z,24nm,0.5s						
TUP				smax	smax		
	comp=N,254nm,0.6s						
TUP	**Tupik**	**4.76**	**93**	*e*Pn	**Pn**	**13 52 38.8**	**+1.5**
TUP				*e*		13 52 41.5	
TUP				*e*Pg	**Pb**	**13 52 51.9**	**+2.9**
TUP				*e*Sn	**Sn**	**13 53 32.8**	**+0.3**
TUP				*e*Sg	**Sg**	**13 53 54.6**	**-3.6**
TUP				Pmax			
	comp=N,24nm,0.5s						
TUP				Smax			
	comp=N,260nm,0.9s						
BGT	**Bolshoye Golou**	**4.82**	**235**	*e*Pn	**Pn**	**13 52 38.0**	**-0.1**
BGT				*e*Pg	**Pb**	**13 52 50.1**	**+0.1**
BGT				*e*Sg	**Sb**	**13 53 50.8**	**+2.8**
BGT				Pmax			
	comp=N,10.0nm,0.1s						
BGT				Smax			
	comp=N,87nm,0.6s						
KHNR	**Khani**	**4.99**	**64**	*e*	Pb	13 52 46.9	-6.0
KHNR				*e*Pg	**Pg**	**13 52 57.1**	**-3.9**
KHNR				*e*Sg	**Sg**	**13 54 03.6**	**-2.0**
LSTR	**Listvyanka**	**5.20**	**236**	*e*Pn	**Pn**	**13 52 43.4**	**0.0**
LSTR				*e*Pg	**Pb**	**13 52 57.3**	**+0.7**
LSTR				*e*Sn	**Sn**	**13 53 40.7**	**-2.8**
LSTR				*e*Sg	**Sb**	**13 54 03.6**	**+4.5**
LSTR				Pmax			
	comp=N,14nm,0.8s						
LSTR				Smax			
	comp=N,64nm,0.7s						
IRK	**Irkutsk**	**5.26**	**242**	*e*PN	**Pb**	**13 52 57.5**	**0.0**
IRK				*e*		13 54 02.9	
IRK				pmax	pmax		
	comp=Z,94nm,0.1s						
IRK				smax	smax		
	comp=N,231nm,0.7s						
IRK	**Irkutsk**	**5.26**	**242**	*e*Sg	**Sb**	**13 54 04.6**	**+4.0**
IRK				Smax			
	comp=N,230nm,0.7s						
KPC	**Khapcheranga**	**5.29**	**176**	*e*PN	**Pn**	**13 52 44.3**	**-0.4**
KPC				*e*		13 52 58.9	
KPC				*e*		13 54 05.5	
KPC				pmax	pmax		
	comp=Z,18nm,0.4s						
KPC				smax	smax		
	comp=E,239nm,0.9s						
KPC	**Khapcheranga**	**5.29**	**176**	*e*Pn	**Pn**	**13 52 44.4**	**-0.3**
KPC				*e*Pg	**Pb**	**13 52 59.0**	**+0.8**
KPC				*e*		13 53 05.7	
KPC				*e*Sg	**Sb**	**13 54 06.7**	**+4.9**
KPC				max			
	comp=E,18nm,0.4s						
KPC				Smax			
	comp=E,237nm,0.5s						
IVK	**Ivanovka**	**5.45**	**237**	*e*	**Pb**	**13 53 00.8**	**+0.1**
IVK				*e*Pg	Pg	13 53 01.7	-8.1
IVK				*e*Sg	**Sb**	**13 54 11.1**	**+5.0**
IVK				Pmax			
	comp=E,11nm,0.4s						
IVK				Smax			
	comp=E,208nm,1.1s						
YKLR	**Yuktali**	**5.79**	**70**	*e*Pn	**Pn**	**13 52 54.7**	**+3.3**
YKLR				*e*Pg	**Pg**	**13 53 12.1**	**-4.2**
YKLR				*e*Sg	**Sg**	**13 54 28.4**	**-2.8**
TLY	**Talaya**	**5.90**	**239**	Pg	Pb	13 53 02.7	-5.7
	baz=56,slow=17						
TLY				Lg	Lg	13 54 19.5	
	baz=13,slow=14						
TLY	**Talaya**	**5.90**	**239**	*e*Pg	**Pb**	**13 53 09.5**	**+1.1**
TLY				*e*Sg	**Sb**	**13 54 24.2**	**+5.1**
TLY				Pmax			
	comp=E,19nm,1.0s						
TLY				Smax			
	comp=E,66nm,1.0s						
ARS	**Arshan**	**6.39**	**245**	*e*	Pn	13 53 05.8	+6.1
ARS				*e*Pg	**Pb**	**13 53 19.1**	**+2.4**
ARS				*e*		13 54 38.1	
ARS				*e*Sg	**Sb**	**13 54 40.8**	**+7.7**
ARS				Pmax			
	comp=E,24nm,0.6s						
ARS				Smax			
	comp=E,304nm,0.9s						
ZAK	**Zakamensk**	**6.93**	**232**	*e*PG	**Pg**	**13 53 34.2**	**-3.9**
ZAK				*e*		13 54 57.4	
ZAK				pmax	pmax		
	comp=Z,8.0nm,0.5s						
ZAK				smax	smax		
	comp=N,44nm,0.8s						
ZAK	**Zakamensk**	**6.93**	**232**	*e*Pg	**Pb**	**13 53 28.5**	**+2.5**
ZAK				*e*Sg	Sb	13 54 58.1	+9.3
ZAK				Pmax			
	comp=N,7.0nm,0.5s						
ZAK				Smax			
	comp=N,46nm,1.3s						
MOY	**Mondy**	**7.28**	**247**	*e*PN	**Pn**	**13 53 13.5**	**+1.6**
MOY				*e*		13 53 35.2	
MOY				*e*		13 55 08.4	
MOY				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MOY				smax	smax		
	comp=E,120nm,1.0s						
MOY	**Mondy**	**7.28**	**247**	*e*Pn	**Pn**	**13 53 13.2**	**+1.3**
MOY				*e*Pg	**Pb**	**13 53 34.6**	**+2.7**
MOY				*e*		13 54 34.6	
MOY				*e*Sg	**Sb**	**13 55 07.4**	**+8.7**
MOY				Pmax			
	comp=E,13nm,1.4s						
MOY				Smax			
	comp=E,119nm,1.0s						
HIA	**Hailar**	**7.52**	**136**	*e*Sg	Sg	13 55 16.7	-10
HIA				Smax			
	comp=E,122nm,1.2s						
ORL	**Orlik**	**7.52**	**256**	*e*Pn	**Pn**	**13 53 16.0**	**+0.7**
ORL				*e*		13 53 28.5	
ORL				*e*Pg	**Pb**	**13 53 39.8**	**+3.8**
ORL				*e*		13 54 40.0	
ORL				*e*Sg	Sb	13 55 15.3	+10
ORL				Pmax			
	comp=E,10.0nm,0.6s						
ORL				Smax			
	comp=E,108nm,1.1s						
ULN	**Ulaanbaatar**	**7.72**	**205**	*e*Pn	**Pn**	**13 53 18.7**	**+0.7**
ULN				*e*Pg	**Pb**	**13 53 43.1**	**+3.7**
ULN				*e*Sg	**Sb**	**13 55 20.4**	**+9.0**
ULN				Pmax			
	comp=E,3.0nm,0.4s						
ULN				Smax			
	comp=E,103nm,1.5s						
SONM	**Songino Array**	**7.91**	**207**	Pn	**Pn**	**13 53 20.3**	**-0.4**
	comp=E,1.8nm,0.3s,baz=28,slow=12,SNR=21						
SONM				Lg	Lg	13 55 28.8	
	comp=E,2.1nm,0.3s,baz=19,slow=27,SNR=13						
	comp=E,2.4nm,0.3s						
YAK	**Yakutsk**	**11.69**	**46**	Lg	Lg	13 57 25.6	
	comp=E,1.9nm,0.3s,baz=315,slow=18,SNR=6.2						
KLR	**Kul'dur**	**13.52**	**107**	Lg	Lg	13 58 32.3	
	comp=E,0.1nm,0.3s,baz=210,slow=23,SNR=5.9						
KLR				LR	LR	14 00 44.1	
	comp=E,17nm,19.5s,baz=210,slow=41						
ZALV	**Zalesovo Beam**	**15.69**	**277**	Pn	**Pn**	**13 55 05.2**	**-1.3**
	comp=E,0.8nm,0.3s,baz=73,slow=16,SNR=3.1						
	comp=E,2.1nm,0.6s						
TIXI	**Tiksi**	**18.27**	**17**	P	**P**	**13 55 38.2**	**-0.7**
	comp=E,0.2nm,0.3s,baz=212,slow=8.0,SNR=4.0						
TIXI				Lg	Lg	14 01 01.4	
	comp=E,0.1nm,0.3s,baz=140,slow=6.0,SNR=3.7						
	comp=E,0.8nm,0.4s						
MKAR	**Makanchi Array**	**20.22**	**258**	P	**P**	**13 55 59.1**	**-1.3**
	comp=E,0.3nm,0.7s,baz=56,slow=10,SNR=4.2						
	comp=E,0.3nm,0.7s						
KURK	**Kurchatov**	**20.37**	**272**	P	**P**	**13 56 02.2**	**+0.2**
KURBB	**Kurchatov Arra**	**20.46**	**272**	P	**P**	**13 56 02.2**	**-0.9**
	comp=E,0.3nm,0.6s,baz=62,slow=11,SNR=3.0						
	comp=E,0.3nm,0.6s						
BVAR	**Borovoye Array**	**24.17**	**283**	P	**P**	**13 56 40.0**	**-1.7**
	comp=E,0.2nm,0.5s,baz=56,slow=11,SNR=1.6						
	comp=E,0.2nm,0.5s						
BVAR	**Borovoye Array**	**24.17**	**283**	P	**P**	**13 56 40.0**	**-1.7**
ILAR	**Eielson Array**	**46.38**	**35**	P	**P**	**13 59 53.2**	**+1.7**
	comp=E,0.3nm,0.8s,baz=318,slow=7.6,SNR=4.7						
	comp=E,0.3nm,0.8s						
WRA	**Warramunga Arr**	**77.06**	**158**	P	**P**	**14 03 18.4**	**-0.3**
	comp=E,0.4nm,0.8s,baz=355,slow=5.9,SNR=1.9						
	comp=E,0.4nm,0.8s						

*SDD **26** 13:53:42.5±1.9, 19°.11N×67°.63W, h15km±10km, MD3.1, ML2.6, MW2.7, Presumed earthquake*
*NEIC **26** 13:53:46.3±1.2, 18°.8N±0°.1×67°.60W±0°.05, h33km±13km, ML2.5/37, Error ellipse: s-maj=17.3km s-min=5.3km az=194.0*

ISC 26 13:53:43.7±1.3, 18°.91N±0°.08×67°.68W±0°.03, h22km±6km, n37,σ1ş09/55, 28C-1D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.70**	**129**		**Pb**	**13 53 56.2**	**-1.0**
AGPR				Sn	**Sb**	**13 54 06.5**	**+0.1**
AGPR				IAML		13 54 09.6	
	177nm,0.2s						
AGPR	**Aguadilla, PR**	**0.70**	**129**	⇑*e*Sg	**Sn**	**13 54 08.2**	**-0.1**
AGPR				IAML		13 54 09.0	
	comp=N,101nm,0.2s						
AGPR	**Aguadilla, PR**	**0.70**	**129**	⇑*e*Pg	**Pb**	**13 53 56.8**	**-0.4**
AGPR				⇑*e*Sg	**Sb**	**13 54 06.8**	**+0.4**
AGPR				IAML		13 54 09.0	
	comp=N,101nm,0.2s						
PCDR	**Punta Cana, DR**	**0.77**	**239**	Pn	**Pn**	**13 53 59.4**	**+0.1**
PRSN	**Puerto Rico Se**	**0.86**	**144**	Pn	**Pb**	**13 53 58.8**	**-1.1**
PRSN				IAML		13 54 19.8	
	comp=N,323nm,0.3s						
PRSN	**Puerto Rico Se**	**0.86**	**144**	⇑*e*Sg	**Sn**	**13 54 12.1**	**-0.3**
PRSN				IAML		13 54 24.6	
	comp=N,258nm,0.3s						
PRSN	**Puerto Rico Se**	**0.86**	**144**	*e*Sg	**Sn**	**13 54 12.0**	**-0.3**
PRSN				IAML		13 54 24.6	
	comp=N,258nm,0.3s						
HIDR	**Higuey Centro**	**1.03**	**252**	*i* P	**Pb**	**13 54 03.0**	**+0.1**
HIDR				*i* S	**Sb**	**13 54 16.0**	**0.0**
HIDR				IAML		13 54 16.8	
	comp=N,164nm,0.2s						
HIDR	**Higuey Centro**	**1.03**	**252**	*e*Pg	**Pb**	**13 54 02.0**	**-0.9**
HIDR				⇑*e*Sg	**Sb**	**13 54 15.0**	**-1.0**
HIDR				IAML		13 54 16.8	
	comp=N,164nm,0.2s						
AOPR	**Arecibo Observ**	**1.04**	**122**		**Pb**	**13 54 01.7**	**-1.3**
AOPR				IAML		13 54 25.9	
	comp=N,211nm,0.3s						
AOPR				IAML		13 54 33.3	
	comp=N,85nm,0.3s						
AOPR	**Arecibo Observ**	**1.04**	**122**	⇑*e*Pg	**Pb**	**13 54 02.5**	**-0.6**
AOPR				⇑*e*Sg	**Sn**	**13 54 17.2**	**+0.3**
AOPR				IAML		13 54 25.9	
	comp=N,73nm,0.2s						
AOPR	**Arecibo Observ**	**1.04**	**122**	⇑*e*Pg	**Pb**	**13 54 02.0**	**-1.1**
AOPR				⇑*e*Sg	**Sn**	**13 54 17.4**	**+0.4**
AOPR				IAML		13 54 25.9	
	comp=N,73nm,0.2s						
MLPR	**Magueyes Islan**	**1.11**	**147**		**Pn**	**13 54 03.5**	**-0.5**
MLPR				IAML		13 54 24.6	
	comp=N,99nm,0.4s						
MLPR	**Magueyes Islan**	**1.11**	**147**	⇑*e*Pg	**Pn**	**13 54 03.8**	**-0.2**
MLPR				⇑*e*Sg	**Sn**	**13 54 21.0**	**+2.3**
MLPR				IAML		13 54 24.4	
	comp=N,34nm,0.5s						
MLPR	**Magueyes Islan**	**1.11**	**147**	⇑*e*Pg	**Pn**	**13 54 03.8**	**-0.2**
MLPR				⇑*e*Sg	**Sn**	**13 54 21.0**	**+2.3**
MLPR				IAML		13 54 24.4	
	comp=N,34nm,0.5s						
CELP	**Cerrillos**	**1.33**	**128**	⇓*e*Pg	**Pn**	**13 54 07.0**	**0.0**
CELP				⇑*e*Sg	**Sb**	**13 54 26.1**	**+1.4**
CELP				IAML		13 54 30.7	
	comp=N,28nm,0.2s						
CELP	**Cerrillos**	**1.33**	**128**	⇑*e*Pg	**Pn**	**13 54 07.1**	**0.0**
CELP				⇑*e*Sg	**Sb**	**13 54 26.2**	**+1.4**
CELP				IAML		13 54 30.7	
	comp=N,28nm,0.2s						
OBIP	**Obispado Ponce**	**1.34**	**130**	Pn	**Pn**	**13 54 06.5**	**-0.5**
ECPR	**Experimental S**	**1.38**	**115**	Pn	**Pn**	**13 54 06.8**	**-0.9**
ECPR				IAML		13 54 31.5	
	comp=N,134nm,0.2s						
ECPR				IAML		13 54 33.6	
	comp=N,137nm,0.2s						
SMDR	**Samana, DR**	**1.48**	**285**	⇑*e*Pg	**Pn**	**13 54 07.8**	**-1.2**
SMDR				⇑*e*Sg	**Sn**	**13 54 26.7**	**-0.9**
SMDR				IAML		13 54 42.3	
	comp=N,47nm,0.5s						
SMDR	**Samana, DR**	**1.48**	**285**	⇑*e*Pg	**Pn**	**13 54 08.8**	**-0.1**
SMDR				*e*Sg	**Sb**	**13 54 30.0**	**+1.2**
SMDR				IAML		13 54 42.3	
	comp=N,47nm,0.5s						
DR12	**Loma Pena Alta**	**1.61**	**266**	Pn	**Pn**	**13 54 11.6**	**+0.6**
HATOM	**Hato Mayor del**	**1.62**	**266**	*e*Pg	**Pb**	**13 54 12.6**	**-0.2**
HATOM				⇑*e*Sg	**Sb**	**13 54 33.2**	**+0.3**
HATOM				IAML		13 54 38.5	
	comp=N,38nm,0.2s						
HATOM	**Hato Mayor del**	**1.62**	**266**	*e*Pg	**Pb**	**13 54 12.3**	**-0.5**
HATOM				⇑*e*Sg	**Sn**	**13 54 31.7**	**+0.5**
HATOM				IAML		13 54 38.5	
	comp=N,38nm,0.2s						
SJG	**San Juan**	**1.66**	**118**	Pn	**Pn**	**13 54 11.5**	**0.0**
SJG				IAML		13 54 37.4	
	comp=N,50nm,0.5s						
SJG				IAML		13 54 40.4	
	comp=N,44nm,0.3s						
SJG	**San Juan**	**1.66**	**118**	⇑*e*Pg	**Pn**	**13 54 12.3**	**+0.9**
SJG	**San Juan**	**1.66**	**118**	⇑*e*Pg	**Pn**	**13 54 11.9**	**+0.4**
SJG				⇑*e*Sg	**Sb**	**13 54 34.6**	**+0.7**
HUMP	**Col San Antoni**	**1.90**	**113**	Pn	**Pn**	**13 54 14.8**	**0.0**
HUMP				IAML		13 54 45.8	
	comp=N,27nm,0.2s						
SDD	**Santo Domingo**	**2.17**	**258**	Pn	**Pb**	**13 54 21.0**	**-1.2**
DR08	**Loma La Naviza**	**2.22**	**272**	⇑*e*Pg	**Pb**	**13 54 21.8**	**-1.3**
DR08				⇑*e*Sg	**Sb**	**13 54 51.1**	**+0.9**
DR08				IAML		13 54 52.7	
	comp=N,561nm,0.3s						
DR08	**Loma La Naviza**	**2.22**	**272**	⇑*e*Pg	**Pb**	**13 54 23.8**	**+0.7**
DR08				*e*Sg	**Sb**	**13 54 50.2**	**+0.1**
DR08				IAML		13 54 52.7	
	comp=N,561nm,0.3s						
CUPR	**Culebra, Puert**	**2.35**	**104**	Pn	**Pn**	**13 54 21.1**	**+0.1**
BANI	**BANI**	**2.59**	**259**	Pn	**Pb**	**13 54 27.6**	**-2.0**
BANI	**BANI**	**2.59**	**259**	*i* P	**Pn**	**13 54 22.1**	**-2.4**
BANI				⇑*e*Sg	**Sb**	**13 55 03.4**	**+2.4**
BANI				IAML		13 55 07.2	
	comp=N,30nm,1.4s						
SDDR	**Presa de Saban**	**3.42**	**272**	Pn	**Pn**	**13 54 38.8**	**+3.0**
SDDR				IAML		13 55 33.2	
	comp=N,16nm,1.9s						
SDDR				IAML		13 55 35.5	
	comp=N,17nm,0.9s						

IDC 26 14:00:03.9±10.0, 19°.82S×175°.51W, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=480.0km s-min=44.5km az=144.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**46.95**	**256**	P	P	14 08 37.0	0.0
	0.3nm,0.7s,baz=91,slow=8.4,SNR=4.6						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**47.02**	**261**	P	P	14 08 37.0	-0.4
	0.3nm,1.0s,baz=98,slow=6.7,SNR=1.5						
	0.3nm,1.0s						
ILAR	**Eielson Array**	**87.15**	**12**	P	P	14 12 51.4	0.0
	0.2nm,0.7s,baz=190,slow=4.5,SNR=1.8						
	0.2nm,0.7s						

*WEL **26** 14:17:48.3±0.5, 40°.5S±3°×17°.7E±°, h18km±3km, M3.1/56, ML3.3/17, MLv3.1/56, Error ellipse: s-maj=5.4km s-min=2.7km az=118.5, confirmed*
*NOU **26** 14:17:48.2, 40°.35S×176°.65E, h36km, MLv3.6/11, North Island, New Zealand*

ISC 26 14:17:47.9±1.0, 40°.34S±0°.03×176°.71E±0°.04, h25km±6km, n108,σ1ş00/120, North Island

| Code | Station Name | Δ° | AZ° | Phase | ID | Time | Res |

PRHZ				S	**Sb**	**14 17 54.6**	**-0.9**
ANWZ	**Angora Road**	**0.21**	**235**	P	**Pb**	**14 17 54.4**	**+0.7**
ANWZ				S	**Sb**	**14 17 59.9**	**+2.2**
PXZ	**Pawanui**	**0.33**	**21**	P	**Pb**	**14 17 55.7**	**+0.4**
PXZ				S	**Sb**	**14 18 01.9**	**+1.5**
WPHZ	**Waipukurau**	**0.34**	**323**	P	**Pb**	**14 17 55.4**	**-0.1**
DVHZ	**Dannevirke**	**0.41**	**275**	P	**Pb**	**14 17 57.0**	**+0.2**
DVHZ				S	**Sn**	**14 18 03.9**	**-1.4**
BFZ	**Birch Farm**	**0.49**	**225**	P	**Pn**	**14 17 59.2**	**-0.2**
BFZ	**Birch Farm**	**0.49**	**225**	P	**Pn**	**14 17 59.2**	**-0.2**
BFZ				S	**Sn**	**14 18 08.4**	**+1.2**
KAHZ	**Kahuranaki**	**0.56**	**14**	P	**Pb**	**14 17 59.9**	**+0.8**
KAHZ				S	**Sn**	**14 18 09.9**	**+1.0**
PNHZ	**Pukenui**	**0.57**	**317**	P	**Pb**	**14 17 59.5**	**0.0**
PNHZ				S	**Sn**	**14 18 08.0**	**-1.3**
PRWZ	**Pori Road**	**0.60**	**249**	P	**Pn**	**14 18 01.0**	**+0.1**
PRWZ				S	**Sn**	**14 18 11.4**	**+1.5**
TSZ	**Takapari Road**	**0.64**	**296**	P	**Pb**	**14 18 00.5**	**+0.1**
TSZ				S	**Sn**	**14 18 10.0**	**-0.8**
CPWZ	**Castlepoint**	**0.69**	**214**	P	**Pn**	**14 18 02.6**	**+0.5**
CPWZ				S	**Sn**	**14 18 14.5**	**+2.4**
POWZ	**Post Office Ro**	**0.72**	**265**	P	**Pn**	**14 18 02.5**	**0.0**
POWZ				S	**Sn**	**14 18 14.4**	**+1.6**
CKHZ	**Cape Kidnapper**	**0.74**	**23**	P	**Pb**	**14 18 02.3**	**+0.2**
KRHZ	**Kereru**	**0.74**	**339**	P	**Pb**	**14 18 02.3**	**+0.1**
KRHZ				S	**Sn**	**14 18 13.4**	**0.0**
TIWZ	**Tintock**	**0.76**	**235**	P	**Pn**	**14 18 03.2**	**0.0**
MCHZ	**McNeill Hill**	**0.89**	**360**	P	**Pb**	**14 18 05.0**	**+0.3**
MRZ	**Mangatainoka R**	**0.92**	**249**	P	**Pn**	**14 18 05.0**	**-0.2**
KWHZ	**Kaweka Forest**	**0.94**	**346**	P	**Pn**	**14 18 05.6**	**-0.1**
TMWZ	**Te Maipa**	**0.99**	**219**	P	**Pn**	**14 18 05.9**	**-0.4**
HOWZ	**Holdsworth Sta**	**1.06**	**239**	P	**Pn**	**14 18 06.9**	**-0.4**
OHWZ	**Ohakea**	**1.07**	**277**	P	**Pb**	**14 18 08.7**	**+0.9**
ARHZ	**Aropaoanui**	**1.10**	**12**	P	**Pn**	**14 18 07.7**	**-0.1**
BKZ	**Black Stump Fm**	**1.18**	**352**	P	**Pn**	**14 18 08.8**	**-0.2**
BKZ	**Black Stump Fm**	**1.18**	**352**	P	**Pn**	**14 18 08.7**	**-0.2**
MOVZ	**Moawhango**	**1.18**	**321**	P	**Pb**	**14 18 09.4**	**-0.3**
MTW	**Mount Morrison**	**1.23**	**228**	P	**Pn**	**14 18 08.8**	**-0.8**
NMHZ	**Naumai**	**1.24**	**4**	P	**Pn**	**14 18 10.1**	**+0.3**
OGWZ	**Otaki Gorge**	**1.26**	**247**	P	**Pn**	**14 18 09.9**	**-0.2**
TRWZ	**Traveller**	**1.31**	**216**	P	**Pn**	**14 18 10.0**	**-0.7**
WNVZ	**Wahianoa**	**1.32**	**319**	P	**Pb**	**14 18 12.2**	**+0.1**
WHHZ	**Waihua**	**1.32**	**18**	P	**Pn**	**14 18 11.4**	**+0.5**
TUVZ	**Tukino**	**1.34**	**322**	P	**Pb**	**14 18 12.8**	**+0.3**
MTVZ	**Mangateitei**	**1.35**	**315**	P	**Pb**	**14 18 13.0**	**+0.5**
WHVZ	**Whangaehu Hut**	**1.36**	**320**	P	**Pb**	**14 18 12.9**	**+0.1**
TRVZ	**Turoa**	**1.37**	**319**	P	**Pb**	**14 18 13.3**	**+0.3**
FWVZ	**Far West T-bar**	**1.40**	**320**	P	**Pb**	**14 18 13.6**	**+0.1**
SNVZ	**South Ngauruho**	**1.41**	**324**	P	**Pn**	**14 18 10.8**	**-1.5**
OTVZ	**Oturere**	**1.42**	**325**	P	**Pb**	**14 18 13.3**	**-0.6**
ETVZ	**East Tongariro**	**1.43**	**327**	P	**Pb**	**14 18 13.3**	**-0.6**
PAWZ	**Paruwai Farm**	**1.43**	**223**	P	**Pn**	**14 18 11.3**	**-0.9**
NGZ	**Ngauruhoe**	**1.44**	**323**	P	**Pb**	**14 18 14.1**	**0.0**
WAZ	**Wanganui**	**1.44**	**293**	P	**Pb**	**14 18 14.0**	**-0.1**
TMVZ	**Te Maari**	**1.45**	**327**	P	**Pb**	**14 18 13.6**	**-0.6**
COVZ	**Chateau Observ**	**1.45**	**321**	P	**Pb**	**14 18 14.0**	**-0.3**
RAHZ	**Arahi**	**1.45**	**12**	P	**Pn**	**14 18 12.4**	**-0.2**
CAW	**Cannon Point**	**1.46**	**238**	P	**Pn**	**14 18 12.2**	**-0.6**
KIW	**Kapiti Island**	**1.47**	**249**	P	**Pn**	**14 18 12.7**	**-0.2**
NTVZ	**North Tongariro**	**1.47**	**327**	P	**Pb**	**14 18 14.1**	**-0.6**
PKVZ	**Pokaka**	**1.48**	**315**	P	**Pb**	**14 18 14.9**	**+0.1**
MTHZ	**Maungataniwha**	**1.49**	**4**	P	**Pn**	**14 18 13.1**	**-0.1**
KRVZ	**Karewarewa**	**1.49**	**326**	P	**Pb**	**14 18 14.7**	**-0.3**
WTVZ	**West Tongariro**	**1.49**	**324**	P	**Pb**	**14 18 14.7**	**-0.4**
RITZ	**Rihia Road**	**1.51**	**334**	P	**Pb**	**14 18 15.2**	**0.0**
MRHZ	**Matea Rd**	**1.52**	**351**	P	**Pn**	**14 18 14.0**	**+0.4**
MSWZ	**Moikau Station**	**1.54**	**225**	P	**Pn**	**14 18 12.8**	**-1.1**
KATZ	**Kakaramea**	**1.57**	**330**	P	**Pb**	**14 18 16.7**	**+0.3**
TWVZ	**Taurewa**	**1.60**	**322**	P	**Pb**	**14 18 16.1**	**-0.7**
RATZ	**Rangitukua**	**1.64**	**334**	P	**Pb**	**14 18 17.8**	**+0.3**
PLWZ	**Palliser**	**1.65**	**221**	P	**Pn**	**14 18 14.1**	**-1.3**
PRGZ	**Paritu Road**	**1.68**	**33**	P	**Pn**	**14 18 14.7**	**-1.0**
BHW	**Baring Head**	**1.75**	**232**	P	**Pn**	**14 18 15.6**	**-1.1**
WATZ	**Wairara**	**1.79**	**335**	P	**Pb**	**14 18 20.7**	**+0.6**
ALRZ	**Allen Road**	**1.79**	**351**	P	**Pn**	**14 18 18.0**	**+0.6**
SNZO	**South Karori**	**1.80**	**237**	P	**Pn**	**14 18 16.4**	**-1.0**
RIGZ	**Rimuhau**	**1.82**	**27**	P	**Pn**	**14 18 17.0**	**-0.7**
PRRZ	**Plateau Road**	**1.85**	**352**	P	**Pn**	**14 18 18.2**	**+0.1**
MUGZ	**Murupara**	**1.86**	**2**	P	**Pn**	**14 18 18.1**	**-0.2**
RAGZ	**Rawiri**	**1.92**	**17**	P	**Pn**	**14 18 18.7**	**-0.5**
VRZ	**Vera Road**	**1.93**	**308**	P	**Pb**	**14 18 20.7**	**-1.7**
LREZ	**Lake Rotokare**	**1.98**	**296**	P	**Pb**	**14 18 22.8**	**-0.4**
TCW	**Tory Channel**	**2.04**	**244**	P	**Pn**	**14 18 19.7**	**-1.0**
TKGZ	**Te Karaka**	**2.09**	**25**	P	**Pn**	**14 18 20.1**	**-1.3**
URZ	**Urewera**	**2.10**	**9**	P	**Pn**	**14 18 20.5**	**-1.0**
URZ	**Urewera**	**2.10**	**9**	P	**Pn**	**14 18 20.8**	**-0.7**
MWZ	**Matawai**	**2.10**	**18**	P	**Pn**	**14 18 20.6**	**-1.0**
TARZ	**Mount Tarawera**	**2.10**	**356**	P	**Pn**	**14 18 21.9**	**+0.2**
DUWZ	**D'Urville Isla**	**2.17**	**257**	P	**Pn**	**14 18 23.4**	**+0.9**
CNGZ	**Carnagh Statio**	**2.19**	**33**	P	**Pn**	**14 18 21.6**	**-1.1**
TLZ	**Tolley Road**	**2.20**	**335**	P	**Pn**	**14 18 23.8**	**+0.8**
DREZ	**Durham Road**	**2.25**	**300**	P	**Pb**	**14 18 29.4**	**+1.6**
HIZ	**Hauiti**	**2.32**	**321**	P	**Pn**	**14 18 23.6**	**-0.9**
HIZ	**Hauiti**	**2.32**	**321**	P	**Pb**	**14 18 29.3**	**+0.2**
KHEZ	**Kahui Hut**	**2.32**	**296**	P	**Pn**	**14 18 23.9**	**-0.7**
KHEZ	**Kahui Hut**	**2.32**	**296**	P	**Pb**	**14 18 31.1**	**+2.0**
TUWZ	**Tuamarina**	**2.36**	**242**	P	**Pn**	**14 18 24.2**	**-0.9**
NBEZ	**Newall Road No**	**2.43**	**295**	P	**Pb**	**14 18 32.4**	**+1.5**
RUGZ	**Raukumara Rang**	**2.49**	**18**	P	**Pn**	**14 18 26.0**	**-0.9**
NNZ	**Nelson**	**2.67**	**250**	P	**Pn**	**14 18 29.2**	**-0.2**
PKGZ	**Pakihiroa**	**2.69**	**24**	P	**Pn**	**14 18 28.6**	**-1.1**
HAZ	**Te Kaha**	**2.71**	**18**	P	**Pn**	**14 18 29.1**	**-0.8**
WMGZ	**Waiomatatini S**	**2.84**	**29**	P	**Pn**	**14 18 30.6**	**-1.1**
TKNZ	**Takaka Hill**	**2.93**	**255**	P	**Pn**	**14 18 32.9**	**-0.1**
KHZ	**Kahutara**	**3.16**	**228**	P	**Pn**	**14 18 34.6**	**-1.5**
KHZ	**Kahutara**	**3.16**	**228**	S	**Sn**	**14 19 11.1**	**-1.9**
KHZ	**Kahutara**	**3.16**	**228**	P	**Pn**	**14 18 33.7**	**-2.4**
MRNZ	**Matariki Terra**	**3.18**	**249**	P	**Pn**	**14 18 36.0**	**-0.4**
THZ	**Tophouse**	**3.21**	**242**	P	**Pn**	**14 18 35.0**	**-1.8**
QRZ	**Quartz Range**	**3.22**	**260**	P	**Pn**	**14 18 36.1**	**-0.8**
QRZ	**Quartz Range**	**3.22**	**260**	P	**Pn**	**14 18 36.5**	**-0.4**
GVZ	**Greta Valley S**	**3.80**	**225**	P	**Pn**	**14 18 43.8**	**-1.1**
LTZ	**Lake Taylor**	**4.13**	**232**	P	**Pn**	**14 18 46.7**	**-2.7**
OKCZ	**Okains Bay**	**4.34**	**218**	P	**Pn**	**14 18 50.1**	**-2.2**
MQZ	**McQueen's Vall**	**4.52**	**221**	P	**Pn**	**14 18 52.0**	**-2.8**
TMZ	**Timaru**	**5.84**	**224**	P	**Pn**	**14 19 10.4**	**-2.6**
CTZ	**Chatham Island**	**6.02**	**127**	P	**Pn**	**14 19 15.4**	**+0.1**
CTZ	**Chatham Island**	**6.02**	**127**	P	**Pn**	**14 19 15.6**	**+0.2**
ODZ	**Otahua Downs**	**6.49**	**222**	P	**Pn**	**14 19 21.1**	**-0.7**

*IDC **26** 14:28:43.2±1.3,27°.18N×130°.35E, h0km, mb3.6/3, mbtmp4.0/5, ML3.6/2, MS3.0/6, Error ellipse: s-maj=29.3km s-min=23.4km az=82.0*
*JMA **26** 14:28:45.7±0.1,27°.2N±0°.5×130°.3E±0°.7, h60km, MV3.6/22, NEAR MINAMI-DAITOJIMA IS*
ISC 26 14:28:45.9±1.3,27°.19N±0°.03×130°.36E±0°.04, h66km±26km, n29, σ0s99/37, mb3.8/3, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JZK	**Kikaishima**	**1.17**	**343**	P	**Pn**	**14 29 07.2**	**+0.8**
JZK				S	**Sn**	**14 29 23.3**	**+1.6**
JTK	**Tokunoshima**	**1.38**	**296**	P	**Pn**	**14 29 09.1**	**-0.1**
JTK				S	**Sn**	**14 29 25.9**	**-0.8**
JAM	**Amami Oshima**	**1.39**	**332**	*i* P	**Pn**	**14 29 09.2**	**0.0**
JAM				S	**Sn**	**14 29 25.8**	**-1.0**
JAMN	**Amaminishikomi**	**1.48**	**315**	P	**Pn**	**14 29 10.3**	**-0.2**
JAMN				S	**Sn**	**14 29 27.8**	**-1.2**
JKDJ	**Kitadaitoujima**	**1.49**	**145**	P	**Pn**	**14 29 10.8**	**+0.1**
JKDJ				*eS*	**Sn**	**14 29 28.4**	**-1.0**
JMZ	**Minamidaito 2**	**1.57**	**150**	P	**Pn**	**14 29 11.4**	**-0.3**
JMZ				S	**Sn**	**14 29 30.2**	**-0.9**
JOKE	**Okinoerabujima**	**1.60**	**277**	P	**Pn**	**14 29 12.0**	**0.0**
JOKE				*eS*	**Sn**	**14 29 31.1**	**-0.7**
JYRO	**Yoronjima**	**1.71**	**265**	P	**Pn**	**14 29 13.7**	**+0.2**
JYRO				S	**Sn**	**14 29 34.2**	**-0.2**
JOW	**Kunigami**	**1.89**	**260**	Pn	**Pn**	**14 29 16.6**	**+0.5**
	84nm,0.3s,baz=116,slow=23,SNR=168						
JOW				Sn	**Sn**	**14 29 38.1**	**-0.8**
	139nm,0.3s,baz=152,slow=25,SNR=24						
JOW	**Kunigami**	**1.89**	**260**	*eP*	**Pn**	**14 29 16.2**	**+0.2**
JOW				*eS*	**Sn**	**14 29 37.9**	**-1.0**
JIH	**Iheya**	**2.13**	**266**	P	**Pn**	**14 29 18.8**	**-0.5**
JIH				S	**Sn**	**14 29 44.4**	**-0.4**
JNTH	**Nagotoyohara**	**2.19**	**253**	P	**Pn**	**14 29 20.1**	**+0.1**
JNTH				S	**Sn**	**14 29 44.5**	**-1.6**
JTAJ	**Takarajima**	**2.21**	**333**	P	**Pn**	**14 29 20.3**	**0.0**
JTAJ				*eS*	**Sn**	**14 29 44.8**	**-1.7**
JJT3	**Tamagusuku3**	**2.53**	**246**	P	**Pn**	**14 29 25.5**	**+0.9**
JJT3				S	**Sn**	**14 29 54.0**	**-0.3**
JAGN	**Aguni-jima**	**2.84**	**259**	P	**Pn**	**14 29 30.3**	**+1.4**
JAGN				S	**Sn**	**14 30 02.1**	**0.0**
JYAK	**Yakushimahirau**	**3.04**	**3**	P	**Pn**	**14 29 32.4**	**+0.8**
JYAK				S	**Sn**	**14 30 05.8**	**-1.1**
JMTN	**Minamitane**	**3.23**	**8**	*eS*	**Sn**	**14 30 12.1**	**+0.5**
JKE	**Kume jima 2**	**3.31**	**256**	*eS*	**Sn**	**14 30 12.9**	**-0.5**
JNU	**Nakatsue**	**5.93**	**4**	Pn	**Pn**	**14 30 12.4**	**+1.2**
	1.4nm,0.3s,baz=335,slow=2.0,SNR=12						
JNU				Sn	**Sn**	**14 31 14.8**	**-3.0**
	0.2nm,0.3s,baz=85,slow=23,SNR=1.5 7.5nm,0.5s						
JHJ	**Hachijo jima 2**	**10.07**	**52**	Pn	**Pn**	**14 31 08.8**	**+1.0**
	3.0nm,0.3s,baz=252,slow=5.5,SNR=3.1 148nm,1.0s						
SONM	**Songino Array**	**27.84**	**324**	LR	LR	14 48 00.5	
	comp=Z,13nm,19.2s,baz=84,slow=42						
CMAR	**Chiang Mai Arr**	**30.16**	**260**	LR	LR	14 48 33.5	
	comp=Z,5.4nm,18.2s,baz=105,slow=40						
YAK	**Yakutsk**	**34.84**	**359**	LR	LR	14 49 50.4	
	comp=Z,22nm,18.7s,baz=316,slow=36						
MKAR	**Makanchi Array**	**42.34**	**311**	P	P	14 36 39.2	+5.8
	0.4nm,0.8s,baz=106,slow=9.2,SNR=2.5 0.4nm,0.8s						
WRA	**Warramunga Arr**	**47.01**	**175**	P	P	14 37 16.1	+5.3
	0.8nm,0.6s,baz=354,slow=8.4,SNR=14 0.8nm,0.6s						
AAK	**Ala-Archa**	**47.50**	**304**	LR	LR	15 00 57.4	
	comp=Z,16nm,19.6s,baz=45,slow=41						
ASAR	**Alice Springs**	**50.67**	**176**	P	P	14 37 44.5	+5.7
	0.5nm,0.6s,baz=5.3,slow=15,SNR=22 0.5nm,0.6s						
BVAR	**Borovoye Array**	**50.84**	**318**	LR	LR	15 03 22.9	
	comp=Z,23nm,18.1s,baz=59,slow=41						
RAO	**Raoul Island**	**74.86**	**135**	LR	LR	15 07 54.0	
	comp=Z,58nm,20.6s,baz=92,slow=31						

*IDC **26** 14:39:04.6±1.7,2°.71S×135°.92E, h0km, mb3.4/2, mbtmp3.6/6, ML3.5/4, Error ellipse: s-maj=32.6km s-min=27.0km az=65.0*
*DJA **26** 14:39:08.1±0.2,3°.5±2°×13°.6E±°, h10km, M3.9/15, mb3.9/2, MLv4.0/15*
ISC 26 14:39:07.5±0.9,2°.83S±0°.06×135°.93E±0°.06, h35km, n14, σ2s61/19, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRPI	**Serui, Papua**	**1.01**	**18**	P	**Pn**	**14 39 22.3**	**-2.9**
BAKI	**Biak**	**1.64**	**6**	P	**Pn**	**14 39 33.7**	**-0.2**
BAKI				S	**Sn**	**14 39 52.2**	**-1.6**
RKPI	**Ransiki, Papua**	**2.19**	**307**	P	**Pn**	**14 39 40.2**	**-1.3**
MWPI	**Manokwari, Pap**	**2.67**	**315**	P	**Pn**	**14 39 49.2**	**+1.1**
FAKI	**Fak Fak**	**3.68**	**269**	P	**Pn**	**14 40 03.0**	**+1.0**
JAY	**Jayapura**	**4.78**	**86**	Pn	**Pn**	**14 40 18.9**	**+1.8**
	0.6nm,0.3s,baz=235,slow=12,SNR=4.6						
JAY				Sn	**Sn**	**14 41 11.2**	**-0.1**
	0.3nm,0.3s,baz=91,slow=22,SNR=3.6 4.0nm,0.6s						
JAY	**Jayapura**	**4.78**	**86**	P	**Pn**	**14 40 21.6**	**+4.5**
SIJI	**Sorong**	**5.06**	**293**	Pn	**Pn**	**14 40 21.2**	**+0.3**
	5.6nm,0.3s,baz=172,slow=23,SNR=96						
SIJI				Sn	**Sn**	**14 41 17.6**	**-0.6**
	5.3nm,0.3s,baz=324,slow=20,SNR=10.0 13nm,0.2s						
SIJI	**Sorong**	**5.06**	**293**	P	**Pn**	**14 40 21.1**	**+0.2**
SWI	**Sorong**	**5.06**	**293**	P	**Pn**	**14 40 21.1**	**+0.1**
WRA	**Warramunga Arr**	**17.07**	**185**	P	**Pn**	**14 43 05.2**	**+1.5**
	0.1nm,0.3s,baz=8.7,slow=12,SNR=7.2						
WRA				S	**Sn**	**14 46 08.1**	**-4.5**
	0.9nm,0.7s,baz=0.9,slow=23,SNR=6.5 0.3nm,0.5s						
FITZ	**Fitzroy Crossi**	**18.22**	**213**	P	**P**	**14 43 19.1**	**+1.4**
	0.1nm,0.3s,baz=27,slow=9.1,SNR=7.5						
FITZ				S	**Sn**	**14 46 33.7**	**-6.5**
	1.6nm,1.0s,baz=357,slow=20,SNR=1.3 2.5nm,0.9s						
ASAR	**Alice Springs**	**20.80**	**185**	P	Pn	14 43 49.8	+1.2
	2.0nm,0.9s,baz=9.6,slow=12,SNR=21						
ASAR				S	**S**	**14 47 36.5**	**+0.1**
	0.3nm,0.6s,baz=8.0,slow=22,SNR=5.3 2.0nm,0.9s						
MKAR	**Makanchi Array**	**68.22**	**323**	P	**P**	**14 50 06.2**	**+1.6**
	0.2nm,0.7s,baz=128,slow=6.3,SNR=2.4 0.2nm,0.7s						

*TIR **26** 14:41:43.9, 41°.66N×19°.40E, h36km±1km, Ml2.9/6*
*BEO **26** 14:41:43.1±0.4, 41°.48N×19°.36E, h4km±2km, ML2.4/11*
*RHSSO **26** 14:41:44.4±0.8, 41°.54N×19°.34E, h8km±2km, ML3.0/6*
*PDG **26** 14:41:44.8±0.2, 41°.64N×19°.39E, h13km, ML2.8/12, Error ellipse: s-maj=0.9km s-min=1.0km az=0.0*
ISC 26 14:41:42.8±1.1, 41°.57N±0°.02×19°.41E±0°.03, h4km±9km, n53, σ0s97/98, 6C-8D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULC	**Ulcinj**	**0.41**	**343**	⇓*i* Pg	**Pg**	**14 41 51.1**	**+0.4**
ULC				*i* Sg	**Sg**	**14 41 57.0**	**+0.9**
TIR	**Tirane**	**0.41**	**123**	Pg	**Pg**	**14 41 50.3**	**-0.4**
TIR				Sg	**Sg**	**14 41 57.0**	**+0.9**
TIR				AML	AML	14 41 57.4	
	1.7nm,0.7s						
SDA	**Shkodra**	**0.48**	**8**	Pg	**Pg**	**14 41 52.4**	**+0.3**
SDA				Sg	**Sb**	**14 42 00.4**	**-0.9**
SDA				AML	AML	14 42 07.6	
	1.6nm,0.7s						
DRME	**Dracevica, Mon**	**0.64**	**345**	⇓*i* Pg	**Pb**	**14 41 55.6**	**-0.8**
DRME				*i* Sg	**Sb**	**14 42 04.5**	**-1.2**
DRME	**Dracevica, Mon**	**0.64**	**345**	⇑*i* Pg	**Pb**	**14 41 55.7**	**-0.7**
DRME				*eSg*	**Sb**	**14 42 06.2**	**+0.5**
PHP	**Peshkopia**	**0.78**	**81**	Pg	**Pg**	**14 41 57.2**	**-0.6**
PHP				Sg	**Sb**	**14 42 10.5**	**+0.5**
PHP				AML	AML	14 42 18.8	
	1.2nm,0.7s						
BUM	**Brajici-Budva**	**0.82**	**332**	⇑*i* Pg	**Pb**	**14 41 59.1**	**-0.6**
BUM				*i* Sg	**Sb**	**14 42 11.6**	**+0.5**
PDG	**Podgorica**	**0.86**	**353**	*eP*g	**Pb**	**14 42 00.8**	**+0.5**
PDG				*eSg*	**Sn**	**14 42 13.8**	**-0.9**
PDG	**Podgorica**	**0.86**	**353**	⇓*i* Pg	**Pb**	**14 41 59.7**	**-0.6**
PDG				*i* Sg	**Sb**	**14 42 12.5**	**+0.3**
PDG	**Podgorica**	**0.86**	**353**	*eP*g	**Pb**	**14 42 00.5**	**+0.2**
PDG				*eSg*	**Sn**	**14 42 13.3**	**-1.4**
CEME	**Cevo**	**1.04**	**340**	⇓*i* Pg	**Pg**	**14 42 02.6**	**-0.1**
CEME				*i* Sg	**Sn**	**14 42 18.1**	**-1.1**
PVY	**Plav**	**1.10**	**22**	⇓*i* Pg	**Pb**	**14 42 04.3**	**-0.2**
PVY				*i* Sg	**Sn**	**14 42 20.8**	**0.0**
VLO	**Vlora**	**1.10**	**176**	Pg	**Pn**	**14 42 05.9**	**+0.9**
VLO				Sg	**Sn**	**14 42 21.5**	**+0.8**
VLO				AML	AML	14 42 26.9	
	1.9nm,0.4s						
HCY	**Herceg Novi**	**1.11**	**322**	⇑*i* Pg	**Pb**	**14 42 04.3**	**-0.2**
HCY				*i* Sg	**Sn**	**14 42 20.9**	**+0.1**
HCY	**Herceg Novi**	**1.11**	**322**	*eP*g	**Pn**	**14 42 04.7**	**-0.4**
HCY				*eSg*	**Sn**	**14 42 20.1**	**-0.7**
NKME	**Niksic**	**1.24**	**344**	*eP*g	**Pn**	**14 42 06.8**	**-0.1**
NKME				*i* Sg	**Sn**	**14 42 24.9**	**+0.8**
KOME	**Kolasin**	**1.28**	**4**	⇓*i* Pg	**Pn**	**14 42 07.5**	**0.0**
KOME				*i* Sg	**Sn**	**14 42 26.1**	**+1.0**
IVA	**Berane**	**1.35**	**15**	⇑*i* Pg	**Pn**	**14 42 08.2**	**-0.2**
IVA				*i* Sg	**Sn**	**14 42 28.0**	**+1.2**
TREB	**Trebinje**	**1.39**	**326**	*eP*n	**Pb**	**14 42 09.1**	**-0.2**
TREB				*eSn*	**Sn**	**14 42 27.8**	**+0.1**
TREB	**Trebinje**	**1.39**	**326**	⇑*i* Pg	**Pn**	**14 42 08.7**	**-0.2**
TREB				*eSg*	**Sn**	**14 42 27.6**	**-0.1**
KBN	**Korca**	**1.41**	**132**	Pg	**Pg**	**14 42 10.0**	**+0.2**
KBN				Sg	**Sn**	**14 42 29.6**	**+1.3**
KBN				AML	AML	14 42 33.5	
	0.9nm,0.9s						
KBN	**Korca**	**1.41**	**132**	P	**Pg**	**14 42 10.0**	**+0.2**
KBN				S	**Sn**	**14 42 30.9**	**+2.6**
UPM	**Unac-Piva**	**1.67**	**347**	⇓*i* Pn	**Pb**	**14 42 13.7**	**-0.5**
UPM				*i* Sn	**Sg**	**14 42 37.4**	**+0.9**
UPM	**Unac-Piva**	**1.67**	**347**	*eP*n	**Pb**	**14 42 14.3**	**+0.1**
UPM				*eSn*	**Sb**	**14 42 35.4**	**-0.3**
NEST	**Nestorio**	**1.70**	**132**	P	**Pb**	**14 42 14.1**	**-0.5**
KLINJ	**Klinje**	**1.71**	**339**	*eP*n	**Pb**	**14 42 14.3**	**-0.5**
KLINJ				*eSn*	**Sg**	**14 42 37.1**	**-0.6**
SJES	**Sjenica**	**1.74**	**14**	*eP*n	**Pb**	**14 42 14.7**	**-0.6**
SJES				*eSn*	**Sg**	**14 42 40.1**	**+1.4**
SJES	**Sjenica**	**1.74**	**14**	⇑*i* Pn	**Pb**	**14 42 15.0**	**-0.3**
SJES				*eSn*	**Sg**	**14 42 38.4**	**-0.3**
SRN	**Sarande**	**1.75**	**165**	P	**Pn**	**14 42 13.0**	**-0.9**
PLE	**Pljevlja**	**1.76**	**360**	⇓*i* Pn	**Pg**	**14 42 16.2**	**-0.3**
PLE				*i* Sn	**Sg**	**14 42 39.6**	**+0.4**
STON	**Ston**	**1.81**	**316**	*eP*n	**Pn**	**14 42 15.5**	**+0.8**
STON				*eSn*	**Sg**	**14 42 41.0**	**-0.1**
KEK	**Kerkira**	**1.88**	**171**	P	**Pn**	**14 42 14.6**	**-1.0**
NOCI	**Noci**	**1.93**	**247**	Pn	**Pn**	**14 42 17.5**	**+1.1**
NOCI				Sn	**Sb**	**14 42 43.7**	**+0.7**
NOCI				AML	AML	14 42 44.8	
	0.4nm,0.3s						
RUDO	**Rudo**	**2.04**	**359**	*eP*n	**Pb**	**14 42 19.4**	**-1.1**
RUDO				*eSn*	**Sg**	**14 42 47.4**	**-1.1**
RUDO	**Rudo**	**2.04**	**359**	*eP*n	**Pb**	**14 42 20.2**	**-0.3**
RUDO				*eSn*	**Sn**	**14 42 44.8**	**+0.9**
IVAS	**Ivanjica**	**2.08**	**15**	*eP*n	**Pn**	**14 42 19.0**	**+0.6**
IVAS				*eSn*	**Sb**	**14 42 47.8**	**+0.6**
SELS	**Selova**	**2.08**	**37**	*eP*n	**Pn**	**14 42 18.8**	**+0.4**
SELS				*eSn*	**Sb**	**14 42 47.4**	**+0.2**
IGT	**Igoumenitsa**	**2.16**	**161**	P	**Pn**	**14 42 19.2**	**-0.3**
IGT	**Igoumenitsa**	**2.16**	**161**	*eP*n	**Pn**	**14 42 19.4**	**-0.1**
IGT				*eSn*	**Sn**	**14 42 46.2**	**-0.4**
BARS	**Barje**	**2.18**	**54**	*eP*n	**Pn**	**14 42 20.3**	**+0.5**
BARS				*eSn*	**Sb**	**14 42 49.4**	**-0.7**
GOCS	**Kraljevo Serbi**	**2.27**	**28**	*eP*n	**Pn**	**14 42 22.5**	**+1.4**
GOCS				*eSn*	**Sb**	**14 42 51.0**	**-1.7**
BBLS	**Lazi&#263i**	**2.29**	**360**	*eP*n	**Pn**	**14 42 22.8**	**+1.4**
BBLS				*eSn*	**Sb**	**14 42 52.3**	**-1.1**
BBLS	**Lazi&#263i**	**2.29**	**360**	*eP*n	**Pb**	**14 42 23.2**	**-1.5**
BBLS				*eSn*	**Sb**	**14 42 51.9**	**-1.5**
BOSS	**Bosilegrad**	**2.47**	**67**	*eP*n	**Pn**	**14 42 24.6**	**+0.8**
BOSS				*eSn*	**Sn**	**14 42 56.2**	**+1.8**
GRUS	**Gruza**	**2.51**	**22**	*eP*n	**Pn**	**14 42 25.1**	**+0.8**
GRUS				*eSn*	**Sb**	**14 42 57.3**	**-2.2**
DIVS	**Divibare**	**2.56**	**9**	*eP*n	**Pn**	**14 42 26.5**	**+1.4**
DIVS				*eSn*	**Sb**	**14 42 59.9**	**-1.3**
TSLK	**Tsoukalades, L**	**2.91**	**160**	P	**Pn**	**14 42 28.3**	**-1.5**
ZAPS	**Zavoj**	**2.93**	**53**	*eP*n	**Pn**	**14 42 31.7**	**+1.5**
ZAPS				*eSn*	**Sb**	**14 43 09.0**	**-2.8**
LKD2

	SNR=9.9								
AAK	**Ala-Archa**	**3.54**	**103**	⇓Pg		**Pb**	**14 52 38.9**	**-2.0**	
	3.4nm,0.5s								
AAK				⇓Lg		Lg	14 53 29.1		
	4.6nm,0.8s								
AAK	**Ala-Archa**	**3.54**	**103**	⇑*i*P		**Pn**	**14 52 33.5**	**-0.1**	
AAK				⇑*i*S		**Sn**	**14 53 18.5**	**+2.2**	
CHMS	**Chumysh**	**3.65**	**96**	P		**Pb**	**14 52 40.5**	**-2.1**	
	SNR=7.6								
UCH	**Uchtor**	**3.69**	**109**	P		**Pb**	**14 52 41.8**	**-1.7**	
	SNR=9.4								
KRBS	**Karabastau**	**4.27**	**86**	Pg		**Pb**	**14 52 51.5**	**-1.6**	
	4.8nm,0.6s								
KRBS				Lg		Lg	14 53 49.6		
	2.8nm,0.4s								
TKM2	**Tokmak 2**	**4.28**	**96**	P		**Pb**	**14 52 55.1**	**+1.7**	
	SNR=11								
DGS	**Degeres**	**4.36**	**91**	Pg		**Pb**	**14 52 53.2**	**-1.5**	
	2.2nm,0.5s								
DGS				Lg		Lg	14 53 55.4		
	5.8nm,0.3s								
KST	**Kastek**	**4.52**	**94**	Pg		**Pb**	**14 52 56.2**	**-1.3**	
	0.9nm,0.1s								
KST				Lg		Lg	14 53 58.1		
	11nm,0.5s								
IZV	**Izvestkoviy**	**4.99**	**93**	Pg		**Pb**	**14 53 07.5**	**+1.9**	
	1.4nm,0.4s								
IZV				Lg		Lg	14 54 18.1		
	11nm,0.3s								
KTBS	**Karatobe**	**5.00**	**85**	Pg		**Pb**	**14 53 06.0**	**+0.5**	
	1.7nm,0.4s								
KTBS				Lg		Lg	14 54 14.4		
	0.2nm,0.1s								
TNSS	**Tian-Shan**	**5.24**	**93**	Pg		**Pb**	**14 53 09.9**	**+0.1**	
	0.4nm,0.5s								
TNSS				Lg		Lg	14 54 21.2		
	1.4nm,0.7s								
KOTS	**Kotyrbulak**	**5.33**	**90**	Pg		**Pb**	**14 53 11.8**	**+0.4**	
	2.1nm,0.3s								
KOTS				Lg		Lg	14 54 25.0		
	6.8nm,0.6s								

*IDC **26** 15:03:51.0±1.5, 1°93S×149°14E, h0km, mb3.6/3, mbtmp3.6/3, MS3.0/1, Error ellipse: s-maj=138.0km s-min=26.2km az=120.0, New Ireland region*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.02**	**218**	P	P	15 08 57.1	-0.8
	1.7nm,0.7s,baz=42,slow=10.0,SNR=23						
WRA				PcP	PcP	15 12 48.0	0.0
	0.2nm,0.5s,baz=36,slow=1.8,SNR=2.2						
	1.7nm,0.7s						
ASAR	**Alice Springs**	**26.17**	**213**	P	P	15 09 27.1	-0.2
	1.0nm,0.8s,baz=38,slow=7.8,SNR=18						
ASAR				PcP	PcP	15 12 55.2	+0.4
	0.2nm,0.5s,baz=23,slow=2.0,SNR=7.3						
	1.0nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**26.65**	**40**	T	T	15 37 27.4	
	baz=220,slow=75,SNR=65						
H11S2	**WAKE ISLAND Hy**	**26.66**	**40**	T	T	15 37 30.8	
	baz=220,slow=75,SNR=44						
H11S1	**WAKE ISLAND Hy**	**26.67**	**40**	T	T	15 37 27.4	
	baz=220,slow=75,SNR=35						
H11N1	**WAKE ISLAND Hy**	**27.68**	**38**	T	T	15 38 48.7	
	baz=218,slow=76,SNR=5.7						
H11N3	**WAKE ISLAND Hy**	**27.70**	**38**	T	T	15 38 45.7	
	baz=218,slow=76,SNR=8.4						
H11N2	**WAKE ISLAND Hy**	**27.70**	**38**	T	T	15 38 45.0	
	baz=218,slow=76,SNR=6.2						
KAPI	**Kappang**	**29.49**	**263**	LR	LR	15 22 47.2	
	comp=Z,27nm,20.4s,baz=208,slow=38						
ILAR	**Eielson Array**	**80.92**	**23**	P	P	15 16 06.1	-0.9
	0.3nm,0.7s,baz=251,slow=4.5,SNR=7.3						
	0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**145.91**	**291**	PKPbc	PKPab	15 23 34.1	0.0
	1.3nm,0.8s,baz=67,slow=2.5,SNR=5.4						

*IDC **26** 15:09:35.5±0.9, 49°.24N×158°.59E, h0km, mb3.9/14, mbtmp3.9/17, ML3.6/4, MS2.6/1, Error ellipse: s-maj=23.9km s-min=17.3km az=115.0*
*MOS **26** 15:09:38.4±0.8, 49°.20N×158°.59E, h36km, mb4.3/11, Error ellipse: s-maj=10.8km s-min=4.1km az=92.0*
*KRSC **26** 15:09:38.9±1.6, 49°.42N×158°.76E, h39km±38km, Ml4.4*
*NEIC **26** 15:09:40.8±1.4, 49°.34N±0°.09×158°.6E±0°.1, h35km±5km, mb4.1/14, Error ellipse: s-maj=14.2km s-min=8.9km az=150.0*

ISC 26 15:09:40.7±0.6, 49°26N±0°.06×158°59E±0°.06, h35km, n114, σ1℘00/127, mb4.1/24, 4C-1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.14**	**313**	*e*PN	**Pn**	**15 10 12.6**	**-1.3**
SKR				*e*S	**Sn**	**15 10 37.7**	**-1.5**
SKR				pmax	pmax		
	comp=Z,245nm,0.4s						
SKR				smax	smax		
	comp=E,2μm,0.7s						
SKR				smax	smax		
	comp=N,3μm,0.7s						
SKR	**Severo-Kuril's**	**2.14**	**313**	*e*P	**Pn**	**15 10 12.4**	**-1.4**
SKR				*e*S	**Sn**	**15 10 37.7**	**-1.5**
PAU	**Pauzhetka**	**2.49**	**333**	PN	**Pn**	**15 10 18.4**	**-0.2**
PAU				S	**Sn**	**15 10 47.5**	**-0.2**
PAU	**Pauzhetka**	**2.49**	**333**	*e*P	**Pn**	**15 10 18.4**	**-0.2**
PAU				*e*S	**Sn**	**15 10 47.5**	**-0.2**
KDTR	**Khodutka, Kamc**	**2.58**	**353**	PN	**Pn**	**15 10 17.5**	**-2.3**
KDTR				S	**Sn**	**15 10 48.2**	**-1.7**
KDTR	**Khodutka, Kamc**	**2.58**	**353**	*e*P	**Pn**	**15 10 17.6**	**-2.3**
KDTR				*e*S	**Sn**	**15 10 48.2**	**-1.7**
ASAK	**Asacha**	**3.16**	**352**	PN	**Pn**	**15 10 28.1**	**+0.2**
ASAK	**Asacha**	**3.16**	**352**	*e*P	**Pn**	**15 10 28.2**	**+0.2**
ASAK				*e*S	**Sn**	**15 11 02.7**	**-1.8**
RUS	**Russkaya**	**3.18**	**359**	PN	**Pn**	**15 10 27.7**	**-0.4**
RUS	**Russkaya**	**3.18**	**359**	*e*P	**Pn**	**15 10 27.8**	**-0.4**
RUS				*e*S	**Sn**	**15 11 01.8**	**-3.0**
MIPR	**Malaya Ipel'ka**	**3.24**	**340**	PN	**Pn**	**15 10 30.1**	**+1.1**
MIPR				S	**Sn**	**15 11 06.4**	**+0.2**
MIPR	**Malaya Ipel'ka**	**3.24**	**340**	*e*P	**Pn**	**15 10 30.1**	**+1.1**
MIPR				*e*S	**Sn**	**15 11 06.5**	**+0.2**
MTVR	**Mutnovka**	**3.24**	**356**	PN	**Pn**	**15 10 29.1**	**0.0**
MTVR	**Mutnovka**	**3.24**	**356**	*e*P	**Pn**	**15 10 29.2**	**0.0**
MTVR				*e*S	**Sn**	**15 11 04.8**	**-1.7**
GRL	**Gorelyy**	**3.31**	**355**	PN	**Pn**	**15 10 30.3**	**+0.2**
GRL				S	**Sn**	**15 11 07.4**	**-0.9**
GRL	**Gorelyy**	**3.31**	**355**	*e*P	**Pn**	**15 10 30.4**	**+0.2**
GRL				*e*S	**Sn**	**15 11 07.5**	**-0.9**
KRMR	**Karymshinskiy**	**3.59**	**356**	PN	**Pn**	**15 10 34.3**	**+0.6**
KRMR				S	**Sn**	**15 11 14.7**	**-0.1**
KRMR	**Karymshinskiy**	**3.59**	**356**	*e*P	**Pn**	**15 10 34.3**	**+0.6**
KRMR				*e*S	**Sn**	**15 11 14.7**	**-0.1**
PET	**Petropavlovsk**	**3.77**	**1**	P	**Pn**	**15 10 34.1**	**-2.1**
PET				Sn	**Sn**	**15 11 17.2**	**-2.1**
PET	**Petropavlovsk**	**3.77**	**1**	*e*PN	**Pn**	**15 10 36.1**	**-0.1**
DALK	**Dalny**	**3.78**	**1**	PN	**Pn**	**15 10 36.1**	**-0.2**
DALK	**Dalny**	**3.78**	**1**	*e*P	**Pn**	**15 10 36.2**	**-0.2**
DALK				*e*S	**Sn**	**15 11 17.9**	**-1.7**
APC	**Apacha**	**3.78**	**347**	PN	**Pn**	**15 10 36.2**	**-0.2**
APC	**Apacha**	**3.78**	**347**	*e*P	**Pn**	**15 10 36.2**	**-0.2**
INSR	**Institute**	**3.81**	**0**	*e*S	**Sn**	**15 11 20.3**	**-0.1**
NLC	**Nalytchevo**	**3.95**	**7**	PN	**Pn**	**15 10 38.0**	**-0.6**
NLC	**Nalytchevo**	**3.95**	**7**	*e*P	**Pn**	**15 10 38.1**	**-0.6**
SPN	**Mys Shipunski**	**3.95**	**13**	PN	**Pn**	**15 10 38.5**	**-0.2**
SPN	**Mys Shipunski**	**3.95**	**13**	*e*P	**Pn**	**15 10 38.5**	**-0.2**
UGLR	**Uglovaya**	**3.96**	**2**	PN	**Pn**	**15 10 39.7**	**+0.8**
UGLR	**Uglovaya**	**3.96**	**2**	*e*P	**Pn**	**15 10 39.7**	**+0.8**
SMAR	**Somma**	**4.01**	**2**	PN	**Pn**	**15 10 40.3**	**+0.5**
SMAR	**Somma**	**4.01**	**2**	*e*P	**Pn**	**15 10 40.3**	**+0.5**
AVH	**Avacha**	**4.01**	**1**	PN	**Pn**	**15 10 40.9**	**+1.2**
AVH	**Avacha**	**4.01**	**1**	*e*P	**Pn**	**15 10 40.9**	**+1.2**
KOK	**Koryaka**	**4.04**	**0**	PN	**Pn**	**15 10 40.8**	**+0.8**
KOK	**Koryaka**	**4.04**	**0**	*e*P	**Pn**	**15 10 40.8**	**+0.8**
KRER	**Koryakskii**	**4.05**	**1**	PN	**Pn**	**15 10 41.7**	**+1.4**
KRER	**Koryakskii**	**4.05**	**1**	*e*P	**Pn**	**15 10 41.7**	**+1.4**
KRX	**Arik**	**4.11**	**0**	PN	**Pn**	**15 10 41.2**	**+0.2**
KRX	**Arik**	**4.11**	**0**	*e*P	**Pn**	**15 10 41.2**	**+0.2**
GNL	**Ganaly**	**4.46**	**355**	PN	**Pn**	**15 10 47.0**	**+1.2**
GNL	**Ganaly**	**4.46**	**355**	*e*P	**Pn**	**15 10 47.1**	**+1.2**
KBTR	**Krutoberegovo**	**7.42**	**19**	PN	**Pn**	**15 11 26.2**	**0.0**
KBTR	**Krutoberegovo**	**7.42**	**19**	*e*P	**Pn**	**15 11 26.3**	**0.0**
SHEM	**Shemya Is, Ala**	**10.37**	**65**	Pn	**Pn**	**15 12 06.1**	**-0.6**
	comp=N,4.1nm,0.3s,baz=81,slow=23,SNR=1.6						
SMY	**Shemya**	**10.37**	**65**	Pn	**Pn**	**15 12 06.5**	**-0.3**
SMY	**Shemya**	**10.37**	**65**	PN	**Pn**	**15 12 06.5**	**-0.3**
YSS	**Yuzhno-Sakhali**	**10.84**	**264**	Pn	**Pn**	**15 12 12.9**	**-0.3**
YSS	**Yuzhno-Sakhali**	**10.84**	**264**	*e*PN	**Pn**	**15 12 13.5**	**+0.3**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MA2	**Magadan**	**11.29**	**339**	LR	LR	15 17 42.0	
	comp=Z,29nm,18.1s,baz=106,slow=43						
JKA	**Kamikawa-asahi**	**12.12**	**251**		**Pn**	**15 12 29.0**	**-1.8**
ASAJ	**Asahikawa**	**12.12**	**251**	Pn	**Pn**	**15 12 29.0**	**-1.8**
	comp=Z,0.6nm,0.3s,baz=67,slow=18,SNR=10						
	comp=Z,5.1nm,0.8s						
ASAJ	**Asahikawa**	**12.12**	**251**	PN	**Pn**	**15 12 29.0**	**-1.8**
KLR	**Kul'dur**	**17.50**	**280**	P	**P**	**15 13 42.1**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=79,slow=6.0,SNR=4.2						
	comp=Z,0.5nm,0.3s						
BILL	**Bilibino**	**19.23**	**9**	*i*P	**Pn**	**15 14 03.4**	**+0.8**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.3s						
MJA0	**Matsu Arr-Jizo**	**19.51**	**237**	*e*P	**Pn**	**15 14 05.6**	**-0.6**
MJB9	**Matsu-Tunnel**	**19.53**	**237**	P	**P**	**15 14 05.0**	**0.0**
MJB9				IAmb	IAmb	15 14 08.6	
	comp=Z,13nm,1.2s						
MAJO	**Matsushiro**	**19.53**	**237**	P	**P**	**15 14 03.9**	**-1.1**
MAJO				IAmb	IAmb	15 14 07.6	
	comp=Z,13nm,1.2s						
MAJO	**Matsushiro**	**19.53**	**237**	P	**P**	**15 14 03.9**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,13nm,1.3s						
MJAR	**Matsushiro Arr**	**19.53**	**237**	P	**P**	**15 14 04.5**	**-0.5**
	baz=6.8,slow=9.5,SNR=5.9						
	comp=Z,1.3nm,0.7s						
SPIA	**Saint Paul Isl**	**20.12**	**55**	P	**P**	**15 14 09.8**	**-1.4**
YAK	**Yakutsk**	**20.50**	**319**	*ce*P	**P**	**15 14 14.1**	**-1.2**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GAMB	**Gambell**	**21.62**	**37**	P	**P**	**15 14 26.5**	**-0.8**
GAMB				IAmb	IAmb	15 14 51.0	
	comp=Z,7.5nm,1.1s						
KSRS	**Korea Array**	**25.05**	**253**	P	**P**	**15 15 01.7**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=50,slow=9.9,SNR=5.0						
	comp=Z,0.8nm,0.6s						
KSAR	**Wonju Array Be**	**25.08**	**254**	P	**P**	**15 15 00.7**	**-1.1**
KSAR	**Wonju Array Be**	**25.08**	**254**	P	**P**	**15 15 00.7**	**-1.1**
TIXI	**Tiksi**	**26.26**	**339**	P	**P**	**15 15 11.0**	**-1.1**
TIXI				IAmb	IAmb	15 15 15.7	
	comp=Z,3.0nm,0.7s						
TIXI	**Tiksi**	**26.26**	**339**	*ce*P	**P**	**15 15 12.4**	**+0.3**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.5s						
C18K	**Utukok River**	**27.60**	**31**	P	**P**	**15 15 24.8**	**+0.6**
O18K	**Koktuh Hills**	**28.23**	**50**	P	**P**	**15 15 28.1**	**-1.8**
XLT	**XiLinHaoTe**	**29.41**	**276**	*e*P	**P**	**15 15 43.0**	**+2.4**
XLT				pP	sP	15 15 51.5	-0.4
XLT				sP	pwP	15 15 57.3	-0.6
XLT				pmax	pmax		
	comp=Z,9.0nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**30.20**	**164**	T	T	15 47 27.0	
	baz=349,slow=76,SNR=7.2						
H11N3	**WAKE ISLAND Hy**	**30.22**	**164**	T	T	15 47 28.1	
	baz=349,slow=76,SNR=7.1						
H11N1	**WAKE ISLAND Hy**	**30.22**	**164**	T	T	15 47 28.2	
	baz=349,slow=76,SNR=5.6						
H11S1	**WAKE ISLAND Hy**	**31.37**	**165**	T	T	15 48 54.6	
	baz=350,slow=76,SNR=9.6						
H11S3	**WAKE ISLAND Hy**	**31.38**	**165**	T	T	15 48 55.8	
	baz=350,slow=76,SNR=9.4						
H11S2	**WAKE ISLAND Hy**	**31.38**	**165**	T	T	15 48 56.1	
	baz=350,slow=76,SNR=11						
NRIK	**Noril'sk**	**38.57**	**327**	*i*P	**P**	**15 16 59.6**	**+0.1**
NRIK				pmax	pmax		
	comp=Z,8.0nm,2.2s						
YKA	**Yellowknife Ar**	**46.68**	**40**	P	**P**	**15 18 05.9**	**+0.6**
	comp=Z,0.1nm,0.4s,baz=299,slow=6.4,SNR=2.6						
	comp=Z,0.1nm,0.4s						
YKA	**Yellowknife Ar**	**46.68**	**40**	P	**P**	**15 18 05.5**	**+0.2**
YKA	**Yellowknife Ar**	**46.68**	**40**	P	**P**	**15 18 05.5**	**+0.2**
KURK	**Kurchatov**	**49.03**	**304**	P	**P**	**15 18 23.7**	**0.0**
KURK	**Kurchatov**	**49.03**	**304**		**PcP**	**15 19 47.6**	**+0.5**
KURK	**Kurchatov**	**49.03**	**304**	*i*P	**P**	**15 18 24.2**	**+0.5**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MK31	**Makanchi Array**	**49.04**	**298**	P	**P**	**15 18 24.0**	**+0.1**
MK31				IAmb	IAmb	15 18 28.9	
	comp=Z,3.9nm,1.4s						
MK31	**Makanchi Array**	**49.04**	**298**	P	**P**	**15 18 24.0**	**+0.1**
MK31				pmax	pmax		
	comp=Z,4.0nm,1.5s						
MKAR	**Makanchi Array**	**49.04**	**298**	P	**P**	**15 18 23.6**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=56,slow=5.9,SNR=7.9						
	comp=Z,0.7nm,0.6s						
MKAR	**Makanchi Array**	**49.04**	**298**	*e*P	**P**	**15 18 24.2**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURBB	**Kurchatov Arra**	**49.12**	**304**	P	**P**	**15 18 24.6**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=63,slow=7.7,SNR=9.4						
KURBB				PcP	**PcP**	**15 19 47.6**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=64,slow=4.2,SNR=2.3						
	comp=Z,0.9nm,0.5s						
MAKZ	**Makanchi**	**49.21**	**298**	P	**P**	**15 18 24.4**	**-0.8**
MAKZ				IAmb	IAmb	15 18 28.6	
	comp=Z,1.9nm,0.7s						
MAKZ	**Makanchi**	**49.21**	**298**	P	**P**	**15 18 24.5**	**-0.8**
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SPITS	**Spitsbergen Ar**	**50.77**	**351**	P	**P**	**15 18 37.0**	**+0.4**
	comp=Z,6.1nm,0.9s,baz=51,slow=6.6,SNR=10						
	comp=Z,6.1nm,0.9s						
BVAR	**Borovoye Array**	**52.09**	**310**	P	**P**	**15 18 47.0**	**+0.3**
	comp=Z,1.1nm,0.5s,baz=66,slow=8.3,SNR=5.0						
	comp=Z,1.1nm,0.5s						
BORK	**Borovoye**	**52.11**	**310**	*i*P	**P**	**15 18 46.7**	**-0.2**
BORK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARTI	**Arti**	**55.72**	**319**	*d*iP	**P**	**15 19 14.3**	**+1.1**
ARTI						15 20 12.2	
ARTI						15 21 17.8	
ARTI				S	**S**	**15 26 59.6**	**+2.7**
ARTI				SS	**SS**	**15 30 40.8**	**-1.0**
ARTI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
AAK	**Ala-Archa**	**55.97**	**298**	P	**P**	**15 19 16.1**	**+0.6**
	comp=Z,0.8nm,0.4s,baz=127,slow=5.1,SNR=8.5						
	comp=Z,0.8nm,0.4s						
AAK	**Ala-Archa**	**55.97**	**298**	P	**P**	**15 19 15.9**	**+0.4**
AAK	**Ala-Archa**	**55.97**	**298**	*ce*P	**P**	**15 19 15.5**	**0.0**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
AKTO	**Aktyubinsk**	**59.74**	**313**	P	**P**	**15 19 42.0**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=57,slow=6.9,SNR=5.1						
	comp=Z,1.1nm,0.5s						
FINES	**FINESS Array B**	**63.27**	**337**	P	**P**	**15 20 05.1**	**0.0**
	comp=Z,2.9nm,1.0s,baz=43,slow=6.3,SNR=4.6						
	comp=Z,2.9nm,1.0s						
FINES	**FINESS Array B**	**63.27**	**337**	*e*P	**P**	**15 20 04.8**	**-0.4**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OBN	**Obninsk**	**65.24**	**328**	⇑*e*P	**P**	**15 20 17.4**	**-0.8**
OBN				*e*S	S	15 29 39.2	+40
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,499nm,19.0s						
NB2	**NORSAR Subarra**	**66.96**	**343**	P	**P**	**15 20 30.4**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=27,slow=6.5						
NOA	**NORSAR Array B**	**66.96**	**343**	P	**P**	**15 20 28.9**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=24,slow=6.5,SNR=4.2						
	comp=Z,0.7nm,0.7s						
NOA	**NORSAR Array B**	**66.96**	**343**	P	**P**	**15 20 29.0**	**-0.2**
HFS	**Hagfors**	**67.31**	**342**	P	**P**	**15 20 31.9**	**+0.6**
	comp=Z,1.3nm,0.9s,baz=57,slow=5.5,SNR=4.3						
	comp=Z,1.3nm,0.9s						
AKASG	**Malin Array Be**	**71.41**	**329**	P	**P**	**15 20 56.5**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=32,slow=6.7,SNR=4.6						
	comp=Z,0.8nm,0.6s						
AKASG	**Malin Array Be**	**71.41**	**329**	*e*P	**P**	**15 20 59.5**	**+2.6**
WB0	**Warramunga Arr**	**72.01**	**204**	P	**P**	**15 21 00.7**	**0.0**
WRA	**Warramunga Arr**	**72.19**	**204**	P	**P**	**15 21 01.5**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=20,slow=6.4,SNR=11						
	comp=Z,1.9nm,0.7s						
WRA	**Warramunga Arr**	**72.19**	**204**	P	**P**	**15 21 01.1**	**-0.7**
WRA	**Warramunga Arr**	**72.19**	**204**	*e*P	**P**	**15 21 01.9**	**+0.1**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ASAR	**Alice Springs**	**75.86**	**203**	P	**P**	**15 21 23.8**	**+0.6**
	comp=Z,0.7nm,0.8s,baz=16,slow=4.9,SNR=15						
	comp=Z,0.7nm,0.8s						

*IDC **26** 15:16:20.6±0.9, 49°.22N×157°.83E, h0km, mb3.8/9, mbtmp3.8/11, ML3.7/3, MS3.0/1, Error ellipse: s-maj=25.2km s-min=18.2km az=144.0*
*MOS **26** 15:16:23.7±0.8, 49°.20N×157°.80E, h40km, mb4.3/10, Error ellipse: s-maj=12.3km s-min=3.9km az=87.1*
*KRSC **26** 15:16:23.4±1.9, 49°.34N×158°.29E, h40km±41km, Ml4.2*
*NEIC **26** 15:16:26.6±1.4, 49°.26N±0°.07×157°.8E±0°.1, h35km±4km, mb4.1/34, Error ellipse: s-maj=14.1km s-min=10.4km az=97.0*

ISC 26 15:16:25.5±0.7, 49°25N±0°.07×157°88E±0°06, h35km, n129, σ1℘35/142, mb4.1/30, 2C, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.83**	**322**	*e*PN	**Pn**	**15 16 54.0**	**-0.4**
SKR				*e*S	**Sn**	**15 17 17.2**	**+0.8**
SKR				pmax	pmax		
	comp=Z,641nm,0.5s						
SKR				smax	smax		
	comp=E,431nm,0.2s						
SKR				smax	smax		
	comp=N,1μm,0.7s						
SKR	**Severo-Kuril's**	**1.83**	**322**	*e*P	**Pn**	**15 16 54.0**	**-0.4**
SKR				*e*S	**Sn**	**15 17 17.1**	**+0.7**
PAU	**Pauzhetka**	**2.33**	**343**	PN	**Pn**	**15 17 01.5**	**+0.4**
PAU				S	**Sn**	**15 17 30.0**	**+1.5**
PAU	**Pauzhetka**	**2.33**	**343**	*e*P	**Pn**	**15 17 01.6**	**+0.4**
PAU				*e*S	**Sn**	**15 17 30.0**	**+1.5**
KDTR	**Khodutka, Kamc**	**2.57**	**3**	PN	**Pn**	**15 17 04.4**	**-0.1**
KDTR				S	**Sn**	**15 17 33.8**	**-0.7**
KDTR	**Khodutka, Kamc**	**2.57**	**3**	*e*P	**Pn**	**15 17 04.4**	**-0.1**
KDTR				*e*S	**Sn**	**15 17 33.8**	**-0.7**
MIPR	**Malaya Ipel'ka**	**3.12**	**347**	PN	**Pn**	**15 17 12.8**	**+0.8**
MIPR	**Malaya Ipel'ka**	**3.12**	**347**	*e*P	**Pn**	**15 17 12.9**	**+0.8**
ASAK	**Asacha**	**3.14**	**0**	PN	**Pn**	**15 17 12.7**	**+0.3**
ASAK	**Asacha**	**3.14**	**0**	*e*P	**Pn**	**15 17 12.8**	**+0.3**
RUS	**Russkaya**	**3.22**	**7**	PN	**Pn**	**15 17 13.6**	**+0.2**
RUS				S	**Sn**	**15 17 49.6**	**-0.8**
RUS	**Russkaya**	**3.22**	**7**	*e*P	**Pn**	**15 17 13.7**	**+0.2**
RUS				*e*S	**Sn**	**15 17 49.6**	**-0.8**
MTVR	**Mutnovka**	**3.25**	**3**	PN	**Pn**	**15 17 14.2**	**+0.2**
MTVR				S	**Sn**	**15 17 50.7**	**-0.7**
MTVR	**Mutnovka**	**3.25**	**3**	*e*P	**Pn**	**15 17 14.2**	**+0.2**
MTVR				*e*S	**Sn**	**15 17 50.8**	**-0.7**
GRL	**Gorelyy**	**3.31**	**2**	PN	**Pn**	**15 17 15.6**	**+0.7**
GRL				S	**Sn**	**15 17 52.8**	**-0.2**
GRL	**Gorelyy**	**3.31**	**2**	*e*P	**Pn**	**15 17 15.6**	**+0.7**
GRL				*e*S	**Sn**	**15 17 52.8**	**-0.2**
KRMR	**Karymshinskiy**	**3.59**	**2**	PN	**Pn**	**15 17 19.8**	**+1.2**
KRMR				S	**Sn**	**15 18 00.3**	**+0.6**
KRMR	**Karymshinskiy**	**3.59**	**2**	*e*P	**Pn**	**15 17 19.9**	**+1.2**
KRMR				*e*S	**Sn**	**15 18 00.4**	**+0.6**
APC	**Apacha**	**3.71**	**353**	PN	**Pn**	**15 17 21.1**	**+0.9**
APC	**Apacha**	**3.71**	**353**	*e*P	**Pn**	**15 17 21.1**	**+0.9**
PET	**Petropavlovsk**	**3.81**	**7**		**Pn**	**15 17 21.9**	**+0.3**
PET				Sn	**Sn**	**15 18 04.0**	**-1.1**
PET	**Petropavlovsk**	**3.81**	**7**	*e*PN	**Pn**	**15 17 21.7**	**+0.1**
PET				*e*S	**Sn**	**15 18 06.7**	**+1.5**
PET				pmax	pmax		
	comp=Z,44nm,0.3s						
PET				smax	smax		
	comp=N,96nm,0.5s						
PET				smax	smax		
	comp=E,83nm,0.5s						
PET	**Petropavlovsk**	**3.81**	**7**	*e*P	**Pn**	**15 17 22.3**	**+0.6**
DALK	**Dalny**	**3.83**	**8**	PN	**Pn**	**15 17 22.4**	**+0.6**
DALK	**Dalny**	**3.83**	**8**	*e*P	**Pn**	**15 17 22.4**	**+0.6**
DALK				*e*S	**Sn**	**15 18 04.3**	**-1.3**
INSR	**Institute**	**3.85**	**7**	PN	**Pn**	**15 17 23.2**	**+1.1**
INSR	**Institute**	**3.85**	**7**	*e*P	**Pn**	**15 17 23.2**	**+1.1**
UGLR	**Uglovaya**	**4.01**	**8**	PN	**Pn**	**15 17 25.3**	**+0.9**
UGLR	**Uglovaya**	**4.01**	**8**	*e*P	**Pn**	**15 17 25.4**	**+0.9**
NLC	**Nalytchevo**	**4.04**	**13**	PN	**Pn**	**15 17 23.7**	**-1.0**
NLC	**Nalytchevo**	**4.04**	**13**	*e*P	**Pn**	**15 17 23

H11N2	**WAKE ISLAND Hy**	**30.32**	**163**	T	T	15 54 21.6			
	baz=348								
H11N1	**WAKE ISLAND Hy**	**30.34**	**163**	T	T	15 54 23.6			
	baz=348								
H11N3	**WAKE ISLAND Hy**	**30.34**	**163**	T	T	15 54 24.6			
	baz=348								
E22K	**Anaktuvuk Pass**	**31.00**	**34**	P	**P**	**15 22 40.4**	**+1.2**		
E22K				IAmb	IAmb	15 22 41.9			
	comp=Z,4.7nm,1.4s								
H11S1	**WAKE ISLAND Hy**	**31.48**	**164**	T	T	15 55 53.0			
	baz=349								
H11S3	**WAKE ISLAND Hy**	**31.49**	**164**	T	T	15 55 54.7			
	baz=349								
H11S2	**WAKE ISLAND Hy**	**31.50**	**164**	T	T	15 55 54.1			
	baz=349								
C23K	**Itkillik River**	**31.80**	**31**	P	**P**	**15 22 48.1**	**+2.0**		
E23K	**Chandalar**	**31.80**	**34**	P	**P**	**15 22 47.7**	**+1.4**		
E23K				IAmb	IAmb	15 23 06.2			
	comp=Z,4.2nm,1.2s								
SML	**Sawmill**	**31.94**	**46**	P	**P**	**15 22 48.3**	**+0.7**		
COLA	**College**	**32.17**	**41**	*i* P	**P**	**15 22 49.8**	**+0.4**		
COLA				pmax	pmax				
	comp=Z,2.0nm,0.9s								
E24K	**Your Creek**	**32.22**	**35**	P	**P**	**15 22 51.6**	**+1.7**		
E24K				IAmb	IAmb	15 22 52.7			
	comp=Z,2.0nm,0.9s								
G24K	**Hadweenzic Riv**	**32.45**	**37**	P	**P**	**15 22 53.7**	**+1.8**		
G24K				IAmb	IAmb	15 22 54.9			
	comp=Z,2.8nm,0.7s								
ILAR	**Eielson Array**	**32.58**	**41**	P	**P**	**15 22 53.8**	**+0.7**		
	comp=Z,0.3nm,0.5s,baz=253,slow=7.8,SNR=13								
	comp=Z,0.3nm,0.5s								
ILAR	**Eielson Array**	**32.58**	**41**	*e*P	**P**	**15 22 54.0**	**+0.9**		
KLU	**Klutina**	**33.11**	**47**	P	**P**	**15 22 58.6**	**+0.8**		
D25K	**Kavik River**	**33.16**	**32**	P	**P**	**15 22 59.0**	**+0.8**		
G26K	**Porcupine Rive**	**33.92**	**37**	P	**P**	**15 23 05.4**	**+0.7**		
G26K				IAmb	IAmb	15 23 08.0			
	comp=Z,2.9nm,0.7s								
E27K	**Coleen River**	**34.80**	**35**	P	**P**	**15 23 14.3**	**+2.0**		
E27K				IAmb	IAmb	15 23 37.5			
	comp=Z,4.6nm,1.4s								
I28M	**Miner Creek**	**35.51**	**40**	P	**P**	**15 23 19.2**	**+0.7**		
G29M	**Pine Creek**	**36.20**	**37**	P	**P**	**15 23 26.8**	**+2.5**		
F31M	**Tsiigehtchic**	**37.81**	**36**	P	**P**	**15 23 39.7**	**+1.8**		
F31M				IAmb	IAmb	15 24 20.4			
	comp=Z,5.5nm,1.1s								
YKA	**Yellowknife Ar**	**46.99**	**39**	P	**P**	**15 24 53.6**	**+1.1**		
	comp=Z,0.8nm,0.8s,baz=290,slow=7.4,SNR=2.5								
	comp=Z,0.8nm,0.8s								
MK31	**Makanchi Array**	**48.63**	**298**	*i* P	**P**	**15 25 05.2**	**-0.4**		
MKAR	**Makanchi Array**	**48.63**	**298**	P	**P**	**15 25 05.7**	**+0.1**		
	comp=Z,1.2nm,0.7s,baz=51,slow=5.7,SNR=13								
	comp=Z,1.2nm,0.7s								
KURK	**Kurchatov**	**48.65**	**304**	P	**P**	**15 25 05.6**	**+0.1**		
KURK	**Kurchatov**	**48.65**	**304**	*i* P	**P**	**15 25 05.1**	**-0.5**		
KURK				pmax	pmax				
	comp=Z,2.0nm,0.8s								
KURBB	**Kurchatov Arra**	**48.74**	**304**	P	**P**	**15 25 06.4**	**+0.1**		
	comp=Z,1.1nm,0.5s,baz=64,slow=8.0,SNR=13								
	comp=Z,1.1nm,0.5s								
BVAR	**Borovoye Array**	**51.73**	**310**	P	**P**	**15 25 29.1**	**+0.1**		
	comp=Z,0.8nm,0.4s,baz=53,slow=8.9,SNR=4.6								
	comp=Z,0.8nm,0.4s								
ARTI	**Arti**	**55.41**	**318**	*c i* P	**P**	**15 25 56.1**	**+0.3**		
ARTI						15 26 55.7			
ARTI						15 27 56.8			
ARTI				S	**S**	**15 33 35.6**	**-2.1**		
ARTI				SS	**SS**	**15 37 17.7**	**-4.1**		
ARTI				pmax	pmax				
	comp=Z,15nm,3.9s								
CMAR	**Chiang Mai Arr**	**56.04**	**259**	P	**P**	**15 26 01.7**	**+0.9**		
	comp=Z,0.3nm,0.4s,baz=30,slow=7.4,SNR=4.1								
	comp=Z,0.3nm,0.4s								
EVN	**Everest**	**57.29**	**276**	P	**P**	**15 26 10.4**	**0.0**		
EVN				IAmb	IAmb	15 26 13.2			
	comp=Z,1.8nm,0.8s								
AB31	**Akbulak array**	**59.25**	**311**	P	**P**	**15 26 23.1**	**+0.2**		
AB31				IAmb	IAmb	15 26 38.2			
	comp=Z,1.7nm,1.0s								
ABKAR	**Akbulak array**	**59.25**	**311**	P	**P**	**15 26 23.1**	**+0.2**		
BELG	**Belogornoye**	**62.75**	**320**	*i* P	**P**	**15 26 46.1**	**-0.5**		
BELG				pmax	pmax				
	comp=Z,2.0nm,0.9s								
OBN	**Obninsk**	**65.00**	**327**	⇑*e*P	**P**	**15 27 00.3**	**-1.1**		
OBN				*e*		15 29 26.9			
OBN				pmax	pmax				
	comp=Z,4.0nm,0.9s								
WB0	**Warramunga Arr**	**71.81**	**203**	P	**P**	**15 27 44.3**	**0.0**		
WR8	**Warramunga Arr**	**71.97**	**203**	P	**P**	**15 27 44.7**	**-0.5**		
WRA	**Warramunga Arr**	**71.99**	**203**	P	**P**	**15 27 45.6**	**+0.2**		
	comp=Z,1.4nm,0.7s,baz=18,slow=6.4,SNR=16								
	comp=Z,1.4nm,0.7s								
BURAR	**Bucovina Array**	**75.18**	**329**	P	**P**	**15 28 06.4**	**+2.3**		
AS31	**Alice Springs**	**75.67**	**203**	P	**P**	**15 28 07.1**	**+0.2**		
ASAR	**Alice Springs**	**75.67**	**203**	P	**P**	**15 28 07.7**	**+0.8**		
	comp=Z,0.4nm,0.5s,baz=18,slow=5.5,SNR=14								
	comp=Z,0.4nm,0.5s								
ASAR	**Alice Springs**	**75.67**	**203**	P	**P**	**15 28 07.5**	**+0.6**		
ASAR	**Alice Springs**	**75.67**	**203**	P	**P**	**15 28 07.5**	**+0.6**		
CSS	**Mathiatis**	**82.78**	**317**	P	**P**	**15 28 47.2**	**+1.4**		
NVL	**N'lazarevskaya**	**153.23**	**204**	*e*PKIKP	**PKPdf**	**15 36 04.5**	**-6.0**		
NVL				pmax	pmax				
	comp=Z,73nm,2.0s								

IDC ***26*** *15:16:27.1±0.3,31.˙72N×104.˙05W,h0km,mb4.5/28, mbtmp4.5/39,ML3.8/10,MS4.3/22,Error ellipse: s-maj=12.3km s-min=6.3km az=72.0*

NEIC ***26*** *15:16:27.9±1.3,31.˙72N±0.˙02×104.˙04W±0.˙04,h10km±3km, mb4.7/178,mb_Lg4.8/173,ML4.7/24,Mwr4.9/64, Mww5.0/81,Error ellipse: s-maj=5.9km s-min=1.7km az=59.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr-2.39; Mθθ2.38; Mϕϕ0.01; Mrθ0.21; Mθϕ-0.30; Mϕr-0.42; Fault plane solution: M₀2.45000×10¹⁶ NP1: ϕs88.22000°,δ42.62000°,λ-103.35000°. NP2: ϕs286.09000°,δ48.79000°,λ-78.01000°. Principal axes: T 2.4291, Plg3.0000°, Azm8.0000°; N 0.0390, Plg9.0000°, Azm98.0000°; P -2.4681, Plg80.0000°, Azm259.0000°;*

TXNET ***26*** *15:16:27.8,31.˙7N±0.˙5×104.˙1W±0.˙6,h6km±1km,ML4.9/18 Error ellipse: s-maj=0.9km s-min=0.6km az=56.6,final*

NEIC ***26*** *15:16:28.7,31.˙70N×104.˙06W,h5km*

NEIC ***26*** *15:16:28.7,31.˙80N×103.˙71W,h16km,Moment Tenson Solution. Duration: 1ŝ8 Moment tensor: Scale 10¹⁶Nm; Mrr-3.97; Mθθ3.89; Mϕϕ0.08; Mrθ1.28; Mθϕ-0.21; Mϕr-0.99; Fault plane solution: M₀4.26000×10¹⁶ NP1:ϕs81.96000°, δ36.73000°,λ-108.76000°. NP2:ϕs284.93000°, δ55.51000°,λ-76.51000°. Principal axes: T 4.1266, Plg10.0000°, Azm5.0000°; N 0.2479, Plg11.0000°, Azm97.0000°; P -4.3745, Plg75.0000°, Azm235.0000°;*

NEIC ***26*** *15:16:28.7,31.˙70N×104.˙06W,h16km*

GFZ ***26*** *15:16:30.1,31.˙62N×103.˙94W,h10km,MW4.9,Moment Tensor Solution. s20 Moment tensor: Mrr-3.10; Mθθ3.01; Mϕϕ0.09; Mrθ-0.67; Mθϕ-0.08; Mϕr-0.21; Fault plane solution: NP1:ϕs87.00000°,δ51.00000°, λ-94.00000°. NP2:ϕs275.00000°,δ38.00000°, λ-83.00000°. Principal axes: T 3.0900, Plg6.0000°, Azm181.0000°; N 0.1000, Plg3.0000°, Azm90.0000°; P -3.1900, Plg82.0000°, Azm329.0000°;*

GCMT ***26*** *15:16:31.9±0.3,31.˙80N±0.˙01×103.˙87W±0.˙03,h12km±1km, MW5.0/76,Moment Tensor Solution. s38,c44; s76,c120; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-3.71±.18; Mθθ3.85±.14; Mϕϕ-0.14±.11; Mrθ0.21±.31; Mθϕ-0.66±.08; Mϕr-1.29±.36; Best double couple: M₀4.05300×10¹⁶ NP1:ϕs82.00000°,δ45.00000°,λ-116.00000°. NP2: ϕs296.00000°,δ51.00000°,λ-67.00000°. Principal axes: T 3.9780, Plg3.0000°, Azm10.0000°; N 0.1490, Plg18.0000°, Azm101.0000°; P -4.1270, Plg72.0000°, Azm270.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 15:16:28.3±0.8,31.˙70N±0.˙02×104.˙03W±0.˙02,h10km±5km, n684,σ1ŝ29/616,mb4.8/117,MS4.5/14,5C-8D,Western Texas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPB13	**Reeves - Culbe**	**0.22**	**132**		**Pg**	**15 16 33.2**	**+0.5**
TPB13					**Sg**	**15 16 37.0**	**+1.1**
TPB13	**Reeves - Culbe**	**0.22**	**132**	⇑P	**Pg**	**15 16 33.2**	**+0.5**
TPB13				S	**Sg**	**15 16 36.9**	**+1.1**
TPB11	**China Draw**	**0.23**	**360**	⇑P	**Pg**	**15 16 33.2**	**+0.1**
TPB11				S	**Sg**	**15 16 36.7**	**+0.3**
TPB09	**Culberson Coun**	**0.24**	**288**		**Pg**	**15 16 33.3**	**+0.1**
TPB09	**Culberson Coun**	**0.24**	**288**	⇑P	**Pg**	**15 16 33.3**	**+0.1**
TPB09				S	**Sg**	**15 16 36.8**	**+0.2**
TPB07	**Mentone**	**0.33**	**111**		**Pg**	**15 16 35.4**	**+0.4**
TPB07					**Sb**	**15 16 41.0**	**-0.9**
TPB07	**Mentone**	**0.33**	**111**	P	**Pg**	**15 16 35.4**	**+0.4**
TPB07				S	**Sb**	**15 16 40.6**	**-1.2**
PECS	**Pecos**	**0.36**	**157**	Pg	**Pg**	**15 16 35.4**	**0.0**
PECS				IAML		15 16 46.1	
	74μm,0.8s						
PECS	**Pecos**	**0.36**	**157**	P	**Pg**	**15 16 35.4**	**0.0**
PECS				S	**Sg**	**15 16 40.8**	**+0.6**
TPB10	**Southeast of T**	**0.48**	**150**		**Pg**	**15 16 37.8**	**+0.1**
TPB10					**Sb**	**15 16 45.3**	**-0.7**
TPB10	**Southeast of T**	**0.48**	**150**	P	**Pg**	**15 16 37.8**	**+0.1**
TPB10				S	**Sb**	**15 16 45.3**	**-0.7**
TPB12	**Southwest of T**	**0.49**	**172**		**Pg**	**15 16 37.9**	**0.0**
TPB12					**Sg**	**15 16 45.2**	**+0.9**
TPB12	**Southwest of T**	**0.49**	**172**	P	**Pg**	**15 16 37.9**	**0.0**
TPB12				S	**Sg**	**15 16 45.2**	**+0.9**
PCOS	**Crockett Middl**	**0.53**	**123**		**Pg**	**15 16 39.0**	**+0.3**
PCOS					**Sb**	**15 16 47.1**	**-0.5**
PCOS	**Crockett Middl**	**0.53**	**123**	P	**Pg**	**15 16 39.0**	**+0.3**
PCOS				S	**Sb**	**15 16 47.1**	**-0.5**
GDL2	**Guadalupe Moun**	**0.57**	**331**	Pg	**Pg**	**15 16 38.9**	**-0.5**
GDL2	**Guadalupe Moun**	**0.57**	**331**	P	**Pg**	**15 16 39.0**	**-0.4**
CLNB	**Carlsbad**	**0.58**	**13**	Pg	**Pg**	**15 16 39.3**	**-0.2**
CLNB	**Carlsbad**	**0.58**	**13**	⇑P	**Pg**	**15 16 39.4**	**-0.1**
CLNB				S	**Sb**	**15 16 48.3**	**-0.6**
TPB06	**Permian Basin**	**0.70**	**94**	P	**Pg**	**15 16 41.8**	**+0.1**
TPB06				S	**Sb**	**15 16 52.2**	**-0.1**
CBET	**Carlsbad E Tow**	**0.72**	**3**		**Pg**	**15 16 41.9**	**-0.3**
CBET	**Carlsbad E Tow**	**0.72**	**3**	P	**Pg**	**15 16 41.8**	**-0.3**
TPB03	**Saragosa**	**0.76**	**144**		**Pg**	**15 16 42.9**	**0.0**
TPB03	**Saragosa**	**0.76**	**144**	P	**Pg**	**15 16 42.9**	**0.0**
TPB03				S	**Sb**	**15 16 53.9**	**-0.2**
TPB27	**North of Pyote**	**0.78**	**99**	P	**Pg**	**15 16 43.2**	**-0.1**
TPB27				S	**Sb**	**15 16 54.3**	**-0.4**
TPB01	**Permian Basin**	**0.79**	**164**	P	**Pg**	**15 16 42.8**	**-0.6**
TPB01				S	**Sg**	**15 16 54.0**	**+0.3**
TPB04	**Verhalen**	**0.83**	**128**		**Pg**	**15 16 44.2**	**0.0**
TPB04	**Verhalen**	**0.83**	**128**	P	**Pg**	**15 16 44.2**	**0.0**
TPB04				S	**Sb**	**15 16 56.1**	**0.0**
HTMS	**Hat Mesa**	**0.84**	**24**		**Pg**	**15 16 43.9**	**-0.6**
HTMS	**Hat Mesa**	**0.84**	**24**	P	**Pg**	**15 16 44.2**	**-0.3**
HTMS				S	**Sb**	**15 16 56.3**	**-0.2**
NM01	**Eunice**	**0.85**	**39**	P	**Pg**	**15 16 44.3**	**-0.3**
NM01				S	**Sb**	**15 16 56.1**	**-0.6**
TPB16	**Coyonosa**	**0.88**	**130**		**Pg**	**15 16 45.1**	**-0.1**
TPB16	**Coyonosa**	**0.88**	**130**	P	**Pg**	**15 16 45.1**	**-0.1**
TPB16				S	**Sb**	**15 16 57.4**	**-0.2**
TPB19	**West of Imperi**	**0.89**	**116**		**Pg**	**15 16 45.0**	**-0.4**
TPB19	**West of Imperi**	**0.89**	**116**	P	**Pg**	**15 16 45.0**	**-0.4**
TPB15	**Southwest of C**	**0.95**	**121**		**Pg**	**15 16 46.1**	**-0.4**
TPB15	**Southwest of C**	**0.95**	**121**	P	**Pg**	**15 16 46.1**	**-0.4**
TPB05	**Hovey Rd**	**0.99**	**142**	P	**Pg**	**15 16 46.7**	**-0.5**
TPB05				S	**Sb**	**15 17 00.7**	**0.0**
MNHN	**Monahans**	**1.14**	**108**		**Pb**	**15 16 49.1**	**-1.1**
MNHN				IAML		15 17 18.2	
	13μm,0.7s						
MNHN	**Monahans**	**1.14**	**108**	P	**Pb**	**15 16 49.1**	**-1.1**
MNHN				S	**Sb**	**15 17 05.2**	**0.0**
MNTX	**Cornudas Mount**	**1.15**	**270**	Pg	**Pb**	**15 16 49.4**	**-0.9**
MNTX	**Cornudas Mount**	**1.15**	**270**	P	**Pb**	**15 16 49.4**	**-0.9**
MNTX				S	**Sb**	**15 17 04.6**	**-0.7**
VHRN	**Van Horn**	**1.22**	**222**		**Pn**	**15 16 50.4**	**-1.2**
VHRN	**Van Horn**	**1.22**	**222**	P	**Pn**	**15 16 50.6**	**-1.0**
VHRN				S	**Sg**	**15 17 07.9**	**+0.3**
TPB08	**Permian Basin**	**1.26**	**130**		**Pn**	**15 16 51.5**	**-0.6**
TPB08	**Permian Basin**	**1.26**	**130**	P	**Pn**	**15 16 51.5**	**-0.6**
TPB08				S	**Sg**	**15 17 08.6**	**-0.1**
ODSA	**Odessa**	**1.33**	**71**		**Pn**	**15 16 52.4**	**-0.6**
ODSA				IAML		15 17 16.4	
	11μm,0.7s						
ODSA				IAML		15 17 36.7	
	20μm,1.3s						
ODSA	**Odessa**	**1.33**	**71**	P	**Pn**	**15 16 52.7**	**-0.4**
ODSA				S	**Sn**	**15 17 10.6**	**-0.3**
CPRX	**Cap Rock**	**1.33**	**6**		**Pn**	**15 16 52.7**	**-0.4**
CPRX	**Cap Rock**	**1.33**	**6**	P	**Pn**	**15 16 52.7**	**-0.4**
ALPN	**Alpine**	**1.36**	**166**		**Pn**	**15 16 52.8**	**-0.8**
ALPN				IAmb_Lg		15 17 13.0	
	comp=Z,10μm,0.9s						
ALPN	**Alpine**	**1.36**	**166**	P	**Pn**	**15 16 52.8**	**-0.8**
ALPN				S	**Sb**	**15 17 11.3**	**-0.3**
TMB02	**Rankin**	**1.78**	**106**		**Pb**	**15 17 00.4**	**-0.6**
TMB02	**Rankin**	**1.78**	**106**	P	**Pb**	**15 17 00.4**	**-0.6**
TMB02				S	**Sb**	**15 17 24.0**	**+0.5**
TMB06	**Greenwood**	**1.92**	**81**	P	**Pb**	**15 17 02.9**	**-0.6**
TMB06				S	**Sb**	**15 17 27.8**	**+0.2**
TMB05	**Klondike**	**2.06**	**63**	P	**Pb**	**15 17 04.7**	**-1.2**
TMB05				S	**Sb**	**15 17 32.7**	**+1.0**
EPT	**El Paso**	**2.11**	**273**		**Pn**	**15 17 05.1**	**+1.3**
EPT	**El Paso**	**2.11**	**273**	P	**Pn**	**15 17 05.1**	**+1.3**
EPT				S	**Sb**	**15 17 34.4**	**+1.4**
TX31	**Lajitas Ar. Si**	**2.38**	**172**		**Pn**	**15 17 08.6**	**+1.0**
TX31	**Lajitas Ar. Si**	**2.38**	**172**	P	**Pn**	**15 17 09.0**	**+1.5**
TXAR	**Lajitas Array**	**2.38**	**172**	Pn	**Pn**	**15 17 09.5**	**+2.0**
	comp=Z,351nm,0.3s,baz=358,slow=22,SNR=752						
TXAR				Lg	Lg	15 17 42.0	
	comp=Z,322nm,0.3s,baz=353,slow=24,SNR=4.7						
TXAR				LR	LR	15 18 10.3	
	comp=Z,41nm,21.5s,baz=292,slow=43						
TXAR	**Lajitas Array**	**2.38**	**172**		**Pn**	**15 17 08.8**	**+1.3**
SAND	**Sanderson**	**2.39**	**136**		**Pn**	**15 17 08.9**	**+1.2**
SAND				IAmb_Lg		15 17 48.1	
	comp=Z,4μm,0.8s						
SGCY	**Sterling City**	**2.48**	**84**		**Pn**	**15 17 10.0**	**+1.1**
SGCY				IAmb_Lg		15 17 49.7	
	comp=Z,6μm,1.2s						
MSTX	**Muleshoe**	**2.50**	**25**		**Pn**	**15 17 10.3**	**+1.2**
MSTX				IAmb_Lg		15 17 51.4	
	comp=Z,5μm,0.7s						
POST	**Post**	**2.54**	**57**		**Pn**	**15 17 11.1**	**+1.5**
OZNA	**Ozona**	**2.60**	**107**	Pn	**Pn**	**15 17 11.6**	**+1.0**
OZNA				IAmb_Lg		15 17 56.9	
	comp=Z,5μm,1.1s						
SN07	**Snyder 07**	**3.00**	**62**		**Pn**	**15 17 17.1**	**+1.1**
SN07				IAmb_Lg		15 18 09.8	
	comp=Z,3μm,0.7s						
CRNM	**Carthage**	**3.20**	**315**		**Pn**	**15 17 21.3**	**+2.5**
DKNS	**Dickens**	**3.27**	**52**		**Pn**	**15 17 20.9**	**+1.2**
DKNS				IAmb_Lg		15 18 20.7	
	comp=Z,3μm,1.1s						
121A	**Cookes Peak, D**	**3.29**	**286**		**Pn**	**15 17 21.6**	**+1.5**
Y22A	**Socorro**	**3.33**	**313**		**Pn**	**15 17 22.7**	**+2.0**
LENM	**Lemitar**	**3.49**	**316**		**Pn**	**15 17 24.9**	**+2.1**
SBM	**South Baldy**	**3.49**	**311**		**Pn**	**15 17 25.3**	**+2.3**
APMT	**Aspermont**	**3.68**	**63**		**Pn**	**15 17 26.4**	**+1.0**
APMT				IAmb_Lg		15 18 29.4	
	comp=Z,4μm,1.2s						
DRIO	**Del Rio**	**3.72**	**127**		**Pn**	**15 17 26.2**	**+0.4**
DRIO				IAmb_Lg		15 18 31.8	
	comp=Z,3μm,0.8s						
AMTX	**Amarillo**	**3.74**	**31**		**Pn**	**15 17 26.9**	**+0.7**
ANMO	**Albuquerque**	**3.82**	**329**	Pn	**Pn**	**15 17 27.7**	**+0.3**
	comp=Z,4.0nm,0.3s,baz=141,slow=11,SNR=45						
ANMO				Lg	Lg	15 18 26.3	
	comp=Z,384nm,0.3s,baz=29,slow=23,SNR=19						
	comp=Z,13nm,0.3s						
ANMO	**Albuquerque**	**3.82**	**329**	Pn	**Pn**	**15 17 29.2**	**+1.8**
ANMO				IAmb_Lg		15 18 32.0	
	comp=Z,4μm,1.0s						
ANMO	**Albuquerque**	**3.82**	**329**		**Pn**	**15 17 28.9**	**+1.6**
ANMO				IAmb_Lg		15 18 32.1	
	comp=Z,4μm,1.0s						
ANMO				IAmb_Lg		15 18 32.1	
	comp=Z,4μm,1.0s						
ANMO	**Albuquerque**	**3.82**	**329**		**Pn**	**15 17 29.0**	**+1.6**
ANMO				IAmb_Lg		15 18 32.1	
	comp=Z,4μm,1.0s						
JCT	**Junction City**	**3.83**	**107**		**Pn**	**15 17 28.0**	**+0.7**
ABTX	**Abilene, Hawle**	**3.83**	**75**		**Pn**	**15 17 28.0**	**+0.5**
ABTX				IAmb_Lg		15 18 40.3	
	comp=Z,2μm,0.9s						
PH02	**Texas Public H**	**4.07**	**25**		**Pn**	**15 17 30.9**	**+0.1**
PH02				IAmb_Lg		15 18 41.8	
	comp=Z,3μm,0.8s						
BRDY	**Brady**	**4.32**	**94**		**Pn**	**15 17 34.5**	**+0.4**
BRDY				IAmb_Lg		15 18 46.0	
	comp=Z,2μm,0.7s						
DUN6	**Lazy B Ranch**	**4.37**	**283**		**Pn**	**15 17 36.0**	**+1.0**
319A	**Douglas**	**4.49**	**267**		**Pn**	**15 17 37.4**	**+0.8**
HNDO	**Hondo**	**4.63**	**117**	Pn	**Pn**	**15 17 39.7**	**+1.3**
HNDO				IAmb_Lg		15 18 55.6	
	comp=Z,4μm,1.1s						
SMWD	**Samnorwood**	**4.64**	**42**		**Pn**	**15 17 39.4**	**+0.8**
RTBA	**Rita Blanca**	**4.85**	**12**		**Pn**	**15 17 42.6**	**+1.2**
RTBA				IAmb_Lg		15 19 06.1	
	comp=Z,2μm,0.9s						
HPIG		**4.96**	**197**		**Pn**	**15 17 43.9**	**+0.9**
HPIG				IAmb_Lg		15 19 12.1	
	comp=Z,3μm,0.9s						
PLPT	**Palo Pinto**	**4.97**	**76**		**Pn**	**15 17 43.3**	**+0.3**
PLPT				IAmb_Lg		15 19 12.4	
	comp=Z,1μm,0.9s						
WTFS	**Witchita Falls**	**5.12**	**65**		**Pn**	**15 17 45.8**	**+0.7**
833A	**Chaparral WMA,**	**5.25**	**129**		**Pn**	**15 17 47.1**	**+0.3**
833A				IAmb_Lg		15 19 20.9	
	comp=Z,1μm,1.1s						
WMOK	**Wichita Mounta**	**5.34**	**54**		**Pn**	**15 17 48.6**	**+0.4**
WMOK	**Wichita Mounta**	**5.34**	**54**	IAmb_Lg		15 19 23.8	
	comp=Z,2μm,1.1s						
T25A	**Trinidad**	**5.43**	**357**		**Pn**	**15 17 50.7**	**+1.1**
T25A				IAmb_Lg		15 19 22.6	
	comp=Z,2μm,0.9s						
EF02	**Christine**	**5.58**	**120**	Pn	**Pn**	**15 17 51.5**	**+0.1**
EF02				IAmb_Lg		15 19 35.2	
	comp=Z,3μm,1.2s						
435B	**Jarrell**	**5.60**	**98**	Pn	**Pn**	**15 17 52.3**	**+0.6**
435B				IAmb_Lg		15 19 39.1	
	comp=Z,2μm,0.8s						
WHTX	**Lake Whitney,**	**5.60**	**85**		**Pn**	**15 17 51.5**	**-0.2**
WHTX				IAmb_Lg		15 19 33.2	
	comp=Z,1μm,1.0s						
FW06	**Azle**	**5.63**	**75**		**Pn**	**15 17 51.8**	**-0.2**
FW13	**Cleburne**	**5.64**	**82**		**Pn**	**15 17 52.1**	**-0.2**
X18A	**Snowflake**	**5.71**	**301**		**Pn**	**15 17 54.1**	**+0.7**
X18A				IAmb_Lg		15 19 39.0	
	comp=Z,2μm,1.1s						
TUC	**Tucson**	**5.77**	**278**		**Pn**	**15 17 55.2**	**+1.1**
TUC				IAmb_Lg		15 19 46.6	
	comp=Z,1μm,1.0s						
TUC	**Tucson**	**5.77**	**278**		**Pn**	**15 17 54.7**	**+0.6**
ELIS	**Ellis County**	**5.80**	**40**	Pn	**Pn**	**15 17 56.5**	**+2.0**
ELIS				IAmb_Lg		15 19 41.9	
	comp=Z,2μm,1.2s						
W18A	**Petrified Fore**	**5.86**	**307**		**Pn**	**15 17 55.5**	**0.0**
W18A				IAmb_Lg		15 19 43.9	
	comp=Z,1μm,1.0s						
X34A	**Smith Ranch, M**	**5.95**	**59**		**Pn**	**15 17 56.9**	**+0.4**
X34A				IAmb_Lg		15 19 50.2	
	comp=Z,2μm,1.2s						
Z35A	**Perchaven, San**	**5.95**	**72**		**Pn**	**15 17 56.4**	**-0.2**
Z35A				IAmb_Lg		15 19 52.0	
	comp=Z,1μm,1.1s						
735A	**Kenedy**	**6.08**	**116**	Pn	**Pn**	**15 17 57.6**	**-0.8**
735A				IAmb_Lg		15 19 56.9	
	comp=Z,2μm,1.1s						
LOOK	**Love County**	**6.20**	**67**		**Pn**	**15 18 00.8**	**+0.8**
MLDN	**Muldoon**	**6.29**	**106**	Pn	**Pn**	**15 18 01.4**	**+0.2**
OK038	**West end E0370**	**6.48**	**41**	IAmb_Lg		15 20 05.2	
	comp=Z,1μm,0.7s						
NOKA	**Waynoka**	**6.49**	**39**	IAmb_Lg		15 20 10.1	
	comp=Z,2μm,1.2s						
FNO	**Franklin**	**6.58**	**56**	IAmb_Lg		15 20 02.5	
	comp=Z,1μm,1.1s						
MVCO	**Mesa Verde**	**6.62**	**327**	IAmb_Lg		15 20 02.8	
	comp=Z,2μm,1.1s						
OKCSW	**OKLAHOMA CITY**	**6.63**	**54**	IAmb_Lg		15 20 02.9	
	comp=Z,1μm,1.0s						
X16A	**Lo Mia Camp, P**	**6.78**	**296**		**Pn**	**15 18 08.9**	**+0.8**
TREL	**Terrell**	**6.81**	**79**	IAmb_Lg		15 20 17.5	
	comp=Z,1μm,1.1s						
W35A	**Tecumseh**	**6.90**	**58**	IAmb_Lg		15 20 10.6	
	comp=Z,865nm,0.9s						
CROK	**Carrier**	**6.94**	**45**	IAmb_Lg		15 20 21.6	
	comp=Z,1μm,1.1s						
OK052	**Battle Ridge R**	**7.38**	**53**	IAmb_Lg		15 20 43

T42A Van Buren 11.94 60 Pn Pn 15 19 17.0 -1.5
CLC China Lake 12.01 294 Pn **Pn 15 19 17.4 -2.2**
CCM Cathedral Cave 12.26 55 Pn 15 19 19.8 -3.2
ELK Elko 12.77 318 Pn **Pn 15 19 33.2 +3.0**
comp=Z,0.1nm,0.3s,baz=137,slow=8.6,SNR=18
ELK Lg Lg 15 23 04.1
comp=Z,0.1nm,0.3s,baz=333,slow=21,SNR=6.5
ELK LR LR 15 24 35.8
comp=Z,2µm,18.9s,baz=133,slow=38
comp=Z,4.5nm,0.9s
ELK Elko 12.77 318 P **Pn 15 19 33.2 +3.0**
SCIA State Center 13.36 37 Pn 15 19 37.3 -0.7
NVAR Mina Array Bea 13.47 304 Pn **Pn 15 19 43.3 +3.6**
comp=Z,0.2nm,0.3s,baz=125,slow=13,SNR=66
NVAR Lg Lg 15 23 23.9
comp=Z,0.2nm,0.3s,baz=131,slow=27,SNR=1.2
NVAR LR LR 15 25 42.9
comp=Z,404nm,18.2s,baz=114,slow=42
comp=Z,17nm,0.9s
NVAR Mina Array Bea 13.47 304 P 15 19 45.8 -3.4
YMR Madison River 14.04 339 Pn 15 19 45.7 -1.8
YHH Holmes Hill 14.11 340 Pn 15 19 45.1 -3.4
WVT Waverly 14.16 67 Pn 15 19 46.0 -2.9
YHB Horse Butte 14.18 339 P **Pn 15 19 46.2 -3.2**
P43A Skaggs, Pawnee 14.20 52 Pn 15 19 46.8 -2.6
Q44A Meyer Farm, Va 14.20 55 Pn 15 19 46.8 -2.8
PKD Bear Valley Ra 14.36 292 Pn 15 19 49.1 -2.6
L40A Anamosa 14.54 41 Pn 15 19 50.8 -3.4
BCYI Bear Canyon 14.58 332 Pn 15 19 52.0 -2.9
PNTR Pine Nut 14.67 304 Pn 15 19 53.1 -3.0
OLIL Olney 14.78 57 Pn 15 19 54.5 -3.0
USIN University of 14.81 61 Pn 15 19 54.1 -3.8
V48A Smith Brothers 14.88 70 Pn 15 19 54.8 -3.9
T47A Sharon Grove 14.94 65 Pn 15 19 56.4 -3.2
E28A Huff 15.08 9 Pn 15 19 59.0 -2.4
E28A IAmb IAmb 15 20 06.0
comp=Z,81nm,1.8s
SAO San Andreas Ge 15.26 294 Pn 15 19 59.5 -4.3
SAO IAmb IAmb 15 20 09.4
comp=Z,35nm,1.2s
CLTN Cedars of Leba 15.34 69 Pn 15 20 01.9 -3.0
CLTN IAmb IAmb 15 20 11.9
comp=Z,24nm,1.0s
L42A Oliver, Polo 15.41 44 Pn 15 20 02.0 -3.7
L42A IAmb IAmb 15 20 12.8
comp=Z,35nm,0.9s
SWET Sewanee 15.51 72 IAmb IAmb 15 20 13.8
comp=Z,39nm,0.8s
MHC Mount Hamilton 15.56 296 IAmb IAmb 15 20 14.4
comp=Z,34nm,1.1s
JFWS Jewell Farm 15.65 40 Pn 15 20 05.6 -3.3
JFWS IAmb IAmb 15 20 14.9
comp=Z,34nm,0.6s
U49A Red Boiling Sp 15.86 67 Pn 15 20 09.2 -2.4
U49A IAmb IAmb 15 20 19.4
comp=Z,64nm,1.3s
WCI Wyandotte Cave 15.92 61 Pn 15 20 09.5 -3.0
WCI IAmb IAmb 15 20 18.8
comp=Z,54nm,1.0s
SFIN Lafayette 16.19 53 Pn 15 20 13.7 -2.2
SUTB Sutter Butte 16.28 302 IAmb IAmb 15 20 25.0
comp=Z,108nm,1.4s
PLID Pearl Lake 16.30 328 Pn 15 20 15.8 -1.8
X51A Calhoun 16.32 75 IAmb IAmb 15 20 24.3
comp=Z,40nm,0.9s
K43A Burlington 16.62 44 IAmb IAmb 15 20 28.3
comp=Z,57nm,1.0s
MNRC McLaughlin Min 16.64 301 Pn 15 20 19.5 -2.1
MNRC IAmb IAmb 15 20 28.3
comp=Z,83nm,1.4s
CPCT Cooper Cave 16.68 72 Pn 15 20 21.2 -1.0
CPCT IAmb IAmb 15 20 29.0
comp=Z,39nm,1.0s
O03E Paynes Creek 16.72 306 IAmb IAmb 15 20 30.3
comp=Z,100nm,1.9s
BMO Blue Mountains 16.73 325 Pn 15 20 20.0 -2.9
CMIG Matias Romero 16.75 148 Pn **Pn 15 20 23.7 +0.5**
comp=Z,0.5nm,0.3s,baz=332,slow=9.6,SNR=28
comp=Z,23nm,0.9s
EGMT Eagleton 16.88 347 IAmb IAmb 15 20 30.7
comp=Z,53nm,1.2s
P48A Milroy 16.98 58 Pn 15 20 22.8 -3.2
P48A IAmb IAmb 15 20 32.1
comp=Z,81nm,1.4s
I42A Draeger Farm, 17.02 40 IAmb IAmb 15 20 32.5
comp=Z,38nm,0.9s
TKL Tuckaleechee C 17.32 71 P **Pn 15 20 29.1 -1.1**
comp=Z,0.8nm,0.3s,baz=226,slow=10.0,SNR=9.6
TKL Lg Lg 15 25 09.1
comp=Z,0.7nm,0.3s,baz=264,slow=2.5,SNR=4.7
TKL LR LR 15 26 56.0
comp=Z,375nm,18.1s,baz=265,slow=36
comp=Z,14nm,0.8s
TKL Tuckaleechee C 17.32 71 IAmb IAmb 15 20 36.6
comp=Z,91nm,1.2s
R50A Paris 17.42 62 Pn 15 20 27.8 -3.6
R50A IAmb IAmb 15 20 39.4
comp=Z,130nm,1.9s
Q48B Farmland 17.48 56 Pn 15 20 27.8 -4.3
TZTN Tazewell 17.63 69 IAmb IAmb 15 20 39.6
comp=Z,132nm,1.9s
N02D Trinity Center 17.63 307 IAmb IAmb 15 20 40.7
comp=Z,68nm,1.2s
S51A Beattyville 17.81 65 P **P 15 20 36.8 -0.3**
M02C Callahan 17.92 308 IAmb IAmb 15 20 46.9
comp=Z,48nm,1.2s
PINE Pine Mountain 17.97 317 P **P 15 20 40.0 +1.0**
YBH Yreka Blue Hor 17.98 309 P **P 15 20 39.0 +0.1**
comp=Z,2.4nm,1.0s,baz=154,slow=4.3,SNR=36
YBH Lg Lg 15 25 42.5
baz=174,slow=11,SNR=1.7
YBH LR LR 15 26 51.9
comp=Z,53nm,18.9s,baz=108,slow=35
YBH Yreka Blue Hor 17.98 309 IAmb IAmb 15 20 44.8
comp=Z,44nm,1.1s
O49A Covington 18.03 57 IAmb IAmb 15 20 44.2
comp=Z,108nm,1.6s
V53A Saluda 18.09 72 P **P 15 20 40.0 -0.2**
TEIG Tepich 18.18 125 P **P 15 20 41.0 -0.1**
TEIG IAmb IAmb 15 20 48.5
comp=Z,28nm,0.8s
KHMM Horse Mountain 18.30 306 P **Pn 15 20 42.3 -0.1**
J04A Umpqua Nationa 18.36 314 P **P 15 20 43.5 +0.2**
N49A Columbus Grove 18.42 55 P **P 15 20 43.2 -0.5**
N49A IAmb IAmb 15 20 48.4
comp=Z,55nm,1.1s
WIFE Three Sisters- 18.64 316 P **Pn 15 20 47.0 +0.4**
U54A Nelson's Funny 19.00 69 P **P 15 20 50.1 -0.1**
D08A Wollman Farm, 19.12 328 P **P 15 20 51.6 +0.2**
Q52A Bidwell 19.16 62 P **P 15 20 51.3 -0.5**
Q52A IAmb IAmb 15 20 55.9
comp=Z,56nm,0.8s
KMSC Kings Mountain 19.25 74 IAmb IAmb 15 20 59.0
comp=Z,32nm,1.0s
JSC Jenkinsville 19.27 76 P **P 15 20 53.0 -0.1**
NEW Newport 19.30 333 P **P 15 20 53.8 +0.4**
comp=Z,0.3nm,0.3s,baz=150,slow=12,SNR=6.9
NEW Lg Lg 15 26 23.4
comp=Z,0.1nm,0.3s,baz=113,slow=23,SNR=1.1
NEW LR LR 15 28 58.7
comp=Z,1µm,19.0s,baz=152,slow=39
comp=Z,7.3nm,0.9s
NEW Newport 19.30 333 P **P 15 20 53.6 +0.2**
MXC Moxie City 19.43 325 P **P 15 20 55.0 +0.2**
ULM Lac du Bonnet 19.50 16 P **Pn 15 20 56.4 -0.4**
comp=Z,0.7nm,0.3s,baz=197,slow=12,SNR=15
ULM Lg Lg 15 26 26.3
comp=Z,0.6nm,0.3s,baz=262,slow=15,SNR=3.3
ULM LR LR 15 28 43.5
comp=Z,3µm,18.4s,baz=196,slow=38
comp=Z,10nm,0.9s
EPLO Experimental L 19.55 20 P **P 15 20 55.9 -0.1**
EPLO IAmb IAmb 15 21 06.5
comp=Z,39nm,1.4s
GLMI Grayling 20.04 44 P **P 15 21 01.5 0.0**
LTY Liberty 20.09 325 IAmb IAmb 15 21 05.4
comp=Z,27nm,1.0s
BLA Blacksburg 20.21 68 IAmb IAmb 15 21 09.5
comp=Z,26nm,0.9s
Q54A Coxs Mills 20.24 63 IAmb IAmb 15 21 17.6
comp=Z,53nm,1.5s
O53A New Philadelph 20.30 59 P **P 15 21 04.0 -0.4**
O53A IAmb IAmb 15 21 10.7
comp=Z,37nm,0.8s
W57A Gilead 20.35 74 IAmb IAmb 15 21 11.2
comp=Z,66nm,1.3s

APG El Apazote 20.73 140 P **P 15 21 10.4 +1.0**
comp=Z,0.5nm,0.6s,baz=140,slow=12,SNR=6.0
O54A Avella 20.89 60 P **P 15 21 09.1 -1.7**
O54A IAmb IAmb 15 21 26.2
comp=Z,101nm,1.6s
GNW Green Mountain 21.37 323 IAmb IAmb 15 21 22.4
comp=Z,46nm,1.2s
PAOC Oil Creek Stat 21.80 56 IAmb IAmb 15 21 27.1
comp=Z,37nm,0.9s
MTO3 Montecristo 21.84 139 P **P 15 21 22.0 +0.7**
R58B Mineral 22.32 67 IAmb IAmb 15 21 31.3
comp=Z,36nm,1.1s
SSPA Standing Stone 22.85 60 P **P 15 21 31.6 -0.1**
CLRS Cowichan Lake 22.86 324 IAmb IAmb 15 21 36.8
comp=Z,44nm,1.0s
FFC Flin Flon 23.06 3 P **P 15 21 34.1 +0.4**
FFC IAmb IAmb 15 21 37.5
comp=Z,16nm,0.8s
LLLB Lillooet 23.07 330 P **P 15 21 33.5 -0.5**
SADO Sadowa 23.40 49 LR LR 15 31 13.7
comp=Z,2µm,18.6s,baz=272,slow=38
J55A Hilton 23.69 53 P **P 15 21 39.0 -1.2**
J55A IAmb IAmb 15 21 46.1
comp=Z,15nm,0.7s
NCB Newcomb 26.39 54 P **P 15 22 05.8 +0.9**
NCB IAmb IAmb 15 22 37.3
comp=Z,39nm,1.3s
BBB Bella Bella 26.98 326 LR LR 15 33 06.1
comp=Z,350nm,19.6s,baz=110,slow=37
JTS Las Juntas de 27.68 136 LR LR 15 35 59.9
comp=Z,139nm,19.4s,baz=338,slow=42
FCC Fort Churchill 27.89 11 P **P 15 22 18.1 0.0**
CRAG Craig 31.35 328 P **P 15 22 50.3 +1.5**
baz=127
YKAW1 Yellowknife Wh 31.52 351 IAmb IAmb 15 22 54.6
comp=Z,23nm,1.5s
YKA Yellowknife Ar 31.55 351 P **P 15 22 51.1 +0.6**
comp=Z,4.7nm,1.1s,baz=157,slow=7.6,SNR=33
YKA PcP **PcP 15 25 42.4 -0.5**
comp=Z,1.6nm,0.8s,baz=149,slow=1.5,SNR=4.9
YKA Lg Lg 15 32 59.8
baz=170,slow=15,SNR=1.7
YKA LR LR 15 35 48.7
comp=Z,756nm,18.7s,baz=132,slow=37
comp=Z,4.7nm,1.1s
YKA Yellowknife Ar 31.55 351 P **P 15 22 50.1 -0.4**
YKAW3 Yellowknife Wh 31.62 351 IAmb IAmb 15 22 55.9
comp=Z,18nm,1.4s
DLBC Dease Lake 32.03 334 LR LR 15 36 59.2
comp=Z,2µm,20.9s,baz=105,slow=38
DLBC Dease Lake 32.03 334 P **P 15 22 56.3 +1.4**
baz=135
S34M Telegraph Cree 32.09 333 P **P 15 22 56.0 +0.6**
baz=133
WTLY Watson Lake, Y 32.83 337 P **P 15 23 03.5 +1.6**
baz=139
BLKN Baker Lake 33.02 6 P **P 15 23 02.5 -0.9**
BLKN IAmb IAmb 15 23 06.9
comp=Z,8.7nm,0.9s
R33M Jennings River 33.06 335 P **P 15 23 06.0 +2.0**
baz=135
S32K Killisnoo 33.21 330 P **P 15 23 06.7 +1.6**
baz=128
Q32M Nakina River 33.24 333 P **P 15 23 06.8 +1.1**
baz=133
SIT Sitka 33.28 329 P **P 15 23 07.0 +1.2**
baz=126
R32K Eaglecrest 33.69 331 P **P 15 23 10.6 +1.3**
baz=129
WRGLY Wrigley 33.87 344 P **P 15 23 12.6 +1.8**
baz=150
P33M Teslin, Yukon 34.30 335 P **P 15 23 14.2 -0.5**
P33M IAmb IAmb 15 23 21.2
comp=Z,18nm,1.5s
P33M Teslin, Yukon 34.30 335 P **P 15 23 16.9 +2.2**
baz=133
SCHQ Schefferville 34.98 38 P **P 15 23 21.4 +0.8**
comp=Z,2.3nm,0.7s,baz=233,slow=7.1,SNR=4.0
SCHQ Lg Lg 15 34 46.5
comp=Z,0.1nm,0.3s,baz=107,slow=12,SNR=2.8
SCHQ LR LR 15 37 19.0
comp=Z,759nm,18.1s,baz=232,slow=36
comp=Z,2.3nm,0.7s
SCHQ Schefferville 34.98 38 IAmb IAmb 15 23 41.0
comp=Z,13nm,1.2s
WHY Wehorse 35.36 334 P **P 15 23 25.4 +1.5**
baz=131
O30N Mendenhall 35.89 334 P **P 15 23 29.5 +1.1**
baz=130
M31M Drury Creek, Y 36.22 336 P **P 15 23 31.9 +0.7**
baz=133
N31M Braeburn, Yuko 36.23 335 P **P 15 23 32.5 +1.2**
baz=131
HYT Haines Junctio 36.46 333 P **P 15 23 34.7 +1.3**
baz=120
O29M Mount Kennedy 36.57 332 P **P 15 23 36.2 +1.9**
baz=126
N30M Aishikik Lake 36.70 334 P **P 15 23 36.7 +1.4**
baz=129
SJG San Juan 36.73 102 LR LR 15 41 29.4
comp=Z,55nm,18.7s,baz=272,slow=41
YUK6 Outpost Mounta 36.87 333 P **P 15 23 37.7 +0.7**
baz=127
YUK4 Talbot Arm 37.22 333 P **P 15 23 41.2 +1.3**
baz=127
M30M Minto, Yukon 37.31 336 P **P 15 23 42.0 +1.5**
baz=130
O28M Mount Upton 37.50 332 P **P 15 23 43.2 +0.8**
baz=124
YUK8 Steele Glacier 37.62 332 P **P 15 23 45.2 +1.8**
baz=125
M29M Somme Creek 37.82 335 P **P 15 23 46.4 +1.5**
baz=128
L29M L29M 38.12 336 P **P 15 23 49.2 +1.9**
baz=129
YUK3 Moose Creek 38.18 333 P **P 15 23 49.4 +1.4**
baz=125
K29M Barlow Dome 38.39 337 P **P 15 23 51.4 +1.8**
baz=131,SNR=6.1
J30M Hart River 38.49 338 P **P 15 23 51.8 +1.3**
baz=133,SNR=9.1
ROSC El Rosal 38.60 128 LR LR 15 43 34.6
comp=Z,146nm,18.9s,baz=336,slow=42
CRQE Cirque 38.69 330 P **P 15 23 52.0 -0.2**
baz=121
I30M Mount Dempster 38.95 339 P **P 15 23 55.0 +0.7**
baz=134
MCARA McCarthy VSAT 38.99 331 P **P 15 23 55.5 +0.9**
baz=122
FRB Frobisher Bay 39.01 24 LR LR 15 40 06.5
comp=Z,1µm,21.3s,baz=236,slow=36
J29N Klondike Camp 39.02 337 P **P 15 23 56.0 +1.1**
baz=130
M27K Edge Creek, AK 39.06 333 P **P 15 23 56.4 +1.1**
baz=124
C36M Paulatuk 39.38 349 P **P 15 23 59.0 +1.3**
baz=153
BCAR Beaver Creek A 39.42 334 P **P 15 23 58.2 -0.1**
L27K Beaver Creek, 39.44 334 P **P 15 23 59.4 +1.0**
baz=125,SNR=6.2
M26K Nabesna, AK 39.52 333 P **P 15 24 00.8 +1.7**
baz=123
OTAV Otavalo 39.56 137 eP **P 15 23 59.3 -1.1**
G31M Satah River 39.57 342 P **P 15 23 59.3 0.0**
G31M IAmb IAmb 15 24 01.2
comp=Z,56nm,2.0s
G31M Satah River 39.57 342 P **P 15 24 00.7 +1.4**
baz=138,SNR=5.0
I29M Ogilvie Camp, 39.64 338 P **P 15 24 00.5 +0.5**
baz=131
EYAK Cordova Ski Ar 39.73 329 P **P 15 24 01.5 +0.8**
baz=118
N25K Chitina, Valde 39.75 331 P **P 15 24 01.6 +0.5**
baz=120
ILON Igloolik, Nuna 39.77 12 IAmb IAmb 15 24 06.2
comp=Z,26nm,1.6s
F31M Tsiigehtchic 39.82 343 P **P 15 24 02.4 +1.0**
baz=139
EPYK Eagle Plains 39.85 340 P **P 15 24 03.0 +1.3**
baz=134
L26K Log Cabin Wild 39.99 333 P **P 15 24 04.1 +1.1**
baz=123
G30M tAoh Zraii Nji 40.14 341 P **P 15 24 05.3 +1.2**
baz=135
I28M Miner Creek 40.22 338 P **P 15 24 06.2 +1.3**
baz=129
P23K Montague Islan 40.23 328 P **P 15 24 06.3 +1.4**
baz=115

H29M Whitestone 40.23 339 P **P 15 24 06.2 +1.3**
baz=132
KLU Klutina 40.25 330 P **P 15 24 05.6 +0.4**
baz=118
INK Inuvik 40.42 344 LR LR 15 41 59.7
comp=Z,542nm,18.4s,baz=108,slow=38
INK Inuvik 40.42 344 P **P 15 24 07.7 +1.3**
baz=140
GLI Glacier Island 40.47 329 P **P 15 24 07.9 +0.9**
baz=116
F30M Barrier River 40.48 342 IAmb IAmb 15 24 53.8
comp=Z,20nm,1.6s
F30M Barrier River 40.48 342 P **P 15 24 08.2 +1.4**
baz=136
G29M Pine Creek 40.60 340 P **P 15 24 09.2 +1.3**
baz=133
M24K Tolsona, Glenn 40.65 331 P **P 15 24 09.7 +1.3**
baz=119
SCRK Sand Creek 40.75 334 P **P 15 24 10.6 +1.2**
baz=123
PAX Paxson 40.79 332 P **P 15 24 10.5 +0.9**
baz=120
I27K Kandik River 40.87 337 P **P 15 24 10.7 +0.5**
baz=127
RIDG Independent Ri 40.95 334 P **P 15 24 11.7 +0.8**
baz=122
SCM Sheep Creek Mo 41.00 330 P **P 15 24 11.7 +0.3**
baz=117
M23K Glacier View 41.15 330 P **P 15 24 13.3 +0.8**
baz=117
I26K Coal Creek Min 41.21 336 P **P 15 24 13.3 +0.4**
baz=125
H27K Steamboat Moun 41.22 338 P **P 15 24 13.8 +0.7**
baz=128
KNK Knik Glacier 41.30 329 P **P 15 24 14.5 +0.8**
baz=115
K24K Donnelly Dome 41.34 333 P **P 15 24 14.5 +0.5**
baz=121
SML Sawmill 41.42 330 P **P 15 24 15.4 +0.6**
baz=116
O22K Cooper Landing 41.48 328 P **P 15 24 16.0 +0.8**
baz=113
WAT6 Susitna Watana 41.52 331 P **P 15 24 16.6 +0.9**
baz=117
E29M Blow River 41.59 342 IAmb IAmb 15 24 21.1
comp=Z,31nm,1.8s
E29M Blow River 41.59 342 P **P 15 24 16.8 +0.8**
baz=134,SNR=5.6
DHY Denali Highway 41.60 332 P **P 15 24 17.0 +0.7**
baz=118
J25K Salcha River, 41.60 335 P **P 15 24 17.2 +0.9**
baz=122,SNR=6.8
F28M Old Crow 41.61 340 P **P 15 24 15.9 -0.3**
F28M Old Crow 41.61 340 P **P 15 24 17.1 +0.9**
baz=131,SNR=7.0
G27K Doyon Strip 41.62 339 P **P 15 24 15.7 -0.6**
G27K Doyon Strip 41.62 339 P **P 15 24 17.5 +1.1**
baz=128
PMR Palmer 41.67 329 P **P 15 24 18.2 +1.5**
baz=115
BRSE Bradley Lake S 41.68 326 P **P 15 24 17.9 +1.1**
baz=111
RC01 Rabbit Creek A 41.73 328 P **P 15 24 18.2 +0.9**
baz=114
A36M Sachs Harbour 41.91 350 P **P 15 24 17.6 -1.0**
A36M Sachs Harbour 41.91 350 P **P 15 24 19.5 +0.9**
baz=152
KDAK Kodiak Island 41.94 323 P **P 15 24 19.7 +0.7**
baz=107
WAT1 Susitna Watana 41.96 331 P **P 15 24 20.5 +1.3**
baz=117
HOM Homer 42.08 326 P **P 15 24 21.7 +1.6**
baz=110
HDA Harding Lake 42.09 334 P **P 15 24 21.3 +1.2**
baz=120,SNR=5.8
Q20K Shuyak Island 42.10 324 P **P 15 24 21.3 +1.1**
baz=108
OHAK Old Harbor 42.15 322 P **P 15 24 21.7 +1.0**
baz=106,SNR=6.6
PRP Porcupine Dome 42.15 336 P **P 15 24 21.8 +1.1**
baz=123
E28M Babbage River 42.18 341 P **P 15 24 22.5 +1.6**
baz=132
ILAR Eielson Array 42.24 334 P **P 15 24 23.4 +1.9**
comp=Z,2.3nm,0.9s,baz=101,slow=8.0,SNR=31
ILAR PcP **PcP 15 26 15.4 +0.2**
comp=Z,3.4nm,0.8s,baz=159,slow=2.9,SNR=8.9
ILAR LR LR 15 42 38.6
comp=Z,648nm,19.9s,baz=102,slow=37
comp=Z,2.3nm,0.9s
ILAR Eielson Array 42.24 334 P **P 15 24 23.0 +1.6**
G26K Porcupine Rive 42.38 338 P **P 15 24 23.8 +1.4**
baz=126
SII Sitkinak Islan 42.45 321 P **P 15 24 24.1 +0.8**
baz=104
D28M Stokes Point 42.47 343 P **P 15 24 24.0 +0.9**
baz=134
E27K Coleen River 42.48 340 P **P 15 24 24.2 +0.9**
baz=130
CUT Chulitna 42.50 330 P **P 15 24 24.5 +1.0**
baz=114
CCB Clear Creek Bu 42.52 334 P **P 15 24 24.5 +0.8**
MCK McKinley 42.53 332 P **P 15 24 25.1 +1.4**
baz=117
POKR Poker Plat Res 42.62 335 P **P 15 24 25.9 +1.4**
baz=120
COLA College 42.65 334 P **P 15 24 26.0 +1.3**
baz=119
SKT Skwentna 42.87 329 P **P 15 24 27.4 +0.8**
baz=113
N20K Mount Spurr 42.88 328 P **P 15 24 27.3 +0.5**
baz=111
SPCR Spurr Chakacha 42.88 328 P **P 15 24 27.6 +0.9**
baz=111
F26K Sheenjek River 42.93 339 P **P 15 24 28.0 +1.0**
baz=126
TRF Thorofare Moun 42.95 332 P **P 15 24 27.9 +0.6**
baz=115,SNR=5.6
NEA2 Nenana 42.98 333 P **P 15 24 27.9 +0.5**
baz=118
H24K Noodor Dome 43.15 335 P **P 15 24 29.4 +0.6**
baz=120,SNR=8.0
RES Resolute Bay 43.30 4 LR LR 15 42 55.2
comp=Z,1µm,18.5s,baz=194,slow=37
RES Resolute Bay 43.30 4 IAmb IAmb 15 25 02.2
comp=Z,13nm,1.5s
F25K Christian Rive 43.34 338 P **P 15 24 31.5 +1.2**
baz=124,SNR=6.4
I23K Minto, Yukon-K 43.35 334 P **P 15 24 31.3 +1.0**
baz=118
Q18K Katmai Hardscr 43.42 324 P **P 15 24 32.0 +0.9**
baz=106
G24K Hadweenzic Riv 43.45 337 P **P 15 24 32.5 +1.3**
baz=122
BPAW Bear Paw Mtn. 43.51 332 P **P 15 24 32.9 +1.2**
baz=115
PPLA Purkeypile 43.51 330 P **P 15 24 32.9 +1.0**
baz=113
O19K Port Alsworth 43.52 326 P **P 15 24 33.2 +1.4**
baz=108,SNR=5.4
M20K Styx River 43.54 329 P **P 15 24 33.4 +1.3**
baz=111
E25K Arctic Village 43.62 339 P **P 15 24 34.3 +1.8**
baz=125
P18K Big Mountain, 43.73 325 P **P 15 24 34.5 +1.0**
baz=106
Q17K Contact Creek 43.76 323 P **P 15 24 34.7 +0.7**
baz=104
N19K Bonanza Creek 43.79 327 P **P 15 24 35.4 +1.3**
baz=108
MLY Manley 43.81 333 P **P 15 24 35.5 +1.3**
baz=116
O18K Koktuh Hills 43.85 325 P **P 15 24 35.8 +1.3**
baz=107
R17L Mt. Peulik Vol 43.86 322 P **P 15 24 35.6 +1.0**
baz=103
CHUM Lake Minchumin 43.95 332 P **P 15 24 36.2 +1.0**
baz=114
C27K Jago River 43.98 341 P **P 15 24 36.6 +1.1**
baz=128
M19K Big River Lodg 44.11 328 P **P 15 24 38.0 +1.5**
baz=110
Q16K King Salmon 44.26 323 P **P 15 24 39.9 +2.2**
baz=104
P17K Kvichak River 44.28 324 P **P 15 24 39.2 +1.4**
baz=105
G23K Bananza Creek 44.33 336 P **P 15 24 39.9 +1.6**
baz=119

I21K	Tanana	44.35	333	P	P	15 24 40.1 +1.7
	baz=115,SNR=12					
L19K	White Mountain	44.40	329	P	P	15 24 40.4 +1.5
	baz=109,SNR=5.7					
N18K	Kilae Creek	44.41	326	P	P	15 24 40.5 +1.4
	baz=107					
H22K	Ishtalitna Cre	44.44	334	P	P	15 24 40.7 +1.6
	baz=116					
K20K	Telida	44.47	330	P	P	15 24 40.8 +1.4
	baz=111					
C26K	Camden Bay	44.49	341	P	P	15 24 40.7 +1.3
	baz=127					
E24K	Your Creek	44.51	338	P	P	15 24 41.3 +1.6
	baz=122					
D25K	Kavik River	44.55	340	IAmb	IAmb	15 26 24.9
	comp=Z,11nm,0.8s					
D25K	Kavik River	44.55	340	P	P	15 24 41.7 +1.6
	baz=125					
M18K	Stony River	44.62	328	P	P	15 24 42.1 +1.5
	baz=108					
COLD	Coldfoot	44.65	336	P	P	15 24 42.4 +1.6
	baz=119					
CHGN	Chignik	44.70	320	P	P	15 24 42.8 +1.5
	baz=100					
O17K	Koliganek Bris	44.75	325	P	P	15 24 43.1 +1.5
	baz=105,SNR=6.8					
J20K	Nowinta River	44.81	332	IAmb	IAmb	15 24 46.6
	comp=Z,14nm,1.5s					
J20K	Nowinta River	44.81	332	P	P	15 24 43.0 +1.0
	baz=112					
E23K	Chandalar	44.86	338	P	P	15 24 43.9 +1.3
	baz=120					
H21K	Melozitna Rive	44.87	334	P	P	15 24 43.4 +0.9
	baz=115,SNR=8.4					
N17K	Nushagak Hills	44.99	326	P	P	15 24 44.8 +1.2
	baz=105					
P16K	Nushagak River	45.02	324	P	P	15 24 45.1 +1.3
	baz=103					
CHNA	Chernabura Isl	45.13	318	P	P	15 24 46.4 +1.6
	baz=97					
TOLK	Toolik Lake Re	45.15	338	P	P	15 24 45.7 +0.9
	baz=121					
D24K	Happy Valley	45.19	339	P	P	15 24 45.8 +0.8
	baz=122					
O16K	Kokwok River B	45.20	325	P	P	15 24 46.5 +1.3
	baz=104					
L18K	Granite Mounta	45.23	328	P	P	15 24 47.0 +1.5
	baz=107,SNR=8.2					
M17K	Holitna River	45.34	327	IAmb	IAmb	15 25 03.7
	comp=Z,15nm,1.1s					
M17K	Holitna River	45.34	327	P	P	15 24 47.9 +1.6
	baz=106					
J19K	Poorman	45.34	331	IAmb	IAmb	15 25 26.3
	comp=Z,15nm,1.0s					
J19K	Poorman	45.34	331	P	P	15 24 47.8 +1.4
	baz=110,SNR=11					
IMAR	Indian Mountai	45.36	334	P	P	15 24 45.9 -0.6
F22K	John River	45.45	336	P	P	15 24 48.8 +1.6
	baz=117					
C24K	Franklin Bluff	45.45	340	P	P	15 24 48.4 +1.2
	baz=123					
G21K	Allakaket	45.49	335	P	P	15 24 48.7 +1.2
	baz=115					
H20K	Anotleneega Mo	45.59	333	P	P	15 24 49.6 +1.3
	baz=112,SNR=8.7					
E22K	Anaktuvuk Pass	45.62	337	P	P	15 24 49.4 +0.9
	baz=118					
J18K	Innoko River	45.63	330	IAmb	IAmb	15 24 52.3
	comp=Z,9.5nm,0.8s					
J18K	Innoko River	45.63	330	P	P	15 24 49.5 +0.9
	baz=108,SNR=18					
D23K	Nanushuk River	45.66	338	P	P	15 24 50.3 +1.5
	baz=120					
N16K	Nishlik Lake	45.73	326	P	P	15 24 50.7 +1.2
	baz=104,SNR=6.1					
F21K	Alatna River	45.78	336	P	P	15 24 51.1 +1.3
	baz=115,SNR=5.3					
L17K	Donlin	45.93	328	P	P	15 24 52.3 +1.2
	baz=106,SNR=5.3					
M16K	Timber Creek	45.95	326	P	P	15 24 51.8 +0.6
	baz=104					
O15K	Ungalikthiuk R	45.97	324	P	P	15 24 52.3 +0.9
	baz=101					
C23K	Itkillik River	46.08	340	P	P	15 24 53.3 +1.2
	baz=121					
K17K	Iditarod	46.09	329	IAmb	IAmb	15 25 06.7
	comp=Z,7.2nm,0.8s					
K17K	Iditarod	46.09	329	P	P	15 24 53.3 +1.0
	baz=106					
H19K	Roundabout Mou	46.22	333	P	P	15 24 53.9 +0.8
	baz=111					
N15K	Kwethluk River	46.30	325	P	P	15 24 55.1 +1.1
	baz=102					
L16K	Owhat River	46.36	327	P	P	15 24 55.0 +0.7
	baz=104					
J17K	VABM Dome	46.62	329	P	P	15 24 56.7 +0.2
J17K				IAmb	IAmb	15 26 33.3
	comp=Z,9.6nm,1.0s					
J17K	VABM Dome	46.62	329	P	P	15 24 57.9 +1.5
	baz=106					
G19K	Purcell Mounta	46.68	333	IAmb	IAmb	15 26 32.9
	comp=Z,4.9nm,0.8s					
G19K	Purcell Mounta	46.68	333	P	P	15 24 58.0 +1.2
	baz=111					
M15K	Kasigluk River	46.70	326	P	P	15 24 58.0 +0.9
	baz=102					
O14K	Tigyukauivet M	46.71	324	P	P	15 24 58.2 +1.1
	baz=100					
H18K	Honhosa River	46.85	332	P	P	15 24 59.0 +0.8
	baz=108					
N14K	Kuskokwak Cree	47.04	324	P	P	15 25 00.8 +1.1
	baz=100					
C21K	Knifeblade Rid	47.05	338	P	P	15 25 00.5 +0.8
	baz=116,SNR=6.3					
SFJD	Kangerlussuaq	47.12	26	LR	LR	15 45 00.1
	comp=Z,496nm,19.3s,baz=250,slow=36					
E20K	Nigu River	47.15	336	P	P	15 25 01.3 +0.8
	baz=113					
B22K	Teshekpuk Lake	47.17	339	IAmb	IAmb	15 26 33.9
	comp=Z,8.5nm,0.8s					
B22K	Teshekpuk Lake	47.17	339	P	P	15 25 01.9 +1.3
	baz=118					
F19K	Shaleruckik Mo	47.18	334	P	P	15 25 01.9 +1.2
	baz=110					
G18K	Tagagawik	47.20	333	IAmb	IAmb	15 26 34.9
	comp=Z,5.1nm,0.9s					
G18K	Tagagawik	47.20	333	P	P	15 25 02.0 +1.0
	baz=109,SNR=7.8					
B21K	Ikpikpuk River	47.20	338	P	P	15 25 01.4 +0.5
B21K				IAmb	IAmb	15 26 33.8
	comp=Z,9.5nm,1.2s					
B21K	Ikpikpuk River	47.20	338	P	P	15 25 02.2 +1.3
	baz=116					
E19K	Redstone River	47.21	335	P	P	15 25 01.9 +1.0
	baz=112,SNR=5.8					
J16K	Anvik River	47.26	329	IAmb	IAmb	15 25 03.6
	comp=Z,14nm,1.4s					
J16K	Anvik River	47.26	329	P	P	15 25 02.7 +1.3
	baz=104					
L15K	Ungalak Mounta	47.29	327	P	P	15 25 02.8 +1.2
	baz=102,SNR=6.3					
M14K	Bethel	47.33	326	P	P	15 25 03.3 +1.3
	baz=101,SNR=6.8					
H17K	Granite Mounta	47.41	331	IAmb	IAmb	15 26 27.1
	comp=Z,17nm,1.6s					
H17K	Granite Mounta	47.41	331	P	P	15 25 03.8 +1.3
	baz=107					
K15K	Wolf Creek Mou	47.44	328	P	P	15 25 04.0 +1.2
	baz=103,SNR=6.2					
I17K	Unalakleet	47.45	330	P	P	15 25 04.0 +1.2
	baz=105					
D20K	Etivluk River	47.47	337	IAmb	IAmb	15 26 20.8
	comp=Z,20nm,1.6s					
D20K	Etivluk River	47.47	337	P	P	15 25 04.1 +1.1
	baz=113					
L14K	Kuka Creek	47.78	326	P	P	15 25 06.0 +0.5
L14K	Kuka Creek	47.78	326	P	P	15 25 06.7 +1.2
	baz=101,SNR=6.2					
F18K	Selawik	47.80	334	P	P	15 25 06.9 +1.3
	baz=108					
G17K	Kiwalik Mounta	47.87	332	P	P	15 25 07.0 +0.9
	baz=106					
D19K	Kuna River	47.90	336	IAmb	IAmb	15 26 37.2
	comp=Z,9.0nm,0.8s					
D19K	Kuna River	47.90	336	P	P	15 25 07.4 +1.0
	baz=112,SNR=6.4					
A22K	Sinclair Lake	47.94	340	P	P	15 25 07.5 +1.0
	baz=117					

M13K	Dall Lake	47.95	325	P	P	15 25 07.5 +0.7
	baz=99					
UPNV	Upernavik	47.98	17	*i* P	P	15 25 09.1 +2.3
UPNV				IAmb	IAmb	15 25 12.8
	comp=Z,27nm,1.1s					
B20K	Meade River	48.17	338	P	P	15 25 09.3 +0.9
	baz=114					
H16K	Elim	48.29	331	P	P	15 25 10.3 +0.9
	baz=104,SNR=7.8					
F17K	Baldwin Pennin	48.37	333	P	P	15 25 11.1 +1.2
	baz=106					
E18K	Tukpahlearik C	48.42	334	IAmb	IAmb	15 25 12.7
	comp=Z,4.7nm,0.8s					
E18K	Tukpahlearik C	48.42	334	P	P	15 25 11.2 +0.8
	baz=108,SNR=6.1					
J14K	Nanvaranak Lak	48.45	328	P	P	15 25 11.5 +0.9
	baz=101,SNR=6.3					
G16K	Koyuk River	48.52	332	IAmb	IAmb	15 25 14.4
	comp=Z,7.3nm,0.9s					
G16K	Koyuk River	48.52	332	P	P	15 25 11.9 +0.7
	baz=104,SNR=8.9					
A21K	Barrow	48.55	340	P	P	15 25 11.9 +0.6
	baz=115					
C19K	Lookout Ridge	48.62	337	P	P	15 25 12.9 +1.0
	baz=110,SNR=7.7					
KULL	Kullorsuaq	48.70	15	*i* P	P	15 25 13.8 +1.4
KULL				IAmb	IAmb	15 25 14.6
	comp=Z,29nm,1.0s					
E17K	Hotham Inlet	48.77	334	P	P	15 25 14.0 +0.9
	baz=106,SNR=9.5					
K13K	Kusilvak Mount	48.81	327	P	P	15 25 14.5 +1.1
	baz=99					
C18K	Utukok River	49.01	336	IAmb	IAmb	15 25 17.2
	comp=Z,6.8nm,1.1s					
C18K	Utukok River	49.01	336	P	P	15 25 15.9 +0.9
	baz=108,SNR=5.5					
G15K	Nuiqsut	49.12	331	P	P	15 25 17.0 +1.2
	baz=102,SNR=7.7					
M11K	Mekoryuk	49.34	325	P	P	15 25 18.8 +1.3
	baz=96					
D17K	Noatak River	49.41	334	P	P	15 25 18.6 +0.7
	baz=106,SNR=8.1					
RDOG	Red Dog Mine	49.44	335	IAmb	IAmb	15 26 20.5
	comp=Z,7.9nm,1.3s					
RDOG	Red Dog Mine	49.44	335	P	P	15 25 19.2 +1.0
	baz=106					
A19K	Wainwright	49.49	338	P	P	15 25 19.1 +0.7
	baz=110					
F15K	North Star Dit	49.53	332	P	P	15 25 19.6 +0.8
	baz=102,SNR=7.9					
ANM	Nome	49.59	330	P	P	15 25 20.9 +1.5
	baz=101,SNR=7.1					
C17K	DeLong Mountai	49.66	335	P	P	15 25 20.5 +0.7
	baz=106					
F14K	Arctic Creek	50.16	331	P	P	15 25 24.3 +0.6
	baz=101					
BOAV	Boa Vista	50.26	117	P	P	15 25 24.1 -0.9
BOAV				IAmb	IAmb	15 25 56.3
	comp=Z,6.7nm,0.9s					
C16K	Lisburne Hills	50.38	335	P	P	15 25 25.5 +0.2
C16K	Lisburne Hills	50.38	335	P	P	15 25 26.1 +0.8
	baz=104					
TNA	Tin City	50.83	331	P	P	15 25 28.9 +0.2
TNA				IAmb	IAmb	15 25 31.4
	comp=Z,15nm,1.6s					
TNA	Tin City	50.83	331	P	P	15 25 29.4 +0.7
	baz=99					
NEEM	North Greenlan	51.50	13	*i* P	P	15 25 34.9 +0.9
NEEM				IAmb	IAmb	15 25 38.6
	comp=Z,50nm,1.2s					
SUMG	Summit	52.79	20	P	P	15 25 42.9 -0.8
SUMG	Summit	52.79	20	*i* P	P	15 25 45.6 +1.9
SUMG				IAmb	IAmb	15 25 47.8
	comp=Z,52nm,1.8s					
SCO	Scoresbysund	57.86	23	*i* P	P	15 26 20.9 +1.1
SCO				IAmb	IAmb	15 26 22.9
	comp=Z,18nm,1.1s					
DBG	Daneborg	58.12	19	*i* P	P	15 26 22.6 +1.0
DBG				IAmb	IAmb	15 26 27.2
	comp=Z,5.2nm,1.1s					
DAG	Danmarks Havn	58.35	16	*i* P	P	15 26 23.0 -0.2
DAG				IAmb	IAmb	15 26 27.1
	comp=Z,21nm,0.9s					
NOR	Nord	58.46	10	*i* P	P	15 26 24.7 +0.8
NOR				IAmb	IAmb	15 26 28.2
	comp=Z,41nm,1.6s					
LPAZ	La Paz	58.85	139	P	P	15 26 29.4 +1.3
	comp=Z,1.1nm,0.7s,baz=348,slow=7.6,SNR=4.0					
	comp=Z,1.1nm,0.7s					
LPAZ	La Paz	58.85	139	IAmb	IAmb	15 26 41.1
	comp=Z,17nm,1.9s					
PB16	IPOC Station P	59.77	141	P	P	15 26 33.7 -0.6
PB16				IAmb	IAmb	15 26 41.1
	comp=Z,13nm,1.3s					
BILL	Bilibino	60.91	335	P	P	15 26 40.3 -0.6
VILB	Vilhena	61.12	130	P	P	15 26 43.0 -0.1
PTLB	Pontes e Lacer	63.65	131	P	P	15 26 59.8 -0.2
PTLB	Pontes e Lacer	63.65	131	eP	P	15 26 59.6 -0.3
BBSD	Serra de San D	64.01	133	eP	P	15 27 01.8 -0.5
SPITS	Spitsbergen Ar	64.99	11	P	P	15 27 08.9 +0.9
	comp=Z,9.4nm,1.0s,baz=274,slow=4.0,SNR=1.9					
	comp=Z,9.4nm,1.0s					
SALV	Santo Antonio	66.25	128	eP	P	15 27 16.8 -0.1
PP1B	Ponte de Pedra	68.00	129	eP	P	15 27 27.6 -0.4
SEY	Seymchan	68.07	331	P	P	15 27 29.0 +1.1
	comp=Z,2.9nm,0.7s,baz=104,slow=9.4,SNR=9.3					
	comp=Z,2.9nm,0.7s					
BDQN	Boqueqna, MS	68.86	132	eP	P	15 27 33.0 -0.3
AQDB	Aquidauana	69.55	132	P	P	15 27 37.0 -0.6
EKA	Eskdalemuir Ar	70.29	37	P	P	15 27 41.3 -0.4
	comp=Z,2.3nm,0.7s,baz=292,slow=6.0,SNR=8.1					
	comp=Z,2.3nm,0.7s					
MA2	Magadan	70.34	329	P	P	15 27 42.2 +0.2
	comp=Z,4.6nm,0.7s,baz=127,slow=15,SNR=3.9					
	comp=Z,4.6nm,0.7s					
MA2	Magadan	70.34	329	P	P	15 27 41.9 -0.1
TIXI	Tiksi	70.54	344	P	P	15 27 41.8 -1.1
TIXI				IAmb	IAmb	15 28 05.2
	comp=Z,7.8nm,1.1s					
CO04	Los Peladeros	70.70	151	P	P	15 27 44.7 0.0
BDFB	Brasilia	71.41	123	P	P	15 27 50.2 +1.0
	comp=Z,4.5nm,0.9s,baz=312,slow=9.9,SNR=3.8					
	comp=Z,4.5nm,0.9s					
MT02	Curacav	71.69	151	P	P	15 27 50.7 +0.3
AMBA	Amambai (Brazi	71.79	133	eP	P	15 27 51.1 -0.1
MT09	Talagante	72.20	152	P	P	15 27 54.3 +0.7
BO04	La Punta	72.54	151	P	P	15 27 56.1 +0.6
ARCES	ARCESS Array B	72.62	17	P	P	15 27 55.9 +0.3
	comp=Z,3.3nm,0.7s,baz=321,slow=5.0,SNR=8.4					
	comp=Z,3.3nm,0.7s					
ARCES	ARCESS Array B	72.62	17	P	P	15 27 55.5 -0.1
BO01	Tunca	72.69	152	P	P	15 27 57.0 +0.7
CPUP	Villa Florida	72.91	137	P	P	15 27 58.4 +0.5
	comp=Z,25nm,0.9s,baz=326,slow=8.0,SNR=54					
	comp=Z,25nm,0.9s					
CPUP	Villa Florida	72.91	137	P	P	15 27 57.5 -0.3
BO02	Sierra Bellavi	73.16	152	P	P	15 27 59.1 -0.1
PGAV	Gavieira, Arco	73.47	51	eP	P	15 28 05.1 +3.9
NOA	NORSAR Array B	73.75	27	P	P	15 28 02.1 -0.3
	comp=Z,3.0nm,0.9s,baz=308,slow=6.3,SNR=6.0					
NOA				LR	LR	15 59 30.1
	comp=Z,392nm,21.4s,baz=60,slow=35					
	comp=Z,3.0nm,0.9s					
POLO	Lamas de Olo	74.06	51	eP	P	15 28 06.2 +1.5
PCAS	Casmilo, Conde	74.21	53	eP	P	15 28 08.0 +2.5
PVIS	Viseu	74.31	52	eP	P	15 28 07.6 +1.5
BI02	San Fabin de	74.61	153	P	P	15 28 07.4 -0.2
PSARD	Sardoal	74.66	53	eP	P	15 28 09.9 +1.8
PSARD				*i* IAmb	IAmb	15 28 14.8
	comp=Z,37nm,1.7s					
MVO	Moncorvo	74.67	51	eP	P	15 28 09.8 +1.6
MVO				*i* IAmb	IAmb	15 28 14.4
	comp=Z,45nm,1.8s					
MTE	Manteigas	74.69	52	eP	P	15 28 09.8 +1.4
PMTG	Montargil	74.86	53	eP	P	15 28 10.6 +1.4
PMTG				*i* IAmb	IAmb	15 28 15.9
	comp=Z,37nm,1.6s					
PCBR	Castelo Branco	75.00	52	eP	P	15 28 11.6 +1.5
MOE	Montemor	75.04	54	eP	P	15 28 12.4 +2.0
MOE				*i* IAmb	IAmb	15 28 15.5
	comp=Z,36nm,1.9s					
PARRA	Arraiolos	75.11	54	eP	P	15 28 12.3 +1.6
PARRA				*i* IAmb	IAmb	15 28 17.4
	comp=Z,30nm,1.7s					
PTEO	Sao Teotonio	75.25	55	eP	P	15 28 13.6 +2.1
PMRV	Marv??o	75.26	53	eP	P	15 28 12.8 +1.2

PMRV				*i* IAmb	IAmb	15 28 18.2
	comp=Z,40nm,1.8s					
HFS	Hagfors	75.27	27	P	P	15 28 11.7 +0.5
	comp=Z,12nm,1.1s,baz=339,slow=3.7,SNR=4.7					
	comp=Z,12nm,1.1s					
PFVI	Vila Bisbo	75.37	55	eP	P	15 28 14.1 +1.9
PESTR	Estremoz	75.40	53	eP	P	15 28 13.3 +0.9
PESTR				*i* IAmb	IAmb	15 28 18.9
	comp=Z,34nm,1.8s					
MESJ	Messejana	75.46	54	eP	P	15 28 14.6 +1.8
PBEJ	Beja	75.61	54	eP	P	15 28 15.5 +1.9
PBEJ				*i* IAmb	IAmb	15 28 19.8
	comp=Z,27nm,1.9s					
PCVE	Castro Verde	75.68	55	eP	P	15 28 15.9 +1.9
PCVE				*i* IAmb	IAmb	15 28 21.2
	comp=Z,26nm,1.6s					
PBDV	Barranco-do-Ve	75.95	55	eP	P	15 28 17.8 +2.2
PBDV				*i* IAmb	IAmb	15 28 23.3
	comp=Z,50nm,2.1s					
PVAQ	Vaqueiros	76.02	55	eP	P	15 28 18.0 +2.0
PVAQ				*i* IAmb	IAmb	15 28 21.3
	comp=Z,38nm,1.9s					
PBAR	Barrancos	76.11	54	eP	P	15 28 17.9 +1.5
PBAR				*i* IAmb	IAmb	15 28 23.1
	comp=Z,31nm,1.8s					
PSAL	Palomas, Salto	76.38	140	eP	P	15 28 17.9 +0.1
ITAB	Concordia	76.69	134	P	P	15 28 19.9 +0.3
BMRD	Maredsous	76.99	39	dP	P	15 28 22.7 +1.5
	comp=Z,9.1nm,0.9s					
DOU	Dourbes	77.02	39	dP	P	15 28 22.5 +1.1
	comp=Z,6.6nm,1.5s					
YAK	Yakutsk	77.09	337	P	P	15 28 21.2 -0.3
	comp=Z,9.9nm,0.7s,baz=57,slow=10,SNR=10					
	comp=Z,9.9nm,0.7s					
YAK	Yakutsk	77.09	337	P	P	15 28 21.7 +0.2
GO06	Curarrehue	77.10	155	P	P	15 28 21.2 -0.6
GO06				IAmb	IAmb	15 28 23.9
	comp=Z,7.3nm,0.9s					
BGES	Gesves	77.11	38	dP	P	15 28 23.0 +1.1
	comp=Z,7.5nm,1.0s					
BCLA	Clavier	77.21	38	dP	P	15 28 23.7 +1.2
	comp=Z,5.0nm,0.9s					
ESDC	Sonseca Array	77.44	51	P	P	15 28 24.5 +0.5
	comp=Z,3.3nm,1.1s,baz=305,slow=5.2,SNR=9.7					
	comp=Z,3.3nm,1.1s					
ESDC	Sonseca Array	77.44	51	P	P	15 28 23.9 -0.1
ESDC				IAmb	IAmb	15 28 26.3
	comp=Z,10.0nm,1.4s					
MEM	Membach	77.47	38	dP	P	15 28 25.2 +1.4
	comp=Z,14nm,1.1s					
BTNL	Ternell	77.55	38	dP	P	15 28 25.1 +0.8
WLF	Walferdange	78.09	39	dP	P	15 28 28.3 +1.0
	comp=Z,12nm,1.0s					
PLCA	Paso Flores	78.44	155	P	P	15 28 30.5 +1.2
	comp=Z,11nm,1.0s,baz=337,slow=7.4,SNR=13					
	comp=Z,11nm,1.0s					
PLCA	Paso Flores	78.44	155	eP	P	15 28 29.2 -0.1
FINES	FINESS Array B	78.77	22	P	P	15 28 31.0 +0.2
	comp=Z,5.0nm,0.8s,baz=279,slow=3.7,SNR=10.0					
	comp=Z,5.0nm,0.8s					
FINES	FINESS Array B	78.77	22	P	P	15 28 31.3 +0.4
NRIK	Noril'sk	78.90	356	P	P	15 28 31.5 +0.1
	comp=Z,4.0nm,0.7s,baz=29,slow=4.9,SNR=9.3					
	comp=Z,4.0nm,0.7s					
NRIK	Noril'sk	78.90	356	P	P	15 28 31.6 +0.1
NRIK				IAmb	IAmb	15 28 32.5
	comp=Z,3.9nm,0.7s					
ECH	Echery	79.47	39	IAmb	IAmb	15 28 54.6
	comp=Z,10nm,1.2s					
TRQA	Tornquist	79.71	147	P	P	15 28 36.3 +0.1
LL02	Futaleuf	80.16	157	IAmb	IAmb	15 28 41.2
	comp=Z,15nm,1.0s					
CLL	Collm	80.57	35	P	P	15 28 40.7 -0.2
CLL				IAmb	IAmb	15 28 42.6
	comp=Z,9.1nm,0.7s					
CLL	Collm	80.57	35⇑	*i* P	P	15 28 42.0 +1.2
	comp=Z,12nm,0.8s					
CLL				*i* x	x	15 28 44.3
	comp=Z,16nm,1.2s					
CLL	Collm	80.57	35	P	P	15 28 40.7 -0.2
DAVA	Damuels	81.50	39	epP	pP	15 28 47.9 -1.7
	comp=Z,12nm,0.9s					
MOTA	Moosalm	82.12	38	epP	P	15 28 50.1 +0.7
	comp=Z,9.5nm,1.2s					
FETA	Feichten	82.12	39	epP	P	15 28 51.4 +2.0
	comp=Z,8.9nm,1.0s					
SQTA	Sankt Quirin	82.25	38	epP	P	15 28 52.2 +2.1
	comp=Z,7.4nm,1.0s					
KHC	Kasperske Hory	82.25	36	eP	P	15 28 50.9 +1.0
ZVC	Zvikov	82.36	35	eP	P	15 28 52.1 +1.7
WATA	Walderalm	82.37	38	epP	P	15 28 52.6 +1.9
	comp=Z,7.3nm,0.8s					
WTTA	Wattenberg	82.45	38	epP	P	15 28 53.6 +2.4
	comp=Z,21nm,1.5s					
CHVC	Chvalec	82.50	34	eP	P	15 28 53.2 +2.1
GERES	GERESS Array B	82.50	36	P	P	15 28 51.8 +0.6
	comp=Z,1.9nm,0.7s,baz=305,slow=5.8,SNR=6.6					
	comp=Z,1.9nm,0.7s					
DPC	Dobruska-Polom	82.79	34	eP	P	15 28 54.4 +1.7
LESA	Schwarzleotal	82.89	38	epP	P	15 28 54.0 +0.7
	comp=Z,12nm,1.6s					
KRLC	Kraliky	83.19	34	eP	P	15 28 56.2 +1.4
BIOA	Bad Ischl, Aus	83.22	37	pP	pP	15 28 56.7 -1.7
	comp=Z,10nm,0.8s					
ABTA	Abfaltersbach	83.24	38	epP	P	15 28 55.9 +0.7
	comp=Z,20nm,1.1s					
MOA	Molln	83.44	37	epP	pP	15 28 57.9 -1.7
	comp=Z,20nm,1.2s					
KBA	Koelnbreinsper	83.46	38	epP	P	15 28 57.8 +1.4
	comp=Z,16nm,1.0s					
VRAC	Vranov	83.62	35	eP	P	15 28 57.9 +1.0
KRUC	Moravsky	83.69	35	eP	P	15 28 57.9 +0.6
MORC	Moravsky Berou	83.75	34	eP	P	15 28 58.7 +1.0
STEB	Steborice	83.75	34	eP	P	15 28 58.9 +1.3
MAUC	Maruska	84.17	34	eP	P	15 29 01.5 +1.7
WINA	Alland / Wiene	84.17	36	*i* PcP	P	15 29 02.0 +2.2
	SNR=5.1					
CONA	Conrad Observa	84.19	36	epP	P	15 29 01.4 +1.5
	comp=Z,13nm,0.9s,SNR=9.9					
JAVC	Velka Javorina	84.44	34	eP	P	15 29 02.9 +1.7
OBKA	Obir	84.46	38	epP	P	15 29 02.6 +1.2
	comp=Z,29nm,0.9s,SNR=13					
ARSA	Arzberg	84.47	37	epP	P	15 29 02.8 +1.4
	comp=Z,7.2nm,0.9s,SNR=4.2					
RONA	Rosalia, Austr	84.56	36	epP	pP	15 29 03.6 -1.7
	comp=Z,19nm,1.0s					
MODS	Modra-Piesok	84.58	35	eP	P	15 29 04.0 +2.1
MODS				ePP	P'P'df	15 55 32.9 +9.1
SOKA	Soboth	84.60	37	epP	P	15 29 03.3 +1.2
	comp=Z,25nm,1.0s,SNR=4.6					
LANS	Liptovska Anna	85.09	33	eP	P	15 29 09.5 +5.0
KLR	Kul'dur	85.37	327	P	P	15 29 04.9 -0.9
	comp=Z,1.6nm,1.0s,baz=87,slow=5.0,SNR=4.5					
	comp=Z,1.6nm,1.0s					
SRO	Srobarova	85.47	35	eP	P	15 29 08.8 +2.5
STHS	Stebnicka Huta	85.73	32	eP	P	15 29 09.8 +2.2
RNPP9	Sopachiv	86.27	29	P	P	15 29 10.0 -0.2
RNPP8	Varash	86.31	29	P	P	15 29 10.2 -0.2
HEH

comp=Z,10.0nm,0.8s
DBIC Dimbokro 94.28 80 P **P** 15 29 48.2 -0.2
comp=Z,3.3nm,0.9s,baz=343,slow=4.8,SNR=4.4
comp=Z,3.3nm,0.9s
BVAR Borovoye Array 95.49 3 P **P** 15 29 53.6 +0.3
comp=Z,1.8nm,0.7s,baz=344,slow=3.7,SNR=9.8
comp=Z,1.8nm,0.7s
ULN Ulaanbaatar 96.02 340 P **P** 15 29 55.2 -0.8
ULN IAmb IAmb 15 29 58.5
comp=Z,5.5nm,1.2s
TORD Torodi Ar. Bea 96.14 71 P **P** 15 29 58.5 +1.5
comp=Z,1.1nm,1.0s,baz=293,slow=7.1,SNR=4.3
comp=Z,1.1nm,1.0s
SONM Songino Array 96.24 340 P **P** 15 29 57.6 +0.6
comp=Z,1.7nm,0.8s,baz=10,slow=4.0,SNR=10
comp=Z,1.7nm,0.8s
SONM Songino Array 96.24 340 P **P** 15 29 57.1 +0.1
SONM IAmb IAmb 15 29 59.5
comp=Z,6.0nm,1.4s
AKTO Aktyubinsk 96.69 11 P **P** 15 29 59.2 +0.4
comp=Z,0.8nm,0.4s,baz=12,slow=2.3,SNR=4.2
comp=Z,0.8nm,0.4s
SANVU Saraoutou 96.93 256 P **P** 15 29 58.0 -2.4
KURK Kurchatov 97.91 358 P Pdif 15 30 04.4 0.0
KURK Kurchatov 97.91 358 IAmb IAmb 15 30 08.7
comp=Z,9.8nm,1.8s
KURBB Kurchatov Arra 98.01 358 P **P** 15 30 04.4 -0.4
comp=Z,0.2nm,0.6s,baz=30,slow=4.9,SNR=2.7
comp=Z,0.2nm,0.6s
AB31 Akbulak array 98.15 11 P **P** 15 30 04.6 -0.8
MXZ Matakaoa Point 99.94 232 Pdif **Pdif** 15 30 13.0 -0.4
HHC Hu-ho-hao-te 100.67 333 *eP* **Pdif** 15 30 15.8 -1.2
HHC pmax pmax
comp=Z,6.0nm,0.7s
CAN Canberra 120.29 245 PKPdf **PKPdf** 15 35 17.4 -2.5
QSPA South Pole Qui 121.56 180 PKP **PKiKP** 15 35 21.8 +0.3
comp=Z,1.6nm,0.6s,baz=175,slow=0.4,SNR=14
STKA Stephens Creek 125.03 251 PKP **PKPdf** 15 35 28.5 -0.5
comp=Z,1.1nm,0.7s,baz=15,slow=5.4,SNR=3.1
CMAR Chiang Mai Arr 125.47 333 PKP **PKPdf** 15 35 28.8 -1.6
comp=Z,2.6nm,0.8s,baz=329,slow=2.1,SNR=22
CMAR Chiang Mai Arr 125.47 333 **PKPdf** 15 35 30.5 +0.1
WRA Warramunga Arr 126.71 268 PKP **PKPdf** 15 35 30.7 -1.9
comp=Z,1.1nm,0.8s,baz=67,slow=2.1,SNR=9.2
ASAR Alice Springs 128.58 264 PKP **PKPdf** 15 35 35.3 -0.8
comp=Z,0.7nm,0.7s,baz=82,slow=1.7,SNR=9.3
ASAR PP **PP** 15 37 45.1 +3.1
comp=Z,0.8nm,1.0s,baz=66,slow=7.0,SNR=4.8
ASAR Alice Springs 128.58 264 **PKPdf** 15 35 33.5 -2.6
MAW Mawson 143.24 172 PKP PKPbc 15 35 59.5 +0.7
comp=Z,7.7nm,1.0s,baz=257,slow=7.6,SNR=6.3
MAW Mawson 143.24 172 PKPpre 15 35 58.7
NWAO Narrogin (SRO) 145.26 257 **PKPbc** 15 36 04.8 -1.4
MORW Morawa 145.46 264 **PKPdf** 15 36 05.0 -2.0

*MAN **26** 15:34:16.0, 10.92N×126.60E, h6km, MS4.2*
*IDC **26** 15:34:17.4±0.5, 10.83N×126.33E, h0km, mb4.2/25, mbtmp4.3/29, ML4.0/3, Error ellipse: s-maj=21.0km s-min=10.5km az=83.0*
*NEIC **26** 15:34:18.6±1.3, 10.85N±0.07×126.25E±0.10, h10km±1km, mb4.5/85, Error ellipse: s-maj=16.1km s-min=11.0km az=253.0*

ISC 26 15:34:18.2±0.3, 10.84N±0.03×126.29E±0.04, h10km, n144, σ1§43/153, mb4.4/61, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**1.31**	**217**	*i* P	**Pg**	**15 34 45.0**	**+1.5**
SCPH				*i* S	**Sb**	**15 34 52.5**	**-7.5**
PLP	**Palo**	**1.33**	**284**	*eP*	**Pg**	**15 34 44.8**	**+1.0**
PLP				*eS*	**Sg**	**15 35 08.4**	**+7.4**
TSSP	**Tandag City**	**1.79**	**183**	*eP*	**Pn**	**15 34 49.8**	**+0.6**
LLP	**Lapu-Lapu**	**2.34**	**257**	*eP*	**Pg**	**15 35 03.3**	**+0.1**
LLP				*i* S	**Sg**	**15 35 35.8**	**+2.1**
TBP	**Tagbilaran**	**2.65**	**245**	*eP*	**Pb**	**15 35 05.3**	**-0.5**
TBP				*i* S	**Sg**	**15 35 47.7**	**+4.3**
MMPH	**Masbate**	**3.02**	**300**	*eP*	**Pb**	**15 35 09.6**	**-2.5**
MMPH				*i* S	**Sn**	**15 35 45.0**	**+2.7**
BUKP	**Musuan**	**3.18**	**202**	*eP*	**Pb**	**15 35 14.6**	**-0.4**
BUKP				*eS*	**Sb**	**15 35 51.7**	**-2.1**
SNPH	**Sibulan**	**3.36**	**244**	*i* P	**Pb**	**15 35 17.8**	**-0.1**
SNPH				*i* S	**Sb**	**15 35 57.8**	**-1.1**
RCP	**Roxas**	**3.55**	**282**	*eP*	**Pb**	**15 35 18.0**	**-3.2**
RCP				*i* S	**Sg**	**15 36 08.7**	**-3.7**
DCPH	**Dipolog City**	**3.66**	**232**	*eP*	Pn	15 35 07.4	-7.6
DAV	**Davao City (W)**	**3.81**	**191**	Pn	**Pn**	**15 35 18.8**	**+1.8**
	24nm,0.3s,baz=224,slow=23,SNR=1.7						
	65nm,0.3s						
DAV	**Davao City (W)**	**3.81**	**191**		**Pn**	**15 35 16.6**	**-0.4**
GQP	**Guinayangan**	**4.83**	**309**	*eP*	**Pn**	**15 35 32.3**	**+1.2**
TGY	**Tagaytay City**	**6.15**	**302**	Pn	**Pn**	**15 35 51.7**	**+2.4**
	12nm,0.3s,baz=309,slow=5.9,SNR=4.1						
	41nm,0.4s						
SIJI	**Sorong**	**12.64**	**157**	Pn	**Pn**	**15 37 19.6**	**+1.4**
	0.1nm,0.3s,baz=187,slow=4.1,SNR=3.6						
	4.9nm,0.9s						
TPUB	**Ta-pu**	**13.52**	**337**	Pn	**Pn**	**15 37 28.2**	**-2.0**
SSLB	**Suanglung**	**13.84**	**339**	Pn	**Pn**	**15 37 31.4**	**-3.2**
FAKI	**Fak Fak**	**14.90**	**156**	Pn	**Pn**	**15 37 50.7**	**+1.6**
SBUM	**Sibu**	**16.26**	**240**	P	**Pn**	**15 38 07.6**	**+0.7**
KAPI	**Kappang**	**17.04**	**203**	P	**P**	**15 38 17.8**	**-0.8**
	3.9nm,0.3s,baz=27,slow=14,SNR=4.0						
MMRI	**Maumere**	**19.77**	**192**	P	**P**	**15 38 47.8**	**-0.8**
MMRI				IAmb	IAmb	15 39 24.1	
	comp=Z,37nm,1.1s						
SOEI	**Soe**	**20.56**	**186**	P	**P**	**15 38 56.0**	**-1.3**
BATI	**Baumata**	**21.07**	**187**	P	**P**	**15 39 03.5**	**+0.7**
	comp=Z,12nm,0.5s,baz=52,slow=3.3,SNR=2.7						
	comp=Z,12nm,0.5s						
LEM	**Lembang**	**25.57**	**227**	P	**P**	**15 39 49.9**	**+2.1**
	comp=Z,15nm,0.4s,baz=143,slow=4.2,SNR=3.8						
	comp=Z,15nm,0.4s						
KULM	**Kulim**	**25.97**	**260**	P	**P**	**15 39 49.9**	**-1.5**
KULM				IAmb	IAmb	15 40 29.8	
	comp=Z,18nm,1.4s						
INU	**Inuyama**	**26.28**	**20**	P	**P**	**15 39 54.7**	**+0.9**
INU				IAmb	IAmb	15 39 55.8	
	comp=Z,6.4nm,0.7s						
KNRA	**Kununurra**	**26.46**	**175**	P	**P**	**15 39 55.9**	**+0.2**
KNRA				IAmb	IAmb	15 40 22.1	
	comp=Z,19nm,1.3s						
KSRS	**Korea Array**	**26.54**	**3**	P	**P**	**15 39 57.8**	**+1.6**
	comp=Z,1.7nm,1.0s,baz=149,slow=29,SNR=4.3						
	comp=Z,1.7nm,1.0s						
CMAR	**Chiang Mai Arr**	**27.49**	**289**	P	**P**	**15 40 05.1**	**0.0**
	comp=Z,0.7nm,0.5s,baz=95,slow=7.6,SNR=8.3						
	comp=Z,0.7nm,0.5s						
CMAR	**Chiang Mai Arr**	**27.49**	**289**	P	**P**	**15 40 03.5**	**-1.6**
MJAR	**Matsushiro Arr**	**27.77**	**21**	P	**P**	**15 40 06.7**	**-0.6**
	comp=Z,1.9nm,0.8s,baz=196,slow=8.9,SNR=5.9						
	comp=Z,1.9nm,0.8s						
MJAR	**Matsushiro Arr**	**27.77**	**21**	IAmb	IAmb	15 40 15.2	
	comp=Z,3.0nm,1.4s						
WB0	**Warramunga Arr**	**31.44**	**165**	P	**P**	**15 40 39.5**	**-0.5**
WB0				IAmb	IAmb	15 40 57.5	
	comp=Z,9.5nm,1.2s						
WRA	**Warramunga Arr**	**31.60**	**165**	P	**P**	**15 40 41.0**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=347,slow=8.9,SNR=11						
	comp=Z,0.8nm,0.6s						
WR8	**Warramunga Arr**	**31.65**	**165**	P	**P**	**15 40 40.3**	**-1.6**
MBWA	**Marble Bar**	**32.45**	**191**	P	**P**	**15 40 49.0**	**+0.1**
PSA00	**Pilbara Seismi**	**32.83**	**191**		**P**	**15 40 51.3**	**-0.8**
PSA00	**Pilbara Seismi**	**32.83**	**191**	P	**P**	**15 40 51.7**	**-0.4**
PSA00				IAmb	IAmb	15 40 54.8	
	comp=Z,33nm,1.4s						
PBA	**Port Blair**	**32.90**	**275**	P	**P**	**15 40 51.2**	**-1.8**
USRK	**Ussuriysk Ar.**	**33.60**	**7**	P	**P**	**15 40 58.6**	**-0.1**
	comp=Z,4.5nm,0.8s,baz=179,slow=7.0,SNR=5.8						
	comp=Z,4.5nm,0.8s						
AS31	**Alice Springs**	**35.09**	**168**	P	**P**	**15 41 11.1**	**-0.8**
ASAR	**Alice Springs**	**35.09**	**168**	P	**P**	**15 41 12.1**	**+0.1**
	comp=Z,1.7nm,0.6s,baz=349,slow=6.9,SNR=28						
ASAR				PcP	**PcP**	**15 43 44.2**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=345,slow=2.6,SNR=5.8						
	comp=Z,1.7nm,0.6s						
ASAR	**Alice Springs**	**35.09**	**168**	P	**P**	**15 41 10.9**	**-1.0**
SHL	**Shillong**	**35.68**	**299**		**P**	**15 41 15.9**	**-1.3**
ASAJ	**Asahikawa**	**36.03**	**20**	P	**P**	**15 41 21.6**	**+1.9**
	comp=Z,2.7nm,0.8s,baz=297,slow=9.0,SNR=4.6						
	comp=Z,2.7nm,0.8s						
JKA	**Kamikawa-asahi**	**36.03**	**20**	P	**P**	**15 41 20.4**	**+0.8**
GTA2	**Gaotai**	**37.01**	**325**	*eP*	**P**	**15 41 30.0**	**+1.7**
GTA2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KLR	**Kul'dur**	**38.54**	**6**	P	**P**	**15 41 41.8**	**+0.9**
	comp=Z,1.7nm,0.8s,baz=254,slow=1.7,SNR=4.6						
	comp=Z,1.7nm,0.8s						
ULN	**Ulaanbaatar**	**40.30**	**340**	P	**P**	**15 41 55.2**	**-0.7**
SONM	**Songino Array**	**40.49**	**339**	P	**P**	**15 41 58.4**	**+0.9**
	comp=Z,1.4nm,0.9s,baz=156,slow=10.0,SNR=6.5						
SONM				PcP	**PcP**	**15 44 02.0**	**+1.9**
	comp=Z,0.5nm,0.6s,baz=142,slow=1.5,SNR=2.3						
	comp=Z,1.4nm,0.9s						
SONM	**Songino Array**	**40.49**	**339**	P	**P**	**15 41 56.5**	**-0.9**
SONM				IAmb	IAmb	15 42 33.7	
	comp=Z,12nm,1.4s						
EVN	**Everest**	**40.72**	**300**		**P**	**15 41 59.0**	**-1.2**
INKA	**Innaminka**	**40.83**	**160**		**P**	**15 42 00.8**	**+0.6**
MORW	**Morawa**	**40.89**	**194**		**P**	**15 42 00.3**	**-0.4**
FORT	**Forrest**	**41.41**	**178**	P	**P**	**15 42 04.5**	**-0.5**
FORT				IAmb	IAmb	15 42 06.4	
	comp=Z,5.7nm,0.8s						
EIDS	**Eidsvold**	**43.35**	**146**	P	**P**	**15 42 20.5**	**-0.3**
NWAO	**Narrogin (SRO)**	**44.37**	**191**	P	**P**	**15 42 28.2**	**-0.7**
STKA	**Stephens Creek**	**44.93**	**161**	P	**P**	**15 42 34.1**	**+0.7**
	comp=Z,4.8nm,0.9s,baz=350,slow=7.8,SNR=7.6						
	comp=Z,4.8nm,0.9s						
STKA	**Stephens Creek**	**44.93**	**161**	P	**P**	**15 42 32.4**	**-1.1**
TOO	**Toolangi**	**51.41**	**160**	P	**P**	**15 43 24.3**	**+0.8**
TOO				IAmb	IAmb	15 43 32.9	
	comp=Z,8.9nm,1.3s						
MKAR	**Makanchi Array**	**51.59**	**322**	P	**P**	**15 43 26.2**	**+1.4**
	comp=Z,3.7nm,0.8s,baz=116,slow=8.1,SNR=28						
MKAR				PcP	**PcP**	**15 44 39.1**	**+0.4**
	comp=Z,4.0nm,1.0s,baz=93,slow=6.0,SNR=5.2						
	comp=Z,3.7nm,0.8s						
MKAR	**Makanchi Array**	**51.59**	**322**		**P**	**15 43 25.3**	**+0.5**
MAKZ	**Makanchi**	**51.78**	**322**	P	**P**	**15 43 27.0**	**+0.8**
MAKZ				IAmb	IAmb	15 43 33.3	
	comp=Z,8.3nm,1.3s						
PRZ	**Przheval'sk**	**52.19**	**316**	P	**P**	**15 43 28.8**	**-0.7**
PRZ				IAmb	IAmb	15 44 06.4	
	comp=Z,6.5nm,1.0s						
TARG	**Taragay, Kyrgy**	**52.32**	**315**		**P**	**15 43 30.6**	**-0.2**
KDJ	**Kajisay**	**52.90**	**315**	P	**P**	**15 43 34.1**	**-0.7**
KDJ				IAmb	IAmb	15 43 43.8	
	comp=Z,3.2nm,0.8s						
NIL	**Nilore**	**53.43**	**304**	P	**P**	**15 43 37.9**	**-0.8**
NIL				IAmb	IAmb	15 44 15.5	
	comp=Z,3.7nm,0.7s						
NRN	**Naryn**	**53.48**	**314**		**P**	**15 43 38.4**	**-0.8**
KAAM	**Kaadhehdhoo**	**53.93**	**263**	P	**P**	**15 43 42.5**	**-0.1**
ZAA0	**Zalesovo Array**	**54.14**	**331**	P	**P**	**15 43 43.6**	**+0.1**
ZAA0				IAmb	IAmb	15 44 09.3	
	comp=Z,3.7nm,0.8s						
ZALV	**Zalesovo Beam**	**54.14**	**331**	P	**P**	**15 43 44.1**	**+0.7**
	comp=Z,2.4nm,0.6s,baz=109,slow=5.9,SNR=2.8						
	comp=Z,2.4nm,0.6s						
ZALV	**Zalesovo Beam**	**54.14**	**331**	P	**P**	**15 43 43.6**	**+0.1**
AAK	**Ala-Archa**	**54.94**	**315**	P	**P**	**15 43 48.7**	**-1.0**
SEY	**Seymchan**	**55.27**	**14**	P	**P**	**15 43 52.9**	**+1.5**
	comp=Z,1.3nm,0.7s,baz=216,slow=4.2,SNR=4.7						
	comp=Z,1.3nm,0.7s						
MIDW	**Midway**	**55.36**	**63**	P	**P**	**15 43 52.5**	**-0.3**
ARSB	**Arslanbob**	**55.60**	**313**	P	**P**	**15 43 53.9**	**-0.6**
ARSB				IAmb	IAmb	15 44 25.4	
	comp=Z,5.9nm,1.2s						
KURK	**Kurchatov**	**55.61**	**325**	P	**P**	**15 43 54.4**	**+0.2**
KURBB	**Kurchatov Arra**	**55.62**	**325**	P	**P**	**15 43 55.1**	**+0.9**
	comp=Z,5.3nm,0.8s,baz=126,slow=6.8,SNR=37						
	comp=Z,5.3nm,0.8s						
BTK	**Batken**	**56.83**	**311**	P	**P**	**15 44 02.4**	**-0.8**
KK31	**Karatay Array**	**57.87**	**314**	P	**P**	**15 44 09.6**	**-0.8**
KK31				IAmb	IAmb	15 44 29.1	
	comp=Z,2.9nm,0.8s						
KKAR	**Karatay Array**	**57.87**	**314**	P	**P**	**15 44 09.7**	**-0.7**
AMKA	**Amchitka**	**58.93**	**36**	P	**P**	**15 44 17.6**	**0.0**
TIXI	**Tiksi**	**60.78**	**1**	P	**P**	**15 44 30.4**	**+0.4**
	comp=Z,1.8nm,0.3s,baz=210,slow=3.7,SNR=8.1						
	comp=Z,1.8nm,0.3s						
TIXI	**Tiksi**	**60.78**	**1**		**P**	**15 44 29.4**	**-0.6**
TIXI				IAmb	IAmb	15 44 32.6	
	comp=Z,3.4nm,1.1s						
BVAR	**Borovoye Array**	**61.21**	**325**	P	**P**	**15 44 34.2**	**+1.0**
	comp=Z,6.3nm,0.8s,baz=117,slow=8.5,SNR=25						
	comp=Z,6.3nm,0.8s						
BORK	**Borovoye**	**61.26**	**325**		**P**	**15 44 33.2**	**-0.3**
GSTR	**Great Sitkin T**	**61.88**	**36**	P	**P**	**15 44 37.6**	**-0.2**
JOHN	**Johnston Islan**	**62.39**	**77**	P	**P**	**15 44 41.3**	**-0.5**
NRIK	**Noril'sk**	**63.47**	**346**	P	**P**	**15 44 50.9**	**+2.8**
	comp=Z,1.0nm,0.6s,baz=140,slow=9.2,SNR=3.9						
	comp=Z,1.0nm,0.6s						
NRIK	**Noril'sk**	**63.47**	**346**	P	**P**	**15 44 48.4**	**+0.3**
AB31	**Akbulak array**	**66.46**	**319**		**P**	**15 45 07.7**	**-0.3**
ABKAR	**Akbulak array**	**66.46**	**319**		**P**	**15 45 07.7**	**-0.3**
AMCZ	**Amberley**	**68.37**	**145**	P	**P**	**15 45 21.3**	**+1.2**
ARTI	**Arti**	**68.85**	**326**		**P**	**15 45 22.6**	**-0.2**
L14K	**Kuka Creek**	**71.48**	**29**	P	**P**	**15 45 39.6**	**+0.7**
L14K				IAmb	IAmb	15 45 42.5	
	comp=Z,5.0nm,1.0s						
M14K	**Bethel**	**71.71**	**29**	P	**P**	**15 45 40.3**	**0.0**
M14K				IAmb	IAmb	15 45 44.1	
	comp=Z,4.0nm,0.8s						
E18K	**Tukpahlearik C**	**73.58**	**23**		**P**	**15 45 51.4**	**+0.1**
E18K				IAmb	IAmb	15 46 27.6	
	comp=Z,4.4nm,1.3s						
C18K	**Utukok River**	**73.62**	**21**	P	**P**	**15 45 51.7**	**0.0**
C19K	**Lookout Ridge**	**74.28**	**21**		**P**	**15 45 55.1**	**-0.4**
C19K				IAmb	IAmb	15 45 59.3	
	comp=Z,4.8nm,1.0s						
D19K	**Kuna River**	**74.70**	**22**		**P**	**15 45 58.1**	**+0.2**
D19K				IAmb	IAmb	15 46 00.7	
	comp=Z,3.2nm,1.0s						
HUH	**Hualalai**	**75.11**	**72**	P	**P**	**15 46 00.1**	**-1.4**
OVEH	**Oceanview Est**	**75.23**	**73**	P	**P**	**15 46 00.8**	**-1.3**
OVEH				IAmb	IAmb	15 46 08.2	
	comp=Z,175nm,1.3s						
D20K	**Etivluk River**	**75.28**	**22**	P	**P**	**15 46 00.3**	**-0.9**
D20K				IAmb	IAmb	15 46 04.5	
	comp=Z,5.4nm,1.1s						
B20K	**Meade River**	**75.28**	**20**	P	**P**	**15 46 00.6**	**-0.5**
B20K				IAmb	IAmb	15 46 04.2	
	comp=Z,6.4nm,1.2s						
IMAR	**Indian Mountai**	**76.08**	**25**	P	**P**	**15 46 05.8**	**-0.1**
B21K	**Ikpikpuk River**	**76.11**	**21**		**P**	**15 46 06.2**	**+0.3**
B21K				IAmb	IAmb	15 46 09.4	
	comp=Z,4.5nm,1.1s						
G21K	**Allakaket**	**76.22**	**24**		**P**	**15 46 06.8**	**+0.2**
G21K				IAmb	IAmb	15 46 11.3	
	comp=Z,4.0nm,1.0s						
F21K	**Alatna River**	**76.29**	**23**	P	**P**	**15 46 07.3**	**+0.3**
F21K				IAmb	IAmb	15 46 32.9	
	comp=Z,3.3nm,1.1s						
I21K	**Tanana**	**76.76**	**25**	P	**P**	**15 46 10.0**	**+0.4**
I21K				IAmb	IAmb	15 46 14.4	
	comp=Z,5.6nm,1.0s						
L22K	**Petersville**	**77.20**	**28**	P	**P**	**15 46 12.5**	**+0.2**
L22K				IAmb	IAmb	15 46 31.1	
	comp=Z,7.3nm,1.3s						
MLY	**Manley**	**77.28**	**26**	P	**P**	**15 46 12.1**	**-0.6**
CUT	**Chulitna**	**77.43**	**28**	P	**P**	**15 46 13.7**	**+0.2**
D23K	**Nanushuk River**	**77.45**	**22**	P	**P**	**15 46 13.9**	**+0.4**
D23K				IAmb	IAmb	15 46 41.5	
	comp=Z,7.6nm,1.4s						
C23K	**Itkillik River**	**77.51**	**21**	P	**P**	**15 46 15.1**	**+1.3**
C23K				IAmb	IAmb	15 46 16.1	
	comp=Z,3.5nm,0.8s						
D24K	**Happy Valley**	**78.12**	**21**	P	**P**	**15 46 17.9**	**+0.7**
D24K				IAmb	IAmb	15 46 20.0	
	comp=Z,2.8nm,0.8s						
E24K	**Your Creek**	**78.23**	**22**	P	**P**	**15 46 18.3**	**+0.3**
E24K				IAmb	IAmb	15 46 38.7	
	comp=Z,4.9nm,1.3s						
F24K	**Squaw Lake**	**78.46**	**23**	P	**P**	**15 46 19.8**	**+0.6**
G24K	**Hadweenzic Riv**	**78.63**	**24**	P	**P**	**15 46 18.9**	**-1.2**
HDA	**Harding Lake**	**78.91**	**26**	P	**P**	**15 46 21.4**	**-0.2**
HDA				IAmb	IAmb	15 47 03.5	
	comp=Z,5.3nm,1.3s						
ILAR	**Eielson Array**	**78.92**	**26**	P	**P**	**15 46 21.9**	**+0.1**
	comp=Z,0.5nm,1.0s,baz=261,slow=6.2,SNR=2.6						
	comp=Z,0.5nm,1.0s						
GLI	**Glacier Island**	**78.97**	**30**	P	**P**	**15 46 21.6**	**-0.4**
D25K	**Kavik River**	**78.99**	**21**	P	**P**	**15 46 22.2**	**+0.1**
D25K				IAmb	IAmb	15 46 26.4	
	comp=Z,4.1nm,1.2s						
BMAR	**Burnt Mountain**	**79.74**	**23**	P	**P**	**15 46 25.9**	**-0.3**
C27K	**Jago River**	**79.92**	**21**	P	**P**	**15 46 27.4**	**+0.3**
I26K	**Coal Creek Min**	**80.47**	**25**	P	**P**	**15 46 30.4**	**+0.2**
I26K				IAmb	IAmb	15 46 40.6	
	comp=Z,5.6nm,1.5s						
E27K	**Coleen River**	**80.81**	**22**	P	**P**	**15 46 32.4**	**+0.5**
E27K				IAmb	IAmb	15 46 59.2	
	comp=Z,6.4nm,1.4s						
I27K	**Kandik River**	**81.08**	**25**		**P**	**15 46 33.1**	**-0.4**
BCAR	**Beaver Creek A**	**81.30**	**27**	P	**P**	**15 46 34.5**	**-0.1**
GRNC	**Granite Creek**	**81.59**	**30**	P	**P**	**15 46 35.9**	**-0.6**
CTGM	**Chitina Glacie**	**81.76**	**30**	P	**P**	**15 46 37.8**	**+0.5**
H29M	**Whitestone**	**82.31**	**24**	P	**P**	**15 46 39.7**	**-0.2**
M29M	**Somme Creek**	**82.90**	**28**	P	**P**	**15 46 45.7**	**+2.5**
M29M				IAmb	IAmb	15 46 59.9	
	comp=Z,2.5nm,1.1s						
L29M	**L29M**	**82.94**	**27**	P	**P**	**15 46 45.6**	**+2.3**
L29M				IAmb	IAmb	15 47 27.7	
	comp=Z,4.5nm,1.1s						
BRTR	**Keskin Array B**	**85.19**	**309**	P	**P**	**15 46 54.9**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=106,slow=4.4,SNR=3.6						
	comp=Z,0.7nm,0.6s						
FIA1	**FINESS Array S**	**85.40**	**332**	P	**P**	**15 46 56.5**	**+0.8**
FINES	**FINESS Array B**	**85.40**	**332**	P	**P**	**15 46 56.4**	**+0.6**
	comp=Z,2.2nm,0.5s,baz=67,slow=5.3,SNR=16						
	comp=Z,2.2nm,0.5s						
FINES	**FINESS Array B**	**85.40**	**332**	P	**P**	**15 46 55.6**	**-0.1**
AKASG	**Malin Array Be**	**86.14**	**321**	P	**P**	**15 46 59.1**	**-0.5**
	comp=Z,2.0nm,0.7s,baz=61,slow=5.1,SNR=7.4						
	comp=Z,2.0nm,0.7s						
BURAR	**Bucovina Array**	**89.43**	**318**	P	**P**	**15 47 15.4**	**-0.3**
VNDA	**Vanda**	**90.49**	**173**	P	**P**	**15 47 20.3**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=312,slow=2.1,SNR=5.6						
	comp=Z,1.3nm,0.8s						
HFS	**Hagfors**	**91.56**	**332**	P	**P**	**15 47 25.5**	**+0.3**
	comp=Z,4.2nm,1.0s,baz=0.0,slow=3.0,SNR=3.3						
	comp=Z,4.2nm,1.0s						
TORD	**Torodi Ar. Bea**	**120.07**	**292**	PKP	**PKiKP**	**15 53 10.7**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=70,slow=2.6,SNR=3.7						
TORD	**Torodi Ar. Bea**	**120.07**	**292**		**PKPdf**	**15 53 09.1**	**-1.2**
PLCA	**Paso Flores**	**146.72**	**156**	PKPbc	**PKPbc**	**15 54 01.0**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=310,slow=6.1,SNR=3.4						

*BJI **26** 15:37:55.0, 5.13N×125.64E, h50km, mB6.0/74, mb5.7/92, Ms5.8/97, Ms7 5.7/92*
*GFZ **26** 15:37:57.7, 5.86N×125.11E, h58km, MW6.0, Moment Tensor Solution. s97 Moment tensor: Mrr1.16; Mθθ0.04; Mθφ-1.20; Mrθ0.44; Mθφ-0.01; Mφθ0.30; Fault plane solution: NP1:φs163.00000°, δ40.00000°, λ61.00000°. NP2:φs18.00000°, δ55.00000°, λ112.00000°. Principal axes: T 1.3400, Plg70.0000°, Azm340.0000°; N -0.1000, Plg17.0000°, Azm185.0000°; P -1.2400, Plg7.0000°, Azm93.0000°;*
*MAN **26** 15:38:02.0, 5.46N×125.10E, h48km, MS6.1*
MAN INTENSITY V - GLAN MAASIM ALABEL KIAMBA AND MALAPATAN SARANGANI; TUPI SOUTH COTABATO; GENERAL SANTOS CITY; PALIMBANG SULTAN KUDARAT; . INTENSITY IV - JOSE ABAD SANTOS MALITA AND SARANGANI DAVAO OCCIDENTAL; KORONADAL CITY; POLOMOLOK AND TAMPAKAN SOUTH COTABATO; . INTENSITY III - DAVAO CITY; MACO AND MAWA DAVAO DE ORO; DIGOS CITY; COTABATO CITY; . INTENSITY II - ZAMBOANGA CITY; KIDAPAWAN CITY.
*MOS **26** 15:38:02.2±0.9, 5.73N×125.03E, h68km, mb6.0/77, MS5.6/19, Error ellipse: s-maj=6.6km s-min=3.9km az=110.6*
*NEIC **26** 15:38:03.4, 5.70N×125.13E, h60km*
*IPGP **26** 15:38:03.0, 5.69N×125.18E, h61km, Mw6.1, Fault plane solution: NP1:φs184.00000°, δ35.00000°, λ76.00000°. NP2:φs21.00000°, δ56.00000°, λ100.00000°.*
*NEIC **26** 15:38:03.4, 5.60N×125.13E, h60km, Moment Tensor Solution. Duration: 5s6 Moment tensor: Scale 1018Nm; Mrr1.44; Mθθ-0.08; Mφφ-1.35; Mrθ0.53; Mθφ-0.05; Mφr0.80; Fault plane solution: Mo1.70000×1018 NP1: φs169.75000°, δ31.02000°, λ65.06000°. NP2:φs18.23000°, δ62.15000°, λ104.23000°. Principal axes: T 1.7870, Plg69.0000°, Azm318.0000°; N -0.1951, Plg13.0000°, Azm191.0000°; P -1.5919, Plg16.0000°, Azm98.0000°;*
*NEIC **26** 15:38:04.1±2.7, 5.57N±0.04×125.05E±0.03, h59km±1km, mb6.0/475, Mwb6.1/162, Mww6.1/67 Error ellipse: s-maj=7.5km s-min=5.5km az=160.0, Moment Tensor Solution. Moment tensor: Scale 1018Nm; Mrr1.74; Mθθ-0.18; Mφφ-1.56; Mrθ0.41; Mθφ-0.29; Mφr0.51; Fault plane solution: Mo1.80000×1018 NP1:φs20.11000°, δ55.10000°, λ99.78000°. NP2:φs183.35000°, δ36.08000°, λ76.32000°. Principal axes: T 1.8815, Plg77.0000°, Azm324.0000°; N -0.1673, Plg8.0000°, Azm194.0000°; P -1.7143, Plg10.0000°, Azm103.0000°;*
*N

TNTI Ternate 5.34 155 ⇓P Pn 15 39 22.4 +1.5
GTOI Gorontalo 5.38 203 P Pn 15 39 21.4 -0.1
PLP Palo 5.50 359 eP Pn 15 39 25.4 +2.3
PLP eS Sn 15 40 25.1 +0.1
JAP San Jose, Anti 5.96 329 eP Pn 15 39 33.2 +3.9
MRSI Marisa 6.01 212 P Pn 15 39 31.4 +1.3
TOLI2 Tolitoli 6.22 224 P Pn 15 39 32.2 -0.8
TOLI2 Tolitoli 6.22 224 Pn 15 39 32.0 -1.0
TOLI2 Sn Sn 15 40 38.4 -4.4
RCP Roxas 6.33 339 eP Pn 15 39 37.9 +3.4
MMPH Masbate 6.84 348 eP Pn 15 39 46.5 +5.1
MMPH i S Sn 15 40 56.2 -1.6
LUWI Luwuk 7.03 199 P Pn 15 39 47.6 +3.6
LUWI S Sn 15 41 04.2 +1.8
LUWI Luwuk 7.03 199 P Pn 15 39 48.6 +4.6
LUWI Luwuk 7.03 199 S Sn 15 41 05.5 +3.0
LUWI Luwuk 7.03 199 Pn 15 39 44.5 +0.5
LUWI Sn Sn 15 41 02.6 +0.1
LUWI Luwuk 7.03 199 P Pn 15 39 48.4 +4.4
LUWI Luwuk 7.03 199 ⇓P Pn 15 39 47.0 +3.0
APSI Ampana 7.36 208 P Pn 15 39 51.4 +2.9
MPSI Mapaga 7.39 225 P Pn 15 39 48.1 -0.8
64µm672nm,0.7s
PPR Puerto Princes 7.53 304 eP Pn 15 39 51.2 +0.4
SANI Sanana 7.69 173 P Pn 15 39 52.8 -0.2
SANI S Sn 15 41 14.5 -4.1
SANI Sanana 7.69 173 P Pn 15 39 53.3 +0.3
SANI Sanana 7.69 173 P Pn 15 39 53.0 0.0
SANI Sanana 7.69 173 ⇑P Pn 15 39 52.8 -0.2
TARAI Tarakan 7.84 253 P Pn 15 39 58.3 +3.1
15nm74µm39µm2µm,0.8s
AUQP San Andres 8.00 343 eP Pn 15 40 04.5 +7.1
PCI Palu 8.35 219 P Pn 15 40 02.5 +0.4
55µm12µm1µm,0.9s
GQP Guinayangan 8.62 343 i P Pn 15 40 11.7 +5.9
KKM Kota Kinabalu 8.84 273 P Pn 15 40 12.7 +3.8
KKM Kota Kinabalu 8.84 273 S Sn 15 41 50.0 +2.9
KKM Kota Kinabalu 8.84 273 Pn 15 40 10.6 +1.6
KKM Sn Sn 15 41 47.3 +0.2
KKM Kota Kinabalu 8.84 273 P Pn 15 40 12.2 +3.3
KKM Kota Kinabalu 8.84 273 P Pn 15 40 11.1 +2.2
21µm759nm,1.0s
KKM Kota Kinabalu 8.84 273 ⇓P Pn 15 40 12.0 +3.0
SWI Sorong 8.92 136 P Pn 15 40 10.7 +0.8
56µm20µm1µm,1.2s
SIJI Sorong 8.93 136 P Pn 15 40 12.1 +2.0
578nm,0.6s,baz=328,slow=9.5,SNR=399
SIJI S Sn 15 41 46.2 -3.0
314nm,0.7s,baz=297,slow=22,SNR=2.4
SIJI LR LR 15 44 00.3
comp=Z,31µm,21.7s,baz=328,slow=39
SIJI Sorong 8.93 136 P Pn 15 40 10.8 +0.7
46µm16µm992nm,0.8s
NLAI Namlea 9.04 167 P Pn 15 40 11.4 -0.1
TGY Tagaytay City 9.36 334 P Pn 15 40 20.9 +5.0
503nm,0.8s,baz=302,slow=4.4,SNR=13
TGY LR LR 15 44 24.4
comp=Z,49µm,21.7s,baz=168,slow=41
TGY Tagaytay City 9.36 334 eP Pn 15 40 21.7 +5.8
KRAI Karang Ratu 9.49 160 P Pn 15 40 19.1 +1.4
24µm23µm1µm,0.5s
I39PW PALAU INFRASON 9.58 78 I I 16 31 00.0
baz=268,slow=222,SNR=0.7
MMSI Mamuju 10.32 217 P Pn 15 40 29.7 +0.6
35µm315nm,0.5s
KKSI Kolaka, Sulawe 10.33 200 P Pn 15 40 32.1 +2.9
23µm9µm542nm,0.6s
BKB Balikpapan 10.67 230 P Pn 15 40 35.1 +1.2
BKB Balikpapan 10.67 230 S Sn 15 42 33.3 +1.5
BKB Balikpapan 10.67 230 Pn 15 40 33.8 -0.1
BKB Balikpapan 10.67 230 P Pn 15 40 36.6 +2.7
BKB Balikpapan 10.67 230 P Pn 15 40 34.9 +1.0
55µm13µm978nm,0.8s
BKB Balikpapan 10.67 230 ⇓P Pn 15 40 32.8 -1.1
SPSI Sidrap Palu 10.92 209 P Pn 15 40 39.8 +2.6
35µm585nm,1.0s
PMSI Majene 10.97 214 P Pn 15 40 39.7 +1.7
MWPI Manokwari, Pap 11.06 126 P Pn 15 40 40.1 +0.9
FAKI Fak Fak 11.10 140 P Pn 15 40 41.5 +1.7
FAKI Fak Fak 11.10 140 S Sn 15 42 44.8 +2.4
FAKI Fak Fak 11.10 140 Pn 15 40 40.9 +1.1
FAKI Fak Fak 11.10 140 P Pn 15 40 41.5 +1.7
FAKI Fak Fak 11.10 140 P Pn 15 40 41.3 +1.5
43µm28µm1µm,0.9s
FAKI Fak Fak 11.10 140 ⇓P Pn 15 40 41.2 +1.5
BNDI Bandanaira 11.18 154 P Pn 15 40 42.8 +2.1
BNDI Bandanaira 11.18 154 P Pn 15 40 40.9 +0.2
29µm2µm,1.3s
BNDI Bandanaira 11.18 154 ⇓P Pn 15 40 40.4 -0.4
RKPI Ransiki, Papua 11.52 128 P Pn 15 40 48.7 +3.2
KAPI Kappang 11.85 207 P Pn 15 40 52.5 +2.6
126nm,0.6s,baz=23,slow=8.7,SNR=43
KAPI S Sn 15 42 56.6 -3.9
113nm,1.0s,baz=336,slow=19,SNR=1.0
KAPI Kappang 11.85 207 P Pn 15 40 54.1 +4.2
KAPI Kappang 11.85 207 Pn 15 40 50.8 +0.9
KAPI Kappang 11.85 207 P Pn 15 40 50.8 +0.9
KAPI 15 42 56.6
KAPI Kappang 11.85 207 P Pn 15 40 53.1 +3.3
KAPI P Pn 15 40 53.1 +3.3
KAPI Kappang 11.85 207 P Pn 15 40 52.8 +2.9
KAPI Kappang 11.85 207 ⇑P Pn 15 40 52.1 +2.2
MKS Makassar 12.15 208 P Pn 15 40 57.1 +3.0
30µm14µm476nm,1.2s
BSSI Bau Bau, Buton 12.57 202 P Pn 15 41 01.8 +2.0
17µm9µm619nm,0.9s
KMPI Kaimana, Papua 12.62 137 P Pn 15 41 01.4 +0.9
38µm2µm,1.5s
SZP Santa 12.68 339 P Pn 15 41 02.1 +0.8
SZP Santa 12.68 339 S Sn 15 43 21.4 +0.6
SZP Santa 12.68 339 ⇓P P 15 41 06.5 -3.6
BAKI Biak 12.92 121 P Pn 15 41 06.6 +2.0
SIPP Brgy, Tapao 13.03 340 eP Pn 15 41 09.2 +3.3
SBUM Sibu 13.22 257 P P 15 41 12.9 -3.3
SBUM Sibu 13.22 257 Pn 15 41 09.1 +0.5
SBUM Sibu 13.22 257 P P 15 41 13.1 -3.1
SBUM Sibu 13.22 257 P Pn 15 41 11.4 +2.8
SBUM Sibu 13.22 257 ⇓P Pn 15 41 11.5 +2.9
PIP Pasuquin 13.35 341 eP Pn 15 41 09.7 -0.6
PIP eS S 15 43 47.3 -10
SRPI Serui, Papua 13.40 124 P Pn 15 41 11.7 +0.7
32µm32µm834nm,0.9s
BBKI Banjar Baru 13.66 229 P P 15 41 17.9 -3.1
44µm30µm974nm,2.1s
MMRI Maumere 14.46 191 P P 15 41 28.0 -2.0
MMRI Maumere 14.46 191 Pn 15 41 25.3 +0.3
MMRI Maumere 14.46 191 P P 15 41 27.6 -2.4
12µm16µm603nm,1.2s
MMRI Maumere 14.46 191 ⇓P Pn 15 41 27.4 +2.4
SAUI Saumlaki 14.88 155 P Pn 15 41 29.3 -1.1
SAUI Saumlaki 14.88 155 Pn 15 41 28.9 -1.5
SAUI Saumlaki 14.88 155 P Pn 15 41 28.6 -1.8
21µm17µm2µm,1.2s
SAUI Saumlaki 14.88 155 ⇑P Pn 15 41 29.1 -1.3
LBFI Labuhan Bajo, 14.95 200 P P 15 41 34.9 -0.5
SOEI Soe 15.31 183 P P 15 41 39.2 -0.3
SOEI Soe 15.31 183 P P 15 41 40.7 +1.1
SOEI Soe 15.31 183 P P 15 41 38.0 -1.6
SOEI Soe 15.31 183 P P 15 41 39.7 +0.1
SOEI Soe 15.31 183 P P 15 41 39.2 -0.3
16um31µm2µm,1.0s
SOEI Soe 15.31 183 ⇓P P 15 41 39.5 0.0
DBNI Kabupaten Domp 15.59 206 P P 15 41 42.9 +0.4
19µm20µm1µm,1.7s
BATI Baumata 15.80 185 P P 15 41 45.7 +0.8
559nm,0.7s,baz=334,slow=0.8,SNR=49
BATI Baumata 15.80 185 P P 15 41 44.9 0.0
WSI Waingapu 15.94 197 P P 15 41 46.4 +0.1
21µm42µm1µm,1.6s
PLAI Plampang 16.11 207 P P 15 41 50.4 +2.1
PLAI Plampang 16.11 207 P P 15 41 49.5 +1.2
23µm14µm923nm,1.1s
WBSI Waikabubak, Su 16.20 201 P P 15 41 49.4 0.0
22µm21µm554nm,1.4s
BASI Baing, Sumba 16.38 196 P P 15 41 51.3 0.0
26µm1µm,1.6s
TWSI Taliwang, Sumb 16.46 210 P P 15 41 54.3 +2.1
25µm18µm1µm,1.1s
KMMI Kalianget 16.79 222 P P 15 41 58.7 +2.8
43µm18µm563nm,1.1s
KHKI Kahang-Kahang 16.82 214 P P 15 41 58.3 +2.2
31µm12µm548nm,1.3s
GENI Genyem 17.13 118 P P 15 41 59.6 0.0

GENI Genyem 17.13 118 P P 15 42 02.9 +3.3
GENI Genyem 17.13 118 P Pn 15 41 58.5 -0.4
50µm35µm1µm,1.2s
ABJI Asem Bagus 17.18 219 P P 15 42 02.6 +2.4
34µm11µm479nm,1.0s
RTBI Rangdo, Negare 17.28 216 P P 15 42 03.8 +2.6
31µm15µm908nm,1.1s
DNP Denpasar 17.30 215 P P 15 42 04.5 +3.1
32µm40µm2µm,1.7s
IGBI Denpasar 17.45 215 P P 15 42 05.9 +2.8
30µm27µm1µm,1.3s
TWGBT Beinan 17.52 348 P P 15 42 03.9 +0.1
TWG Pinlang 17.52 348 Pn 15 42 02.6 -1.0
BLJI Banyuglugur 17.55 221 P P 15 42 09.1 +4.8
JAY Jayapura 17.57 117 P Pn 15 42 03.8 -0.5
168nm,0.6s,baz=285,slow=6.5,SNR=43
JAY LR LR 15 49 25.4
comp=Z,9µm,18.8s,baz=286,slow=38
JAY Jayapura 17.57 117 P P 15 42 05.2 +0.7
JAY Jayapura 17.57 117 P Pn 15 42 02.3 -2.0
37µm13µm339nm,0.9s
JAGI Jajag, Banyuwa 17.76 218 P Pn 15 42 10.0 +3.4
JAGI Jajag, Banyuwa 17.76 218 Pn 15 42 08.0 +1.5
JAGI Jajag, Banyuwa 17.76 218 P Pn 15 42 11.0 +4.4
JAGI Jajag, Banyuwa 17.76 218 P Pn 15 42 11.2 +4.6
31µm12µm618nm,1.0s
JAGI Jajag, Banyuwa 17.76 218 ⇑P Pn 15 42 08.4 +1.8
YULB Yu-li 18.03 349 P P 15 42 09.0 -0.5
YULB Yu-li 18.03 349 P P 15 42 09.0 -0.5
TPUB Ta-pu 18.08 347 P Pn 15 42 11.2 +0.7
TPUB Ta-pu 18.08 347 P P 15 42 09.8 -0.2
TPUB lAmb lAmb 15 42 14.7
comp=Z,1µm,0.9s
SSLB Suanglung 18.48 348 P P 15 42 14.7 +0.2
SSLB Suanglung 18.48 348 P P 15 42 13.8 -0.7
SSLB lAmb lAmb 15 42 19.0
comp=Z,712nm,1.0s
NACB Ninganchiao 18.74 350 P P 15 42 17.6 +0.4
NACB Ninganchiao 18.74 350 P P 15 42 16.9 -0.4
NGJI Ngawi 18.76 227 P Pn 15 42 23.3 +4.7
comp=Z,2µm,2.0s
YOJ Yonaguni jima 18.83 354 P Pn 15 42 20.4 +1.0
YOJ Yonaguni jima 18.83 354 P P 15 42 17.9 -0.3
YOJ Yonaguni jima 18.83 354 P P 15 42 17.9 -0.3
YOJ pmax pmax
comp=Z,412nm,1.3s
YOJ Yonaguni jima 18.83 354 ⇑S Pn 15 42 19.7 +0.3
SNJI Sawahan-Nganju 18.83 225 P Pn 15 42 22.9 +3.2
comp=Z,23µmcomp=Z,1µm,1.9s
AUDHS Darwin High Sc 18.84 162 P P 15 42 18.8 +0.4
DRS Darwin Rock St 18.85 162 P Pn 15 42 19.3 -0.5
JMJ Miyako jima 2 19.07 1 P Pn 15 42 22.1 -0.2
YHNB Yeheng 19.26 350 P Pn 15 42 24.2 -0.4
YHNB Yeheng 19.26 350 P P 15 42 23.0 0.0
SMRI Semarang 19.30 229 P Pn 15 42 27.4 +2.3
SMRI Semarang 19.30 229 P P 15 42 23.9 +0.4
SMRI lAmb lAmb 15 42 32.0
comp=Z,844nm,0.9s
SMRI Semarang 19.30 229 P Pn 15 42 28.8 +3.7
comp=Z,2µm,1.3s
SMRI Semarang 19.30 229 ⇑P Pn 15 42 27.9 +2.8
TPI Tanjungpandan 19.31 245 P Pn 15 42 26.6 +1.4
comp=Z,17µmcomp=Z,326nm,0.9s
MTN Manton Dam 19.31 162 P P 15 42 23.6 +0.1
comp=Z,456nm,0.7s,comp=Z,0.0nm
MTN Manton Dam 19.31 162 P P 15 42 23.1 -0.5
MTN Manton Dam 19.31 162 P P 15 42 24.0 +0.4
PCJI Pacitan 19.53 225 P Pn 15 42 32.3 +4.5
comp=Z,40µmcomp=Z,2µm,2.0s
TATO Taipei 19.54 350 P Pn 15 42 27.0 -0.8
TATO Taipei 19.54 350 P P 15 42 26.6 +0.6
TATO Taipei 19.54 350 P Pn 15 42 27.4 -0.4
TATO P Pn 15 42 27.4 -0.4
TATO S Sn 15 46 06.4 -0.4
TATO S Sn 15 46 06.4 -0.4
KDU Kakadu 19.62 158 P P 15 42 27.6 +0.6
comp=Z,307nm,0.9s,comp=Z,0.0nm
HKPS Hong Kong Po S 19.64 328 P Pn 15 42 30.1 +1.0
HKPS Hong Kong Po S 19.64 328 P Pn 15 42 28.9 -0.1
HKPS Hong Kong Po S 19.64 328 Pn 15 42 29.2 +0.1
HKPS lAmb lAmb 15 42 35.0
comp=Z,1µm,1.4s
KNMB Chin-men Tao 19.80 342 P Pn 15 42 30.9 0.0
UGM Wanagama 19.81 227 P Pn 15 42 32.7 +1.6
UGM Wanagama 19.81 227 P Pn 15 42 30.2 -0.9
UGM Wanagama 19.81 227 P Pn 15 42 34.2 +3.1
YOGI Yogyakarta 19.91 228 P Pn 15 42 33.9 +1.6
comp=Z,40µmcomp=Z,2µm,1.3s
QIZ Qiongzhong 19.95 313 P Pn 15 42 32.6 -0.2
QIZ Qiongzhong 19.95 313 P Pn 15 42 31.8 -1.0
QIZ Qiongzhong 19.95 313 P Pn 15 42 33.0 +0.2
QIZ sP sP 15 42 52.5 -0.5
QIZ S S 15 46 11.3 -0.2
QIZ pmax pmax
comp=Z,220nm,1.6s
QIZ pmax pmax
comp=Z,6µm,9.4s
QIZ L L
comp=Z,10µm,20.0s
QIZ L L
comp=Z,15µm,15.1s
QIZ L L
comp=Z,27µm,26.2s
QZH2 Quanzhou 20.19 343 ⇑i P Pn 15 42 34.5 -1.0
QZH2 S S 15 46 13.0 -3.0
QZH2 pmax pmax
comp=Z,2µm,1.7s
QZH2 pmax pmax
comp=Z,5µm,4.6s
QZH2 L L
comp=Z,25µm,8.6s
QZH2 L L
comp=Z,46µm,10.0s
QZH2 L L
comp=Z,40µm,25.0s
CTJI Waduk Cacaban 20.24 232 P Pn 15 42 38.3 +2.1
comp=Z,19µmcomp=Z,2µm,1.2s
PPBI Pangkal Pinang 20.45 248 P Pn 15 42 41.6 +2.9
KPJI Karang Pucung 20.64 232 P Pn 15 42 42.7 +1.8
comp=Z,18µmcomp=Z,781nm,1.2s
MMPI Merauke 20.71 132 P Pn 15 42 42.2 +0.5
JMZ Minamidaito 2 20.91 16 P Pn 15 42 42.4 -1.6
JMZ Minamidaito 2 20.91 16 P P 15 42 41.2 +0.4
JMZ lAmb lAmb 15 42 58.5
comp=Z,1µm,1.3s
GUMO Guam 21.02 66 P P 15 42 42.7 +0.6
comp=Z,115nm,0.5s,baz=183,slow=17,SNR=7.3
GUMO LR LR 15 50 09.3
comp=Z,7µm,21.7s,baz=242,slow=34
comp=Z,115nm,0.5s
GUMO Guam 21.02 66 P P 15 42 42.9 +0.7
GUMO Guam 21.02 66 P P 15 42 41.4 -0.8
GUMO lAmb lAmb 15 43 03.5
comp=Z,554nm,0.9s
GUMO Guam 21.02 66 P P 15 42 41.4 -0.8
GUMO pmax pmax
comp=Z,555nm,1.0s
GUMO Guam 21.02 66 ⇑P P 15 42 45.4 +3.2
GZH2 Guangzhou 21.03 330 ⇑i P P 15 42 44.8 +2.7
GZH2 sP pP 15 43 00.5 +3.9
GZH2 S Sn 15 46 39.5 -3.0
GZH2 pmax pmax
comp=Z,2µm,1.3s
GZH2 pmax pmax
comp=Z,10µm,6.1s
GZH2 L L
comp=Z,14µm,18.9s
GZH2 L L
comp=Z,9µm,21.0s
GZH2 L L
comp=Z,21µm,19.8s
TPRI Tanjung Pinang 21.05 258 P P 15 42 45.8 +3.3
comp=Z,17µmcomp=Z,519nm,1.6s
JOW Kunigami 21.30 8 P P 15 42 45.6 +0.7
comp=Z,437nm,0.8s,baz=198,slow=8.6,SNR=75
JOW LR LR 15 51 04.8
comp=Z,17µm,21.7s,baz=174,slow=37
comp=Z,437nm,0.8s
JOW Kunigami 21.30 8 P P 15 42 46.6 +1.6
JOW Kunigami 21.30 8 P P 15 42 46.2 +1.2
JOW lAmb lAmb 15 43 00.9
comp=Z,569nm,0.9s
JOW Kunigami 21.30 8 ⇑P P 15 42 46.8 +1.9
JOW Kunigami 21.30 8 P P 15 42 46.8 +1.9
DSRI Dabo 21.36 254 P P 15 42 49.8 +4.0

comp=Z,11µmcomp=Z,466nm,1.0s
LEM Lembang 21.39 235 P P 15 42 47.4 +1.2
comp=Z,367nm,1.1s,baz=80,slow=10,SNR=68
LEM S S 15 46 36.8 -3.5
comp=Z,34nm,0.7s,baz=9.7,slow=20,SNR=1.3
comp=Z,367nm,1.1s
LEM Lembang 21.39 235 P P 15 42 51.2 +5.0
comp=Z,34µmcomp=Z,20µmcomp=Z,1µm,1.3s
KNRA Kununurra 21.48 170 P P 15 42 47.3 +0.3
comp=Z,942nm,0.8s,comp=Z,0.0nm
KNRA Kununurra 21.48 170 P P 15 42 47.4 +0.3
KNRA lAmb lAmb 15 43 05.3
comp=Z,550nm,0.7s
MYKOM Kota Tinggi 21.54 261 P P 15 42 50.4 +2.8
MYKOM Kota Tinggi 21.54 261 P P 15 42 48.7 +1.1
MYKOM lAmb lAmb 15 42 54.0
comp=Z,1µm,1.6s
MYKOM Kota Tinggi 21.54 261 P P 15 42 50.6 +3.0
MYKOM Kota Tinggi 21.54 261 ⇑P P 15 42 49.9 +2.3
BTDF Bukit Timah Da 21.69 260 P P 15 42 52.1 +2.8
BTDF Bukit Timah Da 21.69 260 P P 15 42 52.4 +3.1
comp=Z,330nm,1.0s
BBJI Bungbulang 21.73 233 P P 15 42 52.5 +2.8
BBJI Bungbulang 21.73 233 P P 15 42 52.0 +2.2
BBJI lAmb lAmb 15 43 10.7
comp=Z,717nm,1.4s
BBJI Bungbulang 21.73 233 P P 15 42 52.8 +3.1
comp=Z,17µmcomp=Z,11µmcomp=Z,392nm,0.8s
DBJI Dramaga 21.95 237 P P 15 42 56.2 +4.1
comp=Z,34µmcomp=Z,35µmcomp=Z,1µm,1.8s
PMBI Palembang 22.00 248 P P 15 42 58.1 +5.4
PMBI Palembang 22.00 248 P P 15 42 55.1 +2.5
PMBI Palembang 22.00 248 P P 15 42 58.5 +5.8
comp=Z,35µmcomp=Z,30µmcomp=Z,2µm,1.2s
PMBI Palembang 22.00 248 ⇑P P 15 42 55.6 +2.9
SBJI Serang 22.24 239 P P 15 42 59.3 +4.1
JMBI JAMBI 22.61 252 P P 15 43 04.7 +5.5
comp=Z,18µmcomp=Z,1µm,0.8s
BLSI Bandar Lampung 22.63 241 P P 15 43 03.5 +4.1
comp=Z,31µmcomp=Z,12µmcomp=Z,1µm,1.0s
KLI Kotabumi 22.74 243 P P 15 43 04.0 +3.5
comp=Z,32µmcomp=Z,13µmcomp=Z,1µm,0.9s
KLSI 22.77 244 P P 15 43 03.5 +2.6
CGJI Cibinong 22.87 238 P P 15 43 04.1 +2.3
comp=Z,2µm,1.5s
MDSI Maura Dua 23.18 245 P P 15 43 07.1 +2.2
comp=Z,12µmcomp=Z,442nm,1.0s
KASI Kota Agung 23.36 242 P P 15 43 08.5 +1.9
comp=Z,29µmcomp=Z,14µmcomp=Z,943nm,1.0s
LWLI Liwa 23.52 244 P P 15 43 10.7 +2.5
comp=Z,34µmcomp=Z,25µmcomp=Z,2µm,1.1s
MANU Manus Island 23.52 108 P P 15 43 09.2 +1.1
MANU Manus Island 23.52 108 ⇑P P 15 43 07.7 -0.5
FITZ Fitzroy Crossi 23.59 179 LR LR 15 54 24.7
comp=Z,5µm,20.9s,baz=358,slow=41
GULI GuiLin 24.11 326 P P 15 43 17.3 +4.0
GULI sP sP 15 43 34.3 -3.1
GULI S S 15 47 37.8 +11
GULI pmax pmax
comp=Z,680nm,1.5s
GULI L L
comp=Z,14µm,22.8s
GULI L L
comp=Z,9µm,17.9s
GULI L L
comp=Z,26µm,20.6s
MNAI Manna 24.23 246 P P 15 43 17.3 +2.7
MNAI Manna 24.23 246 P P 15 43 15.9 +1.3
MNAI Manna 24.23 246 P P 15 43 17.3 +2.7
comp=Z,28µmcomp=Z,1µm,1.3s
MNAI Manna 24.23 246 ⇑S P 15 43 17.1 +2.5
KSI Kapahiang 24.29 246 P P 15 43 18.0 +2.8
comp=Z,34µmcomp=Z,20µmcomp=Z,1µm,0.9s
KULM Kulim 24.33 270 P P 15 43 17.2 +1.8
KULM Kulim 24.33 270 P P 15 43 17.4 +1.9
KULM Kulim 24.33 270 P P 15 43 17.3 +1.8
comp=Z,33µmcomp=Z,9µmcomp=Z,494nm,1.7s
KULM Kulim 24.33 270 ⇑P P 15 43 17.3 +1.9
MASI Maura Aman, Be 24.43 250 P P 15 43 19.4 +2.9
comp=Z,27µmcomp=Z,1µm,1.0s
BKNI Bangkinang 24.58 258 P P 15 43 20.2 +2.4
BKNI Bangkinang 24.58 258 P P 15 43 20.4 +2.6
BKNI Bangkinang 24.58 258 P P 15 43 19.3 +1.5
BKNI Bangkinang 24.58 258 P P 15 43 20.3 +2.5
comp=Z,26µmcomp=Z,15µmcomp=Z,944nm,1.2s
UBSI University, Be 24.63 248 P P 15 43 20.3 +2.1
comp=Z,26µmcomp=Z,24µmcomp=Z,1µm,1.4s
KRJI Kerinci 24.82 253 P P 15 43 23.2 +3.2
comp=Z,32µmcomp=Z,27µmcomp=Z,891nm,0.9s
CNSH ChangSha 25.22 334 P P 15 43 25.0 +1.6
CNSH S S 15 47 49.0 +4.8
CNSH pmax pmax
comp=Z,110nm,1.7s
CNSH L L
comp=Z,7µm,20.1s
CNSH L L
comp=Z,8µm,19.1s
CNSH L L
comp=Z,10µm,17.1s
EGSI Enggano, Bengk 25.26 245 P P 15 43 25.0 +1.1
comp=Z,20µmcomp=Z,19µmcomp=Z,776nm,1.2s
PPI Padang Panjang 25.39 257 P P 15 43 27.0 +1.9
comp=Z,29µmcomp=Z,8µmcomp=Z,704nm,1.8s
PDSI Padang 25.44 256 P P 15 43 26.9 +1.3
comp=Z,27µmcomp=Z,9µmcomp=Z,811nm,1.0s
SSE Sheshan 25.59 352 P P 15 43 27.0 +0.3
SSE S S 15 47 52.0 +2.0
SSE pmax pmax
comp=Z,33nm,0.8s
SSE pmax pmax
comp=Z,2µm,8.7s
SSE L L
comp=Z,6µm,23.5s
SSE L L
comp=Z,3µm,23.1s
MNSI Mandailing Nat 25.91 260 P P 15 43 32.2 +2.3
comp=Z,6µmcomp=Z,478nm,0.8s
JSU Suzuyama 26.22 10 P P 15 43 32.4 -0.1
JSU Suzuyama 26.22 10 P P 15 43 31.7 -0.8
JSU lAmb lAmb 15 44 04.2
comp=Z,846nm,1.9s
JSU Suzuyama 26.22 10 ⇑P P 15 43 32.1 -0.3
PSI Prapat 26.25 265 P P 15 43 34.8 +1.8
PSI Prapat 26.25 265 P P 15 43 34.3 +1.3
PSI pmax pmax
comp=Z,170nm,0.9s
PSI Prapat 26.25 265 P P 15 43 34.5 +1.5
comp=Z,23µmcomp=Z,5µmcomp=Z,210nm,0.9s
RPSI Rantau Prapat 26.26 265 P P 15 43 34.2 +1.3
PPSI Pulau Pagai 26.40 252 P P 15 43 36.2 +1.9
comp=Z,594nm,0.7s
COEN Coen 26.48 137 P P 15 43 35.8 +0.9
comp=Z,594nm,1.8s,comp=Z,0.0nm
COEN Coen 26.48 137 P P 15 43 36.0 +1.1
COEN Coen 26.48 137 P P 15 43 34.8 -0.1
COEN Coen 26.48 137 ⇑P P 15 43 35.5 +0.6
PMG Port Moresby 26.59 124 P P 15 43 37.1 +1.2
PMG Port Moresby 26.59 124 P P 15 43 36.4 +0.5
PMG lAmb lAmb 15 44 10.2
comp=Z,516nm,1.1s
PMG Port Moresby 26.59 124 de P P 15 43 36.8 +0.9
PMG pmax pmax
comp=Z,98nm,0.8s
PMG Port Moresby 26.59 124 P P 15 43 37.2 +1.3
comp=Z,9µmcomp=Z,9µmcomp=Z,411nm,1.7s
PMG Port Moresby 26.59 124 ⇑P P 15 43 36.9 +1.0
WHN Wuhan 26.76 339 ⇑i P P 15 43 38.5 +1.2
WHN sP sP 15 44 01.5 +0.1
WHN S S 15 48 08.8 +0.3
WHN pmax pmax
comp=Z,410nm,1.0s
WHN pmax pmax
comp=Z,8µm,5.2s
WHN L L
comp=Z,15µm,11.7s
WHN L L
comp=Z,38µm,21.5s
WHN L L
comp=Z,76µm,20.4s
JCJ Chichijima 26.84 35 P P 15 43 37.0 -1.1
comp=Z,451nm,0.7s,baz=262,slow=23,SNR=35
JCJ S S 15 48 01.9 -8.0
comp=Z,100nm,0.9s,baz=293,slow=21,SNR=6.3
JCJ LR LR 15 52 18.3
comp=Z,4µm,21.8s,baz=214,slow=32
comp=Z,451nm,0.7s

JCJ	**Chichijima**	**26.84**	**35**	P	**P**	**15 43 37.7**	**-0.4**
JCJ	**Chichijima**	**26.84**	**35**	P	**P**	**15 43 37.5**	**-0.6**
JCJ	**Chichijima**	**26.84**	**35**	⇑P	**P**	**15 43 37.3**	**-0.8**
WB0	**Warramunga Arr**	**26.85**	**160**	P	**P**	**15 43 38.2**	**0.0**
NJ2	**Nanjing**	**26.92**	**348**	⇑P	**P**	**15 43 39.5**	**+0.8**
NJ2				sP	**sP**	**15 43 59.5**	**-3.1**
NJ2				PcS	**PcS**	**15 50 37.0**	**-3.9**
NJ2				pmax	pmax		
	comp=Z,100nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,7μm,4.5s						
NJ2				L	L		
	comp=Z,33μm,19.9s						
NJ2				L	L		
	comp=Z,25μm,18.5s						
NJ2				L	L		
	comp=Z,44μm,20.2s						
WRAB	**Tennant Creek**	**26.99**	**161**	P	**P**	**15 43 39.7**	**+0.3**
WRAB	**Tennant Creek**	**26.99**	**161**	P	**P**	**15 43 40.0**	**+0.5**
WRAB	**Tennant Creek**	**26.99**	**161**	*de*P	**P**	**15 43 39.8**	**+0.3**
WRAB				pmax	pmax		
	comp=Z,323nm,1.1s						
WRA	**Warramunga Arr**	**27.00**	**161**	P	**P**	**15 43 40.6**	**+1.1**
	comp=Z,134nm,0.9s,baz=336,slow=9.7,SNR=105						
WRA				S	**S**	**15 48 07.3**	**-5.1**
	comp=Z,211nm,1.4s,baz=337,slow=16,SNR=11						
	comp=Z,134nm,0.9s						
WRA	**Warramunga Arr**	**27.00**	**161**	P	**P**	**15 43 39.4**	**-0.1**
WRA	**Warramunga Arr**	**27.00**	**161**	*i* P	**P**	**15 43 39.7**	**+0.2**
WRA				pmax	pmax		
	comp=Z,141nm,0.9s						
WR8	**Warramunga Arr**	**27.06**	**160**	P	**P**	**15 43 40.2**	**+0.1**
WR8				IAmb	IAmb	15 44 17.5	
	comp=Z,483nm,0.8s						
MBWA	**Marble Bar**	**27.14**	**191**	P	**P**	**15 43 41.1**	**+0.3**
	comp=Z,445nm,1.2s,comp=Z,0.0nm						
MBWA	**Marble Bar**	**27.14**	**191**	P	**P**	**15 43 41.1**	**+0.3**
MBWA	**Marble Bar**	**27.14**	**191**	P	**P**	**15 43 41.1**	**+0.3**
MBWA				IAmb	IAmb	15 44 10.6	
	comp=Z,416nm,1.0s						
MBWA	**Marble Bar**	**27.14**	**191**	P	**P**	**15 43 41.4**	**+0.6**
MBWA				P	**P**	**15 43 41.4**	**+0.6**
MBWA				S	**S**	**15 48 12.6**	**-2.0**
MBWA				S	**S**	**15 48 12.6**	**-2.0**
MBWA	**Marble Bar**	**27.14**	**191**	⇑P	**P**	**15 43 41.2**	**+0.4**
GYA	**Guiyang**	**27.17**	**322**	⇑P	**P**	**15 43 43.3**	**+2.1**
GYA				pP	pP	15 43 58.0	+0.8
GYA				sP	sP	15 44 05.3	+0.2
GYA				S	**S**	**15 48 22.0**	**+6.7**
GYA				pmax	pmax		
	comp=Z,120nm,1.2s						
GYA				pmax	pmax		
	comp=Z,5μm,5.3s						
GYA				L	L		
	comp=Z,12μm,20.9s						
GYA				L	L		
	comp=Z,11μm,18.0s						
GYA				L	L		
	comp=Z,14μm,21.2s						
KCSI	**Kotacane, Aceh**	**27.31**	**267**	P	**P**	**15 43 43.2**	**+0.7**
	comp=Z,17μmcomp=Z,4μmcomp=Z,361nm,1.1s						
PSAC1	**Pilbara Seismi**	**27.49**	**191**	P	**P**	**15 43 44.3**	**+0.3**
	comp=Z,469nm,0.5s						
BULU	**Kimbe**	**27.52**	**113**	P	**P**	**15 43 46.5**	**+2.2**
PSA00	**Pilbara Seismi**	**27.52**	**191**	P	**P**	**15 43 44.4**	**+0.2**
PSA00	**Pilbara Seismi**	**27.52**	**191**	P	**P**	**15 43 43.9**	**-0.3**
PSA00				IAmb	IAmb	15 44 15.4	
	comp=Z,524nm,0.9s						
PSA00	**Pilbara Seismi**	**27.52**	**191**	P	**P**	**15 43 44.5**	**+0.2**
PSA00				IAmb	IAmb	15 44 15.4	
	comp=Z,550nm,0.9s						
GSI	**Gunungsitoli**	**27.79**	**262**	P	**P**	**15 43 47.2**	**+0.4**
GSI	**Gunungsitoli**	**27.79**	**262**	P	**P**	**15 43 47.1**	**+0.4**
GSI	**Gunungsitoli**	**27.79**	**262**	P	**P**	**15 43 47.5**	**+0.7**
	comp=Z,18μmcomp=Z,6μmcomp=Z,552nm,1.0s						
GSI	**Gunungsitoli**	**27.79**	**262**	⇑P	**P**	**15 43 47.6**	**+0.7**
JNU	**Nakatsue**	**27.88**	**10**	P	**P**	**15 43 47.3**	**0.0**
	comp=Z,134nm,0.9s,baz=173,slow=4.7,SNR=36						
JNU				LR	LR	15 54 27.4	
	comp=Z,8μm,21.8s,baz=198,slow=35						
	comp=Z,134nm,0.9s						
TPTI		**27.93**	**266**	P	**P**	**15 43 50.1**	**+2.1**
	comp=Z,17μmcomp=Z,3μmcomp=Z,172nm,0.6s						
LHMI	**Lhok Sumawe**	**28.02**	**271**	P	**P**	**15 43 51.2**	**+2.4**
LHMI	**Lhok Sumawe**	**28.02**	**271**	P	**P**	**15 43 50.1**	**+1.3**
LHMI				IAmb	IAmb	15 44 28.1	
	comp=Z,452nm,1.0s						
LHMI	**Lhok Sumawe**	**28.02**	**271**	P	**P**	**15 43 53.1**	**+4.3**
	comp=Z,21μmcomp=Z,7μmcomp=Z,446nm,0.7s						
LHMI	**Lhok Sumawe**	**28.02**	**271**	⇑P	**P**	**15 43 51.4**	**+2.6**
CM31	**Chiang Mai Arr**	**28.52**	**299**	P	**P**	**15 43 54.1**	**+0.9**
CM31	**Chiang Mai Arr**	**28.52**	**299**	P	**P**	**15 43 55.2**	**+2.1**
	SNR=56						
CM31				P	**P**	**15 43 55.2**	**+2.1**
	SNR=56						
CM31				S	**S**	**15 48 39.0**	**+2.5**
CM31				S	**S**	**15 48 39.0**	**+2.5**
CMAR	**Chiang Mai Arr**	**28.52**	**299**	P	**P**	**15 43 53.4**	**+0.2**
	comp=Z,21nm,0.7s,baz=113,slow=7.3,SNR=105						
CMAR				PKiKP	**PKiKP**	**15 54 37.3**	**-1.6**
	comp=Z,1.0nm,0.8s,baz=146,slow=0.7,SNR=4.4						
CMAR				LR	LR	15 55 03.7	
	comp=Z,10μm,21.3s,baz=105,slow=36						
CMAR				P3KPbc		16 16 08.8	
	comp=Z,0.3nm,0.3s,baz=286,slow=5.1,SNR=6.9						
	comp=Z,21nm,0.7s						
CMAR	**Chiang Mai Arr**	**28.52**	**299**	P	**P**	**15 43 54.4**	**+1.2**
CMAR	**Chiang Mai Arr**	**28.52**	**299**	*ce*P	**P**	**15 43 54.9**	**+1.7**
CMAR				pmax	pmax		
	comp=Z,22nm,0.7s						
ENH	**Enshi**	**28.58**	**331**	P	**P**	**15 43 54.8**	**+1.2**
ENH	**Enshi**	**28.58**	**331**	P	**P**	**15 43 54.7**	**+1.2**
MLSI	**Meulaboh, Aceh**	**28.61**	**269**	P	**P**	**15 43 55.3**	**+1.2**
	comp=Z,17μmcomp=Z,6μmcomp=Z,493nm,0.9s						
KRVT	**Keravat (AS076**	**28.65**	**110**	LR	LR	15 53 47.3	
	comp=Z,2μm,21.7s,baz=219,slow=33						
CHTO	**Chiang Mai**	**28.66**	**299**	P	**P**	**15 43 55.7**	**+1.3**
CHTO	**Chiang Mai**	**28.66**	**299**	P	**P**	**15 43 55.4**	**+0.9**
CHTO	**Chiang Mai**	**28.66**	**299**	P	**P**	**15 43 55.4**	**+0.9**
CHTO				pmax	pmax		
	comp=Z,436nm,1.8s						
CHTO	**Chiang Mai**	**28.66**	**299**	P	**P**	**15 43 56.3**	**+1.9**
CHTO				P	**P**	**15 43 56.3**	**+1.9**
CHTO				S	**S**	**15 48 41.6**	**+2.9**
CHTO				S	**S**	**15 48 41.6**	**+2.9**
CHTO	**Chiang Mai**	**28.66**	**299**	P	**P**	**15 43 55.5**	**+1.1**
CHTO	**Chiang Mai**	**28.66**	**299**	⇑P	**P**	**15 43 55.9**	**+1.5**
RABL	**Rabaul**	**28.75**	**109**	P	**P**	**15 43 56.9**	**+1.6**
RABL	**Rabaul**	**28.75**	**109**	⇓S	**P**	**15 43 57.5**	**+2.2**
KMI2	**Kunming**	**28.90**	**315**	⇑P	**P**	**15 43 59.0**	**+2.3**
KMI2				S	**S**	**15 48 45.0**	**+2.2**
KMI2				pmax	pmax		
	comp=Z,130nm,1.5s						
KMI2				pmax	pmax		
	comp=Z,3μm,10.7s						
KMI2				L	L		
	comp=Z,8μm,22.0s						
KMI2				L	L		
	comp=Z,12μm,24.7s						
KMI2				L	L		
	comp=Z,24μm,23.6s						
JMN	**Monobe**	**29.12**	**15**	P	**P**	**15 43 59.5**	**+1.1**
JMN	**Monobe**	**29.12**	**15**	P	**P**	**15 43 58.8**	**+0.4**
JMN	**Monobe**	**29.12**	**15**	⇑P	**P**	**15 43 59.0**	**+0.6**
JMN	**Monobe**	**29.12**	**15**	P	**P**	**15 43 59.1**	**+0.8**
BSI	**Banda Aceh**	**29.65**	**271**	P	**P**	**15 44 03.9**	**+0.6**
	comp=Z,16μmcomp=Z,3μmcomp=Z,173nm,1.4s						
QIS	**Mount Isa**	**29.68**	**152**	P	**P**	**15 44 04.7**	**+1.3**
	comp=Z,253nm,0.9s,comp=Z,0.0nm						
QIS	**Mount Isa**	**29.68**	**152**	P	**P**	**15 44 04.8**	**+1.3**
GIRL	**Giralia**	**30.05**	**200**	P	**P**	**15 44 07.4**	**+0.8**
	comp=Z,74nm,0.9s,comp=Z,0.0nm						
GIRL	**Giralia**	**30.05**	**200**	P	**P**	**15 44 07.3**	**+0.7**
JHS	**Saijyo**	**30.15**	**13**	P	**P**	**15 44 08.0**	**+0.5**
MTSU	**Mount Surprise**	**30.29**	**142**	P	**P**	**15 44 10.6**	**+1.7**
	comp=Z,239nm,0.9s						
MTSU	**Mount Surprise**	**30.29**	**142**	P	**P**	**15 44 10.6**	**+1.7**
JAD	**Aida**	**30.34**	**15**	P	**P**	**15 44 09.2**	**+0.1**
AS31	**Alice Springs**	**30.37**	**164**	P	**P**	**15 44 09.7**	**+0.2**
ASAR	**Alice Springs**	**30.37**	**164**	P	**P**	**15 44 10.4**	**+0.9**
	comp=Z,66nm,0.8s,baz=336,slow=7.3,SNR=138						
ASAR				PcP	**PcP**	**15 47 08.3**	**0.0**
	comp=Z,26nm,0.7s,baz=338,slow=2.6,SNR=4.5						
ASAR				S	**S**	**15 49 02.0**	**-3.4**
	comp=Z,14nm,1.0s,baz=341,slow=15,SNR=2.1						
	comp=Z,66nm,0.8s						
AUALC	**St Philip's Co**	**30.38**	**164**	P	**P**	**15 44 10.6**	**+1.0**
PZH	**PanZhiHua**	**30.45**	**316**	P	**P**	**15 44 11.5**	**+1.2**
PZH				S	**S**	**15 49 05.0**	**-1.9**
PZH				pmax	pmax		
	comp=Z,90nm,1.6s						
PZH				pmax	pmax		
	comp=Z,3μm,7.4s						
PZH				L	L		
	comp=Z,10μm,22.2s						
PZH				L	L		
	comp=Z,9μm,23.5s						
PZH				L	L		
	comp=Z,13μm,23.7s						
JHJ	**Hachijo jima 2**	**30.58**	**25**	P	**P**	**15 44 11.2**	**-0.1**
	comp=Z,128nm,1.0s,baz=65,slow=22,SNR=6.2						
JHJ				LR	LR	15 54 56.6	
	comp=Z,5μm,21.7s,baz=220,slow=33						
	comp=Z,128nm,1.0s						
WRKA	**Warakurna**	**30.65**	**174**	P	**P**	**15 44 12.9**	**+0.9**
	comp=Z,92nm,1.2s,comp=Z,0.0nm						
TJN	**Taejon**	**30.67**	**4**	P	**P**	**15 44 12.2**	**+0.2**
TJN	**Taejon**	**30.67**	**4**	P	**P**	**15 44 11.8**	**-0.1**
TJN				IAmb	IAmb	15 45 03.2	
	comp=Z,466nm,1.1s						
TJN	**Taejon**	**30.67**	**4**	P	**P**	**15 44 11.8**	**-0.1**
TJN				pmax	pmax		
	comp=Z,466nm,1.1s						
JWT	**Wachi**	**31.00**	**17**	P	**P**	**15 44 15.2**	**+0.3**
LYN	**LuoYang**	**31.06**	**340**	P	**P**	**15 44 16.3**	**+0.9**
LYN				pP	pP	15 44 32.8	+1.0
LYN				sP	sP	15 44 37.5	-2.2
LYN				S	**S**	**15 49 14.5**	**-1.4**
LYN				sS	sS	15 49 41.5	-0.8
LYN				pmax	pmax		
	comp=Z,110nm,1.2s						
LYN				pmax	pmax		
	comp=Z,3μm,4.0s						
LYN				L	L		
	comp=Z,11μm,19.2s						
LYN				L	L		
	comp=Z,5μm,19.9s						
LYN				L	L		
	comp=Z,22μm,22.0s						
TIA	**Tai'an**	**31.30**	**348**	P	**P**	**15 44 17.3**	**-0.3**
TIA				pmax	pmax		
	comp=Z,50nm,0.9s						
TIA				pmax	pmax		
	comp=Z,2μm,5.2s						
TIA				L	L		
	comp=Z,8μm,18.9s						
TIA				L	L		
	comp=Z,5μm,18.5s						
TIA				L	L		
	comp=Z,14μm,18.9s						
JSG	**Sagara**	**31.33**	**21**	P	**P**	**15 44 18.6**	**+0.7**
JSG	**Sagara**	**31.33**	**21**	IAmb	IAmb	15 44 38.9	
	comp=Z,388nm,1.0s						
JSG	**Sagara**	**31.33**	**21**	⇑P	**P**	**15 44 18.5**	**+0.7**
INU	**Inuyama**	**31.55**	**19**	P	**P**	**15 44 19.6**	**-0.2**
INU	**Inuyama**	**31.55**	**19**	P	**P**	**15 44 19.6**	**-0.2**
INU				IAmb	IAmb	15 45 34.2	
	comp=Z,192nm,1.0s						
INU	**Inuyama**	**31.55**	**19**	⇑P	**P**	**15 44 19.6**	**-0.2**
INU	**Inuyama**	**31.55**	**19**	P	**P**	**15 44 19.8**	**+0.1**
INU				ScP	**ScP**	**15 50 48.5**	**-0.2**
INCN	**Inchon**	**31.73**	**2**	P	**P**	**15 44 22.2**	**+0.8**
INCN	**Inchon**	**31.73**	**2**	P	**P**	**15 44 21.0**	**-0.4**
INCN	**Inchon**	**31.73**	**2**	P	**P**	**15 44 21.0**	**-0.4**
INCN				pmax	pmax		
	comp=Z,50nm,1.0s						
INCN	**Inchon**	**31.73**	**2**	P	**P**	**15 44 20.3**	**-1.1**
KSAR	**Wonju Array Be**	**31.76**	**4**	P	**P**	**15 44 21.8**	**+0.2**
KSAR	**Wonju Array Be**	**31.76**	**4**	P	**P**	**15 44 21.8**	**+0.2**
KSRS	**Korea Array**	**31.78**	**4**	P	**P**	**15 44 22.1**	**+0.4**
	comp=Z,68nm,0.8s,baz=183,slow=10.0,SNR=156						
KSRS				PcP	**PcP**	**15 47 11.7**	**0.0**
	comp=Z,3.8nm,0.7s,baz=174,slow=2.9,SNR=1.5						
KSRS				ScP	**ScP**	**15 50 46.3**	**-3.1**
	comp=Z,4.0nm,0.9s,baz=181,slow=3.2,SNR=4.1						
KSRS				LR	LR	15 57 02.6	
	comp=Z,9μm,21.5s,baz=180,slow=36						
KSRS				P3KPbc		16 15 53.1	
	comp=Z,2.2nm,1.1s,baz=257,slow=31,SNR=4.5						
	comp=Z,68nm,0.8s						
KS19	**Wonju Array Si**	**31.82**	**4**	P	**P**	**15 44 21.7**	**-0.4**
KS19				IAmb	IAmb	15 44 53.3	
	comp=Z,231nm,1.4s						
JGF	**Kuroka**	**31.89**	**19**	P	**P**	**15 44 22.3**	**-0.5**
JGF	**Kuroka**	**31.89**	**19**	⇑P	**P**	**15 44 22.1**	**-0.7**
JGF	**Kuroka**	**31.89**	**19**	P	**P**	**15 44 22.2**	**-0.7**
TNCH	**TengChong**	**31.95**	**310**	*i* P	**P**	**15 44 24.8**	**+1.2**
TNCH				S	**S**	**15 49 32.5**	**+2.0**
TNCH				pmax	pmax		
	comp=Z,190nm,1.5s						
TNCH				pmax	pmax		
	comp=Z,2μm,3.5s						
TNCH				L	L		
	comp=Z,3μm,10.0s						
TNCH				L	L		
	comp=Z,5μm,14.4s						
TNCH				L	L		
	comp=Z,15μm,25.8s						
XAN	**Xi'an**	**32.00**	**334**	⇑P	**P**	**15 44 24.0**	**+0.2**
XAN				sP	sP	15 44 46.0	-2.2
XAN				S	**S**	**15 49 32.0**	**+1.2**
XAN				sS	sS	15 49 55.8	-1.4
XAN				pmax	pmax		
	comp=Z,740nm,1.1s						
XAN				pmax	pmax		
	comp=Z,1μm,3.7s						
XAN				L	L		
	comp=Z,8μm,21.3s						
XAN				L	L		
	comp=Z,10μm,19.9s						
XAN				L	L		
	comp=Z,16μm,19.2s						
XAN	**Xi'an**	**32.00**	**334**	P	**P**	**15 44 24.9**	**+1.1**
CD2	**Chengdu**	**32.15**	**324**	⇑P	**P**	**15 44 26.5**	**+1.3**
CD2				pP	pP	15 44 42.3	+0.8
CD2				S	**S**	**15 49 37.8**	**+4.5**
CD2				pmax	pmax		
	comp=Z,840nm,1.1s						
CD2				L	L		
	comp=Z,13μm,20.3s						
CD2				L	L		
	comp=Z,19μm,21.6s						
CD2				L	L		
	comp=Z,26μm,20.9s						
JGN	**Niukaw**	**32.45**	**19**	P	**P**	**15 44 26.8**	**-1.0**
PBA	**Port Blair**	**32.52**	**283**	P	**P**	**15 44 28.8**	**+0.3**
PBA				IAmb	IAmb	15 45 02.9	
	comp=Z,282nm,1.2s						
PBA	**Port Blair**	**32.52**	**283**	P	**P**	**15 44 30.6**	**+2.1**
MEEK	**Meekatharra**	**32.69**	**191**	P	**P**	**15 44 30.3**	**+0.4**
	comp=Z,209nm,1.0s,comp=Z,0.0nm						
MEEK	**Meekatharra**	**32.69**	**191**	P	**P**	**15 44 29.9**	**0.0**
JRY	**Ryugami san**	**32.79**	**21**	P	**P**	**15 44 29.6**	**-1.1**
CTA	**Charters Tower**	**32.96**	**141**	LR	LR	16 00 56.7	
	comp=Z,3μm,18.2s,baz=326,slow=41						
CTAO	**Charters Tower**	**32.96**	**141**	P	**P**	**15 44 34.2**	**+1.9**
CTAO	**Charters Tower**	**32.96**	**141**	P	**P**	**15 44 33.1**	**+0.8**
CTAO				IAmb	IAmb	15 44 44.1	
	comp=Z,253nm,1.1s						
CTAO	**Charters Tower**	**32.96**	**141**	P	**P**	**15 44 33.1**	**+0.8**
CTAO				pmax	pmax		
	comp=Z,253nm,1.1s						
CTAO	**Charters Tower**	**32.96**	**141**	⇑P	**P**	**15 44 34.2**	**+1.9**
CTAO	**Charters Tower**	**32.96**	**141**	P	**P**	**15 44 34.8**	**+2.5**
HNS	**HongShan**	**33.01**	**345**	⇑P	**P**	**15 44 32.5**	**0.0**
HNS				S	**S**	**15 49 43.3**	**-3.0**
HNS				pmax	pmax		
	comp=Z,90nm,1.1s						
HNS				pmax	pmax		
	comp=Z,2μm,7.7s						
HNS				L	L		
	comp=Z,17μm,23.5s						
HNS				L	L		
	comp=Z,6μm,24.8s						
HNS				L	L		
	comp=Z,24μm,23.5s						
MJAR	**Matsushiro Arr**	**33.03**	**20**	P	**P**	**15 44 31.6**	**-1.1**
	comp=Z,39nm,0.8s,baz=194,slow=9.0,SNR=71						
MJAR				ScP	**ScP**	**15 50 50.7**	**-3.2**
	comp=Z,13nm,1.0s,baz=197,slow=5.2,SNR=6.7						
MJAR				LR	LR	15 56 07.3	
	comp=Z,4μm,20.7s,baz=208,slow=33						
MJAR				P3KPbc		16 15 47.1	
	comp=Z,1.9nm,0.9s,baz=17,slow=5.0,SNR=5.8						
	comp=Z,39nm,0.8s						
MJAR	**Matsushiro Arr**	**33.03**	**20**	P	**P**	**15 44 31.7**	**-1.1**
MJAR					**ScP**	**15 50 50.5**	**-3.3**
MJAR	**Matsushiro Arr**	**33.03**	**20**	P	**P**	**15 44 31.7**	**-1.1**
MJAR				pmax	pmax		
	comp=Z,67nm,1.0s						
MAJO	**Matsushiro**	**33.03**	**20**	P	**P**	**15 44 31.5**	**-1.2**
MAJO	**Matsushiro**	**33.03**	**20**	P	**P**	**15 44 31.9**	**-0.8**
MAJO	**Matsushiro**	**33.03**	**20**	*c i* P	**P**	**15 44 31.5**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,38nm,0.9s						
MAJO	**Matsushiro**	**33.03**	**20**	⇑P	**P**	**15 44 31.5**	**-1.2**
MAJO	**Matsushiro**	**33.03**	**20**	P	**P**	**15 44 31.8**	**-0.9**
MAJO				ScP	**ScP**	**15 50 52.7**	**-1.1**
PATS	**Pohnpei**	**33.04**	**86**	P	**P**	**15 44 32.7**	**-0.4**
COCO	**West Island**	**33.21**	**238**	P	**P**	**15 44 35.5**	**+1.0**
COCO	**West Island**	**33.21**	**238**	P	**P**	**15 44 35.0**	**+0.5**
COCO				IAmb	IAmb	15 44 36.5	
	comp=Z,316nm,1.2s						
COCO	**West Island**	**33.21**	**238**	P	**P**	**15 44 35.0**	**+0.5**
COCO				pmax	pmax		
	comp=Z,316nm,1.2s						
COCO	**West Island**	**33.21**	**238**	P	**P**	**15 44 35.2**	**+0.7**
COCO				P	**P**	**15 44 35.2**	**+0.7**
COCO	**West Island**	**33.21**	**238**	P	**P**	**15 44 35.8**	**+1.3**
DL2	**Dalian**	**33.27**	**355**	P	**P**	**15 44 33.5**	**-1.2**
DL2				S	**S**	**15 49 50.5**	**+0.2**
DL2				pmax	pmax		
	comp=Z,120nm,1.1s						
DL2				pmax	pmax		
	comp=Z,1μm,10.4s						
DL2				L	L		
	comp=Z,12μm,22.6s						
DL2				L	L		
	comp=Z,6μm,18.8s						
DL2				L	L		
	comp=Z,18μm,22.8s						
PYAG	**Pyongyang**	**33.27**	**1**	S	**S**	**15 49 56.2**	**+5.9**
AUAYR	**Ayr State High**	**33.32**	**139**	P	**P**	**15 44 37.5**	**+2.1**
TIY	**Taiyuan**	**33.95**	**342**	P	**P**	**15 44 41.0**	**+0.2**
TIY				S	**S**	**15 50 01.8**	**+0.7**
TIY				sS	**sS**	**15 50 26.5**	**-1.1**
TIY				pmax	pmax		
	comp=Z,50nm,1.1s						
TIY				pmax	pmax		
	comp=Z,2μm,5.9s						
TIY				L	L		
	comp=Z,8μm,23.2s						
TIY				L	L		
	comp=Z,8μm,21.4s						
TIY				L	L		
	comp=Z,17μm,29.2s						
HHU	**Hamhung**	**34.21**	**3**	P	**P**	**15 44 42.7**	**-0.2**
HHU				S	**S**	**15 50 09.7**	**+4.8**
HHU				AmB			
	comp=Z,2μm,2.3s						
HHU				AMS	AMS		
	comp=Z,2μm,10.6s						
MORE	**Moreh**	**34.89**	**305**	IAmb	IAmb	15 44 50.2	
	comp=Z,207nm,1.4s						
BJI2	**Beijing**	**35.16**	**348**	P	**P**	**15 44 50.5**	**-0.6**
BJI2				sP	**sP**	**15 45 12.3**	**-3.0**
BJI2				S	**S**	**15 50 16.3**	**-3.2**
BJI2				sS	**sS**	**15 50 45.3**	**-0.8**
BJI2				SS	**SnSn**	**15 52 48.5**	**+6.0**
BJI2				pmax	pmax		
	comp=Z,58nm,1.1s						
BJI2				pmax	pmax		
	comp=Z,810nm,6.8s						
BJI2				L	L		
	comp=Z,2μm,20.0s						
BJI2				L	L		
	comp=Z,4μm,22.0s						
BJI2				L	L		
	comp=Z,4μm,22.4s						
BJT	**Baijiatuao**	**35.16**	**348**	P	**P**	**15 44 51.3**	**+0.2**
BJT	**Baijiatuao**	**35.16**	**348**	P	**P**	**15 44 50.9**	**-0.3**
BJT	**Baijiatuao**	**35.16**	**348**	P	**P**	**15 44 50.9**	**-0.3**
BJT				pmax	pmax		
	comp=Z,141nm,1.1s						
BJT	**Baijiatuao**	**35.16**	**348**	P	**P**	**15 44 51.3**	**+0.2**
LKP	**Lekhapani**	**35.21**	**311**	IAmb	IAmb	15 44 27.0	
	comp=Z,164nm,1.1s						
SAIH	**SAIHA**	**35.24**	**302**	*e*P	**P**	**15 44 53.4**	**+1.2**
SAIH				IAmb	IAmb	15 44 56.7	
	comp=Z,164nm,1.1s						
IMP	**Imphal**	**35.45**	**306**	*e*P	**P**	**15 44 54.0**	**+0.1**
IMP				IAmb	IAmb	15 44 56.2	
	comp=Z,117nm,0.9s						
MORW	**Morawa**	**35.59**	**194**	P	**P**	**15 44 55.4**	**+0.5**
	comp=Z,94nm,1.1s,comp=Z,0.0nm						
MORW	**Morawa**	**35.59**	**194**	P	**P**	**15 44 55.6**	**+0.7**
MORW	**Morawa**	**35.59**	**194**	P	**P**	**15 44 55.1**	**+0.2**
MORW	**Morawa**	**35.59**	**194**	⇑P	**P**	**15 44 55.3**	**+0.4**
MOKO	**MOKOCHONG**	**35.70**	**309**	*e*P	**P**	**15 44 56.8**	**+0.6**
MOKO				IAmb	IAmb	15 45 00.1	
	comp=Z,180nm,0.7s						
KOHI	**KOHIMA**	**35.73**	**307**	*e*P	**P**	**15 44 56.4**	**-0.1**
KOHI				IAmb	IAmb	15 45 00.8	
	comp=Z,173nm,0.8s						
PASG	**PASIGHAT**	**35.99**	**312**	*e*P	**P**	**15 44 59.1**	**+0.7**
PASG				IAmb	IAmb	15 45 25.2	
	comp=Z,176nm,0.9s						
LZDM	**Lanzhou Array**	**36.02**	**330**	P	**P**	**15 44 59.9**	**+0.9**
	comp=Z,109nm,1.0s,baz=141,slow=9.6,SNR=87						
LZDM				LR	LR	16 00 36.6	
	comp=Z,8μm,18.9s,baz=120,slow=38						
	comp=Z,109nm,1.0s						
LZH	**Lanzhou**	**36.05**	**330**	*e*P	**P**	**15 45 01.3**	**+2.3**
LZH				pP	pP	15 45 17.8	+2.3
LZH				PP	**PP**	**15 46 25.5**	**+3.4**
LZH				S	**S**	**15 50 37.5**	**+4.0**
LZH				sS	ScP	15 51 05.0	+0.2
LZH				pmax	pmax		
	comp=Z,560nm,1.3s						
LZH				pmax	pmax		
	comp=Z,6μm,4.5s						
LZH				L	L		
	comp=Z,8μm,14.8s						
LZH				L	L		
	comp=Z,8μm,13.4s						
LZH				L	L		
	comp=Z,9μm,14.1s						
SNY	**Shenyang**	**36.06**	**358**	⇑P	**P**	**15 44 58.5**	**-0.3**
SNY				S	**S**	**15 50 32.0**	**-1.2**
SNY				pmax	pmax		
	comp=Z,94nm,0.9s						
SNY				pmax	pmax		
	comp=Z,2μm,5.8s						
SNY				L	L		
	comp=Z,7μm,22.8s

BLDU	Ballidu	36.93	192		P		P	15 45 06.6	+0.3
QLP	Quilpie	37.01	151		P		P	15 45 08.3	+1.1
	comp=Z,354nm,0.9s								
QLP	Quilpie	37.01	151		P		P	15 45 08.2	+1.1
QLP	Quilpie	37.01	151	⇑	P		P	15 45 07.9	+0.8
HHC	Hu-ho-hao-te	37.10	343	⇑	*i*P		P	15 45 08.3	+0.5
HHC					pP		pP	15 45 25.0	+0.5
HHC					S		S	15 50 47.3	-2.0
HHC					sS		sS	15 51 15.8	-0.2
HHC					pmax		pmax		
	comp=Z,78nm,1.1s								
HHC					pmax		pmax		
	comp=Z,2µm,6.1s								
HHC					L		L		
	comp=Z,11µm,22.3s								
HHC					L		L		
	comp=Z,5µm,24.0s								
HHC					L		L		
	comp=Z,20µm,25.6s								
TEZP	TEZPUR	37.19	308		*e*P		P	15 45 09.4	+0.7
TEZP					IAmb		IAmb	15 45 10.6	
	comp=Z,297nm,1.4s								
PSTR	Posyet	37.21	7	*i*	P		P	15 45 07.9	-0.6
PSTR					pmax		pmax		
	comp=Z,8.0nm,1.0s								
AGT	Agartala	37.26	303		*e*P		P	15 45 11.8	+2.5
SHL	Shillong	37.44	306		P		P	15 45 12.0	+1.0
SHL	Shillong	37.44	306		P		P	15 45 12.0	+1.0
SHL					pmax		pmax		
	comp=Z,690nm,0.7s								
SHL	Shillong	37.44	306		P		P	15 45 12.3	+1.2
	SNR=301								
SHL	Shillong	37.44	306		*e*P		P	15 45 12.1	+1.0
SHL					IAmb		IAmb	15 45 15.3	
	comp=Z,112nm,0.8s								
BTO2	Baotou	37.52	341		*e*P		P	15 45 11.0	-0.5
BTO2					pP		pP	15 45 23.3	-4.8
BTO2					sP		sP	15 45 28.8	-7.2
BTO2					S		S	15 50 56.5	+0.7
BTO2					sS		sS	15 51 19.0	-3.6
BTO2					SS		SnSn	15 53 33.5	-6.3
BTO2					pmax		pmax		
	comp=Z,62nm,1.9s								
BTO2					pmax		pmax		
	comp=Z,5µm,9.6s								
BTO2					L		L		
	comp=Z,16µm,23.6s								
BTO2					L		L		
	comp=Z,15µm,20.6s								
BTO2					L		L		
	comp=Z,29µm,24.8s								
SAVO	Savo Central	37.60	113		P		P	15 45 12.9	+0.6
KLBR	Kellerberrin	37.67	190		P		P	15 45 13.2	+0.6
	comp=Z,265nm,0.8s								
KLBR	Kellerberrin	37.67	190		P		P	15 45 12.9	+0.3
VLA	Vladivostok	37.81	8	*d*	*i*P		P	15 45 14.2	+0.6
VLA					pmax		pmax		
	comp=Z,45nm,0.9s								
JTM	Tenmabayashi	37.82	20		P		P	15 45 14.6	+0.9
JTM	Tenmabayashi	37.82	20		IAmb		IAmb	15 45 53.2	
	comp=Z,185nm,1.0s								
JTM	Tenmabayashi	37.82	20	⇑	P		P	15 45 14.1	+0.4
HNR	Honiara	37.82	113		LR		LR	16 02 33.7	
	comp=Z,76nm,18.2s,baz=2.0,slow=39								
HNR	Honiara	37.82	113		P		P	15 45 15.4	+1.2
HNR	Honiara	37.82	113		P		P	15 45 14.4	+0.3
HNR	Honiara	37.82	113		P		P	15 45 14.4	+0.3
HNR					pmax		pmax		
	comp=Z,936nm,1.0s								
HNR	Honiara	37.82	113	⇓	P		P	15 45 14.4	+0.3
HNR	Honiara	37.82	113		P		P	15 45 15.3	+1.2
GUWA	GUWAHATI	37.88	306		*e*P		P	15 45 14.9	+0.4
GUWA					IAmb		IAmb	15 45 18.3	
	comp=Z,170nm,0.8s								
CN2	Changchun	38.01	0		*e*P		P	15 45 16.8	+1.5
CN2					*e*pP		pP	15 45 30.8	-1.0
CN2					*e*S		S	15 51 05.5	+2.6
CN2					pmax		pmax		
	comp=Z,10.0nm,0.8s								
CN2					pmax		pmax		
	comp=Z,900nm,6.0s								
CN2					L		L		
	comp=Z,1µm,12.0s								
CN2					L		L		
	comp=Z,2µm,12.0s								
CN2					L		L		
	comp=Z,2µm,14.0s								
AUNRC	North Rockhamp	38.04	140		P		P	15 45 17.8	+2.0
JOT	Ohata	38.34	19		P		P	15 45 19.0	+0.8
MUN	Mundaring	38.35	192		P		P	15 45 18.8	+0.5
	comp=Z,104nm,0.8s,comp=Z,0.0nm								
MUN	Mundaring	38.35	192		P		P	15 45 18.8	+0.5
TAWA	Tawang	38.39	308		*e*P		P	15 45 21.0	+1.8
TAWA					IAmb		IAmb	15 45 28.4	
	comp=Z,194nm,0.9s								
MTKN	Mount Kenneth	38.40	193		P		P	15 45 17.9	-0.8
AUKUL	Kulin High Sch	38.66	189		P		P	15 45 21.8	+0.9
NGOA	Tingoa Renbel	38.76	116		P		P	15 45 23.5	+1.5
GD1S	Gladstone Soft	38.80	140		P		P	15 45 24.4	+2.2
USRK	Ussuriysk Ar.	38.88	8		P		P	15 45 23.4	+0.8
	comp=Z,104nm,0.8s,baz=194,slow=7.3,SNR=111								
	comp=Z,104nm,0.8s								
XLT	XiLinHaoTe	38.93	350		*e*P		P	15 45 22.5	-0.6
XLT					sP		sP	15 45 43.8	-3.7
XLT					PP		PP	15 46 59.8	+6.3
XLT					pmax		pmax		
	comp=Z,51nm,1.3s								
XLT					pmax		pmax		
	comp=Z,2µm,5.8s								
XLT					L		L		
	comp=Z,680nm,20.4s								
XLT					L		L		
	comp=Z,5µm,19.6s								
XLT					L		L		
	comp=Z,11µm,23.0s								
MDJ	Mudanjiang	39.03	5		P		P	15 45 24.6	+0.8
MDJ	Mudanjiang	39.03	5		P		P	15 45 24.2	+0.4
MDJ					IAmb		IAmb	15 45 54.5	
	comp=Z,169nm,1.0s								
MDJ	Mudanjiang	39.03	5		P		P	15 45 24.0	+0.2
MDJ					S		S	15 51 17.3	-0.8
MDJ					sS		sS	15 51 44.5	-0.5
MDJ					pmax		pmax		
	comp=Z,150nm,1.1s								
MDJ					L		L		
	comp=Z,6µm,23.4s								
MDJ					L		L		
	comp=Z,6µm,19.9s								
MDJ					L		L		
	comp=Z,10µm,21.3s								
MDJ	Mudanjiang	39.03	5		P		P	15 45 24.5	+0.7
NWAO	Narrogin (SRO)	39.07	191		P		P	15 45 26.0	+1.7
	comp=Z,143nm,1.0s,comp=Z,0.0nm								
NWAO	Narrogin (SRO)	39.07	191		P		P	15 45 25.3	+1.0
NWAO	Narrogin (SRO)	39.07	191		P		P	15 45 24.9	+0.6
NWAO					IAmb		IAmb	15 46 00.2	
	comp=Z,175nm,0.9s								
NWAO	Narrogin (SRO)	39.07	191		P		P	15 45 25.0	+0.6
NWAO					pmax		pmax		
	comp=Z,175nm,1.0s								
NWAO	Narrogin (SRO)	39.07	191		P		P	15 45 25.4	+1.0
NWAO					P		P	15 45 25.4	+1.0
NWAO					S		S	15 51 19.0	0.0
NWAO					S		S	15 51 19.0	0.0
NWAO	Narrogin (SRO)	39.07	191		P		P	15 45 25.3	+1.0
DHUB	DHUBRI	39.17	305		*e*P		P	15 45 26.4	+1.1
RMQ	Roma	39.31	145		P		P	15 45 28.4	+1.9
AUHAR	St Anne's Scho	39.49	192		P		P	15 45 29.1	+1.3
BBOO	Buckleboo	39.63	165		P		P	15 45 30.6	+1.6
	comp=Z,351nm,0.7s,comp=Z,0.0nm								
BBOO	Buckleboo	39.63	165		P		P	15 45 30.4	+1.4
BBOO	Buckleboo	39.63	165		P		P	15 45 29.9	+0.9
JEM	Erimo	39.63	21		P		P	15 45 31.2	+2.3
EIDS	Eidsvold	39.85	142		P		P	15 45 31.8	+0.8
	comp=Z,202nm,0.8s,comp=Z,0.0nm								
EIDS	Eidsvold	39.85	142		P		P	15 45 32.0	+1.1
EIDS	Eidsvold	39.85	142		P		P	15 45 32.1	+1.1
EIDS					IAmb		IAmb	15 46 13.3	
	comp=Z,177nm,0.8s								
EIDS	Eidsvold	39.85	142	⇓	P		P	15 45 31.9	+1.1
LSA	Lhasa	39.96	311		P		P	15 45 33.8	+1.3
LSA					IAmb		IAmb	15 45 39.2	
	comp=Z,120nm,0.8s								
LSA	Lhasa	39.96	311		P		P	15 45 34.6	+2.1
LSA					pmax		pmax		
	comp=Z,120nm,0.8s								
LSA	Lhasa	39.96	311		P		P	15 45 33.8	+1.3
LSA					S		S	15 51 32.5	-1.1
LSA					pmax		pmax		
	comp=Z,120nm,1.3s								
LSA					L		L		
	comp=Z,2µm,19.4s								
LSA					L		L		
	comp=Z,3µm,21.9s								
LSA					L		L		
	comp=Z,4µm,22.6s								
HURO	Huro Makira	39.99	114		P		P	15 45 34.4	+2.1
BNX	BinXian	40.00	3	⇑	P		P	15 45 31.3	-0.6
BNX					pP		pP	15 45 44.0	-4.5
BNX					S		S	15 51 30.8	-1.9
BNX					pmax		pmax		
	comp=Z,44nm,1.3s								
BNX					pmax		pmax		
	comp=Z,2µm,5.9s								
BNX					L		L		
	comp=Z,7µm,23.4s								
BNX					L		L		
	comp=Z,4µm,20.8s								
BNX					L		L		
	comp=Z,11µm,23.6s								
STKA	Stephens Creek	40.48	158		P		P	15 45 37.6	+1.6
	comp=Z,243nm,0.9s,baz=332,slow=8.2,SNR=142								
STKA					S		S	15 51 33.8	-6.5
	comp=Z,98nm,1.2s,baz=108,slow=18,SNR=9.6								
STKA					LR		LR	16 03 31.4	
	comp=Z,3µm,21.8s,baz=336,slow=38								
	comp=Z,243nm,0.9s								
STKA	Stephens Creek	40.48	158		P		P	15 45 38.0	+1.9
	comp=Z,1µm,0.9s,comp=Z,0.0nm								
STKA	Stephens Creek	40.48	158		P		P	15 45 37.4	+1.3
STKA	Stephens Creek	40.48	158		P		P	15 45 37.7	+1.6
STKA	Stephens Creek	40.48	158	*d*	*i*P		P	15 45 36.6	+0.5
TEY	Ternei	40.52	13	⇑	*e*P		P	15 45 36.8	+0.6
TEY					pmax		pmax		
	comp=Z,200nm,7.1s								
TEY					pmax		pmax		
	comp=N,100nm,6.5s								
TEY					pmax		pmax		
	comp=E,10.0nm,1.1s								
TEY					pmax		pmax		
	comp=N,130nm,1.0s								
TEY					pmax		pmax		
	comp=Z,220nm,1.0s								
GTA2	Gaotai	40.72	330		P		P	15 45 39.5	+1.3
GTA2					pP		pP	15 45 56.3	+1.4
GTA2					S		S	15 51 46.5	+2.6
GTA2					sS		sS	15 52 15.5	+4.6
GTA2					SS		SnSn	15 54 52.5	-4.3
GTA2					pmax		pmax		
	comp=Z,170nm,1.4s								
GTA2					pmax		pmax		
	comp=Z,3µm,7.9s								
GTA2					L		L		
	comp=Z,10µm,19.2s								
GTA2					L		L		
	comp=Z,9µm,17.9s								
GTA2					L		L		
	comp=Z,19µm,18.6s								
RKGY	Rocky Gully	40.75	190		P		P	15 45 40.3	+2.0
	comp=Z,230nm,0.8s,comp=Z,0.0nm								
BWNR	Bhubaneshwar	40.80	295		*e*P		P	15 45 41.0	+2.1
BWNR					IAmb		IAmb	15 45 42.3	
	comp=Z,149nm,1.2s								
SHBG	Sahibganj	40.81	303		*e*P		P	15 45 41.2	+2.2
SHBG					IAmb		IAmb	15 45 43.4	
	comp=Z,270nm,1.1s								
GTK	Tadong	40.85	306		*e*P		P	15 45 40.8	+1.4
GTK					IAmb		IAmb	15 45 42.1	
	comp=Z,239nm,1.4s								
AUALB	St Joseph's Co	40.98	189		P		P	15 45 41.6	+1.5
HTT	Hallett	41.01	162		P		P	15 45 42.4	+2.0
	comp=Z,88nm,0.7s								
HTT	Hallett	41.01	162		P		P	15 45 42.2	+1.8
HTT	Hallett	41.01	162	⇓	P		P	15 45 42.2	+1.8
GOMU	GeErMu	41.19	322		P		P	15 45 43.5	+1.2
GOMU					S		S	15 51 53.5	+2.1
GOMU					SS		SS	15 54 57.5	+0.8
GOMU					pmax		pmax		
	comp=Z,88nm,1.2s								
GOMU					L		L		
	comp=Z,3µm,18.6s								
GOMU					L		L		
	comp=Z,6µm,19.2s								
AULRC	Lightning Ridg	41.22	149		P		P	15 45 43.0	+0.8
ASAJ	Asahikawa	41.30	19		P		P	15 45 44.3	+1.7
	comp=Z,89nm,0.8s,baz=240,slow=9.5,SNR=53								
ASAJ					S		S	15 51 47.0	-5.0
	comp=Z,10.0nm,1.1s,baz=10.0,slow=20,SNR=1.8								
	comp=Z,89nm,0.8s								
ASAJ	Asahikawa	41.30	19		P		P	15 45 43.7	+1.1
JKA	Kamikawa-asahi	41.30	19		P		P	15 45 43.3	+0.6
JKA					IAmb		IAmb	15 46 22.4	
	comp=Z,241nm,1.1s								
JKA	Kamikawa-asahi	41.30	19				S	15 51 47.0	-5.1
JMP	Maruseppu	41.45	20		P		P	15 45 45.3	+1.3
H01W3	Cape Leeuwin H	41.60	194		P		P	15 45 48.4	+3.4
	baz=45,slow=8.6,SNR=2.5								
H01W1	Cape Leeuwin H	41.61	194		P		P	15 45 53.0	+8.0
	baz=45,slow=8.6,SNR=3.0								
H01W2	Cape Leeuwin H	41.62	194		P		P	15 45 50.2	+5.1
	baz=45,slow=8.6,SNR=2.6								
CMSA	Cobar Meteorol	41.87	153		P		P	15 45 49.7	+2.2
	comp=Z,264nm,1.2s,comp=Z,0.0nm								
CMSA	Cobar Meteorol	41.87	153		P		P	15 45 49.4	+1.9
TW1H	Toowoomba 1 Ha	41.98	143		P		P	15 45 50.5	+1.9
AUBSH	Beerwah State	42.08	141		P		P	15 45 50.6	+1.3
AUMAR	Marden Senior	42.28	163		P		P	15 45 52.5	+1.7
GHSS	Government Hou	42.30	163		P		P	15 45 53.0	+2.1
YUK	Yuzh-Kuril'sk	42.38	22		*e*P		P	15 45 50.7	-0.7
YUK								15 47 32.0	
YUK					*e*S		S	15 52 07.5	-0.4
YUK					pmax		pmax		
	comp=Z,627nm,1.4s								
YUK					pmax		pmax		
	comp=E,430nm,1.1s								
YUK					pmax		pmax		
	comp=N,325nm,0.7s								
H11S3	WAKE ISLAND Hy	42.52	69		T		T	16 31 04.5	
	baz=257,slow=75,SNR=415								
VIS	Vishakhapatnam	42.52	290		*e*P		P	15 45 55.0	+2.0
VIS					IAmb		IAmb	15 45 58.3	
	comp=Z,136nm,0.9s								
H11S1	WAKE ISLAND Hy	42.53	69		T		T	16 31 06.2	
	baz=257,slow=75,SNR=301								
H11S2	WAKE ISLAND Hy	42.53	69		T		T	16 31 04.6	
	baz=257,slow=75,SNR=526								
EVN	Everest	42.55	306		IAmb		IAmb	15 45 57.5	
	comp=Z,270nm,0.8s								
EVN	Everest	42.55	306	⇑	P		P	15 45 55.5	+1.5
GAYA	Gaya	42.69	301		*e*P		P	15 45 55.7	+1.4
GAYA					IAmb		IAmb	15 45 57.9	
	comp=Z,141nm,0.7s								
AUMBR	Murray Bridge	42.70	163		P		P	15 45 55.9	+1.8
RAGD	RAYAGADA	42.72	292		*e*P		P	15 45 56.8	+2.2
H11N1	WAKE ISLAND Hy	42.97	67		T		T	16 32 03.0	
	baz=254,slow=75,SNR=276								
H11N2	WAKE ISLAND Hy	42.98	67		T		T	16 32 03.0	
	baz=254,slow=75,SNR=265								
H11N3	WAKE ISLAND Hy	42.99	67		T		T	16 32 01.3	
	baz=254,slow=75,SNR=199								
JHSG	JHARSUGUGA	43.05	296		*e*P		P	15 45 59.1	+1.8
JHSG					IAmb		IAmb	15 46 02.4	
	comp=Z,142nm,0.9s								
GC1S	Gold Coast 1 S	43.36	142		P		P	15 46 01.7	+2.1
HIA	Hailar	43.72	355		P		P	15 46 01.8	-0.4
HIA	Hailar	43.72	355		P		P	15 46 01.8	-0.4
HIA	Hailar	43.72	355		P		P	15 46 01.8	-0.4
HIA					pmax		pmax		
	comp=Z,107nm,1.1s								
HIA	Hailar	43.72	355		P		P	15 46 02.1	-0.1
HIA					PcP		PcP	15 47 50.7	+2.6
KLR	Kul'dur	43.81	6		P		P	15 46 02.3	-0.7
	comp=Z,29nm,0.9s,baz=202,slow=6.1,SNR=65								
KLR					S		S	15 52 22.3	-6.5
	comp=Z,5.5nm,1.1s,baz=110,slow=21,SNR=2.0								
KLR					LR		LR	16 05 15.2	
	comp=Z,3µm,22.0s,baz=204,slow=37								
	comp=Z,29nm,0.9s								
KLR	Kul'dur	43.81	6	*c*	*e*P		P	15 46 01.7	-1.2
KLR					pmax		pmax		
	comp=Z,52nm,1.1s								
AUDCS	Dubbo College	43.82	151		P		P	15 46 05.7	+2.4
YSS	Yuzhno-Sakhali	43.89	17		P		P	15 46 04.2	+0.6
YSS	Yuzhno-Sakhali	43.89	17		P		P	15 46 03.8	+0.2
YSS					IAmb		IAmb	15 46 34.1	
	comp=Z,510nm,1.9s								
YSS	Yuzhno-Sakhali	43.89	17	*α*	*e*P		P	15 46 03.8	+0.2
YSS					*e**SP		pP	15 46 22.9	+2.6
YSS					*e*			15 47 47.9	
YSS					*e*S		S	15 52 30.9	+0.9
YSS					*e*			15 55 55.7	
YSS					pmax		pmax		
	comp=Z,2µm,7.9s								
YSS					pmax		pmax		
	comp=N,700nm,7.4s								
YSS					pmax		pmax		
	comp=E,600nm,7.3s								
YSS					pmax		pmax		
	comp=Z,60nm,0.7s								
YSS					smax		smax		
	comp=N,2µm,10.6s								
YSS					smax		smax		
	comp=E,1µm,13.2s								
YSS	Yuzhno-Sakhali	43.89	17	⇑	P		P	15 46 03.7	+0.2
YSS	Yuzhno-Sakhali	43.89	17		P		P	15 46 04.1	+0.5
ARMA	Armidale	43.95	146		P		P	15 46 07.2	+2.7
	comp=Z,618nm,1.2s,comp=Z,0.0nm								
ARMA	Armidale	43.95	146		P		P	15 46 06.8	+2.4
ARMA	Armidale	43.95	146		P		P	15 46 06.3	+1.9
ARMA	Armidale	43.95	146	⇓	P		P	15 46 06.2	+1.8
AUPHS	Peel High Scho	44.07	148		P		P	15 46 07.5	+2.2
PALK	Pallekele	44.13	275		P		P	15 46 07.5	+1.5
PALK					IAmb		IAmb	15 46 09.6	
	comp=Z,616nm,1.9s								
PALK	Pallekele	44.13	275	*i*	P		P	15 46 07.6	+1.5
	SNR=14								
PALK	Pallekele	44.13	275	*c*	*i*P		P	15 46 07.1	+1.0
PALK					pmax		pmax		
	comp=Z,115nm,1.8s								
PALK	Pallekele	44.13	275		P		P	15 46 07.8	+1.7
PALK					S		S	15 52 35.4	+0.9
PALK	Pallekele	44.13	275		P		P	15 46 08.0	+2.0
PALK	Pallekele	44.13	275		P		P	15 46 08.1	+2.0
HALK	Hakmana	44.17	273	⇑	P		P	15 46 08.0	+1.5
MALK	Mahakanadarawa	44.28	276		P		P	15 46 09.1	+1.8
MALK	Mahakanadarawa	44.28	276	⇑	P		P	15 46 09.1	+1.8
HEH	HeiHe	44.51	2		*e*P		P	15 46 07.5	-1.0
HEH					sP		pP	15 46 28.0	+2.7
HEH					PP		PP	15 47 55.8	+2.3
HEH					S		S	15 52 44.3	+5.4
HEH					sS		sS	15 53 08.8	+2.6
HEH					pmax		pmax		
	comp=Z,73nm,1.1s								
HEH					pmax		pmax		
	comp=Z,2µm,6.4s								
HEH					L		L		
	comp=Z,4µm,21.8s								
HEH					L		L		
	comp=Z,6µm,21.2s								
HEH					L		L		
	comp=Z,12µm,21.7s								
BLSP	Bilaspur	44.56	296		*e*P		P	15 46 10.9	+1.5
BLSP					IAmb		IAmb	15 46 12.4	
	comp=Z,115nm,1.0s								
MDRS	Chennai	44.80	283		*e*P		P	15 46 13.7	+2.3
ULN	Ulaanbaatar	44.82	343		P		P	15 46 10.9	-0.4
ULN	Ulaanbaatar	44.82	343	*c*	*e*P		P	15 46 10.8	-0.5
ULN					pmax		pmax		
	comp=Z,131nm,1.2s								
ULN	Ulaanbaatar	44.82	343		P		P	15 46 11.7	+0.5
ULN					P		P	15 46 11.7	+0.5
ULN	Ulaanbaatar	44.82	343		P		P	15 46 11.2	-0.1
	comp=Z,9µmcomp=Z,359nm,1.0s								
ULN	Ulaanbaatar	44.82	343	⇑	P		P	15 46 11.0	-0.2
ULN	Ulaanbaatar	44.82	343		P		P	15 46 11.7	+0.5
SONM	Songino Array	44.99	342		P		P	15 46 12.2	-0.3
	comp=Z,42nm,1.0s,baz=161,slow=8.2,SNR=120								
SONM					LR		LR	16 06 09.3	
	comp=Z,12µm,21.4s,baz=157,slow=38								
	comp=Z,42nm,1.0s								
SONM	Songino Array	44.99	342		P		P	15 46 12.3	-0.3
SONM	Songino Array	44.99	342		P		P	15 46 12.3	-0.3
SONM					pmax		pmax		
	comp=Z,71nm,1.1s								
ARPS	Mount Arapiles	45.00	161		P		P	15 46 14.9	+2.3
	comp=Z,237nm,1.3s								
YNG	Young	45.41	153		P		P	15 46 18.5	+2.5
	comp=Z,167nm,1.2s								
MGBR	Mount Gambier	45.49	163		P		P	15 46 17.3	+0.9
MGBR					IAmb		IAmb	15 46 48.3	
	comp=Z,167nm,0.9s								
UGL	Uglegorsk	45.62	16		*e*P		P	15 46 18.4	+1.1
UGL					*e*			15 48 06.0	
UGL					*e*S		S	15 52 54.3	-0.7
UGL					pmax		pmax		
	comp=Z,200nm,1.1s								
UGL					pmax		pmax		
	comp=Z,2µm,6.5s								
UGL					smax		smax		
	comp=E,2µm,9.0s								
UGL					smax		smax		
	comp=N,3µm,6.5s								
ALBI	Allahabad	45.80	300		*e*P		P	15 46 20.1	+1.0
GRNR	Gornyy	45.97	10	⇑	*i*P		P	15 46 20.8	+0.7
GRNR					pmax		pmax		
	comp=N,30nm,1.0s								
GRNR					pmax		pmax		
	comp=E,7.0nm,1.0s								
GRNR					pmax		pmax		
	comp=Z,50nm,0.9s								
GRNR					MLR		MLR		
	comp=E,1µm,14.0s								
SYDH	Sydney Hard Ro	46.10	150		P		P	15 46 23.7	+2.4
RIV	Riverview	46.36	150		P		P	15 46 27.6	+4.2
RIV	Riverview	46.36	150		P		P	15 46 27.2	+3.9
AUHPC	Hawkesdale P12	46.38	161		P		P	15 46 26.6	+3.2
BRAT	Ballarat	46.41	159		P		P	15 46 25.9	+2.2
AUMTC	Mt Clear Colle	46.45	159		P		P	15 46 26.3	+2.3
AUMTS	Mt Stromlo	46.54	153		P		P	15 46 27.5	+2.7
CAN	Canberra	46.54	153		P		P	15 46 27.7	+2.9
	comp=Z,266nm,1.0s,comp=Z,0.0nm								
CAN	Canberra	46.54	153		P		P	15 46 27.3	+2.5
CAN	Canberra	46.54	153		P		P	15 46 26.5	+1.7
CAN					IAmb		IAmb	15 46 29.4	
	comp=Z,300nm,1.1s								
CAN	Canberra	46.54	153		P		P	15 46 26.5	+1.7
CAN					pmax		pmax		
	comp=Z,300nm,1.1s								
CAN	Canberra	46.54	153	⇑	P		P	15 46 27.3	+2.5
CAN	Canberra	46.54	153		P		P	15 46 28.2	+3.4
AUDAR	Daramalan Coll	46.54	153		P		P	15 46 27.3	+2.5
AUMHS	Melrose High S	46.61	153		P		P	15 46 28.4	+3.0
SANVU	Sara

CIT	**Chita**	**47.22**	**350**	*e*P		**P**	**15 46 29.2**	**-0.7**
CIT				*e*			15 46 45.6	
CIT				*e*			15 46 57.0	
CIT				*e*			15 47 07.2	
CIT				*e*			15 48 26.8	
CIT				*e*			15 49 02.4	
CIT				pmax	pmax			
	comp=Z,203nm,2.1s							
AUUHS	**Ulladulla High**	**47.25**	**152**	P		**P**	**15 46 34.2**	**+3.9**
AUSMG	**Snowy Mountain**	**47.28**	**154**	P		**P**	**15 46 33.0**	**+2.4**
TYV	**Tymovskoe**	**47.41**	**15**	*e*P		**P**	**15 46 32.0**	**+0.7**
TYV				*e*S		**S**	**15 53 19.6**	**-1.0**
TYV				pmax	pmax			
	comp=Z,51nm,1.3s							
TYV				pmax	pmax			
	comp=Z,2µm,4.9s							
TYV				smax	smax			
	comp=N,11nm,1.7s							
TYV				smax	smax			
	comp=E,11nm,1.7s							
TYV				smax	smax			
	comp=N,2µm,5.9s							
TYV				smax	smax			
	comp=E,600nm,5.9s							
TARA	**Tarawa**	**47.92**	**93**	P		**P**	**15 46 36.5**	**+0.6**
ZEA	**Zeya**	**47.99**	**2**	*e*P		**P**	**15 46 35.3**	**-0.5**
ZEA				*e**SP		**pP**	**15 46 55.6**	**+2.9**
ZEA				*e*			15 48 02.6	
ZEA				*e*			15 48 31.1	
ZEA				*e*S		**S**	**15 53 22.1**	**-6.6**
ZEA				*e*SS		**SS**	**15 56 49.5**	**-8.9**
ZEA				pmax	pmax			
	comp=N,10.0nm,1.2s							
ZEA				pmax	pmax			
	comp=Z,30nm,1.1s							
ZEA				pmax	pmax			
	comp=Z,2µm,6.5s							
ZEA				pmax	pmax			
	comp=N,900nm,6.3s							
ZEA				smax	smax			
	comp=E,300nm,9.7s							
MILA	**Mila**	**48.05**	**154**	P		**P**	**15 46 39.3**	**+2.7**
	comp=Z,24nm,0.8s							
MILA	**Mila**	**48.05**	**154**	P		**P**	**15 46 38.6**	**+2.0**
ZAK	**Zakamensk**	**48.20**	**341**	*e*P		**P**	**15 46 36.3**	**-1.3**
ZAK				pmax	pmax			
	comp=Z,53nm,1.8s							
PTH	**Pithoragarh**	**48.54**	**305**	*e*P		**P**	**15 46 40.3**	**-0.3**
LGTI	**Lohaghat**	**48.57**	**305**	*e*P		**P**	**15 46 40.3**	**-0.6**
LGTI				IAmb	IAmb		15 47 03.3	
	comp=Z,117nm,1.2s							
JHNI	**Jhansi**	**48.60**	**299**	*e*P		**P**	**15 46 41.1**	**+0.1**
JHNI				IAmb	IAmb		15 46 44.5	
	comp=Z,198nm,1.5s							
NOUC	**Port Laguerre**	**48.86**	**126**	P		**P**	**15 46 45.0**	**+2.0**
AKL	**Akola**	**48.94**	**293**	*e*P		**P**	**15 46 45.1**	**+1.5**
AKL				IAmb	IAmb		15 46 47.4	
	comp=Z,208nm,0.8s							
DZM	**Mont Dzumac**	**48.96**	**126**	LR	LR		16 08 32.7	
	comp=Z,2µm,19.5s,baz=310,slow=37							
NKL	**Nikolayevsk**	**49.06**	**12**	*e*P		**P**	**15 46 43.8**	**-0.2**
NKL				*e*S		**S**	**15 53 51.2**	**+7.4**
NKL				pmax	pmax			
	comp=N,181nm,0.9s							
NKL				pmax	pmax			
	comp=E,144nm,0.9s							
NKL				pmax	pmax			
	comp=Z,674nm,0.9s							
NKL				smax	smax			
	comp=E,805nm,3.8s							
NKL				smax	smax			
	comp=N,389nm,4.7s							
NKL				MLR	MLR			
	comp=E,10µm,11.0s							
NKL				MLR	MLR			
	comp=N,11µm,18.0s							
NKL				MLR	MLR			
	comp=Z,15µm,21.0s							
ONTNC	**Ouen Toro**	**49.09**	**126**	P		**P**	**15 46 46.8**	**+2.1**
ONTNC	**Ouen Toro**	**49.09**	**126**	P		**P**	**15 46 45.3**	**+0.6**
ONTNC				IAmb	IAmb		15 46 52.0	
	comp=Z,273nm,1.2s							
ONTNC	**Ouen Toro**	**49.09**	**126**	⇑P		**P**	**15 46 46.8**	**+2.1**
BHPL	**Bhopal**	**49.10**	**296**	*e*P		**P**	**15 46 46.0**	**+1.1**
BHPL				IAmb	IAmb		15 46 49.1	
	comp=Z,226nm,0.9s							
LHI	**Lord Howe Isla**	**49.15**	**141**	P		**P**	**15 46 46.4**	**+1.4**
LHI				IAmb	IAmb		15 47 25.4	
	comp=Z,196nm,1.2s							
LHI	**Lord Howe Isla**	**49.15**	**141**	P		P	15 46 55.1	+10
NRDN	**NARMADA NAGAR**	**49.21**	**295**	*e*P		P	15 46 51.2	+5.5
TLY	**Talaya**	**49.23**	**343**	P		**P**	**15 46 44.7**	**-0.7**
	comp=Z,42nm,0.9s							
TLY				LR	LR		16 08 46.7	
	comp=Z,8µm,21.6s,baz=142,slow=38							
	comp=Z,42nm,0.9s							
TLY	**Talaya**	**49.23**	**343**	P		**P**	**15 46 45.1**	**-0.3**
TLY	**Talaya**	**49.23**	**343**	*ce*P		**P**	**15 46 45.4**	**0.0**
TLY				pmax	pmax			
	comp=Z,80nm,1.0s							
TLY	**Talaya**	**49.23**	**343**	P		**P**	**15 46 46.7**	**+1.3**
TLY				P		**P**	**15 46 46.7**	**+1.3**
TLY	**Talaya**	**49.23**	**343**	⇑P		**P**	**15 46 45.3**	**-0.1**
TLY	**Talaya**	**49.23**	**343**	P		**P**	**15 46 46.6**	**+1.3**
YATNC	**Mamie plateau,**	**49.32**	**125**	P		**P**	**15 46 49.1**	**+2.6**
JOSI	**Joshimath**	**49.40**	**306**	*e*P		**P**	**15 46 47.3**	**0.0**
JOSI				IAmb	IAmb		15 47 10.6	
	comp=Z,192nm,1.1s							
OUENC	**Ouen Island, N**	**49.45**	**126**	P		**P**	**15 46 50.4**	**+2.9**
OUENC	**Ouen Island, N**	**49.45**	**126**	P		**P**	**15 46 47.3**	**-0.1**
GUNA	**GUNA**	**49.52**	**298**	*e*P		**P**	**15 46 48.7**	**+0.7**
GUNA				IAmb	IAmb		15 46 50.5	
	comp=Z,142nm,0.4s							
IRK	**Irkutsk**	**49.54**	**343**	*e*P		**P**	**15 46 45.1**	**-2.6**
IRK				pmax	pmax			
	comp=Z,228nm,1.9s							
MARNC	**Mare, Loyalty**	**49.98**	**124**	P		**P**	**15 46 54.2**	**+2.7**
MARNC	**Mare, Loyalty**	**49.98**	**124**	P		**P**	**15 46 52.5**	**+1.0**
MARNC	**Mare, Loyalty**	**49.98**	**124**	⇑P		**P**	**15 46 53.8**	**+2.3**
MNGI	**Mangalore**	**50.02**	**282**	*e*P		**P**	**15 46 53.7**	**+1.8**
MOY	**Mondy**	**50.05**	**341**	*e*P		**P**	**15 46 51.2**	**-0.5**
MOY				pmax	pmax			
	comp=Z,216nm,2.7s							
WMQ	**Urumqi**	**50.24**	**325**	⇑P		**P**	**15 46 54.0**	**+0.8**
WMQ				pP		pP	15 47 10.5	+0.6
WMQ				PcP		**PcP**	**15 48 11.0**	**-0.5**
WMQ				PP		**PP**	**15 48 49.0**	**-0.2**
WMQ				S		**S**	**15 53 59.0**	**-1.8**
WMQ				SS		**SS**	**15 57 33.8**	**-1.2**
WMQ				pmax	pmax			
	comp=Z,130nm,1.5s							
WMQ				pmax	pmax			
	comp=Z,3µm,5.5s							
WMQ				L	L			
	comp=Z,8µm,24.9s							
WMQ				L	L			
	comp=Z,7µm,19.1s							
WMQ				L	L			
	comp=Z,8µm,24.1s							
KNGR	**Kungurtug, Tuv**	**50.41**	**337**	*i* P		**P**	**15 46 53.7**	**-0.8**
KNGR				pmax	pmax			
	comp=Z,68nm,1.0s							
BISR	**Bishrakh**	**50.50**	**303**	*e*P		**P**	**15 46 55.2**	**-0.2**
BISR				IAmb	IAmb		15 46 59.9	
	comp=Z,163nm,0.8s							
DDI	**Dehra Dun**	**50.54**	**305**	*e*P		**P**	**15 46 56.5**	**+0.7**
DDI				IAmb	IAmb		15 47 16.1	
	comp=Z,175nm,0.8s							
NDI	**New Delhi**	**50.72**	**303**	*e*P		**P**	**15 46 56.6**	**-0.5**
NDI				IAmb	IAmb		15 46 58.1	
	comp=Z,185nm,0.5s							
NPLP	**NPLP New Delhi**	**50.75**	**303**	*e*P		**P**	**15 46 56.8**	**-0.4**
NPLP				IAmb	IAmb		15 47 01.1	
	comp=Z,130nm,0.6s							
KLP	**Kalpa**	**50.80**	**307**	*e*P		**P**	**15 46 58.9**	**+0.9**
GLAD	**Gladstone**	**50.93**	**158**	P		**P**	**15 47 00.9**	**+2.6**
KAD	**Karad**	**51.07**	**288**	*e*P		**P**	**15 47 00.6**	**+0.7**
KUDL	**Kundal**	**51.17**	**302**	*e*P		**P**	**15 47 00.3**	**-0.1**
KUDL				IAmb	IAmb		15 47 04.9	
	comp=Z,158nm,0.9s							
KKR	**Kurukshetra**	**51.44**	**304**	*e*P		**P**	**15 47 03.2**	**+0.7**
KKR				IAmb	IAmb		15 47 08.3	
	comp=Z,116nm,0.7s							
SMLA	**Simla**	**51.53**	**306**	*e*P		**P**	**15 47 04.4**	**+1.4**
SMLA				IAmb	IAmb		15 47 08.0	
	comp=Z,107nm,0.5s							
POO	**Poona**	**51.54**	**289**	*e*P		**P**	**15 47 04.1**	**+0.7**
POO				IAmb	IAmb		15 47 07.2	
	comp=Z,139nm,1.0s							
HMDM	**Hanimaadhoo**	**51.60**	**274**	P		**P**	**15 47 03.9**	**+0.1**
HMDM	**Hanimaadhoo**	**51.60**	**274**	P		**P**	**15 47 06.4**	**+2.6**
	comp=Z,9µmcomp=Z,6µmcomp=Z,255nm,1.3s							
CGRH	**CHANDIGARH**	**51.72**	**305**	*e*P		**P**	**15 47 06.5**	**+2.0**
MOO	**Moorlands**	**51.90**	**159**	P		**P**	**15 47 08.5**	**+2.9**
	comp=Z,168nm,1.1s,comp=Z,0.0nm							
MOO	**Moorlands**	**51.90**	**159**	P			**15 47 08.2**	**+2.6**
MOO	**Moorlands**	**51.90**	**159**	P		**P**	**15 47 07.9**	**+2.3**
KAAM	**Kaadhehdhoo**	**52.25**	**266**	P		**P**	**15 47 09.4**	**+0.7**
KAAM	**Kaadhehdhoo**	**52.25**	**266**	P		**P**	**15 47 09.7**	**+0.9**
	SNR=9.0							
KAAM	**Kaadhehdhoo**	**52.25**	**266**	P		**P**	**15 47 09.9**	**+1.2**
	comp=Z,7µmcomp=Z,367nm,1.1s							
KAAM	**Kaadhehdhoo**	**52.25**	**266**	⇑P		**P**	**15 47 09.6**	**+0.9**
BHK	**Bhakra**	**52.26**	**306**	*e*P		**P**	**15 47 09.6**	**+1.1**
BHK				IAmb	IAmb		15 47 13.3	
	comp=Z,186nm,0.6s							
AJM	**Ajmer**	**52.32**	**299**	*e*P		**P**	**15 47 09.3**	**+0.2**
AJM				IAmb	IAmb		15 47 11.8	
	comp=Z,162nm,0.8s							
TAU	**Tasmania Unive**	**52.36**	**159**	P		**P**	**15 47 11.2**	**+2.3**
TAU	**Tasmania Unive**	**52.36**	**159**	P		**P**	**15 47 09.7**	**+0.7**
TAU				IAmb	IAmb		15 47 50.7	
	comp=Z,214nm,1.2s							
TAU	**Tasmania Unive**	**52.36**	**159**	P		**P**	**15 47 09.7**	**+0.7**
TAU				pmax	pmax			
	comp=Z,214nm,1.3s							
TAU	**Tasmania Unive**	**52.36**	**159**	⇑P		**P**	**15 47 11.3**	**+2.3**
TAU	**Tasmania Unive**	**52.36**	**159**	P		**P**	**15 47 11.5**	**+2.6**
AUTAR	**Taroona High S**	**52.40**	**159**	P		**P**	**15 47 11.3**	**+2.1**
ALCI	**Alchi Leh**	**52.59**	**309**	*e*P		**P**	**15 47 11.7**	**+0.3**
ALCI				IAmb	IAmb		15 47 14.1	
	comp=Z,186nm,0.8s							
DHRM	**DHARAMSHALA**	**52.60**	**307**	*e*P		**P**	**15 47 11.8**	**+0.5**
DHRM				IAmb	IAmb		15 47 15.4	
	comp=Z,150nm,0.8s							
UDPR	**Udaipur**	**52.71**	**297**	*e*P		**P**	**15 47 13.3**	**+1.3**
UDPR				IAmb	IAmb		15 47 15.7	
	comp=Z,199nm,1.1s							
BOD	**Bodaibo**	**52.77**	**353**	*e*P		**P**	**15 47 10.0**	**-1.8**
BOD				pmax	pmax			
	comp=Z,194nm,2.2s							
TLWR	**Talawar**	**52.78**	**306**	*e*P		**P**	**15 47 12.9**	**+0.5**
TLWR				IAmb	IAmb		15 47 17.3	
	comp=Z,133nm,0.6s							
TSSA	**Tissa**	**52.92**	**307**	*e*P		**P**	**15 47 13.8**	**+0.2**
TSSA				IAmb	IAmb		15 47 17.3	
	comp=Z,132nm,1.0s							
THN	**Thein Dam**	**53.10**	**307**	*e*P		**P**	**15 47 15.3**	**+0.5**
THN				IAmb	IAmb		15 47 19.8	
	comp=Z,155nm,0.8s							
SRGN	**SRI GANGA NAGA**	**53.86**	**303**	*e*P		**P**	**15 47 21.1**	**+0.7**
BKNR	**BIKANER**	**53.88**	**301**	*e*P		**P**	**15 47 20.7**	**+0.2**
BKNR				IAmb	IAmb		15 47 24.4	
	comp=Z,173nm,0.8s							
JMU	**Jammu**	**53.95**	**307**	*e*P		**P**	**15 47 21.9**	**+0.9**
JMU				IAmb	IAmb		15 47 24.5	
	comp=Z,253nm,1.1s							
ZSN	**Zaisan**	**54.03**	**327**	⇑ *i* P		**P**	**15 47 21.6**	**+0.3**
ZSN				*e*S		**S**	**15 54 54.5**	**+2.0**
WUS	**Wushi**	**54.06**	**318**	IAmb	IAmb		15 47 45.4	
	comp=Z,274nm,1.5s							
WUS	**Wushi**	**54.06**	**318**	P		**P**	**15 47 23.1**	**+1.3**
DGAR	**Diego Garcia**	**54.09**	**257**	P		**P**	**15 47 22.3**	**+0.1**
DGAR	**Diego Garcia**	**54.09**	**257**	*ce*P		**P**	**15 47 22.2**	**0.0**
DGAR				pmax	pmax			
	comp=Z,398nm,1.1s							
DGAR	**Diego Garcia**	**54.09**	**257**	P		**P**	**15 47 22.5**	**+0.3**
DGAR				S		**S**	**15 54 53.0**	**-1.2**
DGAR	**Diego Garcia**	**54.09**	**257**	⇑P		**P**	**15 47 22.4**	**+0.1**
DGAR	**Diego Garcia**	**54.09**	**257**	P		**P**	**15 47 22.6**	**+0.3**
H08S2	**Diego Garcia H**	**54.10**	**256**	P		**P**	**15 47 22.3**	**+0.3**
	baz=48,slow=9.6,SNR=54							
H08S3	**Diego Garcia H**	**54.11**	**256**	P		**P**	**15 47 22.4**	**+0.3**
	baz=48,slow=9.6,SNR=72							
H08S1	**Diego Garcia H**	**54.12**	**256**	P		**P**	**15 47 22.5**	**+0.4**
	baz=48,slow=9.6,SNR=61							
PETK	**Petropavlovsk-**	**54.32**	**24**	LR	LR		16 13 02.9	
	comp=Z,599nm,18.4s,baz=223,slow=39							
PET	**Petropavlovsk**	**54.64**	**24**	P		**P**	**15 47 26.7**	**+1.2**
PET	**Petropavlovsk**	**54.64**	**24**	P		**P**	**15 47 26.1**	**+0.5**
PET	**Petropavlovsk**	**54.64**	**24**	*e*P		**P**	**15 47 26.4**	**+0.9**
PET				*e**SP		**sP**	**15 47 48.9**	**-1.4**
PET				*e*S		**S**	**15 55 00.9**	**+0.5**
PET				*e**SS		**sS**	**15 55 32.5**	**+2.8**
PET				pmax	pmax			
	comp=Z,344nm,1.2s							
PET				pmax	pmax			
	comp=Z,2µm,13.1s							
PET				MLR	MLR			
	comp=Z,2µm,19.0s							
PET	**Petropavlovsk**	**54.64**	**24**	⇑P		**P**	**15 47 26.4**	**+0.9**
PET	**Petropavlovsk**	**54.64**	**24**	P		**P**	**15 47 25.7**	**+0.2**
	comp=Z,317nm,1.3s							
PET	**Petropavlovsk**	**54.64**	**24**	P		**P**	**15 47 26.6**	**+1.0**
SHLS	**Shalkode**	**54.85**	**320**	*e*P		**P**	**15 47 25.9**	**-1.5**
	comp=Z,89nm,1.1s							
PDGK	**Podgornoye**	**54.91**	**320**	P		**P**	**15 47 28.2**	**+0.3**
MK31	**Makanchi Array**	**55.07**	**325**	P		**P**	**15 47 29.1**	**+0.3**
MK31				IAmb	IAmb		15 47 32.7	
	comp=Z,103nm,0.9s							
MK31	**Makanchi Array**	**55.07**	**325**	P		**P**	**15 47 29.1**	**+0.3**
MK31				pmax	pmax			
	comp=Z,103nm,0.9s							
MKAR	**Makanchi Array**	**55.07**	**325**	P		**P**	**15 47 29.1**	**+0.3**
	comp=Z,86nm,0.7s,baz=120,slow=7.1,SNR=218							
MKAR				S		S	15 54 57.1	-9.4
	comp=Z,1.3nm,1.0s,baz=134,slow=11,SNR=0.9							
MKAR				LR	LR		16 12 21.3	
	comp=Z,11µm,20.4s,baz=114,slow=37							
MKAR				PKPPKP		**P'P'df**	**16 17 36.4**	**-0.6**
	comp=Z,1.2nm,0.9s,baz=268,slow=6.9,SNR=4.8							
	comp=Z,86nm,0.7s							
UZB	**Uzynbulak**	**55.12**	**320**	⇑ *i* P		**P**	**15 47 29.9**	**+0.4**
	comp=Z,91nm,1.5s							
UZB				*e*S		**S**	**15 55 09.5**	**+1.9**
PRZ	**Przheval'sk**	**55.21**	**319**	P		**P**	**15 47 31.5**	**+1.4**
PRZ				IAmb	IAmb		15 47 32.7	
	comp=Z,191nm,1.0s							
PRZ	**Przheval'sk**	**55.21**	**319**	P		**P**	**15 47 31.5**	**+1.4**
PRZ				pmax	pmax			
	comp=Z,191nm,1.0s							
TARG	**Taragay, Kyrgy**	**55.25**	**318**	P		**P**	**15 47 32.0**	**+1.3**
TARG				IAmb	IAmb		15 47 43.0	
	comp=Z,120nm,1.0s							
TARG	**Taragay, Kyrgy**	**55.25**	**318**	P		**P**	**15 47 32.0**	**+1.3**
TARG				pmax	pmax			
	comp=Z,120nm,1.0s							
MAKZ	**Makanchi**	**55.26**	**325**	P		**P**	**15 47 30.6**	**+0.4**
MAKZ				IAmb	IAmb		15 47 34.0	
	comp=Z,215nm,0.9s							
MAKZ	**Makanchi**	**55.26**	**325**	P		**P**	**15 47 30.6**	**+0.4**
MAKZ				pmax	pmax			
	comp=Z,215nm,1.0s							
MAKZ	**Makanchi**	**55.26**	**325**	⇑P		**P**	**15 47 30.4**	**+0.2**
SATY	**Saty**	**55.48**	**320**	*e*P		**P**	**15 47 32.4**	**+0.4**
	comp=Z,101nm,1.2s							
NIL	**Nilore**	**55.48**	**307**	P		**P**	**15 47 33.3**	**+1.3**
NIL	**Nilore**	**55.48**	**307**	P		**P**	**15 47 33.3**	**+1.3**
NIL				pmax	pmax			
	comp=Z,838nm,1.2s							
NIL	**Nilore**	**55.48**	**307**	P		**P**	**15 47 33.0**	**+0.9**
NIL	**Nilore**	**55.48**	**307**	⇑P		**P**	**15 47 32.9**	**+0.9**
KPKS	**Kokpek**	**55.49**	**320**	*e*P		**P**	**15 47 32.4**	**+0.4**
JASL	**Jaisalmer**	**55.68**	**299**	*e*P		**P**	**15 47 34.1**	**+0.6**
JASL				IAmb	IAmb		15 47 36.5	
	comp=Z,189nm,1.1s							
KSH2	**Kashi**	**55.69**	**314**	P		**P**	**15 47 34.8**	**+1.2**
KSH2				pP		pP	15 47 51.0	+0.1
KSH2				PP		**PP**	**15 49 41.8**	**+3.3**
KSH2				S		**S**	**15 55 13.5**	**-1.8**
KSH2				pmax	pmax			
	comp=Z,130nm,1.3s							
KSH2				pmax	pmax			
	comp=Z,2µm,9.0s							
KSH2				L	L			
	comp=Z,4µm,17.5s							
KSH2				L	L			
	comp=Z,5µm,19.2s							
KSH2				L	L			
	comp=Z,9µm,29.5s							
FUNA	**Funafuti**	**55.75**	**104**	P		**P**	**15 47 36.0**	**+1.8**
FUNA	**Funafuti**	**55.75**	**104**	P		**P**	**15 47 34.9**	**+0.7**
KDJ	**Kajisay**	**55.85**	**318**	P		**P**	**15 47 35.6**	**+0.9**
KDJ				IAmb	IAmb		15 47 36.6	
	comp=Z,100nm,0.8s							
KDJ	**Kajisay**	**55.85**	**318**	P		**P**	**15 47 35.6**	**+0.9**
KDJ				pmax	pmax			
	comp=Z,100nm,0.8s							
BHUJ	**Bhuj**	**56.11**	**294**	*e*P		**P**	**15 47 38.1**	**+1.5**
NRN	**Naryn**	**56.33**	**317**	P		**P**	**15 47 39.0**	**+0.7**
NRN	**Naryn**	**56.33**	**317**	P		**P**	**15 47 39.0**	**+0.7**
NRN				pmax	pmax			
	comp=Z,69nm,0.9s							
YAK	**Yakutsk**	**56.38**	**3**	LR	LR		16 12 40.6	
	comp=Z,3µm,21.8s,baz=184,slow=37							
YAK	**Yakutsk**	**56.38**	**3**	P		**P**	**15 47 37.1**	**-0.7**
YAK	**Yakutsk**	**56.38**	**3**	*c i* P		**P**	**15 47 37.1**	**-0.7**
YAK				*e**PP		**pP**	**15 47 54.0**	**-1.1**
YAK				*e*			15 48 33.8	
YAK				*e*			15 49 43.6	
YAK				*e*S		**S**	**15 55 24.1**	**+0.9**
YAK				*e**SS		**pS**	**15 55 47.8**	**+4.7**
YAK				*e*			15 57 20.9	
YAK				pmax	pmax			
	comp=Z,411nm,0.9s							
YAK				pmax	pmax			
	comp=N,72nm,0.9s							
YAK				pmax	pmax			
	comp=E,28nm,1.1s							
YAK				pmax	pmax			
	comp=Z,114nm,1.0s							
YAK				pmax	pmax			
	comp=E,53nm,1.1s							
YAK				pmax	pmax			
	comp=N,110nm,1.3s							
YAK				smax	smax			
	comp=E,113nm,2.8s							
YAK				smax	smax			
	comp=N,22nm,1.4s							
YAK				MLR	MLR			
	comp=Z,5µm,20.0s							
YAK				MLR	MLR			
	comp=N,3µm,17.0s							
YAK				MLR	MLR			
	comp=E,2µm,22.0s							
YAK	**Yakutsk**	**56.38**	**3**	⇑P		**P**	**15 47 37.0**	**-0.8**
YAK	**Yakutsk**	**56.38**	**3**	P		**P**	**15 47 37.7**	**-0.2**
ARXS	**Arharly**	**56.40**	**321**	*e*P		**P**	**15 47 38.4**	**-0.1**
MDOK	**Medeo**	**56.40**	**319**	*e*P		**P**	**15 47 39.0**	**+0.4**
MDOK				*e*S		**S**	**15 55 26.6**	**+1.9**
TNSS	**Tian-Shan**	**56.41**	**319**	*e*P		**P**	**15 47 39.1**	**+0.1**
TDK	**Taldyqorghan**	**56.42**	**322**	⇑ *i* P		**P**	**15 47 39.1**	**+0.5**
	comp=E,101nm,0.9s							
YSA	**Yasawairara**	**56.43**	**114**	P		**P**	**15 47 40.8**	**+1.8**
AAA	**Alma-Ata**	**56.51**	**319**	*e*P		**P**	**15 47 39.9**	**+0.6**
	comp=E,69nm,0.9s							
ULHL	**Ulahol**	**56.52**	**318**	P		**P**	**15 47 40.6**	**+1.1**
	SNR=47							
BOOM	**Boomskoye usch**	**56.83**	**318**	IAmb	IAmb		15 47 43.3	
	comp=Z,123nm,1.3s							
MSVF	**Nonsavu**	**57.19**	**115**	LR	LR		16 10 10.4	
	comp=Z,3µm,21.8s,baz=291,slow=34							
MSVF	**Nonsavu**	**57.19**	**115**	P		**P**	**15 47 47.0**	**+2.5**
MSVF	**Nonsavu**	**57.19**	**115**	P		**P**	**15 47 46.6**	**+2.1**
MSVF	**Nonsavu**	**57.19**	**115**	P		**P**	**15 47 46.6**	**+2.1**
MSVF				pmax	pmax			
	comp=Z,251nm,1.1s							
MSVF	**Nonsavu**	**57.19**	**115**	⇓P		**P**	**15 47 47.4**	**+2.9**
MSVF	**Nonsavu**	**57.19**	**115**	P		**P**	**15 47 47.0**	**+2.5**
TKM2	**Tokmak 2**	**57.25**	**318**	P		**P**	**15 47 45.3**	**+0.7**
	SNR=137							
MA2	**Magadan**	**57.28**	**15**	P		**P**	**15 47 44.3**	**-0.1**
	comp=Z,78nm,0.9s,baz=210,slow=7.8,SNR=42							
MA2				LR	LR		16 11 29.3	
	comp=Z,1µm,22.0s,baz=212,slow=35							
	comp=Z,78nm,0.9s							
MA2	**Magadan**	**57.28**	**15**	P		**P**	**15 47 45.0**	**+0.7**
MA2	**Magadan**	**57.28**	**15**	P		**P**	**15 47 44.9**	**+0.5**
MA2	**Magadan**	**57.28**	**15**	⇑P		**P**	**15 47 45.0**	**+0.7**
MA2	**Magadan**	**57.28**	**15**	P		**P**	**15 47 44.0**	**-0.3**
	comp=Z,5µmcomp=Z,241nm,1.6s							
MA2	**Magadan**	**57.28**	**15**	P		**P**	**15 47 45.3**	**+0.9**
KBK	**Karagaybulak**	**57.56**	**318**	P		**P**	**15 47 47.9**	**+1.0**
	SNR=101							
UCH	**Uchtor**	**57.68**	**317**	P		**P**	**15 47 49.3**	**+1.3**
	SNR=153							
CHMS	**Chumysh**	**57.84**	**318**	P		**P**	**15 47 48.9**	**+0.3**
	SNR=55							
AAK	**Ala-Archa**	**57.86**	**318**	LR	LR		16 14 42.1	
	comp=Z,7µm,22.0s,baz=103,slow=38							
AAK	**Ala-Archa**	**57.86**	**318**	P		**P**	**15 47 49.9**	**+0.9**
	SNR=66							
AAK	**Ala-Archa**	**57.86**	**318**	P		**P**	**15 47 49.4**	**+0.5**
AAK				IAmb	IAmb		15 47 50.7	
	comp=Z,227nm,1.6s							
AAK	**Ala-Archa**	**57.86**	**318**	*i* P		**P**	**15 47 49.8**	**+0.9**
	SNR=93							
AAK	**Ala-Archa**	**57.86**	**318**	*ce*P		**P**	**15 47 49.3**	**+0.4**
AAK				pmax	pmax			
	comp=Z,235nm,2.4s							
AAK	**Ala-Archa**	**57.86**	**318**	P		**P**	**15 47 50.0**	**+1.1**
AAK				P		**P**	**15 47 50.0**	**+1.1**
AAK				S		**S**	**15 55 44.6**	**+0.8**
AAK				S		**S**	**15 55 44.6**	**+0.8**
AAK	**Ala-Archa**	**57.86**	**318**	⇑P		**P**	**15 47 49.8**	**+0.9**
AAK	**Ala-Archa**	**57.86**	**318**	P		**P**	**15 47 49.8**	**+0.9**
SGDS	**Sogindy**	**58.11**	**319**	⇑ *i*

KKAR **Karatay Array** 60.73 317 P **P** 15 48 08.9 +0.3
KKAR **Karatay Array** 60.73 317 P **P** 15 48 08.9 +0.3
OUZ **Omahuta** 61.06 136 P **P** 15 48 13.0 +2.2
OUZ **Omahuta** 61.06 136 ⇑P **P** 15 48 13.5 +2.7
CHM **Chimkent** 61.08 316 *e*P **P** 15 48 11.5 +0.6
comp=Z,68nm,1.1s
BRLS **Boroldayy** 61.17 317 ⇑ *i*P **P** 15 48 12.1 +0.5
comp=Z,35nm,0.9s
SHEM **Shemya Is, Ala** 61.68 31 LR LR 16 12 13.7
comp=Z,1µm,21.5s,baz=276,slow=33
SHEM **Shemya Is, Ala** 61.68 31 P **P** 15 48 15.3 +0.7
SMY **Shemya** 61.68 31 P **P** 15 48 16.3 +1.6
AIS **Amsterdam Isla** 61.78 222 P **P** 15 48 16.3 +0.7
WCZ **Waipu Caves** 61.95 136 P **P** 15 48 18.9 +2.1
BRZS **Berezniki** 62.20 325 *e*P **P** 15 48 18.5 +0.2
MSZ **Milford Sound** 63.10 147 P **P** 15 48 27.1 +2.8
JCZ **Jackson Bay** 63.19 146 P **P** 15 48 27.2 +2.2
JCZ **Jackson Bay** 63.19 146 P **P** 15 48 27.5 +2.5
DCZ **Deep Cove** 63.21 148 P **P** 15 48 26.6 +1.6
DCZ IAmb IAmb 15 48 29.3
comp=Z,179nm,0.9s
FOZ **Fox Glacier** 63.43 145 P **P** 15 48 28.2 +1.8
FOZ IAmb IAmb 15 48 30.5
comp=Z,127nm,0.9s
FOZ **Fox Glacier** 63.43 145 P **P** 15 48 27.9 +1.4
QRZ **Quartz Range** 63.43 141 P **P** 15 48 28.5 +2.0
QRZ IAmb IAmb 15 48 31.3
comp=Z,198nm,0.9s
QRZ **Quartz Range** 63.43 141 P **P** 15 48 28.7 +2.1
PYZ **Puysegur Point** 63.44 149 P **P** 15 48 28.2 +1.7
PYZ IAmb IAmb 15 48 30.8
comp=Z,218nm,1.0s
DSZ **Denniston Nort** 63.52 143 P **P** 15 48 29.8 +2.6
HIZ **Hauiti** 63.65 138 P **P** 15 48 29.7 +1.6
HIZ IAmb IAmb 15 48 32.7
comp=Z,208nm,1.1s
HIZ **Hauiti** 63.65 138 P **P** 15 48 30.5 +2.4
MLZ **Mavora Lakes** 63.66 148 P **P** 15 48 29.1 +1.1
MLZ **Mavora Lakes** 63.66 148 P **P** 15 48 29.4 +1.4
TOZ **Tahuroa Road** 63.68 137 P **P** 15 48 29.7 +1.5
TOZ IAmb IAmb 15 48 32.6
comp=Z,110nm,0.9s
TOZ **Tahuroa Road** 63.68 137 P **P** 15 48 30.9 +2.6
WVZ **Waitaha Valley** 63.68 144 P **P** 15 48 30.0 +1.9
WKZ **Wanaka** 63.80 147 P **P** 15 48 30.3 +1.3
WKZ IAmb IAmb 15 49 23.9
comp=Z,307nm,1.4s
WKZ **Wanaka** 63.80 147 P **P** 15 48 30.0 +1.1
TKNZ **Takaka Hill** 63.81 141 P **P** 15 48 30.2 +1.0
TKNZ **Takaka Hill** 63.81 141 P **P** 15 48 31.4 +2.2
AMKA **Amchitka** 63.85 34 P **P** 15 48 29.7 +0.6
AMKA IAmb IAmb 15 48 30.8
comp=Z,196nm,0.8s
MCASZ **Murchison** 63.87 142 P **P** 15 48 30.8 +1.4
INZ **Inchbonnie** 63.88 144 P **P** 15 48 32.7 +3.2
MRNZ **Matariki Terra** 63.90 142 P **P** 15 48 30.3 +0.7
MRNZ **Matariki Terra** 63.90 142 P **P** 15 48 30.9 +1.3
VRZ **Vera Road** 63.91 139 P **P** 15 48 32.4 +2.6
TLZ **Tolley Road** 64.01 138 P **P** 15 48 33.3 +2.8
NGCH **Negor - Chabah** 64.09 295 P **P** 15 48 32.3 +1.1
SNR=8.1
NGCH S **S** 15 57 04.8 +1.4
LBZ **Lake Benmore** 64.17 146 P **P** 15 48 32.9 +1.5
NNZ **Nelson** 64.18 141 P **P** 15 48 32.3 +0.9
THZ **Tophouse** 64.20 142 P **P** 15 48 32.7 +1.0
THZ IAmb IAmb 15 48 34.4
comp=Z,116nm,0.8s
THZ **Tophouse** 64.20 142 P **P** 15 48 32.9 +1.2
EAZ **Earnscleugh** 64.21 147 P **P** 15 48 32.2 +0.5
RPZ **Rata Peaks** 64.25 145 LR LR 16 17 01.2
comp=Z,4µm,20.0s,baz=312,slow=36
RPZ **Rata Peaks** 64.25 145 P **P** 15 48 33.9 +2.0
DUWZ **D'Urville Isla** 64.29 141 P **P** 15 48 34.3 +2.0
WAZ **Wanganui** 64.40 139 P **P** 15 48 36.0 +3.0
LTZ **Lake Taylor** 64.40 143 IAmb IAmb 15 49 03.7
comp=Z,130nm,1.1s
LTZ **Lake Taylor** 64.40 143 P **P** 15 48 34.9 +2.0
MHCZ **Mount Hutt** 64.44 144 P **P** 15 48 34.8 +1.6
ARCZ **Arundel** 64.46 145 P **P** 15 48 34.9 +1.6
NGZ **Ngauruhoe** 64.50 138 P **P** 15 48 36.6 +2.8
OXZ **Oxford** 64.59 144 IAmb IAmb 15 48 37.8
comp=Z,82nm,0.7s
OXZ **Oxford** 64.59 144 P **P** 15 48 35.2 +1.1
TMZ **Timaru** 64.63 145 P **P** 15 48 36.2 +1.8
TUWZ **Tuamarina** 64.65 141 P **P** 15 48 36.1 +1.6
TCW **Tory Channel** 64.74 141 P **P** 15 48 35.9 +0.8
RAO **Raoul Island** 64.76 126 LR LR 16 17 00.3
comp=Z,682nm,19.9s,baz=300,slow=36
RAO **Raoul Island** 64.76 126 P **P** 15 48 37.0 +1.5
RAO **Raoul Island** 64.76 126 P **P** 15 48 37.0 +1.5
RAO pmax pmax
comp=Z,228nm,0.4s
ODZ **Otahua Downs** 64.83 146 P **P** 15 48 36.6 +1.0
ODZ **Otahua Downs** 64.83 146 P **P** 15 48 36.6 +1.0
ODZ **Otahua Downs** 64.83 146 ⇓P **P** 15 48 37.4 +1.8
JOHN **Johnston Islan** 64.84 74 P **P** 15 48 36.8 +0.5
BVA0 **Borovoye Array** 64.84 327 P **P** 15 48 34.8 -0.9
BVAR **Borovoye Array** 64.84 327 P **P** 15 48 35.0 -0.7
comp=Z,108nm,1.1s,baz=116,slow=6.8,SNR=182
BVAR PKPPKP **P'P'df** 16 17 20.6 -0.9
comp=Z,7.4nm,1.1s,baz=48,slow=2.2,SNR=4.3
BVAR LR LR 16 17 34.9
comp=Z,5µm,21.5s,baz=121,slow=37
comp=Z,108nm,1.1s
BORK **Borovoye** 64.89 327 P **P** 15 48 35.2 -0.7
BORK IAmb IAmb 15 48 36.9
comp=Z,170nm,1.1s
BORK **Borovoye** 64.89 327 *ce*P **P** 15 48 35.3 -0.7
BORK pmax pmax
comp=Z,195nm,1.2s
BORK **Borovoye** 64.89 327 P **P** 15 48 35.6 -0.3
KHZ **Kahutara** 64.96 142 P **P** 15 48 37.1 +0.6
KHZ **Kahutara** 64.96 142 P **P** 15 48 37.1 +0.6
KHZ **Kahutara** 64.96 142 ⇑P **P** 15 48 37.2 +0.7
GVZ **Greta Valley S** 64.97 143 P **P** 15 48 38.3 +1.6
URZ **Urewera** 65.04 137 ⇑P **P** 15 48 37.9 +0.7
SNZO **South Karori** 65.06 141 P **P** 15 48 38.7 +1.5
SNZO **South Karori** 65.06 141 P **P** 15 48 37.5 +0.3
SNZO IAmb IAmb 15 48 39.9
comp=Z,256nm,1.1s
SNZO **South Karori** 65.06 141 ⇑P **P** 15 48 37.4 +0.3
SNZO **South Karori** 65.06 141 P **P** 15 48 37.5 +0.3
BKZ **Black Stump Fm** 65.08 138 P **P** 15 48 38.4 +0.9
BKZ **Black Stump Fm** 65.08 138 P **P** 15 48 38.5 +0.9
BKZ IAmb IAmb 15 48 40.7
comp=Z,202nm,0.9s
OGWZ **Otaki Gorge** 65.09 140 P **P** 15 48 38.0 +0.6
RTZ **Ruatahuna** 65.13 137 P **P** 15 48 38.6 +0.8
MQZ **McQueen's Vall** 65.17 144 IAmb IAmb 15 49 00.3
comp=Z,306nm,1.5s
MQZ **McQueen's Vall** 65.17 144 P **P** 15 48 40.0 +2.1
TSZ **Takapari Road** 65.19 139 P **P** 15 48 39.2 +1.0
BHW **Baring Head** 65.22 141 IAmb IAmb 15 48 40.2
comp=Z,96nm,0.8s
BHW **Baring Head** 65.22 141 P **P** 15 48 38.7 +0.4
MRZ **Mangatainoka R** 65.27 140 P **P** 15 48 38.6 0.0
HOWZ **Holdsworth Sta** 65.35 140 P **P** 15 48 39.8 +0.7
JLN **Jalan Bani Buh** 65.38 292 S **S** 15 57 17.3 -2.0
MTW **Mount Morrison** 65.48 140 P **P** 15 48 41.0 +1.0
PAWZ **Paruwai Farm** 65.56 140 P **P** 15 48 41.3 +0.9
AFI **Afiamalu** 65.58 108 LR LR 16 15 28.6
comp=Z,1µm,18.5s,baz=281,slow=34
BFZ **Birch Farm** 65.71 139 P **P** 15 48 43.5 +2.1
BFZ **Birch Farm** 65.71 139 P **P** 15 48 42.4 +1.0
ROCAM **Rodrigues Isla** 65.71 246 P **P** 15 48 41.9 0.0
ROCAM **Rodrigues Isla** 65.71 246 ⇑P **P** 15 48 42.5 +0.7
WBK **Wadi Bani Khal** 65.82 292 P **P** 15 48 43.0 +0.4
SNR=26
WBK S **S** 15 57 23.9 -0.9
TIXI **Tiksi** 65.98 1 P **P** 15 48 40.9 -1.7
comp=Z,57nm,0.9s,baz=178,slow=3.9,SNR=60
TIXI LR LR 16 17 45.1
comp=Z,7µm,21.6s,baz=196,slow=36
comp=Z,57nm,0.9s
TIXI **Tiksi** 65.98 1 P **P** 15 48 43.1 +0.5
TIXI **Tiksi** 65.98 1 *ce*P **P** 15 48 41.1 -1.5
TIXI pmax pmax
comp=Z,74nm,0.9s
TIXI **Tiksi** 65.98 1 ⇑P **P** 15 48 40.9 -1.7
TIXI **Tiksi** 65.98 1 P **P** 15 48 41.6 -1.0
KIWB **Kanaga Island** 66.06 35 P **P** 15 48 43.9 +0.4
WSAR **Wadi Sarin** 66.18 293 LR LR 16 16 51.2
comp=Z,6.3nm,21.4s,baz=113,slow=35

WSAR **Wadi Sarin** 66.18 293 P **P** 15 48 45.0 +0.1
SNR=25
WSAR S **S** 15 57 27.8 -1.2
MCQ **Macquarie Isla** 66.25 159 P **P** 15 48 45.5 +1.0
MCQ **Macquarie Isla** 66.25 159 P **P** 15 48 45.5 +1.0
MCQ pmax pmax
comp=Z,121nm,1.2s
ADK **Adak** 66.33 35 P **P** 15 48 45.7 +0.4
ADK **Adak** 66.33 35 P **P** 15 48 45.5 +0.3
ADK IAmb IAmb 15 48 46.8
comp=Z,172nm,0.9s
ADK **Adak** 66.33 35 P **P** 15 48 45.5 +0.3
ADK pmax pmax
comp=Z,172nm,0.9s
ADK **Adak** 66.33 35 ⇑P **P** 15 48 44.5 -0.8
ADK **Adak** 66.33 35 P **P** 15 48 45.5 +0.3
JMDO **Jabal Madar** 66.61 292 P **P** 15 48 47.6 0.0
SNR=30
JMDO S **S** 15 57 31.8 -2.4
MHTO **MHTO** 66.66 290 P **P** 15 48 48.0 +0.1
SNR=46
MHTO P **P** 15 48 48.0 +0.1
SNR=46
MHTO S **S** 15 57 33.8 -1.0
MHTO S **S** 15 57 33.8 -1.0
BIDO **Bidbid** 66.66 293 P **P** 15 48 48.1 +0.2
SNR=41
BIDO S **S** 15 57 35.1 +0.2
SMDO **Samad** 66.70 293 P **P** 15 48 47.9 -0.4
SNR=21
SMDO P **P** 15 48 47.9 -0.4
SNR=21
SMDO S **S** 15 57 34.1 -1.5
SMDO S **S** 15 57 34.1 -1.5
GSTR **Great Sitkin T** 66.77 35 IAmb IAmb 15 49 11.1
comp=Z,200nm,0.8s
JASK **Jask - Hormozg** 67.08 296 P **P** 15 48 52.1 +1.5
SNR=24
JASK S **S** 15 57 40.2 +0.4
HOQ **Hoqain** 67.41 293 P **P** 15 48 52.5 -0.2
SNR=25
HOQ P **P** 15 48 52.5 -0.2
SNR=25
HOQ S **S** 15 57 42.7 -1.2
HOQ S **S** 15 57 42.7 -1.2
BSY **Bisya** 67.46 292 P **P** 15 48 52.9 -0.1
SNR=27
BSY S **S** 15 57 42.6 -2.0
ARQ **Araqi** 68.12 293 S **S** 15 57 50.5 -1.9
BILL **Bilibino** 68.15 15 P **P** 15 48 55.8 -0.7
BILL **Bilibino** 68.15 15 *ce*P **P** 15 48 56.1 -0.4
BILL pmax pmax
comp=Z,73nm,1.1s
BILL MLR MLR
comp=Z,2µm,20.0s
BILL **Bilibino** 68.15 15 P **P** 15 48 56.4 -0.1
NRIK **Noril'sk** 68.21 347 P **P** 15 48 55.2 -1.5
comp=Z,56nm,1.1s,baz=146,slow=6.9,SNR=29
NRIK PKP2bc **P'P'bc** 16 17 13.3 -3.0
comp=Z,5.3nm,1.0s,baz=5.3,slow=1.7,SNR=6.3
comp=Z,56nm,1.1s
NRIK **Noril'sk** 68.21 347 P **P** 15 48 55.3 -1.5
NRIK IAmb IAmb 15 50 36.2
comp=Z,171nm,1.4s
NRIK **Noril'sk** 68.21 347 *c* *i*P **P** 15 48 55.0 -1.8
NRIK pmax pmax
comp=Z,52nm,1.1s
MDH **Madha** 68.45 295 *i* P **P** 15 48 57.4 -1.7
SNR=9.2
MDH **Madha** 68.45 295 P **P** 15 48 58.4 -0.8
SNR=7.1
MDH S **S** 15 57 51.7 -4.5
BANOM **Banah** 68.49 296 *i* P **P** 15 48 58.9 -0.6
SNR=28
BANOM **Banah** 68.49 296 P **P** 15 48 59.9 +0.4
NIUE **Niue** 68.51 113 P **P** 15 49 01.3 +1.7
NIUE **Niue** 68.51 113 P **P** 15 48 59.6 0.0
NIUE **Niue** 68.51 113 P **P** 15 49 02.1 +2.5
NIUE **Niue** 68.51 113 ⇑P **P** 15 49 02.8 +3.2
UOSS **Minazif** 68.51 294 P **P** 15 48 57.9 -1.7
UOSS **Minazif** 68.51 294 *i* P **P** 15 48 58.6 -1.0
SNR=16
UOSS **Minazif** 68.51 294 P **P** 15 48 59.3 -0.3
UOSS P **P** 15 48 59.3 -0.3
UOSS S **S** 15 57 52.5 -4.5
UOSS S **S** 15 57 52.5 -4.5
HATD **Hatta, Dubai** 68.57 294 *i* P **P** 15 48 59.4 -0.6
SNR=22
HATD **Hatta, Dubai** 68.57 294 P **P** 15 49 00.4 +0.4
SNR=32
HATD P **P** 15 49 00.4 +0.4
SNR=32
HATD S **S** 15 57 57.0 -0.7
HATD S **S** 15 57 57.0 -0.7
MSFE **Esma-Masafi** 68.58 295 *i* P **P** 15 48 59.2 -0.9
SNR=22
MASF **Masafi** 68.58 295 P **P** 15 49 00.4 +0.4
SNR=18
MASF S **S** 15 57 57.5 -0.4
ASHO **Ashiyiah** 68.63 294 *i* P **P** 15 49 00.2 -0.1
SNR=20
ASHO **Ashiyiah** 68.63 294 S **S** 15 57 56.1 -2.3
SHME **Shamm** 68.64 296 *i* P **P** 15 49 00.2 -0.2
SNR=16
SHME **Shamm** 68.64 296 P **P** 15 49 00.7 +0.3
SNR=9.7
SHME P **P** 15 49 00.7 +0.3
SNR=9.7
SHME S **S** 15 57 56.2 -2.3
SHME S **S** 15 57 56.2 -2.3
SHAO **Shalim** 68.77 287 *i* P **P** 15 49 01.8 +0.5
SNR=20
SHAO **Shalim** 68.77 287 P **P** 15 49 02.1 +0.9
SNR=28
SHAO P **P** 15 49 02.1 +0.9
SNR=28
SHAO S **S** 15 57 60.0 -0.2
SHAO S **S** 15 57 60.0 -0.2
NAZ **Nazwa, Dubai** 69.00 294 *i* P **P** 15 49 02.3 -0.3
SNR=7.7
NAZ **Nazwa, Dubai** 69.00 294 P **P** 15 49 02.0 -0.6
SNR=11
NAZ P **P** 15 49 02.0 -0.6
SNR=11
NAZ S **S** 15 57 59.3 -3.5
NAZ S **S** 15 57 59.3 -3.5
UMQ **Umm Al-Quwin** 69.04 295 *i* P **P** 15 49 03.2 +0.4
SNR=5.5
UMQ **Umm Al-Quwin** 69.04 295 P **P** 15 49 03.3 +0.5
UMQ P **P** 15 49 03.3 +0.5
UMQ S **S** 15 58 04.9 +1.8
UMQ S **S** 15 58 04.9 +1.8
FAQ **Al Faqa, Dubai** 69.05 294 *i* P **P** 15 49 02.5 -0.4
SNR=15
FAQ **Al Faqa, Dubai** 69.05 294 P **P** 15 49 02.7 -0.2
SNR=11
FAQ P **P** 15 49 02.7 -0.2
SNR=11
FAQ S **S** 15 58 00.0 -3.4
FAQ S **S** 15 58 00.0 -3.4
ASUD **Al Ashush, Dub** 69.28 294 *i* P **P** 15 49 04.4 +0.1
SNR=10.0
ASUD **Al Ashush, Dub** 69.28 294 P **P** 15 49 04.8 +0.5
SNR=6.4
ASUD P **P** 15 49 04.8 +0.5
SNR=6.4
ASUD S **S** 15 58 03.1 -3.0
ASUD S **S** 15 58 03.1 -3.0
UMZA **Um Al Zommool** 69.34 292 P **P** 15 49 04.7 -0.1
UMZA P **P** 15 49 04.7 -0.1
UMZA S **S** 15 58 05.6 -1.3
UMZA S **S** 15 58 05.6 -1.3
DMTO **DMTO** 69.41 287 P **P** 15 49 06.0 +0.7
SNR=12
DMTO P **P** 15 49 06.0 +0.7
SNR=12
DMTO S **S** 15 58 08.1 +0.3
DMTO S **S** 15 58 08.1 +0.3
AJN **Ajban** 69.59 294 P **P** 15 49 06.0 -0.2
AB31 **Akbulak array** 69.65 321 P **P** 15 49 05.5 -0.7
AB31 IAmb IAmb 15 49 07.2
comp=Z,253nm,1.3s
AB31 pP **pP** 15 49 22.6 -1.6
AB31 **Akbulak array** 69.65 321 *i* P **P** 15 49 05.5 -0.7
DOK **Doka** 70.20 288 P **P** 15 49 10.2 +0.1
SNR=41
DOK S **S** 15 58 15.8 -1.2
MSEY **Mahe Island** 70.27 263 P **P** 15 49 09.3 -1.4
MSEY **pP** 15 49 25.3 -1.7
MSEY **Mahe Island** 70.27 263 P **P** 15 49 10.3 -0.4
MSEY **Mahe Island** 70.27 263 P **P** 15 49 09.3 -1.4
MSEY *PP **pP** 15 49 25.3 -1.7
MSEY pmax pmax
comp=Z,154nm,1.5s
MSEY **Mahe Island** 70.27 263 P **P** 15 49 10.7 0.0
MSEY S **S** 15 58 17.2 -0.9
WHFO **Wadi Hawf** 70.53 287 P **P** 15 49 12.0 -0.2
SNR=42
WHFO S **S** 15 58 17.0 -4.0
MZR **Muzera** 70.90 292 *i* P **P** 15 49 14.8 +0.5
SNR=115
MZR **Muzera** 70.90 292 P **P** 15 49 14.8 +0.5
SNR=71
AKTO **Aktyubinsk** 71.16 322 LR LR 16 23 15.8
comp=Z,5µm,18.6s,baz=104,slow=38
AKTO **Aktyubinsk** 71.16 322 P **P** 15 49 14.3 -1.1
GHWR **Ruwais** 71.49 293 P **P** 15 49 18.4 +0.6
SVE **Sverdlovsk** 71.49 328 *d* *i*P **P** 15 49 16.4 -0.8
SVE *eS **S** 15 58 26.7 -4.0
SVE pmax pmax
comp=Z,224nm,1.5s
SPIA **Saint Paul Isl** 71.71 31 P **P** 15 49 19.8 +1.3
SPIA **Saint Paul Isl** 71.71 31 P **P** 15 49 19.1 +0.7
SPIA **Saint Paul Isl** 71.71 31 P **P** 15 49 19.7 +1.2
baz=251,SNR=14
SPIA S **S** 15 58 35.2 +2.0
baz=251
PAF **Port-aux-Franc** 72.50 214 P **P** 15 49 23.8 +0.5
PAF IAmb IAmb 15 49 44.5
comp=Z,436nm,1.8s
PAF **Port-aux-Franc** 72.50 214 P **P** 15 49 23.8 +0.5
PAF pmax pmax
comp=Z,436nm,1.8s
CASY **Casey** 72.51 186 P **P** 15 49 23.3 +0.3
CASY **Casey** 72.51 186 ⇑P **P** 15 49 24.2 +1.2
CASY **Casey** 72.51 186 P **P** 15 49 24.2 +1.2
ARTI **Arti** 72.55 328 LR LR 16 23 39.9
comp=Z,3µm,21.6s,baz=106,slow=38
ARTI **Arti** 72.55 328 P **P** 15 49 21.9 -1.6
ARTI IAmb IAmb 15 49 23.6
comp=Z,245nm,1.4s
ARTI **Arti** 72.55 328 *c* *i*P **P** 15 49 21.8 -1.7
ARTI 15 49 40.3
ARTI 15 52 01.8
ARTI PPP PPP 15 53 42.7
ARTI S **S** 15 58 42.6 -0.2
ARTI 15 59 38.6
ARTI SS **SS** 16 03 19.8 -3.0
ARTI pmax pmax
comp=Z,210nm,1.4s
ARTI MLR MLR
comp=Z,6µm,23.0s
ARTI **Arti** 72.55 328 P **P** 15 49 22.1 -1.4
DRV **Dumont d'Urvil** 72.92 174 P **P** 15 49 26.2 +0.7
LVA **Lava Point** 73.15 35 IAmb IAmb 15 49 28.6
comp=Z,308nm,1.1s
AKUT **Akutan** 73.30 35 P **P** 15 49 28.5 +0.6
GAMB **Gambell** 73.34 24 P **P** 15 49 28.3 +0.3
GAMB IAmb IAmb 15 49 30.2
comp=Z,185nm,1.0s
GAMB **Gambell** 73.34 24 P **P** 15 49 28.9 +0.9
baz=248
GAMB S **SKiKP** 15 58 52.7 -0.5
baz=248
GAMB **Gambell** 73.34 24 ⇑P **P** 15 49 28.9 +0.9
SAKB **Bahrain** 73.68 295 P **P** 15 49 31.1 +0.3
SAKB S **SKiKP** 15 58 55.3 +0.4
M11K **Mekoryuk** 74.68 29 IAmb IAmb 15 49 38.2
comp=Z,149nm,1.1s
M11K **Mekoryuk** 74.68 29 P **P** 15 49 37.4 +1.5
baz=254,SNR=40
M11K S **S** 15 59 10.1 +3.4
baz=254
FALS **False Pass** 74.80 35 P **P** 15 49 36.9 +0.2
FALS **False Pass** 74.80 35 P **P** 15 49 36.6 -0.1
baz=258,SNR=9.6
TNA **Tin City** 75.49 23 P **P** 15 49 40.9 +0.5
TNA **Tin City** 75.49 23 P **P** 15 49 41.0 +0.5
baz=251,SNR=42
TNA S **S** 15 59 15.2 -0.2
baz=251
KIP **Kipapa** 75.78 69 P **P** 15 49 45.0 +2.0
KIP IAmb IAmb 15 50 15.3
comp=Z,145nm,0.9s
KIP **Kipapa** 75.78 69 P **P** 15 49 45.0 +2.0
KIP pmax pmax
comp=Z,145nm,1.0s
HON **Honolulu** 75.79 70 P **P** 15 49 45.0 +1.9
HON **Honolulu** 75.79 70 P **P** 15 49 45.0 +1.9
HON pmax pmax
comp=Z,347nm,1.0s
K13K **Kusilvak Mount** 75.82 27 P **P** 15 49 42.8 +0.4
K13K IAmb IAmb 15 49 45.0
comp=Z,162nm,1.0s
K13K **Kusilvak Mount** 75.82 27 P **P** 15 49 43.7 +1.3
baz=255
K13K S **S** 15 59 20.8 +1.6
baz=255
DHH **Diamond Head** 75.98 70 P **P** 15 49 45.6 +1.4
DHH **Diamond Head** 75.98 70 P **P** 15 49 45.6 +1.4
M13K **Dall Lake** 76.06 29 IAmb IAmb 15 49 46.0
comp=Z,138nm,1.1s
M13K **Dall Lake** 76.06 29 P **P** 15 49 45.2 +1.4
baz=256,SNR=29
M13K S **S** 15 59 23.6 +1.7
baz=256
F14K **Arctic Creek** 76.09 24 P **P** 15 49 45.1 +1.1
baz=253
F14K S **S** 15 59 23.3 +1.1
baz=253
ANM **Nome** 76.22 25 P **P** 15 49 44.9 +0.2
ANM pP **pP** 15 50 03.6 +0.8
ANM **Nome** 76.22 25 P **P** 15 49 44.9 +0.2
ANM *PP **pP** 15 50 03.6 +0.8
ANM pmax pmax
comp=Z,70nm,1.0s
ANM **Nome** 76.22 25 P **P** 15 49 45.6 +0.9
baz=254,SNR=52
ANM S **S** 15 59 24.4 +0.8
baz=254
KBD **Kabd** 76.28 299 P **P** 15 49 45.6 -0.1
KBD S **S** 15 59 24.7 -0.8
J14K **Nanvaranak Lak** 76.52 27 P **P** 15 49 47.4 +1.0
baz=256
J14K S **S** 15 59 26.8 -0.1
baz=256
SDPT **Sand Point** 76.55 34 P **P** 15 49 47.0 +0.3
SDPT **Sand Point** 76.55 34 P **P** 15 49 46.2 -0.5
SDPT **Sand Point** 76.55 34 P **P** 15 49 46.8 +0.1
baz=260,SNR=13
SDPT S **S** 15 59 25.8 -1.7
baz=260
L14K **Kuka Creek** 76.59 28 P **P** 15 49 48.2 +1.4
baz=257
L14K S **S** 15 59 28.6 +0.9
baz=257
N14K **Kuskokwak Cree** 76.77 30 P **P** 15 49 48.9 +1.0
baz=258,SNR=64
N14K S **S** 15 59 29.5 -0.1
baz=258
M14K **Bethel** 76.80 29 P **P** 15 49 49.3 +1.3
baz=258,SNR=130
M14K S **S** 15 59 31.1 +1.0
baz=258
AKT **Akhty** 76.82 311 *e*P **P** 15 49 48.4 -0.3
AKT *e*PP **pP** 15 50 07.0 +0.9
AKT *e*SP **sP** 15 50 13.6 +0.5
AKT *e* 15 52 42.4
AKT *e*PPP PPP 15 54 32.6
AKT *eS **S** 15 59 28.2 -3.1
AKT *e*SS **ScS** 16 00 00.7 +0.7
AKT pmax pmax
comp=Z,172nm,1.4s
AKT MLR MLR
comp=Z,2µm,19.0s
F15K **North Star Dit** 76.83 24 P **P** 15 49 49.2 +1.1
baz=254
F15K S **S** 15 59 29.4 -0.9
baz=254
O14K **Tigyukauivet M** 76.84 30 IAmb IAmb 15 49 50.4

comp=Z,172nm,0.9s
O14K Tigyukauivet M 76.84 30 P **P** **15 49 49.2 +0.9**
baz=259
O14K S **S** **15 59 30.1 -0.4**
baz=259
G15K Niukluk 76.88 24 P **P** **15 49 48.9 +0.5**
baz=255
G15K S **S** **15 59 30.2 -0.6**
baz=255
CNBA Chernabura Isl 76.97 35 IAmb IAmb 15 49 50.7
comp=Z,171nm,1.0s
CHNA Chernabura Isl 76.97 35 P **P** **15 49 49.8 +0.7**
CHNA Chernabura Isl 76.97 35 P **P** **15 49 49.5 +0.4**
baz=261,SNR=10
CHNA S **S** **15 59 31.5 -0.6**
baz=261
MAK Makhachkala 77.10 313*c i*P **P** **15 49 49.5 -0.6**
MAK *e**PP **pP** **15 50 05.7 -1.9**
MAK *e**SP **pwP** **15 50 11.4 +1.5**
MAK *e* 15 52 40.2
MAK *e*PPP PPP 15 54 39.3
MAK *e*S **S** **15 59 33.5 -0.5**
MAK *e**SS **sS** **16 00 03.9 -1.0**
MAK pmax pmax
comp=Z,334nm,1.6s
S14K Fog Glacier 77.22 34 P **P** **15 49 50.6 0.0**
baz=261
S14K S **S** **15 59 32.3 -2.7**
baz=261
L15K Ungalak Mounta 77.22 28 P **P** **15 49 51.2 +0.8**
baz=258
L15K S **S** **15 59 34.4 -0.2**
baz=258
KHLH Kahului Airpor 77.27 70 P **P** **15 49 52.7 +1.3**
KHLH IAmb IAmb 15 50 35.7
comp=Z,303nm,1.3s
C16K Lisburne Hills 77.30 21 IAmb IAmb 15 49 52.7
comp=Z,178nm,1.1s
C16K Lisburne Hills 77.30 21 P **P** **15 49 51.3 +0.7**
baz=253
C16K S **S** **15 59 36.7 +1.5**
baz=253
XMAS Kiritimati 77.33 89 P **P** **15 49 53.9 +2.0**
XMAS IAmb IAmb 15 50 22.0
comp=Z,284nm,1.3s
K15K Wolf Creek Mou 77.33 27 IAmb IAmb 15 49 53.7
comp=Z,148nm,1.0s
K15K Wolf Creek Mou 77.33 27 P **P** **15 49 52.4 +1.4**
baz=258,SNR=92
K15K S **S** **15 59 37.0 +1.2**
baz=258
M15K Kasigluk River 77.40 29 P **P** **15 49 52.3 +0.8**
baz=259,SNR=106
M15K S **S** **15 59 35.9 -0.8**
baz=259
HLK Haleakala 77.44 70 P **P** **15 49 53.8 +1.1**
H16K Elim 77.54 25 P **P** **15 49 52.6 +0.5**
baz=257,SNR=139
H16K S **S** **15 59 38.3 +0.3**
baz=257
O15K Ungalikthiuk R 77.55 31 P **P** **15 49 53.1 +0.8**
baz=260,SNR=28
O15K S **S** **15 59 37.6 -0.7**
baz=260
N15K Kwethluk River 77.60 30 P **P** **15 49 53.7 +1.2**
baz=260,SNR=113
N15K S **S** **15 59 39.0 +0.2**
baz=260
G16K Koyuk River 77.67 24 P **P** **15 49 53.6 +0.8**
baz=256
G16K S **S** **15 59 39.7 +0.3**
baz=256
KIRV Kirov 77.76 329 LR LR 16 28 23.0
comp=Z,2µm,20.6s,baz=96,slow=39
KIRV Kirov 77.76 329*ce*P **P** **15 49 51.9 -1.5**
MHA Mahukona 77.78 71 P **P** **15 49 54.9 +0.6**
MHA Mahukona 77.78 71 P **P** **15 49 54.9 +0.6**
KHLU Kahalu`u 77.80 71 P **P** **15 49 55.0 +0.4**
KHLU IAmb IAmb 15 50 21.9
comp=Z,268nm,1.2s
CHGN Chignik 77.85 34 P **P** **15 49 53.8 -0.2**
baz=262,SNR=8.5
CHGN S **S** **15 59 39.0 -2.5**
baz=262
HUH Hualalai 77.85 71 P **P** **15 49 55.8 +0.8**
HUH IAmb IAmb 15 51 05.7
comp=Z,275nm,1.3s
BELG Belogornoye 77.91 322 P **P** **15 49 52.9 -1.4**
comp=Z,314nm,1.1s,baz=107,slow=3.3,SNR=13
BELG LR LR 16 26 38.1
comp=Z,3µm,20.8s,baz=92,slow=37
comp=Z,314nm,1.1s
BELG Belogornoye 77.91 322*c i*P **P** **15 49 53.0 -1.4**
BELG pmax pmax
comp=Z,78nm,1.1s
J16K Anvik River 77.95 26 IAmb IAmb 15 49 57.1
comp=Z,160nm,1.0s
J16K Anvik River 77.95 26 P **P** **15 49 55.8 +1.3**
baz=258
J16K S **S** **15 59 43.9 +1.4**
baz=258
D17K Noatak River 77.96 22 P **P** **15 49 55.6 +1.2**
baz=255,SNR=383
D17K S **S** **15 59 43.0 +0.6**
baz=255
DAH Dandelion 78.02 71 P **P** **15 49 56.4 +0.2**
I17K Unalakleet 78.04 26 IAmb IAmb 15 49 57.7
comp=Z,176nm,1.0s
I17K Unalakleet 78.04 26 P **P** **15 49 56.2 +1.4**
baz=258,SNR=50
I17K S **S** **15 59 43.7 +0.4**
baz=258
MWH Mokuaweoweo 78.08 71 P **P** **15 49 57.0 +0.3**
MWH IAmb IAmb 15 50 28.6
comp=Z,280nm,1.2s
MLOA Mauna Loa Obse 78.10 71 P **P** **15 49 56.4 -0.3**
RDOG Red Dog Mine 78.11 21 IAmb IAmb 15 49 57.5
comp=Z,178nm,1.2s
RDOG Red Dog Mine 78.11 21 P **P** **15 49 56.1 +0.8**
baz=255,SNR=48
RDOG S **S** **15 59 43.1 -1.0**
baz=255
C17K DeLong Mountai 78.12 21 P **P** **15 49 56.1 +0.8**
baz=255,SNR=112
C17K S **S** **15 59 42.6 -1.6**
baz=255
TRH Trail 78.13 71 P **P** **15 49 56.7 -0.1**
POHA Pohakuloa 78.14 71 P **P** **15 49 57.5 +0.9**
POHA IAmb IAmb 15 50 28.8
comp=Z,235nm,1.1s
L16K Owhat River 78.17 28 IAmb IAmb 15 49 58.1
comp=Z,189nm,0.9s
L16K Owhat River 78.17 28 P **P** **15 49 56.8 +1.1**
baz=260,SNR=119
L16K S **S** **15 59 44.8 0.0**
baz=260
RAYN Ar Rayn 78.24 293 P **P** **15 49 55.8 -1.1**
RAYN Ar Rayn 78.24 293 *i* P **P** **15 49 56.4 -0.5**
SNR=57
RAYN Ar Rayn 78.24 293 P **P** **15 49 55.8 -1.1**
RAYN pmax pmax
comp=Z,60nm,1.0s
RAYN Ar Rayn 78.24 293 P **P** **15 49 56.7 -0.2**
RAYN Ar Rayn 78.24 293 P **P** **15 49 56.5 -0.4**
E17K Hotham Inlet 78.28 22 P **P** **15 49 57.3 +1.2**
baz=256,SNR=228
E17K S **S** **15 59 46.5 +0.7**
baz=256
RAR Rarotonga 78.28 113 LR LR 16 22 51.8
comp=Z,305nm,19.9s,baz=282,slow=34
RAR Rarotonga 78.28 113 P **P** **15 49 57.9 +0.9**
RAR IAmb IAmb 15 50 27.8
comp=Z,378nm,1.9s
RAR Rarotonga 78.28 113 P **P** **15 49 57.9 +0.9**
RAR pmax pmax
comp=Z,379nm,1.9s
MLH Mauna Loa 78.28 71 P **P** **15 49 58.8 +1.3**
M16K Timber Creek 78.30 29 P **P** **15 49 57.0 +0.6**
M16K IAmb IAmb 15 49 58.8
comp=Z,225nm,0.9s
M16K Timber Creek 78.30 29 P **P** **15 49 57.5 +1.2**
baz=260
M16K S **S** **15 59 45.8 -0.5**
baz=260
N16K Nishlik Lake 78.30 29 P **P** **15 49 57.9 +1.5**
baz=261,SNR=84
N16K S **S** **15 59 47.1 +0.8**
baz=261
CPK Cone Peak 78.34 71 P **P** **15 49 56.5 -1.1**
F17K Baldwin Pennin 78.35 23 P **P** **15 49 57.6 +1.1**
baz=257
F17K S **S** **15 59 45.7 -0.9**
baz=257
G17K Kiwalik Mounta 78.39 24 P **P** **15 49 57.9 +1.1**
baz=258
G17K S **S** **15 59 47.2 +0.1**
baz=258
PUH Pauahi 78.45 71 IAmb IAmb 15 50 01.3
comp=Z,277nm,1.0s
P16K Nushagak River 78.47 31 IAmb IAmb 15 50 35.8
comp=Z,129nm,0.9s
P16K Nushagak River 78.47 31 P **P** **15 49 58.3 +1.0**
baz=262,SNR=16
P16K S **S** **15 59 48.9 +0.9**
baz=262
R16K Pilot Point 78.48 32 P **P** **15 49 57.6 +0.1**
baz=262
O16K Kokwok River B 78.50 30 IAmb IAmb 15 49 59.9
comp=Z,188nm,1.1s
O16K Kokwok River B 78.50 30 P **P** **15 49 58.5 +1.0**
baz=261
O16K S **S** **15 59 48.2 -0.2**
baz=261
STCH Steam Cracks 78.53 71 IAmb IAmb 15 50 01.6
comp=Z,189nm,0.9s
H17K Granite Mounta 78.58 25 IAmb IAmb 15 50 00.4
comp=Z,191nm,1.0s
H17K Granite Mounta 78.58 25 P **P** **15 49 59.0 +1.2**
baz=259
H17K S **S** **15 59 49.2 0.0**
baz=259
J17K VABM Dome 78.65 26 IAmb IAmb 15 50 01.0
comp=Z,128nm,0.9s
J17K VABM Dome 78.65 26 P **P** **15 49 59.6 +1.3**
baz=260
J17K S **S** **15 59 50.7 +0.7**
baz=260
L17K Donlin 78.79 28 P **P** **15 50 00.8 +1.7**
baz=261
L17K S **S** **15 59 52.6 +1.1**
baz=261
E18K Tukpahlearik C 78.82 22 IAmb IAmb 15 50 01.6
comp=Z,167nm,1.0s
E18K Tukpahlearik C 78.82 22 P **P** **15 50 00.4 +1.3**
baz=258
E18K S **S** **15 59 51.6 0.0**
baz=258
C18K Utukok River 78.87 21 P **P** **15 50 00.2 +0.7**
baz=257
C18K S **S** **15 59 50.8 -1.5**
baz=257
K17K Iditarod 78.88 27 P **P** **15 50 01.1 +1.5**
baz=261,SNR=176
K17K S **S** **15 59 53.1 +0.6**
baz=261
F18K Selawik 79.01 23 P **P** **15 50 00.9 +0.8**
baz=259,SNR=140
F18K S **S** **15 59 53.4 -0.2**
baz=259
GNI Garni 79.02 310 P **P** **15 50 00.4 -0.6**
comp=Z,87nm,1.3s,baz=246,slow=3.9,SNR=14
GNI LR LR 16 28 54.1
comp=Z,845nm,21.8s,baz=90,slow=39
comp=Z,87nm,1.3s
GNI Garni 79.02 310 P **P** **15 50 01.1 0.0**
GNI IAmb IAmb 15 50 03.5
comp=Z,495nm,1.9s
GNI Garni 79.02 310 P **P** **15 50 01.4 +0.4**
GNI Garni 79.02 310*c i*P **P** **15 50 01.3 +0.3**
GNI pmax pmax
comp=Z,231nm,1.6s
GNI Garni 79.02 310 P **P** **15 50 02.1 +1.1**
GNI Garni 79.02 310 P **P** **15 50 01.6 +0.6**
comp=Z,4µmcomp=Z,120nm,1.8s
O17K Koliganek Bris 79.02 30 P **P** **15 50 01.4 +1.0**
baz=262,SNR=60
O17K S **S** **15 59 54.8 +0.8**
baz=262
N17K Nushagak Hills 79.08 29 IAmb IAmb 15 50 03.6
comp=Z,162nm,1.1s
N17K Nushagak Hills 79.08 29 P **P** **15 50 02.4 +1.7**
baz=262,SNR=57
N17K S **S** **15 59 56.9 +2.2**
baz=262
M17K Holitna River 79.08 29 IAmb IAmb 15 50 03.7
comp=Z,201nm,1.1s
M17K Holitna River 79.08 29 P **P** **15 50 02.3 +1.6**
baz=262
M17K S **S** **15 59 55.1 +0.4**
baz=262
Q16K King Salmon 79.10 31 P **P** **15 50 00.6 -0.2**
baz=263,SNR=8.0
R17L Mt. Peulik Vol 79.13 32 P **P** **15 50 01.2 +0.1**
baz=263,SNR=21
PLK4 Peulik 4 79.14 32 IAmb IAmb 15 50 02.4
comp=Z,255nm,1.1s
H18K Honhosa River 79.27 25 IAmb IAmb 15 50 03.7
comp=Z,126nm,0.9s
H18K Honhosa River 79.27 25 P **P** **15 50 02.4 +0.7**
baz=260
H18K S **S** **15 59 56.1 -0.4**
baz=260
A19K Wainwright 79.28 19 P **P** **15 50 03.0 +1.5**
baz=257
A19K S **S** **15 59 56.4 0.0**
baz=257
G18K Tagagawik 79.28 24 P **P** **15 50 02.3 +0.6**
baz=260
G18K S **S** **15 59 55.3 -1.3**
baz=260
P17K Kvichak River 79.28 31 P **P** **15 50 02.6 +0.9**
baz=263,SNR=25
P17K S **S** **15 59 56.9 +0.2**
baz=263
CHIR Chirikof Islan 79.34 34 P **P** **15 50 03.8 +1.6**
CHIR Chirikof Islan 79.34 34 P **P** **15 50 03.3 +1.1**
baz=264,SNR=5.1
CHIR S **S** **15 59 60.0 +2.4**
baz=264
Q17K Contact Creek 79.46 32 P **P** **15 50 02.6 -0.3**
baz=264
C19K Lookout Ridge 79.54 21 IAmb IAmb 15 50 05.9
comp=Z,258nm,1.1s
C19K Lookout Ridge 79.54 21 P **P** **15 50 04.5 +1.4**
baz=258
C19K S **S** **15 59 58.5 -0.8**
baz=258
L18K Granite Mounta 79.55 28 IAmb IAmb 15 50 06.0
comp=Z,140nm,1.0s
L18K Granite Mounta 79.55 28 P **P** **15 50 04.9 +1.7**
baz=262,SNR=81
L18K S **S** **16 00 00.1 +0.5**
baz=262
J18K Innoko River 79.71 27 P **P** **15 50 04.9 +0.8**
baz=262
J18K S **S** **15 59 59.4 -1.9**
baz=262
N18K Kilae Creek 79.73 29 IAmb IAmb 15 50 07.1
comp=Z,270nm,1.6s
N18K Kilae Creek 79.73 29 P **P** **15 50 05.7 +1.4**
baz=263
N18K S **S** **16 00 02.1 +0.5**
baz=263
F19K Shaleruckik Mo 79.79 23 P **P** **15 50 04.8 +0.4**
baz=260,SNR=81
F19K S **S** **16 00 00.3 -1.6**
baz=260
GCSA Galena City Sc 79.83 25 P **P** **15 50 05.6 +1.0**
baz=262,SNR=90
GCSA S **S** **16 00 02.2 -0.1**
baz=262
M18K Stony River 79.86 29 P **P** **15 50 06.4 +1.5**
baz=263
M18K S **S** **16 00 03.4 +0.5**
baz=263
P18K Big Mountain, 79.92 31 P **P** **15 50 05.4 +0.1**
baz=264,SNR=12
P18K S **S** **16 00 02.0 -1.6**
baz=264
D19K Kuna River 79.95 21 IAmb IAmb 15 50 07.5
comp=Z,145nm,0.9s
D19K Kuna River 79.95 21 P **P** **15 50 06.2 +0.8**
baz=260
D19K S **S** **16 00 01.8 -1.9**
baz=260
G19K Purcell Mounta 79.95 24 IAmb IAmb 15 50 07.6
comp=Z,214nm,1.1s
G19K Purcell Mounta 79.95 24 P **P** **15 50 06.3 +1.0**
baz=261
G19K S **S** **16 00 02.5 -1.1**
baz=261
Q18K Katmai Hardscr 79.96 32 P **P** **15 50 05.3 -0.3**
baz=264,SNR=18
Q18K S **S** **16 00 00.6 -3.6**
baz=264
O18K Koktuh Hills 79.98 30 IAmb IAmb 15 50 08.1
comp=Z,324nm,1.1s
O18K Koktuh Hills 79.98 30 P **P** **15 50 06.7 +1.0**
baz=264,SNR=38
O18K S **S** **16 00 05.1 +0.9**
baz=264
E19K Redstone River 80.10 22 P **P** **15 50 07.3 +1.2**
baz=261,SNR=415
E19K S **S** **16 00 03.8 -1.4**
baz=261
H19K Roundabout Mou 80.12 24 P **P** **15 50 07.4 +1.2**
baz=262
H19K S **S** **16 00 05.2 -0.1**
baz=262
SII Sitkinak Islan 80.21 34 P **P** **15 50 08.7 +1.8**
SII Sitkinak Islan 80.21 34 P **P** **15 50 08.0 +1.1**
baz=265,SNR=7.4
J19K Poorman 80.26 26 IAmb IAmb 15 50 09.5
comp=Z,191nm,1.0s
J19K Poorman 80.26 26 P **P** **15 50 08.2 +1.1**
baz=263,SNR=195
J19K S **S** **16 00 07.3 +0.2**
baz=263
GEVA Gevas 80.29 308 IAmb IAmb 15 50 10.9
comp=Z,252nm,1.6s
KARS Kars 80.30 310 IAmb IAmb 15 50 31.5
comp=Z,475nm,1.8s
L19K White Mountain 80.40 28 IAmb IAmb 15 50 10.5
comp=Z,218nm,1.0s
L19K White Mountain 80.40 28 P **P** **15 50 09.0 +1.2**
baz=264
L19K S **S** **16 00 08.6 0.0**
baz=264
GOF Gofitskoye 80.42 315*c i*P **P** **15 50 07.5 -0.8**
ABPO Ambohimpanom 80.42 250 P **P** **15 50 08.1 -0.9**
ABPO Ambohimpanom 80.42 250 P **P** **15 50 08.1 -0.9**
ABPO pmax pmax
comp=Z,88nm,1.2s
ABPO Ambohimpanom 80.42 250 P **P** **15 50 08.2 -0.8**
N19K Bonanza Creek 80.44 29 IAmb IAmb 15 50 10.9
comp=Z,286nm,1.2s
N19K Bonanza Creek 80.44 29 P **P** **15 50 09.6 +1.4**
baz=264
N19K S **S** **16 00 10.0 +0.9**
baz=264
O19K Port Alsworth 80.46 30 IAmb IAmb 15 50 10.3
comp=Z,213nm,1.2s
O19K Port Alsworth 80.46 30 P **P** **15 50 09.0 +0.9**
baz=265,SNR=47
O19K S **S** **16 00 09.1 0.0**
baz=265
KBZ Khabaz 80.49 313 P **P** **15 50 08.1 -0.6**
comp=Z,34nm,1.2s,baz=94,slow=4.2,SNR=50
KBZ PKKPbc **PKKPbc** **16 08 49.8 -1.1**
comp=Z,1.6nm,0.8s,baz=89,slow=0.7,SNR=4.7
KBZ PKPPKP **P'P'df** **16 16 54.2 -0.6**
comp=Z,2.3nm,0.9s,baz=289,slow=2.2,SNR=4.2
KBZ LR LR 16 31 27.9
comp=Z,2µm,18.2s,baz=72,slow=40
comp=Z,34nm,1.2s
KBZ Khabaz 80.49 313*ce*P **P** **15 50 08.0 -0.6**
KBZ pmax pmax
comp=Z,122nm,1.6s
D20K Etivluk River 80.53 21 IAmb IAmb 15 50 10.8
comp=Z,274nm,1.1s
D20K Etivluk River 80.53 21 P **P** **15 50 09.4 +0.9**
baz=261
D20K S **S** **16 00 07.4 -2.3**
baz=261
B20K Meade River 80.55 20 IAmb IAmb 15 50 10.8
comp=Z,207nm,1.0s
B20K Meade River 80.55 20 P **P** **15 50 09.4 +1.0**
baz=260
B20K S **S** **16 00 08.9 -0.9**
baz=260
M19K Big River Lodg 80.59 28 IAmb IAmb 15 50 41.0
comp=Z,174nm,1.1s
M19K Big River Lodg 80.59 28 P **P** **15 50 10.3 +1.5**
baz=264
M19K S **S** **16 00 11.4 +0.9**
baz=264
CCD Concordia, Ant 80.61 180 P **P** **15 50 10.2 +1.1**
E20K Nigu River 80.62 22 P **P** **15 50 09.8 +0.9**
baz=262
E20K S **S** **16 00 09.6 -1.1**
baz=262
F20K Avaraart Lake 80.62 23 P **P** **15 50 10.0 +1.1**
baz=262
F20K S **S** **16 00 10.0 -0.6**
baz=262
KVAR Kislovodsk Arr 80.64 313 P **P** **15 50 09.9 +0.2**
comp=Z,4.7nm,0.6s,baz=90,slow=20
comp=Z,4.7nm,0.6s
KIV Kislovodsk 80.65 313 P **P** **15 50 08.9 -0.7**
KIV Kislovodsk 80.65 313 *i* P **P** **15 50 09.0 -0.7**
SNR=20
KIV Kislovodsk 80.65 313 *e*P **P** **15 50 08.8 -0.9**
KIV *e* 15 53 12.0
KIV *e*PPP PPP 15 55 03.5
KIV *e*S **S** **16 00 11.7 -0.3**
KIV *e*SS **SS** **16 05 26.4 +0.4**
KIV pmax pmax
comp=Z,61nm,1.1s
KIV pmax pmax
comp=Z,404nm,4.2s
KIV MLR MLR
comp=Z,2µm,19.0s
KIV Kislovodsk 80.65 313 P **P** **15 50 09.7 0.0**
SHA1 Shidzhatmaz 80.67 313*ce*P **P** **15 50 09.1 -0.8**
Q19K Cape Douglas, 80.69 31 IAmb IAmb 15 50 30.7
comp=Z,149nm,0.8s
Q19K Cape Douglas, 80.69 31 P **P** **15 50 09.2 -0.3**
baz=265
OHAK Old Harbor 80.75 33 P **P** **15 50 10.1 +0.4**
OHAK Old Harbor 80.75 33 IAmb IAmb 15 50 11.8
comp=Z,148nm,1.0s
OHAK Old Harbor 80.75 33 P **P** **15 50 10.7 +0.9**
baz=266,SNR=26
OHAK S **S** **16 00 11.3 -1.0**
baz=266
H20K Anotleneega Mo 80.76 25 P **P** **15 50 11.0 +1.3**
baz=263,SNR=250
H20K S **S** **16 00 12.3 +0.1**
baz=263
I20K Naaghedeneel 80.85 25 P **P** **15 50 11.7 +1.5**
baz=264,SNR=67
I20K S **S** **16 00 13.6 +0.5**
baz=264
K20K Telida 80.88 27 IAmb IAmb 15 50 13.2
comp=Z,201nm,1.0s
K20K Telida 80.88 27 P **P** **15 50 11.8 +1.4**
baz=264
K20K S **S** **16 00 14.1 +0.6**
baz=264
J20K Nowinta River 80.93 26 IAmb IAmb 15 50 13.3
comp=Z,189nm,1.0s
J20K Nowinta River 80.93 26 P **P** **15 50 12.1 +1.5**
baz=264
J20K S **S** **16 00 14.3 +0.4**
baz=264
A21K Barrow 80.94 19 P **P** **15 50 11.4 +0.9**
baz=261,SNR=33
A21K S **S** **16 00 13.4 -0.4**
baz=261
P19K Oil Pt 80.96 31 P **P** **15 50 10.8 0.0**
baz=266
GURO Guroymak-BITLI 81.09 308 IAmb IAmb 15 50 14.4
comp=Z,225nm,1.4s
KDAK Kodiak Island 81.17 32 LR LR 16 22 38.5
comp=Z,920nm,21.2s,baz=248,slow=33
KDAK Kodiak Island 81.17 32 P **P** **15 50 12.0 0.0**
KDAK IAmb IAmb 15 50 13.4
comp=Z,174nm,1.0s
KDAK Kodiak Island 81.17 32 P **P** **15 50 12.0 0.0**
KDAK pmax pmax
comp=Z,174nm,1.0s
KDAK Kodiak Island 81.17 32 P **P** **15 50 12.7 +0.7**
baz=266

KDAK S **S** **16 00 15.6 -1.0**
baz=266
KDAK Kodiak Island 81.17 32 P **P** **15 50 12.7 +0.7**
M20K Styx River 81.18 28 IAmb IAmb 15 50 14.8
comp=Z,204nm,0.9s
M20K Styx River 81.18 28 P **P** **15 50 13.4 +1.3**
baz=265
M20K S **S** **16 00 17.0 +0.1**
baz=265
RED Redoubt Volcan 81.24 30 IAmb IAmb 15 50 13.5
comp=Z,164nm,0.9s
C21K Knifeblade Rid 81.25 21 P **P** **15 50 13.3 +1.1**
baz=263
C21K S **S** **16 00 15.3 -1.8**
baz=263
IMAR Indian Mountai 81.28 24 P **P** **15 50 12.9 +0.4**
VOI Vohitsoka 81.30 247 P **P** **15 50 12.3 -1.2**
VOI IAmb IAmb 15 50 14.5
comp=Z,263nm,1.3s
VOI Vohitsoka 81.30 247 P **P** **15 50 13.4 -0.2**
SNR=11
ATD Arta Tunnel 81.32 281 LR LR 16 24 50.4
comp=Z,40nm,22.0s,baz=80,slow=34
ATD Arta Tunnel 81.32 281 P **P** **15 50 14.8 +1.1**
Q20K Shuyak Island 81.32 32 P **P** **15 50 13.1 +0.3**
baz=266,SNR=5.8
Q20K S **S** **16 00 15.5 -2.6**
baz=266
SYI Shuyak Island 81.32 32 IAmb IAmb 15 50 16.2
comp=Z,176nm,0.8s
B21K Ikpikpuk River 81.37 20 IAmb IAmb 15 50 15.3
comp=Z,216nm,0.9s
B21K Ikpikpuk River 81.37 20 P **P** **15 50 13.9 +1.1**
baz=263
B21K S **S** **16 00 16.9 -1.4**
baz=263
A22K Sinclair Lake 81.42 19 S **S** **16 00 17.8 -1.0**
baz=262
G21K Allakaket 81.43 24 IAmb IAmb 15 50 17.1
comp=Z,158nm,0.8s
G21K Allakaket 81.43 24 P **P** **15 50 14.3 +1.1**
baz=264
G21K S **S** **16 00 19.0 -0.1**
baz=264
E21K Killik River 81.46 22 IAmb IAmb 15 50 15.6
comp=Z,220nm,1.0s
E21K Killik River 81.46 22 P **P** **15 50 14.2 +0.8**
baz=264
E21K S **S** **16 00 17.5 -1.8**
baz=264
VRH Novokhopyorsk 81.48 321 *e*P **P** **15 50 12.1 -1.7**
VRH *e*S **S** **16 00 14.4 -5.7**
VRH pmax pmax
comp=Z,191nm,1.2s
VRH pmax pmax
comp=Z,300nm,1.3s
VRH smax smax
comp=N,300nm,2.2s
F21K Alatna River 81.51 23 P **P** **15 50 14.2 +0.5**
baz=264,SNR=99
F21K S **S** **16 00 18.1 -1.9**
baz=264
N20K Mount Spurr 81.57 29 P **P** **15 50 14.4 +0.2**
baz=266
N20K S **S** **16 00 19.0 -1.9**
baz=266
SPCR Spurr Chakacha 81.57 29 P **P** **15 50 14.5 +0.3**
baz=266,SNR=31
H21K Melozitna Rive 81.64 25 IAmb IAmb 15 50 17.0
comp=Z,175nm,1.0s
H21K Melozitna Rive 81.64 25 P **P** **15 50 15.7 +1.4**
baz=265
H21K S **S** **16 00 21.9 +0.6**
baz=265
SPU Mount Spurr 81.64 29 IAmb IAmb 15 50 16.0
comp=Z,162nm,1.2s
FOMA Nahampoana Res 81.66 244 P **P** **15 50 15.2 0.0**
FOMA IAmb IAmb 15 50 16.8
comp=Z,321nm,1.5s
FOMA Nahampoana Res 81.66 244 P **P** **15 50 15.7 +0.5**
PPLA Purkeypile 81.69 27 P **P** **15 50 15.6 +0.7**
baz=266
PPLA S **S** **16 00 20.8 -1.4**
baz=266
CHUM Lake Minchumin 81.71 26 P **P** **15 50 16.0 +1.3**
baz=266
CHUM S **S** **16 00 21.2 -0.7**
baz=266
HOM Homer 81.76 31 IAmb IAmb 15 50 35.2
comp=Z,176nm,0.8s
HOM Homer 81.76 31 P **P** **15 50 14.9 -0.2**
baz=267
B22K Teshekpuk Lake 81.86 20 IAmb IAmb 15 50 17.6
comp=Z,228nm,1.1s
B22K Teshekpuk Lake 81.86 20 P **P** **15 50 16.3 +1.0**
baz=264
B22K S **S** **16 00 22.1 -1.2**
baz=264
SKT Skwentna 81.94 28 IAmb IAmb 15 50 17.2
comp=Z,258nm,1.1s
SKT Skwentna 81.94 28 P **P** **15 50 15.8 -0.2**
baz=267,SNR=123
I21K Tanana 81.94 25 IAmb IAmb 15 50 18.6
comp=Z,200nm,0.9s
I21K Tanana 81.94 25 P **P** **15 50 17.3 +1.4**
baz=266,SNR=248
I21K S **S** **16 00 24.3 -0.1**
baz=266
CNPM China Poot 81.96 31 IAmb IAmb 15 50 16.9
comp=Z,179nm,1.0s
F22K John River 82.04 23 P **P** **15 50 17.8 +1.4**
baz=265
F22K S **S** **16 00 25.0 -0.3**
baz=265
CAPN Captain Cook N 82.06 30 P **P** **15 50 17.7 +1.1**
baz=267,SNR=12
BRLK Bradley Lake 82.15 31 IAmb IAmb 15 50 21.3
comp=Z,244nm,1.0s
BRSE Bradley Lake S 82.22 31 P **P** **15 50 17.8 +0.2**
baz=268,SNR=41
BRSE S **S** **16 00 25.0 -2.5**
baz=268
E22K Anaktuvuk Pass 82.23 22 IAmb IAmb 15 50 20.0
comp=Z,156nm,1.0s
E22K Anaktuvuk Pass 82.23 22 P **P** **15 50 18.8 +1.3**
baz=266,SNR=212
E22K S **S** **16 00 26.2 -1.1**
baz=266
ERBR Yeremizino-Bor 82.23 315 *e*P **P** **15 50 16.6 -1.3**
ERBR pmax pmax
comp=Z,108nm,1.2s
H22K Ishtalitna Cre 82.24 24 IAmb IAmb 15 50 42.2
comp=Z,132nm,1.0s
H22K Ishtalitna Cre 82.24 24 P **P** **15 50 19.1 +1.5**
baz=266,SNR=107
H22K S **S** **16 00 28.1 +0.6**
baz=266
BPAW Bear Paw Mtn. 82.30 26 P **P** **15 50 18.6 +0.7**
baz=267,SNR=144
KTH Kantishna Hill 82.31 27 P **P** **15 50 17.8 -0.1**
MLY Manley 82.46 25 IAmb IAmb 15 50 21.0
comp=Z,204nm,1.1s
MLY Manley 82.46 25 P **P** **15 50 19.6 +0.9**
baz=267,SNR=87
CUT Chulitna 82.55 28 P **P** **15 50 19.2 0.0**
baz=268,SNR=25
VSLR Vesyoloye 82.57 313 *c i*P **P** **15 50 18.0 -1.7**
VSLR pmax pmax
comp=Z,217nm,1.8s
TRF Thorofare Moun 82.58 27 P **P** **15 50 19.7 +0.1**
baz=268,SNR=102
M22K Willow 82.60 29 P **P** **15 50 19.0 -0.4**
baz=268
D23K Nanushuk River 82.70 21 IAmb IAmb 15 50 22.2
comp=Z,220nm,1.2s
D23K Nanushuk River 82.70 21 P **P** **15 50 21.4 +1.6**
baz=267
O22K Cooper Landing 82.75 30 P **P** **15 50 20.5 +0.3**
baz=269,SNR=72
RC01 Rabbit Creek A 82.76 29 P **P** **15 50 20.4 +0.1**
baz=268,SNR=83
C23K Itkillik River 82.77 20 IAmb IAmb 15 50 22.6
comp=Z,152nm,0.9s
C23K Itkillik River 82.77 20 P **P** **15 50 21.3 +1.1**
baz=266,SNR=152
COLD Coldfoot 82.79 23 IAmb IAmb 15 50 43.4
comp=Z,127nm,1.0s
COLD Coldfoot 82.79 23 P **P** **15 50 21.7 +1.4**
baz=267,SNR=124
SOC Sochi 82.80 313 *e*P **P** **15 50 18.8 -2.1**
SOC *e**PP **pP** **15 50 35.6 -3.1**
SOC *e* 15 53 32.0
SOC *e*PPP PPP 15 55 21.8
SOC *e*S **S** **16 00 36.6 +2.6**
SOC *e*SSS SSS 16 09 16.6
SOC pmax pmax
comp=Z,41nm,1.8s
SOC MLR MLR
comp=Z,3µm,19.0s
G23K Bananza Creek 82.83 24 P **P** **15 50 21.9 +1.3**
baz=268
SEW Seward 82.88 30 P **P** **15 50 21.2 +0.3**
baz=269,SNR=63
KLMR Klimovskoe 82.95 331 *e*P **P** **15 50 19.5 -1.8**
KLMR S **S** **16 00 34.5 -0.3**
KLMR pmax pmax
comp=Z,384nm,1.4s
KLMR MLR MLR
comp=Z,4µm,18.0s
VORD Divnogorie 83.01 321 *e*P **P** **15 50 18.7 -3.1**
VORD pmax pmax
comp=Z,60nm,1.1s
E23K Chandalar 83.05 22 P **P** **15 50 23.3 +1.5**
baz=268
I23K Minto, Yukon-K 83.05 25 P **P** **15 50 22.7 +1.0**
baz=268,SNR=194
VORR Voronezh 83.06 321 *e*P **P** **15 50 21.2 -0.8**
VORR pmax pmax
comp=Z,84nm,0.4s
PMR Palmer 83.07 29 P **P** **15 50 21.3 -0.5**
PMR Palmer 83.07 29 P **P** **15 50 21.9 0.0**
baz=269,SNR=127
TOLK Toolik Lake Re 83.08 22 P **P** **15 50 23.1 +1.2**
baz=268,SNR=154
VSR Storozhevoye 83.09 321 *e*P **P** **15 50 18.3 -3.9**
VSR pmax pmax
comp=Z,40nm,1.1s
VSR MLR MLR
comp=Z,3µm,22.0s
NEA2 Nenana 83.16 26 P **P** **15 50 22.4 +0.1**
baz=269,SNR=102
GHO Glory Hole Cre 83.17 29 IAmb IAmb 15 50 26.4
comp=Z,176nm,1.2s
MCK McKinley 83.20 27 P **P** **15 50 22.8 +0.2**
baz=269,SNR=197
RND Reindeer 83.23 27 IAmb IAmb 15 50 23.9
comp=Z,216nm,1.0s
LPSR Galich'ya Gora 83.23 322 *e*P **P** **15 50 21.0 -1.9**
LPSR *e*S **S** **16 00 36.6 -1.3**
LPSR pmax pmax
comp=Z,700nm,1.7s
LPSR pmax pmax
comp=Z,149nm,1.5s
LPSR smax smax
comp=N,400nm,5.0s
WAT1 Susitna Watana 83.36 27 P **P** **15 50 23.3 -0.1**
baz=269
D24K Happy Valley 83.37 21 IAmb IAmb 15 50 26.1
comp=Z,186nm,0.9s
D24K Happy Valley 83.37 21 P **P** **15 50 24.6 +1.3**
baz=268
KNK Knik Glacier 83.39 29 P **P** **15 50 24.2 +0.6**
baz=270,SNR=131
C24K Franklin Bluff 83.43 20 P **P** **15 50 24.5 +0.9**
baz=268
SML Sawmill 83.45 29 P **P** **15 50 24.2 +0.3**
baz=270,SNR=88
E24K Your Creek 83.47 22 IAmb IAmb 15 50 26.5
comp=Z,142nm,1.1s
E24K Your Creek 83.47 22 P **P** **15 50 24.9 +1.0**
baz=269
ADZR Andozero 83.57 334 *e*P **P** **15 50 21.4 -3.0**
ADZR S **SKSac** **16 00 33.8 -7.2**
ADZR pmax pmax
comp=Z,178nm,1.6s
ADZR MLR MLR
comp=Z,5µm,22.0s
H24K Noodor Dome 83.68 24 IAmb IAmb 15 50 28.7
comp=Z,230nm,1.0s
H24K Noodor Dome 83.68 24 P **P** **15 50 26.2 +1.2**
baz=270,SNR=335
COLA College 83.68 25 P **P** **15 50 24.5 -0.4**
COLA College 83.68 25 P **P** **15 50 24.2 -0.7**
COLA IAmb IAmb 15 50 27.1
comp=Z,143nm,0.9s
COLA College 83.68 25 *c i*P **P** **15 50 24.3 -0.7**
COLA pmax pmax
comp=Z,147nm,0.9s
COLA College 83.68 25 P **P** **15 50 24.6 -0.3**
baz=270
COLA College 83.68 25 P **P** **15 50 24.9 0.0**
F24K Squaw Lake 83.69 23 IAmb IAmb 15 50 27.9
comp=Z,205nm,1.1s
F24K Squaw Lake 83.69 23 P **P** **15 50 26.4 +1.3**
baz=269
WAT6 Susitna Watana 83.73 28 P **P** **15 50 25.7 +0.2**
baz=270,SNR=168
M23K Glacier View 83.74 29 P **P** **15 50 25.6 +0.3**
baz=270,SNR=58
G24K Hadweenzic Riv 83.84 24 P **P** **15 50 27.0 +1.2**
baz=270
POKR Poker Plat Res 83.86 25 P **P** **15 50 25.4 -0.5**
baz=270
DHY Denali Highway 83.89 27 IAmb IAmb 15 50 31.6
comp=Z,88nm,0.8s
DHY Denali Highway 83.89 27 P **P** **15 50 26.3 0.0**
baz=270,SNR=73
P23K Montague Islan 83.91 30 P **P** **15 50 27.0 +0.8**
baz=271,SNR=29
SCM Sheep Creek Mo 83.93 28 P **P** **15 50 26.9 +0.5**
baz=270,SNR=49
MOS Moscow 83.95 325 *e*P **P** **15 50 24.3 -2.2**
MOS *e**PP **pP** **15 50 45.1 +1.1**
MOS *e*S S 16 00 35.4 -10
MOS pmax pmax
comp=Z,1µm,2.5s
MOS pmax pmax
comp=Z,355nm,1.6s
MOS MLR MLR
comp=E,5µm,21.0s
MOS MLR MLR
comp=Z,6µm,21.0s
ARPR Arapgir-MALATY 83.97 309 IAmb IAmb 15 50 29.6
comp=Z,386nm,1.7s
GLI Glacier Island 84.05 29 P **P** **15 50 27.2 +0.3**
baz=271,SNR=70
HDA Harding Lake 84.07 26 P **P** **15 50 26.5 -0.5**
baz=271,SNR=227
IL31 84.10 26 IAmb IAmb 15 50 30.5
comp=Z,99nm,0.8s
ILAR Eielson Array 84.10 26 P **P** **15 50 25.8 -1.3**
comp=Z,81nm,0.8s,baz=317,slow=4.6,SNR=280
ILAR PKKPbc **PKKPbc** **16 08 40.6 -3.0**
comp=Z,1.7nm,1.0s,baz=74,slow=1.3,SNR=8.5
ILAR PKPPKP **P'P'df** **16 16 44.6 -2.6**
comp=Z,0.7nm,0.9s,baz=138,slow=1.8,SNR=5.0
ILAR LR LR 16 29 21.2
comp=Z,902nm,20.4s,baz=236,slow=37
comp=Z,81nm,0.8s
D25K Kavik River 84.25 21 IAmb IAmb 15 50 30.2
comp=Z,234nm,1.1s
D25K Kavik River 84.25 21 P **P** **15 50 28.8 +1.0**
baz=271
G25K Bearman Lake 84.39 23 P **P** **15 50 30.0 +1.5**
baz=271,SNR=129
ANN Anapa 84.41 314 *e*P **P** **15 50 27.0 -2.0**
ANN *e**PP **pP** **15 50 43.8 -3.1**
ANN *e*S **SKSac** **16 00 45.4 -1.8**
ANN pmax pmax
comp=Z,168nm,1.2s
Q23K Middleton Isla 84.45 31 P **P** **15 50 30.0 +1.0**
baz=272
M24K Tolsona, Glenn 84.47 28 P **P** **15 50 30.0 +0.9**
baz=272,SNR=56
M24K S **SKSac** **16 00 50.7 +3.6**
baz=272
F25K Christian Rive 84.55 23 IAmb IAmb 15 50 32.4
comp=Z,131nm,1.0s
F25K Christian Rive 84.55 23 P **P** **15 50 30.9 +1.5**
baz=271
E25K Arctic Village 84.56 22 P **P** **15 50 30.9 +1.4**
baz=271,SNR=236
E25K S **SKSac** **16 00 51.6 +4.2**
baz=271
OBN Obninsk 84.57 325 P **P** **15 50 28.2 -1.4**
comp=Z,150nm,1.1s,baz=60,slow=1.8,SNR=56
OBN LR LR 16 30 23.2
comp=Z,6µm,21.5s,baz=81,slow=37
comp=Z,150nm,1.1s
OBN Obninsk 84.57 325 ⇓P **P** **15 50 28.5 -1.2**
OBN Obninsk 84.57 325 P **P** **15 50 27.8 -1.8**
OBN Obninsk 84.57 325 *c i*P **P** **15 50 28.2 -1.4**
OBN *e* 15 53 41.6
OBN *e*PPP PPP 15 55 38.8
OBN *i* S **S** **16 00 55.6 +4.3**
OBN *e*SSS SSS 16 09 52.1
OBN pmax pmax
comp=Z,278nm,1.3s
OBN MLR MLR
comp=Z,6µm,21.0s
K24K Donnelly Dome 84.60 26 P **P** **15 50 29.8 +0.1**
baz=272
KLU Klutina 84.60 29 IAmb IAmb 15 51 21.5
comp=Z,134nm,1.3s
KLU Klutina 84.60 29 P **P** **15 50 30.5 +0.7**
baz=272,SNR=38
KLU S **SKSac** **16 00 51.4 +3.4**
baz=272
PRP Porcupine Dome 84.66 25 P **P** **15 50 29.4 -0.7**
baz=272,SNR=69
PRP S **SKSac** **16 00 52.4 +4.1**
baz=272
EYAK Cordova Ski Ar 84.72 30 P **P** **15 50 31.4 +1.1**
EYAK Cordova Ski Ar 84.72 30 IAmb IAmb 15 50 32.6
comp=Z,163nm,1.1s
EYAK Cordova Ski Ar 84.72 30 P **P** **15 50 31.1 +0.8**
baz=272,SNR=23
EYAK S **SKSac** **16 00 53.1 +4.6**
baz=272
C26K Camden Bay 84.75 20 P **P** **15 50 32.1 +1.8**
baz=272,SNR=296
J25K Salcha River, 84.75 26 IAmb IAmb 15 50 34.0
comp=Z,79nm,0.8s
J25K Salcha River, 84.75 26 P **P** **15 50 29.8 -0.7**
baz=272
PAX Paxson 84.77 27 IAmb IAmb 15 50 32.6
comp=Z,151nm,1.1s
PAX Paxson 84.77 27 P **P** **15 50 31.1 +0.5**
baz=272,SNR=99
PAX S **SKSac** **16 00 51.5 +2.5**
baz=272
GAZ Gaziantep 84.95 307 IAmb IAmb 15 50 33.6
comp=Z,159nm,1.2s
BMAR Burnt Mountain 84.96 23 P **P** **15 50 33.0 +1.5**
MAW Mawson 84.97 200 P **P** **15 50 31.9 +0.6**
comp=Z,25nm,0.8s,baz=136,slow=4.8,SNR=29
comp=Z,25nm,0.8s
MAW Mawson 84.97 200 P **P** **15 50 31.4 +0.1**
MAW Mawson 84.97 200 P **P** **15 50 31.4 +0.1**
MAW pmax pmax
comp=Z,16nm,1.2s
LVZ Lovozero 84.99 338 P **P** **15 50 31.6 0.0**
LVZ IAmb IAmb 15 52 25.7
comp=Z,293nm,2.0s
LVZ Lovozero 84.99 338 P **P** **15 50 31.6 0.0**
LVZ pmax pmax
comp=Z,293nm,2.0s
RIDG Independent Ri 85.02 27 P **P** **15 50 31.8 0.0**
baz=272,SNR=86
F26K Sheenjek River 85.12 23 P **P** **15 50 33.7 +1.4**
baz=273
F26K S **S** **16 00 57.0 +0.6**
baz=273
C27K Jago River 85.18 21 P **P** **15 50 33.8 +1.3**
baz=273
C27K S **SKSac** **16 00 56.3 +5.1**
baz=273
N25K Chitina, Valde 85.23 29 IAmb IAmb 15 50 35.2
comp=Z,116nm,1.1s
N25K Chitina, Valde 85.23 29 P **P** **15 50 33.7 +0.7**
baz=273,SNR=44
N25K S **SKSac** **16 00 57.1 +5.1**
baz=273
RAGM Ragged Mountai 85.26 30 IAmb IAmb 15 51 01.2
comp=Z,219nm,1.2s
BMRM Bremner River 85.26 29 IAmb IAmb 15 50 35.1
comp=Z,151nm,1.1s
BMRM Bremner River 85.26 29 P **P** **15 50 33.6 +0.5**
baz=273,SNR=44
BMRM S **S** **16 00 58.0 -0.1**
baz=273
G26K Porcupine Rive 85.30 23 IAmb IAmb 15 50 36.0
comp=Z,191nm,1.1s
G26K Porcupine Rive 85.30 23 P **P** **15 50 34.4 +1.3**
baz=273,SNR=135
TOKA Tokat 85.34 310 IAmb IAmb 15 50 35.1
comp=Z,124nm,1.2s
SCRK Sand Creek 85.39 26 P **P** **15 50 34.0 +0.3**
baz=273,SNR=63
SCRK S **SKSac** **16 00 57.5 +4.5**
baz=273
KAIM Kayak Island 85.41 30 P **P** **15 50 34.9 +1.1**
baz=273,SNR=23
KAIM S **S** **16 01 01.1 +1.6**
baz=273
APA Apatity 85.48 337 ⇓*i*P **P** **15 50 31.3 -2.6**
APA *i* 15 53 47.7
APA pmax pmax
comp=Z,23nm,1.1s
ASF Jabal al Asfar 85.51 302 P **P** **15 50 35.2 +0.2**
comp=Z,73nm,1.1s,baz=97,slow=1.2,SNR=63
ASF LR LR 16 36 23.5
comp=Z,638nm,18.3s,baz=78,slow=41
comp=Z,73nm,1.1s
VNDA Vanda 85.51 172 P **P** **15 50 34.5 +0.6**
comp=Z,17nm,0.9s,baz=300,slow=5.4,SNR=45
VNDA PKKPbc **PKKPbc** **16 08 39.4 -1.6**
comp=Z,0.9nm,0.7s,baz=338,slow=3.0,SNR=4.1
comp=Z,17nm,0.9s
VNDA Vanda 85.51 172 P **P** **15 50 34.1 +0.2**
VNDA Vanda 85.51 172 P **P** **15 50 34.1 +0.2**
VNDA pmax pmax
comp=Z,76nm,1.2s
VNDA Vanda 85.51 172 P **P** **15 50 34.8 +0.9**
MENT Mentasta 85.57 27 P **P** **15 50 35.4 +0.8**
GLB Gilahina Butte 85.62 29 IAmb IAmb 15 51 01.8
comp=Z,123nm,1.1s
I26K Coal Creek Min 85.66 25 P **P** **15 50 35.4 +0.5**
baz=274
I26K S **S** **16 01 01.0 -0.7**
baz=274
SUCK Suckling Hills 85.72 30 IAmb IAmb 15 51 35.4
comp=Z,207nm,1.3s
L26K Log Cabin Wild 85.73 27 P **P** **15 50 36.2 +0.8**
baz=274,SNR=25
L26K S **S** **16 01 02.7 +0.1**
baz=274
BERG Berg Lake 85.74 30 IAmb IAmb 15 50 37.8
comp=Z,163nm,1.0s
BNN Bunyan 85.92 308 P **P** **15 50 35.9 -1.0**
BNN IAmb IAmb 15 50 37.9
comp=Z,154nm,1.3s
M26K Nabesna, AK 85.94 28 P **P** **15 50 36.9 +0.4**
baz=274
M26K S **S** **16 01 04.5 -0.2**
baz=274
BGLC Bering Glacier 85.97 30 P **P** **15 50 37.7 +1.3**
baz=274
CRQM Cirque 85.99 29 IAmb IAmb 15 51 07.0
comp=Z,86nm,0.9s
MCARA McCarthy VSAT 86.00 29 IAmb IAmb 15 51 54.4
comp=Z,139nm,1.3s
MCARA McCarthy VSAT 86.00 29 P **P** **15 50 37.2 +0.5**
baz=274,SNR=15
MCARA S **S** **16 01 04.6 -0.7**
baz=274
CRQE Cirque 86.02 29 P **P** **15 50 37.3 +0.4**
baz=274,SNR=31
CRQE S **S** **16 01 05.0 -0.6**
baz=274
E27K Coleen River 86.05 22 IAmb IAmb 15 51 32.7
comp=Z,116nm,1.2s
E27K Coleen River 86.05 22 P **P** **15 50 37.8 +1.0**
baz=275
E27K S **S** **16 01 05.5 0.0**
baz=275
TGL Tana Glacier 86.14 29 IAmb IAmb 15 51 00.7
comp=Z,82nm,0.8s
G27K Doyon Strip 86.15 23 P **P** **15 50 38.5 +1.2**
baz=275
G27K S **S** **16 01 08.1 +1.5**
baz=275
D27M Malcolm River 86.17 21 P **P** **15 50 38.4 +0.9**

baz=276
D27M S S 16 01 06.3 -0.5
baz=276
K27K Chicken 86.22 26 IAmb IAmb 15 50 40.8
comp=Z,137nm,1.0s
H27K Steamboat Moun 86.25 24 P **P** **15 50 38.9 +1.0**
baz=275
H27K S **S** **16 01 10.0 +2.3**
baz=275
I27K Kandik River 86.27 25 P **P** **15 50 38.8 +0.8**
baz=275,SNR=247
I27K S **S** **16 01 09.2 +1.4**
baz=275
L27K Beaver Creek, 86.42 27 P **P** **15 50 39.6 +0.9**
baz=275
L27K S **S** **16 01 10.8 +1.4**
baz=275
SBA Scott Base 86.44 172 P **P** **15 50 39.3 +0.9**
SBA IAmb IAmb 15 51 32.0
comp=Z,134nm,1.3s
SBA Scott Base 86.44 172 P **P** **15 50 39.3 +0.9**
SBA pmax pmax
comp=Z,134nm,1.3s
SBA Scott Base 86.44 172 P **P** **15 50 38.3 -0.1**
BCAR Beaver Creek A 86.44 27 P **P** **15 50 38.9 0.0**
M27K Edge Creek, AK 86.46 28 P **P** **15 50 39.5 +0.4**
baz=275
M27K S **S** **16 01 10.7 +0.7**
baz=275
MESA MESA 86.63 30 IAmb IAmb 15 51 11.5
comp=Z,115nm,1.2s
MESA MESA 86.63 30 P **P** **15 50 40.8 +0.7**
baz=275,SNR=8.8
MESA S **S** **16 01 13.3 +1.6**
baz=275
GRNC Granite Creek 86.67 29 IAmb IAmb 15 51 07.8
comp=Z,78nm,0.9s
BARN Barnard Glacie 86.69 29 IAmb IAmb 15 50 44.9
comp=Z,80nm,0.7s
GHAJ Ghor Haditha 86.70 301 IAmb IAmb 15 50 42.2
comp=Z,139nm,1.2s
MMAI Mount Meron Ar 86.71 303 P **P** **15 50 40.6 -0.3**
comp=Z,36nm,1.1s,baz=150,slow=8.9,SNR=18
MMAI LR LR 16 33 46.8
comp=Z,1µm,21.8s,baz=76,slow=39
comp=Z,36nm,1.1s
SIM Simferopol' 86.75 315 *e*P **P** **15 50 39.1 -1.6**
SIM *e* 15 54 02.5
SIM *e*S **S** **16 01 08.8 -4.4**
SIM pmax pmax
comp=Z,65nm,1.1s
SIM pmax pmax
comp=Z,183nm,13.6s
F28M Old Crow 86.75 22 IAmb IAmb 15 50 42.9
comp=Z,128nm,0.9s
F28M Old Crow 86.75 22 P **P** **15 50 40.6 +0.3**
baz=277,SNR=194
F28M S **S** **16 01 12.9 +0.5**
baz=277
E28M Babbage River 86.76 21 IAmb IAmb 15 50 43.8
comp=Z,70nm,0.8s
E28M Babbage River 86.76 21 P **P** **15 50 40.9 +0.6**
baz=277
E28M S **S** **16 01 11.5 -0.9**
baz=277
CTG Chitna Glacier 86.85 29 P **P** **15 50 41.8 +0.8**
baz=276,SNR=92
CTG S **S** **16 01 14.6 +0.8**
baz=276
BVCY Beaver Creek 86.93 28 P **P** **15 50 42.1 +0.9**
baz=276
BVCY S **S** **16 01 15.7 +1.5**
baz=276
D28M Stokes Point 86.95 21 P **P** **15 50 41.8 +0.7**
baz=278
D28M S **S** **16 01 14.1 0.0**
baz=278
I28M Miner Creek 86.99 25 IAmb IAmb 15 50 44.3
comp=Z,139nm,0.9s
I28M Miner Creek 86.99 25 P **P** **15 50 42.2 +0.6**
baz=277
I28M S **S** **16 01 16.1 +1.2**
baz=277
YUK3 Moose Creek 87.19 28 P **P** **15 50 43.1 +0.3**
baz=276,SNR=23
YUK3 S **S** **16 01 19.5 +2.4**
baz=276
PPT Papeete 87.25 108 LR LR 16 26 29.7
comp=Z,841nm,19.5s,baz=264,slow=33
PPT2 Papeete2 87.25 108 *e*PKIKP **P** **15 50 45.4 +1.7**
comp=Z,84nm,1.3s
PPT2 *e*PP **PP** **15 54 04.1 -4.6**
comp=Z,326nm,25.2s
PPT2 *e*S **S** **16 01 17.4 -1.7**
comp=Z,3µm,28.5s
PPT2 *e*SS **SS** **16 07 04.2 -0.6**
comp=Z,3µm,33.5s
PPT2 *e*LQ LQ 16 14 33.7
comp=Z,3µm,28.8s
PPT2 *e*LR LR 16 18 24.6
comp=Z,7µm,34.2s
PPT2 *e*LR LR 16 18 32.3
comp=Z,13µm,33.0s
PAE Paea 87.26 108 *e*PKIKP **P** **15 50 46.5 +2.8**
comp=Z,20nm,1.0s
PAE *e*LR LR 16 18 20.2
comp=Z,1µm,27.4s
PPTF Pamatai, Papee 87.26 108 P **P** **15 50 46.8 +3.0**
KIBK Kibwezi 87.29 267 P **P** **15 50 44.0 -0.1**
KIBK Kibwezi 87.29 267 P **P** **15 50 42.5 -1.6**
KIBK Kibwezi 87.29 267 P **P** **15 50 44.4 +0.3**
SNR=23
EIL Elat 87.37 299 P **P** **15 50 43.5 -0.5**
comp=Z,50nm,1.1s,baz=76,slow=2.0,SNR=41
comp=Z,50nm,1.1s
E29M Blow River 87.39 22 IAmb IAmb 15 51 16.6
comp=Z,154nm,1.9s
E29M Blow River 87.39 22 P **P** **15 50 43.4 +0.1**
baz=278
E29M S **S** **16 01 17.5 -0.8**
baz=278
KIRS Kirsehir-Merke 87.40 309 ⇓P **P** **15 50 43.0 -1.1**
O28M Mount Upton 87.43 29 IAmb IAmb 15 50 49.4
comp=Z,71nm,0.9s
O28M Mount Upton 87.43 29 P **P** **15 50 44.5 +0.5**
baz=277
O28M S **S** **16 01 21.0 +1.3**
baz=277
TIAR Tiarei 87.47 108 *e*PKIKP **P** **15 50 47.5 +2.8**
comp=Z,77nm,0.8s
PINM Pinnacle 87.48 30 P **P** **15 50 44.4 +0.4**
baz=277,SNR=16
PINM S **S** **16 01 21.9 +2.1**
baz=277
H29M Whitestone 87.52 24 IAmb IAmb 15 50 46.0
comp=Z,92nm,0.9s
H29M Whitestone 87.52 24 P **P** **15 50 44.2 +0.1**
baz=278
H29M S **S** **16 01 19.8 0.0**
baz=278
BR131 Keskin Array S 87.56 309 *i* P **P** **15 50 43.0 -1.9**
BR131 Keskin Array S 87.56 309 P **P** **15 50 43.8 -1.1**
SNR=18
BRTR Keskin Array B 87.56 309 P **P** **15 50 43.5 -1.4**
comp=Z,20nm,0.9s,baz=117,slow=4.3,SNR=40
BRTR PKKPbc **PKKPbc** **16 08 33.6 -0.9**
comp=Z,1.6nm,1.0s,baz=155,slow=3.5,SNR=4.1
BRTR LR LR 16 35 42.1
comp=Z,920nm,21.6s,baz=79,slow=40
comp=Z,20nm,0.9s
BRTR Keskin Array B 87.56 309 P **P** **15 50 43.1 -1.9**
G29M Pine Creek 87.56 23 P **P** **15 50 44.4 +0.2**
baz=278
G29M S **S** **16 01 19.5 -0.6**
baz=278
YUK8 Steele Glacier 87.58 29 P **P** **15 50 45.3 +0.6**
baz=277,SNR=53
YUK8 S **S** **16 01 23.4 +2.4**
baz=277
I29M Ogilvie Camp, 87.67 25 IAmb IAmb 15 50 47.2
comp=Z,118nm,1.1s
I29M Ogilvie Camp, 87.67 25 P **P** **15 50 44.8 0.0**
baz=278,SNR=136
I29M S **S** **16 01 21.5 +0.2**
baz=278
J29N Klondike Camp 87.84 26 P **P** **15 50 46.3 +0.7**
baz=278,SNR=38
J29N S **S** **16 01 24.7 +1.6**

baz=278
M29M Somme Creek 88.03 28 P **P** **15 50 47.4 +0.7**
baz=278
M29M S **S** **16 01 27.1 +2.1**
baz=278
TBI Tubuai 88.04 114 *e*P P 15 50 55.6 +8.3
comp=Z,4µm,27.0s
TBI *e*PP **PP** **15 54 14.2 -0.6**
comp=Z,1µm,26.5s
TBI *e*LQ LQ 16 14 47.3
comp=Z,9µm,38.0s
TBI *e*LR LR 16 18 52.4
comp=Z,10µm,33.2s
TBI *e*LR LR 16 18 54.6
comp=Z,52µm,34.2s
L29M L29M 88.08 27 IAmb IAmb 15 50 50.0
comp=Z,82nm,1.0s
L29M L29M 88.08 27 P **P** **15 50 47.7 +0.9**
baz=278,SNR=84
L29M S **S** **16 01 27.3 +2.0**
baz=278
YUK4 Talbot Arm 88.10 29 P **P** **15 50 47.7 +0.6**
baz=278,SNR=22
ARCES ARCESS Array B 88.11 340 P **P** **15 50 44.9 -1.9**
comp=Z,13nm,0.8s,baz=90,slow=6.1,SNR=12
ARCES LR LR 16 33 35.8
comp=Z,2µm,21.8s,baz=79,slow=38
comp=Z,13nm,0.8s
ARCES ARCESS Array B 88.11 340 P **P** **15 50 45.5 -1.2**
ARCES IAmb IAmb 15 50 47.2
comp=Z,192nm,1.8s
ARCES ARCESS Array B 88.11 340 P **P** **15 50 45.5 -1.2**
ARCES pmax pmax
comp=Z,192nm,1.8s
EPYK Eagle Plains 88.16 24 IAmb IAmb 15 50 48.6
comp=Z,119nm,0.9s
EPYK Eagle Plains 88.16 24 P **P** **15 50 46.7 -0.4**
baz=280,SNR=90
EPYK S **S** **16 01 24.5 -1.4**
baz=280
K29M Barlow Dome 88.24 26 P **P** **15 50 48.1 +0.5**
baz=279,SNR=48
K29M S **S** **16 01 28.3 +1.3**
baz=279
G30M tAoh Zraii Nji 88.25 23 IAmb IAmb 15 50 50.7
comp=Z,85nm,1.1s
G30M tAoh Zraii Nji 88.25 23 P **P** **15 50 46.8 -0.7**
baz=280
O29M Mount Kennedy 88.28 30 P **P** **15 50 48.4 +0.5**
baz=278
O29M S **S** **16 01 30.1 +2.6**
baz=278
YUK6 Outpost Mounta 88.30 29 P **P** **15 50 48.6 +0.5**
baz=278,SNR=15
YUK6 S **S** **16 01 30.7 +2.9**
baz=278
F30M Barrier River 88.30 22 IAmb IAmb 15 50 49.0
comp=Z,86nm,1.0s
F30M Barrier River 88.30 22 P **P** **15 50 47.5 -0.1**
baz=280
SPB2 Spitsbergen Ar 88.30 349 P **P** **15 50 46.3 -1.2**
SPB2 IAmb IAmb 15 51 59.1
comp=Z,95nm,1.3s
SPITS Spitsbergen Ar 88.31 349 P **P** **15 50 45.7 -1.9**
comp=Z,3.1nm,0.3s,baz=91,slow=8.3,SNR=47
SPITS LR LR 16 34 13.7
comp=Z,6µm,21.6s,baz=60,slow=38
comp=Z,3.1nm,0.3s
SPITS Spitsbergen Ar 88.31 349 P **P** **15 50 46.4 -1.1**
SPITS pmax pmax
comp=Z,95nm,1.3s
I30M Mount Dempster 88.50 25 IAmb IAmb 15 50 53.7
comp=Z,56nm,0.9s
I30M Mount Dempster 88.50 25 P **P** **15 50 48.7 -0.1**
baz=280
I30M S **S** **16 01 28.6 -0.8**
baz=280
PMOR Pomariorio Ree 88.57 105 *e*P **P** **15 50 52.2 +2.3**
comp=Z,146nm,0.9s
PMOR *e*LR LR 16 19 04.6
comp=Z,13µm,28.3s
J30M Hart River 88.63 25 P **P** **15 50 49.8 +0.3**
baz=280
J30M S **S** **16 01 31.5 +0.9**
baz=280
HYT Haines Junctio 88.73 29 IAmb IAmb 15 50 52.1
comp=Z,56nm,0.9s
HYT Haines Junctio 88.73 29 P **P** **15 50 50.5 +0.5**
baz=279,SNR=52
HYT S **S** **16 01 32.7 +1.0**
baz=279
M30M Minto, Yukon 88.77 27 P **P** **15 50 50.8 +0.7**
baz=280,SNR=43
M30M S **S** **16 01 34.3 +2.4**
baz=280
N30M Aishihik Lake 88.82 28 IAmb IAmb 15 50 52.8
comp=Z,53nm,0.9s
N30M Aishihik Lake 88.82 28 P **P** **15 50 51.2 +0.9**
baz=280,SNR=75
N30M S **S** **16 01 34.0 +1.6**
baz=280
VAH Vaihoa 88.85 105 *e*P **P** **15 50 53.3 +2.1**
comp=Z,9.8nm,0.9s
KBS Kingsbay 88.85 350 *i* P **P** **15 50 49.1 -0.9**
INK Inuvik 89.00 21 LR LR 16 36 14.3
comp=Z,324nm,18.5s,baz=282,slow=39
INK Inuvik 89.00 21 IAmb IAmb 15 50 51.8
comp=Z,64nm,1.1s
INK Inuvik 89.00 21 P **P** **15 50 50.4 -0.5**
baz=283,SNR=57
INK S **S** **16 01 31.3 -2.3**
baz=283
MAYO Mayo, Yukon 89.00 26 IAmb IAmb 15 51 14.7
comp=Z,112nm,0.9s
MAYO Mayo, Yukon 89.00 26 P **P** **15 50 51.4 +0.3**
baz=280,SNR=30
MAYO S **S** **16 01 34.7 +0.8**
baz=280
G31M Satah River 89.01 23 IAmb IAmb 15 50 51.8
comp=Z,114nm,1.1s
G31M Satah River 89.01 23 P **P** **15 50 50.5 -0.5**
baz=282,SNR=70
G31M S **S** **16 01 31.7 -2.1**
baz=282
F31M Tsiigehtchic 89.11 22 IAmb IAmb 15 50 52.2
comp=Z,101nm,1.1s
F31M Tsiigehtchic 89.11 22 P **P** **15 50 50.9 -0.5**
baz=282,SNR=61
F31M S **S** **16 01 31.8 -2.8**
baz=282
P30M Million Dollar 89.11 30 P **P** **15 50 52.2 +0.5**
baz=280
P30M S **S** **16 01 37.5 +2.3**
baz=280
H31M Peel River 89.22 24 IAmb IAmb 15 50 53.1
comp=Z,80nm,1.1s
H31M Peel River 89.22 24 P **P** **15 50 51.7 -0.4**
baz=282,SNR=46
H31M S **S** **16 01 34.3 -1.6**
baz=282
FIA1 FINESS Array S 89.39 332 P **P** **15 50 51.5 -1.4**
FINES FINESS Array B 89.39 332 P **P** **15 50 51.1 -1.8**
comp=Z,19nm,0.7s,baz=57,slow=4.4,SNR=26
FINES PKKPbc **PKKPbc** **16 08 28.7 -2.0**
comp=Z,1.7nm,0.7s,baz=150,slow=4.2,SNR=4.6
FINES LR LR 16 33 54.2
comp=Z,6µm,21.9s,baz=74,slow=38
comp=Z,19nm,0.7s
FINES FINESS Array B 89.39 332 P **P** **15 50 51.0 -1.9**
FINES FINESS Array B 89.39 332 *ce*P **P** **15 50 51.7 -1.2**
FINES pmax pmax
comp=Z,19nm,0.7s
AKASG Malin Array Be 89.39 321 P **P** **15 50 50.8 -2.3**
comp=Z,17nm,1.0s,baz=71,slow=4.3,SNR=45
AKASG LR LR 16 33 22.7
comp=Z,3µm,21.5s,baz=80,slow=37
comp=Z,17nm,1.0s
AKASG Malin Array Be 89.39 321 P **P** **15 50 50.8 -2.3**
AKASG Malin Array Be 89.39 321 *ce*P **P** **15 50 50.7 -2.4**
AKASG pmax pmax
comp=Z,24nm,1.1s
AKBB Malin Array Si 89.39 321 *ce*P **P** **15 50 51.2 -1.9**
AKBB pmax pmax
comp=Z,27nm,1.1s
LODK Lodwar 89.40 273 P **P** **15 50 51.8 -2.3**
LODK Lodwar 89.40 273 P **P** **15 50 54.0 -0.1**
SNR=15
KIEV Kiev 89.41 321 ⇓P **P** **15 50 51.4 -1.7**

KIEV Kiev 89.41 321 P **P** **15 50 50.6 -2.5**
KIEV pP **pP** **15 51 10.1 -1.0**
KIEV Kiev 89.41 321 *i* P **P** **15 50 51.0 -2.2**
SNR=13
KIEV Kiev 89.41 321 P **P** **15 50 50.7 -2.5**
KIEV *PP **pP** **15 51 10.1 -1.0**
KIEV pmax pmax
comp=Z,42nm,1.3s
O30N Mendenhall 89.42 29 P **P** **15 50 53.7 +0.5**
baz=280,SNR=30
O30N S **S** **16 01 39.3 +1.3**
baz=280
N31M Braeburn, Yuko 89.44 28 IAmb IAmb 15 50 55.6
comp=Z,90nm,0.9s
N31M Braeburn, Yuko 89.44 28 P **P** **15 50 54.0 +0.8**
baz=281,SNR=57
N31M S **S** **16 01 40.8 +2.7**
baz=281
SAHE Sakarya_HENDEK 89.56 311 ⇑P **P** **15 50 53.1 -1.1**
VSU Vasula 89.60 329 *ce*P **P** **15 50 50.9 -3.0**
VSU pmax pmax
comp=Z,91nm,1.5s
MNK Minsk 89.63 325 *i* PPP PPP 15 34 12.4
MNK *i* SSS SSS 15 48 35.0
MNK *i* LQ LQ 16 01 20.4
MNK *i* LRM MLR 16 07 37.8
comp=E,289nm,16.0s
MNK *i* LRM MLR 16 08 02.5
comp=Z,431nm,17.7s
MNK *i* LRM MLR 16 08 39.2
comp=N,894nm,14.3s
MNK Minsk 89.63 325 *i* P **P** **15 50 54.0 -0.1**
comp=E,25nm,1.0s
MNK *i* P **P** **15 50 54.0 -0.1**
comp=N,36nm,1.0s
MNK *i* P **P** **15 50 54.0 -0.1**
comp=Z,59nm,0.9s,baz=80
MNK *i* pP **pP** **15 51 08.7 -3.3**
MNK *i* PP **PP** **15 54 26.2 -0.3**
MNK *i* PPP PPP 15 56 23.1
MNK *i* S **SKSac** **16 01 19.6 +0.7**
MNK *i* sS **ScS** **16 01 45.6 +1.2**
MNK *i* SS **SS** **16 07 40.0 +2.8**
MNK *i* SSS SSS 16 11 16.0
MNK *i* LQ LQ 16 26 16.1
MNK *i* LR LR 16 30 50.8
MNK *i* LRM MLR 16 32 35.4
comp=E,4µm,21.3s
MNK *i* LRM MLR 16 33 22.9
comp=N,5µm,20.1s
MNK *i* LRM MLR 16 33 26.7
comp=Z,6µm,19.9s
MNK Minsk 89.63 325 *i* P **P** **15 50 54.0 -0.1**
MNK *i* *PP **pP** **15 51 08.7 -3.3**
MNK *i* 15 54 26.1
MNK *i* PPP PPP 15 56 23.0
MNK *i* S **SKSac** **16 01 19.5 +0.7**
MNK *i* *SS **ScS** **16 01 45.6 +1.2**
MNK *i* SS **SS** **16 07 40.0 +2.8**
MNK *i* SSS SSS 16 11 15.9
MNK pmax pmax
comp=Z,59nm,0.9s
MNK pmax pmax
comp=N,36nm,1.0s
MNK pmax pmax
comp=E,25nm,1.0s
MNK MLR MLR
comp=E,4µm,21.0s
MNK MLR MLR
comp=N,5µm,20.0s
MNK MLR MLR
comp=Z,6µm,20.0s
S31K Pelican 89.86 32 P **P** **15 50 55.8 +0.7**
baz=280
S31K S **S** **16 01 44.1 +2.1**
baz=280
M31M Drury Creek, Y 89.94 27 P **P** **15 50 55.7 +0.2**
baz=282,SNR=27
M31M S **S** **16 01 45.1 +2.4**
baz=282
WHY Whitehorse 90.03 29 P **P** **15 50 56.7 +0.7**
baz=281,SNR=75
WHY S **S** **16 01 46.9 +3.1**
baz=281
R31K City Hall, Gus 90.03 31 P **P** **15 50 56.2 +0.3**
baz=281
R31K S **S** **16 01 46.9 +3.4**
baz=281
SKAG Skagway 90.04 30 P **P** **15 50 56.6 +0.7**
baz=281
ISP Isparta 90.19 308 *ce*P **P** **15 50 55.5 -1.8**
ISP pmax pmax
comp=Z,28nm,1.1s
SORM Soroca 90.33 318 ⇓P **P** **15 50 55.9 -1.7**
SORM Soroca 90.33 318 P **P** **15 50 55.8 -1.7**
BESE Bessie Mountai 90.45 31 IAmb IAmb 15 51 00.1
comp=Z,57nm,1.1s
SIT Sitka 90.51 33 P **P** **15 50 58.3 +0.1**
SIT Sitka 90.51 33 IAmb IAmb 15 51 00.3
comp=Z,62nm,1.2s
SIT Sitka 90.51 33 P **P** **15 50 59.0 +0.8**
baz=281
SIT S **S** **16 01 51.1 +3.1**
baz=281
A36M Sachs Harbour 90.66 17 P **P** **15 50 57.6 -1.0**
A36M Sachs Harbour 90.66 17 P **P** **15 50 58.1 -0.4**
baz=290,SNR=9.9
A36M S **S** **16 01 47.8 -1.1**
baz=290
R32K Eaglecrest 90.69 31 P **P** **15 50 59.6 +0.6**
baz=282,SNR=10
R32K S **S** **16 01 53.0 +3.3**
baz=282
JIS Juneau Island 90.76 31 P **P** **15 50 59.6 +0.3**
TPGR Topolog 90.78 315 ⇑P **P** **15 50 59.2 -0.6**
P32M Atlin 90.82 30 P **P** **15 51 00.1 +0.4**
baz=282,SNR=9.1
P32M S **S** **16 01 54.3 +3.3**
baz=282
S32K Killisnoo 90.82 32 IAmb IAmb 15 51 01.4
comp=Z,89nm,2.0s
S32K Killisnoo 90.82 32 P **P** **15 50 59.8 +0.1**
baz=282
S32K S **S** **16 01 53.6 +2.7**
baz=282
NOR Nord 91.06 355 *i* P **P** **15 50 58.5 -1.9**
NOR IAmb IAmb 15 51 01.7
comp=Z,11nm,0.8s
P33M Teslin, Yukon 91.12 29 P **P** **15 51 01.4 +0.3**
baz=283,SNR=27
P33M S **S** **16 01 56.0 +2.2**
baz=283
MMPY Sheldon Lake, 91.27 27 IAmb IAmb 15 51 03.6
comp=Z,54nm,1.0s
MMPY Sheldon Lake, 91.27 27 P **P** **15 51 02.3 +0.6**
baz=285,SNR=42
MMPY S **S** **16 01 57.0 +2.1**
baz=285
MANT Manisa 91.63 309 IAmb IAmb 15 51 03.7
comp=Z,80nm,1.4s
PABE Paberze 91.66 326 P **P** **15 51 01.4 -2.2**
PABE IAmb IAmb 15 51 03.2
comp=Z,131nm,1.5s
Q32M Nakina River 91.69 30 P **P** **15 51 04.5 +0.6**
baz=284
TESR Tescani 91.74 317 ⇓P **P** **15 51 02.9 -1.3**
VRI Vrincioaia 91.80 316 ⇓P **P** **15 51 03.7 -0.8**
VRI Vrincioaia 91.80 316 P **P** **15 51 03.6 -0.8**
T33K Petersburg 91.83 33 P **P** **15 51 05.3 +1.0**
baz=283
PLOR Plostina 91.85 316 ⇑P **P** **15 51 04.6 -0.2**
PLOR Plostina 91.85 316 P **P** **15 51 04.6 -0.2**
U33K Whale Pass 91.89 33 IAmb IAmb 15 51 06.7
comp=Z,90nm,1.2s
U33K Whale Pass 91.89 33 P **P** **15 51 05.2 +0.5**
baz=283,SNR=8.2
ONER Baraj Valea Uz 91.94 317 ⇓P **P** **15 51 04.4 -0.8**
C36M Paulatuk 91.97 19 IAmb IAmb 15 51 36.9
comp=Z,77nm,1.2s
C36M Paulatuk 91.97 19 P **P** **15 51 04.2 -0.5**
baz=291,SNR=11
C36M S **S** **16 02 00.2 -0.6**
baz=291
BALB Balikesir 91.98 310 IAmb IAmb 15 51 04.8
comp=Z,77nm,1.3s
CRAG Craig 92.04 34 P **P** **15 51 06.2 +0.9**

CRAG Craig 92.04 34 P **P** **15 51 06.0 +0.7**
baz=283,SNR=7.1
R33M Jennings River 92.23 30 IAmb IAmb 15 51 08.5
comp=Z,51nm,1.0s
R33M Jennings River 92.23 30 P **P** **15 51 07.1 +0.8**
baz=285
WRAK Wrangell Islan 92.25 33 IAmb IAmb 15 51 08.1
comp=Z,94nm,1.1s
WRAK Wrangell Islan 92.25 33 P **P** **15 51 06.8 +0.6**
baz=284,SNR=13
TURR Turia 92.25 317 ⇓P **P** **15 51 06.0 -0.6**
MLR Muntele Rosu 92.41 316 P **P** **15 51 05.9 -1.5**
comp=Z,25nm,1.2s,baz=64,slow=4.1,SNR=14
MLR LR LR 16 38 57.1
comp=Z,3µm,20.6s,baz=60,slow=40
comp=Z,25nm,1.2s
MLR Muntele Rosu 92.41 316 ⇓P **P** **15 51 06.4 -1.0**
MLR Muntele Rosu 92.41 316 IAmb IAmb 15 51 07.6
comp=Z,145nm,1.7s
MLR Muntele Rosu 92.41 316 P **P** **15 51 06.4 -1.0**
SUW Suwalki 92.44 325 *e*P **P** **15 51 06.7 -0.5**
BURAR Bucovina Array 92.50 318 ⇓P **P** **15 51 07.0 -0.9**
BURAR Bucovina Array 92.50 318 P **P** **15 51 06.0 -1.8**
BURAR Bucovina Array 92.50 318 P **P** **15 51 06.9 -0.9**
S34M Telegraph Cree 92.52 31 IAmb IAmb 15 51 09.7
comp=Z,69nm,1.1s
S34M Telegraph Cree 92.52 31 P **P** **15 51 08.6 +1.0**
baz=285,SNR=42
V35K Ketchikan 92.91 34 IAmb IAmb 15 51 10.8
comp=Z,51nm,1.1s
V35K Ketchikan 92.91 34 P **P** **15 51 09.5 +0.1**
baz=284,SNR=5.2
TGTN Hyland Airport 92.92 27 P **P** **15 51 09.9 +0.5**
baz=287,SNR=40
DIB Dawson Inlet, 92.92 36 IAmb IAmb 15 51 10.8
comp=Z,66nm,1.0s
H02S2 DAWSON INLET T 92.92 36 P **P** **15 51 08.0 -1.4**
SNR=6.5
DLBC Dease Lake 92.95 31 LR LR 16 28 23.1
comp=Z,697nm,22.0s,baz=265,slow=32
DLBC Dease Lake 92.95 31 P **P** **15 51 10.3 +0.7**
baz=286,SNR=33
VOIR 93.03 316 ⇑P **P** **15 51 09.2 -1.1**
VOIR 93.03 316 P **P** **15 51 09.2 -1.1**
WTLY Watson Lake, Y 93.09 29 P **P** **15 51 11.0 +0.8**
baz=287,SNR=25
T35M Bob Quinn 93.23 32 IAmb IAmb 15 51 12.9
comp=Z,51nm,0.9s
T35M Bob Quinn 93.23 32 P **P** **15 51 11.8 +0.9**
baz=285,SNR=22
MOBC Moresby Island 93.23 36 P **P** **15 51 11.0 0.0**
MOBC IAmb IAmb 15 51 12.4
comp=Z,63nm,1.2s
ARR Arges 93.33 316 ⇑P **P** **15 51 10.2 -1.5**
TNR Turnu Rosu 93.53 316 ⇑P **P** **15 51 11.4 -1.1**
TNR Turnu Rosu 93.53 316 P **P** **15 51 11.3 -1.1**
SYO Syowa Base 93.60 201 ⇑*i*P **P** **15 51 12.8 +0.6**
U35K Hyder 93.63 33 P **P** **15 51 12.9 +0.3**
baz=286
HG4B Hotspring 93.89 37 P **P** **15 51 13.5 -0.5**
HG4B IAmb IAmb 15 51 17.0
comp=Z,81nm,0.9s
RUBB Prince Rupert 93.92 35 IAmb IAmb 15 51 15.7
comp=Z,81nm,1.0s
MARR Marisel-Cluj 94.10 318 ⇑P **P** **15 51 13.9 -1.3**
BEL Belsk 94.36 323 *e*P **P** **15 51 16.3 +0.2**
MBAR Mbarara 94.39 270 *ce*P **P** **15 51 16.7 -0.6**
MBAR pmax pmax
comp=Z,10.0nm,1.7s
MBAR Mbarara 94.39 270 P **P** **15 51 16.7 -0.6**
WRGLY Wrigley 94.47 25 IAmb IAmb 15 51 17.7
comp=Z,65nm,1.0s
WRGLY Wrigley 94.47 25 P **P** **15 51 16.6 +0.3**
baz=292
GZR Gura Zlata 94.61 316 ⇓P **P** **15 51 16.6 -0.9**
GZR Gura Zlata 94.61 316 P **P** **15 51 16.6 -0.9**
STHS Stebnicka Huta 94.69 320 *e*P **P** **15 51 17.6 -0.1**
STHS *e* 15 55 10.5
STHS Stebnicka Huta 94.69 320 *e*P **P** **15 51 17.6 -0.1**
STHS *e*PP **PP** **15 55 10.5 +4.1**
HERR Herculane 94.97 316 ⇑P **P** **15 51 17.2 -1.8**
IDI Anoyia 95.06 306 P **P** **15 51 19.5 -0.3**
comp=Z,13nm,0.8s,baz=28,slow=2.8,SNR=4.1
IDI LR LR 16 39 53.6
comp=Z,708nm,22.0s,baz=76,slow=39
comp=Z,13nm,0.8s
IDI Anoyia 95.06 306 IAmb IAmb 15 54 34.4
comp=Z,115nm,1.6s
DAG Danmarks Havn 95.16 352 *i* P **P** **15 51 16.9 -2.4**
DAG IAmb IAmb 15 51 22.1
comp=Z,25nm,0.9s
NIE Niedzica 95.28 321 *e*P **P** **15 51 21.3 +0.8**
KOTAN Kotaneelee Air 95.33 28 P **P** **15 51 20.7 +0.3**
baz=291
OJC Ojcow 95.39 322 *e*P **P** **15 51 21.2 +0.3**
QSPA South Pole Qui 95.53 180 P **P** **15 51 21.7 +0.5**
comp=Z,22nm,0.9s,baz=333,slow=3.1,SNR=32
QSPA PKKPbc **PKKPdf** **16 08 14.1 -1.8**
comp=Z,2.4nm,0.9s,baz=181,slow=1.5,SNR=5.8
QSPA LR LR 16 35 35.0
comp=Z,2µm,21.5s,baz=352,slow=36
comp=Z,22nm,0.9s
QSPA South Pole Qui 95.53 180 IAmb IAmb 15 52 03.6
comp=Z,87nm,1.2s
TAOE Nuku Hiva Isla 95.54 98 *e*PKIKP P 15 51 13.3 -9.1
comp=Z,504nm,27.5s
TAOE *e*PP **PP** **15 55 12.0 -2.3**
comp=Z,177nm,24.9s
TAOE *e*S **S** **16 02 35.8 +1.3**
comp=Z,2µm,26.7s
TAOE *e*SS **SS** **16 08 59.1 -5.3**
comp=Z,1µm,29.0s
TAOE *e*LQ LQ 16 18 02.7
comp=Z,2µm,34.0s
TAOE *e*LR LR 16 22 15.6
comp=Z,11µm,27.9s
HFS Hagfors 95.58 332 P **P** **15 51 19.1 -2.4**
comp=Z,7.5nm,0.8s,baz=121,slow=5.7,SNR=9.9
HFS PKKPbc **PKKPdf** **16 08 12.5 -1.8**
comp=Z,1.0nm,0.6s,baz=223,slow=3.5,SNR=6.7
HFS LR LR 16 37 34.6
comp=Z,5µm,22.0s,baz=65,slow=37
comp=Z,7.5nm,0.8s
BBB Bella Bella 95.75 36 LR LR 16 27 49.9
comp=Z,709nm,22.0s,baz=284,slow=31
PSZ Piszkesteto 95.93 319 ⇑P **P** **15 51 22.9 -0.7**
PSZ Piszkesteto 95.93 319 P **P** **15 51 22.8 -0.7**
GKP Gorka Klasztor 96.04 325 *e*P **P** **15 51 23.4 -0.4**
NC405 NORSAR Array S 96.11 333 IAmb IAmb 15 52 43.6
comp=Z,30nm,0.9s
NC303 NORSAR Array S 96.22 334 IAmb IAmb 15 52 07.2
comp=Z,52nm,1.4s
RES Resolute Bay 96.23 10 LR LR 16 38 40.3
comp=Z,795nm,20.1s,baz=328,slow=38
RES Resolute Bay 96.23 10 P **P** **15 51 23.1 -1.1**
RES Resolute Bay 96.23 10 P **P** **15 51 23.1 -1.1**
RES pmax pmax
comp=Z,28nm,1.2s
NB2 NORSAR Subarra 96.36 333 P **P** **15 51 22.2 -2.9**
comp=Z,21nm,1.1s,baz=66,slow=4.4
NB2 PKKP **PKKPbc** **16 08 10.9 -1.8**
comp=Z,1.0nm,0.8s,baz=237,slow=2.3
NB2 NORSAR Subarra 96.36 333 P **P** **15 51 22.2 -2.9**
NOA NORSAR Array B 96.36 333 P **P** **15 51 22.5 -2.6**
comp=Z,6.9nm,0.8s,baz=66,slow=4.5,SNR=18
NOA PP **PP** **15 55 19.9 +0.8**
comp=Z,4.6nm,1.0s,baz=73,slow=8.3,SNR=3.7
NOA PKKPbc **PKKPbc** **16 08 10.5 -2.2**
comp=Z,2.3nm,0.9s,baz=66,slow=2.6,SNR=5.8
NOA LR LR 16 41 29.6
comp=Z,2µm,18.0s,baz=75,slow=40
comp=Z,6.9nm,0.8s
OKC Ostrava-Krasne 96.52 321 AMS AMS 16 36 40.0
comp=Z,3µm,26.6s
MAUC Maruska 96.85 321 *e*PP **PP** **15 55 25.3 +2.1**
MORC Moravsky Berou 96.91 321 ⇑P **P** **15 51 27.0 -0.9**
MORC Moravsky Berou 96.91 321 P **P** **15 51 27.0 -0.9**
MORC Moravsky Berou 96.91 321 *e*P **P** **15 51 26.5 -1.4**
NEEM North Greenlan 97.01 359 *i* P **P** **15 51 26.9 -1.2**
NEEM IAmb IAmb 15 51 30.3
comp=Z,41nm,1.3s
JAVC Velka Javorina 97.10 321 *e*P **P** **15 51 28.2 -0.5**
MORH Mrgy, Hungar 97.21 318 ⇓P **P** **15 51 28.0 -1.2**
KRLC Kraliky 97.29 322 *e*PP **PP** **15 55 26.4 -0.1**
KRLC AMS AMS 16 37 20.0
comp=Z,5µm,21.2s

KSP Ksiaz 97.35 323 *e*P Pdif 15 51 30.2 +0.4
DBG Daneborg 97.40 351 *i* P **P** **15 51 27.3 -2.2**
DBG IAmb IAmb 15 51 30.2
comp=Z,14nm,1.1s
DPC Dobruska-Polom 97.48 322 AMS AMS 16 37 40.0
comp=Z,5µm,23.1s
OSTC Ostas 97.48 323 AMS AMS 16 37 50.0
comp=Z,6µm,21.1s
CHVC Chvalec 97.57 323 AMS AMS 16 37 50.0
comp=Z,6µm,21.7s
UPC Upice 97.62 322 *e*PP **PP** **15 55 23.3 -5.7**
UPC AMS AMS 16 37 50.0
comp=Z,6µm,21.9s
VRAC Vranov 97.64 321 P **P** **15 51 29.0 -2.1**
comp=Z,1.9nm,0.4s,baz=64,slow=3.4,SNR=9.8
VRAC LR LR 16 39 06.2
comp=Z,3µm,21.6s,baz=66,slow=38
comp=Z,1.9nm,0.4s
VRAC Vranov 97.64 321 *e*P **P** **15 51 30.1 -1.0**
KRUC Moravsky 97.84 321 *e*P **P** **15 51 30.6 -1.4**
CBB Campbell River 98.06 38 P **P** **15 51 32.4 -0.6**
LSZ Lusaka 98.11 255 LR LR 16 33 01.6
comp=Z,3µm,21.9s,baz=93,slow=34
LSZ Lusaka 98.11 255 P **P** **15 51 31.9 -2.1**
LSZ IAmb IAmb 15 55 31.6
comp=Z,58nm,1.6s
LSZ Lusaka 98.11 255 P **P** **15 51 31.9 -2.1**
LSZ pmax pmax
comp=Z,58nm,1.7s
LSZ Lusaka 98.11 255 P **P** **15 51 33.2 -0.8**
RONA Rosalia, Austr 98.32 320 *e*PcP **P** **15 51 32.4 -1.8**
comp=Z,6.8nm,1.1s
RONA PP **PP** **15 55 35.5 +1.0**
comp=Z,13nm,1.2s
TREC Trest 98.33 321 AMS AMS 16 37 50.0
comp=Z,5µm,26.4s
WINA Alland / Wiene 98.34 320 *e*PP **PP** **15 55 38.6 +4.1**
comp=Z,23nm,1.5s
YKA Yellowknife Ar 98.44 24 P **P** **15 51 33.6 -0.7**
comp=Z,17nm,0.9s,baz=306,slow=4.9,SNR=108
YKA PP **PP** **15 55 31.1 -3.7**
comp=Z,2.8nm,1.0s,baz=299,slow=7.9,SNR=4.1
YKA PKiKP **PKiKP** **15 56 04.9 -1.2**
comp=Z,1.0nm,0.9s,baz=306,slow=2.2,SNR=4.4
YKA PKKPbc **PKKPbc** **16 08 03.4 -3.6**
comp=Z,3.3nm,0.9s,baz=99,slow=3.4,SNR=14
YKA LR LR 16 36 25.5
comp=Z,735nm,21.6s,baz=310,slow=36
comp=Z,17nm,0.9s
YKA Yellowknife Ar 98.44 24 P **P** **15 51 33.9 -0.5**
PVCC Panska Ves 98.49 323 AMS AMS 16 38 40.0
comp=Z,4µm,19.5s
CONA Conrad Observa 98.53 320 *e*PP **PP** **15 55 36.9 +0.7**
comp=Z,3.8nm,0.7s
PRU Pruhonice 98.69 322 *e*PP **PP** **15 55 33.6 -3.5**
PRU AMS AMS 16 38 40.0
comp=Z,6µm,22.2s
RICC Richard 98.77 323 AMS AMS 16 39 00.0
comp=Z,4µm,20.9s
ARSA Arzberg 98.96 319 *e*PP **PP** **15 55 39.4 0.0**
comp=Z,12nm,1.2s
ELIB Princess Elisa 98.97 198 *d*P Pdif 15 51 38.0 +1.3
comp=Z,19nm,1.1s
ZVC Zvikov 99.08 322 *e*PP **PP** **15 55 37.1 -3.1**
ZVC AMS AMS 16 38 40.0
comp=Z,5µm,22.4s
HSKC Hora Svate Kat 99.14 323 AMS AMS 16 39 20.0
comp=Z,4µm,20.5s
CLL Collm 99.15 324 *i* P **Pdif** **15 51 36.5 -1.3**
CLL *e* 15 55 42.0
CLL pmax pmax
comp=Z,26nm,1.5s
CLL Collm 99.15 324 *i* Pdif **Pdif** **15 51 36.5 -1.3**
comp=Z,26nm,1.5s
CLL *i* x x 15 51 57.0
comp=Z,20nm,1.4s
CLL *e*PP **PP** **15 55 42.0 +1.4**
CLL *es*PP 15 56 18.0
CLL *e*PPP PPP 15 57 49.0
CLL *es*PPP 15 58 24.0
CLL *e*SKSac **SKSac** **16 02 12.0 +1.6**
CLL *e*Sdif **Sdif** **16 03 18.0 +14**
CLL *e*PS **PS** **16 04 36.0 -2.4**
CLL *e*PPS PPS 16 05 30.0
CLL *ex* x 16 07 42.0
CLL *e*SS **SS** **16 09 54.0 +1.4**
CLL *e*SSS SSS 16 13 30.0
CLL *ex* x 16 14 48.0
CLL *ex* x 16 17 30.0
CLL *ex* x 16 18 12.0
CLL *ex* x 16 19 18.0
CLL AMS AMS 16 38 00.0
CLRS Cowichan Lake 99.22 39 P **Pdif** **15 51 38.1 0.0**
CKRC Cesky Krumlov 99.22 321 *e*PP PP 15 55 33.0 -8.3
CKRC AMS AMS 16 38 40.0
comp=Z,4µm,23.7s
SOKA Soboth 99.46 319 *e*PP **PP** **15 55 44.2 +0.9**
comp=Z,4.8nm,0.9s
SOKA *e*PKKP **PKKPbc** **16 08 03.5 -0.2**
comp=Z,1.8nm,0.6s
KHC Kasperske Hory 99.57 322 *e*PDIFF **Pdif** **15 51 37.5 -2.3**
KHC *e*PP **PP** **15 55 41.5 -2.4**
KHC AMS AMS 16 38 50.0
comp=Z,5µm,21.5s
KHC Kasperske Hory 99.57 322 *ce*P **Pdif** **15 51 38.7 -1.1**
KHC pmax pmax
comp=Z,5.0nm,1.1s
MOA Molln 99.57 320 *e*PKKP **PKKPbc** **16 08 02.9 -0.4**
comp=Z,2.3nm,0.5s
GERES GERESS Array B 99.59 321 P **Pdif** **15 51 39.0 -1.0**
comp=Z,1.2nm,0.7s,baz=69,slow=7.3,SNR=5.4
GERES PKKPbc **PKKPbc** **16 08 02.3 -1.1**
comp=Z,2.9nm,0.9s,baz=222,slow=1.8,SNR=6.9
GERES LR LR 16 42 14.5
comp=Z,2µm,19.3s,baz=68,slow=39
comp=Z,1.2nm,0.7s
OBKA Obir 99.83 319 *e*PKKP **PKKPbc** **16 08 02.2 -0.5**
comp=Z,4.5nm,0.9s
MYKA Terra Mystica 100.38 319 *e*PKKP **PKKPbc** **16 08 00.8 -0.2**
comp=Z,3.1nm,0.5s
KBA Koelnbreinsper 100.42 320 *e*PP **PP** **15 55 54.4 +3.8**
comp=Z,21nm,1.2s
LESA Schwarzleotal 100.72 320 *e*PKKP **PKKPbc** **16 07 59.1 -1.0**
comp=Z,8.0nm,1.0s
ABTA Abfaltersbach 101.07 320 *e*PKKP **PKKPbc** **16 07 58.9 -0.2**
comp=Z,3.3nm,0.8s
SUMG Summit 101.22 355 P **Pdif** **15 51 38.6 -8.5**
SUMG Summit 101.22 355 *i* P **Pdif** **15 51 49.0 +1.9**
SUMG IAmb IAmb 15 51 51.2
comp=Z,9.6nm,1.1s
BOSA Boshof 101.30 242 PKKPbc PKKPbc 16 07 56.9 -1.0
comp=Z,4.0nm,0.9s,baz=62,slow=3.3,SNR=3.6
WTTA Wattenberg 101.44 320 *e*Pdiff **Pdif** **15 51 46.9 -1.5**
comp=Z,22nm,1.4s
WTTA *e*PKKP **PKKPbc** **16 07 58.3 +0.1**
comp=Z,2.3nm,0.6s
WATA Walderalm 101.45 320 *e*Pdiff **Pdif** **15 51 47.0 -1.4**
comp=Z,21nm,1.6s
SQTA Sankt Quirin 101.73 320 *e*Pdiff **Pdif** **15 51 47.9 -1.7**
comp=Z,12nm,1.2s
MOTA Moosalm 101.75 321 *e*PKKP **PKKPbc** **16 07 57.1 -0.1**
comp=Z,7.3nm,0.9s
FETA Feichten 102.11 320 *e*PKKP **PKKPbc** **16 07 55.2 -1.0**
comp=Z,4.9nm,0.9s
DAVOX Davos/Dischmat 102.74 320 P **Pdif** **15 51 52.9 -1.3**
comp=Z,3.1nm,0.9s,baz=163,slow=9.9,SNR=3.9
NVL N'lazarevskaya 102.84 198 *e*P **Pdif** **15 51 59.2 +5.5**
NVL *e* 15 56 11.2
NVL *e*PPP PPP 15 58 21.9
NVL *e*PS PS 16 05 21.0 +3.8
NVL *e*SS SS 16 10 50.4 +7.1
NVL *e*SSS SSS 16 14 45.2
NVL pmax pmax
comp=Z,44nm,1.7s
NVL MLR MLR
comp=Z,1µm,22.0s
VLC Villacollemand 103.39 318 P **Pdif** **15 51 48.4 -8.5**
MEM Membach 103.48 325 *d*Pdif **Pdif** **15 51 55.9 -1.2**
WLF Walferdange 103.81 324 *d*Pdif **Pdif** **15 51 58.8 +0.2**
BCLA Clavier 103.97 325 *d*Pdif **Pdif** **15 51 59.5 +0.2**
BMRD Maredsous 104.32 325 *d*Pdif **Pdif** **15 52 01.0 +0.2**
TROLL Troll, Antarti 105.02 196 Pdiff **Pdif** **15 52 07.5 +3.9**
EKA Eskdalemuir Ar 105.78 332 PP **PKiKP** **15 56 19.8 +0.2**
comp=Z,2.2nm,0.9s,baz=67,slow=7.3,SNR=3.5
EKA PKKPbc **PKKPbc** **16 07 43.7 -1.6**
comp=Z,2.8nm,0.9s,baz=248,slow=4.4,SNR=5.4

NVAR Mina Array Bea 106.84 47 Pdiff **Pdif** **15 52 13.2 +0.5**
comp=Z,9.7nm,0.9s,baz=273,slow=5.2,SNR=32
NVAR PKiKP **PKiKP** **15 56 23.3 +0.8**
comp=Z,0.9nm,0.6s,baz=309,slow=2.4,SNR=2.3
NVAR PP **PP** **15 56 37.2 -1.6**
comp=Z,3.3nm,0.8s,baz=282,slow=6.5,SNR=4.9
NVAR PKKPbc **PKKPbc** **16 07 40.4 -1.4**
comp=Z,1.2nm,0.7s,baz=123,slow=5.5,SNR=5.4
KEST Kesra 107.16 310 PP **PP** **15 56 41.2 +0.1**
comp=Z,9.8nm,1.1s,baz=345,slow=5.5,SNR=5.9
VNA2 Neumayer--Watz 108.25 195 ⇑Pdiff **Pdif** **15 52 27.6 +10**
comp=Z,9.0nm,0.6s,baz=139
VNA3 Neumayer Olymp 108.60 194 ⇓Pdiff **Pdif** **15 52 29.4 +10**
comp=Z,5.2nm,1.0s
VNA1 Neumayer--Stat 108.64 195 ⇑Pdiff **Pdif** **15 52 28.6 +9.1**
comp=Z,20nm,0.9s
PDAR Pinedale Array 110.98 40 Pdiff **Pdif** **15 52 30.7 -0.2**
comp=Z,1.1nm,0.9s,baz=298,slow=3.2,SNR=6.9
PDAR PKiKP **PKiKP** **15 56 30.2 +0.1**
comp=Z,0.6nm,0.8s,baz=283,slow=4.1,SNR=1.7
PDAR PKKPbc **PKKPbc** **16 07 25.6 -3.1**
comp=Z,2.5nm,0.7s,baz=128,slow=5.1,SNR=16
ULM Lac du Bonnet 114.06 27 PKP PKPdf 15 56 34.2 -1.2
comp=Z,3.9nm,0.5s,baz=14,slow=0.9,SNR=9.0
ULM PKKPbc **PKKPbc** **16 07 15.5 -3.0**
comp=Z,2.7nm,0.6s,baz=110,slow=3.9,SNR=3.7
ESDC Sonseca Array 114.96 319 PKP **PKiKP** **15 56 36.7 -0.8**
comp=Z,0.9nm,0.9s,baz=38,slow=3.9,SNR=2.4
ESDC PP **PP** **15 57 36.7 -0.1**
comp=Z,3.9nm,1.0s,baz=60,slow=5.8,SNR=6.1
ESDC PKKPbc **PKKPbc** **16 07 10.7 -4.4**
comp=Z,2.0nm,0.9s,baz=264,slow=3.0,SNR=7.8
PBRG Braganca 115.56 322 *e*PP **PP** **15 57 44.6 +3.7**
PGAV Gavieira, Arco 116.40 323 *e*PP **PP** **15 57 53.5 +6.7**
PGAV *e*LR LR 16 43 24.9
PGAV *i* IAMs_20 IAMs_20 16 53 46.5
comp=Z,2µm,20.0s
MTE Manteigas 116.86 321 *e*PP **PP** **15 57 54.7 +4.7**
MTE *e*LR LR 16 40 53.5
MTE *i* IAMs_20 IAMs_20 16 53 56.2
comp=Z,2µm,20.0s
PVIS Viseu 116.90 321 *e*PP **PP** **15 57 53.3 +3.0**
ANMO Albuquerque 116.92 46 **PKPdf** **15 56 41.3 -0.4**
ANMO Albuquerque 116.92 46 **PKPdf** **15 56 40.9 -0.8**
ANMO Albuquerque 116.92 46 **PKPdf** **15 56 41.2 -0.5**
ANMO Albuquerque 116.92 46 PKIKP **PKPdf** **15 56 41.3 -0.4**
Y22A Socorro 117.04 47 **PKPdf** **15 56 41.0 -0.9**
121A Cookes Peak, D 117.08 49 **PKPdf** **15 56 40.8 -1.2**
PMRV Marv??o 117.32 320 *e*PP **PP** **15 57 55.9 +2.7**
PMRV *e*LQ LQ 16 32 15.4
PMRV *e*LR LR 16 36 17.1
PMRV *i* IAMs_20 IAMs_20 16 55 08.9
comp=Z,1µm,22.0s
PSARD Sardoal 117.71 321 *e*PP PP 15 58 05.7 +10
PESTR Estremoz 117.76 320 *e*PP **PP** **15 57 59.7 +3.4**
PBAR Barrancos 117.78 319 *e*PP **PP** **15 58 00.2 +3.8**
EVO Evora 118.22 319 *e*PP **PP** **15 58 02.1 +2.7**
MOE Montemor 118.44 320 *e*PP PP 15 58 09.4 +8.5
PVAQ Vaqueiros 118.66 318 *e*PP **PP** **15 58 09.2 +6.7**
PVAQ *e*LQ LQ 16 34 01.4
PVAQ *e*LR LR 16 38 43.1
PVAQ *i* IAMs_20 IAMs_20 16 51 15.9
comp=Z,1µm,22.0s
PCVE Castro Verde 118.74 319 *e*PP **PP** **15 58 08.8 +5.7**
MESJ Messejana 118.75 319 *e*PP **PP** **15 58 04.4 +1.3**
MESJ IAMs_20 IAMs_20 16 49 27.9
comp=Z,2µm,21.4s
MESJ Messejana 118.75 319 *e*PP **PP** **15 58 05.6 +2.5**
RTBA Rita Blanca 118.76 43 **PKPdf** **15 56 43.5 -1.5**
PMAFR Mafra 118.79 321 *e*PP **PP** **15 58 05.9 +2.5**
SCHQ Schefferville 118.94 8 PKP **PKPdf** **15 56 44.1 -0.6**
comp=Z,6.2nm,0.6s,baz=25,slow=0.7,SNR=9.0
SCHQ PKKPbc **PKKPbc** **16 06 58.5 -3.1**
comp=Z,5.3nm,0.9s,baz=206,slow=4.6,SNR=4.5
MD01 Midelt array s 118.95 312 **PKPdf** **15 56 44.2 -1.4**
MNTX Cornudas Mount 119.27 49 **PKPdf** **15 56 44.9 -1.1**
MORF Marmelete 119.33 319 *e*PP **PP** **15 58 08.2 +1.0**
MORF IAMs_20 IAMs_20 16 49 57.1
comp=Z,4µm,24.7s
MORF Marmelete 119.33 319 *e*PP **PP** **15 58 14.8 +7.6**
PFVI Vila Bisbo 119.54 319 *e*PP PP 15 58 16.9 +8.3
VHRN Van Horn 120.00 50 **PKPdf** **15 56 46.9 -0.7**
TORD Torodi Ar. Bea 120.77 289 PKP **PKPdf** **15 56 47.5 -1.8**
comp=Z,8.5nm,0.7s,baz=50,slow=0.8,SNR=17
TORD PKKPbc **PKKPbc** **16 06 51.8 -1.8**
comp=Z,6.1nm,0.8s,baz=266,slow=4.7,SNR=13
TORD SKKPbc SKKPbc 16 10 32.1 -3.8
comp=Z,1.3nm,0.9s,baz=268,slow=5.5,SNR=3.8
TORD Torodi Ar. Bea 120.77 289 **PKPdf** **15 56 47.0 -2.3**
HPIG 121.21 54 **PKPdf** **15 56 49.5 -0.6**
TXAR Lajitas Array 121.69 51 PKP **PKPdf** **15 56 50.0 -0.9**
comp=Z,3.8nm,0.7s,baz=270,slow=1.3,SNR=17
TXAR PKKPbc **PKKPbc** **16 06 50.2 -0.4**
comp=Z,0.4nm,0.3s,baz=147,slow=9.2,SNR=5.7
TXAR Lajitas Array 121.69 51 **PKPdf** **15 56 49.7 -1.1**
TXAR Lajitas Array 121.69 51 PKIKP **PKPdf** **15 56 50.0 -0.9**
SAND Sanderson 122.56 49 **PKPdf** **15 56 51.3 -1.2**
CCM Cathedral Cave 124.96 35 **PKPdf** **15 56 55.2 -1.6**
CCM Cathedral Cave 124.96 35 PKIKP **PKPdf** **15 56 55.2 -1.6**
ZAIG Zacatecas 125.53 57 **PKPdf** **15 56 58.1 -0.6**
WCI Wyandotte Cave 127.52 31 **PKPdf** **15 57 00.2 -1.4**
WCI Wyandotte Cave 127.52 31 PKIKP **PKPdf** **15 57 00.2 -1.4**
WVT Waverly 128.25 34 **PKPdf** **15 57 02.1 -1.0**
WVT Waverly 128.25 34 PKPpre 15 56 55.2
DBIC Dimbokro 128.57 283 PKP **PKPdf** **15 57 03.5 -0.8**
comp=Z,8.9nm,0.7s,baz=84,slow=1.3,SNR=12
DBIC Dimbokro 128.57 283 **PKPdf** **15 57 02.3 -2.0**
SSPA Standing Stone 129.35 23 **PKPdf** **15 57 04.4 -0.7**
AY01 Puyuhuapi 138.35 161 **PKPdf** **15 57 20.5 -1.2**
PLCA Paso Flores 142.34 160 PKhKP PKPpre 15 57 24.8
comp=Z,20nm,1.0s,baz=194,slow=3.9,SNR=17
PLCA Paso Flores 142.34 160 PKPpre 15 57 24.1
PLCA Paso Flores 142.34 160 PKHKP PKPpre 15 57 24.1
HERN Volcan Telica 143.46 60 PKPbc 15 57 29.4 +0.2
H03S2 Juan Fernandez 144.17 145 PKP **PKiKP** **15 57 34.5 -1.3**
baz=201,slow=74,SNR=3.9
H03S1 Juan Fernandez 144.17 145 PKP **PKiKP** **15 57 34.5 -1.3**
baz=201,slow=74,SNR=4.3
H03S3 Juan Fernandez 144.18 145 PKP **PKPdf** **15 57 33.4 +1.1**
baz=201,slow=74,SNR=3.6
H03N3 Juan Fernandez 144.44 144 PKP **PKPdf** **15 57 32.2 -0.5**
baz=171,slow=18,SNR=3.6
H03N2 Juan Fernandez 144.45 144 PKP **PKPdf** **15 57 33.0 +0.4**
baz=171,slow=18,SNR=5.2
H03N1 Juan Fernandez 144.46 144 PKP **PKPdf** **15 57 33.0 +0.3**
baz=171,slow=18,SNR=6.7
BI05 Punta Hualpn 144.80 154 PKPbc 15 57 32.6 0.0
BI02 San Fabin de 145.67 156 *i* P **PKPab** **15 57 36.2 +0.3**
JTS Las Juntas de 146.15 62 **PKPdf** **15 57 35.5 -1.0**
JTS Las Juntas de 146.15 62 PKIKP **PKPdf** **15 57 35.5 -1.0**
GO05 Hualane 146.81 154 **PKPdf** **15 57 36.2 -0.9**
HDC Heredia 147.02 62 *e*P **PKPdf** **15 57 35.6 -2.5**
TRQA Tornquist 147.09 170 **PKPdf** **15 57 36.5 -1.0**
TRQA Tornquist 147.09 170 PKIKP **PKPdf** **15 57 36.5 -1.0**
MTDJ Mount Denham 147.44 43 ⇑*i*P **PKPbc** **15 57 41.5 +0.3**
BO02 Sierra Bellavi 147.49 155 *i* P **PKPdf** **15 57 39.5 +1.2**
PRVC Isla de Provid 147.64 54 P **PKPdf** **15 57 38.1 -0.8**
BO01 Tunca 147.70 154 *i* P **PKPdf** **15 57 37.9 -0.6**
GTBY Guantanamo Bay 147.75 38 ⇑*i*P **PKPbc** **15 57 42.4 +0.5**
STH Stony Hill 148.03 42 ⇑*i*P **PKPbc** **15 57 42.8 +0.1**
HOJ Hope 148.12 42 *i* P **PKiKP** **15 57 43.9 -0.8**
BO04 La Punta 148.25 155 **PKPdf** **15 57 39.1 -0.4**
RFA San Rafael 148.41 158 *i* P **PKPdf** **15 57 39.8 0.0**
MT13 San Alfonso 148.60 155 *i* P **PKPdf** **15 57 40.5 +0.3**
VA01 Torpederas 148.60 152 *i* P **PKPdf** **15 57 40.8 +0.8**
MT02 Curacav 148.64 153 *i* P **PKPdf** **15 57 40.1 0.0**
PEL Peldehue 148.94 154 **PKPdf** **15 57 39.8 -0.9**
PEL Peldehue 148.94 154 PKIKP **PKPdf** **15 57 39.8 -0.9**
PEL Peldehue 148.94 154 *i* P **PKPdf** **15 57 40.3 -0.4**
MT04 Ro Olivares 148.95 155 *i* P **PKPdf** **15 57 41.3 +0.4**
MT08 Bocatoma Ro 148.97 155 *i* P **PKPdf** **15 57 41.4 +0.4**
VA03 San Esteban 149.32 154 *i* P **PKPdf** **15 57 41.6 +0.3**
AAGR Agrelo 149.77 156 *e*P **PKPdf** **15 57 42.5 +0.4**
ASAL Salagasta 150.20 156 *i* P **PKPdf** **15 57 43.7 +0.9**
CO02 Combarbal 150.42 151 *i* P **PKPdf** **15 57 42.9 -0.3**
LPA La Plata 150.74 175 PKIKP PKPdf 15 57 35.5 -7.9
LPA PDIFF 15 55 44.0
CO03 El Pedregal 150.87 151 *i* P **PKPdf** **15 57 44.2 +0.3**
ACAN Cantantal 151.12 158 *e*P **PKPdf** **15 57 44.9 +0.8**
BCIP Isla Barro Col 151.13 60 P PKPdf 15 57 31.4 -13
ZON Zonda 151.17 155 **PKPdf** **15 57 43.3 -0.9**
ZON Zonda 151.17 155 PKIKP **PKPdf** **15 57 43.3 -0.9**
ZON Zonda 151.17 155 *i* P **PKPdf** **15 57 44.5 +0.3**

CFA	**Coronel Fontan**	**151.30**	**156**	*i* P		**PKPdf**	**15 57 45.5**	**+1.1**
CO01	**Juntas del Tor**	**151.87**	**151**	*i* P		**PKPdf**	**15 57 46.5**	**+0.8**
AROD	**Rodeo**	**152.00**	**152**	*i* P		**PKPdf**	**15 57 45.7**	**-0.2**
ACDV	**Cuesta del Vie**	**152.16**	**153**	*e*P		**PKPdf**	**15 57 46.8**	**+0.9**
ACHE	**Chepes**	**152.31**	**158**	*i* P		**PKPdf**	**15 57 46.5**	**+0.4**
LCO	**Las Campanas**	**152.36**	**149**	*i* P		**PKPdf**	**15 57 47.0**	**+0.6**
AVFE	**Valle Fertil**	**152.45**	**156**	*i* P		**PKPdf**	**15 57 46.9**	**+0.7**
AC05	**El Transito**	**152.72**	**150**	*i* P		**PKPdf**	**15 57 46.6**	**-0.1**
PTAC	**Punta Ardita,**	**153.86**	**61**	P		**PKPdf**	**15 57 46.5**	**-2.1**
SJG	**San Juan**	**153.93**	**25**			**PKPdf**	**15 57 46.8**	**-1.7**
SJG	**San Juan**	**153.93**	**25**		PKIKP	**PKPdf**	**15 57 46.8**	**-1.7**
HUMP	**Col San Antoni**	**154.02**	**24**			**PKPdf**	**15 57 47.0**	**-1.7**
APAC	**Apartado, Choc**	**154.54**	**58**	P		**PKPdf**	**15 57 47.3**	**-2.3**
PSAL	**Palomas, Salto**	**154.55**	**175**	*e*P		**PKPdf**	**15 57 47.9**	**-1.2**
SOLC	**Bahia Solano**	**154.64**	**63**	P		**PKPdf**	**15 57 48.5**	**-1.2**
DBBC	**Dabeiba**	**155.31**	**60**	P		**PKPdf**	**15 57 48.3**	**-2.4**
CPSB	**Cacapava Do Su**	**155.32**	**183**	*e*P		**PKPdf**	**15 57 50.2**	**0.0**
OTAV	**Otavalo**	**155.78**	**77**			**PKPdf**	**15 57 50.5**	**-1.4**
OTAV	**Otavalo**	**155.78**	**77**		PKIKP	**PKPdf**	**15 57 50.5**	**-1.4**
OTAV	**Otavalo**	**155.78**	**77**	*e*P		**PKPdf**	**15 57 52.1**	**+0.2**
CBOC	**Ciudad Bolivar**	**156.03**	**62**	P		**PKPdf**	**15 57 48.2**	**-3.6**
CNLB	**Canela**	**156.14**	**189**	*e*P		**PKPdf**	**15 57 51.9**	**+0.5**
PLMC	**San Jos del P**	**156.23**	**64**	P		**PKPdf**	**15 57 48.0**	**-4.0**
	comp=Z,1μmcomp=Z,34nm,1.1s							
HELC	**Santa Helena**	**156.30**	**61**	P		**PKPdf**	**15 57 48.2**	**-4.2**
BBAC	**Balboa, Cauca**	**156.43**	**72**	P		PKPdf	15 57 38.4	-14
YOTC	**Yotoco, Valle**	**156.56**	**66**	P		**PKPdf**	**15 57 51.8**	**-0.7**
GCUF	**Volcan Galeras**	**156.58**	**74**	P		PKPdf	15 57 38.9	-14
	comp=Z,2μmcomp=Z,34nm,0.9s							
ATAH	**Atahualpa**	**156.61**	**95**		PKP	**PKPdf**	**15 57 54.2**	**+1.3**
	comp=Z,27nm,1.1s,baz=308,slow=0.5,SNR=20							
ATAH					PKPab	**PKPab**	**15 58 22.6**	**+0.5**
	comp=Z,34nm,0.8s,baz=231,slow=3.3,SNR=10							
BONI	**La Bonita**	**156.62**	**76**	P		PKPdf	15 57 36.7	-16
	comp=Z,1μmcomp=Z,32nm,0.9s							
POPC	**Popayan, Colom**	**156.79**	**70**	P		**PKPdf**	**15 57 51.1**	**-1.8**
CMAN1	**Manizales, Cal**	**156.83**	**63**	P		**PKPdf**	**15 57 59.7**	**+6.7**
GUY2C	**Guyana, Caldas**	**156.90**	**63**	P		**PKPdf**	**15 57 48.2**	**-5.1**
NNA	**Nana**	**157.44**	**108**		PKP	**PKPdf**	**15 57 53.3**	**-0.1**
	comp=Z,13nm,0.9s,baz=299,slow=4.2,SNR=4.3							
NNA					PKPab	**PKPab**	**15 58 24.7**	**-0.5**
	comp=Z,21nm,1.0s,baz=203,slow=6.1,SNR=4.3							
NNA	**Nana**	**157.44**	**108**			**PKPdf**	**15 57 52.3**	**-1.1**
ORTC	**Ortega, Tolima**	**157.58**	**65**	P		**PKPdf**	**15 57 52.4**	**-1.3**
	comp=Z,4μmcomp=Z,1μmcomp=Z,39nm,1.4s							
BETC	**Betania**	**157.89**	**69**	P		**PKPdf**	**15 57 53.8**	**-0.3**
PRAC	**Prado**	**157.99**	**65**	P		**PKPdf**	**15 57 52.7**	**-1.5**
ROSC	**El Rosal**	**158.00**	**62**		PKP	**PKPdf**	**15 57 55.0**	**+0.4**
	comp=Z,21nm,0.8s,baz=133,slow=3.0,SNR=15							
GARC	**Garzon, Huila**	**158.02**	**70**	P		**PKPdf**	**15 57 53.5**	**-1.0**
FLOC	**Florencia**	**158.08**	**71**	P		**PKPdf**	**15 57 53.5**	**-0.8**
ITAB	**Concordia**	**158.36**	**187**	*e*P		**PKPdf**	**15 57 54.5**	**+0.3**
URMC	**La Uribe, Meta**	**158.65**	**66**	P		**PKPdf**	**15 57 52.4**	**-2.6**
SDV	**Santo Domingo**	**158.70**	**47**		PKP	**PKPdf**	**15 57 54.7**	**-0.5**
	comp=Z,29nm,1.0s,baz=340,slow=0.8,SNR=27							
SDV					PKPab	**PKPab**	**15 58 30.8**	**+0.1**
	comp=Z,52nm,0.8s,baz=308,slow=0.6,SNR=9.5							
SDV	**Santo Domingo**	**158.70**	**47**			**PKPdf**	**15 57 53.7**	**-1.4**
SDV	**Santo Domingo**	**158.70**	**47**	*e*P		**PKPdf**	**15 57 54.5**	**-0.7**
CPUP	**Villa Florida**	**159.29**	**174**	PKP		**PKPdf**	**15 57 55.3**	**0.0**
	comp=Z,6.8nm,1.1s,baz=42,slow=1.8,SNR=12							
CPUP					PKPab	**PKPab**	**15 58 33.6**	**+1.0**
	comp=Z,21nm,0.9s,baz=189,slow=5.1,SNR=7.6							
CPUP	**Villa Florida**	**159.29**	**174**	*e*P		**PKPdf**	**15 57 55.1**	**-0.2**
PTLC	**Puerto Leguiza**	**159.32**	**74**	P		**PKPdf**	**15 57 52.4**	**-3.3**
	comp=Z,4μmcomp=Z,3μmcomp=Z,17nm,1.0s							
MACC	**Macarena, Meta**	**159.57**	**68**	P		**PKPdf**	**15 57 53.8**	**-2.2**
RIB01	**Linhares ES**	**160.39**	**225**	*e*P		**PKPdf**	**15 57 57.0**	**+0.3**
NBPV	**Pedro Velho**	**160.47**	**267**	*e*P		**PKPdf**	**15 57 54.0**	**-3.0**
SPB	**Sao Paulo**	**160.75**	**201**	*e*P		**PKPdf**	**15 57 57.6**	**+0.6**
PTGB	**Pitanga**	**160.83**	**188**	*e*P		**PKPdf**	**15 57 57.0**	**-0.2**
BSFB	**Barra de Sao F**	**161.03**	**225**	*e*P		**PKPdf**	**15 57 56.7**	**-0.7**
RCBR	**Riachuelo**	**161.09**	**268**			**PKPdf**	**15 57 55.9**	**-1.8**
RCBR	**Riachuelo**	**161.09**	**268**		PKIKP	**PKPdf**	**15 57 55.9**	**-1.8**
RCBR	**Riachuelo**	**161.09**	**268**	*e*P		**PKPdf**	**15 57 56.9**	**-0.8**
VAO	**Valinhos**	**161.11**	**203**	*e*P		**PKPdf**	**15 57 57.9**	**+0.4**
SJMB	**Sao Joao De Ma**	**161.35**	**225**	*e*P		**PKPdf**	**15 57 57.1**	**-0.6**
GUA01	**Guaratinga, BA**	**161.63**	**232**	*e*P		**PKPdf**	**15 57 58.3**	**+0.2**
FRTB	**Fartura**	**161.66**	**196**	*e*P		**PKPdf**	**15 57 59.4**	**+1.4**
BSCB	**Bom Sucesso**	**161.84**	**212**	*e*P		**PKPdf**	**15 57 58.2**	**-0.2**
LDASE	**Londrina, Braz**	**161.97**	**191**	*e*P		**PKPdf**	**15 57 58.8**	**+0.4**
CMC01	**Camacan, BA**	**162.06**	**236**	*e*P		**PKPdf**	**15 57 58.8**	**+0.2**
CZSB	**Cruzeiro do Su**	**162.20**	**98**	P		**PKPdf**	**15 57 57.6**	**-1.2**
CZSB	**Cruzeiro do Su**	**162.20**	**98**	*e*P		**PKPdf**	**15 57 59.1**	**+0.3**
NBPA	**Parau_RN**	**162.29**	**269**	*e*P		**PKPdf**	**15 57 58.6**	**-0.3**
TRCB	**Terra Rica**	**162.80**	**187**	*e*P		**PKPdf**	**15 57 58.8**	**-0.4**
AMBA	**Amambai (Brazi**	**162.81**	**180**	*e*P		**PKPdf**	**15 57 58.0**	**-1.2**
LPAZ	**La Paz**	**163.26**	**130**	PKP		**PKPdf**	**15 58 01.0**	**+0.5**
	comp=Z,14nm,1.1s,baz=10.0,slow=1.6,SNR=33							
LPAZ					PKPab	**PKPab**	**15 58 53.2**	**+2.1**
	comp=Z,24nm,0.9s,baz=198,slow=1.3,SNR=9.3							
LPAZ	**La Paz**	**163.26**	**130**	*e*P		**PKPdf**	**15 58 00.6**	**+0.1**
DIAM	**Diamantina, MG**	**163.31**	**220**	*e*P		**PKPdf**	**15 57 58.3**	**-1.6**
BB19B	**Bebedouro**	**163.46**	**201**	*e*P		**PKPdf**	**15 58 00.6**	**+0.7**
MURT	**Porto Murtinho**	**163.86**	**171**	*e*P		**PKPdf**	**15 58 01.3**	**+1.2**
NBMA	**Muriti-CE**	**163.87**	**263**	*e*P		**PKPdf**	**15 57 59.8**	**-0.7**
PMNB	**Patos De Minas**	**164.74**	**212**	*e*P		**PKPdf**	**15 58 00.9**	**-0.2**
BDQN	**Bodoquena, MS**	**165.17**	**173**	*e*P		**PKPdf**	**15 58 02.1**	**+0.8**
AQDB	**Aquidauana**	**165.23**	**177**	*e*P		**PKPdf**	**15 58 00.9**	**-0.4**
ITRB	**Iturama**	**165.33**	**197**	*e*P		**PKPdf**	**15 58 02.1**	**+0.6**
JANB	**Januaria**	**166.00**	**227**	*e*P		**PKPdf**	**15 58 01.7**	**-0.5**
IPMB	**Ipameri, GO**	**166.09**	**208**	*e*P		**PKPdf**	**15 58 01.3**	**-0.9**
NBPS	**Pedro II - PI**	**166.53**	**275**	*e*P		**PKPdf**	**15 58 02.1**	**-0.7**
C2SB	**Chapadao do Su**	**166.79**	**189**	*e*P		**PKPdf**	**15 58 04.0**	**+1.3**
BBSD	**Serra de San D**	**167.23**	**155**	*e*P		**PKPdf**	**15 58 03.2**	**+0.2**
BDFB	**Brasilia**	**167.97**	**214**	PKP		**PKPdf**	**15 58 03.0**	**-0.8**
	comp=Z,12nm,1.0s,baz=33,slow=2.6,SNR=9.3							
BDFB					PKPab	**PKPab**	**15 59 11.3**	**+0.1**
	comp=Z,27nm,1.0s,baz=118,slow=2.7,SNR=6.2							
BDFB					PP	**PP**	**16 03 02.2**	**+3.3**
	comp=Z,5.1nm,0.8s,baz=130,slow=7.6,SNR=3.2							
BDFB	**Brasilia**	**167.97**	**214**			**PKPdf**	**15 58 02.2**	**-1.5**
SDBA	**SAO DESIDERIO**	**168.05**	**235**	*e*P		**PKPdf**	**15 58 03.2**	**-0.5**
SIV	**San Ignacio**	**168.06**	**150**	PKP		**PKPdf**	**15 58 03.0**	**-0.7**
	comp=Z,8.2nm,0.9s,baz=175,slow=0.5,SNR=27							
SIV					PKPab	**PKPab**	**15 59 12.5**	**+1.1**
	comp=Z,14nm,0.9s,baz=192,slow=4.6,SNR=8.0							
PP1B	**Ponte de Pedra**	**168.11**	**180**	*e*P		**PKPdf**	**15 58 03.2**	**-0.4**
PTLB	**Pontes e Lacer**	**169.40**	**157**			**PKPdf**	**15 58 03.0**	**-1.4**
PTLB	**Pontes e Lacer**	**169.40**	**157**	*e*P		**PKPdf**	**15 58 04.4**	**-0.1**
ARAG	**Araguaiana, MT**	**169.54**	**197**	*e*P		**PKPdf**	**15 58 04.8**	**+0.2**
SALV	**Santo Antonio**	**169.77**	**176**	*e*P		**PKPdf**	**15 58 04.0**	**-0.7**
TEFE	**Tefe**	**170.08**	**78**	*e*P		**PKPdf**	**15 58 04.4**	**-0.6**
BOAV	**Boa Vista**	**170.25**	**35**			**PKPdf**	**15 58 02.9**	**-2.2**
BOAV					PKPab	**PKPab**	**15 59 19.6**	**-1.5**
BOAV	**Boa Vista**	**170.25**	**35**	*e*P		**PKPdf**	**15 58 04.4**	**-0.8**
VILB	**Vilhena**	**171.05**	**145**	*e*P		**PKPdf**	**15 58 04.8**	**-0.8**
SMTB	**Santa Maria do**	**172.06**	**246**	*e*P		**PKPdf**	**15 58 05.1**	**-0.9**
SNDB	**Serra Nova Dou**	**172.76**	**209**	*e*P		**PKPdf**	**15 58 05.1**	**-1.2**
MACA	**Manacapuru-AM**	**173.74**	**67**	PKPdf		**PKPdf**	**15 58 04.8**	**-2.0**
MACA						**PKPab**	**15 59 34.9**	**-2.0**
MACA	**Manacapuru-AM**	**173.74**	**67**	*e*P		**PKPdf**	**15 58 06.3**	**-0.5**
PDRB	**Porto dos Gac**	**173.79**	**163**	*e*P		**PKPdf**	**15 58 05.5**	**-1.2**
CLDB	**Colider**	**174.72**	**170**	*e*P		**PKPdf**	**15 58 05.9**	**-1.1**
PRPB	**Parauapebas**	**174.91**	**264**	*e*P		**PKPdf**	**15 58 06.3**	**-0.9**
ITTB	**Itaituba**	**178.50**	**33**	*e*P		**PKPdf**	**15 58 06.7**	**-1.1**
NPGB	**Novo Progresso**	**178.53**	**162**	*e*P		**PKPdf**	**15 58 05.5**	**-2.3**

RSNC 26 15:46:35.2±0.0,5°N±1″,7°4W±″,h146km±2km,M3.0,mb4.3, ML2.6,MLv3.3,Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPBC	**San Pablo de B**	**0.48**	**318**	P	Pn	15 46 56.1	0.0
SPBC				S	Sn	15 47 11.7	-0.3
CHIC	**Chingaza**	**0.66**	**178**	P	Pn	15 46 57.4	-0.1
CHIC				S	Sn	15 47 14.1	-0.4
ROSC	**El Rosal**	**0.72**	**232**	P	Pn	15 46 59.0	+1.1
ROSC				S	Sn	15 47 15.8	+0.7
CVER	**Cruz Verde, Cu**	**0.83**	**203**	P	Pn	15 46 59.3	+0.5
CVER				S	Sn	15 47 16.0	-0.7
RUSC	**La Rusia**	**0.89**	**48**	P	Pn	15 46 59.7	+0.4
RUSC				S	Sn	15 47 17.7	+0.1
NORC	**Norcasia**	**1.15**	**284**	P	Pn	15 47 00.9	-0.1
NORC				S	Sn	15 47 20.6	0.0
VILC	**Villavicencio,**	**1.17**	**177**	P	Pn	15 47 00.8	-0.5
VILC				S	Sn	15 47 20.5	-0.8
BARC	**Barichara**	**1.41**	**24**	P	Pn	15 47 03.6	-0.2
BARC				P		15 47 03.8	
BARC				S	Sn	15 47 23.9	-1.8
BARC				S		15 47 24.4	
BARC				S		15 47 24.8	
PTBC	**PUERTO BERRIO,**	**1.43**	**331**	P	Pn	15 47 03.2	-0.5
PTBC	**PUERTO BERRIO,**	**1.43**	**331**	P	Pn	15 47 02.9	-0.8
PTBC				S	Sn	15 47 24.5	-1.1
PTBC	**PUERTO BERRIO,**	**1.43**	**331**	P	Pn	15 47 03.1	-0.6
GUY2C	**Guyana, Caldas**	**1.61**	**268**	P	Pn	15 47 06.0	-0.1
GUY2C				S	Sn	15 47 29.3	-0.4
BRJC	**Barrancabermej**	**1.67**	**0**	P	Pn	15 47 06.4	0.0
BRJC				S	Sn	15 47 30.7	+0.4
NIZA	**Niza - Manizal**	**1.73**	**262**	P	Pn	15 47 06.2	-1.1
NIZA				S	Sn	15 47 29.4	-2.4
PRAC	**Prado**	**1.93**	**216**	S	Sn	15 47 35.1	-0.5
PRAC	**Prado**	**1.93**	**216**	P	Pn	15 47 09.1	-0.3
PRAC				S	Sn	15 47 35.0	-0.6
PRAC	**Prado**	**1.93**	**216**	P	Pn	15 47 09.5	+0.1
PRAC	**Prado**	**1.93**	**216**	P	Pn	15 47 09.5	+0.1
PTGC	**Puerto Gaitan,**	**1.94**	**124**	P	Pn	15 47 08.8	-0.6
PTGC	**Puerto Gaitan,**	**1.94**	**124**	P	Pn	15 47 08.6	-0.8
PTGC				S	Sn	15 47 32.8	-2.9
PTGC	**Puerto Gaitan,**	**1.94**	**124**	P	Pn	15 47 08.7	-0.7
HELC	**Santa Helena**	**1.98**	**297**	S	Sn	15 47 37.1	0.0
HELC	**Santa Helena**	**1.98**	**297**	P	Pn	15 47 10.4	+0.1
HELC				S	Sn	15 47 36.4	-0.7
HELC	**Santa Helena**	**1.98**	**297**	P	Pn	15 47 10.8	+0.5
HELC	**Santa Helena**	**1.98**	**297**	P	Pn	15 47 10.9	+0.6
HELC	**Santa Helena**	**1.98**	**297**	P	Pn	15 47 11.0	+0.7
HELC	**Santa Helena**	**1.98**	**297**	S	Sn	15 47 36.9	-0.2
ORTC	**Ortega, Tolima**	**2.03**	**227**	S	Sn	15 47 36.8	-0.7
ORTC	**Ortega, Tolima**	**2.03**	**227**	P	Pn	15 47 09.9	-0.6
ORTC				S	Sn	15 47 36.0	-1.5
ORTC	**Ortega, Tolima**	**2.03**	**227**	P	Pn	15 47 10.5	0.0
ORTC	**Ortega, Tolima**	**2.03**	**227**	P	Pn	15 47 10.8	+0.3
ORTC	**Ortega, Tolima**	**2.03**	**227**	P	Pn	15 47 10.9	+0.4
URMC	**La Uribe, Meta**	**2.12**	**197**	P	Pn	15 47 11.8	+0.1
URMC	**La Uribe, Meta**	**2.12**	**197**	P	Pn	15 47 11.4	-0.3
URMC				S	Sn	15 47 38.9	-0.8
PAMC	**Pamplona, Colo**	**2.29**	**27**	P	Pn	15 47 14.8	+0.8
PAMC	**Pamplona, Colo**	**2.29**	**27**	P	Pn	15 47 14.1	+0.1
PAMC				S	Sn	15 47 43.2	-0.7
PAMC	**Pamplona, Colo**	**2.29**	**27**	P	Pn	15 47 14.5	+0.5
CBOC	**Ciudad Bolivar**	**2.32**	**284**	P	Pn	15 47 14.6	+0.5
CBOC				S	Sn	15 47 43.7	-0.3
PLMC	**San Jos del P**	**2.55**	**261**	P	Pn	15 47 17.7	+0.8
PLMC				S	Sn	15 47 48.5	-0.4
YOTC	**Yotoco, Valle**	**2.89**	**243**	P	Pn	15 47 20.8	-0.4
YOTC				S	Sn	15 47 56.9	+0.2
GUVC	**San Jose del G**	**2.95**	**158**	P	Pn	15 47 21.3	-0.5
GUVC				S	Sn	15 47 55.2	-2.6
OCAC	**Ocana**	**2.96**	**8**	S	Sn	15 47 59.1	+0.8
OCAC	**Ocana**	**2.96**	**8**	P	Pn	15 47 21.7	-0.4
OCAC				S	Sn	15 47 57.8	-0.5
OCAC	**Ocana**	**2.96**	**8**	P	Pn	15 47 22.1	0.0
OCAC	**Ocana**	**2.96**	**8**	P	Pn	15 47 22.2	+0.1
OCAC	**Ocana**	**2.96**	**8**	P	Pn	15 47 22.3	+0.2
DBBC	**Dabeiba**	**2.99**	**305**	P	Pn	15 47 23.0	+0.6
DBBC	**Dabeiba**	**2.99**	**305**	P	Pn	15 47 22.4	0.0
DBBC				S	Sn	15 47 57.5	-1.3
DBBC	**Dabeiba**	**2.99**	**305**	P	Pn	15 47 23.0	+0.6
UREC	**San Jos de Ur**	**3.02**	**324**	P	Pn	15 47 20.6	-2.1
UREC				S	Sn	15 47 56.8	-2.6
MACC	**Macarena, Meta**	**3.12**	**182**	P	Pn	15 47 22.1	-2.0
MACC				S	Sn	15 47 57.1	-4.8
GARC	**Garzon, Huila**	**3.54**	**209**	P	Pn	15 47 28.2	-1.4
GARC				S	Sn	15 48 09.3	-2.5
JAMC	**Jamundi, Valle**	**3.57**	**235**	P	Pn	15 47 28.9	-1.1
JAMC				S	Sn	15 48 11.6	-0.8
APAC	**Apartado, Choc**	**3.83**	**313**	P	Pn	15 47 32.4	-0.7
APAC				S	Sn	15 48 16.1	-1.9
POPC	**Popayan, Colom**	**4.00**	**227**	P	Pn	15 47 36.4	+0.8
FLOC	**Florencia**	**4.14**	**207**	P	Pn	15 47 36.8	-0.5
FLOC				S	Sn	15 48 24.4	-1.2
ARGC	**Ariguani, Magd**	**4.56**	**354**	P	Pn	15 47 42.5	-0.3
ARGC				S	Sn	15 48 33.6	-1.9
SDV	**Santo Domingo**	**4.72**	**41**	P	Pn	15 47 44.4	-0.7
SDV				S	Sn	15 48 36.2	-3.4
SJCC	**San Jacinto, C**	**4.79**	**343**	P	Pn	15 47 42.8	-3.1
SJCC				S	Sn	15 48 35.8	-5.2
SMRC	**Santa Marta, M**	**5.86**	**355**	P	Pn	15 48 00.9	+0.9
SMRC				S	Sn	15 49 01.3	-4.9

MOS ***26*** *16:09:59.5±1.4,43.˝75N×146.˝13E,h61km,mb4.0/2,Error ellipse: s-maj=20.3km s-min=14.0km az=93.1*
MOS Felt (II-III) at Malokuril'skoye.
JMA ***26*** *16:10:01.2±0.2,43.˝7N±0.˝6×14˝6E±˝,h36km±1km, MV3.4/39,NEAR KUNASHIRI ISLAND*
SKHL ***26*** *16:10:02.3±0.1,43.˝70N×146.˝30E,h30km±9km,mb5.1/2*
ISC 26 16:09:59.8±1.0,43˝71N±0˝05×146˝32E±0˝05,h44km±8km, n33,σ2s24/49,1C-2D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.40**	**66**	*e*P	Pn	16 10 20.5	+11
SHO				AMB	AMB	16 10 21.0	
	850nm,0.2s						
SHO				*e*S	Sn	16 10 26.0	+10
SHO				A	A	16 10 27.0	
	10μm,0.3s						
SHO				A	A	16 10 27.0	
	14μm,0.3s						
YUK	**Yuzh-Kuril'sk**	**0.47**	**315**	*d* iPN	Pn	**16 10 10.9**	**+0.6**
YUK				*e*S	Sn	**16 10 17.2**	**-0.4**
YUK				pmax	pmax		
	comp=N,376nm,0.1s						
YUK				pmax	pmax		
	comp=E,461nm,0.1s						
YUK				pmax	pmax		
	comp=Z,3μm,0.1s						
YUK				smax	smax		
	comp=E,7μm,0.5s						
YUK				smax	smax		
	comp=N,7μm,0.2s						
YUK	**Yuzh-Kuril'sk**	**0.47**	**315**	*e*P	Pn	**16 10 10.9**	**+0.6**
YUK				AMB	AMB	16 10 11.5	
	comp=N,2μm,0.4s						
YUK				*e*S	Sn	**16 10 17.3**	**-0.4**
YUK				A	A	16 10 17.7	
	comp=N,7μm,0.2s						
YUK				A	A	16 10 17.7	
	comp=N,7μm,0.2s						
NEM2	**Nemuro 2**	**0.54**	**231**	*i* P	Pn	**16 10 12.4**	**+1.1**
NEM2				*e*S	Sn	**16 10 20.0**	**+0.6**
NMR	**Nemuro--Hokkai**	**0.55**	**232**	*i* PN	Pn	**16 10 12.3**	**+1.0**
NMR				*e*S	Sn	**16 10 20.0**	**+0.5**
NMR	**Nemuro--Hokkai**	**0.55**	**232**	*e*P	Pn	**16 10 12.4**	**+1.1**
NMR				*e*S	Sn	**16 10 20.0**	**+0.5**
RUSJ	**Misakicho**	**0.87**	**297**	*e*PN	Pn	**16 10 17.7**	**+2.0**
RUSJ				*e*S	Sn	**16 10 29.6**	**+2.4**
JRA	**Rausu**	**0.90**	**285**	*e*P	Pn	**16 10 18.1**	**+2.1**
JRA				*e*S	Sn	**16 10 29.7**	**+1.9**
JNSB	**Nemuroshibetsu**	**0.96**	**274**	P	Pn	**16 10 19.2**	**+2.4**
JNSB				*e*S	Sn	**16 10 31.8**	**+2.5**
JKHN	**Kushirohamanak**	**1.05**	**234**	*e*P	Pn	**16 10 19.4**	**+1.3**
JNK	**Nakash**	**1.17**	**264**	*i* P	Pn	**16 10 21.8**	**+2.1**
JNK				*e*S	Sn	**16 10 37.0**	**+2.5**
AKK	**Akkeshi**	**1.28**	**238**	*e*P	Pn	**16 10 23.0**	**+1.7**
JAK	**Akkeshi**	**1.38**	**240**	*e*P	Pn	**16 10 24.4**	**+1.8**
JAK				*e*S	Sn	**16 10 41.9**	**+2.1**
JTKR	**Abashiri--Toko**	**1.77**	**279**	*e*P	Pn	**16 10 31.5**	**+3.6**
JTKR				*e*S	Sn	**16 10 54.1**	**+4.9**
KUR	**Kuril'sk**	**1.88**	**35**	PN	Pn	**16 10 32.8**	**+3.3**
KUR				S	Sn	**16 10 55.1**	**+3.1**
KUR				pmax	pmax		
	comp=Z,186nm,0.6s						
KUR				smax	smax		
	comp=N,359nm,0.2s						
KUR				smax	smax		
	comp=E,177nm,0.2s						
KUR	**Kuril'sk**	**1.88**	**35**	*e*P	Pn	**16 10 33.0**	**+3.5**
KUR				AMB	AMB	16 10 34.3	
	comp=E,140nm,0.3s						
KUR				*e*S	Sn	**16 10 53.8**	**+1.8**
KUR				A	A	16 10 57.4	
	comp=E,260nm,0.2s						
KUR				A	A	16 10 57.4	
	comp=E,260nm,0.2s						
JAR	**Ashorobuto**	**1.90**	**258**	*e*P	Pn	**16 10 32.9**	**+3.1**
JAR				*e*S	Sn	**16 10 56.8**	**+4.3**
JOB	**Onbets**	**1.99**	**247**	*e*P	Pn	**16 10 33.8**	**+2.9**
JOB				*e*S	Sn	**16 10 58.0**	**+3.5**
YSS	**Yuzhno-Sakhali**	**4.11**	**323**	*e*P	Pn	16 11 03.3	+3.3
YSS				*e*S	**Sn**	**16 11 48.9**	**+2.2**
VLA	**Vladivostok**	**10.52**	**272**	*i* PN	**Pn**	**16 12 27.2**	**-0.7**
VLA	**Vladivostok**	**10.52**	**272**	*e*P	**Pn**	**16 12 27.3**	**-0.7**
MA2	**Magadan**	**16.12**	**8**	*i* P	**Pn**	**16 13 41.3**	**-1.8**
MA2	**Magadan**	**16.12**	**8**	*e*P	**Pn**	**16 13 41.3**	**-1.8**
BILL	**Bilibino**	**26.57**	**17**	*i* P	**P**	**16 15 32.5**	**-0.8**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.5s						
BILL	**Bilibino**	**26.57**	**17**	*e*P	**P**	**16 15 32.5**	**-0.8**
ULN	**Ulaanbaatar**	**27.49**	**293**	*i* P	**P**	**16 15 40.8**	**-1.2**
ULN	**Ulaanbaatar**	**27.49**	**293**	*e*P	**P**	**16 15 40.9**	**-1.1**
TIXI	**Tiksi**	**29.28**	**349**	*i* P	**P**	**16 15 57.1**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.2s						
TIXI	**Tiksi**	**29.28**	**349**	*e*P	**P**	**16 15 57.1**	**-0.4**
MK31	**Makanchi Array**	**44.07**	**297**	*i* P	**P**	**16 18 03.3**	**-0.1**
ARTI	**Arti**	**54.07**	**317**	*d* iP	**P**	**16 19 18.4**	**-1.3**
ARTI						16 21 18.8	
ARTI				S	**S**	**16 26 48.6**	**-4.0**
ARTI				SS	**SKiKP**	**16 30 30.6**	**+3.1**
KIV	**Kislovodsk**	**69.34**	**311**	*e*P	**P**	**16 21 02.2**	**-0.6**
KIV	**Kislovodsk**	**69.34**	**311**	*e*P	**P**	**16 21 02.2**	**-0.6**

NEIC ***26*** *16:12:42.7±1.2,40.˝753N×0.˝010×112.˝00W±0.˝02, h6km±2km,ML3.3/174,ML3.3/8(UUSS),Error ellipse: s-maj=1.8km s-min=1.3km az=64.0*
UUSS ***26*** *16:12:42.9±1.4,40.˝769N×0.˝010×111.˝97W±0.˝01, h6km±2km,Error ellipse: s-maj=1.7km s-min=1.4km az=58.0*
IDC ***26*** *16:12:44.8±1.1,41.˝04N×112.˝10W,h0km,mb2.5/1, mbtmp3.0/5,ML3.6/4,Error ellipse: s-maj=23.0km s-min=6.5km az=153.0*
ISC 26 16:12:42.9±0.9,40˝76N±0˝02×112˝00W±0˝02,h10km±6km, n153,σ0s93/157,Utah

| Code | Station Name | Δ° | AZ° | Phase ID Op | IS

	comp=E,92nm,0.8s									
PSUT					IAML			16 14 17.2		
	comp=N,125nm,0.8s									
BW06	**Boulder Array**	**2.71**	**42**			**Pn**		**16 13 27.8**	**+1.1**	
BW06					IAML			16 14 09.4		
	comp=N,169nm,0.5s									
BW06					IAML			16 14 14.7		
	comp=N,143nm,0.7s									
PD31	**Pinedale Array**	**2.71**	**42**			**Pn**		**16 13 28.1**	**+1.4**	
PDAR	**Pinedale Array**	**2.71**	**42**	Pn		**Pn**		**16 13 29.1**	**+2.4**	
	comp=N,10nm,0.3s,baz=218,slow=13,SNR=83									
PDAR				Lg	Lg			16 14 05.9		
	comp=N,32nm,0.3s,baz=228,slow=31,SNR=15									
	comp=N,13nm,0.4s									
PDAR	**Pinedale Array**	**2.71**	**42**			**Pn**		**16 13 28.2**	**+1.5**	
MTPU	**Mount Pierson**	**2.72**	**183**			**Pn**		**16 13 28.2**	**+1.1**	
SNOW	**Snow King Moun**	**2.85**	**18**	Pn		**Pn**		**16 13 29.1**	**+0.4**	
SNOW					IAML			16 14 17.0		
	comp=N,248nm,0.5s									
SNOW					IAML			16 14 18.1		
	comp=N,137nm,0.6s									
O20A	**White River Ci**	**2.93**	**101**	Pn		**Pn**		**16 13 30.4**	**+0.6**	
O20A					IAML			16 14 19.2		
	comp=N,233nm,0.7s									
O20A					IAML			16 14 23.6		
	comp=N,200nm,0.8s									
FXWY	**Fox Creek**	**2.96**	**14**			**Pn**		**16 13 30.6**	**+0.3**	
HMU	**Henry Mountain**	**2.98**	**161**			**Pn**		**16 13 30.2**	**-0.3**	
HMU					IAML			16 14 39.2		
	comp=N,240nm,0.7s									
LOHW	**Long Hollow**	**3.03**	**19**			**Pn**		**16 13 31.7**	**+0.6**	
LOHW					IAML			16 14 25.0		
	comp=N,99nm,0.6s									
LOHW					IAML			16 14 29.9		
	comp=N,67nm,0.7s									
MOOW	**Moose Ponds**	**3.12**	**17**			**Pn**		**16 13 34.1**	**+1.7**	
PV21	**Cone Mtn., Par**	**3.21**	**132**			**Pn**		**16 13 35.1**	**+1.6**	
PV23	**Carpenter Ridg**	**3.26**	**134**			**Pn**		**16 13 33.9**	**-0.5**	
SZCU	**Shurtz Canyon**	**3.27**	**195**			**Pn**		**16 13 35.7**	**+1.2**	
PV10	**Paradox Valley**	**3.30**	**135**			**Pn**		**16 13 35.4**	**+0.5**	
PV14	**Lion Creek, Pa**	**3.31**	**135**			**Pn**		**16 13 36.0**	**+1.0**	
PKCU	**Pink Cliffs**	**3.32**	**184**			**Pn**		**16 13 36.7**	**+1.4**	
PKCU					IAML			16 14 40.6		
	comp=E,74nm,0.8s									
PKCU					IAML			16 14 57.7		
	comp=N,64nm,2.8s									
HLID	**Hailey**	**3.33**	**328**			**Pn**		**16 13 36.6**	**+1.4**	
PV22	**Blue Mesa, Par**	**3.33**	**131**			**Pn**		**16 13 36.5**	**+1.3**	
PV04	**Paradox Valley**	**3.36**	**134**			**Pn**		**16 13 35.3**	**-0.4**	
PV04					IAML			16 14 35.0		
	comp=E,180nm,0.7s									
PV20	**West Nyswonger**	**3.37**	**135**			**Pn**		**16 13 36.2**	**+0.4**	
CCUT	**Cedar City**	**3.38**	**199**			**Pn**		**16 13 35.1**	**-0.8**	
PV19	**Morning Glory**	**3.38**	**135**			**Pn**		**16 13 35.9**	**-0.1**	
PV16	**Nyswonger Mesa**	**3.42**	**135**			**Pn**		**16 13 34.6**	**-1.8**	
PV17	**East Wray Mesa**	**3.42**	**136**			**Pn**		**16 13 35.7**	**-0.7**	
PV17					IAML			16 14 38.1		
	comp=E,125nm,0.5s									
PV17					IAML			16 14 46.3		
	comp=N,113nm,0.7s									
PV11	**David Mesa, Pa**	**3.45**	**135**			**Pn**		**16 13 36.6**	**-0.2**	
FLWY	**Flagg Ranch**	**3.45**	**16**			**Pn**		**16 13 37.3**	**+0.3**	
FLWY					IAML			16 14 53.7		
	comp=N,60nm,1.2s									
PV18	**Skein Mesa, Pa**	**3.47**	**135**			**Pn**		**16 13 36.8**	**-0.4**	
PV12	**Saucer Basin,**	**3.47**	**134**			**Pn**		**16 13 36.6**	**-0.7**	
PV07	**Paradox Valley**	**3.48**	**131**			**Pn**		**16 13 37.7**	**+0.4**	
PV07					IAML			16 14 42.2		
	comp=N,114nm,0.7s									
MCID	**Moose Creek**	**3.48**	**10**			**Pn**		**16 13 40.4**	**+3.1**	
PV03	**Paradox Valley**	**3.49**	**135**			**Pn**		**16 13 38.4**	**+0.9**	
PV03					IAML			16 14 36.2		
	comp=E,121nm,1.0s									
PV03					IAML			16 14 45.8		
	comp=N,142nm,0.9s									
PV05	**Paradox Valley**	**3.50**	**139**			**Pn**		**16 13 38.3**	**+0.8**	
PV13	**Radium Mtn., P**	**3.58**	**136**			**Pn**		**16 13 39.4**	**+0.7**	
PV02	**Paradox Valley**	**3.59**	**134**			**Pn**		**16 13 37.7**	**-1.1**	
HAYD	**Hayden**	**3.61**	**92**			**Pn**		**16 13 38.9**	**-0.3**	
HAYD					IAML			16 14 54.1		
	comp=E,144nm,1.1s									
YPP	**Pitchstone Pla**	**3.62**	**14**			**Pn**		**16 13 39.0**	**-0.3**	
YPP					IAML			16 14 48.2		
	comp=E,41nm,1.0s									
PV15	**Paradox Valley**	**3.64**	**131**			**Pn**		**16 13 37.3**	**-2.2**	
BCYI	**Bear Canyon**	**3.70**	**344**			**Pn**		**16 13 39.2**	**-1.1**	
PV01	**Paradox Valley**	**3.73**	**134**			**Pn**		**16 13 39.3**	**-1.5**	
PV01					IAML			16 14 48.2		
	comp=E,74nm,0.8s									
PV01					IAML			16 14 50.2		
	comp=N,102nm,0.8s									
H17A	**Grant Village**	**3.78**	**16**			**Pn**		**16 13 41.2**	**-0.3**	
YFT	**Old Faithful**	**3.79**	**13**			**Pn**		**16 13 41.6**	**0.0**	
YFT					IAML			16 14 10.5		
	comp=N,54nm,1.0s									
YFT					IAML			16 14 12.1		
	comp=E,37nm,0.9s									
KNB	**Kanab**	**3.80**	**190**			**Pn**		**16 13 41.0**	**-0.6**	
LCMT	**Little Creek M**	**3.87**	**195**			**Pn**		**16 13 41.4**	**-1.2**	
MFID	**Camas Ranch**	**3.89**	**314**			**Pn**		**16 13 43.5**	**+0.6**	
MFID					IAML			16 14 56.2		
	comp=E,32nm,1.3s									
MFID					IAML			16 14 58.5		
	comp=E,52nm,0.7s									
YMR	**Madison River**	**3.98**	**11**			**Pn**		**16 13 44.6**	**+0.5**	
YMR					IAML			16 14 55.5		
	comp=E,48nm,0.7s									
YMR					IAML			16 15 08.9		
	comp=N,56nm,0.9s									
YHB	**Horse Butte**	**4.03**	**8**			**Pn**		**16 13 44.9**	**0.0**	
YNR	**Norris Junctio**	**4.07**	**13**			**Pn**		**16 13 46.2**	**+0.7**	
QLMT	**Earthquake Lak**	**4.09**	**6**			**Pn**		**16 13 46.2**	**+0.5**	
PRN	**Pahroc Range**	**4.11**	**216**	Pn		**Pn**		**16 13 45.5**	**-0.3**	
MCMT	**McKenzie Canyo**	**4.11**	**352**			**Pn**		**16 13 46.1**	**+0.1**	
YHH	**Holmes Hill**	**4.11**	**11**			**Pn**		**16 13 45.8**	**-0.3**	
YHL	**Hebgen Lake**	**4.13**	**8**			**Pn**		**16 13 46.3**	**0.0**	
YHL					IAML			16 15 11.0		
	comp=N,22nm,1.7s									
YMP	**Mirror Lake Pl**	**4.20**	**18**			**Pn**		**16 13 47.0**	**-0.3**	
YMP					IAML			16 14 18.2		
	comp=N,26nm,1.7s									
YMP					IAML			16 14 22.1		
	comp=E,24nm,1.3s									
U15A	**North Rim**	**4.33**	**183**			**Pn**		**16 13 50.1**	**+1.0**	
U15A					IAML			16 15 20.8		
	comp=E,27nm,1.0s									
U15A					IAML			16 15 32.3		
	comp=N,26nm,1.1s									
MVCO	**Mesa Verde**	**4.47**	**141**			**Pn**		**16 13 51.0**	**0.0**	
YNE	**Yellowstone No**	**4.49**	**18**			**Pn**		**16 13 51.2**	**0.0**	
K22A	**Casper**	**4.51**	**63**			**Pn**		**16 13 52.4**	**+0.9**	
DLMT	**Dillon**	**4.62**	**355**			**Pn**		**16 13 54.5**	**+1.5**	
DLMT					IAML			16 14 52.4		
	comp=N,24nm,4.7s									
DLMT					IAML			16 15 15.8		
	comp=N,19nm,2.4s									
RLMT	**Red Lodge**	**4.79**	**24**			**Pn**		**16 13 57.1**	**+1.7**	
RLMT					IAML			16 15 31.4		
	comp=N,19nm,2.5s									
RLMT					IAML			16 16 56.4		
	comp=N,20nm,4.8s									
BOZ	**Bozeman (W)**	**4.84**	**3**			**Pn**		**16 13 57.4**	**+1.4**	
BOZ					IAML			16 15 24.4		
	comp=N,13nm,4.7s									
SHPR	**Sheep Range**	**4.92**	**211**			**Pn**		**16 13 56.7**	**-0.4**	
SHPR					IAML			16 15 34.3		
	comp=E,12nm,3.3s									
ISCO	**Idaho Springs**	**4.97**	**99**			**Pn**		**16 13 59.5**	**+1.5**	
ISCO					IAML			16 15 40.7		
	comp=E,17nm,2.3s									
ISCO					IAML			16 15 43.8		
	comp=E,12nm,1.2s									
KVN	**Kaiserville**	**5.00**	**252**			**Pn**		**16 13 59.0**	**+0.9**	
LRM	**Limekiln Ridge**	**5.07**	**356**			**Pn**		**16 13 59.9**	**+0.8**	
WUAZ	**Wupatki**	**5.26**	**174**			**Pn**		**16 14 03.9**	**+2.2**	
GMN	**Gold Mountain**	**5.36**	**232**		IAML			16 15 36.1		
	comp=N,12nm,1.8s									
GMN					IAML			16 15 49.4		
	comp=E,11nm,0.7s									
WCT	**Wildcat Mounta**	**5.37**	**224**			**Pn**		**16 14 04.5**	**+1.4**	
WCT					IAML			16 15 50.8		
	comp=N,15nm,1.7s									
WCT					IAML			16 15 51.4		
	comp=E,15nm,1.4s									
NVAR	**Mina Array Bea**	**5.40**	**246**	Pn		**Pn**		**16 14 07.8**	**+4.1**	
	comp=E,0.6nm,0.3s,baz=65,slow=12,SNR=12									
NVAR				Lg	Lg			16 15 27.7		
	comp=E,2.8nm,0.3s,baz=68,slow=30,SNR=6.9									
	comp=E,1.6nm,0.5s									
J08A	**Circle Bar Ran**	**5.47**	**300**			**Pn**		**16 14 03.9**	**-0.8**	
V12A	**Nelson**	**5.51**	**205**			**Pn**		**16 14 04.6**	**-0.5**	
GRAC	**Grapevine Rang**	**5.63**	**230**			**Pn**		**16 14 06.6**	**-0.1**	
BMO	**Blue Mountains**	**5.65**	**318**			**Pn**		**16 14 06.6**	**-0.5**	
DSP	**Deep Springs**	**5.75**	**236**			**Pn**		**16 14 08.1**	**-0.2**	
W13A	**Hualapai Mount**	**5.85**	**195**			**Pn**		**16 14 09.7**	**-0.2**	
SHOC	**Shoshone, Teco**	**5.91**	**216**			**Pn**		**16 14 09.4**	**-1.1**	
W18A	**Petrified Fore**	**5.91**	**162**			**Pn**		**16 14 09.2**	**-1.5**	
QSM	**Queen of Sheba**	**6.13**	**220**			**Pn**		**16 14 12.5**	**-1.0**	
MPMC	**Manual Prospec**	**6.38**	**224**			**Pn**		**16 14 15.1**	**-2.1**	
CWC	**Cottonwood Cre**	**6.43**	**230**			**Pn**		**16 14 17.7**	**-0.1**	
RSSD	**Black Hills**	**6.78**	**58**			**Pn**		**16 14 21.0**	**-1.6**	
ANMO	**Albuquerque**	**7.27**	**141**	Pn		**Pn**		**16 14 34.8**	**+5.4**	
	comp=E,0.1nm,0.3s,baz=323,slow=8.0,SNR=3.8									
ANMO				Lg	Lg			16 16 26.9		
	comp=E,0.5nm,0.3s,baz=232,slow=18,SNR=5.2									
	comp=E,0.4nm,0.3s									
ANMO	**Albuquerque**	**7.27**	**141**			**Pn**		**16 14 27.2**	**-2.2**	
YKA	**Yellowknife Ar**	**21.82**	**357**	P		**P**		**16 17 34.8**	**-0.3**	
	comp=E,0.1nm,0.4s,baz=182,slow=9.8,SNR=2.5									
	comp=E,0.1nm,0.4s									

*JMA **26** 16:17:32.6±0.1,25.0'N±0.8×125.1'E±0.4,h64km±1km, MV3.1/11,NEAR MIYAKOJIMA ISLAND*
ISC 26 16:17:33.3±2.6,25.0'N±0.2×125.08'E±0.09,h61km±17km, n15,σ0°27/23,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JIKM	**Ikemajima**	**0.17**	**116**	*i* P		**Pn**	**16 17 42.4**	**-0.2**
JIKM					S	**Sn**	**16 17 49.7**	**+0.3**
JMJ	**Miyako jima 2**	**0.26**	**134**	P		**Pn**	**16 17 43.5**	**+0.3**
JMJ2	**Miyako jima3**	**0.34**	**139**	P		**Pn**	**16 17 43.5**	**-0.3**
JMJ2					S	**Sn**	**16 17 51.6**	**+0.2**
JOGS	**Gusukube**	**0.38**	**129**	P		**Pn**	**16 17 43.9**	**-0.3**
JOGS					S	**Sn**	**16 17 52.0**	**0.0**
JTJ	**Tarama**	**0.50**	**224**	*i* P		**Pn**	**16 17 45.2**	**-0.1**
JTJ					S	**Sn**	**16 17 54.3**	**+0.3**
JISG	**Ishigakijimahi**	**0.81**	**240**	*i* P		**Pn**	**16 17 48.7**	**-0.2**
JISG					S	**Sn**	**16 18 00.6**	**0.0**
JIJ	**Ishigaki jima**	**1.06**	**234**	*i* P		**Pn**	**16 17 51.8**	**-0.4**
JIJ					S	**Sn**	**16 18 05.8**	**-0.5**
JKRS	**Kuro-shima**	**1.24**	**232**	P		**Pn**	**16 17 54.5**	**0.0**
JKRS					eS	**Sn**	**16 18 10.5**	**+0.2**
IRIF	**Iriomote-Funau**	**1.40**	**242**	P		**Pn**	**16 17 56.4**	**-0.2**
IRIF					eS	**Sn**	**16 18 14.0**	**-0.1**
HATJ	**Hateruma jima**	**1.50**	**231**	*e*P		**Pn**	**16 17 58.0**	**+0.1**
HATJ					eS	**Sn**	**16 18 16.7**	**+0.2**
YOJ	**Yonaguni jima**	**1.96**	**255**	P		**Pn**	**16 18 04.3**	**+0.1**
NACB	**Ninganchiao**	**3.28**	**256**	P		**Pn**	**16 18 22.1**	**-0.2**
YHNB	**Yeheng**	**3.38**	**265**	P		Pn	16 18 19.6	-4.2
YULB	**Yu-li**	**3.81**	**246**	P		**Pn**	**16 18 30.0**	**+0.5**
SSLB	**Suanglung**	**3.95**	**253**	P		**Pn**	**16 18 31.4**	**-0.1**

*UCR **26** 16:18:33.1±0.9,9.53N×84.24W,h45km±2km, MW3.8, Presumed earthquake*
*UPA **26** 16:18:34.5±2.3,9.96N×83.91W,h27km±187km, MW3.2, Presumed earthquake*
ISC 26 16:18:34.5±1.0,9.51N±0.04×84.23W±0.03,h33km±4km, n101,σ1°37/108,16C-22D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SVQ2	**Quepos**	**0.10**	**142**	*e*P		**Pb**	**16 18 40.0**	**-0.2**
SVQ2					eS	**Sb**	**16 18 45.6**	**+1.5**
QUEP	**Quepos**	**0.10**	**141**	⇑*i*P		**Pb**	**16 18 39.9**	**-0.3**
QUEP					eS	**Sb**	**16 18 45.5**	**+1.4**
PICV	**PH. Pirrs**	**0.12**	**15**	⇓*i*P		**Pb**	**16 18 40.4**	**-0.1**
PICV					eS	**Sb**	**16 18 46.1**	**+1.5**
RAZU	**San Marcos de**	**0.25**	**53**	⇓*i*P		**Pn**	**16 18 41.3**	**-0.6**
RAZU					eS	**Sb**	**16 18 47.9**	**+1.1**
PITB	**Pirrs, San**	**0.25**	**53**	⇓*i*P		**Pn**	**16 18 41.3**	**-0.6**
PITB					eS	**Sb**	**16 18 47.8**	**+1.0**
PIEC	**Cerro El Cedra**	**0.29**	**67**	⇓*i*P		**Pn**	**16 18 41.9**	**-0.5**
PIEC					eS	**Sb**	**16 18 48.7**	**+1.0**
ACOS	**Acosta**	**0.29**	**12**	*e*P		**Pb**	**16 18 41.5**	**-0.8**
ACOS					eS	**Sn**	**16 18 48.0**	**+0.4**
SANTA	**Santa Ana**	**0.42**	**6**	⇑*i*P		**Pb**	**16 18 43.0**	**-1.1**
LUJA	**Lujan**	**0.44**	**20**	*e*P		**Pn**	**16 18 43.5**	**-1.2**
PAVB	**Pavas, San Jos**	**0.44**	**14**	*e*P		**Pb**	**16 18 43.3**	**-1.0**
CENT	**San Jose**	**0.44**	**19**	*e*P		**Pn**	**16 18 40.6**	**-4.2**
MEXI	**Barrio Mexico**	**0.45**	**18**	*e*P		**Pn**	**16 18 43.6**	**-1.3**
TRIO	**Tres Rios**	**0.46**	**30**	⇓*e*P		**Pn**	**16 18 43.5**	**-1.5**
ECI	**Escuela Centro**	**0.46**	**22**	⇑*i*P		**Pn**	**16 18 43.8**	**-1.1**
SJS	**Escuela Geolog**	**0.46**	**22**	*e*P		**Pn**	**16 18 43.7**	**-1.3**
SJS3	**Mercedes San J**	**0.46**	**22**	*e*P		**Pn**	**16 18 43.9**	**-1.1**
TAGO	**Cartago**	**0.46**	**40**	*e*P		**Pn**	**16 18 43.6**	**-1.5**
BELE	**Belen**	**0.47**	**5**	⇑*i*P		**Pn**	**16 18 43.5**	**-1.5**
LUPE	**Guadalupe**	**0.47**	**21**	*e*P		**Pn**	**16 18 43.4**	**-1.6**
REPA	**Paraso**	**0.47**	**48**	⇓*i*P		**Pn**	**16 18 43.8**	**-1.4**
BUS1	**Rivas**	**0.47**	**85**	⇓*i*P		**Pn**	**16 18 44.0**	**-1.5**
DOM	**Santo Domingo**	**0.49**	**16**	*e*P		**Pn**	**16 18 43.7**	**-2.1**
ATEO	**Atenas**	**0.49**	**342**	⇑*i*P		**Pn**	**16 18 43.7**	**-1.6**
HEME	**Heredia, Merce**	**0.49**	**10**	⇑*i*P		**Pb**	**16 18 45.2**	**+0.2**
HDC	**Heredia**	**0.50**	**13**	⇑*e*P		**Pn**	**16 18 44.4**	**-1.2**
UELA	**Alajuela**	**0.51**	**2**	*e*P		**Pn**	**16 18 43.7**	**-1.9**
CORON	**Coronado**	**0.51**	**26**	*e*P		**Pn**	**16 18 44.7**	**-1.0**
POAS	**San Pedro de P**	**0.56**	**358**	*e*P		**Pn**	**16 18 45.2**	**-1.1**
PCAYA	**Pacayas**	**0.58**	**45**	⇑*i*P		**Pn**	**16 18 45.2**	**-1.4**
PALD	**Palmares**	**0.58**	**339**	⇑*i*P		**Pn**	**16 18 45.0**	**-1.6**
CVIMO	**Finca Echandi**	**0.58**	**29**	*e*P		**Pn**	**16 18 45.7**	**-1.0**
SARCI	**Sarchi**	**0.59**	**349**	*e*P		**Pn**	**16 18 44.9**	**-1.8**
VICA	**Volcano Irazu**	**0.60**	**39**	⇓*e*P		**Pn**	**16 18 45.9**	**-1.3**
RAFA	**San Farael, Vo**	**0.61**	**43**	*e*P		**Pn**	**16 18 45.7**	**-1.4**
VINA	**Juan Vinas**	**0.61**	**51**	⇓*i*P		**Pn**	**16 18 45.7**	**-1.3**
RAMO	**San Ramon**	**0.62**	**338**	⇓*e*P		**Pn**	**16 18 45.7**	**-1.4**
VPS8	**V Poas**	**0.67**	**359**	⇑*i*P		**Pn**	**16 18 46.7**	**-1.3**
CVTQ	**Turrialba Volc**	**0.67**	**43**	⇓*e*P		**Pn**	**16 18 46.8**	**-1.2**
VPS5	**V. Poas**	**0.68**	**360**	⇑*i*P		**Pn**	**16 18 46.6**	**-1.5**
VERB	**Verbena**	**0.68**	**50**	*e*P		**Pn**	**16 18 47.4**	**-1.6**
CVTV	**Tajo**	**0.68**	**44**	⇓*i*P		**Pn**	**16 18 47.1**	**-1.1**
VTCV	**VTCV, Calle Va**	**0.68**	**46**	⇓*i*P		**Pn**	**16 18 46.8**	**-1.3**
VTR0	**Volcan Turrial**	**0.68**	**42**	⇓*i*P		**Pn**	**16 18 47.0**	**-1.2**
CVTR	**Volcan Turrial**	**0.69**	**42**	⇓*e*P		**Pn**	**16 18 47.1**	**-1.2**
ROBF	**Roble, Puntare**	**0.69**	**313**	⇓*i*P		**Pn**	**16 18 46.5**	**-1.4**
ABRB	**Las Abras (San**	**0.70**	**45**	⇓*i*P		**Pn**	**16 18 47.2**	**-1.2**
EDPE	**Pejibaye, P**	**0.73**	**118**	*e*P		**Pn**	**16 18 47.5**	**-1.1**
RESJ	**San Isidro (Tu**	**0.77**	**48**	⇓*e*P		**Pn**	**16 18 48.2**	**-1.1**
PILE	**Guapiles**	**0.82**	**32**	*e*P		**Pn**	**16 18 48.8**	**-1.0**
ARTO	**Ro Cuarto**	**0.83**	**1**	⇑*i*P		**Pn**	**16 18 48.8**	**-1.1**
VPL3	**V. Platanar**	**0.84**	**354**	*e*P		**Pn**	**16 18 49.0**	**-1.1**
RVLA	**Villa Bonita**	**0.87**	**47**	*e*P		**Pn**	**16 18 49.4**	**-1.0**
LCOCO	**El Coco**	**0.87**	**49**	⇓*i*P		**Pn**	**16 18 49.5**	**-1.0**
IRES	**Siquirres**	**0.92**	**51**	*e*P		**Pn**	**16 18 49.7**	**-1.5**
PANP	**Palmar Norte**	**0.93**	**126**	*e*P		**Pn**	**16 18 50.2**	**-1.1**
ITAL	**Pital**	**0.94**	**357**	*e*P		**Pn**	**16 18 50.1**	**-1.3**
BURE	**Buenos Aires**	**0.94**	**111**	*e*P		**Pn**	**16 18 50.3**	**-1.6**
CARI	**Cariari**	**0.98**	**30**	*e*P		**Pn**	**16 18 51.2**	**-0.7**
DRK0	**Durika**	**1.00**	**104**	⇓*e*P		**Pn**	**16 18 48.1**	**-4.3**
MTEVE	**Monteverde**	**1.00**	**324**	*e*P		**Pn**	**16 18 51.0**	**-1.4**
FIMO	**Fila Mora**	**1.00**	**121**	*e*P		**Pn**	**16 18 51.9**	**-0.6**
CASO	**Castillo**	**1.05**	**332**	⇑*i*P		**Pn**	**16 18 52.0**	**-0.9**
FORC	**Fortuna**	**1.05**	**335**	⇑*e*P		**Pn**	**16 18 52.0**	**-0.9**
JTS	**Las Juntas de**	**1.06**	**317**	⇓*i*P		**Pn**	**16 18 51.7**	**-1.4**
VACR	**Volcan Arenal**	**1.06**	**335**	*e*P		**Pn**	**16 18 51.8**	**-1.3**
ARE1	**Arenal 1**	**1.06**	**333**	*e*P		**Pn**	**16 18 52.4**	**-0.8**
VARE2	**V. Arenal**	**1.06**	**333**	*e*P		**Pn**	**16 18 52.0**	**-1.2**
CEDE	**Laguna Cedeo**	**1.08**	**334**	*e*P		**Pn**	**16 18 52.7**	**-0.7**
VERH	**Veragua Rainfo**	**1.10**	**68**	*e*P		**Pn**	**16 18 52.4**	**-1.3**
REZ	**Monterrey de S**	**1.11**	**335**	*e*P		**Pn**	**16 18 53.4**	**-0.4**
TABAC	**Tabacon**	**1.12**	**332**	⇓*e*P		**Pn**	**16 18 53.4**	**-0.5**
NYURE	**Nandayure**	**1.12**	**296**	*e*P		**Pn**	**16 18 51.9**	**-2.0**
EDP2	**Potrero Grande**	**1.15**	**115**	*e*P		**Pn**	**16 18 53.2**	**-1.1**
TRT2	**Tortugero**	**1.15**	**25**	⇑*i*P		**Pn**	**16 18 53.4**	**-0.9**
TILA	**Tilaran**	**1.20**	**323**	*e*P		**Pn**	**16 18 54.1**	**-1.0**
CNAS	**Canas**	**1.25**	**317**	*e*P		Pn	16 18 45.3	-10
INVE	**Universidad In**	**1.27**	**320**	*e*P		**Pn**	**16 18 54.5**	**-1.4**
CMARA	**Lajas Hojancha**	**1.28**	**293**	*e*P		**Pn**	**16 18 53.4**	**-2.8**
QUEB	**Quebradon, Cot**	**1.29**	**329**	*e*P		**Pn**	**16 18 55.3**	**-1.0**
TIMP	**Tierras Morena**	**1.32**	**324**	*e*P		**Pn**	**16 18 55.8**	**-1.0**
EDAD	**Golfito**	**1.35**	**129**	*e*P		**Pn**	**16 18 57.3**	**+0.2**
NICO	**Nicoya**	**1.35**	**297**	*e*P		**Pn**	**16 18 54.7**	**-2.4**
PLVR	**Palo Verde**	**1.39**	**307**	*e*P		**Pn**	**16 18 56.5**	**-1.2**
JUD3	**Juan Diaz 3**	**1.45**	**297**	⇓*e*P		**Pn**	**16 18 56.4**	**-2.0**
ALCO	**Alturas Coton,**	**1.48**	**112**	*e*P		**Pn**	**16 18 57.7**	**-1.4**
COLC	**Colonia**	**1.50**	**320**	*e*P		**Pn**	**16 18 57.9**	**-1.3**
HORNC	**Hornillas**	**1.52**	**322**	*e*P		**Pn**	**16 18 58.4**	**-1.0**
MESS	**Mesas**	**1.55**	**322**	*e*P		**Pn**	**16 18 58.9**	**-1.0**
VMAR	**Armenia, Volca**	**1.56**	**326**	*e*P		**Pn**	**16 18 59.1**	**-1.0**
GPS2	**Hotel Rincn d**	**1.66**	**318**	*e*P		**Pb**	**16 19 07.3**	**+2.8**
BRU2	**Volcan**	**1.68**	**115**	*e*P		**Pn**	**16 19 01.3**	**-0.4**
BRU2					eS	**Sn**	**16 19 22.4**	**+0.3**
ALIBA	**Liberia Airpor**	**1.69**	**310**	*e*P		**Pn**	**16 19 01.7**	**0.0**
VRLE	**La Escondida,**	**1.69**	**319**	*e*P		**Pn**	**16 19 00.7**	**-1.2**
LAPC	**Finca la Perla**	**1.73**	**317**	*e*P		**Pn**	**16 19 01.4**	**-0.8**
BUAI	**Buenos Aires**	**1.74**	**321**	*e*P		**Pn**	**16 19 01.8**	**-0.7**
CLLRA	**Cordillera,**	**1.77**	**115**	*e*P		**Pn**	**16 19 02.0**	**-0.9**
CLLRA	**Cordillera,**	**1.77**	**115**	*e*P		**Pn**	**16 19 01.5**	**-1.4**
JEFFS	**S de V. Buru**	**1.87**	**116**	*e*P		**Pn**	**16 19 03.3**	**-1.0**
PBNVO	**Pueblo Nuevo,**	**2.10**	**107**	*e*P		**Pn**	**16 19 07.4**	**0.0**
RBALA	**Bur**	**2.14**	**107**	*e*P		**Pn**	**16 19 07.6**	**-0.3**
RBALA	**Bur**	**2.14**	**107**	*e*P		**Pn**	**16 19 07.0**	**-0.9**

IDC 26 16:37:14.2±11.0,8.67S×128.15E,h330km±117km, mb3.1/1,mbtmp3.7/3,Error ellipse: s-maj=104.6km s-min=82.3km az=56.0,Timor Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**9.69**	**194**		S	S	16 41 07.6	-11
	1.2nm,0.7s,baz=56,slow=17,SNR=1.7							
WRA	**Warramunga Arr**	**12.71**	**153**	P		P	16 40 04.0	-0.6
	0.5nm,0.3s,baz=331,slow=12,SNR=13							
WRA					S	S	16 42 24.5	-0.7
	0.3nm,0.5s,baz=330

BVAR	**Borovoye Array**	**67.05**	**327**	P		**P**		**16 52 02.2**	**+1.2**
	comp=Z,0.8nm,0.9s,baz=98,slow=3.0,SNR=4.5								
	comp=Z,0.8nm,0.9s								
NRIK	**Noril'sk**	**70.50**	**347**	P		**P**		**16 52 22.7**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=143,slow=6.7,SNR=3.7								
	comp=Z,0.8nm,0.5s								
NRIK	**Noril'sk**	**70.50**	**347**	IAmb		IAmb		16 52 53.5	
	comp=Z,5.3nm,1.5s								
ABKAR	**Akbulak array**	**71.77**	**321**	P		**P**		**16 52 29.2**	**-0.9**

*IDC **26** 16:44:09.4±2.6, 49˚.31N×158˚.31E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=89.7km s-min=27.8km az=79.0*
*KRSC **26** 16:44:13.9±1.9, 49˚.31N×158˚.26E, h34km±37km, Ml3.9*
*SKHL **26** 16:44:14.0±0.7, 49˚.10N×157˚.80E, h66km±2km, mb4.4/3*

ISC 26 16:44:15.4±1.2, 49˚15N±0˚.08×157˚.94E±0˚.08, h35km, n37, σ1s24/53, mb3.5/4, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.93**	**323**	*eP*		**Pn**	**16 44 44.6**	**-1.0**
SKR				*eS*		**Sn**	**16 45 07.5**	**-1.2**
SKR	**Severo-Kuril's**	**1.93**	**323**	*eP*		**Pn**	**16 44 44.8**	**-0.9**
SKR				AMB		AMB	16 44 46.3	
	140nm,0.3s							
SKR				*eS*		**Sn**	**16 45 07.5**	**-1.2**
SKR				A		A	16 45 08.3	
	440nm,0.6s							
SKR				A		A	16 45 08.3	
	570nm,0.6s							
PAU	**Pauzhetka**	**2.43**	**343**	*eP*		**Pn**	**16 44 52.7**	**+0.2**
PAU				*eS*		**Sn**	**16 45 21.1**	**+0.2**
PAU	**Pauzhetka**	**2.43**	**343**	*eP*		**Pn**	**16 44 52.7**	**+0.2**
PAU				AMB		AMB	16 44 54.2	
	30nm,0.2s							
PAU				*eS*		**Sn**	**16 45 21.2**	**+0.2**
PAU				A		A	16 45 21.8	
	210nm,0.4s							
PAU				A		A	16 45 21.8	
	180nm,0.4s							
KDTR	**Khodutka, Kamc**	**2.66**	**2**	*eP*		**Pn**	**16 44 54.7**	**-1.0**
KDTR				*eS*		**Sn**	**16 45 24.7**	**-1.9**
MIPR	**Malaya Ipel'ka**	**3.22**	**347**	*eP*		**Pn**	**16 45 04.5**	**+1.2**
MIPR				*eS*		**Sn**	**16 45 41.7**	**+1.3**
ASAK	**Asacha**	**3.23**	**360**	*eP*		**Pn**	**16 45 03.4**	**-0.3**
ASAK				*eS*		**Sn**	**16 45 39.7**	**-1.3**
RUS	**Russkaya**	**3.30**	**6**	*eP*		**Pn**	**16 45 04.9**	**+0.4**
RUS				*eS*		**Sn**	**16 45 42.3**	**-0.2**
MTVR	**Mutnovka**	**3.34**	**3**	*eP*		**Pn**	**16 45 05.3**	**+0.2**
MTVR				*eS*		**Sn**	**16 45 42.1**	**-1.5**
GRL	**Gorelyy**	**3.40**	**1**	*eP*		**Pn**	**16 45 06.0**	**0.0**
GRL				*eS*		**Sn**	**16 45 43.8**	**-1.4**
KRMR	**Karymshinskiy**	**3.68**	**2**	*eP*		**Pn**	**16 45 10.7**	**+0.9**
KRMR				*eS*		**Sn**	**16 45 51.8**	**-0.1**
APC	**Apacha**	**3.81**	**353**	*eP*		**Pn**	**16 45 12.4**	**+0.9**
APC				*eS*		**Sn**	**16 45 55.1**	**+0.1**
PET	**Petropavlovsk**	**3.90**	**6**	*eP*		**Pn**	**16 45 13.2**	**+0.4**
PET				*eS*		**Sn**	**16 45 56.7**	**-0.6**
PET	**Petropavlovsk**	**3.90**	**6**	*eP*		**Pn**	**16 45 13.2**	**+0.4**
PET				AMB		AMB	16 45 14.2	
	20nm,0.2s							
PET				*eS*		**Sn**	**16 45 56.8**	**-0.5**
PET				A		A	16 46 00.4	
	40nm,0.5s							
PET				A		A	16 46 00.4	
	40nm,0.5s							
DALK	**Dalny**	**3.92**	**7**	*eP*		**Pn**	**16 45 13.4**	**+0.4**
DALK				*eS*		**Sn**	**16 45 57.1**	**-0.6**
PETK	**Petropavlovsk-**	**3.96**	**358**	Pn		Pn	16 45 09.6	-4.0
	baz=194,slow=14							
UGLR	**Uglovaya**	**4.10**	**7**	*eP*		**Pn**	**16 45 16.8**	**+1.3**
AVH	**Avacha**	**4.15**	**7**	*eP*		**Pn**	**16 45 17.6**	**+1.4**
AVH				*eS*		**Sn**	**16 46 03.4**	**-0.1**
SMAR	**Somma**	**4.15**	**7**	*eP*		**Pn**	**16 45 17.3**	**+0.9**
SPN	**Mys Shipunski**	**4.16**	**18**	*eP*		**Pn**	**16 45 18.4**	**0.0**
SPN				*eS*		**Sn**	**16 46 00.9**	**-2.8**
KOK	**Koryaka**	**4.17**	**6**	*eP*		**Pn**	**16 45 18.0**	**+1.5**
KOK				*eS*		**Sn**	**16 46 04.2**	**+0.2**
KRER	**Koryakskii**	**4.19**	**7**	*eP*		**Pn**	**16 45 18.4**	**+1.6**
KRER				*eS*		**Sn**	**16 46 05.2**	**+0.6**
KRX	**Arik**	**4.24**	**6**	*eP*		**Pn**	**16 45 18.6**	**+1.1**
KRX				*eS*		**Sn**	**16 46 05.3**	**-0.4**
GNL	**Ganaly**	**4.55**	**0**	*eP*		**Pn**	**16 45 23.6**	**+1.9**
GNL				*eS*		**Sn**	**16 46 13.8**	**+0.4**
KII	**Karymskiy**	**4.98**	**10**	*eP*		**Pn**	**16 45 29.9**	**+2.3**
KII				*eS*		**Sn**	**16 46 25.1**	**+1.1**
KBTR	**Krutoberegovo**	**7.66**	**21**	*eP*		**Pn**	**16 46 04.8**	**+0.5**
KBTR				*eS*		**Sn**	**16 47 25.6**	**-4.2**
KUR	**Kuril'sk**	**7.90**	**244**	*eP*		**Pn**	**16 46 05.2**	**-2.5**
H11N2	**WAKE ISLAND Hy**	**30.22**	**163**	T		T	17 22 07.9	
	baz=349							
H11N3	**WAKE ISLAND Hy**	**30.24**	**163**	T		T	17 22 09.1	
	baz=349							
H11N1	**WAKE ISLAND Hy**	**30.24**	**163**	T		T	17 22 07.9	
	baz=349							
H11S1	**WAKE ISLAND Hy**	**31.38**	**164**	T		T	17 23 35.5	
	baz=349							
H11S3	**WAKE ISLAND Hy**	**31.39**	**164**	T		T	17 23 38.4	
	baz=349							
H11S2	**WAKE ISLAND Hy**	**31.40**	**164**	T		T	17 23 37.7	
	baz=349							
MKAR	**Makanchi Array**	**48.71**	**298**	P		**P**	**16 52 56.8**	**+0.6**
	0.3nm,0.7s,baz=56,slow=8.2,SNR=2.3							
	0.3nm,0.7s							
KURBB	**Kurchatov Arra**	**48.83**	**304**	P		**P**	**16 52 56.6**	**-0.3**
	0.4nm,0.6s,baz=65,slow=7.7,SNR=4.0							
	0.4nm,0.6s							
WRA	**Warramunga Arr**	**71.93**	**203**	P		**P**	**16 55 35.2**	**+0.3**
	0.7nm,0.7s,baz=21,slow=6.2,SNR=4.5							
	0.7nm,0.7s							
ASAR	**Alice Springs**	**75.60**	**203**	P		**P**	**16 55 57.8**	**+1.4**
	0.2nm,0.4s,baz=16,slow=5.5,SNR=6.9							
	0.2nm,0.4s							

*IDC **26** 16:51:57.7±1.0, 49˚.34N×158˚.49E, h0km, mb3.8/14, mbtmp3.9/16, ML3.3/2, MS3.2/2, Error ellipse: s-maj=26.6km s-min=17.7km az=104.0*
*KRSC **26** 16:51:59.0±1.3, 49˚.50N×158˚.91E, h39km±28km, Ml4.1*
*MOS **26** 16:52:01.5±0.7, 49˚.48N×158˚.51E, h42km, mb4.3/7, Error ellipse: s-maj=13.7km s-min=4.1km az=92.4*
*NEIC **26** 16:52:03.0±1.4, 49˚.47N±0˚.09×158˚.5E±0˚.1, h35km±5km, mb4.3/25, Error ellipse: s-maj=14.6km s-min=11.5km az=139.0*

ISC 26 16:52:02.5±0.6, 49˚42N±0˚07×158˚63E±0˚05, h35km, n119, σ0s98/147, mb4.1/25, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.06**	**309**	*ePN*		**Pn**	**16 52 33.4**	**-1.1**
SKR				*eS*		**Sn**	**16 52 58.7**	**-0.2**
SKR				pmax		pmax		
	comp=Z,475nm,0.6s							
SKR				smax		smax		
	comp=N,2μm,0.7s							
SKR				smax		smax		
	comp=E,1μm,0.7s							
SKR	**Severo-Kuril's**	**2.06**	**309**	*eP*		**Pn**	**16 52 33.4**	**-1.1**
SKR				*eS*		**Sn**	**16 52 58.7**	**-0.2**
PAU	**Pauzhetka**	**2.36**	**331**	P	N	**Pn**	**16 52 37.8**	**-0.9**
PAU				S		**Sn**	**16 53 07.1**	**+0.7**
PAU	**Pauzhetka**	**2.36**	**331**	*eP*		**Pn**	**16 52 37.8**	**-0.9**
PAU				*eS*		**Sn**	**16 53 07.1**	**+0.7**
KDTR	**Khodutka, Kamc**	**2.42**	**352**	P	N	**Pn**	**16 52 38.2**	**-1.3**
KDTR				S		**Sn**	**16 53 06.6**	**-1.2**
KDTR	**Khodutka, Kamc**	**2.42**	**352**	*eP*		**Pn**	**16 52 38.2**	**-1.3**
KDTR				*eS*		**Sn**	**16 53 06.7**	**-1.2**
ASAK	**Asacha**	**3.01**	**351**	P	N	**Pn**	**16 52 47.0**	**-0.6**
ASAK	**Asacha**	**3.01**	**351**	*eP*		**Pn**	**16 52 47.1**	**-0.6**
RUS	**Russkaya**	**3.02**	**359**	P	N	**Pn**	**16 52 46.5**	**-1.2**
RUS				S		**Sn**	**16 53 20.9**	**-1.8**
RUS	**Russkaya**	**3.02**	**359**	*eP*		**Pn**	**16 52 46.6**	**-1.2**
RUS				*eS*		**Sn**	**16 53 20.9**	**-1.8**
MTVR	**Mutnovka**	**3.08**	**355**	P	N	**Pn**	**16 52 48.0**	**-0.7**
MTVR				S		**Sn**	**16 53 23.5**	**-0.9**
MTVR	**Mutnovka**	**3.08**	**355**	*eP*		**Pn**	**16 52 48.1**	**-0.7**
MTVR				*eS*		**Sn**	**16 53 23.5**	**-0.9**
MIPR	**Malaya Ipel'ka**	**3.10**	**338**	P	N	**Pn**	**16 52 48.6**	**-0.2**
MIPR				S		**Sn**	**16 53 25.3**	**+0.6**
MIPR	**Malaya Ipel'ka**	**3.10**	**338**	*eP*		**Pn**	**16 52 48.7**	**-0.2**
MIPR				*eS*		**Sn**	**16 53 25.3**	**+0.6**
GRL	**Gorelyy**	**3.16**	**354**	P	N	**Pn**	**16 52 49.5**	**-0.3**
GRL				S		**Sn**	**16 53 25.8**	**-0.5**
GRL	**Gorelyy**	**3.16**	**354**	*eP*		**Pn**	**16 52 49.6**	**-0.3**
GRL				*eS*		**Sn**	**16 53 25.9**	**-0.5**
KRMR	**Karymshinskiy**	**3.43**	**355**	P	N	**Pn**	**16 52 53.6**	**+0.2**
KRMR				S		**Sn**	**16 53 33.1**	**+0.3**
KRMR	**Karymshinskiy**	**3.43**	**355**	*eP*		**Pn**	**16 52 53.6**	**+0.2**
KRMR				*eS*		**Sn**	**16 53 33.2**	**+0.3**
PET	**Petropavlovsk**	**3.61**	**0**			**Pn**	**16 52 55.0**	**-0.8**
PET					Sn	**Sn**	**16 53 35.0**	**-2.2**
PET	**Petropavlovsk**	**3.61**	**0**	*ePN*		**Pn**	**16 52 55.0**	**-0.8**
PET				*eS*		**Sn**	**16 53 36.3**	**-0.9**
PET				pmax		pmax		
	comp=Z,82nm,0.6s							
PET				smax		smax		
	comp=E,104nm,0.6s							
PET				smax		smax		
	comp=N,151nm,0.4s							
PET	**Petropavlovsk**	**3.61**	**0**	*eP*		**Pn**	**16 52 55.0**	**-0.8**
PET				*eS*		**Sn**	**16 53 36.1**	**-1.2**
DALK	**Dalny**	**3.62**	**1**	P	N	**Pn**	**16 52 55.2**	**-0.8**
DALK				S		**Sn**	**16 53 36.1**	**-1.3**
DALK	**Dalny**	**3.62**	**1**	*eP*		**Pn**	**16 52 55.2**	**-0.8**
DALK				*eS*		**Sn**	**16 53 36.1**	**-1.3**
APC	**Apacha**	**3.63**	**346**	P	N	**Pn**	**16 52 56.2**	**+0.1**
APC	**Apacha**	**3.63**	**346**	*eP*		**Pn**	**16 52 56.3**	**+0.1**
SPN	**Mys Shipunski**	**3.79**	**13**	P	N	**Pn**	**16 52 57.3**	**-1.0**
SPN				S		**Sn**	**16 53 39.3**	**-2.3**
SPN	**Mys Shipunski**	**3.79**	**13**	*eP*		**Pn**	**16 52 57.3**	**-1.0**
SPN				*eS*		**Sn**	**16 53 39.4**	**-2.3**
UGLR	**Uglovaya**	**3.80**	**2**	P	N	**Pn**	**16 52 58.4**	**-0.1**
UGLR	**Uglovaya**	**3.80**	**2**	*eP*		**Pn**	**16 52 58.5**	**-0.1**
SMAR	**Somma**	**3.85**	**1**	P	N	**Pn**	**16 52 59.2**	**-0.2**
SMAR	**Somma**	**3.85**	**1**	*eP*		**Pn**	**16 52 59.2**	**-0.2**
AVH	**Avacha**	**3.86**	**1**	P	N	**Pn**	**16 52 58.8**	**-0.4**
AVH				S		**Sn**	**16 53 42.2**	**-1.1**
AVH	**Avacha**	**3.86**	**1**	*eP*		**Pn**	**16 52 58.9**	**-0.4**
AVH				*eS*		**Sn**	**16 53 42.2**	**-1.1**
KOK	**Koryaka**	**3.88**	**0**	P	N	**Pn**	**16 52 59.7**	**+0.1**
KOK				S		**Sn**	**16 53 43.9**	**-0.1**
KOK	**Koryaka**	**3.88**	**0**	*eP*		**Pn**	**16 52 59.7**	**+0.1**
KOK				*eS*		**Sn**	**16 53 44.0**	**-0.1**
KRER	**Koryakskii**	**3.90**	**1**	P	N	**Pn**	**16 52 59.5**	**-0.4**
KRER				S		**Sn**	**16 53 43.3**	**-1.2**
KRER	**Koryakskii**	**3.90**	**1**	*eP*		**Pn**	**16 52 59.6**	**-0.4**
KRER				*eS*		**Sn**	**16 53 43.3**	**-1.2**
KRX	**Arik**	**3.95**	**0**	P	N	**Pn**	**16 53 00.3**	**-0.3**
KRX				S		**Sn**	**16 53 44.7**	**-1.1**
KRX	**Arik**	**3.95**	**0**	*eP*		**Pn**	**16 53 00.3**	**-0.3**
KRX				*eS*		**Sn**	**16 53 44.7**	**-1.1**
GNL	**Ganaly**	**4.31**	**355**	P	N	**Pn**	**16 53 06.5**	**+1.0**
GNL				S		**Sn**	**16 53 55.2**	**+0.7**
GNL	**Ganaly**	**4.31**	**355**	*eP*		**Pn**	**16 53 06.5**	**+1.0**
GNL				*eS*		**Sn**	**16 53 55.3**	**+0.7**
KII	**Karymskiy**	**4.66**	**6**	P	N	**Pn**	**16 53 10.7**	**+0.5**
KII				S		**Sn**	**16 54 03.1**	**+0.1**
KII	**Karymskiy**	**4.66**	**6**	*eP*		**Pn**	**16 53 10.8**	**+0.5**
KII				*eS*		**Sn**	**16 54 03.1**	**+0.1**
TUMD	**Tumrok D**	**5.90**	**10**	P	N	**Pn**	**16 53 27.3**	**+0.1**
TUMD	**Tumrok D**	**5.90**	**10**	*eP*		**Pn**	**16 53 27.3**	**+0.1**
TUMD				*eS*		**Sn**	**16 54 32.1**	**-1.5**
ESO	**Esso**	**6.52**	**0**	P	N	**Pn**	**16 53 36.5**	**+0.7**
ESO	**Esso**	**6.52**	**0**	*eP*		**Pn**	**16 53 36.5**	**+0.7**
KOZ	**Kozyrevsk**	**6.70**	**6**	P	N	**Pn**	**16 53 39.4**	**+1.2**
KOZ	**Kozyrevsk**	**6.70**	**6**	*eP*		**Pn**	**16 53 39.4**	**+1.2**
KBTR	**Krutoberegovo**	**7.26**	**19**	P	N	**Pn**	**16 53 44.9**	**-1.0**
KBTR	**Krutoberegovo**	**7.26**	**19**	*eP*		**Pn**	**16 53 45.0**	**-1.0**
KBTR				*eS*		**Sn**	**16 55 03.7**	**-3.3**
SHEM	**Shemya Is, Ala**	**10.28**	**65**	P		**Pn**	**16 54 27.3**	**0.0**
JKA	**Kamikawa-asahi**	**12.20**	**250**			**Pn**	**16 54 51.2**	**-2.4**
ASAJ	**Asahikawa**	**12.20**	**250**	Pn		**Pn**	**16 54 51.9**	**-1.7**
	comp=N,0.3nm,0.3s,baz=88,slow=12,SNR=6.7							
	comp=N,5.1nm,1.0s							
ADK	**Adak**	**15.83**	**72**	Pn		**Pn**	**16 55 43.6**	**+1.2**
ADK	**Adak**	**15.83**	**72**	P		**Pn**	**16 55 43.6**	**+1.2**
ADK				pmax		pmax		
	comp=Z,39nm,1.1s							
KLR	**Kul'dur**	**17.50**	**280**	P		**Pn**	**16 56 03.2**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=73,slow=9.6,SNR=5.6							
	comp=Z,1.3nm,0.7s							
YAK	**Yakutsk**	**20.40**	**319**	P		**P**	**16 56 34.2**	**-1.8**
	comp=Z,14nm,0.6s,baz=92,slow=2.8,SNR=5.3							
	comp=Z,14nm,0.6s							
YAK	**Yakutsk**	**20.40**	**319**	P		**P**	**16 56 34.2**	**-1.8**
YAK				IAmb		IAmb	16 56 35.8	
	comp=Z,13nm,0.6s							
ANM	**Nome**	**24.33**	**38**	P		**P**	**16 57 17.4**	**+0.9**
ANM	**Nome**	**24.33**	**38**	P		**P**	**16 57 17.4**	**+0.9**
ANM				pmax		pmax		
	comp=Z,5.0nm,1.3s							
N14K	**Kuskokwak Cree**	**24.86**	**50**	P		**P**	**16 57 21.9**	**+0.7**
N14K				IAmb		IAmb	16 57 50.0	
	comp=Z,14nm,1.1s							
KSRS	**Korea Array**	**25.12**	**253**	P		**P**	**16 57 23.9**	**0.0**
	comp=Z,1.1nm,0.9s,baz=48,slow=12,SNR=1.9							
	comp=Z,1.1nm,0.9s							
N15K	**Kwethluk River**	**25.68**	**50**	P		**P**	**16 57 29.8**	**+1.0**
N15K				IAmb		IAmb	16 57 49.1	
	comp=Z,9.2nm,1.3s							
C16K	**Lisburne Hills**	**25.91**	**30**	P		**P**	**16 57 31.1**	**+0.4**
TIXI	**Tiksi**	**26.12**	**339**	P		**P**	**16 57 32.1**	**-0.5**
TIXI				IAmb		IAmb	16 57 34.3	
	comp=Z,4.8nm,0.7s							
TIXI	**Tiksi**	**26.12**	**339**	P		**P**	**16 57 32.1**	**-0.5**
TIXI				pmax		pmax		
	comp=Z,5.0nm,0.7s							
JNU	**Nakatsue**	**26.25**	**242**	LR		LR	17 08 26.0	
	comp=Z,134nm,21.6s,baz=346,slow=38							
CHGN	**Chignik**	**26.47**	**58**	P		**P**	**16 57 36.5**	**+0.6**
C18K	**Utukok River**	**27.45**	**31**	P		**P**	**16 57 44.0**	**-0.7**
H11N2	**WAKE ISLAND Hy**	**30.35**	**164**	T		T	17 29 56.4	
	baz=350,slow=76,SNR=7.3							
H11N3	**WAKE ISLAND Hy**	**30.36**	**164**	T		T	17 29 59.9	
	baz=350,slow=76,SNR=5.7							
H11N1	**WAKE ISLAND Hy**	**30.36**	**164**	T		T	17 29 57.9	
	baz=350,slow=76,SNR=6.9							
H11S1	**WAKE ISLAND Hy**	**31.51**	**165**	T		T	17 31 23.2	
	baz=350,slow=76,SNR=7.7							
H11S3	**WAKE ISLAND Hy**	**31.52**	**165**	T		T	17 31 24.1	
	baz=350,slow=76,SNR=8.2							
H11S2	**WAKE ISLAND Hy**	**31.53**	**165**	T		T	17 31 26.3	
	baz=350,slow=76,SNR=7.0							
G24K	**Hadweenzic Riv**	**32.02**	**37**	P		**P**	**16 58 24.4**	**-0.7**
G24K				IAmb		IAmb	16 59 02.7	
	comp=Z,3.6nm,1.4s							
BMAR	**Burnt Mountain**	**33.21**	**36**	P		**P**	**16 58 35.7**	**+0.2**
BERG	**Berg Lake**	**33.82**	**49**	P		**P**	**16 58 40.1**	**-0.8**
Q32M	**Nakina River**	**39.79**	**49**	P		**P**	**16 59 31.4**	**-0.5**
Q32M				IAmb		IAmb	16 59 57.9	
	comp=Z,11nm,1.5s							
R33M	**Jennings River**	**40.29**	**48**	P		**P**	**16 59 36.4**	**+0.4**
YKA	**Yellowknife Ar**	**46.54**	**40**	P		**P**	**17 00 27.5**	**+1.4**
	comp=Z,0.2nm,0.6s,baz=298,slow=7.9,SNR=3.0							
	comp=Z,0.2nm,0.6s							
KURK	**Kurchatov**	**48.96**	**304**	P		**P**	**17 00 44.2**	**-0.8**
KURK				IAmb		IAmb	17 00 46.9	
	comp=Z,1.5nm,0.6s							
KURK	**Kurchatov**	**48.96**	**304**	P		**P**	**17 00 44.2**	**-0.8**
KURK				pmax		pmax		
	comp=Z,1.0nm,0.6s							
MKAR	**Makanchi Array**	**48.99**	**298**	P		**P**	**17 00 45.5**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=56,slow=6.0,SNR=11							
	comp=Z,0.3nm,0.4s							
MKAR	**Makanchi Array**	**48.99**	**298**	P		**P**	**17 00 44.3**	**-1.0**
MKAR	**Makanchi Array**	**48.99**	**298**	P		**P**	**17 00 44.3**	**-1.0**
KURBB	**Kurchatov Arra**	**49.06**	**304**	P		**P**	**17 00 45.9**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=64,slow=7.8,SNR=11							
	comp=Z,1.1nm,0.6s							
SPITS	**Spitsbergen Ar**	**50.62**	**351**	P		**P**	**17 00 58.9**	**+1.7**
	comp=Z,3.3nm,0.7s,baz=62,slow=7.0,SNR=9.1							
	comp=Z,3.3nm,0.7s							
SPITS	**Spitsbergen Ar**	**50.62**	**351**	P		**P**	**17 00 57.9**	**+0.7**
SPITS				pmax		pmax		
	comp=Z,28nm,1.5s							
BVAR	**Borovoye Array**	**52.01**	**310**	P		**P**	**17 01 07.5**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=60,slow=8.8,SNR=10							
	comp=Z,1.0nm,0.5s							
BORK	**Borovoye**	**52.03**	**310**	P		**P**	**17 01 08.3**	**+0.2**
BORK				IAmb		IAmb	17 01 09.8	
	comp=Z,1.6nm,0.6s							
BORK	**Borovoye**	**52.03**	**310**	P		**P**	**17 01 08.3**	**+0.2**
BORK				pmax		pmax		
	comp=Z,2.0nm,0.6s							
YBH	**Yreka Blue Hor**	**53.25**	**66**	LR		LR	17 20 58.6	
	comp=Z,9.4nm,21.9s,baz=57,slow=33							
KDJ	**Kajisay**	**54.67**	**296**	P		**P**	**17 01 27.8**	**-0.1**
KDJ				IAmb		IAmb	17 01 38.4	
	comp=Z,3.1nm,1.0s							
KDJ	**Kajisay**	**54.67**	**296**	P		**P**	**17 01 27.8**	**-0.1**
KDJ				pmax		pmax		
	comp=Z,3.0nm,1.0s							
BOOM	**Boomskoye usch**	**55.17**	**297**	P		**P**	**17 01 31.3**	**-0.2**
BOOM	**Boomskoye usch**	**55.17**	**297**	P		**P**	**17 01 31.3**	**-0.2**
BOOM				pmax		pmax		
	comp=Z,7.0nm,1.4s							
CMAR	**Chiang Mai Arr**	**56.55**	**259**	P		**P**	**17 01 41.6**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=32,slow=7.2,SNR=5.4							
	comp=Z,0.2nm,0.5s							
KK31	**Karatay Array**	**57.91**	**300**	P		**P**	**17 01 50.1**	**-0.7**
KK31				IAmb		IAmb	17 01 52.2	
	comp=Z,1.3nm,0.7s							
KK31	**Karatay Array**	**57.91**	**300**	P		**P**	**17 01 50.1**	**-0.7**
KK31				pmax		pmax		
	comp=Z,1.0nm,0.7s							
KKAR	**Karatay Array**	**57.91**	**300**	P		**P**	**17 01 50.0**	**-0.8**
KKAR	**Karatay Array**	**57.91**	**300**	P		**P**	**17 01 50.0**	**-0.8**
AB31	**Akbulak array**	**59.51**	**311**	P		**P**	**17 02 02.0**	**+0.2**
AB31				IAmb		IAmb	17 02 03.1	
	comp=Z,2.3nm,0.7s							
ABKAR	**Akbulak array**	**59.51**	**311**	P		**P**	**17 02 02.1**	**+0.3**
FINES	**FINESS Array B**	**63.13**	**337**	P		**P**	**17 02 25.6**	**-0.5**
	comp=Z,2.1nm,0.9s,baz=37,slow=6.4,SNR=3.4							
	comp=Z,2.1nm,0.9s							
FINES	**FINESS Array B**	**63.13**	**337**	P		**P**	**17 02 26.4**	**+0.3**
NC405	**NORSAR Array S**	**66.65**	**343**	P		**P**	**17 02 50.9**	**+1.9**
NC204	**NORSAR Array S**	**66.68**	**344**	P		**P**	**17 02 50.9**	**+1.7**
NB2	**NORSAR Subarra**	**66.81**	**343**	P		**P**	**17 02 52.8**	**+2.7**
	comp=Z,0.5nm,0.6s,baz=23,slow=6.9							
NOA	**NORSAR Array B**	**66.81**	**343**	P		**P**	**17 02 50.9**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=25,slow=6.5,SNR=3.7							
	comp=Z,0.4nm,0.5s							
HFS	**Hagfors**	**67.17**	**342**	P		**P**	**17 02 52.8**	**+0.6**
	comp=Z,0.9nm,0.5s,baz=40,slow=7.7,SNR=6.3							
	comp=Z,0.9nm,0.5s							
121A	**Cookes Peak, D**	**68.23**	**65**			**P**	**17 02 59.9**	**+0.2**
WRA	**Warramunga Arr**	**72.35**	**204**	P		**P**	**17 03 23.8**	**-0.7**
	comp=Z,2.6nm,0.8s,baz=21,slow=6.4,SNR=14							
	comp=Z,2.6nm,0.8s							
WRA	**Warramunga Arr**	**72.35**	**204**	IAmb		IAmb	17 03 25.1	
	comp=Z,0.3nm,1.1s							
EKA	**Eskdalemuir Ar**	**74.51**	**349**	P		**P**	**17 03 39.1**	**+2.2**
	comp=Z,0.3nm,0.4s,baz=21,slow=5.1,SNR=5.7							
	comp=Z,0.3nm,0.4s							
ASAR	**Alice Springs**	**76.02**	**203**	P		**P**	**17 03 46.3**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=15,slow=5.5,SNR=23							
	comp=Z,0.8nm,0.6s							
ASAR	**Alice Springs**	**76.02**	**203**	P		**P**	**17 03 45.9**	**0.0**
ASAR	**Alice Springs**	**76.02**	**203**	P		**P**	**17 03 45.9**	**0.0**

*IDC **26** 17:00:00.2±1.6, 36˚.09N×96˚.17W, h0km, mb3.3/1, mbtmp3.5/6, ML3.8/4, Error ellipse: s-maj=28.4km s-min=14.9km az=124.0*
*NEIC **26** 17:00:04.2±0.4, 36˚.354N±0˚.008×97˚.355W±0˚.006, h6km±3km, Error ellipse: s-maj=1.3km s-min=0.4km az=204.0*
*NEIC **26** 17:00:04.0±0.3, 36˚.357N±0˚.009×97˚.37W±0˚.01, h5km±1km, mb_Lg3.4/125, ML3.6/76, ML3.4/38, Error ellipse: s-maj=2.7km s-min=1.5km az=349.0*

ISC 26 17:00:04.1±0.9, 36˚.35N±0˚.02×97˚.36W±0˚.02, h15km±8km, n94, σ0s92/47, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OK048

MGMO	**Mountain Grove** comp=Z,98nm,0.8s	**4.17**	**77**	lAmb_Lg			17 02 15.8	
ABTX	**Abilene, Hawle** comp=Z,52nm,0.7s	**4.17**	**208**	lAmb_Lg			17 02 23.2	
WHAR	**Wooly Hollow** comp=Z,130nm,1.0s	**4.26**	**103**	lAmb_Lg			17 02 21.2	
SN07	**Snyder 07** comp=Z,74nm,0.8s	**4.37**	**223**	lAmb_Lg			17 02 26.5	
UALR	**University of** comp=Z,97nm,0.9s	**4.38**	**110**	lAmb_Lg			17 02 25.8	
WLAR	**White Oak Lake** comp=Z,87nm,0.7s	**4.39**	**126**	lAmb_Lg			17 02 33.1	
P38A	**Dawn** comp=Z,81nm,0.7s	**4.45**	**42**	lAmb_Lg			17 02 24.2	
POST	**Post** comp=Z,84nm,0.9s	**4.73**	**227**	lAmb_Lg			17 02 42.0	
KSCO	**Kaye Shedlock'** comp=Z,66nm,0.9s	**4.95**	**304**	lAmb_Lg			17 02 53.5	
T42A	**Van Buren** comp=Z,45nm,0.8s	**5.08**	**81**	lAmb_Lg			17 02 48.9	
BGNE	**Belgrade** comp=Z,91nm,0.9s	**5.08**	**353**	lAmb_Lg			17 02 55.3	
NATX	**Nacogdoches** comp=Z,47nm,0.8s	**5.10**	**153**	lAmb_Lg			17 02 55.7	
CCM	**Cathedral Cave** comp=Z,77nm,0.8s	**5.17**	**69**	lAmb_Lg			17 02 54.5	
CCAR	**Cane Creek** comp=Z,98nm,0.8s	**5.18**	**116**	lAmb_Lg			17 02 59.2	
BRDY	**Brady** comp=Z,54nm,0.7s	**5.24**	**196**	lAmb_Lg			17 02 54.1	
129A	**Stewart Farms,** comp=Z,13nm,0.7s	**5.26**	**226**	lAmb_Lg			17 03 03.3	
P40A	**Paris** comp=Z,83nm,0.8s	**5.26**	**51**	lAmb_Lg			17 02 50.2	
435B	**Jarrell** comp=Z,49nm,0.8s	**5.56**	**182**	lAmb_Lg			17 03 04.6	
PBMO	**Poplar Bluff** comp=Z,64nm,0.9s	**5.59**	**84**	lAmb_Lg			17 03 03.1	
T25A	**Trinidad** comp=Z,71nm,1.0s	**5.71**	**280**	lAmb_Lg			17 03 12.8	
229A	**Bryant Ranch,** comp=Z,15nm,0.8s	**5.72**	**221**	lAmb_Lg			17 03 09.4	
FVM	**French Village** comp=Z,72nm,0.7s	**5.77**	**72**	lAmb_Lg			17 03 10.1	
ODSA	**Odessa** comp=Z,36nm,1.1s	**6.02**	**227**	lAmb_Lg			17 03 15.8	
143A	**Socs Landing,** comp=Z,46nm,0.7s	**6.12**	**125**	lAmb_Lg			17 03 24.0	
CGM3	**Cape Girardeau** comp=Z,63nm,1.0s	**6.25**	**79**	lAmb_Lg			17 03 25.6	
OZNA	**Ozona** comp=Z,49nm,0.8s	**6.26**	**211**	lAmb_Lg			17 03 39.1	
K30B	**Basset** comp=Z,62nm,0.8s	**6.55**	**345**	lAmb_Lg			17 03 46.6	
S44A	**Carbondale** comp=Z,64nm,0.7s	**6.62**	**76**	lAmb_Lg			17 03 33.1	
SIUC	**Southern Illin** comp=Z,62nm,0.8s	**6.65**	**76**	lAmb_Lg			17 03 40.9	
MNHN	**Monahans** comp=Z,28nm,0.9s	**6.72**	**223**	lAmb_Lg			17 03 38.7	
OXF	**Oxford** comp=Z,63nm,1.0s	**6.75**	**103**	lAmb_Lg			17 03 40.6	
TPB06	**Permian Basin** comp=Z,23nm,0.8s	**6.76**	**228**	lAmb_Lg			17 03 46.0	
Y45A	**Yeager Farm, C** comp=Z,43nm,0.8s	**6.87**	**109**	lAmb_Lg			17 03 48.4	
HNDO	**Hondo** comp=Z,48nm,1.0s	**7.00**	**194**	lAmb_Lg			17 03 49.3	
TPB07	**Mentone** comp=Z,73nm,0.8s	**7.08**	**230**	lAmb_Lg			17 04 05.6	
EF04	**Eagle Ford 04** comp=Z,49nm,0.9s	**7.13**	**183**	lAmb_Lg			17 04 01.1	
TPB05	**Hovey Rd** comp=Z,43nm,1.1s	**7.35**	**224**	lAmb_Lg			17 04 07.4	
L40A	**Anamosa** comp=Z,52nm,0.9s	**7.43**	**38**	lAmb_Lg			17 04 01.4	
DRIO	**Del Rio** comp=Z,28nm,0.8s	**7.43**	**203**	lAmb_Lg			17 04 14.8	
SAND	**Sanderson** comp=Z,42nm,0.7s	**7.53**	**213**	lAmb_Lg			17 04 16.7	
ANMO	**Albuquerque** comp=Z,0.4nm,0.3s,baz=83,slow=16,SNR=5.4	**7.54**	**262**	Pn	Pn		17 02 04.0	+10
ANMO				Sn	**Sb**		**17 03 43.2**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=96,slow=11,SNR=1.7 comp=Z,1.9nm,0.5s							
TPB01	**Permian Basin** comp=Z,24nm,0.7s	**7.60**	**227**	lAmb_Lg			17 04 19.4	
USIN	**University of** comp=Z,31nm,0.8s	**7.91**	**75**	lAmb_Lg			17 04 21.4	
SUSD	**Miller** comp=Z,34nm,0.7s	**8.17**	**352**	lAmb_Lg			17 04 36.8	
I37A	**Lemond, Waseca** comp=Z,52nm,1.1s	**8.23**	**20**	lAmb_Lg			17 04 32.9	
JFWS	**Jewell Farm** comp=Z,46nm,0.9s	**8.54**	**38**	lAmb_Lg			17 04 56.2	
TXAR	**Lajitas Array** comp=Z,0.3nm,0.3s,baz=49,slow=13,SNR=8.6	**8.78**	**219**	Pn	**Pn**		**17 02 12.7**	**+2.1**
TXAR				Pg			17 02 42.5	
	comp=Z,0.9nm,0.3s,baz=46,slow=20,SNR=8.1							
TXAR				Lg	Lg		17 04 37.5	
	comp=Z,1.6nm,0.3s,baz=34,slow=23,SNR=7.3 comp=Z,0.5nm,0.5s							
HAYD	**Hayden** comp=Z,24nm,1.2s	**8.81**	**301**	lAmb_Lg			17 04 56.9	
RSSD	**Black Hills** comp=Z,30nm,1.1s	**9.28**	**329**	lAmb_Lg			17 05 05.8	
K22A	**Casper** comp=Z,33nm,0.8s	**9.47**	**314**	lAmb_Lg			17 05 27.5	
SPMN	**Marine on St.** comp=Z,40nm,1.3s	**9.51**	**20**	lAmb_Lg			17 05 10.6	
F33A	**5 Mile Ranch,** comp=Z,17nm,0.8s	**9.51**	**5**	lAmb_Lg			17 05 25.9	
I42A	**Draeger Farm,** comp=Z,21nm,0.7s	**9.92**	**38**	lAmb_Lg			17 05 23.0	
PDAR	**Pinedale Array** comp=Z,0.2nm,0.3s,baz=116,slow=14,SNR=4.0	**11.38**	**308**	Pn	Pn		17 02 58.1	+12
PDAR				Lg	Lg		17 06 03.5	
	comp=Z,0.4nm,0.3s,baz=107,slow=32,SNR=4.5 comp=Z,0.3nm,0.3s							
PDAR	**Pinedale Array**	**11.38**	**308**		**Pn**		**17 02 45.0**	**-1.3**
ULM	**Lac du Bonnet** comp=Z,0.9nm,0.5s,baz=181,slow=13,SNR=1.9	**13.93**	**4**	Pn	**Pn**		**17 03 18.1**	**-2.8**
ULM				Lg	Lg		17 07 14.2	
	comp=Z,0.2nm,0.3s,baz=213,slow=19,SNR=1.9							
SADO	**Sadowa** comp=Z,0.2nm,0.3s,baz=258,slow=20,SNR=1.0 comp=Z,1.7nm,0.3s	**16.17**	**53**	Pn	Pn		17 03 37.7	-13
ILAR	**Eielson Array** comp=Z,0.4nm,0.8s,baz=103,slow=7.9,SNR=4.6 comp=Z,0.4nm,0.8s	**40.73**	**330**	P	**P**		**17 07 46.7**	**+2.8**

*MEX **26** 17:26:49.7±0.7, 14°.73N×92°.12W, h100km±12km, MD3.5*
*GCG **26** 17:26:49.5±0.8, 14°.61N×92°.28W, h64km±43km, MD3.9, Presumed earthquake*

ISC 26 17:26:46.7±2.4, **14°.8N**±0°.2×**91°.9W**±0°.2, **h106**km±15km, **n11**, σ1°**34**/19, **Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTAL	**Retalhuleu**	**0.32**	**149**	*e*P	**Pn**	**17 27 04.0**	**+1.9**
RTAL				*e*S	**Sn**	**17 27 15.5**	**+1.8**
CHUJ	**Union Juarez**	**0.38**	**321**	*e*P	**Pn**	**17 27 03.6**	**+0.9**
CHUJ				*e*S	**Sn**	**17 27 14.8**	**+0.1**
THIG		**0.40**	**286**	*e*S	**Sn**	**17 27 13.6**	**-0.8**
PATR	**El Naranjo**	**0.48**	**311**	*e*P	**Pn**	**17 27 03.4**	**0.0**
PATR				*e*S	**Sn**	**17 27 14.1**	**-1.7**
PAVE	**Pavencul**	**0.50**	**322**	*e*P	**Pn**	**17 27 04.5**	**+1.1**
PAVE				*e*S	**Sn**	**17 27 15.8**	**-0.2**
STG2	**El Palmar, Qui**	**0.59**	**127**	*e*P	**Pn**	**17 27 04.2**	**+0.2**
STG2				*e*S	**Sn**	**17 27 14.9**	**-2.0**
STG8	**El Palmar, Qui**	**0.60**	**125**	*e*P	**Pn**	**17 27 04.2**	**0.0**
STG8				*e*S	**Sn**	**17 27 16.4**	**-1.0**
STG5	**El Palmar, Qui**	**0.63**	**128**	*e*P	**Pn**	**17 27 03.8**	**-0.5**
STG5				*e*S	**Sn**	**17 27 15.4**	**-2.0**
FG8	**Yepocapa, Chim**	**1.37**	**113**	*e*P	**Pn**	**17 27 12.7**	**+0.8**
FG16	**Alotenango, Sa**	**1.41**	**112**	*e*P	**Pn**	**17 27 13.8**	**+1.4**
PCIG		**1.59**	**305**	*e*P	**Pn**	**17 27 15.0**	**+0.6**
PCIG				*e*S	**Sn**	**17 27 34.0**	**-1.5**

*IDC **26** 17:27:50.2±2.3, 5°.04N×126°.95E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=216.7km s-min=23.0km az=67.0*
*MAN **26** 17:27:55.0, 5°.61N×127°.74E, h56km, MS3.1*

ISC 26 17:27:55.8±1.4, **5°.4N**±0°.1×**127°.7E**±0°.2, **h53**km, **n6**, σ0°**86**/6,
mb3.2/4, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**2.06**	**291**	*e*P	**Pn**	**17 28 27.7**	**-0.4**
BIPH	**Bislig**	**3.08**	**335**	*i* P	**Pn**	**17 28 41.3**	**-0.7**
WRA	**Warramunga Arr** 0.2nm,0.9s,baz=343,slow=9.2,SNR=1.5 0.2nm,0.9s	**26.00**	**166**	P	**P**	**17 33 23.3**	**-0.6**
ASAR	**Alice Springs** 0.1nm,0.6s,baz=355,slow=6.9,SNR=4.3 0.1nm,0.6s	**29.50**	**168**	P	**P**	**17 33 55.2**	**0.0**
MKAR	**Makanchi Array** 0.4nm,0.5s,baz=117,slow=7.6,SNR=7.6 0.4nm,0.5s	**56.75**	**324**	P	**P**	**17 37 35.1**	**+0.6**
KURBB	**Kurchatov Arra** 0.5nm,0.7s,baz=132,slow=5.1,SNR=8.0 0.5nm,0.7s	**60.87**	**327**	P	**P**	**17 38 03.8**	**+0.9**

IDC 26 17:29:10.9±3.6, **47°.57N**×**93°.13W**, **h0**km, **mbtmp2.7**/2, **ML0.7**/1, **Error ellipse: s-maj=38.1km s-min=17.7km az=91.0, Minnesota**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULM	**Lac du Bonnet** 0.1nm,0.3s,baz=108,slow=6.4,SNR=1.4	**3.23**	**327**	Pn	Pn	17 30 01.8	-1.2
ULM				Pg	Pb	17 30 08.1	-1.1
	0.3nm,0.3s,baz=149,slow=16,SNR=2.2						
ULM				Lg	Lg	17 30 51.1	
	3.1nm,0.3s,baz=215,slow=21,SNR=6.5 0.6nm,0.4s						
I10CA	**LAC DU BONNET** baz=146,slow=323,SNR=2.5	**3.25**	**325**	I	I	17 51 40.0	
PDAR	**Pinedale Array** 0.2nm,0.5s,baz=61,slow=15,SNR=1.6	**12.55**	**254**	Pn	Pn	17 32 08.6	-2.2
PDAR				Lg	Lg	17 35 39.2	
	baz=63,slow=35,SNR=2.2						

*SSNC **26** 17:33:11.2±1.3, 18°.90N×76°.95W, h7km±87km, MD2.7, ML1.4, Presumed earthquake*
*JSN **26** 17:33:11.0±0.5, 18°.74N×76°.85W, h22km±3km, MD2.8, Presumed earthquake*

ISC 26 17:33:08.9±1.4, **18°.83N**±0°.05×**76°.89W**±0°.08, **h35**km, **n7**, σ1°**28**/10, **3C, Jamaica region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STH	**Stony Hill**	**0.76**	**174**	⇑*i*P	**Pn**	**17 33 23.0**	**-0.1**
GWJ	**Greenwich**	**0.77**	**169**	⇑*i*P	**Pn**	**17 33 23.4**	**-0.1**
MTDJ	**Mount Denham**	**0.86**	**226**	⇑*i*P	**Pn**	**17 33 25.6**	**+1.0**
MTDJ	**Mount Denham**	**0.86**	**226**	*e*P	**Pn**	**17 33 25.7**	**+1.0**
MTDJ				*e*S	**Sn**	**17 33 35.7**	**-0.4**
MTDJ				lAML		17 33 37.7	
	comp=Z,138nm,0.2s						
MTDJ				lAML		17 33 39.0	
	148nm,0.3s						
LMGC	**Las Mercedes**	**1.23**	**355**	*e*P	**Pn**	**17 33 29.7**	**+0.1**
LMGC				*e*S	**Sn**	**17 33 42.8**	**-2.1**
LMGC				lAML		17 33 44.1	
	comp=E,10nm,0.1s						
LMGC				lAML		17 33 44.1	
	comp=N,21nm,0.1s						
YAR	**Yar**	**1.61**	**18**	*e*P	**Pn**	**17 33 35.9**	**+1.1**
YAR				lAML		17 33 54.0	
	comp=N,1.2nm,0.0s						
YAR				lAML		17 33 54.0	
	comp=E,0.7nm,0.0s						
RCC	**Rio Carpintero**	**1.61**	**44**	*e*P	**Pn**	**17 33 36.5**	**+1.6**
RCC				*e*S	**Sn**	**17 33 53.5**	**-0.9**
RCC				lAML		17 33 55.5	
	comp=N,2.1nm,0.1s						
RCC				lAML		17 33 55.6	
	comp=E,1.3nm,0.1s						

*CATAC **26** 17:39:06.9±0.4, 13°.N±3°.×9°.1W±°., h12km±2km, M4.1/26, MLv4.1/26, Error ellipse: s-maj=5.8km s-min=2.7km az=18.5, confirmed*
*GCG **26** 17:39:07.9±1.9, 13°.60N×90°.77W, h29km±7km, MD4.2, ML4.0, Presumed earthquake*
*SNET **26** 17:39:09.0, 13°.68N×90°.64W, h48km, ML3.9, Presumed earthquake*

ISC 26 17:39:10.8±1.6, **13°.60N**±0°.06×**90°.59W**±0°.05, **h26**km±13km, **n64**, σ1°**29**/93, **6C-21D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAME	**Alcaldia de Sa**	**0.60**	**66**	⇓P	**Pb**	**17 39 21.9**	**-1.0**
FAME				S	**Sb**	**17 39 32.5**	**+1.5**
PCG5	**San Vicente Pa**	**0.65**	**18**	*e*P	**Pn**	**17 39 22.9**	**-1.5**
PCG5				*e*S	**Sn**	**17 39 33.0**	**-1.0**
FG8	**Yepocapa, Chim**	**0.66**	**2**	⇓*i*P	**Pn**	**17 39 24.5**	**-0.1**
FG8				*e*S	**Sn**	**17 39 36.5**	**+2.4**
FG16	**Alotenango, Sa**	**0.68**	**6**	⇓*i*P	**Pn**	**17 39 24.5**	**-0.3**
FG16				*e*S	**Sn**	**17 39 36.6**	**+1.9**
NUBE	**Las Nubes**	**0.84**	**69**	⇓P	**Pn**	**17 39 25.2**	**-1.8**
NUBE				S	**Sn**	**17 39 38.3**	**-0.4**
NUBE	**Las Nubes**	**0.84**	**69**	⇓*i*P	**Pn**	**17 39 25.3**	**-1.8**
NUBE	**Las Nubes**	**0.84**	**69**	⇓*i*P	**Pn**	**17 39 25.3**	**-1.8**
NUBE				*e*S	**Sn**	**17 39 38.0**	**-0.6**
LOAL	**Lomas de Alarc**	**0.88**	**63**	⇑P	**Pn**	**17 39 26.4**	**-1.2**
LOAL				S	**Sb**	**17 39 40.5**	**+1.7**
LOAL	**Lomas de Alarc**	**0.88**	**63**	*e*P	**Pn**	**17 39 26.3**	**-1.2**
SLOZ	**Alcaldia de Sa**	**0.89**	**61**	⇓P	**Pn**	**17 39 26.4**	**-1.3**
SLOZ				S	**Sb**	**17 39 41.1**	**+2.1**
SLOZ	**Alcaldia de Sa**	**0.89**	**61**	*e*P	**Pn**	**17 39 26.3**	**-1.3**
SLOZ				*e*S	**Sn**	**17 39 40.6**	**+0.9**
CEVE	**Cerro Verde**	**0.96**	**76**	⇓P	**Pn**	**17 39 27.4**	**-1.4**
CEVE				S	**Sn**	**17 39 42.3**	**+0.5**
CEVE	**Cerro Verde**	**0.96**	**76**	⇓*i*P	**Pn**	**17 39 27.4**	**-1.4**
SBLS	**San Blas**	**0.96**	**75**	⇓*i*P	**Pn**	**17 39 27.3**	**-1.6**
SNJE	**San Jose**	**0.99**	**74**	⇓*i*P	**Pn**	**17 39 27.8**	**-1.4**
RBDL	**Robledal**	**1.01**	**59**	⇓*i*P	**Pn**	**17 39 28.5**	**-1.0**
UNIC	**Universidad Ca**	**1.08**	**69**	P	**Pn**	**17 39 29.0**	**-1.2**
UNIC				S	**Sn**	**17 39 45.3**	**+0.9**
STG5	**El Palmar, Qui**	**1.09**	**317**	*e*P	Pb	17 39 31.4	+0.3
STG5				*e*S	**Sb**	**17 39 46.6**	**+1.7**
JAYA	**Jayaque - finc**	**1.11**	**87**	⇓P	**Pn**	**17 39 29.1**	**-1.6**
JAYA				S	**Sn**	**17 39 44.5**	**-0.8**
JAYA	**Jayaque - finc**	**1.11**	**87**	⇓*i*P	**Pn**	**17 39 29.0**	**-1.8**
JAYA				lAML		17 39 45.5	
	comp=N,13μm,0.2s						
JAYA	**Jayaque - finc**	**1.11**	**87**	*e*P	**Pn**	**17 39 28.9**	**-1.8**
STG8	**El Palmar, Qui**	**1.13**	**319**	*e*P	Pb	**17 39 31.7**	**-0.1**
STG8				*e*S	Sb	17 39 49.4	+3.3
STG8				lAML		17 39 53.3	
	comp=N,2μm,0.1s						
STG2	**El Palmar, Qui**	**1.13**	**317**	*e*P	Pb	17 39 32.3	+0.5
CEDA	**San Andres**	**1.17**	**80**	⇑P	**Pn**	**17 39 30.4**	**-1.2**
CEDA				S	**Sn**	**17 39 47.4**	**+0.6**
CEDA	**San Andres**	**1.17**	**80**	*e*P	**Pn**	**17 39 30.3**	**-1.2**
LALI	**Alcalda de L**	**1.23**	**95**	P	**Pn**	**17 39 30.8**	**-1.6**
LALI				S	**Sn**	**17 39 48.1**	**0.0**
LALI	**Alcalda de L**	**1.23**	**95**	*e*P	**Pn**	**17 39 31.0**	**-1.4**
LALI	**Alcalda de L**	**1.23**	**95**	*e*P	**Pn**	**17 39 30.7**	**-1.7**
PMON	**Piamonte**	**1.24**	**85**	⇓P	**Pn**	**17 39 31.3**	**-1.3**
PMON				S	**Sn**	**17 39 49.2**	**+0.7**
PMON	**Piamonte**	**1.24**	**85**	*e*P	**Pn**	**17 39 31.2**	**-1.3**
BOQS	**Boqueron**	**1.28**	**84**	*e*P	**Pn**	**17 39 32.1**	**-1.0**
UEES	**Universidad Ev**	**1.31**	**85**	⇓P	**Pn**	**17 39 32.7**	**-0.9**
UEES				S	**Sn**	**17 39 51.1**	**+0.9**
UEES	**Universidad Ev**	**1.31**	**85**	*e*P	**Pn**	**17 39 32.6**	**-0.9**
SEMO	**Seminario San**	**1.33**	**85**	P	**Pn**	**17 39 32.8**	**-0.9**
SEMO				S	**Sn**	**17 39 51.3**	**+0.7**
UTEC	**Universidad Te**	**1.35**	**85**	⇓P	**Pb**	**17 39 34.7**	**-0.7**
UTEC				S	**Sn**	**17 39 52.0**	**+0.9**
PANCS	**Alcalda de**	**1.37**	**89**	P	**Pn**	**17 39 33.0**	**-1.3**
PANCS				S	**Sn**	**17 39 51.6**	**+0.1**
PANCS	**Alcalda de**	**1.37**	**89**	*e*P	**Pn**	**17 39 33.0**	**-1.3**
LOMA	**Loma Larga**	**1.38**	**88**	*e*P	**Pn**	**17 39 33.2**	**-1.2**
IGN	**Direccin Gen**	**1.38**	**85**	P	**Pn**	**17 39 33.4**	**-1.1**
IGN				S	**Sn**	**17 39 52.9**	**+1.0**
UDBS	**Universidad Do**	**1.40**	**85**	⇓P	**Pn**	**17 39 34.2**	**-0.4**
UDBS				S	**Sn**	**17 39 53.7**	**+1.4**
APG	**El Apazote**	**1.40**	**5**	⇓*i*P	Pb	**17 39 33.9**	**-2.6**
APG				*e*S	**Sb**	**17 39 52.4**	**-1.6**
MTO3	**Montecristo**	**1.43**	**56**	⇓P	**Pn**	**17 39 34.4**	**-0.9**
MTO3				S	**Sb**	**17 39 56.3**	**+1.5**
MTO3	**Montecristo**	**1.43**	**56**	*e*P	**Pn**	**17 39 34.4**	**-0.9**
MTO3	**Montecristo**	**1.43**	**56**	*e*P	**Pn**	**17 39 34.4**	**-0.9**
LFU	**La Fuente**	**1.44**	**84**	*e*P	**Pn**	**17 39 34.7**	**-0.5**
LFRS	**El Faro**	**1.48**	**89**	*e*P	**Pn**	**17 39 34.9**	**-1.0**
LBRS	**Las Brisas**	**1.50**	**84**	*e*P	**Pn**	**17 39 35.5**	**-0.7**
SJTE	**Alcalda de S**	**1.53**	**89**	*e*P	**Pn**	**17 39 35.8**	**-0.8**
ESQI	**Esquipulas**	**1.54**	**51**	P	**Pn**	**17 39 35.8**	**-0.9**
ESQI				S	**Sb**	**17 39 59.8**	**+1.9**
ESQI	**Esquipulas**	**1.54**	**51**	*e*P	**Pn**	**17 39 36.2**	**-0.4**
PAVA	**Las Pavas**	**1.61**	**86**	⇑P	**Pn**	**17 39 36.9**	**-0.6**
PAVA				S	**Sn**	**17 39 60.0**	**+2.4**
PAVA	**Las Pavas**	**1.61**	**86**	*e*P	**Pn**	**17 39 36.8**	**-0.8**
COEG	**Centro de Oper**	**1.66**	**89**	⇓P	**Pn**	**17 39 37.9**	**-0.4**
COEG				S	**Sn**	**17 40 00.2**	**+1.4**
COEG	**Centro de Oper**	**1.66**	**89**	*e*P	**Pn**	**17 39 37.7**	**-0.6**
LLGN	**La Laguna**	**1.69**	**70**	S	**Sb**	**17 40 03.4**	**+1.2**
TECO	**Alcaldia de Te**	**1.76**	**92**	P	**Pn**	**17 39 38.7**	**-0.9**
TECO				S	**Sn**	**17 40 01.2**	**+0.1**
SCLA	**Alcaldia de Sa**	**1.81**	**86**	⇑P	**Pn**	**17 39 39.8**	**-0.5**
SCLA				S	**Sn**	**17 40 05.4**	**+3.0**
SCLA	**Alcaldia de Sa**	**1.81**	**86**	*e*P	**Pn**	**17 39 39.7**	**-0.6**
P5NO	**Presa 5 de nov**	**1.82**	**78**	P	**Pn**	**17 39 39.1**	**-1.3**
P5NO				S	**Sn**	**17 40 05.1**	**+2.5**
PQSS	**Presa 15 de Se**	**1.97**	**89**	*e*P	**Pn**	**17 39 41.6**	**-0.8**
SARH	**Santa Rosa de**	**2.12**	**56**	⇑P	**Pn**	**17 39 44.5**	**-0.1**
PACA	**Pacayal**	**2.20**	**93**	P	**Pn**	**17 39 45.7**	**-0.1**
PACA				S	**Sn**	**17 40 13.8**	**+1.5**
RANC	**El Ranchito**	**2.24**	**94**	P	**Pn**	**17 39 45.3**	**-1.0**
LCND	**La Caada**	**2.64**	**96**	⇑P	**Pn**	**17 39 51.3**	**-0.4**

*IDC **26** 18:01:08.3±1.3, 67°.00N×21°.43E, h0km, mbtmp2.7/3, ML1.8/3, Error ellipse: s-maj=21.5km s-min=9.4km az=97.0*

ISC 26 18:01:08.5±1.1, **67°.03N**±0°.06×**20°.94E**±0°.09, **h10**km, **n5**, σ0°**64**/7, **Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SALU	**Saltoluokta**	**1.01**	**292**	*e*P	**Pb**	**18 01 27.4**	**-0.6**
HEF	**Hetta**	**1.73**	**36**	*e*P	**Pn**	**18 01 38.4**	**-0.2**
ARCES	**ARCESS Array B** 0.2nm,0.3s,baz=212,slow=14,SNR=12	**3.04**	**32**	Pn	**Pn**	**18 01 56.7**	**+0.2**
ARCES				Sn	**Sn**	**18 02 33.0**	**+0.1**
	0.7nm,0.3s,baz=210,slow=25,SNR=5.3 0.7nm,0.3s						
FINES	**FINESS Array B** 0.1nm,0.3s,baz=345,slow=14,SNR=4.2	**6.04**	**156**	Pn	**Pn**	**18 02 38.0**	**+0.3**
FINES				Sn	**Sn**	**18 03 46.1**	**-0.6**
	0.2nm,0.3s,baz=343,slow=23,SNR=9.0						
FINES				Lg	Lg	18 04 14.0	
	0.1nm,0.3s,baz=341,slow=32,SNR=1.7 1.8nm,1.0s						
NOA	**NORSAR Array B** baz=37,slow=15,SNR=1.3 0.4nm,0.7s	**7.36**	**220**	Pn	**Pn**	**18 02 56.7**	**+0.8**

*IDC **26** 18:10:27.1±0.6, 49°.30N×158°.56E, h0km, mb4.0/18, mbtmp4.0/22, ML3.3/4, MS3.5/4, Error ellipse: s-maj=17.4km s-min=13.3km az=130.0*
*KRSC **26** 18:10:30.2±1.7, 49°.50N×158°.88E, h41km±46km, Ml4.4*
*NEIC **26** 18:10:32.7±2.1, 49°.29N±0°.10×158°.5E±0°.2, h36km±5km, mb4.4/33, Error ellipse: s-maj=16.6km s-min=11.7km az=130.0*
*MOS **26** 18:10:32.2±0.8, 49°.45N×158°.48E, h47km, mb4.5/21, Error ellipse: s-maj=12.0km s-min=4.0km az=94.3*

ISC 26 18:10:33.8±1.1, **49°.42N**±0°.06×**158°.53E**±0°.05, **h48**km±9km, **n162**, σ1°**18**/178, **mb4.2**/44, **MS3.6**/4, **10C-2D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.00**	**310**	*e*PN	**Pn**	**18 11 04.4**	**-0.7**
SKR				*e*S	**Sn**	**18 11 29.0**	**0.0**
SKR				pmax	pmax		
	comp=Z,450nm,0.6s						
SKR				smax	smax		
	comp=N,2μm,0.8s						
SKR				smax	smax		
	comp=E,1μm,0.8s						
SKR	**Severo-Kuril's**	**2.00**	**310**	*e*P	**Pn**	**18 11 03.8**	**-1.3**
SKR				*e*S	**Sn**	**18 11 28.9**	**0.0**
PAU	**Pauzhetka**	**2.32**	**332**	PN	**Pn**	**18 11 09.0**	**-0.5**
PAU				S	**Sn**	**18 11 38.1**	**+1.3**
PAU	**Pauzhetka**	**2.32**	**332**	*e*P	**Pn**	**18 11 09.1**	**-0.5**
PAU				*e*S	**Sn**	**18 11 38.1**	**+1.3**
KDTR	**Khodutka, Kamc**	**2.41**	**353**	PN	**Pn**	**18 11 09.3**	**-1.3**
KDTR				S	**Sn**	**18 11 38.0**	**-0.9**
KDTR	**Khodutka, Kamc**	**2.41**	**353**	*e*P	**Pn**	**18 11 09.3**	**-1.3**
KDTR				*e*S	**Sn**	**18 11 38.0**	**-0.9**
ASAK	**Asacha**	**2.99**	**353**	PN	**Pn**	**18 11 18.4**	**-0.3**
ASAK				S	**Sn**	**18 11 52.7**	**-0.7**
ASAK	**Asacha**	**2.99**	**353**	*e*P	**Pn**	**18 11 18.5**	**-0.3**
ASAK				*e*S	**Sn**	**18 11 52.7**	**-0.7**
RUS	**Russkaya**	**3.01**	**360**	PN	**Pn**	**18 11 18.0**	**-0.9**
RUS				S	**Sn**	**18 11 52.5**	**-1.3**
RUS	**Russkaya**	**3.01**	**360**	*e*P	**Pn**	**18 11 18.1**	**-0.9**
RUS				*e*S	**Sn**	**18 11 52.6**	**-1.3**
MIPR	**Malaya Ipel'ka**	**3.07**	**339**	PN	**Pn**	**18 11 20.4**	**+0.7**
MIPR	**Malaya Ipel'ka**	**3.07**	**339**	*e*P	**Pn**	**18 11 20.5**	**+0.7**
MTVR	**Mutnovka**	**3.07**	**356**	PN	**Pn**	**18 11 18.7**	**-1.2**
MTVR				S	**Sn**	**18 11 54.9**	**-0.5**
MTVR	**Mutnovka**	**3.07**	**356**	*e*P	**Pn**	**18 11 18.8**	**-1.2**
MTVR				*e*S	**Sn**	**18 11 55.0**	**-0.5**
GRL	**

YSS	**Yuzhno-Sakhali**	**10.82**	**263**	*e*PN		**Pn**		**18 13 05.7**	**-0.2**
YSS					pmax	pmax			
	comp=Z,10.0nm,1.1s								
JKA	**Kamikawa-asahi**	**12.14**	**250**			Pn		18 13 20.7	-3.3
ASAJ	**Asahikawa**	**12.14**	**250**	Pn		Pn		18 13 21.1	-2.8
	comp=Z,0.4nm,0.3s,baz=85,slow=18,SNR=8.0								
	comp=Z,3.6nm,0.6s								
SEY	**Seymchan**	**13.96**	**348**	Pn		**Pn**		**18 13 49.3**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=158,slow=9.0,SNR=8.8								
	comp=Z,0.5nm,0.3s								
SEY	**Seymchan**	**13.96**	**348**	*ce*P		**Pn**		**18 13 47.3**	**-1.3**
SEY					pmax	pmax			
	comp=Z,3.0nm,0.8s								
KLR	**Kul'dur**	**17.43**	**280**	P		**Pn**		**18 14 32.5**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=90,slow=12,SNR=1.9								
	comp=Z,0.6nm,0.5s								
KLR	**Kul'dur**	**17.43**	**280**	*ce*P		**P**		**18 14 35.7**	**+1.7**
KLR					pmax	pmax			
	comp=Z,1.0nm,1.3s								
BILL	**Bilibino**	**19.07**	**9**	*ce*P		**Pn**		**18 14 52.0**	**-1.0**
BILL					pmax	pmax			
	comp=Z,15nm,2.5s								
MJAR	**Matsushiro Arr**	**19.59**	**237**	P		**P**		**18 14 56.1**	**-1.7**
	baz=30,slow=9.7,SNR=5.9								
	comp=Z,2.6nm,1.0s								
MJAR	**Matsushiro Arr**	**19.59**	**237**	IAmb		IAmb		18 15 02.3	
	comp=Z,3.6nm,1.3s								
MJB9	**Matsu-Tunnel**	**19.59**	**237**	P		**P**		**18 14 55.5**	**-2.3**
MAJO	**Matsushiro**	**19.59**	**237**	P		**P**		**18 14 54.4**	**-3.4**
MAJO	**Matsushiro**	**19.59**	**237**	P		**P**		**18 14 54.4**	**-3.4**
MAJO					pmax	pmax			
	comp=Z,6.0nm,0.8s								
ZEA	**Zeya**	**19.82**	**295**	*e*P		**P**		**18 14 59.5**	**-0.7**
HEH	**HeiHe**	**20.02**	**284**	*e*P		**P**		**18 14 59.0**	**-3.4**
HEH					pmax	pmax			
	comp=Z,8.0nm,1.1s								
YAK	**Yakutsk**	**20.35**	**319**	P		**P**		**18 15 05.5**	**-0.4**
	comp=Z,16nm,0.7s,baz=285,slow=0.3,SNR=13								
	comp=Z,16nm,0.7s								
YAK	**Yakutsk**	**20.35**	**319**			**P**		**18 15 03.1**	**-2.7**
YAK					IAmb	IAmb		18 15 06.2	
	comp=Z,15nm,0.6s								
YAK	**Yakutsk**	**20.35**	**319**	*e*P		**P**		**18 15 04.2**	**-1.7**
YAK				*e**PP		**pP**		**18 15 18.2**	**+2.8**
YAK				*e*				18 15 22.0	
YAK				*e*S		**S**		**18 18 48.0**	**-3.0**
YAK				*e*				18 19 15.6	
YAK				*e*				18 26 31.4	
YAK					pmax	pmax			
	comp=Z,17nm,0.9s								
YAK					pmax	pmax			
	comp=E,5.0nm,1.4s								
YAK					pmax	pmax			
	comp=N,3.0nm,1.5s								
YAK					pmax	pmax			
	comp=Z,106nm,3.5s								
YAK					pmax	pmax			
	comp=N,78nm,3.5s								
YAK					pmax	pmax			
	comp=E,41nm,3.2s								
YAK					smax	smax			
	comp=N,72nm,3.0s								
YAK					smax	smax			
	comp=E,42nm,3.3s								
TNA	**Tin City**	**23.77**	**35**	P		**P**		**18 15 41.4**	**-0.1**
K13K	**Kusilvak Mount**	**23.86**	**44**	P		**P**		**18 15 42.6**	**+0.3**
K13K					IAmb	IAmb		18 15 44.4	
	comp=Z,9.0nm,1.4s								
M13K	**Dall Lake**	**24.15**	**48**	P		**P**		**18 15 46.5**	**+1.5**
M13K					IAmb	IAmb		18 15 47.7	
	comp=Z,18nm,1.1s								
ANM	**Nome**	**24.36**	**38**			**P**		**18 15 48.2**	**+1.3**
ANM	**Nome**	**24.36**	**38**	P		**P**		**18 15 48.2**	**+1.3**
ANM					pmax	pmax			
	comp=Z,7.0nm,1.2s								
KSRS	**Korea Array**	**25.06**	**253**	P		**P**		**18 15 53.5**	**0.0**
	comp=Z,1.0nm,0.8s,baz=47,slow=8.8,SNR=4.1								
	comp=Z,1.0nm,0.8s								
TIXI	**Tiksi**	**26.09**	**339**			**P**		**18 16 02.5**	**0.0**
TIXI					IAmb	IAmb		18 16 06.2	
	comp=Z,5.6nm,0.7s								
TIXI	**Tiksi**	**26.09**	**339**	*ce*P		**P**		**18 16 01.8**	**-0.7**
TIXI					pmax	pmax			
	comp=Z,8.0nm,1.0s								
J17K	**VABM Dome**	**26.70**	**43**	P		**P**		**18 16 07.3**	**-0.8**
J17K					IAmb	IAmb		18 16 34.8	
	comp=Z,10nm,1.4s								
C19K	**Lookout Ridge**	**28.19**	**30**	P		**P**		**18 16 23.0**	**+1.5**
H11N2	**WAKE ISLAND Hy**	**30.37**	**164**	T		T		18 48 17.9	
	baz=349,slow=76,SNR=10								
H11N3	**WAKE ISLAND Hy**	**30.39**	**164**	T		T		18 48 19.7	
	baz=349,slow=76,SNR=8.3								
H11N1	**WAKE ISLAND Hy**	**30.39**	**164**	T		T		18 48 19.2	
	baz=349,slow=76,SNR=13								
H11S1	**WAKE ISLAND Hy**	**31.54**	**165**	T		T		18 49 46.2	
	baz=350,slow=76,SNR=16								
H11S3	**WAKE ISLAND Hy**	**31.55**	**165**	T		T		18 49 47.4	
	baz=350,slow=76,SNR=20								
H11S2	**WAKE ISLAND Hy**	**31.55**	**165**	T		T		18 49 47.4	
	baz=350,slow=76,SNR=24								
ILAR	**Eielson Array**	**32.17**	**41**	P		**P**		**18 16 56.2**	**-0.4**
	comp=Z,0.2nm,0.6s,baz=257,slow=6.3,SNR=3.0								
	comp=Z,0.2nm,0.6s								
ULN	**Ulaanbaatar**	**33.51**	**287**	*i* P		**P**		**18 17 08.2**	**-0.5**
ULN					pmax	pmax			
	comp=Z,1.0nm,1.0s								
TLY	**Talaya**	**34.26**	**295**	*ce*P		**P**		**18 17 16.0**	**+1.1**
TLY					pmax	pmax			
	comp=Z,5.0nm,1.7s								
L27K	**Beaver Creek,**	**34.45**	**44**	P		**P**		**18 17 18.1**	**+1.5**
L27K					IAmb	IAmb		18 17 19.1	
	comp=Z,2.9nm,0.9s								
BCAR	**Beaver Creek A**	**34.47**	**44**	P		**P**		**18 17 17.2**	**+0.5**
CTGM	**Chitina Glacie**	**34.94**	**48**	P		**P**		**18 17 21.8**	**+1.0**
CTGM					IAmb	IAmb		18 18 06.1	
	comp=Z,8.1nm,1.2s								
L29M	**L29M**	**36.12**	**44**	P		**P**		**18 17 32.6**	**+1.8**
L29M					IAmb	IAmb		18 17 33.9	
	comp=Z,2.8nm,0.8s								
HYT	**Haines Junctio**	**36.81**	**47**	P		**P**		**18 17 38.4**	**+1.6**
GTA2	**Gaotai**	**42.13**	**279**	*e*P		**P**		**18 18 22.5**	**+1.2**
GTA2					pmax	pmax			
	comp=Z,3.0nm,1.0s								
YKA	**Yellowknife Ar**	**46.58**	**40**	P		**P**		**18 18 57.8**	**+1.4**
	comp=Z,1.3nm,1.0s,baz=299,slow=8.1,SNR=9.6								
	comp=Z,1.3nm,1.0s								
KURK	**Kurchatov**	**48.90**	**304**			**P**		**18 19 14.8**	**+0.3**
KURK					IAmb	IAmb		18 19 15.9	
	comp=Z,3.7nm,0.8s								
KURK	**Kurchatov**	**48.90**	**304**			**PcP**		**18 20 39.5**	**+1.3**
KURK	**Kurchatov**	**48.90**	**304**	*de*P		**P**		**18 19 14.6**	**+0.1**
KURK					pmax	pmax			
	comp=Z,6.0nm,1.2s								
MK31	**Makanchi Array**	**48.93**	**298**	*de*P		**P**		**18 19 15.2**	**+0.3**
MKAR	**Makanchi Array**	**48.93**	**298**	P		**P**		**18 19 15.5**	**+0.6**
	comp=Z,2.1nm,0.7s,baz=57,slow=8.0,SNR=20								
MKAR					PcP		**PcP**		**18 20 38.1**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=73,slow=4.8,SNR=2.4								
	comp=Z,2.1nm,0.7s								
KURBB	**Kurchatov Arra**	**49.00**	**304**	P		**P**		**18 19 16.1**	**+0.8**
	comp=Z,2.2nm,0.7s,baz=62,slow=7.5,SNR=16								
KURBB					PcP		**PcP**		**18 20 39.5**	**+0.9**
	comp=Z,0.8nm,0.8s,baz=60,slow=3.6,SNR=5.9								
	comp=Z,2.2nm,0.7s								
DAV	**Davao City (W)**	**50.47**	**224**	P		**P**		**18 19 26.4**	**-0.4**
	comp=Z,56nm,0.4s,baz=175,slow=8.6,SNR=4.6								
DAV	**Davao City (W)**	**50.47**	**224**		IAmb	IAmb		18 19 27.0	
	comp=Z,80nm,0.7s								
SPITS	**Spitsbergen Ar**	**50.60**	**351**	P		**P**		**18 19 29.0**	**+1.9**
	comp=Z,3.7nm,0.8s,baz=49,slow=8.9,SNR=5.4								
	comp=Z,3.7nm,0.8s								
BVAR	**Borovoye Array**	**51.95**	**310**	P		**P**		**18 19 37.5**	**0.0**
	comp=Z,1.8nm,0.6s,baz=56,slow=8.1,SNR=12								
	comp=Z,1.8nm,0.6s								
BORK	**Borovoye**	**51.97**	**310**			**P**		**18 19 38.4**	**+0.7**
BORK	**Borovoye**	**51.97**	**310**	*ce*P		**P**		**18 19 38.2**	**+0.5**
BORK					pmax	pmax			
	comp=Z,8.0nm,1.7s								
WUS	**Wushi**	**53.96**	**294**			**P**		**18 19 53.1**	**+0.4**
WUS					IAmb	IAmb		18 19 55.5	
	comp=Z,6.4nm,1.2s								
KDJ	**Kajisay**	**54.60**	**296**			**P**		**18 19 58.4**	**+1.0**
KDJ					IAmb	IAmb		18 20 00.0	
	comp=Z,6.4nm,1.1s								
KDJ	**Kajisay**	**54.60**	**296**	P		**P**		**18 19 58.4**	**+1.0**
KDJ					pmax	pmax			
	comp=Z,6.0nm,1.1s								
BOOM	**Boomskoye usch**	**55.11**	**297**			**P**		**18 20 02.2**	**+1.2**
BOOM					IAmb	IAmb		18 20 05.1	
	comp=Z,4.3nm,0.8s								
BOOM	**Boomskoye usch**	**55.11**	**297**	P		**P**		**18 20 02.3**	**+1.2**
BOOM					pmax	pmax			
	comp=Z,4.0nm,0.8s								
ARTI	**Arti**	**55.56**	**318**	*c* P		**P**		**18 20 04.1**	**+0.2**
ARTI								18 21 05.4	
ARTI								18 22 06.2	
ARTI					S	**S**		**18 27 45.4**	**-0.3**
ARTI					SS	**SS**		**18 31 28.4**	**-1.9**
ARTI					pmax	pmax			
	comp=Z,4.0nm,0.8s								
AAK	**Ala-Archa**	**55.86**	**298**			**P**		**18 20 07.4**	**+1.0**
AAK					IAmb	IAmb		18 20 09.1	
	comp=Z,4.3nm,0.9s								
AAK	**Ala-Archa**	**55.86**	**298**	*ce*P		**P**		**18 20 06.5**	**+0.1**
AAK					pmax	pmax			
	comp=Z,13nm,2.5s								
SHL	**Shillong**	**56.02**	**271**			**P**		**18 20 08.1**	**+0.3**
SHL	**Shillong**	**56.02**	**271**	P		**P**		**18 20 08.1**	**+0.3**
SHL					pmax	pmax			
	comp=Z,6.0nm,0.8s								
ARCES	**ARCESS Array B**	**56.48**	**342**	LR		LR		18 47 57.6	
	comp=Z,34nm,20.9s,baz=192,slow=40								
CMAR	**Chiang Mai Arr**	**56.49**	**259**	P		**P**		**18 20 11.6**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=33,slow=7.0,SNR=8.8								
	comp=Z,0.9nm,0.8s								
CMAR	**Chiang Mai Arr**	**56.49**	**259**	P		**P**		**18 20 10.9**	**-0.1**
CMAR	**Chiang Mai Arr**	**56.49**	**259**	*e*P		**P**		**18 20 11.9**	**+0.9**
CMAR					pmax	pmax			
	comp=Z,1.0nm,0.8s								
KSH2	**Kashi**	**57.43**	**294**	P		**P**		**18 20 18.5**	**+0.9**
KIRV	**Kirov**	**57.78**	**324**	LR		LR		18 48 53.1	
	comp=Z,56nm,18.4s,baz=67,slow=40								
KKAR	**Karatay Array**	**57.85**	**300**			**P**		**18 20 16.9**	**-3.4**
KKAR	**Karatay Array**	**57.85**	**300**	P		**P**		**18 20 16.9**	**-3.4**
QLMT	**Earthquake Lak**	**57.87**	**57**	P		**P**		**18 20 22.0**	**+1.3**
AB31	**Akbulak array**	**59.45**	**311**			**P**		**18 20 31.3**	**0.0**
ABKAR	**Akbulak array**	**59.45**	**311**			**P**		**18 20 31.7**	**+0.3**
KLMR	**Klimovskoe**	**59.64**	**330**	*e*P		**P**		**18 20 32.0**	**-0.5**
KLMR					pmax	pmax			
	comp=Z,17nm,1.3s								
PDAR	**Pinedale Array**	**60.24**	**58**	P		**P**		**18 20 37.6**	**+0.4**
	comp=Z,1.6nm,0.9s,baz=336,slow=3.3,SNR=9.8								
	comp=Z,1.6nm,0.9s								
PDAR	**Pinedale Array**	**60.24**	**58**	P		**P**		**18 20 36.9**	**-0.3**
NIL	**Nilore**	**62.45**	**290**	P		**P**		**18 20 52.4**	**+0.4**
NIL	**Nilore**	**62.45**	**290**	P		**P**		**18 20 52.4**	**+0.4**
NIL					pmax	pmax			
	comp=Z,6.0nm,1.0s								
BELG	**Belogornoye**	**62.89**	**320**	*i* P		**P**		**18 20 55.2**	**+0.7**
BELG					pmax	pmax			
	comp=Z,2.0nm,1.1s								
FINES	**FINESS Array B**	**63.10**	**337**	P		**P**		**18 20 55.8**	**0.0**
	comp=Z,2.7nm,0.8s,baz=2.7,slow=8.2,SNR=4.8								
	comp=Z,2.7nm,0.8s								
FINES	**FINESS Array B**	**63.10**	**337**	P		**P**		**18 20 56.9**	**+1.1**
FINES	**FINESS Array B**	**63.10**	**337**	*e*P		**P**		**18 20 57.5**	**+1.7**
FINES					pmax	pmax			
	comp=Z,4.0nm,1.0s								
OBN	**Obninsk**	**65.08**	**327**	*e*P		**P**		**18 21 09.9**	**+1.0**
OBN				*e*				18 23 32.0	
OBN					pmax	pmax			
	comp=Z,5.0nm,0.7s								
OBN					MLR	MLR			
	comp=Z,51nm,15.0s								
BORG	**Borgarnes**	**66.17**	**360**	LR		LR		18 51 14.5	
	comp=Z,29nm,19.8s,baz=259,slow=37								
NB2	**NORSAR Subarra**	**66.79**	**343**	P		**P**		**18 21 21.1**	**+1.2**
	comp=Z,2.1nm,0.8s,baz=21,slow=6.5								
NOA	**NORSAR Array B**	**66.79**	**343**	P		**P**		**18 21 20.7**	**+0.9**
	comp=Z,1.2nm,0.7s,baz=22,slow=6.4,SNR=5.5								
	comp=Z,1.2nm,0.7s								
NOA	**NORSAR Array B**	**66.79**	**343**	*e*P		**P**		**18 21 21.0**	**+1.2**
NOA					pmax	pmax			
	comp=Z,1.0nm,0.7s								
AKASG	**Malin Array Be**	**71.25**	**329**	P		**P**		**18 21 47.8**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=32,slow=6.3,SNR=5.2								
	comp=Z,1.2nm,0.6s								
AKASG	**Malin Array Be**	**71.25**	**329**	P		**P**		**18 21 48.4**	**+0.8**
AKASG					IAmb	IAmb		18 21 49.9	
	comp=Z,3.9nm,1.4s								
AKASG	**Malin Array Be**	**71.25**	**329**	*ce*P		**P**		**18 21 47.4**	**-0.2**
AKASG					pmax	pmax			
	comp=Z,1.0nm,0.6s								
KIV	**Kislovodsk**	**71.44**	**317**	*e*P		**P**		**18 21 49.4**	**+0.4**
KIV					pmax	pmax			
	comp=Z,3.0nm,1.1s								
KBZ	**Khabaz**	**71.52**	**316**	*i* P		**P**		**18 21 49.7**	**+0.4**
KBZ					pmax	pmax			
	comp=Z,2.0nm,1.0s								
SHA1	**Shidzhatmaz**	**71.62**	**317**	*i* P		**P**		**18 21 49.6**	**-0.7**
OK052	**Battle Ridge R**	**72.00**	**56**	P		**P**		**18 21 50.7**	**-1.7**
WRA	**Warramunga Arr**	**72.33**	**204**	P		**P**		**18 21 53.1**	**-1.2**
	comp=Z,4.3nm,1.0s,baz=21,slow=6.4,SNR=14								
	comp=Z,4.3nm,1.0s								
WRA	**Warramunga Arr**	**72.33**	**204**	P		**P**		**18 21 51.1**	**-3.2**
WRA	**Warramunga Arr**	**72.33**	**204**	*e*P		**P**		**18 21 55.2**	**+0.9**
WRA					pmax	pmax			
	comp=Z,3.0nm,0.7s								
TX31	**Lajitas Ar. Si**	**73.04**	**65**			**P**		**18 21 58.7**	**0.0**
TX31					IAmb	IAmb		18 22 00.3	
	comp=Z,2.2nm,0.8s								
TXAR	**Lajitas Array**	**73.04**	**65**	P		**P**		**18 21 59.5**	**+0.7**
	comp=Z,1.8nm,0.7s,baz=299,slow=4.1,SNR=15								
	comp=Z,1.8nm,0.7s								
TXAR	**Lajitas Array**	**73.04**	**65**	P		**P**		**18 21 58.9**	**+0.1**
TXAR	**Lajitas Array**	**73.04**	**65**	P		**P**		**18 21 58.9**	**+0.1**
EKA	**Eskdalemuir Ar**	**74.49**	**349**	P		**P**		**18 22 07.3**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=21,slow=6.3,SNR=3.9								
	comp=Z,0.5nm,0.6s								
ASAR	**Alice Springs**	**76.00**	**203**	P		**P**		**18 22 15.4**	**-0.3**
	comp=Z,1.3nm,0.9s,baz=14,slow=5.3,SNR=13								
	comp=Z,1.3nm,0.9s								
ASAR	**Alice Springs**	**76.00**	**203**	P		**P**		**18 22 15.1**	**-0.6**
ESDC	**Sonseca Array**	**89.94**	**347**	P		**P**		**18 23 28.4**	**+0.6**
	comp=Z,2.1nm,1.2s,baz=20,slow=4.9,SNR=4.3								
	comp=Z,2.1nm,1.2s								
ESDC	**Sonseca Array**	**89.94**	**347**	P		**P**		**18 23 28.2**	**+0.4**
ESDC					IAmb	IAmb		18 23 29.4	
	comp=Z,3.4nm,1.2s								
PLCA	**Paso Flores**	**144.82**	**95**	PKP		**PKPab**		**18 30 03.6**	**-0.4**
	comp=Z,1.6nm,1.0s,baz=309,slow=6.1,SNR=3.2								
AY01	**Puyuhuapi**	**145.25**	**102**			**PKPbc**		**18 30 04.5**	**-0.6**

*IDC **26** 18:17:48.4±1.0, 1°.40N×123°.46E, h0km, mb3.7/7, mbtmp3.8/9, ML4.1/2, MS3.8/2, Error ellipse: s-maj=56.2km s-min=16.5km az=70.0*
*DJA **26** 18:17:52.2±0.3, 1°N±2°×12°3E±°, h10km, M4.3/34, mB4.8/10, mb4.7/16, MLv4.6/34, Mw(mB)4.1/10*
*NEIC **26** 18:17:53.8±1.3, 1°.37N±0°.09×123°.0E±0°.1, h40km±10km, mb4.2/10, Error ellipse: s-maj=17.6km s-min=10.6km az=62.0*
ISC 26 18:17:53.8±0.7, 1°.35N±0°.06×123°.09E±0°.06, h39km, n42, σ1s97/41, mb4.0/12, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GTOI	**Gorontalo**	**0.71**	**186**	P		**P**	**Pn**	**18 18 04.0**	**-3.4**
GTOI				S		S	**Sn**	**18 18 13.0**	**-4.1**
MRSI	**Marisa**	**1.44**	**233**	P		P	**Pn**	**18 18 16.6**	**-0.8**
MNI	**Manado**	**1.75**	**87**	P		P	**Pn**	**18 18 21.3**	**-0.4**
TOLI2	**Tolitoli**	**2.32**	**264**				**Pn**	**18 18 27.3**	**-2.2**
LUWI	**Luwuk**	**2.39**	**188**				**Pn**	**18 18 31.6**	**+1.1**
LUWI	**Luwuk**	**2.39**	**188**	P			**Pn**	**18 18 31.7**	**+1.1**
APSI	**Ampana**	**2.66**	**213**	P			**Pn**	**18 18 36.7**	**+2.4**
MPSI	**Mapaga**	**3.34**	**253**	P			**Pn**	**18 18 45.4**	**+1.8**
PCI	**Palu**	**3.95**	**236**	P			**Pn**	**18 18 51.7**	**-0.2**
SANI	**Sanana**	**4.45**	**139**	P			**Pn**	**18 19 00.9**	**+2.1**
KKSI	**Kolaka, Sulawe**	**5.67**	**195**	P			**Pn**	**18 19 16.9**	**+1.4**
	0.5nm1μm123nm,0.6s								
MMSI	**Mamuju**	**5.79**	**226**	P			**Pn**	**18 19 18.8**	**+1.5**
	0.1nm487nm35nm,0.6s								
KCP	**Kidapawan**	**5.97**	**19**	*i* P			**Pn**	**18 19 20.8**	**+1.0**
NLAI	**Namlea**	**6.07**	**139**	P			**Pn**	**18 19 24.6**	**+3.5**
	0.2nm557nm50nm,0.9s								
DAV	**Davao City (W)**	**6.21**	**24**	LR			LR	18 22 27.8	
	comp=Z,138nm,19.5s,baz=118,slow=46								
SPSI	**Sidrap Palu**	**6.23**	**212**	P			**Pn**	**18 19 25.7**	**+2.4**
	0.3nm781nm89nm,1.1s								
KRAI	**Karang Ratu**	**7.04**	**131**	P			**Pn**	**18 19 36.6**	**+2.1**
	0.1nm652nm12nm,0.7s								
KAPI	**Kappang**	**7.14**	**208**	Pn			**Pn**	**18 19 37.6**	**+1.8**
	4.5nm,0.3s,baz=21,slow=10.0,SNR=28								
KAPI						Sn	**Sn**	**18 20 57.6**	**+1.8**
	1.3nm,0.3s,baz=203,slow=22,SNR=1.2								
	22nm,0.6s								
KAPI	**Kappang**	**7.14**	**208**				**Pn**	**18 19 35.7**	**-0.1**
KAPI	**Kappang**	**7.14**	**208**	P			**Pn**	**18 19 39.4**	**+3.6**
	0.1nm24nm,0.8s								
MKS	**Makassar**	**7.46**	**209**	P			**Pn**	**18 19 43.7**	**+3.6**
	0.2nm65nm,1.0s								
BSSI	**Bau Bau, Buton**	**7.88**	**199**	P			**Pn**	**18 19 49.6**	**+3.7**
	0.2nm73nm,1.0s								
KKM	**Kota Kinabalu**	**8.30**	**304**	P			**Pn**	**18 19 49.9**	**-1.9**
	26nm,1.4s								
FITZ	**Fitzroy Crossi**	**19.48**	**173**	P		**P**		**18 22 17.0**	**-0.6**
	0.3nm,0.3s,baz=20,slow=10.0,SNR=8.1								
	2.0nm,0.5s								
WB0	**Warramunga Arr**	**23.73**	**153**	P		**P**		**18 23 01.3**	**-1.3**
WB0						IAmb	IAmb	18 23 10.2	
	comp=Z,9.5nm,1.3s								
WRA	**Warramunga Arr**	**23.86**	**153**	P		**P**		**18 23 02.5**	**-1.3**
	comp=Z,1.8nm,0.5s,baz=332,slow=10,SNR=30								
	comp=Z,1.8nm,0.5s								
WR8	**Warramunga Arr**	**23.95**	**153**	P		**P**		**18 23 03.9**	**-0.7**
WR8						IAmb	IAmb	18 23 16.1	
	comp=Z,4.1nm,0.8s								
AS31	**Alice Springs**	**27.00**	**158**	P		**P**		**18 23 32.2**	**-0.1**
ASAR	**Alice Springs**	**27.00**	**158**	P		**P**		**18 23 31.6**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=345,slow=15,SNR=13								
	comp=Z,0.5nm,0.7s								
MORW	**Morawa**	**30.99**	**192**	P		**P**		**18 24 06.2**	**-1.5**
FORT	**Forrest**	**32.30**	**172**	P		**P**		**18 24 18.8**	**-0.3**
FORT						IAmb	IAmb	18 24 39.0	
	comp=Z,5.0nm,0.8s								
STKA	**Stephens Creek**	**37.41**	**154**	P		**P**		**18 25 02.8**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=314,slow=9.6,SNR=2.9								
	comp=Z,1.0nm,0.5s								
XLT	**XiLinHaoTe**	**42.83**	**353**	*e*P		**P**		**18 25 50.5**	**+2.4**
XLT						pP	pP	18 25 55.3	-2.8
XLT						pmax	pmax		
	comp=Z,10.0nm,0.9s								
SONM	**Songino Array**	**48.52**	**345**	P		**P**		**18 26 33.4**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=146,slow=5.6,SNR=4.4								
	comp=Z,0.6nm,0.7s								
SONM	**Songino Array**	**48.52**	**345**	P		**P**		**18 26 32.5**	**-0.6**
SONM						IAmb	IAmb	18 26 46.6	
	comp=Z,3.5nm,1.5s								
MKAR	**Makanchi Array**	**57.52**	**328**	P		**P**		**18 27 40.9**	**+1.6**
	comp=Z,0.3nm,0.6s,baz=120,slow=7.4,SNR=3.8								
	comp=Z,0.3nm,0.6s								
MKAR	**Makanchi Array**	**57.52**	**328**	P		**P**		**18 27 39.8**	**+0.4**
KURBB	**Kurchatov Arra**	**61.85**	**330**	P		**P**		**18 28 10.3**	**+1.3**
	comp=Z,0.5nm,0.7s,baz=128,slow=5.9,SNR=7.2								
	comp=Z,0.5nm,0.7s								
KURK	**Kurchatov**	**61.87**	**330**	P		**P**		**18 28 10.3**	**+1.3**
KURK						IAmb	IAmb	18 28 26.2	
	comp=Z,2.1nm,1.0s								
VNDA	**Vanda**	**81.56**	**172**	P		**P**		**18 30 07.0**	**+0.1**
	comp=Z,1.2nm,0.9s,baz=328,slow=6.1,SNR=4.7								
	comp=Z,1.2nm,0.9s								
VNDA	**Vanda**	**81.56**	**172**	IAmb		IAmb		18 30 17.0	
	comp=Z,1.5nm,0.9s								
KVAR	**Kislovodsk Arr**	**82.15**	**314**	LR		LR		19 09 06.5	
	comp=Z,411nm,21.7s,slow=37								

*IDC **26** 18:23:29.3±2.4, 23°.40S×171°.50E, h0km, mb3.8/5, mbtmp3.8/6, ML3.5/1, Error ellipse: s-maj=109.1km s-min=33.8km az=167.0*
ISC 26 18:23:34.9±1.5, 23°.4S±0°.4×171°.4E±0°.1, h35km, n6, σ0s93/7, mb3.8/5, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.79**	**285**	Pn		**Pn**		**18 24 45.2**	**+0.4**

*TEH **26** 18:41:25.5,38.96N×45.17E,h6km±75km,ML3.2, Presumed earthquake*
ISC 26 18:41:25.4±1.0,38.96N±0.02×45.18E±0.01,h9km±9km, n82,σ1s25/132,4D,Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NAX	**Nakhchivan**	**0.33**	**49**	Pg	**Pb**	**18 41 32.8**	**-0.6**
NAX	**Nakhchivan**	**0.33**	**49**	P	**Pb**	**18 41 32.8**	**-0.6**
NAX				S	**Sb**	**18 41 38.4**	**-0.3**
SBZ	**Shahbuz**	**0.52**	**34**	Pg	**Pg**	**18 41 35.9**	**+0.3**
SBZ	**Shahbuz**	**0.52**	**34**	P	**Pg**	**18 41 36.0**	**+0.4**
SBZ				S	**Sb**	**18 41 44.2**	**-0.3**
MAKU	**Maku**	**0.55**	**316**	Pg	**Pg**	**18 41 35.4**	**-0.7**
ORD	**Ordubad**	**0.64**	**93**	Pg	**Pb**	**18 41 38.5**	**-0.2**
ORD	**Ordubad**	**0.64**	**93**	Pg	**Pb**	**18 41 38.5**	**-0.2**
ORD				Sg	**Sb**	**18 41 48.0**	**+0.3**
ISHB	**Shabestar**	**0.76**	**153**	Pg	**Pb**	**18 41 39.7**	**-1.2**
VAYK	**Vayk**	**0.76**	**14**	*eP*	**Pg**	**18 41 39.8**	**-0.2**
VAYK				*eS*	**Sb**	**18 41 51.8**	**+0.5**
HYR	**Heyderabad**	**0.80**	**342**	Pg	**Pg**	**18 41 40.2**	**-0.6**
HYR	**Heyderabad**	**0.80**	**342**	P	**Pg**	**18 41 40.2**	**-0.6**
HYR				S	**Sg**	**18 41 51.0**	**-0.2**
ALVK	**Alvank**	**0.91**	**91**	*eP*	**Pb**	**18 41 43.0**	**-0.4**
ALVK				*eS*	**Sb**	**18 41 55.4**	**+0.3**
OZAP	**Van, Ozalp-Mer**	**0.97**	**253**	P	**Pn**	**18 41 44.3**	**-1.1**
OZAP				S	**Sn**	**18 41 58.8**	**-0.6**
OZAP	comp=E,146nm,1.5s			IAML		18 42 08.0	
OZAP	comp=N,142nm,1.2s			IAML		18 42 09.0	
OZAP	**Van, Ozalp-Mer**	**0.97**	**253**	Pg	**Pn**	**18 41 44.3**	**-1.1**
GRS	**Goris**	**1.04**	**59**	*iP*	**Pn**	**18 41 46.0**	**-0.3**
GRS				*iS*	**Sn**	**18 42 01.0**	**-0.1**
ITBZ	**Tabriz**	**1.05**	**133**	Pg	**Pg**	**18 41 44.7**	**-0.8**
EGVZ	**Egvard**	**1.09**	**76**	*eP*	**Pg**	**18 41 46.2**	**-0.2**
EGVZ				*eS*	**Sb**	**18 42 01.3**	**+0.4**
GNI	**Garni**	**1.23**	**344**	Pn	**Pn**	**18 41 48.4**	**-0.6**
GNI	**Garni**	**1.23**	**344**	*eP*	**Pn**	**18 41 48.2**	**-0.7**
GNI				*eS*	**Sn**	**18 42 06.0**	**+0.2**
AYRK	**Ayrk**	**1.25**	**22**	*eP*	**Pn**	**18 41 48.3**	**-0.9**
AYRK				*eS*	**Sb**	**18 42 05.7**	**+0.2**
IGDI	**IGDIR**	**1.25**	**317**	P	**Pn**	**18 41 47.0**	**-2.1**
IGDI				S	**Sb**	**18 42 03.8**	**-1.4**
IGDI	comp=N,154nm,0.3s			IAML		18 42 06.0	
IGDI	comp=E,175nm,0.5s			IAML		18 42 09.0	
IGDI	**IGDIR**	**1.25**	**317**	Pg	**Pn**	**18 41 48.1**	**-0.9**
IGDI	**IGDIR**	**1.25**	**317**	P	**Pn**	**18 41 47.6**	**-1.4**
IGDI				S	**Sb**	**18 42 04.6**	**-0.7**
VMUR	**Van-Muradiye**	**1.25**	**272**	P	**Pb**	**18 41 48.4**	**-0.9**
VMUR				S	**Sn**	**18 42 07.1**	**+0.8**
VMUR	comp=N,122nm,0.4s			IAML		18 42 12.0	
DYDN	**Diyadin**	**1.30**	**297**	P	**Pg**	**18 41 50.5**	**+0.2**
DYDN				S	**Sn**	**18 42 09.8**	**+2.4**
DYDN	**Diyadin**	**1.30**	**297**	Pg	**Pg**	**18 41 50.4**	**+0.2**
KAPZ	**Kaputan**	**1.41**	**345**	*eP*	**Pb**	**18 41 51.6**	**-0.4**
KAPZ				*eS*	**Sg**	**18 42 11.4**	**+0.6**
IAZR	**Azarshahr**	**1.43**	**154**	Pg	**Pg**	**18 41 51.9**	**-0.9**
VANB	**Van**	**1.45**	**256**	Pn	**Pg**	**18 41 53.9**	**+0.8**
TVAN	**Van**	**1.45**	**253**	P	**Pg**	**18 41 53.5**	**+0.2**
TVAN	comp=N,84nm,0.8s			IAML		18 42 32.0	
TVAN	**Van**	**1.45**	**253**	Pg	**Pg**	**18 41 53.5**	**+0.2**
YOVA	**Hakkari_Yksek**	**1.54**	**207**	P	**Pg**	**18 41 54.0**	**-1.0**
YOVA	**Hakkari_Yksek**	**1.54**	**207**	Pg	**Pg**	**18 41 53.9**	**-1.0**
ARUZ	**Aruch**	**1.57**	**328**	*eP*	**Pn**	**18 41 53.0**	**-0.5**
ARUZ				*eS*	**Sb**	**18 42 14.2**	**-0.3**
AMBZ	**Amberd**	**1.59**	**334**	*eP*	**Pn**	**18 41 53.5**	**-0.4**
AMBZ				*eS*	**Sb**	**18 42 15.1**	**-0.3**
IHRS	**Heris**	**1.59**	**113**	Pg	**Pg**	**18 41 55.4**	**-0.6**
QRD	**Qoradiz**	**1.74**	**73**	Pn	**Pg**	**18 41 58.5**	**-0.2**
QRD				Sn	**Sg**	**18 42 22.8**	**+1.6**
KOTA	**Agri, Merkez-K**	**1.75**	**299**	P	**Pb**	**18 41 57.1**	**-0.6**
KOTA				S	**Sg**	**18 42 21.8**	**+0.3**
GEVA	**Gevas**	**1.78**	**249**	P	**Pg**	**18 41 58.8**	**-0.7**
GEVA				S	**Sg**	**18 42 23.9**	**+1.2**
GEVA	comp=E,62nm,0.7s			IAML		18 42 38.0	
AGRB	**Hanur-Agry**	**1.81**	**291**	Pn	**Pg**	**18 41 58.8**	**-1.2**
AGRB				Sn	**Sg**	**18 42 25.2**	**+1.7**
GDB	**GEDABAY**	**1.81**	**14**	Pn	**Pb**	**18 41 58.6**	**-0.3**
GDB				Sn	**Sb**	**18 42 22.9**	**+1.2**
HAKT	**HAKKARI**	**1.82**	**220**	P	**Pg**	**18 41 59.8**	**-0.4**
HAKT				S	**Sg**	**18 42 25.9**	**+2.1**
HAKT	comp=N,57nm,0.7s			IAML		18 42 30.0	
HAKT	comp=E,65nm,1.1s			IAML		18 42 32.0	
HAKT	**HAKKARI**	**1.82**	**220**	Pn	**Pg**	**18 41 59.8**	**-0.4**
HAKT	**HAKKARI**	**1.82**	**220**	Pn	**Pg**	**18 42 00.5**	**+0.2**
HAKT				Sn	**Sg**	**18 42 27.6**	**+3.7**
AKDM	**Akdamar-Van**	**1.83**	**251**	Pn	**Pg**	**18 41 59.5**	**-1.1**
AKDM				Sn	**Sg**	**18 42 26.2**	**+1.8**
AGDM	**Agdam**	**1.88**	**52**	Pn	**Pb**	**18 42 00.6**	**+0.8**
AGDM				Sn	**Sg**	**18 42 26.7**	**+0.9**
GANJ	**Ganja**	**1.90**	**27**	Pn	**Pb**	**18 42 00.2**	**0.0**
GANJ				Sn	**Sg**	**18 42 26.7**	**+0.3**
DORK	**Agr/Tutak/Do**	**1.91**	**284**	P	**Pb**	**18 42 00.5**	**-0.1**
DORK				S	**Sg**	**18 42 27.8**	**+0.9**
DORK	comp=N,70nm,0.8s			IAML		18 42 30.0	
ADCV	**BITLIS_Adilcev**	**1.92**	**266**	P	**Pb**	**18 42 00.5**	**-0.3**
ADCV				S	**Sg**	**18 42 28.2**	**+1.0**
ADCV	**BITLIS_Adilcev**	**1.92**	**266**	Pn	**Pb**	**18 42 00.4**	**-0.3**
LSVT	**Lusahovit**	**1.95**	**0**	*eP*	**Pb**	**18 42 01.0**	**-0.2**
LSVT				*eS*	**Sg**	**18 42 27.2**	**-1.0**
BLQ	**Beylaqan**	**2.00**	**67**	Pn	**Pb**	**18 42 02.5**	**+0.7**
BLQ				Sn	**Sg**	**18 42 29.2**	**+0.3**
BRDA	**Brd**	**2.02**	**49**	Pn	**Pg**	**18 42 04.2**	**+0.2**
BRDA				Sn	**Sg**	**18 42 33.0**	**+2.7**
MLAZ	**Malazgirt-MUS**	**2.06**	**276**	Pn	**Pb**	**18 42 02.8**	**-0.2**
QZX	**Qazax, Azerbai**	**2.10**	**4**	Pn	**Pb**	**18 42 03.3**	**-0.3**
QZX				Sn	**Sb**	**18 42 30.9**	**+1.1**
EAK	**Akyaka**	**2.11**	**325**	P	**Pb**	**18 42 03.6**	**-0.3**
EAK				S	**Sg**	**18 42 31.6**	**-1.5**
EAK	comp=N,102nm,0.7s			IAML		18 42 38.0	
EAK	comp=E,101nm,1.0s			IAML		18 42 42.0	
PERV	**Siirt/Pervari-**	**2.31**	**245**	P	**Pb**	**18 42 06.7**	**-0.5**
PERV	comp=N,66nm,0.6s			IAML		18 42 50.0	
PERV	comp=E,70nm,0.8s			IAML		18 42 51.0	
KARS	**Kars**	**2.32**	**316**	Pn	**Pn**	**18 42 05.1**	**+1.2**
MNGR	**Mingechevir, A**	**2.33**	**38**	Pn	**Pb**	**18 42 07.8**	**+0.3**
MNGR				Sn	**Sg**	**18 42 39.3**	**-0.9**
ZRD	**Zardab**	**2.34**	**55**	Pn	**Pb**	**18 42 08.5**	**+0.8**
ZRD				Sn	**Sg**	**18 42 42.6**	**+2.0**
YRD	**Yardimli**	**2.39**	**90**	Pn	**Pb**	**18 42 08.3**	**-0.3**
YRD				Sn	**Sg**	**18 42 42.3**	**+0.2**
VSHL	**Vashlovani**	**2.45**	**22**	P	**Pb**	**18 42 09.5**	**-0.2**
VSHL				S	**Sg**	**18 42 47.4**	**+3.3**
LRK	**Lerik**	**2.49**	**96**	Pn	**Pb**	**18 42 10.4**	**+0.1**
LRK				Sn	**Sg**	**18 42 45.8**	**+0.4**
DGRG	**David-gareji**	**2.49**	**3**	P	**Pb**	**18 42 11.3**	**+1.0**
DGRG				S	**Sg**	**18 42 46.4**	**+0.9**
GURO	**Guroymak-BITLI**	**2.50**	**262**	Pn	**Pb**	**18 42 08.9**	**-1.5**
GLBA	**Clilabad**	**2.52**	**83**	Pn	**Pb**	**18 42 11.7**	**+1.0**
GLBA				Sn	**Sg**	**18 42 45.1**	**-1.0**
SENK	**Senkaya-Erzuru**	**2.70**	**307**	Pn	**Pn**	**18 42 11.1**	**+1.9**
TRLG	**Trialeti**	**2.70**	**343**	P	**Pb**	**18 42 14.1**	**0.0**
SEKA	**Sheki**	**2.73**	**34**	Pn	**Pb**	**18 42 12.0**	**-2.4**
SEKA				Sn	**Sb**	**18 42 50.4**	**+2.5**
TBLG	**Delisi**	**2.79**	**353**	Pn	**Pn**	**18 42 09.8**	**-0.4**
LKRN	**Lenkeran, Azer**	**2.82**	**94**	Pg	**Pb**	**18 42 15.8**	**-0.1**
LKRN				Sg	**Sg**	**18 42 55.2**	**-0.8**
QBL	**Gabala**	**2.85**	**45**	Pg	**Pb**	**18 42 16.0**	**-0.4**
QBL				Sg	**Sb**	**18 42 53.8**	**+2.5**
ASTR	**Astara**	**2.85**	**97**	Pg	**Pb**	**18 42 16.3**	**-0.1**
ASTR				Sg	**Sg**	**18 42 56.6**	**-0.3**
ZKTA	**Zakatala**	**2.89**	**22**	Pg	**Pb**	**18 42 15.3**	**-1.8**
ZKTA				Sg	**Sb**	**18 42 53.7**	**+1.1**
XNQ	**Khinaliq**	**3.17**	**45**	Pn	**Pb**	**18 42 18.0**	**+2.4**
XNQ				Sn	**Sb**	**18 43 00.3**	**-0.5**
PQL	**Pirkuli**	**3.20**	**54**	Pn	**Pb**	**18 42 19.9**	**-2.6**
PQL				Sn	**Sb**	**18 42 58.6**	**-2.9**
GBS	**Qobustan**	**3.30**	**60**	Pg	**Pb**	**18 42 23.9**	**-0.2**
CHRG	**Chargali**	**3.37**	**357**	P	**Pb**	**18 42 25.7**	**+0.4**
ATGJ	**Altiaghaj**	**3.46**	**56**	Pn	**Pb**	**18 42 23.7**	**-3.1**
QUBA	**Quba, Azerbaij**	**3.49**	**46**	Pn	**Pb**	**18 42 24.1**	**-3.2**
SIZA	**Siyzn**	**3.55**	**52**	Pn	**Pb**	**18 42 24.9**	**-3.5**
SHTL	**Shatili**	**3.69**	**360**	P	**Pb**	**18 42 30.7**	**-0.1**
SHTL				S	**Sg**	**18 43 20.6**	**-3.4**

*SNET **26** 18:41:58.6±0.5, 13.21N×88.09W, h14km±4km, ML2.4, Presumed earthquake*
*CATAC **26** 18:41:59.1±0.3, 13°N±3°×8°8W±°, h8km±2km, M2.7/7, MLv2.7/7, Error ellipse: s-maj=6.1km s-min=2.8km az=14.4, confirmed*
ISC 26 18:41:59.4±1.0,13.23N±0.06×88.08W±0.03,h16km±6km, n20,σ0s85/31,1C,El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INTP	**Intipuca**	**0.04**	**143**	*eP*	**Pg**	**18 42 01.6**	**-0.6**
INTP				*eS*	**Sg**	**18 42 03.4**	**-0.7**
INTP	comp=Z,954nm,0.2s			IAML		18 42 07.0	
LCND	**La Caada**	**0.20**	**67**	P	**Pg**	**18 42 03.7**	**-0.4**
LCND				S	**Sg**	**18 42 09.4**	**+2.2**
LCND	**La Caada**	**0.20**	**67**	*eP*	**Pg**	**18 42 03.7**	**-0.4**
LCND				*eS*	**Sg**	**18 42 07.9**	**+0.7**
LCND	comp=Z,1µm,0.4s			IAML		18 42 09.1	
CNCH	**Conchagua**	**0.24**	**79**	P	**Pb**	**18 42 04.8**	**-0.7**
CNCH				S	**Sg**	**18 42 11.0**	**+2.4**
CNCH	**Conchagua**	**0.24**	**79**	*eP*	**Pb**	**18 42 04.8**	**-0.7**
CNCH				*eS*	**Sg**	**18 42 09.2**	**+0.6**
CNCH				*eS*		18 42 10.3	
BLLM	**Bellamira**	**0.26**	**324**	*eP*	**Pg**	**18 42 04.7**	**-0.4**
LCY	**Lacayo**	**0.28**	**313**	*eP*	**Pg**	**18 42 05.5**	**-0.1**
RANC	**El Ranchito**	**0.29**	**315**	P	**Pg**	**18 42 05.4**	**-0.3**
RANC				S	**Sb**	**18 42 11.4**	**+0.5**
RANC	**El Ranchito**	**0.29**	**315**	*eP*	**Pg**	**18 42 05.3**	**-0.3**
RANC	comp=Z,520nm,0.2s			IAML		18 42 13.4	
PACA	**Pacayal**	**0.34**	**315**	P	**Pg**	**18 42 06.3**	**-0.2**
PACA				S	**Sb**	**18 42 13.5**	**+1.2**
PACA	**Pacayal**	**0.34**	**315**	*eP*	**Pg**	**18 42 06.2**	**-0.2**
CSGN	**Cosiguina Volc**	**0.57**	**116**	P	**Pb**	**18 42 10.9**	**-0.1**
COEG	**Centro de Oper**	**0.87**	**297**	S	**Sb**	**18 42 28.1**	**+0.5**
MARCA	**Marcala la Paz**	**0.93**	**3**	P	**Pg**	**18 42 16.7**	**-0.7**
MARCA				S	**Sb**	**18 42 29.8**	**+0.5**
P5NO	**Presa 5 de nov**	**1.00**	**319**	S	**Sb**	**18 42 32.2**	**+0.9**
TGUH	**Tegucigalpa,Un**	**1.14**	**43**	P	**Pb**	**18 42 19.7**	**-1.1**
TGUH				S	**Sb**	**18 42 35.1**	**-0.2**
LLGN	**La Laguna**	**1.25**	**318**	P	**Pg**	**18 42 23.0**	**-0.5**
PMON	**Piamonte**	**1.29**	**292**	S	**Sg**	**18 42 41.8**	**+0.5**
JAYA	**Jayaque - finc**	**1.40**	**288**	P	**Pg**	**18 42 26.7**	**+0.3**
JAYA				S	**Sg**	**18 42 44.2**	**-0.4**
YUSH	**Yuscaran**	**1.40**	**59**	P	**Pn**	**18 42 24.3**	**-0.1**
YUSH				S	**Sg**	**18 42 44.8**	**+0.1**

*IDC **26** 18:45:34.6±2.7, 18.05S×178.20W, h594km±20km, mb2.9/5, mbtmp3.9/6, Error ellipse: s-maj=77.1km s-min=24.5km az=149.0*
ISC 26 18:45:33.8±2.0,18.1S±0.6×178.1W±0.3,h590km,n8, σ0s52/10,mb3.3/5,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.67**	**275**	P	**P**	**18 46 57.3**	**+0.8**
	48nm,0.6s,baz=141,slow=3.2,SNR=72						
WRA	**Warramunga Arr**	**44.88**	**260**	P	**P**	**18 52 56.6**	**-0.6**
	0.6nm,0.6s,baz=95,slow=7.2,SNR=10						
WRA				PcP	**PcP**	**18 54 26.0**	**0.0**
	0.2nm,0.3s,baz=92,slow=3.4,SNR=2.0						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**45.01**	**254**	P	**P**	**18 52 57.9**	**-0.4**
	3.3nm,1.0s,baz=86,slow=9.4,SNR=4.1						
ASAR				PcP	**PcP**	**18 54 26.6**	**+0.1**
	0.3nm,0.4s,baz=100,slow=3.8,SNR=6.8						
	3.3nm,1.0s						
SIJI	**Sorong**	**52.55**	**283**	P	**P**	**18 53 54.0**	**+0.1**
	3.8nm,0.7s,baz=120,slow=7.8,SNR=5.2						
	3.8nm,0.7s						
ILAR	**Eielson Array**	**86.00**	**13**	P	**P**	**18 57 11.6**	**-0.6**
	0.2nm,0.4s,baz=221,slow=4.6,SNR=5.9						
	0.2nm,0.4s						
PDAR	**Pinedale Array**	**87.29**	**43**	P	**P**	**18 57 19.5**	**+0.5**
	0.2nm,0.7s,baz=238,slow=4.5,SNR=1.6						
	0.2nm,0.7s						
BRTR	**Keskin Array B**	**145.10**	**315**	PKPbc	**PKPbc**	**19 04 06.3**	**0.0**
	0.4nm,0.4s,baz=72,slow=2.2,SNR=4.4						
GERES	**GERESS Array B**	**147.85**	**345**	PKPbc	**PKPbc**	**19 04 13.2**	**-0.2**
	0.5nm,0.6s,baz=5.2,slow=2.7,SNR=2.0						

*AZER **26** 19:23:45.8, 41.08N×49.11E, h9km, ml2.5*
*MOS **26** 19:23:46.2, 41.10N×49.13E, h18km, MPVA3.7*
*DRS **26** 19:23:48.6, 41.17N×48.92E, h18km*
ISC 26 19:23:45.1±1.3,41.15N±0.02×49.26E±0.04,h7km±9km, n40,σ1s08/79,Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIZA	**Siyzn**	**0.28**	**254**	P	**Pb**	**19 23 51.3**	**-1.2**
SIZA				S	**Sb**	**19 23 57.3**	**-0.1**
ATGJ	**Altiaghaj**	**0.38**	**219**	P	**Pg**	**19 23 52.2**	**-0.2**
ATGJ				S	**Sg**	**19 23 58.0**	**+0.6**
QUBA	**Quba, Azerbaij**	**0.61**	**290**	P	**Pn**	**19 23 58.9**	**-1.3**
QUBA				S	**Sb**	**19 24 08.2**	**+1.4**
PQL	**Pirkuli**	**0.62**	**234**	P	**Pb**	**19 23 57.5**	**-0.8**
PQL				S	**Sg**	**19 24 06.2**	**+1.1**
GBS	**Qobustan**	**0.66**	**201**	P	**Pn**	**19 23 59.8**	**-1.1**
GBS				S	**Sb**	**19 24 09.3**	**+1.0**
NDR	**Nardaran**	**0.80**	**136**	P	**Pn**	**19 24 03.0**	**+0.4**
NDR				S	**Sn**	**19 24 15.6**	**+0.8**
QSAR	**Qusar**	**0.83**	**296**	P	**Pn**	**19 24 02.9**	**-0.3**
QSAR				S	**Sb**	**19 24 14.6**	**+1.4**
GOBA	**Gobu**	**0.83**	**154**	P	**Pn**	**19 24 03.8**	**+0.6**
GOBA				S	**Sn**	**19 24 17.1**	**+1.4**
XNQ	**Khinaliq**	**0.84**	**272**	P	**Pb**	**19 24 02.2**	**0.0**
XNQ				S	**Sg**	**19 24 13.7**	**+1.4**
IML	**Ismayilli**	**0.89**	**246**	P	**Pb**	**19 24 02.5**	**-0.3**
IML				S	**Sb**	**19 24 15.5**	**+0.6**
KSMR	**Kasumkent**	**0.96**	**298**	*ePg*	**Pn**	**19 24 05.2**	**+0.2**
KSMR	37nm,0.1s			*eSg*	**Sn**	**19 24 18.3**	**-0.6**
	221nm,0.2s						
QBL	**Gabala**	**1.09**	**260**	P	**Pn**	**19 24 06.3**	**-0.5**
QBL				S	**Sg**	**19 24 21.2**	**+1.0**
DRN	**Derbent**	**1.12**	**322**	*ePg*	**Pn**	**19 24 08.1**	**+1.1**
DRN	48nm,0.4s			*eSg*	**Sn**	**19 24 24.0**	**+1.3**
	456nm,0.4s						
AKT	**Akhty**	**1.19**	**286**	*ePg*	**Pb**	**19 24 08.5**	**+0.4**
AKT	87nm,0.2s			*eSg*	**Sb**	**19 24 24.4**	**+0.7**
	332nm,0.2s						
ALIB	**&Aumlli-Bayram**	**1.21**	**189**	P	**Pn**	**19 24 10.3**	**+1.9**
ZRD	**Zardab**	**1.48**	**234**	Pn	**Pg**	**19 24 12.9**	**-0.5**
ZRD				Sn	**Sg**	**19 24 34.4**	**+1.8**
SEKA	**Sheki**	**1.55**	**273**	Pn	**Pg**	**19 24 14.8**	**-0.1**
SEKA				Sn	**Sg**	**19 24 36.6**	**+1.6**
URKR	**Urkarakh**	**1.58**	**310**	*ePg*	**Pg**	**19 24 16.2**	**+0.9**
URKR	19nm,0.3s			*eSg*	**Sg**	**19 24 37.8**	**+1.9**
	123nm,0.2s						
MNGR	**Mingechevir, A**	**1.69**	**258**	Pn	**Pg**	**19 24 16.7**	**-0.7**
MNGR				Sn	**Sb**	**19 24 38.0**	**+0.2**
KMKR	**Kumukh**	**1.89**	**302**	*ePg*	**Pg**	**19 24 20.3**	**-1.0**
KMKR	15nm,0.2s			*eSg*	**Sg**	**19 24 45.7**	**-0.1**
	77nm,0.3s						
BLQ	**Beylaqan**	**1.93**	**223**	Pn	**Pb**	**19 24 19.6**	**-1.0**
BLQ				Sn	**Sn**	**19 24 42.7**	**-0.1**
AGDM	**Agdam**	**1.94**	**238**	Pn	**Pn**	**19 24 18.8**	**+0.4**
AGDM				Sn	**Sn**	**19 24 43.6**	**+0.6**
GLBA	**Clilabad**	**2.02**	**199**	Pn	**Pb**	**19 24 21.0**	**-1.0**
GLBA				Sn	**Sb**	**19 24 47.7**	**+0.3**
ZKTA	**Zakatala**	**2.04**	**285**	Pn	**Pb**	**19 24 21.9**	**-0.5**
ZKTA				Sn	**Sg**	**19 24 50.3**	**-0.3**
GNBR	**Gunib**	**2.11**	**307**	*ePg*	**Pg**	**19 24 23.7**	**-1.9**
GNBR	7.0nm,0.5s			*eSg*	**Sb**	**19 24 51.4**	**+1.2**
	38nm,0.3s						
ARKR	**Arakani**	**2.22**	**311**	*ePg*	**Pb**	**19 24 24.8**	**-0.8**
	4.0nm,0.3s						
ARKR				*eSg*	**Sb**	**19 24 54.0**	**+0.6**
	19nm,0.3s						
QRD	**Qoradiz**	**2.25**	**222**	Pn	**Pb**	**19 24 25.2**	**-0.7**
QRD				Sn	**Sn**	**19 24 50.6**	**0.0**
GANJ	**Ganja**	**2.28**	**258**	Pn	**Pn**	**19 24 23.3**	**+0.2**
GANJ				Sn	**Sn**	**19 24 51.1**	**-0.4**
XNZR	**Khunzakh**	**2.36**	**307**	*ePg*	**Pb**	**19 24 26.8**	**-1.2**
XNZR	4.0nm,0.3s			*eSg*	**Sb**	**19 24 57.3**	**0.0**
	14nm,0.6s						
YRD	**Yardimli**	**2.37**	**200**	Pn	**Pb**	**19 24 26.0**	**-2.1**
YRD				Sn	**Sb**	**19 24 55.3**	**-2.2**
TLTR	**Tlyarata**	**2.37**	**295**	*ePg*	**Pb**	**19 24 26.5**	**-1.7**
TLTR	3.0nm,0.9s			*eSg*	**Sb**	**19 24 56.9**	**-0.9**
	4.0nm,0.4s						
KRNR	**Karanay**	**2.42**	**314**	*ePg*	**Pb**	**19 24 27.8**	**-1.2**
	4.0nm,0.3s						
KRNR				*eSg*	**Sb**	**19 24 58.6**	**-0.4**
	7.0nm,0.4s						
LRK	**Lerik**	**2.60**	**196**	Pn	**Pb**	**19 24 30.4**	**-1.7**
LRK				Sn	**Sb**	**19 25 04.1**	**-0.3**
GDB	**GEDABAY**	**2.69**	**262**	Pn	**Pn**	**19 24 28.9**	**0.0**
GDB				Sn	**Sn**	**19 25 01.3**	**-0.4**
BTLR	**Botlikh**	**2.72**	**305**	*ePn*	**Pn**	**19 24 30.4**	**+1.1**
BTLR				*eSn*	**Sb**	**19 25 07.0**	**-0.7**
DLMR	**Dylym**	**2.73**	**315**	*ePn*	**Pb**	**19 24 32.5**	**-1.8**
DLMR				*eSn*	**Sb**	**19 25 04.8**	**-3.2**
QZX	**Qazax, Azerbai**	**2.94**	**269**	Pn	**Pn**	**19 24 33.0**	**+0.9**
QZX				Sn	**Sn**	**19 25 08.9**	**+1.3**
DVE	**Vedeno**	**2.94**	**309**	*ePn*	**Pb**	**19 24 37.6**	**-0.3**
DVE				*eSn*	**Sb**	**19 25 13.9**	**-0.2**
ORD	**Ordubad**	**3.35**	**229**	Pn	**Pn**	**19 24 38.2**	**+0.4**
ORD				Sn	**Sn**	**19 25 19.0**	**+1.2**
KBZ	**Khabaz**	**5.36**	**301**	*ePn*	**Pn**	**19 25 06.1**	**+0.7**
KBZ				*eSn*	**Sn**	**19 26 06.8**	**-0.5**

*ISN **26** 19:27:55.9±4.2, 33.19N×47.34E, h8km±42km, ML2.7, Presumed earthquake*
*TEH **26** 19:27:56.2, 33.13N×47.73E, h8km±32km, ML3.1, Presumed earthquake*
ISC 26 19:27:57.5±1.0,33.18N±0.04×47.62E±0.05,h15km,n20, σ0s89/22,Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCHF	**Cheshme Sefid,**	**1.20**	**336**	Pg	**Pg**	**19 28 20.6**	**0.0**
IBZA	**Bozab**	**1.30**	**9**	Pg	**Pb**	**19 28 21.9**	**+0.1**
IGHG	**Ghaleghazi**	**1.44**	**323**	Pg	**Pg**	**19 28 25.3**	**0.0**
SNQR	**Sonqor, Kerman**	**1.67**	**0**	Pg	**Pb**	**19 28 28.3**	**+0.1**
GLG1	**Gilan-e-Gharb**	**1.71**	**304**	Pn	**Pg**	**19 28 29.6**	**-0.7**
IALM	**Almabolaq**	**1.74**	**15**	Pg	**Pb**	**19 28 28.7**	**-0.5**
IDHR	**Dehrash**	**1.83**	**326**	Pn	**Pg**	**19 28 31.3**	**-1.5**
RAFI	**Al-Rafai**	**1.93**	**222**	*ePg*	**Pg**	**19 28 34.0**	**-0.6**
RAFI	baz=35			*eSg*	**Sg**	**19 29 02.0**	**+2.3**
AMIS	**Naft Sefid**	**2.06**	**137**	Pn	**Pn**	**19 28 31.7**	**0.0**
JHBN	**Jahan bin**	**2.73**	**109**	Pn	**Pn**	**19 28 41.0**	**-0.2**
IPIR	**Pirpir**	**2.79**	**99**	Pn	**Pn**	**19 28 42.4**	**+0.4**
QAMS	**Qamsar**	**3.20**	**79**	Pn	**Pn**	**19 28 48.1**	**+0.5**
IQOM	**Qom**	**3.31**	**59**	Pn	**Pn**	**19 28 49.4**	**+0.4**
IKLH	**Kolahrood**	**3.32**	**87**	Pn	**Pn**	**19 28 49.8**	**+0.7**
IBRJ	**Brojen**	**3.32**	**111**	Pn	**Pn**	**19 28 49.1**	**-0.1**
IKRK	**Kirkuk**	**3.50**	**310**	*ePn*	**Pn**	**19 28 52.0**	**+0.5**
IKRK				*eSn*	**Sn**	**19 29 31.0**	**-1.7**
IKRK	comp=N,28nm,0.6s			AML	AML	19 30 00.3	
IKRK	comp=E,32nm,0.5s			AML	AML	19 30 06.1	
IGZV	**Ghazvin**	**3.85**	**33**	Pn	**Pn**	**19 28 57.6**	**+1.3**
IVRN	**Varamin**	**3.86**	**61**	Pn	**Pn**	**19 28 57.2**	**+0.8**
IZEF	**Zefreh**	**3.96**	**93**	Pn	**Pn**	**19 28 58.5**	**+0.5**
KLNJ	**Kolanjah**	**4.00**	**122**	Pn	**Pn**	**19 28 58.5**	**-0.1**

*OSPL **26** 19:33:21.9±0.3, 17.93N×66.60W, h1km±999km, ML3.9, Presumed earthquake*
*NEIC **26** 19:33:21.2±0.8, 17.95N±0.02×66.58W±0.01, h10km±1km, ML3.3/31, Md3.2/19(RSPR), Error ellipse: s-maj=4.1km s-min=2.1km az=357.0*
**ISC 26 19:33:21.0±1.1,17.94N±0.05×66.59W±0

*NEIC **26** 19:49:10.7±1.4,4.63S±0.07×101.96E±0.06,h35km±2km, mb4.3/9, Error ellipse: s-maj=12.0km s-min=10.5km az=165.0*
*DJA **26** 19:49:13.0±0.5,5.2S×10.2E±°,h30km±6km,M4.3/43, mB4.9/7, mb4.5/14, MLv4.4/43, Mw(mB)4.2/7*

ISC 26 19:49:12.5±1.0,4.56S±0.05×101.98E±0.05,h55km±9km, n72,σ1§21/68,mb4.3/17,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGSI	**Enggano, Bengk**	**0.84**	**160**	P	**Pn**	**19 49 28.2**	**-0.1**
EGSI				S	**Sn**	**19 49 41.3**	**+1.5**
UBSI	**University, Be**	**0.84**	**20**	P	**Pn**	**19 49 28.4**	**+0.1**
UBSI				S	**Sn**	**19 49 40.3**	**+0.4**
MNAI	**Manna**	**0.99**	**79**		**Pn**	**19 49 29.5**	**-0.8**
MNAI				Sn	**Sn**	**19 49 42.4**	**-0.9**
MNAI	**Manna**	**0.99**	**79**	P	**Pn**	**19 49 29.8**	**-0.4**
MNAI				S	**Sn**	**19 49 42.8**	**-0.5**
KSI	**Kapahiang**	**1.09**	**34**	P	**Pn**	**19 49 31.4**	**-0.2**
KSI				S	**Sn**	**19 49 44.9**	**-0.8**
MASI	**Maura Aman, Be**	**1.43**	**10**	P	**Pn**	**19 49 36.9**	**+0.7**
MASI				S	**Sn**	**19 49 54.4**	**+0.4**
LWLI	**Liwa**	**2.12**	**102**	P	**Pn**	**19 49 45.8**	**+0.2**
MDSI	**Maura Dua**	**2.19**	**88**	P	**Pn**	**19 49 46.9**	**+0.4**
KRJI	**Kerinci**	**2.51**	**348**	P	**Pn**	**19 49 52.4**	**+1.5**
PPSI	**Pulau Pagai**	**2.66**	**312**	P	**Pn**	**19 49 54.0**	**+1.1**
KASI	**Kota Agung**	**2.68**	**111**	P	**Pn**	**19 49 53.3**	**+0.1**
KASI				S	**Sn**	**19 50 25.3**	**+0.8**
KLSI		**2.74**	**93**	P	**Pn**	**19 49 55.1**	**+1.1**
KLI	**Kotabumi**	**2.88**	**96**	P	**Pn**	**19 49 58.5**	**+2.6**
BLSI	**Bandar Lampung**	**3.35**	**104**	P	**Pn**	**19 50 00.7**	**-1.7**
PDSI	**Padang**	**3.93**	**337**	P	**Pn**	**19 50 10.4**	**+0.1**
CGJI	**Cibinong**	**4.22**	**119**	P	**Pn**	**19 50 14.2**	**-0.1**
PPI	**Padang Panjang**	**4.37**	**339**	P	**Pn**	**19 50 16.9**	**+0.5**
DSRI	**Dabo**	**4.81**	**33**	P	**Pn**	**19 50 23.8**	**+1.4**
DBJI	**Dramaga** 0.4nm2µm86nm,1.3s	**5.14**	**113**	P	**Pn**	**19 50 27.4**	**+0.4**
PBSI	**Pulau Batu** 82nm,1.6s	**5.80**	**320**	P	**Pn**	**19 50 36.3**	**+0.3**
LEM	**Lembang** 2.4nm,0.3S,baz=279,slow=1.3,SNR=7.7	**6.04**	**112**	Pn	**Pn**	**19 50 37.7**	**-1.8**
LEM	comp=Z,97nm,18.8s,baz=336,slow=42 4.4nm,0.3s			LR	LR	19 53 19.1	
LEM	**Lembang** 0.2nm63nm,1.2s	**6.04**	**112**	P	**Pn**	**19 50 38.9**	**-0.6**
BBJI	**Bungbulang**	**6.33**	**117**		**Pn**	**19 50 42.4**	**-1.0**
BBJI				Sn	**Sn**	**19 51 51.8**	**-2.6**
BBJI	**Bungbulang** 0.1nm18nm,0.7s	**6.33**	**117**	P	**Pn**	**19 50 46.1**	**+2.7**
MYKOM	**Kota Tinggi**	**6.58**	**17**	Pn	**Pn**	**19 50 48.1**	**+1.5**
MYKOM	**Kota Tinggi**	**6.58**	**17**	P	**Pn**	**19 50 49.4**	**+2.8**
GSI	**Gunungsitoli**	**7.30**	**323**		**Pn**	**19 50 56.2**	**-0.3**
GSI				Sn	**Sn**	**19 52 14.1**	**-4.0**
GSI	**Gunungsitoli** 0.2nm24nm,0.9s	**7.30**	**323**	P	**Pn**	**19 50 58.7**	**+2.1**
UGM	**Wanagama**	**9.12**	**112**	Pn	**Pn**	**19 51 21.7**	**+0.1**
JAGI	**Jajag, Banyuwa**	**12.70**	**108**	Pn	**Pn**	**19 52 09.8**	**-0.7**
CMAR	**Chiang Mai Arr** 1.2nm,0.8s,baz=182,slow=9.0,SNR=12 1.2nm,0.8s	**23.07**	**353**	P	**P**	**19 54 12.4**	**-1.1**
H08S2	**Diego Garcia H** baz=85,slow=75,SNR=68	**29.48**	**263**	T	T	20 25 42.8	
H08S3	**Diego Garcia H** baz=85,slow=75,SNR=45	**29.48**	**263**	T	T	20 25 36.6	
H08S1	**Diego Carcia H** baz=85,slow=75,SNR=46	**29.49**	**263**	T	T	20 25 45.9	
SHL	**Shillong**	**31.51**	**342**		**P**	**19 55 29.7**	**0.0**
SHL	comp=Z,3.5nm,0.8s			IAmb	IAmb	19 55 30.2	
H01W3	**Cape Leeuwin H** baz=339,slow=76,SNR=6.3	**32.21**	**161**	T	T	20 29 30.2	
H01W2	**Cape Leeuwin H** baz=339,slow=76,SNR=7.3	**32.22**	**161**	T	T	20 29 29.8	
H01W1	**Cape Leeuwin H** baz=339,slow=76,SNR=5.9	**32.22**	**161**	T	T	20 29 32.6	
EVN	**Everest**	**35.48**	**337**	P	**P**	**19 56 03.8**	**-0.9**
KSRS	**Korea Array** comp=Z,0.8nm,0.6s,baz=207,slow=5.7,SNR=1.6 comp=Z,0.8nm,0.6s	**48.27**	**28**	P	**P**	**19 57 48.0**	**-0.2**
KDJ	**Kajisay**	**51.66**	**337**	P	**P**	**19 58 14.4**	**+0.3**
KDJ	comp=Z,2.4nm,0.7s			IAmb	IAmb	19 58 16.1	
SONM	**Songino Array** comp=Z,3.1nm,0.6s,baz=186,slow=9.6,SNR=38 comp=Z,3.1nm,0.6s	**52.32**	**4**	P	**P**	**19 58 20.1**	**+1.3**
SONM	**Songino Array** comp=Z,2.3nm,0.7s	**52.32**	**4**	P	**P**	**19 58 19.2**	**+0.5**
SONM				IAmb	IAmb	19 58 20.8	
MJAR	**Matsushiro Arr** comp=Z,1.0nm,0.7s,baz=231,slow=9.6,SNR=4.2 comp=Z,1.0nm,0.7s	**53.07**	**37**	P	**P**	**19 58 23.0**	**-1.4**
MKAR	**Makanchi Array** comp=Z,2.5nm,0.6s,baz=150,slow=8.3,SNR=30 comp=Z,2.5nm,0.6s	**54.02**	**343**	P	**P**	**19 58 31.9**	**+0.8**
MKAR	**Makanchi Array**	**54.02**	**343**	P	**P**	**19 58 31.2**	**0.0**
USRK	**Ussuriysk Ar.** comp=Z,1.7nm,0.5s,baz=168,slow=4.6,SNR=9.0 comp=Z,1.7nm,0.5s	**55.53**	**26**	P	**P**	**19 58 42.2**	**+0.2**
KURBB	**Kurchatov Arra** comp=Z,0.9nm,0.2s,baz=158,slow=6.6,SNR=4.2 comp=Z,0.9nm,0.2s	**58.56**	**343**	P	**P**	**19 59 04.1**	**+0.7**
KURK	**Kurchatov**	**58.61**	**343**	P	**P**	**19 59 03.8**	**+0.1**
H04N2	**CROZET ISLANDS** baz=63,slow=75,SNR=205	**59.97**	**218**	T	T	21 04 04.0	
H04N1	**CROZET ISLANDS** baz=63,slow=75,SNR=269	**59.98**	**218**	T	T	21 04 01.9	
H04N3	**CROZET ISLANDS** baz=63,slow=75,SNR=178	**59.99**	**218**	T	T	21 04 03.9	
ZAA0	**Zalesovo Array**	**60.04**	**348**		**P**	**19 59 12.8**	**-0.8**
ZALV	**Zalesovo Beam** comp=Z,3.7nm,0.4s,baz=168,slow=5.3,SNR=22 comp=Z,3.7nm,0.4s	**60.04**	**348**	P	**P**	**19 59 14.0**	**+0.5**
ZALV	**Zalesovo Beam**	**60.04**	**348**	P	**P**	**19 59 12.6**	**-0.9**
H04S1	**CROZET ISLANDS** baz=61,slow=75,SNR=8.0	**60.22**	**217**	T	T	21 04 19.6	
H04S3	**CROZET ISLANDS** baz=61,slow=75,SNR=14	**60.23**	**217**	T	T	21 04 14.8	
H04S2	**CROZET ISLANDS** baz=61,slow=75,SNR=8.1	**60.24**	**217**	T	T	21 04 17.2	
BVAR	**Borovoye Array** comp=Z,1.9nm,0.5s,baz=145,slow=9.1,SNR=19 comp=Z,1.9nm,0.5s	**63.26**	**339**	P	**P**	**19 59 35.5**	**+0.2**
BORK	**Borovoye** comp=Z,2.1nm,0.6s	**63.30**	**339**	P	**P**	**19 59 35.6**	**+0.1**
BORK				IAmb	IAmb	19 59 36.2	
AB31	**Akbulak array**	**64.82**	**331**	P	**P**	**19 59 45.2**	**-0.4**
AB31	comp=Z,2.7nm,1.1s			IAmb	IAmb	19 59 46.9	
ABKAR	**Akbulak array**	**64.82**	**331**	P	**P**	**19 59 45.7**	**+0.1**
KBZ	**Khabaz** comp=Z,1.1nm,0.8s,baz=115,slow=16,SNR=3.7 comp=Z,1.1nm,0.8s	**71.52**	**319**	P	**P**	**20 00 29.1**	**+1.4**
BRTR	**Keskin Array B** comp=Z,0.9nm,0.5s,baz=144,slow=7.2,SNR=7.0 comp=Z,0.9nm,0.5s	**76.50**	**313**	P	**P**	**20 00 58.0**	**+1.0**
FINES	**FINESS Array B** comp=Z,2.3nm,1.0s,baz=164,slow=7.7,SNR=5.3 comp=Z,2.3nm,1.0s	**87.28**	**332**	P	**P**	**20 01 53.8**	**+0.8**
SPITS	**Spitsbergen Ar** comp=Z,1.7nm,0.8s,baz=123,slow=9.1,SNR=4.9 comp=Z,1.7nm,0.8s	**93.53**	**348**	P	**P**	**20 02 21.6**	**-0.3**
BDFB	**Brasilia** comp=Z,1.2nm,0.4s,baz=153,slow=21,SNR=1.8	**144.15**	**235**	PKP	**PKiKP**	**20 08 46.9**	**0.0**
APMT	**Aspermont**	**144.73**	**33**	PKPdf	PKPbc	20 08 43.0	+0.2
TX31	**Lajitas Ar. Si**	**145.40**	**42**	PKPdf	**PKPdf**	**20 08 46.0**	**+0.8**
TXAR	**Lajitas Array** comp=Z,2.0nm,0.5s,baz=296,slow=1.1,SNR=30	**145.40**	**42**	PKPbc	**PKPdf**	**20 08 46.8**	**+1.6**
TXAR	**Lajitas Array**	**145.40**	**42**		**PKPdf**	**20 08 46.2**	**+1.0**
T42A	**Van Buren**	**145.53**	**19**	PKPdf	**PKPdf**	**20 08 43.2**	**-1.8**

*IDC **26** 19:49:16.3±0.5,2.95S×139.11E,h0km,mb4.3/16, mbtmp4.3/21,ML4.1/3,MS3.6/26,Error ellipse: s-maj=17.7km s-min=12.2km az=74.0*
*DJA **26** 19:49:21.6±0.2,3.3S±2.2×13.9E±°,h10km,M4.6/36, mb4.9/36,mB5.1/20,MLv4.9/18,Mw(mB)4.4/20*
*NEIC **26** 19:49:22.8±1.8,2.94S±0.08×139.24E±0.05,h35km±1km, mb4.6/70,Error ellipse: s-maj=13.5km s-min=8.2km az=168.0*

ISC 26 19:49:22.9±0.3,3.03S±0.05×139.26E±0.04,h46km,n142, σ1§58/115,mb4.6/49,MS3.6/22,1D,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAMI	**Wamena**	**1.01**	**213**	P	**Pn**	**19 49 43.5**	**+2.8**
WAMI				S	Sn	19 50 03.8	+10
GENI	**Genyem**	**1.01**	**65**	P	**Pn**	**19 49 39.1**	**-1.6**
GENI				S	**Sn**	**19 49 52.0**	**-1.8**
JAY	**Jayapura** 17nm,0.3s,baz=234,slow=10,SNR=179	**1.54**	**71**	Pn	**Pn**	**19 49 45.6**	**-2.3**
JAY	62nm,0.3s,baz=221,slow=22,SNR=8.1			Sn	**Sn**	**19 50 06.1**	**-0.6**
JAY	comp=Z,1µm,18.2s,baz=16,slow=43			LR	LR	19 50 27.5	
JAY	**Jayapura**	**1.54**	**71**	P	**Pn**	**19 49 46.2**	**-1.7**
JAY				S	**Sn**	**19 50 06.8**	**+0.1**
SRPI	**Serui, Papua**	**3.23**	**291**	P	**Pn**	**19 50 09.8**	**-1.3**
SRPI				S	**Sn**	**19 50 48.5**	**+0.2**
BAKI	**Biak**	**3.64**	**300**	P	**Pn**	**19 50 16.4**	**-0.4**
BAKI				S	**Sn**	**19 50 59.7**	**+1.2**
RKPI	**Ransiki, Papua** 0.6nm1µm171nm,0.7s	**5.29**	**286**	P	**Pn**	**19 50 40.9**	**+1.4**
MMPI	**Merauke**	**5.52**	**168**	P	Pn	19 50 49.0	+6.4
KMPI	**Kaimana, Papua** 1.0nm3µm249nm,0.9s	**5.58**	**263**	P	**Pn**	**19 50 46.1**	**+2.7**
MWPI	**Manokwari, Pap** 0.6nm2µm125nm,0.7s	**5.61**	**292**	P	**Pn**	**19 50 45.5**	**+1.6**
FAKI	**Fak Fak**	**7.00**	**271**		**Pn**	**19 51 02.3**	**-0.6**
FAKI	**Fak Fak** 0.2nm698nm81nm,0.7s	**7.00**	**271**	P	**Pn**	**19 51 05.4**	**+2.5**
MANU	**Manus Island**	**8.16**	**83**	Pn	**Pn**	**19 51 21.8**	**+2.9**
SIJI	**Sorong** 6.4nm,0.3s,baz=53,slow=14,SNR=37	**8.27**	**285**	Pn	Pn	19 51 15.1	-5.2
SIJI	baz=293,slow=20			Sn	**Sn**	**19 52 49.0**	**-3.6**
SIJI	comp=Z,398nm,21.8s,baz=98,slow=43 1.9nm,0.4s			LR	LR	19 55 06.2	
SIJI	**Sorong** 0.2nm859nm45nm,0.7s	**8.27**	**285**	P	**Pn**	**19 51 21.3**	**+0.9**
SWI	**Sorong** 0.2nm656nm61nm,0.7s	**8.28**	**285**	P	**Pn**	**19 51 21.3**	**+0.9**
SAUI	**Saumlaki**	**9.32**	**238**	Pn	**Pn**	**19 51 35.8**	**+1.0**
SAUI	**Saumlaki** 208nm,0.9s	**9.32**	**238**	P	**Pn**	**19 51 38.5**	**+3.7**
BNDI	**Bandanaira** 86nm,0.9s	**9.45**	**261**	P	**Pn**	**19 51 39.0**	**+2.5**
PMG	**Port Moresby** 4.2nm,0.8s,baz=313,slow=10,SNR=4.6	**10.09**	**129**	Pn	**Pn**	**19 51 45.5**	**+0.2**
PMG	**Port Moresby** 709nm80nm,0.7s	**10.09**	**129**		**Pn**	**19 51 45.2**	**-0.1**
PMG	**Port Moresby** 33nm,0.9s	**10.09**	**129**	P	**Pn**	**19 51 48.9**	**+3.6**
KRAI	**Karang Ratu** 416nm27nm,0.9s	**10.85**	**268**	P	**Pn**	**19 51 57.1**	**+1.4**
COEN	**Coen**	**11.53**	**161**		**Pn**	**19 52 06.0**	**+1.0**
NLAI	**Namlea** 709nm80nm,0.7s	**12.14**	**269**	P	**Pn**	**19 52 15.7**	**+2.3**
MTN	**Manton Dam**	**12.64**	**219**		**Pn**	**19 52 19.7**	**-0.5**
SANI	**Sanana** 788nm112nm,0.8s	**13.29**	**274**	P	**Pn**	**19 52 30.2**	**+1.1**
KNRA	**Kununurra**	**16.27**	**219**		**Pn**	**19 53 07.1**	**-1.3**
SOEI	**Soe**	**16.32**	**245**		**Pn**	**19 53 07.4**	**-1.8**
SOEI	**Soe**	**16.32**	**245**	P	**P**	**19 53 12.8**	**+1.3**
LUWI	**Luwuk** 1µm47nm,0.8s	**16.59**	**276**	P	**Pn**	**19 53 13.8**	**+1.3**
DAV	**Davao City (W)** comp=Z,66nm,18.7s,baz=124,slow=41	**16.94**	**306**	LR	LR	20 00 40.2	
BATI	**Baumata** 4.2nm,0.4s,baz=114,slow=9.2,SNR=14	**17.04**	**245**	Pn	**Pn**	**19 53 15.0**	**-3.1**
BATI	**Baumata**	**17.04**	**245**	P	**P**	**19 53 21.2**	**+1.8**
WB0	**Warramunga Arr**	**17.30**	**196**		**Pn**	**19 53 20.6**	**-0.6**
WB0	comp=Z,37nm,0.9s			IAmb	IAmb	19 53 38.6	
GUMO	**Guam** comp=Z,162nm,18.7s,baz=152,slow=36	**17.43**	**19**	LR	LR	19 59 40.2	
WR8	**Warramunga Arr**	**17.45**	**195**		**Pn**	**19 53 22.5**	**-0.6**
WR8	comp=Z,41nm,0.9s			IAmb	IAmb	19 53 42.1	
WRAB	**Tennant Creek**	**17.47**	**196**	Pn	**Pn**	**19 53 21.9**	**-1.5**
WRAB	comp=Z,37nm,0.9s			IAmb	IAmb	19 53 47.7	
WRA	**Warramunga Arr** comp=Z,1.1nm,0.3s,baz=13,slow=13,SNR=26	**17.48**	**196**	P	**Pn**	**19 53 23.7**	**+0.2**
WRA	comp=Z,9.6nm,0.9s,baz=12,slow=22,SNR=5.4 comp=Z,6.1nm,0.6s			S	**Sn**	**19 56 31.2**	**-6.2**
WRA	**Waramunga Arr**	**17.48**	**196**		**Pn**	**19 53 23.7**	**+0.2**
APSI	**Ampana** comp=Z,55nm,1.1s	**17.72**	**276**	P	**P**	**19 53 28.6**	**+1.7**
MMRI	**Maumere**	**17.82**	**251**	Pn	**Pn**	**19 53 25.2**	**-2.4**
MMRI	**Maumere** comp=Z,33nm,0.9s	**17.82**	**251**	P	**P**	**19 53 29.2**	**+1.2**
CTA	**Charters Tower** comp=Z,0.1nm,0.3s,baz=337,slow=12,SNR=1.7	**18.28**	**159**	P	**Pn**	**19 53 34.1**	**+0.9**
CTA	comp=Z,574nm,20.0s,baz=28,slow=39 comp=Z,3.5nm,0.9s			LR	LR	20 01 11.1	
TOLI2	**Tolitoli**	**18.92**	**282**		**P**	**19 53 38.5**	**-1.6**
KAPI	**Kappang** comp=Z,85nm,21.4s,baz=86,slow=41	**19.55**	**264**	LR	LR	20 02 34.1	
FITZ	**Fitzroy Crossi** comp=Z,11nm,0.7s,baz=34,slow=10,SNR=21	**20.06**	**221**	P	**P**	**19 53 50.8**	**-1.7**
FITZ	comp=Z,21nm,0.8s,baz=171,slow=13,SNR=4.8			S	**S**	**19 57 30.4**	**-5.2**
FITZ	comp=Z,579nm,19.2s,baz=36,slow=39 comp=Z,11nm,0.7s			LR	LR	20 02 17.7	
AS31	**Alice Springs**	**21.16**	**194**		**P**	**19 54 03.9**	**-0.4**
AS31	comp=Z,15nm,0.6s			IAmb	IAmb	19 54 20.1	
ASAR	**Alice Springs** comp=Z,6.2nm,0.6s,baz=21,slow=9.3,SNR=5.3	**21.16**	**194**	P	**P**	**19 54 04.8**	**+0.4**
ASAR	comp=Z,4.3nm,0.8s,baz=9.0,slow=17,SNR=4.2			S	**S**	**19 57 56.8**	**-0.6**
ASAR	comp=Z,690nm,18.5s,baz=6.0,slow=39 comp=Z,6.2nm,0.6s			LR	LR	20 03 02.2	
ASAR	**Alice Springs**	**21.16**	**194**		**P**	**19 54 04.6**	**+0.2**
HNR	**Honiara** comp=Z,6.1nm,21.8s,baz=9.0,slow=35	**21.52**	**108**	LR	LR	20 01 47.3	
MBWA	**Marble Bar**	**26.19**	**225**		**P**	**19 54 53.8**	**+0.4**
MBWA	comp=Z,17nm,0.8s			IAmb	IAmb	19 55 00.6	
PSA00	**Pilbara Seismi**	**26.38**	**224**	P	**P**	**19 54 57.6**	**+2.5**
PSA00	comp=Z,15nm,0.6s			IAmb	IAmb	19 55 02.3	
PSA00	**Pilbara Seismi**	**26.38**	**224**		**P**	**19 54 55.7**	**+0.6**
PSA00	comp=Z,8.5nm,0.7s			IAmb	IAmb	19 55 02.4	
STKA	**Stephens Creek** comp=Z,0.9nm,0.5s,baz=25,slow=5.6,SNR=4.7	**28.78**	**176**	P	**P**	**19 55 16.7**	**+0.2**
STKA	comp=Z,495nm,19.7s,baz=4.2,slow=39 comp=Z,0.9nm,0.5s			LR	LR	20 07 57.7	
FORT	**Forrest**	**29.56**	**200**	P	**P**	**19 55 24.3**	**+0.9**
FORT	comp=Z,9.0nm,0.8s			IAmb	IAmb	19 56 03.4	
JCJ	**Chichijima** comp=Z,90nm,21.3s,baz=183,slow=34	**30.08**	**5**	LR	LR	20 06 02.0	
JOW	**Kunigami** comp=Z,133nm,21.9s,baz=143,slow=32	**31.53**	**341**	LR	LR	20 05 46.9	
BBJI	**Bungbulang** comp=Z,17nm,1.3s	**31.77**	**261**	P	**P**	**19 55 43.0**	**-0.2**
BBJI				IAmb	IAmb	19 56 08.4	
TPUB	**Ta-pu**	**31.85**	**326**	P	**P**	**19 55 42.6**	**-1.2**
SSLB	**Suanglung**	**32.06**	**327**	P	**P**	**19 55 44.3**	**-1.4**
SSLB	comp=Z,9.5nm,0.7s			IAmb	IAmb	19 55 49.2	
MORW	**Morawa** comp=Z,14nm,1.2s	**34.02**	**218**	IAmb	IAmb	19 56 20.4	
JHJ	**Hachijo jima 2** comp=Z,116nm,18.4s,baz=238,slow=32	**35.96**	**1**	LR	LR	20 08 23.9	
NWAO	**Narrogin (SRO)** comp=Z,708nm,18.6s,baz=26,slow=38	**36.20**	**212**	LR	LR	20 12 27.6	
JNU	**Nakatsue** comp=Z,106nm,21.6s,baz=162,slow=32	**36.82**	**348**	LR	LR	20 08 55.1	
MJAR	**Matsushiro Arr** comp=Z,0.5nm,0.5s,baz=182,slow=10,SNR=2.2	**39.38**	**359**	P	**P**	**19 56 47.3**	**-0.9**
MJAR	comp=Z,1.2nm,0.8s,baz=152,slow=2.9,SNR=4.7			PcP	**PcP**	**19 58 56.1**	**+0.3**
MJAR	comp=Z,88nm,21.2s,baz=190,slow=33 comp=Z,0.5nm,0.5s			LR	LR	20 11 08.5	
MJAR	**Matsushiro Arr** comp=Z,4.2nm,1.5s	**39.38**	**359**	IAmb	IAmb	19 56 51.7	
RPSI	**Rantau Prapat**	**40.71**	**278**		**P**	**19 57 00.2**	**+0.6**
RPSI	comp=Z,24nm,1.3s			IAmb	IAmb	19 57 18.3	
MSVF	**Nonsavu** comp=Z,111nm,20.8s,baz=324,slow=34	**40.74**	**114**	LR	LR	20 12 21.8	
KSRS	**Korea Array**	**41.63**	**346**	P	**P**	**19 57 04.6**	**-2.1**
KSRS	comp=Z,1.9nm,0.8s,baz=160,slow=9.6,SNR=5.4			LR	LR	20 11 54.3	
KS19	**Wonju Array Si**	**41.69**	**346**	P	**P**	**19 57 07.5**	**+0.3**
ENH	**Enshi**	**43.65**	**322**		**P**	**19 57 23.1**	**-0.2**
ENH				IAmb	IAmb	19 57 24.5	
CMAR	**Chiang Mai Arr** comp=Z,0.5nm,0.3s,baz=123,slow=6.2,SNR=7.2	**45.07**	**300**	P	**P**	**19 57 34.1**	**-0.6**
CMAR	comp=Z,23nm,21.7s,baz=115,slow=34 comp=Z,0.5nm,0.3s			LR	LR	20 14 24.2	
ASAJ	**Asahikawa** comp=Z,59nm,21.3s,baz=192,slow=33	**47.03**	**3**	LR	LR	20 15 00.4	
USRK	**Ussuriysk Ar.** comp=Z,2.5nm,0.7s,baz=178,slow=9.0,SNR=5.0 comp=Z,2.5nm,0.7s	**47.47**	**353**	P	**P**	**19 57 53.8**	**+0.6**
BJT	**Baijiatuan**	**47.79**	**336**	P	**P**	**19 57 55.6**	**-0.2**
BJT	comp=Z,5.1nm,0.7s			IAmb	IAmb	19 57 56.9	
URZ	**Urewera** comp=Z,106nm,18.5s,baz=316,slow=38	**49.23**	**140**	LR	LR	20 20 06.5	
RPZ	**Rata Peaks** comp=Z,89nm,19.5s,baz=60,slow=37	**49.34**	**150**	LR	LR	20 19 34.7	
BNX	**BinXian**	**49.69**	**349**	||P	**P**	**19 58 11.5**	**+1.3**
BNX	comp=Z,11nm,1.0s			pmax	pmax		
SHL	**Shillong**	**53.96**	**305**		**P**	**19 58 42.2**	**-0.5**
GTA2	**Gaotai**	**55.73**	**323**	*e*P	**P**	**19 58 56.0**	**+0.8**
GTA2				sP	pP	19 59 07.5	-0.7
GTA2	comp=Z,3.0nm,0.8s			pmax	pmax		
LSA	**Lhasa**	**56.34**	**309**	P	**P**	**19 58 59.3**	**-0.8**
LSA	comp=Z,4.0nm,0.7s			pmax	pmax		
SONM	**Songino Array** comp=Z,0.9nm,0.6s,baz=155,slow=7.5,SNR=8.6 comp=Z,0.9nm,0.6s	**58.24**	**335**	P	**P**	**19 59 13.3**	**+0.5**
SONM	**Songino Array**	**58.24**	**335**	P	**P**	**19 59 13.2**	**+0.3**
EVN	**Everest**	**59.07**	**305**		**P**	**19 59 19.3**	**-0.2**
EVN	comp=Z,3.9nm,0.6s			IAmb	IAmb	19 59 23.4	
PALK	**Pallekele** comp=Z,29nm,19.0s,baz=102,slow=38	**59.32**	**280**	LR	LR	20 27 11.0	
RAR	**Rarotonga** comp=Z,27nm,19.3s,baz=290,slow=34	**61.90**	**112**	LR	LR	20 24 56.2	
MA2	**Magadan** comp=Z,34nm,22.0s,baz=190,slow=33	**63.08**	**7**	LR	LR	20 23 51.1	
YAK	**Yakutsk**	**65.30**	**355**		**P**	**20 00 00.6**	**+0.8**
MKAR	**Makanchi Array** comp=Z,3.3nm,0.6s,baz=112,slow=7.6,SNR=24 comp=Z,3.3nm,0.6s	**70.37**	**322**	P	**P**	**20 00 30.1**	**-2.0**
MKAR	**Makanchi Array**	**70.37**	**322**		**P**	**20 00 32.4**	**+0.3**
MAKZ	**Makanchi**	**70.57**	**322**		**P**	**20 00 33.7**	**+0.4**
PRZ	**Przheval'sk** comp=Z,4.7nm,0.7s	**71.07**	**317**	IAmb	IAmb	20 00 39.2	
KSH2	**Kashi**	**71.87**	**313**	P	**P**	**20 00 43.3**	**+1.8**
KSH2	comp=Z,4.0nm,0.8s			pmax	pmax		
NIL	**Nilore**	**71.95**	**307**		**P**	**20 00 42.4**	**+0.4**
NIL	comp=Z,6.1nm,0.8s			IAmb	IAmb	20 00 43.5	
ZALV	**Zalesovo Beam** comp=Z,1.4nm,0.5s,baz=114,slow=5.9,SNR=4.8 comp=Z,1.4nm,0.5s	**72.48**	**330**	P	**P**	**20 00 43.6**	**-1.1**
ZALV	**Zalesovo Beam**	**72.48**	**330**	P	**P**	**20 00 43.9**	**-0.8**
BOOM	**Boomsoye usch** comp=Z,5.4nm,0.6s	**72.76**	**316**	IAmb	IAmb	20 00 48.9	
AAK	**Ala-Archa** comp=Z,21nm,21.6s,baz=85,slow=37	**73.81**	**316**	LR	LR	20 34 52.8	
KURK	**Kurchatov**	**74.29**	**325**	P	**P**	**20 00 55.2**	**-0.2**
KURBB	**Kurchatov Arra** comp=Z,1.0nm,0.3s,baz=119,slow=5.3,SNR=7.3 comp=Z,1.0nm,0.3s	**74.30**	**325**	P	**P**	**20 00 54.6**	**-0.8**
ARSB	**Arslanbob** comp=Z,4.8nm,0.6s	**74.45**	**314**	IAmb	IAmb	20 00 58.4	
TIXI	**Tiksi** comp=Z,49nm,21.3s,baz=192,slow=34	**74.85**	**357**	LR	LR	20 31 57.3	
TIXI	**Tiksi**	**74.85**	**357**		**P**	**20 00 58.2**	**0.0**
TIXI	comp=Z,3.0nm,0.5s			IAmb	IAmb	20 00 59.9	
VNDA	**Vanda** comp=Z,6.2nm,0.8s,baz=322,slow=6.0,SNR=26 comp=Z,6.2nm,0.8s	**75.42**	**175**	P	**P**	**20 01 01.4**	**-0.1**
VNDA	**Vanda**	**75.42**	**175**	P	**P**	**20 01 04.7**	**+3.3**
VNDA	comp=Z,6.0nm,0.8s			IAmb	IAmb	20 01 05.7	
KBL	**Kabul**	**75.56**	**307**	P	**P**	**20 01 03.1**	**-0.2**
KKAR	**Karatay Array**	**76.74**	**315**	P	**P**	**20 01 09.9**	**+0.3**
L14K	**Kuka Creek** comp=Z,6.8nm,1.1s	**77.95**	**25**	IAmb	IAmb	20 01 31.5	
BVAR	**Borovoye Array** comp=Z,4.0nm,0.6s,baz=115,slow=6.6,SNR=24 comp=Z,4.0nm,0.6s	**79.88**	**325**	P	**P**	**20 01 24.7**	**-2.1**
BORK	**Borovoye** comp=Z,5.3nm,0.7s	**79.93**	**325**		**P**	**20 01 27.5**	**+0.5**
BORK				IAmb	IAmb	20 01 28.7	
NRIK	**Noril'sk** comp=Z,2.3nm,0.7s,baz=104,slow=6.2,SNR=4.6 comp=Z,2.3nm,0.7s	**80.18**	**344**	P	**P**	**20 01 26.8**	**-1.2**
C19K	**Lookout Ridge** comp=Z,4.7nm,1.1s	**82.89**	**18**	IAmb	IAmb	20 02 03.9	
E19K	**Redstone River** comp=Z,4.5nm,0.7s	**82.92**	**20**	IAmb	IAmb	20 01 46.3	
D19K	**Kuna River** comp=Z,4.9nm,1.0s	**83.08**	**19**	IAmb	IAmb	20 02 03.5	
F20K	**Avaraart Lake** comp=Z,5.8nm,1.4s	**83.28**	**21**	IAmb	IAmb	20 02 05.0	
D20K	**Etivluk River** comp=Z,4.9nm,1.1s	**83.67**	**19**	IAmb	IAmb	20 01 50.9	
BWN	**Browne**	**84.65**	**25**	P	**P**	**20 01 53.0**	**+1.5**
RND	**Reindeer**	**84.67**	**25**		**P**	**20 01 51.4**	**-0.3**
RND	comp=Z,7.3nm,1.1s			IAmb	IAmb	20 02 04.8	
AB31	**Akbulak array** comp=Z,4.2nm,0.7s	**85.31**	**320**	IAmb	IAmb	20 01 56.5	
ABKAR	**Akbulak array**	**85.31**	**320**		**P**	**20 01 54.4**	**-0.7**
**CC

δ45.57000°, λ58.74000°. NP2:φ$_b$315.58000°, δ52.38000°, λ117.90000°. Principal axes: T 1.3902, Plg68.0000°, Azm287.0000°; N -0.0856, Plg22.0000°, Azm118.0000°; P -1.3046, Plg4.0000°, Azm26.0000°;

MOS **26** 20:24:53.2±0.9,56°.62S×26°.91W,h77km,mb5.6/13 Error ellipse: s-maj=20.7km s-min=10.5km az=101.1

NEIC **26** 20:24:54.6±1.5,56°.61S±0°.05×26°.9W±0°.1,h78km±5km, mb5.5/137,Mww5.4/13,Error ellipse: s-maj=11.6km s-min=7.4km az=100.0

IDC **26** 20:24:58.1±1.0,56°.62S×26°.76W,h111km±7km,mb4.9/19, mbtmp5.2/21,MS4.3/10,Error ellipse: s-maj=13.6km s-min=9.3km az=52.0

GCMT **26** 20:24:59.6±0.1,56°.72S±0°.01×26°.43W±0°.02,h99km±1km, MW5.4/127,Moment Tensor Solution. s97,c148; s127,c220; Duration: 1s2 Moment tensor: Scale 10^{17} Nm; M_{rr}0.08±.02; $M_{\theta\theta}$1.14±.03; $M_{\phi\phi}$-1.22±.03; $M_{r\theta}$0.37±.02; $M_{\theta\phi}$0.57±.03; $M_{\phi r}$0.76±.02; Best double couple: $M_0$1.55500×10^{17} NP1:φ$_b$122.00000°,δ57.00000°, λ0.00000°. NP2:φ$_b$31.00000°,δ90.00000°,λ147.00000°. Principal axes: T 1.4920, Plg23.0000°, Azm342.0000°; N 0.1250, Plg57.0000°, Azm211.0000°; P -1.6180, Plg22.0000°, Azm81.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 26 20:24:55.0±0.3,**56.70S**±0.04×**26°.82W**±0°.05,**h90**km±2km, **h90**km:**pP-P,n666,**σ1≒**48**/679,**mb5.5**/117,**28C-7D,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.00**	**290**	P	Pn	20 26 15.8	-5.3
HOPE				Sn	**Sn**	**20 27 26.1**	**-2.2**
HOPE	**Hope Point**	**6.00**	**290**	P	Pn	20 26 15.8	-5.3
HOPE						20 27 26.1	
VNA1	**Neumayer--Stat**	**16.12**	**158**	⇓P	**P**	**20 28 39.8**	**+2.5**
	comp=Z,37nm,0.2s						
VNA1				⇑S	**Sn**	**20 31 31.3**	**-2.4**
VNA1				⇓ScP	**ScP**	**20 36 51.5**	**+0.2**
VNA3	**Neumayer Olymp**	**16.31**	**160**	⇑P	**P**	**20 28 39.9**	**+0.4**
	comp=Z,38nm,0.2s						
VNA3				⇑S	**Sn**	**20 31 30.8**	**-7.6**
VNA3				⇑ScP	**ScP**	**20 36 51.1**	**-0.6**
	comp=Z,12nm,0.8s						
ESPZ	**Base Esperanza**	**16.37**	**233**	Pn	**Pn**	**20 28 38.4**	**-0.4**
VNA2	**Neumayer--Watz**	**16.51**	**157**	⇑P	**P**	**20 28 43.4**	**+1.7**
	comp=Z,36nm,0.2s,baz=323,slow=12						
VNA2				⇓S	**Sn**	**20 31 36.3**	**-7.0**
	baz=174,slow=30						
VNA2				⇑ScP	**ScP**	**20 36 51.7**	**-0.4**
	baz=339,slow=3.4						
SNAA	**Sanae**	**18.07**	**155**	⇑P	**Pn**	**20 29 00.6**	**+0.9**
	comp=Z,2μm,0.5s						
SNAA				⇓S	**S**	**20 32 17.8**	**-2.6**
SNAA				⇑ScP	**ScP**	**20 36 55.0**	**-0.4**
SNAA	**Sanae**	**18.07**	**155**	P	**Pn**	**20 28 59.9**	**+0.3**
	comp=Z,26nm,0.7s,baz=299,slow=10.0,SNR=22						
SNAA				S	**S**	**20 32 12.1**	**-8.4**
	comp=Z,6.0nm,0.6s,baz=326,slow=13,SNR=2.2						
SNAA				PcP	**PcP**	**20 33 30.0**	**+1.4**
	comp=Z,5.6nm,0.7s,baz=191,slow=7.3,SNR=2.1						
SNAA				ScP	**ScP**	**20 36 54.3**	**-1.1**
	comp=Z,16nm,0.8s,baz=239,slow=1.1,SNR=11						
SNAA	**Sanae**	**18.07**	**155**		**Pn**	**20 29 00.4**	**+0.7**
SNAA	**Sanae**	**18.07**	**155**		**ScP**	**20 36 54.7**	**-0.7**
SNAA	**Sanae**	**18.07**	**155**	*ce*P	**Pn**	**20 29 01.1**	**+1.5**
SNAA				pmax	pmax		
	comp=Z,22nm,0.6s						
EFI	**East Falkland**	**18.86**	**272**	P	**P**	**20 29 08.3**	**+0.7**
EFI	**East Falkland**	**18.86**	**272**	*e*P	**Pn**	**20 29 09.5**	**+0.4**
TROLL	**Troll, Antarti**	**19.57**	**153**	⇑P	**Pn**	**20 29 16.9**	**-0.7**
TROLL				⇑S	**S**	**20 32 52.1**	**+0.8**
TROLL				⇑ScP	**ScP**	**20 36 58.5**	**-0.4**
PMSA	**Palmer Station**	**19.64**	**230**	P	**Pn**	**20 29 18.1**	**-0.1**
	comp=Z,58nm,0.5s,baz=355,slow=11,SNR=15						
PMSA				LR	LR	20 36 22.6	
	comp=Z,683nm,18.7s,baz=82,slow=35						
BELA	**Belgrano 2**	**21.44**	**185**	P	**P**	**20 29 36.6**	**+1.3**
NVL	**N'lazarevskaya**	**21.61**	**146**	*e*P	**P**	**20 29 34.6**	**-2.5**
NVL				*e*S	**S**	**20 33 30.7**	**-0.3**
NVL				pmax	pmax		
	comp=Z,79nm,1.7s						
NVL				MLR	MLR		
	comp=Z,429nm,19.0s						
MG01	**Puerto William**	**22.76**	**257**	P	**P**	**20 29 50.1**	**+0.7**
ELIB	**Princess Elisa**	**25.49**	**146**	*d*P	**P**	**20 30 15.6**	**+1.3**
	comp=Z,24nm,0.7s						
ELIB				*d*PP	**PnPn**	**20 30 55.2**	**+0.2**
GO08	**Villa O'Higgin**	**28.51**	**267**	P	**P**	**20 30 42.2**	**+0.7**
TRQA	**Tornquist**	**29.77**	**294**		**P**	**20 30 52.9**	**+0.1**
TRQA	**Tornquist**	**29.77**	**294**	P	**P**	**20 30 52.9**	**+0.1**
TRQA				pmax	pmax		
	comp=Z,24nm,0.8s						
SYO	**Syowa Base**	**30.95**	**140**	⇑*i*PKiKP	**PKiKP**	**20 41 30.6**	**+4.4**
LL02	**Futaleuf**	**31.35**	**276**		**P**	**20 31 07.0**	**+0.4**
CNLB	**Canela**	**32.19**	**318**	*e*P	**P**	**20 31 15.4**	**+1.2**
CPSB	**Cacapava Do Su**	**32.21**	**313**	*e*P	**P**	**20 31 14.9**	**+0.7**
PLCA	**Paso Flores**	**32.32**	**281**	P	**P**	**20 31 14.6**	**-0.6**
	comp=Z,7.6nm,0.7s,baz=145,slow=7.2,SNR=29						
PLCA				PcP	**PcP**	**20 34 00.7**	**-0.3**
	comp=Z,8.2nm,0.9s,baz=128,slow=3.4,SNR=6.7						
PLCA				ScP	**ScP**	**20 37 33.1**	**-3.1**
	comp=Z,3.7nm,0.6s,baz=114,slow=3.9,SNR=12						
	comp=Z,7.6nm,0.7s						
PLCA	**Paso Flores**	**32.32**	**281**		**P**	**20 31 14.8**	**-0.5**
PLCA	**Paso Flores**	**32.32**	**281**	*e*P	**P**	**20 31 14.7**	**-0.6**
PLCA	**Paso Flores**	**32.32**	**281**	P	**P**	**20 31 14.8**	**-0.5**
PLCA				pP	**pP**	**20 31 33.1**	**-2.0**
PLCA				sP	**sP**	**20 31 42.8**	**-2.4**
PLCA				PcP	**PcP**	**20 34 01.9**	**+0.9**
PLCA				ScP	**ScP**	**20 37 33.1**	**-3.1**
MAJ01	**Sao Joao Batis**	**33.29**	**322**	*e*P	**P**	**20 31 25.6**	**+1.8**
PSAL	**Palomas, Salto**	**33.38**	**307**	*e*P	**P**	**20 31 24.9**	**+0.5**
LR05	**Currie**	**33.46**	**280**		**P**	**20 31 24.6**	**-0.5**
QSPA	**South Pole Qui**	**33.55**	**180**	P	**P**	**20 31 28.1**	**+2.2**
	comp=Z,32nm,0.8s,baz=205,slow=1.4,SNR=136						
QSPA				ScP	**ScP**	**20 37 39.3**	**-0.9**
	comp=Z,71nm,0.9s,baz=198,slow=1.6,SNR=40						
QSPA				ScS	**ScS**	**20 41 36.7**	**-4.5**
	comp=Z,1.0nm,0.7s,baz=100,slow=19,SNR=1.6						
QSPA				LR	LR	20 44 14.1	
	comp=Z,442nm,21.2s,baz=150,slow=34						
	comp=Z,32nm,0.8s						
QSPA	**South Pole Qui**	**33.55**	**180**	lAmb	lAmb	20 31 28.9	
	comp=Z,33nm,0.8s						
QSPA	**South Pole Qui**	**33.55**	**180**	P	**P**	**20 31 28.3**	**+2.5**
QSPA				pP	**pP**	**20 31 47.0**	**+1.3**
QSPA				PcP	**PcP**	**20 34 05.7**	**+1.6**
QSPA				ScP	**ScP**	**20 37 39.1**	**-1.0**
GO06	**Curarrehue**	**33.63**	**281**		**P**	**20 31 25.3**	**-1.4**
ITAB	**Concordia**	**34.54**	**318**		**P**	**20 31 35.2**	**+0.7**
ITAB	**Concordia**	**34.54**	**318**	*e*P	**P**	**20 31 35.8**	**+1.2**
PET01	**Itanhaem-SP**	**35.63**	**327**	*e*P	**P**	**20 31 45.3**	**+1.4**
PARB	**Paraibuna**	**36.05**	**330**	*e*P	**P**	**20 31 49.5**	**+1.9**
SPB	**Sao Paulo**	**36.33**	**327**	*e*P	**P**	**20 31 51.6**	**+1.7**
DUB01	**Friburgo-RJ**	**36.42**	**335**	*e*P	**P**	**20 31 52.9**	**+2.1**
CAM01	**Campos-RJ**	**36.51**	**336**	*e*P	**P**	**20 31 53.4**	**+2.0**
BI05	**Punta Hualpn**	**36.62**	**283**	P	**P**	**20 31 52.5**	**+0.3**
BI05				lAmb	lAmb	20 31 53.9	
	comp=Z,31nm,0.7s						
VAO	**Valinhos**	**36.75**	**328**	*e*P	**P**	**20 31 55.5**	**+1.9**
PTGB	**Pitanga**	**36.81**	**320**	*e*P	**P**	**20 31 54.8**	**+0.7**
BO02	**Sierra Bellavi**	**36.81**	**288**	P	**P**	**20 31 53.7**	**-0.3**
ACAN	**Cantantal**	**36.94**	**294**	*e*P	**P**	**20 31 53.5**	**-1.6**
AAGR	**Agrelo**	**37.13**	**291**	*e*P	**P**	**20 31 55.8**	**-1.0**
GO05	**Hualane**	**37.26**	**286**	lAmb	lAmb	20 32 02.9	
	comp=Z,102nm,1.9s						
BO01	**Tunca**	**37.28**	**288**	P	**P**	**20 31 56.6**	**-1.3**
CPUP	**Villa Florida**	**37.39**	**311**	P	**P**	**20 31 59.1**	**+0.3**
	comp=Z,41nm,0.8s,baz=150,slow=8.7,SNR=108						
CPUP				PcP	**PcP**	**20 34 16.1**	**+0.2**
	comp=Z,8.2nm,0.4s,baz=132,slow=2.8,SNR=7.6						
CPUP				ScP	**ScP**	**20 37 51.9**	**-2.6**
	comp=Z,16nm,0.9s,baz=134,slow=4.1,SNR=16						
	comp=Z,41nm,0.8s						
CPUP	**Villa Florida**	**37.39**	**311**		**P**	**20 31 59.0**	**+0.2**
CPUP				lAmb	lAmb	20 32 00.2	
	comp=Z,119nm,1.4s						
CPUP	**Villa Florida**	**37.39**	**311**		**ScP**	**20 37 52.4**	**-2.1**
CPUP	**Villa Florida**	**37.39**	**311**	P	**P**	**20 31 59.1**	**+0.2**
CPUP				PcP	**PcP**	**20 34 16.5**	**+0.7**
CPUP				ScP	**ScP**	**20 37 52.5**	**-2.1**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALF01	**Guarapari-ES**	**37.48**	**338**	*e*P	**P**	**20 32 01.5**	**+1.9**
ASAL	**Salagasta**	**37.52**	**292**	*e*P	**P**	**20 31 59.2**	**-0.9**
ACHE	**Chepes**	**37.58**	**296**	*e*P	**P**	**20 31 59.4**	**-1.2**
LDASE	**Londrina, Braz**	**37.70**	**322**	*e*P	**P**	**20 32 03.2**	**+1.7**
MT09	**Talagante**	**37.71**	**288**	lAmb	lAmb	20 32 03.2	
	comp=Z,196nm,1.9s						
PEL	**Peldehue**	**38.04**	**289**	lAmb	lAmb	20 32 06.8	
	comp=Z,53nm,0.5s						
PEL	**Peldehue**	**38.04**	**289**	*e*P	**P**	**20 32 04.1**	**-0.3**
PEL	**Peldehue**	**38.04**	**289**	P	**P**	**20 32 04.1**	**-0.3**
PEL				pP	**pP**	**20 32 23.0**	**-1.7**
PEL				sP	**sP**	**20 32 32.2**	**-2.6**
PEL				PcP	**PcP**	**20 34 18.2**	**+0.4**
BSCB	**Bom Sucesso**	**38.05**	**332**	*e*P	**P**	**20 32 06.2**	**+1.7**
AUSP	**Uspallata**	**38.10**	**292**	*e*P	**P**	**20 32 04.3**	**-0.8**
MT02	**Curacav**	**38.19**	**289**	lAmb	lAmb	20 32 05.7	
	comp=Z,32nm,0.7s						
VA03	**San Esteban**	**38.27**	**290**	lAmb	lAmb	20 32 07.4	
	comp=Z,26nm,0.5s						
ZON	**Zonda**	**38.28**	**293**	lAmb	lAmb	20 32 06.8	
	comp=Z,54nm,0.6s						
ZON	**Zonda**	**38.28**	**293**	*e*P	**P**	**20 32 05.4**	**-1.0**
RTLL	**Cerro Villicun**	**38.35**	**294**	*e*P	**P**	**20 32 06.1**	**-0.9**
AVFE	**Valle Fertil**	**38.38**	**295**	*e*P	**P**	**20 32 06.7**	**-0.5**
RIB01	**Linhares ES**	**38.68**	**339**	*e*P	**P**	**20 32 11.5**	**+1.8**
TRCB	**Terra Rica**	**38.78**	**320**	*e*P	**P**	**20 32 11.2**	**+0.6**
VA06	**Catapilco**	**38.82**	**289**	lAmb	lAmb	20 32 13.4	
	comp=Z,50nm,1.1s						
BB19B	**Bebedouro**	**39.04**	**327**	*e*P	**P**	**20 32 14.2**	**+1.4**
ACLC	**CERRO LA CRUZ**	**39.14**	**297**	*e*P	**P**	**20 32 13.1**	**-0.7**
BSFB	**Barra de Sao F**	**39.24**	**339**	*e*P	**P**	**20 32 16.1**	**+1.7**
SJMB	**Sao Joao De Ma**	**39.43**	**338**	*e*P	**P**	**20 32 17.3**	**+1.3**
MAW	**Mawson**	**39.51**	**143**	P	**P**	**20 32 17.5**	**+1.4**
	comp=Z,5.2nm,0.4s,baz=223,slow=5.8,SNR=30						
MAW				PcP	**PcP**	**20 34 23.1**	**+1.3**
	comp=Z,7.4nm,0.7s,baz=278,slow=2.5,SNR=2.7						
MAW				LR	LR	20 48 00.6	
	comp=Z,212nm,18.1s,baz=258,slow=35						
	comp=Z,5.2nm,0.4s						
MAW	**Mawson**	**39.51**	**143**	P	**P**	**20 32 17.9**	**+1.8**
	comp=Z,3.2nm,0.7s						
MAW	**Mawson**	**39.51**	**143**		**P**	**20 32 17.8**	**+1.7**
AMBA	**Amambai (Brazi**	**39.52**	**317**	*e*P	**P**	**20 32 16.8**	**0.0**
CO02	**Combarbal**	**39.74**	**291**	lAmb	lAmb	20 32 20.2	
	comp=Z,71nm,1.3s						
AROD	**Rodeo**	**39.79**	**294**	*e*P	**P**	**20 32 19.4**	**+0.1**
CO01	**Juntas del Tor**	**40.26**	**293**	P	**P**	**20 32 23.3**	**+0.2**
CO01				lAmb	lAmb	20 32 25.4	
	comp=Z,34nm,0.6s						
DIAM	**Diamantina, MG**	**40.37**	**335**	*e*P	**P**	**20 32 25.2**	**+1.3**
GO04	**Tololo Observa**	**40.46**	**292**	P	**P**	**20 32 25.0**	**+0.3**
GO04				lAmb	lAmb	20 32 29.5	
	comp=Z,57nm,1.2s						
SUR	**Sutherland**	**40.62**	**74**	LR	LR	20 46 10.4	
	comp=Z,921nm,18.8s,baz=209,slow=31						
PMNB	**Patos De Minas**	**40.84**	**331**	*e*P	**P**	**20 32 29.3**	**+1.5**
ITRB	**Iturama**	**40.88**	**325**	*e*P	**P**	**20 32 29.1**	**+1.1**
CO05	**La Serena**	**40.89**	**292**	P	**P**	**20 32 27.6**	**-0.4**
CO05				lAmb	lAmb	20 32 28.0	
	comp=Z,47nm,0.7s						
GUA01	**Guaratinga, BA**	**41.23**	**341**	*e*P	**P**	**20 32 32.1**	**+1.2**
AC05	**El Transito**	**41.27**	**294**	lAmb	lAmb	20 32 32.3	
	comp=Z,42nm,0.6s						
LCO	**Las Campanas**	**41.35**	**293**	P	**P**	**20 32 31.4**	**-0.7**
LCO	**Las Campanas**	**41.35**	**293**	P	**P**	**20 32 31.4**	**-0.7**
LCO				pmax	pmax		
	comp=Z,26nm,0.9s						
LCO	**Las Campanas**	**41.35**	**293**	P	**P**	**20 32 31.6**	**-0.4**
LCO				x	x	20 32 52.1	
LCO				PcP	**PcP**	**20 34 29.3**	**+0.6**
LCO				ScP	**ScP**	**20 38 07.1**	**-3.0**
FSA	**Cafayete**	**41.44**	**301**	*e*P	**P**	**20 32 30.8**	**-1.9**
MURT	**Porto Murtinho**	**41.68**	**314**	*e*P	**P**	**20 32 34.0**	**-0.4**
IPMB	**Ipameri, GO**	**41.86**	**329**	*e*P	**P**	**20 32 37.4**	**+1.3**
AC04	**Llanos de Chal**	**42.19**	**294**	lAmb	lAmb	20 32 39.5	
	comp=Z,70nm,0.6s						
AC02	**Maricunga**	**42.35**	**297**	lAmb	lAmb	20 32 43.2	
	comp=Z,57nm,0.8s						
CMC01	**Camacan, BA**	**42.38**	**342**	*e*P	**P**	**20 32 41.1**	**+0.9**
SLA	**San Lorenzo**	**42.40**	**303**	*e*P	**P**	**20 32 40.0**	**-0.5**
BDQN	**Bodoquena, MS**	**42.44**	**316**	*e*P	**P**	**20 32 40.0**	**-0.7**
AC06	**Mina Casimiro**	**42.53**	**295**	lAmb	lAmb	20 32 43.1	
	comp=Z,28nm,0.6s						
C2SB	**Chapadao do Su**	**42.57**	**322**	*e*P	**P**	**20 32 43.0**	**+1.3**
JANB	**Januaria**	**43.65**	**335**	*e*P	**P**	**20 32 51.6**	**+1.1**
SHEL	**Horse Pasture**	**43.69**	**30**	P	**P**	**20 32 50.9**	**0.0**
SHEL	**Horse Pasture**	**43.69**	**30**	P	**P**	**20 32 50.9**	**0.0**
SHEL				pmax	pmax		
	comp=Z,300nm,1.0s						
SHEL	**Horse Pasture**	**43.69**	**30**	P	**P**	**20 32 52.7**	**+1.8**
SHEL				ScP	**ScP**	**20 38 21.5**	**+2.1**
BDFB	**Brasilia**	**44.03**	**330**	P	**P**	**20 32 54.9**	**+1.3**
	comp=Z,34nm,0.8s,baz=150,slow=6.5,SNR=36						
BDFB				ScP	**ScP**	**20 38 18.7**	**-2.2**
	comp=Z,5.0nm,0.9s,baz=82,slow=1.5,SNR=2.6						
	comp=Z,34nm,0.8s						
BDFB	**Brasilia**	**44.03**	**330**		**P**	**20 32 54.3**	**+0.6**
BDFB				lAmb	lAmb	20 32 56.5	
	comp=Z,112nm,1.3s						
BDFB	**Brasilia**	**44.03**	**330**	P	**P**	**20 32 54.3**	**+0.6**
BDFB				pmax	pmax		
	comp=Z,112nm,1.3s						
PP1B	**Ponte de Pedra**	**44.36**	**320**	*e*P	**P**	**20 32 56.8**	**+0.6**
PB14	**IPOC Station P**	**44.82**	**297**		**P**	**20 32 59.5**	**-0.7**
ARAG	**Araguaiana, MT**	**45.09**	**325**	*e*P	**P**	**20 33 03.1**	**+1.1**
SBA	**Scott Base**	**45.45**	**184**		**P**	**20 33 06.0**	**+2.0**
SBA	**Scott Base**	**45.45**	**184**	P	**P**	**20 33 06.1**	**+2.0**
SBA				pmax	pmax		
	comp=Z,76nm,2.0s						
PB10	**IPOC Station P**	**45.83**	**298**	lAmb	lAmb	20 33 09.4	
	comp=Z,29nm,0.5s						
VNDA	**Vanda**	**45.93**	**183**	P	**P**	**20 33 10.6**	**+2.6**
	comp=Z,7.2nm,0.6s,baz=185,slow=6.5,SNR=89						
VNDA				ScP	**ScP**	**20 38 27.2**	**-0.6**
	comp=Z,15nm,0.9s,baz=214,slow=3.9,SNR=21						
	comp=Z,7.2nm,0.6s						
VNDA	**Vanda**	**45.93**	**183**	P	**P**	**20 33 10.4**	**+2.5**
VNDA					**ScP**	**20 38 28.0**	**+0.3**
VNDA	**Vanda**	**45.93**	**183**	P	**P**	**20 33 10.4**	**+2.5**
VNDA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
VNDA	**Vanda**	**45.93**	**183**	P	**P**	**20 33 10.5**	**+2.6**
VNDA				x	x	20 33 35.6	
VNDA				x	x	20 33 43.8	
VNDA				ScP	**ScP**	**20 38 28.2**	**+0.5**
BOSA	**Boshof**	**45.94**	**75**	P	**P**	**20 33 09.0**	**+0.3**
	comp=Z,50nm,0.8s,baz=210,slow=7.7,SNR=49						
BOSA				LR	LR	20 49 15.8	
	comp=Z,817nm,18.7s,baz=232,slow=32						
	comp=Z,50nm,0.8s						
BOSA	**Boshof**	**45.94**	**75**	lAmb	lAmb	20 33 10.0	
	comp=Z,59nm,0.8s						
BOSA	**Boshof**	**45.94**	**75**	P	**P**	**20 33 09.0**	**+0.3**
BOSA				pP	**pP**	**20 33 27.8**	**-1.3**
PB06	**IPOC Station P**	**46.04**	**299**	lAmb	lAmb	20 34 46.7	
	comp=Z,44nm,0.9s						
PB05	**IPOC Station P**	**46.22**	**299**	lAmb	lAmb	20 33 12.1	
	comp=Z,90nm,1.5s						
SALV	**Santo Antonio**	**46.22**	**320**	*e*P	**P**	**20 33 11.7**	**+0.9**
SDBA	**SAO DESIDERIO**	**46.34**	**335**	*e*P	**P**	**20 33 12.9**	**+1.1**
PB03	**IPOC Station P**	**46.69**	**300**	lAmb	lAmb	20 33 16.5	
	comp=Z,40nm,0.5s						
WIN	**Windhoek**	**46.72**	**62**	lAmb	lAmb	20 33 17.2	
	comp=Z,73nm,1.7s						
BBSD	**Serra de San D**	**46.91**	**313**	*e*P	**P**	**20 33 16.5**	**+0.3**
CCD	**Concordia, Ant**	**47.00**	**170**	P	**P**	**20 33 18.5**	**+1.8**
CCD				ScP	**ScP**	**20 38 31.8**	**-1.0**
PB07	**IPOC Station P**	**47.02**	**300**	lAmb	lAmb	20 33 19.0	
	comp=Z,139nm,1.4s						
H04S2	**CROZET ISLANDS**	**47.10**	**113**	T	T	21 24 13.2	
	baz=226,slow=75,SNR=5.0						
H04S3	**CROZET ISLANDS**	**47.11**	**113**	T	T	21 24 12.2	
	baz=226,slow=75,SNR=4.0						
H04S1	**CROZET ISLANDS**	**47.12**	**113**	T	T	21 24 08.8	
	baz=226,slow=75,SNR=1.5						
PB02	**IPOC Station P**	**47.38**	**300**	lAmb	lAmb	20 33 21.8	
	comp=Z,44nm,0.6s						
LKGWB	**Lokgwabe**	**47.48**	**67**	lAmb	lAmb	20 33 24.2	
	comp=Z,78nm,0.9s						
KOOLE	**Kule**	**47.89**	**65**	*i* P	**P**	**20 33 23.1**	**-0.9**
KOOLE	**Kule**	**47.89**	**65**	lAmb	lAmb	20 33 25.3	
	comp=Z,64nm,0.8s						
PTLB	**Pontes e Lacer**	**47.91**	**316**	*e*P	**P**	**20 33 24.5**	**+0.6**
PATCX	**Punta Patache**	**47.92**	**300**	lAmb	lAmb	20 33 27.1	
	comp=Z,51nm,0.6s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAKGR	**Makgori**	**47.94**	**72**	*i* P	**P**	**20 33 23.1**	**-1.2**
MAKGR	**Makgori**	**47.94**	**72**	lAmb	lAmb	20 33 25.4	
	comp=Z,52nm,0.8s						
PB08	**IPOC Station P**	**48.04**	**302**	lAmb	lAmb	20 33 30.5	
	comp=Z,121nm,1.2s						
SIV	**San Ignacio**	**48.17**	**313**	ScP	**ScP**	**20 38 36.0**	**-2.1**
	comp=Z,29nm,0.9s,baz=140,slow=5.2,SNR=30						
HMBC	**Humberstone**	**48.26**	**301**	lAmb	lAmb	20 33 33.6	
	comp=Z,38nm,0.5s						
SNDB	**Serra Nova Dou**	**48.45**	**327**	*e*P	**P**	**20 33 29.7**	**+1.5**
H10S2	**ASCENSION HYDR**	**48.57**	**16**	T	T	21 26 09.7	
	baz=31,slow=74,SNR=51						
H10S3	**ASCENSION HYDR**	**48.57**	**16**	T	T	21 26 12.0	
	baz=189,slow=74,SNR=33						
PSGCX	**Pisagua**	**48.96**	**301**	lAmb	lAmb	20 33 42.2	
	comp=Z,38nm,0.6s						
LBTB	**Lobatse**	**49.01**	**72**	LR	LR	20 51 16.2	
	comp=Z,336nm,18.0s,baz=200,slow=32						
LBTB	**Lobatse**	**49.01**	**72**	lAmb	lAmb	20 33 33.8	
	comp=Z,79nm,0.8s						
LBTB	**Lobatse**	**49.01**	**72**	P	**P**	**20 33 32.5**	**+0.1**
LBTB				PcP	**PcP**	**20 34 54.1**	**-1.0**
KGCAE	**Kacgae**	**49.02**	**67**	*i* P	**P**	**20 33 32.4**	**-0.3**
KGCAE	**Kacgae**	**49.02**	**67**		**P**	**20 33 32.5**	**-0.2**
H10N1	**ASCENSION HYDR**	**49.68**	**16**	T	T	21 27 35.9	
	baz=186,slow=77,SNR=16						
H10N3	**ASCENSION HYDR**	**49.69**	**16**	T	T	21 27 36.5	
	baz=186,slow=77,SNR=41						
H10N2	**ASCENSION HYDR**	**49.70**	**16**	T	T	21 27 38.5	
	baz=186,slow=77,SNR=22						
GRTLG	**Ghanzi**	**49.77**	**65**	*i* P	**P**	**20 33 37.5**	**-0.8**
GRTLG	**Ghanzi**	**49.77**	**65**	lAmb	lAmb	20 33 39.6	
	comp=Z,35nm,0.9s						
TSUM	**Tsumeb**	**49.83**	**60**	LR	LR	20 51 13.5	
	comp=Z,214nm,19.8s,baz=232,slow=32						
TSUM	**Tsumeb**	**49.83**	**60**		**P**	**20 33 39.1**	**+0.4**
TSUM	**Tsumeb**	**49.83**	**60**	P	**P**	**20 33 39.1**	**+0.4**
TSUM				pP	**pP**	**20 33 58.0**	**-1.3**
TSUM				PcP	**PcP**	**20 34 58.4**	**+0.2**
KDWAN	**Kaudwane**	**49.85**	**70**	*i* P	**P**	**20 33 38.2**	**-0.7**
PB12	**IPOC Station P**	**49.91**	**301**	lAmb	lAmb	20 35 00.1	
	comp=Z,43nm,0.7s						
NBMA	**Muriti-CE**	**50.09**	**344**	*e*P	**P**	**20 33 41.8**	**+1.1**
PB18	**Visviri**	**50.40**	**303**	lAmb	lAmb	20 33 53.0	
	comp=Z,77nm,0.8s						
SMTB	**Santa Maria do**	**50.41**	**333**	*e*P	**P**	**20 33 44.4**	**+1.4**
LPHEP	**Lephephe**	**50.49**	**71**	*i* P	**P**	**20 33 43.3**	**-0.4**
LPHEP	**Lephephe**	**50.49**	**71**	lAmb	lAmb	20 33 45.3	
	comp=Z,91nm,1.1s						
PDRB	**Porto dos Gac**	**50.56**	**321**	*e*P	**P**	**20 33 44.5**	**+0.4**
NBPV	**Pedro Velho**	**50.59**	**349**	*e*P	**P**	**20 33 45.4**	**+1.0**
VILB	**Vilhena**	**50.59**	**316**	*e*P	**P**	**20 33 44.7**	**+0.2**
LPAZ	**La Paz**	**50.92**	**305**	P	**P**	**20 33 49.2**	**+1.7**
	comp=Z,180nm,0.5s,baz=135,slow=4.9,SNR=978						
LPAZ				ScP	**ScP**	**20 38 48.5**	**-2.1**
	comp=Z,5.7nm,0.8s,baz=121,slow=3.8,SNR=5.8						
LPAZ	**La Paz**	**50.92**	**305**	*e*P	**P**	**20 33 47.3**	**-0.3**
LPAZ	**La Paz**	**50.92**	**305**	P	**P**	**20 33 49.0**	**+1.4**
LPAZ				pP	**pP**	**20 34 08.4**	**-0.6**
LPAZ				sP	**sP**	**20 34 18.3**	**-0.6**
LPAZ				PcP	**PcP**	**20 35 04.1**	**+1.3**
LPAZ				ScP

OTAV Otavalo 70.19 304 P **P** **20 35 59.4 +0.9**
OTAV Otavalo 70.19 304 P **P** **20 35 59.4 +0.9**
OTAV pmax pmax
comp=Z,191nm,1.3s
OTAV Otavalo 70.19 304 P **P** **20 35 59.5 +1.1**
comp=Z,1μmcomp=Z,105nm,1.4s
OTAV Otavalo 70.19 304 *eP* **P** **20 35 59.8 +1.3**
OTAV Otavalo 70.19 304 P **P** **20 36 00.0 +1.6**
TULM Tuicn-Chalpat 70.30 304 P **P** **20 36 01.1 +1.9**
CMBC Cumbal 70.52 304 P **P** **20 36 03.3 +2.8**
GARC Garzon, Huila 70.59 307 P **P** **20 36 00.7 +0.1**
comp=Z,3μmcomp=Z,274nm,0.6s
BBAC Balboa, Cauca 71.22 306 P **P** **20 36 04.8 +0.4**
comp=Z,1μmcomp=Z,93nm,1.3s
POPC Popayan, Colom 71.42 306 P **P** **20 36 06.3 +0.6**
comp=Z,1μmcomp=Z,152nm,1.5s
PRAC Prado 71.69 309 P **P** **20 36 07.3 +0.3**
comp=Z,2μmcomp=Z,233nm,1.6s
ORTC Ortega, Tolima 72.02 308 P **P** **20 36 09.2 +0.2**
comp=Z,4μmcomp=Z,510nm,1.0s
JAMC Jamundi, Valle 72.02 307 P **P** **20 36 09.0 -0.2**
comp=Z,1μmcomp=Z,80nm,1.1s
MBAR Mbarara 72.27 62 *i* P **P** **20 36 12.1 +1.4**
MBAR pmax pmax
comp=Z,11nm,1.5s
ROSC El Rosal 72.45 310 P **P** **20 36 12.8 +0.8**
comp=Z,76nm,0.8s,baz=166,slow=4.7,SNR=29
comp=Z,76nm,0.8s
ROSC El Rosal 72.45 310 IAmb IAmb 20 36 14.1
comp=Z,97nm,0.9s
GR1C Gorgona, Isla 72.50 305 P **P** **20 36 12.9 +1.1**
YOTC Yotoco, Valle 72.56 307 P **P** **20 36 11.7 -0.6**
comp=Z,936nmcomp=Z,107nm,1.0s
RUSC La Rusia 72.88 311 P **P** **20 36 13.9 -0.7**
comp=Z,2μmcomp=Z,152nm,1.4s
GUY2C Guyana, Caldas 73.25 309 P **P** **20 36 15.9 -0.9**
comp=Z,871nmcomp=Z,94nm,1.1s
PLMC San Jos del P 73.36 308 P **P** **20 36 16.2 -0.7**
comp=Z,3μmcomp=Z,296nm,1.1s
TORD Torodi Ar. Bea 73.52 29 P **P** **20 36 18.4 +0.7**
comp=Z,79nm,0.7s,baz=204,slow=8.0,SNR=456
comp=Z,79nm,0.7s
PAMC Pamplona, Colo 74.03 312 P **P** **20 36 20.9 -0.5**
comp=Z,393nmcomp=Z,43nm,0.7s
CBOC Ciudad Bolivar 74.10 308 P **P** **20 36 20.1 -1.3**
comp=Z,834nmcomp=Z,75nm,1.1s
GRGR Grenville 74.42 325 P **P** **20 36 23.3 +0.3**
comp=Z,3μmcomp=Z,296nm,1.0s
SDV Santo Domingo 74.61 315 P **P** **20 36 25.2 +0.8**
comp=Z,61nm,0.7s,baz=159,slow=5.6,SNR=84
comp=Z,61nm,0.7s
SDV Santo Domingo 74.61 315 P **P** **20 36 24.7 +0.4**
SDV Santo Domingo 74.61 315 P **P** **20 36 24.8 +0.4**
comp=Z,1μmcomp=Z,127nm,1.0s
SDV Santo Domingo 74.61 315 *eP* **P** **20 36 24.8 +0.4**
DBBC Dabeiba 75.22 309 P **P** **20 36 27.6 -0.1**
UREC San Jos de Ur 75.58 310 P **P** **20 36 28.8 -0.9**
comp=Z,1μmcomp=Z,100nm,1.2s
PTAC Punta Ardita, 76.03 307 P **P** **20 36 32.8 +0.6**
comp=Z,3μmcomp=Z,253nm,1.2s
APZ The Paps 76.10 190 P **P** **20 36 34.9 +2.5**
APAC Apartado, Choc 76.17 309 P **P** **20 36 34.1 +1.1**
comp=Z,155nm,1.1s
CXM Morne La Croix 76.78 326 IAmb IAmb 20 36 39.1
comp=Z,318nm,1.5s
ARGC Ariguani, Magd 76.94 312 P **P** **20 36 37.9 +0.5**
comp=Z,3μmcomp=Z,326nm,1.0s
SJCC San Jacinto, C 77.37 311 P **P** **20 36 40.0 +0.2**
comp=Z,2μmcomp=Z,218nm,1.1s
MLZ Mavora Lakes 77.53 191 P **P** **20 36 42.0 +1.6**
GDSD La Dsirade Is 78.17 326 IAmb IAmb 20 36 47.2
comp=Z,104nm,0.9s
H05N1 Guadeloupe/Mar 78.17 326 P **P** **20 36 45.2 +1.1**
SNR=9.7
MSZ Milford Sound 78.24 191 P **P** **20 36 47.6 +3.3**
MQZ McQueen's Vall 78.63 194 P **P** **20 36 48.6 +2.2**
WVZ Waitaha Valley 79.50 193 P **P** **20 36 52.6 +1.4**
LTZ Lake Taylor 79.59 194 P **P** **20 36 54.5 +2.6**
KHZ Kahutara 79.77 195 P **P** **20 36 54.1 +1.4**
THZ Tophouse 80.50 195 P **P** **20 36 59.1 +2.3**
TAU Tasmania Unive 80.64 176 P **P** **20 36 58.4 +1.0**
TAU IAmb IAmb 20 36 59.4
comp=Z,37nm,0.8s
TAU Tasmania Unive 80.64 176 P **P** **20 36 58.4 +1.0**
TAU pmax pmax
comp=Z,37nm,0.8s
TAU Tasmania Unive 80.64 176 P **P** **20 36 58.4 +1.0**
DSZ Denniston Nort 80.67 194 P **P** **20 36 58.6 +0.9**
TUWZ Tuamarina 80.68 196 P **P** **20 37 01.8 +4.2**
TCW Tory Channel 80.84 196 P **P** **20 37 00.3 +1.8**
MRNZ Matariki Terra 80.88 195 P **P** **20 37 00.4 +1.7**
HOWZ Holdsworth Sta 80.95 197 P **P** **20 37 00.6 +1.5**
NNZ Nelson 80.97 195 P **P** **20 37 00.8 +1.6**
BFZ Birch Farm 81.05 198 P **P** **20 37 02.1 +2.5**
TKNZ Takaka Hill 81.21 195 P **P** **20 37 01.0 +0.6**
DUWZ D'Urville Isla 81.30 196 P **P** **20 37 02.4 +1.5**
HUMP Col San Antoni 81.41 323 IAmb IAmb 20 37 03.8
comp=Z,60nm,0.9s
DVHZ Dannevirke 81.43 198 P **P** **20 37 04.1 +2.4**
QRZ Quartz Range 81.47 195 P **P** **20 37 02.0 +0.2**
SJG San Juan 81.48 322 P **P** **20 37 01.7 -0.3**
comp=Z,31nm,0.8s,baz=71,slow=3.6,SNR=15
comp=Z,31nm,0.8s
SJG San Juan 81.48 322 P **P** **20 37 01.0 -1.0**
SJG IAmb IAmb 20 37 02.8
comp=Z,53nm,0.9s
SJG San Juan 81.48 322 P **P** **20 37 01.0 -1.0**
SJG pmax pmax
comp=Z,53nm,1.0s
SJG San Juan 81.48 322 P **P** **20 37 01.2 -0.8**
comp=Z,28nm,1.1s
MLPR Magueyes Islan 81.66 322 IAmb IAmb 20 37 03.7
comp=Z,118nm,1.1s
ECPR Experimental S 81.75 322 IAmb IAmb 20 37 04.0
comp=Z,97nm,1.7s
UUPR Utuado, UPR, P 81.81 322 IAmb IAmb 20 37 03.8
comp=Z,28nm,0.7s
PRSN Puerto Rico Se 81.92 322 IAmb IAmb 20 37 05.6
comp=Z,71nm,1.0s
JTS Las Juntas de 82.03 302 P **P** **20 37 05.7 +0.6**
comp=Z,43nm,0.8s,baz=21,slow=2.3,SNR=21
comp=Z,43nm,0.8s
JTS Las Juntas de 82.03 302 P **P** **20 37 05.6 +0.6**
JTS IAmb IAmb 20 37 08.0
comp=Z,79nm,1.1s
JTS Las Juntas de 82.03 302 *c i* P **P** **20 37 06.0 +1.0**
JTS pmax pmax
comp=Z,77nm,1.1s
BKZ Black Stump Fm 82.48 198 P **P** **20 37 10.4 +3.2**
VRZ Vera Road 82.81 197 P **P** **20 37 09.2 +0.4**
RTZ Ruatahuna 82.93 199 P **P** **20 37 11.3 +1.7**
MWZ Matawai 83.11 199 P **P** **20 37 13.1 +2.7**
URZ Urewera 83.26 199 P **P** **20 37 13.4 +2.3**
HIZ Hauiti 83.39 197 P **P** **20 37 13.0 +1.2**
TAM Tamanrasset 83.75 30 P **P** **20 37 15.0 +1.1**
TAM Tamanrasset 83.75 30 P **P** **20 37 15.0 +1.1**
TAM pmax pmax
comp=Z,27nm,1.1s
SDDR Presa de Saban 84.10 318 IAmb IAmb 20 37 17.1
comp=Z,26nm,0.8s
SIUN Universidad Ur 84.95 304 IAmb IAmb 20 37 21.5
comp=Z,87nm,1.2s
WCZ Waipu Caves 85.99 197 P **P** **20 37 25.4 +0.5**
TGUH Tegucigalpa,Un 86.41 302 IAmb IAmb 20 37 28.9
comp=Z,54nm,1.0s
TBI Tubuai 86.83 231 *e* LR LR 21 05 03.2
comp=Z,958nm,27.2s
TBI *e* LR LR 21 05 12.3
comp=Z,2μm,30.0s
NMDO Nuevo Mundo 86.93 316 IAmb IAmb 20 37 32.5
comp=Z,89nm,1.3s
CHIV Chivirico 86.96 314 IAmb IAmb 20 37 32.3
comp=Z,91nm,1.1s
MTO3 Montecristo 87.69 301 IAmb IAmb 20 37 34.9
comp=Z,57nm,0.8s
PMOZ Porto Moniz, M 89.54 8 *eP* **P** **20 37 45.2 +3.5**
CAIB Caibarien 90.44 313 IAmb IAmb 20 37 49.0
comp=Z,39nm,1.1s
MD31 MD31 91.16 18 IAmb IAmb 20 37 53.6
comp=Z,42nm,1.1s
STKA Stephens Creek 91.23 170 P **P** **20 37 50.9 +1.0**
comp=Z,3.9nm,0.6s,baz=141,slow=4.9,SNR=18
comp=Z,3.9nm,0.6s
STKA Stephens Creek 91.23 170 P **P** **20 37 50.9 +1.0**
STKA Stephens Creek 91.23 170 *i* P **P** **20 37 51.0 +1.1**
PPT2 Papeete2 91.96 233 *e* LR LR 21 07 30.7
comp=Z,942nm,28.8s
PPT2 *e* LR LR 21 07 34.8
comp=Z,645nm,31.2s
PPT Papeete 91.97 233 LR LR 21 09 29.8
comp=Z,169nm,21.4s,baz=174,slow=29
TEIG Tepich 92.24 304 P **P** **20 37 55.4 +0.9**
TEIG Tepich 92.24 304 P **P** **20 37 55.1 +0.7**
PFVI Vila Bisbo 94.71 14 *eP* **P** **20 38 09.0 +3.7**
MORF Marmelete 94.90 14 *eP* **P** **20 38 08.7 +2.4**
MORF IAmb IAmb 20 38 09.7
comp=Z,15nm,1.0s
MORF Marmelete 94.90 14 *eP* **P** **20 38 09.3 +3.0**
MORF *i* IAmb IAmb 20 38 14.9
comp=Z,37nm,1.7s
MORF Marmelete 94.90 14 *eP* **P** **20 38 08.7 +2.4**
PBDV Barranco-do-Ve 94.94 15 *eP* **P** **20 38 10.5 +4.0**
TAOE Nuku Hiva Isla 95.07 246 *e* LR LR 21 08 54.3
comp=Z,197nm,30.4s
PTEO Sao Teotonio 95.13 14 *eP* **P** **20 38 10.4 +3.1**
PVAQ Vaqueiros 95.13 15 *eP* **P** **20 38 10.2 +2.9**
PVAQ *i* IAmb IAmb 20 38 11.1
comp=Z,43nm,1.4s
PCVE Castro Verde 95.31 15 *eP* **P** **20 38 10.8 +2.7**
PCVE *i* IAmb IAmb 20 38 20.1
comp=Z,34nm,1.8s
MESJ Messejana 95.49 15 *eP* **P** **20 38 11.4 +2.5**
MESJ IAmb IAmb 20 38 12.9
comp=Z,32nm,1.3s
MESJ Messejana 95.49 15 IAmb IAmb 20 38 12.6
comp=Z,24nm,1.2s
MESJ Messejana 95.49 15 *eP* **P** **20 38 11.6 +2.6**
MESJ Messejana 95.49 15 *eP* **P** **20 38 11.4 +2.5**
PBEJ Beja 95.72 15 *eP* **P** **20 38 12.5 +2.5**
PBEJ *i* IAmb IAmb 20 38 13.7
comp=Z,22nm,1.5s
PBAR Barrancos 95.99 16 *eP* **P** **20 38 14.6 +3.4**
PBAR *i* IAmb IAmb 20 38 21.0
comp=Z,22nm,1.6s
MOE Montemor 96.14 14 *eP* **P** **20 38 14.6 +2.7**
MOE *i* IAmb IAmb 20 38 15.4
comp=Z,40nm,1.7s
EVO Evora 96.20 15 *eP* **P** **20 38 15.3 +3.1**
EVO *i* IAmb IAmb 20 38 20.6
comp=Z,13nm,1.4s
PARRA Arraiolos 96.47 15 *eP* **P** **20 38 16.4 +3.0**
PARRA *i* IAmb IAmb 20 38 18.8
comp=Z,27nm,1.9s
PMTG Montargil 96.69 14 *eP* **P** **20 38 16.8 +2.4**
PMTG *i* IAmb IAmb 20 38 18.9
comp=Z,18nm,2.1s
PMRV Marv??o 97.16 15 *eP* Pdif 20 38 20.1 +3.5
ESDC Sonseca Array 97.94 18 P Pdif 20 38 21.4 +1.3
comp=Z,2.8nm,0.9s,baz=195,slow=4.5,SNR=12
comp=Z,2.8nm,0.9s
ESDC Sonseca Array 97.94 18 P Pdif 20 38 20.9 +0.9
ASAR Alice Springs 98.31 162 P Pdif 20 38 22.9 +0.5
comp=Z,2.1nm,0.6s,baz=179,slow=3.9,SNR=21
ASAR PP **PP** **20 42 19.9 -2.3**
comp=Z,2.2nm,1.0s,baz=174,slow=5.9,SNR=4.5
ASAR PKKPbc **PKKPdf** **20 54 51.1 -0.8**
comp=Z,2.0nm,0.8s,baz=354,slow=2.7,SNR=15
comp=Z,2.1nm,0.6s
ASAR Alice Springs 98.31 162 **P** **20 38 22.4 0.0**
PBRG Braganca 99.59 15 *eP* **Pdif** **20 38 29.4 +2.1**
WRA Warramunga Arr 102.03 162 P **Pdif** **20 38 38.7 -0.2**
comp=Z,0.7nm,0.7s,baz=199,slow=4.7,SNR=6.8
WRA S **SKSac** **20 49 02.7 -7.6**
comp=Z,1.4nm,1.0s,baz=220,slow=6.1,SNR=5.2
WRA PKKPbc **PKKPbc** **20 54 41.9 +2.2**
comp=Z,1.7nm,0.5s,baz=356,slow=2.8,SNR=25
TXAR Lajitas Array 107.27 297 PKiKP **PKiKP** **20 43 10.8 +0.5**
comp=Z,0.5nm,0.9s,baz=142,slow=6.3,SNR=3.5
TXAR PP **PP** **20 43 29.4 -1.0**
comp=Z,0.4nm,0.6s,baz=108,slow=4.1,SNR=4.4
BRTR Keskin Array B 108.74 45 PP **PP** **20 43 38.6 -2.5**
comp=Z,1.0nm,1.0s,baz=224,slow=6.9,SNR=4.2
HYB Hyderabad 112.82 93 *e* PKiKP **PKiKP** **20 43 23.2 +2.2**
HYB *ep* PKiKP **pPKiKP** **20 43 44.3 -1.0**
HYB *e* PP **PP** **20 44 12.4 +2.1**
STHS Stebnicka Huta 113.01 32 *e* PP **PP** **20 44 17.5 +5.9**
ANMO Albuquerque 113.21 298 *c i* PKiKP **PKiKP** **20 43 21.7 +0.2**
ANMO pmax pmax
comp=Z,3.0nm,1.3s
EKA Eskdalemuir Ar 113.32 14 PKKPbc PKKPbc 20 54 06.3 +0.5
comp=Z,0.3nm,0.4s,baz=358,slow=2.6,SNR=7.5
SCHQ Schefferville 115.84 336 PKP **PKPdf** **20 43 25.1 -0.5**
comp=Z,3.8nm,0.6s,baz=57,slow=2.6,SNR=12
SCHQ PP **PP** **20 44 27.5 -3.9**
comp=Z,3.0nm,0.8s,baz=158,slow=9.2,SNR=4.0
SCHQ SKP **SKPdf** **20 46 50.4 -2.2**
comp=Z,1.6nm,0.8s,baz=238,slow=13,SNR=4.7
KBZ Khabaz 115.84 49 PKP **PKiKP** **20 43 26.2 +0.3**
comp=Z,1.4nm,0.9s,baz=184,slow=2.0,SNR=3.1
KBZ Khabaz 115.84 49 *i* PKiKP **PKiKP** **20 43 27.1 +1.2**
KIV Kislovodsk 115.94 49 *i* PKiKP **PKPdf** **20 43 26.2 -0.1**
KIV pmax pmax
comp=Z,3.0nm,1.0s
AKASG Malin Array Be 116.60 36 PKP **PKPdf** **20 43 26.7 -0.5**
comp=Z,0.7nm,0.5s,baz=242,slow=1.7,SNR=5.3
AKASG Malin Array Be 116.60 36 *c i* PKiKP **PKPdf** **20 43 26.2 -1.0**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
MNK Minsk 119.45 33 *i* PKP **PKiKP** **20 43 32.9 +0.3**
comp=E,13nm,1.0s
MNK *i* PKP **PKiKP** **20 43 32.9 +0.3**
comp=N,7.0nm,1.0s
MNK *i* PKP **PKiKP** **20 43 32.9 +0.3**
comp=Z,12nm,0.8s,baz=211
MNK *i* pPKP **pPKPdf** **20 43 55.4 -1.5**
MNK *i* PP **PP** **20 44 54.5 -1.9**
MNK *i* PPP PPP 20 47 26.5
MNK *i* SKS **SKSdf** **20 50 37.5 +1.8**
MNK *i* SS **SS** **21 01 11.4 -0.7**
MNK *i* SSS SSS 21 05 36.8
MNK *i* LQ LQ 21 27 40.5
MNK Minsk 119.45 33 *i* PKiKP **PKiKP** **20 43 32.8 +0.3**
MNK *i* 20 43 55.3
MNK *i* 20 44 54.5
MNK *i* PPP PPP 20 47 26.4
MNK *i* 20 50 37.5
MNK *i* SS SS 21 01 11.4 -0.7
MNK *i* SSS SSS 21 05 36.7
MNK pmax pmax
comp=N,7.0nm,1.0s
MNK pmax pmax
comp=E,13nm,1.0s
MNK pmax pmax
comp=Z,12nm,0.8s
MNK MLR MLR
comp=Z,65nm,21.0s
SIJI Sorong 119.94 154 PKP **PKiKP** **20 43 35.6 +0.6**
comp=Z,2.5nm,0.5s,baz=354,slow=8.5,SNR=5.0
SIJI SKP **SKPdf** **20 46 59.5 -2.4**
comp=Z,2.6nm,0.7s,baz=15,slow=4.5,SNR=5.1
HFS Hagfors 120.81 22 PKP **PKPdf** **20 43 33.8 -1.2**
comp=Z,2.3nm,0.7s,baz=191,slow=3.0,SNR=6.3
HFS PP **PP** **20 44 58.1 -7.6**
comp=Z,1.3nm,0.7s,baz=171,slow=3.9,SNR=2.8
HFS PKKPbc **PKKPbc** **20 53 38.8 -0.4**
comp=Z,0.7nm,0.4s,baz=79,slow=7.7,SNR=5.4
ULM Lac du Bonnet 120.86 316 PKP **PKPdf** **20 43 34.8 -0.6**
comp=Z,4.4nm,0.5s,baz=111,slow=2.3,SNR=14
ULM PP **PP** **20 44 59.0 -7.2**
comp=Z,6.6nm,1.0s,baz=136,slow=6.2,SNR=5.3
ULM Lac du Bonnet 120.86 316 *i* PKiKP **PKPdf** **20 43 35.0 -0.4**
PDAR Pinedale Array 120.86 302 PKhKP PKPpre 20 43 22.5
comp=Z,0.3nm,0.6s,baz=105,slow=4.0,SNR=4.5
PDAR PKP **PKPdf** **20 43 35.5 -0.4**
comp=Z,0.9nm,0.4s,baz=111,slow=5.0,SNR=23
PDAR PP **PP** **20 45 05.8 -0.8**
comp=Z,2.6nm,1.1s,baz=143,slow=5.4,SNR=7.5
PDAR PKKPbc **PKKPab** **20 53 39.1 0.0**
comp=Z,0.4nm,0.6s,baz=52,slow=2.4,SNR=3.8
NB2 NORSAR Subarra121.14 21 PKPdf **PKiKP** **20 43 35.8 0.0**
comp=Z,1.1nm,1.2s,baz=202,slow=1.9
NB2 NORSAR Subarra121.14 21 PKP **PKKPbc** **20 53 39.8 +1.8**
comp=Z,0.5nm,0.6s,baz=23,slow=4.3
NB2 NORSAR Subarra121.14 21 PKPdf **PKiKP** **20 43 35.8 0.0**
NOA NORSAR Array B 121.14 21 PKP **PKPdf** **20 43 35.4 -0.3**
comp=Z,3.2nm,0.8s,baz=206,slow=1.9,SNR=9.5
NOA SKP **SKPdf** **20 47 00.7 -1.8**
comp=Z,0.6nm,0.7s,baz=204,slow=1.7,SNR=3.6
NOA PKKPbc **PKKPab** **20 53 36.8 +0.7**
comp=Z,0.9nm,0.8s,baz=27,slow=4.0,SNR=3.8
NVAR Mina Array Bea 121.84 292 PKP **PKiKP** **20 43 39.1 +0.9**
comp=Z,5.0nm,0.8s,baz=146,slow=3.3,SNR=19

ANGG Ammassalik, Gr 122.27 355 *i* P **PKiKP** **20 43 40.1 +2.4**
OBN Obninsk 122.73 38 *i* PKiKP **PKPdf** **20 43 38.9 +0.1**
OBN pmax pmax
comp=Z,9.0nm,0.9s
BELG Belogornoye 124.64 46 *i* PKiKP **PKiKP** **20 43 42.9 0.0**
CMAR Chiang Mai Arr 124.65 111 PKP **PKPdf** **20 43 43.9 +0.2**
comp=Z,4.1nm,0.8s,baz=232,slow=3.6,SNR=23
CMAR PP **PP** **20 45 27.2 -4.5**
comp=Z,1.6nm,1.1s,baz=232,slow=6.0,SNR=4.8
CMAR PKKPbc **PKKPbc** **20 53 23.4 -0.1**
comp=Z,0.4nm,0.4s,baz=26,slow=3.5,SNR=4.6
CMAR Chiang Mai Arr 124.65 111 *c i* PKiKP **PKiKP** **20 43 44.2 +0.2**
CMAR pmax pmax
comp=Z,4.0nm,0.8s
SFJD Kangerlussuaq 124.65 349 *i* P **PKiKP** **20 43 42.4 0.0**
FINES FINESS Array B 124.86 28 PKP **PKPdf** **20 43 42.7 0.0**
comp=Z,20nm,0.9s,baz=172,slow=2.2,SNR=48
FINES SKP **SKPdf** **20 47 08.3 -1.2**
comp=Z,3.4nm,1.0s,baz=319,slow=5.3,SNR=3.8
CHTO Chiang Mai 124.94 110 PKP **PKiKP** **20 43 45.4 +0.8**
SCO Scoresbysund 126.93 2 *i* P **PKiKP** **20 43 48.0 +1.0**
KSH2 Kashi 128.06 75 PKP **PKPdf** **20 43 49.8 0.0**
KSH2 sPKP sPKPdf 20 44 29.0 +5.6
KSH2 pmax pmax
comp=Z,11nm,0.8s
KLMR Klimovskoe 128.24 35 *e* PKiKP **PKPdf** **20 43 48.2 -1.0**
KLMR pmax pmax
comp=Z,45nm,1.3s
SAATT Saattut 128.43 350 *i* P **PKPdf** **20 43 49.4 +0.2**
SUMG Summit 129.24 356 *i* P **PKiKP** **20 43 51.7 -0.3**
KIRV Kirov 129.93 42 *c i* PKiKP **PKiKP** **20 43 53.2 0.0**
AAK Ala-Archa 130.00 71 SKPbc **SKPab** **20 47 05.7 -1.7**
comp=Z,12nm,0.9s,baz=218,slow=4.7,SNR=21
AAK Ala-Archa 130.00 71 P **SKPab** **20 47 05.9 -1.5**
SNR=14
AAK Ala-Archa 130.00 71 *c i* PKiKP **PKiKP** **20 43 54.2 0.0**
AAK pmax pmax
comp=Z,5.0nm,0.6s
UPNV Upernavik 130.77 349 *i* P **PKPdf** **20 43 53.7 0.0**
DBG Daneborg 130.80 2 *i* P **PKiKP** **20 43 54.8 +0.2**
ARCES ARCESS Array B 131.47 22 PKP **PKPdf** **20 43 54.8 -0.3**
comp=Z,8.9nm,0.8s,baz=213,slow=2.4,SNR=15
ARCES SKPbc **SKPbc** **20 47 08.8 -3.2**
comp=Z,8.1nm,0.8s,baz=191,slow=5.8,SNR=6.9
ARTI Arti 131.88 48 *c i* PKiKP **PKiKP** **20 43 57.8 +0.5**
ARTI pmax pmax
comp=Z,15nm,1.3s
PZH PanZhiHua 132.72 108 PKP **PKiKP** **20 44 00.8 +0.7**
DAG Danmarks Havn 133.31 3 *i* P **PKPdf** **20 43 57.8 -0.6**
BORK Borovoye 134.94 58 *c i* PKiKP **PKiKP** **20 44 03.1 -0.5**
BORK pmax pmax
comp=Z,4.0nm,1.0s
BVAR Borovoye Array 134.96 58 PKP **PKPdf** **20 44 02.3 +0.1**
comp=Z,3.9nm,0.8s,baz=248,slow=1.6,SNR=15
BVAR SKPbc **SKPbc** **20 47 21.6 -2.6**
comp=Z,3.8nm,0.8s,baz=211,slow=2.6,SNR=8.2
TULEG Thule 135.63 347 *i* P **PKPdf** **20 44 03.2 +0.4**
YKA Yellowknife Ar 136.79 317 PKhKP PKPpre 20 43 52.3
comp=Z,0.2nm,0.4s,baz=175,slow=15,SNR=7.1
YKA PKP **PKPdf** **20 44 05.6 +0.4**
comp=Z,4.7nm,0.5s,baz=124,slow=1.5,SNR=35
YKA PP **PP** **20 46 44.2 -5.9**
comp=Z,2.4nm,1.1s,baz=129,slow=5.0,SNR=7.8
YKA SKPbc **SKPbc** **20 47 26.7 -2.8**
comp=Z,14nm,0.9s,baz=121,slow=1.2,SNR=40
MK31 Makanchi Array 136.90 72 *c i* PKiKP **PKPdf** **20 44 05.8 -0.2**
MKAR Makanchi Array 136.90 72 PKhKP PKPpre 20 43 56.0
comp=Z,0.6nm,0.7s,baz=208,slow=4.5,SNR=5.7
MKAR PKP **PKPdf** **20 44 06.2 +0.2**
comp=Z,1.6nm,0.7s,baz=267,slow=2.2,SNR=11
MKAR SKPbc **SKPbc** **20 47 27.4 -3.1**
comp=Z,2.2nm,0.7s,baz=244,slow=1.8,SNR=8.3
MKAR Makanchi Array 136.90 72 *c i* PKiKP **PKPdf** **20 44 06.1 +0.1**
MKAR pmax pmax
comp=Z,2.0nm,0.7s
SPITS Spitsbergen Ar 137.16 12 PKhKP PKPpre 20 43 55.4
comp=Z,14nm,1.0s,baz=161,slow=5.3,SNR=5.8
SPITS PKP **PKPdf** **20 44 06.2 +0.6**
comp=Z,7.5nm,0.7s,baz=161,slow=5.3,SNR=11
KURBB Kurchatov Arra 137.39 65 PKhKP PKPpre 20 43 57.0
comp=Z,1.6nm,0.9s,baz=240,slow=3.2,SNR=6.7
KURBB SKPbc **SKPbc** **20 47 29.7 -2.0**
comp=Z,3.6nm,0.7s,baz=234,slow=3.4,SNR=13
KURK Kurchatov 137.50 65 *c i* PKiKP **PKPdf** **20 44 05.7 -1.2**
KURK pmax pmax
comp=Z,9.0nm,1.7s
H02S2 DAWSON INLET T 139.10 298 PKP **PKPdf** **20 44 10.3 +0.6**
SNR=3.0
LZDM Lanzhou Array 141.11 101 SKPbc **SKPbc** **20 47 39.9 -3.0**
comp=Z,1.2nm,0.3s,baz=236,slow=6.9,SNR=4.0
GTA2 Gaotai 141.51 93 PKP **PKPdf** **20 44 15.5 +0.7**
XAN Xi'an 142.45 108 PKP **PKPdf** **20 44 13.5 -3.1**
ZALV Zalesovo Beam 142.47 64 PKhKP PKPpre 20 44 11.4
comp=Z,1.6nm,0.6s,baz=251,slow=4.5,SNR=8.3
ZALV SKPbc **SKPbc** **20 47 42.0 -3.2**
comp=Z,1.4nm,0.6s,baz=269,slow=4.4,SNR=4.3
M31M Drury Creek, Y 144.57 310 P PKPbc 20 44 18.7 +0.4
baz=115
LYN LuoYang 144.69 111 PKP **PKPdf** **20 44 20.0 -0.4**
O30N Mendenhall 144.69 307 **PKPdf** **20 44 19.7 0.0**
O30N Mendenhall 144.69 307 P **PKPdf** **20 44 19.6 0.0**
baz=116,SNR=92
P30M Million Dollar 144.80 305 P **PKPdf** **20 44 20.2 +0.4**
baz=116
N31M Braeburn, Yuko 144.86 308 **PKPdf** **20 44 19.9 0.0**
N31M Braeburn, Yuko 144.86 308 P **PKPdf** **20 44 19.7 -0.1**
baz=115
A36M Sachs Harbour 144.87 328 P **PKPdf** **20 44 19.9 +0.4**
baz=108,SNR=118
HYT Haines Junctio 145.34 306 **PKPab** **20 44 21.8 +0.5**
HYT Haines Junctio 145.34 306 P **PKPab** **20 44 22.0 +0.8**
baz=115,SNR=90
N30M Aishikik Lake 145.42 307 P **PKPab** **20 44 22.3 +0.8**
baz=114
O29M Mount Kennedy 145.60 305 P **PKPab** **20 44 22.3 0.0**
baz=115
M30M Minto, Yukon 145.75 309 P **PKPab** **20 44 22.7 +0.1**
baz=113,SNR=100
MAYO Mayo, Yukon 145.76 311 P **PKPab** **20 44 22.8 +0.2**
baz=112
YUK6 Outpost Mounta 145.77 306 P **PKPab** **20 44 23.2 +0.2**
baz=114,SNR=22
NJ2 Nanjing 145.83 122 *eP* **PKPab** **20 44 24.3 +0.6**
NJ2 pmax pmax
comp=Z,33nm,0.6s
H31M Peel River 145.94 315 P **PKPbc** **20 44 22.7 +0.2**
baz=110,SNR=132
YUK4 Talbot Arm 146.06 307 P **PKPab** **20 44 24.1 0.0**
baz=113,SNR=59
F31M Tsiigehtchic 146.25 318 P **PKPbc** **20 44 23.6 +0.3**
baz=108,SNR=40
PINM Pinnacle 146.28 304 P **PKPab** **20 44 24.5 -0.2**
baz=114,SNR=37
G31M Satah River 146.28 317 P **PKPbc** **20 44 23.8 +0.4**
baz=108,SNR=120
J30M Hart River 146.29 313 P **PKPab** **20 44 24.4 -0.3**
baz=110,SNR=26
M29M Somme Creek 146.41 309 P **PKPab** **20 44 25.0 -0.3**
baz=112,SNR=131
INK Inuvik 146.43 320 P **PKPbc** **20 44 24.3 +0.5**
baz=107,SNR=66
L29M L29M 146.51 310 P **PKPab** **20 44 25.2 -0.3**
baz=111,SNR=230
K29M Barlow Dome 146.52 311 P **PKPbc** **20 44 25.0 +0.6**
baz=111
O28M Mount Upton 146.52 305 P **PKPab** **20 44 25.7 -0.2**
baz=113
I30M Mount Dempster 146.53 314 P **PKPbc** **20 44 24.9 +0.5**
baz=110,SNR=148
YUK8 Steele Glacier 146.53 306 P **PKPab** **20 44 25.6 -0.4**
baz=113,SNR=33
J29N Klondike Camp 147.02 312 PKPdf **PKPbc** **20 44 26.3 +0.5**
J29N Klondike Camp 147.02 312 P **PKPbc** **20 44 26.6 +0.8**
baz=109,SNR=12
G30M tAoh Zraii Nji 147.03 317 P **PKPbc** **20 44 25.8 +0.1**
baz=107,SNR=48
YUK3 Moose Creek 147.03 307 P **PKPbc** **20 44 26.4 +0.3**
baz=112,SNR=37
EPYK Eagle Plains 147.03 316 P **PKPbc** **20 44 26.1 +0.4**
baz=108,SNR=79
F30M Barrier River 147.05 318 P **PKPbc** **20 44 26.1 +0.5**
baz=106,SNR=45
MESA MESA 147.09 304 P **PKPab** **20 44 27.2 -0.9**
baz=113,SNR=14
CTGM Chitina Glacie 147.11 305 PKPdf **PKPbc** **20 44 26.5 +0.3**
CTG Chitina Glacier 147.12 305 P **PKPbc** **20 44 27.0 +0.8**
baz=112,SNR=23

I29M	Ogilvie Camp, baz=108,SNR=28	147.35	314	P		PKPbc	20 44 26.4	-0.2
BVCY	Beaver Creek baz=110,SNR=24	147.44	308	P		PKPbc	20 44 27.5	+0.6
H29M	Whitestone baz=107	147.63	315	P		PKPbc	20 44 27.7	+0.5
BGLC	Bering Glacier baz=112	147.68	303	P		PKiKP	20 44 29.0	-0.4
G29M	Pine Creek baz=106	147.69	317	P		PKPbc	20 44 28.0	+0.5
CRQE	Cirque baz=112,SNR=21	147.83	304	P		PKPbc	20 44 28.6	+0.5
M27K	Edge Creek, AK baz=110,SNR=44	147.86	307	P		PKPbc	20 44 28.6	+0.4
BTO2	Baotou	147.92	101	*e*PKPbc		PKPbc	20 44 29.8	+0.8
BTO2				PP		PP	20 48 06.8	+9.0
BTO2	comp=Z,150nm,0.8s			pmax		pmax		
BTO2	comp=Z,220nm,6.0s			pmax		pmax		
E29M	Blow River baz=104	148.02	319	P		PKPbc	20 44 28.5	+0.3
I28M	Miner Creek baz=107,SNR=34	148.03	313	P		PKPbc	20 44 28.7	+0.3
MCARA	McCarthy VSAT baz=111,SNR=50	148.03	305	P		PKiKP	20 44 29.4	-0.8
HNS	HongShan	148.04	111	⇓PKPbc		PKPbc	20 44 29.3	+0.1
L27K	Beaver Creek, baz=109	148.08	309	P		PKPbc	20 44 29.3	+0.7
KAIM	Kayak Island baz=112,SNR=9.2	148.13	302	P		PKiKP	20 44 30.1	-0.3
TIA	Tai'an	148.35	115	PKPbc		PKPbc	20 44 30.8	+0.7
M26K	Nabesna, AK baz=109,SNR=19	148.37	307	P		PKPbc	20 44 29.6	+0.2
D28M	Stokes Point baz=101	148.52	321	P		PKiKP	20 44 30.5	-0.4
F28M	Old Crow baz=103,SNR=70	148.56	317	P		PKPbc	20 44 30.3	+0.6
BMRM	Bremner River baz=110,SNR=20	148.60	304	P		PKiKP	20 44 31.0	-0.4
E28M	Babbage River baz=102	148.66	319	P		PKPbc	20 44 29.9	0.0
L26K	Log Cabin Wild baz=108,SNR=14	148.72	308	P		PKiKP	20 44 30.9	-0.7
I27K	Kandik River baz=105	148.74	313	P		PKiKP	20 44 31.0	-0.6
N25K	Chitina, Valde baz=109,SNR=15	148.82	305	P		PKiKP	20 44 31.7	-0.2
Q23K	Middleton Isla baz=112	148.86	301	P		PKiKP	20 44 31.7	-0.2
H27K	Steamboat Moun baz=104,SNR=70	148.87	315	P		PKiKP	20 44 31.3	-0.5
HHC	Hu-ho-hao-te	148.91	103	*e*P		PKPdf	20 44 25.5	-1.9
EYAK	Cordova Ski Ar baz=110,SNR=20	148.98	303	P		PKiKP	20 44 32.1	-0.1
G27K	Doyon Strip baz=103,SNR=19	149.05	316	P		PKiKP	20 44 31.6	-0.6
SCRK	Sand Creek baz=106,SNR=8.5	149.28	310	P		PKiKP	20 44 32.7	-0.1
I26K	Coal Creek Min baz=104	149.28	313	P		PKiKP	20 44 32.3	-0.4
D27M	Malcolm River baz=100	149.29	320	P		PKiKP	20 44 32.4	-0.2
E27K	Coleen River baz=101	149.32	318	P		PKiKP	20 44 32.3	-0.4
KLU	Klutina baz=109,SNR=10	149.38	305	P		PKiKP	20 44 33.4	+0.3
NRIK	Noril'sk comp=Z,23nm,0.9s,baz=17,slow=0.4,SNR=33	149.38	39	PKPbc		PKiKP	20 44 32.4	-0.3
P23K	Montague Islan baz=110,SNR=20	149.56	301	P		PKiKP	20 44 33.2	-0.2
RIDG	Independent Ri baz=106,SNR=8.8	149.58	309	P		PKiKP	20 44 33.6	+0.2
PAX	Paxson baz=107,SNR=64	149.63	308	P		PKiKP	20 44 33.1	-0.4
MOY	Mondy	149.68	77	*e*PKP2		PKPbc	20 44 33.2	+0.1
MOY	comp=Z,32nm,1.9s			pmax		pmax		
M24K	Tolsona, Glenn baz=108,SNR=17	149.69	306	P		PKiKP	20 44 34.1	+0.4
GLI	Glacier Island baz=109	149.72	303	P		PKiKP	20 44 33.6	-0.1
G26K	Porcupine Rive baz=101	149.91	316	P		PKiKP	20 44 33.8	-0.1
K24K	Donnelly Dome baz=105	149.99	309	P		PKiKP	20 44 34.0	-0.2
J25K	Salcha River, baz=104,SNR=5.3	150.03	311	P		PKiKP	20 44 34.3	0.0
SCM	Sheep Creek Mo baz=107,SNR=18	150.12	305	P		PKiKP	20 44 34.9	+0.3
F26K	Sheenjek River baz=100	150.18	317	P		PKiKP	20 44 34.9	+0.4
ZAK	Zakamensk	150.25	81	*e*PKIKP		PKPbc	20 44 34.5	0.0
ZAK	comp=Z,27nm,1.1s			pmax		pmax		
M23K	Glacier View baz=107,SNR=19	150.29	305	P		PKiKP	20 44 35.0	+0.1
PRP	Porcupine Dome baz=102,SNR=5.9	150.30	312	P		PKiKP	20 44 34.9	0.0
C27K	Jago River baz=97	150.30	321	P		PKiKP	20 44 34.8	+0.2
DHY	Denali Highway baz=105,SNR=22	150.50	307	P		PKiKP	20 44 35.9	+0.5
KNK	Knik Glacier baz=107,SNR=13	150.51	304	P		PKiKP	20 44 35.5	+0.1
WAT6	Susitna Watana baz=106	150.52	306	P		PKiKP	20 44 35.7	+0.2
SONM	Songino Array comp=Z,31nm,0.7s,baz=221,slow=3.1,SNR=93	150.56	87	PKPbc		PKiKP	20 44 35.7	-0.3
SEW	Seward baz=109,SNR=11	150.56	301	P		PKiKP	20 44 35.5	+0.1
SML	Sawmill baz=107,SNR=18	150.57	305	P		PKiKP	20 44 35.5	0.0
HDA	Harding Lake baz=103,SNR=18	150.64	310	P		PKiKP	20 44 35.2	-0.3
ILAR	Eielson Array comp=Z,4.2nm,1.0s,baz=322,slow=2.0,SNR=22	150.70	311	PKPbc		PKiKP	20 44 35.5	0.0
F25K	Christian Rive baz=99,SNR=19	150.73	317	P		PKiKP	20 44 36.1	+0.4
C26K	Camden Bay baz=95,SNR=7.4	150.75	321	P		PKiKP	20 44 36.0	+0.5
G25K	Bearman Lake baz=100	150.77	315	P		PKiKP	20 44 36.5	+0.9
E25K	Arctic Village baz=98	150.78	318	P		PKiKP	20 44 36.0	+0.3
O22K	Cooper Landing baz=108	150.81	302	P		PKiKP	20 44 36.1	+0.2
PMR	Palmer baz=107,SNR=11	150.87	304	P		PKiKP	20 44 36.1	+0.1
ULN	Ulaanbaatar	150.94	88	*c i*PKIKP		PKPbc	20 44 36.3	0.0
ULN	comp=Z,20nm,1.0s			pmax		pmax		
WAT1	Susitna Watana baz=105	150.95	306	P		PKiKP	20 44 36.3	+0.1
POKR	Poker Plat Res baz=102	151.00	311	P		PKPbc	20 44 35.9	+0.2
RC01	Rabbit Creek A baz=107,SNR=17	151.00	303	P		PKiKP	20 44 36.8	+0.4
BRSE	Bradley Lake S baz=109,SNR=18	151.06	300	P		PKiKP	20 44 36.7	+0.2
TLY	Talaya comp=Z,7.4nm,0.6s,baz=241,slow=13,SNR=11	151.12	79	PKPbc		PKPbc	20 44 35.6	-0.8
TLY	Talaya	151.12	79	*c i*PKIKP		PKiKP	20 44 36.9	0.0
TLY	comp=Z,32nm,1.7s			pmax		pmax		
D25K	Kavik River baz=95	151.21	320	P		PKiKP	20 44 36.5	-0.1
KDAK	Kodiak Island baz=111	151.28	295	P		PKiKP	20 44 37.3	+0.4
G24K	Hadwoenzic Riv baz=99,SNR=7.2	151.30	315	P		PKiKP	20 44 37.3	+0.5
H24K	Noodor Dome baz=100,SNR=5.4	151.32	313	P		PKiKP	20 44 37.0	+0.1
MCK	McKinley baz=103,SNR=33	151.34	308	P		PKiKP	20 44 37.4	+0.4
M22K	Willow baz=106	151.37	304	P		PKiKP	20 44 37.6	+0.6
OHAK	Old Harbor baz=112,SNR=14	151.43	294	P		PKiKP	20 44 37.8	+0.6
HOM	Homer baz=108	151.47	299	P		PKiKP	20 44 38.1	+0.8
Q20K	Shuyak Island baz=110	151.48	297	P		PKiKP	20 44 38.0	+0.6
CAPN	Captain Cook N baz=107,SNR=5.6	151.57	302	P		PKiKP	20 44 38.9	+1.5
F24K	Squaw Lake baz=97,SNR=16	151.57	316	P		PKiKP	20 44 38.0	+0.6
NEA2	Nenana	151.58	310	P		PKiKP	20 44 37.3	-0.2
CUT	Chulitna baz=104,SNR=14	151.61	305	P		PKiKP	20 44 38.1	+0.6
SII	Sitkinak Islan baz=112	151.63	292	P		PKiKP	20 44 38.4	+0.6
IRK	Irkutsk	151.73	78	*e*PKIKP		PKPbc	20 44 35.7	-2.0
IRK	comp=Z,23nm,1.0s			pmax		pmax		
I23K	Minto, Yukon-K baz=100,SNR=13	151.80	311	P		PKPbc	20 44 37.4	-0.1
E24K	Your Creek baz=95	151.86	317	P		PKiKP	20 44 38.5	+0.6
TRF	Thorofare Moun baz=102	151.86	307	P		PKiKP	20 44 38.5	+0.2
C24K	Franklin Bluff baz=92	152.05	321	P		PKiKP	20 44 38.5	+0.4
D24K	Happy Valley baz=93	152.06	320	P		PKiKP	20 44 38.4	+0.2
SKT	Skwentna baz=104,SNR=6.4	152.07	304	P		PKiKP	20 44 38.9	+0.4
CHIR	Chirikof Islan baz=113	152.09	290	P		PKiKP	20 44 39.3	+0.6
N20K	Mount Spurr baz=105	152.19	302	P		PKiKP	20 44 38.8	0.0
SPCR	Spurr Chakacha baz=105,SNR=5.4	152.19	302	P		PKiKP	20 44 38.7	-0.1
Q19K	Cape Douglas, baz=109	152.20	297	P		PKiKP	20 44 39.0	+0.1
P19K	Oil Pt baz=108	152.23	299	P		PKiKP	20 44 38.9	0.0
E23K	Chandalar baz=94,SNR=14	152.28	317	P		PKiKP	20 44 39.2	+0.3
BPAW	Bear Paw Mtn. baz=101,SNR=38	152.30	309	P		PKiKP	20 44 39.1	+0.1
G23K	Bananza Creek baz=93	152.31	314	P		PKiKP	20 44 39.8	+0.9
TOLK	Toolik Lake Re baz=93,SNR=9.5	152.31	318	P		PKiKP	20 44 39.4	+0.6
MLY	Manley baz=99,SNR=17	152.36	311	P		PKPbc	20 44 38.8	-0.1
COLD	Coldfoot baz=96,SNR=15	152.43	315	P		PKiKP	20 44 40.0	+0.9
PPLA	Purkeypile baz=102	152.59	306	P		PKiKP	20 44 40.0	+0.3
C23K	Itkillik River baz=90	152.71	321	P		PKiKP	20 44 40.1	+0.6
D23K	Nanushuk River baz=92	152.72	319	P		PKiKP	20 44 40.3	+0.6
H22K	Ishtalitna Cre baz=97	152.75	312	P		PKiKP	20 44 40.3	+0.5
M20K	Styx River baz=104	152.79	303	P		PKPbc	20 44 40.0	+0.1
Q18K	Katmai Hardscr baz=103,SNR=5.7	152.79	296	P		PKiKP	20 44 40.2	0.0
CHUM	Lake Minchumin baz=100,SNR=20	152.84	308	P		PKiKP	20 44 40.2	+0.2
I21K	Tanana baz=98	152.90	311	P		PKiKP	20 44 40.2	+0.1
O19K	Port Alsworth baz=106,SNR=11	152.91	299	P		PKPbc	20 44 40.0	-0.1
Q17K	Contact Creek baz=109	153.10	295	P		PKiKP	20 44 41.1	+0.2
E22K	Anaktuvuk Pass baz=92	153.11	317	P		PKiKP	20 44 41.0	+0.5
P18K	Big Mountain, baz=107,SNR=8.7	153.12	298	P		PKPbc	20 44 40.6	-0.1
R17L	Mt. Peulik Vol baz=110,SNR=7.7	153.13	293	P		PKiKP	20 44 41.3	+0.5
N19K	Bonanza Creek baz=105	153.16	301	P		PKPbc	20 44 40.7	0.0
F22K	John River baz=93	153.22	316	P		PKiKP	20 44 41.6	+0.8
O18K	Koktuh Hills baz=106,SNR=7.6	153.25	298	P		PKiKP	20 44 41.1	+0.1
H21K	Melozitna Rive baz=96,SNR=16	153.31	312	P		PKiKP	20 44 41.6	+0.6
K20K	Telida baz=100	153.51	306	P		PKiKP	20 44 41.5	+0.1
Q16K	King Salmon baz=108,SNR=5.3	153.61	295	P		PKiKP	20 44 42.1	+0.4
L19K	White Mountain baz=103	153.64	304	P		PKiKP	20 44 41.9	+0.1
B22K	Teshekpuk Lake baz=86	153.66	322	P		PKiKP	20 44 42.2	+0.7
P17K	Kvichak River baz=107,SNR=5.9	153.66	297	P		PKiKP	20 44 41.9	+0.1
G21K	Allakaket baz=94	153.67	314	P		PKiKP	20 44 42.5	+0.8
J20K	Nowinta River baz=98	153.68	308	P		PKiKP	20 44 42.2	+0.5
F21K	Alatna River baz=93	153.70	315	P		PKiKP	20 44 42.6	+0.9
CHNA	Chernabura Isl baz=114	153.77	286	P		PKiKP	20 44 42.4	+0.2
I20K	Naaghedeneel baz=97	153.91	310	P		PKiKP	20 44 43.1	+0.9
E21K	Killik River baz=90	153.92	318	P		PKiKP	20 44 42.9	+0.7
M18K	Stony River baz=102	153.95	302	P		PKiKP	20 44 42.8	+0.5
B21K	Ikpikpuk River baz=87	154.11	321	P		PKiKP	20 44 43.3	+0.8
A22K	Sinclair Lake baz=84	154.12	324	P		PKiKP	20 44 43.2	+0.8
O17K	Koliganek Bris baz=105	154.14	298	P		PKiKP	20 44 43.0	+0.2
H20K	Anotleneega Mo baz=95	154.15	311	P		PKiKP	20 44 43.7	+1.0
C21K	Knifedade Rid baz=88	154.20	320	P		PKiKP	20 44 43.7	+1.1
J19K	Poorman baz=98,SNR=10.0	154.30	308	P		PKiKP	20 44 44.1	+1.1
S14K	Fog Glacier baz=111	154.30	289	P		PKiKP	20 44 44.0	+0.6
N17K	Nushagak Hills baz=104	154.37	299	P		PKPab	20 44 58.5	+0.5
P16K	Nushagak River baz=106	154.38	296	P		PKPab	20 44 58.6	+0.6
KSRS	Koreo Array comp=Z,1.7nm,0.8s,baz=226,slow=3.7,SNR=4.5	154.44	128	PKPab		PKPab	20 44 59.4	+0.6
SDPT	Sand Point baz=112	154.44	287	P		PKPab	20 44 58.6	+0.2
L18K	Granite Mounta baz=100	154.50	303	P		PKPab	20 44 59.1	+0.6
F20K	Avaraart Lake baz=91	154.57	315	P		PKPab	20 44 59.4	+0.7
O16K	Kokhok River B baz=105	154.58	297	P		PKPab	20 45 00.0	+1.1
A21K	Barrow baz=81	154.60	325	P		PKPab	20 44 59.8	+1.2
M17K	Holitna River baz=102	154.69	301	P		PKPab	20 45 00.1	+0.8
J18K	Innoko River baz=98	154.71	306	P		PKPab	20 45 00.2	+0.9
E20K	Nigu River baz=88	154.74	318	P		PKPab	20 45 00.9	+1.4
H19K	Roundabout Mou baz=94	154.80	311	P		PKPab	20 45 00.5	+0.9
D20K	Etivluk River baz=87	154.88	319	P		PKPab	20 45 01.1	+1.1
GCSA	Galena City Sc baz=95	154.92	309	P		PKPab	20 45 01.5	+1.4
B20K	Meade River baz=83	154.96	322	P		PKPab	20 45 01.4	+1.2
G19K	Purcell Mounta baz=92	155.09	313	P		PKPab	20 45 01.6	+0.7
N16K	Nishlik Lake baz=103	155.12	299	P		PKPab	20 45 01.7	+0.5
E19K	Redstone River baz=89	155.16	316	P		PKPab	20 45 02.0	+0.8
L17K	Donlin baz=99	155.22	303	P		PKPab	20 45 02.8	+1.2
K17K	Iditarod baz=98	155.32	304	P		PKPab	20 45 03.1	+1.1
M16K	Timber Creek baz=101	155.33	300	P		PKPab	20 45 03.4	+1.3
O15K	Ungalikthiuk R baz=105	155.33	296	P		PKPab	20 45 03.5	+1.4
F19K	Shaleruckik Mo baz=90	155.38	314	P		PKPab	20 45 02.6	+0.5
D19K	Kuna River baz=86	155.44	318	P		PKPab	20 45 03.6	+1.2
H18K	Honhosa River baz=93	155.58	310	P		PKPab	20 45 04.3	+1.2
N15K	Kwethluk River baz=102	155.70	298	P		PKPab	20 45 04.8	+1.1
L16K	Owhat River baz=100,SNR=9.9	155.70	302	P		PKPab	20 45 05.0	+1.3
G18K	Tagagawik baz=91	155.73	312	P		PKPab	20 45 04.8	+1.1
J17K	VABM Dome baz=96	155.75	306	P		PKPab	20 45 05.2	+1.4
C19K	Lookout Ridge baz=83	155.91	320	P		PKPab	20 45 05.9	+1.4
O14K	Tigyukauivet M baz=104	156.07	295	P		PKPab	20 45 06.0	+0.7
M15K	Kasigluk River baz=101,SNR=6.4	156.10	299	P		PKPab	20 45 06.7	+1.3
F18K	Selawik baz=88,SNR=8.3	156.13	314	P		PKPab	20 45 06.2	+0.9
H17K	Granite Mounta baz=92	156.23	309	P		PKPab	20 45 07.0	+1.1
A19K	Wainwright baz=79	156.25	323	P		PKPab	20 45 07.1	+1.4
J16K	Anvik River baz=95	156.43	305	P		PKPab	20 45 08.0	+1.3
N14K	Kuskokwak Cree baz=102	156.43	297	P		PKPab	20 45 08.2	+1.4
E18K	Tukpahlearik C baz=86	156.46	316	P		PKPab	20 45 07.6	+0.9
I17K	Unalakleet baz=94,SNR=8.3	156.51	307	P		PKPab	20 45 08.6	+1.5
G17K	Kiwalik Mounta baz=90	156.55	311	P		PKPab	20 45 08.4	+1.2
C18K	Utukok River baz=82	156.55	319	P		PKPab	20 45 08.1	+0.9
L15K	Ungalak Mounta baz=98	156.64	301	P		PKPab	20 45 08.8	+1.1
M14K	Bethel baz=100,SNR=18	156.72	299	P		PKPab	20 45 09.3	+1.3
K15K	Wolf Creek Mou baz=97	156.75	303	P		PKPab	20 45 09.5	+1.3
F17K	Baldwin Pennin baz=87,SNR=9.0	156.77	313	P		PKPab	20 45 09.0	+0.9
E17K	Hotham Inlet baz=85,SNR=23	156.96	315	P		PKPab	20 45 09.9	+1.0
UNV	Unalaska Valle baz=113	157.09	280	P		PKPab	20 45 10.5	+0.7
L14K	Kuka Creek baz=98,SNR=6.9	157.16	300	P		PKPab	20 45 10.5	+0.6
H16K	Elim baz=91,SNR=13	157.22	309	P		PKPab	20 45 11.3	+1.3
G16K	Koyuk River baz=89	157.26	311	P		PKPab	20 45 11.3	+1.1
RDOG	Red Dog Mine baz=82,SNR=14	157.26	318	P		PKPab	20 45 11.2	+0.9
C17K	DeLong Mountai baz=80,SNR=14	157.30	319	P		PKPab	20 45 11.4	+1.0
M13K	Dall Lake baz=100	157.34	298	P		PKPab	20 45 12.3	+1.6
D17K	Noatak River baz=82,SNR=18	157.38	317	P		PKPab	20 45 11.6	+1.0
MJAR	Matsushiro Arr comp=Z,0.9nm,0.7s,baz=183,slow=2.4,SNR=4.5	157.46	147	PKP		PKPdf	20 44 40.8	+1.0
J14K	Nanvaranak Lak baz=94	157.72	304	P		PKPab	20 45 13.9	+1.6
G15K	Niukluk baz=88,SNR=31	157.98	310	P		PKPab	20 45 14.8	+1.4
C16K	Lisburne Hills baz=79,SNR=16	158.12	319	P		PKPab	20 45 15.0	+1.1
K13K	Kusi1ak Mount baz=95	158.17	301	P		PKPab	20 45 15.6	+1.3
F15K	North Star Dit baz=86,SNR=22	158.20	312	P		PKPab	20 45 15.8	+1.5
CN2	Changchun	158.25	115	*e*P		PKPdf	20 44 40.3	-0.2
CN2	comp=Z,10.0nm,0.8s			pmax		pmax		
ANM	Nome baz=88,SNR=6.5	158.57	309	P		PKPab	20 45 16.8	+0.9
M11K	Mekoryuk baz=98,SNR=12	158.73	297	P		PKPab	20 45 17.7	+0.9
F14K	Arctic Creek baz=85	158.92	311	P		PKPab	20 45 18.8	+1.4
TNA	Tin City baz=83,SNR=13	159.57	312	P		PKPab	20 45 20.7	+0.4
SPIA	Saint Paul Isl baz=104	160.19	287	P		PKPab	20 45 24.7	+1.5
GAMB	Gambell baz=84	161.39	307	P		PKPab	20 45 29.2	+1.0
USRK	Uesuriysk Ar. comp=Z,1.6nm,0.5s,baz=213,slow=4.0,SNR=4.7	161.70	124	PKPab		PKPab	20 45 28.6	-1.5
ZEA	Zeya	164.94	90	*e*PKIKP		PKPdf	20 44 43.3	-3.8
YSS	Yuzhno-Sakhali	168.32	142	*e*PKIKP		PKPdf	20 44 50.3	+0.5
YSS	comp=Z,10.0nm,1.1s			pmax		pmax		

IDC 26 20:31:11.2±32.0, 46°.50N×153°.17E, h0km, mb4.0/4, mbtmp4.0/4, MS2.9/1, Error ellipse: s-maj=748.4km s-min=74.6km az=154.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KLR	Kul'dur	14.63	289	LR	LR	20 41 09.7	
	comp=Z,41nm,19.0s,baz=106,slow=41						
H11N2	WAKE ISLAND Hy	28.98	153	T	T	21 08 28.2	
	baz=341,slow=74,SNR=6.6						
H11N1	WAKE ISLAND Hy	29.00	153	T	T	21 08 30.5	
	baz=341,slow=74,SNR=9.5						
H11N3	WAKE ISLAND Hy	29.00	153	T	T	21 08 24.3	
	baz=341						
H11S1	WAKE ISLAND Hy	30.07	154	T	T	21 09 51.0	
	baz=343,slow=76,SNR=28						
H11S3	WAKE ISLAND Hy	30.07	154	T	T	21 09 47.0	
	baz=343,slow=76,SNR=30						
H11S2	WAKE ISLAND Hy	30.09	154	T	T	21 09 52.1	
	baz=343,slow=76,SNR=24						
MKAR	Makanchi Array	47.09	298	P	P	20 39 44.5	-0.2
	0.2nm,0.7s,baz=71,slow=6.7,SNR=6.1 0.2nm,0.7s						
FINES	FINESS Array B	64.28	335	P	P	20 41 47.6	-0.2
	1.5nm,0.5s,baz=34,slow=7.6,SNR=21 1.5nm,0.5s						
NB2	NORSAR Subarra	68.48	341	P	P	20 42 14.7	-0.1
	comp=Z,1.2nm,0.6s,baz=29,slow=6.5						
NOA	NORSAR Array B	68.48	341	P	P	20 42 14.8	+0.1
	comp=Z,1.1nm,0.7s,baz=26,slow=6.3,SNR=5.9 comp=Z,1.1nm,0.7s						
HFS	Hagfors	68.70	340	P	P	20 42 16.3	+0.1
	comp=Z,2.4nm,0.5s,baz=44,slow=4.4,SNR=15 comp=Z,2.4nm,0.5s						

*IDC **26** 20:34:10.1±0.8, 36°.76S×96°.45W, h0km, mb4.3/12, mbtmp4.3/12, MS4.6/35, Error ellipse: s-maj=24.0km s-min=21.8km az=136.0*

*NEIC **26** 20:34:11.3±1.6, 36°.7S±0°.1×95°.9W±0°.2, h10km±1km, mb4.8/60, Error ellipse: s-maj=25.9km s-min=11.9km az=122.0*

*GCMT **26** 20:34:12.3±0.1, 37°.01S±0°.01×96°.75W±0°.01, h17km, MW5.4/142, Moment Tensor Solution. s104,c171; s142,c247; Duration: 1s2 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.27±.02; $M_{\theta\theta}$-0.06±.02; $M_{\phi\phi}$0.33±.02; $M_{r\theta}$0.22±.05; $M_{r\phi}$-1.41±.02; $M_{\theta\phi}$-0.41±.06; Best double couple: $M_0$1.48300×10^{17} NP1:ϕ_s93.00000°, δ76.00000°, λ175.00000°. NP2:ϕ_s184.00000°, δ85.00000°, λ14.00000°. Principal axes: T 1.6660, Plg13.0000°, Azm49.0000°; N -0.3650, Plg75.0000°, Azm203.0000°; P -1.3010, Plg6.0000°, Azm318.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*GFZ **26** 20:34:17.7, 36°.31S×96°.00W, h12km, MW5.3, Moment Tensor Solution. s53 Moment tensor: M_{rr}-0.10; $M_{\theta\theta}$-0.19; $M_{\phi\phi}$0.29; $M_{r\theta}$0.12; $M_{\theta\phi}$-1.21; $M_{r\phi}$-0.14; Fault plane solution: NP1:ϕ_s95.00000°, δ84.00000°, λ174.00000°. NP2:ϕ_s185.00000°, δ84.00000°, λ5.00000°.*

ISC 26 20:34:11.5±0.6, 36.7S±0°.1×95.99W±0°.09, h10km, n126, σ2s17/83, mb4.7/28, MS4.5/36, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H03S2	Juan Fernandez	14.24	83	T	T	20 52 58.0	
	baz=252,slow=74,SNR=95						
H03S1	Juan Fernandez	14.25	83	T	T	20 52 54.3	
	baz=252,slow=74,SNR=91						
H03S3	Juan Fernandez	14.25	83	T	T	20 52 53.5	
	baz=252,slow=74,SNR=96						
H03N2	Juan Fernandez	14.35	82	T	T	20 53 01.7	
	baz=249,slow=72,SNR=243						
H03N3	Juan Fernandez	14.35	82	T	T	20 53 00.6	
	baz=249,slow=72,SNR=278						
H03N1	Juan Fernandez	14.37	82	T	T	20 52 59.7	
	baz=249,slow=72,SNR=293						

LL05 Los Muermos 18.08 112 Pn 20 38 20.2 -2.5
LL05 IAmb IAmb 20 38 20.5
comp=Z,34nm,0.5s
GO07 Millades Hill, 18.24 117 Pn 20 38 25.5 +0.8
GO07 IAmb IAmb 20 38 32.2
comp=Z,40nm,0.8s
BI05 Punta Hualpn 18.27 97 Pn **Pn 20 38 20.1 -5.0**
LL07 Hotel Espejo d 18.32 116 P **P 20 38 27.1 +1.4**
LL07 IAmb IAmb 20 38 30.3
comp=Z,73nm,0.8s
LL01 San Ignacio de 19.01 114 P **P 20 38 33.3 0.0**
LR05 Currie 19.08 108 P **Pn 20 38 39.1 +4.1**
AY01 Puyuhuapi 19.28 121 P **P 20 38 36.1 -0.2**
GO06 Curarrehue 19.47 106 Pn 20 38 40.2 +0.4
LL02 Futaleuf 19.56 117 P **P 20 38 38.3 -1.1**
LL02 IAmb IAmb 20 38 49.2
comp=Z,51nm,1.2s
BI02 San Fabin de 19.81 97 P **P 20 38 40.6 -1.6**
COYC Coyhaique 19.99 124 P **P 20 38 42.5 -1.6**
COYC IAmb IAmb 20 38 53.7
comp=Z,72nm,1.4s
PLCA Paso Flores 20.22 109 P Pn 20 38 52.3 +3.7
comp=Z,9.0nm,0.8s,baz=256,slow=12,SNR=10
PLCA LR LR 20 44 50.3
comp=Z,2µm,20.0s,baz=270,slow=31
comp=Z,9.0nm,0.8s
PLCA Paso Flores 20.22 109 P **P 20 38 45.1 -1.5**
AY03 Cochrane 20.24 129 P **P 20 38 47.2 +0.4**
MT01 Popeta 20.38 89 P **P 20 38 47.4 -1.0**
BO01 Tunca 20.38 91 P **P 20 38 49.8 +1.3**
BO01 IAmb IAmb 20 39 00.9
comp=Z,47nm,1.3s
BO02 Sierra Bellavi 20.53 92 P Pn 20 38 53.5 +1.2
BO02 IAmb IAmb 20 39 05.2
comp=Z,86nm,1.6s
MT09 Talagante 20.61 89 P **P 20 38 51.2 +0.1**
MT02 Curacav 20.64 88 P **P 20 38 51.0 -0.2**
MT02 IAmb IAmb 20 39 03.8
comp=Z,87nm,1.9s
BO04 La Punta 20.86 90 P **P 20 38 50.6 -3.1**
BO04 IAmb IAmb 20 39 08.9
comp=Z,43nm,1.1s
PEL Peldehue 21.03 88 P **P 20 38 53.2 -2.4**
MT16 CCHEN 21.08 89 P **P 20 38 54.5 -1.6**
MT16 IAmb IAmb 20 39 11.5
comp=Z,28nm,0.9s
CO04 Los Peladeros 21.15 85 P **P 20 38 55.3 -1.7**
CO04 IAmb IAmb 20 39 13.7
comp=Z,54nm,1.2s
CO02 Combarbal 21.42 82 P **P 20 39 03.2 +3.5**
CO02 IAmb IAmb 20 39 11.1
comp=Z,88nm,1.5s
MT08 Bocatoma Ro 21.48 89 P **P 20 39 04.7 +4.1**
MT08 IAmb IAmb 20 39 13.7
comp=Z,44nm,1.2s
LCO Las Campanas 22.55 77 P **P 20 39 12.5 +0.4**
LCO IAmb IAmb 20 39 30.5
comp=Z,29nm,1.1s
CO01 Juntas del Tor 22.62 80 P **P 20 39 11.7 -1.1**
CO01 IAmb IAmb 20 39 29.1
comp=Z,31nm,1.3s
AC05 El Transito 22.96 77 P **P 20 39 19.3 +3.0**
AC05 IAmb IAmb 20 39 35.9
comp=Z,30nm,0.9s
AROD Rodeo 23.03 81 *i* P **P 20 39 21.0 +3.8**
ZON Zonda 23.15 85 P **P 20 39 22.2 +4.1**
CFA Coronel Fontan 23.48 86 LR LR 20 46 40.6
comp=Z,518nm,18.6s,baz=241,slow=32
GO03 Copiapo 23.57 75 P **P 20 39 19.6 -2.8**
GO03 Copiapo 23.57 75 *i* P **P 20 39 25.6 +3.2**
AVFE Valle Fertil 24.45 84 *i* P **P 20 39 33.5 +2.8**
ACHE Chepes 24.90 86 *i* P **P 20 39 38.9 +4.0**
ACLC CERRO LA CRUZ 25.34 82 *i* P **P 20 39 41.5 +2.7**
TINO Tinogasta 25.44 78 *i* P **P 20 39 43.3 +3.6**
PB09 IPOC Station P 27.56 65 P **P 20 39 57.1 -1.8**
FSA Cafayete 27.61 76 *i* P **P 20 40 02.7 +3.4**
NNA Nana 30.07 40 LR LR 20 49 27.5
comp=Z,4µm,21.6s,baz=198,slow=30
LPAZ La Paz 32.00 58 P **P 20 40 42.2 +3.5**
comp=Z,13nm,0.9s,baz=189,slow=6.3,SNR=14
LPAZ LR LR 20 51 38.6
comp=Z,647nm,18.0s,baz=237,slow=32
comp=Z,13nm,0.9s
ATAH Atahualpa 33.56 33 P **P 20 40 54.5 +2.3**
comp=Z,5.8nm,0.8s,baz=149,slow=2.2,SNR=6.5
ATAH LR LR 20 51 23.4
comp=Z,3µm,21.6s,baz=215,slow=31
comp=Z,5.8nm,0.8s
PMSA Palmer Station 33.88 156 LR LR 20 50 35.7
comp=Z,1µm,20.3s,baz=282,slow=29
CPUP Villa Florida 34.34 84 P **P 20 40 59.9 +1.4**
comp=Z,2.2nm,0.8s,baz=238,slow=9.3,SNR=3.6
CPUP LR LR 20 52 43.0
comp=Z,654nm,21.6s,baz=250,slow=32
comp=Z,2.2nm,0.8s
CPUP Villa Florida 34.34 84 P 20 40 57.7 -0.8
CPUP IAmb IAmb 20 41 12.6
comp=Z,17nm,1.4s
CZSB Cruzeiro do Su 35.82 42 P **P 20 41 11.8 +0.4**
CZSB IAmb IAmb 20 41 20.3
comp=Z,16nm,0.8s
SIV San Ignacio 37.20 66 P **P 20 41 24.5 +1.4**
comp=Z,1.5nm,0.6s,baz=157,slow=5.2,SNR=3.9
SIV LR LR 20 54 41.1
comp=Z,1µm,21.2s,baz=281,slow=33
comp=Z,1.5nm,0.6s
AQDB Aquidauana 38.59 76 P **P 20 41 32.4 -2.5**
AQDB IAmb IAmb 20 41 48.7
comp=Z,21nm,1.1s
PTLB Pontes e Lacer 38.97 67 P **P 20 41 36.2 -1.8**
OTAV Otavalo 40.23 28 P **P 20 41 47.7 -1.3**
ROSC El Rosal 46.05 31 P **P 20 42 39.0 +3.0**
comp=Z,8.0nm,0.5s,baz=196,slow=2.9,SNR=6.4
ROSC LR LR 20 59 40.3
comp=Z,2µm,18.2s,baz=222,slow=33
comp=Z,8.0nm,0.5s
ROSC El Rosal 46.05 31 P **P 20 42 35.4 -0.6**
MACA Manacapuru-AM 46.59 53 P **P 20 42 36.9 -3.0**
BDFB Brasilia 47.34 77 LR LR 21 01 55.2
comp=Z,771nm,20.7s,baz=237,slow=35
JTS Las Juntas de 47.92 15 LR LR 20 58 02.5
comp=Z,2µm,21.6s,baz=207,slow=30
SDV Santo Domingo 51.25 33 P **P 20 43 17.6 +1.8**
comp=Z,1.4nm,0.5s,baz=9.9,slow=17,SNR=1.7
SDV LR LR 21 02 57.9
comp=Z,1µm,20.9s,baz=210,slow=34
comp=Z,1.4nm,0.5s
QSPA South Pole Qui 53.48 180 LR LR 21 03 17.8
comp=Z,318nm,18.1s,baz=126,slow=33
SNAA Sanae 56.56 158 LR LR 21 04 55.8
comp=Z,349nm,19.8s,baz=256,slow=33
RAR Rarotonga 56.95 267 LR LR 21 01 29.7
comp=Z,276nm,21.1s,baz=124,slow=29
VNDA Vanda 57.01 195 P **P 20 43 57.2 +0.4**
comp=Z,1.8nm,1.1s,baz=135,slow=11,SNR=3.8
VNDA LR LR 21 03 29.6
comp=Z,437nm,18.8s,baz=110,slow=31
comp=Z,1.8nm,1.1s
MDP Montagnes des 58.04 54 LR LR 21 06 41.0
comp=Z,1µm,21.1s,baz=224,slow=33
SJG San Juan 61.40 33 LR LR 21 09 11.4
comp=Z,552nm,20.7s,baz=230,slow=34
LPIG La Paz 62.00 345 LR LR 21 05 44.9
comp=Z,89nm,20.6s,baz=162,slow=31
RCBR Riachuelo 62.70 76 LR LR 21 11 03.9
comp=Z,324nm,19.2s,baz=220,slow=35
TXAR Lajitas Array 66.12 353 P 20 44 58.0 -1.0
comp=Z,0.7nm,0.8s,baz=171,slow=8.9,SNR=6.8
comp=Z,0.7nm,0.8s
TXAR Lajitas Array 66.12 353 P 20 44 58.3 -0.6
TX31 Lajitas Ar. Si 66.12 353 P 20 44 59.1 +0.2
TX31 IAmb IAmb 20 45 08.1
comp=Z,11nm,1.4s
ALPN Alpine 67.14 353 P 20 45 06.8 +1.2
ALPN IAmb IAmb 20 45 27.9
comp=Z,9.8nm,1.1s
RAO Raoul Island 67.16 250 LR LR 21 06 44.9
comp=Z,357nm,21.6s,baz=166,slow=29
APMT Aspermont 69.81 356 P 20 45 22.7 +0.7
AFI Afiamalu 70.50 267 LR LR 21 08 18.3
comp=Z,268nm,20.1s,baz=130,slow=29
MSTX Muleshoe 70.63 354 P 20 45 24.7 -2.4
MIAR Mount Ida 70.95 2 P **P 20 45 29.6 +0.6**
AMTX Amarillo 71.45 355 P 20 45 32.0 -0.1
ANMO Albuquerque 71.98 351 LR LR 21 12 52.2
comp=Z,307nm,18.8s,baz=169,slow=32

PFO Pinyon Flats O 72.55 342 LR LR 21 10 01.3
comp=Z,151nm,18.9s,baz=157,slow=30
LCAR Lake Charles 72.58 4 P 20 45 37.6 -1.0
LCAR IAmb IAmb 20 45 44.9
comp=Z,11nm,1.0s
TKL Tuckaleechee C 72.92 10 LR LR 21 14 06.8
comp=Z,218nm,19.3s,baz=166,slow=33
MAW Mawson 74.75 172 LR LR 21 17 44.4
comp=Z,452nm,18.7s,baz=205,slow=35
MSVF Nonsavu 76.45 258 LR LR 21 10 50.3
comp=Z,405nm,21.0s,baz=145,slow=29
DSP Deep Springs 76.50 342 P 20 46 00.8 -0.6
DSP IAmb IAmb 20 46 11.3
comp=Z,5.9nm,1.0s
NVAR Mina Array Bea 77.58 342 P **P 20 46 07.8 0.0**
comp=Z,2.8nm,1.1s,baz=186,slow=7.1,SNR=7.1
NVAR LR LR 21 12 38.0
comp=Z,197nm,21.5s,baz=163,slow=30
comp=Z,2.8nm,1.1s
NVAR Mina Array Bea 77.58 342 P **P 20 46 08.5 +0.7**
BSUT Blindstream Ca 78.09 349 IAmb IAmb 20 46 20.4
comp=Z,11nm,1.1s
ELK Elko 79.11 345 LR LR 21 14 13.1
comp=Z,190nm,20.4s,baz=154,slow=30
BW06 Boulder Array 80.09 350 P 20 46 20.7 -0.8
BW06 IAmb IAmb 20 46 27.3
comp=Z,7.5nm,1.1s
PD31 Pinedale Array 80.09 350 P 20 46 19.5 -2.0
PD31 IAmb IAmb 20 46 27.3
comp=Z,8.0nm,1.1s
PDAR Pinedale Array 80.09 350 P **P 20 46 22.6 +1.1**
comp=Z,5.6nm,1.0s,baz=158,slow=4.8,SNR=9.9
comp=Z,5.6nm,1.0s
PDAR Pinedale Array 80.09 350 P **P 20 46 21.7 +0.2**
RSSD Black Hills 80.81 354 P 20 46 24.9 -0.4
WVOR Wild Horse Val 81.46 343 P 20 46 28.2 -0.5
WVOR IAmb IAmb 20 47 16.8
comp=Z,12nm,1.3s
HLID Hailey 81.66 347 P **P 20 46 31.0 +1.2**
HLID IAmb IAmb 20 46 39.6
comp=Z,5.1nm,0.9s
YBH Yreka Blue Hor 81.83 340 LR LR 21 15 30.9
comp=Z,14nm,18.8s,baz=152,slow=30
SADO Sadowa 82.55 12 LR LR 21 20 12.2
comp=Z,226nm,18.1s,baz=190,slow=33
ULM Lac du Bonnet 86.61 0 P **P 20 46 54.7 +0.1**
comp=Z,1.7nm,0.7s,baz=36,slow=1.2,SNR=7.0
comp=Z,1.7nm,0.7s
ULM Lac du Bonnet 86.61 0 IAmb IAmb 20 47 00.7
comp=Z,7.9nm,0.9s
NEW Newport 86.70 346 LR LR 21 18 53.8
comp=Z,154nm,19.7s,baz=140,slow=31
CBB Campbell River 90.22 342 P **P 20 47 11.2 -0.5**
SCHQ Schefferville 94.58 16 LR LR 21 27 25.0
comp=Z,414nm,18.1s,baz=198,slow=34
BOSA Boshof 94.74 131 LR LR 21 23 17.3
comp=Z,188nm,21.5s,baz=216,slow=31
DBIC Dimbokro 94.85 85 LR LR 21 27 06.8
comp=Z,300nm,19.2s,baz=244,slow=33
LBTB Lobatse 97.55 129 LR LR 21 24 29.8
comp=Z,141nm,21.7s,baz=210,slow=31
H01W1 Cape Leeuwin H 103.41 205 T T 22 43 45.4
baz=154,slow=76,SNR=12
H01W2 Cape Leeuwin H 103.41 205 T T 22 43 45.5
baz=154,slow=76,SNR=12
H01W3 Cape Leeuwin H 103.42 205 T T 22 43 46.9
baz=154,slow=76,SNR=11
H11S2 WAKE ISLAND Hyl 106.54 281 T T 22 46 54.1
baz=126
H11S1 WAKE ISLAND Hyl 106.55 281 T T 22 46 53.4
baz=126
H11S3 WAKE ISLAND Hyl 106.56 281 T T 22 46 56.9
baz=126
MJAR Matsushiro Arr 137.01 287 PKP **PKPdf 20 53 33.3 -1.3**
comp=Z,0.8nm,0.7s,baz=39,slow=1.2,SNR=4.1
KSRS Korea Array 145.20 285 PKP **PKPbc 20 53 47.9 -1.0**
comp=Z,2.3nm,0.9s,baz=100,slow=4.1,SNR=4.5
KSAR Wonju Array Be 145.23 285 PKPbc 20 53 46.9 -2.0
KOPT Kop Dagi 145.98 71 PKPdf **PKPdf 20 53 47.8 -3.1**
HEH HeiHe 146.23 307 *e*P **PKPab 20 53 52.8 +0.4**
HEH pmax pmax
comp=Z,6.0nm,1.0s
KBZ Khabaz 148.10 64 PKPbc **PKPbc 20 53 57.6 +0.5**
comp=Z,3.8nm,0.9s,baz=355,slow=4.4,SNR=8.1
NJ2 Nanjing 150.97 271 *e*P **PKiKP 20 54 06.8 +1.6**
NJ2 pmax pmax
comp=Z,25nm,0.7s
CMAR Chiang Mai Arr 157.54 220 PKPab **PKPab 20 54 37.6 -2.6**
comp=Z,0.2nm,0.3s,baz=167,slow=3.5,SNR=4.6
HHC Hu-ho-hao-te 158.17 289 *e*P **PKPdf 20 54 11.3 +2.6**
AB31 Akbulak array 158.51 47 PKPdf **PKPdf 20 54 06.0 -2.7**
ABKAR Akbulak array 158.51 47 PKPdf **PKPdf 20 54 06.2 -2.4**
WMQ Urumqi 172.39 339 *e*PKP **PKPdf 20 54 25.5 +5.0**
WMQ LR LR
comp=N,1µm,19.9s
WMQ LR LR
comp=E,670nm,16.1s
WMQ LR LR
comp=Z,1µm,23.9s

*IDC **26** 20:34:16.8±1.8, 9.22S±113.62E, h59km±16km, mb4.0/17, mbtmp4.3/20, MS3.3/8, Error ellipse: s-maj=14.2km s-min=9.1km az=39.0*
*NEIC **26** 20:34:17.0±1.2, 9.27S±0.07×113.60E±0.06, h58km±6km, mb4.5/24, Error ellipse: s-maj=9.7km s-min=8.6km az=182.0*
*DJA **26** 20:34:17.0±0.2, 9°S±2°×11°4E±°, h60km±3km, M4.7/78, mb4.8/78, mB5.2/37, MLv5.1/54, Mw(mB)4.6/37, MwMwp5.1/2, Mwp5.4/2*
ISC 26 20:34:15.6±0.8, 9.42S±0.05×113.52E±0.04, h53km±8km, n131, σ1°46/137, mb4.4/24, MS3.4/6, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
JAGI	**Jajag, Banyuwa**	**1.13**	**34**		**Pn**	**20 34 34.5**	**-0.7**
JAGI	**Jajag, Banyuwa**	**1.13**	**34**	P	**Pn**	**20 34 34.2**	**-1.0**
JAGI				S	**Sn**	**20 34 49.5**	**-0.1**
BLJI	**Banyuglugur**	**1.66**	**2**	P	**Pn**	**20 34 43.1**	**+0.7**
BLJI				S	**Sn**	**20 35 04.0**	**+1.4**
RTBI	**Rangdo, Negare**	**1.69**	**56**	P	**Pn**	**20 34 43.6**	**+0.7**
RTBI				S	**Sn**	**20 35 05.4**	**+1.9**
IGBI	**Denpasar**	**1.71**	**70**	P	**Pn**	**20 34 44.1**	**+1.1**
ABJI	**Asem Bagus**	**1.76**	**24**	P	**Pn**	**20 34 45.4**	**+1.7**
DNP	**Denpasar**	**1.82**	**66**	P	**Pn**	**20 34 45.8**	**+1.2**
DNP				S	**Sn**	**20 35 09.3**	**+2.8**
KHKI	**Kahang-Kahang**	**2.31**	**63**	P	**Pn**	**20 34 53.6**	**+2.3**
KHKI				S	**Sn**	**20 35 20.3**	**+1.8**
SNJI	**Sawahan-Nganju**	**2.38**	**313**	P	**Pn**	**20 34 53.9**	**+1.5**
KMMI	**Kalianget**	**2.39**	**11**	P	**Pn**	**20 34 53.9**	**+1.5**
PCJI	**Pacitan**	**2.62**	**297**	P	**Pn**	**20 34 55.8**	**+0.3**
NGJI	**Ngawi**	**2.88**	**315**	P	**Pn**	**20 35 01.2**	**+2.1**
UGM	**Wanagama**	**3.32**	**296**		**Pn**	**20 35 06.2**	**+1.0**
UGM	**Wanagama**	**3.32**	**296**	P	**Pn**	**20 35 06.4**	**+1.2**
UGM				S	**Sn**	**20 35 44.1**	**+0.7**
YOGI	**Yogyakarta**	**3.57**	**296**	P	**Pn**	**20 35 09.4**	**+0.9**
YOGI				S	**Sn**	**20 35 50.2**	**+0.8**
SMRI	**Semarang**	**3.85**	**307**		**Pn**	**20 35 13.6**	**+1.2**
SMRI	**Semarang**	**3.85**	**307**	P	**Pn**	**20 35 13.5**	**+1.1**
PLAI	**Plampang**	**4.24**	**82**	P	**Pn**	**20 35 19.4**	**+1.6**
PLAI				S	**Sn**	**20 36 07.9**	**+1.9**
DBNI	**Kabupaten Domp**	**4.82**	**80**	P	**Pn**	**20 35 29.0**	**+3.3**
CTJI	**Waduk Cacaban**	**4.92**	**299**	P	**Pn**	**20 35 30.0**	**+3.0**
KPJI	**Karang Pucung**	**4.99**	**294**	P	**Pn**	**20 35 29.6**	**+1.5**
WBSI	**Waikabubak, Su**	**5.79**	**93**	P	**Pn**	**20 35 38.6**	**-0.5**
	1.8nm2µm201nm,0.6s						
BBKI	**Banjar Baru**	**6.06**	**13**	P	**Pn**	**20 35 45.5**	**+2.8**
	0.5nm1µm60nm,0.6s						
BBJI	**Bungbulang**	**6.12**	**288**		**Pn**	**20 35 43.8**	**+0.1**
BBJI	**Bungbulang**	**6.12**	**288**	P	**Pn**	**20 35 44.5**	**+0.8**
	0.7nm1µm128nm,1.1s						
LBFI	**Labuhan Bajo,**	**6.36**	**82**	P	**Pn**	**20 35 48.0**	**+1.2**
	15nm,0.5s						
LEM	**Lembang**	**6.39**	**293**	P	**Pn**	**20 35 49.4**	**+2.1**
	24nm,0.6s,baz=145,slow=12,SNR=10.0						
LEM				S	**Sn**	**20 36 59.3**	**+0.2**
	112nm,0.7s,baz=90,slow=19,SNR=4.5						
LEM				LR	LR	20 39 00.8	
	comp=Z,151nm,18.5s,baz=120,slow=44						
LEM	**Lembang**	**6.39**	**293**	P	**Pn**	**20 35 49.5**	**+2.1**
	0.6nm1µm133nm,0.9s						
WSI	**Waingapu**	**6.69**	**93**	P	**Pn**	**20 35 53.1**	**+1.8**
MKS	**Makassar**	**7.22**	**55**	P	**Pn**	**20 35 58.7**	**0.0**
	0.2nm38nm,0.7s						

DBJI Dramaga 7.29 292 P **Pn 20 35 59.8 +0.2**
0.4nm86nm,1.0s
KAPI Kappang 7.57 55 P **Pn 20 36 02.3 -1.1**
14nm,0.3s,baz=226,slow=9.4,SNR=11
KAPI S **Sn 20 37 24.9 -3.0**
42nm,0.6s,baz=42,slow=21,SNR=8.0
KAPI LR LR 20 39 16.2
comp=Z,190nm,21.7s,baz=248,slow=41
KAPI Kappang 7.57 55 Pn 20 36 01.5 -2.0
KAPI Kappang 7.57 55 P **Pn 20 36 04.0 +0.6**
BSSI Bau Bau, Buton 7.63 65 P **Pn 20 36 05.3 +1.0**
0.6nm1µm76nm,0.4s
PMSI Majene 7.95 43 P **Pn 20 36 11.1 +2.4**
0.5nm2µm113nm,0.5s
SPSI Sidrap Palu 8.23 49 P **Pn 20 36 13.4 +0.9**
CGJI Cibinong 8.24 289 P **Pn 20 36 13.9 +1.3**
MMSI Mamuju 8.56 39 P **Pn 20 36 18.0 +0.9**
20nm,0.5s
MMRI Maumere 8.64 86 Pn 20 36 16.6 -1.6
MMRI Maumere 8.64 86 P **Pn 20 36 20.3 +2.1**
55nm,0.7s
TPI Tanjungpandan 8.82 318 P **Pn 20 36 21.2 +0.6**
KKSI Kolaka, Sulawe 9.61 58 P **Pn 20 36 33.6 +2.3**
651nm42nm,1.2s
KASI Kota Agung 9.75 293 P **Pn 20 36 33.2 -0.1**
672nm49nm,0.9s
KLSI 9.91 298 P **Pn 20 36 37.2 +1.7**
BATI Baumata 10.02 95 P **Pn 20 36 37.3 +0.2**
40nm,0.3s,baz=20,slow=1.7,SNR=37
BATI S **Sn 20 38 22.6 -5.6**
35nm,0.4s,baz=22,slow=23,SNR=10
BATI Baumata 10.02 95 P **Pn 20 36 38.2 +1.1**
43nm,0.4s
LWLI Liwa 10.36 294 P **Pn 20 36 43.2 +1.5**
MDSI Maura Dua 10.49 297 P **Pn 20 36 44.3 +0.9**
14nm,0.6s
SOEI Soe 10.60 93 Pn 20 36 45.4 +0.3
SOEI Soe 10.60 93 P **Pn 20 36 46.6 +1.5**
37nm,0.6s
MPSI Mapaga 11.58 34 P **Pn 20 36 58.9 +0.5**
368nm14nm,0.8s
MNAI Manna 11.63 295 Pn **Pn 20 36 58.0 -1.1**
MNAI Manna 11.63 295 P **Pn 20 36 57.9 -1.1**
138nm,0.9s
APSI Ampana 11.69 44 P **Pn 20 37 00.6 +0.7**
40nm,1.0s
KSI Kapahiang 12.27 297 P **Pn 20 37 08.0 +0.1**
MASI Maura Aman, Be 12.83 298 P **Pn 20 37 15.2 -0.2**
MRSI Marisa 12.92 41 P **Pn 20 37 18.2 +1.6**
26nm,0.7s
MBWA Marble Bar 13.12 154 Pn 20 37 15.4 -3.9
GIRL Giralia 13.17 177 Pn **Pn 20 37 18.0 -2.1**
PSA00 Pilbara Seismi 13.53 154 Pn 20 37 21.4 -3.6
PSA00 Pilbara Seismi 13.53 154 Pn 20 37 21.2 -3.8
GTOI Gorontalo 13.75 44 P **Pn 20 37 29.9 +2.0**
49nm,0.8s
KRJI Kerinci 14.03 301 P **Pn 20 37 31.7 -0.1**
SANI Sanana 14.39 60 P **Pn 20 37 36.8 +0.2**
18nm,1.1s
FITZ Fitzroy Crossi 14.59 128 P **Pn 20 37 37.0 -2.1**
2.4nm,0.3s,baz=327,slow=8.5,SNR=21
FITZ S Sn 20 40 07.3 -12
8.9nm,0.5s,baz=156,slow=23,SNR=7.6
FITZ LR LR 20 43 34.8
comp=Z,117nm,20.0s,baz=298,slow=38
PPSI Pulau Pagai 14.97 295 P **Pn 20 37 44.4 +0.3**
KRAI Karang Ratu 15.97 69 P **Pn 20 37 58.3 +1.3**
1µm14nm,0.4s
KNRA Kununurra 16.12 114 Pn 20 37 58.8 -0.1
KNRA IAmb IAmb 20 38 20.3
comp=Z,22nm,0.8s
MTN Manton Dam 17.61 103 Pn 20 38 17.5 +0.1
MTN IAmb IAmb 20 38 33.8
comp=Z,16nm,0.5s
SWI Sorong 19.59 65 P **Pn 20 38 42.9 +1.6**
comp=Z,22nm,0.8s
SIJI Sorong 19.59 65 P **P 20 38 37.8 -1.8**
comp=Z,5.4nm,0.4s,baz=278,slow=5.8,SNR=12
SIJI Sorong 19.59 65 P **Pn 20 38 41.0 -0.4**
comp=Z,14nm,0.8s
MORW Morawa 19.69 173 Pn 20 38 42.8 +0.4
MORW IAmb IAmb 20 38 47.9
comp=Z,10nm,0.6s
FAKI Fak Fak 19.70 72 P **P 20 38 40.0 -0.8**
FAKI IAmb IAmb 20 38 58.6
comp=Z,16nm,0.7s
DAV Davao City (W) 20.31 37 LR LR 20 47 12.2
comp=Z,61nm,20.7s,baz=318,slow=39
WB0 Warramunga Arr 22.64 119 P **P 20 39 12.6 +0.1**
WRA Warramunga Arr 22.66 120 P **P 20 39 13.3 +0.5**
comp=Z,8.0nm,0.9s,baz=298,slow=11,SNR=85
WRA S **S 20 43 17.4 0.0**
comp=Z,1.8nm,0.8s,baz=278,slow=21,SNR=5.2
comp=Z,8.0nm,0.9s
WRA Warramunga Arr 22.66 120 P **P 20 39 12.9 +0.1**
WRAB Tennant Creek 22.67 120 P **P 20 39 12.9 +0.1**
WR8 Warramunga Arr 22.81 120 P 20 39 14.5 +0.2
WR8 IAmb IAmb 20 39 15.4
comp=Z,13nm,0.6s
NWAO Narrogin (SRO) 23.65 172 S **S 20 43 33.8 +0.6**
comp=Z,3.6nm,0.8s,baz=270,slow=15,SNR=0.9
ASAR Alice Springs 24.09 129 P **P 20 39 27.6 +1.1**
comp=Z,5.1nm,0.4s,baz=301,slow=8.6,SNR=90
ASAR PcP **PcP 20 43 08.4 +1.5**
comp=Z,1.9nm,0.5s,baz=308,slow=1.7,SNR=9.2
ASAR S **S 20 43 43.3 +2.8**
comp=Z,0.3nm,0.6s,baz=308,slow=15,SNR=1.6
ASAR LR LR 20 48 58.5
comp=Z,62nm,21.9s,baz=290,slow=36
comp=Z,5.1nm,0.4s
ASAR Alice Springs 24.09 129 P 20 39 27.2 +0.8
AS31 Alice Springs 24.09 129 P 20 39 27.2 +0.7
FORT Forrest 25.21 150 P 20 39 37.8 +1.3
FORT IAmb IAmb 20 39 39.8
comp=Z,19nm,0.7s
CMAR Chiang Mai Arr 31.21 333 P **P 20 40 30.9 +0.8**
comp=Z,2.4nm,0.8s,baz=165,slow=8.7,SNR=24
CMAR LR LR 20 54 47.9
comp=Z,82nm,18.2s,baz=170,slow=40
comp=Z,2.4nm,0.8s
CMAR Chiang Mai Arr 31.21 333 P 20 40 30.0 -0.2
STKA Stephens Creek 34.30 135 P **P 20 40 58.9 +1.8**
comp=Z,13nm,0.5s,baz=316,slow=8.9,SNR=40
STKA LR LR 20 56 17.2
comp=Z,96nm,18.9s,baz=215,slow=38
comp=Z,13nm,0.5s
BRDH Bariadhala 38.43 326 LR LR 20 58 38.1
comp=Z,47nm,20.3s,baz=90,slow=38
H08S2 Diego Garcia H 40.60 269 T T 21 25 07.9
baz=95,slow=75,SNR=4.8
H08S3 Diego Garcia H 40.61 269 T T 21 25 04.1
baz=95,slow=75,SNR=5.4
H08S1 Diego Garcia H 40.62 269 T T 21 25 03.5
baz=95,slow=75,SNR=5.8
SHL Shillong 40.66 329 P 20 41 50.4 -0.7
SHL IAmb IAmb 20 41 51.6
comp=Z,10nm,0.7s
EVN Everest 45.26 326 P 20 42 27.6 -1.2
HNR Honiara 45.77 94 P **P 20 42 31.4 -1.0**
LZDM Lanzhou Array 46.07 349 P **P 20 42 35.6 +0.8**
comp=Z,1.4nm,0.4s,baz=180,slow=16,SNR=4.7
comp=Z,1.4nm,0.4s
MJAR Matsushiro Arr 51.27 26 P **P 20 43 12.5 -1.9**
comp=Z,0.6nm,0.5s,baz=213,slow=7.1,SNR=4.6
comp=Z,0.6nm,0.5s
USRK Ussuriysk Ar. 55.93 16 P **P 20 43 47.0 -1.3**
comp=Z,1.1nm,0.7s,baz=196,slow=6.2,SNR=2.1
comp=Z,1.1nm,0.7s
ULN Ulaanbaatar 57.32 355 P 20 43 57.6 -0.7
ULN Ulaanbaatar 57.32 355 P **P 20 43 58.1 -0.2**
comp=Z,21nm,0.8s
SONM Songino Array 57.35 354 P **P 20 43 57.9 -0.6**
comp=Z,2.9nm,0.5s,baz=177,slow=8.6,SNR=34
comp=Z,2.9nm,0.5s
SONM Songino Array 57.35 354 P P 20 43 57.9 -0.6
WMQ Urumqi 57.95 338 *e*PKP P 20 44 07.8 +5.1
WMQ LR LR
comp=Z,88nm,22.7s
HEH HeiHe 60.64 10 *e*P **P 20 44 20.0 -1.0**
HEH pmax pmax
comp=Z,6.0nm,0.6s
MKAR Makanchi Array 62.51 336 P **P 20 44 32.9 -0.9**
comp=Z,2.7nm,0.6s,baz=149,slow=6.9,SNR=22
comp=Z,2.7nm,0.6s
MAW Mawson 67.06 199 P **P 20 45 04.2 +1.2**
comp=Z,13nm,0.9s,baz=60,slow=7.8,SNR=9.5
comp=Z,13nm,0.9s

MAW	**Mawson**	**67.06 199**	P	**P**	**20 45 03.8**	**+0.8**
KURBB	**Kurchatov Arra**	**67.07 337**	P	**P**	**20 45 02.7**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=152,slow=5.0,SNR=4.9					
	comp=Z,1.0nm,0.7s					
KURK	**Kurchatov**	**67.11 337**	P	**P**	**20 45 02.1**	**-1.5**
KURK			IAmb	IAmb	20 45 17.9	
	comp=Z,3.3nm,0.8s					
ZALV	**Zalesovo Beam**	**67.64 342**	P	**P**	**20 45 05.3**	**-1.5**
	comp=Z,2.1nm,0.6s,baz=148,slow=2.8,SNR=5.0					
	comp=Z,2.1nm,0.6s					
ZALV	**Zalesovo Beam**	**67.64 342**	P	**P**	**20 45 05.0**	**-1.8**
BVAR	**Borovoye Array**	**72.22 334**	P	**P**	**20 45 34.3**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=120,slow=5.8,SNR=1.7					
	comp=Z,1.0nm,0.7s					
VNDA	**Vanda**	**72.46 170**	P	**P**	**20 45 37.8**	**+1.6**
	comp=Z,3.5nm,0.9s,baz=314,slow=7.1,SNR=12					
	comp=Z,3.5nm,0.9s					
VNDA	**Vanda**	**72.46 170**			**20 45 37.7**	**+1.6**
VNDA			IAmb	IAmb	20 45 38.8	
	comp=Z,5.7nm,1.1s					
AB31	**Akbulak array**	**74.87 327**	P	**P**	**20 45 49.6**	**-1.1**
AB31			IAmb	IAmb	20 46 06.3	
	comp=Z,8.5nm,0.8s					
ABKAR	**Akbulak array**	**74.87 327**	P	**P**	**20 45 50.0**	**-0.7**
QSPA	**South Pole Qui**	**80.58 180**	P	**P**	**20 46 24.3**	**+1.9**
	comp=Z,2.2nm,1.0s,baz=26,slow=13,SNR=1.8					
	comp=Z,2.2nm,1.0s					
QSPA	**South Pole Qui**	**80.58 180**	P	**P**	**20 46 24.0**	**+1.6**
QSPA			IAmb	IAmb	20 46 44.9	
	comp=Z,5.1nm,1.2s					
KBZ	**Khabaz**	**82.80 316**	P	**P**	**20 46 35.1**	**+0.8**
	comp=Z,1.1nm,0.9s,baz=244,slow=18,SNR=2.0					
	comp=Z,1.1nm,0.9s					
BRTR	**Keskin Array B**	**88.27 311**	P	**P**	**20 47 01.4**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=134,slow=7.0,SNR=3.9					
	comp=Z,0.7nm,0.7s					
TORD	**Torodi Ar. Bea**	**113.21 280**	PKiKP	**PKiKP**	**20 52 48.0**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=100,slow=1.7,SNR=4.9					
YKA	**Yellowknife Ar**	**116.73 23**	PKP	**PKPdf**	**20 52 52.5**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=330,slow=2.6,SNR=6.2					
PDAR	**Pinedale Array**	**129.84 41**	PKP	**PKPdf**	**20 53 20.1**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=315,slow=0.6,SNR=4.0					
PDAR			SKPbc	SKPab	20 56 34.8	-2.7
	comp=Z,0.5nm,0.8s,baz=197,slow=1.5,SNR=3.6					
ULM	**Lac du Bonnet**	**132.57 25**	SKPbc	**SKPbc**	**20 56 44.6**	**-2.6**
	comp=Z,4.6nm,0.9s,baz=325,slow=3.9,SNR=7.4					
CPUP	**Villa Florida**	**143.37 194**	PKP	**PKPdf**	**20 53 45.1**	**+0.1**
	comp=Z,1.0nm,0.4s,baz=171,slow=11,SNR=4.3					
CPUP	**Villa Florida**	**143.37 194**		**PKPdf**	**20 53 44.2**	**-0.8**
BDFB	**Brasilia**	**149.11 216**	PKPbc	**PKiKP**	**20 53 60.0**	**-0.6**
	comp=Z,1.3nm,0.3s,baz=140,slow=5.4,SNR=3.0					
BDFB	**Brasilia**	**149.11 216**		**PKPdf**	**20 53 54.6**	**-0.5**
LPAZ	**La Paz**	**154.41 176**	PKPab	**PKPab**	**20 54 28.2**	**+2.1**
	comp=Z,2.4nm,0.7s,baz=180,slow=1.6,SNR=9.8					
LPAZ	**La Paz**	**154.41 176**		**PKPab**	**20 54 27.9**	**+1.8**

*AZER **26** 20:34:35.1, 38.°45N×44.°46E, h3km, ml3.1*
*AFAD **26** 20:34:36.9, 38.°45N×44.°58E, h3km±1km, ML2.9*
*ISK **26** 20:34:37.9, 38.°29N×44.°44E, h2km, ML2.9/8*
*TEH **26** 20:34:40.3, 38.°53N×44.°62E, h6km±129km, ML2.9, Presumed earthquake*
*NSSP **26** 20:35:36.2, 38.°37N×44.°55E, h10km, Ms3.0*

ISC 26 20:34:38.4±1.1, 38.°45N±0.°02×44.°52E±0.°02, h2km±10km, n64, σ1§88/114, 2C-4D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**298**	P		**Pg**	**20 34 47.0**	**-0.4**
OZAP				S		**Sg**	**20 34 54.8**	**+1.3**
OZAP				IAML			20 34 58.0	
	comp=N,1μm,0.7s							
OZAP				IAML			20 35 02.0	
	comp=E,977nm,0.5s							
YOVA	**Hakkari_Yksek**	**0.88**	**192**	P		**Pb**	**20 34 55.8**	**-0.7**
YOVA				S		**Sb**	**20 35 07.4**	**-1.3**
YOVA				IAML			20 35 13.0	
	comp=E,511nm,0.4s							
YOVA				IAML			20 35 14.0	
	comp=N,363nm,0.7s							
TVAN	**Van**	**0.88**	**276**	P		**Pg**	**20 34 55.0**	**-0.3**
TVAN				IAML			20 35 23.0	
	comp=E,335nm,0.8s							
TVAN				IAML			20 35 28.0	
	comp=N,439nm,0.6s							
VANB	**Van**	**0.90**	**280**	Pg		**Pg**	**20 34 54.9**	**-0.8**
VANB				Sg		**Sg**	**20 35 07.4**	**+0.1**
MAKU	**Maku**	**0.92**	**8**	Pg		**Pg**	**20 34 55.9**	**-0.1**
VMUR	**Van-Muradiye**	**0.92**	**306**	P		**Pg**	**20 34 55.7**	**-0.4**
VMUR				S		**Sb**	**20 35 09.5**	**-0.3**
VMUR				IAML			20 35 18.0	
	comp=N,317nm,0.5s							
VMUR				IAML			20 35 18.0	
	comp=E,350nm,0.6s							
NAX	**Nakhchivan**	**1.05**	**46**	P		**Pn**	**20 34 59.4**	**-0.8**
NAX				S		**Sn**	**20 35 15.9**	**+0.3**
HAKT	**HAKKARI**	**1.09**	**216**	P		**Pg**	**20 34 59.0**	**-0.4**
HAKT				S		**Sn**	**20 35 15.8**	**-1.0**
HAKT				IAML			20 35 19.0	
	comp=N,317nm,0.6s							
HAKT				IAML			20 35 19.0	
	comp=E,312nm,0.3s							
HAKT	**HAKKARI**	**1.09**	**216**	P		**Pg**	**20 34 58.8**	**-0.6**
HAKT				S		**Sn**	**20 35 17.5**	**+0.7**
GEVA	**Gevas**	**1.16**	**264**	P		**Pg**	**20 34 59.0**	**-1.6**
GEVA				S		**Sb**	**20 35 17.4**	**+0.7**
GEVA				IAML			20 35 20.0	
	comp=N,218nm,0.4s							
GEVA				IAML			20 35 21.0	
	comp=E,288nm,0.6s							
AKDM	**Akdamar-Van**	**1.22**	**265**	Pn		**Pg**	**20 35 00.5**	**-1.2**
AKDM				Sn		**Sg**	**20 35 17.7**	**+0.2**
SBZ	**Shahbuz**	**1.25**	**40**	P		**Pn**	**20 35 02.9**	**0.0**
SBZ				S		**Sn**	**20 35 21.0**	**+0.7**
ORD	**Ordubad**	**1.25**	**67**	P		**Pn**	**20 35 02.9**	**-0.1**
ORD				S		**Sn**	**20 35 20.8**	**+0.5**
DYDN	**Diyadin**	**1.27**	**330**	P		**Pn**	**20 35 03.6**	**+0.3**
DYDN				IAML			20 35 26.0	
	comp=N,193nm,0.7s							
DYDN				IAML			20 35 31.0	
	comp=E,232nm,0.6s							
HYR	**Heyderabad**	**1.30**	**11**	P		**Pn**	**20 35 03.6**	**0.0**
HYR				S		**Sn**	**20 35 22.6**	**+1.1**
ITBZ	**Tabriz**	**1.30**	**99**	Pg		**Pn**	**20 35 03.5**	**-0.2**
IAZR	**Azarshahr**	**1.38**	**123**	Pg		**Pb**	**20 35 05.9**	**+0.7**
VAYK	**Vayk**	**1.43**	**29**	⇓*eP*		**Pg**	**20 35 05.8**	**-0.1**
VAYK				⇓*eS*		**Sn**	**20 35 26.5**	**+1.5**
ADCV	**BITLIS_Adilcev**	**1.45**	**285**	P		**Pn**	**20 35 05.6**	**-0.3**
ADCV				S		**Sn**	**20 35 26.9**	**+1.4**
IGDI	**IGDIR**	**1.46**	**347**	P		**Pg**	**20 35 06.1**	**-0.4**
IGDI				S		**Sn**	**20 35 28.2**	**+2.7**
ALVK	**Alvank**	**1.52**	**70**	*eP*		**Pg**	**20 35 07.1**	**-0.3**
ALVK				*eS*		**Sg**	**20 35 28.4**	**+1.4**
PERV	**Siirt/Pervari-**	**1.64**	**253**	P		**Pb**	**20 35 08.9**	**-0.5**
PERV				S		**Sg**	**20 35 33.8**	**+2.8**
AGRB	**Hanur-Agry**	**1.64**	**314**	Pn		**Pb**	**20 35 09.4**	**-0.1**
DORK	**Agr/Tutak/Do**	**1.65**	**305**	P		**Pn**	**20 35 08.3**	**-0.2**
DORK				S		**Sg**	**20 35 32.5**	**+1.0**
DORK				IAML			20 35 45.0	
	comp=E,111nm,0.8s							
DORK				IAML			20 35 50.0	
	comp=N,106nm,0.8s							
MLAZ	**Malazgirt-MUS**	**1.69**	**295**	Pn		**Pb**	**20 35 09.9**	**-0.4**
MLAZ				Sn		**Sg**	**20 35 32.6**	**-0.1**
GNI	**Garni**	**1.71**	**6**	Pn		**Pg**	**20 35 11.9**	**+0.7**
GNI				Sn		**Sg**	**20 35 36.7**	**+3.3**
GNI	**Garni**	**1.71**	**6**	⇓*iP*		**Pg**	**20 35 11.4**	**+0.2**
GNI				⇑*iS*		**Sg**	**20 35 36.9**	**+3.5**
EGVZ	**Egvard**	**1.76**	**63**	*eP*		**Pg**	**20 35 11.2**	**-1.0**
EGVZ				*eS*		**Sg**	**20 35 35.4**	**+0.4**
GRS	**Goris**	**1.76**	**53**	⇓*iP*		**Pg**	**20 35 14.0**	**+1.8**
GRS				⇑*iS*		**Sg**	**20 35 37.0**	**+2.0**
BLIS	**Bitlis-Merkez**	**1.89**	**270**	P		**Pb**	**20 35 13.8**	**+0.1**
BLIS				S		**Sb**	**20 35 37.5**	**-0.3**
BLIS				IAML			20 35 47.0	
	comp=N,97nm,0.7s							
MAHB	**Mahabad**	**1.92**	**150**	Pn		**Pg**	**20 35 16.9**	**+1.6**
AYRK	**Ayrk**	**1.94**	**30**	*eP*		**Pg**	**20 35 15.1**	**-0.4**
AYRK				*eS*		**Sg**	**20 35 41.6**	**+0.9**
GURO	**Guroymak-BITLI**	**1.96**	**274**	Pn		**Pn**	**20 35 12.7**	**0.0**
IHRS	**Heris**	**1.99**	**93**	Pn		**Pg**	**20 35 15.8**	**-0.7**
SRTM	**Siirt_Merkez**	**2.10**	**258**	P		**Pb**	**20 35 17.2**	**0.0**
SRTM				S		**Sg**	**20 35 46.1**	**+0.4**
SRTM				IAML			20 35 49.0	
	comp=E,156nm,1.3s							
SRTM				IAML			20 35 53.0	
	comp=N,188nm,0.7s							
QRD	**Qoradiz**	**2.41**	**64**	P		**Pn**	**20 35 19.4**	**+0.6**
QRD				S		**Sb**	**20 35 52.2**	**-0.3**
KARS	**Kars**	**2.45**	**333**	Pn		**Pb**	**20 35 21.5**	**-1.7**
GDB	**GEDABAY**	**2.46**	**22**	P		**Pn**	**20 35 20.2**	**+0.5**
GDB				S		**Sb**	**20 35 53.3**	**-1.0**
LSVT	**Lusahovit**	**2.52**	**12**	*eP*		**Pg**	**20 35 26.2**	**-0.5**
LSVT				*eS*		**Sg**	**20 36 00.0**	**+0.6**
ISRB	**Sarab**	**2.56**	**103**	Pn		**Pb**	**20 35 24.2**	**-0.9**
GANJ	**Ganja**	**2.60**	**32**	P		**Pn**	**20 35 22.0**	**+0.5**
GANJ				S		**Sb**	**20 35 57.4**	**-0.8**
AGDM	**Agdam**	**2.61**	**50**	P		**Pn**	**20 35 22.2**	**+0.6**
AGDM				S		**Sb**	**20 35 56.5**	**-1.7**
BLQ	**Beylaqan**	**2.69**	**61**	P		**Pn**	**20 35 23.3**	**+0.7**
BLQ				S		**Sb**	**20 36 00.0**	**-0.6**
QZX	**Qazax, Azerbai**	**2.69**	**14**	P		**Pn**	**20 35 23.5**	**+0.8**
QZX				S		**Sb**	**20 35 59.1**	**-1.6**
SENK	**Senkaya-Erzuru**	**2.70**	**322**	Pn		**Pb**	**20 35 25.0**	**-2.5**
BRDA	**Brd**	**2.75**	**48**	P		**Pn**	**20 35 24.3**	**+0.9**
BRDA				S		**Sb**	**20 36 01.8**	**-0.5**
YRD	**Yardimli**	**2.95**	**80**	P		**Pn**	**20 35 26.6**	**+0.1**
YRD				S		**Sb**	**20 36 06.0**	**-2.3**
LRK	**Lerik**	**3.00**	**85**	P		**Pn**	**20 35 27.3**	**+0.2**
LRK				S		**Sb**	**20 36 08.0**	**-1.8**
BNGB	**Bingl**	**3.05**	**281**	Pn		**Pn**	**20 35 28.6**	**+0.8**
ZRD	**Zardab**	**3.06**	**52**	S		**Sn**	**20 36 10.2**	**-1.1**
GLBA	**Clilabad**	**3.13**	**74**	P		**Pn**	**20 35 29.1**	**+0.4**
GLBA				S		**Sb**	**20 36 12.1**	**-1.2**
LKRN	**Lenkeran, Azer**	**3.35**	**84**	P		**Pn**	**20 35 32.6**	**+0.9**
LKRN				S		**Sb**	**20 36 15.6**	**-4.0**
ASTR	**Astara**	**3.35**	**87**	P		**Pn**	**20 35 32.2**	**+0.5**
ASTR				S		**Sb**	**20 36 16.9**	**-2.8**
SEKA	**Sheki**	**3.44**	**36**	P		**Pn**	**20 35 34.5**	**+1.3**
SEKA				S		**Sb**	**20 36 19.3**	**-3.1**
ZKTA	**Zakatala**	**3.57**	**26**	P		**Pn**	**20 35 35.7**	**+0.9**
ZKTA				S		**Sb**	**20 36 22.1**	**-4.0**
QBL	**Gabala**	**3.58**	**45**	P		**Pn**	**20 35 35.2**	**+0.3**
QBL				S		**Sb**	**20 36 21.7**	**-4.5**
IML	**Ismayilli**	**3.67**	**49**	P		**Pn**	**20 35 36.7**	**+0.5**
IML				S		**Sb**	**20 36 24.7**	**-4.3**
XNQ	**Khinaliq**	**3.90**	**45**	P		**Pn**	**20 35 40.3**	**+0.9**
XNQ				S		**Sn**	**20 36 29.7**	**+3.8**
PQL	**Pirkuli**	**3.92**	**52**	P		**Pn**	**20 35 40.2**	**+0.5**
PQL				S		**Sb**	**20 36 30.8**	**-5.4**
GBS	**Qobustan**	**4.01**	**57**	P		**Pn**	**20 35 42.4**	**+1.6**
GBS				S		**Sb**	**20 36 33.1**	**-5.5**
ATGJ	**Altiaghaj**	**4.18**	**53**	P		**Pn**	**20 35 43.5**	**+0.4**
ATGJ				S		**Sn**	**20 36 36.4**	**+3.7**
QSAR	**Qusar**	**4.20**	**42**	P		**Pn**	**20 35 43.9**	**+0.4**
QSAR				S		**Sn**	**20 36 37.2**	**+4.1**
QUBA	**Quba, Azerbaij**	**4.22**	**45**	P		**Pn**	**20 35 44.7**	**+1.0**
QUBA				S		**Sb**	**20 36 38.6**	**-6.0**
SIZA	**Siyzn**	**4.28**	**51**	P		**Pn**	**20 35 44.3**	**-0.2**
SIZA				S		**Sb**	**20 36 40.0**	**-6.4**

*IDC **26** 20:46:44.8±2.2, 46.°04N×93.°50E, h0km, mb4.0/2, mbtmp3.4/9, ML3.0/7, MS4.4/3, Error ellipse: s-maj=38.2km s-min=16.9km az=176.0*
*NNC **26** 20:46:46.3±4.4, 44.°80N×93.°75E, h0km, mb3.9, mpv3.2, Error ellipse: s-maj=36.6km s-min=34.5km az=72.0*

ISC 26 20:46:19.9±1.9, 44.°5N±0.°2×95.°54E±0.°08, h10km, n17, σ1§80/9, MS4.4/3, 4C-9D, Mongolia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SONM	**Songino Array**	**8.24**	**62**	Pn		**Pg**	**20 48 57.4**	**-0.4**
	0.1nm,0.3s,baz=256,slow=14,SNR=1.9							
SONM				Lg		Lg	20 51 16.7	
	2.6nm,0.3s,baz=282,slow=21,SNR=11							
	0.2nm,0.3s							
TLY	**Talaya**	**9.01**	**34**	Pn			20 48 53.1	
	0.6nm,0.3s,baz=239,slow=14,SNR=2.9							
TLY				Lg		Lg	20 51 09.7	
	1.3nm,0.3s,baz=276,slow=14,SNR=4.0							
	1.8nm,0.4s							
MK31	**Makanchi Array**	**9.56**	**289**	⇑Pn		Pn	20 48 43.5	+5.9
	0.5nm,0.5s,baz=101,slow=14,SNR=13							
MK31				⇓Lg		Lg	20 51 07.9	
	16nm,0.7s,baz=98,slow=28,SNR=3.7							
MKAR	**Makanchi Array**	**9.56**	**289**	Pn		Pn	20 48 41.1	+3.5
	0.3nm,0.3s,baz=93,slow=15,SNR=8.8							
MKAR				Lg		Lg	20 50 51.2	
	2.1nm,0.3s,baz=86,slow=33,SNR=9.5							
	0.3nm,0.4s							
MAKZ	**Makanchi**	**9.78**	**288**	⇑Pn		Pn	20 48 49.4	+8.9
	1.2nm,0.8s							
MAKZ				⇓Lg		Lg	20 51 14.5	
	16nm,0.7s							
PDGK	**Podgornoye**	**11.64**	**270**	⇑Pn		Pn	20 49 17.6	+11
	7.2nm,1.0s							
PDGK				⇓Sn		**Sn**	**20 51 14.9**	**-1.2**
	7.2nm,0.7s							
PDGK				⇑Lg		Lg	20 52 18.4	
	12nm,0.8s							
ZALV	**Zalesovo Beam**	**11.76**	**327**	Pn		**Pn**	**20 49 06.2**	**-1.5**
	0.1nm,0.3s,baz=142,slow=16,SNR=1.4							
ZALV				Lg		Lg	20 51 54.2	
	0.2nm,0.3s,baz=142,slow=31,SNR=2.4							
	1.0nm,0.9s							
KURK	**Kurchatov**	**12.99**	**305**	⇓Pn			20 49 37.0	
	1.5nm,0.7s							
KURK				⇓Sn		**Sn**	**20 51 48.7**	**-0.2**
	4.4nm,0.8s							
KURK				⇓Lg		Lg	20 52 58.4	
	9.7nm,1.1s							
KURBB	**Kurchatov Arra**	**13.01**	**304**	Pn		**Pn**	**20 49 22.7**	**-2.0**
	0.1nm,0.3s,baz=106,slow=15,SNR=4.8							
KURBB				Lg		Lg	20 52 32.4	
	0.1nm,0.3s,baz=108,slow=31,SNR=5.5							
	0.7nm,0.7s							
KURBB	**Kurchatov Arra**	**13.01**	**304**	⇓Pn		**P**	**20 49 38.2**	**+2.9**
	3.7nm,0.6s							
KURBB				⇓Sn		**Sn**	**20 51 49.8**	**+0.4**
	7.8nm,0.8s							
KURBB				⇓Lg		Lg	20 52 58.1	
	47nm,1.2s							
AAK	**Ala-Archa**	**15.36**	**270**	Pn		**P**	**20 50 03.1**	**+1.4**
	0.1nm,0.3s,baz=180,slow=21,SNR=1.1							
	0.3nm,0.4s							
BVAR	**Borovoye Array**	**18.57**	**306**	Pn		**Pn**	**20 50 36.2**	**-0.8**
	baz=99,slow=9.2,SNR=6.6							
	0.3nm,0.6s							
ARTI	**Arti**	**26.14**	**310**	P		P	20 52 01.5	+7.5
	1.6nm,0.6s,baz=102,slow=11,SNR=3.9							
	1.6nm,0.6s							
HFS	**Hagfors**	**49.04**	**319**	P		P	20 55 15.5	+8.8
	1.6nm,0.6s,baz=69,slow=8.5,SNR=4.9							
	1.6nm,0.6s							
EIL	**Elat**	**49.47**	**274**	LR		LR	21 20 30.0	
	comp=Z,160nm,18.6s,baz=219,slow=42							
KDAK	**Kodiak Island**	**63.46**	**34**	LR		LR	21 24 44.2	
	comp=Z,261nm,22.0s,baz=115,slow=36							
FRB	**Frobisher Bay**	**71.37**	**353**	LR		LR	21 29 45.4	
	comp=Z,304nm,21.2s,baz=218,slow=37							

*IDC **26** 21:01:57.0±2.2, 22.°55N×145.°01E, h0km, mb3.8/11, mbtmp3.8/12, ML3.9/1, MS3.4/2, Error ellipse: s-maj=86.0km s-min=20.0km az=77.0*
*NEIC **26** 21:01:59.7±1.4, 22.°58N±0.°06×144.°9E±0.°1, h10km±1km, mb4.2/9, Error ellipse: s-maj=25.4km s-min=5.5km az=66.0*

ISC 26 21:02:02.6±0.9, 22.°58N±0.°07×144.°8E±0.°2, h35km, n32, σ0§90/32, mb4.0/15, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JCJ	**Chichijima**	**5.11**	**332**	Pn		**Pn**	**21 03 15.9**	**-0.8**
	4.5nm,0.3s,baz=116,slow=21,SNR=6.4							
JCJ				Sn		**Sn**	**21 04 12.7**	**-1.6**
	8.4nm,0.3s,baz=282,slow=22,SNR=8.3							
	17nm,0.4s							
JCJ	**Chichijima**	**5.11**	**332**			**Pn**	**21 03 15.8**	**-0.8**
JCJ						**Sn**	**21 04 12.1**	**-2.3**
GUMO	**Guam**	**8.94**	**180**	Pn		**Pn**	**21 04 08.0**	**-1.3**
INU	**Inuyama**	**14.44**	**334**	Pn		**Pn**	**21 05 25.0**	**+0.5**
JGF	**Kuroka**	**14.53**	**335**	P		**P**	**21 05 31.4**	**-0.4**
KSRS	**Korea Array**	**20.79**	**319**	P		**P**	**21 06 41.9**	**+1.2**
	0.9nm,0.6s,baz=137,slow=9.4,SNR=4.4							
	0.9nm,0.6s							
KSAR	**Wonju Array Be**	**20.81**	**319**	P		**P**	**21 06 41.1**	**+0.2**
KS19	**Wonju Array Si**	**20.86**	**319**	P		**P**	**21 06 41.9**	**+0.5**
SSLB	**Suanglung**	**21.99**	**278**	P		**P**	**21 06 54.1**	**+0.4**
SSLB				IAmb		IAmb	21 07 00.3	
	comp=Z,11nm,1.0s							
USRK	**Ussuriysk Ar.**	**24.03**	**337**	P		**P**	**21 07 16.3**	**+2.1**
	comp=Z,1.7nm,0.7s,baz=154,slow=10,SNR=3.1							
	comp=Z,1.7nm,0.7s							
TOLI2	**Tolitoli**	**31.66**	**231**	P		**P**	**21 08 23.5**	**+0.7**
TOLI2				IAmb		IAmb	21 08 36.4	
	comp=Z,4.4nm,0.7s							
HNR	**Honiara**	**35.09**	**153**	LR		LR	21 21 18.5	
	comp=Z,12nm,21.9s,baz=228,slow=33							
LZDM	**Lanzhou Array**	**38.02**	**300**	P		**P**	**21 09 18.6**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=159,slow=8.7,SNR=3.5							
	comp=Z,0.7nm,0.3s							
SONM	**Songino Array**	**39.66**	**319**	P		**P**	**21 09 31.8**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=134,slow=8.2,SNR=3.2							
	comp=Z,0.3nm,0.4s							
SONM	**Songino Array**	**39.66**	**319**	P		**P**	**21 09 31.2**	**-0.1**
KIWB	**Kanaga Island**	**41.31**	**35**	P		**P**	**21 09 44.8**	**+0.2**
WR8	**Warramunga Arr**	**43.46**	**194**	P		**P**	**21 10 01.3**	**-1.2**
WR8				IAmb		IAmb	21 10 19.5	
	comp=Z,1.5nm,0.9s							
WRAB	**Tennant Creek**	**43.48**	**194**	P		**P**	**21 10 02.4**	**-0.1**
WRAB				IAmb		IAmb	21 10 11.0	
	comp=Z,3.6nm,0.7s							
WRA	**Warramunga Array**	**43.49**	**194**	P		**P**	**21 10 02.7**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=17,slow=9.1,SNR=6.4							
	comp=Z,0.6nm,0.6s							
WRA	**Warramunga Arr**	**43.49**	**194**	P		**P**	**21 10 02.2**	**-0.5**
ASAR	**Alice Springs**	**47.18**	**194**	P		**P**	**21 10 31.3**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=19,slow=9.2,SNR=1.5							
	comp=Z,0.2nm,0.5s							
ZALV	**Zalesovo Beam**	**54.49**	**321**	P		**P**	**21 11 26.7**	**+0.1**
	baz=98,slow=10							
MKAR	**Makanchi Array**	**55.24**	**312**	P		**P**	**21 11 32.9**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=86,slow=8.6,SNR=4.2							
	comp=Z,0.2nm,0.5s							
MKAR	**Makanchi Array**	**55.24**	**312**	P		**P**	**21 11 32.7**	**+0.5**
KURBB	**Kurchatov Arra**	**57.94**	**317**	P		**P**	**21 11 51.6**	**+0.3**
	comp=Z,1.0nm,0.3s,baz=94,slow=7.5,SNR=4.7							
	comp=Z,1.0nm,0.3s							
BVAR	**Borovoye Array**	**63.01**	**319**	P		**P**	**21 12 26.6**	**+0.7**
	comp=Z,0.9nm,0.4s,baz=90,slow=8.3,SNR=10							
	comp=Z,0.9nm,0.4s							
BORK	**Borovoye**	**63.05**	**319**	P		**P**	**21 12 26.7**	**+0.5**
BORK				IAmb		IAmb	21 12 27.6	
	comp=Z,1.0nm,0.7s							
OBN	**Obninsk**	**81.61**	**327**	LR		LR	21 54 18.5	
	comp=Z,120nm,19.8s,baz=258,slow=38							
KBZ	**Khabaz**	**82.86**	**314**	P		**P**	**21 14 24.4**	**+0.8**
	comp=Z,1.5nm,0.9s,baz=95,slow=3.3,SNR=4.1							
	comp=Z,1.5nm,0.9s							
KIV	**Kislovodsk**	**82.91**	**315**	P		**P**	**21 14 23.4**	**-0.6**
FINES	**FINESS Array B**	**83.05**	**335**	P		**P**	**21 14 24.1**	**-0.1**
	comp=Z,1.7nm,0.8s,baz=70,slow=6.5,SNR=5.0							
	comp=Z,1.7nm,0.8s							
FINES	**FINESS Array B**	**83.05**	**335**	P		**P**	**21 14 23.9**	**-0.3**

IDC 26 21:06:52.1±3.2, 43.°14N×105.°39W, h0km, mb2.6/1, mbtmp3.1/3, ML2.8/2, MS2.2/1, Error ellipse: s-maj=59.2km s-min=10.4km az=156.0, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PDAR	**Pinedale Array**	**3.08**	**264**	Pn		Pn	21 07 44.7	+2.4
	0.8nm,0.3s,baz=70,slow=12,SNR=6.0							
PDAR				LR		LR	21 08 28.2	
	comp=Z,39nm,20.4s,baz=121,slow=31							
PDAR				Lg		Lg	21 08 28.9	
	9.0nm,0.3s,baz=78,slow=30,SNR=8.1							
	1.8nm,0.4s							
I10CA	**LAC DU BONNET**	**9.55**	**39**	I		I	21 59 20.0	
	baz=217,slow=244,SNR=3.8							
ULM	**Lac du Bonnet**	**9.65**	**39**	Pn		Pn	21 09 11.4	-0.8
	0.2nm,0.3s,baz=233,slow=14,SNR=3.0							
ULM				Lg		Lg	21 11 46.6	
	0.3nm,0.3s,baz=304,slow=12,SNR=3.5							

	comp=Z,980nm,0.5s								
HMBC	**Humberstone**	**2.08**	**356**	*e*P		**Pn**	**21**	**11**	**37.6 -0.5**
HMBC				*i* S		**Sn**	**21**	**12**	**04.6 +1.4**
HMBC				IAML			21	12	09.5
	comp=E,2μm,0.1s								
HMBC	**Humberstone**	**2.08**	**356**	*e*P		**Pn**	**21**	**11**	**37.2 -0.9**
HMBC				*e*S		**Sn**	**21**	**12**	**01.2 -2.0**
HMBC				IAML			21	12	09.7
	comp=Z,1μm,0.3s								
TA02	**Huaiquique**	**2.12**	**350**	*i* S		**Sn**	**21**	**12**	**05.2 +1.4**
TA02	**Huaiquique**	**2.12**	**350**	*e*P		**Pn**	**21**	**11**	**38.0 -0.5**
TA02				*e*S		**Sn**	**21**	**12**	**02.1 -1.7**
TA02				IAML			21	12	11.1
	comp=Z,833nm,0.1s								
PB08	**IPOC Station P**	**2.29**	**14**	*e*P		**Pn**	**21**	**11**	**40.9 -0.2**
PB08				*e*S		**Sn**	**21**	**12**	**08.7 +0.3**
PB08				IAML			21	12	16.2
	comp=Z,350nm,0.2s								
PB14	**IPOC Station P**	**2.33**	**195**	*e*P		**Pn**	**21**	**11**	**40.6 -1.0**
PB14				*e*S		**Sn**	**21**	**12**	**15.8 +6.5**
PB14				IAML			21	12	19.9
	comp=Z,414nm,0.4s								
PB11	**IPOC Station P**	**2.60**	**2**	*e*P		**Pn**	**21**	**11**	**44.4 -0.8**
PB11				*i* S		**Sn**	**21**	**12**	**17.1 +1.5**
PB11	**IPOC Station P**	**2.60**	**2**	*e*P		**Pn**	**21**	**11**	**44.5 -0.7**
PB11				*e*S		**Sn**	**21**	**12**	**14.2 -1.5**
PB11				IAML			21	12	20.2
	comp=Z,426nm,0.3s								
GO01	**Chusmiza**	**2.74**	**11**	*e*P		**Pn**	**21**	**11**	**47.3 0.0**
GO01				IAML			21	12	29.8
	comp=Z,299nm,0.2s								
PSGCX	**Pisagua**	**2.78**	**353**	*e*P		**Pn**	**21**	**11**	**45.8 -1.8**
PSGCX				*e*S		**Sn**	**21**	**12**	**23.3 +3.2**
PSGCX				IAML			21	12	34.3
	comp=Z,355nm,0.4s								
AC01	**Pan de Azucar**	**3.84**	**191**	*e*P		**Pn**	**21**	**11**	**59.1 -2.9**
AC01				*e*S		Sn	21	13	00.1 +14
AC01				IAML			21	13	16.2
	comp=Z,89nm,0.5s								
AC02	**Maricunga**	**4.48**	**173**	*e*P		**Pn**	**21**	**12**	**11.1 -0.1**
AC02				*e*S		Sn	21	13	20.3 +18
AC02				IAML			21	13	27.6
	comp=Z,73nm,0.3s								
GO03	**Copiapo**	**5.22**	**185**	*e*P		**Pn**	**21**	**12**	**18.5 -2.4**
GO03				*e*S		Sn	21	13	35.5 +16
GO03				IAML			21	13	55.0
	comp=Z,76nm,0.5s								

*IDC **26** 21:24:03.8±0.8, 10.07S×74.01W, h131km±7km, mb3.5/6, mbtmp4.1/10, Error ellipse: s-maj=14.4km s-min=11.2km az=140.0*
*NEIC **26** 21:24:05.8±1.5, 10.08S±0.05×74.10W±0.08, h142km± 10km, mb4.1/6, Error ellipse: s-maj=12.0km s-min=6.8km az=97.0*

ISC 26 21:24:05.3±0.5, 10.07S±0.06×74.10W±0.07, h150km, n30, σ1§23/36, mb3.6/5, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
CZSB	**Cruzeiro do Su**	**2.70**	**31**	Pn	**Pn**	**21**	**24**	**49.0**	**0.0**
CZSB				Sn	**Sn**	**21**	**25**	**23.1**	**+0.4**
NNA	**Nana**	**3.30**	**234**	P	**Pn**	**21**	**24**	**56.4**	**-0.1**
	96nm,0.3s,baz=57,slow=13,SNR=74								
NNA				S	**Sn**	**21**	**25**	**35.5**	**-0.7**
	290nm,0.3s,baz=38,slow=14,SNR=18								
ATAH	**Atahualpa**	**5.15**	**304**	P	**Pn**	**21**	**25**	**21.0**	**-0.1**
	13nm,0.3s,baz=116,slow=8.0,SNR=53								
ATAH				S	**Sn**	**21**	**26**	**20.8**	**+0.6**
	46nm,0.5s,baz=1.4,slow=7.6,SNR=6.7								
LPAZ	**La Paz**	**8.49**	**137**	P	**Pn**	**21**	**26**	**07.0**	**+1.1**
	1.6nm,0.6s,baz=318,slow=13,SNR=8.8								
LPAZ	**La Paz**	**8.49**	**137**		**Pn**	**21**	**26**	**06.0**	**+0.1**
PB16	**IPOC Station P**	**9.35**	**152**	Pn	**Pn**	**21**	**26**	**17.3**	**+0.1**
GO01	**Chusmiza**	**10.66**	**154**	Pn	**Pn**	**21**	**26**	**34.8**	**+0.3**
OTAV	**Otavalo**	**11.12**	**337**	Pn	**Pn**	**21**	**26**	**40.4**	**-0.2**
SIV	**San Ignacio**	**13.99**	**116**	P	**Pn**	**21**	**27**	**17.4**	**+0.1**
	7.8nm,0.6s,baz=307,slow=11,SNR=16								
AF01	**San Pedro de A**	**14.01**	**157**	Pn	**Pn**	**21**	**27**	**17.3**	**-0.4**
LCO	**Las Campanas**	**19.11**	**171**	P	**P**	**21**	**28**	**18.1**	**+1.1**
LCO				IAmb	IAmb	21	28	36.3	
	comp=Z,16nm,1.4s								
SDV	**Santo Domingo**	**19.14**	**11**	P	**P**	**21**	**28**	**18.1**	**+0.7**
	comp=Z,6.1nm,0.3s,baz=165,slow=1.7,SNR=13								
SDV	**Santo Domingo**	**19.14**	**11**		**P**	**21**	**28**	**17.7**	**+0.4**
SDV				IAmb	IAmb	21	28	19.7	
	comp=Z,8.0nm,1.1s								
CO05	**La Serena**	**19.93**	**173**	P	**P**	**21**	**28**	**26.8**	**+1.2**
CO06	**Fray Jorge**	**20.63**	**174**	P	**P**	**21**	**28**	**34.0**	**+0.9**
CO06				IAmb	IAmb	21	28	36.8	
	comp=Z,16nm,1.1s								
CO03	**El Pedregal**	**20.91**	**172**	P	**P**	**21**	**28**	**37.4**	**+1.3**
CO03				IAmb	IAmb	21	28	40.5	
	comp=Z,6.7nm,1.0s								
PLCA	**Paso Flores**	**30.70**	**175**	P	**P**	**21**	**30**	**06.1**	**0.0**
	comp=Z,1.1nm,0.9s,baz=346,slow=8.3,SNR=1.5								
	comp=Z,1.1nm,0.9s								
TXAR	**Lajitas Array**	**48.45**	**325**	P	**P**	**21**	**32**	**33.8**	**+0.9**
	comp=Z,0.6nm,0.4s,baz=153,slow=8.6,SNR=12								
	comp=Z,0.6nm,0.4s								
PDAR	**Pinedale Array**	**61.76**	**331**	P	**P**	**21**	**34**	**08.9**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=133,slow=4.4,SNR=1.0								
	comp=Z,0.2nm,0.3s								
SCHQ	**Schefferville**	**64.94**	**5**	P	**P**	**21**	**34**	**28.2**	**-0.5**
	comp=Z,1.9nm,0.8s,baz=190,slow=11,SNR=1.6								
SCHQ				pP	**PcP**	**21**	**35**	**01.1**	**+0.6**
	comp=Z,5.1nm,1.1s,baz=197,slow=8.6,SNR=2.8								
	comp=Z,1.9nm,0.8s								
TORD	**Torodi Ar. Bea**	**78.69**	**74**	P	**P**	**21**	**35**	**51.5**	**0.0**
	comp=Z,0.8nm,0.7s,baz=250,slow=6.3,SNR=3.6								
TORD				pP	**pP**	**21**	**36**	**24.0**	**-4.8**
	comp=Z,0.4nm,0.6s,baz=253,slow=5.5,SNR=2.3								
	comp=Z,0.8nm,0.7s								
YKA	**Yellowknife Ar**	**78.82**	**342**	P	**P**	**21**	**35**	**51.7**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=141,slow=5.3,SNR=18								
YKA				pP	**pP**	**21**	**36**	**24.8**	**-3.7**
	comp=Z,0.3nm,0.8s,baz=142,slow=5.7,SNR=3.5								
	comp=Z,0.8nm,0.6s								
YKA	**Yellowknife Ar**	**78.82**	**342**	P	**P**	**21**	**35**	**51.4**	**+0.1**
YKAW3	**Yellowknife Wh**	**78.88**	**342**	P	**P**	**21**	**35**	**52.2**	**+0.7**
ZALV	**Zalesovo Beam**	**133.10**	**17**	PKP	**PKPdf**	**21**	**43**	**03.8**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=318,slow=1.9,SNR=3.4								
ZALV	**Zalesovo Beam**	**133.10**	**17**		**PKiKP**	**21**	**43**	**04.0**	**-0.3**
KURBB	**Kurchatov Array**	**133.71**	**24**	PKP	**PKiKP**	**21**	**43**	**05.4**	**-0.2**
	comp=Z,0.3nm,0.2s,baz=307,slow=2.8,SNR=2.0								
MKAR	**Makanchi Array**	**138.26**	**24**	PKP	**PKPdf**	**21**	**43**	**14.0**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=323,slow=1.9,SNR=2.0								
MKAR	**Makanchi Array**	**138.26**	**24**	PKPdf	**PKPdf**	**21**	**43**	**13.7**	**+0.8**
GTA2	**Gaotai**	**150.20**	**10**	*e*P	**PKiKP**	**21**	**43**	**40.5**	**+0.6**

*NNC **26** 21:24:15.6±0.9, 44.72N×79.19E, h9km±9km, mpv2.8, Error ellipse: s-maj=13.1km s-min=2.8km az=111.0*
*SOME **26** 21:24:15.6, 44.65N×79.37E, h10km*

ISC 26 21:24:13.6±1.1, 44.75N±0.06×79.40E±0.05, h10km, n5, σ0§28/10, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
DJR	**Jarkent**	**0.50**	**146**	*e*P	**Pg**	**21**	**24**	**23.7**	**+0.3**
	1.1nm,0.1s								
DJR				*e*S	**Sg**	**21**	**24**	**29.5**	**-0.5**
	2.3nm,0.1s								
KAPS	**Kapalarasan**	**0.54**	**357**	P	**Pn**	**21**	**24**	**27.5**	**+0.2**
	4.6nm,0.1s								
KAPS				S	**Sn**	**21**	**24**	**36.2**	**-0.3**
	100nm,0.1s								
BLB	**Baldybastay**	**0.93**	**226**	P	**Pb**	**21**	**24**	**31.7**	**-0.1**
	0.4nm,0.0s								
BLB				S	**Sg**	**21**	**24**	**43.5**	**0.0**
	8.5nm,0.2s								
ARXS	**Arharly**	**1.25**	**245**	P	**Pg**	**21**	**24**	**37.6**	**+0.1**
	1.1nm,0.2s								
ARXS				S	**Sb**	**21**	**24**	**53.4**	**0.0**
	9.2nm,0.2s								
ARXS	**Arharly**	**1.25**	**245**	*e*P	**Pg**	**21**	**24**	**37.6**	**+0.1**
	1.1nm,0.2s								
ARXS				*e*S	**Sb**	**21**	**24**	**53.4**	**0.0**
	9.2nm,0.2s								

*IDC **26** 21:34:38.2±1.3, 6.76N×72.95W, h164km±25km, mb2.8/2, mbtmp3.6/4, Error ellipse: s-maj=70.3km s-min=7.7km az=134.0*

*RSNC **26** 21:34:39.6±0.0, 7.1N×7.3W, h148km±1km, M3.5, mB4.7, mb3.8, ML3.2, MLv3.9, Mw(mB)3.9*
*FUNV **26** 21:34:41.4, 7.15N×73.15W, h14km, MW3.6, Presumed earthquake*

ISC 26 21:34:37.7±0.9, 6.88N±0.03×73.11W±0.04, h158km±6km, n49, σ1§66/82, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
BARC	**Barichara**	**0.29**	**194**	P	**Pn**	**21**	**34**	**59.6**	**+0.1**
BARC				S	**Sn**	**21**	**35**	**14.8**	**-1.3**
PAMC	**Pamplona, Colo**	**0.61**	**42**	P	**Pn**	**21**	**35**	**02.5**	**+1.4**
PAMC				S	**Sn**	**21**	**35**	**19.4**	**+0.4**
BRJC	**Barrancabermej**	**0.64**	**279**	P	**Pn**	**21**	**35**	**01.3**	**+0.6**
BRJC				S	**Sn**	**21**	**35**	**17.9**	**-0.3**
RUSC	**La Rusia**	**0.98**	**178**	P	**Pn**	**21**	**35**	**03.6**	**-0.1**
RUSC				S	**Sn**	**21**	**35**	**21.9**	**-1.6**
RUSC	**La Rusia**	**0.98**	**178**	*e*P	**Pn**	**21**	**35**	**03.5**	**-0.2**
RUSC				*e*S	**Sn**	**21**	**35**	**20.7**	**-2.9**
OCAC	**Ocana**	**1.37**	**351**	P	**Pn**	**21**	**35**	**07.8**	**+1.1**
OCAC				S	**Sn**	**21**	**35**	**29.6**	**+0.5**
PTBC	**PUERTO BERRIO,**	**1.38**	**256**	P	**Pn**	**21**	**35**	**06.1**	**-0.6**
PTBC				S	**Sn**	**21**	**35**	**27.6**	**-1.3**
SPBC	**San Pablo de B**	**1.55**	**218**	P	**Pn**	**21**	**35**	**08.4**	**-0.1**
SPBC				S	**Sn**	**21**	**35**	**30.2**	**-1.9**
NORC	**Norcasia**	**2.18**	**233**	P	**Pn**	**21**	**35**	**15.3**	**-0.2**
NORC				S	**Sn**	**21**	**35**	**42.9**	**-1.7**
CHIC	**Chingaza**	**2.32**	**196**	P	**Pn**	**21**	**35**	**17.5**	**0.0**
CHIC				S	**Sn**	**21**	**35**	**47.0**	**-1.1**
ROSC	**El Rosal**	**2.35**	**211**	P	**Pn**	**21**	**35**	**19.1**	**+1.3**
	120nm,0.3s,baz=18,slow=20,SNR=66								
ROSC				S	**Sn**	**21**	**35**	**50.1**	**+1.3**
	402nm,0.4s,baz=43,slow=20,SNR=14								
ROSC	**El Rosal**	**2.35**	**211**	P	**Pn**	**21**	**35**	**19.0**	**+1.1**
ROSC				S	**Sn**	**21**	**35**	**49.1**	**+0.2**
HELC	**Santa Helena**	**2.50**	**254**	P	**Pn**	**21**	**35**	**19.4**	**-0.1**
HELC				S	**Sn**	**21**	**35**	**51.4**	**-0.4**
HELC	**Santa Helena**	**2.50**	**254**	*e*P	**Pn**	**21**	**35**	**21.2**	**+1.7**
HELC				*e*S	**Sn**	**21**	**35**	**52.1**	**+0.3**
CVER	**Cruz Verde, Cu**	**2.53**	**202**	P	**Pn**	**21**	**35**	**21.9**	**+0.8**
CVER				S	**Sn**	**21**	**35**	**52.2**	**-0.6**
UREC	**San Jos de Ur**	**2.56**	**290**	P	**Pn**	**21**	**35**	**19.7**	**-0.2**
UREC				S	**Sn**	**21**	**35**	**49.7**	**-2.8**
GUY2C	**Guyana, Caldas**	**2.78**	**234**	P	**Pn**	**21**	**35**	**23.7**	**+0.6**
GUY2C				S	**Sn**	**21**	**35**	**56.6**	**-1.6**
VILC	**Villavicencio,**	**2.81**	**192**	P	**Pn**	**21**	**35**	**22.6**	**-0.6**
VILC				S	**Sn**	**21**	**35**	**57.0**	**-1.4**
PTGC	**Puerto Gaitan,**	**2.83**	**160**	P	**Pn**	**21**	**35**	**22.7**	**-0.6**
PTGC				S	**Sn**	**21**	**35**	**56.3**	**-2.4**
RECRC	**Villamaria, Ca**	**2.93**	**230**	P	**Pn**	**21**	**35**	**27.3**	**+2.2**
RECRC				S	**Sn**	**21**	**36**	**03.1**	**+1.4**
NIZA	**Niza - Manizal**	**2.96**	**233**	P	**Pn**	**21**	**35**	**25.6**	**+0.4**
NIZA				S	**Sn**	**21**	**36**	**00.7**	**-1.3**
CBOC	**Ciudad Bolivar**	**3.06**	**251**	P	**Pn**	**21**	**35**	**26.8**	**+0.6**
CBOC				S	**Sn**	**21**	**36**	**02.6**	**-1.2**
DBBC	**Dabeiba**	**3.08**	**273**	P	**Pn**	**21**	**35**	**26.7**	**+0.2**
DBBC				S	**Sn**	**21**	**36**	**01.2**	**-3.1**
SDV	**Santo Domingo**	**3.16**	**51**	P	**Pn**	**21**	**35**	**28.9**	**+1.2**
	58nm,0.3s,baz=224,slow=11,SNR=123								
SDV				S	**Sn**	**21**	**36**	**06.2**	**-0.1**
	27nm,0.3s,baz=57,slow=23,SNR=16								
SDV	**Santo Domingo**	**3.16**	**51**	P	**Pn**	**21**	**35**	**29.3**	**+1.7**
SDV				S	**Sn**	**21**	**36**	**06.0**	**-0.3**
SDV	**Santo Domingo**	**3.16**	**51**	*e*P	**Pn**	**21**	**35**	**28.7**	**+1.1**
SDV				*e*S	**Sn**	**21**	**36**	**03.1**	**-3.2**
ARGC	**Ariguani, Magd**	**3.17**	**339**	P	**Pn**	**21**	**35**	**29.5**	**+2.0**
ARGC				S	**Sn**	**21**	**36**	**08.3**	**+2.1**
APAC	**Apartado, Choc**	**3.59**	**287**	P	**Pn**	**21**	**35**	**33.3**	**+0.4**
APAC				S	**Sn**	**21**	**36**	**12.0**	**-3.7**
PRAC	**Prado**	**3.61**	**209**	P	**Pn**	**21**	**35**	**33.0**	**-0.2**
PRAC				S	**Sn**	**21**	**36**	**15.1**	**-1.2**
SJCC	**San Jacinto, C**	**3.63**	**326**	P	**Pn**	**21**	**35**	**33.5**	**0.0**
SJCC				S	**Sn**	**21**	**36**	**14.9**	**-2.0**
SJCC	**San Jacinto, C**	**3.63**	**326**	*e*P	**Pn**	**21**	**35**	**33.4**	**0.0**
SJCC				*e*S	**Sn**	**21**	**36**	**11.4**	**-5.5**
ORTC	**Ortega, Tolima**	**3.64**	**216**	P	**Pn**	**21**	**35**	**33.6**	**+0.1**
ORTC				S	**Sn**	**21**	**36**	**16.6**	**-0.3**
PLMC	**San Jos del P**	**3.71**	**238**	P	**Pn**	**21**	**35**	**35.0**	**+0.4**
PLMC				S	**Sn**	**21**	**36**	**16.1**	**-2.7**
URMC	**La Uribe, Meta**	**3.82**	**199**	P	**Pn**	**21**	**35**	**36.3**	**+0.3**
YOTC	**Yotoco, Valle**	**4.32**	**228**	P	**Pn**	**21**	**35**	**42.3**	**-0.1**
SMRC	**Santa Marta, M**	**4.40**	**346**	P	**Pn**	**21**	**35**	**44.6**	**+1.2**
CAPC	**Capurgana**	**4.55**	**293**	P	**Pn**	**21**	**35**	**46.5**	**+1.1**
PIZC	**Pizarro, Choco**	**4.63**	**246**	P	**Pn**	**21**	**35**	**48.5**	**+2.0**
PTAC	**Punta Ardita,**	**4.67**	**274**	P	**Pn**	**21**	**35**	**47.0**	**+0.1**
MACC	**Macarena, Meta**	**4.76**	**189**	P	**Pn**	**21**	**35**	**46.9**	**-1.2**
URIC	**Uribia, Colomb**	**4.92**	**13**	P	**Pn**	**21**	**35**	**50.0**	**-0.2**
URIC	**Uribia, Colomb**	**4.92**	**13**	*e*S	**Sn**	**21**	**36**	**40.0**	**-6.9**
JAMC	**Jamundi, Valle**	**5.08**	**224**	P	**Pn**	**21**	**35**	**52.4**	**-0.2**
	0.0nm11nm,0.6s								
GARC	**Garzon, Huila**	**5.23**	**207**	P	**Pn**	**21**	**35**	**53.5**	**-1.1**
POPC	**Popayan, Colom**	**5.58**	**220**	P	**Pn**	**21**	**35**	**59.5**	**+0.3**
	4.7nm,0.6s								
FLOC	**Florencia**	**5.84**	**206**	P	**Pn**	**21**	**36**	**02.1**	**-0.3**
	588nm14nm,0.9s								
BBAC	**Balboa, Cauca**	**6.35**	**221**	P	**Pn**	**21**	**36**	**10.1**	**+0.8**
TXAR	**Lajitas Array**	**36.43**	**312**	P	**P**	**21**	**41**	**28.3**	**+0.8**
	0.2nm,0.6s,baz=119,slow=8.7,SNR=2.0								
	0.2nm,0.6s								
YKA	**Yellowknife Ar**	**63.21**	**340**	P	**P**	**21**	**44**	**50.0**	**+1.2**
	0.2nm,0.5s,baz=135,slow=5.9,SNR=7.0								
	0.2nm,0.5s								

*BJI **26** 21:36:34.0, 3.65S×139.70E, h40km, mB5.5/65, mb5.4/89, Ms5.3/92, Ms7 5.3/89*
*MOS **26** 21:36:36.4±0.9, 2.94S×138.99E, h11km, mb5.7/66, MS5.4/37, Error ellipse: s-maj=7.0km s-min=4.4km az=109.4*
*IDC **26** 21:36:36.1±0.3, 2.90S×139.16E, h0km, mb5.3/29, mbtmp5.2/33, ML4.7/3, MS5.2/54, Error ellipse: s-maj=9.6km s-min=8.3km az=98.0*
*PTWC **26** 21:36:41, 2.70S×139.20E, h10km, Mwp5.8/9*
*IPGP **26** 21:36:42.0, 2.99S×139.07E, h49km, Mw5.8, Fault plane solution: NP1:ϕs109.00000°, δ21.00000°, λ.84.00000°. NP2:ϕs296.00000°, δ69.00000°, λ.92.00000°.*
*NEIC **26** 21:36:42.7, 2.99S×139.07E, h38km*
*ISC-PP **26** 21:36:42, 2.95S×139.11E, h37km, Mwppsm6.0, Moment Tensor Solution. s48 Moment tensor: Scale 1018Nm; Mrr0.39±.11; Mθθ-0.57±.14; Mϕϕ0.20±.15; Mrθ-0.36±.17; Mθϕ-0.12±.13; Mϕr0.30±.19; Fault plane solution: Mo1.24000×1018 NP1:ϕs142.60000°, δ41.40000°, λ145.10000°. NP2:ϕs260.20000°, δ67.80000°, λ.54.10000°.*
*NEIC **26** 21:36:42.3, 2.84S×139.12E, h36km, Moment Tensor Solution. Duration: 3s6 Moment tensor: Scale 1017Nm; Mrr3.00; Mθθ-2.01; Mϕϕ-0.98; Mrθ-3.85; Mθϕ0.47; Mϕr1.71; Fault plane solution: Mo5.00000×1017 NP1: ϕs110.99000°, δ15.84000°, λ.87.60000°. NP2: ϕs293.49000°, δ74.18000°, λ.90.68000°. Principal axes: T 5.3484, Plg61.0000°, Azm204.0000°; N -0.8003, Plg1.0000°, Azm113.0000°; P -4.5481, Plg29.0000°, Azm23.0000°;*
*NEIC **26** 21:36:42.2±1.6, 2.95S±0.07×139.11E±0.06, h38km±1km, mb5.5/349, Ms_20 5.7/647, Mwb5.7/64, Mww5.7/19 Error ellipse: s-maj=11.8km s-min=10.2km az=0.0, Moment Tensor Solution. Moment tensor: Scale 1017Nm; Mrr3.45; Mθθ-2.22; Mϕϕ-1.22; Mrθ-3.54; Mθϕ1.14; Mϕr1.77; Fault plane solution: Mo5.11000×1017 NP1: ϕs298.22000°, δ70.54000°, λ.87.30000°. NP2: ϕs126.29000°, δ19.64000°, λ.97.60000°. Principal axes: T 5.3455, Plg64.0000°, Azm204.0000°; N -0.4977, Plg3.0000°, Azm299.0000°; P -4.8478, Plg25.0000°, Azm30.0000°;*
*NEIC **26** 21:36:42.3, 2.94S×139.12E, h36km*
*GFZ **26** 21:36:43.7, 2.93S×139.14E, h46km, MW5.8, Moment Tensor Solution. s22 Moment tensor: Mrr5.20; Mθθ-4.65; Mϕϕ-0.56; Mrθ-2.74; Mθϕ1.55; Mϕr1.45; Fault plane solution: NP1:ϕs104.00000°, δ29.00000°, λ.81.00000°. NP2:ϕs293.00000°, δ60.00000°, λ.94.00000°. Principal axes: T 6.0800, Plg74.0000°, Azm215.0000°; N -0.0700, Plg4.0000°, Azm111.0000°; P -6.0100, Plg15.0000°, Azm19.0000°;*
*DJA **26** 21:36:43.8±0.2, 3.3S×139.9E, h50km±2km, M5.7/189, mB6.1/166, mb5.8/189, MLv6.2/18, Mw5.8/22, Mw(mB)5.8/166, MwMwp5.5/90, Mwp5.7/90*

*GCMT **26** 21:36:45.2±0.1, 2.74S±0.01×139.21E±0.01, h41km, MW5.8/155, Moment Tensor Solution. s153, c310; s155, c316; Duration: 1s9 Moment tensor: Scale 1017 Nm; Mrr3.76±.05; Mθθ-2.97±.04; Mϕϕ-0.78±.04; Mrθ-3.91±.06; Mθϕ1.34±.03; Mϕr2.26±.05; Best double couple: Mo5.82700×1017 NP1:ϕs112.00000°, δ20.00000°, λ84.00000°. NP2:ϕs299.00000°, δ70.00000°, λ92.00000°. Principal axes: T 5.9110, Plg65.0000°, Azm213.0000°; N -0.1610, Plg2.0000°, Azm118.0000°; P -5.7440, Plg25.0000°, Azm27.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 21:36:43.3±0.3, 2.94S±0.03×139.18E±0.03, h46km±2km, h46km:pP-P, n1694, σ1§66/1678, mb5.5/373, MS5.6/437, 33C-9D, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
GENI	**Genyem**	**1.04**	**71**	P	**Pn**	**21**	**37**	**01.2**	**-0.3**
GENI	**Genyem**	**1.04**	**71**	S	**Sn**	**21**	**37**	**15.2**	**+0.3**
GENI	**Genyem**	**1.04**	**71**	P	**Pn**	**21**	**36**	**59.0**	**-2.5**
GENI	**Genyem**	**1.04**	**71**	P	**Pn**	**21**	**36**	**59.9**	**-1.6**
GENI				S	**Sn**	**21**	**37**	**15.2**	**+0.3**
WAMI	**Wamena**	**1.05**	**207**	P	**Pn**	**21**	**37**	**04.4**	**+2.7**
WAMI				S	**Sn**	**21**	**37**	**22.5**	**+7.3**
JAY	**Jayapura**	**1.58**	**75**	Pg	**Pn**	**21**	**37**	**06.2**	**-2.6**
	352nm,0.3s,baz=236,slow=10,SNR=839								
JAY				Lg	Lg	21	37	24.9	
	3μm,0.3s,baz=95,slow=17,SNR=22								
JAY				LR	LR	21	37	55.9	
	comp=Z,82μm,20.8s,baz=3.5,slow=50								
JAY	**Jayapura**	**1.58**	**75**	P	**Pn**	**21**	**37**	**06.3**	**-2.6**
JAY	**Jayapura**	**1.58**	**75**	P	**Pn**	**21**	**37**	**06.3**	**-2.6**
JAY				S	**Sn**	**21**	**37**	**24.6**	**-3.5**
SRPI	**Serui, Papua**	**3.13**	**290**	P	**Pn**	**21**	**37**	**28.8**	**-1.3**
SRPI				S	**Sn**	**21**	**38**	**07.5**	**+1.3**
BAKI	**Biak**	**3.53**	**299**	P	**Pn**	**21**	**37**	**36.8**	**+1.2**
BAKI				S	**Sn**	**21**	**38**	**17.1**	**+0.9**
RKPI	**Ransiki, Papua**	**5.20**	**286**	P	**Pn**	**21**	**37**	**58.8**	**+0.2**
	21nm30μm25μm2μm,1.0s								
RKPI				S	**Sn**	**21**	**38**	**58.7**	**+1.4**
	21nm30μm25μm2μm,1.0s								
MWPI	**Manokwari, Pap**	**5.51**	**291**	P	**Pn**	**21**	**38**	**03.8**	**+0.9**
MWPI				S	**Sn**	**21**	**39**	**05.5**	**+0.4**
KMPI	**Kaimana, Papua**	**5.52**	**262**	P	**Pn**	**21**	**38**	**04.7**	**+1.8**
	18nm41μm31μm3μm,1.0s								
MMPI	**Merauke**	**5.62**	**168**	P	**Pn**	**21**	**38**	**06.8**	**+2.4**
FAKI	**Fak Fak**	**6.93**	**270**	P	**Pn**	**21**	**38**	**23.2**	**+0.9**
FAKI	**Fak Fak**	**6.93**	**270**	S	**Sn**	**21**	**39**	**41.1**	**+1.2**
FAKI	**Fak Fak**	**6.93**	**270**		**Pn**	**21**	**38**	**21.2**	**-1.1**
FAKI	**Fak Fak**	**6.93**	**270**	P	**Pn**	**21**	**38**	**23.1**	**+0.8**
FAKI	**Fak Fak**	**6.93**	**270**	P	**Pn**	**21**	**38**	**22.4**	**+0.1**
	38μm10μm1μm,1.0s								
FAKI				S	**Sn**	**21**	**39**	**41.0**	**+1.2**
	38μm10μm1μm,1.0s								
SIJI	**Sorong**	**8.18**	**284**	Pn	**Pn**	**21**	**38**	**39.6**	**+0.1**
	52nm,0.3s,baz=70,slow=11,SNR=68								
SIJI				Sn	**Sn**	**21**	**40**	**10.0**	**-0.6**
	19nm,0.3s,baz=263,slow=23,SNR=8.3								
SIJI				LR	LR	21	42	48.8	
	comp=Z,28μm,20.5s,baz=100,slow=46								
SIJI	**Sorong**	**8.18**	**284**	P	**Pn**	**21**	**38**	**39.7**	**+0.2**
	16μm6μm386nm,1.1s								
SWI	**Sorong**	**8.18**	**284**	P	**Pn**	**21**	**38**	**40.3**	**+0.8**
	3.2nm19μm8μm645nm,0.7s								
MANU	**Manus Island**	**8.22**	**84**		**Pn**	**21**	**38**	**41.4**	**+1.3**
SAUI	**Saumlaki**	**9.31**	**237**	P	**Pn**	**21**	**38**	**55.9**	**+0.9**
SAUI	**Saumlaki**	**9.31**	**237**		**Pn**	**21**	**38**	**53.6**	**-1.4**
SAUI	**Saumlaki**	**9.31**	**237**	P	**Pn**	**21**	**38**	**56.0**	**+0.9**
SAUI	**Saumlaki**	**9.31**	**237**

comp=Z,317nm,1.1s
WRAB Tennant Creek 17.54 195 P **Pn** **21 40 43.6 -1.0**
WRAB Tennant Creek 17.54 195 **Pn** **21 40 41.0 -3.7**
WRAB IAmb IAmb 21 40 51.9
comp=Z,306nm,0.9s
WRAB Tennant Creek 17.54 195*ce* P **Pn** **21 40 41.3 -3.3**
WRAB pmax pmax
comp=Z,277nm,0.9s
KKSI Kolaka, Sulawe 17.54 265 P **P** **21 40 45.9 +0.6**
WRA Warramunga Arr 17.55 195 P **Pn** **21 40 41.5 -3.2**
comp=Z,3.0nm,0.3s,baz=12,slow=13,SNR=68
WRA S **Sn** **21 43 59.7 +0.3**
comp=Z,36nm,0.8s,baz=4.5,slow=25,SNR=3.0
WRA LR LR 21 48 08.6
comp=Z,47µm,18.7s,baz=10.0,slow=39
comp=Z,35nm,0.7s
WRA Warramunga Arr 17.55 195 P **Pn** **21 40 40.9 -3.9**
WRA Warramunga Arr 17.55 195 *i* P **Pn** **21 40 41.4 -3.4**
WRA pmax pmax
comp=Z,66nm,1.0s
MRSI Marisa 17.57 281 P **Pn** **21 40 43.8 -1.2**
comp=Z,9µmcomp=Z,5µmcomp=Z,568nm,1.2s
APSI Ampana 17.64 276 P **P** **21 40 47.0 +0.6**
comp=Z,17µmcomp=Z,2µm,1.4s
MMRI Maumere 17.78 251 P **P** **21 40 48.3 +0.4**
MMRI Maumere 17.78 251 P **Pn** **21 40 46.1 -1.5**
MMRI Maumere 17.78 251 P **Pn** **21 40 46.6 -1.0**
comp=Z,14µmcomp=Z,6µmcomp=Z,391nm,1.2s
CTA Charters Tower 18.39 158 P **P** **21 40 54.7 +0.1**
comp=Z,1.4nm,0.3s,baz=320,slow=12,SNR=14
CTA LR LR 21 48 31.5
comp=Z,28µm,19.0s,baz=334,slow=39
comp=Z,12nm,0.8s
CTA Charters Tower 18.39 158 P **Pn** **21 40 55.6 +0.5**
comp=Z,82nm,1.3s
CTA Charters Tower 18.39 158 P **Pn** **21 40 57.4 +2.4**
CTAO Charters Tower 18.39 158 P **Pn** **21 40 57.4 +2.4**
CTAO Charters Tower 18.39 158 P **P** **21 40 54.1 -0.6**
CTAO Charters Tower 18.39 158 P **P** **21 40 54.1 -0.6**
CTAO pmax pmax
comp=Z,160nm,1.2s
TOLI2 Tolitoli 18.83 282 P **Pn** **21 41 00.1 -0.3**
TOLI2 Tolitoli 18.83 282 P **P** **21 40 58.3 -1.2**
TOLI2 IAmb IAmb 21 41 03.7
comp=Z,455nm,1.1s
BSSI Bau Bau, Buton 18.90 260 P **P** **21 41 00.6 +0.3**
comp=Z,14µmcomp=Z,11µmcomp=Z,790nm,1.2s
SPSI Sidrap Palu 19.41 266 P **P** **21 41 06.1 +0.3**
comp=Z,13µmcomp=Z,5µmcomp=Z,292nm,1.0s
PCI Palu 19.44 276 P **Pn** **21 41 09.4 +1.7**
comp=Z,12µmcomp=Z,13µmcomp=Z,1µm,1.2s
KAPI Kappang 19.49 263 P **P** **21 41 04.8 -1.9**
comp=Z,1.6nm,0.3s,baz=76,slow=4.6,SNR=23
comp=Z,6.2nm,0.5s
KAPI Kappang 19.49 263 P **Pn** **21 41 08.9 +0.6**
KAPI Kappang 19.49 263 P **P** **21 41 06.0 -0.8**
KAPI Kappang 19.49 263 *i* P **P** **21 41 06.3 -0.5**
KAPI pmax pmax
comp=Z,56nm,0.8s
KAPI Kappang 19.49 263 P **Pn** **21 41 10.6 +2.3**
KAPI S **Sn** **21 44 53.6 +7.1**
KAPI Kappang 19.49 263 P **Pn** **21 41 09.9 +1.6**
MPSI Mapaga 19.55 279 P **P** **21 41 06.9 -0.5**
MKS Makassar 19.79 263 P **P** **21 41 10.9 +0.9**
comp=Z,11µmcomp=Z,7µmcomp=Z,442nm,1.2s
WSI Waingapu 19.92 250 P **P** **21 41 10.2 -1.2**
comp=Z,12µmcomp=Z,7µmcomp=Z,584nm,0.6s
LBFI Labuhan Bajo, 19.96 253 P **P** **21 41 11.7 -0.2**
FITZ Fitzroy Crossi 20.08 220 P **P** **21 41 11.7 -1.4**
comp=Z,182nm,0.8s,baz=40,slow=11,SNR=140
FITZ S **S** **21 44 50.6 -5.9**
comp=Z,185nm,1.0s,baz=76,slow=16,SNR=3.4
FITZ LR LR 21 49 48.8
comp=Z,31µm,18.5s,baz=33,slow=39
comp=Z,182nm,0.8s
PMSI Majene 20.25 268 P Pn 21 41 17.1 -0.2
comp=Z,8µmcomp=Z,492nm,0.8s
MMSI Mamuju 20.25 270 P **P** **21 41 15.7 +0.6**
comp=Z,7µmcomp=Z,688nm,1.0s
WBSI Waikabubak, Su 20.76 250 P **P** **21 41 17.9 -2.7**
comp=Z,11µmcomp=Z,4µmcomp=Z,503nm,0.9s
AS31 Alice Springs 21.23 193 **P** **21 41 23.5 -2.0**
ASAR Alice Springs 21.23 193 P **P** **21 41 24.2 -1.4**
comp=Z,52nm,0.7s,baz=24,slow=7.4,SNR=105
ASAR S **S** **21 45 21.8 +2.6**
comp=Z,30nm,0.8s,baz=17,slow=23,SNR=3.5
ASAR LR LR 21 50 23.8
comp=Z,35µm,19.3s,baz=5.5,slow=39
comp=Z,52nm,0.7s
ASAR Alice Springs 21.23 193 **P** **21 41 23.0 -2.5**
AUALC St Philip's Co 21.26 194 P **P** **21 41 26.1 +0.3**
SAVO Savo Central 21.41 108 P **P** **21 41 27.7 +0.1**
PATS Pohnpei 21.42 63 P **P** **21 41 26.6 -1.0**
DBNI Kabupaten Domp 21.48 254 P **P** **21 41 26.8 -1.5**
comp=Z,3µmcomp=Z,230nm,1.0s
HNR Honiara 21.62 108 P **P** **21 41 29.1 -0.6**
comp=Z,4.8nm,0.5s,baz=286,slow=2.8,SNR=9.3
HNR Honiara 21.62 108 P **P** **21 41 30.2 +0.5**
HNR Honiara 21.62 108 P **P** **21 41 29.9 +0.2**
HNR Honiara 21.62 108 P **P** **21 41 30.0 +0.2**
HNR pmax pmax
comp=Z,375nm,0.9s
HNR MLR MLR
comp=Z,3µm,20.0s
SGKI Sangatta, Kali 21.70 276 P **P** **21 41 34.0 +3.3**
comp=Z,11µmcomp=Z,11µmcomp=Z,805nm,1.5s
PLAI Plampang 22.07 254 P **P** **21 41 33.7 -1.0**
PLAI Plampang 22.07 254 P **P** **21 41 32.4 -2.3**
comp=Z,10µmcomp=Z,3µmcomp=Z,262nm,0.7s
BKB Balikpapan 22.33 274 P **P** **21 41 39.3 +1.8**
BKB Balikpapan 22.33 274 P **P** **21 41 38.0 +0.5**
BKB Balikpapan 22.33 274 P **P** **21 41 41.2 +3.7**
NGOA Tingoa Renbel 22.39 114 P **P** **21 41 38.5 +0.4**
HURO Huro Makira 23.75 109 P **P** **21 41 54.8 +3.1**
QLP Quilpie 24.00 169 P **P** **21 41 54.4 +0.5**
comp=Z,503nm,1.2s,comp=Z,0.0nm
QLP Quilpie 24.00 169 P **P** **21 41 55.8 +1.9**
KHKI Kahang-Kahang 24.06 256 P **P** **21 41 52.6 -2.0**
comp=Z,10µmcomp=Z,8µmcomp=Z,535nm,1.7s
BBKI Banjar Baru 24.31 268 P **P** **21 41 57.2 +0.3**
WRKA Warakurna 24.35 205 P **P** **21 41 55.2 -2.0**
comp=Z,127nm,0.8s,comp=Z,0.0nm
DNP Denpasar 24.51 256 P **P** **21 42 00.7 +2.0**
comp=Z,12µmcomp=Z,394nm,0.7s
IGBI Denpasar 24.61 255 P **P** **21 41 59.5 0.0**
comp=Z,8µmcomp=Z,8µmcomp=Z,550nm,1.3s
KKM Kota Kinabalu 24.61 291 P **P** **21 42 00.6 +0.9**
KKM Kota Kinabalu 24.61 291 P **P** **21 42 00.1 +0.4**
KKM Kota Kinabalu 24.61 291 P **P** **21 41 59.7 0.0**
comp=Z,6µmcomp=Z,4µmcomp=Z,242nm,1.6s
INKA Innaminka 24.71 177 P **P** **21 42 00.0 -0.3**
INKA IAmb IAmb 21 42 34.0
comp=Z,94nm,0.9s
RTBI Rangdo, Negare 24.73 256 P **P** **21 41 58.3 -2.4**
comp=Z,9µmcomp=Z,6µmcomp=Z,492nm,0.9s
TGY Tagaytay City 24.78 314 LR LR 21 52 13.5
comp=Z,5µm,19.8s,baz=136,slow=38
EIDS Eidsvold 25.07 154 P **P** **21 42 06.4 +2.8**
comp=Z,120nm,1.0s,comp=Z,0.0nm
EIDS Eidsvold 25.07 154 P **P** **21 42 06.1 +2.5**
EIDS Eidsvold 25.07 154 P **P** **21 42 03.8 +0.1**
EIDS IAmb IAmb 21 42 38.5
comp=Z,153nm,1.1s
ABJI Asem Bagus 25.30 258 P **P** **21 42 05.8 0.0**
comp=Z,8µmcomp=Z,4µmcomp=Z,243nm,1.0s
KMMI Kalianget 25.45 260 P **P** **21 42 08.3 +1.1**
comp=Z,9µmcomp=Z,497nm,1.3s
JAGI Jajag, Banyuwa 25.50 256 P **P** **21 42 05.7 -2.0**
JAGI Jajag, Banyuwa 25.50 256 P **P** **21 42 05.0 -2.6**
JAGI IAmb IAmb 21 42 27.8
comp=Z,243nm,1.1s
JAGI Jajag, Banyuwa 25.50 256 P **P** **21 42 06.2 -1.5**
comp=Z,7µmcomp=Z,2µmcomp=Z,210nm,0.8s
BLJI Banyuglugur 25.91 258 P **P** **21 42 11.1 -0.3**
comp=Z,7µmcomp=Z,4µmcomp=Z,203nm,0.8s
MBWA Marble Bar 26.20 225 P **P** **21 42 15.1 +1.1**
comp=Z,221nm,0.8s,comp=Z,0.0nm
MBWA Marble Bar 26.20 225 P **P** **21 42 14.5 +0.5**
MBWA Marble Bar 26.20 225 P **P** **21 42 13.1 -0.9**
MBWA IAmb IAmb 21 42 29.4
comp=Z,159nm,0.8s
MBWA Marble Bar 26.20 225 IAMs_20 IAMs_20 21 53 15.3
comp=Z,16µm,22.0s
MBWA Marble Bar 26.20 225 P **P** **21 42 15.5 +1.5**
MBWA P **P** **21 42 15.5 +1.5**
MBWA P **P** **21 42 15.5 +1.5**
MBWA S **S** **21 46 52.7 +10**
MBWA S **S** **21 46 52.7 +10**
MBWA S **S** **21 46 52.7 +10**
PSAC2 Pilbara Seismi 26.35 224 P **P** **21 42 16.3 +1.0**
comp=Z,195nm,0.9s
PSAC1 Pilbara Seismi 26.39 224 P **P** **21 42 16.3 +0.6**
comp=Z,281nm,1.0s
PSA00 Pilbara Seismi 26.40 224 P **P** **21 42 16.7 +1.0**
comp=Z,243nm,1.1s
PSA00 Pilbara Seismi 26.40 224 P **P** **21 42 16.2 +0.5**
PSA00 Pilbara Seismi 26.40 224 P **P** **21 42 15.1 -0.6**
PSA00 IAmb IAmb 21 42 23.3
comp=Z,179nm,0.9s
PSA00 Pilbara Seismi 26.40 224 P **P** **21 42 14.2 -1.5**
PSA00 IAmb IAmb 21 42 23.3
comp=Z,178nm,0.9s
PSAB3 Pilbara Seismi 26.40 224 P **P** **21 42 16.4 +0.6**
comp=Z,243nm,1.1s
TW1H Toowoomba 1 Ha 27.35 155 P **P** **21 42 27.4 +3.1**
SBUM Sibu 27.48 281 P **P** **21 42 26.7 +1.2**
SBUM Sibu 27.48 281 P **P** **21 42 25.5 0.0**
SBUM Sibu 27.48 281 P **P** **21 42 27.4 +1.9**
AULRC Lightning Ridg 27.64 163 P **P** **21 42 28.4 +1.6**
SNJI Sawahan-Nganju 27.72 259 P **P** **21 42 28.5 +0.6**
comp=Z,6µmcomp=Z,2µmcomp=Z,116nm,1.1s
PCJI Pacitan 28.35 258 P **P** **21 42 32.5 -0.8**
comp=Z,3µmcomp=Z,232nm,1.0s
STKA Stephens Creek 28.88 176 P **P** **21 42 36.8 -1.0**
comp=Z,13nm,0.7s,baz=351,slow=8.5,SNR=15
STKA LR LR 21 55 18.4
comp=Z,25µm,19.6s,baz=347,slow=39
comp=Z,13nm,0.7s
STKA Stephens Creek 28.88 176 P **P** **21 42 38.5 +0.7**
comp=Z,316nm,0.9s,comp=Z,0.0nm
STKA Stephens Creek 28.88 176 P **P** **21 42 38.3 +0.5**
STKA Stephens Creek 28.88 176 **P** **21 42 36.1 -1.7**
STKA Stephens Creek 28.88 176 P **P** **21 42 36.1 -1.7**
STKA pmax pmax
comp=Z,279nm,0.9s
SMRI Semarang 28.92 261 P **P** **21 42 40.1 +1.7**
SMRI Semarang 28.92 261 P **P** **21 42 36.7 -1.7**
SMRI Semarang 28.92 261 P **P** **21 42 38.2 -0.2**
comp=Z,4µmcomp=Z,295nm,1.3s
UGM Wanagama 28.95 259 P **P** **21 42 37.4 -1.3**
UGM IAmb IAmb 21 43 17.0
comp=Z,146nm,1.2s
CMSA Cobar Meteorol 29.10 169 P **P** **21 42 42.1 +2.3**
comp=Z,69nm,1.0s,comp=Z,0.0nm
CMSA Cobar Meteorol 29.10 169 P **P** **21 42 41.7 +1.9**
FORT Forrest 29.62 200 P **P** **21 42 42.7 -1.7**
comp=Z,55nm,0.8s,comp=Z,0.0nm
FORT Forrest 29.62 200 **P** **21 42 42.8 -1.6**
ARMA Armidale 29.76 158 P **P** **21 42 45.2 -0.6**
BBOO Buckleboo 29.86 185 P **P** **21 42 47.9 +1.4**
comp=Z,47nm,0.9s,comp=Z,0.0nm
BBOO Buckleboo 29.86 185 P **P** **21 42 48.6 +2.1**
BBOO Buckleboo 29.86 185 P **P** **21 42 46.2 -0.3**
BBOO IAmb IAmb 21 43 47.6
comp=Z,137nm,1.1s
JCJ Chichijima 30.00 5 LR LR 21 53 20.0
comp=Z,5µm,21.2s,baz=170,slow=34
AUPHS Peel High Scho 30.11 160 P **P** **21 42 51.7 +2.9**
CTJI Waduk Cacaban 30.15 261 P **P** **21 42 53.1 +3.8**
comp=Z,102nm,1.1s
SANVU Saraoutou 30.27 116 P **P** **21 42 52.2 +1.9**
SANVU Saraoutou 30.27 116 P **P** **21 42 50.4 +0.1**
SANVU IAmb IAmb 21 43 34.6
comp=Z,109nm,1.1s
HTT Hallett 30.34 180 P **P** **21 42 52.3 +1.6**
comp=Z,20nm,0.9s
HTT Hallett 30.34 180 P **P** **21 42 51.8 +1.0**
KPJI Karang Pucung 30.44 261 P **P** **21 42 52.7 +0.9**
comp=Z,5µmcomp=Z,1µmcomp=Z,141nm,1.1s
AUDCS Dubbo College 30.46 164 P **P** **21 42 53.9 +2.1**
MEEK Meekatharra 30.73 218 P **P** **21 42 54.9 +0.5**
comp=Z,48nm,1.1s,comp=Z,0.0nm
MEEK Meekatharra 30.73 218 P **P** **21 42 54.8 +0.5**
GIRL Giralia 31.13 229 P **P** **21 43 01.6 +3.8**
comp=Z,192nm,0.9s,comp=Z,0.0nm
GIRL Giralia 31.13 229 P **P** **21 42 57.4 -0.4**
JOW Kunigami 31.41 341 LR LR 21 52 53.4
comp=Z,6µm,21.5s,baz=150,slow=31
JOW Kunigami 31.41 341 P **P** **21 43 00.6 +0.3**
JOW Kunigami 31.41 341 P **P** **21 42 59.2 -1.0**
YULB Yu-li 31.45 327 P **P** **21 42 59.3 -1.3**
TPI Tanjungpandan 31.49 270 P **P** **21 43 02.7 +1.6**
comp=Z,3µmcomp=Z,284nm,1.1s
BBJI Bungbulang 31.71 261 P **P** **21 43 01.9 -1.3**
BBJI Bungbulang 31.71 261 P **P** **21 43 01.2 -2.0**
BBJI IAmb IAmb 21 43 03.6
comp=Z,75nm,0.8s
BBJI Bungbulang 31.71 261 P **P** **21 43 01.9 -1.3**
comp=Z,1µmcomp=Z,103nm,0.7s
TPUB Ta-pu 31.74 326 P **P** **21 43 00.6 -2.6**
TPUB Ta-pu 31.74 326 P **P** **21 42 59.6 -3.6**
NACB Ninganchiao 31.92 329 P **P** **21 43 04.1 -0.6**
NACB Ninganchiao 31.92 329 P **P** **21 43 02.3 -2.5**
SSLB Suanglung 31.95 327 P **P** **21 43 04.0 -1.0**
SSLB Suanglung 31.95 327 P **P** **21 43 02.5 -2.5**
AUMBR Murray Bridge 32.04 180 P **P** **21 43 08.6 +3.0**
YNG Young 32.36 166 P **P** **21 43 11.8 +3.2**
comp=Z,41nm,1.2s
YHNB Yeheng 32.44 329 P **P** **21 43 10.0 +0.6**
YHNB Yeheng 32.44 329 P **P** **21 43 07.8 -1.6**
YHNB IAmb IAmb 21 43 16.9
comp=Z,69nm,0.9s
SYDH Sydney Hard Ro 32.51 162 P **P** **21 43 12.8 +3.0**
DBJI Dramaga 32.52 262 P **P** **21 43 10.9 +0.7**
comp=Z,90nm,0.9s
DZM Mont Dzumac 32.59 128 LR LR 21 57 21.1
comp=Z,3µm,19.6s,baz=317,slow=38
TATO Taipei 32.63 329 P **P** **21 43 11.7 +0.7**
TATO Taipei 32.63 329 P **P** **21 43 10.5 -0.4**
KMBL Kambalda 32.65 208 P **P** **21 43 11.5 +0.4**
comp=Z,48nm,0.9s,comp=Z,0.0nm
PPBI Pangkal Pinang 33.02 271 P **P** **21 43 16.9 +2.3**
AUDAR Daramalan Coll 33.45 165 P **P** **21 43 21.3 +3.2**
AUMTS Mt Stromlo 33.48 165 P **P** **21 43 21.2 +2.8**
CAN Canberra 33.48 165 P **P** **21 43 21.8 +3.4**
comp=Z,57nm,1.1s,comp=Z,0.0nm
CAN Canberra 33.48 165 P **P** **21 43 21.2 +2.8**
CAN Canberra 33.48 165 P **P** **21 43 17.9 -0.5**
CAN IAmb IAmb 21 43 36.2
comp=Z,52nm,1.0s
CAN IAMs_20 IAMs_20 21 57 45.5
comp=Z,14µm,20.0s
CAN Canberra 33.48 165 P **P** **21 43 17.9 -0.5**
CAN pmax pmax
comp=Z,52nm,1.0s
CAN MLR MLR
comp=Z,14µm,20.0s
AUMHS Melrose High S 33.55 165 P **P** **21 43 21.9 +3.0**
CGJI Cibinong 33.57 263 P **P** **21 43 18.3 -1.0**
comp=Z,3µmcomp=Z,171nm,1.0s
CNB Canberra Magne 33.57 165 P **P** **21 43 22.6 +3.4**
comp=Z,75nm,0.8s,comp=Z,0.0nm
CNB Canberra Magne 33.57 165 P **P** **21 43 21.9 +2.7**
ARPS Mount Arapiles 33.76 176 P **P** **21 43 22.3 +1.6**
comp=Z,44nm,0.9s
KNMB Chin-men Tao 33.92 325 P **P** **21 43 22.0 -0.2**
MORW Morawa 34.05 218 P **P** **21 43 23.9 +0.5**
comp=Z,113nm,1.1s,comp=Z,0.0nm
MORW Morawa 34.05 218 P **P** **21 43 23.8 +0.5**
MORW Morawa 34.05 218 **P** **21 43 21.7 -1.6**
QZH2 Quanzhou 34.17 325 P **P** **21 43 23.5 -0.9**
QZH2 S **S** **21 48 45.0 -2.8**
QZH2 pmax pmax
comp=Z,230nm,0.9s
QZH2 pmax pmax
comp=Z,400nm,7.2s
QZH2 L L
comp=Z,4µm,23.9s
QZH2 L L
comp=Z,4µm,23.4s
QZH2 L L
comp=Z,8µm,26.7s
PMBI Palembang 34.37 269 P **P** **21 43 28.6 +2.3**
PMBI Palembang 34.37 269 P **P** **21 43 27.2 +1.0**
PMBI Palembang 34.37 269 P **P** **21 43 29.0 +2.7**
KLSI 34.42 266 P **P** **21 43 27.2 +0.5**
AUSMG Snowy Mountain 34.44 166 P **P** **21 43 29.5 +2.8**
H11S3 WAKE ISLAND Hy 34.45 51 T T 22 18 44.5
baz=233,slow=74
H11S2 WAKE ISLAND Hy 34.46 51 T T 22 18 47.4
baz=233
H11S1 WAKE ISLAND Hy 34.47 51 T T 22 18 50.7
baz=233,slow=74
MGBR Mount Gambier 34.65 178 P **P** **21 43 28.1 -0.2**
MGBR IAmb IAmb 21 44 40.0
comp=Z,131nm,1.4s
DSRI Dabo 34.67 273 P **P** **21 43 30.2 +1.3**
comp=Z,3µmcomp=Z,169nm,1.7s
KASI Kota Agung 34.68 265 P **P** **21 43 27.9 -1.1**
comp=Z,1µmcomp=Z,111nm,0.9s
BRAT Ballarat 34.72 173 P **P** **21 43 31.6 +2.6**
AUMTC Mt Clear Colle 34.77 173 P **P** **21 43 32.2 +2.8**
BLDU Ballidu 34.78 215 P **P** **21 43 30.3 +0.7**
comp=Z,71nm,1.2s
BLDU Ballidu 34.78 215 P **P** **21 43 30.6 +1.0**
TPRI Tanjung Pinang 34.86 276 P **P** **21 43 31.9 +1.4**
comp=Z,5µmcomp=Z,233nm,1.6s
KLBR Kellerberrin 34.93 213 P **P** **21 43 30.8 -0.1**
TOO Toolangi 34.95 171 P **P** **21 43 33.9 +2.9**
comp=Z,16nm,1.3s,comp=Z,0.0nm
TOO Toolangi 34.95 171 P **P** **21 43 31.2 +0.1**
TOO Toolangi 34.95 171 P **P** **21 43 31.2 +0.1**
TOO pmax pmax
comp=Z,30nm,1.4s
MDSI Maura Dua 34.96 266 P **P** **21 43 30.1 -1.3**
HKPS Hong Kong Po S 35.02 317 P **P** **21 43 32.5 +0.7**
HKPS Hong Kong Po S 35.02 317 P **P** **21 43 31.4 -0.4**
HKPS IAmb IAmb 21 43 33.2
comp=Z,57nm,1.1s
LWLI Liwa 35.10 265 P **P** **21 43 32.7 0.0**
AUHPC Hawkesdale P12 35.12 176 P **P** **21 43 35.4 +3.0**
MILA Mila 35.17 166 P **P** **21 43 35.2 +2.2**
comp=Z,19nm,2.1s
H11N1 WAKE ISLAND Hy 35.32 49 T T 22 20 06.5
baz=233
H11N2 WAKE ISLAND Hy 35.34 49 T T 22 20 06.7
baz=233,slow=74
H11N3 WAKE ISLAND Hy 35.34 49 T T 22 20 06.2
baz=233,slow=74
JMBI JAMBI 35.54 271 P **P** **21 43 39.6 +3.2**
AUKUL Kulin High Sch 35.55 211 P **P** **21 43 38.1 +1.8**
MYKOM Kota Tinggi 35.63 277 P **P** **21 43 38.5 +1.3**
MYKOM Kota Tinggi 35.63 277 **P** **21 43 36.9 -0.3**
MYKOM Kota Tinggi 35.63 277 P **P** **21 43 38.5 +1.3**
comp=Z,3µmcomp=Z,178nm,1.6s
BTDF Bukit Timah Da 35.66 276 P **P** **21 43 38.5 +1.2**
BTDF Bukit Timah Da 35.66 276 P **P** **21 43 38.6 +1.2**
JHJ Hachijo jima 2 35.87 1 LR LR 21 55 11.3
comp=Z,6µm,19.9s,baz=202,slow=31
MUN Mundaring 36.08 214 P **P** **21 43 42.1 +1.4**
comp=Z,33nm,0.8s,comp=Z,0.0nm
MUN Mundaring 36.08 214 P **P** **21 43 42.8 +2.0**
MNAI Manna 36.18 267 P **P** **21 43 38.8 -3.1**
MNAI Manna 36.18 267 P **P** **21 43 41.2 -0.7**
comp=Z,3µmcomp=Z,233nm,0.9s
QIZ Qiongzhong 36.19 308 P **P** **21 43 42.3 +0.5**
QIZ Qiongzhong 36.19 308 P **P** **21 43 41.8 0.0**
QIZ sP **pP** **21 43 53.5 -0.7**
QIZ PP **PP** **21 45 05.3 +0.5**
QIZ pmax pmax
comp=Z,52nm,0.9s
QIZ pmax pmax
comp=Z,300nm,5.7s
QIZ L L
comp=Z,1µm,19.0s
QIZ L L
comp=Z,2µm,19.6s
QIZ L L
comp=Z,3µm,26.3s
QIZ Qiongzhong 36.19 308 P **P** **21 43 41.9 +0.1**
QIZ x x 21 43 54.6
NWAO Narrogin (SRO) 36.24 212 LR LR 21 59 39.3
comp=Z,36µm,18.2s,baz=26,slow=38
NWAO Narrogin (SRO) 36.24 212 P **P** **21 43 42.9 +0.8**
comp=Z,56nm,1.8s,comp=Z,0.0nm
NWAO Narrogin (SRO) 36.24 212 P **P** **21 43 43.8 +1.7**
NWAO Narrogin (SRO) 36.24 212 P **P** **21 43 40.7 -1.4**
NWAO IAmb IAmb 21 45 01.8
comp=Z,48nm,0.9s
NWAO Narrogin (SRO) 36.24 212 P **P** **21 43 40.7 -1.4**
NWAO pmax pmax
comp=Z,48nm,0.9s
NWAO MLR MLR
comp=Z,37µm,18.0s
GZH2 Guangzhou 36.29 318 P **P** **21 43 42.5 -0.1**
GZH2 pP **pP** **21 43 54.8 -0.1**
GZH2 S **S** **21 49 18.5 -1.9**
GZH2 pmax pmax
comp=Z,34nm,1.2s
GZH2 L L
comp=Z,2µm,19.7s
GZH2 L L
comp=Z,2µm,17.8s
GZH2 L L
comp=Z,4µm,20.3s
KSI Kapahiang 36.54 268 P **P** **21 43 44.8 -0.2**
comp=Z,5µmcomp=Z,258nm,1.3s
JNU Nakatsue 36.71 348 LR LR 21 56 12.7
comp=Z,5µm,21.4s,baz=166,slow=32
JMN Monobe 36.81 353 P **P** **21 43 48.4 +1.4**
JMN Monobe 36.81 353 P **P** **21 43 47.2 +0.3**
MASI Maura Aman, Be 36.89 269 P **P** **21 43 48.2 +0.2**
KRJI Kerinci 37.69 270 P **P** **21 43 55.3 +0.4**
SSE Sheshan 37.94 334 P **P** **21 43 57.5 +1.0**
SSE S **S** **21 49 45.8 +0.5**
SSE pmax pmax
comp=Z,47nm,0.8s
SSE pmax pmax
comp=Z,230nm,3.5s
SSE L L
comp=Z,1µm,21.1s
SSE L L
comp=Z,830nm,22.2s
SSE Sheshan 37.94 334 P **P** **21 43 57.5 +1.0**
SSE x x 21 44 11.1
INU Inuyama 38.14 357 P **P** **21 43 58.5 +0.4**
BKNI Bangkinang 38.27 274 P **P** **21 43 58.7 -0.9**
BKNI Bangkinang 38.27 274 P **P** **21 44 01.0 +1.4**
BKNI Bangkinang 38.27 274 P **P** **21 43 59.3 -0.3**
BKNI Bangkinang 38.27 274 P **P** **21 44 00.8 +1.2**
JGF Kuroka 38.37 358 P **P** **21 44 00.6 +0.4**
GLAD Gladstone 38.70 169 P **P** **21 44 05.4 +2.6**
PDSI Padang 38.75 272 P **P** **21 44 01.7 -2.0**
comp=Z,3µmcomp=Z,249nm,1.1s
PPI Padang Panjang 38.84 273 P **P** **21 44 02.7 -1.7**
comp=Z,5µmcomp=Z,448nm,1.2s
CORO Coronation Par 39.01 170 P **P** **21 44 08.3 +2.9**
MJAR Matsushiro Arr 39.28 359 P **P** **21 44 06.1 -1.7**
comp=Z,3.9nm,0.8s,baz=182,slow=9.5,SNR=12
MJAR PcP **PcP** **21 46 16.2 +0.2**
comp=Z,10nm,0.9s,baz=159,slow=2.7,SNR=9.3
MJAR ScP **ScP** **21 50 02.7 +1.7**
comp=Z,7.5nm,1.1s,baz=182,slow=4.7,SNR=9.7
MJAR LR LR 21 58 25.3
comp=Z,4µm,20.6s,baz=160,slow=33
comp=Z,3.9nm,0.8s
MJAR Matsushiro Arr 39.28 359 **P** **21 44 06.5 -1.3**
MAJO Matsushiro 39.29 359 P **P** **21 44 07.5 -0.3**
MAJO Matsushiro 39.29 359 P **P** **21 44 07.3 -0.5**
MAJO Matsushiro 39.29 359 P **P** **21 44 07.3 -0.5**
MAJO pmax pmax
comp=Z,14nm,0.7s
MAJO MLR MLR
comp=Z,4µm,20.0s
MJB9 Matsu-Tunnel 39.29 359 P **P** **21 44 06.7 -1.1**
GULI GuiLin 39.60 317 P **P** **21 44 13.3 +2.7**
GULI sP **sP** **21 44 28.5 +0.1**
GULI S **S** **21 50 11.0 +0.4**
GULI pmax pmax
comp=Z,47nm,1.3s
GULI L L
comp=Z,1µm,23.6s
GULI L L
comp=Z,1µm,23.5s
GULI L L
comp=Z,2µm,28.1s
MNSI Mandailing Nat 39.76 275 P **P** **21 44 12.2 +0.1**
comp=Z,4µmcomp=Z,139nm,1.3s
NJ2 Nanjing 39.79 333 ⇑P **P** **21 44 13.5 +1.5**
NJ2 sP **sP** **21 44 27.8 -2.3**
NJ2 S **S** **21 50 14.5 +1.3**
NJ2 SS **SnSn** **21 53 13.8 -1.2**
NJ2 pmax pmax
comp=Z,150nm,0.9s
NJ2 L L
comp=Z,6µm,16.5s

NJ2				L	L	
	comp=Z,6µm,18.0s					
NJ2				L	L	
	comp=Z,12µm,18.9s					
CNSH	**ChangSha**	**39.94**	**323**	P	**P**	**21 44 14.0 +0.7**
CNSH				S	**S**	**21 50 16.0 +0.5**
CNSH				pmax	pmax	
	comp=Z,14nm,0.7s					
CNSH				L	L	
	comp=Z,2µm,21.4s					
CNSH				L	L	
	comp=Z,2µm,22.6s					
CNSH				L	L	
	comp=Z,3µm,24.1s					
MOO	**Moorlands**	**39.98**	**171**	P	**P**	**21 44 16.5 +3.0**
	comp=Z,83nm,1.1s					
MOO	**Moorlands**	**39.98**	**171**	P	**P**	**21 44 16.3 +2.8**
FUNA	**Funafuti**	**40.18**	**100**	P	**P**	**21 44 18.0 +2.5**
FUNA	**Funafuti**	**40.18**	**100**	P	**P**	**21 44 15.3 -0.2**
TAU	**Tasmania Unive**	**40.46**	**171**	P	**P**	**21 44 20.3 +2.9**
TAU	**Tasmania Unive**	**40.46**	**171**	P	**P**	**21 44 16.3 -1.1**
TAU				IAmb	IAmb	21 44 31.8
	comp=Z,169nm,1.5s					
TAU	**Tasmania Unive**	**40.46**	**171**	P	**P**	**21 44 16.3 -1.1**
TAU				pmax	pmax	
	comp=Z,169nm,1.5s					
TAU				MLR	MLR	
	comp=Z,18µm,18.0s					
RPSI	**Rantau Prapat**	**40.63**	**278**		**P**	**21 44 17.4 -1.9**
PSI	**Prapat**	**40.65**	**278**	P	**P**	**21 44 18.1 -1.5**
PSI	**Prapat**	**40.65**	**278**	P	**P**	**21 44 17.4 -2.2**
PSI				pmax	pmax	
	comp=Z,662nm,1.6s					
PSI				MLR	MLR	
	comp=Z,1µm,22.0s					
PSI	**Prapat**	**40.65**	**278**	P	**P**	**21 44 17.7 -1.9**
	comp=Z,4µmcomp=Z,253nm,1.3s					
MSVF	**Nonsavu**	**40.84**	**114**	LR	LR	21 59 13.7
	comp=Z,1µm,21.6s,baz=283,slow=33					
MSVF	**Nonsavu**	**40.84**	**114**	P	**P**	**21 44 23.9 +2.8**
MSVF	**Nonsavu**	**40.84**	**114**	P	**P**	**21 44 21.7 +0.6**
MSVF	**Nonsavu**	**40.84**	**114**	*i* P	**P**	**21 44 20.6 -0.5**
MSVF				pmax	pmax	
	comp=Z,27nm,1.1s					
WHN	**Wuhan**	**40.87**	**326**	P	**P**	**21 44 21.8 +0.8**
WHN				sP	**pP**	**21 44 34.5 +0.9**
WHN				S	**S**	**21 50 36.3 +7.0**
WHN				SS	**SnSn**	**21 53 38.0 -3.0**
WHN				pmax	pmax	
	comp=Z,550nm,1.8s					
WHN				pmax	pmax	
	comp=Z,2µm,6.4s					
WHN				L	L	
	comp=Z,4µm,14.5s					
WHN				L	L	
	comp=Z,2µm,12.5s					
WHN				L	L	
	comp=Z,6µm,21.1s					
PBSI	**Pulau Batu**	**40.98**	**273**	P	**P**	**21 44 23.1 +0.9**
	comp=Z,4µmcomp=Z,232nm,1.7s					
KSAR	**Wonju Array Be**	**41.52**	**346**	P	**P**	**21 44 25.9 -0.3**
KSAR	**Wonju Array Be**	**41.52**	**346**	P	**P**	**21 44 25.9 -0.3**
KSRS	**Korea Array**	**41.53**	**346**	P	**P**	**21 44 26.1 -0.2**
	comp=Z,12nm,0.7s,baz=159,slow=8.6,SNR=28					
KSRS				PcP	**PcP**	**21 46 24.2 +1.0**
	comp=Z,12nm,0.9s,baz=170,slow=3.3,SNR=9.3					
KSRS				LR	LR	21 59 01.3
	comp=Z,3µm,21.6s,baz=165,slow=32					
	comp=Z,12nm,0.7s					
KS19	**Wonju Array Si**	**41.59**	**346**	P	**P**	**21 44 26.9 +0.1**
GSI	**Gunungsitoli**	**41.81**	**275**	P	**P**	**21 44 27.9 -1.1**
GSI	**Gunungsitoli**	**41.81**	**275**	P	**P**	**21 44 28.3 -0.7**
	comp=Z,4µmcomp=Z,313nm,1.4s					
INCN	**Inchon**	**41.87**	**345**	P	**P**	**21 44 30.9 +1.8**
INCN	**Inchon**	**41.87**	**345**	P	**P**	**21 44 28.3 -0.8**
INCN	**Inchon**	**41.87**	**345**	P	**P**	**21 44 28.3 -0.8**
INCN				pmax	pmax	
	comp=Z,343nm,1.9s					
INCN				MLR	MLR	
	comp=Z,3µm,20.0s					
INCN	**Inchon**	**41.87**	**345**	P	**P**	**21 44 26.2 -2.9**
INCN				P	**P**	**21 44 26.2 -2.9**
KCSI	**Kotacane, Aceh**	**41.88**	**279**	P	**P**	**21 44 28.8 -0.8**
	comp=Z,2µmcomp=Z,121nm,1.1s					
DGTI	**Dogotuki**	**42.02**	**111**	P	**P**	**21 44 32.0 +1.3**
TPTI		**42.43**	**278**	P	**P**	**21 44 33.9 -0.2**
	comp=Z,2µmcomp=Z,80nm,0.8s					
TAVE	**Taveuni**	**42.45**	**112**	P	**P**	**21 44 36.1 +1.9**
COCO	**West Island**	**42.92**	**255**	P	**P**	**21 44 39.4 +1.4**
COCO	**West Island**	**42.92**	**255**	P	**P**	**21 44 36.7 -1.3**
COCO	**West Island**	**42.92**	**255**	P	**P**	**21 44 36.7 -1.3**
COCO				pmax	pmax	
	comp=Z,623nm,1.8s					
COCO	**West Island**	**42.92**	**255**	P	**P**	**21 44 38.4 +0.5**
GYA	**Guiyang**	**42.92**	**315**	⇑P	**P**	**21 44 39.0 +1.1**
GYA				pP	pP	21 44 51.0 +0.5
GYA				S	**S**	**21 50 57.5 -2.5**
GYA				pmax	pmax	
	comp=Z,30nm,0.9s					
GYA				L	L	
	comp=Z,950nm,21.8s					
GYA				L	L	
	comp=Z,1µm,20.8s					
GYA				L	L	
	comp=Z,2µm,24.0s					
LHMI	**Lhok Sumawe**	**42.97**	**281**	P	**P**	**21 44 37.8 -0.6**
LHMI	**Lhok Sumawe**	**42.97**	**281**	P	**P**	**21 44 37.1 -1.3**
LHMI	**Lhok Sumawe**	**42.97**	**281**	P	**P**	**21 44 38.9 +0.5**
MLSI	**Meulaboh, Aceh**	**43.34**	**279**	P	**P**	**21 44 40.7 -0.8**
	comp=Z,363nm,1.1s					
ENH	**Enshi**	**43.53**	**322**	P	**P**	**21 44 42.0 -0.8**
ENH	**Enshi**	**43.53**	**322**	P	**P**	**21 44 41.6 -1.1**
ENH				PcP	**PcP**	**21 46 30.0 0.0**
FUTU	**Fugatoga**	**43.61**	**108**	P	**P**	**21 44 46.3 +2.7**
FUTU	**Fugatoga**	**43.61**	**108**	P	**P**	**21 44 42.2 -1.4**
TIA	**Tai'an**	**44.06**	**334**	P	**P**	**21 44 47.0 +0.1**
TIA				PcP	**PcP**	**21 46 32.8 +1.1**
TIA				S	**S**	**21 51 16.0 -0.2**
TIA				SS	**SS**	**21 54 35.5 +0.6**
TIA				pmax	pmax	
	comp=Z,56nm,1.0s					
TIA				pmax	pmax	
	comp=Z,780nm,5.8s					
TIA				L	L	
	comp=Z,2µm,16.5s					
TIA				L	L	
	comp=Z,940nm,18.5s					
TIA				L	L	
	comp=Z,4µm,19.9s					
DL2	**Dalian**	**44.68**	**340**	P	**P**	**21 44 52.5 +0.8**
DL2				pP	**pP**	**21 45 07.3 +2.9**
DL2				S	**S**	**21 51 25.5 +0.5**
DL2				SS	**SS**	**21 54 47.0 +0.1**
DL2				pmax	pmax	
	comp=Z,93nm,0.8s					
DL2				pmax	pmax	
	comp=Z,830nm,7.3s					
DL2				L	L	
	comp=Z,2µm,23.1s					
DL2				L	L	
	comp=Z,3µm,21.1s					
DL2				L	L	
	comp=Z,2µm,21.2s					
CM31	**Chiang Mai Arr**	**44.96**	**300**	P	**P**	**21 44 54.9 +0.5**
CM31				IAmb	IAmb	21 45 12.6
	comp=Z,137nm,1.4s					
CM31	**Chiang Mai Arr**	**44.96**	**300**	P	**P**	**21 44 54.7 +0.3**
	SNR=32					
CM31				P	**P**	**21 44 54.7 +0.3**
	SNR=32					
CMAR	**Chiang Mai Arr**	**44.96**	**300**	P	**P**	**21 44 53.4 -0.9**
	comp=Z,20nm,1.0s,baz=114,slow=7.6,SNR=40					
CMAR				PcP	**PcP**	**21 46 37.3 +2.1**
	comp=Z,11nm,0.9s,baz=137,slow=2.4,SNR=4.2					
CMAR				ScP	**ScP**	**21 50 26.4 +2.3**
	comp=Z,2.8nm,0.3s,baz=109,slow=4.9,SNR=5.0					
CMAR				LR	LR	22 03 02.1
	comp=Z,727nm,21.2s,baz=115,slow=35					
	comp=Z,20nm,1.0s					
CMAR	**Chiang Mai Arr**	**44.96**	**300**	P	**P**	**21 44 53.2 -1.2**
LYN	**LuoYang**	**44.96**	**328**	P	**P**	**21 44 54.8 +0.7**
LYN				pP	pP	21 45 06.0 -0.8
LYN				PP	**PP**	**21 46 44.0 +4.1**
LYN				S	**S**	**21 51 28.3 -1.0**
LYN				sS	sS	21 51 57.3 +7.0
LYN				SS	**SS**	**21 54 51.5 -0.9**
LYN				pmax	pmax	
	comp=Z,110nm,0.9s					
LYN				pmax	pmax	
	comp=Z,1µm,6.4s					
LYN				L	L	
	comp=Z,2µm,18.5s					
LYN				L	L	
	comp=Z,1µm,16.8s					
LYN				L	L	
	comp=Z,3µm,20.3s					
KMI2	**Kunming**	**45.03**	**310**	⇑P	**P**	**21 44 56.3 +1.2**
KMI2				pP	pP	21 45 08.0 +0.3
KMI2				S	**S**	**21 51 29.8 -1.3**
KMI2				SS	**ScS**	**21 54 49.0 0.0**
KMI2				pmax	pmax	
	comp=Z,230nm,7.1s					
KMI2				L	L	
	comp=Z,960nm,23.9s					
KMI2				L	L	
	comp=Z,2µm,21.7s					
KMI2				L	L	
	comp=Z,4µm,28.1s					
CHTO	**Chiang Mai**	**45.10**	**300**	P	**P**	**21 44 55.4 -0.1**
CHTO	**Chiang Mai**	**45.10**	**300**		**P**	**21 44 54.3 -1.2**
CHTO				IAmb	IAmb	21 45 12.6
	comp=Z,147nm,1.7s					
CHTO	**Chiang Mai**	**45.10**	**300**	P	**P**	**21 44 54.3 -1.2**
CHTO				pmax	pmax	
	comp=Z,147nm,1.7s					
CHTO	**Chiang Mai**	**45.10**	**300**	P	**P**	**21 44 53.2 -2.3**
CHTO				P	**P**	**21 44 53.2 -2.3**
CHTO				S	**S**	**21 51 31.7 -0.2**
CHTO				S	**S**	**21 51 31.7 -0.2**
CHTO	**Chiang Mai**	**45.10**	**300**	P	**P**	**21 44 55.2 -0.3**
HNS	**HongShan**	**46.12**	**333**	⇑P	**P**	**21 45 03.8 +0.6**
HNS				pP	**pP**	**21 45 15.5 -0.4**
HNS				PcP	**PcP**	**21 46 40.3 +1.5**
HNS				S	**S**	**21 51 43.0 -3.0**
HNS				pmax	pmax	
	comp=Z,86nm,1.1s					
HNS				L	L	
	comp=Z,3µm,22.6s					
HNS				L	L	
	comp=Z,3µm,22.7s					
HNS				L	L	
	comp=Z,5µm,18.4s					
PZH	**PanZhiHua**	**46.53**	**311**	P	**P**	**21 45 05.5 -1.3**
PZH				S	**S**	**21 51 48.5 -3.9**
PZH				pmax	pmax	
	comp=Z,30nm,1.5s					
PZH				pmax	pmax	
	comp=Z,220nm,6.7s					
PZH				L	L	
	comp=Z,1µm,24.1s					
PZH				L	L	
	comp=Z,2µm,22.5s					
PZH				L	L	
	comp=Z,3µm,23.1s					
XAN	**Xi'an**	**46.53**	**325**	⇑P	**P**	**21 45 07.0 +0.4**
XAN				pP	pP	21 45 14.5 -4.7
XAN				S	**S**	**21 51 52.0 -0.1**
XAN				pmax	pmax	
	comp=Z,77nm,0.8s					
XAN				pmax	pmax	
	comp=Z,290nm,3.9s					
XAN				L	L	
	comp=Z,2µm,23.4s					
XAN				L	L	
	comp=Z,2µm,21.3s					
XAN				L	L	
	comp=Z,3µm,22.7s					
SNY	**Shenyang**	**46.76**	**344**	⇑P	**P**	**21 45 06.0 -2.1**
SNY				S	**S**	**21 51 55.8 +0.9**
SNY				pmax	pmax	
	comp=Z,39nm,1.1s					
SNY				pmax	pmax	
	comp=Z,240nm,3.9s					
SNY				L	L	
	comp=Z,2µm,21.8s					
SNY				L	L	
	comp=Z,2µm,20.0s					
SNY				L	L	
	comp=Z,3µm,23.1s					
ASAJ	**Asahikawa**	**46.94**	**3**	LR	LR	22 04 12.6
	comp=Z,2µm,21.8s,baz=198,slow=35					
ASAJ	**Asahikawa**	**46.94**	**3**	P	**P**	**21 45 09.2 -0.3**
ASAJ				pmax	pmax	
	comp=Z,49nm,1.0s					
JKA	**Kamikawa-asahi**	**46.94**	**3**	P	**P**	**21 45 09.2 -0.3**
JKA				IAmb	IAmb	21 45 34.6
	comp=Z,48nm,1.0s					
USRK	**Ussuriysk Ar.**	**47.37**	**353**	P	**P**	**21 45 12.1 -0.7**
	comp=Z,26nm,0.7s,baz=176,slow=7.2,SNR=48					
	comp=Z,26nm,0.7s					
TIY	**Taiyuan**	**47.45**	**331**	P	**P**	**21 45 14.3 +0.6**
TIY				pP	**pP**	**21 45 25.8 -0.7**
TIY				S	**S**	**21 52 03.3 -1.8**
TIY				pmax	pmax	
	comp=Z,29nm,0.6s					
TIY				pmax	pmax	
	comp=Z,210nm,4.1s					
TIY				L	L	
	comp=Z,2µm,21.4s					
TIY				L	L	
	comp=Z,2µm,19.8s					
TIY				L	L	
	comp=Z,3µm,19.8s					
CD2	**Chengdu**	**47.67**	**318**	⇑P	**P**	**21 45 16.3 +0.8**
CD2				S	**S**	**21 52 05.3 -3.1**
CD2				pmax	pmax	
	comp=Z,110nm,1.0s					
CD2				pmax	pmax	
	comp=Z,560nm,3.9s					
CD2				L	L	
	comp=Z,1µm,19.7s					
CD2				L	L	
	comp=Z,3µm,19.7s					
CD2				L	L	
	comp=Z,3µm,19.7s					
BJI2	**Beijing**	**47.68**	**336**	P	**P**	**21 45 15.8 +0.5**
BJI2				S	**S**	**21 52 07.3 -0.8**
BJI2				SS	**SS**	**21 55 43.0 +6.0**
BJI2				pmax	pmax	
	comp=Z,39nm,1.7s					
BJI2				pmax	pmax	
	comp=Z,330nm,4.2s					
BJI2				L	L	
	comp=Z,1µm,20.2s					
BJI2				L	L	
	comp=Z,1µm,19.5s					
BJI2				L	L	
	comp=Z,2µm,18.9s					
BJT	**Baijiatuau**	**47.68**	**336**	P	**P**	**21 45 15.3 0.0**
BJT	**Baijiatuau**	**47.68**	**336**	P	**P**	**21 45 15.6 +0.3**
BJT				x	x	21 45 29.5
TEY	**Ternei**	**47.82**	**358**	*e*P	**P**	**21 45 16.6 +0.3**
TOZ	**Tahuroa Road**	**48.01**	**141**	P	**P**	**21 45 17.4 -0.5**
TOZ				IAmb	IAmb	21 45 38.3
	comp=Z,75nm,1.0s					
HIZ	**Hauiti**	**48.08**	**142**	P	**P**	**21 45 18.0 -0.5**
MDJ	**Mudanjiang**	**48.11**	**351**	P	**P**	**21 45 19.6 +1.0**
MDJ	**Mudanjiang**	**48.11**	**351**	P	**P**	**21 45 19.8 +1.2**
MDJ				S	**S**	**21 52 16.0 +1.9**
MDJ				SS	**SS**	**21 55 47.0 +3.1**
MDJ				pmax	pmax	
	comp=Z,43nm,0.7s					
MDJ				L	L	
	comp=Z,4µm,19.9s					
MDJ				L	L	
	comp=Z,2µm,19.9s					
MDJ				L	L	
	comp=Z,7µm,19.9s					
MDJ	**Mudanjiang**	**48.11**	**351**	P	**P**	**21 45 19.9 +1.3**
CN2	**Changchun**	**48.14**	**347**	⇑P	**P**	**21 45 19.5 +0.7**
CN2				*e*pP	pP	21 45 30.3 -1.3
CN2				*e*S	**S**	**21 52 15.0 +0.5**
CN2				pmax	pmax	
	comp=Z,30nm,1.3s					
CN2				pmax	pmax	
	comp=Z,800nm,5.0s					
CN2				L	L	
	comp=Z,800nm,16.0s					
CN2				L	L	
	comp=Z,800nm,16.0s					
CN2				L	L	
	comp=Z,2µm,18.0s					
QRZ	**Quartz Range**	**48.22**	**146**	P	**P**	**21 45 20.1 +0.6**
QRZ	**Quartz Range**	**48.22**	**146**	P	**P**	**21 45 21.8 +2.3**
TNCH	**TengChong**	**48.25**	**308**	⇑*i*P	**P**	**21 45 20.5 +0.2**
TNCH				pP	pP	21 45 32.0 -1.0
TNCH				S	**S**	**21 52 16.3 -0.8**
TNCH				pmax	pmax	
	comp=Z,46nm,1.4s					
TNCH				L	L	
	comp=Z,940nm,16.8s					
TNCH				L	L	
	comp=Z,520nm,16.3s					
TNCH				L	L	
	comp=Z,2µm,21.9s					
RAO	**Raoul Island**	**48.39**	**127**	LR	LR	22 04 36.0
	comp=Z,1µm,21.3s,baz=267,slow=35					
PBA	**Port Blair**	**48.40**	**288**	P	**P**	**21 45 21.4 +0.1**
DSZ	**Denniston Nort**	**48.45**	**147**	IAMs_20	IAMs_20	22 04 56.9
	comp=Z,6µm,21.0s					
TKNZ	**Takaka Hill**	**48.60**	**146**	P	**P**	**21 45 22.4 -0.1**
JCZ	**Jackson Bay**	**48.61**	**152**	P	**P**	**21 45 25.4 +2.8**
JCZ	**Jackson Bay**	**48.61**	**152**	P	**P**	**21 45 23.8 +1.2**
MSZ	**Milford Sound**	**48.67**	**153**	P	**P**	**21 45 26.5 +3.6**
FOZ	**Fox Glacier**	**48.71**	**150**	P	**P**	**21 45 22.4 -0.8**
MRNZ	**Matariki Terra**	**48.74**	**146**	P	**P**	**21 45 23.5 0.0**
DCZ	**Deep Cove**	**48.94**	**154**	P	**P**	**21 45 24.8 -0.2**
DCZ	**Deep Cove**	**48.94**	**154**	P	**P**	**21 45 28.3 +3.4**
INZ	**Inchbonnie**	**48.95**	**149**	IAMs_20	IAMs_20	22 06 05.9
	comp=Z,5µm,20.0s					
NNZ	**Nelson**	**48.96**	**146**	P	**P**	**21 45 26.3 +1.1**
THZ	**Tophouse**	**49.06**	**147**	P	**P**	**21 45 26.3 +0.2**
THZ				IAmb	IAmb	21 46 37.3
	comp=Z,49nm,1.0s					
THZ				IAMs_20	IAMs_20	22 06 51.1
	comp=Z,6µm,19.0s					
THZ	**Tophouse**	**49.06**	**147**	P	**P**	**21 45 27.9 +1.8**
MLZ	**Mavora Lakes**	**49.29**	**153**	P	**P**	**21 45 28.0 +0.3**
MLZ	**Mavora Lakes**	**49.29**	**153**	P	**P**	**21 45 28.6 +0.9**
WKZ	**Wanaka**	**49.29**	**152**	P	**P**	**21 45 27.8 +0.1**
WKZ	**Wanaka**	**49.29**	**152**	P	**P**	**21 45 30.5 +2.8**
URZ	**Urewera**	**49.34**	**140**	LR	LR	22 07 34.3
	comp=Z,2µm,18.4s,baz=304,slow=38					
URZ	**Urewera**	**49.34**	**140**	P	**P**	**21 45 29.0 +0.8**
TUWZ	**Tuamarina**	**49.42**	**146**	P	**P**	**21 45 28.5 -0.2**
LTZ	**Lake Taylor**	**49.42**	**148**		**P**	**21 45 28.5 -0.3**
LTZ				IAMs_20	IAMs_20	22 06 32.5
	comp=Z,6µm,19.0s					
RPZ	**Rata Peaks**	**49.45**	**150**	LR	LR	22 07 49.9
	comp=Z,3µm,18.4s,baz=65,slow=38					
RPZ	**Rata Peaks**	**49.45**	**150**	P	**P**	**21 45 29.1 +0.1**
RPZ	**Rata Peaks**	**49.45**	**150**	P	**P**	**21 45 29.4 +0.4**
TCW	**Tory Channel**	**49.46**	**145**	P	**P**	**21 45 28.9 -0.2**
RTZ	**Ruatahuna**	**49.47**	**141**	P	**P**	**21 45 29.4 +0.1**
RTZ	**Ruatahuna**	**49.47**	**141**	P	**P**	**21 45 29.8 +0.5**
HAZ	**Te Kaha**	**49.48**	**139**	P	**P**	**21 45 30.9 +1.6**
BKZ	**Black Stump Fm**	**49.49**	**142**	P	**P**	**21 45 31.6 +2.2**
BKZ	**Black Stump Fm**	**49.49**	**142**	P	**P**	**21 45 28.6 -0.8**
BKZ				IAmb	IAmb	21 46 00.4
	comp=Z,54nm,1.0s					
LBZ	**Lake Benmore**	**49.51**	**151**		**P**	**21 45 28.9 -0.5**
BNX	**BinXian**	**49.58**	**349**	⇑P	**P**	**21 45 30.5 +0.7**
BNX				pP	**pP**	**21 45 41.8 -0.9**
BNX				S	**S**	**21 52 35.0 +0.3**
BNX				pmax	pmax	
	comp=Z,96nm,0.8s					
BNX				pmax	pmax	
	comp=Z,470nm,3.6s					
BNX				L	L	
	comp=Z,2µm,21.0s					
BNX				L	L	
	comp=Z,1µm,22.8s					
BNX				L	L	
	comp=Z,3µm,22.6s					
KWHZ	**Kaweka Forest**	**49.61**	**142**	P	**P**	**21 45 31.9 +1.6**
AFI	**Afiamalu**	**49.62**	**106**	LR	LR	22 04 42.6
	comp=Z,2µm,21.6s,baz=281,slow=34					
WHZ	**Wether Hill Ro**	**49.62**	**154**	P	**P**	**21 45 30.1 -0.1**
OXZ	**Oxford**	**49.68**	**149**	P	**P**	**21 45 30.2 -0.5**
OXZ				IAmb	IAmb	21 45 47.7
	comp=Z,54nm,1.1s					
KRHZ	**Kereru**	**49.71**	**142**	P	**P**	**21 45 31.7 +0.7**
OGWZ	**Otaki Gorge**	**49.72**	**144**	P	**P**	**21 45 31.7 +0.6**
EAZ	**Earnscleugh**	**49.73**	**152**	P	**P**	**21 45 32.3 +1.3**
PNHZ	**Pukenui**	**49.77**	**143**	P	**P**	**21 45 31.9 +0.4**
SNZO	**South Karori**	**49.77**	**145**	P	**P**	**21 45 30.5 -0.9**
YSS	**Yuzhno-Sakhali**	**49.78**	**3**	P	**P**	**21 45 32.2 +0.9**
YSS	**Yuzhno-Sakhali**	**49.78**	**3**	P	**P**	**21 45 31.2 -0.1**
YSS	**Yuzhno-Sakhali**	**49.78**	**3**	*de*P	**P**	**21 45 32.0 +0.7**
YSS				pmax	pmax	
	comp=Z,49nm,1.3s					
CAW	**Cannon Point**	**49.85**	**145**	P	**P**	**21 45 32.5 +0.5**
KHZ	**Kahutara**	**49.85**	**147**	P	**P**	**21 45 31.4 -0.6**
KHZ				IAMs_20	IAMs_20	22 07 37.0
	comp=Z,8µm,18.0s					
KHZ	**Kahutara**	**49.85**	**147**	P	**P**	**21 45 31.7 -0.2**
MRZ	**Mangatainoka R**	**49.87**	**144**	P	**P**	**21 45 31.8 -0.4**
MRZ	**Mangatainoka R**	**49.87**	**144**	P	**P**	**21 45 31.9 -0.2**
TMZ	**Timaru**	**49.91**	**150**	P	**P**	**21 45 32.0 -0.5**
BHW	**Baring Head**	**49.93**	**145**	P	**P**	**21 45 31.9 -0.8**
BHW				IAmb	IAmb	21 45 53.4
	comp=Z,79nm,1.2s					
GVZ	**Greta Valley S**	**49.96**	**148**	IAMs_20	IAMs_20	22 07 08.6
	comp=Z,5µm,20.0s					
PUZ	**Puketiti**	**49.97**	**139**	P	**P**	**21 45 33.8 +0.7**
HOWZ	**Holdsworth Sta**	**49.98**	**144**	P	**P**	**21 45 32.7 -0.3**
KAHZ	**Kahuranaki**	**50.11**	**142**	P	**P**	**21 45 35.2 +1.1**
MSWZ	**Moikau Station**	**50.15**	**145**	P	**P**	**21 45 33.0 -1.3**
CNGZ	**Carnagh Statio**	**50.17**	**140**	P	**P**	**21 45 38.4 +3.9**
ODZ	**Otahua Downs**	**50.22**	**151**	P	**P**	**21 45 34.7 0.0**
ODZ				IAmb	IAmb	21 45 44.0
	comp=Z,108nm,1.6s					
ODZ	**Otahua Downs**	**50.22**	**151**	P	**P**	**21 45 36.8 +2.0**
PAWZ	**Paruwai Farm**	**50.23**	**145**	P	**P**	**21 45 34.8 -0.2**
PLWZ	**Palliser**	**50.26**	**145**	P	**P**	**21 45 34.2 -1.0**
MQZ	**McQueen's Vall**	**50.27**	**149**	P	**P**	**21 45 34.6 -0.5**
BFZ	**Birch Farm**	**50.27**	**143**	P	**P**	**21 45 35.6 +0.4**
BFZ	**Birch Farm**	**50.27**	**143**	P	**P**	**21 45 33.8 -1.4**
BFZ				IAmb	IAmb	21 45 53.0
	comp=Z,55nm,0.8s					
BFZ	**Birch Farm**	**50.27**	**143**	P	**P**	**21 45 35.1 -0.1**
HHC	**Hu-ho-hao-te**	**50.35**	**333**	⇑*i*P	**P**	**21 45 37.0 +1.1**
HHC				sP	pP	21 45 51.0 +2.4
HHC				PP	**PP**	**21 47 36.0 +4.2**
HHC				S	**S**	**21 52 44.8 -1.0**
HHC				pmax	pmax	
	comp=Z,46nm,1.0s					
HHC				pmax	pmax	
	comp=Z,240nm,5.7s					
HHC				L	L	
	comp=Z,3µm,22.1s					
HHC				L	L	
	comp=Z,890nm,18.0s					
HHC				L	L	
	comp=Z,3µm,23.4s					
APZ	**The Paps**	**50.37**	**155**	P	**P**	**21 45 36.4 +0.5**
LZH	**Lanzhou**	**50.95**	**323**	*e*P	**P**	**21 45 41.8 +1.2**
LZH				pP	pP	21 45 53.0 -0.3
LZH				PP	**PP**	**21 47 39.0 +1.6**
LZH				S	**S**	**21 52 51.3 -3.1**
LZH				SS	**SS**	**21 56 30.3 +0.3**
LZH				pmax	pmax	
	comp=Z,96nm,1.4s					
LZH				pmax	pmax	
	comp=Z,330nm,4.5s					
LZH				L	L	
	comp=Z,2µm,16.1s					
LZH				L	L	
	comp=Z,2µm,16.1s					
LZH				L	L	
	comp=Z,4µm,16.2s					
LZDM	**Lanzhou Array**	**50.95**	**323**	P	**P**	**21 45 40.2 -0.6**
	comp=Z,12nm,0.7s,baz=124,slow=7.7,SNR=22					
LZDM				LR	LR	22 06 41.2
	comp=Z,2µm,21.1s,baz=115,slow=36					
	comp=Z,12nm,0.7s					
XLT	**XiLinHaoTe**	**51.03**	**339**	*e*P	**P**	**21 45 41.0 0.0**
XLT				pP	pP	21 45 53.3 -0.6
XLT				PcP	**PcP**	**21 46 57.3 +0.8**
XLT				PP	**PP**	**21 47 40.8 +2.8**
XLT				S	**S**	**21 52 51.0 -4.2**
XLT				sS	sS	21 53 16.0 -0.4
XLT				SS	**SS**	**21 56 29.3 -1.6**
XLT				pmax	pmax	
	comp=Z,36nm,1.3s					

XLT pmax pmax
comp=Z,560nm,6.0s
XLT L L
comp=Z,250nm,23.8s
XLT L L
comp=Z,700nm,15.7s
XLT L L
comp=Z,2μm,20.0s
BTO2 Baotou 51.05 331 *e*P **P** **21 45 41.8 +0.6**
BTO2 pP **pP** **21 45 54.0 0.0**
BTO2 sP **sP** **21 45 59.8 +0.5**
BTO2 PP **PP** **21 47 39.8 +1.5**
BTO2 S **S** **21 52 55.0 -0.7**
BTO2 sS **sS** **21 53 18.5 +1.6**
BTO2 SS **SS** **21 56 30.8 -0.6**
BTO2 pmax pmax
comp=Z,110nm,0.8s
BTO2 pmax pmax
comp=Z,570nm,6.3s
BTO2 L L
comp=Z,7μm,21.5s
BTO2 L L
comp=Z,4μm,21.1s
BTO2 L L
comp=Z,9μm,22.1s
LKP Lekhapani 51.47 309 IAmb IAmb 21 45 17.9
comp=Z,90nm,1.1s
SAIH SAIHA 51.69 302 *e*P **P** **21 45 46.4 +0.1**
SAIH IAmb IAmb 21 46 04.7
comp=Z,106nm,1.0s
IMP Imphal 51.85 305 *e*P **P** **21 45 45.6 -1.8**
IMP IAmb IAmb 21 46 07.6
comp=Z,57nm,1.3s
UGL Uglegorsk 51.87 2 *e*P **P** **21 45 47.2 +0.3**
UGL *e*S **S** **21 53 05.4 -0.8**
MIDW Midway 51.98 50 IAMs_20 IAMs_20 22 02 50.9
comp=Z,7μm,22.0s
MOKO MOKOCHONG 52.05 307 *e*P **P** **21 45 48.2 -0.8**
MOKO IAmb IAmb 21 46 01.7
comp=Z,71nm,1.0s
KOHI KOHIMA 52.10 306 *e*P **P** **21 45 46.8 -2.6**
KOHI IAmb IAmb 21 46 19.4
comp=Z,191nm,1.5s
PASG PASIGHAT 52.22 309 *e*P **P** **21 45 48.9 -1.2**
PASG IAmb IAmb 21 46 03.6
comp=Z,141nm,1.3s
KLR Kul'dur 52.36 354 LR LR 22 05 17.8
comp=Z,4μm,21.9s,baz=179,slow=33
KLR Kul'dur 52.36 354*c*e**P** **P** **21 45 50.2 -0.4**
KLR pmax pmax
comp=Z,37nm,1.7s
JORH JORHAT 52.45 307 *e*P **P** **21 45 51.6 -0.2**
BRDH Bariadhala 52.90 301 P **P** **21 45 55.1 0.0**
comp=Z,85nm,0.3s,baz=88,slow=7.1,SNR=7.4
comp=Z,85nm,0.3s
ITAN ITANAGAR 53.05 307 *e*P **P** **21 45 55.2 -1.0**
ITAN IAmb IAmb 21 46 07.1
comp=Z,182nm,1.1s
ZIRO ZIRO 53.12 308 *e*P **P** **21 45 56.0 -0.9**
ZIRO IAmb IAmb 21 46 00.0
comp=Z,119nm,1.1s
BELO BELONIA 53.29 302 *e*P **P** **21 45 58.9 +0.9**
BELO IAmb IAmb 21 46 28.7
comp=Z,188nm,1.3s
GRNR Gornyy 53.55 358⇑ *i*P **P** **21 46 00.5 +1.1**
GRNR pmax pmax
comp=Z,10.0nm,0.8s
TEZP TEZPUR 53.55 306 *e*P **P** **21 45 58.7 -1.2**
TYV Tymovskoe 53.67 3 *e*P **P** **21 46 01.5 +1.2**
TYV *e*S **S** **21 53 31.4 +0.5**
TYV pmax pmax
comp=Z,400nm,2.6s
TYV pmax pmax
comp=Z,30nm,1.3s
TYV smax smax
comp=N,2μm,7.9s
TYV smax smax
comp=E,800nm,7.9s
AGT Agartala 53.71 303 *e*P **P** **21 46 00.3 -0.7**
SHL Shillong 53.85 305 **P** **21 46 00.4 -2.0**
SHL IAmb IAmb 21 46 03.7
comp=Z,92nm,1.2s
SHL Shillong 53.85 305 P **P** **21 46 00.4 -2.0**
SHL pmax pmax
comp=Z,92nm,1.2s
SHL Shillong 53.85 305 *e*P **P** **21 46 00.3 -2.0**
SHL IAmb IAmb 21 46 19.0
comp=Z,223nm,2.0s
HEH HeiHe 53.94 351 *e*P **P** **21 46 01.3 -1.0**
HEH sP **pP** **21 46 17.3 +2.0**
HEH PP **PP** **21 48 02.8 -1.2**
HEH S **S** **21 53 32.8 -1.7**
HEH sS **sS** **21 53 58.5 +2.7**
HEH pmax pmax
comp=Z,71nm,1.5s
HEH pmax pmax
comp=Z,900nm,6.1s
HEH L L
comp=Z,2μm,23.3s
HEH L L
comp=Z,2μm,22.6s
HEH L L
comp=Z,4μm,24.5s
GUWA GUWAHATI 54.27 305 *e*P **P** **21 46 04.3 -0.8**
GUWA IAmb IAmb 21 46 21.7
comp=Z,79nm,1.4s
HIA Hailar 54.66 344 P **P** **21 46 08.6 +1.0**
HIA Hailar 54.66 344 P **P** **21 46 07.1 -0.5**
HIA IAmb IAmb 21 46 10.5
comp=Z,76nm,1.3s
HIA Hailar 54.66 344*d i*P **P** **21 46 08.6 +1.0**
HIA pmax pmax
comp=Z,40nm,1.0s
HIA Hailar 54.66 344 P **P** **21 46 08.5 +1.0**
TAWA Tawang 54.73 307 *e*P **P** **21 46 07.8 -1.1**
TAWA IAmb IAmb 21 46 26.9
comp=Z,59nm,0.8s
DHUB DHUBRI 55.59 304 *e*P **P** **21 46 14.7 +0.1**
DHUB IAmb IAmb 21 46 31.6
comp=Z,43nm,1.0s
GTA2 Gaotai 55.61 323 P **P** **21 46 15.8 +1.0**
GTA2 S **S** **21 53 53.0 -4.7**
GTA2 pmax pmax
comp=Z,44nm,1.1s
GTA2 pmax pmax
comp=Z,640nm,6.2s
GTA2 L L
comp=Z,780nm,22.0s
GTA2 L L
comp=Z,1μm,22.7s
GTA2 L L
comp=Z,2μm,22.7s
LSA Lhasa 56.22 309 P **P** **21 46 18.4 -1.4**
LSA IAmb IAmb 21 46 22.2
comp=Z,31nm,0.7s
LSA Lhasa 56.22 309 P **P** **21 46 18.1 -1.6**
LSA Lhasa 56.22 309 P **P** **21 46 18.4 -1.4**
LSA pmax pmax
comp=Z,31nm,0.7s
LSA MLR MLR
comp=Z,1μm,22.0s
LSA Lhasa 56.22 309 P **P** **21 46 19.0 -0.7**
LSA P **P** **21 46 19.0 -0.7**
LSA P **P** **21 46 19.0 -0.7**
LSA Lhasa 56.22 309 P **P** **21 46 17.8 -1.9**
LSA S **S** **21 54 03.8 -3.0**
LSA pmax pmax
comp=Z,41nm,0.8s
LSA L L
comp=Z,480nm,22.0s
LSA L L
comp=Z,740nm,22.3s
LSA L L
comp=Z,1μm,23.0s
LSA Lhasa 56.22 309 P **P** **21 46 21.4 +1.7**
GOMU GeErMu 56.80 317 P **P** **21 46 24.0 +0.4**
GOMU S **S** **21 54 14.5 +0.5**
GOMU pmax pmax
comp=Z,20nm,1.1s
GOMU L L
comp=Z,470nm,18.6s
GOMU L L
comp=Z,1μm,17.5s
BWNR Bhubaneshwar 57.18 296 *e*P **P** **21 46 25.9 -0.1**
BWNR IAmb IAmb 21 46 43.0
comp=Z,34nm,1.0s
GTK Tadong 57.25 305 *e*P **P** **21 46 27.2 +0.5**
GTK IAmb IAmb 21 46 40.3
comp=Z,78nm,1.2s
SHBG Sahibganj 57.26 303 *e*P **P** **21 46 27.3 +0.8**
SHBG IAmb IAmb 21 46 54.2
comp=Z,356nm,1.8s
ZEA Zeya 57.35 352 *e*P **P** **21 46 25.8 -0.9**
ZEA *e*S **S** **21 54 19.1 -0.7**
ZEA pmax pmax
comp=E,20nm,0.6s
ZEA pmax pmax
comp=N,30nm,1.5s
ZEA pmax pmax
comp=Z,70nm,1.5s
ZEA pmax pmax
comp=N,100nm,2.0s
ZEA pmax pmax
comp=Z,200nm,2.0s
ZEA smax smax
comp=N,300nm,8.0s
ZEA smax smax
comp=E,500nm,9.1s
ULN Ulaanbaatar 57.87 335 **P** **21 46 29.3 -1.4**
ULN IAmb IAmb 21 46 32.6
comp=Z,21nm,0.7s
ULN Ulaanbaatar 57.87 335*c e*P **P** **21 46 30.0 -0.7**
ULN pmax pmax
comp=Z,56nm,1.7s
ULN Ulaanbaatar 57.87 335 P **P** **21 46 30.8 +0.2**
ULN P **P** **21 46 30.8 +0.2**
ULN P **P** **21 46 30.8 +0.2**
ULN S **S** **21 54 25.3 -1.9**
ULN S **S** **21 54 25.3 -1.9**
ULN S **S** **21 54 25.3 -1.9**
ULN Ulaanbaatar 57.87 335 P **P** **21 46 30.9 +0.2**
comp=Z,3μmcomp=Z,144nm,0.7s
PET Petropavlovsk 58.11 14 *e*P **P** **21 46 34.6 +2.6**
PET *e*S **S** **21 54 35.4 +5.6**
PET MLR MLR
comp=Z,1μm,15.0s
PET MLR MLR
comp=Z,2μm,15.0s
SONM Songino Array 58.13 335 P **P** **21 46 31.5 -0.8**
comp=Z,8.1nm,0.6s,baz=154,slow=7.5,SNR=53
SONM LR LR 22 12 37.4
comp=Z,4μm,19.0s,baz=140,slow=37
SONM PKP2bc **P'P'bc** **22 16 25.2 +0.9**
comp=Z,3.0nm,1.1s,baz=294,slow=2.7,SNR=11
comp=Z,8.1nm,0.6s
SONM Songino Array 58.13 335 **P** **21 46 31.6 -0.8**
SONM IAmb IAmb 21 46 58.2
comp=Z,113nm,2.0s
SONM Songino Array 58.13 335 P **P** **21 46 31.6 -0.8**
SONM pmax pmax
comp=Z,113nm,2.0s
VIS Vishakhapatnam 58.74 293 *e*P **P** **21 46 37.7 +0.7**
CIT Chita 58.91 342 *e*P **P** **21 46 37.4 -0.3**
CIT *e* 21 48 51.8
CIT pmax pmax
comp=Z,201nm,2.1s
EVN Everest 58.96 305 **P** **21 46 37.2 -2.0**
RAGD RAYAGADA 59.02 294 *e*P **P** **21 46 38.5 -0.6**
RAGD IAmb IAmb 21 47 06.6
comp=Z,40nm,0.9s
GAYA Gaya 59.14 301 *e*P **P** **21 46 39.6 -0.2**
GAYA IAmb IAmb 21 46 57.1
comp=Z,88nm,1.3s
PALK Pallekele 59.23 280 P **P** **21 46 40.4 -0.2**
comp=Z,14nm,0.8s,baz=91,slow=6.2,SNR=8.1
PALK LR LR 22 15 45.2
comp=Z,516nm,20.3s,baz=100,slow=40
comp=Z,14nm,0.8s
PALK Pallekele 59.23 280 P **P** **21 46 38.9 -1.7**
PALK IAmb IAmb 21 46 57.4
comp=Z,74nm,1.2s
PALK Pallekele 59.23 280 P **P** **21 46 38.9 -1.7**
PALK pmax pmax
comp=Z,75nm,1.3s
PALK MLR MLR
comp=Z,700nm,19.0s
PALK Pallekele 59.23 280 P **P** **21 46 41.1 +0.5**
PALK S **S** **21 54 50.1 +4.3**
PALK Pallekele 59.23 280 P **P** **21 46 41.7 +1.1**
MALK Mahakanadarawa 59.55 281 P **P** **21 46 40.2 -2.5**
MDRS Chennai 60.61 287 *e*P **P** **21 46 49.5 -0.6**
MDRS IAmb IAmb 21 47 05.3
comp=Z,39nm,1.2s
VJD Vijayawada 60.95 291 IAmb IAmb 21 47 15.1
comp=Z,36nm,0.9s
BLSP Bilaspur 60.97 297 *e*P **P** **21 46 52.3 0.0**
ZAK Zakamensk 61.39 335 *e*P **P** **21 46 53.9 -0.9**
ZAK pmax pmax
comp=Z,60nm,1.9s
RAR Rarotonga 62.00 112 LR LR 22 12 24.4
comp=Z,647nm,20.6s,baz=276,slow=35
TLY Talaya 62.22 336 P **P** **21 47 00.4 +0.2**
comp=Z,20nm,0.7s,baz=158,slow=7.4
TLY LR LR 22 12 34.1
comp=Z,2μm,21.9s,baz=124,slow=35
comp=Z,20nm,0.7s
TLY Talaya 62.22 336 P **P** **21 46 59.7 -0.5**
TLY IAmb IAmb 21 47 02.5
comp=Z,19nm,0.6s
TLY Talaya 62.22 336 *i* P **P** **21 46 57.7 -2.5**
TLY pmax pmax
comp=Z,17nm,0.8s
TLY Talaya 62.22 336 P **P** **21 46 57.1 -3.1**
TLY P **P** **21 46 57.1 -3.1**
TLY S **S** **21 55 20.0 -2.7**
TLY S **S** **21 55 20.0 -2.7**
TLY Talaya 62.22 336 P **P** **21 47 01.6 +1.4**
TLY x x 21 47 15.7
ALBI Allahabad 62.24 301 *e*P **P** **21 47 00.3 -0.6**
IRK Irkutsk 62.39 337 *e*P **P** **21 47 00.8 -0.6**
IRK *e*S **S** **21 55 26.8 +2.0**
IRK pmax pmax
comp=Z,90nm,2.1s
SHEM Shemya Is, Ala 62.77 23 LR LR 22 09 47.9
comp=Z,4μm,21.5s,baz=232,slow=32
KOD Kodaikanal 62.82 283 *e*P **P** **21 47 05.5 +0.2**
KOD IAmb IAmb 21 47 22.9
comp=Z,205nm,1.5s
MA2 Magadan 62.99 7 LR LR 22 10 46.7
comp=Z,808nm,20.6s,baz=197,slow=33
MA2 Magadan 62.99 7 P **P** **21 47 06.6 +1.4**
MA2 Magadan 62.99 7 P **P** **21 47 04.9 -0.3**
MA2 Magadan 62.99 7*c e*P **P** **21 47 06.5 +1.4**
MA2 pmax pmax
comp=Z,111nm,2.5s
MA2 Magadan 62.99 7 P **P** **21 47 05.1 -0.1**
comp=Z,858nmcomp=Z,41nm,1.7s
HYB Hyderabad 63.10 291 *e*P **P** **21 47 06.4 -0.4**
HYB *es*P **pP** **21 47 21.1 +1.2**
HYB *e*PcP **PcP** **21 47 43.0 -1.2**
HYB *e*PP **PP** **21 49 25.7 -0.3**
HYB *e*S **S** **21 55 34.0 -0.8**
HYB IVMs_BB IVMs_BB 22 12 56.6
comp=Z,316nm,21.8s
HYB Hyderabad 63.10 291 *e*P **P** **21 47 06.0 -0.8**
MOY Mondy 63.32 334 *e*P **P** **21 47 06.7 -1.0**
MOY pmax pmax
comp=Z,81nm,2.1s
NGP Nagpur 63.52 295 *e*P **P** **21 47 08.5 -0.9**
DRV Dumont d'Urvil 63.61 180 P **P** **21 47 08.7 -0.5**
BOD Bodaibo 63.85 345 *e*P **P** **21 47 11.2 +0.3**
BOD pmax pmax
comp=Z,89nm,2.1s
KNGR Kungurtug, Tuv 64.14 332 *i* P **P** **21 47 13.8 +0.7**
KNGR pmax pmax
comp=Z,13nm,0.9s
PTH Pithoragarh 64.96 305 *e*P **P** **21 47 18.4 -0.5**
PTH IAmb IAmb 21 47 52.6
comp=Z,24nm,0.8s
LGTI Lohaghat 64.99 304 *e*P **P** **21 47 18.4 -0.8**
LGTI IAmb IAmb 21 47 44.0
comp=Z,28nm,1.5s
JHNI Jhansi 65.05 300 *e*P **P** **21 47 17.2 -2.2**
JHNI IAmb IAmb 21 47 35.0
comp=Z,22nm,0.9s
YAK Yakutsk 65.20 355 LR LR 22 13 08.5
comp=Z,3μm,20.7s,baz=158,slow=34
YAK Yakutsk 65.20 355 P **P** **21 47 19.2 -0.3**
YAK Yakutsk 65.20 355 *e*P **P** **21 47 19.7 +0.1**
YAK *e* 21 47 52.6
YAK *e* 21 49 46.1
YAK *e*S **S** **21 56 00.0 +0.8**
YAK *e**SS **sS** **21 56 21.6 +0.4**
YAK *e* 21 57 11.3
YAK pmax pmax
comp=Z,141nm,1.0s
YAK pmax pmax
comp=E,8.0nm,1.5s
YAK pmax pmax
comp=N,60nm,1.4s
YAK pmax pmax
comp=Z,88nm,2.3s
YAK pmax pmax
comp=N,51nm,2.5s
YAK pmax pmax
comp=E,18nm,1.5s
YAK smax smax
comp=E,812nm,3.8s
YAK smax smax
comp=N,605nm,4.0s
AKL Akola 65.25 294 *e*P **P** **21 47 19.9 -0.9**
WMQ Urumqi 65.48 321⇑ P **P** **21 47 22.8 +0.9**
WMQ pP pP 21 47 35.0 -0.1
WMQ PP **PP** **21 49 46.5 0.0**
WMQ S **S** **21 56 04.0 +0.4**
WMQ ScS **ScS** **21 57 15.0 +1.1**
WMQ pmax pmax
comp=N,93nm,1.3s
WMQ pmax pmax
comp=N,310nm,3.7s
WMQ L L
comp=N,1μm,18.9s
WMQ L L
comp=N,760nm,22.3s
WMQ L L
comp=N,1μm,24.3s
WMQ Urumqi 65.48 321 P **P** **21 47 23.5 +1.6**
BHPL Bhopal 65.50 297 *e*P **P** **21 47 21.6 -0.9**
BHPL IAmb IAmb 21 47 43.2
comp=Z,25nm,1.2s
MNGI Mangalore 65.75 285 *e*P **P** **21 47 24.8 +0.7**
JOSI Joshimath 65.80 305 *e*P **P** **21 47 24.3 -0.2**
KIWB Kanaga Island 65.91 28 P **P** **21 47 25.6 +1.2**
GUNA GUNA 65.95 299 *e*P **P** **21 47 24.3 -0.9**
AIS Amsterdam Isla 65.97 230 P **P** **21 47 24.7 -0.4**
HON Honolulu 65.98 65 P **P** **21 47 26.1 +0.6**
HON Honolulu 65.98 65 P **P** **21 47 26.1 +0.6**
HON pmax pmax
comp=Z,237nm,1.0s
ADK Adak 66.15 28 P **P** **21 47 27.0 +1.1**
ADK Adak 66.15 28 IAMs_20 IAMs_20 22 11 19.9
comp=Z,4μm,21.0s
ADK Adak 66.15 28 P **P** **21 47 27.0 +1.1**
ADK pmax pmax
comp=Z,182nm,1.6s
ADK MLR MLR
comp=Z,4μm,21.0s
KAAM Kaadhehdhoo 66.25 272 P **P** **21 47 26.5 -0.9**
CASY Casey 66.35 192 P **P** **21 47 26.5 -0.5**
CASY Casey 66.35 192 IAMs_20 IAMs_20 22 14 26.5
comp=Z,4μm,21.0s
CASY Casey 66.35 192 P **P** **21 47 26.6 -0.4**
SEY Seymchan 66.45 7 LR LR 22 13 51.4
comp=Z,2μm,22.0s,baz=185,slow=34
SEY Seymchan 66.45 7*c e*P **P** **21 47 27.5 -0.1**
SEY pmax pmax
comp=Z,72nm,2.5s
DGAR Diego Garcia 66.56 263 P **P** **21 47 28.6 -0.7**
DGAR Diego Garcia 66.56 263 P **P** **21 47 28.6 -0.7**
DGAR pmax pmax
comp=Z,188nm,1.1s
DGAR MLR MLR
comp=Z,2μm,22.0s
DGAR Diego Garcia 66.56 263 P **P** **21 47 30.0 +0.6**
DGAR P **P** **21 47 30.0 +0.6**
DGAR P **P** **21 47 30.0 +0.6**
HMDM Hanimaadhoo 66.58 279 P **P** **21 47 30.3 +0.8**
DDI Dehra Dun 66.96 305 *e*P **P** **21 47 31.7 +0.1**
DDI IAmb IAmb 21 47 49.0
comp=Z,170nm,1.2s
KAD Karad 67.16 290 *e*P **P** **21 47 31.2 -1.9**
KAD IAmb IAmb 21 47 48.7
comp=Z,30nm,1.2s
NDI New Delhi 67.17 303 *e*P **P** **21 47 31.9 -1.1**
KLP Kalpa 67.18 306 *e*P **P** **21 47 33.6 +0.3**
KLP IAmb IAmb 21 47 56.3
comp=Z,78nm,1.2s
NPLP NPLP New Delhi 67.19 303 *e*P **P** **21 47 32.0 -1.1**
NPLP IAmb IAmb 21 47 39.8
comp=Z,13nm,0.8s
KUDL Kundal 67.62 302 *e*P **P** **21 47 34.0 -1.8**
POO Poona 67.71 291 *e*P **P** **21 47 35.5 -1.1**
POO IAmb IAmb 21 47 50.8
comp=Z,33nm,1.1s
SMLA Simla 67.94 305 *e*P **P** **21 47 36.0 -1.7**
SMLA IAmb IAmb 21 47 55.1
comp=Z,52nm,1.0s
BHK Bhakra 68.66 305 *e*P **P** **21 47 40.7 -1.5**
AJM Ajmer 68.76 300 *e*P **P** **21 47 41.6 -1.4**
AJM IAmb IAmb 21 48 08.5
comp=Z,29nm,1.0s
ALCI Alchi Leh 68.90 308 *e*P **P** **21 47 43.6 -0.5**
ALCI IAmb IAmb 21 48 00.9
comp=Z,50nm,1.2s
DHRM DHARAMSHALA 68.98 306 *e*P **P** **21 47 42.9 -1.7**
DHRM IAmb IAmb 21 47 57.5
comp=Z,190nm,1.6s
ZSN Zaisan 69.02 324⇓ *i*P **P** **21 47 44.3 0.0**
comp=Z,24nm,1.5s
ZSN *e*S **S** **21 56 49.1 +3.1**
UDPR Udaipur 69.12 298 *e*P **P** **21 47 43.6 -1.8**
TLWR Talawar 69.17 306 *e*P **P** **21 47 45.0 -0.5**
TSSA Tissa 69.28 307 *e*P **P** **21 47 45.9 -0.4**
TSSA IAmb IAmb 21 48 02.9
comp=Z,190nm,1.5s
THN Thein Dam 69.48 306 *e*P **P** **21 47 45.3 -2.1**
THN IAmb IAmb 21 48 04.2
comp=Z,120nm,1.3s
WUS Wushi 69.89 316 P **P** **21 47 51.2 +1.3**
MK31 Makanchi Array 70.26 322*c e*P **P** **21 47 50.7 -1.2**
MKAR Makanchi Array 70.26 322 P **P** **21 47 50.8 -1.1**
comp=Z,53nm,0.9s,baz=100,slow=7.7,SNR=194
MKAR PKP2bc **P'P'bc** **22 15 48.3 -3.7**
comp=Z,0.5nm,0.9s,baz=343,slow=2.9,SNR=4.4
MKAR LR LR 22 18 15.9
comp=Z,748nm,21.9s,baz=102,slow=36
comp=Z,53nm,0.9s
MKAR Makanchi Array 70.26 322 P **P** **21 47 50.4 -1.4**
MKAR Makanchi Array 70.26 322*c e*P **P** **21 47 50.7 -1.1**
MKAR pmax pmax
comp=Z,36nm,0.7s
JMU Jammu 70.32 306 *e*P **P** **21 47 52.1 -0.4**
MAKZ Makanchi 70.45 322 P **P** **21 47 51.6 -1.5**
MAKZ Makanchi 70.45 322 P **P** **21 47 51.6 -1.5**
MAKZ pmax pmax
comp=Z,141nm,1.2s
MAKZ MLR MLR
comp=Z,1μm,21.0s
MAKZ Makanchi 70.45 322 P **P** **21 47 52.1 -1.0**
SHLS Shalkode 70.50 318⇓ *i*P **P** **21 47 51.9 -1.7**
comp=Z,26nm,1.0s
SHLS *e*S **S** **21 57 03.3 -0.4**
UZB Uzynbulak 70.79 318 *e*P **P** **21 47 55.3 0.0**
comp=Z,27nm,1.0s
PRZ Przheval'sk 70.95 317 **P** **21 47 55.6 -0.8**
PRZ Przheval'sk 70.95 317 P **P** **21 47 55.6 -0.8**
PRZ pmax pmax
comp=Z,168nm,1.3s
TARG Taragay, Kyrgy 71.08 316 **P** **21 47 56.1 -1.3**
TARG IAmb IAmb 21 48 10.1
comp=Z,79nm,1.3s
TARG Taragay, Kyrgy 71.08 316 P **P** **21 47 56.1 -1.3**
TARG pmax pmax
comp=Z,79nm,1.3s
KPKS Kokpek 71.14 318 *e*P **P** **21 47 57.5 +0.1**
KPKS *e*S **S** **21 57 13.1 +2.0**
SATY Saty 71.17 317⇓ *i*P **P** **21 47 57.7 +0.1**
comp=Z,27nm,1.3s
PPT Papeete 71.24 107 P **P** **21 47 59.4 +1.0**
comp=Z,21nm,0.7s,baz=341,slow=9.2,SNR=4.5
PPT LR LR 22 16 51.3
comp=Z,659nm,19.3s,baz=264,slow=34
comp=Z,21nm,0.7s
PPTF Pamatai, Papee 71.25 107 P **P** **21 48 01.0 +2.5**
PPTF Pamatai, Papee 71.25 107 P **P** **21 47 58.0 -0.5**

PPTF IAmb IAmb 21 48 18.0
comp=Z,137nm,1.8s
KDJ Kajisay 71.66 316 P P 21 47 59.8 -0.8
KDJ IAmb IAmb 21 48 05.7
comp=Z,50nm,0.9s
KDJ Kajisay 71.66 316 P **P 21 47 59.8 -0.8**
KDJ pmax pmax
comp=Z,50nm,0.9s
KSH2 Kashi 71.75 313 P **P 21 48 00.8 -0.5**
KSH2 sP pP 21 48 14.5 -0.2
KSH2 S **S 21 57 18.8 +0.4**
KSH2 pmax pmax
comp=Z,92nm,1.1s
KSH2 pmax pmax
comp=Z,460nm,5.5s
KSH2 L L
comp=Z,660nm,26.1s
KSH2 L L
comp=Z,2μm,23.4s
KSH2 L L
comp=Z,3μm,25.8s
NIL Nilore 71.84 307 P 21 48 00.2 -1.5
NIL Nilore 71.84 307 P **P 21 48 00.2 -1.5**
NIL pmax pmax
comp=Z,129nm,1.1s
NIL MLR MLR
comp=Z,800nm,20.0s
NIL Nilore 71.84 307 P **P 21 47 59.6 -2.2**
TDK Taldygorghan 71.94 319 *e*P **P 21 48 02.4 +0.3**
comp=Z,26nm,1.2s
ARXS Arharly 72.01 318 *e*P **P 21 48 01.4 -1.2**
JASL Jaisalmer 72.12 299 *e*P **P 21 48 01.7 -1.8**
JASL IAmb IAmb 21 48 24.7
comp=Z,50nm,1.2s
MDOK Medeo 72.13 317 *e*P **P 21 48 03.6 +0.2**
MDOK *e*S **S 21 57 25.5 +2.9**
TNSS Tian-Shan 72.15 317 *e*P **P 21 48 03.7 -0.2**
NRN Naryn 72.23 315 P 21 48 03.0 -1.3
NRN Naryn 72.23 315 P **P 21 48 03.0 -1.3**
NRN pmax pmax
comp=Z,25nm,0.9s
AAA Alma-Ata 72.24 317 *e*P **P 21 48 04.1 +0.1**
comp=Z,26nm,0.8s
UNV Unalaska Valle 72.29 30 P **P 21 48 04.9 +1.0**
UNV Unalaska Valle 72.29 30 P **P 21 48 04.2 +0.3**
UNV IAmb IAmb 21 48 10.8
comp=Z,80nm,1.4s
UNV IAMs_20 IAMs_20 22 14 35.4
comp=Z,3μm,21.0s
UNV Unalaska Valle 72.29 30 P **P 21 48 04.8 +0.9**
baz=238
UNV S **S 21 57 27.6 +4.0**
baz=238
ULHL Ulahol 72.35 316 P **P 21 48 05.8 +0.9**
SNR=8.2
ZAA0 Zalesovo Array 72.37 330 P 21 48 02.5 -1.9
ZALV Zalesovo Beam 72.37 330 P **P 21 48 02.2 -2.2**
comp=Z,14nm,0.5s,baz=122,slow=5.9,SNR=67
comp=Z,14nm,0.5s
SPIA Saint Paul Isl 72.38 26 P **P 21 48 04.8 +0.5**
baz=234
BOOM Boomskoye usch 72.64 316 P 21 48 05.7 -0.9
BOOM IAmb IAmb 21 48 08.8
comp=Z,43nm,0.8s
BOOM Boomskoye usch 72.64 316 P **P 21 48 05.7 -0.9**
BOOM pmax pmax
comp=Z,43nm,0.8s
LVA Lava Point 72.69 30 P **P 21 48 05.8 -0.6**
LVA IAmb IAmb 21 48 21.7
comp=Z,57nm,1.0s
AKUT Akutan 72.81 30 P **P 21 48 07.8 +0.8**
TKM2 Tokmak 2 73.03 317 P **P 21 48 10.0 +1.1**
SNR=57
BILL Bilibino 73.30 10 P 21 48 09.3 -0.3
BILL Bilibino 73.30 10 *de*P **P 21 48 10.7 +1.0**
BILL pmax pmax
comp=Z,41nm,2.5s
BILL Bilibino 73.30 10 P **P 21 48 10.7 +1.0**
BILL x x 21 48 21.0
KBK Karagaybulak 73.39 316 P **P 21 48 12.5 +1.6**
SNR=29
UCH Uchtor 73.55 316 P **P 21 48 14.3 +2.1**
SNR=54
CHMS Chumaysh 73.64 316 P **P 21 48 13.4 +1.2**
SNR=26
FRU1 Bishkek 73.66 316 IAmb IAmb 21 48 41.6
comp=Z,54nm,1.2s
AAK Ala-Archa 73.70 316 LR LR 22 23 19.5
comp=Z,1μm,19.9s,baz=110,slow=38
AAK Ala-Archa 73.70 316 P **P 21 48 13.8 +1.1**
SNR=32
AAK Ala-Archa 73.70 316 P 21 48 12.1 -0.7
AAK Ala-Archa 73.70 316 *i* P **P 21 48 12.9 +0.1**
SNR=45
AAK Ala-Archa 73.70 316 *ce*P **P 21 48 12.8 +0.1**
AAK pmax pmax
comp=Z,50nm,1.7s
AAK Ala-Archa 73.70 316 P **P 21 48 11.5 -1.3**
AAK P **P 21 48 11.5 -1.3**
AAK S **S 21 57 40.9 +0.4**
AAK S **S 21 57 40.9 +0.4**
AAK Ala-Archa 73.70 316 P **P 21 48 14.0 +1.2**
SGDS Sogindy 73.88 317 *e*P **P 21 48 13.8 +0.1**
SGDS *e*S **S 21 57 45.2 +2.9**
USP Ospenovka 73.91 317 P **P 21 48 12.8 -1.0**
SNR=77
PAF Port-aux-Franc 74.17 219 P **P 21 48 14.7 -0.4**
PAF Port-aux-Franc 74.17 219 P **P 21 48 14.7 -0.4**
PAF pmax pmax
comp=Z,813nm,2.0s
KURK Kurchatov 74.17 325 P 21 48 14.0 -1.1
KURK IAmb IAmb 21 48 16.6
comp=Z,62nm,1.1s
KURK Kurchatov 74.17 325 P **P 21 48 14.0 -1.1**
KURK pmax pmax
comp=Z,62nm,1.2s
KURK MLR MLR
comp=Z,1μm,22.0s
KURK Kurchatov 74.17 325 P **P 21 48 13.8 -1.3**
KURK P **P 21 48 13.8 -1.3**
KURK S **S 21 57 43.6 -1.5**
KURK S **S 21 57 43.6 -1.5**
KURK Kurchatov 74.17 325 P **P 21 48 13.8 -1.3**
KURBB Kurchatov Arra 74.19 325 P **P 21 48 13.5 -1.7**
comp=Z,28nm,1.0s,baz=114,slow=5.1,SNR=83
comp=Z,28nm,1.0s
EKS2 Erkin-Say 74.20 316 P **P 21 48 14.7 -1.0**
SNR=55
ARSB Arslanbob 74.33 314 P 21 48 15.5 -1.0
ARSB Arslanbob 74.33 314 P **P 21 48 15.5 -1.0**
ARSB pmax pmax
comp=Z,216nm,1.5s
FALS False Pass 74.36 30 P **P 21 48 15.9 -0.2**
FALS IAmb IAmb 21 48 23.0
comp=Z,55nm,0.9s
FALS IAMs_20 IAMs_20 22 18 15.2
comp=Z,3μm,20.0s
FALS False Pass 74.36 30 P **P 21 48 16.6 +0.5**
baz=241
DRK Karamyk 74.63 312 P 21 48 16.8 -1.6
DRK Karamyk 74.63 312 P **P 21 48 16.8 -1.6**
DRK pmax pmax
comp=Z,216nm,1.7s
TIXI Tiksi 74.75 357 LR LR 22 19 15.7
comp=Z,2μm,21.5s,baz=178,slow=34
TIXI Tiksi 74.75 357 P **P 21 48 17.1 -0.9**
TIXI IAmb IAmb 21 48 20.3
comp=Z,66nm,1.6s
TIXI Tiksi 74.75 357 *ce*P **P 21 48 17.9 -0.2**
TIXI pmax pmax
comp=Z,64nm,2.5s
BTLS Baital 74.82 318 *e*P **P 21 48 19.3 +0.2**
KBL Kabul 75.44 307 P 21 48 20.5 -2.6
KBL IAmb IAmb 21 48 24.2
comp=Z,46nm,0.9s
KBL Kabul 75.44 307 P **P 21 48 20.5 -2.6**
KBL pmax pmax
comp=Z,46nm,0.9s
KBL Kabul 75.44 307 P **P 21 48 21.0 -2.1**
SNR=28
KBL P **P 21 48 21.0 -2.1**
SNR=28
KBL S **S 21 57 57.3 -3.1**
KBL S **S 21 57 57.3 -3.1**
VNDA Vanda 75.51 175 P **P 21 48 21.6 -0.9**
comp=Z,56nm,0.8s,baz=323,slow=6.7,SNR=93
VNDA LR LR 22 20 15.5
comp=Z,5μm,21.3s,baz=353,slow=35
comp=Z,56nm,0.8s
VNDA Vanda 75.51 175 P **P 21 48 21.7 -0.7**
VNDA IAmb IAmb 21 48 25.6
comp=Z,59nm,0.8s
VNDA Vanda 75.51 175 P **P 21 48 21.7 -0.7**
VNDA pmax pmax
comp=Z,59nm,0.8s
BTK Batken 75.52 313 P 21 48 21.9 -1.3
BTK Batken 75.52 313 P **P 21 48 22.0 -1.3**
BTK pmax pmax
comp=Z,152nm,1.6s
ROCAM Rodrigues Isla 75.66 250 P 21 48 22.9 -1.5
GAMB Gambell 75.83 20 P 21 48 23.3 -1.0
GAMB Gambell 75.83 20 P **P 21 48 25.4 +1.1**
baz=231,SNR=5.9
GAMB S **S 21 58 06.5 +3.6**
baz=231
M11K Mekoryuk 75.93 25 IAMs_20 IAMs_20 22 18 51.4
comp=Z,3μm,20.0s
M11K Mekoryuk 75.93 25 P **P 21 48 25.9 +0.9**
baz=237
M11K S **S 21 58 10.1 +5.8**
baz=237
DZA Taraz 75.98 315 *e*P **P 21 48 25.8 0.0**
comp=Z,16nm,0.9s
SDPT Sand Point 76.08 31 P P 21 48 25.5 -0.5
SDPT Sand Point 76.08 31 P **P 21 48 26.7 +0.7**
baz=243
SBA Scott Base 76.28 174 P 21 48 27.0 +0.3
SBA Scott Base 76.28 174 IAMs_20 IAMs_20 22 19 48.3
comp=Z,3μm,22.0s
SBA Scott Base 76.28 174 P **P 21 48 27.0 +0.3**
SBA pmax pmax
comp=Z,120nm,1.1s
SBA MLR MLR
comp=Z,3μm,22.0s
SBA Scott Base 76.28 174 P **P 21 48 28.5 +1.7**
CNBA Chernabura Isl 76.31 31 P **P 21 48 27.2 -0.1**
CNBA IAmb IAmb 21 51 12.4
comp=Z,57nm,1.1s
CNBA IAMs_20 IAMs_20 22 18 34.9
comp=Z,3μm,21.0s
CHNA Chernabura Isl 76.31 31 P **P 21 48 28.0 +0.7**
baz=244
CHNA S **S 21 58 12.8 +4.1**
baz=244
KK31 Karatay Array 76.62 315 P 21 48 28.4 -1.0
KK31 IAmb IAmb 21 48 31.4
comp=Z,115nm,1.7s
KK31 Karatay Array 76.62 315 P **P 21 48 28.4 -1.0**
KK31 pmax pmax
comp=Z,115nm,1.7s
KKAR Karatay Array 76.62 315 P 21 48 27.9 -1.5
KKAR Karatay Array 76.62 315 P **P 21 48 27.9 -1.5**
IUG luzhnay 76.69 314 *e*P **P 21 48 29.7 -0.2**
IUG luzhnay 76.69 314 *ij*P **P 21 48 29.9 0.0**
comp=Z,48nm,1.7s
IUG *e*S **S 21 58 16.5 +2.9**
S14K Fog Glacier 76.97 30 P **P 21 48 31.8 +0.7**
baz=244
S14K S **S 21 58 19.0 +3.0**
baz=244
CHM Chimkent 77.04 315 *e*P **P 21 48 32.0 +0.2**
comp=Z,44nm,1.6s
BRLS Boroldoy 77.07 315 *e*P **P 21 48 32.0 +0.1**
comp=Z,17nm,1.1s
M13K Dall Lake 77.15 25 P P 21 48 31.2 -0.7
M13K IAmb IAmb 21 48 51.9
comp=Z,64nm,1.3s
M13K IAMs_20 IAMs_20 22 17 30.7
comp=Z,2μm,21.0s
M13K Dall Lake 77.15 25 P **P 21 48 33.2 +1.3**
baz=240
M13K S **S 21 58 21.2 +3.7**
baz=240
K13K Kusilvak Mount 77.40 24 P P 21 48 33.4 +0.1
K13K IAmb IAmb 21 48 36.2
comp=Z,40nm,0.9s
K13K IAMs_20 IAMs_20 22 18 26.0
comp=Z,4μm,21.0s
K13K Kusilvak Mount 77.40 24 P **P 21 48 34.5 +1.3**
baz=238
K13K S **S 21 58 23.4 +3.2**
baz=238
BRZS Berezniki 77.40 323 *e*P **P 21 48 33.9 +0.3**
O14K Tigyukauivet M 77.50 27 P P 21 48 33.4 -0.6
O14K Tigyukauivet M 77.50 27 P **P 21 48 35.0 +1.1**
baz=242
O14K S **S 21 58 24.6 +3.1**
baz=242
N14K Kuskokwak Cree 77.64 26 P 21 48 34.6 0.0
N14K IAMs_20 IAMs_20 22 18 38.5
comp=Z,3μm,21.0s
N14K Kuskokwak Cree 77.64 26 P **P 21 48 35.6 +1.0**
baz=241
N14K S **S 21 58 27.1 +4.2**
baz=241
L14K Kuka Creek 77.90 25 P P 21 48 35.8 -0.2
L14K IAmb IAmb 21 48 56.3
comp=Z,70nm,1.1s
L14K Kuka Creek 77.90 25 P **P 21 48 37.3 +1.2**
baz=240
L14K S **S 21 58 29.7 +4.1**
baz=240
M14K Bethel 77.92 25 P 21 48 35.4 -0.8
M14K IAmb IAmb 21 49 01.0
comp=Z,32nm,0.8s
M14K IAMs_20 IAMs_20 22 17 42.9
comp=Z,3μm,22.0s
M14K Bethel 77.92 25 P **P 21 48 37.4 +1.2**
baz=241
M14K S **S 21 58 29.6 +3.8**
baz=241
O15K Ungalikthiuk R 78.13 27 P **P 21 48 38.4 +1.0**
baz=243
O15K S **S 21 58 31.2 +2.9**
baz=243
TNA Tin City 78.21 20 P 21 48 37.2 -0.5
TNA IAmb IAmb 21 48 50.8
comp=Z,60nm,1.6s
TNA Tin City 78.21 20 P **P 21 48 38.9 +1.2**
baz=234,SNR=11
TNA S **S 21 58 32.6 +3.8**
baz=234
J14K Nanvaranak Lak 78.26 23 IAMs_20 IAMs_20 22 22 11.8
comp=Z,3μm,20.0s
J14K Nanvaranak Lak 78.26 23 P **P 21 48 39.1 +1.1**
baz=239
J14K S **S 21 58 33.1 +3.6**
baz=239
M15K Kasigluk River 78.44 26 P **P 21 48 39.8 +0.7**
baz=242
M15K S **S 21 58 34.1 +2.6**
baz=242
N15K Kwethluk River 78.46 26 P P 21 48 39.3 +0.1
N15K Kwethluk River 78.46 26 P **P 21 48 39.9 +0.6**
baz=243
N15K S **S 21 58 34.2 +2.4**
baz=243
R16K Pilot Point 78.50 29 P **P 21 48 40.1 +0.7**
baz=246
ANM Nome 78.54 21 P 21 48 39.3 -0.3
ANM IAMs_20 IAMs_20 22 19 15.0
comp=Z,3μm,20.0s
ANM Nome 78.54 21 P **P 21 48 39.3 -0.3**
ANM pmax pmax
comp=Z,42nm,1.4s
ANM MLR MLR
comp=Z,3μm,20.0s
ANM Nome 78.54 21 P **P 21 48 40.7 +1.2**
baz=237,SNR=8.7
ANM S **S 21 58 35.6 +3.1**
baz=237
L15K Ungalak Mounta 78.57 25 P **P 21 48 40.5 +0.7**
baz=241
L15K S **S 21 58 36.7 +3.9**
baz=241
F14K Arctic Creek 78.70 20 P **P 21 48 41.7 +1.2**
baz=236
F14K S **S 21 58 39.5 +5.3**
baz=236
CHIR Chirikof Islan 78.79 31 IAMs_20 IAMs_20 22 18 25.4
comp=Z,4μm,22.0s
CHIR Chirikof Islan 78.79 31 P **P 21 48 42.4 +1.3**
baz=248
K15K Wolf Creek Mou 78.85 24 P P 21 48 41.3 0.0
K15K IAmb IAmb 21 48 55.1
comp=Z,46nm,1.1s
K15K IAMs_20 IAMs_20 22 18 59.4
comp=Z,3μm,22.0s
K15K Wolf Creek Mou 78.85 24 P **P 21 48 42.4 +1.0**
baz=241
K15K S **S 21 58 38.9 +3.0**
baz=241
P16K Nushagak River 78.91 28 P 21 48 42.0 +0.2
P16K IAmb IAmb 21 49 10.9
comp=Z,56nm,0.9s
P16K IAMs_20 IAMs_20 22 19 42.4
comp=Z,4μm,20.0s
P16K Nushagak River 78.91 28 P **P 21 48 42.6 +0.9**
baz=245
O16K Kokwok River B 79.11 27 P **P 21 48 42.5 -0.3**
O16K Kokwok River B 79.11 27 P **P 21 48 44.1 +1.3**
baz=245,SNR=8.2
O16K S **S 21 58 41.8 +3.2**
baz=245
R17L Mt. Peulik Vol 79.12 30 P **P 21 48 44.1 +1.1**
baz=247
PLK4 Peulik 4 79.12 30 IAMs_20 IAMs_20 22 17 59.0
comp=Z,4μm,22.0s
N16K Nishlik Lake 79.18 26 P **P 21 48 44.3 +1.1**
baz=244,SNR=11
N16K S **S 21 58 42.5 +2.9**
baz=244
G15K Niukluk 79.25 21 P **P 21 48 44.3 +0.8**
baz=238
G15K S **S 21 58 44.2 +4.2**
baz=238
M16K Timber Creek 79.34 26 IAMs_20 IAMs_20 22 18 26.6
comp=Z,3μm,22.0s
M16K Timber Creek 79.34 26 P **P 21 48 44.8 +0.7**
baz=244
M16K S **S 21 58 44.1 +2.9**
baz=244
F15K North Star Dit 79.42 20 P **P 21 48 43.9 -0.5**
F15K IAmb IAmb 21 48 57.8
comp=Z,87nm,1.6s
F15K North Star Dit 79.42 20 P **P 21 48 45.1 +0.7**
baz=238
F15K S **S 21 58 44.7 +2.9**
baz=238
L16K Owhat River 79.43 25 P 21 48 43.7 -0.8
L16K IAMs_20 IAMs_20 22 18 49.9
comp=Z,4μm,22.0s
L16K Owhat River 79.43 25 P **P 21 48 44.9 +0.4**
baz=243
L16K S **S 21 58 44.8 +2.8**
baz=243
Q17K Contact Creek 79.60 29 P **P 21 48 45.9 +0.2**
baz=247
O17K Koliganek Bris 79.64 27 P **P 21 48 46.2 +0.5**
baz=246
O17K S **S 21 58 46.5 +2.2**
baz=246
J16K Anvik River 79.70 23 P **P 21 48 46.2 +0.3**
J16K IAmb IAmb 21 48 60.0
comp=Z,91nm,1.6s
J16K IAMs_20 IAMs_20 22 22 56.8
comp=Z,3μm,20.0s
J16K Anvik River 79.70 23 P **P 21 48 46.7 +0.8**
baz=242,SNR=20
J16K S **S 21 58 49.6 +4.7**
baz=242
P17K Kvichak River 79.71 28 P 21 48 46.6 +0.5
P17K Kvichak River 79.71 28 P **P 21 48 46.5 +0.4**
baz=246
H16K Elim 79.73 22 P **P 21 48 46.6 +0.6**
baz=240,SNR=16
H16K S **S 21 58 49.3 +4.3**
baz=240
BVAR Borovoye Array 79.77 325 P **P 21 48 45.2 -1.3**
comp=Z,45nm,0.8s,baz=112,slow=6.9,SNR=121
comp=Z,45nm,0.8s
SII Sitkinak Islan 79.81 31 P **P 21 48 46.2 -0.5**
SII IAMs_20 IAMs_20 22 21 24.3
comp=Z,2μm,21.0s
SII Sitkinak Islan 79.81 31 P **P 21 48 47.2 +0.5**
baz=249
BORK Borovoye 79.81 325 P 21 48 45.2 -1.6
BORK IAmb IAmb 21 48 51.0
comp=Z,53nm,0.8s
BORK Borovoye 79.81 325 *ce*P **P 21 48 45.4 -1.4**
BORK pmax pmax
comp=Z,155nm,1.7s
BORK Borovoye 79.81 325 P **P 21 48 45.2 -1.6**
ACHA Angle Creek He 79.86 29 P **P 21 48 46.7 -0.3**
N17K Nushagak Hills 79.91 27 P **P 21 48 47.4 +0.2**
N17K Nushagak Hills 79.91 27 P **P 21 48 48.2 +1.0**
baz=245
N17K S **S 21 58 51.9 +4.7**
baz=245
I17K Unalakleet 79.95 23 P 21 48 47.5 +0.3
I17K IAmb IAmb 21 49 19.4
comp=Z,78nm,1.3s
I17K IAMs_20 IAMs_20 22 19 17.4
comp=Z,4μm,22.0s
I17K Unalakleet 79.95 23 P **P 21 48 48.4 +1.2**
baz=242,SNR=14
I17K S **S 21 58 52.9 +5.5**
baz=242
G16K Koyuk River 80.07 21 P **P 21 48 47.0 -0.9**
G16K IAMs_20 IAMs_20 22 22 40.4
comp=Z,2μm,20.0s
G16K Koyuk River 80.07 21 P **P 21 48 48.9 +1.1**
baz=240
G16K S **S 21 58 53.7 +5.1**
baz=240
NRIK Noril'sk 80.07 344 P **P 21 48 46.8 -1.1**
comp=Z,40nm,1.1s,baz=124,slow=5.7,SNR=41
NRIK LR LR 22 23 57.4
comp=Z,2μm,20.6s,baz=123,slow=36
comp=Z,40nm,1.1s
NRIK Noril'sk 80.07 344 P **P 21 48 47.1 -0.7**
NRIK IAmb IAmb 21 48 49.6
comp=Z,93nm,1.4s
NRIK Noril'sk 80.07 344 *ci*P **P 21 48 46.6 -1.2**
NRIK pmax pmax
comp=Z,52nm,1.2s
L17K Donlin 80.12 25 P **P 21 48 49.1 +0.9**
baz=244
L17K S **S 21 58 54.2 +4.9**
baz=244
M17K Holitna River 80.17 26 P **P 21 48 48.6 0.0**
M17K IAmb IAmb 21 49 06.9
comp=Z,58nm,1.1s
M17K IAMs_20 IAMs_20 22 19 04.5
comp=Z,3μm,22.0s
M17K Holitna River 80.17 26 P **P 21 48 49.5 +0.9**
baz=245
M17K S **S 21 58 54.3 +4.4**
baz=245
Q18K Katmai Hardscr 80.18 29 P **P 21 48 49.8 +1.0**
baz=248
P18K Big Mountain, 80.36 28 P 21 48 48.4 -1.3
P18K Big Mountain, 80.36 28 P **P 21 48 50.5 +0.8**
baz=247
J17K VABM Dome 80.36 24 P 21 48 49.2 -0.3
J17K IAmb IAmb 21 49 17.5
comp=Z,49nm,1.0s
J17K IAMs_20 IAMs_20 22 23 07.3
comp=Z,2μm,20.0s
J17K VABM Dome 80.36 24 P **P 21 48 50.9 +1.3**
baz=243,SNR=19
J17K S **S 21 58 56.1 +4.3**
baz=243
K17K Iditarod 80.37 24 P **P 21 48 50.7 +1.1**
baz=244
K17K S **S 21 58 57.1 +5.2**
baz=244
NGCH Negor - Chabah 80.48 296 P P 21 48 48.6 -2.3
OHAK Old Harbor 80.51 31 P P 21 48 52.2 +1.8
OHAK Old Harbor 80.51 31 P P 21 48 50.5 +0.1
OHAK IAmb IAmb 21 49 03.6
comp=Z,79nm,1.3s
OHAK Old Harbor 80.51 31 P **P 21 48 51.3 +0.9**
baz=249
O18K Koktuh Hills 80.55 28 IAMs_20 IAMs_20 22 21 12.6
comp=Z,4μm,20.0s
O18K Koktuh Hills 80.55 28 P **P 21 48 51.5 +0.9**
baz=247
N18K Kilae Creek 80.56 27 P **P 21 48 50.8 +0.1**

N18K Kilae Creek 80.56 27 P P 21 48 51.6 +0.9
baz=246
N18K S S 21 58 58.9 +4.8
baz=246
C16K Lisburne Hills 80.59 18 P P 21 48 49.8 -0.8
C16K Lisburne Hills 80.59 18 P P 21 48 51.7 +1.1
baz=237
C16K S S 21 58 57.9 +3.9
baz=237
G17K Kiwalik Mounta 80.74 22 P P 21 48 52.7 +1.2
baz=241,SNR=21
G17K S S 21 58 59.3 +3.6
baz=241
H17K Granite Mounta 80.75 22 P P 21 48 51.0 -0.6
H17K IAMs_20 IAMs_20 22 19 53.4
comp=Z,4µm,22.0s
H17K Granite Mounta 80.75 22 P P 21 48 52.4 +0.9
baz=242,SNR=22
H17K S S 21 59 00.5 +4.7
baz=242
L18K Granite Mounta 80.84 25 P 21 48 51.5 -0.6
L18K IAMs_20 IAMs_20 22 19 55.1
comp=Z,4µm,21.0s
L18K Granite Mounta 80.84 25 P P 21 48 53.1 +1.0
baz=246,SNR=14
HRA Herat 80.91 305 P 21 48 51.0 -2.4
HRA IAmb IAmb 21 48 54.7
comp=Z,162nm,1.9s
M18K Stony River 80.91 26 P P 21 48 53.5 +0.9
baz=246
Q19K Cape Douglas, 80.94 29 P P 21 48 52.4 -0.3
Q19K Cape Douglas, 80.94 29 P P 21 48 53.6 +0.8
baz=249
F17K Baldwin Pennin 80.98 21 P P 21 48 52.1 -0.7
F17K IAMs_20 IAMs_20 22 22 12.6
comp=Z,2µm,20.0s
F17K Baldwin Pennin 80.98 21 P P 21 48 53.7 +0.9
baz=241
D17K Noatak River 81.00 19 P P 21 48 53.6 +0.8
baz=239,SNR=34
KDAK Kodiak Island 81.06 30 LR LR 22 20 02.8
comp=Z,5µm,21.3s,baz=243,slow=32
KDAK Kodiak Island 81.06 30 P P 21 48 53.9 +0.5
KDAK IAmb IAmb 21 49 07.1
comp=Z,65nm,1.1s
KDAK Kodiak Island 81.06 30 P P 21 48 53.9 +0.5
KDAK pmax pmax
comp=Z,65nm,1.1s
KDAK MLR MLR
comp=Z,5µm,20.0s
KDAK Kodiak Island 81.06 30 P P 21 48 54.0 +0.6
baz=250
O19K Port Alsworth 81.09 28 P P 21 48 52.7 -0.8
O19K IAMs_20 IAMs_20 22 21 49.9
comp=Z,3µm,20.0s
O19K Port Alsworth 81.09 28 P P 21 48 53.9 +0.5
baz=248
E17K Hotham Inlet 81.10 20 P P 21 48 54.6 +1.2
baz=240,SNR=28
RDOG Red Dog Mine 81.24 19 P P 21 48 54.2 +0.1
RDOG Red Dog Mine 81.24 19 P P 21 48 55.1 +1.0
baz=239,SNR=8.3
N19K Bonanza Creek 81.25 27 P P 21 48 54.5 0.0
N19K Bonanza Creek 81.25 27 P P 21 48 55.2 +0.8
baz=248
J18K Innoko River 81.35 24 P P 21 48 55.6 +0.8
baz=245
C17K DeLong Mountai 81.37 18 P P 21 48 55.7 +0.9
baz=239
P19K Oil Pt 81.40 28 P P 21 48 54.0 -1.2
P19K IAmb IAmb 21 49 21.9
comp=Z,47nm,0.9s
P19K Oil Pt 81.40 28 P P 21 48 55.7 +0.5
baz=249
H18K Honhosa River 81.43 22 P P 21 48 54.3 -0.9
H18K Honhosa River 81.43 22 P P 21 48 55.7 +0.5
baz=244
Q20K Shuyak Island 81.44 29 P P 21 48 55.6 +0.3
baz=250
ILSW Iliamna Southw 81.56 28 P P 21 48 56.0 -0.2
L19K White Mountain 81.61 26 P 21 48 55.6 -0.7
L19K IAmb IAmb 21 49 13.4
comp=Z,46nm,1.0s
L19K IAMs_20 IAMs_20 22 19 56.5
comp=Z,4µm,22.0s
L19K White Mountain 81.61 26 P P 21 48 56.9 +0.6
baz=247,SNR=20
F18K Selawik 81.62 21 P P 21 48 57.0 +0.9
baz=242,SNR=12
JLN Jalan Bani Buh 81.64 293 P P 21 48 57.3 +0.1
JLN P P 21 48 57.3 +0.1
G18K Tagagawik 81.66 22 P 21 48 55.4 -1.0
G18K IAMs_20 IAMs_20 22 19 38.4
comp=Z,3µm,22.0s
G18K Tagagawik 81.66 22 P P 21 48 57.2 +0.8
baz=243,SNR=21
E18K Tukpahlearik C 81.68 20 P P 21 48 55.9 -0.6
E18K Tukpahlearik C 81.68 20 P P 21 48 57.2 +0.7
baz=241
GCSA Galena City Sc 81.82 23 P P 21 48 58.0 +0.8
baz=245,SNR=14
J19K Poorman 82.01 24 P P 21 48 57.8 -0.5
J19K IAmb IAmb 21 49 15.3
comp=Z,53nm,1.4s
J19K Poorman 82.01 24 P P 21 48 59.0 +0.7
baz=246,SNR=20
C18K Utukok River 82.09 19 P P 21 48 57.7 -1.0
C18K Utukok River 82.09 19 P P 21 48 59.1 +0.4
baz=240
MAW Mawson 82.09 202 P P 21 48 58.1 -0.5
comp=Z,56nm,1.0s,baz=75,slow=4.8,SNR=26
MAW LR LR 22 23 16.5
comp=Z,6µm,19.8s,baz=68,slow=34
comp=Z,56nm,1.0s
MAW Mawson 82.09 202 P P 21 48 57.8 -0.8
MAW Mawson 82.09 202 P P 21 48 57.8 -0.8
MAW pmax pmax
comp=Z,12nm,1.0s
WBK Wadi Bani Khal 82.10 293 P P 21 48 57.1 -2.6
WBK P P 21 48 57.1 -2.6
HOM Homer 82.16 29 IAMs_20 IAMs_20 22 21 12.2
comp=Z,4µm,21.0s
M20K Styx River 82.25 26 IAMs_20 IAMs_20 22 20 19.2
comp=Z,3µm,22.0s
M20K Styx River 82.25 26 P P 21 48 60.0 +0.3
baz=249
CNPM China Poot 82.31 29 P P 21 48 59.5 -0.5
CNPM IAmb IAmb 21 49 12.7
comp=Z,89nm,1.4s
H19K Roundabout Mou 82.32 22 P P 21 48 59.5 -0.3
H19K IAmb IAmb 21 49 13.4
comp=Z,74nm,1.6s
H19K IAMs_20 IAMs_20 22 20 51.9
comp=Z,4µm,21.0s
H19K Roundabout Mou 82.32 22 P P 21 49 00.3 +0.5
baz=245
G19K Purcell Mounta 82.34 22 P P 21 48 59.9 -0.1
G19K IAMs_20 IAMs_20 22 20 09.5
comp=Z,3µm,22.0s
G19K Purcell Mounta 82.34 22 P P 21 49 00.3 +0.4
baz=245
F19K Shaleruckik Mo 82.39 21 P P 21 48 59.9 -0.3
F19K Shaleruckik Mo 82.39 21 P P 21 49 00.9 +0.8
baz=244
K20K Telida 82.39 25 P 21 48 60.0 -0.4
K20K IAmb IAmb 21 49 14.7
comp=Z,30nm,0.8s
K20K Telida 82.39 25 P P 21 49 01.0 +0.6
baz=248
N20K Mount Spurr 82.42 27 P P 21 49 00.5 0.0
baz=250
SPCR Spurr Chakacha 82.42 27 P P 21 49 00.3 -0.3
baz=250
WSAR Wadi Sarin 82.48 294 P P 21 48 59.1 -2.6
SPU Mount Spurr 82.49 27 P P 21 49 00.2 -0.7
BRLK Bradley Lake 82.56 29 P P 21 49 00.6 -0.7
BRSE Bradley Lake S 82.62 29 P P 21 49 01.9 +0.4
baz=251
J20K Nowinta River 82.68 24 P P 21 49 01.8 +0.1
J20K IAmb IAmb 21 49 15.5
comp=Z,114nm,1.6s
J20K Nowinta River 82.68 24 P P 21 49 02.3 +0.5
baz=248
STLK Strandline Lak 82.69 27 P P 21 49 01.1 -0.9
CAPN Captain Cook N 82.76 28 P P 21 49 02.7 +0.5
baz=251

I20K Naaghedeneel 82.78 23 IAMs_20 IAMs_20 22 25 02.3
comp=Z,3µm,20.0s
I20K Naaghedeneel 82.78 23 P P 21 49 03.0 +0.7
baz=247
C19K Lookout Ridge 82.82 18 P P 21 49 02.3 -0.2
C19K IAmb IAmb 21 49 20.3
comp=Z,40nm,1.1s
C19K Lookout Ridge 82.82 18 P P 21 49 03.0 +0.5
baz=242
MHTO MHTO 82.85 291 P P 21 49 03.0 -0.6
SNR=6.8
E19K Redstone River 82.86 20 P P 21 49 02.3 -0.3
E19K IAmb IAmb 21 49 06.4
comp=Z,36nm,0.8s
E19K IAMs_20 IAMs_20 22 24 29.8
comp=Z,2µm,20.0s
E19K Redstone River 82.86 20 P P 21 49 03.0 +0.3
baz=244
JMDO Jabal Madar 82.87 293 P P 21 49 04.0 +0.3
SNR=5.7
JMDO P P 21 49 04.0 +0.3
SNR=5.7
H20K Anotleneega Mo 82.90 23 P P 21 49 03.1 +0.2
baz=247
A19K Wainwright 82.90 17 P P 21 49 03.1 +0.3
baz=240
BIDO Bidbid 82.97 294 P P 21 49 05.2 +1.0
SNR=6.6
SKT Skwentna 82.99 26 P 21 49 02.7 -0.8
SKT IAMs_20 IAMs_20 22 20 54.2
comp=Z,2µm,22.0s
SKT Skwentna 82.99 26 P P 21 49 03.2 -0.3
baz=250,SNR=5.5
SMDO Samad 83.00 294 P P 21 49 02.4 -2.1
SNR=6.9
D19K Kuna River 83.02 19 P P 21 49 02.5 -1.0
D19K IAmb IAmb 21 49 22.1
comp=Z,42nm,1.1s
D19K Kuna River 83.02 19 P P 21 49 03.7 +0.2
baz=243
PPLA Purkeypile 83.02 25 P P 21 49 03.0 -0.8
PPLA IAmb IAmb 21 49 49.2
comp=Z,88nm,1.6s
PPLA IAMs_20 IAMs_20 22 21 33.9
comp=Z,4µm,21.0s
PPLA Purkeypile 83.02 25 P P 21 49 03.8 +0.1
baz=250,SNR=7.8
SLKM Skilak Lake 83.11 28 P 21 49 02.4 -1.8
SLKM IAmb IAmb 21 49 16.9
comp=Z,39nm,1.0s
SLKM IAMs_20 IAMs_20 22 22 13.4
comp=Z,4µm,21.0s
F20K Avaraart Lake 83.22 21 P P 21 49 03.9 -0.5
F20K IAmb IAmb 21 49 22.3
comp=Z,42nm,1.2s
F20K IAMs_20 IAMs_20 22 21 19.6
comp=Z,2µm,22.0s
F20K Avaraart Lake 83.22 21 P P 21 49 05.1 +0.6
baz=246
CHUM Lake Minchumin 83.32 24 P P 21 49 05.7 +0.6
baz=249,SNR=52
O22K Cooper Landing 83.34 28 P P 21 49 04.8 -0.4
O22K IAmb IAmb 21 49 29.4
comp=Z,48nm,0.8s
O22K IAMs_20 IAMs_20 22 22 41.3
comp=Z,3µm,20.0s
O22K Cooper Landing 83.34 28 P P 21 49 05.8 +0.6
baz=252
SEW Seward 83.35 29 P P 21 49 05.0 -0.2
SEW IAmb IAmb 21 49 41.8
comp=Z,94nm,1.6s
SEW Seward 83.35 29 P P 21 49 05.7 +0.4
baz=252
JASK Jask - Hormozg 83.47 296 P P 21 49 06.2 -0.5
SNR=11
MSEY Mahe Island 83.50 266 P P 21 49 08.3 +1.1
L22K Petersville 83.51 26 P 21 49 04.7 -1.5
L22K IAMs_20 IAMs_20 22 20 56.8
comp=Z,4µm,22.0s
RC01 Rabbit Creek A 83.52 28 P 21 49 06.2 0.0
RC01 IAmb IAmb 21 49 24.3
comp=Z,34nm,0.8s
RC01 Rabbit Creek A 83.52 28 P P 21 49 06.7 +0.5
baz=252,SNR=12
IMAR Indian Mountai 83.52 22 P P 21 49 05.4 -0.7
M22K Willow 83.55 27 P P 21 49 06.3 +0.1
baz=252
E20K Nigu River 83.56 20 P P 21 49 07.0 +0.7
baz=245
D20K Etivluk River 83.61 19 P P 21 49 06.5 -0.1
D20K Etivluk River 83.61 19 P P 21 49 07.4 +0.9
baz=245
CUT Chulitna 83.69 26 IAMs_20 IAMs_20 22 20 40.7
comp=Z,4µm,22.0s
CUT Chulitna 83.69 26 P P 21 49 07.3 +0.3
baz=251
HOQ Hoqain 83.73 294 P P 21 49 06.2 -1.9
SNR=14
BSY Bisya 83.74 293 P P 21 49 06.3 -1.9
H21K Melozitna Rive 83.76 23 P P 21 49 07.1 -0.2
H21K IAMs_20 IAMs_20 22 22 07.1
comp=Z,4µm,21.0s
H21K Melozitna Rive 83.76 23 P P 21 49 07.8 +0.4
baz=249,SNR=13
KTH Kantishna Hill 83.79 25 P P 21 49 06.6 -1.0
KTH IAMs_20 IAMs_20 22 21 43.7
comp=Z,3µm,22.0s
G21K Allakaket 83.81 22 P 21 49 08.3 +0.7
G21K IAMs_20 IAMs_20 22 21 17.5
comp=Z,4µm,22.0s
G21K Allakaket 83.81 22 P P 21 49 08.2 +0.7
baz=248
I21K Tanana 83.91 23 P P 21 49 08.9 +0.9
I21K IAmb IAmb 21 49 31.1
comp=Z,44nm,1.4s
I21K IAMs_20 IAMs_20 22 25 46.2
comp=Z,2µm,20.0s
I21K Tanana 83.91 23 P P 21 49 08.7 +0.6
baz=250
BPAW Bear Paw Mtn. 83.94 24 P P 21 49 07.9 -0.4
BPAW IAmb IAmb 21 49 22.1
comp=Z,60nm,2.0s
BPAW Bear Paw Mtn. 83.94 24 P P 21 49 08.5 +0.2
baz=251,SNR=6.0
PMR Palmer 83.95 27 P P 21 49 08.6 +0.3
PMR Palmer 83.95 27 P 21 49 07.2 -1.1
PMR IAmb IAmb 21 49 21.1
comp=Z,28nm,0.8s
PMR Palmer 83.95 27 P P 21 49 07.2 -1.1
PMR pmax pmax
comp=Z,28nm,0.8s
PMR Palmer 83.95 27 P P 21 49 08.6 +0.3
baz=252,SNR=7.8
B20K Meade River 83.99 18 P P 21 49 08.9 +0.6
B20K IAmb IAmb 21 49 27.5
comp=Z,48nm,1.3s
B20K Meade River 83.99 18 P P 21 49 09.1 +0.7
baz=244
F21K Alatna River 84.09 21 P P 21 49 09.1 0.0
F21K IAMs_20 IAMs_20 22 21 47.7
comp=Z,3µm,22.0s
F21K Alatna River 84.09 21 P P 21 49 09.8 +0.8
baz=248
GHO Glory Hole Cre 84.10 27 P P 21 49 09.0 -0.2
GHO IAmb IAmb 21 49 27.4
comp=Z,32nm,1.0s
GHO IAMs_20 IAMs_20 22 20 57.4
comp=Z,4µm,22.0s
KNK Knik Glacier 84.20 27 P P 21 49 09.2 -0.6
KNK IAMs_20 IAMs_20 22 21 58.3
comp=Z,4µm,21.0s
KNK Knik Glacier 84.20 27 P P 21 49 10.1 +0.4
baz=253,SNR=17
P23K Montague Islan 84.30 29 P P 21 49 10.2 0.0
P23K IAMs_20 IAMs_20 22 22 29.0
comp=Z,4µm,22.0s
P23K Montague Islan 84.30 29 P P 21 49 10.9 +0.7
baz=254
MLY Manley 84.36 24 P 21 49 09.6 -0.8
MLY IAmb IAmb 21 49 29.0
comp=Z,45nm,1.2s
MLY Manley 84.36 24 P P 21 49 10.9 +0.5
baz=251,SNR=18
SML Sawmill 84.38 27 P P 21 49 09.7 -0.9
SML IAMs_20 IAMs_20 22 21 13.8
comp=Z,3µm,22.0s
SML Sawmill 84.38 27 P P 21 49 10.7 +0.1
baz=253,SNR=17
E21K Killik River 84.38 20 P P 21 49 10.7 +0.2
E21K Killik River 84.38 20 P P 21 49 10.9 +0.4
baz=247
C21K Knifeblade Rid 84.39 19 P P 21 49 11.3 +0.8
baz=247
H22K Ishtalitna Cre 84.40 23 P P 21 49 10.1 -0.5
H22K IAMs_20 IAMs_20 22 22 14.9
comp=Z,3µm,21.0s
H22K Ishtalitna Cre 84.40 23 P P 21 49 10.6 0.0
baz=250
ARQ Araqi 84.42 294 P P 21 49 09.6 -2.0
SNR=11
WAT1 Susitna Watana 84.58 26 P P 21 49 11.5 -0.1
baz=253
BWN Browne 84.60 25 P P 21 49 12.7 +1.1
RND Reindeer 84.62 25 P 21 49 10.6 -1.3
RND IAmb IAmb 21 49 14.5
comp=Z,40nm,0.7s
RND IAMs_20 IAMs_20 22 22 45.0
comp=Z,3µm,21.0s
RND Reindeer 84.62 25 P P 21 49 10.6 -1.3
RND pmax pmax
comp=Z,41nm,0.7s
RND MLR MLR
comp=Z,3µm,21.0s
B21K Ikpikpuk River 84.64 19 P 21 49 10.9 -0.8
B21K IAmb IAmb 21 49 16.3
comp=Z,51nm,1.2s
B21K Ikpikpuk River 84.64 19 P P 21 49 12.2 +0.6
baz=247
M23K Glacier View 84.65 27 P P 21 49 12.0 0.0
baz=254,SNR=10
F22K John River 84.66 21 P P 21 49 12.3 +0.4
baz=249
Q23K Middleton Isla 84.67 30 P P 21 49 12.2 +0.3
baz=255
MID Middleton Isla 84.67 30 IAMs_20 IAMs_20 22 23 16.8
comp=Z,3µm,21.0s
MCK McKinley 84.69 25 P 21 49 11.8 -0.3
MCK IAmb IAmb 21 49 24.7
comp=Z,57nm,1.2s
MCK IAMs_20 IAMs_20 22 25 33.8
comp=Z,2µm,20.0s
MCK McKinley 84.69 25 P P 21 49 11.8 -0.3
MCK pmax pmax
comp=Z,57nm,1.2s
MCK MLR MLR
comp=Z,2µm,20.0s
MCK McKinley 84.69 25 P P 21 49 12.4 +0.3
baz=252,SNR=11
GLI Glacier Island 84.69 28 P P 21 49 12.4 +0.3
baz=254
A21K Barrow 84.73 17 P P 21 49 12.8 +0.7
baz=245,SNR=6.7
SHAO Shalim 84.78 288 P P 21 49 13.4 -0.1
SHAO Shalim 84.78 288 P P 21 49 13.7 +0.1
MDH Madha 84.82 296 P P 21 49 13.4 -0.2
HIN Hinchinbrook I 84.84 29 P P 21 49 12.6 -0.3
HIN IAmb IAmb 21 49 14.9
comp=Z,22nm,0.7s
HIN IAMs_20 IAMs_20 22 23 18.2
comp=Z,4µm,22.0s
SCM Sheep Creek Mo 84.84 27 P P 21 49 12.0 -1.0
SCM IAmb IAmb 21 49 26.4
comp=Z,42nm,0.9s
SCM IAMs_20 IAMs_20 22 23 10.1
comp=Z,3µm,21.0s
SCM Sheep Creek Mo 84.84 27 P P 21 49 12.0 -1.0
SCM pmax pmax
comp=Z,42nm,0.9s
SCM MLR MLR
comp=Z,2µm,21.0s
SCM Sheep Creek Mo 84.84 27 P P 21 49 13.2 +0.2
baz=254,SNR=11
WAT6 Susitna Watana 84.87 26 P P 21 49 13.5 +0.3
baz=254,SNR=10
UOSS Minazif 84.87 295 P 21 49 13.6 -0.3
UOSS IAmb IAmb 21 49 14.6
comp=Z,26nm,0.9s
UOSS Minazif 84.87 295 *i* P P 21 49 13.5 -0.3
SNR=12
UOSS Minazif 84.87 295 P P 21 49 14.1 +0.2
UOSS Minazif 84.87 295 P P 21 49 14.0 +0.1
BANOM Banah 84.88 296 *i* P P 21 49 14.4 +0.5
SNR=11
NEA2 Nenana 84.89 24 P P 21 49 13.3 +0.2
baz=252
HATD Hatta, Dubai 84.92 295 *i* P P 21 49 14.2 +0.1
SNR=20
HATD Hatta, Dubai 84.92 295 P P 21 49 12.3 -1.8
SNR=14
HATD P P 21 49 12.3 -1.8
SNR=14
I23K Minto, Yukon-K 84.94 24 P P 21 49 11.7 -1.6
I23K IAmb IAmb 21 49 27.4
comp=Z,34nm,1.0s
I23K IAMs_20 IAMs_20 22 26 08.5
comp=Z,2µm,20.0s
I23K Minto, Yukon-K 84.94 24 P P 21 49 14.0 +0.7
baz=252,SNR=19
MSFE Esma-Masafi 84.95 296 *i* P P 21 49 14.6 +0.3
SNR=15
MASF Masafi 84.95 296 P P 21 49 12.9 -1.4
SNR=21
ASHO Ashiyiah 84.97 295 *i* P P 21 49 14.2 -0.2
SNR=8.3
ASHO Ashiyiah 84.97 295 P P 21 49 14.4 0.0
SNR=14
E22K Anaktuvuk Pass 85.02 21 P 21 49 13.3 -0.4
E22K Anaktuvuk Pass 85.02 21 P P 21 49 14.2 +0.5
baz=249,SNR=28
SHME Shamm 85.03 296 *i* P P 21 49 15.0 +0.4
SNR=5.2
SHME Shamm 85.03 296 P P 21 49 13.8 -0.8
SNR=5.4
A22K Sinclair Lake 85.08 17 P P 21 49 14.4 +0.6
baz=246
DHY Denali Highway 85.17 26 IAMs_20 IAMs_20 22 22 31.6
comp=Z,4µm,22.0s
DHY Denali Highway 85.17 26 P P 21 49 15.0 +0.3
baz=254,SNR=8.0
G23K Bananza Creek 85.18 22 P P 21 49 14.4 -0.1
G23K IAmb IAmb 21 49 31.6
comp=Z,27nm,1.1s
G23K Bananza Creek 85.18 22 P P 21 49 15.0 +0.5
baz=251
ALNE Al Ain 85.19 294 P P 21 49 15.7 +0.2
AB31 Akbulak array 85.20 320 P 21 49 13.4 -1.5
AB31 IAmb IAmb 21 49 16.4
comp=Z,41nm,0.9s
ABKAR Akbulak array 85.20 320 P 21 49 13.3 -1.7
EYAK Cordova Ski Ar 85.24 29 P P 21 49 15.3 +0.4
EYAK Cordova Ski Ar 85.24 29 P P 21 49 15.0 +0.2
EYAK Cordova Ski Ar 85.24 29 P P 21 49 15.1 +0.3
baz=256
WRH Wood River Hil 85.26 25 P 21 49 13.7 -1.3
WRH IAmb IAmb 21 49 30.4
comp=Z,42nm,1.0s
COLD Coldfoot 85.29 22 P 21 49 15.6 +0.6
COLD IAMs_20 IAMs_20 22 22 36.3
comp=Z,4µm,21.0s
COLD Coldfoot 85.29 22 P P 21 49 15.5 +0.6
baz=251
B22K Teshekpuk Lake 85.30 18 P P 21 49 14.6 -0.3
B22K IAmb IAmb 21 49 33.6
comp=Z,58nm,1.1s
B22K Teshekpuk Lake 85.30 18 P P 21 49 15.3 +0.3
baz=248
NAZ Nazwa, Dubai 85.36 295 *i* P P 21 49 16.2 -0.1
SNR=9.8
NAZ Nazwa, Dubai 85.36 295 P P 21 49 17.0 +0.7
SNR=7.4
DIV Divide 85.38 28 P P 21 49 15.2 -0.5
KLU Klutina 85.40 28 P P 21 49 14.9 -0.9
KLU IAmb IAmb 21 49 32.3
comp=Z,32nm,1.0s
KLU Klutina 85.40 28 P P 21 49 16.1 +0.3
baz=255,SNR=8.6
DMTO DMTO 85.40 288 P P 21 49 16.0 -0.6
FAQ Al Faqa, Dubai 85.40 295 P P 21 49 16.5 0.0
FAQ Al Faqa, Dubai 85.40 295 P P 21 49 16.5 0.0
SNR=5.6
FAQ P P 21 49 16.5 0.0
SNR=5.6
CCB Clear Creek Bu 85.43 24 P P 21 49 14.4 -1.4
CCB IAmb IAmb 21 49 29.0

comp=Z,49nm,1.0s
M24K Tolsona, Glenn 85.44 27 P **P** **21 49 15.5 -0.5**
M24K IAmb IAmb 21 49 47.2
comp=Z,54nm,1.1s
M24K Tolsona, Glenn 85.44 27 P **P** **21 49 16.4 +0.4**
baz=255,SNR=7.0
COLA College 85.47 24 P **P** **21 49 15.9 0.0**
COLA College 85.47 24 P **P** **21 49 16.2 +0.2**
baz=253
UMZA Um Al Zommool 85.61 293 P **P** **21 49 15.4 -2.2**
ASUD Al Ashush, Dub 85.63 295 *i* P **P** **21 49 18.0 +0.4**
SNR=16
ASUD Al Ashush, Dub 85.63 295 P **P** **21 49 17.0 -0.6**
SNR=7.6
ASUD P **P** **21 49 17.0 -0.6**
SNR=7.6
D23K Nanushuk River 85.69 20 P **P** **21 49 17.0 0.0**
D23K IAMs_20 IAMs_20 22 24 25.1
comp=Z,2µm,21.0s
D23K Nanushuk River 85.69 20 P **P** **21 49 17.7 +0.7**
baz=250
POKR Poker Plat Res 85.71 24 P **P** **21 49 17.1 0.0**
baz=254
HDA Harding Lake 85.72 25 P **P** **21 49 17.0 -0.2**
HDA IAmb IAmb 21 49 30.8
comp=Z,28nm,1.0s
HDA Harding Lake 85.72 25 P **P** **21 49 17.5 +0.3**
baz=254,SNR=14
RAGM Ragged Mountai 85.72 29 P **P** **21 49 16.4 -1.0**
RAGM IAmb IAmb 21 49 30.5
comp=Z,34nm,1.0s
KAIM Kayak Island 85.74 29 P **P** **21 49 17.8 +0.4**
KAIM IAMs_20 IAMs_20 22 23 59.9
comp=Z,3µm,21.0s
KAIM Kayak Island 85.74 29 P **P** **21 49 17.8 +0.4**
baz=257
H24K Noodor Dome 85.74 23 **P** **21 49 16.6 -0.8**
H24K IAmb IAmb 21 49 32.0
comp=Z,24nm,0.9s
H24K IAMs_20 IAMs_20 22 26 52.6
comp=Z,2µm,20.0s
H24K Noodor Dome 85.74 23 P **P** **21 49 17.7 +0.4**
baz=253,SNR=35
E23K Chandalar 85.77 21 **P** **21 49 17.5 0.0**
E23K IAmb IAmb 21 49 43.0
comp=Z,54nm,1.1s
E23K IAMs_20 IAMs_20 22 21 49.1
comp=Z,3µm,22.0s
E23K Chandalar 85.77 21 P **P** **21 49 18.0 +0.5**
baz=252,SNR=31
IL31 85.84 24 P **P** **21 49 16.1 -1.6**
IL31 IAmb IAmb 21 49 30.6
comp=Z,34nm,0.9s
ILAR Eielson Array 85.84 24 P **P** **21 49 15.6 -2.2**
comp=Z,25nm,0.7s,baz=263,slow=4.5,SNR=104
comp=Z,25nm,0.7s
ILAR Eielson Array 85.84 24 **P** **21 49 15.5 -2.3**
BMRM Bremner River 85.89 28 P **P** **21 49 17.1 -1.1**
BMRM IAmb IAmb 21 49 22.2
comp=Z,27nm,0.9s
BMRM Bremner River 85.89 28 P **P** **21 49 18.3 +0.1**
baz=257,SNR=11
AJN Ajban 85.93 295 *i* P **P** **21 49 18.9 -0.2**
SNR=6.0
AJN Ajban 85.93 295 P **P** **21 49 17.3 -1.8**
TOLK Toolik Lake Re 85.97 20 P **P** **21 49 19.0 +0.6**
baz=252,SNR=33
PAX Paxson 85.98 26 P **P** **21 49 18.3 -0.4**
PAX Paxson 85.98 26 P **P** **21 49 18.3 -0.4**
PAX pmax pmax
comp=Z,24nm,1.2s
PAX MLR MLR
comp=Z,5µm,21.0s
PAX Paxson 85.98 26 P **P** **21 49 18.9 +0.3**
baz=256
C23K Itkillik River 86.01 19 P **P** **21 49 19.0 +0.5**
baz=250
CRZF Crozet Islands 86.04 224 IAMs_20 IAMs_20 22 22 52.4
comp=Z,2µm,22.0s
N25K Chitina, Valde 86.04 28 P **P** **21 49 18.1 -0.9**
N25K Chitina, Valde 86.04 28 P **P** **21 49 19.3 +0.3**
baz=256,SNR=11
K24K Donnelly Dome 86.05 25 P **P** **21 49 18.8 -0.1**
K24K IAmb IAmb 21 49 35.1
comp=Z,36nm,1.0s
K24K Donnelly Dome 86.05 25 P **P** **21 49 19.5 +0.6**
baz=255,SNR=10
SUCK Suckling Hills 86.08 29 IAMs_20 IAMs_20 22 23 37.8
comp=Z,3µm,21.0s
RBK Rabkut 86.09 288 P **P** **21 49 20.3 +0.2**
G24K Hadweenzic Riv 86.15 22 P **P** **21 49 19.4 +0.1**
G24K IAmb IAmb 21 50 05.5
comp=Z,38nm,1.1s
G24K IAMs_20 IAMs_20 22 23 20.2
comp=Z,4µm,21.0s
G24K Hadweenzic Riv 86.15 22 P **P** **21 49 19.7 +0.4**
baz=254
E24K Your Creek 86.18 21 P **P** **21 49 19.9 +0.4**
E24K IAMs_20 IAMs_20 22 23 16.9
comp=Z,3µm,22.0s
E24K Your Creek 86.18 21 P **P** **21 49 20.1 +0.6**
baz=253
SVE Sverdlovsk 86.19 327 *e*P **P** **21 49 19.5 -0.2**
SVE *e*S **SKSac** **21 59 43.7 +1.7**
SVE pmax pmax
comp=Z,29nm,1.1s
SVE MLR MLR
comp=Z,957nm,20.0s
BERG Berg Lake 86.19 29 IAMs_20 IAMs_20 22 21 15.9
comp=Z,4µm,22.0s
F24K Squaw Lake 86.23 22 P **P** **21 49 19.5 -0.2**
F24K Squaw Lake 86.23 22 P **P** **21 49 20.5 +0.7**
baz=253
DOK Doka 86.25 289 P **P** **21 49 18.4 -2.4**
SNR=10
GLB Gilahina Butte 86.37 28 **P** **21 49 19.8 -0.7**
GLB IAmb IAmb 21 49 24.5
comp=Z,23nm,0.8s
GLB IAMs_20 IAMs_20 22 23 59.6
comp=Z,4µm,21.0s
D24K Happy Valley 86.39 20 P **P** **21 49 20.7 +0.3**
D24K Happy Valley 86.39 20 P **P** **21 49 21.1 +0.7**
baz=252
J25K Salcha River, 86.43 25 P **P** **21 49 19.7 -1.1**
J25K IAmb IAmb 21 49 25.3
comp=Z,22nm,0.9s
J25K Salcha River, 86.43 25 P **P** **21 49 20.8 0.0**
baz=256
RIDG Independent Ri 86.44 26 **P** **21 49 19.8 -1.1**
RIDG IAmb IAmb 21 49 34.9
comp=Z,23nm,0.9s
RIDG IAMs_20 IAMs_20 22 23 40.2
comp=Z,3µm,21.0s
RIDG Independent Ri 86.44 26 P **P** **21 49 20.8 0.0**
baz=256,SNR=16
VRDI Verde Repeater 86.49 28 **P** **21 49 20.2 -1.2**
VRDI IAMs_20 IAMs_20 22 24 21.8
comp=Z,4µm,21.0s
WHFO Wadi Hawf 86.53 288 P **P** **21 49 20.8 -1.4**
WHFO P **P** **21 49 20.8 -1.4**
CRQM Cirque 86.54 29 P **P** **21 49 20.5 -1.1**
CRQM IAmb IAmb 21 49 25.8
comp=Z,37nm,0.8s
CRQM IAMs_20 IAMs_20 22 22 03.7
comp=Z,4µm,22.0s
CRQE Cirque 86.56 29 P **P** **21 49 21.6 0.0**
baz=258,SNR=17
PRP Porcupine Dome 86.59 24 **P** **21 49 20.5 -1.2**
PRP IAMs_20 IAMs_20 22 27 09.1
comp=Z,2µm,20.0s
PRP Porcupine Dome 86.59 24 P **P** **21 49 21.5 -0.2**
baz=256
C24K Franklin Bluff 86.60 19 P **P** **21 49 21.7 +0.3**
C24K IAmb IAmb 21 49 35.6
comp=Z,46nm,1.0s
C24K IAMs_20 IAMs_20 22 25 49.0
comp=Z,2µm,20.0s
C24K Franklin Bluff 86.60 19 P **P** **21 49 21.9 +0.4**
baz=252
AKTO Aktyubinsk 86.62 321 P **P** **21 49 20.4 -1.6**
comp=Z,16nm,1.1s,baz=81,slow=4.0,SNR=14
comp=Z,16nm,1.1s
G25K Bearman Lake 86.69 23 P **P** **21 49 22.4 +0.5**
baz=255
TGL Tana Glacier 86.69 29 P **P** **21 49 21.5 -0.7**
TGL IAmb IAmb 21 49 39.4
comp=Z,30nm,1.0s
TGL IAMs_20 IAMs_20 22 22 31.1
comp=Z,3µm,22.0s
MCARA McCarthy VSAT 86.73 28 P **P** **21 49 22.4 +0.1**
MCARA IAmb IAmb 21 49 36.9
comp=Z,21nm,0.9s
MCARA IAMs_20 IAMs_20 22 24 20.0
comp=Z,4µm,20.0s
MCARA McCarthy VSAT 86.73 28 P **P** **21 49 22.8 +0.5**
MENT Mentasta 86.75 27 P **P** **21 49 23.3 +0.9**
MENT Mentasta 86.75 27 P **P** **21 49 23.1 +0.8**
DOT Dot Lake 86.76 26 P **P** **21 49 21.6 -0.8**
DOT IAMs_20 IAMs_20 22 29 11.5
comp=Z,2µm,19.0s
SCRK Sand Creek 86.86 25 **P** **21 49 21.6 -1.5**
SCRK IAmb IAmb 21 49 45.2
comp=Z,41nm,1.8s
SCRK IAMs_20 IAMs_20 22 25 42.3
comp=Z,2µm,20.0s
SCRK Sand Creek 86.86 25 P **P** **21 49 23.8 +0.8**
baz=257,SNR=14
MZWR Madinat Zayed 86.87 294 P **P** **21 49 22.9 -0.9**
MZWR P **P** **21 49 22.9 -0.9**
L26K Log Cabin Wild 86.93 26 P **P** **21 49 24.3 +1.0**
L26K IAMs_20 IAMs_20 22 23 27.3
comp=Z,4µm,22.0s
ABTO Aybut 86.94 287 P **P** **21 49 24.5 +0.2**
SNR=5.4
M26K Nabesna, AK 86.96 27 P **P** **21 49 24.4 +1.0**
M26K Nabesna, AK 86.96 27 P **P** **21 49 24.4 +1.0**
baz=258
M26K S **S** **22 00 02.0 +3.6**
baz=258
FYU Fort Yukon 86.97 23 **P** **21 49 24.2 +0.9**
FYU IAMs_20 IAMs_20 22 27 04.0
comp=Z,2µm,20.0s
MESA MESA 87.00 29 P **P** **21 49 23.6 -0.3**
MESA IAMs_20 IAMs_20 22 24 51.4
comp=Z,4µm,21.0s
MESA MESA 87.00 29 P **P** **21 49 24.1 +0.3**
baz=259
QSPA South Pole Qui 87.01 180 P **P** **21 49 22.7 -1.0**
comp=Z,156nm,1.0s,baz=343,slow=2.2,SNR=106
QSPA LR LR 22 27 36.0
comp=Z,6µm,21.7s,baz=6.5,slow=35
comp=Z,156nm,1.0s
QSPA South Pole Qui 87.01 180 P **P** **21 49 22.9 -0.8**
QSPA South Pole Qui 87.01 180 P **P** **21 49 23.4 -0.3**
QSPA x x 21 49 36.1
F25K Christian Rive 87.08 22 P **P** **21 49 24.0 +0.1**
F25K IAmb IAmb 21 49 29.2
comp=Z,31nm,1.1s
F25K Christian Rive 87.08 22 P **P** **21 49 24.7 +0.8**
baz=255
F25K S **S** **22 00 04.6 +5.2**
baz=255
MZR Muzera 87.18 293 *i* P **P** **21 49 25.5 +0.2**
SNR=8.2
MZR Muzera 87.18 293 P **P** **21 49 24.3 -1.0**
SNR=12
GRNC Granite Creek 87.20 29 P **P** **21 49 23.8 -1.1**
GRNC IAmb IAmb 21 49 47.5
comp=Z,48nm,1.4s
GRNC IAMs_20 IAMs_20 22 25 29.6
comp=Z,2µm,22.0s
E25K Arctic Village 87.24 21 P **P** **21 49 24.2 -0.5**
E25K IAmb IAmb 21 49 43.6
comp=Z,57nm,1.2s
E25K IAMs_20 IAMs_20 22 23 49.0
comp=Z,4µm,22.0s
E25K Arctic Village 87.24 21 P **P** **21 49 25.5 +0.9**
baz=255,SNR=11
E25K S **S** **22 00 04.7 +3.8**
baz=255
D25K Kavik River 87.27 20 P **P** **21 49 24.7 -0.1**
D25K Kavik River 87.27 20 P **P** **21 49 25.7 +0.9**
baz=254
BARN Barnard Glacie 87.31 29 P **P** **21 49 24.9 -0.5**
BARN IAmb IAmb 21 49 39.4
comp=Z,31nm,0.8s
BARN IAMs_20 IAMs_20 22 22 28.4
comp=Z,4µm,22.0s
ARTI Arti 87.33 327 P **P** **21 49 24.2 -1.1**
comp=Z,14nm,0.7s,baz=105,slow=2.2,SNR=29
ARTI LR LR 22 29 53.5
comp=Z,885nm,20.7s,baz=94,slow=37
comp=Z,14nm,0.7s
ARTI Arti 87.33 327 P **P** **21 49 23.5 -1.8**
ARTI Arti 87.33 327 *c*P **P** **21 49 24.2 -1.1**
ARTI S **SKSac** **21 59 50.9 +1.8**
ARTI pmax pmax
comp=Z,46nm,1.4s
ARTI MLR MLR
comp=Z,1µm,20.0s
ARTI Arti 87.33 327 P **P** **21 49 24.4 -0.9**
BMAR Burnt Mountain 87.43 22 P **P** **21 49 25.2 -0.4**
CTG Chitna Glacier 87.45 29 P **P** **21 49 26.4 +0.5**
baz=259,SNR=20
CTG S **S** **22 00 05.3 +1.9**
baz=259
CTGM Chitina Glacie 87.45 29 P **P** **21 49 25.1 -0.9**
CTGM IAmb IAmb 21 49 28.2
comp=Z,30nm,0.8s
CTGM IAMs_20 IAMs_20 22 25 15.1
comp=Z,2µm,22.0s
M27K Edge Creek, AK 87.46 27 P **P** **21 49 25.0 -1.0**
M27K IAmb IAmb 21 49 43.5
comp=Z,29nm,1.0s
M27K Edge Creek, AK 87.46 27 P **P** **21 49 26.5 +0.5**
baz=259,SNR=16
M27K S **S** **22 00 07.1 +3.7**
baz=259
I26K Coal Creek Min 87.51 24 P **P** **21 49 24.6 -1.4**
I26K Coal Creek Min 87.51 24 P **P** **21 49 26.8 +0.8**
baz=258
LOGN Logan Glacier 87.58 29 P **P** **21 49 25.6 -1.0**
LOGN IAmb IAmb 21 50 03.1
comp=Z,30nm,1.1s
LOGN IAMs_20 IAMs_20 22 25 30.6
comp=Z,3µm,21.0s
L27K Beaver Creek, 87.62 27 P **P** **21 49 25.9 -0.7**
L27K IAmb IAmb 21 49 44.1
comp=Z,26nm,1.1s
L27K IAMs_20 IAMs_20 22 26 52.4
comp=Z,3µm,20.0s
L27K Beaver Creek, 87.62 27 S **S** **22 00 07.2 +2.5**
baz=259
G26K Porcupine Rive 87.62 23 **P** **21 49 26.0 -0.4**
G26K IAMs_20 IAMs_20 22 27 23.2
comp=Z,2µm,20.0s
G26K Porcupine Rive 87.62 23 P **P** **21 49 27.2 +0.7**
baz=257,SNR=44
G26K S **S** **22 00 08.9 +4.4**
baz=257
BCAR Beaver Creek A 87.64 27 **P** **21 49 26.2 -0.5**
F26K Sheenjek River 87.66 22 **P** **21 49 26.7 0.0**
F26K Sheenjek River 87.66 22 P **P** **21 49 27.3 +0.7**
baz=257,SNR=43
F26K S **S** **22 00 09.1 +4.1**
baz=257
K27K Chicken 87.70 26 P **P** **21 49 25.6 -1.3**
K27K IAmb IAmb 21 49 41.5
comp=Z,40nm,1.1s
GHWR Ruwais 87.81 294 P **P** **21 49 28.4 +0.1**
PCA Pinnacle 87.82 30 P **P** **21 49 26.9 -0.7**
PCA IAmb IAmb 21 49 29.5
comp=Z,20nm,0.7s
PCA IAMs_20 IAMs_20 22 24 54.1
comp=Z,3µm,21.0s
PINM Pinnacle 87.82 30 P **P** **21 49 27.7 +0.1**
baz=260,SNR=7.6
PINM S **S** **22 00 10.9 +4.0**
baz=260
C26K Camden Bay 87.92 20 P **P** **21 49 28.9 +1.1**
baz=256
C26K S **S** **22 00 11.0 +3.7**
baz=256
BVCY Beaver Creek 87.93 27 P **P** **21 49 28.8 +0.7**
baz=260,SNR=9.3
O28M Mount Upton 87.97 29 P **P** **21 49 28.1 -0.5**
O28M IAmb IAmb 21 49 49.4
comp=Z,36nm,1.2s
O28M IAMs_20 IAMs_20 22 25 32.8
comp=Z,3µm,21.0s
O28M Mount Upton 87.97 29 P **P** **21 49 28.8 +0.2**
baz=260,SNR=12
O28M S **S** **22 00 12.2 +3.6**
baz=260
YUK3 Moose Creek 88.01 28 P **P** **21 49 28.9 +0.3**
baz=260,SNR=20
YUK3 S **S** **22 00 11.1 +2.2**
baz=260
BCPM Bancas Point 88.11 30 P **P** **21 49 28.5 -0.4**
BCPM IAmb IAmb 21 49 48.7
comp=Z,50nm,1.5s
BCPM IAMs_20 IAMs_20 22 24 29.5
comp=Z,3µm,21.0s
I27K Kandik River 88.20 24 **P** **21 49 28.9 -0.4**
I27K Kandik River 88.20 24 P **P** **21 49 29.8 +0.5**
baz=259
I27K S **S** **22 00 13.3 +3.1**
baz=259
YUK8 Steele Glacier 88.25 29 P **P** **21 49 30.2 +0.2**
baz=261,SNR=9.3
YUK8 S **S** **22 00 13.2 +1.9**
baz=261
C27K Jago River 88.26 20 P **P** **21 49 29.7 +0.3**
C27K IAmb IAmb 21 49 44.0
comp=Z,71nm,1.9s
C27K Jago River 88.26 20 P **P** **21 49 30.1 +0.7**
baz=257
C27K S **S** **22 00 12.2 +1.7**
baz=257
H27K Steamboat Moun 88.36 23 P **P** **21 49 30.2 +0.1**
H27K IAMs_20 IAMs_20 22 24 18.6
comp=Z,3µm,22.0s
H27K Steamboat Moun 88.36 23 P **P** **21 49 30.6 +0.5**
baz=259,SNR=42
H27K S **S** **22 00 16.7 +5.1**
baz=259
G27K Doyon Strip 88.42 23 P **P** **21 49 30.3 0.0**
G27K IAmb IAmb 21 50 01.4
comp=Z,27nm,1.1s
G27K IAMs_20 IAMs_20 22 25 51.2
comp=Z,3µm,20.0s
G27K Doyon Strip 88.42 23 P **P** **21 49 30.8 +0.5**
baz=259
G27K S **S** **22 00 17.4 +5.2**
baz=259
O29M Mount Kennedy 88.68 30 **P** **21 49 31.5 -0.3**
O29M IAmb IAmb 21 49 36.4
comp=Z,22nm,1.1s
O29M Mount Kennedy 88.68 30 P **P** **21 49 31.9 +0.2**
baz=262
O29M S **S** **22 00 18.6 +3.5**
baz=262
E27K Coleen River 88.70 22 P **P** **21 49 31.1 -0.5**
E27K IAmb IAmb 21 49 46.5
comp=Z,37nm,1.4s
E27K IAMs_20 IAMs_20 22 24 08.7
comp=Z,3µm,22.0s
E27K Coleen River 88.70 22 P **P** **21 49 32.0 +0.4**
baz=259
E27K S **S** **22 00 18.0 +3.2**
baz=259
YUK4 Talbot Arm 88.80 29 P **P** **21 49 33.1 +0.7**
baz=262,SNR=23
I28M Miner Creek 88.86 24 P **P** **21 49 31.4 -1.1**
I28M IAmb IAmb 21 49 49.0
comp=Z,28nm,0.9s
I28M IAMs_20 IAMs_20 22 24 59.1
comp=Z,2µm,22.0s
I28M Miner Creek 88.86 24 P **P** **21 49 32.9 +0.4**
baz=261
I28M S **S** **22 00 19.1 +2.5**
baz=261
YUK6 Outpost Mounta 88.88 29 P **P** **21 49 33.2 +0.4**
baz=262
YUK6 S **S** **22 00 19.9 +2.7**
baz=262
M29M Somme Creek 89.04 27 P **P** **21 49 32.8 -0.7**
M29M IAmb IAmb 21 49 47.6
comp=Z,22nm,0.9s
M29M Somme Creek 89.04 27 P **P** **21 49 33.8 +0.4**
baz=262,SNR=21
M29M S **S** **22 00 22.3 +3.9**
baz=262
D27M Malcolm River 89.13 21 P **P** **21 49 33.0 -0.6**
D27M Malcolm River 89.13 21 P **P** **21 49 34.2 +0.6**
baz=260
D27M S **S** **22 00 22.0 +3.1**
baz=260
F28M Old Crow 89.24 22 **P** **21 49 34.1 -0.1**
F28M IAMs_20 IAMs_20 22 25 27.0
comp=Z,2µm,20.0s
F28M Old Crow 89.24 22 P **P** **21 49 34.8 +0.6**
baz=261,SNR=7.7
F28M S **S** **22 00 24.2 +4.3**
baz=261
HYT Haines Junctio 89.28 29 **P** **21 49 34.0 -0.6**
HYT IAmb IAmb 21 49 39.1
comp=Z,28nm,0.9s
HYT Haines Junctio 89.28 29 P **P** **21 49 35.2 +0.6**
baz=263,SNR=20
HYT S **S** **22 00 24.1 +3.4**
baz=263
L29M L29M 89.28 27 P **P** **21 49 33.4 -1.1**
L29M IAmb IAmb 21 49 48.9
comp=Z,29nm,1.1s
L29M L29M 89.28 27 P **P** **21 49 35.3 +0.8**
baz=262,SNR=14
L29M S **S** **22 00 25.1 +4.5**
baz=262
J29N Klondike Camp 89.43 25 P **P** **21 49 34.7 -0.4**
J29N IAmb IAmb 21 49 59.9
comp=Z,49nm,1.5s
J29N IAMs_20 IAMs_20 22 24 43.3
comp=Z,3µm,21.0s
J29N Klondike Camp 89.43 25 P **P** **21 49 35.4 +0.2**
baz=262
J29N S **S** **22 00 25.5 +3.6**
baz=262
P30M Million Dollar 89.46 30 P **P** **21 49 35.7 +0.3**
baz=263
P30M S **S** **22 00 25.6 +3.3**
baz=263
I29M Ogilvie Camp, 89.52 25 P **P** **21 49 34.9 -0.6**
I29M IAmb IAmb 21 49 49.4
comp=Z,39nm,1.2s
I29M Ogilvie Camp, 89.52 25 P **P** **21 49 35.8 +0.3**
baz=262,SNR=15
I29M S **S** **22 00 25.2 +2.6**
baz=262
E28M Babbage River 89.53 21 P **P** **21 49 35.8 +0.4**
E28M IAMs_20 IAMs_20 22 25 08.5
comp=Z,3µm,22.0s
E28M Babbage River 89.53 21 P **P** **21 49 36.0 +0.6**
baz=261
E28M S **S** **22 00 24.9 +2.4**
baz=261
N30M Aishikik Lake 89.56 29 P **P** **21 49 35.2 -0.6**
N30M IAmb IAmb 21 49 38.0
comp=Z,18nm,0.8s
N30M IAMs_20 IAMs_20 22 26 55.8
comp=Z,2µm,20.0s
N30M Aishikik Lake 89.56 29 P **P** **21 49 36.0 +0.2**
baz=263
N30M S **S** **22 00 26.7 +3.6**
baz=263
S31K Pelican 89.59 32 P **P** **21 49 36.4 +0.5**
baz=264
H29M Whitestone 89.61 24 P **P** **21 49 34.9 -1.0**
H29M IAmb IAmb 21 49 49.8
comp=Z,39nm,1.4s
H29M IAMs_20 IAMs_20 22 28 26.0
comp=Z,2µm,20.0s
H29M Whitestone 89.61 24 P **P** **21 49 36.4 +0.5**
baz=262
H29M S **S** **22 00 26.0 +2.6**
baz=262
K29M Barlow Dome 89.65 26 P **P** **21 49 36.8 +0.5**
baz=263
K29M S **S** **22 00 27.5 +3.4**
baz=263
M30M Minto, Yukon 89.83 27 **P** **21 49 36.9 -0.1**
M30M Minto, Yukon 89.83 27 P **P** **21 49 37.4 +0.4**
baz=263,SNR=10.0
M30M S **S** **22 00 30.0 +4.4**
baz=263
G29M Pine Creek 89.85 23 IAMs_20 IAMs_20 22 25 35.9
comp=Z,3µm,22.0s
G29M Pine Creek 89.85 23 P **P** **21 49 37.3 +0.4**
baz=262

G29M S **S** **22 00 29.7 +4.2**
baz=262
D28M Stokes Point 89.93 21 P **P** **21 49 37.8 +0.6**
baz=262
O30N Mendenhall 89.96 29 P **P** **21 49 36.6 -1.0**
O30N IAMs_20 IAMs_20 22 26 24.5
comp=Z,3µm,21.0s
O30N Mendenhall 89.96 29 P **P** **21 49 37.6 0.0**
baz=264,SNR=9.0
O30N S **S** **22 00 29.6 +2.7**
baz=264
SIT Sitka 89.98 33 P **P** **21 49 38.1 +0.3**
baz=265
E29M Blow River 90.09 22 P **P** **21 49 37.9 -0.2**
E29M IAMs_20 IAMs_20 22 25 37.5
comp=Z,3µm,21.0s
E29M Blow River 90.09 22 P **P** **21 49 38.8 +0.8**
baz=262
E29M S **S** **22 00 29.5 +1.8**
baz=262
N31M Braeburn, Yuko 90.18 29 **P** **21 49 39.0 +0.3**
N31M IAmb IAmb 21 49 40.9
comp=Z,22nm,0.8s
N31M Braeburn, Yuko 90.18 29 P **P** **21 49 39.3 +0.6**
baz=264,SNR=12
SKAG Skagway 90.21 31 P **P** **21 49 39.3 +0.5**
baz=265
SKAG S **S** **22 00 30.8 +1.7**
baz=265
J30M Hart River 90.26 25 P **P** **21 49 38.8 -0.3**
J30M IAmb IAmb 21 49 59.1
comp=Z,28nm,1.1s
J30M IAMs_20 IAMs_20 22 24 45.1
comp=Z,3µm,22.0s
J30M Hart River 90.26 25 P **P** **21 49 39.5 +0.4**
baz=264,SNR=9.8
J30M S **S** **22 00 32.3 +2.7**
baz=264
EPYK Eagle Plains 90.30 24 P **P** **21 49 38.1 -1.0**
EPYK Eagle Plains 90.30 24 P **P** **21 49 39.4 +0.3**
baz=264
EPYK S **S** **22 00 29.5 -0.3**
baz=264
I30M Mount Dempster 90.31 25 P **P** **21 49 37.9 -1.4**
I30M IAmb IAmb 21 50 13.8
comp=Z,23nm,1.2s
I30M IAMs_20 IAMs_20 22 26 00.4
comp=Z,2µm,22.0s
I30M Mount Dempster 90.31 25 P **P** **21 49 39.5 +0.2**
baz=264
I30M S **S** **22 00 33.2 +3.1**
baz=264
BESE Bessie Mountai 90.37 32 P **P** **21 49 38.7 -0.9**
BESE IAmb IAmb 21 50 14.4
comp=Z,35nm,1.6s
BESE IAMs_20 IAMs_20 22 26 54.7
comp=Z,2µm,20.0s
S32K Killisnoo 90.43 33 IAMs_20 IAMs_20 22 21 20.2
comp=Z,2µm,22.0s
S32K Killisnoo 90.43 33 P **P** **21 49 40.1 +0.3**
baz=265
R32K Eaglecrest 90.52 32 IAMs_20 IAMs_20 22 26 29.7
comp=Z,2µm,21.0s
R32K Eaglecrest 90.52 32 P **P** **21 49 40.6 +0.3**
baz=265
WHY Whitehorse 90.54 29 IAmb IAmb 21 50 10.2
comp=Z,25nm,0.9s
WHY Whitehorse 90.54 29 P **P** **21 49 40.9 +0.4**
baz=265,SNR=13
WHY S **S** **22 00 33.8 +1.5**
baz=265
G30M tAoh Zraii Nji 90.56 23 P **P** **21 49 38.8 -1.6**
G30M IAmb IAmb 21 50 02.3
comp=Z,27nm,1.4s
G30M IAMs_20 IAMs_20 22 26 05.9
comp=Z,3µm,21.0s
G30M tAoh Zraii Nji 90.56 23 P **P** **21 49 41.2 +0.8**
baz=264
G30M S **S** **22 00 33.4 +1.2**
baz=264
FOMA Nahampoana Res 90.77 245 P **P** **21 49 40.7 -1.4**
FOMA IAmb IAmb 21 52 09.3
comp=Z,32nm,1.0s
F30M Barrier River 90.79 22 P **P** **21 49 41.3 -0.1**
F30M IAMs_20 IAMs_20 22 24 37.0
comp=Z,2µm,22.0s
F30M Barrier River 90.79 22 P **P** **21 49 41.8 +0.5**
baz=264
F30M S **S** **22 00 35.8 +1.6**
baz=264
M31M Drury Creek, Y 90.90 28 P **P** **21 49 41.6 -0.4**
M31M IAmb IAmb 21 50 02.3
comp=Z,23nm,1.4s
M31M IAMs_20 IAMs_20 22 24 47.4
comp=Z,3µm,22.0s
M31M Drury Creek, Y 90.90 28 P **P** **21 49 42.5 +0.5**
baz=266
M31M S **S** **22 00 36.7 +1.2**
baz=266
ABPO Ambohimpanom 90.90 251 P **P** **21 49 40.5 -2.6**
ABPO IAmb IAmb 21 49 45.2
comp=Z,23nm,1.2s
ABPO Ambohimpanom 90.90 251 P **P** **21 49 40.5 -2.6**
ABPO pmax pmax
comp=Z,23nm,1.3s
ABPO MLR MLR
comp=Z,900nm,19.0s
OPO Ambohidratompo 90.97 251 LR LR 22 30 44.4
comp=Z,136nm,18.1s,baz=242,slow=36
P32M Atlin 91.04 31 **P** **21 49 41.5 -1.2**
P32M IAMs_20 IAMs_20 22 25 12.2
comp=Z,2µm,22.0s
P32M Atlin 91.04 31 P **P** **21 49 43.1 +0.4**
baz=266
CRAG Craig 91.08 35 P **P** **21 49 42.3 -0.6**
CRAG Craig 91.08 35 P **P** **21 49 43.3 +0.4**
baz=266
U33K Whale Pass 91.13 34 IAMs_20 IAMs_20 22 22 51.9
comp=Z,3µm,22.0s
U33K Whale Pass 91.13 34 P **P** **21 49 43.3 +0.2**
baz=266
H31M Peel River 91.21 24 P **P** **21 49 42.8 -0.5**
H31M IAmb IAmb 21 50 21.5
comp=Z,48nm,1.9s
H31M Peel River 91.21 24 P **P** **21 49 43.9 +0.5**
baz=266
H31M S **S** **22 00 38.7 +0.6**
baz=266
G31M Satah River 91.32 23 **P** **21 49 42.8 -0.9**
G31M IAmb IAmb 21 50 04.5
comp=Z,18nm,1.1s
G31M Satah River 91.32 23 P **P** **21 49 44.6 +0.8**
baz=266
P33M Teslin, Yukon 91.53 30 P **P** **21 49 43.9 -1.1**
P33M Teslin, Yukon 91.53 30 P **P** **21 49 45.3 +0.3**
baz=267
F31M Tsiigehtchic 91.56 23 P **P** **21 49 44.8 -0.1**
F31M IAMs_20 IAMs_20 22 26 58.4
comp=Z,3µm,21.0s
F31M Tsiigehtchic 91.56 23 P **P** **21 49 45.3 +0.4**
baz=266
WRAK Wrangell Islan 91.58 34 P **P** **21 49 45.3 +0.2**
WRAK IAmb IAmb 21 50 02.8
comp=Z,14nm,0.8s
WRAK Wrangell Islan 91.58 34 IAMs_20 IAMs_20 22 21 38.7
comp=Z,3µm,22.0s
WRAK Wrangell Islan 91.58 34 P **P** **21 49 45.5 +0.4**
baz=267
INK Inuvik 91.70 22 LR LR 22 30 14.1
comp=Z,1µm,19.6s,baz=234,slow=35
INK Inuvik 91.70 22 P **P** **21 49 44.6 -0.9**
INK IAmb IAmb 21 50 37.1
comp=Z,28nm,1.8s
INK Inuvik 91.70 22 P **P** **21 49 44.6 -0.9**
INK pmax pmax
comp=Z,28nm,1.8s
INK Inuvik 91.70 22 P **P** **21 49 46.2 +0.7**
baz=266
Q32M Nakina River 91.74 31 P **P** **21 49 46.7 +0.5**
baz=267
V35K Ketchikan 91.94 35 IAMs_20 IAMs_20 22 24 26.4
comp=Z,3µm,21.0s
V35K Ketchikan 91.94 35 P **P** **21 49 47.5 +0.7**
baz=268
S34M Telegraph Cree 92.30 32 IAMs_20 IAMs_20 22 27 31.7
comp=Z,2µm,20.0s
S34M Telegraph Cree 92.30 32 P **P** **21 49 49.1 +0.6**
baz=268
KIRV Kirov 92.36 328 P **P** **21 49 47.0 -1.8**
comp=Z,5.6nm,0.7s,baz=91,slow=8.2,SNR=5.1
KIRV LR LR 22 32 40.8
comp=Z,2µm,20.6s,baz=86,slow=36
comp=Z,5.6nm,0.7s
KIRV Kirov 92.36 328*c* eP **P** **21 49 48.3 -0.4**
MMPY Sheldon Lake, 92.38 28 P **P** **21 49 48.2 -0.7**
MMPY IAmb IAmb 21 50 29.8
comp=Z,32nm,1.7s
MMPY Sheldon Lake, 92.38 28 P **P** **21 49 49.2 +0.3**
baz=268
R33M Jennings River 92.43 31 IAMs_20 IAMs_20 22 25 40.0
comp=Z,2µm,22.0s
R33M Jennings River 92.43 31 P **P** **21 49 49.5 +0.2**
baz=268
T35M Bob Quinn 92.75 33 IAMs_20 IAMs_20 22 28 09.8
comp=Z,3µm,20.0s
T35M Bob Quinn 92.75 33 P **P** **21 49 50.9 +0.2**
baz=269
U35K Hyder 92.86 34 IAMs_20 IAMs_20 22 27 39.6
comp=Z,3µm,20.0s
DLBC Dease Lake 92.90 32 P **P** **21 49 50.4 -1.0**
comp=Z,2.4nm,0.9s,baz=293,slow=4.6,SNR=4.5
DLBC LR LR 22 28 04.6
comp=Z,2µm,19.9s,baz=272,slow=33
comp=Z,2.4nm,0.9s
DLBC Dease Lake 92.90 32 P **P** **21 49 51.7 +0.3**
baz=269
AKT Akhty 93.02 311 eP **P** **21 49 51.1 -1.3**
AKT *e*
AKT pmax pmax
comp=Z,15nm,1.1s
AKT MLR MLR
comp=Z,1µm,24.0s
MAK Makhachkala 93.21 313*c* iP **P** **21 49 53.0 0.0**
MAK *e* 22 00 24.1
MAK pmax pmax
comp=Z,323nm,1.6s
BELG Belogornoye 93.26 322 P **P** **21 49 51.5 -1.5**
comp=Z,61nm,1.1s,baz=124,slow=7.3,SNR=15
BELG LR LR 22 33 43.1
comp=Z,676nm,21.4s,baz=94,slow=37
comp=Z,61nm,1.1s
BELG Belogornoye 93.26 322 eP **P** **21 49 51.6 -1.5**
BELG pmax pmax
comp=Z,11nm,1.1s
WTLY Watson Lake, Y 93.54 30 P **P** **21 49 53.2 -1.1**
WTLY IAmb IAmb 21 50 11.3
comp=Z,22nm,1.3s
WTLY Watson Lake, Y 93.54 30 P **P** **21 49 54.8 +0.6**
baz=270
TGTN Hyland Airport 93.78 29 P **P** **21 49 55.8 +0.5**
baz=271
BBB Bella Bella 93.96 38 LR LR 22 23 37.1
comp=Z,3µm,22.0s,baz=256,slow=30
A36M Sachs Harbour 94.50 18 **P** **21 49 57.3 -1.0**
A36M IAmb IAmb 21 50 12.0
comp=Z,17nm,0.9s
A36M IAMs_20 IAMs_20 22 30 12.7
comp=Z,2µm,21.0s
A36M Sachs Harbour 94.50 18 P **P** **21 49 58.9 +0.5**
baz=274
RAYN Ar Rayn 94.53 293 **P** **21 49 57.0 -2.7**
RAYN IAmb IAmb 21 50 00.1
comp=Z,13nm,0.8s
RAYN Ar Rayn 94.53 293 *i* P **P** **21 49 59.3 -0.3**
SNR=21
RAYN Ar Rayn 94.53 293 P **P** **21 49 57.0 -2.7**
RAYN pmax pmax
comp=Z,13nm,0.8s
RAYN MLR MLR
comp=Z,500nm,21.0s
ELIB Princess Elisa 95.01 196 *d* P **P** **21 50 00.5 -0.4**
comp=Z,24nm,1.1s
C36M Paulatuk 95.12 21 P **P** **21 50 01.2 0.0**
C36M IAMs_20 IAMs_20 22 29 07.2
comp=Z,2µm,21.0s
C36M Paulatuk 95.12 21 P **P** **21 50 01.7 +0.6**
baz=275
GNI Garni 95.28 310 LR LR 22 36 32.6
comp=Z,172nm,21.5s,baz=80,slow=38
KOTAN Kotaneelee Air 95.91 30 P **P** **21 50 05.8 +0.7**
baz=274
WRGLY Wrigley 95.93 27 P **P** **21 50 06.0 +1.0**
baz=275
KARS Kars 96.54 310 P **P** **21 50 07.7 -0.8**
KARS IAmb IAmb 21 50 09.2
comp=Z,17nm,0.9s
KARS Kars 96.54 310 P **P** **21 50 07.7 -0.8**
KARS pmax pmax
comp=Z,17nm,0.9s
KBZ Khabaz 96.56 314 P **P** **21 50 06.8 -1.6**
comp=Z,2.5nm,0.9s,baz=69,slow=4.0,SNR=7.0
comp=Z,2.5nm,0.9s
KBZ Khabaz 96.56 314*ce* eP **P** **21 50 07.8 -0.6**
KBZ pmax pmax
comp=Z,4.0nm,1.0s
GEVA Gevas 96.62 308 P **P** **21 50 06.9 -2.1**
GEVA IAmb IAmb 21 50 09.7
comp=Z,25nm,1.2s
KIV Kislovodsk 96.71 314 P **P** **21 50 07.7 -1.5**
KIV IAmb IAmb 21 50 41.1
comp=Z,14nm,1.2s
KIV Kislovodsk 96.71 314 eP **P** **21 50 07.5 -1.7**
KIV *e* 21 54 00.8
KIV *e*SS SS 22 08 01.7 -1.2
KIV pmax pmax
comp=Z,5.0nm,1.1s
SHA1 Shidzhatmaz 96.74 314 *i* P **P** **21 50 08.5 -1.0**
ATD Arta Tunnel 96.78 281 LR LR 22 35 54.5
comp=Z,12nm,19.2s,baz=86,slow=37
KBO Bosley Butte 96.85 48 IAMs_20 IAMs_20 22 24 01.6
comp=Z,2µm,22.0s
NLWA Neilton Lookou 96.86 43 IAMs_20 IAMs_20 22 26 29.4
comp=Z,2µm,20.0s
VRH Novokhopyorsk 96.96 321 eP **P** **21 50 06.6 -3.4**
VRH pmax pmax
comp=Z,45nm,0.8s
JCC Jacoby Creek, 97.05 49 IAMs_20 IAMs_20 22 28 16.6
comp=Z,2µm,20.0s
KLMR Klimovskoe 97.27 331 eP **P** **21 50 08.1 -3.0**
KLMR *e* 21 54 04.5
KLMR pmax pmax
comp=Z,22nm,1.2s
KHMM Horse Mountain 97.27 49 Pdif 21 50 12.2 +0.2
KHMM IAMs_20 IAMs_20 22 28 15.0
comp=Z,3µm,20.0s
KMRM Mail Ridge 97.32 50 IAMs_20 IAMs_20 22 27 22.8
comp=Z,3µm,20.0s
COR Corvallis 97.41 46 IAMs_20 IAMs_20 22 26 53.7
comp=Z,2µm,22.0s
GURO Guroymak-BITLI 97.42 308 P **P** **21 50 11.4 -1.1**
GURO IAmb IAmb 21 50 13.4
comp=Z,24nm,1.3s
HOPS Hopland Field 97.86 51 IAMs_20 IAMs_20 22 28 25.7
comp=Z,2µm,20.0s
FARB Farallon Islan 97.97 53 IAMs_20 IAMs_20 22 32 26.9
comp=Z,2µm,19.0s
YBH Yreka Blue Hor 98.00 48 P **P** **21 50 14.6 -0.4**
comp=Z,0.1nm,0.4s,baz=311,slow=1.0,SNR=4.6
YBH LR LR 22 26 48.0
comp=Z,320nm,21.1s,baz=310,slow=31
O02D Mt. Diablo Mer 98.02 50 P **P** **21 50 14.8 -0.4**
O02D IAmb IAmb 21 50 18.9
comp=Z,10nm,0.9s
MCCM Marconi Confer 98.05 52 IAMs_20 IAMs_20 22 25 05.8
comp=Z,2µm,22.0s
LABN Labinsk 98.08 315 eP **P** **21 50 14.1 -1.1**
LABN pmax pmax
comp=Z,6.0nm,0.5s
ERBR Yeremizino-Bor 98.17 316 eP **P** **21 50 13.9 -1.7**
ERBR *e*S **SKSac** **22 00 51.6 +1.7**
ERBR pmax pmax
comp=Z,25nm,1.0s
M03C McCloud 98.47 49 P **P** **21 50 15.4 -1.8**
M03C IAmb IAmb 21 51 07.0
comp=Z,21nm,1.2s
VORR Voronezh 98.48 322 eP **P** **21 50 15.0 -1.8**
VORR pmax pmax
comp=Z,23nm,0.4s
VORD Divnogorie 98.50 321 eP **P** **21 50 13.2 -3.7**
VORD pmax pmax
comp=Z,20nm,0.8s
KOPT Kop Dagi 98.54 310 **P** **21 50 16.3 -1.4**
KOPT IAmb IAmb 21 50 19.4
comp=Z,28nm,1.2s
LPSR Galich'ya Gora 98.56 323 eP **P** **21 50 12.6 -4.5**
LPSR pmax pmax
comp=Z,10.0nm,0.9s
VSR Storozhevoye 98.56 321 eP **P** **21 50 12.6 -4.6**
VSR pmax pmax
comp=Z,10.0nm,1.0s
JRSC Jasper Ridge 98.59 53 IAMs_20 IAMs_20 22 31 22.8
comp=Z,2µm,20.0s
APA Apatity 98.70 338⇓ eP **P** **21 50 14.6 -2.8**
APA *e* 21 54 13.8
APA pmax pmax
comp=Z,13nm,1.1s
APA MLR MLR
comp=Z,2µm,25.9s
O03E Paynes Creek 98.77 50 P **P** **21 50 18.3 -0.2**
O03E IAmb IAmb 21 50 41.6
comp=Z,12nm,1.1s
NVL N'lazarevskaya 98.79 195 eP P 21 50 11.0 -6.8
NVL e**PS** **PS** **22 03 09.3 -5.7**
NVL e**SS** SS 22 08 26.2 -3.9
NVL e**SSS** SSS 22 12 14.6
NVL pmax pmax
comp=Z,144nm,2.5s
NVL MLR MLR
comp=Z,4µm,18.0s
SOC Sochi 98.88 313 eP **P** **21 50 16.9 -1.9**
SOC e**PPP** PPP 21 56 26.7
SOC e**S** **SKSac** **22 00 53.7 +0.2**
SOC e**SS** **SS** **22 08 33.8 +0.6**
SOC pmax pmax
comp=Z,8.0nm,1.0s
SOC MLR MLR
comp=Z,904nm,24.0s
MOS Moscow 98.92 326 eP **P** **21 50 17.0 -1.7**
MOS *e* 21 54 19.2
MOS pmax pmax
comp=Z,30nm,1.2s
MOS MLR MLR
comp=E,1µm,21.0s
MOS MLR MLR
comp=Z,1µm,21.0s
FORD Fort Ord Natur 99.00 53 IAMs_20 IAMs_20 22 30 49.0
comp=Z,2µm,20.0s
HATC Hat Creek Radi 99.00 49 IAMs_20 IAMs_20 22 30 08.6
comp=Z,2µm,20.0s
ORV Oroville 99.05 51 **Pdif** **21 50 19.1 -0.6**
ORV Oroville 99.05 51 P **Pdif** **21 50 19.1 -0.6**
ORV pmax pmax
comp=Z,7.0nm,1.2s
ORV MLR MLR
comp=Z,1µm,22.0s
MHC Mount Hamilton 99.07 53 IAMs_20 IAMs_20 22 31 47.9
comp=Z,2µm,19.0s
BELA Belgrano 2 99.22 181 P **Pdif** **21 50 18.1 -1.6**
BELA IAmb IAmb 21 50 22.1
comp=Z,23nm,1.0s
SAO San Andreas Ge 99.26 53 IAMs_20 IAMs_20 22 31 54.0
comp=Z,2µm,18.0s
SPITS Spitsbergen Ar 99.29 350 P **Pdif** **21 50 19.0 -0.9**
comp=Z,1.8nm,0.7s,baz=81,slow=8.9,SNR=4.6
SPITS LR LR 22 34 16.0
comp=Z,2µm,21.9s,baz=42,slow=35
comp=Z,1.8nm,0.7s
OBN Obninsk 99.61 325 LR LR 22 37 11.5
comp=Z,1µm,21.6s,baz=53,slow=36
OBN Obninsk 99.61 325⇑ eP **Pdif** **21 50 19.6 -2.2**
OBN *e* 21 54 26.4
OBN pmax pmax
comp=Z,13nm,1.1s
OBN MLR MLR
comp=Z,2µm,22.0s
BEKR Beckworth 99.90 50 **Pdif** **21 50 23.8 +0.1**
YKAW3 Yellowknife Wh 100.03 27 Pdif **Pdif** **21 50 23.4 -0.1**
YKA Yellowknife Ar 100.05 27 P **Pdif** **21 50 23.1 -0.5**
comp=Z,0.8nm,0.8s,baz=293,slow=5.6,SNR=7.5
YKA PP **PP** **21 54 29.0 -0.1**
comp=Z,0.9nm,1.0s,baz=284,slow=8.6,SNR=4.5
YKA PKKPbc **PKKPbc** **22 06 41.8 -2.9**
comp=Z,0.7nm,0.8s,baz=88,slow=2.1,SNR=9.6
YKA Yellowknife Ar 100.05 27 **Pdif** **21 50 23.0 -0.5**
TROLL Troll, Antarti 100.21 193 Pdiff **Pdif** **21 50 24.9 +0.5**
ARPR Arapgir-MALATY 100.27 309 **Pdif** **21 50 23.8 -1.6**
KEV Kevo 100.31 341 IAMs_20 IAMs_20 22 37 44.7
comp=Z,2µm,21.0s
ARCES ARCESS Array B 100.88 341 P **Pdif** **21 50 26.5 -0.7**
comp=Z,13nm,0.7s,baz=79,slow=5.8,SNR=14
WVOR Wild Horse Val 100.96 47 IAMs_20 IAMs_20 22 31 26.5
comp=Z,2µm,20.0s
KIBK Kibwezi 100.99 267 PP **PP** **21 54 35.1 -2.8**
NEW Newport 101.29 41 IAMs_20 IAMs_20 22 28 48.6
comp=Z,2µm,21.0s
SNAA Sanae 101.58 191 Pdiff **Pdif** **21 50 34.3 +4.0**
comp=Z,198nm,1.0s
SNAA Sanae 101.58 191 P **Pdif** **21 50 30.5 +0.2**
comp=Z,1.9nm,0.3s,baz=162,slow=6.4,SNR=4.6
NVAR Mina Array Bea 101.62 52 P **Pdif** **21 50 32.0 +0.6**
comp=Z,0.9nm,0.7s,baz=286,slow=4.4,SNR=4.1
BMO Blue Mountains 101.64 45 IAMs_20 IAMs_20 22 28 10.6
comp=Z,2µm,22.0s
TIN Tinemaha, Big 101.81 53 IAMs_20 IAMs_20 22 33 40.9
comp=Z,2µm,19.0s
RES Resolute Bay 101.81 13 **Pdif** **21 50 31.1 0.0**
RES Resolute Bay 101.81 13 P **Pdif** **21 50 31.2 0.0**
CWC Cottonwood Cre 101.98 54 IAMs_20 IAMs_20 22 34 23.7
comp=Z,3µm,18.0s
PLID Pearl Lake 102.52 45 IAMs_20 IAMs_20 22 32 32.0
comp=Z,2µm,20.0s
MFID Camas Ranch 102.89 46 IAMs_20 IAMs_20 22 31 01.9
comp=Z,1µm,20.0s
FURC Furnace Creek, 102.96 53 IAMs_20 IAMs_20 22 33 25.9
comp=Z,2µm,19.0s
VNA2 Neumayer--Watz 103.06 191⇑ Pdiff **Pdif** **21 50 42.0 +5.1**
comp=Z,6.3nm,0.8s,baz=330,slow=12
VNA3 Neumayer Olymp 103.20 190⇑ Pdiff **Pdif** **21 50 38.0 +0.5**
comp=Z,5.6nm,0.7s
TPNV Topopah Spring 103.40 53 IAMs_20 IAMs_20 22 36 34.0
comp=Z,2µm,18.0s
VNA1 Neumayer--Stat 103.45 191⇑ Pdiff **Pdif** **21 50 39.0 +0.5**
comp=Z,10nm,0.9s
FINES FINESS Array B 103.47 333 Pdiff **Pdif** **21 50 37.4 -1.4**
comp=Z,2.6nm,0.8s,baz=66,slow=6.5,SNR=7.4
FINES PKiKP **PKiKP** **21 54 56.1 -1.2**
comp=Z,2.4nm,0.9s,baz=64,slow=3.2,SNR=4.8
SHOC Shoshone, Teco 103.49 54 IAMs_20 IAMs_20 22 35 02.6
comp=Z,2µm,19.0s
PFO Pinyon Flats O 103.57 56 IAMs_20 IAMs_20 22 29 36.6
comp=Z,3µm,20.0s
MSO Missoula 103.65 43 IAMs_20 IAMs_20 22 29 51.1
comp=Z,2µm,21.0s
ELK Elko 103.70 49 IAMs_20 IAMs_20 22 32 59.6
comp=Z,2µm,20.0s
BR131 Keskin Array S 103.82 310 **Pdif** **21 50 38.7 -2.4**
BR131 Keskin Array S 103.82 310 P **Pdif** **21 50 38.7 -2.4**
BRTR Keskin Array B 103.82 310 Pdiff **Pdif** **21 50 39.6 -1.5**
comp=Z,2.7nm,0.8s,baz=98,slow=4.2,SNR=13
BRTR Keskin Array B 103.82 310 Pdif **Pdif** **21 50 38.4 -2.7**
BRTR Keskin Array B 103.82 310 P **Pdif** **21 50 38.4 -2.7**
BR104 Keskin Array S 103.82 310 P **Pdif** **21 50 39.2 -1.9**
comp=Z,4.5nm,1.0s
BR106 Keskin Array S 103.83 310 P **Pdif** **21 50 39.2 -1.9**
comp=Z,3.8nm,0.8s
BR105 Keskin Array S 103.83 310 P **Pdif** **21 50 39.2 -2.0**
HLID Hailey 103.88 46 **Pdif** **21 50 43.2 +1.8**
HLID IAMs_20 IAMs_20 22 32 44.6
comp=Z,2µm,20.0s
BC3 Big Chuckawall 104.40 56 IAMs_20 IAMs_20 22 30 05.0
comp=Z,2µm,20.0s
MNK Minsk 104.65 326 *i* P **Pdif** **21 50 43.6 -0.6**
comp=E,3.0nm,0.6s
MNK *i* P **Pdif** **21 50 43.6 -0.6**
comp=N,8.0nm,0.8s
MNK *i* P **Pdif** **21 50 43.6 -0.6**
comp=Z,4.0nm,0.7s,baz=74
MNK *i* PP **PP** **21 55 02.8 -1.0**
MNK *i* PPP PPP 21 57 15.0
MNK *i* SKS 22 02 11.4
MNK *i* S **Sdif** **22 02 35.9 +2.4**
MNK *i* SS **SS** **22 09 55.9 +3.5**
MNK *i* SSS SSS 22 13 52.9
MNK *i* LQ LQ 22 30 39.2
MNK *i* LRM MLR 22 39 37.4
comp=N,839nm,22.5s
MNK *i* LRM MLR 22 40 01.5
comp=Z,981nm,18.8s
MNK Minsk 104.65 326 *i* P **Pdif** **21 50 43.6 -0.6**
MNK *i* 21 55 02.8

MNK				*i* PPP	PPP	21 57 15.0				
MNK				*i*		22 02 11.4				
MNK				*i* S	**Sdif**	**22 02 35.9**	**+2.4**			
MNK				*i* SS	**SS**	**22 09 55.9**	**+3.5**			
MNK				*i* SSS	SSS	22 13 52.9				
MNK				pmax	pmax					
	comp=E,3.0nm,0.6s									
MNK				pmax	pmax					
	comp=Z,4.0nm,0.7s									
MNK				pmax	pmax					
	comp=N,8.0nm,0.8s									
MNK				MLR	MLR					
	comp=N,839nm,22.0s									
MNK				MLR	MLR					
	comp=Z,981nm,19.0s									
MNK				MLR	MLR					
	comp=E,772nm,20.0s									
AK09	**Malin Array Si**	**104.82**	**322**	P	**Pdif**	**21 50 43.7**	**-1.4**			
AKASG	**Malin Array Be**	**104.84**	**322**	Pdiff	**Pdif**	**21 50 43.5**	**-1.6**			
	comp=E,1.2nm,0.7s,baz=62,slow=4.9,SNR=9.3									
AKASG				PP	**PP**	**21 55 05.8**	**+0.4**			
	comp=E,0.5nm,0.5s,baz=65,slow=7.5,SNR=5.1									
AK10	**Malin Array Si**	**104.84**	**322**	P	**Pdif**	**21 50 43.3**	**-1.9**			
AK01	**Malin Array Si**	**104.85**	**322**	P	**Pdif**	**21 50 43.4**	**-1.8**			
DLMT	**Dillon**	**104.85**	**44**	IAMs_20	IAMs_20	22 29 25.4				
	comp=Z,2µm,22.0s									
AK11	**Malin Array Si**	**104.88**	**322**	P	**Pdif**	**21 50 43.1**	**-2.2**			
AK06	**Malin Array Si**	**104.88**	**322**	P	**Pdif**	**21 50 43.2**	**-2.1**			
AK07	**Malin Array Si**	**104.89**	**322**	P	**Pdif**	**21 50 44.0**	**-1.4**			
AK12	**Malin Array Si**	**104.89**	**322**	P	**Pdif**	**21 50 44.0**	**-1.4**			
AK15	**Malin Array Si**	**104.90**	**322**	P	**Pdif**	**21 50 43.9**	**-1.5**			
AK16	**Malin Array Si**	**104.92**	**322**	P	**Pdif**	**21 50 43.9**	**-1.6**			
AK22	**Malin Array Si**	**104.92**	**322**	P	**Pdif**	**21 50 43.9**	**-1.6**			
GLA	**Glamis**	**104.99**	**57**	IAMs_20	IAMs_20	22 30 28.6				
	comp=Z,2µm,20.0s									
BOZ	**Bozeman (W)**	**105.47**	**43**	IAMs_20	IAMs_20	22 36 36.8				
	comp=Z,2µm,19.0s									
DUG	**Dugway, Tooele**	**105.61**	**49**	IAMs_20	IAMs_20	22 39 45.7				
	comp=Z,2µm,18.0s									
LUBAR	**Lubar, Ukraine**	**105.94**	**321**	P	**Pdif**	**21 50 48.3**	**-1.8**			
EGMT	**Eagleton**	**106.18**	**41**	IAMs_20	IAMs_20	22 32 33.7				
	comp=Z,2µm,20.0s									
FXWY	**Fox Creek**	**106.29**	**45**	IAMs_20	IAMs_20	22 33 55.7				
	comp=Z,2µm,19.0s									
AHID	**Auburn Hatcher**	**106.41**	**46**	IAMs_20	IAMs_20	22 30 09.5				
	comp=Z,2µm,22.0s									
FLWY	**Flagg Ranch**	**106.43**	**45**	IAMs_20	IAMs_20	22 31 45.4				
	comp=Z,2µm,20.0s									
MOOW	**Moose Ponds**	**106.47**	**45**	IAMs_20	IAMs_20	22 34 09.9				
	comp=Z,2µm,20.0s									
PABE	**Paberze**	**106.49**	**328**		**Pdif**	**21 50 51.1**	**-1.3**			
PABE				IAMs_20	IAMs_20	22 43 46.6				
	comp=Z,2µm,20.0s									
SNOW	**Snow King Moun**	**106.52**	**46**	IAMs_20	IAMs_20	22 33 32.9				
	comp=Z,2µm,20.0s									
LOHW	**Long Hollow**	**106.59**	**45**	IAMs_20	IAMs_20	22 34 44.3				
	comp=Z,2µm,20.0s									
RNPP9	**Sopachiv**	**106.68**	**323**	P	**Pdif**	**21 50 52.0**	**-1.3**			
RNPP8	**Varash**	**106.72**	**323**	P	**Pdif**	**21 50 52.2**	**-1.3**			
RLMT	**Red Lodge**	**107.20**	**44**	IAMs_20	IAMs_20	22 33 54.5				
	comp=Z,2µm,21.0s									
SUW	**Suwalki**	**107.43**	**326**	IAMs_20	IAMs_20	22 44 02.2				
	comp=Z,2µm,20.0s									
BW06	**Boulder Array**	**107.52**	**46**	IAMs_20	IAMs_20	22 32 03.9				
	comp=Z,2µm,21.0s									
PDAR	**Pinedale Array**	**107.52**	**46**	Pdiff	**Pdif**	**21 50 59.9**	**+2.3**			
	comp=Z,0.3nm,0.6s,baz=302,slow=3.3,SNR=3.2									
PDAR				PP	**PP**	**21 55 25.5**	**-0.2**			
	comp=Z,0.6nm,1.0s,baz=284,slow=9.8,SNR=2.5									
PDAR				PKKPbc	**PKKPbc**	**22 06 21.4**	**-0.5**			
	comp=Z,0.8nm,0.9s,baz=100,slow=8.1,SNR=4.1									
PDAR				PKKP	**PKKPab**	**22 06 35.7**	**+0.3**			
	comp=Z,1.5nm,0.8s,baz=98,slow=6.4,SNR=8.6									
BUR08	**Bucovina Ar. S**	**108.18**	**319**		**Pdif**	**21 51 00.8**	**+0.5**			
TUC	**Tucson**	**108.47**	**57**	IAMs_20	IAMs_20	22 31 44.7				
	comp=Z,2µm,20.0s									
FFC	**Flin Flon**	**108.72**	**32**	PKKPbc	PKKPbc	22 06 15.8	-2.5			
FFC	**Flin Flon**	**108.72**	**32**	IAMs_20	IAMs_20	22 35 31.9				
	comp=Z,3µm,20.0s									
LAO	**LASA Array**	**108.85**	**41**	IAMs_20	IAMs_20	22 32 37.4				
	comp=Z,2µm,22.0s									
O20A	**White River Ci**	**109.06**	**49**	IAMs_20	IAMs_20	22 32 48.5				
	comp=Z,2µm,20.0s									
BOSA	**Boshof**	**109.38**	**238**	PKiKP	**PKiKP**	**21 55 10.8**	**+1.3**			
	comp=Z,8.3nm,1.1s,baz=153,slow=1.6,SNR=4.9									
LSZ	**Lusaka**	**109.39**	**253**	IAMs_20	IAMs_20	22 37 18.2				
	comp=Z,2µm,20.0s									
MVCO	**Mesa Verde**	**109.48**	**52**	IAMs_20	IAMs_20	22 36 21.0				
	comp=Z,2µm,22.0s									
HFS	**Hagfors**	**109.53**	**334**	Pdiff	**Pdif**	**21 51 05.0**	**-0.8**			
	comp=Z,3.2nm,0.9s,baz=44,slow=4.4,SNR=3.0									
K22A	**Casper**	**109.72**	**46**	IAMs_20	IAMs_20	22 32 31.6				
	comp=Z,2µm,22.0s									
NOA	**NORSAR Array B**	**110.09**	**336**	Pdiff	**Pdif**	**21 51 06.9**	**-1.4**			
	comp=Z,1.4nm,0.9s,baz=60,slow=4.3,SNR=3.3									
NOA				PP	**PP**	**21 55 42.7**	**-0.7**			
	comp=Z,0.9nm,0.8s,baz=49,slow=6.5,SNR=3.7									
SLBS	**Sierra La Lagu**	**110.28**	**66**	IAMs_20	IAMs_20	22 32 26.9				
	comp=Z,3µm,20.0s									
S22A	**4UR Ranch, Cre**	**110.66**	**51**	IAMs_20	IAMs_20	22 41 09.5				
	comp=Z,2µm,18.0s									
RSSD	**Black Hills**	**111.06**	**44**	IAMs_20	IAMs_20	22 42 27.8				
	comp=Z,1µm,20.0s									
ISCO	**Idaho Springs**	**111.11**	**48**	IAMs_20	IAMs_20	22 43 20.5				
	comp=Z,2µm,20.0s									
KONO	**Kongsberg**	**111.53**	**335**	IAMs_20	IAMs_20	22 44 38.5				
	comp=Z,3µm,21.0s									
ANMO	**Albuquerque**	**111.56**	**54**	PKKPab	PKKPab	22 06 16.9	-0.6			
	comp=Z,5.6nm,0.9s,baz=107,slow=6.1,SNR=11									
ANMO	**Albuquerque**	**111.56**	**54**	IAMs_20	IAMs_20	22 34 31.1				
	comp=Z,2µm,20.0s									
ANMO	**Albuquerque**	**111.56**	**54**	IAMs_20	IAMs_20	22 34 31.1				
	comp=Z,2µm,20.0s									
ANMO	**Albuquerque**	**111.56**	**54**	IAMs_20	IAMs_20	22 34 31.1				
	comp=Z,2µm,20.0s									
Q24A	**Divide**	**111.66**	**49**	IAMs_20	IAMs_20	22 44 10.3				
	comp=Z,2µm,19.0s									
SDCO	**Great Sand Dun**	**111.69**	**50**	IAMs_20	IAMs_20	22 42 13.7				
	comp=Z,2µm,19.0s									
OKC	**Ostrava-Krasne**	**111.85**	**323**	AMS	AMS	22 46 50.0				
	comp=Z,900nm,17.3s									
STEB	**Steborice**	**112.04**	**323**	*e*PKP	**PKiKP**	**21 55 14.8**	**+1.1**			
EPT	**El Paso**	**112.14**	**57**	IAMs_20	IAMs_20	22 32 37.9				
	comp=Z,2µm,22.0s									
RGN	**Rugen**	**112.47**	**329**	IAMs_20	IAMs_20	22 48 37.6				
	comp=Z,2µm,19.0s									
E28A	**Huff**	**112.49**	**40**	IAMs_20	IAMs_20	22 35 34.7				
	comp=Z,2µm,22.0s									
KRLC	**Kraliky**	**112.56**	**324**	*e*PKP	**PKiKP**	**21 55 14.5**	**-0.3**			
KRLC				*e*SP	SP	22 05 30.9	+0.6			
KRLC				AMS	AMS	22 47 10.0				
	comp=Z,1µm,21.1s									
KRLC	**Kraliky**	**112.56**	**324**	*e*PKIKP	**PKiKP**	**21 55 14.5**	**-0.3**			
KRLC				*e*SP	SP	22 05 30.9	+0.6			
KRLC				MLR	MLR					
	comp=Z,1µm,21.1s									
T25A	**Trinidad**	**112.68**	**51**	IAMs_20	IAMs_20	22 40 37.9				
	comp=Z,2µm,21.0s									
OSTC	**Ostas**	**112.70**	**325**	AMS	AMS	22 47 20.0				
	comp=Z,2µm,23.1s									
DPC	**Dobruska-Polom**	**112.72**	**324**	*e*PKP	**PKiKP**	**21 55 16.4**	**+1.3**			
DPC				AMS	AMS	22 47 20.0				
	comp=Z,2µm,21.2s									
DPC	**Dobruska-Polom**	**112.72**	**324**	*e*PKIKP	**PKiKP**	**21 55 16.4**	**+1.3**			
DPC				MLR	MLR					
	comp=Z,2µm,21.2s									
CHVC	**Chvalec**	**112.78**	**325**	*e*PKP	**PKiKP**	**21 55 15.9**	**+0.7**			
CHVC				AMS	AMS	22 47 30.0				
	comp=Z,1µm,22.0s									
CHVC	**Chvalec**	**112.78**	**325**	*e*PKIKP	**PKiKP**	**21 55 15.9**	**+0.7**			
CHVC				MLR	MLR					
	comp=Z,1µm,22.0s									
UPC	**Upice**	**112.83**	**325**	AMS	AMS	22 47 40.0				
	comp=Z,2µm,19.2s									
MODS	**Modra-Piesok**	**112.95**	**322**	*e*PKIKP	**PKiKP**	**21 55 15.6**	**0.0**			
MODS	**Modra-Piesok**	**112.95**	**322**	*e*PKP	**PKiKP**	**21 55 15.6**	**0.0**			
MNTX	**Cornudas Mount**	**113.09**	**57**	IAMs_20	IAMs_20	22 32 56.6				
	comp=Z,2µm,22.0s									
OGNE	**Ogallala**	**113.42**	**46**	IAMs_20	IAMs_20	22 34 34.6				
	comp=Z,2µm,22.0s									
KSCO	**Kaye Shedlock'**	**113.54**	**49**	IAMs_20	IAMs_20	22 36 31.6				
	comp=Z,2µm,21.0s									
TREC	**Trest**	**113.65**	**324**	AMS	AMS	22 48 00.0				
	comp=Z,2µm,21.7s									
PVCC	**Panska Ves**	**113.66**	**325**	AMS	AMS	22 47 40.0				
	comp=Z,1µm,20.1s									
RONA	**Rosalia, Austr**	**113.82**	**322**	*e*PKiKP	**PKiKP**	**21 55 17.9**	**+0.6**			
	comp=Z,1.3nm,0.6s									
PRU	**Pruhonice**	**113.91**	**324**	*e*PKP	**PKiKP**	**21 55 17.8**	**+0.5**			
PRU				AMS	AMS	22 45 30.0				
	comp=Z,2µm,23.6s									
PRU	**Pruhonice**	**113.91**	**324**	*e*PKIKP	**PKiKP**	**21 55 17.8**	**+0.5**			
PRU				MLR	MLR					
	comp=Z,2µm,23.6s									
RICC	**Richard**	**113.92**	**325**	AMS	AMS	22 48 00.0				
	comp=Z,1µm,18.0s									
ULM	**Lac du Bonnet**	**113.97**	**35**	PKKPab	PKKPab	22 06 05.7	-0.6			
	comp=Z,4.0nm,1.0s,baz=108,slow=4.4,SNR=5.0									
CONA	**Conrad Observa**	**113.99**	**322**	*e*PKiKP	**PKiKP**	**21 55 18.3**	**+0.6**			
	comp=Z,2.0nm,0.7s									
CLL	**Collm**	**114.19**	**326**	IAMs_20	IAMs_20	22 47 55.0				
	comp=Z,2µm,19.0s									
CLL	**Collm**	**114.19**	**326**	*e*SKSac	**SKSac**	**22 01 54.0**	**-6.8**			
CLL				*e*Sdif	**Sdif**	**22 03 54.0**	**+0.8**			
CLL				*e*PS	PS	22 05 42.0	-9.3			
CLL				*ex*	x	22 06 30.0				
CLL				*e*PPS	PPS	22 07 00.0				
CLL				*e*SS	**SS**	**22 12 00.0**	**-0.4**			
CLL				*e*SSS	SSS	22 16 18.0				
CLL				*ex*	x	22 18 00.0				
CLL				*e*SSSS		22 19 42.0				
CLL				AMS	AMS	22 48 00.0				
	comp=N,900nm,18.3s									
CLL				AMS	AMS	22 48 00.0				
	comp=E,1µm,18.7s									
CLL				AMS	AMS	22 48 00.0				
	comp=Z,2µm,19.6s									
HSKC	**Hora Svate Kat**	**114.27**	**325**	AMS	AMS	22 48 30.0				
	comp=Z,2µm,17.6s									
ZVC	**Zvikov**	**114.36**	**324**	*e*PKP	**PKiKP**	**21 55 18.2**	**0.0**			
ZVC				AMS	AMS	22 49 10.0				
	comp=Z,2µm,20.8s									
ARSA	**Arzberg**	**114.48**	**321**	*e*PKiKP	PKPdf	21 55 19.0	+0.4			
	comp=Z,0.5nm,0.4s									
CKRC	**Cesky Krumlov**	**114.56**	**323**	*e*PKP	PKPdf	21 55 19.4	+0.8			
CKRC				AMS	AMS	22 49 00.0				
	comp=Z,2µm,18.3s									
CKRC	**Cesky Krumlov**	**114.56**	**323**	*e*PKIKP	PKPdf	21 55 19.4	+0.8			
CKRC				MLR	MLR					
	comp=Z,2µm,18.3s									
K30B	**Basset**	**114.58**	**44**	IAMs_20	IAMs_20	22 41 50.9				
	comp=Z,2µm,19.0s									
KHC	**Kasperske Hory**	**114.85**	**324**	IAMs_20	IAMs_20	22 49 49.8				
	comp=Z,1µm,21.0s									
KHC	**Kasperske Hory**	**114.85**	**324**	*e*PKP	PKPdf	21 55 19.4	+0.2			
KHC				*e*SP	SP	22 05 50.6	-0.7			
KHC				AMS	AMS	22 46 00.0				
	comp=Z,2µm,21.4s									
KHC	**Kasperske Hory**	**114.85**	**324***c*	*i* PKIKP	PKPdf	21 55 20.5	+1.3			
KHC				pmax	pmax					
	comp=Z,14nm,2.5s									
GERES	**GERESS Array B**	**114.91**	**324**	PKP	PKPdf	21 55 19.5	+0.1			
	comp=Z,1.7nm,0.6s,baz=63,slow=0.6,SNR=5.2									
NKC	**Novy Kostel**	**115.00**	**325**	AMS	AMS	22 49 10.0				
	comp=Z,2µm,19.6s									
TXAR	**Lajitas Array**	**115.01**	**59**	PKP	**PKPdf**	**21 55 19.4**	**-0.8**			
	comp=Z,0.3nm,0.6s,baz=305,slow=2.7,SNR=5.0									
TXAR				PKKPbc	**PKKPbc**	**22 05 55.5**	**-1.3**			
	comp=Z,4.5nm,0.8s,baz=120,slow=7.4,SNR=8.0									
TXAR				PKKP	**PKKPdf**	**22 06 17.7**	**-3.0**			
	comp=Z,2.9nm,0.8s,baz=127,slow=7.6,SNR=8.2									
F33A	**5 Mile Ranch,**	**115.60**	**40**	IAMs_20	IAMs_20	22 42 20.8				
	comp=Z,2µm,22.0s									
CBKS	**Cedar Bluff**	**115.75**	**48**	IAMs_20	IAMs_20	22 38 00.0				
	comp=Z,2µm,21.0s									
MYKA	**Terra Mystica**	**115.91**	**321**	*e*PKiKP	**PKiKP**	**21 55 21.3**	**0.0**			
	comp=Z,1.9nm,0.3s									
GRA1	**Grafenberg Arr**	**115.95**	**325**	IAMs_20	IAMs_20	22 50 25.9				
	comp=Z,1µm,20.0s									
GRFO	**Grafenberg**	**115.96**	**325**	IAMs_20	IAMs_20	22 50 16.9				
	comp=Z,2µm,20.0s									
BGNE	**Belgrade**	**116.04**	**45**	IAMs_20	IAMs_20	22 42 29.1				
	comp=Z,2µm,21.0s									
LESA	**Schwarzleotal**	**116.16**	**323**	*e*PKiKP	**PKiKP**	**21 55 22.0**	**+0.1**			
	comp=Z,0.7nm,0.3s									
SAND	**Sanderson**	**116.19**	**58**		PKKPbc	22 05 49.1	-3.5			
SAND				PKKPab	**PKKPab**	**22 05 57.4**	**+0.5**			
ABTA	**Abfaltersbach**	**116.56**	**322**	*e*PKiKP	**PKiKP**	**21 55 22.8**	**+0.2**			
	comp=Z,1.9nm,0.5s									
R32A	**Long Quarter,**	**116.64**	**48**	IAMs_20	IAMs_20	22 43 49.5				
	comp=Z,2µm,20.0s									
WTTA	**Wattenberg**	**116.86**	**323**	*i* PKiKP	**PKiKP**	**21 55 23.9**	**+0.6**			
	comp=Z,4.4nm,0.5s									
L34A	**Svendsen Farm,**	**117.07**	**44**	IAMs_20	IAMs_20	22 44 21.3				
	comp=Z,2µm,21.0s									
SQTA	**Sankt Quirin**	**117.14**	**323**	*e*PKiKP	**PKiKP**	**21 55 24.2**	**+0.4**			
	comp=Z,2.6nm,0.7s									
MOTA	**Moosalm**	**117.14**	**323**	*e*PKiKP	**PKiKP**	**21 55 24.0**	**+0.1**			
	comp=Z,1.4nm,0.4s									
OK038	**West end E0370**	**117.23**	**50**	IAMs_20	IAMs_20	22 41 10.3				
	comp=Z,2µm,20.0s									
ANGG	**Ammassalik, Gr**	**117.41**	**359**	IAMs_20	IAMs_20	22 43 00.6				
	comp=Z,2µm,21.0s									
FETA	**Feichten**	**117.52**	**323**	*e*PKiKP	**PKiKP**	**21 55 25.1**	**+0.5**			
	comp=Z,2.0nm,0.7s									
STU	**Stuttgart**	**117.56**	**325**	IAMs_20	IAMs_20	22 51 23.5				
	comp=Z,2µm,18.0s									
ABTX	**Abilene, Hawle**	**117.62**	**55**	IAMs_20	IAMs_20	22 36 11.7				
	comp=Z,3µm,22.0s									
WMOK	**Wichita Mounta**	**117.72**	**52**	IAMs_20	IAMs_20	22 41 36.5				
	comp=Z,2µm,20.0s									
DAVA	**Damuels**	**117.90**	**323**	*e*PKiKP	**PKiKP**	**21 55 25.6**	**+0.3**			
	comp=Z,6.2nm,0.7s									
KSU1	**Kansas State U**	**117.96**	**47**	IAMs_20	IAMs_20	22 37 27.2				
	comp=Z,2µm,22.0s									
FUORN	**Ofenpass-Fuorn**	**117.99**	**323**	IAMs_20	IAMs_20	22 50 05.9				
	comp=Z,2µm,22.0s									
JCT	**Junction City**	**118.03**	**57**	IAMs_20	IAMs_20	22 43 22.9				
	comp=Z,1µm,19.0s									
SPMN	**Marine on St.**	**118.08**	**39**	IAMs_20	IAMs_20	22 44 51.3				
	comp=Z,2µm,20.0s									
BFO	**Black Forest**	**118.28**	**325**	IAMs_20	IAMs_20	22 51 35.6				
	comp=Z,2µm,19.0s									
OK029	**Liberty Lake**	**118.43**	**51**	IAMs_20	IAMs_20	22 43 54.2				
	comp=Z,2µm,20.0s									
TSUM	**Tsumeb**	**118.55**	**246**	IAMs_20	IAMs_20	22 45 20.5				
	comp=Z,1µm,20.0s									
TUE	**Stuetta**	**118.62**	**323**	PKPdf	**PKPdf**	**21 55 26.2**	**-0.6**			
OK048	**Pawnee Station**	**118.62**	**50**	IAMs_20	IAMs_20	22 46 17.2				
	comp=Z,2µm,20.0s									
WLF	**Walferdange**	**118.78**	**327**	PKPdf	**PKiKP**	**21 55 28.8**	**+2.0**			
WLF				IAMs_20	IAMs_20	22 50 24.6				
	comp=Z,1µm,22.0s									
WLF	**Walferdange**	**118.78**	**327**	PKIKP	**PKiKP**	**21 55 28.8**	**+2.0**			
WLF				MLR	MLR					
	comp=Z,1µm,22.0s									
T35A	**Sooner Cattle**	**118.79**	**49**	IAMs_20	IAMs_20	22 44 57.4				
	comp=Z,2µm,19.0s									
ECH	**Echery**	**119.01**	**325**	IAMs_20	IAMs_20	22 51 18.8				
	comp=Z,1µm,20.0s									
SCIA	**State Center**	**119.26**	**43**	IAMs_20	IAMs_20	22 41 08.0				
	comp=Z,1µm,18.0s									
WHTX	**Lake Whitney,**	**119.57**	**55**	IAMs_20	IAMs_20	22 37 43.8				
	comp=Z,1µm,21.0s									
EKA	**Eskdalemuir Ar**	**119.57**	**336**	PKP	**PKPdf**	**21 55 27.4**	**-0.7**			
	comp=Z,0.8nm,0.7s,baz=46,slow=5.2,SNR=4.1									
EKA				PP	**PP**	**21 56 52.2**	**+2.1**			
	comp=Z,1.6nm,0.8s,baz=202,slow=26,SNR=4.1									
EKA				PKKPbc	**PKKPbc**	**22 05 40.2**	**-1.1**			
	comp=Z,0.6nm,0.7s,baz=239,slow=4.7,SNR=3.5									
ESK	**Eskdalemuir**	**119.60**	**336**	IAMs_20	IAMs_20	22 48 03.8				
	comp=Z,2µm,21.0s									
TUL3	**Leonard**	**119.67**	**50**	IAMs_20	IAMs_20	22 45 43.9				
	comp=Z,2µm,19.0s									
N38A	**Joes South For**	**119.71**	**44**	IAMs_20	IAMs_20	22 44 59.1				
	comp=Z,1µm,21.0s									
SENIN	**Lac Senin/Sane**	**119.90**	**324**	IAMs_20	IAMs_20	22 53 07.3				
	comp=Z,2µm,20.0s									
P38A	**Dawn**	**119.97**	**45**	IAMs_20	IAMs_20	22 45 48.2				
	comp=Z,2µm,20.0s									
I40A	**Norwalk**	**120.08**	**40**	IAMs_20	IAMs_20	22 44 21.3				
	comp=Z,2µm,20.0s									
735A	**Kenedy**	**120.11**	**58**	IAMs_20	IAMs_20	22 41 20.6				
	comp=Z,2µm,20.0s									
U38A	**Gravette**	**120.55**	**49**	IAMs_20	IAMs_20	22 45 42.1				
	comp=Z,2µm,20.0s									
UNM	**Universidad Na**	**120.76**	**69**	IAMs_20	IAMs_20	22 36 59.9				
	comp=Z,2µm,19.0s									
S39A	**Bolivar**	**120.88**	**47**	IAMs_20	IAMs_20	22 47 24.5				
	comp=Z,2µm,20.0s									
P40A	**Paris**	**121.06**	**45**	IAMs_20	IAMs_20	22 45 54.9				
	comp=Z,2µm,20.0s									
I42A	**Draeger Farm,**	**121.16**	**39**	IAMs_20	IAMs_20	22 46 08.8				
	comp=Z,2µm,19.0s									
N41A	**Harden Midland**	**121.38**	**43**	IAMs_20	IAMs_20	22 41 43.2				
	comp=Z,2µm,20.0s									
R40A	**Maddies Statio**	**121.41**	**46**	IAMs_20	IAMs_20	22 39 00.4				
	comp=Z,2µm,22.0s									
HKT	**Hockley**	**121.48**	**56**	IAMs_20	IAMs_20	22 46 26.0				
	comp=Z,2µm,19.0s									
IVI	**Ivigtut**	**121.61**	**4**	IAMs_20	IAMs_20	22 45 54.9				
	comp=Z,2µm,22.0s									
CLF	**Chambon-Foret**	**121.83**	**327**	IAMs_20	IAMs_20	22 53 45.2				
	comp=Z,2µm,20.0s									
NATX	**Nacogdoches**	**121.91**	**54**	IAMs_20	IAMs_20	22 45 01.7				
	comp=Z,2µm,20.0s									
SSB	**Saint Sauveur**	**122.11**	**324**	IAMs_20	IAMs_20	22 52 33.8				
	comp=Z,1µm,22.0s									
K43A	**Burlington**	**122.11**	**40**	IAMs_20	IAMs_20	22 42 05.2				
	comp=Z,2µm,20.0s									
CCM	**Cathedral Cave**	**122.24**	**46**	IAMs_20	IAMs_20	22 43 53.4				
	comp=Z,2µm,20.0s									
HDIL	**Hopedale**	**122.51**	**43**	IAMs_20	IAMs_20	22 41 25.0				
	comp=Z,2µm,22.0s									
P43A	**Skaggs, Pawnee**	**122.77**	**44**	IAMs_20	IAMs_20	22 54 49.1				
	comp=Z,1µm,19.0s									
T42A	**Van Buren**	**122.77**	**47**	IAMs_20	IAMs_20	22 42 06.6				
	comp=Z,2µm,22.0s									
KEST	**Kesra**	**123.38**	**312**	PKP	**PKiKP**	**21 55 36.2**	**-0.1**			
	comp=Z,8.6nm,0.9s,baz=45,slow=1.4,SNR=6.7									
L46A	**Eue Claire**	**123.77**	**40**	IAMs_20	IAMs_20	22 41 57.9				
	comp=Z,2µm,22.0s									
S44A	**Carbondale**	**123.82**	**46**	IAMs_20	IAMs_20	22 41 22.1				
	comp=Z,2µm,20.0s									
SFIN	**Lafayette**	**124.06**	**42**	IAMs_20	IAMs_20	22 45 27.1				
	comp=Z,2µm,20.0s									
P46A	**Rosedale**	**124.36**	**43**	IAMs_20	IAMs_20	22 44 24.0				
	comp=Z,2µm,21.0s									
T45A	**Paducah**	**124.55**	**46**	IAMs_20	IAMs_20	22 48 02.6				
	comp=Z,2µm,21.0s									
WVT	**Waverly**	**125.53**	**47**	IAMs_20	IAMs_20	22 48 34.6				
	comp=Z,2µm,21.0s									
P48A	**Milroy**

comp=Z,1µm,22.0s
OTAV Otavalo 142.29 93 PKIKP **PKPdf 21 56 09.9 -2.7**
OTAV MLR MLR
comp=Z,1µm,22.0s
OTAV Otavalo 142.29 93 *eP* **PKPdf 21 56 09.9 -2.7**
GTBY Guantanamo Bay 142.52 61 IAMs_20 IAMs_20 23 03 23.9
comp=Z,902nm,21.0s
PSAL Palomas, Salto 142.58 156 *eP* **PKPdf 21 56 12.5 +0.5**
BONI La Bonita 143.22 93 P PKPab 21 56 08.4 -1.3
BBAC Balboa, Cauca 143.59 91 P PKPab 21 56 02.2 -8.9
PB12 IPOC Station P 143.91 128 PKPpre PKPpre 21 56 07.1
DBIC Dimbokro 143.98 277 PKhKP PKPpre 21 56 11.3
comp=Z,59nm,1.0s,baz=105,slow=3.7,SNR=47
DBIC Dimbokro 143.98 277 PKPab 21 56 11.6 -0.8
DBIC Dimbokro 143.98 277 PKIKP PKPab 21 56 11.6 -0.7
APAC Apartado, Choc 144.07 81 P **PKPab 21 56 11.8 -0.9**
POPC Popayan, Colom 144.18 90 P **PKPab 21 56 10.1 -3.3**
JAMC Jamundi, Valle 144.19 89 P **PKPab 21 56 09.6 -3.8**
DBBC Dabeiba 144.52 82 P PKPbc 21 56 14.7 0.0
YOTC Yotoco, Valle 144.52 87 P **PKPab 21 56 11.3 -3.2**
PLMC San Jos del P 144.57 86 P **PKPab 21 56 10.7 -3.9**
CPSB Cacapava Do Su 144.72 161 *eP* **PKPdf 21 56 16.3 +0.5**
CBOC Ciudad Bolivar 144.79 84 P **PKPab 21 56 15.2 -0.4**
UREC San Jos de Ur 145.12 81 P **PKPbc 21 56 11.3 -5.2**
FLOC Florencia 145.17 91 P **PKPbc 21 56 14.1 -2.6**
SJCC San Jacinto, C 145.18 77 P **PKPbc 21 56 15.2 -1.5**
GRTK Grand Turk 145.22 55 IAMs_20 IAMs_20 22 59 52.9
comp=Z,1µm,21.0s
GARC Garzon, Huila 145.35 90 P **PKPbc 21 56 12.4 -5.2**
GUY2C Guyana, Caldas 145.47 85 P **PKPdf 21 56 13.5 -4.7**
MACI Morro de la Ar 145.78 320 **PKPdf 21 56 17.9 -0.1**
SDDR Presa de Saban 146.20 60 IAMs_20 IAMs_20 22 57 31.9
comp=Z,2µm,21.0s
CZSB Cruzeiro do Su 146.47 109 *eP* **PKPdf 21 56 19.5 +0.2**
CNLB Canela 146.52 164 *eP* **PKPab 21 56 22.1 +0.7**
ROSC El Rosal 146.52 86 PKPbc **PKPdf 21 56 19.6 -0.2**
comp=Z,32nm,0.8s,baz=72,slow=3.2,SNR=15
CPUP Villa Florida 146.81 152 PKPbc **PKPdf 21 56 20.0 +0.5**
comp=Z,17nm,0.9s,baz=226,slow=4.4,SNR=28
CPUP Villa Florida 146.81 152 **PKPbc 21 56 20.8 -0.5**
CPUP Villa Florida 146.81 152 PKP2 **PKPbc 21 56 20.8 -0.5**
CPUP Villa Florida 146.81 152 *eP* **PKPbc 21 56 21.3 0.0**
LPAZ La Paz 146.93 126 PKPbc **PKPdf 21 56 21.4 +0.7**
comp=Z,39nm,0.9s,baz=243,slow=1.7,SNR=56
LPAZ La Paz 146.93 126 *eP* **PKPbc 21 56 22.3 -0.4**
MACC Macarena, Meta 146.99 91 P **PKPdf 21 56 18.1 -2.1**
VILC Villavicencio, 147.17 87 P **PKPdf 21 56 18.7 -1.9**
RUSC La Rusia 147.70 84 P **PKPdf 21 56 19.8 -2.1**
PAMC Pamplona, Colo 147.95 81 P **PKPdf 21 56 19.2 -3.1**
ITAB Concordia 148.08 161 **PKPbc 21 56 23.6 -1.2**
ITAB Concordia 148.08 161 *eP* **PKPdf 21 56 22.4 +0.9**
MAJ01 Sao Joao Batis 148.82 166 *eP* **PKPbc 21 56 22.4 +0.7**
SDV Santo Domingo 149.77 77 **PKPdf 21 56 25.3 +0.4**
SDV IAMs_20 IAMs_20 22 54 19.3
comp=Z,979nm,22.0s
SDV Santo Domingo 149.77 77 *eP* **PKPdf 21 56 24.9 0.0**
PTGB Pitanga 150.42 159 *eP* **PKPdf 21 56 27.4 +1.9**
MURT Porto Murtinho 150.54 147 *eP* **PKPdf 21 56 26.5 +0.8**
AMBA Amambai (Brazi 150.81 152 *eP* **PKPbc 21 56 29.0 -2.7**
TRCB Terra Rica 151.94 156 **PKiKP 21 56 35.2 +0.5**
TRCB Terra Rica 151.94 156 *eP* **PKPdf 21 56 29.6 +1.7**
LDASE Londrina, Braz 151.97 160 *eP* **PKPdf 21 56 29.1 +1.2**
BDQN Bodoquena, MS 151.99 147 *eP* **PKPdf 21 56 27.9 0.0**
BBSD Serra de San D 152.04 136 *eP* **PKPdf 21 56 27.3 -0.8**
PET01 Itanhaem-SP 152.22 167 *eP* **PKPdf 21 56 28.2 0.0**
FRTB Fartura 152.52 162 *eP* **PKPdf 21 56 31.1 +2.4**
AQDB Aquidauana 152.53 149 *eP* **PKPdf 21 56 30.3 +1.6**
SPB Sao Paulo 152.85 167 IAMs_20 IAMs_20 23 03 05.9
comp=Z,1µm,21.0s
SPB Sao Paulo 152.85 167 *eP* **PKPdf 21 56 29.0 -0.1**
PARB Paraibuna 153.47 170 *eP* **PKPdf 21 56 32.5 +2.4**
SMRT St. Maarten 153.51 54 IAMs_20 IAMs_20 22 58 49.8
comp=Z,960nm,19.0s
SABA Saba 153.60 55 IAMs_20 IAMs_20 22 59 25.8
comp=Z,1µm,22.0s
SEUS St. Eustatius 153.88 55 IAMs_20 IAMs_20 22 59 32.6
comp=Z,1µm,21.0s
PTLB Pontes e Lacer 154.26 136 *eP* **PKPdf 21 56 32.7 +1.4**
ANWB Willy Bob 154.75 53 IAMs_20 IAMs_20 23 07 47.0
comp=Z,1µm,20.0s
VILB Vilhena 155.11 130 *eP* **PKPdf 21 56 31.6 -1.0**
PP1B Ponte de Pedra 155.32 146 *eP* **PKPdf 21 56 33.1 +0.4**
CAM01 Campos-RJ 155.38 178 *eP* **PKPdf 21 56 33.2 +0.6**
GDHS Morne Mazeau, 155.50 56 IAMs_20 IAMs_20 23 08 13.5
comp=Z,1µm,20.0s
ITRB Iturama 155.62 158 *eP* **PKPdf 21 56 34.8 +1.7**
ABD La Joyeuse, An 155.63 55 IAMs_20 IAMs_20 23 00 08.5
comp=Z,1µm,21.0s
BSCB Bom Sucesso 155.90 171 *eP* **PKPdf 21 56 35.0 +1.5**
GDSD La Dsirade Is 156.06 55 IAMs_20 IAMs_20 23 00 42.8
comp=Z,1µm,22.0s
SALV Santo Antonio 156.19 142 *eP* **PKPdf 21 56 35.4 +1.5**
SVN Savane Anatole 156.70 58 IAMs_20 IAMs_20 23 00 44.6
comp=Z,1µm,22.0s
FDFM Morne la Roset 156.76 58 IAMs_20 IAMs_20 23 00 47.5
comp=Z,1µm,22.0s
BIM Bigot 156.94 59 IAMs_20 IAMs_20 22 59 59.9
comp=Z,1µm,22.0s
MPOM Morne Pois Mar 157.15 59 IAMs_20 IAMs_20 23 00 38.0
comp=Z,1µm,21.0s
GRGR Grenville 157.43 65 IAMs_20 IAMs_20 23 06 32.7
comp=Z,1µm,22.0s
RIB01 Linhares ES 157.88 181 *eP* **PKPdf 21 56 37.5 +1.5**
PMNB Patos De Minas 157.96 166 *eP* **PKPdf 21 56 37.5 +1.2**
IPMB Ipameri, GO 157.97 161 *eP* **PKPdf 21 56 37.1 +0.9**
BSFB Barra de Sao F 158.37 180 *eP* **PKPdf 21 56 37.7 +1.1**
SJMB Sao Joao De Ma 158.49 179 *eP* **PKPdf 21 56 37.9 +1.1**
ARAG Araguaiana, MT 158.52 150 *eP* **PKPdf 21 56 38.1 +1.2**
PDRB Porto dos Gac 158.57 133 *eP* **PKPdf 21 56 37.7 +0.7**
DIAM Diamantina, MG 158.71 173 *eP* **PKPdf 21 56 38.1 +0.9**
BDFB Brasilia 160.22 159 PKP **PKPdf 21 56 40.1 +1.2**
comp=Z,7.6nm,0.8s,baz=150,slow=2.6,SNR=8.0
BDFB PKPab **PKPab 21 57 20.1 +1.0**
comp=Z,7.7nm,0.8s,baz=186,slow=3.9,SNR=5.6
BDFB Brasilia 160.22 159 **PKPdf 21 56 39.0 +0.1**
BOAV Boa Vista 160.31 91 **PKPdf 21 56 38.4 -0.6**
BOAV Boa Vista 160.31 91 *eP* **PKPdf 21 56 38.5 -0.6**
GUA01 Guaratinga, BA 160.58 183 *eP* **PKPdf 21 56 41.2 +2.0**
JANB Januaria 161.79 169 *eP* **PKPdf 21 56 43.0 +2.4**
SNDB Serra Nova Dou 161.89 145 *eP* **PKPdf 21 56 40.1 -0.6**
NPGB Novo Progresso 162.42 124 *eP* **PKPdf 21 56 41.7 +0.4**
ITTB Itaituba 163.42 116 *eP* **PKPdf 21 56 42.7 +0.5**
SDBA SAO DESIDERIO 164.22 165 *eP* **PKPdf 21 56 43.7 +0.7**
SMTB Santa Maria do 166.47 150 *eP* **PKPdf 21 56 45.7 +0.8**
PRPB Parauapebas 167.25 135 *eP* **PKPdf 21 56 45.9 +0.4**
NBPV Pedro Velho 169.19 211 *eP* **PKPdf 21 56 47.3 +0.6**
NBMA Muriti-CE 169.56 191 *eP* **PKPdf 21 56 47.3 +0.3**
RCBR Riachuelo 170.01 209 PKPdf **PKPdf 21 56 45.4 -1.8**
RCBR **PKPab 21 58 02.1 0.0**
RCBR Riachuelo 170.01 209 PKIKP **PKPdf 21 56 45.4 -1.8**
NBPA Parau_RN 170.61 203 *eP* **PKPdf 21 56 47.9 +0.3**

*GCG **26** 21:55:15.6s 0.8, 13°.82N × 91°.30W, h73km ± 13km, MD3.9, ML3.4, Presumed earthquake*
*SNET **26** 21:55:23.6s 6.8, 13°.67N × 90°.51W, h108km, ML2.9, Presumed earthquake*
ISC 26 21:55:13.9 ± 2.6, 13°.6N ± 0°.2 × 91°.3W ± 0°.1, h100km, n15, σ2s 0²02/21, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESSJ	**San Jos, E**	**0.75**	**92**	*eP*	**Pn**	**21 55 28.4**	**-3.4**
STG5	**El Palmar, Qui**	**0.81**	**355**	*eP*	**Pn**	**21 55 33.3**	**+0.8**
STG5				*eS*	**Sn**	**21 55 47.2**	**+0.7**
STG8	**El Palmar, Qui**	**0.86**	**355**	*eP*	**Pn**	**21 55 34.3**	**+1.2**
STG8				*eS*	**Sn**	**21 55 47.8**	**+0.2**
STG8				IAML		21 55 55.4	
	comp=E,554nm,0.2s						
FG8	**Yepocapa, Chim**	**0.96**	**46**	*eP*	**Pn**	**21 55 31.4**	**-2.7**
FG16	**Alotenango, Sa**	**1.00**	**47**	*eP*	**Pn**	**21 55 32.1**	**-2.6**
FG16				*eS*	**Sn**	**21 55 45.3**	**-4.9**
PCG5	**San Vicente Pa**	**1.07**	**54**	*eP*	**Pn**	**21 55 33.3**	**-2.0**
NUBE	**Las Nubes**	**1.48**	**78**	*eP*	**Pn**	**21 55 40.3**	**+0.1**
APG	**El Apazote**	**1.61**	**29**	*eP*	**Pn**	**21 55 43.2**	**+1.4**
CEVE	**Cerro Verde**	**1.62**	**81**	*eP*	**Pn**	**21 55 42.7**	**+0.7**
CEVE				*eS*	**Sn**	**21 56 04.3**	**+1.1**
SBLS	**San Blas**	**1.62**	**81**	*eP*	**Pn**	**21 55 42.6**	**+0.7**
RBDL	**Robledal**	**1.63**	**71**	*eP*	**Pn**	**21 55 43.2**	**+1.3**
SNJE	**San Jose**	**1.65**	**80**	*eP*	**Pn**	**21 55 43.1**	**+0.9**
JAYA	**Jayaque - finc**	**1.78**	**88**	*eP*	**Pn**	**21 55 44.8**	**+1.0**
JAYA				*eS*	**Sn**	**21 56 07.2**	**+0.7**
JAYA	**Jayaque - finc**	**1.78**	**88**	*eP*	**Pn**	**21 55 45.2**	**+1.4**
JAYA				*eS*	**Sn**	**21 56 08.4**	**+1.9**
MTO3	**Montecristo**	**2.02**	**66**	*eP*	**Pn**	**21 55 48.7**	**+1.7**

*IDC **26** 21:56:52.9s 1.0, 3°.03S × 139°.25E, h0km, mb3.5/5, mbtmp3.7/7, ML3.7/2, Error ellipse: s-maj=24.9km s-min=12.5km az=159.0*
*DJA **26** 21:56:59.0s 0.8, 3°.S × 3°.× 13°.9E ± °, h20km ± 8km, M4.3/12, mb4.4/4, MLv4.2/12*
ISC 26 21:56:58.7 ± 0.8, 2°.94S ± 0°.08 × 139°.24E ± 0°.05, h46km, n16, σ2s 36/21, mb3.4/4, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.99**	**70**	*P*	**Pn**	**21 57 16.1**	**-0.1**
GENI				*S*	**Sn**	**21 57 30.9**	**+1.8**
WAMI	**Wamena**	**1.08**	**209**	*P*	**Pn**	**21 57 21.2**	**+3.8**
WAMI				*S*	Sn	21 57 39.5	+8.3
JAY	**Jayapura**	**1.52**	**74**	Pg	**Pn**	**21 57 22.5**	**-1.0**
	45nm,0.3s,baz=228,slow=15,SNR=199						
JAY				Lg	Lg	21 57 41.5	
	55nm,0.3s,baz=101,slow=15,SNR=19						
JAY	**Jayapura**	**1.52**	**74**	*P*	**Pn**	**21 57 23.0**	**-0.5**
JAY				*S*	**Sn**	**21 57 43.1**	**+0.9**
SRPI	**Serui, Papua**	**3.18**	**289**	*P*	**Pn**	**21 57 47.2**	**+1.0**
SRPI				*S*	**Sn**	**21 58 24.5**	**+1.6**
BAKI	**Biak**	**3.58**	**299**	*P*	**Pn**	**21 57 54.9**	**+3.2**
BAKI				*S*	**Sn**	**21 58 35.0**	**+2.2**
RKPI	**Ransiki, Papua**	**5.25**	**286**	*P*	**Pn**	**21 58 16.4**	**+1.7**
	0.3nm22nm,0.6s						
MWPI	**Manokwari, Pap**	**5.56**	**291**	*P*	**Pn**	**21 58 19.4**	**+0.4**
	0.4nm39nm,0.8s						
FAKI	**Fak Fak**	**6.98**	**270**	*P*	**Pn**	**21 58 39.4**	**+0.9**
SIJI	**Sorong**	**8.23**	**284**	*Pn*	**Pn**	**21 58 54.9**	**-0.7**
	1.0nm,0.3s,baz=93,slow=18,SNR=4.1						
SIJI				*Sn*	**Sn**	**22 00 20.2**	**-7.1**
	0.8nm,0.3s,baz=127,slow=20,SNR=1.8 3.7nm,0.5s						
WRA	**Warramunga Arr**	**17.57**	**195**	*P*	**Pn**	**22 00 59.2**	**-1.2**
	0.3nm,0.3s,baz=17,slow=12,SNR=12 2.2nm,0.7s						
FITZ	**Fitzroy Crossi**	**20.12**	**221**	*P*	**P**	**22 01 28.4**	**-0.4**
	1.8nm,0.6s,baz=29,slow=12,SNR=1.8 1.8nm,0.6s						
ASAR	**Alice Springs**	**21.24**	**194**	*P*	**P**	**22 01 40.6**	**-0.5**
	0.9nm,0.6s,baz=23,slow=9.7,SNR=12 0.9nm,0.6s						
CMAR	**Chiang Mai Arr**	**45.01**	**300**	*P*	**P**	**22 05 12.0**	**+1.9**
	0.5nm,0.6s,baz=126,slow=8.3,SNR=6.2 0.5nm,0.6s						
MKAR	**Makanchi Array**	**70.29**	**322**	*P*	**P**	**22 08 07.6**	**+0.2**
	0.1nm,0.6s,baz=111,slow=7.9,SNR=1.7 0.1nm,0.6s						
QSPA	**South Pole Qui**	**87.01**	**180**	*P*	**P**	**22 09 38.0**	**-1.1**
	1.0nm,0.6s,baz=6.4,slow=6.9,SNR=5.8 1.0nm,0.6s						

*IDC **26** 21:58:52.8s 1.1, 4°.81S × 118°.64E, h0km, mb3.9/7, mbtmp3.9/7, Error ellipse: s-maj=38.1km s-min=14.6km az=43.0*
*NEIC **26** 21:58:57.0s 1.3, 4°.10S ± 0°.04 × 120°.04E ± 0°.07, h10km ± 1km, mb4.4/11, Error ellipse: s-maj=12.4km s-min=6.4km az=108.0*
*DJA **26** 21:58:58.8s 0.1, 4°.S ± 1°.× 12°.0E ± °, h10km, M4.6/42, mB5.2/7, mb4.8/15, MLv4.5/42, Mw(mB)4.5/7*
ISC 26 21:58:57.1 ± 1.6, 4°.08S ± 0°.03 × 120°.09E ± 0°.04, h14km ± 11km, n55, σ1s 80/59, mb4.2/16, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPSI	**Sidrap Palu**	**0.34**	**289**	*P*	**Pb**	**21 59 04.9**	**-0.1**
SPSI				*S*	**Sb**	**21 59 11.4**	**+1.1**
KAPI	**Kappang**	**0.99**	**200**	Pn	**Pn**	**21 59 16.9**	**+0.3**
	247nm,0.3s,baz=3.5,slow=8.7,SNR=383						
KAPI				*Sn*	**Sn**	**21 59 31.8**	**+1.4**
	519nm,0.3s,baz=186,slow=22,SNR=14						
KAPI	**Kappang**	**0.99**	**200**		**Pn**	**21 59 16.8**	**+0.2**
KAPI					**Sn**	**21 59 29.7**	**-0.6**
KAPI	**Kappang**	**0.99**	**200**	*P*	**Pn**	**21 59 16.5**	**-0.1**
KAPI				*S*	**Sn**	**21 59 31.1**	**+0.7**
MKS	**Makassar**	**1.29**	**209**	*P*	**Pg**	**21 59 22.0**	**0.0**
MKS				*S*	**Sn**	**21 59 40.8**	**+3.0**
PMSI	**Majene**	**1.31**	**296**	*P*	**Pg**	**21 59 22.0**	**-0.4**
KKSI	**Kolaka, Sulawe**	**1.56**	**93**	*P*	**Pn**	**21 59 25.6**	**+1.2**
MMSI	**Mamuju**	**1.82**	**319**	*P*	**Pn**	**21 59 30.1**	**-0.1**
BSSI	**Bau Bau, Buton**	**2.09**	**169**	*P*	**Pb**	**21 59 33.6**	**-1.2**
PCI	**Palu**	**3.16**	**355**	*P*	**Pb**	**21 59 50.5**	**-2.7**
APSI	**Ampana**	**3.51**	**26**	*P*	**Pn**	**21 59 53.3**	**+2.0**
LUWI	**Luwuk**	**4.03**	**42**		**Pn**	**21 59 59.7**	**+1.3**
LUWI				*Sn*	**Sn**	**22 00 46.8**	**+1.3**
LUWI	**Luwuk**	**4.03**	**42**	*P*	**Pn**	**22 00 00.1**	**+1.6**
BKB	**Balikpapan**	**4.25**	**311**	*Pn*	**Pn**	**22 00 02.7**	**+1.3**
BKB	**Balikpapan**	**4.25**	**311**	*P*	**Pn**	**22 00 05.5**	**+4.1**
LBFI	**Labuhan Bajo,**	**4.38**	**183**	*P*	**Pn**	**22 00 05.5**	**+2.3**
MPSI	**Mapaga**	**4.39**	**357**	*P*	**Pn**	**22 00 05.8**	**+2.4**
DBNI	**Kabupaten Domp**	**4.74**	**202**	*P*	**Pn**	**22 00 10.1**	**+1.9**
MRSI	**Marisa**	**4.89**	**22**	*P*	**Pn**	**22 00 12.4**	**+2.2**
MMRI	**Maumere**	**5.00**	**155**		**Pn**	**22 00 12.1**	**+0.3**
MMRI	**Maumere**	**5.00**	**155**	*P*	**Pn**	**22 00 13.1**	**+1.2**
	0.3nm3µm97nm,0.8s						
TOLI2	**Tolitoli**	**5.20**	**8**		**Pn**	**22 00 16.2**	**+1.7**
PLAI	**Plampang**	**5.25**	**206**	*P*	**Pn**	**22 00 17.0**	**+1.8**
	0.3nm86nm,0.6s						
BBKI	**Banjar Baru**	**5.28**	**276**	*P*	**Pn**	**22 00 17.8**	**+2.2**
	56nm,0.5s						
GTOI	**Gorontalo**	**5.52**	**32**	*P*	**Pn**	**22 00 21.9**	**+3.0**
	0.4nm56nm,0.6s						
WSI	**Waingapu**	**5.56**	**178**	*P*	**Pn**	**22 00 21.7**	**+2.2**
	0.4nm81nm,0.8s						
WBSI	**Waikabubak, Su**	**5.57**	**187**	*P*	**Pn**	**22 00 21.2**	**+1.5**
	0.5nm2µm189nm,0.8s						
KHKI	**Kahang-Kahang**	**6.17**	**226**	*P*	**Pn**	**22 00 29.5**	**+1.7**
	0.1nm24nm,0.6s						
SANI	**Sanana**	**6.22**	**71**	*P*	**Pn**	**22 00 29.6**	**+1.0**
KMMI	**Kalianget**	**6.77**	**244**	*P*	**Pn**	**22 00 39.6**	**+3.4**
SOEI	**Soe**	**7.00**	**144**		**Pn**	**22 00 41.1**	**+1.8**
SOEI	**Soe**	**7.00**	**144**	*P*	**Pn**	**22 00 43.9**	**+4.5**
	0.3nm80nm,1.2s						
BATI	**Baumata**	**7.04**	**150**	*Pn*	**Pn**	22 00 45.8	+5.9
	5.4nm,0.3s,baz=97,slow=8.1,SNR=7.2						
BATI	**Baumata**	**7.04**	**150**	*P*	**Pn**	**22 00 43.2**	**+3.3**
JAGI	**Jajag, Banyuwa**	**7.34**	**233**	*Pn*	**Pn**	**22 00 44.6**	**+0.6**
WB0	**Warramunga Arr**	**20.92**	**139**	*P*	**P**	**22 03 40.9**	**+1.4**
WRA	**Warramunga Arr**	**21.01**	**140**	*P*	**P**	**22 03 41.2**	**+0.7**
	3.6nm,0.9s,baz=315,slow=12,SNR=8.3 3.6nm,0.9s						
WR8	**Warramunga Arr**	**21.12**	**140**	*P*	**P**	**22 03 42.7**	**+1.0**
WR8				*IAmb*	IAmb	22 03 54.1	
	comp=Z,8.5nm,0.8s						
ASAR	**Alice Springs**	**23.60**	**147**	*P*	**P**	**22 04 08.7**	**+0.9**
	comp=Z,1.7nm,0.9s,baz=322,slow=7.4,SNR=7.4 comp=Z,1.7nm,0.9s						
MORW	**Morawa**	**25.15**	**188**	*P*	**P**	**22 04 20.4**	**-1.6**
MORW				*IAmb*	IAmb	22 04 37.7	
	comp=Z,4.1nm,0.8s						
NWAO	**Narrogin (SRO)**	**28.82**	**185**	*P*	**P**	**22 04 53.5**	**-1.5**
NWAO				*IAmb*	IAmb	22 04 55.7	
	comp=Z,9.3nm,1.0s						
BBOO	**Buckleboo**	**32.25**	**154**	*P*	**P**	**22 05 24.9**	**-0.4**
BBOO				*IAmb*	IAmb	22 05 37.0	
	comp=Z,7.8nm,1.0s						
STKA	**Stephens Creek**	**34.24**	**146**	*P*	**P**	**22 05 42.4**	**-0.3**
	comp=Z,1.0nm,0.3s,baz=317,slow=7.1,SNR=4.7 comp=Z,1.0nm,0.3s						
STKA	**Stephens Creek**	**34.24**	**146**	*P*	**P**	**22 05 41.6**	**-1.1**
EVN	**Everest**	**45.19**	**317**	*P*	**P**	**22 07 13.9**	**-0.7**
EVN				*IAmb*	IAmb	22 07 25.5	
	comp=Z,5.4nm,1.0s						
HHC	**Hu-ho-hao-te**	**45.39**	**351**	*eP*	**P**	**22 07 17.8**	**+2.4**
HHC				*pmax*	pmax		
	comp=Z,7.0nm,0.6s						
GTA2	**Gaotai**	**47.23**	**339**	*eP*	P	22 07 38.8	+8.9
GTA2				*pmax*	pmax		
	comp=Z,4.0nm,0.8s						
KAAM	**Kaadhehdhoo**	**47.28**	**274**	*P*	**P**	**22 07 29.3**	**-1.3**
JKA	**Kamikawa-asahi**	**52.07**	**20**	*P*	**P**	**22 08 06.2**	**-0.3**
JKA				*IAmb*	IAmb	22 08 15.8	
	comp=Z,8.8nm,1.1s						
ULN	**Ulaanbaatar**	**52.98**	**349**	*P*	**P**	**22 08 13.5**	**+0.1**
ULN				*IAmb*	IAmb	22 08 14.1	
	comp=Z,1.6nm,0.7s						
SONM	**Songino Array**	**53.08**	**348**	*P*	**P**	**22 08 14.4**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=165,slow=8.3,SNR=10 comp=Z,1.0nm,0.6s						
SONM	**Songino Array**	**53.08**	**348**	*P*	**P**	**22 08 14.2**	**+0.1**
MKAR	**Makanchi Array**	**60.65**	**331**	*P*	**P**	**22 09 06.4**	**-1.3**
	comp=Z,0.5nm,0.6s,baz=154,slow=8.1,SNR=4.0 comp=Z,0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**64.89**	**338**	*P*	**P**	**22 09 34.1**	**-1.7**
	comp=Z,2.0nm,0.7s,baz=127,slow=6.2,SNR=6.6 comp=Z,2.0nm,0.7s						
KURBB	**Kurchatov Arra**	**65.11**	**332**	*P*	**P**	**22 09 35.3**	**-2.0**
	comp=Z,0.5nm,0.3s,baz=140,slow=5.9,SNR=4.3 comp=Z,0.5nm,0.3s						

*IDC **26** 22:04:40.8s 0.9, 31°.74N × 72°.06E, h0km, mb3.8/15, mbtmp3.8/18, ML3.6/3, Error ellipse: s-maj=22.4km s-min=16.5km az=44.0*
*NDI **26** 22:04:42.5s 2.9, 31°.79N × 71°.82E, h10km, ML3.9, MW3.6, Presumed earthquake*
ISC 26 22:04:41.8 ± 0.6, 31°.72N ± 0°.04 × 71°.97E ± 0°.05, h10km, n40, σ2s 06/60, mb3.8/14, 2C-1D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMU	**Jammu**	**2.64**	**66**	*eP*	**Pn**	**22 05 26.8**	**+2.3**
JMU				*eS*	**Sn**	**22 05 59.4**	**+2.7**
JMU				IAML		22 06 12.4	
	comp=N,532nm,0.6s						
JMU				IAML		22 06 14.8	
	comp=E,828nm,0.7s						
THN	**Thein Dam**	**3.29**	**76**	*eP*	**Pb**	**22 05 37.9**	**-2.4**
THN				*eS*	**Sn**	**22 06 13.7**	**+1.0**
THN				IAML		22 06 32.7	
	comp=E,341nm,0.7s						
THN				IAML		22 06 34.0	
	comp=N,369nm,0.6s						
SRNI	**Srinagar**	**3.33**	**45**	*eP*	**Pn**	**22 05 36.5**	**+2.4**
SRNI				IAML		22 06 35.6	
	comp=E,648nm,0.5s						
SRNI				IAML		22 06 36.0	
	comp=N,479nm,0.5s						
TLWR	**Talawar**	**3.40**	**85**	*eP*	**Pn**	**22 05 36.9**	**+2.1**
TLWR				*eS*	**Sn**	**22 06 16.9**	**+1.6**
TLWR				IAML		22 06 29.1	
	comp=N,546nm,0.3s						
TLWR				IAML		22 06 32.6	
	comp=E,641nm,0.3s						
TSSA	**Tissa**	**3.71**	**71**	*eP*	**Pn**	**22 05 41.1**	**+1.8**
TSSA				*eS*	**Sn**	**22 06 23.5**	**+0.3**
TSSA				IAML		22 06 44.5	
	comp=E,747nm,0.5s						
TSSA				IAML		22 06 44.6	
	comp=N,662nm,0.7s						
DHRM	**DHARAMSHALA**	**3.71**	**81**	*eP*	**Pn**	**22 05 41.4**	**+2.0**
DHRM				*eS*	**Sn**	**22 06 25.0**	**+1.7**
DHRM				IAML		22 06 44.8	
	comp=E,711nm,0.4s						
DHRM				IAML		22 06 48.0	
	comp=N,733nm,0.5s						
BHK	**Bhakra**	**3.78**	**94**	*eP*	**Pb**	**22 05 48.2**	**-0.4**
BHK				IAML		22 06 27.8	
	comp=N,276nm,0.4s						
BHK				IAML		22 06 28.8	
	comp=E,224nm,0.2s						
BHK				*eS*	**Sb**	**22 06 35.4**	**+1.0**
BKNR	**BIKANER**	**3.85**	**163**	*eP*	**Pn**	**22 05 42.3**	**+1.2**
BKNR				*eS*	**Sn**	**22 06 24.4**	**-2.1**
BKNR				IAML		22 06 50.9	
	comp=N,497nm,0.8s						
BKNR				IAML		22 06 52.0	
	comp=E,585nm,0.3s						
SMLA	**Simla**	**4.48**	**96**	*eP*	**Pn**	**22 05 53.1**	**+3.4**
SMLA				*eS*	**Sn**	**22 06 43.2**	**+1.4**
SMLA				IAML		22 06 45.6	
	comp=N,270nm,0.3s						
SMLA				IAML		22 06 45.9	
	comp=E,217nm,0.4s						
ALCI	**Alchi Leh**	**5.04**	**59**	*eP*	**Pn**	**22 05 59.6**	**+1.9**
ALCI				*eS*	**Sn**	**22 06 56.8**	**+0.6**
ALCI				IAML		22 06 58.5	
	comp=E,66nm,0.3s						
ALCI				IAML		22 06 58.5	
	comp=N,71nm,0.5s						
KUDL	**Kundal**	**5.29**	**131**	*eP*	**Pn**	**22 06 01.7**	**+0.8**
KLP	**Kalpa**	**5.36**	**90**	*eP*	**Pn**	**22 06 03.8**	**+1.7**
KLP				*eS*	**Sn**	**22 07 02.9**	**-1.1**
KLP				IAML		22 07 07.0	
	comp=E,668nm,0.5s						
KLP				IAML		22 07 07.2	
	comp=N,542nm,0.5s						
DDI	**Dehra Dun**	**5.40**	**103**	*eP*	**Pn**	**22 06 06.1**	**+3.6**
DDI				*eS*	**Sn**	**22 07 06.4**	**+1.6**
NDI	**New Delhi**	**5.45**	**122**	*eP*	**Pn**	**22 06 04.6**	**+1.5**
NDI				*eS*	**Sn**	**22 07 04.6**	**-1.3**
NDI				IAML		22 07 39.6	
	comp=E,39nm,0.6s						
NDI				IAML		22 07 42.0	
	comp=N,41nm,0.5s						
AJM	**Ajmer**	**5.76**	**156**	*eP*	**Pn**	**22 06 08.5**	**+1.1**
AJM				*eS*	**Sn**	**22 07 13.8**	**+0.2**
JOSI	**Joshimath**	**6.60**	**98**	*eP*	**Pn**	**22 06 20.7**	**+1.6**
JOSI				*eS*	**Sn**	**22 07 35.

comp=E,0.8nm,0.5s,baz=112,slow=12,SNR=1.7
comp=E,0.8nm,0.5s

NB2 NORSAR Subarra 48.73 326 P **P** **22 13 27.3 +1.1**
comp=Z,0.4nm,0.5s,baz=105,slow=7.9

NOA NORSAR Array B 48.73 326 P **P** **22 13 27.4 +1.1**
comp=Z,0.3nm,0.6s,baz=98,slow=7.8,SNR=2.2
comp=Z,0.3nm,0.6s

SPITS Spitsbergen Ar 52.32 348 P **P** **22 13 54.0 +0.9**
comp=Z,4.6nm,1.0s,baz=96,slow=11,SNR=1.5
comp=Z,4.6nm,1.0s

TORD Torodi Ar. Bea 66.52 271 P **P** **22 15 32.3 +0.1**
comp=Z,0.7nm,0.6s,baz=52,slow=5.1,SNR=6.4
comp=Z,0.7nm,0.6s

WRA Warramunga Arr 78.78 122 P **P** **22 16 45.5 +0.5**
comp=Z,0.8nm,0.6s,baz=320,slow=5.5,SNR=12
comp=Z,0.8nm,0.6s

ASAR Alice Springs 80.86 125 P **P** **22 16 57.1 +0.9**
comp=Z,0.9nm,0.5s,baz=312,slow=5.3,SNR=14
comp=Z,0.9nm,0.5s

SCB 26 22:51:53.5±1.5, 18.60S×63.56W, h21km±7km, ML3.5/2, Error ellipse: s-maj=5.7km s-min=4.0km az=2.0, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOEA	**Aiquile**	**1.65**	**284**	Pg	Pb	22 52 24.4	+1.1
AOEA	**Aiquile**	**1.65**	**284**	Pg	Pb	22 52 24.7	+1.4
AOEA				Sg	Sb	22 52 48.5	+4.7
AOEA				IAML		22 52 50.9	
	391nm,0.5s						
SOET	**ToroToro**	**2.20**	**282**	Pg	Pb	22 52 33.7	+1.0
BBSD	**Serra de San D**	**3.14**	**64**	Pn	Pb	22 52 47.4	-1.2
MOCB	**Mochara**	**3.28**	**216**	Pn	Pb	22 52 48.7	-2.7
MOCB				Sn	Sb	22 53 32.3	+1.2
MOCB				IAML		22 53 39.9	
	145nm,0.6s						
SIV	**San Ignacio**	**3.52**	**43**	Pn	Pb	22 52 52.3	-2.8
YJA	**Yavi**	**4.00**	**207**	Pn	Pb	22 52 59.0	-4.6
SOEO	**Opoqueri**	**4.11**	**270**	Pn	Pb	22 53 01.0	-4.4
BBOE	**La Paz, Chanca**	**4.58**	**292**	Pn	Pn	22 53 06.8	+4.8
SOEJ	**Jacaque**	**4.70**	**289**	Pn	Pn	22 53 09.4	+5.7
LPAZ	**La Paz**	**4.94**	**297**	Pn	Pn	22 53 11.3	+4.3
BBOD	**La Paz, Gloria**	**5.19**	**291**	Pn	Pn	22 53 15.8	+5.4
PTLB	**Pontes e Lacer**	**5.26**	**54**	Pn	Pn	22 53 16.7	+5.8

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*IDC **26** 23:05:35.0±3.1, 22.96N×144.62E, h0km, mb3.7/8, mbtmp3.7/9, ML3.7/1, Error ellipse: s-maj=132.6km s-min=21.9km az=78.0*
ISC 26 23:05:41.3±2.7, 23.0N±0.2×144.3E±0.8, h35km, n12, σ0s70/10, mb3.6/8, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**4.54**	**335**	Pn	**Pn**	**23 06 47.0**	**-0.5**
	3.3nm,0.3s,baz=108,slow=20,SNR=1.1						
JCJ				Sn	**Sn**	**23 07 38.4**	**-0.7**
	4.8nm,0.3s,baz=294,slow=23,SNR=6.3						
	14nm,0.4s						
H11N1	**WAKE ISLAND Hy**	**21.29**	**94**	T	T	23 32 38.0	
	baz=283,slow=74,SNR=7.0						
H11N2	**WAKE ISLAND Hy**	**21.29**	**94**	T	T	23 32 36.4	
	baz=283,slow=74,SNR=6.3						
H11N3	**WAKE ISLAND Hy**	**21.31**	**94**	T	T	23 32 35.5	
	baz=283,slow=74,SNR=8.7						
SONM	**Songino Array**	**39.05**	**319**	P	**P**	**23 13 05.6**	**+0.8**
	0.2nm,0.4s,baz=115,slow=6.5,SNR=2.1						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**43.73**	**194**	P	**P**	**23 13 42.6**	**-0.8**
	0.2nm,0.4s,baz=18,slow=9.0,SNR=5.6						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**47.44**	**193**	P	**P**	**23 14 12.1**	**-0.5**
	0.2nm,0.6s,baz=17,slow=9.7,SNR=2.0						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**54.61**	**312**	P	**P**	**23 15 06.6**	**+0.2**
	0.5nm,0.7s,baz=86,slow=10,SNR=6.4						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**57.32**	**316**	P	**P**	**23 15 25.4**	**-0.2**
	0.2nm,0.3s,baz=94,slow=7.7,SNR=4.1						
	0.2nm,0.3s						
BVAR	**Borovoye Array**	**62.39**	**319**	P	**P**	**23 16 01.0**	**+0.5**
	1.6nm,0.4s,baz=87,slow=7.0,SNR=14						
	1.6nm,0.4s						
KBZ	**Khabaz**	**82.23**	**314**	P	**P**	**23 17 59.9**	**+0.9**
	2.0nm,0.8s,baz=81,slow=4.3,SNR=7.0						
	2.0nm,0.8s						
FINES	**FINESS Array B**	**82.49**	**335**	P	**P**	**23 17 59.7**	**-0.3**
	1.1nm,0.7s,baz=64,slow=4.4,SNR=6.0						
	1.1nm,0.7s						

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*GII **26** 23:21:19.6±0.0, 34.934N±0.002×35.237E±0.001, h0km, Mws2.6, confirmed*
*GRAL **26** 23:21:20.6±0.3, 34.98N×35.32E, h4km±4km, MD3.3*
*AFAD **26** 23:21:22.2, 35.09N×35.07E, h4km±2km, ML2.6*
*ISK **26** 23:21:25.3, 35.14N×35.03E, h21km, ML1.8/9*
ISC 26 23:21:18.7±1.5, 34.99N±0.02×35.38E±0.04, h3km±13km, n37, σ1s15/58, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BEIL	**Beino**	**0.80**	**124**	*e*P	**Pn**	**23 21 35.6**	**-1.4**
BEIL				*e*S	**Sn**	**23 21 46.7**	**-2.8**
HWQ	**Hawqa**	**0.85**	**146**	*e*P	**Pb**	**23 21 36.2**	**0.0**
HWQ				*e*S	**Sb**	**23 21 47.9**	**-0.3**
BHL	**Bhannes**	**1.11**	**168**	*e*P	**Pb**	**23 21 40.3**	**-0.3**
BEYL	**Beirut**	**1.12**	**175**	*e*P	**Pb**	**23 21 40.5**	**-0.2**
EREN	**Erenkoy**	**1.12**	**299**	Pg	**Pb**	**23 21 41.5**	**+0.7**
ERES	**Erenkoy**	**1.12**	**299**	P	**Pb**	**23 21 41.8**	**+1.0**
EREN				S	**Sb**	**23 21 57.4**	**+1.5**
YAYL	**Yayladag**	**1.20**	**30**	P	**Pn**	**23 21 44.9**	**+2.3**
YAYL				S	**Sn**	**23 22 02.3**	**+2.9**
YAYL				IAML		23 22 04.0	
	comp=N,136nm,0.4s						
YAYL				IAML		23 22 04.0	
	comp=E,83nm,0.3s						
ZAHL	**Zahle**	**1.21**	**159**	*e*P	**Pb**	**23 21 42.2**	**-0.1**
DQRL	**Deir Qamar**	**1.29**	**173**	*e*P	**Pn**	**23 21 43.4**	**-0.4**
QRWL	**Qaraoun**	**1.46**	**170**	*e*P	**Pn**	**23 21 46.1**	**0.0**
RCY	**Rachaya**	**1.54**	**166**	*e*P	**Pn**	**23 21 47.6**	**+0.4**
RHAN	**Hatay/Reyhanl**	**1.61**	**38**	P	**Pg**	**23 21 49.3**	**-0.3**
RHAN				S	**Sg**	**23 22 11.0**	**+0.5**
RHAN				IAML		23 22 12.0	
	comp=N,60nm,0.4s						
RHAN				IAML		23 22 12.0	
	comp=E,104nm,0.6s						
NATI	**Neve Ativ**	**1.75**	**170**	P	**Pn**	**23 21 50.0**	**0.0**
NATI				S	**Sb**	**23 22 14.0**	**+0.1**
GEM	**Giv'at Ha'Em**	**1.79**	**172**	P	**Pn**	**23 21 50.6**	**+0.1**
GEM				S	**Sn**	**23 22 14.4**	**+0.5**
KIZK	**Mersin**	**1.79**	**326**	Pn	**Pb**	**23 21 52.0**	**-0.2**
KIZK				Sn	**Sn**	**23 22 11.6**	**-2.3**
IKL	**Isikli**	**1.86**	**313**	Pn	**Pn**	**23 21 52.5**	**+1.1**
GULN	**MERSIN_Gulnar**	**1.91**	**309**	P	**Pn**	**23 21 51.6**	**-0.5**
GULN				S	**Sn**	**23 22 13.7**	**-3.1**
MMC7	**Mount Meron ar**	**1.96**	**180**	P	**Pn**	**23 21 53.3**	**+0.3**
MMA0B	**Mount Meron ar**	**1.97**	**179**	P	**Pn**	**23 21 53.3**	**+0.2**
MMA0B				S	**Sn**	**23 22 18.7**	**+0.3**
HASA	**Hatay-Hassa-Ha**	**1.97**	**27**	P	**Pg**	**23 21 57.2**	**+0.7**
HASA				S	**Sg**	**23 22 22.5**	**+0.3**
HASA				IAML		23 22 26.0	
	comp=N,44nm,0.4s						
KEBE	**Keben-Mersin**	**1.98**	**318**	Pn	**Pn**	**23 21 54.4**	**+1.1**
KSHT	**Keshet**	**2.04**	**170**	P	**Pn**	**23 21 55.3**	**+1.3**
KSHT				S	**Sn**	**23 22 20.9**	**+1.0**
TEVE	**Tevekalti-Mers**	**2.13**	**313**	Pn	**Pn**	**23 21 56.4**	**+1.1**
TEVE				Sn	**Sn**	**23 22 19.2**	**-3.2**
OFRI	**`Ofer**	**2.39**	**188**	P	**Pn**	**23 21 59.3**	**+0.5**
OFRI				S	**Sn**	**23 22 28.5**	**-0.1**
KOZT	**Kozan**	**2.51**	**8**	Pn	**Pb**	**23 22 04.9**	**+0.4**
MMLI	**Mount Malkishu**	**2.55**	**179**	P	**Pn**	**23 22 01.6**	**+0.6**
KERG	**Konya-Eregli**	**2.62**	**338**	P	**Pn**	**23 22 02.1**	**0.0**
KERG				IAML		23 22 31.0	
	comp=N,32nm,2.8s						
KERG				S	**Sn**	**23 22 33.3**	**-1.3**
GAZ	**Gaziantep**	**2.64**	**34**	Pn	**Pg**	**23 22 08.8**	**-0.4**
CMRD	**Camardi-Nigde**	**2.68**	**353**	Pn	**Pb**	**23 22 06.2**	**-1.3**
HMDT	**Nahal Hemdat**	**2.73**	**177**	P	**Pn**	**23 22 04.1**	**+0.6**
HMDT				S	**Sn**	**23 22 37.8**	**+0.7**
SLTI	**Sal'it**	**2.76**	**186**	P	**Pn**	**23 22 04.2**	**+0.4**
SLTI				S	**Sn**	**23 22 37.6**	**-0.1**
KMRS	**Kahramanmaras**	**2.80**	**26**	Pn	**Pg**	**23 22 10.3**	**-2.0**
DSI	**Dead Sea**	**3.41**	**180**	P	**Pn**	**23 22 13.1**	**+0.2**
DSI				S	**Sn**	**23 22 53.4**	**-0.4**
AMAZ	**Amatzia**	**3.47**	**186**	P	**Pn**	**23 22 13.8**	**+0.1**
AMAZ				S	**Sn**	**23 22 55.2**	**-0.2**
YTIR	**Yattir**	**3.62**	**184**	P	**Pn**	**23 22 16.3**	**+0.4**
YTIR				S	**Sn**	**23 22 59.7**	**+0.5**
GHAJ	**Ghor Haditha**	**3.68**	**177**	P	**Pn**	**23 22 17.4**	**+0.9**
PRNI	**Paran**	**4.64**	**184**	P	**Pn**	**23 22 30.0**	**+0.3**
PRNI				S	**Sn**	**23 23 24.8**	**+0.6**

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*GUC **26** 23:26:19.4±0.7, 30.61S×71.68W, h36km±2km, ML3.9*
*SJA **26** 23:26:20.0±1.0, 30.53S×71.81W, h65km, ML3.7, MW3.5*
ISC 26 23:26:19.1±1.4, 30.60S±0.03×71.80W±0.07, h26km±7km, n30, σ2s40/51, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.16**	**118**	*e*P	**Pb**	**23 26 24.8**	**+0.3**
CO06				*i* S	**Sb**	**23 26 28.1**	**+0.1**
CO06				IAML		23 26 29.1	
	comp=N,48μm,0.3s						
CO05	**La Serena**	**0.83**	**36**	*e*P	**Pb**	**23 26 34.1**	**-0.8**
CO05				*i* S	**Sb**	**23 26 44.4**	**-1.3**
CO05				IAML		23 26 47.6	
	comp=N,5μm,0.4s						
CO02	**Combarbal**	**0.91**	**132**	*e*P	**Pb**	**23 26 34.8**	**-1.6**
CO02				*i* S	**Sb**	**23 26 46.2**	**-2.0**
CO02				IAML		23 26 46.9	
	comp=N,15μm,0.2s						
GO04	**Tololo Observa**	**0.96**	**64**	*e*P	**Pb**	**23 26 35.9**	**-1.3**
GO04				*i* S	**Sb**	**23 26 48.0**	**-1.7**
CO03	**El Pedregal**	**0.98**	**104**	*e*P	**Pn**	**23 26 36.0**	**-1.4**
CO03				*i* S	**Sb**	**23 26 47.8**	**-2.4**
CO03				IAML		23 26 51.0	
	comp=E,5μm,0.3s						
CO01	**Juntas del Tor**	**1.60**	**68**	*e*P	**Pn**	**23 26 45.9**	**0.0**
CO01				*i* S	**Sn**	**23 27 05.2**	**-0.7**
CO04	**Los Peladeros**	**1.60**	**154**	*e*P	**Pn**	**23 26 46.2**	**+0.2**
CO04				*i* S	**Sb**	**23 27 07.1**	**-1.1**
CO04				IAML		23 27 11.6	
	comp=N,3μm,0.5s						
LCO	**Las Campanas**	**1.85**	**31**	*e*P	**Pn**	**23 26 49.3**	**-0.1**
LCO				*i* S	**Sn**	**23 27 13.3**	**+1.3**
VA06	**Catapilco**	**2.00**	**168**	*e*P	**Pn**	**23 26 51.2**	**0.0**
VA06				*i* S	**Sn**	**23 27 16.9**	**+1.5**
VA06				IAML		23 27 22.8	
	comp=E,1μm,0.5s						
AROD	**Rodeo**	**2.05**	**78**	*e*P	**Pb**	**23 26 54.6**	**-1.3**
AROD				*e*S	**Sb**	**23 27 20.6**	**-0.6**
ACDV	**Cuesta del Vie**	**2.35**	**80**	*e*P	**Pb**	**23 26 59.4**	**-1.5**
ACDV				IAML		23 27 39.9	
	comp=Z,216nm,0.5s						
VA03	**San Esteban**	**2.41**	**154**	*e*P	**Pn**	**23 26 57.6**	**+0.7**
VA03				*i* S	**Sn**	**23 27 26.4**	**+0.8**
VA03				IAML		23 27 37.6	
	comp=E,1μm,0.5s						
ROCH	**El Roble**	**2.46**	**164**	*e*P	**Pn**	**23 26 57.9**	**+0.2**
ROCH				*i* S	**Sn**	**23 27 28.8**	**+1.8**
AUSP	**Uspallata**	**2.62**	**129**	*e*P	**Pn**	**23 27 02.9**	**+2.9**
AUSP				*e*S	**Sb**	**23 27 36.2**	**-1.2**
ZON	**Zonda**	**2.84**	**110**	*e*P	**Pn**	**23 27 05.7**	**+2.9**
ZON				*e*S	**Sb**	**23 27 44.1**	**+0.7**
ZON				IAML		23 27 59.6	
	comp=Z,134nm,0.6s						
SJA	**San Juan**	**2.93**	**109**	*e*P	Pn	23 26 59.5	-4.5
SJA				IAML		23 27 50.4	
	comp=Z,183nm,0.3s						
RTLL	**Cerro Villicun**	**2.95**	**105**	*e*P	**Pn**	**23 27 06.6**	**+2.3**
RTLL				*e*S	**Sn**	**23 27 42.0**	**+3.2**
RTLL				IAML		23 28 01.4	
	comp=Z,210nm,0.4s						
ASAL	**Salagasta**	**3.21**	**129**	*e*P	**Pn**	**23 27 11.8**	**+3.8**
ASAL				*e*S	**Sb**	**23 27 52.0**	**-2.3**
ASAL				IAML		23 27 58.5	
	comp=Z,0.1nm,0.5s						
ARCO	**CERRO ARCO**	**3.31**	**133**	*e*P	**Pb**	**23 27 13.7**	**-3.5**
ARCO				IAML		23 28 07.1	
	comp=Z,233nm,0.3s						
AAGR	**Agrelo**	**3.54**	**135**	*e*P	**Pn**	**23 27 16.1**	**+3.7**
AAGR				IAML		23 28 17.0	
	comp=Z,228nm,0.6s						
VCA	**Vinchina**	**3.64**	**60**	*e*P	**Pn**	**23 27 18.0**	**+4.1**
VCA				*e*S	**Sb**	**23 28 04.0**	**-2.5**
VCA				IAML		23 28 15.6	
	comp=Z,422nm,0.7s						
AVFE	**Valle Fertil**	**3.74**	**92**	*e*P	**Pn**	**23 27 17.4**	**+2.1**
AVFE				IAML		23 28 20.0	
	comp=Z,126nm,0.6s						
ACAN	**Cantantal**	**4.28**	**114**	*e*P	**Pn**	**23 27 24.8**	**+2.2**
ACAN				IAML		23 28 43.5	
	comp=Z,338nm,0.4s						
ACLC	**CERRO LA CRUZ**	**4.36**	**76**	*e*P	**Pn**	**23 27 26.0**	**+2.2**
ACLC				*e*S	**Sb**	**23 28 21.0**	**-6.4**
ACLC				IAML		23 28 27.8	
	comp=Z,118nm,0.4s						
ACHE	**Chepes**	**4.45**	**99**	*e*P	**Pn**	**23 27 26.6**	**+1.6**
ACHE				*e*S	**Sn**	**23 28 21.5**	**+5.4**
TINO	**Tinogasta**	**4.47**	**57**	*e*P	**Pn**	**23 27 27.6**	**+2.2**
TINO				*e*S	**Sb**	**23 28 27.5**	**-3.1**
AANI	**Anillaco**	**4.59**	**68**	*e*P	**Pn**	**23 27 29.7**	**+2.7**
AANI				*e*S	**Sn**	**23 28 24.0**	**+4.5**
AANI				IAML		23 28 34.4	
	comp=Z,547nm,0.8s						
MRA	**San Martin**	**5.50**	**111**	*e*P	**Pn**	**23 27 40.4**	**+1.0**
MRA				IAML		23 29 19.4	
	comp=Z,66nm,0.8s						
TCA	**Tanti**	**6.23**	**99**	*e*P	**Pn**	**23 27 49.5**	**+0.1**
TCA				*e*S	**Sn**	**23 28 59.3**	**-0.6**
TCA				IAML		23 29 08.3	
	comp=Z,48nm,0.5s						
FSA	**Cafayete**	**6.80**	**50**	*e*P	**Pn**	**23 27 58.8**	**+1.4**

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*IDC **26** 23:28:55.3±0.7, 48.99N×157.94E, h0km, mb4.0/23, mbtmp4.0/26, ML3.5/3, MS3.4/4, Error ellipse: s-maj=18.5km s-min=14.2km az=145.0*
*KRSC **26** 23:28:57.5±1.5, 49.19N×158.45E, h41km±43km, Ml4.5*
*MOS **26** 23:28:59.7±1.0, 49.15N×157.95E, h40km, mb4.6/31, Error ellipse: s-maj=9.9km s-min=3.9km az=92.4*
*SKHL **26** 23:28:59.1±0.6, 49.10N×158.10E, h42km±4km, mb5.1/3*
*NEIC **26** 23:29:01.2±1.1, 49.1N±0.1×157.9E±0.1, h34km±5km, mb4.4/45, Error ellipse: s-maj=17.4km s-min=11.1km az=139.0*
ISC 26 23:29:01.5±1.2, 49.05N±0.07×158.02E±0.05, h37km±5km, n204, σ1s66/213, mb4.3/64, MS4.2/3, 10C-1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.04**	**324**	PN	**Pn**	**23 29 31.0**	**-2.2**
SKR				*S*	**Sn**	**23 29 55.8**	**-1.7**
SKR	**Severo-Kuril's**	**2.04**	**324**	*e*P	**Pn**	**23 29 31.1**	**-2.2**
SKR				*e*S	**Sn**	**23 29 55.8**	**-1.7**
SKR	**Severo-Kuril's**	**2.04**	**324**	*e*P	**Pn**	**23 29 31.0**	**-2.2**
SKR				AMB	AMB	23 29 33.0	
	1μm,0.6s						
SKR				*e*S	**Sn**	**23 29 55.1**	**-2.4**
SKR				A	A	23 29 59.7	
	2μm,0.5s						
SKR				A	A	23 29 59.7	
	970nm,0.5s						
PAU	**Pauzhetka**	**2.54**	**343**	PN	**Pn**	**23 29 38.4**	**-1.6**
PAU				*S*	**Sn**	**23 30 09.2**	**-0.4**
PAU	**Pauzhetka**	**2.54**	**343**	*e*P	**Pn**	**23 29 38.5**	**-1.6**
PAU				*e*S	**Sn**	**23 30 09.3**	**-0.4**
PAU	**Pauzhetka**	**2.54**	**343**	*e*P	**Pn**	**23 29 38.4**	**-1.6**
PAU				AMB	AMB	23 29 41.5	
	140nm,0.4s						
PAU				*e*S	**Sn**	**23 30 08.0**	**-1.7**
PAU				A	A	23 30 15.4	
	400nm,0.3s						
PAU				A	A	23 30 15.4	
	670nm,0.3s						
KDTR	**Khodutka, Kamc**	**2.76**	**1**	PN	**Pn**	**23 29 40.7**	**-2.4**
KDTR				*S*	**Sn**	**23 30 11.9**	**-3.2**
KDTR	**Khodutka, Kamc**	**2.76**	**1**	*e*P	**Pn**	**23 29 40.8**	**-2.4**
KDTR				*e*S	**Sn**	**23 30 11.9**	**-3.2**
KDTR	**Khodutka, Kamc**	**2.76**	**1**	*e*P	**Pn**	**23 29 40.7**	**-2.4**
KDTR				*e*S	**Sn**	**23 30 11.9**	**-3.2**
MIPR	**Malaya Ipel'ka**	**3.33**	**347**	PN	**Pn**	**23 29 49.7**	**-1.2**
MIPR	**Malaya Ipel'ka**	**3.33**	**347**	*e*P	**Pn**	**23 29 49.7**	**-1.2**
ASAK	**Asacha**	**3.34**	**359**	PN	**Pn**	**23 29 49.6**	**-1.5**
ASAK	**Asacha**	**3.34**	**359**	*e*P	**Pn**	**23 29 49.6**	**-1.5**
RUS	**Russkaya**	**3.40**	**5**	PN	**Pn**	**23 29 49.7**	**-2.2**
RUS				S	**Sn**	**23 30 27.0**	**-3.9**
RUS	**Russkaya**	**3.40**	**5**	*e*P	**Pn**	**23 29 49.7**	**-2.2**
RUS				*e*S	**Sn**	**23 30 27.0**	**-3.9**
RUS	**Russkaya**	**3.40**	**5**	*e*P	**Pn**	**23 29 49.7**	**-2.2**
RUS				*e*S	**Sn**	**23 30 27.0**	**-3.9**
MTVR	**Mutnovka**	**3.44**	**2**	PN	**Pn**	**23 29 50.7**	**-1.8**
MTVR				S	**Sn**	**23 30 29.8**	**-2.2**
MTVR	**Mutnovka**	**3.44**	**2**	*e*P	**Pn**	**23 29 50.8**	**-1.8**
MTVR				*e*S	**Sn**	**23 30 29.9**	**-2.2**
GRL	**Gorelyy**	**3.50**	**1**	PN	**Pn**	**23 29 51.9**	**-1.5**
GRL	**Gorelyy**	**3.50**	**1**	*e*P	**Pn**	**23 29 51.9**	**-1.5**
KRMR	**Karymshinskiy**	**3.78**	**1**	PN	**Pn**	**23 29 55.6**	**-1.5**
KRMR	**Karymshinskiy**	**3.78**	**1**	*e*P	**Pn**	**23 29 55.7**	**-1.5**
KRMR	**Karymshinskiy**	**3.78**	**1**	*e*P	**Pn**	**23 29 55.6**	**-1.5**
APC	**Apacha**	**3.92**	**352**	PN	**Pn**	**23 29 57.8**	**-1.1**
APC	**Apacha**	**3.92**	**352**	*e*P	**Pn**	**23 29 57.8**	**-1.1**
PET	**Petropavlovsk**	**4.00**	**5**		**Pn**	**23 29 58.4**	**-1.7**
PET	**Petropavlovsk**	**4.00**	**5**	*e*PN	**Pn**	**23 29 58.2**	**-1.9**
PET				*e*S	**Sn**	**23 30 44.5**	**-1.1**
PET				pmax	pmax		
	comp=Z,318nm,0.6s						
PET				smax	smax		
	comp=E,237nm,0.8s						
PET				MLR	MLR		
	comp=Z,300nm,13.0s						
PET	**Petropavlovsk**	**4.00**	**5**	*e*P	**Pn**	**23 29 58.4**	**-1.7**
PET	**Petropavlovsk**	**4.00**	**5**	*e*P	**Pn**	**23 29 58.2**	**-1.9**
PET				AMB	AMB	23 29 58.9	
	comp=Z,260nm,0.5s						
PET				*e*S	**Sn**	**23 30 42.4**	**-3.2**
PET				A	A	23 30 45.5	
	comp=Z,100nm,0.2s						
PET				A	A	23 30 45.5	
	comp=Z,110nm,0.2s						
DALK	**Dalny**	**4.01**	**6**	PN	**Pn**	**23 29 58.5**	**-1.7**
DALK				S	**Sn**	**23 30 43.3**	**-2.6**
DALK	**Dalny**	**4.01**	**6**	*e*P	**Pn**	**23 29 58.6**	**-1.7**
DALK				*e*S	**Sn**	**23 30 43.3**	**-2.6**
DALK	**Dalny**	**4.01**	**6**	*e*P	**Pn**	**23 29 58.5**	**-1.7**
UGLR	**Uglovaya**	**4.19**	**7**	PN	**Pn**	**23 30 01.4**	**-1.5**
UGLR	**Uglovaya**	**4.19**	**7**	*e*P	**Pn**	**23 30 01.4**	**-1.5**
NLC	**Nalytchevo**	**4.21**	**11**	PN	**Pn**	**23 29 59.7**	**-3.3**
NLC	**Nalytchevo**	**4.21**	**11**	*e*P	**Pn**	**23 29 59.7**	**-3.3**
AVH	**Avacha**	**4.24**	**6**	PN	**Pn**	**23 30 02.4**	**-1.1**
AVH	**Avacha**	**4.24**	**6**	*e*P	**Pn**	**23 30 02.4**	**-1.1**
AVH	**Avacha**	**4.24**	**6**	*e*P	**Pn**	**23 30 02.4**	**-1.1**
SPN	**Mys Shipunski**	**4.24**	**17**	PN	**Pn**	**23 30 00.6**	**-2.8**
SPN	**Mys Shipunski**	**4.24**	**17**	*e*P	**Pn**	**23 30 00.7**	**-2.8**
SMAR	**Somma**	**4.25**	**6**	PN	**Pn**	**23 30 01.9**	**-1.8**
SMAR	**Somma**	**4.25**	**6**	*e*P	**Pn**	**23 30 01.9**	**-1.8**
KOK	**Koryaka**	**4.26**	**5**	PN	**Pn**	**23 30 03.1**	**-0.7**
KOK	**Koryaka**	**4.26**	**5**	*e*P	**Pn**	**23 30 03.1**	**-0.7**
KOK	**Koryaka**	**4.26**	**5**	*e*P	**Pn**	**23 30 03.1**	**-0.7**
KRER	**Koryakskii**	**4.28**	**6**	PN	**Pn**	**23 30 03.2**	**-1.0**
KRER	**Koryakskii**	**4.28**	**6**	*e*P	**Pn**	**23 30 03.3**	**-1.0**
KRX	**Arik**	**4.33**	**5**	PN	**Pn**	**23 30 03.8**	**-1.0**
KRX	**Arik**	**4.33**	**5**	*e*P	**Pn**	**23 30 03.9**	**-1.0**
GNL	**Ganaly**	**4.65**	**359**	PN	**Pn**	**23 30 08.3**	**-0.9**
GNL	**Ganaly**	**4.65**	**359**	*e*P	**Pn**	**23 30 08.3**	**-0.9**
KBTR	**Krutoberegovo**	**7.74**	**20**	PN	**Pn**	**23 30 49.2**	**-2.1**
KBTR	**Krutoberegovo**	**7.74**	**20**	*e*P	**Pn**	**23 30 49.3**	**-2.1**
BKI	**Bering**	**7.86**	**35**	PN	**Pn**	**23 30 49.8**	**-3.3**
BKI	**Bering**	**7.86**	**35**	*e*P	**Pn**	**23 30 49.8**	**-3.3**
YSS	**Yuzhno-Sakhali**	**10.45**	**264**	Pn	Pn	23 31 24.0	-4.5
YSS	**Yuzhno-Sakhali**	**10.45**	**264**	*e*PN	Pn	23 31 39.5	+11
YSS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
YSS	**Yuzhno-Sakhali**	**10.45**	**264**	*e*P	**Pn**	**23 31 28.3**	**-0.2**
MA2	**Magadan**	**11.35**	**341**	LR	LR	23 35 53.1	
	comp=Z,130nm,20.9s,baz=86,slow=37						
JKA	**Kamikawa-asahi**	**11.70**	**251**	Pn	**Pn**	**23 31 44.5**	**-1.2**
ASAJ	**Asahikawa**	**11.70**	**251**	Pn	**Pn**	**23 31 44.0**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=64,slow=11,SNR=3.8						
	comp=Z,6.1nm,0.7s						
ASAJ	**Asahikawa**	**11.70**	**251**	PN	**Pn**	**23 31 44.5**	**-1.2**
SEY	**Seymchan**	**14.26**	**349**	*i* P	**Pn**	**23 32 21.5**	**+1.0**
KLR	**Kul'dur**	**17.17**	**281**	P	**Pn**	**23 32 56.9**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=91,slow=8.3,SNR=6.8						
KLR				LR	LR	23 39 38.7	
	comp=Z,44nm,21.3s,baz=64,slow=38						
	comp=Z,2.0nm,0.7s						
KLR	**Kul'dur**	**17.17**	**281**	*ce*P	**P**	**23 32 59.3**	**-0.2**
KLR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
VLA	**Vladivostok**	**19.02**	**262**	*i* P	**Pn**	**23 33 22.0**	**+1.1**
VLA				pmax	pmax		
	comp=Z,28nm,0.9s						

	comp=Z,2.0nm,1.0s									
F31M	**Tsiigehtchic**	**37.91**	**36**		P	**P**	**23 36 14.9**	**+0.3**
F31M					IAmb	IAmb	23 36 15.7	
	comp=Z,4.3nm,0.8s									
NRIK	**Noril'sk**	**38.54**	**328**	*i*	P	**P**	**23 36 18.5**	**-1.4**
NRIK					pmax	pmax				
	comp=Z,2.0nm,1.0s									
A36M	**Sachs Harbour**	**40.30**	**28**			**P**	**23 36 33.4**	**-1.0**
A36M					IAmb	IAmb	23 36 36.4			
	comp=Z,5.8nm,0.9s									
GTA2	**Gaotai**	**41.86**	**279**	*e*	P	**P**	**23 36 48.0**	**+0.1**
GTA2					pmax	pmax				
	comp=Z,3.0nm,0.8s									
ZALV	**Zalesovo Beam**	**43.96**	**305**		P	**P**	**23 37 02.9**	**-1.6**
	comp=Z,0.8nm,0.6s,baz=78,slow=7.5,SNR=3.3									
	comp=Z,0.8nm,0.6s									
YKA	**Yellowknife Ar**	**47.08**	**39**		P	**P**	**23 37 29.1**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=299,slow=8.3,SNR=4.6									
YKA					PcP	**PcP**	**23 39 00.3**	**-0.1**
	comp=Z,0.2nm,0.8s,baz=296,slow=4.2,SNR=2.6									
	comp=Z,0.4nm,0.7s									
YKA	**Yellowknife Ar**	**47.08**	**39**	*i*	P	**P**	**23 37 30.7**	**+1.7**
PZH	**PanZhiHua**	**48.58**	**264**		P	**P**	**23 37 41.3**	**0.0**
MK31	**Makanchi Array**	**48.80**	**298**	*ce*	P	**P**	**23 37 41.9**	**-0.8**
MKAR	**Makanchi Array**	**48.80**	**298**		P	**P**	**23 37 41.9**	**-0.8**
	comp=Z,2.1nm,0.9s,baz=56,slow=7.5,SNR=13									
	comp=Z,2.1nm,0.9s									
MKAR	**Makanchi Array**	**48.80**	**298**	*i*	P	**P**	**23 37 42.2**	**-0.4**
MKAR					pmax	pmax				
	comp=Z,2.0nm,0.9s									
MKAR	**Makanchi Array**	**48.80**	**298**	*e*	P	**P**	**23 37 42.3**	**-0.4**
KURK	**Kurchatov**	**48.83**	**304**		P	**P**	**23 37 42.5**	**-0.2**
KURK					IAmb	IAmb	23 37 53.7			
	comp=Z,4.1nm,0.7s									
KURK	**Kurchatov**	**48.83**	**304**	*ce*	P	**P**	**23 37 42.3**	**-0.5**
KURK					pmax	pmax				
	comp=Z,11nm,1.3s									
KURK	**Kurchatov**	**48.83**	**304**	*e*	P	**P**	**23 37 42.3**	**-0.5**
KURBB	**Kurchatov Arra**	**48.93**	**304**		P	**P**	**23 37 43.1**	**-0.4**
	comp=Z,3.1nm,0.8s,baz=64,slow=8.0,SNR=15									
	comp=Z,3.1nm,0.8s									
MAKZ	**Makanchi**	**48.98**	**298**		P	**P**	**23 37 43.1**	**-0.9**
MAKZ					IAmb	IAmb	23 37 44.1			
	comp=Z,2.7nm,1.1s									
MAKZ	**Makanchi**	**48.98**	**298**		P	**P**	**23 37 43.1**	**-0.9**
MAKZ					pmax	pmax				
	comp=Z,3.0nm,1.1s									
SPITS	**Spitsbergen Ar**	**50.91**	**351**		P	**P**	**23 37 57.7**	**-0.5**
SPITS					pmax	pmax				
	comp=Z,15nm,1.2s									
SPB2	**Spitsbergen Ar**	**50.91**	**351**		P	**P**	**23 37 58.0**	**-0.2**
BVAR	**Borovoye Array**	**51.93**	**310**		P	**P**	**23 38 05.6**	**-0.6**
	comp=Z,2.0nm,0.6s,baz=53,slow=6.6,SNR=12									
	comp=Z,2.0nm,0.6s									
BORK	**Borovoye**	**51.95**	**310**		P	**P**	**23 38 04.9**	**-1.4**
BORK					IAmb	IAmb	23 38 06.7			
	comp=Z,3.6nm,0.8s									
BORK	**Borovoye**	**51.95**	**310**		P	**P**	**23 38 04.9**	**-1.4**
BORK					pmax	pmax				
	comp=Z,4.0nm,0.8s									
BLKN	**Baker Lake**	**53.20**	**32**		P	**P**	**23 38 14.6**	**-0.8**
BLKN					IAmb	IAmb	23 38 15.7			
	comp=Z,3.5nm,0.8s									
PINE	**Pine Mountain**	**53.59**	**63**		P	**P**	**23 38 17.8**	**-1.0**
PINE					IAmb	IAmb	23 38 20.7			
	comp=Z,2.5nm,1.0s									
K05A	**Summer Lake**	**54.25**	**64**		P	**P**	**23 38 23.9**	**+0.2**
K05A					IAmb	IAmb	23 38 35.4			
	comp=Z,2.2nm,0.9s									
TARG	**Taragay, Kyrgy**	**54.33**	**295**		P	**P**	**23 38 24.9**	**+0.4**
TARG					IAmb	IAmb	23 38 27.1			
	comp=Z,2.1nm,0.7s									
TARG	**Taragay, Kyrgy**	**54.33**	**295**		P	**P**	**23 38 24.9**	**+0.4**
TARG					pmax	pmax				
	comp=Z,2.0nm,0.7s									
KDJ	**Kajisay**	**54.46**	**296**		P	**P**	**23 38 24.1**	**-1.0**
KDJ	**Kajisay**	**54.46**	**296**		P	**P**	**23 38 24.2**	**-1.0**
KDJ					pmax	pmax				
	comp=Z,6.0nm,0.8s									
BOOM	**Boomskoye usch**	**54.98**	**297**		P	**P**	**23 38 28.0**	**-0.9**
BOOM					IAmb	IAmb	23 38 29.9			
	comp=Z,4.8nm,0.9s									
BOOM	**Boomskoye usch**	**54.98**	**297**		P	**P**	**23 38 28.0**	**-0.9**
BOOM					pmax	pmax				
	comp=Z,5.0nm,0.9s									
ARTI	**Arti**	**55.62**	**318**		P	**P**	**23 38 31.9**	**-1.2**
ARTI					IAmb	IAmb	23 38 43.6			
	comp=Z,4.3nm,0.6s									
ARTI	**Arti**	**55.62**	**318**	*c*	*i*P	**P**	**23 38 33.5**	**+0.4**
ARTI					*PP	**pwP**	**23 38 50.5**	**-1.0**
ARTI							23 39 33.5			
ARTI							23 40 34.8			
ARTI					S	**S**	**23 46 15.8**	**-0.2**
ARTI					SS	**SS**	**23 49 56.5**	**-4.2**
ARTI					pmax	pmax				
	comp=Z,12nm,1.7s									
PLID	**Pearl Lake**	**55.65**	**59**		P	**P**	**23 38 33.5**	**-0.3**
SHL	**Shillong**	**55.69**	**270**		P	**P**	**23 38 34.0**	**-0.3**
SHL					IAmb	IAmb	23 38 39.1			
	comp=Z,3.2nm,0.7s									
SHL	**Shillong**	**55.69**	**270**		P	**P**	**23 38 34.0**	**-0.3**
SHL					pmax	pmax				
	comp=Z,3.0nm,0.7s									
AAK	**Ala-Archa**	**55.74**	**297**		P	**P**	**23 38 33.7**	**-0.7**
AAK					IAmb	IAmb	23 38 35.0			
	comp=Z,4.6nm,0.9s									
AAK	**Ala-Archa**	**55.74**	**297**	*ce*	P	**P**	**23 38 33.3**	**-1.0**
AAK					pmax	pmax				
	comp=Z,10.0nm,1.7s									
AAK	**Ala-Archa**	**55.74**	**297**	*e*	P	**P**	**23 38 33.3**	**-1.0**
CHTO	**Chiang Mai**	**55.83**	**259**		P	**P**	**23 38 33.6**	**-1.5**
CHTO					IAmb	IAmb	23 38 46.2			
	comp=Z,2.6nm,0.8s									
CHTO	**Chiang Mai**	**55.83**	**259**		P	**P**	**23 38 33.6**	**-1.5**
CHTO					pmax	pmax				
	comp=Z,3.0nm,0.9s									
CMAR	**Chiang Mai Arr**	**56.09**	**259**		P	**P**	**23 38 36.3**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=31,slow=7.2,SNR=6.6									
	comp=Z,0.8nm,0.4s									
CMAR	**Chiang Mai Arr**	**56.09**	**259**	*i*	P	**P**	**23 38 36.9**	**0.0**
CMAR					pmax	pmax				
	comp=Z,1.0nm,0.3s									
ARCES	**ARCESS Array B**	**56.73**	**342**		P	**P**	**23 38 39.9**	**-0.9**
	comp=Z,3.4nm,0.8s,baz=34,slow=7.3,SNR=3.9									
	comp=Z,3.4nm,0.8s									
ARCES	**ARCESS Array B**	**56.73**	**342**		P	**P**	**23 38 38.7**	**-2.1**
ARCES					IAmb	IAmb	23 38 45.7			
	comp=Z,3.8nm,1.1s									
ARCES	**ARCESS Array B**	**56.73**	**342**		P	**P**	**23 38 38.7**	**-2.1**
ARCES					pmax	pmax				
	comp=Z,4.0nm,1.1s									
PAHR	**Pah Rah Range**	**57.00**	**66**		P	**P**	**23 38 43.3**	**-0.1**
PNTR	**Pine Nut**	**57.26**	**66**		P	**P**	**23 38 45.1**	**-0.2**
PNTR					IAmb	IAmb	23 38 46.6			
	comp=Z,2.9nm,0.9s									
KSH2	**Kashi**	**57.27**	**294**		P	**P**	**23 38 45.5**	**+0.2**
KSH2					pmax	pmax				
	comp=Z,3.0nm,1.1s									
SAO	**San Andreas Ge**	**57.61**	**70**		P	**P**	**23 38 48.0**	**+0.5**
SAO					IAmb	IAmb	23 38 58.6			
	comp=Z,5.2nm,0.8s									
SAO	**San Andreas Ge**	**57.61**	**70**		P	**P**	**23 38 48.0**	**+0.5**
SAO					pmax	pmax				
	comp=Z,5.0nm,0.9s									
KK31	**Karatay Array**	**57.74**	**300**		P	**P**	**23 38 47.5**	**-0.9**
KK31					IAmb	IAmb	23 38 48.6			
	comp=Z,4.2nm,0.8s									
KK31	**Karatay Array**	**57.74**	**300**		P	**P**	**23 38 47.5**	**-0.9**
KK31					pmax	pmax				
	comp=Z,4.0nm,0.9s									
KKAR	**Karatay Array**	**57.74**	**300**		P	**P**	**23 38 47.9**	**-0.5**
KKAR	**Karatay Array**	**57.74**	**300**		P	**P**	**23 38 47.9**	**-0.5**
DRK	**Karamyk**	**59.30**	**296**		P	**P**	**23 38 58.8**	**-0.9**
DRK	**Karamyk**	**59.30**	**296**		P	**P**	**23 38 58.8**	**-0.9**
DRK					pmax	pmax				
	comp=Z,8.0nm,1.1s									
AB31	**Akbulak array**	**59.44**	**311**		P	**P**	**23 38 59.5**	**-0.6**
ABKAR	**Akbulak array**	**59.44**	**311**		P	**P**	**23 38 59.3**	**-0.8**
BTK	**Batken**	**59.51**	**297**		P	**P**	**23 39 00.3**	**-0.5**
BTK	**Batken**	**59.51**	**297**		P	**P**	**23 39 00.3**	**-0.5**
BTK					pmax	pmax				
	comp=Z,6.0nm,0.9s									
KLMR	**Klimovskoe**	**59.80**	**330**	*e*	P	**P**	**23 39 00.7**	**-1.6**
KLMR					pmax	pmax				
	comp=Z,8.0nm,0.9s									
CLC	**China Lake**	**60.59**	**68**		P	**P**	**23 39 09.0**	**+0.8**
CLC					IAmb	IAmb	23 39 10.1			
	comp=Z,2.5nm,1.0s									
CLC	**China Lake**	**60.59**	**68**		P	**P**	**23 39 09.0**	**+0.8**
CLC					pmax	pmax				
	comp=Z,3.0nm,1.0s									
PDAR	**Pinedale Array**	**60.72**	**58**		P	**P**	**23 39 09.1**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=289,slow=4.5,SNR=5.2									
	comp=Z,0.4nm,0.5s									
PSUT	**Pine Spring**	**61.04**	**64**		P	**P**	**23 39 11.5**	**0.0**
NIL	**Nilore**	**62.26**	**290**		P	**P**	**23 39 19.8**	**+0.3**
NIL	**Nilore**	**62.26**	**290**		P	**P**	**23 39 19.8**	**+0.3**
NIL					pmax	pmax				
	comp=Z,5.0nm,0.9s									
BELG	**Belogornoye**	**62.96**	**320**	*i*	P	**P**	**23 39 24.1**	**+0.3**
BELG					pmax	pmax				
	comp=Z,2.0nm,0.9s									
FINES	**FINESS Array B**	**63.31**	**336**		P	**P**	**23 39 25.2**	**-0.7**
	comp=Z,2.3nm,0.7s,baz=56,slow=6.1,SNR=9.9									
	comp=Z,2.3nm,0.7s									
OBN	**Obninsk**	**65.22**	**327**	*e*	P	**P**	**23 39 37.2**	**-1.3**
OBN					*eS	S	23 48 52.7	+34		
OBN					pmax	pmax				
	comp=Z,12nm,1.0s									
OBN					MLR	MLR				
	comp=Z,125nm,18.0s									
OBN	**Obninsk**	**65.22**	**327**	*e*	P	**P**	**23 39 37.2**	**-1.3**
NB2	**NORSAR Subarra**	**67.05**	**343**		P	**P**	**23 39 49.5**	**-0.8**
	comp=Z,6.5nm,1.2s,baz=21,slow=6.9									
NOA	**NORSAR Array B**	**67.05**	**343**		P	**P**	**23 39 49.9**	**-0.5**
	comp=Z,1.6nm,0.8s,baz=24,slow=6.5,SNR=7.3									
	comp=Z,1.6nm,0.8s									
HFS	**Hagfors**	**67.39**	**342**		P	**P**	**23 39 51.3**	**-1.1**
	comp=Z,1.6nm,0.8s,baz=68,slow=8.5,SNR=4.1									
	comp=Z,1.6nm,0.8s									
AKASG	**Malin Array Be**	**71.39**	**328**		P	**P**	**23 40 15.9**	**-1.3**
	comp=Z,2.5nm,0.6s,baz=33,slow=6.5,SNR=6.4									
	comp=Z,2.5nm,0.6s									
AKASG	**Malin Array Be**	**71.39**	**328**		IAmb	IAmb	23 40 23.0			
	comp=Z,1.5nm,0.9s									
AKASG	**Malin Array Be**	**71.39**	**328**	*i*	P	**P**	**23 40 18.7**	**+1.4**
AKASG					pmax	pmax				
	comp=Z,3.0nm,0.6s									
AKBB	**Malin Array Si**	**71.39**	**328**	*ce*	P	**P**	**23 40 17.3**	**0.0**
AKBB					pmax	pmax				
	comp=Z,5.0nm,1.4s									
KBZ	**Khabaz**	**71.56**	**316**		P	**P**	**23 40 17.7**	**-0.7**
	comp=Z,2.3nm,0.9s,baz=26,slow=5.7,SNR=5.2									
	comp=Z,2.3nm,0.9s									
KBZ	**Khabaz**	**71.56**	**316**	*ce*	P	**P**	**23 40 18.4**	**0.0**
KBZ					pmax	pmax				
	comp=Z,3.0nm,1.0s									
KBZ	**Khabaz**	**71.56**	**316**	*e*	P	**P**	**23 40 18.4**	**0.0**
WB0	**Warramunga Arr**	**71.67**	**203**		P	**P**	**23 40 17.8**	**-1.4**
WRA	**Warramunga Arr**	**71.85**	**203**		P	**P**	**23 40 19.3**	**-1.1**
	comp=Z,4.2nm,0.7s,baz=20,slow=6.3,SNR=24									
	comp=Z,4.2nm,0.7s									
WRA	**Warramunga Arr**	**71.85**	**203**		P	**P**	**23 40 19.2**	**-1.1**
TX31	**Lajitas Ar. Si**	**73.50**	**64**		P	**P**	**23 40 30.0**	**-0.3**
TX31					IAmb	IAmb	23 40 31.3			
	comp=Z,3.8nm,1.1s									
TXAR	**Lajitas Array**	**73.50**	**64**		P	**P**	**23 40 30.2**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=285,slow=4.4,SNR=17									
	comp=Z,1.4nm,0.7s									
TXAR	**Lajitas Array**	**73.50**	**64**		P	**P**	**23 40 30.1**	**-0.2**
EKA	**Eskdalemuir Ar**	**74.80**	**349**		P	**P**	**23 40 38.6**	**+1.3**
	comp=Z,0.9nm,0.5s,baz=19,slow=5.6,SNR=9.9									
	comp=Z,0.9nm,0.5s									
STHS	**Stebnicka Huta**	**75.09**	**332**	*e*	P	**P**	**23 40 39.7**	**+0.5**
STHS	**Stebnicka Huta**	**75.09**	**332**	*e*	P	**P**	**23 40 39.7**	**+0.5**
TREL	**Terrell**	**75.32**	**57**		P	**P**	**23 40 39.8**	**-1.0**
BUR08	**Bucovina Ar. S**	**75.38**	**329**		P	**P**	**23 40 40.3**	**-0.7**
BUR08					IAmb	IAmb	23 40 54.9			
	comp=Z,2.9nm,0.8s									
BURAR	**Bucovina Array**	**75.40**	**329**		P	**P**	**23 40 40.5**	**-0.5**
BURAR					IAmb	IAmb	23 40 46.7			
	comp=Z,1.7nm,0.7s									
ASAR	**Alice Springs**	**75.53**	**203**		P	**P**	**23 40 41.4**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=11,slow=5.1,SNR=14									
	comp=Z,1.3nm,0.7s									
ASAR	**Alice Springs**	**75.53**	**203**		P	**P**	**23 40 41.7**	**-0.2**
LANS	**Liptovska Anna**	**75.86**	**333**	*e*	P	**P**	**23 40 47.3**	**+3.7**
LANS					pmax	pmax				
	comp=Z,2.0nm,0.6s									
LANS	**Liptovska Anna**	**75.86**	**333**	*e*	P	**P**	**23 40 47.3**	**+3.7**
KECS	**Kecovo**	**76.15**	**332**	*e*	P	P	23 40 51.6	+6.4
KECS					pmax	pmax				
	comp=Z,13nm,1.0s									
KECS	**Kecovo**	**76.15**	**332**	*e*	P	P	23 40 51.5	+6.3
GERES	**GERESS Array B**	**77.74**	**337**		P	**P**	**23 40 54.5**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=39,slow=3.8,SNR=2.4									
	comp=Z,0.6nm,0.6s									
CONA	**Conrad Observa**	**78.00**	**335**	*ep*	P	**P**	**23 40 59.0**	**+3.3**
	comp=Z,0.9nm,0.4s									
BMRD	**Maredsous**	**78.40**	**343**	*d*	P	P	23 40 52.3	-5.5
MOA	**Molln**	**78.50**	**336**	*ep*	P	**P**	**23 41 01.8**	**+3.4**
	comp=Z,1.3nm,0.6s									
BRTR	**Keskin Array B**	**78.88**	**320**		P	**P**	**23 41 02.1**	**+1.3**
	comp=Z,0.6nm,0.8s,baz=35,slow=9.0,SNR=3.5									
	comp=Z,0.6nm,0.8s									
WTTA	**Wattenberg**	**79.73**	**337**		pP	P	**23 41 08.2**	**+2.8**
	comp=Z,2.5nm,0.8s									
MMAI	**Mount Meron Ar**	**83.66**	**315**		P	**P**	**23 41 27.5**	**+1.3**
	comp=Z,0.5nm,0.5s,baz=50,slow=9.6,SNR=2.0									
	comp=Z,0.5nm,0.5s									
NWAO	**Narrogin (SRO)**	**89.34**	**213**		LR	LR	00 20 03.5			
	comp=Z,99nm,22.0s,baz=252,slow=34									

*NEIC **26** 23:45:58.9±2.2, 14.77°N±0.06°×93.19°W±0.05, h35km±1km, mb4.8/421, Md5.1/91(MEX), Error ellipse: s-maj=10.4km s-min=6.8km az=205.0*

*IDC **26** 23:45:58.4±5.1, 15.03°N×92.75°W, h33km±37km, mb4.2/21, mbtmp4.4/22, ML4.5/1, MS3.8/33, Error ellipse: s-maj=22.5km s-min=12.7km az=61.0*

*GCG **26** 23:46:00.3±2.3, 14.74°N×93.29°W, h36km±999km, MD4.2, ML5.7, Presumed earthquake*

*GCMT **26** 23:46:00.9±0.6, 14.93°N±0.03°×93.16°W±0.04, h47km±4km, MW4.8/76, Moment Tensor Solution. s11,c11; s76,c97; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.08±.20; $M_{\theta\theta}$-0.02±.14; $M_{\phi\phi}$1.10±.14; $M_{r\theta}$1.17±.10; $M_{\theta\phi}$-0.88±.09; $M_{\phi r}$-1.43±.12; Best double couple: M_o2.28400×10^{16} NP1:ϕ_s169.00000°,δ20.00000°,λ-64.00000°. NP2: ϕ_s321.00000°,δ73.00000°,λ-99.00000°. Principal axes: T 2.5070, Plg27.0000°, Azm58.0000°; N -0.4500, Plg9.0000°, Azm324.0000°; P -2.0610, Plg61.0000°, Azm218.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MEX **26** 23:46:01.6±0.7, 14.71°N×93.33°W, h22km±52km, MD5.1*

*CATAC **26** 23:46:01.4±0.5, 15°N±3°×9°3W±°, h29km±5km, M5.5/43, mb6.0/18, mB5.9/18, MLv5.7/43, Mw(mB)5.4/18, Error ellipse: s-maj=8.3km s-min=3.4km az=49.9, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.66; $M_{\theta\theta}$0.21; $M_{\phi\phi}$0.45; $M_{r\theta}$0.85; $M_{\theta\phi}$-0.58; $M_{\phi r}$-0.73; Fault plane solution: M_o1.39286×10^{16} NP1: ϕ_s156.33525°,δ18.99159°,λ-65.84197°. NP2: ϕ_s310.95752°,δ72.72680°,λ-98.01740°. Principal axes: T 1.4967, Plg27.3004°, Azm47.3296°; N -0.2384, Plg7.6536°, Azm313.3524°; P -1.2583, Plg61.4711°, Azm209.0404°; confirmed*

*SNET **26** 23:46:06.3±1.4, 14.91°N×92.85W, h77km, ML5.5, Presumed earthquake*

ISC 26 23:46:00.7±0.7, 14.82°N±0.04°×93.18°W±0.03, h60km±6km, n891, σ1°s79/910, mb4.8/169, 12C-6D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PCIG		**0.88**	**358**			**Pn**	**23 46 17.1**	**-0.1**
PCIG						**Sn**	**23 46 29.2**	**-0.1**
PCIG		**0.88**	**358**	*i*	P	**Pn**	**23 46 17.1**	**-0.1**
PCIG					*eS	**Sn**	**23 46 29.2**	**-0.1**
THIG		**0.89**	**85**			**Pn**	**23 46 17.9**	**+0.5**
THIG						**Sn**	**23 46 30.6**	**+0.9**
THIG		**0.89**	**85**	*e*	P	**Pn**	**23 46 17.9**	**+0.5**
THIG					*S	**Sn**	**23 46 30.6**	**+0.9**
THIG		**0.89**	**85**	*i*	P	**Pn**	**23 46 17.9**	**+0.5**
THIG					*S	**Sn**	**23 46 31.5**	**+1.8**
PATR	**El Naranjo**	**0.96**	**72**			**Pn**	**23 46 18.6**	**+0.1**
PATR						**Sn**	**23 46 32.4**	**+0.7**
PAVE	**Pavencul**	**1.04**	**69**			**Pn**	**23 46 20.2**	**+0.7**
PAVE						**Sn**	**23 46 34.4**	**+0.9**
PAVE	**Pavencul**	**1.04**	**69**	*e*	P	**Pn**	**23 46 20.2**	**+0.7**
PAVE					*S	**Sn**	**23 46 34.4**	**+0.9**
SMCA	**Catarina**	**1.07**	**88**	*i*	P	**Pn**	**23 46 20.1**	**+0.3**
SMCA					*S	**Sn**	**23 46 35.4**	**+1.5**
CHUJ	**Union Juarez**	**1.07**	**75**	*e*	P	**Pn**	**23 46 20.5**	**+0.5**
CHUJ					*S	**Sn**	**23 46 35.3**	**+1.0**
RTAL	**Retalhuleu**	**1.47**	**101**			**Pn**	**23 46 25.0**	**0.0**
RTAL					Sn	**Sn**	**23 46 43.9**	**+0.5**
RTAL	**Retalhuleu**	**1.47**	**101**		P	**Pn**	**23 46 25.9**	**+0.9**
RTAL					S	**Sn**	**23 46 45.3**	**+1.9**
QUEO	**Labor Ovalle**	**1.61**	**88**	*i*	P	**Pn**	**23 46 28.9**	**+1.6**
QUEO					*S	**Sn**	**23 46 50.2**	**+2.9**
HUEH	**Huehuetenango**	**1.70**	**73**			**Pn**	**23 46 30.1**	**+1.8**
HUEH					Sn	**Sn**	**23 46 51.5**	**+2.4**
HUEH	**Huehuetenango**	**1.70**	**73**		P	**Pn**	**23 46 31.2**	**+2.9**
HUEH					S	**Sn**	**23 46 52.0**	**+2.8**
HUEH	**Huehuetenango**	**1.70**	**73**	*i*	P	**Pn**	**23 46 30.7**	**+2.4**
HUEH					*S	**Sn**	**23 46 54.1**	**+5.0**
CCIG	**Comitan**	**1.77**	**35**			**Pn**	**23 46 31.4**	**+2.2**
CCIG					Sn	**Sn**	**23 46 53.7**	**+3.0**
CCIG	**Comitan**	**1.77**	**35**	*e*	P	**Pn**	**23 46 31.6**	**+2.4**
CCIG					*eS	**Sn**	**23 46 54.3**	**+3.5**
CCIG	**Comitan**	**1.77**	**35**		P	**Pn**	**23 46 32.4**	**+3.2**
CCIG					S	**Sn**	**23 46 56.4**	**+5.7**
CCIG	**Comitan**	**1.77**	**35**	*i*	P	**Pn**	**23 46 31.5**	**+2.3**
CCIG					IAML		23 47 01.6			
	comp=N,34μm,0.4s									
STG2	**El Palmar, Qui**	**1.79**	**102**	*i*	P	**Pn**	**23 46 26.2**	**-3.3**
STG2					*S	**Sn**	**23 46 45.6**	**-5.7**
STG2					IAML		23 46 48.6			
	comp=E,471μm,0.3s									
STG8	**El Palmar, Qui**	**1.81**	**102**	*i*	P	**Pn**	**23 46 26.9**	**-3.0**
STG8					*S	**Sn**	**23 46 46.7**	**-5.2**
STG8					IAML		23 46 47.4			
	comp=N,212μm,0.4s									
STG5	**El Palmar, Qui**	**1.82**	**103**	*i*	P	**Pn**	**23 46 26.9**	**-3.0**
TGIG		**1.94**	**2**			**Pn**	**23 46 32.7**	**+1.2**
TGIG						**Sn**	**23 46 56.1**	**+1.2**
TGIG		**1.94**	**2**	*e*	P	**Pn**	**23 46 32.7**	**+1.2**
TGIG					*eS	**Sn**	**23 46 56.1**	**+1.2**
TGIG		**1.94**	**2**	*i*	P	**Pn**	**23 46 32.7**	**+1.2**
TGIG					*S	**Sn**	**23 46 56.4**	**+1.5**
TGIG					IAML		23 47 02.5			
	comp=E,14μm,0.6s									
GCG4	**OSOP**	**2.58**	**95**	*i*	P	**Pn**	**23 46 42.7**	**+2.5**
GCG4					IAML		23 47 17.5			
	comp=E,13μm,0.7s									
FG8	**Yepocapa, Chim**	**2.60**	**102**	*i*	P	**Pn**	**23 46 36.3**	**-4.2**
APG	**El Apazote**	**2.63**	**86**		Pn	**Pn**	**23 46 42.3**	**+1.2**
	comp=E,18nm,0.3s,baz=201,slow=14,SNR=373									
APG					Sn	**Sn**	**23 47 04.2**	**-7.8**
	comp=E,16nm,0.3s,baz=92,slow=15,SNR=9.8									
APG	**El Apazote**	**2.63**	**86**	*i*	P	**Pn**	**23 46 43.3**	**+2.2**
APG					*S	**Sn**	**23 47 18.2**	**+6.2**
FG16	**Alotenango, Sa**	**2.65**	**102**	*i*	P	**Pn**	**23 46 37.7**	**-3.5**
FG16					IAML		23 47 12.2			
	comp=N,63μm,0.2s									
AVCB	**Coban**	**2.76**	**76**	*i*	P	**Pn**	**23 46 45.0**	**+2.3**
PCG5	**San Vicente Pa**	**2.78**	**102**	*i*	P	**Pn**	**23 46 40.9**	**-2.2**
PCG5					*S	**Sn**	**23 47 10.4**	**-5.2**
PCG5					IAML		23 47 14.3			
	comp=N,68μm,0.5s									
CMIG	**Matias Romero**	**2.79**	**324**		Pn	**Pn**	**23 46 43.3**	**+0.3**
	comp=N,75nm,0.3s,baz=151,slow=13,SNR=314									
CMIG					Sn	**Sn**	**23 47 12.0**	**-3.4**
	comp=N,178nm,0.3s,baz=118,slow=17,SNR=11									
CMIG					LR	LR	23 47 51.1			
	comp=N,463nm,20.3s,baz=160,slow=39									
	comp=N,316nm,0.4s									
CMIG	**Matias Romero**	**2.79**	**324**			**Pn**	**23 46 43.0**	**0.0**
CMIG						**Sn**	**23 47 15.2**	**-0.1**
CMIG	**Matias Romero**	**2.79**	**324**	‖ *e*	P	**Pn**	**23 46 43.0

RANC El Ranchito 4.95 106 P Pn 23 47 15.9 +3.2
RANC S Sn 23 48 12.8 +4.1
TOIG Toxpalan 4.95 312 Pn 23 47 13.8 +1.2
TOIG Sn 23 48 14.3 +5.7
TOIG Toxpalan 4.95 312⇑ eP Pn 23 47 13.8 +1.2
TOIG i S Sn 23 48 14.3 +5.7
BLLM Bellamira 4.99 105 eP Pn 23 47 15.7 +2.5
PNIG Pinotepa 5.01 289 Pn 23 47 12.9 -0.5
PNIG Sn 23 48 04.3 -5.8
PNIG Pinotepa 5.01 289⇓ eP Pn 23 47 12.9 -0.5
PNIG i S Sn 23 48 04.3 -5.8
TXIG Tlaxiaco 5.03 299 Pn 23 47 15.1 +1.2
TXIG Sn 23 48 10.7 -0.1
TXIG Tlaxiaco 5.03 299 eP Pn 23 47 15.1 +1.2
TXIG i S Sn 23 48 10.7 -0.1
HLIG Huajuapan de L 5.35 305 Pn 23 47 19.9 +1.6
HLIG Sn 23 48 18.0 -0.7
HLIG Huajuapan de L 5.35 305 eP Pn 23 47 19.9 +1.6
HLIG i S Sn 23 48 18.0 -0.7
LCND La Caada 5.35 106 P Pn 23 47 20.4 +2.3
LCND S Sn 23 48 23.2 +4.7
TPIG Tehuac#an 5.37 312 Pn 23 47 22.6 +4.1
TPIG Sn 23 48 21.9 +2.8
TPIG Tehuac#an 5.37 312 eP Pn 23 47 22.6 +4.1
TPIG i S Sn 23 48 21.9 +2.8
CNCH Conchagua 5.41 106 P Pn 23 47 21.2 +2.1
CNCH S Sn 23 48 24.3 +4.1
FTIG Fresnillo de T 5.65 304 Pn 23 47 24.9 +2.5
FTIG Sn 23 48 23.9 -2.2
FTIG Fresnillo de T 5.65 304 i P Pn 23 47 24.9 +2.5
FTIG eS Sn 23 48 23.9 -2.2
JAUV Jalcomulco 5.69 323 Pn 23 47 21.6 -0.8
JAUV Sn 23 48 20.1 -6.7
JAUV Jalcomulco 5.69 323 eP Pn 23 47 21.9 -0.8
JAUV eS Sn 23 48 20.1 -6.7
CSGN Cosiguina Volc 5.76 108 P Pn 23 47 27.2 +3.4
CSGN S Sn 23 48 31.2 +2.5
MGIG Malinaltepec 5.76 295 Pn 23 47 25.3 +1.4
MGIG Malinaltepec 5.76 295⇑ eP Pn 23 47 25.3 +1.4
MGIG i S Sn 23 48 25.5 -3.3
LVIG Laguna Verde 5.77 328 Pn 23 47 23.5 -0.3
LVIG Sn 23 48 22.3 -6.3
LVIG Laguna Verde 5.77 328 eP Pn 23 47 23.5 -0.3
LVIG eS Sn 23 48 22.3 -6.3
TGUH Tegucigalpa,Un 5.78 97 Pn 23 47 22.0 -2.0
TGUH Tegucigalpa,Un 5.78 97 P Pn 23 47 25.7 +1.7
POTN Potosi Cosigui 5.80 108 Pn Pn 23 47 22.2 -2.0
POTN Potosi Cosigui 5.80 108 P Pn 23 47 27.7 +3.5
POTN S Sn 23 48 36.0 +6.5
TLIG Tlapa 5.84 298 Pn 23 47 24.1 -0.9
TLIG Tlapa 5.84 298⇑ iP Pn 23 47 26.9 +2.0
TLIG i S Sn 23 48 33.5 +2.8
CRIG Cruz Grande 6.03 289 Pn 23 47 27.6 +0.2
CRIG Sn 23 48 27.2 -7.9
CRIG Cruz Grande 6.03 289⇑ eP Pn 23 47 27.6 +0.2
CRIG i S Sn 23 48 27.2 -7.9
HERN Volcan Telica 6.55 109 Pn 23 47 33.5 -1.1
HERN Volcan Telica 6.55 109 P Pn 23 47 36.3 +1.7
HERN S Sn 23 48 47.7 -0.3
POLN Al Sur del Vol 6.56 108 P Pn 23 47 36.9 +2.3
POLN S Sn 23 48 44.0 -4.0
HOYN Al Sur del Vol 6.56 109 P Pn 23 47 36.4 +1.7
HOYN S Sn 23 48 50.5 +2.3
DAIG Los Arroyos 6.59 290 Pn 23 47 35.7 +0.6
DAIG Sn 23 48 48.0 -1.0
DAIG Los Arroyos 6.59 290⇑ eP Pn 23 47 35.7 +0.6
DAIG i S Sn 23 48 48.0 -1.0
PPM Popocatepetl 6.70 310⇑ eP Pn 23 47 41.2 +4.2
PPM i S Sn 23 49 04.8 +12
PPIG Popocatepetl 6.70 310 Pn 23 47 41.2 +4.2
PPIG Sn 23 49 04.8 +12
CNGA Al SSO del Vol 6.71 109 P Pn 23 47 37.8 +1.0
CNGN Cerro Negro 6.71 109 Pn 23 47 35.7 -1.1
CNGN Cerro Negro 6.71 109 P Pn 23 47 38.2 +1.4
CNGN S Sn 23 48 54.7 +2.8
CXUV Coxquihui 6.78 322 Pn 23 47 38.3 +0.6
CXUV Sn 23 48 47.9 -5.7
CXUV Coxquihui 6.78 322 eP Pn 23 47 38.3 +0.6
CXUV eS Sn 23 48 47.9 -5.7
LIMN Finca el Limon 6.85 104 P Pn 23 47 40.3 +1.7
RCVN Varillal2 6.89 99 P Pn 23 47 40.5 +1.1
MEIG Mezcala 6.91 297 Pn 23 47 41.6 +2.2
MEIG Sn 23 48 59.6 +2.9
MEIG Mezcala 6.91 297 eP Pn 23 47 41.6 +2.2
MEIG eS Sn 23 48 59.6 +2.9
YAIG Yautepec 6.92 306 Pn 23 47 42.5 +2.8
YAIG Sn 23 48 55.0 -2.1
YAIG Yautepec 6.92 306 eP Pn 23 47 42.5 +2.8
YAIG i S Sn 23 48 55.0 -2.1
MYIG Merida 6.92 28 Pn 23 47 39.5 -0.1
MYIG Sn 23 48 56.2 -0.8
MYIG Merida 6.92 28 eP Pn 23 47 39.5 -0.1
MYIG i S Sn 23 48 56.2 -0.8
COPN Copaltepe 6.93 111 P Pn 23 47 41.2 +1.5
MOM2 El Cardon 6.93 109 P Pn 23 47 42.7 +3.0
MOM2 S Sn 23 48 58.2 +1.0
PLIG Platanillo 7.02 301 Pn 23 47 43.6 +2.6
PLIG Sn 23 49 03.0 +3.5
PLIG Platanillo 7.02 301⇑ eP Pn 23 47 43.6 +2.6
PLIG i S Sn 23 49 03.0 +3.5
SAPS Ciudad Sandino 7.10 111 P Pn 23 47 45.1 +3.0
SAPS S Sn 23 49 02.8 +1.4
TEIG Tepich 7.12 40 Pn 23 47 42.2 -0.1
TEIG Tepich 7.12 40 eP Pn 23 47 41.5 -0.9
TEIG eS Sn 23 48 54.8 -7.2
TEIG Tepich 7.12 40 P Pn 23 47 42.4 +0.1
TEIG Tepich 7.12 40 P Pn 23 47 42.3 -0.1
comp=N,90µmcomp=N,5µm,0.7s
CAIG El Cayaco 7.16 289 Pn 23 47 43.7 +0.8
CAIG El Cayaco 7.16 289⇑ iP Pn 23 47 43.7 +0.8
CAIG i S Sn 23 49 30.8 +28
TISN Laguna Tiscapa 7.23 111 P Pn 23 47 47.8 +3.9
UNAN Cigeo UNAN 7.24 111 P Pn 23 47 46.9 +2.8
UNAN S Sn 23 49 09.7 +4.8
MGAN Managua 7.25 111 Pn 23 47 42.2 -2.0
MGAN Managua 7.25 111 P Pn 23 47 46.6 +2.5
comp=N,699nm,0.7s
MATN Matagalpa 7.29 104 P Pn 23 47 45.5 +0.7
MAS3 Al N del Volca 7.36 111 P Pn 23 47 48.1 +2.4
NANN Nandasmo 7.45 112 P Pn 23 47 52.0 +5.2
NANN S Sn 23 49 07.6 -2.3
BOAB BOACO BROADBAN 7.68 107 Pn 23 47 48.2 -1.8
BOAB BOACO BROADBAN 7.68 107 P Pn 23 47 52.3 +2.3
ARIG Puente Sto Nin 7.68 298 Pn 23 47 52.8 +2.8
ARIG Sn 23 49 14.0 -1.7
ARIG Puente Sto Nin 7.68 298⇓ eP Pn 23 47 52.8 +2.8
ARIG eS Sn 23 49 14.0 -1.7
DHIG Demacu 7.80 315 Pn 23 47 56.4 +4.6
DEIG Demacu 7.80 315 eP Pn 23 47 56.4 +4.6
DEIG i S Sn 23 49 47.1 +28
MORN Al O del Volca 8.03 113 P Pn 23 47 56.0 +1.2
SIUN Universidad Ur 8.23 97 Pn 23 47 56.5 -1.0
ZIIG Zihuatanejo 8.42 290 Pn 23 48 01.7 +1.5
ZIIG Zihuatanejo 8.42 290⇓ iP Pn 23 48 01.7 +1.5
ZIIG i S Sn 23 50 08.1 +34
ELI1 Hacienda Flor 8.52 118 P Pn 23 48 04.6 +3.0
JUD3 Juan Diaz 3 8.78 121 Pn 23 48 06.2 +1.0
MOIG Morelia 9.04 303 Pn 23 48 09.2 +0.4
MOIG Morelia 9.04 303 eP Pn 23 48 12.4 +3.6
MOIG i S Sn 23 50 18.1 +29
JTS Las Juntas de 9.21 118 Pn Pn 23 48 12.0 +1.1
comp=N,5.8nm,0.3s,baz=275,slow=13,SNR=20
JTS Sn Sn 23 49 48.3 -4.9
comp=N,1.7nm,0.3s,baz=156,slow=22,SNR=1.4
JTS Las Juntas de 9.21 118 Pn 23 48 10.8 -0.2
RPIG Rio Verde 9.54 318 Pn 23 48 17.2 +1.7
RPIG Rio Verde 9.54 318 eP Pn 23 48 17.2 +1.7
RPIG eS Sn 23 50 31.2 +30
GTIG Gomez Farias 9.96 326 Pn 23 48 20.4 -0.8
GTIG Gomez Farias 9.96 326 eP Pn 23 48 20.4 -0.8
GTIG i S Sn 23 50 10.1 -1.4
HDC Heredia 10.07 117 Pn Pn 23 48 21.6 -1.2
HDC Heredia 10.07 117 eP Pn 23 48 19.3 -3.5
RAFA San Farael, Vo 10.35 117 Pn Pn 23 48 24.3 -2.6
INCO Volcan de Coli 11.00 297 eP Pn 23 48 40.0 +4.2
INCO eS Sn 23 50 51.9 +14
SOMAC Volcano de Col 11.02 297 eP Pn 23 48 40.0 +4.0
SOMAC eS Sn 23 50 52.5 +15
CDAR Ciudad de Arme 11.14 293 eP Pn 23 48 37.7 +0.3
CDAR eS Sn 23 50 43.9 +3.5

CEGR Campo Tres 11.17 295⇑ eP Pn 23 48 41.6 +3.7
CEGR eS Sn 23 50 40.6 -0.7
PIRO Carate, Puerto 11.56 122 Pn 23 48 43.0 -0.1
ZAIG Zacatecas 11.89 313 Pn 23 48 47.7 -0.1
BRU2 Volcan 11.89 119 Pn 23 48 48.6 +0.9
HBVL Hebbronville 13.21 338 Pn 23 49 04.9 -0.6
CAMR Camarioca 13.85 52 Pn 23 49 14.4 +0.2
CAMR Camarioca 13.85 52 eP Pn 23 49 14.6 +0.4
MGV Manicaragua 14.46 58 eP Pn 23 49 22.2 -0.1
735A Kenedy 14.61 344 P Pn 23 49 24.5 +0.4
833A Chaparral WMA, 14.62 338 Pn 23 49 24.5 +0.2
EF04 Eagle Ford 04 14.94 344 Pn Pn 23 49 28.1 -0.3
HKT Hockley 15.25 351 P Pn 23 49 32.7 +0.3
HKT IAmb IAmb 23 49 47.0
comp=Z,56nm,1.4s
HKT Hockley 15.25 351 Pn Pn 23 49 32.6 +0.2
HKT IAmb IAmb 23 49 36.1
comp=Z,87nm,1.5s
MLDN Muldoon 15.31 347 Pn 23 49 33.2 0.0
MTDJ Mount Denham 15.38 75 Pn 23 49 34.3 0.0
MTDJ Mount Denham 15.38 75 eP P 23 49 37.9 +0.1
HNDO Hondo 15.68 340 Pn 23 49 37.9 -0.1
441A DeRidder 15.85 360 Pn 23 49 40.6 +0.5
CCCC Cccc 15.97 64 eP P 23 49 46.5 +2.3
DRIO Del Rio 16.07 336 Pn 23 49 42.7 -0.2
435B Jarrell 16.39 346 Pn 23 49 47.1 +0.2
JCT Junction City 16.73 340 P Pn 23 49 51.6 +0.4
CHIV Chivirico 16.80 70 Pn 23 49 50.8 -1.3
346A Big Creek Wild 16.84 11 Pn 23 49 51.6 -0.9
346A IAmb IAmb 23 50 09.2
comp=Z,93nm,0.9s
NATX Nacogdoches 16.91 356 Pn 23 49 52.7 -0.7
YAR Yar 16.95 69 eP Pn 23 49 51.6 -2.4
060A Indiantown 17.04 42 Pn 23 49 53.6 -1.4
451A Vernon 17.14 22 Pn 23 49 55.8 -0.4
451A IAmb IAmb 23 49 59.9
comp=Z,142nm,1.3s
DWPF Disney Wildern 17.14 38 P Pn 23 49 56.1 -0.2
DWPF IAmb IAmb 23 49 58.5
comp=Z,113nm,0.8s
SAND Sanderson 17.16 333 P 23 49 57.6 +0.2
SAND IAmb IAmb 23 50 02.0
comp=Z,88nm,1.1s
BRAL Brewton 17.21 18 Pn 23 49 56.1 -1.0
BRDY Brady 17.23 343 P P 23 49 57.8 -0.3
237A Washetta, Mont 17.27 352 P P 23 49 58.5 +0.1
553A Crawfordville 17.29 26 Pn 23 49 57.6 -0.4
TXAR Lajitas Array 17.39 328 P P 23 50 02.8 +2.8
comp=Z,30nm,1.1s,baz=146,slow=11,SNR=58
TXAR S S 23 53 16.8 -0.8
comp=Z,0.3nm,0.7s,baz=332,slow=27,SNR=0.8
TXAR Lajitas Array 17.39 328 P P 23 49 59.8 -0.2
TX31 Lajitas Ar. Si 17.39 328 P P 23 50 01.0 +1.0
RCC Rio Carpintero 17.46 70 eP Pn 23 50 00.1 -0.1
VBMS Vicksburg 17.49 8 P Pn 23 50 00.2 -0.3
VBMS IAmb IAmb 23 50 06.3
comp=Z,66nm,0.7s
656A Willston 17.50 32 Pn 23 49 60.0 -0.7
WHTX Lake Whitney, 17.53 348 P P 23 50 01.9 +0.5
OZNA Ozona 17.60 337 P P 23 50 03.0 +0.7
OZNA IAmb IAmb 23 50 07.7
comp=Z,100nm,1.5s
143A Socs Landing, 17.87 5 P P 23 50 04.6 -0.6
143A IAmb IAmb 23 50 09.6
comp=Z,69nm,0.7s
FW13 Cleburne 17.87 348 P P 23 50 04.7 -0.5
GTBY Guantanamo Bay 17.98 71 eP Pn 23 50 06.7 +0.1
TREL Terrell 18.02 352 P Pn 23 50 07.2 +0.2
TREL IAmb IAmb 23 50 11.8
comp=Z,80nm,1.1s
146A Union 18.13 11 P P 23 50 07.5 -0.5
250A Grady 18.21 19 P P 23 50 08.9 0.0
250A IAmb IAmb 23 50 14.0
comp=Z,75nm,0.8s
ALPN Alpine 18.22 330 P Pn 23 50 10.0 +0.4
NMDO Nuevo Mundo 18.25 69 P P 23 50 09.0 -0.4
NMDO Nuevo Mundo 18.25 69 eP Pn 23 50 09.9 0.0
MOAC Moa 18.30 69 eP P 23 50 08.7 -1.2
QMBU Quimbuelo 18.31 70 eP P 23 50 08.5 -1.7
Z41A Richland Creek 18.36 1 P Pn 23 50 11.2 +0.1
Z41A IAmb IAmb 23 50 15.8
comp=Z,52nm,0.7s
Z38A Mt. Pleasant 18.43 355 P Pn 23 50 12.0 0.0
SGCY Sterling City 18.50 338 P Pn 23 50 12.6 -0.3
SGCY IAmb IAmb 23 50 18.5
comp=Z,47nm,0.9s
FW06 Azle 18.50 348 P Pn 23 50 12.7 -0.1
PLPT Palo Pinto 18.51 346 P Pn 23 50 14.1 +1.2
PLPT IAmb IAmb 23 50 30.0
comp=Z,30nm,0.6s
LPIG La Paz 18.58 302 LR LR 23 57 30.1
comp=Z,156nm,18.0s,baz=120,slow=37
MNHN Monahans 18.63 334 P Pn 23 50 15.1 +0.6
MNHN IAmb IAmb 23 50 20.9
comp=Z,144nm,1.5s
ABTX Abilene, Hawle 18.67 343 P Pn 23 50 14.6 -0.4
ABTX IAmb IAmb 23 50 22.3
comp=Z,25nm,0.6s
TIGA Tifton 18.73 26 P Pn 23 50 15.2 -0.4
TIGA IAmb IAmb 23 50 32.0
comp=Z,80nm,0.9s
WLAR White Oak Lake 18.78 0 P P 23 50 14.9 -0.3
WLAR IAmb IAmb 23 50 20.1
comp=Z,129nm,1.3s
Z35A Perchaven, San 18.79 349 P Pn 23 50 16.7 +0.4
Z35A IAmb IAmb 23 50 22.9
comp=Z,47nm,0.8s
456A Hilliard 18.86 31 P P 23 50 15.2 -0.7
456A IAmb IAmb 23 50 21.3
comp=Z,83nm,0.9s
Z47A Carrollton 18.87 13 P P 23 50 16.3 +0.2
Z47A IAmb IAmb 23 50 34.5
comp=Z,59nm,0.7s
LRAL Lakeview Retre 18.98 16 P P 23 50 17.5 +0.1
LRAL IAmb IAmb 23 50 24.7
comp=Z,73nm,1.4s
CCAR Cane Creek 19.05 4 P P 23 50 17.5 -0.6
CCAR IAmb IAmb 23 50 23.2
comp=Z,47nm,0.7s
PECS Pecos 19.16 331 P P 23 50 19.3 -0.1
ODSA Odessa 19.22 335 P P 23 50 19.9 -0.2
ODSA IAmb IAmb 23 50 26.9
comp=Z,62nm,1.0s
VHRN Van Horn 19.23 328 P P 23 50 20.7 +0.4
Y45A Yeager Farm, C 19.24 9 P P 23 50 20.1 -0.1
Y45A IAmb IAmb 23 50 27.0
comp=Z,60nm,0.9s
152A Waverly Hall 19.36 22 P P 23 50 22.2 +0.7
152A IAmb IAmb 23 50 25.9
comp=Z,38nm,0.8s
WTFS Witchita Falls 19.46 347 P P 23 50 23.1 +0.6
APMT Aspermont 19.47 342 P P 23 50 22.2 -0.5
APMT IAmb IAmb 23 50 30.2
comp=Z,32nm,0.8s
SN07 Snyder 07 19.49 340 P P 23 50 22.1 -0.8
SN07 IAmb IAmb 23 50 26.5
comp=Z,22nm,0.6s
X40A Basin Creek Fa 19.58 1 P P 23 50 23.6 -0.2
MIAR Mount Ida 19.64 359 P P 23 50 23.4 -1.2
POST Post 19.67 339 P P 23 50 24.7 -0.3
POST IAmb IAmb 23 50 43.1
comp=Z,54nm,1.2s
UALR University of 19.88 2 P P 23 50 26.6 -0.5
UALR IAmb IAmb 23 50 42.8
comp=Z,34nm,0.8s
OXF Oxford 19.90 9 P P 23 50 27.4 +0.1
CLNB Carlsbad 19.91 333 P P 23 50 28.8 +1.1
Y49A Blount Mountai 19.92 17 P P 23 50 27.5 -0.1
154A Montrose 19.95 26 P P 23 50 28.8 +0.9
JAMC Jamundi, Valle 19.95 124 P Pn 23 50 30.4 -0.1
comp=Z,41nm,0.9s
GUY2C Guyana, Caldas 19.95 117 P P 23 50 29.4 +0.8
comp=Z,690nmcomp=Z,79nm,0.9s
HTMS Hat Mesa 19.98 333 P P 23 50 29.4 +0.9
DKNS Dickens 20.03 341 P P 23 50 29.2 +0.3
DKNS IAmb IAmb 23 50 35.7
comp=Z,38nm,0.8s
GDL2 Guadalupe Moun 20.08 331 P P 23 50 29.9 +0.4
X34A Smith Ranch, M 20.13 349 P Pn 23 50 31.1 -1.1
X34A IAmb IAmb 23 50 45.4
comp=Z,62nm,1.1s
MNTX Cornudas Mount 20.16 328 P P 23 50 30.8 +0.5
BBAC Balboa, Cauca 20.23 127 P Pn 23 50 33.7 -0.1

comp=Z,875nmcomp=Z,75nm,0.9s
X48A Hartselle 20.31 15 P P 23 50 32.3 +0.5
X48A IAmb IAmb 23 50 38.4
comp=Z,46nm,1.0s
POPC Popayan, Colom 20.35 125 P Pn 23 50 35.2 0.0
comp=Z,641nmcomp=Z,42nm,0.6s
257A Skidaway Islan 20.36 31 P P 23 50 32.9 +0.5
WHAR Wooly Hollow 20.40 2 P P 23 50 32.3 -0.4
WHAR IAmb IAmb 23 50 40.5
comp=Z,65nm,1.2s
WMOK Wichita Mounta 20.46 347 P P 23 50 32.9 -0.5
GOGA Godfrey 20.50 24 P P 23 50 32.6 -1.3
GOGA IAmb IAmb 23 50 47.9
comp=Z,34nm,0.5s
W35A Tecumseh 20.51 351 P P 23 50 33.0 -1.0
W35A IAmb IAmb 23 50 50.1
comp=Z,35nm,0.6s
OTAV Otavalo 20.55 134 P P 23 50 33.3 -1.7
CPRX Cap Rock 20.56 334 P P 23 50 35.9 +1.2
Y52A Lilburn 20.68 22 P P 23 50 35.4 -0.4
FNO Franklin 20.70 350 P P 23 50 36.7 +0.7
ORTC Ortega, Tolima 20.73 120 P Pn 23 50 38.8 -0.7
comp=Z,3µmcomp=Z,273nm,1.0s
HBAR Harrisburg 20.77 6 P P 23 50 36.8 +0.1
HBAR IAmb IAmb 23 50 43.9
comp=Z,47nm,0.8s
FPAL Fort Paine 20.79 18 P P 23 50 36.7 -0.3
EPT El Paso 20.80 326 P P 23 50 36.5 -0.9
OKCSW OKLAHOMA CITY 20.85 350 P P 23 50 37.0 -0.7
MSTX Muleshoe 20.94 337 P P 23 50 37.9 -0.9
MSTX IAmb IAmb 23 50 46.8
comp=Z,38nm,1.0s
FCAR Ozark Folk Cen 21.00 2 P P 23 50 38.8 -0.4
X51A Calhoun 21.04 19 P P 23 50 39.8 0.0
X51A IAmb IAmb 23 50 47.0
comp=Z,34nm,0.9s
ROSC El Rosal 21.05 116 P P 23 50 41.4 +1.0
comp=Z,31nm,0.8s,baz=300,slow=6.2,SNR=22
ROSC El Rosal 21.05 116 P P 23 50 39.5 -0.9
ROSC IAmb IAmb 23 50 45.0
comp=Z,59nm,1.1s
TUL3 Leonard 21.13 354 P P 23 50 40.0 -0.7
TUL3 IAmb IAmb 23 50 59.2
comp=Z,35nm,1.0s
DEOK Depew 21.14 353 P P 23 50 41.0 +0.3
DEOK IAmb IAmb 23 50 48.3
comp=Z,29nm,0.7s
PRAC Prado 21.14 120 P P 23 50 42.7 +1.7
comp=Z,91nm,1.0s
SMWD Samnorwood 21.17 344 P P 23 50 40.8 -0.3
OK029 Liberty Lake 21.23 350 P P 23 50 42.0 +0.3
OK029 IAmb IAmb 23 50 59.2
comp=Z,27nm,0.6s
LCAR Lake Charles 21.23 5 P P 23 50 41.0 -0.8
LCAR IAmb IAmb 23 50 49.8
comp=Z,46nm,1.3s
HALT Halls 21.28 9 P 23 50 42.3 +0.1
RLO Rose Lookout 21.32 356 IAmb IAmb 23 51 01.1
comp=Z,23nm,0.8s
SWET Sewanee 21.33 17 P P 23 50 42.9 +0.1
SWET IAmb IAmb 23 51 01.4
comp=Z,18nm,0.6s
OK052 Battle Ridge R 21.33 352 P P 23 50 42.8 0.0
OK052 IAmb IAmb 23 50 52.2
comp=Z,53nm,0.8s
SDDR Presa de Saban 21.35 76 P P 23 50 41.6 -1.6
SDDR IAmb IAmb 23 51 01.2
comp=Z,40nm,0.9s
HHAR Hobbs 21.38 358 P P 23 50 42.4 -0.9
HHAR IAmb IAmb 23 50 51.7
comp=Z,33nm,1.2s
AMTX Amarillo 21.39 341 P P 23 50 42.4 -1.1
CVER Cruz Verde, Cu 21.42 117 P P 23 50 47.6 +3.2
comp=Z,1µmcomp=Z,97nm,0.7s
PAMC Pamplona, Colo 21.42 108 P P 23 50 44.8 +0.4
comp=Z,361nmcomp=Z,27nm,0.5s
W50A Signal Mountai 21.49 18 P P 23 50 44.9 +0.4
W50A IAmb IAmb 23 51 03.1
comp=Z,33nm,0.9s
QUOK Quay 21.49 352 P P 23 50 44.6 +0.1
U38A Gravette 21.55 357 P P 23 50 45.4 +0.3
U38A IAmb IAmb 23 50 47.9
comp=Z,18nm,0.6s
V48A Smith Brothers 21.60 14 P P 23 50 45.3 -0.3
GLAT Glass 21.64 9 P P 23 50 46.2 +0.1
HODGE Hodges 21.70 25 P P 23 50 46.1 -0.6
HODGE IAmb IAmb 23 51 04.0
comp=Z,61nm,1.0s
WVT Waverly 21.75 12 P P 23 50 46.7 -0.6
WVT IAmb IAmb 23 50 55.0
comp=Z,27nm,0.7s
OK048 Pawnee Station 21.77 352 P P 23 50 46.9 -0.5
OK048 IAmb IAmb 23 50 56.8
comp=Z,44nm,0.8s
UTMT University of 21.77 9 P P 23 50 50.1 +2.6
W52A Murphy 21.83 21 P P 23 50 48.7 +0.5
W52A IAmb IAmb 23 51 07.2
comp=Z,23nm,0.6s
OK051 E0350 and S346 21.84 352 P P 23 50 47.7 -0.5
OK051 IAmb IAmb 23 50 57.6
comp=Z,48nm,0.8s
ELIS Ellis County 21.88 346 P P 23 50 48.0 -0.7
ELIS IAmb IAmb 23 50 54.4
comp=Z,46nm,1.2s
SC01 Santiago de lo 21.94 75 P P 23 50 48.6 -0.9
PH02 Texas Public H 21.94 341 P P 23 50 48.5 -0.9
PH02 IAmb IAmb 23 50 50.7
comp=Z,42nm,0.8s
VILC Villavicencio, 21.95 117 P P 23 50 50.9 +1.2
comp=Z,23µmcomp=Z,58nm,0.7s
CPCT Cooper Cave 21.96 19 P P 23 50 49.0 -0.5
CPCT IAmb IAmb 23 51 07.3
comp=Z,23nm,0.7s
PARMO Parma 21.96 7 P P 23 50 50.4 +0.9
GRTK Grand Turk 21.97 69 P P 23 50 50.4 +0.7
PBMO Poplar Bluff 22.00 6 P P 23 50 48.3 -1.6
PBMO IAmb IAmb 23 50 58.7
comp=Z,74nm,1.5s
CROK Carrier 22.01 350 P P 23 50 48.2 -1.9
CROK IAmb IAmb 23 50 59.0
comp=Z,30nm,0.8s
CLTN Cedars of Leba 22.05 15 P P 23 50 49.3 -1.1
BLOK Blackwell 22.14 351 IAmb IAmb 23 51 07.0
comp=Z,43nm,1.1s
JSC Jenkinsville 22.16 27 IAmb IAmb 23 51 01.0
comp=Z,69nm,1.2s
MGMO Mountain Grove 22.25 2 IAmb IAmb 23 51 02.4
comp=Z,48nm,1.1s
NOKA Waynoka 22.32 348 IAmb IAmb 23 50 55.1
comp=Z,30nm,0.8s
TKL Tuckaleechee C 22.40 20 LR LR 00 01 13.0
comp=Z,251nm,18.7s,baz=211,slow=41
TKL Tuckaleechee C 22.40 20 IAmb IAmb 23 51 11.4
comp=Z,27nm,0.8s
U49A Red Boiling Sp 22.59 16 IAmb IAmb 23 51 16.2
comp=Z,39nm,1.0s
T47A Sharon Grove 22.73 13 P 23 50 55.7 -2.0
V53A Saluda 22.75 22 P 23 50 59.4 +1.4
V53A IAmb IAmb 23 51 17.0
comp=Z,45nm,0.8s
Y22A Socorro 22.75 329 IAmb IAmb 23 51 10.4
comp=Z,66nm,1.1s
S39A Bolivar 22.78 360 IAmb IAmb 23 51 04.5
comp=Z,18nm,0.6s
BIRD Birdtown, Kers 22.83 28 IAmb IAmb 23 51 19.5
comp=Z,33nm,0.9s
SDV Santo Domingo 22.83 102 LR LR 00 01 18.8
comp=Z,129nm,20.4s,baz=280,slow=41
SDV Santo Domingo 22.83 102 P 23 50 56.1 -3.1
SDV IAmb IAmb 23 51 03.4
comp=Z,25nm,0.9s
SDV Santo Domingo 22.83 102 eP P 23 50 55.1 -4.1
KMSC Kings Mountain 22.87 26 P P 23 50 59.9 +0.6
KMSC IAmb IAmb 23 51 18.0
comp=Z,34nm,1.0s
MACC Macarena, Meta 22.87 122 P P 23 51 00.9 +1.5
SIUC Southern Illin 23.07 8 IAmb IAmb 23 51 21.8
comp=Z,42nm,0.8s
DR12 Loma Pena Alta 23.12 77 P P 23 51 00.9 -1.1
RTBA Rita Blanca 23.16 340 IAmb IAmb 23 51 04.8
comp=Z,33nm,0.8s
CCM Cathedral Cave 23.20 4 P 23 51 00.2 -2.3
CCM IAmb IAmb 23 51 12.6
comp=Z,20nm,0.8s
T50A Nancy 23.32 17 P P 23 51 03.0 -0.6

ABQ Albuquerque 23.33 332 P P 23 51 03.5 -0.5
ANMO Albuquerque 23.33 332 P P 23 51 02.1 -1.8
ANMO Albuquerque 23.33 332 P P 23 51 03.9 -0.1
ANMO IAmb IAmb 23 51 10.5
comp=Z,9.6nm,0.9s
ANMO Albuquerque 23.33 332 P P 23 51 04.3 +0.3
ANMO IAmb IAmb 23 51 21.3
comp=Z,6.0nm,0.6s
TASM ASL Pad, Albuq 23.33 332 P P 23 51 04.4 +0.4
TASM IAmb IAmb 23 51 12.1
comp=Z,8.5nm,0.8s
W57A Gilead 23.46 28 IAmb IAmb 23 51 17.0
comp=Z,41nm,1.1s
V55A Taylorsville 23.53 25 IAmb IAmb 23 51 19.9
comp=Z,53nm,1.5s
TUC Tucson 23.67 320 P P 23 51 07.8 +0.7
TUC IAmb IAmb 23 51 25.1
comp=Z,48nm,1.4s
U54A Nelsons Funny 23.87 23 P P 23 51 08.6 -0.2
U54A IAmb IAmb 23 51 27.0
comp=Z,38nm,1.1s
R32A Long Quarter, 24.01 349 IAmb IAmb 23 51 13.4
comp=Z,24nm,0.7s
WCI Wyandotte Cave 24.10 13 P P 23 51 09.0 -1.7
WCI IAmb IAmb 23 51 22.7
comp=Z,25nm,1.0s
OLIL Olney 24.24 10 IAmb IAmb 23 51 28.8
comp=Z,25nm,0.9s
Q44A Meyer Farm, Va 24.27 8 P P 23 51 11.2 -1.0
Q44A pP 23 51 24.2 -2.7
S51A Beattyville 24.27 19 P 23 51 13.0 +0.7
S51A IAmb IAmb 23 51 28.8
comp=Z,47nm,1.1s
U56A King 24.30 26 P P 23 51 13.1 +0.6
KSU1 Kansas State U 24.37 354 IAmb IAmb 23 51 28.0
comp=Z,18nm,0.8s
R49A Shelbyville 24.43 15 P P 23 51 13.5 -0.2
CBKS Cedar Bluff 24.59 348 P P 23 51 14.4 -0.8
CBKS IAmb IAmb 23 51 31.5
comp=Z,25nm,0.7s
P40A Paris 24.63 2 IAmb IAmb 23 51 15.1
comp=Z,17nm,0.7s
R50A Paris 24.64 17 P P 23 51 14.5 -1.2
R50A IAmb IAmb 23 51 33.0
comp=Z,36nm,1.3s
P38A Dawn 24.71 359 IAmb IAmb 23 51 23.2
comp=Z,16nm,0.6s
P43A Skaggs, Pawnee 24.93 7 IAmb IAmb 23 51 40.3
comp=Z,44nm,1.0s
BLA Blacksburg 25.02 25 IAmb IAmb 23 51 38.2
comp=Z,26nm,0.8s
P46A Rosedale 25.25 11 IAmb IAmb 23 51 40.4
comp=Z,26nm,0.8s
SDCO Great Sand Dun 25.31 337 IAmb IAmb 23 51 25.1
comp=Z,24nm,1.3s
P48A Milroy 25.47 14 IAmb IAmb 23 51 41.2
comp=Z,23nm,1.2s
KSCO Kaye Shedlock' 25.49 343 IAmb IAmb 23 51 25.9
comp=Z,44nm,1.2s
UUPR Utuado, UPR, P 25.59 79 IAmb IAmb 23 51 42.0
comp=Z,27nm,1.0s
113A Mohawk Valley, 25.87 317 P P 23 51 26.9 0.0
N38A Joes South For 25.87 360 P P 23 51 24.7 -2.2
Q52A Bidwell 25.90 20 P P 23 51 25.7 -1.4
Q52A IAmb IAmb 23 51 43.2
comp=Z,24nm,1.1s
ECPR Experimental S 25.93 79 P 23 51 27.4 -0.3
ECPR IAmb IAmb 23 51 32.9
comp=Z,12nm,0.6s
N35A Tabor 26.03 356 IAmb IAmb 23 51 32.5
comp=Z,25nm,0.6s
T59A Double "B" Far 26.08 29 IAmb IAmb 23 51 29.1
comp=Z,14nm,0.7s
SJG San Juan 26.12 79 LR LR 00 02 35.6
comp=Z,45nm,18.1s,baz=240,slow=39
MVCO Mesa Verde 26.13 331 P P 23 51 30.0 +0.5
Y14A Wickenburg 26.14 320 P P 23 51 29.6 +0.2
ATAH Atahualpa 26.29 145 LR LR 23 59 19.5
comp=Z,118nm,21.2s,baz=7.1,slow=31
O48B Farmland 26.29 14 P P 23 51 31.1 +0.5
GLA Glamis 26.75 317 P 23 51 35.3 +0.4
M44A Midewin, Midew 26.84 9 P P 23 51 35.5 -0.1
M44A IAmb IAmb 23 51 54.7
comp=Z,32nm,1.3s
PV01 Paradox Valley 26.92 332 P P 23 51 36.3 -0.3
SCIA State Center 26.99 360 P P 23 51 35.5 -1.3
PV15 Paradox Valley 27.05 333 P P 23 51 38.7 +0.9
PV15 IAmb IAmb 23 51 56.9
comp=Z,38nm,1.1s
PV13 Radium Mtn., P 27.05 332 P P 23 51 38.2 +0.4
PV13 IAmb IAmb 23 51 55.9
comp=Z,31nm,1.0s
PV02 Paradox Valley 27.05 332 P P 23 51 38.9 +1.1
PV03 Paradox Valley 27.14 332 IAmb IAmb 23 51 56.7
comp=Z,32nm,1.1s
PV18 Skein Mesa, P 27.16 332 P P 23 51 41.0 +2.3
ISCO Idaho Springs 27.16 339 P P 23 51 38.8 -0.1
PV11 David Mesa, Pa 27.19 332 P P 23 51 39.8 +0.8
L40A Anamosa 27.20 3 IAmb IAmb 23 51 41.6
comp=Z,20nm,1.0s
PV07 Paradox Valley 27.20 333 P P 23 51 39.8 +0.7
PV17 East Wray Mesa 27.21 332 P P 23 51 39.1 -0.1
PV17 IAmb IAmb 23 51 57.2
comp=Z,31nm,1.0s
PV16 Nyswonger Mesa 27.22 332 IAmb IAmb 23 51 44.4
comp=Z,13nm,0.7s
PV10 Paradox Valley 27.32 332 P P 23 51 40.1 -0.1
PV22 Blue Mesa, Par 27.34 333 P P 23 51 40.1 -0.2
PV22 IAmb IAmb 23 51 58.4
comp=Z,43nm,1.1s
PV23 Carpenter Ridg 27.38 332 P P 23 51 41.4 +0.6
BC3 Big Chuckawall 27.53 317 P 23 51 45.1 +3.1
JFWS Jewell Farm 28.11 5 P P 23 51 46.4 -0.5
JFWS IAmb IAmb 23 51 50.2
comp=Z,25nm,1.3s
ECSD EROS Data Cent 28.96 355 P P 23 51 52.6 -1.9
P17A Butcher Ranch, 28.99 331 P P 23 51 55.0 0.0
RDMU Red Mountain 29.36 334 P P 23 51 58.3 0.0
RDMU IAmb IAmb 23 52 15.8
comp=Z,21nm,1.3s
PSUT Pine Spring 29.84 326 P P 23 52 02.7 +0.1
BSUT Blindstream Ca 29.86 332 P P 23 52 02.2 -0.7
BSUT IAmb IAmb 23 52 21.0
comp=Z,16nm,1.2s
QSM Queen of Sheba 29.87 319 P P 23 52 03.4 +0.8
K22A Casper 30.02 340 IAmb IAmb 23 52 06.0
comp=Z,11nm,0.7s
CZSB Cruzeiro do Su 30.24 136 eP P 23 52 08.3 +2.2
SPMN Marine on St. 30.30 1 IAmb IAmb 23 52 11.5
comp=Z,15nm,0.5s
MPMC Manual Prospec 30.32 319 P P 23 52 07.0 +0.2
RSSD Black Hills 30.63 345 P P 23 52 08.7 -0.9
RSSD Black Hills 30.63 345 P P 23 52 08.2 -1.3
RSSD IAmb IAmb 23 52 11.1
comp=Z,10.0nm,0.7s
RSSD Black Hills 30.63 345 P P 23 52 10.4 +0.9
RSSD x x 23 52 25.5
GRAC Grapevine Rang 30.83 320 P P 23 52 11.8 +0.6
GRAC IAmb IAmb 23 52 15.2
comp=Z,16nm,1.4s
PDAR Pinedale Array 31.20 336 P P 23 52 15.3 +0.7
comp=Z,1.7nm,0.6s,baz=128,slow=10,SNR=14
PDAR PcP PcP 23 55 10.4 +2.1
comp=Z,0.7nm,0.4s,baz=140,slow=5.8,SNR=9.1
comp=Z,1.7nm,0.6s
PDAR Pinedale Array 31.20 336 P 23 52 14.6 -0.1
HVU Hansel Valley 31.76 332 P P 23 52 21.0 +1.6
HVU IAmb IAmb 23 52 37.6
comp=Z,22nm,1.1s
AHID Auburn Hatcher 31.82 335 P P 23 52 19.9 -0.1
AHID IAmb IAmb 23 52 37.4
comp=Z,13nm,0.9s
SADO Sadowa 32.14 19 LR LR 00 06 57.7
comp=Z,187nm,20.2s,baz=186,slow=40
SNOW Snow King Moun 32.26 336 P P 23 52 24.9 +1.0
PKD Bear Valley Ra 32.27 316 P P 23 52 23.6 -0.2
PKD IAmb IAmb 23 52 28.5
comp=Z,14nm,1.1s
E28A Huff 32.27 350 P P 23 52 23.0 -0.7
NVAR Mina Array Bea 32.31 321 P P 23 52 25.8 +1.4
comp=Z,6.2nm,0.7s,baz=134,slow=8.1,SNR=29
NVAR PcP PcP 23 55 12.8 +1.4
comp=Z,0.5nm,0.5s,baz=158,slow=2.3,SNR=5.0
comp=Z,6.2nm,0.7s
NVAR Mina Array Bea 32.31 321 P P 23 52 27.6 +3.2

LOHW Long Hollow 32.33 336 IAmb IAmb 23 52 42.0
comp=Z,19nm,1.1s
MOOW Moose Ponds 32.50 336 P P 23 52 26.6 +0.7
MOOW IAmb IAmb 23 52 43.3
comp=Z,10nm,0.9s
FXWY Fox Creek 32.52 336 P P 23 52 25.7 -0.4
FXWY IAmb IAmb 23 52 43.7
comp=Z,12nm,0.9s
FLWY Flagg Ranch 32.76 336 P P 23 52 29.5 +1.3
FLWY IAmb IAmb 23 52 46.5
comp=Z,9.9nm,0.8s
H17A Grant Village 32.98 337 P P 23 52 30.6 +0.4
M65A Busby, Falmout 33.03 32 P P 23 52 31.4 +1.1
baz=223
RLMT Red Lodge 33.13 339 P P 23 52 30.9 -0.5
YNE Yellowstone No 33.29 338 IAmb IAmb 23 52 35.0
comp=Z,14nm,1.0s
YMR Madison River 33.36 337 IAmb IAmb 23 52 38.3
comp=Z,19nm,0.9s
CMB Columbia Colle 33.36 319 P P 23 52 33.8 +0.5
YHH Holmes Hill 33.41 337 P P 23 52 34.4 +0.3
AGMN Agassiz Nation 33.45 357 IAmb IAmb 23 52 36.0
comp=Z,10nm,0.9s
YHL Hebgen Lake 33.59 337 IAmb IAmb 23 52 55.5
comp=Z,8.6nm,0.9s
TEFE Tefe 33.64 121 eP P 23 52 34.6 -1.3
MPK Martis Peak 33.91 321 P P 23 52 38.7 +0.4
MPK IAmb IAmb 23 52 57.4
comp=Z,9.6nm,0.9s
HLID Hailey 33.91 332 P P 23 52 38.8 +0.6
HLID IAmb IAmb 23 52 56.2
comp=Z,13nm,1.1s
MCMT McKenzie Canyo 34.24 335 P P 23 52 42.8 +1.7
BOZ Bozeman (W) 34.39 337 P P 23 52 42.6 +0.2
MFID Camas Ranch 34.46 330 P P 23 52 44.2 +1.3
MFID IAmb IAmb 23 53 03.9
comp=Z,11nm,1.1s
BEKR Beckworth 34.46 322 P P 23 52 44.0 +1.0
BEKR IAmb IAmb 23 53 01.8
comp=Z,13nm,1.4s
BOAV Boa Vista 34.51 108 P P 23 52 41.8 -1.7
BOAV IAmb IAmb 23 52 43.9
comp=Z,8.3nm,0.7s
BOAV Boa Vista 34.51 108 eP P 23 52 42.6 -0.9
DLMT Dillon 34.58 336 P P 23 52 44.3 +0.4
EPLO Experimental L 34.76 359 IAmb IAmb 23 52 49.8
comp=Z,6.0nm,0.6s
LRM Limekiln Ridge 34.90 336 P P 23 52 47.6 +0.8
WVOR Wild Horse Val 35.17 326 P P 23 52 50.0 +0.9
WVOR IAmb IAmb 23 53 08.0
comp=Z,22nm,1.4s
ULM Lac du Bonnet 35.40 357 P P 23 52 48.6 -2.1
comp=Z,4.3nm,0.6s,baz=172,slow=9.5,SNR=10
ULM PcP PcP 23 55 20.3 +0.8
comp=Z,5.1nm,0.8s,baz=167,slow=3.9,SNR=4.0
comp=Z,4.3nm,0.6s
PLID Pearl Lake 35.81 332 P P 23 52 55.4 +0.7
EGMT Eagleton 35.83 341 P P 23 52 53.4 -1.3
BMO Blue Mountains 36.24 331 IAmb IAmb 23 53 15.2
comp=Z,13nm,1.2s
MSO Missoula 36.31 336 P P 23 52 59.3 +0.6
MSO IAmb IAmb 23 53 16.0
comp=Z,16nm,1.1s
MACA Manacapuru-AM 36.82 116 P 23 53 03.5 +0.2
MACA Manacapuru-AM 36.82 116 eP P 23 53 03.3 0.0
H04A Detroit Lake 38.59 326 IAmb IAmb 23 53 35.6
comp=Z,20nm,1.0s
NEW Newport 38.76 334 P P 23 53 20.4 +1.0
C09A Chrisman Ranch 38.90 333 P P 23 53 20.6 +0.1
C09A IAmb IAmb 23 53 37.9
comp=Z,16nm,0.8s
LPAZ La Paz 39.60 140 P P 23 53 27.6 +0.3
comp=Z,3.0nm,0.7s,baz=320,slow=5.1,SNR=12
comp=Z,3.0nm,0.7s
LPAZ La Paz 39.60 140 P P 23 53 25.5 -1.8
LPAZ La Paz 39.60 140 eP P 23 53 28.1 +0.8
LPAZ La Paz 39.60 140 P P 23 53 27.8 +0.5
LPAZ PcP PcP 23 55 39.2 +5.5
LON Longmire 39.80 329 P P 23 53 29.4 +1.4
FFC Flin Flon 40.40 352 P 23 53 32.4 -0.4
FFC Flin Flon 40.40 352 P P 23 53 32.4 -0.4
MDP Montagnes des 41.01 99 LR LR 00 11 46.8
comp=Z,154nm,22.0s,baz=268,slow=38
ITTB Itaituba 41.72 114 eP P 23 53 42.9 -1.3
LLLB Lillooet 42.57 333 IAmb IAmb 23 54 08.3
comp=Z,16nm,1.0s
VILB Vilhena 42.76 129 eP P 23 53 52.3 -0.3
NPGB Novo Progresso 43.34 118 eP P 23 53 56.2 -1.2
FCC Fort Churchill 43.87 359 P 23 54 00.5 -0.5
RPN Rapa Nui 44.55 201 LR LR 00 07 55.6
comp=Z,174nm,20.2s,baz=57,slow=29
PDRB Porto dos Gac 44.66 124 eP P 23 54 07.0 -0.9
SCHQ Schefferville 44.86 21 PcP PcP 23 55 50.3 +0.5
comp=Z,5.6nm,0.5s,baz=220,slow=4.7,SNR=15
SCHQ LR LR 00 14 22.3
comp=Z,211nm,19.1s,baz=212,slow=38
CLDB Colider 44.99 122 eP P 23 54 09.3 -1.3
PTLB Pontes e Lacer 45.13 130 IAmb IAmb 23 54 30.0
comp=Z,8.6nm,0.9s
PTLB Pontes e Lacer 45.13 130 eP P 23 54 13.3 +1.7
BBSD Serra de San D 45.22 134 eP P 23 54 12.2 -0.1
PRPB Parauapebas 47.79 113 eP P 23 54 31.9 -0.7
SALV Santo Antonio 48.00 128 eP P 23 54 34.6 +0.6
LCO Las Campanas 48.70 154 P P 23 54 38.5 -1.0
LCO IAmb IAmb 23 54 41.4
comp=Z,15nm,1.1s
SNDB Serra Nova Dou 49.30 120 eP P 23 54 44.3 +0.2
BLKN Baker Lake 49.48 358 P 23 54 44.2 -0.5
PP1B Ponte de Pedra 49.65 129 eP P 23 54 47.7 +0.9
YKAW1 Yellowknife Wh 49.93 347 P P 23 54 47.4 -0.8
YKAW1 IAmb IAmb 23 54 49.1
comp=Z,8.8nm,0.7s
YKA Yellowknife Ar 49.97 347 P P 23 54 48.1 -0.4
comp=Z,4.0nm,0.7s,baz=153,slow=7.0,SNR=80
YKA PcP PcP 23 56 09.3 +1.5
comp=Z,1.3nm,0.6s,baz=157,slow=3.0,SNR=4.8
comp=Z,4.0nm,0.7s
YKA Yellowknife Ar 49.97 347 P P 23 54 48.5 0.0
YKAW3 Yellowknife Wh 50.03 347 P P 23 54 48.3 -0.7
YKAW3 IAmb IAmb 23 54 49.5
comp=Z,7.1nm,0.6s
BDQN Bodoquena, MS 50.11 133 eP P 23 54 49.6 -0.5
MURT Porto Murtinho 50.32 135 eP P 23 54 50.9 -0.8
KOTAN Kotaneelee Air 50.53 341 P P 23 54 54.0 +1.2
baz=140,SNR=8.0
T35M Bob Quinn 50.56 335 P P 23 54 54.4 +1.3
baz=131
CRAG Craig 50.86 332 P P 23 54 56.6 +1.3
baz=127
AQDB Aquidauana 50.87 133 P P 23 54 54.5 -1.3
AQDB Aquidauana 50.87 133 eP P 23 54 56.2 +0.4
ARAG Araguaiana, MT 50.90 125 eP P 23 54 56.2 0.0
SMTB Santa Maria do 50.96 115 eP P 23 54 57.6 +0.8
WRAK Wrangell Islan 51.09 333 P P 23 54 58.2 +1.2
baz=128
U33K Whale Pass 51.25 333 P P 23 54 59.0 +0.8
baz=127
DLBC Dease Lake 51.44 336 P P 23 55 01.5 +1.7
baz=132,SNR=7.7
S34M Telegraph Cree 51.53 335 P P 23 55 01.6 +1.2
baz=131
ZON Zonda 51.76 153 P P 23 55 01.9 -0.5
ZON IAmb IAmb 23 55 04.7
comp=Z,14nm,1.2s
FRB Frobisher Bay 51.78 14 LR LR 00 19 48.4
comp=Z,87nm,18.8s,baz=227,slow=39
WTLY Watson Lake, Y 52.13 338 P P 23 55 04.9 0.0
WTLY Watson Lake, Y 52.13 338 P P 23 55 06.3 +1.5
baz=135
R33M Jennings River 52.44 337 P P 23 55 08.5 +1.2
baz=132
Q32M Nakina River 52.67 336 P P 23 55 10.3 +1.3
baz=130
S32K Killisnoo 52.70 333 P P 23 55 10.3 +1.3
baz=127
WRGLY Wrigley 52.78 343 IAmb IAmb 23 55 29.1
comp=Z,17nm,1.1s
WRGLY Wrigley 52.78 343 P P 23 55 10.0 +0.6
baz=142,SNR=6.7
SIT Sitka 52.79 333 P P 23 55 10.0 +0.4
baz=126
TGTN Hyland Airport 52.96 340 P P 23 55 12.0 +1.0
baz=136,SNR=6.0
AMBA Amambai (Brazi 52.97 134 eP P 23 55 11.4 -0.1
R32K Eaglecrest 53.16 334 P P 23 55 12.8 +0.4
baz=127
P32M Atlin 53.64 336 P P 23 55 16.8 +0.8
baz=129
P33M Teslin, Yukon 53.69 337 P P 23 55 17.5 +1.1
baz=130
S31K Pelican 53.71 333 P P 23 55 17.9 +1.5
baz=125
CPUP Villa Florida 53.75 139 P P 23 55 16.5 -0.6
comp=Z,4.3nm,0.8s,baz=323,slow=0.8,SNR=4.7
comp=Z,4.3nm,0.8s
CPUP Villa Florida 53.75 139 eP P 23 55 16.5 -0.6
BDFB Brasilia 53.93 122 P P 23 55 18.3 -0.4
comp=Z,3.5nm,0.5s,baz=290,slow=7.5,SNR=11
comp=Z,3.5nm,0.5s
BDFB Brasilia 53.93 122 IAmb IAmb 23 55 22.2
comp=Z,15nm,1.4s
SKAG Skagway 54.21 335 P P 23 55 21.0 +1.0
baz=127
NBPS Pedro II - PI 54.70 106 eP P 23 55 24.1 -0.3
MMPY Sheldon Lake, 54.73 340 P P 23 55 25.3 +1.5
baz=133,SNR=12
WHY Whitehorse 54.77 336 P P 23 55 25.5 +1.3
baz=128
SDBA SAO DESIDERIO 54.94 117 eP P 23 55 26.2 +0.1
ILON Igloolik, Nuna 54.99 5 P 23 55 25.4 -0.1
ILON IAmb IAmb 23 55 26.3
comp=Z,11nm,1.1s
IPMB Ipameri, GO 55.03 125 eP P 23 55 27.9 +1.2
P30M Million Dollar 55.27 335 P P 23 55 29.2 +1.4
baz=126
O30N Mendenhall 55.31 336 P P 23 55 29.4 +1.3
baz=127
M31M Drury Creek, Y 55.55 338 P P 23 55 31.1 +1.3
baz=130
N31M Braeburn, Yuko 55.62 337 IAmb IAmb 23 55 48.7
comp=Z,18nm,1.1s
N31M Braeburn, Yuko 55.62 337 P P 23 55 32.0 +1.7
baz=128
NBMO Morrinhos-CE 55.63 105 eP P 23 55 30.7 -0.3
HYT Haines Junctio 55.90 336 P P 23 55 34.0 +1.6
baz=126
LDASE Londrina, Braz 55.99 132 eP P 23 55 32.5 -1.0
O29M Mount Kennedy 56.04 335 P P 23 55 34.9 +1.5
baz=124
N30M Aishikik Lake 56.11 336 P P 23 55 35.2 +1.4
baz=126
PTGB Pitanga 56.16 134 eP P 23 55 34.0 -0.7
YUK6 Outpost Mounta 56.31 335 P P 23 55 36.4 +1.0
baz=125
BB19B Bebedouro 56.52 128 eP P 23 55 37.6 +0.3
PINM Pinnacle 56.63 334 P P 23 55 38.7 +1.2
baz=122
YUK4 Talbot Arm 56.65 336 P P 23 55 38.9 +1.1
baz=125
M30M Minto, Yukon 56.66 338 IAmb IAmb 23 55 56.0
comp=Z,14nm,1.3s
M30M Minto, Yukon 56.66 338 P P 23 55 39.0 +1.3
baz=127,SNR=5.7
JANB Januaria 56.71 119 eP P 23 55 38.9 +0.2
PMNB Patos De Minas 56.74 124 eP P 23 55 40.5 +1.5
O28M Mount Upton 56.96 335 P P 23 55 41.1 +1.0
baz=123
MAYO Mayo, Yukon 56.97 339 P P 23 55 41.0 +1.2
baz=129
YUK8 Steele Glacier 57.07 335 P P 23 55 41.5 +0.7
baz=123
M29M Somme Creek 57.21 337 P P 23 55 42.5 +0.8
baz=125
MESA MESA 57.40 334 P P 23 55 44.3 +1.2
baz=120
L29M L29M 57.47 338 P P 23 55 44.6 +1.1
baz=126
CTG Chitna Glacier 57.54 334 P P 23 55 44.8 +0.7
baz=122
YUK3 Moose Creek 57.61 336 P P 23 55 44.8 +0.2
baz=123
K29M Barlow Dome 57.69 338 P P 23 55 45.3 +0.3
baz=127
J30M Hart River 57.73 340 P P 23 55 46.2 +0.9
baz=129
ITAB Concordia 57.75 136 eP P 23 55 45.7 -0.1
C36M Paulatuk 57.85 348 P P 23 55 47.4 +1.5
baz=144
H31M Peel River 57.88 341 P P 23 55 47.5 +1.3
baz=131
RCLB Rio Claro- Sao 58.05 129 eP P 23 55 50.0 +1.9
BVCY Beaver Creek 58.12 336 P P 23 55 49.0 +1.1
baz=123
I30M Mount Dempster 58.15 340 IAmb IAmb 23 56 05.3
comp=Z,5.2nm,0.8s
I30M Mount Dempster 58.15 340 P P 23 55 49.7 +1.5
baz=129
CRQE Cirque 58.17 334 P P 23 55 49.7 +1.3
baz=120
NBMA MuriAÇE 58.28 108 eP P 23 55 50.5 +0.7
J29N Klondike Camp 58.30 339 P P 23 55 50.9 +1.7
baz=127
KAIM Kayak Island 58.36 333 P P 23 55 49.8 +0.2
baz=118
MCARA McCarthy VSAT 58.46 334 P P 23 55 51.8 +1.5
baz=120
M27K Edge Creek, AK 58.49 336 P P 23 55 51.4 +0.7
baz=122
POIN Pond Inlet 58.55 5 IAmb IAmb 23 55 51.6
comp=Z,6.7nm,0.9s
G31M Satah River 58.60 342 P P 23 55 52.2 +1.0
baz=132,SNR=11
F31M Tsiigehtchic 58.80 343 P P 23 55 52.8 +0.3
F31M Tsiigehtchic 58.80 343 P P 23 55 53.4 +0.9
baz=133,SNR=7.2
VAO Valinhos 58.81 129 eP P 23 55 54.9 +1.5
GLB Gilahina Butte 58.82 334 IAmb IAmb 23 56 11.7
comp=Z,12nm,1.0s
BCAR Beaver Creek A 58.83 336 P P 23 55 53.1 +0.3
L27K Beaver Creek, 58.84 336 P P 23 55 53.7 +0.8
baz=122
DIAM Diamantina, MG 58.85 122 eP P 23 55 55.0 +1.2
I29M Ogilvie Camp, 58.88 340 P P 23 55 52.8 -0.3
I29M IAmb IAmb 23 56 11.1
comp=Z,5.5nm,0.9s
I29M Ogilvie Camp, 58.88 340 P P 23 55 54.1 +1.0
baz=127,SNR=5.3
BMRM Bremner River 58.93 334 P P 23 55 54.5 +0.9
baz=118
M26K Nabesna, AK 58.96 335 IAmb IAmb 23 56 12.4
comp=Z,12nm,1.4s
M26K Nabesna, AK 58.96 335 P P 23 55 54.9 +1.0
baz=121
EPYK Eagle Plains 58.98 341 IAmb IAmb 23 55 55.9
comp=Z,11nm,1.2s
EPYK Eagle Plains 58.98 341 P P 23 55 55.1 +1.2
baz=129
Q23K Middleton Isla 59.01 331 P P 23 55 55.0 +0.9
baz=116
SFJD Kangerlussuaq 59.09 18 LR LR 00 23 18.8
comp=Z,106nm,18.7s,baz=230,slow=38
PLCA Paso Flores 59.13 160 P P 23 55 55.5 +0.3
comp=Z,6.7nm,0.9s,baz=327,slow=8.8,SNR=13
comp=Z,6.7nm,0.9s
PLCA Paso Flores 59.13 160 P 23 55 56.1 +0.9
PLCA IAmb IAmb 23 55 56.8
comp=Z,9.9nm,1.0s
PLCA Paso Flores 59.13 160 eP P 23 55 56.2 +0.9
PLCA Paso Flores 59.13 160 P P 23 55 55.7 +0.5
G30M tAoh Zrail Nji 59.22 342 P P 23 55 57.0 +1.5
baz=130
N25K Chitina, Valde 59.23 334 IAmb IAmb 23 56 14.8
comp=Z,12nm,0.9s
N25K Chitina, Valde 59.23 334 P P 23 55 57.0 +1.3
baz=118,SNR=6.0
EYAK Cordova Ski Ar 59.23 333 P P 23 55 56.7 +1.1
baz=117
INK Inuvik 59.33 344 P P 23 55 55.8 -0.4
INK Inuvik 59.33 344 P P 23 55 56.9 +0.8
baz=133,SNR=19
BSCB Bom Sucesso 59.38 126 eP P 23 55 58.1 +0.8
H29M Whitestone 59.41 340 P P 23 55 57.9 +1.0
baz=127
L26K Log Cabin Wild 59.42 336 P P 23 55 57.8 +0.9
baz=120
I28M Miner Creek 59.48 339 P P 23 55 57.9 +0.5
baz=125
F30M Barrier River 59.50 342 P P 23 55 58.4 +1.0
baz=131
G29M Pine Creek 59.73 341 P P 23 55 59.9 +0.9
baz=128
KLU Klutina 59.73 334 P P 23 55 59.8 +0.6

	baz=117					
P23K	**Montague Islan**	59.74	332	P	**P**	23 55 59.3 +0.2
	baz=115					
RES	**Resolute Bay**	59.87	359	IAmb	IAmb	23 56 00.3
	comp=Z,9.5nm,0.8s					
GLI	**Glacier Island**	59.97	333	P	**P**	23 56 01.7 +0.9
	baz=116					
M24K	**Tolsona, Glenn**	60.12	334	P	**P**	23 56 02.9 +1.1
	baz=117					
I27K	**Kandik River**	60.15	339	IAmb	IAmb	23 56 19.7
	comp=Z,7.7nm,0.9s					
I27K	**Kandik River**	60.15	339	P	**P**	23 56 02.6 +0.7
	baz=124,SNR=7.9					
SCRK	**Sand Creek**	60.15	337	P	**P**	23 56 03.1 +1.1
	baz=120					
A36M	**Sachs Harbour**	60.22	349	P	**P**	23 56 02.3 0.0
	baz=144,SNR=24					
PAX	**Paxson**	60.23	335	IAmb	IAmb	23 56 20.6
	comp=Z,10nm,0.9s					
PAX	**Paxson**	60.23	335	P	**P**	23 56 02.7 +0.1
	baz=118					
RIDG	**Independent Ri**	60.36	336	P	**P**	23 56 03.7 +0.3
	baz=119					
RCBR	**Riachuelo**	60.37	106	LR	LR	00 24 02.2
	comp=Z,22nm,18.4s,baz=239,slow=38					
RCBR	**Riachuelo**	60.37	106	P	**P**	23 56 03.0 -1.3
RCBR	**Riachuelo**	60.37	106	*e*P	**P**	23 56 04.0 -0.2
H27K	**Steamboat Moun**	60.46	340	IAmb	IAmb	23 56 23.0
	comp=Z,13nm,1.1s					
H27K	**Steamboat Moun**	60.46	340	P	**P**	23 56 04.7 +0.6
	baz=124					
SCM	**Sheep Creek Mo**	60.49	334	P	**P**	23 56 04.8 +0.5
	baz=116					
I26K	**Coal Creek Min**	60.53	338	P	**P**	23 56 04.8 +0.4
	baz=122					
E29M	**Blow River**	60.61	343	P	**P**	23 56 05.4 +0.4
	baz=129					
M23K	**Glacier View**	60.64	334	P	**P**	23 56 05.7 +0.3
	baz=116					
SEW	**Seward**	60.72	331	P	**P**	23 56 06.2 +0.3
	baz=113					
F28M	**Old Crow**	60.73	341	P	**P**	23 56 06.6 +0.8
	baz=126,SNR=22					
K24K	**Donnelly Dome**	60.75	336	P	**P**	23 56 06.5 +0.4
	baz=118					
KNK	**Knik Glacier**	60.80	333	P	**P**	23 56 06.7 +0.3
	baz=115					
G27K	**Doyon Strip**	60.83	340	P	**P**	23 56 07.3 +0.7
	baz=124					
SML	**Sawmill**	60.91	334	P	**P**	23 56 07.5 +0.3
	baz=115					
CMC01	**Camacan, BA**	60.93	117	*e*P	**P**	23 56 08.3 +0.4
J25K	**Salcha River,**	60.99	337	IAmb	IAmb	23 56 25.9
	comp=Z,7.3nm,1.1s					
J25K	**Salcha River,**	60.99	337	P	**P**	23 56 08.7 +1.1
	baz=119					
WAT6	**Susitna Watana**	60.99	334	P	**P**	23 56 08.5 +0.6
	baz=116,SNR=5.7					
O22K	**Cooper Landing**	60.99	332	P	**P**	23 56 08.2 +0.6
	baz=113					
DHY	**Denali Highway**	61.05	335	P	**P**	23 56 09.1 +0.8
	baz=116					
SJMB	**Sao Joao De Ma**	61.09	121	*e*P	**P**	23 56 08.1 -0.9
NBPV	**Pedro Velho**	61.14	106	*e*P	**P**	23 56 09.0 -0.5
GHO	**Glory Hole Cre**	61.15	333	P	**P**	23 56 08.6 -0.2
PMR	**Palmer**	61.17	333	P	**P**	23 56 09.7 +0.8
	baz=114					
BRSE	**Bradley Lake S**	61.19	331	P	**P**	23 56 09.4 +0.3
	baz=112					
E28M	**Babbage River**	61.22	342	IAmb	IAmb	23 56 26.6
	comp=Z,20nm,1.5s					
E28M	**Babbage River**	61.22	342	P	**P**	23 56 09.9 +0.8
	baz=127					
RC01	**Rabbit Creek A**	61.23	332	P	**P**	23 56 09.2 -0.1
RC01	**Rabbit Creek A**	61.23	332	P	**P**	23 56 10.0 +0.7
	baz=113					
GUA01	**Guaratinga, BA**	61.24	119	*e*P	**P**	23 56 10.6 +0.6
SAATT	**Saattut**	61.36	14	*i* P	**P**	23 56 10.7 +0.7
SAATT				IAmb	IAmb	23 56 11.2
	comp=Z,6.2nm,0.7s					
KDAK	**Kodiak Island**	61.42	328	P	**P**	23 56 11.1 +0.6
	baz=109					
WAT1	**Susitna Watana**	61.43	335	P	**P**	23 56 11.4 +0.7
	baz=115					
D28M	**Stokes Point**	61.44	343	P	**P**	23 56 11.5 +1.0
	baz=128					
BSFB	**Barra de Sao F**	61.44	121	*e*P	**P**	23 56 12.2 +0.9
PRP	**Porcupine Dome**	61.49	338	P	**P**	23 56 11.7 +0.6
PRP	**Porcupine Dome**	61.49	338	P	**P**	23 56 11.8 +0.6
	baz=120,SNR=9.2					
HDA	**Harding Lake**	61.49	337	P	**P**	23 56 10.6 -0.5
HDA				IAmb	IAmb	23 56 28.1
	comp=Z,6.1nm,0.9s					
HDA	**Harding Lake**	61.49	337	P	**P**	23 56 12.1 +1.1
	baz=118,SNR=6.4					
Q20K	**Shuyak Island**	61.59	329	P	**P**	23 56 12.8 +1.0
	baz=109					
E27K	**Coleen River**	61.59	341	IAmb	IAmb	23 56 14.3
	comp=Z,12nm,1.0s					
E27K	**Coleen River**	61.59	341	P	**P**	23 56 12.9 +1.2
	baz=125					
OHAK	**Old Harbor**	61.60	328	P	**P**	23 56 12.7 +0.9
	baz=108					
G26K	**Porcupine Rive**	61.61	340	P	**P**	23 56 13.2 +1.5
	baz=122					
ILAR	**Eielson Array**	61.63	337	P	**P**	23 56 12.2 +0.2
	comp=Z,2.3nm,0.6s,baz=140,slow=4.8,SNR=40					
	comp=Z,2.3nm,0.6s					
ILAR	**Eielson Array**	61.63	337		**P**	23 56 12.3 +0.4
CAPN	**Captain Cook N**	61.75	332	P	**P**	23 56 13.5 +0.7
	baz=112					
RND	**Reindeer**	61.80	335	P	**P**	23 56 13.8 +0.6
SII	**Sitkinak Islan**	61.88	327	P	**P**	23 56 13.8 0.0
	baz=107					
CCB	**Clear Creek Bu**	61.93	337	P	**P**	23 56 13.8 -0.1
CCB				IAmb	IAmb	23 56 32.1
	comp=Z,12nm,1.4s					
WRH	**Wood River Hil**	61.96	336	P	**P**	23 56 15.0 +0.9
WRH				IAmb	IAmb	23 56 31.3
	comp=Z,5.6nm,1.1s					
MCK	**McKinley**	61.97	335	P	**P**	23 56 15.2 +0.9
	baz=115					
CUT	**Chulitna**	61.98	334	P	**P**	23 56 15.5 +1.2
	baz=113					
POKR	**Poker Plat Res**	62.00	337	P	**P**	23 56 15.5 +1.0
	baz=117					
D27M	**Malcolm River**	62.02	343	P	**P**	23 56 15.9 +1.3
	baz=126					
RIB01	**Linhares ES**	62.05	122	*e*P	**P**	23 56 16.0 +0.5
COLA	**College**	62.05	337	P	**P**	23 56 15.7 +1.0
	baz=117					
F26K	**Sheenjek River**	62.13	340	P	**P**	23 56 16.8 +1.5
	baz=122					
BMAR	**Burnt Mountain**	62.13	340		**P**	23 56 16.4 +1.1
CAM01	**Campos-RJ**	62.28	125	*e*P	**P**	23 56 18.1 +1.1
G25K	**Bearman Lake**	62.31	339	P	**P**	23 56 17.7 +1.3
	baz=120					
Q19K	**Cape Douglas,**	62.31	329	P	**P**	23 56 17.4 +0.7
	baz=108					
SPU	**Mount Spurr**	62.31	332	IAmb	IAmb	23 56 34.7
	comp=Z,13nm,1.0s					
STLK	**Strandline Lak**	62.33	332	IAmb	IAmb	23 56 34.8
	comp=Z,6.2nm,1.0s					
P19K	**Oil Pt**	62.34	330	P	**P**	23 56 18.3 +1.4
	baz=109					
SKT	**Skwentna**	62.37	333	P	**P**	23 56 18.3 +1.3
	baz=112,SNR=5.6					
N20K	**Mount Spurr**	62.39	332	P	**P**	23 56 18.2 +1.0
	baz=111					
SPCR	**Spurr Chakacha**	62.39	332	P	**P**	23 56 18.5 +1.3
	baz=111					
NEA2	**Nenana**	62.40	336	P	**P**	23 56 18.1 +1.0
	baz=116					
TRF	**Thorofare Moun**	62.41	335	P	**P**	23 56 18.4 +1.0
	baz=114					
ALF01	**Guarapari-ES**	62.42	123	*e*P	**P**	23 56 18.5 +0.7
H24K	**Noodor Dome**	62.50	338	P	**P**	23 56 19.3 +1.5
	baz=117,SNR=9.3					
F25K	**Christian Rive**	62.56	340	P	**P**	23 56 19.6 +1.4
	baz=120					
I23K	**Minto, Yukon-K**	62.75	337	P	**P**	23 56 20.3 +0.9
	baz=116					
G24K	**Hadweenzic Riv**	62.75	339	P	**P**	23 56 20.7 +1.3
	baz=118					
E25K	**Arctic Village**	62.81	341	P	**P**	23 56 21.1 +1.3
	baz=121					
Q18K	**Katmai Hardscr**	62.90	329	P	**P**	23 56 21.0 +0.3
	baz=107					
BPAW	**Bear Paw Mtn.**	62.95	335	IAmb	IAmb	23 56 38.4
	comp=Z,15nm,1.1s					
BPAW	**Bear Paw Mtn.**	62.95	335	P	**P**	23 56 21.5 +0.7
	baz=113,SNR=6.8					
KULLO	**Kullorsuaq**	62.97	10	*i* P	**P**	23 56 21.1 +0.3
KULLO				IAmb	IAmb	23 56 21.4
	comp=Z,15nm,1.1s					
PPLA	**Purkeypile**	62.99	334	P	**P**	23 56 22.1 +0.8
	baz=112					
O19K	**Port Alsworth**	63.03	331	P	**P**	23 56 22.3 +1.0
	baz=108					
C27K	**Jago River**	63.03	342	P	**P**	23 56 21.8 +0.6
	baz=123					
M20K	**Styx River**	63.04	333	P	**P**	23 56 22.3 +0.8
	baz=110					
MLY	**Manley**	63.23	336	P	**P**	23 56 22.9 +0.2
MLY	**Manley**	63.23	336	P	**P**	23 56 23.5 +0.8
	baz=114,SNR=9.9					
P18K	**Big Mountain,**	63.23	330	P	**P**	23 56 23.0 +0.3
	baz=107					
Q17K	**Contact Creek**	63.24	328	P	**P**	23 56 23.6 +0.7
	baz=106					
F24K	**Squaw Lake**	63.28	339	P	**P**	23 56 24.1 +1.1
	baz=118					
N19K	**Bonanza Creek**	63.30	331	P	**P**	23 56 23.9 +0.6
	baz=108					
R17L	**Mt. Peulik Vol**	63.31	328	P	**P**	23 56 23.9 +0.6
	baz=105					
O18K	**Koktuh Hills**	63.35	330	P	**P**	23 56 24.3 +0.8
	baz=107					
CHUM	**Lake Minchumin**	63.41	335	P	**P**	23 56 25.1 +1.3
	baz=112					
C26K	**Camden Bay**	63.54	342	P	**P**	23 56 25.9 +1.3
	baz=122					
G23K	**Bananza Creek**	63.66	338	P	**P**	23 56 26.6 +1.1
	baz=116					
D25K	**Kavik River**	63.67	342	P	**P**	23 56 26.6 +1.1
	baz=120					
E24K	**Your Creek**	63.74	340	P	**P**	23 56 26.6 +0.5
	baz=118					
P17K	**Kvichak River**	63.77	329	P	**P**	23 56 26.5 +0.2
	baz=106					
I21K	**Tanana**	63.77	336	P	**P**	23 56 27.0 +0.9
	baz=13					
H22K	**Ishtalitna Cre**	63.82	337	IAmb	IAmb	23 56 44.0
	comp=Z,13nm,1.2s					
H22K	**Ishtalitna Cre**	63.82	337	P	**P**	23 56 27.5 +1.0
	baz=114					
L19K	**White Mountain**	63.91	333	IAmb	IAmb	23 56 44.9
	comp=Z,11nm,1.0s					
L19K	**White Mountain**	63.91	333	P	**P**	23 56 27.8 +0.6
	baz=109					
N18K	**Kilae Creek**	63.92	331	P	**P**	23 56 28.0 +0.8
	baz=107					
R16K	**Pilot Point**	63.93	327	P	**P**	23 56 28.4 +1.1
	baz=104					
COLD	**Coldfoot**	63.95	339	P	**P**	23 56 27.9 +0.6
	baz=116					
K20K	**Telida**	63.95	334	P	**P**	23 56 28.8 +1.3
	baz=110					
E23K	**Chandalar**	64.11	340	P	**P**	23 56 28.5 0.0
	baz=116					
M18K	**Stony River**	64.13	332	P	**P**	23 56 29.3 +0.7
	baz=108					
O17K	**Koliganek Bris**	64.25	330	P	**P**	23 56 29.7 +0.3
	baz=106					
PPT	**Papeete**	64.25	242	LR	LR	00 16 08.7
	comp=Z,115nm,21.1s,baz=11,slow=28					
J20K	**Nowinta River**	64.27	335	IAmb	IAmb	23 56 47.0
	comp=Z,14nm,1.2s					
J20K	**Nowinta River**	64.27	335	P	**P**	23 56 30.3 +0.8
	baz=110,SNR=5.4					
H21K	**Melozitna Rive**	64.27	337	P	**P**	23 56 30.7 +1.2
	baz=112					
G22K	**Bettles**	64.29	338	P	**P**	23 56 30.2 +0.7
	baz=114					
D24K	**Happy Valley**	64.36	341	IAmb	IAmb	23 56 48.1
	comp=Z,13nm,1.1s					
D24K	**Happy Valley**	64.36	341	P	**P**	23 56 30.9 +1.0
	baz=118,SNR=6.0					
TOLK	**Toolik Lake Re**	64.36	340	P	**P**	23 56 31.0 +0.9
	baz=117,SNR=13					
CHNA	**Chernabura Isl**	64.45	324	P	**P**	23 56 31.2 +0.5
	baz=101					
N17K	**Nushagak Hills**	64.49	330	P	**P**	23 56 31.7 +0.7
	baz=106					
P16K	**Nushagak River**	64.50	329	P	**P**	23 56 31.6 +0.5
	baz=104					
C24K	**Franklin Bluff**	64.58	341	P	**P**	23 56 32.6 +1.3
	baz=118					
I20K	**Naaghedeneel**	64.62	335	P	**P**	23 56 32.5 +0.9
	baz=110					
O16K	**Kokwok River B**	64.69	329	P	**P**	23 56 32.9 +0.7
	baz=104					
S14K	**Fog Glacier**	64.71	326	P	**P**	23 56 33.1 +0.5
	baz=102					
L18K	**Granite Mounta**	64.74	332	P	**P**	23 56 33.4 +0.8
	baz=107					
F22K	**John River**	64.76	339	P	**P**	23 56 33.5 +0.9
	baz=114					
J19K	**Poorman**	64.82	334	IAmb	IAmb	23 56 50.4
	comp=Z,14nm,1.0s					
J19K	**Poorman**	64.82	334	P	**P**	23 56 34.3 +1.2
	baz=109,SNR=12					
M17K	**Holitna River**	64.85	331	P	**P**	23 56 33.9 +0.6
	baz=106					
G21K	**Allakaket**	64.86	337	P	**P**	23 56 34.1 +0.9
	baz=112					
D23K	**Nanuuk River**	64.87	340	P	**P**	23 56 34.4 +1.1
	baz=116					
E22K	**Anaktuvuk Pass**	64.89	339	P	**P**	23 56 34.7 +1.2
	baz=114					
H20K	**Anotleneega Mo**	65.02	336	P	**P**	23 56 35.4 +1.0
	baz=110					
SDPT	**Sand Point**	65.04	324	P	**P**	23 56 35.4 +0.7
	baz=100					
F21K	**Alatna River**	65.12	338	P	**P**	23 56 36.1 +1.1
	baz=112					
C23K	**Itkillik River**	65.23	341	P	**P**	23 56 36.8 +1.2
	baz=116					
N16K	**Nishlik Lake**	65.24	330	P	**P**	23 56 36.8 +1.0
	baz=104					
L17K	**Donlin**	65.44	332	P	**P**	23 56 38.0 +0.9
	baz=105					
O15K	**Ungalikthiuk R**	65.45	329	P	**P**	23 56 37.9 +0.6
	baz=103					
M16K	**Timber Creek**	65.46	331	P	**P**	23 56 37.8 +0.5
	baz=104					
GCSA	**Galena City Sc**	65.57	335	P	**P**	23 56 38.7 +0.8
	baz=108					
K17K	**Iditarod**	65.60	333	P	**P**	23 56 38.6 +0.5
	baz=106					
H19K	**Roundabout Mou**	65.65	336	P	**P**	23 56 39.3 +1.0
	baz=109					
E21K	**Killik River**	65.75	339	P	**P**	23 56 39.6 +0.5
	baz=112					
SUMG	**Summit**	65.75	16	*i* P	**P**	23 56 39.4 0.0
SUMG				IAmb	IAmb	23 56 40.8
	comp=Z,3.7nm,0.8s					
N15K	**Kwethluk River**	65.81	330	P	**P**	23 56 40.4 +0.8
	baz=103					
L16K	**Owhat River**	65.87	331	P	**P**	23 56 40.8 +0.9
	baz=104					
F20K	**Avaraart Lake**	65.87	338	P	**P**	23 56 40.7 +0.9
	baz=110					
G19K	**Purcell Mounta**	66.09	336	P	**P**	23 56 42.2 +0.9
	baz=108					
NEEM	**North Greenlan**	66.11	9	*i* P	**P**	23 56 41.9 +0.4
NEEM				IAmb	IAmb	23 56 42.8
	comp=Z,21nm,0.6s					
J17K	**VABM Dome**	66.12	333	P	**P**	23 56 42.1 +0.6
	baz=105					
O14K	**Tigyukauivet M**	66.20	329	P	**P**	23 56 42.5 +0.5
	baz=101					
M15K	**Kasigluk River**	66.21	330	P	**P**	23 56 43.1 +1.0
	baz=103					
C21K	**Knifeblade Rid**	66.29	340	P	**P**	23 56 43.9 +1.4
	baz=112					
H18K	**Honhosa River**	66.30	335	P	**P**	23 56 43.9 +1.3
	baz=107					
B22K	**Teshekpuk Lake**	66.31	341	P	**P**	23 56 43.5 +1.0
	baz=114					
B21K	**Ikpikpuk River**	66.41	340	P	**P**	23 56 44.2 +1.0
	baz=112					
E20K	**Nigu River**	66.45	339	P	**P**	23 56 44.4 +0.8
	baz=110					
N14K	**Kuskokwak Cree**	66.54	329	P	**P**	23 56 44.9 +0.8
	baz=101					
E19K	**Redstone River**	66.56	338	P	**P**	23 56 45.2 +1.0
	baz=109					
F19K	**Shaleruckik Mo**	66.57	337	P	**P**	23 56 45.4 +1.2
	baz=108					
G18K	**Tagagawik**	66.63	336	P	**P**	23 56 45.5 +0.8
	baz=107					
FALS	**False Pass**	66.64	324	P	**P**	23 56 45.5 +0.6
	baz=98					
D20K	**Etivluk River**	66.76	339	P	**P**	23 56 46.3 +0.9
	baz=110					
J16K	**Anvik River**	66.76	333	P	**P**	23 56 46.4 +0.8
	baz=104					
L15K	**Ungalak Mounta**	66.80	331	P	**P**	23 56 46.7 +0.9
	baz=102					
M14K	**Bethel**	66.83	330	P	**P**	23 56 47.2 +1.2
M14K	**Bethel**	66.83	330	P	**P**	23 56 46.8 +0.8
	baz=101,SNR=6.2					
H17K	**Granite Mounta**	66.87	335	P	**P**	23 56 47.2 +1.0
	baz=105					
I17K	**Unalakleet**	66.94	334	P	**P**	23 56 47.5 +0.9
	baz=104					
K15K	**Wolf Creek Mou**	66.95	332	P	**P**	23 56 47.7 +0.9
	baz=102					
A22K	**Sinclair Lake**	67.05	342	P	**P**	23 56 48.1 +0.9
	baz=112					
D19K	**Kuna River**	67.21	339	P	**P**	23 56 49.3 +0.9
	baz=108					
F18K	**Selawik**	67.21	337	P	**P**	23 56 49.6 +1.3
	baz=106					
L14K	**Kuka Creek**	67.29	331	IAmb	IAmb	23 57 06.9
	comp=Z,10nm,0.9s					
L14K	**Kuka Creek**	67.29	331	P	**P**	23 56 49.5 +0.6
	baz=101					
G17K	**Kiwalik Mounta**	67.32	335	P	**P**	23 56 50.0 +1.0
	baz=105					
B20K	**Meade River**	67.38	340	P	**P**	23 56 50.2 +0.8
	baz=110					
M13K	**Dall Lake**	67.44	330	P	**P**	23 56 50.5 +0.7
	baz=100					
A21K	**Barrow**	67.66	342	P	**P**	23 56 52.3 +1.2
	baz=111					
H16K	**Elim**	67.77	334	P	**P**	23 56 52.6 +0.8
	baz=103,SNR=6.6					
F17K	**Baldwin Pennin**	67.79	336	P	**P**	23 56 52.8 +0.8
	baz=104					
E18K	**Tukpahlearik C**	67.80	337	P	**P**	23 56 53.0 +0.9
	baz=105					
C19K	**Lookout Ridge**	67.90	339	P	**P**	23 56 53.5 +0.8
	baz=107					
J14K	**Nanvaranak Lak**	67.96	332	P	**P**	23 56 53.6 +0.5
	baz=101					
G16K	**Koyuk River**	67.98	335	P	**P**	23 56 54.0 +0.8
	baz=103					
E17K	**Hotham Inlet**	68.17	337	P	**P**	23 56 55.2 +0.8
	baz=104,SNR=20					
K13K	**Kusilvak Mount**	68.32	331	P	**P**	23 56 56.2 +0.8
	baz=100					
UNV	**Unalaska Valle**	68.33	322	P	**P**	23 56 56.3 +0.7
	baz=95					
C18K	**Utukok River**	68.33	339	IAmb	IAmb	23 57 13.3
	comp=Z,11nm,1.2s					
C18K	**Utukok River**	68.33	339	P	**P**	23 56 56.5 +1.0
	baz=105					
G15K	**Niukluk**	68.59	334	P	**P**	23 56 58.4 +1.3
	baz=101					
RDOG	**Red Dog Mine**	68.80	338	P	**P**	23 56 59.4 +1.0
	baz=104					
ALE	**Alert**	68.83	4	P	**P**	23 56 57.9 -0.4
M11K	**Mekoryuk**	68.84	329	P	**P**	23 56 59.8 +1.2
	baz=98					
BORG	**Borgarnes**	68.97	26	LR	LR	00 27 01.0
	comp=Z,20nm,18.5s,baz=256,slow=36					
F15K	**North Star Dit**	68.98	335	IAmb	IAmb	23 57 18.2
	comp=Z,15nm,1.2s					
F15K	**North Star Dit**	68.98	335	P	**P**	23 57 01.1 +1.6
	baz=101					
C17K	**DeLong Mountai**	69.00	338	P	**P**	23 57 01.4 +1.8
	baz=103					
ANM	**Nome**	69.08	334	P	**P**	23 57 01.7 +1.6
	baz=100					
C16K	**Lisburne Hills**	69.74	338	P	**P**	23 57 05.8 +1.7
	baz=101					
TNA	**Tin City**	70.30	335	IAmb	IAmb	23 57 05.9
	comp=Z,6.5nm,0.6s					
DBG	**Daneborg**	71.23	16	*i* P	**P**	23 57 13.4 +0.3
DBG				IAmb	IAmb	23 57 14.3
	comp=Z,2.5nm,0.9s					
GAMB	**Gambell**	71.74	333	P	**P**	23 57 17.9 +1.6
	baz=94					
DAG	**Danmarks Havn**	72.13	13	*i* P	**P**	23 57 17.0 -1.4
DAG				IAmb	IAmb	23 57 18.8
	comp=Z,8.6nm,0.6s					
NOR	**Nord**	73.46	9	*i* P	**P**	23 57 26.3 0.0
NOR				IAmb	IAmb	23 57 27.2
	comp=Z,11nm,0.9s					
JMIC	**Jan Mayen**	74.36	20	LR	LR	00 30 06.6
	comp=Z,165nm,21.9s,baz=295,slow=36					
RAR	**Rarotonga**	74.51	243	LR	LR	00 23 55.7
	comp=Z,94nm,19.4s,baz=127,slow=30					
EKA	**Eskdalemuir Ar**	77.97	36	P	**P**	23 57 50.0 -2.4
	comp=Z,1.9nm,0.5s,baz=282,slow=5.8,SNR=18					
EKA				LR	LR	00 31 42.5
	comp=Z,54nm,19.9s,baz=224,slow=35					
	comp=Z,1.9nm,0.5s					
SPITS	**Spitsbergen Ar**	79.51	11	P	**P**	23 58 00.8 +0.2
	comp=Z,3.8nm,0.5s,baz=285,slow=5.5,SNR=38					
SPITS				LR	LR	00 34 14.4
	comp=Z,136nm,21.8s,baz=224,slow=36					
	comp=Z,3.8nm,0.5s					
ESDC	**Sonseca Array**	80.11	52	P	**P**	23 58 02.4 -2.2
	comp=Z,1.7nm,1.0s,baz=280,slow=4.7,SNR=6.3					
ESDC				LR	LR	00 26 19.6
	comp=Z,84nm,21.6s,baz=286,slow=30					
	comp=Z,1.7nm,1.0s					
MD31	**MD31**	80.81	58	P	**P**	23 58 06.7 -1.9
MDT	**Midelt**	80.95	58	LR	LR	00 27 34.4
	comp=Z,51nm,21.3s,baz=293,slow=31					
AFI	**Afiamalu**	82.82	254	LR	LR	00 26 05.1
	comp=Z,82nm,20.4s,baz=106,slow=29					
NB2	**NORSAR Subarra**	83.97	28	P	**P**	23 58 23.6 -0.8
	comp=Z,3.8nm,0.9s,baz=288,slow=5.1					
NOA	**NORSAR Array B**	83.97	28	P	**P**	23 58 23.4 -0.9
	comp=Z,1.1nm,0.6s,baz=290,slow=5.2,SNR=7.3					
NOA				LR	LR	00 34 35.5
	comp=Z,76nm,21.0s,baz=285,slow=35					
	comp=Z,1.1nm,0.6s					
HFS	**Hagfors**	85.44	29	P	**P**	23 58 30.3 -1.3
	comp=Z,2.8nm,0.7s,baz=241,slow=3.0,SNR=14					
HFS				LR	LR	00 34 57.3
	comp=Z,76nm,21.1s,baz=283,slow=35					
	comp=Z,2.8nm,0.7s					
ARCES	**ARCESS Array B**	85.72	18	P	**P**	23 58 32.7 -0.2
	comp=Z,2.0nm,0.4s,baz=291,slow=5.2,SNR=21					
ARCES				LR	LR	00 37 23.6
	comp=Z,75nm,18.6s,baz=304,slow=36					
	comp=Z,2.0nm,0.4s					
DBIC	**Dimbokro**	86.71	84	P	**P**	23 58 38.0 -0.9
	comp=Z,1.9nm,0.5s,baz=297,slow=3.3,SNR=4.9					
DBIC				PP	PP	00 01 56.7 -5.2
	comp=Z,3.2nm,1.0s,baz=244,slow=6.5,SNR=3.5					
DBIC				LR	LR	00 34 39.9
	comp=Z,29nm,20.7s,baz=316,slow=34					
	comp=Z,1.9nm,0.5s					
DBIC	**Dimbokro**	86.71	84	IAmb	IAmb	23 58 53.8
	comp=Z,14nm,1.5s					
DAVOX	**Davos/Dischmat**	88.03	42	LR	LR	00 32 45.1
	comp=Z,94nm,20.4s,baz=258,slow=32					
TIXI	**Tiksi**	89.22	348		**P**	23 58 49.6 0.0
GERES	**GERESS Array B**	89.70	39	P	**P**	23 58 51.8 -0.8
	comp=Z,0.6nm,0.7s,baz=268,slow=7.6,SNR=2.5					
	comp

AKASG	**Malin Array Be**	**97.67**	**33**	P		**P**		**23 59 26.3**	**-2.6**
	comp=Z,0.2nm,0.3s,baz=283,slow=4.7,SNR=1.8								
AKASG				LR		LR		00 43 03.2	
	comp=Z,32nm,21.5s,baz=330,slow=35								
	comp=Z,0.2nm,0.3s								
OBN	**Obninsk**	**98.47**	**27**	LR		LR		00 43 49.2	
	comp=Z,52nm,19.2s,baz=7.5,slow=35								
MLR	**Muntele Rosu**	**98.65**	**38**	LR		LR		00 41 24.8	
	comp=Z,50nm,20.3s,baz=67,slow=34								
BRTR	**Keskin Array B**	**106.57**	**40**	PKiKP		**PKiKP**		**00 04 19.9**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=280,slow=2.0,SNR=1.6								
BVAR	**Borovoye Array**	**110.96**	**11**	PKiKP		**PKiKP**		**00 04 28.6**	**+1.3**
	comp=Z,0.7nm,0.7s,baz=11,slow=1.5,SNR=4.6								
KURBB	**Kurchatov Arra**	**114.43**	**6**	PKP		**PKiKP**		**00 04 33.5**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=349,slow=1.8,SNR=15								
KURBB				PKKPbc		**PKKPbc**		**00 15 12.6**	**-2.2**
	comp=Z,0.5nm,0.8s,baz=194,slow=3.3,SNR=4.9								
KSRS	**Korea Array**	**115.21**	**325**	PKP		**PKPdf**		**00 04 38.1**	**+2.3**
	comp=Z,1.2nm,0.6s,baz=31,slow=2.0,SNR=2.7								
SONM	**Songino Array**	**115.22**	**346**	PKP		**PKPdf**		**00 04 36.8**	**+1.1**
	comp=Z,0.9nm,0.8s,baz=13,slow=0.5,SNR=7.8								
MKAR	**Makanchi Array**	**118.53**	**4**	PKP		**PKPdf**		**00 04 42.0**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=334,slow=1.9,SNR=7.8								
HHC	**Hu-ho-hao-te**	**120.04**	**338**	*eP*		**PKPdf**		**00 04 45.0**	**-0.2**
WMQ	**Urumqi**	**121.64**	**359**	*e*PKP		**PKPdf**		**00 04 44.8**	**-3.3**
WMQ				sPKP		sPKPdf		00 05 06.8	-5.3
WMQ				LR		LR			
	comp=Z,170nm,24.0s								
BOSA	**Boshof**	**121.74**	**115**	PKP		**PKiKP**		**00 04 50.6**	**+1.7**
	comp=Z,6.7nm,0.8s,baz=277,slow=2.6,SNR=12								
KDJ	**Kajisay**	**122.64**	**9**			**PKiKP**		**00 04 51.5**	**+1.1**
NJ2	**Nanjing**	**124.19**	**327**	*eP*		**PKPdf**		**00 04 53.3**	**+0.1**
NJ2				pmax		pmax			
	comp=Z,12nm,0.6s								
GTA2	**Gaotai**	**124.64**	**348**	*eP*		**PKiKP**		**00 04 56.5**	**+2.1**
GTA2				pP		pPKPdf		00 05 06.8	-4.9
GTA2				sP		sPKPdf		00 05 12.0	-6.1
GTA2				pmax		pmax			
	comp=Z,7.0nm,0.8s								
KSH2	**Kashi**	**125.29**	**11**	PKP		**PKiKP**		**00 04 58.0**	**+2.3**
LZDM	**Lanzhou Array**	**127.03**	**343**	PKP		**PKiKP**		**00 04 59.8**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=350,slow=3.5,SNR=3.8								
XAN	**Xi'an**	**127.04**	**337**	Pdif		**Pdif**		**00 01 40.3**	**+0.2**
XAN				PKP		**PKPdf**		**00 04 58.3**	**-0.4**
XAN				sPKP		sPKPdf		00 05 14.5	-8.2
STKA	**Stephens Creek**	**127.46**	**241**	PKP		**PKPdf**		**00 04 59.6**	**+0.2**
	comp=Z,3.4nm,0.8s,baz=90,slow=1.0,SNR=8.3								
WRA	**Warramunga Arr**	**134.48**	**257**	PKP		**PKPdf**		**00 05 13.5**	**+0.5**
	comp=Z,2.4nm,0.9s,baz=70,slow=0.9,SNR=12								
ASAR	**Alice Springs**	**134.85**	**251**	PKP		**PKPdf**		**00 05 14.1**	**+0.4**
	comp=Z,0.9nm,0.8s,baz=89,slow=1.1,SNR=8.9								
PZH	**PanZhiHua**	**136.43**	**340**	PKP		**PKPdf**		**00 05 16.3**	**-0.4**
FITZ	**Fitzroy Crossi**	**142.67**	**260**	PKhKP		PKPpre		00 05 25.8	
	comp=Z,2.1nm,0.8s,baz=70,slow=2.5,SNR=5.3								
CMAR	**Chiang Mai Arr**	**144.84**	**340**	PKP		**PKPdf**		**00 05 31.9**	**-0.1**
	comp=Z,6.1nm,0.7s,baz=344,slow=3.7,SNR=32								
KAPI	**Kappang**	**146.17**	**283**	PKPbc		**PKPab**		**00 05 36.6**	**+0.5**
	comp=Z,14nm,0.8s,baz=80,slow=4.7,SNR=8.5								
KAPI	**Kappang**	**146.17**	**283**			**PKPab**		**00 05 37.2**	**+1.1**
NWAO	**Narrogin (SRO)**	**147.03**	**231**	PKPbc		**PKPbc**		**00 05 37.3**	**0.0**
	comp=Z,16nm,0.9s,baz=126,slow=3.3,SNR=6.5								
PSA00	**Pilbara Seismi**	**147.96**	**253**			**PKPbc**		**00 05 40.0**	**-0.2**

MEX 27 00:01:56.8±0.7, 14°89N×93°35W, h46km±128km, MD3.5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.82**	**9**	*e*P	Pn	00 02 10.8	-1.3
PCIG				*e*S	Sn	00 02 20.8	-2.4
THIG		**1.05**	**89**	*e*P	Pn	00 02 13.3	-1.8
THIG				*i* S	Sn	00 02 28.0	-0.6
PATR	**El Naranjo**	**1.10**	**78**	*e*P	Pn	00 02 14.9	-1.2
PATR				*i* S	Sn	00 02 28.1	-2.1
PAVE	**Pavencul**	**1.17**	**75**	*e*P	Pn	00 02 15.9	-1.1
PAVE				*e*S	Sn	00 02 30.0	-2.1
CHUJ	**Union Juarez**	**1.22**	**80**	*e*P	Pn	00 02 14.6	-3.0
CHUJ				*i* S	Sn	00 02 30.9	-2.2
CARR	**Arriaga**	**1.46**	**338**	*e*P	Pn	00 02 20.2	-0.5
CARR				*e*S	Sn	00 02 37.6	-1.1
TGIG		**1.90**	**7**	*e*P	Pn	00 02 24.6	-2.2
TGIG				*i* S	Sn	00 02 41.8	-7.7
CMIG	**Matias Romero**	**2.64**	**326**	*e*P	Pn	00 02 36.2	-0.8
CMIG				*i* S	Sn	00 03 04.9	-2.9

KRSC 27 00:03:33.2±1.6, 49°24N×158°31E, h43km±39km, MI3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.02**	**316**	*e*P	Pn	00 04 05.6	+0.8
SKR				*e*S	Sn	00 04 29.2	+0.6
PAU	**Pauzhetka**	**2.42**	**337**	*e*P	Pn	00 04 13.2	+2.9
PAU				*e*S	Sn	00 04 41.8	+3.2
KDTR	**Khodutka, Kamc**	**2.57**	**357**	*e*P	Pn	00 04 15.4	+3.1
KDTR				*e*S	Sn	00 04 46.3	+4.0
ASAK	**Asacha**	**3.15**	**355**	*e*P	Pn	00 04 24.2	+3.8
MTVR	**Mutnovka**	**3.25**	**359**	*e*P	Pn	00 04 25.6	+3.9
MTVR				*e*S	Sn	00 05 03.5	+4.4
GRL	**Gorelyy**	**3.32**	**358**	*e*P	Pn	00 04 26.5	+3.9
GRL				*e*S	Sn	00 05 05.8	+4.9
KRMR	**Karymshinskiy**	**3.59**	**358**	*e*P	Pn	00 04 30.5	+4.2
KRMR				*e*S	Sn	00 05 13.7	+6.2
APC	**Apacha**	**3.76**	**349**	*e*P	Pn	00 04 32.3	+3.7
PET	**Petropavlovsk**	**3.79**	**3**	*e*P	Pn	00 04 32.7	+3.7
DALK	**Dalny**	**3.80**	**4**	*e*P	Pn	00 04 33.2	+4.0
UGLR	**Uglovaya**	**3.98**	**4**	*e*P	Pn	00 04 36.9	+5.1
SPN	**Mys Shipunski**	**4.01**	**15**	*e*P	Pn	00 04 36.3	+3.3
SPN				*e*S	Sn	00 05 22.2	+4.5
AVH	**Avacha**	**4.04**	**4**	*e*P	Pn	00 04 37.3	+4.8
SMAR	**Somma**	**4.04**	**4**	*e*P	Pn	00 04 37.3	+4.7
KOK	**Koryaka**	**4.06**	**3**	*e*P	Pn	00 04 37.5	+4.7
KRER	**Koryakskii**	**4.08**	**4**	*e*P	Pn	00 04 37.7	+4.5
KRX	**Arik**	**4.13**	**3**	*e*P	Pn	00 04 38.1	+4.3
GNL	**Ganaly**	**4.46**	**357**	*e*P	Pn	00 04 42.6	+4.3
KBTR	**Krutoberegovo**	**7.49**	**20**	*e*P	Pn	00 05 23.6	+3.8

ISK 27 00:20:05.8, 38°43N×39°19E, h4km, ML3.7/15
AFAD 27 00:20:05.9, 38°43N×39°17E, h15km±2km, MW3.7
ISC 27 00:20:06.2±0.9, 38°43N±0°02×39°19E±0°02, h7km±6km, n37, σ1s09/52, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESIJ	**Sivrice-Elazig**	**0.10**	**81**	Pg	**Pg**	**00 20 08.3**	**-0.2**
ESIJ				Sg	**Sg**	**00 20 10.2**	**+0.1**
ESGZ	**Sivrice-Elazig**	**0.10**	**268**	Pg	**Pg**	**00 20 08.9**	**+0.3**
SVRC	**Sivrice-ELAZID**	**0.10**	**121**	Pg	**Pg**	**00 20 08.0**	**-0.7**
MDYL	**Doganyol-Malat**	**0.17**	**225**	Pg	**Pg**	**00 20 09.8**	**+0.1**
MDYL				Sg	**Sg**	**00 20 12.7**	**+0.6**
ELZG	**Elazig**	**0.17**	**292**	P	**Pg**	**00 20 10.3**	**+0.5**
ELZG				S	**Sg**	**00 20 13.2**	**+0.9**
CNGT	**ngs**	**0.23**	**159**	P	**Pg**	**00 20 10.7**	**-0.2**
CNGT				S	**Sg**	**00 20 13.9**	**-0.1**
ELZ	**Elazig**	**0.26**	**3**	P	**Pg**	**00 20 11.6**	**+0.3**
ELZ				S	**Sg**	**00 20 15.8**	**+0.9**
MDNT	**Maden**	**0.39**	**96**	P	**Pb**	**00 20 14.9**	**-0.6**
MDNT				S	**Sb**	**00 20 20.2**	**-1.5**
KOVA	**Elazig, Kovanc**	**0.56**	**61**	P	**Pg**	**00 20 16.6**	**-0.4**
MAYA	**Malatya/Merkez**	**0.61**	**260**	P	**Pg**	**00 20 17.9**	**-0.2**
MAYA				S	**Sb**	**00 20 26.9**	**-1.3**
NARI	**Adyaman-Kaht**	**0.65**	**212**	P	**Pb**	**00 20 18.9**	**-0.9**
NARI				S	**Sg**	**00 20 27.4**	**+0.3**
MCKZ	**Bingol**	**0.70**	**346**	P	**Pg**	**00 20 19.3**	**-0.5**
MCKZ				S	**Sg**	**00 20 29.3**	**+0.3**
KAHTU	**Kahta**	**0.78**	**216**	P	**Pb**	**00 20 21.7**	**-0.4**
KAHTU				S	**Sb**	**00 20 32.2**	**-0.6**
DYBB	**Diyarbakir**	**0.89**	**122**	Pg	**Pb**	**00 20 23.3**	**-0.7**
HANM	**anlurfa/Hi**	**0.89**	**196**	P	**Pb**	**00 20 23.2**	**-0.7**
HANM				S	**Sn**	**00 20 39.0**	**+0.7**
DIYA	**Diyarbakir**	**0.89**	**125**	P	**Pb**	**00 20 23.9**	**-0.2**
ARPR	**Arapgir-MALATY**	**0.94**	**315**	Pg	**Pb**	**00 20 24.1**	**-0.8**
ARPR				Sg	**Sb**	**00 20 37.8**	**+0.1**
AZEY	**Adyaman-Merk**	**0.97**	**230**	P	**Pn**	**00 20 25.3**	**-1.0**
AZEY				S	**Sn**	**00 20 41.7**	**+1.3**
AKCD	**Akcadag**	**1.01**	**263**	P	**Pg**	**00 20 25.0**	**-0.6**
AKCD				S	**Sb**	**00 20 38.7**	**-0.9**
HEKM	**Malatya_Hekimh**	**1.06**	**295**	P	**Pg**	**00 20 26.1**	**-0.6**
HEKM				S	**Sn**	**00 20 41.8**	**-1.1**
ILIC	**ilic-Erzincan**	**1.13**	**335**	Pn	**Pb**	**00 20 27.7**	**-0.4**
ERZN	**Erzincan**	**1.22**	**20**	Pn	**Pg**	**00 20 29.9**	**+0.2**
BNGB	**Bingl**	**1.29**	**64**	Pn	**Pg**	**00 20 31.3**	**+0.3**
YEDI	**Yedisu-Bingol**	**1.46**	**46**	Pn	**Pb**	**00 20 33.6**	**-0.1**
KARO	**Karliova-Bingo**	**1.69**	**58**	Pn	**Pb**	**00 20 37.1**	**-0.7**
VRTB	**Varto-Mus**	**1.91**	**67**	Pn	**Pb**	**00 20 40.2**	**-1.3**
GAZ	**Gaziantep**	**2.01**	**232**	Pn	**Pb**	**00 20 41.4**	**-1.8**
KMRS	**Kahramanmaras**	**2.03**	**244**	Pn	**Pb**	**00 20 41.7**	**-1.8**
BAYT	**Aydıntepe-Bayb**	**2.09**	**20**	Pn	**Pb**	**00 20 43.1**	**-1.5**
GURO	**Guroymak-BITLI**	**2.23**	**86**	Pn	**Pn**	**00 20 44.6**	**+0.9**
BEIL	**Beino**	**4.58**	**213**	*e*P	**Pn**	**00 21 17.0**	**+1.1**
HWQ	**Hawqa**	**4.90**	**213**	*e*P	**Pn**	**00 21 21.9**	**+1.5**
ZAHL	**Zahle**	**5.29**	**211**	*e*P	**Pn**	**00 21 27.3**	**+1.5**
BHL	**Bhannes**	**5.35**	**213**	*e*P	**Pn**	**00 21 28.2**	**+1.7**
DQRL	**Deir Qamar**	**5.55**	**213**	*e*P	**Pn**	**00 21 32.1**	**+2.7**
RCY	**Rachaya**	**5.63**	**210**	*e*P	**Pn**	**00 21 32.8**	**+2.3**
QRWL	**Qaraoun**	**5.64**	**211**	*e*P	**Pn**	**00 21 33.3**	**+2.7**

IDC 27 00:33:13.2±1.6, 32°98N×105°66E, h0km, mb3.5/5, mbtmp3.5/8, ML3.8/2, Error ellipse: s-maj=30.1km s-min=20.6km az=61.0
ISC 27 00:33:15.2±1.2, 33°0N±0°1×105°7E±0°2, h14km, n8, σ0s64/10, mb3.3/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZDM	**Lanzhou Array**	**3.41**	**332**	Pn	**Pn**	**00 34 09.1**	**+0.9**
	baz=154,slow=14						
LZDM				Pg	**Pb**	**00 34 15.1**	**-0.5**
	baz=147,slow=14						
LZDM				Sn	**Sn**	**00 34 48.9**	**+0.2**
	baz=169,slow=18						
LZDM				Lg	Lg	00 34 59.8	
	baz=132,slow=26						
	14nm,0.3s						
SONM	**Songino Array**	**14.87**	**2**	Pn	**Pn**	**00 36 44.9**	**-0.2**
	0.1nm,0.3s,baz=178,slow=14,SNR=2.6						
SONM				Lg	Lg	00 41 05.4	
	0.1nm,0.3s,baz=182,slow=33,SNR=1.4						
	0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**15.66**	**204**	Pn	**Pn**	**00 36 56.0**	**+0.4**
	1.4nm,0.3s,baz=12,slow=9.3,SNR=17						
MKAR	**Makanchi Array**	**22.54**	**315**	P	**P**	**00 38 14.8**	**0.0**
	0.9nm,0.8s,baz=115,slow=10,SNR=8.6						
	0.9nm,0.8s						
KLR	**Kul'dur**	**25.32**	**42**	P	**P**	**00 38 41.9**	**+0.5**
	1.3nm,0.8s,baz=226,slow=10,SNR=4.0						
	1.3nm,0.8s						
KURBB	**Kurchatov Arra**	**26.63**	**320**	P	**P**	**00 38 53.8**	**+0.6**
	0.5nm,0.8s,baz=125,slow=10,SNR=4.5						
	0.5nm,0.8s						
BRTR	**Keskin Array B**	**57.00**	**299**	P	**P**	**00 42 59.8**	**-0.9**
	0.7nm,0.7s,baz=90,slow=5.8,SNR=3.9						
	0.7nm,0.7s						
YKA	**Yellowknife Ar**	**79.52**	**18**	P	**P**	**00 45 20.7**	**-0.5**
	0.2nm,0.6s,baz=334,slow=6.3,SNR=5.5						
	0.2nm,0.6s						

IDC 27 00:37:04.8±3.6, 4°17S×152°22E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=126.2km s-min=29.4km az=108.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.43**	**227**	P	P	00 42 16.6	+0.6
	0.5nm,0.4s,baz=50,slow=9.8,SNR=8.5						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**26.23**	**221**	P	P	00 42 41.7	-0.1
	0.2nm,0.4s,baz=52,slow=8.3,SNR=4.6						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**79.47**	**319**	P	P	00 49 14.1	+0.7
	0.3nm,0.5s,baz=122,slow=6.0,SNR=5.6						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**82.95**	**322**	P	P	00 49 31.5	-0.2
	0.4nm,0.8s,baz=103,slow=3.9,SNR=3.3						
	0.4nm,0.8s						
BVAR	**Borovoye Array**	**88.39**	**323**	P	P	00 49 59.0	+0.3
	1.0nm,0.6s,baz=101,slow=6.0,SNR=6.6						
	1.0nm,0.6s						
TORD	**Torodi Ar. Bea**	**149.56**	**289**	PKPbc	PKPbc	00 56 55.4	-1.9
	0.4nm,0.7s,baz=80,slow=2.2,SNR=5.8						

IDC 27 00:48:09.7±3.1, 31°19S×177°56W, h0km, mb3.6/2, mbtmp3.7/3, ML3.3/1, Error ellipse: s-maj=78.2km s-min=47.2km az=123.0
ISC 27 00:48:13.5±1.3, 31°5S±0°2×177°4W±0°2, h35km, n8, σ2s45/7, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.16**	**212**	Pn	**Pn**	**00 50 10.5**	**+1.2**
	0.4nm,0.3s,baz=125,slow=19,SNR=1.4						
URZ				Sn	**Sn**	**00 51 38.7**	**-1.5**
	0.3nm,0.3s,baz=6.6,slow=13,SNR=2.2						
	1.7nm,0.3s						
ASAR	**Alice Springs**	**43.58**	**268**	P	**P**	**00 56 15.0**	**+0.6**
	0.5nm,0.6s,baz=102,slow=7.8,SNR=5.4						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**44.66**	**273**	P	**P**	**00 56 22.8**	**-0.3**
	0.8nm,0.6s,baz=112,slow=7.9,SNR=5.5						
	0.8nm,0.6s						
GO07	**Milladeo Hill,**	**78.17**	**133**	*e*P	P	01 00 17.2	+8.0
LL01	**San Ignacio de**	**79.34**	**133**	*e*P	**P**	**01 00 18.6**	**+3.0**
LL01				IAML		01 00 52.7	
	comp=E,20nm,0.4s						
LR05	**Currie**	**80.77**	**132**	*e*P	P	01 00 15.0	-8.4
LR05				IAML		01 00 48.2	
	comp=N,97nm,0.2s						
GO06	**Curarrehue**	**81.47**	**131**	*e*P	**P**	**01 00 24.1**	**-3.2**
GO06				IAML		01 01 09.2	
	comp=E,8.1nm,0.6s						
FINES	**FINESS Array B**	**146.31**	**340**	PKPbc	**PKPab**	**01 07 49.8**	**-0.7**
	comp=E,2.8nm,0.9s,baz=48,slow=2.8,SNR=6.2						

NOU 27 01:07:46.9, 18°27S×179°38W, h668km, mb3.4/6, Fiji Islands Region
NEIC 27 01:07:53.7±2.0, 17°6S±0°1×179°9E±0°2, h620km±8km, mb4.2/21, Error ellipse: s-maj=23.0km s-min=17.3km az=124.0
IDC 27 01:07:53.8±1.3, 17°52S×179°74E, h623km±15km, mb3.1/10, mbtmp4.1/11, Error ellipse: s-maj=28.8km s-min=15.9km az=146.0
ISC 27 01:07:53.7±0.6, 17°6S±0°1×179°8E±0°1, h620km, n42, σ0s80/41, mb4.0/21, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAVE	**Taveuni**	**0.95**	**18**	P	**P**	**01 09 06.6**	**-0.4**
DGTI	**Dogotuki**	**1.31**	**358**	P	**P**	**01 09 07.0**	**-0.8**
MSVF	**Nonsavu**	**1.66**	**266**	P	**P**	**01 09 08.9**	**+0.2**
	160nm,0.7s,baz=63,slow=9.0,SNR=141						
MSVF	**Nonsavu**	**1.66**	**266**	P	**P**	**01 09 09.2**	**+0.4**
FUNA	**Funafuti**	**9.05**	**356**	P	**P**	**01 10 02.1**	**-1.8**
MARNC	**Mare, Loyalty**	**11.73**	**249**	P	**P**	**01 10 28.2**	**-1.7**
	0.4nm,1.8s						
MARNC	**Mare, Loyalty**	**11.73**	**249**	P	**P**	**01 10 28.9**	**-1.0**
SANVU	**Saraoutou**	**12.26**	**278**	P	**P**	**01 10 36.6**	**+1.6**
SANVU	**Saraoutou**	**12.26**	**278**	P	**P**	**01 10 36.7**	**+1.6**
DZM	**Mont Dzumac**	**13.31**	**248**	P	**P**	**01 10 45.1**	**-0.3**
	7.2nm,0.6s,baz=76,slow=21,SNR=6.2						
QRZ	**Quartz Range**	**23.96**	**194**	P	**P**	**01 12 21.9**	**+0.3**
CTAO	**Charters Tower**	**31.80**	**260**	P	**P**	**01 13 29.1**	**-0.8**
CTAO				IAmb	IAmb	01 13 30.4	
	comp=Z,9.7nm,0.9s						
COEN	**Coen**	**35.38**	**271**	P	**P**	**01 14 00.6**	**+0.7**
STKA	**Stephens Creek**	**37.27**	**240**	P	**P**	**01 14 15.8**	**+0.7**
	comp=Z,2.2nm,0.4s,baz=89,slow=12,SNR=7.5						
	comp=Z,2.2nm,0.4s						
STKA	**Stephens Creek**	**37.27**	**240**	P	**P**	**01 14 15.7**	**+0.7**
BBOO	**Buckleboo**	**42.05**	**240**	P	**P**	**01 14 53.3**	**+0.1**
BBOO				IAmb	IAmb	01 14 54.1	
	comp=Z,6.5nm,0.9s						
WR8	**Warramunga Arr**	**42.84**	**259**		**P**	**01 14 58.8**	**-0.7**
WR8				IAmb	IAmb	01 15 39.9	
	comp=Z,6.9nm,1.4s						
WB0	**Warramunga Arr**	**42.96**	**260**	P	**P**	**01 14 59.6**	**-0.8**
WB0				IAmb	IAmb	01 15 01.0	
	comp=Z,3.2nm,0.8s						
WRA	**Warramunga Arr**	**42.99**	**259**	P	**P**	**01 14 59.9**	**-0.8**
	comp=Z,1.5nm,0.5s,baz=85,slow=6.9,SNR=54						
	comp=Z,1.5nm,0.5s						
AS31	**Alice Springs**	**43.22**	**254**		**P**	**01 15 02.4**	**0.0**
AS31				IAmb	IAmb	01 15 02.9	
	comp=Z,5.8nm,0.6s						
ASAR	**Alice Springs**	**43.22**	**254**	P	**P**	**01 15 02.4**	**0.0**
	comp=Z,15nm,0.5s,baz=88,slow=8.0,SNR=197						
	comp=Z,15nm,0.5s						
MTN	**Manton Dam**	**47.09**	**269**	P	**P**	**01 15 31.4**	**-0.4**
MTN				IAmb	IAmb	01 15 33.0	
	comp=Z,10nm,1.1s						
FORT	**Forrest**	**48.58**	**244**	P	**P**	**01 15 42.5**	**-0.2**
FORT				IAmb	IAmb	01 16 25.7	
	comp=Z,5.3nm,0.9s						
KNRA	**Kununurra**	**48.81**	**264**	P	**P**	**01 15 44.1**	**-0.4**
KNRA				IAmb	IAmb	01 15 45.3	
	comp=Z,7.6nm,0.7s						
PSA00	**Pilbara Seismi**	**56.32**	**255**	P	**P**	**01 16 36.8**	**-1.1**
PSA00	**Pilbara Seismi**	**56.32**	**255**	P	**P**	**01 16 37.9**	**0.0**
PSA00				IAmb	IAmb	01 17 02.7	
	comp=Z,8.3nm,0.9s						
QSPA	**South Pole Qui**	**72.44**	**180**	P	**P**	**01 18 18.7**	**+0.1**
	comp=Z,2.6nm,0.6s,baz=62,slow=9.6,SNR=11						
	comp=Z,2.6nm,0.6s						
QSPA	**South Pole Qui**	**72.44**	**180**	P	**P**	**01 18 19.0**	**+0.4**
N14K	**Kuskokwak Cree**	**78.72**	**9**	P	**P**	**01 18 53.3**	**+0.4**
N14K				IAmb	IAmb	01 18 58.0	
	comp=Z,21nm,1.5s						
O18K	**Koktuh Hills**	**79.83**	**13**	P	**P**	**01 18 58.5**	**-0.3**
O18K				IAmb	IAmb	01 19 08.0	
	comp=Z,21nm,1.4s						
NVAR	**Mina Array Bea**	**80.41**	**45**	P	**P**	**01 19 02.4**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=252,slow=6.7,SNR=4.0						
	comp=Z,0.4nm,0.6s						
KVN	**Kaiserville**	**80.87**	**44**	P	**P**	**01 19 05.7**	**+0.8**
K15K	**Wolf Creek Mou**	**81.00**	**9**	P	**P**	**01 19 05.9**	**+1.1**
MAW	**Mawson**	**83.55**	**200**	P	**P**	**01 19 18.4**	**+0.7**
	comp=Z,3.4nm,0.7s,baz=86,slow=13,SNR=2.5						
	comp=Z,3.4nm,0.7s						
MAW	**Mawson**	**83.55**	**200**	P	**P**	**01 19 18.7**	**+1.0**
ILAR	**Eielson Array**	**86.00**	**14**	P	**P**	**01 19 28.2**	**-1.2**
	comp=Z,0.1nm,0.5s,baz=229,slow=5.7,SNR=4.9						
	comp=Z,0.1nm,0.5s						
TXAR	**Lajitas Array**	**87.30**	**58**	P	**P**	**01 19 37.2**	**+0.7**
	comp=Z,0.5nm,0.9s,baz=249,slow=5.3,SNR=3.4						
	comp=Z,0.5nm,0.9s						
PDAR	**Pinedale Array**	**88.33**	**44**	P	**P**	**01 19 40.9**	**-0.2**
	comp=Z,0.2nm,0.7s,baz=228,slow=4.4,SNR=2.2						
	comp=Z,0.2nm,0.7s						
YKA	**Yellowknife Ar**	**94.79**	**25**	P	**P**	**01 20 09.6**	**-0.4**
	comp=Z,0.1nm,0.6s,baz=248,slow=4.3,SNR=2.9						
	comp=Z,0.1nm,0.6s						
CLL	**Collm**	**144.78**	**346**	PKPab	PKPbc	01 26 21.9	+0.1
FUORN	**Ofenpass-Fuorn**	**149.80**	**346**	PKPbc	**PKiKP**	**01 26 35.9**	**-0.2**
TUE	**Stuetta**	**150.15**	**347**	PKPbc	**PKPbc**	**01 26 36.2**	**0.0**

SJA 27 01:09:48.4±0.8, 35°58S×75°18W, h30km, ML4.3, MW3.8
GUC 27 01:09:56.1±0.5, 35°28S×74°47W, h12km±15km, ML4.6
IDC 27 01:09:58.5±0.8, 35°52S×74°17W, h0km, mb4.2/9, mbtmp4.1/13, ML3.9/4, MS3.5/11, Error ellipse: s-maj=25.5km s-min=20.5km az=74.0
NEIC 27 01:10:00.5±1.8, 35°35S±0°05×74°1W±0°1, h10km±1km, mb4.6/31, ML4.2(GUC), Error ellipse: s-maj=15.5km s-min=8.9km az=269.0
VAO 27 01:10:01.2±1.0, 35°29S×74°09W, h10km, mb4.3, Presumed earthquake
ISC 27 01:09:59.6±0.9, 35°39S±0°04×74°11W±0°05, h10km±5km, n132, σ2s06/161, mb4.6/21, MS3.7/10, 18C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BI05	**Punta Hualpn**	**1.55**	**151**	⇑*i*P	**Pn**	**01 10 26.2**	**-1.1**
BI05				*i* S	**Sn**	**01 10 43.1**	**-4.3**
BI05				IAML		01 10 44.6	
	comp=E,2μm,0.2s						
GO05	**Hualane**	**1.83**	**79**		**Pn**	**01 10 30.7**	**-0.5**
GO05	**Hualane**	**1.83**	**79**	⇑*i*P	**Pn**	**01 10 30.6**	**-0.5**
GO05				*i* S	**Sn**	**01 10 52.2**	**-2.1**
BO03	**Pichilemu**	**1.98**	**64**	⇑*i*P	**Pn**	**01 10 32.3**	**

baz=75,slow=13
H03S3 Sn **Sn** **01 11 51.0 -2.8**
H03S3 T T 01 15 16.8
baz=115,slow=70
H03S2 Juan Fernandez 4.26 290 Pn **Pn** **01 11 00.8 -3.5**
baz=75,slow=13
H03S2 Sn **Sn** **01 11 51.0 -3.0**
H03S2 T T 01 15 11.7
baz=115,slow=70
H03N1 Juan Fernandez 4.42 295 Pn **Pn** **01 11 03.2 -3.3**
baz=135,slow=25
H03N3 Juan Fernandez 4.42 294 Pn **Pn** **01 11 03.6 -2.9**
baz=135,slow=25
H03N2 Juan Fernandez 4.43 295 Pn **Pn** **01 11 03.6 -3.0**
baz=135,slow=25
GO06 Curarrehue 4.69 154 **Pn** **01 11 11.4 +0.9**
AAGR Agrelo 4.94 64 *eP* **Pn** **01 11 16.4 +2.4**
AAGR IAML 01 12 29.1
comp=Z,52nm,1.3s
ARCO CERRO ARCO 4.99 61 *eP* **Pn** **01 11 17.4 +2.6**
ARCO IAML 01 12 25.1
comp=Z,77nm,0.6s
AUSP Uspallata 5.04 53 *eP* **Pn** **01 11 17.5 +1.9**
AUSP *eS* **Sn** **01 12 11.5 -2.6**
ASAL Salagasta 5.20 59 *eP* **Pn** **01 11 19.6 +2.1**
ASAL *eS* **Sn** **01 12 23.4 +5.8**
GO04 Tololo Observa 5.90 29 **Pn** **01 11 25.5 -1.8**
ZON Zonda 5.94 51 **Pn** **01 11 28.7 +1.0**
ZON Sn **Sn** **01 12 37.3 +1.4**
ZON Zonda 5.94 51 *eP* **Pn** **01 11 28.8 +1.0**
ZON *eS* **Sn** **01 12 37.6 +1.7**
ZON IAML 01 12 42.2
comp=Z,44nm,1.0s
PLCA Paso Flores 6.03 153 Pn **Pn** **01 11 28.8 -0.1**
comp=Z,0.7nm,0.3s,baz=327,slow=13,SNR=28
PLCA Sn **Sn** **01 12 30.1 -8.0**
comp=Z,1.3nm,0.3s,baz=299,slow=7.8,SNR=3.5
PLCA LR LR 01 13 51.2
comp=Z,395nm,20.5s,baz=350,slow=39
comp=Z,8.8nm,0.9s
PLCA Paso Flores 6.03 153 **Pn** **01 11 30.2 +1.2**
PLCA Paso Flores 6.03 153 *eP* **Pn** **01 11 31.8 +2.8**
CFA Coronel Fontan 6.19 54 Pn **Pn** **01 11 31.8 +0.6**
comp=Z,3.3nm,0.3s,baz=239,slow=13,SNR=229
CFA Sn **Sn** **01 12 41.2 -0.7**
comp=Z,6.1nm,0.3s,baz=135,slow=21,SNR=18
comp=Z,8.2nm,0.3s
RTLL Cerro Villicun 6.21 51 *eP* **Pn** **01 11 32.4 +0.9**
RTLL *eS* **Sn** **01 12 39.0 -3.6**
RTLL IAML 01 12 46.1
comp=Z,116nm,0.4s
AROD Rodeo 6.51 38 *eP* **Pn** **01 11 36.3 +0.6**
LCO Las Campanas 6.98 25 **Pn** **01 11 40.4 -1.8**
AVFE Valle Fertil 7.31 52 *eP* **Pn** **01 11 46.1 -0.5**
AVFE *eS* **Sn** **01 13 04.0 -5.7**
AVFE IAML 01 13 10.3
comp=Z,41nm,0.6s
ACHE Chepes 7.53 58 *eP* **Pn** **01 11 49.7 +0.1**
ACHE *eS* **Sn** **01 13 12.7 -2.4**
MRA San Martin 7.58 69 *eP* **Pn** **01 11 51.2 +0.9**
MRA *eS* Sn 01 13 24.7 +8.4
MRA IAML 01 13 47.1
comp=Z,12nm,0.6s
VCA Vinchina 8.31 39 *eP* **Pn** **01 12 00.9 +0.6**
VCA *eP* **Pn** **01 12 01.4 +1.1**
VCA *eS* **Sn** **01 13 36.8 +2.4**
VCA IAML 01 13 40.9
comp=Z,41nm,0.5s
ACLC CERRO LA CRUZ 8.48 47 *eP* **Pn** **01 12 01.4 -1.3**
ACLC *eS* **Sn** **01 13 37.5 -1.1**
ACLC IAML 01 13 39.0
comp=Z,8.9nm,0.6s
TCA Tanti 8.92 66 *eP* **Pn** **01 12 08.0 -0.7**
TCA *eS* **Sn** **01 13 42.0 -7.4**
TCA IAML 01 13 52.3
comp=Z,14nm,0.7s
TINO Tinogasta 9.18 39 *eP* **Pn** **01 12 10.6 -1.7**
TINO *eS* **Sn** **01 13 50.5 -5.3**
TRQA Tornquist 10.10 109 **Pn** **01 12 25.8 +1.1**
TRQA Tornquist 10.10 109 IAML 01 14 15.3
comp=Z,4.1nm,2.4s
AHML Horco Molle 11.40 44 IAML 01 14 38.2
comp=Z,8.4nm,3.4s
CPUP Villa Florida 16.98 63 P **P** **01 13 59.5 +0.2**
comp=Z,0.2nm,0.3s,baz=221,slow=12,SNR=3.0
CPUP LR LR 01 20 57.8
comp=Z,81nm,21.1s,baz=240,slow=39
comp=Z,0.7nm,0.3s
CPUP Villa Florida 16.98 63 **P** **01 13 58.1 -1.1**
LPAZ La Paz 19.76 17 P **Pn** **01 14 33.7 +1.8**
comp=Z,0.1nm,0.3s,baz=186,slow=8.0,SNR=6.4
comp=Z,1.2nm,0.6s
LPAZ La Paz 19.76 17 **P** **01 14 31.0 +0.6**
MURT Porto Murtinho 19.89 51 *eP* **Pn** **01 14 32.7 -0.2**
EFI East Falkland 19.94 150 P **Pn** **01 14 32.3 -0.8**
ITAB Concordia 20.43 73 Pn 01 14 39.0 -0.2
ITAB IAmb IAmb 01 14 42.1
comp=Z,45nm,1.2s
AMBA Amambai (Brazi 20.76 58 *eP* **P** **01 14 41.3 +0.5**
BDQN Bodoquena, MS 21.32 50 *eP* **P** **01 14 47.2 +0.4**
BBSD Serra de San D 21.75 37 *eP* **P** **01 14 52.3 +0.8**
PTGB Pitanga 21.80 67 *eP* **P** **01 14 53.5 +1.5**
AQDB Aquidauana 21.97 52 P **P** **01 14 54.0 +0.2**
AQDB Aquidauana 21.97 52 *eP* **P** **01 14 54.8 +1.0**
TRCB Terra Rica 22.52 62 **P** **01 15 00.2 +0.5**
TRCB IAmb IAmb 01 15 02.0
comp=Z,13nm,0.6s
SIV San Ignacio 22.57 34 LR LR 01 24 42.0
comp=Z,57nm,19.7s,baz=97,slow=39
MAJ01 Sao Joao Batis 22.82 77 *eP* **P** **01 15 03.5 +0.7**
LDASE Londrina, Braz 23.27 65 *eP* **P** **01 15 07.9 +0.4**
PTLB Pontes e Lacer 23.96 38 **P** **01 15 13.3 -1.0**
PTLB IAmb IAmb 01 15 17.2
comp=Z,17nm,1.5s
PTLB Pontes e Lacer 23.96 38 *eP* **P** **01 15 15.6 +1.4**
PP1B Ponte de Pedra 24.62 49 *eP* **P** **01 15 20.2 -0.1**
SALV Santo Antonio 25.46 45 *eP* **P** **01 15 28.6 +0.7**
VILB Vilhena 25.63 33 P **P** **01 15 29.7 +0.2**
VILB IAmb IAmb 01 15 36.0
comp=Z,6.9nm,0.8s
ITRB Iturama 26.12 60 *eP* **P** **01 15 36.0 +2.1**
ATAH Atahualpa 28.39 351 LR LR 01 24 55.9
comp=Z,49nm,18.3s,baz=226,slow=32
PDRB Porto dos Gac 28.44 38 *eP* **P** **01 15 55.3 +0.6**
BDFB Brasilia 30.52 57 P **P** **01 16 13.8 +0.5**
comp=Z,2.6nm,0.8s,baz=225,slow=8.6,SNR=3.8
BDFB LR LR 01 28 25.7
comp=Z,116nm,18.4s,baz=304,slow=36
comp=Z,2.6nm,0.8s
RPN Rapa Nui 31.09 275 LR LR 01 24 59.7
comp=Z,251nm,19.1s,baz=87,slow=29
JANB Januaria 33.50 60 *eP* **P** **01 16 39.7 +0.2**
SDBA SAO DESIDERIO 34.93 56 *eP* **P** **01 16 52.1 +0.2**
SMTB Santa Maria do 35.83 49 *eP* **P** **01 17 00.4 +0.8**
BOAV Boa Vista 39.68 22 P **P** **01 17 30.8 -1.3**
NBMA Muriti-CE 42.74 58 *eP* **P** **01 17 58.0 +0.7**
MDP Montagnes des 45.05 31 LR LR 01 39 04.2
comp=Z,42nm,18.8s,baz=192,slow=39
BELA Belgrano 2 45.83 169 P **P** **01 18 21.8 +0.5**
BELA IAmb IAmb 01 18 23.7
comp=Z,16nm,1.4s
JUD3 Juan Diaz 3 46.58 344 P **P** **01 18 28.3 +0.4**
CELP Cerrillos 53.65 9 P **P** **01 19 20.9 -0.5**
QSPA South Pole Qui 54.85 180 P **P** **01 19 28.8 -1.1**
comp=Z,5.1nm,0.9s,baz=140,slow=0.8,SNR=7.4
comp=Z,5.1nm,0.9s
QSPA South Pole Qui 54.85 180 **P** **01 19 30.8 +0.9**
QSPA IAmb IAmb 01 19 32.9
comp=Z,9.7nm,1.2s
TEIG Tepich 56.92 344 LR LR 01 41 03.5
comp=Z,888nm,20.0s,baz=359,slow=33
TXAR Lajitas Array 70.14 333 P **P** **01 21 13.5 +1.1**
comp=Z,0.7nm,0.7s,baz=149,slow=7.4,SNR=7.8
TXAR LR LR 01 46 32.7
comp=Z,55nm,20.3s,baz=234,slow=31
comp=Z,0.7nm,0.7s
TXAR Lajitas Array 70.14 333 P **P** **01 21 12.7 +0.3**
V48A Smith Brothers 71.75 349 P **P** **01 21 21.9 0.0**
CLTN Cedars of Leba 72.02 350 IAmb IAmb 01 21 24.3
comp=Z,5.4nm,1.1s
LCAR Lake Charles 72.84 346 IAmb IAmb 01 21 28.8
comp=Z,4.1nm,0.6s
CCM Cathedral Cave 74.78 346 P **P** **01 21 39.8 +0.1**
CCM IAmb IAmb 01 21 43.4
comp=Z,5.7nm,0.7s
DBIC Dimbokro 77.23 72 P **P** **01 21 55.4 +1.1**
comp=Z,3.4nm,0.7s,baz=244,slow=4.9,SNR=6.1
DBIC LR LR 01 53 32.8
comp=Z,41nm,19.3s,baz=200,slow=34
comp=Z,3.4nm,0.7s
DBIC Dimbokro 77.23 72 P **P** **01 21 55.0 +0.7**
DBIC IAmb IAmb 01 21 55.8
comp=Z,4.0nm,0.7s
T25A Trinidad 77.46 336 P **P** **01 21 55.8 +0.5**
T25A IAmb IAmb 01 21 57.7
comp=Z,5.7nm,1.0s
TSUM Tsumeb 80.47 107 LR LR 01 53 24.4
comp=Z,42nm,19.9s,baz=178,slow=32
BOSA Boshof 80.92 119 P **P** **01 22 15.1 +0.5**
comp=Z,4.8nm,1.0s,baz=265,slow=3.1,SNR=6.2
comp=Z,4.8nm,1.0s
BOSA Boshof 80.92 119 P **P** **01 22 14.6 +0.1**
CCUT Cedar City 81.20 329 P **P** **01 22 16.2 +0.5**
CCUT IAmb IAmb 01 22 21.4
comp=Z,4.6nm,1.2s
ECSD EROS Data Cent 81.37 344 P **P** **01 22 16.3 +0.1**
ECSD IAmb IAmb 01 22 17.9
comp=Z,16nm,1.4s
LBTB Lobatse 83.26 116 LR LR 01 53 56.7
comp=Z,31nm,19.6s,baz=182,slow=32
NVAR Mina Array Bea 84.07 327 P **P** **01 22 32.5 +1.8**
comp=Z,1.1nm,0.9s,baz=150,slow=5.3,SNR=4.6
comp=Z,1.1nm,0.9s
PDAR Pinedale Array 84.25 335 P **P** **01 22 31.7 +0.2**
comp=Z,0.7nm,0.9s,baz=207,slow=4.4,SNR=4.4
comp=Z,0.7nm,0.9s
PDAR Pinedale Array 84.25 335 P **P** **01 22 31.2 -0.2**
TORD Torodi Ar. Bea 86.28 71 P **P** **01 22 42.2 +0.2**
comp=Z,2.3nm,1.0s,baz=256,slow=3.6,SNR=8.7
comp=Z,2.3nm,1.0s
TORD Torodi Ar. Bea 86.28 71 IAmb IAmb 01 22 44.3
comp=Z,1.9nm,0.8s
HLID Hailey 86.73 332 IAmb IAmb 01 22 48.7
comp=Z,3.7nm,1.1s
BCYI Bear Canyon 86.98 333 IAmb IAmb 01 22 56.5
comp=Z,3.5nm,1.0s
ULM Lac du Bonnet 87.41 346 P **P** **01 22 46.1 -0.5**
comp=Z,2.6nm,0.8s,baz=154,slow=4.5,SNR=5.0
comp=Z,2.6nm,0.8s
ULM Lac du Bonnet 87.41 346 IAmb IAmb 01 22 49.9
comp=Z,5.2nm,1.0s
PLID Pearl Lake 88.62 332 IAmb IAmb 01 22 57.6
comp=Z,4.1nm,1.1s
BVAR Borovoye Array 149.46 44 PKPbc **PKiKP** **01 29 49.6 0.0**
comp=Z,1.8nm,0.5s,baz=315,slow=2.3,SNR=13
KURBB Kurchatov Arra 155.05 44 PKP **PKPdf** **01 29 51.7 -0.7**
comp=Z,0.7nm,1.0s,baz=285,slow=2.1,SNR=4.5
KURBB PKPab **sPKPab** **01 30 18.6 -0.5**
comp=Z,0.8nm,0.8s,baz=297,slow=3.0,SNR=5.3
KURK Kurchatov 155.06 44 **PKPdf** **01 29 51.7 -0.7**
KURK **pPKPab** **01 30 18.6 +0.1**
MKAR Makanchi Array 158.96 50 PKP **PKPdf** **01 29 58.4 +0.9**
comp=Z,0.7nm,0.8s,baz=299,slow=2.5,SNR=6.1
MKAR PKPab **pPKPab** **01 30 34.9 -0.6**
comp=Z,0.8nm,0.7s,baz=302,slow=2.7,SNR=5.3
SONM Songino Array 167.56 358 PKPab **PKPab** **01 31 12.9 +1.4**
comp=Z,0.3nm,0.4s,baz=18,slow=1.8,SNR=4.4
NJ2 Nanjing 168.70 257 *eP* **PKPdf** **01 30 07.3 +0.4**
NJ2 pmax pmax
comp=Z,26nm,0.7s
PZH PanZhiHua 170.46 157 PKP **PKPdf** **01 30 07.8 -0.5**
HHC Hu-ho-hao-te 172.95 322 *eP* **PKPdf** **01 30 05.3 -3.7**

IDC 27 01:18:10.5±1.8, 6°30.5′S×142°16.6′E, h0km, mb3.8/1, mbtmp3.4/3, ML3.2/2, MS2.7/1, Error ellipse: s-maj=344.8km s-min=32.8km az=115.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**12.13**	**296**	LR	LR	01 26 41.7	
	comp=Z,32nm,19.6s,baz=52,slow=42						
WRA	**Warramunga Arr**	**15.54**	**209**	Pn	Pn	01 21 51.4	+0.2
	0.1nm,0.3s,baz=31,slow=12,SNR=5.6						
WRA				Sn	Sn	01 24 36.4	-7.9
	0.1nm,0.3s,baz=59,slow=13,SNR=2.0						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**19.01**	**204**	P	P	01 22 33.9	-0.1
	0.1nm,0.3s,baz=24,slow=11,SNR=8.2						
	0.5nm,0.5s						
ILAR	**Eielson Array**	**87.68**	**24**	P	P	01 31 00.8	0.0
	0.4nm,0.6s,baz=241,slow=4.8,SNR=9.9						
	0.4nm,0.6s						

KRSC 27 01:39:28.2±1.2, 49°48N×158°76E, h49km±33km, MI4.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.09**	**306**	*eP*	Pn	01 40 02.4	+1.7
SKR				*eS*	Sn	01 40 27.6	+2.3
PAU	**Pauzhetka**	**2.35**	**329**	*eS*	Sn	01 40 35.6	+3.8
KDTR	**Khodutka, Kamc**	**2.37**	**350**	*eP*	Pn	01 40 07.4	+2.8
KDTR				*eS*	Sn	01 40 36.1	+3.6
ASAK	**Asacha**	**2.96**	**350**	*eP*	Pn	01 40 16.8	+4.1
ASAK				*eS*	Sn	01 40 51.5	+4.5
RUS	**Russkaya**	**2.96**	**357**	*eP*	Pn	01 40 15.9	+3.3
MTVR	**Mutnovka**	**3.03**	**353**	*eP*	Pn	01 40 16.6	+2.9
MTVR				*eS*	Sn	01 40 52.8	+4.0
MIPR	**Malaya Ipel'ka**	**3.08**	**336**	*eP*	Pn	01 40 18.4	+4.2
MIPR				*eS*	Sn	01 40 54.4	+4.7
GRL	**Gorelyy**	**3.11**	**352**	*eP*	Pn	01 40 18.3	+3.6
GRL				*eS*	Sn	01 40 54.3	+3.5
KRMR	**Karymshinskiy**	**3.38**	**354**	*eP*	Pn	01 40 22.4	+4.1
KRMR				*eS*	Sn	01 41 02.2	+5.0
PET	**Petropavlovsk**	**3.55**	**359**	*eP*	Pn	01 40 24.1	+3.4
PET				*eS*	Sn	01 41 05.0	+3.6
DALK	**Dalny**	**3.56**	**360**	*eP*	Pn	01 40 24.3	+3.5
DALK				*eS*	Sn	01 41 04.5	+3.0
APC	**Apacha**	**3.60**	**344**	*eP*	Pn	01 40 24.4	+3.0
APC				*eS*	Sn	01 41 05.6	+3.1
SPN	**Mys Shipunski**	**3.71**	**12**	*eP*	Pn	01 40 26.4	+3.5
SPN				*eS*	Sn	01 41 09.1	+3.7
NLC	**Nalytchevo**	**3.72**	**5**	*eP*	Pn	01 40 26.5	+3.5
NLC				*eS*	Sn	01 41 08.6	+3.1
UGLR	**Uglovaya**	**3.74**	**1**	*eP*	Pn	01 40 27.4	+4.0
UGLR				*eS*	Sn	01 41 10.4	+4.3
SMAR	**Somma**	**3.79**	**0**	*eP*	Pn	01 40 28.3	+4.0
SMAR				*eS*	Sn	01 41 12.7	+5.1
AVH	**Avacha**	**3.79**	**360**	*eP*	Pn	01 40 28.4	+4.2
KOK	**Koryaka**	**3.82**	**359**	*eP*	Pn	01 40 29.3	+4.8
KOK				*eS*	Sn	01 41 12.8	+4.7
KRER	**Koryakskii**	**3.83**	**360**	*eP*	Pn	01 40 29.0	+4.2
KRER				*eS*	Sn	01 41 12.7	+4.1
KRX	**Arik**	**3.89**	**359**	*eP*	Pn	01 40 29.4	+3.9
KRX				*eS*	Sn	01 41 14.3	+4.4
GNL	**Ganaly**	**4.25**	**353**	*eP*	Pn	01 40 34.8	+4.3
GNL				*eS*	Sn	01 41 23.3	+4.4
KII	**Karymskiy**	**4.59**	**5**	*eP*	Pn	01 40 39.4	+4.4
KII				*eS*	Sn	01 41 31.6	+4.7
TUMD	**Tumrok D**	**5.82**	**9**	*eS*	Sn	01 42 01.5	+4.2
KBTR	**Krutoberegovo**	**7.18**	**18**	*eP*	Pn	01 41 15.0	+4.6

IDC 27 01:42:55.3±0.8, 32°.34N×141°.68E, h0km, mb3.7/10, mbtmp3.7/13, ML3.3/3, MS2.9/6, Error ellipse: s-maj=20.4km s-min=16.0km az=56.0
JMA 27 01:42:59.5±0.3, 32°.5N±0°.9×14°2E±°, h58km, MV3.4/14, E OFF HACHIJOJIMA ISLAND

ISC 27 01:42:59.4±0.7, 32°.31N±0°.06×141°.71E±0°.09, h31km, n27, σ1°34/26, mb3.7/10, MS2.9/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**1.79**	**297**	*eP*	**Pn**	**01 43 28.6**	**+0.5**
JHJ2				*eS*	**Sn**	**01 43 49.3**	**-0.5**
JHJ	**Hachijo jima 2**	**1.82**	**297**	Pn	**Pn**	**01 43 28.3**	**-0.2**
	38nm,0.3s,baz=81,slow=22,SNR=7.7						
JHJ				Sn	**Sn**	**01 43 50.4**	**-0.1**
	122nm,0.3s,baz=261,slow=8.8,SNR=10						
JMKN	**Mikurajimanish**	**2.38**	**312**	*eS*	**Sn**	**01 44 03.6**	**-0.9**
BSO1	**Boso 1**	**2.42**	**346**	*eP*	**Pn**	**01 43 35.5**	**-0.8**
BSO3	**Boso 3**	**2.68**	**338**	*eP*	**Pn**	**01 43 39.5**	**-0.7**
JOD2	**Odawara 2**	**3.67**	**324**	*eS*	**Sn**	**01 44 33.6**	**-2.6**
JYN	**Shimob**	**4.13**	**321**	*eP*	**Pn**	**01 44 00.8**	**+0.3**
JRY	**Ryogami san**	**4.37**	**329**	*eP*	**Pn**	**01 44 04.1**	**+0.4**
JAG	**Ashikaga**	**4.51**	**336**	*eP*	**Pn**	**01 44 04.7**	**-0.9**
MJAR	**Matsushiro Arr**	**5.12**	**327**	Pn	**Pn**	**01 44 12.2**	**-1.7**
	0.2nm,0.3s,baz=148,slow=11,SNR=8.2						
MJAR				Sn	**Sn**	**01 45 10.1**	**-1.9**
	0.1nm,0.3s,baz=150,slow=15,SNR=1.0						
MJAR				LR	LR	01 46 22.3	
	comp=Z,95nm,19.5s,baz=174,slow=41						
	0.9nm,0.3s						
JCJ	**Chichijima 5.21 175**			Pn	**Pn**	**01 44 14.5**	**-0.7**
	5.5nm,0.3s,baz=28,slow=19,SNR=7.1						
JCJ				Sn	**Sn**	**01 45 10.9**	**-3.3**
	5.0nm,0.3s,baz=280,slow=19,SNR=1.7						
	35nm,0.6s						
JNU	**Nakatsue 9.16 278**			LR	LR	01 48 40.5	
	comp=Z,59nm,19.1s,baz=168,slow=38						
KSRS	**Korea Array 12.43 298**			LR	LR	01 50 51.6	
	comp=Z,71nm,18.1s,baz=110,slow=38						
KLR	**Kul'dur 18.48 339**			P	**P**	**01 47 10.5**	**-2.2**
	0.1nm,0.3s,baz=132,slow=5.0,SNR=3.8						
	0.9nm,0.5s						
SONM	**Songino Array 30.84 311**			P	**P**	**01 49 14.2**	**+1.4**
	0.3nm,0.5s,baz=116,slow=7.8,SNR=2.3						
	0.3nm,0.5s						
TLY	**Talaya 33.77 316**			LR	LR	02 03 47.7	
	comp=Z,22nm,19.8s,baz=92,slow=37						
CMAR	**Chiang Mai Arr 40.76 261**			LR	LR	02 09 16.6	
	comp=Z,6.0nm,18.4s,baz=90,slow=39						
MKAR	**Makanchi Array 46.96 306**			P	**P**	**01 51 27.1**	**-0.3**
	0.5nm,0.6s,baz=90,slow=8.4,SNR=7.8						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra 49.20 311**			P	**P**	**01 51 43.9**	**-0.6**
	0.4nm,0.5s,baz=88,slow=8.0,SNR=4.0						
	0.4nm,0.5s						
WRA	**Warramunga Arr 52.43 189**			P	**P**	**01 52 09.9**	**+0.8**
	1.2nm,0.5s,baz=5.7,slow=7.5,SNR=23						
	1.2nm,0.5s						
ILAR	**Eielson Array 53.39 30**			P	**P**	**01 52 15.9**	**+0.2**
	0.8nm,0.8s,baz=274,slow=5.9,SNR=8.6						
	0.8nm,0.8s						
ASAR	**Alice Springs 56.16 189**			P	**P**	**01 52 36.2**	**0.0**
	0.2nm,0.5s,baz=10,slow=6.3,SNR=1.5						
	0.2nm,0.5s						
YKA	**Yellowknife Ar 67.79 29**			P	**P**	**01 53 54.6**	**+0.7**
	0.5nm,0.9s,baz=298,slow=7.2,SNR=5.7						
	0.5nm,0.9s						
NVAR	**Mina Array Bea 77.65 52**			P	**P**	**01 54 54.5**	**+1.3**
	0.5nm,0.7s,baz=142,slow=5.1,SNR=4.0						
	0.5nm,0.7s						
PDAR	**Pinedale Array 80.82 45**			P	**P**	**01 55 11.4**	**+1.0**
	0.4nm,0.7s,baz=245,slow=3.1,SNR=4.2						
	0.4nm,0.7s						
ANMO	**Albuquerque 87.44 50**			LR	LR	02 28 09.0	
	comp=Z,28nm,20.4s,baz=148,slow=31						
TXAR	**Lajitas Array 92.80 53**			P	**P**	**01 56 10.5**	**+1.2**
	0.8nm,0.9s,baz=302,slow=2.8,SNR=7.0						
	0.8nm,0.9s						

IDC 27 01:43:34.3±0.8, 3°.41N×74°.07W, h0km, mb3.5/8, mbtmp3.7/10, ML3.3/2, MS3.1/6, Error ellipse: s-maj=22.4km s-min=12.5km az=86.0
RSNC 27 01:43:36.1±0.0, 3°.50N×74°.16W, h8km±1km, M3.8, mB5.0, mb4.5, ML3.6, Mw(mB)4.3

ISC 27 01:43:35.5±1.2, 3°.47N±0°.02×74°.15W±0°.03, h7km±8km, n62, σ1°54/80, mb3.4/6, MS3.1/3, Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URMC	**La Uribe, Meta**	**0.32**	**225**	P	**Pb**	**01 43 43.2**	**-0.4**
URMC				S	**Sg**	**01 43 47.2**	**+1.1**
PRAC	**Prado**	**0.77**	**288**	P	**Pg**	**01 43 50.5**	**+0.1**
PRAC				S	**Sg**	**01 44 00.5**	**+0.1**
VILC	**Villavicencio,**	**0.78**	**36**	P	**Pb**	**01 43 51.6**	**+0.1**
VILC				S	**Sb**	**01 44 02.8**	**+0.4**
CVER	**Cruz Verde, Cu**	**1.04**	**4**	P	**Pg**	**01 43 55.6**	**0.0**
CVER				S	**Sg**	**01 44 09.5**	**+0.3**
ORTC	**Ortega, Tolima**	**1.17**	**292**	P	**Pg**	**01 43 57.6**	**-0.5**
ORTC				S	**Sn**	**01 44 15.4**	**+0.7**
CHIC	**Chingaza**	**1.22**	**20**	P	**Pg**	**01 43 58.7**	**-0.4**
CHIC				S	**Sg**	**01 44 13.6**	**-1.4**
MACC	**Macarena, Meta**	**1.35**	**167**	P	**Pb**	**01 44 01.6**	**+0.3**
MACC				S	**Sn**	**01 44 19.2**	**+0.1**
ROSC	**El Rosal**	**1.37**	**353**	Pg	**Pb**	**01 44 02.9**	**+1.2**
	305nm,0.3s,baz=34,slow=0.7,SNR=267						
ROSC				Lg	Lg	01 44 20.4	
	479nm,0.3s,baz=193,slow=23,SNR=30						
ROSC	**El Rosal**	**1.37**	**353**	P	**Pb**	**01 44 02.0**	**+0.3**
ROSC				S	**Sb**	**01 44 20.2**	**+0.7**
BETC	**Betania**	**1.51**	**239**	P	**Pb**	**01 44 04.0**	**+0.1**
BETC				S	**Sn**	**01 44 23.5**	**+0.5**
GARC	**Garzon, Huila**	**1.85**	**226**	P	**Pb**	**01 44 09.9**	**0.0**
GARC				S	**Sb**	**01 44 33.5**	**+0.2**
RECRC	**Villamaria, Ca**	**1.90**	**321**	P	**Pn**	**01 44 10.3**	**+1.4**
RECRC				S	**Sn**	**01 44 34.1**	**+0.8**
NIZA	**Niza - Manizal**	**2.05**	**320**	P	**Pb**	**01 44 12.7**	**-0.6**
NIZA				S	**Sn**	**01 44 38.2**	**+1.5**
CMAN1	**Manizales, Cal**	**2.10**	**319**	P	**Pb**	**01 44 13.7**	**-0.3**
CMAN1				S	**Sn**	**01 44 36.3**	**-1.5**
GUY2C	**Guyana, Caldas**	**2.12**	**325**	P	**Pb**	**01 44 13.7**	**-0.8**
GUY2C				S	**Sn**	**01 44 38.4**	**-0.2**
SPBC	**San Pablo de B**	**2.17**	**2**	P	**Pb**	**01 44 15.1**	**0.0**
SPBC				S	**Sn**	**01 44 40.3**	**+1.1**
NORC	**Norcasia**	**2.19**	**341**	P	**Pn**	**01 44 13.8**	**+1.3**
NORC				S	**Sn**	**01 44 40.5**	**+0.6**
YOTC	**Yotoco, Valle**	**2.25**	**283**	P	**Pn**	**01 44 14.5**	**+1.3**
YOTC				S	**Sn**	**01 44 41.4**	**+0.1**
FLOC	**Florencia**	**2.40**	**219**	P	**Pb**	**01 44 18.1**	**-1.1**
FLOC				S	**Sb**	**01 44 49.1**	**+0.1**
JAMC	**Jamundi, Valle**	**2.53**	**264**	P	**Pn**	**01 44 19.4**	**+2.2**
JAMC				S	**Sb**	**01 44 53.5**	**+0.6**
PLMC	**San Jos del P**	**2.56**	**304**	P	**Pn**	**01 44 18.8**	**+1.3**
PLMC				S	**Sb**	**01 44 53.0**	**-0.5**
RUSC	**La Rusia**	**2.63**	**24**	P	**Pb**	**01 44 21.8**	**-1.5**
RUSC				S	**Sb**	**01 44 55.1**	**-0.8**
POPC	**Popayan, Colom**	**2.69**	**250**	P	**Pb**	**01 44 22.2**	**-1.9**
POPC				S	**Sn**	**01 44 52.6**	**+0.3**
CBOC	**Ciudad Bolivar**	**3.01**	**322**	P	**Pn**	**01 44 26.7**	**+2.9**
HELC	**Santa Helena**	**3.03**	**333**	P	**Pn**	**01 44 26.2**	**+2.0**
PTBC	**PUERTO BERRIO,**	**3.06**	**354**	P	**Pn**	**01 44 26.0**	**+1.6**
MEDEC	**Medelln, Ant**	**3.13**	**333**	P	**Pn**	**01 44 28.7**	**+3.2**
BARC	**Barichara**	**3.25**	**17**	P	**Pn**	**01 44 29.9**	**+2.8**
PTLC	**Puerto Leguiza**	**3.34**	**191**	P	**Pb**	**01 44 35.9**	**+0.7**
CRUC	**La Cruz**	**3.38**	**236**	P	**Pb**	**01 44 33.2**	**-2.8**
BBAC	**Balboa, Cauca**	**3.41**	**245**	P	**Pn**	**01 44 31.9**	**+2.5**
BRJC	**Barrancabermej**	**3.50**	**7**	P	**Pn**	**01 44 31.3**	**+0.9**
PIZC	**Pizarro, Choco**	**3.52**	**295**	P	**Pn**	**01 44 33.2**	**+2.5**
GCUF	**Volcan Galeras**	**3.89**	**235**	P	**Pn**	**01 44 38.7**	**+2.4**
GR1C	**Gorgona, Isla**	**4.04**	**263**	P	**Pn**	**01 44 38.6**	**+0.8**
DBB1	**Dabeiba**	**4.07**	**330**	P	**Pn**	**01 44 40.9**	**+2.6**
PAMC	**Pamplona, Colo**	**4.10**	**21**	P	**Pn**	**01 44 43.3**	**+4.2**
UREC	**San Jos de Ur**	**4.47**	**342**	P	**Pn**	**01 44 44.8**	**+1.1**
BONI	**La Bonita**	**4.52**	**228**	P	**Pn**	**01 44 47.0**	**+2.4**
OCAC	**Ocana**	**4.80**	**10**	P	**Pn**	**01 44 51.9**	**+3.4**
APAC	**Apartado, Choc**	**5.02**	**331**	P	**Pn**	**01 44 55.8**	**+4

0.6nm,0.9s
MDP Montagnes des 21.51 85 P **P 01 48 24.6 -0.7**
8.9nm,0.8s,baz=258,slow=12,SNR=5.1
8.9nm,0.8s
SIV San Ignacio 23.27 147 LR LR 01 57 58.0
comp=Z,62nm,19.3s,baz=98,slow=37
PDAR Pinedale Array 50.22 326 P **P 01 52 32.9 +0.4**
0.2nm,0.5s,baz=140,slow=8.3,SNR=2.1
0.2nm,0.5s
SCHQ Schefferville 51.54 5 P **P 01 52 41.7 -0.3**
4.4nm,0.8s,baz=202,slow=5.7,SNR=6.6
4.4nm,0.8s
NVAR Mina Array Bea 53.15 317 P **P 01 52 54.7 +0.2**
0.4nm,0.7s,baz=150,slow=5.8,SNR=4.0
0.4nm,0.7s
YKA Yellowknife Ar 66.05 341 P **P 01 54 23.0 +0.3**
0.1nm,0.4s,baz=138,slow=5.8,SNR=2.1
YKA LR LR 02 24 19.4
comp=Z,33nm,18.1s,baz=338,slow=37
0.1nm,0.4s
TORD Torodi Ar. Bea 75.44 77 P **P 01 55 19.7 -1.2**
0.4nm,0.8s,baz=271,slow=6.6,SNR=4.6
0.4nm,0.8s
ILAR Eielson Array 79.55 335 P **P 01 55 43.0 0.0**
0.3nm,0.7s,baz=119,slow=6.9,SNR=5.1
0.3nm,0.7s
ASAR Alice Springs 146.27 231 PKPbc **PKPdf 02 03 17.1 +0.3**
1.2nm,0.5s,baz=118,slow=3.7,SNR=9.0
WRA Warramunga Arr 147.75 237 PKPbc **PKPbc 02 03 21.2 -0.9**
1.1nm,1.0s,baz=112,slow=2.5,SNR=7.4

SDD ***27*** *01:52:14.4±1.8, 17°.84N×71°.30W, h24km±23km, MD3.3, ML2.0, MW2.6, Presumed earthquake*
OSPL ***27*** *01:52:17.3±1.4, 17°.98N×71°.36W, h21km±12km, ML1.6, Presumed earthquake*
ISC 27 01:52:15.3±1.2, 17°.93N±0°.05×71°.32W±0°.06, h29km±8km, n9, σ1ş72/18, 9C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LOVI	**El Cajuil, Ovi**	**0.14**	**199**	*i*	P		**Pb**	**01 52 22.0**	**+1.2**
LOVI					*eS*		**Sb**	**01 52 26.0**	**+1.3**
LOVI					IAML			01 52 28.8	
	comp=Z,92nm,0.6s								
PODR	**Polo**	**0.23**	**9**	⇑*e*P			**Pb**	**01 52 21.5**	**-0.5**
PODR				⇑*e*Sg			**Sb**	**01 52 25.8**	**-0.9**
PODR				IAML				01 52 31.4	
	comp=N,230nm,0.6s								
PODR	**Polo**	**0.23**	**9**	*i*	P		**Pb**	**01 52 21.6**	**-0.5**
PODR					*eS*		**Sb**	**01 52 25.5**	**-1.2**
PODR					IAML			01 52 29.2	
	comp=Z,3μm,0.2s								
LOBH	**Bahia de las A**	**0.31**	**257**	*i*	P		**Pb**	**01 52 22.9**	**0.0**
LOBH					*eS*		**Sb**	**01 52 27.8**	**-0.2**
LOBH					IAML			01 52 35.5	
	comp=Z,94nm,0.6s								
NEDR	**Neiba UASD**	**0.56**	**350**	⇑*e*P			**Pb**	**01 52 26.8**	**+0.1**
NEDR				⇑*e*Sg			**Sb**	**01 52 35.4**	**+1.1**
NEDR				IAML				01 52 35.9	
	comp=N,56nm,0.4s								
LONE3	**El Aguacate, B**	**0.68**	**349**	*i*	P		**Pb**	**01 52 28.6**	**-0.2**
LONE3					*eS*		**Sb**	**01 52 38.2**	**+0.3**
LONE3					IAML			01 52 38.5	
	comp=Z,17nm,1.1s								
JIDR	**Jimani**	**0.75**	**318**	*e*Pg			**Pn**	**01 52 27.4**	**-2.5**
JIDR				⇑*e*Sg			**Sb**	**01 52 40.5**	**+0.7**
JIDR				IAML				01 52 59.3	
	comp=N,51nm,1.2s								
BANI	**BANI**	**1.02**	**63**	⇑*e*Pg			**Pn**	**01 52 33.2**	**-0.5**
BANI				⇑*e*Sg			**Sn**	**01 52 45.4**	**-1.7**
BANI				IAML				01 53 05.5	
	comp=N,26nm,2.0s								
REDR	**Restauracion**	**1.23**	**357**	⇑*e*Pg			**Pn**	**01 52 39.2**	**+2.7**
REDR				⇑*e*Sg			**Sb**	**01 52 57.5**	**+4.1**
REDR				IAML				01 52 59.3	
	comp=N,16nm,0.2s								

KRSC 27 01:57:20.8±1.6, 49°.46N×158°.71E, h41km±38km, MI3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.07**	**307**	*e*P			Pn	01 57 54.3	+1.3
SKR					*eS*		Sn	01 58 19.7	+2.1
PAU	**Pauzhetka**	**2.35**	**330**	*e*P			Pn	01 58 00.0	+3.2
PAU					*eS*		Sn	01 58 28.7	+4.3
KDTR	**Khodutka, Kamc**	**2.39**	**351**	*e*P			Pn	01 58 00.0	+2.7
KDTR					*eS*		Sn	01 58 28.9	+3.6
ASAK	**Asacha**	**2.97**	**350**	*e*S			Sn	01 58 44.4	+4.5
RUS	**Russkaya**	**2.98**	**358**	*e*P			Pn	01 58 08.6	+3.1
RUS					*eS*		Sn	01 58 43.6	+3.6
MTVR	**Mutnovka**	**3.04**	**354**	*e*S			Sn	01 58 45.7	+3.9
GRL	**Gorelyy**	**3.12**	**353**	*e*S			Sn	01 58 48.1	+4.5
KRMR	**Karymshinskiy**	**3.39**	**354**	*e*P			Pn	01 58 15.3	+4.1
KRMR					*eS*		Sn	01 58 55.3	+5.2
PET	**Petropavlovsk**	**3.57**	**359**	*e*P			Pn	01 58 17.5	+3.9
PET					*eS*		Sn	01 58 58.2	+3.8
DALK	**Dalny**	**3.58**	**0**	*e*P			Pn	01 58 17.4	+3.7
DALK					*eS*		Sn	01 58 59.2	+4.5
SPN	**Mys Shipunski**	**3.73**	**12**	*e*P			Pn	01 58 19.6	+3.8
SPN					*eS*		Sn	01 59 02.6	+4.0
NLC	**Nalytchevo**	**3.74**	**6**	*e*S			Sn	01 59 02.4	+3.8
KOK	**Koryaka**	**3.84**	**359**	*e*P			Pn	01 58 22.2	+4.8
KOK					*eS*		Sn	01 59 07.3	+6.0
KRER	**Koryakskii**	**3.85**	**0**	*e*P			Pn	01 58 21.9	+4.2
KRER					*eS*		Sn	01 59 06.4	+4.8
KRX	**Arik**	**3.91**	**359**	*e*P			Pn	01 58 23.8	+5.5
GNL	**Ganaly**	**4.27**	**354**	*e*P			Pn	01 58 29.2	+5.9
KII	**Karymskiy**	**4.61**	**5**	*e*S			Sn	01 59 25.5	+5.4
KBTR	**Krutoberegovo**	**7.20**	**19**	*e*P			Pn	01 59 07.7	+4.3

IDC 27 02:23:28.6±7.0, 5°.59S×150°.73E, h0km, mb3.9/4, mbtmp4.0/5, ML1.9/1, MS3.1/2, Error ellipse: s-maj=105.0km s-min=73.5km az=31.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.19**	**223**	Pn			Pn	02 24 46.5	-1.0
	3.1nm,0.3s,baz=45,slow=8.6,SNR=4.4								
PMG				Sn			Sn	02 25 41.6	-6.5
	3.9nm,0.3s,baz=75,slow=20,SNR=7.2								
	9.3nm,0.3s								
CTA	**Charters Tower**	**15.06**	**196**	LR			LR	02 33 10.2	
	comp=Z,40nm,18.9s,baz=42,slow=39								
WRA	**Warramunga Arr**	**21.39**	**227**	P			P	02 28 17.6	-0.6
	3.3nm,0.6s,baz=51,slow=10.0,SNR=16								
	3.3nm,0.6s								
ASAR	**Alice Springs**	**24.20**	**220**	P			P	02 28 47.5	+0.3
	1.5nm,0.9s,baz=56,slow=8.4,SNR=14								
	1.5nm,0.9s								
FITZ	**Fitzroy Crossi**	**27.47**	**241**	P			P	02 29 17.0	+0.2
	2.4nm,0.7s,baz=61,slow=11,SNR=2.7								
	2.4nm,0.7s								
STKA	**Stephens Creek**	**27.52**	**197**	P			P	02 29 17.3	+0.3
	1.1nm,0.5s,baz=352,slow=15,SNR=3.4								
	1.1nm,0.5s								
URZ	**Urewera**	**40.40**	**147**	LR			LR	02 46 09.1	
	comp=Z,58nm,21.8s,baz=319,slow=34								

IDC ***27*** *02:24:49.3±1.6, 36°.11N×27°.23E, h0km, mb3.3/2, mbtmp3.2/4, ML3.2/2, Error ellipse: s-maj=40.5km s-min=23.4km az=177.0*
ATH ***27*** *02:24:49.5, 36°.48N×26°.99E, h5km±1km, ML3.1/8, Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
ISK ***27*** *02:24:50.9, 36°.40N×27°.15E, h5km, ML2.8/26*
THE ***27*** *02:24:50.5, 36°N±3°×2°7E±°, h2km±16km, M2.8/12, MLh2.8/12*
AFAD ***27*** *02:24:52.3, 36°.48N×27°.10E, h8km±1km, ML2.6*
ISC 27 02:24:50.3±1.1, 36°.45N±0°.02×27°.04E±0°.02, h9km±9km, n73, σ1ş26/98, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YAZI	**Mula-Dat§a-**	**0.41**	**55**	P			**Pb**	**02 24 59.1**	**-0.6**
YAZI					S		**Sb**	**02 25 04.7**	**-1.3**
YAZI					IAML			02 25 05.0	
	comp=E,596nm,0.4s								
DAT	**Datca**	**0.52**	**57**	Pg			**Pb**	**02 25 01.5**	**-0.1**
DAT					Sg		**Sb**	**02 25 08.7**	**-0.5**
DATC	**Datca-Mugla**	**0.59**	**58**	Pg			**Pb**	**02 25 02.6**	**-0.2**
BODT	**Bodrum**	**0.65**	**19**	S			**Sn**	**02 25 16.3**	**+0.1**
BODT	**Bodrum**	**0.65**	**19**	Pg			**Pn**	**02 25 05.5**	**-0.3**
BODT					Sg		**Sn**	**02 25 15.7**	**-0.5**
BDRM	**Kayabasi**	**0.70**	**27**	P			**Pb**	**02 25 04.8**	**+0.1**
BDRM					S		**Sb**	**02 25 13.7**	**-0.7**
YKAV	**Yalikavak-Bodr**	**0.70**	**16**	Pg			**Pb**	**02 25 05.3**	**+0.6**
KARP	**Karpathos**	**0.90**	**174**	P			**Pg**	**02 25 08.0**	**+0.3**
KARP					S		**Sb**	**02 25 21.1**	**+0.8**
KARP	**Karpathos**	**0.90**	**174**	Pg			**Pg**	**02 25 08.2**	**+0.6**
KARP					Sg		**Sb**	**02 25 21.1**	**+0.8**
KARP	**Karpathos**	**0.90**	**174**	P			**Pg**	**02 25 07.8**	**+0.2**
KARP					S		**Sg**	**02 25 20.1**	**+0.8**
ARG	**Arkhangelos**	**0.91**	**104**	P			**Pb**	**02 25 07.9**	**-0.3**
ARG					S		**Sb**	**02 25 20.9**	**+0.6**
ARG	**Arkhangelos**	**0.91**	**104**	Pg			**Pb**	**02 25 07.8**	**-0.4**
ARG					Sg		**Sb**	**02 25 20.2**	**-0.1**
ARG	**Arkhangelos**	**0.91**	**104**	P			**Pg**	**02 25 07.4**	**-0.3**
ARG					S		**Sb**	**02 25 20.1**	**-0.2**
RODB	**Rodos**	**0.95**	**90**	P			**Pb**	**02 25 08.7**	**-0.3**
RODB					S		**Sb**	**02 25 21.9**	**+0.3**
DDIM	**Aydin, Didim**	**1.02**	**9**	P			**Pn**	**02 25 11.2**	**+0.4**
DDIM					S		**Sn**	**02 25 24.7**	**-0.6**
DDIM					IAML			02 25 31.0	
	comp=N,322nm,0.9s								
DDIM					IAML			02 25 38.0	
	comp=E,332nm,1.0s								
TURN	**Turunc**	**1.02**	**71**	Pg			**Pn**	**02 25 10.4**	**-0.4**
TURN					Sg		**Sn**	**02 25 24.8**	**-0.5**
TURN	**Turunc**	**1.02**	**71**	P			**Pb**	**02 25 09.9**	**-0.3**
TURN					S		**Sn**	**02 25 24.3**	**-1.0**
TURN					IAML			02 25 26.0	
	comp=N,234nm,0.4s								
TURN					IAML			02 25 32.0	
	comp=E,134nm,0.5s								
MLSB	**Milas**	**1.03**	**35**	Pg			**Pn**	**02 25 11.6**	**+0.6**
YER	**Yerkesik**	**1.21**	**55**	P			**Pb**	**02 25 13.2**	**-0.2**
YER					S		**Sn**	**02 25 33.2**	**+3.1**
YER	**Yerkesik**	**1.21**	**55**	Pn			**Pn**	**02 25 14.1**	**+0.6**
GCAM	**G?zelcami?**	**1.26**	**7**	Pn			**Pn**	**02 25 16.6**	**+2.5**
GCAM	**G?zelcami?**	**1.26**	**7**	P			**Pn**	**02 25 15.3**	**+1.2**
GCAM					S		**Sn**	**02 25 33.8**	**+2.7**
THR8	**Santorini-Mono**	**1.26**	**269**	P			**Pn**	**02 25 13.1**	**-1.0**
THR8	**Santorini-Mono**	**1.26**	**269**	P			**Pn**	**02 25 12.9**	**-1.2**
THERA	**Ancient Thera,**	**1.27**	**267**	P			**Pn**	**02 25 14.1**	**-0.1**
THERA					S		**Sg**	**02 25 31.9**	**+0.9**
THERA	**Ancient Thera,**	**1.27**	**267**	P			**Pn**	**02 25 12.8**	**-1.4**
THERA					S		**Sg**	**02 25 29.2**	**-1.9**
SMG	**Samos**	**1.27**	**353**	P			**Pg**	**02 25 13.7**	**-1.0**
SMG	**Samos**	**1.27**	**353**	P			**Pg**	**02 25 13.0**	**-1.7**
SMG					S		**Sg**	**02 25 29.5**	**-1.7**
MULA	**Mugla, Merkez-**	**1.31**	**51**	P			**Pn**	**02 25 16.0**	**+1.2**
MULA					S		**Sn**	**02 25 34.2**	**+1.7**
MULA					IAML			02 25 42.0	
	comp=E,128nm,0.7s								
THR3	**Thira Island,**	**1.32**	**269**	P			**Pn**	**02 25 14.0**	**-0.9**
SNT5	**Nea Kammeni, S**	**1.33**	**269**	P			**Pn**	**02 25 15.2**	**+0.2**
SNT5	**Nea Kammeni, S**	**1.33**	**269**	P			**Pn**	**02 25 14.2**	**-0.8**
THR6	**Thira Island,**	**1.33**	**267**	P			**Pn**	**02 25 14.2**	**-0.9**
DALY	**Dalyan (Mula)**	**1.35**	**74**	Pn			**Pb**	**02 25 16.8**	**+1.1**
THR9	**Santorini-Faro**	**1.36**	**267**	P			**Pn**	**02 25 14.2**	**-1.3**
SAP3	**Santorini-Thir**	**1.37**	**270**	P			**Pn**	**02 25 15.2**	**-0.4**
KRL1	**Karlovasi Samo**	**1.37**	**349**	P			**Pn**	**02 25 14.4**	**-1.2**
AYDN	**Tasoluk**	**1.39**	**29**	P			**Pg**	**02 25 16.5**	**-0.4**
SIT2	**Siteia**	**1.45**	**212**	P			**Pn**	**02 25 16.7**	**0.0**
SIT2					S		**Sn**	**02 25 36.1**	**+0.2**
STIA	**Sitia Lasithi**	**1.46**	**212**	P			**Pn**	**02 25 17.0**	**+0.1**
STIA					S		**Sn**	**02 25 35.8**	**-0.3**
ZKR	**Zakros**	**1.49**	**207**	Pn			**Pg**	**02 25 19.7**	**+0.9**
ZKR	**Zakros**	**1.49**	**207**	P			**Pn**	**02 25 17.1**	**-0.1**
ZKR					S		**Sn**	**02 25 36.6**	**-0.2**
SABU	**Mula-Dalaman**	**1.59**	**76**	P			**Pg**	**02 25 20.5**	**-0.4**
SABU					IAML			02 25 45.0	
	comp=N,83nm,0.7s								
GMLD	**Gumuldur**	**1.63**	**356**	Pn			**Pg**	**02 25 22.9**	**+1.3**
AYDB	**Zeytinkoy-Aydi**	**1.64**	**24**	Pn			**Pg**	**02 25 22.0**	**+0.2**
FETY	**Fethiye**	**1.66**	**83**	P			Pn	02 25 10.4	-9.1
FETY	**Fethiye**	**1.66**	**83**	P			Pn	02 25 12.7	-6.8
FETY					S		**Sn**	**02 25 37.8**	**-3.2**
NPS	**Neapolis**	**1.66**	**225**	P			**Pn**	**02 25 20.1**	**+0.6**
NPS	**Neapolis**	**1.66**	**225**	P			**Pn**	**02 25 19.6**	**0.0**
NPS					S		**Sn**	**02 25 40.6**	**-0.3**
ESEN	**Aydn-Nazilli**	**1.71**	**37**	P			**Pb**	**02 25 21.6**	**-0.3**
ESEN					S		**Sg**	**02 25 46.8**	**+1.6**
ESEN					IAML			02 25 54.0	
	comp=E,57nm,0.7s								
NAZL	**Nazilli-Aydin**	**1.81**	**33**	Pn			**Pg**	**02 25 24.5**	**-0.6**
CAME	**Cameli-Denizli**	**1.88**	**74**	Pn			**Pb**	**02 25 24.3**	**-0.6**
BLCB	**Balcova**	**1.94**	**360**	P			**Pn**	**02 25 23.1**	**-0.3**
BLCB	**Balcova**	**1.94**	**360**	Pn			**Pg**	**02 25 26.9**	**-0.1**
URLA	**Izmir**	**1.94**	**350**	Pn			**Pg**	**02 25 27.5**	**-0.1**
ODEM	**Odemis-Izmir**	**2.00**	**24**	Pn			**Pb**	**02 25 27.5**	**+0.5**
KSL	**Kastellorizon**	**2.07**	**97**	P			**Pn**	**02 25 26.2**	**+0.9**
KSL	**Kastellorizon**	**2.07**	**97**	P			**Pn**	**02 25 25.9**	**+0.7**
APMY	**Acipayam-Deniz**	**2.08**	**60**	Pn			**Pb**	**02 25 27.5**	**-0.8**
AKAS	**Kas**	**2.08**	**95**	Pn			**Pb**	**02 25 27.0**	**-1.3**
CHOS	**Chios island**	**2.09**	**338**	Pn			**Pb**	**02 25 29.6**	**+1.2**
IDI	**Anoyia**	**2.10**	**237**	P			**Pn**	**02 25 25.8**	**+0.2**
IDI	**Anoyia**	**2.10**	**237**	P			**Pn**	**02 25 25.6**	**0.0**
ELL	**Elmali**	**2.33**	**82**	Pn			**Pn**	**02 25 30.5**	**+1.6**
KULA	**Kula-Manisa**	**2.43**	**31**	Pn			**Pb**	**02 25 33.3**	**-1.0**
GORD	**Gordes-Manisa**	**2.62**	**20**	Pn			**Pb**	**02 25 35.9**	**-1.5**
DKL	**Dikili**	**2.62**	**358**	Pn			**Pb**	**02 25 37.4**	**-0.1**
IMMV	**Iera Moni Meta**	**2.67**	**249**	P			**Pn**	**02 25 33.1**	**-0.4**
SIGR	**SIGRI**	**2.92**	**342**	P			**Pn**	**02 25 36.0**	**-0.8**
BRTR	**Keskin Array B**	**6.15**	**56**	Pn			**Pn**	**02 26 24.1**	**+2.7**
	0.1nm,0.3s,baz=235,slow=18,SNR=2.4								
	0.3nm,0.4s								
MMAI	**Mount Meron Ar**	**7.69**	**114**	Pn			**Pn**	**02 26 40.2**	**-2.3**
	1.6nm,0.3s,baz=294,slow=13,SNR=8.0								
MMAI					Sn		**Sn**	**02 28 03.7**	**-6.0**
	1.2nm,0.3s,baz=303,slow=23,SNR=2.1								
	1.0nm,0.4s								
ESDC	**Sonseca Array**	**24.56**	**287**	P			**P**	**02 30 13.8**	**+3.2**
	0.6nm,0.8s,baz=79,slow=9.6,SNR=6.0								
	0.6nm,0.8s								
TORD	**Torodi Ar. Bea**	**32.49**	**231**	P			**P**	**02 31 20.1**	**-1.2**
	0.3nm,0.5s,baz=34,slow=7.3,SNR=7.3								
	0.3nm,0.5s								

IDC ***27*** *02:25:30.3±0.6, 19°.00N×145°.46E, h223km±5km, mb3.8/25, mbtmp4.4/29, Error ellipse: s-maj=13.9km s-min=7.1km az=78.0*
NEIC ***27*** *02:25:31.3±2.0, 18°.99N±0°.06×145°.4E±0°.1, h224km±6km, mb4.4/49, Error ellipse: s-maj=15.7km s-min=8.7km az=78.0*
ISC 27 02:25:29.5±0.4, 18°.99N±0°.04×145°.47E±0°.09, h214km, n100, σ1ş12/99, mb4.3/46, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DPSS	**Saipan**	**3.74**	**175**				**Pn**	**02 26 30.9**	**+2.2**
DPSS						Sn	**S**	**02 27 14.1**	**-1.0**
GUMO	**Guam**	**5.40**	**186**	P			**Pn**	**02 26 51.1**	**+1.7**
	82nm,0.2s,baz=304,slow=23,SNR=1.7								
GUMO					S		**S**	**02 27 50.8**	**-1.7**
	115nm,0.3s,baz=232,slow=19,SNR=3.9								
GUMO	**Guam**	**5.40**	**186**	Pn			**Pn**	**02 26 51.0**	**+1.5**
JCJ	**Chichijima**	**8.61**	**340**	P			**Pn**	**02 27 30.2**	**-0.5**
	42nm,0.4s,baz=288,slow=22,SNR=7.3								
JCJ					S		**S**	**02 29 02.8**	**-5.0**
	61nm,0.5s,baz=277,slow=22,SNR=5.8								
JCJ	**Chichijima**	**8.61**	**340**	Pn			**Pn**	**02 27 31.6**	**+0.9**
JOW	**Kunigami**	**17.64**	**299**	P			**Pn**	**02 29 22.4**	**-0.3**
	40nm,0.4s,baz=123,slow=12,SNR=18								
JOW	**Kunigami**	**17.64**	**299**	IAmb		IAmb		02 29 25.5	
	comp=Z,45nm,0.5s								
INU	**Inuyama**	**17.93**	**337**	P			**P**	**02 29 25.4**	**+1.8**
INU				IAmb		IAmb		02 29 27.5	
	comp=Z,30nm,1.1s								
JGF	**Kuroka**	**18.03**	**338**				**Pn**	**02 29 26.7**	**-0.5**
MJAR	**Matsushiro Arr**	**18.61**	**341**	P			**P**	**02 29 31.6**	**+0.6**
	comp=Z,2.4nm,0.3s,baz=171,slow=9.8,SNR=14								
MJAR	**Matsushiro Arr**	**18.61**	**341**				**P**	**02 29 32.8**	**+1.7**
MAJO	**Matsushiro**	**18.62**	**341**	P			**Pn**	**02 29 33.3**	**-0.7**
MAJO				IAmb		IAmb		02 29 38.8	
	comp=Z,18nm,0.8s								
H11S3	**WAKE ISLAND Hy**	**20.10**	**88**	T			T	02 51 18.1	
	baz=275								
H11S1	**WAKE ISLAND Hy**	**20.11**	**88**	T			T	02 51 18.9	
	baz=275,slow=74,SNR=4.4								
H11S2	**WAKE ISLAND Hy**	**20.12**	**88**	T			T	02 51 19.7	
	baz=275,slow=74,SNR=5.0								
H11N1	**WAKE ISLAND Hy**	**20.23**	**84**	T			T	02 51 42.6	
	baz=271								
H11N2	**WAKE ISLAND Hy**	**20.23**	**84**	T			T	02 51 43.2	
	baz=271								
H11N3	**WAKE ISLAND Hy**	**20.25**	**84**	T			T	02 51 45.3	
	baz=271								
MANU	**Manus Island**	**20.98**	**175**				**P**	**02 29 56.0**	**-0.5**
JAY	**Jayapura**	**21.88**	**193**	P			**P**	**02 30 05.4**	**-0.2**
	comp=Z,13nm,0.7s,baz=348,slow=4.7								
	comp=Z,13nm,0.7s								
JTM	**Tenmabayashi**	**22.05**	**351**	P			**P**	**02 30 08.4**	**+1.5**
SSLB	**Suanglung**	**23.31**	**286**				**P**	**02 30 20.4**	**+1.8**
SSLB				IAmb		IAmb		02 30 21.8	
	comp=Z,15nm,0.8s								
KSRS	**Korea Array**	**23.95**	**324**	P			**P**	**02 30 23.1**	**-1.1**
	comp=Z,1.5nm,0.6s,baz=148,slow=9.0,SNR=4.1								
KSRS				pP			**pwP**	**02 31 06.8**	**-0.7**
	comp=Z,4.0nm,0.8s,baz=150,slow=7.9,SNR=4.1								
	comp=Z,1.5nm,0.6s								
RABL	**Rabaul**	**23.96**	**163**	P			**P**	**02 30 23.6**	**-1.0**
PMG	**Port Moresby**	**28.27**	**176**	P			**P**	**02 31 02.2**	**-0.9**
	comp=Z,4.5nm,0.2s,baz=355,slow=13,SNR=4.3								
	comp=Z,4.5nm,0.2s								
PMG	**Port Moresby**	**28.27**	**176**	IAmb		IAmb		02 31 09.5	
	comp=Z,20nm,1.0s								
KKM	**Kota Kinabalu**	**31.25**	**250**	P			**P**	**02 31 30.5**	**+0.8**
KKM				IAmb		IAmb		02 32 01.8	
	comp=Z,18nm,1.1s								
COEN	**Coen**	**32.82**	**184**	P			**P**	**02 31 42.7**	**-0.4**
COEN				IAmb		IAmb		02 32 09.1	
	comp=Z,13nm,1.1s								
MTN	**Manton Dam**	**34.64**	**205**				**P**	**02 31 57.6**	**-1.2**
HHC	**Hu-ho-hao-te**	**36.24**	**314**	*e*P			**P**	**02 32 14.0**	**+1.6**
HHC				pmax		pmax			
	comp=Z,7.0nm,0.6s								
HHC				pmax		pmax			
	comp=Z,89nm,4.5s								
SBUM	**Sibu**	**36.45**	**247**	P			**P**	**02 32 15.3**	**+1.0**
KNRA	**Kununurra**	**38.17**	**207**				**P**	**02 32 28.4**	**-0.2**
KNRA				IAmb		IAmb		02 32 31.7	
	comp=Z,16nm,0.9s								
CTA	**Charters Tower**	**38.84**	**179**	P			**P**	**02 32 33.9**	**-0.3**
	comp=Z,1.9nm,0.3s,baz=347,slow=8.4,SNR=7.1								
	comp=Z,1.9nm,0.3s								
CTAO	**Charters Tower**	**38.84**	**179**	P			**P**	**02 32 33.6**	**-0.6**
CTAO				IAmb		IAmb		02 32 45.2	
	comp=Z,18nm,1.4s								
WB0	**Warramunga Arr**	**40.02**	**196**				**P**	**02 32 44.0**	**+0.1**
WB0				IAmb		IAmb		02 32 45.2	
	comp=Z,22nm,1.1s								
WRA	**Warramunga Arr**	**40.20**	**196**	P			**P**	**02 32 45.1**	**-0.2**
	comp=Z,8.9nm,0.3s,baz=19,slow=9.1,SNR=134								
	comp=Z,8.9nm,0.3s								
WRA	**Warramunga Arr**	**40.20**	**196**				**P**	**02 32 44.5**	**-0.9**
FITZ	**Fitzroy Crossi**	**41.69**	**209**	P			**P**	**02 32 57.5**	**0.0**
	comp=Z,9.7nm,0.3s,baz=34,slow=11,SNR=64								
	comp=Z,9.7nm,0.3s								
SONM	**Songino Array**	**42.78**	**321**	P			**P**	**02 33 06.4**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=144,slow=9.8,SNR=5.2								
SONM				pP			**pP**	**02 33 53.4**	**+2.9**
	comp=Z,1.5nm,0.7s,baz=136,slow=7.6,SNR=2.5								
	comp=Z,0.6nm,0.5s								
SONM	**Songino Array**	**42.78**	**321**	P			**P**	**02 33 06.3**	**+0.1**
AS31	**Alice Springs**	**43.87**	**195**				**P**	**02 33 15.1**	**0.0**
AS31				IAmb		IAmb		02 33 18.0	
	comp=Z,3.6nm,0.3s								
ASAR	**Alice Springs**	**43.87**	**195**	P			**P**	**02 33 15.0**	**0.0**
	comp=Z,2.9nm,0.4s,baz=12,slow=6.4,SNR=52								
	comp=Z,2.9nm,0.4s								
ASAR	**Alice Springs**	**43.87**	**195**				**P**	**02 33 14.8**	**-0.2**
CMAR	**Chiang Mai Arr**	**43.96**	**277**	P			**P**	**02 33 17.1**	**+1.2**
	comp=Z,1.4nm,0.3s,baz=68,slow=3.4,SNR=1.1								
DZM	**Mont Dzumac**	**45.68**	**152**	P			**P**	**02 33 29.9**	**+0.6**
	comp=Z,6.4nm,0.4s,baz=301,slow=5.9,SNR=18								
	comp=Z,6.4nm,0.4s								
**OUEN

comp=Z,0.3nm,0.6s,baz=295,slow=6.0,SNR=6.5
YKA pP **pwP 02 37 56.8 +0.1**
comp=Z,1.0nm,0.7s,baz=294,slow=6.2,SNR=6.8
comp=Z,0.3nm,0.6s
SPITS Spitsbergen Ar 78.84 351 P **P 02 37 08.0 -0.4**
comp=Z,12nm,1.1s,baz=66,slow=5.2,SNR=1.9
comp=Z,12nm,1.1s
ARCES ARCESS Array B 82.15 342 P **P 02 37 25.4 -0.7**
comp=Z,2.8nm,0.7s,baz=53,slow=4.7,SNR=4.0
comp=Z,2.8nm,0.7s
ARCES ARCESS Array B 82.15 342 IAmb IAmb 02 38 08.7
comp=Z,16nm,1.3s
NVAR Mina Array Bea 83.13 52 P **P 02 37 32.4 +0.3**
comp=Z,2.0nm,0.8s,baz=261,slow=5.7,SNR=13
comp=Z,2.0nm,0.8s
KBZ Khabaz 85.78 315 P **P 02 37 43.9 -0.9**
comp=Z,0.6nm,0.5s,baz=170,slow=1.8,SNR=2.9
comp=Z,0.6nm,0.5s
FINES FINESS Array B 86.53 335 P **P 02 37 46.8 -1.4**
comp=Z,2.3nm,0.5s,baz=68,slow=4.8,SNR=32
FINES pP **pP 02 38 40.4 +1.1**
comp=Z,0.7nm,0.5s,baz=70,slow=6.3,SNR=2.3
comp=Z,2.3nm,0.5s
PDAR Pinedale Array 87.78 45 P **P 02 37 54.5 -0.4**
comp=Z,0.1nm,0.4s,baz=287,slow=8.0,SNR=2.3
comp=Z,0.1nm,0.4s
HFS Hagfors 92.03 338 P **P 02 38 11.6 -2.4**
comp=Z,0.8nm,0.6s,baz=56,slow=5.6,SNR=6.0
comp=Z,0.8nm,0.6s
NOA NORSAR Array B 92.22 340 P **P 02 38 13.8 -1.1**
comp=Z,0.2nm,0.5s,baz=44,slow=4.5,SNR=1.2
comp=Z,0.2nm,0.5s
TORD Torodi Ar. Bea 132.10 309 PKP **PKPdf 02 44 17.4 -1.2**
comp=Z,0.3nm,0.5s,baz=338,slow=1.0,SNR=5.2
PLCA Paso Flores 142.36 133 PKhKP PKPpre 02 44 28.1
comp=Z,0.8nm,0.5s,baz=255,slow=3.5,SNR=8.7
LPAZ La Paz 147.90 91 PKPbc **PKPbc 02 44 50.7 -0.3**
comp=Z,1.3nm,0.4s,baz=17,slow=4.2,SNR=8.3
LPAZ La Paz 147.90 91 **PKPbc 02 44 50.9 -0.1**
CPUP Villa Florida 157.75 113 PKPab **PKPab 02 45 35.2 +0.5**
comp=Z,1.0nm,0.8s,baz=0.0,slow=1.0,SNR=3.1

*IDC **27** 02:30:19.4±0.8, 15°.61S×173°.43W, h0km, mb3.8/10, mbtmp3.8/11, ML4.8/1, MS3.0/2, Error ellipse: s-maj=35.8km s-min=18.2km az=136.0*
*NEIC **27** 02:30:22.5±1.9, 15°.20S±0°.06×173°.7W±0°.1, h10km±1km, mb4.4/6, Error ellipse: s-maj=25.4km s-min=4.3km az=290.0*
ISC 27 02:30:25.3±0.7, 15°.5S±0°.2×173°.4W±0°.2, h42km, n29, σ1°35/21, mb3.9/13, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.19**	**44**	Pn		**Pn**	**Pn**	**02 30 59.7**	**+0.4**
	262nm,0.3s,baz=149,slow=2.1,SNR=13								
AFI				Sn			**Sn**	**02 31 22.3**	**-3.0**
	397nm,0.3s,baz=94,slow=22,SNR=16								
AFI				LR		LR	LR	02 31 42.6	
	comp=Z,199nm,20.0s,baz=224,slow=36								
	550nm,0.3s								
NIUE	**Niue**	**4.83**	**138**	Pn		Pn	Pn	02 31 40.9	+5.3
MSVF	**Nonsavu**	**8.54**	**254**	LR		LR	LR	02 34 38.8	
	comp=Z,152nm,21.0s,baz=70,slow=31								
URZ	**Urewera**	**24.19**	**199**	P		**P**	**P**	**02 35 36.0**	**-1.8**
	2.0nm,0.5s,baz=347,slow=20,SNR=2.0								
	2.0nm,0.5s								
RTZ	**Ruatahuna**	**24.55**	**198**	P		**P**	**P**	**02 35 41.9**	**+0.6**
H11S2	**WAKE ISLAND Hy**	**39.07**	**329**	T		T	T	03 18 12.6	
	baz=147,slow=76,SNR=10								
H11S3	**WAKE ISLAND Hy**	**39.08**	**329**	T		T	T	03 18 32.8	
	baz=147,slow=76,SNR=4.6								
H11S1	**WAKE ISLAND Hy**	**39.09**	**329**	T		T	T	03 18 14.0	
	baz=147,slow=76,SNR=14								
H11N3	**WAKE ISLAND Hy**	**40.02**	**330**	T		T	T	03 19 19.2	
	baz=148,slow=76,SNR=18								
H11N1	**WAKE ISLAND Hy**	**40.02**	**330**	T		T	T	03 19 37.7	
	baz=148,slow=76,SNR=6.6								
H11N2	**WAKE ISLAND Hy**	**40.03**	**330**	T		T	T	03 19 24.3	
	baz=148,slow=76,SNR=8.5								
WR8	**Warramunga Arr**	**49.72**	**257**	P		**P**	**P**	**02 39 12.6**	**-1.1**
WR8				IAmb		IAmb	IAmb	02 39 16.5	
	comp=Z,9.6nm,1.4s								
WRA	**Warramunga Arr**	**49.87**	**257**	P		**P**	**P**	**02 39 13.8**	**-1.1**
	comp=Z,0.6nm,0.5s,baz=89,slow=6.9,SNR=13								
	comp=Z,0.6nm,0.5s								
WRA	**Warramunga Arr**	**49.87**	**257**	P		**P**	**P**	**02 39 12.8**	**-2.1**
AS31	**Alice Springs**	**50.13**	**252**	P		**P**	**P**	**02 39 15.6**	**-1.3**
AS31				IAmb		IAmb	IAmb	02 39 16.6	
	comp=Z,1.4nm,0.8s								
ASAR	**Alice Springs**	**50.13**	**252**	P		**P**	**P**	**02 39 15.8**	**-1.0**
	comp=Z,4.0nm,0.7s,baz=85,slow=8.4,SNR=45								
	comp=Z,4.0nm,0.7s								
ASAR	**Alice Springs**	**50.13**	**252**	P		**P**	**P**	**02 39 15.6**	**-1.2**
FORT	**Forrest**	**55.42**	**243**	P		**P**	**P**	**02 39 54.5**	**-1.2**
FORT				IAmb		IAmb	IAmb	02 40 06.4	
	comp=Z,5.4nm,0.9s								
MJAR	**Matsushiro Arr**	**69.04**	**320**	P		**P**	**P**	**02 41 28.0**	**+1.2**
	comp=Z,0.8nm,0.4s,baz=153,slow=10,SNR=2.4								
	comp=Z,0.8nm,0.4s								
NVAR	**Mina Array Bea**	**74.37**	**42**	P		**P**	**P**	**02 42 01.3**	**+2.2**
	comp=Z,0.4nm,0.6s,baz=217,slow=11,SNR=4.0								
	comp=Z,0.4nm,0.6s								
QSPA	**South Pole Qui**	**74.55**	**180**	P		**P**	**P**	**02 42 00.1**	**+0.5**
	comp=Z,2.7nm,1.0s,baz=162,slow=2.0,SNR=2.7								
	comp=Z,2.7nm,1.0s								
QSPA	**South Pole Qui**	**74.55**	**180**	P		P	P	02 42 03.8	+4.1
QSPA				IAmb		IAmb	IAmb	02 42 05.2	
	comp=Z,5.3nm,1.2s								
TXAR	**Lajitas Array**	**80.62**	**56**	P		**P**	**P**	**02 42 34.2**	**+0.1**
	comp=Z,0.4nm,1.0s,baz=235,slow=4.1,SNR=2.4								
	comp=Z,0.4nm,1.0s								
PDAR	**Pinedale Array**	**82.30**	**42**	P		**P**	**P**	**02 42 43.2**	**+0.3**
	comp=Z,0.2nm,0.7s,baz=258,slow=5.8,SNR=2.0								
	comp=Z,0.2nm,0.7s								
ILAR	**Eielson Array**	**82.53**	**11**	P		**P**	**P**	**02 42 43.1**	**-0.1**
	comp=Z,0.2nm,0.7s,baz=242,slow=6.2,SNR=4.1								
	comp=Z,0.2nm,0.7s								
YKA	**Yellowknife Ar**	**90.17**	**23**	P		**P**	**P**	**02 43 21.7**	**+1.0**
	comp=Z,0.1nm,0.8s,baz=260,slow=3.7,SNR=0.9								
	comp=Z,0.1nm,0.8s								
GERES	**GERESS Array B**	**146.24**	**352**	PKPbc		**PKPab**	**PKPab**	**02 50 02.2**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=297,slow=4.3,SNR=2.4								
BRTR	**Keskin Array B**	**146.26**	**321**	PKPbc		**PKPbc**	**PKPbc**	**02 50 01.4**	**-0.4**
	comp=Z,0.9nm,0.9s,baz=90,slow=3.7,SNR=5.0								
FUORN	**Ofenpass-Fuorn**	**148.82**	**355**	PKPbc		**PKiKP**	**PKiKP**	**02 50 10.0**	**-0.1**

*IDC **27** 02:48:57.0±0.6, 2°.82S×139°.16E, h0km, mb4.2/11, mbtmp4.3/15, ML4.1/3, MS3.4/27, Error ellipse: s-maj=16.5km s-min=11.4km az=86.0*
*DJA **27** 02:49:02.2±0.3, 3°.5S×4°×13°.9E±°, h10km, M4.8/12, mB5.2/3, mb4.9/6, MLv4.8/12, Mw(mB)4.5/3*
*NEIC **27** 02:49:03.1±2.6, 2°.94S±0°.07×139°.16E±0°.05, h35km±1km, mb4.5/27, Error ellipse: s-maj=12.0km s-min=7.9km az=356.0*
ISC 27 02:49:04.0±0.4, 3°.01S±0°.05×139°.21E±0°.05, h46km, n98, σ1°82/81, mb4.4/19, MS3.5/23, 1D, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WAMI	**Wamena**	**1.00**	**209**	P		**Pn**	**Pn**	**02 49 26.0**	**+4.4**
GENI	**Genyem**	**1.05**	**67**	P		**Pn**	**Pn**	**02 49 21.0**	**-1.3**
GENI	**Genyem**	**1.05**	**67**	P		**Pn**	**Pn**	**02 49 21.0**	**-1.3**
JAY	**Jayapura**	**1.58**	**72**	Pn		**Pn**	**Pn**	**02 49 27.8**	**-1.8**
	baz=257,slow=11								
JAY				Sn			**Sn**	**02 49 46.4**	**-2.4**
	baz=122,slow=19								
JAY				LR		LR	LR	02 50 16.2	
	comp=Z,586nm,20.9s,baz=354,slow=50								
JAY	**Jayapura**	**1.58**	**72**	P		**Pn**	**Pn**	**02 49 27.7**	**-1.8**
SRPI	**Serui, Papua**	**3.17**	**291**	P		**Pn**	**Pn**	**02 49 51.3**	**-0.1**
BAKI	**Biak**	**3.58**	**300**	P		**Pn**	**Pn**	**02 49 58.1**	**+1.0**
RKPI	**Ransiki, Papua**	**5.24**	**286**	P		**Pn**	**Pn**	**02 50 18.4**	**-1.4**
	0.5nm121nm,0.6s								
KMPI	**Kaimana, Papua**	**5.53**	**263**	P		**Pn**	**Pn**	**02 50 25.9**	**+2.1**
	0.6nm2µm162nm,0.9s								
FAKI	**Fak Fak**	**6.95**	**271**	P		**Pn**	**Pn**	**02 50 43.7**	**+0.4**
FAKI	**Fak Fak**	**6.95**	**271**			**Pn**	**Pn**	**02 50 42.1**	**-1.2**
FAKI	**Fak Fak**	**6.95**	**271**	P		**Pn**	**Pn**	**02 50 43.5**	**+0.2**
SIJI	**Sorong**	**8.21**	**285**	Pn		**Pn**	**Pn**	**02 50 58.0**	**-2.6**
	5.4nm,0.3s,baz=51,slow=12,SNR=9.9								
SIJI				Sn			**Sn**	**02 52 28.1**	**-4.2**
	1.0nm,0.3s,baz=258,slow=23,SNR=1.2								
SIJI				LR		LR	LR	02 55 07.6	
	comp=Z,149nm,20.8s,baz=154,slow=46								
	12nm,0.3s								
SWI	**Sorong**	**8.22**	**285**	P		**Pn**	**Pn**	**02 51 02.0**	**+1.2**
SAUI	**Saumlaki**	**9.29**	**238**	Pn		**Pn**	**Pn**	**02 51 13.1**	**-2.3**
PMG	**Port Moresby**	**10.14**	**129**	Pn		**Pn**	**Pn**	**02 51 25.1**	**-1.9**
	5.0nm,0.3s,baz=260,slow=12,SNR=1.3								
PMG				Sn			**Sn**	**02 53 15.2**	**-4.4**
	1.0nm,0.3s,baz=264,slow=9.4,SNR=1.8								
COEN	**Coen**	**11.56**	**160**				**Pn**	**02 51 47.2**	**+0.6**
MTN	**Manton Dam**	**12.62**	**219**				**Pn**	**02 52 00.4**	**-0.5**
SANI	**Sanana**	**13.24**	**274**	P		**Pn**	**Pn**	**02 52 09.7**	**+0.3**
MTSU	**Mount Surprise**	**15.85**	**162**	P		**P**	**P**	**02 52 47.2**	**0.0**
KNRA	**Kununurra**	**16.25**	**219**				**Pn**	**02 52 46.8**	**-2.5**
KNRA						IAmb	IAmb	02 52 57.0	
	comp=Z,46nm,0.8s								
SOEI	**Soe**	**16.28**	**245**	P		**P**	**P**	**02 52 53.3**	**+1.2**
SOEI	**Soe**	**16.28**	**245**				**Pn**	**02 52 49.1**	**-0.6**
LUWI	**Luwuk**	**16.54**	**276**	P		**P**	**P**	**02 52 54.6**	**-0.3**
BATI	**Baumata**	**17.00**	**244**	LR		LR	LR	03 01 38.2	
	comp=Z,58nm,18.7s,baz=96,slow=45								
WB0	**Warramunga Arr**	**17.31**	**195**	Pn			**Pn**	**02 53 01.0**	**-1.4**
WB0				IAmb			IAmb	02 53 18.0	
	comp=Z,28nm,0.9s								
GUMO	**Guam**	**17.42**	**19**	LR		LR	LR	02 58 44.2	
	comp=Z,91nm,18.6s,baz=120,slow=34								
QIS	**Mount Isa**	**17.45**	**179**	P		**P**	**P**	**02 53 07.3**	**+2.4**
WR0	**Warramunga Arr**	**17.45**	**195**	Pn			**Pn**	**02 53 02.9**	**-1.3**
WR0				IAmb			IAmb	02 53 19.3	
	comp=Z,43nm,1.3s								
WR8	**Warramunga Arr**	**17.46**	**195**	Pn			**Pn**	**02 53 02.6**	**-1.7**
WR8				IAmb			IAmb	02 53 21.0	
	comp=Z,28nm,1.0s								
WRAB	**Tennant Creek**	**17.48**	**195**	P		**P**	**P**	**02 53 06.9**	**+1.7**
WRAB	**Tennant Creek**	**17.48**	**195**				**Pn**	**02 53 03.7**	**-0.8**
WRAB				IAmb			IAmb	02 53 20.0	
	comp=Z,29nm,0.9s								
WB2	**Warramunga Arr**	**17.49**	**195**	Pn			**Pn**	**02 53 03.8**	**-0.8**
WB2				IAmb			IAmb	02 53 20.1	
	comp=Z,33nm,0.8s								
WRA	**Warramunga Arr**	**17.49**	**195**	P		**P**	**P**	**02 53 02.8**	**-1.8**
	comp=Z,0.6nm,0.3s,baz=17,slow=13,SNR=21								
WRA				S			**Sn**	**02 56 15.8**	**-2.8**
	comp=Z,5.1nm,0.8s,baz=12,slow=22,SNR=5.8								
	comp=Z,7.2nm,0.6s								
WRA	**Warramunga Arr**	**17.49**	**195**	Pn		**Pn**	**Pn**	**02 53 02.0**	**-2.7**
CTA	**Charters Tower**	**18.32**	**158**	P		**Pn**	**Pn**	**02 53 15.5**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=333,slow=11,SNR=4.7								
CTA				LR		LR	LR	03 00 50.0	
	comp=Z,271nm,18.9s,baz=3.5,slow=38								
	comp=Z,3.2nm,0.8s								
CTAO	**Charters Tower**	**18.32**	**158**	P		**Pn**	**Pn**	**02 53 14.8**	**0.0**
TOLI2	**Tolitoli**	**18.87**	**282**	P		**Pn**	**Pn**	**02 53 24.3**	**+2.8**
TOLI2	**Tolitoli**	**18.87**	**282**			**P**	**P**	**02 53 19.5**	**-1.1**
FITZ	**Fitzroy Crossi**	**20.04**	**221**	P		**P**	**P**	**02 53 32.9**	**-0.5**
	comp=Z,8.9nm,0.6s,baz=39,slow=13,SNR=24								
FITZ				S			**S**	**02 57 10.0**	**-6.3**
	comp=Z,8.5nm,0.7s,baz=177,slow=9.1,SNR=4.4								
	comp=Z,8.9nm,0.6s								
AS31	**Alice Springs**	**21.17**	**194**	P		**P**	**P**	**02 53 45.5**	**-0.1**
ASAR	**Alice Springs**	**21.17**	**194**	P		**P**	**P**	**02 53 45.5**	**0.0**
	comp=Z,5.3nm,0.5s,baz=23,slow=8.7,SNR=41								
ASAR				S			Sn	02 57 45.6	-1.6
	comp=Z,2.6nm,0.8s,baz=17,slow=18,SNR=4.1								
ASAR				LR		LR	LR	03 02 41.6	
	comp=Z,314nm,18.2s,baz=352,slow=39								
	comp=Z,5.3nm,0.5s								
ASAR	**Alice Springs**	**21.17**	**194**	P		**P**	**P**	**02 53 45.4**	**-0.2**
EIDS	**Eidsvold**	**25.00**	**154**	P		**P**	**P**	**02 54 25.4**	**+1.8**
EIDS				IAmb		IAmb	IAmb	02 54 42.8	
	comp=Z,24nm,1.1s								
MBWA	**Marble Bar**	**26.17**	**225**	P		**P**	**P**	**02 54 34.3**	**0.0**
MBWA				IAmb		IAmb	IAmb	02 54 39.6	
	comp=Z,9.5nm,0.7s								
PSA00	**Pilbara Seismi**	**26.36**	**224**	P		**P**	**P**	**02 54 35.4**	**-0.6**
PSA00				IAmb		IAmb	IAmb	02 54 39.8	
	comp=Z,5.0nm,0.8s								
PSA00	**Pilbara Seismi**	**26.36**	**224**	P		**P**	**P**	**02 54 35.7**	**-0.4**
PSA00				IAmb		IAmb	IAmb	02 54 39.8	
	comp=Z,9.7nm,0.8s								
STKA	**Stephens Creek**	**28.80**	**176**	P		**P**	**P**	**02 54 58.3**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=338,slow=14,SNR=3.6								
STKA				LR		LR	LR	03 07 36.9	
	comp=Z,256nm,18.3s,baz=14,slow=39								
	comp=Z,0.9nm,0.6s								
STKA	**Stephens Creek**	**28.80**	**176**	P		**P**	**P**	**02 54 57.5**	**-0.2**
FORT	**Forrest**	**29.56**	**200**	P		**P**	**P**	**02 55 04.3**	**-0.3**
FORT				IAmb		IAmb	IAmb	02 55 35.3	
	comp=Z,8.2nm,0.8s								
BBOO	**Buckleboo**	**29.79**	**185**	P		**P**	**P**	**02 55 06.4**	**-0.2**
BBOO				IAmb		IAmb	IAmb	02 55 15.3	
	comp=Z,14nm,1.4s								
JCJ	**Chichijima**	**30.07**	**5**	LR		LR	LR	03 05 32.2	
	comp=Z,60nm,19.5s,baz=132,slow=33								
DZM	**Mont Dzumac**	**32.53**	**128**	LR		LR	LR	03 08 18.5	
	comp=Z,67nm,19.5s,baz=42,slow=36								
ONTNC	**Ouen Toro**	**32.66**	**128**	P		**P**	**P**	**02 55 33.7**	**+1.7**
NWAO	**Narrogin (SRO)**	**36.19**	**212**	LR		LR	LR	03 11 49.5	
	comp=Z,207nm,19.5s,baz=292,slow=38								
JNU	**Nakatsue**	**36.79**	**348**	LR		LR	LR	03 09 12.1	
	comp=Z,32nm,21.9s,baz=172,slow=33								
MJAR	**Matsushiro Arr**	**39.36**	**359**	LR		LR	LR	03 10 45.5	
	comp=Z,44nm,19.6s,baz=166,slow=33								
NJ2	**Nanjing**	**39.87**	**333**	*eP*			**P**	**02 56 36.5**	**+3.2**
NJ2				pmax			pmax		
	comp=Z,30nm,0.6s								
KSRS	**Korea Array**	**41.60**	**346**	LR		LR	LR	03 11 21.9	
	comp=Z,25nm,21.4s,baz=175,slow=32								
CMAR	**Chiang Mai Arr**	**45.01**	**300**	LR		LR	LR	03 17 19.4	
	comp=Z,7.1nm,18.6s,baz=115,slow=38								
PZH	**PanZhiHua**	**46.59**	**311**	P		**P**	**P**	**02 57 30.5**	**+2.6**
ASAJ	**Asahikawa**	**47.01**	**3**	LR		LR	LR	03 14 16.0	
	comp=Z,24nm,21.9s,baz=144,slow=32								
RAO	**Raoul Island**	**48.33**	**127**	LR		LR	LR	03 16 52.8	
	comp=Z,68nm,18.8s,baz=98,slow=35								
TUWZ	**Tuamarina**	**49.35**	**146**	P		**P**	**P**	**02 57 50.0**	**+1.2**
BNX	**BinXian**	**49.66**	**349**	⇓P		**P**	**P**	**02 57 50.8**	**-0.3**
BNX				pmax			pmax		
	comp=Z,5.0nm,1.1s								
HHC	**Hu-ho-hao-te**	**50.42**	**333**	*eP*		**P**	**P**	**02 58 01.0**	**+3.9**
HHC				pmax			pmax		
	comp=Z,11nm,0.7s								
HHC				pmax			pmax		
	comp=Z,60nm,4.7s								
KLR	**Kul'dur**	**52.43**	**354**	LR		LR	LR	03 17 37.7	
	comp=Z,34nm,21.8s,baz=257,slow=33								
SONM	**Songino Array**	**58.20**	**335**	P		**P**	**P**	**02 58 51.1**	**-2.5**
	comp=Z,0.4nm,0.4s,baz=163,slow=6.2,SNR=4.0								
	comp=Z,0.4nm,0.4s								
SONM	**Songino Array**	**58.20**	**335**	IAmb		IAmb	IAmb	02 58 56.6	
	comp=Z,1.6nm,1.3s								
PALK	**Pallekele**	**59.27**	**280**	LR		LR	LR	03 28 56.3	
	comp=Z,18nm,18.3s,baz=106,slow=40								
MA2	**Magadan**	**63.06**	**7**	LR		LR	LR	03 25 14.7	
	comp=Z,15nm,20.6s,baz=56,slow=35								
YAK	**Yakutsk**	**65.27**	**355**	LR		LR	LR	03 24 36.9	
	comp=Z,33nm,21.6s,baz=210,slow=33								
SEY	**Seymchan**	**66.52**	**7**	LR		LR	LR	03 27 45.3	
	comp=Z,133nm,19.6s,baz=149,slow=35								
MKAR	**Makanchi Array**	**70.33**	**322**	P		**P**	**P**	**03 00 11.6**	**-1.4**
	comp=Z,2.2nm,0.6s,baz=112,slow=8.0,SNR=23								
	comp=Z,2.2nm,0.6s								
MKAR	**Makanchi Array**	**70.33**	**322**	P		**P**	**P**	**03 00 12.2**	**-0.8**
MAKZ	**Makanchi**	**70.52**	**322**	P		**P**	**P**	**03 00 13.4**	**-0.7**
MAKZ				IAmb		IAmb	IAmb	03 00 14.1	
	comp=Z,4.7nm,0.8s								
ZALV	**Zalesovo Beam**	**72.44**	**330**	P		**P**	**P**	**03 00 24.4**	**-1.1**
	baz=107,slow=7.7								
KURK	**Kurchatov**	**74.24**	**325**	P		**P**	**P**	**03 00 35.0**	**-1.2**
KURBB	**Kurchatov Arra**	**74.25**	**325**	P		**P**	**P**	**03 00 35.1**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=118,slow=5.0,SNR=12								
	comp=Z,0.5nm,0.4s								
TIXI	**Tiksi**	**74.83**	**357**	LR		LR	LR	03 31 24.1	
	comp=Z,25nm,20.6s,baz=194,slow=34								
VNDA	**Vanda**	**75.44**	**175**	P		**P**	**P**	**03 00 44.1**	**+1.5**
	comp=Z,3.4nm,0.8s,baz=321,slow=5.8,SNR=16								
VNDA				LR		LR	LR	03 32 24.6	
	comp=Z,49nm,21.6s,baz=175,slow=34								
	comp=Z,3.4nm,0.8s								
VNDA	**Vanda**	**75.44**	**175**	P		**P**	**P**	**03 00 43.4**	**+0.7**
VNDA				IAmb		IAmb	IAmb	03 00 44.7	
	comp=Z,3.2nm,0.8s								
BVAR	**Borovoye Array**	**79.84**	**325**	P		**P**	**P**	**03 01 06.8**	**-0.8**
	comp=Z,2.6nm,0.6s,baz=108,slow=8.0,SNR=14								
	comp=Z,2.6nm,0.6s								
NRIK	**Noril'sk**	**80.14**	**344**	P		**P**	**P**	**03 01 08.0**	**-0.9**
	comp=Z,2.0nm,0.7s,baz=114,slow=5.6,SNR=4.3								
NRIK				LR		LR	LR	03 36 35.1	
	comp=Z,20nm,20.3s,baz=127,slow=36								
	comp=Z,2.0nm,0.7s								
NRIK	**Noril'sk**	**80.14**	**344**	IAmb		IAmb	IAmb	03 01 11.8	
	comp=Z,2.0nm,0.7s								
KDAK	**Kodiak Island**	**81.11**	**30**	LR		LR	LR	03 31 50.1	
	comp=Z,48nm,19.8s,baz=220,slow=32								
ILAR	**Eielson Array**	**85.90**	**24**	P		**P**	**P**	**03 01 37.0**	**-1.7**
	comp=Z,1.1nm,0.7s,baz=262,slow=4.6,SNR=16								
	comp=Z,1.1nm,0.7s								
CRQM	**Cirque**	**86.59**	**29**	P		**P**	**P**	**03 01 44.9**	**+2.4**
QSPA	**South Pole Qui**	**86.94**	**180**	P		**P**	**P**	**03 01 44.3**	**+0.3**
	comp=Z,7.0nm,0.7s,baz=314,slow=1.1,SNR=42								
QSPA				LR		LR	LR	03 41 20.0	
	comp=Z,63nm,19.2s,baz=116,slow=36								
	comp=Z,7.0nm,0.7s								
QSPA	**South Pole Qui**	**86.94**	**180**	P		**P**	**P**	**03 01 44.8**	**+0.8**
BARN	**Barnard Glacie**	**87.36**	**29**	P		**P**	**P**	**03 01 47.0**	**+0.7**
BMAR	**Burnt Mountain**	**87.49**	**22**	P		**P**	**P**	**03 01 47.5**	**+1.0**
DLBC	**Dease Lake**	**92.94**	**32**	LR		LR	LR	03 40 32.1	
	comp=Z,20nm,19.1s,baz=55,slow=33								
SPITS	**Spitsbergen Ar**	**99.36**	**350**	LR		LR	LR	03 46 36.3	
	comp=Z,23nm,21.7s,baz=24,slow=35								
TORD	**Torodi Ar. Bea**	**136.81**	**286**	PKP		**PKPdf**	**PKPdf**	**03 08 22.7**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=98,slow=1.6,SNR=2.7								
DBIC	**Dimbokro**	**144.01**	**277**	PKP		**PKPab**	**PKPab**	**03 08 33.2**	**+0.1**
	comp=Z,2.7nm,0.7s,baz=99,slow=3.6,SNR=4.6								
CPUP	**Villa Florida**	**146.74**	**152**	PKPbc		**PKPbc**	**PKPbc**	**03 08 41.6**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=227,slow=12,SNR=3.4								
LPAZ	**La Paz**	**146.87**	**126**	PKPbc		**PKPbc**	**PKPbc**	**03 08 43.2**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=254,slow=3.3,SNR=6.3								

*AFAD **27** 02:51:58.8, 42°.58N×24°.48E, h6km×3km, ML2.6*
*SOF **27** 02:51:59.4, 42°.12N±0°.01×24°.37E±0°.01, h18km±1km, MD2.9/8*
*THE **27** 02:52:00.4, 42°N±2°×2°4E±°, h0km, M2.7/18, MLh2.7/18*
*BEO **27** 02:52:00.4±0.3, 42°.19N×24°.38E, h5km×2km, ML2.7/12*
*ISK **27** 02:52:01.2, 42°.20N×24°.93E, h5km, ML3.0/13*
ISC 27 02:52:00.2±1.0, 42°.14N±0°.02×24°.38E±0°.02, h7km±8km, n90, σ0°94/142, 16C-14D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PLD	**Plovdiv**	**0.28**	**88**	P			**Pg**	**02 52 05.7**	**+0.2**
PLD				S			**Sg**	**02 52 10.0**	**+0.7**
PLD	**Plovdiv**	**0.28**	**88**	Pg			**Pg**	**02 52 05.7**	**+0.2**
PLD				Sg			**Sg**	**02 52 09.7**	**+0.4**
PLD	**Plovdiv**	**0.28**	**88**	Pg			**Pg**	**02 52 05.8**	**+0.2**
PLD				Sg			**Sg**	**02 52 09.9**	**+0.6**
PLD	**Plovdiv**	**0.28**	**88**	*e*Pg			**Pg**	**02 52 05.6**	**0.0**
PLD				*e*Sg			**Sg**	**02 52 09.9**	**+0.6**
PGB	**Panagyurishte**	**0.40**	**338**	Pg			**Pg**	**02 52 08.4**	**+0.4**
RZN	**Rozhen**	**0.52**	**148**	P			**Pg**	**02 52 09.9**	**-0.3**
RZN				S			**Sg**	**02 52 16.5**	**-0.5**
RZN	**Rozhen**	**0.52**	**148**	Pg			**Pg**	**02 52 09.9**	**-0.3**
RZN				Sg			**Sg**	**02 52 16.5**	**-0

GELI	**Tayfur-Gelibol**	**2.35**	**137**	Pn	**Pn**	**02 52 39.6**	**+0.4**
HUMR	**Humele**	**2.43**	**10**	⇑P	**Pn**	**02 52 40.5**	**+0.2**
HUMR				⇑S	**Sb**	**02 53 13.3**	**-1.1**
LPK	**Lapseki**	**2.52**	**134**	Pn	**Pn**	**02 52 41.6**	**+0.1**
MURA	**Muratl, TEK**	**2.53**	**112**	P	**Pn**	**02 52 42.4**	**+0.7**
MURA				IAML		02 53 35.0	
	comp=E,50nm,3.4s						
MURA				IAML		02 53 48.0	
	comp=N,55nm,2.3s						
BORS2	**Bor- Borsko je**	**2.61**	**319**	*e*Pn	**Pn**	**02 52 42.6**	**-0.2**
SELS	**Selova**	**2.63**	**295**	*e*Pn	**Pn**	**02 52 43.1**	**-0.1**
SELS				*e*Sn	**Sn**	**02 53 14.9**	**-0.5**
LAPS	**Lapseki, ANA**	**2.65**	**135**	P	**Pb**	**02 52 47.8**	**-0.2**
LAPS				S	**Sb**	**02 53 22.0**	**+1.4**
EZN	**Ezine**	**2.74**	**147**	Pn	**Pn**	**02 52 45.2**	**+0.6**
KRBG	**Karabiga-Canak**	**2.81**	**127**	Pn	**Pn**	**02 52 44.9**	**-0.6**
BAYC	**CANAKKALE_Bayr**	**2.90**	**145**	P	**Pn**	**02 52 47.4**	**+0.5**
CANM	**Can-anakkale**	**2.93**	**136**	Pn	**Pn**	**02 52 47.7**	**+0.5**
SLVT	**Silivri**	**3.01**	**106**	Pn	**Pn**	**02 52 46.9**	**-1.4**
HERR	**Herculane**	**3.09**	**333**	⇑P	**Pn**	**02 52 49.6**	**+0.2**
ICOR	**Ion Corvin**	**3.19**	**51**	⇑P	**Pn**	**02 52 52.3**	**+1.5**
GRUS	**Gruza**	**3.20**	**304**	*e*Pn	**Pn**	**02 52 50.8**	**-0.2**
GRUS				*e*Sn	**Sn**	**02 53 29.4**	**0.0**
ARR	**Arges**	**3.23**	**3**	⇑P	**Pn**	**02 52 51.9**	**+0.5**
VOIR		**3.33**	**8**	⇑P	**Pn**	**02 52 53.2**	**+0.4**
LOT	**Lotru**	**3.34**	**353**	⇑P	**Pn**	**02 52 53.2**	**+0.3**
LOT				⇓S	**Sn**	**02 53 33.7**	**+0.8**
IVAS	**Ivanjica**	**3.42**	**296**	*e*Pn	**Pn**	**02 52 54.7**	**+0.7**
SJES	**Sjenica**	**3.43**	**291**	*e*Pn	**Pn**	**02 52 55.0**	**+0.8**
GZR	**Gura Zlata**	**3.45**	**341**	⇓P	**Pn**	**02 52 53.8**	**-0.7**
GZR				⇑S	**Sn**	**02 53 36.1**	**+0.4**
GZR	**Gura Zlata**	**3.45**	**341**	*e*Pn	**Pn**	**02 52 53.4**	**-1.1**
MLR	**Muntele Rosu**	**3.54**	**18**	⇓P	**Pn**	**02 52 56.1**	**+0.4**
VRSS	**Vrsac**	**3.72**	**324**	*e*Pn	**Pn**	**02 52 56.9**	**-1.1**
VRSS				*e*Sn	**Sn**	**02 53 39.6**	**-2.4**
DOPR	**Dopca**	**3.90**	**10**	⇓P	**Pn**	**02 53 01.6**	**+1.0**
COVR	**Voineasa-Covas**	**3.93**	**19**	⇑P	**Pn**	**02 53 01.5**	**+0.4**
BZS	**Buzias**	**4.01**	**331**	⇑P	**Pn**	**02 53 01.5**	**-0.5**
BZS	**Buzias**	**4.01**	**331**	*e*Pn	**Pn**	**02 53 00.8**	**-1.2**
PLOR	**Plostina**	**4.06**	**23**	⇑P	**Pn**	**02 53 05.0**	**+2.3**
VRI	**Vrincioaia**	**4.09**	**24**	⇑P	**Pn**	**02 53 05.6**	**+2.4**
MARR	**Marisel-Cluj**	**4.63**	**349**	⇑P	**Pn**	**02 53 11.2**	**+0.6**

*MDD **27** 03:04:57.2±0.5,35˚.50N×3˚.85W,h0km,mb_Lg2.6/6,Error ellipse: s-maj=3.9km s-min=3.4km az=59.0*
*CNRM **27** 03:04:57.3,35˚.51N×3˚.86W,h26km,ML2.5*
*SFS **27** 03:04:57.1,35˚.53N×3˚.81W,h0km,ML3.1/11,ML2.5/15,MLv2.2/15*
*INMG **27** 03:05:01.2±1.5,35˚.47N×3˚.86W,h51km±19km,ML1.9,Error ellipse: s-maj=4.9km s-min=2.8km az=98.0,#DIST_RANGE: REGIONAL #IPMA_REGION: NE Al Hoceima (MARR)*

ISC 27 03:04:55.7±1.1,35˚.50N±0˚.02×3˚.82W±0˚.02,h10km±9km, n52,σ1§42/83,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.30**	**200**	P	**Pb**	**03 05 03.8**	**+0.5**
PALE				S	**Sb**	**03 05 08.7**	**+0.4**
WMELI	**Melilla**	**0.73**	**104**	Pg	**Pb**	**03 05 10.9**	**+0.4**
WMELI				Sg	**Sb**	**03 05 20.7**	**+0.2**
EALB	**Alboran**	**0.77**	**55**	Pg	**Pg**	**03 05 10.0**	**-0.6**
EALB				Sg	**Sb**	**03 05 21.0**	**-0.7**
EALB	**Alboran**	**0.77**	**55**	Sg	**Sb**	**03 05 22.3**	**+0.5**
EALB				*i* IVmb_Lg		03 05 26.5	
AKLM	**AKL**	**0.99**	**182**	P	**Pn**	**03 05 15.9**	**+0.1**
AKLM				S	**Sg**	**03 05 27.8**	**+0.1**
SMIR	**Smir Dam**	**1.29**	**278**	P	**Pn**	**03 05 18.9**	**-0.9**
SMIR				S	**Sb**	**03 05 36.2**	**-0.4**
CHEFC	**Chefchaouen**	**1.31**	**253**	P	**Pg**	**03 05 20.9**	**+0.1**
ECEU	**Ceuta**	**1.33**	**288**	Sn	**Sb**	**03 05 35.6**	**-2.3**
ECEU				*i* IVmb_Lg		03 05 38.3	
EMAL	**Malaga-Limoner**	**1.35**	**339**	Pg	**Pg**	**03 05 21.3**	**-0.4**
EMAL				Sg	**Sb**	**03 05 38.0**	**-0.5**
ELGU	**Los Guajares,**	**1.37**	**6**	Pg	**Pb**	**03 05 21.4**	**-0.2**
ELGU				Sg	**Sb**	**03 05 38.4**	**-0.8**
ELGU	**Los Guajares,**	**1.37**	**6**	Pn	**Pb**	**03 05 21.3**	**-0.2**
ELGU				Sn	**Sb**	**03 05 38.6**	**-0.5**
ELGU				Sg	**Sg**	**03 05 41.2**	**+1.4**
ELGU				*i* IVmb_Lg		03 05 42.5	
JBK	**JBK**	**1.55**	**138**	P	**Pn**	**03 05 23.1**	**-0.5**
JBK				S	**Sn**	**03 05 42.4**	**-1.5**
EBER	**Berja**	**1.58**	**28**	Pn	**Pn**	**03 05 24.1**	**+0.1**
EBER				Sn	**Sn**	**03 05 44.4**	**-0.2**
EBER	**Berja**	**1.58**	**28**	Pn	**Pn**	**03 05 23.8**	**-0.2**
EBER				Sn	**Sn**	**03 05 44.5**	**-0.1**
EGOR	**Sierra Gorda,**	**1.62**	**352**	Pn	**Pb**	**03 05 25.3**	**-0.6**
EGOR	**Sierra Gorda,**	**1.62**	**352**	Pn	**Pg**	**03 05 25.9**	**+0.1**
EGOR				Sg	**Sg**	**03 05 49.8**	**+1.8**
EJIF	**Jimena Fronter**	**1.64**	**306**	Sg	**Sg**	**03 05 47.9**	**-0.6**
EQTA	**Presa de Quent**	**1.73**	**10**	Sn	**Sg**	**03 05 50.4**	**-0.9**
SICH	**Sidi Chahed**	**1.86**	**222**	P	**Pb**	**03 05 28.9**	**-1.0**
SICH				S	**Sn**	**03 05 51.2**	**-0.1**
LCRM	**LCR**	**2.00**	**206**	P	**Pb**	**03 05 32.0**	**-0.4**
LCRM				S	**Sb**	**03 05 58.2**	**+0.8**
IFR	**Ifrane**	**2.26**	**209**	Pn	**Pn**	**03 05 34.4**	**+1.1**
IFR				Sn	**Sn**	**03 06 00.8**	**-0.5**
EQES	**Quesada**	**2.37**	**14**	Pn	**Pb**	**03 05 38.1**	**-0.5**
EQES				Sn	**Sb**	**03 06 06.0**	**-2.0**
EQES				*i* IVmb_Lg		03 06 12.1	
EADA	**Adamuz**	**2.73**	**347**	Pn	**Pb**	**03 05 42.1**	**-2.6**
EADA				Sn	**Sn**	**03 06 12.8**	**0.0**
EADA	**Adamuz**	**2.73**	**347**	Pn	**Pb**	**03 05 42.4**	**-2.3**
EADA				Sn	**Sn**	**03 06 14.8**	**+2.0**
EADA				*i* IVmb_Lg		03 06 24.5	
MD31	**MD31**	**2.74**	**197**	P	**Pn**	**03 05 40.5**	**+0.7**
MD31				S	**Sn**	**03 06 12.7**	**-0.4**
MDT	**Midelt**	**2.76**	**194**	P	**Pn**	**03 05 40.6**	**+0.4**
MDT				S	**Sn**	**03 06 13.1**	**-0.5**
ECAB	**El Cabril**	**2.87**	**334**	Sn	**Sn**	**03 06 15.6**	**-0.7**
ECAB	**El Cabril**	**2.87**	**334**	Sn	**Sn**	**03 06 18.2**	**+1.9**
ZHG	**ZHG**	**3.11**	**230**	P	**Pn**	**03 05 45.9**	**+1.0**
ZHG				S	**Sn**	**03 06 23.1**	**+1.0**
EMIN	**Mina Concepcio**	**3.22**	**315**	Pn	**Pn**	**03 05 48.8**	**+2.4**
ETOB	**Tobarra**	**3.62**	**29**	Pn	**Pn**	**03 05 54.5**	**+2.5**
ETOB	**Tobarra**	**3.62**	**29**	Pn	**Pn**	**03 05 54.9**	**+3.0**
PVAQ	**Vaqueiros**	**3.67**	**302**	*e*P	**Pn**	**03 05 55.1**	**+2.5**
PVAQ				*e*S	**Sn**	**03 06 35.3**	**-0.7**
PVAQ				*i* IAML		03 06 38.0	
PVAQ				*i* IAML		03 06 39.6	
PVAQ				*i* IAML		03 06 39.8	
PBAR	**Barrancos**	**3.71**	**317**	Pn	**Pn**	**03 05 55.7**	**+2.5**
PBAR	**Barrancos**	**3.71**	**317**	*e*P	**Pn**	**03 05 55.1**	**+1.9**
PBAR				*e*S	**Sn**	**03 06 37.1**	**+0.1**
PBAR				*i* IAML		03 06 39.6	
PBAR				*i* IAML		03 06 49.6	
PBAR				*i* IAML		03 06 53.1	
PBDV	**Barranco-do-Ve**	**3.75**	**299**	Pn	**Pn**	**03 05 55.2**	**+1.5**
PBDV	**Barranco-do-Ve**	**3.75**	**299**	*e*P	**Pn**	**03 05 55.7**	**+2.0**
PBDV				*e*S	**Sn**	**03 06 36.8**	**-1.1**
PBDV				*i* IAML		03 06 38.0	
PBDV				*i* IAML		03 06 40.8	
PCVE	**Castro Verde**	**4.01**	**303**	*e*S	**Sn**	**03 06 43.7**	**-0.5**
MESJ	**Messejana**	**4.24**	**305**	*e*S	**Sn**	**03 06 49.4**	**-0.6**
MORF	**Marmelete**	**4.30**	**296**	*e*S	**Sn**	**03 06 50.6**	**-0.8**
PFVI	**Vila Bisbo**	**4.36**	**293**	*e*S	**Sn**	**03 06 52.5**	**-0.4**
PTEO	**Sao Teotonio**	**4.45**	**299**	*e*S	**Sn**	**03 06 54.6**	**-0.5**
PESTR	**Estremoz**	**4.51**	**319**	P	**Pn**	**03 06 03.9**	**-0.3**
PESTR				S	**Sn**	**03 06 55.2**	**-1.5**
EVO	**Evora**	**4.52**	**313**	Pn	**Pn**	**03 06 06.3**	**+2.1**
EVO	**Evora**	**4.52**	**313**	*e*P	**Pn**	**03 06 06.5**	**+2.3**
EVO				*e*S	**Sn**	**03 06 55.3**	**-1.5**
EVO				*i* IAML		03 06 56.0	
EVO				*i* IAML		03 06 59.3	
EVO				*i* IAML		03 07 00.3	
MOE	**Montemor**	**4.72**	**311**	*e*S	**Sn**	**03 07 00.8**	**-1.0**
MOE				*i* IAML		03 07 02.2	
MOE				*i* IAML		03 07 04.0	
MOE				*i* IAML		03 07 07.2	
PARRA	**Arraiolos**	**4.72**	**316**	*e*P	**Pn**	**03 06 09.8**	**+2.8**
PARRA				*e*S	**Sn**	**03 07 01.6**	**-0.3**
PMRV	**Marv??o**	**4.84**	**325**	*e*P	**Pn**	**03 06 11.9**	**+3.3**
PMRV				*e*S	**Sn**	**03 07 04.0**	**-0.8**
PMTG	**Montargil**	**5.00**	**317**	*e*S	**Sn**	**03 07 08.4**	**-0.4**
PSARD	**Sardoal**	**5.35**	**321**	*e*P	**Pn**	**03 06 20.0**	**+4.3**
PSARD				*e*S	**Sn**	**03 07 17.2**	**-0.2**
TIO	**Tiouine**	**5.40**	**213**	P	**Pn**	**03 06 16.0**	**-0.5**
MVO	**Moncorvo**	**6.19**	**337**	*e*P	**Pn**	**03 06 29.9**	**+2.7**
MVO				*e*S	**Sn**	**03 07 36.6**	**-1.6**

*LDG **27** 03:25:27.7±0.2,53˚.30N×3˚.63E,h10km,Ml2.8/21,Error ellipse: s-maj=5.2km s-min=2.2km az=44.0*
*BGS **27** 03:25:27.7±1.1,53˚.35N×4˚.00E,h10km,ML2.8*
*UCC **27** 03:25:37.5±6.8,52˚.63N×4˚.00E,h5km±11km,ML3.1*

ISC 27 03:25:29.3±2.4,52˚.99N±0˚.07×3˚.65E±0˚.04,h16km±15km, n64,σ1§33/99,1C-32D,North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOST	**Ostende**	**1.81**	**194**	*d*P	**Pb**	**03 26 02.2**	**+0.2**
BOST				*d*S	**Sb**	**03 26 24.8**	**+0.5**
	comp=Z,13nm,0.3s						
WACR	**West Acre**	**1.85**	**263**	*e*P	**Pn**	**03 26 01.6**	**+1.2**
WACR				IAML		03 26 36.5	
	comp=N,47nm,0.6s						
WACR				IAML		03 26 38.1	
	comp=E,35nm,0.2s						
ELMS	**Elmsett, Ipswi**	**1.85**	**242**	*e*P	**Pb**	**03 26 02.7**	**-0.1**
ELMS				*e*S	**Sg**	**03 26 28.9**	**0.0**
ELMS				IAML		03 26 35.3	
	comp=N,116nm,0.2s						
ELMS				IAML		03 26 39.1	
	comp=E,114nm,0.3s						
BZEV	**Zevekote**	**1.91**	**194**	*d*P	**Pb**	**03 26 05.5**	**+1.7**
BDSL	**Dessel**	**1.98**	**153**	*d*P	**Pn**	**03 26 03.4**	**+1.2**
BDSL				*d*S	**Sb**	**03 26 28.6**	**-0.7**
BMOL	**Mol**	**1.99**	**153**	*d*P	**Pn**	**03 26 03.6**	**+1.4**
UCC	**Uccle**	**2.24**	**168**	*d*P	**Pn**	**03 26 07.5**	**+1.8**
UCC				*d*S	**Sb**	**03 26 36.9**	**+0.2**
BOPT	**Opiter**	**2.25**	**146**	*d*P	**Pn**	**03 26 06.6**	**+0.9**
BOPT				*d*P	**Pb**	**03 26 07.9**	**-1.5**
BOPT				*d*S	**Sn**	**03 26 34.5**	**+1.3**
BSKQ	**Steenkerk**	**2.36**	**173**	*d*P	**Pn**	**03 26 08.8**	**+1.5**
ELSH	**Elham, Standar**	**2.41**	**221**	*e*P	**Pb**	**03 26 11.1**	**-1.1**
ELSH				IAML		03 27 00.2	
	comp=N,38nm,1.0s						
ELSH				IAML		03 27 04.1	
	comp=E,51nm,0.6s						
BRQR	**Ronquire**	**2.41**	**171**	*d*P	**Pn**	**03 26 09.7**	**+1.6**
TGA	**Tangissart**	**2.45**	**167**	*d*P	**Pn**	**03 26 09.8**	**+1.2**
TGA				*d*S	**Sb**	**03 26 42.2**	**-0.6**
BEBN	**Eben Emael**	**2.53**	**149**	*d*P	**Pn**	**03 26 11.2**	**+1.6**
BEBN				*d*S	**Sn**	**03 26 42.9**	**+2.7**
	comp=Z,15nm,0.4s						
BGES	**Gesves**	**2.76**	**160**	*d*P	**Pn**	**03 26 14.5**	**+1.6**
BGES				*d*S	**Sb**	**03 26 49.6**	**-2.2**
	comp=Z,6.1nm,0.4s						
BCLA	**Clavier**	**2.77**	**158**	*d*P	**Pn**	**03 26 14.9**	**+1.9**
BCLA				*d*S	**Sb**	**03 26 51.2**	**-1.0**
BMRD	**Maredsous**	**2.78**	**165**	*d*P	**Pn**	**03 26 15.0**	**+1.9**
BMRD				*d*S	**Sb**	**03 26 50.4**	**-2.0**
MEM	**Membach**	**2.80**	**147**	*d*P	**Pn**	**03 26 14.1**	**+0.7**
MEM				*d*P	Pb	03 26 14.1	-4.8
MEM				*d*S	**Sn**	**03 26 47.7**	**+0.9**
	comp=Z,4.7nm,0.3s						
BAIF	**Baives**	**2.96**	**173**	*e*Pn	**Pn**	**03 26 17.3**	**+1.8**
DOU	**Dourbes**	**2.96**	**168**	*b*P	**Pn**	**03 26 17.0**	**+1.4**
DOU				*d*S	**Sn**	**03 26 51.7**	**+1.0**
	comp=E,3.5nm,0.4s						
GIVF	**Givet**	**2.98**	**165**	*e*Pn	**Pn**	**03 26 17.2**	**+1.3**
RCHB	**Rochefort**	**3.00**	**160**	*d*P	**Pn**	**03 26 17.3**	**+1.1**
CWF	**Charnwood Fore**	**3.01**	**267**	*e*P	**Pn**	**03 26 16.9**	**+0.6**
CWF				IAML		03 27 13.6	
	comp=N,9.6nm,0.3s						
CWF				IAML		03 27 17.2	
	comp=E,8.8nm,0.6s						
GDLE	**Glaisdale, N Y**	**3.01**	**300**	*e*P	**Pn**	**03 26 15.2**	**-1.1**
GDLE				IAML		03 27 19.0	
	comp=E,28nm,0.4s						
GDLE				IAML		03 27 20.3	
	comp=N,38nm,0.5s						
BHOU	**Houvegnez**	**3.02**	**150**	*d*P	**Pn**	**03 26 17.1**	**+0.6**
BHOU				*d*S	**Sn**	**03 26 54.0**	**+1.6**
	comp=N,5.7nm,0.2s						
LBWR	**Ladybower, Pea**	**3.26**	**279**	*e*P	**Pn**	**03 26 18.9**	**-0.8**
LBWR				IAML		03 27 24.9	
	comp=E,27nm,0.3s						
LBWR				IAML		03 27 26.4	
	comp=N,25nm,0.8s						
LKLB	**Kalborn**	**3.28**	**151**	*d*P	**Pn**	**03 26 20.8**	**+0.8**
HPK	**Haverah Park**	**3.29**	**289**	*e*P	**Pn**	**03 26 19.4**	**-0.8**
HPK				IAML		03 27 19.4	
	comp=E,20nm,0.6s						
HPK				IAML		03 27 32.2	
	comp=N,18nm,0.4s						
WOL	**Wolverton**	**3.44**	**243**	*e*P	**Pn**	**03 26 24.9**	**+2.7**
WOL				IAML		03 27 33.7	
	comp=N,19nm,0.4s						
WOL				IAML		03 27 39.0	
	comp=E,16nm,0.8s						
STRD	**Stroud**	**3.76**	**253**	*e*P	**Pn**	**03 26 28.2**	**+1.6**
STRD				IAML		03 27 45.8	
	comp=N,25nm,0.5s						
STRD				IAML		03 27 52.4	
	comp=E,27nm,0.7s						
EDMD	**Edmundbyers**	**3.79**	**301**	*e*P	**Pn**	**03 26 24.5**	**-2.5**
EDMD				IAML		03 27 07.4	
	comp=N,10nm,0.3s						
EDMD				IAML		03 27 09.7	
	comp=E,12nm,0.2s						
HLM1	**Long Mynd**	**3.99**	**266**	*e*P	**Pn**	**03 26 30.3**	**+0.5**
HLM1				IAML		03 27 41.7	
	comp=N,7.4nm,0.3s						
HLM1				IAML		03 27 42.1	
	comp=E,8.2nm,0.5s						
MONM	**Monmouth**	**4.11**	**256**	*e*P	**Pn**	**03 26 32.6**	**+1.1**
MONM				IAML		03 27 24.5	
	comp=E,7.3nm,0.3s						
MONM				IAML		03 27 25.4	
	comp=N,9.2nm,0.5s						
FOEL	**Foel Wylfa**	**4.14**	**271**	*e*P	**Pn**	**03 26 31.8**	**0.0**
FOEL				IAML		03 27 47.4	
	comp=E,8.6nm,0.8s						
FOEL				IAML		03 27 50.4	
	comp=N,10nm,0.6s						
KESW	**Keswick, Cumbr**	**4.31**	**294**	*e*P	**Pn**	**03 26 33.2**	**-0.9**
SAVF	**Savonnieres en**	**4.48**	**167**	*e*Pn	**Pn**	**03 26 37.5**	**+1.0**
MEZF	**Maizieres J'vi**	**4.58**	**168**	*e*Pn	**Pn**	**03 26 39.1**	**+1.2**
PAGF	**Fort de Pagny**	**4.63**	**163**	*e*Pn	**Pn**	**03 26 40.8**	**+2.2**
ESK	**Eskdalemuir**	**4.65**	**303**	*e*P	**Pn**	**03 26 37.1**	**-1.7**
ESK				IAML		03 27 29.9	
	comp=N,2.7nm,0.3s						
ESK				IAML		03 27 32.1	
	comp=E,3.5nm,0.4s						
SFTF	**Sexfontaines**	**4.87**	**169**	*e*Pn	**Pn**	**03 26 43.0**	**+1.1**
SFTF				*e*Sn	**Sn**	**03 27 36.2**	**-1.8**
	comp=E,2.8nm,0.4s						
FLN	**La Foliniere**	**4.97**	**213**	*e*Pn	**Pn**	**03 26 43.9**	**+0.6**
FLN				*e*Sn	**Sn**	**03 27 41.9**	**+1.5**
	comp=E,2.1nm,0.2s						
LDF	**La Druitiere**	**5.01**	**210**	*e*Pn	**Pn**	**03 26 44.7**	**+1.0**
LDF				*e*Sn	**Sn**	**03 27 42.1**	**+0.8**
CDF	**Champ du Feu**	**5.13**	**152**	*e*Pn	**Pn**	**03 26 46.9**	**+1.4**
CDF				*e*Sn	**Sn**	**03 27 44.9**	**+0.5**
	comp=E,2.6nm,0.6s						
HAU	**Haudompre**	**5.28**	**160**	*e*Pn	**Pn**	**03 26 50.2**	**+2.7**
HAU				*e*Sn	**Sn**	**03 27 48.9**	**+0.9**
	comp=E,3.1nm,0.4s						
GRR	**Gorron**	**5.42**	**214**	*e*Pn	**Pn**	**03 26 50.1**	**+0.7**
GRR				*e*Sn	**Sn**	**03 27 51.7**	**+0.2**
	comp=E,2.8nm,0.3s						
HINF	**Hinteralfeld**	**5.57**	**157**	*e*Pn	**Pn**	**03 26 52.9**	**+1.4**
HINF				*e*Sn	**Sn**	**03 27 55.3**	**+0.1**
	comp=E,0.7nm,0.2s						
LOR	**Lormes**	**5.73**	**179**	*e*Pn	**Pn**	**03 26 54.6**	**+0.9**
LOR				*e*Sn	**Sn**	**03 28 00.0**	**+0.9**
	comp=E,1.1nm,0.2s						
HYF	**Humbligny**	**5.76**	**187**	*e*Pn	**Pn**	**03 26 55.4**	**+1.3**
SSF	**Saint Saulge**	**5.94**	**181**	*e*Pn	**Pn**	**03 26 56.8**	**+0.3**
SSF				*e*Sn	**Sn**	**03 28 03.7**	**-0.4**
	comp=E,1.4nm,0.3s						
SGMF	**Saint Gilles**	**6.17**	**222**	*e*Pn	**Pn**	**03 26 59.2**	**-0.4**
SGMF				*e*Sn	**Sn**	**03 28 10.4**	**+0.6**
	comp=E,3.5nm,0.4s						
AVF	**Avril sur Loir**	**6.21**	**182**	*e*Pn	**Pn**	**03 27 01.7**	**+1.5**
SMF	**Signal de Mont**	**6.35**	**179**	*e*Pn	**Pn**	**03 27 02.7**	**+0.5**
SMF				*e*Sn	**Sn**	**03 28 12.4**	**-2.0**
	comp=E,2.8nm,0.5s						
ROSF	**Rostrenen**	**6.41**	**226**	*e*Pn	**Pn**	**03 27 03.5**	**+0.6**
ROSF				*e*Sn	**Sn**	**03 28 17.1**	**+1.4**
	comp=E,5.0nm,0.4s						

BGF	**Bois d'Agland**	**6.46**	**185**	*e*Pn	**Pn**	**03 27 04.2**	**+0.5**
BGF				*e*Sn	**Sn**	**03 28 16.8**	**-0.3**
	comp=E,1.8nm,0.3s						
CABF	**La Chapelle**	**6.58**	**165**	*e*Pn	**Pn**	**03 27 06.5**	**+1.1**
CABF				*e*Sn	**Sn**	**03 28 18.7**	**-1.4**
	comp=E,5.6nm,0.8s						
QUIF	**Quistinic**	**6.68**	**223**	*e*Pn	**Pn**	**03 27 06.9**	**+0.2**
QUIF				*e*Sn	**Sn**	**03 28 22.9**	**+0.4**
	comp=E,2.4nm,0.3s						
TCF	**Toulx Ste Croi**	**6.77**	**188**	*e*Pn	**Pn**	**03 27 09.4**	**+1.4**
TCF				*e*Sn	**Sn**	**03 28 23.8**	**-1.0**
	comp=E,0.6nm,0.3s						
MFF	**Saint Martin d**	**6.85**	**202**	*e*Pn	**Pn**	**03 27 08.6**	**-0.4**
MFF				*e*Sn	**Sn**	**03 28 25.6**	**-1.0**
	comp=E,1.4nm,0.2s						
LPL	**La Plagne**	**7.75**	**164**	*e*Pn	**Pn**	**03 27 22.9**	**+1.3**
LPL				*e*Sn	**Sn**	**03 28 48.2**	**-0.8**
	comp=E,0.3nm,0.2s						
LPG	**La Plagne**	**7.77**	**164**	*e*Pn	**Pn**	**03 27 23.7**	**+1.8**
LPG				*e*Sn	**Sn**	**03 28 48.2**	**-1.5**
	comp=E,0.7nm,0.4s						
RJF	**Les Rejaudoux**	**7.82**	**191**	*e*Pn	**Pn**	**03 27 22.8**	**+0.5**
RJF				*e*Sn	**Sn**	**03 28 48.3**	**-2.2**
	comp=E,1.1nm,0.2s						
CAF	**Calviac**	**8.14**	**188**	*e*Pn	**Pn**	**03 27 26.6**	**-0.1**
VIVF	**Saint-Julien-l**	**8.17**	**175**	*e*Pn	**Pn**	**03 27 27.4**	**+0.2**
VIVF				*e*Sn	**Sn**	**03 28 56.1**	**-3.0**
	comp=E,4.4nm,0.7s						
ORIF	**Oris-en-Rattie**	**8.21**	**169**	*e*Pn	**Pn**	**03 27 28.4**	**+0.6**
LASF	**Ste Croix**	**8.92**	**179**	*e*Pn	**Pn**	**03 27 39.4**	**+1.9**

*MOS **27** 03:44:36.9±1.6,48˚.55N×158˚.14E,h33km,mb3.9/3,Error ellipse: s-maj=56.2km s-min=13.8km az=100.5*
*SKHL **27** 03:44:46.2±0.2,49˚.10N×157˚.80E,h84km±2km,mb4.7/3,msh5.4/2*
*KRSC **27** 03:44:46.4±1.4,49˚.28N×158˚.04E,h30km±27km,Ml3.9*

ISC 27 03:44:48.0±1.8,49˚.18N±0˚.10×157˚.79E±0˚.09,h82km±12km, n34,σ0§91/34,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.85**	**325**	*e*PN	**Pn**	**03 45 17.2**	**-0.7**
SKR				pmax	pmax		
	comp=Z,163nm,0.3s						
SKR	**Severo-Kuril's**	**1.85**	**325**	*e*P	**Pn**	**03 45 17.2**	**-0.7**
SKR				*e*S	**Sn**	**03 45 40.9**	**+0.1**
SKR	**Severo-Kuril's**	**1.85**	**325**	*e*P	**Pn**	**03 45 17.2**	**-0.7**
SKR				AMB	AMB	03 45 17.4	
	comp=Z,180nm,0.3s						
SKR				*e*S	**Sn**	**03 45 40.6**	**-0.1**
SKR				A	A	03 45 41.6	
	comp=Z,410nm,0.3s						
SKR				A	A	03 45 41.6	
	comp=Z,290nm,0.3s						
PAU	**Pauzhetka**	**2.38**	**345**	*e*P	**Pn**	**03 45 25.8**	**+0.9**
PAU				*e*S	**Sn**	**03 45 54.4**	**+1.2**
PAU	**Pauzhetka**	**2.38**	**345**	*e*P	**Pn**	**03 45 25.6**	**+0.7**
PAU				AMB	AMB	03 45 26.2	
	comp=Z,40nm,0.2s						
PAU				*e*S	**Sn**	**03 45 54.1**	**+1.0**
PAU				A	A	03 45 56.5	
	comp=Z,160nm,0.2s						
PAU				A	A	03 45 56.5	
	comp=Z,140nm,0.2s						
KDTR	**Khodutka, Kamc**	**2.64**	**4**	*e*P	**Pn**	**03 45 28.0**	**-0.4**
KDTR				*e*S	**Sn**	**03 45 58.3**	**-1.1**
MIPR	**Malaya Ipel'ka**	**3.17**	**348**	*e*P	Pn	03 45 37.2	+1.6
ASAK	**Asacha**	**3.21**	**1**	*e*P	**Pn**	**03 45 37.0**	**+0.8**
MTVR	**Mutnovka**	**3.32**	**4**	*e*P	**Pn**	**03 45 38.0**	**+0.2**
MTVR				*e*S	**Sn**	**03 46 15.3**	**-0.9**
GRL	**Gorelyy**	**3.38**	**3**	*e*P	**Pn**	**03 45 39.4**	**+0.8**
GRL				*e*S	**Sn**	**03 46 17.8**	**+0.1**
KRMR	**Karymshinskiy**	**3.66**	**3**	*

MSVF				LR	LR	04 15 06.2			
	comp=Z,149nm,19.1s,baz=195,slow=35 10nm,0.3s								
DZM	**Mont Dzumac**	**7.85**	**269**	Pn	**Pn**	**04 13 59.8**	**+0.8**		
	9.0nm,1.1s,baz=90,slow=15,SNR=6.7								
DZM				Sn	**Sn**	**04 15 27.7**	**-0.3**		
	baz=156,slow=20								
DZM				LR	LR	04 16 33.9			
	comp=Z,118nm,18.9s,baz=184,slow=35								
ASAR	**Alice Springs**	**37.71**	**260**	P	**P**	**04 19 20.5**	**-0.3**		
	1.0nm,0.8s,baz=87,slow=8.1,SNR=8.7								
ASAR				LR	LR	04 35 05.6			
	comp=Z,40nm,18.1s,baz=100,slow=37 1.0nm,0.8s								
WRA	**Warramunga Arr**	**37.85**	**266**	P	**P**	**04 19 20.9**	**-1.1**		
	0.4nm,0.8s,baz=99,slow=8.1,SNR=2.4 0.4nm,0.8s								
TGY	**Tagaytay City**	**63.99**	**299**	LR	LR	04 46 12.7			
	comp=Z,35nm,21.8s,baz=359,slow=32								
ILAR	**Eielson Array**	**91.50**	**15**	P	**P**	**04 25 11.3**	**+0.4**		
	0.5nm,0.7s,baz=226,slow=4.6,SNR=8.1 0.5nm,0.7s								

SFS ***27*** *04:15:26.8,35°.47N×3°.75W,h17km,ML2.7/7,ML2.6/8, MLv2.5/8*
CNRM ***27*** *04:15:27.2,35°.41N×3°.74W,h16km,ML2.8*
MDD ***27*** *04:15:27.3±0.5,35°.44N×3°.76W,h15km,mb_Lg2.5/3, Error ellipse: s-maj=5.6km s-min=4.1km az=79.0*
ISC 27 04:15:24.7±1.1**,35°.50N**±0°.02×**3°.72W**±0°.03**,h13**km±9**km,**
n23,σ1ᵍ**06/38,Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.34**	**213**	P	**Pg**	**04 15 32.0**	**+0.5**
PALE				S	**Sg**	**04 15 36.4**	**+0.3**
WMELI	**Melilla**	**0.65**	**106**	Pg	**Pn**	**04 15 40.0**	**+0.3**
WMELI				Sg	**Sb**	**04 15 48.1**	**+1.2**
EALB	**Alboran**	**0.71**	**52**	Sg	**Sn**	**04 15 50.3**	**-0.9**
AKLM	**AKL**	**0.99**	**187**	P	**Pn**	**04 15 44.9**	**+0.5**
AKLM				S	**Sg**	**04 15 54.8**	**-2.0**
SMIR	**Smir Dam**	**1.37**	**278**	P	**Pb**	**04 15 50.2**	**+0.1**
ELGU	**Los Guajares,**	**1.37**	**3**	Pn	**Pn**	**04 15 49.5**	**0.0**
ELGU				Sn	**Sb**	**04 16 07.4**	**-0.2**
ELGU	**Los Guajares,**	**1.37**	**3**	Pn	**Pb**	**04 15 50.3**	**+0.1**
ELGU				Sn	**Sb**	**04 16 07.5**	**-0.1**
ELGU				*i* IVmb_Lg		04 16 10.1	
CHEFC	**Chefchaouen**	**1.38**	**254**	P	**Pb**	**04 15 50.9**	**+0.5**
EMAL	**Malaga-Limoner**	**1.39**	**336**	Pn	**Pb**	**04 15 50.4**	**0.0**
EMAL				Sn	**Sg**	**04 16 08.8**	**-0.5**
ECEU	**Ceuta**	**1.41**	**287**	Pn	**Pn**	**04 15 49.8**	**-0.2**
JBK	**JBK**	**1.50**	**141**	P	**Pb**	**04 15 52.5**	**+0.1**
JBK				S	**Sn**	**04 16 10.3**	**-0.6**
EBER	**Berja**	**1.55**	**25**	Pn	**Pb**	**04 15 53.0**	**-0.4**
EBER	**Berja**	**1.55**	**25**	Pn	**Pb**	**04 15 53.4**	**+0.1**
EBER				Sn	**Sg**	**04 16 14.4**	**-0.2**
EGOR	**Sierra Gorda,**	**1.64**	**349**	Pn	**Pn**	**04 15 53.5**	**+0.1**
EGOR				Sn	**Sb**	**04 16 15.2**	**-0.2**
SICH	**Sidi Chahed**	**1.92**	**224**	P	**Pb**	**04 15 59.2**	**-0.3**
SICH				S	**Sb**	**04 16 22.8**	**-0.5**
LCRM	**LCR**	**2.04**	**208**	P	**Pg**	**04 16 27.2**	**-0.3**
LCRM				S	**Sb**	**04 16 27.2**	**+0.3**
IFR	**Ifrane**	**2.29**	**211**	Pn	**Pn**	**04 16 02.4**	**0.0**
IFR				Sn	**Sn**	**04 16 28.3**	**-2.3**
EQES	**Quesada**	**2.36**	**13**	Pn	**Pb**	**04 16 06.3**	**-0.7**
EQES				Sn	**Sb**	**04 16 34.9**	**-1.2**
EQES				*i* IVmb_Lg		04 16 37.9	
EADA	**Adamuz**	**2.75**	**346**	Pn	**Pn**	**04 16 10.1**	**+1.6**
EADA				Sn	**Sn**	**04 16 43.7**	**+2.1**
MD31	**MD31**	**2.76**	**198**	P	**Pn**	**04 16 09.9**	**+1.1**
MD31				S	**Sn**	**04 16 40.9**	**-1.1**
MDT	**Midelt**	**2.78**	**196**	P	**Pn**	**04 16 11.4**	**+2.4**
ECAB	**El Cabril**	**2.91**	**333**	Sn	**Sn**	**04 16 46.1**	**+0.5**
GOLM	**Goulmima**	**3.92**	**196**	P	**Pn**	**04 16 27.2**	**+2.5**

IDC ***27*** *04:17:47.7±28.0,28°.79N×138°.77E,h490km±323km, mb3.0/7,mbtmp3.9/7,Error ellipse: s-maj=209.5km s-min=23.9km az=71.0*
ISC 27 04:17:46.0±1.9**,28°.8N**±0°.2×**138°.9E**±0°.7**,h473**km**,n7,**
σ0ᵍ89/7,mb3.3/7,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**48.66**	**186**	P	**P**	**04 25 44.9**	**-1.2**
	0.3nm,0.3s,baz=1.9,slow=7.8,SNR=6.6 0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**49.77**	**314**	P	**P**	**04 25 54.0**	**+0.1**
	0.4nm,0.4s,baz=94,slow=7.5,SNR=3.3 0.4nm,0.4s						
ASAR	**Alice Springs**	**52.39**	**186**	P	**P**	**04 26 14.7**	**+1.3**
	0.1nm,0.3s,baz=18,slow=8.3,SNR=5.0 0.1nm,0.3s						
ARCES	**ARCESS Array B**	**70.96**	**340**	P	**P**	**04 28 14.4**	**0.0**
	7.4nm,1.0s,baz=56,slow=5.8,SNR=4.5 7.4nm,1.0s						
FINES	**FINESS Array B**	**75.12**	**333**	P	**P**	**04 28 38.2**	**-0.3**
	1.3nm,0.7s,baz=57,slow=7.0,SNR=7.6 1.3nm,0.7s						
HFS	**Hagfors**	**80.69**	**336**	P	**P**	**04 29 08.6**	**-0.1**
	0.8nm,0.7s,baz=64,slow=6.6,SNR=4.7 0.8nm,0.7s						
NOA	**NORSAR Array B**	**80.93**	**337**	P	**P**	**04 29 09.8**	**-0.1**
	0.8nm,0.9s,baz=44,slow=5.0,SNR=2.9 0.8nm,0.9s						

GII ***27*** *04:28:19.6±0.0,33°.492N±0°.001×35°.920E±0°.001, h0km,Mws1.9,confirmed*
GRAL ***27*** *04:28:20.7±0.3,33°.44N×35°.90E,h5km±2km,MD2.8*
ISC 27 04:28:19.3±1.2**,33°.52N**±0°.04×**35°.91E**±0°.07**,h15**km±5**km,**
n24,σ0ᵍ**56/40,Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCY	**Rachaya**	**0.07**	**250**	*e*P	**Pb**	**04 28 22.4**	**+0.1**
RCY				*e*S	**Sg**	**04 28 23.7**	**-0.7**
QRWL	**Qaraoun**	**0.19**	**278**	*e*P	**Pb**	**04 28 24.6**	**0.0**
NATI	**Neve Ativ**	**0.30**	**210**	P	**Pg**	**04 28 25.3**	**-0.2**
NATI				S	**Sg**	**04 28 29.9**	**+0.2**
ZAHL	**Zahle**	**0.34**	**356**	*e*P	**Pn**	**04 28 28.1**	**-1.7**
DQRL	**Deir Qamar**	**0.34**	**303**	*e*P	**Pb**	**04 28 27.5**	**+0.3**
DQRL				*e*S	**Sb**	**04 28 32.7**	**+0.3**
MTLA	**Metula**	**0.37**	**229**	P	**Pb**	**04 28 27.2**	**-0.3**
MTLA				S	**Sg**	**04 28 32.6**	**+0.7**
GEM	**Giv'at Ha'Em**	**0.37**	**214**	P	**Pg**	**04 28 26.8**	**0.0**
GEM				S	**Sg**	**04 28 32.6**	**+0.6**
MSAM	**Misgav Am**	**0.41**	**228**	P	**Pb**	**04 28 28.0**	**-0.2**
MSAM				S	**Sb**	**04 28 34.9**	**+0.6**
KIRY	**Kiryat Shemona**	**0.42**	**223**	P	**Pb**	**04 28 28.1**	**-0.4**
KIRY				S	**Sb**	**04 28 34.9**	**+0.2**
LVBS	**Lehavot Habash**	**0.44**	**210**	P	**Pg**	**04 28 28.1**	**+0.1**
LVBS				S	**Sg**	**04 28 34.5**	**+0.6**
BHL	**Bhannes**	**0.44**	**331**	*e*P	**Pn**	**04 28 29.9**	**-1.3**
KDZV	**Kedmat Zvi**	**0.52**	**201**	P	**Pb**	**04 28 30.0**	**-0.2**
KDZV				S	**Sb**	**04 28 37.6**	**+0.1**
KSHT	**Keshet**	**0.54**	**189**	P	**Pb**	**04 28 30.1**	**-0.5**
KSHT				S	**Sb**	**04 28 37.8**	**-0.3**
RSPN	**Rosh Pina**	**0.63**	**209**	P	**Pb**	**04 28 31.7**	**-0.2**
HDNS	**Had-Ness**	**0.63**	**201**	P	**Pb**	**04 28 32.1**	**+0.1**
HDNS				S	**Sg**	**04 28 40.3**	**+0.3**
MMA0B	**Mount Meron ar**	**0.66**	**220**	P	**Pg**	**04 28 32.3**	**+0.1**
MMA0B				S	**Sb**	**04 28 42.0**	**+0.4**
MMC7	**Mount Meron ar**	**0.66**	**221**	P	**Pg**	**04 28 32.2**	**0.0**
AMID	**Amiad**	**0.67**	**208**	P	**Pg**	**04 28 32.2**	**-0.1**
KNHM	**Kefar Nahum**	**0.69**	**204**	P	**Pb**	**04 28 32.8**	**-0.2**
KNHM				S	**Sb**	**04 28 43.0**	**+0.6**
HWQ	**Hawqa**	**0.76**	**2**	*e*P	**Pn**	**04 28 35.8**	**+0.2**
GOLA	**Golan Heights**	**0.83**	**195**	P	**Pb**	**04 28 35.4**	**0.0**
GOLA				S	**Sb**	**04 28 47.0**	**+0.5**
BEIL	**Beino**	**1.04**	**12**	*e*P	**Pn**	**04 28 40.8**	**+1.3**
MMLI	**Mount Malkishu**	**1.16**	**201**	P	**Pg**	**04 28 41.2**	**-0.4**
MMLI				S	**Sg**	**04 28 57.4**	**+0.8**
HMDT	**Nahal Hemdat**	**1.30**	**195**	P	**Pb**	**04 28 43.5**	**0.0**
HMDT				S	**Sg**	**04 29 01.2**	**-0.2**

OSPL ***27*** *04:32:09.9±0.7,17°.66N×71°.08W,h6km±44km,ML1.5, Presumed earthquake*
SDD ***27*** *04:32:11.4±2.2,18°.14N×70°.81W,h16km±18km,MD2.5, ML1.3,MW1.8,Presumed earthquake*
ISC 27 04:32:05.5±2.0**,17°.79N**±0°.08×**70°.89W**±0°.06**,h1**km±13**km,**
n8,σ1ᵍ**05/14,4C,Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LOVI	**El Cajuil, Ovi**	**0.45**	**272**	*i* P	**Pb**	**04 32 15.9**	**-0.4**
LOVI				*e*S	**Sg**	**04 32 19.4**	**-0.7**
LOVI				IAML		04 32 20.0	
	comp=Z,36nm,0.7s						
PODR	**Polo**	**0.53**	**316**	*i* P	**Pn**	**04 32 19.5**	**-0.9**
PODR				*i* S	**Sb**	**04 32 25.8**	**-0.2**
PODR				IAML		04 32 29.4	
	comp=N,11nm,0.3s						
PODR	**Polo**	**0.53**	**316**	*i* P	**Pn**	**04 32 19.6**	**-0.9**
PODR				*e*S	**Sb**	**04 32 26.8**	**+0.8**
PODR				IAML		04 32 28.8	
	comp=Z,97nm,0.2s						
LOBH	**Bahia de las A**	**0.72**	**276**	*i* P	**Pg**	**04 32 19.8**	**+0.5**
LOBH				*e*S	**Sg**	**04 32 28.0**	**-0.6**
LOBH				IAML		04 32 31.2	
	comp=Z,28nm,1.9s						
BANI	**BANI**	**0.79**	**40**	⇑*e*Pg	**Pg**	**04 32 20.8**	**+0.1**
BANI				IAML		04 32 55.2	
	comp=N,31nm,1.2s						
NEDR	**Neiba UASD**	**0.86**	**324**	⇑*e*Sg	**Sg**	**04 32 32.8**	**-0.3**
JIDR	**Jimani**	**1.15**	**308**	⇑*e*Pg	**Pn**	**04 32 31.4**	**+2.6**
JIDR				⇑*e*Sg	**Sn**	**04 32 44.4**	**-0.7**
REDR	**Restauracion**	**1.45**	**341**	*i* P	**Pg**	**04 32 33.6**	**+0.1**
REDR				*i* S	**Sg**	**04 32 52.7**	**+0.3**
REDR				IAML		04 32 55.6	
	comp=N,6.4nm,1.6s						

KRNET ***27*** *04:34:02.6±0.1,39°.90N×77°.47E,h19km,mb3.1*
NNC ***27*** *04:34:03.4±4.5,39°.94N×77°.43E,h0km,mb3.6,mpv3.2, Error ellipse: s-maj=30.6km s-min=24.0km az=171.0*
SOME ***27*** *04:34:03.4,39°.97N×77°.52E,h10km*
ISC 27 04:33:56.7±2.9**,39°.5N**±0°.1×**77°.25E**±0°.06**,h10**km**,n21,**
σ1ᵍ57/36,14C-2D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNKS	**Jany-Kuch**	**1.99**	**322**	⇑*i*P	**Pg**	**04 34 36.3**	**+1.5**
JNKS				⇑*i*S	**Sg**	**04 35 00.9**	**+0.3**
NRN	**Naryn**	**2.15**	**334**	⇑*i*P	**Pg**	**04 34 38.0**	**0.0**
NRN				⇑*i*S	**Sb**	**04 35 03.8**	**+0.9**
TARG	**Taragay, Kyrgy**	**2.27**	**11**	⇑*e*P	**Pb**	**04 34 37.0**	**-1.0**
TARG				⇑*i*S	**Sn**	**04 35 02.3**	**-0.5**
KDJ	**Kajisay**	**2.63**	**359**	⇑*e*P	**Pb**	**04 34 43.0**	**-1.0**
KDJ				⇑*i*S	**Sn**	**04 35 12.6**	**+1.2**
SALK	**Salom-Alik**	**2.97**	**299**	⇑*e*P	**Pg**	**04 34 53.1**	**-0.5**
SALK				⇑*i*S	**Sg**	**04 35 30.0**	**-2.1**
BOOM	**Boomskoye usch**	**3.15**	**342**	⇑*i*P	**Pb**	**04 34 51.1**	**-1.8**
BOOM				⇑*i*S	**Sn**	**04 35 26.6**	**+2.4**
TNSS	**Tian-Shan**	**3.54**	**356**	Pg	**Pb**	**04 35 01.1**	**+1.4**
	4.4nm,0.6s						
TNSS				Lg	Lg	04 35 43.2	
	6.8nm,1.1s						
TNSS	**Tian-Shan**	**3.54**	**356**	*e*P	**Pb**	**04 35 01.1**	**+1.4**
	4.4nm,0.6s						
TNSS				*e*S	**Sb**	**04 35 42.6**	**-0.3**
	6.8nm,1.1s						
MDOK	**Medeo**	**3.66**	**358**	Pg	**Pb**	**04 35 02.9**	**+1.3**
	8.0nm,0.4s						
MDOK				Lg	Lg	04 35 46.0	
	28nm,0.3s						
KOTS	**Kotyrbulak**	**3.73**	**358**	*e*P	**Pb**	**04 35 04.7**	**+1.9**
	6.2nm,0.3s						
KOTS				*e*S	**Sb**	**04 35 48.7**	**+0.6**
	38nm,0.4s						
AAK	**Ala-Archa**	**3.76**	**327**	⇓Pg	**Pg**	**04 35 06.8**	**-2.0**
	1.7nm,0.7s						
AAK				⇓Lg	Lg	04 35 54.3	
	2.7nm,0.6s						
UZB	**Uzynbulak**	**3.88**	**20**	*e*P	**Pb**	**04 35 05.8**	**+0.4**
	2.2nm,0.1s						
UZB				*e*S	**Sb**	**04 35 50.8**	**-1.6**
	4.4nm,0.2s						
DGS	**Degeres**	**3.90**	**344**	Pg	**Pb**	**04 35 06.4**	**+0.8**
	4.8nm,0.4s						
DGS				Lg	Lg	04 35 52.2	
	9.1nm,0.6s						
DGS	**Degeres**	**3.90**	**344**	*e*P	**Pb**	**04 35 06.4**	**+0.8**
	4.8nm,0.4s						
DGS				*e*S	**Sb**	**04 35 52.2**	**-0.7**
	9.1nm,0.6s						
SHLS	**Shalkode**	**4.01**	**24**	*e*P	**Pb**	**04 35 10.4**	**+2.8**
	2.9nm,0.3s						
SHLS				*e*S	**Sb**	**04 35 58.7**	**+2.5**
	11nm,0.4s						
PDGK	**Podgornoye**	**4.18**	**23**	⇑Pg	**Pb**	**04 35 09.8**	**-0.6**
	4.7nm,0.6s						
PDGK				⇑Lg	Lg	04 35 59.0	
	7.4nm,0.8s						
KTBS	**Karatobe**	**4.23**	**354**	*e*P	**Pb**	**04 35 13.0**	**+1.8**
	1.4nm,0.3s						
KTBS				*e*S	**Sb**	**04 36 02.8**	**+0.5**
	0.4nm,0.5s						
MRKS	**Merke**	**4.44**	**318**	*e*P	**Pg**	**04 35 21.3**	**-0.6**
	2.4nm,0.4s						
MRKS				*e*S	**Sg**	**04 36 17.4**	**-2.0**
	4.0nm,0.4s						
ARXS	**Arharly**	**4.73**	**5**	Pg	**Pg**	**04 35 24.4**	**-2.9**
	3.1nm,0.4s						
ARXS				Lg	Lg	04 36 23.3	
	6.1nm,0.4s						
ARXS	**Arharly**	**4.73**	**5**	*e*P	**Pb**	**04 35 22.4**	**+2.7**
	3.1nm,0.4s						
ARXS				*e*S	**Sb**	**04 36 19.0**	**+2.2**
	6.1nm,0.4s						
DJR	**Jarkent**	**5.18**	**21**	*e*P	**Pb**	**04 35 28.2**	**+0.6**
	0.6nm,0.2s						
DJR				*e*S	**Sb**	**04 36 29.2**	**-0.7**
	3.2nm,0.6s						

IDC 27 04:38:06.4±2.4**,7°.69S×128°.29E,h0km,mb3.9/1, mbtmp3.5/4,ML3.3/3,Error ellipse: s-maj=84.0km s-min=34.0km az=94.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.21**	**241**	Sn	Sn	04 40 20.4	-6.2
	5.2nm,0.3s,baz=49,slow=20,SNR=2.0						
FITZ	**Fitzroy Crossi**	**10.66**	**194**	Pn	Pn	04 40 39.1	-1.5
	0.3nm,0.3s,baz=11,slow=11,SNR=7.3						
FITZ				Sn	Sn	04 42 32.4	-8.4
	0.1nm,0.3s,baz=105,slow=16,SNR=1.6 0.9nm,0.4s						
WRA	**Warramunga Arr**	**13.52**	**155**	Pn	Pn	04 41 20.9	+1.2
	0.2nm,0.3s,baz=336,slow=10,SNR=8.8						
WRA				Sn	Sn	04 43 44.9	-5.9
	0.1nm,0.3s,baz=343,slow=20,SNR=2.1 0.2nm,0.3s						
ASAR	**Alice Springs**	**16.78**	**162**	Pn	Pn	04 42 03.4	+0.4
	baz=335,slow=11,SNR=6.0 0.5nm,0.4s						
ILAR	**Eielson Array**	**94.69**	**25**	P	P	04 51 29.3	0.0
	0.2nm,0.5s,baz=256,slow=5.7,SNR=5.0 0.2nm,0.5s						

IDC ***27*** *05:05:36.0±1.7,10°.20S×116°.24E,h0km,mb3.8/5, mbtmp3.8/7,ML3.7/2,Error ellipse: s-maj=124.2km s-min=17.9km az=50.0*
DJA ***27*** *05:05:40.7±0.7,11°.S±8°×11°5E±°,h55km±91km,M4.1/14, MLv4.1/14*
ISC 27 05:05:38.0±0.8**,11°.14S**±0°.07×**115°.35E**±0°.08**,h35**km**,n22,**
σ2ᵍ17/28,mb4.0/5,South of Bali

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGBI	**Denpasar**	**2.32**	**355**	P	**Pn**	**05 06 12.6**	**-1.0**
DNP	**Denpasar**	**2.45**	**357**	P	**Pn**	**05 06 16.2**	**+0.7**
DNP				S	**Sn**	**05 06 43.6**	**-0.7**
RTBI	**Rangdo, Negare**	**2.69**	**351**	P	**Pn**	**05 06 19.7**	**+0.8**
KHKI	**Kahang-Kahang**	**2.77**	**5**	P	**Pn**	**05 06 20.7**	**+0.8**
KLNI	**Mataram**	**2.80**	**15**	P	**Pn**	**05 06 20.7**	**+0.4**
KLNI				S	**Sn**	**05 06 52.4**	**-0.5**
TWSI	**Taliwang, Sumb**	**2.83**	**32**	P	**Pn**	**05 06 21.3**	**+0.7**
TWSI				S	**Sn**	**05 06 53.6**	**+0.1**
SRBI	**Singaraja**	**3.04**	**357**	P	**Pn**	**05 06 23.9**	**+0.3**
BYJI	**Banyuwangi**	**3.07**	**341**	P	**Pn**	**05 06 23.9**	**-0.1**
PLAI	**Plampang**	**3.32**	**46**	P	**Pn**	**05 06 28.3**	**+0.9**
ABJI	**Asem Bagus**	**3.50**	**342**	P	**Pn**	**05 06 30.2**	**+0.3**
BLJI	**Banyuglugur**	**3.79**	**333**	P	**Pn**	**05 06 33.3**	**-0.6**
DBNI	**Kabupaten Domp**	**3.92**	**48**	P	**Pn**	**05 06 37.4**	**+1.6**

WBSI	**Waikabubak, Su**	**4.25**	**70**	P	**Pn**	**05 06 42.0**	**+1.8**		
FITZ	**Fitzroy Crossi**	**12.12**	**126**	Pn	**Pn**	**05 08 28.1**	**-0.1**		
	0.4nm,0.3s,baz=307,slow=8.6,SNR=14								
FITZ				Sn	**Sn**	**05 10 36.2**	**-6.0**		
	0.5nm,0.3s,baz=46,slow=19,SNR=2.5 1.7nm,0.6s								
WRA	**Warramunga Arr**	**20.26**	**118**	P	**P**	**05 10 11.0**	**+0.4**		
	0.2nm,0.3s,baz=303,slow=11,SNR=10								
WRA				S	**S**	**05 13 50.8**	**-5.4**		
	0.3nm,0.6s,baz=290,slow=21,SNR=2.0 2.0nm,0.9s								
ASAR	**Alice Springs**	**21.61**	**128**	P	**P**	**05 10 26.6**	**+1.5**		
	0.6nm,0.5s,baz=313,slow=9.1,SNR=7.9								
ASAR				S	**S**	**05 14 22.4**	**-0.5**		
	0.1nm,0.4s,baz=234,slow=38,SNR=1.4 0.6nm,0.5s								
STKA	**Stephens Creek**	**31.81**	**134**	P	**P**	**05 12 02.9**	**+3.4**		
	1.2nm,0.6s,baz=292,slow=8.8,SNR=3.8 1.2nm,0.6s								
LZDM	**Lanzhou Array**	**48.12**	**347**	P	**P**	**05 14 11.2**	**-3.6**		
	1.1nm,0.4s,baz=158,slow=9.0,SNR=1.7 1.1nm,0.4s								
MKAR	**Makanchi Array**	**64.81**	**336**	P	**P**	**05 16 13.9**	**+0.7**		
	0.7nm,0.5s,baz=146,slow=7.6,SNR=8.0 0.7nm,0.5s								
KURBB	**Kurchatov Arra**	**69.36**	**336**	P	**P**	**05 16 43.0**	**+1.0**		
	1.5nm,0.8s,baz=146,slow=5.1,SNR=11 1.5nm,0.8s								
YKA	**Yellowknife Ar**	**117.59**	**24**	PKP	**PKiKP**	**05 24 21.0**	**+1.1**		
	0.1nm,0.4s,baz=317,slow=2.6,SNR=4.3								
ESDC	**Sonseca Array**	**119.53**	**309**	PKP	**PKiKP**	**05 24 27.7**	**+3.2**		
	0.7nm,0.4s,baz=11,slow=1.3,SNR=1.4								

IDC ***27*** *05:07:25.4±1.0,22°.87N×101°.03E,h0km,mb3.6/6, mbtmp3.6/7,ML4.0/1,MS2.9/1,Error ellipse: s-maj=29.2km s-min=15.3km az=89.0*
BKK ***27*** *05:07:28.4±1.5,23°.N±12°×10°.1E±°,h10km,M4.4/4, MLv4.4/4*
ISC 27 05:07:26.9±1.0**,22°.73N**±0°.07×**100°.8E**±0°.2**,h10**km**,n11,**
σ2ᵍ04/13,mb3.6/6,Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAI	**Chiengmai2**	**3.22**	**210**	P	**Pn**	**05 08 19.0**	**+1.3**
CMAI				Pg	**Pb**	**05 08 26.5**	**+2.2**
CMAR	**Chiang Mai Arr**	**4.59**	**202**	Pn	**Pn**	**05 08 38.6**	**+2.2**
	1.6nm,0.3s,baz=18,slow=12,SNR=6.9						
CMAR				Pg	**Pg**	**05 08 54.1**	**-0.7**
	0.6nm,0.3s,baz=18,slow=11,SNR=7.2						
CMAR				Sn	**Sb**	**05 09 37.9**	**-5.0**
	1.4nm,0.3s,baz=14,slow=16,SNR=6.6						
CMAR				Lg	Lg	05 09 58.0	
	4.6nm,0.3s,baz=32,slow=19,SNR=5.7 1.9nm,0.3s						
CM02	**Chiang Mai Arr**	**4.61**	**202**	Pg	**Pg**	**05 08 55.7**	**+0.5**
UTTA	**Uttaradit**	**4.97**	**182**	Pg	**Pn**	**05 08 43.1**	**+1.5**
SONM	**Songino Array**	**25.45**	**9**	P	**P**	**05 12 54.2**	**-0.8**
	0.2nm,0.3s,baz=193,slow=5.9,SNR=1.7 0.2nm,0.3s						
MKAR	**Makanchi Array**	**28.27**	**333**	P	**P**	**05 13 20.5**	**+0.2**
	0.3nm,0.4s,baz=146,slow=10,SNR=6.8 0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**32.81**	**334**	P	**P**	**05 13 60.0**	**-0.3**
	0.2nm,0.3s,baz=130,slow=8.9,SNR=2.7 0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**33.42**	**343**	LR	LR	05 28 39.9	
	comp=Z,21nm,19.1s,baz=337,slow=38						
BVAR	**Borovoye Array**	**38.07**	**330**	P	**P**	**05 14 44.9**	**-0.7**
	0.5nm,0.5s,baz=118,slow=12,SNR=3.6 0.5nm,0.5s						
WRA	**Warramunga Arr**	**53.59**	**140**	P	**P**	**05 16 47.7**	**-0.8**
	0.8nm,0.9s,baz=326,slow=8.1,SNR=4.5 0.8nm,0.9s						
ASAR	**Alice Springs**	**56.25**	**143**	P	**P**	**05 17 07.7**	**0.0**
	0.4nm,0.5s,baz=327,slow=7.0,SNR=4.5 0.4nm,0.5s						

MOS ***27*** *05:27:42.7±1.0,27°.69N×140°.07E,h497km,mb4.0/19, Error ellipse: s-maj=12.4km s-min=7.4km az=113.7*
IDC ***27*** *05:27:42.5±0.5,27°.62N×139°.97E,h477km±5km,mb3.6/22, mbtmp4.5/27,Error ellipse: s-maj=12.6km s-min=7.8km az=70.0*
NEIC ***27*** *05:27:43.9±1.6,27°.67N±0°.04×140°.0E±0°.1,h486km±10km, mb4.1/30,Error ellipse: s-maj=19.1km s-min=6.4km az=85.0*
JMA ***27*** *05:27:43.8±0.1,28°.N±1°×14°.0E±°,h481km,MV4.7/25,W OFF OGASAWARA*
ISC 27 05:27:43.5±0.5**,27°.65N**±0°.05×**140°.00E**±0°.07**,h486**km±6**km,**
n337,σ0ᵍ**97/354,mb4.0/51,5C-5D,Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.02**	**105**	P	**P**	**05 28 46.9**	**-0.5**
CBIJ				*e*S	**S**	**05 29 36.6**	**-2.6**
JCJ	**Chichijima**	**2.02**	**105**	P	**P**	**05 28 46.7**	**-0.7**
	294nm,0.3s,baz=5.7,slow=10,SNR=452						
JCJ				S	**S**	**05 29 37.0**	**-2.3**
	431nm,0.3s,baz=289,slow=22,SNR=16						
JCJ	**Chichijima**	**2.02**	**105**		**P**	**05 28 46.1**	**-1.2**
JHH2	**Haha-jima-NKT2**	**2.19**	**117**	P	**P**	**05 28 48.5**	**+0.2**
JHH2				*e*S	**S**	**05 29 40.0**	**-0.9**
JHJ2	**Mitsune**	**5.44**	**358**	P	**P**	**05 29 13.2**	**-0.5**
JHJ2	**Mitsune**	**5.44**	**358**	P

BILL Bilibino 43.37 14 *ce*P P 05 35 01.8 +0.3
BILL pmax pmax
comp=Z,6.0nm,0.9s
KNRA Kununurra 44.43 196 P P 05 35 09.6 -0.8
TIXI Tiksi 44.47 355 P P 05 35 09.6 -0.4
TIXI IAmb IAmb 05 35 28.8
comp=Z,2.8nm,0.5s
TIXI Tiksi 44.47 355 P P 05 35 09.6 -0.4
TIXI pmax pmax
comp=Z,3.0nm,0.5s
WMQ Urumqi 44.67 305 *e*P P 05 35 13.0 +0.9
WMQ pmax pmax
comp=Z,12nm,1.1s
EVN Everest 46.72 283 P 05 35 28.6 -0.1
EVN IAmb IAmb 05 35 30.4
comp=Z,3.2nm,0.5s
LVA Lava Point 47.14 40 P P 05 35 29.5 -1.2
AKUT Akutan 47.28 41 P P 05 35 31.6 -0.2
WB0 Warramunga Arr 47.45 187 P 05 35 32.1 -1.4
WB0 IAmb IAmb 05 35 33.3
comp=Z,13nm,1.2s
GAMB Gambell 47.49 27 P P 05 35 34.0 +0.9
baz=244
WRA Warramunga Arr 47.63 187 P P 05 35 34.0 -0.9
comp=Z,5.3nm,0.3s,baz=3.8,slow=7.6,SNR=133
WRA PcP PcP 05 36 54.7 -0.5
comp=Z,0.6nm,0.6s,baz=7.6,slow=4.0,SNR=1.0
WRA ScP ScP 05 40 01.7 -0.9
comp=Z,0.2nm,0.7s,baz=0.9,slow=4.6,SNR=6.2
comp=Z,5.3nm,0.3s
WRA Warramunga Arr 47.63 187 P P 05 35 33.9 -0.9
WRA Warramunga Arr 47.63 187 P P 05 35 33.9 -0.9
ZALV Zalesovo Beam 47.80 319 P P 05 35 35.5 -0.1
comp=Z,1.4nm,0.3s,baz=109,slow=8.0,SNR=6.2
ZALV PcP PcP 05 36 54.2 -1.1
comp=Z,1.8nm,0.3s,baz=125,slow=4.0,SNR=5.2
comp=Z,1.4nm,0.3s
CTAO Charters Tower 47.84 172 P P 05 35 36.4 0.0
CTAO IAmb IAmb 05 35 47.2
comp=Z,12nm,1.1s
CTAO Charters Tower 47.84 172 P P 05 35 36.4 0.0
CTAO pmax pmax
comp=Z,12nm,1.1s
MK31 Makanchi Array 48.62 309 *ce*P P 05 35 41.8 -0.2
MKAR Makanchi Array 48.62 309 P P 05 35 42.2 +0.2
comp=Z,1.2nm,0.4s,baz=87,slow=10.0,SNR=17
MKAR PcP PcP 05 36 58.1 -0.5
comp=Z,0.8nm,0.5s,baz=74,slow=6.7,SNR=5.9
comp=Z,1.2nm,0.4s
MAKZ Makanchi 48.84 309 P P 05 35 43.8 +0.2
MAKZ Makanchi 48.84 309 P P 05 35 43.8 +0.2
MAKZ pmax pmax
comp=Z,7.0nm,1.4s
K13K Kusilvak Mount 49.81 31 P P 05 35 51.1 +0.6
baz=253
F14K Arctic Creek 50.29 26 P P 05 35 55.0 +0.9
baz=248
ANM Nome 50.35 27 P P 05 35 55.3 +0.9
ANM Nome 50.35 27 P P 05 35 55.3 +0.9
ANM pmax pmax
comp=Z,4.0nm,1.4s
ANM Nome 50.35 27 P P 05 35 55.4 +1.0
baz=250
SDPT Sand Point 50.51 40 P P 05 35 55.3 -0.5
SDPT Sand Point 50.51 40 P P 05 35 56.2 +0.4
baz=262
J14K Nanvaranak Lak 50.54 30 P P 05 35 56.8 +1.0
baz=253
L14K Kuka Creek 50.55 32 P P 05 35 56.7 +0.8
baz=255
N14K Kuskokwak Cree 50.69 34 P P 05 35 58.0 +1.0
baz=257
M14K Bethel 50.75 33 P P 05 35 58.3 +1.0
baz=256
O14K Tigyukauivet M 50.76 35 P P 05 35 58.3 +0.8
baz=258
CHNA Chernabura Isl 50.95 40 P P 05 35 59.8 +0.8
baz=263
F15K North Star Dit 51.03 26 P P 05 36 00.5 +1.1
baz=250
G15K Niukluk 51.03 27 P P 05 36 00.4 +1.0
baz=251
S14K Fog Glacier 51.16 39 P P 05 36 01.0 +0.4
baz=262
L15K Ungalak Mounta 51.19 31 P P 05 36 01.4 +0.8
baz=256
KURK Kurchatov 51.21 314 *de*P P 05 36 00.8 -0.1
KURK pmax pmax
comp=Z,3.0nm,0.6s
KURBB Kurchatov Arra 51.26 314 P P 05 36 01.2 -0.1
comp=Z,7.0nm,0.4s,baz=92,slow=8.1,SNR=24
comp=Z,7.0nm,0.4s
K15K Wolf Creek Mou 51.32 31 P P 05 36 02.4 +0.8
baz=256
M15K Kasigluk River 51.34 33 P P 05 36 02.5 +0.8
baz=258
AS31 Alice Springs 51.35 187 P 05 36 01.8 -0.6
AS31 IAmb IAmb 05 36 02.7
comp=Z,2.7nm,0.5s
ASAR Alice Springs 51.36 187 P P 05 36 01.6 -0.8
comp=Z,2.6nm,0.4s,baz=359,slow=5.0,SNR=83
ASAR PcP PcP 05 37 08.7 -0.2
comp=Z,0.1nm,0.3s,baz=15,slow=5.2,SNR=2.2
ASAR ScP ScP 05 40 17.4 -1.2
comp=Z,0.1nm,0.3s,baz=27,slow=4.3,SNR=2.5
comp=Z,2.6nm,0.4s
ASAR Alice Springs 51.36 187 P P 05 36 01.9 -0.5
NRIK Noril'sk 51.43 339 P P 05 36 02.8 +0.5
comp=Z,2.2nm,0.6s,baz=98,slow=7.9,SNR=3.6
comp=Z,2.2nm,0.6s
NRIK Noril'sk 51.43 339 *i*P P 05 36 01.9 -0.3
NRIK pmax pmax
comp=Z,3.0nm,0.7s
O15K Ungalikthiuk R 51.47 35 P P 05 36 03.4 +0.7
baz=260
N15K Kwethluk River 51.53 34 P P 05 36 03.7 +0.6
baz=259
H16K Elim 51.65 28 P P 05 36 04.6 +0.7
baz=253
C16K Lisburne Hills 51.72 23 P P 05 36 05.2 +0.8
baz=247
CHGN Chignik 51.79 39 P P 05 36 05.3 +0.3
baz=263
G16K Koyuk River 51.83 27 P P 05 36 06.1 +0.9
baz=252
J16K Anvik River 51.98 30 P P 05 36 07.1 +0.8
baz=256
L16K Owhat River 52.13 32 P P 05 36 08.4 +0.9
L16K PcP PcP 05 37 12.0 +0.7
L16K Owhat River 52.13 32 P P 05 36 08.3 +0.9
baz=258
N16K Nishlik Lake 52.23 33 P P 05 36 09.0 +0.7
baz=260
M16K Timber Creek 52.24 33 P P 05 36 09.1 +0.9
baz=259
D17K Noatak River 52.30 24 P P 05 36 09.7 +1.2
baz=250,SNR=10
P16K Nushagak River 52.38 35 P P 05 36 10.3 +1.0
P16K IAmb IAmb 05 36 40.9
comp=Z,15nm,1.1s
P16K Nushagak River 52.38 35 P P 05 36 10.1 +0.9
baz=261
O16K Kokwok River B 52.42 34 P P 05 36 10.2 +0.7
baz=261
RDOG Red Dog Mine 52.49 23 P P 05 36 10.9 +1.0
baz=250
C17K DeLong Mountai 52.54 23 P P 05 36 11.1 +0.8
baz=249
G17K Kiwalik Mounta 52.54 27 P P 05 36 11.2 +0.8
baz=254
E17K Hotham Inlet 52.56 25 P P 05 36 11.5 +1.1
baz=252
F17K Baldwin Pennin 52.58 26 P P 05 36 11.5 +1.0
baz=253
J17K VABM Dome 52.68 30 P P 05 36 12.3 +0.9
baz=257
H17K Granite Mounta 52.69 28 P P 05 36 12.5 +1.0
baz=255
L17K Donlin 52.77 31 P P 05 36 13.0 +0.9
baz=259
K17K Iditarod 52.88 31 P P 05 36 13.8 +1.0
baz=258
O17K Koliganek Bris 52.94 34 P P 05 36 14.2 +0.9
baz=262
N17K Nushagak Hills 53.01 33 P P 05 36 14.9 +1.1
baz=261
Q16K King Salmon 53.02 36 P P 05 36 15.2 +1.4
baz=263
M17K Holitna River 53.03 32 P P 05 36 15.2 +1.3
baz=260
R17L Mt. Peulik Vol 53.06 37 P P 05 36 15.2 +1.0
baz=264
E18K Tukpahlearik C 53.12 25 P P 05 36 15.7 +1.3
baz=253
P17K Kvichak River 53.20 35 P P 05 36 16.2 +1.1
baz=263
F18K Selawik 53.24 26 P P 05 36 16.5 +1.2
baz=254
C18K Utukok River 53.29 23 P P 05 36 17.0 +1.3
baz=251
H18K Honhosa River 53.38 28 P P 05 36 17.6 +1.2
baz=256
G18K Tagagawik 53.45 27 P P 05 36 18.1 +1.2
baz=256
L18K Granite Mounta 53.52 31 P P 05 36 18.6 +1.1
baz=260
N18K Kilae Creek 53.67 33 P P 05 36 19.6 +1.1
baz=262
J18K Innoko River 53.73 30 P P 05 36 19.9 +1.0
baz=259
M18K Stony River 53.81 32 P P 05 36 20.5 +1.0
baz=262
P18K Big Mountain, 53.84 35 P P 05 36 20.6 +0.8
baz=264
A19K Wainwright 53.84 21 P P 05 36 20.8 +1.3
baz=250
O18K Koktuh Hills 53.90 34 P P 05 36 21.9 +1.7
O18K IAmb IAmb 05 36 52.5
comp=Z,11nm,1.2s
O18K Koktuh Hills 53.90 34 P P 05 36 21.1 +0.9
baz=263
C19K Lookout Ridge 53.98 23 P P 05 36 21.8 +1.2
baz=252,SNR=5.7
KSH2 Kashi 53.99 300 P P 05 36 23.0 +1.7
KSH2 pmax pmax
comp=Z,12nm,0.4s
F19K Shaleruckik Mo 54.02 26 P P 05 36 21.7 +0.9
baz=256
G19K Purcell Mounta 54.13 27 P P 05 36 22.4 +0.8
baz=257
H19K Roundabout Mou 54.25 27 P P 05 36 23.5 +1.1
baz=258
J19K Poorman 54.31 29 P P 05 36 23.7 +0.8
baz=260
D19K Kuna River 54.32 24 P P 05 36 23.9 +0.9
baz=254
L19K White Mountain 54.37 32 P P 05 36 24.3 +0.9
baz=262
N19K Bonanza Creek 54.37 33 P P 05 36 24.2 +0.7
baz=263
E19K Redstone River 54.38 25 P P 05 36 24.3 +0.9
baz=256
O19K Port Alsworth 54.38 34 P P 05 36 24.3 +0.8
baz=264
Q19K Cape Douglas, 54.60 36 P P 05 36 25.9 +0.7
baz=265
OHAK Old Harbor 54.68 38 P P 05 36 25.7 0.0
OHAK Old Harbor 54.68 38 P P 05 36 26.3 +0.6
baz=267
F20K Avaraart Lake 54.85 26 P P 05 36 27.6 +0.8
baz=258
P19K Oil Pt 54.88 35 P P 05 36 27.6 +0.5
baz=265
H20K Anotleneega Mo 54.88 28 P P 05 36 27.9 +0.9
baz=260
K20K Telida 54.89 30 P P 05 36 28.2 +1.2
baz=262
D20K Etivluk River 54.91 24 P P 05 36 28.2 +1.0
baz=256
E20K Nigu River 54.95 24 P P 05 36 28.3 +0.8
baz=256
J20K Nowinta River 54.98 29 P P 05 36 28.8 +1.2
baz=261,SNR=5.4
B20K Meade River 55.06 22 P P 05 36 29.2 +1.1
baz=254
KDAK Kodiak Island 55.09 37 P P 05 36 28.7 +0.2
baz=267
M20K Styx River 55.14 32 P P 05 36 29.5 +0.6
baz=264
Q20K Shuyak Island 55.23 36 P P 05 36 30.1 +0.5
baz=267
N20K Mount Spurr 55.51 33 P P 05 36 31.7 +0.1
baz=265
SPCR Spurr Chakacha 55.51 33 P P 05 36 32.1 +0.6
baz=265
A21K Barrow 55.59 20 P P 05 36 32.8 +1.0
baz=254
G21K Allakaket 55.62 26 P P 05 36 33.1 +1.0
baz=260
C21K Knifeblade Rid 55.66 23 P P 05 36 33.5 +1.2
baz=257
PPLA Purkeypile 55.68 31 P P 05 36 32.6 -0.2
baz=264
CHUM Lake Minchumin 55.73 30 P P 05 36 32.7 -0.3
baz=263
F21K Alatna River 55.75 26 P P 05 36 33.9 +0.9
baz=260
H21K Melozitna Rive 55.76 28 P P 05 36 34.2 +1.0
baz=262,SNR=5.4
E21K Killik River 55.80 24 P P 05 36 33.4 +0.1
baz=258
B21K Ikpikpuk River 55.82 23 P P 05 36 34.4 +1.0
baz=257
SKT Skwentna 55.90 32 P P 05 36 34.8 +0.6
baz=265
CAPN Captain Cook N 55.99 34 P P 05 36 35.4 +0.6
baz=266
A22K Sinclair Lake 56.02 21 P P 05 36 35.9 +1.1
baz=256
I21K Tanana 56.04 28 P P 05 36 36.2 +1.2
baz=263
BRSE Bradley Lake S 56.14 35 P P 05 36 36.5 +0.6
baz=267
F22K John River 56.29 25 P P 05 36 38.4 +1.5
baz=261,SNR=8.7
BVAR Borovoye Array 56.32 317 P P 05 36 37.4 +0.2
comp=Z,10nm,0.4s,baz=86,slow=7.1,SNR=32
BVAR PcP PcP 05 37 26.7 -0.9
comp=Z,1.9nm,0.4s,baz=74,slow=4.8,SNR=2.8
comp=Z,10nm,0.4s
BPAW Bear Paw Mtn. 56.34 30 P P 05 36 38.2 +1.0
baz=264
BORK Borovoye 56.36 317 *di*P P 05 36 37.6 +0.1
BORK pmax pmax
comp=Z,6.0nm,0.6s
B22K Teshekpuk Lake 56.38 22 P P 05 36 38.5 +1.2
baz=258
H22K Ishtalitna Cre 56.38 27 P P 05 36 38.5 +1.1
baz=263
G22K Bettles 56.46 26 P P 05 36 38.9 +1.0
baz=262
E22K Anaktuvuk Pass 56.53 25 P P 05 36 39.2 +0.7
E22K Anaktuvuk Pass 56.53 25 P P 05 36 39.5 +1.1
baz=261,SNR=6.7
MLY Manley 56.54 28 P P 05 36 39.3 +0.7
baz=264
M22K Willow 56.55 32 P P 05 36 39.0 +0.4
baz=267
TRF Thorofare Moun 56.59 30 P P 05 36 39.8 +0.7
baz=265
O22K Cooper Landing 56.68 34 P P 05 36 40.2 +0.7
baz=268
RC01 Rabbit Creek A 56.70 33 P P 05 36 40.3 +0.6
baz=267
NIL Nilore 56.85 294 P 05 36 42.0 +0.7
NIL IAmb IAmb 05 36 43.5
comp=Z,4.7nm,0.8s
NIL Nilore 56.85 294 P P 05 36 42.0 +0.7
NIL pmax pmax
comp=Z,5.0nm,0.8s
COLD Coldfoot 57.01 26 P P 05 36 42.7 +0.9
baz=263
PMR Palmer 57.01 33 P P 05 36 42.5 +0.7
baz=268
G23K Bananza Creek 57.02 26 P P 05 36 43.1 +1.2
baz=264,SNR=6.1
D23K Nanushuk River 57.07 24 P P 05 36 43.2 +1.1
baz=261
I23K Minto, Yukon-K 57.13 28 P P 05 36 43.6 +1.0
baz=265
KK31 Karatay Array 57.18 305 P 05 36 43.5 +0.2
KK31 IAmb IAmb 05 36 44.4
comp=Z,5.7nm,0.9s
KK31 Karatay Array 57.18 305 P P 05 36 43.5 +0.2
KK31 pmax pmax
comp=Z,6.0nm,1.0s
KKAR Karatay Array 57.18 305 P 05 36 43.1 -0.3
KKAR Karatay Array 57.18 305 P P 05 36 43.1 -0.3
MCK McKinley 57.22 30 P P 05 36 44.0 +0.7
baz=266
NEA2 Nenana 57.22 29 P P 05 36 43.9 +0.7
baz=266
C23K Itkillik River 57.23 23 P P 05 36 44.0 +0.8
baz=261
KNK Knik Glacier 57.33 33 P P 05 36 44.0 -0.1
KNK IAmb IAmb 05 36 45.3
comp=Z,7.5nm,0.6s
KNK Knik Glacier 57.33 33 P P 05 36 44.8 +0.7
baz=268
E23K Chandalar 57.34 25 P P 05 36 45.3 +1.3
baz=263,SNR=6.7
WAT1 Susitna Watana 57.34 31 P P 05 36 44.8 +0.6
baz=267
SML Sawmill 57.40 32 P P 05 36 44.3 -0.2
SML IAmb IAmb 05 36 45.2
comp=Z,5.3nm,0.7s
SML Sawmill 57.40 32 P P 05 36 45.0 +0.5
baz=268
TOLK Toolik Lake Re 57.42 24 P P 05 36 45.6 +0.9
baz=263
M23K Glacier View 57.69 32 P P 05 36 47.0 +0.5
baz=269
WAT6 Susitna Watana 57.70 31 P P 05 36 47.0 +0.2
baz=268
D24K Happy Valley 57.76 24 P P 05 36 47.8 +1.0
baz=263
E24K Your Creek 57.76 25 P P 05 36 48.0 +1.1
baz=264
H24K Noodor Dome 57.80 28 P P 05 36 48.1 +0.9
baz=266
P23K Montague Islan 57.83 35 P P 05 36 48.3 +0.8
baz=270
C24K Franklin Bluff 57.87 23 P P 05 36 48.6 +1.1
baz=263
SCM Sheep Creek Mo 57.88 32 P P 05 36 48.4 +0.6
baz=269
DHY Denali Highway 57.88 31 P P 05 36 48.6 +0.6
baz=268
F24K Squaw Lake 57.93 26 P P 05 36 49.2 +1.1
baz=265,SNR=12
GLI Glacier Island 57.98 33 P P 05 36 48.8 +0.3
baz=270
G24K Hadweenzic Riv 58.03 27 P P 05 36 50.0 +1.3
baz=266,SNR=7.8
HDA Harding Lake 58.12 29 P P 05 36 50.1 +0.7
baz=268
IL31 58.16 29 P P 05 36 48.6 -0.9
ILAR Eielson Array 58.16 29 P P 05 36 49.0 -0.6
comp=Z,0.6nm,0.4s,baz=248,slow=5.8,SNR=18
comp=Z,0.6nm,0.4s
Q23K Middleton Isla 58.37 35 P P 05 36 51.9 +0.8
baz=271
M24K Tolsona, Glenn 58.43 32 P P 05 36 52.3 +0.7
baz=270
KLU Klutina 58.55 33 P P 05 36 53.0 +0.6
baz=270
G25K Bearman Lake 58.58 27 P P 05 36 53.6 +1.2
baz=267
K24K Donnelly Dome 58.62 30 P P 05 36 53.6 +0.8
baz=269
D25K Kavik River 58.64 24 P P 05 36 53.9 +1.0
baz=265,SNR=10
EYAK Cordova Ski Ar 58.65 34 P P 05 36 53.7 +0.8
baz=271
PAX Paxson 58.75 31 P P 05 36 54.3 +0.5
baz=270
PRP Porcupine Dome 58.76 28 P P 05 36 54.7 +0.9
baz=268
F25K Christian Rive 58.80 26 P P 05 36 55.3 +1.4
baz=267,SNR=8.5
J25K Salcha River, 58.81 29 P P 05 36 55.1 +1.0
baz=269
E25K Arctic Village 58.85 25 P P 05 36 55.2 +0.9
E25K IAmb IAmb 05 36 56.8
comp=Z,4.3nm,0.8s
E25K Arctic Village 58.85 25 P P 05 36 55.7 +1.4
baz=267,SNR=7.1
N25K Chitina, Valde 59.18 33 P P 05 36 57.5 +0.8
baz=272
BMRM Bremner River 59.20 33 P P 05 36 57.1 +0.3
BMRM Bremner River 59.20 33 P P 05 36 57.5 +0.8
baz=272
C26K Camden Bay 59.20 23 P P 05 36 58.0 +1.5
baz=266
STKA Stephens Creek 59.22 178 P P 05 36 56.9 -0.3
comp=Z,2.4nm,0.5s,baz=340,slow=6.2,SNR=6.7
comp=Z,2.4nm,0.5s
F26K Sheenjek River 59.37 25 P P 05 36 59.3 +1.5
baz=268,SNR=12
SCRK Sand Creek 59.41 30 P P 05 36 57.2 -1.0
SCRK Sand Creek 59.41 30 P P 05 36 58.7 +0.4
baz=271,SNR=6.8
G26K Porcupine Rive 59.50 26 P P 05 36 59.6 +1.0
baz=269
C27K Jago River 59.60 23 P P 05 37 00.4 +1.2
baz=268,SNR=9.1
L26K Log Cabin Wild 59.72 31 P P 05 37 00.8 +0.6
baz=272
M26K Nabesna, AK 59.91 32 P P 05 37 02.2 +0.7
baz=272
MCARA McCarthy VSAT 59.94 33 P P 05 37 02.4 +0.7
baz=273
CRQE Cirque 59.95 34 P P 05 37 02.4 +0.5
baz=273
G27K Doyon Strip 60.34 27 P P 05 37 05.2 +0.9
baz=271
E27K Coleen River 60.34 25 P P 05 37 05.1 +0.8
baz=270
I27K Kandik River 60.39 28 P P 05 37 05.4 +0.7
baz=272
H27K Steamboat Moun 60.41 27 P P 05 37 05.9 +1.2
baz=272,SNR=7.0
L27K Beaver Creek, 60.41 31 P P 05 37 05.6 +0.8
baz=273
M27K Edge Creek, AK 60.43 32 P P 05 37 05.6 +0.5
baz=274
MESA MESA 60.55 34 P P 05 37 06.4 +0.4
baz=275
CTG Chitna Glacier 60.79 33 P P 05 37 08.1 +0.6
baz=275
BVCY Beaver Creek 60.90 32 P P 05 37 08.8 +0.8
baz=274
F28M Old Crow 61.01 26 P P 05 37 09.6 +1.0
baz=272,SNR=7.3
I28M Miner Creek 61.09 28 P P 05 37 10.2 +0.8
baz=274,SNR=7.6
E28M Babbage River 61.10 24 P P 05 37 10.2 +1.0
baz=272,SNR=8.6
YUK3 Moose Creek 61.14 32 P P 05 37 10.6 +0.7
baz=275
D28M Stokes Point 61.35 24 P P 05 37 12.1 +1.2
baz=272
O28M Mount Upton 61.37 33 P P 05 37 11.9 +0.4
baz=276
PINM Pinnacle 61.41 34 P P 05 37 12.2 +0.8
baz=276
YUK8 Steele Glacier 61.52 33 P P 05 37 13.3 +0.9
baz=276
H29M Whitestone 61.68 27 P P 05 37 14.2 +1.1
baz=274
E29M Blow River 61.71 25 P P 05 37 14.3 +1.1
baz=274
G29M Pine Creek 61.77 26 P P 05 37 15.0 +1.3
baz=274
I29M Ogilvie Camp, 61.78 28 P P 05 37 15.0 +1.2
baz=275
J29N Klondike Camp 61.90 29 P P 05 37 15.8 +1.1
baz=276
M29M Somme Creek 62.01 31 P P 05 37 16.0 +0.6
baz=276
YUK4 Talbot Arm 62.05 33 P P 05 37 16.5 +0.7
baz=277
L29M L29M 62.08 31 P P 05 37 16.6 +0.8
baz=276
O29M Mount Kennedy 62.21 34 P P 05 37 18.0 +1.2
baz=278
YUK6 Outpost Mounta 62.23 33 P P 05 37 18.1 +1.0
baz=277
K29M Barlow Dome 62.27 30 P P 05 37 17.9 +0.8
baz=276
EPYK Eagle Plains 62.34 27 P P 05 37 18.2 +0.8
baz=276,SNR=6.8
G30M tAoh Zraii Nji 62.47 26 P P 05 37 19.0 +0.7

baz=276,SNR=7.9
F30M Barrier River 62.57 25 P P 05 37 19.6 +0.8
baz=276
I30M Mount Dempster 62.60 28 P P 05 37 19.8 +0.5
baz=277,SNR=5.1
HYT Haines Junctio 62.67 33 P P 05 37 20.3 +0.6
baz=278
J30M Hart River 62.70 29 P P 05 37 20.1 +0.2
baz=277
M30M Minto, Yukon 62.76 31 P P 05 37 21.1 +0.9
baz=278
N30M Aishikik Lake 62.78 32 P P 05 37 21.1 +0.7
baz=278
ARTI Arti 62.89 322 *d i* P **P 05 37 20.8 -0.3**
ARTI 05 37 48.2
ARTI 05 39 43.3
ARTI S **S 05 45 11.7 -0.6**
ARTI SS **SS 05 49 24.3 -3.8**
ARTI pmax pmax
comp=Z,4.0nm,0.6s
MAYO Mayo, Yukon 63.02 30 P P 05 37 22.6 +0.7
baz=278
P30M Million Dollar 63.04 34 P P 05 37 22.6 +0.5
baz=279
AB31 Akbulak array 63.31 314 P P 05 37 23.7 -0.2
AB31 IAmb IAmb 05 37 24.4
comp=Z,3.4nm,0.7s
ABKAR Akbulak array 63.31 314 P P 05 37 23.1 -0.8
INK Inuvik 63.33 25 P P 05 37 24.4 +0.7
baz=278
O30N Mendenhall 63.36 33 P P 05 37 24.5 +0.4
baz=279
H31M Peel River 63.37 27 P P 05 37 24.5 +0.4
baz=278
F31M Tsiigehtchic 63.37 26 P P 05 37 24.3 +0.4
baz=278
N31M Braeburn, Yuko 63.39 32 P P 05 37 24.9 +0.5
baz=279
S31K Pelican 63.77 36 P P 05 37 26.9 +0.2
baz=281
M31M Drury Creek, Y 63.92 31 P P 05 37 28.0 +0.3
M31M IAmb IAmb 05 37 29.3
comp=Z,5.0nm,1.0s
M31M Drury Creek, Y 63.92 31 P P 05 37 28.3 +0.6
baz=280
SKAG Skagway 63.96 34 P P 05 37 28.5 +0.6
baz=281
SIT Sitka 64.43 37 P P 05 37 31.5 +0.6
baz=282
R32K Eaglecrest 64.61 36 P P 05 37 32.5 +0.4
baz=282
P32M Atlin 64.74 34 P P 05 37 33.4 +0.4
baz=282
P33M Teslin, Yukon 65.06 33 P P 05 37 35.3 +0.3
baz=282
A36M Sachs Harbour 65.43 20 P P 05 37 37.5 +0.6
baz=284,SNR=10
Q32M Nakina River 65.61 35 P P 05 37 38.7 +0.1
baz=283
R33M Jennings River 66.15 34 P P 05 37 42.3 +0.3
baz=284
WRAK Wrangell Islan 66.17 37 P P 05 37 42.2 +0.3
baz=284
S34M Telegraph Cree 66.44 36 P P 05 37 44.2 +0.6
baz=285
C36M Paulatuk 66.48 23 P P 05 37 44.0 +0.5
baz=286
V35K Ketchikan 66.85 38 P P 05 37 46.5 +0.4
baz=285
DLBC Dease Lake 66.87 35 P P 05 37 46.6 +0.2
baz=285
WTLY Watson Lake, Y 67.03 33 P P 05 37 47.5 +0.3
baz=286
KIRV Kirov 67.14 325 *ce* **P P 05 37 48.0 +0.2**
T35M Bob Quinn 67.14 36 P P 05 37 48.3 +0.3
baz=286
WRGLY Wrigley 68.54 29 P P 05 37 56.6 +0.2
baz=289
SPITS Spitsbergen Ar 69.49 349 P P 05 38 02.1 +0.2
comp=Z,3.0nm,0.7s,baz=132,slow=4.6,SNR=12
comp=Z,3.0nm,0.7s
KLMR Klimovskoe 71.12 329 *e* **P P 05 38 08.9 -2.9**
KLMR pmax pmax
comp=Z,7.0nm,1.0s
ARCES ARCESS Array B 72.37 340 P P 05 38 19.5 +0.4
comp=Z,4.7nm,0.8s,baz=74,slow=8.9,SNR=13
comp=Z,4.7nm,0.8s
YKA Yellowknife Ar 72.57 28 P P 05 38 20.3 0.0
comp=Z,2.2nm,0.7s,baz=300,slow=6.4,SNR=44
comp=Z,2.2nm,0.7s
OBN Obninsk 74.96 325 *i* **P P 05 38 38.5 +4.5**
OBN *i* 05 38 45.8
OBN pmax pmax
comp=Z,4.0nm,0.7s
KBZ Khabaz 76.20 312 P P 05 38 41.4 +0.2
comp=Z,1.4nm,0.5s,baz=59,slow=3.3,SNR=7.5
comp=Z,1.4nm,0.5s
KBZ Khabaz 76.20 312 *ce* **P P 05 38 41.3 +0.2**
KBZ pmax pmax
comp=Z,2.0nm,0.9s
SHA1 Shidzhatmaz 76.36 312 *d i* **P P 05 38 41.0 -1.4**
FINES FINESS Array B 76.58 333 P P 05 38 42.5 -0.4
comp=Z,6.7nm,0.4s,baz=66,slow=5.1,SNR=91
comp=Z,6.7nm,0.4s
AKASG Malin Array Be 81.01 323 P P 05 39 06.0 -0.8
comp=Z,0.9nm,0.3s,baz=51,slow=5.6,SNR=12
comp=Z,0.9nm,0.3s
AKBB Malin Array Si 81.01 323 *i* **P P 05 39 06.6 -0.2**
AKBB pmax pmax
comp=Z,4.0nm,1.1s
NVAR Mina Array Bea 81.69 51 P P 05 39 11.9 +1.0
comp=Z,1.4nm,0.5s,baz=297,slow=6.0,SNR=19
comp=Z,1.4nm,0.5s
HFS Hagfors 82.14 336 P P 05 39 11.3 -1.1
comp=Z,1.9nm,0.3s,baz=73,slow=5.0,SNR=29
comp=Z,1.9nm,0.3s
NB2 NORSAR Subarra 82.36 337 P P 05 39 12.6 -1.0
comp=Z,1.3nm,0.5s,baz=49,slow=4.6
NOA NORSAR Array B 82.36 337 P P 05 39 12.7 -0.9
comp=Z,2.6nm,0.6s,baz=46,slow=4.8,SNR=11
comp=Z,2.6nm,0.6s
BRTR Keskin Array B 84.19 312 P P 05 39 22.3 -1.0
comp=Z,0.8nm,0.6s,baz=102,slow=4.1,SNR=4.2
comp=Z,0.8nm,0.6s
PDAR Pinedale Array 85.17 44 P P 05 39 28.6 +0.3
comp=Z,0.4nm,0.5s,baz=278,slow=2.0,SNR=6.4
comp=Z,0.4nm,0.5s
ANMO Albuquerque 91.60 49 *ce* **P P 05 39 57.5 -0.9**
ANMO pmax pmax
comp=Z,2.0nm,0.8s
TXAR Lajitas Array 96.81 52 P P 05 40 22.4 +0.3
comp=Z,0.5nm,0.7s,baz=318,slow=1.8,SNR=7.0
comp=Z,0.5nm,0.7s
QSPA South Pole Qui 117.42 180 PKP PKPdf 05 45 31.7 -0.9
comp=Z,0.9nm,0.4s,baz=264,slow=1.4,SNR=6.3
TORD Torodi Ar. Bea 122.74 310 PKP PKPdf 05 45 43.0 -1.4
comp=Z,0.5nm,0.6s,baz=6.7,slow=2.4,SNR=4.1
LPAZ La Paz 151.64 72 PKPbc PKiKP 05 46 44.4 +0.3
comp=Z,3.6nm,0.7s,baz=346,slow=2.9,SNR=18
PLCA Paso Flores 151.72 125 PKPbc PKPbc 05 46 42.7 +0.1
comp=Z,1.6nm,0.4s,baz=230,slow=3.0,SNR=14

IDC ***27*** *05:36:59.6±1.4, 1°.08N×126°.34E, h0km, mb3.6/5, mbtmp3.6/5, MS3.3/1, Error ellipse: s-maj=145.1km s-min=20.7km az=68.0*
DJA ***27*** *05:37:04.4±0.7, 2°.1N±4°×12°.7E±°, h24km±9km, M3.7/12, MLv3.7/12*
ISC 27 05:37:05.0±1.0, 1°.48N±0°.07×127°.04E±0°.08, h35km, n11, σ1§66/10, mb3.6/5, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.78**	**155**	P	**Pn**	**05 37 20.8**	**+1.3**
GAMI	**Galela, Maluku**	**0.83**	**65**	P	**Pn**	**05 37 20.9**	**+0.7**
MNI	**Manado**	**2.20**	**269**	P	**Pn**	**05 37 39.9**	**+0.9**
SANI	**Sanana**	**3.66**	**197**	P	**Pn**	**05 37 59.3**	**+0.1**
NLAI	**Namlea**	**4.69**	**179**	P	**Pn**	**05 38 15.2**	**+1.9**
WRA	**Warramunga Arr**	**22.46**	**162**	P	**P**	**05 41 59.8**	**-1.5**
	0.3nm,0.4s,baz=339,slow=11,SNR=6.3						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**25.87**	**165**	P	**P**	**05 42 30.8**	**-2.9**
	0.1nm,0.3s,baz=344,slow=11,SNR=5.6						
	0.1nm,0.3s						
SONM	**Songino Array**	**49.52**	**342**	P	**P**	**05 45 53.5**	**+1.2**
	0.4nm,0.6s,baz=154,slow=7.3,SNR=2.3						
	0.4nm,0.6s						
TLY	**Talaya**	**53.75**	**342**	LR	LR	06 12 13.8	
	comp=Z,25nm,18.3s,baz=16,slow=39						
MKAR	**Makanchi Array**	**59.57**	**326**	P	**P**	**05 47 05.3**	**+0.1**
	0.5nm,0.5s,baz=135,slow=6.5,SNR=7.6						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**63.79**	**328**	P	**P**	**05 47 32.6**	**-0.9**
	1.5nm,0.3s,baz=117,slow=7.8,SNR=5.4						
	1.5nm,0.3s						

IDC ***27*** *05:56:52.2±0.8, 45°.15S×166°.66E, h0km, mb3.7/3, mbtmp3.9/4, ML4.6/1, Error ellipse: s-maj=32.6km s-min=24.3km az=1.0*
WEL ***27*** *05:56:54.2±0.9, 45°.5S±4°×16°.7E±°, h5km, M4.3/8, ML4.2/8, MLv4.3/8, Error ellipse: s-maj=6.7km s-min=4.5km az=116.9, confirmed*
ISC 27 05:56:52.2±1.6, 45°.13S±0°.04×166°.55E±0°.05, h1km±10km, n68, σ0§82/73, mb3.7/3, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DCZ	**Deep Cove**	**0.54**	**128**	P	**Pb**	**05 57 04.3**	**-0.1**
DCZ				S	**Sb**	**05 57 10.8**	**-1.8**
TAFS	**Te Anau Fire S**	**0.87**	**109**	P	**Pb**	**05 57 10.2**	**+0.1**
TAFS				S	**Sb**	**05 57 21.5**	**-0.8**
PYZ	**Puysegur Point**	**1.04**	**175**	P	**Pg**	**05 57 12.6**	**+0.5**
PYZ				S	**Sg**	**05 57 25.9**	**+0.4**
MSZ	**Milford Sound**	**1.08**	**65**	P	**Pb**	**05 57 13.9**	**+0.3**
MSZ				S	**Sb**	**05 57 28.5**	**+0.3**
MLZ	**Mavora Lakes**	**1.13**	**102**	P	**Pb**	**05 57 14.2**	**-0.3**
MLZ				S	**Sb**	**05 57 29.2**	**-0.5**
RRKS	**Rarakau**	**1.20**	**148**	P	**Pb**	**05 57 15.8**	**+0.1**
WHZ	**Wether Hill Ro**	**1.24**	**128**	P	**Pg**	**05 57 15.9**	**-0.1**
WHZ				S	**Sg**	**05 57 31.1**	**-0.9**
MOSS	**Mossburn Schoo**	**1.30**	**115**	P	**Pb**	**05 57 17.3**	**-0.1**
MOSS				S	**Sn**	**05 57 35.2**	**-0.3**
GLNY	**Glenorchy**	**1.34**	**79**	P	**Pb**	**05 57 18.2**	**0.0**
ORPS	**Orepuki**	**1.43**	**144**	P	**Pn**	**05 57 19.1**	**-0.2**
QTPS	**Queenstown Pol**	**1.50**	**87**	P	**Pb**	**05 57 20.8**	**0.0**
QTPS				S	**Sn**	**05 57 42.2**	**+1.8**
WKZ	**Wanaka**	**1.78**	**81**	P	**Pb**	**05 57 25.9**	**+0.3**
WNPS	**Wanaka Nationa**	**1.89**	**77**	P	**Pg**	**05 57 28.7**	**+0.2**
JCZ	**Jackson Bay**	**1.92**	**57**	P	**Pn**	**05 57 25.5**	**-0.5**
EAZ	**Earnscleugh**	**1.95**	**94**	P	**Pb**	**05 57 28.0**	**-0.6**
EAZ				S	**Sn**	**05 57 51.5**	**0.0**
APZ	**The Paps**	**1.97**	**150**	P	**Pb**	**05 57 28.2**	**-0.7**
SYZ	**Scrubby Hill**	**2.29**	**129**	P	**Pn**	**05 57 31.8**	**+0.7**
TUZ	**Tuapeka**	**2.31**	**112**	P	**Pn**	**05 57 32.5**	**+1.1**
LBZ	**Lake Benmore**	**2.69**	**75**	P	**Pn**	**05 57 37.7**	**+1.1**
FOZ	**Fox Glacier**	**2.84**	**57**	P	**Pn**	**05 57 37.6**	**-1.0**
ODZ	**Otahua Downs**	**2.90**	**90**	P	**Pn**	**05 57 39.9**	**+0.5**
HHSZ	**Highcliff Hill**	**2.94**	**106**	P	**Pn**	**05 57 41.2**	**+1.1**
TMZ	**Timaru**	**3.26**	**78**	P	**Pn**	**05 57 44.9**	**+0.4**
GCSZ	**Gaunt Creek Bo**	**3.27**	**58**	P	**Pn**	**05 57 43.6**	**-0.9**
ARCZ	**Arundel**	**3.51**	**72**	P	**Pn**	**05 57 47.8**	**-0.1**
RPZ	**Rata Peaks**	**3.52**	**68**	Pn	**Pn**	**05 57 48.3**	**+0.3**
	62nm,0.3s,baz=186,slow=1.3,SNR=85						
RPZ				Sn	**Sn**	**05 58 31.5**	**+1.1**
	53nm,0.3s,baz=185,slow=23,SNR=4.4						
	214nm,0.4s						
RPZ	**Rata Peaks**	**3.52**	**68**	P	**Pn**	**05 57 48.3**	**+0.3**
WVZ	**Waitaha Valley**	**3.65**	**57**	P	**Pn**	**05 57 48.8**	**-0.9**
MHCZ	**Mount Hutt**	**3.94**	**68**	P	**Pn**	**05 57 54.6**	**+0.9**
WACZ	**Wakanui South**	**3.96**	**74**	P	**Pn**	**05 57 54.0**	**0.0**
RACZ	**Rakaia**	**4.24**	**73**	P	**Pn**	**05 57 59.3**	**+1.5**
INZ	**Inchbonnie**	**4.28**	**57**	P	**Pn**	**05 57 57.6**	**-0.8**
OXZ	**Oxford**	**4.34**	**67**	P	**Pn**	**05 57 59.0**	**-0.3**
MQZ	**McQueen's Vall**	**4.60**	**74**	P	**Pn**	**05 58 02.6**	**-0.2**
LTZ	**Lake Taylor**	**4.75**	**62**	P	**Pn**	**05 58 05.6**	**+0.6**
AMCZ	**Amberley**	**4.81**	**68**	P	**Pn**	**05 58 06.4**	**+0.8**
OKCZ	**Okains Bay**	**4.87**	**75**	P	**Pn**	**05 58 06.9**	**+0.4**
DSZ	**Dennistoun Nort**	**5.11**	**55**	P	**Pn**	**05 58 09.2**	**-0.6**
GVZ	**Greta Valley S**	**5.15**	**67**	P	**Pn**	**05 58 11.7**	**+1.3**
THZ	**Tophouse**	**5.72**	**56**	P	**Pn**	**05 58 17.7**	**-0.6**
MRNZ	**Matariki Terra**	**5.87**	**53**	P	**Pn**	**05 58 20.2**	**0.0**
QRZ	**Quartz Range**	**6.14**	**48**	P	**Pn**	**05 58 22.9**	**-1.1**
TKNZ	**Takaka Hill**	**6.23**	**51**	P	**Pn**	**05 58 24.4**	**-0.8**
NNZ	**Nelson**	**6.34**	**54**	P	**Pn**	**05 58 26.9**	**+0.2**
TUWZ	**Tuamarina**	**6.54**	**58**	P	**Pn**	**05 58 31.5**	**+2.0**
TCW	**Tory Channel**	**6.88**	**58**	P	**Pn**	**05 58 35.9**	**+1.8**
DUWZ	**D'Urville Isla**	**6.92**	**54**	P	**Pn**	**05 58 35.9**	**+1.1**
CAW	**Cannon Point**	**7.42**	**60**	P	**Pn**	**05 58 41.2**	**-0.3**
URZ	**Urewera**	**10.46**	**53**	Sn	Sn	06 01 12.1	-8.9
	2.7nm,0.3s,baz=190,slow=18,SNR=9.7						
ASAR	**Alice Springs**	**34.06**	**298**	P	**P**	**06 03 38.9**	**+0.8**
	0.9nm,1.1s,baz=123,slow=6.3,SNR=4.6						
ASAR				PcP	**PcP**	**06 06 15.8**	**+0.1**
	0.1nm,0.3s,baz=125,slow=4.7,SNR=2.1						
	0.9nm,1.1s						
WRA	**Warramunga Arr**	**36.59**	**303**	P	**P**	**06 04 00.8**	**+1.0**
	1.5nm,1.0s,baz=139,slow=9.2,SNR=6.0						
WRA				PcP	**PcP**	**06 06 23.2**	**+0.1**
	0.4nm,0.7s,baz=134,slow=2.7,SNR=1.2						
	1.5nm,1.0s						
H01W1	**Cape Leeuwin H**	**40.77**	**266**	T	T	06 48 10.5	
	baz=121,slow=75,SNR=115						
H01W2	**Cape Leeuwin H**	**40.78**	**266**	T	T	06 48 10.3	
	baz=121,slow=75,SNR=114						
H01W3	**Cape Leeuwin H**	**40.79**	**266**	T	T	06 48 11.9	
	baz=121,slow=75,SNR=120						
QSPA	**South Pole Qui**	**44.99**	**180**	P	**P**	**06 05 08.8**	**0.0**
	0.9nm,0.8s,baz=325,slow=4.3,SNR=1.8						
	0.9nm,0.8s						
H08S2	**Diego Garcia H**	**87.49**	**262**	T	T	07 46 23.5	
	baz=136,slow=76,SNR=61						
H08S1	**Diego Carcia H**	**87.51**	**262**	T	T	07 46 10.2	
	baz=136,slow=76,SNR=42						
H08S3	**Diego Garcia H**	**87.51**	**262**	T	T	07 46 21.5	
	baz=136,slow=76,SNR=79						
MKAR	**Makanchi Array**	**117.69**	**309**	PKP	**PKPdf**	**06 15 38.0**	**-1.3**
	0.3nm,0.8s,baz=172,slow=4.1,SNR=2.1						
KURBB	**Kurchatov Arra**	**121.94**	**311**	PKP	**PKPdf**	**06 15 46.1**	**-1.3**
	0.2nm,0.4s,baz=103,slow=2.1,SNR=2.4						
YKA	**Yellowknife Ar**	**124.20**	**33**	PKP	**PKPdf**	**06 15 50.2**	**-1.1**
	0.2nm,0.9s,baz=272,slow=2.6,SNR=3.7						
SPITS	**Spitsbergen Ar**	**144.87**	**350**	PKP	**PKPab**	**06 16 28.6**	**+0.1**
	11nm,0.9s,baz=57,slow=6.1,SNR=5.3						
SCHQ	**Schefferville**	**145.13**	**54**	PKPbc	**PKPbc**	**06 16 28.5**	**-1.5**
	3.1nm,1.0s,baz=232,slow=8.1,SNR=1.7						
BRTR	**Keskin Array B**	**145.22**	**278**	PKPbc	**PKPbc**	**06 16 31.4**	**+0.4**
	3.5nm,1.0s,baz=152,slow=5.6,SNR=12						
TORD	**Torodi Ar. Bea**	**145.61**	**207**	PKPbc	**PKPdf**	**06 16 32.7**	**+0.2**
	5.9nm,0.7s,baz=194,slow=3.1,SNR=30						
ARCES	**ARCESS Array B**	**148.74**	**335**	PKPbc	**PKPbc**	**06 16 40.0**	**+0.1**
	5.4nm,0.9s,baz=28,slow=3.3,SNR=8.4						
AKASG	**Malin Array Be**	**151.18**	**297**	PKPbc	**PKPbc**	**06 16 47.1**	**+0.8**
	1.2nm,0.6s,baz=83,slow=2.3,SNR=6.0						
FINES	**FINESS Array B**	**151.87**	**320**	PKPbc	**PKPbc**	**06 16 48.0**	**+0.5**
	1.9nm,0.7s,baz=51,slow=5.8,SNR=9.3						

ASRS ***27*** *06:14:33.0±0.8, 54°.99N×88°.50E, h0km, M2.4(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 27 06:14:36.2±4.1, 55°.02N×88°.17E, h0km, mbtmp2.5/2, ML2.0/2, Error ellipse: s-maj=37.2km s-min=27.0km az=29.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**2.23**	**243**	I	I	06 29 40.0	
	baz=61,slow=346,SNR=4.7						
ZALV	**Zalesovo Beam**	**2.23**	**243**	Pg	Pb	06 15 17.9	+0.6
	0.4nm,0.3s,baz=60,slow=17,SNR=2.3						
ZALV				Lg	Lg	06 15 47.2	
	1.2nm,0.3s,baz=63,slow=28,SNR=5.2						
KURBB	**Kurchatov Arra**	**7.31**	**237**	Pn	Pn	06 16 22.7	-1.5
	baz=54,slow=14,SNR=4.4						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**9.03**	**207**	Pn	Pn	06 16 49.7	+1.9
	baz=21,slow=13,SNR=1.6						
	0.1nm,0.5s						

NEIC ***27*** *06:27:19.6±1.8, 2°.87S±0°.09×139°.43E±0°.10, h111km±6km, mb4.5/24, Error ellipse: s-maj=14.4km s-min=12.6km az=106.0*
IDC ***27*** *06:27:19.1±0.8, 2°.81S×139°.53E, h118km±10km, mb3.7/13, mbtmp4.1/18, MS3.0/1, Error ellipse: s-maj=16.2km s-min=12.2km az=86.0*
DJA ***27*** *06:27:20.3±0.3, 3°S±3°×14°0E±°, h111km±3km, M4.7/15, mb4.6/15, mB5.0/6, MLv4.9/12, Mw(mB)4.4/6*
ISC 27 06:27:18.2±0.4, 2°.86S±0°.05×139°.44E±0°.05, h100km, n70, σ1§83/74, mb4.3/27, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**0.77**	**70**	P	**Pn**	**06 27 39.3**	**+3.0**
GENI				S	**Sn**	**06 27 54.3**	**+4.5**
SMPI	**Sarmi**	**1.13**	**320**	P	**Pn**	**06 27 44.3**	**+4.2**
WAMI	**Wamena**	**1.26**	**216**	P	Pn	06 27 46.7	+5.2
WAMI				S	**Sn**	**06 28 06.9**	**+7.7**
JAY	**Jayapura**	**1.30**	**75**	P	**Pn**	**06 27 43.9**	**+1.7**
	1μm,0.5s,baz=234,slow=8.7,SNR=500						
JAY				S	**Sn**	**06 28 01.2**	**+1.0**
	1μm,0.5s,baz=156,slow=20,SNR=18						
JAY				LR	LR	06 28 19.7	
	comp=Z,371nm,19.5s,baz=342,slow=50						
JAY	**Jayapura**	**1.30**	**75**	P	**Pn**	**06 27 44.0**	**+1.9**
SRPI	**Serui, Papua**	**3.35**	**287**	P	**Pn**	**06 28 11.2**	**+2.6**
BAKI	**Biak**	**3.72**	**296**	P	**Pn**	**06 28 15.6**	**+1.9**
FAKI	**Fak Fak**	**7.19**	**269**		**Pn**	**06 29 02.9**	**+2.2**
FAKI	**Fak Fak**	**7.19**	**269**	P	**Pn**	**06 29 03.4**	**+2.7**
	0.2nm23nm,0.8s						
MANU	**Manus Island**	**7.96**	**84**		**Pn**	**06 29 13.6**	**+2.4**
SIJI	**Sorong**	**8.41**	**283**	P	**Pn**	**06 29 18.6**	**+1.2**
	7.6nm,0.3s,baz=79,slow=11,SNR=5.9						
PMG	**Port Moresby**	**10.06**	**131**	P	**Pn**	**06 29 39.4**	**-0.4**
	16nm,0.6s,baz=321,slow=14,SNR=7.8						
PMG	**Port Moresby**	**10.06**	**131**		**Pn**	**06 29 40.7**	**+1.0**
PMG	**Port Moresby**	**10.06**	**131**	P	**Pn**	**06 29 42.3**	**+2.6**
	41nm,0.9s						
COEN	**Coen**	**11.63**	**162**	Pn	**Pn**	**06 30 00.8**	**-0.3**
MTN	**Manton Dam**	**12.89**	**219**		**Pn**	**06 30 16.4**	**-1.4**
KNRA	**Kununurra**	**16.52**	**219**		**Pn**	**06 31 03.2**	**-0.8**
KNRA				IAmb	IAmb	06 31 25.9	
	comp=Z,21nm,0.7s						
GTOI	**Gorontalo**	**16.79**	**282**	P	**P**	**06 31 09.9**	**+2.0**
	comp=Z,43nm,0.6s						
DAV	**Davao City (W)**	**16.99**	**306**	P	**Pn**	**06 31 08.0**	**-1.9**
DAV	**Davao City (W)**	**16.99**	**306**	P	**Pn**	**06 31 09.8**	**-0.1**
WB0	**Warramunga Arr**	**17.52**	**196**		**P**	**06 31 15.0**	**-0.9**
WRA	**Warramunga Arr**	**17.70**	**196**	P	**P**	**06 31 17.4**	**-0.5**
	comp=Z,2.3nm,0.4s,baz=18,slow=12,SNR=32						
WRA				S	Sn	06 34 24.9	-11
	comp=Z,3.8nm,0.9s,baz=16,slow=22,SNR=5.2						
WRA	**Warramunga Arr**	**17.70**	**196**		**P**	**06 31 16.4**	**-1.6**
MRSI	**Marisa**	**17.81**	**280**	P	**Pn**	**06 31 21.2**	**+1.4**
	comp=Z,34nm,0.6s						
CTA	**Charters Tower**	**18.37**	**159**	P	**P**	**06 31 26.4**	**+1.1**
	comp=Z,2.4nm,0.6s,baz=355,slow=7.3,SNR=2.4						
CTAO	**Charters Tower**	**18.37**	**159**	P	**P**	**06 31 27.1**	**+1.8**
TOLI2	**Tolitoli**	**19.07**	**282**	P	**P**	**06 31 33.1**	**+0.2**
TOLI2				IAmb	IAmb	06 31 35.2	
	comp=Z,15nm,0.8s						
BSSI	**Bau Bau, Buton**	**19.17**	**260**	P	**Pn**	**06 31 36.3**	**+0.3**
	comp=Z,68nm,0.9s						
SPSI	**Sidrap Palu**	**19.67**	**266**	P	**Pn**	**06 31 42.1**	**+0.2**
	comp=Z,19nm,0.6s						
KAPI	**Kappang**	**19.76**	**263**	P	**P**	**06 31 41.5**	**+1.0**
	comp=Z,29nm,0.3s,baz=90,slow=10,SNR=4.1						
FITZ	**Fitzroy Crossi**	**20.31**	**221**	P	**P**	**06 31 47.2**	**+0.8**
	comp=Z,6.0nm,0.9s,baz=40,slow=11,SNR=11						
FITZ				S	**S**	**06 35 25.8**	**-2.9**
	comp=Z,6.0nm,0.9s,baz=343,slow=19,SNR=2.9						
	comp=Z,6.0nm,0.9s						
AS31	**Alice Springs**	**21.37**	**194**		**P**	**06 31 58.5**	**+0.7**
ASAR	**Alice Springs**	**21.37**	**194**	P	**P**	**06 31 58.3**	**+0.5**
	comp=Z,1.7nm,0.5s,baz=28,slow=11,SNR=38						
ASAR				S	**S**	**06 35 49.4**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=9.1,slow=26,SNR=4.0						
ASAR				LR	LR	06 40 48.0	
	comp=Z,47nm,21.2s,baz=104,slow=38						
	comp=Z,1.7nm,0.5s						
HNR	**Honiara**	**21.40**	**109**	P	**P**	**06 31 58.5**	**+0.5**
	comp=Z,4.1nm,0.7s,baz=281,slow=10,SNR=3.8						
	comp=Z,4.1nm,0.7s						
KKM	**Kota Kinabalu**	**24.82**	**291**	P	**P**	**06 32 31.4**	**-0.1**
KKM				IAmb	IAmb	06 32 34.5	
	comp=Z,21nm,0.8s						
MBWA	**Marble Bar**	**26.44**	**225**	P	**P**	**06 32 45.4**	**-0.5**
MBWA				IAmb	IAmb	06 32 47.7	
	comp=Z,6.8nm,0.8s						
STKA	**Stephens Creek**	**28.94**	**176**	P	**P**	**06 33 06.3**	**-1.8**
	comp=Z,0.7nm,0.5s,baz=349,slow=17,SNR=2.2						
	comp=Z,0.7nm,0.5s						
FORT	**Forrest**	**29.79**	**200**	P	**P**	**06 33 15.8**	**+0.2**
FORT				IAmb	IAmb	06 33 56.1	
	comp=Z,6.7nm,0.8s						
BBOO	**Buckleboo**	**29.97**	**186**	P	**P**	**06 33 16.6**	**-0.5**
BBOO				IAmb	IAmb	06 33 34.0	
	comp=Z,6.7nm,1.2s						
BBJI	**Bungbulang**	**31.98**	**261**	P	**P**	**06 33 33.6**	**-1.6**
MORW	**Morawa**	**34.28**	**218**	P	**P**	**06 33 54.2**	**-0.7**
MORW				IAmb	IAmb	06 34 01.3	
	comp=Z,26nm,1.5s						
NJ2	**Nanjing**	**39.84**	**332**	*eP*	**P**	**06 34 44.5**	**+2.5**
NJ2				pmax	pmax		
	comp=Z,25nm,0.7s						
KSRS	**Korea Array**	**41.51**	**346**	P	**P**	**06 34 55.1**	**-0.5**
	comp=Z,1.6nm,0.7s,baz=158,slow=9.4,SNR=4.7						
	comp=Z,1.6nm,0.7s						
GSI	**Gunungsitoli**	**42.06**	**275**	P	**P**	**06 34 59.1**	**-1.4**
CMAR	**Chiang Mai Arr**	**45.15**	**300**	P	**P**	**06 35 24.5**	**-0.7**
	comp=Z,2.7nm,0.7s,baz=109,slow=7.1,SNR=2.1						
HHC	**Hu-ho-hao-te**	**50.40**	**333**	*eP*	**P**	**06 36 08.5**	**+3.0**
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,82nm,4.0s						
SHL	**Shillong**	**54.02**	**305**	P	**P**	**06 36 31.9**	**-0.8**
SONM	**Songino Array**	**58.16**	**334**	P	**P**	**06 37 00.4**	**-1.4**
	comp=Z,0.4nm,0.5s,baz=145,slow=5.3,SNR=2.5						
	comp=Z,0.4nm,0.5s						
EVN	**Everest**	**59.12**	**305**	P	**P**	**06 37 09.7**	**+0.3**
WMQ	**Urumqi**	**65.58**	**321**	*eP*	**P**	**06 37 52.5**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
WMQ				LR	LR		
	comp=N,530nm,10.9s						
WMQ				LR	LR		
	comp=E,570nm,10.9s						
WMQ				LR	LR		
	comp=Z,290nm,20.5s						
MKAR	**Makanchi Array**	**70.35**	**322**	P	**P**	**06 38 20.9**	**-0.4**
	comp=Z,3.1nm,0.6s,baz=111,slow=8.1,SNR=36						
	comp=Z,3.1nm,0.6s						

comp=Z,3.8nm,0.5s,baz=95,slow=1.6,SNR=8.6

VAO ***27*** *06:38:46.9±0.9, 28.5°×54S×70.1°×11W, h10km, mb4.0, Presumed earthquake*

SJA ***27*** *06:39:22.7±0.7, 27.7°×78S×67.4°×43W, h153km±3km, ML3.6, MW3.6*

ISC 27 06:39:22.5±0.7, 27.75S±0.04°×67.44W±0.04°, h162km±7km, n43, σ2≥00/63, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TINO	**Tinogasta**	**0.33**	**201**	*eP*	**Pn**	**06 39 44.6**	**-0.1**
TINO				*eS*	**Sn**	**06 39 59.7**	**-2.3**
AANI	**Anillaco**	**1.15**	**158**	*eP*	**Pn**	**06 39 49.8**	**0.0**
AANI				IAML		06 40 11.0	
	comp=Z,2μm,0.4s						
AANI				*eS*	**Sn**	**06 40 11.1**	**+0.1**
VCA	**Vinchina**	**1.19**	**214**	*eP*	**Pn**	**06 39 50.5**	**+0.3**
VCA				*eS*	**Sn**	**06 40 10.6**	**-1.1**
VCA				IAML		06 40 13.8	
	comp=Z,2μm,0.2s						
ACLC	**CERRO LA CRUZ**	**1.72**	**166**	*eP*	**Pn**	**06 39 55.9**	**+0.4**
ACLC				*eS*	**Sn**	**06 40 19.8**	**-1.3**
ACLC				IAML		06 40 20.2	
	comp=Z,401nm,0.3s						
AC02	**Maricunga**	**1.76**	**301**	*eP*	**Pn**	**06 39 57.1**	**+0.8**
AC02				*eS*	Sn	06 40 32.5	+10
FSA	**Cafayete**	**2.09**	**39**	*eP*	**Pn**	**06 40 02.2**	**+2.6**
FSA				*eS*	**Sn**	**06 40 25.5**	**-2.6**
AHML	**Horco Molle**	**2.10**	**63**	*eP*	Pn	06 39 45.8	-14
AHML				*eS*	Sn	06 40 10.0	-18
AHML				IAML		06 40 17.7	
	comp=Z,116nm,0.6s						
GO03	**Copiapo**	**2.49**	**273**	*eP*	**Pn**	**06 40 04.5**	**+0.4**
GO03				*eS*	**Sn**	**06 40 34.5**	**-1.8**
GO03				IAML		06 40 35.5	
	comp=Z,430nm,0.1s						
AC05	**El Transito**	**2.73**	**246**	*eP*	**Pn**	**06 40 07.7**	**+0.6**
AC05				*eS*	**Sn**	**06 40 41.0**	**-0.6**
AC05				IAML		06 40 41.9	
	comp=Z,104nm,0.2s						
ACDV	**Cuesta del Vie**	**2.83**	**211**	*eP*	**Pn**	**06 40 09.1**	**+0.8**
ACDV				IAML	**S**	**06 40 44.5**	**+0.6**
	comp=Z,107nm,0.5s						
ACDV				*eS*	**S**	**06 40 44.5**	**+0.6**
AVFE	**Valle Fertil**	**2.90**	**180**	*eP*	**Pn**	**06 40 09.6**	**+0.4**
AVFE				*eS*	**Sn**	**06 40 43.8**	**-1.7**
AVFE				IAML		06 40 44.5	
	comp=Z,91nm,0.4s						
AROD	**Rodeo**	**3.00**	**216**	*eP*	**Pn**	**06 40 11.5**	**+0.9**
AROD				*eS*	**Sn**	**06 40 47.9**	**-0.1**
LCO	**Las Campanas**	**3.14**	**246**	*eP*	**Pn**	**06 40 12.3**	**0.0**
LCO				*eS*	**Sn**	**06 40 49.8**	**-1.1**
CO01	**Juntas del Tor**	**3.22**	**226**	*eP*	**Pn**	**06 40 13.9**	**+0.6**
CO01				*eS*	**Sn**	**06 40 54.3**	**+1.5**
CO01				IAML		06 40 58.6	
	comp=Z,48nm,1.1s						
AC01	**Pan de Azucar**	**3.24**	**299**	*eP*	**Pn**	**06 40 13.0**	**-0.4**
AC01				*eS*	**Sn**	**06 40 49.9**	**-3.1**
AC01				IAML		06 40 56.8	
	comp=Z,108nm,0.3s						
AC04	**Llanos de Chal**	**3.25**	**261**	*eP*	**Pn**	**06 40 13.0**	**-0.4**
AC04				*eS*	**Sn**	**06 40 52.3**	**-0.7**
AC04				IAML		06 40 57.7	
	comp=Z,100nm,0.3s						
ACHE	**Chepes**	**3.47**	**169**	*eP*	**Pn**	**06 40 17.1**	**+0.8**
ACHE				*eS*	**Sn**	**06 40 56.4**	**-1.9**
SLA	**San Lorenzo**	**3.48**	**30**	*eP*	**Pn**	**06 40 20.1**	**+3.5**
SALTA		**3.65**	**16**	*eP*	**Pn**	**06 40 19.2**	**+0.2**
SALTA				*eP*		06 40 22.8	
SALTA				*eP*		06 40 30.6	
SALTA				IAML		06 41 45.7	
	comp=Z,43nm,0.1s						
RTLL	**Cerro Villicun**	**3.68**	**194**	*eP*	**Pn**	**06 40 19.4**	**+0.5**
RTLL				*eS*	**Sn**	**06 41 01.5**	**-1.5**
RTLL				IAML		06 41 04.5	
	comp=Z,128nm,0.4s						
GO04	**Tololo Observa**	**3.81**	**230**	*eP*	**Pn**	**06 40 20.5**	**-0.3**
GO04				*eS*	**Sn**	**06 41 05.6**	**-0.6**
GO04				IAML		06 41 11.2	
	comp=Z,143nm,0.2s						
SJA	**San Juan**	**3.89**	**194**	*eP*	**Pn**	**06 40 22.4**	**+0.8**
SJA				IAML		06 41 13.4	
	comp=Z,99nm,2.3s						
CFA	**Coronel Fontan**	**3.91**	**190**	*eP*	**Pn**	**06 40 22.1**	**+0.3**
CFA				*eS*	**Sn**	**06 41 06.3**	**-1.9**
CFA				IAML		06 41 08.9	
	comp=Z,80nm,0.3s						
ZON	**Zonda**	**3.93**	**196**	*eP*	**Pn**	**06 40 22.6**	**+0.3**
ZON				*eS*	**Sn**	**06 41 07.2**	**-1.7**
ZON				IAML		06 41 09.2	
	comp=Z,83nm,0.5s						
CO03	**El Pedregal**	**4.19**	**222**	*eS*	**Sn**	**06 41 14.5**	**-0.3**
CO03				IAML		06 41 16.4	
	comp=Z,60nm,0.3s						
HJA	**Humahuaca**	**4.88**	**22**	*eP*	**Pn**	**06 40 38.8**	**+3.9**
MRA	**San Martin**	**4.89**	**163**	*eP*	**Pn**	**06 40 35.3**	**+0.7**
MRA				*eS*	**Sn**	**06 41 23.6**	**-7.5**
MRA				IAML		06 41 29.5	
	comp=Z,33nm,0.7s						
CPUP	**Villa Florida**	**9.12**	**83**	*eP*	**Pn**	**06 41 30.9**	**+0.2**
MURT	**Porto Murtinho**	**10.79**	**58**	*eP*	**Pn**	**06 41 54.7**	**+2.0**
AMBA	**Amambai (Brazi**	**12.23**	**70**	*eP*	**P**	**06 42 16.7**	**-0.5**
AQDB	**Aquidauana**	**12.93**	**58**	*eP*	**Pn**	**06 42 22.5**	**+2.1**
ITAB	**Concordia**	**13.60**	**91**	*eP*	**P**	**06 42 32.6**	**+0.4**
PTGB	**Pitanga**	**14.12**	**81**	*eP*	**P**	**06 42 39.0**	**+0.8**
LDASE	**Londrina, Braz**	**15.35**	**77**	*eP*	**P**	**06 42 56.0**	**+4.2**
SALV	**Santo Antonio**	**16.04**	**45**	*eP*	**P**	**06 43 01.1**	**+1.6**
FRTB	**Fartura**	**16.71**	**79**	*eP*	**Pn**	**06 43 11.7**	**+4.3**
BB19B	**Bebedouro**	**18.45**	**73**	*eP*	**Pn**	**06 43 29.6**	**+1.7**
ARAG	**Araguaiana, MT**	**18.80**	**54**	*eP*	**Pn**	**06 43 33.7**	**+1.7**
PDRB	**Porto dos Gac**	**18.94**	**34**	*eP*	**P**	**06 43 29.9**	**-1.3**
VAO	**Valinhos**	**19.09**	**80**	*eP*	**Pn**	**06 43 36.5**	**+1.1**
PMNB	**Patos De Minas**	**21.35**	**69**	*eP*	**P**	**06 43 59.5**	**+2.3**
SNDB	**Serra Nova Dou**	**21.79**	**47**	*eP*	**P**	**06 44 02.9**	**+1.2**
MACA	**Manacapuru-AM**	**25.29**	**16**	*eP*	**P**	**06 44 28.7**	**-5.3**

MOS ***27*** *06:40:40.2±0.9, 28.2°S×57.3°W, h11km, mb5.7/90, MS4.4/21, Error ellipse: s-maj=4.7km s-min=3.1km az=109.8*

BJI ***27*** *06:40:40.1, 28.5°S×56.6°W, h35km, mB5.3/38, mb5.4/85, Ms5.0/65, Ms7 4.8/64*

NEIC ***27*** *06:40:42.5±1.6, 28.2°S×57.2°W×0.07°±57.12E±0.08, h10km±1km, mb5.5/155, Mww5.3/11, Error ellipse: s-maj=12.7km s-min=10.4km az=120.0*

NEIC ***27*** *06:40:42.6, 28.1°S×57.4°W, h26km, Moment Tensor Solution. Duration: 2s2 Moment tensor: Scale 10^17 Nm; Mrr0.29; Mθθ-0.67; Mφφ0.38; Mrθ0.73; Mθφ-0.05; Mφr-0.44; Fault plane solution: M0 1.04000×10^17 NP1: φs228.12000°, δ29.26000°, λ20.50000°. NP2: φs120.05000°, δ80.14000°, λ117.68000°. Principal axes: T 0.9795, Plg48.0000°, Azm59.0000°; N 0.1035, Plg27.0000°, Azm295.0000°; P -1.0831, Plg30.0000°, Azm188.0000°;*

BGR ***27*** *06:40:42.2, 27.9°N×56.9°E, h33km, mb5.5, Ms4.4*

DSN ***27*** *06:40:42.8±1.1, 28.3°S×57.1°E, h10km, ML5.0/16, Error ellipse: s-maj=24.7km s-min=8.6km az=128.0*

GFZ ***27*** *06:40:42.7, 28.3°S×57.1°E, h17km, MW5.2, Moment Tensor Solution. s60 Moment tensor: Mrr2.05; Mθθ-3.22; Mφφ1.17; Mrθ7.83; Mθφ1.15; Mφr-0.33; Fault plane solution: NP1:φs91.00000°, δ80.00000°, λ83.00000°. NP2:φs307.00000°, δ11.00000°, λ125.00000°. Principal axes: T 7.7000, Plg53.0000°, Azm353.0000°; N 1.2700, Plg6.0000°, Azm93.0000°; P -8.9700, Plg35.0000°, Azm187.0000°;*

NEIC ***27*** *06:40:42.6, 28.2°S×57.1°E, h26km*

TEH ***27*** *06:40:43.4, 28.3°S×57.2°E, h15km±19km, ML5.4, Presumed earthquake*

OMAN ***27*** *06:40:44.5±0.5, 28.1°N×57.1°E, h14km, mb5.1/20, ml5.3/17, ms4.6/4, Mwp5.2/23, Error ellipse: s-maj=6.0km s-min=4.8km az=69.0*

THR ***27*** *06:40:44.6±0.0, 28.3°N×57.1°E, h15km±11km, ML5.3, Presumed earthquake*

GCMT ***27*** *06:40:45.5±0.1, 27.9°N±0.01°×57.1°E±0.01, h45km±1km, MW5.2/125, Moment Tensor Solution. s99,c151;*

s125,c221; Duration: 1s0 Moment tensor: Scale 10^16 Nm; Mrr4.74±.15; Mθθ-5.29±.12; Mφφ0.55±.13; Mrθ6.22±.18; Mθφ2.56±.10; Mφr-0.86±.13; Best double couple: M0 8.37300×10^16 NP1:φs306.00000°, δ22.00000°, λ115.00000°. NP2:φs100.00000°, δ70.00000°, λ80.00000°. Principal axes: T 7.7310, Plg64.0000°, Azm354.0000°; N 1.2870, Plg9.0000°, Azm103.0000°; P -9.0150, Plg24.0000°, Azm197.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

IDC ***27*** *06:40:47.5±1.1, 28.2°N×57.2°E, h53km±8km, mb5.0/32, mbtmp5.2/37, MS4.6/81 Error ellipse: s-maj=9.1km s-min=6.9km az=159.0*

ISC 27 06:40:42.7±0.5, 28.23N±0.02°×57.15E±0.02, h18km±2km, n1317, σ1≥31/1400, mb5.5/359, MS4.7/134, 74C-60D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHNJ	**Kahnooj**	**0.57**	**120**	Pg	**Pg**	**06 40 54.1**	**0.0**
IBND	**Bandar-abas**	**0.95**	**215**	Pg	**Pn**	**06 41 04.3**	**+3.1**
BNDS	**Bandar-Abbas**	**1.20**	**226**	*e*Pg	**Pg**	**06 41 08.4**	**+2.5**
BNDS				IAML		06 41 30.1	
	comp=Z,43μm,1.0s						
BNDS	**Bandar-Abbas**	**1.20**	**226**	Pg	**Pg**	**06 41 08.4**	**+2.5**
NGRK	**Negar Kerman**	**1.46**	**346**	Pg	**Pb**	**06 41 09.8**	**+0.3**
KBAM	**BAM**	**1.46**	**51**	Pg	**Pn**	**06 41 08.2**	**0.0**
KBAM				Sg	**Sn**	**06 41 26.9**	**0.0**
CHMN	**Cheshme madani**	**1.66**	**12**	Pg	**Pb**	**06 41 12.4**	**-0.6**
KHGB	**Koh Gabri**	**2.22**	**345**	Pn	**Pb**	**06 41 21.9**	**-0.6**
SHME	**Shamm** SNR=278	**2.35**	**203**	*e*P	**Pb**	**06 41 22.8**	**-1.7**
SHME				S	**Sb**	**06 41 55.0**	**+1.8**
SHME	**Shamm** SNR=145	**2.35**	**203**	P	**Pb**	**06 41 24.0**	**-0.6**
SHME	SNR=145			P	**Pb**	**06 41 24.0**	**-0.6**
SHME				S	**Sn**	**06 41 49.5**	**+0.7**
SHME				S	**Sn**	**06 41 49.5**	**+0.7**
BANOM	**Banah** SNR=404	**2.42**	**198**	*e*P	**Pn**	**06 41 23.8**	**+2.4**
BANOM	**Banah**	**2.42**	**198**	P	**Pb**	**06 41 24.9**	**-0.9**
JASK	**Jask - Hormozg** SNR=394	**2.44**	**165**	P	**Pb**	**06 41 25.0**	**-1.1**
JASK	**Jask - Hormozg**	**2.44**	**165**	Pn	**Pb**	**06 41 24.6**	**-1.5**
MASF	**Masafi** SNR=617	**2.98**	**197**	P	**Pn**	**06 41 32.3**	**+3.1**
MASF	SNR=617			P	**Pn**	**06 41 32.3**	**+3.1**
MSFE	**Esma-Masafi** SNR=113	**2.99**	**197**	*i* P	**Pn**	**06 41 30.6**	**+1.2**
UMQ	**Umm Al-Quwin** SNR=35	**3.00**	**207**	*i* P	**Pb**	**06 41 33.4**	**-2.3**
UMQ	**Umm Al-Quwin** SNR=35	**3.00**	**207**	P	**Pb**	**06 41 34.1**	**-1.5**
UMQ	SNR=35			P	**Pb**	**06 41 34.1**	**-1.5**
MDH	**Madha** SNR=82	**3.02**	**195**	*i* P	**Pn**	**06 41 30.2**	**+0.6**
MDH	**Madha** SNR=18	**3.02**	**195**	P	**Pn**	**06 41 31.7**	**+2.1**
MDH	SNR=18			P	**Pn**	**06 41 31.7**	**+2.1**
JHRM	**Jahrom**	**3.16**	**276**	Pn	**Pb**	**06 41 35.9**	**-2.5**
UOSS	**Minazif** SNR=89	**3.38**	**195**		**Pn**	**06 41 36.0**	**+1.3**
UOSS	**Minazif** SNR=89	**3.38**	**195**	*i* P	**Pn**	**06 41 35.7**	**+1.1**
UOSS	**Minazif** SNR=89	**3.38**	**195**	P	**Pn**	**06 41 37.6**	**+3.0**
KHL1	**Khalili_Fars**	**3.46**	**261**	Pn	**Pb**	**06 41 40.2**	**-3.3**
NAZ	**Nazwa, Dubai** SNR=119	**3.49**	**203**	*i* P	**Pn**	**06 41 39.3**	**+3.1**
NAZ	**Nazwa, Dubai** SNR=120	**3.49**	**203**	P	**Pn**	**06 41 39.5**	**+3.3**
NAZ	SNR=120			P	**Pn**	**06 41 39.5**	**+3.3**
HATD	**Hatta, Dubai** SNR=102	**3.51**	**195**	*i* P	**Pn**	**06 41 38.0**	**+1.6**
HATD	**Hatta, Dubai** SNR=245	**3.51**	**195**	P	**Pn**	**06 41 38.5**	**+2.0**
HATD	SNR=245			P	**Pn**	**06 41 38.5**	**+2.0**
LMD1	**Lamerd**	**3.64**	**257**	*e*Pn	**Pn**	**06 41 41.8**	**+3.6**
LMD1				IAML		06 43 22.7	
	comp=Z,8μm,1.0s						
LMD1	**Lamerd**	**3.64**	**257**	Pn	**Pn**	**06 41 42.4**	**+4.2**
ASHO	**Ashiyiah** SNR=296	**3.67**	**196**	*i* P	**Pn**	**06 41 41.1**	**+2.6**
ASHO	**Ashiyiah** SNR=298	**3.67**	**196**	P	**Pn**	**06 41 41.5**	**+2.9**
FAQ	**Al Faqa, Dubai** SNR=47	**3.74**	**202**	*i* P	**Pn**	**06 41 42.5**	**+3.0**
FAQ	**Al Faqa, Dubai** SNR=47	**3.74**	**202**	P	**Pn**	**06 41 42.8**	**+3.2**
FAQ	SNR=47			P	**Pn**	**06 41 42.8**	**+3.2**
ASUD	**Al Ashush, Dub** SNR=100	**3.94**	**205**	*i* P	**Pn**	**06 41 46.0**	**+3.6**
ASUD	**Al Ashush, Dub** SNR=99	**3.94**	**205**	P	**Pn**	**06 41 46.1**	**+3.8**
ASUD	SNR=99			P	**Pn**	**06 41 46.1**	**+3.8**
CHBR	**Chabahar**	**3.97**	**131**	Pn	**Pn**	**06 41 44.7**	**+2.0**
BSRN	**Basiran**	**4.10**	**24**	*e*Pn	**Pn**	**06 41 46.6**	**+2.0**
BSRN				IAML		06 42 57.5	
	comp=Z,3μm,1.0s						
AJN	**Ajban** SNR=139	**4.14**	**208**	*i* P	**Pn**	**06 41 47.9**	**+2.9**
AJN	**Ajban** SNR=140	**4.14**	**208**	P	**Pn**	**06 41 48.5**	**+3.5**
AJN	SNR=140			P	**Pn**	**06 41 48.5**	**+3.5**
SHI	**Shiraz**	**4.30**	**290**	Pn	**Pn**	**06 41 51.1**	**+3.7**
TAFT	**Taft - Yazd**	**4.33**	**324**	Pn	**Pn**	**06 41 51.4**	**+3.4**
DOBD	**Dorbid, Yazd**	**4.39**	**329**	Pn	**Pn**	**06 41 51.7**	**+3.1**
IKOO	**Kooshah**	**4.48**	**21**	Pn	**Pn**	**06 41 51.6**	**+1.7**
NGCH	**Negor - Chabah** SNR=91	**4.57**	**128**	P	**Pn**	**06 41 53.2**	**+2.3**
NGCH				S	**Sn**	**06 42 46.2**	**+2.6**
NGCH	**Negor - Chabah**	**4.57**	**128**	Pn	**Pn**	**06 41 53.0**	**+2.0**
HOQ	**Hoqain** SNR=821	**4.63**	**178**	P	**Pn**	**06 41 53.4**	**+1.5**
HOQ	SNR=821			P	**Pn**	**06 41 53.4**	**+1.5**
HOQ				S	**Sn**	**06 42 43.6**	**-1.6**
HOQ				S	**Sn**	**06 42 43.6**	**-1.6**
YZKH	**Yazd**	**4.70**	**333**	*e*Pn	**Pn**	**06 41 56.5**	**+3.7**
YZKH				IAML		06 43 31.1	
	comp=Z,2μm,1.0s						
SRVN	**Saravan**	**4.72**	**99**	*e*Pn	**Pn**	**06 41 57.3**	**+4.1**
SRVN				IAML		06 43 39.1	
	comp=Z,2μm,1.0s						
BIDO	**Bidbid** SNR=350	**4.77**	**169**	P	**Pn**	**06 41 55.1**	**+1.3**
BIDO				S	**Sn**	**06 42 47.6**	**-1.0**
KAZ2	**Kazeron-Fars-I**	**5.00**	**287**	Pn	**Pn**	**06 42 00.7**	**+3.7**
IDAH	**Dahanechah**	**5.07**	**27**	Pn	**Pn**	**06 41 60.0**	**+1.9**
WSAR	**Wadi Sarin**	**5.15**	**165**	LR	LR	06 44 50.5	
	comp=Z,31nn,21.4s,baz=4.0,slow=47						
WSAR	**Wadi Sarin** SNR=611	**5.15**	**165**	P	**Pn**	**06 42 01.1**	**+2.1**
WSAR				S	**Sn**	**06 42 58.4**	**+0.5**
SMDO	**Samad** SNR=625	**5.21**	**171**	P	**Pn**	**06 42 02.3**	**+2.4**
SMDO	SNR=625			P	**Pn**	**06 42 02.3**	**+2.4**
SMDO				S	**Sn**	**06 43 00.2**	**+0.5**
SMDO				S	**Sn**	**06 43 00.2**	**+0.5**
MZWR	**Madinat Zayed**	**5.33**	**214**	P	**Pn**	**06 42 03.8**	**+2.3**
MZWR				P	**Pn**	**06 42 03.8**	**+2.3**
TABS	**Tabas**	**5.40**	**360**	*e*Pn	**Pn**	**06 42 06.9**	**+4.4**
TABS				IAML		06 44 06.8	
	comp=Z,2.1nn,1.0s						
IRAM	**Ramesheh**	**5.46**	**312**	Pn	**Pn**	**06 42 06.5**	**+3.1**
BSY	**Bisya**	**5.46**	**180**	S	**Sn**	**06 43 09.4**	**+3.7**
KLNJ	**Kolanjah**	**5.57**	**301**	*e*Pn	**Pn**	**06 42 08.0**	**+2.9**
KLNJ				IAML		06 43 17.5	
	comp=Z,4μm,1.0s						
KLNJ	**Kolanjah**	**5.57**	**301**	Pn	**Pn**	**06 42 08.6**	**+3.5**
GHWR	**Ruwais**	**5.73**	**223**	P	**Pn**	**06 42 09.0**	**+2.1**
GHWR				P	**Pn**	**06 42 09.0**	**+2.1**
GHWR				S	**Sn**	**06 43 12.1**	**-0.1**
GHWR				S	**Sn**	**06 43 12.1**	**-0.1**
UMZA	**Um Al Zommool**	**5.78**	**199**	P	**Pn**	**06 42 09.9**	**+2.3**
UMZA				P	**Pn**	**06 42 09.9**	**+2.3**
WBK	**Wadi Bani Khal** SNR=213	**5.83**	**163**	P	**Pn**	**06 42 10.0**	**+1.6**
WBK				S	**Sn**	**06 43 16.3**	**+1.5**
NASN	**Na'in**	**5.89**	**322**	*e*Pn	**Pn**	**06 42 12.6**	**+3.1**
NASN				IAML		06 44 15.3	
	comp=Z,660nm,1.0s						
JMDO	**Jabal Madar** SNR=84	**5.90**	**171**	P	**Pn**	**06 42 12.2**	**+3.0**
JMDO	SNR=84			P	**Pn**	**06 42 12.2**	**+3.0**
JMDO				S	**Sn**	**06 43 17.1**	**+0.7**
JMDO				S	**Sn**	**06 43 17.1**	**+0.7**
SHRT	**Shahrakht**	**6.04**	**26**	*e*Pn	**Pn**	**06 42 14.4**	**+3.2**
SHRT				IAML		06 44 18.6	
	comp=Z,870nm,1.0s						
SAKB	**Bahrain**	**6.30**	**251**	P	**Pn**	**06 42 18.2**	**+3.4**
SAKB				S	**Sn**	**06 43 28.0**	**+1.6**
JLN	**Jalan Bani Buh** SNR=153	**6.39**	**161**	P	**Pn**	**06 42 17.2**	**+1.1**
JLN				S	**Sn**	**06 43 28.0**	**-0.6**
SLWR	**Sila**	**6.42**	**231**	P	**Pn**	**06 42 17.8**	**+1.4**
SLWR				S	**Sn**	**06 43 26.7**	**-2.5**
MHTO	**MHTO** SNR=274	**7.25**	**174**	P	**Pn**	**06 42 30.5**	**+2.7**
MHTO	SNR=274			P	**Pn**	**06 42 30.5**	**+2.7**
MHTO	SNR=274			P	**Pn**	**06 42 30.5**	**+2.7**
MHTO				S	**Sn**	**06 43 50.0**	**+0.3**
MHTO				S	**Sn**	**06 43 50.0**	**+0.3**
MHTO				S	**Sn**	**06 43 50.0**	**+0.3**
HRA	**Herat**	**7.53**	**34**		**Pn**	**06 42 34.8**	**+3.0**
SHRO	**Shahrood**	**7.80**	**353**	*e*Pn	**Pn**	**06 42 39.8**	**+4.4**
SHRO				IAML		06 43 22.6	
	comp=Z,2.6nm,1.0s						
GHVR	**GHOM**	**7.99**	**323**	*e*Pn	**Pn**	**06 42 42.4**	**+4.4**
GHVR				IAML		06 43 27.8	
	comp=Z,390nm,1.0s						
SBZV	**Sabzevar**	**8.14**	**3**	*e*Pn	Pn	06 42 45.1	+4.9
KHMZ	**Khomeyn**	**8.26**	**313**	*e*Pn	**Pn**	**06 42 44.1**	**+2.3**
KBD	**Kabd**	**8.36**	**279**	P	**Pn**	**06 42 47.0**	**+4.0**
KBD				S	**Sn**	**06 44 14.9**	**-2.0**
DAMV	**Damavand**	**8.59**	**331**	*e*Pn	**Pn**	**06 42 50.1**	**+3.7**
CHTH	**Charan**	**9.20**	**328**	*e*Pn	**Pn**	**06 42 58.6**	**+3.8**
THKV	**Tehran--Karaj**	**9.32**	**327**	*e*Pn	**Pn**	**06 43 00.7**	**+4.3**
MRVT	**Maraveh tapeh**	**9.44**	**355**	*e*Pn	Pn	06 43 03.1	+5.2
BJRD	**Bojnurd**	**9.45**	**1**	*e*Pn	Pn	06 43 02.7	+4.7
DOK	**Doka** SNR=44	**9.96**	**197**	P	**Pn**	**06 43 06.1**	**+1.0**
DOK	SNR=44			P	**Pn**	**06 43 06.1**	**+1.0**
DOK	SNR=44			P	**Pn**	**06 43 06.1**	**+1.0**
SHAO	**Shalim** SNR=56	**10.26**	**188**	P	**Pn**	**06 43 09.2**	**+0.1**
SHAO	SNR=56			P	**Pn**	**06 43 09.2**	**+0.1**
GIDE	**GILAN DEYLAMAN**	**10.60**	**327**	*i* P	Pn	06 43 19.2	+5.3
ABTO	**Aybut** SNR=32	**11.39**	**199**	P	**Pn**	**06 43 24.6**	**-0.1**
ABTO	SNR=32			P	**Pn**	**06 43 24.6**	**-0.1**
RAYN	**Ar Rayn**	**11.48**	**249**		**Pn**	**06 43 24.4**	**-1.5**
RAYN	**Ar Rayn**	**11.48**	**249**	P	**Pn**	**06 43 24.4**	**-1.5**
RAYN	**Ar Rayn**	**11.48**	**249**	P	**Pn**	**06 43 24.9**	**-1.0**
KBL	**Kabul** SNR=20	**11.95**	**55**	P	Pn	06 43 40.4	+8.1
KBL	SNR=20			P	Pn	06 43 40.4	+8.1
NIL	**Nilore**	**14.83**	**65**	Pn	**Pn**	**06 44 12.3**	**+0.7**
NIL	**Nilore**	**14.83**	**65**	P	**Pn**	**06 44 12.3**	**+0.7**
NIL	**Nilore**	**14.83**	**65**	P	**P**	**06 44 14.4**	**-3.0**
AKT	**Akhty**	**15.30**	**332**	*e*P	**Pn**	**06 44 18.2**	**+0.4**
AKT				*e*S	**Sn**	**06 47 08.2**	**+1.3**
AKT				pmax	pmax		
	comp=Z,328nm,1.4s						
AKT				MLR	MLR		
	comp=Z,3μm,24.0s						
VANB	**Van**	**15.44**	**316**	*e*P	**P**	**06 44 22.1**	**-2.0**
GEVA	**Gevas**	**15.47**	**314**		**Pn**	**06 44 21.1**	**+0.9**
GEVA				IAmb	IAmb	06 44 28.7	
	comp=Z,183nn,0.9s						
AKDM	**Akdamar-Van**	**15.53**	**314**	*e*P	**P**	**06 44 24.6**	**-0.7**
GNI	**Garni**	**15.69**	**322**	P	**P**	**06 44 26.5**	**-0.4**
GNI	comp=Z,84nm,0.8s,baz=126,slow=8.7,SNR=28			LR	LR	06 51 42.7	
	comp=Z,671nm,20.6s,baz=126,slow=42						
GNI	**Garni**	**15.69**	**322**	Pn	**Pn**	**06 44 24.1**	**+1.1**
GNI				IAmb	IAmb	06 44 30.6	
	comp=Z,317nm,1.4s						
GNI	**Garni**	**15.69**	**322**	*e*P	**P**	**06 44 26.0**	**-1.0**
GNI	**Garni**	**15.69**	**322**	P	**Pn**	**06 44 24.1**	**+1.1**
GNI				pmax	pmax		
	comp=Z,317nm,1.4s						
GNI	**Garni**	**15.69**	**322**	P	**P**	**06 44 28.4**	**+1.5**
GURO	**Guroymak-BITLI**	**16.27**	**313**	Pn	**Pn**	**06 44 31.1**	**+0.7**
GURO	**Guroymak-BITLI**	**16.27**	**313**	*e*P	**P**	**06 44 34.1**	**+0.7**
MLAZ	**Malazgirt-MUS**	**16.29**	**316**	P	**P**	**06 44 35.2**	**+1.6**
AGRB	**Hanur-Agry**	**16.29**	**318**	*e*P	**P**	**06 44 33.0**	**-0.7**
MARD	**Mardin**	**16.46**	**308**	Pn	**Pn**	**06 44 31.9**	**-1.0**
MAK	**Makhachkala**	**16.64**	**335**	*c* iP	**Pn**	**06 44 35.0**	**+0.1**
MAK				*e*S	**Sn**	**06 47 40.3**	**+1.1**
MAK				pmax	pmax		
	comp=Z,1μm,1.7s						
MAK				MLR	MLR		
	comp=Z,2μm,13.0s						
TBLG	**Delisi**	**16.85**	**326**	*e*P	**P**	**06 44 40.7**	**+1.0**
KARS	**Kars**	**16.93**	**321**		**P**	**06 44 40.5**	**-0.2**
KARS	**Kars**	**16.93**	**321**	*e*P	**P**	**06 44 43.8**	**+3.1**
KARS	**Kars**	**16.93**	**321**	P	**P**	**06 44 40.5**	**-0.2**
KARS				pmax	pmax		
	comp=Z,207nm,1.0s						
VRTB	**Varto-Mus**	**16.98**	**314**	*e*P	**P**	**06 44 43.3**	**+2.0**
DYBB	**Diyarbakir**	**17.21**	**309**	*e*P	**P**	**06 44 45.9**	**+2.1**
SENK	**Senkaya-Erzuru**	**17.30**	**319**	*e*P	**P**	**06 44 48.5**	**+3.6**
CHM	**Chimkent**	**17.32**	**32**	*e*P	**Pn**	**06 44 43.9**	**+0.3**
KARO	**Karliova-Bingo**	**17.33**	**314**	*e*P	**P**	**06 44 46.5**	**+1.3**
BNGB	**Bingl**	**17.39**	**312**	*e*P	**P**	**06 44 48.5**	**+2.7**
IUG	**Iuzhnay**	**17.40**	**34**	*e*P	**Pn**	**06 44 44.0**	**-0.6**
IUG	**Iuzhnay**	**17.40**	**34**	*e*P	**Pn**	**06 44 44.9**	**+0.3**
IUG				*e*S	**Sn**	**06 47 58.8**	**+1.0**
**YED

comp=Z,535nm,1.3s
ARPR Arapgir-MALATY 19.00 310 *e*P **Pn 06 45 06.6 +2.2**
ILIC ilic-Erzincan 19.03 311 *i* P **Pn 06 45 08.3 +3.7**
HWQ Hawqa 19.09 294 *e*P **Pn 06 45 07.5 +2.1**
KBZ Khabaz 19.25 327 P **Pn 06 45 08.2 +1.1**
comp=Z,62nm,0.8s,baz=133,slow=7.7,SNR=38
KBZ S **Sn 06 48 40.3 -2.0**
comp=Z,7.1nm,1.0s,baz=136,slow=8.4,SNR=1.4
KBZ ScP **ScP 06 52 58.4 -5.4**
comp=Z,4.1nm,0.8s,baz=188,slow=1.5,SNR=4.6
KBZ LR LR 06 54 45.3
comp=Z,835nm,19.2s,baz=120,slow=44
BHL Bhannes 19.25 292 *e*P **Pn 06 45 08.8 +1.5**
MMAI Mount Meron Ar 19.30 290 P **Pn 06 45 09.4 +1.4**
comp=Z,26nm,0.7s,baz=88,slow=13,SNR=26
MMAI S Sn 06 48 31.2 -13
comp=Z,13nm,0.7s,baz=90,slow=17,SNR=3.1
MMAI LR LR 06 54 22.9
comp=Z,3μm,18.6s,baz=94,slow=42
KMRS Kahramanmaras 19.33 304 *e*P **Pn 06 45 10.2 +2.0**
SHA1 Shidzhatmaz 19.37 327⇑ *e*P **Pn 06 45 08.2 -0.6**
TAHT Tahtakopru-Hat 19.47 300 *e*P **Pn 06 45 11.9 +2.1**
EIL Elat 19.48 280 P **Pn 06 45 10.9 +0.9**
comp=Z,76nm,0.9s,baz=83,slow=6.9,SNR=20
EIL S **Sn 06 48 38.2 -10**
comp=Z,23nm,0.8s,baz=143,slow=13,SNR=1.3
EIL LR LR 06 54 11.0
comp=Z,1μm,19.3s,baz=98,slow=41
KVAR Kislovodsk Arr 19.51 327 P **Pn 06 45 11.5 +1.1**
comp=Z,70nm,0.8s,baz=180,slow=19
KIV Kislovodsk 19.52 327 ⇓P **Pn 06 45 12.2 +1.8**
KIV Kislovodsk 19.52 327 P **Pn 06 45 11.3 +0.9**
KIV IAmb IAmb 06 45 15.3
comp=Z,517nm,1.1s
KIV Kislovodsk 19.52 327 *e*P **P 06 45 08.9 -0.2**
KIV *e*S **Sn 06 48 49.2 +0.2**
KIV pmax pmax
comp=Z,368nm,1.0s
KIV MLR MLR
comp=Z,451nm,14.0s
KIV Kislovodsk 19.52 327 P **Pn 06 45 12.5 +2.1**
KIV P **Pn 06 45 12.5 +2.1**
KIV P **Pn 06 45 12.5 +2.1**
EKS2 Erkin-Say 19.72 39 P **Pn 06 45 13.0 +0.2**
SNR=117
UCH Uchtor 19.85 41 P **Pn 06 45 14.3 -0.5**
SNR=74
SARI SarD1z-Kayseri 20.04 306 *e*P Pn 06 45 17.7 +1.0
AAK Ala-Archa 20.10 40 P Pn 06 45 17.4 0.0
comp=Z,117nm,0.8s,baz=230,slow=9.6,SNR=163
AAK S **S 06 48 57.8 -3.0**
comp=Z,4.5nm,0.9s,baz=200,slow=13,SNR=1.2
AAK LR LR 06 54 02.4
comp=Z,5μm,18.8s,baz=238,slow=40
comp=Z,117nm,0.8s
AAK Ala-Archa 20.10 40 P Pn 06 45 17.5 0.0
SNR=176
AAK Ala-Archa 20.10 40 Pn 06 45 16.5 -1.0
AAK IAmb IAmb 06 45 18.7
comp=Z,131nm,0.8s
AAK Ala-Archa 20.10 40 *i* P Pn 06 45 17.3 -0.2
AAK pmax pmax
comp=Z,924nm,0.9s
AAK Ala-Archa 20.10 40 P Pn 06 45 17.5 0.0
AAK P Pn 06 45 17.5 0.0
KOZT Kozan 20.11 303 *e*P Pn 06 45 18.5 +1.0
GOF Gofitskoye 20.20 330*c i*P Pn 06 45 18.1 -0.3
NRN Naryn 20.27 45 P **P 06 45 18.0 +0.4**
NRN IAmb IAmb 06 45 19.9
comp=Z,228nm,0.8s
NRN Naryn 20.27 45 P **P 06 45 18.0 +0.4**
NRN pmax pmax
comp=Z,228nm,0.8s
FRU1 Bishkek 20.29 40 P Pn 06 45 19.1 -0.5
FRU1 Bishkek 20.29 40 P Pn 06 45 19.1 -0.5
FRU1 pmax pmax
comp=Z,125nm,0.9s
SVSK Karacayir 20.31 310 *e*P Pn 06 45 20.7 +1.0
KBK Karagaybulak 20.37 40 P Pn 06 45 20.6 -0.1
SNR=47
CHMS Chumysh 20.48 39 P Pn 06 45 21.9 +0.1
SNR=24
USP Ospenovka 20.52 38 P **P 06 45 20.7 +0.7**
SNR=52
VSLR Vesyoloye 20.52 322*c i*P Pn 06 45 21.4 -0.7
VSLR pmax pmax
comp=Z,209nm,0.9s
BNN Bunyan 20.63 306 P Pn 06 45 23.9 +0.2
BNN IAmb IAmb 06 45 25.4
comp=Z,281nm,0.8s
BNN Bunyan 20.63 306 *e*P Pn 06 45 23.6 0.0
SOC Sochi 20.77 322 *e*P **P 06 45 23.1 +0.5**
SOC *e*PPP PPP 06 45 47.3
SOC *e*S **S 06 49 11.3 -2.4**
SOC pmax pmax
comp=Z,109nm,1.0s
TOKT Tokat 20.81 311 *i* P Pn 06 45 25.7 +0.1
BOOM Boomskoye usch 20.85 42 P **P 06 45 24.4 +0.7**
BOOM Boomskoye usch 20.85 42 P **P 06 45 24.4 +0.7**
BOOM pmax pmax
comp=Z,694nm,1.4s
TOKA Tokat 20.85 311 Pn 06 45 24.9 -1.3
ULHL Ulahol 20.88 43 P Pn 06 45 26.0 -0.6
SNR=235
TKM2 Tokmak 2 20.91 41 P Pn 06 45 25.6 -1.4
SNR=135
LABN Labinsk 20.98 326 *e*P Pn 06 45 26.4 -1.1
LABN *e*S **S 06 49 19.3 +1.5**
LABN pmax pmax
comp=Z,262nm,1.0s
LABN MLR MLR
comp=Z,850nm,14.0s
AB31 Akbulak array 21.10 5 P **P 06 45 27.1 +0.9**
AB31 Akbulak array 21.10 5 *i* P **P 06 45 27.5 +1.3**
ABKAR Akbulak array 21.10 5 P **P 06 45 27.4 +1.2**
YOZ Yozgat 21.33 308 *e*P **P 06 45 31.2 +2.3**
ATD Arta Tunnel 21.34 222 P **P 06 45 31.4 +2.3**
comp=Z,2.1nm,0.8s,baz=22,slow=8.5,SNR=8.1
ATD S **S 06 49 23.2 -2.2**
comp=Z,0.2nm,0.2s,baz=72,slow=20,SNR=1.4
ATD LR LR 06 55 22.6
comp=Z,160nm,19.8s,baz=34,slow=41
ATD Arta Tunnel 21.34 222 **P 06 45 29.7 +0.7**
CSS Mathiatis 21.34 294 **P 06 45 30.3 +1.4**
CSS IAmb IAmb 06 45 35.9
comp=Z,368nm,1.1s
CSS Mathiatis 21.34 294 P **P 06 45 30.1 +1.2**
comp=Z,4μmcomp=Z,368nm,1.2s
KDJ Kajisay 21.39 44 P **P 06 45 30.7 +1.2**
KDJ Kajisay 21.39 44 P **P 06 45 30.7 +1.2**
KDJ pmax pmax
comp=Z,498nm,1.0s
BTLS Baital 21.50 34 *e*P **P 06 45 31.0 +0.5**
TARG Taragay, Kyrgy 21.56 46 **P 06 45 33.1 +1.5**
TARG IAmb IAmb 06 45 44.1
comp=Z,179nm,1.0s
TARG Taragay, Kyrgy 21.56 46 P **P 06 45 33.1 +1.5**
TARG pmax pmax
comp=Z,179nm,1.0s
TNSS Tian-Shan 21.77 42 *e*P **P 06 45 34.1 +0.3**
TNSS *e*S **S 06 49 35.4 +1.3**
ERBR Yeremizino-Bor 21.87 327 *e*P **P 06 45 35.4 +0.9**
ERBR pmax pmax
comp=Z,261nm,1.2s
MDOK Medeo 21.90 42 *e*P **P 06 45 35.7 +0.7**
MDOK *e*S **S 06 49 38.2 +1.9**
KIRS Kirsehir-Merke 22.12 305 ⇓P **P 06 45 39.7 +2.4**
AKTO Aktyubinsk 22.18 1 LR LR 06 55 54.4
comp=Z,5μm,18.7s,baz=198,slow=41
AKTO Aktyubinsk 22.18 1 P **P 06 45 38.8 +1.0**
WUS Wushi 22.21 49 P **P 06 45 38.4 +0.1**
WUS IAmb IAmb 06 45 42.0
comp=Z,170nm,1.1s
PRZ Przheval'sk 22.34 45 P **P 06 45 40.1 +0.5**
PRZ IAmb IAmb 06 45 44.0
comp=Z,381nm,1.4s
PRZ Przheval'sk 22.34 45 P **P 06 45 40.2 +0.5**
PRZ pmax pmax
comp=Z,381nm,1.4s
HYB Hyderabad 22.44 114 *e*P **P 06 45 41.8 +1.0**
HYB *es*P **sP 06 45 47.6 -1.3**
HYB IVmB_BB 06 45 48.3
comp=Z,687nm,1.1s
HYB *e*S **S 06 49 49.7 +3.1**
HYB IVMs_BB IVMs_BB 06 56 40.0
comp=Z,344nm,12.3s
SNOP Sinop 22.53 313 P **P 06 45 42.1 +0.5**
BR104 Keskin Array S 22.54 307 P **P 06 45 42.9 +1.0**
comp=Z,2μmcomp=Z,349nm,0.9s
BR131 Keskin Array S 22.55 307 **P 06 45 43.2 +1.3**
BR131 Keskin Array S 22.55 307*ce*P **P 06 45 42.7 +0.7**
BRTR Keskin Array B 22.55 307 P **P 06 45 43.5 +1.5**
comp=Z,214nm,0.9s,baz=122,slow=9.0,SNR=403
BRTR PcP **PcP 06 49 33.0 -2.3**
comp=Z,2.2nm,0.8s,baz=126,slow=3.7,SNR=2.2
BRTR S **S 06 49 49.3 +0.8**
comp=Z,2.3nm,0.9s,baz=132,slow=20,SNR=6.8
BRTR ScP **ScP 06 53 08.7 -3.3**
comp=Z,5.3nm,0.9s,baz=147,slow=5.2,SNR=12
BRTR LR LR 06 56 09.6
comp=Z,4μm,20.7s,baz=109,slow=41
comp=Z,214nm,0.9s
BRTR Keskin Array B 22.55 307 **P 06 45 42.9 +0.9**
BRTR Keskin Array B 22.55 307 *e*P **P 06 45 43.1 +1.1**
BRTR pmax pmax
comp=Z,221nm,0.9s
BR105 Keskin Array S 22.56 307 P **P 06 45 43.4 +1.3**
comp=Z,2μmcomp=Z,359nm,0.9s
BR106 Keskin Array S 22.57 307 P **P 06 45 43.1 +1.0**
comp=Z,2μmcomp=Z,296nm,0.9s
SATY Saty 22.66 44⇑ *i*P **P 06 45 43.3 +0.2**
SATY *e*S **S 06 49 52.2 +1.8**
ANN Anapa 22.81 322 *e*P **P 06 45 45.6 +1.2**
ANN *e*S **S 06 49 54.7 +2.0**
ANN pmax pmax
comp=Z,180nm,1.0s
ANN MLR MLR
comp=Z,696nm,13.0s
ANN MLR MLR
comp=N,842nm,12.0s
ANN MLR MLR
comp=E,421nm,10.0s
ARXS Arharly 22.98 41 *e*P **P 06 45 45.4 -1.0**
ILGA Ilgaz 23.05 310 P **P 06 45 47.7 +0.4**
ILGA IAmb IAmb 06 45 50.5
comp=Z,164nm,1.1s
KPKS Kokpek 23.05 43 *e*P **P 06 45 47.2 0.0**
UZB Uzynbulak 23.08 44⇑ *i*P **P 06 45 47.9 +0.3**
comp=Z,76nm,1.3s
UZB *e*S **S 06 49 59.5 +1.7**
BZK Bozkurt 23.28 312 ⇓P **P 06 45 51.0 +1.7**
BZK Bozkurt 23.28 312 P **P 06 45 49.8 +0.5**
BZK IAmb IAmb 06 45 53.2
comp=Z,137nm,0.8s
BZK Bozkurt 23.28 312 P **P 06 45 50.7 +1.4**
comp=Z,3μmcomp=Z,215nm,0.8s
SHLS Shalkode 23.36 44 *e*P **P 06 45 53.3 +3.0**
comp=Z,91nm,0.9s
PDGK Podgornoye 23.47 44 P **P 06 45 51.5 +0.1**
TDK Taldyqorghan 23.79 40⇑ *i*P **P 06 45 54.9 +0.6**
CIDE Kastamonu/Cide 23.94 311 ⇓P **P 06 45 57.4 +1.6**
ISP Isparta 24.22 300 P **P 06 45 59.0 +0.5**
ISP IAmb IAmb 06 46 03.9
comp=Z,161nm,1.1s
ISP Isparta 24.22 300⇑ *e*P **P 06 46 00.3 +1.8**
ISP pmax pmax
comp=Z,127nm,1.0s
ELL Elmali 24.43 297 P **P 06 46 01.2 +0.7**
ELL IAmb IAmb 06 46 17.8
comp=Z,143nm,0.8s
ELL Elmali 24.43 297 P **P 06 46 01.3 +0.7**
ELL pmax pmax
comp=Z,143nm,0.8s
MDUB Mudurnu 24.56 307 P **P 06 46 01.9 +0.3**
AKAS Kas 24.57 296 P **P 06 46 01.7 -0.1**
AKAS IAmb IAmb 06 46 25.4
comp=Z,157nm,1.2s
BRZS Berezniki 24.74 24 *e*P **P 06 46 03.8 +0.7**
SIM Simferopol' 24.78 318 *e*P **P 06 46 03.6 +0.2**
SIM *e* 06 46 39.0
SIM *e*S **S 06 50 22.0 -2.9**
SIM pmax pmax
comp=Z,382nm,0.7s
SIM MLR MLR
comp=Z,400nm,15.7s
BORA Eskisehir 24.89 305 P **P 06 46 05.2 +0.6**
BORA IAmb IAmb 06 46 18.5
comp=Z,200nm,1.1s
SAHE Sakarya_HENDEK 24.95 307 ⇓P **P 06 46 06.7 +1.7**
BELG Belogornoye 25.16 346 LR LR 06 58 51.3
comp=Z,1μm,18.9s,baz=142,slow=43
BELG Belogornoye 25.16 346*c i*P **P 06 46 06.6 -0.1**
BELG pmax pmax
comp=Z,66nm,1.0s
VRH Novokhopyorsk 25.73 337 *e*P **P 06 46 11.6 -0.3**
VRH pmax pmax
comp=Z,262nm,1.0s
ARG Arkhangelos 25.74 295 P **P 06 46 12.2 0.0**
ARG IAmb IAmb 06 46 29.6
comp=Z,125nm,1.0s
ARG Arkhangelos 25.74 295 P **P 06 46 12.2 0.0**
ARG pmax pmax
comp=Z,125nm,1.0s
MANT Manisa 25.89 301 P **P 06 46 14.3 +0.5**
MANT IAmb IAmb 06 46 31.8
comp=Z,182nm,1.2s
EVN Everest 26.15 84 P **P 06 46 17.2 +0.4**
EVN IAmb IAmb 06 46 22.9
comp=Z,78nm,0.8s
KLYT Kilyos 26.37 307 P **P 06 46 18.6 +0.7**
comp=Z,292nm,1.4s
VORD Divnogorie 26.41 334 *e*P **P 06 46 16.3 -1.8**
VORD pmax pmax
comp=Z,140nm,0.9s
KARP Karpathos 26.42 294 P **P 06 46 19.5 +1.1**
KARP Karpathos 26.42 294 P **P 06 46 19.6 +1.1**
comp=Z,3μmcomp=Z,381nm,0.9s
BORK Borovoye 26.64 18 P **P 06 46 20.3 +0.1**
BORK IAmb IAmb 06 46 32.3
comp=Z,117nm,0.9s
BORK Borovoye 26.64 18*c i*P **P 06 46 20.9 +0.7**
BORK pmax pmax
comp=Z,205nm,1.3s
BORK MLR MLR
comp=Z,6μm,17.0s
BVA0 Borovoye Array 26.64 18 *i* P **P 06 46 20.0 -0.2**
BVAR Borovoye Array 26.64 18 P **P 06 46 20.9 +0.7**
comp=Z,105nm,0.7s,baz=201,slow=7.9,SNR=335
BVAR PcP **PcP 06 49 43.4 -0.4**
comp=Z,3.2nm,0.5s,baz=228,slow=3.2,SNR=2.7
BVAR LR LR 06 58 20.2
comp=Z,7μm,18.1s,baz=211,slow=40
comp=Z,105nm,0.7s
VSR Storozhevoye 26.66 334 *e*P **P 06 46 18.6 -1.8**
VSR pmax pmax
comp=Z,130nm,1.0s
BALB Balikesir 26.70 303 P **P 06 46 21.6 +0.7**
BAND Balkesir-Ban 26.75 304⇑ P **P 06 46 23.3 +1.9**
MAKZ Makanchi 26.87 40 **P 06 46 22.8 +0.4**
MAKZ IAmb IAmb 06 46 24.3
comp=Z,230nm,1.4s
MAKZ Makanchi 26.87 40 P **P 06 46 22.8 +0.4**
MAKZ pmax pmax
comp=Z,230nm,1.4s
KHAM Kharkiv 26.95 329 P **P 06 46 23.8 +0.7**
CTYL Yalikoy Yolu 26.98 307 P **P 06 46 23.1 -0.2**
comp=Z,67nm,1.0s
VORR Voronezh 27.01 335 *e*P **P 06 46 24.0 +0.5**
VORR pmax pmax
comp=Z,208nm,0.9s
MK31 Makanchi Array 27.04 40 *i* P **P 06 46 24.7 +0.8**
MK31 pmax pmax
comp=Z,55nm,0.7s
MKAR Makanchi Array 27.04 40 P **P 06 46 24.3 +0.4**
comp=Z,37nm,0.6s,baz=224,slow=8.2,SNR=369
MKAR PcP **PcP 06 49 44.3 -0.6**
comp=Z,1.5nm,0.6s,baz=238,slow=2.7,SNR=1.5
MKAR LR LR 06 58 14.8
comp=Z,2μm,18.5s,baz=234,slow=39
comp=Z,37nm,0.6s
MKAR Makanchi Array 27.04 40 **P 06 46 24.6 +0.7**
NE56 Odesa 27.61 319 P **P 06 46 28.7 -0.2**
KURBB Kurchatov Arra 27.61 30 P **P 06 46 29.8 +0.9**
comp=Z,53nm,0.8s,baz=229,slow=8.6,SNR=371
KURBB PcP **PcP 06 49 45.4 -0.7**
comp=Z,3.9nm,1.0s,baz=227,slow=2.5,SNR=2.5
KURBB ScP **ScP 06 53 22.8 -3.2**
comp=Z,5.2nm,1.1s,baz=229,slow=3.6,SNR=9.9
KURBB LR LR 06 58 54.3
comp=Z,5μm,18.5s,baz=196,slow=40
KURBB P3KPbc 07 18 56.3
comp=Z,1.1nm,0.9s,baz=41,slow=4.1,SNR=6.3
comp=Z,53nm,0.8s
KURK Kurchatov 27.72 30 P **P 06 46 30.4 +0.5**
KURK Kurchatov 27.72 30*c i*P **P 06 46 30.8 +0.9**
KURK pmax pmax
comp=Z,124nm,1.7s
KURK Kurchatov 27.72 30 P **P 06 46 31.2 +1.3**
KURK P **P 06 46 31.2 +1.3**
LPSR Galich'ya Gora 27.86 336 *e*P **P 06 46 31.1 0.0**
LPSR pmax pmax
comp=Z,124nm,0.9s
EZN Ezine 27.91 303 P **P 06 46 31.8 +0.1**
comp=Z,65nm,1.2s
TIRR Tirgusor 28.05 313 P **P 06 46 31.4 -1.6**
comp=Z,33nm,1.3s
PURM Purcari 28.13 318⇑ P **P 06 46 34.6 +1.0**
PURM Purcari 28.13 318 P **P 06 46 33.7 +0.1**
ARTI Arti 28.15 1 LR LR 06 59 12.0
comp=Z,1μm,21.0s,baz=186,slow=39
ARTI Arti 28.15 1 **P 06 46 33.5 -0.2**
ARTI Arti 28.15 1*c i*P **P 06 46 34.1 +0.4**
ARTI 06 47 22.3
ARTI 06 49 48.0
ARTI S **S 06 51 21.0 +3.0**
ARTI SS **SnSn 06 52 34.1 -0.2**
ARTI pmax pmax
comp=Z,65nm,1.8s
ARTI MLR MLR
comp=Z,2μm,24.0s
TPGR Topolog 28.22 314 ⇓P **P 06 46 35.3 +0.8**
IDI Anoyia 28.23 293 P **P 06 46 36.5 +1.7**
IDI Anoyia 28.23 293 LR LR 07 01 14.0
comp=Z,474nm,19.8s,baz=103,slow=43
IDI Anoyia 28.23 293 **P 06 46 34.4 -0.3**
IDI IAmb IAmb 06 46 37.2
comp=Z,47nm,0.7s
ALN Alexandroupoli 28.40 305 **P 06 46 37.4 +1.3**
ALN IAmb IAmb 06 46 39.6
comp=Z,93nm,1.4s
ALN Alexandroupoli 28.40 305 P **P 06 46 37.4 +1.3**
ALN pmax pmax
comp=Z,93nm,1.4s
CFR Carcaliu 28.55 314 ⇓P **P 06 46 38.1 +0.7**
CFR Carcaliu 28.55 314 P **P 06 46 38.0 +0.7**
SVE Sverdlovsk 28.69 4 *e*P **P 06 46 39.1 +0.6**
SVE pmax pmax
comp=Z,70nm,1.0s
TATR Tatarca 28.79 315⇑ P **P 06 46 40.6 +1.1**
LOZB Loznitsa 28.83 310 ⇓P **P 06 46 41.0 +1.1**
RDO Rodhopi 28.84 305 **P 06 46 40.9 +0.8**
RDO IAmb IAmb 06 46 43.4
comp=Z,102nm,1.1s
SCTR Scanteiesti 28.86 315⇑ P **P 06 46 41.0 +0.9**
ZSN Zaisan 28.87 41 *e*P **P 06 46 40.7 +0.5**
SCHLR Schela 28.87 314⇑ P **P 06 46 42.4 +2.2**
NEGRR Negrea 28.87 315⇑ P **P 06 46 41.6 +1.4**
VLDR Vladesti 28.88 315 ⇓P **P 06 46 41.3 +1.0**
IZVR Izvoarele 28.94 315 ⇓P **P 06 46 41.6 +0.7**
RAZG Razgrad 28.96 310⇑ P **P 06 46 42.4 +1.3**
WMQ Urumqi 28.99 49⇑ P **P 06 46 42.5 +1.1**
WMQ pP sP 06 46 48.3 -1.4
WMQ S **S 06 51 30.5 -1.1**
WMQ pmax pmax
comp=Z,87nm,0.9s
WMQ pmax pmax
comp=Z,330nm,3.9s
WMQ L L
comp=Z,2μm,18.5s
WMQ L L
comp=Z,3μm,21.9s
WMQ L L
comp=Z,4μm,22.9s
KIS Kishinev 28.99 318 P **P 06 46 41.0 -0.3**
comp=Z,136nm,0.8s
ELND Elena 29.16 309⇑ P **P 06 46 43.8 +0.9**
SZH Strazhitsa 29.21 309 P **P 06 46 44.0 +0.7**
BIR Birlad 29.36 316 ⇓P **P 06 46 45.8 +1.3**
BIR Birlad 29.36 316 P **P 06 46 45.8 +1.3**
GHRR 29.40 315 ⇓P **P 06 46 46.9 +2.0**
GHRR 29.40 315 P **P 06 46 45.9 +1.0**
VASR Vaslui 29.43 317 ⇓P **P 06 46 46.8 +1.6**
ODBI Odobesti 29.49 315 ⇓P **P 06 46 48.0 +2.4**
RZN Rozhen 29.57 306 P **P 06 46 48.8 +2.0**
PLD Plovdiv 29.70 306 P **P 06 46 49.6 +2.0**
LSA Lhasa 29.73 79 P **P 06 46 48.0 -0.6**
LSA pmax pmax
comp=Z,25nm,0.7s
LSA L L
comp=Z,460nm,22.3s
LSA L L
comp=Z,660nm,15.8s
LSA L L
comp=Z,930nm,17.2s
VRI Vrincioaia 29.74 314 ⇓P **P 06 46 50.0 +2.1**
VRI Vrincioaia 29.74 314 P **P 06 46 50.0 +2.1**
VRI Vrincioaia 29.74 314 P **P 06 46 48.3 +0.3**
comp=Z,44nm,0.9s
PLOR Plostina 29.78 314 ⇓P **P 06 46 49.9 +1.5**
PLOR Plostina 29.78 314 P **P 06 46 49.8 +1.5**
NEHR Nehoiu 29.83 313⇑ P **P 06 46 50.4 +1.6**
SORM Soroca 29.85 320 P **P 06 46 48.1 -0.7**
comp=Z,3μmcomp=Z,261nm,0.9s
COPA Copaceanca 30.03 310 ⇓P **P 06 46 52.0 +1.5**
COVR Voineasa-Covas 30.06 314 ⇓P **P 06 46 52.2 +1.4**
TESR Tescani 30.07 316 ⇓P **P 06 46 51.9 +1.0**
TESR Tescani 30.07 316 P **P 06 46 51.1 +0.2**
comp=Z,1μmcomp=Z,183nm,0.9s
MLR Muntele Rosu 30.08 313 LR LR 07 01 51.0
comp=Z,1μm,20.3s,baz=117,slow=42
MLR Muntele Rosu 30.08 313 ⇓P **P 06 46 52.5 +1.4**
MLR Muntele Rosu 30.08 313 **P 06 46 52.5 +1.4**
MLR IAmb IAmb 06 46 57.7
comp=Z,86nm,1.0s
MLR Muntele Rosu 30.08 313 P **P 06 46 52.5 +1.4**
ONER Baraj Valea Uz 30.15 315 ⇓P **P 06 46 53.1 +1.5**
PLVB Pleven 30.18 309 ⇓P **P 06 46 53.5 +1.6**
PGB Panagyurishte 30.22 307 P **P 06 46 54.3 +2.0**
TUR Turia 30.27 314 ⇓P **P 06 46 53.4 +0.7**
BOSR Bodos 30.50 314⇑ P **P 06 46 55.9 +1.2**
PALK Pallekele 30.50 129 LR LR 06 59 10.9
comp=Z,1μm,20.8s,baz=313,slow=36
PALK Pallekele 30.50 129*de*P **P 06 46 56.6 +1.6**
PALK pmax pmax
comp=Z,17nm,1.0s
DOPR Dopca 30.63 314 ⇓P **P 06 46 57.1 +1.3**
VOIR 30.63 313⇑ P **P 06 46 57.9 +1.9**
VOIR 30.63 313 P **P 06 46 57.8 +1.9**
VOIR 30.63 313 P **P 06 46 56.3 +0.3**
comp=Z,582nmcomp=Z,49nm,1.4s
NDNU Novodnistrovsk 30.65 320 P **P 06 46 55.7 -0.2**
NDNU pP **pP 06 46 58.4 -3.5**
OBN Obninsk 30.71 337 LR LR 07 01 30.0
comp=Z,812nm,18.7s,baz=171,slow=40
OBN Obninsk 30.71 337⇑ P **P 06 46 57.9 +1.5**
OBN Obninsk 30.71 337 **P 06 46 56.8 +0.4**
OBN Obninsk 30.71 337*c i*P **P 06 46 56.9 +0.5**
OBN *i* 06 47 04.2
OBN *i* 06 47 51.5
OBN pmax pmax
comp=Z,165nm,1.0s
OBN MLR MLR
comp=Z,763nm,19.0s
OBN Obninsk 30.71 337 P **P 06 46 56.8 +0.4**
comp=Z,2μmcomp=Z,166nm,1.1s
PRAR RASCA 30.72 317 ⇓P **P 06 46 57.4 +0.8**
AK09 Malin Array Si 30.72 324 P **P 06 46 56.2 -0.3**
AK07 Malin Array Si 30.72 324 P **P 06 46 56.0 -0.6**
AK10 Malin Array Si 30.73 324 P **P 06 46 56.0 -0.6**
AK08 Malin Array Si 30.75 324 P **P 06 46 56.1 -0.7**
AK06 Malin Array Si 30.75 324 P **P 06 46 56.3 -0.5**
AK05 Malin Array Si 30.77 324 P **P 06 46 56.0 -0.9**
KKB Krupnik 30.77 305 P **P 06 46 59.0 +1.8**
MPEP Malo Peshtene 30.78 308 P **P 06 46 58.8 +1.6**
AK02 Malin Array Si 30.79 324 P **P 06 46 56.3 -0.8**
AK01 Malin Array Si 30.80 324 P **P 06 46 56.8 -0.5**
AKASG Malin Array Be 30.80 324 P **P 06 46 57.0 -0.3**
comp=Z,67nm,0.7s,baz=130,slow=8.3,SNR=382
AKASG PcP **PcP 06 49 53.2 -1.0**
comp=Z,3.7nm,0.7s,baz=106,slow=2.9,SNR=5.6
AKASG S **S 06 51 58.6 -1.1**
comp=Z,2.4nm,0.9s,baz=131,slow=16,SNR=4.3
AKASG ScP **ScP 06 53 33.0 -3.1**
comp=Z,13nm,1.0s,baz=108,slow=3.4,SNR=28
AKASG LR LR 07 02 07.3

comp=Z,920nm,21.1s,baz=130,slow=42
comp=Z,67nm,0.7s
AKASG **Malin Array Be** **30.80 324** *e*P **P** **06 46 56.9 -0.3**
AKASG pmax pmax
comp=Z,75nm,0.7s
AKBB Malin Array Si **30.80 324** **P** **P**
AKBB **Malin Array Si** **30.80 324** P **P** **06 46 57.0 -0.3**
AKBB pmax pmax
comp=Z,177nm,0.7s
AKBB Malin Array Si **30.80 324** P **P** **06 46 56.8 -0.5**
AK12 Malin Array Si **30.80 324** P **P** **06 46 56.7 -0.6**
KIEV Kiev **30.81 324** **P** **06 46 57.1 -0.2**
KIEV Kiev **30.81 324** P **P** **06 46 57.1 -0.2**
KIEV pmax pmax
comp=Z,159nm,0.7s
KIEV Kiev **30.81 324** P **P** **06 46 56.8 -0.5**
comp=Z,6µmcomp=Z,969nm,0.8s
ITM Ithomi **30.81 296** **P** **06 46 57.9 +0.4**
KIRV Kirov **30.82 352** LR LR 07 01 55.7
comp=Z,5µm,18.8s,baz=161,slow=41
KIRV Kirov **30.82 352***c* *i*P **P** **06 46 57.5 +0.3**
AK11 Malin Array Si **30.82 324** P **P** **06 46 57.0 -0.4**
AK03 Malin Array Si **30.82 324** P **P** **06 46 56.8 -0.6**
AK14 Malin Array Si **30.82 324** P **P** **06 46 56.9 -0.5**
AK13 Malin Array Si **30.83 324** P **P** **06 46 56.8 -0.7**
AK04 Malin Array Si **30.84 324** P **P** **06 46 57.0 -0.6**
AK16 Malin Array Si **30.84 324** P **P** **06 46 57.2 -0.4**
AK15 Malin Array Si **30.85 324** P **P** **06 46 57.1 -0.6**
MOS Moscow **30.86 338** *e*P **P** **06 46 58.4 +0.7**
MOS *e* 06 47 59.3
MOS *e*S **S** **06 51 59.2 -1.3**
MOS pmax pmax
comp=Z,71nm,0.9s
MOS MLR MLR
comp=Z,600nm,15.0s
ARR Arges **30.88 312** ⇓P **P** **06 46 59.5 +1.4**
AK17 Malin Array Si **30.88 324** P **P** **06 46 57.3 -0.6**
AK23 Malin Array Si **30.89 324** P **P** **06 46 57.4 -0.6**
DRBR Darabani **30.89 319** ⇑P **P** **06 46 59.5 +1.4**
AK18 Malin Array Si **30.89 324** P **P** **06 46 57.5 -0.6**
VTS Vitosha **30.91 307** P **P** **06 46 59.7 +1.2**
AK22 Malin Array Si **30.92 324** P **P** **06 46 57.7 -0.6**
AK19 Malin Array Si **30.92 324** P **P** **06 46 57.7 -0.6**
AK20 Malin Array Si **30.94 324** P **P** **06 46 57.9 -0.5**
AK21 Malin Array Si **30.94 324** P **P** **06 46 57.9 -0.6**
BLSH Balsha **30.95 307** P **P** **06 47 00.2 +1.5**
SHL Shillong **31.03 87** **P** **06 46 59.4 -0.4**
SHL Shillong **31.03 87** P **P** **06 46 59.4 -0.4**
SHL pmax pmax
comp=Z,26nm,0.9s
VAY Valandovo **31.05 304** *i* P **P** **06 47 01.0 +1.5**
VALD Valchedram **31.09 309** P **P** **06 47 01.7 +1.8**
LUBAR Lubar, Ukraine **31.13 322** P **P** **06 46 59.6 -0.6**
KMPD K-Podol'skiy **31.15 319** P **P** **06 46 59.4 -1.0**
KMPD P **P** **06 46 59.6 -0.8**
TNR Turnu Rosu **31.22 313** ⇑P **P** **06 47 02.2 +1.1**
TNR Turnu Rosu **31.22 313** P **P** **06 47 02.1 +1.1**
MI29 MI29, Kamyanyy **31.36 323** P **P** **06 47 01.5 -0.7**
comp=Z,873nm,1.0s
MI30 MI30,Zelenitsa **31.36 324** P **P** **06 47 01.3 -0.9**
comp=Z,131nm,1.0s
BURAR Bucovina Array **31.44 317** ⇓P **P** **06 47 04.3 +1.1**
BURAR Bucovina Array **31.44 317** **P** **06 47 03.3 +0.2**
BURAR IAmb IAmb 06 47 05.2
comp=Z,74nm,1.1s
BURAR Bucovina Array **31.44 317** P **P** **06 47 04.2 +1.1**
BUR08 Bucovina Ar. S **31.47 317** **P** **06 47 03.8 +0.5**
BUR08 IAmb IAmb 06 47 05.1
comp=Z,53nm,0.8s
LOT Lotru **31.47 312** ⇑P **P** **06 47 04.4 +1.0**
HORU Horodok **31.50 320** P **P** **06 47 03.5 +0.1**
MI28 Mi28,Pidlybu **31.74 324** P **P** **06 47 03.9 -1.6**
KSV Kosov **31.85 318** P **P** **06 47 06.0 -0.6**
CJR Cluj-Napoca **32.06 314** ⇑P **P** **06 47 10.0 +1.5**
CJR Cluj-Napoca **32.06 314** P **P** **06 47 10.0 +1.5**
GZR Gura Zlata **32.10 312** ⇑P **P** **06 47 09.8 +0.8**
GZR Gura Zlata **32.10 312** P **P** **06 47 09.7 +0.8**
HERR Herculane **32.17 310** ⇑P **P** **06 47 10.6 +1.2**
LODK Lodwar **32.24 224** **P** **06 47 12.8 +2.4**
RAKU Rahkiv **32.26 317** P **P** **06 47 10.5 +0.3**
OHR Ohrid **32.30 303** *i* P **P** **06 47 12.4 +1.7**
MARR Marisel-Cluj **32.35 314** ⇓P **P** **06 47 12.3 +1.2**
STNU Starunia **32.37 318** P **P** **06 47 11.0 -0.1**
BMR Baia Mare **32.52 316** ⇓P **P** **06 47 13.9 +1.5**
BMR Baia Mare **32.52 316** **P** **06 47 13.9 +1.5**
MDVR Moldovita **32.61 310** ⇓P **P** **06 47 14.9 +1.5**
MESR Meseseni **32.65 315** ⇑P **P** **06 47 15.5 +2.0**
DRGR **32.66 314** ⇑P **P** **06 47 14.7 +1.0**
DRGR **32.66 314** P **P** **06 47 14.7 +1.0**
GOMU GeErMu **32.69 66** P **P** **06 47 15.0 +0.5**
GOMU S **S** **06 52 31.5 +1.2**
GOMU pmax pmax
comp=Z,96nm,1.0s
GOMU L L
comp=Z,490nm,17.5s
GOMU L L
comp=Z,640nm,15.1s
ZALV Zalesovo Beam **32.70 31** P **P** **06 47 14.3 +0.4**
comp=Z,133nm,0.7s,baz=233,slow=8.7,SNR=22
ZALV PcP **PcP** **06 49 58.1 -1.1**
comp=Z,3.9nm,0.5s,baz=211,slow=4.1,SNR=2.9
ZALV S **S** **06 52 27.9 -1.5**
comp=Z,1.4nm,0.6s,baz=197,slow=4.6,SNR=2.1
comp=Z,133nm,0.7s
KEK Kerkira **32.80 300** P **P** **06 47 15.2 +0.1**
KEK IAmb IAmb 06 47 19.8
comp=Z,70nm,1.0s
RNPP5 Staryi Chortor **32.84 323** P **P** **06 47 14.9 -0.3**
RNPP2 Kostyukhnivka **32.90 323** P **P** **06 47 15.5 -0.2**
MORS Morshin **32.91 318** P **P** **06 47 16.1 +0.2**
RNPP8 Varash **32.92 323** P **P** **06 47 15.7 -0.1**
RNPP9 Sopachiv **32.94 323** P **P** **06 47 15.9 -0.1**
KORU Korolevo **32.94 316** P **P** **06 47 16.1 0.0**
BZS Buzias **32.95 311** ⇓P **P** **06 47 17.3 +1.0**
BZS Buzias **32.95 311** P **P** **06 47 17.2 +1.0**
BRIU Brid **33.09 317** P **P** **06 47 18.0 +0.6**
BANR Banloc **33.19 311** ⇓P **P** **06 47 19.6 +1.3**
SHIU Shidnytsya **33.27 318** P **P** **06 47 19.5 +0.5**
BERU Beregovo **33.27 316** P **P** **06 47 19.1 +0.1**
MUKU Mukachevo **33.34 317** P **P** **06 47 20.0 +0.5**
SJES Sjenica **33.39 307** ⇑*i*P **P** **06 47 21.0 +0.8**
LTVH Ltavrtes, Hu **33.40 315** ⇑P **P** **06 47 22.0 +2.0**
HOLU Holmets **33.55 317** P **P** **06 47 21.7 +0.3**
UZHM Uzhgorod **33.65 317** P **P** **06 47 22.6 +0.4**
DRME Dracevica, Mon **33.71 305** ⇑*i*P **P** **06 47 22.6 -0.3**
MNK Minsk **33.78 329** *i* P **P** **06 47 23.8 +0.5**
comp=E,40nm,0.8s
MNK *i* P **P** **06 47 23.8 +0.5**
comp=N,118nm,0.8s
MNK *i* P **P** **06 47 23.8 +0.5**
comp=Z,192nm,0.7s,baz=129
MNK *i* PP **PnPn** **06 48 36.3 +0.6**
MNK *i* PPP PPP 06 48 47.4
MNK *i* PcP **PcP** **06 50 02.5 +0.3**
MNK *i* S **S** **06 52 48.7 +2.6**
MNK *i* SS **SnSn** **06 54 54.8 +3.8**
MNK *i* SSS SSS 06 55 16.6
MNK *i* LQ LQ 06 58 55.4
MNK *i* LR LR 07 00 35.7
MNK *i* LRM MLR 07 03 56.2
comp=Z,507nm,13.0s
MNK *i* LRM MLR 07 04 00.7
comp=E,253nm,13.9s
MNK *i* LRM MLR 07 04 08.4
comp=N,315nm,14.4s
MNK Minsk **33.78 329** *i* P **P** **06 47 23.8 +0.5**
MNK *i* 06 48 36.2
MNK *i* PPP PPP 06 48 47.4
MNK *i* 06 50 02.5
MNK *i* S **S** **06 52 48.6 +2.6**
MNK *i* SS **SnSn** **06 54 54.8 +3.8**
MNK *i* SSS SSS 06 55 16.5
MNK *i* 06 57 49.0
MNK pmax pmax
comp=Z,192nm,0.7s
MNK pmax pmax
comp=N,118nm,0.8s
MNK pmax pmax
comp=E,40nm,0.8s
MNK MLR MLR
comp=Z,507nm,13.0s
MNK MLR MLR
comp=E,253nm,14.0s

MNK MLR MLR
comp=N,315nm,14.0s
KWP Kalwaria Pacla **33.83 319** *e*P **P** **06 47 25.2 +1.3**
KWP Kalwaria Pacla **33.83 319** P **P** **06 47 24.1 +0.2**
comp=N,4µmcomp=N,341nm,1.0s
RUDO Rudo **33.90 307** *e*P **P** **06 47 24.2 -0.4**
BBLS Lazi&#263i **33.94 308** *e*P **P** **06 47 25.3 +0.3**
FRGS Fruska Gora **34.01 310** ⇑*i*P **P** **06 47 26.3 +0.8**
UPM Unac-Piva **34.13 306** ⇑*i*P **P** **06 47 27.3 +0.5**
HCY Herceg Novi **34.27 305** *e*P **P** **06 47 28.5 +0.8**
BRY Bronjgost **34.33 306** ⇑*i*P **P** **06 47 28.9 +0.5**
KLINJ Klinje **34.35 306** *e*P **P** **06 47 28.6 0.0**
TREB Trebinje **34.42 305** ⇑*i*P **P** **06 47 28.0 -1.1**
NACGM Naroch **34.53 329** *e*P **P** **06 47 30.1 +0.3**
STHS Stebnicka Huta **34.60 318** *e*P **P** **06 47 30.4 -0.2**
STHS pmax pmax
comp=Z,18nm,1.0s
STHS Stebnicka Huta **34.60 318** *e*P **P** **06 47 30.4 -0.2**
KECS Kecovo **34.69 316** *e*P **P** **06 47 32.7 +1.4**
KECS pmax pmax
comp=Z,133nm,1.2s
KECS Kecovo **34.69 316** *e*P **P** **06 47 32.7 +1.4**
KLMR Klimovskoe **34.72 345** *e*P **P** **06 47 29.7 -1.6**
KLMR *e* 06 48 44.9
KLMR pmax pmax
comp=Z,171nm,1.3s
KLMR MLR MLR
comp=Z,1µm,16.0s
PSZ Piszkesteto **34.85 315** ⇓P **P** **06 47 34.0 +1.1**
PSZ Piszkesteto **34.85 315** **P** **06 47 33.1 +0.3**
PSZ IAmb IAmb 06 47 34.7
comp=Z,65nm,0.9s
PSZ Piszkesteto **34.85 315** P **P** **06 47 33.1 +0.3**
PSZ pmax pmax
comp=Z,65nm,0.9s
KMBO Kilima Mbogo **34.88 217** P **P** **06 47 35.7 +2.2**
baz=35,slow=13
KMBO S **S** **06 53 05.7 +1.4**
baz=63,slow=14
KMBO LR LR 07 03 03.9
comp=Z,567nm,18.3s,baz=47,slow=38
TIP Timpagrande **35.07 299** ⇓P **P** **06 47 35.5 +0.7**
TIP Timpagrande **35.07 299** P **P** **06 47 35.3 +0.5**
TIP IAmb IAmb 06 47 38.8
comp=Z,77nm,1.0s
TIP Timpagrande **35.07 299** P **P** **06 47 36.0 +1.2**
comp=Z,73nm,0.9s
MORH Mrgy, Hungar **35.11 311** ⇓P **P** **06 47 36.1 +1.2**
MORH Mrgy, Hungar **35.11 311** P **P** **06 47 35.2 +0.3**
comp=Z,1µmcomp=Z,113nm,1.5s
MORH Mrgy, Hungar **35.11 311** ⇑*i*P **P** **06 47 35.6 +0.7**
NIE Niedzica **35.17 317** *e*P **P** **06 47 36.8 +1.3**
NIE Niedzica **35.17 317** P **P** **06 47 35.9 +0.4**
comp=Z,385nmcomp=Z,27nm,0.8s
KIBK Kibwezi **35.51 214** P **P** **06 47 41.0 +2.3**
KIBK Kibwezi **35.51 214** **P** **06 47 39.5 +0.7**
KIBK Kibwezi **35.51 214** P **P** **06 47 41.9 +3.1**
LANS Liptovska Anna **35.57 316** *e*P **P** **06 47 39.7 +0.8**
LANS pmax pmax
comp=Z,84nm,1.1s
LANS Liptovska Anna **35.57 316** *e*P **P** **06 47 39.7 +0.8**
CEL Celeste **35.67 297** P **P** **06 47 41.1 +1.1**
CEL Celeste **35.67 297** P **P** **06 47 40.8 +0.8**
comp=Z,58nm,1.0s
BLY Banja Luka **35.70 308** ⇑P **P** **06 47 40.9 +0.8**
BLY Banja Luka **35.70 308** P **P** **06 47 40.7 +0.6**
BLY IAmb IAmb 06 47 42.0
comp=Z,59nm,1.1s
BLY Banja Luka **35.70 308** *e*P **P** **06 47 40.7 +0.6**
SUW Suwalki **35.73 326** *e*P **P** **06 47 39.8 -0.4**
SUW Suwalki **35.73 326** P **P** **06 47 40.3 +0.1**
SUW Suwalki **35.73 326** P **P** **06 47 40.3 +0.1**
OJC Ojcow **35.78 318** *e*P **P** **06 47 41.3 +0.6**
OJC Ojcow **35.78 318** **P** **06 47 41.1 +0.4**
OJC Ojcow **35.78 318** P **P** **06 47 41.1 +0.4**
OJC Ojcow **35.78 318** P **P** **06 47 40.8 +0.1**
comp=Z,5µmcomp=Z,581nm,1.0s
SRO Srobarova **35.82 314** *e*P **P** **06 47 42.2 +1.2**
SRO pmax pmax
comp=Z,157nm,0.9s
SRO Srobarova **35.82 314** *e*P **P** **06 47 42.2 +1.2**
CUC Castrocucco **35.88 300** **P** **06 47 42.6 +0.9**
R9F13 Warsaw-Wawer **35.90 322** *e*P **P** **06 47 42.7 +1.1**
BEL Belsk **35.91 321** *e*P **P** **06 47 42.5 +0.8**
MPLH Magyarpolny **36.12 312** P **P** **06 47 44.1 +0.5**
comp=Z,5µmcomp=Z,656nm,1.1s
PABE Paberze **36.18 328** **P** **06 47 43.9 -0.1**
BEHE Becsehely **36.42 311** P **P** **06 47 47.1 +0.9**
BEHE IAmb IAmb 06 47 48.4
comp=Z,78nm,0.9s
BEHE Becsehely **36.42 311** ⇑*i*P **P** **06 47 47.1 +0.9**
PUL Pulkovo **36.46 337** ⇓*e*P **P** **06 47 46.3 0.0**
PUL pmax pmax
comp=Z,80nm,0.7s
PUL MLR MLR
comp=Z,622nm,16.0s
JAVC Velka Javorina **36.57 315** *e*P **P** **06 47 48.8 +1.3**
SMOL Smolenice **36.61 315** *e*P **P** **06 47 48.2 +0.4**
SMOL pmax pmax
comp=Z,51nm,0.9s
OKC Ostrava-Krasne **36.62 317** *e*P **P** **06 47 48.6 +0.7**
OKC AMS AMS 07 05 30.0
comp=Z,900nm,22.2s
OKC Ostrava-Krasne **36.62 317** *e*P **P** **06 47 48.6 +0.7**
OKC MLR MLR
comp=Z,900nm,22.2s
MAUC Maruska **36.65 316** *e*P **P** **06 47 49.3 +1.2**
MODS Modra-Piesok **36.66 314** *e*P **P** **06 47 48.6 +0.4**
MODS pmax pmax
comp=Z,230nm,1.0s
MODS Modra-Piesok **36.66 314** *e*P **P** **06 47 48.6 +0.4**
KOGS Kog **36.76 311** *i* P **P** **06 47 49.5 +0.4**
VAE Valguarnera **36.80 296** LR LR 07 08 17.5
comp=Z,361nm,18.0s,baz=10,slow=45
GTA2 Gaotai **36.81 61** P **P** **06 47 50.5 +0.7**
GTA2 sP sP 06 47 59.3 +1.1
GTA2 S **S** **06 53 33.3 -0.1**
GTA2 pmax pmax
comp=Z,250nm,0.8s
GTA2 L L
comp=Z,760nm,17.2s
GTA2 L L
comp=Z,700nm,14.8s
GTA2 L L
comp=Z,650nm,21.6s
RAFF Raffo Rosso **36.84 295** **P** **06 47 50.9 +1.0**
RAFF IAmb IAmb 06 47 53.1
comp=Z,94nm,1.0s
VSU Vasula **36.84 334***c* *i*P **P** **06 47 48.6 -1.0**
VSU pmax pmax
comp=Z,557nm,1.3s
VSU MLR MLR
comp=Z,462nm,17.0s
STEB Steborice **36.88 317** *e*P **P** **06 47 50.4 +0.3**
PAOL Paolisi **36.94 302** P **P** **06 47 51.8 +1.0**
PAOL IAmb IAmb 06 47 54.6
comp=Z,171nm,1.1s
MORC Moravsky Berou **36.97 317** ⇓P **P** **06 47 51.8 +0.9**
MORC Moravsky Berou **36.97 317** **P** **06 47 50.6 -0.3**
MORC Moravsky Berou **36.97 317** P **P** **06 47 50.6 -0.3**
MORC pmax pmax
comp=Z,135nm,0.8s
MORC Moravsky Berou **36.97 317** *e*P **P** **06 47 50.7 -0.2**
TNCH TengChong **36.99 85** P **P** **06 47 53.3 +1.7**
TNCH S **S** **06 53 37.5 +1.0**
TNCH pmax pmax
comp=Z,150nm,0.9s
RONA Rosalia, Austr **37.08 313** *e*P **P** **06 47 52.4 +0.5**
comp=Z,228nm,0.8s,SNR=58
RONA *e*PcP **PcP** **06 50 12.4 +0.2**
comp=Z,19nm,1.3s
WINA Alland / Wiene **37.34 313** *i* P **P** **06 47 54.4 +0.4**
SNR=31
VRAC Vranov **37.39 316** LR LR 07 05 26.0
comp=Z,618nm,21.3s,baz=107,slow=40
VRAC Vranov **37.39 316** ⇑P **P** **06 47 55.5 +1.1**
VRAC Vranov **37.39 316** P **P** **06 47 55.5 +1.1**
VRAC Vranov **37.39 316** *e*P **P** **06 47 54.8 +0.4**
CONA Conrad Observa **37.42 313** *i* P **P** **06 47 55.1 +0.3**
comp=Z,156nm,1.1s,SNR=30
CONA *e*PcP **PcP** **06 50 13.2 -0.1**
comp=Z,8.8nm,1.0s
KRUC Moravsky **37.43 315** *e*P **P** **06 47 55.0 +0.2**
ARSA Arzberg **37.46 312** **P** **06 47 55.0 0.0**

ARSA IAmb IAmb 06 47 57.0
comp=Z,107nm,0.9s
ARSA Arzberg **37.46 312** *i* P **P** **06 47 55.8 +0.8**
comp=Z,146nm,0.9s,SNR=43
KRLC Kraliky **37.53 317** *e*P **P** **06 47 56.1 +0.4**
KRLC AMS AMS 07 04 30.0
comp=Z,900nm,27.0s
KRLC Kraliky **37.53 317** *e*P **P** **06 47 56.1 +0.4**
PERS Pernice **37.57 311** *i* P **P** **06 47 56.3 +0.3**
PERS *e*PcP **PcP** **06 50 13.6 -0.1**
SOKA Soboth **37.63 311** *i* P **P** **06 47 57.2 +0.6**
comp=Z,60nm,0.9s,SNR=15
ADZR Andozero **37.71 346** *e*P **P** **06 47 55.1 -1.8**
ADZR pmax pmax
comp=Z,100nm,1.1s
KNGR Kungurtug, Tuv **37.72 42***ce*P **P** **06 47 59.6 +2.3**
KNGR pmax pmax
comp=Z,146nm,1.0s
LJU Ljubljana **37.83 310** *i* P **P** **06 47 59.1 +0.9**
LJU *i* 06 48 00.0
comp=Z,38nm,0.7s
DPC Dobruska-Polom **37.90 317** *e*P **P** **06 47 59.3 +0.5**
DPC AMS AMS 07 05 10.0
comp=Z,800nm,23.0s
DPC Dobruska-Polom **37.90 317** *e*P **P** **06 47 59.3 +0.5**
DPC MLR MLR
comp=Z,800nm,23.0s
DPC Dobruska-Polom **37.90 317** P **P** **06 47 58.8 0.0**
comp=Z,1µmcomp=Z,137nm,1.0s
OBKA Obir **37.92 310** *i* P **P** **06 47 59.7 +0.6**
comp=Z,169nm,1.4s,SNR=15
AQU L'Aquila **37.97 304** P **P** **06 48 02.0 +2.5**
AQU L'Aquila **37.97 304** P **P** **06 48 00.8 +1.3**
AQU L'Aquila **37.97 304** P **P** **06 48 00.8 +1.3**
AQU pmax pmax
comp=Z,194nm,0.9s
AQU L'Aquila **37.97 304** ⇑*i*P **P** **06 48 01.2 +1.7**
OSTC Ostas **38.04 317** *e*P **P** **06 48 00.5 +0.6**
OSTC AMS AMS 07 05 10.0
comp=Z,800nm,23.0s
OSTC Ostas **38.04 317** *e*P **P** **06 48 00.5 +0.6**
OSTC MLR MLR
comp=Z,800nm,23.0s
KSP Ksiaz **38.09 318** *e*P **P** **06 48 00.6 +0.3**
KSP Ksiaz **38.09 318** P **P** **06 48 00.3 0.0**
comp=Z,1µmcomp=Z,116nm,1.2s
GUMA Gualdo di Mace **38.11 305** P **P** **06 48 01.3 +0.7**
UPC Upice **38.14 317** *e*P **P** **06 48 01.4 +0.6**
UPC AMS AMS 07 05 10.0
comp=Z,700nm,20.0s
UPC Upice **38.14 317** *e*P **P** **06 48 01.4 +0.6**
UPC MLR MLR
comp=Z,700nm,20.0s
CHVC Chvalec **38.15 317** *e*P **P** **06 48 01.8 +1.0**
CHVC AMS AMS 07 05 00.0
comp=Z,700nm,25.6s
CHVC Chvalec **38.15 317** *e*P **P** **06 48 01.8 +1.0**
CHVC MLR MLR
comp=Z,700nm,25.6s
NRCA Norcia **38.24 304** P **P** **06 48 02.4 +0.6**
NRCA IAmb IAmb 06 48 04.8
comp=Z,115nm,0.8s
MBAR Mbarara **38.25 226** LR LR 07 06 06.8
comp=Z,5µm,18.8s,baz=35,slow=40
MBAR Mbarara **38.25 226**j *e*P **P** **06 48 02.0 -0.2**
MBAR pmax pmax
comp=Z,34nm,0.9s
MBAR Mbarara **38.25 226** P **P** **06 48 04.7 +2.5**
TRI Trieste **38.27 309** **P** **06 48 01.6 -0.3**
TRI Trieste **38.27 309** P **P** **06 48 01.6 -0.3**
TRI pmax pmax
comp=Z,181nm,0.8s
DGAR Diego Garcia **38.39 155** ⇑*e*P **P** **06 48 02.2 -1.0**
DGAR pmax pmax
comp=Z,57nm,1.6s
MOA Molln **38.44 312** *i* P **P** **06 48 03.8 +0.5**
comp=Z,199nm,0.8s,SNR=58
MOA *e*PcP **PcP** **06 50 17.4 +1.1**
comp=Z,21nm,1.5s
SABO M.te Sabotino **38.44 309** P **P** **06 48 03.2 -0.2**
SABO IAmb IAmb 06 48 06.1
comp=Z,87nm,1.0s
GKP Gorka Klasztor **38.49 322** *e*P **P** **06 48 03.9 +0.3**
MYKA Terra Mystica **38.55 310** *i* P **P** **06 48 04.7 +0.3**
comp=Z,69nm,0.9s,SNR=6.6
PRED Cave del Predi **38.56 310** P **P** **06 48 04.4 -0.1**
PRED IAmb IAmb 06 48 06.1
comp=Z,89nm,1.0s
CESX Cesi **38.60 304** **P** **06 48 05.9 +1.1**
CKRC Cesky Krumlov **38.67 314** *e*P **P** **06 48 06.3 +1.0**
CKRC Cesky Krumlov **38.67 314** *e*P **P** **06 48 06.3 +1.0**
BIOA Bad Ischl, Aus **38.81 312** *i* P **P** **06 48 06.9 +0.5**
comp=Z,219nm,0.8s,SNR=46
KBA Koelnbreinsper **38.85 311** *i* P **P** **06 48 07.4 +0.4**
comp=Z,181nm,1.1s,SNR=32
KBA *e*PcP **PcP** **06 50 17.6 -0.3**
comp=Z,13nm,1.0s
PRU Pruhonice **38.87 316** *e*P **P** **06 48 07.0 +0.1**
PRU Pruhonice **38.87 316** *e*P **P** **06 48 07.0 +0.1**
ZVC Zvikov **38.92 315** *e*P **P** **06 48 08.1 +0.8**
PVCC Panska Ves **39.02 317** *e*P **P** **06 48 08.5 +0.4**
PVCC Panska Ves **39.02 317** *e*P **P** **06 48 08.5 +0.4**
GEC2 GERESS Array S **39.06 314** P **P** **06 48 08.4 -0.2**
GEC2 IAmb IAmb 06 48 10.1
comp=Z,174nm,1.0s
GEC2 GERESS Array S **39.06 314** *e*P **P** **06 48 08.7 0.0**
comp=Z,189nm,1.1s,baz=106,slow=8.2
GERES GERESS Array B **39.06 314** P **P** **06 48 08.8 +0.2**
comp=Z,69nm,0.9s,baz=116,slow=9.1,SNR=172
GERES PcP **PcP** **06 50 18.3 -0.1**
comp=Z,7.7nm,0.7s,baz=124,slow=3.6,SNR=5.5
GERES ScP **ScP** **06 54 02.6 -3.4**
comp=Z,1.6nm,0.8s,baz=193,slow=5.2,SNR=5.3
GERES LR LR 07 06 47.1
comp=Z,542nm,21.3s,baz=101,slow=40
comp=Z,69nm,0.9s
GERES GERESS Array B **39.06 314** *e*P **P** **06 48 09.2 +0.6**
GERES pmax pmax
comp=Z,70nm,0.9s
STAL STALIGIAL **39.10 310** P **P** **06 48 09.1 +0.1**
STAL IAmb IAmb 06 48 10.0
comp=Z,115nm,0.9s
FINES FINESS Array B **39.12 337** P **P** **06 48 09.0 +0.2**
comp=Z,18nm,0.5s,baz=136,slow=9.3,SNR=265
FINES PP **PnPn** **06 49 39.9 -1.2**
comp=Z,40nm,1.0s,baz=127,slow=11,SNR=9.7
FINES ScP **ScP** **06 54 02.4 -3.3**
comp=Z,11nm,0.9s,baz=150,slow=5.8,SNR=6.9
FINES LR LR 07 07 21.6
comp=Z,737nm,18.2s,baz=141,slow=41
comp=Z,18nm,0.5s
FINES FINESS Array B **39.12 337** *e*P **P** **06 48 09.3 +0.5**
FINES pmax pmax
comp=Z,18nm,0.5s
KHC Kasperske Hory **39.22 314** **P** **06 48 10.2 +0.3**
KHC Kasperske Hory **39.22 314** *e*P **P** **06 48 10.4 +0.5**
KHC AMS AMS 07 07 40.0
comp=Z,800nm,21.2s
KHC Kasperske Hory **39.22 314***c* *i*P **P** **06 48 10.0 +0.1**
KHC pmax pmax
comp=Z,251nm,1.0s
KHC MLR MLR
comp=Z,564nm,20.0s
KHC Kasperske Hory **39.22 314** P **P** **06 48 09.2 -0.7**
comp=Z,3µmcomp=Z,314nm,1.1s
CHTO Chiang Mai **39.29 94** P **P** **06 48 11.2 +0.4**
RICC Richard **39.31 317** *e*P **P** **06 48 11.0 +0.5**
ABTA Abfaltersbach **39.34 310** *e*P **P** **06 48 11.4 +0.4**
comp=Z,184nm,0.9s,SNR=31
LESA Schwarzleotal **39.38 311** *i* P **P** **06 48 11.2 0.0**
comp=Z,106nm,0.7s,SNR=23
CMAR Chiang Mai Arr **39.42 95** P **P** **06 48 12.7 +0.8**
comp=Z,14nm,0.3s,baz=294,slow=7.7,SNR=3.4
CMAR LR LR 07 06 53.0
comp=Z,212nm,20.2s,baz=285,slow=40
comp=Z,14nm,0.3s
PZH PanZhiHua **39.48 82** P **P** **06 48 12.8 +0.4**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,130nm,5.2s
BRG Berggiesshubel **39.51 317** *e*P **P** **06 48 12.0 -0.1**
comp=Z,77nm,0.9s,baz=106,slow=8.2
TEOL Teolo **39.65 308** P **P** **06 48 13.5 0.0**
WET Wettzell **39.66 314** *e*P **P** **06 48 13.2 -0.3**
comp=Z,115nm,1.1s,baz=106,slow=8.2

HSKC **Hora Svate Kat** 39.73 316 *e*P P 06 48 14.2 +0.1
CTI **Castel Tesino** 39.79 309 P 06 48 14.9 +0.2
CTI **Castel Tesino** 39.79 309 P P 06 48 14.9 +0.2
CTI pmax pmax
comp=Z,63nm,1.0s
LZDM **Lanzhou Array** 39.88 67 P P 06 48 16.2 +0.4
comp=Z,43nm,0.7s,baz=258,slow=10,SNR=44
LZDM S S 06 54 16.0 -4.1
comp=Z,1.7nm,0.3s,baz=266,slow=14,SNR=1.2
LZDM LR LR 07 08 07.0
comp=Z,537nm,18.8s,baz=355,slow=41
comp=Z,43nm,0.7s
CASP **Castiglione de** 39.88 304 P P 06 48 15.5 +0.1
LZH **Lanzhou** 39.99 67 P P 06 48 17.3 +0.7
LZH sP sP 06 48 27.8 +2.8
LZH SS SS 06 57 10.3 -8.2
LZH pmax pmax
comp=Z,160nm,1.5s
LZH pmax pmax
comp=Z,170nm,4.8s
LZH L L
comp=Z,900nm,15.1s
LZH L L
comp=Z,540nm,14.8s
LZH L L
comp=Z,620nm,14.1s
WTTA **Wattenberg** 40.03 311 *i* P P 06 48 16.7 -0.1
comp=Z,288nm,0.8s,SNR=64
WTTA *e*PcP PcP 06 50 22.0 +0.4
comp=Z,12nm,0.6s
WATA **Walderalm** 40.09 311 *i* P P 06 48 16.9 -0.4
comp=Z,273nm,1.1s,SNR=54
RUE **Ruedersdorf** 40.13 319 *e*P P 06 48 17.1 -0.1
comp=Z,135nm,0.8s,baz=106,slow=8.2
MOY **Mondy** 40.14 42 *e*P P 06 48 18.8 +1.2
MOY pmax pmax
comp=Z,127nm,1.8s
CLL **Collm** 40.20 317 P P 06 48 18.1 +0.1
CLL **Collm** 40.20 317 P P 06 48 18.1 +0.1
CLL pmax pmax
comp=Z,230nm,1.0s
CLL **Collm** 40.20 317⇑ *i*P P 06 48 18.5 +0.5
comp=Z,246nm,1.0s
CLL *ex* x 06 48 29.0
CLL *e*PP PP 06 49 52.0 +1.5
CLL *i* ScP ScP 06 54 08.5 -1.7
comp=Z,25nm,1.7s
CLL *e*S S 06 54 23.0 -1.0
CLL *ex* x 06 55 02.0
CLL *e*SS SnSn 06 57 25.0 -1.4
CLL AMS AMS 07 09 00.0
comp=Z,600nm,18.9s
CLL **Collm** 40.20 317 *e*P P 06 48 18.3 +0.3
comp=Z,211nm,1.0s,baz=106,slow=8.2
CLL **Collm** 40.20 317 P P 06 48 18.2 +0.3
comp=Z,2μmcomp=Z,248nm,1.0s
NKC **Novy Kostel** 40.23 316 *e*P P 06 48 18.7 +0.5
NKC **Novy Kostel** 40.23 316 *e*P P 06 48 18.7 +0.5
TANN **Tannenbergstha** 40.27 316 *e*P P 06 48 18.4 -0.2
comp=Z,16nm,1.0s,baz=106,slow=8.2
SQTA **Sankt Quirin** 40.31 311 *i* P P 06 48 18.8 -0.3
comp=Z,200nm,0.7s,SNR=56
SQTA *e*PcP PcP 06 50 23.0 +0.6
comp=Z,16nm,0.6s
VLC **Villacollemand** 40.38 306 P P 06 48 20.2 +0.5
CD2 **Chengdu** 40.40 75 P P 06 48 20.0 0.0
CD2 S S 06 54 29.3 +1.7
CD2 pmax pmax
comp=Z,50nm,0.8s
CD2 L L
comp=Z,850nm,15.2s
CD2 L L
comp=Z,600nm,13.3s
CD2 L L
comp=Z,730nm,14.0s
MOTA **Moosalm** 40.40 311 *e*P P 06 48 19.2 -0.6
comp=Z,294nm,1.2s,SNR=68
MOTA *e*PcP PcP 06 50 22.9 +0.1
comp=Z,17nm,0.6s
FUR **Furstenfeldbru** 40.46 312 *e*P P 06 48 19.6 -0.6
comp=Z,128nm,1.1s,baz=106,slow=8.2
PLN **Plauen** 40.48 316 *e*P P 06 48 19.9 -0.3
comp=Z,14nm,1.2s,baz=106,slow=8.2
SALO **Salr** 40.49 308 P 06 48 21.5 +1.0
SALO IAmb IAmb 06 48 22.2
comp=Z,165nm,0.9s
BSD **Bornholm Skovb** 40.49 324 *i* P P 06 48 19.3 -1.0
BSD IAmb IAmb 06 48 20.5
comp=Z,167nm,0.8s
BLEU **Blekinge** 40.54 326 *i* P P 06 48 20.0 -0.7
FETA **Feichten** 40.59 310 *i* P P 06 48 21.3 -0.2
comp=Z,203nm,0.8s,SNR=70
HAMD **Hammershus, De** 40.63 324 *i* P P 06 48 20.2 -1.2
RETA **Reutte** 40.66 311 *e*P P 06 48 21.1 -0.8
comp=Z,121nm,0.8s,SNR=24
KMI2 **Kunming** 40.68 83 ⇑P P 06 48 23.3 +0.8
KMI2 S S 06 54 30.5 -1.6
KMI2 pmax pmax
comp=Z,53nm,0.9s
KMI2 pmax pmax
comp=Z,250nm,3.2s
KMI2 L L
comp=Z,400nm,16.8s
KMI2 L L
comp=Z,270nm,19.3s
KMI2 L L
comp=Z,400nm,20.8s
VSL **Villasalto** 40.80 299 P P 06 48 24.4 +1.2
FUORN **Ofenpass-Fuorn** 40.84 310 P P 06 48 23.8 +0.2
FUORN IAmb IAmb 06 48 25.6
comp=Z,58nm,0.6s
GRA1 **Grafenberg Arr** 40.85 314 P P 06 48 23.4 +0.1
GRF **Grafenberg Arr** 40.85 314 P P 06 48 23.5 +0.1
GRF pmax pmax
comp=Z,274nm,1.0s
GRF **Grafenberg Arr** 40.85 314 *e*P P 06 48 23.6 +0.3
comp=Z,267nm,1.0s,baz=106,slow=8.2
GRF *e*L L 07 08 59.2
comp=Z,595nm,21.1s
MOX **Moxa** 40.85 316 *e*P P 06 48 23.4 0.0
comp=Z,43nm,0.9s,baz=106,slow=8.2
MOX *e*L L 07 10 26.8
comp=Z,426nm,18.7s
KEST **Kesra** 40.91 293 P P 06 48 26.0 +1.9
comp=Z,25nm,0.9s,baz=98,slow=3.4,SNR=21
KEST LR LR 07 09 08.9
comp=Z,639nm,19.1s,baz=98,slow=42
comp=Z,25nm,0.9s
KEST **Kesra** 40.91 293 P P 06 48 26.3 +2.2
NEUB **Neuenburg** 40.91 317 *e*P P 06 48 24.0 +0.2
comp=Z,156nm,1.0s,baz=106,slow=8.2
RGN **Rugen** 41.12 322 *e*P P 06 48 25.9 +0.5
comp=Z,332nm,0.8s,baz=106,slow=8.2
DAVOX **Davos/Dischmat** 41.12 310 LR LR 07 08 40.7
comp=Z,529nm,21.6s,baz=78,slow=41
UBR **Ueberruh** 41.13 311 *e*P P 06 48 25.1 -0.6
comp=Z,200nm,0.8s,baz=106,slow=8.2
ZAK **Zakamensk** 41.15 45 *e*P P 06 48 26.2 +0.2
ZAK pmax pmax
comp=Z,63nm,1.6s
DAVA **Damuels** 41.21 311 *i* P P 06 48 26.2 -0.3
comp=Z,288nm,0.8s,SNR=92
TUE **Stuetta** 41.43 309 P P 06 48 28.4 -0.1
TUE IAmb IAmb 06 48 29.6
comp=Z,87nm,1.1s
TUE **Stuetta** 41.43 309 P P 06 48 27.7 -0.8
comp=Z,4μmcomp=Z,352nm,0.8s
LUNU **Lund** 41.47 324 *i* P P 06 48 28.3 0.0
FLTG **Flechtingen** 41.56 318 *e*P P 06 48 29.2 +0.1
comp=Z,204nm,0.8s,baz=106,slow=8.2
DEL **Delary** 41.59 325 *i* P P 06 48 29.0 -0.3
DEL IAmb IAmb 06 48 30.1
comp=Z,46nm,0.9s
GORT1 **Trebel** 41.72 319 *e*P P 06 48 30.8 +0.5
comp=Z,118nm,0.9s,baz=106,slow=8.2
TLY **Talaya** 41.72 43 LR LR 07 07 53.0
comp=Z,2μm,20.0s,baz=256,slow=39
TLY **Talaya** 41.72 43 P P 06 48 31.1 +0.6
TLY **Talaya** 41.72 43 *ce*P P 06 48 31.4 +0.9
TLY pmax pmax
comp=Z,50nm,1.7s
TLY **Talaya** 41.72 43 P P 06 48 32.2 +1.7
ASSE **Asse, Remlinge** 41.83 318 *e*P P 06 48 31.6 +0.4
comp=Z,107nm,1.1s,baz=106,slow=8.2
BJUU **Bjuv** 41.86 324 *i* P P 06 48 31.5 0.0
APA **Apatity** 41.88 347⇓ *e*P P 06 48 31.4 -0.2
APA *e* 06 50 11.2
APA *e* 06 50 29.0
APA pmax pmax
comp=Z,82nm,0.9s
APA MLR MLR
comp=Z,2μm,14.1s
UBBA **Unterbreizbach** 41.89 316 *e*P P 06 48 32.4 +0.7
comp=Z,187nm,1.9s,baz=106,slow=8.2
LVZ **Lovozero** 41.92 347 *de*P P 06 48 32.1 +0.2
LVZ pmax pmax
comp=Z,44nm,0.9s
LVZ MLR MLR
comp=Z,894nm,17.0s
CLZ **Clausthal** 41.93 317 *e*P P 06 48 32.8 +0.6
comp=Z,263nm,1.1s,baz=106,slow=8.2
STU **Stuttgart** 41.94 313 *e*P P 06 48 31.2 -1.1
comp=Z,147nm,1.1s,baz=106,slow=8.2
COP **Copenhagen** 42.02 323 *i* P P 06 48 33.4 +0.6
COP IAmb IAmb 06 48 34.6
comp=Z,186nm,0.9s
GTTG **Gottingen** 42.10 317 *e*P P 06 48 34.2 +0.7
comp=Z,146nm,1.3s,baz=106,slow=8.2
IRK **Irkutsk** 42.25 42 *e*P P 06 48 34.5 -0.3
IRK pmax pmax
comp=Z,95nm,1.6s
FABU **Falkenberg** 42.38 325 *i* P P 06 48 35.7 -0.1
BFO **Black Forest** 42.42 312 P P 06 48 35.0 -1.3
BFO **Black Forest** 42.42 312 P P 06 48 35.0 -1.3
BFO pmax pmax
comp=Z,19nm,0.9s
BFO **Black Forest** 42.42 312 *e*P P 06 48 35.2 -1.1
comp=Z,18nm,0.9s,baz=106,slow=8.2
BSEG **Bad Segeberg** 42.57 320 *e*P P 06 48 37.6 +0.3
comp=Z,38nm,0.9s,baz=106,slow=8.2
BORU **Boraas** 42.62 326 *i* P P 06 48 37.5 -0.1
SONM **Songino Array** 42.62 49 P P 06 48 38.7 +0.6
comp=Z,40nm,0.8s,baz=256,slow=8.9,SNR=201
SONM LR LR 07 08 25.8
comp=Z,3μm,20.8s,baz=262,slow=39
comp=Z,40nm,0.8s
SONM **Songino Array** 42.62 49 P P 06 48 38.1 0.0
SONM **Songino Array** 42.62 49 P P 06 48 38.1 0.0
SONM pmax pmax
comp=Z,50nm,0.8s
BSI **Banda Aceh** 42.65 115 P P 06 48 40.3 +1.8
comp=Z,35nm,1.3s
TNS **Taunus Mts** 42.72 315 *e*P P 06 48 39.2 +0.5
comp=Z,215nm,1.1s,baz=106,slow=8.2
RETH **Rethem/Aller,** 42.77 318 *e*P P 06 48 39.6 +0.6
comp=Z,45nm,1.1s,baz=106,slow=8.2
SENIN **Lac Senin/Sane** 42.82 309 P P 06 48 39.0 -0.8
SENIN IAmb IAmb 06 48 41.1
comp=Z,68nm,0.6s
ONAU **Onsala** 42.94 326 *i* P P 06 48 39.9 -0.4
KASTN **Kahler Asten** 42.95 316 *e*P P 06 48 41.2 +0.7
comp=Z,144nm,1.2s,baz=106,slow=8.2
ULN **Ulaanbaatar** 43.07 49 P P 06 48 42.0 +0.3
ULN IAmb IAmb 06 48 43.2
comp=Z,66nm,0.7s
ULN **Ulaanbaatar** 43.07 49 *ce*P P 06 48 42.1 +0.4
ULN pmax pmax
comp=Z,59nm,0.9s
ULN **Ulaanbaatar** 43.07 49 P P 06 48 42.4 +0.7
ULN **Ulaanbaatar** 43.07 49 P P 06 48 41.4 -0.3
BNI **Bardonecchia** 43.11 307 P P 06 48 42.0 -0.1
BNI **Bardonecchia** 43.11 307 P P 06 48 42.0 -0.1
BNI pmax pmax
comp=Z,193nm,0.8s
ECH **Echery** 43.18 312 P P 06 48 41.9 -0.5
ECH IAmb IAmb 06 48 43.0
comp=Z,96nm,1.0s
ECH **Echery** 43.18 312 P P 06 48 41.9 -0.5
ECH pmax pmax
comp=Z,96nm,1.0s
HFS **Hagfors** 43.28 330 P P 06 48 42.8 -0.2
comp=Z,22nm,0.6s,baz=128,slow=9.6,SNR=80
HFS PP PP 06 50 21.5 -2.1
comp=Z,11nm,0.9s,baz=107,slow=9.5,SNR=4.4
HFS ScP ScP 06 54 19.3 -3.0
comp=Z,4.2nm,0.8s,baz=103,slow=3.3,SNR=3.7
HFS LR LR 07 09 37.6
comp=Z,1μm,21.8s,baz=126,slow=40
comp=Z,22nm,0.6s
TJOU **Tjoern** 43.34 326 *i* P P 06 48 42.9 -0.6
SSRD **Sdr. Stenderup** 43.44 322 *e*P P 06 48 45.0 +0.7
IBBN **Ibbenburen** 43.61 317 *e*P P 06 48 46.3 +0.5
comp=Z,198nm,1.2s,baz=106,slow=8.2
BUG **Bochum--Univer** 43.71 316 *e*P P 06 48 47.1 +0.6
comp=Z,230nm,1.2s,baz=106,slow=8.2
GYA **Guiyang** 43.77 80 P P 06 48 47.5 -0.1
GYA pmax pmax
comp=Z,23nm,0.8s
GYA L L
comp=Z,650nm,21.8s
STRU **Stroemstad** 43.95 328 *i* P P 06 48 47.8 -0.6
MUD **Monsted U'grnd** 44.00 324 *i* P P 06 48 49.3 +0.4
MUD IAmb IAmb 06 48 50.6
comp=Z,38nm,0.6s
HLG **Helgoland** 44.02 320 *e*P P 06 48 47.0 -2.0
comp=Z,146nm,0.8s,baz=106,slow=8.2
WLF **Walferdange** 44.07 313 P P 06 48 49.8 +0.3
WLF **Walferdange** 44.07 313 P P 06 48 49.6 +0.1
WLF IAmb IAmb 06 48 50.9
comp=Z,79nm,0.9s
WLF **Walferdange** 44.07 313 P P 06 48 49.6 +0.1
WLF pmax pmax
comp=Z,79nm,0.9s
WLF **Walferdange** 44.07 313 *d*P P 06 48 49.5 0.0
comp=Z,56nm,1.1s
WLF **Walferdange** 44.07 313 *e*P P 06 48 49.4 -0.1
comp=Z,94nm,1.0s,baz=106,slow=8.2
BTNL **Ternell** 44.24 315 *d*P P 06 48 52.1 +1.1
comp=Z,48nm,1.2s
BTNL *d*PP PcP 06 50 34.9 -0.4
MLSI **Meulaboh, Aceh** 44.26 115 P P 06 48 52.1 +0.6
comp=Z,74nm,1.0s
BHOU **Houvegnez** 44.28 314 *d*P P 06 48 52.0 +0.8
comp=Z,55nm,1.1s
XAN **Xi'an** 44.31 69 ⇑P P 06 48 51.0 -0.8
XAN pmax pmax
comp=Z,74nm,1.1s
XAN pmax pmax
comp=Z,160nm,3.6s
XAN L L
comp=Z,930nm,14.4s
XAN L L
comp=Z,1μm,15.8s
XAN L L
comp=Z,980nm,23.4s
MEM **Membach** 44.32 315 *d*P P 06 48 52.3 +0.7
comp=Z,62nm,1.2s
NC602 **NORSAR Array S** 44.51 330 *e*P P 06 48 51.6 -1.3
OSL **Oslo** 44.54 329 *e*P P 06 48 53.7 +0.6
BEBN **Eben Emael** 44.56 315 *d*P P 06 48 54.2 +0.8
BSTI **Sart Tilman** 44.59 315 *d*P P 06 48 54.5 +0.8
comp=Z,7.9nm,1.0s
BTO2 **Baotou** 44.61 59 *e*P P 06 48 53.8 -0.3
BTO2 S S 06 55 29.8 +0.4
BTO2 pmax pmax
comp=Z,180nm,0.7s
BTO2 pmax pmax
comp=Z,900nm,4.9s
BTO2 L L
comp=Z,2μm,16.1s
BTO2 L L
comp=Z,3μm,16.6s
BTO2 L L
comp=Z,4μm,16.1s
SSB **Saint Sauveur** 44.64 307 P P 06 48 54.1 -0.1
SSB **Saint Sauveur** 44.64 307 P P 06 48 54.1 -0.1
SSB pmax pmax
comp=Z,174nm,0.9s
BCLA **Clavier** 44.73 314 *d*P P 06 48 55.6 +0.8
comp=Z,57nm,1.1s
RCHB **Rochefort** 44.74 314 *d*P P 06 48 55.6 +0.8
comp=Z,82nm,1.1s
NRIK **Noril'sk** 44.76 15 P P 06 48 55.0 +0.2
comp=Z,70nm,0.9s,baz=220,slow=5.9,SNR=90
comp=Z,70nm,0.9s
NRIK **Noril'sk** 44.76 15 *e*P P 06 48 55.5 +0.7
NRIK pmax pmax
comp=Z,70nm,0.9s
NB2 **NORSAR Subarra** 44.79 330 P P 06 48 54.5 -0.7
comp=Z,48nm,1.2s,baz=112,slow=7.9
NB2 **NORSAR Subarra** 44.79 330 P P 06 48 54.5 -0.7
NOA **NORSAR Array B** 44.79 330 P P 06 48 54.3 -0.8
comp=Z,11nm,0.7s,baz=115,slow=7.8,SNR=53
NOA PP PcP 06 50 38.1 +1.1
comp=Z,8.8nm,0.9s,baz=125,slow=11,SNR=4.4
NOA LR LR 07 10 33.6
comp=Z,884nm,21.7s,baz=120,slow=40
comp=Z,11nm,0.7s
VADS **Vadso** 44.83 347 *e*P P 06 48 55.9 +0.6
NAO01 **NORSAR Array S** 44.85 330 P P 06 48 55.6 0.0
BGES **Gesves** 44.86 314 *d*P P 06 48 57.1 +1.2
comp=Z,62nm,1.2s
KONO **Kongsberg** 44.94 328 P P 06 48 55.9 -0.5
KONO **Kongsberg** 44.94 328 *e*P P 06 48 56.1 -0.2
KONO IAmb IAmb 06 48 56.7
comp=Z,53nm,1.2s
KONO *e*S S 06 55 34.4 +0.9
KONO *e*SS SS 06 58 58.4 +3.4
KONO IAMs_20 IAMs_20 07 12 23.7
comp=Z,1μm,21.2s
KONO **Kongsberg** 44.94 328 *de*P P 06 48 56.2 -0.1
KONO pmax pmax
comp=Z,39nm,1.3s
HOMB **Homborsund** 44.96 326 *e*P P 06 48 56.5 +0.1
HOMB IAmb IAmb 06 48 57.3
comp=Z,84nm,1.2s
HOMB *e*SS SS 06 58 59.3 +4.0
HOMB **Homborsund** 44.96 326 *i* P P 06 48 55.8 -0.7
KEV **Kevo** 45.03 346 P P 06 48 57.1 +0.2
KEV **Kevo** 45.03 346 P P 06 48 57.1 +0.2
KEV pmax pmax
comp=Z,108nm,0.8s
BMRD **Maredsous** 45.05 314 *d*P P 06 48 58.1 +0.7
comp=Z,69nm,1.0s
DOU **Dourbes** 45.13 314 *d*P P 06 48 58.6 +0.7
comp=Z,67nm,1.2s
DOU *d*PcP PcP 06 50 38.6 +0.3
ARA0 **ARCESS Array S** 45.20 345 *e*P P 06 48 58.5 +0.3
ARA0 IAmb IAmb 06 48 59.2
comp=Z,45nm,0.9s
ARA0 *e*S S 06 55 41.7 +4.8
ARA0 IAMs_20 IAMs_20 07 11 05.4
comp=Z,1μm,17.2s
ARCES **ARCESS Array B** 45.20 345 P P 06 48 58.5 +0.2
comp=Z,39nm,0.8s,baz=137,slow=8.3,SNR=76
ARCES PP PP 06 50 43.1 -0.8
comp=Z,4.4nm,0.5s,baz=138,slow=9.9,SNR=6.2
ARCES ScP ScP 06 54 26.8 -3.2
comp=Z,13nm,0.8s,baz=170,slow=2.1,SNR=8.1
ARCES LR LR 07 10 48.1
comp=Z,1μm,18.5s,baz=127,slow=40
comp=Z,39nm,0.8s
ARCES **ARCESS Array B** 45.20 345 P P 06 48 58.4 +0.2
ARCES IAmb IAmb 06 48 59.5
comp=Z,40nm,0.8s
ARCES **ARCESS Array B** 45.20 345 *e*P P 06 48 58.7 +0.5
ARCES pmax pmax
comp=Z,33nm,0.7s
KTK1 **Kautokeino** 45.35 344 *e*P P 06 48 59.9 +0.5
KTK1 IAmb IAmb 06 49 00.2
comp=Z,223nm,1.8s
KTK1 *e*S S 06 55 42.1 +3.0
KTK1 IAMs_20 IAMs_20 07 10 50.4
comp=Z,2μm,18.1s
ENH **Enshi** 45.38 74 P P 06 49 00.1 -0.2
ENH IAmb IAmb 06 49 15.7
comp=Z,75nm,1.1s
UCC **Uccle** 45.39 315 *d*P P 06 49 00.6 +0.6
comp=Z,30nm,0.0s
SNART **Snartemo** 45.63 326 *e*P P 06 49 02.5 +0.7
SNART **Snartemo** 45.63 326 *i* P P 06 49 01.6 -0.2
EJON **La Jonquera** 45.74 303 P P 06 49 03.4 +0.4
KCSI **Kotacane, Aceh** 45.80 115 P P 06 49 03.6 -0.1
ETOS **Mallorca** 45.87 299 P P 06 49 05.3 +1.2
HHC **Hu-ho-hao-te** 45.88 59 *e*P P 06 49 04.8 +0.5
HHC sP sP 06 49 14.5 +1.8
HHC PP PP 06 50 52.6 +1.0
HHC S S 06 55 46.5 -1.4
HHC ScS ScS 06 58 56.5 -3.1
HHC pmax pmax
comp=Z,33nm,0.8s
HHC pmax pmax
comp=Z,90nm,3.6s
HHC L L
comp=Z,380nm,13.3s
HHC L L
comp=Z,470nm,13.2s
HHC L L
comp=Z,650nm,13.5s
SKAR **Skarslia** 45.94 329 *e*P P 06 49 04.8 +0.5
SKAR IAmb IAmb 06 49 07.6
comp=Z,31nm,0.8s
SKAR *e*S S 06 55 50.6 +2.6
SKAR IAMs_20 IAMs_20 07 11 01.6
comp=Z,1μm,15.7s
MOR8 **Moi Rana** 46.10 338 *e*P P 06 49 05.4 0.0
MOR8 IAmb IAmb 06 49 05.8
comp=Z,77nm,1.2s
MOR8 *e*S S 06 55 49.6 -0.5
NSS **Namsos** 46.11 335 *e*P P 06 49 06.4 +0.8
NSS IAmb IAmb 06 49 06.4
comp=Z,66nm,0.8s
NSS IAMs_20 IAMs_20 07 08 30.1
comp=Z,2μm,4.4s
DOMB **Dombas** 46.15 331 *e*P P 06 49 06.3 +0.4
DOMB IAmb IAmb 06 49 06.9
comp=Z,140nm,1.6s
DOMB IAMs_20 IAMs_20 07 09 51.9
comp=Z,2μm,34.6s
BLS5 **Blasjo** 46.36 327 *e*P P 06 49 08.9 +1.3
BLS5 IAmb IAmb 06 49 09.7
comp=Z,74nm,1.3s
BLS5 *e*S S 06 55 56.7 +2.8
BLS5 IAMs_20 IAMs_20 07 10 49.3
comp=Z,926nm,20.6s
RAUS **Rausandaksla** 46.38 338 *e*P P 06 49 08.0 +0.4
RAUS IAmb IAmb 06 49 08.3
comp=Z,138nm,1.1s
RAUS IAMs_20 IAMs_20 07 07 48.7
comp=Z,2μm,4.9s
ODD1 **Odda** 46.44 328 *e*P P 06 49 08.8 +0.6
ODD1 IAmb IAmb 06 49 11.0
comp=Z,121nm,1.4s
ODD1 IAMs_20 IAMs_20 07 09 18.8
comp=Z,895nm,20.0s
HAMF **Hammerfest** 46.44 345 *e*P P 06 49 08.6 +0.5
HAMF IAmb IAmb 06 49 09.0
comp=Z,95nm,0.7s
HAMF IAMs_20 IAMs_20 07 11 44.5
comp=Z,2μm,14.1s
JETT **Jettan, Norway** 46.45 343 *e*P P 06 49 08.6 +0.4
JETT IAmb IAmb 06 49 09.2
comp=Z,65nm,0.6s
JETT IAMs_20 IAMs_20 07 11 34.2
comp=Z,2μm,14.2s
FAUS **Fauske** 46.52 339 *e*P P 06 49 09.0 +0.3
FAUS IAmb IAmb 06 49 10.0
comp=Z,46nm,0.8s
FAUS IAMs_20 IAMs_20 07 10 04.7
comp=Z,2μm,4.6s
STOK **Stokkvaagen** 46.67 337 *e*P P 06 49 10.0 +0.1
STOK IAmb IAmb 06 49 11.3
comp=Z,109nm,1.1s
STOK IAMs_20 IAMs_20 07 10 31.7
comp=Z,2μm,4.4s
KONS **Konsvik** 46.73 337 *e*P P 06 49 10.3 0.0
TIY **Taiyuan** 46.75 64 *e*P P 06 49 11.3 +0.2
TIY pmax pmax
comp=Z,62nm,0.7s
TIY L L
comp=Z,400nm,13.3s
TIY L L
comp=Z,440nm,20.2s
TIY L L
comp=Z,510nm,20.2s
VAGH **Vaagaholmen** 46.80 338 *e*P P 06 49 11.2 +0.3
STEI **Steigen** 46.86 340 *e*P P 06 49 12.0 +0.7
STEI IAmb IAmb 06 49 14.7
comp=Z,792nm,2.8s
STEI IAMs_20 IAMs_20 07 11 46.1
comp=Z,2μm,13.9s
KMY **Karmoy** 46.88 326 *e*P P 06 49 12.0 +0.5
KMY IAmb IAmb 06 49 12.7
comp=Z,124nm,1.5s
KMY IAMs_20 IAMs_20 07 11 03.5
comp=Z,866nm,20.1s
TRO **Tromso** 46.88 343 *e*P P 06 49 11.9 +0.5
TRO IAmb IAmb 06 49 12.3

TRO comp=Z,216nm,1.5s IAMs_20 IAMs_20 07 11 47.8

GSI Gunungsitoli 46.99 118 P **P** **06 49 14.8 +1.7**
comp=Z,2µm,21.7s comp=Z,37nm,1.1s

MOL Molde 47.01 331 *e*P **P** **06 49 13.0 +0.4**
HYA Hoyanger 47.08 329 *e*P **P** **06 49 13.5 +0.3**
AKN Aaknes 47.09 331 *e*P **P** **06 49 14.0 +0.7**
KULM Kulim 47.12 111 P **P** **06 49 16.5 +2.4**
comp=Z,29nm,1.4s

PSI Prapat 47.15 115 P **P** **06 49 14.8 +0.3**
PSI pmax pmax
comp=Z,21nm,1.0s

LYN LuoYang 47.15 68 ⇑P **P** **06 49 14.3 +0.2**
LYN pmax pmax
comp=Z,130nm,1.1s

LYN L L
comp=Z,580nm,22.7s

LYN L L
comp=Z,790nm,20.6s

LYN L L
comp=Z,1µm,19.2s

BER Bergen 47.21 328 *e*P **P** **06 49 14.9 +0.8**
RPSI Rantau Prapat 47.21 115 P **P** **06 49 14.8 0.0**
GULI GuiLin 47.30 81 P **P** **06 49 16.8 +1.4**
GULI pmax pmax
comp=Z,13nm,1.1s

GULI L L
comp=Z,540nm,15.2s

GULI L L
comp=Z,280nm,14.6s

GULI L L
comp=Z,400nm,15.2s

ASK Askoy 47.30 328 *e*P **P** **06 49 15.5 +0.6**
LOF Lofoten 47.49 339 *e*P **P** **06 49 15.8 -0.5**
OPO Ambohidratompo 47.51 193 LR LR 07 07 16.1
comp=Z,875nm,21.9s,baz=180,slow=33

EBR Ebro Roquetas 47.58 301 P **P** **06 49 18.4 +1.0**
EBR Ebro Roquetas 47.58 301 P **P** **06 49 18.4 +1.0**
CIT Chita 47.80 44 *e*P **P** **06 49 19.2 +0.2**
CIT *e* 06 51 12.0
CIT pmax pmax
comp=Z,169nm,1.3s

ABPO Ambohimpanom 47.94 193 P **P** **06 49 21.6 +1.1**
ABPO IAmb IAmb 06 49 23.5
comp=Z,56nm,1.8s

ABPO Ambohimpanom 47.94 193 P **P** **06 49 21.6 +1.1**
ABPO pmax pmax
comp=Z,56nm,1.8s

WACR West Acre 47.97 317 *e*P **P** **06 49 20.1 -0.1**
WACR IAmb IAmb 06 49 21.5
comp=Z,89nm,0.8s

HNS HongShan 48.58 64 ⇓P **P** **06 49 25.5 +0.3**
HNS pmax pmax
comp=Z,34nm,1.1s

HNS L L
comp=Z,840nm,17.1s

HNS L L
comp=Z,570nm,21.8s

QIZ Qiongzhong 48.82 89 P **P** **06 49 27.3 0.0**
QIZ S **S** **06 56 31.0 +1.1**
QIZ pmax pmax
comp=Z,30nm,1.1s

QIZ pmax pmax
comp=Z,200nm,3.3s

QIZ L L
comp=Z,210nm,19.2s

QIZ L L
comp=Z,330nm,16.6s

QIZ L L
comp=Z,430nm,19.4s

CART Cartagena 49.03 297 P **P** **06 49 30.2 +1.7**
BOD Bodaibo 49.03 36 *e*P **P** **06 49 27.7 -0.6**
BOD pmax pmax
comp=Z,152nm,1.4s

XLT XiLinHaoTe 49.13 55 *e*P **P** **06 49 30.5 +1.1**
XLT sP sP 06 49 40.0 +2.1
XLT pmax pmax
comp=Z,76nm,1.0s

XLT pmax pmax
comp=Z,200nm,3.7s

XLT L L
comp=Z,900nm,15.2s

XLT L L
comp=Z,1µm,16.5s

JSA Saint Aubin 49.42 312 *e*P **P** **06 49 31.2 -0.2**
JSA IAmb IAmb 06 49 32.5
comp=Z,41nm,0.8s

WHN Wuhan 49.44 73 P **P** **06 49 31.8 0.0**
WHN pmax pmax
comp=Z,350nm,1.9s

BJT Baijiatuau 49.44 60 P **P** **06 49 31.6 -0.1**
BJT IAmb IAmb 06 49 45.6
comp=Z,64nm,1.3s

BJT Baijiatuau 49.44 60 P **P** **06 49 31.6 -0.1**
BJT pmax pmax
comp=Z,64nm,1.3s

BJI2 Beijing 49.45 60 P **P** **06 49 31.5 -0.3**
BJI2 PcP **PcP** **06 50 54.3 +0.5**
BJI2 S **S** **06 56 35.8 -2.4**
BJI2 pmax pmax
comp=Z,18nm,0.9s

BJI2 pmax pmax
comp=Z,84nm,4.6s

BJI2 L L
comp=Z,370nm,17.7s

BJI2 L L
comp=Z,560nm,19.2s

BJI2 L L
comp=Z,780nm,18.2s

LBWR Ladybower, Pea 49.46 318 *e*P **P** **06 49 31.3 -0.4**
LBWR IAmb IAmb 06 49 32.9
comp=Z,25nm,0.6s

HPK Haverah Park 49.46 318 *e*P **P** **06 49 31.5 -0.1**
HPK IAmb IAmb 06 49 33.1
comp=Z,25nm,0.6s

EDMD Edmundbyers 49.77 319 *e*P **P** **06 49 34.0 0.0**
EDMD IAmb IAmb 06 49 35.9
comp=Z,71nm,0.6s

MONM Monmouth 49.97 315 *e*P **P** **06 49 35.3 -0.3**
MONM IAmb IAmb 06 49 36.3
comp=Z,66nm,0.6s

HLM1 Long Mynd 50.07 316 *e*P **P** **06 49 36.2 -0.2**
HLM1 IAmb IAmb 06 49 37.4
comp=Z,26nm,0.7s

MCH1 Michaelchurch 50.10 316 *e*P **P** **06 49 36.3 -0.3**
MCH1 IAmb IAmb 06 49 37.0
comp=Z,40nm,0.6s

LRW Lerwick 50.26 326 *e*P **P** **06 49 37.5 -0.2**
LRW IAmb IAmb 06 49 38.5
comp=Z,32nm,0.7s

FOEL Foel Wylfa 50.30 317 *e*P **P** **06 49 38.2 +0.1**
FOEL IAmb IAmb 06 49 39.1
comp=Z,52nm,0.7s

DRUM Mains of Drumt 50.35 322 *e*P **P** **06 49 38.3 -0.1**
DRUM IAmb IAmb 06 49 40.2
comp=Z,61nm,0.6s

KESW Keswick, Cumbr 50.40 319 *e*P **P** **06 49 38.7 -0.1**
KESW IAmb IAmb 06 49 40.7
comp=Z,24nm,0.7s

UCM Universidad Co 50.46 300 P **P** **06 49 40.6 +1.1**
EKA Eskdalemuir Ar 50.51 320 P **P** **06 49 39.4 -0.3**
comp=Z,7.0nm,0.4s,baz=104,slow=7.1,SNR=113

EKA PP **PP** **06 51 36.7 +1.4**
comp=Z,3.3nm,0.8s,baz=100,slow=10,SNR=2.5

EKA LR LR 07 14 34.7
comp=Z,616nm,21.6s,baz=97,slow=40
comp=Z,7.0nm,0.4s

ESK Eskdalemuir 50.54 320 *e*P **P** **06 49 39.0 -0.8**
ESK IAmb IAmb 06 49 41.0
comp=Z,11nm,0.5s

LLW Llanuwychllyn 50.57 317 *e*P **P** **06 49 40.2 +0.1**
LLW IAmb IAmb 06 49 41.2
comp=Z,16nm,0.7s

DYA Yadsworthy 50.61 314 *e*P **P** **06 49 40.4 0.0**
DYA IAmb IAmb 06 49 41.6
comp=Z,72nm,0.7s

EBER Berja 50.61 296 P **P** **06 49 42.0 +1.1**
PDSI Padang 50.62 117 P **P** **06 49 41.4 +0.4**
comp=Z,30nm,1.2s

TIA Tai'an 50.67 65 P **P** **06 49 41.0 -0.1**
TIA pmax pmax
comp=Z,100nm,0.9s

TIA L L
comp=Z,690nm,17.7s

TIA L L
comp=Z,390nm,17.7s

TIA L L
comp=Z,830nm,24.0s

HOPEN Hopen 50.74 351 *e*P **P** **06 49 41.4 +0.4**
VOI Vohitsoka 50.84 192 P **P** **06 49 43.3 +0.8**
VOI IAmb IAmb 06 49 45.2
comp=Z,64nm,1.1s

EDA Edea 50.85 250 P **P** **06 49 43.0 +0.3**
MCD Coleburn Disti 50.86 323 *e*P **P** **06 49 42.2 0.0**
MCD IAmb IAmb 06 49 44.1
comp=Z,37nm,0.8s

WMELI Melilla 50.91 294 P **P** **06 49 44.7 +1.8**
HTL Hartland 50.98 314 *e*P **P** **06 49 43.1 -0.1**
HTL IAmb IAmb 06 49 44.4
comp=Z,24nm,0.7s

WME Myndd Eilian 51.00 317 *e*P **P** **06 49 43.5 +0.2**
WME IAmb IAmb 06 49 44.4
comp=Z,38nm,0.7s

EQTA Presa de Quent 51.00 297 P **P** **06 49 45.0 +1.2**
ESDC Sonseca Array 51.08 300 P **P** **06 49 44.8 +0.5**
comp=Z,9.6nm,0.6s,baz=73,slow=7.2,SNR=60

ESDC ScP **ScP** **06 54 53.2 -2.3**
comp=Z,0.8nm,0.7s,baz=55,slow=4.9,SNR=2.9

ESDC LR LR 07 15 16.4
comp=Z,397nm,18.3s,baz=62,slow=40
comp=Z,9.6nm,0.6s

ESDC Sonseca Array 51.08 300 P **P** **06 49 44.1 -0.2**
NEWG New Galloway 51.10 320 *e*P **P** **06 49 44.0 0.0**
INVG Invergeldie, C 51.14 321 *e*P **P** **06 49 43.9 -0.4**
INVG IAmb IAmb 06 49 46.0
comp=Z,31nm,0.6s

RSBS Rosebush, Pemb 51.18 316 *e*P **P** **06 49 44.4 -0.3**
RSBS IAmb IAmb 06 49 45.7
comp=Z,30nm,0.7s

ELGU Los Guajares, 51.20 296 P **P** **06 49 46.8 +1.6**
EAB Aberfoyle 51.27 321 *e*P **P** **06 49 45.0 -0.3**
EAB IAmb IAmb 06 49 46.1
comp=Z,25nm,0.6s

BIGH Upper Bighouse 51.34 324 *e*P **P** **06 49 45.5 -0.2**
BIGH IAmb IAmb 06 49 46.3
comp=Z,18nm,0.6s

GAL1 Galloway 51.35 319 *e*P **P** **06 49 45.9 0.0**
GAL1 IAmb IAmb 06 49 47.9
comp=Z,20nm,0.7s

PAB San Pablo 51.39 300 P **P** **06 49 47.1 +0.6**
PAB IAmb IAmb 06 49 48.5
comp=Z,72nm,1.2s

PAB San Pablo 51.39 300 P **P** **06 49 47.2 +0.6**
PAB pmax pmax
comp=Z,72nm,1.2s

LSZ Lusaka 51.55 217 LR LR 07 14 09.2
comp=Z,1µm,19.0s,baz=40,slow=39

LSZ Lusaka 51.55 217 P **P** **06 49 48.8 +0.8**
LSZ Lusaka 51.55 217 P **P** **06 49 48.8 +0.8**
LSZ pmax pmax
comp=Z,55nm,1.6s

EADA Adamuz 51.75 298 P **P** **06 49 50.6 +1.3**
EMAL Malaga-Limoner 51.85 296 P **P** **06 49 50.5 +0.6**
LAWE Loch Awe, Argy 51.87 321 *e*P **P** **06 49 49.7 0.0**
LAWE IAmb IAmb 06 49 50.8
comp=Z,35nm,0.6s

LINV Loch Inver, As 51.97 323 *e*P **P** **06 49 50.1 -0.4**
LINV IAmb IAmb 06 49 51.4
comp=Z,35nm,0.7s

KPL Plockton 52.12 322 *e*P **P** **06 49 51.4 -0.2**
KPL IAmb IAmb 06 49 52.6
comp=Z,17nm,0.7s

CLGH Cloghs, Cushen 52.17 319 *e*P **P** **06 49 51.9 -0.2**
CLGH IAmb IAmb 06 49 53.9
comp=Z,28nm,0.8s

DSB Dublin 52.23 317 P **P** **06 49 52.6 +0.1**
ILTH Belurgan, Co L 52.24 318 P **P** **06 49 52.4 -0.2**
ECAB El Cabril 52.42 298 P **P** **06 49 55.4 +1.1**
IWEX Carrickbyrne, 52.44 316 P **P** **06 49 54.5 +0.4**
HSPB Hornsund (broa 52.58 349 *e*P **P** **06 49 54.9 +0.2**
MDT Midelt 52.74 291 LR LR 07 18 07.5
comp=Z,242nm,18.4s,baz=86,slow=42

ECEU Ceuta 52.76 295 P **P** **06 49 57.1 +0.4**
NJ2 Nanjing 52.87 70 *e*P **P** **06 49 58.0 +0.4**
NJ2 pmax pmax
comp=Z,39nm,0.8s

ECAL Calabor 52.91 303 P **P** **06 49 59.1 +1.3**
PBRG Braganca 52.93 303 *e*P **P** **06 49 59.0 +1.1**
PBRG *i* IAmb IAmb 06 50 02.8
comp=Z,77nm,1.8s

ESPR Espera 52.96 296 P **P** **06 49 58.5 +0.3**
IDGL Inch Island, C 52.98 319 P **P** **06 49 58.1 +0.1**
IFR Ifrane 53.02 292 P **P** **06 50 01.4 +2.5**
CNIL Conil 53.21 296 P **P** **06 50 00.8 +0.7**
MVO Moncorvo 53.22 302 *e*P **P** **06 50 01.2 +1.1**
MVO *i* IAmb IAmb 06 50 02.3
comp=Z,140nm,1.1s

SPA0 Spitsbergen Ar 53.26 350 *e*P **P** **06 50 00.7 +0.9**
SPITS Spitsbergen Ar 53.26 350 P **P** **06 50 00.1 +0.3**
comp=Z,29nm,0.7s,baz=120,slow=9.9,SNR=92

SPITS PP **PP** **06 51 58.8 -0.9**
comp=Z,15nm,0.9s,baz=145,slow=10,SNR=3.5

SPITS LR LR 07 16 33.7
comp=Z,2µm,19.2s,baz=139,slow=40
comp=Z,29nm,0.7s

EMIN Mina Concepcio 53.45 298 P **P** **06 50 02.7 +0.8**
TORD Torodi Ar. Bea 53.58 266 P **P** **06 50 03.0 0.0**
comp=Z,15nm,0.5s,baz=65,slow=6.0,SNR=104

TORD ScP **ScP** **06 55 04.0 -2.7**
comp=Z,2.6nm,1.0s,baz=74,slow=3.4,SNR=3.6

TORD S **S** **06 57 31.3 -4.4**
comp=Z,4.6nm,1.2s,baz=60,slow=14,SNR=8.8
comp=Z,15nm,0.5s

TORD Torodi Ar. Bea 53.58 266 P **P** **06 50 02.1 -0.9**
PBAR Barrancos 53.67 298 P **P** **06 50 04.6 +1.1**
PBAR Barrancos 53.67 298 *e*P **P** **06 50 04.3 +0.9**
PBAR *i* IAmb IAmb 06 50 18.6
comp=Z,108nm,1.7s

MTE Manteigas 53.71 301 *e*P **P** **06 50 05.4 +1.6**
MTE *i* IAmb IAmb 06 50 06.3
comp=Z,131nm,1.1s

MTE *e*LR LR 07 14 12.8
MTE *i* IAMs_20 IAMs_20 07 16 27.7
comp=Z,356nm,20.0s

PVRL Vila Real 53.72 302 *e*P **P** **06 50 05.3 +1.6**
PVRL *i* IAmb IAmb 06 50 06.8
comp=Z,138nm,1.5s

PMRV Marv??o 53.74 300 *e*P **P** **06 50 04.7 +0.8**
PMRV *i* IAmb IAmb 06 50 05.8
comp=Z,54nm,1.0s

PCBR Castelo Branco 53.74 300 *e*P **P** **06 50 05.4 +1.5**
PCBR *i* IAmb IAmb 06 50 06.3
comp=Z,178nm,1.0s

POLO Lamas de Olo 53.77 302 *e*P **P** **06 50 05.6 +1.4**
POLO *i* IAmb IAmb 06 50 06.5
comp=Z,58nm,1.4s

DL2 Dalian 53.78 61 P **P** **06 50 04.0 -0.2**
DL2 *e*S **S** **06 57 39.3 +1.4**
DL2 pmax pmax
comp=Z,140nm,1.3s

DL2 pmax pmax
comp=Z,580nm,4.3s

DL2 L L
comp=Z,930nm,19.0s

DL2 L L
comp=Z,1µm,19.4s

DL2 L L
comp=Z,1µm,18.3s

PCAB Cabril 53.89 303 *e*P **P** **06 50 06.0 +1.0**
PCAB *i* IAmb IAmb 06 50 18.1
comp=Z,132nm,1.5s

PVIS Viseu 53.93 302 *e*P **P** **06 50 07.0 +1.6**
PESTR Estremoz 53.98 299 P **P** **06 50 06.8 +1.1**
PESTR Estremoz 53.98 299 *e*P **P** **06 50 06.4 +0.7**
PESTR *i* IAmb IAmb 06 50 07.5
comp=Z,45nm,1.1s

IGLA Glengowla, Co 54.03 317 P **P** **06 50 05.9 +0.1**
IGLA Glengowla, Co 54.03 317 *e*P **P** **06 50 05.7 0.0**
PGAV Gavieira, Arco 54.04 303 *e*P **P** **06 50 07.8 +1.6**
PGAV *i* IAmb IAmb 06 50 19.5
comp=Z,144nm,1.4s

PSARD Sardoal 54.30 300 *e*P **P** **06 50 09.3 +1.3**
PSARD *i* IAmb IAmb 06 50 12.9
comp=Z,99nm,2.5s

PVAQ Vaqueiros 54.33 297 P **P** **06 50 07.5 -0.8**
PVAQ Vaqueiros 54.33 297 *e*P **P** **06 50 08.1 -0.2**
PVAQ *i* IAmb IAmb 06 50 29.0
comp=Z,51nm,1.4s

PARRA Arraiolos 54.34 299 *e*P **P** **06 50 09.0 +0.7**
PARRA *i* IAmb IAmb 06 50 40.7
comp=Z,34nm,1.5s

PBEJ Beja 54.34 298 *e*P **P** **06 50 09.2 +0.9**
PBEJ *i* IAmb IAmb 06 50 14.0
comp=Z,57nm,1.4s

EVO Evora 54.36 299 P **P** **06 50 09.7 +1.2**
EVO Evora 54.36 299 *e*P **P** **06 50 09.6 +1.1**
EVO *i* IAmb IAmb 06 50 25.7
comp=Z,82nm,1.4s

PTO Porto 54.40 302 *e*P **P** **06 50 10.5 +1.8**
PTO *i* IAmb IAmb 06 50 13.3
comp=Z,144nm,1.6s

KBS Kingsbay 54.42 350 *ce*P **P** **06 50 08.1 -0.1**
KBS pmax pmax
comp=Z,57nm,1.0s

KBS Kingsbay 54.42 350 *i* P **P** **06 50 08.6 +0.4**
PMTG Montargil 54.44 300 *e*P **P** **06 50 09.4 +0.4**
PMTG *i* IAmb IAmb 06 50 14.5
comp=Z,56nm,1.6s

PCAS Casmilo, Conde 54.49 301 *e*P **P** **06 50 10.9 +1.6**
PCAS *i* IAmb IAmb 06 50 11.7
comp=Z,123nm,0.9s

PCVE Castro Verde 54.54 298 *e*P **P** **06 50 10.4 +0.6**
PCVE *i* IAmb IAmb 06 50 24.4
comp=Z,52nm,1.2s

VAL Valentia 54.58 315 P **P** **06 50 10.7 +0.9**
VAL Valentia 54.58 315 P **P** **06 50 10.4 +0.6**
MOE Montemor 54.63 299 *e*P **P** **06 50 11.8 +1.4**
MOE *i* IAmb IAmb 06 50 13.3
comp=Z,69nm,1.3s

MESJ Messejana 54.65 298 *e*P **P** **06 50 11.3 +0.7**
MESJ IAmb IAmb 06 50 15.0
comp=Z,86nm,1.7s

MESJ Messejana 54.65 298 *e*P **P** **06 50 11.2 +0.7**
MESJ *i* IAmb IAmb 06 50 45.0
comp=Z,46nm,1.6s

MESJ Messejana 54.65 298 *e*P **P** **06 50 11.3 +0.7**
PSBE So Bento 54.80 300 *e*P **P** **06 50 12.3 +0.6**
PSBE *i* IAmb IAmb 06 50 17.0
comp=Z,146nm,1.9s

SNY Shenyang 54.81 57 ⇓P **P** **06 50 11.0 -0.6**
SNY S S 06 57 42.5 -9.2
SNY pmax pmax
comp=Z,29nm,0.9s

SNY pmax pmax
comp=Z,430nm,3.6s

SNY L L
comp=Z,640nm,15.8s

SNY L L
comp=Z,850nm,18.9s

SNY L L
comp=Z,820nm,19.0s

AVE Averroes 54.93 292 P **P** **06 50 14.0 +1.3**
MORF Marmelete 55.08 298 *e*P **P** **06 50 15.8 +2.1**
MORF *i* IAmb IAmb 06 50 19.1
comp=Z,53nm,1.6s

KSANE Kasane 55.25 218 *i* P **P** **06 50 15.3 +0.2**
PFVI Vila Bisbo 55.25 297 P **P** **06 50 16.1 +1.2**
PFVI Vila Bisbo 55.25 297 *e*P **P** **06 50 15.8 +0.9**
PFVI *i* IAmb IAmb 06 50 29.6
comp=Z,127nm,1.2s

PMAFR Mafra 55.27 300 *e*P **P** **06 50 16.5 +1.5**
TIO Tiouine 55.38 290 P **P** **06 50 17.4 +1.3**
MDSI Maura Dua 55.73 118 P **P** **06 50 20.9 +2.3**
LWLI Liwa 55.97 119 P **P** **06 50 22.0 +1.5**
comp=Z,84nm,0.7s

ZEA Zeya 56.16 42 *e*P **P** **06 50 21.4 +0.3**
ZEA pmax pmax
comp=Z,200nm,2.3s

ZEA pmax pmax
comp=N,20nm,0.8s

ZEA pmax pmax
comp=E,40nm,0.9s

ZEA pmax pmax
comp=Z,80nm,0.9s

BROLN Tlhalogang 56.88 214 *i* P **P** **06 50 26.6 -0.1**
SSLB Suanglung 56.94 79 P **P** **06 50 27.7 +0.4**
BNX BinXian 57.00 52 ⇓P **P** **06 50 27.0 -0.3**
BNX pmax pmax
comp=Z,45nm,1.0s

YAK Yakutsk 57.33 32 LR LR 07 17 31.5
comp=Z,2µm,20.2s,baz=262,slow=38

YAK Yakutsk 57.33 32 *c* *i*P **P** **06 50 27.7 -1.6**
YAK *e**PP **pP** **06 50 30.9 -4.6**
YAK *e* 06 51 21.8
YAK *e* 06 52 34.9
YAK *e*S **S** **06 58 24.4 -0.2**
YAK *e**SS **pS** **06 58 29.8 -2.4**
YAK *e* 07 00 12.2
YAK *e*SS **SS** **07 02 14.9 +1.3**
YAK pmax pmax
comp=Z,11nm,1.0s

YAK pmax pmax
comp=E,9.0nm,0.9s

YAK pmax pmax
comp=Z,69nm,1.3s

YAK pmax pmax
comp=N,38nm,2.2s

YAK pmax pmax
comp=E,52nm,2.5s

YAK smax smax
comp=N,20nm,1.6s

YAK smax smax
comp=E,15nm,1.0s

YAK MLR MLR
comp=Z,2µm,21.0s

YAK MLR MLR
comp=E,2µm,22.0s

YAK MLR MLR
comp=N,316nm,19.0s

TIXI Tiksi 57.72 21 LR LR 07 18 29.1
comp=N,2µm,18.0s,baz=299,slow=39

TIXI Tiksi 57.72 21 P **P** **06 50 31.6 -0.3**
TIXI Tiksi 57.72 21 *c* *i*P **P** **06 50 31.4 -0.5**
TIXI pmax pmax
comp=Z,186nm,1.7s

TIXI MLR MLR
comp=Z,2µm,17.0s

SBUM Sibu 58.35 106 P **P** **06 50 37.2 0.0**
SBUM Sibu 58.35 106 P **P** **06 50 37.1 -0.1**
MDJ Mudanjiang 58.70 53 P **P** **06 50 38.3 -1.0**
MDJ pP sP 06 50 49.3 +1.5
MDJ sP pP 06 50 54.5 +9.0
MDJ S **S** **06 58 45.8 +2.6**
MDJ pmax pmax
comp=Z,17nm,1.6s

MDJ L L
comp=Z,640nm,13.9s

MDJ L L
comp=Z,500nm,14.6s

MDJ L L
comp=Z,1µm,19.6s

KSAR Wonju Array Be 58.90 61 P **P** **06 50 40.2 -0.5**
KSAR Wonju Array Be 58.90 61 P **P** **06 50 40.2 -0.5**
KSRS Korea Array 58.92 61 P **P** **06 50 40.1 -0.8**
comp=Z,25nm,0.7s,baz=277,slow=6.8,SNR=38

KSRS LR LR 07 19 25.3
comp=Z,669nm,19.3s,baz=270,slow=39
comp=Z,25nm,0.7s

KLR Kul'dur 59.41 47 LR LR 07 18 50.2
comp=Z,1µm,20.6s,baz=280,slow=38

KLR Kul'dur 59.41 47 *ce*P **P** **06 50 43.1 -1.0**
KLR pmax pmax
comp=Z,10.0nm,1.0s

KLR MLR MLR
comp=Z,1µm,20.0s

DAG Danmarks Havn 59.49 345 *i* P **P** **06 50 43.5 -0.6**
DAG IAmb IAmb 06 50 45.1
comp=Z,35nm,1.0s

LPHEP Lephephe 59.51 214 *i* P **P** **06 50 45.4 +0.3**
DBG Daneborg 59.65 342 *i* P **P** **06 50 46.3 +1.0**
DBG IAmb IAmb 06 50 47.2
comp=Z,22nm,1.0s

LEM Lembang 59.86 118 LR LR 07 19 48.0
comp=Z,188nm,18.3s,baz=144,slow=39

NOR Nord 59.90 351 *i* P **P** **06 50 47.0 0.0**
PSTR Posyet 59.94 55 *de*P **P** **06 50 48.0 +0.2**
BORG Borgarnes 59.95 331 LR LR 07 20 49.1
comp=Z,244nm,19.5s,baz=87,slow=40

SCO Scoresbysund 60.05 338 P **P** **06 50 49.0 +0.9**
SCO IAmb IAmb 06 50 50.5
comp=Z,38nm,1.0s

SCO Scoresbysund 60.05 338 P **P** **06 50 49.0 +0.9**
SCO pmax pmax
comp=Z,38nm,1.0s

SCO Scoresbysund 60.05 338 *i* P **P** **06 50 49.4 +1.3**

KDWAN **Kaudwane** 60.12 215 *i* P P 06 50 49.3 0.0
GRTLG **Ghanzi** 60.29 219 *i* P P 06 50 51.4 +0.8
USRK **Ussuriysk Ar.** 60.47 53 P P 06 50 50.4 -1.0
comp=Z,12nm,0.7s,baz=278,slow=6.2,SNR=12
comp=Z,12nm,0.7s
TSUM **Tsumeb** 60.73 224 LR LR 07 19 42.6
comp=Z,1μm,18.6s,baz=36,slow=38
KGCAE **Kacgae** 60.96 217 *i* P P 06 50 55.3 +0.2
KGCAE **Kacgae** 60.96 217 P P 06 50 56.5 +1.5
LBTB **Lobatse** 61.03 213 LR LR 07 20 16.5
comp=Z,393nm,19.4s,baz=28,slow=39
LBTB **Lobatse** 61.03 213 P P 06 50 56.4 +0.9
LBTB IAmb IAmb 06 50 58.0
comp=Z,30nm,0.8s
LBTB **Lobatse** 61.03 213 P P 06 50 56.4 +0.9
LBTB pmax pmax
comp=Z,29nm,0.9s
MAKGR **Makgori** 62.09 213 *i* P P 06 51 02.0 -0.6
MAKGR **Makgori** 62.09 213 P P 06 51 03.6 +1.0
MAKGR IAmb IAmb 06 51 04.6
comp=Z,33nm,0.8s
GRNR **Gornyy** 62.11 45 *i* P P 06 51 02.0 -0.5
GRNR pmax pmax
comp=Z,10.0nm,0.9s
GRNR MLR MLR
comp=E,450nm,15.0s
GRNR MLR MLR
comp=N,370nm,12.0s
GRNR MLR MLR
comp=Z,620nm,13.0s
KOOLE **Kule** 62.16 219 *i* P P 06 51 02.0 -1.2
KOOLE **Kule** 62.16 219 P P 06 51 04.3 +1.0
KOOLE IAmb IAmb 06 51 06.0
comp=Z,32nm,0.8s
DBIC **Dimbokro** 62.24 262 P P 06 51 04.0 +0.1
comp=Z,3.9nm,0.4s,baz=77,slow=6.2,SNR=9.6
DBIC S S 06 59 25.5 -3.8
comp=Z,6.6nm,1.1s,baz=342,slow=19,SNR=2.7
DBIC LR LR 07 21 02.0
comp=Z,610nm,18.9s,baz=76,slow=39
comp=Z,3.9nm,0.4s
DBIC **Dimbokro** 62.24 262 P P 06 51 04.2 +0.3
DBIC **Dimbokro** 62.24 262 P P 06 51 04.2 +0.3
DBIC pmax pmax
comp=Z,25nm,1.2s
JNU **Nakatsue** 62.40 65 LR LR 07 22 20.8
comp=Z,348nm,18.9s,baz=288,slow=40
PMOZ **Porto Moniz, M** 62.98 294 P P 06 51 09.3 +0.6
SNJI **Sawahan-Nganju** 63.70 116 P P 06 51 14.0 +0.3
BOSA **Boshof** 64.25 211 P P 06 51 17.3 +0.3
comp=Z,26nm,0.9s,baz=37,slow=6.7,SNR=16
BOSA LR LR 07 20 44.3
comp=Z,356nm,19.2s,baz=32,slow=37
comp=Z,26nm,0.9s
BOSA **Boshof** 64.25 211 P P 06 51 17.7 +0.7
BOSA IAmb IAmb 06 51 18.8
comp=Z,42nm,1.1s
BOSA **Boshof** 64.25 211 P P 06 51 17.7 +0.7
BOSA pmax pmax
comp=Z,42nm,1.1s
JMN **Monobe** 64.61 64 P P 06 51 19.0 -0.3
SUMG **Summit** 64.99 341 P P 06 51 22.2 +0.6
SUMG **Summit** 64.99 341 P P 06 51 22.4 +0.8
SUMG **Summit** 64.99 341 P P 06 51 22.4 +0.8
SUMG pmax pmax
comp=Z,89nm,0.8s
SUMG **Summit** 64.99 341 *i* P P 06 51 22.2 +0.6
SUMG IAmb IAmb 06 51 23.4
comp=Z,66nm,0.9s
TYV **Tymovskoe** 65.93 44 *eP* P 06 51 27.7 +0.1
TYV pmax pmax
comp=Z,200nm,4.9s
TYV pmax pmax
comp=Z,38nm,1.0s
MPSI **Mapaga** 66.00 103 P P 06 51 29.2 +0.7
comp=Z,2μmcomp=Z,57nm,1.1s
TOLI2 **Tolitoli** 66.37 102 P P 06 51 31.4 +0.5
NEEM **North Greenlan** 66.50 347 *i* P P 06 51 31.1 0.0
ANGG **Ammassalik, Gr** 66.58 333 P P 06 51 31.5 +0.1
ANGG IAmb IAmb 06 51 32.7
comp=Z,33nm,0.7s
MMSI **Mamuju** 66.73 107 P P 06 51 32.9 -0.3
MJB9 **Matsu-Tunnel** 67.08 60 P P 06 51 34.8 -0.4
MJB9 IAmb IAmb 06 51 46.7
comp=Z,28nm,0.9s
MAJO **Matsushiro** 67.08 60 P P 06 51 34.2 -1.0
MAJO IAmb IAmb 06 51 45.7
comp=Z,28nm,0.9s
MAJO **Matsushiro** 67.08 60 *ceP* P 06 51 33.5 -1.7
MAJO pmax pmax
comp=Z,18nm,1.0s
MJAR **Matsushiro Arr** 67.08 60 P P 06 51 34.0 -1.3
comp=Z,9.0nm,0.9s,baz=288,slow=8.4,SNR=15
MJAR LR LR 07 24 47.8
comp=Z,235nm,18.4s,baz=294,slow=39
comp=Z,9.0nm,0.9s
MJAR **Matsushiro Arr** 67.08 60 P P 06 51 34.6 -0.6
MJAR IAmb IAmb 06 51 46.1
comp=Z,60nm,1.6s
MJAR **Matsushiro Arr** 67.08 60 P P 06 51 34.6 -0.6
MJAR pmax pmax
comp=Z,60nm,1.7s
YSS **Yuzhno-Sakhali** 67.10 48 P P 06 51 33.9 -1.2
YSS **Yuzhno-Sakhali** 67.10 48 *ceP* P 06 51 33.9 -1.2
YSS pmax pmax
comp=Z,77nm,1.0s
YSS MLR MLR
comp=Z,1μm,20.0s
MJA0 **Matsu Arr-Jizo** 67.11 60 *eP* P 06 51 34.3 -1.1
MJA0 pmax pmax
comp=Z,9.0nm,0.9s
SEY **Seymchan** 67.57 30 *ceP* P 06 51 37.8 0.0
SEY pmax pmax
comp=Z,59nm,0.7s
SEY MLR MLR
comp=Z,2μm,17.0s
DAV **Davao City (W)** 67.70 94 LR LR 07 24 43.0
comp=Z,74nm,19.0s,baz=336,slow=39
JTM **Tenmabayashi** 67.84 55 P P 06 51 38.4 -1.5
ASAJ **Asahikawa** 67.86 51 LR LR 07 24 25.7
comp=Z,983nm,19.2s,baz=280,slow=39
ASAJ **Asahikawa** 67.86 51 P P 06 51 38.8 -1.2
ASAJ pmax pmax
comp=Z,31nm,1.0s
JKA **Kamikawa-asahi** 67.86 51 P P 06 51 38.8 -1.1
JKA IAmb IAmb 06 51 50.1
comp=Z,31nm,1.0s
MA2 **Magadan** 67.87 33 LR LR 07 23 55.5
comp=Z,639nm,19.5s,baz=287,slow=38
MA2 **Magadan** 67.87 33 *ceP* P 06 51 39.0 -0.8
MA2 pmax pmax
comp=Z,33nm,1.7s
MA2 MLR MLR
comp=Z,800nm,16.0s
MA2 **Magadan** 67.87 33 P P 06 51 38.9 -0.8
comp=Z,46nm,1.1s
MKS **Makassar** 68.55 109 P P 06 51 44.8 +0.1
comp=Z,1μmcomp=Z,109nm,1.1s
KAPI **Kappang** 68.68 108 LR LR 07 22 49.8
comp=Z,214nm,21.7s,baz=292,slow=37
KAPI **Kappang** 68.68 108 P P 06 51 45.8 +0.3
KAPI IAmb IAmb 06 51 46.8
comp=Z,44nm,1.2s
KAPI **Kappang** 68.68 108 *c iP* P 06 51 45.3 -0.2
KAPI pmax pmax
comp=Z,37nm,1.1s
KAPI **Kappang** 68.68 108 P P 06 51 45.1 -0.4
comp=Z,19nm,1.2s
KULLO **Kullorsuaq** 69.14 345 *i* P P 06 51 47.5 +0.1
SUR **Sutherland** 69.47 212 LR LR 07 25 24.1
comp=Z,316nm,20.3s,baz=24,slow=38
SAATT **Saattut** 69.50 340 *i* P P 06 51 49.9 +0.2
NUUG **Nuugaatsiaq** 69.62 341 *i* P P 06 51 50.2 -0.2
UPNV **Upernavik** 69.80 343 *i* P P 06 51 52.0 +0.4
BSSI **Bau Bau, Buton** 69.90 109 P P 06 51 52.2 -0.9
comp=Z,670nmcomp=Z,61nm,0.9s
SAQQ **Saqqaq** 69.97 340 *i* P P 06 51 52.3 -0.3
TULEG **Thule** 70.36 348 *i* P P 06 51 54.7 -0.2
TULEG IAmb IAmb 06 51 55.6
comp=Z,111nm,0.7s
BILL **Bilibino** 70.90 22 P P 06 51 58.8 +0.5
BILL IAmb IAmb 06 51 59.9
comp=Z,60nm,1.0s
BILL **Bilibino** 70.90 22 *c iP* P 06 51 58.4 +0.1
BILL pmax pmax
comp=Z,68nm,1.0s
BILL MLR MLR
comp=Z,1μm,16.0s
SFJD **Kangerlussuaq** 70.92 337 LR LR 07 25 17.7
comp=Z,642nm,20.2s,baz=58,slow=38
SFJD **Kangerlussuaq** 70.92 337 *i* P P 06 51 57.4 -1.0
SANI **Sanana** 72.45 102 P P 06 52 08.2 -0.3
SANI **Sanana** 72.45 102 P P 06 52 07.8 -0.7
comp=Z,53nm,1.1s
JCJ **Chichijima** 73.67 68 LR LR 07 29 25.8
comp=Z,230nm,19.5s,baz=134,slow=40
PET **Petropavlovsk** 74.41 38 *eP* P 06 52 25.9 +6.4
PET *e* 06 55 14.0
PET *eS* S 07 01 58.3 +5.2
PET MLR MLR
comp=Z,600nm,20.0s
BATI **Baumata** 74.73 111 LR LR 07 27 35.9
comp=Z,581nm,21.3s,baz=328,slow=38
BATI **Baumata** 74.73 111 P P 06 52 21.8 -0.2
POIN **Pond Inlet** 74.81 347 P P 06 52 21.2 -0.2
SOEI **Soe** 74.99 110 P P 06 52 24.3 +0.7
SOEI **Soe** 74.99 110 P P 06 52 22.6 -1.0
SOEI **Soe** 74.99 110 P P 06 52 23.4 -0.2
KRAI **Karang Ratu** 75.16 102 P P 06 52 24.5 +0.1
comp=Z,28nm,0.7s
RES **Resolute Bay** 75.73 353 LR LR 07 29 24.2
comp=Z,769nm,21.7s,baz=18,slow=38
RES **Resolute Bay** 75.73 353 P P 06 52 26.8 +0.1
RES **Resolute Bay** 75.73 353 P P 06 52 26.8 +0.1
RES pmax pmax
comp=Z,17nm,1.0s
SWI **Sorong** 76.44 98 P P 06 52 32.0 +0.2
comp=Z,49nm,1.0s
SIJI **Sorong** 76.45 98 LR LR 07 32 02.7
comp=Z,57nm,18.6s,baz=176,slow=40
SIJI **Sorong** 76.45 98 P P 06 52 31.5 -0.3
comp=Z,724nmcomp=Z,44nm,0.9s
A21K **Barrow** 77.93 11 P P 06 52 39.7 +0.6
baz=330,SNR=88
A19K **Wainwright** 78.10 12 P P 06 52 40.7 +0.6
baz=326
PSA00 **Pilbara Seismi** 78.19 122 P P 06 52 41.1 -0.3
ILON **Igloolik, Nuna** 78.22 346 P P 06 52 40.2 -0.5
ILON IAmb IAmb 06 52 41.7
comp=Z,62nm,1.0s
FAKI **Fak Fak** 78.30 100 P P 06 52 42.5 +0.3
FAKI **Fak Fak** 78.30 100 P P 06 52 42.3 +0.1
comp=Z,895nmcomp=Z,72nm,1.4s
A22K **Sinclair Lake** 78.47 10 P P 06 52 42.8 +0.6
baz=331
C16K **Lisburne Hills** 78.78 15 P P 06 52 43.7 -0.2
baz=323
FRB **Frobisher Bay** 78.90 338 LR LR 07 29 35.7
comp=Z,320nm,21.8s,baz=60,slow=37
B20K **Meade River** 78.98 11 P P 06 52 45.3 +0.3
baz=330
C17K **DeLong Mountai** 79.10 14 P P 06 52 45.8 +0.1
baz=324,SNR=128
B22K **Teshekpuk Lake** 79.30 10 P P 06 52 47.2 +0.5
baz=333,SNR=88
C19K **Lookout Ridge** 79.31 13 P P 06 52 47.4 +0.5
baz=328
C18K **Utukok River** 79.37 13 P P 06 52 47.2 -0.1
baz=326
RDOG **Red Dog Mine** 79.50 14 P P 06 52 47.3 -0.6
RDOG IAmb IAmb 06 52 48.8
comp=Z,58nm,1.2s
RDOG **Red Dog Mine** 79.50 14 P P 06 52 47.6 -0.3
baz=325,SNR=13
B21K **Ikpikpuk River** 79.75 11 P P 06 52 49.6 +0.5
baz=332,SNR=48
D17K **Noatak River** 79.76 15 P P 06 52 49.0 -0.2
baz=325,SNR=108
A36M **Sachs Harbour** 80.04 1 P P 06 52 50.7 0.0
baz=358,SNR=172
D19K **Kuna River** 80.11 12 P P 06 52 51.1 -0.1
baz=329,SNR=91
C21K **Knifeblade Rid** 80.13 11 P P 06 52 51.6 +0.3
baz=332,SNR=26
C23K **Itkillik River** 80.18 9 P P 06 52 52.3 +0.8
baz=335,SNR=78
D20K **Etivluk River** 80.20 12 P P 06 52 51.8 0.0
baz=330,SNR=38
TNA **Tin City** 80.29 17 P P 06 52 51.8 -0.4
TNA **Tin City** 80.29 17 P P 06 52 52.1 -0.1
baz=321,SNR=15
E18K **Tukpahlearik C** 80.52 14 P P 06 52 53.3 -0.1
baz=327,SNR=92
E17K **Hotham Inlet** 80.54 14 P P 06 52 53.2 -0.3
baz=326,SNR=45
C24K **Franklin Bluff** 80.55 9 P P 06 52 54.2 +0.7
baz=337
GAMB **Gambell** 80.58 20 P P 06 52 52.9 -0.8
baz=318
E20K **Nigu River** 80.68 12 P P 06 52 54.2 -0.1
baz=331
F14K **Arctic Creek** 80.77 17 P P 06 52 55.2 +0.4
baz=322
C26K **Camden Bay** 80.84 8 P P 06 52 55.7 +0.7
baz=340,SNR=23
E21K **Killik River** 80.91 11 P P 06 52 55.1 -0.4
baz=333
D23K **Nanushuk River** 80.96 10 P P 06 52 56.2 +0.5
baz=335,SNR=42
F15K **North Star Dit** 81.01 16 P P 06 52 56.3 +0.2
baz=324,SNR=60
D24K **Happy Valley** 81.06 9 P P 06 52 56.6 +0.3
baz=337
E19K **Redstone River** 81.18 13 P P 06 52 56.5 -0.4
baz=330,SNR=58
F17K **Baldwin Pennin** 81.20 15 P P 06 52 57.0 0.0
baz=326,SNR=41
D25K **Kavik River** 81.23 8 P P 06 52 57.7 +0.5
baz=339,SNR=62
C27K **Jago River** 81.26 7 P P 06 52 58.2 +0.8
baz=342,SNR=65
F18K **Selawik** 81.42 14 P P 06 52 57.8 -0.3
baz=328,SNR=71
TOLK **Toolik Lake Re** 81.42 10 P P 06 52 58.8 +0.5
baz=336,SNR=25
E22K **Anaktuvuk Pass** 81.54 11 P P 06 52 58.9 0.0
E22K IAmb IAmb 06 53 11.0
comp=Z,53nm,1.4s
E22K **Anaktuvuk Pass** 81.54 11 P P 06 52 59.0 0.0
baz=334,SNR=29
F19K **Shaleruckik Mo** 81.61 13 P P 06 52 58.6 -0.6
baz=329
GUMO **Guam** 81.72 79 LR LR 07 31 59.3
comp=Z,85nm,20.4s,baz=85,slow=38
G15K **Niukluk** 81.74 16 P P 06 52 59.9 -0.1
baz=324,SNR=28
ANM **Nome** 81.75 17 P P 06 53 00.1 +0.2
baz=323,SNR=34
G16K **Koyuk River** 81.82 16 P P 06 53 00.5 +0.2
baz=326
F20K **Avaraart Lake** 81.82 12 P P 06 52 59.9 -0.4
baz=331,SNR=34
KNRA **Kununurra** 81.85 113 P P 06 53 02.1 +0.9
KNRA IAmb IAmb 06 53 15.5
comp=Z,65nm,1.1s
D27M **Malcolm River** 81.91 6 P P 06 53 01.4 +0.5
baz=344
E23K **Chandalar** 81.95 10 P P 06 53 01.5 +0.3
baz=336,SNR=54
D28M **Stokes Point** 82.04 6 P P 06 53 01.9 +0.5
baz=346,SNR=9.2
F22K **John River** 82.05 11 P P 06 53 02.1 +0.5
baz=334
F21K **Alatna River** 82.08 12 P P 06 53 01.7 0.0
baz=333,SNR=8.9
E24K **Your Creek** 82.11 9 P P 06 53 02.3 +0.5
baz=337,SNR=71
G17K **Kiwalik Mounta** 82.13 15 P P 06 53 01.7 -0.3
baz=327,SNR=24
G18K **Tagagawik** 82.23 14 P P 06 53 01.8 -0.8
baz=329,SNR=35
MTN **Manton Dam** 82.33 109 P P 06 53 04.2 +0.3
G19K **Purcell Mounta** 82.35 13 P P 06 53 02.9 -0.3
baz=330,SNR=51
E25K **Arctic Village** 82.46 8 P P 06 53 04.0 +0.3
baz=340,SNR=85
H16K **Elim** 82.47 16 P P 06 53 03.8 0.0
baz=326,SNR=20
SHEM **Shemya Is, Ala** 82.51 33 LR LR 07 33 54.6
comp=Z,583nm,18.4s,baz=296,slow=39
COLD **Coldfoot** 82.63 10 P P 06 53 04.7 +0.2
COLD IAmb IAmb 06 53 06.0
comp=Z,40nm,1.0s
COLD **Coldfoot** 82.63 10 P P 06 53 04.7 +0.2
baz=336,SNR=45
E28M **Babbage River** 82.67 6 P P 06 53 05.1 +0.3
baz=345,SNR=34
G22K **Bettles** 82.69 11 P P 06 53 05.0 +0.2
baz=335
C36M **Paulatuk** 82.70 0 P P 06 53 04.2 -0.6
baz=359,SNR=60
G21K **Allakaket** 82.71 12 P P 06 53 04.6 -0.4
baz=333
F24K **Squaw Lake** 82.71 9 P P 06 53 05.5 +0.5
baz=338
H17K **Granite Mounta** 82.77 15 P P 06 53 05.2 -0.1
baz=328,SNR=17
E27K **Coleen River** 82.87 7 P P 06 53 06.0 +0.2
baz=343,SNR=31
H18K **Honhosa River** 82.93 14 P P 06 53 06.0 -0.2
baz=329,SNR=32
F25K **Christian Rive** 82.95 9 P P 06 53 06.9 +0.6
baz=340,SNR=18
H19K **Roundabout Mou** 83.01 13 P P 06 53 06.4 -0.1
baz=331
E29M **Blow River** 83.03 6 P P 06 53 06.8 +0.2
baz=347,SNR=27
F26K **Sheenjek River** 83.05 8 P P 06 53 07.2 +0.4
baz=341,SNR=28
G23K **Bananza Creek** 83.13 11 P P 06 53 07.5 +0.3
baz=336,SNR=32
H20K **Anotleneega Mo** 83.36 13 P P 06 53 08.2 -0.2
baz=332,SNR=31
NWAO **Narrogin (SRO)** 83.37 133 LR LR 07 25 54.1
comp=Z,163nm,21.6s,baz=288,slow=32
INK **Inuvik** 83.43 4 LR LR 07 38 05.6
comp=Z,159nm,18.0s,baz=347,slow=41
INK **Inuvik** 83.43 4 P P 06 53 08.4 -0.2
baz=351,SNR=25
I17K **Unalakleet** 83.48 16 P P 06 53 09.4 +0.5
baz=327,SNR=23
G24K **Hadweenzic Riv** 83.53 10 P P 06 53 09.9 +0.7
baz=338,SNR=59
F28M **Old Crow** 83.60 6 P P 06 53 09.7 +0.1
baz=345,SNR=35
GCSA **Galena City Sc** 83.61 14 P P 06 53 09.8 +0.2
baz=330,SNR=20
H21K **Melozitna Rive** 83.61 12 P P 06 53 09.9 +0.2
baz=334
H22K **Ishtalitna Cre** 83.65 11 P P 06 53 10.4 +0.6
baz=335,SNR=53
G25K **Bearman Lake** 83.67 9 P P 06 53 10.7 +0.8
baz=340,SNR=12
J14K **Nanvaranak Lak** 83.69 18 P P 06 53 10.4 +0.3
baz=325
G26K **Porcupine Rive** 83.80 8 P P 06 53 11.0 +0.4
baz=342,SNR=11
F30M **Barrier River** 83.96 5 P P 06 53 11.6 +0.2
baz=349
FYU **Fort Yukon** 83.97 9 P P 06 53 12.0 +0.5
J16K **Anvik River** 84.01 16 P P 06 53 12.1 +0.3
baz=327,SNR=30
I20K **Naaghedeneel** 84.06 13 P P 06 53 12.3 +0.4
baz=332
K13K **Kusilvak Mount** 84.06 18 P P 06 53 12.0 0.0
baz=324,SNR=11
G27K **Doyon Drig** 84.19 7 P P 06 53 13.2 +0.6
baz=343,SNR=47
I21K **Tanana** 84.19 12 P P 06 53 12.9 +0.3
baz=334
F31M **Tsiigehtchic** 84.27 4 P P 06 53 12.9 0.0
baz=350,SNR=57
H24K **Noodor Dome** 84.28 10 P P 06 53 13.6 +0.5
baz=338
J17K **VABM Dome** 84.28 16 P P 06 53 13.2 +0.1
baz=328
SCHQ **Schefferville** 84.35 331 P P 06 53 12.8 -0.9
comp=Z,14nm,0.6s,baz=44,slow=6.0,SNR=30
SCHQ LR LR 07 32 12.7
comp=Z,148nm,20.2s,baz=39,slow=37
comp=Z,14nm,0.6s
SCHQ **Schefferville** 84.35 331 P P 06 53 13.2 -0.4
G29M **Pine Creek** 84.46 6 P P 06 53 14.0 0.0
baz=347
J19K **Poorman** 84.53 14 P P 06 53 14.6 +0.2
baz=331
G30M **tAoh Zrig Nji** 84.55 5 P P 06 53 14.1 -0.3
baz=348,SNR=52
MLY **Manley** 84.55 12 P P 06 53 14.6 +0.1
baz=336,SNR=15
K15K **Wolf Creek Mou** 84.60 17 P P 06 53 15.3 +0.5
baz=326,SNR=14
J20K **Nowinta River** 84.67 13 P P 06 53 15.5 +0.4
baz=333
I23K **Minto, Yukon-K** 84.68 11 P P 06 53 15.3 +0.2
baz=337,SNR=23
H27K **Steamboat Moun** 84.76 7 P P 06 53 16.1 +0.6
baz=344,SNR=36
J18K **Innoko River** 84.76 15 P P 06 53 15.6 +0.1
baz=330
M11K **Mekoryuk** 84.85 20 P P 06 53 16.5 +0.5
baz=323
PRP **Porcupine Dome** 84.92 9 P P 06 53 16.5 0.0
PRP IAmb IAmb 06 53 18.1
comp=Z,30nm,1.1s
PRP **Porcupine Dome** 84.92 9 P P 06 53 16.9 +0.3
baz=340,SNR=21
POKR **Poker Plat Res** 85.02 10 P P 06 53 17.1 +0.2
baz=338
K17K **Iditarod** 85.05 16 P P 06 53 17.1 +0.1
baz=329,SNR=23
L14K **Kuka Creek** 85.09 18 P P 06 53 17.6 +0.4
baz=326,SNR=34
H29M **Whitestone** 85.10 6 P P 06 53 17.2 0.0
baz=346,SNR=32
EPYK **Eagle Plains** 85.11 6 P P 06 53 16.9 -0.4
baz=348,SNR=16
L15K **Ungalak Mounta** 85.13 17 P P 06 53 17.6 +0.2
baz=326,SNR=8.9
COLA **College** 85.18 10 P P 06 53 17.1 -0.4
COLA IAmb IAmb 06 53 18.3
comp=Z,61nm,1.4s
COLA **College** 85.18 10 *ceP* P 06 53 16.6 -1.0
COLA pmax pmax
comp=Z,21nm,1.1s
COLA **College** 85.18 10 P P 06 53 17.3 -0.3
baz=338
NEA2 **Nenana** 85.24 11 P P 06 53 17.4 -0.6
baz=337,SNR=12
CHUM **Lake Minchumin** 85.30 13 P P 06 53 18.3 +0.1
baz=334,SNR=53
I27K **Kandik River** 85.35 8 P P 06 53 18.6 +0.1
baz=344
BPAW **Bear Paw Mtn.** 85.35 12 P P 06 53 18.5 -0.1
baz=335,SNR=28
K20K **Telida** 85.42 14 P P 06 53 19.1 +0.2
baz=333,SNR=32
ILAR **Eielson Array** 85.42 10 P P 06 53 17.7 -1.2
comp=Z,5.7nm,0.6s,baz=321,slow=4.9,SNR=55
ILAR PP PP 06 56 34.9 -1.3
comp=Z,3.5nm,0.9s,baz=332,slow=6.2,SNR=6.6
ILAR PKKPbc PKKPbc 07 11 24.3 +0.3
comp=Z,0.9nm,1.0s,baz=191,slow=3.7,SNR=5.4
ILAR LR LR 07 37 10.1
comp=Z,376nm,20.1s,baz=318,slow=40
comp=Z,5.7nm,0.6s
ILAR **Eielson Array** 85.42 10 *eP* P 06 53 18.1 -0.8
ILAR pmax pmax
comp=Z,6.0nm,0.6s
I26K **Coal Creek Min** 85.45 8 P P 06 53 19.1 +0.1
baz=342
L17K **Donlin** 85.55 16 P P 06 53 19.8 +0.3
baz=329,SNR=13
L16K **Owhat River** 85.62 17 P P 06 53 20.3 +0.5
baz=328,SNR=22
M13K **Dall Lake** 85.67 19 P P 06 53 21.0 +0.9
baz=325,SNR=12
I28M **Miner Creek** 85.69 7 P P 06 53 19.9 -0.4
baz=345
HDA **Harding Lake** 85.75 10 P P 06 53 19.0 -1.5
baz=339,SNR=16
M14K **Bethel** 85.78 18 P P 06 53 20.9 +0.3
baz=326,SNR=28
J25K **Salcha River,** 85.80 10 P P 06 53 20.5 -0.3
baz=340
H31M **Peel River** 85.85 5 P P 06 53 20.7 -0.3
baz=350,SNR=61
L18K **Granite Mounta** 85.85 15 P P 06 53 21.1 +0.1
baz=331
I29M **Ogilvie Camp,** 85.95 6 P P 06 53 20.9 -0.5
baz=346,SNR=18

MCK	McKinley	86.06	11	P	P	06 53 21.5	-0.6
	baz=337,SNR=33						
TRF	Thorofare Moun	86.08	12	P	P	06 53 21.4	-0.9
	baz=336						
M15K	Kasigluk River	86.17	18	P	P	06 53 22.6	+0.1
	baz=327,SNR=25						
PPLA	Purkeypile	86.22	13	P	P	06 53 22.3	-0.7
	baz=334,SNR=21						
I30M	Mount Dempster	86.26	6	P	P	06 53 22.6	-0.5
	baz=348,SNR=142						
L19K	White Mountain	86.30	14	P	P	06 53 23.2	-0.1
	baz=332						
M16K	Timber Creek	86.34	17	P	P	06 53 23.8	+0.4
	baz=329,SNR=11						
M17K	Holitna River	86.39	16	P	P	06 53 24.3	+0.6
	baz=330,SNR=16						
K24K	Donnelly Dome	86.50	10	P	P	06 53 23.7	-0.5
K24K				IAmb	IAmb	06 53 25.3	
	comp=Z,50nm,1.1s						
K24K	Donnelly Dome	86.50	10	P	P	06 53 23.5	-0.8
	baz=340,SNR=18						
N14K	Kuskokwak Cree	86.54	18	P	P	06 53 24.7	+0.3
	baz=326,SNR=13						
SCRK	Sand Creek	86.60	9	P	P	06 53 25.3	+0.4
SCRK				IAmb	IAmb	06 53 26.2	
	comp=Z,45nm,1.0s						
SCRK	Sand Creek	86.60	9	P	P	06 53 24.9	0.0
	baz=342,SNR=63						
M18K	Stony River	86.69	15	P	P	06 53 25.1	0.0
	baz=331,SNR=15						
RIDG	Independent Ri	86.70	10	P	P	06 53 24.7	-0.6
	baz=341,SNR=14						
N15K	Kwethluk River	86.77	18	P	P	06 53 25.8	+0.2
	baz=328,SNR=14						
L22K	Petersville	86.83	13	P	P	06 53 25.0	-0.9
L22K				IAmb	IAmb	06 53 26.3	
	comp=Z,28nm,0.7s						
J29N	Klondike Camp	86.84	7	P	P	06 53 26.1	+0.1
	baz=346,SNR=17						
N16K	Nishlik Lake	86.86	17	P	P	06 53 26.5	+0.4
	baz=329						
J30M	Hart River	86.90	6	P	P	06 53 26.0	-0.3
	baz=348,SNR=37						
DHY	Denali Highway	86.93	11	P	P	06 53 25.7	-0.8
	baz=338,SNR=7.9						
M20K	Styx River	86.94	14	P	P	06 53 25.8	-0.7
	baz=334						
WAT1	Susitna Watana	86.96	11	P	P	06 53 25.7	-0.8
	baz=338						
CUT	Chulitna	87.04	12	P	P	06 53 25.9	-0.9
	baz=336						
SKT	Skwentna	87.18	13	P	P	06 53 26.5	-1.0
	baz=335,SNR=26						
N17K	Nushagak Hills	87.21	16	P	P	06 53 28.0	+0.2
	baz=330,SNR=9.6						
O14K	Tigyukauivet M	87.22	19	P	P	06 53 27.6	-0.1
	baz=327						
WAT6	Susitna Watana	87.33	11	P	P	06 53 27.5	-0.9
	baz=338,SNR=13						
PAX	Paxson	87.34	10	P	P	06 53 27.8	-0.6
	baz=340,SNR=7.6						
N18K	Kilae Creek	87.39	16	P	P	06 53 28.9	+0.3
	baz=331						
K29M	Barlow Dome	87.51	6	P	P	06 53 29.3	0.0
	baz=347,SNR=59						
N19K	Bonanza Creek	87.60	15	P	P	06 53 29.5	-0.2
	baz=332,SNR=9.5						
L26K	Log Cabin Wild	87.60	9	P	P	06 53 29.8	+0.2
	baz=342,SNR=7.2						
M22K	Willow	87.66	13	P	P	06 53 29.1	-0.7
	baz=336						
O15K	Ungalikthiuk R	87.69	18	P	P	06 53 30.0	0.0
	baz=328						
N20K	Mount Spurr	87.75	14	P	P	06 53 29.5	-0.9
	baz=334						
SPCR	Spurr Chakacha	87.75	14	P	P	06 53 29.7	-0.7
	baz=334						
L27K	Beaver Creek,	87.77	9	P	P	06 53 30.6	+0.1
	baz=343						
O16K	Kokwok River B	87.79	17	P	P	06 53 30.6	+0.2
	baz=329,SNR=9.4						
O17K	Koliganek Bris	87.89	17	P	P	06 53 30.8	-0.2
	baz=330,SNR=8.8						
MAYO	Mayo, Yukon	87.90	6	P	P	06 53 30.7	-0.3
	baz=349,SNR=8.3						
SML	Sawmill	87.95	12	P	P	06 53 30.9	-0.4
SML				IAmb	IAmb	06 53 35.0	
	comp=Z,25nm,0.9s						
SML	Sawmill	87.95	12	P	P	06 53 30.9	-0.4
	baz=338,SNR=12						
PMR	Palmer	88.00	12	P	P	06 53 31.0	-0.5
PMR	Palmer	88.00	12	P	P	06 53 31.0	-0.5
PMR				pmax	pmax		
	comp=Z,109nm,1.7s						
PMR	Palmer	88.00	12	P	P	06 53 31.0	-0.5
	baz=337,SNR=25						
M24K	Tolsona, Glenn	88.04	11	P	P	06 53 32.3	+0.6
	baz=340,SNR=14						
M23K	Glacier View	88.07	12	P	P	06 53 31.1	-0.8
	baz=338,SNR=11						
SCM	Sheep Creek Mo	88.10	11	P	P	06 53 31.7	-0.3
	baz=339,SNR=6.8						
L29M	L29M	88.16	7	P	P	06 53 32.5	+0.2
	baz=347,SNR=22						
O19K	Port Alsworth	88.19	15	P	P	06 53 31.9	-0.5
	baz=333						
M26K	Nabesna, AK	88.25	9	P	P	06 53 32.4	-0.3
	baz=342						
O18K	Koktuh Hills	88.28	16	P	P	06 53 33.0	+0.1
	baz=332,SNR=8.4						
KNK	Knik Glacier	88.29	12	P	P	06 53 32.8	-0.1
	baz=338,SNR=6.9						
P16K	Nushagak River	88.30	17	P	P	06 53 32.8	-0.2
	baz=330,SNR=7.6						
RC01	Rabbit Creek A	88.35	13	P	P	06 53 32.8	-0.3
	baz=336,SNR=12						
M27K	Edge Creek, AK	88.44	9	P	P	06 53 34.0	+0.2
	baz=343						
BVCY	Beaver Creek	88.52	8	P	P	06 53 34.4	+0.4
	baz=344,SNR=8.2						
P17K	Kvichak River	88.56	17	P	P	06 53 34.6	+0.5
	baz=331,SNR=9.6						
WRA	Warramunga Arr	88.60	113	P	P	06 53 35.9	+0.9
	comp=Z,22nm,0.9s,baz=316,slow=4.0,SNR=123						
WRA				S	SKSac	07 03 55.0	-8.7
	comp=Z,0.3nm,0.8s,baz=297,slow=7.8,SNR=1.7						
WRA				PKKPbc	PKKPbc	07 11 16.1	+0.1
	comp=Z,1.0nm,0.7s,baz=119,slow=2.2,SNR=7.3						
	comp=Z,22nm,0.9s						
WRAB	Tennant Creek	88.60	113	*c i*P	P	06 53 35.9	+0.9
WRAB				pmax	pmax		
	comp=Z,47nm,1.3s						
KLU	Klutina	88.66	11	P	P	06 53 35.1	+0.4
	baz=340,SNR=10						
P18K	Big Mountain,	88.68	16	P	P	06 53 34.8	-0.1
	baz=332						
N25K	Chitina, Valde	88.77	10	P	P	06 53 35.2	0.0
	baz=341						
M29M	Somme Creek	88.78	7	P	P	06 53 35.7	+0.4
	baz=346,SNR=26						
M30M	Minto, Yukon	88.82	6	P	P	06 53 35.7	+0.3
	baz=348,SNR=12						
WRGLY	Wrigley	88.86	0	P	P	06 53 35.7	+0.2
	baz=360,SNR=21						
O22K	Cooper Landing	88.91	13	P	P	06 53 35.9	+0.2
	baz=337,SNR=8.1						
P19K	Oil Pt	88.92	15	P	P	06 53 35.6	-0.3
	baz=334						
Q16K	King Salmon	88.96	17	P	P	06 53 35.5	-0.5
	baz=331,SNR=7.8						
GLI	Glacier Island	89.03	12	P	P	06 53 36.1	-0.3
	baz=339						
YUK3	Moose Creek	89.19	8	P	P	06 53 37.4	0.0
	baz=345,SNR=11						
MCARA	McCarthy VSAT	89.22	10	P	P	06 53 37.2	-0.1
	baz=342						
HOM	Homer	89.27	14	P	P	06 53 37.7	+0.2
	baz=335						
SEW	Seward	89.31	13	P	P	06 53 37.2	-0.4
	baz=337						
YKA	Yellowknife Ar	89.35	356	P	P	06 53 37.8	-0.1
	comp=Z,15nm,0.8s,baz=357,slow=5.5,SNR=362						
YKA				PKKPbc	PKKPbc	07 11 15.1	+0.6
	comp=Z,0.2nm,0.8s,baz=201,slow=2.5,SNR=4.8						
YKA				LR	LR	07 39 48.3	
	comp=Z,317nm,18.8s,baz=10,slow=40						
	comp=Z,15nm,0.8s						
YKA	Yellowknife Ar	89.35	356	*e*P	P	06 53 37.7	-0.1
	comp=Z,17nm,0.8s			pmax	pmax		
BMRM	Bremner River	89.37	10	P	P	06 53 37.7	-0.3
	baz=341,SNR=8.9						
BRSE	Bradley Lake S	89.38	14	P	P	06 53 37.9	-0.2
	baz=336						
Q18K	Katmai Hardscr	89.39	16	P	P	06 53 38.1	-0.2
	baz=332						
M31M	Drury Creek, Y	89.41	5	P	P	06 53 37.9	-0.3
	baz=350,SNR=14						
Q19K	Cape Douglas,	89.47	15	P	P	06 53 38.2	-0.3
	baz=333						
Q17K	Contact Creek	89.52	17	P	P	06 53 38.5	-0.3
	baz=331						
EYAK	Cordova Ski Ar	89.58	11	P	P	06 53 39.1	+0.2
	baz=340						
YUK8	Steele Glacier	89.75	8	P	P	06 53 39.7	-0.4
	baz=345						
P23K	Montague Islan	89.80	12	P	P	06 53 39.9	-0.1
	baz=339						
CRQE	Cirque	89.81	10	P	P	06 53 39.6	-0.5
	baz=342						
YUK4	Talbot Arm	89.83	8	P	P	06 53 40.4	+0.1
	baz=346,SNR=13						
CTG	Chitna Glacier	89.86	9	P	P	06 53 40.4	0.0
	baz=344,SNR=6.4						
N30M	Aishikik Lake	89.89	7	P	P	06 53 40.3	-0.1
	baz=348,SNR=8.5						
R17L	Mt. Peulik Vol	89.95	17	P	P	06 53 40.7	-0.1
	baz=331						
UNV	Unalaska Valle	89.96	24	P	P	06 53 40.8	0.0
	baz=323						
N31M	Braeburn, Yuko	89.99	6	P	P	06 53 40.3	-0.6
	baz=349,SNR=6.6						
Q20K	Shuyak Island	90.05	15	P	P	06 53 41.3	+0.1
	baz=334						
ASAR	Alice Springs	90.14	117	P	P	06 53 42.8	+0.6
	comp=Z,6.5nm,0.8s,baz=304,slow=4.7,SNR=60						
ASAR				S	SKSac	07 04 08.3	-4.4
	comp=Z,0.3nm,0.8s,baz=314,slow=5.2,SNR=2.5						
ASAR				PKKPbc	PKKPbc	07 11 11.3	-0.9
	comp=Z,0.2nm,0.7s,baz=141,slow=3.2,SNR=4.5						
ASAR				LR	LR	07 36 21.1	
	comp=Z,111nm,18.8s,baz=288,slow=37						
	comp=Z,6.5nm,0.8s						
O28M	Mount Upton	90.19	8	P	P	06 53 42.2	0.0
	baz=345						
FALS	False Pass	90.21	22	P	P	06 53 42.3	+0.4
	baz=325						
S14K	Fog Glacier	90.22	19	P	P	06 53 42.2	0.0
	baz=328						
YUK6	Outpost Mounta	90.25	8	P	P	06 53 42.3	-0.1
	baz=346						
KAIM	Kayak Island	90.39	11	P	P	06 53 43.1	+0.4
	baz=341						
HYT	Haines Junctio	90.46	7	P	P	06 53 43.4	+0.2
	baz=347,SNR=29						
Q23K	Middleton Isla	90.53	12	P	P	06 53 43.3	0.0
	baz=340						
MESA	MESA	90.53	9	P	P	06 53 43.8	+0.2
	baz=343						
CHGN	Chignik	90.54	19	P	P	06 53 43.9	+0.5
	baz=329						
O30N	Mendenhall	90.66	6	P	P	06 53 43.7	-0.4
	baz=348,SNR=10						
SDPT	Sand Point	90.74	20	P	P	06 53 43.9	-0.5
	baz=328						
KDAK	Kodiak Island	90.75	15	LR	LR	07 40 38.7	
	comp=Z,537nm,19.2s,baz=328,slow=40						
KDAK	Kodiak Island	90.75	15	P	P	06 53 44.2	-0.2
	baz=334						
PINM	Pinnacle	90.84	9	P	P	06 53 45.2	+0.2
	baz=345,SNR=5.4						
O29M	Mount Kennedy	90.85	8	P	P	06 53 44.8	-0.2
	baz=346						
WHY	Whitehorse	90.89	6	P	P	06 53 44.2	-1.0
	baz=349						
OHAK	Old Harbor	91.09	16	P	P	06 53 45.6	-0.3
	baz=334						
P30M	Million Dollar	91.21	7	P	P	06 53 46.6	0.0
	baz=348						
CHNA	Chernabura Isl	91.45	20	P	P	06 53 47.3	-0.5
	baz=328						
SII	Sitkinak Islan	91.46	17	P	P	06 53 47.1	-0.6
	baz=333						
P33M	Teslin, Yukon	91.50	5	P	P	06 53 47.3	-0.8
	baz=351,SNR=16						
CHIR	Chirikof Islan	91.73	18	P	P	06 53 48.9	-0.1
	baz=332						
WTLY	Watson Lake, Y	91.85	3	P	P	06 53 49.5	0.0
	baz=355,SNR=10						
SKAG	Skagway	92.03	6	P	P	06 53 49.9	-0.4
	baz=349						
P32M	Atlin	92.05	6	P	P	06 53 50.2	-0.3
	baz=350,SNR=9.4						
R33M	Jennings River	92.44	4	P	P	06 53 52.5	0.0
	baz=353,SNR=10.0						
Q32M	Nakina River	92.79	5	P	P	06 53 53.8	-0.3
	baz=352,SNR=6.3						
R32K	Eaglecrest	93.27	6	P	P	06 53 56.3	+0.2
	baz=350						
S31K	Pelican	93.41	7	P	P	06 53 56.7	0.0
	baz=348						
DLBC	Dease Lake	93.45	4	LR	LR	07 41 00.8	
	comp=Z,124nm,20.7s,baz=318,slow=39						
DLBC	Dease Lake	93.45	4	P	P	06 53 57.5	+0.4
	baz=354,SNR=12						
S34M	Telegraph Cree	93.91	4	P	P	06 53 59.5	+0.5
	baz=353,SNR=10						
S32K	Killisnoo	94.06	6	P	P	06 53 59.9	+0.2
	baz=350						
PMG	Port Moresby	94.39	98	LR	LR	07 40 17.0	
	comp=Z,44nm,21.9s,baz=292,slow=38						
SIT	Sitka	94.39	7	P	P	06 54 01.5	+0.3
	baz=349						
T35M	Bob Quinn	94.89	4	P	P	06 54 03.2	-0.4
	baz=354						
WRAK	Wrangell Islan	95.30	5	P	P	06 54 04.9	-0.5
	baz=352						
RCBR	Riachuelo	95.40	266	LR	LR	07 38 31.5	
	comp=Z,146nm,18.9s,baz=72,slow=36						
M65A	Busby, Falmout	95.44	323	P	P	06 54 05.3	-1.0
	baz=44						
U33K	Whale Pass	95.54	6	P	P	06 54 06.0	-0.5
	baz=351						
MAW	Mawson	95.64	178	LR	LR	07 31 47.1	
	comp=Z,364nm,20.3s,baz=354,slow=32						
CRAG	Craig	96.18	6	P	P	06 54 08.8	-0.6
	baz=351						
V35K	Ketchikan	96.44	5	P	P	06 54 09.9	-0.7
	baz=352						
SADO	Sadowa	97.13	330	LR	LR	07 40 55.0	
	comp=Z,249nm,19.4s,baz=76,slow=37						
ULM	Lac du Bonnet	98.28	343	P	P	06 54 17.8	-1.2
	comp=Z,2.0nm,0.8s,baz=41,slow=3.5,SNR=4.8						
ULM				S	SKSac	07 04 47.5	-8.6
	comp=Z,1.0nm,0.7s,baz=49,slow=19,SNR=1.7						
ULM				LR	LR	07 41 42.0	
	comp=Z,335nm,20.9s,baz=10.0,slow=37						
	comp=Z,2.0nm,0.8s						
ULM	Lac du Bonnet	98.28	343	*e*P	P	06 54 17.2	-1.9
CTA	Charters Tower	98.50	108	LR	LR	07 43 29.9	
	comp=Z,140nm,18.8s,baz=266,slow=38						
BBB	Bella Bella	99.80	3	LR	LR	07 46 57.3	
	comp=Z,138nm,18.0s,baz=34,slow=40						
STKA	Stephens Creek	100.06	121	P	Pdif	06 54 27.4	+0.1
	comp=Z,0.4nm,0.3s,baz=268,slow=8.9,SNR=2.1						
PDAR	Pinedale Array	108.30	350	PKiKP	PKiKP	06 59 09.5	-0.8
	comp=Z,1.0nm,0.6s,baz=64,slow=3.0,SNR=11						
PDAR				PKKPab	PKKPab	07 10 40.0	+2.2
	comp=Z,0.6nm,0.8s,baz=145,slow=5.4,SNR=4.6						
NVAR	Mina Array Bea	113.55	356	PKiKP	PKiKP	06 59 20.4	0.0
	comp=Z,2.2nm,0.7s,baz=42,slow=0.9,SNR=20						
NVAR				PKKPab	PKKPab	07 10 12.4	-2.0
	comp=Z,0.2nm,0.4s,baz=169,slow=8.2,SNR=4.1						
QSPA	South Pole Qui	118.07	180	PKP	PKPdf	06 59 27.0	-0.7
	comp=Z,3.2nm,0.8s,baz=282,slow=1.9,SNR=7.1						
QSPA				PKKPbc	PKKPbc	07 09 48.9	-0.7
	comp=Z,3.5nm,0.9s,baz=101,slow=1.7,SNR=7.5						
AQDB	Aquidauana	119.00	261	*e*P	PKPdf	06 59 30.6	-0.3
TXAR	Lajitas Array	119.89	341	PKP	PKPdf	06 59 32.1	-0.6
	comp=Z,2.7nm,0.6s,baz=24,slow=3.3,SNR=38						
BDQN	Bodoquena, MS	119.91	262	*e*P	PKPdf	06 59 32.1	-0.5
PTLB	Pontes e Lacer	120.09	268	*e*P	PKPdf	06 59 33.0	0.0
CPSB	Cacapava Do Su	120.33	250	*e*P	PKiKP	06 59 34.4	+1.1
VNDA	Vanda	120.53	166	PKP	PKiKP	06 59 32.9	+0.7
	comp=Z,0.4nm,0.9s,baz=265,slow=6.3,SNR=1.2						
MURT	Porto Murtinho	121.09	261	*e*P	PKPdf	06 59 34.6	-0.2
BBSD	Serra de San D	122.08	267	*e*P	PKPdf	06 59 36.8	-0.1
CPUP	Villa Florida	122.39	255	PKP	PKPdf	06 59 36.4	-0.8
	comp=Z,2.1nm,0.7s,baz=80,slow=6.1,SNR=9.6						
CPUP	Villa Florida	122.39	255	*e*P	PKPdf	06 59 37.0	-0.2
LPAZ	La Paz	128.36	271	PKP	PKPdf	06 59 49.7	0.0
	comp=Z,2.2nm,0.7s,baz=63,slow=2.3,SNR=10.0						
LPAZ	La Paz	128.36	271	*e*PKiKP	PKiKP	06 59 50.4	+0.1
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
LPAZ	La Paz	128.36	271	*e*P	PKPdf	06 59 48.9	-0.8
OTAV	Otavalo	128.94	296	*e*P	PKiKP	06 59 51.9	+0.5
PLCA	Paso Flores	135.72	239	PKP	PKiKP	07 00 03.6	-0.2
	comp=Z,1.3nm,0.7s,baz=49,slow=4.8,SNR=4.1						
PLCA	Paso Flores	135.72	239	*e*P	PKiKP	07 00 04.2	+0.4
PPT2	Papeete2	153.26	72	*e*LR	LR	07 51 40.2	
	comp=Z,213nm,23.5s						
PPT2				*e*LR	LR	07 51 40.2	
	comp=Z,158nm,30.2s						
TAOE	Nuku Hiva Isla	154.76	44	*e*LR	LR	07 52 30.2	
	comp=Z,288nm,25.8s						
TBI	Tubuai	155.58	85	*e*LR	LR	07 52 53.3	
	comp=Z,2µm,31.2s						

*GCG **27** 06:40:47.5±1.6, 13˚.30N×91˚.48W, h0km±12km, MD4.3, ML3.6, Presumed earthquake*
*SNET **27** 06:40:48.8±2.1, 13˚.53N×91˚.26W, h9km±11km, ML3.3, Presumed earthquake*
*CATAC **27** 06:40:51.9±0.4, 13˚N±3˚×9˚1W±˚, h10km, M3.4/23, MLv3.4/23, Error ellipse: s-maj=7.1km s-min=2.9km az=26.7, confirmed*

ISC 27 06:40:47.8±2.2, 13˚.38N±0˚.08×91˚.33W±0˚.06, h1km±12km, n48, σ1°.44/70, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STG5	El Palmar, Qui	1.02	359	*i* P		Pn	06 41 12.9 +3.5
STG2	El Palmar, Qui	1.06	358	*i* P		Pn	06 41 13.4 +4.0
STG8	El Palmar, Qui	1.07	359	*i* P		Pn	06 41 14.2 +4.0
FG8	Yepocapa, Chim	1.16	40	*i* P		Pn	06 41 11.4 +0.1
RTAL	Retalhuleu	1.20	343	P		Pn	06 41 11.8 +0.1
RTAL				S		Sn	06 41 28.6 0.0
RTAL	Retalhuleu	1.20	343	*e*P		Pn	06 41 11.6 -0.1
FG16	Alotenango, Sa	1.20	42	*i* P		Pn	06 41 12.2 +0.3
FG16				IAML			06 41 38.4
	comp=E,3µm,0.2s						
PCG5	San Vicente Pa	1.25	48	*i* P		Pn	06 41 12.9 +0.4
FAME	Alcaldia de Sa	1.36	70	P		Pb	06 41 15.0 +0.8
FAME				S		Sn	06 41 31.9 -0.9
NUBE	Las Nubes	1.60	71	P		Pg	06 41 18.7 +0.3
NUBE				S		Sg	06 41 39.3 +0.1
NUBE	Las Nubes	1.60	71	*i* P		Pg	06 41 18.6 +0.1
NUBE				IAML			06 41 53.2
	comp=E,109nm,0.5s						
NUBE	Las Nubes	1.60	71	*e*P		Pg	06 41 18.4 0.0
NUBE				*e*S		Sg	06 41 42.0 +2.8
LOAL	Lomas de Alarc	1.63	68	P		Pg	06 41 19.5 +0.4
SLOZ	Alcaldia de Sa	1.64	67	P		Pg	06 41 19.2 0.0
SLOZ				S		Sg	06 41 40.9 +0.4
SLOZ	Alcaldia de Sa	1.64	67	*e*P		Pg	06 41 19.4 +0.2
CEVE	Cerro Verde	1.72	75	P		Pg	06 41 20.7 -0.1
CEVE				S		Sg	06 41 44.6 +1.5
CEVE	Cerro Verde	1.72	75	*e*P		Pg	06 41 20.3 -0.6
CEVE				*e*S		Sg	06 41 47.1 +4.0
SBLS	San Blas	1.73	74	*e*P		Pg	06 41 20.4 -0.5
SNJE	San Jose	1.75	74	*e*P		Pg	06 41 21.0 -0.3
RBDL	Robledal	1.76	65	*e*P		Pg	06 41 21.6 0.0
APG	El Apazote	1.82	27	*i* P		Pg	06 41 23.1 +0.3
UNIC	Universidad Ca	1.84	71	P		Pg	06 41 22.9 -0.2
UNIC				S		Sg	06 41 46.2 -0.4
JAYA	Jayaque - finc	1.85	81	P		Pg	06 41 22.7 -0.6
JAYA				S		Sg	06 41 46.5 -0.9
JAYA	Jayaque - finc	1.85	81	*i* P		Pb	06 41 22.3 -0.3
JAYA				IAML			06 41 54.4
	comp=N,711nm,0.3s						
JAYA	Jayaque - finc	1.85	81	*e*P		Pb	06 41 22.4 -0.3
JAYA				*e*S		Sg	06 41 47.8 +0.4
HUEH	Huehuetenango	1.94	355	*i* P		Pg	06 41 25.1 +0.1
HUEH				IAML			06 42 01.3
	comp=N,428nm,0.7s						
PMON	Piamonte	1.99	80	P		Pb	06 41 24.7 -0.2
PMON				S		Sg	06 41 51.7 -0.2
PMON	Piamonte	1.99	80	*e*P		Pb	06 41 24.3 -0.7
PMON				*e*S		Sg	06 41 52.7 +0.9
UEES	Universidad Ev	2.06	80	P		Pb	06 41 25.9 -0.2
UEES				S		Sg	06 41 54.5 +0.3
PANCS	Alcalda de	2.11	83	S		Sb	06 41 53.6 0.0
UDBS	Universidad Do	2.15	81	P		Pb	06 41 27.6 +0.1
UDBS				S		Sb	06 41 54.8 +0.2
MTO3	Montecristo	2.17	62	P		Pb	06 41 27.9 -0.2
MTO3				S		Sg	06 41 55.8 -1.8
MTO3	Montecristo	2.17	62	*i* P		Pb	06 41 27.7 -0.4
MTO3	Montecristo	2.17	62	*e*P		Pb	06 41 27.5 -0.5
ESQI	Esquipulas	2.26	58	P		Pb	06 41 29.5 -0.1
ESQI				S		Sg	06 42 00.1 -0.5
ESQI	Esquipulas	2.26	58	*e*P		Pb	06 41 29.1 -0.4
ESQI				*e*S		Sg	06 42 01.2 +0.6
SJTE	Alcalda de S	2.27	84	*e*S		Sg	06 41 59.3 -1.7
PAVA	Las Pavas	2.35	82	P		Pb	06 41 30.8 -0.3
PAVA				S		Sg	06 42 03.2 -0.3
COEG	Centro de Oper	2.40	84	P		Pb	06 41 31.5 -0.3
SCLA	Alcaldia de Sa	2.55	82	P		Pb	06 41 33.2 -1.3
SCLA				S		Sb	06 42 04.8 -1.6
P5NO	Presa 5 de nov	2.58	76	P		Pb	06 41 32.6 -2.2
P5NO				S		Sb	06 42 06.2 -0.9
SARH	Santa Rosa de	2.86	61	P		Pb	06 41 37.6 -2.1
SARH	Santa Rosa de	2.86	61	*i* P		Pb	06 41 37.4 -2.3
PACA	Pacayal	2.93	88	P		Pb	06 41 38.9 -2.0
PACA				S		Sb	06 42 14.3 -3.0
CCIG	Comitan	2.99	345	P		Pb	06 41 39.7 -2.3
CSGN	Cosiguina Volc	3.70	96	P		Pn	06 41 48.0 +1.8
CSGN				S		Sn	06 42 30.6 +0.1
YUSH	Yuscaran	4.40	82	P		Pn	06 41 58.9 +2.9
LIMN	Finca el Limon	4.85	93	P		Pn	06 42 03.9 +1.9

PRE 27 06:47:39.9±0.9, 28˚.88S×31˚.86E, h5km, ML2.2, Presumed earthquake, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMBG	Pietermaritzbu	1.33	242	*e*P		Pn	06 48 05.3 0.0
PMBG				*e*S		Sn	06 48 24.6 +1.2
PMBG				IAML			06 48

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.73**	**299**	P	**P**	**06 54 30.5**	**+2.4**
	18nm,0.4s,baz=112,slow=7.3,SNR=57						
AFI	**Afiamalu**	**8.32**	**43**	P	**P**	**06 55 04.0**	**+0.8**
	17nm,0.7s,baz=191,slow=12,SNR=2.7						
AFI				S	**S**	06 56 39.6	-1.9
	5.3nm,0.3s,baz=299,slow=20,SNR=1.6						
URZ	**Urewera**	**18.66**	**193**	P	**P**	**06 56 52.5**	**+3.0**
	4.8nm,0.5s,baz=15,slow=16,SNR=7.4						
URZ				S	**S**	06 59 54.0	+0.1
	5.5nm,0.7s,baz=357,slow=20,SNR=1.9						
ASAR	**Alice Springs**	**44.96**	**256**	P	**P**	**07 00 31.8**	**-1.8**
	1.0nm,0.5s,baz=94,slow=7.7,SNR=20						
	1.0nm,0.5s						
WRA	**Warramunga Arr**	**45.01**	**262**	P	**P**	**07 00 31.6**	**-2.4**
	0.6nm,0.3s,baz=97,slow=7.6,SNR=19						
	0.6nm,0.3s						
QSPA	**South Pole Qui**	**69.96**	**180**	P	**P**	**07 03 22.2**	**-1.6**
	2.6nm,1.1s,baz=29,slow=2.8,SNR=2.7						
	2.6nm,1.1s						
TXAR	**Lajitas Array**	**86.54**	**57**	P	**P**	**07 04 54.5**	**+1.2**
	0.3nm,0.8s,baz=238,slow=3.9,SNR=2.5						
	0.3nm,0.8s						
ILAR	**Eielson Array**	**87.85**	**13**	P	**P**	**07 04 58.7**	**+0.2**
	0.2nm,0.4s,baz=211,slow=6.3,SNR=7.1						
	0.2nm,0.4s						
PDAR	**Pinedale Array**	**88.43**	**43**	P	**P**	**07 05 02.9**	**+0.8**
	0.4nm,0.8s,baz=226,slow=5.0,SNR=2.9						
	0.4nm,0.8s						
AKASG	**Malin Array Be**	**142.84**	**332**	PKP	**PKPdf**	**07 11 36.1**	**-3.3**
	0.2nm,0.4s,baz=64,slow=2.2,SNR=6.2						

MOS ***27*** *07:02:44.9, 42°.31N×46°.04E, h17km, MPVA4.1*
NORS ***27*** *07:02:45.3, 42°.34N×46°.02E, h15km, MPVA4.1*
DRS ***27*** *07:02:46.7, 42°.37N×46°.12E, h6km*
AZER ***27*** *07:02:48.8, 42°.02N×45°.96E, h13km, ml2.2*
ISC 27 07:02:46.6±1.0, 42°.33N±0°.02×46°.03E±0°.02, h12km±8km, n44, σ1§15/84, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLTR	**Tlyarata**	**0.33**	**133**	*e*Pg	**Pg**	**07 02 52.8**	**-0.5**
	221nm,0.6s						
TLTR				*e*Sg	**Sg**	07 02 57.5	-0.3
	256nm,0.2s						
BTLR	**Botlikh**	**0.36**	**23**	*e*Pg	**Pg**	**07 02 53.8**	**0.0**
	224nm,0.4s						
BTLR				*e*Sg	**Sg**	07 02 59.0	+0.3
	399nm,0.5s						
XNZR	**Khunzakh**	**0.54**	**67**	*e*Pg	**Pb**	**07 02 57.8**	**-0.4**
	82nm,0.2s						
XNZR				*e*Sg	**Sb**	07 03 06.5	+0.5
	103nm,0.4s						
DVE	**Vedeno**	**0.63**	**6**	*e*Pg	**Pg**	**07 02 58.8**	**0.0**
	165nm,0.1s						
DVE				*e*Sg	**Sb**	07 03 07.6	-0.7
	293nm,0.5s						
UNCR	**Uncukul**	**0.68**	**56**	*e*Pg	**Pb**	**07 03 00.1**	**-0.3**
	56nm,0.5s						
UNCR				*e*Sg	**Sn**	07 03 10.8	-2.0
	218nm,0.5s						
GNBR	**Gunib**	**0.69**	**85**	*e*Pg	**Pg**	**07 03 00.0**	**0.0**
	74nm,0.1s						
GNBR				*e*Sg	**Sb**	07 03 09.8	-0.5
	275nm,0.4s						
ARKR	**Arakani**	**0.76**	**69**	*e*Pg	**Pb**	**07 03 01.6**	**-0.2**
	97nm,0.5s						
ARKR				*e*Sg	**Sn**	07 03 12.9	-1.8
	122nm,0.2s						
KRNR	**Karanay**	**0.81**	**52**	*e*Pg	**Pb**	**07 03 02.6**	**-0.2**
	37nm,0.1s						
KRNR				*e*Sg	**Sb**	07 03 14.2	+0.5
	67nm,0.2s						
KMKR	**Kumukh**	**0.82**	**104**	*e*Pg	**Pg**	**07 03 02.0**	**-0.4**
	102nm,0.3s						
KMKR				*e*Sg	**Sb**	07 03 14.2	+0.2
	333nm,0.2s						
ZKTA	**Zakatala**	**0.82**	**147**	P	**Pg**	**07 03 02.0**	**-0.4**
ZKTA				S	**Sb**	07 03 13.6	-0.3
DLMR	**Dylym**	**0.86**	**31**	*e*Pg	**Pg**	**07 03 03.7**	**+0.5**
	78nm,0.2s						
DLMR				*e*Sg	**Sn**	07 03 16.0	-1.1
	183nm,0.2s						
GROC	**Groznyy**	**0.89**	**349**	*e*Pg	**Pn**	**07 03 05.0**	**0.0**
	155nm,0.3s						
GROC				*e*Sg	**Sn**	07 03 18.3	+0.5
	635nm,0.5s						
DBC	**Dubki**	**0.91**	**40**	*e*Pg	**Pn**	**07 03 04.5**	**-0.7**
	59nm,0.2s						
DBC				*e*Sg	**Sn**	07 03 17.4	-0.9
	104nm,0.8s						
BUJR	**Buynaksk**	**0.94**	**58**	*e*Pg	**Pn**	**07 03 05.3**	**-0.3**
	161nm,0.2s						
BUJR				*e*Sg	**Sn**	07 03 18.8	-0.2
	195nm,0.4s						
KMGR	**Komgaron**	**1.12**	**311**	*e*Pg	**Pb**	**07 03 07.7**	**-0.3**
KMGR				*e*Sg	**Sn**	07 03 25.5	+1.9
URKR	**Urkarakh**	**1.20**	**97**	*e*Pg	**Pg**	**07 03 09.4**	**-0.2**
	47nm,0.5s						
URKR				*e*Sg	**Sg**	07 03 26.1	+0.7
	52nm,0.6s						
SGKR	**Sergokala**	**1.21**	**83**	*e*Pg	**Pg**	**07 03 10.1**	**+0.2**
	65nm,0.2s						
SGKR				*e*Sg	**Sg**	07 03 27.4	+1.7
	86nm,0.3s						
QZX	**Qazax, Azerbai**	**1.37**	**201**	P	**Pn**	**07 03 11.0**	**-0.5**
QZX				S	**Sn**	07 03 27.0	-2.6
LACR	**Lac**	**1.37**	**292**	*e*Pg	**Pn**	**07 03 09.6**	**-2.1**
LACR				*e*Sg	**Sb**	07 03 29.7	-0.1
SEKA	**Sheki**	**1.42**	**142**	P	**Pg**	**07 03 13.6**	**-0.3**
SEKA				S	**Sg**	07 03 34.1	+1.8
AKT	**Akhty**	**1.53**	**123**	*e*Pg	**Pb**	**07 03 14.1**	**-0.8**
	13nm,0.5s						
AKT				*e*Sg	**Sg**	07 03 35.3	-0.5
	24nm,0.3s						
ARNR	**Ardon**	**1.54**	**304**	*e*Pg	**Pb**	**07 03 14.9**	**-0.2**
ARNR				*e*Sg	**Sg**	07 03 36.6	+0.5
GDB	**GEDABAY**	**1.62**	**187**	P	**Pn**	**07 03 15.0**	**-0.3**
GDB				S	**Sn**	07 03 35.7	-0.5
KORR	**Kora**	**1.63**	**298**	*e*Pg	**Pn**	**07 03 15.7**	**+0.5**
KORR				*e*Sg	**Sg**	07 03 39.8	+0.8
GANJ	**Ganja**	**1.70**	**172**	P	**Pn**	**07 03 16.7**	**+0.6**
GANJ				S	**Sb**	07 03 38.4	-0.8
MNGR	**Mingechevir, A**	**1.75**	**153**	S	**Sb**	**07 03 41.1**	**+0.6**
STDR	**Stavd-Durt**	**1.78**	**306**	*e*Pg	**Pb**	**07 03 18.7**	**-0.4**
STDR				*e*Sg	**Sg**	07 03 43.1	-0.7
QSAR	**Qusar**	**1.86**	**115**	P	**Pg**	**07 03 22.4**	**+0.2**
QSAR				S	**Sg**	07 03 48.5	+2.3
LSNR	**Lesken**	**1.88**	**301**	*e*Pg	**Pb**	**07 03 19.7**	**-1.1**
LSNR				*e*Sg	**Sb**	07 03 45.0	+0.7
DIGR	**Digorskoe uzhe**	**1.90**	**288**	*e*Pg	**Pn**	**07 03 18.5**	**-0.5**
DIGR				*e*Sg	**Sb**	07 03 44.8	-0.2
XNQ	**Khinaliq**	**1.96**	**126**	P	**Pg**	**07 03 23.8**	**-0.3**
XNQ				S	**Sg**	07 03 50.2	+0.7
QUBA	**Quba, Azerbaij**	**2.08**	**117**	P	**Pg**	**07 03 26.3**	**-0.2**
QUBA				S	**Sg**	07 03 53.4	-0.2
AGDM	**Agdam**	**2.37**	**160**	P	**Pb**	**07 03 27.4**	**-1.8**
AGDM				S	**Sn**	07 03 55.1	+0.8
GNI	**Garni**	**2.39**	**204**	*e*Pn	**Pn**	**07 03 26.9**	**+1.2**
GNI				*e*Sn	**Sb**	07 04 01.0	+1.9
ZRD	**Zardab**	**2.40**	**148**	S	**Sn**	**07 03 55.3**	**+0.3**
ATGJ	**Altiaghaj**	**2.63**	**123**	P	**Pb**	**07 03 32.5**	**-1.2**
ATGJ				S	**Sb**	07 04 03.7	-2.4
KBZ	**Khabaz**	**2.69**	**302**	*e*Pn	**Pn**	**07 03 31.5**	**+1.9**
KBZ				*e*Sn	**Sb**	07 04 06.7	-0.8
GBS	**Qobustan**	**2.83**	**128**	P	**Pb**	**07 03 35.7**	**-1.4**
GBS				S	**Sn**	07 04 08.0	+2.2
SHA1	**Shidzhatmaz**	**2.84**	**301**	*e*Pn	**Pn**	**07 03 33.3**	**+1.3**
SHA1				*e*Sn	**Sb**	07 04 09.6	-2.7
IGDI	**IGDIR**	**2.87**	**212**	P	**Pn**	**07 03 33.4**	**+1.1**
IGDI				S	**Sn**	07 04 05.3	-1.4
KIV	**Kislovodsk**	**2.94**	**305**	*e*Sn	**Sn**	**07 04 10.4**	**+2.0**
SBZ	**Shahbuz**	**2.96**	**187**	P	**Pn**	**07 03 35.2**	**+1.7**
SBZ				S	**Sn**	07 04 09.7	+0.7
YRD	**Yardimli**	**3.81**	**153**	P	**Pn**	**07 03 47.5**	**+2.3**
YRD				S	**Sn**	07 04 28.9	-1.1
LRK	**Lerik**	**4.08**	**154**	P	**Pn**	**07 03 51.5**	**+2.4**

IDC ***27*** *07:09:50.0±1.1, 0°.41N×128°.32E, h0km, mb3.8/5, mbtmp3.8/6, ML3.6/1, MS2.3/1, Error ellipse: s-maj=45.1km s-min=19.0km az=57.0*

DJA ***27*** *07:09:52.6±0.3, 0°.7N±3°×12°.8E±°, h10km, M4.0/12, mB5.7/1, mb4.5/2, MLv3.8/12, Mw(mB)5.2/1*
ISC 27 07:09:55.4±1.0, 0°.32N±0°.09×128°.33E±0°.08, h35km, n10, σ1§05/11, mb3.8/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.06**	**295**	P	**Pn**	**07 10 12.6**	**-1.2**
GAMI	**Galela, Maluku**	**1.60**	**340**	P	**Pn**	**07 10 22.5**	**+1.2**
SIJI	**Sorong**	**3.16**	**112**	Pn	**Pn**	**07 10 41.7**	**-1.0**
	6.5nm,0.3s,baz=297,slow=18,SNR=5.6						
SIJI				Sn	**Sn**	07 11 20.0	+0.8
	3.6nm,0.3s,baz=332,slow=16,SNR=3.8						
SIJI				LR	LR	07 11 46.6	
	comp=Z,46nm,20.5s,baz=156,slow=36						
	16nm,0.3s						
SIJI	**Sorong**	**3.16**	**112**	P	**Pn**	**07 10 41.6**	**-1.1**
MSAI	**Masohi**	**3.69**	**171**	P	**Pn**	**07 10 50.6**	**+0.6**
WRA	**Warramunga Arr**	**20.98**	**164**	P	**P**	**07 14 35.5**	**-0.3**
	1.6nm,0.5s,baz=343,slow=11,SNR=27						
	1.6nm,0.5s						
ASAR	**Alice Springs**	**24.45**	**168**	P	**P**	**07 15 12.0**	**+0.9**
	2.8nm,0.8s,baz=353,slow=15,SNR=25						
	2.8nm,0.8s						
STKA	**Stephens Creek**	**34.40**	**160**	P	**P**	**07 16 40.0**	**+0.6**
	2.8nm,0.7s,baz=340,slow=8.4,SNR=8.8						
	2.8nm,0.7s						
MKAR	**Makanchi Array**	**61.26**	**326**	P	**P**	**07 20 06.0**	**-1.1**
	0.4nm,0.7s,baz=116,slow=6.6,SNR=3.6						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**65.46**	**328**	P	**P**	**07 20 34.6**	**-0.2**
	0.4nm,0.6s,baz=128,slow=6.2,SNR=4.9						
	0.4nm,0.6s						

IDC ***27*** *07:21:51.2±1.4, 30°.74N×50°.47E, h0km, mb4.0/23, mbtmp4.0/27, ML3.4/4, Error ellipse: s-maj=30.3km s-min=14.1km az=171.0*
TEH ***27*** *07:21:52.8, 30°.70N×50°.66E, h9km±26km, ML3.7, Presumed earthquake*
NEIC ***27*** *07:21:53.1±1.4, 30°.64N±0°.09×50°.5E±0°.1, h10km±1km, mb4.2/16, Error ellipse: s-maj=17.6km s-min=13.3km az=232.0*
OMAN ***27*** *07:21:58.1±1.0, 30°.36N×50°.99E, h10km, mb3.4/19, Error ellipse: s-maj=9.7km s-min=7.3km az=23.0*
DSN ***27*** *07:22:03.1±1.5, 29°.70N×50°.85E, h15km, ML3.4/10, Error ellipse: s-maj=22.7km s-min=11.6km az=15.0*
ISC 27 07:21:54.3±0.4, 30°.64N±0°.04×50°.66E±0°.04, h25km, n118, σ1§57/134, mb4.1/35, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLNJ	**Kolanjah**	**0.88**	**65**	Pg	**Pb**	**07 22 09.6**	**-1.7**
KAZ2	**Kazeron-Fars-I**	**1.34**	**139**	Pg	**Pb**	**07 22 19.9**	**+1.0**
IBRJ	**Brojen**	**1.36**	**22**	Pg	**Pn**	**07 22 17.5**	**-0.5**
ZNGN	**Zangian**	**1.48**	**6**	Pg	**Pb**	**07 22 21.0**	**-0.4**
AMIS	**Naft Sefid**	**1.56**	**311**	Pg	**Pb**	**07 22 22.4**	**-0.1**
AHWZ	**Ahwaz**	**1.86**	**292**	Pn	**Pb**	**07 22 27.1**	**-0.6**
IRAM	**Ramesheh**	**1.88**	**51**	Pn	**Pb**	**07 22 27.5**	**-0.7**
SHI	**Shiraz**	**1.89**	**121**	Pn	**Pb**	**07 22 28.6**	**+0.3**
IPIR	**Pirpir**	**2.05**	**6**	Pn	**Pb**	**07 22 30.0**	**-1.0**
DSBU	**Dashti - Bushe**	**2.33**	**167**	Pn	**Pb**	**07 22 34.5**	**-1.2**
IZEF	**Zefreh**	**2.66**	**32**	Pn	**Pn**	**07 22 38.3**	**+2.4**
TAFT	**Taft - Yazd**	**3.20**	**69**	Pn	**Pn**	**07 22 45.9**	**+2.6**
IMEH	**Mehriz**	**3.48**	**77**	Pn	**Pn**	**07 22 49.9**	**+2.9**
ICHK	**Chekchek**	**3.58**	**63**	Pn	**Pn**	**07 22 50.7**	**+2.2**
BDRS	**Dareh Seyedi**	**3.63**	**336**	Pn	**Pn**	**07 22 51.3**	**+2.0**
IBAF	**Bafgh**	**4.31**	**76**	Pn	**Pn**	**07 23 01.1**	**+2.5**
IBZA	**Bozab**	**4.49**	**329**	Pn	**Pn**	**07 23 03.1**	**+2.0**
SAKB	**Bahrain**	**4.65**	**181**	P	**Pn**	**07 23 06.3**	**+3.4**
SAKB				S	**Sn**	**07 23 58.8**	**+2.7**
SNQR	**Sonqor, Kerman**	**4.92**	**330**	Pn	**Pn**	**07 23 08.7**	**+1.7**
KHGB	**Koh Gabri**	**5.03**	**92**	Pn	**Pn**	**07 23 10.7**	**+2.3**
QABG	**Abgarm-Qazvin**	**5.13**	**350**	Pn	**Pn**	**07 23 12.0**	**+2.1**
IDHR	**Dehrash**	**5.42**	**319**	Pn	**Pn**	**07 23 15.7**	**+2.0**
SLWR	**Sila**	**6.61**	**172**	P	**Pn**	**07 23 32.0**	**+2.1**
SLWR				S	**Sn**	**07 24 44.9**	**+0.4**
SHME	**Shamm**	**6.65**	**132**	P	**Pn**	**07 23 30.9**	**+0.4**
SHME	**Shamm**	**6.65**	**132**	P	**Pn**	**07 23 31.2**	**+0.7**
BANOM	**Banah**	**6.84**	**132**	P	**Pn**	**07 23 32.1**	**-1.1**
BANOM				S	**Sn**	**07 24 43.8**	**-6.5**
BANOM	**Banah**	**6.84**	**132**	P	**Pn**	**07 23 33.4**	**+0.2**
BANOM				S	**Sn**	**07 24 48.2**	**-2.1**
MASF	**Masafi**	**7.15**	**136**	P	**Pn**	**07 23 38.0**	**+0.5**
MASF				S	**Sn**	**07 24 55.3**	**-2.7**
MSFE	**Esma-Masafi**	**7.16**	**136**	P	**Pn**	**07 23 36.8**	**-0.7**
NAZ	**Nazwa, Dubai**	**7.16**	**141**	P	**Pn**	**07 23 36.6**	**-1.0**
NAZ	**Nazwa, Dubai**	**7.16**	**141**	P	**Pn**	**07 23 38.2**	**+0.6**
NAZ				S	**Sn**	**07 24 57.3**	**-0.9**
AJN	**Ajban**	**7.17**	**147**	P	**Pn**	**07 23 38.4**	**+0.8**
AJN				S	**Sn**	**07 24 57.4**	**-0.8**
ASUD	**Al Ashush, Dub**	**7.28**	**144**	P	**Pn**	**07 23 38.0**	**-1.2**
ASUD	**Al Ashush, Dub**	**7.28**	**144**	P	**Pn**	**07 23 41.0**	**+1.9**
ASUD				S	**Sn**	**07 24 59.8**	**-1.3**
MDH	**Madha**	**7.29**	**136**	P	**Pn**	**07 23 38.7**	**-0.6**
MDH	**Madha**	**7.29**	**136**	P	**Pn**	**07 23 39.5**	**+0.2**
MDH				S	**Sn**	**07 24 59.1**	**-2.2**
FAQ	**Al Faqa, Dubai**	**7.32**	**142**	S	**Sn**	**07 25 00.6**	**-1.4**
MZWR	**Madinat Zayed**	**7.43**	**157**	P	**Pn**	**07 23 42.9**	**+1.7**
UOSS	**Minazif**	**7.50**	**138**	Pn	**Pn**	**07 23 44.3**	**+2.1**
UOSS	**Minazif**	**7.50**	**138**	P	**Pn**	**07 23 44.5**	**+2.3**
UOSS				S	**Sn**	**07 25 03.2**	**-3.3**
HATD	**Hatta, Dubai**	**7.55**	**139**	P	**Pn**	**07 23 40.4**	**-2.5**
HATD	**Hatta, Dubai**	**7.55**	**139**	P	**Pn**	**07 23 43.0**	**+0.1**
HATD				S	**Sn**	**07 25 05.7**	**-2.1**
ASHO	**Ashiyiah**	**7.62**	**140**	P	**Pn**	**07 23 42.7**	**-1.2**
ASHO	**Ashiyiah**	**7.62**	**140**	P	**Pn**	**07 23 44.1**	**+0.3**
ASHO				S	**Sn**	**07 25 07.6**	**-1.9**
JASK	**Jask - Hormozg**	**7.94**	**125**	S	**Sn**	**07 25 15.0**	**-2.2**
MZR	**Muzera**	**8.01**	**161**	P	**Pn**	**07 23 46.2**	**-3.0**
MZR	**Muzera**	**8.01**	**161**	P	**Pn**	**07 23 50.8**	**+1.6**
RAYN	**Ar Rayn**	**8.45**	**214**		**Pn**	**07 23 54.8**	**-0.4**
ARQ	**Araqi**	**8.96**	**143**	P	**Pn**	**07 24 02.9**	**+0.7**
ARQ				S	**Sn**	**07 25 38.6**	**-3.7**
BSY	**Bisya**	**9.80**	**142**	P	**Pn**	**07 24 15.4**	**+1.7**
BSY				S	**Sn**	**07 25 59.5**	**-3.5**
SMDO	**Samad**	**10.02**	**137**	P	**Pn**	**07 24 16.4**	**-0.5**
SMDO				S	**Sn**	**07 26 06.3**	**-2.4**
WSAR	**Wadi Sarin**	**10.24**	**134**	P	**Pn**	**07 24 19.6**	**-0.2**
MARD	**Mardin**	**10.56**	**312**	Pn	**Pn**	**07 24 23.3**	**-0.8**
JMDO	**Jabal Madar**	**10.59**	**139**	P	**Pn**	**07 24 24.9**	**+0.3**
NGCH	**Negor - Chabah**	**10.65**	**117**	P	**Pn**	**07 24 25.4**	**+0.1**
WBK	**Wadi Bani Khal**	**10.91**	**135**	P	**Pn**	**07 24 28.5**	**-0.6**
MHTO	**MHTO**	**11.65**	**144**	P	**Pn**	**07 24 38.4**	**-0.6**
ASF	**Jabal al Asfar**	**11.86**	**281**	Pn	**Pn**	**07 24 40.4**	**-1.5**
	0.4nm,0.3s,baz=135,slow=18,SNR=2.4						
ASF				Sn	**Sn**	**07 26 50.3**	**-3.2**
	0.2nm,0.3s,baz=114,slow=20,SNR=1.3						
	1.1nm,0.4s						
DOK	**Doka**	**12.38**	**164**	P	**Pn**	**07 24 48.4**	**-0.6**
WHFO	**Wadi Hawf**	**12.98**	**167**	P	**Pn**	**07 24 56.3**	**-1.0**
MMAI	**Mount Meron Ar**	**13.19**	**284**	Pn	**Pn**	**07 24 59.1**	**-1.0**
	0.7nm,0.3s,baz=62,slow=20,SNR=1.7						
	0.3nm,0.3s						
ABTO	**Aybut**	**13.44**	**169**	P	**Pn**	**07 25 02.4**	**-1.2**
DMTO	**DMTO**	**13.45**	**162**	P	**Pn**	**07 25 02.4**	**-1.2**
KBZ	**Khabaz**	**14.44**	**337**	Pn	**Pn**	**07 25 17.9**	**+0.8**
	baz=158,slow=9.1,SNR=3.8						
	2.5nm,1.1s						
KIV	**Kislovodsk**	**14.72**	**337**	Pn	**Pn**	**07 25 22.6**	**+1.7**
BRTR	**Keskin Array B**	**16.58**	**308**	Pn	**Pn**	**07 25 44.2**	**-1.0**
	0.1nm,0.3s,baz=137,slow=15,SNR=4.1						
	1.0nm,0.8s						
BRTR	**Keskin Array B**	**16.58**	**308**	P	**Pn**	**07 25 45.5**	**+0.2**
AB31	**Akbulak array**	**19.88**	**18**	P	**P**	**07 26 24.1**	**+0.5**
ABKAR	**Akbulak array**	**19.88**	**18**	P	**P**	**07 26 23.7**	**0.0**
KK31	**Karatay Array**	**20.11**	**46**	P	**P**	**07 26 26.7**	**+0.4**
KKAR	**Karatay Array**	**20.11**	**46**		**P**	**07 26 26.7**	**+0.4**
AKTO	**Aktyubinsk**	**20.53**	**14**	P	**P**	**07 26 30.8**	**+0.1**
	1.7nm,0.7s,baz=211,slow=12,SNR=5.1						
	1.7nm,0.7s						
ARSB	**Arslanbob**	**20.92**	**53**	P	**P**	**07 26 35.1**	**0.0**
ARSB				IAmb	IAmb	07 26 44.6	
	comp=Z,7.2nm,0.9s						
BELG	**Belogornoye**	**21.85**	**355**	P	**P**	**07 26 42.9**	**-1.9**
	comp=Z,6.3nm,0.5s,baz=156,slow=1.3,SNR=5.3						
	comp=Z,6.3nm,0.5s						
IDI	**Anoyia**	**22.09**	**289**	P	**P**	**07 26 46.3**	**-1.4**
	comp=Z,11nm,1.0s,baz=112,slow=5.4,SNR=2.0						
	comp=Z,11nm,1.0s						
AAK	**Ala-Archa**	**22.48**	**51**	P	**P**	**07 26 54.0**	**+2.0**
	comp=Z,0.9nm,0.5s,baz=232,slow=12,SNR=6.9						
	comp=Z,0.9nm,0.5s						
AAK	**Ala-Archa**	**22.48**	**51**		**P**	**07 26 52.5**	**+0.5**
NRN	**Naryn**	**23.07**	**55**		**P**	**07 27 00.5**	**+2.1**
BOOM	**Boomskoye usch**	**23.41**	**53**		**P**	**07 27 03.4**	**+1.8**
BOOM				IAmb	IAmb	07 27 06.7	
	comp=Z,3.1nm,0.9s						
MLR	**Muntele Rosu**	**24.33**	**314**	P	**P**	**07 27 11.3**	**+1.2**
MLR				IAmb	IAmb	07 27 15.3	
	comp=Z,5.8nm,0.8s						
TARG	**Taragay, Kyrgy**	**24.45**	**56**		**P**	**07 27 12.3**	**+0.7**
TARG				IAmb	IAmb	07 27 15.1	
	comp=Z,4.1nm,0.8s						
AKASG	**Malin Array Be**	**25.64**	**328**	P	**P**	**07 27 20.8**	**-1.0**
	comp=Z,2.2nm,0.7s,baz=136,slow=9.5,SNR=16						
	comp=Z,2.2nm,0.7s						
AKBB	**Malin Array Si**	**25.64**	**328**		**P**	**07 27 21.7**	**-0.1**
KIEV	**Kiev**	**25.64**	**327**		**P**	**07 27 21.5**	**-0.3**
KIEV				IAmb	IAmb	07 27 24.0	
	comp=Z,6.7nm,0.8s						
BUR08	**Bucovina Ar. S**	**25.87**	**318**	P	**P**	**07 27 24.4**	**+0.4**
BUR08				IAmb	IAmb	07 27 36.3	
	comp=Z,12nm,1.4s						
ARTI	**Arti**	**26.31**	**10**	P	**P**	**07 27 29.1**	**+1.3**
	comp=Z,2.0nm,0.5s,baz=216,slow=8.7,SNR=3.1						
	comp=Z,2.0nm,0.5s						
BVAR	**Borovoye Array**	**26.59**	**27**	P	**P**	**07 27 31.7**	**+1.2**
	comp=Z,3.0nm,0.6s,baz=228,slow=7.8,SNR=16						
	comp=Z,3.0nm,0.6s						
KURBB	**Kurchatov Arra**	**28.81**	**38**	P	**P**	**07 27 51.6**	**+1.3**
	comp=Z,2.3nm,0.8s,baz=240,slow=9.5,SNR=19						
	comp=Z,2.3nm,0.8s						
KURK	**Kurchatov**	**28.91**	**38**	P	**P**	**07 27 52.3**	**+1.2**
KURK				IAmb	IAmb	07 27 54.3	
	comp=Z,2.9nm,0.8s						
MKAR	**Makanchi Array**	**29.23**	**48**	P	**P**	**07 27 54.9**	**+0.7**
	comp=Z,1.7nm,0.8s,baz=250,slow=11,SNR=7.7						
	comp=Z,1.7nm,0.8s						
MKAR	**Makanchi Array**	**29.23**	**48**	P	**P**	**07 27 55.5**	**+1.4**
EVN	**Everest**	**31.56**	**86**		**P**	**07 28 16.5**	**+0.9**
KBA	**Koelnbreinsper**	**33.00**	**310**	*e*P	**P**	**07 28 28.8**	**+1.3**
	comp=Z,1.9nm,0.3s						
LESA	**Schwarzleotal**	**33.53**	**311**	*i* P	**P**	**07 28 32.3**	**+0.3**
	comp=Z,1.4nm,0.3s						
ZALV	**Zalesovo Beam**	**33.84**	**37**	P	**P**	**07 28 34.9**	**+0.4**
	comp=Z,2.4nm,0.7s,baz=250,slow=8.4						
	comp=Z,2.4nm,0.7s						
WTTA	**Wattenberg**	**34.17**	**310**	*i* P	**P**	**07 28 38.2**	**+0.6**
	comp=Z,5.2nm,0.6s						
SQTA	**Sankt Quirin**	**34.44**	**310**	*e*P	**P**	**07 28 40.3**	**+0.4**
	comp=Z,6.8nm,0.6s						
MOTA	**Moosalm**	**34.54**	**310**	*e*P	**P**	**07 28 41.0**	**+0.1**
	comp=Z,2.2nm,0.5s						
FETA	**Feichten**	**34.71**	**310**	*e*P	**P**	**07 28 42.8**	**+0.4**
	comp=Z,3.7nm,0.6s						
FINES	**FINESS Array B**	**34.78**	**339**	P	**P**	**07 28 41.8**	**-0.7**
	comp=Z,2.2nm,0.8s,baz=139,slow=13,SNR=6.4						
	comp=Z,2.2nm,0.8s						
DAVA	**Damuels**	**35.34**	**310**	*e*P	**P**	**07 28 47.7**	**0.0**
	comp=Z,10nm,0.4s						
HFS	**Hagfors**	**38.40**	**331**	P	**P**	**07 29 12.7**	**-0.7**
	comp=Z,1.1nm,0.4s,baz=120,slow=8.8,SNR=11						
	comp=Z,1.1nm,0.4s						
NOA	**NORSAR Array B**	**39.92**	**331**	P	**P**	**07 29 24.7**	**-1.4**
	comp=Z,0.4nm,0.5s,baz=132,slow=5.2,SNR=1.8						
	comp=Z,0.4nm,0.5s						
ARCES	**ARCESS Array B**	**41.49**	**347**	P	**P**	**07 29 41.0**	**+2.0**
	comp=Z,2.6nm,0.9s,baz=144,slow=7.0,SNR=1.7						
ARCES	**ARCESS Array B**	**41.49**	**347**	P	**P**	**07 29 40.3**	**+1.4**
EKA	**Eskdalemuir Ar**	**45.02**	**319**	P	**P**	**07 30 07.0**	**-0.6**

EPON				⇑*i*Vmb_VC			07 51 22.3	
	346nm,SNR=1.3							
EPON				Sn	Sn		07 52 01.8	-4.9
PGAV	**Gavieira, Arco**	**4.41**	**128**	*e*P	Pn		07 51 13.3	-1.3
PGAV				*e*S	Sn		07 52 03.1	-3.6
PGAV				*i* IAML			07 52 04.4	
PGAV				*i* IAML			07 52 04.7	
PGAV				*i* IAML			07 52 05.6	
ELOB	**Lobios**	**4.59**	**128**	Pn	Pn		07 51 15.8	-1.4
ELOB				⇑*i*Vmb_VC			07 51 20.2	
	230nm,SNR=1.2							
ELOB				Sn	Sn		07 52 07.4	-3.7
PCAB	**Cabril**	**4.71**	**129**	*e*P	Pn		07 51 18.6	-0.2
PCAB				*e*S	Sn		07 52 10.6	-3.6
PCAB				*i* IAML			07 52 12.7	
PCAB				*i* IAML			07 52 12.8	
POLO	**Lamas de Olo**	**5.07**	**130**	*e*P	Pn		07 51 22.1	-1.7
POLO				*i* IAML			07 52 19.3	
POLO				*e*S	Sn		07 52 19.4	-3.6
POLO				*i* IAML			07 52 20.5	
POLO				*i* IAML			07 52 20.6	
ECAL	**Calabor**	**5.33**	**120**	⇑*i*Vmb_VC			07 51 25.6	
	272nm,SNR=1.0							
ECAL				Pn	Pn		07 51 26.5	-0.7
ECAL				Sn	Sn		07 52 24.6	-4.8
PBRG	**Braganca**	**5.41**	**121**	*e*S	Sn		07 52 26.7	-4.5
PBRG				*i* IAML			07 52 27.9	
PBRG				*i* IAML			07 52 28.4	
PBRG				*i* IAML			07 52 28.7	
MVO	**Moncorvo**	**5.64**	**128**	*e*S	Sn		07 52 32.3	-4.6
MVO				*i* IAML			07 52 34.5	
MVO				*i* IAML			07 52 34.6	
MVO				*i* IAML			07 52 34.6	
EARI	**Arriondas**	**5.75**	**102**	Pn	Pn		07 51 31.9	-1.2
EARI				⇑*i*Vmb_VC			07 51 40.9	
	302nm,SNR=1.2							
EARI				Sn	Sn		07 52 35.5	-4.3

SNET ***27*** *07:55:02.4±2.5, 13°.02N×91°.58W, h141km±387km, ML3.5, Presumed earthquake*
GCG ***27*** *07:55:03.3±2.0, 13°.39N×91°.39W, h0km±16km, MD4.2, ML3.6, Presumed earthquake*
CATAC ***27*** *07:55:06.7±0.6, 13°N±4°×9°1W±1°, h10km, M3.2/15, MLv3.2/15, Error ellipse: s-maj=9.0km s-min=3.5km az=31.6, confirmed*

ISC 27 07:55:02.8±2.2, 13°.35N±0°.10×91°.36W±0°.07, h3km±13km, n38, σ1°30/56, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG5	**El Palmar, Qui**	**1.04**	**0**	*i* P	**Pn**	**07 55 27.1**	**+2.6**
STG2	**El Palmar, Qui**	**1.08**	**359**	*i* P	**Pn**	**07 55 27.9**	**+2.9**
STG2				IAML		07 55 47.9	
	comp=E,1μm,0.3s						
STG8	**El Palmar, Qui**	**1.09**	**0**	*i* P	**Pn**	**07 55 28.2**	**+3.0**
RTAL	**Retalhuleu**	**1.21**	**344**	P	**Pg**	**07 55 26.2**	**+0.2**
RTAL				S	**Sn**	**07 55 42.3**	**-1.3**
RTAL	**Retalhuleu**	**1.21**	**344**	*e*P	**Pg**	**07 55 25.9**	**-0.2**
FAME	**Alcaldia de Sa**	**1.39**	**69**	P	**Pn**	**07 55 28.8**	**-0.3**
FAME				S	**Sn**	**07 55 45.6**	**-2.5**
NUBE	**Las Nubes**	**1.63**	**70**	P	**Pb**	**07 55 33.2**	**-0.3**
NUBE				S	**Sn**	**07 55 52.3**	**-1.7**
NUBE	**Las Nubes**	**1.63**	**70**	*i* P	**Pn**	**07 55 33.1**	**+0.5**
NUBE	**Las Nubes**	**1.63**	**70**	*e*P	**Pn**	**07 55 32.9**	**+0.4**
SLOZ	**Alcaldia de Sa**	**1.67**	**66**	P	**Pb**	**07 55 33.8**	**-0.4**
SLOZ				S	**Sn**	**07 55 54.9**	**-0.1**
SLOZ	**Alcaldia de Sa**	**1.67**	**66**	*e*P	**Pn**	**07 55 33.5**	**+0.5**
CEVE	**Cerro Verde**	**1.75**	**74**	P	**Pb**	**07 55 35.2**	**-0.5**
CEVE				S	**Sn**	**07 55 56.4**	**-0.8**
CEVE	**Cerro Verde**	**1.75**	**74**	*e*P	**Pb**	**07 55 35.8**	**+0.1**
CEVE				*e*S	**Sg**	**07 55 59.7**	**+0.6**
SNJE	**San Jose**	**1.78**	**73**	*e*P	**Pn**	**07 55 35.1**	**+0.5**
APG	**El Apazote**	**1.85**	**28**	*i* P	**Pb**	**07 55 37.5**	**0.0**
UNIC	**Universidad Ca**	**1.87**	**70**	P	**Pn**	**07 55 36.7**	**+1.0**
JAYA	**Jayaque - finc**	**1.88**	**81**	P	**Pn**	**07 55 36.5**	**+0.4**
JAYA				S	**Sn**	**07 56 00.2**	**-0.1**
JAYA	**Jayaque - finc**	**1.88**	**81**	*i* P	**Pn**	**07 55 36.4**	**+0.4**
JAYA				IAML		07 56 08.4	
	comp=N,530nm,0.4s						
JAYA	**Jayaque - finc**	**1.88**	**81**	*e*P	**Pn**	**07 55 36.3**	**+0.3**
JAYA				*e*S	**Sb**	**07 56 01.8**	**-0.1**
HUEH	**Huehuetenango**	**1.96**	**356**	P	**Pb**	**07 55 38.6**	**-0.7**
HUEH				S	**Sb**	**07 56 03.1**	**-1.1**
HUEH	**Huehuetenango**	**1.96**	**356**	*i* P	**Pb**	**07 55 39.0**	**-0.3**
HUEH				IAML		07 56 15.3	
	comp=N,372nm,0.8s						
PMON	**Piamonte**	**2.02**	**80**	P	**Pb**	**07 55 39.3**	**-0.9**
PMON				S	**Sn**	**07 56 04.7**	**+1.0**
PMON	**Piamonte**	**2.02**	**80**	*e*P	**Pn**	**07 55 38.4**	**+0.5**
PMON				*e*S	**Sb**	**07 56 06.4**	**+0.6**
UEES	**Universidad Ev**	**2.09**	**80**	P	**Pb**	**07 55 40.9**	**-0.5**
UEES				S	**Sb**	**07 56 07.1**	**-0.8**
LOMA	**Loma Larga**	**2.15**	**82**	*e*P	**Pb**	**07 55 41.3**	**-1.1**
LOMA				*e*S	**Sb**	**07 56 10.4**	**+0.9**
MTO3	**Montecristo**	**2.20**	**62**	P	**Pn**	**07 55 41.7**	**+1.2**
MTO3				S	**Sb**	**07 56 09.6**	**-1.5**
MTO3	**Montecristo**	**2.20**	**62**	*i* P	**Pn**	**07 55 41.7**	**+1.2**
MTO3	**Montecristo**	**2.20**	**62**	*e*P	**Pn**	**07 55 41.5**	**+1.1**
ESQI	**Esquipulas**	**2.29**	**58**	P	**Pb**	**07 55 43.6**	**-1.4**
ESQI				S	**Sn**	**07 56 10.1**	**-0.4**
ESQI	**Esquipulas**	**2.29**	**58**	*e*P	**Pn**	**07 55 43.0**	**+1.3**
ESQI				*e*S	**Sb**	**07 56 14.3**	**+0.5**
SJTE	**Alcalda de S**	**2.30**	**83**	*e*P	**Pn**	**07 55 43.4**	**+1.7**
PAVA	**Las Pavas**	**2.38**	**81**	P	**Pb**	**07 55 45.1**	**-1.3**
COEG	**Centro de Oper**	**2.42**	**83**	P	**Pb**	**07 55 45.5**	**-1.6**
COEG				S	**Sn**	**07 56 15.3**	**+1.6**
TECO	**Alcaldia de Te**	**2.51**	**86**	P	**Pn**	**07 55 46.7**	**+2.1**
TECO				S	**Sn**	**07 56 16.2**	**+0.5**
SCLA	**Alcaldia de Sa**	**2.58**	**82**	P	**Pn**	**07 55 47.1**	**+1.5**
SARH	**Santa Rosa de**	**2.89**	**60**	P	**Pn**	**07 55 51.4**	**+1.6**
CCIG	**Comitan**	**3.01**	**346**	*i* P	**Pb**	**07 55 53.9**	**-3.3**
LCND	**La Caada**	**3.38**	**90**	*e*P	**Pn**	**07 55 57.5**	**+1.0**

ASRS ***27*** *07:55:03.0±1.3, 53°.54N×87°.96E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 27 07:55:06.1±3.1, 53°.55N×87°.61E, h0km, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=27.8km s-min=20.8km az=75.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.70**	**285**	I	I	08 06 50.0	
	0.1nm,0.7s,baz=98,slow=339,SNR=3.8						
ZALV	**Zalesovo Beam**	**1.70**	**285**	Pg	Pn	07 55 37.3	+0.2
	baz=102,slow=16						
KURBB	**Kurchatov Arra**	**6.32**	**246**	Pn	Pn	07 56 41.4	+1.0
	0.1nm,0.3s,baz=62,slow=14,SNR=8.2						
KURBB				Sn	Sn	07 57 50.7	-2.5
	baz=61,slow=25						
KURBB				Lg	Lg	07 58 27.4	
	baz=65,slow=28,SNR=4.5						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**7.58**	**209**	Pn	Pn	07 56 58.9	+1.1
	0.1nm,0.3s,baz=28,slow=13,SNR=5.6						
MKAR				Lg	Lg	07 59 06.8	
	0.1nm,0.3s,baz=25,slow=29,SNR=2.3						
	0.1nm,0.3s						

ASRS ***27*** *08:00:05.0±1.0, 53°.59N×87°.61E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 27 08:00:08.8±3.4, 53°.50N×87°.61E, h0km, mbtmp2.5/2, ML2.2/2, Error ellipse: s-maj=30.3km s-min=18.0km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.72**	**286**	I	I	08 11 10.0	
	baz=101,slow=337,SNR=2.9						
ZALV	**Zalesovo Beam**	**1.72**	**286**	Pg	Pn	08 00 40.0	+0.1
	0.7nm,0.3s,baz=109,slow=13,SNR=2.0						
ZALV				Lg	Lg	08 01 03.2	
	1.3nm,0.3s,baz=107,slow=29,SNR=2.4						
KURBB	**Kurchatov Arra**	**6.30**	**246**	Pn	Pn	08 01 43.5	+0.7
	baz=63,slow=14,SNR=3.3						
KURBB				Lg	Lg	08 03 27.0	
	baz=60,slow=31,SNR=4.6						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**7.53**	**209**	Pn	Pn	08 02 01.0	+1.2
	0.1nm,0.3s,baz=29,slow=13,SNR=2.3						
	0.1nm,0.3s						

WEL 27 08:07:51.5±1.1, 33°S±17°×17°9E±3°9, h358km±22km, M4.0/6, mB4.9/5, ML4.2/8, MLv4.0/6, Mw(mB)4.1/5, Error ellipse: s-maj=55.6km s-min=6.0km az=113.1, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.30**	**33**	S	S	08 10 03.2	+0.5
MXZ	**Matakaoa Point**	**4.71**	**191**	P	Pn	08 09 07.7	-0.5
WMGZ	**Waiomatatini S**	**4.95**	**189**	P	Pn	08 09 12.4	+1.6
WMGZ				S	S	08 10 15.2	+0.2
HAZ	**Te Kaha**	**5.00**	**195**	P	Pn	08 09 11.9	+0.5
PUZ	**Puketiti**	**5.22**	**190**	P	Pn	08 09 14.1	+0.4
PUZ				S	S	08 10 20.4	0.0
RUGZ	**Raukumara Rang**	**5.23**	**195**	P	Pn	08 09 14.1	+0.2
MWZ	**Matawai**	**5.61**	**195**	P	Pn	08 09 18.7	+0.5
MWZ				S	S	08 10 29.9	+1.5
CNGZ	**Carnagh Statio**	**5.63**	**190**	P	Pn	08 09 17.6	-0.7
URZ	**Urewera**	**5.64**	**199**	P	Pn	08 09 18.3	-0.1
URZ				S	S	08 10 29.9	+0.9
TKGZ	**Te Karaka**	**5.65**	**193**	P	Pn	08 09 18.9	+0.4
RAGZ	**Rawiri**	**5.79**	**196**	P	Pn	08 09 20.2	0.0
MUGZ	**Murupara**	**5.94**	**201**	P	Pn	08 09 21.9	+0.1
MUGZ				S	S	08 10 35.6	+0.4
RTZ	**Ruatahuna**	**6.01**	**199**	P	Pn	08 09 21.8	-0.9
RTZ				S	S	08 10 36.9	+0.2
BKZ	**Black Stump Fm**	**6.66**	**200**	P	Pn	08 09 29.5	-0.6
BKZ				S	S	08 10 50.4	+0.1
OTVZ	**Oturere**	**6.93**	**205**	P	Pn	08 09 33.4	+0.1

ASRS ***27*** *08:10:25.0±1.0, 53°.55N×87°.50E, h0km, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 27 08:10:25.7±3.7, 53°.52N×87°.65E, h0km, mbtmp2.6/2, ML2.2/2, Error ellipse: s-maj=36.2km s-min=22.2km az=78.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.73**	**285**	I	I	08 21 20.0	
	0.2nm,0.7s,baz=103,slow=336,SNR=9.1						
ZALV	**Zalesovo Beam**	**1.73**	**285**	Pg	Pn	08 10 56.6	-0.5
	baz=101,slow=19						
KURBB	**Kurchatov Arra**	**6.33**	**246**	Pn	Pn	08 12 01.4	+1.2
	baz=62,slow=14,SNR=4.1						
KURBB				Lg	Lg	08 13 46.7	
	baz=59,slow=34,SNR=3.0						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**7.56**	**209**	Pn	Pn	08 12 18.0	+0.8
	0.1nm,0.3s,baz=20,slow=9.5,SNR=2.4						
MKAR				Lg	Lg	08 14 24.8	
	0.1nm,0.3s,baz=24,slow=31,SNR=2.2						
	0.2nm,0.5s						

KRSC 27 08:13:22.1±1.5, 49°.50N×159°.06E, h41km±42km, MI3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.23**	**303**	*e*P	Pn	08 13 57.9	+1.4
SKR				*e*S	Sn	08 14 23.5	+0.6
KDTR	**Khodutka, Kamc**	**2.40**	**345**	*e*P	Pn	08 14 01.6	+2.9
KDTR				*e*S	Sn	08 14 30.5	+3.6
PAU	**Pauzhetka**	**2.44**	**325**	*e*P	Pn	08 14 02.7	+3.3
PAU				*e*S	Sn	08 14 31.6	+3.7
RUS	**Russkaya**	**2.96**	**354**	*e*P	Pn	08 14 10.0	+3.6
RUS				*e*S	Sn	08 14 44.2	+3.5
ASAK	**Asacha**	**2.98**	**346**	*e*P	Pn	08 14 10.8	+4.0
ASAK				*e*S	Sn	08 14 45.9	+4.5
MTVR	**Mutnovka**	**3.04**	**350**	*e*P	Pn	08 14 10.4	+2.7
MTVR				*e*S	Sn	08 14 45.8	+2.8
GRL	**Gorelyy**	**3.12**	**349**	*e*P	Pn	08 14 12.9	+4.0
GRL				*e*S	Sn	08 14 49.4	+4.5
KRMR	**Karymshinskiy**	**3.39**	**350**	*e*P	Pn	08 14 17.0	+4.7
KRMR				*e*S	Sn	08 14 56.5	+5.2
DALK	**Dalny**	**3.54**	**357**	*e*P	Pn	08 14 18.4	+3.9
DALK				*e*S	Sn	08 14 59.4	+4.3
SPN	**Mys Shipunski**	**3.66**	**9**	*e*P	Pn	08 14 20.3	+4.2
SPN				*e*S	Sn	08 15 01.9	+4.0
UGLR	**Uglovaya**	**3.72**	**358**	*e*P	Pn	08 14 21.1	+4.1
SMAR	**Somma**	**3.78**	**358**	*e*P	Pn	08 14 21.8	+3.9
AVH	**Avacha**	**3.78**	**357**	*e*P	Pn	08 14 22.2	+4.4
SDLR	**Sedlovina**	**3.79**	**358**	*e*P	Pn	08 14 21.5	+3.5
KOK	**Koryaka**	**3.81**	**356**	*e*P	Pn	08 14 22.9	+4.6
KRER	**Koryakskii**	**3.82**	**357**	*e*P	Pn	08 14 22.6	+4.2
KRER				*e*S	Sn	08 15 06.9	+4.8
KRX	**Arik**	**3.88**	**356**	*e*P	Pn	08 14 23.4	+4.2
GNL	**Ganaly**	**4.26**	**351**	*e*P	Pn	08 14 29.6	+5.1
KBTR	**Krutoberegovo**	**7.10**	**17**	*e*P	Pn	08 15 08.2	+4.9

IDC ***27*** *08:21:48.5±1.2, 1°.55S×127°.25E, h0km, mb3.3/4, mbtmp3.4/6, ML3.8/2, MS2.8/1, Error ellipse: s-maj=34.2km s-min=21.3km az=59.0*
DJA ***27*** *08:21:53.5±0.2, 1°S±2°×12°7E±1°, h10km, M4.2/23, mB5.1/4, mb4.5/5, MLv3.9/23, Mw(mB)4.5/4*

ISC 27 08:21:53.1±0.8, 1°.66S±0°.08×127°.35E±0°.06, h25km, n18, σ1°84/19, mb3.3/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANI	**Sanana**	**1.42**	**254**	P	**Pb**	**08 22 18.9**	**0.0**
NLAI	**Namlea**	**1.59**	**189**	P	**Pb**	**08 22 24.1**	**+2.2**
KRAI	**Karang Ratu**	**1.95**	**148**	P	**Pb**	**08 22 29.0**	**+1.0**
AAI	**Ambon**	**2.19**	**157**	P	**Pb**	**08 22 32.4**	**+0.4**
MSAI	**Masohi**	**2.30**	**137**	P	**Pb**	**08 22 33.8**	**-0.2**
TNTI	**Ternate**	**2.41**	**0**	P	**Pn**	**08 22 32.1**	**+1.1**
SWI	**Sorong**	**3.98**	**79**	P	**Pn**	**08 22 53.1**	**+0.5**
SIJI	**Sorong**	**3.99**	**79**	Pn	**Pn**	**08 22 53.0**	**+0.3**
	6.2nm,0.3s,baz=256,slow=17,SNR=18						
SIJI				Sn	**Sn**	**08 23 41.2**	**+2.5**
	4.8nm,0.3s,baz=217,slow=22,SNR=6.6						
	21nm,0.3s						
SIJI	**Sorong**	**3.99**	**79**	P	**Pn**	**08 22 53.5**	**+0.8**
FAKI	**Fak Fak**	**5.05**	**104**	P	**Pn**	**08 23 07.8**	**+0.5**
	0.1nm30nm,0.6s						
APSI	**Ampana**	**5.75**	**277**	P	**Pn**	**08 23 19.0**	**+2.1**
MRSI	**Marisa**	**5.81**	**291**	P	**Pn**	**08 23 20.2**	**+2.4**
WRA	**Warramunga Arr**	**19.42**	**160**	P	**P**	**08 26 17.9**	**+0.2**
	0.3nm,0.3s,baz=340,slow=11,SNR=12						
WRA				S	**S**	**08 29 51.5**	**-4.4**
	0.1nm,0.3s,baz=342,slow=27,SNR=1.3						
	0.3nm,0.4s						
LEM	**Lembang**	**20.34**	**255**	LR	LR	08 36 10.0	
	comp=Z,28nm,19.2s,baz=332,slow=42						
ASAR	**Alice Springs**	**22.78**	**164**	P	**P**	**08 26 54.4**	**+0.3**
	0.5nm,0.6s,baz=345,slow=12,SNR=12						
	0.5nm,0.6s						
SONM	**Songino Array**	**52.58**	**342**	P	**P**	**08 31 03.4**	**-1.3**
	0.3nm,0.4s,baz=165,slow=6.0,SNR=1.8						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**62.34**	**327**	P	**P**	**08 32 12.6**	**-0.9**
	0.1nm,0.3s,baz=120,slow=8.1,SNR=1.9						
	0.1nm,0.3s						
KURBB	**Kurchatov Arra**	**66.60**	**329**	P	**P**	**08 32 38.6**	**-2.7**
	0.1nm,0.4s,baz=127,slow=5.7,SNR=2.3						
	0.1nm,0.4s						

BGSI ***27*** *08:24:46.9±1.2, 30°.61S×27°.02E, h4km±422km, ML3.3*
PRE ***27*** *08:24:58.8±1.1, 26°.38S×29°.26E, h0km, ML2.5, Suspected explosion*

ISC 27 08:24:59.4±0.9, 26°.43S±0°.04×29°.21E±0°.04, h0km, n23, σ1°87/38, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WDLM	**Western Deep L**	**1.60**	**270**	*e*P	**Pb**	**08 25 29.7**	**-0.2**
WDLM				*e*S	**Sg**	**08 25 52.0**	**+1.2**
WDLM				IAML		08 25 54.9	
	comp=Z,79nm,0.3s						
PRYS	**Parys**	**1.72**	**253**	*e*P	**Pn**	**08 25 31.3**	**+0.5**
PRYS				*e*S	**Sb**	**08 25 55.5**	**+1.1**
PRYS				IAML		08 25 56.7	
	comp=Z,76nm,0.4s						
PILG	**Pilgrimsrest,**	**2.02**	**43**	*e*P	**Pn**	**08 25 33.8**	**-1.1**
PILG				*e*S	**Sn**	**08 25 59.0**	**-1.8**
PILG				IAML		08 26 01.4	
	comp=Z,51nm,1.0s						
SNKL	**Senekal, Frees**	**2.24**	**214**	*e*P	**Pn**	**08 25 39.5**	**+1.6**
SNKL				*e*S	**Sn**	**08 26 07.5**	**+1.1**
SNKL				IAML		08 26 11.4	
	comp=Z,50nm,0.7s						
HOED	**Hoedspruit, Li**	**2.54**	**38**	*e*P	**Pn**	**08 25 42.1**	**+0.1**
HOED				*e*S	**Sn**	**08 26 12.2**	**-1.5**
HOED				IAML		08 26 15.2	
	comp=Z,30nm,0.4s						
LEPH	**Lephalale, Lim**	**2.86**	**333**	*e*P	**Pn**	**08 25 46.4**	**0.0**
LEPH				*e*S	**Sn**	**08 26 21.3**	**-0.3**
LEPH				IAML		08 26 27.1	
	comp=Z,37nm,0.4s						
TEMBE	**Tembe Elephant**	**2.94**	**103**	*e*P	**Pn**	**08 25 47.0**	**-0.4**
TEMBE				*e*S	**Sn**	**08 26 21.6**	**-1.9**
TEMBE				IAML		08 26 43.3	
	comp=Z,40nm,0.5s						
PMBG	**Pietermaritzbu**	**3.28**	**160**	*e*P	**Pn**	**08 25 53.3**	**+1.2**
PMBG				*e*S	**Sn**	**08 26 32.7**	**+0.8**
PMBG				IAML		08 27 37.3	
	comp=Z,38nm,0.4s						
LBTB	**Lobatse**	**3.55**	**293**	*e*P	**Pn**	**08 25 57.3**	**+1.5**
LBTB				*e*S	**Sn**	**08 26 38.5**	**-0.1**
LBTB				IAML		08 26 49.4	
	comp=Z,31nm,0.6s						
MAKGR	**Makgori**	**4.01**	**278**	*i* P	**Pn**	**08 26 02.7**	**+0.5**
MAKGR				*i* S	**Sb**	**08 26 59.1**	**-0.9**
MAKGR				IAML		08 27 08.6	
	comp=N,138nm,0.6s						
BOSA	**Boshof**	**4.13**	**237**	*e*P	**Pn**	**08 26 05.1**	**+1.3**
BOSA				*e*S	**Sn**	**08 26 53.6**	**+0.7**
BOSA				IAML		08 27 11.3	
	comp=Z,12nm,0.4s						
MUSN	**Musina, Limpop**	**4.17**	**8**	*e*P	**Pn**	**08 26 04.1**	**-0.2**
MUSN				*e*S	**Sn**	**08 26 51.2**	**-2.5**
MUSN				IAML		08 27 15.7	
	comp=Z,12nm,0.7s						
KSTD	**Kokstad**	**4.17**	**179**	*e*P	**Pn**	**08 26 05.6**	**+1.1**
KSTD				*e*S	**Sn**	**08 26 54.4**	**+0.3**
KSTD				IAML		08 27 11.8	
	comp=Z,13nm,0.4s						
LPHEP	**Lephephe**	**4.31**	**314**	*i* P	Pg	08 26 30.8	+8.8
LPHEP				IAML		08 27 13.8	
	comp=E,19nm,0.6s						
KDWAN	**Kaudwane**	**5.12**	**305**	*i* P	**Pg**	**08 26 33.7**	**-3.9**
KDWAN				IAML		08 27 46.6	
	comp=E,24nm,0.6s						
BROLN	**Tlhalogang**	**5.58**	**342**	*i* P	Pg	08 26 59.4	+13
KHWEE	**KHWEE**	**5.63**	**322**	*i* P	**Pg**	**08 26 51.1**	**+3.8**
SOOWA	**Sowa**	**6.45**	**334**	IAML		08 28 21.4	
	comp=E,40nm,0.6s						
BFON	**Badsfontein, M**	**7.21**	**221**	*e*P	**Pn**	**08 26 47.5**	**+1.4**
BFON				*e*S	**Sn**	**08 28 07.1**	**-1.7**
BFON				IAML		08 28 49.6	
	comp=Z,5.2nm,0.5s						
BRAK	**Brakfontein**	**7.67**	**225**	*e*P	**Pn**	**08 26 54.5**	**+1.9**
BRAK				*e*S	**Sn**	**08 28 17.7**	**-2.6**
BRAK				IAML		08 28 22.2	
	comp=Z,3.0nm,0.3s						
ROOI	**Rooidraai Farm**	**7.80**	**218**	*e*P	**Pn**	**08 26 56.3**	**+2.1**
ROOI				*e*S	**Sn**	**08 28 20.4**	**-2.9**
ROOI				IAML		08 28 31.6	
	comp=Z,1.9nm,1.1s						
GRAN	**Grantham**	**8.48**	**225**	*e*P	**Pn**	**08 27 05.8**	**+2.3**
GRAN				*e*S	**Sn**	**08 28 36.6**	**-3.5**
GRAN				IAML		08 29 30.0	
	comp=Z,4.7nm,0.5s						
FRAZ	**Fraserburg**	**8.74**	**229**	*e*P	**Pn**	**08 27 08.6**	**+1.3**
FRAZ				*e*S	**Sn**	**08 28 43.0**	**-3.7**
FRAZ				IAML		08 29 00.2	
	comp=Z,1.5nm,0.4s						

IDC 27 08:31:31.9±3.5, 53°.95N×87°.58E, h0km, mbtmp2.4/2, ML2.2/2, Error ellipse: s-maj=32.2km s-min=18.6km az=51.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.63**	**271**	I	I	08 43 00.0	
	0.1nm,0.9s,baz=91,slow=338,SNR=2.8						
ZALV	**Zalesovo Beam**	**1.63**	**271**	Pg	Pn	08 32 01.2	-0.7
	0.3nm,0.3s,baz=85,slow=16,SNR=1.4						
ZALV				Lg	Lg	08 32 23.8	
	0.5nm,0.3s,baz=88,slow=38,SNR=2.0						
KURBB	**Kurchatov Arra**	**6.47**	**243**	Pn	Pn	08 33 08.9	+0.5
	baz=50,slow=12,SNR=1.7						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**7.92**	**207**	Pn	Pn	08 33 29.6	+1.4
	0.1nm,0.3s,baz=26,slow=13,SNR=5.3						
	0.1nm,0.3s						

CATAC ***27*** *08:32:41.9±0.7, 13°N±4°×9°0W±1°, h15km±5km, M2.5/11, MLv2.5/11, Error ellipse: s-maj=8.0km s-min=6.4km az=16.4, confirmed*
GCG ***27*** *08:32:42.2±0.8, 13°.21N×90°.10W, h0km±98km, MD3.9, ML2.5, Presumed earthquake*
SNET ***27*** *08:32:42.4±1.4, 13°.15N×90°.12W, h30km±16km, ML2.5, Presumed earthquake*

ISC 27 08:32:41.1±2.8, 13°.1N±0°.1×90°.07W±0°.08, h17km±9km, n29, σ0°62/47, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	**Alcaldia de Sa**	**0.78**	**4**	P	**Pn**	**08 32 57.3**	**-0.1**
FAME				S	**Sn**	**08 33 07.0**	**-1.5**
JAYA	**Jayaque - finc**	**0.84**	**46**	P	**Pg**	**08 32 57.6**	**0.0**
JAYA	**Jayaque - finc**	**0.84**	**46**	*i* P	**Pg**	**08 32 57.7**	**+0.1**
JAYA				*i* S	**Sn**	**08 33 09.9**	**-0.5**
JAYA				IAML		08 33 11.3	
	comp=N,432nm,0.3s						
JAYA	**Jayaque - finc**	**0.84**	**46**	*e*P	**Pg**	**08 32 57.8**	**+0.1**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.78**	**282**	I	I	08 51 10.0	
	baz=100,slow=340,SNR=1.6						
ZALV	**Zalesovo Beam**	**1.78**	**282**	Pg	Pn	08 40 28.3	+0.3
	0.7nm,0.3s,baz=98,slow=15,SNR=3.7						
ZALV				Lg	Lg	08 40 52.3	
	0.8nm,0.3s,baz=99,slow=31,SNR=3.9						
KURBB	**Kurchatov Arra**	**6.43**	**246**	Pn	Pn	08 41 32.6	+0.7
	0.1nm,0.3s,baz=63,slow=14,SNR=1.5						
MKAR	**Makanchi Array**	**7.68**	**209**	Pn	Pn	08 41 50.3	+1.1
	0.1nm,0.3s,baz=27,slow=12,SNR=4.3						
	0.2nm,0.3s						

NOU ***27*** *08:47:52.7, 41.87S×174.61E, h7km, MLv3.7/13, Cook Strait, New Zealand*
WEL ***27*** *08:47:54.0±0.3, 42.3°S±3°×17.4E±°, h12km, M3.4/19, ML3.4/19, MLv3.4/19, Error ellipse: s-maj=3.7km s-min=2.2km az=157.9, confirmed*

ISC 27 08:47:53.6±0.9, **41.76S**±0.03×**174.40E**±0.03, **h17**km±6km, **n109**, σ0**99**/118, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.14**	**272**	P	**Pg**	**08 47 57.8**	**+0.2**
CMWZ				S	**Sg**	**08 48 00.8**	**+0.5**
WDFS	**Ward Fire Stat**	**0.21**	**249**	P	**Pg**	**08 47 59.1**	**+0.6**
SDNS	**Seddon**	**0.21**	**295**	P	**Pg**	**08 47 58.2**	**-0.5**
SDNS				S	**Sg**	**08 48 01.6**	**-0.5**
SEDS	**Seddon Fire St**	**0.25**	**289**	P	**Pg**	**08 47 58.6**	**-0.7**
SEDS				S	**Sg**	**08 48 02.4**	**-0.7**
KEKS	**Kekerengu Vall**	**0.37**	**237**	P	**Pb**	**08 48 02.4**	**+0.7**
MGCS	**Blenheim Marlb**	**0.42**	**306**	P	**Pg**	**08 48 01.2**	**-1.0**
MGCS				S	**Sg**	**08 48 06.8**	**-1.1**
TUWZ	**Tuamarina**	**0.47**	**314**	P	**Pg**	**08 48 02.6**	**-0.5**
TUWZ				S	**Sg**	**08 48 08.3**	**-1.1**
BWRS	**Waikakaho Road**	**0.48**	**310**	P	**Pg**	**08 48 02.7**	**-1.1**
BHW	**Baring Head**	**0.50**	**46**	P	**Pb**	**08 48 04.6**	**+0.8**
BHW				S	**Sb**	**08 48 12.4**	**+1.6**
SNZO	**South Karori**	**0.50**	**28**	P	**Pb**	**08 48 03.9**	**0.0**
SNZO	**South Karori**	**0.50**	**28**	S	**Sb**	**08 48 11.5**	**+0.6**
WNAS	**Wellington Int**	**0.53**	**36**	P	**Pb**	**08 48 04.7**	**+0.3**
WNHS	**Wellington Hig**	**0.54**	**32**	P	**Pb**	**08 48 04.8**	**+0.3**
WNKS	**Wellington Kar**	**0.54**	**29**	P	**Pb**	**08 48 04.7**	**+0.1**
TRTW	**Torrens Terrac**	**0.54**	**32**	P	**Pb**	**08 48 04.7**	**+0.2**
MKVS	**Makara Village**	**0.54**	**26**	P	**Pb**	**08 48 04.5**	**-0.1**
MKVS				S	**Sb**	**08 48 12.5**	**+0.4**
WTYS	**Wellington Ten**	**0.54**	**32**	P	**Pb**	**08 48 04.9**	**+0.3**
WEL	**Wellington**	**0.55**	**31**	P	**Pb**	**08 48 04.9**	**+0.2**
WEL				S	**Sb**	**08 48 13.0**	**+0.8**
QCCS	**Picton Queen C**	**0.55**	**329**	P	**Pg**	**08 48 03.2**	**-1.4**
QCCS				S	**Sg**	**08 48 09.7**	**-2.3**
TCW	**Tory Channel**	**0.55**	**351**	P	**Pg**	**08 48 03.6**	**-0.9**
TCW				S	**Sg**	**08 48 10.4**	**-1.6**
PLWZ	**Palliser**	**0.67**	**74**	P	**Pn**	**08 48 08.8**	**+0.5**
MSWZ	**Moikau Station**	**0.72**	**62**	P	**Pn**	**08 48 09.3**	**+0.3**
CAW	**Cannon Point**	**0.82**	**38**	P	**Pn**	**08 48 09.7**	**+0.4**
PAWZ	**Paruwai Farm**	**0.86**	**65**	P	**Pn**	**08 48 11.3**	**+0.4**
KHZ	**Kahutara**	**0.92**	**224**	P	**Pb**	**08 48 11.8**	**+0.8**
KHZ	**Kahutara**	**0.92**	**224**	S	**Sn**	**08 48 26.2**	**+1.7**
KHZ	**Kahutara**	**0.92**	**224**	P	**Pb**	**08 48 12.0**	**+1.0**
NNZ	**Nelson**	**0.93**	**305**	P	**Pg**	**08 48 10.1**	**-1.7**
KIW	**Kapiti Island**	**0.97**	**24**	P	**Pg**	**08 48 11.9**	**-0.6**
DUWZ	**D'Urville Isla**	**1.02**	**339**	P	**Pg**	**08 48 11.7**	**-1.7**
MTW	**Mount Morrison**	**1.02**	**55**	P	**Pn**	**08 48 13.4**	**+0.3**
TRWZ	**Traveller**	**1.03**	**70**	P	**Pn**	**08 48 13.6**	**+0.3**
OGWZ	**Otaki Gorge**	**1.10**	**32**	P	**Pg**	**08 48 14.3**	**-0.7**
THZ	**Tophouse**	**1.11**	**269**	P	**Pb**	**08 48 14.0**	**-0.5**
HOWZ	**Holdsworth Sta**	**1.20**	**45**	P	**Pb**	**08 48 15.8**	**-0.1**
MRNZ	**Matariki Terra**	**1.28**	**286**	P	**Pn**	**08 48 16.7**	**+0.1**
TMWZ	**Te Maipa**	**1.30**	**61**	P	**Pn**	**08 48 17.0**	**+0.1**
TKNZ	**Takaka Hill**	**1.30**	**303**	P	**Pn**	**08 48 16.5**	**-0.5**
MRZ	**Mangatainoka R**	**1.41**	**40**	P	**Pn**	**08 48 18.7**	**+0.3**
TIWZ	**Tintock**	**1.49**	**49**	P	**Pn**	**08 48 19.6**	**0.0**
GVZ	**Greta Valley S**	**1.58**	**219**	P	**Pn**	**08 48 20.8**	**0.0**
CPWZ	**Castlepoint**	**1.60**	**59**	P	**Pn**	**08 48 21.3**	**+0.3**
QRZ	**Quartz Range**	**1.69**	**303**	P	**Pn**	**08 48 22.8**	**+0.6**
QRZ	**Quartz Range**	**1.69**	**303**	P	**Pn**	**08 48 22.9**	**+0.6**
PRWZ	**Pori Road**	**1.69**	**45**	P	**Pn**	**08 48 22.3**	**0.0**
OHWZ	**Ohakea**	**1.70**	**25**	P	**Pb**	**08 48 24.5**	**+0.2**
POWZ	**Post Office Ro**	**1.71**	**38**	P	**Pn**	**08 48 22.8**	**+0.2**
BFZ	**Birch Farm**	**1.76**	**53**	P	**Pn**	**08 48 22.8**	**-0.5**
BFZ	**Birch Farm**	**1.76**	**53**	P	**Pn**	**08 48 22.7**	**-0.5**
LTZ	**Lake Taylor**	**1.88**	**236**	P	**Pn**	**08 48 25.0**	**0.0**
AMCZ	**Amberley**	**1.92**	**222**	P	**Pn**	**08 48 25.1**	**-0.3**
DSZ	**Denniston Nort**	**1.94**	**269**	P	**Pn**	**08 48 26.5**	**+0.7**
DVHZ	**Dannevirke**	**1.98**	**43**	P	**Pn**	**08 48 25.7**	**-0.6**
WAZ	**Wanganui**	**2.05**	**13**	P	**Pb**	**08 48 30.2**	**-0.1**
TSZ	**Takapari Road**	**2.07**	**36**	P	**Pn**	**08 48 27.5**	**0.0**
OKCZ	**Okains Bay**	**2.20**	**206**	P	**Pn**	**08 48 28.7**	**-0.7**
PRHZ	**Porangahau**	**2.25**	**49**	P	**Pn**	**08 48 29.4**	**-0.7**
LREZ	**Lake Rotokare**	**2.29**	**0**	P	**Pb**	**08 48 34.4**	**-0.1**
WPHZ	**Waipukurau**	**2.29**	**43**	P	**Pn**	**08 48 30.7**	**+0.1**
PNHZ	**Pukenui**	**2.29**	**37**	P	**Pn**	**08 48 30.2**	**-0.4**
MQZ	**McQueen's Vall**	**2.33**	**213**	P	**Pn**	**08 48 29.8**	**-1.4**
OXZ	**Oxford**	**2.35**	**227**	P	**Pn**	**08 48 30.1**	**-1.2**
NMEZ	**Namu Road**	**2.37**	**350**	P	**Pb**	**08 48 36.4**	**+0.6**
INZ	**Inchbonnie**	**2.40**	**245**	P	**Pn**	**08 48 32.3**	**+0.3**
PREZ	**Palmer Road**	**2.42**	**356**	P	**Pb**	**08 48 36.1**	**-0.6**
KHEZ	**Kahui Hut**	**2.48**	**353**	P	**Pb**	**08 48 37.1**	**-0.5**
KHEZ	**Kahui Hut**	**2.48**	**353**	S	**Sb**	**08 49 08.4**	**+0.6**
KHEZ	**Kahui Hut**	**2.48**	**353**	P	**Pb**	**08 48 37.3**	**-0.3**
NBEZ	**Newall Road No**	**2.52**	**351**	P	**Pb**	**08 48 38.1**	**-0.2**
PXZ	**Pawanui**	**2.54**	**48**	P	**Pn**	**08 48 32.9**	**-1.1**
MOVZ	**Moawhango**	**2.56**	**24**	P	**Pb**	**08 48 39.0**	**-0.2**
DREZ	**Durham Road**	**2.57**	**357**	P	**Pn**	**08 48 37.5**	**+3.1**
PKVZ	**Pokaka**	**2.57**	**17**	P	**Pb**	**08 48 38.6**	**-0.6**
KRHZ	**Kereru**	**2.59**	**36**	P	**Pb**	**08 48 34.1**	**-0.6**
WNVZ	**Wahianoa**	**2.59**	**21**	P	**Pb**	**08 48 40.6**	**+0.9**
TRVZ	**Turoa**	**2.60**	**20**	P	**Pb**	**08 48 40.6**	**+0.7**
WHVZ	**Whangaehu Hut**	**2.63**	**21**	P	**Pb**	**08 48 40.8**	**+0.4**
VRZ	**Vera Road**	**2.64**	**6**	P	**Pn**	**08 48 37.6**	**+2.2**
FWVZ	**Far West T-bar**	**2.65**	**20**	P	**Pb**	**08 48 40.9**	**+0.2**
TUVZ	**Tukino**	**2.66**	**22**	P	**Pn**	**08 48 38.1**	**+2.2**
COVZ	**Chateau Observ**	**2.70**	**19**	P	**Pb**	**08 48 41.4**	**0.0**
KAHZ	**Kahuranaki**	**2.72**	**45**	P	**Pn**	**08 48 36.2**	**-0.3**
NGZ	**Ngauruhoe**	**2.73**	**20**	P	**Pb**	**08 48 42.1**	**0.0**
SNVZ	**South Ngauruho**	**2.73**	**21**	P	**Pn**	**08 48 38.3**	**+1.5**
MHCZ	**Mount Hutt**	**2.74**	**229**	P	**Pn**	**08 48 36.0**	**-0.8**
OTVZ	**Oturere**	**2.76**	**21**	P	**Pn**	**08 48 38.6**	**+1.4**
WTVZ	**West Tongariro**	**2.79**	**19**	P	**Pb**	**08 48 42.0**	**-1.0**
KWHZ	**Kaweka Forest**	**2.79**	**34**	P	**Pn**	**08 48 37.6**	**+0.1**
TWVZ	**Taurewa**	**2.80**	**17**	P	**Pb**	**08 48 43.7**	**+0.6**
ETVZ	**East Tongariro**	**2.80**	**21**	P	**Pn**	**08 48 38.9**	**+1.2**
TMVZ	**Te Maari**	**2.82**	**21**	P	**Pn**	**08 48 39.0**	**+1.1**
KRVZ	**Karewarewa**	**2.82**	**20**	P	**Pb**	**08 48 43.9**	**+0.3**
NTVZ	**North Tongarir**	**2.83**	**21**	P	**Pn**	**08 48 39.3**	**+1.2**
WACZ	**Wakanui South**	**2.88**	**220**	P	**Pn**	**08 48 38.0**	**-0.7**
KATZ	**Kakaramea**	**2.95**	**20**	P	**Pb**	**08 48 46.0**	**+0.2**
RITZ	**Rihia Road**	**2.99**	**22**	P	**Pb**	**08 48 46.0**	**-0.5**
WVZ	**Waitaha Valley**	**3.01**	**243**	P	**Pn**	**08 48 41.7**	**+1.3**
BKZ	**Black Stump Fm**	**3.04**	**32**	P	**Pn**	**08 48 41.3**	**+0.4**
BKZ	**Black Stump Fm**	**3.04**	**32**	P	**Pn**	**08 48 40.5**	**-0.4**
RATZ	**Rangitukua**	**3.07**	**20**	P	**Pb**	**08 48 48.5**	**+0.7**
RPZ	**Rata Peaks**	**3.15**	**230**	P	**Pn**	**08 48 42.2**	**-0.2**
ARCZ	**Arundel**	**3.23**	**226**	P	**Pn**	**08 48 42.7**	**-0.8**
HIZ	**Hauiti**	**3.26**	**6**	P	**Pn**	**08 48 47.2**	**+3.3**
HIZ	**Hauiti**	**3.26**	**6**	P	**Pn**	**08 48 47.8**	**+3.9**
TMZ	**Timaru**	**3.62**	**222**	P	**Pn**	**08 48 47.7**	**-1.1**
URZ	**Urewera**	**4.07**	**32**	P	**Pn**	**08 48 55.5**	**+0.5**
ODZ	**Otahua Downs**	**4.28**	**218**	P	**Pn**	**08 48 57.1**	**-0.7**
ODZ	**Otahua Downs**	**4.28**	**218**	P	**Pn**	**08 48 56.4**	**-1.4**
MKAZ	**Moumakai**	**4.68**	**8**	P	Pn	08 49 09.9	+6.5

JSN ***27*** *08:52:14.7±0.6, 19.22N×80.88W, h49km±999km, MW5.2, Presumed earthquake*
SSNC ***27*** *08:52:17.5±2.0, 18.96N×80.68W, h25km±38km, MD3.9, ML2.7, Presumed earthquake*

ISC 27 08:52:17.9±3.1, **19.1N**±0.1×**80.6W**±0.2, **h35**km, **n17**, σ1**65**/18, **2D, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCCY	**Blossom Villag**	**0.73**	**39**	*eP*	**Pn**	**08 52 32.3**	**+0.6**
CBCY	**The Bluff, Cay**	**1.00**	**50**	*eP*	**Pn**	**08 52 35.4**	**0.0**
CBCY				*eS*	**Sn**	**08 52 44.8**	**-3.4**
CBCY				IAML		08 52 49.8	
	comp=E,78nm,0.3s						
CBCY				IAML		08 52 51.0	
	comp=N,49nm,0.2s						
MTDJ	**Mount Denham**	**3.01**	**106**	*iP*	**Pn**	**08 53 03.3**	**+0.1**
MTDJ	**Mount Denham**	**3.01**	**106**	*eP*	**Pn**	**08 53 03.0**	**-0.2**
MTDJ				IAML		08 53 40.5	
	comp=N,20nm,0.4s						
MTDJ				IAML		08 53 42.3	
	comp=N,27nm,0.4s						
MGV	**Manicaragua**	**3.04**	**10**	*eP*	**Pn**	**08 53 04.0**	**+0.4**
MGV				IAML		08 53 42.4	
	comp=E,18nm,0.3s						
MGV				IAML		08 53 42.7	
	comp=N,17nm,0.2s						
CCCC	**Cccc**	**3.37**	**51**	*eP*	Pn	08 53 13.7	+5.7
LMGC	**Las Mercedes**	**3.50**	**74**	*eP*	**Pn**	**08 53 11.7**	**+1.9**
LMGC				*eS*	**Sn**	**08 53 49.8**	**-0.2**
LMGC				*eSg*		08 53 53.3	
STH	**Stony Hill**	**3.71**	**105**	*iP*	**Pn**	**08 53 13.0**	**+0.2**
GWJ	**Greenwich**	**3.79**	**105**	*iP*	**Pn**	**08 53 14.1**	**+0.2**
CHIV	**Chivirico**	**4.02**	**77**	*eP*	**Pn**	**08 53 18.0**	**+1.0**
MARVS	**Santiago de Cu**	**4.50**	**78**	*eP*	**Pn**	**08 53 24.0**	**+0.5**
HLGC	**Holguin**	**4.60**	**66**	*eP*	**Pn**	**08 53 27.5**	**+2.4**
RCC	**Rio Carpintero**	**4.69**	**78**	*eP*	**Pn**	**08 53 25.5**	**-0.6**
PINC	**Pinares de May**	**4.71**	**72**	*eP*	**Pn**	**08 53 28.7**	**+2.2**
GTBY	**Guantanamo Bay**	**5.22**	**80**	*eP*	**Pn**	**08 53 35.3**	**+1.9**
QMBU	**Quimbuelo**	**5.54**	**78**	*eP*	**Pn**	**08 53 37.6**	**-0.3**
MASC	**Masc**	**6.07**	**79**	*eP*	**Pn**	**08 53 48.1**	**+2.9**

IDC ***27*** *08:56:28.5±5.1, 15.21S×167.43E, h141km±39km, mb3.7/8, mbtmp4.0/9, Error ellipse: s-maj=40.8km s-min=22.7km az=50.0*

ISC 27 08:56:26.9±1.3, **15.1S**±0.1×**167.5E**±0.3, **h129**km, **n9**, σ0**87**/12, **mb4.0/8, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.97**	**188**	P	**Pn**	**08 58 06.6**	**0.0**
	5.0nm,0.4s,baz=81,slow=19,SNR=11						
DZM				S	**Sn**	**08 59 25.4**	**+0.7**
	6.5nm,0.4s,baz=61,slow=19,SNR=6.5						
STKA	**Stephens Creek**	**28.91**	**230**	P	**P**	**09 02 14.6**	**+0.8**
	2.3nm,0.6s,baz=48,slow=5.9,SNR=7.6						
	2.3nm,0.6s						
WRA	**Warramunga Arr**	**31.95**	**257**	P	**P**	**09 02 39.5**	**-1.3**
	0.4nm,0.6s,baz=88,slow=9.2,SNR=7.2						
WRA				PcP	**PcP**	**09 05 27.4**	**-0.7**
	0.2nm,1.0s,baz=92,slow=3.2,SNR=1.9						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**32.74**	**250**	P	**P**	**09 02 46.6**	**-1.1**
	2.2nm,0.7s,baz=79,slow=9.1,SNR=26						
ASAR				PcP	**PcP**	**09 05 29.6**	**-0.7**
	0.3nm,0.9s,baz=68,slow=2.8,SNR=2.0						
	2.2nm,0.7s						
VNDA	**Vanda**	**62.47**	**181**	P	**P**	**09 06 35.6**	**-0.3**
	1.1nm,0.6s,baz=2.4,slow=7.0,SNR=8.6						
	1.1nm,0.6s						
QSPA	**South Pole Qui**	**74.90**	**180**	P	**P**	**09 07 52.9**	**-0.5**
	2.1nm,0.8s,baz=4.4,slow=3.6,SNR=9.1						
	2.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**75.32**	**294**	P	**P**	**09 07 57.6**	**+1.1**
	0.9nm,0.3s,baz=123,slow=7.8,SNR=1.3						
	0.9nm,0.3s						
SONM	**Songino Array**	**82.95**	**324**	P	**P**	**09 08 37.9**	**+0.3**
	0.6nm,0.7s,baz=106,slow=3.1,SNR=2.8						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**97.65**	**316**	P	**P**	**09 09 47.4**	**+0.4**
	0.3nm,0.7s,baz=94,slow=5.8,SNR=2.7						
	0.3nm,0.7s						

IDC ***27*** *09:01:13.5±2.8, 14.74S×177.92W, h408km±50km, mb2.8/4, mbtmp3.6/6, Error ellipse: s-maj=204.7km s-min=17.6km az=157.0*

ISC 27 09:01:13.1±1.0, **14.6S**±0.4×**177.9W**±0.2, **h400**km, **n6**, σ1**91**/6, **mb3.0/4, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.98**	**230**	P	**Pn**	**09 02 35.8**	**+0.8**
	6.4nm,0.4s,baz=36,slow=10,SNR=16						
AFI	**Afiamalu**	**6.01**	**85**	P	**Pn**	**09 02 45.5**	**-0.4**
	7.8nm,0.6s,baz=180,slow=8.1,SNR=1.4						
WRA	**Warramunga Arr**	**45.77**	**256**	P	**P**	**09 08 56.3**	**-0.8**
	0.1nm,0.4s,baz=89,slow=7.9,SNR=12						
	0.1nm,0.4s						
ASAR	**Alice Springs**	**46.22**	**251**	P	**P**	**09 08 59.6**	**-0.9**
	2.3nm,0.6s,baz=83,slow=7.9,SNR=58						
	2.3nm,0.6s						
NVAR	**Mina Array Bea**	**76.72**	**44**	P	**P**	**09 12 22.8**	**+0.9**
	0.3nm,0.8s,baz=255,slow=8.4,SNR=1.9						
	0.3nm,0.8s						
TXAR	**Lajitas Array**	**83.83**	**58**	P	**P**	**09 12 59.3**	**-0.1**
	0.2nm,0.8s,baz=243,slow=5.2,SNR=2.1						
	0.2nm,0.8s						

GCG ***27*** *09:12:27.3±3.2, 13.32N×91.75W, h33km±93km, MD4.5, ML3.6, Presumed earthquake*
CATAC ***27*** *09:12:27.9±0.6, 13°N±4°×9°2W±°, h10km, M3.5/13, mb3.8/1, mB4.2/1, MLv3.3/13, Mw(mB)3.3/1, Error ellipse: s-maj=9.7km s-min=4.4km az=38.8, confirmed*
SNET ***27*** *09:12:38.8±7.8, 13.64N×92.33W, h45km, ML3.6, Presumed earthquake*

ISC 27 09:12:29.1±2.8, **13.4N**±0.1×**91.7W**±0.1, **h27**km±18km, **n37**, σ0**96**/50, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG5	**El Palmar, Qui**	**1.04**	**17**	*iP*	**Pb**	**09 12 49.0**	**+0.5**
STG2	**El Palmar, Qui**	**1.07**	**15**	*iP*	**Pb**	**09 12 49.9**	**+0.8**
STG8	**El Palmar, Qui**	**1.09**	**16**	*iP*	**Pb**	**09 12 50.6**	**+1.2**
RTAL	**Retalhuleu**	**1.12**	**358**	P	**Pn**	**09 12 47.7**	**-1.4**
RTAL				S	**Sn**	**09 13 02.7**	**-0.9**
FAME	**Alcaldia de Sa**	**1.65**	**74**	P	**Pn**	**09 12 55.9**	**-0.5**
FAME				S	**Sn**	**09 13 16.3**	**-0.5**
NUBE	**Las Nubes**	**1.89**	**74**	P	**Pn**	**09 12 58.6**	**-1.2**
NUBE				S	**Sn**	**09 13 22.7**	**-0.2**
NUBE	**Las Nubes**	**1.89**	**74**	*iP*	**Pn**	**09 12 58.4**	**-1.4**
NUBE	**Las Nubes**	**1.89**	**74**	*eS*	**Sn**	**09 13 22.8**	**0.0**
SLOZ	**Alcaldia de Sa**	**1.92**	**71**	P	**Pn**	**09 12 59.3**	**-0.9**
SLOZ				S	**Sn**	**09 13 23.3**	**-0.2**
APG	**El Apazote**	**1.97**	**36**	*iP*	**Pn**	**09 13 00.7**	**-0.3**
CEVE	**Cerro Verde**	**2.02**	**78**	*eP*	**Pn**	**09 13 01.7**	**+0.1**
CEVE				*eS*	**Sn**	**09 13 27.6**	**+1.4**
SBLS	**San Blas**	**2.02**	**77**	*eP*	**Pn**	**09 13 01.6**	**-0.1**
SBLS				*eS*	**Sn**	**09 13 27.3**	**+1.0**
RBDL	**Robledal**	**2.04**	**69**	*eP*	**Pn**	**09 13 01.9**	**0.0**
SNJE	**San Jose**	**2.05**	**77**	*eP*	**Pn**	**09 13 02.4**	**+0.4**
JAYA	**Jayaque - finc**	**2.16**	**83**	P	**Pn**	**09 13 02.8**	**-0.7**
JAYA				S	**Sn**	**09 13 28.8**	**-0.7**
JAYA	**Jayaque - finc**	**2.16**	**83**	*iP*	**Pn**	**09 13 03.0**	**-0.6**
JAYA				*iS*	**Sn**	**09 13 29.8**	**+0.3**
JAYA				IAML		09 13 34.2	
	comp=N,424nm,0.3s						
JAYA	**Jayaque - finc**	**2.16**	**83**	*eP*	**Pn**	**09 13 03.2**	**-0.3**
JAYA				*eS*	**Sn**	**09 13 29.6**	**0.0**
CEDA	**San Andres**	**2.23**	**79**	S	**Sn**	**09 13 31.9**	**+0.7**
PMON	**Piamonte**	**2.30**	**82**	P	**Pn**	**09 13 05.3**	**0.0**
PMON	**Piamonte**	**2.30**	**82**	*eP*	**Pn**	**09 13 04.3**	**-1.1**
AVCB	**Coban**	**2.39**	**30**	*iP*	**Pb**	**09 13 09.3**	**-2.2**
AVCB				IAML		09 13 47.9	
	comp=E,771nm,0.4s						
MTO3	**Montecristo**	**2.44**	**66**	P	**Pn**	**09 13 07.0**	**-0.4**
MTO3	**Montecristo**	**2.44**	**66**	*iP*	**Pn**	**09 13 06.8**	**-0.6**
MTO3	**Montecristo**	**2.44**	**66**	*eP*	**Pn**	**09 13 06.9**	**-0.6**
MTO3				*eS*	**Sn**	**09 13 39.8**	**+3.2**
ESQI	**Esquipulas**	**2.52**	**63**	P	**Pn**	**09 13 08.2**	**-0.3**
ESQI	**Esquipulas**	**2.52**	**63**	*eP*	**Pn**	**09 13 08.2**	**-0.3**
SJTE	**Alcalda de S**	**2.58**	**85**	*eP*	**Pn**	**09 13 09.1**	**-0.2**
PAVA	**Las Pavas**	**2.66**	**83**	*eP*	**Pn**	**09 13 10.2**	**-0.1**
COEG	**Centro de Oper**	**2.71**	**85**	P	**Pn**	**09 13 10.7**	**-0.3**
COEG				S	**Sn**	**09 13 44.4**	**+1.4**
COEG	**Centro de Oper**	**2.71**	**85**	*eP*	**Pn**	**09 13 10.8**	**-0.2**
COEG				*eS*	**Sn**	**09 13 45.0**	**+2.1**
SCLA	**Alcaldia de Sa**	**2.86**	**84**	P	**Pn**	**09 13 12.9**	**-0.2**
CCIG	**Comitan**	**2.90**	**351**	*iP*	**Pn**	**09 13 14.9**	**+1.1**
SARH	**Santa Rosa de**	**3.12**	**64**	*iP*	**Pn**	**09 13 16.7**	**0.0**
PACA	**Pacayal**	**3.24**	**88**	*eP*	**Pn**	**09 13 17.5**	**-0.9**
LCND	**La Caada**	**3.67**	**91**	P	**Pn**	**09 13 23.1**	**-1.0**
CNCH	**Conchagua**	**3.72**	**91**	P	**Pn**	**09 13 24.6**	**-0.4**
CNCH				S	**Sn**	**09 14 08.3**	**+0.3**
MOM3	**MOM3**	**5.08**	**99**	P	**Pn**	**09 13 43.7**	**+0.1**

SDD ***27*** *09:18:29.5±1.5, 18.66N×71.37W, h2km±112km, MD2.6, ML1.5, MW2.2, Presumed earthquake*
OSPL ***27*** *09:18:29.7±0.7, 18.63N×71.49W, h17km±3km, ML1.9, Presumed earthquake*

ISC 27 09:18:28.9±0.9, **18.61N**±0.03×**71.37W**±0.04, **h17**km±6km, **n11**, σ0**53**/19, **6C-1D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LONE3	**El Aguacate, B**	**0.08**	**264**	*iP*	**Pg**	**09 18 32.3**	**-0.1**
LONE3				*eS*	**Sg**	**09 18 34.9**	**+0.2**
LONE3				IAML		09 18 35.5	
	comp=Z,101nm,0.4s						
NEDR	**Neiba UASD**	**0.14**	**199**	*ePg*	**Pg**	**09 18 33.0**	**+0.2**
NEDR				*eSg*	**Sg**	**09 18 35.0**	**-0.4**
NEDR				IAML		09 18 37.6	
	comp=N,114nm,0.2s						
SDDR	**Presa de Saban**	**0.37**	**12**	*iP*	**Pb**	**09 18 37.0**	**-0.1**
SDDR				*eS*	**Sb**	**09 18 43.0**	**+0.3**
SDDR				IAML		09 18 44.9	
	comp=Z,241nm,0.1s						
PODR	**Polo**	**0.45**	**169**	*ePg*	**Pg**	**09 18 38.5**	**-0.1**
PODR				*eSg*	**Sb**	**09 18 45.5**	**+0.4**
PODR				IAML		09 18 46.8	
	comp=N,50nm,0.7s						
PODR	**Polo**	**0.45**	**169**	*iP*	**Pb**	**09 18 38.7**	**+0.1**
PODR				*eS*	**Sb**	**09 18 46.1**	**+1.0**
PODR				IAML		09 18 47.1	
	comp=Z,364nm,0.1s						
JIDR	**Jimani**	**0.47**	**255**	*ePg*	**Pb**	**09 18 38.1**	**-0.6**
JIDR				*eSg*	**Sb**	**09 18 45.2**	**-0.2**
JIDR				IAML		09 18 45.8	
	comp=N,46nm,0.2s						
REDR	**Restauracion**	**0.55**	**358**	*ePg*	**Pn**	**09 18 42.7**	**+0.7**
REDR				*eSg*	**Sn**	**09 18 50.7**	**-0.1**
REDR				IAML		09 18 53.0	
	comp=N,28nm,0.2s						
LOBH	**Bahia de las A**	**0.79**	**199**	*iP*	**Pg**	**09 18 43.9**	**-0.4**
LOBH				IAML		09 18 57.5	
	comp=Z,25nm,2.1s						
BANI	**BANI**	**0.98**	**103**	*iP*	**Pb**	**09 18 46.8**	**-0.8**
BANI				*iS*	**Sn**	**09 19 01.2**	**-0.5**
BANI				IAML		09 19 05.6	
	comp=N,10nm,0.3s						
DR08	**Loma La Naviza**	**1.32**	**75**	*eSg*	**Sb**	**09 19 10.4**	**+0.4**
HATOM	**Hato Mayor del**	**1.89**	**84**	*ePg*	**Pb**	**09 19 02.4**	**-0.7**

DSN ***27*** *09:22:41.9±1.2, 27.46N×53.94E, h15km, ML3.0/12, Error ellipse: s-maj=14.1km s-min=6.0km az=0.0*
TEH ***27*** *09:22:41.9, 27.17N×53.92E, h17km±11km, ML3.3, Presumed earthquake*
OMAN ***27*** *09:22:44.3±1.1, 27.09N×54.00E, h10km, mb3.5/8, ml3.3/16, Error ellipse: s-maj=8.6km s-min=6.0km az=168.0*

ISC 27 09:22:41.9±1.9, **27.22N**±0.06×**53.96E**±0.05, **h6**km±18km, **n58**, σ1**52**/76, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	**Lamerd**	**0.72**	**280**	Pg	**Pg**	**09 22 55.4**	**-0.5**
KHL1	**Khalili

ABTO Aybut 9.84 184 P Pn 09 25 02.3 -1.7
SNR=11

SNET ***27*** *09:36:51.5±1.4, 13.96N×91.36W, h35km, ML4.6, Presumed earthquake*
GCG ***27*** *09:36:51.9±2.0, 14.04N×91.32W, h60km±8km, MD4.4, ML5.0, Presumed earthquake*
NEIC ***27*** *09:36:51.8±2.5, 13.98N±0.07°×91.31W±0.06, h63km±6km, mb4.4/193, Error ellipse: s-maj=11.0km s-min=6.8km az=209.0*
IDC ***27*** *09:36:52.8±1.0, 13.96N×91.07W, h93km±6km, mb3.7/13, mbtmp4.1/14, MS3.3/29, Error ellipse: s-maj=15.8km s-min=12.6km az=143.0*
CATAC ***27*** *09:36:52.1±0.3, 14.2°×9.1W±.°, h36km±5km, M4.9/40, mb5.2/4, mB5.6/2, MLv4.7/40, Mw(mB)5.1/2, Error ellipse: s-maj=6.0km s-min=1.8km az=31.1, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}4.32; $M_{\theta\theta}$-2.71; $M_{\phi\phi}$-1.61; $M_{r\theta}$4.06; $M_{\theta\phi}$1.45; $M_{\phi r}$-1.80; Fault plane solution: M_o6.00803×10^{15} NP1:ϕ_s117.06687°, δ68.99520°, λ85.54768°. NP2:ϕ_s309.32270°, δ21.45060°, λ101.43004°. Principal axes: T 6.3168, Plg65.7257°, Azm19.3936°; N -0.6745, Plg4.1559°, Azm118.6656°; P -5.6423, Plg23.8703°, Azm210.5082°; confirmed*

ISC 27 09:36:51.5±0.5, 13.96N±0.05×91.29W±0.04, h76km±4km, n323, σ1$47/332, mb4.3/71, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
STG5	**El Palmar, Qui**	**0.45**	**353**	*i* P		**Pn**	**09 37 05.9**	**+1.3**
STG2	**El Palmar, Qui**	**0.48**	**350**	*i* P		**Pn**	**09 37 06.9**	**+1.9**
STG2				*i* S		**Sn**	**09 37 17.9**	**+3.1**
STG2				IAML			09 37 19.8	
	comp=E,255μm,0.2s							
STG8	**El Palmar, Qui**	**0.49**	**353**	*i* P		**Pn**	**09 37 06.9**	**+1.8**
STG8				IAML			09 37 19.2	
	comp=N,61μm,0.2s							
RTAL	**Retalhuleu**	**0.69**	**325**			**Pn**	**09 37 05.3**	**-1.5**
RTAL				Sn		**Sn**	**09 37 15.6**	**-2.4**
RTAL	**Retalhuleu**	**0.69**	**325**	P		**Pn**	**09 37 05.3**	**-1.5**
RTAL				S		**Sn**	**09 37 13.9**	**-4.1**
FG8	**Yepocapa, Chim**	**0.77**	**67**	*i* P		**Pn**	**09 37 04.7**	**-3.1**
FG8				*i* S		**Sn**	**09 37 14.6**	**-5.3**
FG16	**Alotenango, Sa**	**0.82**	**68**	*i* P		**Pn**	**09 37 05.6**	**-2.9**
FG16				*i* S		**Sn**	**09 37 16.2**	**-4.8**
FG16				IAML			09 37 17.7	
	comp=N,437μm,0.4s							
ESSJ	**San Jos, E**	**0.86**	**117**	*i* P		Pn	09 37 04.1	-4.6
ESSJ				*i* S		**Sn**	**09 37 15.1**	**-6.4**
PCG5	**San Vicente Pa**	**0.93**	**74**	*i* P		**Pn**	**09 37 06.9**	**-2.7**
PCG5				*i* S		**Sn**	**09 37 18.3**	**-4.8**
QUEQ	**Labor Ovalle**	**0.93**	**347**	*i* P		**Pn**	**09 37 09.3**	**-0.6**
GCG4	**OSOP**	**0.97**	**50**	*i* P		**Pn**	**09 37 10.1**	**0.0**
GCG4				*i* S		**Sn**	**09 37 24.9**	**+0.9**
GCG4				IAML			09 37 29.7	
	comp=N,22μm,0.8s							
SMCA	**Catarina**	**1.17**	**320**	*i* P		**Pn**	**09 37 11.2**	**-1.4**
SMCA				*i* S		**Sn**	**09 37 25.4**	**-2.8**
FAME	**Alcaldia de Sa**	**1.25**	**95**	P		**Pn**	**09 37 13.2**	**-0.2**
FAME				S		**Sn**	**09 37 27.7**	**-2.2**
APG	**El Apazote**	**1.31**	**38**	P		**Pn**	**09 37 14.3**	**-0.2**
	comp=N,31nm,0.4s,baz=187,slow=12,SNR=440							
APG				S		**Sn**	**09 37 32.6**	**+0.8**
	comp=N,325nm,0.8s,baz=227,slow=19,SNR=18							
APG				LR		LR	09 37 58.5	
	comp=N,58nm,20.2s,baz=260,slow=55							
APG	**El Apazote**	**1.31**	**38**	*i* P		**Pn**	**09 37 14.3**	**-0.2**
APG				*i* S		**Sn**	**09 37 33.4**	**+1.7**
THIG		**1.33**	**315**	*i* P		**Pn**	**09 37 14.0**	**-0.6**
HUEH	**Huehuetenango**	**1.37**	**351**			**Pn**	**09 37 15.2**	**-0.1**
HUEH				Sn		**Sn**	**09 37 30.3**	**-2.7**
HUEH	**Huehuetenango**	**1.37**	**351**	P		**Pn**	**09 37 15.1**	**-0.1**
HUEH				S		**Sn**	**09 37 33.0**	**0.0**
HUEH	**Huehuetenango**	**1.37**	**351**	*i* P		**Pn**	**09 37 15.2**	**-0.1**
HUEH	**Huehuetenango**	**1.37**	**351**	*eP*		**Pn**	**09 37 15.1**	**-0.1**
SLOZ	**Alcaldia de Sa**	**1.47**	**87**	P		**Pn**	**09 37 16.7**	**+0.4**
SLOZ				S		**Sn**	**09 37 35.7**	**+0.6**
SLOZ	**Alcaldia de Sa**	**1.47**	**87**	*eP*		**Pn**	**09 37 16.8**	**+0.5**
LOAL	**Lomas de Alarc**	**1.47**	**88**	P		**Pn**	**09 37 17.1**	**+0.8**
LOAL				S		**Sn**	**09 37 35.9**	**+0.8**
LOAL	**Lomas de Alarc**	**1.47**	**88**	*eP*		**Pn**	**09 37 17.2**	**+0.8**
LOAL				*eS*		**Sn**	**09 37 36.1**	**+1.0**
NUBE	**Las Nubes**	**1.47**	**92**	P		**Pn**	**09 37 16.8**	**+0.4**
NUBE				S		**Sn**	**09 37 34.6**	**-0.7**
NUBE	**Las Nubes**	**1.47**	**92**	*i* P		**Pn**	**09 37 16.8**	**+0.4**
NUBE				*i* S		**Sn**	**09 37 35.6**	**+0.4**
NUBE				IAML			09 37 36.5	
	comp=E,9μm,0.6s							
NUBE	**Las Nubes**	**1.47**	**92**	*eP*		**Pn**	**09 37 16.9**	**+0.4**
RBDL	**Robledal**	**1.57**	**84**	*eP*		**Pn**	**09 37 18.3**	**+0.5**
RBDL				*eS*		**Sn**	**09 37 39.9**	**+2.3**
RTR	**El Retiro**	**1.60**	**92**	*eP*		**Pn**	**09 37 19.1**	**+0.9**
CEVE	**Cerro Verde**	**1.63**	**94**	P		**Pn**	**09 37 19.4**	**+0.8**
CEVE	**Cerro Verde**	**1.63**	**94**	*eP*		**Pn**	**09 37 19.6**	**+1.0**
CEVE				*eS*		**Sn**	**09 37 40.8**	**+1.7**
SBLS	**San Blas**	**1.63**	**94**	*eP*		**Pn**	**09 37 19.4**	**+0.8**
SBLS				*eP*			09 37 19.6	
SBLS				*eS*		**Sn**	**09 37 40.6**	**+1.6**
SNJE	**San Jose**	**1.64**	**93**	*eP*		**Pn**	**09 37 19.5**	**+0.8**
UNIC	**Universidad Ca**	**1.69**	**89**	P		**Pn**	**09 37 19.6**	**+0.3**
UNIC				S		**Sn**	**09 37 41.1**	**+0.7**
UNIC	**Universidad Ca**	**1.69**	**89**	*eP*		**Pn**	**09 37 19.6**	**+0.3**
UNIC				*eS*		**Sn**	**09 37 42.2**	**+1.8**
AVCB	**Coban**	**1.73**	**30**	*i* P		**Pn**	**09 37 20.5**	**+0.6**
AVCB				IAML			09 37 56.0	
	comp=E,15μm,0.5s							
JAYA	**Jayaque - finc**	**1.82**	**99**	P		**Pn**	**09 37 21.4**	**+0.4**
JAYA				S		**Sn**	**09 37 42.6**	**-0.9**
JAYA	**Jayaque - finc**	**1.82**	**99**	*i* P		**Pn**	**09 37 21.7**	**+0.6**
JAYA	**Jayaque - finc**	**1.82**	**99**	*eP*		**Pn**	**09 37 21.7**	**+0.6**
JAYA				*eS*		**Sn**	**09 37 44.6**	**+1.2**
CEDA	**San Andres**	**1.85**	**95**	P		**Pn**	**09 37 22.5**	**+1.2**
CEDA				S		**Sn**	**09 37 44.9**	**+0.8**
CEDA	**San Andres**	**1.85**	**95**	*eP*		**Pn**	**09 37 21.0**	**-0.4**
MTO3	**Montecristo**	**1.92**	**77**			**Pn**	**09 37 22.4**	**-0.2**
MTO3	**Montecristo**	**1.92**	**77**	P		**Pn**	**09 37 22.3**	**-0.2**
MTO3	**Montecristo**	**1.92**	**77**	*i* P		**Pn**	**09 37 22.4**	**-0.2**
MTO3	**Montecristo**	**1.92**	**77**	*eP*		**Pn**	**09 37 22.4**	**-0.2**
PMON	**Piamonte**	**1.94**	**97**	P		**Pn**	**09 37 23.3**	**+0.7**
PMON				S		**Sn**	**09 37 47.1**	**+0.9**
PMON	**Piamonte**	**1.94**	**97**	*eP*		**Pn**	**09 37 23.4**	**+0.8**
BOQS	**Boqueron**	**1.97**	**96**	*eP*		**Pn**	**09 37 24.1**	**+1.0**
MAGS	**Ministerio de**	**1.97**	**98**	*eP*		**Pn**	**09 37 23.8**	**+0.8**
LALI	**Alcalda de L**	**1.97**	**103**	P		**Pn**	**09 37 23.7**	**+0.7**
LALI				S		**Sn**	**09 37 48.2**	**+1.3**
LALI	**Alcalda de L**	**1.97**	**103**	*i* P		**Pn**	**09 37 24.0**	**+1.0**
LALI				IAML			09 37 54.4	
	comp=E,1μm,0.3s							
LALI	**Alcalda de L**	**1.97**	**103**	*eP*		**Pn**	**09 37 23.8**	**+0.7**
ZAFR2	**Estanzuela, Za**	**1.98**	**72**	*i* P		**Pn**	**09 37 22.5**	**-0.6**
ESQI	**Esquipulas**	**1.98**	**72**			**Pn**	**09 37 23.4**	**+0.1**
ESQI	**Esquipulas**	**1.98**	**72**	P		**Pn**	**09 37 23.4**	**+0.1**
ESQI	**Esquipulas**	**1.98**	**72**	*eP*		**Pn**	**09 37 23.4**	**+0.1**
PIC2	**El Picacho**	**1.99**	**96**	*eP*		**Pn**	**09 37 24.3**	**+0.9**
UEES	**Universidad Ev**	**2.01**	**97**	P		**Pn**	**09 37 24.6**	**+1.0**
UEES				S		**Sn**	**09 37 48.8**	**+0.9**
SEMO	**Seminario San**	**2.02**	**97**	P		**Pn**	**09 37 24.8**	**+1.1**
SEMO				S		**Sn**	**09 37 50.3**	**+2.0**
UTEC	**Universidad Te**	**2.05**	**97**	P		**Pn**	**09 37 26.5**	**+2.4**
UTEC				S		**Sn**	**09 37 50.8**	**+2.0**
IGN	**Direccin Gen**	**2.08**	**96**	P		**Pn**	**09 37 24.9**	**+0.4**
IGN				S		**Sn**	**09 37 50.7**	**+1.2**
PANCS	**Alcalda de**	**2.08**	**99**	P		**Pn**	**09 37 25.7**	**+1.3**
PANCS				S		**Sn**	**09 37 50.1**	**+0.5**
LOMA	**Loma Larga**	**2.08**	**98**	*eP*		**Pn**	**09 37 25.3**	**+0.7**
UDBS	**Universidad Do**	**2.09**	**96**	P		**Pn**	**09 37 25.4**	**+0.8**
UDBS				S		**Sn**	**09 37 51.4**	**+1.5**
LFU	**La Fuente**	**2.13**	**95**	*eP*		**Pn**	**09 37 25.9**	**+0.8**
LFRS	**El Faro**	**2.19**	**98**	*eP*		**Pn**	**09 37 27.5**	**+1.5**
LBRS	**Las Brisas**	**2.20**	**95**	*eP*		**Pn**	**09 37 26.7**	**+0.7**
SJTE	**Alcalda de S**	**2.25**	**98**	*eP*		**Pn**	**09 37 27.6**	**+0.9**
LLGN	**La Laguna**	**2.29**	**85**	P		**Pn**	**09 37 27.3**	**0.0**
PAVA	**Las Pavas**	**2.30**	**96**	P		**Pn**	**09 37 28.2**	**+0.7**
PAVA				S		**Sn**	**09 37 57.2**	**+2.2**
PAVA	**Las Pavas**	**2.30**	**96**	*eP*		**Pn**	**09 37 28.4**	**+0.9**
PAVA				*eS*		**Sn**	**09 37 58.9**	**+3.9**
COEG	**Centro de Oper**	**2.37**	**98**	P		**Pn**	**09 37 29.1**	**+0.8**
COEG				S		**Sn**	**09 37 58.3**	**+1.7**
COEG	**Centro de Oper**	**2.37**	**98**	*eP*		**Pn**	**09 37 29.3**	**+1.0**
CCIG	**Comitan**	**2.45**	**341**			**Pn**	**09 37 30.6**	**+1.0**
CCIG	**Comitan**	**2.45**	**341**	P		**Pn**	**09 37 30.4**	**+0.8**
CCIG	**Comitan**	**2.45**	**341**	*i* P		**Pn**	**09 37 30.6**	**+1.0**
P5NO	**Presa 5 de nov**	**2.46**	**89**	P		**Pn**	**09 37 29.4**	**-0.1**
P5NO				S		**Sn**	**09 38 00.1**	**+1.4**
P5NO	**Presa 5 de nov**	**2.46**	**89**	*eP*		**Pn**	**09 37 29.5**	**0.0**
TECO	**Alcaldia de Te**	**2.48**	**99**	P		**Pn**	**09 37 30.6**	**+0.9**
TECO				S		**Sn**	**09 38 00.8**	**+1.7**
TECO	**Alcaldia de Te**	**2.48**	**99**	*eP*		**Pn**	**09 37 30.7**	**+0.9**
TECO				*eS*		**Sn**	**09 38 01.1**	**+2.0**
SCLA	**Alcaldia de Sa**	**2.50**	**96**	P		**Pn**	**09 37 30.9**	**+0.7**
SCLA	**Alcaldia de Sa**	**2.50**	**96**	*eP*		**Pn**	**09 37 31.1**	**+0.9**
SARH	**Santa Rosa de**	**2.58**	**71**	P		**Pn**	**09 37 31.8**	**+0.5**
SARH	**Santa Rosa de**	**2.58**	**71**	*i* P		**Pn**	**09 37 31.7**	**+0.5**
PACA	**Pacayal**	**2.93**	**99**	P		**Pn**	**09 37 36.9**	**+0.9**
PACA				S		**Sn**	**09 38 12.3**	**+2.1**
PACA	**Pacayal**	**2.93**	**99**	*eP*		**Pn**	**09 37 38.9**	**+3.0**
RANC	**El Ranchito**	**2.97**	**100**	P		**Pn**	**09 37 36.8**	**+0.2**
RANC				S		**Sn**	**09 38 14.0**	**+2.8**
INTHN	**La Esperanza I**	**3.11**	**83**	P		**Pn**	**09 37 38.8**	**+0.2**
IZABA	**Izabal, Puerto**	**3.16**	**56**	P		**Pn**	**09 37 39.5**	**+0.6**
MARCA	**Marcala la Paz**	**3.17**	**86**	P		**Pn**	**09 37 39.3**	**0.0**
MARCA	**Marcala la Paz**	**3.17**	**86**	*i* P		**Pn**	**09 37 39.4**	**+0.2**
INTP	**Intipuca**	**3.24**	**103**	*eP*		**Pn**	**09 37 41.9**	**+1.8**
PETF	**Flores**	**3.25**	**25**			**Pn**	**09 37 40.6**	**+0.4**
PETF	**Flores**	**3.25**	**25**	P		**Pn**	**09 37 40.4**	**+0.2**
PETF	**Flores**	**3.25**	**25**	*i* P		**Pn**	**09 37 40.6**	**+0.4**
TGIG		**3.31**	**328**	*i* P		**Pn**	**09 37 40.8**	**-0.3**
LCND	**La Caada**	**3.37**	**101**	P		**Pn**	**09 37 42.9**	**+1.0**
LCND				S		**Sn**	**09 38 25.6**	**+4.8**
LCND	**La Caada**	**3.37**	**101**	*eP*		**Pn**	**09 37 43.1**	**+1.2**
CNCH	**Conchagua**	**3.43**	**101**	P		**Pn**	**09 37 43.8**	**+1.0**
CNCH				S		**Sn**	**09 38 24.4**	**+2.0**
CNCH	**Conchagua**	**3.43**	**101**	*eP*		**Pn**	**09 37 44.0**	**+1.2**
CSGN	**Cosiguina Volc**	**3.76**	**105**	P		**Pn**	**09 37 49.6**	**+2.3**
CSGN				S		**Sn**	**09 38 32.5**	**+2.0**
POTN	**Potosi Cosigui**	**3.81**	**104**	Pn		**Pn**	**09 37 49.8**	**+2.0**
POTN	**Potosi Cosigui**	**3.81**	**104**	P		**Pn**	**09 37 50.0**	**+2.3**
POTN				S		**Sn**	**09 38 32.6**	**+1.2**
TGUH	**Tegucigalpa,Un**	**3.90**	**88**			**Pn**	**09 37 49.5**	**+0.3**
TGUH	**Tegucigalpa,Un**	**3.90**	**88**	P		**Pn**	**09 37 49.3**	**0.0**
YUSH	**Yuscaran**	**4.32**	**90**	P		**Pn**	**09 37 55.2**	**+0.3**
HERN	**Volcan Telica**	**4.55**	**107**			**Pn**	**09 37 59.2**	**+1.3**
CMIG	**Matias Romero**	**4.66**	**312**	P		**Pn**	**09 37 59.3**	**-0.1**
	comp=E,45nm,0.3s,baz=153,slow=9.0,SNR=130							
CMIG				S		**Sn**	**09 38 52.9**	**+0.7**
	comp=E,124nm,0.5s,baz=86,slow=19,SNR=8.7							
CNGN	**Cerro Negro**	**4.70**	**107**			**Pn**	**09 38 00.4**	**+0.3**
LIMN	**Finca el Limon**	**4.87**	**100**	P		**Pn**	**09 38 03.9**	**+1.4**
LIMN				S		**Sn**	**09 38 59.5**	**+1.8**
USIM	**UNAN**	**5.22**	**110**	Pn		**Pn**	**09 38 08.9**	**+1.7**
MGAN	**Managua**	**5.24**	**110**			**Pn**	**09 38 09.0**	**+1.7**
BOAB	**BOACO BROADBAN**	**5.68**	**105**			**Pn**	**09 38 14.8**	**+1.4**
BOAB	**BOACO BROADBAN**	**5.68**	**105**	P		**Pn**	**09 38 15.5**	**+2.1**
BOAB				S		**Sn**	**09 39 19.3**	**+2.0**
SIUN	**Universidad Ur**	**6.34**	**91**			**Pn**	**09 38 23.9**	**+1.6**
JUD3	**Juan Diaz 3**	**6.77**	**123**	Pn		**Pn**	**09 38 31.6**	**+3.2**
TEIG	**Tepich**	**6.87**	**24**			**Pn**	**09 38 29.7**	**+0.1**
TEIG	**Tepich**	**6.87**	**24**	P		**Pn**	**09 38 30.8**	**+1.2**
MYIG	**Merida**	**7.12**	**12**	P		**Pn**	**09 38 32.6**	**-0.4**
MYIG				S		**Sn**	**09 39 52.7**	**+0.3**
JTS	**Las Juntas de**	**7.19**	**120**	P		**Pn**	**09 38 36.5**	**+2.4**
	comp=E,14nm,0.4s,baz=305,slow=14,SNR=8.9							
JTS				S		**Sn**	**09 39 53.9**	**-0.4**
	comp=E,5.1nm,0.4s,baz=288,slow=20,SNR=0.8							
JTS	**Las Juntas de**	**7.19**	**120**			**Pn**	**09 38 36.7**	**+2.6**
TLIG	**Tlapa**	**7.87**	**298**			**Pn**	**09 38 45.2**	**+1.9**
TLIG	**Tlapa**	**7.87**	**298**	P		**Pn**	**09 38 45.4**	**+2.0**
TLIG				S		**Sn**	**09 40 11.7**	**+0.8**
HDC	**Heredia**	**8.05**	**118**	Pn		**Pn**	**09 38 47.8**	**+1.9**
RAFA	**San Farael, Vo**	**8.33**	**118**	Pn		**Pn**	**09 38 51.2**	**+1.3**
BRU2	**Volcan**	**9.87**	**120**			Pn	09 39 15.1	+4.2
MOIG	**Morelia**	**11.05**	**302**			Pn	09 39 31.4	+4.5
ZAIG	**Zacatecas**	**13.82**	**311**	Pn		**Pn**	**09 40 06.3**	**+1.9**
833A	**Chaparral WMA,**	**16.16**	**333**	P		**Pn**	**09 40 35.2**	**+1.2**
MLDN	**Muldoon**	**16.63**	**342**	Pn		**Pn**	**09 40 39.1**	**-0.8**
MLDN				IAmb	IAmb		09 41 06.7	
	comp=Z,16nm,0.9s							
HNDO	**Hondo**	**17.17**	**336**			**Pn**	**09 40 47.2**	**+0.7**
656A	**Willston**	**17.35**	**26**			**Pn**	**09 40 49.1**	**+0.4**
656A				IAmb	IAmb		09 40 53.5	
	comp=Z,23nm,0.7s							
553A	**Crawfordville**	**17.35**	**20**			**P**	**09 40 49.7**	**+0.7**
346A	**Big Creek Wild**	**17.43**	**5**			**Pn**	**09 40 49.3**	**-0.4**
BRAL	**Brewton**	**17.57**	**12**	P		**Pn**	**09 40 51.8**	**+0.4**
DRIO	**Del Rio**	**17.65**	**332**	P		**P**	**09 40 54.1**	**+1.7**
NATX	**Nacogdoches**	**17.99**	**351**	P		**P**	**09 40 55.1**	**-0.9**
VBMS	**Vicksburg**	**18.19**	**2**	P		**P**	**09 40 58.3**	**+0.1**
JCT	**Junction City**	**18.22**	**336**	P		**P**	**09 40 59.2**	**+0.6**
352A	**Blakely**	**18.39**	**17**	Pn		**Pn**	**09 41 02.5**	**+1.1**
352A				IAmb	IAmb		09 41 05.7	
	comp=Z,22nm,0.9s							
237A	**Washetta, Mont**	**18.43**	**348**	P		**Pn**	**09 41 02.5**	**+0.6**
237A				IAmb	IAmb		09 41 20.4	
	comp=Z,24nm,0.8s							
250A	**Grady**	**18.52**	**14**	P		**Pn**	**09 41 04.0**	**+1.2**
250A				IAmb	IAmb		09 41 05.3	
	comp=Z,16nm,0.8s							
HPIG		**18.63**	**316**	P		**Pn**	**09 41 05.4**	**+0.9**
BRDY	**Brady**	**18.64**	**339**			**P**	**09 41 04.3**	**+1.1**
143A	**Socs Landing,**	**18.66**	**360**	P		**Pn**	**09 41 05.0**	**+0.4**
143A				IAmb	IAmb		09 41 20.3	
	comp=Z,20nm,1.0s							
146A	**Union**	**18.70**	**6**	P		**P**	**09 41 03.9**	**0.0**
456A	**Hilliard**	**18.74**	**26**	P		**P**	**09 41 04.9**	**+0.6**
TIGA	**Tifton**	**18.78**	**21**	P		**P**	**09 41 04.9**	**+0.2**
TIGA				IAmb	IAmb		09 41 20.8	
	comp=Z,25nm,0.7s							
SAND	**Sanderson**	**18.80**	**330**	P		**Pn**	**09 41 08.3**	**+1.9**
WHTX	**Lake Whitney,**	**18.82**	**344**	P		**Pn**	**09 41 07.8**	**+1.4**
WHTX				IAmb	IAmb		09 41 27.9	
	comp=Z,15nm,0.7s							
TXAR	**Lajitas Array**	**19.12**	**325**	P		**Pn**	**09 41 10.9**	**+0.8**
	comp=Z,1.7nm,0.7s,baz=150,slow=12,SNR=28							
TXAR				PcP		**PcP**	**09 45 30.9**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=149,slow=2.8,SNR=2.9							
TXAR	**Lajitas Array**	**19.12**	**325**	P		**Pn**	**09 41 11.3**	**+1.1**
TXAR						**PcP**	**09 45 32.3**	**+2.2**
TX31	**Lajitas Ar. Si**	**19.12**	**325**	P		**Pn**	**09 41 11.0**	**+0.8**
OZNA	**Ozona**	**19.16**	**333**			**P**	**09 41 10.5**	**+1.6**
TREL	**Terrell**	**19.19**	**348**	P		**P**	**09 41 09.6**	**+0.3**
TREL				IAmb	IAmb		09 41 33.3	
	comp=Z,15nm,0.8s							
Z47A	**Carrollton**	**19.38**	**8**	P		**Pn**	**09 41 13.5**	**+0.4**
LRAL	**Lakeview Retre**	**19.39**	**11**	P		**Pn**	**09 41 13.2**	**0.0**
LRAL				IAmb	IAmb		09 41 17.0	
	comp=Z,18nm,1.0s							
Z38A	**Mt. Pleasant**	**19.51**	**351**			**P**	**09 41 12.9**	**+0.3**
Z38A				IAmb	IAmb		09 41 14.3	
	comp=Z,20nm,0.8s							
152A	**Waverly Hall**	**19.57**	**17**	P		**P**	**09 41 13.6**	**+0.3**
152A				IAmb	IAmb		09 41 22.0	
	comp=Z,12nm,0.8s							
CCAR	**Cane Creek**	**19.88**	**359**	P		**P**	**09 41 17.4**	**+0.8**
CCAR				IAmb	IAmb		09 41 22.8	
	comp=Z,28nm,0.9s							
ABTX	**Abilene, Hawle**	**20.08**	**339**			**P**	**09 41 19.4**	**+0.5**
ABTX				IAmb	IAmb		09 41 21.3	
	comp=Z,14nm,0.7s							
MNHN	**Monahans**	**20.25**	**331**	IAmb	IAmb		09 41 23.8	
	comp=Z,18nm,0.7s							
Y49A	**Blount Mountai**	**20.30**	**12**	P		**P**	**09 41 22.5**	**+1.2**
Y49A				IAmb	IAmb		09 41 24.2	
	comp=Z,17nm,0.9s							
TPB01	**Permian Basin**	**20.44**	**328**	IAmb	IAmb		09 41 26.3	
	comp=Z,6.0nm,0.8s							
LPIG	**La Paz**	**20.59**	**302**	LR		LR	09 49 06.7	
	comp=Z,66nm,18.7s,baz=124,slow=35							
MIAR	**Mount Ida**	**20.60**	**355**	P		**P**	**09 41 24.4**	**-0.1**
MIAR				IAmb	IAmb		09 41 33.1	
	comp=Z,19nm,1.2s							
GOGA	**Godfrey**	**20.63**	**19**	P		**P**	**09 41 26.3**	**+1.4**
GOGA				IAmb	IAmb		09 41 49.5	
	comp=Z,14nm,0.8s							
UALR	**University of**	**20.75**	**358**			**P**	**09 41 26.4**	**+0.3**
UALR				IAmb	IAmb		09 41 29.3	
	comp=Z,18nm,0.7s							
X48A	**Hartselle**	**20.76**	**10**	IAmb	IAmb		09 41 33.5	
	comp=Z,9.9nm,0.7s							
ODSA	**Odessa**	**20.81**	**332**	P		**P**	**09 41 27.6**	**+0.8**
ODSA				IAmb	IAmb		09 41 28.5	
	comp=Z,11nm,0.8s							
PECS	**Pecos**	**20.82**	**328**	IAmb	IAmb		09 41 30.5	
	comp=Z,10nm,0.7s							
SDV	**Santo Domingo**	**20.86**	**102**	P		**P**	**09 41 26.0**	**-1.7**
	comp=Z,2.6nm,0.3s,baz=300,slow=5.5,SNR=8.5							
SDV				LR		LR	09 49 33.0	
	comp=Z,55nm,19.8s,baz=253,slow=37							
	comp=Z,2.6nm,0.3s							
SDV	**Santo Domingo**	**20.86**	**102**			**P**	**09 41 26.6**	**-1.2**
Y52A	**Lilburn**	**20.88**	**17**	P		**P**	**09 41 28.3**	**+0.8**
Y52A				IAmb	IAmb		09 41 30.5	
	comp=Z,15nm,0.7s							
APMT	**Aspermont**	**20.89**	**339**	P		**P**	**09 41 27.3**	**-0.3**
APMT				IAmb	IAmb		09 41 57.0	
	comp=Z,18nm,0.8s							
SN07	**Snyder 07**	**20.96**	**337**	P		**P**	**09 41 28.7**	**+0.2**
TPB13	**Reeves - Culbe**	**20.96**	**329**	IAmb	IAmb		09 41 57.6	
	comp=Z,14nm,0.9s							
POST	**Post**	**21.17**	**336**	P		**P**	**09 41 30.8**	**0.0**
POST				IAmb	IAmb		09 41 32.2	
	comp=Z,13nm,0.7s							
128A	**Castleberry Fa**	**21.20**	**333**	IAmb	IAmb		09 41 32.6	
	comp=Z,7.6nm,0.6s							
WHAR	**Wooly Hollow**	**21.26**	**358**	IAmb	IAmb		09 41 34.9	
	comp=Z,11nm,0.8s							
CLNB	**Carlsbad**	**21.55**	**330**	P		**P**	**09 41 34.3**	**-0.5**
HTMS	**Hat Mesa**	**21.60**	**331**	P		**P**	**09 41 36.2**	**+0.8**
SWET	**Sewanee**	**21.71**	**12**	IAmb	IAmb		09 41 55.3	
	comp=Z,17nm,0.9s							
HODGE	**Hodges**	**21.78**	**21**	P		**P**	**09 41 38.3**	**+1.2**
HODGE				IAmb	IAmb		09 41 38.9	
	comp=Z,12nm,0.8s							
W50A	**Signal Mountai**	**21.83**	**13**	IAmb	IAmb		09 41 55.5	
	comp=Z,15nm,0.8s							
FCAR	**Ozark Folk Cen**	**21.85**	**358**	P		**P**	**09 41 37.2**	**-0.7**
FCAR				IAmb	IAmb		09 41 39.1	
	comp=Z,11nm,0.7s							
LCAR	**Lake Charles**	**22.02**	**0**			**P**	**09 41 39.1**	**-0.5**
LCAR				IAmb	IAmb		09 41 41.7	
	comp=Z,12nm,0.8s							
CPCT	**Cooper Cave**	**22.25**	**15**	IAmb	IAmb		09 42 00.6	
	comp=Z,11nm,0.8s							
BG3	**Lake Jocassee**	**22.26**	**18**	P		**P**	**09 41 42.6**	**+0.3**
BG3				IAmb	IAmb		09 42 10.6	
	comp=Z,11nm,0.8s							
WVT	**Waverly**	**22.30**	**7**	P		**P**	**09 41 42.6**	**-0.1**
WVT				IAmb	IAmb		09 41 51.6	
	comp=Z,7.8nm,0.8s							
HHAR	**Hobbs**	**22.36**	**354**	P		**P**	**09

comp=Z,4.6nm,0.8s
ELK Elko 33.90 326 IAmb IAmb 09 43 31.3
comp=Z,2.9nm,0.8s
NV11 Mina Array Sit 34.05 321 P **P** **09 43 30.1 +1.4**
NV11 IAmb IAmb 09 43 32.7
comp=Z,4.7nm,0.8s
NVAR Mina Array Bea 34.14 321 P **P** **09 43 32.0 +2.5**
comp=Z,6.4nm,0.8s,baz=134,slow=8.6,SNR=46
NVAR pP **pP** **09 43 50.3 +2.7**
comp=Z,2.4nm,0.8s,baz=129,slow=8.7,SNR=4.0
NVAR PcP **PcP** **09 46 06.3 +1.1**
comp=Z,1.4nm,0.7s,baz=72,slow=2.8,SNR=8.6
NVAR LR LR 09 58 34.9
comp=Z,43nm,21.5s,baz=125,slow=38
comp=Z,6.4nm,0.8s
LHV Little Huntoon 34.15 320 IAmb IAmb 09 43 35.0
comp=Z,6.6nm,1.0s
MACA Manacapuru-AM 34.80 117 **P** **09 43 36.1 +0.9**
YMR Madison River 34.89 335 P **P** **09 43 37.4 +1.4**
YMR IAmb IAmb 09 44 05.6
comp=Z,5.3nm,1.4s
HLID Hailey 35.55 331 **P** **09 43 42.8 +1.3**
HLID IAmb IAmb 09 43 45.9
comp=Z,2.5nm,0.8s
EPLO Experimental L 35.67 357 **P** **09 43 40.5 -1.8**
EPLO IAmb IAmb 09 43 40.8
comp=Z,3.3nm,0.8s
BEKR Beckworth 36.28 321 IAmb IAmb 09 43 52.7
comp=Z,3.4nm,0.8s
ULM Lac du Bonnet 36.38 355 P **P** **09 43 46.5 -1.8**
comp=Z,1.9nm,0.7s,baz=167,slow=10,SNR=4.7
ULM LR LR 10 00 30.8
comp=Z,51nm,18.4s,baz=136,slow=39
comp=Z,1.9nm,0.7s
ULM Lac du Bonnet 36.38 355 IAmb IAmb 09 43 58.1
comp=Z,7.1nm,1.3s
PLID Pearl Lake 37.44 331 IAmb IAmb 09 44 35.7
comp=Z,5.1nm,1.2s
LPAZ La Paz 37.78 142 P **P** **09 44 00.0 -1.2**
comp=Z,0.4nm,0.6s,baz=6.5,slow=5.4,SNR=1.8
LPAZ LR LR 09 59 25.9
comp=Z,53nm,19.2s,baz=278,slow=36
comp=Z,0.4nm,0.6s
LPAZ La Paz 37.78 142 P **P** **09 44 00.7 -0.5**
H04A Detroit Lake 40.33 326 **P** **09 44 23.3 +1.6**
NEW Newport 40.34 335 LR LR 10 02 36.9
comp=Z,34nm,19.9s,baz=141,slow=38
HOOD Mount Hood Mea 40.46 327 P **P** **09 44 24.5 +1.7**
BUCK Buck Mountain 40.48 324 P **P** **09 44 24.0 +1.1**
C09A Chrisman Ranch 40.51 332 P **P** **09 44 22.7 -0.3**
C09A IAmb IAmb 09 44 26.0
comp=Z,4.7nm,0.6s
H04D Lebanon 40.54 325 P **P** **09 44 23.5 +0.2**
VILB Vilhena 40.79 130 P **P** **09 44 26.1 +0.4**
LON Longmire 41.48 328 P **P** **09 44 32.9 +1.8**
LON IAmb IAmb 09 44 34.1
comp=Z,5.3nm,0.8s
RPN Rapa Nui 44.44 203 LR LR 09 59 19.8
comp=Z,46nm,19.0s,baz=10.0,slow=30
SCHQ Schefferville 45.02 20 P **P** **09 44 57.1 -2.4**
comp=Z,4.8nm,0.8s,baz=224,slow=6.8,SNR=12
comp=Z,4.8nm,0.8s
SCHQ Schefferville 45.02 20 P **P** **09 44 58.2 -1.2**
YKAW1 Yellowknife Wh 51.19 346 P **P** **09 45 46.6 -0.2**
YKAW1 IAmb IAmb 09 45 48.0
comp=Z,3.4nm,0.7s
YKA Yellowknife Ar 51.23 346 P **P** **09 45 45.9 -1.1**
comp=Z,1.6nm,0.7s,baz=152,slow=7.2,SNR=36
YKA pP **pP** **09 46 08.8 +2.7**
comp=Z,0.3nm,0.6s,baz=150,slow=7.2,SNR=3.5
YKA PcP **PcP** **09 47 00.2 -1.1**
comp=Z,0.7nm,0.7s,baz=155,slow=3.1,SNR=8.4
comp=Z,1.6nm,0.7s
YKA Yellowknife Ar 51.23 346 P **P** **09 45 46.4 -0.6**
YKA **PcP** **09 47 01.8 +0.6**
YKAW3 Yellowknife Wh 51.29 346 P **P** **09 45 47.4 -0.1**
YKAW3 IAmb IAmb 09 45 48.8
comp=Z,1.9nm,0.6s
CPUP Villa Florida 51.91 140 LR LR 10 07 21.1
comp=Z,29nm,19.1s,baz=243,slow=35
FRB Frobisher Bay 52.20 13 LR LR 10 08 28.8
comp=Z,54nm,19.2s,baz=89,slow=36
DLBC Dease Lake 52.97 336 LR LR 10 11 42.9
comp=Z,48nm,19.4s,baz=108,slow=39
S34M Telegraph Cree 53.09 335 P **P** **09 46 03.2 +2.3**
R33M Jennings River 53.97 336 P **P** **09 46 08.9 +1.4**
Q32M Nakina River 54.21 335 P **P** **09 46 11.3 +1.9**
R32K Eaglecrest 54.74 334 P **P** **09 46 13.8 +0.8**
P33M Teslin, Yukon 55.21 336 P **P** **09 46 17.4 +0.9**
P33M IAmb IAmb 09 46 57.9
comp=Z,3.1nm,1.1s
M29M Somme Creek 58.73 336 P **P** **09 46 42.2 +0.9**
L29M L29M 58.97 337 P **P** **09 46 43.4 +0.5**
L29M IAmb IAmb 09 46 46.5
comp=Z,2.6nm,1.1s
J30M Hart River 59.18 339 P **P** **09 46 44.5 +0.1**
J30M PcP **PcP** **09 47 33.0 +0.8**
SFJD Kangerlussuaq 59.35 17 LR LR 10 12 42.0
comp=Z,54nm,21.2s,baz=221,slow=36
INK Inuvik 60.67 343 LR LR 10 15 51.9
comp=Z,22nm,18.8s,baz=352,slow=38
RES Resolute Bay 60.75 359 LR LR 10 15 11.6
comp=Z,42nm,18.1s,baz=12,slow=38
F28M Old Crow 62.13 341 **P** **09 47 05.2 +0.9**
J25K Salcha River, 62.49 337 IAmb IAmb 09 47 08.4
comp=Z,1.7nm,0.6s
SLKM Skilak Lake 62.86 332 P **P** **09 47 10.1 +0.8**
BRLK Bradley Lake 62.91 331 P **P** **09 47 10.9 +1.2**
KDAK Kodiak Island 63.11 328 P **P** **09 47 12.1 +1.1**
ILAR Eielson Array 63.15 337 P **P** **09 47 10.5 -0.6**
comp=Z,0.9nm,0.7s,baz=171,slow=4.9,SNR=20
ILAR pP **pP** **09 47 33.5 +2.7**
comp=Z,0.3nm,0.7s,baz=95,slow=6.2,SNR=2.5
ILAR PcP **PcP** **09 47 48.3 +0.2**
comp=Z,0.6nm,0.7s,baz=118,slow=2.2,SNR=4.2
comp=Z,0.9nm,0.7s
ILAR Eielson Array 63.15 337 P **P** **09 47 11.4 +0.3**
ILAR PcP **PcP** **09 47 49.3 +1.3**
BMAR Burnt Mountain 63.57 340 P **P** **09 47 14.2 +0.3**
PPLA Purkeypile 64.57 334 P **P** **09 47 20.8 +0.1**
O16K Kokwok River B 66.36 329 P **P** **09 47 32.7 +0.6**
O16K IAmb IAmb 09 47 33.6
comp=Z,4.9nm,0.8s
BORG Borgarnes 68.95 26 LR LR 10 18 31.2
comp=Z,12nm,21.8s,baz=268,slow=36
EKA Eskdalemuir Ar 77.60 36 P **P** **09 48 36.6 -2.7**
comp=Z,1.2nm,0.6s,baz=278,slow=6.4,SNR=6.2
EKA pP **pP** **09 49 01.5 +1.8**
comp=Z,2.2nm,0.9s,baz=285,slow=4.8,SNR=3.2
comp=Z,1.2nm,0.6s
MDT Midelt 79.83 59 LR LR 10 20 02.0
comp=Z,20nm,18.1s,baz=254,slow=32
SPITS Spitsbergen Ar 79.99 12 P **P** **09 48 50.9 -1.2**
comp=Z,2.3nm,0.8s,baz=300,slow=9.8,SNR=5.0
SPITS LR LR 10 25 26.8
comp=Z,35nm,21.0s,baz=204,slow=36
comp=Z,2.3nm,0.8s
NOA NORSAR Array B 83.85 29 LR LR 10 24 58.2
comp=Z,6.8nm,20.7s,baz=255,slow=34
HFS Hagfors 85.31 29 P **P** **09 49 18.0 -2.0**
comp=Z,2.2nm,0.7s,baz=328,slow=5.1,SNR=3.1
HFS LR LR 10 27 08.8
comp=Z,6.8nm,19.4s,baz=326,slow=35
comp=Z,2.2nm,0.7s
ARCES ARCESS Array B 85.96 18 P **P** **09 49 21.0 -2.1**
comp=Z,2.4nm,0.8s,baz=297,slow=8.0,SNR=1.5
comp=Z,2.4nm,0.8s
ARCES ARCESS Array B 85.96 18 P **P** **09 49 22.9 -0.1**
DAVOX Davos/Dischmat 87.43 42 LR LR 10 27 20.0
comp=Z,19nm,20.5s,baz=265,slow=35
GERES GERESS Array B 89.20 40 LR LR 10 29 15.7
comp=Z,14nm,18.5s,baz=45,slow=35
TORD Torodi Ar. Bea 89.72 77 P **P** **09 49 40.0 -2.1**
comp=Z,0.3nm,0.5s,baz=280,slow=2.6,SNR=1.8
comp=Z,0.3nm,0.5s
FINES FINESS Array B 90.24 25 LR LR 10 31 01.3
comp=Z,11nm,18.4s,baz=198,slow=36
NRIK Noril'sk 96.92 0 LR LR 10 36 55.4
comp=Z,26nm,20.4s,baz=344,slow=37
KURK Kurchatov 115.00 7 **PKiKP** **09 55 22.9 -0.9**
KURBB Kurchatov Arra 115.08 7 PKP **PKiKP** **09 55 22.9 -1.0**
comp=Z,0.6nm,0.6s,baz=345,slow=2.0,SNR=7.6
SONM Songino Array 116.49 347 PKP **PKPdf** **09 55 23.8 -3.2**
comp=Z,0.4nm,0.5s,baz=53,slow=7.4,SNR=2.2
MKAR Makanchi Array 119.25 5 PKP **PKPdf** **09 55 31.4 -0.8**
comp=Z,0.6nm,0.7s,baz=2.5,slow=2.8,SNR=4.6
HHC Hu-ho-hao-te 121.50 340 *eP* **PKPdf** **09 55 35.0 -1.8**

WRA Warramunga Arr 136.05 256 PKP **PKPdf** **09 56 06.2 +1.4**
comp=Z,1.0nm,0.7s,baz=82,slow=1.9,SNR=7.9
ASAR Alice Springs 136.30 250 PKP **PKPdf** **09 56 06.7 +1.5**
comp=Z,0.6nm,0.8s,baz=99,slow=1.9,SNR=5.7
PZH PanZhiHua 137.83 342 PKP **PKPdf** **09 56 09.5 +1.4**
TOLI2 Tolitoli 144.87 293 PKPbc **PKPab** **09 56 20.3 +0.2**
CHTO Chiang Mai 145.91 343 PKPdf **PKPdf** **09 56 22.6 0.0**
CMAR Chiang Mai Arr 146.25 342 PKPbc **PKPdf** **09 56 24.4 +1.3**
comp=Z,6.5nm,0.6s,baz=336,slow=3.2,SNR=37
CMAR Chiang Mai Arr 146.25 342 PKPbc **PKPdf** **09 56 24.6 +1.5**

MOS ***27*** *09:48:41.6±0.9, 48°.42N×153°.34E, h166km, mb4.1/1, Error ellipse: s-maj=11.9km s-min=4.7km az=62.7*
SKHL ***27*** *09:48:42.3±0.7, 48°.30N×153°.40E, h150km±9km, mb4.9/5, msh5.6/4*
NEIC ***27*** *09:48:43.4±1.5, 48°.5N±0°.1×153°.1E±0°.2, h154km±6km, mb4.3/50, Error ellipse: s-maj=18.7km s-min=12.6km az=146.0*
IDC ***27*** *09:48:45.8±2.8, 48°.50N×153°.13E, h184km±26km, mb3.5/19, mbtmp4.0/23, Error ellipse: s-maj=14.3km s-min=11.1km az=145.0*

ISC 27 09:48:42.0±0.5, 48°.38N±0°.07×153°.35E±0°.07, h150km, n163,σ1°46/186, mb4.2/42, 4C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.93**	**37**	*i* P	N	**Pn**	**09 49 29.3**	**+0.9**
SKR				*e*S	N	**Sn**	**09 50 04.6**	**+0.3**
SKR				pmax	pmax			
	comp=Z,252nm,0.6s							
SKR				smax	smax			
	comp=N,265nm,0.7s comp=E,303nm,0.8s							
SKR				smax	smax			
	comp=N,240nm,0.3s							
SKR	**Severo-Kuril's**	**2.93**	**37**	*e*P	N	**Pn**	**09 49 29.3**	**+0.9**
SKR				AMB	AMB		09 49 30.1	
	comp=N,210nm,0.4s							
SKR				*e*S	N	**Sn**	**09 50 04.6**	**+0.3**
SKR				A	A		09 50 09.8	
	comp=N,230nm,0.3s							
SKR				A	A		09 50 09.8	
	comp=N,240nm,0.3s							
PAU	**Pauzhetka**	**3.82**	**35**	PN	N	**Pn**	**09 49 40.3**	**+0.5**
PAU				S	N	**Sn**	**09 50 24.2**	**-0.5**
PAU	**Pauzhetka**	**3.82**	**35**	*e*P	N	**Pn**	**09 49 40.3**	**+0.5**
PAU				*e*S	N	**Sn**	**09 50 24.2**	**-0.5**
KDTR	**Khodutka, Kamc**	**4.59**	**40**	PN	N	**Pn**	**09 49 48.9**	**-1.0**
KDTR				S	N	**Sn**	**09 50 38.1**	**-4.7**
KDTR	**Khodutka, Kamc**	**4.59**	**40**	*e*P	N	**Pn**	**09 49 48.9**	**-1.0**
KDTR				*e*S	N	**Sn**	**09 50 38.1**	**-4.7**
KUR	**Kuril'sk**	**4.90**	**232**	*e*PN	N	**Pn**	**09 49 54.1**	**0.0**
KUR				*e*S	N	**Sn**	**09 50 53.2**	**+2.9**
KUR				pmax	pmax			
	comp=Z,47nm,0.4s							
KUR				pmax	pmax			
	comp=E,21nm,0.2s							
KUR				pmax	pmax			
	comp=N,19nm,0.6s							
KUR				smax	smax			
	comp=N,113nm,0.3s							
KUR				smax	smax			
	comp=E,46nm,0.5s							
KUR	**Kuril'sk**	**4.90**	**232**	*e*P	N	**Pn**	**09 49 54.1**	**0.0**
KUR				AMB	AMB		09 49 58.4	
	comp=E,80nm,0.5s							
KUR				*e*S	N	**Sn**	**09 50 48.6**	**-1.7**
KUR				A	A		09 51 01.2	
	comp=E,120nm,0.4s							
KUR				A	A		09 51 01.2	
	comp=E,60nm,0.4s							
ASAK	**Asacha**	**4.96**	**34**	PN	N	**Pn**	**09 49 55.7**	**+0.9**
ASAK				S	N	**Sn**	**09 50 50.4**	**-1.2**
MTVR	**Mutnovka**	**5.14**	**35**	PN	N	**Pn**	**09 49 57.6**	**+0.2**
MTVR				S	N	**Sn**	**09 50 54.5**	**-1.6**
GRL	**Gorelyy**	**5.16**	**34**	PN	N	**Pn**	**09 49 58.4**	**+0.9**
GRL				S	N	**Sn**	**09 50 56.0**	**-0.4**
APC	**Apacha**	**5.16**	**27**	PN	N	**Pn**	**09 49 57.5**	**+0.1**
APC				S	N	**Sn**	**09 50 56.2**	**-0.1**
RUS	**Russkaya**	**5.23**	**37**	PN	N	**Pn**	**09 49 57.2**	**-1.2**
RUS				S	N	**Sn**	**09 50 53.3**	**-4.8**
RUS	**Russkaya**	**5.23**	**37**	*e*P	N	**Pn**	**09 49 57.2**	**-1.2**
RUS				*e*S	N	**Sn**	**09 50 53.3**	**-4.8**
KRMR	**Karymshinskiy**	**5.40**	**33**	PN	N	**Pn**	**09 50 00.6**	**0.0**
KRMR				S	N	**Sn**	**09 50 59.8**	**-2.2**
KRMR	**Karymshinskiy**	**5.40**	**33**	*e*P	Pn		09 50 06.0	+5.4
KRMR				*e*S	N	**Sn**	**09 50 59.8**	**-2.2**
PET	**Petropavlovsk**	**5.75**	**34**	*e*PN	N	**Pn**	**09 50 05.8**	**+0.6**
PET				*e*S	N	**Sn**	**09 51 08.6**	**-1.6**
PET				smax	smax			
	comp=N,31nm,0.6s							
PET				smax	smax			
	comp=E,33nm,0.5s							
PET	**Petropavlovsk**	**5.75**	**34**	*e*P	N	**Pn**	**09 50 05.8**	**+0.6**
PET				AMB	AMB		09 50 11.2	
	comp=E,10.0nm,0.2s							
PET				*e*S	N	**Sn**	**09 51 08.7**	**-1.5**
PET				A	A		09 51 14.6	
	comp=E,20nm,0.4s							
PET				A	A		09 51 14.6	
	comp=E,20nm,0.4s							
DALK	**Dalny**	**5.79**	**34**	PN	N	**Pn**	**09 50 05.1**	**-0.7**
DALK				S	N	**Sn**	**09 51 08.8**	**-2.4**
DALK	**Dalny**	**5.79**	**34**	*e*P	N	**Pn**	**09 50 05.1**	**-0.7**
DALK				*e*S	N	**Sn**	**09 51 08.8**	**-2.4**
KOK	**Koryaka**	**5.95**	**32**	PN	N	**Pn**	**09 50 09.1**	**+1.0**
KOK	**Koryaka**	**5.95**	**32**	*e*P	N	**Pn**	**09 50 09.1**	**+1.0**
UGLR	**Uglovaya**	**5.96**	**34**	PN	N	**Pn**	**09 50 08.9**	**+0.8**
UGLR				S	N	**Sn**	**09 51 12.9**	**-2.5**
AVH	**Avacha**	**5.97**	**33**	PN	N	**Pn**	**09 50 09.3**	**+1.1**
AVH				S	N	**Sn**	**09 51 14.7**	**-1.0**
AVH	**Avacha**	**5.97**	**33**	*e*P	N	**Pn**	**09 50 09.3**	**+1.1**
AVH				*e*S	N	**Sn**	**09 51 14.7**	**-1.0**
SMAR	**Somma**	**5.99**	**33**	PN	N	**Pn**	**09 50 09.2**	**+0.5**
KRER	**Koryakskii**	**6.00**	**33**	PN	N	**Pn**	**09 50 09.5**	**+0.7**
KRER				S	N	**Sn**	**09 51 14.0**	**-2.7**
KRX	**Arik**	**6.01**	**32**	PN	N	**Pn**	**09 50 08.9**	**0.0**
SPN	**Mys Shipunski**	**6.35**	**39**	PN	N	**Pn**	**09 50 11.6**	**-1.6**
SPN	**Mys Shipunski**	**6.35**	**39**	*e*P	N	**Pn**	**09 50 11.6**	**-1.6**
SHO	**Shikotan**	**6.39**	**228**	*e*P	Pn		09 50 22.8	+9.0
SHO				AMB	AMB		09 50 24.6	
	comp=E,40nm,0.4s							
SHO				*e*S	N	**Sn**	**09 51 30.3**	**+4.6**
SHO				A	A		09 51 36.6	
	comp=E,20nm,0.3s							
SHO				A	A		09 51 36.6	
	comp=E,30nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**6.77**	**233**	*e*PN	N	**Pn**	**09 50 19.2**	**+0.3**
YUK				*e*S	N	**Sn**	**09 51 32.8**	**-2.0**
YUK				pmax	pmax			
	comp=Z,232nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**6.77**	**233**	*e*P	N	**Pn**	**09 50 19.3**	**+0.3**
YUK				AMB	AMB		09 50 21.1	
	comp=Z,40nm,0.5s							
YUK				*e*S	N	**Sn**	**09 51 33.3**	**-1.5**
YUK				A	A		09 51 40.1	
	comp=Z,180nm,0.4s							
YUK				A	A		09 51 40.1	
	comp=Z,200nm,0.4s							
GLVR	**Golovnino**	**7.15**	**232**	*e*PN	N	**Pn**	**09 50 24.0**	**0.0**
GLVR				*e*S	N	**Sn**	**09 51 41.2**	**-2.8**
NMR	**Nemuro--Hokkai**	**7.30**	**230**	*e*PN	N	**Pn**	**09 50 23.8**	**-2.2**
NMR	**Nemuro--Hokkai**	**7.30**	**230**	*e*P	N	**Pn**	**09 50 23.8**	**-2.2**
NMR				*e*S	N	**Sn**	**09 51 42.9**	**-4.7**
AKK	**Akkeshi**	**8.01**	**231**	*e*P	N	**Pn**	**09 50 34.0**	**-1.4**
JKA	**Kamikawa-asahi**	**8.58**	**244**	Pn	N	**Pn**	**09 50 44.9**	**+1.8**
JKA	**Kamikawa-asahi**	**8.58**	**244**	*e*P	N	**Pn**	**09 50 45.8**	**+2.7**
ASAJ	**Asahikawa**	**8.58**	**244**	P	N	**Pn**	**09 50 45.8**	**+2.7**
	comp=Z,30nm,0.6s,baz=51,slow=14,SNR=41							
KBG	**Krutoberegovo**	**9.74**	**32**	PN	N	**Pn**	**09 50 57.5**	**-0.9**
KBTR	**Krutoberegovo**	**9.75**	**33**	PN	N	**Pn**	**09 50 56.7**	**-1.8**
JTM	**Tenmabayashi**	**11.58**	**234**	Pn	N	**Pn**	**09 51 18.6**	**-4.1**
KLR	**Kul'dur**	**14.26**	**282**	P	N	**Pn**	**09 51 59.0**	**+2.1**
	comp=Z,3.3nm,0.7s,baz=90,slow=13,SNR=4.7							
USRK	**Ussuriysk Ar.**	**15.33**	**262**	P	N	**P**	**09 52 11.9**	**+0.2**
	comp=Z,3.2nm,0.7s,baz=86,slow=7.4,SNR=2.9							
JYT	**Yasato**	**15.53**	**223**	Pn	N	**Pn**	**09 52 13.1**	**+0.2**
MJA0	**Matsu Arr-Jizo**	**16.21**	**229**	*e*P	N	**P**	**09 52 21.6**	**0.0**
MJA0				pmax	pmax			
	comp=Z,5.0nm,0.6s							
MJB9	**Matsu-Tunnel**	**16.23**	**229**	P	N	**P**	**09 52 22.1**	**+0.3**
MJB9				IAmb	IAmb		09 52 23.1	
	comp=Z,11nm,0.7s							
MAJO	**Matsushiro**	**16.23**	**229**	P	N	**P**	**09 52 21.9**	**+0.1**
MAJO				IAmb	IAmb		09 52 22.1	
	comp=Z,11nm,0.6s							
MAJO	**Matsushiro**	**16.23**	**229**	P	N	**P**	**09 52 21.9**	**+0.1**
MAJO				pmax	pmax			
	comp=Z,11nm,0.6s							
MJAR	**Matsushiro Arr**	**16.23**	**229**	P	N	**Pn**	**09 52 21.2**	**-0.3**
	comp=Z,4.1nm,0.8s,baz=26,slow=13,SNR=10							
MJAR	**Matsushiro Arr**	**16.23**	**229**	P	N	**Pn**	**09 52 21.2**	**-0.3**
JGF	**Kuroka**	**17.40**	**229**	P	N	**Pn**	**09 52 35.7**	**+0.1**
JGF				IAmb	IAmb		09 52 41.8	
	comp=Z,25nm,1.2s							
INU	**Inuyama**	**17.77**	**229**	P	N	**Pn**	**09 52 39.8**	**-0.1**
INU				IAmb	IAmb		09 52 40.9	
	comp=Z,18nm,0.9s							
KIWB	**Kanaga Island**	**19.17**	**68**	P	N	**P**	**09 52 54.0**	**+0.3**
KSRS	**Korea Array**	**21.48**	**249**	P	N	**P**	**09 53 18.9**	**+0.2**
	comp=Z,4.0nm,0.5s,baz=48,slow=10.0,SNR=13							
	comp=Z,4.0nm,0.5s							
KSRS	**Korea Array**	**21.48**	**249**	*e*P	N	**P**	**09 53 21.1**	**+2.4**
KSRS				pmax	pmax			
	comp=Z,4.0nm,0.5s							
KS19	**Wonju Array Si**	**21.49**	**249**	P	N	**P**	**09 53 18.8**	**0.0**
KSAR	**Wonju Array Be**	**21.52**	**249**	P	N	**P**	**09 53 18.3**	**-0.7**
KSAR	**Wonju Array Be**	**21.52**	**249**	P	N	**P**	**09 53 18.3**	**-0.7**
KSAR	**Wonju Array Be**	**21.52**	**249**	*e*P	N	**P**	**09 53 18.3**	**-0.7**
N14K	**Kuskokwak Cree**	**28.18**	**49**	P	N	**P**	**09 54 21.5**	**+1.5**
O14K	**Tigyukauivet M**	**28.36**	**50**	P	N	**P**	**09 54 22.9**	**+1.3**
O14K				IAmb	IAmb		09 54 29.9	
	comp=Z,9.5nm,1.3s							
N15K	**Kwethluk River**	**29.00**	**48**	P	N	**P**	**09 54 28.8**	**+1.5**
N15K				IAmb	IAmb		09 54 29.1	
	comp=Z,4.0nm,0.8s							
M16K	**Timber Creek**	**29.60**	**47**	P	N	**P**	**09 54 34.0**	**+1.4**
M16K				IAmb	IAmb		09 55 06.4	
	comp=Z,12nm,1.4s							
H11N2	**WAKE ISLAND Hy**	**30.60**	**154**	T	T	T	10 26 51.8	
	baz=341,slow=75,SNR=36							
H11N1	**WAKE ISLAND Hy**	**30.62**	**154**	T	T	T	10 26 50.4	
	baz=341,slow=75,SNR=39							
H11N3	**WAKE ISLAND Hy**	**30.62**	**154**	T	T	T	10 26 52.5	
	baz=341,slow=75,SNR=27							
SONM	**Songino Array**	**30.98**	**287**	P	N	**P**	**09 54 44.2**	**-0.9**
	comp=Z,1.0nm,0.8s,baz=75,slow=8.0,SNR=4.8							
	comp=Z,1.0nm,0.8s							
SONM	**Songino Array**	**30.98**	**287**	P	N	**P**	**09 54 45.0**	**0.0**
SONM	**Songino Array**	**30.98**	**287**	*e*P	N	**P**	**09 54 44.7**	**-0.3**
SONM				pmax	pmax			
	comp=Z,1.0nm,0.8s							
TLY	**Talaya**	**31.61**	**295**	*de*P	N	**P**	**09 54 50.1**	**-0.2**
TLY				pmax	pmax			
	comp=Z,2.0nm,0.9s							
TLY	**Talaya**	**31.61**	**295**	*e*P	N	**P**	**09 54 50.1**	**-0.2**
H11S1	**WAKE ISLAND Hy**	**31.71**	**155**	T	T	T	10 28 28.3	
	baz=344,slow=76,SNR=104							
H11S3	**WAKE ISLAND Hy**	**31.72**	**155**	T	T	T	10 28 15.5	
	baz=344,slow=76,SNR=85							
H11S2	**WAKE ISLAND Hy**	**31.73**	**155**	T	T	T	10 28 29.1	
	baz=344,slow=76,SNR=101							
D20K	**Etivluk River**	**31.77**	**32**	P	N	**P**	**09 54 52.6**	**+1.0**
IMAR	**Indian Mountai**	**32.37**	**38**	P	N	**P**	**09 54 57.2**	**+0.4**
SKT	**Skwentna**	**33.17**	**45**	P	N	**P**	**09 55 04.2**	**+0.3**
SKT				IAmb	IAmb		09 55 21.3	
	comp=Z,4.5nm,0.7s							
CNPM	**China Poot**	**33.48**	**50**	P	N	**P**	**09 55 07.1**	**+0.5**
BRLK	**Bradley Lake**	**33.63**	**49**	P	N	**P**	**09 55 08.1**	**+0.2**
COLD	**Coldfoot**	**33.91**	**36**	P	N	**P**	**09 55 11.2**	**+1.0**
KNK	**Knik Glacier**	**34.67**	**46**	P	N	**P**	**09 55 17.5**	**+0.7**
KNK				IAmb	IAmb		09 55 18.1	
	comp=Z,5.5nm,0.8s							
SML	**Sawmill**	**34.70**	**45**	P	N	**P**	**09 55 17.8**	**+0.7**
HDA	**Harding Lake**	**35.17**	**41**	P	N	**P**	**09 55 21.9**	**+0.8**
HDA				IAmb	IAmb		09 55 22.2	
	comp=Z,3.2nm,0.6s							
IL31		**35.19**	**40**	P	N	**P**	**09 55 22.1**	**+1.0**
ILAR	**Eielson Array**	**35.19**	**40**	P	N	**P**	**09 55 21.2**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=259,slow=5.9,SNR=23							
	comp=Z,0.6nm,0.7s							
ILAR	**Eielson Array**	**35.19**	**40**	P	N	**P**	**09 55 21.4**	**+0.2**
D25K	**Kavik River**	**35.50**	**32**	P	N	**P**	**09 55 24.5**	**+0.7**
D25K				IAmb	IAmb		09 55 24.9	
	comp=Z,6.3nm,1.4s							
J25K	**Salcha River,**	**35.85**	**40**	P	N	**P**	**09 55 26.7**	**-0.2**
BMAR	**Burnt Mountain**	**36.09**	**35**	P	N	**P**	**09 55 30.4**	**+1.5**
SCRK	**Sand Creek**	**36.49**	**41**	P	N	**P**	**09 55 33.0**	**+0.6**
CRQM	**Cirque**	**37.32**	**46**	P	N	**P**	**09 55 40.9**	**+1.4**
CRQM				IAmb	IAmb		09 55 41.4	
	comp=Z,5.6nm,0.8s							
K27K	**Chicken**	**37.33**	**41**	P	N	**P**	**09 55 40.8**	**+1.5**
L27K	**Beaver Creek,**	**37.56**	**43**	P	N	**P**	**09 55 43.1**	**+1.7**
L27K				IAmb	IAmb		09 55 44.1	
	comp=Z,7.3nm,1.2s							
BCAR	**Beaver Creek A**	**37.58**	**43**	P	N	**P**	**09 55 43.2**	**+1.7**
A36M	**Sachs Harbour**	**42.33**	**27**	P	N	**P**	**09 56 22.2**	**+1.7**
MK31	**Makanchi Array**	**46.35**	**296**	*ce*P	N	**P**	**09 56 51.3**	**-1.5**
MKAR	**Makanchi Array**	**46.35**	**296**	P	N	**P**	**09 56 51.4**	**-1.4**
	comp=Z,1.5nm,0.5s,baz=65,slow=8.2,SNR=16							
MKAR				PcP		**PcP**	**09 58 24.8**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=68,slow=5.2,SNR=2.1							
	comp=Z,1.5nm,0.5s							
MKAR	**Makanchi Array**	**46.35**	**296**	P	N	**P**	**09 56 51.7**	**-1.1**
MKAR						**PcP**	**09 58 25.4**	**+0.1**
MKAR	**Makanchi Array**	**46.35**	**296**	*ce*P	N	**P**	**09 56 51.9**	**-0.9**
MKAR				pmax	pmax			
	comp=Z,2.0nm,0.5s							
MKAR	**Makanchi Array**	**46.35**	**296**	*e*P	N	**P**	**09 56 51.9**	**-0.9**
KURK	**Kurchatov**	**46.61**	**302**	P	N	**P**	**09 56 53.6**	**-1.1**
KURK				IAmb	IAmb		09 56 54.4	
	comp=Z,7.4nm,0.7s							
KURK	**Kurchatov**	**46.61**	**302**	*ce*P	N	**P**	**09 56 53.0**	**-1.7**
KURK				pmax	pmax			
	comp=Z,6.0nm,0.6s							
KURK	**Kurchatov**	**46.61**	**302**	*e*P	N	**P**	**09 56 53.0**	**-1.7**
KURBB	**Kurchatov Arra**	**46.70**	**302**	P	N	**P**	**09 56 54.1**	**-1.3**
	comp=Z,7.2nm,0.7s,baz=68,slow=8.5,SNR=40							
	comp=Z,7.2nm,0.7s							
YKA	**Yellowknife Ar**

PLID	**Pearl Lake**	**58.62**	**56**	P	**P**	**09 58 24.8**	**+1.4**
PLID				IAmb	IAmb	09 58 25.4	
	comp=Z,2.8nm,0.8s						
NIL	**Nilore**	**59.56**	**288**	P	**P**	**09 58 29.1**	**-0.6**
NIL				IAmb	IAmb	09 58 31.1	
	comp=Z,5.9nm,1.1s						
NIL	**Nilore**	**59.56**	**288**	P	**P**	**09 58 29.1**	**-0.6**
NIL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
FCC	**Fort Churchill**	**59.82**	**34**	P	**P**	**09 58 31.2**	**+0.2**
FCC				IAmb	IAmb	09 59 13.5	
	comp=Z,5.1nm,1.4s						
FCC	**Fort Churchill**	**59.82**	**34**	P	**P**	**09 58 31.2**	**+0.2**
FCC				pmax	pmax		
	comp=Z,5.0nm,1.4s						
LRM	**Limekiln Ridge**	**60.09**	**54**	P	**P**	**09 58 35.5**	**+2.1**
NVAR	**Mina Array Bea**	**61.55**	**63**	P	**P**	**09 58 44.5**	**+1.2**
	comp=Z,0.6nm,0.4s,baz=299,slow=7.7,SNR=7.3						
	comp=Z,0.6nm,0.4s						
NVAR	**Mina Array Bea**	**61.55**	**63**	P	**P**	**09 58 44.1**	**+0.8**
YHH	**Holmes Hill**	**61.62**	**54**	P	**P**	**09 58 45.2**	**+1.3**
FIA1	**FINESS Array S**	**62.64**	**334**	P	**P**	**09 58 48.6**	**-1.3**
FINES	**FINESS Array B**	**62.64**	**334**	P	**P**	**09 58 48.2**	**-1.7**
	comp=Z,1.2nm,0.4s,baz=32,slow=7.1,SNR=21						
	comp=Z,1.2nm,0.4s						
FINES	**FINESS Array B**	**62.64**	**334**	P	**P**	**09 58 48.5**	**-1.4**
FINES	**FINESS Array B**	**62.64**	**334**	P	**P**	**09 58 48.5**	**-1.4**
COEN	**Coen**	**62.71**	**191**	P	**P**	**09 58 51.7**	**+0.8**
PDAR	**Pinedale Array**	**63.67**	**55**	P	**P**	**09 58 57.8**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=284,slow=1.0,SNR=8.6						
	comp=Z,0.7nm,0.7s						
PDAR	**Pinedale Array**	**63.67**	**55**	P	**P**	**09 58 58.9**	**+1.6**
GWY	**Greenwater Val**	**64.01**	**64**	P	**P**	**09 59 01.0**	**+1.5**
GWY				IAmb	IAmb	09 59 08.0	
	comp=Z,6.0nm,1.5s						
NC405	**NORSAR Array S**	**66.57**	**341**	P	**P**	**09 59 15.9**	**+0.5**
NC204	**NORSAR Array S**	**66.63**	**341**	P	**P**	**09 59 15.3**	**-0.5**
NOA	**NORSAR Array B**	**66.74**	**341**	P	**P**	**09 59 14.9**	**-1.7**
	comp=Z,0.5nm,0.7s,baz=27,slow=6.5,SNR=1.7						
	comp=Z,0.5nm,0.7s						
HFS	**Hagfors**	**66.99**	**339**	P	**P**	**09 59 17.1**	**-1.0**
	comp=Z,3.1nm,0.8s,baz=53,slow=7.4,SNR=2.7						
	comp=Z,3.1nm,0.8s						
WB0	**Warramunga Arr**	**69.92**	**199**	P	**P**	**09 59 36.4**	**-0.3**
WR8	**Warramunga Arr**	**70.08**	**199**	P	**P**	**09 59 37.6**	**-0.1**
WR8				IAmb	IAmb	10 00 04.0	
	comp=Z,4.7nm,1.2s						
WRA	**Warramunga Arr**	**70.10**	**199**	P	**P**	**09 59 37.6**	**-0.2**
	comp=Z,0.9nm,0.9s,baz=22,slow=6.8,SNR=13						
	comp=Z,0.9nm,0.9s						
WRA	**Warramunga Arr**	**70.10**	**199**	*eP*	**P**	**09 59 39.3**	**+1.5**
ASAR	**Alice Springs**	**73.80**	**199**	P	**P**	**10 00 00.5**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=12,slow=5.7,SNR=12						
	comp=Z,0.3nm,0.5s						
ASAR	**Alice Springs**	**73.80**	**199**	P	**P**	**10 00 00.1**	**+0.3**
ASAR	**Alice Springs**	**73.80**	**199**	P	**P**	**10 00 00.1**	**+0.3**
EKA	**Eskdalemuir Ar**	**74.80**	**346**	P	**P**	**10 00 04.8**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=21,slow=6.4,SNR=4.0						
	comp=Z,0.2nm,0.3s						
TXAR	**Lajitas Array**	**76.56**	**61**	P	**P**	**10 00 16.4**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=293,slow=5.2,SNR=5.0						
	comp=Z,0.4nm,0.4s						
TXAR	**Lajitas Array**	**76.56**	**61**	P	**P**	**10 00 16.6**	**+0.8**
GERES	**GERESS Array B**	**77.06**	**334**	P	**P**	**10 00 17.1**	**-1.3**
	comp=Z,0.7nm,0.6s,baz=9.7,slow=5.5,SNR=4.1						
	comp=Z,0.7nm,0.6s						
MMAI	**Mount Meron Ar**	**81.86**	**311**	P	**P**	**10 00 44.1**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=40,slow=11,SNR=2.0						
	comp=Z,1.0nm,0.5s						
PLCA	**Paso Flores**	**148.16**	**93**	PKPbc	**PKPbc**	**10 08 09.4**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=247,slow=11,SNR=1.6						
PLCA	**Paso Flores**	**148.16**	**93**	PKPbc	**PKPbc**	**10 08 10.4**	**+0.8**

IDC 27 10:01:51.9±1.9, 6°04S×149°91E, h0km, mb3.3/3, mbtmp3.4/4, ML1.5/1, Error ellipse: s-maj=125.1km s-min=23.7km az=125.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.31**	**219**	Pn	Pn	10 02 59.3	+0.5
	1.9nm,0.3s,baz=55,slow=16,SNR=2.1						
PMG				Sn	Sn	10 03 50.0	+0.1
	4.3nm,0.3s,baz=95,slow=18,SNR=3.0						
	4.0nm,0.3s						
WRA	**Warramunga Arr**	**20.49**	**226**	P	P	10 06 31.6	-0.1
	0.5nm,0.5s,baz=52,slow=11,SNR=9.6						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**23.33**	**220**	P	P	10 07 01.5	-0.5
	0.3nm,0.5s,baz=53,slow=8.9,SNR=5.7						
	0.3nm,0.5s						
ILAR	**Eielson Array**	**84.39**	**23**	P	P	10 14 25.8	-0.2
	0.4nm,0.6s,baz=238,slow=5.2,SNR=9.0						
	0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**147.90**	**285**	PKPbc	PKPbc	10 21 40.3	+0.1
	0.4nm,0.7s,baz=90,slow=2.6,SNR=2.6						

*NEIC **27** 10:17:52.9±0.7, 19°67N±0°02×66°51W±0°05, h10km±2km, ML2.6/35, Md3.8/10(RSPR), Error ellipse: s-maj=8.2km s-min=3.8km az=86.0*
*SDD **27** 10:17:53.2±2.8, 19°84N×66°77W, h26km±16km, MD3.9, ML2.6, MW3.0, Presumed earthquake*
ISC 27 10:17:52.4±3.1, 19.72N±0°08×66.54W±0°06, h15km±16km, n30, σ1§11/48, 12C-1D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMPR	**Esperanza - Ma**	**1.24**	**179**		**Pn**	**10 18 15.8**	**+0.6**
EMPR					**Sg**	**10 18 31.9**	**-0.6**
AGPR	**Aguadilla, PR**	**1.36**	**203**		**Pn**	**10 18 17.2**	**+0.3**
AGPR				Sn	**Sb**	**10 18 34.2**	**-0.5**
AGPR				IAML		10 18 36.0	
	82nm,0.3s						
AGPR				IAML		10 18 37.7	
	84nm,0.4s						
AGPR	**Aguadilla, PR**	**1.36**	**203**	⇑*e*Pg	**Pn**	**10 18 17.0**	**+0.2**
AGPR				⇑*e*Sg	**Sb**	**10 18 34.5**	**-0.3**
AGPR				IAML		10 18 36.0	
	comp=N,61nm,0.4s						
AOPR	**Arecibo Observ**	**1.38**	**188**		**Pn**	**10 18 17.6**	**+0.4**
AOPR				Sn	**Sb**	**10 18 35.1**	**-0.4**
AOPR				IAML		10 18 39.6	
	comp=N,201nm,0.4s						
AOPR				IAML		10 18 41.0	
	comp=N,121nm,0.3s						
AOPR	**Arecibo Observ**	**1.38**	**188**	⇓*e*Pg	**Pn**	**10 18 17.6**	**+0.4**
AOPR				IAML		10 18 40.5	
	comp=N,72nm,0.3s						
ECPR	**Experimental S**	**1.41**	**173**		Pn	10 18 17.2	-0.3
ECPR				Sn	**Sn**	**10 18 35.4**	**-0.4**
ECPR				IAML		10 18 35.9	
	comp=N,133nm,0.2s						
ECPR				IAML		10 18 38.6	
	comp=N,119nm,0.2s						
UUPR	**Utuado, UPR, P**	**1.47**	**187**	Pn	**Pn**	**10 18 18.9**	**+0.5**
UUPR					**Sn**	**10 18 37.4**	**0.0**
IDE	**Isla Desecheo**	**1.60**	**214**		**Pn**	**10 18 20.7**	**+0.6**
IDE					**Sn**	**10 18 41.0**	**+0.6**
PRSN	**Puerto Rico Se**	**1.60**	**201**		**Pn**	**10 18 20.5**	**+0.3**
PRSN	**Puerto Rico Se**	**1.60**	**201**		**Sn**	**10 18 40.8**	**+0.2**
PRSN	**Puerto Rico Se**	**1.60**	**201**	⇑*e*Pg	**Pn**	**10 18 20.3**	**+0.1**
PRSN				⇑*e*Sg	**Sn**	**10 18 40.0**	**-0.6**
PRSN				IAML		10 18 43.8	
	comp=N,196nm,0.2s						
LSP	**Las Mesas**	**1.62**	**199**		**Pn**	**10 18 21.2**	**+0.7**
LSP					**Sn**	**10 18 41.9**	**+0.7**
CELP	**Cerrillos**	**1.64**	**181**		**Pn**	**10 18 21.1**	**+0.4**
CELP					**Sn**	**10 18 41.0**	**-0.6**
CELP				IAML		10 18 42.8	
	comp=N,52nm,0.5s						
CELP	**Cerrillos**	**1.64**	**181**	*i* P	Pn	10 18 20.0	-0.7
CELP				*i* S	**Sn**	**10 18 39.7**	**-1.8**
CELP				IAML		10 18 42.7	
	comp=N,16nm,0.4s						
SJG	**San Juan**	**1.65**	**167**	Pn	**Pn**	**10 18 21.2**	**+0.4**
OBIP	**Obispado Ponce**	**1.67**	**182**	Pn	**Pn**	**10 18 21.3**	**+0.1**
OBIP				Sn	**Sn**	**10 18 42.4**	**+0.1**
HUMP	**Col San Antoni**	**1.70**	**157**		**Pn**	**10 18 21.7**	**+0.1**
HUMP					**Sn**	**10 18 42.5**	**-0.6**
HUMP				IAML		10 18 49.2	
	comp=N,51nm,0.2s						
HUMP				IAML		10 18 52.6	
	comp=N,65nm,0.2s						
GBPR	**Guanica, Bosqu**	**1.77**	**190**		**Pn**	**10 18 23.8**	**+1.3**
GBPR					**Sn**	**10 18 46.2**	**+1.5**
IGPR	**InterUniversit**	**1.80**	**167**		**Pn**	**10 18 23.4**	**+0.6**
IGPR					**Sn**	**10 18 46.3**	**+0.9**
MLPR	**Magueyes Islan**	**1.81**	**195**	Pn	**Pn**	**10 18 23.6**	**+0.6**
MLPR				Sn	**Sn**	**10 18 46.0**	**+0.3**
MLPR	**Magueyes Islan**	**1.81**	**195**	⇑*e*Pg	**Pn**	**10 18 24.0**	**+0.9**
MLPR				⇑*e*Sg	**Sn**	**10 18 46.1**	**+0.5**
MLPR				IAML		10 18 49.0	
	comp=N,13nm,0.4s						
CUPR	**Culebra, Puert**	**1.84**	**140**	Pn	**Pn**	**10 18 23.0**	**-0.5**
HIDR	**Higuey Centro**	**2.34**	**242**	⇓*e*Pg	**Pn**	**10 18 30.9**	**+0.5**
HIDR				⇑*e*Sg	**Sn**	**10 18 57.2**	**-1.8**
HIDR				IAML		10 19 01.4	
	comp=N,94nm,0.2s						
SMDR	**Samana, DR**	**2.53**	**261**	⇑*e*Pg	**Pn**	**10 18 32.3**	**-0.7**
SMDR				⇑*e*Sg	**Sn**	**10 19 01.9**	**-1.7**
SMDR				IAML		10 19 23.6	
	comp=N,40nm,1.0s						
DR12	**Loma Pena Alta**	**2.84**	**251**	Pn	**Pn**	**10 18 37.1**	**-0.1**
HATOM	**Hato Mayor del**	**2.84**	**251**	⇑*e*Pg	**Pn**	**10 18 37.0**	**-0.3**
HATOM				*e*Sg	**Sn**	**10 19 08.6**	**-2.6**
HATOM				IAML		10 19 10.7	
	comp=N,19nm,0.4s						
BANI	**BANI**	**3.84**	**250**	Pn	**Pn**	**10 18 52.1**	**+0.9**
BANI	**BANI**	**3.84**	**250**	⇑*e*Pg	**Pn**	**10 18 53.4**	**+2.3**
BANI				IAML		10 20 10.1	
	comp=N,30nm,1.9s						
SDDR	**Presa de Saban**	**4.54**	**261**	Pn	**Pn**	**10 19 02.0**	**+1.3**
SDDR				IAML		10 19 59.2	
	comp=N,11nm,0.5s						
REDR	**Restauracion**	**4.61**	**264**	*e*Pg	**Pn**	**10 19 05.8**	**+4.2**
REDR				IAML		10 21 00.1	
	comp=N,8.1nm,1.1s						

*UPP **27** 10:20:43.5±3.0, 64°62N×31°84E, h0km, ML1.9, Presumed earthquake*
*IDC **27** 10:20:47.9±2.7, 64°68N×31°53E, h0km, mbtmp2.9/4, ML2.2/4, Error ellipse: s-maj=34.9km s-min=11.1km az=106.0*
*HEL **27** 10:20:47.0±0.3, 64°77N×30°92E, h0km, ML2.0, Explosion*
*IGKR **27** 10:20:49.0±0.3, 64°69N±0°02×30°65E±0°09, M2.5(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
*KOLA **27** 10:20:52.5, 64°76N×30°92E, h0km, ML2.4, Error ellipse: s-maj=17.3km s-min=8.2km az=160.0, Kostomuksha, Karelia*
ISC 27 10:20:47.1±0.9, 64°75N±0°03×31°02E±0°04, h0km, n47, σ1§96/66, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RMF	**Romuvaara**	**0.71**	**222**	PG	**Pg**	**10 20 59.2**	**-1.5**
	baz=40						
RMF				smax	smax	10 21 09.1	
	comp=Z,18nm,0.2s						
RMF				SG	**Sg**	**10 21 09.3**	**-0.6**
KU1	**Kurvinen**	**1.03**	**324**	PB	**Pg**	**10 21 06.7**	**-0.1**
KU6	**Riekki**	**1.37**	**340**	PN	**Pg**	**10 21 12.0**	**-1.2**
	baz=165						
KU6				smax	smax	10 21 27.2	
	comp=Z,11nm,0.2s						
KU6				SN	**Sg**	**10 21 30.2**	**-0.7**
MSF	**Maaselka**	**1.43**	**325**	PN	**Pn**	**10 21 13.8**	**-0.5**
MSF				SN	**Sb**	**10 21 33.1**	**-0.3**
KU2	**Taivalkoski**	**1.52**	**311**	PN	**Pn**	**10 21 14.7**	**-0.8**
	baz=126						
JOF	**Joensuu**	**1.84**	**176**	*eP*	**Pn**	**10 21 20.0**	**+0.1**
JOF	**Joensuu**	**1.84**	**176**	PG	**Pn**	**10 21 20.9**	**+1.0**
NIF	**Nilsia**	**1.96**	**227**	PG	**Pn**	**10 21 21.4**	**-0.2**
	baz=41						
NIF				smax	smax	10 21 45.0	
	comp=Z,8.5nm,0.2s						
KVDA	**Kovda**	**2.10**	**21**	P	**Pg**	**10 21 27.9**	**+0.7**
KVDA				S	**Sg**	**10 21 55.5**	**+1.1**
RANF	**Ranua**	**2.18**	**308**	PG	**Pn**	**10 21 25.8**	**+1.3**
OUL	**Oulu**	**2.21**	**281**	PG	**Pn**	**10 21 25.7**	**+0.8**
	baz=99						
OUL				SG	**Sn**	**10 21 52.6**	**-0.3**
OBF4	**Vikkela, Lumij**	**2.54**	**274**	PG	**Pn**	**10 21 31.1**	**+1.7**
OBF4				smax	smax	10 22 00.6	
	comp=Z,10nm,0.2s						
OBF4				SG	**Sb**	**10 22 04.7**	**-0.3**
OUF	**Merijarvi**	**2.74**	**265**	PB	**Pn**	**10 21 33.3**	**+1.0**
OUF				smax	smax	10 22 06.5	
	comp=Z,11nm,0.2s						
OUF				SG	**Sn**	**10 22 07.9**	**+1.9**
RNF	**Rovaniemi**	**2.79**	**314**	PG	**Pb**	**10 21 36.7**	**-1.0**
OBF0	**Syolatti, Pyha**	**2.93**	**268**	PG	**Pb**	**10 21 39.4**	**-0.7**
OBF0				smax	smax	10 22 12.0	
	comp=Z,10nm,0.2s						
OBF0				SG	**Sb**	**10 22 15.4**	**-1.0**
SUF	**Sumiainen**	**2.97**	**229**	*eP*	**Pn**	**10 21 36.8**	**+1.4**
SUF	**Sumiainen**	**2.97**	**229**	PB	**Pn**	**10 21 37.9**	**+2.5**
SUF				smax	smax	10 22 14.1	
	comp=Z,2.4nm,0.2s						
APA0	**Apatity Array**	**2.98**	**15**	P	**Pb**	**10 21 41.6**	**+0.7**
APA0				S	**Sb**	**10 22 15.8**	**-2.1**
VRF	**Varrio**	**3.07**	**350**	PG	**Pb**	**10 21 41.9**	**-0.6**
VRF				smax	smax	10 22 16.1	
	comp=Z,3.5nm,0.2s						
TOF	**Tornio**	**3.10**	**299**	PG	**Pb**	**10 21 40.9**	**-2.1**
TOF				smax	smax	10 22 16.6	
	comp=Z,2.7nm,0.2s						
TOF				SG	**Sb**	**10 22 21.0**	**-0.4**
KALU	**Kalix**	**3.41**	**293**	P	**Pn**	**10 21 42.4**	**+1.1**
KALU				S	**Sb**	**10 22 27.1**	**-2.9**
RUF	**Ruokolahti**	**3.47**	**197**	PB	**Pn**	**10 21 45.3**	**+3.1**
LVZ	**Lovozero**	**3.48**	**23**	S	**Sb**	**10 22 29.1**	**-3.3**
KEF	**Keuruu**	**3.79**	**230**	*eP*	**Pn**	**10 21 45.5**	**-1.1**
KEF	**Keuruu**	**3.79**	**230**	PB	**Pn**	**10 21 49.7**	**+3.1**
KLF	**Kolari**	**3.81**	**314**	PB	**Pn**	**10 21 49.4**	**+2.4**
RAJF	**Raja-Jooseppi**	**3.90**	**345**	PB	**Pn**	**10 21 52.2**	**+4.1**
FIA0	**FINESS Array S**	**4.01**	**216**	PG	**Pb**	**10 21 59.1**	**+0.7**
FINES	**FINESS Array B**	**4.01**	**216**	Pn	**Pn**	**10 21 50.0**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=28,slow=14,SNR=2.0						
FINES				Sn	**Sn**	**10 22 37.6**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=36,slow=19,SNR=3.7						
FINES				Lg	Lg	10 22 49.0	
	comp=Z,1.2nm,0.3s,baz=43,slow=25,SNR=9.3						
	comp=Z,1.5nm,0.9s						
SJUU	**Sjulsmark**	**4.05**	**285**	P	**Pn**	**10 21 52.4**	**+2.2**
SJUU				S	**Sn**	**10 22 40.2**	**+1.9**
VAF	**Ylistaro**	**4.07**	**249**	*eP*	**Pn**	**10 21 52.5**	**+2.0**
VAF	**Ylistaro**	**4.07**	**249**	PB	**Pn**	**10 21 54.2**	**+3.7**
	baz=61						
ERTU	**Ertsjaerv**	**4.08**	**300**	P	**Pn**	**10 21 51.1**	**+0.5**
ERTU				S	**Sn**	**10 22 43.2**	**+4.1**
ERTU	**Ertsjaerv**	**4.08**	**300**	PB	**Pn**	**10 21 53.3**	**+2.6**
ERTU				SG	**Sb**	**10 22 52.7**	**+3.2**
BURU	**Burvik**	**4.15**	**272**	P	**Pn**	**10 21 51.2**	**-0.4**
BURU	**Burvik**	**4.15**	**272**	PB	**Pn**	**10 21 54.3**	**+2.7**
HARU	**Harads**	**4.42**	**293**	P	**Pn**	**10 21 56.7**	**+1.3**
ODEU	**Stanfors**	**4.46**	**270**	P	**Pn**	**10 21 56.6**	**+0.8**
UMAU	**Umeaa**	**4.58**	**264**	P	**Pn**	**10 21 58.0**	**+0.5**
UMAU	**Umeaa**	**4.58**	**264**	SG	**Sb**	**10 23 07.6**	**+3.7**
HEF	**Hetta**	**4.70**	**325**	PB	**Pn**	**10 22 03.8**	**+4.6**
ARCES	**ARCESS Array B**	**5.26**	**338**	Pn	**Pn**	**10 22 07.6**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=151,slow=13,SNR=11						
ARCES				Sn	**Sn**	**10 23 06.3**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=155,slow=26,SNR=1.4						
ARCES				Lg	Lg	10 23 28.7	
	comp=Z,0.5nm,0.3s,baz=154,slow=25,SNR=6.3						
	comp=Z,1.8nm,0.8s						
ARCES	**ARCESS Array B**	**5.26**	**338**	P	**Pn**	**10 22 09.4**	**+2.5**
ARCES				S	**Sn**	**10 23 08.3**	**+0.2**
RAF	**Rauma**	**5.64**	**233**	*eP*	**Pn**	**10 22 11.0**	**-1.1**
FAUS	**Fauske**	**6.92**	**299**	P	**Pn**	**10 22 32.3**	**+2.8**
FAUS				S	**Sn**	**10 23 48.2**	**-0.6**
HFS	**Hagfors**	**9.25**	**248**	Pn	**Pn**	**10 23 01.3**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=51,slow=11,SNR=5.4						
HFS				Sn	**Sn**	**10 24 42.7**	**-3.5**
	comp=Z,0.1nm,0.3s,baz=55,slow=18,SNR=1.6						
HFS				Lg	Lg	10 25 33.6	
	comp=Z,0.2nm,0.3s,baz=59,slow=29,SNR=3.0						
	comp=Z,0.4nm,0.3s						
NOA	**NORSAR Array B**	**9.76**	**257**	Pn	**Pn**	**10 23 08.2**	**-0.3**
	baz=54,slow=12,SNR=2.0						
	comp=Z,0.3nm,0.7s						

*SOME **27** 10:25:20.8, 43°67N×83°03E, h10km*

*NNC **27** 10:25:23.0±1.6, 43°70N×82°90E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=13.9km s-min=5.3km az=129.0*
ISC 27 10:25:22.3±2.4, 43°8N±0°1×82°9E±0°1, h10km, n11, σ1§33/15, 3C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	**2.34**	**285**	Pg	**Pb**	**10 26 06.0**	**+1.4**
	5.2nm,0.3s						
DJR				Lg	Lg	10 26 38.7	
	34nm,0.2s						
DJR	**Jarkent**	**2.34**	**285**	*eP*	**Pb**	**10 26 06.0**	**+1.4**
	5.2nm,0.3s						
DJR				*e*S	**Sg**	**10 26 38.7**	**+1.3**
	34nm,0.2s						
PDGK	**Podgornoye**	**2.54**	**262**	⇑Pg	**Pb**	**10 26 08.3**	**+0.3**
	3.6nm,0.5s						
PDGK				⇑Lg	Lg	10 26 41.6	
	11nm,0.3s						
SHLS	**Shalkode**	**2.59**	**258**	Pg	**Pn**	**10 26 04.3**	**-0.2**
	25nm,0.3s						
SHLS				Lg	Lg	10 26 35.7	
	87nm,0.3s						
SHLS	**Shalkode**	**2.59**	**258**	*eP*	**Pn**	**10 26 04.2**	**-0.2**
	25nm,0.3s						
SHLS				*e*S	**Sn**	**10 26 35.7**	**-0.5**
	87nm,0.3s						
UZB	**Uzynbulak**	**2.91**	**259**	Pg	**Pb**	**10 26 15.7**	**+1.3**
	3.5nm,0.3s						
UZB				Lg	Lg	10 26 55.3	
	15nm,0.2s						
UZB	**Uzynbulak**	**2.91**	**259**	*eP*	**Pb**	**10 26 15.7**	**+1.3**
	3.5nm,0.3s						
UZB				*e*S	**Sg**	**10 26 55.3**	**-0.5**
	15nm,0.2s						
MK31	**Makanchi Array**	**3.07**	**352**	⇓Pg	**Pg**	**10 26 20.6**	**-0.6**
	0.8nm,0.3s,baz=168,slow=15,SNR=6.0						
MK31				⇓Lg	Lg	10 27 00.3	
	1.4nm,0.2s,baz=169,slow=29,SNR=5.6						
MAKZ	**Makanchi**	**3.13**	**348**	⇓Pg	**Pg**	**10 26 21.4**	**-0.8**
	3.0nm,0.5s						
MAKZ				⇑Lg	Lg	10 27 02.0	
	4.4nm,0.6s						
BLB	**Baldybastay**	**3.23**	**278**	Pg	**Pb**	**10 26 21.2**	**+1.3**
	12nm,0.2s						
BLB				Lg	Lg	10 27 04.6	
	34nm,0.4s						
ARXS	**Arharly**	**3.71**	**279**	*eP*	**Pb**	**10 26 29.7**	**+1.7**
	2.3nm,0.3s						
ARXS				*e*S	**Sg**	**10 27 19.0**	**-2.5**
	18nm,0.3s						

*ISK **27** 10:26:09.5, 36°53N×28°81E, h13km, ML2.9/24*
*AFAD **27** 10:26:10.6, 36°54N×28°82E, h7km±5km, ML2.5*
*THE **27** 10:26:10.2, 37°N±12°×29°E±°, h0km±13km, M2.6/7, ML2.6/7*
*ATH **27** 10:26:10.1, 36°51N×28°85E, h27km±4km, ML2.8/4, Latitude uncertainty: 6 km; Longitude uncertainty: 2 km*
ISC 27 10:26:09.6±1.0, 36°53N±0°02×28°83E±0°02, h7km±9km, n49, σ1§10/69, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FETY	**Fethiye**	**0.23**	**63**	P	Pg	10 26 08.1	-6.1
FETY				S	**Sg**	**10 26 11.4**	**-5.9**
SABU	**Mula-Dalaman**	**0.31**	**21**	P	**Pg**	**10 26 17.1**	**+1.3**
SABU				S	**Sb**	**10 26 23.7**	**+0.8**
DALY	**Dalyan (Mula)**	**0.32**	**333**	Pg	**Pg**	**10 26 16.8**	**+0.9**
DALY				Sg	**Sg**	**10 26 21.5**	**+1.4**
IZZE	**Mula-Seydike**	**0.33**	**106**	P	**Pb**	**10 26 17.9**	**+0.1**
IZZE				S	**Sb**	**10 26 22.8**	**-0.5**
IZZE				IAML		10 26 25.0	
	comp=E,1μm,0.3s						
IZZE				IAML		10 26 26.0	
	comp=N,1μm,0.4s						
RDI1	**Rhodes Town Ha**	**0.50**	**261**	P	**Pb**	**10 26 20.7**	**+0.1**
RDI1				S	**Sb**	**10 26 27.6**	**-0.4**
TURN	**Turunc**	**0.53**	**297**	Pg	**Pg**	**10 26 20.2**	**+0.3**
TURN				Sg	**Sg**	**10 26 27.7**	**+0.9**
TURN	**Turunc**	**0.53**	**297**	P	**Pg**	**10 26 20.4**	**+0.5**
TURN				S	**Sb**	**10 26 29.4**	**+0.3**
TURN				IAML		10 26 30.0	
	comp=N,282nm,0.3s						
TURN				IAML		10 26 32.0	
	comp=E,243nm,0.7s						
CAME	**Cameli-Denizli**	**0.56**	**42**	Pg	**Pg**	**10 26 21.1**	**+0.7**
ARG	**Arkhangelos**	**0.65**	**241**	P	**Pg**	**10 26 22.4**	**+0.2**
ARG				S	**Sb**	**10 26 32.6**	**+0.1**
ARG	**Arkhangelos**	**0.65**	**241**	Pg	**Pg**	**10 26 22.1**	**0.0**
ARG	**Arkhangelos**	**0.65**	**241**	P	**Pg**	**10 26 21.9**	**-0.2**
ARG				S	**Sb**	**10 26 31.7**	**-0.8**
KNIK	**Mula-Seydike**	**0.67**	**62**	P	**Pg**	**10 26 23.7**	**+1.1**
KNIK				S	**Sg**	**10 26 32.7**	**+1.3**
KNIK				IAML		10 26 34.0	
	comp=N,174nm,0.7s						
AKAS	**Kas**	**0.69**	**115**	Pg	**Pg**	**10 26 23.5**	**+0.6**
AKAS	**Kas**	**0.69**	**115**	P	**Pg**	**10 26 23.7**	**+0.7**
AKAS				S	**Sn**	**10 26 36.0**	**-0.9**
AKAS				IAML		10 26 38.0	
	comp=E,417nm,0.5s						
AKAS				IAML		10 26 41.0	
	comp=N,446nm,0.4s						
CAEL	**Deniz

IDC ***27*** *10:26:59.1±1.1,7˚.43N×92˚.35E,h0km,mb3.8/6, mbtmp3.9/8,ML4.3/2,MS2.6/1,Error ellipse: s-maj=37.9km s-min=18.7km az=59.0*

NEIC ***27*** *10:27:01.1±0.7,7˚.40N±0˚.07×92˚.3E±0˚.1,h10km±1km, mb4.3/12,Error ellipse: s-maj=21.2km s-min=3.7km az=236.0*

ISC 27 10:27:02.3±0.7,7˚4N±0˚.1×92˚3E±0˚.1,h24km,n29, σ1§19/27,mb3.9/12,2C,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALK	**Pallekele**	**11.49**	**270**	Pn	**Pn**	**10 29 46.0**	**+1.0**
	1.5nm,0.3s,baz=87,slow=14,SNR=12						
PALK				Sn	Sn	10 31 41.3	-11
	1.2nm,0.3s,baz=10.0,slow=17,SNR=4.7						
PALK				LR	LR	10 33 56.2	
	comp=Z,28nm,18.8s,baz=98,slow=36						
	3.5nm,0.3s						
PALK	**Pallekele**	**11.49**	**270**	Pn	**Pn**	**10 29 44.4**	**-0.6**
CM31	**Chiang Mai Arr**	**12.77**	**30**	Pn	**Pn**	**10 30 02.7**	**+0.3**
CMAR	**Chiang Mai Arr**	**12.77**	**30**	Pn	**Pn**	**10 30 03.1**	**+0.6**
	0.5nm,0.3s,baz=218,slow=14,SNR=20						
	2.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**12.77**	**30**	Pn	**Pn**	**10 30 01.5**	**-1.0**
EVN	**Everest**	**21.10**	**346**	P	**P**	**10 31 45.8**	**-0.1**
EVN				IAmb	IAmb	10 31 47.7	
	comp=Z,2.6nm,0.8s						
H08S3	**Diego Garcia H**	**24.75**	**233**	T	T	10 58 15.6	
	baz=53,slow=75,SNR=53						
H08S2	**Diego Garcia H**	**24.75**	**233**	T	T	10 58 14.3	
	baz=53,slow=75,SNR=52						
H08S1	**Diego Garcia H**	**24.76**	**233**	T	T	10 58 19.8	
	baz=53,slow=75,SNR=43						
BOOM	**Boomskoye usch**	**37.82**	**340**	P	**P**	**10 34 17.9**	**+0.7**
BOOM				IAmb	IAmb	10 34 28.3	
	comp=Z,5.2nm,1.2s						
FRU1	**Bishkek**	**38.56**	**339**	P	**P**	**10 34 23.3**	**+0.1**
MKAR	**Makanchi Array**	**40.19**	**349**	P	**P**	**10 34 36.2**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=164,slow=8.3,SNR=13						
	comp=Z,0.8nm,0.5s						
SONM	**Songino Array**	**42.06**	**14**	P	**P**	**10 34 52.1**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=198,slow=9.1,SNR=5.4						
	comp=Z,0.9nm,0.8s						
SONM	**Songino Array**	**42.06**	**14**	P	**P**	**10 34 52.8**	**+0.6**
KNRA	**Kununurra**	**42.79**	**123**	P	**P**	**10 34 58.0**	**-0.3**
KNRA				IAmb	IAmb	10 35 37.7	
	comp=Z,18nm,1.5s						
KURBB	**Kurchatov Arra**	**44.59**	**348**	P	**P**	**10 35 12.4**	**0.0**
	comp=Z,1.2nm,0.6s,baz=170,slow=7.2,SNR=16						
	comp=Z,1.2nm,0.6s						
KURK	**Kurchatov**	**44.66**	**348**	P	**P**	**10 35 13.4**	**+0.4**
KURK				IAmb	IAmb	10 35 25.4	
	comp=Z,6.1nm,1.4s						
KURK	**Kurchatov**	**44.66**	**348**	⇑Pg	**PKiKP**	**10 43 50.0**	**-4.9**
	comp=Z,1.6nm,0.9s						
KURK				⇑Lg	Lg	10 44 19.0	
	comp=Z,6.0nm,0.9s						
BVAR	**Borovoye Array**	**48.88**	**343**	P	**P**	**10 35 45.8**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=157,slow=7.8,SNR=3.9						
	comp=Z,0.5nm,0.4s						
WB0	**Warramunga Arr**	**49.46**	**124**	P	**P**	**10 35 51.0**	**+0.1**
WB0				IAmb	IAmb	10 36 01.9	
	comp=Z,7.8nm,1.4s						
WRA	**Warramunga Arr**	**49.50**	**124**	P	**P**	**10 35 50.5**	**-0.8**
	comp=Z,1.0nm,0.8s,baz=299,slow=7.9,SNR=9.5						
	comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	**49.50**	**124**	P	**P**	**10 35 51.0**	**-0.2**
WR8	**Warramunga Arr**	**49.64**	**124**	P	**P**	**10 35 52.4**	**+0.1**
WR8				IAmb	IAmb	10 36 25.3	
	comp=Z,4.5nm,1.1s						
ASAR	**Alice Springs**	**51.04**	**128**	P	**P**	**10 36 03.3**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=304,slow=7.7,SNR=24						
ASAR				PcP	**PcP**	**10 37 19.8**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=294,slow=3.9,SNR=2.0						
	comp=Z,0.7nm,0.6s						
AS31	**Alice Springs**	**51.04**	**128**	P	**P**	**10 36 03.7**	**+0.8**
GUMO	**Guam**	**51.99**	**79**	P	**P**	**10 36 10.3**	**+0.1**
BBOO	**Buckleboo**	**57.71**	**136**	P	**P**	**10 36 51.6**	**+0.4**
FINES	**FINESS Array B**	**72.28**	**333**	P	**P**	**10 38 25.8**	**+0.3**
NVAR	**Mina Array Bea**	**126.26**	**30**	PKP	**PKiKP**	**10 46 05.6**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=2.0,slow=1.8,SNR=2.7						

IDC 27 10:41:45.5±1.8,6˚22S×153˚64E,h0km,mb3.3/3, mbtmp3.5/4,ML1.9/1,MS2.9/3,Error ellipse: s-maj=104.2km s-min=27.1km az=137.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.16**	**243**	Pn	Pn	10 43 33.1	+1.6
	1.3nm,0.3s,baz=56,slow=11,SNR=2.8						
PMG				Sn	Sn	10 44 54.6	+1.0
	1.0nm,0.3s,baz=57,slow=17,SNR=4.1						
PMG				LR	LR	10 45 52.6	
	comp=Z,67nm,21.0s,baz=224,slow=34						
	6.5nm,0.5s						
DZM	**Mont Dzumac**	**20.03**	**143**	LR	LR	10 52 10.0	
	comp=Z,53nm,18.5s,baz=216,slow=31						
WRA	**Warramunga Arr**	**23.18**	**232**	P	P	10 46 53.7	-0.4
	0.2nm,0.4s,baz=56,slow=9.5,SNR=6.0						
WRA				PcP	PcP	10 50 42.7	-0.2
	0.1nm,0.5s,baz=52,slow=2.5,SNR=1.3						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**25.71**	**226**	P	P	10 47 17.3	-0.4
	0.5nm,0.5s,baz=55,slow=9.8,SNR=17						
	0.5nm,0.5s						
KAPI	**Kappang**	**33.74**	**270**	LR	LR	11 05 01.7	
	comp=Z,13nm,18.7s,baz=196,slow=41						
ILAR	**Eielson Array**	**83.16**	**22**	P	P	10 54 13.6	+0.4
	0.2nm,0.7s,baz=238,slow=5.0,SNR=2.0						
	0.2nm,0.7s						

IDC ***27*** *10:43:41.5±0.6,31˚.84N×48˚.70E,h0km,mb4.1/32, mbtmp4.1/38,ML3.7/6,MS3.3/17,Error ellipse: s-maj=11.9km s-min=10.7km az=148.0*

MOS ***27*** *10:43:41.7±1.1,31˚.82N×48˚.64E,h13km,mb4.6/32,Error ellipse: s-maj=7.5km s-min=5.2km az=86.4*

NEIC ***27*** *10:43:43.7±1.5,31˚.83N±0˚.05×48˚.67E±0˚.06,h10km±1km, mb4.5/65,Error ellipse: s-maj=10.1km s-min=7.4km az=144.0*

TEH ***27*** *10:43:44.7,31˚.90N×48˚.72E,h14km±21km,ML4.3, Presumed earthquake*

THR ***27*** *10:43:44.1±0.0,31˚.91N×48˚.72E,h10km±3km,ML4.4, Presumed earthquake*

SGS ***27*** *10:43:45.3,32˚.11N×48˚.84E,h16km,MI4.5*

NAO ***27*** *10:43:47.0,31˚.81N×48˚.18E,h33km,MB3.9*

OMAN ***27*** *10:43:48.6±1.1,31˚.59N×49˚.17E,h10km,mb4.4/26,Error ellipse: s-maj=9.4km s-min=5.6km az=6.0*

DSN ***27*** *10:43:51.9±1.4,31˚.17N×49˚.01E,h10km,ML3.9/10,Error ellipse: s-maj=19.1km s-min=6.9km az=6.0*

ISC 27 10:43:44.1±1.2,31˚86N±0˚.03×48˚71E±0˚.03,h17km±7km, n334,σ1§84/374,mb4.4/77,MS3.3/13,9C-6D,Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AHWZ	**Ahwaz**	**0.53**	**186**	Pg	**Pb**	**10 43 56.1**	**+1.2**
AMIS	**Naft Sefid**	**0.53**	**111**	Pg	**Pg**	**10 43 55.0**	**+0.3**
GTMR	**Gotvand**	**0.70**	**29**	*e*Pg	**Pg**	**10 43 56.3**	**-1.6**
GTMR				IAML		10 44 21.0	
	comp=Z,9μm,1.0s						
ZNGN	**Zangian**	**1.84**	**81**	Pn	**Pb**	**10 44 18.0**	**+0.4**
IPIR	**Pirpir**	**2.02**	**65**	Pn	**Pb**	**10 44 20.4**	**-0.2**
BDRS	**Dareh Seyedi**	**2.10**	**4**	Pn	**Pb**	**10 44 20.9**	**-1.1**
KHMZ	**Khomeyn**	**2.15**	**29**	*e*Pn	**Pb**	**10 44 22.2**	**-0.6**
KHMZ				IAML		10 45 02.9	
	comp=Z,1μm,1.0s						
IBRJ	**Brojen**	**2.17**	**88**	Pn	**Pb**	**10 44 22.5**	**-0.6**
KLNJ	**Kolanjah**	**2.60**	**108**	*e*Pn	**Pn**	**10 44 28.3**	**+2.5**
KLNJ				IAML		10 45 26.7	
	comp=Z,1μm,1.0s						
KLNJ	**Kolanjah**	**2.60**	**108**	Pn	**Pn**	**10 44 28.3**	**+2.5**
IBZA	**Bozab**	**2.70**	**345**	Pn	**Pn**	**10 44 29.1**	**+2.0**
KBD	**Kabd**	**2.81**	**198**	P	**Pb**	**10 44 32.5**	**-1.4**
KBD				S	**Sb**	**10 45 07.0**	**-1.0**
QAMS	**Qamsar**	**2.94**	**50**	Pn	**Pn**	**10 44 32.9**	**+2.6**
HAGD	**Aghdareh**	**2.98**	**7**	Pn	**Pn**	**10 44 32.2**	**+1.3**
IALM	**Almabolaq**	**3.03**	**352**	Pn	**Pn**	**10 44 33.9**	**+2.3**
IGHG	**Ghaleghazi**	**3.05**	**325**	Pn	**Pn**	**10 44 34.3**	**+2.4**
IRAM	**Ramesheh**	**3.13**	**90**	Pn	**Pn**	**10 44 35.4**	**+2.5**
SNQR	**Sonqor, Kerman**	**3.13**	**343**	Pn	**Pn**	**10 44 35.1**	**+2.2**
GLG1	**Gilan-e-Gharb**	**3.26**	**314**	Pn	**Pn**	**10 44 36.7**	**+2.2**
KAZ2	**Kazeron-Fars-I**	**3.38**	**131**	Pn	**Pn**	**10 44 39.2**	**+2.9**
GHVR	**GHOM**	**3.40**	**39**	*e*Pn	**Pn**	**10 44 39.9**	**+3.4**
GHVR				IAML		10 45 54.1	
	comp=Z,330nm,1.0s						
IDHR	**Dehrash**	**3.44**	**326**	Pn	**Pn**	**10 44 39.4**	**+2.2**
KFJS2	**Khafji**	**3.50**	**185**	P	**Pn**	**10 44 41.1**	**+3.2**
KFJS2				S	**Sn**	**10 45 23.4**	**+4.4**
IQOM	**Qom**	**3.58**	**33**	Pn	**Pn**	**10 44 41.1**	**+2.0**
NASN	**Na'in**	**3.59**	**74**	*e*Pn	**Pn**	**10 44 42.0**	**+2.6**
NASN				IAML		10 45 52.4	
	comp=Z,270nm,1.0s						
KFJS1	**Al Wafrah**	**3.72**	**191**	P	**Pn**	**10 44 44.8**	**+4.0**
KFJS1				S	**Sn**	**10 45 28.6**	**+4.4**
QABG	**Abgarm-Qazvin**	**3.91**	**10**	Pn	**Pn**	**10 44 46.0**	**+2.3**
SHI	**Shiraz**	**3.95**	**123**	Pn	**Pn**	**10 44 46.8**	**+2.7**
IVRN	**Varamin**	**4.02**	**38**	Pn	**Pn**	**10 44 47.3**	**+2.2**
DSBU	**Dashti - Bushe**	**4.12**	**147**	Pn	**Pn**	**10 44 49.5**	**+3.0**
QYSM	**Um Kedad**	**4.29**	**202**	P	**Pn**	**10 44 44.5**	**-4.3**
THKV	**Tehran--Karaj**	**4.43**	**23**	*e*Pn	**Pn**	**10 44 52.3**	**+1.5**
THKV				IAML		10 46 27.5	
	comp=Z,310nm,1.0s						
CHTH	**Charan**	**4.51**	**26**	*e*Pn	**Pn**	**10 44 53.8**	**+1.8**
CHTH				IAML		10 46 03.7	
	comp=Z,75nm,1.0s						
SRFHA	**Rafha**	**4.52**	**233**	P	**Pn**	**10 44 55.1**	**+3.1**
SRFHA				S	**Sn**	**10 45 46.6**	**+2.5**
DAMV	**Damavand**	**4.64**	**35**	*e*Pn	**Pn**	**10 44 55.7**	**+1.9**
DAMV				IAML		10 47 09.0	
	comp=Z,4.9nm,1.0s						
IGZV	**Ghazvin**	**4.69**	**15**	Pn	**Pn**	**10 44 56.2**	**+1.8**
ZNJK	**Zanjan**	**4.80**	**360**	*e*Pn	**Pn**	**10 44 58.4**	**+2.4**
ZNJK				IAML		10 46 36.1	
	comp=Z,4.0nm,1.0s						
ZNJK	**Zanjan**	**4.80**	**360**	Pn	**Pn**	**10 44 57.8**	**+1.9**
YZKH	**Yazd**	**5.02**	**82**	*e*Pn	**Pn**	**10 45 01.0**	**+2.2**
YZKH				IAML		10 46 45.1	
	comp=Z,110nm,1.0s						
IMEH	**Mehriz**	**5.06**	**94**	Pn	**Pn**	**10 45 02.0**	**+2.6**
RQBS	**RQBS**	**5.10**	**209**	P	**Pn**	**10 45 02.7**	**+2.9**
RQBS				S	**Sn**	**10 46 01.4**	**+3.1**
SRSL	**SARDASHT**	**5.13**	**329**	*e*Pn	**Pn**	**10 45 02.2**	**+1.8**
SRSL				IAML		10 46 04.7	
	comp=Z,230nm,1.0s						
GIDE	**GILAN DEYLAMAN**	**5.15**	**11**	*e*Pn	**Pn**	**10 45 03.1**	**+2.4**
GIDE				IAML		10 46 53.5	
	comp=Z,290nm,1.0s						
ASYS		**5.76**	**222**	P	**Pn**	**10 45 10.7**	**+1.7**
SAKB	**Bahrain**	**6.07**	**164**	P	**Pn**	**10 45 15.2**	**+2.1**
SAKB				S	**Sn**	**10 45 25.5**	**+1.2**
HIL04	**Ash Shaalaniya**	**6.58**	**233**	P	**Pn**	**10 45 21.6**	**+1.3**
RMAH	**Rumah**	**6.68**	**194**	P	**Pn**	**10 45 23.6**	**+2.0**
NARAR	**Arar**	**6.83**	**266**	P	**Pn**	**10 45 24.6**	**+0.9**
NARAR				S	**Sn**	**10 46 38.7**	**-2.5**
KRBR	**Kerman**	**7.16**	**103**	*e*Pn	Pn	10 45 33.2	+4.7
KRBR				IAML		10 47 26.4	
	comp=Z,43nm,1.0s						
HTM03	**HTM03**	**7.26**	**230**	P	**Pn**	**10 45 30.6**	**+0.9**
HTM02	**HTM02**	**7.28**	**229**	P	**Pn**	**10 45 30.5**	**+0.6**
TABS	**Tabas**	**7.31**	**74**	*e*Pn	**Pn**	**10 45 32.5**	**+2.3**
TABS				IAML		10 47 24.4	
	comp=Z,1.9nm,1.0s						
SHRO	**Shahrood**	**7.33**	**54**	*e*Pn	**Pn**	**10 45 32.6**	**+2.0**
SHRO				IAML		10 46 42.0	
	comp=Z,2.1nm,1.0s						
HTM05	**HTM05**	**7.37**	**232**	P	**Pn**	**10 45 31.7**	**+0.6**
QSMS	**Sumairaa**	**7.37**	**227**	P	**Pn**	**10 45 31.7**	**+0.6**
HTM04	**HTM04**	**7.39**	**231**	P	**Pn**	**10 45 32.2**	**+0.8**
HTM01	**HTM01**	**7.47**	**228**	P	**Pn**	**10 45 33.2**	**+0.7**
HTM06	**HTM06**	**7.63**	**230**	P	**Pn**	**10 45 35.4**	**+0.7**
BNDS	**Bandar-Abbas**	**7.87**	**122**	IAML		10 47 17.6	
	comp=Z,69nm,1.0s						
GEVA	**Gevas**	**7.93**	**326**	Pn	**Pn**	**10 45 40.3**	**+1.4**
GEVA				Sn	**Sn**	**10 47 07.3**	**-1.0**
SLWR	**Sila**	**8.19**	**161**	P	**Pn**	**10 45 43.2**	**+1.0**
SLWR				S	**Sn**	**10 47 12.7**	**-1.8**
MRVT	**Maraveh tapeh**	**8.39**	**44**	*e*Pn	**Pn**	**10 45 46.8**	**+1.8**
HIL01	**Al Amaaer**	**8.41**	**226**	P	**Pn**	**10 45 45.1**	**-0.3**
MARD	**Mardin**	**8.51**	**312**		**Pn**	**10 45 47.1**	**+0.4**
GURO	**Guroymak-BITLI**	**8.63**	**323**	Pn	**Pn**	**10 45 48.3**	**-0.1**
SBZV	**Sabzevar**	**8.65**	**56**	*e*Pn	**Pn**	**10 45 50.0**	**+1.2**
SHME	**Shamm**	**8.71**	**130**	P	**Pn**	**10 45 48.4**	**-0.9**
SHME				P		10 45 48.8	
SHME				S	**Sn**	**10 47 22.0**	**-5.1**
SHME	**Shamm**	**8.71**	**130**	P	**Pn**	**10 45 49.6**	**+0.3**
SHME				S	**Sn**	**10 47 23.5**	**-3.6**
RAYN	**Ar Rayn**	**8.77**	**200**		**Pn**	**10 45 50.8**	**+0.5**
RAYN	**Ar Rayn**	**8.77**	**200**	*i* P	**Pn**	**10 45 50.9**	**+0.6**
	SNR=24						
RAYN				*i* P		10 45 51.1	
	SNR=58						
RAYN	**Ar Rayn**	**8.77**	**200**	P	**Pn**	**10 45 50.8**	**+0.5**
RAYN	**Ar Rayn**	**8.77**	**200**	P	**Pn**	**10 45 51.2**	**+0.9**
BSRN	**Basiran**	**8.86**	**87**	*e*Pn	**Pn**	**10 45 53.0**	**+1.5**
GNI	**Garni**	**8.88**	**340**	Pn	**Pn**	**10 45 55.8**	**+4.0**
	comp=Z,1.0nm,0.3s,baz=119,slow=13,SNR=3.0						
	comp=Z,4.3nm,0.4s						
GNI	**Garni**	**8.88**	**340**	Pn	**Pn**	**10 45 51.3**	**-0.5**
GNI	**Garni**	**8.88**	**340**	P	**Pn**	**10 45 51.3**	**-0.5**
BANOM	**Banah**	**8.90**	**130**	*i* P	**Pn**	**10 45 51.3**	**-0.7**
	SNR=31						
BANOM				S	**Sn**	**10 47 26.2**	**-5.7**
BANOM	**Banah**	**8.90**	**130**	P	**Pn**	**10 45 51.9**	**-0.1**
BANOM				S	**Sn**	**10 47 27.3**	**-4.6**
ETH05	**ETH05**	**8.94**	**238**	P	**Pn**	**10 45 53.0**	**+0.3**
JOFS	**JOFS**	**9.04**	**257**	P	**Pn**	**10 45 53.9**	**0.0**
AJN	**Ajban**	**9.13**	**141**	P	**Pn**	**10 45 56.7**	**+1.6**
AJN				S	**Sn**	**10 47 35.3**	**-2.3**
NAZ	**Nazwa, Dubai**	**9.18**	**136**	*i* P	**Pn**	**10 45 56.2**	**+0.4**
	SNR=18						
NAZ	**Nazwa, Dubai**	**9.18**	**136**	P	**Pn**	**10 45 56.6**	**+0.8**
	SNR=18						
NAZ				S	**Sn**	**10 47 36.1**	**-2.6**
MASF	**Masafi**	**9.19**	**133**	P	**Pn**	**10 45 56.5**	**+0.5**
	SNR=9.9						
MASF				S	**Sn**	**10 47 35.8**	**-3.4**
MSFE	**Esma-Masafi**	**9.20**	**133**	*i* P	**Pn**	**10 45 56.2**	**0.0**
	SNR=9.9						
ASUD	**Al Ashush, Dub**	**9.27**	**139**	*i* P	**Pn**	**10 45 58.2**	**+1.1**
	SNR=24						
ASUD	**Al Ashush, Dub**	**9.27**	**139**	P	**Pn**	**10 45 58.6**	**+1.5**
	SNR=24						
ASUD				S	**Sn**	**10 47 37.8**	**-3.1**
MZWR	**Madinat Zayed**	**9.27**	**149**	P	**Pn**	**10 45 58.2**	**+1.2**
MZWR				S	**Sn**	**10 47 37.6**	**-3.4**
FAQ	**Al Faqa, Dubai**	**9.32**	**138**	*i* P	**Pn**	**10 45 58.4**	**+0.6**
	SNR=13						
FAQ	**Al Faqa, Dubai**	**9.32**	**138**	P	**Pn**	**10 45 59.1**	**+1.3**
	SNR=13						
FAQ				S	**Sn**	**10 47 37.7**	**-4.6**
MDH	**Madha**	**9.33**	**133**	*i* P	**Pn**	**10 45 57.5**	**-0.5**
	SNR=12						
MDH	**Madha**	**9.33**	**133**	P	**Pn**	**10 45 58.2**	**+0.3**
	SNR=12						
MDH				S	**Sn**	**10 47 38.3**	**-4.3**
FRDH	**FRDH**	**9.34**	**206**	P	**Pn**	**10 45 57.0**	**-1.1**
AFFS	**'Afif**	**9.37**	**214**	P	**Pn**	**10 45 55.0**	**-3.6**
UOSS	**Minazif**	**9.53**	**134**		**Pn**	**10 46 00.6**	**-0.1**
UOSS	**Minazif**	**9.53**	**134**	*i* P	**Pn**	**10 45 59.9**	**-0.8**
	SNR=7.4						
UOSS	**Minazif**	**9.53**	**134**	P	**Pn**	**10 46 00.8**	**+0.1**
UOSS				S	**Sn**	**10 47 41.8**	**-5.7**
HATD	**Hatta, Dubai**	**9.58**	**135**	*i* P	**Pn**	**10 46 01.9**	**+0.6**
	SNR=14						
HATD	**Hatta, Dubai**	**9.58**	**135**	P	**Pn**	**10 46 02.3**	**+1.0**
	SNR=14						
HATD				S	**Sn**	**10 47 43.9**	**-4.7**
ASHO	**Ashiyiah**	**9.64**	**136**	*i* P	**Pn**	**10 46 02.0**	**-0.2**
	SNR=24						
ASHO	**Ashiyiah**	**9.64**	**136**	P	**Pn**	**10 46 03.0**	**+0.8**
	SNR=24						
ASHO				S	**Sn**	**10 47 47.0**	**-3.2**
MZR	**Muzera**	**9.78**	**153**	*i* P	**Pn**	**10 46 04.4**	**+0.3**
	SNR=18						
MZR	**Muzera**	**9.78**	**153**	P	**Pn**	**10 46 05.1**	**+1.0**
	SNR=18						
MZR				S	**Sn**	**10 47 51.3**	**-2.3**
JASK	**Jask - Hormozg**	**10.00**	**124**	P	**Pn**	**10 46 06.6**	**-0.5**
JASK				S	**Sn**	**10 47 55.1**	**-3.8**
ASF	**Jabal al Asfar**	**10.04**	**275**	Pn	**Pn**	**10 46 06.6**	**-1.0**
	comp=Z,1.4nm,0.3s,baz=90,slow=8.3,SNR=13						
ASF				Sn	**Sn**	**10 47 58.3**	**-1.6**
	comp=Z,0.9nm,0.3s,baz=96,slow=19,SNR=1.7						
ASF				Lg	Lg	10 49 08.8	
	comp=Z,0.7nm,0.3s,baz=66,slow=20,SNR=3.9						
ASF				LR	LR	10 51 13.6	
	comp=Z,159nm,18.7s,baz=42,slow=45						
	comp=Z,3.7nm,0.3s						
ARQ	**Araqi**	**10.95**	**139**	P	**Pn**	**10 46 20.0**	**-0.1**
	SNR=15						
ARQ				S	**Sn**	**10 48 18.4**	**-3.9**
ARPR	**Arapgir-MALATY**	**11.12**	**313**	Pn	**Pn**	**10 46 21.6**	**-0.8**
MAK	**Makhachkala**	**11.13**	**355**	*c i*P	**Pn**	**10 46 19.0**	**-3.4**
MAK				*e*S	**Sn**	**10 48 22.2**	**-4.2**
MAK				pmax	pmax		
	comp=Z,213nm,1.2s						
MAK				MLR	MLR		
	comp=Z,276nm,11.0s						
HOQ	**Hoqain**	**11.22**	**135**	P	**Pn**	**10 46 23.2**	**-0.6**
HOQ				S	**Sn**	**10 48 22.9**	**-6.0**
MMAI	**Mount Meron Ar**	**11.30**	**279**	Sn	**Sn**	**10 48 25.6**	**-5.4**
	comp=Z,2.3nm,0.3s,baz=103,slow=33,SNR=4.1						
MMAI				Lg	Lg	10 49 47.3	
	comp=Z,1.2nm,0.3s,baz=78,slow=40,SNR=6.3						
MMAI				LR	LR	10 52 02.5	
	comp=Z,147nm,18.1s,baz=85,slow=44						
BSY	**Bisya**	**11.80**	**138**	P	**Pn**	**10 46 32.0**	**+0.2**
	SNR=12						
BSY				S	**Sn**	**10 48 38.8**	**-4.3**
EIL	**Elat**	**12.03**	**263**	Pn	**Pn**	**10 46 34.8**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=77,slow=7.1,SNR=10						
EIL				Lg	Lg	10 50 12.1	
	comp=Z,0.6nm,0.3s,baz=82,slow=17,SNR=1.8						
EIL				LR	LR	10 52 27.3	
	comp=Z,213nm,19.9s,baz=65,slow=44						
	comp=Z,1.3nm,0.3s						
SMDO	**Samad**	**12.06**	**134**	P	**Pn**	**10 46 35.2**	**-0.2**
	SNR=13						
SMDO				S	**Sn**	**10 48 45.6**	**-4.0**
WSAR	**Wadi Sarin**	**12.29**	**132**	P	**Pn**	**10 46 37.6**	**-0.8**
WSAR				S	**Sn**	**10 48 48.5**	**-6.5**
BNN	**Bunyan**	**12.60**	**307**		**Pn**	**10 46 42.1**	**-0.7**
JMDO	**Jabal Madar**	**12.61**	**136**	P	**Pn**	**10 46 42.5**	**-0.4**
JMDO				S	**Sn**	**10 48 57.0**	**-6.0**
NGCH	**Negor - Chabah**	**12.69**	**118**	P	**Pn**	**10 46 42.8**	**-1.0**
NGCH				S	**Sn**	**10 48 58.5**	**-6.2**
KBZ	**Khabaz**	**12.71**	**341**	Pn	**Pn**	**10 46 47.0**	**+3.0**
	comp=Z,0.2nm,0.3s,baz=166,slow=17,SNR=2.5						
	comp=Z,1.2nm,0.7s						
WBK	**Wadi Bani Khal**	**12.96**	**133**	P	**Pn**	**10 46 46.2**	**-1.4**
	SNR=11						
WBK				S	**Sn**	**10 49 07.3**	**-4.1**
KIV	**Kislovodsk**	**12.98**	**340**	*e*P	**Pn**	**10 46 49.0**	**+1.2**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,36nm,13.0s						
MHTO	**MHTO**	**13.63**	**140**	P	**Pn**	**10 46 56.2**	**-0.5**
	SNR=15						
DOK	**Doka**	**14.06**	**158**	P	**Pn**	**10 47 01.7**	**-0.9**
	SNR=10.0						
BRTR	**Keskin Array B**	**14.52**	**307**	Pn	**Pn**	**10 47 10.0**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=138,slow=11,SNR=4.4						
BRTR				LR	LR	10 53 19.0	
	comp=Z,80nm,20.5s,baz=114,slow=40						
	comp=Z,0.5nm,0.6s						
BRTR	**Keskin Array B**	**14.52**	**307**		**Pn**	**10 47 09.1**	**+0.1**
WHFO	**Wadi Hawf**	**14.61**	**161**	P	**Pn**	**10 47 08.6**	**-1.6**
	SNR=9.4						
ABTO	**Aybut**	**15.02**	**163**	P	**Pn**	**10 47 14.4**	**-1.4**
RBK	**Rabkut**	**15.13**	**160**	P	**Pn**	**10 47 15.3**	**-1.9**
DMTO	**DMTO**	**15.17**	**157**	P	**Pn**	**10 47 15.9**	**-1.7**
	SNR=5.2						
KBL	**Kabul**	**17.23**	**76**	P	**P**	**10 47 45.7**	**0.0**
KBL	**Kabul**	**17.23**	**76**	P	**P**	**10 47 45.7**	**0.0**
KBL				pmax	pmax		
	comp=Z,9.0nm,1.3s						
MANT	**Manisa**	**17.74**	**297**		**Pn**	**10 47 50.1**	**-0.4**
KARP	**Karpathos**	**18.30**	**287**	P	**Pn**	**10 47 56.5**	**-0.7**
KARP				IAmb	IAmb	10 48 13.1	
	comp=Z,40nm,1.1s						
BALB	**Balikesir**	**18.58**	**300**	P	**P**	**10 48 00.8**	**+0.4**
AB31	**Akbulak array**	**19.33**	**23**	P	**Pn**	**10 48 09.6**	**+0.1**
ABKAR	**Akbulak array**	**19.33**	**23**	P	**P**	**10 48 09.1**	**+0.7**
BTK	**Batken

AK05	**Malin Array Si**	**23.68**	**328**	P		**P**		**10 48 53.9**	**-0.8**
AK02	**Malin Array Si**	**23.70**	**328**	P		**P**		**10 48 52.9**	**-2.1**
AK12	**Malin Array Si**	**23.71**	**328**	P		**P**		**10 48 53.6**	**-1.5**
AK01	**Malin Array Si**	**23.72**	**328**	P		**P**		**10 48 53.5**	**-1.7**
AKASG	**Malin Array Be**	**23.73**	**328**	P		**P**		**10 48 54.6**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=138,slow=8.6,SNR=9.2								
	comp=Z,0.5nm,0.4s								
AKASG	**Malin Array Be**	**23.73**	**328**	*eP*		**P**		**10 48 55.3**	**+0.1**
AKASG				pmax	pmax				
	comp=Z,1.0nm,0.5s								
AKBB	**Malin Array Si**	**23.73**	**328**	P		**P**		**10 48 55.5**	**+0.3**
AKBB				lAmb	lAmb			10 49 08.5	
	comp=Z,12nm,1.4s								
AKBB	**Malin Array Si**	**23.73**	**328**	P		**P**		**10 48 55.5**	**+0.3**
AKBB				pmax	pmax				
	comp=Z,12nm,1.5s								
AKBB	**Malin Array Si**	**23.73**	**328**	P		**P**		**10 48 53.7**	**-1.5**
KIEV	**Kiev**	**23.73**	**328**	P		**P**		**10 48 55.0**	**-0.2**
KIEV	**Kiev**	**23.73**	**328**	P		**P**		**10 48 55.0**	**-0.2**
KIEV				pmax	pmax				
	comp=Z,11nm,1.5s								
KIEV	**Kiev**	**23.73**	**328**	P		**P**		**10 48 53.6**	**-1.6**
	comp=Z,24nm,1.2s								
AK14	**Malin Array Si**	**23.73**	**328**	P		**P**		**10 48 53.6**	**-1.6**
AK11	**Malin Array Si**	**23.73**	**328**	P		**P**		**10 48 52.5**	**-2.8**
AK03	**Malin Array Si**	**23.74**	**328**	P		**P**		**10 48 53.9**	**-1.5**
AK16	**Malin Array Si**	**23.76**	**328**	P		**P**		**10 48 53.6**	**-1.9**
AK04	**Malin Array Si**	**23.77**	**328**	P		**P**		**10 48 54.4**	**-1.2**
AK15	**Malin Array Si**	**23.77**	**328**	P		**P**		**10 48 54.8**	**-0.8**
AK17	**Malin Array Si**	**23.79**	**328**	P		**P**		**10 48 54.9**	**-0.9**
AK18	**Malin Array Si**	**23.81**	**328**	P		**P**		**10 48 54.3**	**-1.7**
NRN	**Naryn**	**23.81**	**59**	P		**P**		**10 48 57.9**	**+1.4**
NRN				lAmb	lAmb			10 49 00.3	
	comp=Z,19nm,0.9s								
NRN	**Naryn**	**23.81**	**59**	P		**P**		**10 48 57.9**	**+1.4**
NRN				pmax	pmax				
	comp=Z,19nm,0.9s								
BURAR	**Bucovina Array**	**23.83**	**318**	P		**P**		**10 48 56.7**	**+0.3**
AK19	**Malin Array Si**	**23.84**	**328**	P		**P**		**10 48 55.3**	**-1.0**
AK22	**Malin Array Si**	**23.84**	**328**	P		**P**		**10 48 54.7**	**-1.6**
AK20	**Malin Array Si**	**23.85**	**328**	P		**P**		**10 48 55.3**	**-1.1**
BUR08	**Bucovina Ar. S**	**23.85**	**318**	P		**P**		**10 48 56.4**	**-0.3**
AK21	**Malin Array Si**	**23.86**	**328**	P		**P**		**10 48 54.7**	**-1.8**
LUBAR	**Lubar, Ukraine**	**23.88**	**325**	P		**P**		**10 48 54.8**	**-1.9**
OBN	**Obninsk**	**24.79**	**343**	*eP*		**P**		**10 49 03.7**	**-1.3**
OBN				*i*				10 49 10.6	
OBN				pmax	pmax				
	comp=Z,8.0nm,0.7s								
KDJ	**Kajisay**	**24.84**	**58**			**P**		**10 49 07.2**	**+1.4**
KDJ				lAmb	lAmb			10 49 10.2	
	comp=Z,11nm,1.0s								
KDJ	**Kajisay**	**24.84**	**58**	P		**P**		**10 49 07.2**	**+1.4**
KDJ				pmax	pmax				
	comp=Z,11nm,1.0s								
TARG	**Taragay, Kyrgy**	**25.20**	**59**			**P**		**10 49 10.2**	**+0.9**
TARG				lAmb	lAmb			10 49 14.4	
	comp=Z,17nm,0.9s								
TARG	**Taragay, Kyrgy**	**25.20**	**59**	P		**P**		**10 49 10.2**	**+0.9**
TARG				pmax	pmax				
	comp=Z,17nm,0.9s								
ARTI	**Arti**	**25.44**	**13**	P		**P**		**10 49 11.1**	**+0.2**
	comp=Z,4.2nm,0.6s,baz=198,slow=9.6,SNR=5.1								
	comp=Z,4.2nm,0.6s								
ARTI	**Arti**	**25.44**	**13**	lAmb	lAmb			10 49 13.4	
	comp=Z,16nm,1.2s								
ARTI	**Arti**	**25.44**	**13**	*c iP*		**P**		**10 49 11.2**	**+0.3**
ARTI								10 49 43.3	
ARTI				S		**S**		**10 53 39.4**	**+2.5**
ARTI				SS		**SnSn**		**10 54 31.0**	**+1.4**
ARTI				pmax	pmax				
	comp=Z,11nm,1.1s								
RNPP9	**Sopachiv**	**25.75**	**326**	P		**P**		**10 49 13.0**	**-0.7**
BORK	**Borovoye**	**26.32**	**30**	P		**P**		**10 49 19.5**	**+0.7**
BORK				lAmb	lAmb			10 49 27.5	
	comp=Z,4.5nm,0.7s								
BORK	**Borovoye**	**26.32**	**30**	*eP*		**P**		**10 49 19.2**	**+0.3**
BORK				pmax	pmax				
	comp=Z,7.0nm,1.0s								
BVAR	**Borovoye Array**	**26.33**	**30**	P		**P**		**10 49 19.4**	**+0.4**
	comp=Z,6.5nm,0.5s,baz=224,slow=8.1,SNR=21								
BVAR				LR	LR			11 02 15.6	
	comp=Z,37nm,20.8s,baz=218,slow=42								
	comp=Z,6.5nm,0.5s								
KIRV	**Kirov**	**26.73**	**1**	P		**P**		**10 49 22.3**	**-0.3**
	comp=Z,7.1nm,0.6s,baz=174,slow=10,SNR=2.1								
	comp=Z,7.1nm,0.6s								
KIRV	**Kirov**	**26.73**	**1**	*ceP*		**P**		**10 49 22.1**	**-0.4**
STHS	**Stebnicka Huta**	**27.02**	**318**	*eP*		**P**		**10 49 30.0**	**+4.7**
STHS	**Stebnicka Huta**	**27.02**	**318**	*eP*		**P**		**10 49 30.0**	**+4.7**
NACGM	**Naroch**	**27.79**	**332**	*eP*		**P**		**10 49 33.8**	**+1.8**
LANS	**Liptovska Anna**	**27.91**	**317**	*eP*		**P**		**10 49 35.4**	**+2.1**
LANS	**Liptovska Anna**	**27.91**	**317**	*eP*		**P**		**10 49 35.4**	**+2.1**
VAE	**Valguarnera**	**28.66**	**291**	P		**P**		**10 49 42.2**	**+2.1**
	comp=Z,7.6nm,0.4s,baz=68,slow=12,SNR=1.8								
	comp=Z,7.6nm,0.4s								
KURBB	**Kurchatov Arra**	**28.94**	**41**	P		**P**		**10 49 43.6**	**+1.3**
	comp=Z,4.8nm,0.9s,baz=243,slow=9.5,SNR=23								
KURBB				PcP		**PcP**		**10 52 51.2**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=248,slow=3.0,SNR=4.1								
KURBB				ScP		**ScP**		**10 56 30.9**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=242,slow=3.5,SNR=1.8								
	comp=Z,4.8nm,0.9s								
KURK	**Kurchatov**	**29.03**	**41**			**P**		**10 49 44.9**	**+1.7**
KURK				lAmb	lAmb			10 49 46.1	
	comp=Z,7.9nm,0.9s								
KURK	**Kurchatov**	**29.03**	**41**			**PcP**		**10 52 51.2**	**0.0**
KURK	**Kurchatov**	**29.03**	**41**	*ceP*		**P**		**10 49 44.5**	**+1.3**
KURK				pmax	pmax				
	comp=Z,13nm,1.3s								
MAKZ	**Makanchi**	**29.49**	**50**	P		**P**		**10 49 48.1**	**+0.7**
MAKZ	**Makanchi**	**29.49**	**50**	P		**P**		**10 49 48.1**	**+0.7**
MAKZ				pmax	pmax				
	comp=Z,4.0nm,1.3s								
KLMR	**Klimovskoe**	**29.63**	**351**	*eP*		**P**		**10 49 46.5**	**-1.9**
KLMR				pmax	pmax				
	comp=Z,30nm,1.5s								
VRAC	**Vranov**	**29.68**	**315**	LR	LR			11 03 07.0	
	comp=Z,30nm,18.3s,baz=147,slow=39								
MK31	**Makanchi Array**	**29.69**	**50**	*ceP*		**P**		**10 49 50.0**	**+0.9**
MKAR	**Makanchi Array**	**29.69**	**50**	P		**P**		**10 49 49.6**	**+0.5**
	comp=Z,1.9nm,0.8s,baz=250,slow=7.4,SNR=14								
MKAR				PcP		**PcP**		**10 52 53.0**	**0.0**
	comp=Z,0.5nm,0.5s,baz=280,slow=4.2,SNR=3.6								
MKAR				ScP		**ScP**		**10 56 33.4**	**-0.8**
	comp=Z,0.6nm,0.9s,baz=256,slow=4.0,SNR=2.6								
MKAR				LR	LR			11 03 17.6	
	comp=Z,97nm,18.5s,baz=196,slow=40								
	comp=Z,1.9nm,0.8s								
MKAR	**Makanchi Array**	**29.69**	**50**			**P**		**10 49 49.9**	**+0.7**
KBA	**Koelnbreinsper**	**30.94**	**310**	*ep*	P			10 50 04.8	-0.7
	comp=Z,2.3nm,0.5s								
ZCCA	**Zocca**	**31.93**	**304**	P		**P**		**10 50 08.7**	**-0.2**
WTTA	**Wattenberg**	**32.11**	**309**	*eP*		**P**		**10 50 10.9**	**+0.2**
	comp=Z,1.8nm,0.3s								
SQTA	**Sankt Quirin**	**32.38**	**309**	*eP*		**P**		**10 50 13.4**	**+0.4**
	comp=Z,2.8nm,0.4s								
FETA	**Feichten**	**32.65**	**309**	*eP*		**P**		**10 50 16.1**	**+0.7**
	comp=Z,3.3nm,0.7s								
WMQ	**Urumqi**	**32.74**	**57**	*eP*		**P**		**10 50 19.5**	**+3.5**
FINES	**FINESS Array B**	**33.07**	**340**	P		**P**		**10 50 18.1**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=139,slow=7.9,SNR=14								
	comp=Z,0.8nm,0.3s								
FINES	**FINESS Array B**	**33.07**	**340**	P		**P**		**10 50 17.8**	**-0.8**
FINES	**FINESS Array B**	**33.07**	**340**	*i* P		**P**		**10 50 18.6**	**0.0**
FINES				pmax	pmax				
	comp=Z,1.0nm,0.3s								
ZAA0	**Zalesovo Array**	**33.90**	**39**			**P**		**10 50 26.8**	**+0.8**
ZAA0				lAmb	lAmb			10 50 27.4	
	comp=Z,6.5nm,1.1s								
ZALV	**Zalesovo Beam**	**33.90**	**39**	P		**P**		**10 50 26.5**	**+0.6**
	comp=Z,3.0nm,0.7s,baz=244,slow=9.3,SNR=9.3								
ZALV				PcP		**PcP**		**10 53 04.0**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=248,slow=1.6,SNR=1.7								
ZALV				LR	LR			11 04 30.8	
	comp=Z,27nm,20.9s,baz=68,slow=37								
	comp=Z,3.0nm,0.7s								
BNI	**Bardonecchia**	**35.06**	**304**	P		**P**		**10 50 36.4**	**+0.1**
BNI				lAmb	lAmb			10 50 40.3	
	comp=Z,8.5nm,0.8s								
BNI	**Bardonecchia**	**35.06**	**304**	P		**P**		**10 50 36.4**	**+0.1**
BNI				pmax	pmax				
	comp=Z,9.0nm,0.9s								
HFS	**Hagfors**	**36.53**	**331**	P		**P**		**10 50 48.0**	**-0.5**
	comp=Z,1.7nm,0.4s,baz=127,slow=9.3,SNR=15								
	comp=Z,1.7nm,0.4s								

NC405	**NORSAR Array S**	**37.89**	**332**	P		**P**		**10 50 60.0**	**-0.2**
NC405				lAmb	lAmb			10 51 10.1	
	comp=Z,10nm,1.1s								
NB201	**NORSAR Array S**	**38.03**	**331**	P		**P**		**10 51 01.4**	**+0.1**
NB201				lAmb	lAmb			10 51 37.0	
	comp=Z,11nm,1.2s								
NB2	**NORSAR Subarra**	**38.06**	**331**	P		**P**		**10 51 00.5**	**-1.0**
	comp=Z,1.3nm,0.7s,baz=124,slow=8.6								
NOA	**NORSAR Array B**	**38.06**	**331**	P		**P**		**10 51 01.1**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=122,slow=8.2,SNR=3.8								
	comp=Z,1.0nm,0.8s								
NOA	**NORSAR Array B**	**38.06**	**331**	*eP*		**P**		**10 51 01.9**	**+0.4**
NOA				pmax	pmax				
	comp=Z,1.0nm,0.8s								
NC204	**NORSAR Array S**	**38.37**	**331**	P		**P**		**10 51 04.2**	**0.0**
NC204				lAmb	lAmb			10 51 38.7	
	comp=Z,16nm,1.4s								
ARCES	**ARCESS Array B**	**39.94**	**348**	P		**P**		**10 51 17.4**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=149,slow=8.3,SNR=4.2								
	comp=Z,1.7nm,0.7s								
ARCES	**ARCESS Array B**	**39.94**	**348**	P		**P**		**10 51 17.8**	**+0.7**
ARCES				lAmb	lAmb			10 51 59.6	
	comp=Z,21nm,1.4s								
ARCES	**ARCESS Array B**	**39.94**	**348**	P		**P**		**10 51 17.8**	**+0.7**
ARCES				pmax	pmax				
	comp=Z,21nm,1.5s								
KNGR	**Kungurtug, Tuv**	**40.37**	**48**	*eP*		**P**		**10 51 24.2**	**+3.1**
KNGR				pmax	pmax				
	comp=Z,12nm,0.8s								
ESDC	**Sonseca Array**	**42.93**	**296**	P		**P**		**10 51 42.7**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=83,slow=7.9,SNR=2.0								
	comp=Z,0.5nm,0.7s								
ESDC	**Sonseca Array**	**42.93**	**296**	P		**P**		**10 51 41.0**	**-1.1**
EKA	**Eskdalemuir Ar**	**43.01**	**319**	P		**P**		**10 51 41.5**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=106,slow=8.0,SNR=3.7								
	comp=Z,0.2nm,0.3s								
NRIK	**Noril'sk**	**43.43**	**19**	P		**P**		**10 51 46.1**	**+0.5**
	comp=Z,0.8nm,0.3s,baz=202,slow=7.8,SNR=4.2								
NRIK				LR	LR			11 15 53.1	
	comp=Z,24nm,18.7s,baz=220,slow=44								
	comp=Z,0.8nm,0.3s								
NRIK	**Noril'sk**	**43.43**	**19**	P		**P**		**10 51 45.8**	**+0.1**
NRIK				lAmb	lAmb			10 51 47.5	
	comp=Z,6.1nm,1.2s								
TLY	**Talaya**	**44.33**	**47**	LR	LR			11 10 37.5	
	comp=Z,31nm,18.3s,baz=298,slow=36								
TLY	**Talaya**	**44.33**	**47**	*eP*		**P**		**10 51 55.8**	**+2.6**
TLY				pmax	pmax				
	comp=Z,8.0nm,2.5s								
LZDM	**Lanzhou Array**	**45.32**	**69**	P		**P**		**10 52 00.9**	**-0.8**
	comp=Z,1.2nm,0.3s,baz=275,slow=5.4,SNR=1.8								
	comp=Z,1.2nm,0.3s								
LZH	**Lanzhou**	**45.41**	**69**	*eP*		**P**		**10 52 03.8**	**+1.6**
LZH				sP		sP		10 52 10.3	+0.8
LZH				pmax	pmax				
	comp=Z,20nm,1.4s								
SONM	**Songino Array**	**46.01**	**52**	P		**P**		**10 52 06.9**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=276,slow=9.2,SNR=6.0								
SONM				PcP		**PcP**		**10 53 43.7**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=262,slow=4.4,SNR=2.5								
SONM				LR	LR			11 14 44.4	
	comp=Z,35nm,19.0s,baz=263,slow=40								
	comp=Z,0.9nm,0.6s								
SONM	**Songino Array**	**46.01**	**52**	P		**P**		**10 52 06.9**	**+0.2**
SONM						**PcP**		**10 53 43.9**	**+0.8**
SONM	**Songino Array**	**46.01**	**52**	*eP*		**P**		**10 52 07.8**	**+1.1**
SONM				pmax	pmax				
	comp=Z,1.0nm,0.6s								
PZH	**PanZhiHua**	**46.24**	**82**	P		**P**		**10 52 09.8**	**+1.0**
ULN	**Ulaanbaatar**	**46.45**	**52**	*eP*		**P**		**10 52 11.2**	**+1.0**
ULN				pmax	pmax				
	comp=Z,1.0nm,0.5s								
CHTO	**Chiang Mai**	**46.85**	**94**			**P**		**10 52 13.1**	**-0.4**
CHTO				lAmb	lAmb			10 52 15.1	
	comp=Z,4.9nm,0.8s								
CHTO	**Chiang Mai**	**46.85**	**94**	P		**P**		**10 52 13.1**	**-0.4**
CHTO				pmax	pmax				
	comp=Z,5.0nm,0.9s								
TORD	**Torodi Ar. Bea**	**46.85**	**258**	P		**P**		**10 52 14.0**	**+0.4**
	comp=Z,4.1nm,0.9s,baz=52,slow=8.2,SNR=16								
	comp=Z,4.1nm,0.9s								
TORD	**Torodi Ar. Bea**	**46.85**	**258**	P		**P**		**10 52 11.3**	**-2.3**
TORD				lAmb	lAmb			10 52 23.9	
	comp=Z,4.7nm,0.8s								
CM31	**Chiang Mai Arr**	**47.00**	**94**	P		**P**		**10 52 15.2**	**+0.4**
CM31				lAmb	lAmb			10 52 16.2	
	comp=Z,6.0nm,1.0s								
CMAR	**Chiang Mai Arr**	**47.00**	**94**	P		**P**		**10 52 15.0**	**+0.3**
	comp=Z,3.2nm,0.9s,baz=297,slow=7.8,SNR=20								
CMAR				PcP		**PcP**		**10 53 47.3**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=312,slow=3.7,SNR=2.2								
CMAR				PP		**PP**		**10 54 06.3**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=299,slow=9.1,SNR=4.4								
	comp=Z,3.2nm,0.9s								
CMAR	**Chiang Mai Arr**	**47.00**	**94**	P		**P**		**10 52 14.9**	**+0.2**
CMAR						**PcP**		**10 53 47.9**	**+0.9**
CMAR	**Chiang Mai Arr**	**47.00**	**94**	*eP*		**P**		**10 52 15.4**	**+0.7**
CMAR				pmax	pmax				
	comp=Z,3.0nm,0.9s								
SPB2	**Spitsbergen Ar**	**48.53**	**352**	P		**P**		**10 52 26.3**	**+0.5**
SPITS	**Spitsbergen Ar**	**48.53**	**352**	P		**P**		**10 52 26.1**	**+0.3**
SPITS				pmax	pmax				
	comp=Z,60nm,1.5s								
HHC	**Hu-ho-hao-te**	**50.45**	**61**	*eP*		**P**		**10 52 41.0**	**-0.1**
HHC				pmax	pmax				
	comp=Z,15nm,0.5s								
HHC				pmax	pmax				
	comp=Z,120nm,4.5s								
DBIC	**Dimbokro**	**55.76**	**255**	P		**P**		**10 53 21.9**	**+1.5**
	comp=Z,2.3nm,0.6s,baz=54,slow=8.8,SNR=4.0								
DBIC				LR	LR			11 17 43.9	
	comp=Z,50nm,18.1s,baz=72,slow=37								
	comp=Z,2.3nm,0.6s								
DBIC	**Dimbokro**	**55.76**	**255**	P		**P**		**10 53 20.3**	**-0.1**
DBIC				lAmb	lAmb			10 53 22.1	
	comp=Z,12nm,1.3s								
DBIC	**Dimbokro**	**55.76**	**255**	P		**P**		**10 53 20.3**	**-0.1**
DBIC				pmax	pmax				
	comp=Z,12nm,1.3s								
TIXI	**Tiksi**	**57.03**	**22**	LR	LR			11 22 39.5	
	comp=Z,31nm,18.5s,baz=224,slow=41								
TIXI	**Tiksi**	**57.03**	**22**	*eP*		**P**		**10 53 28.6**	**0.0**
TIXI				pmax	pmax				
	comp=Z,12nm,2.5s								
YAK	**Yakutsk**	**58.26**	**33**	*eP*		**P**		**10 53 37.7**	**+0.3**
YAK				pmax	pmax				
	comp=Z,4.0nm,0.6s								
NJ2	**Nanjing**	**58.48**	**70**	*eP*		**P**		**10 53 39.5**	**0.0**
NJ2				pmax	pmax				
	comp=Z,27nm,0.7s								
LBTB	**Lobatse**	**60.71**	**204**	P		**P**		**10 53 55.4**	**+0.5**
LBTB	**Lobatse**	**60.71**	**204**	P		**P**		**10 53 55.4**	**+0.5**
LBTB				pmax	pmax				
	comp=Z,20nm,1.5s								
YHNB	**Yeheng**	**63.34**	**76**	P		**P**		**10 54 13.9**	**+1.1**
KSRS	**Korea Array**	**63.59**	**61**	P		**P**		**10 54 13.9**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=283,slow=6.0,SNR=4.5								
KSRS				LR	LR			11 26 21.8	
	comp=Z,19nm,21.2s,baz=0.0,slow=40								
	comp=Z,1.4nm,0.6s								
KSRS	**Korea Array**	**63.59**	**61**	*eP*		**P**		**10 54 14.0**	**-0.1**
KSRS				pmax	pmax				
	comp=Z,1.0nm,0.5s								
BOSA	**Boshof**	**64.14**	**203**	P		**P**		**10 54 17.5**	**-0.3**
	comp=Z,2.8nm,0.9s,baz=16,slow=9.5,SNR=4.5								
BOSA				LR	LR			11 23 16.4	
	comp=Z,121nm,19.8s,baz=176,slow=37								
	comp=Z,2.8nm,0.9s								
BOSA	**Boshof**	**64.14**	**203**	P		**P**		**10 54 17.7**	**-0.1**
BOSA	**Boshof**	**64.14**	**203**	P		**P**		**10 54 17.7**	**-0.1**
BOSA				pmax	pmax				
	comp=Z,21nm,1.5s								
NRS	**Narsarsuaq**	**64.56**	**328**	P		**P**		**10 54 20.9**	**+0.9**
NRS	**Narsarsuaq**	**64.56**	**328**	P		**P**		**10 54 20.9**	**+0.9**
NRS				pmax	pmax				
	comp=Z,71nm,1.5s								
KKM	**Kota Kinabalu**	**67.75**	**97**	P		**P**		**10 54 41.8**	**+0.5**
SEY	**Seymchan**	**67.97**	**29**	*eP*		**P**		**10 54 43.1**	**+1.2**
SEY				pmax	pmax				
	comp=Z,5.0nm,1.3s								
BBJI	**Bungbulang**	**68.43**	**114**	P		**P**		**10 54 44.8**	**-0.8**
SUR	**Sutherland**	**69.12**	**205**	LR	LR			11 26 08.6	
	comp=Z,120nm,18.4s,baz=179,slow=37								
POIN	**Pond Inlet**	**69.57**	**345**	P		**P**		**10 54 52.4**	**+0.7**
POIN				lAmb	lAmb			10 55 08.2	
	comp=Z,3.6nm,1.4s								
BILL	**Bilibino**	**70.21**	**21**	P		**P**		**10 54 56.8**	**+1.1**
BILL	**Bilibino**	**70.21**	**21**	*eP*		**P**		**10 54 56.4**	**+0.7**
BILL				pmax	pmax				
	comp=Z,8.0nm,1.7s								
ILON	**Igloolik, Nuna**	**72.83**	**344**	P		**P**		**10 55 11.7**	**+0.2**
ILON				lAmb	lAmb			10 55 37.1	
	comp=Z,4.7nm,1.4s								
A36M	**Sachs Harbour**	**76.36**	**358**	P		**P**		**10 55 31.9**	**0.0**
A36M				lAmb	lAmb			10 56 00.3	
	comp=Z,3.5nm,0.8s								
C19K	**Lookout Ridge**	**77.21**	**10**	P		**P**		**10 55 37.0**	**+0.2**
C19K				lAmb	lAmb			10 55 40.3	
	comp=Z,6.7nm,1.4s								
C18K	**Utukok River**	**77.38**	**11**	P		**P**		**10 55 38.2**	**+0.4**
C18K				lAmb	lAmb			10 55 39.0	
	comp=Z,3.6nm,0.8s								
SCHQ	**Schefferville**	**77.52**	**328**	P		**P**		**10 55 38.7**	**-0.1**
	comp=Z,3.1nm,0.8s,baz=45,slow=2.9,SNR=6.1								
	comp=Z,3.1nm,0.8s								
SCHQ	**Schefferville**	**77.52**	**328**	P		**P**		**10 55 38.6**	**-0.1**
D24K	**Happy Valley**	**78.47**	**6**	P		**P**		**10 55 44.3**	**+0.6**
D24K				lAmb	lAmb			10 55 45.2	
	comp=Z,5.2nm,1.2s								
E18K	**Tukpahlearik C**	**78.58**	**11**	P		**P**		**10 55 45.0**	**+0.5**
E18K				lAmb	lAmb			10 55 45.5	
	comp=Z,3.0nm,0.9s								
E22K	**Anaktuvuk Pass**	**79.14**	**8**	P		**P**		**10 55 48.4**	**+0.8**
E22K				lAmb	lAmb			10 56 20.1	
	comp=Z,3.7nm,1.3s								
BLKN	**Baker Lake**	**80.21**	**345**	P		**P**		**10 55 54.2**	**+0.9**
BLKN				lAmb	lAmb			10 55 59.2	
	comp=Z,5.4nm,1.5s								
BMAR	**Burnt Mountain**	**80.51**	**5**	P		**P**		**10 55 56.2**	**+1.1**
ILAR	**Eielson Array**	**82.92**	**7**	P		**P**		**10 56 07.2**	**-0.5**
	comp=Z,0.5nm,0.9s,baz=336,slow=2.0,SNR=5.5								
	comp=Z,0.5nm,0.9s								
ILAR	**Eielson Array**	**82.92**	**7**	P		**P**		**10 56 07.7**	**0.0**
D62A	**Allapoint, Al/**	**83.54**	**323**	P		**P**		**10 56 12.2**	**+1.0**
FCC	**Fort Churchill**	**84.55**	**342**	P		**P**		**10 56 16.6**	**+0.5**
FCC				lAmb	lAmb			10 56 17.5	
	comp=Z,5.5nm,1.4s								
FCC	**Fort Churchill**	**84.55**	**342**	P		**P**		**10 56 16.6**	**+0.5**
FCC				pmax	pmax				
	comp=Z,6.0nm,1.4s								
YKAW3	**Yellowknife Wh**	**84.96**	**352**	P		**P**		**10 56 18.4**	**+0.3**
YKAW3				lAmb	lAmb			10 56 55.6	
	comp=Z,3.2nm,1.5s								
YKA	**Yellowknife Ar**	**85.03**	**352**	P		**P**		**10 56 18.2**	**-0.2**
	comp=Z,0.3nm,0.9s,baz=11,slow=5.6,SNR=4.2								
	comp=Z,0.3nm,0.9s								
YKA	**Yellowknife Ar**	**85.03**	**352**	P		**P**		**10 56 17.6**	**-0.8**
BCAR	**Beaver Creek A**	**85.03**	**5**	P		**P**		**10 56 19.6**	**+1.0**
SLKM	**Skilak Lake**	**86.67**	**9**	P		**P**		**10 56 27.3**	**+0.6**
KNRA	**Kununurra**	**89.97**	**108**	P		**P**		**10 56 42.8**	**-0.2**
ULM	**Lac du Bonnet**	**92.44**	**338**	P		**P**		**10 56 53.3**	**-0.7**
	comp=Z,1.7nm,0.7s,baz=36,slow=5.5,SNR=4.4								
	comp=Z,1.7nm,0.7s								
ULM	**Lac du Bonnet**	**92.44**	**338**	P		**P**		**10 56 54.2**	**+0.3**
ULM	**Lac du Bonnet**	**92.44**	**338**	*eP*		**P**		**10 56 54.1**	**+0.1**
ULM				pmax	pmax				
	comp=Z,2.0nm,0.8s								
EYMN	**Ely**	**92.91**	**334**	P		**P**		**10 56 56.8**	**+0.6**
WRA	**Warramunga Ar

UPP 27 10:53:15.9±0.0, 67°.64N×21°.02E, h0km, ML2.2, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KUA	**Kurravaara**	**0.41**	**321**	P		Pg	10 53 23.6	-0.1
KUA				S		Sg	10 53 29.6	+0.7
MASU	**Masugnsbyn**	**0.42**	**116**	P		Pg	10 53 23.9	-0.1
MASU				S		Sg	10 53 29.8	+0.4
LANU	**Lannavaara**	**0.55**	**42**	P		Pg	10 53 26.4	0.0
LANU				S		Sg	10 53 33.9	+0.4
DUNU	**Dundret**	**0.55**	**198**	P		Pg	10 53 26.5	+0.1
DUNU				S		Sg	10 53 33.8	+0.2
RATU	**Laukkuluspa**	**0.57**	**289**	P		Pg	10 53 26.8	-0.1
KOVU	**Salmi**	**0.67**	**331**	P		Pg	10 53 28.5	-0.1
NIKU	**Nikkaluokta**	**0.79**	**288**	P		Pg	10 53 30.5	-0.5
NIKU				S		Sg	10 53 41.7	+0.6
SALU	**Saltoluokta**	**1.00**	**256**	*eP*		Pg	10 53 28.7	-6.3
SALU	**Saltoluokta**	**1.00**	**256**	P		Pg	10 53 34.7	-0.4
SALU				S		Sg	10 53 48.1	+0.1
HEF	**Hetta**	**1.26**	**51**	*eP*		Pg	10 53 35.5	-4.4
HARU	**Harads**	**1.49**	**181**	P		Pn	10 53 42.9	-0.9

*SJA **27** 11:10:50.5±0.8, 31°.63S×71°.56W, h41km±11km, ML3.5, MW3.6*
*GUC **27** 11:10:51.9±0.8, 31°.63S×71°.47W, h52km±3km, ML3.6*
*IDC **27** 11:10:53.3±1.8, 31°.80S×71°.57W, h67km±26km, mb3.0/2, mbtmp3.3/4, Error ellipse: s-maj=47.4km s-min=11.2km az=168.0*
ISC 27 11:10:51.6±1.2, 31°.64S±0°.02×71°.57W±0°.04, h32km±10km, n71, σ1s62/112, 8C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CO04	**Los Peladeros**	**0.65**	**129**	⇑*iP*		**Pn**	**11 11 04.8**	**0.0**
CO04				*i* S		**Sb**	**11 11 13.8**	**+0.2**
CO04				*i* S			11 11 13.8	
CO04				IAML			11 11 14.7	
	comp=N,6μm,0.1s							
CO02	**Combarbal**	**0.65**	**48**	⇓*iP*		**Pn**	**11 11 04.7**	**-0.1**
CO02				*i* S		**Sb**	**11 11 13.7**	**+0.1**
CO02				IAML			11 11 14.4	
	comp=N,11μm,0.2s							
CO02	**Combarbal**	**0.65**	**48**	*eP*		**Pn**	**11 11 04.7**	**-0.1**
CO02				*eS*		**Sb**	**11 11 14.1**	**+0.4**
CO02				IAML			11 11 14.8	
	comp=Z,3μm,0.2s							
VA06	**Catapilco**	**0.94**	**166**	⇑*iP*		**Pb**	**11 11 09.7**	**+0.2**
VA06				*i* S		**Sb**	**11 11 22.2**	**+0.5**
VA06				IAML			11 11 26.6	
	comp=E,3μm,0.4s							
CO03	**El Pedregal**	**1.10**	**44**	⇑*iP*		**Pn**	**11 11 10.6**	**-0.2**
CO03				*i* S		**Sn**	**11 11 24.3**	**-0.7**
CO03				IAML			11 11 26.4	
	comp=N,3μm,0.2s							
CO03	**El Pedregal**	**1.10**	**44**	*eP*		**Pn**	**11 11 10.7**	**-0.1**
CO03				*eS*		**Sn**	**11 11 24.5**	**-0.5**
CO03				IAML			11 11 26.1	
	comp=Z,1μm,0.2s							
VA01	**Torpederas**	**1.38**	**183**	*eP*		**Pn**	**11 11 15.5**	**+0.9**
VA01	**Torpederas**	**1.38**	**183**	*eP*		**Pn**	**11 11 14.8**	**+0.2**
VA01				IAML			11 11 37.5	
	comp=Z,291nm,0.2s							
ROCH	**El Roble**	**1.41**	**161**	⇑*iP*		**Pn**	**11 11 15.9**	**+0.7**
ROCH				⇑*iP*		**Pn**	**11 11 15.9**	**+0.7**
ROCH				*i* S		**Sb**	**11 11 34.7**	**-0.4**
ROCH				*i* S		**Sb**	**11 11 34.7**	**-0.4**
ROCH				IAML			11 11 35.6	
	comp=N,1μm,0.4s							
ROCH				IAML			11 11 35.8	
	comp=N,2μm,0.5s							
VA03	**San Esteban**	**1.41**	**143**	⇓*iP*		**Pn**	**11 11 15.2**	**+0.1**
VA03				*i* S		**Sn**	**11 11 33.2**	**+0.4**
VA03				IAML			11 11 35.9	
	comp=E,2μm,0.2s							
VA03	**San Esteban**	**1.41**	**143**	*eP*		**Pn**	**11 11 14.7**	**-0.5**
VA03				*eS*		**Sn**	**11 11 33.8**	**+1.0**
VA03				IAML			11 11 35.8	
	comp=Z,755nm,0.1s							
GO04	**Tololo Observa**	**1.61**	**25**	*eP*		**Pn**	**11 11 18.5**	**+0.6**
GO04				*i* S		**Sn**	**11 11 38.3**	**+0.5**
GO04				IAML			11 11 43.1	
	comp=E,3μm,0.5s							
GO04	**Tololo Observa**	**1.61**	**25**	*eP*		**Pn**	**11 11 18.0**	**0.0**
GO04				*eS*		**Sn**	**11 11 39.0**	**+1.2**
GO04				IAML			11 11 39.5	
	comp=Z,2μm,0.3s							
MT02	**Curacav**	**1.65**	**167**	⇑*iP*		**Pn**	**11 11 18.7**	**+0.3**
MT02				*eS*		**Sn**	**11 11 40.5**	**+1.9**
MT02				IAML			11 11 42.1	
	comp=E,686nm,0.2s							
MT02	**Curacav**	**1.65**	**167**	*eP*		**Pn**	**11 11 18.0**	**-0.4**
MT02				IAML			11 11 41.6	
	comp=Z,375nm,0.5s							
PEL	**Peldehue**	**1.67**	**154**	⇓*iP*		**Pn**	**11 11 19.3**	**+0.6**
PEL				*i* S		**Sn**	**11 11 40.1**	**+0.9**
PEL				IAML			11 11 43.1	
	comp=E,639nm,0.3s							
PEL	**Peldehue**	**1.67**	**154**	*eP*		**Pn**	**11 11 19.4**	**+0.6**
PEL				*eS*		**Sn**	**11 11 33.2**	**-5.9**
PEL				IAML			11 11 46.0	
	comp=Z,209nm,0.3s							
CO05	**La Serena**	**1.74**	**9**	*eP*		**Pn**	**11 11 19.7**	**+0.1**
CO05				IAML			11 11 50.5	
	comp=E,689nm,0.6s							
MT10	**Hacienda Santa**	**1.85**	**152**	⇑*iP*		**Pn**	**11 11 21.6**	**+0.4**
MT10				*i* S		**Sn**	**11 11 44.2**	**+0.7**
MT10				IAML			11 11 48.1	
	comp=E,934nm,0.3s							
MT14	**Cerro Cal¡n**	**1.96**	**154**	*eP*		**Pn**	**11 11 23.4**	**+0.7**
MT14				IAML			11 12 03.6	
	comp=E,581nm,0.8s							
MT03	**Universidad Ad**	**2.05**	**154**	*eP*		**Pn**	**11 11 24.4**	**+0.4**
MT03				*i* S		**Sn**	**11 11 49.8**	**+1.3**
MT03				IAML			11 11 55.7	
	comp=N,858nm,0.3s							
MT03	**Universidad Ad**	**2.05**	**154**	*eP*		**Pn**	**11 11 24.4**	**+0.4**
MT03				*eS*		**Sb**	**11 11 54.8**	**+1.4**
MT03				IAML			11 12 04.4	
	comp=Z,335nm,0.5s							
CO01	**Juntas del Tor**	**2.09**	**38**	*eP*		**Pn**	**11 11 25.6**	**+1.0**
CO01				*i* S		**Sn**	**11 11 49.8**	**+0.2**
CO01				IAML			11 11 52.3	
	comp=N,518nm,0.3s							
CO01	**Juntas del Tor**	**2.09**	**38**	*eP*		**Pn**	**11 11 25.1**	**+0.5**
CO01				*eS*		**Sn**	**11 11 50.0**	**+0.3**
CO01				IAML			11 11 52.0	
	comp=Z,376nm,0.2s							
MT04	**Ro Olivares**	**2.13**	**146**	*eP*		**Pn**	**11 11 25.9**	**+0.6**
MT04				*eS*		**Sn**	**11 11 53.3**	**+2.6**
MT04				IAML			11 11 56.5	
	comp=Z,269nm,0.3s							
MT08	**Bocatoma Ro**	**2.23**	**144**	IAML			11 12 03.5	
	comp=N,323nm,0.3s							
MT08	**Bocatoma Ro**	**2.23**	**144**	*eP*		**Pn**	**11 11 28.0**	**+1.6**
MT08				*eS*		Sn	11 11 38.2	-15
MT08				IAML			11 12 00.9	
	comp=Z,161nm,0.4s							
MT01	**Popeta**	**2.23**	**173**	*eP*		**Pn**	**11 11 26.5**	**+0.2**
MT01				*eS*		**Sn**	**11 11 55.6**	**+2.7**
MT01				IAML			11 12 09.3	
	comp=Z,160nm,0.2s							
AROD	**Rodeo**	**2.33**	**51**	*eP*		**Pn**	**11 11 30.2**	**+2.3**
MT13	**San Alfonso**	**2.36**	**153**	*eP*		**Pn**	**11 11 29.1**	**+0.8**
MT13				*i* S		**Sn**	**11 11 57.3**	**+1.1**
MT13				IAML			11 12 03.4	
	comp=E,490nm,0.2s							
MT13	**San Alfonso**	**2.36**	**153**	*eP*		**Pn**	**11 11 29.2**	**+1.0**
MT13				*eS*		**Sn**	**11 11 59.1**	**+3.0**
MT13				IAML			11 12 07.1	
	comp=Z,217nm,0.5s							
ZON	**Zonda**	**2.47**	**89**	*eP*		**Pn**	**11 11 30.8**	**+1.1**
ZON				*eS*		**Sn**	**11 11 56.4**	**-2.4**
ZON				IAML			11 12 06.8	
	comp=Z,133nm,0.3s							
LMEL	**Las Melosas**	**2.48**	**153**	⇑*iP*		**Pn**	**11 11 31.3**	**+1.4**
LMEL				IAML			11 12 06.6	
	comp=N,442nm,0.4s							
ASAL	**Salagasta**	**2.51**	**113**	*eP*		**Pn**	**11 11 32.8**	**+2.6**
ASAL				*eS*		**Sb**	**11 12 06.6**	**+0.2**
ARCO	**CERRO ARCO**	**2.53**	**119**	*eP*		**Pn**	**11 11 33.4**	**+2.7**
ARCO				*eS*		Sn	11 11 49.9	-11
ARCO				IAML			11 12 12.6	
	comp=Z,132nm,0.3s							
ACDV	**Cuesta del Vie**	**2.56**	**56**	*eP*		**Pn**	**11 11 33.1**	**+2.0**
ACDV				*eS*		**Sb**	**11 12 08.2**	**0.0**
ACDV				IAML			11 12 10.1	
	comp=Z,82nm,0.5s							
SJA	**San Juan**	**2.57**	**88**	*eP*		**Pn**	**11 11 33.4**	**+2.4**
SJA				*eS*		**Sb**	**11 12 06.7**	**-1.5**
SJA				IAML			11 12 07.9	
	comp=Z,123nm,0.2s							
RTLL	**Cerro Villicun**	**2.66**	**84**	*eP*		**Pn**	**11 11 33.8**	**+1.5**
RTLL				*eS*		**Sn**	**11 12 01.9**	**-1.6**
RTLL				IAML			11 12 07.4	
	comp=Z,153nm,0.3s							
LCO	**Las Campanas**	**2.73**	**16**	*eP*		**Pn**	**11 11 33.4**	**0.0**
LCO				*eS*		**Sn**	**11 12 09.2**	**+3.7**
LCO				IAML			11 12 11.4	
	comp=Z,355nm,0.3s							
AAGR	**Agrelo**	**2.73**	**123**	*eP*		**Pn**	**11 11 36.0**	**+2.7**
AAGR				IAML			11 12 29.0	
	comp=Z,101nm,0.7s							
BO01	**Tunca**	**2.77**	**172**	*eP*		**Pn**	**11 11 33.9**	**+0.1**
BO01				IAML			11 12 19.7	
	comp=Z,88nm,0.3s							
CFA	**Coronel Fontan**	**2.84**	**90**	P		**Pn**	**11 11 35.8**	**+1.0**
	comp=Z,28nm,0.2s,baz=261,slow=15,SNR=126							
CFA				S		**Sn**	**11 12 10.3**	**+2.3**
	comp=Z,52nm,0.5s,baz=217,slow=20,SNR=9.0							
CFA	**Coronel Fontan**	**2.84**	**90**	*eP*		**Pn**	**11 11 35.3**	**+0.6**
CFA				*eS*		**Sn**	**11 12 10.5**	**+2.5**
CFA				IAML			11 12 15.5	
	comp=Z,87nm,0.2s							
AC05	**El Transito**	**3.01**	**22**	*eP*		**Pn**	**11 11 38.1**	**+0.9**
AC05				*eS*		**Sn**	**11 12 13.5**	**+1.2**
AC05				IAML			11 12 31.2	
	comp=Z,141nm,0.7s							
AVIZ	**Vizcacheras**	**3.16**	**126**	*eP*		**Pn**	**11 11 38.8**	**-0.4**
BO02	**Sierra Bellavi**	**3.21**	**168**	*eP*		**Pn**	**11 11 40.3**	**+0.5**
BO02				*eS*		**Sn**	**11 12 17.9**	**+0.8**
BO02				IAML			11 12 33.0	
	comp=Z,257nm,0.6s							
GO05	**Hualane**	**3.37**	**185**	*eP*		**Pn**	**11 11 42.1**	**+0.1**
GO05				*eS*		**Sb**	**11 12 33.2**	**+2.0**
GO05				IAML			11 12 46.2	
	comp=Z,43nm,0.7s							
AC04	**Llanos de Chal**	**3.45**	**7**	*eP*		**Pn**	**11 11 43.0**	**-0.2**
AC04				*eS*		**Sn**	**11 12 28.0**	**+5.0**
AC04				IAML			11 12 37.0	
	comp=Z,138nm,0.4s							
AVFE	**Valle Fertil**	**3.66**	**76**	*eP*		**Pn**	**11 11 46.7**	**+0.7**
AVFE				*eS*		**Sn**	**11 12 29.1**	**+0.9**
AVFE				IAML			11 12 34.4	
	comp=Z,92nm,0.6s							
ACAN	**Cantantal**	**3.78**	**101**	*eP*		**Pn**	**11 11 47.2**	**-0.4**
ACAN				IAML			11 12 51.6	
	comp=Z,175nm,0.4s							
RFA	**San Rafael**	**4.06**	**141**	*eP*		**Pn**	**11 11 52.7**	**+1.1**
VCA	**Vinchina**	**4.11**	**46**	*eP*		**Pn**	**11 11 54.5**	**+2.2**
VCA				*eS*		**Sn**	**11 12 40.7**	**+1.4**
VCA				IAML			11 12 55.4	
	comp=Z,198nm,0.3s							
GO03	**Copiapo**	**4.20**	**16**	*eP*		**Pn**	**11 11 55.1**	**+1.6**
GO03				*eS*		**Sn**	**11 12 42.4**	**+0.9**
GO03				IAML			11 13 03.1	
	comp=Z,96nm,0.6s							
ACHE	**Chepes**	**4.22**	**85**	*eP*		**Pn**	**11 11 54.5**	**+0.6**
ACHE				*eS*		**Sn**	**11 12 43.0**	**+0.8**
ACLC	**CERRO LA CRUZ**	**4.55**	**62**	*eP*		**Pn**	**11 11 59.1**	**+0.6**
ACLC				*eS*		**Sn**	**11 12 51.5**	**+1.0**
ACLC				IAML			11 12 57.9	
	comp=Z,62nm,0.5s							
TINO	**Tinogasta**	**4.98**	**45**	*eP*		**Pn**	**11 12 05.6**	**+1.4**
TINO				*eS*		**Sn**	**11 13 01.9**	**+1.1**
BI02	**San Fabin de**	**5.01**	**177**	*eP*		**Pn**	**11 12 05.0**	**+0.3**
BI02				IAML			11 13 31.2	
	comp=Z,13nm,0.6s							
MRA	**San Martin**	**5.03**	**100**	*eP*		**Pn**	**11 12 04.3**	**-0.6**
MRA				*eS*		**Sn**	**11 13 07.4**	**+5.4**
MRA				IAML			11 13 30.4	
	comp=Z,44nm,0.6s							
AC02	**Maricunga**	**5.24**	**25**	*eP*		**Pn**	**11 12 09.4**	**+1.2**
AC02				*eS*		**Sn**	**11 13 11.3**	**+3.5**
AC02				IAML			11 13 35.6	
	comp=Z,30nm,0.5s							
H03N1	**Juan Fernandez**	**6.46**	**252**	P		**Pn**	**11 12 26.9**	**+2.8**
	baz=111,slow=20,SNR=10							
H03N1				S		**Sn**	**11 13 35.9**	**-0.7**
H03N1				T		T	11 19 11.1	
	baz=79,slow=73,SNR=1651							
H03N3	**Juan Fernandez**	**6.47**	**252**	P		**Pn**	**11 12 26.3**	**+1.9**
	baz=111,slow=20,SNR=13							
H03N3				S		**Sn**	**11 13 35.6**	**-1.4**
H03N3				T		T	11 19 10.5	
	baz=79,slow=73,SNR=1438							
H03N2	**Juan Fernandez**	**6.47**	**252**	P		**Pn**	**11 12 26.5**	**+2.2**
	baz=111,slow=20,SNR=6.2							
H03N2				S		**Sn**	**11 13 36.0**	**-0.9**
H03N2				T		T	11 19 11.9	
	baz=79,slow=73,SNR=1908							
PLCA	**Paso Flores**	**9.11**	**175**	P		**Pn**	**11 13 00.9**	**0.0**
	comp=Z,0.3nm,0.4s,baz=354,slow=10,SNR=1.7							
TXAR	**Lajitas Array**	**67.89**	**330**	P		**P**	**11 21 46.2**	**-0.9**
	comp=Z,0.2nm,0.9s,baz=164,slow=8.1,SNR=2.3							
	comp=Z,0.2nm,0.9s							
TORD	**Torodi Ar. Bea**	**83.03**	**70**	P		**P**	**11 23 11.5**	**-2.7**
	comp=Z,0.2nm,0.6s,baz=236,slow=4.3,SNR=2.5							
	comp=Z,0.2nm,0.6s							
H11S2	**WAKE ISLAND Hyl**	**26.17**	**271**	T		T	13 48 54.8	
	baz=117,slow=75,SNR=13							
H11S1	**WAKE ISLAND Hyl**	**26.18**	**271**	T		T	13 48 57.2	
	baz=117,slow=75,SNR=14							
H11S3	**WAKE ISLAND Hyl**	**26.19**	**271**	T		T	13 48 56.3	
	baz=117,slow=75,SNR=12							
H11N3	**WAKE ISLAND Hyl**	**26.53**	**272**	T		T	13 49 16.6	
	baz=115,slow=74,SNR=4.1							
H11N1	**WAKE ISLAND Hyl**	**26.54**	**272**	T		T	13 49 19.3	
	baz=115							
H11N2	**WAKE ISLAND Hyl**	**26.54**	**272**	T		T	13 49 21.2	
	baz=115,slow=74,SNR=8.5							

*SKHL **27** 11:24:42.1±0.5, 44°.70N×150°.00E, h87km±2km, mb4.5/5, msh5.4/5*
*JMA **27** 11:24:43.2±0.8, 45°N±4°.4×15°0E±°, h158km, MV3.6/12, SE OFF ETOROFU*
*IDC **27** 11:24:46.5±2.5, 45°.78N×149°.00E, h189km±24km, mb3.1/12, mbtmp3.6/15, Error ellipse: s-maj=20.7km s-min=15.0km az=109.0*
ISC 27 11:24:40.9±0.8, 45°.4N±0°.1×149°.5E±0°.1, h150km, n39, σ2s08/41, mb3.5/12, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KUR	**Kuril'sk**	**1.12**	**265**	*eP*		**Pn**	**11 25 08.5**	**+1.8**
KUR				AMB		AMB	11 25 10.0	
	40nm,0.3s							
KUR				*i* S		**Sn**	**11 25 28.7**	**+2.3**
KUR				A		A	11 25 30.8	
	410nm,0.3s							
KUR				A		A	11 25 30.8	
	420nm,0.3s							
SHO	**Shikotan**	**2.38**	**233**	*eP*		Pn	11 25 33.0	+12
SHO				AMB		AMB	11 25 34.0	
	30nm,0.5s							
SHO				*eS*		Sn	11 26 00.6	+10
SHO				A		A	11 26 02.4	
	190nm,0.3s							
SHO				A		A	11 26 02.4	
	90nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**2.88**	**244**	*eP*		**Pn**	**11 25 28.6**	**+1.9**
YUK				AMB		AMB	11 25 29.9	
	160nm,0.5s							
YUK				*eS*		**Sn**	**11 26 03.1**	**+1.1**
YUK				A		A	11 26 05.8	
	240nm,0.5s							
YUK				A		A	11 26 05.8	
	330nm,0.5s							
GLVR	**Golovnino**	**3.24**	**242**	*eP*		**Pn**	**11 25 33.3**	**+2.0**
GLVR				AMB		AMB	11 25 33.5	
	100nm,0.2s							
GLVR				*eS*		**Sn**	**11 26 11.4**	**+1.2**
GLVR				A		A	11 26 14.8	
	230nm,0.3s							
GLVR				A		A	11 26 14.8	
	280nm,0.3s							
NEM2	**Nemuro 2**	**3.31**	**235**	P		**Pn**	**11 25 33.2**	**+0.9**
NEM2				S		**Sn**	**11 26 11.4**	**-0.6**
NMR	**Nemuro--Hokkai**	**3.32**	**235**	*eP*		**Pn**	**11 25 33.2**	**+0.9**
NMR				*eS*		**Sn**	**11 26 10.8**	**-1.3**
JRA	**Rausu**	**3.40**	**247**	P		**Pn**	**11 25 35.5**	**+2.3**
JNK	**Nakash**	**3.82**	**244**	*eP*		**Pn**	**11 25 41.1**	**+2.4**
AKK	**Akkeshi**	**4.05**	**237**	*eP*		**Pn**	**11 25 42.7**	**+0.9**
JAK	**Akkeshi**	**4.15**	**237**	P		**Pn**	**11 25 44.0**	**+0.9**
JAK				S		**Sn**	**11 26 31.5**	**+0.2**
JTKR	**Abashiri--Toko**	**4.19**	**253**	*eP*		**Pn**	**11 25 45.5**	**+1.9**
JAR	**Ashorobuto**	**4.56**	**245**	P		**Pn**	**11 25 50.9**	**+2.4**
JAR				S		**Sn**	**11 26 43.9**	**+2.8**
JOB	**Onbets**	**4.72**	**241**	P		**Pn**	**11 25 52.4**	**+1.8**
JKK2	**Kamakawa 2**	**5.01**	**255**	*eP*		**Pn**	**11 25 56.7**	**+2.3**
ASAJ	**Asahikawa**	**5.04**	**258**	P		**Pn**	**11 25 57.9**	**+3.2**
	6.2nm,0.6s,baz=68,slow=5.4,SNR=14							
JCH	**Churui**	**5.17**	**240**	P		**Pn**	**11 25 57.5**	**+0.9**
JCH				*eS*		**Sn**	**11 26 54.9**	**-0.7**
JNBK	**Urakawa-nobuka**	**5.73**	**240**	*eP*		**Pn**	**11 26 04.3**	**+0.3**
JANG	**Nango**	**7.66**	**232**	P		**Pn**	**11 26 29.2**	**-0.6**
JANG				*eS*		**Sn**	**11 27 49.3**	**-5.8**
MJAR	**Matsushiro Arr**	**12.22**	**228**	P		**P**	**11 27 36.4**	**+0.2**
	1.5nm,0.9s,baz=42,slow=9.3,SNR=4.3							
SEY	**Seymchan**	**17.70**	**4**	P		**P**	**11 28 35.9**	**-0.7**
	1.8nm,0.5s,baz=180,slow=18,SNR=7.3							
H11N2	**WAKE ISLAND Hy**	**29.34**	**145**	T		T	12 01 44.5	
	baz=335,slow=75,SNR=50							
H11N1	**WAKE ISLAND Hy**	**29.36**	**145**	T		T	12 01 46.5	
	baz=335,slow=75,SNR=39							
H11N3	**WAKE ISLAND Hy**	**29.36**	**145**	T		T	12 01 46.8	
	baz=335,slow=75,SNR=40							
H11S1	**WAKE ISLAND Hy**	**30.37**	**146**	T		T	12 03 01.7	
	baz=336,slow=76,SNR=66							
H11S3	**WAKE ISLAND Hy**	**30.38**	**146**	T		T	12 03 02.5	
	baz=336,slow=76,SNR=42							
H11S2	**WAKE ISLAND Hy**	**30.39**	**146**	T		T	12 03 03.9	
	baz=336,slow=76,SNR=41							
ILAR	**Eielson Array**	**39.23**	**37**	P		**P**	**11 31 54.5**	**+0.4**
	0.1nm,0.4s,baz=268,slow=8.1,SNR=6.8							
	0.1nm,0.4s							
MKAR	**Makanchi Array**	**45.31**	**297**	P		**P**	**11 32 42.3**	**-1.3**
	0.3nm,0.7s,baz=65,slow=8.7,SNR=4.0							
	0.3nm,0.7s							
KURBB	**Kurchatov Arra**	**46.10**	**303**	P		**P**	**11 32 47.4**	**-2.2**
	0.8nm,0.6s,baz=70,slow=9.0,SNR=7.5							
	0.8nm,0.6s							
YKA	**Yellowknife Ar**	**53.56**	**35**	P		**P**	**11 33 46.0**	**+0.3**
	0.2nm,0.6s,baz=302,slow=7.9,SNR=5.4							
	0.2nm,0.6s							
FINES	**FINESS Array B**	**64.19**	**334**	P		**P**	**11 34 56.5**	**-2.6**
	3.0nm,1.0s,baz=34,slow=6.8,SNR=5.6							
	3.0nm,1.0s							
WRA	**Warramunga Arr**	**66.42**	**196**	P		**P**	**11 35 15.7**	**+1.9**
	0.5nm,0.8s,baz=9.9,slow=6.5,SNR=3.6							
	0.5nm,0.8s							
NB2	**NORSAR Subarra**	**68.69**	**340**	P		**P**	**11 35 25.9**	**-1.8**
	comp=Z,0.8nm,0.6s,baz=29,slow=6.5							
NOA	**NORSAR Array B**	**68.69**	**340**	P		**P**	**11 35 25.2**	**-2.5**
	comp=Z,0.3nm,0.5s,baz=33,slow=7.4,SNR=4.3							
	comp=Z,0.3nm,0.5s							
HFS	**Hagfors**	**68.84**	**338**	P		**P**	**11 35 26.1**	**-2.5**
	comp=Z,0.8nm,0.4s,baz=39,slow=5.5,SNR=8.8							
	comp=Z,0.8nm,0.4s							
ASAR	**Alice Springs**	**70.13**	**195**	P		**P**	**11 35 41.0**	**+4.1**
	comp=Z,0.4nm,0.7s,baz=11,slow=6.2,SNR=9.5							
	comp=Z,0.4nm,0.7s							
AKASG	**Malin Array Be**	**71.25**	**325**	P		**P**	**11 35 41.7**	**-1.7**
	comp=Z,0.4nm,0.4s,baz=40,slow=7.3,SNR=4.1							
	comp=Z,0.4nm,0.4s							
BRTR	**Keskin Array B**	**77.61**	**315**	P		**P**	**11 36 19.7**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=38,slow=9.7,SNR=2.6							
	comp=Z,0.5nm,0.6s							
TXAR	**Lajitas Array**	**80.40**	**58**	P		**P**	**11 36 37.9**	**+2.0**
	comp=Z,0.1nm,0.4s,baz=316,slow=6.3,SNR=2.2							
	comp=Z,0.1nm,0.4s							

*TEH **27** 11:32:44.0, 38°.80N×43°.50E, h10km±990km, ML2.6, Presumed earthquake*
*AFAD **27** 11:32:45.6, 38°.88N×43°.69E, h26km±1km, ML2.6*
*ISK **27** 11:32:46.1, 38°.82N×43°.68E, h15km, ML2.7/6*
ISC 27 11:32:47.0±1.0, 38°.89N±0°.03×43°.66E±0°.02, h19km±2km, n23, σ1s33/40, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VMUR	**Van-Muradiye**	**0.12**	**328**	P		**Pg**	**11 32 50.5**	**-0.8**
VMUR				IAML			11 32 55.0	
	comp=N,3μm,0.4s							
VMUR				S		**Sg**	**11 32 55.0**	**+0.9**
VMUR				IAML			11 32 57.0	
	comp=E,2μm,0.3s							
OZAP	**Van, Ozalp-Mer**	**0.35**	**130**	P		**Pb**	**11 32 54.0**	**-0.8**
OZAP				IAML			11 33 03.0	
	comp=E,955nm,0.7s							
OZAP				S		**Sn**	**11 33 03.9**	**+0.1**
OZAP				IAML			11 33 08.0	
	comp=N,370nm,0.6s							
VANB	**Van**	**0.36**	**216**	Pg		**Pb**	**11 32 54.4**	**-0.5**
VANB				Sg		**Sb**	**11 33 00.1**	**-0.1**
TVAN	**Van**	**0.41**	**209**	P		**Pg**	**11 32 54.5**	**-1.1**
TVAN				S		**Sb**	**11 33 01.9**	**+0.2**
TVAN				IAML			11 33 04.0	
	comp=N,852nm,0.4s							
TVAN				IAML

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIF	**Nilsia**	**0.31**	**1**	*e*P	**Pg**	**11 35 21.7**	**+0.3**
NIF				*e*S	**Sg**	**11 35 25.4**	**-0.1**
SUF	**Sumiainen**	**0.84**	**245**	*e*P	**Pg**	**11 35 31.9**	**+0.4**
SUF	**Sumiainen**	**0.84**	**245**	*e*P	**Pg**	**11 35 31.7**	**+0.2**
SUF				*e*S	**Sg**	**11 35 42.5**	**+0.1**
RMF	**Romuvaara**	**1.49**	**39**	*e*P	**Pn**	**11 35 43.0**	**-0.4**
RMF				*e*S	**Sg**	**11 36 02.0**	**-1.1**
JOF	**Joensuu**	**1.61**	**94**	*e*P	**Pb**	**11 35 46.0**	**-0.1**
JOF	**Joensuu**	**1.61**	**94**	*e*P	**Pb**	**11 35 46.1**	**+0.1**
JOF				*e*S	**Sg**	**11 36 07.4**	**+0.3**
JOF				smax	smax	11 36 09.0	
	comp=Z,6.1nm,0.1s						
KEF	**Keuruu**	**1.64**	**237**	*e*P	**Pb**	**11 35 46.4**	**-0.1**
KEF	**Keuruu**	**1.64**	**237**	*e*P	**Pn**	**11 35 46.0**	**+0.6**
KEF				*e*S	**Sn**	**11 36 06.9**	**-0.2**
KEF				smax	smax	11 36 08.9	
	comp=Z,3.8nm,0.1s						
RUF	**Ruokolahti**	**1.75**	**162**	*e*P	**Pg**	**11 35 48.8**	**-0.1**
RUF				*e*S	**Sg**	**11 36 11.6**	**+0.1**
RUF				smax	smax	11 36 13.2	
	comp=Z,3.6nm,0.1s						
FIA0	**FINESS Array S**	**1.83**	**207**	*e*PG	**Pb**	**11 35 50.1**	**+0.4**
FIA0				*e*SG	**Sg**	**11 36 14.0**	**-0.1**
FIA0				smax	smax	11 36 17.1	
	comp=Z,4.4nm,0.1s						
FINES	**FINESS Array B**	**1.83**	**207**	Pg	**Pb**	**11 35 49.5**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=23,slow=17,SNR=21						
FINES				Lg	Lg	11 36 13.7	
	comp=Z,0.2nm,0.3s,baz=26,slow=29,SNR=3.9						
OUF	**Merijarvi**	**1.88**	**315**	*e*PN	**Pn**	**11 35 49.5**	**+0.6**
OUF				*e*SN	**Sn**	**11 36 13.3**	**+0.1**
OUF				smax	smax	11 36 16.1	
	comp=Z,5.8nm,0.1s						
OBF4	**Vikkela, Lumij**	**2.11**	**327**	*e*PB	**Pn**	**11 35 53.0**	**+1.0**
OBF4				*e*SB	**Sn**	**11 36 19.4**	**+0.6**
OBF4				smax	smax	11 36 22.8	
	comp=Z,3.8nm,0.1s						
OBF0	**Syolatti, Pyha**	**2.13**	**314**	*e*PB	**Pn**	**11 35 53.4**	**+1.2**
OBF0				*e*SG	**Sn**	**11 36 20.7**	**+1.4**
OBF0				smax	smax	11 36 23.0	
	comp=Z,3.6nm,0.1s						
OUL	**Oulu**	**2.18**	**338**	*e*P	**Pn**	**11 35 53.9**	**+0.9**
OUL				*e*SB	**Sn**	**11 36 21.3**	**+0.7**
VAF	**Ylistaro**	**2.34**	**271**	*e*P	**Pb**	**11 35 57.7**	**-0.7**
RAF	**Rauma**	**3.51**	**237**	*e*P	**Pn**	**11 36 12.4**	**+1.2**
ARCES	**ARCESS Array B**	**6.55**	**353**	Pn	**Pn**	**11 36 52.9**	**0.0**
	comp=Z,0.1nm,0.3s,baz=171,slow=12,SNR=1.7						
ARCES				Sn	**Sn**	**11 38 06.0**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=175,slow=22,SNR=1.8						
ARCES				Lg	Lg	11 38 35.7	
	comp=Z,0.2nm,0.3s,baz=168,slow=28,SNR=1.5						
	comp=Z,3.6nm,1.0s						
HFS	**Hagfors**	**7.34**	**253**	Pn	**Pn**	**11 37 05.1**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=64,slow=15,SNR=1.4						
HFS				Sn	**Sn**	**11 38 25.0**	**-2.8**
	comp=Z,0.1nm,0.3s,baz=63,slow=33,SNR=1.5						
	comp=Z,0.4nm,0.4s						
NOA	**NORSAR Array B**	**8.05**	**263**	Pn	**Pn**	**11 37 13.3**	**-0.3**
	baz=71,slow=18,SNR=1.4						
	comp=Z,0.1nm,0.4s						

*IDC **27** 11:41:13.6±1.3, 32.˚62N×75.˚95E, h0km, mb3.4/5, mbtmp3.4/6, ML3.6/1, Error ellipse: s-maj=34.7km s-min=30.8km az=23.0*
*NDI **27** 11:41:19.9±2.5, 32.˚72N×76.˚12E, h5km, ML3.3, MW3.3, Presumed earthquake*
ISC 27 11:41:17.7±0.9, **32.˚72N**±0.˚03×**76.˚10E**±0.˚04, **h13**km±6km, **n22**, σ2**^{s}42**/34, **mb3.3**/4, **Kashmir-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSSA	**Tissa**	**0.13**	**21**	*e*P	**Pg**	**11 41 21.1**	**-0.1**
TSSA				*e*S	**Sg**	**11 41 23.2**	**-0.5**
THN	**Thein Dam**	**0.40**	**226**	*e*P	**Pn**	**11 41 27.5**	**-1.6**
THN				*e*S	**Sb**	**11 41 35.3**	**+2.7**
THN				IAML		11 41 40.8	
	comp=E,2μm,0.5s						
THN				IAML		11 41 41.9	
	comp=N,2μm,0.6s						
DHRM	**DHARAMSHALA**	**0.50**	**160**	*e*P	**Pb**	**11 41 28.3**	**-0.1**
DHRM				*e*S	**Sb**	**11 41 36.8**	**+1.2**
DHRM				IAML		11 41 41.4	
	comp=N,497nm,0.4s						
DHRM				IAML		11 41 43.0	
	comp=E,771nm,0.4s						
TLWR	**Talawar**	**0.77**	**189**	*e*P	**Pn**	**11 41 34.5**	**+0.3**
TLWR				*ex*	x	11 41 50.6	
JMU	**Jammu**	**1.07**	**274**	*e*P	**Pn**	**11 41 40.2**	**+1.9**
JMU				*e*S	**Sn**	**11 41 55.3**	**+2.3**
JMU				IAML		11 42 03.0	
	comp=E,565nm,0.3s						
JMU				IAML		11 42 07.8	
	comp=N,429nm,0.5s						
BHK	**Bhakra**	**1.34**	**170**	*e*P	Pb	11 41 47.4	+4.8
BHK				IAML		11 42 07.3	
	comp=N,951nm,0.5s						
BHK				IAML		11 42 07.4	
	comp=E,978nm,0.5s						
BHK				*e*S	**Sn**	**11 42 08.2**	**+8.5**
SRNI	**Srinagar**	**1.71**	**321**	*e*S	**Sg**	**11 42 16.1**	**+3.2**
ALCI	**Alchi Leh**	**1.75**	**31**	*e*P	**Pb**	**11 41 50.7**	**+0.9**
ALCI				*e*S	**Sn**	**11 42 13.1**	**+2.8**
ALCI				IAML		11 42 19.2	
	comp=E,826nm,0.3s						
ALCI				IAML		11 42 21.0	
	comp=N,573nm,0.3s						
SMLA	**Simla**	**1.83**	**150**	*e*P	**Pg**	**11 41 51.6**	**-1.2**
SMLA				*e*S	**Sg**	**11 42 16.3**	**-0.2**
SMLA				IAML		11 42 19.5	
	comp=N,820nm,0.3s						
SMLA				IAML		11 42 20.0	
	comp=E,902nm,0.4s						
KLP	**Kalpa**	**2.18**	**122**	*e*P	**Pb**	**11 41 56.9**	**-0.2**
KLP				*e*S	**Sb**	**11 42 25.7**	**+1.6**
KLP				IAML		11 42 29.8	
	comp=E,561nm,0.5s						
KLP				IAML		11 42 30.6	
	comp=N,316nm,0.5s						
HNLY	**HANLEY**	**2.42**	**88**	*e*P	**Pb**	**11 42 01.2**	**-0.2**
HNLY				*e*S	**Sb**	**11 42 32.0**	**+0.6**
HNLY				IAML		11 42 37.7	
	comp=E,74nm,0.4s						
HNLY				IAML		11 42 37.9	
	comp=N,115nm,0.4s						
JOSI	**Joshimath**	**3.66**	**125**	*e*P	**Pn**	**11 42 17.4**	**+3.3**
JOSI				*e*S	**Sn**	**11 43 00.3**	**+3.1**
JOSI				IAML		11 43 06.0	
	comp=N,77nm,0.3s						
JOSI				IAML		11 43 20.4	
	comp=E,77nm,0.8s						
SONA	**Sohna**	**4.54**	**169**	*e*S	**Sn**	**11 43 17.7**	**-0.9**
KUDL	**Kundal**	**4.57**	**176**	*e*P	**Pn**	**11 42 29.7**	**+3.2**
KUDL				*e*S	**Sn**	**11 43 20.9**	**+1.4**
PTH	**Pithoragarh**	**4.71**	**130**	*e*P	**Pn**	**11 42 30.5**	**+2.0**
PTH				*e*S	**Sn**	**11 43 23.5**	**+0.4**
LGTI	**Lohaghat**	**4.76**	**133**	*e*P	**Pn**	**11 42 31.7**	**+2.5**
LGTI				*e*S	**Sn**	**11 43 24.8**	**+0.4**
MKAR	**Makanchi Array**	**14.83**	**17**	Pn	**Pn**	**11 44 45.2**	**-1.8**
	comp=E,0.3nm,0.3s,baz=201,slow=13,SNR=9.6						
MKAR				Sn	Sn	11 47 22.8	-8.4
	comp=E,0.2nm,0.3s,baz=198,slow=22,SNR=6.4						
	comp=E,0.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**24.95**	**119**	P	**P**	**11 46 39.7**	**-1.2**
	comp=E,0.4nm,0.4s,baz=306,slow=8.7,SNR=4.7						
	comp=E,0.4nm,0.4s						
SONM	**Songino Array**	**27.39**	**48**	P	**P**	**11 47 02.1**	**-0.7**
	comp=E,0.2nm,0.3s,baz=246,slow=11,SNR=2.6						
	comp=E,0.2nm,0.3s						
TORD	**Torodi Ar. Bea**	**69.98**	**273**	P	**P**	**11 52 26.7**	**-2.6**
	comp=E,0.2nm,0.6s,baz=49,slow=4.7,SNR=4.6						
	comp=E,0.2nm,0.6s						
WRA	**Warramunga Arr**	**76.41**	**125**	P	**P**	**11 53 05.1**	**-1.9**
	comp=E,1.0nm,1.3s,baz=318,slow=6.3,SNR=1.6						
	comp=E,1.0nm,1.3s						
ILAR	**Eielson Array**	**77.19**	**17**	P	**P**	**11 53 10.0**	**-0.8**
	comp=E,0.1nm,0.5s,baz=313,slow=6.0,SNR=2.2						
	comp=E,0.1nm,0.5s						

*IDC **27** 11:46:57.1±0.6, 32.˚74N×76.˚01E, h0km, mb4.0/23, mbtmp4.1/26, ML3.9/3, MS3.2/16, Error ellipse: s-maj=14.1km s-min=11.0km az=68.0*
*NEIC **27** 11:46:59.0±1.5, 32.˚70N±0.˚06×76.˚14E±0.˚06, h10km±1km, mb4.5/42, Error ellipse: s-maj=13.4km s-min=2.9km az=218.0*
*NDI **27** 11:47:02.0±4.0, 32.˚72N×76.˚17E, h4km±7km, ML4.2, MW4.0, Presumed earthquake*
*NNC **27** 11:47:14.2±4.0, 33.˚60N×76.˚10E, h82km±33km, mb4.0, Error ellipse: s-maj=30.9km s-min=24.6km az=145.0*
ISC 27 11:47:00.2±0.8, **32.˚74N**±0.˚02×**76.˚16E**±0.˚03, **h19**km±2km, **n146**, σ1^{s}**79**/156, **mb4.3**/41, **MS3.3**/15, **11C-3D, Kashmir-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSSA	**Tissa**	**0.10**	**355**	*e*P	**Pg**	**11 47 03.2**	**-1.0**
TSSA				*e*S	**Sg**	**11 47 05.5**	**-1.4**
TSSA				IAML		11 47 06.3	
	comp=N,134μm,0.3s						
TSSA				IAML		11 47 06.8	
	comp=E,101μm,0.3s						
THN	**Thein Dam**	**0.45**	**229**	*e*P	**Pg**	**11 47 09.7**	**+0.2**
THN				*e*S	**Sb**	**11 47 17.7**	**+1.7**
THN				IAML		11 47 27.9	
	comp=E,19μm,0.8s						
THN				IAML		11 47 29.2	
	comp=N,10μm,0.8s						
DHRM	**DHARAMSHALA**	**0.50**	**166**	*e*P	**Pg**	**11 47 10.8**	**+0.3**
DHRM				*e*S	**Sb**	**11 47 19.1**	**+1.6**
DHRM				IAML		11 47 29.7	
	comp=N,4μm,0.6s						
DHRM				IAML		11 47 31.3	
	comp=E,5μm,0.6s						
TLWR	**Talawar**	**0.80**	**192**	*e*P	**Pn**	**11 47 16.8**	**+0.3**
TLWR				*e*S	**Sn**	**11 47 28.8**	**+0.9**
TLWR				IAML		11 47 40.2	
	comp=N,850nm,0.4s						
TLWR				IAML		11 47 40.4	
	comp=E,3μm,0.5s						
JMU	**Jammu**	**1.12**	**272**	*e*P	**Pg**	**11 47 22.0**	**+0.1**
JMU				*e*S	**Sg**	**11 47 42.5**	**+5.8**
JMU				IAML		11 47 45.1	
	comp=E,4μm,0.5s						
JMU				IAML		11 47 50.5	
	comp=N,5μm,0.7s						
BHK	**Bhakra**	**1.35**	**172**	*e*P	**Pg**	**11 47 28.4**	**+2.1**
BHK				IAML		11 47 49.7	
	comp=E,26μm,0.2s						
BHK				*e*S	**Sg**	**11 47 50.0**	**+5.9**
BHK				IAML		11 47 52.5	
	comp=N,42μm,0.3s						
ALCI	**Alchi Leh**	**1.70**	**30**	*e*P	**Pg**	**11 47 32.8**	**-0.2**
ALCI				*e*S	**Sg**	**11 47 54.7**	**-0.6**
ALCI				IAML		11 47 58.2	
	comp=N,1μm,0.7s						
ALCI				IAML		11 48 00.0	
	comp=E,2μm,0.7s						
SRNI	**Srinagar**	**1.73**	**319**	*e*P	**Pb**	**11 47 32.5**	**+1.0**
SRNI				*e*S	**Sg**	**11 47 58.3**	**+2.2**
SRNI				IAML		11 48 09.8	
	comp=E,15μm,0.7s						
SRNI				IAML		11 48 10.0	
	comp=N,19μm,0.6s						
SMLA	**Simla**	**1.82**	**152**	*e*P	**Pb**	**11 47 33.5**	**+0.6**
SMLA				*e*S	**Sg**	**11 47 58.2**	**-0.7**
SMLA				IAML		11 48 00.1	
	comp=E,3μm,0.5s						
SMLA				IAML		11 48 00.7	
	comp=N,4μm,0.5s						
CGRH	**CHANDIGARH**	**2.07**	**165**	*e*P	**Pb**	**11 47 37.4**	**+0.2**
CGRH				*e*S	**Sg**	**11 48 06.5**	**-0.4**
CGRH				IAML		11 48 10.6	
	comp=E,4μm,0.5s						
CGRH				IAML		11 48 16.9	
	comp=N,4μm,0.5s						
KLP	**Kalpa**	**2.14**	**124**	*e*P	**Pb**	**11 47 39.2**	**+0.6**
KLP				*e*S	**Sb**	**11 48 06.9**	**+2.0**
KLP				IAML		11 48 17.0	
	comp=E,3μm,0.7s						
KLP				IAML		11 48 20.2	
	comp=N,2μm,0.7s						
HNLY	**HANLEY**	**2.37**	**88**	*e*P	**Pb**	**11 47 43.4**	**+0.8**
HNLY				*e*S	**Sb**	**11 48 13.2**	**+1.6**
HNLY				IAML		11 48 20.2	
	comp=N,506nm,0.3s						
HNLY				IAML		11 48 21.3	
	comp=E,340nm,0.5s						
NIL	**Nilore**	**2.60**	**291**		**Pn**	**11 47 40.4**	**-0.8**
KKR	**Kurukshetra**	**2.83**	**168**	*e*P	**Pb**	**11 47 49.6**	**-0.5**
DDI	**Dehra Dun**	**2.90**	**146**	*e*P	**Pb**	**11 47 49.3**	**-2.1**
DDI				*e*S	**Sb**	**11 48 24.4**	**-2.2**
DDI				IAML		11 48 36.8	
	comp=N,768nm,0.3s						
DDI				IAML		11 48 41.0	
	comp=E,1μm,0.3s						
JOSI	**Joshimath**	**3.62**	**126**	*e*P	**Pn**	**11 47 59.5**	**+4.0**
JOSI				*e*S	**Sn**	**11 48 40.8**	**+2.9**
JOSI				IAML		11 49 00.2	
	comp=E,496nm,0.6s						
JOSI				IAML		11 49 01.1	
	comp=N,414nm,0.6s						
KUDL	**Kundal**	**4.59**	**176**	*e*P	**Pn**	**11 48 11.2**	**+2.6**
KUDL				*e*S	**Sn**	**11 49 03.1**	**+1.7**
PTH	**Pithoragarh**	**4.68**	**131**	*e*P	**Pn**	**11 48 12.5**	**+2.5**
PTH				*e*S	**Sn**	**11 49 05.6**	**+1.7**
PTH				IAML		11 49 09.7	
	comp=N,79nm,0.4s						
PTH				IAML		11 49 10.4	
	comp=E,81nm,0.3s						
LGTI	**Lohaghat**	**4.74**	**134**	*e*P	**Pn**	**11 48 13.8**	**+3.0**
LGTI				*e*S	**Sn**	**11 49 06.2**	**+0.9**
LGTI				IAML		11 49 09.4	
	comp=E,2μm,0.4s						
LGTI				IAML		11 49 09.7	
	comp=N,1μm,0.3s						
BKNR	**BIKANER**	**5.32**	**209**	*e*P	**Pn**	**11 48 20.1**	**+1.5**
BKNR				*e*S	**Sn**	**11 49 19.2**	**-0.3**
KBL	**Kabul**	**6.20**	**289**		**Pn**	**11 48 30.6**	**-0.4**
KSH2	**Kashi**	**6.41**	**356**	P	Pn	11 48 39.3	+5.6
KSH2				sP	Pb	11 48 43.0	-8.2
KSH2				S	**Sn**	**11 49 50.5**	**+4.1**
KSH2				pmax	pmax		
	comp=Z,42nm,0.7s						
KSH2				LR	LR		
	comp=N,570nm,8.9s						
KSH2				LR	LR		
	comp=E,680nm,8.2s						
KSH2				LR	LR		
	comp=Z,480nm,8.7s						
AJM	**Ajmer**	**6.43**	**192**	*e*P	**Pn**	**11 48 34.3**	**+0.3**
AJM				*e*S	**Sn**	**11 49 43.6**	**-3.3**
JHNI	**Jhansi**	**7.57**	**163**	*e*P	**Pn**	**11 48 49.6**	**0.0**
JHNI				*e*S	**Sn**	**11 50 11.4**	**-3.4**
JHNI				IAML		11 50 13.8	
	comp=E,449nm,0.2s						
JHNI				IAML		11 50 16.8	
	comp=N,452nm,0.3s						
DRK	**Karamyk**	**7.59**	**334**	Pn	**Pn**	**11 48 49.6**	**-0.5**
UDPR	**Udaipur**	**8.41**	**195**	*e*P	**Pn**	**11 49 02.7**	**+1.6**
UDPR				*e*S	**Sn**	**11 50 30.2**	**-5.3**
BTK	**Batken**	**8.48**	**331**		**Pn**	**11 49 01.2**	**-0.8**
VLK	**Valmikinagar**	**8.55**	**126**	*e*S	**Sn**	**11 50 37.6**	**-1.3**
NRN	**Naryn**	**8.68**	**359**		**Pn**	**11 49 05.4**	**-0.4**
WUS	**Wushi**	**8.79**	**15**		**Pn**	**11 49 06.1**	**-0.3**
ALBI	**Allahabad**	**8.90**	**145**	*e*P	**Pn**	**11 49 09.0**	**+1.2**
ALBI				*e*S	**Sn**	**11 50 42.5**	**-5.1**
ALBI				IAML		11 50 45.6	
	comp=N,606nm,0.4s						
ALBI				IAML		11 50 45.6	
	comp=E,543nm,0.4s						
ARSB	**Arslanbob**	**8.94**	**344**		**Pn**	**11 49 08.5**	**+0.1**
TARG	**Taragay, Kyrgy**	**9.07**	**8**		**Pn**	**11 49 10.6**	**+0.2**
KDJ	**Kajisay**	**9.41**	**5**		**Pn**	**11 49 16.2**	**+1.3**
BHPL	**Bhopal**	**9.53**	**173**	*e*P	**Pn**	**11 49 16.6**	**+0.1**
BHPL				*e*S	**Sn**	**11 50 58.5**	**-4.6**
BOOM	**Boomskoye usch**	**9.73**	**359**		**Pn**	**11 49 21.9**	**+2.5**
PRZ	**Przheval'sk**	**9.89**	**10**		**Pn**	**11 49 22.7**	**+1.2**
AAK	**Ala-Archa**	**9.97**	**353**	Pn	**Pn**	**11 49 24.9**	**+2.4**
	comp=E,0.8nm,0.3s,baz=170,slow=7.9,SNR=15						
AAK				Sn	**Sn**	**11 51 10.3**	**-3.6**
	comp=E,1.2nm,0.3s,baz=180,slow=7.1,SNR=4.5						
AAK				LR	LR	11 53 51.7	
	comp=E,98nm,20.0s,baz=198,slow=42						
	comp=E,7.1nm,0.8s						
AAK	**Ala-Archa**	**9.97**	**353**		**Pn**	**11 49 23.2**	**+0.7**
	comp=E,7.6nm,1.0s						
AAK				⇑S	Sn	11 51 04.7	-9.2
	comp=E,19nm,0.9s						
EVN	**Everest**	**10.37**	**115**		**Pn**	**11 49 28.0**	**-0.5**
PDGK	**Podgornoye**	**10.89**	**13**	⇓P	**Pn**	**11 49 36.8**	**+1.7**
	comp=E,20nm,0.6s						
PDGK				⇓S	**Sn**	**11 51 31.3**	**-5.2**
	comp=E,18nm,0.6s						
KK31	**Karatay Array**	**11.26**	**338**		**Pn**	**11 49 40.0**	**-0.1**
KK31	**Karatay Array**	**11.26**	**338**	⇑P	**Pn**	**11 49 40.2**	**+0.1**
	comp=E,7.2nm,0.5s,baz=163,slow=11,SNR=14						
KK31				⇑S	Sn	11 51 35.5	-10
	comp=E,23nm,0.5s,baz=152,slow=22,SNR=22						
KKAR	**Karatay Array**	**11.26**	**338**		**Pn**	**11 49 40.6**	**+0.5**
HRA	**Herat**	**11.72**	**282**	Pn	**Pn**	**11 49 46.0**	**-0.7**
WMQ	**Urumqi**	**14.28**	**36**	*e*P	**Pn**	**11 50 25.5**	**+4.1**
WMQ				LR	LR		
	comp=Z,170nm,18.5s						
MAKZ	**Makanchi**	**14.74**	**16**		**Pn**	**11 50 26.8**	**-0.8**
MAKZ	**Makanchi**	**14.74**	**16**	⇑P	**Pn**	**11 50 26.2**	**-1.4**
	comp=Z,6.4nm,0.5s						
MAKZ				⇑S	Sn	11 52 59.5	-11
	comp=Z,1.8nm,0.6s						
MK31	**Makanchi Array**	**14.80**	**17**	Pn	**Pn**	**11 50 26.9**	**-1.5**
MK31	**Makanchi Array**	**14.80**	**17**	P	**Pn**	**11 50 26.9**	**-1.5**
	comp=Z,2.4nm,0.4s,baz=199,slow=13,SNR=99						
MK31				⇑S	Sn	11 53 00.3	-11
	comp=Z,4.7nm,0.6s,baz=198,slow=19,SNR=12						
MKAR	**Makanchi Array**	**14.80**	**17**	Pn	**Pn**	**11 50 27.4**	**-1.0**
	comp=Z,1.7nm,0.3s,baz=202,slow=14,SNR=40						
MKAR				Sn	Sn	11 52 58.1	-14
	comp=Z,0.8nm,0.3s,baz=201,slow=23,SNR=8.9						
MKAR				LR	LR	11 56 34.3	
	comp=Z,40nm,18.5s,baz=176,slow=39						
	comp=Z,3.6nm,0.3s						
MKAR	**Makanchi Array**	**14.80**	**17**		**Pn**	**11 50 27.2**	**-1.2**
HYB	**Hyderabad**	**15.41**	**171**	*e*P	**P**	**11 50 40.5**	**-0.6**
SHL	**Shillong**	**15.48**	**113**	Pn	**Pn**	**11 50 33.3**	**-4.4**
KURBB	**Kurchatov Arra**	**17.95**	**5**	P	**Pn**	**11 51 06.3**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=191,slow=12,SNR=52						
KURBB				S	**Sn**	**11 54 29.9**	**+1.6**
	comp=Z,0.7nm,0.7s,baz=192,slow=21,SNR=2.7						
KURBB				LR	LR	11 58 32.1	
	comp=Z,80nm,21.9s,baz=176,slow=39						
	comp=Z,7.4nm,0.8s						
KURBB	**Kurchatov Arra**	**17.95**	**5**	⇑P	**Pn**	**11 51 06.5**	**-2.1**
	comp=Z,7.5nm,0.8s						
KURK	**Kurchatov**	**18.05**	**5**		**Pn**	**11 51 08.0**	**-1.9**
KURK	**Kurchatov**	**18.05**	**5**	⇑P	**Pn**	**11 51 07.7**	**-2.1**
	comp=Z,3.1nm,0.8s						
GTA2	**Gaotai**	**20.19**	**64**	P	Pn	11 51 35.5	-0.3
GTA2				pmax	pmax		
	comp=Z,29nm,0.8s						
GTA2				LR	LR		
	comp=N,92nm,13.4s						
GTA2				LR	LR		
	comp=E,180nm,10.6s						
GTA2				LR	LR		
	comp=Z,190nm,12.4s						
AB31	**Akbulak array**	**20.47**	**328**	P	**P**	**11 51 37.2**	**+0.6**
AB31	**Akbulak array**	**20.47**	**328**	⇓P	**P**	**11 51 37.1**	**+0.4**
	comp=Z,3.6nm,0.6s,baz=134,slow=11,SNR=9.9						
ABKAR	**Akbulak array**	**20.47**	**328**	P	**P**	**11 51 37.5**	**+0.9**
BVA0	**Borovoye Array**	**20.70**	**350**	⇑P	**P**	**11 51 39.5**	**+0.4**
	comp=Z,8.9nm,0.7s,baz=159,slow=11,SNR=64						
BVAR	**Borovoye Array**	**20.70**	**350**	P	**P**	**11 51 39.7**	**+0.6**
	comp=Z,12nm,0.6s,baz=162,slow=10,SNR=82						
BVAR				S	**S**	**11 55 27.9**	**-1.5**
	comp=Z,0.9nm,0.8s,baz=160,slow=18,SNR=2.0						
	comp=Z,12nm,0.6s						
BORK	**Borovoye**	**20.73**	**350**	P	**P**	**11 51 39.9**	**+0.5**
BORK				IAmb	IAmb	11 51 40.8	
	comp=Z,18nm,0.6s						
ZAA0	**Zalesovo Array**	**22.08**	**14**	P	**P**	**11 51 53.2**	**-0.8**
ZAA0				IAmb	IAmb	11 51 56.7	
	comp=Z,9.5nm,0.8s						
AKTO	**Aktyubinsk**	**22.18**	**328**	⇑P	**P**	**11 51 55.3**	**+0.2**
	comp=Z,1.0nm,0.8s						
LZDM	**Lanzhou Array**	**22.93**	**74**	P	**P**	**11 52 04.8**	**+1.3**
	comp=Z,3.1nm,0.3s,baz=263,slow=11,SNR=5.1						
	comp=Z,3.1nm,0.3s						
LZH	**Lanzhou**	**23.05**	**74**	*e*P	**P**	**11 52 08.5**	**+3.9**
LZH				sP	sP	11 52 18.5	+5.2
LZH				pmax	pmax		
	comp=Z,22nm,1.6s						
CHTO	**Chiang Mai**	**24.69**	**119**	P	**P**	**11 52 19.4**	**-0.7**
CM31	**Chiang Mai Arr**	**24.91**	**119**	P	**P**	**11 52 21.6**	**-0.6**
CM31				IAmb	IAmb	11 52 30.7	
	comp=Z,11nm,1.1s						
CMAR	**Chiang Mai Arr**	**24.91**	**119**	P	**P**	**11 52 22.9**	**+0.8**
	comp=Z,2.7nm,1.0s,baz=315,slow=8.8,SNR=19						
CMAR				LR	LR	12 04 17.1	
	comp=Z,15nm,18.2s,baz=290,slow=42						
	comp=Z,2.7nm,1.0s						
CMAR	**Chiang Mai Arr**	**24.91**	**119**	P	**P**	**11 52 20.3**	**-1.9**
PALK	**Pallekele**	**25.69**	**170**	LR	LR	12 02 29.3	
	comp=Z,36nm,21.4s,baz=340,slow=36						
GNI	**Garni**	**26.24**	**295**	P	**P**	**11 52 32.9**	**-1.3**
GNI				IAmb	IAmb	11 52 46.6	
	comp=Z,28nm,1.1s						
SONM	**Songino Array**	**27.34**	**48**	P	**P**	**11 52 46.3**	**+2.3**
	comp=Z,2.6nm,0.6s,baz=246,slow=9.4,SNR=18						
SONM				LR	LR	12 04 44.2	
	comp=Z,73nm,18.4s,baz=240,slow=39						
	comp=Z,2.6nm,0.6s						
SONM	**Songino Array**	**27.34**	**48**	P	**P**	**11 52 44.2**	**+0.2**
TLY	**Talaya**	**27.54**	**38**	LR	LR	12 03 57.4	
	comp=Z,25nm,18.1s,baz=254,slow=37						
RAYN	**Ar Rayn**	**28.47**	**259**		**P**	**11 52 54.8**	**+0.5**
RAYN				IAmb	IAmb	11 53 00.2	
	comp=Z,4.6nm,0.9s						
ASF	**Jabal al Asfar**	**33.01**	**280**	LR	LR	12 09 28.3	
	comp=Z,120nm,18.5s,ba

comp=Z,1.8nm,0.8s,baz=100,slow=12,SNR=4.2
comp=Z,1.8nm,0.8s

NC405	**NORSAR Array S**	**49.68**	**325**	P		**P**	**11 55 50.0**	**-0.5**
NB201	**NORSAR Array S**	**49.88**	**325**	P		**P**	**11 55 52.6**	**+0.5**
NB2	**NORSAR Subarra**	**49.92**	**325**	P		**P**	**11 55 52.7**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=93,slow=7.9							
NOA	**NORSAR Array B**	**49.92**	**325**	P		**P**	**11 55 52.6**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=96,slow=7.7,SNR=4.2							
	comp=Z,0.3nm,0.5s							
MAJO	**Matsushiro**	**50.41**	**67**	P		**P**	**11 55 55.5**	**-0.9**
MJAR	**Matsushiro Arr**	**50.42**	**67**	P		**P**	**11 55 57.4**	**+0.9**
	comp=Z,2.6nm,0.8s,baz=293,slow=8.5,SNR=5.5							
	comp=Z,2.6nm,0.8s							
MJAR	**Matsushiro Arr**	**50.42**	**67**	P		**P**	**11 55 56.0**	**-0.4**
MJAR				IAmb		IAmb	11 56 31.2	
	comp=Z,7.9nm,1.5s							
SPB2	**Spitsbergen Ar**	**52.11**	**347**	P		**P**	**11 56 09.4**	**+0.9**
SPB2				PcP		**PcP**	**11 57 20.8**	**+0.6**
SPITS	**Spitsbergen Ar**	**52.11**	**347**	P		**P**	**11 56 09.8**	**+1.2**
	comp=Z,7.9nm,0.9s,baz=110,slow=11,SNR=4.7							
	comp=Z,7.9nm,0.9s							
SENIN	**Lac Senin/Sane**	**53.22**	**306**	P		**P**	**11 56 17.7**	**+0.2**
SENIN				IAmb		IAmb	11 56 22.8	
	comp=Z,12nm,1.4s							
KEST	**Kesra**	**54.34**	**293**	P		**P**	**11 56 25.6**	**-0.2**
	comp=Z,5.4nm,0.9s,baz=69,slow=8.6,SNR=3.1							
	comp=Z,5.4nm,0.9s							
KEST	**Kesra**	**54.34**	**293**	P		**P**	**11 56 26.3**	**+0.5**
EKA	**Eskdalemuir Ar**	**57.93**	**318**	P		**P**	**11 56 50.4**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=77,slow=6.4,SNR=2.7							
	comp=Z,0.6nm,0.6s							
PETK	**Petropavlovsk-**	**59.72**	**44**	LR		LR	12 24 49.7	
	comp=Z,252nm,19.7s,baz=1.1,slow=38							
ESDC	**Sonseca Array**	**63.01**	**301**	P		**P**	**11 57 25.9**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=62,slow=6.5,SNR=1.7							
	comp=Z,0.4nm,0.7s							
C16K	**Lisburne Hills**	**69.52**	**20**	P		**P**	**11 58 08.3**	**+1.2**
C16K				IAmb		IAmb	11 58 09.2	
	comp=Z,2.6nm,0.9s							
TORD	**Torodi Ar. Bea**	**70.03**	**273**	P		**P**	**11 58 09.9**	**-1.3**
	comp=Z,5.4nm,0.8s,baz=56,slow=5.3,SNR=16							
	comp=Z,5.4nm,0.8s							
B20K	**Meade River**	**70.59**	**17**	IAmb		IAmb	11 58 27.7	
	comp=Z,4.4nm,1.1s							
C19K	**Lookout Ridge**	**70.59**	**18**	P		**P**	**11 58 15.2**	**+1.4**
C19K				IAmb		IAmb	11 58 16.2	
	comp=Z,4.2nm,0.6s							
D19K	**Kuna River**	**71.41**	**18**	IAmb		IAmb	11 58 20.6	
	comp=Z,5.4nm,0.6s							
E18K	**Tukpahlearik C**	**71.45**	**20**	IAmb		IAmb	11 58 21.1	
	comp=Z,4.0nm,0.7s							
E21K	**Killik River**	**72.51**	**17**	IAmb		IAmb	11 58 36.4	
	comp=Z,3.3nm,0.9s							
COLD	**Coldfoot**	**74.37**	**17**	IAmb		IAmb	11 58 38.3	
	comp=Z,3.5nm,1.0s							
IMAR	**Indian Mountai**	**74.40**	**19**	P		**P**	**11 58 37.5**	**+1.0**
BMAR	**Burnt Mountain**	**75.52**	**15**	P		**P**	**11 58 44.4**	**+1.4**
WB0	**Warramunga Arr**	**76.30**	**124**	P		**P**	**11 58 48.3**	**+0.3**
WB0				IAmb		IAmb	11 59 31.2	
	comp=Z,8.6nm,1.4s							
WRA	**Warramunga Arr**	**76.38**	**125**	P		**P**	**11 58 48.5**	**0.0**
	comp=Z,0.5nm,0.7s,baz=315,slow=6.2,SNR=18							
	comp=Z,0.5nm,0.7s							
WRA	**Warramunga Arr**	**76.38**	**125**	P		**P**	**11 58 46.5**	**-2.0**
WRAB	**Tennant Creek**	**76.38**	**125**	P		**P**	**11 58 48.4**	**-0.1**
WRAB				IAmb		IAmb	11 59 25.7	
	comp=Z,5.2nm,1.2s							
ILAR	**Eielson Array**	**77.15**	**17**	P		**P**	**11 58 52.1**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=325,slow=6.3,SNR=19							
	comp=Z,0.8nm,0.6s							
ILAR	**Eielson Array**	**77.15**	**17**	P		**P**	**11 58 52.5**	**+0.3**
BOSA	**Boshof**	**77.83**	**224**	P		**P**	**11 58 55.5**	**-1.0**
	comp=Z,3.1nm,0.9s,baz=38,slow=17,SNR=4.1							
	comp=Z,3.1nm,0.9s							
AS31	**Alice Springs**	**78.61**	**128**	P		**P**	**11 59 01.4**	**+0.5**
ASAR	**Alice Springs**	**78.61**	**128**	P		**P**	**11 59 00.6**	**-0.3**
	comp=Z,0.5nm,0.9s,baz=316,slow=5.6,SNR=5.8							
	comp=Z,0.5nm,0.9s							
ASAR	**Alice Springs**	**78.61**	**128**	P		**P**	**11 59 00.4**	**-0.5**
I30M	**Mount Dempster**	**79.12**	**13**	IAmb		IAmb	11 59 10.7	
	comp=Z,3.2nm,1.2s							
YKAW3	**Yellowknife Wh**	**84.64**	**5**	P		**P**	**11 59 32.5**	**+0.3**
YKAW3				IAmb		IAmb	11 59 56.9	
	comp=Z,3.7nm,1.4s							
YKA	**Yellowknife Ar**	**84.70**	**5**	P		**P**	**11 59 32.9**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=346,slow=5.7,SNR=15							
	comp=Z,0.6nm,0.7s							
TRQA	**Tornquist**	**145.68**	**249**			**PKPdf**	**12 06 36.4**	**-1.0**

*IDC **27** 12:04:56.4±0.7, 49˚.00N×157˚.62E, h0km, mb3.7/14, mbtmp3.7/15, ML3.6/2, MS2.6/1, Error ellipse: s-maj=22.0km s-min=16.4km az=147.0*
*KRSC **27** 12:04:58.6±1.5, 49˚.16N×158˚.05E, h39km±28km, Ml4.0*
*SKHL **27** 12:04:59.9±0.5, 49˚.00N×157˚.70E, h58km±9km, mb4.5/3*
ISC 27 12:05:01.6±0.7, **49˚.08N**±0˚.07×**157˚.66E**±0˚.07, **h35**km, **n49, σ0s88/50, mb3.8/14, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.89**	**329**	*eP*		**Pn**	**12 05 30.1**	**-1.3**
SKR				*eS*		**Sn**	**12 05 53.4**	**-0.5**
SKR	**Severo-Kuril's**	**1.89**	**329**	*eP*		**Pn**	**12 05 30.3**	**-1.1**
SKR				AMB		AMB	12 05 30.5	
	160nm,0.3s							
SKR				*eS*		**Sn**	**12 05 53.5**	**-0.5**
SKR				A		A	12 05 54.0	
	590nm,0.5s							
SKR				A		A	12 05 54.0	
	570nm,0.5s							
PAU	**Pauzhetka**	**2.45**	**348**	*eP*		**Pn**	**12 05 39.1**	**0.0**
PAU				*eS*		**Sn**	**12 06 08.2**	**+0.4**
PAU	**Pauzhetka**	**2.45**	**348**	*eP*		**Pn**	**12 05 38.9**	**-0.2**
PAU				AMB		AMB	12 05 41.6	
	50nm,0.3s							
PAU				*eS*		**Sn**	**12 06 07.8**	**0.0**
PAU				A		A	12 06 08.4	
	270nm,0.5s							
KDTR	**Khodutka, Kamc**	**2.75**	**5**	*eP*		**Pn**	**12 05 42.0**	**-1.1**
KDTR				*eS*		**Sn**	**12 06 12.4**	**-2.6**
MIPR	**Malaya Ipel'ka**	**3.25**	**350**	*eP*		**Pn**	**12 05 51.2**	**+1.1**
ASAK	**Asacha**	**3.31**	**3**	*eP*		**Pn**	**12 05 50.7**	**-0.3**
RUS	**Russkaya**	**3.40**	**9**	*eP*		**Pn**	**12 05 51.5**	**-0.6**
MTVR	**Mutnovka**	**3.42**	**5**	*eP*		**Pn**	**12 05 52.0**	**-0.6**
MTVR				*eS*		**Sn**	**12 06 31.4**	**-0.6**
GRL	**Gorelyy**	**3.49**	**4**	*eP*		**Pn**	**12 05 53.2**	**-0.3**
KRMR	**Karymshinskiy**	**3.77**	**4**	*eP*		**Pn**	**12 05 57.1**	**0.0**
APC	**Apacha**	**3.86**	**356**	*eP*		**Pn**	**12 05 58.5**	**0.0**
PET	**Petropavlovsk**	**4.00**	**9**	*eP*		**Pn**	**12 05 59.7**	**-0.6**
PET				*eS*		**Sn**	**12 06 44.8**	**-1.1**
PET	**Petropavlovsk**	**4.00**	**9**	*eP*		**Pn**	**12 05 59.7**	**-0.6**
PET				AMB		AMB	12 06 02.5	
	20nm,0.3s							
PET				*eS*		**Sn**	**12 06 44.8**	**-1.1**
PET				A		A	12 06 48.5	
	50nm,0.3s							
PET				A		A	12 06 48.5	
	40nm,0.3s							
DALK	**Dalny**	**4.02**	**9**	*eP*		**Pn**	**12 05 59.8**	**-0.8**
UGLR	**Uglovaya**	**4.20**	**10**	*eP*		**Pn**	**12 06 03.0**	**-0.2**
AVH	**Avacha**	**4.25**	**9**	*eP*		**Pn**	**12 06 03.9**	**0.0**
SMAR	**Somma**	**4.25**	**9**	*eP*		**Pn**	**12 06 04.4**	**+0.4**
KOK	**Koryaka**	**4.26**	**8**	*eP*		**Pn**	**12 06 04.4**	**+0.3**
SDLR	**Sedlovina**	**4.27**	**10**	*eP*		**Pn**	**12 06 03.2**	**-1.1**
KRER	**Koryakskii**	**4.29**	**9**	*eP*		**Pn**	**12 06 04.6**	**+0.1**
SPN	**Mys Shipunski**	**4.29**	**19**	*eP*		**Pn**	**12 06 03.0**	**-1.3**
KRX	**Arik**	**4.33**	**8**	*eP*		**Pn**	**12 06 04.9**	**-0.1**
GNL	**Ganaly**	**4.62**	**2**	*eP*		**Pn**	**12 06 09.6**	**+0.5**
KUR	**Kuril'sk**	**7.70**	**244**	*eP*		**Pn**	**12 06 50.2**	**-1.0**
KBTR	**Krutoberegovo**	**7.80**	**22**	*eP*		**Pn**	**12 06 52.0**	**-0.5**
SHEM	**Shemya Is, Ala**	**11.00**	**64**	Pn		**Pn**	**12 07 35.7**	**-0.7**
	2.5nm,0.3s,baz=270,slow=19,SNR=1.7							
MA2	**Magadan**	**11.25**	**342**	LR		LR	12 12 12.7	
	comp=Z,29nm,19.5s,baz=172,slow=39							
ASAJ	**Asahikawa**	**11.48**	**250**	Pn		**Pn**	**12 07 41.4**	**-1.6**
	0.3nm,0.3s,baz=74,slow=15,SNR=1.8							
	4.0nm,0.9s							
H11N2	**WAKE ISLAND Hy**	**30.21**	**163**	T		T	12 42 48.4	
	baz=352							
H11N3	**WAKE ISLAND Hy**	**30.22**	**162**	T		T	12 42 53.9	
	baz=352							
H11N1	**WAKE ISLAND Hy**	**30.22**	**163**	T		T	12 42 51.0	
	baz=352							
H11S1	**WAKE ISLAND Hy**	**31.36**	**163**	T		T	12 44 15.5	
	baz=344							
H11S3	**WAKE ISLAND Hy**	**31.37**	**163**	T		T	12 44 15.5	
	baz=344							
H11S2	**WAKE ISLAND Hy**	**31.38**	**163**	T		T	12 44 15.7	
	baz=344							
ILAR	**Eielson Array**	**32.80**	**41**	P		**P**	**12 11 30.6**	**-0.6**
	0.2nm,0.7s,baz=273,slow=8.4,SNR=4.1							
	0.2nm,0.7s							
SONM	**Songino Array**	**33.49**	**288**	P		**P**	**12 11 37.8**	**+0.3**
	0.2nm,0.3s,baz=79,slow=7.5,SNR=1.9							
	0.2nm,0.3s							
YKA	**Yellowknife Ar**	**47.21**	**39**	P		**P**	**12 13 31.3**	**+0.8**
	0.4nm,0.9s,baz=296,slow=8.3,SNR=5.5							
	0.4nm,0.9s							
MKAR	**Makanchi Array**	**48.58**	**298**	P		**P**	**12 13 40.2**	**-1.1**
	0.3nm,0.6s,baz=59,slow=8.7,SNR=5.0							
	0.3nm,0.6s							
KURBB	**Kurchatov Arra**	**48.71**	**304**	P		**P**	**12 13 42.6**	**+0.3**
	1.1nm,0.5s,baz=61,slow=7.7,SNR=6.5							
	1.1nm,0.5s							
BVAR	**Borovoye Array**	**51.73**	**310**	P		**P**	**12 14 04.2**	**-0.9**
	0.6nm,0.5s,baz=62,slow=5.9,SNR=4.8							
	0.6nm,0.5s							
CMAR	**Chiang Mai Arr**	**55.86**	**259**	P		**P**	**12 14 36.0**	**+0.2**
	0.3nm,0.8s,baz=45,slow=6.2,SNR=4.1							
	0.3nm,0.3s							
ARCES	**ARCESS Array B**	**56.62**	**342**	P		**P**	**12 14 41.7**	**+1.2**
	5.4nm,1.1s,baz=26,slow=8.5,SNR=1.5							
	5.4nm,1.1s							
PDAR	**Pinedale Array**	**60.91**	**57**	P		**P**	**12 15 12.2**	**+1.3**
	0.4nm,0.8s,baz=311,slow=8.2,SNR=3.6							
	0.4nm,0.8s							
FINES	**FINESS Array B**	**63.19**	**336**	P		**P**	**12 15 25.9**	**+0.3**
	1.2nm,0.9s,baz=45,slow=7.2,SNR=1.7							
	1.2nm,0.9s							
NOA	**NORSAR Array B**	**66.95**	**343**	P		**P**	**12 15 52.0**	**+1.9**
	0.5nm,0.7s,baz=25,slow=6.7,SNR=1.5							
	0.5nm,0.7s							
WRA	**Warramunga Arr**	**71.78**	**203**	P		**P**	**12 16 19.8**	**-0.5**
	2.4nm,0.8s,baz=15,slow=6.0,SNR=17							
	2.4nm,0.8s							
TXAR	**Lajitas Array**	**73.70**	**64**	P		**P**	**12 16 32.2**	**+0.2**
	0.2nm,0.4s,baz=316,slow=7.3,SNR=6.8							
	0.2nm,0.4s							
ASAR	**Alice Springs**	**75.46**	**202**	P		**P**	**12 16 42.0**	**+0.1**
	0.5nm,0.5s,baz=16,slow=6.0,SNR=13							
	0.5nm,0.5s							

IDC 27 12:13:46.8±5.2, **10˚.71S**×**115˚.44E, h0**km, **mb3.0**/3, **mbtmp3.1**/3, **Error ellipse: s-maj=323.3km s-min=30.3km az=46.0, South of Bali**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.39**	**119**	P		P	12 18 24.6	-0.8
	0.6nm,1.1s,baz=289,slow=9.8,SNR=1.3							
WRA				S		S	12 22 04.4	-10
	0.4nm,1.0s,baz=293,slow=23,SNR=2.2							
	0.6nm,1.1s							
ASAR	**Alice Springs**	**21.80**	**129**	P		P	12 18 41.4	+0.6
	0.3nm,0.8s,baz=299,slow=10,SNR=5.0							
	0.3nm,0.8s							
MKAR	**Makanchi Array**	**64.46**	**335**	P		P	12 24 25.1	0.0
	0.1nm,0.3s,baz=141,slow=7.7,SNR=2.0							
	0.1nm,0.3s							

*IDC **27** 12:32:55.5±1.4, 6˚.11N×127˚.56E, h0km, mb3.4/5, mbtmp3.5/6, ML4.1/1, MS2.8/3, Error ellipse: s-maj=53.7km s-min=18.0km az=59.0*
*MAN **27** 12:32:59.0, 5˚.53N×127˚.17E, h21km, MS3.3*
ISC 27 12:32:57.1±3.6, **5˚.88N**±0˚.08×**127˚.28E**±0˚.08, **h6**km±23km, **n13, σ1s88/18, mb3.5/5, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.57**	**278**	*eP*		**Pn**	**12 33 25.7**	**+0.2**
DDMP				*eS*		**Sn**	**12 33 45.3**	**-1.0**
DAV	**Davao City (W)**	**2.06**	**305**	Pn		**Pb**	**12 33 35.1**	**+0.1**
	54nm,0.3s,baz=198,slow=3.2,SNR=3.6							
DAV				Sn		**Sb**	**12 34 02.0**	**+1.1**
	90nm,0.3s,baz=207,slow=2.3,SNR=8.2							
DAV				LR		LR	12 35 11.3	
	comp=Z,104nm,18.8s,baz=330,slow=62							
	122nm,0.3s							
DMPH	**Davao City--Mi**	**2.13**	**304**	*i* P		**Pb**	**12 33 37.0**	**+0.9**
DMPH				*i* S		**Sb**	**12 34 04.3**	**+1.6**
GSPH	**General Santos**	**2.33**	**275**	*i* P		**Pn**	**12 33 34.5**	**-1.5**
GSPH				*i* S		**Sn**	**12 34 00.5**	**-4.5**
KCP	**Kidapawan**	**2.45**	**298**	*eP*		**Pn**	**12 33 38.6**	**+1.0**
KCP				*i* S		**Sn**	**12 34 10.5**	**+2.6**
BIPH	**Bislig**	**2.47**	**338**	*eP*		**Pb**	**12 33 39.9**	**-2.0**
BIPH				*eS*		**Sn**	**12 34 08.4**	**+0.1**
FITZ	**Fitzroy Crossi**	**23.88**	**184**	P		**P**	**12 38 13.0**	**+1.4**
	1.2nm,0.9s,baz=12,slow=9.3,SNR=1.8							
	1.2nm,0.9s							
WRA	**Warramunga Arr**	**26.58**	**165**	P		**P**	**12 38 36.5**	**+0.3**
	0.3nm,0.7s,baz=342,slow=9.2,SNR=9.4							
	0.3nm,0.7s							
ASAR	**Alice Springs**	**30.07**	**168**	P		**P**	**12 39 07.8**	**+0.5**
	0.2nm,0.7s,baz=345,slow=8.3,SNR=4.1							
ASAR				PcP		**PcP**	**12 42 11.2**	**+1.8**
	0.1nm,0.5s,baz=344,slow=3.1,SNR=1.6							
	0.2nm,0.7s							
TLY	**Talaya**	**49.68**	**341**	LR		LR	13 04 07.1	
	comp=Z,15nm,19.1s,baz=323,slow=38							
MKAR	**Makanchi Array**	**56.13**	**324**	P		**P**	**12 42 36.1**	**-1.4**
	0.4nm,0.5s,baz=116,slow=7.3,SNR=5.1							
	0.4nm,0.5s							
KURBB	**Kurchatov Arra**	**60.25**	**327**	P		**P**	**12 43 04.6**	**-1.6**
	0.5nm,0.4s,baz=124,slow=6.8,SNR=6.8							
	0.5nm,0.4s							
TIXI	**Tiksi**	**65.70**	**1**	LR		LR	13 12 33.3	
	comp=Z,9.1nm,21.8s,baz=16,slow=36							

*IDC **27** 12:33:09.5±1.1, 30˚.08N×87˚.72E, h0km, mb3.5/9, mbtmp3.5/11, ML3.7/2, MS2.5/1, Error ellipse: s-maj=39.8km s-min=19.7km az=59.0*
ISC 27 12:33:14.2±1.0, **30˚.0N**±0˚.1×**87˚.4E**±0˚.1, **h35**km, **n12, σ2s32/13, mb3.4/8, Xizang**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LSA	**Lhasa**	**3.28**	**94**	Pn		**Pn**	**12 34 03.3**	**-0.2**
LSA				Sn		**Sn**	**12 34 45.5**	**+4.0**
LSA				smax		smax		
	comp=N,28nm,0.7s							
LSA				smax		smax		
	comp=E,24nm,0.8s							
CMAR	**Chiang Mai Arr**	**15.57**	**135**	Pn		**Pn**	**12 36 47.5**	**-3.6**
	comp=E,0.2nm,0.3s,baz=332,slow=14,SNR=1.6							
CMAR				LR		LR	12 43 12.3	
	comp=E,18nm,19.1s,baz=260,slow=39							
	comp=E,0.2nm,0.3s							
MKAR	**Makanchi Array**	**17.23**	**348**	P		**Pn**	**12 37 09.8**	**-2.3**
	comp=E,0.1nm,0.3s,baz=162,slow=14,SNR=5.8							
	comp=E,0.3nm,0.6s							
KURBB	**Kurchatov Arra**	**21.65**	**345**	P		**P**	**12 38 00.5**	**-0.9**
	comp=E,2.3nm,0.2s,baz=140,slow=13,SNR=2.1							
	comp=E,2.3nm,0.2s							
SONM	**Songino Array**	**23.04**	**34**	P		**P**	**12 38 13.8**	**-2.6**
	comp=E,0.3nm,0.4s,baz=224,slow=10,SNR=2.6							
	comp=E,0.3nm,0.4s							
ZALV	**Zalesovo Beam**	**24.01**	**356**	P		**P**	**12 38 25.3**	**-0.1**
	comp=E,0.4nm,0.5s,baz=175,slow=7.2,SNR=2.1							
	comp=E,0.4nm,0.5s							
BVAR	**Borovoye Array**	**26.16**	**336**	P		**P**	**12 38 46.3**	**+1.2**
	comp=E,0.4nm,0.5s,baz=146,slow=10,SNR=4.1							
	comp=E,0.4nm,0.5s							
FINES	**FINESS Array B**	**50.48**	**327**	P		**P**	**12 42 09.8**	**+1.5**
	comp=E,1.1nm,0.8s,baz=102,slow=10,SNR=3.5							
	comp=E,1.1nm,0.8s							
HFS	**Hagfors**	**56.46**	**325**	P		**P**	**12 42 54.7**	**+2.5**
	comp=E,0.7nm,0.6s,baz=94,slow=12,SNR=1.6							
	comp=E,0.7nm,0.6s							
WRA	**Warramunga Arr**	**67.14**	**132**	P		**P**	**12 44 04.2**	**-0.4**
	comp=E,0.2nm,0.6s,baz=318,slow=6.4,SNR=2.2							
	comp=E,0.2nm,0.6s							
ASAR	**Alice Springs**	**69.58**	**135**	P		**P**	**12 44 20.3**	**+0.4**
	comp=E,0.3nm,0.8s,baz=322,slow=6.3,SNR=2.4							
	comp=E,0.3nm,0.8s							
TORD	**Torodi Ar. Bea**	**79.87**	**279**	P		**P**	**12 45 20.9**	**+1.2**
	comp=E,0.5nm,0.8s,baz=65,slow=6.2,SNR=2.1							
	comp=E,0.5nm,0.8s							

*MEX **27** 12:49:12.2±0.5, 14˚.89N×93˚.27W, h30km±12km, MD3.8*

*GCG **27** 12:49:12.8±1.0, 15˚.04N×93˚.07W, h38km±259km, MD4.0, Presumed earthquake*
ISC 27 12:49:10.2±2.9, **14˚.92N**±0˚.10×**93˚.23W**±0˚.06, **h31**km±21km, **n16, σ0s84/23, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PCIG		**0.78**	**1**	*eP*		**Pn**	**12 49 25.5**	**+0.4**
PCIG				*eS*		**Sb**	**12 49 35.2**	**-0.4**
THIG		**0.94**	**91**	*eP*		**Pn**	**12 49 26.6**	**-0.7**
THIG				*eS*		**Sn**	**12 49 39.4**	**-0.2**
PATR	**El Naranjo**	**0.98**	**78**	*eP*		**Pn**	**12 49 28.3**	**+0.1**
PATR				*eS*		**Sn**	**12 49 40.8**	**-0.4**
PAVE	**Pavencul**	**1.06**	**75**	*eP*		**Pn**	**12 49 29.8**	**+0.6**
PAVE				*eS*		**Sn**	**12 49 43.4**	**+0.4**
CHUJ	**Union Juarez**	**1.10**	**81**	*eP*		**Pn**	**12 49 30.1**	**+0.3**
CHUJ				*eS*		**Sn**	**12 49 44.0**	**-0.1**
SMCA	**Catarina**	**1.12**	**93**	*i* P		**Pn**	**12 49 30.5**	**+0.6**
SMCA				*i* S		**Sn**	**12 49 43.3**	**-1.0**
CARR	**Arriaga**	**1.47**	**334**	*eP*		**Pn**	**12 49 35.1**	**+0.4**
CARR				*eS*		**Sn**	**12 49 53.2**	**+0.3**
CCIG	**Comitan**	**1.72**	**38**	*eP*		**Pn**	**12 49 39.0**	**+0.8**
CCIG				*eS*		**Sn**	**12 49 60.0**	**+0.7**
CCIG	**Comitan**	**1.72**	**38**	*i* P		**Pn**	**12 49 38.9**	**+0.7**
TGIG		**1.85**	**3**	*eP*		**Pn**	**12 49 39.9**	**-0.1**
TGIG				*eS*		**Sn**	**12 50 00.9**	**-1.4**
TGIG		**1.85**	**3**	*i* P		**Pn**	**12 49 40.1**	**+0.1**
STG2	**El Palmar, Qui**	**1.86**	**105**	*i* S		Sn	12 49 55.1	-7.6
STG8	**El Palmar, Qui**	**1.88**	**104**	*i* P		Pn	12 49 37.3	-3.2
STG8				*i* S		Sn	12 49 56.5	-6.8
STG5	**El Palmar, Qui**	**1.90**	**105**	*i* P		Pn	12 49 37.6	-3.0
CMIG	**Matias Romero**	**2.68**	**324**	*eP*		**Pn**	**12 49 51.2**	**-0.1**
CMIG				*eS*		**Sn**	**12 50 21.0**	**-1.8**
NEUV	**Arroyo Zacate**	**3.71**	**319**	*eP*		**Pn**	**12 50 07.3**	**+1.8**

*CATAC **27** 13:01:56.7±0.5, 14˚.N±3˚×9˚.2W±˚, h39km±7km, M3.9/17, MLv3.9/17, Error ellipse: s-maj=7.8km s-min=2.9km az=36.9, confirmed*
*SNET **27** 13:01:57.8±1.6, 14˚.06N×91˚.72W, h28km±58km, ML3.9, Presumed earthquake*
*GCG **27** 13:01:58.1±1.4, 14˚.08N×91˚.75W, h36km±5km, MD4.0, ML4.2, Presumed earthquake*
ISC 27 13:01:54.8±2.1, **13˚.93N**±0˚.07×**91˚.77W**±0˚.08, **h13**km±11km, **n39, σ1s52/58, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RTAL	**Retalhuleu**	**0.60**	**7**	P		**Pn**	**13 02 09.1**	**0.0**
RTAL				S		**Sn**	**13 02 18.6**	**0.0**
STG5	**El Palmar, Qui**	**0.63**	**41**	*i* P		**Pn**	**13 02 10.4**	**+0.9**
STG5				*i* S		**Sn**	**13 02 20.3**	**+0.9**
STG2	**El Palmar, Qui**	**0.64**	**37**	*i* P		**Pn**	**13 02 11.0**	**+1.3**
STG2				IAML			13 02 25.8	
	comp=E,14μm,0.3s							
STG8	**El Palmar, Qui**	**0.66**	**38**	*i* P		**Pn**	**13 02 11.3**	**+1.2**
STG8				*i* S		**Sn**	**13 02 22.0**	**+1.6**
STG8				IAML			13 02 23.4	
	comp=E,5μm,0.1s							
SMCA	**Catarina**	**0.97**	**342**	*i* P		**Pb**	**13 02 13.0**	**-0.4**
QUEO	**Labor Ovalle**	**0.97**	**15**	*i* P		**Pg**	**13 02 13.9**	**+0.3**
QUEO				*i* S		**Sg**	**13 02 26.5**	**+0.2**
FG8	**Yepocapa, Chim**	**1.22**	**74**	*i* P		**Pn**	**13 02 14.0**	**-3.7**
FG16	**Alotenango, Sa**	**1.27**	**74**	*i* P		**Pn**	**13 02 15.2**	**-3.3**
FG16				IAML			13 02 30.9	
	comp=E,24μm,0.2s							
ESSJ	**San Jos, E**	**1.29**	**106**	*i* P		**Pn**	**13 02 15.3**	**-3.2**
PCG5	**San Vicente Pa**	**1.39**	**78**	*i* P		**Pn**	**13 02 17.7**	**-2.3**
PCG5				*i* S		**Sn**	**13 02 32.9**	**-5.3**
HUEH	**Huehuetenango**	**1.41**	**11**	P		**Pn**	**13 02 20.2**	**-0.1**
HUEH				S		**Sn**	**13 02 37.9**	**-0.9**
HUEH	**Huehuetenango**	**1.41**	**11**	*i* P		**Pn**	**13 02 20.4**	**+0.1**
HUEH	**Huehuet

n26,σ2ᵍ70/39, mb3.5/6, Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TSSA	**Tissa**	**0.03**	**344**	*eP*	**Pg**	**13 19 43.3**	**-0.8**
TSSA				*eS*	**Sg**	**13 19 46.0**	**-0.1**
THN	**Thein Dam**	**0.50**	**223**	*eP*	**Pg**	**13 19 50.1**	**-0.9**
THN				*eS*	**Sg**	**13 19 58.0**	**+0.2**
THN				IAML		13 20 03.4	
	comp=N,8μm,0.4s						
THN				IAML		13 20 04.2	
	comp=E,5μm,0.4s						
DHRM	**DHARAMSHALA**	**0.57**	**168**	*eP*	**Pg**	**13 19 50.4**	**-2.0**
TLWR	**Talawar**	**0.87**	**192**	*eP*	**Pg**	**13 19 57.3**	**-0.7**
JMU	**Jammu**	**1.12**	**269**	*eP*	**Pn**	**13 20 02.7**	**+0.5**
JMU				*eS*	**Sn**	**13 20 23.0**	**+5.6**
JMU				IAML		13 20 28.6	
	comp=E,1μm,0.4s						
JMU				IAML		13 20 29.0	
	comp=N,935nm,0.4s						
BHK	**Bhakra**	**1.42**	**172**	*eP*	**Pg**	**13 20 08.7**	**+0.3**
BHK				*eS*	**Sg**	**13 20 28.2**	**+1.2**
BHK				IAML		13 20 30.0	
	comp=E,6μm,0.3s						
BHK				IAML		13 20 32.9	
	comp=N,16μm,0.6s						
ALCI	**Alchi Leh**	**1.64**	**31**	*eP*	**Pg**	**13 20 13.2**	**+0.4**
ALCI				*eS*	**Sg**	**13 20 34.9**	**+0.8**
ALCI				IAML		13 20 41.0	
	comp=N,167nm,0.5s						
ALCI				IAML		13 20 45.3	
	comp=E,251nm,0.5s						
SMLA	**Simla**	**1.88**	**153**	*eP*	**Pn**	**13 20 14.1**	**+1.4**
SMLA				*eS*	**Sb**	**13 20 38.7**	**+0.3**
SMLA				IAML		13 20 41.5	
	comp=N,8μm,0.5s						
SMLA				IAML		13 20 43.0	
	comp=E,8μm,0.2s						
KLP	**Kalpa**	**2.18**	**125**	*eP*	**Pn**	**13 20 18.2**	**+1.0**
KLP				*eS*	**Sb**	**13 20 47.3**	**-0.2**
KLP				IAML		13 20 55.0	
	comp=N,415nm,0.7s						
KLP				IAML		13 20 57.3	
	comp=E,434nm,0.7s						
JOSI	**Joshimath**	**3.67**	**127**	*eP*	**Pn**	**13 20 39.4**	**+1.9**
JOSI				*eS*	**Sn**	**13 21 21.7**	**+1.1**
SONA	**Sohna**	**4.62**	**170**	*eP*	**Pn**	**13 20 51.8**	**+1.5**
SONA				*eS*	**Sn**	**13 21 41.0**	**-2.7**
SONA				IAML		13 21 47.2	
	comp=N,282nm,0.2s						
SONA				IAML		13 21 49.6	
	comp=E,458nm,0.3s						
KUDL	**Kundal**	**4.66**	**176**	*eP*	**Pn**	**13 20 51.5**	**+0.6**
KUDL				*eS*	**Sn**	**13 21 43.8**	**-0.9**
KUDL				IAML		13 22 08.8	
	comp=N,36nm,0.6s						
KUDL				IAML		13 22 09.3	
	comp=E,34nm,0.5s						
PTH	**Pithoragarh**	**4.72**	**132**	*eP*	**Pn**	**13 20 53.8**	**+1.8**
PTH				*eS*	**Sn**	**13 21 44.9**	**-1.7**
JHNI	**Jhansi**	**7.63**	**163**	*eP*	**Pn**	**13 21 30.5**	**-1.4**
JHNI				*eS*	**Sn**	**13 22 51.9**	**-6.2**
JHNI				IAML		13 22 54.4	
	comp=E,124nm,0.2s						
JHNI				IAML		13 22 57.4	
	comp=N,73nm,0.3s						
AAK	**Ala-Archa**	**9.90**	**353**	P	**Pn**	**13 22 03.5**	**+0.6**
	comp=N,0.3nm,0.3s,baz=174,slow=14,SNR=5.3						
AAK				S	**Sn**	**13 23 47.6**	**-6.3**
	comp=N,1.2nm,0.6s,baz=210,slow=17,SNR=1.1						
	comp=N,1.5nm,0.7s						
MKAR	**Makanchi Array**	**14.73**	**17**	P	**Pn**	**13 23 09.1**	**+0.3**
	comp=N,0.5nm,0.3s,baz=202,slow=13,SNR=17						
MKAR				S	**Sn**	**13 25 45.4**	**-6.4**
	comp=N,0.3nm,0.5s,baz=180,slow=15,SNR=2.2						
	comp=N,0.6nm,0.3s						
KURBB	**Kurchatov Arra**	**17.89**	**5**	P	**Pn**	**13 23 47.7**	**-1.5**
	comp=N,0.1nm,0.3s,baz=190,slow=12,SNR=21						
	comp=N,1.9nm,0.7s						
BVAR	**Borovoye Array**	**20.63**	**350**	P	**P**	**13 24 19.5**	**-0.3**
	comp=N,3.8nm,0.6s,baz=161,slow=10,SNR=17						
	comp=N,3.8nm,0.6s						
AKTO	**Aktyubinsk**	**22.13**	**328**	P	**P**	**13 24 34.5**	**-1.5**
	comp=N,1.9nm,0.6s,baz=117,slow=13,SNR=5.3						
	comp=N,1.9nm,0.6s						
CMAR	**Chiang Mai Arr**	**24.95**	**119**	P	**P**	**13 25 10.4**	**+6.5**
	comp=N,0.6nm,0.3s,baz=297,slow=8.9,SNR=5.6						
	comp=N,0.6nm,0.3s						
SONM	**Songino Array**	**27.29**	**48**	P	**P**	**13 25 26.1**	**+1.0**
	comp=N,0.7nm,0.5s,baz=238,slow=10,SNR=6.1						
	comp=N,0.7nm,0.5s						
KSRS	**Korea Array**	**42.16**	**69**	LR	LR	13 47 26.2	
	comp=N,16nm,18.5s,baz=10.0,slow=39						
TORD	**Torodi Ar. Bea**	**70.03**	**227**	P	**P**	**13 30 50.9**	**-1.8**
	comp=N,1.0nm,0.7s,baz=93,slow=4.5,SNR=7.2						
	comp=N,1.0nm,0.7s						
WRA	**Warramunga Arr**	**76.42**	**125**	P	**P**	**13 31 32.6**	**+2.4**
	comp=N,0.4nm,0.9s,baz=318,slow=6.1,SNR=1.8						
	comp=N,0.4nm,0.9s						
ASAR	**Alice Springs**	**78.65**	**128**	P	**P**	**13 31 46.0**	**+3.3**
	comp=N,0.2nm,0.8s,baz=309,slow=5.5,SNR=1.8						
	comp=N,0.2nm,0.8s						
YKA	**Yellowknife Ar**	**84.64**	**5**	P	**P**	**13 32 12.6**	**-1.1**
	comp=N,0.1nm,0.6s,baz=350,slow=5.6,SNR=2.9						
	comp=N,0.1nm,0.6s						

*IDC **27** 13:26:06.6±6.3, 36.46N×71.28E, h180km±50km, mb3.2/3, mbtmp3.7/6, Error ellipse: s-maj=59.7km s-min=29.4km az=57.0*
*NNC **27** 13:26:12.3±4.1, 37.01N×70.77E, h181km±60km, mb2.6, mpv3.1, Error ellipse: s-maj=40.6km s-min=25.7km az=23.0*

ISC 27 13:26:07.4±1.4, 36.7N±0.1×71.0E±0.2, h188km, n11, σ1ᵍ62/14, mb3.4/3, 2C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.46**	**357**	⇑P	**Pn**	**13 27 41.0**	**+0.7**
	2.9nm,0.5s,baz=170,slow=11,SNR=13						
KK31				⇓S	**Sn**	**13 28 50.3**	**-3.6**
	22nm,0.7s,baz=185,slow=22,SNR=12						
AAK	**Ala-Archa**	**6.58**	**23**	P	**Pn**	**13 27 43.6**	**+1.5**
	1.1nm,0.3s,baz=182,slow=5.8,SNR=7.7						
AAK				S	**Sn**	**13 28 56.6**	**-0.3**
	5.1nm,0.7s,baz=331,slow=22,SNR=12						
AAK	**Ala-Archa**	**6.58**	**23**	⇓P	**Pn**	**13 27 42.9**	**+0.9**
	0.2nm,0.4s						
AAK				⇑S	**Sn**	**13 28 55.9**	**-1.0**
	1.8nm,0.5s						
MKAR	**Makanchi Array**	**13.20**	**36**	P	**Pn**	**13 29 07.7**	**+0.1**
	0.2nm,0.5s,baz=230,slow=13,SNR=2.2						
AB31	**Akbulak array**	**14.93**	**331**	P	**Pn**	**13 29 28.6**	**-0.5**
	2.1nm,0.8s,baz=143,slow=12,SNR=13						
AKTO	**Aktyubinsk**	**16.63**	**330**	P	**Pn**	**13 29 50.9**	**+1.2**
	4.7nm,0.6s,baz=136,slow=8.5,SNR=10.0						
AKTO	**Aktyubinsk**	**16.63**	**330**	⇓P	**Pn**	**13 29 50.8**	**+1.1**
	2.1nm,0.6s						
ZALV	**Zalesovo Beam**	**19.80**	**25**	P	**P**	**13 30 24.0**	**+0.8**
	0.4nm,0.5s,baz=210,slow=11,SNR=2.1						
YKA	**Yellowknife Ar**	**81.10**	**3**	P	**P**	**13 38 02.7**	**+1.5**
	0.1nm,0.4s,baz=352,slow=5.9,SNR=5.6						
	0.1nm,0.4s						
WRA	**Warramunga Arr**	**82.11**	**122**	P	**P**	**13 38 05.4**	**-1.7**
	0.4nm,0.6s,baz=324,slow=4.9,SNR=6.9						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**84.37**	**125**	P	**P**	**13 38 17.0**	**-1.6**
	0.6nm,0.6s,baz=312,slow=5.1,SNR=22						
	0.6nm,0.6s						

*SKHL **27** 13:40:19.8±0.4, 44.30N×148.50E, h73km±4km, mb4.7/4*
*JMA **27** 13:40:21.0±0.4, 44°N±2'×14'8E±', h115km, MV3.6/25, SE OFF ETOROFU*

ISC 27 13:40:14.8±3.3, 44.4N±0.2×148.6E±0.2, h132km±24km, n19,σ2ᵍ44/28, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**0.96**	**329**	*i* P	**Pn**	**13 40 38.3**	**+0.8**
KUR				AMB	AMB	13 40 38.7	
	180nm,0.4s						
KUR				*eS*	**Sn**	**13 40 52.2**	**-2.6**
KUR				A	A	13 40 53.5	
	450nm,0.2s						
KUR				A	A	13 40 53.5	
	320nm,0.2s						
SHO	**Shikotan**	**1.35**	**247**	*eP*	Pn	13 40 54.7	+13
SHO				AMB	AMB	13 40 55.5	
	250nm,0.4s						
SHO				*eS*	Sn	13 41 11.8	+10
SHO				A	A	13 41 13.0	
	300nm,0.2s						
SHO				A	A	13 41 13.0	
	290nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.97**	**260**	*eP*	**Pn**	**13 40 50.4**	**+1.9**
YUK				AMB	AMB	13 40 50.9	
	300nm,0.3s						
YUK				*eS*	**Sn**	**13 41 13.0**	**-1.4**
YUK				A	A	13 41 13.4	
	290nm,0.3s						
YUK				A	A	13 41 13.4	
	430nm,0.3s						
NEM2	**Nemuro 2**	**2.29**	**244**	*eP*	**Pn**	**13 40 54.5**	**+2.1**
NEM2				*eS*	**Sn**	**13 41 20.0**	**-1.2**
GLVR	**Golovnino**	**2.29**	**254**	*eP*	**Pn**	**13 40 54.7**	**+2.3**
GLVR				AMB	AMB	13 40 54.9	
	130nm,0.3s						
GLVR				*eS*	**Sn**	**13 41 20.7**	**-0.6**
GLVR				A	A	13 41 22.2	
	350nm,0.3s						
GLVR				A	A	13 41 22.2	
	370nm,0.3s						
NMR	**Nemuro--Hokkai**	**2.29**	**244**	*i* P	**Pn**	**13 40 54.5**	**+2.0**
NMR				*eS*	**Sn**	**13 41 20.3**	**-1.1**
JRA	**Rausu**	**2.52**	**260**	*eP*	**Pn**	**13 40 57.2**	**+1.9**
JNSB	**Nemuroshibetsu**	**2.64**	**257**	*eP*	**Pn**	**13 40 59.3**	**+2.5**
JKHN	**Kushirohamanak**	**2.79**	**243**	*eP*	**Pn**	**13 41 01.2**	**+2.3**
JKHN				*eS*	**Sn**	**13 41 31.6**	**-1.1**
JNK	**Nakash**	**2.89**	**255**	*eP*	**Pn**	**13 41 02.3**	**+2.2**
JNK				*eS*	**Sn**	**13 41 34.1**	**-0.9**
AKK	**Akkeshi**	**3.03**	**244**	*eP*	**Pn**	**13 41 04.2**	**+2.3**
JAK	**Akkeshi**	**3.13**	**245**	*eP*	**Pn**	**13 41 05.3**	**+2.1**
JAK				*eS*	**Sn**	**13 41 39.3**	**-1.3**
JTKR	**Abashiri--Toko**	**3.37**	**264**	*eP*	**Pn**	**13 41 07.9**	**+1.6**
JAR	**Ashorobuto**	**3.64**	**254**	*eP*	**Pn**	**13 41 12.7**	**+2.9**
JAR				*eS*	**Sn**	**13 41 52.8**	**+0.4**
JCH	**Churui**	**4.18**	**246**	*eP*	**Pn**	**13 41 19.1**	**+2.1**
JCH				*eS*	**Sn**	**13 42 02.9**	**-2.4**
JNBK	**Urakawa-nobuka**	**4.74**	**245**	*eP*	**Pn**	**13 41 25.9**	**+1.5**
JOT	**Ohata**	**6.29**	**244**	*eS*	**Sn**	**13 42 50.4**	**-5.4**
JANG	**Nango**	**6.59**	**235**	*eS*	**Sn**	**13 42 58.7**	**-4.4**
JMK	**Ichinoseki**	**7.74**	**228**	*eS*	**Sn**	**13 43 27.8**	**-2.9**

KRSC 27 13:43:32.7±1.5, 49.35N×158.83E, h38km±39km, MI3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.20**	**308**	*eP*	Pn	13 44 07.8	+1.2
SKR				*eS*	Sn	13 44 33.1	+0.6
PAU	**Pauzhetka**	**2.48**	**330**	*eP*	Pn	13 44 13.7	+3.2
PAU				*eS*	Sn	13 44 43.5	+4.0
KDTR	**Khodutka, Kamc**	**2.51**	**349**	*eP*	Pn	13 44 13.9	+3.0
KDTR				*eS*	Sn	13 44 43.6	+3.5
ASAK	**Asacha**	**3.10**	**349**	*eP*	Pn	13 44 23.0	+4.0
ASAK				*eS*	Sn	13 44 58.9	+4.2
RUS	**Russkaya**	**3.10**	**356**	*eP*	Pn	13 44 23.0	+4.0
RUS				*eS*	Sn	13 44 58.5	+3.9
MTVR	**Mutnovka**	**3.17**	**353**	*eP*	Pn	13 44 23.5	+3.4
MTVR				*eS*	Sn	13 45 00.0	+3.4
GRL	**Gorelyy**	**3.25**	**352**	*eP*	Pn	13 44 25.2	+4.1
GRL				*eS*	Sn	13 45 02.9	+4.4
KRMR	**Karymshinskiy**	**3.52**	**353**	*eP*	Pn	13 44 29.6	+4.9
KRMR				*eS*	Sn	13 45 10.6	+5.7
PET	**Petropavlovsk**	**3.68**	**358**	*eP*	Pn	13 44 31.1	+4.1
PET				*eS*	Sn	13 45 13.2	+4.1
DALK	**Dalny**	**3.69**	**359**	*eP*	Pn	13 44 30.9	+3.8
DALK				*eS*	Sn	13 45 13.6	+4.4
SPN	**Mys Shipunski**	**3.83**	**11**	*eP*	Pn	13 44 33.0	+3.9
SPN				*eS*	Sn	13 45 18.0	+5.3
UGLR	**Uglovaya**	**3.87**	**360**	*eP*	Pn	13 44 34.8	+5.2
SMAR	**Somma**	**3.92**	**360**	*eP*	Pn	13 44 35.6	+5.1
AVH	**Avacha**	**3.92**	**359**	*eP*	Pn	13 44 34.9	+4.6
KOK	**Koryaka**	**3.95**	**358**	*eP*	Pn	13 44 35.5	+4.7
KRER	**Koryakskii**	**3.96**	**359**	*eP*	Pn	13 44 35.7	+4.6
KRX	**Arik**	**4.02**	**358**	*eP*	Pn	13 44 36.5	+4.7
KRX				*eS*	Sn	13 45 24.1	+6.5
GNL	**Ganaly**	**4.39**	**353**	*eP*	Pn	13 44 42.0	+5.2
GNL				*eS*	Sn	13 45 31.1	+4.4
KBTR	**Krutoberegovo**	**7.29**	**18**	*eP*	Pn	13 45 21.1	+4.7

*IDC **27** 13:44:48.9±0.9, 32.01S×57.16E, h0km, mb3.7/7, mbtmp3.8/8, ML4.5/1, MS3.5/2, Error ellipse: s-maj=33.0km s-min=26.1km az=69.0*
*NEIC **27** 13:44:50.5±0.7, 32.0S±0.1×57.0E±0.2, h10km±1km, mb4.3/13, Error ellipse: s-maj=27.3km s-min=16.5km az=248.0*

ISC 27 13:44:51.6±0.8, 32.0S±0.2×57.0E±0.1, h19km, n34, σ0ᵍ61/29, mb4.2/12, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FOMA	**Nahampoana Res**	**11.28**	**306**		**Pn**	**13 47 31.0**	**-0.8**
VOI	**Vohitsoka**	**13.58**	**315**	Pn	**Pn**	**13 48 02.7**	**-0.6**
ABPO	**Ambohimpanom**	**15.66**	**323**	Pn	**Pn**	**13 48 32.0**	**+0.5**
ABPO				IAmb	IAmb	13 48 32.1	
	comp=Z,8.1nm,0.6s						
OPO	**Ambohidratompo**	**16.06**	**324**	Pn	**Pn**	**13 48 36.9**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=131,slow=12,SNR=7.6						
	comp=Z,6.8nm,0.6s						
TSUM	**Tsumeb**	**37.59**	**280**	LR	LR	14 06 52.0	
	comp=Z,56nm,18.1s,baz=152,slow=35						
H01W2	**Cape Leeuwin H**	**47.18**	**110**	T	T	14 43 40.3	
	baz=257,slow=75,SNR=3.7						
H01W3	**Cape Leeuwin H**	**47.18**	**110**	T	T	14 43 41.5	
	baz=257,slow=75,SNR=3.7						
H01W1	**Cape Leeuwin H**	**47.20**	**110**	T	T	14 43 51.5	
	baz=257,slow=75,SNR=4.1						
QSPA	**South Pole Qui**	**58.16**	**180**	P	**P**	**13 54 44.8**	**+0.9**
	comp=Z,2.7nm,0.9s,baz=278,slow=1.6,SNR=9.1						
	comp=Z,2.7nm,0.9s						
QSPA	**South Pole Qui**	**58.16**	**180**	P	**P**	**13 54 44.4**	**+0.4**
CM31	**Chiang Mai Arr**	**64.27**	**45**	P	**P**	**13 55 25.6**	**-0.1**
CM31				IAmb	IAmb	13 55 26.8	
	comp=Z,2.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**64.27**	**45**	P	**P**	**13 55 25.9**	**+0.2**
	comp=Z,1.5nm,0.5s,baz=227,slow=7.2,SNR=18						
	comp=Z,1.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**64.27**	**45**	P	**P**	**13 55 25.5**	**-0.3**
ASAR	**Alice Springs**	**67.20**	**104**	P	**P**	**13 55 45.1**	**+0.2**
	comp=Z,0.3nm,0.8s,baz=236,slow=6.2,SNR=2.4						
	comp=Z,0.3nm,0.8s						
AS31	**Alice Springs**	**67.20**	**104**	P	**P**	**13 55 44.4**	**-0.5**
WRA	**Warramunga Arr**	**69.24**	**101**	P	**P**	**13 55 55.9**	**-1.7**
	comp=Z,0.3nm,0.9s,baz=241,slow=5.9,SNR=1.6						
	comp=Z,0.3nm,0.9s						
WRA	**Warramunga Arr**	**69.24**	**101**	P	**P**	**13 55 57.0**	**-0.6**
WB2	**Warramunga Arr**	**69.25**	**101**	P	**P**	**13 55 57.4**	**-0.3**
TORD	**Torodi Ar. Bea**	**69.42**	**301**	P	**P**	**13 55 59.2**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=101,slow=7.5,SNR=2.4						
	comp=Z,0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**69.42**	**301**	P	**P**	**13 55 58.8**	**+0.1**
TORD				IAmb	IAmb	13 56 25.0	
	comp=Z,1.9nm,0.6s						
BRTR	**Keskin Array B**	**74.60**	**341**	P	**P**	**13 56 29.2**	**-0.1**
BR131	**Keskin Array S**	**74.60**	**341**	P	**P**	**13 56 29.0**	**-0.4**
BR131				IAmb	IAmb	13 56 33.9	
	comp=Z,5.4nm,1.4s						
KK31	**Karatay Array**	**75.77**	**10**	P	**P**	**13 56 36.2**	**+0.3**
KK31				IAmb	IAmb	13 56 48.3	
	comp=Z,2.1nm,1.0s						
KKAR	**Karatay Array**	**75.77**	**10**	P	**P**	**13 56 36.3**	**+0.5**
KDJ	**Kajisay**	**76.07**	**15**	P	**P**	**13 56 38.0**	**+0.2**
KDJ				IAmb	IAmb	13 56 42.4	
	comp=Z,2.5nm,1.0s						
VAE	**Valguarnera**	**79.76**	**327**	LR	LR	14 32 21.8	
	comp=Z,32nm,18.0s,baz=244,slow=36						
AB31	**Akbulak array**	**80.94**	**2**	P	**P**	**13 57 04.5**	**+0.2**
ABKAR	**Akbulak array**	**80.94**	**2**	P	**P**	**13 57 04.8**	**+0.5**
MKAR	**Makanchi Array**	**81.69**	**17**	P	**P**	**13 57 08.4**	**+0.1**
KURBB	**Kurchatov Arra**	**84.44**	**14**	P	**P**	**13 57 23.2**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=201,slow=4.9,SNR=4.3						
	comp=Z,0.3nm,0.3s						
KURK	**Kurchatov**	**84.55**	**14**	P	**P**	**13 57 23.1**	**+0.1**
KURK				IAmb	IAmb	13 57 28.1	
	comp=Z,1.8nm,0.9s						
BVAR	**Borovoye Array**	**85.48**	**8**	P	**P**	**13 57 28.6**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=178,slow=5.8,SNR=4.9						
	comp=Z,0.6nm,0.7s						
RABL	**Rabaul**	**92.15**	**96**	P	**P**	**13 57 59.7**	**-0.7**
YKA	**Yellowknife Ar**	**149.03**	**352**	PKPbc	**PKPbc**	**14 04 36.9**	**-0.7**
	comp=Z,0.3nm,0.8s,baz=354,slow=2.9,SNR=4.8						

*AFAD **27** 14:00:00.2, 35.55N×28.03E, h14km±2km, ML3.5*
*ATH **27** 14:00:02.2, 37.16N×28.56E, h22km±6km, ML3.5/3, Latitude uncertainty: 4 km; Longitude uncertainty: 2 km*
*NIC **27** 14:00:03.5, 35.75N×28.17E, h10km±1km, Ml3.3/15*
*THE **27** 14:00:04.0, 36°N±11'×27'8E±1°0, h4km±16km, mb3.5/9, MLh3.5/9*
*IDC **27** 14:00:03.3±1.0, 35.74N×28.34E, h0km, mb3.7/5, mbtmp3.7/15, ML3.7/9, MS3.0/9, Error ellipse: s-maj=17.9km s-min=14.2km az=13.0*
*ISK **27** 14:00:04.2, 35.85N×28.23E, h5km, ML3.6/31*
*GII **27** 14:00:07.5±0.0, 35.53N±0.01×28.208E±0.005, h0km, Mws3.6, confirmed*

ISC 27 14:00:04.0±0.6, 35.70N±0.03×28.18E±0.02, h10km, n145, σ1ᵍ66/190, mb3.6/4, MS2.9/3, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.51**	**355**	P	**Pg**	**14 00 12.6**	**-1.5**
ARG				S	**Sg**	**14 00 19.4**	**-1.4**
ARG	**Arkhangelos**	**0.51**	**355**	Pg	**Pg**	**14 00 12.5**	**-1.5**
ARG				Sg	**Sg**	**14 00 19.2**	**-1.7**
ARG	**Arkhangelos**	**0.51**	**355**	P	**Pg**	**14 00 12.5**	**-1.5**
ARG				S	**Sg**	**14 00 20.1**	**-0.8**
ARG				AML	AML	14 00 24.5	
	15nm,0.6s						
ARG				AML	AML	14 00 25.5	
	15nm,0.6s						
RODB	**Rodos**	**0.74**	**3**	P	**Pg**	**14 00 16.8**	**-1.7**
RODB				S	**Sg**	**14 00 26.0**	**-2.1**
RDI1	**Rhodes Town Ha**	**0.75**	**3**	P	**Pg**	**14 00 16.9**	**-1.5**
RDI1				S	**Sg**	**14 00 26.8**	**-1.5**
KARP	**Karpathos**	**0.84**	**260**	P	**Pn**	**14 00 21.6**	**-0.4**
KARP				S	**Sn**	**14 00 35.9**	**+1.5**
KARP	**Karpathos**	**0.84**	**260**	Pg	**Pn**	**14 00 22.4**	**+0.4**
KARP				Sg	**Sn**	**14 00 36.9**	**+2.5**
KARP	**Karpathos**	**0.84**	**260**	P	**Pg**	**14 00 18.0**	**-2.2**
KARP				S	**Sn**	**14 00 32.3**	**-2.1**
KARP				AML	AML	14 00 39.8	
	10nm,0.6s						
KARP				AML	AML	14 00 41.6	
	11nm,0.8s						
KSS1	**Kassos Island**	**1.06**	**255**	P	Pn	14 00 37.4	+12
TURN	**Turunc**	**1.07**	**3**	Pg	**Pg**	**14 00 22.7**	**-1.9**
TURN				Sg	**Sg**	**14 00 37.2**	**-1.4**
TURN	**Turunc**	**1.07**	**3**	P	**Pg**	**14 00 22.5**	**-2.1**
TURN				S	**Sn**	**14 00 41.6**	**+1.6**
TURN				IAML		14 00 48.0	
	comp=N,838nm,1.1s						
IZZE	**Mula-Seydike**	**1.12**	**49**	P	**Pn**	**14 00 24.9**	**-0.9**
IZZE				IAML		14 00 46.0	
	comp=E,1μm,0.4s						
IZZE				IAML		14 00 48.0	
	comp=N,2μm,0.4s						
DAT	**Datca**	**1.13**	**335**	Pg	**Pn**	**14 00 25.2**	**-0.9**
DATC	**Datca-Mugla**	**1.13**	**339**	Pg	**Pn**	**14 00 24.9**	**-1.1**
YAZI	**Mula-Datşa-**	**1.14**	**329**	P	**Pb**	**14 00 24.5**	**-1.3**
YAZI				S	**Sg**	**14 00 40.0**	**-0.7**
YAZI				IAML		14 00 46.0	
	comp=E,1μm,0.6s						
DALY	**Dalyan (Mula)**	**1.18**	**19**	Pg	**Pn**	**14 00 25.2**	**-1.3**
FETY	**Fethiye**	**1.19**	**38**	P	**Pb**	**14 00 24.1**	**-2.5**
FETY	**Fethiye**	**1.19**	**38**	Pg	**Pb**	**14 00 25.3**	**-1.3**
FETY	**Fethiye**	**1.19**	**38**	P	**Pg**	**14 00 26.7**	**-0.1**
FETY				S	**Sn**	**14 00 46.8**	**+3.9**
KSL	**Kastellorizon**	**1.23**	**68**	P	**Pg**	**14 00 27.0**	**-0.6**
KSL	**Kastellorizon**	**1.23**	**68**	P	**Pg**	**14 00 26.4**	**-1.2**
KSL				S	**Sn**	**14 00 44.1**	**+0.3**
KSL				AML	AML	14 00 49.7	
	2.0nm,0.5s						
KSL				AML	AML	14 01 04.2	
	2.2nm,0.7s						
KSL	**Kastellorizon**	**1.23**	**68**	P	**Pn**	**14 00 25.2**	**-2.0**
KSL				S	**Sg**	**14 00 41.9**	**-1.6**
AKAS	**Kas**	**1.27**	**65**	Pn	**Pg**	**14 00 27.9**	**-0.6**
SABU	**Mula-Dalaman**	**1.29**	**30**	P	**Pn**	**14 00 26.9**	**-1.2**
SABU				S	**Sg**	**14 00 48.6**	**+3.1**
SABU				IAML		14 00 49.0	
	comp=N,744nm,0.4s						
SABU				IAML		14 00 50.0	
	comp=E,571nm,1.0s						
YER	**Yerkesik**	**1.43**	**3**	P	**Pn**	**14 00 29.0**	**-1.2**
YER	**Yerkesik**	**1.43**	**3**	Pn	**Pb**	**14 00 29.6**	**-1.3**
BODA	**Bodrum-Mula**	**1.46**	**335**	Pn	**Pg**	**14 00 31.1**	**-1.0**
BDRM	**Kayabasi**	**1.48**	**337**	P	**Pb**	**14 00 30.3**	**-1.4**
BODT	**Bodrum**	**1.53**	**333**	P	**Pg**	**14 00 34.6**	**+1.3**
BODT	**Bodrum**	**1.53**	**333**	Pn	**Pg**	**14 00 32.3**	**-1.0**
CAME	**Cameli-Denizli**	**1.54**	**36**	Pn	**Pg**	**14 00 31.8**	**-1.7**
MULA	**Mugla, Merkez-**	**1.56**	**4**	P	**Pb**	**14 00 31.9**	**-1.1**
MULA				S	**Sg**	**14 00 55.8**	**+1.7**
MULA				IAML		14 01 06.0	
	comp=E,402nm,0.5s						
KLNA	**Kalymnos**	**1.58**	**323**	P	**Pb**	**14 00 31.7**	**-1

MANT	**Manisa**	**2.80**	**6**	P	**Pb**	**14 00 50.4**	**-3.9**
BLCB	**Balcova**	**2.83**	**342**	Pn	**Pb**	**14 00 50.8**	**-3.8**
ISP	**Isparta**	**2.83**	**41**	P	**Pb**	**14 00 52.1**	**-2.6**
KULA	**Kula-Manisa**	**2.83**	**8**	Pn	**Pn**	**14 00 50.3**	**+0.9**
ZEYE	**Izmir, Urla-Ze**	**2.87**	**333**	P	**Pn**	**14 00 49.8**	**+0.1**
ZEYE				S	**Sn**	**14 01 26.1**	**+1.8**
GORD	**Gordes-Manisa**	**3.20**	**360**	Pn	**Pn**	**14 00 55.6**	**+1.2**
OSC1	**CSNet OBS 1**	**3.37**	**130**	P	**Pn**	**14 00 56.9**	**+0.2**
OSC1				S	**Sn**	**14 01 38.9**	**+2.2**
OSC1				AML	AML	14 01 44.0	
	0.1nm,0.4s						
OSC1				AML	AML	14 01 44.2	
	0.1nm,0.4s						
GAZI	**Gazipasa**	**3.40**	**80**	Pn	**Pn**	**14 00 57.6**	**+0.5**
SEYD	**Seydisehir-KON**	**3.40**	**59**	Pn	**Pn**	**14 00 58.9**	**+1.6**
IMMV	**Iera Moni Meta**	**3.43**	**267**	P	**Pb**	**14 01 00.8**	**-4.0**
IMMV	**Iera Moni Meta**	**3.43**	**267**	Pn	**Pb**	**14 01 01.7**	**-3.2**
SIMA	**Simav-Kutahya**	**3.44**	**11**	Pn	**Pn**	**14 00 58.8**	**+1.1**
AKMS	**Akamas**	**3.47**	**100**	P	**Pn**	**14 00 57.7**	**-0.3**
AKMS				S	**Sn**	**14 01 40.3**	**+1.1**
AKMS				AML	AML	14 01 42.2	
	0.3nm,0.4s						
AKMS				AML	AML	14 01 44.9	
	0.3nm,0.5s						
AKMS	**Akamas**	**3.47**	**100**	P	**Pn**	**14 00 57.9**	**-0.2**
ALFC	**Alefka**	**3.65**	**97**	P	**Pn**	**14 01 00.0**	**-0.6**
ALFC				S	**Sn**	**14 01 44.9**	**+1.1**
ALFC				AML	AML	14 01 50.2	
	0.3nm,0.6s						
ALFC				AML	AML	14 01 53.9	
	0.2nm,0.4s						
HDMB	**Hadim**	**3.70**	**69**	Pn	**Pn**	**14 01 03.7**	**+2.2**
NATA	**Nata**	**3.71**	**103**	P	**Pn**	**14 01 01.8**	**+0.4**
NATA				S	**Sn**	**14 01 46.9**	**+1.7**
NATA				AML	AML	14 01 49.7	
	0.7nm,1.0s						
NATA				AML	AML	14 01 56.7	
	0.8nm,0.4s						
TVSB	**Tavsanli**	**3.88**	**15**	Pn	**Pn**	**14 01 05.2**	**+1.4**
TROD	**Troodos**	**3.91**	**100**	P	**Pn**	**14 01 04.0**	**-0.3**
TROD				S	**Sn**	**14 01 51.5**	**+1.2**
TROD				AML	AML	14 02 00.4	
	0.2nm,0.6s						
TROD				AML	AML	14 02 01.2	
	0.2nm,0.5s						
SIGR	**SIGRI**	**3.96**	**333**	Pn	**Pn**	**14 01 05.4**	**+0.6**
APOL	**The Sanctuary**	**3.97**	**104**	P	**Pn**	**14 01 05.1**	**+0.1**
APOL				S	**Sn**	**14 01 52.7**	**+1.1**
APOL				AML	AML	14 01 55.0	
	0.2nm,0.6s						
APOL				AML	AML	14 02 04.2	
	0.2nm,0.7s						
XYLS	**Xyliatos**	**4.04**	**98**	P	**Pn**	**14 01 05.7**	**-0.2**
XYLS				S	**Sn**	**14 01 54.5**	**+1.1**
XYLS				AML	AML	14 01 59.7	
	0.1nm,0.3s						
XYLS				AML	AML	14 02 02.8	
	0.2nm,0.5s						
ASGA	**Asgata**	**4.25**	**101**	P	**Pn**	**14 01 08.6**	**-0.2**
ASGA				S	**Sn**	**14 02 00.1**	**+1.7**
ASGA				AML	AML	14 02 02.3	
	0.1nm,0.6s						
ASGA				AML	AML	14 02 09.7	
	0.2nm,0.4s						
CSS	**Mathiatis**	**4.28**	**98**	P	**Pn**	**14 01 09.1**	**-0.1**
CSS				S	**Sn**	**14 02 01.1**	**+1.9**
CSS				AML	AML	14 02 03.0	
	0.1nm,0.9s						
CSS				AML	AML	14 02 08.2	
	0.1nm,0.6s						
CSS	**Mathiatis**	**4.28**	**98**	P	**Pn**	**14 01 08.9**	**-0.3**
OSC2	**CSNet OBS 4**	**4.28**	**127**	P	**Pn**	**14 01 10.5**	**+1.3**
OSC2				AML	AML	14 02 08.1	
	0.2nm,1.2s						
MVOU	**Mavrovouni**	**4.51**	**97**	P	**Pn**	**14 01 12.7**	**+0.4**
MVOU				S	**Sn**	**14 02 07.2**	**+2.3**
MVOU				AML	AML	14 02 09.3	
	0.1nm,0.9s						
MVOU				AML	AML	14 02 11.5	
	0.1nm,0.4s						
BRTR	**Keskin Array B**	**5.90**	**46**	Pn	**Pn**	**14 01 30.8**	**-0.9**
	0.2nm,0.3s,baz=213,slow=16,SNR=5.8						
BRTR				Sn	**Sn**	**14 02 37.8**	**-1.7**
	1.0nm,0.3s,baz=216,slow=27,SNR=12						
	0.8nm,0.5s						
HNTI	**Hanita**	**6.35**	**112**	P	**Pn**	**14 01 37.8**	**+0.2**
HNTI				S	**Sn**	**14 02 48.4**	**-1.8**
HWQ	**Hawqa**	**6.53**	**100**	*e*P	**Pn**	**14 01 39.6**	**-0.7**
MMA0B	**Mount Meron ar**	**6.55**	**112**	P	**Pn**	**14 01 41.1**	**+0.6**
MMA0B				S	**Sn**	**14 02 53.6**	**-1.6**
MMAI	**Mount Meron Ar**	**6.55**	**112**	Pn	**Pn**	**14 01 40.3**	**-0.2**
	6.9nm,0.3s,baz=326,slow=13,SNR=23						
MMAI				Sn	**Sn**	**14 02 53.2**	**-2.0**
	5.0nm,0.3s,baz=313,slow=32,SNR=5.9						
	2.6nm,0.3s						
QRWL	**Qaraoun**	**6.55**	**107**	*e*P	**Pn**	**14 01 40.2**	**-0.3**
ZAHL	**Zahle**	**6.60**	**104**	*e*P	**Pn**	**14 01 39.9**	**-1.4**
BEIL	**Beino**	**6.66**	**98**	*e*P	**Pn**	**14 01 40.7**	**-1.3**
GEM	**Giv'at Ha'Em**	**6.66**	**110**	P	**Pn**	**14 01 42.1**	**+0.1**
GEM				S	**Sn**	**14 02 57.1**	**-0.9**
RCY	**Rachaya**	**6.69**	**107**	*e*P	**Pn**	**14 01 41.6**	**-0.8**
NATI	**Neve Ativ**	**6.70**	**109**	P	**Pn**	**14 01 42.8**	**+0.4**
NATI				S	**Sn**	**14 02 57.4**	**-1.4**
MMLI	**Mount Malkishu**	**6.84**	**116**	P	**Pn**	**14 01 44.8**	**+0.5**
SALP	**Salfit**	**6.87**	**120**	P	**Pn**	**14 01 45.0**	**+0.2**
SALP				S	**Sn**	**14 03 01.6**	**-1.4**
KSHT	**Keshet**	**6.87**	**111**	P	**Pn**	**14 01 45.1**	**+0.2**
KSHT				S	**Sn**	**14 03 02.4**	**-0.8**
FKH	**Fakeheh**	**6.91**	**100**	*e*P	**Pn**	**14 01 45.0**	**-0.5**
AMAZ	**Amatzia**	**6.99**	**125**	P	**Pn**	**14 01 46.7**	**+0.2**
AMAZ				S	**Sn**	**14 03 04.9**	**-1.2**
HMDT	**Nahal Hemdat**	**7.01**	**117**	P	**Pn**	**14 01 46.8**	**+0.1**
KZIT	**Kziot**	**7.07**	**131**	P	**Pn**	**14 01 47.9**	**+0.3**
KZIT				S	**Sn**	**14 03 04.1**	**-3.8**
YTIR	**Yattir**	**7.23**	**125**	P	**Pn**	**14 01 49.9**	**+0.1**
YTIR				S	**Sn**	**14 03 09.4**	**-2.7**
DSI	**Dead Sea**	**7.28**	**122**	P	**Pn**	**14 01 51.5**	**+1.0**
DSI				S	**Sn**	**14 03 11.9**	**-1.3**
MSBI	**Mazada**	**7.42**	**124**	P	**Pn**	**14 01 52.6**	**+0.3**
RMNI	**Mount Ramon**	**7.51**	**131**	P	**Pn**	**14 01 53.9**	**+0.2**
ZFRI	**Zfri**	**7.80**	**129**	P	**Pn**	**14 01 57.1**	**-0.4**
KRMI	**Paran Flat**	**7.83**	**134**	P	**Pn**	**14 01 58.0**	**0.0**
KRMI				S	**Sn**	**14 03 23.9**	**-2.8**
PRNI	**Paran**	**7.83**	**131**	P	**Pn**	**14 01 57.8**	**-0.2**
PRNI				S	**Sn**	**14 03 23.9**	**-2.8**
ASF	**Jabal al Asfar**	**8.05**	**113**	Pn	**Pn**	**14 02 01.1**	**0.0**
	0.6nm,0.3s,baz=297,slow=23,SNR=6.8						
ASF				Sn	**Sn**	**14 03 31.4**	**-1.0**
	0.5nm,0.3s,baz=315,slow=22,SNR=5.5						
	1.2nm,0.3s						
HRFI	**Mount Harif**	**8.07**	**132**	P	**Pn**	**14 02 02.1**	**+0.7**
HRFI				S	**Sn**	**14 03 29.7**	**-3.1**
EIL	**Elat**	**8.29**	**135**	Pn	**Pn**	**14 02 04.5**	**+0.2**
	1.0nm,0.3s,baz=23,slow=3.1,SNR=10						
EIL				Sn	**Sn**	**14 03 34.1**	**-4.0**
	1.6nm,0.3s,baz=69,slow=5.3,SNR=7.0						
	3.9nm,0.4s						
EIL	**Elat**	**8.29**	**135**	P	**Pn**	**14 02 04.1**	**-0.2**
EIL				S	**Sn**	**14 03 34.4**	**-3.6**
MLR	**Muntele Rosu**	**9.92**	**351**	Pn	**Pn**	**14 02 28.3**	**+1.5**
	0.1nm,0.3s,baz=127,slow=20,SNR=2.0						
MLR				LR	LR	14 06 46.6	
	comp=Z,129nm,20.4s,baz=102,slow=41						
	2.4nm,0.7s						
GNI	**Garni**	**13.81**	**66**	LR	LR	14 09 58.8	
	comp=Z,57nm,19.9s,baz=282,slow=44						
AKASG	**Malin Array Be**	**15.01**	**3**	Pn	**Pn**	**14 03 36.1**	**-0.1**
	0.5nm,0.3s,baz=194,slow=12,SNR=6.4						
AKASG				LR	LR	14 10 01.1	
	comp=Z,39nm,21.6s,baz=208,slow=40						
	0.2nm,0.3s						
KEST	**Kesra**	**15.30**	**276**	Pn	**P**	**14 03 43.6**	**-1.4**
	0.2nm,0.3s,baz=20,slow=13,SNR=3.9						
	5.2nm,0.9s						
KBA	**Koelnbreinsper**	**15.88**	**320**	*e*pP	pP	14 03 55.1	+1.5
	16nm,1.3s						
VRAC	**Vranov**	**16.03**	**332**	Pn	**P**	**14 03 53.3**	**+0.4**
	0.6nm,0.3s,baz=160,slow=6.8,SNR=3.7						
VRAC				LR	LR	14 11 05.4	
	comp=Z,60nm,19.8s,baz=167,slow=41						
	1.8nm,0.3s						
ABTA	**Abfaltersbach**	**16.11**	**318**	*i* pP	**P**	**14 03 56.9**	**+2.9**
	4.7nm,0.8s						
LESA	**Schwarzleotal**	**16.45**	**320**	*i* pP	**P**	**14 04 01.3**	**+3.6**
	10nm,1.3s						
WTTA	**Wattenberg**	**16.90**	**318**	*i* pP	**P**	**14 04 06.5**	**+3.7**
	4.1nm,0.7s						
GERES	**GERESS Array B**	**16.91**	**325**	Pn	**P**	**14 04 04.5**	**+1.7**
	baz=166,slow=12,SNR=4.9						
GERES				LR	LR	14 10 06.2	
	comp=Z,48nm,18.5s,baz=54,slow=36						
	0.4nm,0.3s						
WATA	**Walderalm**	**16.98**	**318**	*e*pP	**P**	**14 04 06.7**	**+3.1**
	10nm,1.1s						
SQTA	**Sankt Quirin**	**17.11**	**317**	*e*pP	**P**	**14 04 07.8**	**+2.8**
	4.8nm,0.7s						
MOTA	**Moosalm**	**17.24**	**318**	*e*pP	**P**	**14 04 10.1**	**+3.6**
	11nm,1.2s						
FETA	**Feichten**	**17.26**	**316**	*i* pP	**P**	**14 04 09.8**	**+3.1**
	23nm,1.0s						
RETA	**Reutte**	**17.51**	**318**	*i* Pn	**P**	**14 04 11.2**	**+1.8**
	6.2nm,1.3s						
DAVOX	**Davos/Dischmat**	**17.61**	**315**	LR	LR	14 11 30.8	
	comp=Z,73nm,20.8s,baz=254,slow=39						
DAVA	**Damuels**	**17.89**	**316**	*e*P	**P**	**14 04 14.7**	**+1.0**
	7.2nm,1.0s						
ESDC	**Sonseca Array**	**25.67**	**289**	P	**P**	**14 05 35.0**	**+0.9**
	1.7nm,0.8s,baz=78,slow=9.8,SNR=10						
	1.7nm,0.8s						
FINES	**FINESS Array B**	**25.80**	**358**	P	**P**	**14 05 34.9**	**0.0**
	0.9nm,0.7s,baz=157,slow=10,SNR=3.5						
	0.9nm,0.7s						
HFS	**Hagfors**	**26.18**	**344**	LR	LR	14 18 32.6	
	comp=Z,31nm,18.6s,baz=183,slow=42						
NOA	**NORSAR Array B**	**27.57**	**342**	LR	LR	14 18 09.2	
	comp=Z,22nm,18.7s,baz=135,slow=39						
EKA	**Eskdalemuir Ar**	**29.07**	**322**	P	**P**	**14 06 05.4**	**+1.1**
	0.1nm,0.4s,baz=126,slow=10,SNR=1.8						
	0.1nm,0.4s						
TORD	**Torodi Ar. Bea**	**32.76**	**233**	P	**P**	**14 06 38.5**	**+1.2**
	0.8nm,0.6s,baz=35,slow=8.5,SNR=6.3						
	0.8nm,0.6s						
AAK	**Ala-Archa**	**36.20**	**65**	LR	LR	14 24 15.0	
	comp=Z,38nm,19.8s,baz=269,slow=40						
MKAR	**Makanchi Array**	**41.41**	**57**	P	**P**	**14 07 50.6**	**+0.1**
	0.6nm,0.5s,baz=274,slow=7.5,SNR=13						
	0.6nm,0.5s						

*JMA **27** 14:03:20.5±0.3,44˚N±1˚×14˚7E±˚, h21km, MV3.9/29, E OFF HOKKAIDO*
*SKHL **27** 14:03:22.2±0.1,44˚.00N×147˚.40E, h49km±8km, mb4.8/3*
ISC 27 14:03:23.4±1.4, 43°.91N±0°.09×147°.35E±0°.09, h63km, n21, σ1°82/28, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHO	**Shikotan**	**0.38**	**263**	*e*P	Pn	14 03 43.0	+8.6
SHO				AMB	AMB	14 03 44.0	
	260nm,0.2s						
SHO				*e*S	**Sn**	**14 03 50.0**	**+7.6**
SHO				A	A	14 03 51.1	
	3μm,0.3s						
SHO				A	A	14 03 51.1	
	2μm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.08**	**277**	*e*P	**Pn**	**14 03 40.9**	**-1.7**
YUK				AMB	AMB	14 03 42.6	
	570nm,0.2s						
YUK				*e*S	**Sn**	**14 03 55.0**	**-1.8**
YUK				A	A	14 03 57.5	
	2μm,0.3s						
YUK				A	A	14 03 57.5	
	3μm,0.3s						
NEM2	**Nemuro 2**	**1.29**	**245**	P	**Pn**	**14 03 44.0**	**-1.3**
NEM2				*e*S	**Sn**	**14 04 01.0**	**-0.7**
NMR	**Nemuro--Hokkai**	**1.30**	**246**	*i* P	**Pn**	**14 03 44.0**	**-1.4**
NMR				*e*S	**Sn**	**14 04 00.8**	**-1.1**
GLVR	**Golovnino**	**1.34**	**263**	*e*P	**Pn**	**14 03 45.0**	**-0.9**
GLVR				AMB	AMB	14 03 45.2	
	110nm,0.2s						
GLVR				*e*S	**Sn**	**14 04 02.1**	**-0.7**
GLVR				A	A	14 04 06.0	
	1μm,0.3s						
GLVR				A	A	14 04 06.0	
	510nm,0.3s						
KUR	**Kuril'sk**	**1.37**	**15**	*e*P	Pn	14 03 42.1	-4.3
KUR				AMB	AMB	14 03 42.7	
	60nm,0.2s						
KUR				*e*S	Sn	14 03 56.9	-6.7
KUR				A	A	14 03 57.7	
	920nm,0.2s						
KUR				A	A	14 03 57.7	
	560nm,0.2s						
JRA	**Rausu**	**1.61**	**272**	P	**Pn**	**14 03 49.1**	**-0.5**
JRA				*e*S	**Sn**	**14 04 10.0**	**+0.7**
JNSB	**Nemuroshibetsu**	**1.70**	**266**	P	**Pn**	**14 03 50.5**	**-0.3**
JKHN	**Kushirohamanak**	**1.80**	**243**	P	**Pn**	**14 03 51.4**	**-0.7**
JKHN				S	**Sn**	**14 04 14.4**	**+0.5**
JNK	**Nakash**	**1.94**	**261**	P	**Pn**	**14 03 53.6**	**-0.4**
AKK	**Akkeshi**	**2.04**	**245**	*e*P	**Pn**	**14 03 54.7**	**-0.6**
JAK	**Akkeshi**	**2.14**	**246**	P	**Pn**	**14 03 56.0**	**-0.8**
JTKR	**Abashiri--Toko**	**2.49**	**272**	P	**Pn**	**14 04 01.4**	**-0.1**
JAR	**Ashorobuto**	**2.67**	**258**	P	**Pn**	**14 04 04.5**	**+0.5**
JAR				S	**Sn**	**14 04 37.6**	**+2.4**
JOB	**Onbets**	**2.75**	**250**	P	**Pn**	**14 04 05.5**	**+0.4**
JOB				S	**Sn**	**14 04 38.0**	**+0.8**
JMP	**Maruseppu**	**2.88**	**273**	P	**Pn**	**14 04 07.0**	**0.0**
JCH	**Churui**	**3.19**	**247**	P	**Pn**	**14 04 11.1**	**0.0**
JSE	**Soyaes**	**3.57**	**289**	*e*P	**Pn**	**14 04 17.4**	**+1.2**
YSS	**Yuzhno-Sakhali**	**4.44**	**315**	*e*P	**Pn**	**14 04 26.9**	**-1.2**
SKR	**Severo-Kuril's**	**9.01**	**38**	*e*P	**Pn**	**14 05 29.9**	**-0.7**
PAU	**Pauzhetka**	**9.88**	**37**	*e*P	**Pn**	**14 05 42.3**	**-0.2**

*NIED **27** 14:11:09.3,34˚.20N×139˚.25E, h12km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr~3.76; Mθθ1.77; Mϕϕ 1.98; Mrθ0.38; Mrϕ-3.32; Mθϕ0.17; Fault plane solution: M₀4.51000×10¹⁴ NP1: ϕs145.00000°,δ45.00000°,λ-77.00000°. NP2: ϕs307.00000°,δ47.00000°,λ-103.00000°.*
*JMA **27** 14:11:09.3±0.1,34˚.2N±0˚.2×139˚.3E±0˚.4, h12km±1km, MV3.4/38, NEAR NIIJIMA ISLAND*
JMA Felt II J1 at NEAR NIIJIMA ISLAND .
*IDC **27** 14:11:13.4±0.7,34˚.10N×139˚.37E, h58km±9km, mb2.9/5, mbtmp3.4/8, MS2.6/2, Error ellipse: s-maj=23.1km s-min=6.2km az=70.0*
ISC 27 14:11:08.9±0.8, 34°.19N±0°.03×139°.28E±0°.05, h14km±6km, n28, σ1°02/28, mb3.4/5, 5D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKO	**Kozu shima**	**0.12**	**271**	P	**Pg**	**14 11 12.2**	**-0.2**
JSKK	**Shikinejimakit**	**0.16**	**338**	*i* P	**Pg**	**14 11 12.6**	**-0.4**
JSKK				*e*S	**Sg**	**14 11 15.0**	**-0.6**
JNIO	**Niijimaoohara**	**0.17**	**357**	P	**Pg**	**14 11 12.9**	**-0.2**
JNIO				S	**Sg**	**14 11 15.6**	**-0.2**
JMYK	**Miyake Tsubota**	**0.25**	**120**	P	**Pb**	**14 11 15.2**	**+0.1**
JMYK				*e*S	**Sb**	**14 11 20.1**	**+0.7**
JTHY	**Toshimahigashi**	**0.34**	**1**	*i* P	**Pg**	**14 11 16.2**	**+0.4**
JTHY				*e*S	**Sg**	**14 11 22.0**	**+1.4**
JMKN	**Mikurajimanish**	**0.39**	**139**	P	**Pb**	**14 11 17.8**	**+0.3**
JMKN				S	**Sb**	**14 11 23.9**	**+0.6**
JIM2	**Oshima 3**	**0.55**	**13**	P	**Pg**	**14 11 19.9**	**+0.2**
JIM2				*e*S	**Sg**	**14 11 27.4**	**+0.4**
JIZS	**Izushimoda**	**0.63**	**328**	*i* P	**Pg**	**14 11 20.7**	**-0.5**
KTJ3	**Kamata3**	**0.77**	**347**	*i* P	**Pb**	**14 11 23.1**	**-1.0**
JSG	**Sagara**	**1.03**	**299**	P	**Pb**	**14 11 29.3**	**+0.8**
JOD2	**Odawara 2**	**1.09**	**352**	P	**Pb**	**14 11 28.8**	**-0.7**
JHJ	**Hachijo jima 2**	**1.14**	**158**	P	**Pn**	**14 11 30.8**	**+0.4**
	139nm,0.4s,baz=343,slow=15,SNR=16						
JHJ				S	**Sg**	**14 11 46.4**	**+0.6**
	259nm,0.3s,baz=233,slow=22,SNR=12						
MJAR	**Matsushiro Arr**	**2.51**	**340**	P	**Pn**	**14 11 51.2**	**+2.0**
	39nm,0.6s,baz=170,slow=15,SNR=88						
MJAR				S	**Sb**	**14 12 24.4**	**-0.1**
	36nm,0.7s,baz=153,slow=26,SNR=10						
JNU	**Nakatsue**	**7.09**	**264**	P	**Pn**	**14 12 54.0**	**+1.7**
	9.8nm,0.7s,baz=66,slow=3.6,SNR=14						
ASAJ	**Asahikawa**	**10.24**	**14**	P	**Pn**	**14 13 36.5**	**+1.1**
	4.6nm,0.8s,baz=175,slow=12,SNR=5.0						
JOW	**Kunigami**	**11.99**	**235**	LR	LR	14 18 26.0	
	comp=Z,30nm,20.2s,baz=230,slow=36						
KLR	**Kul'dur**	**16.04**	**342**	LR	LR	14 21 05.7	
	comp=Z,18nm,18.4s,baz=134,slow=37						
H11N2	**WAKE ISLAND Hy**	**28.40**	**113**	T	T	14 46 41.8	
	baz=307,slow=75,SNR=76						
H11N1	**WAKE ISLAND Hy**	**28.41**	**113**	T	T	14 46 41.1	
	baz=307,slow=75,SNR=42						
H11N3	**WAKE ISLAND Hy**	**28.42**	**113**	T	T	14 46 56.9	
	baz=307,slow=75,SNR=33						
MKAR	**Makanchi Array**	**44.22**	**304**	P	**P**	**14 19 18.2**	**+0.6**
	0.2nm,0.6s,baz=88,slow=9.2,SNR=3.8						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**46.44**	**310**	P	**P**	**14 19 35.4**	**+0.4**
	0.3nm,0.7s,baz=87,slow=7.5,SNR=2.9						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**54.03**	**186**	P	**P**	**14 20 31.4**	**-1.4**
	0.2nm,0.4s,baz=0.3,slow=7.4,SNR=9.2						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**57.76**	**186**	P	**P**	**14 20 56.8**	**-2.7**
	0.1nm,0.6s,baz=4.8,slow=6.9,SNR=1.3						
	0.1nm,0.6s						
YKA	**Yellowknife Ar**	**67.14**	**29**	P	**P**	**14 22 00.9**	**-0.8**
	0.1nm,0.4s,baz=304,slow=7.1,SNR=4.5						
	0.1nm,0.4s						
H03N2	**Juan Fernandez**	**148.36**	**100**	T	T	17 16 43.2	
	baz=285,slow=75,SNR=4.5						
H03N3	**Juan Fernandez**	**148.37**	**100**	T	T	17 16 37.1	
	baz=285,slow=75,SNR=6.9						
H03N1	**Juan Fernandez**	**148.38**	**100**	T	T	17 16 39.6	
	baz=285,slow=75,SNR=5.6						

*CATAC **27** 14:15:22.7±0.7, 14˚N±4˚×9˚2W±˚, h31km±6km, M3.4/8, MLv3.4/8, Error ellipse: s-maj=11.0km s-min=6.4km az=52.1, confirmed*
*GCG **27** 14:15:24.2±0.9, 14˚.22N×91˚.76W, h50km±13km, MD4.0, ML4.4, Presumed earthquake*
*SNET **27** 14:15:24.4±1.2, 14˚.18N×91˚.73W, h30km±59km, ML3.5, Presumed earthquake*
ISC 27 14:15:24.8±2.2, 14°.15N±0°.10×91°.7W±0°.1, h53km±14km, n30, σ2°03/42, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTAL	**Retalhuleu**	**0.38**	**7**	P	**Pn**	**14 15 34.3**	**-0.6**
RTAL				S	**Sn**	**14 15 43.3**	**+1.2**
STG2	**El Palmar, Qui**	**0.45**	**51**	*i* P	**Pn**	**14 15 35.9**	**+0.1**
STG2				IAML		14 15 46.8	
	comp=E,45μm,0.4s						
STG5	**El Palmar, Qui**	**0.46**	**56**	*i* P	**Pn**	**14 15 35.6**	**-0.2**
STG8	**El Palmar, Qui**	**0.48**	**52**	*i* P	**Pn**	**14 15 36.5**	**+0.3**
STG8				*i* S	**Sn**	**14 15 46.3**	**+1.9**
STG8				IAML		14 15 47.9	
	comp=N,15μm,0.3s						
SOKI	**Kika Raxquin**	**0.74**	**26**	*i* P	**Pn**	**14 15 38.9**	**-0.6**
SOKI				*i* S	**Sn**	**14 15 50.6**	**+0.3**
QUEO	**Labor Ovalle**	**0.75**	**17**	*i* P	**Pn**	**14 15 39.2**	**-0.4**
QUEO				*i* S	**Sn**	**14 15 50.5**	**+0.2**
SMCA	**Catarina**	**0.77**	**335**	*i* P	**Pn**	**14 15 37.5**	**-2.1**
FG8	**Yepocapa, Chim**	**1.15**	**84**	*i* P	**Pn**	**14 15 39.9**	**-4.8**
HUEH	**Huehuetenango**	**1.18**	**11**	*e*P	**Pn**	**14 15 45.2**	**-0.1**
FG16	**Alotenango, Sa**	**1.20**	**84**	*i* P	**Pn**	**14 15 41.1**	**-4.3**
FG16				*i* S	**Sn**	**14 15 54.9**	**-5.9**
FG16				IAML		14 15 57.4	
	comp=N,20μm,0.2s						
QUIS	**Sacapulas**	**1.30**	**29**	*i* P	**Pn**	**14 15 46.8**	**+0.1**
PCG5	**San Vicente Pa**	**1.32**	**87**	*i* P	**Pn**	**14 15 43.8**	**-3.3**
PCG5				*i* S	**Sn**	**14 15 59.3**	**-4.4**
APG	**El Apazote**	**1.50**	**55**	*i* P	**Pn**	**14 15 50.0**	**+0.4**
FAME	**Alcaldia de Sa**	**1.70**	**100**	P	**Pn**	**14 15 51.5**	**-0.6**
LOAL	**Lomas de Alarc**	**1.91**	**94**	*e*S	**Sn**	**14 16 19.2**	**+1.3**
NUBE	**Las Nubes**	**1.92**	**97**	P	**Pn**	**14 15 55.4**	**+0.2**
NUBE				S	**Sn**	**14 16 18.1**	**-0.2**
NUBE	**Las Nubes**	**1.92**	**97**	*i* P	**Pn**	**14 15 55.2**	**0.0**
NUBE	**Las Nubes**	**1.92**	**97**	*e*P	**Pn**	**14 15 55.4**	**+0.2**
CEVE	**Cerro Verde**	**2.08**	**99**	P	**Pn**	**14 15 58.3**	**+0.8**
CEVE				S	**Sn**	**14 16 24.7**	**+2.4**
CEVE	**Cerro Verde**	**2.08**	**99**	*e*P	**Pn**	**14 15 58.3**	**+0.8**
CEVE				*e*S	**Sn**	**14 16 25.0**	**+2.7**
CEVE				IAML		14 16 33.9	
	comp=Z,339nm,0.4s						
UNIC	**Universidad Ca**	**2.13**	**94**	S	**Sn**	**14 16 25.5**	**+2.1**
JAYA	**Jayaque - finc**	**2.28**	**102**	P	**Pn**	**14 16 00.5**	**+0.4**
JAYA	**Jayaque - finc**	**2.28**	**102**	*i* P	**Pn**	**14 16 00.4**	**+0.2**
JAYA	**Jayaque - finc**	**2.28**	**102**	*e*P	**Pn**	**14 16 00.4**	**+0.2**
JAYA				*e*S	**Sn**	**14 16 27.0**	**-0.1**
MTO3	**Montecristo**	**2.32**	**84**	P	**Pn**	**14 16 00.6**	**-0.1**
MTO3				S	**Sn**	**14 16 30.5**	**+2.3**
MTO3	**Montecristo**	**2.32**	**84**	*e*P	**Pn**	**14 16 00.7**	**-0.1**
PMON	**Piamonte**	**2.40**	**100**	S	**Sn**	**14 16 31.2**	**+1.3**
COEG	**Centro de Oper**	**2.83**	**100**	S	**Sn**	**14 16 42.2**	**+1.7**
P5NO	**Presa 5 de nov**	**2.90**	**93**	P	**Pn**	**14 16 08.5**

INTP			eS		Sn	14 21 47.0	-0.6
YUSH	**Yuscaran**	**1.85 351**	P		**Pn**	**14 21 22.4**	**+0.7**
YUSH			S		**Sn**	**14 21 48.2**	**-0.1**
TGUH	**Tegucigalpa,Un**	**2.05 340**	P		**Pn**	**14 21 24.4**	**+0.3**
TGUH			S		**Sn**	**14 21 52.3**	**-0.2**
PACA	**Pacayal**	**2.19 308**	P		**Pn**	**14 21 25.7**	**+0.1**
PACA			S		**Sn**	**14 21 56.3**	**+1.0**
SIUN	**Universidad Ur**	**2.35 47**	P		**Pn**	**14 21 27.6**	**+0.4**
CMARA	**Lajas Hojancha**	**2.36 152**	P		**Pn**	**14 21 27.9**	**+0.4**
CMARA			S		**Sn**	**14 21 56.9**	**-1.8**
JTS	**Las Juntas de**	**2.40 139**	P		**Pn**	**14 21 29.3**	**+1.4**
JTS			S		**Sn**	**14 21 58.2**	**-1.2**
MARCA	**Marcala la Paz**	**2.49 325**	P		**Pn**	**14 21 29.7**	**+0.6**
COEG	**Centro de Oper**	**2.72 303**	P		**Pn**	**14 21 31.7**	**-0.2**
PAVA	**Las Pavas**	**2.82 304**	P		**Pn**	**14 21 33.1**	**+0.1**
P5NO	**Presa 5 de nov**	**2.84 311**	P		**Pn**	**14 21 33.2**	**-0.1**
LFRS	**El Faro**	**2.87 302**	eS		**Sn**	**14 22 09.1**	**-0.7**
PMON	**Piamonte**	**3.13 301**	P		**Pn**	**14 21 37.6**	**+0.7**
PMON			S		**Sn**	**14 22 14.7**	**-0.8**
JAYA	**Jayaque - finc**	**3.21 299**	P		**Pn**	**14 21 38.3**	**+0.3**
JAYA			S		**Sn**	**14 22 16.6**	**-1.0**
JAYA	**Jayaque - finc**	**3.21 299**	eP		**Pn**	**14 21 38.4**	**+0.3**
JAYA			eS		**Sn**	**14 22 15.7**	**-1.8**
CEVE	**Cerro Verde**	**3.45 300**	eP		**Pn**	**14 21 41.4**	**+0.3**
CEVE			eS		**Sn**	**14 22 22.1**	**-0.8**
CEVE			IAML			14 22 29.8	
	comp=Z,184nm,0.3s						
NUBE	**Las Nubes**	**3.62 300**	P		**Pn**	**14 21 43.4**	**+0.3**
FAME	**Alcaldia de Sa**	**3.79 297**	P		**Pn**	**14 21 45.7**	**+0.5**

BJI ***27*** *14:32:39.3,0.76S×133.96E,h10km,mB5.3/53,mb4.8/77, Ms5.2/82,Ms7 4.9/78*

MOS ***27*** *14:32:46.9±1.3,0.16N×133.56E,h15km,mb5.4/40, MS4.8/9, Error ellipse: s-maj=9.1km s-min=5.4km az=111.4*

IDC ***27*** *14:32:47.0±0.4,0.17N×133.60E,h0km,mb4.7/21, mbtmp4.9/29,ML4.9/6,MS4.6/53,Error ellipse: s-maj=16.4km s-min=9.0km az=74.0*

NEIC ***27*** *14:32:48.2±1.9,0.18N±0.07×133.58E±0.09,h10km±1km, mb5.4/199,Ms_20 4.9/83,Mwb5.4/45,Mww5.6/18,Error ellipse: s-maj=15.4km s-min=11.3km az=81.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=0.05; Mθθ-1.20; Mϕϕ1.26; Mrθ0.01; Mrϕ1.28; Mθϕ0.17; Fault plane solution: M₀1.79000×10¹⁷ NP1:ϕs68.17000°, δ85.21000°,λ2.07000°. NP2:ϕs337.99000°,δ87.93000°, λ175.21000°. Principal axes: T 1.8193, Plg5.0000°, Azm293.0000°; N -0.0665, Plg85.0000°, Azm135.0000°; P -1.7529, Plg2.0000°, Azm23.0000°;*

NEIC ***27*** *14:32:48.4,0.27N×133.70E,h30km,Moment Tensor Solution. Duration: 2s6 Moment tensor: Scale 10¹⁷Nm; Mrr-0.16; Mθθ-1.57; Mϕϕ1.73; Mrθ-1.06; Mϕϕ2.36; Mθϕ0.02; Fault plane solution: M₀3.07000×10¹⁷ NP1: ϕs163.67000°,δ70.86000°,λ-173.31000°. NP2: ϕs71.46000°, δ83.68000°,λ-19.27000°. Principal axes: T 3.0315, Plg9.0000°, Azm119.0000°; N 0.0796, Plg70.0000°, Azm234.0000°; P -3.1112, Plg18.0000°, Azm26.0000°;*

NEIC ***27*** *14:32:48.4,0.17N×133.60E,h30km*

NEIC ***27*** *14:32:48.4,0.18N×133.62E,h10km*

PTWC ***27*** *14:32:50,0.00N×133.60E,h10km,Mwp5.8/10,PAPUA REGION, INDONESIA*

GFZ ***27*** *14:32:50.1,0.19N×133.54E,h18km,MW5.5,Moment Tensor Solution. s97 Moment tensor: Mrr0.06; Mθθ-1.56; Mϕϕ 1.50; Mrθ0.27; Mθϕ1.29; Mrr0.06; Fault plane solution: NP1:ϕs335.00000°,δ82.00000°, λ-178.00000°. NP2:ϕs244.00000°,δ88.00000°, λ-7.00000°. Principal axes: T 1.9800, Plg4.0000°, Azm290.0000°; N 0.0800, Plg82.0000°, Azm56.0000°; P -2.0600, Plg6.0000°, Azm199.0000°;*

GCMT ***27*** *14:32:51.2±0.1,0.29N±0.01×133.50E±0.01,h25km, MW5.6/145,Moment Tensor Solution. s125,c217; s145,c269; Duration: 1s5 Moment tensor: Scale 10¹⁷ Nm; Mrr-0.07±.04; Mθθ-2.33±.03; Mϕϕ2.40±.04; Mrθ0.21±.08; Mrϕ1.86±.03; Mθϕ0.32±.09; Best double couple: M₀3.03200×10¹⁷ NP1:ϕs334.00000°,δ84.00000°, λ176.00000°. NP2:ϕs64.00000°,δ87.00000°,λ6.00000°. Principal axes: T 3.0880, Plg7.0000°, Azm289.0000°; N -0.1100, Plg83.0000°, Azm94.0000°; P -2.9770, Plg2.0000°, Azm199.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 14:32:49.2±0.2,0.17N±0.03×133.62E±0.03,h10km,n955, σ1s63/690,mb5.3/221,MS4.9/126,19C-9D,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
MWPI	**Manokwari, Pap**	**1.17**	**159**	P	**Pb**	**14 33 11.7**		**+0.1**
MWPI				S	**Sg**	**14 33 27.2**		**+0.2**
RKPI	**Ransiki, Papua**	**1.76**	**161**	P	**Pn**	**14 33 19.7**		**-0.1**
RKPI				S	**Sn**	**14 33 41.8**		**-0.5**
SIJI	**Sorong**	**2.56**	**246**	Pn	**Pn**	**14 33 29.1**		**-1.8**
	119nm,0.3s,baz=251,slow=20,SNR=333							
SIJI				Sn	**Sn**	**14 33 58.0**		**-4.3**
	663nm,0.3s,baz=264,slow=23,SNR=10 467nm,0.4s							
SIJI	**Sorong**	**2.56**	**246**	P	**Pn**	**14 33 29.3**		**-1.6**
SWI	**Sorong**	**2.57**	**247**	P	**Pn**	**14 33 29.4**		**-1.5**
BAKI	**Biak**	**2.83**	**118**	P	**Pn**	**14 33 35.9**		**+1.3**
SRPI	**Serui, Papua**	**3.31**	**128**	P	**Pn**	**14 33 42.5**		**+1.3**
SRPI				S	**Sn**	**14 34 21.9**		**+1.2**
FAKI	**Fak Fak**	**3.36**	**204**	P	**Pn**	**14 33 42.5**		**+0.6**
FAKI	**Fak Fak**	**3.36**	**204**		**Pn**	**14 33 41.7**		**-0.1**
FAKI	**Fak Fak**	**3.36**	**204**	P	**Pn**	**14 33 42.3**		**+0.5**
FAKI	**Fak Fak**	**3.36**	**204**	P	**Pn**	**14 33 42.4**		**+0.6**
KMPI	**Kaimana, Papua**	**3.80**	**179**	P	**Pn**	**14 33 49.1**		**+1.1**
BNDI	**Bandanaira**	**5.95**	**218**	P	**Pn**	**14 34 18.4**		**+0.9**
BNDI	**Bandanaira**	**5.95**	**218**	P	**Pn**	**14 34 17.8**		**+0.3**
KRAI	**Karang Ratu**	**6.26**	**236**	P	**Pn**	**14 34 23.6**		**+1.8**
	4.3nm13µm9µm619nm,1.4s							
TNTI	**Ternate**	**6.28**	**276**	P	**Pn**	**14 34 23.1**		**+1.1**
TNTI	**Ternate**	**6.28**	**276**		**Pn**	**14 34 22.1**		**+0.1**
TNTI	**Ternate**	**6.28**	**276**	P	**Pn**	**14 34 22.3**		**+0.3**
TNTI	**Ternate**	**6.28**	**276**	P	**Pn**	**14 34 23.2**		**+1.2**
GENI	**Genyem**	**7.10**	**113**	P	**Pn**	**14 34 33.6**		**+0.3**
GENI	**Genyem**	**7.10**	**113**	P	**Pn**	**14 34 33.7**		**+0.4**
GENI	**Genyem**	**7.10**	**113**	P	**Pn**	**14 34 33.6**		**+0.3**
	2.1nm8µm358nm,1.0s							
NLAI	**Namlea**	**7.34**	**242**	P	**Pn**	**14 34 36.9**		**+0.3**
	1.5nm7µm3µm149nm,1.0s							
JAY	**Jayapura**	**7.57**	**111**	Pn	Pn	14 34 37.0		-2.8
	7.3nm,0.3s,baz=248,slow=9.2,SNR=45							
JAY				Sn	**Sn**	**14 36 00.1**		**-5.7**
	6.1nm,0.3s,baz=313,slow=21,SNR=3.8							
JAY				LR	LR	14 37 43.6		
	comp=Z,6µm,18.3s,baz=304,slow=39 20nm,0.3s							
SANI	**Sanana**	**7.94**	**254**	P	**Pn**	**14 34 43.3**		**-1.5**
SANI	**Sanana**	**7.94**	**254**	P	**Pn**	**14 34 43.1**		**-1.7**
	6µm70nm,0.6s							
SAUI	**Saumlaki**	**8.42**	**196**	P	**Pn**	**14 34 51.8**		**+0.4**
SAUI	**Saumlaki**	**8.42**	**196**		**Pn**	**14 34 50.6**		**-0.8**
SAUI	**Saumlaki**	**8.42**	**196**	P	**Pn**	**14 34 51.6**		**+0.2**
SAUI	**Saumlaki**	**8.42**	**196**	P	**Pn**	**14 34 51.9**		**+0.5**
	20µm12µm685nm,1.4s							
SGSI	**Sangihe**	**8.80**	**293**	P	**Pn**	**14 34 58.2**		**+1.5**
MNI	**Manado**	**8.87**	**278**	P	**Pn**	**14 34 58.2**		**+0.6**
	17µm13µm717nm,1.2s							
DDMP	**Don Marcelino,**	**9.85**	**307**	eP	**Pn**	**14 35 13.8**		**+2.7**
CDOP	**Cateel, Davao**	**10.41**	**317**	eP	**Pn**	**14 35 19.2**		**+0.4**
GSPH	**General Santos**	**10.46**	**304**	*i* P	**Pn**	**14 35 19.9**		**+0.4**
DAV	**Davao City (W)**	**10.55**	**311**	Pn	**Pn**	**14 35 22.3**		**+1.7**
	70nm,0.3s,baz=104,slow=3.7,SNR=27							
DAV	**Davao City (W)**	**10.55**	**311**	P	**Pn**	**14 35 22.5**		**+1.9**
DAV				S	Sn	14 37 29.7		+11
DAV	**Davao City (W)**	**10.55**	**311**	P	**Pn**	**14 35 24.0**		**+3.4**
DAV	**Davao City (W)**	**10.55**	**311**	P	**Pn**	**14 35 21.4**		**+0.8**
GTOI	**Gorontalo**	**10.62**	**273**	P	**Pn**	**14 35 24.7**		**+3.2**
	8µm781nm,1.7s							
BIPH	**Bislig**	**10.76**	**318**	eP	**Pn**	**14 35 22.2**		**-1.3**
BIPH				eS	Sn	14 37 06.1		-18
LUWI	**Luwuk**	**10.91**	**264**	P	**Pn**	**14 35 25.6**		**0.0**
LUWI	**Luwuk**	**10.91**	**264**		**Pn**	**14 35 24.5**		**-1.1**
LUWI	**Luwuk**	**10.91**	**264**	P	**Pn**	**14 35 25.7**		**+0.1**
	6µm9µm727nm,1.8s							
MMPI	**Merauke**	**10.91**	**142**	P	**Pn**	**14 35 27.4**		**+1.8**
TSSP	**Tandag City**	**11.50**	**320**	eP	Pn	14 35 29.2		-4.5
MRSI	**Marisa**	**11.68**	**272**	P	**Pn**	**14 35 37.3**		**+1.2**
KDI	**Kendari**	**11.73**	**249**	P	**Pn**	**14 35 37.7**		**+0.9**
BUTP	**Butuan**	**11.83**	**318**	*i* P	Pn	14 35 36.3		-1.8
APSI	**Ampana**	**12.01**	**265**	P	**Pn**	**14 35 41.3**		**+0.6**
CGP	**Cagayan de Oro**	**12.12**	**313**	eP	**Pn**	**14 35 44.5**		**+2.4**
KKSI	**Kolaka, Sulawe**	**12.71**	**250**	P	**Pn**	**14 35 51.2**		**+1.0**
	2µm98nm,1.4s							
DRS	**Darwin Rock St**	**12.80**	**192**	P	**Pn**	**14 35 50.1**		**-1.4**
KDU	**Kakadu**	**12.82**	**185**	P	**Pn**	**14 35 49.4**		**-2.3**
	comp=Z,59nm,0.6s,comp=Z,0.0nm							
TOLI2	**Tolitoli**	**12.87**	**274**	P	**Pn**	**14 35 52.1**		**-0.3**
TOLI2	**Tolitoli**	**12.87**	**274**		**Pn**	**14 35 51.1**		**-1.3**
TOLI2	**Tolitoli**	**12.87**	**274**	P	**Pn**	**14 35 51.7**		**-0.7**
MTN	**Manton Dam**	**13.16**	**191**	P	**Pn**	**14 35 53.4**		**-3.0**
	comp=Z,363nm,0.5s,comp=Z,0.0nm							
MTN	**Manton Dam**	**13.16**	**191**		Pn	14 35 53.2		-3.2
MTN	**Manton Dam**	**13.16**	**191**	P	**Pn**	**14 35 53.3**		**-3.0**
SOEI	**Soe**	**13.55**	**223**	P	**Pn**	**14 36 01.7**		**-0.2**
SOEI	**Soe**	**13.55**	**223**		**Pn**	**14 36 01.3**		**-0.6**
SOEI	**Soe**	**13.55**	**223**	P	**Pn**	**14 36 02.0**		**+0.1**
SOEI	**Soe**	**13.55**	**223**	P	**Pn**	**14 36 03.9**		**+2.0**
	comp=Z,8µmcomp=Z,8µmcomp=Z,556nm,1.4s							
MPSI	**Mapaga**	**13.72**	**271**	P	**Pn**	**14 36 03.9**		**-0.1**
PCI	**Palu**	**13.82**	**266**	P	**Pn**	**14 36 04.6**		**-0.8**
	comp=Z,5µmcomp=Z,401nm,1.2s							
LLP	**Lapu-Lapu**	**13.92**	**317**	*i* P	**Pn**	**14 36 06.8**		**0.0**
LLP				eS	**Sn**	**14 38 46.8**		**+5.2**
MANU	**Manus Island**	**13.92**	**99**		**Pn**	**14 36 05.9**		**-0.9**
MANU	**Manus Island**	**13.92**	**99**	P	**Pn**	**14 36 07.5**		**+0.7**
BATI	**Baumata**	**14.29**	**224**	Pn	**Pn**	**14 36 11.7**		**-0.2**
	comp=Z,23nm,0.3s,baz=124,slow=1.8,SNR=40							
BATI				LR	LR	14 42 09.8		
	comp=Z,4µm,18.6s,baz=34,slow=39 comp=Z,110nm,0.5s							
BATI	**Banata**	**14.29**	**224**	P	**Pn**	**14 36 12.3**		**+0.4**
	comp=Z,5µmcomp=Z,5µmcomp=Z,471nm,1.5s							
MMRI	**Maumere**	**14.32**	**232**		Pn	14 36 05.9		-6.3
MMRI	**Maumere**	**14.32**	**232**	P	**Pn**	**14 36 13.9**		**+1.7**
	comp=Z,3µmcomp=Z,3µmcomp=Z,136nm,1.1s							
SPSI	**Sidrap Palu**	**14.43**	**253**	P	**Pn**	**14 36 15.3**		**+1.5**
	comp=Z,2µmcomp=Z,106nm,1.4s							
BSSI	**Bau Bau, Buton**	**14.52**	**244**	P	**Pn**	**14 36 17.7**		**+2.7**
	comp=Z,2µmcomp=Z,112nm,1.3s							
KAPI	**Kappang**	**14.77**	**249**	Pn	**Pn**	**14 36 19.0**		**+0.5**
	comp=Z,2.4nm,0.3s,baz=74,slow=9.8,SNR=9.8 comp=Z,9.0nm,0.5s							
KAPI	**Kappang**	**14.77**	**249**		Pn	14 36 14.6		-3.8
KAPI	**Kappang**	**14.77**	**249**	eP	Pn	14 36 15.4		-3.0
KAPI	**Kappang**	**14.77**	**249**	P	**Pn**	**14 36 22.2**		**+3.8**
KAPI				S	**Sn**	**14 39 11.1**		**+8.7**
KAPI	**Kappang**	**14.77**	**249**	P	**Pn**	**14 36 20.6**		**+2.2**
MMSI	**Mamuju**	**14.97**	**259**	P	**Pn**	**14 36 21.1**		**-0.1**
MKS	**Makassar**	**15.11**	**249**	P	**Pn**	**14 36 21.8**		**-1.1**
	comp=Z,3µmcomp=Z,82nm,1.2s							
PMSI	**Majene**	**15.14**	**256**	P	**Pn**	**14 36 23.6**		**+0.2**
	comp=Z,3µmcomp=Z,4µmcomp=Z,175nm,1.6s							
RCP	**Roxas**	**15.64**	**317**	*i* P	**Pn**	**14 36 29.9**		**-0.1**
SGKI	**Sangatta, Kali**	**16.03**	**268**	P	**Pn**	**14 36 33.3**		**-1.7**
	comp=Z,6µmcomp=Z,613nm,1.2s							
LBFI	**Labuhan Bajo,**	**16.15**	**238**	P	**Pn**	**14 36 37.3**		**+0.8**
TARAI	**Tarakan**	**16.34**	**281**	P	**Pn**	**14 36 39.2**		**+0.2**
	comp=Z,7µmcomp=Z,537nm,2.2s							
KNRA	**Kununurra**	**16.46**	**197**	P	**Pn**	**14 36 36.7**		**-3.8**
	comp=Z,624nm,0.6s,comp=Z,0.0nm							
KNRA	**Kununurra**	**16.46**	**197**		**Pn**	**14 36 36.4**		**-4.1**
KNRA	**Kununurra**	**16.46**	**197**	P	**Pn**	**14 36 37.4**		**-3.0**
PMG	**Port Moresby**	**16.50**	**126**	Pn	**Pn**	**14 36 41.5**		**+0.5**
	comp=Z,243nm,1.2s,baz=318,slow=11,SNR=37							
PMG				LR	LR	14 43 55.8		
	comp=Z,7µm,21.4s,baz=281,slow=40							
PMG	**Port Moresby**	**16.50**	**126**	P	**Pn**	**14 36 43.0**		**+2.0**
PMG	**Port Moresby**	**16.50**	**126**	eP	**Pn**	**14 36 39.0**		**-2.0**
PMG				pmax	pmax			
	comp=Z,712nm,1.5s							
PMG	**Port Moresby**	**16.50**	**126**	P	**Pn**	**14 36 42.8**		**+1.8**
PMG	**Port Moresby**	**16.50**	**126**	P	**Pn**	**14 36 43.0**		**+2.0**
	comp=Z,10µmcomp=Z,10µmcomp=Z,344nm,1.3s							
BKB	**Balikpapan**	**16.78**	**265**	P	**Pn**	**14 36 45.3**		**+0.8**
	comp=Z,6µmcomp=Z,8µmcomp=Z,326nm,1.2s							
COEN	**Coen**	**16.93**	**146**	P	**Pn**	**14 36 46.0**		**-0.4**
	comp=Z,57nm,1.5s							
COEN	**Coen**	**16.93**	**146**	P	**Pn**	**14 36 46.1**		**-0.3**
COEN	**Coen**	**16.93**	**146**		**Pn**	**14 36 43.3**		**-3.1**
COEN	**Coen**	**16.93**	**146**	P	**Pn**	**14 36 45.8**		**-0.6**
WBSI	**Waikabubak, Su**	**17.19**	**235**	P	**Pn**	**14 36 48.2**		**-1.5**
	comp=Z,3µmcomp=Z,2µmcomp=Z,181nm,0.9s							
GUMO	**Guam**	**17.38**	**39**	P	**Pn**	**14 36 52.8**		**+0.7**
	comp=Z,207nm,0.9s,baz=199,slow=12,SNR=4.7							
DBNI	**Kabupaten Domp**	**17.51**	**240**	P	**Pn**	**14 36 53.6**		**-0.2**
	comp=Z,3µmcomp=Z,172nm,1.2s							
PPR	**Puerto Princes**	**17.62**	**303**	eP	**Pn**	**14 36 55.7**		**+0.6**
PLAI	**Plampang**	**18.13**	**240**	P	**Pn**	**14 37 01.6**		**+0.2**
PLAI	**Plampang**	**18.13**	**240**	P	**Pn**	**14 37 00.5**		**-0.9**
	comp=Z,3µmcomp=Z,2µmcomp=Z,161nm,0.8s							
KKM	**Kota Kinabalu**	**18.32**	**289**	P	**Pn**	**14 37 04.9**		**+1.0**
KKM	**Kota Kinabalu**	**18.32**	**289**	P	**Pn**	**14 37 04.3**		**+0.5**
KKM	**Kota Kinabalu**	**18.32**	**289**	P	**Pn**	**14 37 04.5**		**+0.6**
	comp=Z,7µmcomp=Z,8µmcomp=Z,237nm,1.8s							
TGY	**Tagaytay City**	**18.69**	**318**	P	**P**	**14 37 07.7**		**-0.2**
	comp=Z,12nm,0.3s,baz=77,slow=8.7,SNR=5.3 comp=Z,44nm,0.3s							
KRVT	**Keravat (AS076**	**18.92**	**104**	LR	LR	14 44 00.5		
	comp=Z,360nm,21.4s,baz=205,slow=36							
RABL	**Rabaul**	**19.03**	**103**	P	**P**	**14 37 08.2**		**-3.4**
RABL	**Rabaul**	**19.03**	**103**	P	**P**	**14 37 14.3**		**+2.6**
BBKI	**Banjar Baru**	**19.11**	**259**	P	**P**	**14 37 14.0**		**+1.5**
	comp=Z,9µmcomp=Z,373nm,1.4s							
FITZ	**Fitzroy Crossi**	**19.77**	**203**	P	**P**	**14 37 19.8**		**+0.1**
	comp=Z,3.4nm,0.3s,baz=25,slow=10,SNR=69							
FITZ				S	S	14 40 48.9		-14
	comp=Z,9.8nm,0.6s,baz=44,slow=16,SNR=1.5							
FITZ				LR	LR	14 46 58.2		
	comp=Z,4µm,18.5s,baz=31,slow=43 comp=Z,49nm,0.3s							
KHKI	**Kahang-Kahang**	**19.85**	**244**	P	**P**	**14 37 21.7**		**+1.1**
	comp=Z,2µmcomp=Z,3µmcomp=Z,181nm,1.3s							
WRAB	**Tennant Creek**	**19.99**	**178**	P	**P**	**14 37 21.7**		**-0.4**
WRAB	**Tennant Creek**	**19.99**	**178**	P	**P**	**14 37 21.2**		**-0.9**
WRAB				IAmb	IAmb	14 37 26.8		
	comp=Z,258nm,1.0s							
WRAB	**Tennant Creek**	**19.99**	**178**	IAMs_20	IAMs_20	14 45 36.4		
	comp=Z,6µm,20.0s							
WRAB	**Tennant Creek**	**19.99**	**178**	*de*P	**P**	**14 37 21.3**		**-0.8**
WRAB				pmax	pmax			
	comp=Z,316nm,1.1s							
WRAB	**Tennant Creek**	**19.99**	**178**	P	**P**	**14 37 21.4**		**-0.7**
WRA	**Warramunga Arr**	**20.00**	**178**	P	**P**	**14 37 22.1**		**-0.1**
	comp=Z,99nm,0.5s,baz=354,slow=11,SNR=336							
WRA				S	S	14 40 55.3		-12
	comp=Z,8.2nm,0.6s,baz=358,slow=22,SNR=4.9							
WRA	**Warramunga Arr**	**20.00**	**178**		**P**	**14 37 21.1**		**-1.1**
WRA	**Warramunga Arr**	**20.00**	**178**	P	**P**	**14 37 21.1**		**-1.1**
WRA				pmax	pmax			
	comp=Z,51nm,1.2s							
WR8	**Warramunga Arr**	**20.02**	**178**	P	**P**	**14 37 21.3**		**-1.1**
RTBI	**Rangdo, Negare**	**20.49**	**245**	P	**P**	**14 37 28.6**		**+1.0**
	comp=Z,3µmcomp=Z,164nm,1.0s							
KMMI	**Kalianget**	**20.87**	**250**	P	**P**	**14 37 33.4**		**+1.7**
	comp=Z,3µmcomp=Z,3µmcomp=Z,153nm,1.5s							
ABJI	**Asem Bagus**	**20.88**	**247**	P	**P**	**14 37 32.2**		**+0.4**
	comp=Z,4µmcomp=Z,265nm,1.4s							
MTSU	**Mount Surprise**	**21.01**	**150**	P	**P**	**14 37 36.4**		**+3.2**
	comp=Z,41nm,0.9s							
MTSU	**Mount Surprise**	**21.01**	**150**	P	**P**	**14 37 34.5**		**+1.3**
JAGI	**Jajag, Banyuwa**	**21.21**	**246**	P	**P**	**14 37 32.2**		**-3.2**
JAGI	**Jajag, Banyuwa**	**21.21**	**246**	P	**P**	**14 37 36.8**		**+1.4**
	comp=Z,2µmcomp=Z,2µmcomp=Z,102nm,1.2s							
QIS	**Mount Isa**	**21.41**	**164**	P	**P**	**14 37 37.3**		**-0.2**
	comp=Z,107nm,0.8s,comp=Z,0.0nm							
QIS	**Mount Isa**	**21.41**	**164**	P	**P**	**14 37 37.5**		**0.0**
BLJI	**Banyuglugur**	**21.45**	**248**	P	**P**	**14 37 38.8**		**+0.8**
	comp=Z,3µmcomp=Z,123nm,1.7s							
SBUM	**Sibu**	**21.51**	**276**	P	**P**	**14 37 39.9**		**+1.3**
SBUM	**Sibu**	**21.51**	**276**	P	**P**	**14 37 35.5**		**-3.1**
SBUM				IAmb	IAmb	14 37 52.2		
	comp=Z,152nm,1.4s							
SBUM	**Sibu**	**21.51**	**276**	P	**P**	**14 37 39.6**		**+1.0**
SIPP	**Brgy, Tapao**	**21.88**	**324**	eP	**P**	**14 37 41.5**		**-1.0**
PIP	**Pasuquin**	**22.11**	**325**	eP	**P**	**14 37 41.5**		**-3.4**
PIP				eS	S	14 41 37.2		-12
SNJI	**Sawahan-Nganju**	**23.18**	**250**	P	**P**	**14 37 56.0**		**-0.5**
NGJI	**Ngawi**	**23.33**	**251**	P	**P**	**14 37 58.5**		**+0.6**
	comp=Z,5µmcomp=Z,329nm,1.2s							
CTA	**Charters Tower**	**23.63**	**149**	P	**P**	**14 38 01.2**		**+0.4**
	comp=Z,23nm,0.7s,baz=321,slow=11,SNR=24							
CTA				LR	LR	14 48 59.6		
	comp=Z,4µm,18.8s,baz=322,slow=41 comp=Z,23nm,0.7s							
CTAO	**Charters Tower**	**23.63**	**149**	P	**P**	**14 38 02.1**		**+1.3**
CTAO	**Charters Tower**	**23.63**	**149**	P	**P**	**14 37 59.6**		**-1.2**
CTAO				IAmb	IAmb	14 38 12.3		
	comp=Z,137nm,0.9s							
CTAO	**Charters Tower**	**23.63**	**149**	IAMs_20	IAMs_20	14 48 48.8		
	comp=Z,4µm,19.0s							
CTAO	**Charters Tower**	**23.63**	**149**	P	**P**	**14 37 59.6**		**-1.2**
CTAO				pmax	pmax			
	comp=Z,137nm,0.9s							
CTAO				MLR	MLR			
	comp=Z,4µm,19.0s							
AS31	**Alice Springs**	**23.69**	**179**	P	**P**	**14 38 00.4**		**-1.0**
AS31				IAmb	IAmb	14 38 07.2		
	comp=Z,79nm,0.8s							
ASAR	**Alice Springs**	**23.69**	**179**	P	**P**	**14 38 01.5**		**0.0**
	comp=Z,124nm,0.6s,baz=2.1,slow=11,SNR=1250							
ASAR				S	**S**	**14 42 15.3**		**-1.2**
	comp=Z,46nm,1.3s,baz=5.7,slow=20,SNR=6.1							
ASAR				LR	LR	14 48 12.2		
	comp=Z,8µm,19.3s,baz=358,slow=39 comp=Z,124nm,0.6s							
ASAR	**Alice Springs**	**23.69**	**179**	P	**P**	**14 37 58.9**		**-2.6**
PCJI	**Pacitan**	**23.86**	**249**	P	**P**	**14 38 02.3**		**-0.7**
	comp=Z,3µmcomp=Z,189nm,1.0s							
SMRI	**Semarang**	**24.20**	**252**	P	**P**	**14 38 06.6**		**+0.3**
	comp=Z,4µmcomp=Z,176nm,1.4s							
UGM	**Wanagama**	**24.38**	**250**	P	**P**	**14 38 07.8**		**-0.2**
UGM	**Wanagama**	**24.38**	**250**	P	**P**	**14 38 06.0**		**-1.9**
UGM	**Wanagama**	**24.38**	**250**	P	**P**	**14 38 07.3**		**-0.7**
	comp=Z,3µmcomp=Z,164nm,2.0s							
YOGI	**Yogyakarta**	**24.57**	**251**	P	**P**	**14 38 08.8**		**-0.8**
MBWA	**Marble Bar**	**25.17**	**212**	P	**P**	**14 38 15.1**		**+0.1**
	comp=Z,115nm,1.0s							
MBWA	**Marble Bar**	**25.17**	**212**	P	**P**	**14 38 15.0**		**+0.1**
MBWA	**Marble Bar**	**25.17**	**212**	P	**P**	**14 38 14.6**		**-0.3**
MBWA	**Marble Bar**	**25.17**	**212**	P	**P**	**14 38 15.6**		**+0.6**
MBWA				S	**S**	**14 42 45.9**		**+5.7**
CTJI	**Waduk Cacaban**	**25.39**	**253**	P	**P**	**14 38 18.4**		**+1.3**
	comp=Z,91nm,1.1s							
PSAC2	**Pilbara Seismi**	**25.41**	**211**	P	**P**	**14 38 17.3**		**+0.1**
	comp=Z,206nm,1.3s							
PSAC1	**Pilbara Seismi**	**25.43**	**211**	P	**P**	**14 38 17.2**		**-0.2**
	comp=Z,202nm,1.2s							
PSA00	**Pilbara Seismi**	**25.45**	**211**	P	**P**	**14 38 17.6**		**+0.1**
	comp=Z,150nm,1.3s							
PSA00	**Pilbara Seismi**	**25.45**	**211**	P	**P**	**14 38 17.5**		**0.0**
PSA00	**Pilbara Seismi**	**25.45**	**211**	P	**P**	**14 38 17.0**		**-0.5**
PSA00	**Pilbara Seismi**	**25.45**	**211**	P	**P**	**14 38 16.8**		**-0.8**
PSA00				IAmb	IAmb	14 38 29.0		
	comp=Z,201n

comp=Z,4µm,16.1s
NJ2 L L
comp=Z,10µm,21.8s
RPSI Rantau Prapat 34.77 274 P P 14 39 36.2 -4.0
RPSI IAmb IAmb 14 39 43.5
comp=Z,103nm,1.3s
PSI Prapat 34.77 275 P P 14 39 36.3 -4.2
PSI pmax pmax
comp=Z,103nm,1.3s
ARMA Armidale 34.91 152 P **P** **14 39 43.7 +2.3**
ARMA Armidale 34.91 152 P P 14 39 37.8 -3.6
KLBR Kellerberrin 34.98 204 P **P** **14 39 41.6 -0.2**
INU Inuyama 35.15 5 P P 14 39 39.9 -3.3
INU IAmb IAmb 14 39 53.9
comp=Z,42nm,1.1s
WHN Wuhan 35.33 331 P P 14 39 50.0 +5.2
WHN S **S** **14 45 20.5 +1.4**
WHN L L
comp=Z,3µm,11.6s
WHN L L
comp=Z,4µm,11.9s
WHN L L
comp=Z,4µm,19.6s
JGF Kuroka 35.42 5 P P 14 39 42.0 -3.6
JGF IAmb IAmb 14 40 07.0
comp=Z,70nm,1.3s
MUN Mundaring 35.96 206 P **P** **14 39 50.4 +0.1**
NWAO Narrogin (SRO) 36.36 204 LR LR 14 56 27.3
comp=Z,3µm,19.7s,baz=22,slow=39
NWAO Narrogin (SRO) 36.36 204 P **P** **14 39 53.7 0.0**
NWAO Narrogin (SRO) 36.36 204 P P 14 39 51.0 -2.7
NWAO IAmb IAmb 14 39 58.8
comp=Z,94nm,1.2s
NWAO Narrogin (SRO) 36.36 204 P P 14 39 51.0 -2.7
NWAO pmax pmax
comp=Z,94nm,1.2s
NWAO MLR MLR
comp=Z,3µm,19.0s
NWAO Narrogin (SRO) 36.36 204 P **P** **14 39 53.5 -0.2**
MJAR Matsushiro Arr 36.44 6 P P 14 39 51.8 -2.6
comp=Z,4.8nm,0.9s,baz=186,slow=9.3,SNR=7.0
MJAR LR LR 14 51 40.9
comp=Z,1µm,21.3s,baz=184,slow=31
comp=Z,4.8nm,0.9s
MJAR Matsushiro Arr 36.44 6 P P 14 39 52.0 -2.4
MJAR Matsushiro Arr 36.44 6 P P 14 39 52.0 -2.4
MJAR pmax pmax
comp=Z,15nm,1.3s
MAJO Matsushiro 36.44 6⇑ *eP* P 14 39 51.8 -2.6
MAJO pmax pmax
comp=Z,26nm,1.4s
MJB9 Matsu-Tunnel 36.45 6 P P 14 39 50.5 -3.8
GYA Guiyang 36.84 317 ⇓P **P** **14 39 58.0 0.0**
GYA PP **PP** **14 41 25.3 +3.3**
GYA S **S** **14 45 42.0 -0.7**
GYA SS **SS** **14 48 25.8 +1.9**
GYA pmax pmax
comp=Z,11nm,0.5s
GYA pmax pmax
comp=Z,320nm,5.0s
GYA L L
comp=Z,980nm,20.9s
GYA L L
comp=Z,1µm,18.0s
GYA L L
comp=Z,2µm,17.8s
KSRS Korea Array 37.47 353 P **P** **14 40 02.5 -0.6**
comp=Z,3.7nm,0.9s,baz=172,slow=10,SNR=5.9
KSRS LR LR 14 56 29.9
comp=Z,545nm,18.8s,baz=180,slow=38
comp=Z,3.7nm,0.9s
ENH Enshi 37.72 325 P P 14 40 02.1 -3.3
H11N1 WAKE ISLAND Hy 37.95 57 T T 15 21 45.1
baz=243,slow=75,SNR=53
H11N2 WAKE ISLAND Hy 37.96 57 T T 15 21 44.7
baz=243,slow=75,SNR=67
H11N3 WAKE ISLAND Hy 37.96 57 T T 15 21 51.8
baz=243,slow=75,SNR=63
CM31 Chiang Mai Arr 38.60 300 P P 14 40 09.0 -3.9
CM31 IAmb IAmb 14 40 13.7
comp=Z,89nm,1.4s
CM31 Chiang Mai Arr 38.60 300 P **P** **14 40 12.4 -0.5**
SNR=32
CMAR Chiang Mai Arr 38.60 300 P **P** **14 40 12.2 -0.8**
comp=Z,20nm,1.1s,baz=120,slow=6.8,SNR=82
comp=Z,20nm,1.1s
CMAR Chiang Mai Arr 38.60 300 P P 14 40 08.7 -4.2
CMAR Chiang Mai Arr 38.60 300 *i* P **P** **14 40 12.1 -0.8**
CMAR pmax pmax
comp=Z,21nm,1.1s
CHTO Chiang Mai 38.74 301 P **P** **14 40 13.5 -0.6**
CHTO Chiang Mai 38.74 301 P P 14 40 11.0 -3.1
CHTO Chiang Mai 38.74 301 P P 14 40 11.0 -3.1
CHTO pmax pmax
comp=Z,64nm,1.3s
CHTO MLR MLR
comp=Z,600nm,18.0s
CHTO Chiang Mai 38.74 301 P **P** **14 40 13.0 -1.1**
KMI2 Kunming 38.82 312 ⇑P **P** **14 40 14.5 -0.4**
KMI2 PP **PnPn** **14 41 51.3 +5.2**
KMI2 pmax pmax
comp=Z,40nm,1.4s
KMI2 pmax pmax
comp=Z,210nm,4.1s
KMI2 L L
comp=Z,500nm,18.3s
KMI2 L L
comp=Z,1µm,15.8s
KMI2 L L
comp=Z,620nm,19.5s
TIA Tai'an 39.00 339 P **P** **14 40 16.5 +0.5**
TIA pmax pmax
comp=Z,26nm,2.2s
TIA L L
comp=Z,2µm,18.6s
TIA L L
comp=Z,1µm,19.1s
TIA L L
comp=Z,2µm,19.1s
TOO Toolangi 39.12 165 P **P** **14 40 15.2 -1.9**
TOO Toolangi 39.12 165 P **P** **14 40 15.2 -1.9**
TOO pmax pmax
comp=Z,26nm,1.4s
OUENC Ouen Island, N 39.38 127 P **P** **14 40 20.9 +1.5**
LYN LuoYang 39.52 332 P **P** **14 40 20.5 +0.2**
LYN sP pwP 14 40 29.3 +2.2
LYN S **S** **14 46 21.0 -1.8**
LYN pmax pmax
comp=Z,27nm,1.4s
LYN L L
comp=Z,2µm,17.2s
LYN L L
comp=Z,2µm,19.2s
LYN L L
comp=Z,2µm,17.9s
DL2 Dalian 40.09 345 P P 14 40 19.5 -5.5
DL2 S S 14 46 23.0 -8.2
DL2 pmax pmax
comp=Z,41nm,1.4s
DL2 pmax pmax
comp=Z,390nm,3.5s
DL2 LR LR
comp=N,4µm,18.3s
DL2 LR LR
comp=E,5µm,17.9s
DL2 LR LR
comp=Z,3µm,19.8s
PZH PanZhiHua 40.34 313 P **P** **14 40 26.8 -0.6**
PZH PP **PP** **14 42 06.5 +6.2**
PZH S **S** **14 46 30.0 -5.6**
PZH SS **SS** **14 49 35.0 +0.6**
PZH pmax pmax
comp=Z,30nm,1.4s
PZH pmax pmax
comp=Z,130nm,5.1s
PZH L L
comp=Z,450nm,19.1s
PZH L L
comp=Z,730nm,19.6s
PZH L L
comp=Z,770nm,19.4s
XAN Xi'an 40.88 328 P P 14 40 30.0 -1.7
XAN sP sP 14 40 37.8 +3.3
XAN S **S** **14 46 38.8 -4.5**
XAN pmax pmax
comp=Z,17nm,1.4s
XAN pmax pmax
comp=Z,160nm,3.9s
XAN L L
comp=Z,2µm,15.1s
XAN L L
comp=Z,1µm,17.2s
XAN L L
comp=Z,2µm,16.5s
HNS HongShan 40.96 337 ⇓P **P** **14 40 34.5 +2.3**
HNS S **S** **14 46 41.3 -3.0**
HNS pmax pmax
comp=Z,19nm,1.0s
HNS L L
comp=Z,2µm,17.3s
HNS L L
comp=Z,1µm,14.5s
HNS L L
comp=Z,2µm,19.4s
CD2 Chengdu 41.68 320 P **P** **14 40 37.3 -1.0**
CD2 S **S** **14 46 58.5 +3.2**
CD2 SS **SS** **14 50 02.0 +1.1**
CD2 pmax pmax
comp=Z,50nm,1.2s
CD2 pmax pmax
comp=Z,430nm,4.3s
CD2 L L
comp=Z,2µm,14.0s
CD2 L L
comp=Z,2µm,13.3s
CD2 L L
comp=Z,2µm,14.0s
TNCH TengChong 41.97 309⇑ *i*P **P** **14 40 39.8 -1.2**
TNCH pP pP 14 40 43.0 -0.1
TNCH PP **PP** **14 42 20.0 +1.8**
TNCH S **S** **14 46 56.3 -3.8**
TNCH pmax pmax
comp=Z,49nm,1.1s
TNCH L L
comp=Z,830nm,13.6s
TNCH L L
comp=Z,450nm,13.8s
TNCH L L
comp=Z,860nm,13.7s
SNY Shenyang 42.45 349 ⇓P P 14 40 49.8 +5.4
SNY S **S** **14 47 04.0 -2.2**
SNY pmax pmax
comp=Z,25nm,1.9s
SNY pmax pmax
comp=Z,220nm,3.6s
SNY LR LR
comp=N,1µm,22.9s
SNY LR LR
comp=E,780nm,14.2s
SNY LR LR
comp=Z,1µm,19.8s
BJI2 Beijing 42.74 340 P **P** **14 40 46.5 -0.2**
BJI2 pP **pP** **14 40 50.8 +2.1**
BJI2 PP **PP** **14 42 28.3 +2.3**
BJI2 S **S** **14 47 07.8 -2.7**
BJI2 pmax pmax
comp=Z,13nm,1.1s
BJI2 L L
comp=Z,540nm,22.2s
BJI2 L L
comp=Z,1µm,20.2s
BJI2 L L
comp=Z,890nm,18.4s
BJT Baijiatuan 42.74 340 IAMs_20 IAMs_20 14 56 27.6
comp=Z,2µm,19.0s
USRK Uesuriysk Ar. 43.87 358 P **P** **14 40 55.4 -0.4**
comp=Z,15nm,1.1s,baz=147,slow=4.5,SNR=5.8
comp=Z,15nm,1.1s
CN2 Changchun 44.05 351 *e*P **P** **14 40 59.5 +2.2**
CN2 *e*S **S** **14 47 33.5 +3.8**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 L L
comp=Z,1µm,17.0s
CN2 L L
comp=Z,2µm,17.0s
CN2 L L
comp=Z,2µm,18.0s
MDJ Mudanjiang 44.40 356 P **P** **14 40 59.1 -1.0**
MDJ IAmb IAmb 14 41 05.9
comp=Z,71nm,1.4s
MDJ Mudanjiang 44.40 356 P **P** **14 40 59.0 -1.1**
MDJ S **S** **14 47 41.8 +7.0**
MDJ pmax pmax
comp=Z,19nm,1.2s
MDJ L L
comp=Z,520nm,14.6s
MDJ L L
comp=Z,830nm,14.9s
MDJ L L
comp=Z,1µm,20.0s
ASAJ Asahikawa 44.48 9 LR LR 15 00 49.2
comp=Z,286nm,18.1s,baz=192,slow=38
ASAJ Asahikawa 44.48 9 P P 14 40 59.3 -1.5
ASAJ pmax pmax
comp=Z,116nm,1.5s
JKA Kamikawa-asahi 44.48 9 P P 14 40 59.3 -1.5
JKA IAmb IAmb 14 41 24.0
comp=Z,116nm,1.5s
HHC Hu-ho-hao-te 45.17 336 *e*P **P** **14 41 06.0 -0.5**
HHC sP sP 14 41 12.3 +3.0
HHC S **S** **14 47 43.3 -3.0**
HHC pmax pmax
comp=Z,15nm,0.8s
HHC pmax pmax
comp=Z,200nm,5.7s
HHC L L
comp=Z,880nm,15.9s
HHC L L
comp=Z,2µm,15.3s
HHC L L
comp=Z,1µm,15.5s
LZDM Lanzhou Array 45.18 325 LR LR 14 59 04.2
comp=Z,619nm,21.9s,baz=90,slow=35
LZH Lanzhou 45.19 325 P **P** **14 41 07.0 +0.3**
LZH sP pwP 14 41 16.3 +2.8
LZH S **S** **14 47 44.8 -2.0**
LZH SS **ScS** **14 51 03.3 -1.1**
LZH pmax pmax
comp=Z,42nm,1.5s
LZH pmax pmax
comp=Z,190nm,4.8s
LZH L L
comp=Z,1µm,13.7s
LZH L L
comp=Z,1µm,15.8s
LZH L L
comp=Z,2µm,17.5s
LKP Lekhapani 45.21 310 IAmb IAmb 14 40 42.7
comp=Z,95nm,1.4s
SAIH SAIHA 45.33 302 *e*P P 14 41 05.0 -3.1
SAIH IAmb IAmb 14 41 11.8
comp=Z,67nm,1.6s
IMP Imphal 45.52 306 *e*P P 14 41 06.5 -3.0
IMP IAmb IAmb 14 41 12.4
comp=Z,22nm,1.0s
BNX BinXian 45.71 354⇑P **P** **14 41 09.3 -1.2**
BNX S **S** **14 47 53.3 -0.4**
BNX pmax pmax
comp=Z,17nm,1.0s
BNX pmax pmax
comp=Z,330nm,3.5s
BNX L L
comp=Z,880nm,14.5s
BNX L L
comp=Z,1µm,15.2s
BNX L L
comp=Z,1µm,21.3s
MOKO MOKOCHONG 45.75 308 *e*P P 14 41 08.4 -3.0
MOKO IAmb IAmb 14 41 14.7
comp=Z,41nm,0.9s
BTO2 Baotou 45.78 335 *e*P **P** **14 41 11.5 +0.2**
BTO2 sP **sP** **14 41 18.3 +4.2**
BTO2 S **S** **14 47 56.8 +1.7**
BTO2 pmax pmax
comp=Z,9.0nm,0.8s
BTO2 pmax pmax
comp=Z,320nm,5.1s
BTO2 L L
comp=Z,4µm,14.9s
BTO2 L L
comp=Z,2µm,12.2s
BTO2 L L
comp=Z,3µm,19.0s
KOHI KOHIMA 45.80 307 *e*P P 14 41 08.0 -3.7
KOHI IAmb IAmb 14 41 14.8
comp=Z,80nm,1.4s
PASG PASIGHAT 45.97 310 *e*P P 14 41 10.6 -2.3
PASG IAmb IAmb 14 41 16.8
comp=Z,38nm,1.0s
XLT XiLinHaoTe 46.27 342 *e*P **P** **14 41 18.0 +3.0**
XLT S **S** **14 48 02.3 +0.3**
XLT SS **SS** **14 51 25.0 -2.7**
XLT pmax pmax
comp=Z,22nm,1.3s
XLT pmax pmax
comp=Z,170nm,7.9s
XLT L L
comp=Z,120nm,17.2s
XLT L L
comp=Z,860nm,13.3s
XLT L L
comp=Z,1µm,18.2s
SILR SILCHAR 46.44 305 *e*P P 14 41 14.4 -2.1
ITAN ITANAGAR 46.77 308 *e*P **P** **14 41 17.5 -1.7**
ITAN IAmb IAmb 14 41 37.3
comp=Z,56nm,1.4s
ZIRO ZIRO 46.85 309 *e*P **P** **14 41 18.2 -1.8**
BELO BELONIA 46.93 302 *e*P **P** **14 41 19.4 -1.1**
MSVF Nonsavu 47.18 115 LR LR 15 00 41.9
comp=Z,786nm,19.9s,baz=305,slow=36
MSVF Nonsavu 47.18 115 P **P** **14 41 25.7 +3.1**
TEZP TEZPUR 47.25 307 *e*P P 14 41 20.5 -2.4
YSS Yuzhno-Sakhali 47.28 9 P **P** **14 41 22.0 -0.8**
YSS IAmb IAmb 14 41 26.6
comp=Z,35nm,1.1s
YSS Yuzhno-Sakhali 47.28 9 *e*P **P** **14 41 22.2 -0.6**
YSS *e* 14 43 11.5
YSS *e*S **S** **14 48 14.4 -1.7**
YSS pmax pmax
comp=Z,30nm,1.1s
YSS pmax pmax
comp=Z,500nm,5.3s
YSS pmax pmax
comp=N,300nm,5.6s
YSS MLR MLR
comp=Z,500nm,13.0s
AGT Agartala 47.36 303 *e*P P 14 41 21.6 -2.1
SHL Shillong 47.52 305 P P 14 41 22.5 -2.9
SHL Shillong 47.52 305 P P 14 41 22.5 -2.8
SHL pmax pmax
comp=Z,49nm,1.0s
SHL Shillong 47.52 305 P **P** **14 41 23.9 -1.5**
SNR=22
SHL Shillong 47.52 305 *e*P **P** **14 41 23.6 -1.7**
SHL IAmb IAmb 14 41 28.9
comp=Z,28nm,0.9s
GUWA GUWAHATI 47.95 306 *e*P P 14 41 25.8 -2.6
GUWA IAmb IAmb 14 41 31.9
comp=Z,48nm,1.7s
TAWA Tawang 48.43 308 *e*P **P** **14 41 31.5 -1.0**
TAWA IAmb IAmb 14 41 38.8
comp=Z,79nm,1.1s
KLR Kul'dur 48.90 358 LR LR 15 02 19.8
comp=Z,164nm,19.6s,baz=186,slow=36
KLR Kul'dur 48.90 358 *ce*P **P** **14 41 34.3 -1.0**
KLR pmax pmax
comp=Z,12nm,2.5s
DHUB DHUBRI 49.26 305 *e*P P 14 41 36.5 -2.0
DHUB IAmb IAmb 14 41 42.3
comp=Z,59nm,1.4s
GTA2 Gaotai 49.87 326 P **P** **14 41 42.5 -0.6**
GTA2 S **S** **14 48 50.0 -3.3**
GTA2 pmax pmax
comp=Z,26nm,1.4s
GTA2 L L
comp=Z,840nm,17.9s
GTA2 L L
comp=Z,980nm,18.9s
GTA2 L L
comp=Z,1µm,18.9s
LSA Lhasa 49.97 310 *i* P **P** **14 41 44.0 -0.3**
SNR=11
LSA Lhasa 49.97 310 P P 14 41 41.5 -2.9
LSA S **S** **14 48 51.3 -4.2**
LSA pmax pmax
comp=Z,23nm,1.3s
LSA L L
comp=Z,500nm,24.5s
LSA L L
comp=Z,310nm,22.1s
LSA L L
comp=Z,380nm,25.0s
HEH HeiHe 50.18 355 *e*P P 14 41 43.0 -2.0
HEH S **S** **14 48 57.8 +0.9**
HEH SS **SS** **14 52 34.0 +3.6**
HEH pmax pmax
comp=Z,31nm,1.3s
HEH pmax pmax
comp=Z,360nm,4.9s
HEH L L
comp=Z,580nm,16.1s
HEH L L
comp=Z,2µm,16.2s
HEH L L
comp=Z,1µm,17.5s
HIA Hailar 50.35 348 IAMs_20 IAMs_20 15 00 14.0
comp=Z,1µm,20.0s
GRNR Gornyy 50.47 2⇑ *i*P **P** **14 41 46.1 -1.2**
GRNR pmax pmax
comp=Z,2.0nm,1.0s
GRNR MLR MLR
comp=E,300nm,14.0s
GRNR MLR MLR
comp=N,340nm,15.0s
GRNR MLR MLR
comp=Z,470nm,15.0s
GOMU GeErMu 50.80 319 P P 14 41 48.5 -1.9
GOMU S **S** **14 49 03.3 -3.4**
GOMU SS **SS** **14 52 40.0 -1.5**
GOMU pmax pmax
comp=Z,5.0nm,0.9s
GOMU L L
comp=Z,550nm,15.5s
GOMU L L
comp=Z,670nm,16.5s
BWNR Bhubaneshwar 50.82 296 *e*P **P** **14 41 49.3 -1.1**
BWNR IAmb IAmb 14 41 54.6
comp=Z,72nm,1.3s
SHBG Sahibganj 50.91 303 *e*P **P** **14 41 50.2 -0.8**
GTK Tadong 50.93 306 *e*P **P** **14 41 49.7 -1.6**
GTK IAmb IAmb 14 41 56.9
comp=Z,88nm,1.3s
TYV Tymovskoe 51.09 7 *e*P **P** **14 41 51.2 -0.7**
TYV *e*S **S** **14 49 08.5 -1.0**
TYV pmax pmax
comp=Z,600nm,3.9s
TYV pmax pmax
comp=Z,21nm,1.2s
TYV smax smax
comp=N,200nm,6.2s
TYV smax smax
comp=E,100nm,6.2s
OUZ Omahuta 51.27 138 P P 14 42 04.7 +11
JMUI Jamui 51.98 302 *e*P **P** **14 41 58.2 -0.8**
VIS Vishakhapatnam 52.42 292 *e*P **P** **14 42 01.6 -0.8**
EVN Everest 52.63 306 P P 14 42 01.4 -3.3
RAGD RAYAGADA 52.68 294 *e*P P 14 42 01.5 -2.9
GAYA Gaya 52.79 301 *e*P **P** **14 42 03.6 -1.4**
ULN Ulaanbaatar 52.81 338 P P 14 42 03.5 -1.5
ULN IAmb IAmb 14 42 18.5
comp=Z,61nm,1.2s
ULN Ulaanbaatar 52.81 338 IAMs_20 IAMs_20 15 01 46.1
comp=Z,1µm,21.0s
ULN Ulaanbaatar 52.81 338⇓ *eP* P 14 42 01.2 -3.8
ULN pmax pmax
comp=Z,62nm,1.3s
ULN Ulaanbaatar 52.81 338 P **P** **14 42 06.1 +1.1**
ULN S **S** **14 49 34.0 +0.3**
SONM Songino Array 53.04 337 P **P** **14 42 07.4 +0.7**
comp=Z,3.0nm,0.8s,baz=151,slow=6.4,SNR=11
SONM LR LR 15 04 43.2
comp=Z,829nm,18.9s,baz=148,slow=36
comp=Z,3.0nm,0.8s
SONM Songino Array 53.04 337 P P 14 42 04.1 -2.6
SONM Songino Array 53.04 337 P P 14 42 04.1 -2.6

SONM pmax pmax
comp=Z,29nm,1.3s
JHSG JHARSUGUGA 53.09 297 *e*P **P 14 42 06.1 -1.2**
PALK Pallekele 53.23 279 P **P 14 42 06.7 -1.9**
STMR SITAMARHI 53.44 304 *e*P **P 14 42 09.8 0.0**
ZEA Zeya 53.65 355 *e*P **P 14 42 10.1 -0.8**
ZEA *e*S **S 14 49 45.0 +0.5**
ZEA pmax pmax
comp=Z,100nm,3.0s
ZEA pmax pmax
comp=Z,10.0nm,1.0s
ZEA smax smax
comp=N,200nm,6.1s
QRZ Quartz Range 53.94 144 P **P 14 42 14.6 +1.3**
HIZ Hauiti 53.98 140 P **P 14 42 17.2 +3.6**
MSZ Milford Sound 54.03 150 P P 14 42 25.7 +12
CIT Chita 54.36 345 *e*P P 14 42 07.8 -8.4
CIT *e* 14 42 16.0
CIT *e* 14 43 15.4
CIT *e* 14 44 25.0
CIT pmax pmax
comp=Z,194nm,2.0s
MDRS Chennai 54.41 286 *e*P **P 14 42 15.8 -1.2**
INZ Inchbonnie 54.54 146 P **P 14 42 20.6 +3.0**
BLSP Bilaspur 54.61 297 *e*P **P 14 42 16.9 -1.6**
RAO Raoul Island 54.69 127 LR LR 15 04 30.4
comp=Z,570nm,20.4s,baz=278,slow=35
NNZ Nelson 54.69 144 P **P 14 42 20.5 +1.8**
THZ Tophouse 54.75 145 P P 14 42 14.9 -4.3
LBZ Lake Benmore 54.98 149 P **P 14 42 19.9 -0.9**
RPZ Rata Peaks 54.99 147 LR LR 15 05 45.0
comp=Z,1µm,21.9s,baz=352,slow=36
LTZ Lake Taylor 55.04 146 P **P 14 42 19.7 -1.5**
TUWZ Tuamarina 55.16 144 P P 14 42 19.8 -2.3
URZ Urewera 55.30 139 LR LR 15 04 52.6
comp=Z,2µm,21.7s,baz=308,slow=35
URZ Urewera 55.30 139 P **P 14 42 24.0 +0.9**
URZ Urewera 55.30 139 P **P 14 42 22.2 -0.9**
BKZ Black Stump Fm 55.40 140 P **P 14 42 25.2 +1.3**
RTZ Ruatahuna 55.41 139 P **P 14 42 22.3 -1.7**
KHZ Kahutara 55.53 145 P P 14 42 22.0 -2.7
TSZ Takapari Road 55.57 141 P **P 14 42 28.5 +3.4**
GVZ Greta Valley S 55.59 146 P **P 14 42 24.7 -0.5**
MWZ Matawai 55.62 139 P **P 14 42 26.6 +1.1**
PNHZ Pukenui 55.64 141 P **P 14 42 26.4 +0.8**
RAHZ Arahi 55.64 139 P **P 14 42 27.6 +2.0**
MRZ Mangatainoka R 55.68 142 P P 14 42 20.8 -5.1
MCHZ McNeill Hill 55.69 140 P **P 14 42 28.2 +2.3**
PKGZ Pakihiroa 55.73 138 P **P 14 42 27.4 +1.1**
AFI Afiamalu 55.83 107 LR LR 15 04 50.6
comp=Z,451nm,20.6s,baz=280,slow=34
ALBI Allahabad 55.88 301 *e*P **P 14 42 25.9 -1.7**
ALBI IAmb IAmb 14 42 31.4
comp=Z,68nm,0.9s
WMGZ Waiomatatini S 55.93 138 P **P 14 42 28.9 +1.2**
PUZ Puketiti 55.96 138 P **P 14 42 30.3 +2.4**
KAHZ Kahuranaki 56.00 140 P **P 14 42 29.8 +1.6**
CNGZ Carnagh Statio 56.15 138 P **P 14 42 30.8 +1.6**
ZAK Zakamensk 56.30 337 *e*P **P 14 42 29.9 -0.4**
ZAK pmax pmax
comp=Z,48nm,2.0s
PETK Petropavlovsk- 56.45 17 LR LR 15 05 04.3
comp=Z,139nm,20.7s,baz=222,slow=34
PET Petropavlovsk 56.66 18 *e*P **P 14 42 32.2 -0.4**
PET *e*S **S 14 50 24.4 -0.4**
PET pmax pmax
comp=Z,39nm,1.3s
PET pmax pmax
comp=Z,100nm,12.0s
PET MLR MLR
comp=Z,500nm,15.0s
PET MLR MLR
comp=Z,700nm,14.0s
PET Petropavlovsk 56.66 18 P **P 14 42 32.0 -0.6**
comp=Z,45nm,1.6s
KOD Kodaikanal 56.72 282 *e*P **P 14 42 32.3 -1.8**
BRCI Bahraich 56.79 303 *e*P **P 14 42 33.5 -0.5**
BRCI IAmb IAmb 14 42 38.5
comp=Z,73nm,0.9s
HYB Hyderabad 56.80 291 *e*P P 14 42 32.3 -2.0
HYB Hyderabad 56.80 291 *e*P P 14 42 32.1 -2.2
HYB IAmb IAmb 14 42 37.5
comp=Z,59nm,1.2s
LKN LUCKNOW 57.13 302 *e*P **P 14 42 35.0 -1.4**
NGP Nagpur 57.17 295 *e*P P 14 42 32.7 -4.1
TLY Talaya 57.21 338 LR LR 15 06 01.3
comp=Z,955nm,21.6s,baz=136,slow=35
TLY Talaya 57.21 338‖ *e*P **P 14 42 37.8 +1.2**
TLY pmax pmax
comp=Z,4.0nm,1.0s
BNDA BANDA 57.21 300 *e*P **P 14 42 35.6 -1.4**
IRK Irkutsk 57.43 339 *e*P **P 14 42 39.8 +1.6**
IRK *e*S **S 14 50 36.1 +0.9**
IRK pmax pmax
comp=Z,106nm,2.2s
MOY Mondy 58.21 337 *e*P **P 14 42 44.2 +0.4**
MOY pmax pmax
comp=Z,94nm,1.8s
FRKB FARRUKHABAD 58.44 302 *e*P **P 14 42 44.7 -1.0**
NIUE Niue 58.56 112 P P 14 42 44.4 -2.3
PTH Pithoragarh 58.63 305 *e*P P 14 42 38.5 -8.7
JHNI Jhansi 58.69 300 *e*P P 14 42 45.1 -2.3
AKL Akola 58.91 294 *e*P P 14 42 46.7 -2.4
BHPL Bhopal 59.14 297 *e*P P 14 42 48.7 -2.0
BHPL IAmb IAmb 14 42 54.1
comp=Z,45nm,1.2s
NRDN NARMADA NAGAR 59.24 296 *e*P **P 14 42 51.8 +0.5**
JOSI Joshimath 59.48 306 *e*P **P 14 42 51.9 -1.2**
BOD Bodaibo 59.56 348 *e*P P 14 42 50.8 -2.1
BOD pmax pmax
comp=Z,35nm,1.6s
GUNA GUNA 59.58 299 *e*P P 14 42 51.8 -1.9
WMQ Urumqi 59.63 323 *e*P **P 14 42 53.8 +0.1**
WMQ pP pP 14 42 58.3 +2.5
WMQ S **S 14 51 01.5 -2.8**
WMQ pmax pmax
comp=Z,42nm,0.9s
WMQ pmax pmax
comp=Z,160nm,4.3s
WMQ L L
comp=Z,1µm,15.3s
WMQ L L
comp=Z,740nm,15.3s
WMQ L L
comp=Z,440nm,23.1s
MERT Meerut 60.47 304 *e*P **P 14 42 57.8 -1.8**
BISR Bishrakh 60.59 303 *e*P **P 14 42 59.0 -1.6**
JMIU JAMIA UNIVERSI 60.72 303 *e*P P 14 42 58.7 -2.7
MA2 Magadan 60.74 10 LR LR 15 09 01.0
comp=Z,141nm,19.1s,baz=176,slow=36
SONA Sohna 60.81 303 *e*P P 14 42 59.8 -2.2
SONA IAmb IAmb 14 43 12.1
comp=Z,84nm,1.1s
NDI New Delhi 60.82 303 *e*P P 14 42 56.5 -5.6
NPLP NPLP New Delhi 60.84 303 *e*P P 14 42 59.9 -2.3
KLP Kalpa 60.87 306 *e*P **P 14 43 01.7 -1.1**
KLP IAmb IAmb 14 43 18.2
comp=Z,95nm,1.3s
KUDL Kundal 61.27 302 *e*P P 14 43 02.8 -2.3
KUDL IAmb IAmb 14 43 15.3
comp=Z,52nm,1.5s
JHJR Jhajjar 61.27 303 *e*P P 14 43 01.6 -3.6
DGAR Diego Garcia 61.45 262 *de*P **P 14 43 05.7 -0.9**
DGAR pmax pmax
comp=Z,91nm,1.8s
KKR Kurukshetra 61.53 304 *e*P **P 14 43 05.9 -1.0**
RTK Rohtak 61.59 303 *e*P **P 14 43 05.6 -1.7**
SMLA Simla 61.61 306 *e*P **P 14 43 06.9 -0.4**
YAK Yakutsk 61.78 358 P P 14 43 05.7 -2.2
YAK Yakutsk 61.78 358 *e*P **P 14 43 07.6 -0.3**
YAK *e**PP **pwP 14 43 17.7 +2.9**
YAK *e* 14 43 48.3
YAK *e* 14 45 20.7
YAK *e*S **S 14 51 29.1 -1.7**
YAK *e**SS sS 14 51 46.3 +12
YAK *e* 14 52 56.5
YAK *e*SS **SS 14 55 32.7 -0.1**
YAK pmax pmax
comp=Z,31nm,0.8s
YAK pmax pmax
comp=N,26nm,1.5s
YAK pmax pmax
comp=E,8.0nm,1.4s
YAK pmax pmax
comp=Z,124nm,3.4s
YAK pmax pmax
comp=N,122nm,4.9s
YAK pmax pmax
comp=E,74nm,3.2s
YAK smax smax
comp=N,158nm,5.4s
YAK smax smax
comp=E,123nm,4.7s
YAK MLR MLR
comp=N,329nm,18.0s
YAK MLR MLR
comp=E,218nm,17.0s
CGRH CHANDIGARH 61.80 305 *e*P **P 14 43 08.5 -0.2**
SHEM Shemya Is, Ala 62.30 26 LR LR 15 05 35.7
comp=E,350nm,21.2s,baz=277,slow=32
BHK Bhakra 62.34 306 *e*P **P 14 43 10.8 -1.5**
BHK IAmb IAmb 14 43 22.4
comp=Z,62nm,1.4s
AJM Ajmer 62.40 300 *e*P P 14 43 10.9 -1.9
ALCI Alchi Leh 62.62 309 *e*P **P 14 43 13.8 -0.8**
DHRM DHARAMSHALA 62.67 307 *e*P **P 14 43 13.5 -1.3**
DHRM IAmb IAmb 14 43 26.6
comp=Z,56nm,1.0s
UDPR Udaipur 62.76 298 *e*P **P 14 43 13.6 -1.6**
TSSA Tissa 62.98 307 *e*P **P 14 43 15.4 -1.4**
THN Thein Dam 63.17 307 *e*P P 14 43 15.0 -2.9
ZSN Zaisan 63.28 325 *e*P **P 14 43 18.0 -0.3**
ZSN *e*S **S 14 51 50.8 +0.4**
WUS Wushi 63.82 317 IAmb IAmb 14 43 37.4
comp=Z,32nm,1.1s
SRGN SRI GANGA NAGA 63.96 303 *e*P **P 14 43 21.7 -1.3**
BKNR BIKANER 63.97 301 *e*P **P 14 43 21.6 -1.6**
JMU Jammu 64.02 307 *e*P P 14 43 21.4 -2.0
SEY Seymchan 64.17 9‖ *e*P **P 14 43 24.2 +0.4**
SEY pmax pmax
comp=Z,49nm,1.5s
MK31 Makanchi Array 64.44 324 *ce*P **P 14 43 25.3 -0.7**
MKAR Makanchi Array 64.44 324 P **P 14 43 25.5 -0.4**
comp=Z,8.5nm,0.6s,baz=113,slow=8.3,SNR=100
MKAR S **S 14 52 04.5 -0.3**
comp=Z,0.4nm,1.0s,baz=110,slow=7.8,SNR=1.9
MKAR LR LR 15 11 44.5
comp=Z,420nm,21.4s,baz=106,slow=36
comp=Z,8.5nm,0.6s
MKAR Makanchi Array 64.44 324 P P 14 43 24.1 -1.8
MKAR Makanchi Array 64.44 324 P P 14 43 24.1 -1.9
SHLS Shalkode 64.50 319 *e*P P 14 43 24.2 -2.4
comp=Z,30nm,1.6s
MAKZ Makanchi 64.63 323 P **P 14 43 25.5 -1.7**
MAKZ IAmb IAmb 14 43 32.5
comp=Z,42nm,1.1s
MAKZ IAMs_20 IAMs_20 15 10 30.0
comp=Z,609nm,20.0s
MAKZ Makanchi 64.63 323 P P 14 43 25.5 -1.7
MAKZ pmax pmax
comp=Z,42nm,1.1s
UZB Uzynbulak 64.79 319 *e*P **P 14 43 27.9 -0.6**
comp=Z,21nm,1.2s
UZB *e*S **S 14 52 09.4 -0.1**
KPKS Kokpek 65.15 319 *e*P **P 14 43 30.3 -0.4**
SATY Saty 65.16 318 *e*P **P 14 43 30.3 -0.6**
comp=Z,25nm,1.4s
SATY *e*S **S 14 52 14.0 0.0**
NIL Nilore 65.54 307 P **P 14 43 32.4 -1.0**
KSH2 Kashi 65.59 314 P **P 14 43 33.8 +0.1**
KSH2 S **S 14 52 18.8 -0.7**
KSH2 pmax pmax
comp=Z,39nm,1.1s
KSH2 pmax pmax
comp=Z,220nm,4.5s
KSH2 L L
comp=Z,720nm,17.9s
KSH2 L L
comp=Z,520nm,22.0s
KSH2 L L
comp=Z,500nm,15.1s
JASL Jaisalmer 65.76 300 *e*P P 14 43 32.8 -2.0
TDK Taldyqorghan 65.99 320 *e*P **P 14 43 35.8 -0.3**
comp=Z,5.1nm,0.2s
MDOK Medeo 66.10 318 *e*P **P 14 43 36.5 -0.5**
MDOK *e*S **S 14 52 25.5 -0.1**
TNSS Tian-Shan 66.12 318 *e*P **P 14 43 36.5 -0.9**
ULHL Ulahol 66.28 317 P **P 14 43 38.0 -0.2**
SNR=6.0
BOOM Boomskoye usch 66.58 317 P **P 14 43 38.5 -1.6**
BOOM IAmb IAmb 14 43 45.6
comp=Z,23nm,1.1s
BOOM Boomskoye usch 66.58 317 P **P 14 43 38.5 -1.6**
BOOM pmax pmax
comp=Z,23nm,1.1s
ZAA0 Zalesovo Array 66.94 331 P P 14 43 40.0 -1.8
ZAA0 IAmb IAmb 14 43 54.6
comp=Z,36nm,1.4s
ZALV Zalesovo Beam 66.94 331 P **P 14 43 40.7 -1.2**
comp=Z,2.8nm,0.5s,baz=121,slow=6.7,SNR=9.6
comp=Z,2.8nm,0.5s
TKM2 Tokmak 2 66.98 317 P **P 14 43 42.4 -0.3**
SNR=13
UCH Uchtor 67.46 316 P **P 14 43 46.8 +0.7**
SNR=17
AAK Ala-Archa 67.62 317 P **P 14 43 46.2 -0.4**
SNR=9.0
AAK Ala-Archa 67.62 317 P P 14 43 44.6 -2.1
AAK IAmb IAmb 14 44 02.6
comp=Z,21nm,1.2s
AAK Ala-Archa 67.62 317 IAMs_20 IAMs_20 15 15 34.4
comp=Z,562nm,20.0s
AAK Ala-Archa 67.62 317 *i* P **P 14 43 46.3 -0.4**
SNR=14
AAK Ala-Archa 67.62 317 *ce*P **P 14 43 46.5 -0.2**
AAK pmax pmax
comp=Z,19nm,1.5s
AAK Ala-Archa 67.62 317 P **P 14 43 46.9 +0.2**
SGDS Sogindy 67.84 318 *e*P **P 14 43 47.4 -0.5**
USP Ospenovka 67.86 317 P **P 14 43 47.6 -0.4**
SNR=11
EKS2 Erkin-Say 68.13 317 P **P 14 43 49.7 -0.1**
SNR=12
CASY Casey 68.31 190 P **P 14 43 48.4 -1.9**
CASY IAmb IAmb 14 44 54.9
comp=Z,22nm,0.8s
RAR Rarotonga 68.33 113 LR LR 15 13 13.7
comp=Z,145nm,20.0s,baz=275,slow=36
KURK Kurchatov 68.47 326 P P 14 43 49.1 -2.6
KURK IAmb IAmb 14 44 01.7
comp=Z,32nm,0.9s
KURK Kurchatov 68.47 326 *ce*P **P 14 43 50.8 -0.8**
KURK pmax pmax
comp=Z,92nm,2.5s
KURK Kurchatov 68.47 326 P **P 14 43 51.5 -0.1**
KURBB Kurchatov Arra 68.48 326 P **P 14 43 51.0 -0.6**
comp=Z,19nm,1.0s,baz=120,slow=5.5,SNR=90
comp=Z,19nm,1.0s
BTLS Baital 68.83 319 *e*P **P 14 43 53.6 -0.4**
KBL Kabul 69.14 307 P **P 14 43 55.0 -1.4**
SNR=13
BTK Batken 69.35 313 P P 14 43 55.5 -2.0
BTK Batken 69.35 313 P P 14 43 55.5 -1.9
BTK pmax pmax
comp=Z,58nm,1.3s
DZA Taraz 69.89 316 *e*P **P 14 44 00.2 -0.5**
KK31 Karatay Array 70.53 316 P P 14 44 00.9 -3.7
KK31 IAmb IAmb 14 44 09.6
comp=Z,29nm,1.1s
KK31 Karatay Array 70.53 316 P P 14 44 00.9 -3.7
KK31 pmax pmax
comp=Z,29nm,1.1s
KKAR Karatay Array 70.53 316 P **P 14 44 03.2 -1.4**
KKAR Karatay Array 70.53 316 P **P 14 44 03.2 -1.4**
IUG Iuzhnay 70.56 315 *e*P **P 14 44 04.4 -0.5**
comp=Z,33nm,1.4s
CHM Chimkent 70.92 315 *e*P **P 14 44 06.6 -0.4**
comp=Z,16nm,1.0s
BRLS Boroldaу 70.98 316 *e*P **P 14 44 07.0 -0.3**
comp=Z,12nm,1.0s
BILL Bilibino 71.38 12 IAMs_20 IAMs_20 15 09 05.3
comp=Z,694nm,18.0s
BILL Bilibino 71.38 12‖ *e*P P 14 44 07.6 -1.5
BILL pmax pmax
comp=Z,34nm,3.5s
TIXI Tiksi 71.43 358 LR LR 15 14 00.1
comp=Z,522nm,21.1s,baz=190,slow=35
TIXI Tiksi 71.43 358 IAMs_20 IAMs_20 15 13 36.7
comp=Z,515nm,19.0s
TIXI Tiksi 71.43 358‖ *e*P P 14 44 07.8 -1.6
TIXI pmax pmax
comp=Z,17nm,1.3s
SPIA Saint Paul Isl 72.19 28 P **P 14 44 13.1 -1.1**
baz=241
UNV Unalaska Valle 72.56 32 P **P 14 44 15.7 -0.8**
baz=245
BVAR Borovoye Array 74.07 326 P **P 14 44 25.2 -0.3**
comp=Z,24nm,1.0s,baz=116,slow=6.8,SNR=37
comp=Z,24nm,1.0s
BORK Borovoye 74.12 326 **P 14 44 24.5 -1.3**
BORK IAmb IAmb 14 44 37.1
comp=Z,21nm,0.7s
BORK Borovoye 74.12 326 *ce*P **P 14 44 25.0 -0.8**
BORK pmax pmax
comp=Z,43nm,1.3s
GAMB Gambell 74.96 22 P **P 14 44 29.4 -1.0**
baz=238
JLN Jalan Bani Buh 75.32 293 P **P 14 44 34.0 +0.6**
M11K Mekoryuk 75.55 26 P P 14 44 32.1 -1.7
baz=244
NRIK Noril'sk 75.58 345 P **P 14 44 33.1 -0.8**
comp=Z,5.1nm,0.9s,baz=129,slow=5.8,SNR=6.4
NRIK LR LR 15 19 00.9
comp=Z,892nm,19.6s,baz=138,slow=37
comp=Z,5.1nm,0.9s
WBK Wadi Bani Khal 75.77 293 P **P 14 44 36.1 +0.1**
SNR=6.3
WSAR Wadi Sarin 76.15 294 P **P 14 44 38.0 -0.1**
SNR=6.9
SDPT Sand Point 76.38 32 P P 14 44 36.6 -2.1
baz=250
JMDO Jabal Madar 76.55 293 P **P 14 44 40.1 -0.3**
SNR=7.5
MHTO MHTO 76.55 291 P **P 14 44 39.7 -0.6**
SNR=13
BIDO Bidbid 76.64 294 P **P 14 44 40.5 -0.3**
SNR=15
SMDO Samad 76.66 294 P **P 14 44 40.6 -0.5**
SNR=8.3
CHNA Chernabura Isl 76.68 33 P P 14 44 38.8 -1.6
baz=251
M13K Dall Lake 76.85 27 P **P 14 44 40.2 -1.1**
baz=246
K13K Kusilvak Mount 76.91 25 P **P 14 44 40.8 -0.7**
baz=245
JASK Jask - Hormozg 77.11 296 P **P 14 44 43.7 +0.2**
SNR=6.1
S14K Fog Glacier 77.19 32 P P 14 44 41.2 -2.2
baz=250
TNA Tin City 77.28 21 P **P 14 44 42.4 -1.2**
baz=241
O14K Tigyukauivet M 77.37 29 IAMs_20 IAMs_20 15 10 59.2
comp=Z,605nm,22.0s
O14K Tigyukauivet M 77.37 29 P **P 14 44 42.9 -1.3**
baz=248
HOQ Hoqain 77.39 294 P **P 14 44 44.5 -0.6**
SNR=13
BSY Bisya 77.41 293 P **P 14 44 44.5 -0.8**
SNR=9.4
N14K Kuskokwak Cree 77.42 28 P **P 14 44 43.0 -1.4**
baz=248
PPT Papeete 77.48 108 LR LR 15 16 00.8
comp=Z,142nm,20.4s,baz=280,slow=34
L14K Kuka Creek 77.52 26 IAmb IAmb 14 44 51.9
comp=Z,35nm,1.1s
L14K Kuka Creek 77.52 26 P **P 14 44 44.1 -0.9**
baz=247
M14K Bethel 77.61 27 IAmb IAmb 14 45 11.2
comp=Z,60nm,1.4s
M14K Bethel 77.61 27 P **P 14 44 44.6 -0.9**
baz=247
J14K Nanvaranak Lak 77.72 25 IAmb IAmb 14 45 13.9
comp=Z,35nm,1.4s
J14K Nanvaranak Lak 77.72 25 P **P 14 44 45.7 -0.3**
baz=246
ANM Nome 77.77 23 P **P 14 44 45.6 -0.8**
baz=244
CHGN Chignik 77.79 32 P P 14 44 44.8 -1.8
baz=252
F14K Arctic Creek 77.82 22 P **P 14 44 45.3 -1.3**
baz=242
O15K Ungalikthiuk R 78.03 29 IAmb IAmb 14 45 14.2
comp=Z,34nm,1.4s
O15K Ungalikthiuk R 78.03 29 P **P 14 44 47.2 -0.8**
baz=250
ARQ Araqi 78.09 294 P **P 14 44 48.6 -0.5**
SNR=15
M15K Kasigluk River 78.17 27 P P 14 44 46.9 -1.8
baz=249
L15K Ungalak Mounta 78.18 26 P **P 14 44 47.3 -1.4**
baz=248
N15K Kwethluk River 78.26 28 IAmb IAmb 14 45 15.5
comp=Z,46nm,1.2s
N15K Kwethluk River 78.26 28 P P 14 44 47.3 -1.9
baz=249
K15K Wolf Creek Mou 78.39 26 IAmb IAmb 14 45 17.1
comp=Z,43nm,1.4s
K15K Wolf Creek Mou 78.39 26 P **P 14 44 48.8 -1.1**
baz=248
G15K Niukluk 78.47 23 P **P 14 44 48.8 -1.4**
baz=245
UOSS Minazif 78.52 295 P 14 44 48.3 -3.1
UOSS Minazif 78.52 295 *i* P **P 14 44 50.0 -1.4**
SNR=5.7
UOSS Minazif 78.52 295 P **P 14 44 50.3 -1.1**
BANOM Banah 78.52 296 *i* P **P 14 44 51.1 -0.3**
SNR=5.6
BANOM Banah 78.52 296 P **P 14 44 51.6 +0.2**
F15K North Star Dit 78.55 22 IAmb IAmb 14 45 03.9
comp=Z,43nm,1.5s
F15K North Star Dit 78.55 22 P **P 14 44 49.4 -1.3**
baz=244
HATD Hatta, Dubai 78.57 295 *i* P **P 14 44 50.7 -0.9**
SNR=10
HATD Hatta, Dubai 78.57 295 P **P 14 44 51.1 -0.6**
SNR=9.3
MSFE Esma-Masafi 78.60 296 *i* P **P 14 44 51.5 -0.3**
SNR=14
MASF Masafi 78.60 296 P **P 14 44 52.1 +0.2**
SNR=10
ASHO Ashiyiah 78.63 295 P **P 14 44 51.6 -0.4**
SNR=6.0
R16K Pilot Point 78.63 31 P **P 14 44 50.2 -1.0**
baz=252
SHME Shamm 78.68 296 *i* P **P 14 44 51.7 -0.5**
SNR=5.5
SHME Shamm 78.68 296 P **P 14 44 52.0 -0.2**
P16K Nushagak River 78.88 29 P **P 14 44 51.6 -1.0**
baz=251
N16K Nishlik Lake 78.98 28 P **P 14 44 51.9 -1.3**
baz=250
O16K Kokwok River B 79.01 29 P **P 14 44 51.9 -1.4**
baz=251
NAZ Nazwa, Dubai 79.01 295 *i* P **P 14 44 52.7 -1.4**
SNR=6.6
NAZ Nazwa, Dubai 79.01 295 P **P 14 44 53.7 -0.4**
H16K Elim 79.02 23 P **P 14 44 52.2 -1.1**
baz=246
FAQ Al Faqa, Dubai 79.05 295 P **P 14 44 53.6 -0.7**
M16K Timber Creek 79.08 27 IAmb IAmb 14 45 20.1
comp=Z,29nm,1.1s
M16K Timber Creek 79.08 27 P **P 14 44 52.4 -1.3**
baz=250
L16K Owhat River 79.08 27 IAmb IAmb 14 45 19.2
comp=Z,42nm,1.4s
L16K Owhat River 79.08 27 P **P 14 44 52.8 -0.9**
baz=250
VNDA Vanda 79.12 174 P **P 14 44 53.5 -0.1**
comp=Z,5.5nm,0.7s,baz=329,slow=6.5,SNR=3.2
VNDA LR LR 15 18 58.2
comp=Z,1µm,19.7s,baz=350,slow=35
comp=Z,5.5nm,0.7s
VNDA Vanda 79.12 174 **P 14 44 53.8 +0.2**
VNDA Vanda 79.12 174 P **P 14 44 53.8 +0.2**
VNDA pmax pmax
comp=Z,10.0nm,0.7s
CHIR Chirikof Islan 79.14 33 P P 14 44 52.1 -2.0
baz=254
J16K Anvik River 79.17 25 P **P 14 44 53.2 -0.9**
baz=248
ABKAR Akbulak array 79.26 320 **P 14 44 53.6 -1.3**
R17L Mt. Peulik Vol 79.27 31 P **P 14 44 53.4 -1.4**
baz=253
ASUD Al Ashush, Dub 79.28 295 P **P 14 44 55.0 -0.5**
ASUD Al Ashush, Dub 79.28 295 P **P 14 44 55.4 -0.1**
G16K Koyuk River 79.28 23 P **P 14 44 53.8 -0.9**
baz=246

UMZA	Um Al Zommool	79.28	293	P	P	14 44 54.7	-0.9	
I17K	Unalakleet baz=248	79.35	24	P	P	14 44 54.1	-0.9	
Q16K	King Salmon baz=253	79.43	30	P	P	14 44 54.5	-1.1	
C16K	Lisburne Hills baz=243	79.46	19	P	P	14 44 55.0	-0.6	
O17K	Koliganek Bris baz=252	79.55	29	P	P	14 44 55.6	-0.6	
P17K	Kvichak River baz=253	79.69	29	P	P	14 44 55.9	-1.1	
Q17K	Contact Creek baz=253	79.69	30	P	P	14 44 55.7	-1.5	
N17K	Nushagak Hills baz=252	79.74	28	P	P	14 44 56.3	-1.0	
L17K	Donlin baz=250	79.75	26	P	P	14 44 55.8	-1.5	
J17K	VABM Dome baz=250	79.85	25	P	P	14 44 56.6	-1.2	
RBK	Rabkut	79.85	288	P	P	14 44 57.8	-1.0	
RBK				P	P	14 44 58.3	-0.5	
M17K	Holitna River baz=251	79.90	27	P	P	14 44 55.9	-2.2	
K17K	Iditarod comp=Z,45nm,1.2s	79.95	26	IAmb	IAmb	14 45 25.1		
K17K	Iditarod baz=250	79.95	26	P	P	14 44 57.5	-0.8	
SBA	Scott Base	79.95	173		P	14 44 57.2	-0.9	
SBA	comp=Z,54nm,1.6s			IAmb	IAmb	14 45 12.2		
SBA	Scott Base	79.95	173	P	P	14 44 57.2	-0.9	
SBA	comp=Z,54nm,1.7s			pmax	pmax			
D17K	Noatak River baz=245	79.97	20	P	P	14 44 57.8	-0.6	
G17K	Kiwalik Mounta baz=248	79.98	23	P	P	14 44 57.6	-0.9	
DOK	Doka SNR=5.3	79.98	289	P	P	14 44 58.8	-0.6	
H17K	Granite Mounta baz=249	80.06	23	P	P	14 44 58.3	-0.6	
F17K	Baldwin Pennin baz=247	80.12	22	P	P	14 44 58.3	-0.8	
SII	Sitkinak Islan baz=255	80.12	32	P	P	14 44 58.3	-1.1	
E17K	Hotham Inlet baz=246	80.16	21	P	P	14 44 57.9	-1.5	
RDOG	Red Dog Mine baz=245	80.18	20	P	P	14 44 58.1	-1.4	
Q18K	Katmai Hardscr baz=254	80.25	30	P	P	14 44 58.6	-1.6	
C17K	DeLong Mountai baz=245	80.27	20	P	P	14 44 58.9	-1.2	
WHFO	Wadi Hawf	80.28	288	P	P	14 44 59.9	-1.3	
P18K	Big Mountain, baz=254	80.34	29	P	P	14 44 59.6	-1.0	
N18K	Kilae Creek baz=253	80.39	28	P	P	14 44 59.5	-1.3	
O18K	Koktuh Hills baz=254	80.48	29	P	P	14 44 60.0	-1.4	
L18K	Granite Mounta baz=252	80.50	26	P	P	14 45 00.1	-1.2	
MZWR	Madinat Zayed	80.54	294	P	P	14 45 01.3	-1.1	
SVE	Sverdlovsk	80.60	328	*e*P	P	14 45 01.8	-0.2	
SVE	comp=Z,32nm,1.6s			pmax	pmax			
M18K	Stony River baz=253	80.67	27	P	P	14 45 01.0	-1.3	
ABTO	Aybut SNR=8.2	80.71	287	P	P	14 45 02.9	-0.6	
AKTO	Aktyubinsk comp=Z,312nm,20.2s,baz=85,slow=37	80.72	321	LR	LR	15 22 16.2		
E18K	Tukpahlearik C baz=248,SNR=12	80.73	21	P	P	14 45 01.3	-1.2	
H18K	Honhosa River comp=Z,47nm,1.8s	80.75	23	IAmb	IAmb	14 45 20.6		
H18K	Honhosa River baz=250	80.75	23	P	P	14 45 01.0	-1.7	
OHAK	Old Harbor baz=256	80.76	32	P	P	14 45 01.7	-1.1	
F18K	Selawik baz=249	80.77	22	P	P	14 45 01.5	-1.1	
MZR	Muzera	80.85	293	P	P	14 45 03.4	-0.7	
MZR	Muzera	80.85	293	P	P	14 45 03.8	-0.3	
J18K	Innoko River baz=252	80.87	25	P	P	14 45 01.5	-1.9	
G18K	Tagagawik baz=250	80.89	23	P	P	14 45 01.9	-1.5	
C18K	Utukok River baz=247	81.00	20	P	P	14 45 03.2	-0.8	
Q19K	Cape Douglas, comp=Z,479nm,18.0s	81.00	30	IAMs_20	IAMs_20	15 15 20.1		
Q19K	Cape Douglas, baz=255	81.00	30	P	P	14 45 02.5	-1.7	
O19K	Port Alsworth baz=254	81.00	29	P	P	14 45 02.5	-1.6	
N19K	Bonanza Creek comp=Z,29nm,1.2s	81.09	28	IAmb	IAmb	14 45 18.0		
N19K	Bonanza Creek baz=254	81.09	28	P	P	14 45 03.4	-1.3	
GCSA	Galena City Sc baz=251	81.21	24	P	P	14 45 04.3	-0.8	
KDAK	Kodiak Island comp=Z,301nm,21.9s,baz=241,slow=32	81.26	31	LR	LR	15 16 00.3		
KDAK	Kodiak Island comp=Z,678nm,22.0s	81.26	31	IAMs_20	IAMs_20	15 14 38.0		
KDAK	Kodiak Island baz=256	81.26	31	P	P	14 45 04.4	-1.1	
L19K	White Mountain comp=Z,45nm,1.5s	81.31	27	IAmb	IAmb	14 45 31.6		
L19K	White Mountain baz=254	81.31	27	P	P	14 45 04.3	-1.4	
P19K	Oil Pt baz=256	81.39	29	P	P	14 45 05.2	-1.1	
M19K	Big River Lodg comp=Z,29nm,1.2s	81.44	27	IAmb	IAmb	14 45 19.9		
M19K	Big River Lodg baz=254	81.44	27	P	P	14 45 04.9	-1.5	
J19K	Poorman baz=253	81.50	25	P	P	14 45 05.7	-0.9	
F19K	Shaleruckik Mo baz=250	81.55	22	P	P	14 45 05.6	-1.3	
Q20K	Shuyak Island baz=256	81.56	31	P	P	14 45 06.1	-1.0	
SYI	Shuyak Island comp=Z,543nm,20.0s	81.56	31	IAMs_20	IAMs_20	15 15 22.7		
G19K	Purcell Mounta baz=251	81.58	23	P	P	14 45 06.1	-1.0	
H19K	Roundabout Mou comp=Z,33nm,1.3s	81.63	23	IAmb	IAmb	14 45 20.7		
H19K	Roundabout Mou baz=252	81.63	23	P	P	14 45 06.4	-0.9	
A19K	Wainwright baz=247,SNR=11	81.66	18	P	P	14 45 06.9	-0.4	
ARTI	Arti comp=Z,218nm,21.6s,baz=101,slow=37	81.71	327	LR	LR	15 22 47.6		
ARTI	Arti	81.71	327		P	14 45 09.5	+1.6	
ARTI	comp=Z,33nm,1.4s			IAmb	IAmb	14 45 32.1		
ARTI	Arti	81.71	327	*d i*P	P	14 45 04.7	-3.2	
ARTI				S	S	14 55 15.4	-5.2	
ARTI	comp=Z,7.0nm,1.4s			pmax	pmax			
ARTI	comp=Z,572nm,22.0s			MLR	MLR			
C19K	Lookout Ridge comp=Z,58nm,1.3s	81.72	19	IAmb	IAmb	14 45 16.0		
C19K	Lookout Ridge baz=248,SNR=25	81.72	19	P	P	14 45 06.8	-1.0	
E19K	Redstone River comp=Z,27nm,1.2s	81.96	21	IAmb	IAmb	14 45 16.8		
E19K	Redstone River baz=251	81.96	21	P	P	14 45 08.0	-1.0	
K20K	Telida comp=Z,44nm,1.5s	81.98	26	IAmb	IAmb	14 45 36.8		
K20K	Telida baz=254	81.98	26	P	P	14 45 07.9	-1.3	
D19K	Kuna River comp=Z,46nm,1.3s	82.00	20	IAmb	IAmb	14 45 16.8		
D19K	Kuna River baz=250	82.00	20	P	P	14 45 08.7	-0.6	
M20K	Styx River comp=Z,34nm,1.2s	82.01	27	IAmb	IAmb	14 45 39.8		
M20K	Styx River baz=255	82.01	27	P	P	14 45 09.1	-0.4	
J20K	Nowinta River comp=Z,58nm,1.7s	82.17	25	IAmb	IAmb	14 45 39.1		
J20K	Nowinta River baz=254	82.17	25	P	P	14 45 09.5	-0.7	
HOM	Homer baz=257	82.18	30	P	P	14 45 09.2	-1.1	
I20K	Naaghedeneel baz=254	82.21	24	P	P	14 45 09.6	-0.7	
H20K	Anotleneega Mo baz=253	82.24	24	P	P	14 45 09.6	-1.0	
N20K	Mount Spurr baz=256	82.27	28	P	P	14 45 09.4	-1.5	
SPCR	Spurr Chakacha baz=256	82.27	28	P	P	14 45 09.6	-1.3	
F20K	Avaraart Lake comp=Z,27nm,1.4s	82.38	22	IAmb	IAmb	14 45 19.3		
F20K	Avaraart Lake baz=252	82.38	22	P	P	14 45 10.2	-1.0	
D20K	Etivluk River comp=Z,43nm,1.1s	82.59	20	IAmb	IAmb	14 45 29.8		
D20K	Etivluk River baz=251	82.59	20	P	P	14 45 11.8	-0.6	
E20K	Nigu River baz=252	82.59	21	P	P	14 45 10.8	-1.6	
BRSE	Bradley Lake S baz=258	82.64	30	P	P	14 45 11.7	-1.1	
PPLA	Purkeypile comp=Z,38nm,1.3s	82.69	26	IAmb	IAmb	14 45 38.3		
PPLA	Purkeypile baz=256	82.69	26	P	P	14 45 12.0	-1.1	
SKT	Skwentna comp=Z,21nm,1.2s	82.77	27	IAmb	IAmb	14 45 29.9		
SKT	Skwentna baz=257	82.77	27	P	P	14 45 12.2	-1.2	
IMAR	Indian Mountai	82.83	23	P	P	14 45 12.9	-0.7	
B20K	Meade River baz=250	82.84	19	P	P	14 45 12.1	-1.5	
CHUM	Lake Minchumin baz=256	82.87	25	P	P	14 45 12.9	-0.9	
MAW	Mawson comp=Z,11nm,1.2s,baz=67,slow=7.7,SNR=3.7	82.89	201	P	P	14 45 12.6	-1.3	
MAW	comp=Z,585nm,18.9s,baz=62,slow=35 comp=Z,11nm,1.2s			LR	LR	15 20 49.5		
G21K	Allakaket comp=Z,34nm,1.5s	83.07	23	IAmb	IAmb	14 46 12.6		
G21K	Allakaket baz=254	83.07	23	P	P	14 45 14.1	-0.7	
H21K	Melozitna Rive comp=Z,48nm,1.9s	83.12	24	IAmb	IAmb	14 46 13.8		
H21K	Melozitna Rive baz=255	83.12	24	P	P	14 45 14.1	-1.0	
L22K	Petersville comp=Z,30nm,1.1s	83.23	27	IAmb	IAmb	14 45 28.2		
F21K	Alatna River baz=254	83.27	22	P	P	14 45 15.1	-0.8	
O22K	Cooper Landing baz=258	83.29	29	P	P	14 45 14.8	-1.2	
I21K	Tanana baz=256	83.33	24	P	P	14 45 15.2	-1.0	
SEW	Seward baz=259	83.35	29	P	P	14 45 15.5	-0.8	
C21K	Knifeblade Rid baz=253	83.36	20	P	P	14 45 15.6	-0.7	
M22K	Willow baz=258	83.37	28	P	P	14 45 15.6	-0.8	
KTH	Kantishna Hill comp=Z,29nm,1.2s	83.40	26	IAmb	IAmb	14 45 28.8		
RC01	Rabbit Creek A comp=Z,22nm,1.0s	83.41	28	IAmb	IAmb	14 45 28.7		
RC01	Rabbit Creek A baz=258	83.41	28	P	P	14 45 15.4	-1.2	
E21K	Killik River comp=Z,28nm,1.2s	83.43	21	IAmb	IAmb	14 45 43.4		
E21K	Killik River baz=254	83.43	21	P	P	14 45 15.1	-1.6	
CUT	Chulitna baz=258	83.44	27	P	P	14 45 15.1	-1.6	
A21K	Barrow baz=251,SNR=14	83.44	18	P	P	14 45 16.2	-0.4	
BPAW	Bear Paw Mtn. baz=257	83.49	25	P	P	14 45 16.3	-0.8	
B21K	Ikpikpuk River comp=Z,29nm,1.1s	83.55	20	IAmb	IAmb	14 45 49.8		
B21K	Ikpikpuk River baz=253	83.55	20	P	P	14 45 16.6	-0.6	
TRF	Thorofare Moun baz=258	83.65	26	P	P	14 45 16.6	-1.5	
H22K	Ishtalitna Cre comp=Z,47nm,1.6s	83.75	24	IAmb	IAmb	14 45 39.6		
H22K	Ishtalitna Cre baz=256,SNR=9.7	83.75	24	P	P	14 45 17.6	-0.7	
PMR	Palmer comp=Z,28nm,1.1s	83.80	28	IAmb	IAmb	14 45 31.1		
PMR	Palmer baz=259	83.80	28	P	P	14 45 17.8	-0.8	
F22K	John River baz=255	83.83	22	P	P	14 45 17.4	-1.4	
A22K	Sinclair Lake baz=252	83.85	18	P	P	14 45 17.8	-0.9	
GHO	Glory Hole Cre comp=Z,594nm,21.0s	83.93	28	IAMs_20	IAMs_20	15 22 53.2		
G22K	Benes baz=256	83.94	23	P	P	14 45 18.5	-0.8	
KNK	Knik Glacier comp=Z,33nm,1.0s	84.08	28	IAmb	IAmb	14 45 32.8		
KNK	comp=Z,429nm,19.0s			IAMs_20	IAMs_20	15 13 41.3		
KNK	Knik Glacier baz=260	84.08	28	P	P	14 45 19.0	-1.1	
E22K	Anaktuvuk Pass comp=Z,34nm,1.2s	84.13	21	IAmb	IAmb	14 45 47.1		
E22K	Anaktuvuk Pass baz=256,SNR=15	84.13	21	P	P	14 45 19.6	-0.7	
B22K	Teshekpuk Lake comp=Z,38nm,1.2s	84.15	19	IAmb	IAmb	14 45 36.1		
B22K	Teshekpuk Lake baz=254,SNR=8.3	84.15	19	P	P	14 45 19.1	-1.2	
SML	Sawmill comp=Z,448nm,20.0s	84.21	28	IAMs_20	IAMs_20	15 22 53.8		
SML	Sawmill baz=260	84.21	28	P	P	14 45 19.6	-1.2	
RND	Reindeer comp=Z,32nm,1.2s	84.28	26	IAmb	IAmb	14 45 26.8		
WAT1	Susitna Watana baz=259	84.30	27	P	P	14 45 19.8	-1.5	
MCK	McKinley baz=259,SNR=13	84.30	26	P	P	14 45 19.9	-1.4	
P23K	Montague Islan baz=260	84.34	30	P	P	14 45 20.3	-1.2	
I23K	Minto, Yukon-K baz=258,SNR=23	84.40	24	P	P	14 45 20.5	-1.2	
NEA2	Nenana baz=259	84.41	25	P	P	14 45 20.7	-1.1	
G23K	Bananza Creek comp=Z,36nm,1.4s	84.47	23	IAmb	IAmb	14 45 36.1		
G23K	Bananza Creek baz=258	84.47	23	P	P	14 45 21.1	-1.0	
M23K	Glacier View baz=260	84.49	28	P	P	14 45 21.2	-1.1	
COLD	Coldfoot comp=Z,25nm,1.3s	84.51	22	IAmb	IAmb	14 45 49.1		
COLD	Coldfoot baz=257,SNR=12	84.51	22	P	P	14 45 21.3	-0.9	
WAT6	Susitna Watana baz=260,SNR=10	84.62	27	P	P	14 45 21.7	-1.4	
GLI	Glacier Island baz=261	84.64	29	P	P	14 45 21.8	-1.2	
SCM	Sheep Creek Mo comp=Z,537nm,22.0s	84.69	28	IAMs_20	IAMs_20	15 13 43.3		
SCM	Sheep Creek Mo baz=260	84.69	28	P	P	14 45 22.0	-1.3	
D23K	Nanushuk River comp=Z,41nm,1.4s	84.73	21	IAmb	IAmb	14 45 41.2		
D23K	Nanushuk River baz=257	84.73	21	P	P	14 45 22.0	-1.3	
Q23K	Middleton Isla baz=262	84.78	30	P	P	14 45 22.8	-0.9	
WRH	Wood River Hil comp=Z,43nm,1.2s	84.81	25	IAmb	IAmb	14 45 40.6		
DHY	Denali Highway baz=260,SNR=14	84.87	27	P	P	14 45 23.3	-1.0	
E23K	Chandalar comp=Z,30nm,1.1s	84.91	22	IAmb	IAmb	14 45 51.5		
E23K	Chandalar baz=258	84.91	22	P	P	14 45 23.1	-1.2	
C23K	Itkillik River comp=Z,38nm,1.6s	84.95	20	IAmb	IAmb	14 46 10.4		
C23K	Itkillik River baz=257	84.95	20	P	P	14 45 23.7	-0.7	
COLA	College	84.98	25↑	*e*P	P	14 45 23.9	-0.7	
COLA	comp=Z,3.0nm,0.9s			pmax	pmax			
COLA	College baz=260	84.98	25	P	P	14 45 23.8	-0.8	
TOLK	Toolik Lake Re baz=258	85.05	21	P	P	14 45 24.0	-1.0	
H24K	Noodor Dome baz=260	85.14	24	P	P	14 45 24.5	-1.0	
POKR	Poker Plat Res baz=260	85.20	25	P	P	14 45 24.6	-1.1	
EYAK	Cordova Ski Ar baz=262	85.24	29	P	P	14 45 24.6	-1.4	
M24K	Tolsona, Glenn baz=261	85.27	28	P	P	14 45 24.4	-1.8	
HDA	Harding Lake comp=Z,18nm,1.0s	85.28	25	IAmb	IAmb	14 46 01.5		
HDA	Harding Lake baz=261	85.28	25	P	P	14 45 24.7	-1.4	
KLU	Klutina comp=Z,27nm,1.3s	85.29	28	IAmb	IAmb	14 45 31.2		
KLU	Klutina baz=262	85.29	28	P	P	14 45 23.9	-2.4	
DIV	Divide comp=Z,35nm,1.0s	85.31	29	IAmb	IAmb	14 45 39.5		
DIV	comp=Z,377nm,18.0s			IAMs_20	IAMs_20	15 15 34.9		
E24K	Your Creek baz=259	85.33	22	P	P	14 45 24.1	-2.3	
ILAR	Eielson Array comp=Z,3.5nm,0.9s,baz=259,slow=5.0,SNR=28 comp=Z,3.5nm,0.9s	85.37	25	P	P	14 45 24.8	-1.8	
D24K	Happy Valley comp=Z,63nm,2.0s	85.42	21	IAmb	IAmb	14 46 13.0		
D24K	Happy Valley baz=258	85.42	21	P	P	14 45 25.0	-1.7	
F24K	Squaw Lake comp=Z,31nm,1.6s	85.45	22	IAmb	IAmb	14 45 53.3		
F24K	Squaw Lake baz=259	85.45	22	P	P	14 45 25.3	-1.6	
G24K	Hadweenzic Riv comp=Z,23nm,1.2s	85.46	23	IAmb	IAmb	14 45 53.8		
G24K	Hadweenzic Riv baz=260	85.46	23	P	P	14 45 25.5	-1.5	
C24K	Franklin Bluff baz=258	85.58	20	P	P	14 45 25.7	-1.8	
K24K	Donnelly Dome baz=262	85.70	26	P	P	14 45 26.8	-1.5	
PAX	Paxson baz=262,SNR=14	85.72	27	P	P	14 45 27.1	-1.4	
KAIM	Kayak Island baz=263	85.82	30	P	P	14 45 27.1	-1.8	
BMRM	Bremner River comp=Z,26nm,1.1s	85.86	29	IAmb	IAmb	14 45 52.4		
BMRM	comp=Z,461nm,21.0s			IAMs_20	IAMs_20	15 14 13.3		
BMRM	Bremner River baz=263	85.86	29	P	P	14 45 27.0	-2.1	
N25K	Chitina, Valde comp=Z,35nm,1.4s	85.94	28	IAmb	IAmb	14 46 12.6		
N25K	Chitina, Valde baz=263	85.94	28	P	P	14 45 27.7	-1.9	
J25K	Salcha River, comp=Z,29nm,1.9s	85.99	25	IAmb	IAmb	14 45 55.0		
J25K	Salcha River, baz=262	85.99	25	P	P	14 45 28.2	-1.5	
G25K	Bearman Lake baz=261	86.01	23	P	P	14 45 28.1	-1.6	
PRP	Porcupine Dome baz=262	86.05	24	P	P	14 45 28.3	-1.8	
RIDG	Independent Ri baz=262,SNR=9.2	86.10	26	P	P	14 45 29.2	-1.0	
GLB	Gilahina Butte comp=Z,42nm,1.3s	86.29	29	IAmb	IAmb	14 45 55.1		
F25K	Christian Rive comp=Z,40nm,2.0s	86.31	22	IAmb	IAmb	14 46 26.7		
F25K	Christian Rive baz=262	86.31	22	P	P	14 45 30.3	-0.9	
D25K	Kavik River baz=261	86.31	21	P	P	14 45 30.4	-0.9	
BGLC	Bering Glacier baz=264	86.41	30	P	P	14 45 30.7	-1.0	
E25K	Arctic Village comp=Z,29nm,1.6s	86.42	22	IAmb	IAmb	14 46 05.4		
E25K	Arctic Village baz=262	86.42	22	P	P	14 45 31.0	-0.7	
DOT	Dot Lake comp=Z,39nm,1.5s	86.43	26	IAmb	IAmb	14 45 52.2		
SCRK	Sand Creek baz=263	86.51	26	P	P	14 45 31.2	-1.2	
CRQM	Cirque comp=Z,34nm,1.2s	86.55	29	IAmb	IAmb	14 45 59.3		
CRQM	comp=Z,542nm,19.0s			IAMs_20	IAMs_20	15 16 10.1		
CRQE	Cirque baz=264	86.57	29	P	P	14 45 30.8	-1.9	
MCARA	McCarthy VSAT baz=264	86.66	29	P	P	14 45 31.8	-1.3	
L26K	Log Cabin Wild comp=Z,29nm,1.2s	86.68	27	IAmb	IAmb	14 45 59.7		
L26K	Log Cabin Wild baz=264	86.68	27	P	P	14 45 31.8	-1.3	
BMAR	Burnt Mountain	86.69	23		P	14 45 33.4	+0.3	
TGL	Tana Glacier comp=Z,387nm,19.0s	86.70	29	IAMs_20	IAMs_20	15 28 03.5		
M26K	Nabesna, AK comp=Z,409nm,19.0s	86.78	28	IAMs_20	IAMs_20	15 24 59.9		
M26K	Nabesna, AK baz=264	86.78	28	P	P	14 45 32.3	-1.3	
AKT	Akhty	86.80	311	*e*P	P	14 45 32.9	-1.4	
AKT				*e*		14 48 56.8		
AKT	comp=Z,35nm,1.5s			pmax	pmax			
KIRV	Kirov comp=Z,404nm,21.5s,baz=91,slow=37	86.82	329	LR	LR	15 25 47.3		
F26K	Sheenjek River baz=263	86.89	22	P	P	14 45 32.9	-1.2	
C26K	Camden Bay baz=262	86.91	20	P	P	14 45 33.0	-1.1	
G26K	Porcupine Rive baz=263	86.94	23	P	P	14 45 33.0	-1.2	
I26K	Coal Creek Min baz=264	87.01	25	P	P	14 45 33.9	-0.7	
MAK	Makhachkala	87.03	313	*e*P	P	14 45 29.8	-5.4	
MAK				*e*		14 48 51.7		
MAK				*e*		14 55 53.8		
MAK				*e*		15 01 59.3		
MAK				*e*SSS	SSS	15 05 25.2		
MAK	comp=Z,309nm,1.5s			pmax	pmax			
MESA	MESA baz=265	87.08	30	P	P	14 45 34.0	-1.3	
C27K	Jago River baz=263	87.28	20	P	P	14 45 35.1	-0.8	
M27K	Edge Creek, AK comp=Z,512nm,18.0s	87.29	28	IAMs_20	IAMs_20	15 25 45.5		
M27K	Edge Creek, AK baz=265	87.29	28	P	P	14 45 34.8	-1.5	
L27K	Beaver Creek, comp=Z,30nm,1.4s	87.38	27	IAmb	IAmb	14 46 03.4		
L27K	Beaver Creek, baz=265	87.38	27	P	P	14 45 35.3	-1.2	
BCAR	Beaver Creek A	87.40	27	P	P	14 45 36.0	-0.7	
BELG	Belogornoye	87.41	322↑	*e*P	P	14 45 35.6	-1.2	
BELG	comp=Z,8.0nm,1.5s			pmax	pmax			
CTG	Chitna Glacier baz=266,SNR=11	87.44	29	P	P	14 45 35.5	-1.5	
LOGN	Logan Glacier comp=Z,472nm,21.0s	87.59	29	IAMs_20	IAMs_20	15 18 47.2		
I27K	Kandik River comp=Z,20nm,1.1s	87.68	24	IAmb	IAmb	14 46 15.5		
I27K	Kandik River baz=265	87.68	24	P	P	14 45 36.4	-1.6	
G27K	Doyon Strip baz=265	87.76	23	P	P	14 45 36.5	-1.8	
H27K	Steamboat Moun comp=Z,22nm,1.4s	87.77	24	IAmb	IAmb	14 46 03.8		
H27K	Steamboat Moun baz=265	87.77	24	P	P	14 45 37.1	-1.3	
BVCY	Beaver Creek baz=266	87.77	28	P	P	14 45 36.5	-1.9	
E27K	Coleen River baz=265	87.90	22	P	P	14 45 37.7	-1.2	
YUK3	Moose Creek baz=266	87.92	28	P	P	14 45 37.8	-1.6	
PINM	Pinnacle baz=267	87.92	30	P	P	14 45 37.5	-1.7	
O28M	Mount Upton	87.99	29	IAMs_20	IAMs_20	15 21 58.9		

	comp=Z,370nm,20.0s							
O28M	**Mount Upton**	**87.99**	**29**	P	P	14 45 38.1	-1.7	
	baz=267							
RAYN	**Ar Rayn**	**88.20**	**293**		P	14 45 38.9	-2.5	
RAYN				IAmb	IAmb	14 45 55.5		
	comp=Z,14nm,1.1s							
RAYN	**Ar Rayn**	**88.20**	**293**	*i* P	**P**	**14 45 40.1**	**-1.2**	
	SNR=5.9							
RAYN	**Ar Rayn**	**88.20**	**293**	P	P	14 45 38.9	-2.4	
RAYN				pmax	pmax			
	comp=Z,14nm,1.1s							
RAYN	**Ar Rayn**	**88.20**	**293**	P	**P**	**14 45 40.7**	**-0.6**	
YUK8	**Steele Glacier**	**88.22**	**29**	P	P	14 45 39.3	-1.6	
	baz=267							
I28M	**Miner Creek**	**88.37**	**25**	IAmb	IAmb	14 46 31.4		
	comp=Z,31nm,1.6s							
I28M	**Miner Creek**	**88.37**	**25**	P	**P**	**14 45 39.9**	**-1.4**	
	baz=267							
F28M	**Old Crow**	**88.51**	**22**	P	P	14 45 39.9	-1.9	
	baz=267							
E28M	**Babbage River**	**88.69**	**21**	P	**P**	**14 45 41.3**	**-1.3**	
	baz=267							
YUK4	**Talbot Arm**	**88.77**	**29**	P	P	14 45 41.7	-1.6	
	baz=268							
O29M	**Mount Kennedy**	**88.77**	**30**	IAMs_20	IAMs_20	15 18 28.1		
	comp=Z,702nm,22.0s							
O29M	**Mount Kennedy**	**88.77**	**30**	P	**P**	**14 45 42.1**	**-1.2**	
	baz=268							
M29M	**Somme Creek**	**88.89**	**28**	P	**P**	**14 45 42.3**	**-1.5**	
	baz=268							
YUK6	**Outpost Mounta**	**88.89**	**29**	P	P	14 45 41.5	-2.5	
	baz=268							
D28M	**Stokes Point**	**89.01**	**21**	P	**P**	**14 45 43.2**	**-0.9**	
	baz=268							
H29M	**Whitestone**	**89.04**	**24**	P	**P**	**14 45 42.8**	**-1.5**	
	baz=268							
I29M	**Ogilvie Camp,**	**89.04**	**25**	P	**P**	**14 45 42.9**	**-1.4**	
	baz=268							
L29M	**L29M**	**89.06**	**27**	IAmb	IAmb	14 46 18.4		
	comp=Z,27nm,1.4s							
L29M	**L29M**	**89.06**	**27**	P	P	14 45 42.6	-1.9	
	baz=268							
G29M	**Pine Creek**	**89.20**	**23**	IAmb	IAmb	14 46 10.7		
	comp=Z,26nm,1.4s							
G29M	**Pine Creek**	**89.20**	**23**	P	**P**	**14 45 43.7**	**-1.4**	
	baz=269							
E29M	**Blow River**	**89.29**	**22**	P	**P**	**14 45 43.9**	**-1.5**	
	baz=269							
HYT	**Haines Junctio**	**89.31**	**29**	P	P	14 45 44.0	-1.8	
	baz=269							
K29M	**Barlow Dome**	**89.35**	**26**	P	P	14 45 43.9	-2.0	
	baz=269							
N30M	**Aishikik Lake**	**89.52**	**29**	IAMs_20	IAMs_20	15 20 11.8		
	comp=Z,410nm,22.0s							
N30M	**Aishikik Lake**	**89.52**	**29**	P	P	14 45 44.9	-1.9	
	baz=270							
P30M	**Million Dollar**	**89.57**	**30**	P	P	14 45 45.3	-1.7	
	baz=270							
M30M	**Minto, Yukon**	**89.66**	**28**	P	P	14 45 45.8	-1.6	
	baz=270							
EPYK	**Eagle Plains**	**89.71**	**24**	P	**P**	**14 45 46.2**	**-1.3**	
	baz=270							
I30M	**Mount Dempster**	**89.85**	**25**	P	P	14 45 46.6	-1.7	
	baz=270							
J30M	**Hart River**	**89.87**	**26**	P	P	14 45 46.8	-1.6	
	baz=270							
G30M	**tAoh Zraii Nji**	**89.91**	**23**	P	P	14 45 46.8	-1.7	
	baz=270							
S31K	**Pelican**	**89.94**	**32**	P	P	14 45 46.4	-2.2	
	baz=270							
O30N	**Mendenhall**	**90.00**	**29**	P	P	14 45 47.0	-2.0	
	baz=270							
F30M	**Barrier River**	**90.08**	**23**	P	**P**	**14 45 47.6**	**-1.5**	
	baz=271							
QSPA	**South Pole Qui**	**90.09**	**180**	P	**P**	**14 45 49.1**	**-0.3**	
	comp=Z,9.5nm,0.9s,baz=156,slow=1.4,SNR=20							
QSPA				LR	LR	15 26 08.6		
	comp=Z,2µm,20.1s,baz=5.5,slow=36							
	comp=Z,9.5nm,0.9s							
QSPA	**South Pole Qui**	**90.09**	**180**	P	**P**	**14 45 48.7**	**-0.7**	
QSPA				IAmb	IAmb	14 46 12.5		
	comp=Z,38nm,1.1s							
N31M	**Braeburn, Yuko**	**90.14**	**29**	P	P	14 45 47.6	-2.0	
	baz=271							
R31K	**City Hall, Gus**	**90.20**	**32**	P	P	14 45 48.0	-1.8	
	baz=271							
SKAG	**Skagway**	**90.40**	**31**	P	P	14 45 48.9	-1.9	
	baz=271							
KBZ	**Khabaz**	**90.41**	**314**	LR	LR	15 31 46.0		
	comp=Z,162nm,18.4s,baz=72,slow=39							
KBZ	**Khabaz**	**90.41**	**314**	*e*P	P	14 45 47.6	-3.5	
KBZ				pmax	pmax			
	comp=Z,7.0nm,2.3s							
SIT	**Sitka**	**90.44**	**33**	P	P	14 45 49.3	-1.7	
	baz=271							
KIV	**Kislovodsk**	**90.56**	**314**	*e*P	**P**	**14 45 51.1**	**-0.9**	
KIV				*e*		14 56 22.2		
KIV				pmax	pmax			
	comp=Z,3.0nm,0.9s							
WHY	**Whitehorse**	**90.60**	**29**	P	P	14 45 50.0	-1.8	
	baz=271							
H31M	**Peel River**	**90.69**	**24**	P	P	14 45 50.4	-1.6	
	baz=272							
ATD	**Arta Tunnel**	**90.72**	**281**	LR	LR	15 26 40.6		
	comp=Z,5.7nm,19.1s,baz=104,slow=36							
M31M	**Drury Creek, Y**	**90.79**	**28**	IAMs_20	IAMs_20	15 20 15.6		
	comp=Z,516nm,21.0s							
M31M	**Drury Creek, Y**	**90.79**	**28**	P	P	14 45 50.8	-1.8	
	baz=272							
S32K	**Killisnoo**	**90.84**	**33**	P	P	14 45 51.1	-1.7	
	baz=272							
R32K	**Eaglecrest**	**90.84**	**32**	P	**P**	**14 45 51.4**	**-1.5**	
	baz=272							
F31M	**Tsiigehtchic**	**90.87**	**23**	P	**P**	**14 45 51.5**	**-1.2**	
	baz=272							
INK	**Inuvik**	**90.91**	**22**	IAmb	IAmb	14 46 24.1		
	comp=Z,21nm,1.6s							
INK	**Inuvik**	**90.91**	**22**	P	**P**	**14 45 51.4**	**-1.5**	
	baz=273							
VRH	**Novokhopyorsk**	**91.06**	**321**	*e*P	P	14 45 59.8	+5.8	
VRH				pmax	pmax			
	comp=Z,9.0nm,1.0s							
P32M	**Atlin**	**91.22**	**31**	P	P	14 45 52.6	-2.1	
	baz=272							
P33M	**Teslin, Yukon**	**91.64**	**30**	P	P	14 45 54.8	-1.8	
	baz=273							
U33K	**Whale Pass**	**91.69**	**34**	P	P	14 45 55.2	-1.6	
	baz=273							
CRAG	**Craig**	**91.72**	**35**	P	P	14 45 55.3	-1.6	
	baz=273							
KLMR	**Klimovskoe**	**91.86**	**331**	*e*P	**P**	**14 45 57.0**	**-0.5**	
KLMR				pmax	pmax			
	comp=Z,21nm,1.3s							
Q32M	**Nakina River**	**91.99**	**31**	P	**P**	**14 45 56.9**	**-1.5**	
	baz=274							
WRAK	**Wrangell Islan**	**92.11**	**34**	P	**P**	**14 45 57.4**	**-1.3**	
	baz=274							
V35K	**Ketchikan**	**92.59**	**35**	P	P	14 45 59.2	-1.8	
	baz=274							
R33M	**Jennings River**	**92.63**	**31**	P	P	14 45 59.3	-2.0	
	baz=275							
S34M	**Telegraph Cree**	**92.66**	**32**	P	P	14 45 59.1	-2.2	
	baz=275							
LPSR	**Galich'ya Gora**	**92.72**	**323**	*e*P	P	14 46 08.1	+6.4	
LPSR				pmax	pmax			
	comp=Z,13nm,1.0s							
DLBC	**Dease Lake**	**93.20**	**32**	P	P	14 46 01.8	-2.1	
	baz=276							
T35M	**Bob Quinn**	**93.22**	**33**	P	P	14 46 02.1	-1.9	
	baz=275							
MOS	**Moscow**	**93.25**	**326**	*e*P	**P**	**14 46 06.8**	**+2.8**	
MOS				*e*		14 49 48.7		
A36M	**Sachs Harbour**	**93.29**	**18**	P	**P**	**14 46 02.5**	**-1.3**	
	baz=281							
U35K	**Hyder**	**93.44**	**34**	IAMs_20	IAMs_20	15 25 02.1		
	comp=Z,405nm,19.0s							
U35K	**Hyder**	**93.44**	**34**	P	**P**	**14 46 03.7**	**-1.2**	
	baz=275							
WTLY	**Watson Lake, Y**	**93.65**	**30**	P	**P**	**14 46 04.9**	**-1.0**	
	baz=277							
APA	**Apatity**	**93.75**	**338**	*e*P	**P**	**14 46 07.7**	**+1.6**	
APA				pmax	pmax			
	comp=Z,10.0nm,1.1s							
APA				MLR	MLR			
	comp=Z,966nm,20.4s							
OBN	**Obninsk**	**93.91**	**325**	LR	LR	15 30 29.1		
	comp=Z,386nm,20.4s,baz=90,slow=37							
C36M	**Paulatuk**	**94.18**	**20**	IAmb	IAmb	14 46 33.0		
	comp=Z,20nm,1.4s							
C36M	**Paulatuk**	**94.18**	**20**	P	**P**	**14 46 07.0**	**-1.1**	
	baz=282							
BBB	**Bella Bella**	**94.95**	**38**	LR	LR	15 21 42.7		
	comp=Z,212nm,20.8s,baz=252,slow=31							
SPITS	**Spitsbergen Ar**	**95.25**	**349**	LR	LR	15 32 40.6		
	comp=Z,165nm,20.3s,baz=54,slow=38							
ASF	**Jabal al Asfar**	**95.61**	**302**	LR	LR	15 37 07.9		
	comp=Z,144nm,18.1s,baz=62,slow=40							
WRGLY	**Wrigley**	**95.67**	**26**	P	**P**	**14 46 13.6**	**-1.3**	
	baz=282							
ARCES	**ARCESS Array B**	**96.12**	**340**	P	**P**	**14 46 17.1**	**+0.2**	
	comp=Z,4.4nm,1.0s,baz=43,slow=5.5,SNR=4.7							
ARCES				LR	LR	15 32 15.5		
	comp=Z,412nm,21.1s,baz=80,slow=37							
	comp=Z,4.4nm,1.0s							
KMBO	**Kilima Mbogo**	**96.36**	**269**	LR	LR	15 27 09.8		
	comp=Z,165nm,19.1s,baz=102,slow=34							
MMAI	**Mount Meron Ar**	**96.80**	**303**	LR	LR	15 38 52.5		
	comp=Z,143nm,18.0s,baz=84,slow=41							
EIL	**Elat**	**97.45**	**300**	LR	LR	15 37 08.3		
	comp=Z,224nm,19.1s,baz=81,slow=40							
BRTR	**Keskin Array B**	**97.57**	**310**	P	P	14 46 22.2	-2.2	
	comp=Z,0.3nm,0.4s,baz=72,slow=4.7,SNR=4.3							
	comp=Z,0.3nm,0.4s							
FINES	**FINESS Array B**	**98.18**	**332**	LR	LR	15 33 15.6		
	comp=Z,624nm,19.8s,baz=72,slow=37							
AKASG	**Malin Array Be**	**98.96**	**321**	P	**Pdif**	**14 46 27.6**	**-2.5**	
	comp=Z,0.2nm,0.3s,baz=72,slow=3.0,SNR=4.6							
AKASG				LR	LR	15 35 08.0		
	comp=Z,221nm,18.9s,baz=72,slow=38							
	comp=Z,0.2nm,0.3s							
NACGM	**Naroch**	**99.49**	**326**	*e*P	**Pdif**	**14 46 30.8**	**-1.6**	
YKA	**Yellowknife Ar**	**99.77**	**26**	P	**Pdif**	**14 46 31.3**	**-2.2**	
	comp=Z,0.4nm,0.8s,baz=296,slow=5.7,SNR=6.3							
YKA				LR	LR	15 26 58.4		
	comp=Z,190nm,21.8s,baz=296,slow=33							
	comp=Z,0.4nm,0.8s							
YKA	**Yellowknife Ar**	**99.77**	**26**	*i* P	**Pdif**	**14 46 32.4**	**-1.1**	
RES	**Resolute Bay**	**99.98**	**12**	LR	LR	15 34 11.1		
	comp=Z,91nm,18.4s,baz=287,slow=37							
NVL	**N'lazarevskaya**	**100.21**	**197**	*e*P	**Pdif**	**14 46 35.0**	**-0.3**	
NVL				*e*		14 50 40.9		
NVL				*e*PPP	PPP	14 52 48.1		
NVL				*e*S	**SKSac**	**14 57 13.9**	**-0.1**	
NVL				*e*PS	**PS**	**14 59 41.4**	**+1.0**	
NVL				*e*SS	**SS**	**15 05 06.5**	**+2.5**	
NVL				*e*SSS	SSS	15 08 56.5		
NVL				pmax	pmax			
	comp=Z,94nm,2.7s							
NVL				MLR	MLR			
	comp=Z,1µm,18.0s							
WELL	**Weller Preserv**	**102.13**	**51**	IAMs_20	IAMs_20	15 29 40.7		
	comp=Z,467nm,20.0s							
CMB	**Columbia Colle**	**102.47**	**51**	IAMs_20	IAMs_20	15 29 27.5		
	comp=Z,455nm,20.0s							
PSZ	**Piszkesteto**	**105.57**	**320**	IAMs_20	IAMs_20	15 35 55.2		
	comp=Z,471nm,22.0s							
FXWY	**Fox Creek**	**108.00**	**44**	IAMs_20	IAMs_20	15 31 07.2		
	comp=Z,339nm,20.0s							
CLL	**Collm**	**108.50**	**325**	AMS	AMS	15 39 00.0		
	comp=Z,500nm,18.0s							
CLL	**Collm**	**108.50**	**325**	*e*SP	SP	15 01 00.0	-5.9	
CLL	**Collm**	**108.50**	**325**	*e*PS	PS	15 01 08.0	+0.1	
CLL	**Collm**	**108.50**	**325**	*e*PPS	PPS	15 02 05.0		
CLL	**Collm**	**108.50**	**325**	*e*SS	SS	15 06 54.0	-4.7	
CLL	**Collm**	**108.50**	**325**	*e*SSS	SSS	15 10 54.0		
CLL	**Collm**	**108.50**	**325**	*ex*	x	15 12 36.0		
CLL	**Collm**	**108.50**	**325**	*ex*	x	15 17 12.0		
CLL	**Collm**	**108.50**	**325**	AMS	AMS	15 32 00.0		
	comp=N,1µm,19.5s							
CLL	**Collm**	**108.50**	**325**	AMS	AMS	15 32 00.0		
	comp=E,900nm,19.3s							
KHC	**Kasperske Hory**	**109.06**	**323**	IAMs_20	IAMs_20	15 35 57.2		
	comp=Z,373nm,20.0s							
FUORN	**Ofenpass-Fuorn**	**112.14**	**322**	IAMs_20	IAMs_20	15 41 51.8		
	comp=Z,437nm,21.0s							
WLF	**Walferdange**	**113.14**	**326**	IAMs_20	IAMs_20	15 43 53.9		
	comp=Z,406nm,20.0s							
TXAR	**Lajitas Array**	**118.07**	**56**	PKKPbc	PKKPbc	15 01 58.4	+1.1	
	comp=Z,0.8nm,1.0s,baz=58,slow=3.6,SNR=4.3							
CART	**Cartagena**	**123.79**	**317**	IAMs_20	IAMs_20	15 27 45.7		
	comp=Z,326nm,21.0s							
TORD	**Torodi Ar. Bea**	**130.55**	**287**	PKP	**PKPdf**	**14 52 01.0**	**-0.5**	
	comp=Z,1.7nm,0.4s,baz=83,slow=0.8,SNR=10							
DBIC	**Dimbokro**	**138.01**	**280**	PKP	**PKPdf**	**14 52 16.3**	**+0.8**	
	comp=Z,1.7nm,0.4s,baz=83,slow=4.6,SNR=2.7							
ACDV	**Cuesta del Vie**	**143.14**	**146**	*i* P	PKPbc	14 52 25.0	+3.6	
GO03	**Copiapo**	**144.40**	**142**	*i* P	**PKPab**	**14 52 27.0**	**+2.2**	
VCA	**Vinchina**	**144.75**	**146**	*i* P	**PKPab**	**14 52 27.3**	**+1.1**	
ACLC	**CERRO LA CRUZ**	**144.91**	**148**	*i* P	**PKPab**	**14 52 27.7**	**+1.0**	
NMDO	**Nuevo Mundo**	**145.26**	**52**		**PKPbc**	**14 52 27.1**	**-0.8**	
AANI	**Anillaco**	**145.40**	**147**	*i* P	**PKPbc**	**14 52 29.9**	**+1.5**	
TINO	**Tinogasta**	**145.63**	**146**	*i* P	**PKPdf**	**14 52 28.9**	**0.0**	
MCRA	**Macar, Loja**	**146.21**	**98**	P	**PKPdf**	**14 52 31.5**	**+1.3**	
PB14	**IPOC Station P**	**146.35**	**138**		**PKPdf**	**14 52 27.6**	**-2.9**	
PSAL	**Palomas, Salto**	**147.46**	**162**	*e*P	**PKPdf**	**14 52 32.6**	**+0.9**	
PAC1	**Pacto, Paraso**	**147.59**	**89**	P	**PKPdf**	**14 52 30.0**	**-2.6**	
OTAV	**Otavalo**	**147.93**	**89**	PKPab	**PKPdf**	**14 52 35.4**	**+1.8**	
OTAV	**Otavalo**	**147.93**	**89**	PKP2	**PKPdf**	**14 52 35.4**	**+1.8**	
OTAV	**Otavalo**	**147.93**	**89**	P	**PKPbc**	**14 52 38.6**	**+2.0**	
BONI	**La Bonita**	**148.85**	**89**	P	**PKPdf**	**14 52 36.2**	**+1.4**	
GCUF	**Volcan Galeras**	**149.01**	**87**	P	**PKPdf**	**14 52 39.5**	**+4.1**	
CASC	**Domo de Casc**	**149.04**	**89**	P	**PKPdf**	**14 52 37.4**	**+2.4**	
BBAC	**Balboa, Cauca**	**149.07**	**86**	P	**PKPbc**	**14 52 40.2**	**+1.0**	
DBBC	**Dabeiba**	**149.40**	**76**	P	**PKPbc**	**14 52 41.1**	**+1.2**	
JAMC	**Jamundi, Valle**	**149.54**	**83**	P	**PKPdf**	**14 52 32.3**	**-3.6**	
POPC	**Popayan, Colom**	**149.60**	**85**	P	**PKPdf**	**14 52 39.5**	**+3.5**	
PLMC	**San Jos del P**	**149.72**	**80**	P	**PKPdf**	**14 52 41.0**	**+5.0**	
YOTC	**Yotoco, Valle**	**149.78**	**82**	P	**PKPdf**	**14 52 36.3**	**+0.1**	
CBOC	**Ciudad Bolivar**	**149.82**	**78**	P	**PKPbc**	**14 52 42.0**	**+1.0**	
HELC	**Santa Helena**	**150.23**	**77**	P	**PKPbc**	**14 52 43.4**	**+1.1**	
GUY2C	**Guyana, Caldas**	**150.57**	**79**	P	**PKPdf**	**14 52 39.5**	**+1.7**	
FLOC	**Florencia**	**150.68**	**86**	P	**PKPdf**	**14 52 40.8**	**+3.3**	
GARC	**Garzon, Huila**	**150.80**	**85**	P	**PKPdf**	**14 52 36.8**	**-1.1**	
PB16	**IPOC Station P**	**150.98**	**130**		**PKiKP**	**14 52 47.6**	**+2.8**	
NORC	**Norcasia**	**151.00**	**78**	P	**PKPbc**	**14 52 45.5**	**+1.8**	
PTBC	**PUERTO BERRIO**	**151.21**	**76**	P	**PKiKP**	**14 52 48.6**	**+3.9**	
PRAC	**Prado**	**151.26**	**82**	P	**PKPdf**	**14 52 38.0**	**-0.4**	
ROSC	**El Rosal**	**151.66**	**80**	PKPbc	**PKPbc**	**14 52 45.6**	**-0.1**	
	comp=Z,12nm,0.7s,baz=164,slow=1.8,SNR=4.4							
ROSC	**El Rosal**	**151.66**	**80**	P	**PKPdf**	**14 52 44.9**	**+5.5**	
SPBC	**San Pablo de B**	**151.76**	**78**	P	**PKPdf**	**14 52 43.5**	**+4.3**	
URMC	**La Uribe, Meta**	**151.81**	**83**	P	**PKPbc**	**14 52 46.2**	**+0.6**	
CPUP	**Villa Florida**	**151.93**	**159**	PKPbc	**PKPbc**	**14 52 45.4**	**-0.1**	
	comp=Z,5.4nm,0.8s,baz=197,slow=2.4,SNR=18							
CPUP	**Villa Florida**	**151.93**	**159**		**PKPbc**	**14 52 45.0**	**-0.4**	
CPUP	**Villa Florida**	**151.93**	**159**	PKIKP	**PKPbc**	**14 52 45.0**	**-0.4**	
CHIC	**Chingaza**	**152.27**	**80**	P	**PKPdf**	**14 52 45.5**	**+5.2**	
RUSC	**La Rusia**	**152.68**	**77**	P	**PKPdf**	**14 52 46.8**	**+5.8**	
CZSB	**Cruzeiro do Su**	**152.71**	**107**	*e*P	**PKPdf**	**14 52 41.7**	**+1.2**	
LPAZ	**La Paz**	**153.23**	**128**	PKPbc	**PKPbc**	**14 52 50.3**	**+0.9**	
	comp=Z,2.7nm,0.8s,baz=353,slow=3.8,SNR=8.3							
LPAZ	**La Paz**	**153.23**	**128**		**PKPbc**	**14 52 51.7**	**+2.4**	
SDV	**Santo Domingo**	**154.23**	**69**	*e*P	**PKPdf**	**14 52 45.4**	**+2.5**	
BBSD	**Serra de San D**	**158.04**	**141**	*e*P	**PKPdf**	**14 52 49.4**	**+1.9**	

IDC 27 14:46:06.9±4.3, 30.76N×41.77W, h0km, mb3.6/5, mbtmp3.6/5, MS3.5/13, Error ellipse: s-maj=119.0km s-min=44.7km az=169.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**25.45**	**246**	LR	LR	14 59 07.3	
	comp=Z,36nm,21.3s,baz=68,slow=31						
MDP	**Montagnes des**	**27.50**	**204**	LR	LR	15 00 21.1	
	comp=Z,48nm,18.6s,baz=59,slow=31						
SCHQ	**Schefferville**	**29.98**	**331**	LR	LR	15 04 21.1	
	comp=Z,66nm,19.0s,baz=93,slow=36						
MDT	**Midelt**	**31.55**	**76**	LR	LR	15 03 12.3	
	comp=Z,46nm,18.3s,baz=282,slow=32						
SADO	**Sadowa**	**32.39**	**306**	LR	LR	15 04 13.2	
	comp=Z,54nm,20.1s,baz=96,slow=34						
SDV	**Santo Domingo**	**34.61**	**237**	LR	LR	15 03 55.2	
	comp=Z,60nm,20.3s,baz=64,slow=31						
TKL	**Tuckaleechee C**	**35.29**	**289**	LR	LR	15 05 59.0	
	comp=Z,58nm,18.4s,baz=34,slow=34						
DBIC	**Dimbokro**	**42.06**	**117**	LR	LR	15 11 18.4	
	comp=Z,30nm,19.4s,baz=337,slow=36						
JTS	**Las Juntas de**	**44.93**	**253**	LR	LR	15 11 53.4	
	comp=Z,39nm,20.6s,baz=21,slow=34						
H10N2	**ASCENSION HYDR**	**46.43**	**141**	T	T	15 43 42.7	
	baz=326,slow=75,SNR=53						
H10N3	**ASCENSION HYDR**	**46.43**	**141**	T	T	15 43 46.7	
	baz=326,slow=75,SNR=74						
H10N1	**ASCENSION HYDR**	**46.45**	**141**	T	T	15 43 44.3	
	baz=326,slow=75,SNR=105						
TXAR	**Lajitas Array**	**52.98**	**285**	P	P	14 55 26.1	+0.5
	0.9nm,1.0s,baz=95,slow=7.1,SNR=4.5						
	0.9nm,1.0s						
PDAR	**Pinedale Array**	**54.28**	**303**	P	P	14 55 34.2	-0.9
	2.0nm,1.0s,baz=64,slow=5.4,SNR=7.9						
	2.0nm,1.0s						
YKA	**Yellowknife Ar**	**55.35**	**327**	P	P	14 55 43.1	+0.9
	0.2nm,0.8s,baz=83,slow=6.8,SNR=3.9						
	0.2nm,0.8s						
YBH	**Yreka Blue Hor**	**63.97**	**305**	LR	LR	15 24 35.3	
	comp=Z,29nm,20.6s,baz=276,slow=36						
GNI	**Garni**	**68.47**	**55**	LR	LR	15 28 07.6	
	comp=Z,141nm,19.6s,baz=103,slow=37						
ILAR	**Eielson Array**	**68.69**	**334**	P	P	14 57 11.5	-0.4
	0.8nm,0.9s,baz=58,slow=5.1,SNR=7.3						
	0.8nm,0.9s						
MBAR	**Mbarara**	**75.32**	**100**	LR	LR	15 31 39.9	
	comp=Z,200nm,19.9s,baz=82,slow=36						
KURBB	**Kurchatov Arra**	**83.36**	**34**	P	P	14 58 35.9	+0.1
	0.4nm,0.9s,baz=310,slow=5.2,SNR=4.1						
	0.4nm,0.9s						
RPN	**Rapa Nui**	**86.45**	**236**	LR	LR	15 35 24.0	
	comp=Z,216nm,21.8s,baz=243,slow=34						

KRSC 27 14:48:28.8±1.8, 49.28N×158.31E, h42km±48km, Ml3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.99**	**316**	*e*P	Pn	14 49 00.3	+0.4
SKR				*e*S	Sn	14 49 23.6	-0.1
PAU	**Pauzhetka**	**2.39**	**337**	*e*P	Pn	14 49 08.6	+3.2
PAU				*e*S	Sn	14 49 37.4	+4.0
KDTR	**Khodutka, Kamc**	**2.54**	**357**	*e*P	Pn	14 49 10.2	+2.8
KDTR				*e*S	Sn	14 49 40.4	+3.4
ASAK	**Asacha**	**3.12**	**355**	*e*P	Pn	14 49 19.9	+4.4
MTVR	**Mutnovka**	**3.21**	**359**	*e*P	Pn	14 49 20.3	+3.5
MTVR				*e*S	Sn	14 49 58.3	+4.5
GRL	**Gorelyy**	**3.28**	**357**	*e*P	Pn	14 49 21.1	+3.3
GRL				*e*S	Sn	14 49 59.8	+4.3
KRMR	**Karymshinskiy**	**3.56**	**358**	*e*P	Pn	14 49 25.5	+4.1
PET	**Petropavlovsk**	**3.75**	**3**	*e*P	Pn	14 49 28.2	+4.1
DALK	**Dalny**	**3.77**	**4**	*e*P	Pn	14 49 28.2	+3.9
DALK				*e*S	Sn	14 50 12.0	+4.7
UGLR	**Uglovaya**	**3.95**	**4**	*e*P	Pn	14 49 31.3	+4.4
SPN	**Mys Shipunski**	**3.97**	**15**	*e*P	Pn	14 49 30.9	+3.8
AVH	**Avacha**	**4.00**	**4**	*e*P	Pn	14 49 32.5	+4.9
SMAR	**Somma**	**4.00**	**4**	*e*P	Pn	14 49 32.2	+4.5
SDLR	**Sedlovina**	**4.02**	**5**	*e*P	Pn	14 49 31.6	+3.7
KOK	**Koryaka**	**4.02**	**3**	*e*P	Pn	14 49 32.8	+4.9
KRX	**Arik**	**4.09**	**3**	*e*P	Pn	14 49 33.5	+4.6
GNL	**Ganaly**	**4.43**	**357**	*e*P	Pn	14 49 38.3	+4.8
KBTR	**Krutoberegovo**	**7.46**	**20**	*e*P	Pn	14 50 18.9	+4.0

*NOU **27** 14:50:30.0, 40.95S×177.73E, h354km, MLv3.7/7, Off E. Coast of N. Island, N.Z.*
*WEL **27** 14:51:01.7±0.3, 40.S±2.×17.6E±., h30km±3km, M2.7/22, ML2.6/24, MLv2.7/22, Error ellipse: s-maj=3.2km s-min=3.1km az=99.7, confirmed*

ISC 27 14:51:02.9±1.0, 40.22S±0.02×175.57E±0.02, h32km±9km, n76, σ1912/91, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHWZ	**Ohakea**	**0.20**	**273**	P	**Pn**	**14 51 09.4**	**-0.2**
OHWZ				S	**Sn**	**14 51 15.5**	**+1.7**
POWZ	**Post Office Ro**	**0.23**	**139**	P	**Pb**	**14 51 09.8**	**0.0**
POWZ				S	**Sn**	**14 51 15.8**	**+1.0**
TSZ	**Takapari Road**	**0.34**	**63**	P	**Pb**	**14 51 10.9**	**-0.2**
TSZ				S	**Sn**	**14 51 17.6**	**+0.1**
MRZ	**Mangatainoka R**	**0.45**	**179**	P	**Pb**	**14 51 12.2**	**-0.5**
MRZ				S	**Sn**	**14 51 19.9**	**-0.2**
**PRWZ

*NEIC **27** 14:59:06.9±0.7, 17°.96N±0°.03×67°.01W±0°.01, h10km±1km, ML3.1/31, Md3.5(RSPR), Error ellipse: s-maj=4.6km s-min=2.7km az=14.0*
*OSPL **27** 14:59:07.1±0.3, 17°.96N×67°.02W, h13km±999km, ML3.2, Presumed earthquake*
*SDD **27** 14:59:08.4±1.9, 17°.95N×67°.00W, h0km±21km, MD3.1, ML2.8, MW2.9, Presumed earthquake*

ISC 27 14:59:06.4±1.2, 17°.93N±0°.07×67°.00W±0°.03, h9km±7km, n21, σ0°67/29, 6C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLPR	**Magueyes Islan**	**0.06**	**314**	Pg	**Pg**	**14 59 08.5**	**+0.1**
MLPR				Sg	**Sg**	**14 59 09.7**	**-0.2**
MLPR	**Magueyes Islan**	**0.06**	**314**	⇑*i*P	**Pg**	**14 59 08.4**	**0.0**
MLPR				IAML		14 59 09.8	
	comp=N,16μm,0.5s						
MLPR				⇑*e*Sg	**Sg**	**14 59 10.0**	**+0.2**
CRPR	**Cabo Rojo, PR**	**0.13**	**307**	*i* P	**Pg**	**14 59 09.8**	**+0.4**
CRPR				*e*S	**Sg**	**14 59 11.8**	**+0.3**
CRPR				IAML		14 59 12.2	
	comp=Z,9μm,0.1s						
PRSN	**Puerto Rico Se**	**0.32**	**334**		**Pg**	**14 59 13.1**	**+0.3**
PRSN				IAML		14 59 18.7	
	comp=Z,5μm,0.4s						
PRSN	**Puerto Rico Se**	**0.32**	**334**	⇑*i*P	**Pg**	**14 59 13.2**	**+0.3**
PRSN				⇑*e*Sg	**Sb**	**14 59 18.5**	**-1.2**
PRSN				IAML		14 59 18.7	
	comp=N,3μm,0.3s						
OBIP	**Obispado Ponce**	**0.39**	**73**	Pg	**Pg**	**14 59 14.7**	**+0.6**
OBIP	**Obispado Ponce**	**0.39**	**73**	*i* P	**Pg**	**14 59 14.7**	**+0.6**
OBIP				*e*S	**Sg**	**14 59 20.2**	**+1.0**
OBIP				IAML		14 59 21.1	
	comp=Z,2μm,0.3s						
UUPR	**Utuado, UPR, P**	**0.42**	**39**	Pg	**Pg**	**14 59 15.1**	**+0.4**
CELP	**Cerrillos**	**0.42**	**69**	Pg	**Pg**	**14 59 15.3**	**+0.5**
CELP	**Cerrillos**	**0.42**	**69**	⇓*i*P	**Pg**	**14 59 15.2**	**+0.5**
CELP				⇓*e*Sg	**Sb**	**14 59 22.7**	**0.0**
CELP				IAML		14 59 22.9	
	comp=N,186nm,0.3s						
AOPR	**Arecibo Observ**	**0.48**	**29**	Pg	**Pg**	**14 59 15.9**	**+0.2**
AOPR				IAML		14 59 24.2	
	comp=N,2μm,0.3s						
AOPR	**Arecibo Observ**	**0.48**	**29**	⇑*i*P	**Pg**	**14 59 16.0**	**+0.2**
AOPR				⇓*e*Sg	**Sg**	**14 59 22.6**	**+0.6**
AOPR				IAML		14 59 24.1	
	comp=N,2μm,0.3s						
AGPR	**Aguadilla, PR**	**0.55**	**349**	Pg	**Pg**	**14 59 17.1**	**0.0**
AGPR				IAML		14 59 25.6	
	comp=N,1μm,0.5s						
AGPR				IAML		14 59 25.6	
	comp=N,859nm,0.5s						
AGPR	**Aguadilla, PR**	**0.55**	**349**	⇑*i*P	**Pg**	**14 59 17.4**	**+0.2**
AGPR				⇓*e*Sg	**Sg**	**14 59 24.7**	**+0.4**
AGPR				IAML		14 59 25.4	
	comp=N,638nm,0.7s						
ECPR	**Experimental S**	**0.72**	**57**	Pg	**Pg**	**14 59 20.1**	**-0.1**
ECPR				IAML		14 59 31.4	
	comp=N,1μm,0.2s						
ECPR				IAML		14 59 41.1	
	comp=N,993nm,0.2s						
SJG	**San Juan**	**0.83**	**77**	Pg	**Pg**	**14 59 22.1**	**-0.2**
SJG	**San Juan**	**0.83**	**77**	*i* P	**Pg**	**14 59 22.1**	**-0.2**
SJG				IAML		14 59 36.6	
	comp=Z,3μm,0.3s						
HUMP	**Col San Antoni**	**1.11**	**79**		**Pb**	**14 59 26.8**	**-1.1**
CUPR	**Culebra, Puert**	**1.67**	**77**	Pn	**Pn**	**14 59 36.0**	**+0.1**
DR12	**Loma Pena Alta**	**2.42**	**291**	Pn	**Pn**	**14 59 45.8**	**-0.5**
HATOM	**Hato Mayor del**	**2.42**	**291**	*i* P	**Pn**	**14 59 48.4**	**+2.2**
HATOM				IAML		15 00 29.1	
	comp=N,32nm,0.4s						

IDC 27 15:24:46.7±4.8, 58°.06S×145°.91E, h0km, mb3.3/3, mbtmp3.4/3, Error ellipse: s-maj=911.7km s-min=30.2km az=76.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**20.30**	**170**	P	P	15 29 23.6	0.0
	1.0nm,0.9s,baz=325,slow=10,SNR=3.7 1.0nm,0.9s						
H01W1	**Cape Leeuwin H**	**31.36**	**304**	T	T	16 05 18.4	
	baz=145,slow=75,SNR=13						
H01W2	**Cape Leeuwin H**	**31.37**	**304**	T	T	16 05 19.0	
	baz=145,slow=75,SNR=12						
H01W3	**Cape Leeuwin H**	**31.38**	**304**	T	T	16 05 19.8	
	baz=145,slow=75,SNR=12						
ASAR	**Alice Springs**	**35.43**	**341**	P	P	15 31 43.7	-0.7
	0.3nm,0.6s,baz=168,slow=10,SNR=4.1 0.3nm,0.6s						
WRA	**Warramunga Arr**	**39.00**	**343**	P	P	15 32 15.1	+0.4
	0.7nm,1.0s,baz=166,slow=8.5,SNR=4.5 0.7nm,1.0s						
H08S2	**Diego Garcia H**	**74.79**	**280**	T	T	16 59 58.1	
	baz=147,slow=76,SNR=5.3						
H08S1	**Diego Garcia H**	**74.80**	**280**	T	T	16 59 59.0	
	baz=147,slow=76,SNR=3.8						
H08S3	**Diego Garcia H**	**74.81**	**280**	T	T	17 00 03.5	
	baz=147,slow=76,SNR=3.5						

*IDC **27** 15:30:06.9±0.7, 53°.26N×35°.29W, h0km, mb3.8/18, mbtmp3.8/20, ML3.3/2, MS3.8/11, Error ellipse: s-maj=21.9km s-min=12.9km az=3.0*
*NEIC **27** 15:30:08.0±2.0, 53°.3N±0°.1×35°.33W±0°.08, h10km±1km, mb4.4/16, Error ellipse: s-maj=25.3km s-min=7.0km az=169.0*

ISC 27 15:30:08.8±0.6, 53°.3N±0°.1×35°.34W±0°.07, h16km, n51, σ1°93/43, mb4.2/26, MS3.8/12, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCHQ	**Schefferville**	**18.48**	**288**	P	**P**	**15 34 22.9**	**-0.9**
	0.3nm,0.3s,baz=86,slow=5.7,SNR=5.1 3.2nm,0.9s						
SCHQ	**Schefferville**	**18.48**	**288**	P	**P**	**15 34 22.0**	**-1.9**
EKA	**Eskdalemuir Ar**	**18.80**	**71**	P	**P**	**15 34 26.2**	**-1.2**
	baz=274,slow=9.0 0.9nm,0.7s						
ESDC	**Sonseca Array**	**25.29**	**110**	P	**P**	**15 35 34.3**	**-0.1**
	4.8nm,1.1s,baz=310,slow=8.2,SNR=10.0 4.8nm,1.1s						
ESDC	**Sonseca Array**	**25.29**	**110**	P	**P**	**15 35 32.4**	**-2.0**
NOA	**NORSAR Array B**	**25.91**	**54**	P	**P**	**15 35 40.2**	**+0.4**
	1.3nm,0.9s,baz=275,slow=9.7,SNR=3.5 1.3nm,0.9s						
GERES	**GERESS Array B**	**30.65**	**78**	P	**P**	**15 36 23.2**	**+0.9**
	0.8nm,0.9s,baz=328,slow=7.1,SNR=4.4 0.8nm,0.9s						
FINES	**FINESS Array B**	**32.94**	**51**	P	**P**	**15 36 43.8**	**+1.7**
	2.4nm,0.9s,baz=273,slow=8.3,SNR=2.5						
FINES				LR	LR	15 47 33.0	
	comp=Z,261nm,21.5s,baz=65,slow=32 2.4nm,0.9s						
KEST	**Kesra**	**35.68**	**101**	P	**P**	**15 37 06.6**	**+0.3**
	3.4nm,0.9s,baz=270,slow=10,SNR=2.1 3.4nm,0.9s						
ULM	**Lac du Bonnet**	**36.61**	**290**	P	**P**	**15 37 15.7**	**+1.7**
	1.4nm,0.7s,baz=68,slow=5.4,SNR=2.1						
ULM				LR	LR	15 50 30.4	
	comp=Z,265nm,20.1s,baz=322,slow=33 1.4nm,0.7s						
AKASG	**Malin Array Be**	**38.64**	**67**	P	**P**	**15 37 30.4**	**-0.7**
	0.7nm,0.6s,baz=309,slow=8.0,SNR=5.0 0.7nm,0.6s						
YKA	**Yellowknife Ar**	**40.53**	**315**	P	**P**	**15 37 46.9**	**+0.2**
	0.1nm,0.6s,baz=58,slow=7.5,SNR=5.2 0.1nm,0.6s						
F31M	**Tsiigehtchic**	**45.27**	**328**	P	**P**	**15 38 25.2**	**+0.3**
F31M				IAmb	IAmb	15 38 27.0	
	comp=Z,9.8nm,1.1s						
F30M	**Barrier River**	**45.83**	**328**	P	**P**	**15 38 30.3**	**+0.9**
H29M	**Whitestone**	**47.47**	**328**	P	**P**	**15 38 41.7**	**-0.7**
H29M				IAmb	IAmb	15 38 51.6	
	comp=Z,3.5nm,0.9s						
BRTR	**Keskin Array B**	**47.54**	**77**	P	**P**	**15 38 44.2**	**+0.9**
	comp=Z,2.2nm,0.9s,baz=317,slow=6.7,SNR=8.3						
BRTR				LR	LR	16 00 42.5	
	comp=Z,66nm,18.2s,baz=234,slow=39 comp=Z,2.2nm,0.9s						
BRTR	**Keskin Array B**	**47.54**	**77**	P	**P**	**15 38 43.5**	**+0.1**
C24K	**Franklin Bluff**	**48.22**	**335**	P	**P**	**15 38 47.8**	**-0.2**
I28M	**Miner Creek**	**48.46**	**327**	P	**P**	**15 38 50.6**	**+0.5**
I28M				IAmb	IAmb	15 38 55.4	
	comp=Z,3.1nm,1.1s						
PDAR	**Pinedale Array**	**48.61**	**289**	P	**P**	**15 38 51.5**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=68,slow=7.7,SNR=5.8 comp=Z,0.5nm,0.6s						
D23K	**Nanushuk River**	**49.25**	**334**	P	**P**	**15 38 56.7**	**+0.7**
D23K				IAmb	IAmb	15 39 13.2	
	comp=Z,4.0nm,1.0s						
TORD	**Torodi Ar. Bea**	**49.63**	**130**	P	**P**	**15 38 58.9**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=329,slow=7.5,SNR=7.5 comp=Z,1.4nm,0.8s						
NRIK	**Noril'sk**	**50.82**	**23**	P	**P**	**15 39 07.9**	**0.0**
	comp=Z,0.6nm,0.5s,baz=340,slow=6.6,SNR=3.8 comp=Z,0.6nm,0.5s						
NRIK	**Noril'sk**	**50.82**	**23**	P	**P**	**15 39 06.8**	**-1.1**
ILAR	**Eielson Array**	**51.11**	**329**	P	**P**	**15 39 11.1**	**+0.9**
	comp=Z,0.7nm,0.9s,baz=44,slow=5.3,SNR=8.5 comp=Z,0.7nm,0.9s						
ILAR	**Eielson Array**	**51.11**	**329**	P	**P**	**15 39 07.0**	**-3.1**
ANMO	**Albuquerque**	**52.01**	**279**	LR	LR	16 00 42.3	
	comp=Z,112nm,18.2s,baz=16,slow=35						
SAND	**Sanderson**	**52.94**	**272**	P	**P**	**15 39 23.8**	**-0.5**
SAND				IAmb	IAmb	15 39 29.2	
	comp=Z,3.7nm,0.8s						
ELK	**Elko**	**53.14**	**291**	LR	LR	16 01 14.6	
	comp=Z,82nm,18.2s,baz=4.0,slow=35						
AKTO	**Aktyubinsk**	**53.69**	**52**	LR	LR	16 01 23.5	
	comp=Z,73nm,19.0s,baz=194,slow=35						
TXAR	**Lajitas Array**	**54.31**	**272**	P	**P**	**15 39 35.3**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=49,slow=12,SNR=4.5 comp=Z,0.5nm,0.7s						
TXAR	**Lajitas Array**	**54.31**	**272**	P	**P**	**15 39 34.6**	**+0.2**
TIXI	**Tiksi**	**54.88**	**6**	P	**P**	**15 39 36.2**	**-1.6**
TIXI				IAmb	IAmb	15 39 39.5	
	comp=Z,4.8nm,1.1s						
NVAR	**Mina Array Bea**	**56.45**	**291**	LR	LR	16 02 39.0	
	comp=Z,74nm,18.4s,baz=26,slow=35						
YBH	**Yreka Blue Hor**	**56.58**	**296**	LR	LR	16 02 29.3	
	comp=Z,4.8nm,19.4s,baz=360,slow=34						
BORK	**Borovoye**	**57.35**	**44**	P	**P**	**15 39 56.3**	**+0.6**
BORK				IAmb	IAmb	15 39 58.1	
	comp=Z,4.1nm,1.1s						
BVAR	**Borovoye Array**	**57.39**	**44**	P	**P**	**15 39 57.3**	**+1.2**
	comp=Z,1.9nm,0.8s,baz=298,slow=6.4,SNR=9.3						
BVAR				LR	LR	16 02 36.8	
	comp=Z,69nm,21.5s,baz=269,slow=34 comp=Z,1.9nm,0.8s						
ROSC	**El Rosal**	**57.84**	**228**	P	**P**	**15 40 01.6**	**+1.6**
	comp=Z,6.6nm,0.4s,baz=8.7,slow=13,SNR=4.5						
ROSC	**El Rosal**	**57.84**	**228**	P	**P**	**15 40 00.2**	**+0.1**
KURBB	**Kurchatov Arra**	**62.51**	**41**	P	**P**	**15 40 31.8**	**+0.6**
	comp=Z,1.6nm,0.9s,baz=323,slow=7.2,SNR=11 comp=Z,1.6nm,0.9s						
OTAV	**Otavalo**	**63.78**	**230**		**P**	**15 40 40.0**	**-0.6**
MKAR	**Makanchi Array**	**67.07**	**41**	P	**P**	**15 41 01.2**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=340,slow=6.0,SNR=9.1 comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**67.07**	**41**	P	**P**	**15 40 59.7**	**-1.3**
AAK	**Ala-Archa**	**67.09**	**49**	LR	LR	16 09 28.6	
	comp=Z,59nm,18.1s,baz=296,slow=35						
AAK	**Ala-Archa**	**67.09**	**49**	P	**P**	**15 41 01.9**	**+0.5**
AAK				IAmb	IAmb	15 41 08.6	
	comp=Z,4.7nm,1.4s						
TLY	**Talaya**	**69.91**	**26**	LR	LR	16 11 56.4	
	comp=Z,320nm,21.0s,baz=337,slow=36						
SONM	**Songino Array**	**74.15**	**26**	P	**P**	**15 41 44.7**	**+0.4**
	comp=Z,1.1nm,0.9s,baz=335,slow=6.0,SNR=5.4 comp=Z,1.1nm,0.9s						
SONM	**Songino Array**	**74.15**	**26**	P	**P**	**15 41 44.5**	**+0.2**
BRDH	**Bariadhala**	**91.56**	**48**	LR	LR	16 24 42.1	
	comp=Z,55nm,18.5s,baz=272,slow=36						
WRA	**Warramunga Arr**	**145.79**	**17**	PKPbc	**PKPbc**	**15 49 46.8**	**-0.3**
	comp=Z,1.8nm,0.7s,baz=343,slow=3.5,SNR=18						
ASAR	**Alice Springs**	**149.33**	**20**	PKPbc	**PKPbc**	**15 49 56.4**	**-0.4**
	comp=Z,1.6nm,0.8s,baz=352,slow=2.7,SNR=15						

*NEIC **27** 15:40:40.5±1.0, 17°.87N±0°.02×66°.85W±0°.01, h10km±1km, ML3.0/29, Md3.3/14(RSPR), Error ellipse: s-maj=4.1km s-min=2.2km az=187.0*
*OSPL **27** 15:40:40.4±0.3, 17°.84N×66°.85W, h10km±3km, ML3.3, Presumed earthquake*
*SDD **27** 15:40:40.4±0.4, 17°.86N×66°.86W, h18km±3km, MD2.3, ML2.8, MW3.0, Presumed earthquake*

ISC 27 15:40:40.3±1.2, 17°.88N±0°.06×66°.85W±0°.02, h18km±6km, n32, σ0°64/45, 7C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.09**	**344**		**Pg**	**15 40 43.5**	**-0.4**
GBPR					**Sg**	**15 40 45.9**	**-0.4**
MLPR	**Magueyes Islan**	**0.20**	**295**		**Pg**	**15 40 44.9**	**-0.3**
MLPR					**Sg**	**15 40 48.4**	**-0.2**
MLPR	**Magueyes Islan**	**0.20**	**295**	IAML		15 40 48.5	
	2μm,0.6s						
MLPR				IAML		15 40 48.6	
	6μm,0.4s						
MLPR	**Magueyes Islan**	**0.20**	**295**	⇓*i*P	**Pg**	**15 40 44.9**	**-0.3**
MLPR				⇑*e*Sg	**Sg**	**15 40 48.4**	**-0.2**
MLPR				IAML		15 40 48.5	
	comp=N,2μm,0.4s						
CRPR	**Cabo Rojo, PR**	**0.27**	**296**	*i* P	**Pg**	**15 40 46.0**	**-0.4**
CRPR				*e*S	**Sg**	**15 40 50.1**	**-0.4**
CRPR				IAML		15 40 50.5	
	comp=Z,2μm,0.2s						
OBIP	**Obispado Ponce**	**0.28**	**56**		**Pg**	**15 40 46.3**	**-0.2**
OBIP					**Sg**	**15 40 50.9**	**+0.1**
OBIP	**Obispado Ponce**	**0.28**	**56**	IAML		15 40 53.5	
	comp=N,210nm,0.7s						
OBIP	**Obispado Ponce**	**0.28**	**56**	*i* P	**Pg**	**15 40 46.3**	**-0.2**
OBIP				*e*S	**Sg**	**15 40 50.6**	**-0.2**
OBIP				IAML		15 40 51.9	
	comp=Z,4μm,0.1s						
CELP	**Cerrillos**	**0.32**	**54**		**Pg**	**15 40 47.0**	**-0.2**
CELP					**Sg**	**15 40 52.0**	**+0.1**
CELP	**Cerrillos**	**0.32**	**54**	IAML		15 40 52.5	
	comp=Z,807nm,0.6s						
CELP				IAML		15 40 52.6	
	comp=Z,1μm,0.3s						
CELP	**Cerrillos**	**0.32**	**54**	⇓*i*P	**Pg**	**15 40 47.0**	**-0.2**
CELP				⇓*e*Sg	**Sg**	**15 40 52.0**	**+0.1**
CELP				IAML		15 40 52.5	
	comp=N,432nm,0.2s						
LSP	**Las Mesas**	**0.36**	**323**		**Pg**	**15 40 47.7**	**-0.2**
LSP					**Sg**	**15 40 53.5**	**+0.3**
UUPR	**Utuado, UPR, P**	**0.39**	**19**		**Pg**	**15 40 47.9**	**-0.4**
UUPR					**Sg**	**15 40 53.5**	**-0.4**
UUPR	**Utuado, UPR, P**	**0.39**	**19**	IAML		15 40 54.1	
	comp=N,8μm,0.3s						
UUPR				IAML		15 40 56.4	
	comp=N,4μm,0.3s						
PRSN	**Puerto Rico Se**	**0.43**	**320**		**Pg**	**15 40 48.8**	**-0.3**
PRSN					**Sg**	**15 40 55.0**	**-0.2**
PRSN	**Puerto Rico Se**	**0.43**	**320**	IAML		15 40 55.7	
	comp=N,3μm,0.3s						
PRSN				IAML		15 40 55.7	
	comp=N,4μm,0.2s						
PRSN	**Puerto Rico Se**	**0.43**	**320**	⇑*i*P	**Pg**	**15 40 48.8**	**-0.3**
PRSN				⇑*e*Sg	**Sg**	**15 40 54.9**	**-0.2**
PRSN				IAML		15 40 55.6	
	comp=N,2μm,0.2s						
AOPR	**Arecibo Observ**	**0.47**	**11**		**Pg**	**15 40 49.4**	**-0.5**
AOPR					**Sg**	**15 40 55.9**	**-0.4**
AOPR	**Arecibo Observ**	**0.47**	**11**	IAML		15 40 56.3	
	comp=N,4μm,0.2s						
AOPR				IAML		15 40 58.3	
	comp=N,1μm,0.2s						
AOPR	**Arecibo Observ**	**0.47**	**11**	⇑*i*P	**Pg**	**15 40 49.3**	**-0.5**
AOPR				⇑*e*Sg	**Sg**	**15 40 55.9**	**-0.4**
AOPR				IAML		15 40 58.3	
	comp=N,1μm,0.3s						
AGPR	**Aguadilla, PR**	**0.63**	**337**		**Pg**	**15 40 52.0**	**-0.8**
AGPR					**Sg**	**15 41 00.8**	**-0.4**
AGPR	**Aguadilla, PR**	**0.63**	**337**	IAML		15 41 01.0	
	comp=N,591nm,0.6s						
AGPR				IAML		15 41 01.2	
	comp=N,337nm,0.3s						
AGPR	**Aguadilla, PR**	**0.63**	**337**	⇑*i*P	**Pg**	**15 40 52.0**	**-0.8**
AGPR				⇑*e*Sg	**Sg**	**15 41 00.8**	**-0.4**
AGPR				IAML		15 41 01.1	
	comp=N,254nm,0.2s						
ECPR	**Experimental S**	**0.64**	**47**		**Pg**	**15 40 52.2**	**-0.7**
ECPR					**Sg**	**15 41 01.1**	**-0.3**
ECPR	**Experimental S**	**0.64**	**47**	IAML		15 41 02.2	
	comp=N,634nm,0.2s						
ECPR				IAML		15 41 04.0	
	comp=N,520nm,0.2s						
EMPR	**Esperanza - Ma**	**0.67**	**27**		**Pg**	**15 40 53.1**	**-0.4**
EMPR					**Sg**	**15 41 02.6**	**+0.3**
SJG	**San Juan**	**0.71**	**71**	Pg	**Pg**	**15 40 52.7**	**-1.5**
SJG	**San Juan**	**0.71**	**71**	*i* P	**Pg**	**15 40 53.4**	**-0.8**
SJG				*e*S	**Sg**	**15 41 03.0**	**-0.6**
SJG				IAML		15 41 04.1	
	comp=Z,3μm,0.1s						
IGPR	**InterUniversit**	**0.71**	**83**		**Pg**	**15 40 54.0**	**-0.4**
IGPR					**Sb**	**15 41 04.6**	**+0.9**
IDE	**Isla Desecheo**	**0.77**	**310**		**Pg**	**15 40 54.4**	**-1.1**
IDE					**Sg**	**15 41 04.9**	**-0.9**
HUMP	**Col San Antoni**	**0.99**	**75**		**Sg**	**15 41 10.3**	**-2.2**
CUPR	**Culebra, Puert**	**1.55**	**74**		**Pn**	**15 41 08.2**	**+1.1**

*IDC **27** 15:48:50.8±1.8, 29°.39N×51°.11E, h0km, mb3.8/10, mbtmp3.8/12, ML3.4/2, Error ellipse: s-maj=40.2km s-min=20.8km az=149.0*
*TEH **27** 15:48:51.2, 29°.47N×51°.25E, h6km±47km, ML3.6, Presumed earthquake*
*DSN **27** 15:48:57.0±2.7, 29°.09N×51°.41E, h15km, ML3.6/10, Error ellipse: s-maj=39.4km s-min=9.3km az=7.0*
*OMAN **27** 15:48:59.0±0.3, 29°.08N×51°.62E, h10km, mb3.4/23, ml4.0/2, ms2.5/3, Error ellipse: s-maj=6.3km s-min=5.2km az=22.0*

ISC 27 15:48:53.4±0.6, 29°.38N±0°.05×51°.34E±0°.05, h20km, n76, σ1°97/110, mb3.5/9, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAZ2	**Kazeron-Fars-I**	**0.37**	**50**	Pg	**Pb**	**15 48 59.5**	**-1.7**
DSBU	**Dashti - Bushe**	**1.01**	**184**	Pg	**Pn**	**15 49 13.2**	**+0.7**
SHI	**Shiraz**	**1.05**	**75**	Pg	**Pb**	**15 49 13.7**	**+0.5**
SHI				Sg	**Sn**	**15 49 30.4**	**+3.0**
KLNJ	**Kolanjah**	**1.64**	**8**	Pg	**Pn**	**15 49 21.4**	**-0.1**
IBRJ	**Brojen**	**2.52**	**358**	Pn	**Pn**	**15 49 35.1**	**+1.5**
IRAM	**Rameshesh**	**2.59**	**20**	Pn	**Pn**	**15 49 36.3**	**+1.9**
ZNGN	**Zangian**	**2.77**	**351**	Pn	**Pn**	**15 49 38.0**	**+1.1**
AMIS	**Naft Sefid**	**2.89**	**323**	Pn	**Pn**	**15 49 38.9**	**+0.6**
JHBN	**Jahan bin**	**2.91**	**349**	Pn	**Pn**	**15 49 40.2**	**+1.4**
SAKB	**Bahrain**	**3.46**	**192**	P	**Pn**	**15 49 42.2**	**+3.0**
SAKB				S	**Sn**	**15 50 30.4**	**+3.9**
IZEF	**Zefreh**	**3.61**	**13**	Pn	**Pn**	**15 49 50.1**	**+1.6**
DOBD	**Dorbid, Yazd**	**3.77**	**46**	Pn	**Pn**	**15 49 53.4**	**+2.7**
IBAF	**Bafgh**	**4.26**	**58**	Pn	**Pn**	**15 49 59.8**	**+2.5**
ANAR	**Anarak**	**4.32**	**28**	Pn	**Pn**	**15 49 60.0**	**+1.9**
KHGB	**Koh Gabri**	**4.57**	**76**	Pn	**Pn**	**15 50 05.0**	**+3.4**
NGRK	**Negar Kerman**	**4.70**	**85**	Pn	**Pn**	**15 50 06.9**	**+3.3**
BDRS	**Dareh Seyedi**	**5.02**	**336**	Pn	**Pn**	**15 50 08.9**	**+1.0**
SHME	**Shamm**	**5.39**	**127**	P	**Pn**	**15 50 12.8**	**0.0**
SHME				S	**Sn**	**15 51 14.4**	**+0.2**
CHMN	**Cheshme madani**	**5.42**	**83**	Pn	**Pn**	**15 50 17.0**	**+3.5**
GHWR	**Ruwais**	**5.56**	**165**	P	**Pn**	**15 50 17.4**	**+2.3**
GHWR				S	**Sn**	**15 51 19.9**	**+1.5**
BANOM	**Banah** SNR=17	**5.58**	**127**	*i* P	**Pn**	**15 50 16.8**	**+1.4**
BANOM				S	**Sn**	**15 51 17.1**	**-1.9**
BANOM	**Banah**	**5.58**	**127**	P	**Pn**	**15 50 17.4**	**+2.0**
BANOM				S	**Sn**	**15 51 20.5**	**+1.5**
IVRN	**Varamin**	**5.61**	**3**	Pn	**Pn**	**15 50 17.1**	**+1.3**
AJN	**Ajban**	**5.79**	**145**	P	**Pn**	**15 50 19.8**	**+1.5**
AJN	**Ajban**	**5.79**	**145**	P	**Pn**	**15 50 21.6**	**+3.4**
AJN				S	**Sn**	**15 51 26.2**	**+2.1**
NAZ	**Nazwa, Dubai** SNR=16	**5.82**	**138**	*i* P	**Pn**	**15 50 19.7**	**+1.1**
NAZ	**Nazwa, Dubai** SNR=16	**5.82**	**138**	P	**Pn**	**15 50 21.0**	**+2.4**
NAZ				S	**Sn**	**15 51 24.7**	**-0.1**
MASF	**Masafi**	**5.85**	**132**	P	**Pn**	**15 50 19.9**	**+0.8**
MASF				S	**Sn**	**15 51 25.9**	**+0.2**
IBZA	**Bozab**	**5.88**	**331**	Pn	**Pn**	**15 50 20.2**	**+0.6**
ASUD	**Al Ashush, Dub** SNR=12	**5.92**	**142**	*i* P	**Pn**	**15 50 21.6**	**+1.6**
ASUD	**Al Ashush, Dub** SNR=12	**5.92**	**142**	P	**Pn**	**15 50 23.2**	**+3.2**
ASUD				S	**Sn**	**15 51 29.2**	**+2.0**
FAQ	**Al Faqa, Dubai**	**5.97**	**140**	P	**Pn**	**15 50 23.0**	**+2.4**
FAQ	**Al Faqa, Dubai**	**5.97**	**140**	P	**Pn**	**15 50 24.0**	**+3.3**
FAQ				S	**Sn**	**15 51 28.0**	**-0.4**
MDH	**Madha**	**5.99**	**131**	P	**Pn**	**15 50 22.2**	**+1.2**
MDH	**Madha**	**5.99**	**131**	P	**Pn**	**15 50 22.4**	**+1.4**
MDH				S	**Sn**	**15 51 28.4**	**-0.7**
MZWR	**Madinat Zayed**	**6.04**	**157**	P	**Pn**	**15 50 24.6**	**+3.0**
MZWR				S	**Sn**	**15 51 28.4**	**-1.7**
UOSS	**Minazif**	**6.18**	**134**	P	**Pn**	**15 50 25.8**	**+2.2**
UOSS				S	**Sn**	**15 51 32.2**	**-1.6**
KBAM	**BAM**	**6.22**	**90**	Pn	**Pn**	**15 50 27.3**	**+3.1**
HATD	**Hatta, Dubai**	**6.22**	**136**	P	**Pn**	**15 50 27.0**	**+2.8**
HATD				S	**Sn**	**15 51 34.2**	**-0.7**
ASHO	**Ashiyiah** SNR=9.3	**6.29**	**137**	*i* P	**Pn**	**15 50 26.0**	**+0.9**
ASHO	**Ashiyiah** SNR=9.3	**6.29**	**137**	P	**Pn**	**15 50 27.0**	**+1.9**
ASHO				S	**Sn**	**15 51 35.3**	**-1.1**
	SNR=11						
MZR	**Muzera** SNR=11	**6.63**	**163**	*i* P	**Pn**	**15 50 32.3**	**+2.5**
MZR	**Muzera** SNR=11	**6.63**	**163**	P	**Pn**	**15 50 32.8**	**+3.1**
MZR				S	**Sn**	**15 51 46.4**	**+1.6**
JASK

0.6nm,0.6s
MKAR Makanchi Array 29.67 46 P P 15 54 59.2 +1.5
0.4nm,0.6s,baz=224,slow=6.5,SNR=4.5
0.4nm,0.6s
ZALV Zalesovo Beam 34.51 35 P P 15 55 41.6 +1.5
0.6nm,0.4s,baz=260,slow=8.6,SNR=3.3
0.6nm,0.4s
HFS Hagfors 39.79 331 P P 15 56 23.7 -1.1
2.4nm,0.5s,baz=127,slow=9.5,SNR=19
2.4nm,0.5s
NB2 NORSAR Subarra 41.31 332 P P 15 56 36.6 -0.8
comp=Z,0.5nm,0.5s,baz=120,slow=7.9
NOA NORSAR Array B 41.31 332 P P 15 56 36.4 -1.0
comp=Z,0.5nm,0.5s,baz=121,slow=8.2,SNR=3.9
comp=Z,0.5nm,0.5s
TORD Torodi Ar. Bea 48.64 262 P P 15 57 36.2 0.0
comp=Z,0.7nm,0.3s,baz=61,slow=7.4,SNR=7.0
comp=Z,0.7nm,0.3s
DBIC Dimbokro 57.41 258 P P 15 58 39.1 -1.9
comp=Z,1.5nm,0.6s,baz=53,slow=10,SNR=2.0
comp=Z,1.5nm,0.6s
ILAR Eielson Array 85.09 8 P P 16 01 27.2 -0.3
comp=Z,0.2nm,0.7s,baz=318,slow=3.9,SNR=2.7
comp=Z,0.2nm,0.7s

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*CNRM **27** 16:04:41.7,35˚.97N×6˚.51E, h36km*
*MDD **27** 16:04:44.8±0.4,35˚.60N×5˚.99E, h0km, Mb4.5/60, M_mb3.9/46, Error ellipse: s-maj=3.5km s-min=2.3km az=158.0*
*IDC **27** 16:04:45.0±0.8,35˚.78N×5˚.77E, h0km, mb3.8/16, mbtmp3.8/23, ML3.7/6, MS3.1/3, Error ellipse: s-maj=18.2km s-min=13.6km az=166.0*
*CRAAG **27** 16:04:45.8,35˚.84N×5˚.76E, Ml3.8, Algrie 03km W Ouled-Sellam*
*NAO **27** 16:04:47.2,35˚.60N×5˚.22E, h33km, MB3.5*
*LDG **27** 16:04:47.2±0.2,35˚.68N×5˚.94E, h2km, Ml3.6/14, Error ellipse: s-maj=4.7km s-min=2.5km az=159.0*

ISC 27 16:04:46.7±0.8, 35˚.87N±0˚.04×5˚.78E±0˚.03, h10km±5km, n150, σ1s99/198, mb3.9/18, 28C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CJSR	**Ain Djasser**	**0.14**	**92**	P	**Pg**	**16 04 50.1**	**+0.2**
CKHR	**Kef el Ahmar**	**0.26**	**304**	P	**Pg**	**16 04 52.6**	**+0.5**
SET	**Setif**	**0.45**	**317**	P	**Pg**	**16 04 56.0**	**+0.4**
CTEI	**Djebel Teioual**	**0.54**	**69**	P	**Pg**	**16 04 57.5**	**+0.2**
CAZD	**Ain Tagrout**	**0.59**	**301**	P	**Pb**	**16 04 59.8**	**+0.6**
CKTS	**El Kantara**	**0.64**	**187**	P	**Pg**	**16 04 58.8**	**-0.4**
DFRA	**Djebel Bou Aff**	**0.68**	**7**	P	**Pn**	**16 05 03.6**	**+1.0**
CASM	**Ain Smara**	**0.70**	**56**	P	**Pb**	**16 05 01.4**	**+0.4**
CTGD	**Timgad**	**0.70**	**118**	P	**Pb**	**16 05 00.9**	**-0.2**
CBHR	**Beni Haroun da**	**0.80**	**30**	P	**Pn**	**16 05 04.0**	**-0.2**
CKFL	**Kef-Lekhel**	**0.93**	**55**	P	**Pn**	**16 05 06.1**	**+0.1**
CBOS	**Bilal Ibnou Ra**	**1.02**	**25**	P	**Pn**	**16 05 07.4**	**+0.3**
CTCHA	**Tamokra**	**1.07**	**302**	P	**Pn**	**16 05 08.1**	**+0.2**
CBST	**Bordj Sabath**	**1.20**	**63**	P	**Pn**	**16 05 09.7**	**+0.1**
CAEH	**'Ain El Ouahch**	**1.25**	**43**	P	**Pn**	**16 05 10.0**	**-0.4**
ABSD	**Ouled Sidi Bra**	**1.36**	**252**	P	**Pn**	**16 05 12.0**	**+0.2**
CBBAR	**Babar**	**1.36**	**122**	P	**Pg**	**16 05 13.0**	**+0.2**
ABSA	**Djebel Ababsia**	**1.43**	**73**	P	**Pb**	**16 05 13.6**	**0.0**
CMAH	**Djebel Manchou**	**1.53**	**60**	P	**Pg**	**16 05 17.8**	**+1.8**
I48TN	**KESRA INFRASON**	**2.88**	**90**	I	I	16 20 50.0	
	baz=272,slow=317,SNR=1.9						
KEST	**Kesra**	**2.90**	**92**	Pn	**Pn**	**16 05 34.1**	**+1.0**
	7.1nm,0.3s,baz=297,slow=3.7,SNR=70						
KEST				Sn	**Sn**	**16 06 07.6**	**-0.5**
	14nm,0.3s,baz=64,slow=14,SNR=6.0						
	113nm,0.9s						
EBNR	**Beni Rached**	**3.47**	**278**	P	**Pn**	**16 05 44.2**	**+3.3**
EANR	**'Ain N'Sour**	**3.80**	**273**	P	**Pn**	**16 05 47.4**	**+2.0**
OJBR	**Djebel Berber**	**4.43**	**268**	P	**Pb**	**16 06 01.0**	**-3.7**
ETOS	**Mallorca**	**4.55**	**330**	P	**Pn**	**16 05 56.8**	**+1.2**
ETOS				⇑*i*Vmb_VC		16 05 58.8	
	788nm,SNR=2.2						
ETOS				S	**Sn**	**16 06 49.7**	**+1.1**
VSL	**Villasalto**	**4.61**	**37**	P	**Pn**	**16 05 56.9**	**+0.4**
VSL				S	**Sn**	**16 06 47.7**	**-2.4**
EIBI	**Ibiza**	**4.73**	**313**	P	**Pn**	**16 05 59.7**	**+1.5**
EIBI				⇑*i*Vmb_VC		16 06 01.4	
	652nm,SNR=1.7						
EIBI				S	**Sn**	**16 06 53.9**	**+0.7**
USTO	**Oran**	**5.15**	**270**	P	**Pb**	**16 06 15.0**	**-1.8**
EBEN2	**Beniarda presa**	**5.53**	**302**	P	**Pn**	**16 06 10.4**	**+1.4**
EBEN2				S	**Sn**	**16 07 12.6**	**-0.2**
ECOL	**Islas Columbre**	**5.69**	**316**	P	**Pn**	**16 06 12.2**	**+0.8**
ECOL				S	**Sn**	**16 07 18.8**	**+2.0**
CART	**Cartagena**	**5.71**	**289**	P	**Pn**	**16 06 11.8**	**+0.2**
CART				S	**Sn**	**16 07 21.7**	**+4.4**
AFON	**Font Roja**	**5.76**	**301**	P	**Pn**	**16 06 13.9**	**+1.5**
AFON				⇑*i*Vmb_VC		16 06 16.8	
	264nm,SNR=1.3						
AFON				S	**Sn**	**16 07 18.4**	**-0.3**
CLTB	**Caltabellotta**	**6.21**	**72**	P	**Pn**	**16 06 17.5**	**-1.1**
CLTB				S	**Sn**	**16 07 23.4**	**-6.3**
EVIV	**Cofrentes, Val**	**6.44**	**304**	P	**Pn**	**16 06 24.1**	**+2.4**
EVIV				⇑*i*Vmb_VC		16 06 25.9	
	413nm,SNR=2.2						
EVIV				S	**Sn**	**16 07 36.6**	**+1.2**
ETOB	**Tobarra**	**6.47**	**298**	P	**Pn**	**16 06 24.1**	**+2.0**
ETOB				⇑*i*Vmb_VC		16 06 26.6	
	294nm,SNR=1.8						
ETOB				S	**Sn**	**16 07 36.5**	**+0.5**
ECHE	**Chera**	**6.51**	**307**	P	**Pn**	**16 06 24.6**	**+1.9**
ECHE				⇑*i*Vmb_VC		16 06 28.7	
	232nm,SNR=1.2						
ECHE				S	**Sn**	**16 07 36.9**	**-0.1**
ENIJ	**Nijar**	**6.53**	**282**	P	**Pn**	**16 06 25.1**	**+2.1**
ENIJ				⇑*i*Vmb_VC		16 06 28.4	
	441nm,SNR=2.9						
ENIJ				S	**Sn**	**16 07 37.2**	**-0.4**
EPOB	**Poblet**	**6.60**	**328**	P	**Pn**	**16 06 25.1**	**+1.2**
EPOB				⇑*i*Vmb_VC		16 06 31.8	
	215nm,SNR=2.7						
EPOB				S	**Sn**	**16 07 40.2**	**+1.0**
ERTA	**Horta de San J**	**6.64**	**322**	P	**Pn**	**16 06 25.9**	**+1.5**
ERTA				⇑*i*Vmb_VC		16 06 31.4	
	113nm,SNR=1.0						
ERTA				S	**Sn**	**16 07 41.3**	**+1.1**
EMOS	**Mosqueruela**	**6.67**	**314**	P	**Pn**	**16 06 26.2**	**+1.3**
EMOS				⇑*i*Vmb_VC		16 06 27.1	
	199nm,SNR=1.3						
EMOS				S	**Sn**	**16 07 41.1**	**0.0**
EMIR	**Miracle**	**6.89**	**333**	P	**Pn**	**16 06 30.7**	**+2.8**
EMIR				⇑*i*Vmb_VC		16 06 34.1	
	630nm,SNR=2.9						
EMIR				S	**Sn**	**16 07 48.0**	**+1.6**
FIGM	**Figuig**	**6.93**	**240**	P	**Pn**	**16 06 28.6**	**0.0**
FIGM				S	**Sn**	**16 07 52.6**	**+5.0**
EJON	**La Jonquera**	**6.94**	**342**	P	**Pn**	**16 06 30.8**	**+2.2**
EJON				⇑*i*Vmb_VC		16 06 34.5	
	163nm,SNR=0.8						
EJON				S	**Sn**	**16 07 49.3**	**+1.6**
JBK	**JBK**	**7.01**	**260**	P	**Pn**	**16 06 29.7**	**0.0**
JBK				S	**Sn**	**16 07 58.3**	**+8.7**
EBER	**Berja**	**7.07**	**281**	P	**Pn**	**16 06 30.4**	**0.0**
EBER				⇑*i*Vmb_VC		16 06 31.7	
	229nm,SNR=1.4						
EBER				S	**Sn**	**16 07 49.1**	**-1.9**
VAE	**Valguarnera**	**7.12**	**74**	Pn	**Pn**	**16 06 31.5**	**+0.4**
	4.1nm,0.4s,baz=72,slow=23,SNR=1.3						
PGF	**Pioggiola**	**7.12**	**20**	*e*Pn	**Pn**	**16 06 31.3**	**+0.2**
PGF				*e*Sn	**Sn**	**16 07 50.1**	**-2.1**
	27nm,0.7s						
E0901	**Celadas (Terue**	**7.13**	**312**	P	**Pn**	**16 06 33.9**	**+2.7**
E0901				⇑*i*Vmb_VC		16 06 36.3	
	173nm,SNR=1.5						
E0901				S	**Sn**	**16 07 51.9**	**-0.4**
EQES	**Quesada**	**7.36**	**288**	P	**Pn**	**16 06 36.2**	**+1.8**
EQES				⇑*i*Vmb_VC		16 06 38.4	
	193nm,SNR=2.7						
EQES				S	**Sn**	**16 07 57.3**	**-0.7**
LMR	**La Mourre**	**7.48**	**4**	*e*Pn	**Pn**	**16 06 38.4**	**+2.5**
LMR				*e*P	**Pn**	16 06 42.6	+6.7
LMR				*e*Sn	**Sn**	**16 07 58.1**	**-2.6**
	5.6nm,0.4s						
EQUE	**Quentar**	**7.54**	**283**	P	**Pn**	**16 06 38.1**	**+1.2**
EQUE				⇑*i*Vmb_VC		16 06 39.5	
	206nm,SNR=2.9						
EQUE				S	**Sn**	**16 08 01.6**	**-0.9**
ESAC	**San Caprasio**	**7.61**	**322**	P	**Pn**	**16 06 40.4**	**+2.6**
ESAC				⇑*i*Vmb_VC		16 06 42.2	
	539nm,SNR=3.3						
ESAC				S	**Sn**	**16 08 05.0**	**+0.9**
E0802	**Ubeda,Jaen**	**7.64**	**289**	P	**Pn**	**16 06 39.7**	**+1.5**
E0802				S	**Sn**	**16 08 04.1**	**-0.8**
ELGU	**Los Guajares,**	**7.65**	**280**	P	**Pn**	**16 06 39.2**	**+0.8**
ELGU				⇑*i*Vmb_VC		16 06 43.4	
	288nm,SNR=1.6						
ELGU				S	**Sn**	**16 08 02.8**	**-2.4**
ETOR	**Torete**	**7.89**	**311**	P	**Pn**	**16 06 44.4**	**+2.7**
ETOR				⇑*i*Vmb_VC		16 06 46.2	
	102nm,SNR=1.0						
ETOR				S	**Sn**	**16 08 11.2**	**0.0**
MTLF	**Montolieu**	**7.95**	**341**	*e*Pn	**Pn**	**16 06 43.3**	**+0.9**
MTLF				*e*P	Pn	16 06 48.9	+6.5
MTLF				*e*Sn	**Sn**	**16 08 12.2**	**-0.2**
	5.5nm,0.5s						
AKLM	**AKL**	**8.01**	**263**	P	**Pn**	**16 06 44.6**	**+1.3**
AKLM				S	**Sn**	**16 08 22.7**	**+8.7**
ECHI	**Chisagues Biel**	**8.05**	**329**	P	**Pn**	**16 06 46.1**	**+2.2**
ECHI				⇑*i*Vmb_VC		16 06 49.2	
	75nm,SNR=1.1						
EGOR	**Sierra Gorda,**	**8.06**	**282**	P	**Pn**	**16 06 45.8**	**+1.7**
EGOR				⇑*i*Vmb_VC		16 06 48.5	
	209nm,SNR=2.6						
EGOR				S	**Sn**	**16 08 13.3**	**-2.1**
SBF	**Sospel**	**8.09**	**9**	*e*Pn	**Pn**	**16 06 45.7**	**+1.4**
SBF				*e*P	Pb	16 06 51.0	-16
SBF				*e*Sn	**Sn**	**16 08 15.0**	**-0.8**
	22nm,0.7s						
SMRF	**Simiane la Rot**	**8.10**	**359**	*e*Pn	**Pn**	**16 06 45.6**	**+1.1**
SMRF				*e*Sn	**Sn**	**16 08 12.3**	**-3.8**
	0.6nm,0.3s						
PSIM	**Granatula de C**	**8.15**	**294**	P	**Pn**	**16 06 46.2**	**+1.1**
PSIM				S	**Sn**	**16 08 16.4**	**-0.9**
EPF	**Esparros**	**8.30**	**331**	*e*Pn	**Pn**	**16 06 50.6**	**+3.4**
EPF				*e*Sn	**Sn**	**16 08 19.7**	**-1.3**
	7.4nm,0.5s						
LASF	**Ste Croix**	**8.33**	**350**	*e*Pn	**Pn**	**16 06 49.3**	**+1.7**
LASF				*e*P	Pn	16 06 54.5	+6.9
LASF				*e*Sn	**Sn**	**16 08 16.4**	**-5.3**
	6.3nm,0.5s						
ETSF	**Etsaut**	**8.56**	**327**	*e*Pn	**Pn**	**16 06 54.2**	**+3.4**
ETSF				*e*P	Pn	16 06 58.5	+7.7
ETSF				*e*Sn	**Sn**	**16 08 26.5**	**-1.1**
	3.3nm,0.4s						
EADA	**Adamuz**	**8.60**	**289**	P	**Pn**	**16 06 51.8**	**+0.5**
EADA				⇑*i*Vmb_VC		16 06 54.4	
	78nm,SNR=1.1						
EADA				S	**Sn**	**16 08 27.0**	**-1.3**
ESBB	**Sonseca Array**	**8.60**	**299**	P	**Pn**	**16 06 52.4**	**+1.1**
ESBB				⇑*i*Vmb_VC		16 06 56.0	
	85nm,SNR=1.3						
ESBB				S	**Sn**	**16 08 27.9**	**-0.5**
ESDC	**Sonseca Array**	**8.60**	**299**	Pn	**Pn**	**16 06 52.6**	**+1.3**
	0.3nm,0.3s,baz=114,slow=14,SNR=36						
ESDC				Sn	**Sn**	**16 08 26.8**	**-1.7**
	0.1nm,0.3s,baz=106,slow=24,SNR=0.7						
	6.7nm,0.8s						
ESDC	**Sonseca Array**	**8.60**	**299**	P	**Pn**	**16 06 52.4**	**+1.1**
ESDC				⇑*i*Vmb_VC		16 06 56.0	
	86nm,SNR=1.4						
ESDC				S	**Sn**	**16 08 27.5**	**-0.9**
PAB	**San Pablo**	**8.82**	**298**	P	**Pn**	**16 06 55.2**	**+0.7**
PAB				⇑*i*Vmb_VC		16 06 58.1	
	116nm,SNR=2.2						
PCP	**Piancastagn**	**8.92**	**13**	P	**Pn**	**16 06 55.7**	**+0.1**
PCP				S	**Sn**	**16 08 33.7**	**-2.5**
E1302	**La Puebla de C**	**8.97**	**281**	P	**Pn**	**16 06 57.1**	**+0.8**
E1302				⇑*i*Vmb_VC		16 06 59.1	
	212nm,SNR=1.6						
VIVF	**Saint-Julien-l**	**9.02**	**355**	*e*Pn	**Pn**	**16 06 57.2**	**+0.2**
VIVF				*e*P		16 07 04.2	
VIVF				*e*Sn	**Sn**	**16 08 37.1**	**-1.6**
	5.9nm,0.5s						
SJPF	**Ste Jean**	**9.03**	**325**	*e*Pn	**Pn**	**16 06 59.1**	**+1.9**
SJPF				*e*P		16 07 05.2	
SJPF				*e*Sn	**Sn**	**16 08 38.1**	**-0.9**
	8.8nm,0.7s						
ORIF	**Oris-en-Rattie**	**9.04**	**0**	*e*Pn	**Pn**	**16 06 59.6**	**+2.2**
ORIF				*e*P		16 07 04.9	
ORIF				*e*Sn	**Sn**	**16 08 35.6**	**-3.7**
	3.9nm,0.4s						
MDT	**Midelt**	**9.11**	**253**	Pn	**Pn**	**16 06 59.1**	**+0.6**
	0.6nm,0.3s,baz=79,slow=20,SNR=14						
MDT				Lg	Lg	16 09 32.7	
	0.3nm,0.3s,baz=1.6,slow=16,SNR=2.2						
	2.5nm,0.5s						
MDT	**Midelt**	**9.11**	**253**	P	**Pn**	**16 06 58.7**	**+0.2**
MDT				S	**Sn**	**16 08 48.5**	**+7.3**
EJIF	**Jimena Fronter**	**9.12**	**277**	P	**Pn**	**16 07 00.2**	**+1.8**
MD31	**MD31**	**9.21**	**254**	P	**Pn**	**16 07 00.6**	**+0.8**
ECAB	**El Cabril**	**9.23**	**287**	P	**Pn**	**16 06 59.8**	**-0.2**
ECAB				⇑*i*Vmb_VC		16 07 03.3	
	120nm,SNR=1.9						
ECAB				S	**Sn**	**16 08 44.3**	**+0.4**
CAF	**Calviac**	**9.48**	**344**	*e*Pn	**Pn**	**16 06 47.4**	**+1.3**
CAF				*e*P		16 07 10.7	
LPG	**La Plagne**	**9.65**	**4**	*e*Pn	Pn	16 07 10.9	+5.0
LPG				*e*Sn	**Sn**	**16 08 53.2**	**-1.3**
	0.6nm,0.2s						
LPL	**La Plagne**	**9.67**	**4**	*e*Pn	**Pn**	**16 07 07.8**	**+1.7**
LPL				*e*P		16 07 12.1	
LPL				*e*Sn	**Sn**	**16 08 52.8**	**-2.0**
	2.4nm,0.4s						
PBAR	**Barrancos**	**10.51**	**286**	*e*P	**Pn**	**16 07 19.2**	**+1.8**
PVAQ	**Vaqueiros**	**10.96**	**282**	*e*P	**Pn**	**16 07 23.8**	**+0.2**
PVAQ	**Vaqueiros**	**10.96**	**282**	P	**Pn**	**16 07 23.9**	**+0.4**
PVAQ				S	**Sn**	**16 09 29.9**	**+3.7**
PMRV	**Marv??o**	**11.03**	**293**	*e*P	**Pn**	**16 07 26.7**	**+2.1**
PBDV	**Barranco-do-Ve**	**11.12**	**281**	*e*P	**Pn**	**16 07 27.3**	**+1.6**
PBEJ	**Beja**	**11.13**	**285**	*e*P	**Pn**	**16 07 27.2**	**+1.3**
PCBR	**Castelo Branco**	**11.21**	**295**	*e*P	**Pn**	**16 07 29.3**	**+2.3**
PCVE	**Castro Verde**	**11.23**	**283**	*e*P	**Pn**	**16 07 29.0**	**+1.7**
EVO	**Evora**	**11.32**	**288**	*e*P	**Pn**	**16 07 30.7**	**+2.2**
DAVOX	**Davos/Dischmat**	**11.33**	**14**	LR	LR	16 11 54.5	
	comp=Z,110nm,19.7s,baz=258,slow=38						
MVO	**Moncorvo**	**11.34**	**302**	*e*P	**Pn**	**16 07 30.9**	**+2.0**
MESJ	**Messejana**	**11.39**	**284**	*e*P	**Pn**	**16 07 31.5**	**+2.0**
PBRG	**Braganca**	**11.42**	**305**	*e*P	**Pn**	**16 07 32.5**	**+2.6**
PBRG				*i* IAmb	IAmb	16 07 33.1	
	28nm,1.9s						
ECAL	**Calabor**	**11.48**	**306**	P	**Pn**	**16 07 33.3**	**+2.5**
ECAL				⇑*i*Vmb_VC		16 07 35.4	
	338nm,SNR=1.4						
ECAL				S	**Sn**	**16 09 36.5**	**-2.6**
PMTG	**Montargil**	**11.58**	**290**	*e*P	**Pn**	**16 07 34.0**	**+1.9**
PSARD	**Sardoal**	**11.65**	**293**	*e*P	**Pn**	**16 07 36.3**	**+3.2**
MORF	**Marmelete**	**11.69**	**281**	*e*P	**Pn**	**16 07 35.7**	**+2.0**
PTEO	**Sao Teotonio**	**11.76**	**282**	*e*P	**Pn**	**16 07 38.1**	**+3.5**
POLO	**Lamas de Olo**	**11.95**	**301**	*e*P	**Pn**	**16 07 40.0**	**+2.7**
PCAS	**Casmilo, Conde**	**12.02**	**295**	*e*P	**Pn**	**16 07 40.4**	**+2.3**
QUIF	**Quistinic**	**13.75**	**334**	*e*P	**P**	**16 08 09.2**	**-1.1**
GERES	**GERESS Array B**	**14.22**	**22**	Pn	**Pn**	**16 08 08.7**	**+0.5**
	baz=204,slow=14,SNR=1.8						
GERES				LR	LR	16 13 35.1	
	comp=Z,85nm,18.6s,baz=90,slow=37						
	0.3nm,0.3s						
KHC	**Kasperske Hory**	**14.44**	**21**	P	**Pn**	**16 08 11.4**	**+0.3**
	5.1nm,1.0s						
VRAC	**Vranov**	**15.59**	**27**	Pn	**P**	**16 08 28.7**	**-2.1**
	0.2nm,0.3s,baz=235,slow=11,SNR=5.1						
	1.8nm,0.5s						
STHS	**Stebnicka Huta**	**17.64**	**35**	*e*P	**P**	**16 08 57.5**	**+4.0**
MLR	**Muntele Rosu**	**18.02**	**52**	P	**P**	**16 08 59.4**	**+1.6**
	0.2nm,0.3s,baz=222,slow=14,SNR=2.5						
	1.9nm,0.5s						
NDNU	**Novodnistrovsk**	**20.34**	**45**	P	Pn	16 09 25.8	+0.7
EKA	**Eskdalemuir Ar**	**20.41**	**345**	P	Pn	16 09 25.9	0.0
	2.0nm,0.8s,baz=144,slow=11,SNR=5.7						
	2.0nm,0.8s						
BR105	**Keskin Array S**	**22.29**	**72**	P	**P**	**16 09 46.8**	**+2.4**
	4.8nm,1.0s						
BR106	**Keskin Array S**	**22.29**	**72**	P	**P**	**16 09 46.0**	**+1.6**
	2.5nm,0.8s						
BRTR	**Keskin Array B**	**22.31**	**72**	P	**P**	**16 09 46.3**	**+1.7**
	2.1nm,0.7s,baz=258,slow=8.7,SNR=15						
	2.1nm,0.7s						
BR104	**Keskin Array S**	**22.31**	**72**	P	**P**	**16 09 45.2**	**+0.6**
	4.0nm,0.8s						
AK13	**Malin Array Si**	**22.34**	**41**	P	**P**	**16 09 45.7**	**+1.1**
AK14	**Malin Array Si**	**22.37**	**41**	P	**P**	**16 09 45.9**	**+1.0**
AK17	**Malin Array Si**	**22.37**	**41**	P	**P**	**16 09 45.5**	**+0.5**
AK07	**Malin Array Si**	**22.38**	**42**	P	**P**	**16 09 45.2**	**+0.2**
AK16	**Malin Array Si**	**22.39**	**41**	P	**P**	**16 09 45.4**	**+0.2**
AK06	**Malin Array Si**	**22.40**	**42**	P	**P**	**16 09 45.7**	**+0.5**
AK12	**Malin Array Si**	**22.40**	**42**	P	**P**	**16 09 45.5**	**+0.2**
AK15	**Malin Array Si**	**22.41**	**41**	P	**P**	**16 09 45.9**	**+0.5**
AK05	**Malin Array Si**	**22.42**	**42**	P	**P**	**16 09 45.8**	**+0.4**
AK22	**Malin Array Si**	**22.42**	**41**	P	**P**	**16 09 46.0**	**+0.5**
AK11	**Malin Array Si**	**22.43**	**41**	P	**P**	**16 09 46.2**	**+0.6**
AK10	**Malin Array Si**	**22.43**	**42**	P	**P**	**16 09 46.4**	**+0.8**
AK02	**Malin Array Si**	**22.44**	**42**	P	**P**	**16 09 45.4**	**-0.3**
AK23	**Malin Array Si**	**22.45**	**41**	P	**P**	**16 09 46.4**	**+0.6**
AK04	**Malin Array Si**	**22.45**	**41**	P	**P**	**16 09 46.1**	**+0.3**
AK08	**Malin Array Si**	**22.45**	**42**	P	**P**	**16 09 45.7**	**-0.1**
KIEV	**Kiev**	**22.46**	**41**	P	**P**	**16 09 46.5**	**+0.6**
	47nm,0.8s						
AKASG	**Malin Array Be**	**22.47**	**41**	P	**P**	**16 09 45.2**	**-0.8**
	2.7nm,0.6s,baz=240,slow=9.4,SNR=12						
	2.7nm,0.6s						
AKBB	**Malin Array Si**	**22.47**	**41**	P	**P**	**16 09 46.4**	**+0.4**
AKBB				pP	**sP**	**16 09 50.0**	**-0.5**
TORD	**Torodi Ar. Bea**	**22.92**	**190**	P	**P**	**16 09 49.3**	**-1.7**
	3.9nm,0.8s,baz=359,slow=8.9,SNR=18						
	3.9nm,0.8s						
MMAI	**Mount Meron Ar**	**24.55**	**88**	P	**P**	**16 10 05.7**	**-1.1**
	2.6nm,0.9s,baz=319,slow=4.2,SNR=1.7						
	2.6nm,0.9s						
HFS	**Hagfors**	**24.82**	**9**	P	**P**	**16 10 07.9**	**-1.0**
	1.4nm,0.7s,baz=195,slow=11,SNR=6.1						
	1.4nm,0.7s						
NB2	**NORSAR Subarra**	**25.43**	**6**	P	**P**	**16 10 14.1**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=191,slow=9.3						
NOA	**NORSAR Array B**	**25.43**	**6**	P	**P**	**16 10 13.5**	**-0.9**
	comp=Z,0.8nm,0.6s,baz=188,slow=11,SNR=6.6						
	comp=Z,0.8nm,0.6s						
FINES	**FINESS Array B**	**28.64**	**20**	P	**P**	**16 10 43.4**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=230,slow=8.6,SNR=1.9						
	comp=Z,1.4nm,0.8s						
KBZ	**Khabaz**	**29.39**	**63**	LR	LR	16 24 14.5	
	comp=Z,26nm,19.4s,baz=54,slow=40						
BVAR	**Borovoye Array**	**47.52**	**48**	P	**P**	**16 13 21.9**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=282,slow=7.4,SNR=4.1						
	comp=Z,0.7nm,0.8s						
KURBB	**Kurchatov Arra**	**52.91**	**50**	P	**P**	**16 14 03.0**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=289,slow=8.4,SNR=4.3						
	comp=Z,0.5nm,0.3s						
MKAR	**Makanchi Array**	**56.36**	**53**	P	**P**	**16 14 28.0**	**0.0**
	comp=Z,1.5nm,0.6s,baz=286,slow=6.0,SNR=20						
	comp=Z,1.5nm,0.6s						
ULM	**Lac du Bonnet**	**70.01**	**318**	P	**P**	**16 15 59.3**	**+0.8**
	comp=Z,1.3nm,0.5s,baz=14,slow=2.0,SNR=3.4						
	comp=Z,1.3nm,0.5s						
SONM	**Songino Array**	**70.72**	**45**	P	**P**	**16 16 02.9**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=276,slow=2.6,SNR=1.2						
	comp=Z,0.2nm,0.4s						
YKA	**Yellowknife Ar**	**70.98**	**335**	P	**P**	**16 16 04.2**	**0.0**
	comp=Z,0.9nm,0.8s,baz=43,slow=6.0,SNR=17						
	comp=Z,0.9nm,0.8s						
ILAR	**Eielson Array**	**77.42**	**348**	P	**P**	**16 16 42.6**	**+0.9**
	comp=Z,0.6nm,0.8s,baz=4.5,slow=4.8,SNR=7.9						
	comp=Z,0.6nm,0.8s						
PDAR	**Pinedale Array**	**82.03**	**318**	P	**P**	**16 17 06.9**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=26,slow=5.9,SNR=1.9						
	comp=Z,0.2nm,0.5s						
QSPA	**South Pole Qui**	**125.74**	**180**	PKP	**PKPdf**	**16 23 47.2**	**-0.5**
	comp=Z,1.3nm,0.9s,baz=230,slow=0.9,SNR=7.5						

IDC 27 16:06:32.2±49.0, 22˚.45S×177˚.01W, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=896.0km s-min=159.0km az=86.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**37.82**	**247**	P	P	16 13 50.6	0.0
	0.8nm,0.5s,baz=66,slow=10.0,SNR=3.1						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**45.00**	**258**	P	P	16 14 49.1	-0.7
	0.3nm,0.4s,baz=107,slow=8.5,SNR=26						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**45.27**	**264**	P	P	16 14 52.3	+0.3
	1.1nm,0.4s,baz=101,slow=8.2,SNR=67						
	1.1nm,0.4s						

**IDC 27 16:30:49.4±3

SANI	**Sanana**	**3.90 282**	P	**Pn**	16 44 49.9	**-2.0**
KMPI	**Kaimana, Papua**	**3.98 102**	P	**Pn**	16 44 54.6	**+1.6**
TNTI	**Ternate**	**4.36 326**	P	**Pn**	16 44 57.0	**-1.3**
RKPI	**Ransiki, Papua**	**4.58 73**	P	**Pn**	16 45 01.9	**+0.6**
MWPI	**Manokwari, Pap**	**4.65 66**	P	**Pn**	16 45 04.1	**+1.8**
BAKI	**Biak**	**6.52 75**	P	**Pn**	16 45 29.3	**+1.3**
	0.2nm36nm,1.2s					
LUWI	**Luwuk**	**7.25 284**	P	**Pn**	16 45 37.1	**-1.0**
APSI	**Ampana**	**8.38 283**	P	**Pn**	16 45 53.0	**-0.5**
MRSI	**Marisa**	**8.53 293**	P	**Pn**	16 45 55.1	**-0.5**
	26nm,0.7s					
BATI	**Baumata**	**9.50 220**	P	**Pn**	16 46 09.3	**+0.4**
	5.0nm,0.6s,baz=63,slow=17,SNR=1.6					
BATI			LR	LR	16 50 11.6	
	comp=Z,128nm,18.3s,baz=36,slow=40					
KAPI	**Kappang**	**10.25 258**	P	**Pn**	16 46 21.4	**+2.3**
	1.3nm,0.3s,baz=325,slow=1.7,SNR=4.6					
	5.0nm,0.4s					
KAPI	**Kappang**	**10.25 258**	P	**Pn**	16 46 22.5	**+3.3**
FITZ	**Fitzroy Crossi**	**15.68 195**	P	**Pn**	16 47 31.0	**-1.9**
	0.3nm,0.3s,baz=37,slow=10,SNR=8.2					
	1.5nm,0.8s					
WRAB	**Tennant Creek**	**17.53 166**	P	**Pn**	16 47 57.3	**+0.8**
WRA	**Warramunga Arr**	**17.54 166**	P	**Pn**	16 47 54.4	**-2.2**
	0.4nm,0.3s,baz=346,slow=12,SNR=22					
WRA			S	**Sn**	16 51 09.3	**-2.0**
	0.6nm,0.7s,baz=339,slow=20,SNR=3.1					
	1.3nm,0.6s					
WB1	**Warramunga Ar.**	**17.56 166**	P	**Pn**	16 47 57.1	**+0.3**
PMG	**Port Moresby**	**18.43 111**	LR	LR	16 58 00.4	
	comp=Z,54nm,19.2s,baz=234,slow=46					
ASAR	**Alice Springs**	**21.05 169**	P	**P**	16 48 35.6	**-0.3**
	3.4nm,0.6s,baz=351,slow=11,SNR=80					
ASAR			S	**S**	16 52 24.3	**-5.0**
	0.6nm,0.9s,baz=353,slow=23,SNR=5.0					
ASAR			PcP	**PcP**	16 52 42.8	**+0.4**
	0.5nm,0.6s,baz=353,slow=2.0,SNR=6.4					
	3.4nm,0.6s					
AUALC	**St Philip's Co**	**21.07 170**	P	**P**	16 48 35.3	**-0.9**
LEM	**Lembang**	**22.45 259**	LR	LR	16 59 04.0	
	comp=Z,60nm,20.7s,baz=160,slow=40					
STKA	**Stephens Creek**	**30.92 160**	P	**P**	16 50 07.5	**-1.0**
	0.7nm,0.6s,baz=340,slow=12,SNR=1.8					
	0.7nm,0.6s					
CMAR	**Chiang Mai Arr**	**37.04 306**	P	**P**	16 51 02.6	**+0.8**
	1.4nm,0.9s,baz=136,slow=6.7,SNR=12					
	1.4nm,0.9s					
USRK	**Ussuriysk Ar.**	**46.90 2**	P	**P**	16 52 21.9	**+0.1**
	0.6nm,0.5s,baz=171,slow=10,SNR=1.8					
	0.6nm,0.5s					
MKAR	**Makanchi Array**	**64.70 326**	P	**P**	16 54 29.5	**-0.1**
	0.8nm,0.6s,baz=120,slow=8.8,SNR=13					
	0.8nm,0.6s					
SHEM	**Shemya Is, Ala**	**66.72 28**	LR	LR	17 17 50.1	
	comp=Z,21nm,21.3s,baz=272,slow=30					
ZALV	**Zalesovo Beam**	**67.82 333**	P	**P**	16 54 48.7	**-0.7**
	0.8nm,0.5s,baz=120,slow=8.5,SNR=3.6					
	0.8nm,0.5s					
KURBB	**Kurchatov Arra**	**68.92 328**	P	**P**	16 54 56.4	**0.0**
	3.0nm,0.8s,baz=128,slow=6.0,SNR=29					
	3.0nm,0.8s					
BVAR	**Borovoye Array**	**74.49 327**	P	**P**	16 55 29.7	**-0.2**
	0.5nm,0.7s,baz=120,slow=10,SNR=4.7					
	0.5nm,0.7s					
CPUP	**Villa Florida**	**150.16 167**	PKPbc	**PKPbc**	17 03 43.0	**-0.1**
	0.6nm,0.4s,baz=162,slow=3.2,SNR=4.1					

KRSC 27 16:54:31.0±1.7, 49.52N×158.94E, h39km±49km, MI3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.16**	**304**	*eP*	Pn	16 55 04.3	-0.1
SKR				*eS*	Sn	16 55 30.6	+0.6
KDTR	**Khodutka, Kamc**	**2.36**	**347**	*eP*	Pn	16 55 09.5	+2.3
KDTR				*eS*	Sn	16 55 38.5	+3.7
PAU	**Pauzhetka**	**2.38**	**326**	*eS*	Sn	16 55 39.0	+3.7
RUS	**Russkaya**	**2.93**	**355**	*eP*	Pn	16 55 18.3	+3.3
RUS				*eS*	Sn	16 55 52.9	+3.9
ASAK	**Asacha**	**2.95**	**347**	*eP*	Pn	16 55 19.0	+3.7
ASAK				*eS*	Sn	16 55 53.7	+4.4
MTVR	**Mutnovka**	**3.01**	**351**	*eP*	Pn	16 55 19.4	+3.2
MTVR				*eS*	Sn	16 55 55.1	+4.1
GRL	**Gorelyy**	**3.09**	**350**	*eP*	Pn	16 55 20.7	+3.4
GRL				*eS*	Sn	16 55 57.6	+4.7
KRMR	**Karymshinskiy**	**3.36**	**352**	*eP*	Pn	16 55 25.1	+4.3
KRMR				*eS*	Sn	16 56 04.6	+5.2
PET	**Petropavlovsk**	**3.52**	**357**	*eP*	Pn	16 55 27.5	+4.5
PET				*eS*	Sn	16 56 07.9	+4.5
DALK	**Dalny**	**3.52**	**358**	*eP*	Pn	16 55 26.6	+3.5
DALK				*eS*	Sn	16 56 07.4	+4.0
SPN	**Mys Shipunski**	**3.65**	**10**	*eP*	Pn	16 55 28.9	+4.1
SPN				*eS*	Sn	16 56 11.5	+4.9
UGLR	**Uglovaya**	**3.70**	**359**	*eP*	Pn	16 55 31.7	+6.0
SMAR	**Somma**	**3.75**	**359**	*eP*	Pn	16 55 31.4	+4.9
AVH	**Avacha**	**3.76**	**358**	*eP*	Pn	16 55 32.1	+5.7
SDLR	**Sedlovina**	**3.77**	**359**	*eP*	Pn	16 55 30.8	+4.3
KOK	**Koryaka**	**3.79**	**357**	*eP*	Pn	16 55 31.3	+4.5
KOK				*eS*	Sn	16 56 15.3	+5.2
KRX	**Arik**	**3.85**	**357**	*eP*	Pn	16 55 31.7	+3.9
KRX				*eS*	Sn	16 56 16.6	+4.7
GNL	**Ganaly**	**4.23**	**352**	*eP*	Pn	16 55 38.6	+5.7
KBTR	**Krutoberegovo**	**7.10**	**18**	*eP*	Pn	16 56 16.3	+4.1

*NEIC **27** 17:04:17.3±1.1, 19.05N±0.08×67.82W±0.05, h32km±3km, ML2.6/35, Md3.5/6(RSPR), Error ellipse: s-maj=12.6km s-min=3.3km az=207.0*
*SDD **27** 17:04:18.9±2.4, 19.15N×67.59W, h0km±19km, MD3.1, ML2.3, MW2.4, Presumed earthquake*
ISC 27 17:04:18.7±1.4, 18.97N±0.08×67.72W±0.04, h12km±9km, n33, σ1s94/40, 10C-3D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDE	**Isla Desecheo**	**0.62**	**158**		**Pg**	**17 04 29.3**	**-1.5**
IDE					**Sb**	**17 04 41.5**	**+1.3**
AGPR	**Aguadilla, PR**	**0.76**	**131**		**Pg**	**17 04 31.8**	**-1.6**
AGPR					**Sg**	**17 04 44.1**	**+0.7**
AGPR				IAML		17 04 44.5	
	128nm,0.3s						
AGPR				IAML		17 04 45.7	
	162nm,0.3s						
AGPR	**Aguadilla, PR**	**0.76**	**131**	⇓*iP*	**Pg**	**17 04 31.8**	**-1.6**
AGPR				⇑*eSg*	**Sg**	**17 04 44.1**	**+0.7**
AGPR				IAML		17 04 44.5	
	comp=N,97nm,0.2s						
PRSN	**Puerto Rico Se**	**0.92**	**144**		**Sg**	**17 04 50.1**	**+1.6**
PRSN	**Puerto Rico Se**	**0.92**	**144**		**Pg**	**17 04 35.6**	**-0.9**
PRSN				IAML		17 04 52.5	
	comp=N,204nm,0.3s						
PRSN	**Puerto Rico Se**	**0.92**	**144**	⇑*iP*	**Pb**	**17 04 38.8**	**+2.2**
PRSN				⇑*eSg*	**Sg**	**17 04 50.1**	**+1.6**
PRSN				IAML		17 04 55.1	
	comp=N,224nm,0.2s						
LSP	**Las Mesas**	**0.99**	**142**		**Pg**	**17 04 38.0**	**+0.2**
LSP					**Sg**	**17 04 51.8**	**+1.2**
AOPR	**Arecibo Observ**	**1.10**	**124**		**Pg**	**17 04 38.3**	**-1.6**
AOPR	**Arecibo Observ**	**1.10**	**124**		**Sg**	**17 04 53.6**	**-0.7**
AOPR				IAML		17 05 06.6	
	comp=N,212nm,0.3s						
AOPR	**Arecibo Observ**	**1.10**	**124**	⇑*iP*	**Pg**	**17 04 38.5**	**-1.5**
AOPR				IAML		17 05 09.7	
	comp=N,58nm,0.2s						
MLPR	**Magueyes Islan**	**1.18**	**147**		**Pb**	**17 04 39.4**	**-1.7**
MLPR					**Sg**	**17 04 55.8**	**-0.9**
MLPR				IAML		17 05 00.8	
	comp=N,80nm,0.4s						
MLPR	**Magueyes Islan**	**1.18**	**147**	⇑*iP*	**Pb**	**17 04 42.1**	**+1.0**
MLPR				⇓*eSg*	**Sn**	**17 04 59.3**	**+2.2**
MLPR				IAML		17 05 00.7	
	comp=N,28nm,0.5s						
UUPR	**Utuado, UPR, P**	**1.18**	**127**		**Sb**	**17 04 55.7**	**-0.7**
UUPR	**Utuado, UPR, P**	**1.18**	**127**		Pb	17 04 38.6	-2.6
EMPR	**Esperanza - Ma**	**1.23**	**113**		**Pn**	**17 04 42.0**	**+0.3**
EMPR					**Sb**	**17 04 59.0**	**+1.2**
GBPR	**Guanica, Bosqu**	**1.27**	**141**		**Pn**	**17 04 40.1**	**-2.1**
GBPR					**Sb**	**17 05 00.5**	**+1.7**
CELP	**Cerrillos**	**1.40**	**129**		**Sb**	**17 05 02.2**	**-0.5**
CELP	**Cerrillos**	**1.40**	**129**		**Pn**	**17 04 42.4**	**-1.6**
CELP				IAML		17 05 07.2	
	comp=N,63nm,0.2s						
CELP				IAML		17 05 08.4	
	comp=N,55nm,0.3s						
CELP	**Cerrillos**	**1.40**	**129**	⇑*iP*	**Pn**	**17 04 43.4**	**-0.7**
CELP				⇑*eSg*	**Sb**	**17 05 04.5**	**+1.9**
CELP				IAML		17 05 07.1	
	comp=N,24nm,0.3s						
OBIP	**Obispado Ponce**	**1.40**	**131**		**Sb**	**17 05 02.4**	**-0.2**
OBIP	**Obispado Ponce**	**1.40**	**131**		Pn	17 04 41.6	-2.5
SMDR	**Samana, DR**	**1.43**	**283**	⇑*iP*	**Pn**	**17 04 45.2**	**+0.8**
SMDR				⇓*eSg*	**Sg**	**17 05 06.2**	**+1.7**
SMDR				IAML		17 05 11.1	
	comp=N,50nm,0.6s						
ECPR	**Experimental S**	**1.44**	**116**		**Pn**	**17 04 43.3**	**-1.3**
ECPR					**Sn**	**17 05 04.7**	**+1.2**
ECPR	**Experimental S**	**1.44**	**116**	IAML		17 05 10.6	
	comp=N,128nm,0.2s						
ECPR				IAML		17 05 11.5	
	comp=N,115nm,0.2s						
DR12	**Loma Pena Alta**	**1.58**	**264**		Pn	17 04 41.7	-5.0
DR12				Sn	**Sn**	**17 04 59.8**	**-7.4**
HATOM	**Hato Mayor del**	**1.58**	**264**	⇑*iP*	**Pb**	**17 04 49.7**	**+1.7**
HATOM				⇑*eSg*	**Sg**	**17 05 12.1**	**+2.5**
HATOM				IAML		17 05 12.9	
	comp=N,41nm,0.2s						
IGPR	**InterUniversit**	**1.83**	**123**		**Pn**	**17 04 48.7**	**-1.2**
IGPR					**Sn**	**17 05 15.5**	**+2.4**
HUMP	**Col San Antoni**	**1.95**	**114**		**Sn**	**17 05 17.0**	**+0.7**
HUMP	**Col San Antoni**	**1.95**	**114**		Pn	17 04 49.7	-2.0
CUPR	**Culebra, Puert**	**2.40**	**105**	Pn	**Pn**	**17 04 56.1**	**-1.8**
BANI	**BANI**	**2.56**	**258**		Pn	17 04 55.4	-4.8
SDDR	**Presa de Saban**	**3.38**	**271**	Pn	Pn	17 05 06.7	-4.7
SDDR				IAML		17 06 01.6	
	comp=N,11nm,2.8s						
SDDR				IAML		17 06 04.2	
	comp=N,14nm,1.9s						
SABA	**Saba**	**4.46**	**107**	Pn	Pn	17 05 24.3	-2.0

*IDC **27** 17:13:10.8±1.8, 0.27N×123.49E, h0km, mb3.3/3, mbtmp3.4/4, ML3.9/1, Error ellipse: s-maj=131.1km s-min=26.5km az=64.0*
*DJA **27** 17:13:28.3±0.2, 0.5S±2.1×122.3E±1.1, h119km±3km, M3.7/28, mb3.7/3, MLv3.8/28*
ISC 27 17:13:26.8±1.0, 0.09S±0.07×123.31E±0.06, h157km, n13, σ2s36/15, mb3.1/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**1.09**	**210**	P	**Pn**	**17 13 51.4**	**-1.6**
LUWI				S	**Sn**	**17 14 08.7**	**-4.4**
MRSI	**Marisa**	**1.48**	**292**	P	**Pn**	**17 13 55.1**	**-1.6**
MRSI				S	**Sn**	**17 14 14.9**	**-4.7**
APSI	**Ampana**	**1.85**	**244**	P	**Pn**	**17 14 00.0**	**-0.7**
MNI	**Manado**	**2.15**	**45**	P	**Pn**	**17 14 04.6**	**+0.4**
SANI	**Sanana**	**3.31**	**126**	P	**Pn**	**17 14 16.6**	**-1.8**
MPSI	**Mapaga**	**3.44**	**277**	P	**Pn**	**17 14 22.3**	**+1.1**
PCI	**Palu**	**3.57**	**257**	P	**Pn**	**17 14 22.3**	**+0.5**
KDI	**Kendari**	**3.91**	**190**	P	**Pn**	**17 14 26.1**	**0.0**
SPSI	**Sidrap Palu**	**5.23**	**223**	P	**Pn**	**17 14 45.1**	**+1.7**
	0.1nm9.0nm,0.8s						
FITZ	**Fitzroy Crossi**	**18.05**	**173**	P	**P**	**17 17 28.4**	**+2.2**
	0.3nm,0.3s,baz=342,slow=9.6,SNR=2.2						
	0.8nm,0.3s						
WRA	**Warramunga Arr**	**22.50**	**152**	P	**P**	**17 18 14.8**	**+1.4**
	1.1nm,0.6s,baz=330,slow=10,SNR=25						
	1.1nm,0.6s						
ASAR	**Alice Springs**	**25.60**	**157**	P	**P**	**17 18 43.6**	**+1.9**
	0.2nm,0.5s,baz=330,slow=8.0,SNR=8.3						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**58.85**	**328**	P	**P**	**17 23 10.1**	**+1.1**
	0.1nm,0.4s,baz=140,slow=7.8,SNR=1.6						
	0.1nm,0.4s						

*SJA **27** 17:42:42.6±0.6, 28.88S×63.06W, h646km±10km, ML5.4, MW5.1*
*BJI **27** 17:42:48.8, 28.52S×63.76W, h591km, mB5.2/3*
*MOS **27** 17:42:49.9±1.1, 28.81S×63.15W, h604km, mb4.9/24, Error ellipse: s-maj=13.0km s-min=8.9km az=94.6*
*NEIC **27** 17:42:50.3±1.6, 28.81S±0.07×63.16W±0.10, h597km±5km, mb5.0/595, Mww5.2/10, Error ellipse: s-maj=12.2km s-min=10.3km az=80.0*
*VAO **27** 17:42:50.5±0.3, 28.76S×63.07W, h597km±4km, mb5.1, Presumed earthquake*
*GUC **27** 17:42:50.3±2.6, 28.84S×63.13W, h590km, MW5.2*
*IDC **27** 17:42:50.5±0.4, 28.79S×63.11W, h598km±3km, mb4.2/17, mbtmp5.2/23, Error ellipse: s-maj=10.1km s-min=7.7km az=98.0*
*GCMT **27** 17:42:52.3±0.7, 28.76S±0.06×62.99W±0.06, h619km±4km, MW5.2/49, Moment Tensor Solution. s49,c71; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=4.24±.30; Mθθ=2.55±.47; Mφφ=6.80±.40; Mrθ=2.95±.50; Mθφ=2.11±.43; Mφr=2.38±.53; Best double couple: Mo7.24600×10^16 NP1:φs=20.00000°, δ42.00000°, λ=-37.00000°. NP2: φs=140.00000°, δ66.00000°, λ=-125.00000°. Principal axes: T 7.9950, Plg14.0000°, Azm255.0000°; N -1.4880, Plg32.0000°, Azm156.0000°; P -6.4980, Plg54.0000°, Azm5.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*
ISC 27 17:42:50.0±0.3, 28.75S±0.03×63.14W±0.04, h600km±2km, h600km:pP-P, n786, σ1s02/693, mb5.0/320, 36C-25D, Santiago del Estero Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TCA	**Tanti**	**2.87**	**206**	*eP*	**P**	**17 44 07.9**	**-0.6**
TCA				*eS*	**S**	**17 45 09.2**	**-3.4**
TCA	**Tanti**	**2.87**	**206**	*eP*	**P**	**17 44 07.9**	**-0.6**
PIL	**Pilar**	**2.98**	**192**	*eP*	**P**	**17 44 09.7**	**+0.8**
ACLC	**CERRO LA CRUZ**	**3.40**	**258**	*eP*	**P**	**17 44 11.9**	**+0.2**
ACLC				*eS*	**S**	**17 45 17.2**	**-1.1**
ACHE	**Chepes**	**3.89**	**231**	*eP*	**P**	**17 44 14.8**	**0.0**
ACHE				*eS*	**S**	**17 45 22.3**	**-1.8**
TINO	**Tinogasta**	**3.96**	**279**	*eP*	**P**	**17 44 16.4**	**+1.0**
TINO				*eS*	**S**	**17 45 25.8**	**+0.9**
AVFE	**Valle Fertil**	**4.21**	**242**	*eP*	**P**	**17 44 15.7**	**-1.2**
AVFE				*eS*	**S**	**17 45 24.0**	**-4.0**
AVFE				IAML		17 45 30.9	
	comp=Z,626nm,0.8s						
MRA	**San Martin**	**4.28**	**211**	*eP*	**P**	**17 44 17.2**	**-0.2**
MRA				*eS*	**S**	**17 45 27.5**	**-1.5**
SLA	**San Lorenzo**	**4.53**	**332**	*eP*	**P**	**17 44 20.5**	**+0.9**
SLA	**San Lorenzo**	**4.53**	**332**	*eP*	**P**	**17 44 21.3**	**+1.7**
CFA	**Coronel Fontan**	**5.25**	**236**	P	**P**	**17 44 25.2**	**+0.4**
	comp=Z,188nm,0.4s,baz=66,slow=10,SNR=934						
CFA				S	**S**	**17 45 41.5**	**-1.0**
	comp=Z,371nm,0.6s,baz=94,slow=19,SNR=86						
CFA	**Coronel Fontan**	**5.25**	**236**	*eP*	**P**	**17 44 25.3**	**+0.4**
CFA				*eS*	**S**	**17 45 41.6**	**-0.8**
RTLL	**Cerro Villicun**	**5.29**	**240**	*eP*	**P**	**17 44 25.2**	**0.0**
RTLL				*eS*	**S**	**17 45 42.8**	**-0.2**
PSAL	**Palomas, Salto**	**5.34**	**117**	*eP*	**P**	**17 44 26.4**	**+0.9**
PSAL				*eS*	**S**	**17 45 43.4**	**-0.2**
SALTA		**5.34**	**327**	⇓*eP*	**P**	**17 44 26.7**	**+0.4**
ACDV	**Cuesta del Vie**	**5.40**	**253**	*eP*	**P**	**17 44 27.9**	**+1.6**
ACDV				*eS*	S	17 45 54.9	+10
ACDV				IAML		17 45 59.1	
	comp=Z,322nm,1.8s						
ZON	**Zonda**	**5.54**	**238**		**P**	**17 44 27.8**	**+0.5**
ZON				S	**S**	**17 45 45.8**	**-1.1**
ZON	**Zonda**	**5.54**	**238**	P	**P**	**17 44 27.8**	**+0.5**
ZON				S	**S**	**17 45 45.8**	**-1.1**
AC02	**Maricunga**	**5.63**	**288**	P	**P**	**17 44 30.2**	**+1.6**
AC02				S	**S**	**17 45 46.9**	**-2.2**
AC02	**Maricunga**	**5.63**	**288**	*eP*	**P**	**17 44 30.3**	**+1.6**
AC02				*eS*	**S**	**17 45 50.4**	**+1.3**
CPUP	**Villa Florida**	**5.70**	**66**	P	**P**	**17 44 29.6**	**+1.0**
	comp=Z,204nm,0.5s,baz=252,slow=9.5,SNR=600						
CPUP				S	**S**	**17 45 50.5**	**+1.4**
	comp=Z,40nm,0.9s,baz=234,slow=17,SNR=1.0						
CPUP	**Villa Florida**	**5.70**	**66**		**P**	**17 44 29.3**	**+0.7**
CPUP				S	**S**	**17 45 50.2**	**+1.1**
CO01	**Juntas del Tor**	**6.19**	**257**	P	**P**	**17 44 34.9**	**+1.9**
CO01				S	**S**	**17 45 58.5**	**+1.2**
CO01	**Juntas del Tor**	**6.19**	**257**	⇑*eP*	**P**	**17 44 35.0**	**+1.9**
CO01				*eS*	**S**	**17 45 59.0**	**+1.8**
AC05	**El Transito**	**6.26**	**268**		**P**	**17 44 34.7**	**+1.2**
AC05				S	**S**	**17 45 58.5**	**+0.3**
AC05	**El Transito**	**6.26**	**268**	⇑*eP*	**P**	**17 44 34.8**	**+1.3**
AC05				*eS*	**S**	**17 45 58.9**	**+0.7**
GO03	**Copiapo**	**6.37**	**279**		**P**	**17 44 35.1**	**+0.7**
GO03					S		
GO03	**Copiapo**	**6.37**	**279**	⇑*eP*	**P**	**17 44 35.1**	**+0.7**
GO03				*eS*	**S**	**17 45 59.7**	**-0.1**
AC06	**Mina Casimiro**	**6.52**	**281**	P	**P**	**17 44 36.1**	**+0.4**
AC06				S	**S**	**17 46 00.9**	**-1.3**
LCO	**Las Campanas**	**6.63**	**266**		**P**	**17 44 37.3**	**+0.3**
LCO				S	**S**	**17 46 03.2**	**-1.3**
LCO	**Las Campanas**	**6.63**	**266**	⇑*eP*	**P**	**17 44 37.4**	**+0.3**
LCO				*eS*	**S**	**17 46 04.0**	**-0.5**
LCO	**Las Campanas**	**6.63**	**266**	P	**P**	**17 44 37.3**	**+0.3**
LCO				S	**S**	**17 46 03.2**	**-1.3**
GO04	**Tololo Observa**	**6.82**	**256**	P	**P**	**17 44 39.1**	**+0.5**
GO04				S	**S**	**17 46 07.1**	**-0.5**
GO04	**Tololo Observa**	**6.82**	**256**	⇑*eP*	**P**	**17 44 39.1**	**+0.5**
GO04				*eS*	**S**	**17 46 07.4**	**-0.2**
CO03	**El Pedregal**	**6.88**	**251**		**P**	**17 44 39.4**	**+0.4**
CO03				S	**S**	**17 46 07.3**	**-0.9**
AC04	**Llanos de Chal**	**7.00**	**273**		**P**	**17 44 40.4**	**+0.3**
AC04				S	**S**	**17 46 08.6**	**-1.6**
AC01	**Pan de Azucar**	**7.11**	**290**	P	**P**	**17 44 41.7**	**+0.6**
AC01				S	**S**	**17 46 10.5**	**-1.5**
CO05	**La Serena**	**7.16**	**259**	P	**P**	**17 44 41.2**	**-0.2**
CO05				S	**S**	**17 46 11.2**	**-1.5**
CO02	**Combarbal**	**7.24**	**248**	P	**P**	**17 44 42.5**	**+0.2**
CO02				S	**S**	**17 46 13.0**	**-1.3**
CO02	**Combarbal**	**7.24**	**248**	⇑*eP*	**P**	**17 44 42.6**	**+0.3**
CO02				*eS*	**S**	**17 46 13.4**	**-0.9**
AF01	**San Pedro de A**	**7.34**	**321**	P	**P**	**17 44 44.8**	**+1.2**
AF01				S	**S**	**17 46 14.0**	**-2.5**
CO04	**Los Peladeros**	**7.52**	**242**		**P**	**17 44 44.9**	**-0.1**
CO04				S	**S**	**17 46 17.5**	**-1.8**
CO04	**Los Peladeros**	**7.52**	**242**	⇑*eP*	**P**	**17 44 45.0**	**0.0**
CO04				*eS*	**S**	**17 46 18.7**	**-0.6**
VA03	**San Esteban**	**7.52**	**236**	P	**P**	**17 44 45.3**	**+0.4**
VA03				S	**S**	**17 46 19.3**	**+0.3**
MT08	**Bocatoma Ro**	**7.53**	**230**		**P**	**17 44 45.6**	**+0.6**
MT08	**Bocatoma Ro**	**7.53**	**230**	⇑*eP*	**P**	**17 44 46.2**	**+1.2**
MT04	**Ro Olivares**	**7.58**	**231**	⇑*eP*	**P**	**17 44 46.5**	**+1.0**
MT04				*eS*	**S**	**17 46 21.5**	**+1.3**
CO06	**Fray Jorge**	**7.63**	**253**	P	**P**	**17 44 45.4**	**-0.4**
PB14	**IPOC Station P**	**7.68**	**301**		**P**	**17 44 47.0**	**+0.2**
PB14					S	**17 46 20.4**	**-1.9**
MT10	**Hacienda Santa**	**7.78**	**233**	⇑*eP*	**P**	**17 44 47.9**	**+0.6**
MT10				*eS*	**S**	**17 46 24.1**	**+0.6**
PEL	**Peldehue**	**7.82**	**234**		**P**	**17 44 47.5**	**0.0**
PEL	**Peldehue**	**7.82**	**234**	P	**P**	**17 44 47.5**	**0.0**
MT14	**Cerro Cal¡n**	**7.85**	**232**	⇑*eP*	**P**	**17 44 48.6**	**+0.7**
MT14				*eS*	**S**	**17 46 25.4**	**+0.9**
MT16	**CCHEN**	**7.86**	**232**		**P**	**17 44 48.3**	**+0.3**
MT16	**CCHEN**	**7.86**	**232**	⇑*eP*	**P**	**17 44 48.5**	**+0.6**
MT16				*eS*	**S**	**17 46 25.3**	**+0.6**
MT13	**San Alfonso**	**7.88**	**229**	P	**P**	**17 44 48.6**	**+0.4**
MT13	**San Alfonso**	**7.88**	**229**	⇑*eP*	**P**	**17 44 48.9**	**+0.6**
MT13				*eS*	**S**	**17 46 25.7**	**+0.5**
MT03	**Universidad Ad**	**7.89**	**231**	P	**P**	**17 44 48.4**	**+0.2**
MT03	**Universidad Ad**	**7.89**	**231**	⇑*eP*	**P**	**17 44 48.8**	**+0.5**
MT03				*eS*	**S**	**17 46 25.7**	**+0.5**
LMEL	**Las Melosas**	**7.89**	**228**	⇑*eP*	**P**	**17 44 49.2**	**+0.8**
LMEL				*eS*	**S**	**17 46 26.1**	**+0.6**
MT15	**Las Vizcachas**	**7.95**	**231**	⇑*eP*	**P**	**17 44 49.4**	**+0.6**
MT15				*eS*	**S**	**17 46 26.6**	**+0.5**
ROCH	**El Roble**	**7.96**	**236**	⇑*eP*	**P**	**17 44 48.9**	**-0.2**
ROCH				*eS*	**S**	**17 46 26.0**	**-0.8**
VA06	**Catapilco**	**7.98**	**240**		**P**	**17 44 48.1**	**-0.9**
MT12	**Pirque**	**8.05**	**230**	⇑*eP*	**P**	**17 44 50.2**	**+0.4**
MT12				*eS*	**S**	**17 46 28.6**	**+0.6**
MT02	**Curacav**	**8.20**	**235**	P	**P**	**17 44 50.2**	**-0.6**
MT02	**Curacav**	**8.20**	**235**	⇑*eP*	**P**	**17 44 50.7**	**-0.5**
MT02				*eS*	**S**	**17 46 29.2**	**-1.3**
BO04	**La Punta**	**8.24**	**229**	P	**P**	**17 44 51.3**	**-0.3**
BO04	**La Punta**	**8.24**	**229**	⇑*eP*	**P**	**17 44 51.6**	**0.0**
PB06	**IPOC Station P**	**8.35**	**315**	P	**P**	**17 44 53.5**	**+0.5**
MT09	**Talagante**	**8.38**	**231**	P	**P**	**17 44 52.5**	**-0.5**
MT09	**Talagante**	**8.38**	**231**	⇑*eP*	**P**	**17 44 52.5**	**-0.5**
MT09				*eS*	**S**	**17 46 33.0**	**-0.8**
PB10	**IPOC Station P**	**8.46**	**306**		**P**	**17 44 54.2**	**+0.4**
VA01	**Torpederas**	**8.46**	**238**	P	**P**	**17 44 52.6**	**-0.9**
MT01	**Popeta**	**8.61**	**232**	P	**P**	**17 44 54.0**	**-1.0**
MT01	**Popeta**	**8.61**	**232**	⇑*eP*	**P**	**17 44 54.3

VA04 Juan Fernndez 14.28 246 P P 17 45 50.7 -0.8
SALV Santo Antonio 14.52 30 eP P 17 45 53.9 0.0
ITRB Iturama 14.72 55 eP P 17 45 55.8 0.0
PET01 Itanhaem-SP 14.88 76 eP P 17 45 56.5 -0.6
SPB Sao Paulo 15.01 74 P P 17 45 58.0 -0.3
SPB Sao Paulo 15.01 74 eP P 17 45 58.7 +0.4
LL05 Los Muermos 15.18 211 P P 17 45 57.0 -2.6
LL05 Los Muermos 15.18 211 eP P 17 45 57.8 -1.8
LL05 IAmb IAmb 17 45 58.1
comp=Z,192nm,1.1s
BB19B Bebedouro 15.30 63 eP P 17 46 00.7 -0.4
RCLB Rio Claro- Sao 15.43 69 eP P 17 46 02.0 -0.2
LL01 San Ignacio de 15.54 206 P P 17 46 02.4 -0.4
LL01 San Ignacio de 15.54 206 eP P 17 46 03.2 +0.4
LL01 IAmb IAmb 17 46 04.6
comp=Z,204nm,0.8s
VAO Valinhos 15.64 72 P 17 46 04.3 +0.1
VAO Valinhos 15.64 72 eP P 17 46 04.8 +0.6
VILB Vilhena 15.96 10 P 17 46 07.1 0.0
VILB Vilhena 15.96 10 eP P 17 46 07.5 +0.3
LL02 Futaleuf 16.02 204 P 17 46 06.5 -0.9
LL07 Hotel Espejo d 16.34 208 P P 17 46 08.1 -2.1
LL07 Hotel Espejo d 16.34 208 eP P 17 46 08.8 -1.4
LL07 IAmb IAmb 17 46 09.8
comp=Z,419nm,0.6s
PARB Paraibuna 16.64 75 eP P 17 46 14.1 +0.7
GO07 Milladeo Hill, 16.65 208 P P 17 46 11.7 -1.4
ARAG Araguaiana, MT 16.67 41 eP P 17 46 14.2 +0.5
AY01 Puyuhuapi 17.38 203 P 17 46 18.6 -1.1
IPMB Ipameri, GO 17.38 55 eP P 17 46 20.4 +0.2
IPMB eS S 17 49 09.2 -1.9
COYC Coyhaique 18.22 200 P 17 46 26.9 -0.4
PMNB Patos De Minas 18.35 60 eP P 17 46 29.4 +0.3
BSCB Bom Sucesso 18.35 69 eP P 17 46 29.4 +0.4
CLDB Colider 19.07 23 eP P 17 46 35.9 +0.4
BDFB Brasilia 19.11 50 P P 17 46 36.5 +0.4
comp=Z,74nm,0.3s,baz=221,slow=6.4,SNR=104
BDFB S S 17 49 37.4 -1.7
comp=Z,12nm,0.8s,baz=180,slow=20,SNR=1.7
BDFB Brasilia 19.11 50 P 17 46 36.4 +0.3
DUB01 Friburgo-RJ 19.89 75 eP P 17 46 43.7 +0.8
SNDB Serra Nova Dou 20.02 36 eP P 17 46 44.4 +0.3
GO08 Villa O'Higgin 20.98 198 P 17 46 52.5 +0.2
NNA Nana 21.02 320 P 17 46 53.4 +0.3
NNA Nana 21.02 320 d iP P 17 46 53.7 +0.6
NNA pmax pmax
comp=Z,245nm,1.7s
ALF01 Guarapari-ES 21.89 73 eP P 17 47 01.7 +0.9
JANB Januaria 22.11 56 eP P 17 47 03.3 +0.4
SJMB Sao Joao De Ma 22.42 68 eP P 17 47 06.0 +0.5
RIB01 Linhares ES 22.77 71 eP P 17 47 08.9 +0.3
CZSB Cruzeiro do Su 22.77 335 P 17 47 08.0 -0.7
CZSB Cruzeiro do Su 22.77 335 P P 17 47 08.0 -0.7
comp=Z,3µmcomp=Z,323nm,1.2s
CZSB Cruzeiro do Su 22.77 335 eP P 17 47 08.3 -0.4
NPGB Novo Progresso 22.81 20 eP P 17 47 08.6 -0.4
EFI East Falkland 23.21 172 P P 17 47 11.1 -1.0
EFI East Falkland 23.21 172 P P 17 47 11.1 -1.0
SDBA SAO DESIDERIO 23.52 50 eP P 17 47 15.8 +0.3
GO09 Cerro Castillo 23.53 195 P P 17 47 15.4 +0.5
MG05 Puerto Natales 23.95 194 P 17 47 18.9 +0.3
MG02 Cerro Sombrero 24.43 189 P P 17 47 21.4 -1.4
SMTB Santa Maria do 24.61 40 eP P 17 47 25.3 +0.3
GUA01 Guaratinga, BA 24.65 66 eP P 17 47 25.7 +0.4
MG04 Isla Riesco 24.88 192 P P 17 47 27.7 +1.0
GO10 Punta Arenas 25.07 191 P P 17 47 29.4 +0.9
TEFE Tefe 25.14 356 eP P 17 47 29.9 +0.2
ITTB Itaituba 25.25 18 eP P 17 47 30.9 +0.3
CMC01 Camacan, BA 25.57 64 eP P 17 47 33.7 +0.3
MG03 Isla Dawson 25.64 190 P P 17 47 33.0 -0.4
MG01 Puerto William 26.36 186 P P 17 47 39.6 -0.1
SGC2 Sao Gabriel da 28.67 352 P P 17 47 59.9 -0.6
comp=Z,1µmcomp=Z,123nm,1.0s
MCRA Macar, Loja 29.03 324 P P 17 48 04.5 +0.8
comp=Z,759nmcomp=Z,96nm,0.9s
COHC Cochancay 30.31 327 P P 17 48 15.8 +1.2
BOAV Boa Vista 31.07 5 P 17 48 20.7 -0.3
BOAV Boa Vista 31.07 5 P P 17 48 20.8 -0.3
comp=Z,816nmcomp=Z,99nm,1.1s
BOAV Boa Vista 31.07 5 eP P 17 48 21.3 +0.2
NBMA Muriti-CE 31.33 52 eP P 17 48 23.7 +0.4
NBPS Pedro II - PI 31.80 44 eP P 17 48 27.4 0.0
HOPE Hope Point 32.03 150 P P 17 48 28.7 +0.1
HOPE Hope Point 32.03 150 P P 17 48 28.7 +0.1
HOPE pmax pmax
comp=Z,77nm,1.0s
BONI La Bonita 32.14 332 P P 17 48 32.4 +2.0
OTAV Otavalo 32.33 330 P P 17 48 33.4 +1.1
OTAV IAmb IAmb 17 48 36.6
comp=Z,38nm,0.7s
OTAV Otavalo 32.33 330 P P 17 48 33.4 +1.1
OTAV pmax pmax
comp=Z,38nm,0.7s
OTAV Otavalo 32.33 330 P P 17 48 34.4 +2.1
OTAV Otavalo 32.33 330 eP P 17 48 34.4 +2.1
OTAV Otavalo 32.33 330 P P 17 48 34.5 +2.3
OTAV pP pP 17 50 08.7 -2.0
OTAV PcP PcP 17 51 03.5 +1.9
OTAV sP sP 17 51 19.2 -1.0
OTAV ScP ScP 17 53 51.0 +1.8
CUSE Cuicocha Este 32.37 331 P P 17 48 35.0 +2.4
GARC Garzon, Huila 32.96 337 P P 17 48 37.4 0.0
comp=Z,3µmcomp=Z,216nm,0.9s
BBAC Balboa, Cauca 33.45 334 P P 17 48 43.1 +1.7
comp=Z,2µmcomp=Z,201nm,1.3s
NBMO Morrinhos-CE 33.51 45 eP P 17 48 41.2 -0.5
NBPA Parau_RN 33.62 52 eP P 17 48 43.4 +0.8
POPC Popayan, Colom 33.72 335 P P 17 48 44.9 +1.3
comp=Z,2µmcomp=Z,192nm,1.2s
VILC Villavicencio, 34.21 341 P P 17 48 48.3 +0.6
comp=Z,5µmcomp=Z,1µm,0.7s
JAMC Jamundi, Valle 34.34 336 P P 17 48 48.8 0.0
comp=Z,651nmcomp=Z,62nm,0.8s
RCBR Riachuelo 34.41 54 P P 17 48 49.4 +0.1
RCBR pP 17 50 26.7 -1.0
RCBR IAmb IAmb 17 50 32.4
comp=Z,32nm,1.1s
RCBR Riachuelo 34.41 54 P P 17 48 49.4 +0.1
RCBR pmax pmax
comp=Z,32nm,1.1s
NBPV Pedro Velho 34.44 55 eP P 17 48 49.6 +0.2
ORTC Ortega, Tolima 34.49 338 P P 17 48 49.7 -0.2
comp=Z,1µmcomp=Z,145nm,1.0s
CHIC Chingaza 34.72 341 P P 17 48 51.8 -0.4
comp=Z,2µmcomp=Z,254nm,0.9s
ESPZ Base Esperanza 34.88 175 P P 17 48 52.9 +0.5
YOTC Yotoco, Valle 34.93 337 P P 17 48 52.6 -1.0
comp=Z,38nm,0.7s
ROSC El Rosal 35.09 340 P P 17 48 56.5 +1.3
comp=Z,26nm,0.5s,baz=103,slow=4.3,SNR=14
comp=Z,26nm,0.5s
ROSC El Rosal 35.09 340 IAmb IAmb 17 49 07.4
comp=Z,33nm,0.8s
GUY2C Guyana, Caldas 35.77 339 P P 17 49 00.4 -0.5
comp=Z,648nmcomp=Z,71nm,1.0s
PLMC San Jos del P 35.77 337 P P 17 48 59.5 -1.0
comp=Z,1µmcomp=Z,143nm,0.9s
PMSA Palmer Station 36.04 181 P P 17 49 02.2 +0.3
CBOC Ciudad Bolivar 36.58 338 P P 17 49 06.3 -0.9
comp=Z,2µmcomp=Z,220nm,1.1s
PAMC Pamplona, Colo 37.04 344 P P 17 49 10.0 -1.4
comp=Z,3µmcomp=Z,43nm,0.7s
DBBC Dabeiba 37.73 338 P P 17 49 15.8 -0.7
SDV Santo Domingo 38.11 348 P P 17 49 18.2 -1.4
SDV Santo Domingo 38.11 348 P P 17 49 18.4 -1.3
comp=Z,1µmcomp=Z,105nm,0.9s
SDV Santo Domingo 38.11 348 eP P 17 49 18.8 -0.9
UREC San Jos de Ur 38.21 340 P P 17 49 18.2 -2.1
comp=Z,881nmcomp=Z,96nm,1.0s
ARGC Ariguani, Magd 39.85 343 P P 17 49 32.2 -1.2
comp=Z,5µmcomp=Z,788nm,0.8s
SJCC San Jacinto, C 40.14 341 P P 17 49 35.0 -0.8
comp=Z,1µmcomp=Z,119nm,1.0s
GRGR Grenville 40.67 2 P P 17 49 41.0 +1.1
GRGR Grenville 40.67 2 P P 17 49 37.7 -2.2
comp=Z,3µmcomp=Z,261nm,1.1s
GRGR Grenville 40.67 2 x x 17 49 40.2
BRU2 Volcan 41.82 330 IAmb IAmb 17 49 59.2
comp=Z,46nm,1.0s
MPOM Morne Pois Mar 43.00 3 P P 17 49 57.6 -0.5
BIM Bigot 43.06 3 x x 17 49 58.4
FDFM Morne la Roset 43.27 3 P P 17 50 00.6 +0.3
FDFM PcP PcP 17 51 36.6 +1.2
FDFM pP pP 17 51 45.0 0.0
CXM Morne La Croix 43.35 3 P P 17 50 00.5 -0.5
CXM IAmb IAmb 17 50 02.2
comp=Z,330nm,0.9s
HDC Heredia 43.53 329 P P 17 50 04.2 +1.7
HDC Heredia 43.53 329 eP P 17 50 04.7 +2.3
JTS Las Juntas de 44.16 328 P P 17 50 07.8 +0.6
JTS IAmb IAmb 17 50 10.1
comp=Z,41nm,0.8s
JTS Las Juntas de 44.16 328 d iP P 17 50 08.9 +1.7
JTS pmax pmax
comp=Z,56nm,0.9s
JTS Las Juntas de 44.16 328 P P 17 50 09.4 +2.2
MAGL Barre d'ile 44.47 3 P P 17 50 09.3 -0.2
GDHS Morne Mazeau, 44.78 2 P P 17 50 11.1 -0.8
GDSD La Dsirade Is 44.84 3 P P 17 50 11.7 -0.6
ABD La Joyeuse, An 44.99 2 P P 17 50 12.5 -0.8
ANWB Willy Bob 46.16 2 P P 17 50 21.3 -1.0
ANWB Willy Bob 46.16 2 x x 17 50 20.2
SMRT St. Maarten 46.53 0 P P 17 50 22.4 -2.6
SJG San Juan 46.68 356 P P 17 50 24.6 -1.5
SJG IAmb IAmb 17 50 26.2
comp=Z,69nm,0.8s
SJG San Juan 46.68 356 P P 17 50 24.6 -1.5
SJG pmax pmax
comp=Z,69nm,0.9s
SJG San Juan 46.68 356 P P 17 50 25.2 -0.9
HUMP Col San Antoni 46.69 356 IAmb IAmb 17 50 28.0
comp=Z,33nm,0.8s
CUPR Culebra, Puert 46.83 357 IAmb IAmb 17 50 27.8
comp=Z,77nm,1.0s
ECPR Experimental S 46.90 356 IAmb IAmb 17 50 27.5
comp=Z,50nm,0.8s
AOPR Arecibo Observ 46.95 355 IAmb IAmb 17 50 33.6
comp=Z,54nm,0.8s
AGPR Aguadilla, PR 47.10 355 IAmb IAmb 17 52 25.1
comp=Z,83nm,1.2s
BANI BANI 47.38 351 P P 17 50 31.3 -0.3
SDDR Presa de Saban 48.10 350 IAmb IAmb 17 50 40.1
comp=Z,56nm,0.7s
MTO3 Montecristo 49.83 326 P P 17 50 49.9 +0.1
MTO3 IAmb IAmb 17 50 51.2
comp=Z,45nm,0.7s
MTO3 PcP PcP 17 51 57.9 -1.3
ESQI Esquipulas 49.96 326 IAmb IAmb 17 50 52.4
comp=Z,58nm,0.9s
NMDO Nuevo Mundo 50.34 346 IAmb IAmb 17 50 55.2
comp=Z,50nm,0.9s
BELA Belgrano 2 50.89 173 P P 17 50 56.0 -0.4
BELA PcP PcP 17 52 01.9 -0.1
BELA pP 17 52 45.4 -1.0
VNA3 Neumayer Olymp 51.55 161 ⇓P P 17 51 01.8 +0.5
comp=Z,20nm,0.8s
VNA3 ⇑pP pP 17 52 52.5 +0.8
comp=Z,34nm,0.8s
VNA1 Neumayer--Stat 51.72 160 ⇓P P 17 51 03.4 +1.0
comp=Z,28nm,0.8s
VNA2 Neumayer--Watz 52.09 160 ⇓P P 17 51 05.7 +0.6
comp=Z,31nm,0.6s,baz=274,slow=8.5
VNA2 ⇑pP pP 17 52 58.5 +2.5
comp=Z,18nm,0.7s,baz=273,slow=30
CCIG Comitan 52.82 324 IAmb IAmb 17 51 12.3
comp=Z,44nm,0.7s
CAIB Caibarien 53.32 341 IAmb IAmb 17 51 16.8
comp=Z,117nm,1.3s
SNAA Sanae 53.73 160 ⇓P P 17 51 17.2 +0.4
comp=Z,196nm,0.7s
SNAA ⇑pP pP 17 53 09.9 +1.1
comp=Z,500nm,1.1s
SNAA Sanae 53.73 160 P P 17 51 17.2 +0.4
comp=Z,111nm,0.8s,baz=310,slow=6.4,SNR=8.0
SNAA pP pP 17 53 08.2 -0.5
comp=Z,23nm,1.0s,baz=286,slow=6.8,SNR=9.5
comp=Z,11nm,0.8s
SNAA Sanae 53.73 160 P P 17 51 16.6 -0.2
SNAA pP 17 53 07.0 -1.7
SNAA Sanae 53.73 160 ⇓ eP P 17 51 16.4 -0.4
SNAA pmax pmax
comp=Z,25nm,1.1s
TEIG Tepich 54.40 331 P P 17 51 21.8 -0.3
TEIG PcP PcP 17 52 16.2 -0.1
TEIG Tepich 54.40 331 P P 17 51 22.0 -0.1
TEIG Tepich 54.40 331 P P 17 51 22.3 +0.2
TEIG PcP PcP 17 52 17.6 +1.3
TROLL Troll, Antarti 55.44 160 ⇓P P 17 51 29.5 +0.7
TROLL ⇑pP pP 17 53 22.3 +0.5
TLIG Tlapa 57.38 319 P P 17 51 43.4 +0.6
NVL N'lazarevskaya 58.20 158 eP P 17 51 44.7 -2.7
NVL pmax pmax
comp=Z,145nm,2.5s
DWPF Disney Wildern 59.19 341 P P 17 51 54.9 +0.3
BBSR BB Station 60.80 358 P P 17 52 05.5 +0.3
BBSR IAmb IAmb 17 52 07.2
comp=Z,83nm,0.9s
QSPA South Pole Qui 61.48 180 P P 17 52 10.2 +0.8
comp=Z,6.1nm,0.5s,baz=158,slow=3.0,SNR=63
QSPA pP pP 17 54 05.8 -0.2
comp=Z,11nm,1.0s,baz=175,slow=3.5,SNR=8.6
QSPA S S 17 59 45.5 +0.4
comp=Z,2.6nm,1.1s,baz=254,slow=23,SNR=6.7
comp=Z,6.1nm,0.5s
QSPA South Pole Qui 61.48 180 P P 17 52 10.2 +0.8
QSPA pP 17 54 07.1 +1.2
ELIB Princess Elisa 61.87 159 dP P 17 52 11.4 -0.5
ELIB dPcP PcP 17 52 45.9 +0.3
ELIB dpP pP 17 54 09.0 +0.3
TIGA Tifton 62.94 340 IAmb IAmb 17 52 20.4
comp=Z,49nm,0.8s
RGRS Roger Stewart 63.42 344 IAmb IAmb 17 52 24.4
comp=Z,219nm,0.8s
250A Grady 64.27 338 IAmb IAmb 17 52 28.7
comp=Z,59nm,0.7s
152A Waverly Hall 64.43 340 IAmb IAmb 17 52 29.6
comp=Z,52nm,1.0s
X58A Rowland 64.80 345 P P 17 52 31.0 +0.3
HBVL Hebbronville 65.12 325 IAmb IAmb 17 52 35.5
comp=Z,89nm,1.3s
HODGE Hodges 65.20 343 IAmb IAmb 17 52 35.2
comp=Z,48nm,1.0s
Y52A Lilburn 65.35 341 IAmb IAmb 17 52 35.5
comp=Z,40nm,0.7s
LRAL Lakeview Retre 65.48 338 IAmb IAmb 17 52 36.4
comp=Z,71nm,1.1s
PAULI Pauline 65.64 343 IAmb IAmb 17 52 38.1
comp=Z,101nm,1.0s
KMSC Kings Mountain 65.83 344 IAmb IAmb 17 52 39.2
comp=Z,81nm,0.9s
V58A Windy Hill, Pi 65.94 346 P P 17 52 38.3 +0.4
Z47A Carrollton 65.99 337 IAmb IAmb 17 52 39.5
comp=Z,62nm,0.7s
HKT Hockley 66.19 329 d iP P 17 52 40.4 +1.0
HKT pmax pmax
comp=Z,45nm,1.4s
DBIC Dimbokro 66.22 67 P P 17 52 40.0 -0.1
comp=Z,29nm,0.8s,baz=250,slow=7.3,SNR=38
DBIC S S 18 00 41.2 -2.1
comp=Z,0.9nm,0.4s,baz=343,slow=23,SNR=5.5
comp=Z,29nm,0.8s
DBIC Dimbokro 66.22 67 P P 17 52 40.0 -0.1
DBIC Dimbokro 66.22 67 P P 17 52 40.0 -0.1
DBIC pmax pmax
comp=Z,32nm,0.9s
DBIC Dimbokro 66.22 67 P P 17 52 40.2 +0.1
DBIC pP pP 17 54 40.1 +0.8
FPAL Fort Paine 66.44 340 IAmb IAmb 17 52 42.2
comp=Z,40nm,0.8s
W52A Murphy 66.46 341 IAmb IAmb 17 52 42.7
comp=Z,56nm,0.9s
EF02 Christine 66.47 326 IAmb IAmb 17 52 43.4
comp=Z,170nm,1.2s
833A Chaparral WMA, 66.52 325 P P 17 52 42.0 +0.4
V53A Saluda 66.70 343 IAmb IAmb 17 52 44.3
comp=Z,60nm,0.9s
U56A King 66.75 345 IAmb IAmb 17 52 45.4
comp=Z,68nm,1.0s
TKL Tuckaleechee C 66.95 342 IAmb IAmb 17 52 45.2
comp=Z,53nm,1.1s
CPCT Cooper Cave 66.97 341 P P 17 52 44.0 -0.2
CPCT IAmb IAmb 17 52 45.4
comp=Z,46nm,0.8s
SWET Sewanee 67.16 340 IAmb IAmb 17 52 46.6
comp=Z,58nm,0.8s
BLA Blacksburg 67.59 345 P P 17 52 48.7 +0.7
BLA IAmb IAmb 17 52 50.3
comp=Z,125nm,1.5s
BLA Blacksburg 67.59 345 P P 17 52 48.7 +0.7
BLA pmax pmax
comp=Z,125nm,1.5s
435B Jarrell 67.69 328 IAmb IAmb 17 52 50.9
comp=Z,65nm,0.8s
TZTN Tazewell 67.72 342 IAmb IAmb 17 52 50.1
comp=Z,66nm,1.5s
Z41A Richland Creek 67.78 333 IAmb IAmb 17 52 52.4
comp=Z,64nm,0.8s
R58B Mineral 67.78 347 IAmb IAmb 17 52 51.7
comp=Z,41nm,0.9s
S57A Dark Hollow, R 67.80 347 IAmb IAmb 17 52 51.6
comp=Z,53nm,1.1s
V48A Smith Brothers 67.92 339 P P 17 52 49.5 -0.5
V48A IAmb IAmb 17 52 51.0
comp=Z,47nm,0.7s
DRIO Del Rio 68.03 325 IAmb IAmb 17 52 52.5
comp=Z,52nm,0.8s
CLTN Cedars of Leba 68.09 340 IAmb IAmb 17 52 52.0
comp=Z,28nm,0.8s
U49A Red Boiling Sp 68.32 341 IAmb IAmb 17 52 52.8
comp=Z,22nm,0.6s
JCT Junction City 68.49 326 IAmb IAmb 17 52 55.5
comp=Z,37nm,0.8s
WVT Waverly 68.59 339 P P 17 52 53.4 -0.7
WVT IAmb IAmb 17 52 54.7
comp=Z,53nm,0.8s
WVT Waverly 68.59 339 P P 17 52 53.4 -0.7
WVT pmax pmax
comp=Z,53nm,0.8s
WVT Waverly 68.59 339 P P 17 52 53.8 -0.2
WVT PcP PcP 17 53 13.7 -0.2
WHTX Lake Whitney, 68.65 329 P P 17 52 55.9 +1.4
WHTX IAmb IAmb 17 52 56.2
comp=Z,37nm,0.9s
Z38A Mt. Pleasant 68.67 332 IAmb IAmb 17 52 56.8
comp=Z,56nm,0.9s
HPIG 68.77 320 IAmb IAmb 17 52 57.6
comp=Z,24nm,0.7s
S51A Beattyville 68.77 343 IAmb IAmb 17 52 56.4
comp=Z,39nm,0.9s
BRDY Brady 68.78 327 IAmb IAmb 17 52 57.0
comp=Z,69nm,1.1s
UALR University of 68.94 335 IAmb IAmb 17 52 57.6
comp=Z,60nm,0.8s
FW13 Cleburne 68.95 329 P P 17 52 56.6 +0.4
FW13 IAmb IAmb 17 52 57.9
comp=Z,58nm,0.8s
Q56A Snyder Ridge, 69.08 347 IAmb IAmb 17 52 59.7
comp=Z,36nm,0.9s
T47A Sharon Grove 69.16 340 IAmb IAmb 17 52 58.0
comp=Z,62nm,0.9s
MIAR Mount Ida 69.22 333 IAmb IAmb 17 52 59.7
comp=Z,48nm,1.2s
SAND Sanderson 69.23 324 IAmb IAmb 17 53 00.2
comp=Z,74nm,1.0s
WHAR Wooly Hollow 69.38 335 IAmb IAmb 17 53 00.4
comp=Z,46nm,1.0s
ACRG Accra 69.46 71 P P 17 52 59.8 0.0
ACRG IAmb IAmb 17 53 00.8
comp=Z,35nm,1.0s
OZNA Ozona 69.51 326 IAmb IAmb 17 53 01.2
comp=Z,42nm,0.8s
FW06 Azle 69.53 330 IAmb IAmb 17 53 01.6
comp=Z,55nm,0.8s
TXAR Lajitas Array 69.54 323 P P 17 53 00.7 +0.7
comp=Z,5.3nm,0.4s,baz=151,slow=7.6,SNR=102
comp=Z,5.3nm,0.4s
TXAR Lajitas Array 69.54 323 P P 17 53 00.0 0.0
TXAR Lajitas Array 69.54 323 P P 17 53 00.0 0.0
R50A Paris 69.57 342 IAmb IAmb 17 53 01.0
comp=Z,27nm,0.7s
LCAR Lake Charles 69.66 336 IAmb IAmb 17 53 01.8
comp=Z,61nm,1.1s
Q52A Bidwell 69.69 344 IAmb IAmb 17 53 02.0
comp=Z,54nm,0.7s
PAGS Pennsylvania G 69.78 349 IAmb IAmb 17 53 03.4
comp=Z,64nm,0.8s
R49A Shelbyville 69.80 342 IAmb IAmb 17 53 02.2
comp=Z,58nm,1.4s
MCWV Mont Chateau 69.81 346 IAmb IAmb 17 53 03.6
comp=Z,58nm,0.8s
FCAR Ozark Folk Cen 69.85 335 IAmb IAmb 17 53 02.8
comp=Z,76nm,1.2s
P53A Whipple 69.98 345 IAmb IAmb 17 53 04.2
comp=Z,72nm,0.9s
Q51A Peebles 70.01 343 IAmb IAmb 17 53 03.8
comp=Z,41nm,1.0s
PBMO Poplar Bluff 70.05 337 IAmb IAmb 17 53 03.8
comp=Z,73nm,1.1s
WCI Wyandotte Cave 70.06 341 P P 17 53 02.2 -0.5
WCI IAmb IAmb 17 53 03.5
comp=Z,52nm,0.8s
WCI Wyandotte Cave 70.06 341 P P 17 53 02.2 -0.5
WCI pmax pmax
comp=Z,52nm,0.9s
WCI Wyandotte Cave 70.06 341 P P 17 53 02.4 -0.4
WCI PcP PcP 17 53 20.7 +0.6
ABTX Abilene, Hawle 70.19 328 IAmb IAmb 17 53 05.2
comp=Z,49nm,1.1s
USIN University of 70.23 340 IAmb IAmb 17 53 04.1
comp=Z,45nm,0.8s
CGM3 Cape Girardeau 70.25 338 IAmb IAmb 17 53 04.3
comp=Z,35nm,0.5s
SGCY Sterling City 70.32 326 IAmb IAmb 17 53 05.8
comp=Z,47nm,0.9s
N58A Sunbury 70.37 349 IAmb IAmb 17 53 07.1
comp=Z,37nm,0.9s
P51A Williamsport 70.37 344 IAmb IAmb 17 53 05.7
comp=Z,42nm,1.0s
SSPA Standing Stone 70.38 348 P P 17 53 04.8 +0.2
SSPA pP 17 55 05.6 -0.5
SSPA Standing Stone 70.38 348 P P 17 53 05.7 +1.2
O54A Avella 70.43 346 IAmb IAmb 17 53 06.5
comp=Z,30nm,0.8s
SIUC Southern Illin 70.49 338 IAmb IAmb 17 53 05.8
comp=Z,45nm,0.6s
SUR Sutherland 70.53 117 P P 17 53 06.3 +0.2
WTFS Witchita Falls 70.60 329 IAmb IAmb 17 53 07.8
comp=Z,64nm,1.0s
VNDA Vanda 70.61 189 P P 17 53 07.0 +1.6
comp=Z,1.9nm,0.7s,baz=141,slow=6.0,SNR=7.6
VNDA pP pP 17 55 07.2 +0.3
comp=Z,1.1nm,0.9s,baz=117,slow=5.7,SNR=3.5
comp=Z,1.9nm,0.7s
VNDA Vanda 70.61 189 P P 17 53 06.7 +1.2
VNDA Vanda 70.61 189 P P 17 53 06.7 +1.2
VNDA *PP pP 17 55 07.2 +0.3
VNDA pmax pmax
comp=Z,3.0nm,1.0s
TPB05 Hovey Rd 70.62 324 IAmb IAmb 17 53 08.2
comp=Z,42nm,1.1s
O53A New Philadelph 70.67 345 IAmb IAmb 17 53 08.1
comp=Z,39nm,0.9s
O52A Adamsville 70.69 345 IAmb IAmb 17 53 07.9
comp=Z,57nm,0.8s
229A Bryant Ranch, 70.69 326 IAmb IAmb 17 53 08.1
comp=Z,24nm,1.2s
TPB01 Permian Basin 70.87 324 IAmb IAmb 17 53 10.0
comp=Z,50nm,0.8s
HHAR Hobbs 70.88 334 IAmb IAmb 17 53 09.2
comp=Z,65nm,1.2s
KSPA Keystone Colle 70.92 350 IAmb IAmb 17 53 10.2
comp=Z,55nm,1.2s
P48A Milroy 70.97 342 IAmb IAmb 17 53 08.8
comp=Z,55nm,1.2s
APMT Aspermont 71.00 328 IAmb IAmb 17 53 10.1
comp=Z,48nm,0.6s
MGMO Mountain Grove 71.03 336 IAmb IAmb 17 53 10.0
comp=Z,44nm,0.8s
X34A Smith Ranch, M 71.03 330 IAmb IAmb 17 53 10.4
comp=Z,44nm,0.7s
ACSO Alum Creek Sta 71.06 344 IAmb IAmb 17 53 09.9
comp=Z,59nm,0.8s
OLIL Olney 71.07 340 IAmb IAmb 17 53 09.2
comp=Z,58nm,0.9s
W35A Tecumseh 71.09 331 IAmb IAmb 17 53 09.8
comp=Z,33nm,0.6s
FVM French Village 71.13 337 IAmb IAmb 17 53 09.9
comp=Z,60nm,0.8s
TPB06 Permian Basin 71.14 325 IAmb IAmb 17 53 11.3
comp=Z,51nm,0.9s
U38A Gravette 71.19 334 IAmb IAmb 17 53 10.9
comp=Z,36nm,0.7s
RLO Rose Lookout 71.20 333 IAmb IAmb 17 53 11.3
comp=Z,58nm,0.8s
PECS Pecos 71.26 324 IAmb IAmb 17 53 12.3
comp=Z,73nm,1.5s

129A	Stewart Farms,		71.26	326	IAmb	IAmb	17 53 11.4	
	comp=Z,49nm,1.2s							
TUL3	Leonard		71.29	332	IAmb	IAmb	17 53 11.4	
	comp=Z,38nm,0.7s							
HRV	Adam Dziewonsk		71.33	353	P	P	17 53 10.6	+0.6
HRV					IAmb	IAmb	17 53 12.7	
	comp=Z,54nm,1.1s							
HRV	Adam Dziewonsk		71.33	353	P	P	17 53 10.6	+0.6
HRV					pmax	pmax		
	comp=Z,54nm,1.1s							
WIN	Windhoek		71.33	106	P	P	17 53 10.7	-0.2
WIN	Windhoek		71.33	106	P	P	17 53 10.7	-0.2
WIN					pmax	pmax		
	comp=Z,27nm,1.4s							
O49A	Covington		71.36	343	IAmb	IAmb	17 53 11.4	
	comp=Z,40nm,0.8s							
L61B	Northampton		71.39	353	IAmb	IAmb	17 53 12.9	
	comp=Z,37nm,0.9s							
TPB13	Reeves - Culbe		71.39	324	IAmb	IAmb	17 53 13.3	
	comp=Z,70nm,0.8s							
FNO	Franklin		71.40	331	IAmb	IAmb	17 53 12.5	
	comp=Z,51nm,0.8s							
L59A	Walton		71.44	351	IAmb	IAmb	17 53 13.5	
	comp=Z,53nm,0.8s							
CCM	Cathedral Cave		71.47	337	P	P	17 53 10.5	-0.5
CCM					IAmb	IAmb	17 53 12.1	
	comp=Z,45nm,0.7s							
CCM	Cathedral Cave		71.47	337	P	P	17 53 10.5	-0.5
CCM					pmax	pmax		
	comp=Z,45nm,0.7s							
CCM	Cathedral Cave		71.47	337	P	P	17 53 11.2	+0.2
Q44A	Meyer Farm, Va		71.51	339	IAmb	IAmb	17 53 11.5	
	comp=Z,31nm,0.9s							
K62A	Royalston		71.55	353	IAmb	IAmb	17 53 14.3	
	comp=Z,57nm,1.2s							
128A	Castleberry Fa		71.56	326	IAmb	IAmb	17 53 13.2	
	comp=Z,34nm,1.0s							
PAOC	Oil Creek Stat		71.57	347	IAmb	IAmb	17 53 13.5	
	comp=Z,78nm,1.0s							
N51A	Ashland		71.57	345	IAmb	IAmb	17 53 12.9	
	comp=Z,49nm,0.8s							
BINY	Binghamton		71.58	350	IAmb	IAmb	17 53 14.1	
	comp=Z,51nm,1.1s							
P46A	Rosedale		71.62	341	IAmb	IAmb	17 53 12.5	
	comp=Z,53nm,0.8s							
OK029	Liberty Lake		71.88	331	IAmb	IAmb	17 53 15.2	
	comp=Z,60nm,0.9s							
S39A	Bolivar		71.89	335	IAmb	IAmb	17 53 15.0	
	comp=Z,76nm,0.9s							
M52A	Chesterland		71.94	346	IAmb	IAmb	17 53 15.4	
	comp=Z,53nm,0.7s							
R40A	Maddies Statio		72.04	336	IAmb	IAmb	17 53 15.3	
	comp=Z,49nm,0.6s							
MACI	Morro de la Ar		72.15	42	P	P	17 53 16.2	+0.8
MACI					IAmb	IAmb	17 55 07.0	
	comp=Z,82nm,1.1s							
K57A	Scipio Center		72.19	350	IAmb	IAmb	17 53 16.9	
	comp=Z,43nm,1.1s							
M50A	Fremont		72.19	344	IAmb	IAmb	17 53 16.4	
	comp=Z,53nm,0.8s							
OK051	E0350 and S346		72.23	332	IAmb	IAmb	17 53 17.3	
	comp=Z,76nm,0.9s							
J61A	Chester		72.26	353	P	P	17 53 17.2	+1.7
J61A					IAmb	IAmb	17 53 18.6	
	comp=Z,44nm,0.9s							
SFIN	Lafayette		72.29	341	IAmb	IAmb	17 53 16.2	
	comp=Z,58nm,0.7s							
MMNY	Mt. Morris Dam		72.42	349	IAmb	IAmb	17 53 18.4	
	comp=Z,58nm,0.7s							
T35A	Sooner Cattle		72.45	332	IAmb	IAmb	17 53 18.6	
	comp=Z,79nm,1.0s							
SMWD	Samnorwood		72.53	329	IAmb	IAmb	17 53 19.1	
	comp=Z,61nm,1.1s							
J57A	Williamstown		72.77	350	IAmb	IAmb	17 53 20.5	
	comp=Z,62nm,0.9s							
MSTX	Muleshoe		72.79	326	IAmb	IAmb	17 53 21.2	
	comp=Z,78nm,1.0s							
ELIS	Ellis County		72.96	330	IAmb	IAmb	17 53 21.9	
	comp=Z,70nm,0.8s							
AMTX	Amarillo		73.01	328	IAmb	IAmb	17 53 21.7	
	comp=Z,26nm,0.8s							
NCB	Newcomb		73.08	352	P	P	17 53 20.7	+0.6
NCB					IAmb	IAmb	17 53 22.5	
	comp=Z,60nm,0.8s							
LBNH	Lisbon		73.08	353	IAmb	IAmb	17 53 23.1	
	comp=Z,56nm,0.8s							
TSUM	Tsumeb		73.13	103	P	P	17 53 21.1	-0.2
TSUM	Tsumeb		73.13	103	P	P	17 53 21.6	+0.3
TSUM					pP	pP	17 55 24.6	+0.7
AAM	Ann Arbor		73.19	344	IAmb	IAmb	17 53 21.5	
	comp=Z,35nm,1.0s							
WVL	Waterville		73.20	355	IAmb	IAmb	17 53 23.6	
	comp=Z,56nm,1.0s							
EMMW	East Machias		73.21	357	IAmb	IAmb	17 53 23.7	
	comp=Z,45nm,0.9s							
NOKA	Waynoka		73.22	331	IAmb	IAmb	17 53 23.4	
	comp=Z,42nm,1.0s							
PECO	Prince Edward		73.44	350	P	P	17 53 22.5	+0.4
PECO					IAmb	IAmb	17 53 24.2	
	comp=Z,64nm,0.9s							
P38A	Dawn		73.68	336	IAmb	IAmb	17 53 24.6	
	comp=Z,36nm,0.6s							
KOOLE	Kule		73.76	108	*i* P	P	17 53 23.9	-0.9
KOOLE	Kule		73.76	108	P	P	17 53 24.7	-0.1
KOOLE					IAmb	IAmb	17 53 26.3	
	comp=Z,32nm,0.8s							
LONY	Lake Ozonia		73.76	352	IAmb	IAmb	17 53 26.5	
	comp=Z,84nm,1.1s							
FRNY	Flat Rock		73.85	352	IAmb	IAmb	17 53 26.9	
	comp=Z,45nm,0.7s							
DELO	Deloro Mine		74.11	349	IAmb	IAmb	17 53 27.8	
	comp=Z,56nm,1.2s							
319A	Douglas		74.19	320	IAmb	IAmb	17 53 29.6	
	comp=Z,56nm,0.9s							
WBO	Williamsburg		74.23	351	P	P	17 53 27.4	+0.9
LMN	Caledonia Moun		74.26	359	IAmb	IAmb	17 53 29.1	
	comp=Z,41nm,0.9s							
J47A	Sunner		74.35	344	IAmb	IAmb	17 53 28.6	
	comp=Z,62nm,1.0s							
KSU1	Kansas State U		74.37	334	P	P	17 53 27.6	0.0
KSU1					IAmb	IAmb	17 53 28.9	
	comp=Z,86nm,1.0s							
F64A	Sherman		74.41	356	IAmb	IAmb	17 53 30.3	
	comp=Z,33nm,0.9s							
GRHM	Grahamstown, E		74.49	120	P	P	17 53 28.6	0.0
GRHM					IAmb	IAmb	17 53 30.4	
	comp=Z,54nm,0.9s							
MNTQ	Montreal, Queb		74.51	352	IAmb	IAmb	17 53 30.6	
	comp=Z,58nm,0.8s							
L42A	Oliver, Polo		74.54	340	IAmb	IAmb	17 53 29.5	
	comp=Z,56nm,0.8s							
N38A	Joes South For		74.61	337	IAmb	IAmb	17 53 29.8	
	comp=Z,52nm,0.7s							
SADO	Sadowa		74.61	348	P	P	17 53 29.2	+0.5
SADO					IAmb	IAmb	17 53 30.3	
	comp=Z,46nm,0.7s							
RTBA	Rita Blanca		74.77	328	IAmb	IAmb	17 53 32.5	
	comp=Z,144nm,1.9s							
TORD	Torodi Ar. Bea		75.19	66	P	P	17 53 33.0	+0.3
	comp=Z,43nm,0.7s,baz=253,slow=6.0,SNR=224							
TORD					pP	pP	17 55 36.9	+0.6
	comp=Z,12nm,0.9s,baz=245,slow=6.8,SNR=15							
TORD					S	S	18 02 23.5	-0.8
	comp=Z,0.7nm,0.8s,baz=234,slow=14,SNR=5.3							
	comp=Z,43nm,0.7s							
TORD	Torodi Ar. Bea		75.19	66	P	P	17 53 32.6	-0.1
TORD					IAmb	IAmb	17 53 34.0	
	comp=Z,27nm,0.8s							
TORD					pP	pP	17 55 34.4	-1.9
E62A	Clayton Lake		75.24	355	IAmb	IAmb	17 53 34.9	
	comp=Z,43nm,0.8s							
GRTLG	Ghanzi		75.30	106	*i* P	P	17 53 32.6	-0.8
GRTLG	Ghanzi		75.30	106	P	P	17 53 33.2	-0.2
BUKO	Buck Lake		75.31	348	IAmb	IAmb	17 53 34.6	
	comp=Z,68nm,1.0s							
TRQ	Mont Tremblant		75.33	352	IAmb	IAmb	17 53 34.8	
	comp=Z,79nm,1.0s							
ANMO	Albuquerque		75.40	324	P	P	17 53 34.1	+0.4
ANMO	Albuquerque		75.40	324*d*	*i* P	P	17 53 34.0	+0.3
ANMO					pmax	pmax		
	comp=Z,26nm,0.9s							
ANMO	Albuquerque		75.40	324	P	P	17 53 35.3	+1.6
KGCAE	Kacgae		75.50	108	*i* P	P	17 53 33.2	-1.3
KGCAE	Kacgae		75.50	108	P	P	17 53 34.4	-0.1
BOSA	Boshof		75.55	115	P	P	17 53 34.9	+0.2
	comp=Z,30nm,0.8s,baz=253,slow=4.2,SNR=63							
	comp=Z,30nm,0.8s							
BOSA	Boshof		75.55	115	IAmb	IAmb	17 53 35.8	
	comp=Z,30nm,0.8s							
BOSA	Boshof		75.55	115	P	P	17 53 34.7	0.0
BOSA					pP	pP	17 55 39.4	+1.0
SCIA	State Center		75.59	337	IAmb	IAmb	17 53 35.6	
	comp=Z,44nm,0.6s							
D62A	Allapoint, All		75.67	356	IAmb	IAmb	17 53 37.1	
	comp=Z,59nm,0.9s							
BATG	Bathurst New B		75.72	358	IAmb	IAmb	17 53 37.4	
	comp=Z,38nm,0.9s							
TUC	Tucson		75.73	320	P	P	17 53 36.8	+1.4
TUC	Tucson		75.73	320	P	P	17 53 36.8	+1.4
TUC					pmax	pmax		
	comp=Z,20nm,1.1s							
MAW	Mawson		75.87	161	P	P	17 53 36.5	+1.0
	comp=Z,14nm,0.9s,baz=239,slow=5.3,SNR=8.9							
MAW					pP	pP	17 55 39.0	-0.4
	comp=Z,15nm,0.9s,baz=252,slow=7.1,SNR=8.8							
	comp=Z,14nm,0.9s							
MAW	Mawson		75.87	161	P	P	17 53 36.0	+0.6
MAW					pP	pP	17 55 39.6	+0.3
I42A	Draeger Farm,		76.05	341	IAmb	IAmb	17 53 38.2	
	comp=Z,50nm,0.7s							
T25A	Trinidad		76.13	327	IAmb	IAmb	17 53 40.5	
	comp=Z,56nm,0.9s							
H43A	Windswept, Lux		76.27	342	IAmb	IAmb	17 53 39.3	
	comp=Z,53nm,0.7s							
CCD	Concordia, Ant		76.32	182	P	P	17 53 39.2	+0.8
CCD					pP	pP	17 55 43.6	+1.2
MAKGR	Makgori		76.37	112	*i* P	P	17 53 38.0	-1.3
MAKGR	Makgori		76.37	112	P	P	17 53 38.6	-0.6
KSCO	Kaye Shedlock'		76.82	329	IAmb	IAmb	17 53 44.0	
	comp=Z,150nm,1.5s							
W18A	Petrified Fore		77.25	322	IAmb	IAmb	17 53 46.5	
	comp=Z,49nm,1.1s							
EDA	Edea		77.26	78	P	P	17 53 44.5	+0.4
KDWAN	Kaudwane		77.31	110	*i* P	P	17 53 44.0	-0.4
LBTB	Lobatse		77.36	112	P	P	17 53 44.5	-0.2
LBTB	Lobatse		77.36	112	P	P	17 53 44.5	-0.2
LBTB					pmax	pmax		
	comp=Z,29nm,0.8s							
LBTB	Lobatse		77.36	112	P	P	17 53 45.0	+0.3
LBTB					pP	pP	17 55 49.2	+0.1
X16A	Lo Mia Camp, P		77.66	321	IAmb	IAmb	17 53 48.9	
	comp=Z,51nm,1.1s							
G40A	Rib Lake		77.68	341	IAmb	IAmb	17 53 47.4	
	comp=Z,90nm,1.9s							
OGNE	Ogallala		78.15	331	IAmb	IAmb	17 53 50.7	
	comp=Z,50nm,0.8s							
LPHEP	Lephephe		78.30	110	*i* P	P	17 53 48.8	-0.9
LPHEP	Lephephe		78.30	110	P	P	17 53 49.6	-0.1
ECSD	EROS Data Cent		78.39	336	IAmb	IAmb	17 53 50.9	
	comp=Z,67nm,1.1s							
SPMN	Marine on St.		78.42	339	IAmb	IAmb	17 53 50.7	
	comp=Z,46nm,1.0s							
WUAZ	Wupatki		78.44	322	IAmb	IAmb	17 53 53.1	
	comp=Z,39nm,0.9s							
KHWEE	KHWEE		78.59	109	*i* P	P	17 53 50.9	-0.4
KHWEE	KHWEE		78.59	109	P	P	17 53 51.4	+0.2
KHWEE					IAmb	IAmb	17 53 52.8	
	comp=Z,63nm,0.9s							
K30B	Basset		78.60	333	IAmb	IAmb	17 53 53.7	
	comp=Z,40nm,0.7s							
PV01	Paradox Valley		78.95	325	IAmb	IAmb	17 53 55.7	
	comp=Z,69nm,1.5s							
PV15	Paradox Valley		79.06	325	IAmb	IAmb	17 53 56.5	
	comp=Z,67nm,1.1s							
PV02	Paradox Valley		79.09	325	IAmb	IAmb	17 53 56.2	
	comp=Z,120nm,1.5s							
PV05	Paradox Valley		79.17	325	P	P	17 53 54.5	+0.5
PV18	Skein Mesa, Pa		79.20	325	IAmb	IAmb	17 53 56.7	
	comp=Z,45nm,1.0s							
PV12	Sauer Basin,		79.20	325	IAmb	IAmb	17 53 56.8	
	comp=Z,40nm,0.9s							
PV07	Paradox Valley		79.22	325	IAmb	IAmb	17 53 57.1	
	comp=Z,40nm,0.9s							
PV11	David Mesa, Pa		79.23	325	IAmb	IAmb	17 53 56.9	
	comp=Z,81nm,1.6s							
E38A	The Farm, Brul		79.29	340	IAmb	IAmb	17 53 55.5	
	comp=Z,44nm,0.7s							
PV20	West Nyswonger		79.31	325	IAmb	IAmb	17 53 57.2	
	comp=Z,65nm,1.4s							
PV22	Blue Mesa, Par		79.36	325	IAmb	IAmb	17 53 57.8	
	comp=Z,60nm,1.0s							
PV10	Paradox Valley		79.37	325	IAmb	IAmb	17 53 57.2	
	comp=Z,43nm,1.0s							
SUSD	Miller		79.85	335	IAmb	IAmb	17 53 58.4	
	comp=Z,72nm,0.8s							
PFO	Pinyon Flats O		79.97	317↓	*e*P	P	17 53 59.6	+1.4
PFO					pmax	pmax		
	comp=Z,45nm,1.1s							
DNR	Dunn Ranch,Anz		80.04	317	IAmb	IAmb	17 54 01.3	
	comp=Z,54nm,0.8s							
DANC	Danby, Needles		80.06	319	IAmb	IAmb	17 54 01.3	
	comp=Z,114nm,1.2s							
KSANE	Kasane		80.20	105	*i* P	P	17 53 59.3	-0.5
KSANE	Kasane		80.20	105	P	P	17 53 59.1	-0.7
O20A	White River Ci		80.33	327	IAmb	IAmb	17 54 03.3	
	comp=Z,59nm,1.1s							
KNB	Kanab		80.33	322	IAmb	IAmb	17 54 03.1	
	comp=Z,78nm,0.9s							
BROLN	Tlhalogang		80.54	109	*i* P	P	17 54 00.5	-1.0
TBO	Thunder Bay		80.56	343	IAmb	IAmb	17 54 02.1	
	comp=Z,29nm,0.7s							
SRU	San Rafael Swe		80.68	325	IAmb	IAmb	17 54 04.0	
	comp=Z,47nm,0.8s							
SZCU	Shurtz Canyon		80.90	322	P	P	17 54 03.9	+0.9
P18A	Preston Nutter		80.93	325	IAmb	IAmb	17 54 06.0	
	comp=Z,38nm,0.8s							
CCUT	Cedar City		81.02	322	IAmb	IAmb	17 54 06.8	
	comp=Z,40nm,0.8s							
P17A	Buster Ranch,		81.06	325	IAmb	IAmb	17 54 06.2	
	comp=Z,37nm,1.0s							
K22A	Casper		81.50	329	IAmb	IAmb	17 54 08.3	
	comp=Z,73nm,1.4s							
RSSD	Black Hills		81.60	332	P	P	17 54 06.2	-0.2
RSSD	Black Hills		81.60	332	P	P	17 54 06.2	-0.2
RSSD					pmax	pmax		
	comp=Z,15nm,0.8s							
RSSD	Black Hills		81.60	332	P	P	17 54 07.0	+0.6
RSSD					pP	pP	17 56 11.5	-1.6
CCCA	Chr Cany lake		81.84	318	IAmb	IAmb	17 54 10.3	
	comp=Z,50nm,1.2s							
AGMN	Agassiz Nation		82.12	339	IAmb	IAmb	17 54 10.3	
	comp=Z,26nm,0.7s							
E28A	Huff		82.31	335	P	P	17 54 10.2	+0.6
S11A	Rachel		82.40	320	IAmb	IAmb	17 54 13.8	
	comp=Z,44nm,1.0s							
MD01	Midelt array s		82.59	46	P	P	17 54 12.2	+0.6
EPLO	Experimental L		82.68	341	IAmb	IAmb	17 54 12.9	
	comp=Z,36nm,0.7s							
PDAR	Pinedale Array		82.99	327	P	P	17 54 14.1	+0.6
	comp=Z,10nm,0.5s,baz=130,slow=8.1,SNR=106							
PDAR					pP	pP	17 56 21.4	+0.5
	comp=Z,0.8nm,0.8s,baz=130,slow=4.3,SNR=3.0							
	comp=Z,10nm,0.5s							
PDAR	Pinedale Array		82.99	327	P	P	17 54 13.6	+0.1
PFVI	Vila Bisbo		83.01	41	*e*P	P	17 54 15.2	+1.9
HWUT	Hardware Ranch		83.08	326	IAmb	IAmb	17 54 16.8	
	comp=Z,52nm,0.9s							
MORF	Marmelete		83.23	41	*e*P	P	17 54 15.0	+0.5
MORF					IAmb	IAmb	17 54 16.9	
	comp=Z,32nm,1.1s							
MORF	Marmelete		83.23	41	P	P	17 54 15.7	+1.2
MORF	Marmelete		83.23	41	*e*P	P	17 54 15.6	+1.2
MORF	Marmelete		83.23	41	*e*P	P	17 54 15.0	+0.5
SCHQ	Schefferville		83.30	358	P	P	17 54 15.1	+0.7
	comp=Z,34nm,0.8s,baz=177,slow=4.1,SNR=42							
	comp=Z,34nm,0.8s							
SCHQ	Schefferville		83.30	358	IAmb	IAmb	17 54 15.9	
	comp=Z,49nm,1.0s							
SPUT	South Promonto		83.30	325	IAmb	IAmb	17 54 17.3	
	comp=Z,58nm,1.1s							
BGU	Big Grassy Mou		83.31	324	IAmb	IAmb	17 54 17.4	
	comp=Z,35nm,1.1s							
PTEO	Sao Teotonio		83.36	41	*e*P	P	17 54 16.6	+1.5
PTEO					*i* IAmb	IAmb	17 54 17.6	
	comp=Z,77nm,0.9s							
TIN	Tinemaha, Big		83.40	319	IAmb	IAmb	17 54 18.1	
	comp=Z,69nm,1.1s							
DSP	Deep Springs		83.47	319	P	P	17 54 16.7	+1.1
PBDV	Barranco-do-Ve		83.60	41	*e*P	P	17 54 18.0	+1.7
PBDV					*i* IAmb	IAmb	17 54 18.4	
	comp=Z,78nm,0.8s							
TAM	Tamanrasset		83.66	60	P	P	17 54 17.2	+0.1
TAM					IAmb	IAmb	17 54 19.1	
	comp=Z,31nm,0.8s							
TAM	Tamanrasset		83.66	60	P	P	17 54 17.2	+0.1
TAM					pmax	pmax		
	comp=Z,31nm,0.8s							
AHID	Auburn Hatcher		83.72	327	IAmb	IAmb	17 54 19.2	
	comp=Z,47nm,0.9s							
PCVE	Castro Verde		83.81	41	*e*P	P	17 54 18.8	+1.5
PCVE					*i* IAmb	IAmb	17 54 19.2	
	comp=Z,52nm,0.9s							
HVU	Hansel Valley		83.81	325	IAmb	IAmb	17 54 19.4	
	comp=Z,36nm,0.9s							
PVAQ	Vaqueiros		83.84	41	P	P	17 54 18.4	+1.0
PVAQ					IAmb	IAmb	17 54 19.7	
	comp=Z,36nm,0.9s							
PVAQ	Vaqueiros		83.84	41	*e*P	P	17 54 18.9	+1.5
PVAQ					*i* IAmb	IAmb	17 54 19.4	
	comp=Z,45nm,1.0s							
ULM	Lac du Bonnet		83.84	340	P	P	17 54 17.6	+0.4
	comp=Z,35nm,0.8s,baz=146,slow=5.3,SNR=50							
	comp=Z,35nm,0.8s							
ULM	Lac du Bonnet		83.84	340	IAmb	IAmb	17 54 18.7	
	comp=Z,40nm,0.8s							
MESJ	Messejana		83.85	41	*e*P	P	17 54 17.8	+0.3
MESJ					IAmb	IAmb	17 54 19.6	
	comp=Z,38nm,0.9s							
MESJ	Messejana		83.85	41	P	P	17 54 18.0	+0.5
MESJ					IAmb	IAmb	17 54 19.7	
	comp=Z,35nm,0.8s							
MESJ	Messejana		83.85	41	*e*P	P	17 54 18.9	+1.4
MESJ					*i* IAmb	IAmb	17 54 19.4	
	comp=Z,50nm,0.9s							
MESJ	Messejana		83.85	41	P	P	17 54 18.0	+0.5
MESJ					pmax	pmax		
	comp=Z,35nm,0.8s							
LSZ	Lusaka		83.94	104	P	P	17 54 19.6	+0.9
LSZ					IAmb	IAmb	17 54 21.7	
	comp=Z,36nm,0.8s							
LSZ	Lusaka		83.94	104	P	P	17 54 19.6	+0.9
LSZ					pmax	pmax		
	comp=Z,36nm,0.9s							
LSZ	Lusaka		83.94	104	P	P	17 54 20.6	+1.9
LSZ					pP	pP	17 56 28.4	+2.4
PKD	Bear Valley Ra		84.02	317	IAmb	IAmb	17 54 20.6	
	comp=Z,47nm,1.3s							
PMAFR	Mafra		84.02	39	*e*P	P	17 54 19.6	+1.2
LOHW	Long Hollow		84.13	327	IAmb	IAmb	17 54 21.2	
	comp=Z,30nm,0.8s							
PBEJ	Beja		84.18	41	*e*P	P	17 54 20.5	+1.4
PBEJ					*i* IAmb	IAmb	17 54 20.9	
	comp=Z,37nm,1.0s							
MOE	Montemor		84.24	40	*e*P	P	17 54 20.7	+1.3
MOE					*i* IAmb	IAmb	17 54 22.3	
	comp=Z,45nm,1.4s							
MOOW	Moose Ponds		84.30	327	IAmb	IAmb	17 54 22.0	
	comp=Z,30nm,0.9s							
ELK	Elko		84.33	323	IAmb	IAmb	17 54 22.3	
	comp=Z,43nm,0.8s							
LHV	Little Huntoon		84.38	319	IAmb	IAmb	17 54 22.9	
	comp=Z,23nm,0.8s							
NVAR	Mina Array Bea		84.39	320	P	P	17 54 21.6	+1.2
	comp=Z,11nm,0.8s,baz=142,slow=5.1,SNR=48							
	comp=Z,11nm,0.8s							
NVAR	Mina Array Bea		84.39	320	P	P	17 54 20.8	+0.3
EVO	Evora		84.44	40	*e*P	P	17 54 21.4	+1.0
EVO					*i* IAmb	IAmb	17 54 22.5	
	comp=Z,26nm,1.2s							
FLWY	Flagg Ranch		84.53	328	IAmb	IAmb	17 54 23.5	
	comp=Z,54nm,0.9s							
LAO	LASA Array		84.58	332	IAmb	IAmb	17 54 22.7	
	comp=Z,44nm,1.1s							
PARRA	Arraiolos		84.62	40	*e*P	P	17 54 22.4	+1.1
PARRA					*i* IAmb	IAmb	17 54 24.1	
	comp=Z,39nm,1.6s							
RLMT	Red Lodge		84.67	329	IAmb	IAmb	17 54 23.6	
	comp=Z,22nm,0.7s							
PMTG	Montargil		84.69	40	*e*P	P	17 54 22.7	+1.1
PMTG					*i* IAmb	IAmb	17 54 23.8	
	comp=Z,69nm,1.0s							
PBAR	Barrancos		84.75	41	*e*P	P	17 54 22.9	+1.0
PBAR					*i* IAmb	IAmb	17 54 24.0	
	comp=Z,27nm,1.4s							
YMP	Mirror Lake Pl		84.78	328	IAmb	IAmb	17 54 33.8	
	comp=Z,42nm,1.1s							
YFT	Old Faithful		84.87	328	IAmb	IAmb	17 54 29.9	
	comp=Z,27nm,0.8s							
PESTR	Estremoz		84.91	40	P	P	17 54 23.3	+0.6
PESTR					IAmb	IAmb	17 54 24.8	
	comp=Z,30nm,1.0s							
PESTR	Estremoz		84.91	40	*e*P	P	17 54 24.1	+1.4
PESTR					*i* IAmb	IAmb	17 54 26.6	
	comp=Z,34nm,1.7s							
YNE	Yellowstone No		84.92	329	IAmb	IAmb	17 54 24.8	
	comp=Z,25nm,0.9s							
PSARD	Sardoal		85.09	39	*e*P	P	17 54 24.3	+0.7
PCAS	Casmilo, Conde		85.22	39	*e*P	P	17 54 25.7	+1.5
PCAS					*i* IAmb	IAmb	17 54 25.8	
	comp=Z,59nm,1.3s							
YHB	Horse Butte		85.27	328	IAmb	IAmb	17 54 27.1	
	comp=Z,41nm,1.2s							
YHL	Hebgen Lake		85.34	328	IAmb	IAmb	17 54 27.6	
	comp=Z,72nm,1.5s							
PMRV	Marv??o		85.41	40	*e*P	P	17 54 26.0	+0.9
PMRV					*i* IAmb	IAmb	17 54 27.2	
	comp=Z,39nm,1.4s							
PCBR	Castelo Branco		85.64	40	*e*P	P	17 54 26.8	+0.7
PCBR					*i* IAmb	IAmb	17 54 27.7	
	comp=Z,30nm,1.2s							
PAHR	Pah Rah Range		85.87	320	IAmb	IAmb	17 54 30.1	

	comp=Z,18nm,0.9s								
PINE	**Pine Mountain**	**89.49**	**322**		IAmb	IAmb	17 54 46.8		
	comp=Z,21nm,0.8s								
FFC	**Flin Flon**	**89.60**	**339**		P	**P**	**17 54 44.5**	**+0.2**	
FFC	**Flin Flon**	**89.60**	**339**		P	**P**	**17 54 44.5**	**+0.2**	
FFC					pmax	pmax			
	comp=Z,12nm,1.2s								
BBOR	**Butler Butte**	**89.84**	**321**		IAmb	IAmb	17 54 47.1		
	comp=Z,12nm,0.8s								
L02F	**Cave Junction**	**89.85**	**320**		IAmb	IAmb	17 54 48.1		
	comp=Z,22nm,0.9s								
I05D	**Terrebonne, OR**	**90.07**	**322**		IAmb	IAmb	17 54 49.2		
	comp=Z,14nm,0.7s								
WIFE	**Three Sisters-**	**90.14**	**322**		IAmb	IAmb	17 54 49.5		
	comp=Z,21nm,0.9s								
G06A	**Carlson Farm,**	**90.30**	**323**		IAmb	IAmb	17 54 50.2		
	comp=Z,17nm,1.2s								
H04A	**Detroit Lake**	**90.75**	**322**		IAmb	IAmb	17 54 51.6		
	comp=Z,17nm,1.0s								
C09A	**Chrisman Ranch**	**90.86**	**326**		IAmb	IAmb	17 54 51.7		
	comp=Z,14nm,0.8s								
HOOD	**Mount Hood Mea**	**90.89**	**323**		IAmb	IAmb	17 54 52.5		
	comp=Z,14nm,0.9s								
FCC	**Fort Churchill**	**90.91**	**344**		IAmb	IAmb	17 54 51.7		
	comp=Z,20nm,0.8s								
D05A	**Enumclaw**	**92.30**	**324**		IAmb	IAmb	17 54 58.7		
	comp=Z,19nm,1.0s								
EDM	**Edmonton**	**92.55**	**332**		IAmb	IAmb	17 54 58.7		
	comp=Z,16nm,0.8s								
KEST	**Kesra**	**93.63**	**51**		P	**P**	**17 55 04.8**	**+1.4**	
	comp=Z,3.4nm,0.7s,baz=207,slow=6.8,SNR=3.5								
	comp=Z,3.4nm,0.7s								
BLKN	**Baker Lake**	**96.28**	**346**		IAmb	IAmb	17 58 27.1		
	comp=Z,29nm,2.0s								
EKA	**Eskdalemuir Ar**	**98.15**	**30**		P	Pdif	17 55 23.0	-0.1	
	comp=Z,4.6nm,0.9s,baz=239,slow=5.7,SNR=9.0								
EKA					pP	pP	17 57 34.5	+0.8	
	comp=Z,1.7nm,0.8s,baz=272,slow=5.8,SNR=1.9								
	comp=Z,4.6nm,0.9s								
BMRD	**Maredsous**	**98.94**	**37**	*d*	Pdif	Pdif	17 55 26.6	-0.1	
YKA	**Yellowknife Ar**	**99.78**	**338**		P	**Pdif**	**17 55 30.8**	**+0.7**	
	comp=Z,1.3nm,0.7s,baz=131,slow=3.6,SNR=38								
YKA					pP	**pP**	**17 57 40.9**	**0.0**	
	comp=Z,0.6nm,0.8s,baz=133,slow=3.7,SNR=4.4								
YKA					PP	**PP**	**17 59 46.5**	**+1.2**	
	comp=Z,1.0nm,0.9s,baz=136,slow=7.1,SNR=5.6								
YKA					PKKPbc	**PKKPbc**	**18 11 48.7**	**-0.8**	
	comp=Z,0.1nm,0.4s,baz=90,slow=5.1,SNR=4.1								
	comp=Z,1.3nm,0.7s								
YKA	**Yellowknife Ar**	**99.78**	**338**			**Pdif**	**17 55 30.1**	**-0.1**	
YKA	**Yellowknife Ar**	**99.78**	**338**		P	**Pdif**	**17 55 30.1**	**-0.1**	
YKA					*PP	**pP**	**17 57 40.9**	**0.0**	
BRTR	**Keskin Array B**	**112.62**	**56**		PKiKP	**PKiKP**	**18 00 19.7**	**+0.3**	
	comp=Z,1.2nm,0.7s,baz=180,slow=2.1,SNR=9.1								
ILAR	**Eielson Array**	**113.04**	**332**		PKiKP	**PKiKP**	**18 00 19.4**	**+0.2**	
	comp=Z,0.6nm,0.3s,baz=136,slow=0.8,SNR=13								
ILAR					PP	**PP**	**18 01 20.8**	**0.0**	
	comp=Z,1.5nm,0.9s,baz=118,slow=4.7,SNR=6.6								
ILAR					PKKPbc	**PKKPbc**	**18 11 08.2**	**-0.7**	
	comp=Z,0.2nm,0.6s,baz=304,slow=3.5,SNR=2.3								
AKASG	**Malin Array Be**	**113.10**	**44**		PKiKP	**PKiKP**	**18 00 19.1**	**-0.6**	
	comp=Z,1.0nm,0.4s,baz=260,slow=2.5,SNR=9.3								
AKBB	**Malin Array Si**	**113.10**	**44**	*i*	PKiKP	**PKiKP**	**18 00 18.9**	**-0.8**	
VSU	**Vasula**	**113.96**	**35**	*i*	PKiKP	**PKiKP**	**18 00 20.0**	**-1.1**	
VSU					pmax	pmax			
	comp=Z,35nm,2.5s								
FINES	**FINESS Array B**	**114.45**	**32**		PKP	**PKiKP**	**18 00 22.4**	**+0.4**	
	comp=Z,1.0nm,0.4s,baz=163,slow=1.1,SNR=19								
FINES					PKKPbc	**PKKPbc**	**18 11 01.8**	**-2.4**	
	comp=Z,2.0nm,0.9s,baz=90,slow=5.7,SNR=4.1								
STKA	**Stephens Creek**	**115.28**	**203**		PKKPbc	PKKPbc	18 11 00.8	-0.9	
	comp=Z,1.7nm,0.7s,baz=320,slow=5.5,SNR=4.6								
SPITS	**Spitsbergen Ar**	**115.80**	**13**		PKP	**PKiKP**	**18 00 24.6**	**+0.4**	
	comp=Z,5.4nm,0.9s,baz=242,slow=1.8,SNR=7.3								
SPITS					PP	**PP**	**18 01 33.7**	**-5.9**	
	comp=Z,14nm,1.1s,baz=317,slow=8.4,SNR=8.8								
SPITS					PKKPbc	**PKKPbc**	**18 10 59.0**	**-0.8**	
	comp=Z,3.7nm,1.0s,baz=105,slow=6.1,SNR=6.3								
C23K	**Itkillik River**	**115.81**	**337**			**PKiKP**	**18 00 25.2**	**+0.8**	
ARCES	**ARCESS Array B**	**116.15**	**23**		PKP	**PKPdf**	**18 00 25.0**	**0.0**	
ARCES					PKKPbc	**PKKPbc**	**18 10 57.6**	**-0.9**	
	comp=Z,1.1nm,0.3s,baz=88,slow=3.6,SNR=12								
OBN	**Obninsk**	**118.47**	**40**	*i*	PKiKP	**PKiKP**	**18 00 30.0**	**+0.1**	
OBN					pmax	pmax			
	comp=Z,13nm,1.0s								
GURO	**Guroymak-BITLI**	**118.50**	**59**			**PKPdf**	**18 00 30.6**	**-0.1**	
GEVA	**Gevas**	**119.22**	**60**			**PKPdf**	**18 00 31.9**	**-0.3**	
VSR	**Storozhevoye**	**119.33**	**45**	*e*	PKiKP	**PKPdf**	**18 00 29.3**	**-2.4**	
VSR					pmax	pmax			
	comp=Z,7.0nm,1.0s								
LPSR	**Galich'ya Gora**	**119.42**	**43**	*e*	PKiKP	**PKPdf**	**18 00 30.1**	**-1.7**	
LPSR					pmax	pmax			
	comp=Z,20nm,0.8s								
VORR	**Voronezh**	**119.43**	**44**	*e*	PKiKP	**PKPdf**	**18 00 30.9**	**-0.9**	
VORR					pmax	pmax			
	comp=Z,11nm,0.6s								
KIV	**Kislovodsk**	**120.26**	**54**			**PKPdf**	**18 00 33.6**	**-0.2**	
KIV	**Kislovodsk**	**120.26**	**54**	*e*	PKiKP	**PKiKP**	**18 00 34.3**	**+0.3**	
KIV					pmax	pmax			
	comp=Z,13nm,1.1s								
KBZ	**Khabaz**	**120.36**	**54**		PKP	**PKiKP**	**18 00 34.7**	**+0.7**	
	comp=Z,4.5nm,0.8s,baz=236,slow=2.0,SNR=12								
KBZ	**Khabaz**	**120.36**	**54**	*c*	*i* PKiKP	**PKiKP**	**18 00 34.6**	**+0.6**	
KLMR	**Klimovskoe**	**120.76**	**34**	*e*	PKiKP	**PKPdf**	**18 00 33.3**	**-0.8**	
KLMR					pmax	pmax			
	comp=Z,56nm,1.5s								
VRH	**Novokhopyorsk**	**120.91**	**45**	*e*	PKiKP	**PKPdf**	**18 00 34.4**	**-0.3**	
VRH					pmax	pmax			
	comp=Z,12nm,0.9s								
AKT	**Akhty**	**123.42**	**57**	*i*	PKiKP	**PKPdf**	**18 00 39.9**	**-0.1**	
AKT					pmax	pmax			
	comp=Z,9.0nm,0.6s								
ASAR	**Alice Springs**	**125.36**	**199**		PKP	**PKPdf**	**18 00 43.9**	**-0.5**	
	comp=Z,5.8nm,0.7s,baz=138,slow=1.7,SNR=93								
ASAR					pPKP	**pPKPdf**	**18 03 02.0**	**-0.8**	
	comp=Z,1.3nm,0.9s,baz=156,slow=6.2,SNR=6.2								
ASAR					SKP	**SKPdf**	**18 03 24.3**	**+0.8**	
	comp=Z,2.7nm,0.8s,baz=146,slow=2.4,SNR=10								
ASAR					SKKP	**SKKPdf**	**18 13 42.7**	**+0.7**	
	comp=Z,0.2nm,0.8s,baz=315,slow=1.9,SNR=1.5								
ASAR	**Alice Springs**	**125.36**	**199**			**PKPdf**	**18 00 43.3**	**-1.0**	
ASAR	**Alice Springs**	**125.36**	**199**		PKiKP	**PKPdf**	**18 00 43.3**	**-1.0**	
AS31	**Alice Springs**	**125.36**	**199**			**PKPdf**	**18 00 43.1**	**-1.2**	
KIRV	**Kirov**	**125.74**	**37**	*c*	*i* PKiKP	**PKiKP**	**18 00 44.3**	**+0.1**	
WRA	**Warramunga Arr**	**128.73**	**201**		PKP	**PKPdf**	**18 00 50.7**	**-0.1**	
	comp=Z,3.5nm,0.4s,baz=174,slow=1.7,SNR=103								
WRA					pPKP	**pPKPdf**	**18 03 07.8**	**-1.6**	
	comp=Z,3.6nm,1.1s,baz=165,slow=1.7,SNR=12								
WRA					SKKP	**SKKPdf**	**18 13 37.2**	**+1.6**	
	comp=Z,0.3nm,0.8s,baz=352,slow=5.3,SNR=1.9								
WRA	**Warramunga Arr**	**128.73**	**201**			**PKPdf**	**18 00 50.1**	**-0.7**	
WRA	**Warramunga Arr**	**128.73**	**201**		PKiKP	**PKPdf**	**18 00 50.1**	**-0.7**	
WB0	**Warramunga Arr**	**128.88**	**201**			**PKPdf**	**18 00 51.2**	**+0.2**	
ARTI	**Arti**	**130.77**	**39**			**PKPdf**	**18 00 53.3**	**-0.1**	
ARTI	**Arti**	**130.77**	**39**	*i*	PKiKP	**PKiKP**	**18 00 54.6**	**+0.2**	
ARTI							18 03 17.0		
BILL	**Bilibino**	**131.17**	**338**			**PKPdf**	**18 00 53.6**	**-0.2**	
BILL	**Bilibino**	**131.17**	**338**	⇑	*i* PKiKP	**PKiKP**	**18 00 54.9**	**0.0**	
BILL					pmax	pmax			
	comp=Z,23nm,1.7s								
AKTO	**Aktyubinsk**	**131.18**	**47**		PKiKP	**PKPdf**	**18 00 54.8**	**+0.4**	
AB31	**Akbulak array**	**132.50**	**48**		PKPdf	**PKPdf**	**18 00 56.4**	**-0.5**	
AB31					SKPbc	**SKPbc**	**18 03 28.5**	**-0.1**	
AB31	**Akbulak array**	**132.50**	**48**	*i*	PKiKP	**PKiKP**	**18 00 58.0**	**-0.1**	
ABKAR	**Akbulak array**	**132.50**	**48**			**PKPdf**	**18 00 56.7**	**-0.2**	
ABKAR					SKPbc	**SKPbc**	**18 03 29.0**	**+0.4**	
NRIK	**Noril'sk**	**135.98**	**14**		PKP	**PKiKP**	**18 01 03.9**	**-0.7**	
	comp=Z,1.8nm,0.4s,baz=17,slow=3.1,SNR=6.5								
NRIK	**Noril'sk**	**135.98**	**14**			**PKiKP**	**18 01 03.8**	**-0.8**	
NRIK	**Noril'sk**	**135.98**	**14**		PKiKP	**PKiKP**	**18 01 03.8**	**-0.8**	
TIXI	**Tiksi**	**136.54**	**355**			**PKPdf**	**18 01 03.3**	**-0.5**	
TIXI	**Tiksi**	**136.54**	**355**	‖	*e* PKiKP	**PKPdf**	**18 01 04.4**	**+0.6**	
BORK	**Borovoye**	**138.26**	**41**			PKPpre	18 01 01.4		
BORK	**Borovoye**	**138.26**	**41**	*d*	*i* PKiKP	**PKiKP**	**18 01 08.6**	**-1.1**	
BORK					pmax	pmax			
	comp=Z,18nm,1.7s								
BVA0	**Borovoye Array**	**138.30**	**41**	*i*	PKiKP	**PKiKP**	**18 01 08.8**	**-1.0**	
BVAR	**Borovoye Array**	**138.30**	**41**		PKhKP	PKPpre	18 00 59.9		
	comp=Z,1.4nm,0.6s,baz=270,slow=3.0,SNR=7.5								
BVAR					PKP	**PKiKP**	**18 01 09.2**	**-0.7**	
	comp=Z,5.1nm,0.4s,baz=290,slow=4.3,SNR=22								
BVAR					pPKP	pPKPdf	18 03 25.9	-0.4	
	comp=Z,2.0nm,0.8s,baz=270,slow=4.4,SNR=6.2								
BVAR					SKPbc	**SKPbc**	**18 03 47.1**	**+0.9**	
	comp=Z,1.8nm,0.7s,baz=298,slow=3.2,SNR=5.2								
SEY	**Seymchan**	**138.80**	**336**	⇑	*i* PKiKP	**PKiKP**	**18 01 10.0**	**-0.5**	
SEY					pmax	pmax			
	comp=Z,30nm,1.7s								
CHM	**Chimkent**	**139.73**	**57**	*e*	PKP	**PKPdf**	**18 01 10.2**	**-0.4**	
BRLS	**Borolday**	**139.84**	**56**	*e*	PKP	**PKPdf**	**18 01 09.9**	**-0.8**	
BRLS				*e*	PP	**PP**	**18 04 14.3**	**-1.5**	
IUG	**luzhnay**	**140.06**	**58**	*e*	PKP	**PKPdf**	**18 01 10.7**	**-0.6**	
IUG				*e*	PP	**PP**	**18 04 16.0**	**-1.2**	
KK31	**Karatay Array**	**140.33**	**56**	*i*	PKHKP	PKPpre	18 01 05.6		
KKAR	**Karatay Array**	**140.33**	**56**			PKPpre	18 01 04.7		
KKAR	**Karatay Array**	**140.33**	**56**		PKHKP	PKPpre	18 01 04.7		
DZA	**Taraz**	**140.95**	**56**	*e*	PKP	**PKPdf**	**18 01 12.1**	**-0.6**	
PET	**Petropavlovsk**	**140.97**	**320**	*de*	PKiKP	**PKPdf**	**18 01 13.7**	**+1.4**	
PET					pmax	pmax			
	comp=Z,24nm,1.7s								
NIL	**Nilore**	**142.59**	**71**			**PKPdf**	**18 01 13.6**	**-2.3**	
NIL	**Nilore**	**142.59**	**71**		PKiKP	**PKPdf**	**18 01 13.6**	**-2.3**	
EKS2	**Erkin-Say**	**142.77**	**56**		P	**PKPdf**	**18 01 14.4**	**-1.7**	
	SNR=29								
BBJI	**Bungbulang**	**142.92**	**165**			**PKPdf**	**18 01 14.7**	**-2.5**	
UGM	**Wanagama**	**143.04**	**170**			PKPab	18 01 14.5	-0.5	
HYB	**Hyderabad**	**143.15**	**99**	*e*	PKPab	PKPab	18 01 15.4	-0.1	
USP	**Ospenovka**	**143.20**	**55**		P	PKPbc	18 01 15.6	+0.3	
	SNR=64								
AAK	**Ala-Archa**	**143.29**	**56**		SKPbc	**SKiKP**	**18 04 00.6**	**+0.1**	
	comp=Z,14nm,1.1s,baz=205,slow=3.0,SNR=6.1								
AAK					SKKPbc	**SKKPab**	**18 12 10.1**	**-2.0**	
	comp=Z,1.3nm,0.8s,baz=130,slow=3.7,SNR=7.3								
AAK	**Ala-Archa**	**143.29**	**56**		P	**PKPdf**	**18 01 16.6**	**-0.5**	
	SNR=152								
AAK	**Ala-Archa**	**143.29**	**56**			**PKPdf**	**18 01 16.5**	**-0.5**	
AAK	**Ala-Archa**	**143.29**	**56**	*d*	*i* PKiKP	**PKPdf**	**18 01 16.4**	**-0.7**	
AAK					pmax	pmax			
	comp=Z,130nm,1.0s								
UCH	**Uchtor**	**143.36**	**57**		P	**PKPdf**	**18 01 17.5**	**-0.1**	
	SNR=5.7								
FRU1	**Bishkek**	**143.37**	**56**			PKPbc	18 01 16.1	+0.3	
FRU1	**Bishkek**	**143.37**	**56**		PKiKP	PKPbc	18 01 16.1	+0.3	
CHMS	**Chumysh**	**143.43**	**56**		P	**PKPdf**	**18 01 16.6**	**-0.5**	
	SNR=89								
KBK	**Karagaybulak**	**143.62**	**56**		P	**PKPdf**	**18 01 17.8**	**+0.2**	
	SNR=18								
KURBB	**Kurchatov Arra**	**143.87**	**42**		PKP	**PKPdf**	**18 01 17.8**	**+0.3**	
	comp=Z,100nm,0.9s,baz=295,slow=3.7,SNR=581								
KURBB					SKPbc	**SKiKP**	**18 04 01.3**	**+0.1**	
	comp=Z,5.2nm,1.0s,baz=298,slow=3.0,SNR=5.2								
KURBB					SKKPbc	**SKKPab**	**18 12 07.1**	**-2.1**	
	comp=Z,1.2nm,0.7s,baz=106,slow=4.1,SNR=11								
KURBB	**Kurchatov Arra**	**143.87**	**42**		PKiKP	**PKPdf**	**18 01 17.6**	**+0.1**	
KURK	**Kurchatov**	**143.88**	**42**			**PKPdf**	**18 01 17.5**	**0.0**	
KURK	**Kurchatov**	**143.88**	**42**	*d*	*i* PKiKP	**PKPdf**	**18 01 17.6**	**0.0**	
KURK					pmax	pmax			
	comp=Z,188nm,1.7s								
TKM2	**Tokmak 2**	**144.05**	**56**		P	**PKPab**	**18 01 19.1**	**+0.6**	
	SNR=8.3								
KSH2	**Kashi**	**144.48**	**62**		PKP	**PKPab**	**18 01 20.3**	**+0.1**	
ULHL	**Ulahol**	**144.63**	**57**		P	**PKPab**	**18 01 21.1**	**+0.3**	
	SNR=32								
TNSS	**Tian-Shan**	**145.01**	**55**	*e*	PKP	**PKPdf**	**18 01 19.4**	**-1.0**	
MDOK	**Medeo**	**145.06**	**55**	*e*	PKP	**PKPdf**	**18 01 19.4**	**-0.7**	
TDK	**Taldyqorghan**	**145.60**	**51**	*e*	PKP	**PKPdf**	**18 01 20.3**	**-0.5**	
YAK	**Yakutsk**	**145.65**	**349**			**PKPdf**	**18 01 20.3**	**+0.1**	
YAK	**Yakutsk**	**145.65**	**349**	*e*	PKiKP	**PKPdf**	**18 01 20.8**	**+0.6**	
YAK				*e*			18 03 39.2		
YAK				*e*			18 04 50.3		
YAK				*e*	SS	SS	18 22 57.3	+2.9	
YAK					pmax	pmax			
	comp=Z,31nm,0.8s								
YAK					pmax	pmax			
	comp=N,14nm,1.0s								
YAK					pmax	pmax			
	comp=E,15nm,1.2s								
YAK					pmax	pmax			
	comp=Z,249nm,7.4s								
YAK					pmax	pmax			
	comp=E,156nm,4.9s								
YAK					pmax	pmax			
	comp=N,167nm,5.0s								
ZALV	**Zalesovo Beam**	**145.69**	**34**		PKPbc	**PKPbc**	**18 01 22.1**	**-0.2**	
	comp=N,79nm,0.8s,baz=314,slow=4.5,SNR=34								
ZALV					SKKPbc	SKKPbc	18 11 55.7	-7.3	
	comp=N,0.5nm,0.3s,baz=108,slow=4.7,SNR=3.6								
ZALV	**Zalesovo Beam**	**145.69**	**34**			**PKPdf**	**18 01 21.1**	**+0.5**	
ZALV	**Zalesovo Beam**	**145.69**	**34**		PKiKP	**PKPdf**	**18 01 21.1**	**+0.5**	
SATY	**Saty**	**146.05**	**55**	*e*	PKP	**PKPdf**	**18 01 20.9**	**-0.8**	
UZB	**Uzynbulak**	**146.47**	**54**	*e*	PKP	**PKPdf**	**18 01 21.6**	**-0.9**	
PDGK	**Podgornoye**	**146.76**	**54**		PKiKP	**PKPbc**	**18 01 24.6**	**-1.2**	
SHLS	**Shalkode**	**146.78**	**54**	*e*	PKP	**PKPdf**	**18 01 22.8**	**-0.2**	
GSI	**Gunungsitoli**	**147.08**	**143**			**PKPdf**	**18 01 25.5**	**+1.3**	
MAKZ	**Makanchi**	**147.41**	**47**			**PKPdf**	**18 01 23.5**	**-0.2**	
MAKZ	**Makanchi**	**147.41**	**47**		PKiKP	**PKPdf**	**18 01 23.5**	**-0.2**	
MK31	**Makanchi Array**	**147.62**	**47**	*d*	*i* PKiKP	**PKPdf**	**18 01 24.4**	**+0.3**	
MKAR	**Makanchi Array**	**147.62**	**47**		PKP	**PKPdf**	**18 01 24.4**	**+0.3**	
	comp=N,27nm,0.7s,baz=279,slow=1.2,SNR=114								
MKAR					PKPbc	**PKiKP**	**18 01 28.6**	**-0.6**	
	comp=N,27nm,0.7s,baz=295,slow=2.8,SNR=87								
MKAR					pPKPbc	**pPKPab**	**18 03 45.1**	**0.0**	
	comp=N,5.1nm,0.8s,baz=289,slow=3.7,SNR=8.2								
MKAR	**Makanchi Array**	**147.62**	**47**			**PKPdf**	**18 01 24.1**	**+0.1**	
MKAR						**pPKPab**	**18 03 44.9**	**-0.1**	
ZSN	**Zaisan**	**148.97**	**44**	*e*	PKP	**PKPdf**	**18 01 25.7**	**-0.5**	
BOD	**Bodaibo**	**150.87**	**3**	*e*	PKiKP	**PKPdf**	**18 01 29.2**	**+0.4**	
BOD					pmax	pmax			
	comp=Z,33nm,1.2s								
WMQ	**Urumqi**	**152.27**	**49**	*e*	PKPbc	**PKPdf**	**18 01 30.5**	**-0.9**	
WMQ					PKPab	**PKPab**	**18 01 50.0**	**-1.9**	
YSS	**Yuzhno-Sakhali**	**152.84**	**319**		PKPdf	**PKPdf**	**18 01 31.6**	**-0.5**	
YSS						**PKPbc**	**18 01 39.5**	**-0.3**	
YSS	**Yuzhno-Sakhali**	**152.84**	**319**	*e*	PKiKP	**PKiKP**	**18 01 40.4**	**+0.5**	
YSS					pmax	pmax			
	comp=Z,20nm,0.9s								
EVN	**Everest**	**153.58**	**84**			**PKPdf**	**18 01 33.8**	**-0.8**	
ZEA	**Zeya**	**153.90**	**346**	*e*	PKiKP	**PKPdf**	**18 01 33.8**	**+0.5**	
ZEA					pmax	pmax			
	comp=Z,10.0nm,0.9s								
MOY	**Mondy**	**154.21**	**23**	*e*	PKiKP	**PKPbc**	**18 01 43.9**	**+1.1**	
MOY					pmax	pmax			
	comp=Z,20nm,1.8s								
JKA	**Kamikawa-asahi**	**154.37**	**314**			**PKPbc**	**18 01 44.8**	**+1.6**	
ASAJ	**Asahikawa**	**154.37**	**314**		PKPbc	**PKPbc**	**18 01 44.8**	**+1.6**	
	comp=Z,9.5nm,0.9s,baz=135,slow=5.7,SNR=2.5								
ASAJ					PKPab	**PKPab**	**18 02 01.7**	**+0.9**	
	comp=Z,9.5nm,0.7s,baz=108,slow=6.4,SNR=4.7								
TLY	**Talaya**	**155.05**	**20**		PKPab	**PKPab**	**18 02 04.1**	**+0.7**	
	comp=Z,6.9nm,0.7s,baz=308,slow=4.2,SNR=13								
KLR	**Kul'dur**	**156.58**	**335**		PKP	**PKPdf**	**18 01 37.2**	**+0.2**	
	comp=Z,3.2nm,0.9s,baz=22,slow=4.0,SNR=9.5								
KLR					PKPab	**PKPab**	**18 02 10.5**	**+0.5**	
	comp=Z,7.2nm,1.0s,baz=56,slow=3.4,SNR=9.2								
HEH	**HeiHe**	**157.08**	**342**		PKP	**PKPdf**	**18 01 37.3**	**-0.3**	
LSA	**Lhasa**	**157.56**	**81**		PKP	**PKPdf**	**18 01 38.5**	**-1.0**	
SONM	**Songino Array**	**159.29**	**20**		PKP	**PKPdf**	**18 01 41.5**	**+0.9**	
	comp=Z,8.2nm,1.0s,baz=300,slow=0.6,SNR=39								
SONM					PKPab	**PKPab**	**18 02 22.8**	**+0.7**	
	comp=Z,7.3nm,1.0s,baz=323,slow=3.8,SNR=15								
SONM	**Songino Array**	**159.29**	**20**			**PKPdf**	**18 01 40.1**	**-0.4**	
SONM						**PKPab**	**18 02 22.1**	**0.0**	
SONM	**Songino Array**	**159.29**	**20**		PKiKP	**PKPdf**	**18 01 40.1**	**-0.4**	
SONM							18 02 22.1		
ULN	**Ulaanbaatar**	**159.46**	**19**			**PKPdf**	**18 01 40.6**	**-0.1**	
ULN					PKPab	**PKPab**	**18 02 23.3**	**+0.5**	
ULN	**Ulaanbaatar**	**159.46**	**19**		PKiKP	**PKPdf**	**18 01 40.6**	**-0.1**	
ULN							18 02 23.3		
MJAR	**Matsushiro Arr**	**160.44**	**299**		PKPab	**PKPab**	**18 02 27.8**	**+0.3**	
	comp=Z,3.0nm,0.7s,baz=74,slow=5.1,SNR=7.4								
CMAR	**Chiang Mai Arr**	**160.67**	**118**		PKP	**PKPdf**	**18 01 43.9**	**+1.1**	
	comp=Z,1.8nm,0.8s,baz=258,slow=3.2,SNR=16								
CMAR					PKPab	**PKPab**	**18 02 28.6**	**-0.2**	
	comp=Z,2.0nm,0.9s,baz=240,slow=4.3,SNR=10								
CMAR					pPKPab	**pPKPab**	**18 04 39.8**	**0.0**	
	comp=Z,0.8nm,0.8s,baz=241,slow=4.7,SNR=5.8								
CMAR	**Chiang Mai Arr**	**160.67**	**118**			**PKPdf**	**18 01 43.4**	**+0.7**	
CMAR						**PKPab**	**18 02 27.1**	**-1.7**	
CMAR	**Chiang Mai Arr**	**160.67**	**118**		PKiKP	**PKPdf**	**18 01 43.4**	**+0.7**	
CMAR							18 02 27.1		
CHTO	**Chiang Mai**	**160.88**	**117**			**PKPdf**	**18 01 41.9**	**-1.1**	
CHTO					PKPab	**PKPab**	**18 02 28.4**	**-1.3**	
CHTO	**Chiang Mai**	**160.88**	**117**		PKiKP	**PKPdf**	**18 01 41.9**	**-1.1**	
CHTO							18 02 28.5		
BNX	**BinXian**	**161.11**	**337**		PKP	**PKPdf**	**18 01 41.5**	**-0.9**	
GTA2	**Gaotai**	**162.28**	**48**		PKP	**PKPdf**	**18 01 44.5**	**+0.5**	
GTA2					PKPab	**PKPab**	**18 02 36.8**	**+1.3**	
PZH	**PanZhiHua**	**166.41**	**96**		PKP	**PKPdf**	**18 01 46.5**	**-1.4**	
BTO2	**Baotou**	**166.74**	**24**	*e*	PKP	**PKPdf**	**18 01 43.8**	**-4.0**	
BTO2					PPMZ				
	comp=Z,280nm,4.6s								
LZDM	**Lanzhou Array**	**166.76**	**54**		PKPab	**PKPab**	**18 02 56.1**	**+0.4**	
	comp=Z,5.7nm,0.4s,baz=325,slow=2.3,SNR=4.6								
HHC	**Hu-ho-hao-te**	**167.17**	**18**	*e*	PKP	**PKPdf**	**18 01 46.8**	**-1.2**	
KSRS	**Korea Array**	**167.31**	**316**		PKP	**PKPdf**	**18 01 49.2**	**+1.1**	
	comp=Z,1.6nm,0.9s,baz=41,slow=0.5,SNR=4.6								
KSRS					PKPab	**PKPab**	**18 02 57.9**	**+0.4**	
	comp=Z,1.1nm,0.8s,baz=47,slow=3.9,SNR=2.0								
BJI2	**Beijing**	**168.74**	**3**		PKP	**PKPdf**	**18 01 49.5**	**+0.5**	
BJI2					pPKP	**pPKPdf**	**18 04 10.0**	**+1.0**	
BJI2					PKS	**PKSdf**	**18 05 21.0**	**-0.4**	
HNS	**HongShan**	**171.19**	**11**	⇑	PKP	**PKPdf**	**18 01 52.0**	**+1.6**	
HNS					PKPab	**PKPab**	**18 03 16.0**	**+1.4**	
XAN	**Xi'an**	**171.41**	**50**		PKP	**PKPdf**	**18 01 51.0**	**+0.3**	
NJ2	**Nanjing**	**176.28**	**333**	*e*	PKP	**PKPdf**	**18 01 53.8**	**+1.4**	

UUSS ***27*** *17:56:01.9±1.7, 40.73N±0.01×112.07W±0.04, h11km±3km, Error ellipse: s-maj=4.1km s-min=2.0km az=84.0*

**NEIC 27 17:56:01.6±1.8, 40.73N±0.01×112.09W

PV01	**Paradox Valley**	**3.76**	**132**	Pn	Pn	17 57 00.9 +1.0
PV01				IAML		17 57 59.3
	comp=E,8.7nm,4.2s					

IDC ***27*** *17:59:34.4±1.4,5.°88S×142.°78E,h0km,mb3.9/4, mbtmp4.0/6,ML3.9/2,MS3.1/4,Error ellipse: s-maj=57.7km s-min=22.8km az=103.0*
NEIC ***27*** *17:59:36.3±2.8,6.°1S±0.°1×143.°1E±0.°1,h10km±1km, mb4.5/8,Error ellipse: s-maj=21.6km s-min=16.8km az=46.0*
ISC 27 17:59:35.9±0.8,**6.°22S**±0.°09×**143.°0E**±0.°1,**h10**km,**n24,** σ**2**§**00**/**22,mb4.3/6,New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.21**	**128**	LR	LR	18 03 37.8	
	comp=Z,120nm,21.4s,baz=331,slow=44						
PMG	**Port Moresby**	**5.21**	**128**	Pn	**Pn**	**18 00 52.0**	**-2.0**
COEN	**Coen**	**7.70**	**179**	Pn	**Pn**	**18 01 29.7**	**+1.6**
FAKI	**Fak Fak**	**11.19**	**287**	Pn	**Pn**	**18 02 16.4**	**+0.3**
SIJI	**Sorong**	**12.84**	**294**	LR	LR	18 08 49.0	
	comp=Z,129nm,18.2s,baz=50,slow=44						
MTN	**Manton Dam**	**13.41**	**240**		**Pn**	**18 02 47.1**	**+0.6**
CTA	**Charters Tower**	**14.15**	**167**	LR	LR	18 08 24.9	
	comp=Z,80nm,19.0s,baz=28,slow=36						
WRA	**Warramunga Arr**	**16.02**	**211**	Pn	**Pn**	**18 03 22.3**	**+0.7**
	0.3nm,0.3s,baz=33,slow=13,SNR=7.4						
WRA				Sn	**Sn**	**18 06 14.3**	**-5.1**
	0.2nm,0.3s,baz=40,slow=20,SNR=3.6						
WRA				Lg	Lg	18 08 06.7	
	0.1nm,0.3s,baz=26,slow=28,SNR=4.9						
	1.2nm,0.6s						
KNRA	**Kununurra**	**16.82**	**235**	P	**Pn**	**18 03 32.4**	**+0.6**
KNRA				IAmb	IAmb	18 03 36.9	
	comp=Z,28nm,1.1s						
SOEI	**Soe**	**18.87**	**258**	P	**P**	**18 03 57.4**	**+0.8**
AS31	**Alice Springs**	**19.43**	**206**		**Pn**	**18 04 06.4**	**+2.6**
ASAR	**Alice Springs**	**19.43**	**206**	P	**Pn**	**18 04 06.7**	**+2.9**
	comp=Z,0.6nm,0.3s,baz=34,slow=9.7,SNR=69						
ASAR				S	**S**	**18 07 40.2**	**-2.3**
	comp=Z,0.2nm,0.6s,baz=23,slow=29,SNR=2.7						
ASAR				Lg	Lg	18 09 57.1	
	baz=20,slow=30						
	comp=Z,11nm,0.8s						
ASAR	**Alice Springs**	**19.43**	**206**		**Pn**	**18 04 06.2**	**+2.4**
BBOO	**Buckleboo**	**27.24**	**193**	P	**P**	**18 05 22.3**	**+2.0**
BBOO				IAmb	IAmb	18 05 23.9	
	comp=Z,10nm,1.5s						
ASAJ	**Asahikawa**	**50.10**	**360**	LR	LR	18 28 21.8	
	comp=Z,14nm,21.3s,baz=160,slow=35						
MKAR	**Makanchi Array**	**75.16**	**322**	P	**P**	**18 11 17.2**	**-1.3**
	comp=Z,0.4nm,0.7s,baz=101,slow=6.5,SNR=4.7						
	comp=Z,0.4nm,0.7s						
QSPA	**South Pole Qui**	**83.75**	**180**	P	**P**	**18 12 06.2**	**+1.0**
	comp=Z,2.6nm,1.1s,baz=342,slow=4.6,SNR=2.9						
	comp=Z,2.6nm,1.1s						
QSPA	**South Pole Qui**	**83.75**	**180**	P	**P**	**18 12 05.4**	**+0.2**
QSPA				IAmb	IAmb	18 12 37.4	
	comp=Z,6.1nm,1.4s						
BVAR	**Borovoye Array**	**84.61**	**325**	P	**P**	**18 12 08.4**	**-1.2**
	comp=Z,1.2nm,0.8s,baz=112,slow=6.6,SNR=7.4						
	comp=Z,1.2nm,0.8s						
ILAR	**Eielson Array**	**87.27**	**24**	P	**P**	**18 12 20.1**	**-2.5**
	comp=Z,0.3nm,0.7s,baz=254,slow=4.8,SNR=2.9						
	comp=Z,0.3nm,0.7s						
D23K	**Nanushuk River**	**87.49**	**19**	P	**P**	**18 12 24.5**	**+1.0**
C23K	**Itkillik River**	**87.87**	**19**	P	**P**	**18 12 25.2**	**-0.1**
BMAR	**Burnt Mountain**	**89.05**	**22**	P	**P**	**18 12 30.9**	**-0.1**
I27K	**Kandik River**	**89.64**	**24**	P	**P**	**18 12 33.3**	**-0.5**
I27K				IAmb	IAmb	18 12 35.9	
	comp=Z,5.2nm,1.4s						

CATAC ***27*** *18:01:13.3±0.5,14.°N±3.°×9.°1W±.°,h35km±8km,M3.7/12, MLv3.7/12,Error ellipse: s-maj=8.3km s-min=2.9km az=35.7,confirmed*
SNET ***27*** *18:01:13.4±2.4,14.°02N×91.°33W,h53km,ML3.8, Presumed earthquake*
GCG ***27*** *18:01:14.6±1.1,14.°09N×91.°31W,h50km±11km,MD4.1, ML4.0,MW3.4,Presumed earthquake*
ISC 27 18:01:15.9±1.7,**14.°10N**±0.°09×**91.°18W**±0.°06,**h65**km±11km, **n35,**σ**1**§**95/48,Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STG5	**El Palmar, Qui**	**0.34**	**332**	*i* P	**Pn**	**18 01 27.8**	**+0.9**
STG5				*i* S	**Sn**	**18 01 38.0**	**+3.0**
STG2	**El Palmar, Qui**	**0.38**	**331**	*i* P	**Pn**	**18 01 28.8**	**+1.5**
STG2				*i* S	**Sn**	**18 01 39.4**	**+3.8**
STG8	**El Palmar, Qui**	**0.39**	**335**	*i* P	**Pn**	**18 01 28.8**	**+1.3**
STG8				*i* S	**Sn**	**18 01 39.7**	**+3.8**
FG8	**Yepocapa, Chim**	**0.62**	**75**	*i* P	**Pn**	**18 01 26.6**	**-3.1**
FG8				*i* S	**Sn**	**18 01 35.8**	**-4.0**
RTAL	**Retalhuleu**	**0.65**	**310**	P	**Pn**	**18 01 27.2**	**-2.7**
RTAL				S	**Sn**	**18 01 37.5**	**-2.7**
FG16	**Alotenango, Sa**	**0.67**	**75**	*i* P	**Pn**	**18 01 27.5**	**-2.8**
FG16				*i* S	**Sn**	**18 01 37.6**	**-3.3**
SOKI	**Kika Raxquin**	**0.75**	**343**	*i* P	**Pn**	**18 01 30.0**	**-1.4**
SOKI				IAML		18 01 46.7	
	comp=N,5μm,0.8s						
PCG5	**San Vicente Pa**	**0.79**	**82**	*i* P	**Pn**	**18 01 28.8**	**-2.8**
PCG5				*i* S	**Sn**	**18 01 39.7**	**-3.6**
PCG5				AMP		18 01 41.2	
	comp=N,10μm,0.3s						
GCG4	**OSOP**	**0.79**	**52**	*i* P	**Pn**	**18 01 32.6**	**+0.8**
GCG4				IAML		18 01 50.8	
	comp=E,2μm,0.4s						
QUEO	**Labor Ovalle**	**0.83**	**337**	*i* P	**Pn**	**18 01 31.2**	**-1.1**
ESSJ	**San Jos, E**	**0.85**	**129**	*i* P	Pn	18 01 26.1	-6.2
ESSJ				IAML		18 01 37.3	
	comp=N,8μm,0.5s						
APG	**El Apazote**	**1.14**	**38**	*i* P	**Pn**	**18 01 36.3**	**+0.2**
SMCA	**Catarina**	**1.15**	**311**	*i* P	**Pn**	**18 01 33.0**	**-3.1**
SMCA				IAML		18 01 49.5	
	comp=N,1μm,0.3s						
FAME	**Alcaldia de Sa**	**1.16**	**103**	P	**Pn**	**18 01 35.0**	**-1.2**
FAME				S	**Sn**	**18 01 51.8**	**+0.4**
QUIS	**Sacapulas**	**1.19**	**4**	*i* P	**Pn**	**18 01 36.9**	**+0.2**
QUIS				IAML		18 01 56.4	
	comp=E,842nm,0.4s						
HUEH	**Huehuetenango**	**1.25**	**346**	S	**Sn**	**18 01 54.5**	**+0.7**
HUEH	**Huehuetenango**	**1.25**	**346**	*i* P	**Pn**	**18 01 37.2**	**-0.4**
SLOZ	**Alcaldia de Sa**	**1.36**	**93**	*i* P	**Pn**	**18 01 38.6**	**-0.2**
SLOZ				S	**Sn**	**18 01 57.9**	**+1.8**
LOAL	**Lomas de Alarc**	**1.36**	**94**	P	**Pn**	**18 01 39.0**	**+0.1**
LOAL				S	**Sn**	**18 01 58.2**	**+2.0**
LOAL	**Lomas de Alarc**	**1.36**	**94**	*e*S	**Sn**	**18 01 57.4**	**+1.1**
CEVE	**Cerro Verde**	**1.54**	**100**	P	**Pn**	**18 01 41.2**	**-0.2**
CEVE	**Cerro Verde**	**1.54**	**100**	*e*P	**Pn**	**18 01 41.5**	**+0.1**
CEVE				*e*S	**Sn**	**18 02 02.2**	**+1.6**
UNIC	**Universidad Ca**	**1.59**	**94**	P	**Pn**	**18 01 41.5**	**-0.5**
UNIC				S	**Sn**	**18 02 03.5**	**+1.9**
JAYA	**Jayaque - finc**	**1.74**	**105**	P	**Pn**	**18 01 43.6**	**-0.5**
JAYA	**Jayaque - finc**	**1.74**	**105**	*i* P	**Pn**	**18 01 43.8**	**-0.3**
JAYA				IAML		18 02 07.8	
	comp=N,2μm,0.4s						
JAYA	**Jayaque - finc**	**1.74**	**105**	*e*P	**Pn**	**18 01 43.6**	**-0.5**
JAYA				*e*S	**Sn**	**18 02 05.3**	**-0.1**
CEDA	**San Andres**	**1.76**	**99**	S	**Sn**	**18 02 07.5**	**+1.8**
MTO3	**Montecristo**	**1.79**	**80**	P	**Pn**	**18 01 44.4**	**-0.4**
MTO3	**Montecristo**	**1.79**	**80**	*i* P	**Pn**	**18 01 44.3**	**-0.4**
PMON	**Piamonte**	**1.85**	**102**	P	**Pn**	**18 01 45.7**	**+0.1**
PMON				S	**Sn**	**18 02 09.6**	**+1.5**
BOQS	**Boqueron**	**1.88**	**101**	*e*P	**Pn**	**18 01 47.5**	**+1.5**
SEMO	**Seminario San**	**1.94**	**101**	S	**Sn**	**18 02 11.6**	**+1.5**
LOMA	**Loma Larga**	**2.00**	**103**	S	**Sn**	**18 02 13.2**	**+1.4**
LOMA	**Loma Larga**	**2.00**	**103**	*e*P	**Pn**	**18 01 48.5**	**+0.9**
PANCS	**Alcalda de**	**2.00**	**104**	S	**Sn**	**18 02 12.8**	**+1.1**

ANF ***27*** *18:49:56.5±0.2,61.°35N×146.°64W,h18km±2km,ML4.2/98, Error ellipse: s-maj=1.3km s-min=1.0km az=173.0*
NEIC ***27*** *18:49:57,61.°41N×146.°62W,h32km,Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=3.07; Mθθ=1.53; Mϕϕ4.60; Mrθ2.45; Mθϕ2.75; Mϕr=1.55; Fault plane solution: M₀5.69000×10¹⁴ NP1:ϕs347.00000°, δ62.00000°,λ=139.00000°. NP2:ϕs235.00000°, δ55.00000°,λ=35.00000°. Principal axes: T 5.6948, Plg4.0000°, Azm110.0000°; N 0.0000, Plg42.0000°, Azm16.0000°; P -5.6947, Plg48.0000°, Azm204.0000°;*

NEIC ***27*** *18:49:57.6±1.6,61.°41N±0.°02×146.°59W±0.°05,h38km±7km, mb4.0/11,ML4.0/228,ML3.9(AEIC),Mwr3.8/14(SLM) Error ellipse: s-maj=3.5km s-min=3.0km az=190.0*
AEIC ***27*** *18:49:58.1±1.6,61.°42N±0.°02×146.°56W±0.°04,h20km±4km, Error ellipse: s-maj=3.3km s-min=2.5km az=205.0*
IDC ***27*** *18:49:58.2±1.2,61.°35N×146.°87W,h46km±13km,mb3.2/11, mbtmp3.5/14,ML3.7/4,MS3.1/6,Error ellipse: s-maj=15.0km s-min=9.9km az=105.0*
ISC 27 18:49:55.2±1.2,**61.°37N**±0.°02×**146.°64W**±0.°02,**h16**km±8km, **n451,**σ**1**§**31/467,mb3.6**/15,**MS3.0**/4,**Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KLU	**Klutina**	**0.37**	**70**		**Pb**	**18 50 05.0**	**+1.7**
KLU					**Sb**	**18 50 10.6**	**+1.8**
KLU	**Klutina**	**0.37**	**70**	P	**Pb**	**18 50 05.0**	**+1.7**
	baz=250,SNR=1000						
KLU				S	**Sb**	**18 50 10.7**	**+1.8**
	baz=250						
DIV	**Divide**	**0.48**	**119**		**Pb**	**18 50 06.6**	**+1.3**
DIV					**Sb**	**18 50 13.8**	**+1.6**
DIV				IAML		18 50 14.7	
	comp=E,7μm,0.5s						
DIV				IAML		18 50 15.5	
	comp=N,10μm,0.6s						
GLI	**Glacier Island**	**0.54**	**204**		**Pb**	**18 50 08.3**	**+2.1**
GLI					**Sn**	**18 50 17.2**	**+0.4**
GLI				IAML		18 50 18.3	
	comp=N,8μm,0.3s						
GLI				IAML		18 50 18.7	
	comp=E,8μm,0.4s						
GLI	**Glacier Island**	**0.54**	**204**	P	**Pb**	**18 50 08.3**	**+2.1**
	baz=24,SNR=69						
SCM	**Sheep Creek Mo**	**0.57**	**325**		**Pb**	**18 50 07.9**	**+1.1**
SCM					**Sb**	**18 50 16.2**	**+1.5**
SCM	**Sheep Creek Mo**	**0.57**	**325**	P	**Pb**	**18 50 08.0**	**+1.2**
	baz=145,SNR=739						
SCM				S	**Sb**	**18 50 16.3**	**+1.6**
	baz=145						
M23K	**Glacier View**	**0.67**	**310**		**Pb**	**18 50 09.4**	**+1.0**
M23K					**Sb**	**18 50 18.9**	**+1.3**
M23K	**Glacier View**	**0.67**	**310**	P	**Pb**	**18 50 09.5**	**+1.0**
	baz=129,SNR=1000						
M23K				S	**Sb**	**18 50 18.6**	**+1.1**
	baz=129						
M24K	**Tolsona, Glenn**	**0.77**	**16**		**Pb**	**18 50 11.0**	**+0.8**
M24K					**Sb**	**18 50 21.8**	**+1.2**
M24K				IAML		18 50 22.6	
	comp=E,6μm,0.8s						
M24K	**Tolsona, Glenn**	**0.77**	**16**	P	**Pb**	**18 50 11.1**	**+0.8**
	baz=197,SNR=993						
M24K				S	**Sb**	**18 50 22.0**	**+1.5**
	baz=197						
KNK	**Knik Glacier**	**0.88**	**274**		**Pn**	**18 50 13.2**	**+0.4**
KNK					**Sn**	**18 50 25.4**	**+0.3**
KNK				IAML		18 50 26.9	
	comp=N,5μm,0.8s						
KNK				IAML		18 50 27.2	
	comp=E,5μm,0.4s						
KNK	**Knik Glacier**	**0.88**	**274**	P	**Pn**	**18 50 13.3**	**+0.5**
	baz=92,SNR=1000						
KNK				S	**Sn**	**18 50 25.5**	**+0.3**
	baz=92						
SML	**Sawmill**	**0.92**	**299**		**Pg**	**18 50 13.1**	**+0.1**
SML					**Sb**	**18 50 25.7**	**+0.9**
SML				IAML		18 50 30.0	
	comp=N,5μm,0.5s						
SML	**Sawmill**	**0.92**	**299**	P	**Pb**	**18 50 13.3**	**+0.5**
	baz=118,SNR=738						
EYAK	**Cordova Ski Ar**	**0.93**	**152**		**Pb**	**18 50 14.3**	**+1.4**
EYAK	**Cordova Ski Ar**	**0.93**	**152**	P	**Pb**	**18 50 14.2**	**+1.4**
	baz=332,SNR=212						
HIN	**Hinchinbrook I**	**0.98**	**176**		**Pn**	**18 50 15.4**	**+1.2**
HIN				IAML		18 50 32.6	
	comp=N,4μm,0.3s						
N25K	**Chitina, Valde**	**1.01**	**75**		**Pg**	**18 50 14.1**	**-0.6**
N25K					**Sg**	**18 50 26.4**	**-1.5**
N25K				IAML		18 50 27.5	
	comp=E,3μm,0.6s						
N25K				IAML		18 50 27.6	
	comp=N,4μm,0.5s						
N25K	**Chitina, Valde**	**1.01**	**75**	P	**Pg**	**18 50 14.1**	**-0.6**
	baz=257,SNR=879						
BMRM	**Bremner River**	**1.07**	**111**		**Pb**	**18 50 14.8**	**-0.4**
BMRM					**Sb**	**18 50 29.5**	**+0.6**
BMRM				IAML		18 50 32.9	
	comp=E,4μm,0.5s						
BMRM				IAML		18 50 35.8	
	comp=N,4μm,0.4s						
BMRM	**Bremner River**	**1.07**	**111**	P	**Pb**	**18 50 15.0**	**-0.3**
	baz=293,SNR=1000						
GHO	**Glory Hole Cre**	**1.17**	**291**		**Pb**	**18 50 17.2**	**+0.3**
GHO				IAML		18 50 36.5	
	comp=N,5μm,0.4s						
GHO				IAML		18 50 36.8	
	comp=E,3μm,0.3s						
PMR	**Palmer**	**1.22**	**282**		**Pb**	**18 50 18.4**	**+0.6**
PMR				IAML		18 50 36.1	
	comp=E,2μm,0.4s						
PMR	**Palmer**	**1.22**	**282**	P	**Pb**	**18 50 18.3**	**+0.6**
	baz=100,SNR=713						
GOAT	**Goat Mountain**	**1.22**	**129**		**Pn**	**18 50 18.5**	**+0.9**
WACK	**Wrangell Chich**	**1.27**	**60**		**Pn**	**18 50 18.2**	**-0.1**
WACK					**Sb**	**18 50 34.2**	**-0.6**
WASW	**Wrangell South**	**1.30**	**63**		**Pn**	**18 50 18.2**	**-0.7**
WAT6	**Susitna Watana**	**1.32**	**337**		**Sb**	**18 50 35.5**	**-0.9**
WAT6	**Susitna Watana**	**1.32**	**337**	P	**Pn**	**18 50 18.7**	**-0.4**
	baz=157,SNR=300						
GLB	**Gilahina Butte**	**1.36**	**86**		**Pn**	**18 50 19.3**	**-0.2**
GLB					**Sb**	**18 50 37.1**	**-0.3**
GLB				IAML		18 50 41.5	
	comp=N,2μm,0.4s						
RAGM	**Ragged Mountai**	**1.38**	**135**		**Pb**	**18 50 21.3**	**+0.8**
P23K	**Montague Islan**	**1.43**	**196**		**Pb**	**18 50 22.0**	**+0.7**
P23K				IAML		18 50 44.0	
	comp=E,3μm,0.7s						
P23K	**Montague Islan**	**1.43**	**196**	P	**Pb**	**18 50 22.1**	**+0.7**
	baz=15,SNR=47						
RC01	**Rabbit Creek A**	**1.52**	**261**		**Pb**	**18 50 23.5**	**+0.5**
RC01	**Rabbit Creek A**	**1.52**	**261**	P	**Pb**	**18 50 23.6**	**+0.5**
	baz=78,SNR=340						
VRDI	**Verde Repeater**	**1.55**	**94**		**Pn**	**18 50 22.3**	**+0.2**
VRDI				IAML		18 50 43.0	
	comp=N,2μm,0.6s						
VRDI	**Verde Repeater**	**1.55**	**94**		**Sn**	**18 50 42.3**	**+0.3**
PAX	**Paxson**	**1.70**	**18**		**Pn**	**18 50 24.2**	**+0.1**
PAX					**Sn**	**18 50 45.3**	**-0.3**
PAX				IAML		18 50 46.8	
	comp=E,1μm,0.4s						
PAX	**Paxson**	**1.70**	**18**	P	**Pn**	**18 50 24.6**	**+0.4**
	baz=199,SNR=164						
M22K	**Willow**	**1.71**	**285**		**Pn**	**18 50 25.5**	**+1.3**
M22K	**Willow**	**1.71**	**285**	P	**Pn**	**18 50 25.7**	**+1.5**
	baz=102						
WAT1	**Susitna Watana**	**1.72**	**329**		**Pn**	**18 50 25.1**	**+0.8**
WAT1					**Sn**	**18 50 47.3**	**+1.3**
WAT1	**Susitna Watana**	**1.72**	**329**	P	**Pn**	**18 50 25.2**	**+0.8**
	baz=148						
BERG	**Berg Lake**	**1.74**	**123**		**Pn**	**18 50 25.2**	**+0.5**
MCARA	**McCarthy VSAT**	**1.74**	**88**		**Pn**	**18 50 25.4**	**+0.7**
MCARA					**Sn**	**18 50 48.5**	**+2.0**
MCARA	**McCarthy VSAT**	**1.74**	**88**	P	**Pn**	**18 50 25.5**	**+0.8**
	baz=271,SNR=287						
DHY	**Denali Highway**	**1.75**	**349**		**Pn**	**18 50 25.4**	**+0.4**
DHY					**Sn**	**18 50 46.7**	**-0.2**
DHY				IAML		18 50 51.3	
	comp=E,1μm,0.5s						
DHY	**Denali Highway**	**1.75**	**349**	P	**Pn**	**18 50 25.5**	**+0.6**
	baz=168,SNR=459						
O22K	**Cooper Landing**	**1.75**	**241**	Pn	**Pn**	**18 50 26.6**	**+1.8**
O22K	**Cooper Landing**	**1.75**	**241**	P	**Pn**	**18 50 26.3**	**+1.5**
	baz=58,SNR=100						
WAT7	**Susitna Watana**	**1.80**	**326**		**Pn**	**18 50 26.2**	**+0.7**
WAT7					**Sb**	**18 50 49.7**	**-0.4**
CRQM	**Cirque**	**1.81**	**108**		**Pn**	**18 50 26.6**	**+0.8**
KAIM	**Kayak Island**	**1.81**	**142**		**Pn**	**18 50 26.7**	**+1.1**
KAIM				IAML		18 50 59.2	
	comp=N,1μm,0.6s						
KAIM				IAML		18 50 59.5	
	comp=E,1μm,0.7s						
KAIM	**Kayak Island**	**1.81**	**142**	P	**Pn**	**18 50 26.3**	**+0.6**
	baz=324						
CRQE	**Cirque**	**1.83**	**108**	P	**Pn**	**18 50 26.8**	**+0.7**
	baz=291,SNR=659						
SEW	**Seward**	**1.88**	**229**		**Pn**	**18 50 28.1**	**+1.6**
SEW				IAML		18 50 55.0	
	comp=N,1μm,0.6s						
SEW				IAML		18 50 57.8	
	comp=E,1μm,0.4s						
SEW	**Seward**	**1.88**	**229**	P	**Pn**	**18 50 27.8**	**+1.4**
	baz=46,SNR=65						
SUCK	**Suckling Hills**	**1.92**	**131**		**Pn**	**18 50 28.2**	**+1.1**
SUCK				IAML		18 50 57.5	
	comp=N,2μm,0.7s						
SLKM	**Skilak Lake**	**1.95**	**245**	Pn	**Pn**	**18 50 29.3**	**+1.7**
Q23K	**Middleton Isla**	**1.95**	**176**	P	**Pn**	**18 50 29.3**	**+1.8**
	baz=356						
TGL	**Tana Glacier**	**1.95**	**107**		**Pn**	**18 50 28.4**	**+0.7**
TGL				IAML		18 50 55.5	
	comp=E,2μm,0.5s						
TGL				IAML		18 50 56.8	
	comp=N,2μm,0.6s						
MID	**Middleton Isla**	**1.95**	**175**		**Pn**	**18 50 29.1**	**+1.6**
CUT	**Chulitna**	**2.01**	**303**		**Pn**	**18 50 30.2**	**+1.9**
CUT	**Chulitna**	**2.01**	**303**	P	**Pn**	**18 50 30.3**	**+2.0**
	baz=120,SNR=664						
M26K	**Nabesna, AK**	**2.01**	**57**		**Pn**	**18 50 29.7**	**+1.3**
M26K	**Nabesna, AK**	**2.01**	**57**	P	**Pn**	**18 50 29.9**	**+1.5**
	baz=240,SNR=315						
BGLC	**Bering Glacier**	**2.07**	**126**	P	**Pn**	**18 50 31.5**	**+2.3**
	baz=309,SNR=12						
MENT	**Mentasta**	**2.09**	**40**		**Pn**	**18 50 30.3**	**+0.9**
MENT				IAML		18 51 00.8	
	comp=E,1μm,0.6s						
MENT				IAML		18 51 01.8	
	comp=N,1μm,0.6s						
L26K	**Log Cabin Wild**	**2.27**	**41**		**Pn**	**18 50 33.3**	**+1.3**
L26K				IAML		18 51 04.6	
	comp=E,1μm,0.4s						
L26K				IAML		18 51 05.1	
	comp=N,976nm,0.4s						
L26K	**Log Cabin Wild**	**2.27**	**41**	P	**Pn**	**18 50 33.6**	**+1.7**
	baz=224,SNR=105						
L22K	**Petersville**	**2.27**	**303**		**Pn**	**18 50 34.1**	**+2.1**
L22K				IAML		18 51 06.8	
	comp=E,1μm,0.4s						
CAPN	**Captain Cook N**	**2.27**	**257**		**Pb**	**18 50 34.8**	**-1.0**
CAPN	**Captain Cook N**	**2.27**	**257**	P	**Pn**	**18 50 34.2**	**+2.2**
	baz=73						
RND	**Reindeer**	**2.29**	**334**		**Pn**	**18 50 33.5**	**+1.2**
RND				IAML		18 51 04.1	
	comp=N,790nm,0.7s						
RND				IAML		18 51 05.5	
	comp=E,924nm,0.9s						
SKT	**Skwentna**	**2.41**	**287**		**Pn**	**18 50 35.5**	**+1.7**
SKT	**Skwentna**	**2.41**	**287**	P	**Pn**	**18 50 35.6**	**+1.7**
	baz=103,SNR=1000						
BARN	**Barnard Glacie**	**2.43**	**95**		**Pn**	**18 50 35.0**	**+0.7**
BARN				IAML		18 51 16.1	
	comp=N,575nm,0.7s						
BARN				IAML		18 51 17.9	
	comp=E,945nm,0.6s						
GRNC	**Granite Creek**	**2.46**	**103**		**Pn**	**18 50 35.1**	**+0.4**
GRNC				IAML		18 51 14.6	
	comp=N,984nm,0.5s						
M27K	**Edge Creek, AK**	**2.46**	**64**		**Pn**	**18 50 36.3**	**+1.5**
M27K	**Edge Creek, AK**	**2.46**	**64**	P	**Pn**	**18 50 36.6**	**+1.8**
	baz=248						
K24K	**Donnelly Dome**	**2.48**	**9**		**Pn**	**18 50 37.0**	**+2.2**
K24K				IAML		18 51 19.9	
	comp=E,1μm,0.6s						
K24K				IAML		18 51 23.3	
	comp=N,992nm,0.6s						
K24K	**Donnelly Dome**	**2.48**	**9**	P	**Pn**	**18 50 37.1**	**+2.3**
	baz=190,SNR=172						
STLK	**Strandline Lak**	**2.50**	**275**		**Pn**	**18 50 36.8**	**+1.7**
STLK				IAML		18 51 10.7	
	comp=E,694nm,0.5s						
STLK				IAML		18 51 12.9	
	comp=N,1μm,0.4s						
RIDG	**Independent Ri**	**2.52**	**18**		**Pn**	**18 50 37.1**	**+1.6**
RIDG				IAML		18 51 23.7	
	comp=N,775nm,1.0s						
RIDG				IAML		18 51 27.2	
	comp=E,575nm,0.7s						
RIDG	**Independent Ri**	**2.52**	**18**	P	**Pn**	**18 50 37.2**	**+1.8**
	baz=200,SNR=146						
DOT	**Dot Lake**	**2.58**	**26**	Pn	**Pn**	**18 50 37.7**	**+1.5**
DOT				IAML		18 51 19.9	
	comp=E,525nm,0.6s						
MESA	**MESA**	**2.59**	**115**		**Pn**	**18 50 37.0**	**+0.4**
MESA	**MESA**	**2.59**	**115**	P	**Pn**	**18 50 37.2**	**+0.7**
	baz=299,SNR=112						
SPCG	**Spurr Capps Gl**	**2.59**	**271**		**Pn**	**18 50 38.5**	**+1.9**
MCK	**McKinley**	**2.60**	**337**		**Pn**	**18 50 38.1**	**+1.6**
MCK				IAML		18 51 17.3	
	comp=E,648nm,0.7s						
MCK				IAML		18 51 19.7	
	comp=N,615nm,0.7s						
MCK	**McKinley**	**2.60**	**337**	P	**Pn**	**18 50 38.2**	**+1.6**
	baz=155,SNR=133						
CTG	**Chitna Glacier**	**2.60**	**97**	P	**Pn**	**18 50 37.6**	**+1.0**
	baz=281,SNR=134						
BRSE	**Bradley Lake S**	**2.60**	**233**	P	**Pn**	**18 50 38.3**	**+1.8**
	baz=49,SNR=54						
CTGM	**Chitina Glacie**	**2.60**	**97**		**Pn**	**18 50 37.4**	**+0.8**
SPU	**Mount Spurr**	**2.62**	**268**		**Pn**	**18 50 38.1**	**+1.3**
BRLK	**Bradley Lake**	**2.64**	**234**		**Pn**	**18 50 38.9**	**+1.8**
BRLK				IAML		18 51 19.7	
	comp=N,714nm,0.6s						
BRLK				IAML		18 51 20.9	
	comp=E,855nm,0.5s						
SPCN	**Chakachatna No**	**2.68**	**269**		**Pn**	**18 50 39.6**	**+2.0**
TRF	**Thorofare Moun**	**2.69**	**322**		**Pn**	**18 50 39.2**	**+1.3**
TRF				IAML		18 51 28.1	
	comp=E,620nm,0.8s						
TRF				IAML

RED **Redoubt Volcan** 3.14 255 Pn 18 50 45.4 +1.3
RED IAML 18 51 32.5
comp=N,714nm,0.6s
WRH **Wood River Hil** 3.18 349 Pn 18 50 45.2 +0.7
WRH IAML 18 51 37.5
comp=E,396nm,0.8s
O28M **Mount Upton** 3.19 98 Pn 18 50 45.8 +1.0
O28M IAML 18 51 34.9
comp=N,320nm,0.6s
O28M **Mount Upton** 3.19 98 P Pn 18 50 46.1 +1.3
baz=284,SNR=119
J25K **Salcha River,** 3.31 10 Pn 18 50 47.0 +0.7
J25K **Salcha River,** 3.31 10 P Pn 18 50 47.0 +0.7
baz=191
YUK8 **Steele Glacier** 3.32 88 P Pn 18 50 48.3 +1.8
baz=274,SNR=44
CCB **Clear Creek Bu** 3.33 351 Pn 18 50 47.0 +0.5
CCB IAML 18 51 32.5
comp=E,271nm,0.5s
PCA **Pinnacle** 3.38 109 Pn 18 50 47.9 +0.5
PINM **Pinnacle** 3.39 109 P Pn 18 50 48.0 +0.6
baz=295,SNR=51
BPAW **Bear Paw Mtn.** 3.39 326 Pn 18 50 48.2 +0.8
BPAW IAML 18 51 43.9
comp=E,258nm,0.7s
BPAW IAML 18 51 43.9
comp=N,357nm,0.7s
BPAW **Bear Paw Mtn.** 3.39 326 P Pn 18 50 48.5 +1.1
baz=142,SNR=21
K27K **Chicken** 3.40 36 Pn 18 50 48.5 +1.0
IL31 3.42 358 Pn 18 50 47.8 +0.2
ILAR **Eielson Array** 3.42 358 P Pn 18 50 48.0 +0.4
comp=N,12nm,0.3s,baz=177,slow=14,SNR=154
ILAR S Sn 18 51 29.9 +2.1
comp=N,87nm,0.6s,baz=185,slow=18,SNR=3.2
ILAR **Eielson Array** 3.42 358 Pn 18 50 47.8 +0.1
NEA2 **Nenana** 3.42 342 Pn 18 50 47.9 +0.2
NEA2 **Nenana** 3.42 342 P Pn 18 50 48.4 +0.7
baz=160,SNR=31
ILSW **Iliamna Southw** 3.49 249 Pn 18 50 49.9 +1.2
ILSW IAML 18 51 36.1
comp=N,296nm,0.6s
ILSW IAML 18 51 44.6
comp=E,371nm,0.8s
COLA **College** 3.56 352 Pn Pn 18 50 49.5 -0.2
COLA IAML 18 51 55.2
comp=E,528nm,0.7s
COLA **College** 3.56 352 P Pn 18 50 51.2 +1.5
baz=170
CHUM **Lake Minchumin** 3.64 316 Pn 18 50 52.0 +1.3
CHUM **Lake Minchumin** 3.64 316 P Pn 18 50 51.9 +1.3
baz=132,SNR=75
P19K **Oil Pt** 3.69 245 Pn 18 50 52.9 +1.5
P19K **Oil Pt** 3.69 245 P Pn 18 50 52.4 +1.0
baz=59
BCPM **Bancas Point** 3.73 109 Pn 18 50 52.3 +0.3
BCPM IAML 18 51 46.6
comp=E,376nm,0.3s
BCPM IAML 18 51 49.0
comp=N,343nm,0.5s
M19K **Big River Lodg** 3.74 282 Pn 18 50 53.0 +0.9
M19K **Big River Lodg** 3.74 282 IAML 18 51 59.6
comp=E,218nm,0.5s
M19K IAML 18 52 03.7
comp=N,247nm,0.9s
M19K **Big River Lodg** 3.74 282 P Pn 18 50 53.1 +0.9
baz=95
POKR **Poker Plat Res** 3.78 355 P Pn 18 50 53.2 +0.5
baz=174
N19K **Bonanza Creek** 3.85 265 Pn 18 50 54.7 +0.9
N19K **Bonanza Creek** 3.85 265 IAML 18 52 00.8
comp=E,193nm,0.8s
N19K IAML 18 52 02.5
comp=N,168nm,0.7s
N19K **Bonanza Creek** 3.85 265 P Pn 18 50 54.6 +0.9
baz=78
YUK4 **Talbot Arm** 3.85 87 P Pn 18 50 55.2 +1.4
baz=272,SNR=13
AU22 **Augustine Moun** 3.89 242 Pn 18 50 56.1 +1.9
AUL **Augustine Lava** 3.92 242 Pn 18 50 56.3 +1.8
AUCH **Augustine Cone** 3.93 242 Pn 18 50 56.9 +2.1
O19K **Port Alsworth** 3.94 256 Pn 18 50 55.8 +0.9
O19K **Port Alsworth** 3.94 256 P Pn 18 50 56.0 +1.1
baz=69,SNR=12
L19K **White Mountain** 3.99 285 Pn 18 50 56.6 +1.0
L19K IAML 18 52 09.1
comp=N,152nm,0.8s
L19K IAML 18 52 19.2
comp=E,170nm,1.0s
L19K **White Mountain** 3.99 285 P Pn 18 50 56.5 +1.0
baz=98,SNR=41
I23K **Minto, Yukon-K** 3.99 343 Pn 18 50 56.1 +0.6
I23K **Minto, Yukon-K** 3.99 343 IAML 18 52 03.7
comp=E,179nm,0.7s
I23K IAML 18 52 09.5
comp=N,252nm,0.8s
I23K **Minto, Yukon-K** 3.99 343 P Pn 18 50 56.4 +0.9
baz=161,SNR=63
K20K **Telida** 3.99 303 Pn 18 50 55.8 +0.2
K20K IAML 18 52 08.9
comp=E,206nm,0.8s
K20K **Telida** 3.99 303 P Pn 18 50 56.4 +0.7
baz=117
SYI **Shuyak Island** 4.00 229 Pn 18 50 57.5 +1.9
SYI IAML 18 51 44.6
comp=E,197nm,0.6s
SYI IAML 18 51 45.0
comp=N,196nm,0.5s
Q20K **Shuyak Island** 4.00 229 P Pn 18 50 57.4 +1.7
baz=44,SNR=9.4
M29M **Somme Creek** 4.02 71 Pn 18 50 56.4 +0.4
M29M **Somme Creek** 4.02 71 P Pn 18 50 57.4 +1.4
baz=258,SNR=42
YUK6 **Outpost Mounta** 4.03 92 P Pn 18 50 56.9 +0.5
baz=280,SNR=12
O29M **Mount Kennedy** 4.09 102 Pn 18 50 57.0 -0.1
O29M IAML 18 52 01.6
comp=N,188nm,0.5s
O29M IAML 18 52 01.9
comp=E,173nm,0.7s
O29M **Mount Kennedy** 4.09 102 P Pn 18 50 57.6 +0.6
baz=289,SNR=41
PRP **Porcupine Dome** 4.20 6 Pn 18 50 58.6 +0.1
PRP IAML 18 51 54.6
comp=N,164nm,0.7s
PRP IAML 18 52 10.9
comp=E,137nm,0.7s
PRP **Porcupine Dome** 4.20 6 P Pn 18 50 59.1 +0.6
baz=187,SNR=33
I26K **Coal Creek Min** 4.25 20 Pn 18 50 59.5 +0.4
I26K IAML 18 52 10.6
comp=E,138nm,0.8s
I26K **Coal Creek Min** 4.25 20 P Pn 18 51 00.5 +1.3
baz=203,SNR=20
Q19K **Cape Douglas,** 4.27 238 Pn 18 51 01.1 +1.6
Q19K **Cape Douglas,** 4.27 238 P Pn 18 51 01.1 +1.6
baz=52,SNR=8.0
L29M **L29M** 4.35 63 Pn 18 51 01.0 +0.5
L29M IAML 18 52 20.2
comp=N,144nm,0.6s
L29M IAML 18 52 27.4
comp=E,124nm,0.7s
L29M **L29M** 4.35 63 P Pn 18 51 02.1 +1.6
baz=250,SNR=22
M18K **Stony River** 4.41 276 Pn 18 51 01.9 +0.6
M18K **Stony River** 4.41 276 P Pn 18 51 02.1 +0.7
baz=88
J20K **Nowinta River** 4.45 313 Pn 18 51 02.2 +0.3
J20K IAML 18 52 18.9
comp=E,193nm,0.7s
J20K IAML 18 52 20.1
comp=N,187nm,0.7s
J20K **Nowinta River** 4.45 313 P Pn 18 51 02.9 +1.0
baz=126,SNR=147
HYT **Haines Junctio** 4.47 93 Pn 18 51 02.2 0.0
HYT **Haines Junctio** 4.47 93 P Pn 18 51 03.0 +0.7
baz=281,SNR=12
O18K **Koktuh Hills** 4.49 254 Pn 18 51 03.1 +0.7
O18K IAML 18 52 27.1
comp=N,193nm,0.9s
O18K IAML 18 52 36.7
comp=E,123nm,1.1s
O18K **Koktuh Hills** 4.49 254 P Pn 18 51 02.9 +0.5
baz=67
H24K **Noodor Dome** 4.52 354 Pn 18 51 03.5 +0.6
H24K IAML 18 52 20.2
comp=N,110nm,1.1s
H24K **Noodor Dome** 4.52 354 P Pn 18 51 03.8 +0.9
baz=172,SNR=29
I21K **Tanana** 4.52 330 Pn 18 51 03.1 +0.3
I21K IAML 18 52 21.6
comp=E,114nm,1.0s
I21K **Tanana** 4.52 330 P Pn 18 51 03.9 +1.0
baz=145
N18K **Kilae Creek** 4.55 265 Pn 18 51 03.6 +0.3
N18K IAML 18 52 19.5
comp=N,97nm,0.7s
N18K **Kilae Creek** 4.55 265 P Pn 18 51 03.8 +0.5
baz=77
N30M **Aishikik Lake** 4.59 85 Pn 18 51 03.3 -0.6
N30M **Aishikik Lake** 4.59 85 P Pn 18 51 03.9 0.0
baz=273
KDAK **Kodiak Island** 4.70 223 P Pn 18 51 05.9 +0.6
comp=N,8.8nm,0.3s,baz=32,slow=7.0,SNR=305
KDAK S Sn 18 51 57.5 -1.8
comp=N,31nm,0.4s,baz=306,slow=19,SNR=9.3
KDAK LR LR 18 52 52.6
comp=N,66nm,19.1s,baz=39,slow=38
comp=N,25nm,0.3s
KDAK **Kodiak Island** 4.70 223 Pn 18 51 06.4 +1.2
KDAK IAML 18 52 36.1
comp=N,106nm,0.7s
KDAK IAML 18 52 37.9
comp=N,118nm,1.1s
KDAK **Kodiak Island** 4.70 223 P Pn 18 51 06.2 +0.9
baz=38
P18K **Big Mountain,** 4.70 249 Pn 18 51 05.8 +0.4
P18K **Big Mountain,** 4.70 249 P Pn 18 51 05.8 +0.4
baz=61
M30M **Minto, Yukon** 4.80 71 Pn 18 51 06.5 -0.3
M30M **Minto, Yukon** 4.80 71 P Pn 18 51 07.5 +0.8
baz=260,SNR=9.0
I27K **Kandik River** 4.81 26 Pn 18 51 05.7 -1.2
I27K IAML 18 52 38.6
comp=E,139nm,1.1s
I27K IAML 18 52 38.7
comp=N,136nm,0.9s
I27K **Kandik River** 4.81 26 P Pn 18 51 08.7 +1.8
baz=210,SNR=15
L18K **Granite Mounta** 4.84 285 Pn 18 51 08.1 +0.8
L18K IAML 18 52 34.4
comp=N,125nm,1.1s
L18K **Granite Mounta** 4.84 285 P Pn 18 51 08.0 +0.7
baz=96,SNR=11
K29M **Barlow Dome** 4.89 56 Pn 18 51 07.5 -0.5
K29M **Barlow Dome** 4.89 56 P Pn 18 51 09.3 +1.2
baz=244
J19K **Poorman** 4.90 306 Pn 18 51 08.7 +0.7
J19K **Poorman** 4.90 306 IAML 18 52 32.2
comp=E,110nm,0.7s
J19K IAML 18 52 33.4
comp=N,114nm,0.7s
J19K **Poorman** 4.90 306 P Pn 18 51 08.8 +0.8
baz=118,SNR=72
P30M **Million Dollar** 4.91 100 P Pn 18 51 08.8 +0.6
baz=289
J29N **Klondike Camp** 4.94 48 Pn 18 51 07.9 -0.7
J29N **Klondike Camp** 4.94 48 P Pn 18 51 09.8 +1.2
baz=235
I20K **Naaghedeneel** 4.95 317 Pn Pn 18 51 09.0 +0.3
I20K **Naaghedeneel** 4.95 317 P Pn 18 51 10.0 +1.3
baz=130
Q18K **Katmai Hardscr** 5.01 241 P Pn 18 51 10.6 +0.9
baz=53
H22K **Ishtalitna Cre** 5.01 337 Pn 18 51 09.4 -0.1
H22K **Ishtalitna Cre** 5.01 337 P Pn 18 51 11.0 +1.4
baz=153,SNR=26
I28M **Miner Creek** 5.08 33 Pn 18 51 10.4 -0.2
I28M IAML 18 52 42.5
comp=E,70nm,1.2s
I28M **Miner Creek** 5.08 33 P Pn 18 51 12.1 +1.5
baz=219,SNR=23
KAWH **Katmai** 5.08 238 Pn 18 51 11.8 +1.1
H21K **Melozitna Rive** 5.11 330 Pn 18 51 11.2 +0.3
H21K IAML 18 52 43.8
comp=E,81nm,1.0s
H21K **Melozitna Rive** 5.11 330 P Pn 18 51 11.7 +0.8
baz=145,SNR=97
J18K **Innoko River** 5.13 299 Pn 18 51 11.6 +0.4
J18K **Innoko River** 5.13 299 IAML 18 52 43.4
comp=E,74nm,0.8s
J18K **Innoko River** 5.13 299 P Pn 18 51 11.9 +0.7
baz=110
O30N **Mendenhall** 5.16 92 Pn 18 51 11.3 -0.3
O30N **Mendenhall** 5.16 92 P Pn 18 51 12.0 +0.4
baz=281
M17K **Holitna River** 5.19 275 Pn 18 51 12.4 +0.3
M17K IAML 18 52 52.1
comp=E,136nm,0.8s
M17K **Holitna River** 5.19 275 P Pn 18 51 12.5 +0.4
baz=86,SNR=25
N17K **Nushagak Hills** 5.21 265 Pn 18 51 12.7 +0.4
N17K IAML 18 52 42.0
comp=N,75nm,0.7s
N17K IAML 18 52 49.9
comp=E,70nm,0.7s
N17K **Nushagak Hills** 5.21 265 P Pn 18 51 12.8 +0.5
baz=76
N31M **Braeburn, Yuko** 5.22 84 Pn 18 51 11.0 -1.4
N31M IAML 18 52 45.1
comp=E,83nm,1.1s
N31M IAML 18 53 04.1
comp=N,63nm,1.1s
N31M **Braeburn, Yuko** 5.22 84 P Pn 18 51 13.3 +0.9
baz=274
KAKN **Katmai Knife C** 5.25 238 Pn 18 51 14.1 +1.2
FYU **Fort Yukon** 5.25 6 Pn 18 51 12.1 -0.8
FYU IAML 18 52 49.2
comp=E,144nm,0.9s
FYU IAML 18 52 53.3
comp=N,134nm,1.0s
P17K **Kvichak River** 5.34 250 Pn 18 51 15.1 +1.1
P17K **Kvichak River** 5.34 250 P Pn 18 51 15.1 +1.1
baz=62,SNR=10
G24K **Hadweenzic Riv** 5.37 356 Pn 18 51 13.5 -1.0
G24K IAML 18 53 01.1
comp=N,70nm,1.0s
G24K **Hadweenzic Riv** 5.37 356 P Pn 18 51 14.8 +0.4
baz=176,SNR=8.3
OHAK **Old Harbor** 5.37 222 Pn 18 51 15.1 +0.5
OHAK **Old Harbor** 5.37 222 P Pn 18 51 15.0 +0.5
baz=36
H27K **Steamboat Moun** 5.38 23 Pn 18 51 14.1 -0.5
H27K IAML 18 52 53.8
comp=N,60nm,0.8s
H27K **Steamboat Moun** 5.38 23 P Pn 18 51 16.1 +1.4
baz=207,SNR=18
O17K **Koliganek Bris** 5.40 257 Pn 18 51 15.7 +0.9
O17K **Koliganek Bris** 5.40 257 P Pn 18 51 15.6 +0.7
baz=68
ACHA **Angle Creek He** 5.41 238 Pn 18 51 16.2 +1.1
G25K **Bearman Lake** 5.42 2 Pn 18 51 15.7 +0.5
G25K **Bearman Lake** 5.42 2 P Pn 18 51 16.5 +1.3
baz=183
I29M **Ogilvie Camp,** 5.48 39 Pn 18 51 14.9 -1.2
I29M **Ogilvie Camp,** 5.48 39 P Pn 18 51 17.5 +1.4
baz=227
ANCK **Angle Creek** 5.49 238 Pn 18 51 17.8 +1.6
H20K **Anotleneega Mo** 5.55 322 P Pn 18 51 17.8 +0.9
baz=134,SNR=30
G23K **Bananza Creek** 5.56 346 Pn 18 51 17.2 0.0
G23K **Bananza Creek** 5.56 346 P Pn 18 51 18.4 +1.2
baz=163,SNR=16
L17K **Donlin** 5.59 283 P Pn 18 51 18.0 +0.5
baz=93
CNTC **Contact Creek** 5.61 240 Pn 18 51 19.1 +1.3
IMAR **Indian Mountai** 5.61 329 Pn 18 51 18.0 +0.3
Q17K **Contact Creek** 5.61 240 P Pn 18 51 18.9 +1.0
baz=52
IM01 **Indian Mountai** 5.61 329 Pn 18 51 18.6 +0.9
K17K **Iditarod** 5.65 289 Pn 18 51 19.1 +0.7
K17K **Iditarod** 5.65 289 P Pn 18 51 19.0 +0.7
baz=99
J30M **Hart River** 5.69 51 Pn 18 51 21.4 +2.3
J30M **Hart River** 5.69 51 P Pn 18 51 21.5 +2.5
baz=240,SNR=43
G26K **Porcupine Rive** 5.74 11 Pn 18 51 18.9 -0.6
G26K **Porcupine Rive** 5.74 11 P Pn 18 51 20.1 +0.6
baz=194,SNR=11
GCSA **Galena City Sc** 5.75 310 P Pn 18 51 20.8 +1.0
baz=122
WHY **Whitehorse** 5.76 92 Pn 18 51 20.1 +0.1
WHY **Whitehorse** 5.76 92 P Pn 18 51 19.9 -0.1
baz=282
M31M **Drury Creek, Y** 5.87 76 Pn 18 51 21.6 +0.2
M31M **Drury Creek, Y** 5.87 76 P Pn 18 51 22.4 +1.0
baz=267,SNR=9.1
G27K **Doyon Strip** 5.88 20 P Pn 18 51 23.5 +2.0
baz=204,SNR=13
SKAG **Skagway** 5.92 104 P Pn 18 51 23.4 +1.3
baz=294
O16K **Kokwok River B** 5.94 258 Pn 18 51 22.7 +0.5
O16K **Kokwok River B** 5.94 258 P Pn 18 51 22.7 +0.5
baz=68
M16K **Timber Creek** 5.97 272 Pn 18 51 23.0 +0.3
M16K **Timber Creek** 5.97 272 P Pn 18 51 23.1 +0.4
baz=81
N16K **Nishlik Lake** 5.98 267 Pn 18 51 23.9 +0.9
N16K **Nishlik Lake** 5.98 267 P Pn 18 51 23.8 +0.9
baz=76,SNR=8.0
G21K **Allakaket** 5.98 333 Pn 18 51 23.1 +0.2
G21K **Allakaket** 5.98 333 P Pn 18 51 23.6 +0.7
baz=147
I30M **Mount Dempster** 6.03 46 P Pn 18 51 25.3 +1.6
baz=235,SNR=7.7
H19K **Roundabout Mou** 6.06 318 P Pn 18 51 24.7 +0.8
baz=129,SNR=16
COLD **Coldfoot** 6.08 347 Pn 18 51 24.2 0.0
COLD **Coldfoot** 6.08 347 P Pn 18 51 25.3 +1.1
baz=164,SNR=30
H29M **Whitestone** 6.09 33 Pn 18 51 23.6 -0.8
H29M **Whitestone** 6.09 33 P Pn 18 51 25.6 +1.2
baz=221
P16K **Nushagak River** 6.12 253 Pn 18 51 25.2 +0.4
P16K **Nushagak River** 6.12 253 P Pn 18 51 25.9 +1.1
baz=63
J17K **VABM Dome** 6.13 295 P Pn 18 51 25.1 +0.2
baz=104,SNR=15
L16K **Owhat River** 6.15 279 Pn 18 51 24.8 -0.3
L16K **Owhat River** 6.15 279 P Pn 18 51 25.4 +0.3
baz=88,SNR=7.1
BMAR **Burnt Mountain** 6.15 7 Pn 18 51 25.2 0.0
BM01 **Burnt Mountain** 6.17 8 Pn 18 51 26.0 +0.4
PLK5 **Peulik 5** 6.19 241 Pn 18 51 27.6 +1.9
F24K **Squaw Lake** 6.20 356 P Pn 18 51 27.4 +1.5
baz=174,SNR=25
SII **Sitkinak Islan** 6.20 222 Pn 18 51 26.1 +0.1
SII **Sitkinak Islan** 6.20 222 P Pn 18 51 26.0 +0.1
baz=36
PLK4 **Peulik 4** 6.20 237 Pn 18 51 26.6 +0.6
R17L **Mt. Peulik Vol** 6.21 237 P Pn 18 51 27.4 +1.4
baz=49
F25K **Christian Rive** 6.26 4 Pn 18 51 27.1 +0.2
F25K **Christian Rive** 6.26 4 P Pn 18 51 27.4 +0.6
baz=184,SNR=13
F26K **Sheenjek River** 6.44 9 Pn 18 51 29.4 +0.2
F26K **Sheenjek River** 6.44 9 P Pn 18 51 30.5 +1.2
baz=191,SNR=7.0
H18K **Honhosa River** 6.51 311 Pn 18 51 31.0 +0.9
H18K **Honhosa River** 6.51 311 P Pn 18 51 31.1 +0.9
baz=120
N32M **Quiet Lake** 6.54 86 Pn 18 51 31.2 +0.6
F21K **Alatna River** 6.58 336 Pn 18 51 32.3 +1.2
F21K **Alatna River** 6.58 336 P Pn 18 51 32.4 +1.3
baz=150,SNR=27
F22K **John River** 6.61 341 P Pn 18 51 33.9 +2.4
baz=156
P32M **Atlin** 6.63 100 P Pn 18 51 32.9 +1.0
baz=291
EPYK **Eagle Plains** 6.66 37 P Pn 18 51 33.3 +1.1
baz=226
G19K **Purcell Mounta** 6.66 321 P Pn 18 51 34.2 +2.0
baz=131,SNR=15
N15K **Kwethluk River** 6.70 266 Pn 18 51 33.2 +0.4
N15K **Kwethluk River** 6.70 266 P Pn 18 51 33.6 +0.9
baz=74
G29M **Pine Creek** 6.71 30 P Pn 18 51 34.6 +1.6
baz=218
E24K **Your Creek** 6.78 354 P Pn 18 51 34.9 +1.0
baz=172
J16K **Anvik River** 6.78 293 P Pn 18 51 34.3 +0.5
baz=100,SNR=14
E25K **Arctic Village** 6.79 3 Pn 18 51 32.2 -1.8
E25K **Arctic Village** 6.79 3 P Pn 18 51 35.9 +1.9
baz=184,SNR=11
E23K **Chandalar** 6.84 351 P Pn 18 51 36.9 +2.2
baz=168,SNR=14
M15K **Kasigluk River** 6.86 271 P Pn 18 51 35.9 +1.0
baz=78
P33M **Teslin, Yukon** 6.87 94 P Pn 18 51 35.1 0.0
baz=286
F28M **Old Crow** 6.91 22 P Pn 18 51 38.0 +2.3
baz=208
O15K **Ungalikthiuk R** 6.92 257 Pn 18 51 36.0 +0.4
O15K **Ungalikthiuk R** 6.92 257 P Pn 18 51 36.7 +1.0
baz=66
F20K **Avaraart Lake** 6.94 329 Pn 18 51 35.0 -0.9
F20K **Avaraart Lake** 6.94 329 P Pn 18 51 37.0 +1.1
baz=141,SNR=39
I17K **Unalakleet** 6.95 297 Pn 18 51 37.0 +0.8
I17K **Unalakleet** 6.95 297 P Pn 18 51 36.9 +0.8
baz=105,SNR=8.6
H17K **Granite Mounta** 6.99 307 Pn 18 51 37.7 +1.0
H17K **Granite Mounta** 6.99 307 P Pn 18 51 37.7 +1.0
baz=115,SNR=9.3
G18K **Tagagawik** 7.01 316 Pn 18 51 38.3 +1.3
G18K **Tagagawik** 7.01 316 P Pn 18 51 38.5 +1.5
baz=125,SNR=41
H31M **Peel River** 7.06 46 Pn 18 51 38.4 +0.8
H31M **Peel River** 7.06 46 P Pn 18 51 38.7 +1.0
baz=237
L15K **Ungalak Mounta** 7.11 279 P Pn 18 51 38.6 +0.3
baz=86
K15K **Wolf Creek Mou** 7.11 284 Pn 18 51 38.4 +0.1
K15K **Wolf Creek Mou** 7.11 284 P Pn 18 51 38.9 +0.5
baz=91,SNR=6.6
E22K **Anaktuvuk Pass** 7.14 344 P Pn 18 51 41.6 +2.8
baz=160,SNR=8.6
E27K **Coleen River** 7.17 15 P Pn 18 51 41.0 +1.8
baz=200,SNR=5.1
G30M **tAoh Zraii Nji** 7.23 34 Pn 18 51 40.7 +0.6
G30M **tAoh Zraii Nji** 7.23 34 P Pn 18 51 41.0 +0.9
baz=224
S32K **Killisnoo** 7.29 117 P Pn 18 51 41.7 +1.0
baz=308
F19K **Shaleruckik Mo** 7.33 323 P Pn 18 51 43.4 +2.1
baz=133
MMPY **Sheldon Lake,** 7.35 73 Pn 18 51 41.8 +0.1
MMPY **Sheldon Lake,** 7.35 73 P Pn 18 51 42.3 +0.6
baz=267,SNR=6.4
TOLK **Toolik Lake Re** 7.41 352 P Pn 18 51 45.3 +2.8
baz=169,SNR=23
M14K **Bethel** 7.46 272 P Pn 18 51 45.3 +2.2
baz=79
G17K **Kiwalik Mounta** 7.52 309 Pn 18 51 44.7 +0.7
G17K **Kiwalik Mounta** 7.52 309 P Pn 18 51 45.0 +1.1
baz=117,SNR=13
N14K **Kuskokwak Cree** 7.54 266 P Pn 18 51 46.7 +2.5
baz=72
Q32M **Nakina River** 7.56 102 Pn 18 51 43.9 -0.9
Q32M **Nakina River** 7.56 102 P Pn 18 51 45.4 +0.6
baz=295
O14K **Tigyukauivet M** 7.56 260 P Pn 18 51 45.9 +1.4
baz=68
E19K **Redstone River** 7.63 328 P Pn 18 51 46.6 +1.1
baz=138
L14K **Kuka Creek** 7.71 277 P Pn 18 51 48.0 +1.5
baz=83,SNR=9.9
E21K **Killik River** 7.75 340 P Pn 18 51 48.7 +1.6
baz=153
F18K **Selawik** 7.75 318 Pn 18 51 48.3 +1.2
F18K **Selawik** 7.75 318 P Pn 18 51 48.4 +1.3
baz=127,SNR=12
F30M **Barrier River** 7.81 32 P Pn 18 51 49.3 +1.3
baz=222
H16K **Elim** 7.81 302 Pn 18 51 49.2 +1.2
H16K **Elim** 7.81 302 P Pn 18 51 49.9 +2.0
baz=108,SNR=8.8
D23K **Nanushuk River** 7.81 349 P Pn 18 51 50.7 +2.7
baz=166
E28M **Babbage River** 7.86 19 P Pn 18 51 50.8 +2.2
baz=206
D24K **Happy Valley** 7.87 354 P Pn 18 51 50.8 +2.1
baz=172
E29M **Blow River** 7.96 24 P Pn 18 51 51.6 +1.6
baz=212
D25K **Kavik River** 7.99 1 P Pn 18 51 53.3 +2.9

	baz=181,SNR=13						
R33M	**Jennings River**	8.01	97	P	Pn	18 51 51.9	+1.1
	baz=291						
E20K	**Nigu River**	8.01	334	P	Pn	18 51 53.0	+2.3
	baz=145						
J14K	**Nanvaranak Lak**	8.06	287		Pn	18 51 50.8	-0.6
J14K	**Nanvaranak Lak**	8.06	287	P	Pn	18 51 52.1	+0.7
	baz=92						
G16K	**Koyuk River**	8.12	307		Pn	18 51 52.6	+0.4
G16K	**Koyuk River**	8.12	307	P	Pn	18 51 53.0	+0.9
	baz=113,SNR=8.1						
F17K	**Baldwin Pennin**	8.19	315	P	Pn	18 51 54.6	+1.4
	baz=122						
D27M	**Malcolm River**	8.25	14	P	Pn	18 51 55.9	+1.8
	baz=199						
C24K	**Franklin Bluff**	8.43	355	P	Pn	18 51 58.6	+2.2
	baz=173						
D20K	**Etivluk River**	8.48	335	P	Pn	18 51 59.8	+2.7
	baz=146						
C21K	**Knifeblade Rid**	8.52	340	P	Pn	18 52 00.2	+2.6
	baz=153						
E18K	**Tukpahlearik C**	8.55	321	P	Pn	18 52 00.6	+2.5
	baz=129,SNR=15						
D19K	**Kuna River**	8.64	331	P	Pn	18 52 01.1	+1.8
	baz=140						
D28M	**Stokes Point**	8.64	19	P	Pn	18 52 01.4	+2.2
	baz=206,SNR=14						
G15K	**Niukluk**	8.65	302	P	Pn	18 52 02.3	+2.8
	baz=107						
C23K	**Itkillik River**	8.66	351	P	Pn	18 52 01.7	+2.2
	baz=167						
E17K	**Hotham Inlet**	8.73	317	P	Pn	18 52 02.3	+1.8
	baz=124,SNR=32						
DLBC	**Dease Lake**	8.85	102	P	Pn	18 52 03.5	+1.3
	comp=N,0.4nm,0.3s,baz=299,slow=14,SNR=5.9						
DLBC				LR	LR	18 55 41.5	
	comp=N,93nm,19.6s,baz=298,slow=38						
	comp=N,0.7nm,0.3s						
INK	**Inuvik**	8.90	33	P	Pn	18 52 04.3	+1.4
	comp=N,0.2nm,0.3s,baz=219,slow=17,SNR=7.7						
INK				S	Sn	18 53 44.7	+2.0
	comp=N,2.3nm,0.7s,baz=205,slow=17,SNR=1.8						
	comp=N,2.2nm,0.8s						
INK	**Inuvik**	8.90	33		Pn	18 52 02.5	-0.4
INK	**Inuvik**	8.90	33	P	Pn	18 52 03.9	+1.0
	baz=225						
B21K	**Ikpikpuk River**	8.91	342	P	Pn	18 52 06.2	+3.2
	baz=154						
ANM	**Nome**	9.10	299		Pn	18 52 05.8	+0.3
ANM	**Nome**	9.10	299	P	Pn	18 52 08.0	+2.4
	baz=102,SNR=6.4						
F15K	**North Star Dit**	9.12	306	P	Pn	18 52 08.3	+2.4
	baz=110,SNR=7.8						
B22K	**Teshekpuk Lake**	9.42	346	P	Pn	18 52 11.6	+1.7
	baz=160,SNR=6.8						
D17K	**Noatak River**	9.48	319	P	Pn	18 52 13.7	+2.8
	baz=124						
T35M	**Bob Quinn**	9.48	110	P	Pn	18 52 12.2	+1.3
	baz=304						
C18K	**Utukok River**	9.53	326	P	Pn	18 52 14.5	+3.0
	baz=133						
RDOG	**Red Dog Mine**	9.63	321	P	Pn	18 52 15.8	+2.9
	baz=126						
F14K	**Arctic Creek**	9.71	304	P	Pn	18 52 16.3	+2.3
	baz=106,SNR=9.8						
C17K	**DeLong Mountai**	9.97	323	P	Pn	18 52 20.7	+3.2
	baz=128						
A22K	**Sinclair Lake**	10.23	344	P	Pn	18 52 23.8	+2.8
	baz=157						
TNA	**Tin City**	10.38	303		Pn	18 52 23.8	+0.7
TNA	**Tin City**	10.38	303	P	Pn	18 52 25.6	+2.5
	baz=104,SNR=5.8						
C16K	**Lisburne Hills**	10.51	319		Pn	18 52 25.2	+0.3
C16K	**Lisburne Hills**	10.51	319	P	Pn	18 52 27.9	+3.1
	baz=122						
A19K	**Wainwright**	10.63	333	P	Pn	18 52 28.9	+2.5
	baz=139						
A36M	**Sachs Harbour**	13.49	29		Pn	18 53 04.2	-1.3
A36M	**Sachs Harbour**	13.49	29	P	Pn	18 53 06.8	+1.3
	baz=229						
YKAW3	**Yellowknife Wh**	15.02	71	Pn	Pn	18 53 23.8	-2.6
YKA	**Yellowknife Ar**	15.04	72	P	Pn	18 53 26.0	-0.7
	comp=N,0.4nm,0.8s,baz=280,slow=13,SNR=4.4						
YKA	**Yellowknife Ar**	15.04	72		Pn	18 53 24.8	-1.9
CLES	**Cleveland East**	15.18	246	Pn	Pn	18 53 27.7	-0.9
NEW	**Newport**	21.24	115	P	P	18 54 41.4	+1.2
	comp=N,0.7nm,0.4s,baz=342,slow=13,SNR=1.0						
NEW				LR	LR	19 02 56.1	
	comp=N,55nm,20.0s,baz=1.0,slow=36						
	comp=N,0.7nm,0.4s						
NEW	**Newport**	21.24	115	P	P	18 54 39.0	-1.2
RES	**Resolute Bay**	22.46	33	P	P	18 54 54.1	+1.1
	comp=N,0.4nm,0.5s,baz=248,slow=8.8,SNR=1.1						
	comp=N,0.4nm,0.5s						
RES	**Resolute Bay**	22.46	33	P	P	18 54 51.9	-1.2
WIFE	**Three Sisters-**	22.71	128	P	P	18 54 54.0	-2.1
K02D	**Willamette Mer**	23.22	133	P	P	18 55 00.4	-0.9
K02D				IAmb	IAmb	18 55 38.3	
	comp=Z,7.9nm,1.0s						
YHH	**Holmes Hill**	26.68	112	P	P	18 55 32.1	-1.4
ILON	**Igloolik, Nuna**	26.86	45	P	P	18 55 32.7	-1.7
ILON				IAmb	IAmb	18 55 45.2	
	comp=Z,3.8nm,1.0s						
ELK	**Elko**	28.10	123	LR	LR	19 08 43.0	
	comp=Z,42nm,18.2s,baz=280,slow=40						
PDAR	**Pinedale Array**	28.85	113	P	P	18 55 54.0	+1.2
	comp=Z,0.3nm,0.7s,baz=315,slow=7.7,SNR=3.1						
PDAR				LR	LR	19 08 35.2	
	comp=Z,34nm,20.2s,baz=333,slow=39						
	comp=Z,0.3nm,0.7s						
PDAR	**Pinedale Array**	28.85	113	P	P	18 55 52.7	-0.1
NVAR	**Mina Array Bea**	28.91	130	P	P	18 55 52.5	-0.8
	comp=Z,0.3nm,0.5s,baz=313,slow=6.4,SNR=2.7						
	comp=Z,0.3nm,0.5s						
TXAR	**Lajitas Array**	42.70	119	P	P	18 57 52.4	+1.2
	comp=Z,0.3nm,0.7s,baz=336,slow=7.1,SNR=2.5						
	comp=Z,0.3nm,0.7s						
TXAR	**Lajitas Array**	42.70	119	P	P	18 57 50.9	-0.3
TKL	**Tuckaleechee C**	46.57	94	LR	LR	19 18 10.2	
	comp=Z,79nm,18.1s,baz=306,slow=36						
SONM	**Songino Array**	56.43	309	P	P	18 59 34.9	-0.7
	comp=Z,0.3nm,0.9s,baz=49,slow=2.7,SNR=1.9						
	comp=Z,0.3nm,0.9s						
SONM	**Songino Array**	56.43	309	P	P	18 59 34.0	-1.7
SONM				IAmb	IAmb	18 59 53.9	
	comp=Z,1.5nm,1.2s						
FINES	**FINESS Array B**	57.38	4	P	P	18 59 39.5	-2.5
	comp=Z,0.6nm,0.5s,baz=9.8,slow=9.0,SNR=3.7						
	comp=Z,0.6nm,0.5s						
FINES	**FINESS Array B**	57.38	4	P	P	18 59 40.5	-1.5
BVAR	**Borovoye Array**	62.22	336	P	P	19 00 15.1	-0.2
	comp=Z,0.3nm,0.5s,baz=10,slow=9.0,SNR=4.2						
	comp=Z,0.3nm,0.5s						
KURK	**Kurchatov**	62.55	329	P	P	19 00 16.9	-0.7
KURK	**Kurchatov**	62.55	329	IAmb	IAmb	19 00 28.2	
	comp=Z,1.3nm,1.1s						
KURBB	**Kurchatov Arra**	62.66	329	P	P	19 00 16.9	-1.4
	comp=Z,0.2nm,0.7s,baz=32,slow=7.2,SNR=2.6						
	comp=Z,0.2nm,0.7s						
PABE	**Paberze**	63.23	6	P	P	19 00 20.8	-1.2
MKAR	**Makanchi Array**	65.21	325	P	P	19 00 34.0	-1.2
	comp=Z,0.1nm,0.5s,baz=41,slow=7.4,SNR=2.0						
	comp=Z,0.1nm,0.5s						
MAKZ	**Makanchi**	65.28	325	P	P	19 00 34.7	-0.9
MAKZ				IAmb	IAmb	19 00 49.4	
	comp=Z,1.8nm,1.0s						
AKASG	**Malin Array Be**	68.23	3	P	P	19 00 53.0	-1.3
	comp=Z,0.5nm,0.4s,baz=2.2,slow=6.8,SNR=5.0						
	comp=Z,0.5nm,0.4s						
QSPA	**South Pole Qui**	151.18	180	PKPbc	PKPdf	19 09 43.9	+4.0
	comp=Z,1.2nm,1.0s,baz=333,slow=1.1,SNR=5.7						
QSPA	**South Pole Qui**	151.18	180		PKPdf	19 09 38.6	-1.3

*IDC **27** 19:04:50.6±1.9,2˚.14N×126˚.53E, h0km, mb3.2/5, mbtmp3.3/5, Error ellipse: s-maj=145.3km s-min=21.7km az=69.0*
*DJA **27** 19:04:55.8±0.3,2˚N±3˚×12˚7E±˚, h10km, M3.5/16, mb3.8/3, MLv3.4/16*

ISC 27 19:04:57.3±1.1,**2˚.16N**±0˚.08×**126˚.87E**±0˚.09,**h50**km,**n12,** σ1.3**31/13, mb3.2/4, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	1.46	160	P	Pn	19 05 21.6	+0.2
TNTI				S	Sn	19 05 40.6	+1.2
SGSI	**Sangihe**	2.02	319	P	Pn	19 05 29.6	+0.6
MNI	**Manado**	2.15	251	P	Pn	19 05 30.2	-0.5
GTOI	**Gorontalo**	4.14	249	P	Pn	19 05 59.9	+1.8
SANI	**Sanana**	4.27	192	P	Pn	19 05 59.0	-0.9
MRSI	**Marisa**	5.20	251	P	Pn	19 06 13.8	+1.2
	0.1nm11nm,1.5s						
SWI	**Sorong**	5.32	124	P	Pn	19 06 15.9	+1.7
FITZ	**Fitzroy Crossi**	20.16	183	P	P	19 09 26.4	-1.3
	1.3nm,0.8s,baz=350,slow=6.1,SNR=1.6						
	1.3nm,0.8s						
WRA	**Warramunga Arr**	23.16	162	P	P	19 09 58.6	-1.0
	0.6nm,0.6s,baz=338,slow=11,SNR=6.1						
	0.6nm,0.6s						
ASAR	**Alice Springs**	26.57	165	P	P	19 10 32.2	+1.3
	0.3nm,0.8s,baz=345,slow=9.2,SNR=4.9						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	58.92	326	P	P	19 14 50.9	-0.6
	0.2nm,0.6s,baz=115,slow=6.3,SNR=4.5						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	63.13	328	P	P	19 15 18.4	-1.5
	0.1nm,0.4s,baz=134,slow=5.3,SNR=1.6						
	0.1nm,0.4s						

*ISK **27** 19:07:25.8, 35˚.83N×28˚.19E, h7km, ML3.2/18*
*NIC **27** 19:07:26.1, 35˚.84N×28˚.21E, h20km±2km, Ml2.8/14*
*ATH **27** 19:07:26.8, 35˚.86N×28˚.35E, h6km±2km, ML3.1/7, Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*
*THE **27** 19:07:26.8, 36˚N±11˚×2˚8E±1˚4, h0km±33km, M2.9/6, MLh2.9/6*
*AFAD **27** 19:07:26.0, 35˚.80N×28˚.14E, h24km±1km, ML3.1*

ISC 27 19:07:25.8±1.1,**35˚.80N**±0˚.02×**28˚.25E**±0˚.02,**h6**km±9km, **n78,** σ0.**80**/114**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	0.43	346	P	Pg	19 07 33.8	-0.2
ARG				S	Sb	19 07 41.1	-1.4
ARG	**Arkhangelos**	0.43	346	Pg	Pg	19 07 33.9	-0.2
ARG				Sg	Sg	19 07 40.0	+0.4
ARG	**Arkhangelos**	0.43	346	P	Pg	19 07 34.0	0.0
ARG				S	Sb	19 07 40.8	-1.7
ARG				AML	AML	19 07 46.6	
	2.9nm,0.4s						
ARG				AML	AML	19 07 48.2	
	4.4nm,0.6s						
ARG	**Arkhangelos**	0.43	346	P	Pg	19 07 34.0	0.0
ARG				S	Sg	19 07 39.8	+0.1
RDI1	**Rhodes Town Ha**	0.65	358	P	Pg	19 07 38.5	+0.2
RDI1				S	Sg	19 07 46.5	-0.2
KARP	**Karpathos**	0.92	254	P	Pb	19 07 43.9	-0.3
KARP				S	Sn	19 07 57.8	-1.2
KARP	**Karpathos**	0.92	254	Pg	Pg	19 07 43.3	-0.2
KARP	**Karpathos**	0.92	254	P	Pg	19 07 43.5	+0.1
KARP				S	Sb	19 07 56.9	+0.1
KARP				AML	AML	19 08 05.6	
	2.6nm,0.6s						
KARP				AML	AML	19 08 06.0	
	1.7nm,0.4s						
KARP	**Karpathos**	0.92	254	P	Pn	19 07 46.0	+0.6
KARP				S	Sn	19 07 59.8	+0.8
TURN	**Turunc**	0.97	360	Pg	Pg	19 07 43.9	-0.5
TURN				Sg	Sb	19 07 58.0	-0.2
TURN	**Turunc**	0.97	360	P	Pg	19 07 43.9	-0.5
TURN				S	Sn	19 08 01.2	+1.0
TURN				IAML		19 08 04.0	
	comp=E,347nm,0.6s						
TURN				IAML		19 08 09.0	
	comp=N,348nm,0.4s						
IZZE	**Mula-Seydike**	1.01	51	P	Pn	19 07 46.7	+0.2
IZZE				S	Sn	19 08 02.4	+1.2
IZZE				IAML		19 08 04.0	
	comp=E,458nm,0.3s						
IZZE				IAML		19 08 11.0	
	comp=N,540nm,0.4s						
DALY	**Dalyan (Mula)**	1.06	18	Pg	Pg	19 07 45.6	-0.6
DALY				Sg	Sn	19 08 01.7	-0.7
DATC	**Datca-Mugla**	1.07	334	Pg	Pg	19 07 45.9	-0.4
FETY	**Fethiye**	1.07	39	P	Pb	19 07 47.3	+0.5
FETY	**Fethiye**	1.07	39	Pn	Pb	19 07 47.1	+0.3
FETY				Sn	Sn	19 08 02.5	-0.1
FETY	**Fethiye**	1.07	39	P	Pn	19 07 47.6	+0.2
FETY				S	Sn	19 08 03.1	+0.5
YAZI	**Mula-Dat§a-**	1.09	324	P	Pg	19 07 46.0	-0.7
YAZI				S	Sb	19 08 00.5	-1.0
YAZI				IAML		19 08 07.0	
	comp=E,413nm,0.4s						
YAZI				IAML		19 08 07.0	
	comp=N,497nm,0.6s						
KSL	**Kastellorizon**	1.14	72	P	Pg	19 07 48.2	+0.7
KSL	**Kastellorizon**	1.14	72	P	Pg	19 07 47.5	0.0
KSL				S	Sg	19 08 02.9	+0.6
KSL				AML	AML	19 08 10.3	
	0.7nm,0.6s						
KSL				AML	AML	19 08 13.1	
	0.7nm,0.9s						
SABU	**Mula-Dalaman**	1.17	29	P	Pg	19 07 48.5	+0.2
SABU				S	Sn	19 08 05.1	-0.1
SABU				IAML		19 08 13.0	
	comp=E,214nm,0.8s						
AKAS	**Kas**	1.18	68	Pn	Pn	19 07 49.4	+0.4
AKAS				Sn	Sn	19 08 07.0	+1.5
AKAS	**Kas**	1.18	68	P	Pn	19 07 49.3	+0.4
AKAS				IAML		19 08 13.0	
	comp=E,266nm,0.5s						
AKAS				IAML		19 08 20.0	
	comp=N,510nm,0.8s						
YER	**Yerkesik**	1.33	1	P	Pg	19 07 53.6	+2.3
YER				S	Sn	19 08 12.1	+2.9
YER	**Yerkesik**	1.33	1	Pn	Pg	19 07 51.2	-0.1
BODA	**Bodrum-Mula**	1.40	332	Pn	Pn	19 07 51.5	-0.3
BDRM	**Kayabasi**	1.42	333	P	Pn	19 07 51.9	-0.3
BDRM				S	Sb	19 08 10.3	-0.8
BDRM				IAML		19 08 14.0	
	comp=E,341nm,1.0s						
CAME	**Cameli-Denizli**	1.42	36	Pn	Pn	19 07 52.3	0.0
MULA	**Mugla, Merkez-**	1.45	2	P	Pg	19 07 53.5	-0.1
MULA				IAML		19 08 25.0	
	comp=E,162nm,0.5s						
BODT	**Bodrum**	1.47	329	P	Pg	19 07 56.7	+2.8
KNIK	**Mula-Seydike**	1.49	45	P	Pb	19 07 54.3	+0.3
YKAV	**Yalikavak-Bodr**	1.54	330	Pn	Pn	19 07 53.5	-0.2
CAEL	**Denizli, Camel**	1.58	33	P	Pg	19 07 56.2	+0.2
CAEL				IAML		19 08 39.0	
	comp=E,185nm,1.2s						
DNZT	**Denizli-Tavas-**	1.60	23	P	Pb	19 07 55.7	-0.1
DNZT				P	Pg	19 07 56.1	-0.4
ELL	**Elmali**	1.64	54	Pn	Pn	19 07 55.7	+0.4
ELL	**Elmali**	1.64	54	S	Sn	19 08 15.4	-1.4
ELL				AML	AML	19 08 23.3	
	1.1nm,0.6s						
ELL				AML	AML	19 08 42.7	
	0.8nm,0.8s						
TAVA	**DENIZLI_Tavas**	1.75	18	P	Pb	19 07 58.0	-0.3
TAVA				S	Sg	19 08 22.1	+0.2
GOLH	**Golhisar**	1.78	36	P	Pb	19 07 59.2	+0.3
ZKR	**Zakros**	1.80	248	P	Pg	19 08 00.4	+0.2
ZKR	**Zakros**	1.80	248	Pn	Pn	19 07 57.9	+0.6
ZKR	**Zakros**	1.80	248	P	Pb	19 07 59.2	+0.2
ZKR				S	Sg	19 08 24.2	+0.8
DDIM	**Aydin, Didim**	1.84	334	P	Pn	19 07 58.3	+0.4
DDIM				IAML		19 08 26.0	
	comp=E,295nm,0.5s						
DDIM				IAML		19 08 28.0	
	comp=N,207nm,0.7s						
STIA	**Sitia Lasithi**	1.86	252	P	Pb	19 08 00.6	+0.4
APMY	**Acipayam-Deniz**	1.87	27	Pn	Pn	19 07 59.4	+1.0
AYDN	**Tasoluk**	1.88	351	P	Pn	19 07 59.3	+0.8
AYDN				IAML		19 08 31.0	
	comp=N,159nm,0.6s						
AYDN				IAML		19 08 32.0	
	comp=E,202nm,0.5s						
DNIZ	**Denizli-Tavas-**	1.93	19	P	Pb	19 08 00.7	-0.7
DNIZ				IAML		19 08 36.0	
	comp=E,370nm,0.5s						
DNIZ				IAML		19 08 37.0	
	comp=N,280nm,0.4s						
ESEN	**Aydn-Nazilli**	2.00	2	P	Pb	19 08 02.3	-0.2
ESEN				S	Sg	19 08 29.2	-0.6
ESEN				IAML		19 08 35.0	
	comp=E,91nm,0.4s						
GCAM	**G?zelcaml?**	2.06	337	Pn	Pn	19 08 01.6	+0.6
GCAM	**G?zelcaml?**	2.06	337	P	Pn	19 08 01.5	+0.6
KORT	**Korkueli**	2.08	54	Pn	Pn	19 08 02.5	+1.2
NAZL	**Nazilli-Aydin**	2.16	1	Pn	Pn	19 08 03.0	+0.6
AYDB	**Zeytinkoy-Aydi**	2.16	352	Pn	Pn	19 08 03.0	+0.5
INCE	**Denizli-Bozkur**	2.18	29	P	Pn	19 08 04.4	+1.6
SMG	**Samos**	2.22	330	P	Pn	19 08 02.9	-0.2
SMG	**Samos**	2.22	330	P	Pn	19 08 02.9	-0.2
SMG				S	Sb	19 08 31.7	-2.3
NPS	**Neapolis**	2.22	257	P	Pb	19 08 05.7	-0.6
NPS	**Neapolis**	2.22	257	P	Pb	19 08 05.4	-0.9
SULTU	**Buldan**	2.29	10	P	Pb	19 08 07.1	-0.5
SULTU				IAML		19 08 45.0	
	comp=E,139nm,0.6s						
THERA	**Ancient Thera,**	2.32	285	P	Pn	19 08 05.5	+1.0
IZMR	**zmir-demi**	2.34	354	P	Pn	19 08 05.8	+1.0
THR3	**Thira Island,**	2.39	286	P	Pn	19 08 06.5	+1.0
KIRA	**zmir-Kiraz**	2.40	3	P	Pn	19 08 06.5	+0.8
DUVT	**Torbali**	2.50	345	P	Pn	19 08 07.4	+0.4
DUVT				IAML		19 09 37.0	
	comp=N,1µm,5.1s						
DGB	**zmir**	2.50	334	P	Pn	19 08 07.1	+0.1
BASM	**Basmaki-Afyon**	2.56	34	Pn	Pn	19 08 08.5	+0.6
ZEYE	**Izmir, Urla-Ze**	2.81	331	P	Pn	19 08 11.1	-0.1
OSC1	**CSNet OBS 1**	3.39	132	P	Pn	19 08 18.1	-1.1
OSC1				S	Sn	19 09 00.6	+0.8
OSC1				AML	AML	19 09 02.1	
OSC1				AML	AML	19 09 02.5	
	0.1nm,0.9s						
AKMS	**Akamas**	3.43	102	P	Pn	19 08 19.2	-0.5
AKMS				S	Sn	19 09 01.8	+1.1
AKMS				AML	AML	19 09 06.0	
	0.1nm,0.4s						
AKMS				AML	AML	19 09 07.7	
	0.1nm,0.5s						
AKMS	**Akamas**	3.43	102	P	Pn	19 08 19.5	-0.2
AKMS				S	Sn	19 09 00.6	-0.1
ALFC	**Alefka**	3.61	99	P	Pn	19 08 22.0	-0.2
ALFC				S	Sn	19 09 05.6	+0.4
ALFC				AML	AML	19 09 08.2	
	0.1nm,0.3s						
ALFC				AML	AML	19 09 11.9	
	0.1nm,0.4s						
NATA	**Nata**	3.68	105	P	Pn	19 08 23.0	-0.2
NATA				S	Sn	19 09 07.5	+0.6
NATA				AML	AML	19 09 09.8	
	0.2nm,0.5s						
NATA				AML	AML	19 09 11.2	
	0.3nm,0.6s						
TROD	**Troodos**	3.87	101	P	Pn	19 08 25.1	-0.9
TROD				S	Sn	19 09 12.0	+0.1
TROD				AML	AML	19 09 21.1	
	0.1nm,0.4s						
TROD				AML	AML	19 09 22.0	
APOL	**The Sanctuary**	3.94	105	P	Pn	19 08 26.6	-0.2
APOL				S	Sn	19 09 13.4	+0.1
APOL				AML	AML	19 09 14.0	
	0.1nm,0.7s						
APOL				AML	AML	19 09 14.4	
	0.1nm,0.5s						
XYLS	**Xyliatos**	4.00	100	P	Pn	19 08 27.2	-0.4
XYLS				S	Sn	19 09 14.7	-0.2
XYLS				AML	AML	19 09 17.5	
XYLS				AML	AML	19 09 21.7	
	0.1nm,0.6s						
ASGA	**Asgata**	4.21	102	P	Pn	19 08 30.2	-0.3
ASGA				S	Sn	19 09 20.6	+0.5
ASGA				AML	AML	19 09 23.4	
	0.1nm,0.4s						
ASGA				AML	AML	19 09 27.9	
CSS	**Mathiatis**	4.23	100	P	Pn	19 08 30.3	-0.6
CSS				S	Sn	19 09 21.1	+0.4
CSS				AML	AML	19 09 24.7	
CSS				AML	AML	19 09 25.1	
OSC2	**CSNet OBS 4**	4.29	128	P	Pn	19 08 31.9	+0.3
MVOU	**Mavrovouni**	4.46	99	P	Pn	19 08 33.5	-0.5
MVOU				AML	AML	19 09 25.9	
MVOU				S	Sn	19 09 26.6	+0.3
MVOU				AML	AML	19 09 32.8	

*RSNC **27** 19:10:09.9±0.0, 7˚N±1˚×7˚3W±˚, h151km±1km, M3.1, mB5.0, mb3.6, ML2.7, MLv3.4, Mw(mB)4.3*
*FUNV **27** 19:10:13.4, 7˚.10N×73˚.25W, h21km, MW3.3, Presumed earthquake*

ISC 27 19:10:07.9±1.4,**6˚.86N**±0˚.03×**73˚.13W**±0˚.04,**h158**km±8km, **n39,** σ1.**965/75, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	0.27	191	P	Pn	19 10 30.3	+0.5
BARC				S	Sn	19 10 45.6	-0.8
BRJC	**Barrancabermej**	0.62	280	P	Pn	19 10 32.0	+1.1
BRJC				S	Sn	19 10 48.9	+0.5
PAMC	**Pamplona, Colo**	0.64	42	P	Pn	19 10 33.1	+1.5
PAMC				S	Sn	19 10 50.2	+0.6
RUSC	**La Rusia**	0.96	177	P	Pn	19 10 34.3	+0.5
RUSC				S	Sn	19 10 52.9	-0.7
RUSC	**La Rusia**	0.96	177	eP	Pn	19 10 34.4	+0.6
RUSC				eS	Sn	19 10 51.1	-2.6
PTBC	**PUERTO BERRIO,**	1.36	256	P	Pn	19 10 36.6	-0.1
PTBC				S	Sn	19 10 57.3	-1.5
OCAC	**Ocana**	1.38	352	P	Pn	19 10 38.5	+1.3
OCAC				S	Sn	19 10 59.6	-0.1
SPBC	**San Pablo de B**	1.52	218	P	Pn	19 10 39.1	+0.6
SPBC				S	Sn	19 11 00.7	-1.3
NORC	**Norcasia**	2.16	233	P	Pn	19 10 46.1	+0.6
NORC				S	Sn	19 11 14.7	+0.3
CHIC	**Chingaza**	2.30	195	P	Pn	19 10 48.3	+0.8
CHIC				S	Sn	19 11 17.5	-0.5
ROSC	**El Rosal**	2.33	211	P	Pn	19 10 50.1	+2.2
ROSC				S	Sn	19 11 19.0	+0.3
HELC	**Santa Helena**	2.48	255	P	Pn	19 10 50.8	+1.2
HELC				S	Sn	19 11 21.0	-0.6
HELC	**Santa Helena**	2.48	255	eP	Pn	19 10 52.3	+2.8
HELC				eS	Sn	19 11 19.2	-2.4
UREC	**San Jos de Ur**	2.54	291	P	Pn	19 10 50.7	+0.7
UREC				S	Sn	19 11 20.7	-1.9
GUY2C	**Guyana, Caldas**	2.75	234	P	Pn	19 10 53.9	+0.8
GUY2C				S	Sn	19 11 27.2	-0.7
VILC	**Villavicencio,**	2.79	192	P	Pn	19 10 53.5

6.0nm,2.1s
BBAC S Sn 19 12 49.5 -1.3
6.0nm,2.1s
PTLC Puerto Leguiza 6.85 194 P Pn 19 11 47.0 +0.9

IDC 27 19:10:59.8±1.6, 31°.47N×141°.52E, h0km, mb3.2/2, mbtmp3.3/4, ML2.9/2, MS2.5/1, Error ellipse: s-maj=70.1km s-min=23.8km az=88.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	4.39	172	Pn	Pn	19 12 09.0	+1.2
	3.9nm,0.3s,baz=16,slow=18,SNR=5.6						
JCJ				Sn	Sn	19 12 58.6	-1.0
	2.3nm,0.3s,baz=290,slow=18,SNR=1.3						
JCJ				LR	LR	19 13 10.0	
	comp=Z,62nm,20.0s,baz=130,slow=30						
	60nm,0.8s						
MJAR	Matsushiro Arr	5.76	332	Pn	Pn	19 12 26.3	-0.3
	0.1nm,0.3s,baz=153,slow=8.2,SNR=4.9						
	0.4nm,0.3s						
ILAR	Eielson Array	54.20	30	P	P	19 20 26.6	-0.2
	0.4nm,1.0s,baz=276,slow=7.5,SNR=1.8						
	0.4nm,1.0s						
ASAR	Alice Springs	55.30	189	P	P	19 20 34.9	-0.3
	0.3nm,0.9s,baz=9.1,slow=7.5,SNR=4.6						
	0.3nm,0.9s						

DJA 27 19:28:06.1±0.4, 8°.3S×112°.1E±°, h185km±8km, M3.8/18, mB4.9/1, mb4.0/6, MLv3.7/18, Mw(mB)4.2/1

ISC 27 19:28:05.1±0.9, 8°.35S±0°.09×121°.08E±0°.06, h200km, n23, σ1§16/23, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	Maumere	1.18	104	P	Pn	19 28 36.0	-0.1
MMRI	Maumere	1.18	104	P	Pn	19 28 35.8	-0.3
LBFI	Labuhan Bajo,	1.19	264	P	Pn	19 28 35.9	-0.3
WBSI	Waikabubak, Su	2.11	232	P	Pn	19 28 42.5	-2.3
BSSI	Bau Bau, Buton	2.27	345	P	Pn	19 28 46.9	+0.4
DBNI	Kabupaten Domp	2.75	267	P	Pn	19 28 52.3	+0.5
BATI	Baumata	3.15	126	P	Pn	19 28 56.3	-0.2
PLAI	Plampang	3.30	261	P	Pn	19 28 59.2	+0.8
PLAI	Plampang	3.30	261	P	Pn	19 28 59.0	+0.6
SOEI	Soe	3.44	114	P	Pn	19 29 00.5	+0.3
SOEI	Soe	3.44	114	S	Sn	19 29 43.2	-0.1
SOEI	Soe	3.44	114	P	Pn	19 29 00.0	-0.2
IGBI	Denpasar	5.89	265	P	Pn	19 29 31.2	+0.2
	44nm,1.0s						
RTBI	Rangdo, Negare	6.08	269	P	Pn	19 29 32.9	-0.5
	0.2nm36nm,1.1s						
JAGI	Jajag, Banyuwa	6.86	268	P	Pn	19 29 43.4	-0.1
JAGI	Jajag, Banyuwa	6.86	268	P	Pn	19 29 43.0	-0.5
	0.1nm15nm,1.3s						
PCI	Palu	7.50	350	P	Pn	19 29 54.6	+2.7
TOLI2	Tolitoli	9.40	358	P	Pn	19 30 14.4	-2.3
DRS	Darwin Rock St	10.47	114	P	Pn	19 30 30.4	-0.1
FAKI	Fak Fak	12.35	65	P	Pn	19 30 54.0	-0.5
WRAB	Tennant Creek	17.25	133	P	Pn	19 31 53.9	-0.5
WRAB	Tennant Creek	17.25	133	S	S	19 35 04.4	+2.2
COEN	Coen	22.37	106	P	P	19 32 48.0	+1.0

SKHL 27 19:33:00.7±0.5, 42°.00N×142°.60E, h61km±3km, mb4.8/4
NIED 27 19:33:00.1, 42°.04N×142°.60E, h60km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^14Nm; Mrr3.70; Mθθ0.15; Mϕϕ-3.85; Mrθ2.42; Mθϕ-0.48; Mrϕ3.27; Fault plane solution: M05.56000×10^14 NP1: ϕs169.00000°, δ26.00000°, λ55.00000°. NP2:ϕs27.00000°, δ69.00000°, λ106.00000°.
JMA 27 19:33:00.1±0.2, 42°.0N±0°.8×142°.6E±0°.8, h60km±1km, MV3.7/40, S OFF URAKAWA
JMA Felt I J1 at S OFF URAKAWA .
IDC 27 19:33:01.1±1.8, 42°.06N×142°.59E, h74km±14km, mb3.4/16, mbtmp3.7/19, MS2.6/3, Error ellipse: s-maj=18.6km s-min=12.8km az=108.0

ISC 27 19:32:59.8±0.8, 42°.01N±0°.05×142°.56E±0°.04, h61km±7km, n54, σ1§39/53, mb3.6/16, 9D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNBK	Urakawa-nobuka	0.31	27	P	Pn	19 33 09.9	-0.1
JSHD	Hidakashinhida	0.41	350	P	Pn	19 33 11.2	+0.3
JEM	Erimo	0.44	89	P	Pn	19 33 11.6	+0.3
JEM				S	Sn	19 33 19.5	0.0
JTHR	Tokachihiroo	0.62	62	*i* P	Pn	19 33 13.1	+0.1
JIAM	Iburiatsuma	0.78	322	⇓*i* P	Pn	19 33 16.0	+1.0
JBT2	Biratori 2	0.78	349	⇓*i* P	Pn	19 33 15.0	-0.1
JBT2				⇓S	Sn	19 33 26.4	+0.1
JCH	Churui	0.85	44	*i* P	Pn	19 33 15.7	-0.2
JKB	Kayabe	1.15	264	⇓*i* P	Pn	19 33 20.2	+0.4
JKB				⇓S	Sn	19 33 35.2	+0.5
JFR	Furan	1.16	1	*i* P	Pn	19 33 19.8	-0.1
JEW	Eniwo	1.17	316	⇓*i* P	Pn	19 33 20.4	+0.3
JNB	Noboribetsu	1.22	293	⇓*i* P	Pn	19 33 20.5	-0.3
JNB				⇓S	Sn	19 33 36.7	+0.2
JOT	Ohata	1.29	242	⇓P	Pn	19 33 22.3	+0.6
JOB	Onbets	1.30	46	*i* P	Pn	19 33 22.6	+0.8
JAB	Ashibetsu	1.52	351	*i* P	Pn	19 33 25.2	+0.4
JISS	Ishikarishitsu	1.52	327	P	Pn	19 33 25.3	+0.5
JAR	Ashorobuto	1.57	34	*i* P	Pn	19 33 25.4	0.0
AKK	Akkeshi	1.96	58	*e*P	Pn	19 33 30.8	0.0
ASAJ	Asahikawa	2.11	1	P	Pn	19 33 34.1	+1.4
	80nm,0.3s,baz=198,slow=16,SNR=251						
ASAJ				S	Sn	19 33 59.1	+1.3
	66nm,0.6s,baz=93,slow=28,SNR=4.8						
NMR	Nemuro--Hokkai	2.70	59	*e*P	Pn	19 33 40.2	-0.6
NMR				*e*S	Sn	19 34 09.6	-2.7
GLVR	Golovnino	2.78	50	*e*P	Pn	19 33 42.1	+0.3
GLVR				AMB	AMB	19 33 47.6	
	150nm,0.3s						
GLVR				*e*S	Sn	19 34 13.5	-0.6
GLVR				A	A	19 34 16.6	
	380nm,0.3s						
GLVR				A	A	19 34 16.6	
	760nm,0.3s						
YUK	Yuzh-Kuril'sk	3.15	49	*e*P	Pn	19 33 48.3	+1.3
YUK				AMB	AMB	19 33 50.1	
	150nm,0.5s						
YUK				*e*S	Sn	19 34 23.5	+0.1
YUK				A	A	19 34 26.5	
	380nm,0.4s						
YUK				A	A	19 34 26.5	
	220nm,0.4s						
SHO	Shikotan	3.64	58	*e*P	Pn	19 34 04.0	+10
SHO				AMB	AMB	19 34 05.0	
	50nm,0.2s						
SHO				*e*S	Sn	19 34 43.2	+7.8
SHO				A	A	19 34 44.9	
	110nm,0.3s						
SHO				A	A	19 34 44.9	
	130nm,0.3s						
KUR	Kuril'sk	5.02	48	*e*P	Pn	19 34 14.0	+1.5
KUR				AMB	AMB	19 34 16.6	
	30nm,0.3s						
KUR				*e*S	Sn	19 35 09.5	+0.3
KUR				A	A	19 35 13.9	
	50nm,0.4s						
KUR				A	A	19 35 13.9	
	50nm,0.4s						
MJAR	Matsushiro Arr	6.42	213	P	Pn	19 34 33.6	+1.9
	1.0nm,0.6s,baz=322,slow=5.9,SNR=5.5						
MJAR				LR	LR	19 37 12.9	
	comp=Z,48nm,18.3s,baz=50,slow=39						
USRK	Ussuriysk Ar.	8.04	289	P	Pn	19 34 55.0	+1.2
	3.5nm,0.8s,baz=81,slow=12,SNR=2.7						
KLR	Kul'dur	10.46	317	LR	LR	19 39 44.0	
	comp=Z,30nm,19.1s,baz=16,slow=39						
KSRS	Korea Array	12.15	253	P	P	19 35 56.7	-3.9
	1.4nm,0.5s,baz=63,slow=14,SNR=4.0						
KSRS				LR	LR	19 40 24.6	
	comp=Z,19nm,18.7s,baz=30,slow=36						
SEY	Seymchan	21.75	12	P	P	19 37 44.1	-1.8
	1.2nm,0.6s,baz=191,slow=9.5,SNR=5.2						
	1.2nm,0.6s						
SONM	Songino Array	26.09	295	P	P	19 38 27.5	-0.4
	0.4nm,0.6s,baz=81,slow=5.4,SNR=3.8						
	0.4nm,0.6s						
H11N2	WAKE ISLAND Hy	30.29	130	T	T	20 10 44.6	
	baz=324,slow=75						
H11N1	WAKE ISLAND Hy	30.30	130	T	T	20 10 32.1	
	baz=324,slow=75						
H11N3	WAKE ISLAND Hy	30.31	130	T	T	20 10 32.6	
	baz=324,slow=75						
H11S1	WAKE ISLAND Hy	31.16	131	T	T	20 11 31.2	
	baz=325,slow=76						
H11S3	WAKE ISLAND Hy	31.16	131	T	T	20 11 46.5	
	baz=325,slow=76						
H11S2	WAKE ISLAND Hy	31.17	131	T	T	20 11 30.4	
	baz=325,slow=76						
ZALV	Zalesovo Beam	39.38	308	P	P	19 40 22.8	-0.5
	baz=83,slow=7.1						
MKAR	Makanchi Array	42.41	298	P	P	19 40 48.3	+0.1
	0.9nm,0.9s,baz=88,slow=9.6,SNR=6.6						
MKAR				PcP	PcP	19 42 39.8	-0.6
	0.1nm,0.4s,baz=59,slow=4.2,SNR=1.9						
	0.9nm,0.9s						
CMAR	Chiang Mai Arr	43.78	251	P	P	19 41 00.7	+1.1
	0.3nm,0.5s,baz=51,slow=8.3,SNR=1.4						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	43.79	304	P	P	19 40 59.1	-0.2
	1.4nm,0.4s,baz=76,slow=8.6,SNR=6.7						
	1.4nm,0.4s						
ILAR	Eielson Array	44.87	35	P	P	19 41 07.1	-0.6
	0.3nm,0.8s,baz=256,slow=5.5,SNR=4.7						
	0.3nm,0.8s						
BVAR	Borovoye Array	48.00	309	P	P	19 41 32.5	+0.2
	0.9nm,0.4s,baz=75,slow=9.7,SNR=14						
	0.9nm,0.4s						
WRA	Warramunga Arr	62.10	189	P	P	19 43 14.2	-0.1
	0.3nm,0.6s,baz=5.9,slow=6.7,SNR=10						
	0.3nm,0.6s						
FINES	FINESS Array B	64.85	332	P	P	19 43 31.3	-0.7
	1.5nm,0.6s,baz=47,slow=8.4,SNR=11						
	1.5nm,0.6s						
ASAR	Alice Springs	65.83	189	P	P	19 43 38.4	-0.4
	0.3nm,0.9s,baz=353,slow=7.7,SNR=1.8						
	0.3nm,0.9s						
KBZ	Khabaz	68.37	310	P	P	19 43 55.9	+1.1
	0.4nm,0.4s,baz=0.0,slow=2.0,SNR=2.0						
	0.4nm,0.4s						
HFS	Hagfors	69.93	335	P	P	19 44 03.7	-0.4
	0.9nm,0.3s,baz=45,slow=6.5,SNR=11						
	0.9nm,0.3s						
NB2	NORSAR Subarra	69.95	337	P	P	19 44 04.0	-0.3
	comp=Z,0.6nm,0.7s,baz=36,slow=6.2						
NOA	NORSAR Array B	69.95	337	P	P	19 44 03.5	-0.8
	comp=Z,0.6nm,0.6s,baz=36,slow=6.2,SNR=3.7						
	comp=Z,0.6nm,0.6s						
AKASG	Malin Array Be	70.92	322	P	P	19 44 09.3	-1.0
	comp=Z,0.5nm,0.4s,baz=45,slow=6.9,SNR=6.9						
	comp=Z,0.5nm,0.4s						
NVAR	Mina Array Bea	71.35	55	P	P	19 44 13.5	0.0
	comp=Z,0.4nm,0.6s,baz=345,slow=7.1,SNR=2.7						
	comp=Z,0.4nm,0.6s						
PDAR	Pinedale Array	73.58	47	P	P	19 44 27.5	+0.8
	comp=Z,0.1nm,0.4s,baz=336,slow=2.6,SNR=2.2						
	comp=Z,0.1nm,0.4s						
H03N2	Juan Fernandez	146.35	89	T	T	22 35 49.9	
	baz=301,slow=77						
H03N3	Juan Fernandez	146.37	89	T	T	22 35 52.8	
	baz=301,slow=77						
H03N1	Juan Fernandez	146.37	89	T	T	22 35 53.9	
	baz=301,slow=77						

CATAC 27 20:00:58.9±0.5, 13°.N±3°×9°.1W±°, h13km±2km, M3.9/10, MLv3.9/10, Error ellipse: s-maj=6.1km s-min=3.2km az=24.6, confirmed
SNET 27 20:00:59.5±1.1, 13°.26N×90°.53W, h12km, ML3.8, Presumed earthquake
GCG 27 20:01:02.9±6.8, 13°.55N×90°.52W, h35km±999km, MD3.8, Presumed earthquake

ISC 27 20:00:59.1±1.9, 13°.24N±0°.08×90°.50W±0°.04, h13km±10km, n49, σ0§95/64, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	Alcaldia de Sa	0.76	38	P	Pg	20 01 13.5	-0.4
PCG5	San Vicente Pa	0.97	7	*i* P	Pb	20 01 18.0	+0.1
FG8	Yepocapa, Chim	1.01	356	*i* P	Pn	20 01 20.0	+0.9
FG16	Alotenango, Sa	1.02	359	*i* P	Pn	20 01 20.1	+0.8
LOAL	Lomas de Alarc	1.02	43	P	Pb	20 01 18.1	-0.7
LOAL				S	Sb	20 01 31.7	-0.4
CEVE	Cerro Verde	1.03	56	P	Pb	20 01 18.5	-0.4
CEVE				S	Sg	20 01 32.5	0.0
CEVE	Cerro Verde	1.03	56	*e*P	Pb	20 01 18.6	-0.4
SLOZ	Alcaldia de Sa	1.04	42	P	Pb	20 01 18.3	-0.8
SLOZ				S	Sb	20 01 32.3	-0.4
JAYA	Jayaque - finc	1.10	68	P	Pb	20 01 19.4	-0.7
JAYA				S	Sg	20 01 35.8	+1.1
JAYA	Jayaque - finc	1.10	68	*i* P	Pb	20 01 19.3	-0.7
JAYA				*i* S	Sb	20 01 33.5	-0.9
JAYA	Jayaque - finc	1.10	68	*e*P	Pb	20 01 19.4	-0.7
LALI	Alcalda de L	1.17	78	P	Pn	20 01 20.3	-0.9
LALI	Alcalda de L	1.17	78	*i* P	Pn	20 01 21.0	-0.2
LALI				*i* S	Sb	20 01 33.1	-3.2
LALI				*i* Pg	Sb	20 01 33.1	-3.2
UNIC	Universidad Ca	1.18	51	P	Pb	20 01 20.5	-0.9
UNIC				S	Sb	20 01 36.1	-0.5
CEDA	San Andres	1.21	62	P	Pn	20 01 21.4	-0.4
CEDA	San Andres	1.21	62	*e*P	Pn	20 01 22.3	+0.5
PMON	Piamonte	1.24	68	P	Pn	20 01 21.7	-0.6
PMON				S	Sb	20 01 38.4	0.0
BOQS	Boqueron	1.28	67	*e*P	Pn	20 01 22.4	-0.4
UEES	Universidad Ev	1.31	69	P	Pn	20 01 22.6	-0.6
UEES				S	Sb	20 01 40.9	+0.5
SEMO	Seminario San	1.32	70	P	Pn	20 01 23.4	+0.1
PANCS	Alcalda de	1.33	74	P	Pn	20 01 23.8	+0.3
PANCS				S	Sn	20 01 42.3	+1.2
GCG4	OSOP	1.34	359	*i* P	Pn	20 01 23.1	-0.6
UTEC	Universidad Te	1.34	70	P	Pn	20 01 23.0	-0.6
UDBS	Universidad Do	1.39	70	P	Pn	20 01 24.0	-0.2
STG5	El Palmar, Qui	1.42	324	*i* P	Pg	20 01 26.7	+0.2
STG8	El Palmar, Qui	1.46	325	*i* P	Pg	20 01 27.8	+0.6
STG2	El Palmar, Qui	1.46	324	*i* P	Pg	20 01 27.8	+0.5
PAVA	Las Pavas	1.59	73	P	Pn	20 01 27.5	+0.4
MTO3	Montecristo	1.59	44	P	Pn	20 01 26.8	-0.4
COEG	Centro de Oper	1.62	76	P	Pn	20 01 27.6	+0.1
COEG				S	Sn	20 01 49.4	+1.3
COEG	Centro de Oper	1.62	76	*e*P	Pn	20 01 28.1	+0.7
TECO	Alcaldia de Te	1.69	80	P	Pn	20 01 28.1	-0.3
ESQI	Esquipulas	1.72	40	P	Pn	20 01 28.5	-0.4
ESQI	Esquipulas	1.72	40	*e*P	Pn	20 01 29.5	+0.6
ZAFR2	Estanzuela, Za	1.73	40	*i* P	Pb	20 01 31.0	+0.2
APG	El Apazote	1.75	1	*i* P	Pn	20 01 29.0	-0.4
APG				*i* S	Sb	20 01 52.0	-1.3
LLGN	La Laguna	1.76	59	P	Pn	20 01 30.0	+0.5
LLGN				S	Sb	20 01 53.8	+0.3
SCLA	Alcaldia de Sa	1.78	75	P	Pn	20 01 29.9	+0.3
SOKI	Kika Raxquin	1.80	331	*i* P	Pn	20 01 28.3	-1.9
P5NO	Presa 5 de nov	1.84	66	P	Pn	20 01 29.9	-0.6
QUIS	Sacapulas	2.12	344	*i* P	Pn	20 01 34.7	+0.4
PACA	Pacayal	2.13	84	P	Pn	20 01 34.8	+0.3
RANC	El Ranchito	2.16	85	P	Pn	20 01 35.1	+0.1
HUEH	Huehuetenango	2.28	335	P	Pn	20 01 35.6	-1.1
HUEH				S	Sn	20 02 03.8	-1.0
HUEH	Huehuetenango	2.28	335	*i* P	Pn	20 01 37.3	+0.6
MARCA	Marcala la Paz	2.56	69	*i* P	Pn	20 01 40.6	+0.1
POTN	Potosi Cosigui	2.92	94	S	Sn	20 02 22.6	+2.3
TGUH	Tegucigalpa,Un	3.24	75	P	Pn	20 01 50.8	+1.0
CCIG	Comitan	3.41	332	P	Pn	20 01 53.7	+1.5

IDC 27 20:03:24.9±2.5, 6°.75N×72°.98W, h155km±35km, mbtmp3.5/2, Error ellipse: s-maj=335.1km s-min=7.6km az=132.0
RSNC 27 20:03:26.4±0.0, 7°.N±7°.3W±°, h140km±1km, M3.0, mb3.5, ML2.7, MLv3.4
FUNV 27 20:03:28.5, 7°.10N×73°.19W, h18km, MW3.3, Presumed earthquake

ISC 27 20:03:25.4±1.1, 6°.84N±0°.03×73°.13W±0°.04, h144km±6km, n40, σ1§67/77, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.25	192	P	Pn	20 03 45.5	+0.1
BARC				S	Sn	20 04 00.1	-0.4
BRJC	Barrancabermej	0.62	283	P	Pn	20 03 47.4	+0.7
BRJC				S	Sn	20 04 03.9	+1.0
PAMC	Pamplona, Colo	0.66	41	P	Pn	20 03 48.5	+1.0
PAMC				S	Sn	20 04 05.4	+1.1
RUSC	La Rusia	0.94	177	P	Pn	20 03 49.5	-0.2
RUSC				S	Sn	20 04 06.3	-1.8
RUSC	La Rusia	0.94	177	*e*P	Pn	20 03 49.7	+0.1
RUSC				*e*S	Sn	20 04 07.1	-1.0
PTBC	PUERTO BERRIO,	1.35	257	P	Pn	20 03 52.3	-0.6
PTBC				S	Sn	20 04 12.4	-1.6
OCAC	Ocana	1.41	352	P	Pn	20 03 53.9	+0.2
OCAC				S	Sn	20 04 15.6	+0.3
SPBC	San Pablo de B	1.50	219	P	Pn	20 03 54.5	-0.2
SPBC				S	Sn	20 04 15.1	-1.9
NORC	Norcasia	2.14	234	P	Pn	20 04 01.4	-0.5
NORC				S	Sn	20 04 27.8	-2.2
CHIC	Chingaza	2.27	195	P	Pn	20 04 04.0	+0.1
CHIC				S	Sn	20 04 30.8	-2.6
ROSC	El Rosal	2.31	211	P	Pn	20 04 06.4	+2.1
	22nm,0.3s,baz=27,slow=9.0,SNR=13						
ROSC				S	Sn	20 04 35.0	+0.8
	45nm,0.3s,baz=52,slow=19,SNR=13						
ROSC	El Rosal	2.31	211	P	Pn	20 04 05.6	+1.3
ROSC				S	Sn	20 04 33.1	-1.1
HELC	Santa Helena	2.47	255	P	Pn	20 04 05.8	-0.4
HELC				S	Sn	20 04 37.3	-0.2
HELC	Santa Helena	2.47	255	*e*P	Pn	20 04 07.0	+0.8
HELC				*e*S	Sn	20 04 36.6	-0.9
URED	San Jos de Ur	2.55	291	P	Pn	20 04 05.9	-1.0
URED				S	Sn	20 04 36.6	-2.2
GUY2C	Guyana, Caldas	2.74	234	P	Pn	20 04 10.1	+0.4
GUY2C				S	Sn	20 04 42.9	-0.9
VILC	Villavicencio,	2.77	192	P	Pn	20 04 09.2	-0.5
VILC				S	Sn	20 04 44.0	+0.1
PTGC	Puerto Gaitan,	2.80	159	P	Pn	20 04 09.0	-1.0
PTGC				S	Sn	20 04 41.7	-2.8
RECRC	Villamaria, Ca	2.89	230	P	Pn	20 04 13.6	+1.9
RECRC				S	Sn	20 04 46.5	-0.8
CBOC	Ciudad Bolivar	3.02	252	P	Pn	20 04 13.7	+0.7
CBOC				S	Sn	20 04 49.3	-0.4
DBBC	Dabeiba	3.06	274	P	Pn	20 04 13.8	+0.4
DBBC				S	Sn	20 04 50.6	+0.1
ARGC	Ariguani, Magd	3.20	340	P	Pn	20 04 16.2	+1.1
ARGC				S	Sn	20 04 54.4	+0.8
SDV	Santo Domingo	3.20	50	P	Pn	20 04 15.6	+0.3
	6.8nm,0.3s,baz=231,slow=6.5,SNR=16						
SDV				S	Sn	20 04 52.9	-1.0
	38nm,0.4s,baz=255,slow=20,SNR=38						
SDV	Santo Domingo	3.20	50	P	Pn	20 04 15.3	0.0
SDV				S	Sn	20 04 52.0	-1.9
SDV	Santo Domingo	3.20	50	*e*P	Pn	20 04 15.8	+0.5
SDV				*e*S	Sn	20 04 50.0	-3.9
PRAC	Prado	3.56	209	P	Pn	20 04 20.3	+0.5
PRAC				S	Sn	20 05 01.7	-0.3
APAC	Apartado, Choc	3.58	287	P	Pn	20 04 19.9	-0.1
APAC				S	Sn	20 05 02.8	+0.4
ORTC	Ortega, Tolima	3.59	216	P	Pn	20 04 20.4	+0.2
ORTC				S	Sn	20 05 03.1	+0.4
SJCC	San Jacinto, C	3.65	326	P	Pn	20 04 20.0	-1.0
SJCC				S	Sn	20 05 01.5	-2.7
SJCC	San Jacinto, C	3.65	326	*e*P	Pn	20 04 20.1	-1.0
SJCC				*e*S	Sn	20 04 58.5	-5.7
PLMC	San Jos del P	3.68	239	P	Pn	20 04 21.3	-0.1
PLMC				S	Sn	20 05 05.9	+1.2
URMC	La Uribe, Meta	3.78	199	P	Pn	20 04 22.7	0.0
URMC				S	Sn	20 05 05.5	-1.6
YOTC	Yotoco, Valle	4.28	229	P	Pn	20 04 27.0	-2.3
SMRC	Santa Marta, M	4.43	346	P	Pn	20 04 31.4	+0.2
SMRC				S	Sn	20 05 19.1	-3.3
URIC	Uribia, Colomb	4.96	13	P	Pn	20 04 40.1	+1.9
	0.0nm8.1nm,0.9s						
URIC				S	Sn	20 05 30.6	-4.4
	0.0nm8.1nm,0.9s						
GARC	Garzon, Huila	5.18	207	P	Pn	20 04 40.4	-1.0
GARC				S	Sn	20 05 38.0	-2.7
POPC	Popayan, Colom	5.54	220	P	Pn	20 04 45.9	-0.3
	2.6nm,0.5s						
POPC				S	Sn	20 05 47.4	-1.8
	2.6nm,0.5s						
BBAC	Balboa, Cauca	6.30	221	P	Pn	20 04 56.5	+0.2
BBAC				S	Sn	20 06 03.8	-3.6
ASAR	Alice Springs	149.11	234	PKPbc	PKPdf	20 22 55.4	+2.0
	0.3nm,0.6s,baz=119,slow=3.6,SNR=5.4						
WRA	Warramunga Arr	150.34	241	PKPbc	PKPdf	20 22 58.5	+3.2
	0.4nm,0.8s,baz=108,slow=2.5,SNR=8.5						

KOLA 27 20:05:46.8, 67°.66N×33°.72E, h0km, ML1.3, Error ellipse: s-maj=3.0km s-min=2.1km az=100.0, Khibiny, mines Kirovsk, Yukspor

HEL 27 20:05:45.4±1.2, 67°.62N×33°.95E, h0km, ML1.1, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA	Apatity	0.21	256	P	Pg	20 05 49.4	-0.1
APA				S	Sg	20 05 51.8	-0.5
APA0	Apatity Array	0.37	268	P	Pg	20 05 51.6	-0.8
APA0				S	Sg	20 05 55.7	-1.4
LVZ	Lovozero	0.39	43	S	Sb	20 06 00.1	-1.6
KVDA	Kovda	1.02	205	S	Sg	20 06 18.7	+0.5
VRF	Varrio	1.66	276	PG	Pn	20 06 15.5	-0.2
	baz=90						
VRF				smax	smax	20 06 35.2	
	comp=Z,1.3nm,0.2s						
VRF				SN	Sn	20 06 36.0	-1.7
OLKF	Oulanka, Finla	2.21	236	PG	Pb	20 06 25.7	-0.5
OLKF				smax	smax	20 06 51.0	
	comp=Z,0.7nm,0.2s						
OLKF				SG	Sb	20 06 54.3	+0.1
KU6	Riekki	2.27	227	PG	Pb	20 06 25.6	-1.5
	baz=39						
KU6				smax	smax	20 06 52.5	
	comp=Z,0.5nm,0.2s						
KU6				SG	Sb	20 06 54.3	-1.4
RAJF	Raja-Jooseppi	2.29	295	SB	Sn	20 06 52.3	-0.8
MSF	Maaselka	2.59	231	SG	Sb	20 07 06.4	+1.3
VADS	Vadso	3.01	329	S	Sn	20 07 10.9	-0.1
KEV	Kevo	3.32	313	PN	Pn	20 06 38.9	+0.4
KEV				SN	Sn	20 07 17.1	-1.5
ARCES	ARCESS Array B	3.65	306	P	Pn	20 06 42.5	-0.4
ARCES

KTK1			SG	Sb	20 07 24.3	+0.7
RNF	**Rovaniemi**	**2.19 103**	PG	Pn	20 06 57.8	+1.3
RNF			SG	Sb	20 07 27.2	+0.2
BURU	**Burvik** baz=356	**2.63 173**	PB	Pn	20 07 03.6	+1.0
OLKF	**Oulanka, Finla**	**3.58 100**	SB	Sb	20 08 05.1	-1.7

GCG ***27*** *20:07:00.1±0.8, 13˚.19N×90˚.66W, h14km±7km, MD4.3, Presumed earthquake*
CATAC ***27*** *20:07:01.8±0.5, 13˚.N±3˚×9˚.1W±˚, h10km±2km, M3.9/25, MLv3.9/25, Error ellipse: s-maj=5.7km s-min=3.5km az=17.2, confirmed*
SNET ***27*** *20:07:05.6±2.5, 13˚.44N×90˚.42W, h14km, ML3.4, Presumed earthquake*

ISC 27 20:07:03.4±1.6**, 13˚.32N**±0˚.07×**-90˚.46W**±0˚.04**, h15**km±10km**, n52**, σ0§80/79**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	**Alcaldia de Sa**	**0.68**	**40**	P	**Pb**	**20 07 16.6**	**-0.4**
FG8	**Yepocapa, Chim**	**0.94**	**354**	*i* P	**Pn**	**20 07 22.6**	**+0.4**
LOAL	**Lomas de Alarc**	**0.95**	**44**	P	**Pb**	**20 07 21.2**	**-0.3**
LOAL				S	**Sn**	**20 07 35.3**	**-0.3**
FG16	**Alotenango, Sa**	**0.95**	**357**	*i* P	**Pn**	**20 07 23.2**	**+0.8**
CEVE	**Cerro Verde**	**0.96**	**58**	P	**Pb**	**20 07 21.5**	**-0.4**
CEVE				S	**Sn**	**20 07 36.1**	**0.0**
CEVE	**Cerro Verde**	**0.96**	**58**	*e*P	**Pb**	**20 07 21.5**	**-0.4**
CEVE				*e*S	**Sn**	**20 07 37.0**	**+0.9**
SLOZ	**Alcaldia de Sa**	**0.96**	**43**	P	**Pb**	**20 07 21.3**	**-0.5**
JAYA	**Jayaque - finc**	**1.04**	**71**	P	**Pb**	**20 07 22.4**	**-0.8**
JAYA				S	**Sn**	**20 07 38.0**	**+0.1**
JAYA	**Jayaque - finc**	**1.04**	**71**	*i* P	**Pb**	**20 07 22.2**	**-1.0**
JAYA	**Jayaque - finc**	**1.04**	**71**	*e*P	**Pb**	**20 07 22.4**	**-0.8**
UNIC	**Universidad Ca**	**1.11**	**53**	P	**Pb**	**20 07 23.7**	**+0.6**
UNIC				S	**Sb**	**20 07 39.0**	**+0.5**
LALI	**Alcalda de L**	**1.12**	**81**	S	**Sn**	**20 07 39.7**	**-0.1**
LALI	**Alcalda de L**	**1.12**	**81**	*i* P	**Pn**	**20 07 23.1**	**-1.4**
LALI	**Alcalda de L**	**1.12**	**81**	*e*P	**Pn**	**20 07 23.7**	**-0.8**
CEDA	**San Andres**	**1.14**	**65**	P	**Pn**	**20 07 23.9**	**-1.0**
CEDA				S	**Sg**	**20 07 41.1**	**+0.6**
CEDA	**San Andres**	**1.14**	**65**	*e*P	**Pg**	**20 07 25.1**	**-0.4**
CEDA				*e*S	**Sn**	**20 07 40.1**	**-0.3**
PMON	**Piamonte**	**1.18**	**70**	P	**Pn**	**20 07 24.7**	**-0.8**
PMON				S	**Sn**	**20 07 41.5**	**+0.1**
BOQS	**Boqueron**	**1.22**	**70**	*e*P	**Pn**	**20 07 25.4**	**-0.7**
UEES	**Universidad Ev**	**1.25**	**71**	P	**Pn**	**20 07 26.0**	**-0.5**
UEES				S	**Sg**	**20 07 43.8**	**-0.1**
SEMO	**Seminario San**	**1.26**	**72**	P	**Pn**	**20 07 25.8**	**-0.8**
SEMO				S	**Sn**	**20 07 43.8**	**+0.4**
PANCS	**Alcalda de**	**1.28**	**77**	S	**Sn**	**20 07 44.0**	**+0.3**
UTEC	**Universidad Te**	**1.28**	**73**	P	**Pn**	**20 07 26.4**	**-0.5**
UTEC				S	**Sn**	**20 07 44.4**	**+0.6**
IGN	**Direccin Gen**	**1.32**	**72**	S	**Sb**	**20 07 45.4**	**+0.8**
UDBS	**Universidad Do**	**1.33**	**72**	P	**Pn**	**20 07 27.3**	**-0.2**
UDBS				S	**Sg**	**20 07 46.0**	**-0.4**
LFU	**La Fuente**	**1.38**	**72**	*e*P	**Pn**	**20 07 27.8**	**-0.4**
STG5	**El Palmar, Qui**	**1.38**	**322**	*i* P	**Pg**	**20 07 29.8**	**-0.2**
LFRS	**El Faro**	**1.40**	**77**	*e*P	**Pb**	**20 07 28.6**	**-0.6**
STG8	**El Palmar, Qui**	**1.42**	**323**	*i* P	**Pg**	**20 07 31.0**	**+0.3**
STG8				*i* S	**Sg**	**20 07 52.0**	**+2.7**
STG2	**El Palmar, Qui**	**1.43**	**322**	*i* P	**Pg**	**20 07 30.9**	**+0.1**
MTO3	**Montecristo**	**1.52**	**45**	P	**Pn**	**20 07 29.7**	**-0.5**
MTO3				S	**Sb**	**20 07 51.1**	**+0.6**
PAVA	**Las Pavas**	**1.53**	**75**	P	**Pn**	**20 07 30.2**	**-0.2**
PAVA				S	**Sb**	**20 07 52.0**	**+1.1**
COEG	**Centro de Oper**	**1.57**	**79**	P	**Pn**	**20 07 30.5**	**-0.3**
COEG				S	**Sb**	**20 07 52.2**	**+0.4**
COEG	**Centro de Oper**	**1.57**	**79**	*e*P	**Pb**	**20 07 31.1**	**-1.0**
ESQI	**Esquipulas**	**1.65**	**41**	P	**Pn**	**20 07 31.3**	**-0.6**
ESQI	**Esquipulas**	**1.65**	**41**	*e*P	**Pb**	**20 07 32.3**	**-1.2**
TECO	**Alcaldia de Te**	**1.65**	**82**	P	**Pn**	**20 07 31.3**	**-0.5**
TECO				S	**Sb**	**20 07 54.2**	**0.0**
APG	**El Apazote**	**1.68**	**360**	*i* P	**Pn**	**20 07 31.8**	**-0.6**
LLGN	**La Laguna**	**1.70**	**60**	P	**Pn**	**20 07 32.1**	**-0.5**
LLGN				S	**Sb**	**20 07 55.5**	**-0.1**
LLGN	**La Laguna**	**1.70**	**60**	*e*P	**Pn**	**20 07 32.9**	**+0.4**
SCLA	**Alcaldia de Sa**	**1.73**	**77**	P	**Pn**	**20 07 32.7**	**-0.2**
SCLA				S	**Sb**	**20 07 56.3**	**-0.2**
SOKI	**Kika Raxquin**	**1.75**	**329**	*i* P	**Pn**	**20 07 31.0**	**-2.6**
P5NO	**Presa 5 de nov**	**1.78**	**68**	P	**Pn**	**20 07 33.4**	**-0.3**
P5NO				S	**Sb**	**20 07 57.8**	**-0.2**
PQSS	**Presa 15 de Se**	**1.87**	**80**	P	**Pn**	**20 07 34.6**	**-0.4**
PQSS				S	**Sb**	**20 08 00.5**	**-0.1**
PACA	**Pacayal**	**2.09**	**86**	P	**Pn**	**20 07 37.9**	**0.0**
PACA				S	**Sb**	**20 08 06.1**	**-0.7**
RANC	**El Ranchito**	**2.12**	**87**	P	**Pn**	**20 07 38.6**	**+0.2**
RANC				S	**Sn**	**20 08 05.9**	**+1.3**
HUEH	**Huehuetenango**	**2.23**	**333**	P	**Pn**	**20 07 39.1**	**-0.9**
HUEH				S	**Sn**	**20 08 07.0**	**-0.5**
LCND	**La Caada**	**2.50**	**90**	P	**Pn**	**20 07 43.3**	**-0.2**
LCND				S	**Sn**	**20 08 15.3**	**+1.4**
MARCA	**Marcala la Paz**	**2.50**	**70**	P	**Pn**	**20 07 43.4**	**-0.3**
MARCA	**Marcala la Paz**	**2.50**	**70**	*i* P	**Pn**	**20 07 44.7**	**+1.0**
CNCH	**Conchagua**	**2.56**	**91**	P	**Pn**	**20 07 44.3**	**-0.1**
CNCH				S	**Sn**	**20 08 16.6**	**+1.2**
CSGN	**Cosiguina Volc**	**2.85**	**96**	S	**Sn**	**20 08 24.5**	**+2.0**
POTN	**Potosi Cosigui**	**2.90**	**96**	P	**Pn**	**20 07 49.4**	**+0.5**
POTN				S	**Sn**	**20 08 24.8**	**+1.3**

NEIC ***27*** *20:12:30.2±1.1, 43˚.74N±0˚.05×105˚.32W±0˚.06, h0km±1km, ML3.4/70, Error ellipse: s-maj=9.2km s-min=6.8km az=326.0*
IDC ***27*** *20:12:30.0±1.2, 43˚.49N×105˚.34W, h0km, mb4.0/2, mbtmp3.5/8, ML3.2/5, Error ellipse: s-maj=25.5km s-min=8.0km az=152.0*

ISC 27 20:12:31.3±0.8**, 43˚.74N**±0˚.06×**105˚.36W**±0˚.06**, h0**km**, n82**, σ1§12/82**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.03**	**68**		**Pg**	**20 12 51.2**	**+0.1**
K22A	**Casper**	**1.38**	**218**		**Pg**	**20 12 57.0**	**-0.8**
K22A	844nm,0.3s			IAML		20 13 20.1	
K22A	817nm,0.3s			IAML		20 13 23.6	
LAO	**LASA Array**	**3.01**	**349**		**Pn**	**20 13 21.0**	**+0.6**
RLMT	**Red Lodge**	**3.12**	**298**		**Pn**	**20 13 23.1**	**+1.1**
RLMT	62nm,0.3s			IAML		20 14 11.5	
RLMT	79nm,0.3s			IAML		20 14 12.1	
BW06	**Boulder Array**	**3.22**	**254**		**Pn**	**20 13 23.9**	**+0.6**
BW06	80nm,0.3s			IAML		20 14 12.4	
PD31	**Pinedale Array**	**3.22**	**254**		**Pn**	**20 13 24.1**	**+0.8**
PDAR	**Pinedale Array**	**3.22**	**254**	Pn	**Pn**	**20 13 24.7**	**+1.3**
PDAR	9.2nm,0.3s,baz=70,slow=16,SNR=129 27nm,0.3s,baz=73,slow=29,SNR=3.5			Lg	Lg	20 14 08.4	
HAYD	**Hayden**	**3.51**	**204**		**Pn**	**20 13 28.7**	**+1.3**
HAYD	comp=E,88nm,0.3s			IAML		20 14 23.2	
HAYD	comp=N,75nm,0.7s			IAML		20 14 24.9	
YNE	**Yellowstone No**	**3.57**	**292**		**Pn**	**20 13 28.9**	**+0.7**
YNE	comp=E,66nm,0.3s			IAML		20 14 24.8	
YNE	comp=N,74nm,0.4s			IAML		20 14 25.2	
YMP	**Mirror Lake Pl**	**3.59**	**288**		**Pn**	**20 13 29.6**	**+1.0**
YMP	comp=E,103nm,0.7s			IAML		20 14 29.7	
YMP	comp=N,102nm,0.4s			IAML		20 14 35.1	
OGNE	**Ogallala**	**3.72**	**137**		**Pn**	**20 13 31.1**	**+0.9**
LOHW	**Long Hollow**	**3.81**	**270**		**Pn**	**20 13 33.4**	**+1.9**
H17A	**Grant Village**	**3.82**	**282**		**Pn**	**20 13 34.0**	**+2.4**
H17A	comp=E,35nm,0.9s			IAML		20 14 37.4	
FLWY	**Flagg Ranch**	**3.87**	**277**		**Pn**	**20 13 33.8**	**+1.5**
FLWY	comp=E,50nm,1.5s			IAML		20 14 52.1	
MOOW	**Moose Ponds**	**3.90**	**272**		**Pn**	**20 13 34.8**	**+2.0**
SNOW	**Snow King Moun**	**3.93**	**268**		**Pn**	**20 13 35.8**	**+2.7**
SNOW	comp=E,48nm,1.0s			IAML		20 14 57.2	
SNOW	comp=E,44nm,2.0s			IAML		20 15 05.8	

ISCO	**Idaho Springs**	**3.94**	**183**		**Pn**	**20 13 34.5**	**+1.2**
ISCO	comp=E,36nm,1.1s			IAML		20 14 40.5	
YNR	**Norris Junctio**	**3.95**	**286**		**Pn**	**20 13 34.4**	**+1.0**
YPP	**Pitchstone Pla**	**3.96**	**280**		**Pn**	**20 13 35.0**	**+1.4**
YHH	**Holmes Hill**	**4.08**	**287**		**Pn**	**20 13 36.2**	**+0.9**
FXWY	**Fox Creek**	**4.11**	**271**		**Pn**	**20 13 36.8**	**+1.2**
O20A	**White River Ci**	**4.19**	**212**		**Pn**	**20 13 38.0**	**+1.3**
O20A	comp=E,65nm,0.7s			IAML		20 14 51.4	
O20A	comp=E,61nm,2.4s			IAML		20 15 23.7	
AHID	**Auburn Hatcher**	**4.30**	**259**		**Pn**	**20 13 39.8**	**+1.5**
AHID	comp=E,42nm,1.9s			IAML		20 14 58.5	
AHID	comp=E,41nm,0.9s			IAML		20 15 02.5	
YHL	**Hebgen Lake**	**4.33**	**287**		**Pn**	**20 13 39.7**	**+1.1**
YHL	comp=E,30nm,0.9s			IAML		20 14 54.8	
YHL	comp=N,32nm,1.0s			IAML		20 15 01.7	
K30B	**Basset**	**4.33**	**102**		**Pn**	**20 13 40.2**	**+1.7**
E28A	**Huff**	**4.35**	**48**		**Pn**	**20 13 38.7**	**-0.1**
E28A	comp=N,64nm,0.8s			IAML		20 14 56.8	
RDMU	**Red Mountain**	**4.45**	**226**		**Pn**	**20 13 42.0**	**+1.7**
RDMU	comp=N,42nm,1.1s			IAML		20 14 58.0	
RDMU	comp=E,41nm,0.9s			IAML		20 15 08.1	
QLMT	**Earthquake Lak**	**4.49**	**286**		**Pn**	**20 13 41.3**	**+0.4**
SUSD	**Miller**	**4.67**	**79**		**Pn**	**20 13 44.2**	**+1.1**
BOZ	**Bozeman (W)**	**4.84**	**295**		**Pn**	**20 13 46.2**	**+0.6**
BOZ	comp=E,21nm,2.5s			IAML		20 15 04.8	
HWUT	**Hardware Ranch**	**5.05**	**247**		**Pn**	**20 13 49.5**	**+1.0**
HWUT	comp=E,27nm,1.4s			IAML		20 15 23.0	
HWUT	comp=E,32nm,0.8s			IAML		20 15 29.4	
BSUT	**Blindstream Ca**	**5.13**	**233**		**Pn**	**20 13 50.3**	**+0.4**
BSUT	comp=N,18nm,0.8s			IAML		20 15 30.0	
BSUT	comp=E,15nm,1.2s			IAML		20 15 30.4	
KSCO	**Kaye Shedlock'**	**5.15**	**156**		**Pn**	**20 13 50.2**	**+0.4**
TCUT	**Toone Canyon**	**5.19**	**242**		**Pn**	**20 13 51.3**	**+0.9**
EGMT	**Eagleton**	**5.27**	**326**		**Pn**	**20 13 51.1**	**-0.3**
LRM	**Limekiln Ridge**	**5.46**	**295**		**Pn**	**20 13 54.4**	**+0.3**
MCMT	**McKenzie Canyo**	**5.49**	**284**		**Pn**	**20 13 55.5**	**+0.9**
P18A	**Preston Nutter**	**5.50**	**223**		**Pn**	**20 13 55.8**	**+1.0**
MDND	**Maddock**	**5.75**	**42**		**Pn**	**20 13 57.4**	**-0.6**
HVU	**Hansel Valley**	**5.80**	**253**		**Pn**	**20 13 59.4**	**+0.7**
PV22	**Blue Mesa, Par**	**5.81**	**208**		**Pn**	**20 14 00.3**	**+1.4**
BGNE	**Belgrade**	**5.81**	**111**		**Pn**	**20 13 59.3**	**+0.5**
BCYI	**Bear Canyon**	**5.83**	**278**		**Pn**	**20 14 01.4**	**+2.1**
PV21	**Cone Mtn., Par**	**5.85**	**209**		**Pn**	**20 14 00.7**	**+1.2**
PV07	**Paradox Valley**	**5.85**	**206**		**Pn**	**20 14 00.8**	**+1.3**
LYMT	**Lyon Mountain**	**5.86**	**306**		**Pn**	**20 14 00.2**	**+0.6**
P17A	**Butcher Ranch,**	**5.87**	**225**		**Pn**	**20 14 01.1**	**+1.4**
PV15	**Paradox Valley**	**5.88**	**205**		**Pn**	**20 14 00.8**	**+0.7**
PV04	**Paradox Valley**	**5.97**	**208**		**Pn**	**20 14 02.3**	**+1.1**
PV14	**Lion Creek, Pa**	**6.03**	**209**		**Pn**	**20 14 02.5**	**+0.5**
PV10	**Paradox Valley**	**6.04**	**209**		**Pn**	**20 14 04.2**	**+2.1**
SRU	**San Rafael Swe**	**6.04**	**222**		**Pn**	**20 14 02.2**	**+0.1**
PV20	**West Nyswonger**	**6.04**	**208**		**Pn**	**20 14 03.2**	**+1.0**
PV11	**David Mesa, Pa**	**6.05**	**207**		**Pn**	**20 14 02.9**	**+0.7**
PV16	**Nyswonger Mesa**	**6.05**	**208**		**Pn**	**20 14 03.2**	**+0.9**
PV03	**Paradox Valley**	**6.08**	**207**		**Pn**	**20 14 03.0**	**+0.4**
PV02	**Paradox Valley**	**6.09**	**206**		**Pn**	**20 14 03.2**	**+0.4**
PV01	**Paradox Valley**	**6.10**	**205**		**Pn**	**20 14 03.8**	**+0.8**
PV18	**Skein Mesa, Pa**	**6.11**	**207**		**Pn**	**20 14 03.9**	**+0.9**
PV13	**Radium Mtn., P**	**6.16**	**206**		**Pn**	**20 14 04.8**	**+1.0**
PV05	**Paradox Valley**	**6.32**	**208**		**Pn**	**20 14 05.7**	**-0.4**
ECSD	**EROS Data Cent**	**6.34**	**87**		**Pn**	**20 14 06.2**	**+0.2**
BGU	**Big Grassy Mou**	**6.34**	**246**		**Pn**	**20 14 07.9**	**+1.7**
CBKS	**Cedar Bluff**	**6.49**	**137**		**Pn**	**20 14 08.7**	**+0.6**
Q16A	**Castle Valley**	**6.50**	**224**		**Pn**	**20 14 09.3**	**+0.9**
HLID	**Hailey**	**6.57**	**272**		**Pn**	**20 14 10.7**	**+1.3**
DUG	**Dugway, Tooele**	**6.59**	**240**		**Pn**	**20 14 10.5**	**+1.0**
T25A	**Trinidad**	**6.63**	**173**		**Pn**	**20 14 10.7**	**+0.5**
F33A	**5 Mile Ranch,**	**6.79**	**69**		**Pn**	**20 14 10.8**	**-1.3**
MVCO	**Mesa Verde**	**6.95**	**201**		**Pn**	**20 14 16.1**	**+1.6**
HMU	**Henry Mountain**	**7.08**	**217**		**Pn**	**20 14 16.7**	**+0.2**
R32A	**Long Quarter,**	**7.31**	**134**		**Pn**	**20 14 20.0**	**+0.6**
ELK	**Elko**	**7.92**	**251**	Pn	**Pn**	**20 14 29.1**	**+1.3**
ELK	comp=E,0.4nm,0.3s,baz=79,slow=7.9,SNR=7.4 comp=E,0.2nm,0.3s,baz=38,slow=19,SNR=1.7 comp=E,0.7nm,0.3s			Lg	Lg	20 16 35.7	
AGMN	**Agassiz Nation**	**8.03**	**52**		**Pn**	**20 14 28.7**	**-0.5**
U15A	**North Rim**	**9.03**	**218**		**Pn**	**20 14 44.3**	**+1.1**
ULM	**Lac du Bonnet**	**9.18**	**42**	Pn	**Pn**	**20 14 43.8**	**-1.2**
ULM	comp=E,1.8nm,0.3s,baz=226,slow=11,SNR=11 comp=E,0.3nm,0.3s,baz=315,slow=19,SNR=1.7 comp=E,3.3nm,0.3s			Lg	Lg	20 17 17.6	
NEW	**Newport**	**9.35**	**303**	Pn	**Pn**	**20 14 47.1**	**-0.3**
NEW	comp=E,0.2nm,0.3s,baz=67,slow=17,SNR=1.8 comp=E,0.2nm,0.3s,baz=133,slow=18,SNR=1.9 comp=E,0.6nm,0.3s			Lg	Lg	20 17 23.9	
NVAR	**Mina Array Bea**	**11.11**	**246**	Pn	**Pn**	**20 15 10.2**	**-1.5**
	comp=E,0.2nm,0.3s,baz=49,slow=13,SNR=2.4 comp=E,0.2nm,0.3s						
YKA	**Yellowknife Ar**	**19.55**	**347**	P	**Pn**	**20 17 02.3**	**+0.7**
	comp=E,0.1nm,0.3s,baz=74,slow=2.0,SNR=5.3 comp=E,0.1nm,0.3s						
YKA	**Yellowknife Ar**	**19.55**	**347**	P	**P**	**20 17 00.4**	**+0.1**
FINES	**FINESS Array B**	**68.06**	**23**	P	**P**	**20 23 32.1**	**-0.1**
	comp=E,1.6nm,0.9s,baz=319,slow=7.4,SNR=7.6 comp=E,1.6nm,0.9s						
AKASG	**Malin Array Be**	**77.99**	**28**	P	**P**	**20 24 31.0**	**-0.2**
	comp=E,0.4nm,0.3s,baz=328,slow=5.0,SNR=4.7 comp=E,0.4nm,0.3s						

JMA ***27*** *20:18:17.9±0.1, 24˚.N±1˚×122˚.6E±0˚.4, h51km±2km, MV2.9/18, NW OFF ISHIGAKIJIMA IS*
TAP ***27*** *20:18:17.9, 24˚.30N×122˚.59E, h53km, ML3.5, C*

ISC 27 20:18:18.6±1.2**, 24˚.27N**±0˚.03×**122˚.59E**±0˚.02**, h52**km±6km**, n145, σ1§17/244, 1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS3	**EOS3**	**0.25**	**274**	*i* P	**Pn**	**20 18 27.6**	**+0.2**
EOS3				*e*S	**Sn**	**20 18 34.7**	**+1.2**
EOS4	**EOS4**	**0.29**	**239**	P	**Pn**	**20 18 27.5**	**+0.1**
EOS4				S	**Sn**	**20 18 34.9**	**+1.2**
EOS2	**EOS2**	**0.36**	**294**	*e*P	**Pn**	**20 18 28.7**	**+0.4**
EOS2				S	**Sn**	**20 18 36.9**	**+1.6**
JYNG	**Yonagunijimaku**	**0.37**	**61**	*i* P	**Pn**	**20 18 28.2**	**-0.4**
JYNG				S	**Sn**	**20 18 35.5**	**-0.2**
YOJ	**Yonaguni jima**	**0.43**	**64**	P	**Pn**	**20 18 28.6**	**-0.5**
YOJ	**Yonaguni jima**	**0.43**	**64**	S	**Sn**	**20 18 36.8**	**+0.1**
YOJ	**Yonaguni jima**	**0.43**	**64**	*i* P	**Pn**	**20 18 28.8**	**-0.3**
YOJ				*i* S	**Sn**	**20 18 36.5**	**-0.2**
YOJ	**Yonaguni jima**	**0.43**	**64**	P	**Pn**	**20 18 28.8**	**-0.3**
YOJ				S	**Sn**	**20 18 36.5**	**-0.2**
ESAO	**Su ao**	**0.75**	**294**	*i* P	**Pn**	**20 18 32.7**	**-0.3**
ESAO				S	**Sn**	**20 18 43.1**	**-0.4**
EWUT	**Wuta**	**0.76**	**283**	P	**Pn**	**20 18 32.6**	**-0.6**
EWUT				S	**Sn**	**20 18 44.3**	**+0.4**
EAHA	**Aohua**	**0.78**	**274**	P	**Pn**	**20 18 33.0**	**-0.4**
EAHA				S	**Sn**	**20 18 45.2**	**+0.9**
NDS	**Dongshan**	**0.88**	**295**	P	**Pn**	**20 18 34.8**	**+0.1**
NDS				S	**Sn**	**20 18 46.9**	**+0.4**
ETL	**Fush Village**	**0.89**	**263**	*e*P	**Pn**	**20 18 34.3**	**-0.6**
ETL				S	**Sn**	**20 18 46.6**	**-0.3**
ILA	**Ilan**	**0.91**	**303**	*e*S	**Sn**	**20 18 47.7**	**+0.3**
NACB	**Ninganchiao**	**0.92**	**264**	P	**Pn**	**20 18 34.4**	**-0.8**
NACB	**Ninganchiao**	**0.92**	**264**	S	**Sn**	**20 18 46.5**	**-1.0**
NACB	**Ninganchiao**	**0.92**	**264**	*i* P	**Pn**	**20 18 34.5**	**-0.8**
NACB				*i* S	**Sn**	**20 18 46.3**	**-1.2**
TWB1	**Santiao Chiao**	**0.92**	**323**	P	**Pn**	**20 18 34.6**	**-0.6**
TWB1				*i* S	**Sn**	**20 18 46.2**	**-1.3**
TWD	**Chiawan**	**0.93**	**258**	*i* P	**Pn**	**20 18 34.6**	**-0.8**
TWD				*i* S	**Sn**	**20 18 46.7**	**-1.1**
HWA	**Hwalien**	**0.95**	**252**	*e*P	**Pn**	**20 18 35.2**	**-0.4**
HWA				*i* S	**Sn**	**20 18 48.1**	**-0.1**
TWE	**Neicheng**	**0.95**	**298**	P	**Pn**	**20 18 35.9**	**+0.1**
TWE				*e*S	**Sn**	**20 18 48.4**	**0.0**

TIPB	**Shuangxi**	**0.99**	**315**	P	**Pn**	**20 18 35.5**	**-0.7**
TIPB				*i* S	**Sn**	**20 18 48.4**	**-0.8**
TEYL	**Yanliau Villag**	**0.99**	**246**	*e*P	**Pn**	**20 18 35.6**	**-0.6**
TEYL				S	**Sn**	**20 18 48.6**	**-0.7**
ENTT	**Nioudou**	**1.00**	**292**	*i* P	**Pn**	**20 18 36.5**	**+0.1**
ENTT				S	**Sn**	**20 18 50.2**	**+0.6**
LATG	**Datong**	**1.01**	**285**	*e*P	**Pn**	**20 18 36.8**	**+0.2**
ETLH	**Xiulin Townshi**	**1.01**	**267**	*e*P	**Pn**	**20 18 35.9**	**-0.7**
FUSB	**Fushanzhiwuyua**	**1.04**	**298**	*i* P	**Pn**	**20 18 37.0**	**+0.1**
FUSB				*e*S	**Sn**	**20 18 50.3**	**-0.2**
NDT	**Datong Townshi**	**1.04**	**289**	*i* P	**Pn**	**20 18 37.2**	**+0.3**
NDT				*e*S	**Sn**	**20 18 50.1**	**-0.3**
IRIF	**Iriomote-Funau**	**1.04**	**86**	*i* P	**Pn**	**20 18 36.5**	**-0.3**
IRIF				S	**Sn**	**20 18 50.5**	**+0.1**
SXI1	**Grass Mountain**	**1.05**	**322**	*e*P	**Pn**	**20 18 36.6**	**-0.5**
SXI1				*i* S	**Sn**	**20 18 49.8**	**-1.0**
ETM	**Tongmen**	**1.05**	**253**	*e*P	**Pn**	**20 18 36.1**	**-0.9**
ETM				*e*S	**Sn**	**20 18 48.8**	**-1.8**
SHUL	**Shoufeng**	**1.06**	**243**	*e*P	**Pn**	**20 18 36.6**	**-0.5**
SHUL				*i* S	**Sn**	**20 18 50.1**	**-0.7**
NWF	**Wu-fen Shan**	**1.08**	**317**	*e*P	**Pn**	**20 18 37.1**	**-0.4**
NWF				*i* S	**Sn**	**20 18 50.3**	**-1.3**
WFSB	**Wu-fen Shan**	**1.08**	**317**	*i* P	**Pn**	**20 18 37.4**	**-0.2**
WFSB				*i* S	**Sn**	**20 18 50.6**	**-0.9**
LXIB	**Xiulin Townshi**	**1.10**	**257**	*i* P	**Pn**	**20 18 37.0**	**-0.9**
LXIB				S	**Sn**	**20 18 50.9**	**-1.3**
NWLT	**Wulai**	**1.11**	**297**	*i* P	**Pn**	**20 18 38.2**	**+0.3**
NWLT				S	**Sn**	**20 18 52.9**	**+0.7**
NNSB	**Datong**	**1.11**	**278**	*e*P	**Pn**	**20 18 37.8**	**-0.2**
TEGC	**Jichi Village**	**1.11**	**240**	*e*P	**Pn**	**20 18 37.3**	**-0.5**
TEGC				*e*S	**Sn**	**20 18 51.6**	**-0.5**
NNS	**Nan Shan**	**1.12**	**279**	*e*P	**Pn**	**20 18 38.0**	**-0.2**
HAIJ	**Hateruma jima**	**1.13**	**101**	P	**Pn**	**20 18 38.6**	**+0.6**
TNOU	**National Taiwa**	**1.15**	**320**	P	**Pn**	**20 18 37.6**	**-0.7**
TNOU				*e*S	**Sn**	**20 18 51.6**	**-1.4**
ESL	**Shilin**	**1.15**	**247**	*e*P	**Pn**	**20 18 37.4**	**-1.0**
ESL				S	**Sn**	**20 18 51.1**	**-2.0**
TWA	**Mucha**	**1.16**	**308**	P	**Pn**	**20 18 38.3**	**-0.2**
TWA				*i* S	**Sn**	**20 18 52.9**	**-0.3**
YHNB	**Yeheng**	**1.18**	**290**	P	**Pn**	**20 18 38.7**	**-0.1**
YHNB	**Yeheng**	**1.18**	**290**	S	**Sn**	**20 18 54.4**	**+0.6**
YHNB	**Yeheng**	**1.18**	**290**	P	**Pn**	**20 18 38.9**	**+0.1**
YHNB				*i* S	**Sn**	**20 18 54.5**	**+0.6**
NSK	**Sanguang**	**1.19**	**290**	*e*P	**Pn**	**20 18 39.1**	**+0.1**
NSK				*e*S	**Sn**	**20 18 54.2**	**0.0**
NHY	**Taipei**	**1.20**	**310**	*e*P	**Pn**	**20 18 39.0**	**-0.1**
WHF	**Hehuan Shan**	**1.22**	**264**	*e*P	**Pn**	**20 18 39.3**	**-0.4**
TATO	**Taipei**	**1.23**	**305**	P	**Pn**	**20 18 39.2**	**-0.2**
TATO	**Taipei**	**1.23**	**305**	S	**Sn**	**20 18 54.4**	**0.0**
FUSS	**Fushou**	**1.23**	**269**	*e*P	**Pn**	**20 18 39.7**	**-0.0**
WARBT	**Fenglin Townsh**	**1.23**	**244**	*e*P	**Pn**	**20 18 38.4**	**-1.1**
WARBT				*i* S	**Sn**	**20 18 53.4**	**-1.7**
TWT	**Tachien**	**1.29**	**269**	*e*P	**Pn**	**20 18 40.8**	**+0.4**
TWT				*e*S	**Sn**	**20 18 56.1**	**-0.7**
JKRS	**Kuro-shima**	**1.29**	**91**	*i* P	**Pn**	**20 18 40.7**	**+0.4**
JKRS				S	**Sn**	**20 18 57.4**	**+0.9**
ZUZH	**Zhuzihu**	**1.30**	**313**	P	**Pn**	**20 18 39.9**	**-0.6**
ZUZH				S	**Sn**	**20 18 56.1**	**-0.7**
TDCB	**Techi**	**1.31**	**270**	P	**Pn**	**20 18 41.0**	**+0.4**
TDCB				*e*S	**Sn**	**20 18 56.7**	**-0.5**
OWD	**Renai**	**1.33**	**257**	*i* P	**Pn**	**20 18 40.5**	**-0.5**
OWD				*i* S	**Sn**	**20 18 56.4**	**-1.3**
ANP	**Anpu**	**1.33**	**313**	*e*P	**Pn**	**20 18 41.0**	**0.0**
TWS1	**Kuangyinshan**	**1.35**	**308**	*e*P	**Pn**	**20 18 41.0**	**

CHY	**Chiayi**	**2.13 249**	*e*P	**Pn**	**20 18 53.2 +1.6**
CHY			*e*S	**Sn**	**20 19 19.0 +2.0**
CHN1	**Nanshi**	**2.18 241**	*e*P	**Pn**	**20 18 54.2 +1.7**
CHN1			*e*S	**Sn**	**20 19 20.6 +2.4**
SGST	**Jiashian**	**2.19 238**	*e*P	**Pn**	**20 18 53.2 +0.6**
SGST			*e*S	**Sn**	**20 19 19.7 +1.2**
SLGT	**Liugui**	**2.19 235**	*e*P	**Pn**	**20 18 53.3 +0.7**
SLGT			*e*S	**Sn**	**20 19 20.0 +1.5**
ECL	**Taimali**	**2.25 222**	*e*P	**Pn**	**20 18 53.3 0.0**
WSF	**Szhu**	**2.26 254**	P	**Pn**	**20 18 54.4 +0.9**
WSF			S	**Sn**	**20 19 22.3 +2.2**
WSL	**Shuilin Townsh**	**2.29 251**	*e*P	**Pn**	**20 18 55.1 +1.2**
WSL			*e*S	**Sn**	**20 19 22.8 +1.9**
ICHU	**Yijhu**	**2.30 247**	*e*P	**Pn**	**20 18 55.2 +1.1**
ICHU			*e*S	**Sn**	**20 19 23.8 +2.5**
SSD	**Sandimen**	**2.35 230**	*e*P	**Pn**	**20 18 56.3 +1.5**
SSD			*e*S	**Sn**	**20 19 24.3 +1.8**
CHN8	**Yiju**	**2.37 248**	*e*P	**Pn**	**20 18 55.2 +0.2**
CHN8			*e*S	**Sn**	**20 19 24.8 +2.0**
TSMG	**Majia**	**2.37 229**	*e*P	**Pn**	**20 18 56.8 +1.8**
LAY	**Lan-yu**	**2.42 204**	*e*P	**Pn**	**20 18 54.2 -1.5**
MASBT	**Mashibuluo**	**2.44 228**	*e*P	**Pn**	**20 18 56.6 +0.6**
MASBT			*e*S	**Sn**	**20 19 24.5 -0.2**
EAST	**Anshuo**	**2.47 221**	*e*P	**Pn**	**20 18 57.9 +1.5**
JIKM	**Ikemajima**	**2.50 74**	P	**Pn**	**20 18 57.2 +0.4**
JIKM			*e*S	**Sn**	**20 19 27.2 +1.0**
JMJ	**Miyako jima 2**	**2.52 77**	P	**Pn**	**20 18 59.3 +2.3**
JMJ2	**Miyako jima3**	**2.54 79**	*e*P	**Pn**	**20 18 58.0 +0.7**
TSCK	**Chigu Township**	**2.55 245**	P	**Pn**	**20 18 58.9 +1.4**
TSCK			*e*S	**Sn**	**20 19 28.8 +1.4**
SSPT	**Xinbi**	**2.57 227**	*e*P	**Pn**	**20 19 00.4 +2.6**
SSPT			*e*S	**Sn**	**20 19 30.9 +3.0**
SCZT	**Fangliau**	**2.62 224**	*e*P	**Pn**	**20 19 00.3 +1.9**
SLIU	**Shizi**	**2.63 219**	*e*P	**Pn**	**20 19 00.7 +2.2**
SMST	**Manzhou Townsh**	**2.76 216**	*e*P	**Pn**	**20 18 59.4 -1.0**
PHUB	**P'eng-hu**	**2.87 255**	*e*P	**Pn**	**20 19 01.6 -0.1**
PHUB			*e*S	**Sn**	**20 19 34.7 -0.3**
PNG	**Penghu**	**2.87 256**	*e*P	**Pn**	**20 19 01.2 -0.5**
VWUC	**VWUC**	**2.95 285**	*e*P	**Pn**	**20 19 01.8 -1.1**
VWUC			*e*S	**Sn**	**20 19 34.7 -2.4**
VCHM	**Qimei**	**3.08 251**	*e*P	**Pn**	**20 19 04.9 +0.1**
PTMZ	**Houxiangcun**	**3.25 284**	*e*P	**Pn**	**20 19 06.1 -0.9**
LYJJ	**Jianjiangzhen**	**3.42 312**	*e*P	**Pn**	**20 19 08.1 -1.3**
XPSS	**Dashiqiu**	**3.42 321**	*e*P	**Pn**	**20 19 08.4 -1.0**
KNMB	**Chin-men Tao**	**3.84 274**	*e*P	**Pn**	**20 19 13.9 -1.2**
AXDP	**Jialang**	**4.25 279**	*e*P	**Pn**	**20 19 20.0 -0.8**
ZPLA	**Ao Xicun**	**4.44 267**	*e*P	**Pn**	**20 19 22.1 -1.2**
DSXP	**Dongshan**	**4.76 264**	*e*P	**Pn**	**20 19 26.9 -0.9**

*IDC **27** 20:21:38.6±3.1, 31°.24S×177°.77W, h0km, mb3.8/3, mbtmp3.8/4, ML3.3/1, Error ellipse: s-maj=67.5km s-min=24.5km az=110.0*
ISC 27 20:21:39.6±2.6, 31°.40S±0°.10×177°.3W±0°.4, h35km, n6, σ1§27/8, mb3.9/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.21**	**346**	Pn	**Pn**	**20 22 12.4**	**-1.4**
	56nm,0.3s,baz=143,slow=20,SNR=2.0						
RAO				Sn	**Sn**	**20 22 39.7**	**-0.1**
	39nm,0.3s,baz=112,slow=19,SNR=1.6						
URZ	**Urewera**	**8.24**	**212**	Pn	**Pn**	**20 23 36.4**	**-0.2**
	0.4nm,0.3s,baz=1.3,slow=22,SNR=1.3						
URZ				Sn	**Sn**	**20 25 06.8**	**-1.7**
	1.6nm,0.3s,baz=353,slow=23,SNR=8.5						
	1.6nm,0.3s						
STKA	**Stephens Creek**	**34.85**	**258**	P	**P**	**20 28 28.8**	**+1.2**
	1.1nm,0.7s,baz=94,slow=16,SNR=1.5						
	1.1nm,0.7s						
ASAR	**Alice Springs**	**43.67**	**268**	P	**P**	**20 29 42.0**	**+0.8**
	0.9nm,0.8s,baz=108,slow=8.4,SNR=9.2						
	0.9nm,0.8s						
WRA	**Warramunga Arr**	**44.74**	**273**	P	**P**	**20 29 50.6**	**+0.8**
	0.8nm,0.4s,baz=112,slow=8.1,SNR=34						
	0.8nm,0.4s						
FINES	**FINESS Array B**	**146.29**	**340**	PKPbc	**PKiKP**	**20 41 19.4**	**+0.6**
	0.8nm,0.6s,baz=24,slow=3.8,SNR=5.4						

IDC 27 20:27:21.9±2.0, 7°.69S×130°.61E, h0km, mb3.7/1, mbtmp3.5/3, ML3.6/2, MS3.4/2, Error ellipse: s-maj=102.2km s-min=25.4km az=71.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**12.71**	**164**	Pn	Pn	20 30 25.8	+1.7
	0.3nm,0.3s,baz=348,slow=13,SNR=8.2						
WRA				Sn	Sn	20 32 45.0	-1.5
	0.2nm,0.3s,baz=340,slow=21,SNR=5.6						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**16.20**	**169**	Pn	Pn	20 31 11.6	+0.5
	0.3nm,0.3s,baz=349,slow=9.9,SNR=25						
ASAR				Sn	Sn	20 34 10.0	-1.6
	0.1nm,0.3s,baz=349,slow=24,SNR=4.2						
	0.2nm,0.4s						
GUMO	**Guam**	**25.44**	**34**	LR	LR	20 43 45.8	
	comp=Z,20nm,19.9s,baz=75,slow=39						
MKAR	**Makanchi Array**	**69.13**	**327**	P	P	20 38 30.0	-0.1
	0.4nm,0.6s,baz=114,slow=7.9,SNR=8.1						
	0.4nm,0.6s						
LSZ	**Lusaka**	**99.84**	**253**	LR	LR	21 26 52.4	
	comp=Z,56nm,18.1s,baz=192,slow=36						

*IDC **27** 20:38:42.2±0.8, 35°.17N×27°.83E, h0km, mb3.9/11, mbtmp3.8/19, ML3.4/6, MS2.9/8, Error ellipse: s-maj=17.4km s-min=12.4km az=169.0*
*NIC **27** 20:38:42.5, 35°.29N×27°.96E, h0km±1km, Ml3.2/14*
*ISK **27** 20:38:43.2, 35°.09N×27°.86E, h7km, ML3.5/24*
*ATH **27** 20:38:43.4, 35°.13N×27°.97E, h5km±2km, ML3.4/6, Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*GII **27** 20:38:44.9±0.0, 34°.784N±0°.004×27°.898E±0°.001, h0km, Mws3.4, confirmed*
*THE **27** 20:38:45.4, 35°.N±8°×2°.8E±°, h0km±14km, M3.1/7, MLh3.1/7*
*AFAD **27** 20:38:47.6, 35°.39N×27°.99E, h24km±4km, ML3.2*
ISC 27 20:38:42.9±1.2, 35°.06N±0°.03×27°.88E±0°.02, h8km±8km, n152, σ1§41/198, mb3.7/10, MS2.9/5, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.77**	**310**	P	**Pg**	**20 38 57.1**	**-0.5**
KARP				S	**Sg**	**20 39 06.6**	**-1.0**
KARP	**Karpathos**	**0.77**	**310**	Pg	**Pg**	**20 38 57.5**	**-0.2**
KARP				Sg	**Sg**	**20 39 08.3**	**+0.7**
KARP	**Karpathos**	**0.77**	**310**	P	**Pg**	**20 38 57.1**	**-0.5**
KARP				S	**Sg**	**20 39 08.8**	**+1.2**
KARP				AML	AML	20 39 12.4	
	6.5nm,0.5s						
KARP				AML	AML	20 39 16.8	
	6.2nm,0.5s						
KARP	**Karpathos**	**0.77**	**310**	P	**Pg**	**20 38 58.6**	**+1.0**
KARP				S	**Sg**	**20 39 08.8**	**+1.2**
ARG	**Arkhangelos**	**1.17**	**10**	P	**Pb**	**20 39 05.0**	**-0.4**
ARG				S	**Sg**	**20 39 21.4**	**+0.8**
ARG	**Arkhangelos**	**1.17**	**10**	Pn	**Pb**	**20 39 05.7**	**+0.3**
ARG				Sn	**Sg**	**20 39 21.9**	**+1.3**
ARG	**Arkhangelos**	**1.17**	**10**	S	**Sg**	**20 39 17.8**	**-2.8**
ARG				AML	AML	20 39 30.7	
	3.8nm,0.6s						
ARG				AML	AML	20 39 33.2	
	4.0nm,0.9s						
ARG	**Arkhangelos**	**1.17**	**10**	P	**Pb**	**20 39 04.2**	**-1.2**
ARG				S	**Sg**	**20 39 18.7**	**-1.9**
ZKR	**Zakros**	**1.37**	**273**	P	**Pg**	**20 39 09.1**	**-0.1**
ZKR	**Zakros**	**1.37**	**273**	Pn	**Pg**	**20 39 09.1**	**-0.1**
ZKR				Sn	**Sn**	**20 39 28.1**	**+1.5**
ZKR	**Zakros**	**1.37**	**273**	P	**Pg**	**20 39 09.4**	**+0.2**
ZKR				AML	AML	20 39 40.5	
	0.6nm,0.7s						
ZKR				AML	AML	20 39 41.0	
	2.5nm,0.8s						
ZKR	**Zakros**	**1.37**	**273**	P	**Pg**	**20 39 09.3**	**+0.1**
ZKR				S	**Sn**	**20 39 29.2**	**+2.6**
YAZI	**Mula-Dat§a-**	**1.65**	**348**	P	**Pn**	**20 39 13.2**	**+0.9**
YAZI				S	**Sn**	**20 39 34.0**	**+0.3**
DAT	**Datca**	**1.68**	**352**	Pn	**Pn**	**20 39 13.5**	**+0.7**
DAT				Sn	**Sn**	**20 39 35.3**	**+0.7**
TURN	**Turunc**	**1.73**	**10**	Pn	**Pn**	**20 39 14.4**	**+1.0**
TURN				Sn	**Sn**	**20 39 36.9**	**+1.2**
TURN	**Turunc**	**1.73**	**10**	P	**Pb**	**20 39 15.8**	**+0.8**
IZZE	**Mula-Seydike**	**1.75**	**38**	P	**Pn**	**20 39 14.6**	**+1.0**
AKAS	**Kas**	**1.82**	**50**	Pn	**Pn**	**20 39 15.8**	**+1.1**
AKAS	**Kas**	**1.82**	**50**	P	**Pn**	**20 39 16.1**	**+1.3**
AKAS				S	**Sn**	**20 39 38.3**	**+0.2**
AKAS				IAML		20 39 44.0	
	comp=E,352nm,0.7s						
FETY	**Fethiye**	**1.85**	**31**	P	Pn	20 39 06.3	-8.7
DALY	**Dalyan (Mula)**	**1.86**	**19**	Pn	**Pn**	**20 39 15.9**	**+0.8**
NPS	**Neapolis**	**1.87**	**277**	P	**Pb**	**20 39 17.0**	**-0.4**
NPS	**Neapolis**	**1.87**	**277**	P	**Pb**	**20 39 17.1**	**-0.4**
NPS				S	**Sb**	**20 39 41.4**	**+0.5**
SABU	**Mula-Dalaman**	**1.97**	**26**	P	**Pn**	**20 39 17.8**	**+1.2**
BODA	**Bodrum-Mula**	**2.00**	**350**	Pn	**Pn**	**20 39 17.9**	**+0.9**
BDRM	**Kayabasi**	**2.03**	**350**	P	**Pn**	**20 39 19.5**	**+2.1**
BODT	**Bodrum**	**2.05**	**347**	P	**Pn**	**20 39 18.9**	**+1.2**
BODT	**Bodrum**	**2.05**	**347**	Pn	**Pn**	**20 39 18.7**	**+1.0**
YER	**Yerkesik**	**2.09**	**9**	P	**Pn**	**20 39 19.3**	**+1.0**
YER				S	**Sn**	**20 39 46.9**	**+2.2**
YER	**Yerkesik**	**2.09**	**9**	Pn	**Pn**	**20 39 19.6**	**+1.2**
YKAV	**Yalikavak-Bodr**	**2.12**	**347**	Pn	**Pn**	**20 39 19.9**	**+1.3**
CAME	**Cameli-Denizli**	**2.20**	**31**	Pn	**Pn**	**20 39 21.0**	**+1.1**
MULA	**Mugla, Merkez-**	**2.22**	**9**	P	**Pn**	**20 39 22.1**	**+2.0**
MLSB	**Milas**	**2.23**	**358**	Pn	**Pn**	**20 39 21.2**	**+1.0**
KNIK	**Mula-Seydike**	**2.25**	**37**	P	**Pn**	**20 39 21.3**	**+0.8**
ELL	**Elmali**	**2.35**	**44**	Pn	**Pn**	**20 39 23.4**	**+1.4**
THERA	**Ancient Thera,**	**2.35**	**304**	P	**Pn**	**20 39 22.5**	**+0.6**
THERA				S	**Sn**	**20 39 48.6**	**-2.4**
THERA	**Ancient Thera,**	**2.35**	**304**	P	**Pn**	**20 39 23.0**	**+1.1**
THERA				S	**Sn**	**20 39 53.0**	**+2.0**
CAEL	**Denizli, Camel**	**2.36**	**29**	P	**Pn**	**20 39 23.0**	**+0.9**
AKUM	**Antalya-Kumluc**	**2.36**	**57**	P	**Pn**	**20 39 22.7**	**+0.7**
AKUM				S	**Sn**	**20 39 49.5**	**-1.6**
THR8	**Santorini-Mono**	**2.37**	**305**	P	**Pn**	**20 39 22.8**	**+0.7**
DNZT	**Denizli-Tavas-**	**2.40**	**22**	P	**Pn**	**20 39 23.9**	**+1.3**
DNZT				P	**Pb**	**20 39 24.1**	**-2.2**
THR6	**Thira Island,**	**2.40**	**303**	P	**Pn**	**20 39 24.5**	**+2.0**
THR3	**Thira Island,**	**2.43**	**304**	P	**Pn**	**20 39 24.1**	**+1.2**
THR3	**Thira Island,**	**2.43**	**304**	P	**Pn**	**20 39 24.0**	**+1.1**
SNT5	**Nea Kammeni, S**	**2.43**	**304**	P	**Pn**	**20 39 23.1**	**+0.2**
THR9	**Santorini-Faro**	**2.43**	**303**	P	**Pn**	**20 39 24.3**	**+1.4**
IDI	**Anoyia**	**2.46**	**276**	Pn	**Pn**	**20 39 23.8**	**+0.4**
	26nm,0.6s,baz=72,slow=14,SNR=22						
IDI				Sn	**Sn**	**20 39 54.2**	**+0.4**
	9.5nm,0.3s,baz=75,slow=20,SNR=5.6						
IDI	**Anoyia**	**2.46**	**276**	P	**Pb**	**20 39 25.4**	**-2.1**
IDI	**Anoyia**	**2.46**	**276**	Pn	**Pn**	**20 39 25.0**	**+1.6**
IDI	**Anoyia**	**2.46**	**276**	P	**Pn**	**20 39 24.8**	**+1.3**
IDI				S	**Sb**	**20 39 56.2**	**-1.8**
TAVA	**DENIZLI_Tavas**	**2.54**	**19**	P	**Pn**	**20 39 25.6**	**+1.1**
GOLH	**Golhisar**	**2.56**	**32**	P	**Pn**	**20 39 27.0**	**+2.2**
AYDN	**Tasoluk**	**2.59**	**360**	P	**Pn**	**20 39 25.0**	**-0.2**
APMY	**Acipayam-Deniz**	**2.66**	**25**	Pn	**Pn**	**20 39 26.9**	**+0.7**
GCAM	**G?zelcaml?**	**2.69**	**349**	Pn	**Pn**	**20 39 27.1**	**+0.7**
DNIZ	**Denizli-Tavas-**	**2.72**	**20**	P	**Pn**	**20 39 27.6**	**+0.6**
ESEN	**Aydn-Nazilli**	**2.76**	**8**	P	**Pn**	**20 39 29.4**	**+1.9**
SMG	**Samos**	**2.77**	**343**	P	**Pn**	**20 39 28.9**	**+1.2**
SMG	**Samos**	**2.77**	**343**	P	**Pn**	**20 39 28.5**	**+0.8**
KORT	**Korkueli**	**2.78**	**45**	P	**Pn**	**20 39 29.6**	**+1.7**
AYDB	**Zeytinkoy-Aydi**	**2.88**	**0**	Pn	**Pn**	**20 39 29.4**	**+0.2**
NAZL	**Nazilli-Aydin**	**2.92**	**6**	Pn	**Pn**	**20 39 30.9**	**+1.3**
INCE	**Denizli-Bozkur**	**2.97**	**27**	P	**Pn**	**20 39 31.7**	**+1.2**
VAM	**Vamos**	**3.04**	**278**	P	**Pn**	**20 39 33.7**	**+2.4**
IZMR	**zmir-demi**	**3.07**	**1**	P	**Pn**	**20 39 32.2**	**+0.5**
SULTU	**Buldan**	**3.07**	**13**	P	**Pn**	**20 39 32.8**	**+1.0**
GVD	**Gavdhos**	**3.13**	**267**	Pn	**Pn**	**20 39 33.7**	**+1.2**
KIRA	**zmir-Kiraz**	**3.16**	**7**	P	**Pn**	**20 39 33.4**	**+0.4**
BRDR	**BURDUR-Merkez**	**3.16**	**33**	P	**Pn**	**20 39 34.5**	**+1.5**
ODEM	**Odemis-Izmir**	**3.21**	**3**	Pn	**Pn**	**20 39 34.7**	**+0.9**
OSC1	**CSNet OBS 1**	**3.21**	**118**	P	**Pn**	**20 39 35.3**	**+1.7**
OSC1				S	**Sb**	**20 40 16.9**	**-2.6**
OSC1				AML	AML	20 40 26.9	
	0.1nm,0.9s						
OSC1				AML	AML	20 40 31.3	
	0.1nm,0.7s						
IMMV	**Iera Moni Meta**	**3.22**	**278**	P	**Pn**	**20 39 36.6**	**+2.8**
IMMV	**Iera Moni Meta**	**3.22**	**278**	Pn	**Pn**	**20 39 36.6**	**+2.8**
BLCB	**Balcova**	**3.39**	**349**	Pn	**Pn**	**20 39 37.5**	**+1.4**
MANT	**Manisa**	**3.46**	**9**	P	**Pn**	**20 39 37.7**	**+0.3**
KNDR	**Palaiochora Ch**	**3.50**	**274**	Pn	**Pn**	**20 39 39.8**	**+2.3**
PASA	**Karahalli, USA**	**3.52**	**21**	P	**Pn**	**20 39 37.4**	**-0.6**
KEPZ	**Antalya-Kepez**	**3.53**	**58**	P	**Pn**	**20 39 39.5**	**+1.3**
KEPZ				S	**Sn**	**20 40 19.3**	**-0.8**
CHOS	**Chios island**	**3.63**	**337**	P	**Pn**	**20 39 39.8**	**+0.3**
AKMS	**Akamas**	**3.65**	**89**	P	**Pn**	**20 39 39.3**	**-0.5**
AKMS				S	**Sn**	**20 40 24.4**	**+1.4**
AKMS				AML	AML	20 40 27.0	
	0.2nm,0.5s						
AKMS				AML	AML	20 40 30.4	
	0.2nm,0.9s						
AKMS	**Akamas**	**3.65**	**89**	P	**Pn**	**20 39 39.5**	**-0.3**
KZIL	**AFYON_Kizioren**	**3.67**	**29**	P	**Pn**	**20 39 40.9**	**+0.8**
BAGO	**Egridir - ISPA**	**3.74**	**38**	P	**Pn**	**20 39 43.2**	**+2.1**
USAK	**Uak-Merkez**	**3.76**	**14**	P	**Pn**	**20 39 40.9**	**-0.3**
NATA	**Nata**	**3.86**	**93**	P	**Pn**	**20 39 43.6**	**+1.0**
NATA				S	**Sn**	**20 40 30.2**	**+2.0**
NATA				AML	AML	20 40 33.4	
	0.6nm,0.5s						
NATA				AML	AML	20 40 38.7	
	0.4nm,0.8s						
NATA	**Nata**	**3.86**	**93**	P	**Pn**	**20 39 43.2**	**+0.6**
NATA				S	**Sn**	**20 40 28.3**	**+0.1**
ALFC	**Alefka**	**3.87**	**87**	P	**Pn**	**20 39 42.7**	**0.0**
ALFC				S	**Sn**	**20 40 30.3**	**+2.0**
ALFC				AML	AML	20 40 32.9	
	0.3nm,0.6s						
ALFC				AML	AML	20 40 34.5	
	0.2nm,0.6s						
ALFC	**Alefka**	**3.87**	**87**	P	**Pn**	**20 39 42.6**	**-0.2**
SEDI	**Konya, Seydise**	**3.93**	**52**	P	**Pn**	**20 39 47.0**	**+3.2**
SEDI				S	**Sn**	**20 40 33.4**	**+3.3**
SEDI				IAML		20 40 36.0	
	comp=N,63nm,0.6s						
SEDI				IAML		20 40 40.0	
	comp=E,45nm,0.5s						
TROD	**Troodos**	**4.09**	**90**	P	**Pn**	**20 39 45.8**	**-0.1**
TROD				S	**Sn**	**20 40 36.2**	**+2.1**
TROD				AML	AML	20 40 39.0	
	0.1nm,0.5s						
TROD				AML	AML	20 40 43.7	
	0.1nm,0.6s						
KTHA	**Kythira Island**	**4.10**	**288**	Pn	**Pn**	**20 39 47.8**	**+1.8**
APOL	**The Sanctuary**	**4.11**	**94**	P	**Pn**	**20 39 46.7**	**+0.7**
APOL				S	**Sn**	**20 40 35.9**	**+1.6**
APOL				AML	AML	20 40 39.6	
	0.2nm,0.6s						
APOL				AML	AML	20 40 43.0	
	0.2nm,0.6s						
OSC2	**CSNet OBS 4**	**4.14**	**117**	P	**Pn**	**20 39 48.3**	**+1.9**
OSC2				S	**Sn**	**20 40 40.0**	**+4.9**
OSC2				AML	AML	20 40 46.9	
	0.1nm,0.5s						
YVAC	**Isparta, Yalva**	**4.19**	**39**	P	**Pn**	**20 39 49.8**	**+2.6**
XYLS	**Xyliatos**	**4.24**	**89**	P	**Pn**	**20 39 48.2**	**+0.4**
XYLS				S	**Sn**	**20 40 39.2**	**+1.7**
XYLS				AML	AML	20 40 42.3	
	0.1nm,0.5s						
XYLS				AML	AML	20 40 46.9	
	0.1nm,0.7s						
ASGA	**Asgata**	**4.42**	**92**	P	**Pn**	**20 39 50.6**	**+0.4**
ASGA				S	**Sn**	**20 40 43.9**	**+2.1**
ASGA				AML	AML	20 40 45.6	
	0.1nm,0.7s						
ASGA				AML	AML	20 40 49.8	
	0.2nm,0.7s						
CSS	**Mathiatis**	**4.47**	**90**	P	**Pn**	**20 39 51.5**	**+0.5**
CSS				S	**Sn**	**20 40 44.6**	**+1.4**
CSS				AML	AML	20 40 48.9	
	0.1nm,0.7s						
CSS				AML	AML	20 40 50.4	
	0.1nm,0.7s						
CSS	**Mathiatis**	**4.47**	**90**	P	**Pn**	**20 39 52.7**	**+1.7**
MVOU	**Mavrovouni**	**4.72**	**89**	P	**Pn**	**20 39 54.7**	**+0.4**
MVOU				S	**Sn**	**20 40 50.8**	**+1.6**
MVOU				AML	AML	20 40 56.8	
	0.1nm,0.5s						
MVOU				AML	AML	20 40 57.3	
	0.1nm,0.6s						
HNTI	**Hanita**	**6.36**	**106**	P	**Pn**	**20 40 18.2**	**+1.2**
HNTI				S	**Sn**	**20 41 31.6**	**+1.7**
BRTR	**Keskin Array B**	**6.53**	**43**	Pn	**Pn**	**20 40 20.4**	**+1.0**
	0.2nm,0.3s,baz=215,slow=15,SNR=7.2						
BRTR				Sn	**Sn**	**20 41 33.1**	**-1.1**
	0.4nm,0.3s,baz=214,slow=24,SNR=11						
	0.9nm,0.7s						
MMA0B	**Mount Meron ar**	**6.57**	**106**	P	**Pn**	**20 40 21.6**	**+1.8**
MMA0B				S	**Sn**	**20 41 36.6**	**+1.6**
MMAI	**Mount Meron Ar**	**6.57**	**106**	Pn	**Pn**	**20 40 20.7**	**+0.9**
	2.1nm,0.3s,baz=310,slow=14,SNR=17						
MMAI				Sn	**Sn**	**20 41 34.0**	**-1.0**
	2.9nm,0.3s,baz=297,slow=22,SNR=5.9						
	1.2nm,0.3s						
QRWL	**Qaraoun**	**6.63**	**101**	*e*P	**Pn**	**20 40 22.0**	**+1.3**
HWQ	**Hawqa**	**6.69**	**94**	*e*P	**Pn**	**20 40 21.7**	**+0.1**
GEM	**Giv'at Ha'Em**	**6.71**	**104**	P	**Pn**	**20 40 23.0**	**+1.2**
GEM				S	**Sn**	**20 41 39.9**	**+1.6**
ZAHL	**Zahle**	**6.72**	**98**	*e*P	**Pn**	**20 40 21.8**	**-0.2**
NATI	**Neve Ativ**	**6.75**	**103**	P	**Pn**	**20 40 23.0**	**+0.7**
NATI				S	**Sn**	**20 41 40.1**	**+0.8**
RCY	**Rachaya**	**6.76**	**101**	*e*P	**Pn**	**20 40 22.5**	**-0.2**
SALP	**Salfit**	**6.79**	**114**	P	**Pn**	**20 40 23.5**	**+0.6**
BEIL	**Beino**	**6.85**	**92**	*e*P	**Pn**	**20 40 23.5**	**-0.2**
AMAZ	**Amatzia**	**6.86**	**119**	P	**Pn**	**20 40 24.4**	**+0.6**
AMAZ				S	**Sn**	**20 41 42.4**	**+0.4**
KZIT	**Kziot**	**6.86**	**125**	P	**Pn**	**20 40 24.6**	**+0.8**
KZIT				S	**Sn**	**20 41 39.3**	**-2.9**
KSHT	**Keshet**	**6.90**	**105**	P	**Pn**	**20 40 25.1**	**+0.7**
KSHT				S	**Sn**	**20 41 44.7**	**+1.6**
HMDT	**Nahal Hemdat**	**6.96**	**112**	P	**Pn**	**20 40 25.9**	**+0.7**
YTIR	**Yattir**	**7.09**	**119**	P	**Pn**	**20 40 27.5**	**+0.4**
YTIR				S	**Sn**	**20 41 47.2**	**-0.7**
DSI	**Dead Sea**	**7.17**	**117**	P	**Pn**	**20 40 29.0**	**+0.9**
MSBI	**Mazada**	**7.29**	**119**	P	**Pn**	**20 40 30.2**	**+0.5**
RMNI	**Mount Ramon**	**7.30**	**126**	P	**Pn**	**20 40 30.8**	**+0.9**
KRMI	**Paran Flat**	**7.59**	**129**	P	**Pn**	**20 40 34.9**	**+1.0**
KRMI				S	**Sn**	**20 41 58.1**	**-2.0**
PRNI	**Paran**	**7.62**	**126**	P	**Pn**	**20 40 35.4**	**+1.1**
PRNI				S	**Sn**	**20 41 59.7**	**-1.1**
HRFI	**Mount Harif**	**7.84**	**128**	P	**Pn**	**20 40 38.5**	**+1.1**
HRFI				S	**Sn**	**20 42 05.4**	**-1.0**
EIL	**Elat**	**8.04**	**130**	Pn	**Pn**	**20 40 40.9**	**+0.9**
	1.2nm,0.3s,baz=342,slow=9.3,SNR=12						
EIL				Sn	**Sn**	**20 42 08.7**	**-2.4**
	1.3nm,0.3s,baz=8.4,slow=21,SNR=4.2						
	9.4nm,0.7s						
ASF	**Jabal al Asfar**	**8.05**	**108**	Pn	**Pn**	**20 40 41.2**	**+1.0**
	0.3nm,0.3s,baz=285,slow=13,SNR=6.5						
ASF				Sn	**Sn**	**20 42 14.3**	**+2.8**
	0.1nm,0.3s,baz=15,slow=3.1,SNR=1.5						
	0.9nm,0.3s						
MLR	**Muntele Rosu**	**10.52**	**353**	Pn	**Pn**	**20 41 13.6**	**-0.5**
	0.1nm,0.3s,baz=117,slow=19,SNR=1.2						
MLR				LR	LR	20 45 04.2	
	comp=Z,30nm,19.6s,baz=206,slow=37						
	0.7nm,0.8s						
VAE	**Valguarnera**	**11.14**	**286**	Pn	**Pn**	**20 41 22.5**	**-0.1**
	9.3nm,1.1s,baz=106,slow=19,SNR=1.6						
VAE				Sn	**Sn**	**20 43 22.8**	**-4.6**
	0.5nm,0.3s,baz=29,slow=20,SNR=1.8						
KBZ	**Khabaz**	**14.46**	**49**	Pn	**P**	**20 42 16.6**	**+1.9**
	0.1nm,0.3s,baz=233,slow=9.8,SNR=8.4						
KEST	**Kesra**	**15.14**	**278**	Pn	**P**	**20 42 22.1**	**-0.3**
	0.2nm,0.3s,baz=73,slow=17,SNR=4.8						
AKASG	**Malin Array Be**	**15.66**	**3**	Pn	**P**	**20 42 28.1**	**+0.2**
	0.4nm,0.3s,baz=195,slow=11,SNR=4.0						
ABTA	**Abfaltersbach**	**16.44**	**320**	*e*Pn	**Pn**	**20 42 35.0**	**+1.0**
	4.2nm,1.2s						
VRAC	**Vranov**	**16.48**	**333**	LR	LR	20 50 06.4	
	comp=Z,21nm,20.2s,baz=158,slow=42						
LESA	**Schwarzleotal**	**16.80**	**322**	*i* Pn	**Pn**	**20 42 38.6**	**+0.2**
	2.8nm,0.9s						
WATA	**Walderalm**	**17.30**	**320**	*e*Pn	**P

	15nm,0.1s,SNR=45								
UCH				⇓S		Sb	20 57 49.1	-0.5	
	72nm,0.2s								
UCH	**Uchtor**	**1.25**	**294**	⇑*i*P		Pg	20 57 32.0	-0.3	
UCH				⇑*i*S		Sb	20 57 49.2	-0.5	
ARLS	**Aral**	**1.30**	**277**	*i*P		Pg	20 57 32.5	-0.7	
ARLS				*i*S		Sg	20 57 50.0	0.0	
TARG	**Taragay, Kyrgy**	**1.31**	**89**	*i*P		Pg	20 57 32.8	-0.7	
TARG				*i*S		Sg	20 57 50.3	-0.2	
KST	**Kastek**	**1.32**	**357**	P		Pn	20 57 34.4	+0.4	
	8.0nm,0.2s								
KST				S		Sn	20 57 52.7	+0.4	
	162nm,0.3s								
KST	**Kastek**	**1.32**	**357**	*e*P		Pn	20 57 34.4	+0.4	
	8.0nm,0.2s								
KST				*e*S		Sn	20 57 52.7	+0.4	
	162nm,0.3s								
AAK	**Ala-Archa**	**1.47**	**309**	⇓P		Pg	20 57 36.6	+0.1	
	20nm,0.2s,SNR=83								
AAK				⇓S		Sn	20 57 56.6	+0.6	
	71nm,0.3s								
AAK	**Ala-Archa**	**1.47**	**309**	⇓P		Pg	20 57 36.7	+0.1	
	55nm,0.3s								
AAK				⇑S		Sn	20 57 56.7	+0.6	
	192nm,0.4s								
AAK	**Ala-Archa**	**1.47**	**309**	⇑*i*P		Pn	20 57 36.0	-0.1	
AAK				⇑*i*S		Sn	20 57 56.3	+0.3	
TNSS	**Tian-Shan**	**1.47**	**27**	P		Pg	20 57 36.9	+0.3	
	11nm,0.2s								
TNSS				S		Sn	20 57 57.0	+0.6	
	15nm,0.2s								
TNSS	**Tian-Shan**	**1.47**	**27**	*e*P		Pg	20 57 36.9	+0.3	
	11nm,0.2s								
TNSS				*e*S		Sn	20 57 57.0	+0.6	
	15nm,0.2s								
FRU1	**Bishkek**	**1.51**	**316**	⇑*i*P		Pg	20 57 37.3	0.0	
FRU1				⇑*i*S		Sg	20 57 58.2	+1.3	
DGS	**Degeres**	**1.53**	**352**	P		Pg	20 57 38.2	+0.5	
	17nm,0.1s								
DGS				S		Sg	20 57 59.4	+1.9	
	88nm,0.2s								
DGS	**Degeres**	**1.53**	**352**	*e*P		Pg	20 57 38.2	+0.5	
	17nm,0.1s								
DGS				*e*S		Sg	20 57 59.4	+1.9	
	88nm,0.2s								
CHMS	**Chumysh**	**1.60**	**323**	⇓P		Pg	20 57 39.0	+0.1	
	20nm,0.2s,SNR=35								
CHMS				⇓S		Sg	20 58 00.3	+0.6	
	52nm,0.2s								
CHMS	**Chumysh**	**1.60**	**323**	⇑*i*P		Pb	20 57 38.2	-0.4	
CHMS				⇑*i*S		Sg	20 57 59.9	+0.3	
MDOK	**Medeo**	**1.62**	**27**	Pg		Pg	20 57 39.4	+0.1	
	29nm,0.2s								
MDOK				Lg		Lg	20 58 01.5		
	51nm,0.2s								
KNDC	**Almaty**	**1.64**	**24**	⇓P		Pg	20 57 40.1	+0.3	
	37nm,0.4s								
KNDC				⇓S		Sg	20 58 03.1	+2.1	
	114nm,0.5s								
KOTS	**Kotyrbulak**	**1.71**	**27**	*e*P		Pg	20 57 41.6	+0.7	
	72nm,0.2s								
KOTS				*e*S		Sg	20 58 05.0	+2.0	
	156nm,0.4s								
SALK	**Salom-Alik**	**1.88**	**244**	⇓*i*P		Pn	20 57 42.1	+0.5	
SALK				⇓*i*S		Sn	20 58 06.6	+0.7	
PRZ	**Przheval'sk**	**1.91**	**66**	⇓*i*P		Pb	20 57 43.0	-1.0	
PRZ				⇓*i*S		Sb	20 58 08.2	-0.1	
USP	**Ospenovka**	**1.92**	**324**	P		Pg	20 57 44.8	-0.3	
	SNR=70								
USP				⇓S		Sg	20 58 10.8	+0.7	
	71nm,0.2s								
USP	**Ospenovka**	**1.92**	**324**	⇑*i*P		Pb	20 57 43.5	-0.6	
USP				⇑*i*S		Sg	20 58 08.8	-1.3	
EKS2	**Erkin-Say**	**1.93**	**300**	⇓P		Pg	20 57 44.9	-0.4	
	16nm,0.2s,SNR=62								
EKS2				⇑S		Sg	20 58 11.2	+0.8	
	35nm,0.3s								
EKS2	**Erkin-Say**	**1.93**	**300**	⇑*i*P		Pb	20 57 43.5	-0.8	
EKS2				⇑*i*S		Sb	20 58 08.7	-0.2	
KRBS	**Karabastau**	**1.99**	**352**	Pg		Pg	20 57 46.3	-0.2	
	17nm,0.2s								
KRBS				Lg		Lg	20 58 13.3		
	130nm,0.4s								
KRBS	**Karabastau**	**1.99**	**352**	*e*P		Pg	20 57 46.3	-0.2	
	17nm,0.2s								
KRBS				*e*S		Sg	20 58 13.3	+1.0	
	130nm,0.4s								
SGDS	**Sogindy**	**2.02**	**329**	Pg		Pg	20 57 47.1	0.0	
	7.1nm,0.1s								
SGDS				Lg		Lg	20 58 14.6		
	67nm,0.2s								
KTBS	**Karatobe**	**2.04**	**13**	Pg		Pg	20 57 47.0	-0.4	
	25nm,0.2s								
KTBS				Lg		Lg	20 58 14.6		
	45nm,0.3s								
KTBS	**Karatobe**	**2.04**	**13**	*e*P		Pg	20 57 47.0	-0.4	
	25nm,0.2s								
KTBS				*e*S		Sg	20 58 14.6	+0.7	
	45nm,0.3s								
SATY	**Saty**	**2.20**	**52**	Pg		Pb	20 57 49.1	+0.2	
	40nm,0.3s								
SATY				Lg		Lg	20 58 17.9		
	83nm,0.1s								
SATY	**Saty**	**2.20**	**52**	*e*P		Pb	20 57 49.1	+0.2	
	40nm,0.3s								
SATY				*e*S		Sg	20 58 17.9	-1.1	
	83nm,0.1s								
MRKS	**Merke**	**2.33**	**297**	Pg		Pb	20 57 52.1	+0.9	
	60nm,0.5s								
MRKS				Lg		Lg	20 58 23.2		
	33nm,0.4s								
MRKS	**Merke**	**2.33**	**297**	*e*P		Pb	20 57 52.1	+0.9	
	60nm,0.5s								
MRKS				*e*S		Sg	20 58 23.2	0.0	
	33nm,0.4s								
ARSB	**Arslanbob**	**2.34**	**261**	⇓*i*P		Pn	20 57 48.6	+0.7	
ARSB				⇓*i*S		Sn	20 58 17.8	+0.5	
KURS	**Kuram**	**2.36**	**41**	Pg		Pg	20 57 52.3	-1.2	
	7.7nm,0.2s								
KURS				Lg		Lg	20 58 23.6		
	15nm,0.3s								
SFK	**Sufi-Kurgan**	**2.58**	**229**	⇑*i*P		Pn	20 57 51.8	+0.5	
SFK				⇑*i*S		Sn	20 58 23.3	0.0	
KPKS	**Kokpek**	**2.61**	**47**	Pg		Pb	20 57 56.2	+0.3	
	33nm,0.3s								
KPKS				Lg		Lg	20 58 30.2		
	34nm,0.3s								
KPKS	**Kokpek**	**2.61**	**47**	*e*P		Pb	20 57 56.2	+0.3	
	33nm,0.3s								
KPKS				*e*S		Sg	20 58 30.2	-2.0	
	34nm,0.3s								
UZB	**Uzynbulak**	**2.62**	**56**	Pg		Pb	20 57 56.1	0.0	
	47nm,0.3s								
UZB				Lg		Lg	20 58 30.4		
	70nm,0.3s								
UZB	**Uzynbulak**	**2.62**	**56**	*e*P		Pb	20 57 56.1	0.0	
	47nm,0.3s								
UZB				*e*S		Sg	20 58 30.4	-2.1	
	70nm,0.3s								
OHH	**Osh**	**2.74**	**245**	⇓*i*P		Pn	20 57 53.9	+0.5	
OHH				⇓*i*S		Sn	20 58 27.2	+0.1	
MNAS	**Manas**	**2.75**	**287**	*i*P		Pn	20 57 54.7	+1.2	
MNAS				⇓*i*S		Sn	20 58 28.1	+0.7	
ARXS	**Arharly**	**2.81**	**27**	Pg		Pb	20 57 59.6	+0.3	
	24nm,0.5s								
ARXS				Lg		Lg	20 58 36.1		
	58nm,0.5s								
ARXS	**Arharly**	**2.81**	**27**	*e*P		Pb	20 57 59.6	+0.3	
	24nm,0.5s								
ARXS				*e*S		Sg	20 58 36.1	-2.5	
	58nm,0.5s								
SHLS	**Shalkode**	**2.91**	**59**	Pg		Pg	20 58 05.9	+2.0	
	34nm,0.2s								
SHLS				Lg		Lg	20 58 47.5		
	57nm,0.6s								
SHLS	**Shalkode**	**2.91**	**59**	*e*P		Pg	20 58 05.9	+2.0	
	34nm,0.2s								
SHLS				*e*S		Sg	20 58 47.5	+5.9	
	57nm,0.6s								
BLB	**Baldybastay**	**2.97**	**36**	Pg		Pb	20 58 02.4	+0.4	
	59nm,0.6s								
BLB				Lg		Lg	20 58 41.0		
	69nm,0.5s								
PDGK	**Podgornoye**	**3.01**	**57**	⇑Pn		Pb	20 58 01.2	-1.4	
	25nm,0.6s								
PDGK				⇓Lg		Lg	20 58 42.4		
	40nm,0.7s								
ARK	**Arkit**	**3.06**	**273**	⇓*e*P		Pn	20 57 58.7	+0.9	
ARK				⇓*i*S		Sn	20 58 35.5	+0.5	
KNOS	**Konyrlen**	**3.50**	**40**	Pg		Pb	20 58 11.8	+0.8	
	1.8nm,0.3s								
KNOS				Lg		Lg	20 58 57.0		
	20nm,0.3s								
BTLS	**Baital**	**3.62**	**337**	Pg		Pg	20 58 15.5	-2.2	
	7.3nm,0.3s								
BTLS				Lg		Lg	20 59 03.3		
	25nm,0.5s								
BTLS	**Baital**	**3.62**	**337**	*e*P		Pg	20 58 15.5	-2.2	
	7.3nm,0.3s								
BTLS				*e*S		Sg	20 59 03.4	-1.4	
	25nm,0.5s								
TRKS	**Terek-Say**	**3.68**	**269**	⇓*i*P		Pn	20 58 07.1	+0.7	
TRKS				⇓*i*S		Sn	20 58 49.8	-0.7	
TDK	**Taldyqorghan**	**3.70**	**27**	Pg		Pb	20 58 15.6	+1.1	
	41nm,0.3s								
TDK				Lg		Lg	20 59 04.1		
	47nm,0.3s								
TDK	**Taldyqorghan**	**3.70**	**27**	*e*P		Pb	20 58 15.6	+1.1	
	41nm,0.3s								
TDK				*e*S		Sg	20 59 04.1	-3.1	
	47nm,0.3s								
DJR	**Jarkent**	**3.79**	**45**	Pg		Pb	20 58 16.9	+1.0	
	6.2nm,0.3s								
DJR				Lg		Lg	20 59 05.7		
	6.7nm,0.4s								
DJR	**Jarkent**	**3.79**	**45**	*e*P		Pb	20 58 16.9	+1.0	
	6.2nm,0.3s								
DJR				*e*S		Sg	20 59 05.7	-4.2	
	6.7nm,0.4s								
DRK	**Karamyk**	**3.93**	**237**	⇑*i*P		Pn	20 58 10.5	+0.5	
DRK				⇑*i*S		Sn	20 58 55.9	-1.0	
BTK	**Batken**	**4.30**	**249**	⇓*i*P		Pn	20 58 15.7	+0.9	
BTK				⇓*i*S		Sn	20 59 04.6	-1.0	
KAPS	**Kapalarasan**	**4.30**	**33**	Pg		Pb	20 58 26.5	+1.9	
	2.1nm,0.3s								
KAPS				Lg		Lg	20 59 22.2		
	29nm,0.2s								
KK31	**Karatay Array**	**4.33**	**290**	⇑Pg		Pb	20 58 26.9	+1.8	
	1.8nm,0.4s,baz=104,slow=16,SNR=47								
KK31				⇓Lg		Lg	20 59 23.3		
	3.4nm,0.3s,baz=107,slow=27,SNR=8.3								
BRLS	**Boroldoy**	**4.78**	**288**	Pg		Pg	20 58 38.5	-1.5	
	2.1nm,0.3s								
BRLS				Lg		Lg	20 59 43.2		
	9.9nm,0.4s								
BRLS	**Boroldoy**	**4.78**	**288**	*e*P		Pg	20 58 38.5	-1.5	
	2.1nm,0.3s								
BRLS				*e*S		Sg	20 59 43.2	+1.3	
	9.9nm,0.4s								
MAKZ	**Makanchi**	**6.63**	**38**	⇓Pn		Pn	20 58 47.0	+0.3	
	2.2nm,1.1s								
MAKZ				⇑Lg		Lg	21 00 41.5		
	2.0nm,0.8s								
MK31	**Makanchi Array**	**6.77**	**39**	⇑Pn		Pn	20 58 49.3	+0.7	
	0.2nm,0.3s,base=217,slow=14,SNR=3.5								
MK31				⇓Lg		Lg	21 00 43.3		
	1.8nm,0.7s,baz=220,slow=28,SNR=4.3								

DJA 27 20:57:09.2±0.6, 3°S±3°×12°9E±°, h26km±7km, M3.6/13, mB5.6/1, mb4.3/3, MLv3.3/13, Mw(mB)5.1/1, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRAI	**Karang Ratu**	**0.95**	**213**	P	Pn	20 57 26.7	-0.2
NLAI	**Namlea**	**1.95**	**249**	P	Pn	20 57 41.0	+0.3
SWI	**Sorong**	**2.86**	**55**	P	Pn	20 57 54.4	+1.2
SIJI	**Sorong**	**2.86**	**55**	P	Pn	20 57 54.1	+0.9
SANI	**Sanana**	**2.97**	**279**	P	Pn	20 57 52.0	-2.6
FAKI	**Fak Fak**	**3.35**	**97**	P	Pn	20 57 59.9	0.0
FAKI				S	Sn	20 58 38.2	-0.7
KMPI	**Kaimana, Papua**	**4.91**	**103**	P	Pn	20 58 21.0	-0.4
RKPI	**Ransiki, Papua**	**5.35**	**79**	P	Pn	20 58 28.0	+0.6
	5µm32nm,0.7s						
APSI	**Ampana**	**7.44**	**282**	P	Pn	20 58 56.0	-0.2

*NEIC **27** 21:00:46.0±1.4, 43°.77N±0°.06×105°.3W±0°.1, h0km±1km, ML3.1/68, Error ellipse: s-maj=14.3km s-min=9.6km az=63.0*
*IDC **27** 21:00:46.6±2.1, 43°.60N×105°.33W, h0km, mbtmp3.3/3, ML3.4/3, Error ellipse: s-maj=49.0km s-min=8.5km az=151.0*
ISC 27 21:00:46.9±1.1, 43°.78N±0°.06×105°.19W±0°.05, h0km, n31, σ0s59/22, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.90**	**67**		Pb	21 01 05.5	-0.1
K22A	**Casper**	**1.49**	**221**		Pn	21 01 14.4	-0.8
K22A				IAML		21 01 37.9	
	397nm,0.3s						
K22A				IAML		21 01 43.6	
	388nm,0.3s						
LAO	**LASA Array**	**3.00**	**346**		Pn	21 01 35.2	-0.6
RLMT	**Red Lodge**	**3.22**	**296**		Pn	21 01 39.0	+0.1
RLMT				IAML		21 02 29.7	
	64nm,0.3s						
RLMT				IAML		21 02 34.7	
	54nm,0.3s						
BW06	**Boulder Array**	**3.35**	**254**		Pn	21 01 40.9	+0.2
BW06				IAML		21 02 32.3	
	53nm,0.3s						
BW06				IAML		21 02 37.7	
	40nm,0.3s						
PD31	**Pinedale Array**	**3.35**	**254**		Pn	21 01 40.8	+0.1
PDAR	**Pinedale Array**	**3.35**	**254**	Pn	Pn	21 01 42.0	+1.3
	5.1nm,0.3s,baz=69,slow=16,SNR=98						
PDAR				Pg	Pb	21 01 47.3	0.0
	23nm,0.3s,baz=59,slow=17,SNR=78						
PDAR				Lg	Lg	21 02 26.9	
	16nm,0.3s,baz=76,slow=32,SNR=10						
	5.9nm,0.3s						
PDAR	**Pinedale Array**	**3.35**	**254**		Pn	21 01 41.0	+0.2
HAYD	**Hayden**	**3.60**	**206**		Pn	21 01 43.2	-1.1
HAYD				IAML		21 02 54.5	
	comp=E,35nm,0.9s						
HAYD				IAML		21 02 58.3	
	comp=N,27nm,1.0s						
YNE	**Yellowstone No**	**3.67**	**291**		Pn	21 01 44.5	-0.7
OGNE	**Ogallala**	**3.67**	**139**		Pn	21 01 45.0	0.0
OGNE				IAML		21 02 51.5	
	comp=N,58nm,1.5s						
YMP	**Mirror Lake Pl**	**3.70**	**287**		Pn	21 01 45.9	+0.4
H17A	**Grant Village**	**3.93**	**281**		Pn	21 01 48.4	-0.3
H17A				IAML		21 02 54.4	
	comp=E,26nm,0.3s						
LOHW	**Long Hollow**	**3.93**	**269**		Pn	21 01 48.7	0.0
ISCO	**Idaho Springs**	**3.99**	**185**		Pn	21 01 50.3	+0.7
FLWY	**Flagg Ranch**	**3.99**	**276**		Pn	21 01 49.2	-0.4
FLWY				IAML		21 02 59.5	
	comp=E,32nm,2.1s						
MOOW	**Moose Ponds**	**4.03**	**271**		Pn	21 01 50.8	+0.7
SNOW	**Snow King Moun**	**4.06**	**267**	IAML		21 03 11.2	
	comp=E,25nm,1.4s						
SNOW				IAML		21 03 14.9	
	comp=E,24nm,1.4s						
YPP	**Pitchstone Pla**	**4.08**	**279**		Pn	21 01 50.5	-0.4
YHH	**Holmes Hill**	**4.19**	**286**		Pn	21 01 51.7	-0.7
YMR	**Madison River**	**4.25**	**284**	IAML		21 03 19.4	
	comp=N,22nm,1.0s						
YMR				IAML		21 03 30.9	
	comp=E,22nm,0.9s						
O20A	**White River Ci**	**4.29**	**213**	IAML		21 03 06.0	
	comp=E,32nm,1.3s						
O20A				IAML		21 03 06.1	
	comp=E,32nm,0.7s						
AHID	**Auburn Hatcher**	**4.43**	**259**	IAML		21 03 06.7	
	comp=E,17nm,0.3s						
AHID				IAML		21 03 22.4	
	comp=E,26nm,0.7s						
YHL	**Hebgen Lake**	**4.43**	**286**	IAML		21 03 22.1	
	comp=E,17nm,1.9s						
YHL				IAML		21 03 33.8	
	comp=N,16nm,3.5s						
RDMU	**Red Mountain**	**4.57**	**227**	IAML		21 03 50.6	
	comp=N,13nm,2.2s						
RDMU				IAML		21 03 51.5	
	comp=E,13nm,3.6s						
Q24A	**Divide**	**4.81**	**180**	IAML		21 03 21.0	
	comp=N,12nm,0.3s						
Q24A				IAML		21 03 23.2	
	comp=E,20nm,0.4s						
BOZ	**Bozeman (W)**	**4.94**	**294**	IAML		21 03 25.9	
	comp=E,16nm,0.7s						
HWUT	**Hardware Ranch**	**5.18**	**247**	IAML		21 03 40.5	
	comp=E,16nm,1.2s						
HWUT				IAML		21 03 48.0	
	comp=E,17nm,0.8s						
BSUT	**Blindstream Ca**	**5.26**	**234**	IAML		21 04 10.8	
	comp=E,9.0nm,4.6s						
BSUT				IAML		21 04 56.5	
	comp=N,8.2nm,5.0s						
ULM	**Lac du Bonnet**	**9.07**	**41**	Pn	Pn	21 02 59.1	+0.1
	comp=N,0.9nm,0.3s,baz=230,slow=11,SNR=8.5						
ULM				Lg	Lg	21 05 31.3	
	comp=N,0.9nm,0.3s,baz=304,slow=14,SNR=3.0						
	comp=N,2.2nm,0.4s						
YKA	**Yellowknife Ar**	**19.54**	**347**	P	Pn	21 05 17.4	+0.4
	comp=N,0.1nm,0.3s,baz=156,slow=10,SNR=4.9						
	comp=N,0.1nm,0.3s						

*CATAC **27** 21:16:53.5±0.4, 13°N±2°×9°1W±°, h14km±2km, M4.2/30, MLv4.2/30, Error ellipse: s-maj=5.0km s-min=2.2km az=23.8, confirmed*
*GCG **27** 21:16:54.9±1.6, 13°.32N×90°.61W, h42km±65km, MD4.3, ML4.2, MW3.6, Presumed earthquake*
*SNET **27** 21:17:03.5±6.1, 13°.57N×90°.11W, h45km, ML3.9, Presumed earthquake*
ISC 27 21:16:55.6±1.5, 13°.30N±0°.06×90°.49W±0°.03, h23km±14km, n55, σ1s47/87, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESSJ	**San Jos, E**	**0.26**	**358**	*i*P	Pn	21 17 09.0	+5.0
FAME	**Alcaldia de Sa**	**0.71**	**41**	P	Pb	21 17 08.7	-0.7
FAME				S	Sb	21 17 19.2	+0.5
PCG5	**San Vicente Pa**	**0.92**	**7**	*i*P	Pn	21 17 12.8	-0.4
PCG5				*i*P		21 17 12.9	
PCG5				*i*S	Sn	21 17 25.9	+0.1
FG8	**Yepocapa, Chim**	**0.95**	**356**	*i*P	Pn	21 17 14.8	+1.1
FG16	**Alotenango, Sa**	**0.96**	**359**	*i*P	Pn	21 17 15.0	+1.1
FG16				*i*S	Sn	21 17 31.1	+4.1
LOAL	**Lomas de Alarc**	**0.98**	**45**	P	Pb	21 17 13.1	-0.8
LOAL				S	Sb	21 17 26.2	-0.3
CEVE	**Cerro Verde**	**0.99**	**58**	P	Pb	21 17 13.5	-0.8
CEVE				S	Sn	21 17 28.4	+0.5
CEVE	**Cerro Verde**	**0.99**	**58**	*e*P	Pb	21 17 13.4	-0.8
SLOZ	**Alcaldia de Sa**	**1.00**	**44**	P	Pb	21 17 13.2	-1.0
SLOZ				S	Sb	21 17 26.4	-0.6
JAYA	**Jayaque - finc**	**1.07**	**71**	P	Pb	21 17 14.1	-1.5
JAYA				S	Sn	21 17 30.6	+0.9
JAYA	**Jayaque - finc**	**1.07**	**71**	*i*P	Pb	21 17 14.2	-1.5
JAYA				*i*S	Sb	21 17 28.1	-1.2
JAYA				IAML		21 17 34.2	
	comp=E,11µm,0.2s						
UNIC	**Universidad Ca**	**1.14**	**54**	P	Pn	21 17 15.2	-1.0
UNIC				S	Sb	21 17 30.5	-0.6
LALI	**Alcalda de L**	**1.16**	**81**	P	Pn	21 17 16.1	-0.3
LALI				S	Sn	21 17 32.9	+1.4
LALI	**Alcalda de L**	**1.16**	**81**	*i*P	Pn	21 17 15.6	-0.7
LALI				*i*S	Sb	21 17 30.9	-0.6
CEDA	**San Andres**	**1.18**	**65**	P	Pn	21 17 16.1	-0.6
CEDA				S	Sn	21 17 33.3	+1.2
CEDA	**San Andres**	**1.18**	**65**	*e*P	Pn	21 17 15.9	-0.8
CEDA				*e*S	Sn	21 17 32.9	+0.8
PMON	**Piamonte**	**1.22**	**70**	P	Pn	21 17 16.3	-1.0
PMON				S	Sb	21 17 33.1	-0.3
BOQS	**Boqueron**	**1.26**	**70**	*e*P	Pn	21 17 17.1	-0.8
GCG4	**OSOP**	**1.28**	**358**	*i*P	Pn	21 17 16.2	-2.0
GCG4				*i*S	Sn	21 17 32.8	-1.9
UEES	**Universidad Ev**	**1.29**	**71**	P	Pn	21 17 17.4	-0.8
UEES				S	Sb	21 17 35.6	+0.3
SEMO	**Seminario San**	**1.30**	**72**	P	Pn	21 17 17.8	-0.6
SEMO				S	Sb	21 17 35.9	+0.3
PANCS	**Alcalda de**	**1.31**	**76**	P	Pn	21 17 17.6	-1.0
PANCS				S	Sb	21 17 36.4	+0.3
UTEC	**Universidad Te**	**1.32**	**72**	P	Pn	21 17 18.0	-0.7
IGN	**Direccin Gen**	**1.35**	**72**	P	Pn	21 17 18.6	-0.5
IGN				S	Sb	21 17 37.4	+0.3
UDBS	**Universidad Do**	**1.36**	**72**	P	Pn	21 17 18.9	-0.4
UDBS				S	Sb	21 17 37.6	+0.1
STG8	**El Palmar, Qui**	**1.41**	**324**	*i*P	Pb	21 17 22.5	+1.1
STG8				*i*S	Sb	21 17 45.2	+6.1
STG2	**El Palmar, Qui**	**1.42**	**323**	*i*P	Pb	21 17 22.5	+1.1
STG2				*i*S	Sb	21 17 42.4	+3.3
STG2				IAML		21 17 47.8	
	comp=E,11µm,0.4s						
MTO3	**Montecristo**	**1.55**	**45**	P	Pn	21 17 21.6	-0.3
MTO3				S	Sn	21 17 41.7	+0.2
MTO3	**Montecristo**	**1.55**	**45**	*i*P	Pn	21 17 21.7	-0.3
PAVA	**Las Pavas**	**1.57**	**75**	P	Pn	21 17 22.2	+0.1
COEG	**Centro de Oper**	**1.60**	**78**	P	Pn	21 17 22.6	+0.1
COEG	**Centro de Oper**	**1.60**	**78**	*e*P	Pn	21 17 23.0	+0.4
COEG				*e*S	Sb	21 17 44.7	+0.3
ESQI	**Esquipulas**	**1.68**	**42**	P	Pn	21 17 23.4	-0.3
ESQI	**Esquipulas**	**1.68**	**42**	*e*P	Pn	21 17 23.3	-0.3
TECO	**Alcaldia de Te**	**1.68**	**82**	P	Pn	21 17 23.4	-0.2
TECO				S	Sb	21 17 45.8	-0.9
RTAL	**Retalhuleu**	**1.68**	**316**	P	Pn	21 17 21.2	-2.4
RTAL				S	Sn	21 17 41.0	-3.5
ZAFR2	**Estanzuela, Za**	**1.69**	**41**	*i*P	Pb	21 17 26.3	+0.4
ZAFR2				IAML		21 18 06.2	
	comp=E,729nm,0.9s						
APG	**El Apazote**	**1.69**	**1**	*i*P	Pn	21 17 23.8	-0.2
APG				*i*S	Sn	21 17 45.3	+0.2
LLGN	**La Laguna**	**1.73**	**60**	P	Pn	21 17 23.9	-0.5
SOKI	**Kika Raxquin**	**1.75**	**330**	*i*P	Pn	21 17 23.2	-1.7
SOKI				*i*S	Sn	21 17 43.2	-3.4
SCLA	**Alcaldia de Sa**	**1.76**	**77**	P	Pn	21 17 25.0	+0.2
P5NO	**Presa 5 de nov**	**1.82**	**68**	P	Pn	21 17 25.0	-0.5
P5NO				S	Sn	21 17 49.1	+1.3
PACA	**Pacayal**	**2.12**	**85**	P	Pn	21 17 29.9	+0.1
RANC	**El Ranchito**	**2.15**	**86**	P	Pn	21 17 30.3	+0.1
SMCA	**Catarina**	**2.18**	**315**	*i*P	Pn	21 17 29.5	-0.9
SMCA

LALI				S		**Sn**	**21 25 38.7**	**+2.5**
PMON	**Piamonte**	**1.06**	**74**	P		**Pg**	**21 25 20.9**	**-0.8**
UEES	**Universidad Ev**	**1.13**	**75**	P		**Pn**	**21 25 23.4**	**-0.1**
UEES				S		**Sn**	**21 25 41.5**	**+2.2**
SEMO	**Seminario San**	**1.14**	**76**	S		**Sn**	**21 25 41.3**	**+1.8**
UTEC	**Universidad Te**	**1.16**	**76**	P		**Pn**	**21 25 23.8**	**-0.1**
UTEC				S		**Sn**	**21 25 41.7**	**+1.7**
UDBS	**Universidad Do**	**1.21**	**76**	P		**Pb**	**21 25 24.3**	**-0.2**
UDBS				S		**Sn**	**21 25 44.0**	**+2.8**
LFRS	**El Faro**	**1.28**	**81**	*eP*		**Pn**	**21 25 24.9**	**-0.7**
STG5	**El Palmar, Qui**	**1.37**	**316**	*i* P		**Pb**	**21 25 26.9**	**-0.4**
STG5				*i* S		**Sg**	**21 25 48.0**	**+2.5**
MTO3	**Montecristo**	**1.37**	**45**	P		**Pn**	**21 25 25.9**	**-1.1**
MTO3	**Montecristo**	**1.37**	**45**	*i* P		**Pn**	**21 25 25.9**	**-1.1**
STG8	**El Palmar, Qui**	**1.41**	**317**	*i* P		**Pn**	**21 25 26.9**	**-0.6**
PAVA	**Las Pavas**	**1.41**	**78**	P		**Pn**	**21 25 26.6**	**-0.9**
COEG	**Centro de Oper**	**1.45**	**82**	P		**Pn**	**21 25 26.8**	**-1.1**
COEG				S		**Sg**	**21 25 50.1**	**+2.0**
COEG	**Centro de Oper**	**1.45**	**82**	*eP*		**Pn**	**21 25 26.9**	**-1.1**
ESQI	**Esquipulas**	**1.50**	**41**	P		**Pn**	**21 25 28.0**	**-0.7**
ZAFR2	**Estanzuela, Za**	**1.51**	**40**	*i* P		**Pg**	**21 25 30.5**	**+0.1**
TECO	**Alcaldia de Te**	**1.54**	**85**	P		**Pn**	**21 25 27.8**	**-1.3**
TECO				S		**Sg**	**21 25 51.8**	**+0.8**
LLGN	**La Laguna**	**1.56**	**62**	P		**Pn**	**21 25 29.1**	**-0.4**
LLGN				S		**Sg**	**21 25 52.6**	**+1.0**
APG	**El Apazote**	**1.58**	**356**	*i* P		**Pn**	**21 25 28.1**	**-1.7**
SCLA	**Alcaldia de Sa**	**1.61**	**80**	P		**Pn**	**21 25 29.3**	**-0.8**
SCLA				S		**Sb**	**21 25 52.1**	**+0.2**
P5NO	**Presa 5 de nov**	**1.66**	**70**	P		**Pn**	**21 25 29.8**	**-0.9**
P5NO				S		**Sg**	**21 25 54.6**	**0.0**
PACA	**Pacayal**	**1.98**	**88**	P		**Pn**	**21 25 33.9**	**-1.4**
CNCH	**Conchagua**	**2.46**	**93**	P		**Pn**	**21 25 40.8**	**-1.1**
CNCH				S		**Sb**	**21 26 15.0**	**-1.5**
CSGN	**Cosiguina Volc**	**2.76**	**99**	P		**Pn**	**21 25 45.2**	**-0.8**

NEIC ***27*** *21:26:23.1±1.4,56°.13S±0°.09×27°.2W±0°.2,h104km±5km, mb4.6/64,Error ellipse: s-maj=13.3km s-min=12.4km az=137.0*

IDC ***27*** *21:26:24.3±1.9,56°.06S×27°.06W,h114km±15km,mb4.3/12, mbtmp4.6/13,MS3.5/7,Error ellipse: s-maj=18.2km s-min=12.0km az=69.0*

ISC 27 21:26:22.4±0.3,56°.10S±0°.07×27°.18W±0°.08,h100km, n126,σ0$83/121,mb4.6/37,1C-3D,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.64**	**285**		Pn	**Pn**	**21 27 43.1**	**-0.5**
VNA3	**Neumayer Olymp**	**16.94**	**160**	⇑P		**Pn**	**21 30 13.1**	**+0.3**
	comp=Z,47nm,0.6s							
VNA2	**Neumayer--Watz**	**17.14**	**158**	⇓P		**Pn**	**21 30 14.1**	**-1.1**
	comp=Z,41nm,0.7s,baz=297,slow=13							
SNAA	**Sanae**	**18.69**	**156**	⇓P		**P**	**21 30 32.9**	**+0.4**
	comp=Z,628nm,0.4s							
SNAA	**Sanae**	**18.69**	**156**	P		**P**	**21 30 32.8**	**+0.4**
	comp=Z,16nm,0.6s,baz=309,slow=9.2,SNR=22							
SNAA	**Sanae**	**18.69**	**156**			**P**	**21 30 32.1**	**-0.3**
TROLL	**Troll, Antarti**	**20.20**	**154**	⇓P		**P**	**21 30 48.9**	**+0.1**
BELA	**Belgrano 2**	**22.02**	**184**	P		**P**	**21 31 07.8**	**-0.4**
BELA					IAmb	IAmb	21 31 11.1	
	comp=Z,22nm,0.8s							
MG02	**Cerro Sombrero**	**24.40**	**260**	P		**P**	**21 31 30.4**	**-0.6**
MG02					IAmb	IAmb	21 31 34.9	
	comp=Z,43nm,1.1s							
MG03	**Isla Dawson**	**24.65**	**257**	P		**P**	**21 31 33.3**	**+0.1**
MG05	**Puerto Natales**	**26.69**	**260**	P		**P**	**21 31 50.5**	**-1.3**
GO08	**Villa O'Higgin**	**28.34**	**266**	P		**P**	**21 32 06.5**	**0.0**
TRQA	**Tornquist**	**29.35**	**293**	P		**P**	**21 32 14.8**	**-0.7**
PLCA	**Paso Flores**	**32.02**	**280**	LR		LR	21 45 35.4	
	comp=Z,50nm,18.1s,baz=160,slow=36							
ITAB	**Concordia**	**33.97**	**318**	P		**P**	**21 32 56.8**	**+0.7**
QSPA	**South Pole Qui**	**34.15**	**180**	P		**P**	**21 32 58.1**	**+0.6**
	comp=Z,7.7nm,0.5s,baz=203,slow=1.4,SNR=88							
QSPA				PcP		**PcP**	**21 35 32.2**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=274,slow=13,SNR=1.3							
QSPA				ScP		**ScP**	**21 39 06.0**	**-1.5**
	comp=Z,1.4nm,0.6s,baz=292,slow=0.2,SNR=6.7							
	comp=Z,7.7nm,0.5s							
QSPA	**South Pole Qui**	**34.15**	**180**	P		**P**	**21 32 58.2**	**+0.7**
QSPA					IAmb	IAmb	21 33 01.8	
	comp=Z,7.4nm,0.6s							
BI02	**San Fabin de**	**35.31**	**285**	P		**P**	**21 33 05.8**	**-1.9**
BO02	**Sierra Bellavi**	**36.45**	**287**	P		**P**	**21 33 17.6**	**+0.2**
CPUP	**Villa Florida**	**36.85**	**311**	P		**P**	**21 33 20.8**	**+0.1**
	comp=Z,4.7nm,0.8s,baz=136,slow=9.1,SNR=14							
CPUP				PcP		**PcP**	**21 35 40.6**	**+0.2**
	comp=Z,1.6nm,0.7s,baz=188,slow=3.1,SNR=3.2							
	comp=Z,4.7nm,0.8s							
CPUP	**Villa Florida**	**36.85**	**311**			**P**	**21 33 20.5**	**-0.2**
CPUP					IAmb	IAmb	21 33 21.6	
	comp=Z,4.4nm,0.8s							
BO04	**La Punta**	**36.97**	**288**	P		**P**	**21 33 21.7**	**-0.1**
MT09	**Talagante**	**37.33**	**288**	P		**P**	**21 33 23.9**	**-1.1**
MT01	**Popeta**	**37.41**	**288**	P		**P**	**21 33 24.0**	**-1.4**
MT01					IAmb	IAmb	21 33 43.3	
	comp=Z,5.4nm,1.0s							
PEL	**Peldehue**	**37.66**	**289**	P		**P**	**21 33 27.8**	**+0.1**
MT02	**Curacav**	**37.81**	**288**	P		**P**	**21 33 28.4**	**-0.4**
ZON	**Zonda**	**37.86**	**293**	P		**P**	**21 33 29.5**	**+0.2**
VA03	**San Esteban**	**37.88**	**290**	P		**P**	**21 33 29.7**	**+0.1**
VA03					IAmb	IAmb	21 33 31.3	
	comp=Z,4.6nm,0.6s							
VA06	**Catapilco**	**38.44**	**289**	P		**P**	**21 33 34.1**	**0.0**
VA06					IAmb	IAmb	21 33 35.0	
	comp=Z,17nm,1.1s							
CO04	**Los Peleaderos**	**38.67**	**290**	P		**P**	**21 33 36.8**	**+0.5**
AMBA	**Amambai (Brazi**	**38.95**	**317**	*eP*		**P**	**21 33 38.4**	**0.0**
CO02	**Combarbal**	**39.34**	**291**	P		**P**	**21 33 41.6**	**-0.2**
CO02					IAmb	IAmb	21 33 45.7	
	comp=Z,4.3nm,0.6s							
CO03	**El Pedregal**	**39.47**	**291**	P		**P**	**21 33 42.8**	**0.0**
CO01	**Juntas del Tor**	**39.84**	**293**	P		**P**	**21 33 46.9**	**+0.7**
CO01					IAmb	IAmb	21 33 48.1	
	comp=Z,3.1nm,0.5s							
CO06	**Fray Jorge**	**40.09**	**290**	P		**P**	**21 33 47.2**	**-0.7**
CO06					IAmb	IAmb	21 34 04.4	
	comp=Z,15nm,1.1s							
MAW	**Mawson**	**40.10**	**143**	P		**P**	**21 33 48.1**	**+0.6**
	comp=Z,4.9nm,0.6s,baz=229,slow=7.0,SNR=11							
	comp=Z,4.9nm,0.6s							
MAW	**Mawson**	**40.10**	**143**	P		**P**	**21 33 48.1**	**+0.6**
SUR	**Sutherland**	**40.65**	**75**	LR		LR	21 47 46.5	
	comp=Z,116nm,18.2s,baz=190,slow=32							
SUR	**Sutherland**	**40.65**	**75**	P		**P**	**21 33 53.4**	**+0.8**
SUR					IAmb	IAmb	21 34 05.0	
	comp=Z,8.8nm,1.1s							
AC05	**El Transito**	**40.85**	**294**	P		**P**	**21 33 54.8**	**+0.5**
AC05					IAmb	IAmb	21 33 56.0	
	comp=Z,14nm,1.0s							
LCO	**Las Campanas**	**40.93**	**293**	P		**P**	**21 33 55.0**	**-0.1**
LCO					IAmb	IAmb	21 33 55.7	
	comp=Z,7.1nm,1.1s							
MURT	**Porto Murtinho**	**41.12**	**314**	*eP*		**P**	**21 33 55.7**	**-0.7**
AC04	**Llanos de Chal**	**41.77**	**293**			**P**	**21 34 01.4**	**-0.3**
GO03	**Copiapo**	**41.84**	**295**	P		**P**	**21 34 01.5**	**-0.8**
GO03					IAmb	IAmb	21 34 02.9	
	comp=Z,8.4nm,0.7s							
AC02	**Maricunga**	**41.91**	**297**			**P**	**21 34 03.5**	**+0.2**
AC02					IAmb	IAmb	21 34 05.3	
	comp=Z,15nm,0.8s							
GRHM	**Grahamstown, E**	**43.02**	**81**	P		**P**	**21 34 11.6**	**-0.2**
JANB	**Januaria**	**43.02**	**335**	*eP*		**P**	**21 34 12.2**	**+0.3**
AC01	**Pan de Azucar**	**43.21**	**296**	P		**P**	**21 34 13.3**	**0.0**
AC01					IAmb	IAmb	21 34 29.8	
	comp=Z,6.1nm,0.8s							
BDFB	**Brasilia**	**43.41**	**330**	P		**P**	**21 34 16.3**	**+1.2**
	comp=Z,4.9nm,0.6s,baz=137,slow=5.1,SNR=7.8							
	comp=Z,4.9nm,0.6s							
BDFB	**Brasilia**	**43.41**	**330**		IAmb	IAmb	21 34 16.8	
	comp=Z,4.8nm,0.6s							
PB14	**IPOC Station P**	**44.37**	**297**	P		**P**	**21 34 21.3**	**-1.7**
PB14					IAmb	IAmb	21 34 22.7	
	comp=Z,8.1nm,0.5s							
ARAG	**Araguaiana, MT**	**44.49**	**325**	*eP*		**P**	**21 34 24.0**	**+0.3**
PB06	**IPOC Station P**	**45.57**	**299**	P		**P**	**21 34 32.2**	**-0.2**
PB06					IAmb	IAmb	21 34 33.6	
	comp=Z,16nm,1.0s							
SALV	**Santo Antonio**	**45.63**	**320**	*eP*		**P**	**21 34 33.2**	**+0.6**
PB05	**IPOC Station P**	**45.76**	**299**	P		**P**	**21 34 33.4**	**-0.4**
BOSA	**Boshof**	**45.98**	**76**	P		**P**	**21 34 35.1**	**-0.4**
	comp=Z,2.3nm,0.6s,baz=224,slow=7.5,SNR=11							
BOSA					LR	LR	21 50 28.7	
	comp=Z,71nm,18.6s,baz=184,slow=32							
	comp=Z,2.3nm,0.6s							
BOSA	**Boshof**	**45.98**	**76**	IAmb	IAmb		21 34 38.2	
	comp=Z,4.6nm,1.1s							
SBA	**Scott Base**	**46.03**	**184**	P		**P**	**21 34 38.4**	**+3.4**
SBA					IAmb	IAmb	21 34 38.6	
	comp=Z,15nm,1.1s							
PB03	**IPOC Station P**	**46.22**	**300**	P		**P**	**21 34 37.5**	**0.0**
BBSD	**Serra de San D**	**46.35**	**313**	*eP*		**P**	**21 34 38.0**	**-0.3**
VNDA	**Vanda**	**46.52**	**183**	P		**P**	**21 34 40.5**	**+1.6**
	comp=Z,9.9nm,0.7s,baz=188,slow=6.1,SNR=81							
VNDA					ScP	**ScP**	**21 39 54.6**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=184,slow=4.5,SNR=3.8							
VNDA					LR	LR	21 52 12.5	
	comp=Z,76nm,18.8s,baz=176,slow=33							
	comp=Z,9.9nm,0.7s							
VNDA	**Vanda**	**46.52**	**183**			**P**	**21 34 40.0**	**+1.1**
VNDA					IAmb	IAmb	21 34 42.6	
	comp=Z,9.9nm,0.7s							
PTLB	**Pontes e Lacer**	**47.34**	**316**			**P**	**21 34 46.1**	**+0.1**
PTLB					IAmb	IAmb	21 34 46.7	
	comp=Z,7.9nm,0.7s							
PTLB	**Pontes e Lacer**	**47.34**	**316**	*eP*		**P**	**21 34 46.0**	**0.0**
LKGWB	**Lokgwabe**	**47.43**	**68**	P		**P**	**21 34 48.7**	**+1.8**
LKGWB					IAmb	IAmb	21 35 08.6	
	comp=Z,9.3nm,1.0s							
PB08	**IPOC Station P**	**47.55**	**302**	P		**P**	**21 34 48.7**	**+0.6**
KOOLE	**Kule**	**47.83**	**66**	P		**P**	**21 34 49.6**	**-0.3**
SNDB	**Serra Nova Dou**	**47.84**	**327**	*eP*		**P**	**21 34 51.0**	**+1.1**
H10S2	**ASCENSION HYDR**	**48.05**	**17**	T		T	22 26 58.7	
	baz=189,slow=74,SNR=19							
H10S3	**ASCENSION HYDR**	**48.05**	**17**	T		T	22 26 58.9	
	baz=31,slow=74,SNR=15							
KGCAE	**Kacgae**	**48.98**	**68**			**P**	**21 34 58.8**	**+0.1**
LBTB	**Lobatse**	**49.02**	**73**	LR		LR	21 52 45.1	
	comp=Z,46nm,18.4s,baz=192,slow=32							
LBTB	**Lobatse**	**49.02**	**73**	P		**P**	**21 34 58.9**	**-0.1**
LBTB					IAmb	IAmb	21 34 59.7	
	comp=Z,8.6nm,0.8s							
H10N1	**ASCENSION HYDR**	**49.17**	**17**	T		T	22 28 22.9	
	baz=189,slow=75,SNR=9.5							
H10N3	**ASCENSION HYDR**	**49.17**	**17**	T		T	22 28 22.9	
	baz=189,slow=75,SNR=10							
H10N2	**ASCENSION HYDR**	**49.18**	**17**	T		T	22 28 24.0	
	baz=189,slow=75,SNR=11							
TSUM	**Tsumeb**	**49.70**	**61**	P		**P**	**21 35 04.3**	**+0.1**
TSUM					IAmb	IAmb	21 35 05.3	
	comp=Z,8.7nm,1.0s							
GRTLG	**Ghanzi**	**49.70**	**66**			**P**	**21 35 04.1**	**-0.1**
GRTLG					IAmb	IAmb	21 35 05.1	
	comp=Z,10nm,0.8s							
SMTB	**Santa Maria do**	**49.78**	**333**	*eP*		**P**	**21 35 05.8**	**+1.0**
NBPV	**Pedro Velho**	**49.97**	**349**	*eP*		**P**	**21 35 06.6**	**+0.5**
PDRB	**Porto dos Gac**	**49.97**	**321**	*eP*		**P**	**21 35 05.9**	**-0.3**
LPAZ	**La Paz**	**50.41**	**305**	P		**P**	**21 35 11.2**	**+0.9**
	comp=Z,13nm,0.5s,baz=161,slow=6.4,SNR=64							
	comp=Z,13nm,0.5s							
LPAZ	**La Paz**	**50.41**	**305**			**P**	**21 35 11.1**	**+0.9**
LPAZ	**La Paz**	**50.41**	**305**	*eP*		**P**	**21 35 11.0**	**+0.8**
LPHEP	**Lephephe**	**50.49**	**72**	P		**P**	**21 35 09.8**	**-0.4**
KSANE	**Kasane**	**54.70**	**68**	P		**P**	**21 35 40.4**	**-0.9**
LSZ	**Lusaka**	**58.38**	**69**	P		**P**	**21 36 06.9**	**-0.4**
MACA	**Macapuru-AM**	**59.21**	**320**	P		**P**	**21 36 11.7**	**-1.2**
BOAV	**Boa Vista**	**64.33**	**322**			**P**	**21 36 46.8**	**-0.4**
BOAV					IAmb	IAmb	21 36 47.1	
	comp=Z,5.1nm,0.6s							
BOAV	**Boa Vista**	**64.33**	**322**	*eP*		**P**	**21 36 46.8**	**-0.4**
DBIC	**Dimbokro**	**65.21**	**25**	P		**P**	**21 36 53.0**	**+0.2**
	comp=Z,8.9nm,0.6s,baz=204,slow=6.5,SNR=20							
DBIC					LR	LR	21 57 16.4	
	comp=Z,34nm,21.3s,baz=176,slow=28							
	comp=Z,8.9nm,0.6s							
DBIC	**Dimbokro**	**65.21**	**25**	P		**P**	**21 36 53.2**	**+0.3**
DBIC					IAmb	IAmb	21 36 53.8	
	comp=Z,9.6nm,0.7s							
OTAV	**Otavalo**	**69.69**	**304**			**P**	**21 37 22.7**	**+1.0**
OTAV	**Otavalo**	**69.69**	**304**	*eP*		**P**	**21 37 23.0**	**+1.3**
TORD	**Torodi Ar. Bea**	**73.10**	**29**	P		**P**	**21 37 41.9**	**+0.3**
	comp=Z,7.3nm,0.5s,baz=204,slow=7.7,SNR=89							
	comp=Z,7.3nm,0.5s							
MTO3	**Montecristo**	**87.21**	**301**	P		**P**	**21 38 57.7**	**+0.1**
MTO3					IAmb	IAmb	21 38 58.3	
	comp=Z,6.9nm,0.7s							
APG	**El Apazote**	**88.26**	**300**	P		**P**	**21 39 02.7**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=154,slow=5.4,SNR=5.6							
	comp=Z,0.3nm,0.5s							
RTAL	**Retalhuleu**	**88.45**	**299**	P		**P**	**21 39 03.0**	**-0.2**
ATD	**Arta Tunnel**	**88.68**	**67**	P		**P**	**21 39 03.0**	**-1.3**
ATD					IAmb	IAmb	21 39 19.8	
	comp=Z,8.3nm,0.9s							
MD31	**MD31**	**90.66**	**19**			**P**	**21 39 14.9**	**+1.7**
MD31					IAmb	IAmb	21 39 16.9	
	comp=Z,4.5nm,0.9s							
MD01	**Midelt array s**	**90.66**	**19**	P		**P**	**21 39 14.9**	**+1.6**
TEIG	**Tepich**	**91.74**	**305**	P		**P**	**21 39 19.0**	**+0.6**
CMIG	**Matias Romero**	**92.22**	**298**	LR		LR	22 19 18.0	
	comp=Z,16nm,19.1s,baz=175,slow=34							
ESDC	**Sonseca Array**	**97.43**	**18**	P		**P**	**21 39 44.0**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=193,slow=4.8,SNR=4.6							
	comp=Z,0.5nm,0.7s							
ESDC	**Sonseca Array**	**97.43**	**18**	P		**P**	**21 39 44.8**	**+0.8**
ASAR	**Alice Springs**	**98.94**	**162**	P		**P**	**21 39 51.2**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=186,slow=3.8,SNR=9.3							
ASAR				PP		**PP**	**21 43 52.1**	**-1.2**
	comp=Z,0.4nm,0.9s,baz=188,slow=8.2,SNR=1.9							
	comp=Z,0.8nm,0.7s							
ASAR	**Alice Springs**	**98.94**	**162**	P		**P**	**21 39 50.9**	**-0.5**
WRA	**Warramunga Arr**	**102.65**	**162**	P		**Pdif**	**21 40 08.0**	**0.0**
	comp=Z,0.5nm,1.1s,baz=193,slow=4.9,SNR=1.6							
SCHQ	**Schefferville**	**115.22**	**336**	PKP		**PKPdf**	**21 44 50.0**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=198,slow=6.4,SNR=1.3							
PDAR	**Pinedale Array**	**120.38**	**302**	PKP		**PKPdf**	**21 45 00.2**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=125,slow=4.9,SNR=4.9							
NOA	**NORSAR Array B**	**120.65**	**21**	PKP		**PKPdf**	**21 45 00.9**	**0.0**
	comp=Z,0.8nm,0.8s,baz=211,slow=1.9,SNR=2.1							
FINES	**FINESS Array B**	**124.43**	**28**	PKP		**PKPdf**	**21 45 07.4**	**-0.7**
	comp=Z,1.9nm,0.5s,baz=147,slow=3.2,SNR=26							
ARCES	**ARCESS Array B**	**130.99**	**22**	PKP		**PKPdf**	**21 45 20.4**	**-0.1**
	comp=Z,2.5nm,0.8s,baz=240,slow=1.8,SNR=8.6							
BVAR	**Borovoye Array**	**134.80**	**58**	PKP		**PKPdf**	**21 45 27.0**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=225,slow=0.8,SNR=5.3							
YKA	**Yellowknife Ar**	**136.21**	**318**	PKP		**PKPdf**	**21 45 30.2**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=119,slow=1.8,SNR=15							
YKA					SKPbc	**SKPbc**	**21 48 50.8**	**-2.3**
	comp=Z,0.4nm,0.5s,baz=123,slow=2.3,SNR=9.8							
SPITS	**Spitsbergen Ar**	**136.62**	**12**	PKP		**PKPdf**	**21 45 31.8**	**+1.0**
	comp=Z,8.6nm,0.9s,baz=253,slow=3.4,SNR=2.0							
MKAR	**Makanchi Array**	**136.90**	**71**	PKP		**PKPdf**	**21 45 31.5**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=221,slow=1.5,SNR=3.9							
MKAR	**Makanchi Array**	**136.90**	**71**	PKPdf		**PKPdf**	**21 45 31.3**	**-0.9**
KURBB	**Kurchatov Arra**	**137.32**	**65**	PKP		**PKPdf**	**21 45 31.3**	**-1.5**
	comp=Z,0.5nm,0.9s,baz=230,slow=2.6,SNR=2.7							
ZALV	**Zalesovo Beam**	**142.39**	**64**	PKhKP		PKPpre	21 45 35.9	
	comp=Z,0.6nm,0.3s,baz=219,slow=5.2,SNR=4.4							
ZALV					PKP	**PKPdf**	**21 45 42.3**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=209,slow=3.5,SNR=3.9							
NRIK	**Noril'sk**	**149.04**	**39**	PKPbc		**PKPbc**	**21 45 56.8**	**-0.2**
	comp=Z,4.0nm,1.0s,baz=90,slow=0.7,SNR=5.4							
NRIK	**Noril'sk**	**149.04**	**39**			**PKPbc**	**21 45 57.7**	**+0.6**
ILAR	**Eielson Array**	**150.16**	**312**	PKPbc		**PKPbc**	**21 45 59.8**	**-0.2**
	comp=Z,9.7nm,0.8s,baz=133,slow=2.1,SNR=82							
ILAR	**Eielson Array**	**150.16**	**312**			**PKPbc**	**21 45 59.3**	**-0.6**
SONM	**Songino Array**	**150.72**	**87**	PKPbc		**PKPbc**	**21 46 01.7**	**-0.3**
	comp=Z,2.8nm,0.5s,baz=224,slow=3.8,SNR=29							
SONM	**Songino Array**	**150.72**	**87**			**PKPbc**	**21 46 00.5**	**-1.4**

MEX 27 21:26:56.7±0.6,16°.89N×99°.29W,h3km±4km,MD3.9,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
CRIG	**Cruz Grande**	**0.22**	**135**	*eP*		Pg	21 27 00.7	-0.2
CRIG				*i* S		Sg	21 27 03.8	0.0
DAIG	**Los Arroyos**	**0.37**	**290**	*i* P		Pg	21 27 03.6	-0.2
DAIG				*i* S		Sg	21 27 08.8	+0.2
ACP2	**Acapulco**	**0.57**	**268**	*eP*		Pg	21 27 06.9	-0.8
ACP2				*i* S		Sg	21 27 14.5	-0.5
MGIG	**Malinaltepec**	**0.71**	**62**	*eP*		Pg	21 27 09.9	-0.5
MGIG				*eS*		Sg	21 27 19.7	0.0
CAIG	**El Cayaco**	**0.95**	**279**	*eP*		Pg	21 27 13.1	-1.8
CAIG				*eS*		Sg	21 27 25.9	-1.3
TLIG	**Tlapa**	**0.96**	**46**	*eP*		Pg	21 27 14.6	-0.5
TLIG				*eS*		Sg	21 27 27.7	+0.1
TLIG	**Tlapa**	**0.96**	**46**	S		Sg	21 27 27.9	+0.3
MEIG	**Mezcala**	**1.07**	**343**	*eP*		Pg	21 27 15.5	-1.9
MEIG				*eS*		Sg	21 27 28.2	-3.0
HMTT	**Tlapaneco**	**1.14**	**38**	*eS*		Sg	21 27 33.4	0.0
PNIG	**Pinotepa**	**1.22**	**114**	*eP*		Pg	21 27 17.6	-2.6
PNIG				*eS*		Sg	21 27 32.7	-3.3
FTIG	**Fresnillo de T**	**1.50**	**47**	*eP*		Pn	21 27 23.4	-1.2
FTIG				*eS*		Sb	21 27 40.0	-4.7
TXIG	**Tlaxiaco**	**1.50**	**76**	*eP*		Pn	21 27 23.4	-1.4
TXIG				*eS*		Sg	21 27 41.7	-3.3
PLIG	**Platanillo**	**1.50**	**352**	*eP*		Pn	21 27 23.1	-1.7
PLIG				*eS*		Sn	21 27 41.4	-3.6
YOIG	**Yosondua**	**1.67**	**91**	*eP*		Pn	21 27 25.3	-1.9
YOIG				*eS*		Sn	21 27 45.0	-4.3
HLIG	**Huajuapan de L**	**1.70**	**57**	*eP*		Pn	21 27 25.4	-2.1
HLIG				*eS*		Sn	21 27 45.4	-4.6
ARIG	**Puente Sto Nin**	**1.71**	**324**	*eP*		Pn	21 27 26.3	-1.2
ARIG				*eS*		Sn	21 27 48.0	-1.9
YAIG	**Yautepec**	**1.97**	**6**	*eP*		Pn	21 27 30.2	-1.0
YAIG				*eS*		Sn	21 27 54.3	-2.2
PEIG	**Puerto Escondi**	**2.24**	**113**	*eP*		Pn	21 27 30.9	-3.9
PEIG				*eS*		Sn	21 27 57.5	-5.5
PPM	**Popocatepetl**	**2.25**	**16**	*eP*		Pn	21 27 31.3	-4.1
PPM				*eS*		Sn	21 28 03.9	-0.1

NEIC ***27*** *21:36:20.3±0.7,31°.697N±0°.004×104°.06W±0°.01, h6km±4km,mb_Lg3.3/166,ML3.7/83,Mwr3.5/20(SLM),Error ellipse: s-maj=1.4km s-min=0.6km az=93.0*

IDC ***27*** *21:36:20.3±1.4,31°.70N×103°.88W,h0km,mb3.4/1, mbtmp3.2/5,ML3.8/3,MS2.7/3,Error ellipse: s-maj=41.0km s-min=8.3km az=77.0*

TXNET ***27*** *21:36:20.0,31°.7N±0°.6×104°.1W±0°.6,h6km±2km,ML3.5/16, Error ellipse: s-maj=1.0km s-min=0.8km az=37.9,final*

NEIC ***27*** *21:36:20.3±0.7,31°.70N×104°.07W,h6km,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=2.22; $M_{\theta\theta}$=2.34; $M_{\phi\phi}$=-0.12; $M_{r\theta}$=-0.69; $M_{r\phi}$=-0.41; $M_{\theta\phi}$=0.56; Fault plane solution: $M_0$2.48000×10^{14} NP1:$\phi_8$4.00000°, δ54.00000°,λ-110.00000°. NP2:$\phi_2$95.00000°, δ40.00000°,λ-65.00000°. Principal axes: T 2.4861, Plg7.0000°, Azm187.0000°; N -0.0002, Plg16.0000°, Azm95.0000°; P -2.4859, Plg73.0000°, Azm302.0000°;*

ISC 27 21:36:20.6±0.8,31°.70N±0°.02×104°.07W±0°.02,h12km±6km, n107,σ1$11/101,8C-1D,Western Texas

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
TPB09	**Culberson Coun**	**0.22**	**291**	⇓P		**Pg**	**21 36 25.2**	**-0.1**
TPB09					S	**Sg**	**21 36 28.4**	**-0.2**
TPB13	**Reeves - Culbe**

Y22A	**Socorro**	**3.31**	**313**			**Pn**	**21 37 13.7**	**+1.2**
Y22A				IAML			21 38 14.1	
	comp=N,343nm,0.7s							
SBM	**South Baldy**	**3.47**	**312**			**Pn**	**21 37 13.5**	**-1.3**
APMT	**Aspermont**	**3.71**	**63**			**Pn**	**21 37 18.0**	**+0.2**
APMT				IAmb_Lg			21 38 21.8	
	comp=Z,98nm,1.2s							
DRIO	**Del Rio**	**3.74**	**126**			**Pn**	**21 37 18.6**	**+0.5**
AMTX	**Amarillo**	**3.75**	**32**			**Pn**	**21 37 19.1**	**+0.6**
ANMO	**Albuquerque**	**3.81**	**329**	Pn		**Pn**	**21 37 22.2**	**+2.9**
	comp=Z,1.2nm,0.5s,baz=154,slow=14,SNR=4.1							
ANMO				Pg		**Pb**	**21 37 30.0**	**+2.0**
	comp=Z,2.9nm,0.3s,baz=150,slow=17,SNR=32							
ANMO				Lg	Lg		21 38 16.7	
	comp=Z,30nm,0.3s,baz=274,slow=11,SNR=23							
ANMO				LR	LR		21 39 06.0	
	comp=Z,84nm,18.1s,baz=133,slow=43							
ANMO	**Albuquerque**	**3.81**	**329**			**Pn**	**21 37 18.7**	**-0.6**
ANMO				IAML			21 38 22.4	
	comp=Z,118nm,0.7s							
ANMO				IAML			21 38 24.4	
	comp=Z,170nm,0.9s							
ANMO	**Albuquerque**	**3.81**	**329**			**Pn**	**21 37 18.4**	**-0.9**
ANMO				IAML			21 38 22.4	
	comp=Z,98nm,0.6s							
ANMO				IAmb_Lg			21 38 23.2	
	comp=Z,187nm,0.9s							
ANMO				IAML			21 38 24.4	
	comp=Z,162nm,0.9s							
ANMO	**Albuquerque**	**3.81**	**329**			**Pn**	**21 37 18.5**	**-0.8**
ANMO				IAML			21 38 22.4	
	comp=Z,237nm,0.7s							
ANMO				IAmb_Lg			21 38 24.5	
	comp=Z,149nm,0.7s							
ANMO				IAML			21 38 24.5	
	comp=Z,290nm,0.9s							
ANMO				IAmb_Lg			21 38 24.9	
	comp=Z,262nm,1.1s							
JCT	**Junction City**	**3.85**	**107**	IAmb_Lg			21 38 26.0	
	comp=Z,94nm,0.9s							
ABTX	**Abilene, Hawle**	**3.86**	**75**	IAmb_Lg			21 38 30.8	
	comp=Z,92nm,1.2s							
PH02	**Texas Public H**	**4.09**	**25**	IAmb_Lg			21 38 30.0	
	comp=Z,166nm,1.0s							
PH02				IAML			21 38 35.2	
	comp=Z,594nm,1.2s							
PH02				IAML			21 38 35.3	
	comp=Z,387nm,0.9s							
BRDY	**Brady**	**4.35**	**94**	IAmb_Lg			21 38 43.2	
	comp=Z,86nm,1.3s							
HPIG		**4.95**	**197**	IAML			21 39 01.5	
	comp=N,53nm,0.8s							
HPIG				IAML			21 39 09.5	
	comp=E,83nm,0.7s							
WTFS	**Witchita Falls**	**5.15**	**65**	IAmb_Lg			21 39 12.1	
	comp=Z,42nm,1.3s							
WMOK	**Wichita Mounta**	**5.37**	**54**	IAmb_Lg			21 39 20.3	
	comp=Z,55nm,1.1s							
WMOK				IAML			21 39 20.7	
	comp=Z,46nm,1.2s							
WMOK				IAML			21 39 21.1	
	comp=Z,46nm,1.9s							
EF02	**Christine**	**5.60**	**120**	IAmb_Lg			21 39 29.7	
	comp=Z,74nm,1.1s							
WHTX	**Lake Whitney,**	**5.63**	**85**	IAmb_Lg			21 39 30.8	
	comp=Z,48nm,1.2s							
FW13	**Cleburne**	**5.67**	**82**	IAmb_Lg			21 39 33.2	
	comp=Z,35nm,1.1s							
TUC	**Tucson**	**5.74**	**278**	IAmb_Lg			21 39 35.4	
	comp=Z,36nm,0.9s							
TUC	**Tucson**	**5.74**	**278**	IAmb_Lg			21 39 35.4	
	comp=Z,35nm,0.9s							
ELIS	**Ellis County**	**5.82**	**40**	IAmb_Lg			21 39 32.3	
	comp=Z,43nm,0.9s							
X34A	**Smith Ranch, M**	**5.97**	**59**	IAmb_Lg			21 39 40.4	
	comp=Z,49nm,1.1s							
Z35A	**Perchaven, San**	**5.98**	**72**	IAmb_Lg			21 39 43.5	
	comp=Z,60nm,1.3s							
MLDN	**Muldoon**	**6.32**	**106**	IAmb_Lg			21 39 51.7	
	comp=Z,33nm,0.8s							
OK038	**West end E0370**	**6.50**	**41**	IAmb_Lg			21 39 54.7	
	comp=Z,51nm,0.9s							
NOKA	**Waynoka**	**6.51**	**39**	IAmb_Lg			21 39 52.9	
	comp=Z,42nm,0.9s							
FNO	**Franklin**	**6.60**	**56**	IAmb_Lg			21 40 04.7	
	comp=Z,42nm,1.0s							
CROK	**Carrier**	**6.96**	**45**	IAmb_Lg			21 40 08.1	
	comp=Z,30nm,1.1s							
Q24A	**Divide**	**7.30**	**353**	IAmb_Lg			21 40 21.3	
	comp=Z,23nm,0.9s							
OK052	**Battle Ridge R**	**7.41**	**53**	IAmb_Lg			21 40 35.0	
	comp=Z,23nm,1.1s							
KAN01	**Argonia South**	**7.53**	**42**	IAmb_Lg			21 40 28.1	
	comp=Z,31nm,1.2s							
BLOK	**Blackwell**	**7.59**	**46**	IAmb_Lg			21 40 23.0	
	comp=Z,36nm,1.3s							
OK051	**E0350 and S346**	**7.68**	**49**	IAmb_Lg			21 40 35.0	
	comp=Z,24nm,1.1s							
Z38A	**Mt. Pleasant**	**7.83**	**76**	IAmb_Lg			21 40 35.1	
	comp=Z,29nm,1.0s							
T35A	**Sooner Cattle**	**8.13**	**48**	IAmb_Lg			21 40 40.9	
	comp=Z,41nm,1.2s							
RLO	**Rose Lookout**	**8.73**	**57**	IAmb_Lg			21 41 03.9	
	comp=Z,22nm,1.0s							
U38A	**Gravette**	**9.32**	**57**	IAmb_Lg			21 41 21.3	
	comp=Z,21nm,1.1s							
PDAR	**Pinedale Array**	**11.88**	**340**	Pn		**Pn**	**21 39 14.0**	**+3.9**
	baz=146,slow=7.7,SNR=2.6							
PDAR				LR	LR		21 44 31.9	
	comp=Z,22nm,21.0s,baz=159,slow=41							
	comp=Z,0.3nm,0.7s							
NVAR	**Mina Array Bea**	**13.45**	**304**	Pn		**P**	**21 39 38.9**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=124,slow=9.3,SNR=4.3							
	comp=Z,0.3nm,0.3s							
ULM	**Lac du Bonnet**	**19.52**	**16**	LR	LR		21 47 20.9	
	comp=Z,49nm,19.5s,baz=320,slow=34							
YKA	**Yellowknife Ar**	**31.55**	**351**	P		**P**	**21 42 43.6**	**+1.1**
	comp=Z,0.6nm,1.0s,baz=161,slow=7.9,SNR=5.1							
	comp=Z,0.6nm,1.0s							
RPN	**Rapa Nui**	**58.71**	**185**	LR	LR		22 07 29.5	
	comp=Z,249nm,18.3s,baz=44,slow=32							

CNRM ***27*** *21:48:20.2,35°.41N×7°.10W,h45km*
MDD ***27*** *21:48:22.8±0.3,35°.56N×6°.83W,h44km,mb_Lg2.6/10, Error ellipse: s-maj=3.1km s-min=2.9km az=82.0*
SFS ***27*** *21:48:22.2,35°.55N×6°.84W,h38km,ML2.9/9,ML3.2/9, MLv2.9/9*
INMG ***27*** *21:48:23.7±1.7,35°.56N×6°.84W,h31km±10km,ML2.0, Error ellipse: s-maj=4.3km s-min=3.3km az=60.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Costa de Marrocos*
IGIL ***27*** *21:48:23.1,35°.57N×6°.82W,h32km,ML1.9*

ISC 27 21:48:20.1±1.2,35°.55N±0'.03×6°.85W±0'.03,h94km±14km, n62,σ1s68/117,1C-2D,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SMIR	**Smir Dam**	**1.21**	**83**	P		**Pn**	**21 48 43.7**	**+1.2**
SMIR				S		**Sn**	**21 49 00.2**	**+0.9**
CHEFC	**Chefchaouen**	**1.31**	**109**	P		**Pn**	**21 48 44.8**	**+1.0**
CHEFC				S		**Sn**	**21 49 02.9**	**+1.2**
ESPR	**Espera**	**1.54**	**31**	P		**Pn**	**21 48 46.8**	**+0.2**
ESPR				S		**Sn**	**21 49 05.4**	**-1.2**
ESPR	**Espera**	**1.54**	**31**	P		**Pn**	**21 48 47.6**	**+1.0**
ESPR				S		**Sn**	**21 49 04.6**	**-2.1**
ESPR				*i*	lVmb_Lg		21 49 08.4	
PBDV	**Barranco-do-Ve**	**1.90**	**333**	P		**Pn**	**21 48 51.4**	**+0.2**
PBDV				S		**Sn**	**21 49 12.8**	**-2.1**
PBDV	**Barranco-do-Ve**	**1.90**	**333**	‖*e*P		**Pn**	**21 48 52.0**	**+0.8**
PBDV				*e*S		**Sn**	**21 49 13.3**	**-1.6**
PBDV				*i*	IAML		21 49 14.0	
PBDV				*i*	IAML		21 49 14.2	
PBDV				*i*	IAML		21 49 14.6	
SICH	**Sidi Chahed**	**1.92**	**138**	P		**Pn**	**21 48 51.5**	**+0.2**
SICH				S		**Sn**	**21 49 15.1**	**0.0**
PVAQ	**Vaqueiros**	**1.98**	**340**	‖*e*P		**Pn**	**21 48 53.2**	**+1.0**
PVAQ				*e*S		**Sn**	**21 49 15.2**	**-1.4**
PVAQ				*i*	IAML		21 49 15.8	
PVAQ				*i*	IAML		21 49 16.3	
PVAQ				*i*	IAML		21 49 16.3	
PVAQ	**Vaqueiros**	**1.98**	**340**	P		**Pn**	**21 48 53.0**	**+0.9**
PVAQ				S		**Sn**	**21 49 16.2**	**-0.4**
E1302	**La Puebla de C**	**2.05**	**39**	P		**Pn**	**21 48 55.1**	**+2.1**
E1302				S		**Sn**	**21 49 18.5**	**+0.3**
E1302				*i*	lVmb_Lg		21 49 21.4	
EGRO	**El Granado**	**2.05**	**346**	P		**Pn**	**21 48 53.7**	**+0.7**
EGRO				S		**Sn**	**21 49 16.9**	**-1.2**
EGRO	**El Granado**	**2.05**	**346**	P		**Pn**	**21 48 54.2**	**+1.2**
EGRO				S		**Sn**	**21 49 16.6**	**-1.5**
EGRO				*i*	lVmb_Lg		21 49 19.3	
ZHG	**ZHG**	**2.10**	**175**	P		**Pn**	**21 48 53.6**	**-0.3**
ZHG				S		**Sn**	**21 49 18.0**	**-1.6**
EMIN	**Mina Concepcio**	**2.22**	**4**	P		**Pn**	**21 48 56.7**	**+1.3**
EMIN				S		**Sn**	**21 49 20.0**	**-2.3**
EMIN				*i*	lVmb_Lg		21 49 22.5	
PFVI	**Vila Bisbo**	**2.25**	**315**	S		**Sn**	**21 49 22.0**	**-0.9**
PFVI	**Vila Bisbo**	**2.25**	**315**	*e*P		**Pn**	**21 48 57.1**	**+1.4**
PFVI				*e*S		**Sn**	**21 49 22.4**	**-0.5**
PFVI				*i*	IAML		21 49 26.1	
PFVI				*i*	IAML		21 49 27.3	
PFVI				*i*	IAML		21 49 29.2	
MORF	**Marmelete**	**2.28**	**321**	*e*P		**Pn**	**21 48 57.2**	**+1.1**
MORF				*e*S		**Sn**	**21 49 22.4**	**-1.3**
MORF				IAML			21 49 23.8	
	comp=E,10nm,0.2s							
MORF	**Marmelete**	**2.28**	**321**	*e*P		**Pn**	**21 48 57.5**	**+1.4**
MORF				*e*S		**Sn**	**21 49 23.2**	**-0.5**
MORF				*i*	IAML		21 49 27.8	
MORF				*i*	IAML		21 49 28.3	
MORF				*i*	IAML		21 49 30.1	
PCVE	**Castro Verde**	**2.29**	**336**	P		**Pn**	**21 48 57.5**	**+1.2**
PCVE				S		**Sn**	**21 49 22.2**	**-1.7**
PCVE	**Castro Verde**	**2.29**	**336**	*e*P		**Pn**	**21 48 57.8**	**+1.5**
PCVE				*e*S		**Sn**	**21 49 23.0**	**-0.9**
PCVE				*i*	IAML		21 49 23.3	
PCVE				*i*	IAML		21 49 23.5	
PCVE				*i*	IAML		21 49 24.7	
PALE	**Palemas**	**2.40**	**97**	P		**Pn**	**21 48 59.5**	**+1.8**
PALE				S		**Sn**	**21 49 30.5**	**+3.8**
IFR	**Ifrane**	**2.48**	**144**	P		**Pn**	**21 48 58.7**	**-0.2**
PTEO	**Sao Teotonio**	**2.50**	**323**	*e*P		**Pn**	**21 49 00.4**	**+1.4**
PTEO				*e*S		**Sn**	**21 49 28.2**	**-0.6**
PTEO				*i*	IAML		21 49 30.4	
PTEO				*i*	IAML		21 49 32.8	
MESJ	**Messejana**	**2.54**	**335**	*e*P		**Pn**	**21 49 00.9**	**+1.3**
MESJ				*e*S		**Sn**	**21 49 28.2**	**-1.6**
MESJ				IAML			21 49 31.2	
	comp=E,4.2nm,0.1s							
MESJ	**Messejana**	**2.54**	**335**	*e*P		**Pn**	**21 49 01.0**	**+1.5**
MESJ				*e*S		**Sn**	**21 49 29.0**	**-0.8**
MESJ				*i*	IAML		21 49 31.2	
MESJ				*i*	IAML		21 49 32.7	
MESJ				*i*	IAML		21 49 33.7	
PBEJ	**Beja**	**2.60**	**342**	*e*P		**Pn**	**21 49 02.0**	**+1.5**
PBEJ				*e*S		**Sn**	**21 49 30.5**	**-0.9**
PBEJ				*i*	IAML		21 49 31.3	
PBEJ				*i*	IAML		21 49 31.7	
PBEJ				*i*	IAML		21 49 33.8	
PBAR	**Barrancos**	**2.63**	**357**	P		**Pn**	**21 49 01.7**	**+1.0**
PBAR				S		**Sn**	**21 49 29.9**	**-2.0**
PBAR	**Barrancos**	**2.63**	**357**	*e*P		**Pn**	**21 49 02.5**	**+1.8**
PBAR				*e*S		**Sn**	**21 49 30.2**	**-1.7**
PBAR				*i*	IAML		21 49 32.9	
PBAR				*i*	IAML		21 49 36.6	
PBAR				*i*	IAML		21 49 37.5	
AKLM	**AKL**	**2.66**	**112**	P		**Pn**	**21 49 01.4**	**+0.1**
AKLM				S		**Sn**	**21 49 33.1**	**+0.2**
EGOR	**Sierra Gorda,**	**2.71**	**54**	P		**Pn**	**21 49 04.4**	**+2.5**
EGOR				S		**Sn**	**21 49 34.1**	**0.0**
ECAB	**El Cabril**	**2.77**	**24**	S		**Sn**	**21 49 32.4**	**-3.0**
ECAB				*i*	lVmb_Lg		21 49 36.3	
ELGU	**Los Guajares,**	**2.92**	**62**	P		**Pn**	**21 49 05.0**	**+0.3**
ELGU	**Los Guajares,**	**2.92**	**62**	P		**Pn**	**21 49 05.6**	**+0.8**
ELGU				S		**Sn**	**21 49 35.3**	**-3.7**
EVO	**Evora**	**3.12**	**343**	*e*P		**Pn**	**21 49 09.4**	**+2.1**
EVO				*e*S		**Sn**	**21 49 42.7**	**-1.0**
EVO				*i*	IAML		21 49 44.1	
EVO				*i*	IAML		21 49 44.2	
EVO				*i*	IAML		21 49 44.6	
MD31	**MD31**	**3.19**	**146**	P		**Pn**	**21 49 08.5**	**+0.2**
MD31				S		**Sn**	**21 49 45.2**	**-0.3**
EADA	**Adamuz**	**3.19**	**34**	P		**Pn**	**21 49 09.6**	**+1.4**
EADA				S		**Sn**	**21 49 42.5**	**-2.9**
EADA	**Adamuz**	**3.19**	**34**	P		**Pn**	**21 49 10.1**	**+1.8**
EADA				S		**Sn**	**21 49 42.9**	**-2.5**
EADA				*i*	lVmb_Lg		21 49 45.8	
MOE	**Montemor**	**3.20**	**338**	‖*e*P		**Pn**	**21 49 10.3**	**+1.8**
MOE				*e*S		**Sn**	**21 49 45.7**	**0.0**
MOE				*i*	IAML		21 49 46.3	
MOE				*i*	IAML		21 49 46.5	
MOE				*i*	IAML		21 49 46.8	
MDT	**Midelt**	**3.30**	**145**	P		**Pn**	**21 49 10.2**	**+0.4**
PESTR	**Estremoz**	**3.37**	**350**	*e*P		**Pn**	**21 49 12.3**	**+1.7**
PESTR				*e*S		**Sn**	**21 49 48.6**	**-1.0**
PARRA	**Arraiolos**	**3.40**	**344**	*e*P		**Pn**	**21 49 12.8**	**+1.8**
PARRA				*e*S		**Sn**	**21 49 50.1**	**-0.3**
PARRA				*i*	IAML		21 49 51.3	
PARRA				*i*	IAML		21 49 51.6	
PARRA				*i*	IAML		21 49 51.9	
PMTG	**Montargil**	**3.68**	**343**	*e*P		**Pn**	**21 49 16.9**	**+2.1**
PMTG				*e*S		**Sn**	**21 49 57.0**	**-0.2**
PMTG				*i*	IAML		21 49 59.2	
PMTG				*i*	IAML		21 49 59.9	
PMTG				*i*	IAML		21 49 59.9	
JBK	**JBK**	**3.72**	**108**	P		**Pn**	**21 49 16.3**	**+0.7**
JBK				S		**Sn**	**21 49 59.6**	**+1.0**
EQES	**Quesada**	**3.78**	**52**	P		**Pn**	**21 49 18.6**	**+2.2**
EQES				S		**Sn**	**21 49 59.2**	**-0.6**
PMRV	**Marv??o**	**3.90**	**354**	*e*P		**Pn**	**21 49 20.2**	**+2.4**
PMRV				*e*S		**Sn**	**21 50 01.9**	**-0.6**
PMRV				*i*	IAML		21 50 02.4	
PMRV				*i*	IAML		21 50 02.5	
PMRV				*i*	IAML		21 50 02.6	
PMAFR	**Mafra**	**3.92**	**331**	*e*P		**Pn**	**21 49 20.1**	**+2.1**
PMAFR				*e*S		**Sn**	**21 50 02.4**	**-0.6**
PSIM	**Granatula de C**	**4.10**	**36**	P		**Pn**	**21 49 22.3**	**+1.7**
PSIM				S		**Sn**	**21 50 04.1**	**-3.3**
PSARD	**Sardoal**	**4.18**	**346**	*e*P		**Pn**	**21 49 23.9**	**+2.4**
PSARD				*e*S		**Sn**	**21 50 08.5**	**-0.8**
PSARD				*i*	IAML		21 50 09.2	
PSARD				*i*	IAML		21 50 10.2	
PSARD				*i*	IAML		21 50 11.2	
PCBR	**Castelo Branco**	**4.31**	**354**	*e*P		**Pn**	**21 49 25.7**	**+2.3**
PCBR				*e*S		**Sn**	**21 50 11.1**	**-1.4**
PCBR				*i*	IAML		21 50 12.1	
PCBR				*i*	IAML		21 50 13.2	
PCBR				*i*	IAML		21 50 13.5	
PAB	**San Pablo**	**4.46**	**26**	S		**Sn**	**21 50 13.9**	**-2.3**
PAB				*i*	lVmb_Lg		21 50 14.8	
EPLA	**Plasencia**	**4.55**	**7**	P		**Pn**	**21 49 28.9**	**+2.2**
EPLA				S		**Sn**	**21 50 16.9**	**-1.5**
EPLA				*i*	lVmb_Lg		21 50 19.6	
TIO	**Tiouine**	**4.62**	**184**	P		**Pn**	**21 49 29.3**	**+1.5**
TIO				S		**Sn**	**21 50 18.2**	**-2.1**
TIO	**Tiouine**	**4.62**	**184**	P		**Pn**	**21 49 25.8**	**-2.0**
TIO				S		**Sn**	**21 50 17.1**	**-3.2**
OUZM	**OUZ**	**4.63**	**179**	P		**Pn**	**21 49 27.6**	**-0.2**
OUZM				S		**Sn**	**21 50 19.9**	**-0.6**
ETOB	**Tobarra**	**5.25**	**52**	P		**Pn**	**21 49 37.0**	**+0.9**
ETOB				S		**Sn**	**21 50 33.1**	**-2.3**
ETOB	**Tobarra**	**5.25**	**52**	P		**Pn**	**21 49 37.7**	**+1.6**
ETOB				S		**Sn**	**21 50 33.2**	**-2.3**
MVO	**Moncorvo**	**5.61**	**359**	*e*P		**Pn**	**21 49 43.6**	**+2.5**
MVO				*e*S		**Sn**	**21 50 42.1**	**-2.1**
POLO	**Lamas de Olo**	**5.86**	**353**	*e*S		**Sn**	**21 50 49.5**	**-0.9**
POLO				*i*	IAML		21 50 50.7	
POLO				*i*	IAML		21 50 51.0	
EVIV	**Cofrentes, Val**	**5.88**	**49**	P		**Pn**	**21 49 45.9**	**+1.1**
EVIV				S		**Sn**	**21 50 47.0**	**-3.8**
ECHE	**Chera**	**6.17**	**47**	P		**Pn**	**21 49 49.8**	**+1.0**
ECHE				S		**Sn**	**21 50 55.5**	**-2.5**
ECHE	**Chera**	**6.17**	**47**	P		**Pn**	**21 49 50.2**	**+1.4**
ECHE				S		**Sn**	**21 50 55.8**	**-2.1**
ETOR	**Torete**	**6.48**	**34**	P		**Pn**	**21 49 54.1**	**+1.2**
ETOR				S		**Sn**	**21 51 02.0**	**-3.4**

NEIC ***27*** *21:53:56.0±2.0, 11°.00S±0°.03×115°.26E±0°.07, h10km±1km, mb4.5/34, Error ellipse: s-maj=11.9km s-min=5.3km az=81.0*
DJA ***27*** *21:53:56.9±0.4, 11°.5S±3°×11°.5E±°, h10km, M4.4/30, mB4.9/6, mb4.6/12, MLv4.5/30, Mw(mB)4.1/6*

IDC ***27*** *21:54:03.9±4.0, 10°.83S×115°.51E, h66km±36km, mb3.9/15, mbtmp4.3/17, ML4.3/2, MS2.7/2, Error ellipse: s-maj=27.3km s-min=11.6km az=75.0*

ISC 27 21:53:58.9±0.4,11°.11S±0°.05×115°.35E±0°.05,h35km,n108, σ1s97/113,mb4.5/36,1C,South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
IGBI	**Denpasar**	**2.29**	**355**	P		**Pn**	**21 54 32.7**	**-1.5**
DNP	**Denpasar**	**2.42**	**357**	P		**Pn**	**21 54 35.4**	**-0.6**
RTBI	**Rangdo, Negare**	**2.67**	**351**	P		**Pn**	**21 54 39.2**	**-0.2**
RTBI				S		**Sn**	**21 55 09.0**	**-1.5**
KHKI	**Kahang-Kahang**	**2.74**	**5**	P		**Pn**	**21 54 41.2**	**+0.8**
KHKI				S		**Sn**	**21 55 14.1**	**+1.8**
JAGI	**Jajag, Banyuwa**	**2.88**	**336**			**Pn**	**21 54 39.7**	**-2.6**
JAGI				Sn		**Sn**	**21 55 12.2**	**-3.5**
JAGI	**Jajag, Banyuwa**	**2.88**	**336**	P		**Pn**	**21 54 39.9**	**-2.4**
PLAI	**Plampang**	**3.30**	**47**	P		**Pn**	**21 54 49.0**	**+1.0**
PLAI	**Plampang**	**3.30**	**47**	P		**Pn**	**21 54 48.8**	**+0.8**
ABJI	**Asem Bagus**	**3.48**	**341**	P		**Pn**	**21 54 50.1**	**-0.4**
ABJI				S		**Sn**	**21 55 30.4**	**0.0**
BLJI	**Banyuglugur**	**3.77**	**332**	P		**Pn**	**21 54 53.8**	**-0.7**
DBNI	**Kabupaten Domp**	**3.91**	**49**	P		**Pn**	**21 54 58.5**	**+2.1**
WBSI	**Waikabubak, Su**	**4.24**	**70**	P		**Pn**	**21 55 01.3**	**+0.3**
KMMI	**Kalianget**	**4.26**	**341**	P		**Pn**	**21 55 01.6**	**+0.3**
SNJI	**Sawahan-Nganju**	**4.85**	**313**	P		**Pn**	**21 55 09.1**	**-0.4**
PCJI	**Pacitan**	**5.03**	**305**	P		**Pn**	**21 55 09.3**	**-2.6**
LBFI	**Labuhan Bajo,**	**5.18**	**60**	P		**Pn**	**21 55 15.1**	**+1.1**
UGM	**Wanagama**	**5.72**	**303**	P		**Pn**	**21 55 21.0**	**-0.5**
UGM	**Wanagama**	**5.72**	**303**			**Pn**	**21 55 20.6**	**-0.8**
UGM	**Wanagama**	**5.72**	**303**	P		**Pn**	**21 55 20.7**	**-0.8**
	0.5nm69nm,0.6s							
BSSI	**Bau Bau, Buton**	**7.09**	**46**	P		**Pn**	**21 55 41.0**	**+0.8**
	0.2nm45nm,0.6s							
MMRI	**Maumere**	**7.22**	**71**	P		**Pn**	**21 55 43.1**	**+1.1**
	0.2nm23nm,0.6s							
KPJI	**Karang Pucung**	**7.37**	**300**	P		**Pn**	**21 55 43.3**	**-0.7**
	0.2nm56nm,0.7s							
KAPI	**Kappang**	**7.46**	**36**	P		**Pn**	**21 55 44.9**	**-0.5**
	4.6nm,0.3s,baz=168,slow=12,SNR=4.6							
KAPI				S		**Sn**	**21 57 04.7**	**-4.1**
	3.4nm,0.3s,baz=170,slow=19,SNR=0.6							
	11nm,0.2s							
KAPI	**Kappang**	**7.46**	**36**	P		**Pn**	**21 55 48.1**	**+2.8**
KAPI	**Kappang**	**7.46**	**36**	P		**Pn**	**21 55 45.6**	**+0.3**
	0.0nm402nm11nm,0.9s							
BATI	**Baumata**	**8.22**	**84**	P		**Pn**	**21 55 54.1**	**-1.6**
	13nm,0.3s,baz=271,slow=6.6,SNR=4.8							
BATI				S		**Sn**	**21 57 24.7**	**-2.8**
	25nm,0.4s,baz=4.3,slow=23,SNR=9.7							
BBJI	**Bungbulang**	**8.42**	**295**	P		**Pn**	**21 55 55.8**	**-2.7**
BBJI	**Bungbulang**	**8.42**	**295**			**Pn**	**21 55 55.9**	**-2.6**
LEM	**Lembang**	**8.74**	**298**	LR		LR	22 00 13.4	
	comp=Z,37nm,19.5s,baz=356,slow=42							
SOEI	**Soe**	**8.87**	**82**	P		**Pn**	**21 56 06.3**	**+1.5**
SOEI	**Soe**	**8.87**	**82**			**Pn**	**21 56 07.2**	**+2.4**
SOEI				Sn		**Sn**	**21 57 44.7**	**+1.0**
XMI	**Christmas Isla**	**9.51**	**273**	P		**Pn**	**21 56 09.8**	**-3.7**
MBWA	**Marble Bar**	**10.84**	**158**			**Pn**	**21 56 28.8**	**-2.8**
PSA00	**Pilbara Seismi**	**11.26**	**158**	P		**Pn**	**21 56 34.4**	**-3.0**
FITZ	**Fitzroy Crossi**	**12.14**	**126**	P		**Pn**	**21 56 49.1**	**-0.3**
	2.9nm,0.3s,baz=299,slow=9.3,SNR=21							
FITZ				S		**Sn**	**21 58 56.3**	**-7.3**
	5.1nm,0.4s,baz=226,slow=11,SNR=5.3							
MNAI	**Manna**	**13.99**	**298**	P		**Pn**	**21 57 12.8**	**-1.9**
MTN	**Manton Dam**	**15.54**	**98**			**Pn**	**21 57 36.8**	**+1.3**
MTN						**P**	**21 57 37.4**	**-2.1**
MORW	**Morawa**	**17.88**	**178**	Pn		**Pn**	**21 58 02.7**	**-2.2**
FAKI	**Fak Fak**	**18.63**	**65**	P		**P**	**21 58 13.2**	**-0.5**
SIJI	**Sorong**	**18.80**	**58**	P		**P**	**21 58 15.7**	**+0.1**
	1.2nm,0.3s,baz=242,slow=4.0,SNR=10							
	22nm,1.0s							
WB0	**Warramunga Arr**	**20.26**	**117**			**P**	**21 58 32.6**	**+1.1**
WRA	**Warramunga Arr**	**20.28**	**118**	P		Pn	21 58 34.3	+0.5
	5.4nm,0.9s,baz=295,slow=12,SNR=26							
WRA				S		**S**	**22 02 11.4**	**-5.9**
	1.0nm,0.8s,baz=290,slow=22,SNR=5.0							
	5.4nm,0.9s							
WRA	**Warramunga Arr**	**20.28**	**118**			**P**	**21 58 31.5**	**-0.2**
WRAB	**Tennant Creek**	**20.28**	**118**	P		Pn	21 58 33.4	-0.5
WR8	**Warramunga Arr**	**20.42**	**118**			**P**	**21 58 32.9**	**-0.3**
WR8				lAmb		lAmb	21 58 37.9	
	comp=Z,14nm,0.9s							
DAV	**Davao City (W)**	**20.73**

KSH2					sP	pP	22 04 26.5	+0.3	
KSH2					pmax	pmax			
	comp=Z,4.0nm,0.9s								
KBL	**Kabul**	**63.15**	**318**		**P**	**P**	**22 04 22.0**	**-1.7**	
KBL					IAmb	IAmb	22 04 24.7		
	comp=Z,4.7nm,0.8s								
KDJ	**Kajisay**	**63.51**	**329**		P	**P**	**22 04 25.0**	**-0.9**	
KDJ					IAmb	IAmb	22 04 29.2		
	comp=Z,4.4nm,0.7s								
NRN	**Naryn**	**63.61**	**328**		P	**P**	**22 04 26.0**	**-0.7**	
NRN					IAmb	IAmb	22 04 28.6		
	comp=Z,3.5nm,0.9s								
BOOM	**Boomskoye usch**	**64.40**	**329**		P	**P**	**22 04 31.1**	**-0.7**	
DRK	**Karamyk**	**64.58**	**324**		P	**P**	**22 04 32.6**	**-0.5**	
MKAR	**Makanchi Array**	**64.78**	**336**		P	**P**	**22 04 34.2**	**+0.3**	
	comp=Z,1.7nm,0.5s,baz=148,slow=7.5,SNR=27								
	comp=Z,1.7nm,0.5s								
MKAR	**Makanchi Array**	**64.78**	**336**		P	**P**	**22 04 33.8**	**-0.2**	
TKM2	**Tokmak 2**	**64.89**	**329**		P	**P**	**22 04 35.7**	**+0.7**	
	SNR=14								
KBK	**Karagaybulak**	**65.03**	**328**		P	**P**	**22 04 36.9**	**+1.0**	
	SNR=17								
ARSB	**Arslanbob**	**65.15**	**326**		P	**P**	**22 04 36.3**	**-0.3**	
AAK	**Ala-Archa**	**65.26**	**328**		P	**P**	**22 04 38.2**	**+1.0**	
	SNR=14								
AAK	**Ala-Archa**	**65.26**	**328**			**P**	**22 04 37.8**	**+0.5**	
BTK	**Batken**	**65.53**	**324**			**P**	**22 04 39.0**	**+0.1**	
EKS2	**Erkin-Say**	**65.65**	**328**		P	**P**	**22 04 41.1**	**+1.3**	
	SNR=24								
USP	**Ospenovka**	**65.70**	**328**		P	**P**	**22 04 40.5**	**+0.6**	
	SNR=13								
KK31	**Karatay Array**	**67.71**	**326**		P	**P**	**22 04 52.2**	**-0.6**	
KK31					IAmb	IAmb	22 05 29.3		
	comp=Z,2.4nm,0.9s								
KKAR	**Karatay Array**	**67.71**	**326**		P	**P**	**22 04 51.4**	**-1.3**	
KURBB	**Kurchatov Arra**	**69.34**	**336**		P	**P**	**22 05 03.0**	**+0.3**	
	comp=Z,4.0nm,0.8s,baz=149,slow=5.1,SNR=38								
	comp=Z,4.0nm,0.8s								
KURK	**Kurchatov**	**69.37**	**336**		P	**P**	**22 05 02.7**	**-0.2**	
ZAA0	**Zalesovo Array**	**69.80**	**341**			**P**	**22 05 04.4**	**-1.1**	
ZAA0					IAmb	IAmb	22 05 06.2		
	comp=Z,4.2nm,0.9s								
ZALV	**Zalesovo Beam**	**69.80**	**341**		P	**P**	**22 05 05.2**	**-0.3**	
	comp=Z,2.1nm,0.5s,baz=145,slow=3.6,SNR=17								
	comp=Z,2.1nm,0.5s								
BVAR	**Borovoye Array**	**74.52**	**334**		P	**P**	**22 05 34.5**	**+0.7**	
	comp=Z,2.9nm,0.7s,baz=147,slow=6.3,SNR=13								
	comp=Z,2.9nm,0.7s								
BORK	**Borovoye**	**74.57**	**334**		P	**P**	**22 05 33.6**	**-0.4**	
BORK					IAmb	IAmb	22 05 36.2		
	comp=Z,3.9nm,0.9s								
AB31	**Akbulak array**	**77.27**	**326**			**P**	**22 05 48.7**	**-0.8**	
AB31					IAmb	IAmb	22 05 53.9		
	comp=Z,2.6nm,1.0s								
ABKAR	**Akbulak array**	**77.27**	**326**		P	**P**	**22 05 49.4**	**-0.1**	
QSPA	**South Pole Qui**	**78.90**	**180**		P	**P**	**22 06 01.3**	**+2.7**	
	comp=Z,1.8nm,0.9s,baz=160,slow=1.0,SNR=5.2								
	comp=Z,1.8nm,0.9s								
TIXI	**Tiksi**	**83.07**	**4**			**P**	**22 06 20.6**	**+0.3**	
TIXI					IAmb	IAmb	22 06 30.0		
	comp=Z,2.2nm,0.8s								
BOSA	**Boshof**	**84.85**	**242**		P	**P**	**22 06 32.4**	**+1.7**	
	comp=Z,2.7nm,0.9s,baz=202,slow=14,SNR=2.4								
	comp=Z,2.7nm,0.9s								
TORD	**Torodi Ar. Bea**	**115.27**	**279**		PKP	**PKiKP**	**22 12 38.0**	**+0.3**	
	comp=Z,0.4nm,0.6s,baz=125,slow=2.4,SNR=3.2								
YKA	**Yellowknife Ar**	**117.57**	**24**		PKP	**PKPdf**	**22 12 40.6**	**-0.1**	
	comp=Z,0.1nm,0.5s,baz=314,slow=2.8,SNR=2.2								
LPAZ	**La Paz**	**152.56**	**173**		PKPbc	**PKiKP**	**22 13 55.2**	**+1.5**	
	comp=Z,1.1nm,0.8s,baz=217,slow=5.1,SNR=3.1								
LPAZ					PKPab	**sPKPbc**	**22 14 06.0**	**-0.1**	
	comp=Z,1.2nm,0.7s,baz=256,slow=0.8,SNR=2.9								

*IDC **27** 22:08:03.0±2.4, 18.67S×175.63W, h268km±23km, mb3.6/11, mbtmp4.3/12, Error ellipse: s-maj=21.6km s-min=13.5km az=122.0*
*NEIC **27** 22:08:02.7±1.6, 18.69S±0.07×175.48W±0.08, h267km±6km, mb4.5/30, Error ellipse: s-maj=13.0km s-min=7.3km az=52.0*

ISC 27 22:08:00.1±0.5, 18.55S±0.09×175.56W±0.08, h250km, n64, σ1s45/60, mb4.4/26, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**5.36**	**97**	Pn	**Pn**	**22 09 22.1**	**+1.8**
AFI	**Afiamalu**	**5.87**	**39**	P	Pn	22 09 32.1	+5.4
	29nm,0.2s,baz=297,slow=18,SNR=3.0						
AFI				S	**S**	**22 10 30.6**	**-5.4**
	48nm,0.3s,baz=36,slow=20,SNR=8.9						
MSVF	**Nonsavu**	**6.13**	**277**	P	Pn	22 09 37.9	+7.9
	40nm,0.6s,baz=289,slow=23,SNR=41						
MSVF	**Nonsavu**	**6.13**	**277**		Pn	22 09 33.8	+3.8
RAR	**Rarotonga**	**15.09**	**103**	P	**P**	**22 11 20.5**	**-0.4**
URZ	**Urewera**	**20.66**	**197**	P	**P**	**22 12 21.5**	**+0.4**
	5.0nm,0.4s,baz=264,slow=1.5,SNR=16						
URZ				S	**S**	**22 15 51.7**	**-4.7**
	3.7nm,0.5s,baz=267,slow=20,SNR=7.5						
	5.0nm,0.4s						
RTZ	**Ruatahuna**	**21.03**	**196**	P	**P**	**22 12 25.1**	**+0.2**
RTZ				IAmb	IAmb	22 12 54.3	
	comp=Z,18nm,1.2s						
WR8	**Warramunga Arr**	**47.03**	**260**		**P**	**22 16 07.0**	**0.0**
WB0	**Warramunga Arr**	**47.15**	**260**		**P**	**22 16 08.0**	**0.0**
WB0				IAmb	IAmb	22 16 08.5	
	comp=Z,14nm,0.5s						
WRAB	**Tennant Creek**	**47.17**	**260**	P	**P**	**22 16 08.2**	**+0.1**
WRAB				IAmb	IAmb	22 16 08.6	
	comp=Z,9.4nm,0.5s						
WRA	**Warramunga Arr**	**47.18**	**260**	P	**P**	**22 16 08.2**	**0.0**
	comp=Z,9.5nm,0.4s,baz=98,slow=5.7,SNR=155						
WRA				PcP	**PcP**	**22 17 36.0**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=98,slow=3.2,SNR=3.3						
	comp=Z,9.5nm,0.4s						
WRA	**Warramunga Arr**	**47.18**	**260**		**P**	**22 16 07.7**	**-0.5**
AS31	**Alice Springs**	**47.23**	**255**		**P**	**22 16 08.8**	**+0.2**
ASAR	**Alice Springs**	**47.23**	**255**	P	**P**	**22 16 08.8**	**+0.2**
	comp=Z,15nm,0.7s,baz=90,slow=8.4,SNR=202						
ASAR				PcP	**PcP**	**22 17 36.1**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=97,slow=4.3,SNR=4.9						
ASAR				S	**S**	**22 22 37.9**	**-4.6**
	comp=Z,0.8nm,0.8s,baz=95,slow=16,SNR=7.1						
	comp=Z,15nm,0.7s						
ASAR	**Alice Springs**	**47.23**	**255**		**P**	**22 16 08.7**	**+0.1**
MTN	**Manton Dam**	**51.49**	**268**		**P**	**22 16 41.0**	**+0.3**
MTN				IAmb	IAmb	22 16 41.7	
	comp=Z,14nm,0.8s						
KNRA	**Kununurra**	**53.12**	**264**	P	**P**	**22 16 53.3**	**+0.6**
KNRA				IAmb	IAmb	22 16 53.7	
	comp=Z,12nm,0.7s						
FAKI	**Fak Fak**	**53.36**	**280**	P	**P**	**22 16 54.5**	**+0.1**
SOEI	**Soe**	**58.78**	**270**	P	**P**	**22 17 33.7**	**+0.8**
PSA00	**Pilbara Seismi**	**60.37**	**255**	P	**P**	**22 17 43.1**	**-0.3**
PSA00				IAmb	IAmb	22 17 56.8	
	comp=Z,20nm,1.2s						
PSA00	**Pilbara Seismi**	**60.37**	**255**	P	**P**	**22 17 42.9**	**-0.6**
PSA00				IAmb	IAmb	22 17 43.9	
	comp=Z,3.3nm,0.8s						
MORW	**Morawa**	**62.71**	**246**	P	**P**	**22 17 58.5**	**-0.5**
GIRL	**Giralia**	**65.30**	**253**	P	**P**	**22 18 16.2**	**+0.3**
TOLI2	**Tolitoli**	**65.49**	**280**	P	**P**	**22 18 18.0**	**+0.8**
TOLI2				IAmb	IAmb	22 18 29.8	
	comp=Z,9.3nm,1.1s						
MJAR	**Matsushiro Arr**	**70.06**	**322**	P	**P**	**22 18 46.2**	**+1.1**
	comp=Z,3.5nm,0.7s,baz=154,slow=6.0,SNR=7.2						
	comp=Z,3.5nm,0.7s						
MJAR	**Matsushiro Arr**	**70.06**	**322**	P	**P**	**22 18 46.3**	**+1.1**
MAJO	**Matsushiro**	**70.06**	**322**	P	**P**	**22 18 46.5**	**+1.4**
MAJO				IAmb	IAmb	22 18 49.4	
	comp=Z,9.1nm,0.8s						
MJB9	**Matsu-Tunnel**	**70.06**	**322**	P	**P**	**22 18 47.3**	**+2.1**
MJB9				IAmb	IAmb	22 18 50.3	
	comp=Z,8.7nm,0.8s						
QSPA	**South Pole Qui**	**71.52**	**180**	P	**P**	**22 18 53.9**	**+0.2**
	comp=Z,2.2nm,0.8s,baz=315,slow=1.3,SNR=7.9						
	comp=Z,2.2nm,0.8s						
QSPA	**South Pole Qui**	**71.52**	**180**	P	**P**	**22 18 54.3**	**+0.6**
KKM	**Kota Kinabalu**	**71.52**	**283**	P	**P**	**22 18 54.8**	**+0.2**
KKM				IAmb	IAmb	22 19 09.7	
	comp=Z,18nm,1.2s						
UNV	**Unalaska Valle**	**72.51**	**6**	P	**P**	**22 18 57.8**	**-1.6**
YULB	**Yu-li**	**74.40**	**302**	P	**P**	**22 19 10.9**	**-0.2**
BBJI	**Bungbulang**	**75.18**	**267**	P	**P**	**22 19 15.3**	**-0.6**
BBJI				IAmb	IAmb	22 19 45.5	
	comp=Z,14nm,1.5s						
HOPS	**Hopland Field**	**75.40**	**40**	P	**P**	**22 19 16.3**	**-0.2**
KMRM	**Mail Ridge**	**75.80**	**38**	P	**P**	**22 19 20.1**	**+1.3**
KMRM				IAmb	IAmb	22 19 23.9	
	comp=Z,22nm,1.5s						
SLBS	**Sierra La Lagu**	**76.54**	**59**	P	**P**	**22 19 20.9**	**-2.4**
O03E	**Paynes Creek**	**76.98**	**39**	P	**P**	**22 19 26.4**	**+1.1**
O03E				IAmb	IAmb	22 19 28.6	
	comp=Z,8.7nm,1.5s						
KSRS	**Korea Array**	**76.99**	**317**	P	**P**	**22 19 28.0**	**+2.6**
	comp=Z,1.2nm,0.6s,baz=111,slow=6.3,SNR=2.3						
	comp=Z,1.2nm,0.6s						
NVAR	**Mina Array Bea**	**78.03**	**42**	P	**P**	**22 19 33.5**	**+2.1**
	comp=Z,0.8nm,0.7s,baz=240,slow=5.0,SNR=4.1						
	comp=Z,0.8nm,0.7s						
K15K	**Wolf Creek Mou**	**81.33**	**7**	IAmb	IAmb	22 19 51.6	
	comp=Z,8.4nm,0.7s						
MCK	**McKinley**	**84.59**	**12**	IAmb	IAmb	22 20 06.7	
	comp=Z,9.7nm,1.0s						
H03S2	**Juan Fernandez**	**85.18**	**124**	T	T	23 53 13.1	
	baz=248,slow=75,SNR=4.0						
H03S1	**Juan Fernandez**	**85.19**	**124**	T	T	23 53 12.7	
	baz=248,slow=75,SNR=3.6						
H03S3	**Juan Fernandez**	**85.20**	**124**	T	T	23 53 10.6	
	baz=248,slow=75,SNR=3.6						
CCB	**Clear Creek Bu**	**85.63**	**12**	IAmb	IAmb	22 20 11.4	
	comp=Z,3.8nm,0.8s						
ILAR	**Eielson Array**	**85.92**	**12**	P	**P**	**22 20 12.3**	**+0.8**
	comp=Z,0.3nm,0.4s,baz=215,slow=5.2,SNR=8.2						
	comp=Z,0.3nm,0.4s						
PDAR	**Pinedale Array**	**85.97**	**42**	P	**P**	**22 20 13.4**	**+0.8**
	comp=Z,0.1nm,0.4s,baz=238,slow=4.8,SNR=1.9						
	comp=Z,0.1nm,0.4s						
CMAR	**Chiang Mai Arr**	**91.65**	**289**	P	**P**	**22 20 40.4**	**+0.9**
	comp=Z,1.0nm,0.4s,baz=109,slow=5.8,SNR=7.1						
	comp=Z,1.0nm,0.4s						
YKA	**Yellowknife Ar**	**93.79**	**24**	P	**P**	**22 20 49.4**	**+1.0**
	comp=Z,0.3nm,0.8s,baz=241,slow=4.9,SNR=3.8						
	comp=Z,0.3nm,0.8s						
BVAR	**Borovoye Array**	**119.05**	**321**	PKP	**PKiKP**	**22 26 18.6**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=72,slow=1.8,SNR=4.2						
BRTR	**Keskin Array B**	**147.13**	**316**	PKPbc	**PKiKP**	**22 27 14.7**	**-1.6**
	comp=Z,1.7nm,0.7s,baz=144,slow=5.0,SNR=12						
MMAI	**Mount Meron Ar**	**148.75**	**304**	PKPbc	**PKiKP**	**22 27 19.8**	**+0.1**
	comp=Z,1.4nm,0.4s,baz=63,slow=7.6,SNR=19						
GERES	**GERESS Array B**	**148.86**	**348**	PKPbc	**PKiKP**	**22 27 19.1**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=318,slow=1.8,SNR=6.4						
RONA	**Rosalia, Austr**	**149.35**	**344**	*i* PKP	**PKiKP**	**22 27 20.4**	**0.0**
	comp=Z,1.6nm,0.6s						
KBA	**Koelnbreinsper**	**150.62**	**348**	*i* PKP	**PKiKP**	**22 27 23.4**	**+0.1**
	comp=Z,2.2nm,0.5s						
WATA	**Walderalm**	**150.69**	**350**	*i* PKP	**PKiKP**	**22 27 23.6**	**+0.2**
	comp=Z,2.1nm,0.8s						
WTTA	**Wattenberg**	**150.75**	**350**	*i* PKP	**PKiKP**	**22 27 23.6**	**0.0**
	comp=Z,3.7nm,0.5s						
MOTA	**Moosalm**	**150.76**	**351**	*i* PKP	**PKiKP**	**22 27 24.0**	**+0.5**
	comp=Z,3.9nm,1.0s						
SQTA	**Sankt Quirin**	**150.87**	**351**	*i* PKP	**PKiKP**	**22 27 24.1**	**+0.4**
	comp=Z,5.3nm,1.0s						
DAVA	**Damuels**	**150.99**	**352**	*i* PKP	**PKiKP**	**22 27 24.8**	**+0.9**
	comp=Z,7.3nm,1.1s						
ABTA	**Abfaltersbach**	**151.10**	**348**	*i* PKP	**PKiKP**	**22 27 23.8**	**-0.4**
	comp=Z,4.4nm,0.6s						
FETA	**Fehten**	**151.13**	**351**	*i* PKP	**PKiKP**	**22 27 24.5**	**+0.2**
	comp=Z,3.1nm,0.8s						
ESDC	**Sonseca Array**	**157.72**	**17**	PKPab	**PKPab**	**22 28 01.8**	**+1.2**
	comp=Z,0.4nm,0.9s,baz=339,slow=4.8,SNR=4.6						

*NEIC **27** 22:15:34.0±1.0, 17.77S±0.08×178.6W±0.2, h607km±11km, mb4.1/20, Error ellipse: s-maj=21.4km s-min=10.2km az=103.0*
*IDC **27** 22:15:35.3±1.8, 17.53S×178.80W, h613km±13km, mb3.2/7, mbtmp4.2/9, Error ellipse: s-maj=82.1km s-min=16.3km az=149.0*

ISC 27 22:15:33.3±0.8, 17.8S±0.2×178.5W±0.1, h600km, n33, σ0s88/35, mb4.0/17, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.25**	**271**	P	**P**	**22 16 54.3**	**+0.3**
	43nm,0.6s,baz=103,slow=2.5,SNR=51						
MSVF				S	**S**	**22 18 02.2**	**+2.5**
	1.5nm,0.3s,baz=219,slow=23,SNR=1.6						
MSVF	**Nonsavu**	**3.25**	**271**	P	**P**	**22 16 54.2**	**+0.2**
MARNC	**Mare, Loyalty**	**13.16**	**252**	P	**P**	**22 18 23.7**	**0.0**
DZM	**Mont Dzumac**	**14.73**	**251**	P	**P**	**22 18 39.0**	**-0.2**
	8.5nm,0.8s,baz=346,slow=22,SNR=2.2						
THZ	**Tophouse**	**24.95**	**195**	P	**P**	**22 20 11.4**	**+0.5**
EIDS	**Eidsvold**	**29.17**	**250**	P	**P**	**22 20 47.5**	**-0.5**
EIDS				IAmb	IAmb	22 20 53.6	
	comp=Z,7.8nm,1.0s						
ARMA	**Armidale**	**29.87**	**240**	P	**P**	**22 20 54.0**	**0.0**
ARMA				IAmb	IAmb	22 20 59.4	
	comp=Z,6.9nm,1.0s						
CTAO	**Charters Tower**	**33.34**	**260**	P	**P**	**22 21 23.4**	**0.0**
CAN	**Canberra**	**33.65**	**232**	P	**P**	**22 21 25.5**	**-0.4**
CAN				IAmb	IAmb	22 21 43.7	
	comp=Z,5.0nm,1.0s						
TOO	**Toolangi**	**37.12**	**231**	P	**P**	**22 21 55.2**	**+0.7**
STKA	**Stephens Creek**	**38.55**	**241**	P	**P**	**22 22 06.7**	**+0.4**
	comp=Z,2.8nm,0.5s,baz=0.0,slow=7.4,SNR=8.2						
	comp=Z,2.8nm,0.5s						
STKA	**Stephens Creek**	**38.55**	**241**	P	**P**	**22 22 06.6**	**+0.4**
BBOO	**Buckleboo**	**43.33**	**241**	P	**P**	**22 22 43.7**	**-0.2**
BBOO				IAmb	IAmb	22 22 44.6	
	comp=Z,3.1nm,0.8s						
WR8	**Warramunga Arr**	**44.37**	**259**	P	**P**	**22 22 51.3**	**-0.8**
WR8				IAmb	IAmb	22 23 09.7	
	comp=Z,4.5nm,1.1s						
WRAB	**Tennant Creek**	**44.51**	**259**	P	**P**	**22 22 52.7**	**-0.5**
WRA	**Warramunga Arr**	**44.52**	**259**	P	**P**	**22 22 52.8**	**-0.4**
	comp=Z,2.3nm,0.5s,baz=92,slow=7.3,SNR=44						
	comp=Z,2.3nm,0.5s						
WRA	**Warramunga Arr**	**44.52**	**259**	P	**P**	**22 22 52.9**	**-0.4**
AS31	**Alice Springs**	**44.69**	**254**		**P**	**22 22 54.7**	**+0.1**
AS31				IAmb	IAmb	22 22 55.7	
	comp=Z,4.2nm,0.5s						
ASAR	**Alice Springs**	**44.69**	**254**	P	**P**	**22 22 54.7**	**+0.2**
	comp=Z,14nm,0.6s,baz=87,slow=8.6,SNR=238						
ASAR				PcP	**PcP**	**22 24 24.4**	**+0.6**
	comp=Z,0.2nm,0.4s,baz=91,slow=4.1,SNR=1.9						
	comp=Z,14nm,0.6s						
MTN	**Manton Dam**	**48.67**	**268**	P	**P**	**22 23 24.1**	**-0.5**
MTN				IAmb	IAmb	22 23 25.0	
	comp=Z,3.9nm,0.7s						
FORT	**Forrest**	**49.92**	**245**	P	**P**	**22 23 32.3**	**-1.2**
FORT				IAmb	IAmb	22 23 49.2	
	comp=Z,6.9nm,1.0s						
KNRA	**Kununurra**	**50.37**	**264**	P	**P**	**22 23 36.4**	**-0.5**
KNRA				IAmb	IAmb	22 23 43.8	
	comp=Z,6.1nm,1.1s						
PSA00	**Pilbara Seismi**	**57.81**	**255**	P	**P**	**22 24 28.5**	**-0.5**
MBWA	**Marble Bar**	**57.97**	**256**	P	**P**	**22 24 29.8**	**-0.3**
MBWA				IAmb	IAmb	22 24 39.5	
	comp=Z,13nm,1.1s						
NVAR	**Mina Array Bea**	**79.46**	**44**	P	**P**	**22 26 40.4**	**+1.5**
	comp=Z,0.7nm,0.7s,baz=243,slow=7.7,SNR=3.7						
	comp=Z,0.7nm,0.7s						
NVAR	**Mina Array Bea**	**79.46**	**44**	P	**P**	**22 26 39.4**	**+0.4**
PV17	**East Wray Mesa**	**85.77**	**48**	P	**P**	**22 27 07.8**	**-2.7**
ILAR	**Eielson Array**	**85.84**	**13**	P	**P**	**22 27 09.1**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=207,slow=4.2,SNR=5.1						
	comp=Z,0.3nm,0.4s						
TXAR	**Lajitas Array**	**86.06**	**58**	P	**P**	**22 27 13.2**	**+1.2**
	comp=Z,1.2nm,0.9s,baz=212,slow=6.8,SNR=5.9						
	comp=Z,1.2nm,0.9s						
TXAR	**Lajitas Array**	**86.06**	**58**	P	**P**	**22 27 12.6**	**+0.6**
PD31	**Pinedale Array**	**87.39**	**43**	P	**P**	**22 27 17.7**	**-0.3**
PDAR	**Pinedale Array**	**87.39**	**43**	P	**P**	**22 27 18.5**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=204,slow=3.0,SNR=7.4						
	comp=Z,0.6nm,0.7s						
PDAR	**Pinedale Array**	**87.39**	**43**	P	**P**	**22 27 18.2**	**+0.1**

*IDC **27** 22:43:09.5±0.8, 22.89N×144.13E, h0km, mb3.9/17, mbtmp4.0/19, ML3.6/2, MS3.0/8, Error ellipse: s-maj=31.9km s-min=15.1km az=78.0*
*NEIC **27** 22:43:13.1±2.1, 22.93N±0.08×143.9E±0.1, h10km±1km, mb4.5/16, Error ellipse: s-maj=20.6km s-min=8.0km az=52.0*

ISC 27 22:43:11.7±0.6, 22.92N±0.07×144.1E±0.2, h10km, n57, σ1s10/45, mb4.2/27, MS2.9/4, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**4.49**	**338**	Pn	**Pn**	**22 44 21.4**	**+1.6**
	12nm,0.3s,baz=3.2,slow=18,SNR=18						
JCJ					Sn	**Sn**	**22 45 10.5**	**-1.6**
	19nm,0.3s,baz=287,slow=22,SNR=7.3						
	32nm,0.3s						
JCJ	**Chichijima**	**4.49**	**338**			**Pn**	**22 44 20.8**	**+0.9**
JCJ						**Sn**	**22 45 11.5**	**-0.6**
DPSS	**Saipan**	**7.81**	**168**	Pn		**Pn**	**22 45 06.5**	**+1.1**
GUMO	**Guam**	**9.31**	**175**	LR		LR	22 48 40.0	
	comp=Z,66nm,19.7s,baz=55,slow=36							
JGF	**Kuroka**	**13.92**	**337**	Pn		**Pn**	**22 46 28.9**	**-0.1**
MJAR	**Matsushiro Arr**	**14.49**	**341**	Pn		**Pn**	**22 46 36.8**	**0.0**
	0.1nm,0.3s,baz=156,slow=12,SNR=4.5							
MJAR					LR	LR	22 52 04.3	
	comp=Z,56nm,19.6s,baz=136,slow=37							
	1.5nm,0.6s							
MJAR	**Matsushiro Arr**	**14.49**	**341**			**Pn**	**22 46 36.0**	**-0.8**
JOW	**Kunigami**	**14.84**	**288**	LR		LR	22 51 52.9	
	comp=Z,110nm,19.0s,baz=147,slow=35							
JNU	**Nakatsue**	**15.43**	**314**	LR		LR	22 52 05.1	
	comp=Z,22nm,20.0s,baz=70,slow=35							
KSRS	**Korea Array**	**20.06**	**320**	P		**Pn**	**22 47 48.6**	**+1.7**
	6.9nm,0.8s,baz=147,slow=8.6,SNR=12							
KSRS					LR	LR	22 54 42.7	
	comp=Z,47nm,21.8s,baz=115,slow=34							
H11N1	**WAKE ISLAND Hy**	**21.51**	**94**	T		T	23 10 10.6	
	baz=283,slow=74							
H11N2	**WAKE ISLAND Hy**	**21.51**	**94**	T		T	23 10 09.6	
	baz=283,slow=74							
H11N3	**WAKE ISLAND Hy**	**21.53**	**94**	T		T	23 10 13.9	
	baz=283							
H11S3	**WAKE ISLAND Hy**	**21.62**	**98**	T		T	23 10 27.9	
	baz=284							
H11S1	**WAKE ISLAND Hy**	**21.63**	**98**	T		T	23 10 25.5	
	baz=284,slow=74							
H11S2	**WAKE ISLAND Hy**	**21.64**	**98**	T		T	23 10 27.9	
	baz=284,slow=74							
USRK	**Ussuriysk Ar.**	**23.43**	**338**	P		**P**	**22 48 19.6**	**-1.4**
	2.3nm,0.9s,baz=157,slow=12,SNR=4.9							
	2.3nm,0.9s							
DAV	**Davao City (W)**	**23.75**	**231**	LR		LR	22 55 38.4	
	comp=Z,49nm,20.4s,baz=306,slow=32							
KAPI	**Kappang**	**36.53**	**224**	LR		LR	23 03 04.1	
	comp=Z,12nm,21.8s,baz=50,slow=33							
LZDM	**Lanzhou Array**	**37.21**	**300**	P		**P**	**22 50 23.7**	**0.0**
	0.8nm,0.3s,baz=128,slow=8.1,SNR=1.9							
	0.8nm,0.3s							
SONM	**Songino Array**	**38.93**	**319**	P		**P**	**22 50 37.2**	**-0.6**
	0.4nm,0.4s,baz=123,slow=5.5,SNR=4.1							
SONM					LR	LR	23 06 53.7	
	comp=Z,81nm,20.7s,baz=66,slow=36							
	0.4nm,0.4s							
SONM	**Songino Array**	**38.93**	**319**	IAmb		IAmb	22 50 43.6	
	comp=Z,1.0nm,1.2s							
GTA2	**Gaotai**	**40.89**	**304**	*e*P		**P**	**22 50 55.5**	**+1.2**
GTA2				pmax		pmax		
	comp=Z,4.0nm,0.8s							
WRA	**Warramunga Arr**	**43.64**	**193**	P		**P**	**22 51 15.9**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=11,slow=8.8,SNR=13							
	comp=Z,0.7nm,0.5s							
GOMU	**GeErMu**	**44.39**	**299**	P		**P**	**22 51 24.3**	**+1.3**
GOMU				pmax		pmax		
	comp=Z,5.0nm,0.6s							
ASAR	**Alice Springs**	**47.34**	**193**	P		**P**	**22 51 44.7**	**-1.2**
	comp=Z,0.5nm,0.5s,baz=12,slow=6.7,SNR=9.0							
	comp=Z,0.5nm,0.5s							
SHL	**Shillong**	**47.39**	**284**	P		**P**	**22 51 46.7**	**+0.1**
SHL				IAmb		IAmb	22 51 53.1	
	comp=Z,2.7nm,0.8s							
EVN	**Everest**	**51.54**	**288**			**P**	**22 52 19.8**	**+1.0**
EVN				IAmb		IAmb	22 52 26.5	
	comp=Z,7.0nm,1.4s							
MKAR	**Makanchi Array**	**54.47**	**312**	P		**P**	**22 52 40.3**	**+0.8**
	comp=Z,1.1nm,0.6s,baz=87,slow=10,SNR=17							
	comp=Z,1.1nm,0.6s							
STKA	**Stephens Creek**	**54.54**	**183**	P		**P

MXZ	**Matakaoa Point**	**8.31**	**193**	P		**P**	**22 56 48.3**	**+2.7**
MXZ	**Matakaoa Point**	**8.31**	**193**	P		**P**	**22 56 49.3**	**+3.8**
MXZ				S		S	22 58 15.8	-6.6
WMGZ	**Waiomatatini S**	**8.54**	**192**	P		**Pn**	**22 56 48.1**	**+0.3**
WMGZ				S		S	22 58 20.9	-6.2
HAZ	**Te Kaha**	**8.61**	**196**	P		**P**	**22 56 50.3**	**+1.4**
HAZ				S		**S**	**22 58 23.4**	**-5.3**
PKGZ	**Pakihiroa**	**8.65**	**194**	P		**P**	**22 56 50.9**	**+1.6**
PKGZ				S		**S**	**22 58 23.5**	**-6.1**
WIAZ	**Waiheke Island**	**8.67**	**211**	P		**P**	**22 56 52.4**	**+2.8**
PUZ	**Puketiti**	**8.81**	**193**	P		**Pn**	**22 56 52.3**	**+1.2**
PUZ				S		S	22 58 25.4	-7.7
RUGZ	**Raukumara Rang**	**8.84**	**196**	P		**Pn**	**22 56 52.6**	**+1.1**
RUGZ				S		S	22 58 26.1	-8.6
TWGZ	**Tauwhareparae**	**8.97**	**194**	P		**Pn**	**22 56 54.8**	**+1.9**
TWGZ				S		**S**	**22 58 34.9**	**-1.5**
OPRZ	**Ohinepanea**	**9.04**	**202**	P		**Pn**	**22 56 57.9**	**+4.3**
CNGZ	**Carnagh Statio**	**9.22**	**192**	P		**P**	**22 56 57.2**	**+1.6**
EDRZ	**Edgecumbe**	**9.22**	**200**	P		**Pn**	**22 56 59.2**	**+3.4**
MWZ	**Matawai**	**9.22**	**196**	P		**Pn**	**22 56 58.9**	**+3.1**
MWZ				S		**S**	**22 58 37.3**	**-4.4**
TKGZ	**Te Karaka**	**9.25**	**194**	P		**P**	**22 56 56.8**	**+0.9**
TKGZ				S		S	22 58 35.6	-6.5
URZ	**Urewera**	**9.26**	**198**	P		**P**	**22 56 56.4**	**+0.3**
	51nm,0.5s,baz=20,slow=4.3,SNR=51							
URZ				S		S	22 58 34.7	-7.6
	20nm,0.6s,baz=45,slow=23,SNR=11							
URZ	**Urewera**	**9.26**	**198**	P		**P**	**22 56 56.5**	**+0.5**
KARZ	**Kaharoa**	**9.30**	**203**	P		**Pn**	**22 57 01.1**	**+4.4**
OMRZ	**Omania**	**9.34**	**202**	P		**Pn**	**22 57 00.9**	**+3.8**
RAGZ	**Rawiri**	**9.40**	**196**	P		**P**	**22 56 58.8**	**+1.0**
HLRZ	**Highlands Stat**	**9.48**	**201**	P		**Pn**	**22 57 02.3**	**+3.6**
RIGZ	**Rimuhau**	**9.53**	**194**	P		**P**	**22 56 59.8**	**+0.7**
HSRZ	**Hossack Road**	**9.57**	**202**	P		Pn	22 57 05.3	+5.6
RTZ	**Ruatahuna**	**9.63**	**198**	P		**P**	**22 57 01.6**	**+1.4**
RTZ	**Ruatahuna**	**9.63**	**198**	P		**P**	**22 57 01.1**	**+0.9**
KNZ	**Kokohu**	**9.85**	**194**	P		**Pn**	**22 57 05.3**	**+2.3**
MHGZ	**Mahia Peninsul**	**9.93**	**193**	P		**Pn**	**22 56 57.7**	**+2.8**
HIZ	**Hauiti**	**10.24**	**207**	P		Pn	22 57 12.5	+5.0
BKZ	**Black Stump Fm**	**10.28**	**199**	P		**P**	**22 57 08.0**	**+0.6**
MSVF	**Nonsavu**	**11.95**	**348**	P		**P**	**22 57 23.9**	**-2.3**
ARMA	**Armidale**	**25.21**	**261**	P		**P**	**22 59 39.3**	**+0.8**
ARMA				IAmb		IAmb	22 59 45.9	
	comp=Z,18nm,1.4s							
EIDS	**Eidsvold**	**26.60**	**272**	P		**P**	**22 59 50.7**	**-0.1**
EIDS				IAmb		IAmb	22 59 51.3	
	comp=Z,30nm,1.3s							
CTAO	**Charters Tower**	**32.57**	**279**	P		**P**	**23 00 42.2**	**-0.8**
CTAO				IAmb		IAmb	23 00 43.8	
	comp=Z,11nm,1.1s							
ASAR	**Alice Springs**	**42.07**	**266**	P		**P**	**23 02 01.2**	**-0.4**
	comp=Z,0.8nm,0.4s,baz=104,slow=7.6,SNR=15							
	comp=Z,0.8nm,0.4s							
ASAR	**Alice Springs**	**42.07**	**266**	P		**P**	**23 02 01.0**	**-0.7**
WR8	**Warramunga Arr**	**42.83**	**272**	P		**P**	**23 02 07.2**	**-0.5**
WR8				IAmb		IAmb	23 02 23.3	
	comp=Z,5.2nm,1.4s							
WRA	**Warramunga Arr**	**42.97**	**272**	P		**P**	**23 02 08.2**	**-0.6**
	comp=Z,1.0nm,0.4s,baz=112,slow=6.3,SNR=28							
	comp=Z,1.0nm,0.4s							
WRA	**Warramunga Arr**	**42.97**	**272**	P		**P**	**23 02 08.0**	**-0.8**
WB0	**Warramunga Arr**	**42.99**	**272**	P		**P**	**23 02 08.1**	**-0.9**
WB0				IAmb		IAmb	23 02 18.6	
	comp=Z,5.9nm,1.4s							
ESQI	**Esquipulas**	**96.96**	**77**	P			23 07 37.2	
SJG	**San Juan**	**118.48**	**84**	PKPdf		**PKiKP**	**23 12 51.8**	**+3.5**
FINES	**FINESS Array B**	**143.91**	**340**	PKP		**PKPdf**	**23 13 35.5**	**+0.9**
	comp=Z,1.0nm,0.4s,baz=44,slow=3.8,SNR=15							

GCMT 27 22:54:57.0±0.3,9°11S±0.01×109°57W±0.01,h13km±1km, MW4.9/116,Moment Tensor Solution. s39,c46; s116,c153; Duration: 0 Moment tensor: Scale 10^{16} Nm; M_{rr}-0.46±.08; $M_{\theta\theta}$1.13±.08; $M_{\phi\phi}$-0.67±.09; $M_{r\theta}$0.45±.19; $M_{\theta\phi}$2.57±.08; $M_{\phi r}$-0.69±.20; Best double couple: $M_0$2.87000×10^{16} NP1:φ±278.00000°,δ76.00000°, λ-14.00000°. NP2:φ±11.00000°,δ77.00000°, λ-165.00000°. Principal axes: T 2.9530, Plg1.0000°, Azm145.0000°; N -0.1670, Plg70.0000°, Azm53.0000°; P -2.7870, Plg20.0000°, Azm235.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Central East Pacific Rise

IDC 27 23:18:43.2±2.4,30°32S×178°25W,h0km,mb3.6/3, mbtmp3.6/3,MS3.1/2 Error ellipse: s-maj=67.7km s-min=42.7km az=41.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**18.93**	**66**	LR	LR	23 30 43.5	
	comp=Z,42nm,18.9s,baz=76,slow=38						
ASAR	**Alice Springs**	**42.90**	**267**	P	P	23 26 43.4	-0.4
	0.4nm,0.8s,baz=99,slow=8.1,SNR=4.7						
	0.4nm,0.8s						
WRA	**Warramunga Arr**	**43.88**	**272**	P	P	23 26 51.7	0.0
	0.3nm,0.4s,baz=111,slow=8.1,SNR=6.5						
	0.3nm,0.4s						
QSPA	**South Pole Qui**	**59.79**	**180**	P	P	23 28 50.9	+0.9
	1.5nm,0.9s,baz=11,slow=5.2,SNR=2.1						
	1.5nm,0.9s						
CMAR	**Chiang Mai Arr**	**93.17**	**289**	LR	LR	00 16 33.6	
	comp=Z,11nm,18.9s,baz=85,slow=37						
FINES	**FINESS Array B**	**145.00**	**340**	PKPbc	PKPbc	23 38 19.4	-1.6
	1.7nm,1.0s,baz=18,slow=5.8,SNR=1.7						

*IDC **27** 23:40:41.0±1.7,27°.31N×126°.61E,h155km±19km, mb3.3/10,mbtmp3.7/11,MS3.5/1,Error ellipse: s-maj=34.6km s-min=15.7km az=66.0*
*JMA **27** 23:40:42.5±0.3,27°.N±2°×12°.7E±°,h143km,MV4.0/21,NW OFF OKINAWAJIMA IS*
ISC 27 23:40:40.9±0.8,27°.25N±0°.08×126°.72E±0°.07,h158km±8km, n29,σ0°.94/39,mb3.4/10,Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGN	**Aguni-jima**	**0.81**	**144**	*i* P	**Pn**	**23 41 05.6**	**+0.7**
JAGN				S	**Sn**	**23 41 23.1**	**-0.2**
JKE	**Kume jima 2**	**0.92**	**176**	*i* P	**Pn**	**23 41 06.1**	**+0.3**
JIH	**Iheya**	**1.13**	**101**	*i* P	**Pn**	**23 41 08.6**	**+1.1**
JIH				S	**Sn**	**23 41 27.7**	**-0.2**
JNTH	**Nagotoyohara**	**1.37**	**122**	*i* P	**Pn**	**23 41 10.9**	**+1.1**
JNTH				S	**Sn**	**23 41 31.1**	**-0.9**
JOW	**Kunigami**	**1.45**	**106**	P	**Pn**	**23 41 11.3**	**+0.8**
	236nm,0.4s,baz=114,slow=22,SNR=297						
JOW				S	**Sn**	**23 41 31.8**	**-1.5**
	621nm,0.2s,baz=106,slow=23,SNR=14						
JOW	**Kunigami**	**1.45**	**106**	*i* P	**Pn**	**23 41 11.4**	**+0.8**
JOW				S	**Sn**	**23 41 32.4**	**-0.9**
JJT3	**Tamagusuku3**	**1.46**	**139**	P	**Pn**	**23 41 12.2**	**+1.6**
JYRO	**Yoronjima**	**1.56**	**98**	*i* P	**Pn**	**23 41 12.6**	**+0.9**
JYRO				S	**Sn**	**23 41 34.2**	**-1.1**
JOKE	**Okinoerabujima**	**1.65**	**86**	*i* P	**Pn**	**23 41 13.3**	**+0.7**
JOKE				S	**Sn**	**23 41 36.3**	**-0.8**
JTK	**Tokunoshima**	**2.06**	**74**	P	**Pn**	**23 41 17.7**	**+0.6**
JAMN	**Amaminishikomi**	**2.39**	**65**	P	**Pn**	**23 41 21.7**	**+0.6**
JMJ2	**Miyako jima3**	**2.79**	**207**	P	**Pn**	**23 41 26.0**	**0.0**
JAM	**Amami Oshima**	**2.81**	**65**	*e*P	**Pn**	**23 41 26.6**	**+0.4**
JAM				S	**Sn**	**23 42 00.1**	**-1.0**
JZK	**Kikaishima**	**3.07**	**69**	*e*S	**Sn**	**23 42 07.6**	**+0.4**
JISG	**Ishigakijimahi**	**3.42**	**220**	*e*P	**Pn**	**23 41 33.1**	**-0.8**
JMZ	**Minamidaito 2**	**4.28**	**108**	P	**Pn**	**23 41 45.2**	**+0.3**
JKDJ	**Kitadaitoujima**	**4.30**	**106**	P	**Pn**	**23 41 45.9**	**+0.7**
JKDJ				*e*S	**Sn**	**23 42 32.5**	**-2.8**
JNU	**Nakatsue**	**6.87**	**31**	P	**Pn**	**23 42 19.5**	**+0.3**
	6.0nm,0.6s,baz=165,slow=15,SNR=4.6						
SONM	**Songino Array**	**25.97**	**328**	P	**P**	**23 45 59.1**	**+0.3**
	2.4nm,0.4s,baz=145,slow=11,SNR=30						
	2.4nm,0.4s						
MKAR	**Makanchi Array**	**39.85**	**311**	P	**P**	**23 47 57.9**	**-0.9**
	0.5nm,0.4s,baz=95,slow=10,SNR=15						
MKAR				PcP	**PcP**	**23 50 02.3**	**+0.8**
	0.3nm,0.6s,baz=113,slow=2.8,SNR=2.0						
	0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**40.62**	**323**	LR	LR	00 08 03.1	
	comp=Z,62nm,19.7s,baz=13,slow=40						
KURBB	**Kurchatov Arra**	**43.18**	**316**	P	**P**	**23 48 24.8**	**-1.0**
	0.6nm,0.6s,baz=109,slow=8.9,SNR=5.3						
	0.6nm,0.6s						
WRA	**Warramunga Arr**	**47.49**	**170**	P	**P**	**23 49 00.5**	**+0.5**
	0.3nm,0.6s,baz=349,slow=7.6,SNR=2.2						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**48.62**	**318**	P	**P**	**23 49 07.9**	**-0.4**
	0.3nm,0.3s,baz=94,slow=7.4,SNR=4.3						
BVAR				PcP	**PcP**	**23 50 31.2**	**-0.1**
	0.5nm,0.5s,baz=97,slow=3.1,SNR=2.9						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**51.09**	**172**	P	**P**	**23 49 28.6**	**+1.3**
	0.2nm,0.6s,baz=353,slow=7.3,SNR=5.1						
	0.2nm,0.6s						
FINES	**FINESS Array B**	**71.31**	**330**	P	**P**	**23 51 41.8**	**-1.1**
	0.6nm,0.6s,baz=45,slow=7.2,SNR=1.1						
	0.6nm,0.6s						
BRTR	**Keskin Array B**	**75.34**	**307**	P	**P**	**23 52 07.3**	**+0.3**
	0.5nm,0.8s,baz=309,slow=7.8,SNR=3.8						
	0.5nm,0.8s						
HFS	**Hagfors**	**77.29**	**332**	P	**P**	**23 52 17.4**	**0.0**
	1.7nm,0.8s,baz=79,slow=2.2,SNR=1.6						
	1.7nm,0.8s						
YKA	**Yellowknife Ar**	**78.17**	**25**	P	**P**	**23 52 22.6**	**+0.4**
	0.3nm,0.8s,baz=302,slow=6.8,SNR=4.7						
	0.3nm,0.8s						

*IDC **27** 23:41:11.7±0.5,72°.18N×127°.37E,h0km,mb3.8/19, mbtmp3.8/20,ML3.7/1,Error ellipse: s-maj=13.5km s-min=7.8km az=43.0*
*MOS **27** 23:41:11.7±1.4,72°.15N×127°.43E,h10km,mb4.3/11,Error ellipse: s-maj=24.9km s-min=8.4km az=89.2*
*YARS **27** 23:41:12.6,72°.16N×127°.48E,h10km,mb4.5/8,ML2.2/8*
*NEIC **27** 23:41:13.4±1.4,72°.10N±0°.09×127°.4E±0°.3,h10km±2km, mb4.3/29,Error ellipse: s-maj=18.6km s-min=6.5km az=222.0*
ISC 27 23:41:12.9±1.1,72°.14N±0°.04×127°.35E±0°.04,h9km±7km, n105,σ1°44/121,mb4.0/39,12C-4D,Northern and central Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
Y867		**0.21**	**183**	*i* Pg	**Pg**	**23 41 18.0**	**+0.7**
	93nm,0.3s						
Y867				*e*Sg	**Sg**	**23 41 21.9**	**+1.7**
	1μm,0.7s						
Y765		**0.31**	**102**	*i* Pg	**Pg**	**23 41 18.2**	**-0.8**
	121nm,0.2s						
Y765				*e*Sg	**Sg**	**23 41 22.2**	**-0.9**
	2μm,0.6s						
TIXI	**Tiksi**	**0.69**	**136**	Pg	**Pb**	**23 41 26.2**	**-0.9**
	73nm,0.3s,baz=350,slow=12,SNR=188						
TIXI				Lg	Lg	23 41 35.9	
	644nm,0.3s,baz=267,slow=22,SNR=36						
TIXI	**Tiksi**	**0.69**	**136**		**Pg**	**23 41 25.6**	**-0.5**
TIXI				Sg	**Sb**	**23 41 35.6**	**-1.0**
TIXI	**Tiksi**	**0.69**	**136**	*e*P	**Pg**	**23 41 26.0**	**-0.1**
TIXI	**Tiksi**	**0.69**	**136**	*e*Pg	**Pg**	**23 41 25.8**	**-0.3**
TIXI				*e*Pg	**Pg**	**23 41 25.8**	**-0.3**
TIXI				*e*Pg	**Pg**	**23 41 25.8**	**-0.3**
TIXI				*e*Sg	**Sb**	**23 41 36.4**	**-0.2**
TIXI				*e*Sg	**Sb**	**23 41 36.4**	**-0.2**
Y860		**0.70**	**117**	*i* Pg	**Pg**	**23 41 25.5**	**-0.9**
	843nm,0.1s						
Y860				*e*Sg	**Sb**	**23 41 36.5**	**-0.5**
	1μm,0.0s						
Y452		**0.85**	**149**	*i* Pg	**Pg**	**23 41 28.8**	**-0.4**
	176nm,0.2s						
Y452				*e*Sg	**Sb**	**23 41 40.9**	**-0.3**
	5μm,0.5s						
Y771		**0.96**	**212**	*e*Pg	Pg	23 41 23.5	-7.9
	2.0nm,0.1s						
Y771				*e*Sg	Sg	23 41 31.1	-13
	3μm,0.7s						
Y458		**0.99**	**138**	*i* Pg	**Pg**	**23 41 30.9**	**-0.9**
	416nm,0.1s						
Y458				*e*Sg	**Sn**	**23 41 46.2**	**-0.8**
	3μm,0.3s						
DEPR	**Deputatskiy**	**4.98**	**118**	*e*Pn	**Pn**	**23 42 26.7**	**-1.1**
	4.3nm,0.6s						
DEPR				*e*Sn	**Sn**	**23 43 24.8**	**-0.6**
	13nm,0.5s						
BTGS	**Batagay**	**5.16**	**147**	*e*Pn	**Pn**	**23 42 29.7**	**-0.6**
	1.5nm,0.4s						
BTGS				*e*Sn	**Sn**	**23 43 29.3**	**-0.6**
	4.1nm,0.7s						
BTGS				*e*Lg	Lg	23 43 56.1	
BTGS				*e*Lg	Lg	23 43 56.1	
SVZ	**Severnaya Zeml**	**9.44**	**330**	*e*P	**Pn**	**23 43 28.4**	**-0.5**
SVZ				*e*S	Sn	23 45 04.2	-11
UNR	**Ust'-Nera**	**9.56**	**135**	*e*Pg	Pn	23 44 06.1	+35
	0.9nm,1.0s						
UNR				*e*Sn	**Sn**	**23 45 17.3**	**-0.7**
	1.4nm,0.9s						
UNR				*e*Lg	Lg	23 46 14.8	
	5.2nm,0.9s						
YAK	**Yakutsk**	**10.20**	**174**	Sn	**Sn**	**23 45 29.5**	**-4.0**
	baz=254,slow=3.2						
YAK				Lg	Lg	23 46 32.9	
	3.1nm,0.3s,baz=101,slow=5.8,SNR=1.2						
YAK	**Yakutsk**	**10.20**	**174**	*e*P	**Pn**	**23 43 40.3**	**+1.1**
YAK				*e*S	**Sn**	**23 45 33.4**	**-0.1**
YAK				pmax	pmax		
	comp=Z,12nm,0.7s						
YAK				pmax	pmax		
	comp=N,7.0nm,0.9s						
YAK				smax	smax		
	comp=N,9.0nm,0.6s						
YAK				smax	smax		
	comp=E,41nm,2.8s						
YAK				MLR	MLR		
	comp=Z,121nm,20.0s						
YAK				MLR	MLR		
	comp=N,60nm,14.0s						
YAK				MLR	MLR		
	comp=E,26nm,22.0s						
YAK	**Yakutsk**	**10.20**	**174**	*e*Pn	**Pn**	**23 43 38.3**	**-1.0**
	comp=E,0.4nm,0.4s						
YAK				*e*Lg	Lg	23 46 37.0	
	comp=E,0.2nm,0.7s						
TBGR	**Tabaga**	**10.41**	**174**	*e*Pn	**Pn**	**23 43 42.1**	**0.0**
	comp=E,1.7nm,0.5s						
TBGR				*e*Sn	**Sn**	**23 45 40.3**	**+1.6**
	comp=E,5.0nm,1.0s						
TBGR				*e*Lg	Lg	23 46 44.2	
	comp=E,11nm,0.9s						
BLSR	**Buluus**	**10.85**	**176**	*e*Pn	**Pn**	**23 43 48.1**	**-0.1**
	comp=E,0.7nm,0.3s						
BLSR				*e*Sn	**Sn**	**23 45 49.9**	**+0.3**
	comp=E,2.2nm,0.7s						
BLSR				*e*Lg	Lg	23 46 57.9	
	comp=E,2.7nm,1.0s						
SEY	**Seymchan**	**13.16**	**122**	Lg	Lg	23 48 11.9	
	comp=E,0.1nm,0.3s,baz=223,slow=22,SNR=1.8						
NRIK	**Noril'sk**	**13.24**	**277**	Pn	**Pn**	**23 44 18.9**	**-1.9**
	comp=E,0.4nm,0.3s,baz=72,slow=16,SNR=3.6						
NRIK				Sn	**Sn**	**23 46 39.6**	**-8.3**
	comp=E,0.7nm,0.3s,baz=312,slow=21,SNR=6.0						
NRIK				Lg	Lg	23 48 09.7	
	comp=E,0.5nm,0.3s,baz=340,slow=12,SNR=6.1						
	comp=E,1.0nm,0.3s						
NRIK	**Noril'sk**	**13.24**	**277**	Pn	**Pn**	**23 44 19.6**	**-1.2**
NRIK	**Noril'sk**	**13.24**	**277**	*e*P	**Pn**	**23 44 20.6**	**-0.2**
NRIK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CGD	**Chagda**	**13.52**	**173**	*e*Pn	**Pn**	**23 44 23.4**	**-1.1**
	comp=Z,0.7nm,0.6s						
CGD				*e*Sn	**Sn**	**23 46 56.0**	**+1.3**
	comp=Z,1.3nm,0.3s						
BILL	**Bilibino**	**13.68**	**88**	*e*P	**Pn**	**23 44 26.7**	**0.0**
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BILL	**Bilibino**	**13.68**	**88**	*e*Pg	P	23 45 21.0	+45
	comp=Z,9.3nm,0.4s						
BILL				*e*Lg	Lg	23 48 25.9	
	comp=Z,14nm,0.3s						
BOD	**Bodaibo**	**15.38**	**208**	*e*P	**Pn**	**23 44 44.1**	**-5.7**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.4s						
CLNS	**Chul'man**	**15.40**	**185**	*e*Pn	**Pn**	**23 44 50.2**	**0.0**
	comp=Z,1.0nm,0.4s						
CLNS				*e*Lg	Lg	23 49 22.3	
	comp=Z,5.4nm,1.0s						
MA2	**Magadan**	**15.66**	**131**	*de*P	**Pn**	**23 44 52.4**	**-1.0**
MA2				pmax	pmax		
	comp=Z,28nm,1.3s						
ZEA	**Zeya**	**18.48**	**180**	*e*P	**Pn**	**23 45 30.6**	**+1.8**
ZEA				pmax	pmax		
	comp=Z,20nm,0.6s						
ZEA				MLR	MLR		
	comp=Z,100nm,13.0s						
C18K	**Utukok River**	**22.92**	**63**	P	**P**	**23 46 18.2**	**+1.5**
TLY	**Talaya**	**23.04**	**220**	P	**P**	**23 46 17.0**	**-1.1**
TLY				IAmb	IAmb	23 46 27.6	
	comp=Z,4.5nm,0.8s						
TLY	**Talaya**	**23.04**	**220**	*e*P	**P**	**23 46 16.2**	**-1.9**
TLY				pmax	pmax		
	comp=Z,11nm,2.5s						
C19K	**Lookout Ridge**	**23.05**	**61**	P	**P**	**23 46 18.3**	**+0.2**
KLR	**Kul'dur**	**23.08**	**173**	*e*P	**P**	**23 46 18.7**	**+0.2**
KLR				pmax	pmax		
	comp=Z,7.0nm,2.5s						
TNA	**Tin City**	**23.10**	**73**	P	**P**	**23 46 18.6**	**0.0**
B22K	**Teshekpuk Lake**	**23.85**	**55**	P	**P**	**23 46 26.9**	**+1.0**
B22K				IAmb	IAmb	23 46 31.1	
	comp=Z,12nm,0.9s						
SPB2	**Spitsbergen Ar**	**24.77**	**333**	P	**P**	**23 46 36.0**	**+1.6**
KNGR	**Kungurtug, Tuv**	**25.36**	**228**	*e*P	**P**	**23 46 39.4**	**-0.6**
KNGR				pmax	pmax		
	comp=N,10.0nm,1.1s						
D23K	**Nanushuk River**	**25.49**	**56**	P	**P**	**23 46 42.2**	**+1.2**
D23K				IAmb	IAmb	23 46 44.4	
	comp=Z,5.7nm,0.8s						
E22K	**Anaktuvuk Pass**	**25.79**	**58**	P	**P**	**23 46 45.1**	**+1.3**
E22K				IAmb	IAmb	23 46 49.9	
	comp=Z,3.5nm,1.1s						
ULN	**Ulaanbaatar**	**26.09**	**212**	*e*P	**P**	**23 46 48.1**	**+1.4**
ULN				pmax	pmax		
	comp=Z,11nm,3.5s						
SONM	**Songino Array**	**26.23**	**213**	P	**P**	**23 46 48.8**	**+0.8**
	comp=Z,2.4nm,0.9s,baz=12,slow=9.6,SNR=13						
	comp=Z,2.4nm,0.9s						
SONM	**Songino Array**	**26.23**	**213**	*e*P	**P**	**23 46 50.8**	**+2.8**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
YSS	**Yuzhno-Sakhali**	**26.27**	**156**	*e*P	**P**	**23 46 47.1**	**-1.0**
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
E25K	**Arctic Village**	**27.41**	**54**	P	**P**	**23 46 58.7**	**+0.4**
ILAR	**Eielson Array**	**29.63**	**60**	P	**P**	**23 47 18.8**	**+0.7**
	comp=Z,0.9nm,0.8s,baz=312,slow=7.8,SNR=10						
	comp=Z,0.9nm,0.8s						
KURK	**Kurchatov**	**30.27**	**251**	P	**P**	**23 47 26.0**	**+2.2**
KURK				IAmb	IAmb	23 47 26.7	
	comp=Z,1.6nm,0.7s						
KURK	**Kurchatov**	**30.27**	**251**	*e*P	**P**	**23 47 25.7**	**+1.9**
KURK				pmax	pmax		
	comp=Z,5.0nm,2.5s						
KURBB	**Kurchatov Arra**	**30.38**	**251**	P	**P**	**23 47 24.9**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=31,slow=8.2,SNR=8.5						
	comp=Z,1.1nm,0.7s						
SKT	**Skwentna**	**30.57**	**67**	P	**P**	**23 47 25.8**	**-0.6**
CUT	**Chulitna**	**30.59**	**65**	P	**P**	**23 47 27.7**	**+1.2**
BVAR	**Borovoye Array**	**30.72**	**262**	P	**P**	**23 47 27.6**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=23,slow=7.8,SNR=3.1						
	comp=Z,0.4nm,0.4s						
BORK	**Borovoye**	**30.72**	**263**	*e*P	**P**	**23 47 29.0**	**+1.2**
BORK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**32.33**	**203**	*e*P	**P**	**23 47 42.3**	**+0.1**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,4.1s						
HHC				LR	LR		
	comp=N,89nm,11.8s						
HHC				LR	LR		
	comp=E,110nm,11.6s						
HHC				LR	LR		
	comp=Z,89nm,11.6s						
MK31	**Makanchi Array**	**32.77**	**244**	*e*P	**P**	**23 47 47.2**	**+1.3**
MKAR	**Makanchi Array**	**32.77**	**244**	P	**P**	**23 47 46.3**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=38,slow=7.3,SNR=10						
	comp=Z,1.2nm,0.8s						
WMQ	**Urumqi**	**34.08**	**236**	*e*P	**P**	**23 47 59.5**	**+2.1**
WMQ				pP	sP	23 48 03.5	+2.3
WMQ				PP	**PP**	**23 49 15.0**	**+0.7**
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
WMQ				LR	LR		
	comp=Z,110nm,24.1s						
FINES	**FINESS Array B**	**36.37**	**307**	P	**P**	**23 48 17.0**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=26,slow=7.7,SNR=3.5						
FINES				PcP	**PcP**	**23 50 40.5**	**-0.3**
	comp=Z,1.8nm,0.9s,baz=58,slow=5.2,SNR=3.3						
	comp=Z,1.2nm,0.8s						
FINES	**FINESS Array B**	**36.37**	**307**	*e*P	**P**	**23 48 19.0**	**+2.3**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AAK	**Ala-Archa**	**38.79**	**250**	P	**P**	**23 48 38.5**	**+0.9**
AAK				IAmb	IAmb	23 48 41.5	
	comp=Z,1.7nm,0.6s						
AAK	**Ala-Archa**	**38.79**	**250**	*e*P	**P**	**23 48 38.6**	**+0.9**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
YKAW3	**Yellowknife Wh**	**39.12**	**40**	P	**P**	**23 48 40.5**	**+0.5**
YKA	**Yellowknife Ar**	**39.18**	**40**	P	**P**	**23 48 40.8**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=338,slow=8.9,SNR=7.5						
	comp=Z,0.3nm,0.5s						
YKA	**Yellowknife Ar**	**39.18**	**40**	P	**P**	**23 48 40.7**	**+0.2**
YKA	**Yellowknife Ar**	**39.18**	**40**	*e*P	**P**	**23 48 41.8**	**+1.3**
NOA	**NORSAR Array B**	**40.11**	**317**	P	**P**	**23 48 48.2**	**-0.1**
	comp=Z,1.0nm,0.9s,baz=25,slow=7.3,SNR=2.5						
	comp=Z,1.0nm,0.9s		

BSUT	**Blindstream Ca**	**60.55**	**48**	P	**P**		**23 51 23.1**	**-0.5**
BSUT				IAmb	IAmb		23 51 27.5	
	comp=Z,3.0nm,1.0s							
L42A	**Oliver, Polo**	**63.22**	**30**	P	**P**		**23 51 41.4**	**+0.3**
PV13	**Radium Mtn., P**	**63.26**	**47**	P	**P**		**23 51 40.5**	**-1.2**
ESDC	**Sonseca Array**	**63.41**	**320**	P	**P**		**23 51 43.1**	**+0.7**
	comp=Z,0.5nm,0.5ns,baz=352,slow=4.9,SNR=5.7							
	comp=Z,0.5nm,0.5s							
MVCO	**Mesa Verde**	**64.25**	**47**		**P**		**23 51 48.2**	**+0.1**
MCWV	**Mont Chateau**	**66.87**	**23**	P	**P**		**23 52 06.7**	**+1.9**
ANMO	**Albuquerque**	**66.87**	**46**	*ce*P	**P**		**23 52 06.9**	**+1.8**
ANMO				pmax	pmax			
	comp=Z,3.0nm,0.6s							
TXAR	**Lajitas Array**	**72.89**	**45**	P	**P**		**23 52 41.6**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=1.9,slow=3.8,SNR=5.0							
	comp=Z,0.7nm,0.7s							
TORD	**Torodi Ar. Bea**	**87.72**	**308**	P	**P**		**23 54 01.6**	**-0.3**
	comp=Z,0.9nm,1.0s,baz=1.0,slow=4.6,SNR=3.6							
	comp=Z,0.9nm,1.0s							
WRA	**Warramunga Arr**	**91.97**	**173**	P	**P**		**23 54 20.3**	**-1.2**
	comp=Z,1.0nm,0.9s,baz=354,slow=5.2,SNR=7.0							
	comp=Z,1.0nm,0.9s							
WRA	**Warramunga Arr**	**91.97**	**173**	*e*P	**P**		**23 54 19.6**	**-1.9**
WRA				pmax	pmax			
	comp=Z,1.0nm,0.9s							
ASAR	**Alice Springs**	**95.66**	**174**	P	**P**		**23 54 40.3**	**+1.9**
	comp=Z,0.2nm,0.7s,baz=15,slow=5.7,SNR=1.9							
	comp=Z,0.2nm,0.7s							
PLCA	**Paso Flores**	**147.29**	**26**	PKPbc	**PKPbc**		**00 00 54.7**	**-1.0**
	comp=Z,1.9nm,0.9s,baz=307,slow=2.2,SNR=4.7							
PLCA	**Paso Flores**	**147.29**	**26**	*e*PKP2	**PKPbc**		**00 00 55.0**	**-0.7**
PLCA				pmax	pmax			
	comp=Z,2.0nm,0.9s							

*NEIC **27** 23:41:19.7±1.1, 17.98N±0.03×66.754W±0.009, h11km±1km, ML2.8/31, Md3.1/19(RSPR), Error ellipse: s-maj=3.6km s-min=1.2km az=182.0*
*OSPL **27** 23:41:20.2±0.8, 17.91N×66.78W, h1km±999km, ML3.3, Presumed earthquake*
*SDD **27** 23:41:21.2±2.1, 17.99N×66.77W, h0km±21km, MD2.8, ML2.3, MW2.5, Presumed earthquake*

ISC 27 23:41:20.2±1.1, **17.98N**±0.04×**66.76W**±0.02, **h12**km±6km, **n27**, σ0**8**0/48, **6C-4D**, **Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.12**	**267**		**Pg**	**23 41 22.3**	**-0.9**
GBPR					**Sg**	**23 41 25.7**	**+0.3**
OBIP	**Obispado Ponce**	**0.16**	**67**		**Pg**	**23 41 23.5**	**-0.3**
OBIP				Sg	**Sg**	**23 41 26.5**	**+0.1**
OBIP	**Obispado Ponce**	**0.16**	**67**	*i* P	**Pg**	**23 41 23.6**	**-0.3**
OBIP				*e*S	**Sg**	**23 41 26.8**	**+0.4**
OBIP				IAML		23 41 27.2	
	comp=Z,6μm,0.2s						
CELP	**Cerrillos**	**0.19**	**61**		**Pg**	**23 41 24.2**	**-0.3**
CELP				Sg	**Sg**	**23 41 27.6**	**+0.2**
CELP				IAML		23 41 29.0	
	comp=Z,849nm,0.2s						
CELP	**Cerrillos**	**0.19**	**61**	⇓*i* P	**Pg**	**23 41 24.2**	**-0.3**
CELP				⇑*e*Sg	**Sg**	**23 41 28.2**	**+0.8**
CELP				IAML		23 41 31.0	
	comp=N,282nm,0.5s						
UUPR	**Utuado, UPR, P**	**0.27**	**7**		**Pg**	**23 41 25.3**	**-0.6**
UUPR				Sg	**Sg**	**23 41 29.1**	**-0.6**
MLPR	**Magueyes Islan**	**0.27**	**267**		**Pg**	**23 41 25.1**	**-0.8**
MLPR				Sg	**Sg**	**23 41 29.4**	**-0.3**
MLPR				IAML		23 41 30.8	
	comp=N,599nm,0.2s						
MLPR	**Magueyes Islan**	**0.27**	**267**	⇓*i* P	**Pg**	**23 41 25.0**	**-0.8**
MLPR				⇑*e*Sg	**Sg**	**23 41 29.6**	**-0.1**
MLPR				IAML		23 41 30.7	
	comp=N,221nm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.34**	**274**	*i* P	**Pg**	**23 41 26.2**	**-0.8**
CRPR				IAML		23 41 34.4	
	comp=Z,215nm,0.2s						
AOPR	**Arecibo Observ**	**0.36**	**0**		**Pg**	**23 41 26.8**	**-0.7**
AOPR				Sg	**Sg**	**23 41 32.0**	**-0.4**
AOPR				IAML		23 41 38.1	
	comp=Z,976nm,0.4s						
AOPR	**Arecibo Observ**	**0.36**	**0**	⇑*i* P	**Pg**	**23 41 26.9**	**-0.7**
AOPR				⇓*e*Sg	**Sg**	**23 41 32.0**	**-0.4**
AOPR				IAML		23 41 35.5	
	comp=N,717nm,0.3s						
LSP	**Las Mesas**	**0.37**	**302**		**Pg**	**23 41 27.0**	**-0.7**
LSP					**Sg**	**23 41 33.6**	**+1.1**
PRSN	**Puerto Rico Se**	**0.44**	**302**		**Pg**	**23 41 28.0**	**-0.9**
PRSN				Sg	**Sg**	**23 41 34.4**	**-0.3**
PRSN				IAML		23 41 37.5	
	comp=N,1μm,0.3s						
PRSN				IAML		23 41 38.5	
	comp=N,1μm,0.2s						
PRSN	**Puerto Rico Se**	**0.44**	**302**	⇓*i* P	**Pg**	**23 41 28.4**	**-0.5**
PRSN				⇑*e*Sg	**Sg**	**23 41 35.0**	**+0.3**
PRSN				IAML		23 41 37.4	
	comp=N,624nm,0.3s						
ECPR	**Experimental S**	**0.50**	**48**		**Pg**	**23 41 29.6**	**-0.5**
ECPR				IAML		23 41 31.6	
	comp=N,568nm,0.2s						
ECPR				IAML		23 41 38.6	
	comp=N,355nm,0.3s						
ECPR	**Experimental S**	**0.50**	**48**		**Sg**	**23 41 37.5**	**+0.7**
EMPR	**Esperanza - Ma**	**0.54**	**24**		**Pg**	**23 41 30.7**	**-0.1**
EMPR					**Sg**	**23 41 38.0**	**+0.1**
AGPR	**Aguadilla, PR**	**0.59**	**325**		**Pg**	**23 41 31.1**	**-0.7**
AGPR				Sg	**Sg**	**23 41 39.5**	**-0.1**
AGPR				IAML		23 41 44.8	
	comp=N,254nm,0.6s						
AGPR				IAML		23 41 44.8	
	comp=N,265nm,0.7s						
AGPR	**Aguadilla, PR**	**0.59**	**325**	⇑*i* P	**Pg**	**23 41 30.9**	**-0.8**
AGPR				⇑*e*Sg	**Sg**	**23 41 39.7**	**+0.1**
AGPR				IAML		23 41 40.2	
	comp=N,176nm,0.3s						
SJG	**San Juan**	**0.59**	**77**		**Pg**	**23 41 31.2**	**-0.5**
SJG	**San Juan**	**0.59**	**77**	*i* P	**Pg**	**23 41 31.3**	**-0.5**
SJG				*e*S	**Sg**	**23 41 40.3**	**+0.7**
SJG				IAML		23 41 41.5	
	comp=Z,3μm,0.1s						
IGPR	**InterUniversit**	**0.62**	**91**		**Pg**	**23 41 32.0**	**-0.3**
IGPR					**Sg**	**23 41 41.5**	**+1.1**
IDE	**Isla Desecheo**	**0.79**	**301**		**Pg**	**23 41 34.5**	**-1.1**
IDE					**Sg**	**23 41 45.8**	**-0.1**
HUMP	**Col San Antoni**	**0.88**	**79**		**Pg**	**23 41 35.9**	**-1.3**
HUMP				Sg	**Sg**	**23 41 48.1**	**-0.6**
CUPR	**Culebra, Puert**	**1.44**	**77**		**Pn**	**23 41 45.8**	**-0.4**
CUPR					**Sg**	**23 42 04.2**	**-2.4**
DR12	**Loma Pena Alta**	**2.62**	**288**	Pn	**Pn**	**23 42 03.6**	**+1.2**
HATOM	**Hato Mayor del**	**2.62**	**288**	*i* P	**Pn**	**23 42 04.5**	**+2.0**
HATOM				IAML		23 43 16.9	
	comp=N,9.0nm,4.7s						

GCMT 27 23:49:00.0±0.2, **55.96S**±0.01×**123.30W**±0.02, **h23**km±1km, **MW5.0**/114, **Moment Tensor Solution. s49,c64; s114,c159; Duration: 0 Moment tensor: Scale** 10^{16} **Nm;** M_{rr}-1.16±.18; $M_{\theta\theta}$3.15±.15; $M_{\phi\phi}$-2.00±.12; $M_{r\theta}$0.35±.20; $M_{\theta\phi}$3.38±.10; $M_{\phi r}$-0.48±.19; **Best double couple:** M_{ot}4.31600×10^{16} **NP1:**ϕ_s19.00000°, δ80.00000°, λ-172.00000°. **NP2:**ϕ_s288.00000°, δ82.00000°, λ-10.00000°. **Principal axes:** T 4.8260, Plg1.0000°, Azm334.0000°; N -1.0300, Plg77.0000°, Azm68.0000°; P -3.8060, Plg13.0000°, Azm244.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBI	**Tubuai**	**37.84**	**319**	*e*LR	LR	00 06 05.7	
	3μm,30.8s						
PPT2	**Papeete2**	**43.17**	**322**	*e*LR	LR	00 08 36.4	
	500nm,28.2s						
PPT2				*e*LR	LR	00 08 43.9	
	619nm,26.0s						
TAOE	**Nuku Hiva Isla**	**48.83**	**338**	*e*LR	LR	00 11 12.7	
	485nm,29.5s						

*IDC **27** 23:54:25.4±11.0, 0.97N×98.23E, h0km, mb3.2/3, mbtmp3.2/3 Error ellipse: s-maj=586.8km s-min=32.4km az=55.0*

*DJA **27** 23:54:25.9±0.5, 0.7N±2.9×9.7E±.7, h35km±6km, M4.0/26, mB5.7/1, mb4.2/3, MLv3.9/26, Mw(mB)5.2/1*

ISC 27 23:54:26.1±1.3, **0.42N**±0.07×**97.3E**±0.1, **h29**km, **n25**, σ0**6**79/18, **mb3.1**/3, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.92**	**18**	P	**Pn**	**23 54 43.1**	**0.0**
GSI				S	**Sb**	**23 54 56.0**	**+0.5**
PBSI	**Pulau Batu**	**1.09**	**115**	P	**Pn**	**23 54 45.0**	**-0.5**
MNSI	**Mandailing Nat**	**2.32**	**81**	P	**Pn**	**23 55 01.6**	**-0.7**
TPTI		**2.83**	**358**	P	**Pn**	**23 55 09.3**	**0.0**
PSI	**Prapat**	**2.88**	**35**	P	**Pn**	**23 55 08.9**	**-1.2**
KCSI	**Kotacane, Aceh**	**3.12**	**9**	P	**Pn**	**23 55 13.5**	**+0.1**
KCSI				S	**Sn**	**23 55 48.9**	**-0.8**
PPI	**Padang Panjang**	**3.23**	**106**	P	**Pn**	**23 55 14.5**	**-0.3**
PDSI	**Padang**	**3.44**	**113**	P	**Pn**	**23 55 18.0**	**+0.3**
MLSI	**Meulaboh, Aceh**	**3.92**	**347**	P	**Pn**	**23 55 23.0**	**-1.4**
PPSI	**Pulau Pagai**	**4.17**	**139**	P	**Pn**	**23 55 26.4**	**-1.4**
KRJI	**Kerinci**	**4.86**	**121**	P	**Pn**	**23 55 37.6**	**+0.2**
BSI	**Banda Aceh**	**5.42**	**338**	P	**Pn**	**23 55 44.6**	**-0.4**
	0.1nm10.0nm,0.8s						
KULM	**Kulim**	**5.89**	**35**	P	**Pn**	**23 55 50.9**	**-0.5**
H08S2	**Diego Garcia H**	**25.99**	**252**	T	T	00 27 12.2	
	baz=73,slow=75,SNR=119						
H08S3	**Diego Garcia H**	**26.00**	**252**	T	T	00 27 14.5	
	baz=73,slow=75,SNR=192						
H08S1	**Diego Carcia H**	**26.01**	**252**	T	T	00 27 07.7	
	baz=73,slow=75,SNR=110						
H01W3	**Cape Leeuwin H**	**38.49**	**157**	T	T	00 42 43.4	
	baz=333						
H01W2	**Cape Leeuwin H**	**38.51**	**158**	T	T	00 42 48.1	
	baz=333						
H01W1	**Cape Leeuwin H**	**38.51**	**157**	T	T	00 42 46.9	
	baz=333						
WRA	**Warramunga Arr**	**41.55**	**121**	P	**P**	**00 02 11.0**	**-0.4**
	0.4nm,0.9s,baz=300,slow=8.0,SNR=1.6						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**42.86**	**126**	P	**P**	**00 02 22.2**	**+0.1**
	0.2nm,0.5s,baz=303,slow=8.5,SNR=4.4						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**48.02**	**346**	P	**P**	**00 03 03.9**	**+1.3**
	0.2nm,0.6s,baz=169,slow=8.6,SNR=2.5						
	0.2nm,0.6s						
H04S1	**CROZET ISLANDS**	**61.52**	**214**	T	T	01 11 41.3	
	baz=54						
H04S3	**CROZET ISLANDS**	**61.53**	**214**	T	T	01 11 39.4	
	baz=54						
H04S2	**CROZET ISLANDS**	**61.53**	**214**	T	T	01 11 38.4	
	baz=54						

*THE **27** 23:55:53.9, 39.1N±0.6×21.6E±0.7, h0km±1km, M3.0/52, MLh3.0/52*
*ATH **27** 23:55:53.5, 39.14N×21.56E, h12km±1km, ML3.1/30, Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
*PDG **27** 23:55:53.9±0.5, 39.15N×21.60E, h11km, ML3.3/11, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
*IDC **27** 23:55:53.5±1.2, 39.15N×21.59E, h0km, mb3.5/5, mbtmp3.5/8, ML3.3/2, MS3.7/6, Error ellipse: s-maj=27.4km s-min=18.7km az=104.0*

ISC 27 23:55:53.8±1.0, **39.11N**±0.01×**21.57E**±0.01, **h7**km±7km, **n187**, σ1**9**15/217, **mb3.4**/4, **MS3.5**/6, **11C-15D**, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVR	**Evrytania**	**0.27**	**135**	P	**Pb**	**23 55 60.0**	**-1.0**
EVR				S	**Sb**	**23 56 04.7**	**-1.2**
EVR	**Evrytania**	**0.27**	**135**	P	**Pb**	**23 56 00.0**	**-1.0**
EVR				S	**Sg**	**23 56 03.8**	**+1.2**
TETR	**Tetrakomo, Epi**	**0.33**	**317**	P	**Pg**	**23 55 59.9**	**-0.4**
TETR				S	**Sg**	**23 56 04.8**	**+0.2**
TETR	**Tetrakomo, Epi**	**0.33**	**317**	P	**Pg**	**23 55 60.0**	**-0.3**
TETR				S	**Sg**	**23 56 04.4**	**-0.2**
AMPL	**Ampelaki**	**0.33**	**237**	P	**Pg**	**23 56 00.4**	**+0.2**
AMPL				S	**Sb**	**23 56 05.5**	**-2.1**
AMPL	**Ampelaki**	**0.33**	**237**	P	**Pg**	**23 56 00.6**	**+0.3**
AMPL				S	**Sb**	**23 56 05.5**	**-2.1**
ART2	**Arta**	**0.45**	**276**	P	**Pg**	**23 56 02.3**	**-0.1**
ART2				S	**Sg**	**23 56 08.8**	**+0.5**
MAKR	**Makrakomi, Fth**	**0.45**	**102**	P	**Pb**	**23 56 03.3**	**-0.8**
MAKR				S	**Sg**	**23 56 09.1**	**+0.7**
MAKR	**Makrakomi, Fth**	**0.45**	**102**	P	**Pb**	**23 56 03.3**	**-0.8**
MAKR				S	**Sg**	**23 56 09.2**	**+0.8**
ARTB	**Arta**	**0.46**	**277**	P	**Pg**	**23 56 02.5**	**-0.2**
ARTB				S	**Sg**	**23 56 09.1**	**+0.4**
SOFA	**Sofades**	**0.47**	**60**	P	**Pg**	**23 56 03.6**	**+0.7**
TRKA	**Trikala**	**0.47**	**19**	P	**Pg**	**23 56 02.9**	**-0.1**
PVO	**Paravola**	**0.49**	**184**	P	**Pb**	**23 56 04.0**	**-0.7**
PVO				S	**Sb**	**23 56 10.1**	**-0.0**
PVO	**Paravola**	**0.49**	**184**	P	**Pb**	**23 56 03.9**	**-0.8**
PRMD	**Pramanda**	**0.56**	**319**	P	**Pg**	**23 56 04.3**	**-0.3**
PRMD				S	**Sg**	**23 56 12.3**	**+0.4**
PRMD	**Pramanda**	**0.56**	**319**	P	**Pg**	**23 56 04.4**	**-0.3**
THL	**Klokotos Trika**	**0.58**	**37**	P	**Pg**	**23 56 04.6**	**-0.3**
THL				S	**Sg**	**23 56 12.9**	**+0.5**
THL	**Klokotos Trika**	**0.58**	**37**	P	**Pg**	**23 56 04.4**	**-0.5**
THL				S	**Sg**	**23 56 12.3**	**-0.2**
ANX	**Ano Chora**	**0.58**	**151**	P	**Pb**	**23 56 05.7**	**-0.7**
ANX				S	**Sb**	**23 56 15.1**	**+0.2**
ANX	**Ano Chora**	**0.58**	**151**	P	**Pb**	**23 56 05.7**	**-0.7**
ANX				S	**Sb**	**23 56 14.1**	**-0.8**
AGG	**Agios Georgios**	**0.60**	**98**	P	**Pg**	**23 56 05.7**	**+0.3**
AGG				S	**Sb**	**23 56 15.8**	**+0.4**
AGG	**Agios Georgios**	**0.60**	**98**	P	**Pg**	**23 56 05.5**	**+0.2**
AGG				S	**Sg**	**23 56 14.2**	**+1.0**
AST1	**Astakos**	**0.68**	**214**	P	**Pb**	**23 56 07.8**	**-0.1**
LAM2	**Lamia**	**0.70**	**106**	P	**Pg**	**23 56 07.5**	**+0.1**
AGRP	**Agrapidokambos**	**0.72**	**170**	P	**Pb**	**23 56 07.9**	**-0.8**
EFP	**Efpalio**	**0.73**	**158**	P	**Pb**	**23 56 08.3**	**-0.5**
EFP	**Efpalio**	**0.73**	**158**	P	**Pb**	**23 56 08.3**	**-0.5**
EFP				S	**Sb**	**23 56 18.9**	**0.0**
MSVA	**Metsovo**	**0.73**	**336**	P	**Pg**	**23 56 07.1**	**-0.7**
MSL1	**Messolongi**	**0.74**	**189**	P	**Pn**	**23 56 09.2**	**-1.5**
MALA	**Malamata, Dori**	**0.75**	**161**	P	**Pn**	**23 56 09.4**	**-1.4**
MG00	**Magoula, Dorid**	**0.75**	**157**	P	**Pb**	**23 56 08.5**	**-0.7**
TSLK	**Tsoukalades, L**	**0.76**	**249**	P	**Pb**	**23 56 09.2**	**-0.3**
TSLK	**Tsoukalades, L**	**0.76**	**249**	P	**Pb**	**23 56 09.1**	**-0.3**
LKD2	**Lefkada island**	**0.78**	**246**	P	**Pb**	**23 56 09.4**	**-0.3**
LKD2	**Lefkada island**	**0.78**	**246**	P	**Pb**	**23 56 09.2**	**-0.5**
LKD2				S	**Sb**	**23 56 20.0**	**-0.5**
JAN	**Janina**	**0.78**	**315**	P	**Pg**	**23 56 08.7**	**-0.1**
JAN	**Janina**	**0.78**	**315**	P	**Pg**	**23 56 08.6**	**-0.3**
JAN				S	**Sg**	**23 56 19.1**	**+0.1**
NYDR	**Nydri-Lefkada**	**0.78**	**240**	P	**Pb**	**23 56 09.3**	**-0.4**
NYDR	**Nydri-Lefkada**	**0.78**	**240**	P	**Pb**	**23 56 09.2**	**-0.5**
SERG	**Sergoula**	**0.79**	**151**	P	**Pb**	**23 56 09.1**	**-0.8**
SERG	**Sergoula**	**0.79**	**151**	P	**Pb**	**23 56 09.3**	**-0.6**
SERG				S	**Sb**	**23 56 20.9**	**+0.1**
UPR	**University Cam**	**0.84**	**168**	P	**Pn**	**23 56 11.6**	**-0.4**
KALE	**Kalithea**	**0.84**	**148**	P	**Pb**	**23 56 10.1**	**-0.7**
KALE	**Kalithea**	**0.84**	**148**	P	**Pb**	**23 56 10.1**	**-0.7**
KALE				S	**Sn**	**23 56 22.6**	**-2.2**
PATC	**Patra C**	**0.85**	**170**	P	**Pn**	**23 56 11.3**	**-0.8**
GINA	**Giannouli**	**0.85**	**48**	P	**Pg**	**23 56 09.6**	**-0.5**
ZIRI	**Ziria, Aigiali**	**0.85**	**159**	P	**Pb**	**23 56 10.8**	**-0.2**
EVGI	**Lefkada island**	**0.86**	**236**	P	**Pb**	**23 56 10.6**	**-0.4**
EVGI	**Lefkada island**	**0.86**	**236**	P	**Pb**	**23 56 10.4**	**-0.6**
KPRO	**Kipourio**	**0.86**	**350**	P	**Pg**	**23 56 09.1**	**-1.2**
KPRO				S	**Sb**	**23 56 22.4**	**-0.6**
KPRO	**Kipourio**	**0.86**	**350**	P	**Pg**	**23 56 09.5**	**-0.9**
KPRO				S	**Sg**	**23 56 21.5**	**-0.1**
DRAG	**Dragano-Lefkad**	**0.88**	**242**	P	**Pb**	**23 56 10.8**	**-0.7**
DRAG	**Dragano-Lefkad**	**0.88**	**242**	P	**Pb**	**23 56 10.7**	**-0.7**
AXAR	**Agios Charalam**	**0.92**	**111**	P	**Pb**	**23 56 11.6**	**-0.4**
AXAR	**Agios Charalam**	**0.92**	**111**	P	**Pb**	**23 56 11.7**	**-0.4**
AXS	**Araxos**	**0.92**	**189**	P	**Pn**	**23 56 12.3**	**-0.9**
AXS	**Araxos**	**0.92**	**189**	P	**Pn**	**23 56 12.2**	**-0.9**
FSK	**Fiskardo**	**1.02**	**231**	P	**Pb**	**23 56 12.8**	**-0.9**
FSK	**Fiskardo**	**1.02**	**231**	P	**Pb**	**23 56 12.7**	**-0.9**
VSK1	**VASILIKIADES**	**1.05**	**229**	P	**Pg**	**23 56 13.6**	**-0.3**
IGT	**Igoumenitsa**	**1.05**	**294**	P	**Pb**	**23 56 13.3**	**-1.0**
IGT	**Igoumenitsa**	**1.05**	**294**	P	**Pb**	**23 56 13.2**	**-1.1**
RLS	**Riolos of Patr**	**1.05**	**184**	P	**Pn**	**23 56 14.5**	**-0.4**
RLS	**Riolos of Patr**	**1.05**	**184**	P	**Pn**	**23 56 14.6**	**-0.4**
VOL2	**Volos**	**1.11**	**76**	P	**Pb**	**23 56 14.7**	**-0.5**
PENT	**Pentalofos**	**1.14**	**343**	P	**Pb**	**23 56 14.3**	**-1.6**
KLV1	**Kalavrita**	**1.15**	**158**	P	**Pg**	**23 56 16.6**	**+0.7**
KLV	**Kalavryta, Ach**	**1.16**	**156**	P	**Pg**	**23 56 15.8**	**-0.2**
KLV	**Kalavryta, Ach**	**1.16**	**156**	P	**Pg**	**23 56 15.8**	**-0.2**
DRO	**Drossia**	**1.16**	**174**	P	**Pg**	**23 56 16.5**	**+0.5**
DRO	**Drossia**	**1.16**	**174**	P	**Pg**	**23 56 16.4**	**+0.4**
AIDA	**Aidipsos**	**1.18**	**102**	P	**Pb**	**23 56 16.3**	**-0.3**
VLS	**Valsamata**	**1.20**	**220**	P	**Pn**	**23 56 16.1**	**-1.0**
VLS	**Valsamata**	**1.20**	**220**	P	**Pn**	**23 56 16.1**	**-1.0**
RTZL	**Ratzakli, Kefa**	**1.20**	**211**	P	**Pg**	**23 56 16.6**	**-0.2**
RTZL	**Ratzakli, Kefa**	**1.20**	**211**	P	**Pg**	**23 56 16.8**	**-0.1**
LKR	**Lokris**	**1.21**	**112**	P	**Pn**	**23 56 16.2**	**-0.9**
LKR	**Lokris**	**1.21**	**112**	P	**Pb**	**23 56 16.5**	**-0.5**
ATAL	**Atalanti**	**1.21**	**109**	P	**Pb**	**23 56 16.5**	**-0.5**
ATAL	**Atalanti**	**1.21**	**109**	P	**Pb**	**23 56 16.7**	**-0.3**
KZN	**Kozani**	**1.21**	**7**	P	**Pn**	**23 56 15.4**	**-1.9**
KZN	**Kozani**	**1.21**	**7**	P	**Pn**	**23 56 15.5**	**-1.7**
ARG2	**Argostoli**	**1.25**	**223**	P	**Pn**	**23 56 15.9**	**-1.8**
ARG2	**Argostoli**	**1.25**	**223**	P	**Pn**	**23 56 16.0**	**-1.7**
KFL1	**Kefalonia,Entr**	**1.26**	**222**	P	**Pb**	**23 56 17.1**	**-0.7**
DMLN	**Damoulianata-K**	**1.27**	**228**	P	**Pg**	**23 56 17.6**	**-0.6**
DMLN	**Damoulianata-K**	**1.27**	**228**	P	**Pg**	**23 56 17.8**	**-0.4**
NEO	**Neokhori**	**1.30**	**81**	P	**Pn**	**23 56 18.0**	**-0.5**
NEO	**Neokhori**	**1.30**	**81**	P	**Pn**	**23 56 18.1**	**-0.4**
GUR	**Goura**	**1.32**	**152**	P	**Pg**	**23 56 18.7**	**-0.4**
NEST	**Nestorio**	**1.37**	**343**	P	**Pb**	**23 56 19.5**	**-0.3**
NEST	**Nestorio**	**1.37**	**343**	P	**Pb**	**23 56 19.5**	**-0.3**
KYPS	**Kipseli, Zakin**	**1.41**	**205**	P	**Pg**	**23 56 20.3**	**-0.5**
ORTH	**Orthonies,Zaky**	**1.43**	**209**	P	**Pg**	**23 56 21.7**	**+0.6**
SRN	**Sarande**	**1.44**	**303**	P	**Pb**	**23 56 20.5**	**-0.4**
LTHK	**Lithakia**	**1.51**	**203**	P	**Pg**	**23 56 22.1**	**-0.6**
LTK	**Loutraki**	**1.54**	**134**	P	**Pg**	**23 56 22.7**	**-0.6**
AMT	**Artemida-Makis**	**1.57**	**176**	P	**Pg**	**23 56 23.7**	**-0.3**
KBN	**Korca**	**1.63**	**339**	P	**Pb**	**23 56 23.8**	**-0.5**
VILL	**Villia**	**1.66**	**124**	P	**Pb**	**23 56 24.2**	**-0.5**
STFN	**Stefani**	**1.81**	**120**	P	**Pb**	**23 56 25.9**	**-1.3**
THE	**Thessaloniki**	**1.87**	**35**	P	**Pn**	**23 56 24.9**	**-1.3**
PLG	**Polygyros**	**1.93**	**48**	P	**Pn**	**23 56 25.8**	**-1.3**
ITM	**Ithomi**	**1.94**	**171**	P	**Pg**	**23 56 30.8**	**-0.2**
GRG	**Griva**	**1.96**	**19**	P	**Pn**	**23 56 26.9**	**-0.6**
ATH	**Athens Observa**	**2.03**	**123**	P	**Pb**	**23 56 29.5**	**-1.5**
ATHU	**Athens Univers**	**2.08**	**122**	P	**Pb**	**23 56 29.9**	**-1.9**
OHR	**Ohrid**	**2.09**	**344**	*i* Pn	**Pb**	**23 56 31.9**	**-0.1**
DION	**Dionisos Attik**	**2.12**	**118**	P	**Pn**	**23 56 30.5**	**+0.8**
VLY	**Voula,Athens**	**2.15**	**125**	P	**Pn**	**23 56 30.8**	**+0.7**
SOH	**Sokhos**	**2.20**	**38**	P	**Pn**	**23 56 30.3**	**-0.5**
KNT	**Kendrikon**	**2.29**	**26**	P	**Pn**	**23 56 31.7**	**-0.4**
VAY	**Valandovo**	**2.34**	**19**	*i* Pn	**Pn**	**23 56 33.4**	**+0.6**
SRS	**Serrai**	**2.54**	**37**	P	**Pn**	**23 56 34.7**	**-0.8**
VLI	**Veliai**	**2.62**	**155**	P	**Pb**	**23 56 38.8**	**-2.2**
NVR	**Nevrokopi**	**2.85**	**37**	P	**Pn**	**23 56 39.5**	**-0.2**
SKO	**Skopje**	**2.87**	**358**	*i* Pn	**Pb**	**23 56 43.8**	**-1.5**
LIA	**Limnos Island**	**2.91**	**73**	P	**Pn**	**23 56 39.8**	**-0.7**
KAVA	**Kavala**	**2.95**	**49**	P	**Pn**	**23 56 40.0**	**-1.1**
MMB	**Musomishta**	**2.96**	**34**	P	**Pn**	**23 56 41.1**	**-0.2**
MMB	**Musomishta**	**2.96**	**34**	P	**Pn**	**23 56 41.4**	**+0.2**
KKB	**Krupnik**	**2.98**	**23**	P	**Pn**	**23 56 40.7**	**-0.9**
KKB	**Krupnik**	**2.98**	**23**	P	**Pn**	**23 56 41.5**	**-0.1**
SIGR	**SIGRI**	**3.34**	**87**	P	**Pn**	**23 56 46.8**	**+0.4**
ULC	**Ulcinj**	**3.36**	**329**	⇓*i* Pn	**Pn**	**23 56 48.8**	**+2.0**
ULC				*i* Sn	**Sn**	**23 57 26.9**	**0.0**
RZN	**Rozhen**	**3.54**	**42**	P	**Pn**	**23 56 49.1**	**-0.4**
RZN	**Rozhen**	**3.54**	**42**	P	**Pn**	**23 56 49.3**	**-0.1**
DRME	**Dracevica, Mon**	**3.57**	**330**	⇓*i* Pn	**Pn**	**23 56 52.6**	**+2.9**
DRME				*i* Sn	**Sn**	**23 57 33.9**	**+1.8**
DRME	**

σ0.86/33, **East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.15**	**225**	P	**Pn**	**23 58 24.0**	**-0.7**
MXZ				S	**Sn**	**23 59 00.4**	**-0.7**
WMGZ	**Waiomatatini S**	**3.28**	**221**	P	**Pn**	**23 58 26.4**	**0.0**
WMGZ				S	**Sn**	**23 59 05.5**	**+1.3**
PKGZ	**Pakihiroa**	**3.49**	**223**	P	**Pn**	**23 58 29.3**	**-0.2**
PKGZ				S	**Sn**	**23 59 09.9**	**+0.3**
PUZ	**Puketiti**	**3.55**	**220**	P	**Pn**	**23 58 29.3**	**-0.9**
PUZ				S	**Sn**	**23 59 10.7**	**-0.2**
HAZ	**Te Kaha**	**3.59**	**227**	P	**Pn**	**23 58 30.8**	**0.0**
HAZ				S	**Sn**	**23 59 14.4**	**+2.4**
TWGZ	**Tauwhareparae**	**3.77**	**221**	P	**Pn**	**23 58 33.2**	**-0.1**
TWGZ				S	**Sn**	**23 59 16.8**	**+0.3**
RUGZ	**Raukumara Rang**	**3.79**	**226**	P	**Pn**	**23 58 33.6**	**0.0**
RUGZ				S	**Sn**	**23 59 18.1**	**+1.0**
CNGZ	**Carnagh Statio**	**3.89**	**216**	P	**Pn**	**23 58 34.4**	**-0.4**
CNGZ				S	**Sn**	**23 59 21.4**	**+2.1**
TKGZ	**Te Karaka**	**4.04**	**220**	P	**Pn**	**23 58 36.8**	**-0.1**
TKGZ				S	**Sn**	**23 59 23.1**	**+0.2**
MWZ	**Matawai**	**4.13**	**223**	P	**Pn**	**23 58 37.9**	**-0.4**
MWZ				S	**Sn**	**23 59 24.6**	**-0.8**
URZ	**Urewera**	**4.32**	**227**	Pn	**Pn**	**23 58 40.7**	**-0.1**
	1.8nm,0.3s,baz=16,slow=2.9,SNR=11						
URZ				Sn	**Sn**	**23 59 28.7**	**-1.3**
	1.6nm,0.3s,baz=115,slow=24,SNR=10 4.8nm,0.3s						
URZ	**Urewera**	**4.32**	**227**	P	**Pn**	**23 58 40.7**	**-0.1**
URZ				S	**Sn**	**23 59 29.0**	**-1.0**
MHGZ	**Mahia Peninsul**	**4.57**	**213**	P	**Pn**	**23 58 42.5**	**-1.7**
MHGZ				S	**Sn**	**23 59 36.3**	**+0.3**
RTZ	**Ruatahuna**	**4.64**	**224**	P	**Pn**	**23 58 45.3**	**+0.1**
RTZ				S	**Sn**	**23 59 38.6**	**+0.7**
WHHZ	**Waihua**	**4.83**	**219**	S	**Sn**	**23 59 41.8**	**-0.8**
CTZ	**Chatham Island**	**8.54**	**169**	P	**Pn**	**23 59 38.7**	**0.0**
CTZ				S	Sn	00 01 02.7	-11
RAR	**Rarotonga**	**21.90**	**55**	LR	LR	00 09 53.1	
	comp=Z,113nm,20.7s,baz=142,slow=33						
ASAR	**Alice Springs**	**42.35**	**273**	P	**P**	**00 05 28.8**	**+0.3**
	0.6nm,0.7s,baz=116,slow=7.6,SNR=8.7 0.6nm,0.7s						
WRA	**Warramunga Arr**	**43.79**	**278**	P	**P**	**00 05 39.8**	**-0.3**
	0.4nm,0.7s,baz=120,slow=7.9,SNR=2.5 0.4nm,0.7s						
FINES	**FINESS Array B**	**149.47**	**336**	PKPbc	**PKPab**	**00 17 27.3**	**+0.2**
	2.5nm,1.1s,baz=48,slow=2.8,SNR=4.8						

*IDC **28** 00:03:03.8±2.5,23°.57S×179°.80W,h533km±26km, mb3.4/4, mbtmp4.2/6, Error ellipse: s-maj=41.3km s-min=22.2km az=146.0*
*NEIC **28** 00:03:08.3±1.2,23°.5S±0°.1×180°.0W±0°.1,h580km±9km, mb4.3/27, Error ellipse: s-maj=18.4km s-min=14.5km az=134.0*

ISC 28 00:03:04.2±0.6,**23°.68S**±0°.08×**179°.97W**±0°.09,**h532**km, **n40**,σ1°**51**/39,**mb4.2**/16,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.20**	**342**	P	**P**	**00 04 43.2**	**-0.9**
	2.0nm,0.5s,baz=134,slow=22,SNR=1.3						
MSVF	**Nonsavu**	**6.20**	**342**	P	P	00 04 49.4	+5.3
FUTU	**Fugatoga**	**9.49**	**11**	P	**P**	**00 05 19.0**	**+2.3**
MARNC	**Mare, Loyalty**	**11.30**	**279**	P	**P**	**00 05 37.4**	**+1.9**
URZ	**Urewera**	**14.74**	**189**	P	**P**	**00 06 10.1**	**-1.0**
	5.3nm,0.5s,baz=266,slow=2.6,SNR=7.4						
URZ				S	**S**	**00 08 41.2**	**-4.0**
	5.0nm,0.9s,baz=65,slow=13,SNR=2.3						
THZ	**Tophouse**	**18.99**	**197**	P	**P**	**00 06 53.9**	**+2.1**
THZ				IAmb	IAmb	00 07 10.7	
	comp=Z,19nm,1.0s						
LTZ	**Lake Taylor**	**20.11**	**197**	P	**P**	**00 07 04.5**	**+2.5**
LTZ				IAmb	IAmb	00 07 10.4	
	comp=Z,15nm,1.1s						
ARMA	**Armidale**	**26.12**	**249**	P	**P**	**00 07 57.4**	**+1.4**
ARMA				IAmb	IAmb	00 08 14.1	
	comp=Z,7.1nm,1.1s						
EIDS	**Eidsvold**	**26.37**	**260**	P	**P**	**00 07 59.7**	**+1.6**
EIDS				IAmb	IAmb	00 08 17.5	
	comp=Z,4.3nm,0.9s						
PPTF	**Pamatai, Papee**	**29.06**	**84**	P	**P**	**00 08 22.7**	**+0.9**
CTAO	**Charters Tower**	**31.50**	**270**	P	**P**	**00 08 44.3**	**+1.5**
TOO	**Toolangi**	**32.59**	**237**	P	**P**	**00 08 53.7**	**+1.9**
STKA	**Stephens Creek**	**34.83**	**248**	P	**P**	**00 09 12.3**	**+1.6**
	comp=Z,2.0nm,0.4s,baz=84,slow=10,SNR=5.4 comp=Z,2.0nm,0.4s						
STKA	**Stephens Creek**	**34.83**	**248**	P	**P**	**00 09 12.6**	**+1.9**
STKA				IAmb	IAmb	00 09 22.6	
	comp=Z,12nm,1.1s						
COEN	**Coen**	**36.11**	**279**	P	**P**	**00 09 21.2**	**-0.3**
COEN				IAmb	IAmb	00 09 32.7	
	comp=Z,8.9nm,1.1s						
BBOO	**Buckleboo**	**39.55**	**247**	P	**P**	**00 09 49.8**	**+0.4**
BBOO				IAmb	IAmb	00 10 06.7	
	comp=Z,11nm,1.1s						
AS31	**Alice Springs**	**42.09**	**260**	P	**P**	**00 10 10.6**	**+0.8**
ASAR	**Alice Springs**	**42.10**	**260**	P	**P**	**00 10 10.8**	**+0.9**
	comp=Z,4.7nm,0.8s,baz=100,slow=8.1,SNR=38 comp=Z,4.7nm,0.8s						
ASAR	**Alice Springs**	**42.10**	**260**	P	**P**	**00 10 10.4**	**+0.5**
WR8	**Warramunga Arr**	**42.30**	**266**	P	**P**	**00 10 11.6**	**+0.1**
WR8				IAmb	IAmb	00 10 12.0	
	comp=Z,3.9nm,0.6s						
WB0	**Warramunga Arr**	**42.44**	**266**	P	**P**	**00 10 12.7**	**+0.2**
WB0				IAmb	IAmb	00 10 13.4	
	comp=Z,7.5nm,0.7s						
WRA	**Warramunga Arr**	**42.45**	**266**	P	**P**	**00 10 12.8**	**+0.2**
	comp=Z,5.3nm,0.6s,baz=102,slow=7.9,SNR=70 comp=Z,5.3nm,0.6s						
WRA	**Warramunga Arr**	**42.45**	**266**		**P**	**00 10 12.8**	**+0.2**
FORT	**Forrest**	**46.41**	**249**	P	**P**	**00 10 43.0**	**-0.1**
FORT				IAmb	IAmb	00 10 55.6	
	comp=Z,8.0nm,1.1s						
MTN	**Manton Dam**	**47.46**	**274**	P	**P**	**00 10 51.0**	**-0.2**
MTN				IAmb	IAmb	00 10 57.8	
	comp=Z,5.0nm,1.0s						
KNRA	**Kununurra**	**48.71**	**270**	P	**P**	**00 11 00.1**	**-0.4**
KNRA				IAmb	IAmb	00 11 08.0	
	comp=Z,6.1nm,1.1s						
FAKI	**Fak Fak**	**50.55**	**287**	P	**P**	**00 11 13.2**	**-0.8**
FAKI				IAmb	IAmb	00 11 28.3	
	comp=Z,9.8nm,1.0s						
MIDW	**Midway**	**51.66**	**3**	P	**P**	**00 11 20.5**	**-1.2**
PSA00	**Pilbara Seismi**	**55.23**	**259**	P	**P**	**00 11 47.6**	**+0.3**
MBWA	**Marble Bar**	**55.44**	**260**	P	**P**	**00 11 48.5**	**-0.2**
MBWA				IAmb	IAmb	00 12 01.0	
	comp=Z,8.0nm,1.0s						
MORW	**Morawa**	**56.97**	**250**	P	**P**	**00 11 59.7**	**+0.4**
JCJ	**Chichijima**	**62.33**	**322**	P	**P**	**00 12 32.9**	**-2.0**
QSPA	**South Pole Qui**	**66.40**	**180**	P	**P**	**00 13 01.7**	**+1.4**
JHJ2	**Mitsune**	**68.26**	**324**	P	**P**	**00 13 09.5**	**-2.5**
KKM	**Kota Kinabalu**	**68.86**	**287**	P	**P**	**00 13 13.9**	**-2.2**
KKM				IAmb	IAmb	00 13 22.3	
	comp=Z,12nm,1.0s						
HPIG		**87.63**	**59**	P	**P**	**00 14 55.5**	**-1.0**
TXAR	**Lajitas Array**	**90.30**	**58**	P	**P**	**00 15 08.4**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=282,slow=3.2,SNR=3.8 comp=Z,0.6nm,0.7s						
HFS	**Hagfors**	**142.34**	**349**	PKhKP	PKPpre	00 21 30.4	
	comp=Z,3.0nm,1.0s,baz=62,slow=3.4,SNR=8.5						
BRTR	**Keskin Array B**	**147.47**	**307**	PKPbc	**PKPbc**	**00 21 47.3**	**-1.4**
	comp=Z,0.2nm,0.5s,baz=90,slow=1.4,SNR=2.5						
EKA	**Eskdalemuir Ar**	**148.30**	**3**	PKPbc	**PKPdf**	**00 21 47.7**	**+1.7**
	comp=Z,0.8nm,0.7s,baz=91,slow=3.5,SNR=2.1						

*MAN **28** 00:12:19.0,5°.31N×126°.64E,h33km,MS3.3*
*DJA **28** 00:12:20.2±0.7,6°.N±6°×12°.6E±°,h97km±13km,M4.5/15, mb5.0/6,mb4.4/13,MLv4.6/15,Mw(mB)4.4/6,MwMwp5.1/1, Mwp5.3/1*
*NEIC **28** 00:12:22.4±1.0,5°.65N±0°.07×126°.5E±0°.1,h86km±12km, mb4.0/6, Error ellipse: s-maj=19.3km s-min=10.0km az=78.0*
*IDC **28** 00:12:22.9±2.2,5°.45N×126°.15E,h92km±21km,mb3.5/10, mbtmp3.8/10, Error ellipse: s-maj=87.1km s-min=12.9km az=71.0*

ISC 28 00:12:23.0±0.9,**5°.55N**±0°.04×**126°.41E**±0°.07,**h93**km±8km, **n42**,σ1°**93**/55,**mb3.9**/13,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.89**	**308**	*i* P	**Pn**	**00 12 40.2**	**-1.4**
DDMP				*eS*	**Sn**	**00 12 52.9**	**-2.8**
GSPH	**General Santos**	**1.55**	**290**	*i* P	**Pn**	**00 12 47.7**	**-1.9**
GSPH				*i* S	**Sn**	**00 13 07.8**	**-2.0**
DAV	**Davao City (W)**	**1.72**	**331**	P	**Pn**	**00 12 51.2**	**-0.5**
	408nm,0.5s,baz=355,slow=1.0,SNR=2.3						
DAV				S	**Sn**	**00 13 19.3**	**+5.8**
	612nm,0.4s,baz=100,slow=22,SNR=6.2						
DAV	**Davao City (W)**	**1.72**	**331**		**Pn**	**00 12 49.9**	**-1.8**
DMPH	**Davao City--Mi**	**1.77**	**329**	*i* P	**Pn**	**00 12 51.8**	**-0.5**
DMPH				*eS*	**Sn**	**00 13 20.1**	**+5.6**
KCP	**Kidapawan**	**1.95**	**318**	*i* P	**Pn**	**00 12 54.1**	**-0.7**
KCP				*i* S	**Sn**	**00 13 19.0**	**0.0**
SGSI	**Sangihe**	**2.06**	**205**	P	**Pn**	**00 12 56.3**	**+0.2**
SGSI				S	**Sn**	**00 13 23.8**	**+2.6**
CDOP	**Cateel, Davao**	**2.21**	**1**	*eP*	**Pn**	**00 12 59.0**	**+0.8**
CDOP				*eS*	**Sn**	**00 13 21.9**	**-3.1**
BUKP	**Musuan**	**2.67**	**330**	*i* P	**Pn**	**00 13 04.3**	**+0.1**
BUKP				*eS*	**Sn**	**00 13 36.1**	**+0.1**
CGP	**Cagayan de Oro**	**3.35**	**329**	*eP*	**Pn**	**00 13 16.1**	**+2.8**
CGP				*eS*	**Sn**	**00 13 58.3**	**+6.2**
TSSP	**Tandag City**	**3.47**	**357**	*eP*	**Pn**	**00 13 14.2**	**-0.8**
TSSP				*eS*	Sn	00 13 30.6	-25
GAMI	**Galela, Maluku**	**3.94**	**160**	P	**Pn**	**00 13 19.9**	**-1.4**
GAMI				S	**Sn**	**00 14 09.2**	**+2.7**
TNTI	**Ternate**	**4.84**	**169**		**Pn**	**00 13 33.2**	**-0.4**
TNTI	**Ternate**	**4.84**	**169**	P	**Pn**	**00 13 33.7**	**+0.1**
	0.3nm63nm,1.0s						
PLP	**Palo**	**5.75**	**346**	*eP*	**Pn**	**00 13 47.5**	**+1.5**
PLP				*eS*	**Sn**	**00 14 48.7**	**-1.9**
GTOI	**Gorontalo**	**5.95**	**215**	P	**Pn**	**00 13 46.3**	**-2.3**
	20nm,0.9s						
MRSI	**Marisa**	**6.74**	**222**	P	**Pn**	**00 13 59.4**	**+0.1**
	0.3nm57nm,0.6s						
TOLI2	**Tolitoli**	**7.15**	**232**		**Pn**	**00 14 04.7**	**-0.2**
SANI	**Sanana**	**7.56**	**183**	P	**Pn**	**00 14 09.3**	**-1.3**
	0.2nm1μm24nm,0.6s						
SIJI	**Sorong**	**8.01**	**143**	P	**Pn**	**00 14 15.1**	**-1.7**
NLAI	**Namlea**	**8.76**	**175**	P	**Pn**	**00 14 26.4**	**-0.6**
KRAI	**Karang Ratu**	**9.03**	**167**	P	**Pn**	**00 14 30.8**	**+0.1**
	7.7nm,0.6s						
SBUM	**Sibu**	**14.49**	**258**	P	**P**	**00 15 50.0**	**+2.3**
MTN	**Manton Dam**	**18.87**	**166**	P	**P**	**00 16 36.2**	**+0.1**
MTN				IAmb	IAmb	00 17 14.0	
	comp=Z,7.7nm,1.1s						
KNRA	**Kununurra**	**21.22**	**174**	P	**P**	**00 17 01.7**	**+0.2**
FITZ	**Fitzroy Crossi**	**23.52**	**182**	P	**P**	**00 17 24.8**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=25,slow=8.8,SNR=5.1 comp=Z,1.1nm,0.6s						
WB0	**Warramunga Arr**	**26.36**	**163**	P	**P**	**00 17 51.7**	**+1.0**
WB0				IAmb	IAmb	00 17 58.2	
	comp=Z,7.2nm,1.1s						
WRA	**Warramunga Arr**	**26.51**	**163**	P	**P**	**00 17 51.4**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=344,slow=10,SNR=12 comp=Z,0.5nm,0.6s						
WRA	**Warramunga Arr**	**26.51**	**163**	P	**P**	**00 17 52.0**	**0.0**
WR8	**Warramunga Arr**	**26.57**	**163**	P	**P**	**00 17 52.2**	**-0.3**
WR8				IAmb	IAmb	00 18 07.6	
	comp=Z,9.4nm,1.4s						
ASAR	**Alice Springs**	**29.95**	**166**	P	**P**	**00 18 22.1**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=356,slow=8.2,SNR=12 comp=Z,0.4nm,0.7s						
STKA	**Stephens Creek**	**39.94**	**160**	P	**P**	**00 19 48.3**	**0.0**
	comp=Z,1.7nm,0.7s,baz=351,slow=12,SNR=3.5 comp=Z,1.7nm,0.7s						
SONM	**Songino Array**	**45.48**	**341**	P	**P**	**00 20 32.6**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=151,slow=8.3,SNR=1.7						
SONM				PcP	**PcP**	**00 22 10.3**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=195,slow=4.6,SNR=3.5 comp=Z,0.2nm,0.4s						
MKAR	**Makanchi Array**	**55.89**	**325**	P	**P**	**00 21 50.9**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=118,slow=7.8,SNR=11						
MKAR				PcP	**PcP**	**00 22 49.0**	**0.0**
	comp=Z,0.8nm,0.7s,baz=120,slow=5.7,SNR=6.4 comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	**55.89**	**325**	P	**P**	**00 21 50.7**	**-0.6**
MAKZ	**Makanchi**	**56.08**	**325**	P	**P**	**00 21 51.9**	**-0.7**
MAKZ				IAmb	IAmb	00 22 26.6	
	comp=Z,1.3nm,1.0s						
KURBB	**Kurchatov Arra**	**60.04**	**327**	P	**P**	**00 22 19.5**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=121,slow=6.3,SNR=5.6 comp=Z,0.6nm,0.6s						
NRIK	**Noril'sk**	**68.59**	**346**	P	**P**	**00 23 16.6**	**+0.9**
	comp=Z,1.6nm,0.3s,baz=105,slow=7.5,SNR=3.8 comp=Z,1.6nm,0.3s						
BRTR	**Keskin Array B**	**88.62**	**310**	P	**P**	**00 25 04.3**	**-1.9**
	comp=Z,0.5nm,0.8s,baz=28,slow=5.6,SNR=3.7 comp=Z,0.5nm,0.8s						
FINES	**FINESS Array B**	**90.08**	**332**	P	**P**	**00 25 11.6**	**-0.8**
	comp=Z,1.5nm,0.9s,baz=59,slow=9.2,SNR=3.6 comp=Z,1.5nm,0.9s						
FINES	**FINESS Array B**	**90.08**	**332**	P	**P**	**00 25 11.7**	**-0.7**
TORD	**Torodi Ar. Bea**	**122.04**	**289**	PKP	**PKiKP**	**00 31 07.6**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=107,slow=1.2,SNR=2.9						

*IDC **28** 00:16:28.6±1.0,11°.09S×115°.14E,h0km,mb3.9/10, mbtmp4.0/13,ML4.0/3,MS3.2/5, Error ellipse: s-maj=39.8km s-min=15.8km az=46.0*
*NEIC **28** 00:16:29.8±2.2,11°.11S±0°.07×115°.17E±0°.08,h10km±1km, mb4.4/22, Error ellipse: s-maj=14.2km s-min=10.5km az=66.0*
*DJA **28** 00:16:31.4±0.3,11°.S±3°×11°.5E±°,h10km,M4.5/30, mbB5.3/7,mb4.4/12,MLv4.4/30,Mw(mB)4.7/7*

ISC 28 00:16:29.5±0.5,**11°.11S**±0°.05×**115°.24E**±0°.05,**h10**km,**n83**, σ1°**27**/83,**mb4.2**/19,**MS3.5**/3,**South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGBI	**Denpasar**	**2.28**	**358**	P	**Pn**	**00 17 07.1**	**-0.2**
IGBI				S	**Sn**	**00 17 33.1**	**-2.4**
DNP	**Denpasar**	**2.42**	**359**	P	**Pn**	**00 17 09.8**	**+0.6**
RTBI	**Rangdo, Negare**	**2.65**	**354**	P	**Pn**	**00 17 12.8**	**+0.4**
RTBI				S	**Sn**	**00 17 42.6**	**-2.1**
KHKI	**Kahang-Kahang**	**2.75**	**8**	P	**Pn**	**00 17 14.9**	**+1.1**
KHKI				S	**Sn**	**00 17 47.0**	**-0.2**
JAGI	**Jajag, Banyuwa**	**2.84**	**338**	P	**Pn**	**00 17 15.0**	**0.0**
JAGI	**Jajag, Banyuwa**	**2.84**	**338**		**Pn**	**00 17 14.1**	**-0.9**
JAGI				Sn	**Sn**	**00 17 46.3**	**-2.9**
JAGI	**Jajag, Banyuwa**	**2.84**	**338**	P	**Pn**	**00 17 14.2**	**-0.8**
TWSI	**Taliwang, Sumb**	**2.86**	**35**	P	**Pn**	**00 17 15.5**	**+0.3**
TWSI				S	**Sn**	**00 17 47.8**	**-1.9**
SRBI	**Singaraja**	**3.01**	**359**	P	**Pn**	**00 17 17.8**	**+0.5**
SRBI				S	**Sn**	**00 17 52.4**	**-1.0**
BYJI	**Banyuwangi**	**3.01**	**343**	P	**Pn**	**00 17 17.9**	**+0.6**
BYJI				S	**Sn**	**00 17 53.4**	**-0.1**
PLAI	**Plampang**	**3.37**	**48**	P	**Pn**	**00 17 22.6**	**+0.3**
PLAI	**Plampang**	**3.37**	**48**	P	**Pn**	**00 17 22.7**	**+0.4**
ABJI	**Asem Bagus**	**3.44**	**343**	P	**Pn**	**00 17 24.0**	**+0.7**
BLJI	**Banyuglugur**	**3.72**	**334**	P	**Pn**	**00 17 27.4**	**+0.3**
BLJI				S	**Sn**	**00 18 10.3**	**-0.7**
DBNI	**Kabupaten Domp**	**3.98**	**50**	P	**Pn**	**00 17 31.8**	**+1.1**
KMMI	**Kalianget**	**4.23**	**343**	P	**Pn**	**00 17 35.2**	**+1.1**
WBSI	**Waikabubak, Su**	**4.33**	**71**	P	**Pn**	**00 17 35.1**	**-0.5**
SNJI	**Sawahan-Nganju**	**4.77**	**314**	P	**Pn**	**00 17 42.6**	**+0.9**
LBFI	**Labuhan Bajo,**	**5.27**	**61**	P	**Pn**	**00 17 48.8**	**+0.3**
UGM	**Wanagama**	**5.64**	**304**	P	**Pn**	**00 17 53.8**	**+0.3**
UGM	**Wanagama**	**5.64**	**304**		**Pn**	**00 17 53.3**	**-0.2**
UGM				Sn	**Sn**	**00 18 55.5**	**-2.9**
UGM	**Wanagama**	**5.64**	**304**	P	**Pn**	**00 17 53.3**	**-0.2**
	0.3nm45nm,0.5s						
BSSI	**Bau Bau, Buton**	**7.16**	**47**	P	**Pn**	**00 18 15.4**	**+1.0**
	0.2nm22nm,0.5s						
KPJI	**Karang Pucung**	**7.28**	**301**	P	**Pn**	**00 18 16.5**	**+0.5**
	0.1nm31nm,0.6s						
KAPI	**Kappang**	**7.52**	**37**	Pn	**Pn**	**00 18 20.5**	**+1.1**
	3.4nm,0.3s,baz=211,slow=13,SNR=4.6						
KAPI				Sn	**Sn**	**00 19 41.0**	**-3.9**
	2.6nm,0.3s,baz=57,slow=22,SNR=1.8						
KAPI				LR	LR	00 21 46.1	
	comp=Z,39nm,21.3s,baz=206,slow=42 8.1nm,0.2s						
KAPI	**Kappang**	**7.52**	**37**		**Pn**	**00 18 20.1**	**+0.7**
KAPI	**Kappang**	**7.52**	**37**	P	**Pn**	**00 18 20.0**	**+0.6**
	0.0nm5.0nm,0.6s						
BATI	**Baumata**	**8.32**	**85**	LR	LR	00 21 17.9	
	comp=Z,76nm,19.8s,baz=274,slow=34						
BATI	**Baumata**	**8.32**	**85**	P	**Pn**	**00 18 31.6**	**+1.2**
	16nm,0.9s						
BBJI	**Bungbulang**	**8.33**	**295**	P	**Pn**	**00 18 30.0**	**-0.4**
BBJI	**Bungbulang**	**8.33**	**295**	Pn	Pn	00 18 28.9	-1.6
BBJI	**Bungbulang**	**8.33**	**295**	P	**Pn**	**00 18 30.1**	**-0.4**
	11nm,1.1s						
MBWA	**Marble Bar**	**10.88**	**157**	P	Pn	00 19 03.2	-2.2
MBWA	**Marble Bar**	**10.88**	**157**	Pn	Pn	00 19 02.7	-2.7
PSA00	**Pilbara Seismi**	**11.30**	**158**	P	**Pn**	**00 19 09.8**	**-1.4**
PSA00	**Pilbara Seismi**	**11.30**	**158**	Pn	Pn	00 19 08.8	-2.3
GIRL	**Giralia**	**11.51**	**185**	Pn	Pn	00 19 12.5	-1.5
FITZ	**Fitzroy Crossi**	**12.22**	**126**	Pn	**Pn**	**00 19 23.2**	**-0.5**
	0.5nm,0.3s,baz=311,slow=8.6,SNR=11						
FITZ				Sn	Sn	00 21 29.6	-11
	0.7nm,0.3s,baz=180,slow=20,SNR=5.5 1.1nm,0.3s						
TOLI2	**Tolitoli**	**13.33**	**25**	P	**Pn**	**00 19 40.0**	**+1.0**
MNAI	**Manna**	**13.90**	**298**	Pn	Pn	00 19 45.2	-1.6
KNRA	**Kununurra**	**13.91**	**111**	Pn	**Pn**	**00 19 47.5**	**+0.6**
MTN	**Manton Dam**	**15.64**	**98**	Pn	**Pn**	**00 20 10.7**	**+0.4**
MEEK	**Meekatharra**	**15.77**	**169**	P	**Pn**	**00 20 10.8**	**-1.0**
MORW	**Morawa**	**17.88**	**178**		**Pn**	**00 20 38.0**	**-0.5**
FAKI	**Fak Fak**	**18.73**	**65**	P	**P**	**00 20 49.2**	**+0.6**
FAKI	**Fak Fak**	**18.73**	**65**	P	**P**	**00 20 47.2**	**-1.3**
FAKI				IAmb	IAmb	00 21 15.7	
	comp=Z,18nm,1.1s						
SIJI	**Sorong**	**18.89**	**58**	P	**P**	**00 20 50.5**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=195,slow=4.6,SNR=3.8 comp=Z,3.7nm,0.4s						
WB0	**Warramunga Arr**	**20.35**	**117**		**P**	**00 21 08.0**	**+1.7**
WRA	**Warramunga Arr**	**20.37**	**118**	P	**P**	**00 21 08.1**	**+1.6**
	comp=Z,1.5nm,0.6s,baz=290,slow=10,SNR=18						
WRA				S	S	00 24 43.4	-12
	comp=Z,0.4nm,0.6s,baz=283,slow=24,SNR=2.4 comp=Z,1.5nm,0.6s						
WRA	**Warramunga Arr**	**20.37**	**118**	P	**P**	**00 21 07.5**	**+1.0**
WR8	**Warramunga Arr**	**20.51**	**118**	P	**P**	**00 21 09.5**	**+1.4**
WR8				IAmb	IAmb	00 21 21.3	
	comp=Z,6.1nm,0.8s						
ASAR	**Alice Springs**	**21.71**	**128**	P	**P**	**00 21 23.8**	**+2.7**
	comp=Z,1.2nm,0.5s,baz=300,slow=10.0,SNR=14						
ASAR				S	**S**	**00 25 16.1**	**-5.4**
	comp=Z,0.9nm,0.8s,baz=306,slow=22,SNR=6.0						
ASAR				LR	LR	00 30 41.3	
	comp=Z,104nm,18.2s,baz=128,slow=39 comp=Z,1.2nm,0.5s						
ASAR	**Alice Springs**	**21.71**	**128**	P	**P**	**00 21 22.4**	**+1.3**
NWAO	**Narrogin (SRO)**	**21.79**	**175**	P	**P**	**00 21 21.1**	**-0.6**
FORT	**Forrest**	**22.90**	**151**	P	**P**	**00 21 32.9**	**-0.7**
FORT				IAmb	IAmb	00 22 17.0	
	comp=Z,7.2nm,0.8s						
STKA	**Stephens Creek**	**31.91**	**134**	P	**P**	**00 22 56.7**	**+1.3**
	comp=Z,1.3nm,0.4s,baz=348,slow=11,SNR=3.8 comp=Z,1.3nm,0.4s						
STKA	**Stephens Creek**	**31.91**	**134**	P	**P**	**00 22 56.1**	**+0.7**
CMAR	**Chiang Mai Arr**	**33.50**	**331**	P	**P**	**00 23 09.6**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=159,slow=8.1,SNR=6.3 comp=Z,0.5nm,0.3s						
SONM	**Songino Array**	**59.21**	**353**	P	**P**	**00 26 33.2**	**+2.2**
	comp=Z,0.4nm,0.4s,baz=176,slow=6.0,SNR=4.9 comp=Z,0.4nm,0.4s						
SONM	**Songino Array**	**59.21**	**353**	P	**P**	**00 26 30.1**	**-0.8**
KSH2	**Kashi**	**62.16**	**326**	P	**P**	**00 26 51.5**	**+0.2**
KSH2				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KBL	**Kabul**	**63.08**	**318**	P	P	00 26 55.9	-1.8
TLY	**Talaya**	**63.34**	**352**	P	**P**	**00 26 59.0**	**+0.3**
KDJ	**Kajisay**	**63.46**	**329**	P	**P**	**00 27 00.3**	**+0.4**
KDJ				IAmb	IAmb	00 27 02.3	
	comp=Z,2.8nm,1.0s						
BOOM	**Boomskoye usch**	**64.35**	**329**	P	**P**	**00 27 05.9**	**+0.1**
BOOM				IAmb	IAmb	00 27 07.1	
	comp=Z,2.1nm,0.6s						
MKAR	**Makanchi Array**	**64.74**	**336**	P	**P**	**00 27 08.3**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=146,slow=6.8,SNR=13 comp=Z,0.6nm,0.5s						
MKAR	**Makanchi Array**	**64.74**	**336**	P	**P**	**00 27 08.0**	**-0.1**
ARSB	**Arslanbob**	**65.09**	**326**	P	**P**	**00 27 11.0**	**+0.3**
AAK	**Ala-Archa**	**65.20**	**328**	P	**P**	**00 27 12.4**	**+1.0**
AAK				IAmb	IAmb	00 27 13.1	
	comp=Z,3.1nm,0.8s						
BTK	**Bat

RTBI	**Rangdo, Negare**	**2.50**	**353**	P		**Pn**	**00 30 57.3**	**+0.5**
RTBI				S		**Sn**	**00 31 26.9**	**-0.5**
KHKI	**Kahang-Kahang**	**2.60**	**8**	P		**Pn**	**00 30 59.0**	**+0.8**
KHKI				S		**Sn**	**00 31 30.3**	**+0.5**
JAGI	**Jajag, Banyuwa**	**2.70**	**336**	P		**Pn**	**00 30 59.3**	**-0.2**
TWSI	**Taliwang, Sumb**	**2.73**	**36**	P		**Pn**	**00 31 00.7**	**+0.8**
SRBI	**Singaraja**	**2.85**	**359**	P		**Pn**	**00 31 02.7**	**+1.0**
SRBI				S		**Sn**	**00 31 36.1**	**0.0**
BYJI	**Banyuwangi**	**2.86**	**342**	P		**Pn**	**00 31 02.3**	**+0.5**
PLAI	**Plampang**	**3.26**	**50**	P		**Pn**	**00 31 07.6**	**+0.3**
ABJI	**Asem Bagus**	**3.29**	**342**	P		**Pn**	**00 31 08.3**	**+0.5**
BLJI	**Banyuglugur**	**3.58**	**333**	P		**Pn**	**00 31 12.6**	**+0.9**
DBNI	**Kabupaten Domp**	**3.88**	**51**	P		**Pn**	**00 31 17.3**	**+1.5**
WBSI	**Waikabubak, Su**	**4.28**	**73**	P		**Pn**	**00 31 24.1**	**+2.8**
SNJI	**Sawahan-Nganju**	**4.67**	**312**	P		**Pn**	**00 31 28.0**	**+1.1**
NGJI	**Ngawi**	**5.17**	**313**	P		**Pn**	**00 31 34.3**	**+0.8**
	0.3nm39nm,0.6s							
UGM	**Wanagama**	**5.56**	**303**	P		**Pn**	**00 31 38.5**	**-0.5**
	0.2nm35nm,2.2s							
BSSI	**Bau Bau, Buton**	**7.05**	**48**	P		**Pn**	**00 32 01.0**	**+1.6**
	0.1nm17nm,0.8s							
KPJI	**Karang Pucung**	**7.20**	**299**	P		**Pn**	**00 32 02.1**	**+0.6**
	0.1nm13nm,1.2s							
MMRI	**Maumere**	**7.26**	**72**	P		**Pn**	**00 32 04.0**	**+1.7**
	0.4nm19nm,0.4s							
KAPI	**Kappang**	**7.39**	**37**	Pn		**Pn**	**00 32 05.4**	**+1.3**
	1.3nm,0.3s,baz=194,slow=2.8,SNR=10							
KAPI				Sn		**Sn**	**00 33 25.3**	**-2.8**
	0.5nm,0.3s,baz=259,slow=22,SNR=1.7							
	3.9nm,0.2s							
KAPI	**Kappang**	**7.39**	**37**	P		**Pn**	**00 32 05.1**	**+1.0**
BBJI	**Bungbulang**	**8.27**	**294**	P		**Pn**	**00 32 16.7**	**+0.5**
FITZ	**Fitzroy Crossi**	**12.31**	**126**	Pn		Pn	00 33 08.3	-3.1
	0.3nm,0.3s,baz=300,slow=7.5,SNR=6.5							
FITZ				Sn		Sn	00 35 15.5	-13
	0.2nm,0.3s,baz=343,slow=23,SNR=2.1							
	1.4nm,0.7s							
WRA	**Warramunga Arr**	**20.43**	**118**	P		**P**	**00 34 52.6**	**-1.1**
	1.2nm,0.9s,baz=291,slow=10,SNR=9.9							
	1.2nm,0.9s							
ASAR	**Alice Springs**	**21.80**	**128**	P		**P**	**00 35 07.7**	**-0.8**
	0.8nm,0.7s,baz=302,slow=9.9,SNR=9.2							
	0.8nm,0.7s							
STKA	**Stephens Creek**	**32.01**	**135**	P		**P**	**00 36 42.8**	**0.0**
	1.1nm,0.5s,baz=323,slow=10,SNR=3.4							
	1.1nm,0.5s							
SONM	**Songino Array**	**59.05**	**353**	P		**P**	**00 40 17.2**	**+0.8**
	0.2nm,0.5s,baz=182,slow=10,SNR=2.1							
	0.2nm,0.5s							
MKAR	**Makanchi Array**	**64.60**	**336**	P		**P**	**00 40 53.7**	**0.0**
	0.2nm,0.3s,baz=139,slow=7.7,SNR=5.9							
	0.2nm,0.3s							
KURBB	**Kurchatov Arra**	**69.16**	**336**	P		**P**	**00 41 22.0**	**-0.6**
	0.2nm,0.5s,baz=148,slow=6.1,SNR=4.2							
	0.2nm,0.5s							
BVAR	**Borovoye Array**	**74.34**	**334**	P		**P**	**00 41 53.7**	**0.0**
	0.3nm,0.5s,baz=134,slow=8.6,SNR=3.5							
	0.3nm,0.5s							

NEIC ***28*** *00:39:44.8±1.4, 10˚.68S±0˚.09×162˚.0E±0˚.1, h76km±4km, mb4.3/15, Error ellipse: s-maj=18.2km s-min=10.7km az=58.0*

NOU ***28*** *00:39:45.3, 10˚.76S×161˚.84E, h34km, MLv4.8/11, Solomon Islands*

IDC ***28*** *00:39:46.5±2.6, 10˚.75S×161˚.90E, h92km±20km, mb3.6/7, mbtmp4.0/10, MS3.3/6, Error ellipse: s-maj=25.6km s-min=17.4km az=83.0*

ISC 28 00:39:43.0±0.6, 10˚.76S±0˚.05×161˚.96E±0˚.07, h50km, n45, σ1°91/45, mb4.0/12, MS3.3/4, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HURO	**Huro Makira**	**0.30**	**350**	P		**Pn**	**00 39 54.1**	**+1.9**
HURO	**Huro Makira**	**0.30**	**350**	S		**Sn**	**00 40 01.7**	**+3.1**
NGOA	**Tingoa Renbel**	**2.02**	**247**	P		**Pn**	**00 40 15.6**	**+1.0**
NGOA	**Tingoa Renbel**	**2.02**	**247**	S		**Sn**	**00 40 38.7**	**0.0**
ALEG	**Aligegeo Malai**	**2.35**	**328**	P		**Pn**	**00 40 21.8**	**+2.6**
ALEG	**Aligegeo Malai**	**2.35**	**328**	S		**Sn**	**00 40 47.4**	**+0.6**
HNR	**Honiara**	**2.38**	**304**	P		**Pn**	**00 40 21.7**	**+2.2**
	22nm,0.3s,baz=57,slow=18,SNR=37							
HNR				S		**Sn**	**00 40 51.8**	**+4.3**
	45nm,0.6s,baz=237,slow=21,SNR=14							
HNR				LR		LR	00 41 28.9	
	comp=Z,15nm,18.2s,baz=248,slow=44							
HNR	**Honiara**	**2.38**	**304**	P		**Pn**	**00 40 21.8**	**+2.2**
HNR	**Honiara**	**2.38**	**304**			**Pn**	**00 40 21.4**	**+1.8**
HNR						**Sn**	**00 40 50.3**	**+2.8**
SAVO	**Savo Central**	**2.65**	**307**	P		**Pn**	**00 40 25.3**	**+2.0**
DVP	**Devils Point**	**9.19**	**140**	P		**Pn**	**00 41 57.2**	**+4.2**
DZM	**Mont Dzumac**	**12.04**	**160**	P		**Pn**	**00 42 34.7**	**+2.6**
	3.1nm,0.3s,baz=18,slow=12,SNR=25							
DZM				S		**Sn**	**00 44 45.7**	**+0.7**
	baz=307,slow=20							
MARNC	**Mare, Loyalty**	**12.15**	**152**	Pn		**Pn**	**00 42 35.0**	**+1.5**
OUENC	**Ouen Island, N**	**12.50**	**159**	Pn		**Pn**	**00 42 40.2**	**+1.9**
PMG	**Port Moresby**	**14.63**	**274**	LR		LR	00 48 08.7	
	comp=Z,157nm,20.0s,baz=150,slow=34							
CTA	**Charters Tower**	**17.74**	**237**	P		**P**	**00 43 48.3**	**+1.5**
	9.0nm,0.8s,baz=56,slow=11,SNR=8.6							
CTA				LR		LR	00 49 47.4	
	comp=Z,61nm,18.9s,baz=89,slow=34							
CTAO	**Charters Tower**	**17.74**	**237**	P		**P**	**00 43 47.9**	**+1.1**
CTAO				IAmb		IAmb	00 43 50.5	
	comp=Z,15nm,1.1s							
PATS	**Pohnpei**	**17.85**	**348**			**Pn**	**00 43 46.8**	**-1.1**
COEN	**Coen**	**18.62**	**258**	P		Pn	**00 43 57.9**	**+0.6**
COEN				IAmb		IAmb	00 44 02.6	
	comp=Z,23nm,1.1s							
LHI	**Lord Howe Isla**	**20.83**	**187**	P		**P**	**00 44 20.1**	**-0.4**
LHI				IAmb		IAmb	00 44 28.1	
	comp=Z,32nm,0.9s							
ARMA	**Armidale**	**21.79**	**205**	P		**P**	**00 44 30.9**	**0.0**
ARMA				IAmb		IAmb	00 44 32.9	
	comp=Z,18nm,1.1s							
WR8	**Warramunga Arr**	**27.97**	**248**	P		**P**	**00 45 27.9**	**-1.4**
WR8				IAmb		IAmb	00 45 44.3	
	comp=Z,4.8nm,1.0s							
WB0	**Warramunga Arr**	**28.02**	**248**	P		**P**	**00 45 28.7**	**-1.0**
WB0				IAmb		IAmb	00 45 29.3	
	comp=Z,5.2nm,0.8s							
WRA	**Warramunga Arr**	**28.11**	**248**	P		**P**	**00 45 29.2**	**-1.2**
	comp=Z,2.2nm,0.5s,baz=79,slow=9.5,SNR=36							
	comp=Z,2.2nm,0.5s							
WRA	**Warramunga Arr**	**28.11**	**248**	P		**P**	**00 45 29.3**	**-1.2**
STKA	**Stephens Creek**	**28.20**	**219**	P		**P**	**00 45 31.6**	**+0.5**
	comp=Z,2.0nm,0.7s,baz=21,slow=11,SNR=4.9							
STKA				LR		LR	00 56 26.5	
	comp=Z,78nm,18.6s,baz=24,slow=36							
	comp=Z,2.0nm,0.7s							
STKA	**Stephens Creek**	**28.20**	**219**	P		**P**	**00 45 31.6**	**+0.5**
STKA				IAmb		IAmb	00 45 32.0	
	comp=Z,16nm,0.9s							
AS31	**Alice Springs**	**29.64**	**241**	P		**P**	**00 45 42.5**	**-1.5**
ASAR	**Alice Springs**	**29.64**	**241**	P		**P**	**00 45 42.4**	**-1.6**
	comp=Z,1.4nm,0.5s,baz=63,slow=10.0,SNR=33							
ASAR				LR		LR	00 57 19.1	
	comp=Z,53nm,18.1s,baz=94,slow=36							
	comp=Z,1.4nm,0.5s							
ASAR	**Alice Springs**	**29.64**	**241**	P		**P**	**00 45 42.5**	**-1.5**
MTN	**Manton Dam**	**30.23**	**263**	P		**P**	**00 45 49.5**	**+0.1**
MTN				IAmb		IAmb	00 45 59.1	
	comp=Z,3.2nm,0.9s							
BBOO	**Buckleboo**	**32.39**	**223**	P		**P**	**00 46 07.9**	**-0.2**
KNRA	**Kununurra**	**32.66**	**258**	P		**P**	**00 46 09.4**	**-1.2**
KNRA				IAmb		IAmb	00 46 10.3	
	comp=Z,12nm,1.1s							
PLWZ	**Palliser**	**32.84**	**161**	P		**P**	**00 46 12.6**	**+0.7**
BATI	**Baumata**	**37.64**	**267**	LR		LR	01 02 32.3	
	comp=Z,30nm,21.0s,baz=176,slow=36							
JNU	**Nakatsue**	**52.74**	**327**	LR		LR	01 11 13.9	
	comp=Z,51nm,18.0s,baz=42,slow=36							
SONM	**Songino Array**	**76.27**	**325**	P		**P**	**00 51 24.9**	**-1.7**
	comp=Z,0.5nm,0.6s,baz=142,slow=5.0,SNR=5.7							
	comp=Z,0.5nm,0.6s							
SONM	**Songino Array**	**76.27**	**325**	P		**P**	**00 51 24.3**	**-2.3**
P16K	**Nushagak River**	**76.69**	**20**			**P**	**00 51 26.1**	**-2.4**
ILAR	**Eielson Array**	**84.46**	**20**	P		**P**	**00 52 10.5**	**+0.4**
	comp=Z,0.2nm,0.7s,baz=256,slow=6.6,SNR=1.9							
	comp=Z,0.2nm,0.7s							
ILAR	**Eielson Array**	**84.46**	**20**	P		**P**	**00 52 09.2**	**-0.8**
MKAR	**Makanchi Array**	**90.78**	**317**	P		**P**	**00 52 37.7**	**-3.2**
	comp=Z,0.2nm,0.4s,baz=89,slow=6.4,SNR=4.3							
	comp=Z,0.2nm,0.4s							
MKAR	**Makanchi Array**	**90.78**	**317**	P		**P**	**00 52 38.5**	**-2.4**
YKA	**Yellowknife Ar**	**96.44**	**28**	P		**P**	**00 53 04.7**	**-1.8**
	comp=Z,0.1nm,0.5s,baz=270,slow=4.8,SNR=4.0							
	comp=Z,0.1nm,0.5s							
YKA	**Yellowknife Ar**	**96.44**	**28**	P		**P**	**00 53 04.6**	**-1.9**

IDC ***28*** *00:39:55.8±0.7, 56˚.17S×27˚.46W, h97km±6km, mb4.3/8, mbtmp4.6/9, MS3.3/1, Error ellipse: s-maj=26.9km s-min=14.5km az=80.0*

NEIC ***28*** *00:39:56.5±1.9, 56˚.25S±0˚.1×27˚.4W±0˚.2, h99km±3km, mb4.5/19, Error ellipse: s-maj=18.8km s-min=12.2km az=211.0*

ISC 28 00:39:57.3±0.5, 56˚.18S±0˚.09×27˚.51W±0˚.09, h112km, n61, σ0°96/63, mb4.5/15, 3C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HOPE	**Hope Point**	**5.48**	**287**	Pn		**Pn**	**00 41 16.6**	**+0.1**
HOPE				Sn		**Sn**	**00 42 15.3**	**-2.9**
VNA1	**Neumayer--Stat**	**16.74**	**158**	⇑P		**Pn**	**00 43 44.3**	**-0.3**
	comp=Z,5.0nm,0.5s							
VNA3	**Neumayer Olymp**	**16.93**	**160**	⇑P		**Pn**	**00 43 46.1**	**-0.9**
	comp=Z,6.1nm,0.2s							
VNA2	**Neumayer--Watz**	**17.14**	**157**	⇑P		**P**	**00 43 49.0**	**-0.4**
	comp=Z,8.4nm,0.4s,baz=320,slow=12							
SNAA	**Sanae**	**18.70**	**156**	P		**P**	**00 44 05.5**	**-1.1**
	comp=Z,501nm,0.4s							
SNAA	**Sanae**	**18.70**	**156**	P		**P**	**00 44 05.7**	**-0.8**
	comp=Z,29nm,0.6s,baz=303,slow=10,SNR=33							
SNAA	**Sanae**	**18.70**	**156**	P		**P**	**00 44 05.8**	**-0.7**
SNAA				IAmb		IAmb	00 44 06.3	
	comp=Z,28nm,0.5s							
TROLL	**Troll, Antarti**	**20.21**	**153**	P		**P**	**00 44 22.0**	**-1.1**
BELA	**Belgrano 2**	**21.93**	**184**	P		**P**	**00 44 40.7**	**-0.5**
PLCA	**Paso Flores**	**31.85**	**281**	ScP		**ScP**	**00 52 31.4**	**-0.8**
	comp=Z,1.5nm,0.8s,baz=72,slow=3.5,SNR=5.0							
PLCA				LR		LR	00 58 19.5	
	comp=Z,49nm,18.8s,baz=146,slow=35							
QSPA	**South Pole Qui**	**34.07**	**180**	P		**P**	**00 46 30.8**	**+0.1**
	comp=Z,8.3nm,0.4s,baz=218,slow=1.3,SNR=119							
QSPA				PcP		**PcP**	**00 49 05.4**	**+0.1**
	comp=Z,3.3nm,0.5s,baz=245,slow=2.1,SNR=6.8							
QSPA				ScP		**ScP**	**00 52 38.7**	**-0.9**
	comp=Z,1.2nm,0.6s,baz=248,slow=1.3,SNR=5.3							
	comp=Z,8.3nm,0.4s							
QSPA	**South Pole Qui**	**34.07**	**180**	P		**P**	**00 46 31.5**	**+0.8**
QSPA				IAmb		IAmb	00 46 31.8	
	comp=Z,8.8nm,0.7s							
QSPA						**PcP**	**00 49 05.7**	**+0.3**
MAW	**Mawson**	**40.15**	**144**	P		**P**	**00 47 21.0**	**-0.6**
	comp=Z,3.0nm,0.3s,baz=219,slow=6.8,SNR=14							
	comp=Z,3.0nm,0.3s							
MAW	**Mawson**	**40.15**	**144**	P		**P**	**00 47 21.6**	**-0.1**
AC04	**Llanos de Chal**	**41.64**	**294**	P		**P**	**00 47 35.2**	**+0.8**
AC04				IAmb		IAmb	00 47 45.2	
	comp=Z,7.5nm,0.9s							
AC01	**Pan de Azucar**	**43.08**	**296**	P		**P**	**00 47 46.5**	**+0.4**
AC01				IAmb		IAmb	00 48 02.5	
	comp=Z,9.2nm,1.0s							
PB03	**IPOC Station P**	**46.10**	**300**	P		**P**	**00 48 10.7**	**+0.4**
PB03				IAmb		IAmb	00 48 12.0	
	comp=Z,5.1nm,0.7s							
PB07	**IPOC Station P**	**46.43**	**300**	P		**P**	**00 48 13.3**	**+0.4**
PB07				IAmb		IAmb	00 48 15.1	
	comp=Z,5.4nm,0.8s							
VNDA	**Vanda**	**46.44**	**183**	P		**P**	**00 48 12.6**	**+0.5**
	comp=Z,4.0nm,0.6s,baz=192,slow=6.9,SNR=59							
	comp=Z,4.0nm,0.6s							
VNDA	**Vanda**	**46.44**	**183**	P		**P**	**00 48 13.1**	**+1.1**
VNDA				IAmb		IAmb	00 48 13.7	
	comp=Z,4.6nm,0.8s							
PB01	**IPOC Station P**	**46.82**	**301**	P		**P**	**00 48 17.3**	**+1.4**
PB08	**IPOC Station P**	**47.44**	**302**	P		**P**	**00 48 21.4**	**+0.4**
PB08				IAmb		IAmb	00 48 23.4	
	comp=Z,5.6nm,0.6s							
GO01	**Chusmiza**	**47.86**	**302**	P		**P**	**00 48 26.3**	**+2.0**
GO01				IAmb		IAmb	00 48 27.1	
	comp=Z,5.9nm,0.6s							
KOOLE	**Kule**	**48.03**	**66**	P		**P**	**00 48 24.8**	**-0.4**
KOOLE				IAmb		IAmb	00 48 26.0	
	comp=Z,6.9nm,0.7s							
H10S2	**ASCENSION HYDR**	**48.18**	**17**	T		T	01 41 14.3	
	baz=31,slow=74,SNR=9.0							
H10S3	**ASCENSION HYDR**	**48.18**	**17**	T		T	01 41 14.0	
	baz=189,slow=74,SNR=1.9							
PB16	**IPOC Station P**	**49.16**	**303**	P		P	00 48 29.7	-4.7
PB16				IAmb		IAmb	00 48 47.9	
	comp=Z,3.7nm,0.7s							
H10N1	**ASCENSION HYDR**	**49.29**	**17**	T		T	01 42 35.5	
	baz=194							
H10N3	**ASCENSION HYDR**	**49.30**	**17**	T		T	01 42 19.4	
	baz=194							
H10N2	**ASCENSION HYDR**	**49.31**	**17**	T		T	01 42 39.4	
	baz=194							
GRTLG	**Ghanzi**	**49.90**	**66**	P		**P**	**00 48 38.1**	**-1.4**
LPAZ	**La Paz**	**50.31**	**306**	P		**P**	**00 48 42.2**	**-1.0**
	comp=Z,7.2nm,0.3s,baz=286,slow=3.1,SNR=87							
	comp=Z,7.2nm,0.3s							
LPAZ	**La Paz**	**50.31**	**306**	P		**P**	**00 48 42.2**	**-1.0**
DBIC	**Dimbokro**	**65.36**	**25**	P		**P**	**00 50 28.1**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=203,slow=7.7,SNR=2.0							
	comp=Z,1.2nm,0.6s							
DBIC	**Dimbokro**	**65.36**	**25**	P		**P**	**00 50 28.2**	**+0.6**
TORD	**Torodi Ar. Bea**	**73.26**	**30**	P		**P**	**00 51 15.9**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=201,slow=7.2,SNR=12							
TORD				pP		**pP**	**00 51 41.0**	**-2.6**
	comp=Z,3.4nm,0.8s,baz=203,slow=7.4,SNR=8.8							
	comp=Z,1.2nm,0.6s							
TORD	**Torodi Ar. Bea**	**73.26**	**30**	P		**P**	**00 51 15.1**	**-1.0**
STKA	**Stephens Creek**	**91.80**	**171**	P		**P**	**00 52 52.3**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=189,slow=6.8,SNR=4.0							
	comp=Z,1.7nm,0.7s							
STKA	**Stephens Creek**	**91.80**	**171**	P		**P**	**00 52 52.6**	**+0.2**
ASAR	**Alice Springs**	**98.92**	**163**	P		**P**	**00 53 25.1**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=195,slow=4.2,SNR=8.6							
	comp=Z,1.0nm,0.7s							
ASAR	**Alice Springs**	**98.92**	**163**	P		**P**	**00 53 24.9**	**-0.1**
WRA	**Warramunga Arr**	**102.64**	**163**	P		**Pdif**	**00 53 41.1**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=186,slow=4.2,SNR=2.8							
WRA	**Warramunga Arr**	**102.64**	**163**			**Pdif**	**00 53 41.2**	**-0.3**
NVAR	**Mina Array Bea**	**121.28**	**293**	PKP		**PKiKP**	**00 58 37.9**	**+1.1**
	comp=Z,0.3nm,0.4s,baz=66,slow=3.9,SNR=2.0							
FINES	**FINESS Array B**	**124.58**	**28**	PKP		**PKPdf**	**00 58 42.0**	**+0.1**
	comp=Z,2.2nm,0.8s,baz=183,slow=2.5,SNR=16							
ARCES	**ARCESS Array B**	**131.13**	**22**	PKP		**PKPdf**	**00 58 54.2**	**0.0**
	comp=Z,2.6nm,0.8s,baz=178,slow=3.0,SNR=4.1							
YKA	**Yellowknife Ar**	**136.15**	**318**	PKP		**PKPdf**	**00 59 04.3**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=118,slow=1.9,SNR=5.9							
ILAR	**Eielson Array**	**150.07**	**312**	PKPbc		**PKiKP**	**00 59 34.0**	**0.0**
	comp=Z,3.4nm,0.8s,baz=127,slow=1.7,SNR=30							
ILAR				pPKPbc		**pPKPdf**	**00 59 59.9**	**+1.7**
	comp=Z,1.2nm,0.8s,baz=137,slow=1.2,SNR=2.8							
ILAR	**Eielson Array**	**150.07**	**312**	PKPbc		**PKPbc**	**00 59 33.8**	**+0.6**
F25K	**Christian Rive**	**150.09**	**317**	PKPbc		**PKiKP**	**00 59 35.1**	**+1.0**
E25K	**Arctic Village**	**150.13**	**318**	PKPbc		**PKiKP**	**00 59 34.9**	**+0.8**
E25K				PKPab		**PKPab**	**00 59 40.4**	**+0.5**
CCB	**Clear Creek Bu**	**150.43**	**311**	PKPbc		**PKPbc**	**00 59 34.7**	**+0.6**
SLKM	**Skilak Lake**	**150.46**	**302**	PKPbc		**PKiKP**	**00 59 35.6**	**+0.6**
SONM	**Songino Array**	**150.91**	**87**	PKPbc		**PKPbc**	**00 59 36.0**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=197,slow=3.5,SNR=5.9							
SONM				pPKPbc		**pPKPdf**	**01 00 01.8**	**+1.6**
	comp=Z,0.7nm,0.8s,baz=227,slow=3.9,SNR=2.1							
E24K	**Your Creek**	**151.22**	**318**	PKPbc		**PKiKP**	**00 59 37.7**	**+1.3**
TRF	**Thorofare Moun**	**151.24**	**308**	PKPbc		**PKiKP**	**00 59 37.4**	**+0.7**
L22K	**Petersville**	**151.25**	**306**	PKPbc		**PKiKP**	**00 59 37.6**	**+1.0**
SKT	**Skwentna**	**151.47**	**305**	PKPbc		**PKiKP**	**00 59 37.8**	**+0.7**
STLK	**Strandline Lak**	**151.49**	**304**	PKPbc		**PKiKP**	**00 59 37.5**	**+0.4**
ILSW	**Iliamna Southw**	**151.70**	**300**	PKPbc		**PKiKP**	**00 59 37.9**	**+0.2**
L18K	**Granite Mounta**	**153.89**	**304**	PKPbc		**PKiKP**	**00 59 44.0**	**+2.0**

TRN 28 00:52:52.3, 11˚.20N×60˚.87W, h29km, MD4.3, Near West of Tobago. Felt in Tobago V, VI and Trinidad IV., Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TRN	**Trinidad (W)**	**0.76**	**224**	*e*P		Pb	00 53 07.0	0.0
TRN				*e*S		Sn	00 53 17.6	0.0
PSGH	**Port of Spain**	**0.83**	**230**	*e*P		Pb	00 53 08.3	+0.2
PSGH				*e*S		Sn	00 53 19.6	+0.4
PSQC	**Port of Spain**	**0.83**	**230**	*e*P		Pb	00 53 08.3	+0.1
PSQC				*e*S		Sn	00 53 20.0	+0.7
DMDM	**Guralp CMG5TDE**	**0.84**	**233**	*e*P		Pb	00 53 08.4	+0.1
DMDM				*e*S		Sb	00 53 19.2	-0.1
PSMG	**Mucurapo Girls**	**0.84**	**231**	*e*P		Pb	00 53 08.4	+0.1
PSMG				*e*S		Sn	00 53 20.7	+1.2
TPP	**Pointe-a-Pierr**	**1.05**	**213**	*e*P		Pb	00 53 11.9	0.0
GRFF	**Grenada Fort F**	**1.20**	**315**	*e*P		Pn	00 53 13.0	-0.1
GRFF				*e*S		Sn	00 53 28.8	+0.4
GRGR	**Grenville**	**1.21**	**320**	*e*P		Pn	00 53 13.1	0.0
GRGR				*e*S		Sn	00 53 28.4	-0.1
GRW	**Mount Saint Ca**	**1.23**	**321**	*e*P		Pb	00 53 14.4	-0.5
GRW				*e*S		Sn	00 53 29.8	+0.5
GRHS	**Sauteurs**	**1.27**	**323**	*e*P		Pn	00 53 13.8	-0.2
GRSS	**Sisters**	**1.31**	**326**	*e*P		Pn	00 53 14.4	-0.2
GRSS				*e*S		Sn	00 53 31.2	+0.1
GCMP	**Grenada, Carri**	**1.39**	**337**	*e*P		Pn	00 53 14.9	-0.8
GCMP				*e*S		Sn	00 53 32.7	-0.3
SVB	**Belmont**	**2.09**	**350**	*e*P		Pn	00 53 25.2	-0.2
SVB				*e*S		Sn	00 53 51.0	+0.6
SSV	**Crater Summit**	**2.14**	**351**	*e*P		Pn	00 53 27.1	+1.1
MCLT	**Moule a Chique**	**2.49**	**358**	*e*P		Pn	00 53 30.4	-0.5
MCLT				*e*S		Sn	00 53 59.8	-0.5
SLAC	**Saint Lucia, A**	**2.68**	**359**	*e*P		Pn	00 53 32.9	-0.6
SLAC				*e*S		Sn	00 54 05.5	+0.6
SLCP	**Castries, St.**	**2.79**	**358**	*e*P		Pn	00 53 34.3	-0.7
SLCP				*e*S		Sn	00 54 07.1	-0.6
SLBI	**Saint Lucia, B**	**2.81**	**358**	*e*P		Pn	00 53 35.0	-0.1
SLBI				*e*S		Sn	00 54 07.1	-0.9
BIM	**Bigot**	**3.30**	**357**	*e*P		Pn	00 53 42.2	+0.1
BIM				*e*S		Sn	00 54 18.6	-1.7
SVN	**Savane Anatole**	**3.63**	**355**	*e*P		Pn	00 53 47.0	+0.4
SVN				*e*S		Sn	00 54 28.0	-0.5
DSLB	**Salisbury**	**4.25**	**353**	*e*P		Pn	00 53 56.2	+1.2
DWS	**Wesley**	**4.36**	**354**	*e*P		Pn	00 53 58.8	+2.2
MMLZ	**Guadeloupe Bro**	**4.88**	**351**	*e*P		Pn	00 54 04.6	+0.9
MMLZ				*e*S		Sn	00 54 58.4	-0.7
DHSZ	**Broadband at M**	**5.12**	**350**	*e*P		Pn	00 54 09.2	+2.3
SKI	**Saint Kitts**	**6.36**	**344**	*e*P		Pn	00 54 26.0	+1.9

BJI ***28*** *00:57:50.3, 41˚.84N×142˚.29E, h72km, mB5.2/36, mb5.3/81, Ms4.2/52, Ms7.4.1/52*

NIED ***28*** *00:57:51.8, 41˚.92N×142˚.35E, h70km, MW4.9, Moment Tension Solution. s3 Moment tensor: Scale 10^16 Nm; Mrr2.47; Mθθ-0.70; Mφφ-1.77; Mrθ 0.18; Mrφ-1.06; Mθφ 1.51; Fault plane solution: M0 2.87000×10^16 NP1: φs223.00000°, δ31.00000°, λ110.00000°. NP2: φs19.00000°, δ61.00000°, λ78.00000°.*

MOS ***28*** *00:57:51.6±0.9, 42˚.01N×142˚.28E, h69km, mb5.5/83 Error ellipse: s-maj=5.2km s-min=3.8km az=101.5*

JMA ***28*** *00:57:51.8±0.2, 41˚.9N±0˚.9×142˚.4E±0˚.9, h70km±2km, MD5.0/36, MW5.0/36, S OFF URAKAWA*

JMA Felt III J1 at S OFF URAKAWA .

NEIC ***28*** *00:57:51.8±1.2, 41˚.95N±0˚.05×142˚.3E±0˚.1, h55km±4km, mb5.1/776, Mww4.9/12, Error ellipse: s-maj=11.7km s-min=6.0km az=112.0*

NEIC ***28*** *00:57:52.1, 41˚.93N×142˚.40E, h57km*

IDC ***28*** *00:57:52.0±1.2,

JAB	**Ashibetsu**	**1.54**	**357**	A		A	00 58 18.2		
	comp=N,46nm,1.7s,comp=E,68nm,1.0s								
JSI2	**Shiura 2**	**1.70**	**238**	A		A	00 58 19.8		
	comp=N,57nm,1.3s,comp=E,37nm,3.4s								
JANG	**Nango**	**1.70**	**201**	*i* P		**Pn**	**00 58 20.0**	**+0.6**	
JANG				A		A	00 58 20.0		
	comp=N,25nm,2.6s,comp=E,43nm,1.4s								
JANG				*e*S		**Sn**	**00 58 40.1**	**0.0**	
JAR	**Ashorobuto**	**1.71**	**38**	*i* P		**Pn**	**00 58 20.2**	**+0.8**	
JAR				A		A	00 58 20.2		
	comp=N,42nm,2.3s,comp=E,27nm,0.9s								
JOMM	**Oshimamatsumae**	**1.79**	**257**	*i* P		**Pn**	**00 58 21.1**	**+0.5**	
JOMM				*e*S		**Sn**	**00 58 42.7**	**+0.4**	
JKEN	**Kujiedanarisaw**	**1.82**	**195**	A		A	00 58 21.0		
	comp=N,62nm,0.6s,comp=E,88nm,0.6s								
JSH	**Shimam**	**1.82**	**293**	A		A	00 58 22.1		
	comp=N,8.0nm,1.9s,comp=E,11nm,1.7s								
JHR	**Hokuryu**	**1.83**	**346**	A		A	00 58 22.4		
	comp=N,41nm,0.8s,comp=E,66nm,1.2s								
JHST	**Hiyamasetana**	**1.88**	**285**	A		A	00 58 22.8		
	comp=N,22nm,1.4s,comp=E,27nm,1.0s								
JKK2	**Kamakawa 2**	**1.93**	**9**	A		A	00 58 23.6		
	comp=N,22nm,1.9s,comp=E,22nm,2.7s								
JSK	**Shakotan**	**1.95**	**316**	A		A	00 58 24.0		
	comp=N,16nm,1.0s,comp=E,13nm,1.3s								
JHHS	**Hirosakihyakuz**	**1.98**	**229**	A		A	00 58 23.6		
	comp=N,64nm,2.4s,comp=E,59nm,3.2s								
JAK	**Akkeshi**	**2.04**	**59**	A		A	00 58 24.6		
	comp=N,37nm,1.1s,comp=E,27nm,1.6s								
JKZ	**Kuzumaki**	**2.12**	**201**	A		A	00 58 25.2		
	comp=N,25nm,0.8s,comp=E,18nm,3.0s								
AKK	**Akkeshi**	**2.14**	**60**	*e*P		**Pn**	**00 58 25.4**	**+0.1**	
ASAJ	**Asahikawa**	**2.16**	**5**	P		**Pn**	**00 58 26.5**	**+0.9**	
	comp=E,1µm,0.5s,baz=220,slow=12,SNR=1110								
ASAJ				LR		LR	00 58 52.2		
	comp=E,175nm,19.8s,baz=267,slow=28								
ASAJ				S		**Sn**	**00 58 52.5**	**+1.2**	
	comp=E,5µm,0.8s,baz=1.2,slow=26,SNR=15								
ASAJ	**Asahikawa**	**2.16**	**5**	PN		**Pn**	**00 58 27.3**	**+1.7**	
ASAJ							00 58 53.1		
ASAJ	**Asahikawa**	**2.16**	**5**	A		A	00 58 26.9		
	comp=N,16nm,2.6s,comp=E,19nm,2.8s								
JKA	**Kamikawa-asahi**	**2.16**	**5**			**Pn**	**00 58 27.3**	**+1.7**	
JKA				Sn		**Sn**	**00 58 53.1**	**+1.8**	
JKA	**Kamikawa-asahi**	**2.16**	**5**	*e*P		**Pn**	**00 58 27.3**	**+1.7**	
JKA				*e*S		**Sn**	**00 58 53.1**	**+1.8**	
JMP	**Maruseppu**	**2.18**	**20**	A		A	00 58 27.0		
	comp=N,16nm,3.0s,comp=E,18nm,1.7s								
JAH	**Hinai**	**2.19**	**216**	A		A	00 58 26.2		
	comp=N,18nm,1.4s,comp=E,26nm,1.4s								
JIW	**Iwasaki**	**2.22**	**233**	A		A	00 58 27.0		
	comp=N,19nm,1.4s,comp=E,19nm,0.6s								
JTKR	**Abashiri--Toko**	**2.32**	**30**	A		A	00 58 28.8		
	comp=N,20nm,2.0s,comp=E,25nm,1.9s								
JNTW	**Noshirotokiwa**	**2.35**	**225**	A		A	00 58 28.7		
	comp=N,36nm,2.9s,comp=E,59nm,4.2s								
JKHN	**Kushirohamanak**	**2.38**	**61**	A		A	00 58 29.2		
	comp=N,16nm,1.4s,comp=E,16nm,2.4s								
MIYJ	**Miyakonagasawa**	**2.41**	**189**	A		A	00 58 29.2		
	comp=N,14nm,1.1s,comp=E,12nm,1.4s								
JSZI	**Iwateshizukuis**	**2.45**	**206**	A		A	00 58 29.9		
	comp=N,33nm,2.0s,comp=E,19nm,2.1s								
JSS	**Shosan**	**2.46**	**352**	A		A	00 58 31.1		
	comp=N,22nm,2.0s,comp=E,24nm,4.6s								
JOM	**Ohasama**	**2.61**	**198**	A		A	00 58 32.0		
	comp=N,15nm,1.0s,comp=E,21nm,1.9s								
JNSB	**Nemuroshibetsu**	**2.68**	**46**	A		A	00 58 33.7		
	comp=N,30nm,4.2s,comp=E,18nm,1.1s								
JRA	**Rausu**	**2.85**	**45**	A		A	00 58 36.0		
	comp=N,11nm,0.9s,comp=E,17nm,1.5s								
JRG	**Rokugo**	**2.87**	**207**	A		A	00 58 35.8		
	comp=N,14nm,2.2s,comp=E,15nm,1.6s								
NMR	**Nemuro--Hokkai**	**2.88**	**60**	*e*PN		**Pn**	**00 58 34.5**	**-0.8**	
NMR				*e*S		**Sn**	**00 59 06.7**	**-2.0**	
NMR	**Nemuro--Hokkai**	**2.88**	**60**	*e*P		**Pn**	**00 58 35.1**	**-0.2**	
NMR				*e*S		**Sn**	**00 59 06.8**	**-2.0**	
JYW	**Yuwa**	**2.91**	**214**	A		A	00 58 36.4		
	comp=N,23nm,2.9s,comp=E,19nm,2.3s								
OFUJ	**Ofunato**	**2.92**	**190**	A		A	00 58 36.4		
	comp=N,10.0nm,1.7s,comp=E,14nm,3.1s								
GLVR	**Golovnino**	**2.94**	**52**	*e*PN		**Pn**	**00 58 37.4**	**+1.2**	
GLVR				*e*S		**Sn**	**00 59 10.9**	**+0.5**	
GLVR				pmax		pmax			
	comp=Z,2µm,0.3s								
GLVR				pmax		pmax			
	comp=N,390nm,0.2s								
GLVR				pmax		pmax			
	comp=E,822nm,0.3s								
GLVR				smax		smax			
	comp=N,9µm,0.4s								
GLVR				smax		smax			
	comp=E,10µm,0.4s								
GLVR	**Golovnino**	**2.94**	**52**	*e*P		**Pn**	**00 58 37.4**	**+1.2**	
GLVR				AMB		AMB	00 58 38.9		
	comp=E,2µm,0.3s								
GLVR				*e*S		**Sn**	**00 59 10.9**	**+0.5**	
GLVR				A		A	00 59 16.5		
	comp=E,9µm,0.4s								
GLVR				A		A	00 59 16.5		
	comp=E,10µm,0.4s								
RUSJ	**Misakicho**	**3.03**	**44**	*e*PN		**Pn**	**00 58 39.3**	**+1.9**	
RUSJ				*e*S		**Sn**	**00 59 17.3**	**+4.9**	
JOG3	**Oga3**	**3.19**	**231**	A		A	00 58 34.9		
	comp=N,13nm,1.6s,comp=E,18nm,1.7s								
YUK	**Yuzh-Kuril'sk**	**3.32**	**50**	*c i*PN		**Pn**	**00 58 42.7**	**+1.3**	
YUK				*e*S		**Sn**	**00 59 18.7**	**-0.8**	
YUK				pmax		pmax			
	comp=N,589nm,0.2s								
YUK				pmax		pmax			
	comp=E,980nm,0.2s								
YUK				pmax		pmax			
	comp=Z,7µm,0.2s								
YUK				smax		smax			
	comp=N,3µm,0.4s								
YUK				smax		smax			
	comp=E,12µm,0.5s								
YUK	**Yuzh-Kuril'sk**	**3.32**	**50**	*e*P		**Pn**	**00 58 43.0**	**+1.6**	
YUK				AMB		AMB	00 58 43.2		
	comp=E,7µm,0.3s								
YUK				*e*S		**Sn**	**00 59 19.4**	**-0.1**	
YUK				A		A	00 59 26.2		
	comp=E,11µm,0.4s								
YUK				A		A	00 59 26.2		
	comp=E,12µm,0.4s								
JYK	**Kaneyama**	**3.39**	**207**	A		A	00 58 43.0		
	comp=N,7.0nm,4.4s,comp=E,12nm,1.7s								
JOFO	**Osakifurukawao**	**3.53**	**198**	A		A	00 58 44.9		
	comp=N,39nm,2.9s,comp=E,43nm,1.3s								
JOU	**Okura**	**3.81**	**200**	A		A	00 58 48.9		
	comp=N,14nm,0.7s,comp=E,8.0nm,0.9s								
SHO	**Shikotan**	**3.82**	**59**	*e*P		Pn	00 58 58.4	+10	
SHO				AMB		AMB	00 58 59.3		
	comp=E,1µm,0.5s								
SHO				*e*S		**Sn**	**00 59 39.1**	**+7.3**	
SHO				A		A	00 59 48.1		
	comp=E,3µm,0.4s								
SHO				A		A	00 59 48.1		
	comp=E,4µm,0.4s								
JYA	**Atsumi**	**3.91**	**212**	A		A	00 58 50.4		
	comp=N,23nm,1.0s,comp=E,14nm,0.8s								
JMST	**Minamisoumatoc**	**4.38**	**195**	A		A	00 58 56.8		
	comp=N,9.0nm,1.1s,comp=E,8.0nm,1.3s								
JYAR	**Yonezawaarcadi**	**4.38**	**203**	A		A	00 58 56.9		
	comp=N,15nm,1.2s,comp=E,13nm,1.1s								
YSS	**Yuzhno-Sakhali**	**5.00**	**3**			**Pn**	**00 59 05.7**	**+1.3**	
YSS	**Yuzhno-Sakhali**	**5.00**	**3**	*κ i*PN		**Pn**	**00 59 06.8**	**+2.4**	
YSS				*e*S		**Sn**	**01 00 02.9**	**+2.1**	
YSS				pmax		pmax			
	comp=N,360nm,0.7s								
YSS				pmax		pmax			
	comp=Z,340nm,0.7s								
YSS				pmax		pmax			
	comp=Z,500nm,4.1s								
YSS				smax		smax			
	comp=N,300nm,0.7s								
YSS				smax		smax			
	comp=E,160nm,0.7s								
YSS	**Yuzhno-Sakhali**	**5.00**	**3**	*e*P		**Pn**	**00 59 06.9**	**+2.5**	
YSS				AMB		AMB	00 59 08.4		
	comp=E,330nm,0.6s								
YSS				*e*S		**Sn**	**01 00 02.8**	**+2.0**	
TEY	**Ternei**	**5.17**	**308**	⇑*e*PN		**Pn**	**00 59 07.8**	**+1.1**	
TEY				pmax		pmax			
	comp=N,180nm,0.7s								
TEY				pmax		pmax			
	comp=E,130nm,0.7s								
TEY				pmax		pmax			
	comp=Z,350nm,0.6s								
TEY	**Ternei**	**5.17**	**308**	*e*P		**Pn**	**00 59 07.8**	**+1.1**	
KUR	**Kuril'sk**	**5.18**	**49**	*e*PN		**Pn**	**00 59 08.2**	**+1.3**	
KUR				*e*S		**Sn**	**01 00 06.7**	**+1.4**	
KUR				pmax		pmax			
	comp=Z,840nm,0.6s								
KUR				pmax		pmax			
	comp=N,290nm,0.3s								
KUR				pmax		pmax			
	comp=E,489nm,0.3s								
KUR				smax		smax			
	comp=N,1µm,0.6s								
KUR				smax		smax			
	comp=E,630nm,0.8s								
KUR	**Kuril'sk**	**5.18**	**49**	*e*P		**Pn**	**00 59 08.9**	**+2.0**	
KUR				AMB		AMB	00 59 12.9		
	comp=E,2µm,0.5s								
KUR				*e*S		**Sn**	**01 00 05.4**	**+0.1**	
KUR				A		A	01 00 25.2		
	comp=E,1µm,0.7s								
KUR				A		A	01 00 25.2		
	comp=E,630nm,0.7s								
JYT	**Yasato**	**5.96**	**197**	Pn		**Pn**	**00 59 15.5**	**-2.0**	
MJB9	**Matsu-Tunnel**	**6.28**	**212**			**Pn**	**00 59 23.8**	**+1.8**	
MAJO	**Matsushiro**	**6.29**	**212**	P		**Pn**	**00 59 24.2**	**+2.2**	
MAJO	**Matsushiro**	**6.29**	**212**			**Pn**	**00 59 23.1**	**+1.0**	
MAJO	**Matsushiro**	**6.29**	**212**	*ce*PN		**Pn**	**00 59 23.9**	**+1.9**	
MAJO				pmax		pmax			
	comp=Z,45nm,0.8s								
MJAR	**Matsushiro Arr**	**6.29**	**212**	P		**Pn**	**00 59 24.3**	**+2.3**	
	comp=Z,37nm,0.5s,baz=22,slow=14,SNR=50								
MJAR				LR		LR	01 02 24.6		
	comp=Z,721nm,20.9s,baz=22,slow=43								
MJAR	**Matsushiro Arr**	**6.29**	**212**			**Pn**	**00 59 22.8**	**+0.8**	
JGF	**Kuroka**	**7.44**	**213**	P		**Pn**	**00 59 39.5**	**+1.6**	
JGF	**Kuroka**	**7.44**	**213**			**Pn**	**00 59 38.5**	**+0.6**	
VLA	**Vladivostok**	**7.80**	**282**	*ce*PN		**Pn**	**00 59 44.6**	**+2.0**	
VLA	**Vladivostok**	**7.80**	**282**	*e*P		**Pn**	**00 59 44.6**	**+2.0**	
INU	**Inuyama**	**7.80**	**214**	P		**Pn**	**00 59 44.7**	**+2.0**	
INU	**Inuyama**	**7.80**	**214**			**Pn**	**00 59 42.8**	**+0.1**	
USRK	**Ussuriysk Ar.**	**7.89**	**290**	P		**Pn**	**00 59 44.8**	**+0.8**	
	comp=Z,166nm,0.8s,baz=93,slow=15,SNR=170								
JSG	**Sagara**	**7.97**	**205**	Pn		**Pn**	**00 59 46.3**	**+1.2**	
PSTR	**Posyet**	**8.57**	**278**	*de*PN		**Pn**	**00 59 54.8**	**+1.6**	
TYV	**Tymovskoe**	**8.91**	**1**	*e*PN		**Pn**	**01 00 00.4**	**+2.6**	
TYV				*e*S		**Sn**	**01 01 42.1**	**+5.6**	
TYV				pmax		pmax			
	comp=Z,108nm,0.9s								
TYV				pmax		pmax			
	comp=Z,100nm,2.1s								
TYV				smax		smax			
	comp=N,200nm,1.6s								
TYV				smax		smax			
	comp=E,200nm,1.6s								
TYV				smax		smax			
	comp=N,300nm,4.4s								
TYV				smax		smax			
	comp=E,500nm,4.4s								
TYV	**Tymovskoe**	**8.91**	**1**	*e*P		**Pn**	**01 00 00.7**	**+2.9**	
TYV				AMB		AMB	01 00 02.7		
	comp=E,540nm,0.8s								
JHJ	**Hachijo jima 2**	**9.05**	**194**	P		**Pn**	**00 59 59.5**	**-0.5**	
	comp=E,135nm,0.3s,baz=99,slow=4.2,SNR=9.8								
JHJ				S		**Sn**	**01 01 33.9**	**-6.5**	
	comp=E,311nm,0.4s,baz=242,slow=22,SNR=6.6								
JHJ2	**Mitsune**	**9.06**	**194**	P		**Pn**	**00 59 59.7**	**-0.2**	
JHJ2	**Mitsune**	**9.06**	**194**	Pn		**Pn**	**00 59 58.6**	**-1.3**	
MDJ	**Mudanjiang**	**9.66**	**290**			**Pn**	**01 00 09.2**	**+1.1**	
MDJ	**Mudanjiang**	**9.66**	**290**	P		**Pn**	**01 00 11.0**	**+2.9**	
MDJ				S		**Sn**	**01 01 59.5**	**+4.5**	
MDJ				SS			01 02 13.3		
MDJ				pmax		pmax			
	comp=E,140nm,1.7s								
MDJ				L		L			
	comp=E,500nm,13.9s								
MDJ				L		L			
	comp=E,880nm,15.2s								
GRNR	**Gornyy**	**9.70**	**337**	⇑*i*PN		**Pn**	**01 00 10.7**	**+2.0**	
GRNR				pmax		pmax			
	comp=Z,6.0nm,0.7s								
GRNR				MLR		MLR			
	comp=Z,370nm,14.0s								
GRNR	**Gornyy**	**9.70**	**337**	*e*P		**Pn**	**01 00 10.7**	**+2.0**	
KLR	**Kul'dur**	**10.37**	**318**	P		**Pn**	**01 00 18.7**	**+0.9**	
	comp=Z,113nm,0.8s,baz=125,slow=14,SNR=143								
KLR				LR		LR	01 04 24.8		
	comp=Z,1µm,21.1s,baz=160,slow=38								
KLR	**Kul'dur**	**10.37**	**318**	*de*PN		**Pn**	**01 00 20.4**	**+2.6**	
KLR	**Kul'dur**	**10.37**	**318**	*e*P		**Pn**	**01 00 20.4**	**+2.6**	
JMN	**Monobe**	**10.59**	**222**	P		**Pn**	**01 00 21.4**	**+0.5**	
JMN	**Monobe**	**10.59**	**222**			**Pn**	**01 00 20.9**	**0.0**	
BNX	**BinXian**	**11.42**	**294**	⇓P		**Pn**	**01 00 34.0**	**+1.9**	
BNX				S		**Sn**	**01 02 37.5**	**-0.4**	
BNX				pmax		pmax			
	comp=Z,94nm,1.1s								
BNX				L		L			
	comp=Z,270nm,15.5s								
BNX				L		L			
	comp=Z,680nm,16.6s								
BNX				L		L			
	comp=Z,910nm,18.3s								
KSRS	**Korea Array**	**11.97**	**253**	P		**Pn**	**01 00 41.1**	**+1.5**	
	comp=Z,55nm,0.7s,baz=61,slow=14,SNR=39								
KSRS				S		**Sn**	**01 02 55.5**	**+4.1**	
	comp=Z,34nm,0.8s,baz=65,slow=24,SNR=7.8								
KSRS				LR		LR	01 04 51.8		
	comp=Z,825nm,21.3s,baz=60,slow=35								
KS19	**Wonju Array Si**	**11.99**	**253**			**Pn**	**01 00 42.9**	**+3.0**	
KSAR	**Wonju Array Be**	**12.00**	**253**			**Pn**	**01 00 42.0**	**+1.9**	
KSAR	**Wonju Array Be**	**12.00**	**253**	PN		**Pn**	**01 00 42.0**	**+1.9**	
CN2	**Changchun**	**12.52**	**284**	*e*P		**Pn**	**01 00 49.5**	**+2.4**	
CN2				*e*S		**Sn**	**01 03 12.0**	**+7.2**	
CN2				pmax		pmax			
	comp=Z,20nm,1.0s								
CN2				pmax		pmax			
	comp=Z,200nm,4.0s								
CN2				L		L			
	comp=Z,700nm,16.0s								
CN2				L		L			
	comp=Z,700nm,16.0s								
CN2				L		L			
	comp=Z,800nm,16.6s								
JTU	**Tsushima**	**12.58**	**238**	P		**Pn**	**01 00 49.4**	**+1.4**	
JNU	**Nakatsue**	**12.65**	**229**	P		**Pn**	**01 00 49.5**	**+0.4**	
	comp=Z,23nm,0.7s,baz=253,slow=0.6,SNR=14								
TJN	**Taejon**	**12.88**	**249**	P		**Pn**	**01 00 53.4**	**+1.4**	
TJN	**Taejon**	**12.88**	**249**			**Pn**	**01 00 53.4**	**+1.4**	
TJN	**Taejon**	**12.88**	**249**	PN		**Pn**	**01 00 53.4**	**+1.4**	
SKR	**Severo-Kuril's**	**12.90**	**43**	*e*PN		**Pn**	**01 00 54.6**	**+2.3**	
SKR				pmax		pmax			
	comp=Z,200nm,5.9s								
SKR				MLR		MLR			
	comp=Z,600nm,11.0s								
SKR	**Severo-Kuril's**	**12.90**	**43**	*e*P		**Pn**	**01 00 51.9**	**-0.4**	
HEH	**HeiHe**	**13.24**	**314**	*e*P		**Pn**	**01 00 57.0**	**+0.1**	
HEH				sP		P	01 01 15.8	+11	
HEH				S		**Sn**	**01 03 25.8**	**+3.5**	
HEH				SS		**S**	**01 03 40.0**	**-3.4**	
HEH				pmax		pmax			
	comp=Z,53nm,0.9s								
HEH				pmax		pmax			
	comp=Z,390nm,5.6s								
HEH				L		L			
	comp=Z,600nm,19.0s								
HEH				L		L			
	comp=Z,490nm,20.6s								
HEH				L		L			
	comp=Z,910nm,19.4s								
PAU	**Pauzhetka**	**13.73**	**41**	*e*P		**Pn**	**01 01 02.7**	**-0.7**	
PAU				*e*S		**Sn**	**01 03 26.7**	**-7.4**	
SNY	**Shenyang**	**13.97**	**276**	⇓P		**P**	**01 01 14.0**	**+1.2**	
SNY				S		**Sn**	**01 03 39.0**	**-1.1**	
SNY				pmax		pmax			
	comp=Z,62nm,0.8s								
SNY				pmax		pmax			
	comp=Z,100nm,3.8s								
SNY				LR		LR			
	comp=N,340nm,13.6s								
SNY				LR		LR			
	comp=E,460nm,22.9s								
SNY				LR		LR			
	comp=Z,890nm,27.5s								
JSU	**Suzuyama**	**14.11**	**226**	P		**Pn**	**01 01 08.7**	**+0.1**	
JSU	**Suzuyama**	**14.11**	**226**			**Pn**	**01 01 08.8**	**+0.1**	
JCJ	**Chichijima**	**14.83**	**180**	P		**Pn**	**01 01 15.0**	**-3.1**	
	comp=Z,70nm,0.5s,baz=99,slow=23,SNR=13								
JCJ				S		Sn	01 03 46.3	-15	
	comp=Z,80nm,0.8s,baz=31,slow=23,SNR=2.6								
JCJ	**Chichijima**	**14.83**	**180**	P		**Pn**	**01 01 18.4**	**+0.3**	
PETK	**Petropavlovsk-**	**15.20**	**38**	LR		LR	01 07 50.8		
	comp=Z,264nm,20.3s,baz=199,slow=40								
ZEA	**Zeya**	**15.49**	**325**	*e*P		**Pn**	**01 01 26.7**	**+0.3**	
ZEA				*e*S		**Sn**	**01 04 07.9**	**-8.9**	
ZEA				pmax		pmax			
	comp=E,100nm,1.3s								
ZEA				pmax		pmax			
	comp=Z,200nm,1.3s								
ZEA				pmax		pmax			
	comp=N,100nm,1.2s								
ZEA				MLR		MLR			
	comp=E,200nm,7.0s								
ZEA				MLR		MLR			
	comp=N,300nm,15.0s								
ZEA	**Zeya**	**15.49**	**325**	*e*P		**Pn**	**01 01 26.7**	**+0.3**	
PET	**Petropavlovsk**	**15.59**	**39**	P		**Pn**	**01 01 26.5**	**-1.0**	
PET	**Petropavlovsk**	**15.59**	**39**	⇑*e*P		**Pn**	**01 01 26.4**	**-1.1**	
PET				pmax		pmax			
	comp=Z,11nm,1.0s								
PET	**Petropavlovsk**	**15.59**	**39**	*e*P		**Pn**	**01 01 26.4**	**-1.1**	
DL2	**Dalian**	**16.05**	**266**	⇓*i*P		**Pn**	**01 01 34.5**	**+0.9**	
DL2				S		**Sn**	**01 04 32.5**	**+1.9**	
DL2				pmax		pmax			
	comp=Z,200nm,1.0s								
DL2				pmax		pmax			
	comp=Z,330nm,5.5s								
DL2				L		L			
	comp=Z,420nm,13.7s								
DL2				L		L			
	comp=Z,570nm,16.1s								
DL2				L		L			
	comp=Z,660nm,17.5s								
HIA	**Hailar**	**17.37**	**303**	P		**P**	**01 01 52.1**	**+1.6**	
HIA	**Hailar**	**17.37**	**303**	P		**Pn**	**01 01 48.2**	**-1.7**	
HIA	**Hailar**	**17.37**	**303**	P		**Pn**	**01 01 48.2**	**-1.7**	
HIA				pmax		pmax			
	comp=Z,47nm,1.0s								
MA2	**Magadan**	**18.40**	**14**	P		**P**	**01 02 00.2**	**-1.5**	
	comp=Z,24nm,0.6s,baz=186,slow=12,SNR=11								
MA2				LR		LR	01 10 35.1		
	comp=Z,82nm,18.2s,baz=125,slow=42								
MA2	**Magadan**	**18.40**	**14**	P		**P**	**01 02 00.1**	**-1.5**	
MA2	**Magadan**	**18.40**	**14**			**P**	**01 02 00.6**	**-1.0**	
MA2	**Magadan**	**18.40**	**14**	*de*P		**P**	**01 02 01.5**	**-0.2**	
MA2				pmax		pmax			
	comp=Z,130nm,1.7s								
MA2	**Magadan**	**18.40**	**14**	P		**P**	**01 02 01.5**	**-0.2**	
	comp=Z,70nm,1.3s								
MA2	**Magadan**	**18.40**	**14**	*e*P		**P**	**01 02 01.5**	**-0.2**	
JMZ	**Minamidaito 2**	**18.52**	**213**	P		**Pn**	**01 02 05.2**	**+1.1**	
JMZ	**Minamidaito 2**	**18.52**	**213**	P		**P**	**01 02 03.3**	**0.0**	
JOW	**Kunigami**	**18.99**	**222**	P		**P**	**01 02 07.5**	**-1.0**	
	comp=Z,26nm,0.5s,baz=16,slow=7.5,SNR=9.0								
JOW				LR		LR	01 09 52.0		
	comp=Z,388nm,21.7s,baz=114,slow=38								
JOW	**Kunigami**	**18.99**	**222**	P		**P**	**01 02 07.9**	**-0.5**	
JOW	**Kunigami**	**18.99**	**222**	P		**P**	**01 02 08.2**	**-0.3**	
JOW				IAmb		IAmb	01 02 18.6		
	comp=Z,172nm,1.4s								
XLT	**XiLinHaoTe**	**19.29**	**285**	*e*P		**P**	**01 02 10.3**	**-1.4**	
XLT				pmax		pmax			
	comp=Z,57nm,1.1s								
XLT				L		L			
	comp=Z,630nm,13.2s								
XLT				L		L			
	comp=Z,540nm,14.1s								
BJI2	**Beijing**	**19.82**	**273**	P		**P**	**01 02 15.8**	**-1.6**	
BJI2				PP		**sP**	**01 02 37.3**	**-1.0**	
BJI2				S		**S**	**01 05 48.5**	**-8.6**	
BJI2				pmax		pmax			
	comp=Z,54nm,1.0s								
BJI2				pmax		pmax			
	comp=Z,110nm,3.5s								
BJI2				L		L			
	comp=Z,210nm,14.5s								
BJI2				L		L			
	comp=Z,200nm,16.9s								
BJI2				L		L			
	comp=Z,280nm,22.4s								
BJT	**Baijiatuau**	**19.82**	**273**	P		**P**	**01 02 16.8**	**-0.6**	
BJT	**Baijiatuau**	**19.82**	**273**	P		**P**	**01 02 15.5**	**-1.9**	
BJT				IAmb		IAmb	01 02 17.5		
	comp=Z,97nm,0.9s								
BJT	**Baijiatuau**	**19.82**	**273**	P		**P**	**01 02 15.5**	**-1.9**	
BJT				pmax		pmax			
	comp=Z,97nm,0.9s								
TIA	**Tai'an**	**20.35**	**262**	P		**P**	**01 02 21.5**	**-1.7**	
TIA				PP		**sP**	**01 02 45.3**	**+1.2**	
TIA				pmax		pmax			
	comp=Z,200nm,0.9s								
TIA				pmax		pmax			
	comp=Z,220nm,5.3s								
TIA				L		L			
	comp=Z,210nm,9.3s								
TIA				L		L			
	comp=Z,250nm,13.5s								
TIA				L		L			
	comp=Z,620nm,25.0s								
NJ2	**Nanjing**	**21.14**	**250**	⇓*i*P		**P**	**01 02 30.0**	**-1.6**	
NJ2				pP		**pP**	**01 02 46.5**	**+1.6**	
NJ2				pmax		pmax			
	comp=Z,150nm,0.9s								
YAK	**Yakutsk**	**21.48**	**344**	P		**P**	**01 02 32.9**	**-2.0**	
	comp=Z,50nm,0.4s,baz=136,slow=2.0,SNR=14								
YAK				LR		LR	01 11 24.8		

TATO	**Taipei**	**24.17**	**232**	P	**P**	**01 03 02.0**	**-0.3**
TATO	**Taipei**	**24.17**	**232**	P	**P**	**01 03 03.4**	**+1.1**
BTO2	**Baotou**	**24.31**	**278**	*e*P	**P**	**01 03 01.5**	**-2.2**
BTO2				pP	**pP**	**01 03 18.5**	**-0.1**
BTO2				PP	**PnPn**	**01 03 37.5**	**+0.8**
BTO2				S	**S**	**01 07 15.5**	**-3.0**
BTO2				pmax	pmax		
	comp=Z,67nm,0.9s						
BTO2				pmax	pmax		
	comp=Z,270nm,5.3s						
BTO2				L	L		
	comp=Z,540nm,11.9s						
BTO2				L	L		
	comp=Z,580nm,20.2s						
BTO2				L	L		
	comp=Z,900nm,19.2s						
YHNB	**Yeheng**	**24.47**	**232**	P	**P**	**01 03 05.1**	**-0.1**
YHNB	**Yeheng**	**24.47**	**232**	P	**P**	**01 03 03.8**	**-1.4**
YHNB				IAmb	IAmb	01 03 13.6	
	comp=Z,70nm,0.7s						
LYN	**LuoYang**	**24.50**	**262**	P	**P**	**01 03 03.0**	**-2.3**
LYN				S	**S**	**01 07 18.3**	**-3.0**
LYN				pmax	pmax		
	comp=Z,94nm,0.8s						
LYN				L	L		
	comp=Z,220nm,12.7s						
LYN				L	L		
	comp=Z,510nm,17.5s						
LYN				L	L		
	comp=Z,580nm,21.6s						
NACB	**Ninganchiao**	**24.72**	**231**	P	**P**	**01 03 08.6**	**+1.2**
NACB	**Ninganchiao**	**24.72**	**231**	P	**P**	**01 03 04.4**	**-2.9**
WHN	**Wuhan**	**25.16**	**252**	P	**P**	**01 03 09.0**	**-2.3**
WHN				pmax	pmax		
	comp=Z,150nm,0.6s						
SSLB	**Suanglung**	**25.39**	**231**	P	**P**	**01 03 13.0**	**-0.5**
SSLB	**Suanglung**	**25.39**	**231**	P	**P**	**01 03 11.8**	**-1.7**
SSLB				IAmb	IAmb	01 03 19.6	
	comp=Z,33nm,0.8s						
YULB	**Yu-li**	**25.50**	**230**	P	**P**	**01 03 12.8**	**-1.7**
ULN	**Ulaanbaatar**	**25.51**	**295**	P	**P**	**01 03 14.4**	**-0.2**
ULN				IAmb	IAmb	01 03 17.2	
	comp=Z,29nm,0.7s						
ULN	**Ulaanbaatar**	**25.51**	**295**	*de*P	**P**	**01 03 14.2**	**-0.4**
ULN				pmax	pmax		
	comp=Z,64nm,1.3s						
ULN	**Ulaanbaatar**	**25.51**	**295**	P	**P**	**01 03 15.1**	**+0.5**
ULN	**Ulaanbaatar**	**25.51**	**295**	P	**P**	**01 03 13.6**	**-1.0**
	comp=Z,2µmcomp=Z,197nm,1.1s						
ULN	**Ulaanbaatar**	**25.51**	**295**	*e*P	**P**	**01 03 14.2**	**-0.4**
SONM	**Songino Array**	**25.95**	**295**	P	**P**	**01 03 17.9**	**-0.7**
	comp=Z,32nm,0.5s,baz=73,slow=8.5,SNR=165						
SONM				PcP	**PcP**	**01 06 46.1**	**+0.6**
	comp=Z,5.9nm,0.7s,baz=135,slow=2.2,SNR=6.9						
SONM				ScP	**ScP**	**01 10 19.3**	**-0.3**
	comp=Z,1.9nm,0.9s,baz=98,slow=4.1,SNR=5.4						
SONM				LR	LR	01 14 08.9	
	comp=Z,505nm,20.4s,baz=94,slow=38						
	comp=Z,32nm,0.5s						
SONM	**Songino Array**	**25.95**	**295**	P	**P**	**01 03 18.9**	**+0.4**
SONM				IAmb	IAmb	01 03 23.3	
	comp=Z,34nm,0.8s						
SONM					**PcP**	**01 06 45.6**	**+0.1**
SONM	**Songino Array**	**25.95**	**295**	P	**P**	**01 03 19.0**	**+0.4**
SONM						01 06 45.6	
SONM				pmax	pmax		
	comp=Z,34nm,0.8s						
TPUB	**Ta-pu**	**25.96**	**231**	P	**P**	**01 03 18.0**	**-0.6**
TPUB	**Ta-pu**	**25.96**	**231**	P	**P**	**01 03 17.4**	**-1.2**
TPUB				IAmb	IAmb	01 03 29.9	
	comp=Z,125nm,1.4s						
TWGBT	**Beinan**	**26.07**	**230**	P	**P**	**01 03 19.7**	**0.0**
TWG	**Pinlang**	**26.08**	**230**	P	**P**	**01 03 18.4**	**-1.3**
TWG				IAmb	IAmb	01 03 29.4	
	comp=Z,46nm,0.6s						
KNMB	**Chin-men Tao**	**26.43**	**236**	P	**P**	**01 03 20.9**	**-1.9**
KNMB				IAmb	IAmb	01 03 30.3	
	comp=Z,76nm,0.8s						
XAN	**Xi'an**	**27.36**	**264**	⇑P	**P**	**01 03 29.5**	**-1.7**
XAN				pP	pP	01 03 43.8	-2.3
XAN				pmax	pmax		
	comp=Z,21nm,0.5s						
XAN				pmax	pmax		
	comp=Z,270nm,3.7s						
CNSH	**ChangSha**	**27.55**	**250**	P	**P**	**01 03 32.8**	**-0.1**
CNSH				pmax	pmax		
	comp=Z,17nm,0.6s						
IRK	**Irkutsk**	**27.57**	**305**	*e*P	**P**	**01 03 29.3**	**-3.6**
IRK				pmax	pmax		
	comp=Z,82nm,1.2s						
TLY	**Talaya**	**27.90**	**304**	LR	LR	01 15 29.1	
	comp=Z,455nm,19.1s,baz=88,slow=38						
TLY	**Talaya**	**27.90**	**304**	*c i*P	**P**	**01 03 36.2**	**+0.4**
TLY				pmax	pmax		
	comp=Z,56nm,1.3s						
TLY	**Talaya**	**27.90**	**304**	P	**P**	**01 03 36.3**	**+0.4**
TLY	**Talaya**	**27.90**	**304**	*e*P	**P**	**01 03 36.2**	**+0.4**
ZAK	**Zakamensk**	**28.05**	**301**	*e*P	**P**	**01 03 35.9**	**-1.4**
ZAK				pmax	pmax		
	comp=Z,28nm,1.5s						
GUMO	**Guam**	**28.36**	**175**	LR	LR	01 13 38.1	
	comp=Z,176nm,21.3s,baz=0.0,slow=33						
ENH	**Enshi**	**28.81**	**257**	P	**P**	**01 03 42.4**	**-1.7**
ENH				IAmb	IAmb	01 03 47.2	
	comp=Z,86nm,1.0s						
BILL	**Bilibino**	**29.12**	**18**	P	**P**	**01 03 46.1**	**-0.3**
BILL	**Bilibino**	**29.12**	**18**	⇓*e*P	**P**	**01 03 46.5**	**+0.1**
BILL				pmax	pmax		
	comp=Z,23nm,2.5s						
BILL	**Bilibino**	**29.12**	**18**	*e*P	**P**	**01 03 46.5**	**+0.1**
MOY	**Mondy**	**29.55**	**303**	*e*P	P	01 03 58.0	+7.4
MOY				pmax	pmax		
	comp=Z,57nm,1.7s						
GSTR	**Great Sitkin T**	**29.74**	**56**	P	**P**	**01 03 48.9**	**-3.2**
LZH	**Lanzhou**	**30.28**	**272**	*e*P	**P**	**01 03 57.0**	**-0.3**
LZH				pP	pP	01 04 10.5	-1.8
LZH				sP	sP	01 04 19.5	0.0
LZH				pmax	pmax		
	comp=Z,19nm,1.4s						
LZH				L	L		
	comp=Z,230nm,12.7s						
LZH				L	L		
	comp=Z,220nm,13.4s						
LZH				L	L		
	comp=Z,280nm,15.8s						
H11N2	**WAKE ISLAND Hy**	**30.40**	**129**	T	T	01 35 30.2	
	baz=321,slow=75,SNR=753						
H11N1	**WAKE ISLAND Hy**	**30.41**	**129**	T	T	01 35 32.3	
	baz=321,slow=75,SNR=445						
H11N3	**WAKE ISLAND Hy**	**30.42**	**129**	T	T	01 35 29.6	
	baz=321,slow=75,SNR=987						
LZDM	**Lanzhou Array**	**30.45**	**272**	P	**P**	**01 03 58.2**	**-0.7**
	comp=Z,5.4nm,0.5s,baz=50,slow=2.3,SNR=9.0						
LZDM				PcP	**PcP**	**01 06 58.5**	**+1.5**
	comp=Z,9.8nm,0.5s,baz=252,slow=1.4,SNR=9.0						
LZDM				LR	LR	01 16 41.9	
	comp=Z,253nm,19.1s,baz=15,slow=37						
	comp=Z,5.4nm,0.5s						
TIXI	**Tiksi**	**30.50**	**352**	LR	LR	01 17 29.6	
	comp=Z,114nm,19.3s,baz=190,slow=39						
TIXI	**Tiksi**	**30.50**	**352**	P	**P**	**01 03 55.7**	**-2.9**
TIXI	**Tiksi**	**30.50**	**352**	⇓*e*P	**P**	**01 03 54.8**	**-3.8**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HKPS	**Hong Kong Po S**	**30.69**	**239**	P	**P**	**01 04 00.0**	**-0.7**
HKPS				IAmb	IAmb	01 04 04.5	
	comp=Z,45nm,0.7s						
GULI	**GuiLin**	**31.15**	**248**	P	**P**	**01 04 07.0**	**+2.2**
GULI				pmax	pmax		
	comp=Z,21nm,0.8s						
H11S1	**WAKE ISLAND Hy**	**31.26**	**131**	T	T	01 36 28.3	
	baz=324,slow=76,SNR=883						
H11S3	**WAKE ISLAND Hy**	**31.26**	**131**	T	T	01 36 46.5	
	baz=324,slow=76,SNR=788						
H11S2	**WAKE ISLAND Hy**	**31.28**	**131**	T	T	01 36 45.0	
	baz=324,slow=76,SNR=741						
KNGR	**Kungurtug, Tuv**	**31.73**	**301**	*ce*P	**P**	**01 04 11.0**	**+1.2**
KNGR				pmax	pmax		
	comp=Z,34nm,1.0s						
GTA2	**Gaotai**	**32.12**	**280**	P	**P**	**01 04 12.8**	**-0.6**
GTA2				PcP	**PcP**	**01 07 02.5**	**+1.3**
GTA2				S	**S**	**01 09 19.5**	**-1.9**
GTA2				PcS	**PcS**	**01 10 48.0**	**+1.8**
GTA2				ScS	**ScS**	**01 14 37.5**	**-0.7**
GTA2				pmax	pmax		
	comp=Z,26nm,0.8s						
GTA2				L	L		
	comp=Z,170nm,19.6s						
GTA2				L	L		
	comp=Z,270nm,20.6s						
GTA2				L	L		
	comp=Z,380nm,22.3s						
CD2	**Chengdu**	**32.68**	**263**	P	**P**	**01 04 17.0**	**-1.3**
CD2				pmax	pmax		
	comp=Z,60nm,0.6s						
CD2				L	L		
	comp=Z,250nm,9.5s						
CD2				L	L		
	comp=Z,280nm,8.3s						
CD2				L	L		
	comp=Z,270nm,13.3s						
GYA	**Guiyang**	**33.03**	**254**	P	**P**	**01 04 20.5**	**-0.9**
GYA				sP	sP	01 04 47.0	+3.4
GYA				PcP	**PcP**	**01 07 00.5**	**-3.4**
GYA				S	**S**	**01 09 35.5**	**-0.2**
GYA				sS	sS	01 10 05.3	+4.0
GYA				pmax	pmax		
	comp=Z,22nm,0.5s						
GYA				pmax	pmax		
	comp=Z,180nm,4.5s						
GYA				L	L		
	comp=Z,330nm,19.7s						
SPIA	**Saint Paul Isl**	**33.54**	**47**	P	**P**	**01 04 25.3**	**-0.1**
	baz=264						
UNV	**Unalaska Valle**	**35.54**	**53**	P	**P**	**01 04 42.1**	**-0.6**
	baz=272						
QIZ	**Qiongzhong**	**35.80**	**240**	P	**P**	**01 04 46.5**	**+1.2**
QIZ				S	**S**	**01 10 22.0**	**+3.7**
QIZ				L	L		
	comp=Z,200nm,14.3s						
QIZ				L	L		
	comp=Z,250nm,15.0s						
QIZ				L	L		
	comp=Z,250nm,25.4s						
M11K	**Mekoryuk**	**36.01**	**41**	P	**P**	**01 04 46.1**	**-0.5**
	baz=263						
TNA	**Tin City**	**36.27**	**32**	P	**P**	**01 04 48.5**	**-0.2**
	baz=254						
PZH	**PanZhiHua**	**36.56**	**258**	P	**P**	**01 04 54.0**	**+2.1**
KMI2	**Kunming**	**36.63**	**255**	⇑P	**P**	**01 04 52.5**	**-0.1**
KMI2				sP	sP	01 05 17.5	+2.6
KMI2				pmax	pmax		
	comp=Z,34nm,0.7s						
KMI2				L	L		
	comp=Z,260nm,15.4s						
KMI2				L	L		
	comp=Z,170nm,25.8s						
KMI2				L	L		
	comp=Z,210nm,22.3s						
F14K	**Arctic Creek**	**36.89**	**33**	P	**P**	**01 04 53.7**	**-0.4**
	baz=256						
GOMU	**GeErMu**	**36.95**	**277**	P	**P**	**01 04 55.0**	**-0.4**
GOMU				PcP	**PcP**	**01 07 16.5**	**+1.0**
GOMU				pmax	pmax		
	comp=Z,27nm,0.6s						
K13K	**Kusilvak Mount**	**36.95**	**39**	P	**P**	**01 04 54.7**	**+0.1**
K13K				IAmb	IAmb	01 05 24.3	
	comp=Z,20nm,1.2s						
K13K	**Kusilvak Mount**	**36.95**	**39**	P	**P**	**01 04 54.3**	**-0.3**
	baz=262						
ANM	**Nome**	**37.08**	**35**	P	**P**	**01 04 55.6**	**-0.1**
ANM	**Nome**	**37.08**	**35**	P	**P**	**01 04 55.6**	**-0.1**
ANM				pmax	pmax		
	comp=Z,18nm,1.4s						
ANM	**Nome**	**37.08**	**35**	P	**P**	**01 04 55.6**	**-0.1**
	baz=258						
M13K	**Dall Lake**	**37.42**	**42**	P	**P**	**01 04 59.8**	**+1.2**
M13K				IAmb	IAmb	01 05 11.8	
	comp=Z,20nm,0.9s						
M13K	**Dall Lake**	**37.42**	**42**	P	**P**	**01 04 58.5**	**-0.1**
	baz=265						
J14K	**Nanvaranak Lak**	**37.57**	**38**	P	**P**	**01 04 59.9**	**+0.1**
J14K	**Nanvaranak Lak**	**37.57**	**38**	P	**P**	**01 04 59.5**	**-0.4**
	baz=262						
F15K	**North Star Dit**	**37.62**	**33**	P	**P**	**01 04 59.8**	**-0.5**
F15K	**North Star Dit**	**37.62**	**33**	P	**P**	**01 05 00.6**	**+0.3**
	baz=257						
G15K	**Niukluk**	**37.73**	**34**	P	**P**	**01 05 01.5**	**+0.3**
	baz=259						
DAV	**Davao City (W)**	**37.79**	**208**	LR	LR	01 19 00.8	
	comp=Z,100nm,21.9s,baz=332,slow=34						
DAV	**Davao City (W)**	**37.79**	**208**	P	**P**	**01 05 02.7**	**+0.5**
L14K	**Kuka Creek**	**37.82**	**40**	P	**P**	**01 05 02.7**	**+0.7**
L14K	**Kuka Creek**	**37.82**	**40**	P	**P**	**01 05 02.0**	**0.0**
	baz=265						
C16K	**Lisburne Hills**	**38.01**	**29**	IAmb	IAmb	01 05 04.9	
	comp=Z,13nm,0.8s						
C16K	**Lisburne Hills**	**38.01**	**29**	P	**P**	**01 05 03.3**	**-0.1**
	baz=253						
M14K	**Bethel**	**38.13**	**41**	P	**P**	**01 05 05.2**	**+0.7**
M14K				IAmb	IAmb	01 05 36.4	
	comp=Z,17nm,0.9s						
M14K	**Bethel**	**38.13**	**41**	P	**P**	**01 05 04.8**	**+0.2**
	baz=266						
N14K	**Kuskokwak Cree**	**38.22**	**42**	P	**P**	**01 05 05.8**	**+0.4**
N14K				IAmb	IAmb	01 05 28.6	
	comp=Z,39nm,1.1s						
N14K	**Kuskokwak Cree**	**38.22**	**42**	P	**P**	**01 05 05.2**	**-0.2**
	baz=268						
O14K	**Tigyukauivet M**	**38.42**	**44**	P	**P**	**01 05 06.8**	**-0.2**
	baz=269						
L15K	**Ungalak Mounta**	**38.42**	**40**	P	**P**	**01 05 06.9**	**-0.1**
	baz=266						
H16K	**Elim**	**38.42**	**35**	P	**P**	**01 05 06.6**	**-0.4**
	baz=261,SNR=10						
K15K	**Wolf Creek Mou**	**38.45**	**39**	P	**P**	**01 05 07.9**	**+0.5**
	baz=265						
G16K	**Koyuk River**	**38.50**	**34**	P	**P**	**01 05 07.3**	**-0.4**
G16K	**Koyuk River**	**38.50**	**34**	P	**P**	**01 05 07.7**	**+0.1**
	baz=260						
D17K	**Noatak River**	**38.68**	**30**	P	**P**	**01 05 08.6**	**-0.5**
	baz=256,SNR=11						
M15K	**Kasigluk River**	**38.75**	**41**	P	**P**	**01 05 09.7**	**-0.1**
	baz=268						
RDOG	**Red Dog Mine**	**38.83**	**29**	P	**P**	**01 05 09.6**	**-0.8**
RDOG	**Red Dog Mine**	**38.83**	**29**	P	**P**	**01 05 10.4**	**0.0**
	baz=256						
C17K	**DeLong Mountai**	**38.83**	**29**	P	**P**	**01 05 09.9**	**-0.5**
	baz=255,SNR=19						
SDPT	**Sand Point**	**38.96**	**50**	P	**P**	**01 05 11.1**	**-0.6**
	baz=274						
J16K	**Anvik River**	**38.97**	**37**	P	**P**	**01 05 11.5**	**-0.1**
	baz=264						
I17K	**Unalakleet**	**38.99**	**36**	P	**P**	**01 05 12.3**	**+0.6**
I17K	**Unalakleet**	**38.99**	**36**	P	**P**	**01 05 11.9**	**+0.2**
	baz=264						
E17K	**Hotham Inlet**	**39.02**	**31**	P	**P**	**01 05 11.9**	**-0.1**
	baz=258,SNR=18						
N15K	**Kwethluk River**	**39.03**	**42**	P	**P**	**01 05 13.2**	**+1.0**
N15K				IAmb	IAmb	01 05 34.8	
	comp=Z,28nm,0.9s						
N15K	**Kwethluk River**	**39.03**	**42**	P	**P**	**01 05 12.5**	**+0.3**
	baz=269						
F17K	**Baldwin Pennin**	**39.12**	**32**	P	**P**	**01 05 12.6**	**-0.2**
	baz=260						
NRIK	**Noril'sk**	**39.15**	**333**	P	**P**	**01 05 11.9**	**-1.2**
	comp=Z,19nm,0.4s,baz=107,slow=9.2,SNR=51						
NRIK				LR	LR	01 22 41.7	
	comp=Z,447nm,20.4s,baz=106,slow=38						
	comp=Z,19nm,0.4s						
NRIK	**Noril'sk**	**39.15**	**333**	P	**P**	**01 05 11.5**	**-1.5**
NRIK				IAmb	IAmb	01 05 13.4	
	comp=Z,23nm,0.6s						
NRIK	**Noril'sk**	**39.15**	**333**	*de*P	**P**	**01 05 11.8**	**-1.2**
NRIK				pmax	pmax		
	comp=Z,22nm,0.9s						
O15K	**Ungalikthiuk R**	**39.16**	**44**	P	**P**	**01 05 14.5**	**+1.3**
O15K				IAmb	IAmb	01 05 31.7	
	comp=Z,23nm,1.1s						
O15K	**Ungalikthiuk R**	**39.16**	**44**	P	**P**	**01 05 12.9**	**-0.4**
	baz=270						
G17K	**Kiwalik Mounta**	**39.22**	**34**	P	**P**	**01 05 13.5**	**-0.2**
	baz=262						
ZAA0	**Zalesovo Array**	**39.27**	**308**	P	**P**	**01 05 14.6**	**+0.3**
ZALV	**Zalesovo Beam**	**39.27**	**308**	P	**P**	**01 05 14.1**	**-0.2**
	comp=Z,76nm,0.8s,baz=94,slow=10.0,SNR=229						
ZALV				PcP	**PcP**	**01 07 22.1**	**+0.2**
	comp=Z,25nm,0.7s,baz=103,slow=3.1,SNR=13						
ZALV				ScP	**ScP**	**01 11 05.1**	**+0.2**
	comp=Z,3.4nm,0.7s,baz=64,slow=3.4,SNR=6.5						
ZALV				LR	LR	01 22 19.3	
	comp=Z,301nm,19.0s,baz=80,slow=37						
	comp=Z,76nm,0.8s						
ZALV	**Zalesovo Beam**	**39.27**	**308**	P	**P**	**01 05 14.7**	**+0.5**
ZALV	**Zalesovo Beam**	**39.27**	**308**	P	**P**	**01 05 14.7**	**+0.5**
ZALV						01 07 22.1	
ZALV						01 11 05.1	
L16K	**Owhat River**	**39.38**	**40**	P	**P**	**01 05 15.7**	**+0.7**
L16K	**Owhat River**	**39.38**	**40**	P	**P**	**01 05 14.7**	**-0.4**
	baz=267						
H17K	**Granite Mounta**	**39.45**	**35**	P	**P**	**01 05 15.1**	**-0.6**
	baz=263						
WMQ	**Urumqi**	**39.46**	**292**	⇑P	**P**	**01 05 17.0**	**+1.0**
WMQ				pP	pP	01 05 33.5	+2.1
WMQ				sP	sP	01 05 40.0	+1.5
WMQ				PcP	**PcP**	**01 07 23.0**	**+0.2**
WMQ				ScP	**ScP**	**01 11 06.5**	**+0.6**
WMQ				S	**S**	**01 11 17.5**	**+4.1**
WMQ				sS	sS	01 11 40.8	+1.4
WMQ				ScS	**ScS**	**01 15 14.3**	**-3.9**
WMQ				pmax	pmax		
	comp=Z,25nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,150nm,3.7s						
WMQ				L	L		
	comp=Z,220nm,23.8s						
CHNA	**Chernabura Isl**	**39.51**	**51**	P	**P**	**01 05 16.0**	**-0.2**
CHNA	**Chernabura Isl**	**39.51**	**51**	P	**P**	**01 05 15.4**	**-0.8**
	baz=276						
CNBA	**Chernabura Isl**	**39.52**	**51**	P	**P**	**01 05 17.1**	**+0.9**
E18K	**Tukpahlearik C**	**39.55**	**31**	P	**P**	**01 05 16.3**	**-0.1**
E18K	**Tukpahlearik C**	**39.55**	**31**	P	**P**	**01 05 16.1**	**-0.3**
	baz=259,SNR=7.6						
C18K	**Utukok River**	**39.58**	**29**	P	**P**	**01 05 15.9**	**-0.8**
	baz=257,SNR=21						
M16K	**Timber Creek**	**39.61**	**41**	P	**P**	**01 05 17.9**	**+0.9**
M16K	**Timber Creek**	**39.61**	**41**	P	**P**	**01 05 16.2**	**-0.8**
	baz=269						
J17K	**VABM Dome**	**39.66**	**37**	P	**P**	**01 05 18.2**	**+0.8**
J17K	**VABM Dome**	**39.66**	**37**	P	**P**	**01 05 16.8**	**-0.6**
	baz=266,SNR=9.5						
N16K	**Nishlik Lake**	**39.69**	**42**	P	**P**	**01 05 17.1**	**-0.6**
	baz=270						
TNCH	**TengChong**	**39.78**	**259**	P	**P**	**01 05 19.8**	**+0.8**
TNCH				pmax	pmax		
	comp=Z,370nm,2.2s						
F18K	**Selawik**	**39.78**	**32**	P	**P**	**01 05 18.2**	**-0.1**
	baz=261						
L17K	**Donlin**	**39.95**	**39**	P	**P**	**01 05 19.1**	**-0.8**
	baz=268						
K17K	**Iditarod**	**39.98**	**38**	P	**P**	**01 05 20.8**	**+0.8**
K17K				IAmb	IAmb	01 05 35.1	
	comp=Z,18nm,0.9s						
K17K	**Iditarod**	**39.98**	**38**	P	**P**	**01 05 19.3**	**-0.7**
	baz=267,SNR=7.1						
A19K	**Wainwright**	**39.99**	**26**	P	**P**	**01 05 19.9**	**-0.1**
	baz=256						
O16K	**Kokwok River B**	**40.04**	**43**	P	**P**	**01 05 20.1**	**-0.4**
O16K	**Kokwok River B**	**40.04**	**43**	P	**P**	**01 05 20.3**	**-0.2**
	baz=271						
CHGN	**Chignik**	**40.04**	**48**	P	**P**	**01 05 20.8**	**+0.2**
CHGN	**Chignik**	**40.04**	**48**	P	**P**	**01 05 19.5**	**-1.1**
	baz=275						
G18K	**Tagagawik**	**40.09**	**33**	P	**P**	**01 05 20.7**	**-0.2**
G18K	**Tagagawik**	**40.09**	**33**	P	**P**	**01 05 20.6**	**-0.2**
	baz=263,SNR=12						
P16K	**Nushagak River**	**40.11**	**44**	P	**P**	**01 05 22.0**	**+0.9**
P16K	**Nushagak River**	**40.11**	**44**	P	**P**	**01 05 20.4**	**-0.7**
	baz=272						
H18K	**Honhosa River**	**40.13**	**34**	P	**P**	**01 05 21.0**	**-0.2**
H18K	**Honhosa River**	**40.13**	**34**	P	**P**	**01 05 20.7**	**-0.6**
	baz=264						
C19K	**Lookout Ridge**	**40.25**	**28**	P	**P**	**01 05 21.8**	**-0.5**
	baz=258,SNR=9.6						
M17K	**Holitna River**	**40.35**	**40**	P	**P**	**01 05 24.6**	**+1.5**
M17K				IAmb	IAmb	01 05 52.8	
	comp=Z,17nm,0.8s						
M17K	**Holitna River**	**40.35**	**40**	P	**P**	**01 05 22.8**	**-0.3**
	baz=270,SNR=6.3						
ZSN	**Zaisan**	**40.40**	**298**	⇑*i*P	**P**	**01 05 24.3**	**+0.5**
	comp=Z,19nm,0.8s						
N17K	**Nushagak Hills**	**40.48**	**42**	P	**P**	**01 05 25.1**	**+0.9**
N17K	**Nushagak Hills**	**40.48**	**42**	P	**P**	**01 05 23.9**	**-0.3**
	baz=271						
O17K	**Koliganek Bris**	**40.54**	**43**	P	**P**	**01 05 24.2**	**-0.5**
	baz=272						
F19K	**Shaleruckik Mo**	**40.55**	**32**	P	**P**	**01 05 24.4**	**-0.3**
F19K	**Shaleruckik Mo**	**40.55**	**32**	P	**P**	**01 05 24.1**	**-0.6**
	baz=263						
D19K	**Kuna River**	**40.66**	**29**	P	**P**	**01 05 25.6**	**-0.1**
	baz=260						
L18K	**Granite Mounta**	**40.71**	**39**	P	**P**	**01 05 27.2**	**+1.1**
L18K	**Granite Mounta**	**40.71**	**39**	P	**P**	**01 05 25.6**	**-0.4**
	baz=269,SNR=5.1						
GCSA	**Galena City Sc**	**40.72**	**35**	P	**P**	**01 05 25.6**	**-0.5**
	baz=266						
J18K	**Innoko River**	**40.73**	**37**	P	**P**	**01 05 26.8**	**+0.6**
J18K	**Innoko River**	**40.73**	**37**	P	**P**	**01 05 26.0**	**-0.2**
	baz=268						
G19K	**Purcell Mounta**	**40.75**	**33**	P	**P**	**01 05 26.1**	**-0.3**
	baz=264,SNR=10						
Q16K	**King Salmon**	**40.82**	**44**	P	**P**	**01 05 26.6**	**-0.4**
	baz=273						
E19K	**Redstone River**	**40.84**	**31**	P	**P**	**01 05 26.9**	**-0.2**
	baz=263						
P17K	**Kvichak River**	**40.90**	**44**	P	**P**	**01 05 27.3**	**-0.3**
	baz=273						
H19K	**Roundabout Mou**	**40.96**	**34**	P	**P**	**01 05 28.3**	**+0.3**
H19K				IAmb	IAmb	01 05 31.4	
	comp=Z,21nm,0.7s						
H19K	**Roundabout Mou**	**40.96**	**34**	P	**P**	**01 05 28.2**	**+0.1**
	baz=266						
R17L	**Mt. Peulik Vol**	**41.05**	**46**	P	**P**	**01 05 28.2**	**-0.7**
	baz=275						
N18K	**Kilae Creek**	**41.11**	**41**	P	**P**	**01 05 31.0**	**+1.6**
N18K	**Kilae Creek**	**41.11**	**41**	P	**P**	**01 05 29.3**	**-0.1**
	baz=272						
M18K	**Stony River**	**41.12**	**40**	P	**P**	**01 05 30.1**	**+0.7**
	baz=271						
J19K	**Poorman**	**41.23**	**36**	P	**P**	**01 05 30.5**	**+0.2**
J19K	**Poorman**	**41.23**	**36**	P	**P**	**01 05 30.4**	**0.0**
	baz=268,SNR=10						
D20K	**Etivluk River**	**41.24**	**29**	IAmb	IAmb	01 05 52.9	
	comp=Z,15nm,0.7s						
D20K	**Etivluk River**	**41.24**	**29**	P	**P**	**01 05 30.2**	**-0.2**
	baz=262						
Q17K	**Contact Creek**	**41.25**	**45**	P	**P**	**01 05 30.3**	**-0.4**
	baz=274						
B20K	**Meade River**	**41.26**	**27**	IAmb	IAmb	01 05 55.0	
	comp=Z,41nm,0.6s						
B20K	**Meade River**	**41.26**	**27**	P	**P**	**01 05 29.9**	**-0.5**
	baz=260,SNR=46						
E20K	**Nigu River**	**41.34**	**30**	P	**P**	**01 05 30.9**	**-0.3**
	baz=263,SNR=12						
F20K	**Avaraart Lake**	**41.38

C21K Knifeblade Rid 41.95 28 P P 01 05 36.1 -0.1
baz=263,SNR=15
B21K Ikpikpuk River 42.07 28 P P 01 05 36.8 -0.3
B21K IAmb IAmb 01 06 01.8
comp=Z,19nm,0.6s
B21K Ikpikpuk River 42.07 28 P P 01 05 36.5 -0.6
baz=263,SNR=21
IMAR Indian Mountai 42.10 33 P P 01 05 37.3 -0.1
A22K Sinclair Lake 42.15 26 P P 01 05 36.9 -0.7
baz=261
E21K Killik River 42.17 30 P P 01 05 37.4 -0.6
baz=265,SNR=10
G21K Allakaket 42.22 32 P P 01 05 38.2 -0.1
baz=267
F21K Alatna River 42.27 31 P P 01 05 38.7 0.0
baz=266,SNR=5.6
MK31 Makanchi Array 42.27 298*c iP* P 01 05 39.2 +0.1
MK31 pmax pmax
comp=Z,75nm,0.7s
MKAR Makanchi Array 42.27 298 P P 01 05 39.2 +0.1
comp=Z,54nm,0.7s,baz=83,slow=9.5,SNR=475
MKAR PcP PcP 01 07 32.3 +0.5
comp=Z,5.3nm,0.5s,baz=55,slow=3.1,SNR=4.2
MKAR ScP ScP 01 11 16.9 -0.1
comp=Z,3.0nm,1.0s,baz=90,slow=3.6,SNR=4.2
comp=Z,54nm,0.7s
SII Sitkinak Islan 42.35 47 P P 01 05 38.8 -0.8
baz=278
Q19K Cape Douglas, 42.36 44 P P 01 05 40.0 +0.4
Q19K Cape Douglas, 42.36 44 P P 01 05 39.5 -0.2
baz=276
M20K Styx River 42.39 39 P P 01 05 40.0 +0.1
baz=273
MAKZ Makanchi 42.48 298 P P 01 05 41.2 +0.5
MAKZ Makanchi 42.48 298 P P 01 05 41.2 +0.5
MAKZ pmax pmax
comp=Z,86nm,0.8s
MAKZ Makanchi 42.48 298 P P 01 05 41.2 +0.5
H21K Melozitna Rive 42.48 34 P P 01 05 40.5 0.0
baz=269,SNR=8.0
P19K Oil Pt 42.50 43 P P 01 05 41.1 +0.4
P19K IAmb IAmb 01 06 15.8
comp=Z,65nm,1.4s
P19K Oil Pt 42.50 43 P P 01 05 40.4 -0.4
baz=275
ILSW Iliamna Southw 42.52 42 P P 01 05 41.7 +0.7
ILSW IAmb IAmb 01 05 48.5
comp=Z,35nm,1.4s
B22K Teshekpuk Lake 42.57 27 P P 01 05 40.5 -0.6
baz=263,SNR=9.4
KKM Kota Kinabalu 42.63 220 P P 01 05 42.9 +0.5
KKM Kota Kinabalu 42.63 220 P P 01 05 41.9 -0.5
KKM IAmb IAmb 01 05 44.9
comp=Z,23nm,0.9s
KKM Kota Kinabalu 42.63 220 P P 01 05 41.9 -0.5
comp=Z,32nm,0.9s
RED Redoubt Volcan 42.66 42 P P 01 05 42.5 +0.3
LSA Lhasa 42.68 270 P P 01 05 44.6 +1.5
LSA Lhasa 42.68 270 P P 01 05 42.3 -0.8
LSA pmax pmax
comp=Z,45nm,1.0s
LSA L L
comp=Z,130nm,20.2s
LSA L L
comp=Z,170nm,20.8s
CHUM Lake Minchumin 42.69 36 P P 01 05 42.1 -0.1
baz=271,SNR=7.0
OHAK Old Harbor 42.75 46 P P 01 05 42.9 +0.2
OHAK Old Harbor 42.75 46 P P 01 05 41.8 -0.9
OHAK IAmb IAmb 01 05 50.2
comp=Z,28nm,1.1s
OHAK Old Harbor 42.75 46 P P 01 05 42.7 0.0
baz=278
PPLA Purkeypile 42.78 38 P P 01 05 43.7 +0.6
PPLA Purkeypile 42.78 38 P P 01 05 42.7 -0.4
baz=272,SNR=7.7
F22K John River 42.79 31 P P 01 05 43.2 +0.2
baz=267
N20K Mount Spurr 42.88 40 P P 01 05 43.3 -0.5
baz=274,SNR=10
SPCR Spurr Chakacha 42.88 40 P P 01 05 43.3 -0.5
baz=274
E22K Anaktuvuk Pass 42.95 30 P P 01 05 43.5 -0.8
E22K IAmb IAmb 01 06 09.0
comp=Z,19nm,0.6s
E22K Anaktuvuk Pass 42.95 30 P P 01 05 43.8 -0.5
baz=267,SNR=30
SPU Mount Spurr 42.95 40 P P 01 05 45.1 +0.6
G22K Bettles 43.03 32 P P 01 05 44.8 -0.1
baz=269
STLK Strandline Lak 43.03 40 P P 01 05 45.9 +0.8
Q20K Shuyak Island 43.04 44 P P 01 05 45.0 -0.1
baz=277
SYI Shuyak Island 43.04 44 P P 01 05 45.1 0.0
SYI IAmb IAmb 01 05 53.5
comp=Z,60nm,1.1s
KDAK Kodiak Island 43.05 45 LR LR 01 24 34.0
comp=Z,172nm,21.7s,baz=245,slow=37
KDAK Kodiak Island 43.05 45 P P 01 05 45.3 +0.1
KDAK IAmb IAmb 01 06 16.1
comp=Z,96nm,1.4s
KDAK Kodiak Island 43.05 45 P P 01 05 45.3 +0.1
KDAK pmax pmax
comp=Z,96nm,1.5s
KDAK Kodiak Island 43.05 45 P P 01 05 44.9 -0.2
baz=278
H22K Ishtalitna Cre 43.07 33 P P 01 05 45.5 +0.2
baz=270,SNR=13
SKT Skwentna 43.14 39 P P 01 05 46.3 +0.4
SKT Skwentna 43.14 39 P P 01 05 46.1 +0.1
baz=274
TNTI Ternate 43.16 202 P P 01 05 46.8 +0.3
comp=Z,36nm,0.5s
BPAW Bear Paw Mtn. 43.27 36 P P 01 05 47.5 +0.5
BPAW Bear Paw Mtn. 43.27 36 P P 01 05 46.9 0.0
baz=272
MNI Manado 43.30 206 P P 01 05 47.8 +0.2
KTH Kantishna Hill 43.33 37 P P 01 05 48.1 +0.6
KTH IAmb IAmb 01 05 50.1
comp=Z,43nm,1.0s
CHTO Chiang Mai 43.37 251 P P 01 05 49.2 +1.0
CHTO Chiang Mai 43.37 251 P P 01 05 48.4 +0.2
CHTO IAmb IAmb 01 05 54.7
comp=Z,36nm,0.7s
CHTO Chiang Mai 43.37 251 P P 01 05 48.4 +0.2
CHTO pmax pmax
comp=Z,36nm,0.7s
CHTO Chiang Mai 43.37 251 P P 01 05 49.4 +1.2
CHTO Chiang Mai 43.37 251 P P 01 05 48.1 -0.1
comp=Z,51nm,0.7s
CHTO Chiang Mai 43.37 251 P P 01 05 49.2 +1.0
CHTO pP pP 01 06 02.7 -1.1
D23K Nanushuk River 43.41 29 P P 01 05 47.9 -0.1
D23K Nanushuk River 43.41 29 P P 01 05 48.3 +0.3
baz=267
C23K Itkillik River 43.48 28 P P 01 05 47.4 -1.1
C23K Itkillik River 43.48 28 P P 01 05 48.5 0.0
baz=266,SNR=9.0
CNPM China Poot 43.52 43 P P 01 05 48.6 -0.4
CNPM IAmb IAmb 01 06 16.4
comp=Z,32nm,1.1s
COLD Coldfoot 43.54 31 P P 01 05 48.8 -0.3
COLD Coldfoot 43.54 31 P P 01 05 49.2 +0.1
baz=270,SNR=9.5
KURK Kurchatov 43.59 304 P P 01 05 49.7 +0.1
KURK Kurchatov 43.59 304 P P 01 05 49.7 +0.1
KURK pmax pmax
comp=Z,109nm,0.7s
KURK Kurchatov 43.59 304 P P 01 05 49.9 +0.2
KURK Kurchatov 43.59 304 *eP* P 01 05 49.7 +0.1
KURK Kurchatov 43.59 304 P P 01 05 49.8 +0.1
KURK pP pP 01 06 04.7 -0.5
KURK sP sP 01 06 11.2 -1.1
CM31 Chiang Mai Arr 43.60 251 P P 01 05 50.3 +0.2
CM31 IAmb IAmb 01 05 59.1
comp=Z,22nm,0.9s
CMAR Chiang Mai Arr 43.60 251 P P 01 05 51.2 +1.1
comp=Z,7.8nm,0.6s,baz=42,slow=7.3,SNR=36
CMAR PcP PcP 01 07 38.1 +1.4
comp=Z,4.6nm,0.7s,baz=28,slow=2.6,SNR=6.8
CMAR ScP ScP 01 11 23.8 +1.1
comp=Z,1.8nm,0.3s,baz=15,slow=3.7,SNR=8.8
CMAR LR LR 01 25 29.3
comp=Z,180nm,18.5s,baz=50,slow=38
comp=Z,7.8nm,0.6s
CMAR Chiang Mai Arr 43.60 251 P P 01 05 50.9 +0.8
CMAR PcP 01 07 37.9 +1.2
CMAR ScP 01 11 24.2 +1.5
G23K Bananza Creek 43.61 32 P P 01 05 48.9 -0.8
G23K Bananza Creek 43.61 32 P P 01 05 49.8 +0.1
baz=270,SNR=10
TRF Thorofare Moun 43.62 37 P P 01 05 50.0 +0.1
TRF Thorofare Moun 43.62 37 P P 01 05 50.3 +0.4
baz=274,SNR=9.5
BRLK Bradley Lake 43.67 42 P P 01 05 50.8 +0.6
KURBB Kurchatov Arra 43.67 304 P P 01 05 50.4 +0.1
comp=Z,111nm,0.7s,baz=77,slow=8.6,SNR=602
KURBB LR LR 01 24 44.6
comp=Z,214nm,19.4s,baz=171,slow=37
comp=Z,111nm,0.7s
KURBB Kurchatov Arra 43.67 304 P P 01 05 49.9 -0.4
CUT Chulitna 43.70 38 P P 01 05 50.1 -0.3
CUT IAmb IAmb 01 05 51.5
comp=Z,24nm,0.9s
CUT Chulitna 43.70 38 P P 01 05 50.8 +0.4
baz=275
BRSE Bradley Lake S 43.75 42 P P 01 05 50.8 0.0
baz=277
E23K Chandalar 43.77 30 P P 01 05 51.2 +0.2
baz=269,SNR=12
SWI Sorong 43.79 196 P P 01 05 51.4 -0.1
comp=Z,49nm,1.1s
SIJI Sorong 43.79 196 P P 01 05 52.2 +0.6
comp=Z,35nm,0.8s
TOLK Toolik Lake Re 43.80 29 P P 01 05 51.2 0.0
baz=269,SNR=11
H23K Yukon River 43.83 33 P P 01 05 51.4 0.0
baz=272
M22K Willow 43.83 39 P P 01 05 51.2 -0.1
baz=275
SLKM Skilak Lake 43.91 41 P P 01 05 52.5 +0.4
I23K Minto, Yukon-K 43.93 34 P P 01 05 52.3 +0.2
baz=272,SNR=8.2
NEA2 Nenana 44.08 35 IAmb IAmb 01 05 55.8
comp=Z,30nm,0.8s
NEA2 Nenana 44.08 35 P P 01 05 53.3 -0.1
baz=273,SNR=18
RC01 Rabbit Creek A 44.08 40 P P 01 05 53.3 -0.1
RC01 IAmb IAmb 01 06 22.0
comp=Z,15nm,0.7s
RC01 Rabbit Creek A 44.08 40 P P 01 05 53.1 -0.3
baz=276
D24K Happy Valley 44.08 29 P P 01 05 53.4 0.0
baz=269
C24K Franklin Bluff 44.14 28 IAmb IAmb 01 06 17.9
comp=Z,32nm,0.8s
C24K Franklin Bluff 44.14 28 P P 01 05 53.9 +0.2
baz=268
O22K Cooper Landing 44.16 41 P P 01 05 54.2 +0.2
O22K IAmb IAmb 01 06 13.1
comp=Z,37nm,0.6s
O22K Cooper Landing 44.16 41 P P 01 05 54.3 +0.2
baz=277
E24K Your Creek 44.20 30 P P 01 05 54.6 +0.2
baz=270,SNR=21
MCK McKinley 44.20 36 P P 01 05 54.1 -0.3
MCK McKinley 44.20 36 P P 01 05 54.1 -0.3
MCK pmax pmax
comp=Z,18nm,0.9s
MCK McKinley 44.20 36 P P 01 05 54.4 0.0
baz=274,SNR=15
PMR Palmer 44.31 40 P P 01 05 55.2 -0.1
PMR IAmb IAmb 01 06 23.6
comp=Z,15nm,0.8s
PMR Palmer 44.31 40 P P 01 05 55.2 -0.1
PMR pmax pmax
comp=Z,15nm,0.8s
PMR Palmer 44.31 40 P P 01 05 55.5 +0.3
baz=276,SNR=5.6
SEW Seward 44.34 42 P P 01 05 55.8 +0.3
SEW IAmb IAmb 01 06 01.9
comp=Z,22nm,1.0s
SEW Seward 44.34 42 P P 01 05 55.8 +0.3
baz=278
SHL Shillong 44.36 265 IAmb IAmb 01 05 58.4
comp=Z,38nm,0.8s
SHL Shillong 44.36 265 P P 01 05 56.8 +0.4
GHO Glory Hole Cre 44.39 39 P P 01 05 56.5 +0.4
GHO IAmb IAmb 01 05 57.4
comp=Z,26nm,0.5s
F24K Squaw Lake 44.44 31 P P 01 05 56.3 +0.1
baz=271,SNR=16
WAT1 Susitna Watana 44.45 38 P P 01 05 56.5 +0.1
baz=276
H24K Noodor Dome 44.51 33 P P 01 05 57.7 +0.8
H24K Noodor Dome 44.51 33 P P 01 05 56.5 -0.4
baz=273,SNR=10
WRH Wood River Hil 44.51 35 P P 01 05 56.6 -0.2
COLA College 44.58 35 P P 01 05 57.2 -0.1
COLA IAmb IAmb 01 05 59.9
comp=Z,55nm,1.0s
COLA College 44.58 35*c iP* P 01 05 57.8 +0.4
COLA pmax pmax
comp=Z,33nm,0.9s
COLA College 44.58 35 P P 01 05 57.8 +0.4
baz=274
CCB Clear Creek Bu 44.62 35 P P 01 05 58.1 +0.4
G24K Hadweenzic Riv 44.63 32 P P 01 05 57.8 +0.1
G24K Hadweenzic Riv 44.63 32 P P 01 05 57.9 +0.1
baz=273,SNR=6.1
KNK Knik Glacier 44.66 40 P P 01 05 58.4 +0.4
KNK IAmb IAmb 01 06 32.4
comp=Z,40nm,1.2s
KNK Knik Glacier 44.66 40 P P 01 05 58.0 0.0
baz=277
SML Sawmill 44.67 39 P P 01 05 57.7 -0.4
SML IAmb IAmb 01 06 32.1
comp=Z,34nm,0.8s
SML Sawmill 44.67 39 P P 01 05 58.4 +0.2
baz=277,SNR=8.4
GTOI Gorontalo 44.67 208 P P 01 05 58.3 -0.3
comp=Z,659nmcomp=Z,81nm,0.9s
POKR Poker Plat Res 44.74 34 P P 01 05 58.8 +0.1
baz=274
WAT6 Susitna Watana 44.85 38 P P 01 05 59.9 +0.2
baz=276,SNR=6.6
D25K Kavik River 44.95 28 IAmb IAmb 01 06 24.6
comp=Z,14nm,0.6s
D25K Kavik River 44.95 28 P P 01 06 00.0 -0.3
baz=271,SNR=28
M23K Glacier View 44.95 39 P P 01 06 00.4 0.0
baz=277
DHY Denali Highway 44.96 37 P P 01 06 00.2 -0.4
DHY IAmb IAmb 01 06 01.8
comp=Z,20nm,0.8s
DHY Denali Highway 44.96 37 P P 01 06 00.6 0.0
baz=276,SNR=15
IL31 45.00 35 IAmb IAmb 01 06 02.8
comp=Z,33nm,1.1s
ILAR Eielson Array 45.00 35 P P 01 06 00.7 -0.1
comp=Z,17nm,0.8s,baz=262,slow=5.3,SNR=124
comp=Z,17nm,0.8s
HDA Harding Lake 45.01 35 IAmb IAmb 01 06 01.7
comp=Z,15nm,0.6s
HDA Harding Lake 45.01 35 P P 01 06 01.2 +0.4
baz=275,SNR=18
TOLI2 Tolitoli 45.06 211 P P 01 06 02.1 +0.4
TOLI2 IAmb IAmb 01 06 03.1
comp=Z,24nm,0.7s
SCM Sheep Creek Mo 45.14 39 P P 01 06 02.4 +0.5
SCM IAmb IAmb 01 06 10.7
comp=Z,22nm,0.7s
SCM Sheep Creek Mo 45.14 39 P P 01 06 02.4 +0.5
SCM pmax pmax
comp=Z,22nm,0.7s
SCM Sheep Creek Mo 45.14 39 P P 01 06 02.3 +0.4
baz=278,SNR=7.1
G25K Bearman Lake 45.17 32 P P 01 06 02.3 +0.3
baz=274
MRSI Marisa 45.20 209 P P 01 06 03.5 +0.7
PDGK Podgornoye 45.26 294 P P 01 06 02.7 -0.5
E25K Arctic Village 45.29 30 P P 01 06 03.2 +0.1
baz=273,SNR=7.2
F25K Christian Rive 45.29 31 P P 01 06 03.4 +0.3
F25K Christian Rive 45.29 31 P P 01 06 02.8 -0.3
baz=273,SNR=8.8
SHLS Shalkode 45.34 294 *eP* P 01 06 01.6 -2.2
comp=Z,22nm,0.5s
P23K Montague Islan 45.38 42 P P 01 06 03.3 -0.5
baz=279
GLI Glacier Island 45.38 40 P P 01 06 03.7 -0.1
baz=279
TDK Taldyqorghan 45.41 297 *eP* P 01 06 04.7 +0.5
comp=Z,27nm,0.7s
C26K Camden Bay 45.45 28 P P 01 06 04.6 +0.4
baz=272
PRP Porcupine Dome 45.51 34 P P 01 06 04.5 -0.4
PRP IAmb IAmb 01 06 07.1
comp=Z,25nm,0.8s
PRP Porcupine Dome 45.51 34 P P 01 06 05.1 +0.3
baz=276,SNR=44
FYU Fort Yukon 45.53 32 P P 01 06 04.2 -0.7
FYU IAmb IAmb 01 06 35.5
comp=Z,41nm,1.4s
K24K Donnelly Dome 45.59 36 P P 01 06 05.2 -0.2
K24K IAmb IAmb 01 06 06.8
comp=Z,28nm,0.8s
K24K Donnelly Dome 45.59 36 P P 01 06 05.4 0.0
baz=277
FAKI Fak Fak 45.60 194 P P 01 06 06.5 +0.5
FAKI Fak Fak 45.60 194 P P 01 06 06.1 +0.1
FAKI Fak Fak 45.60 194 P P 01 06 05.1 -0.9
comp=Z,58nm,1.0s
M24K Tolsona, Glenn 45.64 39 P P 01 06 05.2 -0.7
M24K IAmb IAmb 01 06 08.1
comp=Z,27nm,0.7s
M24K Tolsona, Glenn 45.64 39 P P 01 06 06.3 +0.4
baz=278
UZB Uzynbulak 45.64 294⇑ *iP* P 01 06 06.3 +0.1
J25K Salcha River, 45.67 35 P P 01 06 06.1 0.0
baz=276,SNR=7.7
BMAR Burnt Mountain 45.71 31 P P 01 06 07.1 +0.7
KPKS Kokpek 45.76 294 *eP* P 01 06 07.7 +0.6
PAX Paxson 45.84 37 P P 01 06 07.9 +0.4
PAX Paxson 45.84 37 P P 01 06 07.9 +0.4
PAX pmax pmax
comp=Z,7.0nm,0.9s
PAX Paxson 45.84 37 P P 01 06 07.4 -0.1
baz=278
KLU Klutina 45.85 39 P P 01 06 08.0 +0.4
KLU IAmb IAmb 01 06 36.7
comp=Z,26nm,0.9s
KLU Klutina 45.85 39 P P 01 06 07.8 +0.2
baz=279,SNR=11
F26K Sheenjek River 45.86 31 P P 01 06 07.6 +0.1
baz=275,SNR=16
C27K Jago River 45.88 28 IAmb IAmb 01 06 32.5
comp=Z,18nm,0.8s
C27K Jago River 45.88 28 P P 01 06 07.8 +0.2
baz=273,SNR=20
DIV Divide 45.98 40 P P 01 06 09.0 +0.4
DIV IAmb IAmb 01 06 35.4
comp=Z,22nm,0.9s
Q23K Middleton Isla 46.00 42 P P 01 06 08.2 -0.4
baz=281
RIDG Independent Ri 46.01 36 IAmb IAmb 01 06 30.7
comp=Z,13nm,0.7s
RIDG Independent Ri 46.01 36 P P 01 06 08.5 -0.2
baz=278,SNR=8.1
G26K Porcupine Rive 46.07 32 P P 01 06 09.7 +0.5
G26K IAmb IAmb 01 06 17.5
comp=Z,12nm,0.7s
G26K Porcupine Rive 46.07 32 P P 01 06 09.6 +0.5
baz=276,SNR=15
ARXS Arharly 46.07 296 *eP* P 01 06 08.4 -1.1
EYAK Cordova Ski Ar 46.09 41 P P 01 06 10.2 +0.9
EYAK IAmb IAmb 01 06 12.9
comp=Z,32nm,0.9s
EYAK Cordova Ski Ar 46.09 41 P P 01 06 09.8 +0.5
baz=280
SATY Saty 46.09 294⇑ *iP* P 01 06 10.2 +0.4
MPSI Mapaga 46.11 212 P P 01 06 10.2 +0.2
comp=Z,30nm,0.7s
BRDH Bariadhala 46.23 262 LR LR 01 26 36.1
comp=Z,111nm,20.6s,baz=94,slow=37
WUS Wushi 46.24 291 P P 01 06 11.7 +0.7
WUS pP pP 01 06 25.6 -1.1
WUS sP sP 01 06 32.6 -1.1
SANI Sanana 46.24 203 P P 01 06 10.8 -0.2
SANI Sanana 46.24 203 P P 01 06 10.0 -1.0
comp=Z,504nmcomp=Z,32nm,0.6s
PRZ Przheval'sk 46.31 293 P P 01 06 12.1 +0.5
PRZ Przheval'sk 46.31 293 P P 01 06 12.1 +0.5
PRZ pmax pmax
comp=Z,42nm,0.8s
LUWI Luwuk 46.32 208 P P 01 06 10.6 -1.0
LUWI Luwuk 46.32 208 P P 01 06 10.3 -1.3
comp=Z,2µmcomp=Z,49nm,0.9s
SCRK Sand Creek 46.35 36 P P 01 06 11.5 -0.1
SCRK IAmb IAmb 01 06 12.4
comp=Z,32nm,0.9s
SCRK Sand Creek 46.35 36 P P 01 06 11.7 +0.2
baz=278,SNR=24
DOT Dot Lake 46.37 36 P P 01 06 10.8 -0.8
DOT IAmb IAmb 01 06 13.4
comp=Z,13nm,0.9s
N25K Chitina, Valde 46.46 39 P P 01 06 13.2 +0.9
N25K Chitina, Valde 46.46 39 P P 01 06 12.7 +0.3
baz=280
I26K Coal Creek Min 46.52 34 P P 01 06 12.8 +0.2
baz=278
BMRM Bremner River 46.57 40 P P 01 06 13.1 -0.1
BMRM IAmb IAmb 01 06 25.2
comp=Z,22nm,0.8s
BMRM Bremner River 46.57 40 P P 01 06 13.7 +0.5
baz=281
APSI Ampana 46.59 209 P P 01 06 13.8 0.0
comp=Z,76nm,1.0s
MENT Mentasta 46.63 37 P P 01 06 12.2 -1.4
MENT IAmb IAmb 01 06 29.5
comp=Z,13nm,0.8s
E27K Coleen River 46.77 30 P P 01 06 15.2 +0.5
baz=276,SNR=6.1
L26K Log Cabin Wild 46.78 37 IAmb IAmb 01 06 17.1
comp=Z,16nm,0.7s
L26K Log Cabin Wild 46.78 37 P P 01 06 15.5 +0.6
baz=280,SNR=5.9
KRAI Karang Ratu 46.81 199 P P 01 06 16.0 +0.5
comp=Z,4µmcomp=Z,46nm,1.1s
EVN Everest 46.82 271 P P 01 06 16.5 +0.2
GLB Gilahina Butte 46.86 39 P P 01 06 16.4 +1.0
GLB IAmb IAmb 01 06 21.1
comp=Z,11nm,0.6s
D27M Malcolm River 46.88 28 P P 01 06 16.3 +0.8
baz=276
G27K Doyon Strip 46.92 32 P P 01 06 16.7 +0.8
baz=278,SNR=5.9
MDOK Medeo 46.98 295 *eP* P 01 06 17.2 +0.4
AAA Alma-Ata 47.05 295 *eP* P 01 06 17.7 +0.5
comp=Z,20nm,0.6s
H27K Steamboat Moun 47.05 33 P P 01 06 17.5 +0.6
baz=278,SNR=12
M26K Nabesna, AK 47.05 38 P P 01 06 17.7 +0.7
M26K IAmb IAmb 01 06 19.5
comp=Z,24nm,1.2s
M26K Nabesna, AK 47.05 38 P P 01 06 17.9 +0.9
baz=281,SNR=13
VRDI Verde Repeater 47.07 39 P P 01 06 17.8 +0.6
VRDI IAmb IAmb 01 06 19.3
comp=Z,19nm,0.9s
NLAI Namlea 47.07 201 P P 01 06 17.7 +0.2
TNSS Tian-Shan 47.09 294 *eP* P 01 06 18.1 +0.1
I27K Kandik River 47.11 33 P P 01 06 18.0 +0.6
I27K IAmb IAmb 01 06 19.6
comp=Z,15nm,1.0s
I27K Kandik River 47.11 33 P P 01 06 18.2 +0.9
baz=279,SNR=14
K27K Chicken 47.17 36 P P 01 06 18.2 +0.4
K27K IAmb IAmb 01 06 19.7
comp=Z,43nm,1.1s
AAI Ambon 47.22 199 P P 01 06 18.3 -0.3
comp=Z,71nm,0.9s
MCARA McCarthy VSAT 47.24 39 P P 01 06 19.4 +1.1
MCARA IAmb IAmb 01 06 20.9
comp=Z,22nm,0.7s
MCARA McCarthy VSAT 47.24 39 P P 01 06 19.6 +1.2
baz=282,SNR=8.4
PCI Palu 47.27 211 P P 01 06 18.9 -0.2
comp=Z,6µmcomp=Z,41nm,0.7s
KDJ Kajisay 47.28 293 P P 01 06 19.3 +0.1
KDJ Kajisay 47.28 293 P P 01 06 19.3 +0.1
KDJ pmax pmax
comp=Z,42nm,0.8s
CRQM Cirque 47.31 40 P P 01 06 19.7 +0.5
CRQM IAmb IAmb 01 06 22.1
comp=Z,49nm,1.1s
CRQE Cirque 47.34 40 P P 01 06 20.1 +0.8
baz=282,SNR=8.1
BRZS Berezniki 47.45 305 *eP* P 01 06 20.7 +0.5

L27K Beaver Creek, 47.46 37 P **P** **01 06 20.6 +0.5**
L27K IAmb IAmb 01 06 22.5
comp=Z,25nm,0.8s
L27K Beaver Creek, 47.46 37 P **P** **01 06 21.2 +1.1**
baz=281,SNR=35
TGL Tana Glacier 47.46 40 P **P** **01 06 20.9 +0.7**
TGL IAmb IAmb 01 06 22.9
comp=Z,24nm,1.0s
E28M Babbage River 47.47 29 P **P** **01 06 21.0 +0.9**
baz=278,SNR=12
BCAR Beaver Creek A 47.48 37 P **P** **01 06 21.4 +1.2**
F28M Old Crow 47.49 31 P **P** **01 06 21.1 +0.9**
baz=278,SNR=7.9
M27K Edge Creek, AK 47.58 38 P **P** **01 06 21.9 +0.8**
M27K IAmb IAmb 01 06 23.5
comp=Z,26nm,0.9s
M27K Edge Creek, AK 47.58 38 P **P** **01 06 22.1 +0.9**
baz=282,SNR=17
D28M Stokes Point 47.66 28 P **P** **01 06 21.7 +0.3**
baz=278,SNR=8.9
SBUM Sibu 47.71 223 P **P** **01 06 23.2 +0.7**
SBUM Sibu 47.71 223 P **P** **01 06 22.7 +0.2**
SBUM IAmb IAmb 01 06 24.5
comp=Z,10nm,0.8s
SBUM Sibu 47.71 223 P **P** **01 06 23.0 +0.5**
I28M Miner Creek 47.82 33 IAmb IAmb 01 06 25.2
comp=Z,27nm,0.7s
I28M Miner Creek 47.82 33 P **P** **01 06 23.2 +0.3**
baz=280,SNR=48
ULHL Ulahoi 47.88 294 P **P** **01 06 24.1 +0.3**
SNR=31
BVA0 Borovoye Array 47.89 309 *eP* **P** **01 06 23.9 +0.4**
BVAR Borovoye Array 47.89 309 P **P** **01 06 24.1 +0.5**
comp=Z,57nm,0.4s,baz=75,slow=9.3,SNR=738
BVAR PcP **PcP** **01 07 51.8 +0.7**
comp=Z,15nm,0.7s,baz=67,slow=3.9,SNR=4.5
BVAR LR LR 01 27 46.8
comp=Z,206nm,19.2s,baz=69,slow=38
comp=Z,57nm,0.4s
BORK Borovoye 47.92 309 P **P** **01 06 24.4 +0.7**
BORK Borovoye 47.92 309 *c iP* **P** **01 06 24.2 +0.4**
BORK pmax pmax
comp=Z,47nm,0.6s
BORK Borovoye 47.92 309 P **P** **01 06 24.7 +0.9**
BORK sP **sP** **01 06 45.0 -1.6**
BARN Barnard Glacie 47.95 39 P **P** **01 06 24.8 +0.7**
BARN IAmb IAmb 01 06 26.2
comp=Z,24nm,0.7s
GRNC Granite Creek 47.98 40 P **P** **01 06 24.7 +0.3**
GRNC IAmb IAmb 01 06 26.5
comp=Z,22nm,0.8s
BOOM Boomskoye usch 47.99 294 P **P** **01 06 25.2 +0.6**
BOOM Boomskoye usch 47.99 294 P **P** **01 06 25.2 +0.6**
BOOM pmax pmax
comp=Z,110nm,0.7s
MESA MESA 48.02 41 P **P** **01 06 25.0 +0.4**
baz=283
BVCY Beaver Creek 48.03 38 P **P** **01 06 25.1 +0.6**
baz=282,SNR=5.2
TKM2 Tokmak 2 48.05 295 P **P** **01 06 26.1 +0.9**
SNR=40
E29M Blow River 48.10 29 P **P** **01 06 25.8 +0.8**
baz=280,SNR=14
CTG Chitna Glacier 48.13 40 P **P** **01 06 25.8 +0.4**
baz=283,SNR=7.3
CTGM Chitina Glacie 48.13 40 P **P** **01 06 25.9 +0.5**
CTGM IAmb IAmb 01 06 27.5
comp=Z,26nm,0.8s
BTLS Baital 48.28 298 *eP* **P** **01 06 27.0 +0.4**
H29M Whitestone 48.31 32 IAmb IAmb 01 06 28.8
comp=Z,18nm,1.1s
H29M Whitestone 48.31 32 P **P** **01 06 27.6 +0.9**
baz=281,SNR=9.6
G29M Pine Creek 48.32 31 IAmb IAmb 01 06 36.5
comp=Z,12nm,0.7s
G29M Pine Creek 48.32 31 P **P** **01 06 27.5 +0.8**
baz=281
YUK3 Moose Creek 48.35 38 P **P** **01 06 27.6 +0.4**
baz=283,SNR=5.5
NRN Naryn 48.37 293 IAmb IAmb 01 07 00.8
comp=Z,21nm,0.8s
SGDS Sogindy 48.50 296 *i iP* **P** **01 06 28.7 +0.3**
I29M Ogilvie Camp, 48.51 33 P **P** **01 06 27.5 -0.7**
I29M IAmb IAmb 01 06 30.0
comp=Z,23nm,0.7s
I29M Ogilvie Camp, 48.51 33 P **P** **01 06 29.2 +1.0**
baz=282
CHMS Chumysh 48.59 295 P **P** **01 06 29.4 +0.3**
SNR=20
KBK Karagaybulak 48.60 295 P **P** **01 06 30.1 +0.8**
SNR=136
USP Ospenovka 48.66 296 P **P** **01 06 30.0 +0.4**
SNR=19
O28M Mount Upton 48.72 40 P **P** **01 06 30.6 +0.5**
O28M IAmb IAmb 01 06 32.0
comp=Z,13nm,0.9s
O28M Mount Upton 48.72 40 P **P** **01 06 30.6 +0.5**
baz=284
J29N Klondike Camp 48.74 35 P **P** **01 06 31.1 +1.1**
baz=283
FRU1 Bishkek 48.75 295 P **P** **01 06 30.6 +0.2**
FRU1 Bishkek 48.75 295 P **P** **01 06 30.6 +0.2**
FRU1 pmax pmax
comp=Z,64nm,0.7s
BKB Balikpapan 48.79 215 P **P** **01 06 29.0 -1.7**
BKB Balikpapan 48.79 215 P **P** **01 06 30.4 -0.4**
YUK8 Steele Glacier 48.79 39 P **P** **01 06 31.0 +0.3**
baz=284
PINM Pinnacle 48.86 40 P **P** **01 06 31.5 +0.5**
baz=285
AAK Ala-Archa 48.91 295 LR LR 01 29 24.7
comp=Z,136nm,18.1s,baz=78,slow=39
AAK Ala-Archa 48.91 295 P **P** **01 06 32.1 +0.4**
SNR=25
AAK Ala-Archa 48.91 295 P **P** **01 06 31.6 -0.2**
AAK Ala-Archa 48.91 295 *i* P **P** **01 06 32.1 +0.4**
SNR=94
AAK Ala-Archa 48.91 295 *c iP* **P** **01 06 31.7 0.0**
AAK pmax pmax
comp=Z,20nm,0.8s
AAK Ala-Archa 48.91 295 P **P** **01 06 32.1 +0.4**
AAK Ala-Archa 48.91 295 *eP* **P** **01 06 31.7 0.0**
AAK Ala-Archa 48.91 295 P **P** **01 06 32.1 +0.4**
EPYK Eagle Plains 48.94 32 P **P** **01 06 32.0 +0.6**
EPYK IAmb IAmb 01 06 33.4
comp=Z,36nm,1.1s
EPYK Eagle Plains 48.94 32 P **P** **01 06 32.3 +0.9**
baz=282,SNR=22
G30M tAoh Zraii Nji 49.00 31 P **P** **01 06 32.2 +0.3**
G30M IAmb IAmb 01 06 35.8
comp=Z,18nm,0.9s
G30M tAoh Zraii Nji 49.00 31 P **P** **01 06 32.0 +0.1**
baz=282,SNR=13
F30M Barrier River 49.03 30 P **P** **01 06 32.9 +0.8**
F30M IAmb IAmb 01 06 34.8
comp=Z,28nm,0.8s
F30M Barrier River 49.03 30 P **P** **01 06 32.8 +0.8**
baz=282,SNR=26
UCH Uchtor 49.06 294 P **P** **01 06 33.9 +0.7**
SNR=17
L29M L29M 49.09 36 P **P** **01 06 33.8 +1.2**
L29M IAmb IAmb 01 06 35.7
comp=Z,32nm,0.9s
L29M L29M 49.09 36 P **P** **01 06 33.7 +1.0**
baz=284,SNR=22
M29M Somme Creek 49.11 37 P **P** **01 06 34.1 +1.2**
M29M Somme Creek 49.11 37 P **P** **01 06 33.8 +1.0**
baz=284
K29M Barlow Dome 49.18 35 P **P** **01 06 34.1 +0.7**
K29M Barlow Dome 49.18 35 P **P** **01 06 34.0 +0.7**
baz=284
MMSI Mamuju 49.26 212 P **P** **01 06 34.1 -0.3**
YUK4 Talbot Arm 49.30 39 P **P** **01 06 35.3 +0.9**
baz=285
I30M Mount Dempster 49.33 33 P **P** **01 06 34.9 +0.3**
I30M Mount Dempster 49.33 33 P **P** **01 06 35.0 +0.4**
baz=284,SNR=106
EKS2 Erkin-Say 49.38 295 P **P** **01 06 35.7 +0.4**
SNR=99
J30M Hart River 49.51 34 P **P** **01 06 36.6 +0.7**
J30M IAmb IAmb 01 06 38.1
comp=Z,14nm,0.9s
J30M Hart River 49.51 34 P **P** **01 06 36.4 +0.5**
baz=284,SNR=18
YUK6 Outpost Mounta 49.54 39 P **P** **01 06 36.8 +0.4**
baz=286

O29M Mount Kennedy 49.61 40 P **P** **01 06 37.1 +0.4**
O29M IAmb IAmb 01 06 40.7
comp=Z,12nm,0.8s
O29M Mount Kennedy 49.61 40 P **P** **01 06 37.3 +0.5**
baz=286
KSH2 Kashi 49.63 290 P **P** **01 06 38.0 +0.7**
KSH2 pP pP 01 06 55.5 +2.4
KSH2 pmax pmax
comp=Z,35nm,0.7s
INK Inuvik 49.71 29 LR LR 01 29 48.2
comp=Z,69nm,19.2s,baz=308,slow=39
INK Inuvik 49.71 29 IAmb IAmb 01 06 38.7
comp=Z,14nm,0.7s
INK Inuvik 49.71 29 P **P** **01 06 37.6 +0.5**
baz=283,SNR=28
G31M Satah River 49.76 31 P **P** **01 06 38.3 +0.7**
baz=284
M30M Minto, Yukon 49.82 37 P **P** **01 06 39.1 +0.9**
M30M IAmb IAmb 01 06 41.0
comp=Z,11nm,0.9s
M30M Minto, Yukon 49.82 37 P **P** **01 06 38.7 +0.5**
baz=285,SNR=7.8
F31M Tsiigehtchic 49.84 30 IAmb IAmb 01 06 39.4
comp=Z,17nm,0.9s
F31M Tsiigehtchic 49.84 30 P **P** **01 06 38.5 +0.4**
baz=284,SNR=11
MAYO Mayo, Yukon 49.94 35 P **P** **01 06 39.6 +0.6**
MAYO Mayo, Yukon 49.94 35 P **P** **01 06 40.0 +0.9**
baz=285
HYT Haines Junctio 49.98 39 P **P** **01 06 40.5 +1.0**
HYT Haines Junctio 49.98 39 P **P** **01 06 40.0 +0.5**
baz=286,SNR=40
N30M Aishikik Lake 49.99 38 P **P** **01 06 40.3 +0.7**
N30M Aishikik Lake 49.99 38 P **P** **01 06 40.1 +0.5**
baz=286
H31M Peel River 50.01 32 P **P** **01 06 40.0 +0.4**
baz=285,SNR=64
SPSI Sidrap Palu 50.10 210 P **P** **01 06 40.2 -0.6**
comp=Z,31nm,0.9s
P30M Million Dollar 50.44 40 P **P** **01 06 42.9 -0.1**
baz=287
N31M Braeburn, Yuko 50.59 38 P **P** **01 06 44.9 +0.9**
N31M IAmb IAmb 01 06 47.0
comp=Z,27nm,0.8s
N31M Braeburn, Yuko 50.59 38 P **P** **01 06 44.2 +0.2**
baz=287,SNR=7.2
O30N Mendenhall 50.66 39 P **P** **01 06 45.7 +1.1**
O30N IAmb IAmb 01 06 48.0
comp=Z,20nm,1.2s
O30N Mendenhall 50.66 39 P **P** **01 06 44.7 +0.2**
baz=287
DZA Taraz 50.93 296 *eP* **P** **01 06 47.3 +0.4**
M31M Drury Creek, Y 51.00 37 P **P** **01 06 48.0 +0.9**
M31M IAmb IAmb 01 06 49.9
comp=Z,11nm,0.8s
M31M Drury Creek, Y 51.00 37 P **P** **01 06 47.0 -0.1**
baz=288,SNR=9.1
KAPI Kappang 51.08 209 LR LR 01 29 10.0
comp=Z,26nm,20.9s,baz=23,slow=37
KAPI Kappang 51.08 209 P **P** **01 06 47.6 -0.5**
KAPI IAmb IAmb 01 06 50.1
comp=Z,29nm,0.9s
KAPI Kappang 51.08 209 *ce* **P** **P** **01 06 48.9 +0.8**
KAPI pmax pmax
comp=Z,30nm,1.0s
KAPI Kappang 51.08 209 P **P** **01 06 49.0 +0.8**
KAPI Kappang 51.08 209 P **P** **01 06 48.3 +0.2**
WHY Whitehorse 51.26 39 P **P** **01 06 49.4 +0.3**
WHY IAmb IAmb 01 06 51.7
comp=Z,24nm,0.8s
WHY Whitehorse 51.26 39 P **P** **01 06 48.9 -0.3**
baz=288,SNR=7.7
PMG Port Moresby 51.31 174 LR LR 01 27 19.5
comp=Z,33nm,21.3s,baz=351,slow=34
KK31 Karatay Array 51.39 297 *i* P **P** **01 06 50.1 -0.2**
KKAR Karatay Array 51.39 297 P **P** **01 06 50.1 -0.2**
KKAR Karatay Array 51.39 297 P **P** **01 06 50.1 -0.2**
SKAG Skagway 51.43 40 P **P** **01 06 50.5 +0.3**
baz=289
A36M Sachs Harbour 51.44 23 IAmb IAmb 01 06 52.2
comp=Z,28nm,0.8s
A36M Sachs Harbour 51.44 23 P **P** **01 06 50.8 +0.6**
baz=288,SNR=28
S31K Pelican 51.48 42 P **P** **01 06 50.5 -0.1**
baz=289
BBKI Banjar Baru 51.65 216 P **P** **01 06 52.4 0.0**
comp=Z,11µmcomp=Z,102nm,0.8s
KULM Kulim 52.00 237 P **P** **01 06 56.1 +1.1**
KULM Kulim 52.00 237 P **P** **01 06 56.2 +1.2**
comp=Z,882nmcomp=Z,114nm,0.8s
SVE Sverdlovsk 52.00 316 *di* **P** **P** **01 06 55.3 +0.8**
SVE *eS* **S** **01 14 18.1 +5.1**
SVE pmax pmax
comp=Z,128nm,0.8s
SVE Sverdlovsk 52.00 316 *eP* **P** **01 06 55.3 +0.8**
IUG luzhnay 52.12 296 *i iP* **P** **01 06 56.2 +0.4**
comp=Z,19nm,0.6s
P32M Atlin 52.16 40 P **P** **01 06 55.3 -0.5**
baz=290
R32K Eaglecrest 52.23 42 P **P** **01 06 58.1 +1.9**
R32K IAmb IAmb 01 06 59.6
comp=Z,23nm,1.0s
R32K Eaglecrest 52.23 42 P **P** **01 06 55.8 -0.5**
baz=290
MMPY Sheldon Lake, 52.25 36 P **P** **01 06 57.9 +1.4**
MMPY Sheldon Lake, 52.25 36 P **P** **01 06 56.1 -0.3**
baz=290,SNR=7.1
SIT Sitka 52.25 43 P **P** **01 06 56.4 0.0**
baz=291
CHM Chimkent 52.33 297 *i iP* **P** **01 06 57.8 +0.5**
comp=Z,19nm,0.6s
P33M Teslin, Yukon 52.37 39 P **P** **01 06 57.9 +0.5**
P33M IAmb IAmb 01 07 00.1
comp=Z,21nm,1.0s
P33M Teslin, Yukon 52.37 39 P **P** **01 06 57.7 +0.3**
baz=290,SNR=10
S32K Killisnoo 52.48 43 P **P** **01 06 58.2 +0.1**
baz=291
BTK Batken 52.51 293 P **P** **01 06 58.6 -0.2**
BTK Batken 52.51 293 P **P** **01 06 58.6 -0.2**
BTK pmax pmax
comp=Z,31nm,0.6s
PBA Port Blair 52.60 250 P **P** **01 06 59.4 -0.1**
PBA Port Blair 52.60 250 P **P** **01 07 00.6 +1.1**
C36M Paulatuk 52.69 26 P **P** **01 06 59.8 +0.4**
baz=290,SNR=40
MYKOM Kota Tinggi 52.83 231 P **P** **01 07 02.9 +1.7**
MYKOM Kota Tinggi 52.83 231 P **P** **01 07 01.5 +0.3**
MYKOM Kota Tinggi 52.83 231 P **P** **01 07 02.3 +1.1**
comp=Z,571nmcomp=Z,63nm,0.9s
Q32M Nakina River 53.08 40 P **P** **01 07 03.9 +1.1**
Q32M IAmb IAmb 01 07 16.0
comp=Z,33nm,1.4s
Q32M Nakina River 53.08 40 P **P** **01 07 03.4 +0.6**
baz=292
BTDF Bukit Timah Da 53.22 231 P **P** **01 07 04.6 +0.5**
comp=Z,496nmcomp=Z,56nm,0.9s
ARTI Arti 53.32 316 LR LR 01 32 11.8
comp=Z,219nm,21.1s,baz=68,slow=39
ARTI Arti 53.32 316 P **P** **01 07 04.4 +0.2**
ARTI Arti 53.32 316 *c iP* **P** **01 07 04.6 +0.3**
ARTI *PP **pP** **01 07 22.5 +2.1**
ARTI 01 08 10.8
ARTI S **S** **01 14 30.9 -0.1**
ARTI SS **SS** **01 18 05.9 -5.0**
ARTI pmax pmax
comp=Z,123nm,0.8s
ARTI Arti 53.32 316 P **P** **01 07 04.5 +0.2**
ARTI PcP **PcP** **01 08 11.7 +0.6**
R33M Jennings River 53.54 39 P **P** **01 07 06.8 +0.8**
R33M Jennings River 53.54 39 P **P** **01 07 07.2 +1.2**
baz=292
U33K Whale Pass 53.74 44 P **P** **01 07 08.6 +1.2**
baz=293
NIL Nilore 53.87 285 P **P** **01 07 10.2 +1.4**
TGTN Hyland Airport 53.95 36 P **P** **01 07 10.1 +1.1**
baz=293,SNR=8.6
CRAG Craig 53.99 44 P **P** **01 07 09.4 +0.2**
S34M Telegraph Cree 54.03 41 P **P** **01 07 10.6 +1.1**
S34M Telegraph Cree 54.03 41 P **P** **01 07 10.7 +1.2**
baz=293
WTLY Watson Lake, Y 54.27 38 P **P** **01 07 11.4 +0.1**
WTLY IAmb IAmb 01 07 13.9
comp=Z,33nm,1.5s
WTLY Watson Lake, Y 54.27 38 P **P** **01 07 12.2 +1.0**
baz=293

DLBC Dease Lake 54.36 40 LR LR 01 34 21.3
comp=Z,68nm,18.4s,baz=288,slow=40
DLBC Dease Lake 54.36 40 P **P** **01 07 12.0 0.0**
baz=294,SNR=6.2
TPI Tanjungpandan 54.49 224 P **P** **01 07 13.9 +0.6**
comp=Z,494nmcomp=Z,49nm,0.8s
BATI Baumata 54.67 203 LR LR 01 31 32.9
comp=Z,18nm,21.7s,baz=48,slow=37
PPBI Pangkal Pinang 54.79 226 P **P** **01 07 16.6 +1.1**
DBNI Kabupaten Domp 54.83 210 P **P** **01 07 15.2 -0.5**
V35K Ketchikan 54.83 44 P **P** **01 07 16.5 +1.2**
baz=294
T35M Bob Quinn 54.84 42 P **P** **01 07 17.3 +1.8**
T35M IAmb IAmb 01 07 19.3
comp=Z,21nm,0.9s
T35M Bob Quinn 54.84 42 P **P** **01 07 16.1 +0.7**
baz=294,SNR=7.4
PSI Prapat 55.00 237 P **P** **01 07 18.5 +1.3**
RPSI Rantau Prapat 55.08 237 IAmb IAmb 01 07 19.0
comp=Z,30nm,0.8s
KCSI Kotacane, Aceh 55.17 239 P **P** **01 07 17.5 -0.8**
comp=Z,19nm,0.9s
WRGLY Wrigley 55.31 33 P **P** **01 07 19.9 +1.2**
WRGLY IAmb IAmb 01 07 21.6
comp=Z,19nm,0.8s
WRGLY Wrigley 55.31 33 P **P** **01 07 20.1 +1.4**
baz=295
PLAI Plampang 55.33 210 P **P** **01 07 18.4 -0.9**
AB31 Akbulak array 55.39 308 *eP* **P** **01 07 19.9 +0.5**
ABKAR Akbulak array 55.39 308 P **P** **01 07 19.7 +0.3**
HOPEN Hopen 55.45 345 *eP* **P** **01 07 20.1 +0.7**
HOPEN IAmb IAmb 01 07 20.6
comp=Z,36nm,0.8s
MLSI Meulaboh, Aceh 55.48 240 P **P** **01 07 19.9 -0.7**
comp=Z,100nm,0.9s
MTN Manton Dam 55.50 193 P **P** **01 07 21.2 +0.7**
comp=Z,27nm,0.9s
MTN Manton Dam 55.50 193 P **P** **01 07 20.8 +0.2**
MTN IAmb IAmb 01 07 43.7
comp=Z,20nm,0.9s
COEN Coen 55.64 179 P **P** **01 07 22.7 +1.1**
comp=Z,31nm,1.0s
COEN Coen 55.64 179 P **P** **01 07 22.3 +0.7**
COEN Coen 55.64 179 P **P** **01 07 22.9 +1.4**
COEN IAmb IAmb 01 07 23.6
comp=Z,23nm,0.8s
KHKI Kahang-Kahang 55.74 213 P **P** **01 07 22.8 +0.5**
SPA0 Spitsbergen Ar 55.84 348 *eP* **P** **01 07 22.2 0.0**
SPITS Spitsbergen Ar 55.84 348 P **P** **01 07 22.3 0.0**
comp=Z,6.7nm,0.6s,baz=78,slow=8.0,SNR=21
SPITS LR LR 01 32 33.2
comp=Z,96nm,21.4s,baz=24,slow=37
comp=Z,6.7nm,0.6s
KBS Kingsbay 55.93 350 *eP* **P** **01 07 24.0 +1.1**
AKTO Aktyubinsk 55.98 310 LR LR 01 32 43.1
comp=Z,249nm,20.4s,baz=1.0,slow=37
AKTO Aktyubinsk 55.98 310 P **P** **01 07 23.5 -0.2**
RTBI Rangdo, Negare 56.10 213 P **P** **01 07 24.2 -0.7**
NOR Nord 56.18 356 *i* P **P** **01 07 23.9 -0.8**
NOR IAmb IAmb 01 07 24.3
comp=Z,7.2nm,0.9s
KOTAN Kotanelee Air 56.42 37 P **P** **01 07 27.8 +1.1**
baz=297
KBL Kabul 56.42 288 P **P** **01 07 26.6 -0.7**
KBL Kabul 56.42 288 P **P** **01 07 26.6 -0.7**
KBL pmax pmax
comp=Z,47nm,0.9s
KBL Kabul 56.42 288 P **P** **01 07 27.0 -0.3**
SNR=40
JAGI Jajag, Banyuwa 56.44 214 IAmb IAmb 01 07 27.9
comp=Z,37nm,1.1s
HSPB Hornsund (broa 56.79 347 *eP* **P** **01 07 28.6 -0.4**
KIRV Kirov 56.80 321 P **P** **01 07 29.6 +0.4**
comp=Z,97nm,0.5s,baz=76,slow=2.2,SNR=49
KIRV LR LR 01 34 08.8
comp=Z,131nm,20.1s,baz=48,slow=38
comp=Z,97nm,0.5s
SMRI Semarang 56.82 219 P **P** **01 07 30.3 +0.3**
SMRI Semarang 56.82 219 P **P** **01 07 30.3 +0.3**
comp=Z,135nm,1.0s
SNJI Sawahan-Nganju 56.86 217 P **P** **01 07 31.0 +0.6**
comp=Z,57nm,0.8s
GSI Gunungsitoli 57.00 237 P **P** **01 07 32.5 +1.1**
GSI Gunungsitoli 57.00 237 P **P** **01 07 32.0 +0.6**
comp=Z,3µmcomp=Z,70nm,1.5s
CTJI Waduk Cacaban 57.38 220 P **P** **01 07 34.0 +0.1**
comp=Z,119nm,0.9s
UGM Wanagama 57.53 218 P **P** **01 07 34.8 -0.3**
UGM Wanagama 57.53 218 P **P** **01 07 34.8 -0.3**
comp=Z,113nm,0.9s
KLSI 57.66 226 P **P** **01 07 36.0 0.0**
KLI Kotabumi 57.74 226 P **P** **01 07 36.4 -0.1**
KPJI Karang Pucung 57.78 220 P **P** **01 07 36.4 -0.3**
comp=Z,93nm,1.0s
MDSI Maura Dua 57.79 227 P **P** **01 07 36.9 0.0**
comp=Z,50nm,1.0s
VADS Vadso 58.24 338 *eP* **P** **01 07 39.6 +0.3**
KASI Kota Agung 58.49 226 P **P** **01 07 39.8 -1.9**
comp=Z,34nm,0.8s
APA Apatity 58.51 335 *ll eP* **P** **01 07 39.9 -1.3**
APA *e* 01 08 30.2
APA *e* 01 09 49.7
APA pmax pmax
comp=Z,11nm,1.1s
APA MLR MLR
comp=Z,1µm,4.8s
BBJI Bungbulang 58.52 221 IAmb IAmb 01 07 41.3
comp=Z,15nm,0.9s
BBJI Bungbulang 58.52 221 P **P** **01 07 39.9 -2.1**
comp=Z,19nm,0.8s
KNRA Kununurra 58.70 195 P **P** **01 07 42.5 -0.6**
CGJI Cibinong 58.78 224 P **P** **01 07 40.8 -2.9**
comp=Z,47nm,0.5s
ADZR Andozero 58.83 330 *eP* **P** **01 07 42.1 -1.3**
ADZR *e*PP **pP** **01 07 58.2 -1.5**
ADZR pmax pmax
comp=Z,56nm,0.6s
KEV Kevo 59.10 338 P **P** **01 07 45.8 +0.5**
KEV Kevo 59.10 338 P **P** **01 07 45.8 +0.5**
KEV pmax pmax
comp=Z,39nm,0.9s
HYB Hyderabad 59.15 266 *eP* **P** **01 07 46.8 +0.4**
HYB *ep*P **pP** **01 08 02.0 -0.6**
HYB *eS* **S** **01 15 50.8 +1.4**
YKAW3 Yellowknife Wh 59.18 32 P **P** **01 07 46.2 +0.2**
YKAW3 IAmb IAmb 01 07 47.5
comp=Z,19nm,0.8s
YKA Yellowknife Ar 59.22 32 P **P** **01 07 46.7 +0.5**
comp=Z,8.1nm,0.6s,baz=308,slow=7.2,SNR=179
YKA LR LR 01 36 15.0
comp=Z,58nm,19.0s,baz=260,slow=39
comp=Z,8.1nm,0.6s
YKA Yellowknife Ar 59.22 32 P **P** **01 07 46.6 +0.3**
YKAW1 Yellowknife Wh 59.28 32 P **P** **01 07 47.0 +0.4**
YKAW1 IAmb IAmb 01 07 48.2
comp=Z,19nm,1.0s
HAMF Hammerfest 59.41 340 *eP* **P** **01 07 48.4 +0.9**
ARA0 ARCESS Array S 59.65 339 *eP* **P** **01 07 49.3 +0.2**
ARA0 IAmb IAmb 01 07 54.1
comp=Z,180nm,2.0s
ARCES ARCESS Array B 59.65 339 P **P** **01 07 48.8 -0.3**
comp=Z,8.3nm,0.7s,baz=48,slow=8.0,SNR=37
ARCES LR LR 01 36 33.8
comp=Z,107nm,21.7s,baz=50,slow=39
comp=Z,8.3nm,0.7s
KLMR Klimovskoe 60.00 327 *eP* **P** **01 07 50.1 -1.5**
KLMR *e*PP **pP** **01 08 09.7 +1.7**
KLMR S **S** **01 15 59.1 0.0**
KLMR pmax pmax
comp=Z,83nm,1.4s
TULEG Thule 60.13 8 IAmb IAmb 01 07 52.4
comp=Z,27nm,0.8s
TULEG Thule 60.13 8 *i* P **P** **01 07 51.2 -1.1**
TULEG IAmb IAmb 01 07 52.8
comp=Z,26nm,0.7s
NEEM North Greenlan 60.57 3 *i* P **P** **01 07 55.2 -0.5**
NEEM IAmb IAmb 01 07 58.0
comp=Z,35nm,1.0s
KTK1 Kautokeino 60.61 339 *eP* **P** **01 07 56.0 +0.3**
KTK1 IAmb IAmb 01 07 56.2
comp=Z,31nm,0.7s
BELG Belogornoye 60.73 316 P **P** **01 07 57.1 +0.4**
comp=Z,146nm,0.8s,baz=322,slow=1.0,SNR=63
BELG LR LR 01 36 49.5
comp=Z,320nm,18.7s,baz=123,slow=38
comp=Z,146nm,0.8s

BELG Belogornoye 60.73 316*c* iP P **01 07 56.9 +0.2**
BELG pmax pmax
comp=Z,23nm,0.9s
DAG Danmarks Havn 60.93 355 *i* P P **01 07 56.7 -1.0**
DAG IAmb IAmb 01 07 58.8
comp=Z,7.5nm,0.8s
JETT Jettan, Norway 60.98 340 *e*P P **01 07 58.5 +0.3**
JETT IAmb IAmb 01 07 59.6
comp=Z,32nm,0.7s
HRA Herat 61.27 292 P P **01 08 01.1 +0.1**
TRO Tromso 61.30 341 *e*P P **01 08 00.2 0.0**
CTA Charters Tower 61.84 176 LR LR 01 32 16.1
comp=Z,44nm,21.9s,baz=40,slow=33
CLRS Cowichan Lake 62.00 48 P P **01 08 06.3 +1.0**
CLRS IAmb IAmb 01 08 09.3
comp=Z,43nm,1.5s
WRAB Tennant Creek 62.02 189 P P **01 08 05.3 -0.4**
WRAB Tennant Creek 62.02 189 P P **01 08 05.7 0.0**
WRAB IAmb IAmb 01 08 31.9
comp=Z,21nm,1.1s
WRAB Tennant Creek 62.02 189*de*P P **01 08 05.5 -0.2**
WRAB pmax pmax
comp=Z,11nm,0.9s
WRAB Tennant Creek 62.02 189 P P **01 08 05.4 -0.4**
WR0 Warramunga Arr 62.03 188 P P **01 08 04.8 -0.9**
WR0 IAmb IAmb 01 08 06.3
comp=Z,32nm,1.2s
WR8 Warramunga Arr 62.03 188 P P **01 08 06.4 +0.6**
WR8 Warramunga Arr 62.03 188 IAmb IAmb 01 08 32.4
comp=Z,26nm,1.1s
WB2 Warramunga Arr 62.03 188 P P **01 08 05.0 -0.8**
WB2 IAmb IAmb 01 08 32.0
comp=Z,34nm,1.2s
WRA Warramunga Arr 62.03 189 P P **01 08 05.4 -0.4**
comp=Z,9.0nm,0.5s,baz=6.6,slow=6.7,SNR=102
WRA PKPPKP P'P'df 01 37 18.9 +10
comp=Z,0.8nm,0.8s,baz=189,slow=2.9,SNR=8.0
comp=Z,9.0nm,0.5s
WRA Warramunga Arr 62.03 189 P P **01 08 04.6 -1.2**
WRA Warramunga Arr 62.03 189 P P **01 08 04.6 -1.2**
WRA pmax pmax
comp=Z,2.0nm,1.2s
LLLB Lillooet 62.26 46 P P **01 08 07.0 -0.1**
LLLB IAmb IAmb 01 08 09.4
comp=Z,16nm,0.9s
POIN Pond Inlet 62.26 13 P P **01 08 06.2 -0.6**
POIN IAmb IAmb 01 08 06.7
comp=Z,9.7nm,0.8s
NLWA Neilton Lookou 62.92 50 P P **01 08 12.6 +1.0**
NLWA IAmb IAmb 01 08 14.1
comp=Z,13nm,0.8s
KULLO Kullorsuaq 63.01 6 *i* P P **01 08 11.0 -0.7**
KULLO IAmb IAmb 01 08 17.0
comp=Z,15nm,0.7s
DBG Daneborg 63.42 355 *i* P P **01 08 12.7 -1.7**
DBG IAmb IAmb 01 08 16.1
comp=Z,5.1nm,1.2s
STEI Steigen 63.46 340 *e*P P **01 08 15.1 +0.3**
LOF Lofoten 63.73 341 *e*P P **01 08 17.5 +1.0**
MOS Moscow 63.75 322 *e*P P **01 08 15.6 -1.2**
MOS *e* 01 08 33.2
MOS *e* 01 10 33.9
MOS pmax pmax
comp=Z,63nm,1.1s
FAUS Fauske 63.86 340 *e*P P **01 08 17.6 +0.2**
FAUS IAmb IAmb 01 08 18.1
comp=Z,3µm,3.6s
D05A Enumclaw 64.10 49 P P **01 08 19.9 +0.5**
D05A IAmb IAmb 01 08 22.4
comp=Z,24nm,0.9s
PALK Pallekele 64.19 256 LR LR 01 39 16.8
comp=Z,37nm,18.1s,baz=44,slow=39
PALK Pallekele 64.19 256 P P **01 08 19.8 -0.6**
PALK IAmb IAmb 01 08 21.9
comp=Z,33nm,0.8s
PALK Pallekele 64.19 256 *i* P P **01 08 20.7 +0.4**
SNR=7.2
PALK Pallekele 64.19 256*ce*P P **01 08 20.8 +0.4**
PALK pmax pmax
comp=Z,39nm,0.9s
PALK Pallekele 64.19 256 P P **01 08 20.3 -0.1**
PALK Pallekele 64.19 256 P P **01 08 20.7 +0.4**
comp=Z,25nm,1.2s
PALK Pallekele 64.19 256 P P **01 08 20.7 +0.4**
PALK sP **sP 01 08 42.1 -1.5**
ILON Igloolik, Nuna 64.32 16 IAmb IAmb 01 08 20.2
comp=Z,17nm,0.9s
PUL Pulkovo 64.33 329*de*P P **01 08 20.9 +0.3**
PUL pmax pmax
comp=Z,56nm,0.7s
PUL Pulkovo 64.33 329 *e*P P **01 08 20.9 +0.3**
VRH Novokhopyorsk 64.44 317 *e*P P **01 08 20.7 -0.7**
VRH pmax pmax
comp=Z,63nm,1.0s
LON Longmire 64.45 49 P P **01 08 21.6 -0.1**
LON Longmire 64.45 49 P P **01 08 21.6 -0.1**
LON pmax pmax
comp=Z,7.0nm,0.9s
BLKN Baker Lake 64.60 24 IAmb IAmb 01 08 22.9
comp=Z,25nm,0.7s
OBN Obninsk 64.60 322 P P **01 08 22.2 -0.2**
comp=Z,24nm,0.3s,baz=68,slow=4.0,SNR=13
OBN LR LR 01 38 53.4
comp=Z,182nm,18.8s,baz=358,slow=38
comp=Z,24nm,0.3s
OBN Obninsk 64.60 322 ⇓P P **01 08 22.8 +0.4**
OBN Obninsk 64.60 322 P P **01 08 21.6 -0.8**
OBN Obninsk 64.60 322 *d*P P **01 08 21.8 -0.6**
OBN *j**PP **pP 01 08 39.9 +1.1**
OBN *e**SP **sP 01 08 44.8 -0.9**
OBN *i* 01 08 54.6
OBN *e* 01 10 42.4
OBN S **S 01 17 04.0 +6.9**
OBN *SS **sS 01 17 28.0 +2.7**
OBN SS **SS 01 21 08.0 +0.3**
OBN SSS SSS 01 24 04.0
OBN pmax pmax
comp=Z,55nm,1.1s
OBN MLR MLR
comp=Z,149nm,18.0s
OBN Obninsk 64.60 322 P P **01 08 21.6 -0.8**
comp=Z,64nm,1.7s
OBN Obninsk 64.60 322 *e*P P **01 08 21.8 -0.6**
LTY Liberty 64.80 48 P P **01 08 24.6 +0.6**
LTY IAmb IAmb 01 08 25.6
comp=Z,9.1nm,0.6s
FINES FINESS Array B 64.80 332 P P **01 08 23.4 -0.2**
comp=Z,55nm,0.5s,baz=54,slow=6.9,SNR=1059
FINES LR LR 01 39 19.8
comp=Z,312nm,19.0s,baz=40,slow=38
comp=Z,55nm,0.5s
FINES FINESS Array B 64.80 332 *i* P P **01 08 23.3 -0.3**
FINES pmax pmax
comp=Z,55nm,0.5s
VAGH Vaagaholmen 64.87 340 *e*P P **01 08 24.0 0.0**
B08A Colville Reser 64.90 47 P P **01 08 25.2 +0.6**
B08A IAmb IAmb 01 08 26.7
comp=Z,29nm,1.5s
RAUS Rausandaksla 64.90 340 *e*P P **01 08 23.9 -0.3**
MOR8 Moi Rana 65.00 339 *e*P P **01 08 23.7 -1.2**
LPSR Galich'ya Gora 65.01 319 *e*P P **01 08 24.9 -0.2**
LPSR pmax pmax
comp=Z,66nm,0.9s
EDM Edmonton 65.08 40 P P **01 08 26.0 +0.3**
EDM Edmonton 65.08 40 P P **01 08 26.0 +0.3**
EDM pmax pmax
comp=Z,48nm,0.7s
STOK Stokkvaagen 65.25 340 *e*P P **01 08 26.7 +0.3**
EPH Ephrata 65.34 48 P P **01 08 27.5 +0.1**
EPH IAmb IAmb 01 08 29.2
comp=Z,16nm,0.9s
HOOD Mount Hood Mea 65.36 51 P P **01 08 28.3 +0.6**
HOOD IAmb IAmb 01 08 30.4
comp=Z,22nm,0.8s
LEIR Leirfjorden 65.39 340 *e*P P **01 08 27.5 +0.2**
MXC Moxie City 65.41 49 P P **01 08 29.0 +1.1**
MXC IAmb IAmb 01 08 30.5
comp=Z,15nm,0.8s
H04A Detroit Lake 65.42 51 P P **01 08 29.2 +1.2**
H04A IAmb IAmb 01 08 30.4
comp=Z,16nm,0.8s
VORR Voronezh 65.43 318 *e*P P **01 08 27.2 -0.7**
VORR pmax pmax
comp=Z,35nm,0.8s
E07A Sunnyside 65.66 49 P P **01 08 29.7 +0.2**
E07A IAmb IAmb 01 08 32.1
comp=Z,17nm,0.9s
WAH2 Wahluke Slope 65.71 48 P P **01 08 31.1 +1.3**
WAH2 IAmb IAmb 01 08 31.9
comp=Z,21nm,0.6s
VSR Storozhevoye 65.72 318 *e*P P **01 08 27.3 -2.5**
VSR pmax pmax
comp=Z,40nm,0.9s
AS31 Alice Springs 65.76 188 IAmb IAmb 01 08 44.6
comp=Z,6.5nm,0.4s
ASAR Alice Springs 65.76 188 P P **01 08 30.5 +0.2**
comp=Z,4.4nm,0.6s,baz=5.4,slow=7.6,SNR=62
ASAR LR LR 01 36 59.5
comp=Z,77nm,21.1s,baz=340,slow=36
ASAR PKPPKP **P'P'df 01 37 09.8 +6.8**
comp=Z,0.6nm,0.7s,baz=179,slow=3.4,SNR=4.9
comp=Z,4.4nm,0.6s
ASAR Alice Springs 65.76 188 P P **01 08 30.3 0.0**
ASAR Alice Springs 65.76 188 P P **01 08 30.3 0.0**
SUMG Summit 65.76 0 P P **01 08 30.6 +0.5**
SUMG Summit 65.76 0 P P **01 08 30.7 +0.5**
SUMG pmax pmax
comp=Z,30nm,0.7s
SUMG Summit 65.76 0 *i* P P **01 08 30.6 +0.5**
SUMG IAmb IAmb 01 08 31.7
comp=Z,28nm,0.7s
C09A Chrisman Ranch 65.80 47 P P **01 08 31.3 +0.9**
C09A IAmb IAmb 01 08 32.5
comp=Z,21nm,0.8s
I04A Tendick Farm, 65.80 52 P P **01 08 31.4 +0.9**
I04A IAmb IAmb 01 08 33.0
comp=Z,14nm,0.8s
VORD Divnogorie 65.81 318 *e*P P **01 08 28.6 -1.7**
VORD pmax pmax
comp=Z,40nm,1.1s
D08A Wollman Farm, 65.89 48 IAmb IAmb 01 08 32.9
comp=Z,14nm,0.7s
HAWA Hanford 65.94 49 IAmb IAmb 01 08 33.7
comp=Z,12nm,0.8s
F07A Phinny Hill Vi 66.01 49 P P **01 08 32.8 +1.0**
F07A IAmb IAmb 01 08 34.3
comp=Z,22nm,0.8s
E08A Dider Farm, El 66.14 48 P P **01 08 33.2 +0.6**
E08A IAmb IAmb 01 08 34.8
comp=Z,18nm,0.8s
NEW Newport 66.15 46 LR LR 01 36 32.2
comp=Z,31nm,21.5s,baz=300,slow=35
NEW Newport 66.15 46 P P **01 08 32.9 +0.3**
NEW IAmb IAmb 01 08 34.7
comp=Z,14nm,0.8s
NEW Newport 66.15 46 P P **01 08 32.9 +0.3**
NEW pmax pmax
comp=Z,14nm,0.8s
MBWA Marble Bar 66.19 203 P P **01 08 33.6 +0.6**
J04A Umpqua Nationa 66.30 53 P P **01 08 34.2 +0.3**
J04A IAmb IAmb 01 08 36.6
comp=Z,21nm,0.7s
YPT Yellepit 66.46 49 P P **01 08 34.9 +0.3**
YPT IAmb IAmb 01 08 37.0
comp=Z,18nm,0.9s
VSU Vasula 66.59 329*ce*P P **01 08 34.2 -0.9**
VSU pmax pmax
comp=Z,81nm,0.9s
PINE Pine Mountain 66.67 52 P P **01 08 37.4 +1.2**
PINE IAmb IAmb 01 08 39.1
comp=Z,17nm,0.8s
KHMM Horse Mountain 66.71 55 P P **01 08 37.8 +1.3**
KHMM IAmb IAmb 01 08 39.6
comp=Z,9.8nm,0.7s
KMPM Mount Pierce 66.74 56 P P **01 08 37.8 +1.2**
KMPM IAmb IAmb 01 08 39.8
comp=Z,18nm,0.8s
AKT Akhty 66.75 305 *e*P P **01 08 37.0 +0.3**
AKT *e* 01 09 05.8
AKT *e* 01 11 02.8
AKT pmax pmax
comp=Z,122nm,0.8s
L04D Klamath Falls 66.79 54 P P **01 08 37.4 +0.5**
L04D IAmb IAmb 01 08 39.5
comp=Z,20nm,0.8s
YBH Yreka Blue Hor 66.83 54 P P **01 08 37.7 +0.5**
YBH Yreka Blue Hor 66.83 54 P P **01 08 37.7 +0.5**
YBH pmax pmax
comp=Z,5.0nm,0.7s
G08A Pilot Rock 66.92 49 P P **01 08 38.2 +0.5**
NSS Namsos 66.93 339 *e*P P **01 08 37.5 +0.2**
M02C Callahan 66.94 55 P P **01 08 39.2 +1.4**
LNOR Lincton Mounta 66.95 49 P P **01 08 38.1 +0.4**
NIAQ Niaqornat 66.97 6 *i* P P **01 08 37.5 +0.1**
NIAQ IAmb IAmb 01 08 43.9
comp=Z,75nm,1.2s
SAATT Saattut 67.09 5 *i* P P **01 08 38.0 -0.2**
SAATT IAmb IAmb 01 08 41.1
comp=Z,42nm,1.1s
KMRM Mail Ridge 67.11 56 P P **01 08 39.2 +0.3**
KMRM IAmb IAmb 01 08 42.1
comp=Z,10nm,0.8s
NGCH Negor - Chabah 67.23 284 P P **01 08 41.4 +1.6**
N02D Trinity Center 67.28 55 P P **01 08 41.3 +1.3**
N02D IAmb IAmb 01 08 43.0
comp=Z,12nm,0.7s
K05A Summer Lake 67.33 52 P P **01 08 41.0 +0.5**
K05A IAmb IAmb 01 08 43.9
comp=Z,18nm,1.0s
GOF Gofitskoye 67.38 311*c* iP P **01 08 41.2 +0.8**
M03C McCloud 67.46 54 P P **01 08 41.0 -0.2**
M03C IAmb IAmb 01 09 04.2
comp=Z,11nm,0.9s
F10A Beach Ranch, E 67.47 48 P P **01 08 41.9 +0.8**
KCPM Cahto Peak 67.50 56 P P **01 08 42.2 +0.7**
KCPM IAmb IAmb 01 08 44.2
comp=Z,13nm,0.8s
O02D Mt. Diablo Mer 67.70 56 P P **01 08 44.1 +1.4**
O02D IAmb IAmb 01 08 45.7
comp=Z,10.0nm,0.8s
SAQQ Saqqaq 67.85 5 *i* P P **01 08 42.3 -0.7**
SAQQ IAmb IAmb 01 08 43.8
comp=Z,21nm,0.6s
WRKA Warakurna 67.92 194 P P **01 08 43.9 -0.1**
comp=Z,8.1nm,2.0s
KHAM Kharkiv 67.94 318 P P **01 08 44.0 +0.1**
KHAM pP **pP 01 09 00.7 +0.2**
MSVF Nonsavu 67.95 143 LR LR 01 32 13.3
comp=Z,157nm,21.7s,baz=325,slow=30
JTMT Jette 67.97 45 P P **01 08 45.4 +1.1**
BMO Blue Mountains 68.11 49 P P **01 08 45.5 +0.3**
BMO Blue Mountains 68.11 49 P P **01 08 45.5 +0.3**
BMO pmax pmax
comp=Z,5.0nm,0.8s
HATC Hat Creek Radi 68.13 54 P P **01 08 46.3 +0.9**
HATC IAmb IAmb 01 08 48.0
comp=Z,20nm,0.8s
O03E Paynes Creek 68.24 55 IAmb IAmb 01 08 48.0
comp=Z,12nm,0.8s
KVAR Kislovodsk Arr 68.24 310 LR LR 01 43 35.3
comp=Z,72nm,18.9s,baz=270,slow=40
KIV Kislovodsk 68.25 310 ⇑P P **01 08 47.3 +1.2**
KIV Kislovodsk 68.25 310 P P **01 08 46.5 +0.5**
KIV Kislovodsk 68.25 310 *i* P P **01 08 46.9 +0.9**
SNR=83
KIV Kislovodsk 68.25 310 *e*P P **01 08 47.0 +0.9**
KIV pmax pmax
comp=Z,142nm,1.1s
KIV MLR MLR
comp=Z,80nm,17.0s
KIV Kislovodsk 68.25 310 P P **01 08 46.6 +0.5**
KIV Kislovodsk 68.25 310 P P **01 08 46.5 +0.5**
comp=Z,1µmcomp=Z,153nm,1.2s
KIV Kislovodsk 68.25 310 *e*P P **01 08 47.0 +0.9**
KIV Kislovodsk 68.25 310 P P **01 08 47.2 +1.1**
KIV pP **pP 01 09 02.4 -0.3**
KIV sP **sP 01 09 08.1 -1.4**
KBZ Khabaz 68.27 310 P P **01 08 47.0 +1.0**
comp=Z,45nm,0.9s,baz=45,slow=4.6,SNR=102
KBZ LR LR 01 44 03.1
comp=Z,106nm,18.6s,baz=29,slow=41
comp=Z,45nm,0.9s
KBZ Khabaz 68.27 310*c* iP P **01 08 46.8 +0.8**
KBZ pmax pmax
comp=Z,45nm,0.9s
KBZ Khabaz 68.27 310 *e*P P **01 08 46.8 +0.8**
J08A Circle Bar Ran 68.36 51 P P **01 08 47.6 +0.8**
SHA1 Shidzhatmaz 68.40 310*c* iP P **01 08 48.0 +0.8**
ERBR Yeremizino-Bor 68.40 312 *e*P P **01 08 47.2 +0.3**
ERBR pmax pmax
comp=Z,131nm,0.7s
MNRC McLaughlin Min 68.69 57 P P **01 08 49.5 +0.7**
MNRC IAmb IAmb 01 08 51.9
comp=Z,16nm,0.8s
ILULI Ilulissat 68.70 5 *i* P P **01 08 47.8 -0.5**
ILULI IAmb IAmb 01 08 49.1
comp=Z,23nm,0.9s
PLID Pearl Lake 68.70 48 P P **01 08 49.2 +0.1**
MSO Missoula 68.73 46 P P **01 08 49.7 +0.6**
WVOR Wild Horse Val 68.83 52 P P **01 08 49.1 -0.7**
WVOR Wild Horse Val 68.83 52 P P **01 08 49.1 -0.7**
WVOR pmax pmax
comp=Z,6.0nm,0.9s
MNK Minsk 68.83 325 *i* P P **01 08 50.0 +0.7**
comp=E,42nm,0.9s
MNK *i* P P **01 08 50.0 +0.7**
comp=N,30nm,1.0s
MNK *i* P P **01 08 50.0 +0.7**
comp=Z,96nm,0.8s,baz=47
MNK *i* pP **pP 01 09 07.7 +1.7**
MNK *i* sP **PcP 01 09 13.9 +0.4**
MNK *i* PP **PP 01 11 24.1 +2.7**
MNK *i* PPP PPP 01 13 05.6
MNK *i* S **S 01 17 50.2 +2.0**
MNK *i* sS **sS 01 18 21.6 +4.9**
MNK *i* SS **SS 01 22 04.5 -8.8**
MNK *i* SSS SSS 01 25 34.7
MNK *i* LQ LQ 01 34 49.2
MNK *i* LRM MLR 01 40 39.2
comp=N,208nm,23.6s
MNK *i* LRM MLR 01 41 01.5
comp=Z,242nm,19.7s
MNK *i* LRM MLR 01 41 39.0
comp=E,144nm,17.8s
MNK Minsk 68.83 325*c* iP P **01 08 50.0 +0.7**
ORV Oroville 68.87 55 P P **01 08 49.8 -0.1**
ORV Oroville 68.87 55 P P **01 08 49.8 -0.1**
ORV pmax pmax
comp=Z,9.0nm,0.8s
SUTB Sutter Butte 68.89 56 P P **01 08 49.7 -0.3**
SUTB IAmb IAmb 01 08 51.7
comp=Z,10nm,0.8s
LABN Labinsk 68.94 311 *e*P P **01 08 50.4 +0.2**
LABN pmax pmax
comp=Z,91nm,0.8s
CVS Carmenet Viney 69.01 57 P P **01 08 51.6 +0.8**
CVS IAmb IAmb 01 09 13.4
comp=Z,26nm,1.2s
FFC Flin Flon 69.20 34 P P **01 08 52.4 +0.7**
FFC Flin Flon 69.20 34 P P **01 08 52.4 +0.7**
FFC pmax pmax
comp=Z,43nm,0.8s
FFC Flin Flon 69.20 34 P P **01 08 52.2 +0.5**
JASK Jask - Hormozg 69.27 287 P P **01 08 54.0 +1.4**
SNR=7.5
FCC Fort Churchill 69.30 28 IAmb IAmb 01 08 52.9
comp=Z,16nm,0.6s
GNI Garni 69.37 306 P P **01 08 53.2 0.0**
comp=Z,25nm,0.9s,baz=3.2,slow=1.1,SNR=19
GNI LR LR 01 42 12.5
comp=Z,67nm,18.4s,baz=46,slow=38
comp=Z,25nm,0.9s
GNI Garni 69.37 306 P P **01 08 53.9 +0.7**
GNI Garni 69.37 306*c* iP P **01 08 54.5 +1.3**
GNI pmax pmax
comp=Z,55nm,1.3s
GNI Garni 69.37 306 P P **01 08 54.1 +0.9**
GNI Garni 69.37 306 P P **01 08 54.2 +1.0**
comp=Z,509nmcomp=Z,66nm,0.8s
GNI Garni 69.37 306 P P **01 08 54.7 +1.5**
LYMT Lyon Mountain 69.52 45 P P **01 08 54.6 +0.5**
AFDM Forest Hills D 69.56 56 P P **01 08 54.5 +0.3**
MOL Molde 69.69 339 *e*P P **01 08 54.7 +0.2**
DOMB Dombas 69.72 339 *e*P P **01 08 54.8 0.0**
NC303 NORSAR Array S 69.73 337 IAmb IAmb 01 08 56.1
comp=Z,52nm,1.1s
AFI Afiamalu 69.82 132 LR LR 01 32 06.2
comp=Z,99nm,21.4s,baz=338,slow=29
MFID Camas Ranch 69.84 49 P P **01 08 56.1 +0.1**
HFS Hagfors 69.90 335 P P **01 08 55.6 -0.3**
comp=Z,36nm,0.3s,baz=43,slow=6.7,SNR=558
HFS LR LR 01 42 06.3
comp=Z,121nm,21.8s,baz=49,slow=38
comp=Z,36nm,0.3s
NB2 NORSAR Subarra 69.92 337 P P **01 08 56.2 +0.1**
comp=Z,13nm,0.5s,baz=35,slow=6.5
NB2 NORSAR Subarra 69.92 337 P P **01 08 56.2 +0.1**
NOA NORSAR Array B 69.92 337 P P **01 08 55.9 -0.2**
comp=Z,26nm,0.7s,baz=37,slow=6.1,SNR=126
NOA LR LR 01 43 02.1
comp=Z,129nm,21.6s,baz=35,slow=39
comp=Z,26nm,0.7s
VSLR Vesyoloye 70.06 311*c* iP P **01 08 57.9 +0.7**
VSLR pmax pmax
comp=Z,70nm,1.0s
PAHR Pah Rah Range 70.07 54 P P **01 08 57.9 +0.4**
KARS Kars 70.07 307 P P **01 08 57.5 0.0**
KARS Kars 70.07 307 P P **01 08 57.5 0.0**
KARS pmax pmax
comp=Z,64nm,0.9s
NC602 NORSAR Array S 70.07 337 IAmb IAmb 01 08 57.2
comp=Z,15nm,1.1s
NC602 NORSAR Array S 70.07 337 *e*P P **01 08 56.4 -0.5**
EGMT Eagleton 70.14 43 P P **01 08 57.8 +0.1**
EGMT IAmb IAmb 01 09 00.1
comp=Z,32nm,0.9s
AKN Aaknes 70.16 339 *e*P P **01 08 57.6 +0.1**
SOC Sochi 70.17 311 *e*P P **01 08 58.2 +0.4**
SOC *e*PP **pP 01 09 13.6 +0.8**
SOC *eS **S 01 18 05.2 +1.0**
SOC pmax pmax
comp=Z,27nm,0.8s
SOC MLR MLR
comp=Z,119nm,20.0s
NAO01 NORSAR Array S 70.18 337 IAmb IAmb 01 08 58.2
comp=Z,25nm,0.7s
PNTR Pine Nut 70.32 55 P P **01 08 59.3 +0.2**
WSAR Wadi Sarin 70.33 284 P P **01 09 00.4 +1.3**
BANOM Banah 70.36 287 *i* P P **01 08 59.5 +0.2**
SNR=12
BANOM Banah 70.36 287 P P **01 08 59.8 +0.5**
DLMT Dillon 70.39 46 P P **01 08 59.8 +0.5**
DLMT IAmb IAmb 01 09 01.5
comp=Z,22nm,0.7s
SHME Shamm 70.39 288 *i* P P **01 08 59.6 +0.2**
SNR=38
SHME Shamm 70.39 288 P P **01 08 59.6 +0.2**
SNR=9.6
JLN Jalan Bani Buh 70.43 282 P P **01 08 59.6 -0.1**
SNR=7.9
WBK Wadi Bani Khal 70.47 283 P P **01 09 01.1 +1.1**
SNR=10
WBK P P **01 09 01.1 +1.1**
SNR=22
CMB Columbia Colle 70.49 56 IAmb IAmb 01 09 02.3
comp=Z,11nm,0.8s
BIDO Bidbid 70.52 284 P P **01 09 01.3 +1.0**
SNR=11
MCMT McKenzie Canyo 70.59 47 P P **01 09 00.4 -0.3**
BCYI Bear Canyon 70.62 48 P P **01 09 01.1 +0.2**
ANN Anapa 70.65 313 *e*P P **01 09 00.8 +0.1**
ANN *e*PP **pP 01 09 18.4 +1.1**
ANN *eS **S 01 18 03.2 -6.6**
ANN pmax pmax
comp=Z,27nm,0.6s
ANN Anapa 70.65 313 *e*P P **01 09 00.8 +0.1**
MDH Madha 70.74 287 *i* P P **01 09 01.6 0.0**
SNR=5.4
MDH Madha 70.74 287 P P **01 09 01.3 -0.3**
BOZ Bozeman (W) 70.75 46 IAmb IAmb 01 09 03.7
comp=Z,19nm,0.7s
MASF Masafi 70.79 287 P P **01 09 02.4 +0.4**
SNR=18
MSFE Esma-Masafi 70.80 287 *i* P P **01 09 02.4 +0.4**
SNR=18
AK03 Malin Array Si 70.83 322 P P **01 09 01.2 -0.5**
AKASG Malin Array Be 70.85 322 P P **01 09 01.7 -0.1**
comp=Z,44nm,0.6s,baz=46,slow=6.0,SNR=249
AKASG LR LR 01 42 48.8
comp=Z,158nm,20.4s,baz=30,slow=38
comp=Z,44nm,0.6s
AKASG Malin Array Be 70.85 322 P P **01 09 01.7 -0.1**
AKBB Malin Array Si 70.85 322*c* iP P **01 09 01.6 -0.2**
AKBB Malin Array Si 70.85 322 P P **01 09 01.4 -0.4**
AK23 Malin Array Si 70.86 322 P P **01 09 01.6 -0.2**

SMDO **Samad** 70.86 284 P P 01 09 02.9 +0.5
SNR=7.8
AK01 **Malin Array Si** 70.86 322 P P 01 09 01.4 -0.5
AK04 **Malin Array Si** 70.86 322 P P 01 09 01.4 -0.5
KIEV **Kiev** 70.86 322 ⇑P P 01 09 01.7 -0.1
KIEV **Kiev** 70.86 322 P P 01 09 01.8 -0.1
KIEV **Kiev** 70.86 322 *i* P P 01 09 01.7 -0.1
SNR=37
KIEV **Kiev** 70.86 322 P P 01 09 01.8 -0.1
KIEV pmax pmax
comp=Z,64nm,0.8s
KIEV **Kiev** 70.86 322 P P 01 09 01.5 -0.4
comp=Z,344nm,0.8s
KIEV **Kiev** 70.86 322 P P 01 09 01.8 0.0
AK22 **Malin Array Si** 70.88 322 P P 01 09 01.5 -0.5
AK09 **Malin Array Si** 70.88 322 P P 01 09 01.6 -0.4
AK08 **Malin Array Si** 70.88 322 P P 01 09 01.6 -0.4
AK21 **Malin Array Si** 70.88 322 P P 01 09 01.6 -0.4
AK02 **Malin Array Si** 70.89 322 P P 01 09 01.7 -0.4
SFJD **Kangerlussuaq** 70.92 5 LR LR 01 41 31.2
comp=Z,135nm,20.6s,baz=320,slow=37
SFJD **Kangerlussuaq** 70.92 5 *i* P P 01 09 02.0 +0.1
SFJD IAmb IAmb 01 09 02.5
comp=Z,11nm,0.7s
OSL **Oslo** 70.96 337 IAmb IAmb 01 09 02.5
comp=Z,43nm,0.9s
OSL *eP* P 01 09 03.1 +0.8
UOSS **Minazif** 71.02 287 P P 01 09 03.5 +0.2
UOSS **Minazif** 71.02 287 *i* P P 01 09 03.5 +0.2
SNR=21
UOSS **Minazif** 71.02 287 P P 01 09 03.7 +0.3
UOSS **Minazif** 71.02 287 P P 01 09 03.6 +0.2
SKAR **Skarslia** 71.05 338 *eP* P 01 09 03.6 +0.7
UMQ **Umm Al-Quwin** 71.05 288 P P 01 09 04.8 +1.3
HOQ **Hoqain** 71.07 285 P P 01 09 04.4 +0.7
SNR=14
SUW **Suwalki** 71.13 327 *eP* P 01 09 03.2 -0.2
HATD **Hatta, Dubai** 71.15 287 *i* P P 01 09 04.5 +0.4
SNR=59
HATD **Hatta, Dubai** 71.15 287 P P 01 09 05.0 +0.9
SNR=58
HATD P P 01 09 05.0 +0.9
SNR=15
HYA **Hoyanger** 71.22 339 *eP* P 01 09 04.3 +0.4
HYA IAmb IAmb 01 09 04.6
comp=Z,70nm,1.2s
JMDO **Jabal Madar** 71.24 283 P P 01 09 05.2 +0.6
SNR=9.3
JMDO P P 01 09 05.2 +0.6
SNR=14
KVN **Kaiserville** 71.25 54 P P 01 09 05.2 +0.5
KVN **Kaiserville** 71.25 54 P P 01 09 05.2 +0.5
KVN pmax pmax
comp=Z,7.0nm,0.8s
ASHO **Ashiyiah** 71.29 287 *i* P P 01 09 05.2 +0.2
SNR=29
ASHO **Ashiyiah** 71.29 287 P P 01 09 05.0 0.0
SNR=17
QLMT **Earthquake Lak** 71.36 46 P P 01 09 06.1 +0.8
NAZ **Nazwa, Dubai** 71.38 287 *i* P P 01 09 05.4 -0.1
SNR=16
NAZ **Nazwa, Dubai** 71.38 287 P P 01 09 05.9 +0.4
MI28 **Mi28,Pidlybu** 71.40 323 P P 01 09 04.4 -0.8
YHL **Hebgen Lake** 71.48 46 IAmb IAmb 01 09 09.0
comp=Z,15nm,0.9s
LHV **Little Huntoon** 71.51 55 P P 01 09 06.6 +0.6
LHV IAmb IAmb 01 09 29.6
comp=Z,39nm,1.3s
NVAR **Mina Array Bea** 71.52 55 P P 01 09 08.1 +1.7
comp=Z,8.3nm,0.7s,baz=289,slow=5.8,SNR=62
NVAR LR LR 01 36 53.1
comp=Z,24nm,22.0s,baz=282,slow=33
comp=Z,8.3nm,0.7s
NVAR **Mina Array Bea** 71.52 55 P P 01 09 07.4 +1.0
KONO **Kongsberg** 71.53 337 *eP* P 01 09 06.0 +0.3
GEVA **Gevas** 71.53 305 P P 01 09 06.9 +0.5
GEVA IAmb IAmb 01 09 08.6
comp=Z,22nm,1.0s
YHB **Horse Butte** 71.54 46 IAmb IAmb 01 09 09.2
comp=Z,19nm,0.8s
MDPB **Devils Postpil** 71.55 56 P P 01 09 06.5 -0.2
STRU **Stroemstad** 71.55 336 *i* P P 01 09 06.0 +0.1
FAQ **Al Faqa, Dubai** 71.58 287 *i* P P 01 09 06.8 +0.1
SNR=28
FAQ **Al Faqa, Dubai** 71.58 287 P P 01 09 06.5 -0.2
BSY **Bisya** 71.67 284 P P 01 09 08.1 +0.8
SNR=9.2
SUE **Sulen** 71.68 340 *eP* P 01 09 07.3 +0.7
YHH **Holmes Hill** 71.70 46 P P 01 09 09.1 +1.6
YMR **Madison River** 71.72 46 P P 01 09 07.9 +0.4
YMR IAmb IAmb 01 09 10.0
comp=Z,14nm,0.9s
FRB **Frobisher Bay** 71.82 14 LR LR 01 44 06.9
comp=Z,93nm,19.7s,baz=324,slow=39
ASUD **Al Ashush, Dub** 71.84 287 *i* P P 01 09 08.9 +0.6
SNR=12
ASUD **Al Ashush, Dub** 71.84 287 P P 01 09 09.0 +0.8
SNR=12
RNPP9 **Sopachiv** 71.86 324 P P 01 09 07.8 -0.1
ELK **Elko** 71.87 51 P P 01 09 09.2 +0.7
ELK **Elko** 71.87 51 P P 01 09 09.2 +0.7
ELK pmax pmax
comp=Z,5.0nm,0.8s
ALNE **Al Ain** 71.90 286 *i* P P 01 09 09.0 +0.4
SNR=20
ALNE **Al Ain** 71.90 286 P P 01 09 08.9 +0.3
SNR=10
RNPP8 **Varash** 71.93 324 P P 01 09 08.1 -0.2
YFT **Old Faithful** 71.93 46 P P 01 09 08.8 0.0
YFT IAmb IAmb 01 09 12.8
comp=Z,16nm,0.8s
KOPT **Kop Dagi** 71.99 308 P P 01 09 10.2 +0.9
RNPP5 **Staryi Chortor** 71.99 324 P P 01 09 08.3 -0.4
YNE **Yellowstone No** 72.00 45 P P 01 09 09.9 +0.6
ASK **Askoy** 72.06 339 *eP* P 01 09 09.4 +0.5
YPP **Pitchstone Pla** 72.06 46 P P 01 09 10.6 +1.0
LUBAR **Lubar, Ukraine** 72.07 322 P P 01 09 08.7 -0.5
YMP **Mirror Lake Pl** 72.10 46 P P 01 09 11.0 +1.1
BER **Bergen** 72.11 339 *eP* P 01 09 09.7 +0.5
H17A **Grant Village** 72.11 46 P P 01 09 11.4 +1.5
H17A IAmb IAmb 01 09 13.8
comp=Z,20nm,0.9s
AJN **Ajban** 72.13 287 *i* P P 01 09 09.8 -0.2
SNR=6.6
AJN **Ajban** 72.13 287 P P 01 09 09.7 -0.2
ODD1 **Odda** 72.15 338 *eP* P 01 09 09.9 +0.4
BORU **Boraas** 72.17 334 *i* P P 01 09 09.3 -0.3
BLEU **Blekinge** 72.20 332 *i* P P 01 09 09.2 -0.6
MHTO **MHTO** 72.20 282 P P 01 09 11.3 +0.9
SNR=20
TJOU **Tjoern** 72.22 335 *i* P P 01 09 09.5 -0.5
FLWY **Flagg Ranch** 72.25 46 P P 01 09 12.4 +1.7
RLMT **Red Lodge** 72.32 45 P P 01 09 11.6 +0.5
SIM **Simferopol'** 72.33 315 *eP* P 01 09 11.2 +0.4
SIM *e*PP PcP 01 09 30.0 +1.4
SIM *eS* S 01 18 22.0 -7.2
SIM pmax pmax
comp=Z,101nm,0.9s
FXWY **Fox Creek** 72.36 47 P P 01 09 12.4 +1.0
FXWY IAmb IAmb 01 09 14.2
comp=Z,11nm,0.8s
DSP **Deep Springs** 72.39 55 P P 01 09 12.7 +1.4
DSP IAmb IAmb 01 09 34.7
comp=Z,15nm,1.0s
MOOW **Moose Ponds** 72.44 47 IAmb IAmb 01 09 14.7
comp=Z,15nm,1.0s
BAL3X **Bal3x, Balta** 72.58 319 P P 01 09 11.7 -0.6
LOHW **Long Hollow** 72.61 47 P P 01 09 14.0 +1.2
BLS5 **Blasjo** 72.61 338 *eP* P 01 09 12.6 +0.3
HVU **Hansel Valley** 72.62 49 P P 01 09 13.3 +0.5
HVU IAmb IAmb 01 09 15.3
comp=Z,12nm,0.8s
HVU **Hansel Valley** 72.62 49 P P 01 09 13.3 +0.5
HVU pmax pmax
comp=Z,12nm,0.8s
SNOW **Snow King Moun** 72.63 47 P P 01 09 14.1 +1.1
ONAU **Onsala** 72.64 334 *i* P P 01 09 11.9 -0.5
FABU **Falkenberg** 72.70 334 *i* P P 01 09 11.7 -1.1
DEL **Delary** 72.74 333 *i* P P 01 09 12.4 -0.6
ANGG **Ammassalik, Gr** 72.76 360 *i* P P 01 09 12.6 -0.4
ANGG IAmb IAmb 01 09 12.8
comp=Z,13nm,0.6s
LAO **LASA Array** 72.82 42 P P 01 09 14.7 +0.9
LAO IAmb IAmb 01 09 16.0
comp=Z,20nm,0.9s
GMN **Gold Mountain** 72.87 55 P P 01 09 14.8 +0.3
AHID **Auburn Hatcher** 72.90 48 P P 01 09 14.9 +0.4
CWC **Cottonwood Cre** 72.92 56 P P 01 09 15.2 +0.5
HOMB **Homborsund** 72.98 336 *eP* P 01 09 14.5 +0.1
HOMB **Homborsund** 72.98 336 *i* P P 01 09 14.0 -0.4
GRAC **Grapevine Rang** 73.00 55 P P 01 09 16.2 +1.2
GRAC IAmb IAmb 01 09 17.7
comp=Z,18nm,0.8s
BGU **Big Grassy Mou** 73.03 50 P P 01 09 15.6 +0.3
SORM **Soroca** 73.05 320 ⇑P P 01 09 15.1 +0.1
SORM **Soroca** 73.05 320 P P 01 09 14.2 -0.8
comp=Z,73nm,0.9s
SPUT **South Promonto** 73.11 49 P P 01 09 16.7 +0.9
KMY **Karmoy** 73.12 339 *eP* P 01 09 16.1 +0.9
UMZA **Um Al Zommool** 73.15 286 P P 01 09 15.8 -0.3
HORU **Horodok** 73.18 322 P P 01 09 15.6 -0.2
NDNU **Novodnistrovsk** 73.19 321 P P 01 09 15.6 -0.2
SNART **Snartemo** 73.31 337 *eP* P 01 09 16.8 +0.5
SNART **Snartemo** 73.31 337 *i* P P 01 09 16.6 +0.2
BJUU **Bjuv** 73.34 333 *i* P P 01 09 16.7 +0.1
HAMD **Hammershus, De** 73.38 332 *i* P P 01 09 16.7 -0.1
HAMD IAmb IAmb 01 09 17.3
comp=Z,26nm,0.9s
HWUT **Hardware Ranch** 73.41 49 P P 01 09 18.7 +1.2
HWUT IAmb IAmb 01 09 20.1
comp=Z,26nm,1.2s
MZWR **Madinat Zayed** 73.42 287 P P 01 09 17.2 -0.4
PURM **Purcari** 73.43 318 ⇑P P 01 09 17.5 +0.3
PURM **Purcari** 73.43 318 P P 01 09 17.4 +0.1
comp=Z,63nm,0.8s
BSD **Bornholm Skovb** 73.45 332 *i* P P 01 09 17.1 -0.1
BSD IAmb IAmb 01 09 18.3
comp=Z,18nm,0.8s
STKA **Stephens Creek** 73.48 181 P P 01 09 18.1 +0.6
comp=Z,2.4nm,0.7s,baz=342,slow=7.6,SNR=4.2
STKA LR LR 01 41 12.4
comp=Z,39nm,21.8s,baz=25,slow=35
comp=Z,2.4nm,0.7s
STKA **Stephens Creek** 73.48 181 P P 01 09 18.4 +0.8
STKA **Stephens Creek** 73.48 181 P P 01 09 18.4 +0.8
STKA pmax pmax
comp=Z,61nm,1.2s
LUNU **Lund** 73.55 333 *i* P P 01 09 17.8 0.0
MARD **Mardin** 73.56 305 P P 01 09 19.2 +0.8
S11A **Rachel** 73.57 54 P P 01 09 19.4 +0.9
S11A IAmb IAmb 01 09 21.2
comp=Z,15nm,0.8s
WCT **Wildcat Mounta** 73.59 55 P P 01 09 19.1 +0.6
CLC **China Lake** 73.62 57 P P 01 09 19.7 +1.0
CLC **China Lake** 73.62 57 P P 01 09 19.7 +1.0
CLC pmax pmax
comp=Z,10.0nm,1.1s
KMPD **K-Podol'skiy** 73.63 321 P P 01 09 17.8 -0.7
KMPD P P 01 09 17.7 -0.7
DUG **Dugway, Tooele** 73.64 50 P P 01 09 19.8 +1.0
DUG IAmb IAmb 01 09 21.3
comp=Z,16nm,0.8s
DUG **Dugway, Tooele** 73.64 50 P P 01 09 19.8 +1.0
DUG pmax pmax
comp=Z,16nm,0.8s
FURC **Furnace Creek,** 73.65 56 P P 01 09 20.0 +1.3
FURC IAmb IAmb 01 09 41.8
comp=Z,29nm,1.0s
TPNV **Topopah Spring** 73.72 55 P P 01 09 20.0 +0.6
TPNV IAmb IAmb 01 09 42.3
comp=Z,18nm,1.1s
TPNV **Topopah Spring** 73.72 55 P P 01 09 20.0 +0.6
TPNV pmax pmax
comp=Z,18nm,1.1s
BEL **Belsk** 73.72 327 *eP* P 01 09 20.2 +1.4
BW06 **Boulder Array** 73.74 47 IAmb IAmb 01 09 21.3
comp=Z,17nm,0.8s
PD31 **Pinedale Array** 73.74 47 IAmb IAmb 01 09 21.3
comp=Z,17nm,0.8s
PDAR **Pinedale Array** 73.74 47 P P 01 09 20.4 +0.8
comp=Z,14nm,0.7s,baz=267,slow=2.1,SNR=165
PDAR LR LR 01 43 23.2
comp=Z,20nm,19.4s,baz=315,slow=37
comp=Z,14nm,0.7s
LRMC **Laurel Mtn Rad** 73.78 57 P P 01 09 20.6 +0.9
TCUT **Toone Canyon** 73.83 49 P P 01 09 20.6 +0.6
TCUT IAmb IAmb 01 09 22.4
comp=Z,24nm,0.7s
COP **Copenhagen** 73.85 333 *i* P P 01 09 19.9 +0.4
COP IAmb IAmb 01 09 20.9
comp=Z,55nm,0.9s
CCCA **Chr Cany lake** 73.95 57 P P 01 09 21.4 +0.7
GWY **Greenwater Val** 73.95 56 P P 01 09 21.5 +0.7
QSM **Queen of Sheba** 73.97 56 P P 01 09 21.1 +0.4
GHWR **Ruwais** 74.00 288 P P 01 09 23.3 -0.7
GKP **Gorka Klasztor** 74.03 329 *eP* P 01 09 21.1 +0.5
TOKA **Tokat** 74.12 310 P P 01 09 22.2 +0.7
TOKA IAmb IAmb 01 09 23.2
comp=Z,18nm,0.7s
PSUT **Pine Spring** 74.12 52 P P 01 09 22.1 +0.3
MZR **Muzera** 74.18 287 *i* P P 01 09 22.2 +0.1
SNR=32
MZR **Muzera** 74.18 287 P P 01 09 22.0 -0.1
SNR=5.0
MUD **Monsted U'grnd** 74.28 335 *i* P P 01 09 22.3 +0.2
MUD IAmb IAmb 01 09 23.4
comp=Z,18nm,0.7s
MWC **Mount Wilson** 74.35 58 P P 01 09 24.0 +0.8
MWC **Mount Wilson** 74.35 58 P P 01 09 24.0 +0.8
MWC pmax pmax
comp=Z,16nm,1.3s
SAKB **Bahrain** 74.38 291 P P 01 09 21.9 -1.2
MORS **Morshin** 74.39 323 P P 01 09 23.1 +0.2
KAAM **Kaadhehdhoo** 74.40 256 P P 01 09 23.5 0.0
KAAM **Kaadhehdhoo** 74.40 256 P P 01 09 24.4 +1.0
BZK **Bozkurt** 74.40 313 ⇓P P 01 09 24.4 +1.4
BZK **Bozkurt** 74.40 313 P P 01 09 23.9 +0.9
BZK **Bozkurt** 74.40 313 P P 01 09 23.3 +0.2
comp=Z,83nm,0.7s
STNU **Starunia** 74.43 323 P P 01 09 23.2 +0.1
MPU **Maple Canyon** 74.43 50 P P 01 09 24.3 +0.7
MPU IAmb IAmb 01 09 25.9
comp=Z,20nm,0.7s
KSV **Kosov** 74.46 322 P P 01 09 23.4 +0.1
KWP **Kalwaria Pacla** 74.55 324 *eP* P 01 09 25.1 +1.3
KWP **Kalwaria Pacla** 74.55 324 P P 01 09 24.2 +0.4
comp=Z,130nm,0.9s
SHIU **Shidnytsya** 74.56 323 P P 01 09 24.2 +0.3
BSUT **Blindstream Ca** 74.58 49 P P 01 09 25.2 +0.5
PRAR **RASCA** 74.60 321 ⇓P P 01 09 24.7 +0.5
SHPR **Sheep Range** 74.67 55 P P 01 09 26.0 +1.0
BIR **Birlad** 74.72 319 ⇑P P 01 09 26.2 +1.4
VLDR **Vladesti** 74.79 319 ⇓P P 01 09 26.2 +1.0
VARL **Varlezi** 74.87 319 ⇑P P 01 09 26.9 +1.2
BURAR **Bucovina Array** 74.89 321 ⇑P P 01 09 27.2 +1.2
BURAR **Bucovina Array** 74.89 321 P P 01 09 26.5 +0.5
TLCR 74.89 318 ⇑P P 01 09 26.0 +0.2
TCRU **Three Creeks R** 74.90 52 P P 01 09 26.2 -0.1
SSRD **Sdr. Stenderup** 74.94 334 *i* P P 01 09 26.9 +1.0
SSRD IAmb IAmb 01 09 27.3
comp=Z,40nm,0.6s
GHRR 74.97 319 P P 01 09 26.8 +0.5
TATR **Tatarca** 74.98 318 ⇓P P 01 09 27.2 +0.9
TESR **Tescani** 75.02 320 ⇓P P 01 09 26.8 +0.2
TESR **Tescani** 75.02 320 P P 01 09 26.9 +0.3
comp=Z,80nm,0.8s
ULM **Lac du Bonnet** 75.02 34 P P 01 09 26.5 0.0
comp=Z,12nm,0.5s,baz=311,slow=6.4,SNR=36
ULM LR LR 01 44 45.0
comp=Z,40nm,18.0s,baz=320,slow=38
comp=Z,12nm,0.5s
ULM **Lac du Bonnet** 75.02 34 IAmb IAmb 01 09 27.4
comp=Z,28nm,1.1s
CCUT **Cedar City** 75.06 53 P P 01 09 28.1 +0.8
RAKU **Rahkiv** 75.08 322 P P 01 09 26.8 -0.1
MTPC **Mountain Pass** 75.10 56 P P 01 09 28.2 +0.7
NEGRR **Negrea** 75.11 319 ⇑P P 01 09 27.4 +0.3
IZVR **Izvoarele** 75.16 319 ⇓P P 01 09 28.1 +0.7
MDND **Maddock** 75.17 38 IAmb IAmb 01 09 29.2
comp=Z,37nm,0.8s
ILGA **Ilgaz** 75.18 312 P P 01 09 28.8 +0.9
SCHLR **Schela** 75.18 319 ⇑P P 01 09 28.5 +1.0
SZCU **Shurtz Canyon** 75.20 53 P P 01 09 28.3 +0.3
RDMU **Red Mountain** 75.22 48 P P 01 09 28.9 +0.7
PANC **Panciu** 75.23 319 ⇓P P 01 09 29.4 +1.6
CFR **Carcaliu** 75.24 318 ⇓P P 01 09 28.1 +0.3
ONER **Baraj Valea Uz** 75.26 320 ⇑P P 01 09 29.1 +1.1
P17A **Butcher Ranch,** 75.31 50 P P 01 09 29.4 +0.8
P17A IAmb IAmb 01 09 31.0
comp=Z,23nm,0.7s
TPGR **Topolog** 75.33 318 ⇓P P 01 09 29.3 +0.9
STHS **Stebnicka Huta** 75.34 325 *eP* P 01 09 28.8 +0.4
STHS pmax pmax
comp=Z,36nm,0.6s
STHS **Stebnicka Huta** 75.34 325 *eP* P 01 09 28.8 +0.4
OJC **Ojcow** 75.35 326 *eP* P 01 09 29.7 +1.3
OJC **Ojcow** 75.35 326 P P 01 09 28.7 +0.3
OJC **Ojcow** 75.35 326 P P 01 09 28.7 +0.3
OJC **Ojcow** 75.35 326 P P 01 09 28.8 +0.3
comp=Z,131nm,0.9s
BRIU **Brid** 75.37 323 P P 01 09 28.9 +0.4
V12A **Nelson** 75.37 55 P P 01 09 30.1 +1.2
JOSR **Joseni** 75.42 321 ⇑P P 01 09 30.6 +1.7
MUKU **Mukachevo** 75.43 323 P P 01 09 29.5 +0.6
MTPU **Mount Pierson** 75.43 52 P P 01 09 29.6 0.0
Q16A **Castle Valley** 75.43 51 P P 01 09 30.0 +0.6
VRI **Vrincioaia** 75.44 319 ⇓P P 01 09 30.1 +1.1
VRI **Vrincioaia** 75.44 319 P P 01 09 29.5 +0.5
comp=Z,22nm,1.0s
KORU **Korolevo** 75.45 323 P P 01 09 29.5 +0.5
K22A **Casper** 75.45 45 P P 01 09 29.8 +0.4
BNN **Bunyan** 75.47 309 P P 01 09 29.9 +0.5
P18A **Preston Nutter** 75.48 50 P P 01 09 30.0 +0.2
PLOR **Plostina** 75.49 319 ⇑P P 01 09 30.7 +1.4
LCMT **Little Creek M** 75.49 53 P P 01 09 30.0 +0.4
HOLU **Holmets** 75.51 323 P P 01 09 29.9 +0.6
TRSU **Trosnyk** 75.58 323 P P 01 09 30.7 +1.0
E28A **Huff** 75.59 39 P P 01 09 30.1 +0.2
E28A IAmb IAmb 01 09 31.0
comp=Z,24nm,0.7s
BERU **Beregovo** 75.61 323 P P 01 09 30.2 +0.3
TIRR **Tirgusor** 75.61 317 ⇑P P 01 09 30.1 +0.2
TIRR **Tirgusor** 75.61 317 P P 01 09 30.4 +0.4
comp=Z,27nm,1.1s
BMR **Baia Mare** 75.64 322 ⇑P P 01 09 31.3 +1.1
TURR **Turia** 75.65 320 ⇑P P 01 09 31.6 +1.4
SRU **San Rafael Swe** 75.67 50 IAmb IAmb 01 09 33.2
comp=Z,24nm,0.7s
DNR **Dunn Ranch,Anz** 75.68 58 P P 01 09 31.2 +0.5
DNR IAmb IAmb 01 09 32.9
comp=Z,17nm,1.0s
COVR **Voineasa-Covas** 75.71 320 ⇓P P 01 09 31.8 +1.2
RSSD **Black Hills** 75.71 43 P P 01 09 31.5 +0.6
RSSD IAmb IAmb 01 09 32.4
comp=Z,18nm,0.9s
RSSD **Black Hills** 75.71 43 P P 01 09 31.5 +0.6
RSSD pmax pmax
comp=Z,18nm,0.9s
RSSD **Black Hills** 75.71 43 P P 01 09 31.4 +0.6
OZUR 75.73 320 ⇑P P 01 09 32.2 +1.5
KNB **Kanab** 75.74 53 P P 01 09 31.7 +0.6
KNB **Kanab** 75.74 53 P P 01 09 31.7 +0.6
KNB pmax pmax
comp=Z,13nm,1.3s
NIE **Niedzica** 75.75 325 *eP* P 01 09 32.1 +1.3
NIE **Niedzica** 75.75 325 P P 01 09 31.3 +0.6
comp=Z,32nm,0.8s
PFO **Pinyon Flats O** 75.76 58 LR LR 01 35 54.8
comp=Z,61nm,21.8s,baz=248,slow=30
PFO **Pinyon Flats O** 75.76 58 *eP* P 01 09 31.5 +0.3
PFO pmax pmax
comp=Z,7.0nm,0.9s
DANC **Danby, Needles** 75.76 56 P P 01 09 30.4 -0.7
SHAO **Shalim** 75.78 281 P P 01 09 31.1 -0.3
PMD **Palm Desert** 75.79 58 P P 01 09 31.2 0.0
GAZ **Gaziantep** 75.79 307 P P 01 09 31.1 -0.2
BOSR **Bodos** 75.80 320 ⇓P P 01 09 33.0 +1.8
DPP **Dos Picos Cty** 75.86 58 P P 01 09 32.0 +0.3
RUE **Ruedersdorf** 75.95 330 *eP* P 01 09 32.2 +0.5
comp=Z,48nm,1.0s,baz=35,slow=5.6
NEHR **Nehoiu** 75.97 319 ⇑P P 01 09 32.3 +0.3
BLDU **Balidu** 75.98 203 P P 01 09 31.7 -0.4
BSEG **Bad Segeberg** 75.99 333 *eP* P 01 09 32.5 +0.5
comp=Z,23nm,0.8s,baz=35,slow=5.6
DOPR **Dopca** 76.01 320 ⇑P P 01 09 33.7 +1.4
BIGH **Upper Bighouse** 76.04 342 *eP* P 01 09 32.5 +0.4
BIGH IAmb IAmb 01 09 33.7
comp=Z,16nm,0.7s
ISR **Istrita** 76.07 319 ⇓P P 01 09 34.2 +1.6
ISR **Istrita** 76.07 319 P P 01 09 33.2 +0.5
comp=Z,104nm,0.8s
MLR **Muntele Rosu** 76.09 320 LR LR 01 45 04.5
comp=Z,162nm,21.4s,baz=51,slow=37
MLR **Muntele Rosu** 76.09 320 ⇓P P 01 09 33.8 +0.9
MLR **Muntele Rosu** 76.09 320 P P 01 09 32.4 -0.5
MLR IAmb IAmb 01 09 35.5
comp=Z,25nm,1.3s
MLR **Muntele Rosu** 76.09 320 P P 01 09 32.4 -0.5
MLR pmax pmax
comp=Z,25nm,1.3s
MLR **Muntele Rosu** 76.09 320 P P 01 09 33.4 +0.5
comp=Z,15nm,0.7s
CEI **Carei** 76.11 323 ⇓P P 01 09 34.5 +1.8
BR131 **Keskin Array S** 76.13 311 P P 01 09 33.0 -0.2
BR131 IAmb IAmb 01 09 34.8
comp=Z,21nm,0.7s
BR131 **Keskin Array S** 76.13 311 P P 01 09 33.0 -0.2
BR131 pmax pmax
comp=Z,21nm,0.7s
BRTR **Keskin Array B** 76.13 311 P P 01 09 33.8 +0.6
comp=Z,15nm,0.7s,baz=79,slow=3.6,SNR=128
BRTR PP PP 01 12 24.4 +0.1
comp=Z,2.9nm,0.8s,baz=67,slow=5.9,SNR=4.5
BRTR LR LR 01 49 58.9
comp=Z,42nm,18.9s,baz=356,slow=41
comp=Z,15nm,0.7s
BRTR **Keskin Array B** 76.13 311 P P 01 09 32.9 -0.4
BR106 **Keskin Array S** 76.13 311 P P 01 09 33.6 +0.3
comp=Z,165nmcomp=Z,25nm,0.8s
BR104 **Keskin Array S** 76.14 311 P P 01 09 33.6 +0.3
comp=Z,185nmcomp=Z,26nm,0.9s
BR105 **Keskin Array S** 76.14 311 P P 01 09 33.6 +0.3
comp=Z,196nmcomp=Z,28nm,0.8s
ICOR **Ion Corvin** 76.17 318 ⇑P P 01 09 34.2 +1.1
IRM **Iron Mountain** 76.22 56 P P 01 09 33.9 +0.2
O20A **White River Ci** 76.26 48 P P 01 09 34.0 0.0
O20A IAmb IAmb 01 09 35.9
comp=Z,13nm,0.8s
MESR **Meseseni** 76.28 322 ⇑P P 01 09 35.3 +1.5
KSP **Ksiaz** 76.29 328 *eP* P 01 09 34.7 +1.0
KSP **Ksiaz** 76.29 328 P P 01 09 34.1 +0.3
comp=Z,48nm,1.2s
LANS **Liptovska Anna** 76.31 325 *eP* P 01 09 35.5 +1.6
LANS pmax pmax
comp=Z,24nm,0.7s
LANS **Liptovska Anna** 76.31 325 *eP* P 01 09 35.5 +1.6
CJR **Cluj-Napoca** 76.31 322 ⇓P P 01 09 35.6 +1.6
OKC **Ostrava-Krasne** 76.33 327 *eP* P 01 09 34.5 +0.5
OKC **Ostrava-Krasne** 76.33 327 *eP* P 01 09 34.5 +0.5
HMU **Henry Mountain** 76.34 51 P P 01 09 35.1 +0.5
HMU IAmb IAmb 01 09 38.6
comp=Z,23nm,0.7s
BC3 **Big Chuckawall** 76.36 57 P P 01 09 35.5 +0.9
MDB **Medias** 76.36 321 ⇑P P 01 09 35.3 +1.0
W13A **Hualapai Mount** 76.38 55 P P 01 09 35.0 +0.2
KECS **Kecovo** 76.38 324 *eP* P 01 09 35.3 +1.0
KECS pmax pmax
comp=Z,16nm,0.7s
KECS **Kecovo** 76.38 324 *eP* P 01 09 35.3 +1.0
KIRS **Kirsehir-Merke** 76.38 311 ⇓P P 01 09 35.7 +1.1
LEHL **Lehliu** 76.40 318 ⇑P P 01 09 35.6 +1.1
STEB **Steborice** 76.41 327 *eP* P 01 09 35.4 +1.0
GORT1 **Trebel** 76.42 332 *eP* P 01 09 35.3 +0.9
comp=Z,21nm,0.9s,baz=35,slow=5.6
U15A **North Rim** 76.45 53 P P 01 09 36.3 +1.0
DMTO **DMTO** 76.47 282 P P 01 09 35.1 -0.2
DOK **Doka** 76.49 283 P P 01 09 35.0 -0.4
AGMN **Agassiz Nation** 76.50 36 IAmb IAmb 01 09 35.8
comp=Z,21nm,0.9s
SULR 76.53 319 ⇑P P 01 09 36.1 +1.0
HAYD **Hayden** 76.54 47 P P 01 09 36.5 +0.8
OSTC **Ostas** 76.55 328 *eP* P 01 09 36.1 +0.9
OSTC **Ostas** 76.55 328 *eP* P 01 09 36.1 +0.9
MARR **Marisel-Cluj** 76.56 322 ⇑P P 01 09 36.9 +1.4
VOIR 76.56 320 ⇓P P 01 09 36.6 +1.1
VOIR 76.56 320 P P 01 09 35.9 +0.4
comp=Z,25nm,0.8s
LTVH **Ltavrtes, Hu** 76.58 323 ⇓P P 01 09 36.6 +1.2
CHVC **Chvalec** 76.58 328 *eP* P 01 09 36.2 +0.7
CHVC **Chvalec** 76.58 328 *eP* P 01 09 36.2 +0.7
HLG **Helgoland** 76.58 334 *eP* P 01 09 35.7 +0.4
comp=Z,260nm,1.0s,baz=35,slow=5.6

MORC **Moravsky Berou** 76.62 327 ⇑P P 01 09 36.6 +0.9
MORC **Moravsky Berou** 76.62 327 *e*P P 01 09 36.4 +0.7
DRGR 76.66 322 ⇑P P 01 09 36.9 +0.9
DPC **Dobruska-Polom** 76.67 328 *e*P P 01 09 37.1 +1.2
DPC **Dobruska-Polom** 76.67 328 *e*P P 01 09 37.1 +1.2
DPC **Dobruska-Polom** 76.67 328 P P 01 09 36.4 +0.5
comp=Z,31nm,1.0s
UPC **Upice** 76.67 328 *e*P P 01 09 36.8 +0.9
UPC **Upice** 76.67 328 *e*P P 01 09 36.8 +0.9
KRLC **Kraliky** 76.70 327 *e*P P 01 09 37.0 +0.9
KRLC **Kraliky** 76.70 327 *e*P P 01 09 37.0 +0.9
TNR **Turnu Rosu** 76.78 321 ⇑P P 01 09 38.6 +2.0
MAUC **Maruska** 76.83 326 *e*P P 01 09 37.9 +1.0
IVI **Ivigtut** 76.83 5 P P 01 09 37.8 +1.3
BORR **Bors** 76.85 323 ⇓P P 01 09 38.8 +1.8
BLYC **Blythe** 76.88 56 P P 01 09 38.0 +0.7
BLYC IAmb IAmb 01 10 01.0
comp=Z,26nm,1.5s
SAHE **Sakarya_HENDEK** 76.88 314 ⇑P P 01 09 37.2 -0.1
PV21 **Cone Mtn., Par** 76.93 50 P P 01 09 38.2 +0.3
PV21 IAmb IAmb 01 09 40.1
comp=Z,24nm,0.8s
MDUB **Mudurnu** 76.96 313 P P 01 09 37.7 -0.1
PV23 **Carpenter Ridg** 76.99 50 P P 01 09 38.5 +0.2
FLTG **Flechtingen** 76.99 332 *e*P P 01 09 37.5 -0.1
comp=Z,57nm,0.8s,baz=35,slow=5.6
SGRR **Singureni** 77.00 319 ⇓P P 01 09 38.3 +0.5
PV10 **Paradox Valley** 77.02 50 P P 01 09 39.3 +0.9
PV14 **Lion Creek, Pa** 77.03 50 P P 01 09 38.1 -0.4
PV14 IAmb IAmb 01 09 40.7
comp=Z,19nm,0.9s
KUQ **Kuujjuuaa** 77.04 16 IAmb IAmb 01 09 38.3
comp=Z,14nm,0.8s
PV22 **Blue Mesa, Par** 77.06 50 P P 01 09 38.9 +0.3
PV22 IAmb IAmb 01 09 40.8
comp=Z,20nm,0.8s
PSZ **Piszkesteto** 77.06 324 ⇑P P 01 09 39.5 +1.2
PV04 **Paradox Valley** 77.09 50 P P 01 09 38.7 0.0
PV04 IAmb IAmb 01 09 41.1
comp=Z,16nm,0.9s
PV20 **West Nyswonger** 77.09 50 P P 01 09 39.5 +0.7
PV19 **Morning Glory** 77.10 50 P P 01 09 39.7 +0.8
DRUM **Mains of Drumt** 77.13 341 *e*P P 01 09 38.2 -0.1
DRUM IAmb IAmb 01 09 39.3
comp=Z,16nm,0.7s
PV17 **East Wray Mesa** 77.14 50 P P 01 09 39.5 +0.5
PV17 IAmb IAmb 01 09 41.3
comp=Z,26nm,0.8s
PV16 **Nyswonger Mesa** 77.14 50 P P 01 09 39.2 +0.2
PV16 IAmb IAmb 01 09 41.3
comp=Z,16nm,0.8s
RBK **Rabkut** 77.15 282 P P 01 09 38.8 -0.3
GLA **Glamis** 77.15 57 P P 01 09 39.2 +0.2
GLA **Glamis** 77.15 57 P P 01 09 39.2 +0.2
GLA pmax pmax
comp=Z,9.0nm,0.8s
LOT **Lotru** 77.16 321 ⇓P P 01 09 39.4 +0.4
PV11 **David Mesa, Pa** 77.17 50 P P 01 09 39.0 -0.2
PV11 IAmb IAmb 01 09 41.5
comp=Z,14nm,0.7s
BRG **Berggiesshubel** 77.17 329 *e*P P 01 09 39.0 +0.3
comp=Z,13nm,1.0s,baz=35,slow=5.6
CLL **Collm** 77.18 330 ⇑*i*P P 01 09 38.8 +0.1
CLL *e**PP pP 01 09 58.0 +2.4
CLL pmax pmax
comp=Z,48nm,1.0s
CLL **Collm** 77.18 330 ⇑*i*P P 01 09 38.8 +0.1
comp=Z,48nm,1.0s
CLL *e*pP pP 01 09 58.0 +2.4
CLL *ex* x 01 10 02.0
CLL *e*PP PP 01 12 28.0 -4.5
CLL **Collm** 77.18 330 *e*P P 01 09 38.8 +0.1
comp=Z,43nm,0.9s,baz=35,slow=5.6
CLL **Collm** 77.18 330 P P 01 09 38.5 -0.2
comp=Z,57nm,1.1s
PV18 **Skein Mesa, Pa** 77.19 50 P P 01 09 39.6 +0.3
PV18 IAmb IAmb 01 09 41.6
comp=Z,30nm,0.8s
PV05 **Paradox Valley** 77.19 50 P P 01 09 40.1 +0.7
PV05 IAmb IAmb 01 09 41.8
comp=Z,24nm,1.1s
WHFO **Wadi Hawf** 77.20 283 P P 01 09 38.8 -0.6
PV12 **Saucer Basin,** 77.20 50 P P 01 09 40.1 +0.7
PV12 IAmb IAmb 01 10 14.5
comp=Z,19nm,0.8s
PV07 **Paradox Valley** 77.20 50 P P 01 09 39.6 +0.2
PVCC **Panska Ves** 77.21 329 *e*P P 01 09 39.7 +0.8
PVCC **Panska Ves** 77.21 329 *e*P P 01 09 39.7 +0.8
PV03 **Paradox Valley** 77.22 50 P P 01 09 40.2 +0.7
PV03 IAmb IAmb 01 09 41.8
comp=Z,11nm,0.8s
DEV **Deva** 77.25 321 ⇑P P 01 09 40.8 +1.6
JAVC **Velka Javorina** 77.28 326 *e*P P 01 09 41.1 +1.6
PV13 **Radium Mtn., P** 77.30 50 P P 01 09 40.4 +0.4
PV13 IAmb IAmb 01 09 42.3
comp=Z,17nm,0.9s
RETH **Rethem/Aller,** 77.30 333 *e*P P 01 09 39.8 +0.5
comp=Z,36nm,1.2s,baz=35,slow=5.6
LOZB **Loznitsa** 77.31 318 ⇑P P 01 09 40.1 +0.5
PV02 **Paradox Valley** 77.31 50 P P 01 09 40.6 +0.6
PV02 IAmb IAmb 01 09 48.0
comp=Z,13nm,0.8s
ASSE **Asse, Remlinge** 77.35 332 *e*P P 01 09 40.0 +0.4
comp=Z,20nm,1.0s,baz=35,slow=5.6
PV15 **Paradox Valley** 77.36 50 P P 01 09 41.0 +0.7
PV15 IAmb IAmb 01 09 42.5
comp=Z,10nm,0.9s
BSZH **Besenyszg** 77.37 324 ⇓P P 01 09 41.6 +1.7
VRAC **Vranov** 77.38 327 LR LR 01 46 50.5
comp=Z,90nm,21.1s,baz=32,slow=38
VRAC **Vranov** 77.38 327 ⇑P P 01 09 41.3 +1.4
VRAC **Vranov** 77.38 327 *e*P P 01 09 40.7 +0.8
RICC **Richard** 77.38 329 *e*P P 01 09 40.8 +0.9
COPA **Copaceanca** 77.44 319 ⇓P P 01 09 40.5 +0.3
PV01 **Paradox Valley** 77.46 50 P P 01 09 41.7 +0.8
KPL **Plockton** 77.48 343 *e*P P 01 09 40.8 +0.5
KPL IAmb IAmb 01 09 42.0
comp=Z,34nm,0.8s
HSKC **Hora Svate Kat** 77.58 329 *e*P P 01 09 41.4 +0.3
WUAZ **Wupatki** 77.61 53 P P 01 09 42.3 +0.6
WUAZ IAmb IAmb 01 09 44.4
comp=Z,12nm,0.9s
PRA **Prague** 77.63 329 *e*P P 01 09 42.3 +1.0
PRA **Prague** 77.63 329 *e*P P 01 09 42.3 +1.0
KRUC **Moravsky** 77.65 327 *e*P P 01 09 42.2 +0.8
PRU **Pruhonice** 77.65 329 *e*P P 01 09 42.0 +0.6
PRU **Pruhonice** 77.65 329 *e*P P 01 09 42.0 +0.6
SMOL **Smolenice** 77.65 326 *e*P P 01 09 42.9 +1.4
SMOL pmax pmax
comp=Z,19nm,0.8s
GZR **Gura Zlata** 77.67 321 ⇑P P 01 09 42.3 +0.6
Y14A **Wickenburg** 77.69 55 P P 01 09 42.5 +0.5
CLZ **Clausthal** 77.69 332 *e*P P 01 09 42.2 +0.6
comp=Z,47nm,0.8s,baz=35,slow=5.6
NEUB **Neuenburg** 77.71 331 *e*P P 01 09 42.0 +0.3
comp=Z,52nm,0.8s,baz=35,slow=5.6
BORA **Eskisehir** 77.78 313 IAmb IAmb 01 09 44.6
comp=Z,26nm,0.7s
SRO **Srobarova** 77.83 325 *e*P P 01 09 44.0 +1.6
SRO pmax pmax
comp=Z,61nm,0.8s
SRO **Srobarova** 77.83 325 *e*P P 01 09 44.0 +1.6
MODS **Modra-Piesok** 77.83 326 *e*P P 01 09 43.8 +1.4
MODS pmax pmax
comp=Z,61nm,1.0s
MODS **Modra-Piesok** 77.83 326 *e*P P 01 09 43.8 +1.4
TREC **Trest** 77.83 328 *e*P P 01 09 43.1 +0.6
TREC **Trest** 77.83 328 *e*P P 01 09 43.1 +0.6
ABTO **Aybut** 77.91 282 P P 01 09 42.9 -0.5
SNR=6.1
ABTO P P 01 09 43.2 -0.2
VLAD **Vladila** 77.93 319 ⇓P P 01 09 43.9 +0.8
INVG **Invergeldie, C** 77.94 342 *e*P P 01 09 43.1 +0.2
INVG IAmb IAmb 01 09 43.8
comp=Z,11nm,0.7s
SUSD **Miller** 77.99 40 P P 01 09 44.0 +0.5
113A **Mohawk Valley,** 78.00 57 P P 01 09 43.8 +0.1
NWAO **Narrogin (SRO)** 78.02 201 P P 01 09 44.1 +0.7
SRE **Strehaia** 78.02 320 ⇓P P 01 09 44.8 +1.2
BZS **Buzias** 78.04 322 ⇑P P 01 09 43.9 +0.2
GTTG **Gottingen** 78.08 332 *e*P P 01 09 44.2 +0.5
comp=Z,41nm,0.8s,baz=35,slow=5.6
TANN **Tannenbergstha** 78.10 330 *e*P P 01 09 44.3 +0.3
comp=Z,6.7nm,0.9s,baz=35,slow=5.6

MVCO **Mesa Verde** 78.14 50 P P 01 09 45.4 +0.7
PLN **Plauen** 78.16 330 *e*P P 01 09 44.6 +0.3
comp=Z,4.3nm,0.8s,baz=35,slow=5.6
F33A **5 Mile Ranch,** 78.18 38 P P 01 09 44.4 -0.1
F33A IAmb IAmb 01 09 45.5
comp=Z,25nm,0.7s
IBBN **Ibbenburen** 78.20 333 *e*P P 01 09 44.6 +0.2
comp=Z,52nm,0.8s,baz=35,slow=5.6
HERR **Herculane** 78.22 321 ⇑P P 01 09 44.8 +0.1
ZVC **Zvikov** 78.23 328 *e*P P 01 09 45.4 +0.8
EAB **Aberfoyle** 78.23 342 *e*P P 01 09 44.9 +0.4
EAB IAmb IAmb 01 09 47.2
comp=Z,12nm,0.8s
MOX **Moxa** 78.23 330 *e*P P 01 09 44.9 +0.3
comp=Z,14nm,0.7s,baz=35,slow=5.6
NKC **Novy Kostel** 78.26 330 *e*P P 01 09 45.5 +0.7
NKC **Novy Kostel** 78.26 330 *e*P P 01 09 45.5 +0.7
PLVB **Pleven** 78.28 319 ⇑P P 01 09 45.7 +0.7
X16A **Lo Mia Camp, P** 78.32 54 P P 01 09 46.5 +0.8
LAWE **Loch Awe, Argy** 78.41 342 *e*P P 01 09 45.8 +0.3
LAWE IAmb IAmb 01 09 46.6
comp=Z,17nm,0.8s
BANR **Banloc** 78.44 322 ⇑P P 01 09 47.0 +1.1
HWQ **Hawqa** 78.50 306 *e*P P 01 09 47.5 +0.9
WINA **Alland / Wiene** 78.53 327 *i* P P 01 09 47.6 +1.2
comp=Z,28nm,0.5s,SNR=13
PGBU **Glenifferbraes** 78.61 342 *e*P P 01 09 47.0 +0.4
PGBU IAmb IAmb 01 09 48.5
comp=Z,74nm,0.7s
EYMN **Ely** 78.63 34 IAmb IAmb 01 09 47.9
comp=Z,30nm,0.8s
VALD **Valchedram** 78.63 320 *e*P P 01 09 48.4 +1.5
MPLH **Magyarpolny** 78.66 325 P P 01 09 47.5 +0.5
comp=Z,108nm,1.4s
UBBA **Unterbreizbach** 78.67 331 *e*P P 01 09 47.5 +0.6
comp=Z,10nm,0.6s,baz=35,slow=5.6
CKRC **Cesky Krumlov** 78.68 328 *e*P P 01 09 47.7 +0.6
CKRC **Cesky Krumlov** 78.68 328 *e*P P 01 09 47.7 +0.6
S22A **4UR Ranch, Cre** 78.71 49 P P 01 09 48.9 +1.0
KHC **Kasperske Hory** 78.72 329 *e*P P 01 09 48.1 +0.7
KHC *es*P sP 01 10 09.0 -2.1
KHC **Kasperske Hory** 78.72 329 *e*P P 01 09 48.1 +0.7
KHC *e* 01 10 09.0
KHC **Kasperske Hory** 78.72 329 P P 01 09 47.7 +0.3
comp=Z,53nm,0.8s
EKA **Eskdalemuir** 78.72 341 P P 01 09 47.5 +0.2
comp=Z,15nm,0.6s,baz=23,slow=4.9,SNR=68
EKA LR LR 01 47 50.5
comp=Z,44nm,22.0s,baz=30,slow=38
comp=Z,15nm,0.6s
EKB **Eskdalemuir** 78.73 341 P P 01 09 46.9 -0.3
EKB IAmb IAmb 01 09 48.3
comp=Z,19nm,0.7s
MPEP **Malo Peshtene** 78.73 319 *e*P P 01 09 48.9 +1.4
ESK **Eskdalemuir** 78.75 341 *e*P P 01 09 47.6 +0.3
ESK IAmb IAmb 01 09 48.5
comp=Z,19nm,0.6s
ESK **Eskdalemuir** 78.75 341 P P 01 09 48.0 +0.6
ESK IAmb IAmb 01 09 48.5
comp=Z,20nm,0.7s
ESK **Eskdalemuir** 78.75 341 P P 01 09 48.0 +0.6
ESK pmax pmax
comp=Z,20nm,0.7s
CONA **Conrad Observa** 78.76 327 *i* P P 01 09 48.9 +1.2
comp=Z,17nm,0.7s,SNR=9.5
RONA **Rosalia, Austr** 78.76 326 *i* P P 01 09 49.0 +1.3
comp=Z,20nm,0.6s,SNR=28
DIM **Dimitrovgrad** 78.79 317 *e*P P 01 09 50.0 +2.2
W18A **Petrified Fore** 78.86 53 P P 01 09 48.5 -0.1
EDMD **Edmundbyers** 78.87 340 *e*P P 01 09 47.9 -0.2
EDMD IAmb IAmb 01 09 49.7
comp=Z,24nm,0.8s
GEC2 **GERESS Array S** 78.90 328 IAmb IAmb 01 09 49.7
comp=Z,17nm,0.9s
GEC2 **GERESS Array S** 78.90 328 *e*P P 01 09 48.7 +0.3
comp=Z,16nm,0.9s,baz=35,slow=5.6
GERES **GERESS Array B** 78.90 328 P P 01 09 48.8 +0.3
comp=Z,9.9nm,0.7s,baz=38,slow=5.6,SNR=66
GERES LR LR 01 48 21.6
comp=Z,90nm,18.1s,baz=68,slow=38
comp=Z,9.9nm,0.7s
KASTN **Kahler Asten** 78.91 332 *e*P P 01 09 48.6 +0.3
comp=Z,20nm,0.8s,baz=35,slow=5.6
TBO **Thunder Bay** 78.92 32 IAmb IAmb 01 09 49.6
comp=Z,11nm,0.7s
MORH **Mrgy, Hungar** 78.92 324 ⇑P P 01 09 48.7 +0.2
MORH **Mrgy, Hungar** 78.92 324 P P 01 09 48.2 -0.3
comp=Z,17nm,1.1s
MORH **Mrgy, Hungar** 78.92 324 ⇑*i*P P 01 09 48.4 -0.1
BHL **Bhannes** 78.94 306 *e*P P 01 09 49.8 +0.9
WET **Wettzell** 78.98 329 *e*P P 01 09 49.6 +0.8
comp=Z,28nm,0.9s,baz=35,slow=5.6
K30B **Basset** 78.98 42 P P 01 09 49.5 +0.6
OGNE **Ogallala** 79.02 44 P P 01 09 49.9 +0.6
BLKB **Belogradchik** 79.05 320 ⇓P P 01 09 50.1 +0.8
BUG **Bochum--Univer** 79.10 333 *e*P P 01 09 49.4 +0.1
comp=Z,38nm,0.8s,baz=35,slow=5.6
X18A **Snowflake** 79.14 53 P P 01 09 50.0 -0.1
PGB **Panagyurishte** 79.14 318 *e*P P 01 09 51.2 +1.4
GRA1 **Grafenberg Arr** 79.16 330 P P 01 09 50.3 +0.6
GRF **Grafenberg Arr** 79.16 330 P P 01 09 50.3 +0.6
GRF pmax pmax
comp=Z,65nm,0.7s
GRF **Grafenberg Arr** 79.16 330 *e*P P 01 09 50.6 +0.8
comp=Z,64nm,0.7s,baz=35,slow=5.6
GRF *es*P sP 01 10 14.6 +1.1
GRFO **Grafenberg** 79.16 330 P P 01 09 50.8 +1.0
GRFO **Grafenberg** 79.16 330 P P 01 09 50.8 +1.0
GRFO pmax pmax
comp=Z,53nm,0.7s
GRFO **Grafenberg** 79.16 330 P P 01 09 50.8 +1.0
GRFO *p*P pP 01 10 06.0 -0.6
FRGS **Fruska Gora** 79.22 323 ⇑*i*P P 01 09 50.5 +0.3
BALB **Balikesir** 79.34 314 P P 01 09 50.9 0.0
BALB IAmb IAmb 01 09 52.4
comp=Z,30nm,0.8s
ASF **Jabal al Asfar** 79.36 304 P P 01 09 52.4 +1.1
comp=Z,8.8nm,0.8s,baz=17,slow=2.2,SNR=22
ASF LR LR 01 49 11.3
comp=Z,40nm,18.9s,baz=30,slow=39
comp=Z,8.8nm,0.8s
ALN **Alexandroupoli** 79.39 316 P P 01 09 51.4 +0.3
ALN IAmb IAmb 01 09 52.4
comp=Z,25nm,0.8s
ALN **Alexandroupoli** 79.39 316 P P 01 09 51.4 +0.3
ALN pmax pmax
comp=Z,25nm,0.8s
ARSA **Arzberg** 79.44 326 P P 01 09 51.6 +0.2
ARSA IAmb IAmb 01 09 53.2
comp=Z,18nm,1.0s
ARSA **Arzberg** 79.44 326 *i* P P 01 09 52.2 +0.8
comp=Z,20nm,1.1s,SNR=8.9
RAYN **Ar Rayn** 79.45 292 P P 01 09 51.6 -0.2
RAYN IAmb IAmb 01 09 52.8
comp=Z,15nm,0.8s
RAYN **Ar Rayn** 79.45 292 *i* P P 01 09 52.1 +0.2
SNR=22
RAYN **Ar Rayn** 79.45 292 P P 01 09 51.7 -0.2
RAYN pmax pmax
comp=Z,15nm,0.8s
RAYN **Ar Rayn** 79.45 292 P P 01 09 52.0 +0.2
RAYN *s*P sP 01 10 13.6 -1.9
SDCO **Great Sand Dun** 79.46 48 P P 01 09 52.3 +0.3
RDO **Rodhopi** 79.47 317 P P 01 09 52.3 +0.7
MOA **Molln** 79.47 327 *i* P P 01 09 52.2 +0.7
comp=Z,9.9nm,0.8s,SNR=6.5
BOVS **Bovan** 79.50 321 ⇑P P 01 09 52.0 +0.3
GAL1 **Galloway** 79.52 341 *e*P P 01 09 51.9 +0.3
GAL1 IAmb IAmb 01 09 53.0
comp=Z,40nm,0.6s
VTS **Vitosha** 79.53 319 *e*P P 01 09 53.6 +1.5
BEHE **Becsehely** 79.53 325 P P 01 09 51.5 -0.3
BEHE **Becsehely** 79.53 325 ⇑*i*P P 01 09 52.3 +0.5
PLNA **Plana** 79.54 319 *e*P P 01 09 53.6 +1.5
HPK **Haverah Park** 79.57 339 *e*P P 01 09 52.3 +0.5
HPK IAmb IAmb 01 09 53.2
comp=Z,36nm,0.6s
CSS **Mathiatis** 79.59 308 P P 01 09 52.0 -0.4
CSS IAmb IAmb 01 09 53.9
comp=Z,31nm,0.9s
CSS **Mathiatis** 79.59 308 P P 01 09 52.6 +0.2
comp=Z,41nm,1.0s
ECSD **EROS Data Cent** 79.63 39 IAmb IAmb 01 09 53.6
comp=Z,25nm,0.8s
E38A **The Farm, Brul** 79.66 34 P P 01 09 52.1 -0.4
E38A IAmb IAmb 01 09 53.3
comp=Z,25nm,0.8s
MMAI **Mount Meron Ar** 79.70 305 P P 01 09 54.2 +1.1
comp=Z,18nm,0.7s,baz=27,slow=13,SNR=34
MMAI LR LR 01 48 36.4
comp=Z,85nm,21.3s,baz=38,slow=38
comp=Z,18nm,0.7s
TNS **Taunus Mts** 79.72 332 *e*P P 01 09 53.1 +0.3
comp=Z,33nm,1.3s,baz=35,slow=5.6
RAO **Raoul Island** 79.79 145 LR LR 01 41 00.5
comp=Z,109nm,18.6s,baz=100,slow=32
MANT **Manisa** 79.80 313 P P 01 09 53.8 +0.1
MANT IAmb IAmb 01 09 55.0
comp=Z,19nm,0.8s
BIOA **Bad Ischl, Aus** 79.85 328 *i* P P 01 09 54.3 +0.7
comp=Z,23nm,0.7s,SNR=17
IDGL **Inch Island, C** 79.97 343 P P 01 09 54.6 +0.6
IDGL **Inch Island, C** 79.97 343 *e*P P 01 09 54.6 +0.6
EZN **Ezine** 80.03 315 P P 01 09 55.2 +0.6
comp=Z,35nm,1.1s
MMB **Musomishta** 80.08 318 *e*P P 01 09 56.1 +1.2
GROS **Grobnik** 80.08 326 *i* P P 01 09 55.1 +0.3
LBWR **Ladybower, Pea** 80.10 339 *e*P P 01 09 55.3 +0.6
LBWR IAmb IAmb 01 09 56.1
comp=Z,38nm,0.7s
PERS **Pernice** 80.10 326 *i* P P 01 09 55.5 +0.5
SOKA **Soboth** 80.10 326 *i* P P 01 09 55.6 +0.6
comp=Z,49nm,0.7s,SNR=32
TUC **Tucson** 80.16 55 P P 01 09 55.6 0.0
TUC **Tucson** 80.16 55 P P 01 09 55.6 0.0
TUC pmax pmax
comp=Z,13nm,1.5s
TUC **Tucson** 80.16 55 P P 01 09 57.0 +1.4
KKB **Krupnik** 80.16 319 *e*P P 01 09 56.4 +1.1
WIM **Isle of Man** 80.17 341 *e*P P 01 09 55.4 +0.3
BEBN **Eben Emael** 80.17 334 *d*P P 01 09 55.2 0.0
comp=Z,70nm,0.8s
BTNL **Ternell** 80.20 333 *d*P P 01 09 55.0 -0.4
comp=Z,20nm,0.9s
SPMN **Marine on St.** 80.21 36 IAmb IAmb 01 09 56.3
comp=Z,17nm,0.9s
MEM **Membach** 80.22 333 *d*P P 01 09 55.4 -0.1
comp=Z,27nm,0.9s
DGAR **Diego Garcia** 80.26 251 P P 01 09 56.6 +0.5
ELL **Elmali** 80.31 311 IAmb IAmb 01 09 57.5
comp=Z,40nm,1.0s
FUR **Furstenfeldbru** 80.39 329 *e*P P 01 09 57.1 +0.7
comp=Z,66nm,0.8s,baz=35,slow=5.6
BSTI **Sart Tilman** 80.39 334 *d*P P 01 09 56.5 +0.2
comp=Z,7.9nm,0.8s
BBLS **Lazi&#263i** 80.40 322 ⇑*i*P P 01 09 57.3 +0.7
SCHQ **Schefferville** 80.41 17 P P 01 09 56.2 -0.2
comp=Z,17nm,0.7s,baz=1.9,slow=4.8,SNR=38
SCHQ LR LR 01 47 45.7
comp=Z,65nm,21.4s,baz=346,slow=37
comp=Z,17nm,0.7s
SCHQ **Schefferville** 80.41 17 IAmb IAmb 01 09 58.0
comp=Z,21nm,1.0s
OBKA **Obir** 80.43 326 *i* P P 01 09 57.1 +0.3
comp=Z,29nm,0.7s,SNR=10
LESA **Schwarzleotal** 80.45 328 *i* P P 01 09 57.6 +0.7
comp=Z,36nm,0.9s,SNR=16
KBA **Koelnbreinsper** 80.47 327 *i* P P 01 09 57.5 +0.4
comp=Z,20nm,0.6s,SNR=19
T25A **Trinidad** 80.50 48 P P 01 09 58.2 +0.7
T25A IAmb IAmb 01 09 59.5
comp=Z,17nm,0.9s
ELMS **Elmsett, Ipswi** 80.50 337 *e*P P 01 09 57.2 +0.3
ELMS IAmb IAmb 01 09 58.1
comp=Z,94nm,0.6s
LEGS **Legarje** 80.56 326 *i* P P 01 09 57.5 +0.1
SJES **Sjenica** 80.60 321 ⇑*i*P P 01 09 58.3 +0.5
UCC **Uccle** 80.60 334 P P 01 09 56.3 -1.2
UCC **Uccle** 80.60 334 P P 01 09 56.3 -1.2
UCC pmax pmax
comp=Z,10.0nm,0.7s
UCC **Uccle** 80.60 334 *d*P P 01 09 57.2 -0.3
RUDO **Rudo** 80.60 322 *e*P P 01 09 57.0 -0.7
BCLA **Clavier** 80.62 334 *d*P P 01 09 57.6 0.0
comp=Z,21nm,0.8s
BCLA *d*PP PP 01 13 07.6 +6.5
STU **Stuttgart** 80.66 331 *e*P P 01 09 58.2 +0.3
comp=Z,106nm,0.8s,baz=35,slow=5.6
ILTH **Belurgan, Co L** 80.67 342 P P 01 09 58.1 +0.3
BLY **Banja Luka** 80.71 324 ⇓P P 01 09 58.9 +0.7
BLY **Banja Luka** 80.71 324 IAmb IAmb 01 10 02.6
comp=Z,16nm,0.9s
BLY **Banja Luka** 80.71 324 ⇑*i*P P 01 09 58.3 +0.1
MYKA **Mytra Mystica** 80.71 327 *i* P P 01 09 58.3 0.0
comp=Z,19nm,0.6s,SNR=9.9
BGES **Gesves** 80.72 334 *d*P P 01 09 57.0 -1.1
comp=Z,20nm,0.8s
BGES *d*pP pP 01 10 14.3 -0.9
BGES *d*sP sP 01 10 20.6 -1.3
BGES *d*PP PP 01 13 01.4 -0.5
GHAJ **Ghor Haditha** 80.77 304 IAmb IAmb 01 10 00.8
comp=Z,36nm,0.9s
LJU **Ljubljana** 80.82 326 *i* P P 01 09 58.7 0.0
PLE **Pljevlja** 80.82 322 ⇑*i*P P 01 10 00.0 +1.0
VAY **Valandovo** 80.83 319 *i* P P 01 09 59.6 +0.7
RCHB **Rochefort** 80.87 334 *d*P P 01 09 58.8 -0.2
comp=Z,18nm,1.0s
RCHB *d*pP pP 01 10 15.2 -0.7
PRED **Cave del Predi** 80.89 327 IAmb IAmb 01 09 59.7
comp=Z,20nm,0.6s
I37A **Lemond, Waseca** 80.89 37 P P 01 09 59.6 +0.4
I37A IAmb IAmb 01 10 00.7
comp=Z,33nm,0.7s
CRNS **Crni Vrh** 80.90 326 *i* P P 01 09 58.8 -0.4
BMRD **Maredsous** 80.90 334 *d*P P 01 09 59.1 +0.1
comp=Z,36nm,0.8s
ANMO **Albuquerque** 80.90 51 LR LR 01 45 27.3
comp=Z,14nm,21.8s,baz=327,slow=35
ANMO **Albuquerque** 80.90 51 P P 01 10 00.3 +0.7
ANMO **Albuquerque** 80.90 51 P P 01 10 00.6 +0.9
ANMO IAmb IAmb 01 10 02.2
comp=Z,7.2nm,1.1s
ANMO **Albuquerque** 80.90 51 P P 01 10 00.3 +0.7
ANMO **Albuquerque** 80.90 51 *de*P P 01 10 01.5 +1.8
ANMO pmax pmax
comp=Z,6.0nm,0.8s
ANMO **Albuquerque** 80.90 51 P P 01 10 01.3 +1.6
IVA **Berane** 80.94 321 ⇑*i*P P 01 10 00.3 +0.7
FOEL **Foel Wylfa** 80.94 340 *e*P P 01 09 59.9 +0.6
FOEL IAmb IAmb 01 10 01.1
comp=Z,45nm,0.7s
WATA **Walderalm** 80.95 329 *i* P P 01 10 00.1 +0.5
comp=Z,20nm,0.5s,SNR=17
WLF **Walferdange** 80.98 333 IAmb IAmb 01 10 02.1
comp=Z,16nm,0.8s
WLF **Walferdange** 80.98 333 *d*P P 01 09 59.7 +0.2
comp=Z,13nm,0.8s
WLF **Walferdange** 80.98 333 *e*P P 01 10 01.4 +1.9
comp=Z,16nm,0.8s,baz=35,slow=5.6
WTTA **Wattenberg** 80.99 328 *i* P P 01 10 00.5 +0.6
comp=Z,36nm,0.7s,SNR=17
DUN6 **Lazy B Ranch** 81.02 54 P P 01 10 00.2 -0.1
DUN6 IAmb IAmb 01 10 02.8
comp=Z,30nm,0.9s
ABTA **Abfaltersbach** 81.07 328 *i* P P 01 09 59.6 -0.5
comp=Z,15nm,1.0s,SNR=7.6
PVY **Plav** 81.12 321 ⇑*i*P P 01 10 00.9 +0.3
KOME **Kolasin** 81.13 321 ⇑*i*P P 01 10 00.9 +0.3
MOTA **Moosalm** 81.13 329 *i* P P 01 10 01.1 +0.5
comp=Z,56nm,0.8s,SNR=28
DOU **Dourbes** 81.13 334 *d*P P 01 10 00.0 -0.3
comp=Z,8.5nm,1.0s
UPM **Unac-Piva** 81.14 322 ⇑*i*P P 01 10 00.7 -0.1
UPM **Unac-Piva** 81.14 322 ⇑*i*P P 01 10 00.4 -0.4
RETA **Reutte** 81.14 329 *i* P P 01 10 01.2 +0.6
comp=Z,36nm,0.8s,SNR=18
SQTA **Sankt Quirin** 81.19 329 *i* P P 01 10 01.4 +0.6
comp=Z,30nm,0.7s,SNR=11
UBR **Ueberruh** 81.23 330 *e*P P 01 10 01.0 0.0
comp=Z,10nm,0.8s,baz=35,slow=5.6
SABO **M.te Sabotino** 81.25 327 IAmb IAmb 01 10 01.5
comp=Z,51nm,1.4s
G40A **Rib Lake** 81.30 35 IAmb IAmb 01 10 02.3
comp=Z,12nm,0.9s
KLINJ **Klinje** 81.31 322 *e*P P 01 10 01.4 -0.2
Y22A **Socorro** 81.32 52 P P 01 10 01.6 -0.2
BFO **Black Forest** 81.35 331 P P 01 10 01.7 +0.1
BFO IAmb IAmb 01 10 04.5
comp=Z,16nm,0.7s
BFO **Black Forest** 81.35 331 P P 01 10 01.7 +0.1
BFO pmax pmax

comp=Z,16nm,0.7s
BFO Black Forest 81.35 331 *e*P P 01 10 01.8 +0.2
comp=Z,16nm,0.8s,baz=35,slow=5.6
BFO Black Forest 81.35 331 P P 01 10 01.8 +0.2
DSB Dublin 81.41 342 P P 01 10 02.1 +0.4
NKME Niksic 81.46 322 ⇑*i*P P 01 10 02.1 -0.2
BRY Bratogost 81.54 322 ⇑*i*P P 01 10 02.5 -0.3
BRY Bratogost 81.54 322 ⇑*i*P P 01 10 02.5 -0.3
FETA Feichten 81.54 329 *i* P P 01 10 03.3 +0.5
comp=Z,24nm,0.8s,SNR=14
PDG Podgorica 81.58 321 ⇓P P 01 10 03.5 +0.7
PDG Podgorica 81.58 321 ⇑*i*P P 01 10 03.1 +0.3
PDG Podgorica 81.58 321 ⇑*i*P P 01 10 02.9 +0.1
CEME Cevo 81.64 321 ⇑*i*P P 01 10 03.2 -0.1
DAVA Damuels 81.65 329 *i* P P 01 10 03.7 +0.3
comp=Z,47nm,0.8s,SNR=17
STRD Stroud 81.67 339 *e*P P 01 10 03.4 +0.3
MCH1 Michaelchurch 81.70 339 *e*P P 01 10 03.3 0.0
MCH1 IAmb IAmb 01 10 06.2
comp=Z,27nm,0.7s
319A Douglas 81.73 55 IAmb IAmb 01 10 06.5
comp=Z,14nm,0.9s
F42A Maple Grove Fa 81.76 33 P P 01 10 03.7 -0.1
F42A IAmb IAmb 01 10 04.7
comp=Z,15nm,0.9s
TREB Trebinje 81.77 322 ⇑*i*P P 01 10 03.1 -0.8
HMNX Herstmonceux 81.78 337 *e*P P 01 10 04.7 +1.0
HMNX IAmb IAmb 01 10 05.7
comp=Z,95nm,0.8s
CBKS Cedar Bluff 81.79 44 P P 01 10 04.2 +0.1
CBKS IAmb IAmb 01 10 04.9
comp=Z,23nm,0.9s
CBKS Cedar Bluff 81.79 44 P P 01 10 04.2 +0.1
CBKS pmax pmax
comp=Z,23nm,0.9s
DRME Dracevica, Mon 81.80 321 ⇑*i*P P 01 10 04.5 +0.5
DRME Dracevica, Mon 81.80 321 ⇑*i*P P 01 10 04.3 +0.3
121A Cookes Peak, D 81.82 53 P P 01 10 04.6 0.0
121A IAmb IAmb 01 10 07.3
comp=Z,12nm,0.8s
WOL Wolverton 81.83 338 *e*P P 01 10 04.0 +0.1
BUM Brajici-Budva 81.85 321 ⇑*i*P P 01 10 04.3 0.0
OHR Ohrid 81.86 319 *i* P P 01 10 05.0 +0.6
ECH Echery 81.87 332 IAmb IAmb 01 10 05.3
comp=Z,22nm,0.8s
ECH Echery 81.87 332 P P 01 10 04.3 0.0
ECH pP pP 01 10 20.9 -0.4
ECH sP sP 01 10 26.6 -1.4
HCY Herceg Novi 81.92 322 ⇑*i*P P 01 10 04.7 +0.1
HCY Herceg Novi 81.92 322 ⇑*i*P P 01 10 04.9 +0.3
IGLA Glengowla, Co 81.92 343 P P 01 10 04.3 -0.1
RTBA Rita Blanca 81.93 48 P P 01 10 04.6 -0.4
RTBA IAmb IAmb 01 10 06.7
comp=Z,18nm,1.2s
ULC Ulcinj 81.94 321 ⇑*i*P P 01 10 04.8 0.0
DAVOX Davos/Dischmat 82.07 329 LR LR 01 48 52.0
comp=Z,145nm,20.2s,baz=30,slow=37
I40A Norwalk 82.22 36 IAmb IAmb 01 10 07.0
comp=Z,17nm,0.6s
EIL Elat 82.29 303 LR LR 01 50 28.8
comp=Z,72nm,20.3s,baz=56,slow=38
N35A Tabor 82.29 40 P P 01 10 07.1 +0.5
IWEX Carrickbyrne, 82.30 341 P P 01 10 07.1 +0.6
IWEX Carrickbyrne, 82.30 341 *e*P P 01 10 07.0 +0.6
RAR Rarotonga 82.52 127 LR LR 01 40 17.5
comp=Z,73nm,20.0s,baz=297,slow=31
TUE Stuetta 82.53 329 P P 01 10 07.9 -0.1
TUE IAmb IAmb 01 10 09.4
comp=Z,26nm,0.7s
TUE Stuetta 82.53 329 P P 01 10 07.7 -0.3
comp=Z,144nm,0.7s
SCIA State Center 82.63 38 P P 01 10 08.5 +0.1
E46A Sault Ste Mari 82.76 30 P P 01 10 08.7 -0.3
E46A IAmb IAmb 01 10 10.3
comp=Z,16nm,0.7s
SALO Salr 82.78 328 P P 01 10 08.2 -1.0
I42A Draeger Farm, 82.95 35 P P 01 10 10.0 0.0
I42A IAmb IAmb 01 10 11.1
comp=Z,20nm,0.9s
H43A Windswept, Lux 82.96 34 P P 01 10 09.9 -0.1
KSU1 Kansas State U 83.17 42 IAmb IAmb 01 10 11.8
comp=Z,23nm,0.7s
JFWS Jewell Farm 83.17 36 IAmb IAmb 01 10 11.7
comp=Z,12nm,0.8s
SENIN Lac Senin/Sane 83.39 330 P P 01 10 12.2 -0.3
SENIN IAmb IAmb 01 10 13.5
comp=Z,20nm,0.7s
L40A Anamosa 83.42 37 IAmb IAmb 01 10 13.2
comp=Z,24nm,0.8s
N38A Joes South For 83.49 39 P P 01 10 12.6 -0.3
ZCCA Zocca 83.65 327 P P 01 10 13.6 -0.1
AMTX Amarillo 83.65 48 P P 01 10 13.8 -0.1
AMTX IAmb IAmb 01 10 20.5
comp=Z,12nm,0.7s
VLDQ Val d'Or 83.67 26 P P 01 10 12.3 -1.2
CLF Chambon-Foret 83.69 334 IAmb IAmb 01 10 58.5
comp=Z,31nm,1.2s
MSTX Muleshoe 83.71 49 P P 01 10 13.6 -0.7
NOKA Waynoka 83.84 45 P P 01 10 14.9 +0.1
NOKA IAmb IAmb 01 10 16.4
comp=Z,16nm,0.8s
MNTX Cornudas Mount 83.85 52 P P 01 10 15.0 +0.2
MURB Monte Urbino 83.91 326 P P 01 10 15.9 +0.9
I45A Fountain 83.95 33 P P 01 10 15.3 +0.2
ELIS Ellis County 84.01 46 P P 01 10 16.5 +0.9
ELIS IAmb IAmb 01 10 17.8
comp=Z,22nm,0.7s
OK038 West end E0370 84.06 45 P P 01 10 15.8 0.0
OK038 IAmb IAmb 01 10 17.7
comp=Z,33nm,1.1s
IDI Anoyia 84.15 313 P P 01 10 15.8 -0.6
comp=Z,49nm,0.5s,baz=34,slow=10,SNR=39
comp=Z,49nm,0.5s
L42A Oliver, Polo 84.16 36 P P 01 10 15.7 -0.5
L42A IAmb IAmb 01 10 16.7
comp=Z,15nm,0.7s
MATE Matera 84.16 322 ⇑P P 01 10 16.4 +0.2
K43A Burlington 84.17 35 P P 01 10 15.7 -0.5
AQU L'Aquila 84.27 325 P P 01 10 17.0 +0.1
AQU L'Aquila 84.27 325 P P 01 10 17.0 +0.1
AQU pmax pmax
comp=Z,43nm,0.8s
AQU L'Aquila 84.27 325 P P 01 10 17.4 +0.5
comp=Z,53nm,0.9s
AQU L'Aquila 84.27 325 ⇑*i*P P 01 10 17.2 +0.3
SMWD Samnorwood 84.28 47 IAmb IAmb 01 10 19.1
comp=Z,25nm,0.8s
HTMS Hat Mesa 84.31 51 P P 01 10 17.7 +0.3
CLNB Carlsbad 84.32 51 P P 01 10 18.2 +0.9
CESX Cesi 84.42 325 IAmb IAmb 01 10 17.8
comp=Z,13nm,0.8s
CROK Carrier 84.44 45 P P 01 10 17.9 +0.1
CROK IAmb IAmb 01 10 19.4
comp=Z,30nm,1.0s
N41A Harden Midland 84.66 38 P P 01 10 18.1 -0.7
N41A IAmb IAmb 01 10 19.4
comp=Z,17nm,0.6s
BNI Bardonecchia 84.73 330 P P 01 10 18.8 -0.4
BNI IAmb IAmb 01 10 23.8
comp=Z,18nm,0.8s
BNI Bardonecchia 84.73 330 P P 01 10 18.8 -0.4
BNI pmax pmax
comp=Z,18nm,0.8s
VHRN Van Horn 84.74 53 P P 01 10 19.2 -0.4
PAOL Paolisi 84.83 323 P P 01 10 19.3 -0.4
PAOL IAmb IAmb 01 10 45.9
comp=Z,18nm,1.0s
T35A Sooner Cattle 84.89 44 P P 01 10 19.8 -0.2
T35A IAmb IAmb 01 10 21.6
comp=Z,20nm,0.9s
DKNS Dickens 84.97 48 P P 01 10 21.3 +0.7
DKNS IAmb IAmb 01 10 23.1
comp=Z,23nm,0.8s
PECS Pecos 84.98 52 P P 01 10 21.1 +0.5
PECS IAmb IAmb 01 10 22.7
comp=Z,17nm,0.7s
OK048 Pawnee Station 85.05 44 P P 01 10 20.4 -0.4
OK048 IAmb IAmb 01 10 22.4
comp=Z,19nm,1.0s
P40A Paris 85.05 39 P P 01 10 20.2 -0.6
P40A IAmb IAmb 01 10 22.2
comp=Z,26nm,0.9s
POST Post 85.09 49 P P 01 10 21.3 +0.2
POST IAmb IAmb 01 10 22.9

comp=Z,23nm,0.8s
J47A Sunmer 85.18 33 P P 01 10 21.5 +0.2
ODSA Odessa 85.19 50 P P 01 10 22.1 +0.4
OK029 Liberty Lake 85.25 45 P P 01 10 21.7 -0.1
OK029 IAmb IAmb 01 10 23.6
comp=Z,26nm,0.9s
TIP Timpagrande 85.30 321 ⇓P P 01 10 22.6 +0.5
TIP Timpagrande 85.30 321 P P 01 10 22.8 +0.7
comp=Z,25nm,1.1s
SSB Saint Sauveur 85.31 332 P P 01 10 22.1 +0.1
SSB IAmb IAmb 01 10 23.4
comp=Z,21nm,0.8s
SSB Saint Sauveur 85.31 332 P P 01 10 22.1 +0.1
SSB pmax pmax
comp=Z,21nm,0.8s
SSB Saint Sauveur 85.31 332 P P 01 10 22.5 +0.4
SSB sP sP 01 10 44.6 -1.3
BUKO Buck Lake 85.34 28 P P 01 10 21.5 -0.6
BUKO IAmb IAmb 01 10 22.8
comp=Z,15nm,0.9s
WMOK Wichita Mounta 85.35 46 P P 01 10 21.7 -0.7
WMOK IAmb IAmb 01 10 27.2
comp=Z,9.0nm,0.8s
WMOK Wichita Mounta 85.35 46 P P 01 10 21.7 -0.7
WMOK pmax pmax
comp=Z,9.0nm,0.8s
QUOK Quay 85.36 44 P P 01 10 21.2 -1.2
QUOK IAmb IAmb 01 10 51.9
comp=Z,14nm,0.7s
M44A Midewin, Midew 85.36 36 P P 01 10 21.5 -0.8
I49A Point Hope 85.37 31 P P 01 10 22.2 -0.1
SN07 Snyder 07 85.42 49 P P 01 10 22.0 -0.7
SN07 IAmb IAmb 01 10 23.8
comp=Z,7.6nm,0.7s
OK052 Battle Ridge R 85.44 44 P P 01 10 22.2 -0.6
OK052 IAmb IAmb 01 10 24.5
comp=Z,20nm,1.0s
HDIL Hopedale 85.49 37 P P 01 10 22.2 -0.7
OKCSW OKLAHOMA CITY 85.56 45 P P 01 10 22.1 -1.3
L46A Eue Claire 85.59 34 P P 01 10 22.8 -0.6
MNHN Monahans 85.64 51 P P 01 10 24.1 +0.1
MNHN IAmb IAmb 01 10 25.8
comp=Z,8.5nm,0.7s
LDAQ Lac Daran 85.66 22 P P 01 10 23.2 -0.5
LDAQ IAmb IAmb 01 10 24.6
comp=Z,20nm,0.9s
APMT Aspermont 85.67 48 P P 01 10 24.2 +0.2
APMT IAmb IAmb 01 10 25.5
comp=Z,16nm,1.1s
FNO Franklin 85.69 45 P P 01 10 23.2 -0.8
FNO IAmb IAmb 01 10 25.9
comp=Z,16nm,0.8s
DEOK Depew 85.72 44 P P 01 10 24.0 -0.1
DEOK IAmb IAmb 01 10 25.8
comp=Z,19nm,1.0s
ALPN Alpine 85.83 52 P P 01 10 25.1 +0.1
S39A Bolivar 85.89 41 P P 01 10 24.1 -0.9
S39A IAmb IAmb 01 10 25.6
comp=Z,15nm,0.9s
URZ Urewera 85.90 153 LR LR 01 44 45.0
comp=Z,42nm,20.3s,baz=332,slow=33
R40A Maddies Statio 85.92 40 P P 01 10 24.5 -0.6
X34A Smith Ranch, M 85.96 46 P P 01 10 25.9 +0.5
X34A IAmb IAmb 01 10 27.5
comp=Z,15nm,1.0s
SADO Sadowa 86.02 28 LR LR 01 52 51.3
comp=Z,34nm,19.0s,baz=36,slow=38
TUL3 Leonard 86.03 44 P P 01 10 26.1 +0.4
TUL3 IAmb IAmb 01 10 27.1
comp=Z,15nm,0.6s
W35A Tecumseh 86.05 45 P P 01 10 26.2 +0.4
W35A IAmb IAmb 01 10 26.9
comp=Z,11nm,0.6s
P43A Skaggs, Pawnee 86.13 37 P P 01 10 26.1 0.0
P43A IAmb IAmb 01 10 27.2
comp=Z,14nm,0.7s
LPIG La Paz 86.15 61 LR LR 01 40 26.4
comp=Z,30nm,21.9s,baz=20,slow=30
SGCY Sterling City 86.16 50 P P 01 10 26.6 +0.1
PPT Papeete 86.24 118 LR LR 01 43 43.1
comp=Z,89nm,19.2s,baz=312,slow=32
WTFS Witchita Falls 86.25 47 P P 01 10 26.4 -0.4
WTFS IAmb IAmb 01 10 58.5
comp=Z,17nm,1.3s
LMQ La Malbaie 86.30 21 IAmb IAmb 01 10 28.3
comp=Z,18nm,1.0s
U38A Gravette 86.34 42 P P 01 10 27.4 +0.1
U38A IAmb IAmb 01 10 28.3
comp=Z,13nm,1.0s
AAM Ann Arbor 86.43 32 IAmb IAmb 01 10 28.6
comp=Z,13nm,0.8s
K50A Casco 86.44 31 P P 01 10 27.3 -0.2
ABTX Abilene, Hawle 86.47 48 P P 01 10 28.0 +0.1
ABTX IAmb IAmb 01 10 29.5
comp=Z,5.6nm,0.6s
TX31 Lajitas Ar. Si 86.57 53 IAmb IAmb 01 10 30.6
comp=Z,8.2nm,0.7s
TXAR Lajitas Array 86.58 53 P P 01 10 29.9 +1.4
comp=Z,7.8nm,0.7s,baz=296,slow=3.5,SNR=59
comp=Z,7.8nm,0.7s
TXAR Lajitas Array 86.58 53 P P 01 10 28.9 +0.3
TXAR Lajitas Array 86.58 53 P P 01 10 30.0 +1.4
CCM Cathedral Cave 86.60 40 P P 01 10 28.7 +0.3
CCM Cathedral Cave 86.60 40 P P 01 10 28.7 +0.3
CCM pmax pmax
comp=Z,25nm,0.9s
CCM Cathedral Cave 86.60 40 P P 01 10 28.9 +0.4
CCM pP pP 01 10 44.9 -0.8
SFIN Lafayette 86.60 36 P P 01 10 28.2 -0.2
SFIN IAmb IAmb 01 10 29.1
comp=Z,15nm,0.7s
SLM Saint Louis 86.61 39 P P 01 10 28.4 -0.1
SLM Saint Louis 86.61 39 P P 01 10 28.4 -0.1
SLM pmax pmax
comp=Z,29nm,0.8s
HHAR Hobbs 86.69 42 IAmb IAmb 01 10 29.8
comp=Z,8.0nm,0.9s
DELO Deloro Mine 86.77 27 IAmb IAmb 01 10 30.0
comp=Z,15nm,0.9s
N47A Urbana 86.79 34 P P 01 10 29.3 0.0
N47A IAmb IAmb 01 10 30.3
comp=Z,22nm,1.1s
MGMO Mountain Grove 86.82 41 IAmb IAmb 01 10 30.5
comp=Z,12nm,0.8s
OZNA Ozona 86.89 50 P P 01 10 30.6 +0.5
OZNA IAmb IAmb 01 10 31.5
comp=Z,5.8nm,0.8s
Q44A Meyer Farm, Va 86.95 38 P P 01 10 30.4 +0.2
SAND Sanderson 87.03 52 P P 01 10 31.3 +0.5
SAND IAmb IAmb 01 10 55.1
comp=Z,13nm,1.4s
FVM French Village 87.04 39 P P 01 10 30.7 +0.1
FVM IAmb IAmb 01 10 31.9
comp=Z,13nm,0.8s
FVM French Village 87.04 39 P P 01 10 30.7 +0.1
FVM pmax pmax
comp=Z,13nm,0.9s
PLPT Palo Pinto 87.06 47 P P 01 10 30.5 -0.3
D62A Allapoint, All 87.07 21 P P 01 10 30.8 +0.2
D62A IAmb IAmb 01 10 31.7
comp=Z,16nm,0.7s
WBO Williamsburg 87.12 26 IAmb IAmb 01 10 31.9
comp=Z,17nm,0.9s
MNTQ Montreal, Queb 87.19 24 IAmb IAmb 01 10 31.7
comp=Z,23nm,1.1s
N49A Columbus Grove 87.38 33 IAmb IAmb 01 10 33.5
comp=Z,19nm,0.9s
T42A Van Buren 87.49 40 IAmb IAmb 01 10 34.1
comp=Z,26nm,1.3s
PECO Prince Edward 87.49 27 IAmb IAmb 01 10 33.4
comp=Z,13nm,0.8s
O48B Farmland 87.53 34 IAmb IAmb 01 10 34.0
comp=Z,16nm,0.8s
VAE Valguarnera 87.76 321 LR LR 01 52 09.6
comp=Z,73nm,18.0s,baz=60,slow=37
J55A Hilton 87.80 28 IAmb IAmb 01 10 35.0
comp=Z,17nm,0.8s
FCAR Ozark Folk Cen 87.90 41 IAmb IAmb 01 10 35.6
comp=Z,10nm,0.6s
ERPA Erie 88.01 30 IAmb IAmb 01 10 37.4
comp=Z,16nm,0.7s
P48A Milroy 88.08 35 IAmb IAmb 01 10 36.6
comp=Z,13nm,1.0s
N51A Ashland 88.11 32 IAmb IAmb 01 10 36.9
comp=Z,20nm,0.8s

WHTX Lake Whitney, 88.15 47 IAmb IAmb 01 10 37.6
comp=Z,8.0nm,0.7s
MIAR Mount Ida 88.23 43 IAmb IAmb 01 10 38.0
comp=Z,12nm,0.8s
J57A Williamstown 88.29 27 IAmb IAmb 01 10 37.5
comp=Z,10.0nm,0.8s
NCB Newcomb 88.38 25 IAmb IAmb 01 10 37.6
comp=Z,12nm,0.9s
X40A Basin Creek Fa 88.65 43 IAmb IAmb 01 10 40.0
comp=Z,8.1nm,0.9s
WCI Wyandotte Cave 88.73 36 P P 01 10 38.6 0.0
WCI Wyandotte Cave 88.73 36 P P 01 10 38.6 0.0
WCI pmax pmax
comp=Z,19nm,0.8s
J59A Piesco 88.74 26 IAmb IAmb 01 10 39.6
comp=Z,14nm,0.8s
RPZ Rata Peaks 89.11 160 LR LR 01 54 15.8
comp=Z,62nm,18.7s,baz=124,slow=38
R50A Paris 89.53 35 IAmb IAmb 01 10 44.0
comp=Z,14nm,0.9s
WVT Waverly 89.76 38 P P 01 10 44.4 +0.9
WVT IAmb IAmb 01 10 44.9
comp=Z,9.5nm,0.9s
WVT Waverly 89.76 38 P P 01 10 44.4 +0.9
WVT pmax pmax
comp=Z,10.0nm,0.9s
WVT Waverly 89.76 38 P P 01 10 44.2 +0.7
KSPA Keystone Colle 90.02 28 P P 01 10 44.4 -0.2
MLDN Muldoon 90.05 48 P P 01 10 44.8 -0.2
SSPA Standing Stone 90.07 29 P P 01 10 46.0 +1.1
SSPA Standing Stone 90.07 29 P P 01 10 45.5 +0.7
MCWV Mont Chateau 90.19 31 P P 01 10 45.5 0.0
N58A Sunbury 90.32 29 P P 01 10 45.4 -0.6
OXF Oxford 90.33 40 P P 01 10 46.0 -0.2
OXF Oxford 90.33 40 P P 01 10 46.0 -0.2
OXF pmax pmax
comp=Z,24nm,0.9s
735A Kenedy 90.34 50 P 01 10 45.8 -0.5
T50A Nancy 90.37 36 P P 01 10 46.5 +0.1
U49A Red Boiling Sp 90.38 37 P P 01 10 46.8 +0.4
U49A IAmb IAmb 01 10 47.9
comp=Z,13nm,0.8s
Q54A Coxs Mills 90.38 32 P P 01 10 46.6 +0.3
Q54A IAmb IAmb 01 10 47.7
comp=Z,12nm,0.7s
S51A Beattyville 90.39 35 P P 01 10 46.0 -0.4
S51A IAmb IAmb 01 10 47.6
comp=Z,10nm,0.8s
CLTN Cedars of Leba 90.48 37 P P 01 10 45.9 -0.9
V48A Smith Brothers 90.54 38 P P 01 10 47.4 +0.2
V48A IAmb IAmb 01 10 48.5
comp=Z,8.5nm,1.0s
Y45A Yeager Farm, C 90.78 41 P P 01 10 48.9 +0.6
PAGS Pennsylvania G 90.85 29 P P 01 10 48.3 -0.2
SWET Sewanee 91.38 38 IAmb IAmb 01 11 19.8
comp=Z,6.6nm,0.9s
KEST Kesra 91.51 323 P P 01 10 51.8 0.0
comp=Z,5.2nm,0.5s,baz=169,slow=1.6,SNR=33
KEST LR LR 01 55 21.0
comp=Z,116nm,21.2s,baz=302,slow=38
comp=Z,5.2nm,0.5s
KEST Kesra 91.51 323 IAmb IAmb 01 10 52.6
comp=Z,15nm,1.1s
M65A Busby, Falmout 91.68 24 P P 01 10 53.2 +0.9
baz=336
TKL Tuckaleechee C 91.98 36 LR LR 01 55 22.6
comp=Z,24nm,21.4s,baz=341,slow=38
PBRG Braganca 92.06 337 *e*P P 01 10 54.2 0.0
PGAV Gavieira, Arco 92.34 339 *e*P P 01 10 55.4 -0.1
MVO Moncorvo 92.73 337 *e*P P 01 10 57.3 0.0
POLO Lamas de Olo 92.75 338 *e*P P 01 10 57.4 -0.1
PVRL Vila Real 92.82 338 *e*P P 01 10 57.5 -0.2
PVRL *i* IAmb IAmb 01 10 59.4
comp=Z,32nm,1.9s
ESBB Sonseca Array 93.16 335 IAmb IAmb 01 11 00.3
comp=Z,5.5nm,0.8s
ESDC Sonseca Array 93.17 335 P P 01 10 59.4 +0.1
comp=Z,5.7nm,0.7s,baz=15,slow=4.1,SNR=38
ESDC PP PP 01 14 37.7 -4.6
comp=Z,1.2nm,0.9s,baz=24,slow=8.5,SNR=5.0
ESDC LR LR 01 58 49.6
comp=Z,76nm,18.4s,baz=22,slow=39
comp=Z,5.7nm,0.7s
ESDC Sonseca Array 93.17 335 P P 01 10 59.2 -0.1
ESDC IAmb IAmb 01 11 00.4
comp=Z,6.0nm,0.8s
Y52A Lilburn 93.36 37 P P 01 11 00.4 +0.2
Y52A IAmb IAmb 01 11 02.7
comp=Z,8.1nm,0.9s
PVIS Viseu 93.39 338 *e*P P 01 11 00.1 -0.2
PAB San Pablo 93.41 335 P P 01 11 00.9 +0.4
PAB IAmb IAmb 01 11 01.4
comp=Z,6.6nm,0.8s
PAB San Pablo 93.41 335 P P 01 11 00.9 +0.4
PAB pmax pmax
comp=Z,7.0nm,0.9s
MTE Manteigas 93.59 337 *e*P P 01 11 01.3 +0.1
PMRV Marv??o 94.44 337 *e*P P 01 11 04.7 -0.4
PARRA Arraiolos 95.20 337 *e*P P 01 11 08.1 -0.5
PBAR Barrancos 95.50 336 *e*P P 01 11 12.8 +2.9
MDT Midelt 99.61 332 LR LR 02 00 07.0
comp=Z,95nm,20.8s,baz=28,slow=38
KIBK Kibwezi 102.17 278 P Pdif 01 11 41.1 +0.8
TORD Torodi Ar. Bea 114.27 317 PKP PKiKP 01 16 24.1 -0.7
comp=Z,2.2nm,0.8s,baz=341,slow=1.5,SNR=18
TORD PP PP 01 17 17.4 -2.7
comp=Z,9.1nm,1.1s,baz=20,slow=6.2,SNR=5.9
VNDA Vanda 119.82 175 PKP PKiKP 01 16 33.9 +0.2
comp=Z,1.6nm,0.9s,baz=317,slow=2.9,SNR=5.6
SDV Santo Domingo 121.07 39 *e*P PKiKP 01 16 38.3 0.0
DBIC Dimbokro 123.08 320 PKP PKPdf 01 16 41.4 -0.4
comp=Z,4.9nm,0.6s,baz=40,slow=1.9,SNR=12
BOSA Boshof 128.01 264 PKP PKPdf 01 16 51.2 +0.3
comp=Z,2.6nm,0.8s,baz=117,slow=0.5,SNR=6.8
ATAH Atahualpa 130.03 58 PKP PKiKP 01 16 56.6 +0.2
comp=Z,4.5nm,0.8s,baz=275,slow=1.1,SNR=8.8
QSPA South Pole Qui 131.70 180 PKP PKPdf 01 16 57.0 +0.4
comp=Z,6.3nm,0.7s,baz=286,slow=0.3,SNR=24
QSPA South Pole Qui 131.70 180 PKiKP 01 16 57.3 -0.3
NVL N'lazarevskaya 142.09 204 *e*PKIKP PKiKP 01 17 21.9 +3.3
NVL pmax pmax
comp=Z,88nm,1.8s
LPAZ La Paz 143.43 55 PKhKP PKPpre 01 17 17.0
comp=Z,0.8nm,0.4s,baz=66,slow=5.3,SNR=8.5
TROLL Troll, Antarti 144.11 200 P PKPbc 01 17 17.9 +0.2
SNAA Sanae 145.65 199 ⇓P PKPbc 01 17 22.6 +0.2
comp=Z,464nm,1.2s
SNAA Sanae 145.65 199 PKPbc PKPdf 01 17 21.8 -0.1
comp=Z,12nm,0.7s,baz=141,slow=3.6,SNR=12
SNAA Sanae 145.65 199 PKPbc 01 17 22.2 -0.2
H03N2 Juan Fernandez 146.53 89 T T 04 00 48.0
baz=300,slow=77,SNR=82
H03N3 Juan Fernandez 146.54 89 T T 04 00 48.4
baz=300,slow=77,SNR=74
H03N1 Juan Fernandez 146.55 89 T T 04 00 49.3
baz=300,slow=77,SNR=90
SIV San Ignacio 147.22 45 PKPbc PKPdf 01 17 27.3 +1.1
comp=Z,29nm,0.7s,baz=262,slow=1.2,SNR=66
VNA2 Neumayer--Watz 147.23 198 ⇓P PKPbc 01 17 26.9 0.0
comp=Z,38nm,0.7s,baz=124,slow=3.3
VNA3 Neumayer Olymp 147.50 196 ⇓P PKPbc 01 17 27.7 0.0
comp=Z,15nm,0.7s
VNA1 Neumayer--Stat 147.63 198 ⇓P PKPbc 01 17 28.5 +0.6
comp=Z,23nm,0.7s
BDFB Brasilia 152.30 22 PKPbc PKiKP 01 17 41.7 +0.3
comp=Z,9.3nm,0.6s,baz=236,slow=0.2,SNR=18
BDFB PKPab PKPab 01 17 51.4 +0.3
comp=Z,7.5nm,0.5s,baz=324,slow=3.9,SNR=8.1
CFA Coronel Fontan 153.55 77 PKPbc PKPbc 01 17 43.3 -0.1
comp=Z,2.7nm,0.7s,baz=312,slow=4.6,SNR=12
CFA PKPab PKPab 01 17 56.6 +0.5
comp=Z,1.2nm,0.5s,baz=90,slow=5.5,SNR=3.9
PLCA Paso Flores 155.37 98 PKP PKPdf 01 17 38.6 +0.7
comp=Z,2.4nm,1.1s,baz=47,slow=1.8,SNR=3.0
PLCA PKPab pPKPbc 01 18 04.3 -0.6
comp=Z,2.1nm,0.8s,baz=253,slow=3.4,SNR=6.0
CPUP Villa Florida 157.55 52 PKPab PKPab 01 18 13.6 +0.3
comp=Z,1.0nm,0.5s,baz=340,slow=8.4,SNR=3.5

*MOS **28** 01:36:50.8±0.9, 37.°53N×72.°44E, h205km, mb4.1/17, Error ellipse: s-maj=8.0km s-min=4.7km az=99.6*
*IDC **28** 01:36:50.6±1.1, 37.°41N×72.°45E, h195km±8km, mb3.6/20, mbtmp4.2/25, MS2.9/2, Error ellipse: s-maj=15.1km s-min=11.4km az=13.0*

NEIC ***28*** *01:36:51.6±2.0, 37°.56N±0°.05×72°.44E±0°.09, h197km±6km, mb4.3/33, Error ellipse: s-maj=10.2km s-min=7.5km az=88.0*

NNC ***28*** *01:36:54.8±4.7, 37°.85N×72°.25E, h197km±48km, mb3.5, mpv4.2, Error ellipse: s-maj=47.7km s-min=22.7km az=13.0*

ISC 28 01:36:50.5±0.5, 37°.51N±0°.04×72°.43E±0°.05, h190km±5km, h190km:pP-P, n265, σ1936/290, mb4.1/54, 13C-13D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**2.02**	**346**		**Pn**	**01 37 30.6**	**+1.8**
DRK	**Karamyk**	**2.02**	**346**	PN	**Pn**	**01 37 30.6**	**+1.8**
BTK	**Batken**	**2.84**	**334**		**Pn**	**01 37 39.6**	**+1.9**
BTK				Sn	**Sn**	**01 38 14.4**	**-0.3**
BTK	**Batken**	**2.84**	**334**	PN	**Pn**	**01 37 39.6**	**+1.9**
BTK						01 38 14.4	
KSH2	**Kashi**	**2.95**	**56**	Pn	**Pn**	**01 37 42.0**	**+2.9**
KSH2				Sn	**Sn**	**01 38 18.3**	**+1.1**
KSH2	comp=N,870nm,0.7s			smax	smax		
KSH2	comp=E,670nm,0.6s			smax	smax		
ARSB	**Arslanbob**	**3.83**	**6**		**Pn**	**01 37 50.4**	**+0.6**
ARSB	**Arslanbob**	**3.83**	**6**	PN	**Pn**	**01 37 50.4**	**+0.6**
NIL	**Nilore**	**3.91**	**170**		**Pn**	**01 37 53.7**	**+2.8**
NIL				Sn	**Sn**	**01 38 39.8**	**+1.6**
NIL	**Nilore**	**3.91**	**170**	PN	**Pn**	**01 37 53.7**	**+2.8**
NIL						01 38 39.8	
KBL	**Kabul**	**4.04**	**224**		**Pn**	**01 37 53.8**	**+1.1**
KBL	**Kabul**	**4.04**	**224**	PN	**Pn**	**01 37 53.8**	**+1.1**
NRN	**Naryn**	**4.79**	**34**		**Pn**	**01 38 02.2**	**+0.1**
NRN	**Naryn**	**4.79**	**34**	PN	**Pn**	**01 38 02.2**	**+0.1**
UCH	**Uchtor** SNR=117	**4.97**	**18**	P	**Pn**	**01 38 05.7**	**+1.1**
IUG	**Iuzhnay**	**4.98**	**339**	*e*P	**Pn**	**01 38 05.4**	**+1.0**
ALCI	**Alchi Leh**	**5.07**	**129**	*e*P	**Pn**	**01 38 07.5**	**+1.5**
ALCI				*e*S	**Sn**	**01 39 05.3**	**+0.1**
ALCI	comp=N,244nm,0.6s			IAML		01 39 07.1	
ALCI	comp=E,364nm,0.4s			IAML		01 39 07.6	
JMU	**Jammu**	**5.11**	**157**	*e*P	**Pn**	**01 38 08.7**	**+2.5**
JMU				*e*S	**Sn**	**01 39 05.7**	**0.0**
JMU	comp=E,1μm,0.6s			IAML		01 39 09.3	
JMU	comp=N,1μm,0.4s			IAML		01 39 09.4	
EKS2	**Erkin-Say** SNR=84	**5.24**	**11**	P	**Pn**	**01 38 09.0**	**+1.2**
CHM	**Chimkent**	**5.27**	**336**	*e*P	**Pn**	**01 38 09.2**	**+1.1**
AAK	**Ala-Archa** comp=N,54nm,0.3s,baz=173,slow=6.7,SNR=335	**5.36**	**17**	P	**Pn**	**01 38 10.8**	**+1.5**
AAK	comp=N,59nm,0.4s,baz=339,slow=22,SNR=20			S	**Sn**	**01 39 09.5**	**-1.9**
AAK	**Ala-Archa** SNR=176	**5.36**	**17**	P	**Pn**	**01 38 10.8**	**+1.5**
AAK	**Ala-Archa**	**5.36**	**17**	Pn	**Pn**	**01 38 10.8**	**+1.5**
AAK	**Ala-Archa** comp=N,12nm,0.4s	**5.36**	**17**	⇑P	**Pn**	**01 38 10.7**	**+1.5**
AAK	comp=N,57nm,0.5s			⇓S	**Sn**	**01 39 10.9**	**-0.6**
AAK	**Ala-Archa**	**5.36**	**17**	*c i*PN	**Pn**	**01 38 10.6**	**+1.3**
AAK	comp=Z,72nm,0.7s			pmax	pmax		
DZA	**Taraz**	**5.44**	**351**	*e*P	**Pn**	**01 38 11.2**	**+1.0**
KBK	**Karagaybulak** SNR=18	**5.49**	**20**	P	**Pn**	**01 38 12.4**	**+1.4**
FRU1	**Bishkek**	**5.55**	**17**		**Pn**	**01 38 13.4**	**+1.8**
FRU1	**Bishkek**	**5.55**	**17**	PN	**Pn**	**01 38 13.5**	**+1.8**
ULHL	**Ulahol** SNR=68	**5.56**	**31**	P	**Pn**	**01 38 13.0**	**+1.0**
TSSA	**Tissa**	**5.57**	**146**	*e*P	**Pn**	**01 38 13.3**	**+1.1**
TSSA				*e*S	**Sn**	**01 39 14.2**	**-2.4**
TSSA	comp=E,967nm,0.2s			IAML		01 39 18.4	
TSSA	comp=N,1μm,0.4s			IAML		01 39 19.0	
BOOM	**Boomskoye usch**	**5.65**	**27**		**Pn**	**01 38 14.4**	**+1.2**
BOOM	**Boomskoye usch**	**5.65**	**27**	PN	**Pn**	**01 38 14.4**	**+1.2**
THN	**Thein Dam**	**5.75**	**151**	*e*P	**Pn**	**01 38 16.0**	**+1.6**
THN				*e*S	**Sn**	**01 39 19.5**	**-1.1**
THN	comp=E,424nm,0.4s			IAML		01 39 22.3	
THN	comp=N,629nm,0.4s			IAML		01 39 25.1	
CHMS	**Chumysh** SNR=39	**5.76**	**17**	P	**Pn**	**01 38 15.4**	**+1.1**
KK31	**Karatay Array**	**5.77**	**346**		**Pn**	**01 38 14.8**	**+0.2**
KK31	**Karatay Array** comp=N,11nm,0.2s,baz=168,slow=13,SNR=118	**5.77**	**346**	P	**Pn**	**01 38 15.0**	**+0.4**
KK31	comp=N,345nm,0.3s,baz=168,slow=22			⇓S	**Sn**	**01 39 16.6**	**-4.4**
KK31	**Karatay Array**	**5.77**	**346**	PN	**Pn**	**01 38 14.8**	**+0.2**
KKAR	**Karatay Array**	**5.77**	**346**		**Pn**	**01 38 14.6**	**0.0**
KKAR	**Karatay Array**	**5.77**	**346**	PN	**Pn**	**01 38 14.6**	**0.0**
BRLS	**Borolday**	**5.86**	**341**	*e*P	**Pn**	**01 38 13.1**	**-2.5**
KDJ	**Kajisay**	**5.88**	**37**		**Pn**	**01 38 16.9**	**+0.8**
KDJ	**Kajisay**	**5.88**	**37**	PN	**Pn**	**01 38 17.0**	**+0.8**
TARG	**Taragay, Kyrgy**	**5.91**	**43**		**Pn**	**01 38 16.9**	**+0.3**
TARG	**Taragay, Kyrgy**	**5.91**	**43**	PN	**Pn**	**01 38 17.0**	**+0.3**
TKM2	**Tokmak 2** SNR=82	**5.92**	**23**	P	**Pn**	**01 38 17.7**	**+1.0**
USP	**Ospenovka** SNR=23	**5.96**	**15**	P	**Pn**	**01 38 17.4**	**+0.4**
SGDS	**Sogindy**	**6.16**	**15**	*e*P	**Pn**	**01 38 20.3**	**+0.6**
SGDS				*e*S	**Sn**	**01 39 30.1**	**-0.1**
WUS	**Wushi**	**6.42**	**53**		**Pn**	**01 38 24.5**	**+1.4**
TNSS	**Tian-Shan**	**6.51**	**31**	*e*P	**Pn**	**01 38 25.4**	**+1.0**
AAA	**Alma-Ata**	**6.64**	**30**	*e*P	**Pn**	**01 38 27.3**	**+1.4**
MDOK	**Medeo**	**6.65**	**31**	*e*P	**Pn**	**01 38 27.1**	**+1.0**
BHK	**Bhakra**	**6.92**	**151**	*e*P	**Pn**	**01 38 32.7**	**+3.0**
BHK				*e*S	**Sn**	**01 39 48.5**	**+0.4**
HNLY	**HANLEY**	**7.14**	**129**	*e*P	**Pn**	**01 38 34.1**	**+1.1**
HNLY				*e*S	**Sn**	**01 39 53.2**	**-0.9**
HNLY	comp=N,34nm,0.7s			IAML		01 39 55.5	
HNLY	comp=E,57nm,0.6s			IAML		01 39 56.0	
SATY	**Saty**	**7.17**	**38**	*e*P	**Pn**	**01 38 34.0**	**+1.1**
SMLA	**Simla**	**7.48**	**147**	*e*P	**Pn**	**01 38 37.4**	**+0.5**
SMLA				*e*S	**Sn**	**01 39 57.4**	**-3.8**
SMLA	comp=N,438nm,0.4s			IAML		01 40 01.3	
SMLA	comp=E,619nm,0.3s			IAML		01 40 01.4	
UZB	**Uzynbulak**	**7.55**	**40**	*e*P	**Pn**	**01 38 39.0**	**+1.1**
KLP	**Kalpa**	**7.66**	**139**	*e*P	**Pn**	**01 38 40.4**	**+0.8**
KLP				*e*S	**Sn**	**01 40 01.1**	**-4.9**
KLP	comp=E,277nm,0.1s			IAML		01 40 04.2	
KLP	comp=N,295nm,0.6s			IAML		01 40 05.8	
SHLS	**Shalkode**	**7.78**	**41**	*e*P	**Pn**	**01 38 45.2**	**+4.3**
PDGK	**Podgornoye** comp=N,10nm,0.8s	**7.92**	**41**	⇑P	**Pn**	**01 38 43.6**	**+1.0**
KKR	**Kurukshetra**	**8.37**	**153**	*e*P	**Pn**	**01 38 50.7**	**+2.1**
DDI	**Dehra Dun**	**8.56**	**145**	*e*P	**Pn**	**01 38 52.0**	**+0.8**
DDI				*e*S	**Sn**	**01 40 22.4**	**-4.7**
DDI	comp=E,277nm,0.2s			IAML		01 40 27.9	
DDI	comp=N,223nm,0.2s			IAML		01 40 31.0	
JOSI	**Joshimath**	**9.11**	**138**	*e*P	**Pn**	**01 38 59.2**	**+0.7**
JOSI				*e*S	**Sn**	**01 40 34.6**	**-6.0**
JOSI	comp=E,128nm,0.1s			IAML		01 40 41.8	
JOSI	comp=N,132nm,0.6s			IAML		01 40 44.5	
NDI	**New Delhi**	**9.67**	**154**	*e*P	**Pn**	**01 39 05.8**	**+0.1**
NDI				*e*S	Sn	01 40 44.8	-8.8
NPLP	**NPLP New Delhi**	**9.70**	**154**	*e*P	**Pn**	**01 39 06.5**	**+0.5**
NPLP				*e*S	**Sn**	**01 40 48.9**	**-5.4**
LDR	**Lodi Road**	**9.77**	**154**	*e*S	**Sn**	**01 40 50.8**	**-5.1**
KUDL	**Kundal**	**9.95**	**159**	*e*P	**Pn**	**01 39 08.0**	**-1.1**
KUDL				*e*S	Sn	01 40 50.8	-9.4
KUDL	comp=E,81nm,0.7s			IAML		01 40 55.9	
KUDL	comp=N,35nm,0.4s			IAML		01 41 00.7	
LGTI	**Lohaghat**	**10.31**	**139**	*e*P	**Pn**	**01 39 13.4**	**-0.7**
LGTI				*e*S	Sn	01 40 59.4	-10
LGTI	comp=E,38nm,0.4s			IAML		01 41 08.3	
LGTI	comp=N,41nm,0.4s			IAML		01 41 09.0	
AJM	**Ajmer**	**11.21**	**170**	*e*P	**Pn**	**01 39 24.4**	**-1.2**
MAKZ	**Makanchi**	**11.67**	**34**		**Pn**	**01 39 31.0**	**-0.3**
MAKZ	**Makanchi** comp=N,5.2nm,1.1s	**11.67**	**34**	⇑P	**Pn**	**01 39 31.2**	**-0.1**
MAKZ	**Makanchi**	**11.67**	**34**	P	**Pn**	**01 39 31.0**	**-0.3**
MK31	**Makanchi Array** comp=N,2.6nm,0.5s,baz=212,slow=10,SNR=44	**11.80**	**35**	P	**Pn**	**01 39 33.7**	**+0.8**
MK31	**Makanchi Array**	**11.80**	**35**	*c*eP	**Pn**	**01 39 34.4**	**+1.4**
MKAR	**Makanchi Array** comp=N,1.0nm,0.7s,baz=193,slow=10.0,SNR=14	**11.80**	**35**	P	**Pn**	**01 39 33.4**	**+0.5**
MKAR	**Makanchi Array**	**11.80**	**35**		**Pn**	**01 39 33.9**	**+0.9**
MKAR	**Makanchi Array**	**11.80**	**35**	P	**Pn**	**01 39 33.9**	**+0.9**
WMQ	**Urumqi**	**13.18**	**57**	*e*P	**Pn**	**01 39 47.0**	**-3.5**
WMQ	comp=Z,15nm,0.7s			pmax	pmax		
KURBB	**Kurchatov Arra** comp=Z,17nm,0.7s,baz=206,slow=11,SNR=123	**13.81**	**16**	P	**P**	**01 39 59.7**	**-0.9**
KURBB	**Kurchatov Arra** comp=Z,37nm,0.8s,baz=201,slow=9.7	**13.81**	**16**	⇓P	**P**	**01 40 01.1**	**+0.5**
KURK	**Kurchatov**	**13.92**	**17**	P	**P**	**01 40 01.6**	**-0.2**
KURK	**Kurchatov** comp=Z,11nm,1.0s	**13.92**	**17**	⇑P	**P**	**01 40 02.2**	**+0.5**
KURK	**Kurchatov**	**13.92**	**17**	*d i*P	**P**	**01 40 02.1**	**+0.3**
KURK	comp=Z,33nm,1.0s			pmax	pmax		
ALBI	**Allahabad**	**14.55**	**144**	*e*P	**Pn**	**01 40 07.9**	**+0.3**
ALBI				*e*S	Sn	01 42 39.8	-10
AB31	**Akbulak array**	**14.81**	**326**		**Pn**	**01 40 09.1**	**-1.6**
AB31	**Akbulak array** comp=Z,12nm,0.7s,baz=136,slow=12,SNR=113	**14.81**	**326**	⇑P	**Pn**	**01 40 09.5**	**-1.1**
AB31	comp=Z,13nm,0.6s,baz=135,slow=24			⇓S	Sn	01 42 44.0	-12
ABKAR	**Akbulak array**	**14.81**	**326**		**Pn**	**01 40 08.8**	**-1.8**
BHPL	**Bhopal**	**14.86**	**162**	*e*P	**Pn**	**01 40 11.1**	**-0.4**
BHPL				*e*S	Sn	01 42 45.5	-12
EVN	**Everest**	**15.39**	**124**	P	**P**	**01 40 19.0**	**0.0**
BVA0	**Borovoye Array** comp=Z,13nm,1.1s,baz=160,slow=9.4,SNR=58	**15.58**	**355**	⇑P	**P**	**01 40 20.5**	**+0.4**
BVAR	**Borovoye Array** comp=Z,5.9nm,0.4s,baz=161,slow=9.5,SNR=50	**15.58**	**355**	P	**Pn**	**01 40 19.1**	**-0.9**
BVAR	comp=Z,2.4nm,0.6s,baz=171,slow=22,SNR=4.3			S	**S**	**01 43 09.4**	**-3.6**
BORK	**Borovoye** comp=Z,12nm,0.7s	**15.60**	**355**	P	**Pn**	**01 40 19.6**	**-0.6**
BORK				IAmb	IAmb	01 40 22.2	
BORK	**Borovoye** comp=Z,16nm,0.8s	**15.60**	**355**	*de*P	**P**	**01 40 20.4**	**0.0**
BORK				pmax	pmax		
AKTO	**Aktyubinsk** comp=Z,31nm,0.5s,baz=127,slow=9.0,SNR=87	**16.53**	**326**	P	**Pn**	**01 40 31.2**	**-0.1**
AKTO	comp=Z,5.7nm,0.6s,baz=345,slow=13,SNR=6.1			S	**S**	**01 43 28.6**	**-4.8**
AKTO	**Aktyubinsk** comp=Z,18nm,0.6s	**16.53**	**326**	⇓P	**Pn**	**01 40 31.3**	**-0.1**
AKTO	comp=Z,5.8nm,0.6s			⇓S	**S**	**01 43 29.9**	**-3.5**
AKL	**Akola**	**17.22**	**165**	*e*P	**Pn**	**01 40 44.5**	**+4.5**
BANOM	**Banah**	**17.91**	**234**	P	**P**	**01 40 46.1**	**0.0**
UOSS	**Minazif**	**18.66**	**232**	P	**P**	**01 40 53.8**	**-0.4**
UOSS	**Minazif**	**18.66**	**232**	P	**P**	**01 40 53.3**	**-0.9**
ASHO	**Ashiyiah**	**18.94**	**232**	P	**P**	**01 40 56.7**	**-0.6**
AKT	**Akhty**	**19.45**	**289**	*e*P	**P**	**01 41 03.5**	**+0.8**
AKT	comp=Z,5.0nm,0.4s			pmax	pmax		
AKT	comp=E,4.0nm,0.5s			pmax	pmax		
AKT	comp=N,4.0nm,0.6s			pmax	pmax		
SHL	**Shillong**	**20.37**	**120**	P	**P**	**01 41 13.8**	**+1.1**
SHL				IAmb	IAmb	01 41 16.0	
SHL	**Shillong** comp=Z,9.0nm,0.7s	**20.37**	**120**	P	**P**	**01 41 13.8**	**+1.1**
SHL	comp=Z,9.0nm,0.7s			pmax	pmax		
SVE	**Sverdlovsk**	**20.86**	**342**	*e*P	**P**	**01 41 17.6**	**+0.2**
SVE	comp=Z,12nm,0.8s			pmax	pmax		
ARTI	**Arti** comp=Z,6.8nm,0.6s,baz=158,slow=6.5,SNR=16	**21.10**	**338**	P	**P**	**01 41 20.2**	**+0.3**
ARTI	**Arti** comp=Z,6.8nm,0.6s	**21.10**	**338**	*d i*P	**P**	**01 41 19.5**	**-0.5**
ARTI	**Arti**	**21.10**	**338**	*d i*P	**P**	**01 41 20.2**	**+0.3**
ARTI				*PP	**pP**	**01 41 54.1**	**+0.8**
ARTI				S	**S**	**01 45 02.8**	**-0.5**
ARTI	comp=Z,35nm,1.8s			pmax	pmax		
GNI	**Garni** comp=Z,1.3nm,0.5s,baz=138,slow=9.2,SNR=3.3	**21.70**	**286**	P	**P**	**01 41 25.9**	**-0.7**
GNI	**Garni** comp=Z,1.3nm,0.5s	**21.70**	**286**	P	**P**	**01 41 26.2**	**-0.4**
GNI				IAmb	IAmb	01 41 47.2	
GNI	comp=Z,5.4nm,0.8s			pmax	pmax		
GNI	**Garni** comp=Z,8.0nm,1.0s	**21.70**	**286**	*i* P	**P**	**01 41 28.2**	**+1.6**
GNI	comp=Z,7.1nm,0.8s			pmax	pmax		
GNI	**Garni** comp=Z,7.1nm,0.8s	**21.70**	**286**	P	**P**	**01 41 26.4**	**-0.2**
KNGR	**Kungurtug, Tuv**	**22.14**	**46**	⇓*e*P	**P**	**01 41 33.7**	**+2.9**
KNGR	comp=Z,11nm,0.7s			pmax	pmax		
BELG	**Belogornoye**	**22.85**	**319**	*d i*P	**P**	**01 41 37.8**	**+0.7**
BELG	comp=Z,2.0nm,0.8s			pmax	pmax		
KBZ	**Khabaz** comp=Z,1.4nm,0.8s,baz=147,slow=7.9,SNR=4.0	**23.19**	**295**	P	**P**	**01 41 39.2**	**-1.0**
KBZ	**Khabaz** comp=Z,1.4nm,0.8s	**23.19**	**295**	⇑*e*P	**P**	**01 41 39.1**	**-1.1**
KBZ	comp=Z,8.0nm,2.5s			pmax	pmax		
KIV	**Kislovodsk**	**23.36**	**295**	*e*P	**P**	**01 41 42.5**	**+0.6**
KIV				*e*S	**S**	**01 45 40.1**	**-0.4**
KIV	comp=Z,3.0nm,0.9s			pmax	pmax		
KIV	**Kislovodsk** comp=Z,4.8nm,0.7s	**23.36**	**295**	P	**P**	**01 41 41.6**	**-0.3**
KIRV	**Kirov**	**25.86**	**332**	⇑*e*P	**P**	**01 42 05.1**	**+0.9**
SONM	**Songino Array** comp=Z,0.5nm,0.8s,baz=263,slow=9.9,SNR=2.1	**26.82**	**57**	P	**P**	**01 42 13.1**	**0.0**
SONM	comp=Z,0.2nm,0.4s,baz=256,slow=9.7,SNR=1.1			pP	**pP**	**01 42 51.9**	**-1.0**
SONM	**Songino Array** comp=Z,0.5nm,0.8s	**26.82**	**57**	IAmb	IAmb	01 42 20.8	
RAYN	**Ar Rayn** comp=Z,1.3nm,1.3s	**26.95**	**247**	P	**P**	**01 42 13.4**	**-1.1**
RAYN				IAmb	IAmb	01 42 52.0	
RAYN	**Ar Rayn** comp=Z,4.6nm,1.4s	**26.95**	**247**	P	**P**	**01 42 13.4**	**-1.1**
RAYN	comp=Z,5.0nm,1.4s			pmax	pmax		
OBN	**Obninsk** comp=Z,20nm,18.5s,baz=17,slow=40	**29.94**	**318**	LR	LR	01 57 06.1	
OBN	**Obninsk**	**29.94**	**318**	⇓*i*P	**P**	**01 42 41.1**	**+0.6**
OBN				*SP	**sP**	**01 43 43.0**	**+0.1**
OBN						01 43 46.0	
OBN				S	**S**	**01 47 25.0**	**+1.4**
OBN	comp=Z,46nm,2.5s			pmax	pmax		
CMAR	**Chiang Mai Arr** comp=Z,1.1nm,0.3s,baz=315,slow=9.4,SNR=2.1	**29.98**	**122**	pP	pP	01 43 22.2	+0.7
BR104	**Keskin Array S** comp=Z,1.4nm,1.0s	**30.23**	**286**	P	**P**	**01 42 43.9**	**+0.4**
BR131	**Keskin Array S**	**30.23**	**286**	P	**P**	**01 42 44.0**	**+0.5**
BR131				IAmb	IAmb	01 43 24.1	
BR131	**Keskin Array S** comp=Z,3.9nm,1.4s	**30.23**	**286**	P	**P**	**01 42 44.0**	**+0.5**
BR131	comp=Z,4.0nm,1.5s			pmax	pmax		
BRTR	**Keskin Array B** comp=Z,1.0nm,0.5s,baz=91,slow=7.5,SNR=11	**30.23**	**286**	P	**P**	**01 42 44.8**	**+1.3**
BR106	**Keskin Array S** comp=Z,1.0nm,0.5s	**30.25**	**286**	P	**P**	**01 42 43.7**	**+0.1**
BR105	**Keskin Array S** comp=Z,1.9nm,1.3s	**30.25**	**286**	P	**P**	**01 42 43.9**	**+0.2**
HHC	**Hu-ho-hao-te** comp=Z,2.4nm,1.2s	**30.34**	**71**	*e*P	**P**	**01 42 44.3**	**-0.1**
HHC	comp=Z,17nm,0.7s			pmax	pmax		
HHC	comp=Z,100nm,5.6s			pmax	pmax		
PALK	**Pallekele** comp=Z,13nm,1.2s	**31.03**	**164**	P	**P**	**01 42 50.9**	**+0.4**
PALK				IAmb	IAmb	01 43 31.5	
PALK	**Pallekele** comp=Z,13nm,1.3s	**31.03**	**164**	P	**P**	**01 42 50.9**	**+0.4**
PALK				pmax	pmax		
NRIK	**Noril'sk** comp=Z,1.8nm,0.3s,baz=196,slow=6.8,SNR=7.1	**32.93**	**10**	P	**P**	**01 43 08.0**	**+1.5**
NRIK	**Noril'sk** comp=Z,1.8nm,0.3s	**32.93**	**10**	P	**P**	**01 43 07.3**	**+0.8**
NRIK				IAmb	IAmb	01 43 08.6	
NRIK	**Noril'sk** comp=Z,12nm,1.4s	**32.93**	**10**	⇑*i*P	**P**	**01 43 07.7**	**+1.2**
NRIK	comp=Z,9.0nm,1.4s			pmax	pmax		
AK09	**Malin Array Si**	**33.18**	**307**	P	**P**	**01 43 08.6**	**-0.3**
AK10	**Malin Array Si**	**33.20**	**307**	P	**P**	**01 43 08.8**	**-0.2**
AK08	**Malin Array Si**	**33.20**	**307**	P	**P**	**01 43 08.6**	**-0.4**
AK07	**Malin Array Si**	**33.22**	**307**	P	**P**	**01 43 09.3**	**+0.1**
AKASG	**Malin Array Be** comp=Z,1.0nm,0.5s,baz=113,slow=8.3,SNR=8.4	**33.22**	**307**	P	**P**	**01 43 09.2**	**0.0**
AKASG	comp=Z,1.1nm,0.6s,baz=90,slow=11,SNR=6.4			PP	**PP**	**01 44 29.0**	**+0.7**
AKASG	**Malin Array Be** comp=Z,2.3nm,0.8s	**33.22**	**307**	IAmb	IAmb	01 43 10.8	
AKASG	**Malin Array Be**	**33.22**	**307**	*i* P	**P**	**01 43 08.6**	**-0.7**
AKASG	comp=Z,2.0nm,0.5s			pmax	pmax		
AKBB	**Malin Array Si**	**33.22**	**307**	P	**P**	**01 43 09.1**	**-0.2**
AKBB	comp=Z,4.6nm,1.1s			IAmb	IAmb	01 43 09.7	
AKBB	**Malin Array Si**	**33.22**	**307**	P	**P**	**01 43 09.1**	**-0.2**
AKBB	comp=Z,5.0nm,1.1s			pmax	pmax		
AKBB	**Malin Array Si**	**33.22**	**307**	P	**P**	**01 43 08.8**	**-0.5**
AK06	**Malin Array Si**	**33.23**	**307**	P	**P**	**01 43 09.1**	**-0.2**
AK05	**Malin Array Si**	**33.23**	**307**	P	**P**	**01 43 09.4**	**+0.1**
KIEV	**Kiev**	**33.23**	**307**	P	**P**	**01 43 09.3**	**-0.1**
KIEV	**Kiev**	**33.23**	**307**	P	**P**	**01 43 09.3**	**-0.1**
KIEV	comp=Z,2.0nm,0.9s			pmax	pmax		
KIEV	**Kiev**	**33.23**	**307**	P	**P**	**01 43 08.8**	**-0.5**
AK11	**Malin Array Si**	**33.26**	**307**	P	**P**	**01 43 09.1**	**-0.4**
AK15	**Malin Array Si**	**33.29**	**307**	P	**P**	**01 43 09.3**	**-0.5**
AK18	**Malin Array Si**	**33.33**	**307**	P	**P**	**01 43 09.8**	**-0.3**
SORM	**Soroca** comp=Z,6.7nm,0.8s	**33.61**	**303**	P	**P**	**01 43 12.3**	**-0.3**
TIRR	**Tirgusor** comp=Z,15nm,1.4s	**33.62**	**296**	P	**P**	**01 43 12.7**	**-0.1**
ELL	**Elmali**	**33.70**	**282**	P	**P**	**01 43 14.7**	**+0.9**
ELL	comp=Z,13nm,1.2s			IAmb	IAmb	01 43 46.8	
ELL	**Elmali**	**33.70**	**282**	P	**P**	**01 43 14.7**	**+0.9**
ELL	comp=Z,13nm,1.2s			pmax	pmax		
LUBAR	**Lubar, Ukraine**	**34.09**	**306**	P	**P**	**01 43 16.6**	**-0.1**
NDNU	**Novodnistrovsk**	**34.28**	**303**	P	**P**	**01 43 18.5**	**+0.1**
TESR	**Tescani** comp=Z,8.6nm,0.6s	**34.76**	**300**	P	**P**	**01 43 22.2**	**-0.4**
HORU	**Horodok**	**34.92**	**304**	P	**P**	**01 43 24.1**	**+0.2**
MLR	**Muntele Rosu**	**35.30**	**298**	P	**P**	**01 43 29.1**	**+1.7**
MLR	comp=Z,4.0nm,0.7s			IAmb	IAmb	01 43 30.5	
MLR	**Muntele Rosu**	**35.30**	**298**	P	**P**	**01 43 29.1**	**+1.7**
MLR	comp=Z,4.0nm,0.7s			pmax	pmax		
NACGM	**Naroch** comp=Z,9.0nm,0.8s,baz=100	**35.31**	**314**	*e*P	**P**	**01 43 26.9**	**-0.3**
RNPP5	**Staryi Chortor**	**35.38**	**308**	P	**P**	**01 43 27.6**	**-0.1**
RNPP9	**Sopachiv**	**35.39**	**308**	P	**P**	**01 43 27.3**	**-0.5**
RNPP8	**Varash**	**35.40**	**308**	P	**P**	**01 43 27.8**	**-0.2**
JOF	**Joensuu**	**35.58**	**329**	*e*P	**P**	**01 43 29.9**	**+0.5**
BURAR	**Bucovina Array**	**35.71**	**302**	P	**P**	**01 43 31.2**	**+0.4**
BUR08	**Bucovina Ar. S**	**35.72**	**302**	P	**P**	**01 43 31.0**	**+0.1**
BUR08	comp=Z,6.4nm,1.4s			IAmb	IAmb	01 43 54.4	
KSV	**Kosov**	**35.80**	**303**	P	**P**	**01 43 31.4**	**-0.1**
VOIR		**35.94**	**298**	P	**P**	**01 43 32.4**	**-0.3**
STNU	**Starunia**	**36.18**	**304**	P	**P**	**01 43 34.1**	**-0.5**
MORS	**Morshin**	**36.58**	**304**	P	**P**	**01 43 38.2**	**+0.2**
ARBE	**Arbavere**	**36.76**	**322**	*e*P	**P**	**01 43 39.5**	**+0.2**
SHIU	**Shidnytsya**	**36.93**	**304**	P	**P**	**01 43 41.5**	**+0.5**
LVZ	**Lovozero**	**36.95**	**337**	P	**P**	**01 43 41.2**	**+0.2**
LVZ	**Lovozero**	**36.95**	**337**	P	**P**	**01 43 41.2**	**+0.2**
LVZ	comp=Z,51nm,1.4s			pmax	pmax		
FIA1	**FINESS Array S**	**37.30**	**325**	P	**P**	**01 43 44.1**	**+0.2**
FINES	**FINESS Array B** comp=Z,3.3nm,0.4s,baz=116,slow=9.7,SNR=51	**37.30**	**325**	P	**P**	**01 43 44.2**	**+0.4**
FINES	**FINESS Array B** comp=Z,3.3nm,0.4s	**37.30**	**325**	P	**P**	**01 43 43.7**	**-0.2**
KWP	**Kalwaria Pacla**	**37.35**	**305**	P	**P**	**01 43 44.5**	**0.0**
MTSE	**Matsula**	**37.67**	**320**	*e*P	**P**	**01 43 47.4**	**+0.4**
SUF	**Sumiainen**	**37.68**	**327**	*e*P	**P**	**01 43 47.4**	**+0.3**
KEF	**Keuruu**	**38.07**	**326**	*e*P	**P**	**01 43 50.7**	**+0.4**
SLIT	**Slitere, Latvi**	**38.25**	**318**	*e*P	**P**	**01 43 51.5**	**-0.3**
VAF	**Ylistaro**	**39.30**	**327**	*e*P	**P**	**01 44 01.0**	**+0.5**
VADS	**Vadso**	**39.78**	**339**	*e*P	**P**	**01 44 05.0**	**+0.6**
AAL	**Aland**	**39.87**	**322**	*e*P	**P**	**01 44 04.5**	**-0.7**
PDG	**Podgorica**	**40.50**	**294**	P	**P**	**01 44 11.0**	**+0.3**
PDG	comp=Z,12nm,1.4s			IAmb	IAmb	01 44 32.8	
STEB	**Steborice**	**40.54**	**306**	*e*P	**P**	**01 44 12.2**	**+1.3**
MAUC	**Maruska**	**40.54**	**305**	*e*P	**P**	**01 44 12.5**	**+1.5**
ARA0	**ARCESS Array S**	**40.66**	**337**	*e*P	**P**	**01 44 12.4**	**+0.8**
ARCES	**ARCESS Array B** comp=Z,5.0nm,0.4s,baz=113,slow=8.4,SNR=45	**40.66**	**337**	P	**P**	**01 44 12.4**	**+0.8**
ARCES	**ARCESS Array B** comp=Z,42nm,1.4s	**40.66**	**337**	IAmb	IAmb	01 44 13.2	
GKP	**Gorka Klasztor**	**40.76**	**311**	*e*P	**P**	**01 44 13.4**	**+0.7**
KTK1	**Kautokeino**	**41.16**	**336**	*e*P	**P**	**01 44 16.1**	**+0.3**
DPC	**Dobruska-Polom**	**41.44**	**307**	*e*P	**P**	**01 44 19.4**	**+1.1**
DPC	**Dobruska-Polom**	**41.44**	**307**	*e*P	**P**	**01 44 19.4**	**+1.1**
OSTC

NOA				LR	LR	02 05 17.7	
	comp=Z,13nm,18.2s,baz=10.0,slow=38						
	comp=Z,4.5nm,0.6s						
HOPEN	**Hopen**	**44.30**	**346**	*e*P	**P**	**01 44 42.4**	**+1.6**
TIXI	**Tiksi**	**44.40**	**22**⇓	*e*P	**P**	**01 44 42.0**	**+0.3**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NBO00	**NORSAR Array S**	**44.48**	**322**	P	**P**	**01 44 42.1**	**-0.5**
NBO00				IAmb	IAmb	01 45 24.8	
	comp=Z,14nm,1.1s						
FDMO	**Fiordimonte**	**44.80**	**296**	P	**P**	**01 44 45.9**	**+0.5**
WTTA	**Wattenberg**	**44.91**	**303**	*i* P	**P**	**01 44 46.4**	**+0.1**
	comp=Z,3.4nm,0.8s						
KONO	**Kongsberg**	**45.03**	**320**	P	**P**	**01 44 46.5**	**-0.3**
KONO				IAmb	IAmb	01 45 03.5	
	comp=Z,24nm,1.4s						
KONO	**Kongsberg**	**45.03**	**320**	*e*P	**P**	**01 44 46.9**	**0.0**
KONO	**Kongsberg**	**45.03**	**320**	P	**P**	**01 44 46.5**	**-0.3**
KONO				pmax	pmax		
	comp=Z,24nm,1.4s						
DOMB	**Dombas**	**45.35**	**324**	*e*P	**P**	**01 44 49.7**	**+0.3**
HOMB	**Homborsund**	**45.62**	**318**	*e*P	**P**	**01 44 51.6**	**+0.2**
SKAR	**Skarslia**	**45.68**	**322**	*e*P	**P**	**01 44 52.9**	**+0.9**
DAVA	**Damuels**	**46.08**	**303**	*e*P	**P**	**01 44 55.7**	**+0.2**
	comp=Z,4.7nm,0.5s						
SPA0	**Spitsbergen Ar**	**46.77**	**346**	*e*P	**P**	**01 45 01.4**	**+1.2**
SPITS	**Spitsbergen Ar**	**46.77**	**346**	P	**P**	**01 45 00.9**	**+0.7**
	comp=Z,4.6nm,0.6s,baz=116,slow=9.4,SNR=15						
	comp=Z,4.6nm,0.6s						
BER	**Bergen**	**47.16**	**321**	*e*P	**P**	**01 45 03.9**	**+0.5**
ASK	**Askoy**	**47.22**	**322**	*e*P	**P**	**01 45 04.1**	**+0.3**
EKA	**Eskdalemuir Ar**	**52.36**	**316**	P	**P**	**01 45 42.5**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=88,slow=7.7,SNR=6.1						
	comp=Z,0.8nm,0.5s						
ESDC	**Sonseca Array**	**58.00**	**298**	P	**P**	**01 46 23.8**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=54,slow=7.3,SNR=15						
	comp=Z,0.8nm,0.6s						
TORD	**Torodi Ar. Bea**	**66.89**	**269**	P	**P**	**01 47 21.4**	**-1.1**
	comp=Z,3.1nm,0.6s,baz=48,slow=4.6,SNR=68						
	comp=Z,3.1nm,0.6s						
ILAR	**Eielson Array**	**73.49**	**16**	P	**P**	**01 48 01.3**	**-0.5**
	comp=Z,0.8nm,0.8s,baz=314,slow=5.2,SNR=8.8						
	comp=Z,0.8nm,0.8s						
KNRA	**Kununurra**	**74.82**	**124**	P	**P**	**01 48 09.9**	**-0.2**
KNRA				IAmb	IAmb	01 48 48.7	
	comp=Z,9.3nm,1.2s						
YKA	**Yellowknife Ar**	**80.17**	**3**	P	**P**	**01 48 39.4**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=351,slow=6.1,SNR=23						
YKA				pP	**pP**	**01 49 26.7**	**+0.1**
	comp=Z,0.1nm,0.6s,baz=345,slow=6.0,SNR=1.9						
	comp=Z,1.0nm,0.6s						
WB0	**Warramunga Arr**	**81.48**	**123**	P	**P**	**01 48 46.2**	**-0.5**
WB0				IAmb	IAmb	01 49 08.2	
	comp=Z,7.6nm,1.3s						
WRA	**Warramunga Arr**	**81.56**	**123**	P	**P**	**01 48 46.4**	**-0.7**
	comp=Z,0.7nm,0.4s,baz=325,slow=4.9,SNR=23						
	comp=Z,0.7nm,0.4s						
WRA	**Warramunga Arr**	**81.56**	**123**	P	**P**	**01 48 46.2**	**-0.9**
WRA	**Warramunga Arr**	**81.56**	**123**	P	**P**	**01 48 46.2**	**-0.9**
WRAB	**Tennant Creek**	**81.57**	**123**⇑	*e*P	**P**	**01 48 50.1**	**+3.0**
WRAB				pmax	pmax		
	comp=Z,13nm,0.9s						
ASAR	**Alice Springs**	**83.91**	**126**	P	**P**	**01 48 58.6**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=316,slow=4.6,SNR=6.7						
	comp=Z,0.3nm,0.5s						

*KRNET **28** 01:58:21.8±0.1, 41°.31N×72°.56E, h19km, mb2.5*
*NNC **28** 01:58:22.5±1.8, 41°.28N×72°.51E, h0km, mb3.1, mpv3.0,*
Error ellipse: s-maj=15.7km s-min=6.2km az=169.0
*SOME **28** 01:58:22.7, 41°.22N×72°.55E, h20km*
*ISU **28** 01:58:22, 41°.36N×72°.47E, h4km*

ISC 28 01:58:22.4±1.0, 41°.32N±0°.03×72°.57E±0°.02, h17km±8km, n25, σ1°36/43, 11C-5D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ARSB	**Arslanbob**	**0.31**	**89**⇑	*i*P		**Pg**	**01 58 28.5**	**-0.7**
ARSB			⇑	*i*S		**Sg**	**01 58 33.8**	**0.0**
ARK	**Arkit**	**0.66**	**317**⇓	*i*P		**Pb**	**01 58 34.4**	**-1.2**
ARK			⇓	*i*S		**Sb**	**01 58 43.8**	**-0.7**
TSTA	**Tashata**	**0.74**	**185**	P		**Pn**	**01 58 38.2**	**+0.1**
TSTA				S		**Sn**	**01 58 50.1**	**+1.1**
SALK	**Salom-Alik**	**1.04**	**114**⇑	*i*P		**Pb**	**01 58 41.4**	**-0.6**
SALK			⇑	*i*S		**Sb**	**01 58 55.1**	**-0.3**
TRKS	**Terek-Say**	**1.10**	**282**⇑	*i*P		**Pb**	**01 58 41.7**	**-1.3**
TRKS			⇑	*i*S		**Sb**	**01 58 55.9**	**-1.1**
FRG	**Fergana**	**1.11**	**213**	P		**Pg**	**01 58 44.5**	**+0.5**
FRG				S		**Sg**	**01 59 01.0**	**+2.4**
MNAS	**Manas**	**1.17**	**358**⇑	*i*P		**Pn**	**01 58 43.9**	**-0.2**
MNAS			⇑	*i*S		**Sn**	**01 58 59.6**	**-0.1**
ARLS	**Aral**	**1.42**	**67**⇓	*i*P		**Pn**	**01 58 48.1**	**+0.5**
ARLS			⇓	*i*S		**Sb**	**01 59 07.3**	**+0.8**
MRKS	**Merke**	**1.51**	**19**	P		**Pg**	**01 58 52.6**	**+1.1**
	5.3nm,0.1s							
MRKS				S		**Sg**	**01 59 14.1**	**+3.0**
	26nm,0.2s							
MRKS	**Merke**	**1.51**	**19**	*e*P		**Pg**	**01 58 52.6**	**+1.1**
	5.3nm,0.1s							
MRKS				*e*S		**Sg**	**01 59 14.1**	**+3.0**
	26nm,0.2s							
CHMG	**Chimgan**	**1.94**	**278**	P		**Pb**	**01 58 57.8**	**+0.5**
CHMG				S		**Sg**	**01 59 23.5**	**-1.3**
AAK	**Ala-Archa**	**1.95**	**47**	⇑Pg		**Pb**	**01 58 58.6**	**+1.1**
	1.6nm,0.7s							
AAK				⇑Lg		Lg	01 59 25.4	
	2.5nm,0.6s							
CHRV	**Charvak**	**1.99**	**280**	P		**Pb**	**01 58 58.8**	**+0.6**
CHRV				S		**Sg**	**01 59 25.2**	**-1.4**
IUG	**Iuzhnay**	**2.07**	**294**	Pg		**Pb**	**01 59 00.4**	**+0.8**
	42nm,0.2s							
IUG				Lg		Lg	01 59 27.5	
	140nm,0.3s							
IUG	**Iuzhnay**	**2.07**	**294**	*e*P		**Pb**	**01 59 00.4**	**+0.8**
	42nm,0.2s							
IUG				*e*S		**Sg**	**01 59 27.5**	**-1.6**
	140nm,0.3s							
TVKS	**Tavaksay**	**2.21**	**278**	P		**Pb**	**01 59 02.1**	**+0.2**
TVKS				S		**Sg**	**01 59 31.9**	**-1.5**
KK31	**Karatay Array**	**2.35**	**320**	⇓Pg		**Pb**	**01 59 03.8**	**-0.5**
	1.3nm,0.3s,baz=139,slow=16							
KK31				⇑Lg		Lg	01 59 34.5	
	3.2nm,0.3s,baz=139,slow=29							
BRLS	**Borolday**	**2.66**	**311**	Pg		**Pb**	**01 59 10.2**	**+0.7**
	4.9nm,0.4s							
BRLS				Lg		Lg	01 59 44.2	
	13nm,0.3s							
BRLS	**Borolday**	**2.66**	**311**	*e*P		**Pb**	**01 59 10.2**	**+0.7**
	4.9nm,0.4s							
BRLS				*e*S		**Sb**	**01 59 44.2**	**+2.4**
	13nm,0.3s							
KST	**Kastek**	**3.06**	**55**	Pg		**Pg**	**01 59 19.1**	**-1.9**
	1.8nm,0.4s							
KST				Lg		Lg	01 59 59.4	
	8.1nm,0.6s							
KST	**Kastek**	**3.06**	**55**	*e*P		**Pg**	**01 59 19.1**	**-1.9**
	1.8nm,0.4s							
KST				*e*S		**Sg**	**01 59 59.4**	**-1.1**
	8.1nm,0.6s							
DGS	**Degeres**	**3.06**	**50**	Pg		**Pg**	**01 59 19.3**	**-1.7**
	1.8nm,0.3s							
DGS				Lg		Lg	01 59 59.7	
	7.0nm,0.7s							
DGS	**Degeres**	**3.06**	**50**	*e*P		**Pg**	**01 59 19.3**	**-1.7**
	1.8nm,0.3s							
DGS				*e*S		**Sg**	**01 59 59.7**	**-0.9**
	7.0nm,0.7s							
KRBS	**Karabastau**	**3.30**	**43**	Pg		**Pg**	**01 59 24.3**	**-1.4**
	0.7nm,0.4s							
KRBS				Lg		Lg	02 00 08.1	
	2.1nm,0.5s							
KRBS	**Karabastau**	**3.30**	**43**	*e*P		**Pg**	**01 59 24.3**	**-1.4**
	0.7nm,0.4s							
KRBS				*e*S		**Sg**	**02 00 08.1**	**-0.4**
	2.1nm,0.5s							

KRSC 28 02:05:33.6±1.8, 49°.47N×158°.95E, h41km±42km, MI3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SKR	**Severo-Kuril's**	**2.19**	**305**	*e*S		Sn	02 06 33.3	+0.1
KDTR	**Khodutka, Kamc**	**2.40**	**347**	*e*P		Pn	02 06 13.2	+2.8
KDTR				*e*S		Sn	02 06 42.0	+3.4
PAU	**Pauzhetka**	**2.42**	**326**	*e*S		Sn	02 06 41.9	+3.0
RUS	**Russkaya**	**2.98**	**355**	*e*P		Pn	02 06 21.6	+3.4
RUS				*e*S		Sn	02 06 56.2	+3.6
ASAK	**Asacha**	**2.99**	**348**	*e*P		Pn	02 06 22.7	+4.2
ASAK				*e*S		Sn	02 06 57.0	+3.9
MTVR	**Mutnovka**	**3.05**	**351**	*e*P		Pn	02 06 22.9	+3.4
MTVR				*e*S		Sn	02 06 58.6	+3.9
GRL	**Gorelyy**	**3.13**	**350**	*e*P		Pn	02 06 24.2	+3.7
GRL				*e*S		Sn	02 07 01.1	+4.4
KRMR	**Karymshinskiy**	**3.40**	**352**	*e*P		Pn	02 06 28.0	+4.0
KRMR				*e*S		Sn	02 07 08.6	+5.5
DALK	**Dalny**	**3.57**	**358**	*e*P		Pn	02 06 30.3	+4.0
SPN	**Mys Shipunski**	**3.69**	**10**	*e*P		Pn	02 06 32.2	+4.2
SPN				*e*S		Sn	02 07 14.9	+4.6
SMAR	**Somma**	**3.80**	**359**	*e*P		Pn	02 06 34.6	+4.9
AVH	**Avacha**	**3.80**	**358**	*e*P		Pn	02 06 34.5	+4.9
SDLR	**Sedlovina**	**3.81**	**359**	*e*P		Pn	02 06 34.1	+4.3
KOK	**Koryaka**	**3.83**	**357**	*e*P		Pn	02 06 35.1	+5.1
KBTR	**Krutoberegovo**	**7.14**	**18**	*e*P		Pn	02 07 20.1	+4.8

KRSC 28 02:18:39.1±1.8, 49°.44N×158°.94E, h39km±44km, MI3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SKR	**Severo-Kuril's**	**2.21**	**306**	*e*P		Pn	02 19 14.2	+1.1
SKR				*e*S		Sn	02 19 40.2	+1.0
KDTR	**Khodutka, Kamc**	**2.44**	**347**	*e*P		Pn	02 19 19.3	+2.9
KDTR				*e*S		Sn	02 19 48.3	+3.3
PAU	**Pauzhetka**	**2.45**	**327**	*e*S		Sn	02 19 48.7	+3.6
RUS	**Russkaya**	**3.02**	**355**	*e*P		Pn	02 19 27.5	+3.2
RUS				*e*S		Sn	02 20 02.9	+3.8
ASAK	**Asacha**	**3.02**	**348**	*e*P		Pn	02 19 28.2	+3.7
ASAK				*e*S		Sn	02 20 03.6	+4.1
MTVR	**Mutnovka**	**3.09**	**351**	*e*P		Pn	02 19 29.0	+3.6
MTVR				*e*S		Sn	02 20 05.2	+4.0
MIPR	**Malaya Ipel'ka**	**3.16**	**335**	*e*P		Pn	02 19 30.1	+3.8
GRL	**Gorelyy**	**3.17**	**350**	*e*P		Pn	02 19 30.6	+4.0
GRL				*e*S		Sn	02 20 07.8	+4.7
DALK	**Dalny**	**3.60**	**358**	*e*P		Pn	02 19 36.1	+3.8
SPN	**Mys Shipunski**	**3.73**	**10**	*e*P		Pn	02 19 37.7	+3.6
SPN				*e*S		Sn	02 20 21.3	+4.5
SMAR	**Somma**	**3.83**	**359**	*e*P		Pn	02 19 40.4	+4.6
AVH	**Avacha**	**3.84**	**358**	*e*P		Pn	02 19 40.7	+5.0
SDLR	**Sedlovina**	**3.85**	**360**	*e*P		Pn	02 19 39.8	+3.9
KOK	**Koryaka**	**3.87**	**357**	*e*P		Pn	02 19 41.1	+5.0
KRER	**Koryakskii**	**3.88**	**358**	*e*P		Pn	02 19 42.0	+5.6
KRX	**Arik**	**3.93**	**357**	*e*P		Pn	02 19 41.2	+4.2
GNL	**Ganaly**	**4.31**	**352**	*e*P		Pn	02 19 47.7	+5.4
KBTR	**Krutoberegovo**	**7.18**	**18**	*e*P		Pn	02 20 25.8	+4.4

*IDC **28** 02:26:01.4±3.9, 42°.19N×46°.10E, h0km, mb3.2/3,*
mbtmp3.3/5, ML2.9/2, Error ellipse: s-maj=82.5km
s-min=12.8km az=13.0
*NORS **28** 02:26:08.3, 43°.15N×46°.24E, h2km, MPVA4.3*
*MOS **28** 02:26:09.5, 43°.15N×46°.23E, h6km, MPVA4.4*
*DRS **28** 02:26:10.2, 43°.09N×46°.27E, h6km*
*TIF **28** 02:26:10.3, 43°.18N×46°.19E, h5km*

ISC 28 02:26:11.3±0.8, 43°.16N±0°.02×46°.24E±0°.01, h13km±6km, n100, σ1°28/180, mb3.2/4, 10C-5D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DVE	**Vedeno**	**0.22**	**202**	*e*Pg		**Pg**	**02 26 15.3**	**-0.8**
	203nm,0.1s							
DVE				*e*Sg		**Sg**	**02 26 19.6**	**+0.2**
	5μm,0.7s							
DVE	**Vedeno**	**0.22**	**202**	*e*PG		**Pg**	**02 26 15.2**	**-0.8**
DVE				pmax	pmax			
	comp=Z,203nm,0.1s							
DLMR	**Dylym**	**0.30**	**107**	*e*Pg		**Pg**	**02 26 17.4**	**-0.1**
	comp=Z,429nm,0.3s							
DLMR				*e*Sg		**Sg**	**02 26 22.8**	**+1.1**
	comp=Z,2μm,0.3s							
DLMR	**Dylym**	**0.30**	**107**	*e*PG		**Pg**	**02 26 17.4**	**-0.1**
DLMR				*e*S		**Sg**	**02 26 22.8**	**+1.1**
DLMR				pmax	pmax			
	comp=Z,429nm,0.3s							
GROC	**Groznyy**	**0.32**	**278**	*i* Pg		**Pg**	**02 26 18.1**	**+0.1**
	comp=Z,681nm,0.3s							
GROC				*e*Sg		**Sb**	**02 26 24.4**	**+0.3**
	comp=Z,1μm,0.3s							
GROC	**Groznyy**	**0.32**	**278**	⇑*i*PG		**Pg**	**02 26 18.0**	**+0.1**
GROC				*e*S		**Sb**	**02 26 24.3**	**+0.3**
GROC				pmax	pmax			
	comp=Z,681nm,0.3s							
DBC	**Dubki**	**0.46**	**107**	*i* Pg		**Pg**	**02 26 20.4**	**0.0**
	comp=Z,1μm,0.5s							
DBC				*e*Sg		**Sb**	**02 26 27.8**	**-0.2**
	comp=Z,2μm,0.4s							
DBC	**Dubki**	**0.46**	**107**	⇑*i*PG		**Pg**	**02 26 20.4**	**0.0**
DBC				*e*S		**Sb**	**02 26 27.7**	**-0.2**
DBC				pmax	pmax			
	comp=Z,1μm,0.5s							
BTLR	**Botlikh**	**0.49**	**181**	*e*Pg		**Pg**	**02 26 21.4**	**+0.3**
	comp=Z,164nm,0.6s							
BTLR				*e*Sg		**Sb**	**02 26 29.4**	**+0.3**
	comp=Z,2μm,0.3s							
BTLR	**Botlikh**	**0.49**	**181**	*e*PG		**Pg**	**02 26 21.3**	**+0.3**
BTLR				*e*S		**Sb**	**02 26 29.3**	**+0.3**
BTLR				pmax	pmax			
	comp=Z,164nm,0.6s							
KRNR	**Karanay**	**0.59**	**124**	*i* Pg		**Pg**	**02 26 22.6**	**-0.3**
	comp=Z,120nm,0.4s							
KRNR				*e*Sg		**Sb**	**02 26 32.2**	**+0.3**
	comp=Z,282nm,0.2s							
KRNR	**Karanay**	**0.59**	**124**	⇑*i*PG		**Pg**	**02 26 22.6**	**-0.3**
KRNR				*e*S		**Sb**	**02 26 32.2**	**+0.3**
KRNR				pmax	pmax			
	comp=Z,120nm,0.4s							
UNCR	**Uncukul**	**0.61**	**137**	*e*PG		**Pg**	**02 26 23.2**	**+0.1**
UNCR				*e*S		**Sb**	**02 26 32.6**	**+0.4**
UNCR				pmax	pmax			
	comp=Z,383nm,0.6s							
HNZR	**Khunzah**	**0.70**	**149**	*e*PG		**Pg**	**02 26 25.1**	**+0.2**
HNZR				*e*S		**Sb**	**02 26 35.8**	**+0.9**
HNZR				pmax	pmax			
	comp=Z,221nm,0.3s							
XNZR	**Khunzakh**	**0.71**	**151**	*e*Pg		**Pg**	**02 26 25.1**	**0.0**
	comp=Z,221nm,0.3s							
XNZR				*e*Sg		**Sb**	**02 26 35.8**	**+0.6**
	comp=Z,243nm,0.5s							
BUJR	**Buynaksk**	**0.72**	**117**	*e*PG		**Pb**	**02 26 26.0**	**+0.3**
BUJR				*e*S		**Sn**	**02 26 37.6**	**-0.5**
BUJR				pmax	pmax			
	comp=Z,188nm,0.4s							
ARKR	**Arakani**	**0.79**	**135**	*e*Pg		**Pg**	**02 26 26.8**	**+0.2**
	comp=Z,210nm,0.3s							
ARKR				*e*Sg		**Sb**	**02 26 38.4**	**+1.0**
	comp=Z,160nm,0.3s							
ARKR	**Arakani**	**0.79**	**135**	*e*PG		**Pg**	**02 26 26.7**	**+0.2**
ARKR				*e*S		**Sb**	**02 26 38.4**	**+1.0**
ARKR				pmax	pmax			
	comp=Z,210nm,0.3s							
GNBR	**Gunib**	**0.94**	**145**	*e*PG		**Pb**	**02 26 30.0**	**+0.6**
GNBR				*e*S		**Sn**	**02 26 43.7**	**+0.2**
GNBR				pmax	pmax			
	comp=Z,450nm,0.5s							
SHTL	**Shatili**	**0.94**	**238**	P		**Pg**	**02 26 28.8**	**-0.7**
SHTL				S		**Sg**	**02 26 42.0**	**+0.2**
MAK	**Makhachkala**	**0.95**	**102**	*e*Pg		**Pb**	**02 26 30.2**	**+0.6**
	comp=Z,233nm,0.2s							
MAK				*e*Sg		**Sn**	**02 26 44.7**	**+1.0**
	comp=Z,1μm,0.5s							
MAK	**Makhachkala**	**0.95**	**102**	⇑*i*PG		**Pn**	**02 26 30.9**	**+0.6**
MAK				*e*S		**Sn**	**02 26 45.3**	**+1.6**
MAK				pmax	pmax			
	comp=Z,823nm,0.3s							
MAK				smax	smax			
	comp=N,2μm,0.6s							
MAK				smax	smax			
	comp=N,3μm,0.5s							
KMGR	**Komgaron**	**1.01**	**265**	*e*Pg		**Pg**	**02 26 30.9**	**+0.1**
KMGR				*e*Sg		**Sn**	**02 26 46.6**	**+1.4**
KMGR	**Komgaron**	**1.01**	**265**	*e*PG		**Pg**	**02 26 31.0**	**+0.3**
KMGR				*e*S		**Sn**	**02 26 48.2**	**+3.0**
TLTR	**Tlyarata**	**1.06**	**175**	*e*PG		**Pg**	**02 26 31.9**	**+0.2**
TLTR				*e*S		**Sn**	**02 26 47.3**	**+0.8**
TLTR				pmax	pmax			
	comp=Z,73nm,0.3s							
VLKR	**Vladikavkaz**	**1.15**	**265**	*e*Pg		**Pg**	**02 26 33.7**	**+0.4**
VLKR				*e*Sg		**Sn**	**02 26 51.6**	**+3.0**
VLKR	**Vladikavkaz**	**1.15**	**265**	*e*PG		**Pg**	**02 26 34.0**	**+0.6**
VLKR				*e*S		**Sn**	**02 26 51.6**	**+3.0**
KMKR	**Kumukh**	**1.21**	**148**	*e*Pg		**Pg**	**02 26 35.1**	**+0.5**
	comp=Z,491nm,0.5s							
KMKR				*e*Sg		**Sn**	**02 26 53.0**	**+2.6**
	comp=Z,1μm,0.2s							
KMKR	**Kumukh**	**1.21**	**148**	*e*PG		**Pg**	**02 26 35.0**	**+0.5**
KMKR				*e*S		**Sn**	**02 26 53.0**	**+2.6**
KMKR				pmax	pmax			
	comp=Z,491nm,0.5s							
TRKR	**Terskaya**	**1.23**	**298**	*e*Pg		**Pn**	**02 26 34.4**	**+0.2**
TRKR				*e*Sg		**Sg**	**02 26 52.5**	**+1.5**
TRKR	**Terskaya**	**1.23**	**298**	*e*PG		**Pn**	**02 26 34.4**	**+0.2**
TRKR				*e*S		**Sg**	**02 26 52.5**	**+1.5**
BTKR	**Batakoyurt**	**1.25**	**280**	*e*Pg		**Pb**	**02 26 35.3**	**+0.5**
BTKR				*e*Sg		**Sg**	**02 26 53.7**	**+1.9**
BTKR	**Batakoyurt**	**1.25**	**280**	*e*PG		**Pb**	**02 26 35.3**	**+0.5**
BTKR				*e*S		**Sg**	**02 26 53.7**	**+1.9**
SGKR	**Sergokala**	**1.26**	**123**	*e*Pg		**Pg**	**02 26 35.7**	**+0.2**
	comp=Z,492nm,0.3s							
SGKR				*e*Sg		**Sg**	**02 26 54.3**	**+2.4**
	comp=Z,399nm,0.6s							
SGKR	**Sergokala**	**1.26**	**123**	*e*PG		**Pg**	**02 26 35.7**	**+0.2**
SGKR				*e*S		**Sg**	**02 26 54.3**	**+2.4**
SGKR				pmax	pmax			
	comp=Z,492nm,0.3s							
CHRG	**Chargali**	**1.27**	**230**	P		**Pn**	**02 26 35.0**	**+0.2**
CHRG				S		**Sg**	**02 26 52.7**	**+0.4**
LGD	**Lagodekhi**	**1.32**	**180**	P		**Pb**	**02 26 36.6**	**+0.6**
ARNR	**Ardon**	**1.43**	**272**	*e*Pg		**Pb**	**02 26 37.9**	**+0.2**
ARNR				*e*Sg		**Sg**	**02 26 58.8**	**+1.6**
ARNR	**Ardon**	**1.43**	**272**	*e*PG		**Pb**	**02 26 38.6**	**+0.9**
ARNR				*e*S		**Sg**	**02 26 59.4**	**+2.1**
URKR	**Urkarakh**	**1.43**	**133**	*e*PG		**Pg**	**02 26 38.9**	**+0.1**
URKR				*e*S		**Sg**	**02 26 59.4**	**+2.0**
URKR				pmax	pmax			
	comp=Z,462nm,0.3s							
LACR	**Lac**	**1.46**	**258**	*e*Pg		**Pn**	**02 26 37.2**	**-0.2**
LACR				*e*Sg		**Sb**	**02 26 57.4**	**+0.5**
LACR	**Lac**	**1.46**	**258**	*e*PG		**Pn**	**02 26 37.3**	**-0.2**
LACR				*e*S		**Sb**	**02 26 57.7**	**+0.8**
GUDG	**Gudauri**	**1.47**	**242**	P		**Pn**	**02 26 38.4**	**+0.8**
GUDG				S		**Sn**	**02 26 57.4**	**+0.7**
GUDG	**Gudauri**	**1.47**	**242**	*e*Pg		**Pn**	**02 26 38.4**	**+0.8**
GUDG				*e*Sg		**Sn**	**02 26 57.5**	**+0.7**
GUDG	**Gudauri**	**1.47**	**242**	*e*PG		**Pn**	**02 26 38.4**	**+0.8**
GUDG				*e*S		**Sn**	**02 26 57.5**	**+0.7**
PRTR	**Priterechnaya**	**1.54**	**293**	*e*Pg		**Pn**	**02 26 39.5**	**+1.1**
PRTR				*e*Sg		**Sg**	**02 27 01.6**	**+0.7**
PRTR	**Priterechnaya**	**1.54**	**293**	*e*PG		**Pn**	**02 26 39.5**	**+1.1**
PRTR				*e*S		**Sg**	**02 27 01.6**	**+0.7**
KORR	**Kora**	**1.59**	**268**	*e*Pg		**Pn**	**02 26 40.2**	**+1.2**
KORR				*e*Sg		**Sg**	**02 27 02.5**	**+0.1**
KORR	**Kora**	**1.59**	**268**	*e*PG		**Pn**	**02 26 40.3**	**+1.2**
KORR				*e*S		**Sg**	**02 27 03.2**	**+0.8**
STDR	**Stavd-Durt**	**1.60**	**278**	*e*Pg		**Pb**	**02 26 41.0**	**+0.3**
STDR				*e*Sg		**Sg**	**02 27 03.5**	**+0.7**
STDR	**Stavd-Durt**	**1.60**	**278**	*e*PG		**Pb**	**02 26 41.0**	**+0.3**
STDR				*e*S		**Sg**	**02 27 04.9**	**+2.1**
DDFL	**Dedoflistskaro**	**1.71**	**183**	P		**Pg**	**02 26 44.5**	**+0.3**
SEAG	**Tbilisi Sea**	**1.75**	**218**	P		**Pg**	**02 26 44.7**	**-0.2**
LSNR	**Lesken**	**1.77**	**275**	*e*Pg		**Pn**	**02 26 42.3**	**+0.8**
LSNR				*e*Sg		**Sb**	**02 27 06.1**	**+0.6**
LSNR	**Lesken**	**1.77**	**275**	*e*PN		**Pn**	**02 26 42.3**	**+0.8**
LSNR				*e*S		**Sg**	**02 27 08.3**	**+0.2**
TBLG	**Delisi**	**1.81**	**218**	P		**Pb**	**02 26 44.9**	**+0.7**
TBLG				S		**Sg**	**02 27 10.2**	**+0.8**
DGRG	**David-gareji**	**1.82**	**201**	P		**Pg**	**02 26 46.9**	**+0.6**
DGRG				S		**Sg**	**02 27 13.6**	**+3.7**
DRN	**Derbent**	**1.92**	**125**	*e*Pg		**Pb**	**02 26 46.8**	**+0.7**
	comp=Z,172nm,0.3s							
DRN				*e*Sg		**Sg**	**02 27 13.8**	**+0.9**
	comp=Z,723nm,0.2s							
DRN	**Derbent**	**1.92**	**125**	*ce*PN		**Pb**	**02 26 46.7**	**+0.7**
VSHL	**Vashlovani**	**1.93**	**176**	P		**Pg**	**02 26 47.7**	**-0.7**
NCK	**Nalchik**	**1.96**	**281**	*e*Pg		**Pb**	**02 26 46.3**	**-0.4**
NCK				*e*Sg		**Sb**	**02 27 11.2**	**+0.2**
NCK	**Nalchik**	**1.96**	**281**	*e

KURBB	**Kurchatov Arra**	**23.16**	**60**	P		**P**	**02 31 15.6**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=272,slow=12,SNR=4.7							
	comp=Z,0.1nm,0.3s							
KURK	**Kurchatov**	**23.23**	**60**	*e*P		**P**	**02 31 17.4**	**-0.5**
KURK				pmax		pmax		
	comp=E,3.0nm,1.5s							
MKAR	**Makanchi Array**	**25.62**	**69**	P		**P**	**02 31 35.9**	**-4.4**
	comp=Z,0.1nm,0.4s,baz=292,slow=5.8,SNR=2.1							
	comp=Z,0.1nm,0.4s							

IDC ***28*** *02:35:41.0±1.2,2.°79S×119.°58E, h0km, mb3.5/4, mbtmp3.5/5, ML3.6/1, MS2.5/2, Error ellipse: s-maj=69.4km s-min=18.1km az=71.0*

DJA ***28*** *02:35:41.5±0.2,3.°3S±1.°×11.°9E±.°, h10km, M3.9/22, mb4.1/1, MLv3.8/22*

ISC 28 02:35:42.2±0.8,2.°87S±0.°04×119.°36E±0.°06, h10km, n16, σ0.°74/18, mb3.6/4, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MMSI	**Mamuju**	**0.48**	**291**	P		**Pg**	**02 35 51.3**	**-0.3**
MMSI				S		**Sb**	**02 35 59.1**	**-0.8**
PMSI	**Majene**	**0.77**	**215**	P		**Pg**	**02 35 57.4**	**+0.2**
PMSI				S		**Sb**	**02 36 08.9**	**+0.5**
SPSI	**Sidrap Palu**	**1.17**	**159**	P		Pb	02 36 02.1	-2.4
SPSI				S		**Sb**	**02 36 18.8**	**-0.9**
PCI	**Palu**	**2.00**	**14**	P		**Pn**	**02 36 17.0**	**+0.8**
KAPI	**Kappang**	**2.17**	**170**	Pn		**Pn**	**02 36 19.5**	**+1.0**
	17nm,0.3s,baz=345,slow=9.5,SNR=31							
KAPI				Sn		**Sn**	**02 36 46.4**	**+0.9**
	21nm,0.3s,baz=41,slow=23,SNR=18							
KAPI				LR		LR	02 36 52.8	
	comp=Z,34nm,18.7s,baz=304,slow=32							
	65nm,0.4s							
KAPI	**Kappang**	**2.17**	**170**	P		**Pn**	**02 36 18.2**	**-0.3**
MKS	**Makassar**	**2.34**	**177**	P		**Pn**	**02 36 20.2**	**-0.6**
KKSI	**Kolaka, Sulawe**	**2.63**	**120**	P		**Pn**	**02 36 25.0**	**+0.2**
MPSI	**Mapaga**	**3.23**	**10**	P		**Pn**	**02 36 33.1**	**+0.1**
BSSI	**Bau Bau, Buton**	**3.45**	**161**	P		**Pn**	**02 36 35.8**	**-0.2**
GTOI	**Gorontalo**	**5.04**	**46**	P		**Pn**	**02 36 57.9**	**-0.1**
WRA	**Warramunga Arr**	**22.41**	**140**	P		**P**	**02 40 39.6**	**-1.6**
	0.5nm,0.8s,baz=318,slow=12,SNR=5.0							
	0.5nm,0.8s							
ASAR	**Alice Springs**	**25.01**	**147**	P		**P**	**02 41 07.2**	**+0.5**
	0.6nm,0.7s,baz=336,slow=11,SNR=6.9							
	0.6nm,0.7s							
JOW	**Kunigami**	**30.75**	**16**	LR		LR	02 56 12.2	
	comp=Z,30nm,18.8s,baz=310,slow=40							
SONM	**Songino Array**	**51.75**	**349**	P		**P**	**02 44 49.9**	**-0.2**
	0.6nm,0.5s,baz=159,slow=8.6,SNR=4.0							
	0.6nm,0.5s							
MKAR	**Makanchi Array**	**59.24**	**331**	P		**P**	**02 45 44.5**	**+0.6**
	0.8nm,0.6s,baz=137,slow=7.3,SNR=8.3							
	0.8nm,0.6s							

IDC ***28*** *02:42:08.8±0.8,0.°11S×125.°44E, h0km, mb3.8/10, mbtmp3.9/11, ML3.9/1, MS2.9/3, Error ellipse: s-maj=44.5km s-min=16.2km az=72.0*

DJA ***28*** *02:42:14.0±1.1,0.°5S±2.°×12.°5E±.°, h12km±8km, M4.3/26, mB5.0/5, mb4.7/6, MLv4.2/26, Mw(mB)4.3/5*

NEIC ***28*** *02:42:15.5±1.9,0.°14S±0.°06×125.°31E±0.°07, h35km±2km, mb4.2/8, Error ellipse: s-maj=12.8km s-min=9.1km az=112.0*

ISC 28 02:42:16.1±0.6,0.°29S±0.°05×125.°24E±0.°06, h52km, n41, σ1.°30/43, mb3.9/13, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MNI	**Manado**	**1.76**	**347**	P		**Pn**	**02 42 44.6**	**+0.3**
SANI	**Sanana**	**1.91**	**157**	P		**Pn**	**02 42 44.8**	**-1.4**
SANI				S		**Sn**	**02 43 11.0**	**+1.9**
TNTI	**Ternate**	**2.37**	**64**	P		**Pn**	**02 42 51.9**	**-0.7**
TNTI				S		**Sn**	**02 43 21.6**	**+1.1**
GTOI	**Gorontalo**	**2.41**	**292**	P		**Pn**	**02 42 55.9**	**+2.8**
LUWI	**Luwuk**	**2.58**	**253**			**Pn**	**02 42 56.0**	**+0.5**
LUWI	**Luwuk**	**2.58**	**253**	P		**Pn**	**02 42 55.6**	**+0.1**
MRSI	**Marisa**	**3.39**	**283**	P		**Pn**	**02 43 05.3**	**-1.2**
NLAI	**Namlea**	**3.47**	**148**	P		**Pn**	**02 43 07.2**	**-0.5**
APSI	**Ampana**	**3.65**	**260**	P		**Pn**	**02 43 12.1**	**+2.0**
KRAI	**Karang Ratu**	**4.36**	**134**	P		**Pn**	**02 43 21.1**	**+1.2**
TOLI2	**Tolitoli**	**4.67**	**287**			**Pn**	**02 43 24.2**	**+0.1**
MSAI	**Masohi**	**4.78**	**130**	P		**Pn**	**02 43 26.8**	**+1.2**
MPSI	**Mapaga**	**5.38**	**277**	P		**Pn**	**02 43 33.7**	**-0.2**
SPSI	**Sidrap Palu**	**6.58**	**236**	P		**Pn**	**02 43 51.1**	**+0.8**
	0.2nm43nm,0.7s							
KAPI	**Kappang**	**7.22**	**229**	Pn		**Pn**	**02 43 59.8**	**+0.7**
	1.8nm,0.3s,baz=60,slow=6.7,SNR=4.1							
KAPI				Sn		**Sn**	**02 45 19.2**	**-0.6**
	0.3nm,0.3s,baz=98,slow=23,SNR=1.0							
KAPI				LR		LR	02 47 35.0	
	comp=Z,87nm,20.2s,baz=56,slow=44							
	5.6nm,0.4s							
KAPI	**Kappang**	**7.22**	**229**			**Pn**	**02 44 00.4**	**+1.2**
FAKI	**Fak Fak**	**7.48**	**111**	Pn		**Pn**	**02 44 01.4**	**-1.3**
BBJI	**Bungbulang**	**18.93**	**247**	P		**P**	**02 46 33.1**	**0.0**
BBJI				IAmb		IAmb	02 46 38.5	
	comp=Z,8.9nm,0.8s							
WRA	**Warramunga Arr**	**21.47**	**156**	P		**P**	**02 47 00.0**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=337,slow=12,SNR=8.4							
	comp=Z,1.3nm,0.8s							
WRA	**Warramunga Arr**	**21.47**	**156**	P		**P**	**02 47 00.3**	**-0.2**
WR8	**Warramunga Arr**	**21.55**	**156**	P		**P**	**02 46 59.8**	**-1.5**
COEN	**Coen**	**22.35**	**128**	P		**P**	**02 47 10.6**	**+0.6**
COEN				IAmb		IAmb	02 47 47.8	
	comp=Z,11nm,1.1s							
ASAR	**Alice Springs**	**24.72**	**161**	P		**P**	**02 47 32.9**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=337,slow=8.7,SNR=6.8							
	comp=Z,0.8nm,0.6s							
ASAR	**Alice Springs**	**24.72**	**161**	P		**P**	**02 47 34.9**	**+2.2**
CMAR	**Chiang Mai Arr**	**31.85**	**307**	LR		LR	03 02 16.8	
	comp=Z,17nm,18.8s,baz=120,slow=38							
STKA	**Stephens Creek**	**35.02**	**155**	P		**P**	**02 49 04.0**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=308,slow=12,SNR=3.5							
	comp=Z,0.9nm,0.5s							
USRK	**Ussuriysk Ar.**	**44.70**	**7**	P		**P**	**02 50 22.8**	**-1.2**
	comp=Z,1.5nm,0.5s,baz=171,slow=6.6,SNR=2.4							
	comp=Z,1.5nm,0.5s							
SONM	**Songino Array**	**50.66**	**344**	P		**P**	**02 51 10.2**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=157,slow=8.0,SNR=4.3							
SONM				LR		LR	03 13 27.5	
	comp=Z,18nm,20.5s,baz=255,slow=37							
	comp=Z,0.7nm,0.6s							
MKAR	**Makanchi Array**	**60.05**	**327**	P		**P**	**02 52 17.1**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=129,slow=7.8,SNR=16							
	comp=Z,1.4nm,0.7s							
MKAR	**Makanchi Array**	**60.05**	**327**	P		**P**	**02 52 17.8**	**0.0**
ZALV	**Zalesovo Beam**	**63.51**	**335**	P		**P**	**02 52 40.1**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=108,slow=9.3,SNR=1.5							
	comp=Z,0.3nm,0.4s							
KURBB	**Kurchatov Arra**	**64.34**	**329**	P		**P**	**02 52 46.0**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=131,slow=6.7,SNR=16							
	comp=Z,1.1nm,0.7s							
KURK	**Kurchatov**	**64.35**	**329**	P		**P**	**02 52 46.7**	**+0.2**
KURK				IAmb		IAmb	02 52 48.9	
	comp=Z,2.4nm,0.7s							
KKAR	**Karatay Array**	**65.19**	**319**	P		**P**	**02 52 51.2**	**-1.0**
BVAR	**Borovoye Array**	**69.89**	**328**	P		**P**	**02 53 22.6**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=125,slow=7.6,SNR=2.9							
	comp=Z,0.6nm,0.6s							
NRIK	**Noril'sk**	**73.96**	**347**	P		**P**	**02 53 43.4**	**-2.3**
	comp=Z,2.9nm,0.7s,baz=110,slow=8.1,SNR=5.7							
	comp=Z,2.9nm,0.7s							
ABKAR	**Akbulak array**	**74.33**	**322**	P		**P**	**02 53 47.9**	**-0.3**
G16K	**Koyuk River**	**82.99**	**24**	P		**P**	**02 54 38.1**	**+2.7**
G16K				IAmb		IAmb	02 55 05.4	
	comp=Z,1.2nm,0.9s							
J16K	**Anvik River**	**83.17**	**26**	P		**P**	**02 54 40.0**	**+3.6**
L16K	**Owhat River**	**83.30**	**28**	P		**P**	**02 54 37.9**	**+0.8**
TORD	**Torodi Ar. Bea**	**122.64**	**285**	PKP		**PKPdf**	**03 01 07.0**	**-0.1**
	comp=Z,0.7nm,1.1s,baz=105,slow=2.4,SNR=4.1							

IDC ***28*** *02:46:23.9±2.6,24.°30S×179.°95W, h497km±28km, mb3.1/5, mbtmp4.0/7, Error ellipse: s-maj=29.5km s-min=28.6km az=89.0*

ISC 28 02:46:24.0±1.4,24.°4S±0.°1×179.°9W±0.°2, h505km, n9, σ0.°94/9, mb3.6/5, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.86**	**343**	P		**P**	**02 48 08.8**	**-0.4**
	4.9nm,0.3s,baz=218,slow=23,SNR=2.3							
URZ	**Urewera**	**14.10**	**190**	P		**P**	**02 49 23.1**	**-1.4**
	1.3nm,0.3s,baz=256,slow=21,SNR=1.8							
STKA	**Stephens Creek**	**34.65**	**249**	P		**P**	**02 52 31.1**	**+0.4**
	0.8nm,0.4s,baz=88,slow=7.9,SNR=4.4							
	0.8nm,0.4s							
ASAR	**Alice Springs**	**42.06**	**261**	P		**P**	**02 53 31.2**	**0.0**
	0.5nm,0.4s,baz=90,slow=6.6,SNR=17							
	0.5nm,0.4s							
WRA	**Warramunga Arr**	**42.48**	**267**	P		**P**	**02 53 34.3**	**-0.2**
	1.7nm,0.4s,baz=99,slow=6.9,SNR=39							
	1.7nm,0.4s							
FITZ	**Fitzroy Crossi**	**50.90**	**266**	P		**P**	**02 54 38.3**	**0.0**
	1.3nm,0.6s,baz=128,slow=7.1,SNR=5.9							
	1.3nm,0.6s							
QSPA	**South Pole Qui**	**65.73**	**180**	P		**P**	**02 56 19.6**	**+1.5**
	1.7nm,1.0s,baz=59,slow=1.4,SNR=2.3							
	1.7nm,1.0s							
HFS	**Hagfors**	**143.01**	**349**	PKP		**PKPdf**	**03 04 58.6**	**-0.8**
	1.0nm,0.4s,baz=46,slow=4.3,SNR=17							
BRTR	**Keskin Array B**	**147.93**	**307**	PKPbc		**PKPbc**	**03 05 13.0**	**+0.6**
	0.3nm,0.5s,baz=108,slow=4.7,SNR=3.5							

IDC ***28*** *03:05:09.7±1.3,13.°81N×121.°32E, h0km, mb3.5/6, mbtmp3.5/6, Error ellipse: s-maj=59.0km s-min=21.0km az=61.0*

MAN ***28*** *03:05:25.0, 13.°58N×120.°61E, h96km, MS2.9*

ISC 28 03:05:14.7±1.2,13.°8N±0.°2×121.°3E±0.°3, h35km, n6, σ1.°01/6, mb3.5/6, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**21.97**	**285**	P		**P**	**03 10 05.7**	**-0.1**
	0.7nm,0.3s,baz=98,slow=8.1,SNR=8.1							
	0.7nm,0.3s							
WRA	**Warramunga Arr**	**35.89**	**159**	P		**P**	**03 12 11.3**	**-0.4**
	0.4nm,0.7s,baz=335,slow=9.0,SNR=2.1							
	0.4nm,0.7s							
SONM	**Songino Array**	**36.14**	**343**	P		**P**	**03 12 14.5**	**+0.8**
	0.3nm,0.5s,baz=156,slow=12,SNR=2.0							
	0.3nm,0.5s							
ASAR	**Alice Springs**	**39.21**	**162**	P		**P**	**03 12 40.2**	**+0.5**
	0.2nm,0.3s,baz=332,slow=6.5,SNR=4.8							
	0.2nm,0.3s							
MKAR	**Makanchi Array**	**46.31**	**323**	P		**P**	**03 13 37.4**	**+0.3**
	0.4nm,0.6s,baz=134,slow=8.3,SNR=2.9							
	0.4nm,0.6s							
ZALV	**Zalesovo Beam**	**49.25**	**332**	P		**P**	**03 13 58.3**	**-1.4**
	0.5nm,0.4s,baz=131,slow=6.5,SNR=3.2							
	0.5nm,0.4s							

IDC 28 03:07:12.4±53.0,16.°21S×174.°84W, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=999.9km s-min=181.3km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.43**	**240**	P		P	03 15 09.4	+0.3
	0.6nm,0.2s,baz=99,slow=13,SNR=5.5							
	0.6nm,0.2s							
WRA	**Warramunga Arr**	**48.31**	**258**	P		P	03 15 54.5	-1.5
	0.3nm,0.4s,baz=97,slow=8.0,SNR=5.1							
	0.3nm,0.4s							
ASAR	**Alice Springs**	**48.54**	**253**	P		P	03 15 58.4	+0.6
	1.4nm,0.4s,baz=87,slow=8.2,SNR=36							
	1.4nm,0.4s							

IDC ***28*** *03:18:33.6±0.9,32.°34S×72.°34W, h0km, mb3.9/4, mbtmp4.0/9, ML4.2/5, MS3.3/9, Error ellipse: s-maj=30.4km s-min=20.5km az=112.0*

SJA ***28*** *03:18:37.1±0.6,32.°42S×72.°14W, h40km±13km, ML4.3, MW4.2*

NEIC ***28*** *03:18:37.4±1.5,32.°40S±0.°03×72.°09W±0.°04, h10km±1km, mb4.4/15, ML4.5(GUC), Error ellipse: s-maj=6.4km s-min=3.9km az=293.0*

GUC ***28*** *03:18:41.8±0.7,32.°46S×71.°76W, h36km±1km, ML4.5*

ISC 28 03:18:36.3±1.5,32.°41S±0.°02×72.°08W±0.°04, h11km±9km, n154, σ1.°57/190, mb4.4/9, MS3.5/5, 23C-5D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VA06	**Catapilco**	**0.68**	**103**			**Pn**	**03 18 52.0**	**+0.2**
VA06						**Sn**	**03 19 00.2**	**-2.3**
VA06	**Catapilco**	**0.68**	**103**	*e*P		**Pn**	**03 18 51.8**	**-0.1**
VA06				IAML			03 19 01.0	
	comp=N,140μm,0.5s							
VA01	**Torpederas**	**0.71**	**149**			**Pn**	**03 18 53.0**	**+0.7**
VA01						**Sn**	**03 19 02.3**	**-0.9**
VA01	**Torpederas**	**0.71**	**149**	⇑*i*P		**Pn**	**03 18 53.0**	**+0.7**
VA01	**Torpederas**	**0.71**	**149**	*e*P		**Pb**	**03 18 51.1**	**+0.4**
VA01				*e*S		**Pn**	**03 18 53.0**	**+0.7**
VA01				IAML			03 19 03.4	
	comp=Z,5μm,0.4s							
CO04	**Los Peladeros**	**1.00**	**69**			**Pb**	**03 18 56.7**	**+0.8**
CO04						**Sb**	**03 19 08.7**	**-0.5**
CO04	**Los Peladeros**	**1.00**	**69**	⇓*i*P		**Pb**	**03 18 56.8**	**+0.8**
CO04				*i* S		**Sb**	**03 19 08.6**	**-0.6**
CO04				IAML			03 19 09.3	
	comp=E,43μm,0.3s							
ROCH	**El Roble**	**1.06**	**122**	⇑*i*P		**Pn**	**03 18 57.6**	**+0.3**
ROCH				⇑*i*P		**Pn**	**03 18 57.6**	**+0.3**
ROCH				*i* S		**Sg**	**03 19 09.0**	**-1.7**
ROCH				IAML			03 19 11.7	
	comp=N,45μm,0.5s							
MT02	**Curacav**	**1.16**	**137**			**Pn**	**03 18 59.2**	**+0.7**
MT02				Sn		**Sb**	**03 19 12.5**	**-1.0**
MT02	**Curacav**	**1.16**	**137**	⇑*i*P		**Pn**	**03 18 59.1**	**+0.7**
MT02				*i* S		**Sb**	**03 19 12.6**	**-0.8**
MT02	**Curacav**	**1.16**	**137**	*e*P		**Pg**	**03 18 58.4**	**-0.3**
MT02				*e*S		**Sn**	**03 19 13.6**	**-0.8**
MT02				IAML			03 19 14.0	
	comp=Z,4μm,0.3s							
VA03	**San Esteban**	**1.34**	**106**			**Pb**	**03 19 01.1**	**-0.3**
VA03	**San Esteban**	**1.34**	**106**	⇑*i*P		**Pb**	**03 19 01.2**	**-0.3**
VA03				*e*S		**Sg**	**03 19 16.0**	**-3.5**
VA03				IAML			03 19 21.2	
	comp=E,16μm,0.4s							
VA03	**San Esteban**	**1.34**	**106**	*e*P		**Pb**	**03 19 01.2**	**-0.3**
VA03				*e*S		**Sb**	**03 19 17.1**	**-1.6**
VA03				IAML			03 19 19.9	
	comp=Z,6μm,0.2s							
PEL	**Peldehue**	**1.38**	**122**			**Pn**	**03 19 02.0**	**+0.4**
PEL	**Peldehue**	**1.38**	**122**	*i* P		**Pn**	**03 19 02.1**	**+0.4**
PEL				*e*S		**Sb**	**03 19 17.8**	**-2.2**
PEL				IAML			03 19 19.0	
	comp=E,11μm,0.5s							
PEL	**Peldehue**	**1.38**	**122**	*e*P		**Pn**	**03 19 01.9**	**+0.4**
PEL				*e*S		**Sg**	**03 19 18.9**	**-2.1**
PEL				IAML			03 19 18.9	
	comp=Z,4μm,0.2s							
CO02	**Combarbal**	**1.51**	**38**			**Pn**	**03 19 04.6**	**+1.1**
CO02	**Combarbal**	**1.51**	**38**	⇓*i*P		**Pn**	**03 19 04.6**	**+1.1**
CO02				*i* S		**Sn**	**03 19 22.7**	**-0.5**
CO02				IAML			03 19 24.4	
	comp=N,27μm,0.3s							
CO02				IAML			03 19 25.1	
	comp=E,33μm,0.2s							
CO02	**Combarbal**	**1.51**	**38**	*e*P		**Pn**	**03 19 03.9**	**+0.4**
CO02				*e*S		**Sn**	**03 19 23.4**	**+0.2**
CO02				IAML			03 19 24.1	
	comp=Z,11μm,0.2s							
MT10	**Hacienda Santa**	**1.56**	**124**	⇑*i*P		**Pn**	**03 19 05.0**	**+0.9**
MT10				*i* S		**Sb**	**03 19 22.9**	**-2.2**
MT10				IAML			03 19 24.4	
	comp=E,15μm,0.3s							
MT01	**Popeta**	**1.61**	**155**			**Pn**	**03 19 05.7**	**+1.0**
MT01	**Popeta**	**1.61**	**155**	⇑*i*P		**Pn**	**03 19 05.7**	**+1.0**
MT01				*i* S		**Sn**	**03 19 24.0**	**-1.4**
MT01				IAML			03 19 25.4	
	comp=E,5μm,0.2s							
MT01	**Popeta**	**1.61**	**155**	*e*P		**Pn**	**03 19 04.9**	**+0.2**
MT01				*e*S		**Sn**	**03 19 24.1**	**-1.4**
MT01				IAML			03 19 24.8	
	comp=Z,5μm,0.5s							
MT14	**Cerro Cal¡n**	**1.63**	**128**	⇑*i*P		**Pn**	**03 19 06.1**	**+1.1**
MT14				*i* S		**Sn**	**03 19 24.4**	**-1.6**
MT14				IAML			03 19 28.5	
	comp=N,5μm,0.2s							
MT09	**Talagante**	**1.64**	**146**			**Pn**	**03 19 06.5**	**+1.2**
MT09	**Talagante**	**1.64**	**146**	⇑*i*P		**Pn**	**03 19 06.5**	**+1.2**
MT09				*i* S		**Sn**	**03 19 25.4**	**-1.1**
MT09				IAML			03 19 27.7	
	comp=N,8μm,0.2s							
MT16	**CCHEN**	**1.66**	**128**			**Pn**	**03 19 06.5**	**+1.1**
MT16	**CCHEN**	**1.66**	**128**	⇑*i*P		**Pn**	**03 19 06.5**	**+1.1**
MT16				*i* S		**Sn**	**03 19 25.6**	**-1.1**
MT03	**Universidad Ad**	**1.71**	**130**			**Pn**	**03 19 07.2**	**+1.1**
MT03	**Universidad Ad**	**1.71**	**130**	⇑*i*P		**Pn**	**03 19 07.3**	**+1.2**
MT03				IAML			03 19 29.0	
	comp=E,7μm,0.2s							
MT03	**Universidad Ad**	**1.71**	**130**	*e*P		**Pn**	**03 19 06.6**	**+0.5**
MT03				*e*S		**Sb**	**03 19 28.3**	**-1.0**
MT03				IAML			03 19 31.6	
	comp=Z,5μm,0.2s							
MT15	**Las Vizcachas**	**1.78**	**132**	⇑*i*P		**Pn**	**03 19 08.2**	**+1.1**
MT15				*i* S		**Sn**	**03 19 28.7**	**-1.0**
MT15				IAML			03 19 31.3	
	comp=N,10μm,0.5s							
MT12	**Pirque**	**1.84**	**136**	⇑*i*P		**Pn**	**03 19 09.6**	**+1.6**
MT12				*i* S		**Sn**	**03 19 30.9**	**-0.3**
MT12				IAML			03 19 35.8	
	comp=E,5μm,0.6s							
MT04	**Ro Olivares**	**1.91**	**122**	⇑*i*P		**Pn**	**03 19 10.1**	**+1.0**
MT04				*i* S		**Sn**	**03 19 32.1**	**-1.1**
MT04	**Ro Olivares**	**1.91**	**122**	*e*P		**Pn**	**03 19 10.1**	**+1.0**
MT04				*e*S		**Sn**	**03 19 32.6**	**-0.6**
MT04				IAML			03 19 33.4	
	comp=Z,1μm,0.3s							
CO03	**El Pedregal**	**1.96**	**38**			**Pn**	**03 19 11.0**	**+1.3**
CO03	**El Pedregal**	**1.96**	**38**	⇓*i*P		**Pn**	**03 19 11.2**	**+1.5**
CO03				*i* S		**Sn**	**03 19 34.0**	**-0.3**
CO03				IAML			03 19 36.5	
	comp=E,6μm,0.4s							
CO03	**El Pedregal**	**1.96**	**38**	*e*P		**Pn**	**03 19 10.5**	**+0.8**
CO03				*e*S		**Sn**	**03 19 35.1**	**+0.8**
CO03				IAML			03 19 36.5	
	comp=Z,4μm,0.2s							
BO04	**La Punta**	**2.00**	**142**			**Pn**	**03 19 11.7**	**+1.6**
BO04	**La Punta**	**2.00**	**142**	⇑*i*P		**Pn**	**03 19 11.7**	**+1.6**
BO04				*i* S		**Sn**	**03 19 33.8**	**-1.4**
BO04				IAML			03 19 37.5	
	comp=N,15μm,0.5s							
MT13	**San Alfonso**	**2.01**	**132**			**Pn**	**03 19 11.7**	**+1.4**
MT13	**San Alfonso**	**2.01**	**132**	⇑*i*P		**Pn**	**03 19 11.8**	**+1.5**
MT13				*i* S		**Sn**	**03 19 34.5**	**-0.9**
MT13				IAML			03 19 37.1	
	comp=N,5μm,0.2s							
MT13	**San Alfonso**	**2.01**	**132**	*e*P		**Pn**	**03 19 11.1**	**+0.8**
MT13				*e*S		**Sn**	**03 19 32.6**	**-2.9**
MT13				*e*S			03 19 35.9	
MT13				IAML			03 19 38.4	
	comp=Z,2μm,0.5s							
MT08	**Bocatoma Ro**	**2.02**	**121**			**Pn**	**03 19 11.9**	**+1.4**
MT08	**Bocatoma Ro**	**2.02**	**121**	⇑*i*P		**Pn**	**03 19 12.0**	**+1.4**
MT08				*i* S		**Sn**	**03 19 35.1**	**-0.8**
MT08	**Bocatoma Ro**	**2.02**	**121**	*e*P		**Pn**	**03 19 11.3**	**+0.7**
MT08				*e*S		**Sb**	**03 19 36.3**	**-2.1**
MT08				IAML			03 19 43.8	
	comp=Z,915nm,0.3s							
BO03	**Pichilemu**	**2.08**	**177**	⇑*e*P		**Pn**	**03 19 12.3**	**+1.1**
LMEL	**Las Melosas**	**2.13**	**133**	⇑*i*P		**Pn**	**03 19 13.6**	**+1.6**
LMEL				*i* S		**Sn**	**03 19 38.1**	**-0.5**
LMEL				IAML			03 19 40.5	
	comp=N,3μm,0.1s							
BO01	**Tunca**	**2.14**	**157**			**Pn**	**03 19 13.2**	**+1.2**
BO01	**Tunca**	**2.14**	**157**	⇑*e*P		**Pn**	**03 19 13.2**	**+1.2**
BO01	**Tunca**	**2.14**	**157**	*e*P		**Pn**	**03 19 12.5**	**+0.4**
BO01				*e*S		**Sn**	**03 19 37.9**	**-0.7**
BO01				IAML			03 19 39.1	
	comp=Z,1μm,0.3s							
GO04	**Tololo Observa**	**2.48**	**27**			**Pn**	**03 19 18.3**	**+1.3**
GO04	**Tololo Observa**	**2.48**	**27**	⇓*i*P		**Pn**	**03 19 18.3**	**+1.3**
GO04	**Tololo Observa**	**2.48**	**27**	*e*P		**Pn**	**03 19 17.7**	**+0.7**
GO04				IAML			03 19 59.7	
	comp=Z,3μm,0.5s							
CO05	**La Serena**	**2.59**	**16**			**Pn**	**03 19 19.6**	**+1.4**
CO05	**La Serena**	**2.59**	**16**	⇑*e*P		**Pn**	**03 19 19.5**	**+1.4**
GO05	**Hualane**	**2.60**	**177**			**Pn**	**03 19 19.3**	**+0.9**
GO05	**Hualane**	**2.60**	**177**	⇑*i*P		**Pn**	**03 19 19.2**	**+0.9**
GO05				*i* S		**Sn**	**03 19 47.3**	**-2.5**
GO05	**Hualane**	**2.60**	**177**	*e*P		**Pn**	**03 19 18.5**	**+0.2**
GO05				*e*S		**Sn**	**03 19 47.8**	**-2.0**
GO05				IAML			03 19 49.7	
	comp=Z,1μm,0.7s							
BO02	**Sierra Bellavi**	**2.61**	**156**			**Pn**	**03 19 20.0**	**+1.4**
BO02	**Sierra Bellavi**	**2.61**	**156**	⇑*e*P		**Pn**	**03 19 20.0**	**+1.4**
BO02	**Sierra Bellavi**	**2.61**	**156**	*e*P		**Pn**	**03

AVFE					*e*S		**Sb**	**03 20 43.1**	**-1.3**
AVFE					IAML			03 20 57.2	
	comp=Z,298nm,0.5s								
BI05	**Punta Hualpn**	**4.42**	**192**				**Pn**	**03 19 43.9**	**+0.5**
ACHE	**Chepes**	**4.78**	**76**	*e*P			**Pn**	**03 19 50.5**	**+2.1**
VCA	**Vinchina**	**4.96**	**43**	*e*P			**Pn**	**03 19 53.3**	**+2.4**
VCA					*e*S		**Sb**	**03 21 01.4**	**-1.5**
VCA					IAML			03 21 17.2	
	comp=Z,324nm,0.8s								
GO03	**Copiapo**	**5.06**	**19**				**Pn**	**03 19 53.1**	**+0.9**
GO03	**Copiapo**	**5.06**	**19**	*e*P			**Pn**	**03 19 53.4**	**+1.2**
GO03					*e*S		**Sn**	**03 20 46.2**	**-4.5**
GO03					IAML			03 21 14.5	
	comp=Z,322nm,0.3s								
AC06	**Mina Casimiro**	**5.25**	**17**				**Pn**	**03 19 55.5**	**+0.7**
VA04	**Juan Fernndez**	**5.80**	**256**				**Pn**	**03 20 05.9**	**+3.5**
H03N1	**Juan Fernandez**	**5.84**	**258**	T			T	03 26 46.0	
	baz=86,slow=74,SNR=189								
H03N3	**Juan Fernandez**	**5.85**	**258**	T			T	03 26 44.1	
	baz=86,slow=74,SNR=347								
H03N2	**Juan Fernandez**	**5.85**	**258**	T			T	03 26 49.9	
	baz=86,slow=74,SNR=236								
H03S3	**Juan Fernandez**	**5.90**	**254**	T			T	03 26 33.8	
	baz=82,slow=75,SNR=86								
H03S1	**Juan Fernandez**	**5.90**	**254**	T			T	03 26 32.5	
	baz=82,slow=75,SNR=83								
H03S2	**Juan Fernandez**	**5.92**	**254**	T			T	03 26 34.8	
	baz=82,slow=75,SNR=93								
GO06	**Curarrehue**	**7.18**	**176**				**Pn**	**03 20 22.6**	**+1.3**
LR04	**Corral**	**7.53**	**188**	Pn			**Pn**	**03 20 26.6**	**+0.6**
PLCA	**Paso Flores**	**8.40**	**172**	Pn			**Pn**	**03 20 39.2**	**+1.2**
	comp=Z,2.7nm,0.3s,baz=332,slow=11,SNR=92								
PLCA					Sn		**Sn**	**03 22 11.7**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=254,slow=12,SNR=3.3								
PLCA					LR		LR	03 24 02.4	
	comp=Z,190nm,18.1s,baz=352,slow=39								
	comp=Z,7.1nm,0.3s								
PLCA	**Paso Flores**	**8.40**	**172**	Pn			**Pn**	**03 20 39.5**	**+1.5**
TRQA	**Tornquist**	**9.99**	**127**				**Pn**	**03 21 00.3**	**+0.5**
PB16	**IPOC Station P**	**14.21**	**10**	Pn			**Pn**	**03 21 59.4**	**+1.3**
CPUP	**Villa Florida**	**14.21**	**69**	Pn			**Pn**	**03 22 00.2**	**+2.7**
	comp=Z,0.1nm,0.3s,baz=222,slow=15,SNR=1.5								
CPUP					LR		LR	03 28 00.9	
	comp=Z,71nm,21.4s,baz=248,slow=39								
	comp=Z,0.6nm,0.6s								
CPUP	**Villa Florida**	**14.21**	**69**	Pn			**Pn**	**03 21 58.3**	**+0.8**
PB18	**Visviri**	**14.94**	**10**	Pn			**Pn**	**03 22 10.3**	**+2.2**
GO08	**Villa O'Higgin**	**16.04**	**181**	Pn			**Pn**	**03 22 24.0**	**+2.2**
GO08					IAmb		IAmb	03 22 45.3	
	comp=Z,22nm,1.4s								
LPAZ	**La Paz**	**16.45**	**14**	Pn			**Pn**	**03 22 27.8**	**0.0**
	comp=Z,0.4nm,0.3s,baz=187,slow=6.4,SNR=25								
LPAZ					LR		LR	03 30 13.2	
	comp=Z,76nm,18.3s,baz=170,slow=43								
	comp=Z,6.5nm,0.7s								
LPAZ	**La Paz**	**16.45**	**14**	IAmb			IAmb	03 22 34.7	
	comp=Z,7.1nm,0.7s								
ITAB	**Concordia**	**18.05**	**79**				**Pn**	**03 22 47.6**	**+0.4**
SIV	**San Ignacio**	**19.16**	**34**	P			**P**	**03 22 58.5**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=208,slow=7.5,SNR=32								
SIV					LR		LR	03 31 33.5	
	comp=Z,61nm,20.2s,baz=258,slow=41								
	comp=Z,5.7nm,0.7s								
PTLB	**Pontes e Lacer**	**20.58**	**38**	P			**P**	**03 23 15.1**	**-0.3**
MG03	**Isla Dawson**	**21.46**	**177**	P			**P**	**03 23 26.6**	**+2.1**
EFI	**East Falkland**	**21.81**	**156**	P			**P**	**03 23 29.3**	**+1.0**
VILB	**Vilhena**	**22.22**	**32**	P			**P**	**03 23 31.6**	**-1.5**
VILB					IAmb		IAmb	03 23 33.5	
	comp=Z,10nm,0.8s								
CZSB	**Cruzeiro do Su**	**24.56**	**359**	P			**P**	**03 23 56.0**	**-0.3**
CZSB					IAmb		IAmb	03 24 00.1	
	comp=Z,8.1nm,0.8s								
BDFB	**Brasilia**	**27.50**	**58**	P			**P**	**03 24 22.3**	**-0.7**
	comp=Z,1.5nm,0.6s,baz=229,slow=9.3,SNR=4.0								
BDFB					LR		LR	03 36 31.3	
	comp=Z,117nm,18.6s,baz=69,slow=39								
	comp=Z,1.5nm,0.6s								
BDFB	**Brasilia**	**27.50**	**58**	P			**P**	**03 24 21.6**	**-1.4**
BDFB					IAmb		IAmb	03 24 29.5	
	comp=Z,9.8nm,1.4s								
PMSA	**Palmer Station**	**32.77**	**174**	LR			LR	03 38 05.8	
	comp=Z,87nm,18.8s,baz=276,slow=36								
BOAV	**Boa Vista**	**36.31**	**20**	P			**P**	**03 25 39.3**	**-0.8**
BOAV					IAmb		IAmb	03 26 01.8	
	comp=Z,5.3nm,1.2s								
SDV	**Santo Domingo**	**41.09**	**2**	LR			LR	03 44 53.4	
	comp=Z,36nm,18.5s,baz=195,slow=38								
MDP	**Montagnes des**	**41.63**	**30**	LR			LR	03 44 38.8	
	comp=Z,67nm,18.3s,baz=136,slow=38								
CMIG	**Matias Romero**	**53.85**	**333**	LR			LR	03 45 49.1	
	comp=Z,28nm,18.3s,baz=172,slow=30								
TEIG	**Tepich**	**54.59**	**341**	P			**P**	**03 28 05.0**	**+0.3**
QSPA	**South Pole Qui**	**57.82**	**180**	P			**P**	**03 28 26.9**	**-0.7**
	comp=Z,4.0nm,0.7s,baz=164,slow=1.2,SNR=18								
	comp=Z,4.0nm,0.7s								
QSPA	**South Pole Qui**	**57.82**	**180**	P			**P**	**03 28 28.5**	**+0.9**
QSPA					IAmb		IAmb	03 28 28.9	
	comp=Z,3.6nm,0.7s								
TXAR	**Lajitas Array**	**68.33**	**331**	P			P	03 29 36.0	-1.7
	comp=Z,0.5nm,0.6s,baz=143,slow=5.3,SNR=5.8								
	comp=Z,0.5nm,0.6s								
DBIC	**Dimbokro**	**74.71**	**72**	P			**P**	**03 30 18.0**	**+1.6**
DBIC					IAmb		IAmb	03 30 29.1	
	comp=Z,8.5nm,1.4s								
BOSA	**Boshof**	**80.84**	**118**	P			**P**	**03 30 52.8**	**+2.1**
BOSA					IAmb		IAmb	03 31 03.1	
	comp=Z,15nm,1.5s								
TORD	**Torodi Ar. Bea**	**83.70**	**70**	P			**P**	**03 31 05.3**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=256,slow=5.4,SNR=4.9								
	comp=Z,0.3nm,0.8s								
TORD	**Torodi Ar. Bea**	**83.70**	**70**	IAmb			IAmb	03 31 24.6	
	comp=Z,2.7nm,1.0s								
WRA	**Warramunga Arr**	**122.13**	**210**	PKP			**PKPdf**	**03 37 29.9**	**-1.8**
	comp=Z,0.6nm,0.7s,baz=160,slow=1.8,SNR=8.0								
H11S2	**WAKE ISLAND Hy**	**25.74**	**270**	T			T	05 56 46.0	
	baz=118,slow=75,SNR=201								
H11S1	**WAKE ISLAND Hy**	**25.76**	**270**	T			T	05 56 44.2	
	baz=118,slow=75,SNR=208								
H11S3	**WAKE ISLAND Hy**	**25.76**	**270**	T			T	05 56 44.5	
	baz=118,slow=75,SNR=208								
H11N3	**WAKE ISLAND Hy**	**26.12**	**272**	T			T	05 57 11.4	
	baz=117,slow=75,SNR=34								
H11N1	**WAKE ISLAND Hy**	**26.13**	**272**	T			T	05 57 14.4	
	baz=117,slow=75,SNR=19								
H11N2	**WAKE ISLAND Hy**	**26.13**	**272**	T			T	05 57 12.7	
	baz=117,slow=75,SNR=83								
KURBB	**Kurchatov Arra**	**151.72**	**41**	PKPbc			**PKPbc**	**03 38 29.9**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=303,slow=2.9,SNR=5.2								
KURK	**Kurchatov**	**151.72**	**41**				**PKPbc**	**03 38 29.9**	**-0.5**
ZALV	**Zalesovo Beam**	**152.89**	**31**	PKPbc			**PKPbc**	**03 38 33.7**	**+0.7**
	comp=Z,0.7nm,0.6s,baz=240,slow=2.8,SNR=2.7								
MKAR	**Makanchi Array**	**155.72**	**46**	PKPab			**PKPab**	**03 38 55.6**	**-0.9**
	comp=Z,0.2nm,0.6s,baz=336,slow=3.2,SNR=2.0								
NJ2	**Nanjing**	**170.73**	**271**	*e*P			**PKPdf**	**03 38 45.0**	**+0.3**
NJ2					pmax		pmax		
	comp=Z,22nm,0.6s								
HHC	**Hu-ho-hao-te**	**171.08**	**342**	*e*P			**PKPdf**	**03 38 41.3**	**-3.5**
PZH	**PanZhiHua**	**172.02**	**136**	PKP			**PKPdf**	**03 38 45.8**	**+0.1**

*IDC **28** 03:25:35.8±1.6, 1.˚29S×150.˚28E, h0km, mb3.9/5, mbtmp3.9/5, Error ellipse: s-maj=75.8km s-min=24.4km az=112.0*

ISC 28 03:25:41.0±1.7,**1.˚3S**±0.˚3×**150.˚3E**±0.˚5,**h35**km,**n12, σ0s72/7,mb3.9**/5,**New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.21**	**219**	P	**P**	**03 30 54.5**	**0.0**
	4.5nm,0.6s,baz=42,slow=10,SNR=86						
WRA				PcP	**PcP**	**03 34 35.3**	**+0.6**
	0.3nm,0.6s,baz=39,slow=2.7,SNR=5.2						
	4.5nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**25.45**	**38**	T	T	03 58 23.7	
	baz=222,slow=75,SNR=194						
H11S2	**WAKE ISLAND Hy**	**25.45**	**39**	T	T	03 58 24.4	
	baz=222,slow=75,SNR=78						
H11S1	**WAKE ISLAND Hy**	**25.46**	**38**	T	T	03 58 25.2	
	baz=222,slow=75,SNR=96						
H11N1	**WAKE ISLAND Hy**	**26.50**	**37**	T	T	03 59 41.0	
	baz=220,slow=76,SNR=21						
H11N3	**WAKE ISLAND Hy**	**26.51**	**37**	T	T	03 59 43.8	
	baz=220,slow=76,SNR=26						
H11N2	**WAKE ISLAND Hy**	**26.51**	**37**	T	T	03 59 40.6	
	baz=220,slow=76,SNR=43						
ASAR	**Alice Springs**	**27.31**	**214**	P	**P**	**03 31 22.6**	**-0.1**
	1.6nm,0.5s,baz=48,slow=8.1,SNR=22						
	1.6nm,0.5s						
KURBB	**Kurchatov Arra**	**79.57**	**322**	P	**P**	**03 37 45.3**	**+0.9**
	0.3nm,0.6s,baz=108,slow=5.0,SNR=4.1						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**79.93**	**23**	P	**P**	**03 37 46.0**	**0.0**
	0.3nm,0.6s,baz=248,slow=5.8,SNR=5.7						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**85.01**	**323**	P	**P**	**03 38 11.9**	**-0.9**
	0.7nm,0.4s,baz=101,slow=3.1,SNR=4.4						
	0.7nm,0.4s						
TORD	**Torodi Ar. Bea**	**146.80**	**292**	PKPbc	**PKPbc**	**03 45 20.1**	**-0.4**
	1.0nm,0.9s,baz=72,slow=1.4,SNR=5.1						

*IDC **28** 03:48:52.5±1.5, 10.˚20N×125.˚98E, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=204.4km s-min=21.1km az=67.0*

*NEIC **28** 03:49:04.5±1.1, 9.˚9N±0.˚1×125.˚4E±0.˚2, h86km±7km, mb4.4/11, Error ellipse: s-maj=24.6km s-min=15.2km az=81.0*

*MAN **28** 03:49:07.0, 9.˚95N×125.˚79E, h69km, MS3.2*

ISC 28 03:49:05.6±0.9,**9.˚95N**±0.˚05×**125.˚92E**±0.˚07,**h100**km±7km, **n33,σ1s49/44,mb4.0/11,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.45**	**249**	*i* P	**Pn**	**03 49 20.6**	**-0.5**
SCPH				*i* S	Sn	03 49 22.5	-10
TSSP	**Tandag City**	**0.94**	**163**	*i* P	**Pn**	**03 49 26.6**	**+1.2**
TSSP				*e*S	**Sn**	**03 49 36.2**	**-4.1**
BUTP	**Butuan**	**1.01**	**197**	*e*P	**Pn**	**03 49 27.6**	**+1.4**
BUTP				*e*S	**Sn**	**03 49 44.0**	**+2.3**
PLP	**Palo**	**1.52**	**323**	*i* P	**Pn**	**03 49 32.2**	**0.0**
PLP				*e*S	**Sn**	**03 49 52.2**	**-0.2**
BIPH	**Bislig**	**1.80**	**166**	*i* P	**Pn**	**03 49 36.1**	**+0.4**
BIPH				*e*S	**Sn**	**03 50 00.7**	**+2.0**
CGP	**Cagayan de Oro**	**1.91**	**219**	*e*P	**Pn**	**03 49 36.9**	**-0.2**
CGP				*i* S	**Sn**	**03 49 59.7**	**-1.4**
LLP	**Lapu-Lapu**	**1.96**	**281**	*i* P	**Pn**	**03 49 37.8**	**+0.1**
LLP				*i* S	**Sn**	**03 50 01.5**	**-0.6**
CDOP	**Cateel, Davao**	**2.21**	**167**	*e*P	**Pn**	**03 49 41.3**	**+0.4**
CDOP				*e*S	**Sn**	**03 50 09.2**	**+1.3**
BUKP	**Musuan**	**2.22**	**202**	*i* P	**Pn**	**03 49 42.5**	**+1.3**
BUKP				*e*S	**Sn**	**03 50 09.0**	**+0.6**
DAV	**Davao City (W)**	**2.88**	**187**	Pn	**Pn**	**03 49 47.7**	**-2.1**
KCP	**Kidapawan**	**3.03**	**196**	*e*P	Pn	03 49 46.9	-5.0
KCP				*i* S	**Sn**	**03 50 29.6**	**+2.1**
RCP	**Roxas**	**3.51**	**298**	*e*P	**Pn**	**03 49 59.0**	**+0.8**
RCP				*i* S	**Sn**	**03 50 42.7**	**+3.8**
MTN	**Manton Dam**	**23.23**	**167**	P	**P**	**03 54 04.7**	**+0.5**
MTN				IAmb	IAmb	03 54 15.2	
	comp=Z,9.7nm,1.4s						
WRA	**Warramunga Arr**	**30.84**	**164**	P	**P**	**03 55 12.0**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=345,slow=9.2,SNR=11						
WRA				PcP	**PcP**	**03 58 06.9**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=341,slow=2.7,SNR=5.6						
	comp=Z,0.7nm,0.5s						
WRA	**Warramunga Arr**	**30.84**	**164**	P	**P**	**03 55 11.8**	**-0.6**
WR8	**Warramunga Arr**	**30.89**	**164**	P	**P**	**03 55 12.3**	**-0.6**
WR8				IAmb	IAmb	03 55 14.8	
	comp=Z,7.1nm,1.4s						
AS31	**Alice Springs**	**34.30**	**167**	P	**P**	**03 55 42.0**	**-0.7**
ASAR	**Alice Springs**	**34.31**	**167**	P	**P**	**03 55 43.0**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=350,slow=7.1,SNR=13						
ASAR				PcP	**PcP**	**03 58 17.4**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=342,slow=2.8,SNR=9.4						
	comp=Z,0.6nm,0.4s						
ASAR	**Alice Springs**	**34.31**	**167**	P	**P**	**03 55 42.8**	**+0.1**
NWAO	**Narrogin (SRO)**	**43.43**	**191**	P	**P**	**03 56 56.5**	**-2.1**
BBOO	**Buckleboo**	**43.60**	**168**	P	**P**	**03 57 01.0**	**+0.9**
BBOO				IAmb	IAmb	03 57 41.6	
	comp=Z,31nm,1.4s						
STKA	**Stephens Creek**	**44.21**	**161**	P	**P**	**03 57 06.2**	**+1.2**
	comp=Z,1.4nm,0.4s,baz=344,slow=12,SNR=7.5						
	comp=Z,1.4nm,0.4s						
STKA	**Stephens Creek**	**44.21**	**161**	P	**P**	**03 57 06.1**	**+1.2**
STKA				IAmb	IAmb	03 57 23.7	
	comp=Z,49nm,1.5s						
MKAR	**Makanchi Array**	**52.08**	**323**	P	**P**	**03 58 04.4**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=113,slow=6.9,SNR=2.6						
	comp=Z,0.1nm,0.3s						
MKAR	**Makanchi Array**	**52.08**	**323**	P	**P**	**03 58 03.9**	**-1.5**
MAKZ	**Makanchi**	**52.27**	**323**	P	**P**	**03 58 04.7**	**-2.1**
MAKZ				IAmb	IAmb	03 58 36.8	
	comp=Z,2.3nm,1.4s						
C18K	**Utukok River**	**74.58**	**21**	P	**P**	**04 00 34.7**	**+1.2**
D19K	**Kuna River**	**75.67**	**22**	P	**P**	**04 00 41.4**	**+1.7**
D19K				IAmb	IAmb	04 00 57.2	
	comp=Z,3.6nm,1.3s						
N31M	**Braeburn, Yuko**	**85.28**	**28**	P	**P**	**04 01 32.5**	**+1.3**
N31M				IAmb	IAmb	04 01 57.3	
	comp=Z,8.3nm,1.2s						
FIA1	**FINESS Array S**	**86.01**	**332**	P	**P**	**04 01 33.6**	**-1.2**
FINES	**FINESS Array B**	**86.01**	**332**	P	**P**	**04 01 33.8**	**-1.0**
	comp=Z,1.6nm,0.9s,baz=64,slow=4.6,SNR=14						
	comp=Z,1.6nm,0.9s						
TORD	**Torodi Ar. Bea**	**120.06**	**291**	PKP	**PKPdf**	**04 07 44.4**	**-1.4**
	comp=Z,0.2nm,0.4s,baz=42,slow=2.2,SNR=6.1						
PLCA	**Paso Flores**	**146.04**	**157**	PKPbc	**PKPab**	**04 08 35.3**	**+0.2**
	comp=Z,1.8nm,0.7s,baz=229,slow=2.0,SNR=8.5						

*ROM **28** 04:14:02.9±0.4, 41.˚45N±0.˚01×7.˚81E±0.˚02, h32km±2km, ML2.2/7, Error ellipse: s-maj=2.0km s-min=0.9km az=58.0*

*STR **28** 04:14:03.0±0.0, 41.˚5N±0.˚4×7.˚7E±0.˚2, h15km, MLv2.7/13, LOCSAT earthModelID alpes_taup-2.11 preliminary*

*LDG **28** 04:14:03.2±0.2, 41.˚33N×7.˚57E, h30km, Ml2.6/19, Error ellipse: s-maj=4.2km s-min=2.8km az=25.0*

ISC 28 04:13:56.8±1.6,**41.˚31N**±0.˚05×**7.˚49E**±0.˚04,**h10**km±12km, **n56,σ2s15/90,Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AJAC	**Base Areonaval**	**1.14**	**57**	Pg	**Pn**	**04 14 20.4**	**+1.5**
AJAC				Sg	**Sb**	**04 14 33.1**	**-0.5**
AGLI	**Aglientu**	**1.29**	**97**	P	**Pn**	**04 14 22.6**	**+1.7**
AGLI				S	**Sn**	**04 14 37.4**	**-0.8**
SMPL	**Sampolo**	**1.56**	**59**	Pn	**Pg**	**04 14 27.1**	**+0.3**
SMPL				Sg	**Sn**	**04 14 44.9**	**-0.1**
PGF	**Pioggiola**	**1.68**	**42**	*e*Pn	**Pg**	**04 14 29.1**	**+0.1**
PGF				*e*Sn	**Sn**	**04 14 45.9**	**-2.2**
	98nm,0.4s						
PGF	**Pioggiola**	**1.68**	**42**	Pn	**Pg**	**04 14 29.0**	**-0.1**
PGF				Sn	**Sn**	**04 14 48.7**	**+0.7**
SENA	**Sos Enattos**	**1.73**	**119**	P	**Pg**	**04 14 29.4**	**-0.6**
SENA				S	**Sn**	**04 14 48.6**	**-0.5**
LMR	**La Mourre**	**2.15**	**341**	*e*Pn	**Pb**	**04 14 36.3**	**+0.4**
MORSI	**Morsiglia**	**2.16**	**40**	Pn	**Pb**	**04 14 36.0**	**0.0**
MORSI				Sg	**Sn**	**04 14 59.6**	**-0.1**
BURY	**Giardini Botan**	**2.48**	**1**	P	**Pn**	**04 14 39.1**	**+1.9**
BURY				S	**Sn**	**04 15 06.3**	**-1.2**
CALF	**Calern**	**2.48**	**351**	Pn	**Pn**	**04 14 40.0**	**+2.6**
CALF				Sg	**Sn**	**04 15 07.5**	**-0.3**
SBF	**Sospel**	**2.56**	**359**	*e*Pn	**Pn**	**04 14 40.5**	**+2.1**
SBF				*e*Sn	**Sn**	**04 15 09.4**	**-0.2**
	9.9nm,0.2s						
TRIGF	**Trigance**	**2.57**	**342**	Pn	**Pb**	**04 14 42.0**	**-1.0**
TRIGF				Sg	**Sn**	**04 14 57.3**	**+0.8**
MVIF	**Mont Vial**	**2.60**	**355**	Pn	**Pn**	**04 14 41.8**	**+2.7**
MVIF				Sg	**Sn**	**04 15 10.5**	**-0.4**
IMI	**Imperia**	**2.62**	**6**	P	**Pn**	**04 14 41.5**	**+2.2**
IMI				S	**Sn**	**04 15 09.1**	**-2.1**
IMI				AML	AML		
	comp=N,35μm,2.7s						
IMI				AML	AML		
	comp=E,21μm,2.1s						
SALSA	**La sagne**	**2.64**	**347**	Pn	**Pb**	**04 14 42.9**	**-1.4**
SALSA				Sg	**Sn**	**04 15 12.4**	**+0.6**
SAOF	**Saorge**	**2.68**	**1**	Pn	**Pn**	**04 14 42.1**	**+2.0**
SAOF				Sg	**Sn**	**04 15 11.2**	**-1.5**
SAOF	**Saorge**	**2.68**	**1**	P	**Pn**	**04 14 42.3**	**+2.2**
SAOF				S	**Sn**	**04 15 11.1**	**-1.5**
SAOF				AML	AML		
	comp=E,6μm,0.1s						
SAOF				AML	AML		
	comp=N,7μm,0.1s						
RORO	**Rocca Rossa**	**2.84**	**8**	P	**Pn**	**04 14 44.6**	**+2.3**
RORO				S	**Sn**	**04 15 15.1**	**-1.4**
ENAUX	**Enaux**	**2.85**	**350**	Pn	**Pb**	**04 14 46.6**	**-1.3**
ENAUX				Sg	**Sn**	**04 15 17.7**	**+0.7**
ISO	**Isola**	**2.89**	**354**	Pn	**Pb**	**04 14 46.5**	**-2.1**
ISO				Sg	**Sn**	**04 15 17.9**	**-0.1**
ENR	**Entracque**	**2.92**	**359**	Pg	**Pn**	**04 14 46.5**	**+3.1**
ENR	**Entracque**	**2.92**	**359**	P	**Pn**	**04 14 46.5**	**+3.1**
ENR				AML	AML		
	comp=E,40μm,1.1s						
ENR				AML	AML		
	comp=N,32μm,0.7s						
ENR				AML	AML		
	comp=E,27μm,0.1s						
ENR				AML	AML		
	comp=N,19μm,0.2s						
ENR				AML	AML		
	comp=E,9μm,0.3s						
STV	**Sant Anna di V**	**2.94**	**358**	P	**Pn**	**04 14 46.9**	**+3.2**
STV				S	**Sn**	**04 15 19.0**	**-0.2**
STV				AML	AML		
	comp=E,15μm,0.1s						
STV				AML	AML		
	comp=N,47μm,0.2s						
STV				AML	AML		
	comp=E,9μm,0.2s						
STV				AML	AML		
	comp=N,8μm,1.2s						
GBOS	**Grotte di Boss**	**2.94**	**5**	Pn	**Pn**	**04 14 46.8**	**+3.0**
GBOS	**Grotte di Boss**	**2.94**	**5**	P	**Pn**	**04 14 46.8**	**+3.0**
CANO	**Canova, Maglio**	**2.95**	**11**	P	**Pn**	**04 14 46.2**	**+2.3**
CANO				S	**Sn**	**04 15 18.0**	**-1.4**
SMRF	**Simiane la Rot**	**3.02**	**333**	*e*Pn	**Pb**	**04 14 49.0**	**-1.7**
SMRF				*e*Sn	**Sn**	**04 15 23.2**	**+2.2**
	comp=N,12nm,0.4s						
QLNO	**Quiliano**	**3.08**	**12**	P	**Pn**	**04 14 47.8**	**+2.2**
JAUF	**Jausiers**	**3.17**	**350**	Pn	**Pb**	**04 14 51.0**	**-2.3**
JAUF				Sn	**Sn**	**04 15 26.1**	**+1.2**
PZZ	**Stroppo**	**3.21**	**355**	Pn	**Pb**	**04 14 51.4**	**-2.6**
PZZ				Sn	**Sn**	**04 15 27.2**	**+1.3**
PZZ	**Stroppo**	**3.21**	**355**	P	**Pb**	**04 14 51.5**	**-2.6**
PZZ				AML	AML		
	comp=N,12μm,0.2s						
PZZ				AML	AML		
	comp=E,42μm,0.2s						
PZZ				AML	AML		
	comp=N,30μm,0.2s						
PZZ				AML	AML		
	comp=N,20μm,4.0s						
PZZ				AML	AML		
	comp=E,20μm,3.0s						
SURF	**Saint Ours**	**3.21**	**351**	Pn	**Pb**	**04 14 51.6**	**-2.5**
SURF				Sn	**Sn**	**04 15 28.3**	**+2.3**
CREF	**Crivoux**	**3.30**	**349**	Pn	**Pb**	**04 14 53.2**	**-2.5**
CREF				Sn	**Sn**	**04 15 30.7**	**+2.5**
PCP	**Piancastagn**	**3.33**	**13**	P	**Pn**	**04 14 51.4**	**+2.4**
RNCA	**Ronca, Sant'Ol**	**3.34**	**18**	P	**Pn**	**04 14 51.9**	**+2.8**
MBDF	**Montbardon**	**3.46**	**352**	*e*Pn	**Pn**	**04 14 53.3**	**+2.4**
MBDF				*e*Sn	**Sn**	**04 15 31.9**	**-0.1**
	comp=E,2.7nm,0.3s						
BHB	**Bricherasio**	**3.54**	**357**	P	**Pn**	**04 14 54.5**	**+2.7**
RRL	**Rocca Remolon**	**3.65**	**352**	Pn	**Pb**	**04 14 58.7**	**-2.9**
RRL	**Rocca Remolon**	**3.65**	**352**	P	**Pn**	**04 14 57.3**	**+3.7**
ORIF	**Oris-en-Rattie**	**3.80**	**342**	*e*Pn	**Pn**	**04 14 59.0**	**+3.5**
ORIF				*e*Sn	**Sn**	**04 15 39.7**	**-0.6**
	comp=E,1.9nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.80**	**342**	P	**Pn**	**04 14 59.8**	**+4.3**
RSP	**Reno Superiore**	**3.84**	**358**	P	**Pn**	**04 14 59.3**	**+3.1**
LASF	**Ste Croix**	**3.85**	**317**	*e*Pn	**Pn**	**04 14 58.6**	**+2.4**
LASF				*e*Sn	**Sn**	**04 15 40.4**	**-1.1**
	comp=E,3.2nm,0.2s						
VIVF	**Saint-Julien-l**	**4.10**	**331**	*e*Pn	**Pn**	**04 15 03.0**	**+3.3**
VIVF				*e*Sn	**Sn**	**04 15 47.1**	**-0.7**
	comp=E,0.8nm,0.2s						
LPG	**La Plagne**	**4.22**	**353**	*e*Sn	**Sn**	**04 15 49.6**	**-1.5**
	comp=E,0.8nm,0.3s						
LPL	**La Plagne**	**4.24**	**353**	*e*Sn	**Sn**	**04 15 50.2**	**-1.3**
	comp=E,0.7nm,0.3s						
MTLF	**Montolieu**	**4.40**	**299**	*e*Pn	**Pn**	**04 15 06.2**	**+2.4**
CAF	**Calviac**	**5.37**	**314**	*e*Pn	**Pn**	**04 15 19.6**	**+2.5**
CAF				*e*Sn	**S

WAT1	**Susitna Watana**	**1.38**	**66**			**Sn**	**04 21 45.4**	**+0.1**
RC01	**Rabbit Creek A**	**1.42**	**148**			**Pn**	**04 21 27.2**	**-0.2**
RC01	**Rabbit Creek A**	**1.42**	**148**			**Sn**	**04 21 46.4**	**+0.3**
SML	**Sawmill**	**1.48**	**108**			**Pn**	**04 21 28.2**	**0.0**
SML					IAML		04 21 52.1	
	comp=N,1µm,0.4s							
SML					IAML		04 21 52.2	
	comp=E,1µm,0.9s							
SML	**Sawmill**	**1.48**	**108**			**Sn**	**04 21 48.5**	**+0.9**
CAPN	**Captain Cook N**	**1.53**	**178**			**Pn**	**04 21 30.9**	**+2.0**
RND	**Reindeer**	**1.58**	**44**			**Pn**	**04 21 29.8**	**+0.2**
RND					IAML		04 21 50.9	
	comp=E,967nm,0.4s							
RND					IAML		04 21 51.1	
	comp=N,1µm,0.7s							
RND	**Reindeer**	**1.58**	**44**			**Sn**	**04 21 49.7**	**-0.3**
KNK	**Knik Glacier**	**1.61**	**122**			**Pn**	**04 21 29.9**	**0.0**
KNK					IAML		04 21 57.3	
	comp=N,1µm,0.6s							
CHUM	**Lake Minchumin**	**1.66**	**344**			**Pn**	**04 21 31.0**	**+0.4**
CHUM						**Sn**	**04 21 51.4**	**-0.3**
K20K	**Telida**	**1.67**	**311**			**Pn**	**04 21 30.9**	**+0.2**
K20K						**Sn**	**04 21 51.3**	**-0.5**
L19K	**White Mountain**	**1.67**	**268**			**Pn**	**04 21 30.9**	**+0.2**
L19K					IAML		04 21 52.7	
	comp=N,693nm,0.7s							
L19K					IAML		04 21 52.8	
	comp=E,1µm,0.8s							
L19K	**White Mountain**	**1.67**	**268**			**Sn**	**04 21 51.9**	**-0.1**
MCK	**McKinley**	**1.80**	**36**			**Pn**	**04 21 32.9**	**+0.6**
MCK					IAML		04 21 57.1	
	comp=E,575nm,0.4s							
MCK					IAML		04 21 58.3	
	comp=N,739nm,0.4s							
BPAW	**Bear Paw Mtn.**	**1.82**	**4**			**Pn**	**04 21 32.7**	**+0.1**
BPAW					IAML		04 21 54.6	
	comp=N,1µm,0.2s							
BPAW					IAML		04 21 54.9	
	comp=E,798nm,0.8s							
BPAW	**Bear Paw Mtn.**	**1.82**	**4**			**Sn**	**04 21 54.2**	**-1.2**
SLKM	**Skilak Lake**	**1.86**	**164**			**Pn**	**04 21 33.4**	**+0.2**
SLKM					IAML		04 22 04.2	
	comp=E,858nm,0.4s							
SLKM					IAML		04 22 08.4	
	comp=N,688nm,0.4s							
SCM	**Sheep Creek Mo**	**1.92**	**102**			**Pn**	**04 21 33.7**	**-0.3**
SCM					IAML		04 22 04.6	
	comp=N,805nm,0.6s							
SCM					IAML		04 22 05.8	
	comp=E,1µm,0.7s							
O22K	**Cooper Landing**	**1.97**	**157**			**Pn**	**04 21 34.4**	**-0.1**
O22K	**Cooper Landing**	**1.97**	**157**			**Sn**	**04 21 57.8**	**-0.9**
DHY	**Denali Highway**	**1.97**	**65**			**Pn**	**04 21 35.0**	**+0.3**
DHY					IAML		04 22 06.0	
	comp=N,799nm,0.5s							
RED	**Redoubt Volcan**	**2.01**	**201**			**Pn**	**04 21 34.9**	**-0.2**
BWN	**Browne**	**2.06**	**23**			**Pn**	**04 21 36.4**	**+0.7**
BWN					IAML		04 22 24.8	
	comp=E,551nm,0.8s							
BWN					IAML		04 22 29.5	
	comp=N,575nm,0.7s							
J20K	**Nowinta River**	**2.29**	**327**			**Pn**	**04 21 39.0**	**+0.3**
J20K					IAML		04 22 06.7	
	comp=E,611nm,0.5s							
J20K					IAML		04 22 06.8	
	comp=N,595nm,0.6s							
SEW	**Seward**	**2.37**	**157**			**Pn**	**04 21 40.0**	**+0.2**
SEW					IAML		04 22 16.4	
	comp=E,565nm,0.3s							
SEW					IAML		04 22 17.8	
	comp=N,628nm,0.4s							
M24K	**Tolsona, Glenn**	**2.41**	**92**			**Pn**	**04 21 40.5**	**+0.2**
GLI	**Glacier Island**	**2.46**	**123**			**Pn**	**04 21 39.9**	**-1.0**
ILSW	**Iliamna Southw**	**2.48**	**202**			**Pn**	**04 21 41.9**	**+0.4**
ILS	**Iliamna Low So**	**2.50**	**201**			**Pn**	**04 21 42.1**	**+0.6**
NEA2	**Nenana**	**2.52**	**22**			**Pn**	**04 21 41.6**	**-0.1**
NEA2					IAML		04 22 10.6	
	comp=E,259nm,0.6s							
NEA2					IAML		04 22 10.7	
	comp=N,165nm,0.6s							
BRLK	**Bradley Lake**	**2.54**	**175**			**Pn**	**04 21 43.0**	**+0.8**
BRLK					IAML		04 22 20.2	
	comp=E,366nm,0.5s							
BRLK					IAML		04 22 21.3	
	comp=N,569nm,0.5s							
O19K	**Port Alsworth**	**2.56**	**216**			**Pn**	**04 21 42.7**	**+0.4**
O19K	**Port Alsworth**	**2.56**	**216**		IAML		04 22 19.5	
	comp=E,556nm,0.4s							
BRSE	**Bradley Lake S**	**2.57**	**174**			**Pn**	**04 21 43.2**	**+0.6**
J19K	**Poorman**	**2.60**	**313**			**Pn**	**04 21 43.0**	**+0.1**
J19K	**Poorman**	**2.60**	**313**	IAML			04 22 14.2	
	comp=E,151nm,0.5s							
WRH	**Wood River Hil**	**2.62**	**32**			**Pn**	**04 21 43.1**	**0.0**
WRH					IAML		04 22 19.8	
	comp=N,143nm,0.3s							
HOM	**Homer**	**2.65**	**184**			**Pn**	**04 21 44.9**	**+1.4**
KLU	**Klutina**	**2.66**	**105**			**Pn**	**04 21 43.2**	**-0.6**
KLU					IAML		04 22 25.6	
	comp=E,402nm,0.5s							
KLU					IAML		04 22 28.7	
	comp=N,590nm,0.5s							
N18K	**Kilae Creek**	**2.74**	**236**	IAML			04 22 17.0	
	comp=E,140nm,0.6s							
J18K	**Innoko River**	**2.75**	**298**			**Pn**	**04 21 45.4**	**+0.5**
PAX	**Paxson**	**2.77**	**73**			**Pn**	**04 21 46.1**	**+0.8**
P19K	**Oil Pt**	**2.81**	**201**			**Pn**	**04 21 46.2**	**+0.5**
P19K					IAML		04 22 27.0	
	comp=E,389nm,0.5s							
P19K					IAML		04 22 41.7	
	comp=N,244nm,0.6s							
CCB	**Clear Creek Bu**	**2.83**	**32**			**Pn**	**04 21 46.0**	**+0.1**
CCB					IAML		04 22 26.2	
	comp=E,133nm,0.3s							
DIV	**Divide**	**2.88**	**111**			**Pn**	**04 21 45.9**	**-0.7**
DIV					IAML		04 22 29.5	
	comp=E,396nm,0.4s							
HDA	**Harding Lake**	**2.89**	**41**			**Pn**	**04 21 46.8**	**+0.1**
HDA					IAML		04 22 27.3	
	comp=N,375nm,0.4s							
HDA					IAML		04 22 28.7	
	comp=E,318nm,0.3s							
I21K	**Tanana**	**2.92**	**354**			**Pn**	**04 21 47.5**	**+0.4**
I21K	**Tanana**	**2.92**	**354**	IAML			04 22 33.1	
	comp=E,116nm,0.8s							
K24K	**Donnelly Dome**	**2.93**	**56**			**Pn**	**04 21 48.5**	**+1.2**
P23K	**Montague Islan**	**2.97**	**139**			**Pn**	**04 21 46.0**	**-1.9**
HIN	**Hinchinbrook I**	**2.99**	**127**			**Pn**	**04 21 47.2**	**-0.9**
HIN					IAML		04 22 39.9	
	comp=N,412nm,0.8s							
I23K	**Minto, Yukon-K**	**2.99**	**16**			**Pn**	**04 21 48.4**	**+0.3**
I23K					IAML		04 22 22.5	
	comp=E,118nm,0.5s							
I23K					IAML		04 22 56.7	
	comp=N,118nm,0.9s							
COLA	**College**	**3.01**	**29**			**Pn**	**04 21 48.5**	**+0.2**
COLA					IAML		04 22 26.3	
	comp=N,415nm,0.4s							
COLA					IAML		04 22 28.4	
	comp=N,409nm,0.4s							
M17K	**Holitna River**	**3.05**	**256**			**Pn**	**04 21 49.0**	**+0.2**
M17K					IAML		04 22 41.2	
	comp=N,159nm,0.9s							
M17K					IAML		04 22 42.6	
	comp=E,220nm,0.8s							
O18K	**Koktuh Hills**	**3.10**	**220**			**Pn**	**04 21 50.1**	**+0.5**
AUJK	**Augustine Jueg**	**3.13**	**200**			**Pn**	**04 21 50.4**	**+0.4**
IL31		**3.17**	**36**			**Pn**	**04 21 50.6**	**+0.1**
ILAR	**Eielson Array**	**3.17**	**36**	P		**Pn**	**04 21 50.5**	**0.0**
	comp=E,54nm,0.3s,baz=222,slow=14,SNR=837							
ILAR				S		**Sn**	**04 22 25.6**	**-1.9**
	comp=E,57nm,0.7s,baz=223,slow=22,SNR=9.9							
EYAK	**Cordova Ski Ar**	**3.19**	**121**			**Pn**	**04 21 49.6**	**-1.1**
EYAK					IAML		04 22 42.6	
	comp=E,230nm,0.5s							
EYAK					IAML		04 22 43.2	
	comp=N,196nm,0.4s							
N25K	**Chitina, Valde**	**3.24**	**99**	IAML			04 22 31.2	
	comp=N,276nm,0.4s							
N25K					IAML		04 22 42.2	
	comp=E,282nm,0.5s							
RIDG	**Independent Ri**	**3.28**	**61**			**Pn**	**04 21 53.1**	**+1.1**
K17K	**Iditarod**	**3.28**	**281**	IAML			04 22 29.9	
	comp=N,108nm,0.9s							
K17K					IAML		04 22 31.8	
	comp=E,153nm,1.4s							
WACK	**Wrangell Chich**	**3.28**	**92**			**Pn**	**04 21 52.4**	**+0.1**
POKR	**Poker Plat Res**	**3.31**	**29**			**Pn**	**04 21 52.8**	**+0.3**
N17K	**Nushagak Hills**	**3.34**	**241**			**Pn**	**04 21 53.2**	**+0.4**
BMRM	**Bremner River**	**3.46**	**110**			**Pn**	**04 21 53.8**	**-0.6**
BMRM					IAML		04 22 52.0	
	comp=N,311nm,0.5s							
BMRM					IAML		04 22 58.9	
	comp=E,303nm,1.0s							
J25K	**Salcha River,**	**3.53**	**46**	IAML			04 22 46.3	
	comp=E,214nm,0.5s							
J25K					IAML		04 22 47.3	
	comp=N,153nm,0.4s							
MENT	**Mentasta**	**3.56**	**76**			**Pn**	**04 21 55.8**	**+0.1**
Q19K	**Cape Douglas,**	**3.57**	**200**			**Pn**	**04 21 56.6**	**+0.7**
Q19K	**Cape Douglas,**	**3.57**	**200**	IAML			04 23 13.8	
	comp=N,295nm,1.4s							
DOT	**Dot Lake**	**3.57**	**64**	IAML			04 22 43.8	
	comp=N,292nm,0.7s							
H22K	**Ishtalitna Cre**	**3.62**	**359**			**Pn**	**04 21 57.1**	**+0.6**
H22K	**Ishtalitna Cre**	**3.62**	**359**	IAML			04 22 37.7	
	comp=E,79nm,0.9s							
H22K					IAML		04 22 39.2	
	comp=N,128nm,0.6s							
H23K	**Yukon River**	**3.63**	**11**			**Pn**	**04 21 57.4**	**+0.7**
H23K	**Yukon River**	**3.63**	**11**	IAML			04 22 37.9	
	comp=N,68nm,0.7s							
H23K					IAML		04 22 38.6	
	comp=E,112nm,0.7s							
GLB	**Gilahina Butte**	**3.64**	**100**	IAML			04 22 54.9	
	comp=N,242nm,0.7s							
GLB					IAML		04 23 01.4	
	comp=E,178nm,0.8s							
RAGM	**Ragged Mountai**	**3.71**	**118**			**Pn**	**04 21 57.1**	**-0.8**
SCRK	**Sand Creek**	**3.72**	**60**	IAML			04 22 47.4	
	comp=N,224nm,0.3s							
SCRK					IAML		04 22 47.9	
	comp=E,202nm,0.4s							
SYI	**Shuyak Island**	**3.73**	**189**			**Pn**	**04 21 58.8**	**+0.6**
SYI					IAML		04 22 50.1	
	comp=E,128nm,0.8s							
SYI					IAML		04 22 51.2	
	comp=N,108nm,1.1s							
L26K	**Log Cabin Wild**	**3.74**	**75**			**Pn**	**04 21 59.0**	**+0.8**
IMAR	**Indian Mountai**	**3.86**	**345**			**Pn**	**04 22 00.3**	**+0.5**
M26K	**Nabesna, AK**	**3.87**	**85**			**Pn**	**04 21 59.5**	**-0.4**
M26K	**Nabesna, AK**	**3.87**	**85**	IAML			04 23 04.0	
	comp=E,191nm,0.5s							
M26K					IAML		04 23 04.5	
	comp=N,210nm,0.6s							
VRDI	**Verde Repeater**	**3.88**	**103**			**Pn**	**04 21 59.4**	**-0.8**
VRDI					IAML		04 23 03.7	
	comp=E,125nm,0.6s							
VRDI					IAML		04 23 04.3	
	comp=N,147nm,1.1s							
L16K	**Owhat River**	**3.90**	**265**			**Pn**	**04 22 00.9**	**+0.5**
H19K	**Roundabout Mou**	**3.97**	**327**	IAML			04 23 04.3	
	comp=E,49nm,0.7s							
P17K	**Kvichak River**	**4.00**	**221**			**Pn**	**04 22 02.7**	**+1.0**
P17K	**Kvichak River**	**4.00**	**221**	IAML			04 23 33.4	
	comp=N,200nm,0.9s							
MCARA	**McCarthy VSAT**	**4.02**	**99**			**Pn**	**04 22 02.0**	**0.0**
PRP	**Porcupine Dome**	**4.12**	**36**	IAML			04 23 08.7	
	comp=N,62nm,0.7s							
PRP					IAML		04 23 22.6	
	comp=E,61nm,0.8s							
BERG	**Berg Lake**	**4.12**	**114**			**Pn**	**04 22 02.3**	**-1.0**
KAHG	**Katmai Hook Gl**	**4.14**	**204**			**Pn**	**04 22 04.7**	**+1.0**
CRQM	**Cirque**	**4.20**	**108**			**Pn**	**04 22 04.3**	**-0.2**
KAWH	**Katmai**	**4.29**	**206**			**Pn**	**04 22 06.0**	**+0.3**
PTPK	**Patty Peak**	**4.34**	**101**			**Pn**	**04 22 06.2**	**-0.3**
G21K	**Allakaket**	**4.35**	**348**	IAML			04 22 57.4	
	comp=E,61nm,0.8s							
G21K					IAML		04 22 58.3	
	comp=N,73nm,0.8s							
M27K	**Edge Creek, AK**	**4.39**	**85**			**Pn**	**04 22 07.3**	**+0.2**
M27K	**Edge Creek, AK**	**4.39**	**85**	IAML			04 23 21.6	
	comp=E,90nm,0.9s							
M27K					IAML		04 23 22.5	
	comp=N,94nm,0.9s							
KAKN	**Katmai Knife C**	**4.42**	**207**			**Pn**	**04 22 07.8**	**+0.3**
L27K	**Beaver Creek,**	**4.43**	**76**			**Pn**	**04 22 07.3**	**-0.2**
L27K	**Beaver Creek,**	**4.43**	**76**	IAML			04 23 21.7	
	comp=E,48nm,0.7s							
L27K					IAML		04 23 24.3	
	comp=N,63nm,0.9s							
BALM	**Baldy**	**4.45**	**102**			**Pn**	**04 22 06.9**	**-1.0**
BCAR	**Beaver Creek A**	**4.45**	**76**			**Pn**	**04 22 07.5**	**-0.3**
G23K	**Bananza Creek**	**4.47**	**6**	IAML			04 22 58.2	
	comp=E,45nm,0.6s							
KIAG	**Kiagna River**	**4.48**	**104**			**Pn**	**04 22 07.4**	**-1.0**
KABU	**Katmai Buttres**	**4.50**	**208**			**Pn**	**04 22 09.4**	**+0.8**
K27K	**Chicken**	**4.53**	**63**			**Pn**	**04 22 08.8**	**-0.1**
K27K	**Chicken**	**4.53**	**63**	IAML			04 23 20.9	
	comp=N,72nm,1.0s							
K27K					IAML		04 23 20.9	
	comp=E,57nm,0.9s							
ACHA	**Angle Creek He**	**4.56**	**208**			**Pn**	**04 22 10.7**	**+1.3**
I17K	**Unalakleet**	**4.56**	**295**			**Pn**	**04 22 10.2**	**+0.9**
KDAK	**Kodiak Island**	**4.57**	**189**	P		**Pn**	**04 22 08.6**	**-0.8**
	comp=E,4.7nm,0.3s,baz=31,slow=4.2,SNR=47							
KDAK				S		**Sn**	**04 23 00.0**	**-1.2**
	comp=E,13nm,0.3s,baz=0.1,slow=6.9,SNR=2.1							
KDAK	**Kodiak Island**	**4.57**	**189**			**Pn**	**04 22 08.2**	**-1.3**
KDAK					IAML		04 23 12.9	
	comp=E,53nm,1.0s							
KDAK					IAML		04 23 17.2	
	comp=E,53nm,1.1s							
ANCK	**Angle Creek**	**4.61**	**209**			**Pn**	**04 22 11.1**	**+1.0**
G19K	**Purcell Mounta**	**4.62**	**329**			**Pn**	**04 22 10.3**	**+0.2**
BARK	**Barkley Ridge**	**4.64**	**110**			**Pn**	**04 22 10.1**	**-0.4**
CNTC	**Contact Creek**	**4.64**	**212**			**Pn**	**04 22 11.8**	**+1.3**
P16K	**Nushagak River**	**4.64**	**228**			**Pn**	**04 22 11.2**	**+0.8**
P16K	**Nushagak River**	**4.64**	**228**	IAML			04 23 40.3	
	comp=E,108nm,0.8s							
P16K					IAML		04 23 59.6	
	comp=N,115nm,1.4s							
I26K	**Coal Creek Min**	**4.71**	**46**			**Pn**	**04 22 12.2**	**+0.9**
I26K	**Coal Creek Min**	**4.71**	**46**	IAML			04 23 10.2	
	comp=E,93nm,1.1s							
I26K					IAML		04 23 44.2	
	comp=N,95nm,0.7s							
BARN	**Barnard Glacie**	**4.75**	**101**			**Pn**	**04 22 11.8**	**-0.2**
BARN	**Barnard Glacie**	**4.75**	**101**	IAML			04 23 27.7	
	comp=N,124nm,0.7s							
BARN					IAML		04 23 36.0	
	comp=E,99nm,0.7s							
N15K	**Kwethluk River**	**4.76**	**247**	IAML			04 23 22.9	
	comp=N,42nm,1.1s							
N15K					IAML		04 23 57.1	
	comp=E,43nm,0.8s							
GRNC	**Granite Creek**	**4.83**	**105**			**Pn**	**04 22 12.2**	**-1.0**
GRNC	**Granite Creek**	**4.83**	**105**	IAML			04 25 30.9	
	comp=E,78nm,0.5s							
L15K	**Ungalak Mounta**	**4.85**	**267**			**Pn**	**04 22 13.5**	**+0.3**
CTGM	**Chitina Glacie**	**4.93**	**101**			**Pn**	**04 22 14.2**	**-0.3**
CTGM	**Chitina Glacie**	**4.93**	**101**	IAML			04 25 22.4	
	comp=E,93nm,0.4s							
YUK2	**White River**	**4.94**	**91**			**Pn**	**04 22 14.3**	**-0.3**
COLD	**Coldfoot**	**4.98**	**5**	IAML			04 23 25.7	
	comp=N,24nm,0.7s							
MESA	**MESA**	**4.98**	**111**			**Pn**	**04 22 14.8**	**-0.4**
FYU	**Fort Yukon**	**5.03**	**29**			**Pn**	**04 22 16.6**	**+1.0**
FYU	**Fort Yukon**	**5.03**	**29**	IAML			04 23 49.6	
	comp=E,41nm,1.4s							
FYU					IAML		04 24 11.6	
	comp=N,42nm,1.3s							
F21K	**Alatna River**	**5.04**	**350**	IAML			04 23 14.6	
	comp=E,26nm,0.7s							
F21K					IAML		04 23 15.5	
	comp=N,28nm,0.6s							
LOGN	**Logan Glacier**	**5.13**	**102**			**Pn**	**04 22 16.6**	**-0.7**
F20K	**Avaraart Lake**	**5.14**	**340**	IAML			04 23 16.3	
	comp=E,35nm,0.8s							
OHAK	**Old Harbor**	**5.18**	**192**			**Pn**	**04 22 17.2**	**-0.6**
OHAK	**Old Harbor**	**5.18**	**192**	IAML			04 23 22.6	
	comp=N,25nm,1.2s							
OHAK					IAML		04 23 44.0	
	comp=E,24nm,1.3s							
RKAV	**Rock Avalanche**	**5.19**	**108**			**Pn**	**04 22 17.8**	**-0.3**
O15K	**Ungalikthiuk R**	**5.22**	**237**			**Pn**	**04 22 19.0**	**+0.7**
O15K	**Ungalikthiuk R**	**5.22**	**237**	IAML			04 23 54.4	
	comp=E,21nm,1.2s							
O15K					IAML		04 23 59.7	
	comp=N,20nm,1.1s							
G17K	**Kiwalik Mounta**	**5.24**	**312**			**Pn**	**04 22 19.5**	**+1.0**
PLK4	**Peulik 4**	**5.32**	**211**			**Pn**	**04 22 20.8**	**+1.0**
PLK4	**Peulik 4**	**5.32**	**211**	IAML			04 24 09.9	
	comp=E,40nm,1.1s							
PLK4					IAML		04 24 17.8	
	comp=N,40nm,1.4s							
M14K	**Bethel**	**5.34**	**258**			**Pn**	**04 22 20.4**	**+0.6**
M14K	**Bethel**	**5.34**	**258**	IAML			04 24 16.0	
	comp=E,21nm,1.4s							
F19K	**Shaleruckik Mo**	**5.34**	**331**			**Pn**	**04 22 20.4**	**+0.5**
I27K	**Kandik River**	**5.40**	**48**			**Pn**	**04 22 21.6**	**+0.8**
H16K	**Elim**	**5.44**	**300**			**Pn**	**04 22 21.6**	**+0.4**
L14K	**Kuka Creek**	**5.49**	**265**			**Pn**	**04 22 23.1**	**+1.2**
O28M	**Mount Upton**	**5.53**	**101**			**Pn**	**04 22 23.1**	**+0.4**
N14K	**Kuskokwak Cree**	**5.57**	**249**			**Pn**	**04 22 23.8**	**+0.8**
F18K	**Selawik**	**5.64**	**324**			**Pn**	**04 22 24.5**	**+0.7**
J14K	**Nanvaranak Lak**	**5.70**	**280**			**Pn**	**04 22 25.3**	**+0.6**
E19K	**Redstone River**	**5.77**	**337**			**Pn**	**04 22 26.8**	**+1.1**
PCA	**Pinnacle**	**5.77**	**108**			**Pn**	**04 22 25.2**	**-0.7**
G16K	**Koyuk River**	**5.80**	**307**			**Pn**	**04 22 26.5**	**+0.5**
H27K	**Steamboat Moun**	**5.80**	**43**			**Pn**	**04 22 26.9**	**+0.7**
E23K	**Chandalar**	**5.83**	**6**			**Pn**	**04 22 27.5**	**+0.9**
E22K	**Anaktuvuk Pass**	**5.87**	**358**			**Pn**	**04 22 28.9**	**+1.7**
BMAR	**Burnt Mountain**	**5.89**	**26**			**Pn**	**04 22 27.9**	**+0.5**
E24K	**Your Creek**	**5.93**	**10**			**Pn**	**04 22 28.7**	**+0.9**
M29M	**Somme Creek**	**5.97**	**83**			**Pn**	**04 22 28.8**	**+0.2**
F17K	**Baldwin Pennin**	**6.00**	**318**			**Pn**	**04 22 30.1**	**+1.3**
G27K	**Doyon Strip**	**6.14**	**38**			**Pn**	**04 22 31.0**	**+0.2**
E21K	**Killik River**	**6.28**	**351**			**Pn**	**04 22 33.7**	**+1.1**
K13K	**Kusilvak Mount**	**6.28**	**273**			**Pn**	**04 22 33.2**	**+0.6**
YUK6	**Outpost Mounta**	**6.31**	**97**			**Pn**	**04 22 33.3**	**0.0**
O29M	**Mount Kennedy**	**6.44**	**102**			**Pn**	**04 22 35.0**	**0.0**
K29M	**Barlow Dome**	**6.45**	**70**			**Pn**	**04 22 34.7**	**-0.3**
ANM	**Nome**	**6.71**	**296**			**Pn**	**04 22 38.3**	**-0.3**
N30M	**Aishikik Lake**	**6.77**	**91**			**Pn**	**04 22 38.5**	**-0.9**
D19K	**Kuna River**	**6.84**	**338**			**Pn**	**04 22 41.6**	**+1.3**
J30M	**Hart River**	**7.09**	**65**			**Pn**	**04 22 44.2**	**+0.4**
F28M	**Old Crow**	**7.20**	**37**			**Pn**	**04 22 45.4**	**+0.2**
D25K	**Kavik River**	**7.34**	**14**			**Pn**	**04 22 48.6**	**+1.5**
G29M	**Pine Creek**	**7.34**	**45**			**Pn**	**04 22 47.6**	**+0.6**
F14K	**Arctic Creek**	**7.36**	**302**			**Pn**	**04 22 48.3**	**+1.0**
B21K	**Ikpikpuk River**	**7.48**	**351**			**Pn**	**04 22 50.0**	**+1.0**
C24K	**Franklin Bluff**	**7.54**	**7**			**Pn**	**04 22 51.2**	**+1.5**
C23K	**Itkillik River**	**7.58**	**2**			**Pn**	**04 22 51.7**	**+1.4**
C18K	**Utukok River**	**7.59**	**332**			**Pn**	**04 22 51.7**	**+1.3**
E28M	**Babbage River**	**7.99**	**33**			**Pn**	**04 22 56.4**	**+0.5**
TNA	**Tin City**	**8.02**	**301**			**Pn**	**04 22 55.7**	**-0.6**
WHY	**Whitehorse**	**8.02**	**94**			**Pn**	**04 22 55.8**	**-0.7**
D27M	**Malcolm River**	**8.16**	**27**			**Pn**	**04 22 59.6**	**+1.4**
E29M	**Blow River**	**8.28**	**37**			**Pn**	**04 23 00.1**	**+0.3**
F30M	**Barrier River**	**8.45**	**44**			**Pn**	**04 23 02.2**	**+0.1**
G31M	**Satah River**	**8.64**	**50**			**Pn**	**04 23 04.0**	**-0.8**
INK	**Inuvik**	**9.54**	**43**	P		**Pn**	**04 23 17.1**	**+0.2**
	comp=E,4.8nm,0.4s,baz=239,slow=16,SNR=39							
U33K	**Whale Pass**	**11.16**	**115**			**Pn**	**04 23 38.8**	**-0.1**
T35M	**Bob Quinn**	**11.87**	**107**			**Pn**	**04 23 48.4**	**-0.2**
YKA	**Yellowknife Ar**	**16.86**	**73**	P		**Pn**	**04 24 52.1**	**-0.6**
	comp=E,0.4nm,0.8s,baz=294,slow=12,SNR=10							
YKA	**Yellowknife Ar**	**16.86**	**73**			**Pn**	**04 24 52.3**	**-0.5**
ADK	**Adak**	**17.16**	**244**			**Pn**	**04 24 56.3**	**-0.2**
HOLB	**Holberg**	**17.19**	**122**			**Pn**	**04 24 56.5**	**-0.4**
HOLB					IAmb	IAmb	04 25 08.9	
	comp=Z,25nm,1.1s							
RES	**Resolute Bay**	**22.93**	**35**	P		**P**	**04 25 58.3**	**-0.3**
BLKN	**Baker Lake**	**24.26**	**61**	P		**P**	**04 26 11.7**	**+0.9**
ILON	**Igloolik, Nuna**	**27.78**	**45**	P		**P**	**04 26 42.7**	**+0.3**
ILON					IAmb	IAmb	04 27 06.1	
	comp=Z,2.1nm,0.5s							
P17A	**Butcher Ranch,**	**33.42**	**114**	P		**P**	**04 27 32.6**	**0.0**
KUQ	**Kuujjuuaa**	**38.74**	**57**	P		**P**	**04 28 18.2**	**+0.6**
KUQ					IAmb	IAmb	04 28 36.5	
	comp=Z,5.4nm,1.2s							
346A	**Big Creek Wild**	**49.69**	**99**	P		**P**	**04 29 45.6**	**+0.5**
SONM	**Songino Array**	**54.12**	**306**	P		**P**	**04 30 19.6**	**+1.5**
	comp=Z,0.6nm,0.4s,baz=29,slow=9.0,SNR=4.1							
	comp=Z,0.6nm,0.4s							
FINES	**FINESS Array B**	**56.57**	**2**	P		**P**	**04 30 35.4**	**+0.2**
	comp=Z,3.5nm,1.1s,baz=359,slow=7.1,SNR=2.7							
	comp=Z,3.5nm,1.1s							
HFS	**Hagfors**	**57.36**	**9**	P		**P**	**04 30 41.0**	**+0.2**
	comp=Z,1.8nm,1.0s,baz=34,slow=5.6,SNR=4.5							
	comp=Z,1.8nm,1.0s							
BVAR	**Borovoye Array**

RTZ	Ruatahuna	41.84	144	P	P	04 35 41.2	+0.8
MJAR	Matsushiro Arr	43.75	350	LR	LR	04 54 16.4	
	comp=Z,16nm,18.9s,baz=140,slow=36						
CM31	Chiang Mai Arr	53.47	299	P	P	04 37 10.8	+0.3
CMAR	Chiang Mai Arr	53.47	299	P	P	04 37 08.9	-1.6
	comp=Z,1.0nm,0.3s,baz=103,slow=13,SNR=13						
	comp=Z,1.0nm,0.3s						
CMAR	Chiang Mai Arr	53.47	299	P	P	04 37 11.8	+1.3
CHTO	Chiang Mai	53.61	299	P	P	04 37 12.3	+0.8
CHTO				IAmb	IAmb	04 37 30.6	
	comp=Z,6.4nm,1.2s						
PZH	PanZhiHua	54.78	309	P	P	04 37 22.8	+2.7
HHC	Hu-ho-hao-te	57.34	329	*e*P	P	04 37 41.0	+3.0
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,83nm,6.3s						
VNDA	Vanda	71.25	177	P	P	04 39 07.8	-0.3
	comp=Z,1.3nm,0.7s,baz=330,slow=7.3,SNR=4.4						
	comp=Z,1.3nm,0.7s						
VNDA	Vanda	71.25	177	P	P	04 39 08.5	+0.4
VNDA				IAmb	IAmb	04 39 09.6	
	comp=Z,4.8nm,1.2s						
MKAR	Makanchi Array	77.94	321	P	P	04 39 46.8	-0.5
	comp=Z,0.2nm,0.5s,baz=95,slow=8.1,SNR=2.5						
	comp=Z,0.2nm,0.5s						
QSPA	South Pole Qui	83.30	180	P	P	04 40 15.7	0.0
QSPA				IAmb	IAmb	04 40 15.9	
	comp=Z,2.5nm,0.5s						
ILAR	Eielson Array	86.14	23	P	P	04 40 26.0	-3.7
	comp=Z,0.3nm,0.7s,baz=253,slow=5.2,SNR=4.8						
	comp=Z,0.3nm,0.7s						
TORD	Torodi Ar. Bea	145.14	283	PKPbc	PKPdf	04 47 26.9	-0.1
	comp=Z,3.8nm,0.7s,baz=87,slow=3.3,SNR=38						
BDFB	Brasilia	153.37	146	PKPbc	PKPbc	04 47 47.1	-0.8
	comp=Z,0.7nm,0.4s,baz=288,slow=0.5,SNR=6.3						

*NOU **28** 04:34:28.2, 18°.02S×173°.97W, h303km, mb4.5/8, Tonga Islands*
*NEIC **28** 04:34:30.3±1.8, 20°.7S±0°.1×174°.28W±0°.10, h64km±8km, mb4.5/10, Error ellipse: s-maj=23.4km s-min=5.2km az=149.0*
*IDC **28** 04:34:31.6±3.3, 20°.28S×174°.54W, h82km±25km, mb3.6/5, mbtmp4.2/9, MS3.2/4, Error ellipse: s-maj=50.8km s-min=17.8km az=155.0*

ISC 28 04:34:28.4±0.5, 20°.4S±0°.1×174°.35W±0°.07, h56km, n57, σ1$71/51, mb4.4/11, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	4.38	73	P	Pn	04 35 34.4	+2.0
NIUE	Niue	4.38	73		Pn	04 35 34.1	+1.7
AFI	Afiamalu	6.94	21	P	Pn	04 36 09.0	+1.4
	11nm,0.4s,baz=209,slow=14,SNR=5.0						
AFI				S	Sn	04 37 08.3	-17
	29nm,0.4s,baz=56,slow=20,SNR=4.0						
AFI				LR	LR	04 38 06.7	
	comp=Z,70nm,18.4s,baz=144,slow=31						
MSVF	Nonsavu	7.67	289	P	Pn	04 36 18.8	+1.3
	26nm,0.7s,baz=120,slow=13,SNR=18						
MSVF	Nonsavu	7.67	289	Pn	Pn	04 36 21.4	+3.8
RAO	Raoul Island	9.36	200	P	Pn	04 37 07.6	+27
RAR	Rarotonga	13.66	96	P	P	04 37 44.3	-2.1
	14nm,0.6s,baz=229,slow=13,SNR=3.8						
RAR	Rarotonga	13.66	96	P	P	04 37 43.2	-3.2
MARNC	Mare, Loyalty	16.49	263	P	Pn	04 38 10.0	-6.0
DZM	Mont Dzumac	17.97	261	P	Pn	04 38 35.8	+1.3
	9.9nm,0.6s,baz=79,slow=18,SNR=11						
DZM				LR	LR	04 44 39.2	
	comp=Z,138nm,18.4s,baz=243,slow=34						
URZ	Urewera	19.24	201	P	Pn	04 38 53.2	+3.7
BKZ	Black Stump Fm	20.27	201	P	Pn	04 39 03.2	+1.6
HIZ	Hauiti	20.29	205	P	Pn	04 39 04.0	+2.1
BFZ	Birch Farm	21.72	200	P	P	04 39 18.1	+3.3
TUWZ	Tuamarina	23.17	203	P	P	04 39 28.7	-1.4
CTA	Charters Tower	36.90	263	LR	LR	04 54 21.9	
	comp=Z,36nm,19.9s,baz=224,slow=32						
CTAO	Charters Tower	36.90	263	P	P	04 41 30.5	-1.4
STKA	Stephens Creek	40.90	245	LR	LR	04 56 04.4	
	comp=Z,42nm,21.4s,baz=204,slow=32						
COEN	Coen	40.99	272	P	P	04 42 06.5	+0.2
COEN				IAmb	IAmb	04 42 12.6	
	comp=Z,16nm,1.4s						
WR8	Warramunga Arr	47.84	261	P	P	04 43 00.3	-0.6
ASAR	Alice Springs	47.86	256	P	P	04 42 59.8	-1.3
	comp=Z,3.0nm,0.7s,baz=97,slow=8.3,SNR=44						
	comp=Z,3.0nm,0.7s						
ASAR	Alice Springs	47.86	256	P	P	04 43 00.4	-0.6
WRA	Warramunga Arr	47.99	261	P	P	04 43 00.4	-1.6
	comp=Z,1.0nm,0.5s,baz=96,slow=5.1,SNR=28						
	comp=Z,1.0nm,0.5s						
WRA	Warramunga Arr	47.99	261	P	P	04 43 01.1	-1.0
KMRM	Mail Ridge	76.58	37	P	P	04 46 15.0	+2.1
KMRM				IAmb	IAmb	04 46 27.8	
	comp=Z,8.9nm,1.1s						
O02D	Mt. Diablo Mer	77.08	38	P	P	04 46 18.5	+2.8
O02D				IAmb	IAmb	04 46 56.2	
	comp=Z,6.9nm,1.4s						
NVAR	Mina Array Bea	78.67	42	P	P	04 46 25.3	+0.5
	comp=Z,0.5nm,0.7s,baz=227,slow=8.6,SNR=5.4						
	comp=Z,0.5nm,0.7s						
PINE	Pine Mountain	80.48	36	P	P	04 46 36.0	+1.6
PINE				IAmb	IAmb	04 46 44.7	
	comp=Z,5.8nm,1.3s						
K15K	Wolf Creek Mou	83.08	6	P	P	04 46 47.9	+0.4
L18K	Granite Mounta	83.56	8	P	P	04 46 49.8	-0.2
L18K				IAmb	IAmb	04 46 52.8	
	comp=Z,8.6nm,1.4s						
MCK	McKinley	86.21	11	P	P	04 47 02.7	-0.6
MCK				IAmb	IAmb	04 47 03.7	
	comp=Z,4.8nm,0.9s						
ILAR	Eielson Array	87.53	11	P	P	04 47 07.8	-1.8
	comp=Z,0.9nm,1.0s,baz=222,slow=5.8,SNR=6.3						
	comp=Z,0.9nm,1.0s						
ILAR	Eielson Array	87.53	11	P	P	04 47 10.7	+1.0
YKA	Yellowknife Ar	95.05	24	P	P	04 47 44.1	-0.6
	comp=Z,0.3nm,0.7s,baz=248,slow=4.6,SNR=6.3						
	comp=Z,0.3nm,0.7s						
ARCES	ARCESS Array B	129.43	351	PKP	PKPdf	04 53 29.9	-0.2
	comp=Z,6.9nm,1.1s,baz=354,slow=1.2,SNR=6.8						
FINES	FINESS Array B	136.61	346	PKP	PKiKP	04 53 44.9	-0.6
	comp=Z,2.0nm,0.9s,baz=225,slow=2.4,SNR=6.9						
HFS	Hagfors	139.93	354	PKhKP	PKPpre	04 53 43.1	
	comp=Z,2.5nm,0.9s,baz=20,slow=4.7,SNR=4.2						
AKASG	Malin Array Be	144.53	334	PKP	PKPab	04 53 55.8	-1.1
	comp=Z,0.6nm,0.5s,baz=44,slow=3.8,SNR=7.5						
AKBB	Malin Array Si	144.53	334	PKPdf	PKPab	04 53 55.6	-1.2
KIEV	Kiev	144.54	334	PKPdf	PKPab	04 53 55.6	-1.3
BURAR	Bucovina Array	148.59	334	PKPbc	PKiKP	04 54 10.0	-0.7
CLL	Collm	148.65	351	PKPbc	PKPbc	04 54 08.3	-0.7
BRTR	Keskin Array B	149.27	315	PKPbc	PKPbc	04 54 10.3	-0.9
	comp=Z,0.8nm,0.7s,baz=117,slow=4.3,SNR=4.7						
MMAI	Mount Meron Ar	150.72	301	PKPbc	PKiKP	04 54 15.4	-0.1
	comp=Z,1.0nm,0.5s,baz=55,slow=7.2,SNR=4.4						
GERES	GERESS Array B	150.93	349	PKPbc	PKPbc	04 54 14.8	0.0
	comp=Z,0.6nm,0.7s,baz=5.7,slow=1.3,SNR=4.2						
BORA	Eskisehir	151.25	318	PKPbc	PKPbc	04 54 15.5	-0.3
CONA	Conrad Observa	151.35	346	*i* PKiKP	PKiKP	04 54 16.3	-0.1
	comp=Z,3.8nm,1.2s						
RONA	Rosalia, Austr	151.46	345	*i* PKiKP	PKiKP	04 54 16.5	0.0
	comp=Z,1.8nm,0.5s						
MOA	Molln	151.77	348	*i* PKP	PKiKP	04 54 17.2	+0.1
	comp=Z,4.3nm,1.5s						
BIOA	Bad Ischl, Aus	152.05	348	*i* PKP	PKiKP	04 54 17.8	+0.1
	comp=Z,0.7nm,0.4s						
LESA	Schwarzleotal	152.48	350	*i* PKiKP	PKiKP	04 54 18.8	+0.1
	comp=Z,1.1nm,0.5s						
KBA	Koelnbreinsper	152.69	348	*i* PKiKP	PKiKP	04 54 19.1	-0.2
	comp=Z,1.1nm,0.5s						
WATA	Walderalm	152.74	351	*i* PKP	PKPbc	04 54 18.9	-0.2
	comp=Z,1.6nm,0.4s						
WTTA	Wattenberg	152.80	351	*i* PKiKP	PKiKP	04 54 19.4	-0.1
	comp=Z,3.5nm,0.4s						
SQTA	Sankt Quirin	152.90	352	*i* PKP	PKPbc	04 54 19.4	0.0
	comp=Z,4.9nm,1.3s						
ABTA	Abfaltersbach	153.16	350	*i* PKP	PKPbc	04 54 19.5	-0.5
	comp=Z,1.9nm,0.5s						
FUORN	Ofenpass-Fuorn	153.61	353	PKPbc	PKPbc	04 54 20.4	-0.7

KRSC 28 04:40:10.1±2.3, 49°.41N×158°.27E, h40km±43km, MI3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.88	313	*e*P	Pn	04 40 39.7	+0.1
SKR				*e*S	Sn	04 41 02.6	+0.5
PAU	Pauzhetka	2.26	336	*e*S	Sn	04 41 15.1	+3.7
KDTR	Khodutka, Kamc	2.40	357	*e*P	Pn	04 40 49.7	+2.9
KDTR				*e*S	Sn	04 41 18.2	+3.3
ASAK	Asacha	2.98	356	*e*P	Pn	04 40 58.5	+3.7
RUS	Russkaya	3.03	3	*e*P	Pn	04 40 58.9	+3.5
MTVR	Mutnovka	3.07	359	*e*P	Pn	04 40 59.9	+3.7
GRL	Gorelyy	3.15	358	*e*P	Pn	04 41 00.8	+3.7
KRMR	Karymshinskiy	3.42	359	*e*P	Pn	04 41 05.5	+4.7
DALK	Dalny	3.63	5	*e*P	Pn	04 41 07.7	+4.0
UGLR	Uglovaya	3.82	5	*e*P	Pn	04 41 11.2	+4.8
SPN	Mys Shipunski	3.85	16	*e*P	Pn	04 41 10.4	+3.7
AVH	Avacha	3.87	4	*e*P	Pn	04 41 11.8	+4.7
SMAR	Somma	3.87	5	*e*P	Pn	04 41 11.5	+4.3
SDLR	Sedlovina	3.89	5	*e*P	Pn	04 41 10.9	+3.6
KOK	Koryaka	3.89	3	*e*P	Pn	04 41 12.2	+4.8
KRER	Koryakskii	3.91	4	*e*P	Pn	04 41 12.5	+4.8
KRX	Arik	3.96	3	*e*P	Pn	04 41 13.0	+4.6
GNL	Ganaly	4.29	357	*e*P	Pn	04 41 17.9	+5.1
KBTR	Krutoberegovo	7.34	20	*e*P	Pn	04 41 58.5	+3.9

*IDC **28** 04:49:16.5±1.2, 11°.98N×125°.78E, h0km, mb3.6/7, mbtmp3.6/7, MS2.9/1, Error ellipse: s-maj=116.5km s-min=21.1km az=67.0*
*MAN **28** 04:49:23.0, 11°.70N×125°.36E, h88km, MS3.2*

ISC 28 04:49:21.8±0.9, 11°.85N±0°.08×125°.54E±0°.08, h36km, n13, σ1$18/15, mb3.8/7, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLP	Palo	0.87	219	*i* P	Pn	04 49 39.0	+1.3
PLP				*i* S	Sn	04 49 49.8	+0.6
SCPH	Surigao	2.06	181	*e*P	Pn	04 49 48.6	-5.2
SCPH				*i* S	Sn	04 49 58.2	-20
LLP	Lapu-Lapu	2.17	226	*e*P	Pn	04 50 01.6	+6.2
LLP				*e*S	Sn	04 50 18.2	-2.8
RCP	Roxas	2.75	264	*i* P	Pn	04 50 04.3	+0.9
RCP				*i* S	Sn	04 50 34.5	-0.9
BIPH	Bislig	3.73	167	*e*P	Pn	04 50 15.8	-1.1
BIPH				*e*S	Sn	04 51 00.8	+1.2
WRA	Warramunga Arr	32.76	165	P	P	04 55 51.9	+0.3
	0.2nm,0.8s,baz=332,slow=9.9,SNR=2.3						
	0.2nm,0.8s						
ASAR	Alice Springs	36.23	167	P	P	04 56 22.3	+0.7
	0.1nm,0.5s,baz=341,slow=8.3,SNR=1.6						
	0.1nm,0.5s						
SONM	Songino Array	39.30	340	P	P	04 56 47.5	+0.2
	0.3nm,0.5s,baz=123,slow=5.3,SNR=2.3						
SONM				LR	LR	05 15 07.1	
	comp=Z,16nm,18.9s,baz=261,slow=40						
	0.3nm,0.5s						
MKAR	Makanchi Array	50.34	322	P	P	04 58 15.7	+0.4
	0.6nm,0.6s,baz=128,slow=9.5,SNR=6.5						
	0.6nm,0.6s						
ZALV	Zalesovo Beam	52.91	331	P	P	04 58 34.2	+0.1
	0.7nm,0.4s,baz=124,slow=8.9,SNR=2.6						
	0.7nm,0.4s						
KURBB	Kurchatov Arra	54.38	325	P	P	04 58 45.2	+0.2
	0.7nm,0.6s,baz=128,slow=6.9,SNR=7.0						
	0.7nm,0.6s						
FINES	FINESS Array B	84.17	332	P	P	05 01 48.0	-1.1
	2.3nm,1.0s,baz=68,slow=11,SNR=1.9						
	2.3nm,1.0s						
TXAR	Lajitas Array	117.33	48	PKP	PKPdf	05 08 04.2	-0.1
	1.1nm,0.7s,baz=355,slow=6.3,SNR=4.6						

KRSC 28 05:01:23.8±2.2, 49°.21N×158°.47E, h40km±57km, MI3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.12	315	*e*P	Pn	05 01 57.1	+0.4
SKR				*e*S	Sn	05 02 22.1	+0.5
PAU	Pauzhetka	2.50	336	*e*S	Sn	05 02 35.5	+4.5
KDTR	Khodutka, Kamc	2.62	355	*e*P	Pn	05 02 06.5	+3.1
KDTR				*e*S	Sn	05 02 37.6	+3.7
ASAK	Asacha	3.20	354	*e*P	Pn	05 02 15.4	+3.8
MTVR	Mutnovka	3.29	357	*e*P	Pn	05 02 16.5	+3.7
MTVR				*e*S	Sn	05 02 54.3	+3.6
GRL	Gorelyy	3.36	356	*e*P	Pn	05 02 17.6	+3.8
GRL				*e*S	Sn	05 02 57.0	+4.5
KRMR	Karymshinskiy	3.63	357	*e*P	Pn	05 02 21.9	+4.5
PET	Petropavlovsk	3.83	2	*e*P	Pn	05 02 23.9	+3.9
DALK	Dalny	3.83	3	*e*P	Pn	05 02 24.0	+3.9
UGLR	Uglovaya	4.01	3	*e*P	Pn	05 02 27.6	+4.8
SPN	Mys Shipunski	4.02	14	*e*P	Pn	05 02 26.3	+3.6
AVH	Avacha	4.07	2	*e*P	Pn	05 02 28.7	+5.2
SMAR	Somma	4.07	3	*e*P	Pn	05 02 28.9	+5.3
SDLR	Sedlovina	4.09	4	*e*P	Pn	05 02 28.0	+4.3
KOK	Koryaka	4.09	1	*e*P	Pn	05 02 28.6	+4.7
KRER	Koryakskii	4.11	2	*e*P	Pn	05 02 29.5	+5.3
KRX	Arik	4.16	2	*e*P	Pn	05 02 29.1	+4.3
GNL	Ganaly	4.51	356	*e*P	Pn	05 02 33.7	+4.1
KBTR	Krutoberegovo	7.49	19	*e*P	Pn	05 03 14.1	+3.7

IDC 28 05:07:09.1±1.9, 0°.52S×149°.21E, h0km, mb3.5/4, mbtmp3.5/4, MS3.5/1, Error ellipse: s-maj=82.4km s-min=26.7km az=111.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	24.17	216	P	P	05 12 27.1	-0.3
	0.6nm,0.6s,baz=42,slow=10,SNR=10						
	0.6nm,0.6s						
H11S3	WAKE ISLAND Hy	25.54	41	T	T	05 39 55.8	
	baz=222,slow=75,SNR=45						
H11S2	WAKE ISLAND Hy	25.55	41	T	T	05 39 50.5	
	baz=222,slow=75,SNR=10						
H11S1	WAKE ISLAND Hy	25.56	41	T	T	05 39 57.1	
	baz=222,slow=75,SNR=13						
H11N1	WAKE ISLAND Hy	26.55	40	T	T	05 41 18.7	
	baz=220,slow=76,SNR=16						
H11N3	WAKE ISLAND Hy	26.57	40	T	T	05 41 19.5	
	baz=220,slow=76,SNR=14						
H11N2	WAKE ISLAND Hy	26.57	40	T	T	05 41 19.9	
	baz=220,slow=76,SNR=12						
ASAR	Alice Springs	27.38	212	P	P	05 12 57.5	+1.0
	0.8nm,1.1s,baz=43,slow=8.6,SNR=4.7						
	0.8nm,1.1s						
ASAJ	Asahikawa	44.84	353	LR	LR	05 32 14.4	
	comp=Z,59nm,20.2s,baz=128,slow=34						
SONM	Songino Array	60.82	328	P	P	05 17 23.1	-0.2
	0.3nm,0.4s,baz=140,slow=8.1,SNR=2.1						
	0.3nm,0.4s						
ILAR	Eielson Array	79.61	23	P	P	05 19 17.5	-0.5
	0.2nm,0.7s,baz=259,slow=5.3,SNR=2.3						
	0.2nm,0.7s						

*IDC **28** 05:32:01.8±0.8, 49°.16N×158°.63E, h0km, mb3.9/12, mbtmp3.9/13, ML3.4/1, MS3.1/6, Error ellipse: s-maj=26.7km s-min=18.9km az=90.0*
*MOS **28** 05:32:04.8±0.6, 49°.18N×158°.82E, h40km, mb4.3/4, Error ellipse: s-maj=20.1km s-min=4.6km az=92.6*
*KRSC **28** 05:32:05.3±1.5, 49°.40N×158°.93E, h40km±40km, Ml4.2*
*NEIC **28** 05:32:07.3±1.3, 49°.2N±0°.1×158°.8E±0°.1, h37km±6km, mb4.3/15, Error ellipse: s-maj=17.1km s-min=9.6km az=147.0*

ISC 28 05:32:06.9±0.6, 49°.25N±0°.06×158°.75E±0°.06, h35km, n101, σ1$22/109, mb4.1/22, MS3.2/4, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.23	311	*e*PN	Pn	05 32 40.2	-1.1
SKR				*e*S	Sn	05 33 06.4	-1.1
SKR				pmax	pmax		
	comp=Z,172nm,0.5s						
SKR				smax	smax		
	comp=E,714nm,0.4s						
SKR				smax	smax		
	comp=N,626nm,0.4s						
SKR	Severo-Kuril's	2.23	311	*e*P	Pn	05 32 40.4	-0.9
SKR				*e*S	Sn	05 33 06.3	-1.2
PAU	Pauzhetka	2.54	331	PN	Pn	05 32 45.9	+0.3
PAU				S	Sn	05 33 16.1	+0.7
PAU	Pauzhetka	2.54	331	*e*P	Pn	05 32 45.9	+0.3
PAU				*e*S	Sn	05 33 16.1	+0.7
KDTR	Khodutka, Kamc	2.60	351	PN	Pn	05 32 45.6	-0.8
KDTR				S	Sn	05 33 15.5	-1.2
KDTR	Khodutka, Kamc	2.60	351	*e*P	Pn	05 32 45.7	-0.8
KDTR				*e*S	Sn	05 33 15.5	-1.2
ASAK	Asacha	3.18	351	PN	Pn	05 32 54.8	+0.3
ASAK				S	Sn	05 33 30.3	-1.0
ASAK	Asacha	3.18	351	*e*P	Pn	05 32 54.8	+0.3
ASAK				*e*S	Sn	05 33 30.3	-1.0
RUS	Russkaya	3.19	357	PN	Pn	05 32 54.2	-0.3
RUS	Russkaya	3.19	357	*e*P	Pn	05 32 54.2	-0.3
RUS				*e*S	Sn	05 33 29.7	-1.6
MTVR	Mutnovka	3.26	354	PN	Pn	05 32 55.4	-0.2
MTVR				S	Sn	05 33 32.2	-1.0
MTVR	Mutnovka	3.26	354	*e*P	Pn	05 32 55.5	-0.2
MTVR				*e*S	Sn	05 33 32.2	-1.0
MIPR	Malaya Ipel'ka	3.29	338	*e*S	Sn	05 33 35.1	+1.4
GRL	Gorelyy	3.33	353	PN	Pn	05 32 57.1	+0.5
GRL				S	Sn	05 33 34.5	-0.5
GRL	Gorelyy	3.33	353	*e*P	Pn	05 32 57.2	+0.5
GRL				*e*S	Sn	05 33 34.6	-0.5
KRMR	Karymshinskiy	3.61	354	*e*S	Sn	05 33 42.2	+0.6
PET	Petropavlovsk	3.78	359		Pn	05 33 02.5	-0.1
PET	Petropavlovsk	3.78	359	*e*PN	Pn	05 33 02.7	+0.1
PET				pmax	pmax		
	comp=Z,78nm,0.5s						
PET	Petropavlovsk	3.78	359	*e*P	Pn	05 33 02.5	-0.1
PET				*e*S	Sn	05 33 44.9	-0.9
DALK	Dalny	3.79	0	PN	Pn	05 33 02.7	0.0
DALK	Dalny	3.79	0	*e*P	Pn	05 33 02.7	0.0
DALK				*e*S	Sn	05 33 45.1	-0.9
APC	Apacha	3.81	345	PN	Pn	05 33 03.8	+0.7
APC	Apacha	3.81	345	*e*P	Pn	05 33 03.8	+0.7
INSR	Institute	3.82	359	*e*S	Sn	05 33 45.9	-1.0
SPN	Mys Shipunski	3.94	11	PN	Pn	05 33 04.6	-0.2
SPN	Mys Shipunski	3.94	11	*e*P	Pn	05 33 04.6	-0.2
SPN				*e*S	Sn	05 33 48.2	-1.5
UGLR	Uglovaya	3.96	1	PN	Pn	05 33 06.0	+0.7
UGLR	Uglovaya	3.96	1	*e*P	Pn	05 33 06.0	+0.7
SMAR	Somma	4.02	0	PN	Pn	05 33 07.3	+1.2
SMAR	Somma	4.02	0	*e*P	Pn	05 33 07.4	+1.2
AVH	Avacha	4.02	360	PN	Pn	05 33 07.4	+1.4
AVH	Avacha	4.02	360	*e*P	Pn	05 33 07.4	+1.4
SDLR	Sedlovina	4.04	1	PN	Pn	05 33 06.4	+0.2
SDLR	Sedlovina	4.04	1	*e*P	Pn	05 33 06.4	+0.2
KOK	Koryaka	4.05	359	PN	Pn	05 33 07.3	+0.9
KOK	Koryaka	4.05	359	*e*P	Pn	05 33 07.4	+0.9
KRER	Koryakskii	4.06	360	PN	Pn	05 33 07.9	+1.3
KRER	Koryakskii	4.06	360	*e*P	Pn	05 33 08.0	+1.3
KRX	Arik	4.12	359	PN	Pn	05 33 08.1	+0.7
KRX	Arik	4.12	359	*e*P	Pn	05 33 08.2	+0.7
GNL	Ganaly	4.48	354	PN	Pn	05 33 13.7	+1.3
GNL	Ganaly	4.48	354	*e*P	Pn	05 33 13.7	+1.3
KII	Karymskiy	4.81	5	PN	Pn	05 33 18.4	+1.5
KII	Karymskiy	4.81	5	*e*P	Pn	05 33 18.5	+1.5
KBTR	Krutoberegovo	7.39	18	PN	Pn	05 33 52.8	+0.6
KBTR	Krutoberegovo	7.39	18	*e*P	Pn	05 33 52.8	+0.6
KBTR				*e*S	Sn	05 35 12.6	-2.2
SMKR	Semkarok	7.53	12	PN	Pn	05 33 55.5	+1.4
SMKR	Semkarok	7.53	12	*e*P	Pn	05 33 55.5	+1.4
SHEM	Shemya Is, Ala	10.28	64	Pn	Pn	05 34 31.4	-0.4
SMY	Shemya	10.28	64	Pn	Pn	05 34 32.0	+0.2
SMY	Shemya	10.28	64	PN	Pn	05 34 32.0	+0.2
YSS	Yuzhno-Sakhali	10.95	264	*e*PN	Pn	05 34 35.4	-5.5
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MA2	Magadan	11.33	339	LR	LR	05 38 59.9	
	comp=Z,32nm,21.4s,baz=80,slow=37						
MA2	Magadan	11.33	339	*i* PN	Pn	05 34 41.4	-4.7
SEY	Seymchan	14.16	348	Pn	Pn	05 35 26.1	+1.4
	comp=Z,0.2nm,0.3s,baz=347,slow=22,SNR=1.5						
	comp=Z,1.2nm,0.7s						
SEY	Seymchan	14.16	348	*i* P	Pn	05 35 19.7	-5.0
KLR	Kul'dur	17.60	280	LR	LR	05 43 07.6	
	comp=Z,46nm,20.6s,baz=292,slow=38						
KLR	Kul'dur	17.60	280	*i* P	Pn	05 36 02.0	-7.2
KLR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BILL	Bilibino	19.22	9	*i* P	P	05 36 19.5	-8.1
BILL				pmax	pmax		
	comp=Z,2.0nm,1.3s						
YAK	Yakutsk	20.58	319	*i* P	P	05 36 36.4	-6.0
YAK				pmax	pmax		
	comp=Z,13nm,0.4s						
ANM	Nome	24.41	38	P	P	05 37 23.5	+1.8
ANM	Nome	24.41	38	P	P	05 37 23.5	+1.8
ANM				pmax	pmax		
	comp=Z,5.0nm,1.4s						
J14K	Nanvaranak Lak	24.59	43	P	P	05 37 24.3	+0.9
J14K				IAmb	IAmb	05 37 42.6	
	comp=Z,10.0nm,1.2s						
M14K	Bethel	24.89	48	P	P	05 37 26.4	+0.4
M14K				IAmb	IAmb	05 37 51.9	
	comp=Z,22nm,1.5s						
N14K	Kuskokwak Cree	24.90	50	P	P	05 37 26.4	+0.2
TIXI	Tiksi	26.30

TXAR	Lajitas Array	72.98	65	P		P	05 43 32.4	-0.6
TXAR	Lajitas Array	72.98	65	P		P	05 43 32.4	-0.6
AS31	Alice Springs	75.89	203	P		P	05 43 48.9	-0.8
ASAR	Alice Springs	75.90	203	P		P	05 43 50.2	+0.5
	comp=Z,0.6nm,0.7s,baz=14,slow=7.0,SNR=3.4							
	comp=Z,0.6nm,0.7s							
ASAR	Alice Springs	75.90	203	P		P	05 43 49.7	0.0
GERES	GERESS Array B	77.74	337	P		P	05 44 01.8	+1.8
	comp=Z,0.1nm,0.3s,baz=82,slow=8.0,SNR=1.5							
	comp=Z,0.1nm,0.3s							

IDC ***28*** *05:32:50.4±0.5, 1.°28S×150.°25E, h0km, mb4.6/24, mbtmp4.5/27, ML4.2/2, MS3.7/45, Error ellipse: s-maj=21.4km s-min=11.8km az=93.0*

NEIC ***28*** *05:32:52.7±1.6, 1.°31S±0.°09×150.°17E±0.°03, h10km±1km, mb5.0/52, Error ellipse: s-maj=15.3km s-min=2.8km az=20.0*

MOS ***28*** *05:32:54.2±1.1, 1.°36S×150.°09E, h35km, mb4.9/25, Error ellipse: s-maj=12.1km s-min=7.4km az=92.1*

GCMT ***28*** *05:32:56.7±0.2, 1.°05S±0.°02×150.°25E±0.°03, h17km±1km, MW4.9/96, Moment Tensor Solution. s21,c25; s96,c122; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 2.36±.16; Mθθ -1.64±.10; Mφφ -0.72±.10; Mrθ -1.61±.25; Mθφ 1.12±.06; Mφr 0.96±.28; Best double couple: M0 3.02700×10^16 NP1: ϕs 302.00000°, δ 64.00000°, λ 88.00000°. NP2: ϕs 302.00000°, δ 64.00000°, λ 89.00000°. Principal axes: T 3.0120, Plg 71.0000°, Azm 208.0000°; N 0.0260, Plg 1.0000°, Azm 303.0000°; P -3.0420, Plg 19.0000°, Azm 33.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 05:32:54.0±1.2, 1.°36S±0.°06×150.°19E±0.°07, h21km±15km, n188, σ1s 07/159, mb4.9/74, MS3.8/44, 4C-2D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MANU	Manus Island	2.91	257			Pn	05 33 38.2	-0.8
RABL	Rabaul	3.43	145			Pn	05 33 46.0	-0.2
PMG	Port Moresby	8.54	201	Pn		Pn	05 34 57.2	+0.8
	4.0nm,0.3s,baz=3.5,slow=19,SNR=1.4							
PMG	Port Moresby	8.54	201	Pn		Pn	05 34 55.8	-0.7
PMG	Port Moresby	8.54	201	*i* P		Pn	05 34 55.5	-1.0
JAY	Jayapura	9.55	263	LR		LR	05 38 26.2	
	comp=Z,1μm,18.4s,baz=302,slow=35							
PATS	Pohnpei	11.49	45	Pn		Pn	05 35 31.6	-5.3
HNR	Honiara	12.59	130	LR		LR	05 40 58.8	
	comp=Z,37nm,18.5s,baz=28,slow=39							
GUMO	Guam	15.77	341	LR		LR	05 41 22.2	
	comp=Z,147nm,19.4s,baz=148,slow=33							
FAKI	Fak Fak	18.00	265	P		Pn	05 37 02.2	-0.8
SIJI	Sorong	18.93	271	P		Pn	05 37 15.5	+1.0
	0.8nm,0.3s,baz=76,slow=8.0,SNR=4.0							
	6.9nm,0.5s							
CTA	Charters Tower	19.00	191	P		Pn	05 37 16.5	+1.2
	0.4nm,0.3s,baz=15,slow=13,SNR=5.2							
CTA				LR		LR	05 43 38.4	
	comp=Z,263nm,21.0s,baz=36,slow=34							
	3.4nm,0.7s							
CTAO	Charters Tower	19.00	191	P		P	05 37 13.6	-0.9
CTAO	Charters Tower	19.00	191	P		P	05 37 13.6	-0.9
CTAO				pmax		pmax		
	comp=Z,74nm,1.9s							
MTN	Manton Dam	22.06	238			P	05 37 47.6	0.0
MTN				IAmb		IAmb	05 37 57.6	
	comp=Z,37nm,0.7s							
EIDS	Eidsvold	23.88	178	P		P	05 38 06.5	+0.2
EIDS				IAmb		IAmb	05 38 17.9	
	comp=Z,39nm,1.2s							
WB0	Warramunga Arr	23.95	219	P		P	05 38 07.5	+0.6
WB0				IAmb		IAmb	05 38 09.1	
	comp=Z,99nm,1.5s							
WRAB	Tennant Creek	24.10	219	*ce*P		P	05 38 09.1	+0.8
WRAB				pmax		pmax		
	comp=Z,99nm,1.7s							
WRA	Warramunga Arr	24.11	219	P		P	05 38 09.0	+0.5
	comp=Z,23nm,0.5s,baz=42,slow=10,SNR=278							
WRA				PcP		PcP	05 41 50.5	+0.9
	comp=Z,1.9nm,0.6s,baz=36,slow=2.3,SNR=7.1							
	comp=Z,23nm,0.5s							
WRA	Warramunga Arr	24.11	219	P		P	05 38 07.8	-0.7
WRA	Warramunga Arr	24.11	219	*i* P		P	05 38 06.1	-2.4
WRA				pmax		pmax		
	comp=Z,28nm,0.5s							
KNRA	Kununurra	25.48	235			P	05 38 21.2	+0.4
H11S3	WAKE ISLAND Hy	25.55	39	T		T	06 05 37.2	
	baz=222,slow=75,SNR=279							
H11S2	WAKE ISLAND Hy	25.56	39	T		T	06 05 39.4	
	baz=222,slow=75,SNR=171							
H11S1	WAKE ISLAND Hy	25.57	39	T		T	06 05 37.1	
	baz=222,slow=75,SNR=200							
DAV	Davao City (W)	25.95	289	LR		LR	05 48 06.4	
	comp=Z,148nm,19.5s,baz=160,slow=35							
DZM	Mont Dzumac	25.96	144	LR		LR	05 48 01.6	
	comp=Z,232nm,19.0s,baz=18,slow=35							
H11N1	WAKE ISLAND Hy	26.59	37	T		T	06 06 45.2	
	baz=220,slow=76,SNR=48							
H11N3	WAKE ISLAND Hy	26.61	37	T		T	06 06 50.8	
	baz=220,slow=76,SNR=146							
H11N2	WAKE ISLAND Hy	26.61	37	T		T	06 06 43.6	
	baz=220,slow=76,SNR=624							
SOEI	Soe	27.09	251			P	05 38 35.7	0.0
AS31	Alice Springs	27.22	214			P	05 38 36.5	-0.2
ASAR	Alice Springs	27.22	214	P		P	05 38 37.4	+0.7
	comp=Z,8.7nm,0.5s,baz=48,slow=7.7,SNR=40							
ASAR				PcP		PcP	05 41 57.0	+0.4
	comp=Z,1.0nm,0.6s,baz=42,slow=3.8,SNR=4.7							
ASAR				LR		LR	05 49 13.2	
	comp=Z,318nm,21.6s,baz=345,slow=36							
	comp=Z,8.7nm,0.5s							
ASAR	Alice Springs	27.22	214	P		P	05 38 36.7	+0.1
BATI	Baumata	27.79	251	LR		LR	05 49 37.0	
	comp=Z,193nm,21.4s,baz=98,slow=36							
ARMA	Armidale	28.93	177	P		P	05 38 51.8	-0.1
ARMA				IAmb		IAmb	05 39 44.4	
	comp=Z,75nm,1.8s							
FITZ	Fitzroy Crossi	29.29	234	LR		LR	05 51 20.5	
	comp=Z,438nm,18.7s,baz=50,slow=38							
JCJ	Chichijima	29.33	345	LR		LR	05 50 49.3	
	comp=Z,102nm,18.4s,baz=144,slow=37							
TOLI2	Tolitoli	29.51	275	P		P	05 38 55.4	-1.8
KAPI	Kappang	30.60	262	LR		LR	05 51 15.1	
	comp=Z,82nm,20.3s,baz=106,slow=36							
KAPI	Kappang	30.60	262	*i* P		P	05 39 05.1	-1.7
KAPI				pmax		pmax		
	comp=Z,4.0nm,0.4s							
STKA	Stephens Creek	31.42	194	P		P	05 39 13.9	+0.1
	comp=Z,4.6nm,0.5s,baz=0.2,slow=9.2,SNR=12							
STKA				LR		LR	05 51 32.2	
	comp=Z,266nm,18.7s,baz=21,slow=36							
	comp=Z,4.6nm,0.5s							
STKA	Stephens Creek	31.42	194			P	05 39 13.3	-0.5
STKA	Stephens Creek	31.42	194	P		P	05 39 13.3	-0.5
STKA				pmax		pmax		
	comp=Z,44nm,1.2s							
MSVF	Nonsavu	31.84	122	LR		LR	05 51 08.6	
	comp=Z,94nm,18.6s,baz=259,slow=34							
CAN	Canberra	33.80	182			P	05 39 35.2	+0.5
CAN	Canberra	33.80	182	P		P	05 39 35.2	+0.5
CAN				pmax		pmax		
	comp=Z,99nm,1.9s							
KKM	Kota Kinabalu	34.71	283	P		P	05 39 41.6	-1.3
KKM				IAmb		IAmb	05 39 51.8	
	comp=Z,30nm,1.1s							
JOW	Kunigami	35.10	325	LR		LR	05 52 27.7	
	comp=Z,66nm,19.9s,baz=144,slow=34							
MBWA	Marble Bar	35.63	234	P		P	05 39 50.4	-0.2
MBWA				IAmb		IAmb	05 40 00.8	
	comp=Z,30nm,0.9s							
PSA00	Pilbara Seismi	35.74	234	P		P	05 39 51.5	-0.1
PSA00				IAmb		IAmb	05 40 01.7	
	comp=Z,16nm,0.8s							
YULB	Yu-li	37.36	313	P		P	05 40 05.7	+0.4
YULB				IAmb		IAmb	05 40 59.3	
	comp=Z,67nm,1.5s							
YHNB	Yeheng	38.09	315	P		P	05 40 12.2	+0.6
SBUM	Sibu	38.15	276	P		P	05 40 12.0	-0.2
JNU	Nakatsue	38.84	334	LR		LR	05 55 12.2	
	comp=Z,42nm,18.3s,baz=134,slow=35							
AFI	Afiamalu	39.62	110	LR		LR	05 54 13.6	
	comp=Z,179nm,19.8s,baz=277,slow=32							
RAO	Raoul Island	41.13	135	LR		LR	05 55 21.9	
	comp=Z,206nm,20.4s,baz=107,slow=33							
JTM	Tenmabayashi	42.77	350	P		P	05 40 48.8	-1.1
LEM	Lembang	42.79	261	LR		LR	06 01 45.3	
	comp=Z,64nm,18.4s,baz=332,slow=40							
KSRS	Korea Array	43.79	334	P		P	05 40 57.9	-0.4
	comp=Z,2.0nm,0.8s,baz=154,slow=9.2,SNR=4.3							
KSRS				LR		LR	05 57 43.8	
	comp=Z,72nm,21.1s,baz=140,slow=34							
	comp=Z,2.0nm,0.8s							
NWAO	Narrogin (SRO)	44.09	221	LR		LR	06 01 13.8	
	comp=Z,235nm,18.5s,baz=54,slow=38							
RTZ	Ruatahuna	44.45	150	P		P	05 41 04.5	+0.8
RTZ				IAmb		IAmb	05 41 41.4	
	comp=Z,46nm,1.4s							
QIZ	Qiongzhong	44.51	299	P		P	05 41 03.0	-1.4
QIZ				S		S	05 47 41.0	+2.1
QIZ				SS		ScS	05 51 00.5	-1.4
QIZ				LR		LR		
	comp=Z,170nm,11.4s							
NJ2	Nanjing	44.55	321	*e*P		P	05 41 05.0	+0.5
NJ2				pmax		pmax		
	comp=Z,23nm,0.5s							
ASAJ	Asahikawa	45.79	352	LR		LR	05 59 54.4	
	comp=Z,71nm,19.8s,baz=124,slow=36							
RPZ	Rata Peaks	46.08	159	LR		LR	06 01 50.9	
	comp=Z,137nm,18.1s,baz=359,slow=38							
CN2	Changchun	50.13	337	*e*P		P	05 41 46.3	-1.4
CN2				pmax		pmax		
	comp=Z,10.0nm,0.7s							
HNS	HongShan	50.65	323	⇑P		P	05 41 50.5	-1.3
HNS				pmax		pmax		
	comp=Z,7.0nm,0.7s							
BNX	BinXian	51.05	340	⇓P		P	05 41 55.0	+0.3
BNX				pmax		pmax		
	comp=Z,29nm,1.5s							
XAN	Xi'an	52.35	316	P		P	05 42 04.0	-0.7
XAN				sP		pP	05 42 08.5	-2.1
XAN				pmax		pmax		
	comp=Z,5.0nm,0.6s							
XAN				pmax		pmax		
	comp=Z,200nm,3.5s							
KLR	Kul'dur	52.85	345	P		P	05 42 07.8	-0.3
	comp=Z,2.2nm,0.6s,baz=119,slow=4.4,SNR=6.8							
KLR				LR		LR	06 02 48.6	
	comp=Z,34nm,20.7s,baz=252,slow=34							
	comp=Z,2.2nm,0.6s							
KLR	Kul'dur	52.85	345	*i* P		P	05 42 07.1	-0.9
KLR				pmax		pmax		
	comp=Z,5.0nm,1.0s							
CM31	Chiang Mai Arr	54.09	294	P		P	05 42 17.7	+0.1
CMAR	Chiang Mai Arr	54.09	294	P		P	05 42 17.1	-0.6
	comp=Z,2.4nm,0.7s,baz=118,slow=6.0,SNR=13							
	comp=Z,2.4nm,0.7s							
CMAR	Chiang Mai Arr	54.09	294	P		P	05 42 17.7	0.0
CMAR	Chiang Mai Arr	54.09	294	*i* P		P	05 42 18.2	+0.5
CMAR				pmax		pmax		
	comp=Z,3.0nm,0.7s							
CHTO	Chiang Mai	54.19	294	P		P	05 42 18.6	+0.2
CHTO				IAmb		IAmb	05 42 43.2	
	comp=Z,19nm,1.6s							
CHTO	Chiang Mai	54.19	294	P		P	05 42 18.6	+0.2
CHTO				pmax		pmax		
	comp=Z,19nm,1.7s							
PZH	PanZhiHua	54.29	304	P		P	05 42 20.8	+1.6
CD2	Chengdu	54.54	310	P		P	05 42 21.0	+0.2
CD2				pmax		pmax		
	comp=Z,30nm,0.4s							
HHC	Hu-ho-hao-te	54.76	325	*e*P		P	05 42 23.8	+1.5
HHC				pmax		pmax		
	comp=Z,10.0nm,0.6s							
HHC				pmax		pmax		
	comp=Z,120nm,5.0s							
HHC				LR		LR		
	comp=N,110nm,14.7s							
HHC				LR		LR		
	comp=E,94nm,13.7s							
HHC				LR		LR		
	comp=Z,95nm,13.9s							
HEH	HeiHe	55.00	342	*e*P		P	05 42 22.5	-1.2
HEH				pmax		pmax		
	comp=Z,15nm,0.7s							
BTO2	Baotou	55.68	323	*e*P		P	05 42 31.0	+2.0
BTO2				S		S	05 50 19.5	+5.2
BTO2				pmax		pmax		
	comp=Z,20nm,0.5s							
BTO2				pmax		pmax		
	comp=Z,88nm,4.3s							
BTO2				LR		LR		
	comp=N,150nm,8.8s							
BTO2				LR		LR		
	comp=E,230nm,3.9s							
BTO2				LR		LR		
	comp=Z,160nm,4.6s							
LZDM	Lanzhou Array	57.01	315	P		P	05 42 38.3	-0.5
	comp=Z,1.1nm,0.3s,baz=116,slow=6.6,SNR=1.6							
	comp=Z,1.1nm,0.3s							
SHEM	Shemya Is, Ala	57.52	17	P		P	05 42 41.3	-0.3
	comp=Z,51nm,0.8s,baz=205,slow=1.0,SNR=4.4							
SHEM				LR		LR	06 04 02.4	
	comp=Z,74nm,19.5s,baz=236,slow=33							
	comp=Z,51nm,0.8s							
ZEA	Zeya	58.14	344	*e*P		P	05 42 46.6	+0.6
MA2	Magadan	60.76	0	LR		LR	06 05 31.4	
	comp=Z,86nm,22.0s,baz=157,slow=32							
PPT	Papeete	61.28	109	LR		LR	06 06 28.2	
	comp=Z,70nm,18.5s,baz=319,slow=33							
GTA2	Gaotai	61.46	317	*e*P		P	05 43 10.5	+1.2
GTA2				sP		pwP	05 43 21.8	+2.9
GTA2				pmax		pmax		
	comp=Z,4.0nm,1.1s							
ULN	Ulaanbaatar	61.72	328	*i* P		P	05 43 09.8	-1.2
ULN				pmax		pmax		
	comp=Z,4.0nm,1.0s							
SONM	Songino Array	62.05	328	P		P	05 43 13.0	-0.1
	comp=Z,1.7nm,0.8s,baz=145,slow=6.7,SNR=11							
	comp=Z,1.7nm,0.8s							
SONM	Songino Array	62.05	328	P		P	05 43 12.7	-0.4
SONM	Songino Array	62.05	328	P		P	05 43 12.7	-0.4
SONM				pmax		pmax		
	comp=Z,3.0nm,0.8s							
SHL	Shillong	62.34	300	P		P	05 43 14.1	-1.4
SHL				IAmb		IAmb	05 43 37.1	
	comp=Z,8.9nm,0.9s							
SHL	Shillong	62.34	300	P		P	05 43 14.1	-1.4
SHL				pmax		pmax		
	comp=Z,9.0nm,0.9s							
GOMU	GeErMu	63.54	312	P		P	05 43 23.0	-0.6
GOMU				pmax		pmax		
	comp=Z,2.0nm,0.8s							
SEY	Seymchan	64.15	1	P		P	05 43 27.4	+0.8
	comp=Z,1.6nm,0.6s,baz=143,slow=5.0,SNR=4.2							
	comp=Z,1.6nm,0.6s							
SEY	Seymchan	64.15	1	*i* P		P	05 43 27.0	+0.4
SEY				pmax		pmax		
	comp=Z,5.0nm,1.1s							
YAK	Yakutsk	65.13	350	P		P	05 43 34.0	+1.0
	comp=Z,15nm,0.5s,baz=168,slow=6.0,SNR=4.2							
YAK				LR		LR	06 10 33.5	
	comp=Z,21nm,21.5s,baz=164,slow=35							
	comp=Z,15nm,0.5s							
YAK	Yakutsk	65.13	350	P		P	05 43 33.3	+0.4
YAK	Yakutsk	65.13	350	*e*P		P	05 43 34.4	+1.5
YAK				pmax		pmax		
	comp=Z,11nm,0.8s							
YAK				pmax		pmax		
	comp=N,5.0nm,1.4s							
YAK				pmax		pmax		
	comp=E,4.0nm,1.0s							
ZAK	Zakamensk	65.22	329	*e*P		P	05 43 33.8	-0.2
ZAK				pmax		pmax		
	comp=Z,8.0nm,1.7s							
TLY	Talaya	65.82	330	LR		LR	06 13 49.5	
	comp=Z,28nm,18.8s,baz=114,slow=37							
TLY	Talaya	65.82	330	P		P	05 43 38.9	+1.2
TLY	Talaya	65.82	330	*i* P		P	05 43 37.2	-0.5
TLY				pmax		pmax		
	comp=Z,7.0nm,1.9s							
EVN	Everest	67.34	301	P		P	05 43 48.7	+0.1
EVN				IAmb		IAmb	05 44 00.0	
	comp=Z,5.5nm,0.7s							
KNGR	Kungurtug, Tuv	68.41	327	*i* P		P	05 43 54.8	+0.5
KNGR				pmax		pmax		
	comp=Z,3.0nm,0.3s							
PALK	Pallekele	69.85	278	P		P	05 44 04.0	+0.1
PALK				IAmb		IAmb	05 44 31.3	
	comp=Z,23nm,1.4s							
PALK	Pallekele	69.85	278	P		P	05 44 04.0	+0.1
PALK				pmax		pmax		
	comp=Z,23nm,1.4s							
BILL	Bilibino	70.16	6	*i* P		P	05 44 03.8	-0.8
BILL				pmax		pmax		
	comp=Z,20nm,3.0s							
WMQ	Urumqi	71.47	317	*e*P		P	05 44 15.5	+2.3
WMQ				pP		pP	05 44 19.0	-0.3
WMQ				PcP		PcP	05 44 32.8	+0.1
WMQ				PP		PP	05 46 56.8	+4.8
WMQ				S		S	05 53 28.5	-2.3
WMQ				SKS		SKSac	05 54 13.0	-2.5
WMQ				pmax		pmax		
	comp=Z,10.0nm,0.7s							
WMQ				LR		LR		
	comp=Z,130nm,24.2s							
HYB	Hyderabad	72.92	289	*e*P		P	05 44 22.1	-0.3
HYB				*e*PcP		PcP	05 44 39.2	-0.1
ANM	Nome	73.32	18	P		P	05 44 23.9	+0.2
ANM				IAmb		IAmb	05 44 43.4	
	comp=Z,33nm,1.7s							
ANM	Nome	73.32	18	P		P	05 44 23.9	+0.2
ANM				pmax		pmax		
	comp=Z,33nm,1.7s							
OHAK	Old Harbor	73.73	28	P		P	05 44 26.2	0.0
TIXI	Tiksi	74.18	353	LR		LR	06 18 49.0	
	comp=Z,17nm,19.1s,baz=193,slow=37							
TIXI	Tiksi	74.18	353	*i* P		P	05 44 28.3	-0.3
TIXI				pmax		pmax		
	comp=Z,9.0nm,2.0s							
KDAK	Kodiak Island	74.34	28	LR		LR	06 11 25.0	
	comp=Z,141nm,21.4s,baz=243,slow=31							
Q19K	Cape Douglas,	74.42	27	P		P	05 44 29.8	-0.5
N19K	Bonanza Creek	75.04	25	P		P	05 44 34.0	0.0
N19K				IAmb		IAmb	05 46 12.9	
	comp=Z,50nm,1.9s							
CNPM	China Poot	75.80	27	P		P	05 44 38.2	-0.1
MK31	Makanchi Array	76.04	319	*i* P		P	05 44 38.7	-1.2
MKAR	Makanchi Array	76.04	319	P		P	05 44 39.6	-0.3
	comp=Z,1.9nm,0.7s,baz=106,slow=5.7,SNR=18							
MKAR				LR		LR	06 18 57.8	
	comp=Z,25nm,20.2s,baz=101,slow=36							
	comp=Z,1.9nm,0.7s							
MAKZ	Makanchi	76.25	319	P		P	05 44 40.8	-0.3
MAKZ				IAmb		IAmb	05 45 04.0	
	comp=Z,11nm,1.2s							
MAKZ	Makanchi	76.25	319	P		P	05 44 40.8	-0.3
MAKZ				pmax		pmax		
	comp=Z,11nm,1.3s							
VNDA	Vanda	76.35	177	P		P	05 44 40.9	-0.1
	comp=Z,1.4nm,0.6s,baz=329,slow=6.5,SNR=17							
VNDA				PKKP		PKKPdf	06 03 45.9	+1.6
	comp=Z,0.5nm,0.2s,baz=325,slow=2.6,SNR=12							
	comp=Z,1.4nm,0.6s							
VNDA	Vanda	76.35	177	P		P	05 44 42.4	+1.4
VNDA	Vanda	76.35	177	P		P	05 44 42.4	+1.4
VNDA				pmax		pmax		
	comp=Z,9.0nm,1.6s							
RDOG	Red Dog Mine	76.42	16	P		P	05 44 42.1	+0.5
RDOG				IAmb		IAmb	05 44 46.1	
	comp=Z,9.0nm,0.9s							
ZAA0	Zalesovo Array	76.87	327	P		P	05 44 43.6	-0.8
ZALV	Zalesovo Beam	76.87	327	P		P	05 44 43.0	-1.4
	comp=Z,3.9nm,0.6s,baz=111,slow=6.0,SNR=12							
	comp=Z,3.9nm,0.6s							
PPLA	Purkeypile	77.04	23	P		P	05 44 46.9	+1.5
RC01	Rabbit Creek A	77.19	26	P		P	05 44 46.0	0.0
RC01				IAmb		IAmb	05 45 17.9	
	comp=Z,38nm,1.6s							
KTH	Kantishna Hill	77.87	23	P		P	05 44 49.1	-0.8
KTH				IAmb		IAmb	05 46 31.2	
	comp=Z,42nm,1.9s							
SML	Sawmill	78.12	25	P		P	05 44 51.4	+0.1
MCK	McKinley	78.73	23	P		P	05 44 53.9	-0.7
MCK				IAmb		IAmb	05 45 23.0	
	comp=Z,20nm,1.1s							
MCK	McKinley	78.73	23	P		P	05 44 53.9	-0.7
MCK				pmax		pmax		
	comp=Z,20nm,1.1s							
DHY	Denali Highway	79.07	24	P		P	05 44 56.1	-0.6
DHY				IAmb		IAmb	05 45 28.9	
	comp=Z,44nm,2.0s							
KURK	Kurchatov	79.47	322	*ce*P		P	05 44 58.6	-0.3
KURK				pmax		pmax		
	comp=Z,13nm,1.1s							
KURBB	Kurchatov Arra	79.51	322	P		P	05 44 58.2	-0.9
	comp=Z,3.6nm,0.9s,baz=107,slow=5.0,SNR=24							
	comp=Z,3.6nm,0.9s							
COLA	College	79.67	23	*i* P		P	05 44 58.5	-1.2
COLA				pmax		pmax		
	comp=Z,19nm,2.0s							
NIL	Nilore	79.90	304	P		P	05 45 01.7	0.0
NIL				IAmb		IAmb	05 45 03.4	
	comp=Z,17nm,0.8s							
NIL	Nilore	79.90	304	P		P	05 45 01.7	0.0
NIL				pmax		pmax		
	comp=Z,17nm,0.9s							
ILAR	Eielson Array	80.00	23	P		P	05 44 60.0	-1.5
	comp=Z,3.5nm,0.6s,baz=247,slow=5.1,SNR=26							
	comp=Z,3.5nm,0.6s							
ILAR	Eielson Array	80.00	23	P		P	05 44 59.3	-2.2
ILAR	Eielson Array	80.00	23	P		P	05 45 00.0	-1.5
RIDG	Independent Ri	80.38	24	P		P	05 45 04.3	+0.6
RIDG				IAmb		IAmb	05 45 18.6	
	comp=Z,29nm,1.5s							
AAK	Ala-Archa	80.43	314	P		P	05 45 04.5	0.0
	comp=Z,2.9nm,0.8s,baz=145,slow=7.3,SNR=8.3							
	comp=Z,2.3nm,0.8s							
AAK	Ala-Archa	80.43	314	P		P	05 45 04.1	-0.4
AAK	Ala-Archa	80.43	314	*ce*P		P	05 45 05.3	+0.8
AAK				pmax		pmax		
	comp=Z,4.0nm,1.0s							
D24K	Happy Valley	81.28	18	P		P	05 45 08.5	+0.2
D24K				IAmb		IAmb	05 45 29.9	
	comp=Z,16nm,1.1s							
NRIK	Noril'sk	81.89	341	P		P	05 45 10.9	-0.6
	comp=Z,4.2nm,0.5s,baz=114,slow=4.8,SNR=6.9							
NRIK				LR		LR	06 22 42.9	
	comp=Z,38nm,18.5s,baz=120,slow=37							
	comp=Z,4.2nm,0.5s							
NRIK	Noril'sk	81.89	341	*i* P		P	05 45 11.7	+0.2
NRIK				pmax		pmax		
	comp=Z,6.0nm,1.0s							
HYT	Haines Junctio	82.63	28	P		P	05 45 15.7	0.0
HYT				IAmb		IAmb	05 45 19.9	
	comp=Z,11nm,0.9s							
KKAR	Karatay Array	83.39	314	P		P	05 45 19.9	0.0
KKAR	Karatay Array	83.39	314	P		P	05 45 19.9	0.0
F28M	Old Crow	83.71	21	P		P	05 45 21.0	0.0
BVAR	Borovoye Array	84.95	323	P		P	05 45

YKA	**Yellowknife Ar**	**93.61**	**28**	P		**P**	**05 46 07.5**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=282,slow=5.2,SNR=7.2							
YKA				LR		LR	06 24 54.1	
	comp=Z,73nm,21.7s,baz=282,slow=33							
	comp=Z,0.5nm,0.8s							
YKA	**Yellowknife Ar**	**93.61**	**28**	*i* P		**P**	**05 46 08.6**	**+0.2**
YKA				pmax		pmax		
	comp=Z,1.0nm,0.8s							
KIRV	**Kirov**	**96.78**	**329**	LR		LR	06 30 51.7	
	comp=Z,35nm,21.4s,baz=69,slow=36							
RES	**Resolute Bay**	**97.74**	**14**	LR		LR	06 30 28.6	
	comp=Z,55nm,18.9s,baz=324,slow=35							
PDAR	**Pinedale Array**	**98.45**	**47**	P		**P**	**05 46 29.9**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=279,slow=2.7,SNR=3.9							
PDAR				LR		LR	06 23 23.3	
	comp=Z,59nm,21.1s,baz=272,slow=31							
	comp=Z,0.4nm,0.6s							
ELIB	**Princess Elisa**	**99.47**	**195**	*d*P		**Pdif**	**05 46 35.4**	**+0.4**
CLL	**Collm**	**118.60**	**331**	*e*PKIKP		**PKPdf**	**05 51 40.0**	**-0.4**
CLL	**Collm**	**118.60**	**331**	*e*PP		PP	05 52 56.0	-1.3
CLL	**Collm**	**118.60**	**331**	*e*PKiKP		**PKPdf**	**05 51 40.0**	**-0.4**
GERES	**GERESS Array B**	**119.78**	**328**	PKP		**PKPdf**	**05 51 42.5**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=82,slow=3.0,SNR=6.9							
EKA	**Eskdalemuir Ar**	**122.00**	**342**	PKP		**PKPdf**	**05 51 46.7**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=15,slow=3.5,SNR=4.2							
PLCA	**Paso Flores**	**124.07**	**143**	PKP		**PKPdf**	**05 51 51.4**	**0.0**
	comp=Z,1.7nm,0.6s,baz=249,slow=1.9,SNR=10							
LPAZ	**La Paz**	**138.30**	**116**	PKP		**PKiKP**	**05 52 20.8**	**-0.8**
	comp=Z,1.7nm,0.7s,baz=255,slow=5.6,SNR=5.2							
CPUP	**Villa Florida**	**141.74**	**138**	PKP		**PKPdf**	**05 52 22.0**	**-2.8**
	comp=Z,1.1nm,0.7s,baz=314,slow=2.6,SNR=5.3							
TORD	**Torodi Ar. Bea**	**146.69**	**292**	PKPbc		**PKPdf**	**05 52 34.5**	**+0.8**
	comp=Z,4.8nm,0.9s,baz=76,slow=1.8,SNR=19							
DBIC	**Dimbokro**	**154.57**	**283**	PKPbc		**PKPbc**	**05 52 53.7**	**-0.7**
	comp=Z,3.2nm,0.8s,baz=94,slow=2.6,SNR=4.8							

HEL ***28*** *05:33:36.5±0.2, 67.76N×20.13E, h0km, ML1.4, Suspected explosion*
UPP ***28*** *05:33:37.2±0.0, 67.82N×20.23E, h0km, ML2.5, Confirmed Induced event*

ISC 28 05:33:36.6±0.8, 67.78N±0.02×20.36E±0.02, h0km, n24, σ1°30/41, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.17**	**357**	P	**Pg**	**05 33 40.2**	**+0.3**
	baz=213						
KUA				S	**Sg**	**05 33 42.6**	**+0.4**
RATU	**Laukkuluspa**	**0.30**	**279**	P	**Pg**	**05 33 41.9**	**-0.4**
RATU				S	**Sg**	**05 33 45.5**	**-0.6**
KOVU	**Salmi**	**0.45**	**350**	P	**Pg**	**05 33 45.0**	**-0.2**
KOVU				S	**Sg**	**05 33 50.6**	**-0.4**
NIKU	**Nikkaluokta**	**0.51**	**280**	P	**Pg**	**05 33 45.9**	**-0.5**
NIKU				S	**Sg**	**05 33 52.1**	**-0.8**
DUNU	**Dundret**	**0.67**	**173**	P	**Pb**	**05 33 50.3**	**-0.8**
DUNU				S	**Sb**	**05 34 00.2**	**-0.7**
LANU	**Lannavaara**	**0.67**	**66**	P	**Pb**	**05 33 50.7**	**-0.5**
LANU	**Lannavaara**	**0.67**	**66**	PG	**Pb**	**05 33 50.6**	**-0.6**
LANU				SG	**Sg**	**05 33 55.8**	**-2.3**
SALU	**Saltoluokta**	**0.82**	**241**	*e*P	**Pg**	**05 33 52.5**	**+0.3**
SALU	**Saltoluokta**	**0.82**	**241**	P	**Pg**	**05 33 52.2**	**0.0**
HEF	**Hetta**	**1.39**	**62**	*e*P	**Pb**	**05 34 03.4**	**0.0**
HEF	**Hetta**	**1.39**	**62**	PG	**Pg**	**05 34 00.9**	**-2.2**
HEF				smax	smax	05 34 20.8	
	comp=Z,3.2nm,0.2s						
HEF				SG	**Sn**	**05 34 22.2**	**0.0**
ERTU	**Ertsjaerv**	**1.43**	**149**	PN	**Pb**	**05 34 03.6**	**-0.3**
ERTU				SN	**Sn**	**05 34 24.9**	**+1.8**
KLF	**Kolari**	**1.49**	**110**	PN	**Pg**	**05 34 05.6**	**+0.5**
KLF				smax	smax	05 34 23.4	
	comp=Z,2.8nm,0.2s						
KLF				SN	**Sn**	**05 34 26.9**	**+2.2**
KTK1	**Kautokeino**	**1.63**	**39**	PG	**Pg**	**05 34 07.2**	**-0.6**
KTK1				SN	**Sg**	**05 34 29.8**	**+0.9**
TRO	**Tromso**	**1.93**	**345**	PG	**Pb**	**05 34 11.2**	**-1.5**
TRO				SG	**Sb**	**05 34 36.6**	**-0.6**
TOF	**Tornio**	**2.31**	**136**	PG	**Pb**	**05 34 18.8**	**-0.4**
TOF				smax	smax	05 34 46.5	
	comp=Z,1.7nm,0.2s						
TOF				SG	**Sg**	**05 34 51.1**	**+0.3**
RNF	**Rovaniemi**	**2.50**	**116**	PG	**Pb**	**05 34 21.8**	**-0.5**
RNF				SG	**Sg**	**05 34 55.0**	**-1.7**
ARA0	**ARCESS Array S**	**2.58**	**45**	PB	**Pb**	**05 34 21.6**	**-2.0**
	baz=228						
ARA0				SB	**Sb**	**05 34 55.2**	**-0.6**
RAJF	**Raja-Jooseppi**	**3.06**	**73**	PB	**Pb**	**05 34 30.1**	**-1.7**
RAJF				SB	**Sb**	**05 35 09.4**	**-0.1**
RANF	**Ranua**	**3.09**	**122**	SG	**Sg**	**05 35 14.6**	**-1.3**
KEV	**Kevo**	**3.13**	**48**	PN	**Pn**	**05 34 29.4**	**+2.4**
KEV				SN	**Sn**	**05 35 07.5**	**+2.5**
BURU	**Burvik**	**3.24**	**172**	PB	**Pb**	**05 34 31.9**	**-3.0**
VRF	**Varrio**	**3.52**	**86**	SN	**Sn**	**05 35 14.5**	**-0.2**
KU6	**Riekki**	**4.15**	**111**	PG	**Pb**	**05 34 51.7**	**+1.4**
KU6				SG	**Sg**	**05 35 47.8**	**-1.8**

IDC ***28*** *05:33:57.4±6.3, 36.46N×71.12E, h171km±51km, mb3.1/5, mbtmp3.6/10, MS2.9/1, Error ellipse: s-maj=51.2km s-min=26.0km az=31.0*
NNC ***28*** *05:34:02.6±7.5, 36.91N×70.45E, h151km±145km, mb2.8, mpv3.6, Error ellipse: s-maj=66.5km s-min=41.7km az=22.0*

ISC 28 05:33:55.7±1.3, 36.5N±0.1×70.8E±0.1, h150km, n14, σ2s16/17, mb3.3/5, 4C, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.61**	**358**	P	**Pn**	**05 35 33.1**	**+2.6**
	1.6nm,0.3s,baz=179,slow=12,SNR=31						
KK31				⇑S	**Sn**	**05 36 42.7**	**-2.1**
	20nm,0.5s,baz=184,slow=22						
AAK	**Ala-Archa**	**6.78**	**24**	P	**Pn**	**05 35 34.7**	**+1.9**
	1.5nm,0.3s,baz=138,slow=2.8,SNR=8.5						
AAK				S	**Sn**	**05 36 47.6**	**-1.3**
	2.5nm,0.4s,baz=344,slow=24,SNR=11						
AAK	**Ala-Archa**	**6.78**	**24**	⇑P	**Pn**	**05 35 35.1**	**+2.2**
	8.7nm,1.6s						
AAK				⇑S	**Sn**	**05 36 49.3**	**+0.3**
	7.8nm,0.9s						
MKAR	**Makanchi Array**	**13.40**	**36**	P	**Pn**	**05 36 59.6**	**-0.3**
	0.4nm,0.2s,baz=201,slow=15,SNR=26						
AB31	**Akbulak array**	**15.01**	**332**	P	**Pn**	**05 37 21.1**	**+1.0**
	0.5nm,0.5s,baz=143,slow=12,SNR=8.2						
AB31				⇑S	**Sn**	**05 40 01.4**	**-5.3**
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**15.19**	**19**	P	**Pn**	**05 37 24.0**	**+1.7**
	0.1nm,0.4s,baz=208,slow=12,SNR=1.8						
AKTO	**Aktyubinsk**	**16.71**	**331**	P	**P**	**05 37 42.1**	**+1.6**
	2.0nm,0.5s,baz=156,slow=7.2,SNR=6.5						
ZALV	**Zalesovo Beam**	**20.00**	**25**	P	**P**	**05 38 16.0**	**-0.4**
	0.8nm,0.6s,baz=201,slow=16,SNR=1.8						
TLY	**Talaya**	**27.77**	**46**	LR	LR	05 50 17.3	
	comp=Z,21nm,18.5s,baz=59,slow=36						
FINES	**FINESS Array B**	**37.40**	**326**	P	**P**	**05 40 55.0**	**+1.3**
	1.4nm,0.9s,baz=111,slow=22,SNR=1.6						
	1.4nm,0.9s						
HFS	**Hagfors**	**42.97**	**322**	P	**P**	**05 41 40.5**	**+0.9**
	1.5nm,0.7s,baz=99,slow=15,SNR=2.3						
	1.5nm,0.7s						
NOA	**NORSAR Array B**	**44.29**	**323**	P	**P**	**05 41 50.5**	**+0.3**
	0.8nm,0.9s,baz=103,slow=7.2,SNR=1.7						
	0.8nm,0.9s						
YKA	**Yellowknife Ar**	**81.27**	**3**	P	**P**	**05 45 54.4**	**-0.2**
	0.1nm,0.5s,baz=353,slow=5.9,SNR=5.7						
	0.1nm,0.5s						
ASAR	**Alice Springs**	**84.39**	**125**	P	**P**	**05 46 08.9**	**-2.4**
	0.3nm,0.6s,baz=304,slow=4.2,SNR=4.5						
	0.3nm,0.6s						

SOME ***28*** *05:36:09.7, 44.08N×81.93E, h20km*
NNC ***28*** *05:36:17.5±2.0, 44.26N×81.43E, h0km, mb2.6, mpv2.3, Error ellipse: s-maj=33.1km s-min=7.6km az=124.0, Suspected Mining explosion.*

ISC 28 05:36:06.5±2.2, 44.05N±0.09×82.1E±0.1, h0km, n8, σ1°37/16, 3C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.72**	**280**	*e*P	**Pb**	**05 36 38.9**	**0.0**
	8.4nm,0.1s						
DJR				*e*S	**Sn**	**05 36 59.9**	**-0.5**
	6.0nm,0.4s						
PDGK	**Podgornoye**	**2.06**	**250**	⇑Pn	**Pg**	**05 36 47.5**	**+1.5**
	2.4nm,0.4s						
PDGK				⇑Sn	**Sg**	**05 37 12.5**	**-0.1**
	17nm,0.6s						
SHLS	**Shalkode**	**2.15**	**246**	*e*P	**Pn**	**05 36 42.9**	**-0.8**
	4.8nm,0.2s						
SHLS				*e*S	**Sn**	**05 37 07.1**	**-3.9**
	17nm,0.5s						
UZB	**Uzynbulak**	**2.44**	**249**	*e*P	**Pb**	**05 36 52.2**	**+0.8**
	7.8nm,0.3s						
UZB				*e*S	**Sb**	**05 37 23.1**	**+1.0**
	11nm,0.5s						
KPKS	**Kokpek**	**2.58**	**258**	*e*P	**Pb**	**05 36 54.1**	**+0.5**
	0.3nm,0.2s						
KPKS				*e*S	**Sb**	**05 37 26.0**	**+0.1**
	17nm,0.3s						
MK31	**Makanchi Array**	**2.74**	**2**	⇑Pn	**Pg**	**05 36 59.7**	**+0.7**
	0.1nm,0.2s,baz=195,slow=16,SNR=22						
MK31				⇓Sn	**Sg**	**05 37 35.2**	**+0.7**
	6.6nm,0.6s,baz=196,slow=26						
MAKZ	**Makanchi**	**2.76**	**358**	⇓Pn	**Pg**	**05 37 00.4**	**+1.1**
	3.0nm,1.1s						
MAKZ				⇓Sn	**Sg**	**05 37 33.7**	**-1.3**
	4.9nm,0.5s						
ARXS	**Arharly**	**3.11**	**274**	*e*P	**Pb**	**05 37 03.2**	**+0.5**
	2.5nm,0.4s						
ARXS				*e*S	**Sb**	**05 37 41.7**	**+0.4**
	14nm,0.6s						

LJU 28 05:49:56.7, 45.92N×15.46E, h0km, ML0.5, 3D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CESS	**Cesta pri Krsk**	**0.06**	**2**	⇓*i*Pg	Pg	05 49 57.5	-0.3
CESS				*i* Sg	Sg	05 49 58.5	-0.1
CESS				IAML		05 49 58.9	
	comp=Z,57nm,0.1s						
CRES	**Cresnjevec Ost**	**0.09**	**182**	⇓*i*Pg	Pg	05 49 58.4	0.0
CRES				*i* Sg	Sg	05 50 00.2	+0.6
CRES				IAML		05 50 00.6	
	comp=Z,5.9nm,0.1s						
LEGS	**Legarje**	**0.10**	**287**	*i* Pg	Pg	05 49 58.7	0.0
LEGS				*i* Sg	Sg	05 50 00.6	+0.5
GCIS	**Gornji Cirnik**	**0.13**	**114**	*i* Pg	Pg	05 49 59.1	0.0
GCIS				IAML		05 50 01.7	
	comp=Z,4.0nm,0.1s						
GOLS	**Golise**	**0.15**	**51**	*i* Pg	Pg	05 49 59.6	+0.1
GOLS				*i* Sg	Sg	05 50 02.2	+0.7
GOLS				IAML		05 50 03.5	
	comp=Z,7.0nm,0.2s						
DOBS	**Dobrina**	**0.23**	**1**	⇓*i*Pg	Pg	05 50 01.1	-0.1
DOBS				*i* Sg	Sg	05 50 04.8	+0.6
DOBS				IAML		05 50 06.0	
	comp=Z,1.9nm,0.1s						
PDKS	**Podkum**	**0.35**	**294**	*i* Sg	Sg	05 50 09.1	+1.0
VISS	**Visnje**	**0.45**	**255**	*i* Sg	Sg	05 50 11.6	+0.5

VAO ***28*** *05:55:08.6±0.4, 6.71N×72.99W, h143km±4km, mb4.7, Presumed earthquake*
CATAC ***28*** *05:55:09.1±0.3, 7.1°N±1.1°×7.3°W±.1°, h153km±3km, M5.0/17, mb5.3/15, mB5.3/14, MLv5.4/17, Mw(mB)4.8/14, Error ellipse: s-maj=5.0km s-min=3.0km az=82.3, confirmed*
NEIC ***28*** *05:55:09.6±2.5, 6.80N±0.08×73.06W±0.08, h155km±7km, mb4.9/53, Error ellipse: s-maj=13.0km s-min=10.3km az=125.0*
IDC ***28*** *05:55:09.9±0.6, 6.74N×73.04W, h168km±5km, mb3.8/18, mbtmp4.4/22, MS3.0/3, Error ellipse: s-maj=10.9km s-min=8.7km az=64.0*
RSNC ***28*** *05:55:10.1±0.0, 7.1°N±1.1°×7.3°W±.1°, h149km±2km, M5.2, mB5.6, mb5.5, ML4.8, Mw(mB)5.1, MwMwp4.7, Mwp5.0*
FUNV ***28*** *05:55:12.5, 7.13N×73.02W, h17km, MW4.8, Presumed earthquake*
UPA ***28*** *05:56:33.5±1.3, 8.61N×79.33W, h7km±938km, MW3.7, Presumed earthquake*

ISC 28 05:55:08.7±0.3, 6.82N±0.03×73.07W±0.04, h157km±2km, h157km:pP-P,n527, σ1s45/597, mb4.8/55, 4C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.26**	**207**	P	**Pn**	**05 55 30.4**	**+0.1**
BARC				S	**Sn**	**05 55 45.2**	**-1.5**
PAMC	**Pamplona, Colo**	**0.63**	**35**	P	**Pn**	**05 55 33.2**	**+1.1**
PAMC				S	**Sn**	**05 55 50.2**	**+0.3**
BRJC	**Barrancabermej**	**0.69**	**283**	P	**Pn**	**05 55 32.0**	**+0.2**
BRJC				S	**Sn**	**05 55 49.1**	**-0.4**
RUSC	**La Rusia**	**0.93**	**181**	P	**Pn**	**05 55 34.4**	**+0.2**
RUSC				S	**Sn**	**05 55 53.3**	**-0.2**
RUSC	**La Rusia**	**0.93**	**181**	P	**Pn**	**05 55 34.3**	**+0.2**
RUSC				S	**Sn**	**05 55 52.7**	**-0.8**
RUSC	**La Rusia**	**0.93**	**181**	⇓*e*P	**Pn**	**05 55 34.2**	**+0.1**
RUSC				*e*S	**Sn**	**05 55 51.1**	**-2.4**
PTBC	**PUERTO BERRIO,**	**1.41**	**259**	P	**Pn**	**05 55 36.7**	**-1.2**
PTBC				S	**Sn**	**05 55 57.5**	**-2.7**
OCAC	**Ocana**	**1.43**	**350**	P	**Pn**	**05 55 38.5**	**+0.3**
OCAC				S	**Sn**	**05 56 00.2**	**-0.8**
SPBC	**San Pablo de B**	**1.53**	**221**	P	**Pn**	**05 55 39.0**	**-0.2**
SPBC				S	**Sn**	**05 56 01.2**	**-1.5**
CHIC	**Chingaza**	**2.28**	**197**	P	**Pn**	**05 55 48.2**	**+0.3**
CHIC				S	**Sn**	**05 56 15.9**	**-2.3**
ROSC	**El Rosal**	**2.33**	**212**	P	**Pn**	**05 55 49.9**	**+1.4**
	7µm,0.3s,baz=96,slow=23,SNR=2758						
ROSC				S	**Sn**	**05 56 16.7**	**-2.5**
	8µm,0.6s,baz=126,slow=18,SNR=10						
ROSC	**El Rosal**	**2.33**	**212**	P	**Pn**	**05 55 49.9**	**+1.4**
ROSC				S	**Sn**	**05 56 16.5**	**-2.7**
BOG	**Bogota**	**2.40**	**204**	P	**Pn**	**05 55 50.8**	**+1.5**
BOG				S	**Sn**	**05 56 23.2**	**+2.5**
MEDEC	**Medelln, Ant**	**2.56**	**258**	P	**Pn**	**05 55 52.0**	**+0.9**
MEDEC				S	**Sn**	**05 56 23.1**	**-0.8**
UREC	**San Jos de Ur**	**2.61**	**291**	P	**Pn**	**05 55 49.0**	**-1.7**
UREC				S	**Sn**	**05 56 21.7**	**-3.0**
VILC	**Villavicencio,**	**2.77**	**193**	P	**Pn**	**05 55 53.5**	**-0.1**
VILC				S	**Sn**	**05 56 27.5**	**-0.8**
GUY2C	**Guyana, Caldas**	**2.78**	**235**	P	**Pn**	**05 55 54.4**	**+0.3**
NIZA	**Niza - Manizal**	**2.96**	**234**	P	**Pn**	**05 55 57.2**	**+1.0**
CMAN1	**Manizales, Cal**	**3.00**	**235**	P	**Pn**	**05 55 58.9**	**+2.3**
CBOC	**Ciudad Bolivar**	**3.08**	**252**	P	**Pn**	**05 55 57.8**	**+0.3**
DBBC	**Dabeiba**	**3.13**	**274**	P	**Pn**	**05 55 57.7**	**-0.3**
SDV	**Santo Domingo**	**3.16**	**49**	P	**Pn**	**05 55 59.9**	**+1.2**
	784nm,0.3s,baz=180,slow=3.6,SNR=1524						
SDV				S	**Sn**	**05 56 35.8**	**-1.5**
	5µm,0.5s,baz=65,slow=23,SNR=47						
SDV	**Santo Domingo**	**3.16**	**49**	P	**Pn**	**05 55 59.8**	**+1.2**
SDV	**Santo Domingo**	**3.16**	**49**	*e*P	**Pn**	**05 55 58.5**	**-0.1**
SDV				*e*S	**Sn**	**05 56 37.0**	**-0.3**
SDV	**Santo Domingo**	**3.16**	**49**	⇑*i*P	**Pn**	**05 55 59.9**	**+1.2**
SDV				*e*S	**Sn**	**05 56 30.8**	**-6.5**
ARGC	**Ariguani, Magd**	**3.23**	**339**	P	**Pn**	**05 56 00.3**	**+1.0**
ARGC				S	**Sn**	**05 56 38.5**	**-0.1**
PRAC	**Prado**	**3.58**	**210**	P	**Pn**	**05 56 03.3**	**-0.5**
PRAC				S	**Sn**	**05 56 46.8**	**+0.2**
PRAC	**Prado**	**3.58**	**210**	P	**Pn**	**05 56 03.1**	**-0.7**
APAC	**Apartado, Choc**	**3.65**	**287**	P	**Pn**	**05 56 04.2**	**-0.4**
SJCC	**San Jacinto, C**	**3.70**	**326**	P	**Pn**	**05 56 04.3**	**-1.0**
SJCC				S	**Sn**	**05 56 46.2**	**-3.2**
SJCC	**San Jacinto, C**	**3.70**	**326**	P	**Pn**	**05 56 04.0**	**-1.4**
SJCC	**San Jacinto, C**	**3.70**	**326**	⇓*e*P	**Pn**	**05 56 04.0**	**-1.4**
SJCC				*e*S	**Sn**	**05 56 44.1**	**-5.3**
PLMC	**San Jos del P**	**3.72**	**239**	P	**Pn**	**05 56 05.6**	**-0.1**
URMC	**La Uribe, Meta**	**3.79**	**200**	P	**Pn**	**05 56 06.7**	**+0.2**
YOTC	**Yotoco, Valle**	**4.31**	**229**	P	**Pn**	**05 56 12.4**	**-1.0**
SOLC	**Bahia Solano**	**4.35**	**262**	P	**Pn**	**05 56 13.3**	**-0.5**
SMRC	**Santa Marta, M**	**4.46**	**345**	P	**Pn**	**05 56 14.5**	**-0.7**
CAPC	**Capurgana**	**4.61**	**293**	P	**Pn**	**05 56 14.2**	**-3.0**
CAP2	**Capurgana**	**4.62**	**293**	P	**Pn**	**05 56 14.2**	**-3.1**
CAP2				S	**Sn**	**05 57 06.7**	**-4.2**
PIZC	**Pizarro, Choco**	**4.65**	**247**	P	**Pn**	**05 56 18.4**	**+0.7**
MACC	**Macarena, Meta**	**4.71**	**190**	P	**Pn**	**05 56 17.0**	**-1.5**
PTAC	**Punta Ardita,**	**4.72**	**274**	P	**Pn**	**05 56 17.0**	**-1.6**
URI	**Uribia**	**4.96**	**12**	P	**Pn**	**05 56 20.8**	**-0.9**
URI				S	**Sn**	**05 57 17.7**	**-1.1**
URIC	**Uribia, Colomb**	**4.96**	**12**	P	**Pn**	**05 56 20.6**	**-1.2**
URIC	**Uribia, Colomb**	**4.96**	**12**	⇑*i*P	**Pn**	**05 56 20.8**	**-0.9**
URIC				*e*S	**Sn**	**05 57 10.9**	**-7.9**
JAMC	**Jamundi, Valle**	**5.08**	**225**	P	**Pn**	**05 56 22.1**	**-1.4**
	7µm726nm,0.9s						
GARC	**Garzon, Huila**	**5.20**	**208**	P	**Pn**	**05 56 24.0**	**-1.2**
POPC	**Popayan, Colom**	**5.57**	**220**	P	**Pn**	**05 56 29.7**	**-0.4**
	12µm794nm,0.7s						
FLOC	**Florencia**	**5.81**	**206**	P	**Pn**	**05 56 32.2**	**-0.9**
FLOC				S	**Sn**	**05 57 39.1**	**+0.1**
FLOC	**Florencia**	**5.81**	**206**	P	**Pn**	**05 56 32.2**	**-0.9**
	17µm1µm,1.0s						
BBAC	**Balboa, Cauca**	**6.33**	**221**	P	**Pn**	**05 56 39.3**	**-0.9**
	12µm672nm,0.7s						
BBAC				S	**Sn**	**05 57 50.0**	**-1.8**
	12µm672nm,0.7s						
GR1C	**Gorgona, Isla**	**6.34**	**233**	P	**Pn**	**05 56 38.2**	**-1.9**
CRUC	**La Cruz**	**6.50**	**217**	P	**Pn**	**05 56 44.0**	**+1.5**
PTLC	**Puerto Leguiza**	**6.83**	**195**	P	**Pn**	**05 56 48.9**	**+2.3**
	13µm527nm,0.7s						
GCUF	**Volcan Galeras**	**7.01**	**218**	P	**Pn**	**05 56 50.3**	**+0.9**
	5µm436nm,0.5s						
BCIP	**Isla Barro Col**	**7.10**	**290**	P	**Pn**	**05 56 48.1**	**-2.0**
BCIP				S	**Sn**	**05 58 07.3**	**-2.5**
BCIP	**Isla Barro Col**	**7.10**	**290**	P	**Pn**	**05 56 47.8**	**-2.3**
	2µm179nm,0.7s						
BCIP				S	**Sn**	**05 58 06.9**	**-2.9**
	2µm179nm,0.7s						
FUNV	**FUNVISIS**	**7.17**	**59**	⇑*i*P	**Pn**	**05 56 50.4**	**-0.8**
FUNV				*e*S	**Sn**	**05 58 05.4**	**-6.2**
CMBC	**Cumbal**	**7.53**	**219**	P	**Pn**	**05 56 56.8**	**+0.5**
TULM	**Tulcn-Chalpat**	**7.68**	**218**	P	**Pn**	**05 56 58.8**	**+0.4**
TULM				S	**Sn**	**05 58 23.8**	**-0.7**
TULM	**Tulcn-Chalpat**	**7.68**	**218**	P	**Pn**	**05 56 58.3**	**0.0**
	6µm733nm,1.0s						
BONI	**La Bonita**	**7.74**	**215**	P	**Pn**	**05 56 59.4**	**+0.5**
	4µm422nm,0.6s						
CASC	**Dorado de Casc**	**7.89**	**213**	P	**Pn**	**05 57 00.3**	**-0.5**
	4µm562nm,1.0s						
IMBA	**Imbabura, San**	**8.28**	**218**	P	**Pn**	**05 57 06.8**	**+0.5**
CUSE	**Cuicocha Este**	**8.38**	**220**	P	**Pn**	**05 57 07.0**	**-0.6**
	4µm204nm,0.7s						
OTAV	**Otavalo**	**8.46**	**220**		**Pn**	**05 57 07.6**	**-1.2**
OTAV	**Otavalo**	**8.46**	**220**	P	**Pn**	**05 57 07.7**	**-1.2**
OTAV				S	**Sn**	**05 58 41.9**	**-1.4**
OTAV	**Otavalo**	**8.46**	**220**	P	**Pn**	**05 57 07.3**	**-1.5**
	1µm134nm,0.8s						
OTAV				S	**Sn**	**05 58 39.1**	**-4.2**
	1µm134nm,0.8s						
OTAV	**Otavalo**	**8.46**	**220**	*e*P	**Pn**	**05 57 07.6**	**-1.2**
PAC1	**Pacto, Paraso**	**8.66**	**221**	P	**Pn**	**05 57 08.9**	**-2.2**
	4µm151nm,0.4s						
PULU	**Pululahua**	**8.66**	**219**	P	**Pn**	**05 57 10.2**	**-1.1**
PULU				S	**Sn**	**05 58 47.2**	**-0.8**
RMDIO	**Remedios, Chir**	**8.80**	**280**	*e*P	**Pn**	**05 57 13.0**	**+0.2**
RMDIO				*e*S		05 57 41.9	
ANTS	**Antisana-Sarah**	**8.88**	**215**	P	**Pn**	**05 57 14.3**	**-0.1**
ANTS				S	**Sn**	**05 58 52.3**	**-1.1**
GGPC	**Guagua Pichinc**	**8.88**	**219**	P	**Pn**	**05 57 13.4**	**-1.0**
KKNTU	**Kakint[2]**	**8.89**	**284**	*e*P	**Pn**	**05 57 12.8**	**-1.1**
KKNTU				*e*S		05 57 44.3	
SGC2	**Sao Gabriel da**	**9.21**	**139**	P	**Pn**	**05 57 15.9**	**-2.4**
RBALA	**Bur**	**9.23**	**283**	*e*P	**Pn**	**05 57 17.6**	**-0.9**
VCES	**Cotopaxi**	**9.25**	**215**	P	**Pn**	**05 57 19.1**	**-0.2**
PBNVO	**Pueblo Nuevo,**	**9.27**	**283**	*e*P	**Pn**	**05 57 18.3**	**-0.7**
BGUAL	**Bijagual, Pana**	**9.34**	**281**	*e*P	**Pn**	**05 57 20.6**	**+0.6**
BQTLY	**Boquete Panama**	**9.50**	**282**	*e*P	**Pn**	**05 57 22.0**	**-0.3**
JEFFS	**S de V. Baru**	**9.56**	**282**	*e*P	**Pn**	**05 57 23.8**	**+0.8**
PUYO	**Puyo, Santa Ro**	**9.63**	**211**	P	**Pn**	**05 57 23.6**	**-0.3**
CLLRA	**Cordillera,**	**9.65**	**282**	*e*P	**Pn**	**05 57 24.6**	**+0.4**
BRU2	**Volcan**	**9.73**	**282**		**Pn**	**05 57 25.1**	**-0.3**
BRU2	**Volcan**	**9.73**	**282**	P	**Pn**	**05 57 25.9**	**+0.6**
BRU2				S	**Sn**	**05 59 11.0**	**-2.4**
BRU2	**Volcan**	**9.73**	**282**	*e*P	**Pn**	**05 57 26.2**	**+0.9**
SCLRA	**Santa Clara, W**	**9.83**	**282**	*e*P	**Pn**	**05 57 27.4**	**+0.8**
CDITO	**Canoas**	**9.87**	**281**	P	**Pn**	**05 57 27.1**	**+0.1**
NELY	**Ciudad Neily**	**9.96**	**281**	*e*P	**Pn**	**05 57 28.7**	**+0.6**
VITO	**San Vito**	**10.01**	**282**	*e*P	**Pn**	**05 57 30.3**	**+1.3**
PRVC	**Isla de Provid**	**10.44**	**309**	P	**Pn**	**05 57 31.3**	**-3.2**
	118nm,1.0s						
PRVC				S	Sn	05 59 20.8

NMDO IVmB_BB 05 58 28.9
comp=Z,1µm,1.0s
NMDO eS Sn 06 00 41.4 -9.1
PINC Pinares de May 13.84 349 eP **P** **05 58 21.3 -0.3**
PINC IVmB_BB 05 58 23.9
comp=Z,2µm,1.0s
PINC IAmb IAmb 05 58 24.1
comp=Z,200nm,0.5s
PINC eS Sn 06 00 42.5 -9.3
YAR Yar 13.84 347 eP **P** **05 58 21.3 -0.4**
YAR IVmB_BB 05 58 24.2
comp=Z,1µm,1.0s
YAR IAmb IAmb 05 58 24.3
comp=Z,83nm,0.9s
YAR eS Sn 06 00 37.9 -14
MOAC Moa 13.88 353 eP **P** **05 58 22.3 +0.3**
MOAC IAmb IAmb 05 58 25.5
comp=Z,180nm,0.6s
MOAC IVmB_BB 05 58 25.8
comp=Z,2µm,1.0s
MOAC eS **Sn** **06 00 45.9 -6.9**
MGAN Managua 14.03 293 P **P** **05 58 23.8 0.0**
comp=Z,8µmcomp=Z,169nm,1.1s
BIM Bigot 14.04 56 Pn **Pn** **05 58 20.6 -0.4**
CXM Morne La Croix 14.12 55 Pn **Pn** **05 58 22.0 -0.1**
MPOM Morne Pois Mar 14.18 57 Pn **Pn** **05 58 21.8 -0.9**
HLGC Holguin 14.28 349 eP **P** **05 58 29.5 +2.9**
HLGC IAmb IAmb 05 58 31.4
comp=Z,80nm,0.5s
HLGC IVmB_BB 05 58 32.2
comp=Z,1µm,1.0s
HLGC eS **Sn** **06 00 56.7 -5.9**
CBCY The Bluff, Cay 14.39 334 eP **P** **05 58 27.1 -0.6**
CBCY IAmb IAmb 05 58 29.6
comp=Z,180nm,0.8s
CBCY IVmB_BB 05 58 31.2
comp=Z,4µm,1.0s
CBCY eS Sn 06 00 22.1 -43
SABA Saba 14.39 41 Pn **Pn** **05 58 25.3 -0.1**
CZSB Cruzeiro do Su 14.46 179 **Pn** **05 58 25.4 -0.8**
CZSB Cruzeiro do Su 14.46 179 eP **Pn** **05 58 25.1 -1.2**
CNGN Cerro Negro 14.57 294 P **Pn** **05 58 29.1 +1.4**
comp=Z,15µmcomp=Z,1µm,1.0s
BBGH Gun Hill 14.71 64 P **P** **05 58 33.3 +2.0**
comp=Z,384nm,1.3s
SMRT St. Maarten 14.81 40 Pn **Pn** **05 58 29.5 -1.2**
ATAH Atahualpa 14.85 201 P **Pn** **05 58 31.2 -0.3**
comp=Z,23nm,0.6s,baz=32,slow=6.7,SNR=33
ATAH LR LR 06 05 42.9
comp=Z,50nm,21.8s,baz=42,slow=43
CCCC Cccc 15.00 343 eP **Pn** **05 58 34.2 +1.3**
CCCC IAmb IAmb 05 58 41.5
comp=Z,51nm,0.6s
CCCC eS Sn 06 01 08.9 -11
GDSD La Dsirade Is 15.06 50 P **Pn** **05 58 33.6 -0.1**
ANWB Willy Bob 15.41 45 P **Pn** **05 58 36.5 -1.4**
comp=Z,90nm,1.1s
TGUH Tegucigalpa,Un 15.70 298 **Pn** **05 58 41.4 -0.4**
TGUH Tegucigalpa,Un 15.70 298 P **Pn** **05 58 41.2 -0.6**
MACA Manacapuru-AM 15.85 128 P **Pn** **05 58 42.8 -0.6**
MACA Manacapuru-AM 15.85 128 eP **Pn** **05 58 42.8 -0.6**
MGV Manicaragua 16.60 337 eP **Pn** **05 58 54.8 +2.4**
MGV IVmB_BB 05 59 04.8
comp=Z,810nm,1.0s
MGV IAmb IAmb 05 59 04.9
comp=Z,49nm,0.4s
ESQI Esquipulas 17.73 297 P **P** **05 59 04.7 -0.1**
CAMR Camarioca 18.01 335 eP **Pn** **05 59 09.7 +0.3**
CAMR IAmb IAmb 05 59 17.0
comp=Z,85nm,0.7s
APG El Apazote 18.91 297 P **P** **05 59 17.6 -0.2**
comp=Z,4.2nm,0.6s,baz=143,slow=9.9,SNR=31
NNA Nana 19.06 191 P **P** **05 59 18.2 -1.0**
comp=Z,17nm,0.6s,baz=358,slow=9.4,SNR=10.0
NNA Nana 19.06 191 **P** **05 59 18.8 -0.5**
PETF Flores 19.24 303 P **P** **05 59 21.8 +0.7**
TEIG Tepich 19.88 314 **P** **05 59 29.0 +1.1**
HUEH Huehuetenango 19.95 297 P **P** **05 59 27.7 -1.4**
MDP Montagnes des 20.39 94 P **P** **05 59 34.6 +1.1**
comp=Z,15nm,0.9s,baz=279,slow=10,SNR=12
comp=Z,15nm,0.9s
ITTB Itaituba 20.57 122 eP **P** **05 59 36.7 +1.3**
CCIG Comitan 20.89 298 P **P** **05 59 38.4 -0.7**
VILB Vilhena 23.44 147 **P** **06 00 02.9 -1.2**
VILB IAmb IAmb 06 00 36.5
comp=Z,41nm,0.8s
VILB Vilhena 23.44 147 eP **P** **06 00 04.3 +0.2**
LPAZ La Paz 23.48 168 P **P** **06 00 05.0 0.0**
comp=Z,8.7nm,0.7s,baz=351,slow=7.1,SNR=43
LPAZ S **S** **06 04 05.2 -2.3**
comp=Z,3.0nm,0.7s,baz=122,slow=20,SNR=2.3
comp=Z,8.7nm,0.7s
LPAZ La Paz 23.48 168 **P** **06 00 03.5 -1.6**
LPAZ La Paz 23.48 168 eP **P** **06 00 04.3 -0.7**
CMIG Matias Romero 23.63 298 LR LR 06 10 46.6
comp=Z,47nm,20.4s,baz=180,slow=40
PDRB Porto dos Gac 24.49 138 eP **P** **06 00 13.2 -0.5**
PB16 IPOC Station P 25.24 172 P **P** **06 00 18.4 -2.7**
553A Crawfordville 25.58 337 P **P** **06 00 23.1 -0.3**
553A IAmb IAmb 06 01 05.3
comp=Z,36nm,0.6s
TIGA Tifton 26.39 339 P **P** **06 00 31.7 +1.1**
TIGA IAmb IAmb 06 00 33.8
comp=Z,13nm,0.7s
PSGCX Pisagua 26.41 174 P **P** **06 00 29.2 -1.9**
PSGCX IAmb IAmb 06 00 29.2
comp=Z,35nm,1.4s
GO01 Chusmiza 26.60 172 P **P** **06 00 31.4 -1.8**
GO01 IAmb IAmb 06 01 10.3
comp=Z,37nm,1.4s
PB11 IPOC Station P 26.63 173 **P** **06 00 30.5 -2.6**
PB11 IAmb IAmb 06 01 10.9
comp=Z,29nm,1.2s
BBSD Serra de San D 26.85 153 eP **P** **06 00 33.7 -1.1**
352A Blakely 26.92 337 P **P** **06 00 36.6 +1.2**
PB08 IPOC Station P 27.07 172 P **P** **06 00 35.8 -1.4**
TLIG Tlapa 27.07 296 **P** **06 00 38.4 +1.3**
TLIG IAmb IAmb 06 00 45.6
comp=Z,29nm,0.9s
154A Montrose 27.31 341 P **P** **06 00 37.5 -1.4**
154A IAmb IAmb 06 00 42.4
comp=Z,27nm,0.9s
TA01 Diego Aracena 27.36 174 P **P** **06 00 37.0 -2.3**
TA01 IAmb IAmb 06 01 35.4
comp=Z,26nm,1.3s
250A Grady 27.89 335 P **P** **06 00 45.1 +1.1**
250A IAmb IAmb 06 00 47.1
comp=Z,30nm,0.6s
152A Waverly Hall 27.91 339 P **P** **06 00 44.8 +0.6**
152A IAmb IAmb 06 00 47.1
comp=Z,26nm,0.7s
PB01 IPOC Station P 27.91 173 P **P** **06 00 42.7 -1.7**
PB01 IAmb IAmb 06 01 32.6
comp=Z,14nm,0.5s
SALV Santo Antonio 28.39 143 eP **P** **06 00 48.2 -0.3**
SMTB Santa Maria do 29.79 121 eP **P** **06 01 01.4 +0.3**
TKL Tuckaleechee C 30.34 343 LR LR 06 15 06.6
comp=Z,36nm,18.2s,baz=177,slow=39
ARAG Araguaiana, MT 30.73 137 eP **P** **06 01 08.7 -0.6**
HKT Hockley 31.43 320 P **P** **06 01 16.5 +1.3**
HKT ScP **ScP** **06 07 34.9 +1.4**
T50A Nancy 31.92 342 P **P** **06 01 20.5 +1.0**
R55A Marlinton 31.96 349 P **P** **06 01 21.5 +1.5**
R55A IAmb IAmb 06 01 23.6
comp=Z,8.6nm,0.7s
WVT Waverly 32.15 337 P **P** **06 01 23.1 +1.5**
WVT sP **sP** **06 02 13.0 +0.3**
WVT PcP **PcP** **06 04 07.2 +0.4**
435B Jarrell 33.11 319 **P** **06 01 30.6 +0.6**
MVL Millersville 33.16 355 P **P** **06 01 32.3 +2.0**
MVL IAmb IAmb 06 01 33.7
comp=Z,9.1nm,0.5s
R49A Shelbyville 33.19 342 P **P** **06 01 32.4 +1.8**
T45A Paducah 33.24 337 P **P** **06 01 31.9 +0.9**
Z38A Mt. Pleasant 33.25 325 **P** **06 01 32.2 +1.1**
Z38A IAmb IAmb 06 01 33.1
comp=Z,30nm,0.8s
P53A Whipple 33.37 348 **P** **06 01 34.0 +1.8**
Q51A Peebles 33.38 345 P **P** **06 01 34.1 +2.0**
Q51A IAmb IAmb 06 01 35.2
comp=Z,18nm,0.7s
BDFB Brasilia 33.38 132 P **P** **06 01 33.3 +0.7**
comp=Z,3.1nm,0.4s,baz=288,slow=8.4,SNR=12
comp=Z,3.1nm,0.4s

BDFB Brasilia 33.38 132 P **P** **06 01 33.1 +0.5**
NBPS Pedro II - PI 33.47 109 eP **P** **06 01 33.4 0.0**
WCI Wyandotte Cave 33.48 341 P **P** **06 01 35.0 +1.9**
WCI PcP **PcP** **06 04 11.5 +0.9**
USIN University of 33.71 339 P **P** **06 01 36.0 +0.9**
SDBA SAO DESIDERIO 33.90 124 eP **P** **06 01 37.0 0.0**
SSPA Standing Stone 33.94 353 P **P** **06 01 39.4 +2.4**
SSPA pP **pP** **06 02 12.0 +1.0**
SSPA sP **sP** **06 02 29.4 +0.2**
SSPA PcP **PcP** **06 04 12.3 +0.6**
SSPA ScP **ScP** **06 07 44.0 +1.9**
O53A New Philadelph 34.07 349 P **P** **06 01 39.2 +1.0**
BLO Bloomington 34.42 341 P **P** **06 01 42.4 +1.3**
M65A Busby, Falmout 34.66 3 P **P** **06 01 44.9 +1.8**
baz=184
IPMB Ipameri, GO 34.78 135 eP **P** **06 01 44.3 -0.3**
P46A Rosedale 35.04 341 P **P** **06 01 46.7 +0.2**
CCM Cathedral Cave 35.19 335 P **P** **06 01 48.8 +1.0**
CCM sP **sP** **06 02 39.4 +0.1**
ABTX Abilene, Hawle 35.63 320 P **P** **06 01 51.9 +0.2**
ABTX IAmb IAmb 06 01 53.4
comp=Z,33nm,0.8s
SFIN Lafayette 35.70 341 P **P** **06 01 52.9 +0.9**
JANB Januaria 35.85 127 eP **P** **06 01 53.1 -0.6**
CPUP Villa Florida 36.32 156 P **P** **06 01 56.4 -1.2**
comp=Z,1.9nm,1.0s,baz=352,slow=11,SNR=3.4
CPUP ScP **ScP** **06 07 49.1 -1.8**
comp=Z,2.3nm,0.9s,baz=288,slow=2.7,SNR=5.3
comp=Z,1.9nm,1.0s
PMNB Patos De Minas 36.40 134 eP **P** **06 01 58.0 -0.4**
TXAR Lajitas Array 36.50 312 P **P** **06 02 00.0 +0.8**
comp=Z,19nm,0.6s,baz=128,slow=9.2,SNR=171
TXAR PcP **PcP** **06 04 21.3 +1.6**
comp=Z,6.0nm,0.8s,baz=134,slow=6.1,SNR=9.9
TXAR Lajitas Array 36.50 312 P **P** **06 01 59.6 +0.3**
WMOK Wichita Mounta 36.51 323 P **P** **06 01 58.6 -0.5**
WMOK IAmb IAmb 06 01 59.9
comp=Z,21nm,0.7s
J55A Hilton 36.54 354 P **P** **06 02 00.8 +1.7**
J55A IAmb IAmb 06 02 02.4
comp=Z,15nm,0.6s
CROK Carrier 37.30 326 P **P** **06 02 05.5 -0.2**
CROK IAmb IAmb 06 02 06.7
comp=Z,26nm,0.7s
SMWD Samnorwood 37.64 322 P **P** **06 02 09.0 +0.3**
DIAM Diamantina, MG 38.27 131 eP **P** **06 02 14.0 -0.2**
G65A Princeton 38.53 6 P **P** **06 02 17.8 +2.0**
GGN Saint George 38.53 7 P **P** **06 02 17.5 +1.7**
GGN IAmb IAmb 06 02 18.6
comp=Z,38nm,0.8s
MNTQ Montreal, Queb 38.53 359 P **P** **06 02 18.0 +2.1**
MNTQ IAmb IAmb 06 02 19.5
comp=Z,25nm,0.8s
SLBS Sierra La Lagu 39.16 299 P **P** **06 02 24.1 +2.5**
PET01 Itanhaem-SP 39.86 142 eP **P** **06 02 26.8 -0.4**
GUA01 Guaratinga, BA 40.29 126 eP **P** **06 02 31.0 +0.1**
RIB01 Linhares ES 41.36 130 eP **P** **06 02 39.2 -0.4**
ANMO Albuquerque 41.55 317 P **P** **06 02 42.5 +1.3**
ANMO pP **pP** **06 03 16.0 +0.4**
ANMO PcP **PcP** **06 04 36.2 +0.5**
DUN6 Lazy B Ranch 42.14 312 P **P** **06 02 47.6 +1.6**
ECSD EROS Data Cent 42.17 334 P **P** **06 02 45.5 -0.4**
ECSD IAmb IAmb 06 02 46.6
comp=Z,21nm,1.0s
SDCO Great Sand Dun 42.58 321 P **P** **06 02 50.6 +0.9**
SDCO IAmb IAmb 06 02 52.2
comp=Z,18nm,0.7s
TUC Tucson 43.29 311 P **P** **06 02 56.3 +1.1**
TUC PcP **PcP** **06 04 42.2 +0.8**
AGMN Agassiz Nation 45.64 339 P **P** **06 03 13.1 -0.4**
AGMN IAmb IAmb 06 03 14.6
comp=Z,26nm,0.6s
RSSD Black Hills 45.97 329 P **P** **06 03 17.6 +1.2**
RSSD sP **sP** **06 04 09.6 +0.6**
RSSD PcP **PcP** **06 04 51.3 +0.8**
ULM Lac du Bonnet 47.30 340 P **P** **06 03 26.4 0.0**
comp=Z,34nm,0.4s,baz=143,slow=7.5,SNR=96
PLCA Paso Flores 47.38 177 P **P** **06 03 25.4 -1.8**
comp=Z,0.7nm,0.4s,baz=4.6,slow=4.9,SNR=10.0
PLCA ScP **ScP** **06 08 32.6 -2.2**
comp=Z,3.7nm,1.1s,baz=11,slow=3.8,SNR=4.8
comp=Z,0.7nm,0.4s
TCRU Three Creeks R 47.57 318 P **P** **06 03 29.9 +0.9**
CCUT Cedar City 47.66 316 P **P** **06 03 30.6 +0.9**
PDAR Pinedale Array 48.11 324 P **P** **06 03 33.5 +0.5**
comp=Z,7.8nm,0.5s,baz=126,slow=9.0,SNR=97
PDAR PcP **PcP** **06 04 57.9 -0.3**
comp=Z,1.9nm,0.6s,baz=123,slow=3.7,SNR=3.5
comp=Z,7.8nm,0.5s
SCHQ Schefferville 48.13 5 P **P** **06 03 33.9 +1.2**
comp=Z,36nm,0.6s,baz=185,slow=7.1,SNR=104
SCHQ ScP **ScP** **06 08 37.9 +0.2**
comp=Z,6.2nm,0.8s,baz=193,slow=4.6,SNR=4.9
CLC China Lake 49.90 312 P **P** **06 03 47.0 +0.5**
ELK Elko 50.51 319 P **P** **06 03 51.5 +0.2**
NVAR Mina Array Bea 51.52 315 P **P** **06 03 60.0 +1.1**
comp=Z,8.0nm,0.7s,baz=123,slow=7.1,SNR=67
NVAR PcP **PcP** **06 05 11.1 +0.3**
comp=Z,3.8nm,0.6s,baz=133,slow=5.1,SNR=9.8
comp=Z,8.0nm,0.7s
FFC Flin Flon 53.10 339 P **P** **06 04 10.2 +0.3**
F07A Phinny Hill Vi 56.04 322 P **P** **06 04 31.6 +0.4**
YKA Yellowknife Ar 63.28 340 P **P** **06 05 20.8 +0.4**
comp=Z,17nm,0.6s,baz=133,slow=5.9,SNR=479
SAATT Saattut 65.35 8 *i* P **P** **06 05 33.8 0.0**
SAATT IAmb IAmb 06 05 35.2
comp=Z,17nm,1.0s
KOTAN Kotaneelee Air 65.48 335 P **P** **06 05 35.7 +0.9**
baz=122,SNR=8.2
T35M Bob Quinn 66.83 330 P **P** **06 05 45.2 +1.6**
baz=115,SNR=5.0
V35K Ketchikan 66.86 328 P **P** **06 05 44.9 +1.3**
baz=113
WRGLY Wrigley 66.93 338 P **P** **06 05 44.6 +0.6**
baz=124,SNR=14
DLBC Dease Lake 67.35 331 P **P** **06 05 48.1 +1.3**
baz=116,SNR=6.8
WTLY Watson Lake, Y 67.53 333 P **P** **06 05 49.1 +1.2**
baz=117
S34M Telegraph Cree 67.66 331 P **P** **06 05 50.2 +1.6**
baz=114,SNR=11
WRAK Wrangell Islan 67.67 329 P **P** **06 05 49.9 +1.1**
baz=113
DBIC Dibokro 67.68 86 P **P** **06 05 48.9 -0.8**
comp=Z,3.9nm,0.5s,baz=284,slow=4.9,SNR=19
DBIC pP **pP** **06 06 28.9 +1.0**
comp=Z,9.2nm,0.8s,baz=292,slow=5.9,SNR=7.5
comp=Z,3.9nm,0.5s
DBIC Dimbokro 67.68 86 P **P** **06 05 48.6 -1.1**
DBIC pP **pP** **06 06 25.9 -2.0**
DBIC sP **sP** **06 06 41.9 -3.3**
CRAG Craig 67.71 328 P **P** **06 05 50.2 +1.2**
baz=112
U33K Whale Pass 67.95 328 P **P** **06 05 51.8 +1.3**
baz=112
R33M Jennings River 68.20 332 P **P** **06 05 53.3 +1.1**
baz=115
MDT Midelt 68.24 57 pP pP 06 06 33.1 +1.9
comp=Z,2.8nm,0.9s,baz=281,slow=4.9,SNR=5.2
KULLO Kullorsuaq 68.33 5 *i* P **P** **06 05 52.9 +0.3**
KULLO IAmb IAmb 06 05 53.8
comp=Z,11nm,1.0s
Q32M Nakina River 68.63 331 P **P** **06 05 56.2 +1.2**
baz=114
SUMG Summit 68.98 11 P **P** **06 05 57.0 -0.1**
SUMG Summit 68.98 11 *i* P **P** **06 05 58.0 +0.8**
SUMG IAmb IAmb 06 05 58.4
comp=Z,29nm,0.6s
S32K Killisnoo 69.19 329 P **P** **06 05 59.5 +1.4**
baz=111
P33M Teslin, Yukon 69.39 333 P **P** **06 06 00.8 +1.3**
baz=114,SNR=5.9
SIT Sitka 69.43 329 P **P** **06 06 01.0 +1.3**
baz=110
R32K Eaglecrest 69.45 330 P **P** **06 06 00.8 +1.0**
baz=111
P32M Atlin 69.56 332 P **P** **06 06 01.9 +1.4**
baz=113
ESDC Sonseca Array 69.61 50 P **P** **06 06 00.3 -0.9**
comp=Z,0.4nm,0.6s,baz=261,slow=5.8,SNR=2.5
comp=Z,0.4nm,0.6s
TULEG Thule 69.71 1 *i* P **P** **06 06 01.7 +0.6**
TULEG IAmb IAmb 06 06 02.8
comp=Z,7.0nm,0.7s
S31K Pelican 70.20 330 P **P** **06 06 05.6 +1.3**
baz=110
SKAG Skagway 70.28 331 P **P** **06 06 06.2 +1.4**
baz=111
WHY Whitehorse 70.50 333 P **P** **06 06 07.6 +1.2**
baz=112
C36M Paulatuk 70.61 343 P **P** **06 06 08.4 +1.8**
baz=125
M31M Drury Creek, Y 70.87 334 P **P** **06 06 09.8 +1.4**
baz=113,SNR=9.0
O30N Mendenhall 71.10 332 P **P** **06 06 11.4 +1.5**
baz=111,SNR=9.2
N31M Braeburn, Yuko 71.22 333 P **P** **06 06 12.2 +1.6**
baz=111,SNR=7.4
P30M Million Dollar 71.28 332 P **P** **06 06 12.4 +1.4**
baz=110
NEEM North Greenlan 71.54 5 *i* P **P** **06 06 13.3 +0.7**
NEEM IAmb IAmb 06 06 14.3
comp=Z,34nm,0.6s
HYT Haines Junctio 71.77 332 P **P** **06 06 15.6 +1.6**
baz=109
N30M Aishikik Lake 71.80 333 P **P** **06 06 15.8 +1.8**
baz=110
MAYO Mayo, Yukon 72.04 335 P **P** **06 06 17.4 +2.0**
baz=112,SNR=7.9
M30M Minto, Yukon 72.05 334 P **P** **06 06 16.9 +1.3**
baz=111,SNR=16
O29M Mount Kennedy 72.10 332 P **P** **06 06 17.6 +1.6**
baz=108
YUK6 Outpost Mounta 72.20 332 P **P** **06 06 18.5 +1.8**
baz=109
H31M Peel River 72.29 338 P **P** **06 06 18.1 +1.2**
baz=114
A36M Sachs Harbour 72.45 345 P **P** **06 06 18.1 +0.6**
baz=125,SNR=71
YUK4 Talbot Arm 72.46 333 P **P** **06 06 19.8 +1.6**
baz=109
J30M Hart River 72.58 336 P **P** **06 06 19.8 +1.1**
baz=112
G31M Satah River 72.72 339 P **P** **06 06 20.0 +0.8**
baz=114,SNR=12
M29M Somme Creek 72.74 334 P **P** **06 06 20.8 +1.2**
baz=109,SNR=5.3
F31M Tsiigehtchic 72.75 339 P **P** **06 06 20.1 +0.7**
baz=115,SNR=16
K29M Barlow Dome 72.81 335 P **P** **06 06 21.3 +1.3**
baz=110
L29M L29M 72.81 334 P **P** **06 06 21.0 +1.0**
baz=110,SNR=6.9
PINM Pinnacle 72.84 331 P **P** **06 06 21.6 +1.4**
baz=107
I30M Mount Dempster 72.84 337 P **P** **06 06 21.4 +1.2**
baz=112,SNR=11
YUK8 Steele Glacier 72.96 332 P **P** **06 06 22.7 +1.5**
baz=108
O28M Mount Upton 73.00 332 P **P** **06 06 22.6 +1.1**
baz=107
EKA Eskdalemuir Ar 73.04 34 P **P** **06 06 20.5 -0.9**
comp=Z,0.6nm,0.5s,baz=261,slow=3.7,SNR=4.4
EKA pP **pP** **06 07 02.9 +2.6**
comp=Z,1.4nm,0.7s,baz=265,slow=3.9,SNR=2.4
comp=Z,0.6nm,0.5s
INK Inuvik 73.05 340 P **P** **06 06 21.8 +0.7**
baz=115,SNR=17
J29N Klondike Camp 73.30 336 P **P** **06 06 24.4 +1.5**
baz=110,SNR=5.9
EPYK Eagle Plains 73.40 338 P **P** **06 06 24.2 +0.8**
baz=112,SNR=15
YUK3 Moose Creek 73.42 333 P **P** **06 06 25.3 +1.5**
baz=107,SNR=12
G30M tAoh Zraii Nji 73.45 339 P **P** **06 06 24.6 +0.9**
baz=112
F30M Barrier River 73.54 339 P **P** **06 06 25.2 +1.1**
baz=113
CTG Chitna Glacier 73.60 332 P **P** **06 06 26.2 +1.4**
baz=106
I29M Ogilvie Camp, 73.65 337 P **P** **06 06 26.2 +1.4**
baz=110,SNR=5.0
TORD Torodi Ar. Bea 73.69 78 P **P** **06 06 24.8 -1.2**
comp=Z,0.5nm,0.3s,baz=278,slow=7.4,SNR=6.8
TORD pP **pP** **06 07 06.3 +1.2**
comp=Z,0.8nm,0.5s,baz=286,slow=6.9,SNR=3.4
comp=Z,0.5nm,0.3s
BVCY Beaver Creek 73.79 333 P **P** **06 06 27.4 +1.7**
baz=107
DBG Daneborg 73.93 13 *i* P **P** **06 06 26.9 +0.7**
DBG IAmb IAmb 06 06 28.3
comp=Z,3.4nm,0.8s
H29M Whitestone 73.97 337 P **P** **06 06 27.5 +0.9**
baz=110,SNR=11
G29M Pine Creek 74.08 338 P **P** **06 06 27.6 +0.3**
G29M IAmb IAmb 06 06 29.0
comp=Z,9.6nm,0.7s
G29M Pine Creek 74.08 338 P **P** **06 06 28.4 +1.1**
baz=111
M27K Edge Creek, AK 74.23 333 P **P** **06 06 30.0 +1.6**
baz=106
I28M Miner Creek 74.32 336 P **P** **06 06 29.3 +0.5**
I28M Miner Creek 74.32 336 P **P** **06 06 29.8 +1.0**
baz=108
CRQE Cirque 74.37 331 P **P** **06 06 30.5 +1.3**
baz=104
L27K Beaver Creek, 74.40 334 P **P** **06 06 30.8 +1.6**
baz=106
MCARA McCarthy VSAT 74.50 332 P **P** **06 06 31.8 +2.0**
baz=104,SNR=5.3
E29M Blow River 74.57 340 P **P** **06 06 30.9 +0.8**
baz=111
M26K Nabesna, AK 74.74 333 P **P** **06 06 32.6 +1.4**
baz=105
F28M Old Crow 75.00 339 P **P** **06 06 33.3 +0.7**
baz=109,SNR=11
I27K Kandik River 75.04 336 P **P** **06 06 33.8 +0.9**
baz=107,SNR=10.0
L26K Log Cabin Wild 75.06 334 P **P** **06 06 34.5 +1.5**
baz=105,SNR=14
BMRM Bremner River 75.14 331 P **P** **06 06 34.9 +1.4**
baz=103,SNR=5.7
H27K Steamboat Moun 75.19 337 P **P** **06 06 34.9 +1.1**
baz=107
D28M Stokes Point 75.19 340 P **P** **06 06 34.4 +0.8**
baz=111
E28M Babbage River 75.21 340 P **P** **06 06 34.2 +0.4**
baz=110
N25K Chitina, Valde 75.28 332 P **P** **06 06 35.3 +0.8**
baz=103
G27K Doyon Strip 75.41 338 P **P** **06 06 36.0 +1.0**
baz=107
I26K Coal Creek Min 75.57 336 P **P** **06 06 36.5 +0.6**
baz=105
SCRK Sand Creek 75.58 335 P **P** **06 06 37.4 +1.3**
baz=104,SNR=5.5
EYAK Cordova Ski Ar 75.60 331 P **P** **06 06 36.7 +0.6**
baz=102
DAG Danmarks Havn 75.64 11 *i* P **P** **06 06 36.0 0.0**
DAG IAmb IAmb 06 06 36.9
comp=Z,6.2nm,0.6s
Q23K Middleton Isla 75.67 330 P **P** **06 06 37.0 +0.5**
baz=101
E27K Coleen River 75.80 339 P **P** **06 06 38.0 +0.8**
baz=108,SNR=16
ALE Alert 75.81 1 P **P** **06 06 37.4 +0.4**
KLU Klutina 75.88 332 P **P** **06 06 38.9 +1.1**
baz=102
RIDG Independent Ri 75.89 334 P **P** **06 06 39.0 +1.2**
baz=104,SNR=10
D27M Malcolm River 75.91 340 P **P** **06 06 38.6 +0.8**
baz=108,SNR=7.4
PAX Paxson 75.99 333 P **P** **06 06 39.3 +0.9**
baz=103,SNR=5.4
M24K Tolsona, Glenn 76.12 332 P **P** **06 06 40.6 +1.4**
baz=102
G26K Porcupine Rive 76.25 338 P **P** **06 06 41.0 +1.3**
baz=105
P23K Montague Islan 76.30 330 P **P** **06 06 41.2 +1.1**
baz=100
K24K Donnelly Dome 76.31 334 P **P** **06 06 41.1 +1.0**
baz=103,SNR=8.2
J25K Salcha River, 76.31 335 P **P** **06 06 41.1 +0.9**
baz=103
GLI Glacier Island 76.31 331 P **P** **06 06 41.2 +1.0**
baz=101
PRP Porcupine Dome 76.58 336 P **P** **06 06 42.5 +0.7**
baz=103,SNR=15
F26K Sheenjek River 76.58 338 P **P** **06 06 43.2 +1.6**
baz=105
SCM Sheep Creek Mo 76.60 332 P **P** **06 06 43.1 +1.3**
baz=101,SNR=5.2
M23K Glacier View 76.78 332 P **P** **06 06 43.5 +0.7**

baz=100,SNR=7.9
DHY Denali Highway 76.86 333 P P 06 06 44.3 +0.9
baz=101
WAT6 Susitna Watana 76.93 333 P P 06 06 44.8 +1.0
baz=100,SNR=6.6
HDA Harding Lake 76.94 335 P P 06 06 44.0 +0.4
baz=102,SNR=12
C27K Jago River 76.95 340 P P 06 06 44.4 +0.8
baz=106,SNR=7.7
ILAR Eielson Array 76.98 335 P P 06 06 44.2 +0.4
comp=Z,3.3nm,0.7s,baz=109,slow=4.4,SNR=50
ILAR PP PP 06 09 39.0 -0.2
comp=Z,0.5nm,0.6s,baz=94,slow=8.1,SNR=4.6
comp=Z,3.3nm,0.7s
KNK Knik Glacier 77.06 331 P P 06 06 45.2 +0.8
baz=100,SNR=5.2
SML Sawmill 77.07 332 P P 06 06 45.3 +0.9
baz=100
G25K Bearman Lake 77.10 337 P P 06 06 45.7 +1.3
baz=103
F25K Christian Rive 77.11 338 P P 06 06 45.8 +1.2
baz=104
E25K Arctic Village 77.21 338 P P 06 06 46.4 +1.3
baz=104,SNR=6.7
POKR Poker Plat Res 77.28 335 P P 06 06 46.4 +0.8
baz=101
SEW Seward 77.34 330 P P 06 06 46.9 +1.0
baz=98
WAT1 Susitna Watana 77.34 333 P P 06 06 46.9 +1.0
baz=100
PMR Palmer 77.41 332 P P 06 06 47.3 +1.1
baz=99,SNR=7.3
COLA College 77.41 335 P P 06 06 47.2 +1.0
baz=101
C26K Camden Bay 77.43 340 P P 06 06 47.4 +1.2
baz=105
O22K Cooper Landing 77.52 330 P P 06 06 48.1 +1.2
baz=98
H24K Noodor Dome 77.61 336 P P 06 06 48.2 +0.9
baz=101,SNR=7.6
G24K Hadweenzic Riv 77.62 337 P P 06 06 48.5 +1.2
baz=102,SNR=5.5
RC01 Rabbit Creek A 77.62 331 P P 06 06 48.1 +0.6
baz=98
MCK McKinley 77.67 334 P P 06 06 48.5 +0.8
baz=100
D25K Kavik River 77.78 340 P P 06 06 49.0 +0.7
baz=103,SNR=22
NEA2 Nenana 77.87 335 P P 06 06 49.6 +0.8
baz=100
M22K Willow 77.90 332 P P 06 06 49.8 +0.8
baz=98
BRSE Bradley Lake S 77.93 330 P P 06 06 49.7 +0.5
baz=97
F24K Squaw Lake 77.94 338 P P 06 06 50.3 +1.2
baz=102
CUT Chulitna 78.06 332 P P 06 06 50.5 +0.7
baz=98
I23K Minto, Yukon-K 78.09 335 P P 06 06 50.8 +0.8
baz=100,SNR=6.4
TRF Thorofare Moun 78.22 333 P P 06 06 51.5 +0.6
baz=98,SNR=5.8
CAPN Captain Cook N 78.26 331 P P 06 06 52.0 +1.0
baz=97
E24K Your Creek 78.27 338 P P 06 06 52.0 +1.0
baz=101
H23K Yukon River 78.28 336 P P 06 06 52.0 +1.0
baz=100
HOM Homer 78.37 329 P P 06 06 52.6 +1.0
baz=96
SKT Skwentna 78.59 332 P P 06 06 53.7 +0.9
baz=97,SNR=9.0
D24K Happy Valley 78.60 339 P P 06 06 54.0 +1.2
baz=101
NOR Nord 78.60 7 *i* P P 06 06 52.9 +0.3
NOR IAmb IAmb 06 06 54.9
comp=Z,5.7nm,1.2s
G23K Bananza Creek 78.61 337 P P 06 06 54.2 +1.3
baz=99
BPAW Bear Paw Mtn. 78.62 334 P P 06 06 53.7 +0.7
baz=98,SNR=5.9
Q20K Shuyak Island 78.65 328 P P 06 06 54.4 +1.3
baz=96
C24K Franklin Bluff 78.67 340 P P 06 06 54.2 +1.2
baz=101
KDAK Kodiak Island 78.67 328 P P 06 06 54.4 +1.1
baz=95
E23K Chandalar 78.69 338 P P 06 06 54.3 +1.0
baz=100
COLD Coldfoot 78.77 337 P P 06 06 55.3 +1.6
baz=99,SNR=10
TOLK Toolik Lake Re 78.77 339 P P 06 06 54.6 +0.8
baz=100
N20K Mount Spurr 78.82 331 P P 06 06 54.6 +0.4
baz=96
SPCR Spurr Chakacha 78.82 331 P P 06 06 54.7 +0.5
baz=96,SNR=5.4
OHAK Old Harbor 79.00 327 P P 06 06 55.5 +0.4
baz=94
PPLA Purkeypile 79.00 333 P P 06 06 56.0 +0.8
baz=97,SNR=13
H22K Ishtalitna Cre 79.03 336 P P 06 06 56.0 +0.8
baz=98
CHUM Lake Minchumin 79.17 334 P P 06 06 56.6 +0.7
baz=97,SNR=11
P19K Oil Pt 79.17 329 P P 06 06 57.0 +0.9
baz=95
I21K Tanana 79.19 335 P P 06 06 56.7 +0.7
baz=97
D23K Nanushuk River 79.22 339 P P 06 06 57.4 +1.3
baz=99,SNR=6.7
G22K Bettles 79.23 337 P P 06 06 57.1 +0.9
baz=98
Q19K Cape Douglas, 79.33 329 P P 06 06 57.3 +0.4
baz=94
M20K Styx River 79.33 332 P P 06 06 57.3 +0.4
baz=96
C23K Itkillik River 79.34 340 P P 06 06 57.4 +0.7
baz=99
E22K Anaktuvuk Pass 79.51 338 P P 06 06 58.5 +0.8
baz=98
F22K John River 79.57 337 P P 06 06 58.9 +0.9
baz=98
H21K Melozitna Rive 79.59 336 P P 06 06 59.0 +0.9
baz=96
O19K Port Alsworth 79.77 330 P P 06 06 59.2 0.0
baz=94
N19K Bonanza Creek 79.89 331 P P 06 07 00.1 +0.1
baz=94
K20K Telida 79.90 333 P P 06 07 00.2 +0.3
baz=95,SNR=7.1
G21K Allakaket 79.97 336 P P 06 07 01.4 +1.3
baz=96
J20K Nowinta River 80.01 334 P P 06 07 00.9 +0.4
baz=95
Q18K Katmai Hardscr 80.02 328 P P 06 07 00.8 +0.1
baz=93
F21K Alatna River 80.03 337 P P 06 07 01.3 +0.7
baz=96
L19K White Mountain 80.17 332 P P 06 07 01.7 +0.3
baz=94
P18K Big Mountain, 80.17 329 P P 06 07 01.1 -0.4
baz=93
O18K Koktuh Hills 80.19 330 P P 06 07 01.8 +0.3
baz=93
CHIR Chirikof Islan 80.21 325 P P 06 07 02.0 +0.4
baz=92
E21K Killik River 80.35 338 P P 06 07 03.0 +0.8
baz=96
B22K Teshekpuk Lake 80.36 340 P P 06 07 03.0 +0.8
baz=97,SNR=12
H20K Anotleneega Mo 80.43 335 P P 06 07 03.1 +0.4
baz=95
Q17K Contact Creek 80.46 328 P P 06 07 02.9 -0.2
baz=92
N18K Kilae Creek 80.57 330 P P 06 07 03.8 +0.2
baz=93
M18K Stony River 80.58 331 P P 06 07 04.1 +0.6
baz=93
J19K Poorman 80.64 334 P P 06 07 04.4 +0.6
baz=94,SNR=6.5
R17L Mt. Peulik Vol 80.68 327 P P 06 07 05.0 +0.8
baz=92
B21K Ikpikpuk River 80.69 339 P P 06 07 04.8 +0.8
baz=96
C21K Knifeblade Rid 80.71 339 P P 06 07 04.7 +0.6
baz=95,SNR=5.3
P17K Kvichak River 80.78 329 P P 06 07 04.9 +0.3
baz=92
Q16K King Salmon 80.88 328 P P 06 07 05.3 +0.2
baz=92
F20K Avaraart Lake 80.89 337 P P 06 07 06.1 +1.0
baz=94
A22K Sinclair Lake 80.95 341 P P 06 07 06.3 +1.0
baz=95
L18K Granite Mounta 81.03 332 P P 06 07 06.6 +0.7
baz=92
H19K Roundabout Mou 81.08 335 P P 06 07 07.3 +1.2
baz=93
J18K Innoko River 81.09 333 P P 06 07 07.0 +0.8
baz=93
O17K Koliganek Bris 81.14 329 P P 06 07 06.6 +0.1
baz=92
E20K Nigu River 81.15 338 P P 06 07 07.9 +1.3
baz=94,SNR=28
N17K Nushagak Hills 81.20 330 P P 06 07 08.0 +1.2
baz=92
GCSA Galena City Sc 81.23 334 P P 06 07 08.3 +1.4
baz=93
NB2 NORSAR Subarra 81.30 29 P P 06 07 07.9 +0.5
comp=Z,2.1nm,0.6s,baz=267,slow=5.3
NOA NORSAR Array B 81.30 29 P P 06 07 08.4 +0.9
comp=Z,0.9nm,0.5s,baz=267,slow=5.3,SNR=6.5
NOA pP pP 06 07 49.9 +2.5
comp=Z,0.6nm,0.7s,baz=272,slow=5.3,SNR=1.6
comp=Z,0.9nm,0.5s
D20K Etivluk River 81.34 338 P P 06 07 08.4 +1.0
baz=94
R16K Pilot Point 81.34 327 P P 06 07 08.5 +1.0
baz=91
M17K Holitna River 81.35 331 P P 06 07 08.4 +0.7
baz=92
G19K Purcell Mounta 81.38 336 P P 06 07 08.2 +0.5
baz=93
E19K Redstone River 81.50 337 P P 06 07 09.1 +0.8
baz=93,SNR=17
A21K Barrow 81.51 341 P P 06 07 09.1 +0.9
baz=94,SNR=9.4
P16K Nushagak River 81.58 329 P P 06 07 09.5 +0.7
baz=91
B20K Meade River 81.61 340 P P 06 07 09.9 +1.1
baz=93
F19K Shaleruckik Mo 81.68 337 P P 06 07 10.0 +0.8
baz=92,SNR=6.3
L17K Donlin 81.78 332 P P 06 07 10.7 +0.9
baz=91
CHGN Chignik 81.78 326 P P 06 07 10.7 +0.8
baz=90
K17K Iditarod 81.79 332 P P 06 07 10.3 +0.4
baz=91
H18K Honhosa River 81.87 335 P P 06 07 11.6 +1.3
baz=91
D19K Kuna River 81.88 338 P P 06 07 11.6 +1.3
baz=92
N16K Nishlik Lake 81.99 330 P P 06 07 11.8 +0.8
baz=90
G18K Tagagawik 82.01 336 P P 06 07 12.3 +1.3
baz=91,SNR=8.6
M16K Timber Creek 82.08 331 P P 06 07 12.4 +0.9
baz=90
J17K VABM Dome 82.16 333 P P 06 07 13.0 +1.2
baz=90
C19K Lookout Ridge 82.43 339 P P 06 07 14.8 +1.6
baz=91
CHNA Chernabura Isl 82.47 324 P P 06 07 14.6 +1.0
baz=89
HFS Hagfors 82.52 30 P P 06 07 13.8 +0.1
comp=Z,1.1nm,0.5s,baz=251,slow=4.5,SNR=11
comp=Z,1.1nm,0.5s
H17K Granite Mounta 82.53 335 P P 06 07 14.7 +1.0
baz=90
GERES GERESS Array B 82.79 42 P P 06 07 14.6 -0.9
comp=Z,0.6nm,0.5s,baz=258,slow=6.7,SNR=4.9
comp=Z,0.6nm,0.5s
E18K Tukpahlearik C 82.80 337 P P 06 07 16.5 +1.5
baz=90,SNR=6.6
G17K Kiwalik Mounta 82.83 335 P P 06 07 16.6 +1.4
baz=89,SNR=7.0
J16K Anvik River 82.84 333 P P 06 07 16.8 +1.4
baz=89
I17K Unalakleet 82.88 334 P P 06 07 16.8 +1.3
baz=89
M15K Kasigluk River 82.93 330 P P 06 07 17.0 +1.2
baz=89
A19K Wainwright 82.95 340 P P 06 07 17.3 +1.6
baz=90
C18K Utukok River 83.01 338 P P 06 07 17.3 +1.0
baz=89
F17K Baldwin Pennin 83.07 336 P P 06 07 17.5 +1.1
baz=89,SNR=6.8
SPITS Spitsbergen Ar 83.25 12 P P 06 07 18.5 +1.2
comp=Z,5.3nm,0.7s,baz=192,slow=1.5,SNR=8.5
comp=Z,5.3nm,0.7s
E17K Hotham Inlet 83.28 337 P P 06 07 18.5 +1.0
baz=88
L15K Ungalak Mounta 83.29 331 P P 06 07 18.7 +1.0
baz=88
K15K Wolf Creek Mou 83.29 332 P P 06 07 19.4 +1.7
baz=88
N14K Kuskokwak Cree 83.45 330 P P 06 07 19.5 +1.0
baz=88
H16K Elim 83.53 334 P P 06 07 20.3 +1.4
baz=88,SNR=6.3
G16K Koyuk River 83.55 335 P P 06 07 20.5 +1.6
baz=88,SNR=7.8
M14K Bethel 83.56 330 P P 06 07 20.7 +1.7
baz=88
RDOG Red Dog Mine 83.66 338 P P 06 07 20.8 +1.3
baz=88
C17K DeLong Mountai 83.74 338 P P 06 07 21.2 +1.3
baz=87
D17K Noatak River 83.74 337 P P 06 07 20.8 +0.9
baz=87
L14K Kuka Creek 83.88 331 P P 06 07 22.1 +1.5
baz=87
J14K Nanvaranak Lak 84.21 332 P P 06 07 24.0 +1.7
baz=86
M13K Dall Lake 84.26 330 P P 06 07 24.2 +1.6
baz=86
G15K Niukluk 84.28 335 P P 06 07 24.2 +1.6
baz=86
F15K North Star Dit 84.48 335 P P 06 07 25.2 +1.5
baz=86
C16K Lisburne Hills 84.56 338 P P 06 07 25.6 +1.7
baz=85
FALS False Pass 84.68 324 P P 06 07 25.7 +0.9
baz=86
K13K Kusilvak Mount 84.78 332 P P 06 07 26.2 +1.0
baz=85
ANM Nome 84.88 334 P P 06 07 26.6 +0.9
baz=85
MODS Modra-Piesok 85.18 42 *e*P P 06 07 33.2 +5.6
F14K Arctic Creek 85.20 335 P P 06 07 28.3 +1.1
baz=84
M11K Mekoryuk 85.67 330 P P 06 07 30.6 +1.0
baz=84
TNA Tin City 85.85 335 P P 06 07 31.7 +1.3
baz=83
UNV Unalaska Valle 86.57 324 P P 06 07 34.7 +0.5
baz=83
ARCES ARCESS Array B 86.65 20 P P 06 07 34.5 +0.1
comp=Z,2.4nm,0.7s,baz=285,slow=3.4,SNR=11
comp=Z,2.4nm,0.7s
GAMB Gambell 87.74 334 P P 06 07 40.7 +1.1
baz=79
SPIA Saint Paul Isl 88.20 327 P P 06 07 42.9 +1.0
baz=80
FINES FINESS Array B 88.41 28 P P 06 07 43.0 +0.2
comp=Z,3.1nm,1.0s,baz=224,slow=5.3,SNR=5.2
FINES pP pP 06 08 25.7 +2.4
comp=Z,1.1nm,0.6s,baz=266,slow=7.5,SNR=1.7
comp=Z,3.1nm,1.0s
ZALV Zalesovo Beam 116.65 14 PKP PKPdf 06 13 33.9 -0.4
comp=Z,2.2nm,0.4s,baz=289,slow=2.4,SNR=14
KURBB Kurchatov Arra 117.74 20 PKP PKPdf 06 13 36.0 -0.4
comp=Z,1.2nm,0.6s,baz=319,slow=2.2,SNR=17
MKAR Makanchi Array 122.30 20 PKP PKPdf 06 13 45.0 -0.4
comp=Z,1.7nm,0.4s,baz=314,slow=2.5,SNR=37
SONM Songino Array 125.58 0 PKP PKiKP 06 13 52.3 +0.2
comp=Z,1.1nm,0.4s,baz=315,slow=1.1,SNR=6.4
HHC Hu-ho-hao-te 132.37 355 *e*P PKPdf 06 14 04.8 -0.1
GTA2 Gaotai 133.45 8 PKP PKiKP 06 14 08.0 -0.3
STKA Stephens Creek 139.19 228 PKhKP PKPpre 06 14 10.8
comp=Z,0.7nm,0.3s,baz=314,slow=1.3,SNR=3.6
STKA PKP PKPdf 06 14 17.0 -0.6
comp=Z,1.9nm,0.5s,baz=153,slow=1.2,SNR=5.1
NJ2 Nanjing 139.70 344 *e*P PKPdf 06 14 18.0 -0.6
NJ2 pmax pmax
comp=Z,23nm,0.6s
PZH PanZhiHua 146.49 8 PKPbc PKPdf 06 14 29.8 -1.1
MORE Moreh 146.76 21 PKPbc PKPdf 06 14 31.6 +0.3
AS31 Alice Springs 149.16 234 PKPbc PKPbc 06 14 38.4 -1.1
ASAR Alice Springs 149.16 234 PKP PKPdf 06 14 34.8 -0.4
comp=Z,16nm,0.5s,baz=118,slow=3.0,SNR=83
ASAR PKPbc PKPbc 06 14 38.3 -1.3
comp=Z,16nm,0.5s,baz=109,slow=3.4,SNR=89
ASAR Alice Springs 149.16 234 PKPdf PKPdf 06 14 34.1 -1.1
ASAR PKPbc PKPbc 06 14 38.2 -1.3
WRA Warramunga Arr 150.38 241 PKP PKPdf 06 14 36.8 -0.4
comp=Z,14nm,0.4s,baz=109,slow=2.4,SNR=68
WRA PKPbc PKPbc 06 14 41.7 -0.9
comp=Z,14nm,0.4s,baz=108,slow=2.4,SNR=80
CMAR Chiang Mai Arr 153.67 17 PKP PKPdf 06 14 41.7 -0.4
comp=Z,1.8nm,0.3s,baz=306,slow=1.6,SNR=6.6
CMAR PKPbc PKiKP 06 14 50.4 +0.3
comp=Z,4.5nm,0.5s,baz=327,slow=3.5,SNR=18

IDC 28 05:56:00.1±1.9, 6°.52S×129°.22E, h0km, mb3.3/1, mbtmp3.5/4, ML3.8/3, Error ellipse: s-maj=67.3km s-min=29.0km az=80.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.98	20	Pn	Pn	05 57 31.9	+2.0
	2.6nm,0.3s,baz=192,slow=23,SNR=7.5						
	4.6nm,0.3s						
WRA	Warramunga Ar	14.23	160	Pn	Pn	05 59 22.7	-0.5
	0.5nm,0.3s,baz=346,slow=13,SNR=16						
WRA				Sn	Sn	06 01 50.9	-11
	0.3nm,0.3s,baz=335,slow=20,SNR=4.7						
	0.6nm,0.5s						
ASAR	Alice Springs	17.63	166	P	P	06 00 08.4	0.0
	0.2nm,0.3s,baz=348,slow=8.5,SNR=12						
	0.7nm,0.6s						
MKAR	Makanchi Array	67.41	327	P	P	06 06 56.7	-0.8
	0.1nm,0.4s,baz=117,slow=6.3,SNR=2.3						
	0.1nm,0.4s						

*GCG **28** 06:39:57.4±1.1, 13°.22N×90°.62W, h13km±8km, MD4.1, Presumed earthquake*
*CATAC **28** 06:39:58.6±0.3, 13°N±2°×9°1W±°, h14km±2km, M4.5/37, MLv4.5/37, Error ellipse: s-maj=4.1km s-min=1.9km az=21.9, confirmed*
*SNET **28** 06:40:00.1, 13°.41N×90°.50W, h55km, ML4.3, Presumed earthquake*
*NEIC **28** 06:40:00.8±1.9, 13°.31N±0°.07×90°.56W±0°.05, h36km±15km, mb4.1/13, Error ellipse: s-maj=10.4km s-min=6.9km az=190.0*
*IDC **28** 06:40:06.0±2.3, 13°.60N×90°.06W, h83km±16km, mb3.3/4, mbtmp3.7/5, MS3.1/6, Error ellipse: s-maj=45.0km s-min=11.9km az=50.0*

ISC 28 06:40:00.0±1.3, 13°.30N±0°.05×90°.51W±0°.03, h31km±9km, n139, σ1°45/177, mb4.1/9, MS3.2/6, 3D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	Alcaldia de Sa	0.72	42	P	Pb	06 40 13.4	-0.8
PCG5	San Vicente Pa	0.92	8	*i* P	Pn	06 40 17.8	+0.8
FG8	Yepocapa, Chim	0.95	357	*i* P	Pn	06 40 19.7	+2.3
FG8				*i* S	Sn	06 40 37.7	+7.6
FG16	Alotenango, Sa	0.97	360	*i* P	Pn	06 40 20.2	+2.4
LOAL	Lomas de Alarc	0.99	45	P	Pb	06 40 17.9	-0.8
LOAL				S	Sn	06 40 31.3	+0.4
LOAL	Lomas de Alarc	0.99	45	*e*P	Pb	06 40 17.7	-1.0
CEVE	Cerro Verde	1.01	59	P	Pb	06 40 18.4	-0.7
CEVE				S	Sn	06 40 32.6	+1.0
CEVE	Cerro Verde	1.01	59	*e*P	Pb	06 40 18.0	-1.1
CEVE				*e*S	Sb	06 40 31.8	-0.4
SLOZ	Alcaldia de Sa	1.01	44	P	Pb	06 40 18.1	-0.9
SLOZ				S	Sn	06 40 32.2	+0.8
SLOZ	Alcaldia de Sa	1.01	44	*i* P	Pb	06 40 17.8	-1.2
SLOZ				*e*S	Sn	06 40 31.6	+0.3
SBLS	San Blas	1.01	58	*e*P	Pb	06 40 18.0	-1.2
RTR	El Retiro	1.03	55	*e*P	Pb	06 40 18.4	-1.0
SNJE	San Jose	1.04	57	*e*P	Pb	06 40 18.5	-1.2
JAYA	Jayaque - finc	1.09	71	P	Pn	06 40 19.5	+0.2
JAYA				S	Sn	06 40 35.2	+1.8
JAYA	Jayaque - finc	1.09	71	*i* P	Pn	06 40 18.9	-0.4
JAYA				*i* S	Sn	06 40 36.5	+3.0
JAYA	Jayaque - finc	1.09	71	*e*P	Pn	06 40 18.8	-0.6
UNIC	Universidad Ca	1.15	54	P	Pn	06 40 20.1	0.0
UNIC				S	Sn	06 40 35.8	+0.8
LALI	Alcalda de L	1.17	81	P	Pn	06 40 20.5	+0.2
LALI	Alcalda de L	1.17	81	*i* P	Pn	06 40 20.7	+0.4
LALI				*i* S	Sn	06 40 36.9	+1.7
LALI	Alcalda de L	1.17	81	*e*P	Pn	06 40 20.0	-0.3
CEDA	San Andres	1.19	65	P	Pn	06 40 21.1	+0.4
CEDA				S	Sn	06 40 38.0	+2.2
CEDA	San Andres	1.19	65	*e*P	Pn	06 40 21.5	+0.9
PMON	Piamonte	1.23	70	P	Pb	06 40 22.8	0.0
PMON				S	Sn	06 40 39.2	+2.3
PMON	Piamonte	1.23	70	*e*P	Pn	06 40 21.5	+0.3
MAGS	Ministerio de	1.25	72	*e*P	Pn	06 40 21.5	+0.1
BOQS	Boqueron	1.27	70	*e*P	Pn	06 40 22.0	+0.2
GCG4	OSOP	1.28	359	*i* P	Pn	06 40 21.9	-0.1
PIC2	El Picacho	1.30	70	*e*P	Pn	06 40 22.5	+0.2
UEES	Universidad Ev	1.30	71	P	Pn	06 40 22.7	+0.5
UEES				S	Sb	06 40 41.2	+0.8
UEES	Universidad Ev	1.30	71	*e*P	Pn	06 40 22.3	+0.1
SEMO	Seminario San	1.31	72	P	Pn	06 40 23.0	+0.7
SEMO				S	Sb	06 40 42.1	+1.4
QUEZ	Alcaldia de Qu	1.31	66	*e*P	Pn	06 40 22.8	+0.5
PANCS	Alcalda de	1.33	76	P	Pn	06 40 23.7	+1.2
PANCS				S	Sb	06 40 41.4	+0.2
UTEC	Universidad Te	1.33	72	P	Pn	06 40 23.5	+0.9
UTEC				S	Sb	06 40 42.5	+1.3
LOMA	Loma Larga	1.35	75	*e*P	Pn	06 40 23.6	+0.8
IGN	Direccin Gen	1.37	72	P	Pn	06 40 24.0	+0.9
IGN				S	Sb	06 40 43.6	+1.4
STG5	El Palmar, Qui	1.37	323	*i* P	Pb	06 40 26.8	+1.7
STG5				*i* S	Sb	06 40 50.3	+8.1
STG8	El Palmar, Qui	1.41	325	*i* P	Pb	06 40 27.9	+2.0
STG2	El Palmar, Qui	1.41	323	*i* P	Pb	06 40 28.1	+2.3
LFU	La Fuente	1.43	72	*e*P	Pn	06 40 24.9	+1.0
LFRS	El Faro	1.44	77	*e*P	Pn	06 40 24.6	+0.4
LBRS	Las Brisas	1.49	73	*e*P	Pn	06 40 25.4	+0.6
SJTE	Alcalda de S	1.49	78	*e*P	Pn	06 40 25.1	+0.3
MTO3	Montecristo	1.56	45	Pn	Pn	06 40 26.3	+0.5
MTO3	Montecristo	1.56	45	P	Pn	06 40 26.5	+0.6
MTO3				S	Sb	06 40 47.9	-0.1
MTO3	Montecristo	1.56	45	*i* P	Pn	06 40 26.3	+0.5
MTO3	Montecristo	1.56	45	*i* P	Pn	06 40 26.4	+0.5
PAVA	Las Pavas	1.58	75	P	Pn	06 40 27.1	+1.0
PAVA				S	Sb	06 40 49.1	+0.7
PAVA	Las Pavas	1.58	75	*e*P	Pn	06 40 27.0	+1.0
COEG	Centro de Oper	1.62	78	P	Pn	06 40 28.1	+1.6
COEG				S	Sb	06 40 49.8	+0.5
COEG	Centro de Oper	1.62	78	*e*P	Pn	06 40 27.4	+0.9
RTAL	Retalhuleu	1.68	317	Pn	Pn	06 40 25.4	-1.8
RTAL	Retalhuleu	1.68	317	P	Pn	06 40 25.8	-1.5
RTAL				S	Sn	06 40 47.4	-0.3
ESQI	Esquipulas	1.69	42	Pn	Pn	06 40 27.9	+0.4
ESQI	Esquipulas	1.69	42	P	Pn	06 40 28.3	+0.7
ESQI				S	Sb	06 40 50.3	-1.1
ESQI	Esquipulas	1.69	42	*e*P	Pn	06 40 28.2	+0.6
APG	El Apazote	1.69	1	P	Pn	06 40 28.8	+1.1
	64nm,0.6s,baz=170,slow=10,SNR=280						
APG				S	Sb	06 40 50.1	-1.6
	29nm,0.5s,baz=79,slow=18,SNR=14						
APG				LR	LR	06 41 13.3	
	comp=Z,49nm,19.4s,baz=268,slow=46						
APG	El Apazote	1.69	1	*i* P	Pn	06 40 28.6	+0.8
APG				*i* S	Sb	06 40 51.5	-0.2
ZAFR2	Estanzuela, Za	1.70	41	*i* P	Pb	06 40 31.0	+0.4
TECO	Alcaldia de Te	1.70	82	P	Pn	06 40 28.7	+1.1
TECO				S	Sb	06 40 51.1	-0.5
TECO	Alcaldia de Te	1.70	82	*e*P	Pn	06 40 28.4	+0.8
SOKI	Kika Raxquin	1.74	330	*i* P	Pn	06 40 28.8	+0.3
SOKI				*i* S	Sb	06 40 53.1	-0.3
LLGN	La Laguna	1.75	60	P	Pn	06 40 28.8	+0.5
LLGN				S	Sb	06 40 53.0	-0.1
SCLA	Alcaldia de Sa	1.78	77	P	Pn	06 40 29.6	+0.9
SCLA				S	Sb	06 40 53.8	-0.2
SCLA	Alcaldia de Sa	1.78	77	*e*P	Pn	06 40 29.3	+0.6
P5NO	Presa 5 de nov	1.83	68	P	Pn	06 40 30.0	+0.5
P5NO				S	Sb	06 40 54.4	-1.1

P5NO Presa 5 de nov 1.83 68 eP Pn 06 40 29.9 +0.5
QUEO Labor Ovalle 1.84 328 i P Pn 06 40 30.2 +0.4
PACA Pacayal 2.13 85 P Pn 06 40 35.4 +1.7
PACA S Sb 06 41 02.7 -1.5
PACA Pacayal 2.13 85 eP Pn 06 40 34.3 +0.6
AVCB Coban 2.16 3 i P Pn 06 40 36.2 +2.1
RANC El Ranchito 2.17 86 P Pn 06 40 35.2 +1.1
RANC S Sn 06 41 02.6 +2.6
SMCA Catarina 2.17 316 i P Pn 06 40 32.3 -1.8
HUEH Huehuetenango 2.23 334 Pn Pn 06 40 35.6 +0.5
HUEH Huehuetenango 2.23 334 i P Pn 06 40 36.2 +1.1
THIG 2.34 313 i P Pn 06 40 35.6 -0.8
THIG i S Sn 06 41 04.1 +0.1
INTP Intipuca 2.39 92 eP Pn 06 40 37.8 +0.7
INTHN La Esperanza I 2.54 66 P Pn 06 40 41.3 +1.9
LCND La Caada 2.55 89 P Pn 06 40 39.8 +0.5
LCND La Caada 2.55 89 eP Pn 06 40 39.6 +0.3
MARCA Marcala la Paz 2.55 70 P Pn 06 40 40.2 +0.7
MARCA S Sn 06 41 12.8 +3.3
MARCA Marcala la Paz 2.55 70 i P Pn 06 40 40.0 +0.6
CNCH Conchagua 2.60 90 P Pn 06 40 40.9 +0.7
CNCH S Sn 06 41 14.7 +3.9
CNCH Conchagua 2.60 90 eP Pn 06 40 40.5 +0.4
CSGN Cosiguina Volc 2.89 96 P Pn 06 40 45.3 +1.3
CSGN S Sn 06 41 20.9 +3.1
POTN Potosi Cosigui 2.94 95 Pn Pn 06 40 45.0 +0.3
POTN Potosi Cosigui 2.94 95 P Pn 06 40 45.7 +1.0
POTN S Sn 06 41 22.1 +3.1
TGUH Tegucigalpa,Un 3.23 76 Pn Pn 06 40 48.6 -0.2
TGUH Tegucigalpa,Un 3.23 76 P Pn 06 40 48.9 +0.1
TGUH S Sn 06 41 29.1 +2.7
CCIG Comitan 3.36 332 Pn Pn 06 40 51.6 +1.0
CCIG Comitan 3.36 332 i P Pn 06 40 52.3 +1.7
YUSH Yuscaran 3.62 79 P Pn 06 40 54.8 +0.7
PETF Flores 3.65 10 Pn Pn 06 40 53.4 -1.0
PETF Flores 3.65 10 P Pn 06 40 55.8 +1.4
PETF Flores 3.65 10 i P Pn 06 40 55.9 +1.4
HERN Volcan Telica 3.65 100 Pn Pn 06 40 54.9 +0.4
HERN Volcan Telica 3.65 100 P Pn 06 40 55.3 +0.8
HERN S Sn 06 41 39.5 +2.9
HOYN Al Sur del Vol 3.66 101 P Pn 06 40 56.7 +2.1
HOYN S Sn 06 41 39.9 +3.2
POLN Al Sur del Vol 3.66 100 P Pn 06 40 55.4 +0.8
CNGA Al SSO del Vol 3.80 102 P Pn 06 40 58.4 +1.9
CNGN Cerro Negro 3.80 102 Pn Pn 06 40 56.8 +0.2
CNGN Cerro Negro 3.80 102 P Pn 06 40 57.8 +1.3
CNGN S Sn 06 41 43.3 +3.1
OCON Estacion meteo 3.94 85 P Pn 06 40 59.0 +0.5
OCON S Sn 06 41 45.5 +1.9
MOM3 MOM3 3.97 101 P Pn 06 40 59.4 +0.6
MOM3 S Sn 06 41 47.5 +3.2
COPN Copaltepe 3.98 106 P Pn 06 40 59.2 +0.2
MGAN Managua 4.31 105 Pn 06 41 02.5 -1.0
BOAB BOACO BROADBAN 4.80 100 Pn Pn 06 41 09.9 -0.3
SIUN Universidad Ur 5.59 85 Pn Pn 06 41 21.6 +0.5
CMIG Matias Romero 5.66 312 P Pn 06 41 22.0 -0.1
19nm,0.7s,baz=120,slow=10,SNR=18
CMIG S Sn 06 42 29.5 +3.4
24nm,0.7s,baz=3.3,slow=16,SNR=5.1
JUD3 Juan Diaz 3 5.78 122 Pn Pn 06 41 24.5 +0.7
JTS Las Juntas de 6.21 118 P Pn 06 41 31.5 +1.9
12nm,0.4s,baz=322,slow=17,SNR=12
JTS S Sn 06 42 41.0 +1.4
8.2nm,0.4s,baz=267,slow=21,SNR=1.4
JTS Las Juntas de 6.21 118 Pn Pn 06 41 30.9 +1.2
TEIG Tepich 7.21 17 Pn Pn 06 41 44.8 +1.4
RAFA San Farael, Vo 7.35 116 Pn Pn 06 41 47.0 +1.4
EGUB Earth Gu¡pi 7.44 114 Pn Pn 06 41 46.9 +0.4
BRU2 Volcan 8.88 119 Pn Pn 06 42 08.0 +1.5
LRAL Lakeview Retre 19.91 9 P P 06 44 28.5 -0.6
SDV Santo Domingo 19.99 101 P P 06 44 28.6 -1.8
SDV IAmb IAmb 06 44 36.6
comp=Z,4.2nm,0.7s
TXAR Lajitas Array 20.09 325 P P 06 44 32.8 +1.5
comp=Z,1.3nm,0.9s,baz=146,slow=14,SNR=7.2
comp=Z,1.3nm,0.9s
TX31 Lajitas Ar. Si 20.09 325 P P 06 44 32.4 +1.1
Y52A Lilburn 21.30 15 P P 06 44 44.0 -0.2
Y52A IAmb IAmb 06 45 00.3
comp=Z,6.1nm,0.8s
LPIG La Paz 21.59 303 LR LR 06 52 46.8
comp=Z,31nm,20.1s,baz=9.0,slow=35
VHRN Van Horn 21.93 325 P 06 44 51.7 +0.5
SWET Sewanee 22.21 10 P P 06 44 53.8 -0.2
SWET IAmb IAmb 06 45 08.9
comp=Z,5.0nm,0.7s
MNTX Cornudas Mount 22.85 326 P 06 45 00.3 -0.5
MNTX IAmb IAmb 06 45 27.3
comp=Z,7.7nm,1.4s
TKL Tuckaleechee C 23.07 14 LR LR 06 54 42.2
comp=Z,90nm,18.1s,baz=184,slow=39
T47A Sharon Grove 23.79 7 P P 06 45 09.6 -0.4
SJG San Juan 23.92 75 LR LR 06 54 28.1
comp=Z,57nm,19.3s,baz=283,slow=37
S39A Bolivar 24.42 355 P P 06 45 15.3 -0.6
S39A IAmb IAmb 06 45 25.9
comp=Z,4.8nm,0.7s
121A Cookes Peak, D 24.82 323 P P 06 45 20.8 +0.9
121A IAmb IAmb 06 45 23.6
comp=Z,5.6nm,0.8s
WCI Wyandotte Cave 25.11 8 P P 06 45 20.7 -1.4
ANMO Albuquerque 25.93 329 LR LR 06 55 53.6
comp=Z,9.6nm,20.3s,baz=116,slow=37
SADO Sadowa 32.83 15 LR LR 07 00 24.0
comp=Z,51nm,18.5s,baz=246,slow=38
MACA Manacapuru-AM 33.82 117 P P 06 46 39.6 -0.2
NVAR Mina Array Bea 35.13 320 P P 06 46 53.6 +2.5
comp=Z,1.2nm,0.8s,baz=132,slow=6.8,SNR=8.1
comp=Z,1.2nm,0.8s
LHV Little Huntoon 35.14 320 P P 06 46 51.1 +0.2
LHV IAmb IAmb 06 47 27.6
comp=Z,4.6nm,1.2s
SCHQ Schefferville 45.39 19 P P 06 48 12.2 -3.4
comp=Z,1.9nm,0.6s,baz=218,slow=16,SNR=4.5
comp=Z,1.9nm,0.6s
YKA Yellowknife Ar 52.04 346 P P 06 49 04.7 -1.8
comp=Z,0.2nm,0.6s,baz=152,slow=7.2,SNR=2.1
comp=Z,0.2nm,0.6s
FRB Frobisher Bay 52.68 12 LR LR 07 11 30.7
comp=Z,31nm,20.4s,baz=118,slow=36

*IDC **28** 06:53:03.6±0.7, 15°.88S×167°.27E, h0km, mb4.3/12, mbtmp4.3/14, ML5.2/2, MS3.6/10, Error ellipse: s-maj=24.8km s-min=18.6km az=137.0*
*NOU **28** 06:53:05.3, 15°.89S×167°.13E, h13km, MLv5.0/10, Vanuatu Islands*
*NEIC **28** 06:53:09.3±1.0, 16°.05S±0°.1×167°.3E±0°.2, h35km±2km, mb4.8/21, Error ellipse: s-maj=26.2km s-min=15.9km az=114.0*

ISC 28 06:53:09.3±0.5, 16°03S±0°07×167°28E±0°08, h39km, n64, σ0 93/58, mb4.6/21, MS3.5/10, 2C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	1.90	153	P	Pn	06 53 40.8	+1.6
RTV	Rentapao	2.07	148	P	Pn	06 53 42.4	+0.9
MARNC	Mare, Loyalty	5.47	173	P	Pn	06 54 28.5	+0.2
MARNC	Mare, Loyalty	5.47	173	Pn	Pn	06 54 29.2	+0.9
YATNC	Mamie plateau,	6.01	183	P	Pn	06 54 34.7	-1.0
DZM	Mont Dzumac	6.06	187	Pn	Pn	06 54 36.4	-0.1
DZM	14nm,0.3s,baz=327,slow=22,SNR=181			Sn	Sn	06 55 43.2	-1.5
	12nm,0.3s,baz=137,slow=23,SNR=8.6						
ONTNC	130nm,0.7s Ouen Toro	6.29	187	P	Pn	06 54 39.9	+0.3
ONTNC	Ouen Toro	6.29	187		Pn	06 54 39.9	+0.3
OUENC	Ouen Island, N	6.37	184	P	Pn	06 54 41.0	+0.4
OUENC	Ouen Island, N	6.37	184		Pn	06 54 40.7	+0.1
HNR	Honiara	9.70	312	LR	LR	06 58 46.1	
MSVF	comp=Z,15nm,20.7s,baz=254,slow=36 Nonsavu	10.45	101	Pn	Pn	06 55 34.0	-2.7
	1.2nm,0.3s,baz=278,slow=24,SNR=1.9						
FUTU	3.5nm,0.5s Fugatoga	14.20	85	Pn	Pn	06 56 27.0	-0.9
LHI	Lord Howe Isla	17.14	204	P	P	06 57 08.0	+0.8
LHI	comp=Z,114nm,1.2s			IAmb	IAmb	06 57 10.4	
AFI	Afiamalu	20.34	87	LR	LR	07 03 37.2	
CTA	comp=Z,96nm,18.3s,baz=258,slow=31 Charters Tower	20.39	255	P	P	06 57 43.3	+0.3
CTA	comp=Z,1.9nm,0.3s,baz=86,slow=9.4,SNR=4.3			LR	LR	07 04 26.5	
	comp=Z,70nm,18.4s,baz=70,slow=33						
	comp=Z,1.9nm,0.3s						
RPZ	Rata Peaks	27.78	174	LR	LR	07 09 48.1	
	comp=Z,124nm,18.9s,baz=134,slow=36						
STKA	Stephens Creek	28.18	231	P	P	06 58 57.5	-0.6
	comp=Z,0.7nm,0.4s,baz=54,slow=12,SNR=3.6						
STKA				LR	LR	07 09 13.1	
	comp=Z,88nm,18.3s,baz=40,slow=34						
	comp=Z,0.7nm,0.4s						
WB0	Warramunga Arr	31.48	258	P	P	06 59 27.4	-0.3
WRA	Warramunga Arr	31.54	258	P	P	06 59 27.8	-0.4
	comp=Z,1.4nm,0.7s,baz=87,slow=9.1,SNR=12						
	comp=Z,1.4nm,0.7s						
WRA	Warramunga Arr	31.54	258	P	P	06 59 27.2	-0.9
AS31	Alice Springs	32.24	251	P	P	06 59 34.3	0.0
ASAR	Alice Springs	32.24	251	P	P	06 59 34.2	0.0
	comp=Z,7.7nm,0.7s,baz=76,slow=8.8,SNR=43						
ASAR				LR	LR	07 11 40.6	
	comp=Z,67nm,18.7s,baz=113,slow=35						
	comp=Z,7.7nm,0.7s						
ASAR	Alice Springs	32.24	251	P	P	06 59 33.8	-0.5
SIJI	Sorong	38.57	289	LR	LR	07 18 03.5	
	comp=Z,74nm,18.8s,baz=100,slow=39						
FITZ	Fitzroy Crossi	39.80	261	LR	LR	07 16 40.4	
	comp=Z,166nm,18.3s,baz=100,slow=36						
QSPA	South Pole Qui	74.00	180	P	P	07 04 42.6	+1.8
	comp=Z,5.4nm,0.8s,baz=5.5,slow=1.0,SNR=14						
	comp=Z,5.4nm,0.8s						
QSPA	South Pole Qui	74.00	180	P	P	07 04 42.1	+1.3
QSPA				IAmb	IAmb	07 04 43.5	
	comp=Z,6.8nm,0.9s						
CMAR	Chiang Mai Arr	75.49	294	P	P	07 04 50.9	+0.9
	comp=Z,1.0nm,0.3s,baz=110,slow=4.7,SNR=4.8						
	comp=Z,1.0nm,0.3s						
CMAR	Chiang Mai Arr	75.49	294	P	P	07 04 50.1	+0.1
ULN	Ulaanbaatar	83.19	324	P	P	07 05 32.4	+0.9
ULN				IAmb	IAmb	07 05 37.0	
	comp=Z,7.2nm,0.9s						
SONM	Songino Array	83.54	324	P	P	07 05 33.5	+0.1
	comp=Z,4.0nm,1.0s,baz=143,slow=5.4,SNR=12						
	comp=Z,4.0nm,1.0s						
SONM	Songino Array	83.54	324	P	P	07 05 33.7	+0.3
SONM				IAmb	IAmb	07 05 35.1	
	comp=Z,5.0nm,1.1s						
SLKM	Skilak Lake	83.55	20		P	07 05 33.1	+0.1
BILL	Bilibino	83.84	360		P	07 05 34.5	+0.3
F17K	Baldwin Pennin	85.50	12		P	07 05 43.5	+0.9
H19K	Roundabout Mou	85.79	14	P	P	07 05 44.9	+0.8
H19K				IAmb	IAmb	07 05 46.6	
	comp=Z,7.4nm,0.9s						
G19K	Purcell Mounta	86.15	14	P	P	07 05 46.4	+0.5
E18K	Tukpahlearik C	86.48	12		P	07 05 47.9	+0.4
F19K	Shaleruckik Mo	86.57	13		P	07 05 47.9	-0.1
F19K				IAmb	IAmb	07 05 49.8	
	comp=Z,5.4nm,0.9s						
E19K	Redstone River	87.21	13	P	P	07 05 51.6	+0.5
C18K	Utukok River	87.43	11	P	P	07 05 52.4	+0.2
C18K				IAmb	IAmb	07 05 54.0	
	comp=Z,5.3nm,0.8s						
PFO	Pinyon Flats O	87.75	54	LR	LR	07 41 09.0	
	comp=Z,50nm,18.0s,baz=216,slow=33						
ILAR	Eielson Array	87.75	18	P	P	07 05 52.0	-1.7
	comp=Z,2.4nm,0.8s,baz=237,slow=5.0,SNR=31						
	comp=Z,2.4nm,0.8s						
D19K	Kuna River	87.89	12		P	07 05 54.6	+0.2
D19K				IAmb	IAmb	07 05 56.3	
	comp=Z,3.4nm,0.9s						
NVAR	Mina Array Bea	88.11	49	P	P	07 05 57.9	+1.5
	comp=Z,0.5nm,0.8s,baz=238,slow=5.8,SNR=2.7						
NVAR				LR	LR	07 40 51.7	
	comp=Z,34nm,18.1s,baz=244,slow=32						
	comp=Z,0.5nm,0.8s						
E21K	Killik River	88.73	13	P	P	07 05 58.5	+0.2
E21K				IAmb	IAmb	07 06 00.6	
	comp=Z,4.2nm,0.8s						
TROLL	Troll, Antarti	91.57	185	P	P	07 06 13.2	+1.4
VNA3	Neumayer Olymp	92.92	181	⇑P	P	07 06 18.7	+0.8
	comp=Z,5.2nm,0.7s						
VNA2	Neumayer--Watz	93.19	182	⇑P	P	07 06 20.6	+1.5
	comp=Z,5.0nm,0.8s,baz=171,slow=3.5						
ANMO	Albuquerque	96.03	56	LR	LR	07 42 55.5	
	comp=Z,40nm,20.0s,baz=242,slow=31						
MKAR	Makanchi Array	98.14	316	P	P	07 06 40.7	-1.4
	comp=Z,0.3nm,0.6s,baz=98,slow=6.2,SNR=3.8						
	comp=Z,0.3nm,0.6s						
MKAR	Makanchi Array	98.14	316	P	P	07 06 41.4	-0.8
MAKZ	Makanchi	98.36	316	P	P	07 06 42.0	-1.1
A36M	Sachs Harbour	98.41	17	P	P	07 06 42.4	-0.3
A36M				IAmb	IAmb	07 06 44.0	
	comp=Z,3.1nm,0.9s						
ZAA0	Zalesovo Array	98.44	324	P	P	07 06 43.1	-0.1
ZAA0				IAmb	IAmb	07 07 22.0	
	comp=Z,3.5nm,1.2s						
ZALV	Zalesovo Beam	98.44	324	P	P	07 06 42.4	-0.8
	comp=Z,0.7nm,0.5s,baz=83,slow=2.8,SNR=2.0						
	comp=Z,0.7nm,0.5s						
YKA	Yellowknife Ar	98.69	27	P	P	07 06 42.8	-1.4
	comp=Z,0.9nm,0.9s,baz=265,slow=5.1,SNR=17						
	comp=Z,0.9nm,0.9s						
ARCES	ARCESS Array B	121.50	345	PKP	PKPdf	07 11 57.7	-0.3
	comp=Z,3.6nm,0.9s,baz=77,slow=1.3,SNR=5.3						
FINES	FINESS Array B	126.92	338	PKP	PKiKP	07 12 09.2	+0.2
	comp=Z,2.1nm,0.9s,baz=357,slow=2.8,SNR=4.5						
AKASG	Malin Array Be	131.81	325	PKP	PKiKP	07 12 19.4	+0.3
	comp=Z,0.7nm,0.6s,baz=50,slow=1.6,SNR=4.7						
KEST	Kesra	152.20	319	PKPbc	PKiKP	07 13 02.2	+0.7
	comp=Z,4.2nm,0.6s,baz=152,slow=3.4,SNR=10.0						
ESDC	Sonseca Array	155.23	344	PKPab	PKPab	07 13 22.8	-0.8
	comp=Z,1.0nm,0.8s,baz=3.2,slow=4.9,SNR=7.5						
TORD	Torodi Ar. Bea	165.75	260	PKPab	PKPab	07 14 08.7	-1.6
	comp=Z,1.3nm,0.8s,baz=105,slow=3.3,SNR=7.6						

KRSC 28 07:05:41.3±1.5, 49°38N×158°97E, h40km±35km, MI3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.25	307	eS	Sn	07 06 43.1	+0.5
KDTR	Khodutka, Kamc	2.50	347	eP	Pn	07 06 22.1	+2.7
KDTR				eS	Sn	07 06 51.9	+3.3
RUS	Russkaya	3.07	355	eP	Pn	07 06 30.6	+3.3
RUS				eS	Sn	07 07 06.7	+4.0
ASAK	Asacha	3.08	348	eP	Pn	07 06 31.6	+4.1
MTVR	Mutnovka	3.15	351	eP	Pn	07 06 31.8	+3.3
GRL	Gorelyy	3.23	350	eP	Pn	07 06 33.4	+3.9
GRL				eS	Sn	07 07 11.1	+4.3
KRMR	Karymshinskiy	3.50	352	eS	Sn	07 07 18.1	+4.9
DALK	Dalny	3.66	358	eP	Pn	07 06 39.3	+4.0
SPN	Mys Shipunski	3.79	10	eP	Pn	07 06 41.2	+4.2
SMAR	Somma	3.89	359	eP	Pn	07 06 43.6	+4.8
AVH	Avacha	3.90	358	eP	Pn	07 06 43.4	+4.7
SDLR	Sedlovina	3.91	359	eP	Pn	07 06 42.5	+3.7
KOK	Koryaka	3.93	357	eP	Pn	07 06 43.7	+4.7
KRX	Arik	3.99	357	eP	Pn	07 06 44.6	+4.6
KBTR	Krutoberegovo	7.23	17	eP	Pn	07 07 29.1	+4.9

*IDC **28** 07:11:33.2±1.6, 9°.26S×113°.13E, h0km, mb4.1/8, mbtmp4.1/9, ML3.9/1, MS3.3/6, Error ellipse: s-maj=61.9km s-min=13.4km az=48.0*
*DJA **28** 07:11:38.1±0.3, 10°S±2°×11°.3E±°, h10km, M4.4/32, mB4.7/1, mb4.4/1, MLv4.4/32, Mw(mB)4.0/1*
*NEIC **28** 07:11:40.8±1.2, 9°.4S±0°.1×113°.00E±0°.07, h60km±5km, mb4.4/16, Error ellipse: s-maj=16.4km s-min=9.3km az=191.0*

ISC 28 07:11:37.2±0.6, 9°71S±0°07×112°87E±0°05, h36km, n76, σ2 9/09/73, mb4.3/14, MS3.7/4, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAGI	Jajag, Banyuwa	1.76	46	P	Pn	07 12 05.7	+0.5
JAGI	Jajag, Banyuwa	1.76	46		Pn	07 12 05.2	0.0
JAGI	Jajag, Banyuwa	1.76	46	P	Pn	07 12 05.1	0.0
JAGI				S	Sn	07 12 27.1	+0.7
BLJI	Banyuglugur	2.07	20	P	Pn	07 12 11.1	+1.6
BLJI				S	Sn	07 12 37.1	+3.0
BYJI	Banyuwangi	2.08	45	P	Pn	07 12 11.3	+1.7
SNJI	Sawahan-Nganju	2.21	330	P	Pn	07 12 13.2	+1.7
SNJI				S	Sn	07 12 41.1	+3.5
PCJI	Pacitan	2.25	312	P	Pn	07 12 13.3	+1.4
ABJI	Asem Bagus	2.33	35	P	Pn	07 12 15.4	+2.5
RTBI	Rangdo, Negare	2.39	59	P	Pn	07 12 15.5	+1.7
IGBI	Denpasar	2.41	69	P	Pn	07 12 16.1	+2.0
IGBI				S	Sn	07 12 45.8	+3.4

DNP Denpasar 2.52 66 P Pn 07 12 18.1 +2.5
NGJI Ngawi 2.71 329 P Pn 07 12 22.9 +4.7
SRBI Singaraja 2.82 55 P Pn 07 12 21.5 +1.8
KMMI Kalianget 2.85 22 P Pn 07 12 23.1 +2.9
UGM Wanagama 2.93 307 P Pn 07 12 23.6 +2.3
UGM Wanagama 2.93 307 07 12 23.2 +1.9
UGM Wanagama 2.93 307 P Pn 07 12 23.2 +1.9
KHKI Kahang-Kahang 3.01 64 P Pn 07 12 25.4 +3.0
TBJI Tambak Boyo 3.04 340 P Pn 07 12 25.2 +2.4
YOGI Yogyakarta 3.17 306 P Pn 07 12 26.5 +2.0
KLNI Mataram 3.43 68 P Pn 07 12 30.7 +2.6
SMRI Semarang 3.57 317 P Pn 07 12 32.8 +2.7
SMRI Semarang 3.57 317 07 12 32.3 +2.2
SMRI Semarang 3.57 317 P Pn 07 12 33.0 +2.9
TWSI Taliwang, Sumb 4.07 77 P Pn 07 12 39.8 +2.8
KPJI Karang Pucung 4.56 301 P Pn 07 12 46.7 +3.1
PLAI Plampang 4.92 80 P Pn 07 12 50.5 +1.9
PLAI Plampang 4.92 80 P Pn 07 12 51.3 +2.7
DBNI Kabupaten Domp 5.50 78 P Pn 07 12 59.2 +2.5
BBJI Bungbulang 5.63 293 P Pn 07 13 01.1 +2.7
BBJI Bungbulang 5.63 293 Pn 07 13 01.5 +3.1
LEM Lembang 5.94 298 LR LR 07 15 17.3
comp=Z,79nm,20.2s,baz=60,slow=38
XMI Christmas Isla 7.11 263 P Pn 07 13 20.3 +1.5
KAPI Kappang 8.26 56 LR LR 07 16 39.8
comp=Z,47nm,20.4s,baz=212,slow=39
KAPI Kappang 8.26 56 Pn Pn 07 13 35.3 +0.8
MNAI Manna 11.18 298 Pn Pn 07 14 15.4 +0.7
SOEI Soe 11.23 91 Pn Pn 07 14 15.1 -0.3
SBUM Sibu 12.09 357 Pn 07 14 27.9 +0.9
MBWA Marble Bar 13.16 151 P Pn 07 14 40.6 -1.1
PSA00 Pilbara Seismi 13.57 151 P Pn 07 14 45.6 -1.6
FITZ Fitzroy Crossi 14.93 125 Pn Pn 07 15 04.8 -1.0
0.4nm,0.3s,baz=303,slow=7.5,SNR=7.2
FITZ Sn Sn 07 17 38.3 -12
0.4nm,0.3s,baz=84,slow=13,SNR=3.5
1.3nm,0.4s
MTN Manton Dam 18.18 102 P P 07 15 47.4 +0.5
FAKI Fak Fak 20.39 72 P P 07 16 09.1 -2.1
FAKI IAmb IAmb 07 16 13.8
comp=Z,16nm,0.9s
WB0 Warramunga Arr 23.06 118 P P 07 16 40.3 +0.6
WRA Warramunga Arr 23.08 119 P P 07 16 41.2 +1.3
comp=Z,0.8nm,0.5s,baz=292,slow=11,SNR=11
WRA S S 07 20 53.9 +5.2
comp=Z,0.4nm,0.9s,baz=220,slow=14,SNR=1.8
comp=Z,0.8nm,0.5s
WRA Warramunga Arr 23.08 119 P P 07 16 41.1 +1.1
AS31 Alice Springs 24.41 127 P 07 16 54.6 +2.0
ASAR Alice Springs 24.41 127 P P 07 16 54.8 +2.2
comp=Z,2.1nm,0.6s,baz=302,slow=8.7,SNR=39
ASAR S S 07 21 20.3 +10
comp=Z,0.2nm,0.7s,baz=327,slow=22,SNR=2.4
comp=Z,2.1nm,0.6s
ASAR Alice Springs 24.41 127 P P 07 16 55.4 +2.8
CMAR Chiang Mai Arr 31.18 334 P P 07 17 51.2 -1.8
comp=Z,1.3nm,0.4s,baz=169,slow=8.0,SNR=12
comp=Z,1.3nm,0.4s
STKA Stephens Creek 34.56 134 P P 07 18 25.0 +2.5
comp=Z,1.5nm,0.7s,baz=292,slow=8.0,SNR=4.2
comp=Z,1.5nm,0.7s
YHNB Yeheng 35.16 14 P P 07 18 26.0 -1.8
H08S2 Diego Garcia H 39.95 270 T T 08 02 11.8
baz=95,slow=75,SNR=4.4
H08S3 Diego Garcia H 39.97 270 T T 08 02 09.8
baz=95,slow=75,SNR=4.2
H08S1 Diego Carcia H 39.97 270 T T 08 02 04.8
baz=95,slow=75,SNR=4.6
SHL Shillong 40.58 330 P P 07 19 12.6 -1.1
SHL IAmb IAmb 07 19 13.7
comp=Z,7.9nm,0.6s
EVN Everest 45.14 327 P 07 19 50.4 -0.8
EVN IAmb IAmb 07 19 54.2
comp=Z,3.2nm,0.9s
JGF Kuroka 50.65 26 P P 07 20 31.1 -1.9
MJAR Matsushiro Arr 51.81 26 P P 07 20 38.9 -2.7
comp=Z,2.6nm,0.7s,baz=197,slow=8.3,SNR=6.8
comp=Z,2.6nm,0.7s
JTM Tenmabayashi 56.58 25 P P 07 21 14.6 -1.7
NIL Nilore 57.24 321 P 07 21 19.5 -1.7
SONM Songino Array 57.57 355 P P 07 21 23.1 -0.3
comp=Z,1.6nm,0.5s,baz=174,slow=8.6,SNR=10.0
comp=Z,1.6nm,0.5s
SONM Songino Array 57.57 355 P P 07 21 22.8 -0.6
SONM IAmb IAmb 07 21 23.7
comp=Z,1.6nm,0.7s
KDJ Kajisay 61.08 330 P 07 21 47.8 0.0
KDJ IAmb IAmb 07 21 49.2
comp=Z,3.0nm,0.7s
BOOM Boomskoye usch 61.95 330 P P 07 21 53.4 -0.3
BOOM IAmb IAmb 07 21 54.1
comp=Z,1.2nm,0.8s
MKAR Makanchi Array 62.52 337 P P 07 21 56.6 -0.6
comp=Z,2.5nm,0.5s,baz=151,slow=6.4,SNR=39
MKAR LR LR 07 50 30.1
comp=Z,46nm,18.7s,baz=0.5,slow=38
comp=Z,2.5nm,0.5s
MKAR Makanchi Array 62.52 337 P P 07 21 56.2 -1.0
AAK Ala-Archa 62.79 329 LR LR 07 53 26.9
comp=Z,52nm,18.1s,baz=122,slow=40
KKAR Karatay Array 65.20 327 P P 07 22 14.3 -0.6
ZALV Zalesovo Beam 67.72 343 P P 07 22 29.5 -1.2
comp=Z,2.1nm,0.5s,baz=154,slow=5.1,SNR=7.1
comp=Z,2.1nm,0.5s
ZALV Zalesovo Beam 67.72 343 P P 07 22 29.2 -1.5
AB31 Akbulak array 74.76 327 P 07 23 13.4 -0.1
AB31 IAmb IAmb 07 23 14.1
comp=Z,5.9nm,0.8s
ABKAR Akbulak array 74.76 327 P 07 23 13.1 -0.4
ARTI Arti 79.67 333 LR LR 08 01 21.2
comp=Z,22nm,19.2s,baz=80,slow=38
TSUM Tsumeb 91.78 250 LR LR 08 04 18.1
comp=Z,41nm,18.2s,baz=159,slow=34
D20K Etivluk River 99.16 22 P Pdif 07 25 13.6 -0.9
D20K IAmb IAmb 07 25 16.3
comp=Z,1.3nm,1.1s

*NEIC **28** 07:22:60.0±0.8, 17°.52N±0°.08×122°.3E±0°.1, h18km±5km, mb4.4/37, Error ellipse: s-maj=17.1km s-min=11.2km az=77.0*
*MAN **28** 07:23:00.0, 17°.62N×122°.27E, h31km, MS4.2*
MAN INTENSITY III - MACONACON & DIVILACAN ISABELA.
*IDC **28** 07:23:03.8±2.1, 17°.54N×122°.42E, h55km±20km, mb4.0/22, mbtmp4.3/23, ML4.5/2, MS3.3/11, Error ellipse: s-maj=18.0km s-min=10.5km az=87.0*

ISC 28 07:23:01.3±0.4, 17°59N±0°04×122°36E±0°05, h31km, n99, σ1 8/20/96, mb4.4/42, MS3.3/8, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABRA	Dolores	1.57	272	iP	Pn	07 23 26.0	-1.2
ABRA				iS	Sn	07 23 45.3	-1.1
PIP	Pasuquin	1.81	294	eP	Pn	07 23 29.4	-1.0
PIP				iS	Sn	07 23 51.7	-0.7
SIPP	Brgy, Tapao	1.84	281	eP	Pn	07 23 30.2	-0.7
SIPP				eS	Sn	07 23 50.0	-3.2
BOLP	Bolinao	2.63	243	iP	Pn	07 23 42.7	+1.0
BOLP				iS	Sn	07 24 15.5	+2.9
TGY	Tagaytay City	3.73	202	P	Pn	07 23 59.3	+2.5
	121nm,0.3s,baz=38,slow=23,SNR=8.4						
TGY				S	Sn	07 24 42.0	+2.3
	463nm,0.6s,baz=316,slow=1.6,SNR=4.6						
TGY	Tagaytay City	3.73	202	eP	Pb	07 24 03.2	-3.4
TWG	Pinlang	5.34	347		Pn	07 24 19.1	+0.1
YULB	Yu-li	5.86	350		Pn	07 24 26.5	+0.4
TPUB	Ta-pu	5.91	344		Pn	07 24 26.9	0.0
SSLB	Suanglung	6.31	348		Pn	07 24 32.6	+0.4
NACB	Ninganchiao	6.59	354		Pn	07 24 36.5	+0.4
PLP	Palo	6.87	158	eP	Pn	07 24 41.5	+1.5
YHNB	Yeheng	7.11	353		Pn	07 24 44.0	+0.7
JOW	Kunigami	10.70	30	P	Pn	07 25 33.6	+1.1

QIZ LR LR
comp=N,200nm,13.5s
QIZ LR LR
comp=E,290nm,18.3s
QIZ LR LR
comp=Z,220nm,14.4s
JNU Nakatsue 17.26 25 LR LR 07 33 35.4
comp=Z,31nm,20.2s,baz=200,slow=36
TNTI Ternate 17.42 163 Pn **Pn** **07 27 00.8 -1.3**
TNTI IAmb IAmb 07 27 26.2
comp=E,38nm,1.0s
SBUM Sibu 18.04 215 P **Pn** **07 27 08.1 -1.8**
LUWI Luwuk 18.52 179 P **P** **07 27 14.1 -1.2**
LYN LuoYang 19.07 334 P **Pn** **07 27 24.0 +1.8**
LYN pmax pmax
comp=Z,29nm,0.6s
KSAR Wonju Array Be 20.37 13 P **P** **07 27 35.8 +0.5**
KSRS Korea Array 20.39 13 P **P** **07 27 35.9 +0.4**
comp=Z,5.2nm,0.7s,baz=196,slow=10,SNR=12
KSRS LR LR 07 36 04.2
comp=Z,56nm,19.8s,baz=190,slow=38
comp=Z,5.2nm,0.7s
CHTO Chiang Mai 22.28 277 P **P** **07 27 55.3 -0.9**
CM31 Chiang Mai Arr 22.29 276 P **P** **07 27 56.8 +0.5**
CMAR Chiang Mai Arr 22.29 276 P **P** **07 27 56.6 +0.4**
comp=Z,1.0nm,0.3s,baz=95,slow=8.5,SNR=24
CMAR PcP **PcP** **07 31 52.0 +0.4**
comp=Z,1.4nm,0.3s,baz=92,slow=3.3,SNR=5.4
CMAR LR LR 07 37 04.4
comp=Z,32nm,19.8s,baz=130,slow=38
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 22.29 276 **P** **07 27 55.5 -0.7**
JGF Kuroka 22.35 34 P **P** **07 27 57.8 +1.0**
FAKI Fak Fak 22.59 153 P **P** **07 28 00.3 +0.8**
FAKI IAmb IAmb 07 28 20.4
comp=Z,18nm,1.1s
MJAR Matsushiro Arr 23.51 33 P **P** **07 28 09.2 +0.6**
comp=Z,0.7nm,0.5s,baz=204,slow=7.3,SNR=1.9
comp=Z,0.7nm,0.5s
MJAR Matsushiro Arr 23.51 33 P **P** **07 28 08.2 -0.5**
LZDM Lanzhou Array 24.67 322 P **P** **07 28 21.1 +1.3**
comp=Z,1.7nm,0.3s,baz=139,slow=13,SNR=4.7
comp=Z,1.7nm,0.3s
XLT XiLinHaoTe 26.76 350 *eP* **P** **07 28 41.0 +2.6**
XLT pmax pmax
comp=Z,15nm,1.0s
XLT pmax pmax
comp=Z,71nm,5.0s
MDJ Mudanjiang 27.62 11 P **P** **07 28 46.4 +0.4**
USRK Ussuriysk Ar. 27.74 15 P **P** **07 28 48.5 +1.4**
comp=Z,5.1nm,0.8s,baz=209,slow=8.3,SNR=4.9
comp=Z,5.1nm,0.8s
BNX BinXian 28.38 7 ⇑P **P** **07 28 53.8 +1.0**
BNX pmax pmax
comp=Z,15nm,0.8s
SHL Shillong 29.38 291 P **P** **07 29 02.2 +0.1**
SHL IAmb IAmb 07 29 02.6
comp=Z,4.6nm,0.5s
GOMU GeErMu 30.61 313 P **P** **07 29 13.3 +0.2**
GOMU sP pP 07 29 20.3 -1.8
GOMU pmax pmax
comp=Z,5.0nm,0.6s
ULN Ulaanbaatar 32.70 341 P **P** **07 29 31.4 +0.3**
ULN IAmb IAmb 07 29 33.5
comp=Z,4.4nm,1.2s
SONM Songino Array 32.88 340 P **P** **07 29 33.0 +0.3**
comp=Z,1.3nm,0.6s,baz=161,slow=8.8,SNR=8.3
SONM LR LR 07 44 10.1
comp=Z,83nm,19.5s,baz=140,slow=38
comp=Z,1.3nm,0.6s
SONM Songino Array 32.88 340 P **P** **07 29 32.8 +0.1**
EVN Everest 34.25 294 P **P** **07 29 44.6 -0.8**
EVN IAmb IAmb 07 29 55.1
comp=Z,4.4nm,0.8s
TLY Talaya 37.11 341 LR LR 07 46 56.2
comp=Z,58nm,18.1s,baz=154,slow=38
WB0 Warramunga Arr 38.96 162 P **P** **07 30 23.1 -1.7**
WB0 IAmb IAmb 07 30 33.0
comp=Z,6.2nm,0.7s
WRA Warramunga Arr 39.11 162 P **P** **07 30 24.9 -1.1**
comp=Z,6.3nm,0.9s,baz=342,slow=9.3,SNR=30
WRA PcP **PcP** **07 32 35.2 -0.3**
comp=Z,1.2nm,0.8s,baz=344,slow=3.2,SNR=1.8
comp=Z,6.3nm,0.9s
WRA Warramunga Arr 39.11 162 P **P** **07 30 24.2 -1.9**
WR8 Warramunga Arr 39.17 162 P **P** **07 30 25.5 -1.1**
WR8 IAmb IAmb 07 30 26.6
comp=Z,18nm,1.2s
PALK Pallekele 41.87 261 LR LR 07 47 19.2
comp=Z,36nm,19.3s,baz=128,slow=35
H11S3 WAKE ISLAND Hy 42.08 82 T T 08 16 03.0
baz=277,slow=75,SNR=906
H11S1 WAKE ISLAND Hy 42.09 82 T T 08 16 03.8
baz=277,slow=75,SNR=1344
H11S2 WAKE ISLAND Hy 42.09 82 T T 08 16 04.3
baz=277,slow=75,SNR=873
H11N1 WAKE ISLAND Hy 42.16 80 T T 08 16 07.1
baz=275,slow=75,SNR=482
H11N2 WAKE ISLAND Hy 42.16 80 T T 08 16 06.4
baz=275,slow=75,SNR=424
H11N3 WAKE ISLAND Hy 42.17 80 T T 08 16 08.4
baz=275,slow=75,SNR=375
AS31 Alice Springs 42.52 164 P **P** **07 30 53.1 -1.1**
ASAR Alice Springs 42.52 164 P **P** **07 30 53.3 -0.9**
comp=Z,1.5nm,0.6s,baz=345,slow=7.1,SNR=33
comp=Z,1.5nm,0.6s
ASAR Alice Springs 42.52 164 P **P** **07 30 52.8 -1.4**
MKAR Makanchi Array 43.97 320 P **P** **07 31 06.4 +0.7**
comp=Z,4.2nm,0.5s,baz=114,slow=9.7,SNR=63
MKAR PcP **PcP** **07 32 50.9 -0.2**
comp=Z,1.4nm,0.8s,baz=116,slow=3.4,SNR=4.0
comp=Z,4.2nm,0.5s
MAKZ Makanchi 44.17 320 **P** **07 31 07.9 +0.6**
MAKZ IAmb IAmb 07 31 08.8
comp=Z,3.3nm,0.6s
CTAO Charters Tower 44.18 147 P **P** **07 31 07.8 +0.3**
TARG Taragay, Kyrgy 44.94 312 **P** **07 31 14.7 +0.7**
TARG IAmb IAmb 07 31 33.1
comp=Z,2.5nm,0.8s
KDJ Kajisay 45.51 312 P **P** **07 31 18.5 +0.3**
KDJ IAmb IAmb 07 31 19.9
comp=Z,4.2nm,0.6s
NRN Naryn 46.14 311 **P** **07 31 24.3 +0.9**
ZALV Zalesovo Beam 46.43 330 P **P** **07 31 25.2 +0.2**
comp=Z,2.4nm,0.6s,baz=119,slow=7.7,SNR=9.8
comp=Z,2.4nm,0.6s
NIL Nilore 46.65 300 **P** **07 31 26.4 -0.7**
MA2 Magadan 46.72 19 LR LR 07 52 58.9
comp=Z,24nm,19.5s,baz=44,slow=38
KURK Kurchatov 47.94 324 **P** **07 31 36.8 -0.1**
KURBB Kurchatov Arra 47.95 324 P **P** **07 31 37.4 +0.5**
comp=Z,9.5nm,0.6s,baz=120,slow=8.0,SNR=117
comp=Z,9.5nm,0.6s
ARSB Arslanbob 48.30 310 P **P** **07 31 40.2 +0.2**
ARSB IAmb IAmb 07 31 41.3
comp=Z,2.6nm,0.7s
KK31 Karatay Array 50.50 312 P **P** **07 31 56.4 -0.3**
KK31 IAmb IAmb 07 31 57.6
comp=Z,2.9nm,0.7s
KKAR Karatay Array 50.50 312 P **P** **07 31 56.4 -0.2**
STKA Stephens Creek 52.53 159 P **P** **07 32 10.4 -1.4**
comp=Z,0.7nm,0.3s,baz=334,slow=9.2,SNR=3.6
comp=Z,0.7nm,0.3s
BVAR Borovoye Array 53.54 324 P **P** **07 32 19.0 0.0**
comp=Z,1.9nm,0.5s,baz=103,slow=6.4,SNR=5.8
comp=Z,1.9nm,0.5s
TIXI Tiksi 54.19 3 LR LR 07 59 11.2
comp=Z,46nm,18.4s,baz=199,slow=40
NRIK Noril'sk 56.03 346 P **P** **07 32 37.4 +0.6**
comp=Z,2.8nm,0.7s,baz=118,slow=7.1,SNR=4.8
comp=Z,2.8nm,0.7s
AB31 Akbulak array 58.92 317 **P** **07 32 57.1 -0.4**
ABKAR Akbulak array 58.92 317 **P** **07 32 57.2 -0.3**
C16K Lisburne Hills 67.25 23 P **P** **07 33 53.5 +1.0**
C16K IAmb IAmb 07 33 55.8
comp=Z,3.5nm,0.8s
B20K Meade River 70.35 21 P **P** **07 34 12.8 +1.1**
B20K IAmb IAmb 07 34 36.5
comp=Z,4.7nm,1.0s
D20K Etivluk River 70.49 22 P **P** **07 34 13.5 +0.8**
D20K IAmb IAmb 07 34 16.9
comp=Z,5.3nm,1.1s
H22K Ishtalitna Cre 72.58 25 P **P** **07 34 26.2 +0.9**
H22K IAmb IAmb 07 34 38.2
comp=Z,7.1nm,1.4s
E23K Chandalar 73.10 23 P **P** **07 34 29.6 +1.1**
E23K IAmb IAmb 07 34 32.6
comp=Z,2.4nm,0.9s
L22K Petersville 73.13 29 P **P** **07 34 28.6 0.0**
E24K Your Creek 73.52 23 P **P** **07 34 32.1 +1.2**
F24K Squaw Lake 73.81 24 P **P** **07 34 33.3 +0.7**
F24K IAmb IAmb 07 34 57.5
comp=Z,2.4nm,0.8s
D25K Kavik River 74.14 22 P **P** **07 34 35.2 +0.8**
ILAR Eielson Array 74.57 26 P **P** **07 34 36.5 -0.6**
comp=Z,0.4nm,0.5s,baz=266,slow=4.9,SNR=10
comp=Z,0.4nm,0.5s
ARCES ARCESS Array B 76.05 339 P **P** **07 34 45.6 +0.2**
comp=Z,4.1nm,0.8s,baz=75,slow=4.7,SNR=5.1
comp=Z,4.1nm,0.8s
SPITS Spitsbergen Ar 76.13 348 P **P** **07 34 46.4 +0.6**
comp=Z,6.2nm,0.7s,baz=91,slow=9.2,SNR=17
comp=Z,6.2nm,0.7s
FINES FINESS Array B 77.69 331 P **P** **07 34 54.1 -0.7**
comp=Z,1.3nm,0.5s,baz=59,slow=5.0,SNR=19
comp=Z,1.3nm,0.5s
FINES FINESS Array B 77.69 331 P **P** **07 34 54.6 -0.2**
AKASG Malin Array Be 78.55 320 P **P** **07 34 58.8 -0.9**
comp=Z,1.6nm,0.8s,baz=74,slow=3.9,SNR=4.1
comp=Z,1.6nm,0.8s
NACGM Naroch 78.95 324 *eP* **P** **07 35 01.9 0.0**
comp=Z,14nm,0.8s,baz=75
HFS Hagfors 83.85 332 P **P** **07 35 27.5 -0.2**
comp=Z,2.1nm,0.6s,baz=119,slow=5.6,SNR=8.6
comp=Z,2.1nm,0.6s
NB2 NORSAR Subarra 84.56 333 P **P** **07 35 30.5 -0.9**
comp=Z,0.8nm,0.8s,baz=66,slow=4.8
NOA NORSAR Array B 84.56 333 P **P** **07 35 30.8 -0.6**
comp=Z,1.3nm,0.8s,baz=65,slow=5.0,SNR=5.3
comp=Z,1.3nm,0.8s
YKA Yellowknife Ar 88.59 23 P **P** **07 35 51.6 +0.6**
comp=Z,1.5nm,0.7s,baz=310,slow=5.2,SNR=28
comp=Z,1.5nm,0.7s
EKA Eskdalemuir Ar 94.02 332 LR LR 08 23 03.0
comp=Z,26nm,21.9s,baz=26,slow=38

*SOME **28** 07:30:31.5, 42.20N×82.15E, h10km*
NNC 28 07:30:31.3±2.5, 42.34N×82.26E, h0km, mb3.5, mpv3.0, 2D, Error ellipse: s-maj=63.0km s-min=15.8km az=25.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**2.22**	**293**	Pg	Pn	07 31 07.2	-2.2
	8.0nm,0.5s						
SHLS				Lg	Lg	07 31 33.0	
	4.1nm,0.1s						
SHLS	**Shalkode**	**2.22**	**293**	*eP*	Pn	07 31 07.2	-2.2
	8.0nm,0.5s						
SHLS				*eS*	Sn	07 31 33.0	-4.5
	4.1nm,0.1s						
PDGK	**Podgornoye**	**2.27**	**297**	⇓Pg	Pn	07 31 11.5	+1.5
	6.1nm,0.6s						
PDGK				⇓Lg	Lg	07 31 44.2	
	3.2nm,0.5s						
UZB	**Uzynbulak**	**2.52**	**290**	Pg	Pb	07 31 17.8	+0.3
	5.8nm,0.4s						
UZB				Lg	Lg	07 31 51.1	
	2.5nm,0.2s						
UZB	**Uzynbulak**	**2.52**	**290**	*eP*	Pb	07 31 17.8	+0.3
	5.8nm,0.4s						
UZB				*eS*	Sg	07 31 51.1	-1.0
	2.5nm,0.2s						
KPKS	**Kokpek**	**2.86**	**294**	Pg	Pb	07 31 23.5	+0.3
	0.4nm,0.2s						
KPKS				Lg	Lg	07 32 01.0	
	2.9nm,0.4s						
KPKS	**Kokpek**	**2.86**	**294**	*eP*	Pb	07 31 23.5	+0.3
	0.4nm,0.2s						
KPKS				*eS*	Sg	07 32 01.0	-2.1
	2.9nm,0.4s						
BLB	**Baldybastay**	**3.27**	**304**	Pg	Pb	07 31 31.8	+1.4
	0.4nm,0.1s						
BLB				Lg	Lg	07 32 15.1	
	5.4nm,0.6s						

*NEIC **28** 07:38:53.5±1.3, 36.75N±0.07×71.35E±0.09, h177km±8km, mb4.4/31, Error ellipse: s-maj=10.3km s-min=9.6km az=89.0*
*IDC **28** 07:38:53.2±0.8, 36.55N×71.39E, h189km±6km, mb3.6/22, mbtmp4.2/26, MS3.4/3, Error ellipse: s-maj=13.3km s-min=11.8km az=6.0*
*NNC **28** 07:38:58.9±2.9, 37.22N×71.35E, h198km±22km, mb3.3, mpv4.3, Error ellipse: s-maj=26.7km s-min=15.2km az=23.0*
ISC 28 07:38:54.1±0.3, 36.72N±0.04×71.40E±0.04, h200km, n243, σ1°76/266, mb4.1/57, 7C-7D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**2.44**	**340**		**Pn**	**07 39 35.5**	**-1.8**
CHGR	**Chuyangaron**	**2.63**	**318**		**Pn**	**07 39 36.7**	**-2.7**
SHAA	**Shahritus**	**2.75**	**289**		**Pn**	**07 39 37.8**	**-3.0**
DRK	**Karamyk**	**2.78**	**6**		**Pn**	**07 39 39.9**	**-1.5**
KBL	**Kabul**	**2.90**	**222**		**Pn**	**07 39 40.7**	**-2.0**
KBL	**Kabul**	**2.90**	**222**	P	**Pn**	**07 39 40.8**	**-1.9**
	SNR=14						
KBL				S	**Sn**	**07 40 16.4**	**-4.3**
BTK	**Batken**	**3.37**	**352**		**Pn**	**07 39 47.2**	**-0.9**
NIL	**Nilore**	**3.41**	**153**		**Pn**	**07 39 48.4**	**-0.3**
NIL	**Nilore**	**3.41**	**153**	P	**Pn**	**07 39 48.7**	**0.0**
KSH2	**Kashi**	**4.09**	**52**	Pn	**Pn**	**07 39 58.0**	**+0.9**
KSH2				Sn	**Sn**	**07 40 46.0**	**-0.7**
KSH2				smax	smax		
	comp=N,1μm,0.6s						
KSH2				smax	smax		
	comp=E,730nm,0.5s						
ARSB	**Arslanbob**	**4.76**	**15**		**Pn**	**07 40 03.3**	**-2.3**
JMU	**Jammu**	**4.84**	**143**	*eP*	**Pn**	**07 40 06.1**	**-0.3**
JMU				*eS*	**Sn**	**07 41 01.5**	**-1.9**
JMU				IAML		07 41 06.0	
	comp=N,925nm,0.4s						
JMU				IAML		07 41 08.9	
	comp=E,541nm,0.5s						
ALCI	**Alchi Leh**	**5.34**	**116**	*eP*	**Pn**	**07 40 12.1**	**-1.1**
ALCI				*eS*	**Sn**	**07 41 12.4**	**-3.1**
ALCI				IAML		07 41 15.6	
	comp=N,498nm,0.6s						
ALCI				IAML		07 41 16.9	
	comp=E,468nm,0.5s						
TSSA	**Tissa**	**5.50**	**133**	*eP*	**Pn**	**07 40 14.3**	**-0.8**
TSSA				*eS*	**Sn**	**07 41 14.5**	**-4.5**
TSSA				IAML		07 41 18.8	
	comp=N,795nm,0.3s						
TSSA				IAML		07 41 19.3	
	comp=E,878nm,0.4s						
THN	**Thein Dam**	**5.58**	**139**	*eP*	**Pn**	**07 40 15.0**	**-1.0**
THN				*eS*	**Sn**	**07 41 17.4**	**-3.2**
THN				IAML		07 41 19.3	
	comp=E,611nm,0.5s						
THN				IAML		07 41 20.8	
	comp=N,525nm,0.4s						
CHM	**Chimkent**	**5.77**	**347**	*eP*	**Pn**	**07 40 17.3**	**-0.9**
NRN	**Naryn**	**5.92**	**36**		**Pn**	**07 40 17.9**	**-2.6**
UCH	**Uchkor**	**6.01**	**23**	P	**Pn**	**07 40 20.8**	**-1.0**
	SNR=67						
DHRM	**DHARAMSHALA**	**6.02**	**136**	*eP*	**Pn**	**07 40 21.0**	**-0.8**
DHRM				*eS*	**Sn**	**07 41 27.8**	**-3.4**
DHRM				IAML		07 41 29.9	
	comp=E,602nm,0.5s						
DHRM				IAML		07 41 31.7	
	comp=N,735nm,0.2s						
TLWR	**Talawar**	**6.06**	**140**	*eP*	**Pn**	**07 40 21.2**	**-1.0**
TLWR				*eS*	**Sn**	**07 41 27.9**	**-3.9**
DZA	**Taraz**	**6.17**	**360**	*eP*	**Pn**	**07 40 22.8**	**-0.6**
EKS2	**Erkin-Say**	**6.22**	**16**	P	**Pn**	**07 40 23.2**	**-1.0**
	SNR=29						
AAK	**Ala-Archa**	**6.38**	**21**	P	**Pn**	**07 40 25.6**	**-0.6**
	comp=N,37nm,0.3s,baz=205,slow=7.6,SNR=92						
AAK				S	**Sn**	**07 41 33.4**	**-5.9**
	comp=N,26nm,0.3s,baz=220,slow=14,SNR=14						
AAK				LR	LR	07 43 19.9	
	comp=N,29nm,18.3s,baz=220,slow=41						
AAK	**Ala-Archa**	**6.38**	**21**	P	**Pn**	**07 40 25.7**	**-0.6**
	SNR=77						
AAK	**Ala-Archa**	**6.38**	**21**		**Pn**	**07 40 25.2**	**-1.1**
AAK	**Ala-Archa**	**6.38**	**21**	Pn	**Pn**	**07 40 25.6**	**-0.6**
AAK	**Ala-Archa**	**6.38**	**21**	⇓P	**Pn**	**07 40 25.8**	**-0.5**
AAK				⇑S	**Sn**	**07 41 34.2**	**-5.2**
	comp=N,7.1nm,0.4s						
AAK				S	**Sn**	**07 41 36.8**	**-2.6**
	comp=N,163nm,1.0s						
AAK	**Ala-Archa**	**6.38**	**21**	P	**Pn**	**07 40 25.9**	**-0.3**
KK31	**Karatay Array**	**6.42**	**354**		**Pn**	**07 40 24.8**	**-1.9**
KK31	**Karatay Array**	**6.42**	**354**	⇑P	**Pn**	**07 40 25.1**	**-1.6**
	comp=N,53nm,0.6s,baz=175,slow=12						
KK31				⇑S	**Sn**	**07 41 33.1**	**-6.9**
	comp=N,248nm,0.6s,baz=179,slow=21						
KKAR	**Karatay Array**	**6.42**	**354**		**Pn**	**07 40 24.9**	**-1.7**
KBK	**Karagaybulak**	**6.54**	**24**	P	**Pn**	**07 40 27.9**	**-0.4**
	SNR=16						
FRU1	**Bishkek**	**6.58**	**21**		**Pn**	**07 40 28.1**	**-0.7**
BHK	**Bhakra**	**6.73**	**141**	*eP*	**Pn**	**07 40 31.9**	**+1.1**
BHK				IAML		07 41 46.8	
	comp=E,301nm,0.3s						
BHK				IAML		07 41 47.1	
	comp=N,208nm,0.5s						
BHK				*eS*	**Sn**	**07 41 47.4**	**-0.1**
BOOM	**Boomskoye usch**	**6.75**	**30**		**Pn**	**07 40 30.4**	**-0.7**
CHMS	**Chumysh**	**6.79**	**21**	P	**Pn**	**07 40 30.9**	**-0.5**
	SNR=8.4						
USP	**Ospenovka**	**6.96**	**19**	P	**Pn**	**07 40 33.4**	**-0.4**
	SNR=20						
TKM2	**Tokmak 2**	**6.99**	**26**	P	**Pn**	**07 40 34.0**	**-0.3**
	SNR=13						
KDJ	**Kajisay**	**7.02**	**38**		**Pn**	**07 40 33.5**	**-1.2**
TARG	**Taragay, Kyrgy**	**7.06**	**43**		**Pn**	**07 40 34.2**	**-1.2**
SGDS	**Sogindy**	**7.17**	**19**	*eP*	**Pn**	**07 40 36.0**	**-0.5**
SMLA	**Simla**	**7.35**	**138**	*eP*	**Pn**	**07 40 37.4**	**-1.4**
SMLA				*eS*	**Sn**	**07 41 56.8**	**-5.3**
SMLA				IAML		07 41 59.9	
	comp=N,272nm,0.5s						
SMLA				IAML		07 42 04.7	
	comp=E,345nm,0.5s						
HNLY	**HANLEY**	**7.37**	**120**	*eP*	**Pn**	**07 40 38.6**	**-0.9**
HNLY				*eS*	Sn	07 41 55.0	-8.4
HNLY				IAML		07 42 02.9	
	comp=E,31nm,0.5s						
HNLY				IAML		07 42 14.2	
	comp=N,21nm,0.4s						
TNSS	**Tian-Shan**	**7.62**	**32**	*eP*	**Pn**	**07 40 41.9**	**-0.7**
KLP	**Kalpa**	**7.68**	**130**	*eP*	**Pn**	**07 40 42.6**	**-0.9**
KLP				*eS*	**Sn**	**07 42 03.9**	**-6.5**
KLP				IAML		07 42 08.3	
	comp=N,302nm,0.3s						
KLP				IAML		07 42 09.1	
	comp=E,421nm,0.3s						
AAA	**Alma-Ata**	**7.75**	**31**	*eP*	**Pn**	**07 40 43.8**	**-0.2**
MDOK	**Medeo**	**7.76**	**32**	*eP*	**Pn**	**07 40 43.9**	**-0.4**
HRA	**Herat**	**7.81**	**255**		**Pn**	**07 40 43.7**	**-1.4**
SATY	**Saty**	**8.31**	**38**	*eP*	**Pn**	**07 40 50.9**	**-0.6**
BTLS	**Baital**	**8.56**	**13**	*eP*	**Pn**	**07 40 54.0**	**-0.4**
UZB	**Uzynbulak**	**8.69**	**40**	*eP*	**Pn**	**07 40 56.2**	**-0.1**
SHLS	**Shalkode**	**8.93**	**41**	*eP*	**Pn**	**07 41 02.2**	**+2.8**
PDGK	**Podgornoye**	**9.06**	**41**	⇓P	**Pn**	**07 40 59.9**	**-1.3**
	comp=E,6.6nm,0.7s						
JOSI	**Joshimath**	**9.16**	**130**	*eP*	**Pn**	**07 41 01.7**	**-1.0**
JOSI				*eS*	**Sn**	**07 42 40.8**	**-4.7**
JOSI				IAML		07 42 46.1	
	comp=E,212nm,0.5s						
JOSI				IAML		07 42 47.2	
	comp=N,139nm,0.5s						
KUDL	**Kundal**	**9.56**	**152**	*eP*	**Pn**	**07 41 05.3**	**-2.3**
KUDL				*eS*	Sn	07 42 43.3	-11
KUDL				IAML		07 42 55.4	
	comp=N,337nm,0.2s						
KUDL				IAML		07 42 59.0	
	comp=E,392nm,0.3s						
TDK	**Taldyqorghan**	**9.83**	**30**	*eP*	**Pn**	**07 41 10.7**	**-0.3**
LGTI	**Lohaghat**	**10.31**	**133**	*eP*	**Pn**	**07 41 15.3**	**-2.2**
LGTI				*eS*	Sn	07 43 03.6	-9.2
LGTI				IAML		07 43 08.8	
	comp=N,43nm,0.3s						
LGTI				IAML		07 43 10.1	
	comp=E,43nm,0.2s						
AJM	**Ajmer**	**10.62**	**164**	*eP*	**Pn**	**07 41 18.9**	**-2.5**
AJM				*eS*	Sn	07 43 07.6	-12
MAKZ	**Makanchi**	**12.80**	**35**	Pn	**Pn**	**07 41 47.4**	**-1.4**
MAKZ	**Makanchi**	**12.80**	**35**	⇑P	**Pn**	**07 41 47.5**	**-1.4**
	comp=E,5.1nm,0.5s						
MK31	**Makanchi Array**	**12.93**	**35**	P	**Pn**	**07 41 50.0**	**-0.5**
	comp=E,2.2nm,0.4s,baz=214,slow=11,SNR=49						
MKAR	**Makanchi Array**	**12.93**	**35**	P	**Pn**	**07 41 50.6**	**+0.1**
	comp=E,1.7nm,0.6s,baz=225,slow=13,SNR=22						
MKAR	**Makanchi Array**	**12.93**	**35**		**Pn**	**07 41 50.4**	**-0.2**
BRZS	**Berezniki**	**13.29**	**4**	*eP*	**Pn**	**07 41 55.4**	**+0.4**
WMQ	**Urumqi**	**14.31**	**55**	*eP*	**P**	**07 42 08.5**	**-0.8**
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BHPL	**Bhopal**	**14.40**	**157**	*eP*	**Pn**	**07 42 07.3**	**-1.7**
BHPL				*eS*	S	07 44 37.1	-12
ZSN	**Zaisan**	**14.64**	**39**	*eP*	**P**	**07 42 12.7**	**-0.2**
KURBB	**Kurchatov Arra**	**14.82**	**18**	P	**Pn**	**07 42 12.2**	**-1.6**
	comp=Z,3.9nm,0.7s,baz=206,slow=11,SNR=29						
KURBB				S	**Sn**	**07 45 00.1**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=196,slow=20,SNR=4.3						
KURBB	**Kurchatov Arra**	**14.82**	**18**	⇓P	**Pn**	**07 42 12.2**	**-1.6**
	comp=Z,6.4nm,0.8s						
KURK	**Kurchatov**	**14.93**	**18**		**P**	**07 42 15.1**	**-0.8**
KURK	**Kurchatov**	**14.93**	**18**	⇑P	**P**	**07 42 15.9**	**+0.1**
	comp=Z,1.5nm,0.8s						
KURK	**Kurchatov**	**14.93**	**18**	P	**P**	**07 42 16.1**	**+0.2**
AB31	**Akbulak array**	**15.05**	**330**	Pn	**Pn**	**07 42 14.5**	**-2.3**
AB31				IAmb	IAmb	07 42 18.0	
	comp=Z,15nm,0.8s						
AB31	**Akbulak array**	**15.05**	**330**	⇑P	**Pn**	**07 42 15.0**	**-1.7**
	comp=Z,2.0nm,0.2s,baz=145,slow=11,SNR=317						
AB31				⇓S	S	07 44 51.5	-12
	comp=Z,1.1nm,0.5s						
ABKAR	**Akbulak array**	**15.05**	**330**		**Pn**	**07 42 14.8**	**-1.9**
EVN	**Everest**	**15.67**	**119**	P	**P**	**07 42 24.4**	**-0.7**
JASK	**Jask - Hormozg**	**15.81**	**231**	P	**Pn**	**07 42 25.9**	**-0.3**
JASK				S	**S**	**07 45 18.8**	**-2.8**
BVA0	**Borovoye Array**	**16.32**	**358**	⇑P	**Pn**	**07 42 31.6**	**-0.5**
	comp=Z,2.7nm,0.8s						
BVAR	**Borovoye Array**	**16.32**	**358**	P	**Pn**	**07 42 31.5**	**-0.5**
	comp=Z,2.7nm,0.4s,baz=157,slow=9.5,SNR=11						
BVAR				S	**S**	**07 45 26.8**	**-5.2**
	comp=Z,2.5nm,0.5s,baz=170,slow=21,SNR=3.1						
AKTO	**Aktyubinsk**	**16.76**	**329**	P	**Pn**	**07 42 37.1**	**-0.1**
	comp=Z,16nm,0.5s,baz=139,slow=9.3,SNR=56						
AKTO				S	**S**	**07 45 35.4**	**-5.3**
	comp=Z,13nm,0.7s,baz=188,slow=7.5,SNR=8.5						
AKTO	**Aktyubinsk**	**16.76**	**329**	⇓P	**Pn**	**07 42 37.3**	**0.0**
	comp=Z,13nm,0.9s						
AKTO				⇓S	**S**	**07 45 35.5**	**-5.2**
	comp=Z,9.8nm,0.7s						
BANOM	**Banah**	**16.77**	**234**	P	**Pn**	**07 42 37.5**	**-0.2**
BANOM	**Banah**	**16.77**	**234**	P	**P**	**07 42 36.3**	**-0.2**
SHME	**Shamm**	**16.79**	**235**	Pn	**Pn**	**07 42 38.3**	**+0.4**
SHME	**Shamm**	**16.79**	**235**	P	**Pn**	**07 42 37.0**	**-0.8**
MDH	**Madha**	**17.21**	**233**	P	**P**	**07 42 40.9**	**-0.4**
MASF	**Masafi**	**17.25**	**233**	P	**Pn**	**07 42 42.2**	**-1.1**
MSFE	**Esma-Masafi**	**17.26**	**233**	P	**Pn**	**07 42 42.7**	**-0.7**
WBK	**Wadi Bani Khal**	**17.70**	**221**	P	**Pn**	**07 42 48.0**	**-0.7**
ASHO	**Ashiyiah**	**17.80**	**232**	P	**Pn**	**07 42 48.4**	**-1.4**
ASHO	**Ashiyiah**	**17.80**	**232**	P	**Pn**	**07 42 48.2**	**-1.6**
	SNR=8.0						
SMDO	**Samad**	**17.84**	**224**	P	**Pn**	**07 42 49.2**	**-1.1**
HOQ	**Hoqain**	**17.85**	**227**	P	**Pn**	**07 42 48.9**	**-1.5**
JLN	**Jalan Bani Buh**	**17.85**	**219**	P	**Pn**	**07 42 49.1**	**-1.3**
LSA	**Lhasa**	**17.93**	**107**	P	**Pn**	**07 42 51.0**	**-0.8**
LSA				pmax	pmax		
	comp=Z,22nm,0.6s						
ASUD	**Al Ashush, Dub**	**18.30**	**233**	P	**Pn**	**07 42 54.5**	**-1.2**
JMDO	**Jabal Madar**	**18.36**	**223**	P	**Pn**	**07 42 55.3**	**-1.0**
ALNE	**Al Ain**	**18.44**	**231**	P	**Pn**	**07 42 55.5**	**-1.9**
ARQ	**Araqi**	**18.51**	**228**	P	**P**	**07 42 55.9**	**+0.5**
BSY	**Bisya**	**18.57**	**225**	P	**

SAKB	**Bahrain**	**20.74**	**245**	P		**P**	**07 43 18.8**	**-0.5**
GNI	**Garni**	**21.13**	**287**	P		**P**	**07 43 25.0**	**+1.4**
GNI				IAmb		IAmb	07 43 30.2	
	comp=Z,11nm,0.9s							
ARTI	**Arti**	**21.55**	**340**	P		**P**	**07 43 28.9**	**+1.4**
	comp=Z,1.4nm,0.3s,baz=157,slow=18,SNR=2.1							
	comp=Z,1.4nm,0.3s							
KBZ	**Khabaz**	**22.79**	**297**	P		**P**	**07 43 40.4**	**+1.1**
	comp=Z,2.5nm,0.7s,baz=109,slow=7.9,SNR=7.3							
	comp=Z,2.5nm,0.7s							
BELG	**Belogornoye**	**22.92**	**321**	P		**P**	**07 43 41.3**	**+0.9**
	comp=Z,7.7nm,0.7s,baz=350,slow=4.2,SNR=3.4							
	comp=Z,7.7nm,0.7s							
DOK	**Doka**	**23.57**	**225**	P		**P**	**07 43 47.4**	**+0.8**
DMTO	**DMTO**	**23.85**	**222**	P		**P**	**07 43 50.1**	**+0.9**
WHFO	**Wadi Hawf**	**24.33**	**224**	P		**P**	**07 43 53.8**	**+0.2**
ABTO	**Aybut**	**25.05**	**224**	P		**P**	**07 44 03.4**	**+3.2**
	SNR=6.0							
RAYN	**Ar Rayn**	**25.88**	**247**	P		**P**	**07 44 08.2**	**+0.6**
RAYN				IAmb		IAmb	07 44 13.6	
	comp=Z,6.9nm,0.8s							
RAYN	**Ar Rayn**	**25.88**	**247**	P		**P**	**07 44 07.7**	**+0.2**
LZH	**Lanzhou**	**26.06**	**82**	*eP*		**P**	**07 44 10.3**	**+1.1**
LZH				pP		pP	07 44 40.3	-10
LZH				pmax		pmax		
	comp=Z,20nm,1.5s							
PZH	**PanZhiHua**	**27.67**	**103**	P		**P**	**07 44 26.8**	**+3.2**
SONM	**Songino Array**	**27.95**	**56**	P		**P**	**07 44 27.7**	**+1.8**
	comp=Z,1.3nm,0.8s,baz=262,slow=9.1,SNR=6.2							
	comp=Z,1.3nm,0.8s							
BR104	**Keskin Array S**	**29.67**	**287**	P		**P**	**07 44 43.1**	**+1.9**
	comp=Z,2.5nm,0.6s							
BRTR	**Keskin Array B**	**29.67**	**287**	P		**P**	**07 44 43.0**	**+1.7**
	comp=Z,2.1nm,0.5s,baz=105,slow=9.3,SNR=13							
	comp=Z,2.1nm,0.5s							
BRTR	**Keskin Array B**	**29.67**	**287**	P		**P**	**07 44 42.9**	**+1.6**
BR106	**Keskin Array S**	**29.69**	**287**	P		**P**	**07 44 42.5**	**+1.1**
	comp=Z,2.7nm,0.7s							
BR105	**Keskin Array S**	**29.69**	**287**	P		**P**	**07 44 42.8**	**+1.4**
	comp=Z,3.1nm,0.7s							
OBN	**Obninsk**	**29.98**	**319**	P		**P**	**07 44 45.6**	**+2.1**
	comp=Z,34nm,0.4s							
HHC	**Hu-ho-hao-te**	**31.39**	**70**	*eP*		**P**	**07 44 59.3**	**+3.0**
HHC				pmax		pmax		
	comp=Z,9.0nm,0.8s							
HHC				pmax		pmax		
	comp=Z,33nm,5.6s							
AK09	**Malin Array Si**	**33.01**	**308**	P		**P**	**07 45 11.0**	**+0.9**
AK10	**Malin Array Si**	**33.03**	**308**	P		**P**	**07 45 11.3**	**+1.1**
AK08	**Malin Array Si**	**33.03**	**308**	P		**P**	**07 45 11.1**	**+0.8**
AK07	**Malin Array Si**	**33.05**	**308**	P		**P**	**07 45 11.4**	**+1.0**
AK06	**Malin Array Si**	**33.06**	**308**	P		**P**	**07 45 11.5**	**+1.0**
AKASG	**Malin Array Be**	**33.06**	**309**	P		**P**	**07 45 11.4**	**+0.9**
	comp=Z,2.2nm,0.5s,baz=82,slow=7.7,SNR=29							
AKASG				sP		**sP**	**07 46 12.3**	**-2.8**
	comp=Z,1.5nm,0.6s,baz=95,slow=7.8,SNR=2.4							
	comp=Z,2.2nm,0.5s							
AKBB	**Malin Array Si**	**33.06**	**309**	P		**P**	**07 45 10.8**	**+0.3**
AKBB				IAmb		IAmb	07 45 12.8	
	comp=Z,6.9nm,0.5s							
AKBB	**Malin Array Si**	**33.06**	**309**	P		**P**	**07 45 11.1**	**+0.6**
AK05	**Malin Array Si**	**33.06**	**308**	P		**P**	**07 45 11.2**	**+0.7**
ELL	**Elmali**	**33.06**	**283**	P		**P**	**07 45 12.9**	**+2.0**
ELL				IAmb		IAmb	07 45 55.1	
	comp=Z,21nm,1.2s							
AK02	**Malin Array Si**	**33.07**	**308**	P		**P**	**07 45 11.4**	**+0.8**
AK01	**Malin Array Si**	**33.07**	**308**	P		**P**	**07 45 11.3**	**+0.7**
KIEV	**Kiev**	**33.07**	**308**	P		**P**	**07 45 11.0**	**+0.4**
KIEV				IAmb		IAmb	07 45 12.8	
	comp=Z,5.9nm,0.6s							
KIEV	**Kiev**	**33.07**	**308**	P		**P**	**07 45 11.2**	**+0.6**
	comp=Z,38nm,0.7s							
AK11	**Malin Array Si**	**33.09**	**308**	P		**P**	**07 45 11.5**	**+0.7**
AK12	**Malin Array Si**	**33.10**	**308**	P		**P**	**07 45 11.7**	**+0.9**
AK15	**Malin Array Si**	**33.12**	**308**	P		**P**	**07 45 11.7**	**+0.6**
AK16	**Malin Array Si**	**33.13**	**308**	P		**P**	**07 45 11.8**	**+0.7**
AK18	**Malin Array Si**	**33.16**	**309**	P		**P**	**07 45 12.0**	**+0.6**
AK22	**Malin Array Si**	**33.17**	**309**	P		**P**	**07 45 12.0**	**+0.6**
AK19	**Malin Array Si**	**33.20**	**309**	P		**P**	**07 45 12.3**	**+0.6**
AK20	**Malin Array Si**	**33.20**	**309**	P		**P**	**07 45 12.3**	**+0.6**
SORM	**Soroca**	**33.35**	**304**	P		**P**	**07 45 13.8**	**+0.8**
	comp=Z,11nm,1.4s							
LUBAR	**Lubar, Ukraine**	**33.89**	**307**	P		**P**	**07 45 18.4**	**+0.7**
NDNU	**Novodnistrovsk**	**34.04**	**304**	P		**P**	**07 45 20.5**	**+1.5**
MI28	**Mi28,Pidlybu**	**34.07**	**309**	P		**P**	**07 45 19.0**	**-0.2**
TESR	**Tescani**	**34.45**	**301**	P		**P**	**07 45 23.8**	**+1.2**
	comp=Z,11nm,1.7s							
ISR	**Istrita**	**34.55**	**298**	P		**P**	**07 45 24.7**	**+1.2**
	comp=Z,26nm,0.9s							
KMPD	**K-Podol'skiy**	**34.63**	**304**	P		**P**	**07 45 24.9**	**+0.8**
MLR	**Muntele Rosu**	**34.96**	**299**	P		**P**	**07 45 29.7**	**+2.6**
MLR				IAmb		IAmb	07 45 31.3	
	comp=Z,12nm,0.9s							
MLR	**Muntele Rosu**	**34.96**	**299**	P		**P**	**07 45 28.6**	**+1.5**
	comp=Z,16nm,0.9s							
RNPP5	**Staryi Chortor**	**35.22**	**309**	P		**P**	**07 45 30.1**	**+1.0**
RNPP9	**Sopachiv**	**35.24**	**309**	P		**P**	**07 45 30.2**	**+1.0**
RNPP8	**Varash**	**35.25**	**309**	P		**P**	**07 45 30.6**	**+1.3**
BURAR	**Bucovina Array**	**35.44**	**303**	P		**P**	**07 45 31.9**	**+0.8**
BUR08	**Bucovina Ar. S**	**35.45**	**303**	P		**P**	**07 45 32.5**	**+1.3**
VOIR		**35.59**	**299**	P		**P**	**07 45 34.1**	**+1.7**
	comp=Z,4.6nm,1.1s							
STNU	**Starunia**	**35.94**	**305**	P		**P**	**07 45 36.6**	**+1.4**
FIA1	**FINESS Array S**	**37.48**	**326**	P		**P**	**07 45 49.4**	**+1.3**
FINES	**FINESS Array B**	**37.48**	**326**	P		**P**	**07 45 49.4**	**+1.3**
	comp=Z,2.7nm,0.5s,baz=123,slow=9.0,SNR=38							
	comp=Z,2.7nm,0.5s							
FINES	**FINESS Array B**	**37.48**	**326**	P		**P**	**07 45 49.2**	**+1.2**
VADS	**Vadso**	**40.23**	**339**	*eP*		**P**	**07 46 12.4**	**+1.7**
MORC	**Moravsky Berou**	**40.49**	**306**	P		**P**	**07 46 14.7**	**+1.5**
ARA0	**ARCESS Array S**	**41.07**	**337**	*eP*		**P**	**07 46 19.5**	**+1.9**
ARCES	**ARCESS Array B**	**41.07**	**337**	P		**P**	**07 46 19.1**	**+1.4**
	comp=Z,2.0nm,0.5s,baz=110,slow=8.6,SNR=14							
	comp=Z,2.0nm,0.5s							
KTK1	**Kautokeino**	**41.55**	**336**	*eP*		**P**	**07 46 22.9**	**+1.3**
WINA	**Alland / Wiene**	**41.57**	**304**	*i* P		**P**	**07 46 23.8**	**+1.8**
	SNR=4.6							
BLEU	**Blekinge**	**41.64**	**316**	*i* P		**P**	**07 46 22.9**	**+0.6**
CONA	**Conrad Observa**	**41.73**	**304**	*eP*		**P**	**07 46 25.2**	**+1.8**
	comp=Z,5.5nm,0.9s,SNR=6.0							
HEH	**HeiHe**	**41.86**	**53**	*eP*		**P**	**07 46 26.3**	**+2.0**
HEH				pmax		pmax		
	comp=Z,6.0nm,0.6s							
HAMF	**Hammerfest**	**42.14**	**338**	*eP*		**P**	**07 46 28.7**	**+2.4**
HAMD	**Hammershus, De**	**42.18**	**315**	*i* P		**P**	**07 46 27.0**	**+0.2**
HAMD				IAmb		IAmb	07 46 28.2	
	comp=Z,70nm,1.5s							
JETT	**Jettan, Norway**	**42.69**	**336**	*eP*		**P**	**07 46 32.6**	**+1.9**
DEL	**Delary**	**42.73**	**316**	*i* P		**P**	**07 46 32.3**	**+1.2**
MOA	**Molln**	**42.80**	**304**	*eP*		**P**	**07 46 33.6**	**+1.6**
	comp=Z,4.2nm,0.8s							
LUNU	**Lund**	**42.94**	**315**	*i* P		**P**	**07 46 34.5**	**+1.6**
GERES	**GERESS Array B**	**43.07**	**305**	P		**P**	**07 46 35.8**	**+1.6**
	comp=Z,0.3nm,0.5s,baz=92,slow=4.3,SNR=3.7							
	comp=Z,0.3nm,0.5s							
HFS	**Hagfors**	**43.10**	**322**	P		**P**	**07 46 35.3**	**+1.2**
	comp=Z,12nm,0.5s,baz=98,slow=11,SNR=85							
	comp=Z,12nm,0.5s							
BJUU	**Bjuv**	**43.19**	**316**	*i* P		**P**	**07 46 35.6**	**+0.8**
BIOA	**Bad Ischl, Aus**	**43.24**	**303**	*eP*		**P**	**07 46 37.9**	**+2.4**
	comp=Z,2.9nm,0.7s,SNR=6.7							
CLL	**Collm**	**43.31**	**309**	*eP*		**P**	**07 46 34.0**	**-1.9**
BORU	**Boraas**	**43.38**	**318**	*i* P		**P**	**07 46 37.4**	**+1.0**
SABO	**M.te Sabotino**	**43.51**	**301**	P		**P**	**07 46 38.7**	**+1.0**
SABO				IAmb		IAmb	07 46 39.8	
	comp=Z,17nm,1.0s							
KBA	**Koelnbreinsper**	**43.52**	**303**	*i* P		**P**	**07 46 39.5**	**+1.6**
	comp=Z,1.8nm,0.6s							
FAUS	**Fauske**	**43.76**	**332**	*eP*		**P**	**07 46 41.0**	**+1.7**
MOR8	**Moi Rana**	**43.79**	**331**	*eP*		**P**	**07 46 40.5**	**+1.0**
LESA	**Schwarzleotal**	**43.92**	**303**	*i* P		**P**	**07 46 42.2**	**+1.2**
	comp=Z,4.3nm,0.4s,SNR=9.5							
STEI	**Steigen**	**43.93**	**333**	*eP*		**P**	**07 46 43.2**	**+2.7**
RAUS	**Rausandaksla**	**44.01**	**331**	*eP*		**P**	**07 46 42.9**	**+1.6**
STAL	**STALIGIAL**	**44.08**	**302**	P		**P**	**07 46 42.8**	**+0.6**
STAL				IAmb		IAmb	07 46 43.7	
	comp=Z,4.4nm,0.7s							
NC602	**NORSAR Array S**	**44.22**	**322**	*eP*		**P**	**07 46 43.7**	**+0.7**
LEIR	**Leirfjorden**	**44.30**	**330**	*eP*		**P**	**07 46 45.1**	**+1.5**
NB201	**NORSAR Array S**	**44.36**	**323**	P		**P**	**07 46 45.0**	**+0.7**
NB201				IAmb		IAmb	07 47 19.7	
	comp=Z,14nm,1.1s							
NB2	**NORSAR Subarra**	**44.40**	**323**	P		**P**	**07 46 45.1**	**+0.6**
	comp=Z,8nm,0.4s,baz=98,slow=7.9							
NB2	**NORSAR Subarra**	**44.40**	**323**	P		**P**	**07 46 45.1**	**+0.6**
NOA	**NORSAR Array B**	**44.40**	**323**	P		**P**	**07 46 45.4**	**+0.9**
	comp=Z,3.9nm,0.5s,baz=96,slow=7.7,SNR=30							
	comp=Z,3.9nm,0.5s							
WTTA	**Wattenberg**	**44.65**	**303**	*i* P		**P**	**07 46 48.1**	**+1.3**
	comp=Z,6.7nm,1.1s							
CTI	**Castel Tesino**	**44.84**	**301**	P		**P**	**07 46 49.1**	**+0.8**
CTI				IAmb		IAmb	07 46 50.0	
	comp=Z,5.9nm,0.6s							
SQTA	**Sankt Quirin**	**44.94**	**303**	*eP*		**P**	**07 46 49.6**	**+0.5**
	comp=Z,2.4nm,0.5s							
MOTA	**Moosalm**	**44.99**	**303**	*i* P		**P**	**07 46 49.9**	**+0.4**
	comp=Z,2.8nm,0.6s							
KONO	**Kongsberg**	**45.12**	**321**	*eP*		**P**	**07 46 51.3**	**+1.1**
FUORN	**Ofenpass-Fuorn**	**45.68**	**302**	P		**P**	**07 46 55.7**	**+0.6**
FUORN				IAmb		IAmb	07 47 24.1	
	comp=Z,9.0nm,1.4s							
SKAR	**Skarslia**	**45.80**	**322**	*eP*		**P**	**07 46 57.2**	**+1.6**
DAVA	**Damuels**	**45.82**	**303**	*i* P		**P**	**07 46 56.9**	**+0.9**
	comp=Z,8.2nm,0.5s,SNR=10							
MOL	**Molde**	**46.24**	**325**	*eP*		**P**	**07 47 00.6**	**+1.7**
TUE	**Stuetta**	**46.33**	**302**	P		**P**	**07 47 00.5**	**+0.4**
SNART	**Snartemo**	**46.35**	**319**	*eP*		**P**	**07 47 01.4**	**+1.7**
ODD1	**Odda**	**46.63**	**321**	*eP*		**P**	**07 47 03.4**	**+1.4**
BLS5	**Blasjo**	**46.72**	**320**	*eP*		**P**	**07 47 04.7**	**+2.0**
BER	**Bergen**	**47.27**	**322**	*eP*		**P**	**07 47 08.2**	**+1.3**
ASK	**Askoy**	**47.34**	**322**	*eP*		**P**	**07 47 08.7**	**+1.3**
SPITS	**Spitsbergen Ar**	**47.36**	**347**	P		**P**	**07 47 09.7**	**+2.3**
	comp=Z,10nm,0.9s,baz=120,slow=8.0,SNR=6.6							
	comp=Z,10nm,0.9s							
SENIN	**Lac Senin/Sane**	**47.74**	**303**	P		**P**	**07 47 11.7**	**+0.7**
SENIN				IAmb		IAmb	07 47 13.6	
	comp=Z,5.8nm,0.8s							
JOW	**Kunigami**	**48.73**	**85**	P		**P**	**07 47 21.3**	**+2.7**
KEST	**Kesra**	**49.27**	**288**	P		**P**	**07 47 23.0**	**+0.3**
	comp=Z,1.4nm,0.5s,baz=30,slow=6.0,SNR=5.0							
	comp=Z,1.4nm,0.5s							
KIBK	**Kibwezi**	**49.72**	**226**	P		**P**	**07 47 27.3**	**+1.1**
KIBK	**Kibwezi**	**49.72**	**226**	P		**P**	**07 47 28.1**	**+1.9**
SSB	**Saint Sauveur**	**49.87**	**302**	P		**P**	**07 47 28.1**	**+1.1**
SSB				IAmb		IAmb	07 47 28.6	
	comp=Z,4.3nm,0.8s							
EKA	**Eskdalemuir Ar**	**52.35**	**316**	P		**P**	**07 47 45.7**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=60,slow=5.9,SNR=6.7							
	comp=Z,1.3nm,0.6s							
MBAR	**Mbarara**	**52.89**	**235**	P		**P**	**07 47 51.0**	**+1.1**
CEST	**Esterri de Car**	**52.92**	**299**	P		**P**	**07 47 50.3**	**+0.5**
CEST				IAmb		IAmb	07 48 05.4	
	comp=Z,17nm,1.4s							
ESDC	**Sonseca Array**	**57.64**	**298**	P		**P**	**07 48 24.4**	**+1.1**
	comp=Z,1.4nm,0.6s,baz=52,slow=7.9,SNR=16							
	comp=Z,1.4nm,0.6s							
PETK	**Petropavlovsk-**	**59.59**	**44**	LR		LR	08 17 29.3	
	comp=Z,233nm,18.6s,baz=6.1,slow=39							
SUMG	**Summit**	**60.96**	**341**	P		**P**	**07 48 47.7**	**+1.7**
SUMG				IAmb		IAmb	07 48 49.1	
	comp=Z,5.7nm,0.6s							
TORD	**Torodi Ar. Bea**	**66.04**	**269**	P		**P**	**07 49 18.4**	**-1.2**
	comp=Z,6.2nm,0.6s,baz=43,slow=4.7,SNR=40							
	comp=Z,6.2nm,0.6s							
RES	**Resolute Bay**	**68.51**	**356**	P		**P**	**07 49 35.6**	**+1.5**
INK	**Inuvik**	**73.64**	**9**	P		**P**	**07 50 06.7**	**+1.7**
ILAR	**Eielson Array**	**74.48**	**16**	P		**P**	**07 50 10.7**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=323,slow=6.8,SNR=2.5							
ILAR				pP		**pP**	**07 50 56.0**	**-2.7**
	comp=Z,0.6nm,0.9s,baz=301,slow=4.5,SNR=4.4							
	comp=Z,0.2nm,0.5s							
DBIC	**Dimbokro**	**75.03**	**267**	P		**P**	**07 50 13.0**	**-0.9**
	comp=Z,2.0nm,0.6s,baz=47,slow=4.7,SNR=3.9							
	comp=Z,2.0nm,0.6s							
BOSA	**Boshof**	**78.12**	**220**	P		**P**	**07 50 31.1**	**+0.1**
	comp=Z,1.6nm,0.9s,baz=19,slow=4.6,SNR=5.2							
	comp=Z,1.6nm,0.9s							
YKA	**Yellowknife Ar**	**81.02**	**3**	P		**P**	**07 50 47.5**	**+1.4**
	comp=Z,0.6nm,0.5s,baz=23,slow=9.4,SNR=18							
YKA				pP		**pP**	**07 51 33.2**	**-2.2**
	comp=Z,0.5nm,0.7s,baz=350,slow=6.2,SNR=4.3							
	comp=Z,0.6nm,0.5s							
WRA	**Warramunga Arr**	**81.83**	**122**	P		**P**	**07 50 50.7**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=322,slow=4.9,SNR=5.2							
	comp=Z,0.3nm,0.5s							
ASAR	**Alice Springs**	**84.12**	**125**	P		**P**	**07 51 02.4**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=313,slow=5.1,SNR=6.3							
ASAR				pP		**pP**	**07 51 50.6**	**-1.9**
	comp=Z,0.2nm,0.7s,baz=313,slow=5.4,SNR=2.4							
	comp=Z,0.4nm,0.7s							
CTA	**Boshof**	**90.34**	**115**	LR		LR	08 37 03.0	
	comp=Z,18nm,18.2s,baz=218,slow=39							

*CATAC **28** 08:04:51.4±0.6, 14.7°N±3.9°, 92.2°W±0.7°, h2km±3km, M3.7/24, MLv3.7/24, Error ellipse: s-maj=7.7km s-min=2.6km az=27.3, confirmed*
*GCG **28** 08:04:52.4±1.5, 13.79°N×91.72°W, h5km±10km, MD3.8, Presumed earthquake*
*SNET **28** 08:04:54.0±1.0, 13.82°N×91.65°W, h14km±11km, ML3.6, Presumed earthquake*

ISC 28 08:04:51.6±2.1, 13.75°N±0.07°×91.70°W±0.06, h7km±11km, n49, σ1s 21/72, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STG5	**El Palmar, Qui**	**0.74**	**27**	*i* P		**Pn**	**08 05 09.1**	**+0.5**
STG2	**El Palmar, Qui**	**0.76**	**24**	*i* P		**Pn**	**08 05 09.8**	**+0.9**
STG2				*i* S		**Sn**	**08 05 22.9**	**+2.2**
RTAL	**Retalhuleu**	**0.77**	**0**	P		**Pg**	**08 05 07.8**	**+1.2**
RTAL				S		**Sb**	**08 05 18.7**	**+0.5**
RTAL	**Retalhuleu**	**0.77**	**0**	*eP*		**Pg**	**08 05 07.6**	**+1.0**
RTAL				*eS*		**Sg**	**08 05 17.0**	**+0.3**
STG8	**El Palmar, Qui**	**0.78**	**26**	*i* P		**Pn**	**08 05 10.1**	**+0.8**
QUEO	**Labor Ovalle**	**1.13**	**9**	*i* P		**Pb**	**08 05 13.1**	**-0.7**
QUEO				*i* S		**Sn**	**08 05 30.0**	**-0.2**
SMCA	**Catarina**	**1.16**	**342**	*i* P		**Pb**	**08 05 12.5**	**-1.6**
FG8	**Yepocapa, Chim**	**1.22**	**65**	*i* P		**Pb**	**08 05 12.4**	**-2.7**
FG16	**Alotenango, Sa**	**1.27**	**65**	*i* P		**Pn**	**08 05 13.3**	**-2.7**
FG16				*i* S		**Sb**	**08 05 29.5**	**-3.0**
THIG		**1.28**	**335**	*i* P		**Pn**	**08 05 14.4**	**-1.6**
THIG				*i* S		**Sb**	**08 05 31.9**	**-0.9**
HUEH	**Huehuetenango**	**1.57**	**7**	P		**Pn**	**08 05 20.2**	**0.0**
HUEH				S		**Sb**	**08 05 41.4**	**-0.1**
HUEH	**Huehuetenango**	**1.57**	**7**	*i* P		**Pn**	**08 05 19.9**	**-0.4**
HUEH	**Huehuetenango**	**1.57**	**7**	*eP*		**Pn**	**08 05 19.8**	**-0.4**
FAME	**Alcaldia de Sa**	**1.64**	**86**	P		**Pn**	**08 05 21.2**	**+0.3**
FAME				S		**Sb**	**08 05 42.8**	**-0.3**
APG	**El Apazote**	**1.73**	**44**	*i* P		**Pn**	**08 05 23.5**	**+1.1**
APG				*i* S		**Sg**	**08 05 47.5**	**+0.2**
LOAL	**Lomas de Alarc**	**1.88**	**82**	P		**Pn**	**08 05 24.7**	**+0.4**
LOAL				S		**Sb**	**08 05 49.9**	**-0.2**
SLOZ	**Alcaldia de Sa**	**1.88**	**81**	P		**Pn**	**08 05 25.0**	**+0.8**
SLOZ	**Alcaldia de Sa**	**1.88**	**81**	*eP*		**Pn**	**08 05 24.8**	**+0.5**
CEVE	**Cerro Verde**	**2.02**	**87**	P		**Pn**	**08 05 26.7**	**+0.4**
CEVE				S		**Sn**	**08 05 52.9**	**+1.0**
CEVE	**Cerro Verde**	**2.02**	**87**	*eP*		**Pn**	**08 05 27.1**	**+0.8**
SBLS	**San Blas**	**2.02**	**87**	*eP*		**Pn**	**08 05 26.2**	**-0.2**
SNJE	**San Jose**	**2.04**	**86**	*eP*		**Pn**	**08 05 26.8**	**+0.2**
UNIC	**Universidad Ca**	**2.10**	**83**	P		**Pn**	**08 05 28.3**	**+1.0**
UNIC				S		**Sn**	**08 05 54.6**	**+0.8**
JAYA	**Jayaque - finc**	**2.19**	**92**	P		**Pn**	**08 05 28.2**	**-0.4**
JAYA	**Jayaque - finc**	**2.19**	**92**	*i* P		**Pn**	**08 05 29.5**	**+0.9**
JAYA				*i* S		**Sn**	**08 05 56.3**	**+0.2**
JAYA	**Jayaque - finc**	**2.19**	**92**	*eP*		**Pn**	**08 05 28.3**	**-0.4**
PMON	**Piamonte**	**2.32**	**91**	P		**Pn**	**08 05 31.3**	**+0.9**
PMON				S		**Sn**	**08 06 00.9**	**+1.7**
PMON	**Piamonte**	**2.32**	**91**	*eP*		**Pn**	**08 05 30.9**	**+0.5**
MTO3	**Montecristo**	**2.36**	**74**	P		**Pn**	**08 05 31.7**	**+0.7**
MTO3				S		**Sb**	**08 06 02.2**	**-1.9**
MTO3	**Montecristo**	**2.36**	**74**	*i* P		**Pn**	**08 05 31.7**	**+0.7**
UEES	**Universidad Ev**	**2.39**	**90**	P		**Pn**	**08 05 32.5**	**+1.1**
UEES				S		**Sn**	**08 06 02.8**	**+1.8**
SEMO	**Seminario San**	**2.40**	**91**	P		**Pn**	**08 05 31.0**	**-0.6**
SEMO				S		**Sn**	**08 06 03.4**	**+2.1**
ZAFR2	**Estanzuela, Za**	**2.42**	**70**	*i* P		**Pn**	**08 05 32.2**	**+0.5**
ESQI	**Esquipulas**	**2.42**	**70**	P		**Pn**	**08 05 33.1**	**+1.3**
ESQI				S		**Sb**	**08 06 03.8**	**-2.1**
UTEC	**Universidad Te**	**2.43**	**91**	P		**Pn**	**08 05 33.3**	**+1.5**
PANCS	**Alcalda de**	**2.45**	**93**	S		**Sn**	**08 06 04.2**	**+1.7**
LOMA	**Loma Larga**	**2.46**	**92**	*eP*		**Pn**	**08 05 32.5**	**+0.2**
CCIG	**Comitan**	**2.56**	**350**	P		**Pn**	**08 05 35.1**	**+1.4**
CCIG				S		**Sb**	**08 06 07.3**	**-2.5**
CCIG	**Comitan**	**2.56**	**350**	*i* P		**Pn**	**08 05 34.9**	**+1.1**
CCIG				*i* S		**Sb**	**08 06 08.8**	**-1.0**
SJTE	**Alcalda de S**	**2.62**	**93**	*eP*		**Pn**	**08 05 35.0**	**+0.6**
PAVA	**Las Pavas**	**2.68**	**90**	P		**Pn**	**08 05 36.4**	**+1.0**
PAVA				S		**Sn**	**08 06 10.1**	**+1.8**
LLGN	**La Laguna**	**2.71**	**81**	P		**Pn**	**08 05 36.2**	**+0.5**
COEG	**Centro de Oper**	**2.74**	**92**	P		**Pn**	**08 05 37.2**	**+1.1**
COEG				S		**Sn**	**08 06 10.8**	**+1.2**
COEG	**Centro de Oper**	**2.74**	**92**	*eP*		**Pn**	**08 05 36.9**	**+0.7**
TECO	**Alcaldia de Te**	**2.84**	**94**	S		**Sn**	**08 06 13.5**	**+1.4**
P5NO	**Presa 5 de nov**	**2.86**	**85**	P		**Pn**	**08 05 38.0**	**+0.2**
P5NO				S		**Sn**	**08 06 13.9**	**+1.3**
SCLA	**Alcaldia de Sa**	**2.89**	**91**	P		**Pn**	**08 05 38.9**	**+0.7**
PACA	**Pacayal**	**3.29**	**94**	P		**Pn**	**08 05 44.8**	**+1.0**
RANC	**El Ranchito**	**3.33**	**95**	P		**Pn**	**08 05 44.3**	**-0.1**

*NOU **28** 08:08:28.5, 37.87°S×179.75°W, h0km, MLv4.2/8, East of North Island, N.Z.*
*WEL **28** 08:08:36.3±0.9, 38°S±7°×18°0E±°, h12km, M3.4/12, ML3.5/14, MLv3.4/12, Error ellipse: s-maj=9.4km s-min=6.4km az=25.1, confirmed*

ISC 28 08:08:32.7±2.8, 37.77S±0.08°×179.9E±0.1°, h11km±13km, n78, σ1s 31/84, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ECLS	**East Cape Ligh**	**1.04**	**274**	P		**Pn**	**08 08 54.6**	**+1.4**
WMGZ	**Waiomatatini S**	**1.14**	**267**	P		**Pb**	**08 08 54.8**	**+0.3**
WMGZ				S		**Sb**	**08 09 09.2**	**-0.1**
MXZ	**Matakaoa Point**	**1.25**	**279**	P		**Pg**	**08 08 56.0**	**-0.6**
MXZ	**Matakaoa Point**	**1.25**	**279**	P		**Pg**	**08 08 56.0**	**-0.6**
MXZ				S		**Sb**	**08 09 11.5**	**-0.8**
PUZ	**Puketiti**	**1.30**	**256**	P		**Pg**	**08 08 57.3**	**-0.4**
PUZ				S		**Sb**	**08 09 13.5**	**-0.4**
TBAS	**Tolaga Bay Are**	**1.37**	**243**	P		**Pg**	**08 09 00.2**	**+1.3**
CNGZ	**Carnagh Statio**	**1.48**	**241**	P		**Pb**	**08 09 01.1**	**+0.8**
TWGZ	**Tauwhareparae**	**1.54**	**254**	P		**Pn**	**08 09 01.1**	**+1.0**
HAZ	**Te Kaha**	**1.64**	**270**	P		**Pn**	**08 09 02.1**	**+0.6**
HAZ				S		**Sn**	**08 09 22.1**	**-0.5**
TKGZ	**Te Karaka**	**1.72**	**247**	P		**Pn**	**08 09 03.8**	**+1.3**
TKGZ				S		**Sn**	**08 09 24.6**	**+0.1**
RUGZ	**Raukumara Rang**	**1.73**	**263**	P		**Pn**	**08 09 03.3**	**

LATG	**Datong**	**0.84**	**256**	*eP*	**Pg**	**08 10 56.3**	**-0.5**
LATG				*eS*	**Sg**	**08 11 08.0**	**+0.1**
NHDH	**Xindian Distri**	**0.85**	**285**	*eP*	**Pn**	**08 10 57.9**	**+0.1**
NHDH				*eS*	**Sn**	**08 11 09.2**	**-0.9**
TATO	**Taipei**	**0.89**	**285**	*eP*	**Pn**	**08 10 58.4**	**+0.1**
TATO				*eS*	**Sg**	**08 11 10.0**	**+1.0**
ZUZH	**Zhuzihu**	**0.90**	**298**	*eP*	**Pn**	**08 10 58.7**	**0.0**
TWY	**Chenhua**	**0.92**	**306**	*eS*	**Sn**	**08 11 11.4**	**-0.5**
ETL	**Fush Village**	**0.94**	**232**	*eP*	**Pg**	**08 10 58.6**	**+0.1**
NACB	**Ninganchiao**	**0.95**	**234**	P	**Pb**	**08 10 58.1**	**-0.4**
NACB				*eS*	**Sg**	**08 11 11.4**	**+0.3**
YHNB	**Yeheng**	**0.96**	**266**	*eP*	**Pb**	**08 10 58.9**	**+0.1**
YHNB				*eS*	**Sb**	**08 11 11.1**	**-0.3**
NSK	**Sanguang**	**0.97**	**266**	P	**Pb**	**08 10 59.0**	**0.0**
NSK				*eS*	**Sb**	**08 11 10.6**	**-1.2**
NTST	**Danshui**	**0.98**	**296**	*eP*	**Pn**	**08 11 00.3**	**+0.6**
NNSB	**Datong**	**1.00**	**252**	*eP*	**Pb**	**08 10 58.9**	**-0.6**
NNSB				*eS*	**Sb**	**08 11 12.6**	**0.0**
NNSH	**Datong**	**1.00**	**252**	*eP*	**Pb**	**08 10 59.3**	**-0.2**
NNSH				*eS*	**Sb**	**08 11 11.8**	**-0.8**
TWD	**Chiawan**	**1.00**	**229**	*eP*	**Pb**	**08 10 59.6**	**+0.1**
TWD				*eS*	**Sb**	**08 11 12.6**	**+0.1**
NNS	**Nan Shan**	**1.01**	**253**	*eP*	**Pb**	**08 10 59.6**	**0.0**
NNS				*eS*	**Sb**	**08 11 12.5**	**-0.3**
ETLH	**Xiulin Townshi**	**1.01**	**239**	*eP*	**Pg**	**08 10 59.9**	**0.0**
ETLH				*eS*	**Sg**	**08 11 13.3**	**+0.2**
KSHI	**Guanxi Townshi**	**1.14**	**272**	*eP*	**Pg**	**08 11 02.7**	**+0.4**
KSHI				*eS*	**Sn**	**08 11 18.8**	**+1.5**
ETM	**Tongmen**	**1.15**	**228**	*eP*	**Pn**	**08 11 01.9**	**-0.1**
ETM				*eS*	**Sg**	**08 11 17.8**	**+0.3**
LXIB	**Xiulin Townshi**	**1.17**	**232**	*eP*	**Pg**	**08 11 02.8**	**-0.1**
LXIB				*eS*	**Sg**	**08 11 18.5**	**+0.3**
FUSS	**Fushou**	**1.19**	**246**	*eP*	**Pn**	**08 11 02.7**	**0.0**
FUSS				*eS*	**Sg**	**08 11 18.9**	**+0.2**
NFF	**Wufeng Townshi**	**1.20**	**265**	*eP*	**Pg**	**08 11 03.6**	**+0.2**
NFF				*eS*	**Sg**	**08 11 19.4**	**+0.3**
WHF	**Hehuan Shan**	**1.21**	**241**	*eP*	**Pb**	**08 11 03.6**	**+0.2**
WHF				*eS*	**Sb**	**08 11 19.0**	**-0.1**
SHUL	**Shoufeng**	**1.23**	**220**	*eP*	**Pb**	**08 11 03.4**	**0.0**
SHUL				*eS*	**Sg**	**08 11 21.2**	**+1.0**
TWT	**Tachien**	**1.24**	**247**	*eP*	**Pg**	**08 11 04.3**	**+0.1**
TWT				*eS*	**Sg**	**08 11 20.5**	**+0.1**
IRIF	**Iriomote-Funau**	**1.25**	**109**	P	**Pg**	**08 11 04.9**	**+0.4**
IRIF				*eS*	**Sg**	**08 11 20.9**	**+0.1**
TDCB	**Techi**	**1.25**	**247**	*eP*	**Pg**	**08 11 05.0**	**+0.5**
TDCB				*eS*	**Sb**	**08 11 19.7**	**-0.2**
LIOB	**Emei**	**1.29**	**266**	*eP*	**Pg**	**08 11 05.3**	**+0.1**
NSTT	**Nanjuang**	**1.30**	**265**	*eP*	**Pg**	**08 11 06.0**	**+0.6**
NSTT				*eS*	**Sg**	**08 11 22.8**	**+0.4**
OWD	**Renai**	**1.38**	**236**	*eP*	**Pb**	**08 11 06.5**	**+0.4**
OWD				*eS*	**Sg**	**08 11 24.8**	**-0.3**
WARBT	**Fenglin Townsh**	**1.39**	**223**	*eP*	**Pb**	**08 11 06.0**	**-0.2**
WUSB	**Renai**	**1.41**	**238**	P	**Pg**	**08 11 07.0**	**-0.4**
WUSB				*eS*	**Sb**	**08 11 24.8**	**+0.5**
WHP	**Taichung City**	**1.43**	**251**	*eP*	**Pg**	**08 11 07.6**	**-0.2**
WHP				*eS*	**Sb**	**08 11 25.7**	**+0.8**
HATJ	**Hateruma jima**	**1.43**	**118**	*eP*	**Pg**	**08 11 07.9**	**+0.1**
HATJ				*eS*	**Sg**	**08 11 26.9**	**+0.5**
JKRS	**Kuro-shima**	**1.53**	**109**	*eP*	**Pb**	**08 11 08.6**	**+0.2**
JKRS				*eS*	**Sb**	**08 11 27.9**	**+0.3**
VWDT	**VWDT**	**1.53**	**230**	*eP*	**Pb**	**08 11 08.9**	**+0.4**
VWDT				*eS*	**Sg**	**08 11 29.8**	**+0.1**
WCS	**Beigang Elemen**	**1.54**	**244**	*eP*	**Pg**	**08 11 10.2**	**+0.2**
EHY	**Hungye**	**1.59**	**220**	*eP*	**Pn**	**08 11 08.3**	**+0.3**
JISG	**Ishigakijimahi**	**1.72**	**95**	*eP*	**Pb**	**08 11 11.0**	**-0.7**

IDC ***28*** *08:20:36.8±1.0,20°.12S×168°.63E, h0km, mb3.9/7, mbtmp4.0/9, ML3.8/1, MS3.2/3, Error ellipse: s-maj=36.1km s-min=21.1km az=147.0*

ISC 28 08:20:40.6±0.8, 20°.2S±0°.1×168°.6E±0°.1, h25km, n14, σ0s93/14, mb4.0/6, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.69**	**227**	Pn	**Pn**	**08 21 22.1**	**-0.4**
	26nm,0.4s,baz=51,slow=18						
DZM				Sn	**Sn**	**08 21 53.3**	**-1.0**
	50nm,0.3s,baz=102,slow=21,SNR=10						
MSVF	**Nonsavu**	**9.32**	**76**	LR	LR	08 25 55.3	
	comp=Z,175nm,22.0s,baz=244,slow=34						
URZ	**Urewera**	**19.45**	**159**	P	**P**	**08 25 05.7**	**+0.4**
	0.3nm,0.3s,baz=90,slow=3.0,SNR=2.8 9.9nm,0.9s						
AFI	**Afiamalu**	**19.82**	**75**	LR	LR	08 31 20.1	
	comp=Z,39nm,19.6s,baz=18,slow=33						
CTA	**Charters Tower**	**20.93**	**266**	P	**P**	**08 25 20.6**	**-1.1**
	3.8nm,1.0s,baz=14,slow=4.0,SNR=1.5 3.8nm,1.0s						
STKA	**Stephens Creek**	**26.78**	**239**	P	**P**	**08 26 19.7**	**+1.0**
	1.7nm,0.7s,baz=79,slow=10,SNR=5.3						
STKA				LR	LR	08 35 36.8	
	comp=Z,57nm,18.8s,baz=33,slow=34 1.7nm,0.7s						
WRA	**Warramunga Arr**	**32.10**	**264**	P	**P**	**08 27 07.2**	**+1.1**
	0.8nm,1.0s,baz=93,slow=8.4,SNR=5.2						
WRA				PcP	**PcP**	**08 29 55.2**	**0.0**
	0.2nm,0.7s,baz=97,slow=2.4,SNR=1.6 0.8nm,1.0s						
ASAR	**Alice Springs**	**32.27**	**257**	P	**P**	**08 27 09.1**	**+1.5**
	1.4nm,0.5s,baz=86,slow=9.0,SNR=36 1.4nm,0.5s						
SONM	**Songino Array**	**87.61**	**323**	P	**P**	**08 33 27.1**	**+0.3**
	0.7nm,0.6s,baz=157,slow=4.8,SNR=3.6 0.7nm,0.6s						
NVAR	**Mina Array Bea**	**89.93**	**49**	P	**P**	**08 33 38.4**	**+0.3**
	0.9nm,0.8s,baz=228,slow=7.8,SNR=7.5 0.9nm,0.8s						
ILAR	**Eielson Array**	**91.36**	**18**	P	**P**	**08 33 42.4**	**-1.4**
	0.5nm,0.7s,baz=239,slow=5.3,SNR=10 0.5nm,0.7s						
FINES	**FINESS Array B**	**131.24**	**337**	PKP	**PKPdf**	**08 39 49.9**	**-0.1**
	3.9nm,1.2s,baz=123,slow=3.2,SNR=3.7						
EKA	**Eskdalemuir Ar**	**144.39**	**352**	PKP	**PKPdf**	**08 40 13.7**	**-0.6**
	0.7nm,0.4s,baz=352,slow=2.8,SNR=3.0						
GERES	**GERESS Array B**	**145.04**	**331**	PKP	**PKPdf**	**08 40 16.0**	**+0.2**
	0.4nm,0.5s,baz=62,slow=9.5,SNR=3.8						

IDC ***28*** *08:49:39.6±0.8, 0°.80N×125°.88E, h0km, mb4.0/7, mbtmp4.0/8, ML3.7/1, MS3.0/2, Error ellipse: s-maj=62.1km s-min=15.5km az=71.0*

DJA ***28*** *08:49:44.2±0.2, 1°.1N±3°×12°.6E±°, h10km, M4.2/19, mB5.0/4, mb4.4/7, MLv4.1/19, Mw(mB)4.3/4*

NEIC ***28*** *08:49:45.9±1.4, 0°.79N±0°.09×125°.99E±0°.05, h35km±1km, mb4.3/16, Error ellipse: s-maj=15.9km s-min=9.0km az=181.0*

ISC 28 08:49:45.9±0.6, 0°.89N±0°.06×126°.11E±0°.06, h44km, n40, σ1s48/40, mb4.2/15, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.26**	**95**	Pn	**Pn**	**08 50 06.4**	**-0.7**
TNTI	**Ternate**	**1.26**	**95**	P	**Pn**	**08 50 07.2**	**+0.1**
MNI	**Manado**	**1.38**	**294**	P	**Pn**	**08 50 08.4**	**-0.4**
GTOI	**Gorontalo**	**3.11**	**265**	P	**Pn**	**08 50 34.1**	**+1.6**
LUWI	**Luwuk**	**3.85**	**240**	Pn	**Pn**	**08 50 40.7**	**-1.9**
LUWI	**Luwuk**	**3.85**	**240**	P	**Pn**	**08 50 44.2**	**+1.6**
MRSI	**Marisa**	**4.19**	**264**	P	**Pn**	**08 50 49.3**	**+2.0**
NLAI	**Namlea**	**4.22**	**166**	P	**Pn**	**08 50 49.6**	**+1.9**
APSI	**Ampana**	**4.80**	**248**	P	**Pn**	**08 50 57.8**	**+2.0**
TOLI2	**Tolitoli**	**5.33**	**272**	Pn	**Pn**	**08 51 00.8**	**-2.2**
SIJI	**Sorong**	**5.45**	**109**	LR	LR	08 53 24.8	
	comp=Z,113nm,19.9s,baz=305,slow=40						
MPSI	**Mapaga**	**6.23**	**265**	P	**Pn**	**08 51 15.5**	**+0.1**
FAKI	**Fak Fak**	**7.21**	**122**	Pn	**Pn**	**08 51 29.7**	**+0.9**
SPSI	**Sidrap Palu**	**7.96**	**233**	P	**Pn**	**08 51 40.7**	**+1.6**
	1μm19nm,1.0s						
MTN	**Manton Dam**	**14.53**	**160**	Pn	**Pn**	**08 53 07.4**	**-1.4**
KNRA	**Kununurra**	**16.67**	**171**	Pn	**Pn**	**08 53 35.2**	**-1.2**
FITZ	**Fitzroy Crossi**	**18.87**	**181**	P	**P**	**08 54 00.2**	**-2.4**
	0.2nm,0.3s,baz=9.7,slow=9.9,SNR=1.3 1.2nm,0.7s						
WB0	**Warramunga Arr**	**22.08**	**159**	P	**P**	**08 54 36.2**	**-1.1**
WB0				IAmb	IAmb	08 54 43.8	
	comp=Z,14nm,0.9s						
WRA	**Warramunga Arr**	**22.22**	**159**	P	**P**	**08 54 37.1**	**-1.8**
	comp=Z,4.2nm,0.5s,baz=336,slow=11,SNR=44						
WRA				PcP	**PcP**	**08 58 34.3**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=331,slow=2.1,SNR=1.5 comp=Z,4.2nm,0.5s						
WRA	**Warramunga Arr**	**22.22**	**159**	P	**P**	**08 54 35.9**	**-3.0**
COEN	**Coen**	**22.44**	**132**	P	**P**	**08 54 42.2**	**+0.9**
MBWA	**Marble Bar**	**22.78**	**196**	P	**P**	**08 54 43.0**	**-1.9**
MBWA				IAmb	IAmb	08 54 53.5	
	comp=Z,15nm,1.2s						
TPUB	**Ta-pu**	**22.91**	**347**	P	**P**	**08 54 45.4**	**-0.8**
AS31	**Alice Springs**	**25.56**	**163**	P	**P**	**08 55 10.5**	**-0.4**
AS31				IAmb	IAmb	08 55 12.9	
	comp=Z,2.6nm,0.3s						
ASAR	**Alice Springs**	**25.56**	**163**	P	**P**	**08 55 11.2**	**+0.3**
	comp=Z,1.6nm,0.4s,baz=348,slow=13,SNR=41						
ASAR				PcP	**PcP**	**08 58 41.6**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=343,slow=2.6,SNR=4.5 comp=Z,1.6nm,0.4s						
STKA	**Stephens Creek**	**35.74**	**157**	P	**P**	**08 56 40.4**	**-0.2**
	comp=Z,2.0nm,0.6s,baz=332,slow=11,SNR=8.0 comp=Z,2.0nm,0.6s						
MJAR	**Matsushiro Arr**	**37.20**	**16**	P	**P**	**08 56 53.6**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=192,slow=10.0,SNR=2.5 comp=Z,1.1nm,0.6s						
EVN	**Everest**	**46.23**	**309**	P	**P**	**08 58 06.2**	**-1.6**
EVN				IAmb	IAmb	08 58 33.0	
	comp=Z,6.6nm,1.3s						
SONM	**Songino Array**	**49.79**	**343**	P	**P**	**08 58 35.5**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=141,slow=9.3,SNR=2.0 comp=Z,0.5nm,0.6s						
TLY	**Talaya**	**54.03**	**343**	LR	LR	09 23 46.2	
	comp=Z,18nm,19.0s,baz=96,slow=38						
MKAR	**Makanchi Array**	**59.54**	**327**	P	**P**	**08 59 44.7**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=117,slow=8.9,SNR=11 comp=Z,0.9nm,0.5s						
MAKZ	**Makanchi**	**59.73**	**326**	P	**P**	**08 59 46.7**	**+0.4**
MAKZ				IAmb	IAmb	09 00 00.7	
	comp=Z,1.5nm,0.8s						
KURBB	**Kurchatov Arra**	**63.80**	**328**	P	**P**	**09 00 12.7**	**-0.8**
	comp=Z,1.5nm,0.6s,baz=131,slow=6.1,SNR=18 comp=Z,1.5nm,0.6s						
ABKAR	**Akbulak array**	**73.96**	**321**	P	**P**	**09 01 17.9**	**+1.2**
I17K	**Unalakleet**	**81.85**	**25**	P	**P**	**09 02 02.1**	**+1.8**
L16K	**Owhat River**	**81.86**	**28**	P	**P**	**09 02 02.0**	**+1.6**
J17K	**VABM Dome**	**82.43**	**26**	P	**P**	**09 02 03.6**	**+0.3**
J17K				IAmb	IAmb	09 02 14.9	
	comp=Z,5.6nm,1.2s						
K17K	**Iditarod**	**82.63**	**27**	P	**P**	**09 02 06.0**	**+1.6**
E18K	**Tukpahlearik C**	**82.81**	**22**	P	**P**	**09 02 07.2**	**+2.0**
E18K				IAmb	IAmb	09 02 08.4	
	comp=Z,1.8nm,0.8s						
C19K	**Lookout Ridge**	**83.60**	**20**	P	**P**	**09 02 11.4**	**+2.1**
C19K				IAmb	IAmb	09 02 15.1	
	comp=Z,1.9nm,0.8s						

IDC ***28*** *09:44:57.5±0.5, 10°.92S×115°.35E, h0km, mb4.2/19, mbtmp4.3/24, ML4.3/5, MS3.1/4, Error ellipse: s-maj=18.8km s-min=12.1km az=65.0*

NEIC ***28*** *09:44:59.7±1.8, 10°.98S±0°.08×115°.25E±0°.03, h10km±1km, mb4.6/36, Error ellipse: s-maj=14.4km s-min=4.3km az=174.0*

ISC 28 09:45:02.1±0.4, 11°.05S±0°.05×115°.38E±0°.05, h35km, n110, σ1s86/104, mb4.5/34, MS3.0/3, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGI	**Jajag, Banyuwa**	**2.83**	**335**	P	**Pn**	**09 45 43.3**	**-1.6**
JAGI	**Jajag, Banyuwa**	**2.83**	**335**		**Pn**	**09 45 43.4**	**-1.6**
PLAI	**Plampang**	**3.23**	**47**	P	**Pn**	**09 45 51.7**	**+1.3**
UGM	**Wanagama**	**5.71**	**303**	P	**Pn**	**09 46 21.9**	**-2.7**
UGM	**Wanagama**	**5.71**	**303**		**Pn**	**09 46 23.1**	**-1.5**
MMRI	**Maumere**	**7.17**	**71**	Pn	**Pn**	**09 46 45.7**	**+1.1**
KAPI	**Kappang**	**7.40**	**36**	Pn	**Pn**	**09 46 46.1**	**-1.5**
	3.6nm,0.3s,baz=184,slow=2.4,SNR=12						
KAPI				Sn	**Sn**	**09 48 08.4**	**-2.0**
	2.7nm,0.3s,baz=210,slow=20,SNR=1.5						
KAPI				LR	LR	09 50 23.6	
	comp=Z,84nm,19.6s,baz=200,slow=45 7.9nm,0.2s						
KAPI	**Kappang**	**7.40**	**36**	P	**Pn**	**09 46 50.2**	**+2.5**
KAPI	**Kappang**	**7.40**	**36**		**Pn**	**09 46 48.1**	**+0.4**
BATI	**Bamata**	**8.19**	**85**	Pn	**Pn**	**09 46 56.7**	**-1.9**
	6.1nm,0.3s,baz=281,slow=10,SNR=1.5						
BATI				Sn	**Sn**	**09 48 29.8**	**-0.1**
	7.3nm,0.3s,baz=178,slow=23,SNR=3.6 16nm,0.3s						
BBJI	**Bungbulang**	**8.42**	**294**	P	**Pn**	**09 46 58.9**	**-2.9**
BBJI	**Bungbulang**	**8.42**	**294**		**Pn**	**09 46 59.0**	**-2.8**
LEM	**Lembang**	**8.74**	**298**	Pn	**Pn**	**09 47 03.2**	**-3.0**
	2.9nm,0.3s,baz=139,slow=14,SNR=4.3 13nm,0.5s						
SOEI	**Soe**	**8.84**	**82**	Pn	**Pn**	**09 47 08.0**	**+0.5**
XMI	**Christmas Isla**	**9.54**	**273**	P	Pn	09 47 11.8	-5.3
MBWA	**Marble Bar**	**10.89**	**158**	P	Pn	09 47 31.2	-4.3
MBWA	**Marble Bar**	**10.89**	**158**		Pn	09 47 31.9	-3.6
PSA00	**Pilbara Seismi**	**11.31**	**158**	P	Pn	09 47 37.2	-4.1
PSA00	**Pilbara Seismi**	**11.31**	**158**		Pn	09 47 37.4	-3.9
PSA00	**Pilbara Seismi**	**11.31**	**158**		Pn	09 47 37.7	-3.6
FITZ	**Fitzroy Crossi**	**12.15**	**126**	Pn	**Pn**	**09 47 51.6**	**-1.2**
	0.7nm,0.3s,baz=302,slow=7.4,SNR=29						
FITZ				Sn	**Sn**	**09 50 02.5**	**-4.7**
	1.0nm,0.3s,baz=330,slow=20,SNR=3.9 2.9nm,0.3s						
KNRA	**Kununurra**	**13.81**	**111**	Pn	**Pn**	**09 48 16.0**	**+0.5**
MTN	**Manton Dam**	**15.52**	**98**		**Pn**	**09 48 40.4**	**+1.9**
MEEK	**Meekatharra**	**15.80**	**169**	P	**Pn**	**09 48 38.4**	**-3.7**
MORW	**Morawa**	**17.94**	**178**	P	**Pn**	**09 49 06.0**	**-2.9**
MORW	**Morawa**	**17.94**	**178**	Pn	**Pn**	**09 49 07.1**	**-1.8**
MORW				IAmb	IAmb	09 49 42.9	
	comp=Z,47nm,1.4s						
FAKI	**Fak Fak**	**18.58**	**65**	P	**P**	**09 49 16.7**	**+0.3**
FAKI	**Fak Fak**	**18.58**	**65**	P	**P**	**09 49 16.7**	**+0.3**
FAKI				IAmb	IAmb	09 49 26.9	
	comp=Z,26nm,0.9s						
SIJI	**Sorong**	**18.74**	**58**	P	**P**	**09 49 18.1**	**-0.1**
	comp=Z,1.4nm,0.3s,baz=250,slow=4.7,SNR=12						
SIJI				S	**Sn**	**09 52 41.7**	**-6.0**
	comp=Z,2.4nm,0.4s,baz=236,slow=22,SNR=1.7 comp=Z,14nm,0.6s						
BLDU	**Ballidu**	**19.51**	**177**	P	**P**	**09 49 24.4**	**-2.0**
WB0	**Warramunga Arr**	**20.26**	**118**	P	**P**	**09 49 37.4**	**+2.6**
WRA	**Warramunga Arr**	**20.28**	**118**	P	**P**	**09 49 36.1**	**+1.1**
	comp=Z,7.7nm,0.8s,baz=294,slow=12,SNR=49						
WRA				S	**S**	**09 53 16.3**	**-4.4**
	comp=Z,0.7nm,0.7s,baz=288,slow=23,SNR=3.3 comp=Z,7.7nm,0.8s						
WRA	**Warramunga Arr**	**20.28**	**118**	P	**P**	**09 49 37.2**	**+2.2**
WRAB	**Tennant Creek**	**20.29**	**118**	P	**P**	**09 49 36.5**	**+1.5**
WRAB	**Tennant Creek**	**20.29**	**118**	P	**P**	**09 49 38.2**	**+3.1**
WB2	**Warramunga Arr**	**20.29**	**118**	P	**P**	**09 49 37.9**	**+2.8**
WR8	**Warramunga Arr**	**20.43**	**118**	P	**P**	**09 49 39.6**	**+3.0**
WR8				IAmb	IAmb	09 49 40.8	
	comp=Z,18nm,0.8s						
WR0	**Warramunga Arr**	**20.46**	**118**	P	**P**	**09 49 38.4**	**+1.5**
WR0				IAmb	IAmb	09 49 41.2	
	comp=Z,18nm,0.8s						
DAV	**Davao City (W)**	**20.67**	**30**	LR	LR	09 57 57.8	
	comp=Z,23nm,21.6s,baz=150,slow=38						
MUN	**Mundaring**	**20.84**	**178**	P	**P**	**09 49 38.4**	**-2.5**
ASAR	**Alice Springs**	**21.65**	**128**	P	**P**	**09 49 51.8**	**+2.0**
	comp=Z,6.4nm,0.8s,baz=304,slow=9.6,SNR=29						
ASAR				S	**S**	**09 53 47.7**	**0.0**
	comp=Z,1.5nm,0.8s,baz=297,slow=22,SNR=4.5 comp=Z,6.4nm,0.8s						
ASAR	**Alice Springs**	**21.65**	**128**	P	**P**	**09 49 51.3**	**+1.6**
AS31	**Alice Springs**	**21.65**	**128**	P	**P**	**09 49 52.2**	**+2.5**
NWAO	**Narrogin (SRO)**	**21.84**	**176**	P	**P**	**09 49 48.9**	**-2.7**
FORT	**Forrest**	**22.89**	**151**	P	**P**	**09 50 04.1**	**+1.3**
FORT				IAmb	IAmb	09 50 08.4	
	comp=Z,18nm,0.9s						
COEN	**Coen**	**27.28**	**99**	P	**P**	**09 50 45.9**	**+2.2**
BBOO	**Buckleboo**	**28.82**	**142**	P	**P**	**09 50 58.8**	**+1.7**
STKA	**Stephens Creek**	**31.86**	**135**	P	**P**	**09 51 26.0**	**+2.0**
	comp=Z,7.2nm,0.9s,baz=310,slow=10,SNR=13 comp=Z,7.2nm,0.9s						
STKA	**Stephens Creek**	**31.86**	**135**	P	**P**	**09 51 26.3**	**+2.3**
CMAR	**Chiang Mai Arr**	**33.51**	**331**	P	**P**	**09 51 38.9**	**+0.4**
	comp=Z,3.4nm,0.9s,baz=163,slow=8.1,SNR=22 comp=Z,3.4nm,0.9s						
CMAR	**Chiang Mai Arr**	**33.51**	**331**	P	**P**	**09 51 39.6**	**+1.1**
CHTO	**Chiang Mai**	**33.81**	**331**	P	**P**	**09 51 40.9**	**-0.3**
PZH	**PanZhiHua**	**39.61**	**341**	P	**P**	**09 52 33.5**	**+2.9**
H08S2	**Diego Garcia H**	**42.42**	**271**	T	T	10 38 16.9	
	baz=96,slow=75,SNR=8.0						
H08S3	**Diego Garcia H**	**42.44**	**271**	T	T	10 37 56.6	
	baz=96,slow=75,SNR=7.9						
H08S1	**Diego Garcia H**	**42.44**	**271**	T	T	10 38 18.7	
	baz=96,slow=75,SNR=5.7						
NJ2	**Nanjing**	**42.98**	**4**	*eP*	**P**	**09 53 02.3**	**+4.2**
NJ2				pmax	pmax		
SHL	**Shillong**	**42.99**	**328**	P	**P**	**09 52 58.4**	**-0.1**
SHL				IAmb	IAmb	09 53 07.5	
	comp=Z,7.5nm,0.9s						
CD2	**Chengdu**	**43.19**	**345**	P	**P**	**09 53 01.5**	**+1.7**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
XAN	**Xi'an**	**45.26**	**352**	P	**P**	**09 53 16.0**	**-0.3**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
EVN	**Everest**	**47.63**	**325**		**P**	**09 53 33.9**	**-1.9**
EVN				IAmb	IAmb	09 53 38.5	
	comp=Z,7.5nm,0.9s						
LZDM	**Lanzhou Array**	**48.03**	**347**	P	**P**	**09 53 38.7**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=185,slow=15,SNR=1.1 comp=Z,0.9nm,0.3s						
KSRS	**Korea Array**	**49.66**	**13**	P	**P**	**09 53 50.3**	**-0.1**
	comp=Z,2.5nm,0.9s,baz=212,slow=6.8,SNR=5.1 comp=Z,2.5nm,0.9s						
HHC	**Hu-ho-hao-te**	**51.76**	**356**	*eP*	**P**	**09 54 10.0**	**+3.7**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,5.4s						
MJAR	**Matsushiro Arr**	**51.99**	**23**	P	**P**	**09 54 07.1**	**-0.9**
	comp=Z,3.2nm,0.9s,baz=201,slow=7.2,SNR=6.5 comp=Z,3.2nm,0.9s						
USRK	**Ussuriysk Ar.**	**57.02**	**14**	P	**P**	**09 54 43.5**	**-0.9**
	comp=Z,2.4nm,0.7s,baz=219,slow=6.7,SNR=3.1 comp=Z,2.4nm,0.7s						
SONM	**Songino Array**	**59.16**	**353**	P	**P**	**09 54 58.0**	**-1.5**
	comp=Z,0.6nm,0.5s,baz=166,slow=5.6,SNR=5.8 comp=Z,0.6nm,0.5s						
SONM	**Songino Array**	**59.16**	**353**	P	**P**	**09 54 58.5**	**-1.0**
NIL	**Nilore**	**59.85**	**320**	P	**P**	**09 55 03.2**	**-1.2**
NIL				IAmb	IAmb	09 55 12.6	
	comp=Z,6.7nm,0.8s						
KLR	**Kul'dur**	**61.73**	**12**	LR	LR	10 24 52.0	
	comp=Z,11nm,19.8s,baz=295,slow=39						
KSH2	**Kashi**	**62.18**	**326**	P	**P**	**09 55 21.0**	**+0.7**
KSH2				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TARG	**Taragay, Kyrgy**	**62.86**	**329**		**P**	**09 55 26.8**	**+1.7**
TARG				IAmb	IAmb	09 55 46.5	
	comp=Z,8.2nm,1.3s						
KDJ	**Kajisay**	**63.47**	**329**	IAmb	IAmb	09 55 40.2	
	comp=Z,8.4nm,1.1s						
NRN	**Naryn**	**63.57**	**328**		**P**	**09 55 29.9**	**+0.1**
NRN				IAmb	IAmb	09 55 31.1	
	comp=Z,4.1nm,1.0s						
DRK	**Karamyk**	**64.54**	**324**	P	**P**	**09 55 36.0**	**-0.2**
MK31	**Makanchi Array**	**64.74**	**335**	P	**P**	**09 55 37.5**	**+0.6**
MK31				IAmb	IAmb	09 55 38.8	
	comp=Z,3.7nm,0.9s						
MKAR	**Makanchi Array**	**64.74**	**335**	P	**P**	**09 55 37.2**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=148,slow=7.6,SNR=27 comp=Z,1.7nm,0.6s						
MKAR	**Makanchi Array**	**64.74**	**335**		**P**	**09 55 37.0**	**+0.1**
TKM2	**Tokmak 2**	**64.85**	**329**	P	**P**	**09 55 38.7**	**+0.7**
	SNR=12						
KBK	**Karagaybulak**	**65.00**	**328**	P	**P**	**09 55 40.2**	**+1.3**
	SNR=8.7						
AAK	**Ala-Archa**	**65.22**	**328**	P	**P**	**09 55 41.2**	**+0.8**
	SNR=14						
AAK	**Ala-Archa**	**65.22**	**328**		**P**	**09 55 41.1**	**+0.8**
CHGR	**Chuyangaron**	**65.58**	**322**	P	**P**	**09 55 41.5**	**-1.2**
EKS2	**Erkin-Say**	**65.61**	**327**	P	**P**	**09 55 44.0**	**+1.2**
	SNR=11						
USP	**Ospenovka**	**65.66**	**328**	P	**P**	**09 55 43.8**	**+0.8**
	SNR=6.4						
MAW	**Mawson**	**66.12**	**199**	P	**P**	**09 55 46.8**	**+1.3**
	comp=Z,2.5nm,0.8s,baz=81,slow=13,SNR=2.0 comp=Z,2.5nm,0.8s						
KURBB	**Kurchatov Arra**	**69.29**	**336**

RTR	El Retiro	0.42	3	*e*P		Pn	10 05 23.2	-0.7
BOQS	Boqueron	0.45	56	*e*P		Pn	10 05 23.7	-0.5
UEES	Universidad Ev	0.48	60	P		Pn	10 05 23.7	-0.5
UEES				S		Sn	10 05 35.1	+1.8
UEES	Universidad Ev	0.48	60	*e*P		Pn	10 05 23.7	-0.5
PIC2	El Picacho	0.48	56	*e*P		Pn	10 05 24.2	-0.3
SEMO	Seminario San	0.48	62	P		Pn	10 05 24.0	-0.3
SEMO				S		Sn	10 05 33.9	+0.6
PANCS	Alcalda de	0.49	74	P		Pn	10 05 23.8	-0.6
PANCS				S		Sn	10 05 34.4	+0.9
FAME	Alcaldia de Sa	0.50	317	P		Pn	10 05 23.1	-1.3
FAME				S		Sn	10 05 32.7	-0.8
UTEC	Universidad Te	0.50	64	P		Pn	10 05 24.2	-0.3
UTEC				S		Sn	10 05 34.9	+1.2
LOMA	Loma Larga	0.51	71	*e*P		Pn	10 05 24.1	-0.5
UNIC	Universidad Ca	0.51	13	P		Pn	10 05 23.6	-1.0
UNIC				S		Sn	10 05 34.3	+0.4
SLOZ	Alcaldia de Sa	0.56	348	P		Pn	10 05 24.1	-1.0
SLOZ				S		Sn	10 05 34.6	0.0
SLOZ	Alcaldia de Sa	0.56	348	*e*P		Pn	10 05 23.9	-1.1
LFRS	El Faro	0.60	76	*e*P		Pn	10 05 25.1	-0.5
LFRS				*e*S		Sn	10 05 36.6	+1.0
SJTE	Alcalda de S	0.65	78	*e*P		Pn	10 05 25.5	-0.6
SJTE				*e*S		Sn	10 05 37.8	+1.3
LBRS	Las Brisas	0.66	67	*e*P		Pn	10 05 25.6	-0.6
PAVA	Las Pavas	0.74	72	P		Pn	10 05 26.8	-0.4
PAVA				S		Sn	10 05 40.4	+2.0
PAVA	Las Pavas	0.74	72	*e*P		Pn	10 05 26.6	-0.6
COEG	Centro de Oper	0.78	79	P		Pn	10 05 26.9	-0.7
COEG				S		Sn	10 05 40.2	+1.2
COEG	Centro de Oper	0.78	79	*i*P		Pn	10 05 26.8	-0.7
TECO	Alcaldia de Te	0.86	86	P		Pn	10 05 27.8	-0.7
TECO				S		Sn	10 05 41.5	+0.7
TECO	Alcaldia de Te	0.86	86	*e*P		Pn	10 05 27.7	-0.8
SCLA	Alcaldia de Sa	0.94	76	P		Pn	10 05 28.9	-0.6
SCLA				S		Sn	10 05 42.4	-0.1
SCLA	Alcaldia de Sa	0.94	76	*e*P		Pn	10 05 28.7	-0.8
MTO3	Montecristo	0.96	18	P		Pn	10 05 29.2	-0.8
MTO3				S		Sn	10 05 43.5	+0.2
MTO3	Montecristo	0.96	18	*i* P		Pn	10 05 29.2	-0.8
MTO3	Montecristo	0.96	18	*i*P		Pn	10 05 29.2	-0.8
LLGN	La Laguna	0.98	46	P		Pn	10 05 29.2	-0.9
PCG5	San Vicente Pa	1.01	317	*i* P		Pn	10 05 33.0	+2.4
P5NO	Presa 5 de nov	1.01	60	P		Pn	10 05 29.5	-1.0
P5NO				S		Sn	10 05 44.6	+0.4
P5NO	Presa 5 de nov	1.01	60	*e*P		Pn	10 05 29.4	-1.0
PQSS	Presa 15 de Se	1.08	82	*e*P		Pn	10 05 30.5	-0.8
ESQI	Esquipulas	1.12	16	P		Pn	10 05 31.5	-0.4
ESQI				S		Sn	10 05 47.7	+0.9
ESQI	Esquipulas	1.12	16	*i*P		Pn	10 05 31.4	-0.5
TECA	Tecapa	1.13	89	*e*P		Pn	10 05 31.3	-0.8
ZAFR2	Estanzuela, Za	1.14	316	*i* P		Pn	10 05 36.1	+4.1
FG16	Alotenango, Sa	1.14	314	*i* P		Pn	10 05 35.9	+3.7
FG8	Yepocapa, Chim	1.17	312	*i* P		Pn	10 05 35.7	+3.2
APG	El Apazote	1.70	333	*i* P		Pn	10 05 38.6	-1.2
MARCA	Marcala la Paz	1.72	67	*i* P		Pn	10 05 39.0	-0.9
LCND	La Caada	1.73	95	P		Pn	10 05 39.2	-0.7
CNCH	Conchagua	1.79	96	P		Pn	10 05 39.9	-0.9
CNCH				S		Sn	10 06 03.6	+0.9
STG5	El Palmar, Qui	1.88	300	*i* P		Pn	10 05 45.2	+3.3
STG2	El Palmar, Qui	1.92	300	*i* P		Pn	10 05 45.8	+3.3
STG2				*i* S		Sn	10 06 13.0	+7.3

*JMA **28** 10:16:14.7±0.0, 33°.5N±0°.1×132°.3E±0°.1, h44km, MV2.7/38, IYONADA SETONAIKAI*
ISC 28 10:16:15.0±1.3, **33°.47N**±0°.05×**132°.31E**±0°.04, **h41**km, **n11,** σ0**$47/18, Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNA	Nagahama	0.17	57	P	Pn	10 16 21.8	-0.4
JNA				S	Sn	10 16 26.8	-0.4
UWA2	Uwa jima 2	0.36	134	P	Pn	10 16 23.7	-0.4
UWA2				S	Sn	10 16 30.6	+0.2
JUS	Usuki	0.62	230	P	Pn	10 16 27.2	-0.1
JUS				S	Sn	10 16 36.3	+0.2
JKU	Kubokawa	0.65	104	P	Pn	10 16 27.4	-0.4
JKU				S	Sn	10 16 36.9	-0.1
JET	Tanbara	0.69	63	*i* P	Pn	10 16 27.8	-0.5
JET				S	Sn	10 16 37.3	-0.7
JTO	Tosashimizu	0.73	146	*i* P	Pn	10 16 28.7	-0.2
JTO				S	Sn	10 16 39.1	+0.3
JHT	Toyohira	1.20	4	*i* P	Pn	10 16 35.2	-0.2
JHT				S	Sn	10 16 50.6	+0.2
JMN	Monobe	1.33	78	P	Pn	10 16 38.1	+0.9
JTU	Tsushima	2.64	294	P	Pn	10 16 55.1	0.0
INU	Inuyama	4.32	63	P	Pn	10 17 19.1	+0.9
JGF	Kuroka	4.68	62	P	Pn	10 17 23.0	-0.1

*NEIC **28** 10:25:11.6±0.7, 37°.55S±0°.06×74°.27W±0°.06, h10km±2km, mb4.2/2, ML3.8(GUC), Error ellipse: s-maj=11.9km s-min=5.2km az=322.0*
*GUC **28** 10:25:17.0±0.6, 37°.69S×73°.80W, h18km±7km, ML3.8*
ISC 28 10:25:11.5±1.2, **37°.53S**±0°.05×**74°.3W**±0°.1, **h10**km, **n56,** σ0**$60/58, 1C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BI04	Isla Mocha	0.94	160	*e*P	Pg	10 25 29.8	+0.2
BI04				IAML		10 25 45.3	
	comp=E,10μm,0.1s						
BI05	Punta Hualpn	1.17	49		Pb	10 25 33.8	0.0
BI05				Sn	Sb	10 25 49.9	+0.9
BI05	Punta Hualpn	1.17	49	*e*P	Pb	10 25 34.7	+0.8
BI05				IAML		10 25 53.7	
	comp=E,6μm,0.2s						
LC02	Puerto Saavedr	1.45	151	*e*P	Pn	10 25 37.5	-0.2
LC02				IAML		10 26 01.5	
	comp=E,8μm,0.3s						
LC01	Cunco	2.34	126	*e*P	Pn	10 25 49.0	-1.0
LR02	Universidad Au	2.41	161	*e*P	Pb	10 25 56.5	+1.5
LR02				*e*S	Sn	10 26 19.1	-1.5
LR02				IAML		10 26 41.9	
	comp=E,3μm,0.6s						
LR04	Corral	2.44	164		Pn	10 25 50.6	-0.8
LR04	Corral	2.44	164	*e*P	Pn	10 25 50.3	-1.1
LR04				IAML		10 26 34.8	
	comp=N,891nm,0.3s						
BI02	San Fabin de	2.56	71		Pn	10 25 52.8	-0.3
BI02	San Fabin de	2.56	71	*e*P	Pn	10 25 54.3	+1.2
BI02				IAML		10 26 30.1	
	comp=N,729nm,0.5s						
ML02	Panimavida	2.90	53		Pn	10 25 57.5	-0.3
ML02	Panimavida	2.90	53	*e*P	Pn	10 25 57.8	0.0
GO06	Curarrehue	3.01	134		Pn	10 25 58.6	-0.8
GO06	Curarrehue	3.01	134	*e*P	Pn	10 25 59.0	-0.4
GO05	Hualane	3.15	38		Pn	10 26 02.0	+0.8
GO05	Hualane	3.15	38	*e*P	Pn	10 26 02.2	+1.0
GO05				IAML		10 27 00.0	
	comp=E,776nm,0.6s						
LR05	Currie	3.23	147		Pn	10 26 02.1	-0.1
LR05	Currie	3.23	147	*e*P	Pn	10 26 02.7	+0.5
LR05				IAML		10 26 53.7	
	comp=E,279nm,0.4s						
BO03	Pichilemu	3.56	33	*e*P	Pn	10 26 07.5	+0.7
LL05	Los Muermos	3.92	171		Pn	10 26 11.7	-0.1
LL05	Los Muermos	3.92	171	*e*P	Pn	10 26 12.0	+0.2
BO02	Sierra Bellavi	3.94	47		Pn	10 26 12.2	+0.2
BO02	Sierra Bellavi	3.94	47	*e*P	Pn	10 26 12.3	+0.3
BO01	Tunca	4.07	41		Pn	10 26 13.8	+0.1
BO01	Tunca	4.07	41	*e*P	Pn	10 26 14.0	+0.3
PLCA	Paso Flores	4.32	139	Pn	Pn	10 26 17.4	+0.1
MT01	Popeta	4.41	35		Pn	10 26 18.8	+0.3
MT01	Popeta	4.41	35	*e*P	Pn	10 26 18.9	+0.3
MT09	Talagante	4.61	37		Pn	10 26 21.4	+0.1
MT09	Talagante	4.61	37	*e*P	Pn	10 26 22.1	+0.7
BO04	La Punta	4.63	41		Pn	10 26 21.5	0.0
BO04	La Punta	4.63	41	*e*P	Pn	10 26 22.0	+0.5
MT12	Pirque	4.86	40	*e*P	Pn	10 26 25.3	+0.6
LMEL	Las Melosas	4.95	43	*e*P	Pn	10 26 26.9	+0.8
MT02	Curacav	4.98	32		Pn	10 26 26.2	0.0
MT13	San Alfonso	4.99	42		Pn	10 26 26.8	+0.3
MT13	San Alfonso	4.99	42	*e*P	Pn	10 26 27.1	+0.6
VA01	Torpederas	4.99	26	Pn	Pn	10 26 26.2	-0.2
MT03	Universidad Ad	5.07	38		Pn	10 26 27.5	-0.1
PEL	Peldehue	5.27	35		Pn	10 26 30.2	-0.2
LL07	Hotel Espejo d	5.33	174	Pn	Pn	10 26 31.0	-0.1
MT08	Bocatoma Ro	5.36	42		Pn	10 26 31.1	-0.7
VA06	Catapilco	5.53	27		Pn	10 26 34.2	+0.4
GO07	Milladeo Hill,	5.60	175	Pn	Pn	10 26 34.6	-0.2
VA03	San Esteban	5.65	34		Pn	10 26 35.9	+0.2
CO04	Los Peladeros	6.11	27		Pn	10 26 42.2	+0.1
CO02	Combarbal	6.87	24		Pn	10 26 53.1	+0.7
CO06	Fray Jorge	7.18	19	Pn	Pn	10 26 56.4	-0.2
CO03	El Pedregal	7.31	25		Pn	10 26 59.1	+0.7
ZON	Zonda	7.55	39		Pn	10 27 01.7	0.0
CO01	Juntas del Tor	8.30	26		Pn	10 27 12.4	+0.3
LCO	Las Campanas	9.01	20	Pn	Pn	10 27 21.7	-0.2
AC05	El Transito	9.30	22		Pn	10 27 25.6	-0.1
TRQA	Tornquist	9.75	97	Pn	Pn	10 27 31.1	-0.7
LPAZ	La Paz	21.85	16	P	P	10 30 03.7	-1.2
LPAZ				IAmb	IAmb	10 30 21.0	
	comp=Z,7.5nm,1.5s						
QSPA	South Pole Qui	52.71	180	P	P	10 34 25.6	-0.5
QSPA				IAmb	IAmb	10 34 47.8	
	comp=Z,8.2nm,1.4s						

IDC 28 10:26:47.0±1.8, **6°.15S**×**130°.33E, h0**km, **mb3.9**/2, **mbtmp3.7/4, ML3.6/2, MS3.7/1, Error ellipse: s-maj=137.5km s-min=25.3km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.25	164	Pn	Pn	10 30 12.0	+1.7
	0.3nm,0.3s,baz=347,slow=13,SNR=19						
WRA				Sn	Sn	10 32 39.0	-10
	0.7nm,0.3s,baz=342,slow=25,SNR=7.7						
	0.4nm,0.8s						
ASAR	Alice Springs	17.75	169	P	P	10 30 56.9	+0.2
	0.3nm,0.3s,baz=347,slow=10.0,SNR=28						
ASAR				S	Sn	10 34 03.4	-11
	0.2nm,0.4s,baz=346,slow=26,SNR=5.0						
	1.5nm,0.8s						
STKA	Stephens Creek	27.68	159	P	P	10 32 35.7	-1.2
	1.3nm,0.9s,baz=343,slow=14,SNR=2.0						
	1.3nm,0.9s						
JOW	Kunigami	32.85	357	LR	LR	10 45 45.9	
	comp=Z,153nm,21.9s,baz=326,slow=35						
MKAR	Makanchi Array	67.70	326	P	P	10 37 46.4	+0.1
	0.8nm,0.5s,baz=123,slow=7.6,SNR=10						
	0.8nm,0.5s						

*IDC **28** 10:33:25.1±6.1, 52°.32N×177°.31W, h0km, mb3.8/4, mbtmp4.0/6, ML4.4/2, Error ellipse: s-maj=113.6km s-min=54.0km az=93.0*
*AEIC **28** 10:33:59.5±1.4, 52°.7N±0°.1×174°.4W±0°.1, h202km±5km, Error ellipse: s-maj=17.2km s-min=8.3km az=162.0*
*NEIC **28** 10:34:01.2±1.4, 52°.67N±0°.08×174°.4W±0°.1, h203km±5km, mb4.2/76, ML4.0/16, ML3.5(AEIC), Error ellipse: s-maj=13.0km s-min=8.1km az=154.0*
ISC 28 10:34:00.9±0.7, **52°.7N**±0°.1×**174°.32W**±0°.06, **h205**km±7km, **n129,** σ0**$88/116, mb4.1/21, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KONW	Korovin Northw	0.27	165		Pn	10 34 27.5	-0.4
KONW					S	10 34 49.0	0.0
KONE	Korovin Northe	0.29	155		Pn	10 34 27.6	-0.4
KONE					S	10 34 49.8	+0.8
KOWE	Korovin West	0.30	171		Pn	10 34 27.7	-0.3
KOWE					S	10 34 49.2	0.0
KOKL	Mount Kliuchef	0.34	167		Pn	10 34 27.9	-0.3
KOKL					S	10 34 49.6	+0.3
KOSE	Korovin Southe	0.36	152		Pn	10 34 27.9	-0.3
KOSE					S	10 34 49.2	-0.1
KOFP	Korovin Flat P	0.41	160		Pn	10 34 27.9	-0.5
KOFP					S	10 34 50.1	+0.5
GSIG	Igitkin Island	1.19	236		Pn	10 34 32.1	-0.4
GSTR	Great Sitkin T	1.21	243		Pn	10 34 32.5	-0.2
GSTR				IAML		10 35 03.3	
	comp=E,749nm,0.4s						
GSTR	Great Sitkin T	1.21	243		S	10 34 56.7	-0.3
GSMY	Great Sitkin M	1.23	241		Pn	10 34 32.2	-0.6
GSMY					S	10 34 56.3	-1.0
GSSP	Great Sitkin S	1.27	244		Pn	10 34 32.8	-0.3
GSSP					S	10 34 58.3	+0.5
GSTD	Great Sitkin T	1.27	242		Pn	10 34 32.7	-0.5
GSTD					S	10 34 57.0	-0.9
GSCK	Great Sitkin C	1.30	241		Pn	10 34 33.2	-0.2
ETKA	Kagalaska Isla	1.51	239		Pn	10 34 34.6	-0.5
ETKA					S	10 35 00.3	-1.0
ADAG	Mount Adagdak	1.56	245		Pn	10 34 35.5	0.0
ADAG					S	10 35 02.6	+0.7
ADK	Adak	1.65	243	P	Pn	10 34 36.1	-0.2
ADK	Adak	1.65	243		S	10 35 02.6	-0.8
ADK	Adak	1.65	243		Pn	10 34 35.9	-0.4
ADK				IAML		10 35 05.6	
	comp=E,820nm,0.3s						
ADK				IAML		10 35 06.9	
	comp=E,899nm,0.2s						
KICM	Kanaga Island	1.91	248		Pn	10 34 39.4	+0.5
KICM					S	10 35 09.4	+1.5
KIKV	Kanaga Island	1.92	247		Pn	10 34 38.9	0.0
KIKV					S	10 35 08.6	+0.6
KIWB	Kanaga Island	1.92	246		Pn	10 34 38.9	0.0
KIWB				IAML		10 35 11.0	
	comp=E,521nm,0.4s						
KIWB				IAML		10 35 13.0	
	comp=N,491nm,0.3s						
KIWB	Kanaga Island	1.92	246		S	10 35 08.4	+0.5
KIMD	Kanaga Island	2.00	245		Pn	10 34 39.8	0.0
KIMD					S	10 35 08.8	-0.7
TAPA	Tanaga Point A	2.31	250		Pn	10 34 43.2	+0.2
TAFL	Tanaga Flats	2.38	249		Pn	10 34 44.0	+0.3
TASE	Tanaga Southea	2.43	252		Pn	10 34 44.5	+0.2
TANO	Tanaga North	2.45	254		Pn	10 34 45.1	+0.6
TANO					S	10 35 18.1	+0.3
GAEA	Gareloi East	2.86	254		Pn	10 34 49.7	+0.6
GAEA					S	10 35 26.3	+0.1
GANE	Gareloi Northe	2.86	255		Pn	10 34 49.8	+0.6
GANO	Gareloi North	2.88	255		Pn	10 34 49.6	+0.2
GAKI	Gareloi-Kavalg	2.98	250		Pn	10 34 50.5	0.0
CEPE	Semis' Perret	3.76	262		Pn	10 35 00.3	+0.4
OKWR	Okmok West Rim	3.77	76		Pn	10 35 00.4	+0.3
CESW	Semis' Southwe	3.83	261		Pn	10 35 00.9	+0.2
OKTU	Okmok Mt. Tuli	3.86	77		Pn	10 35 00.9	-0.2
AMKA	Amchitka	4.14	254		Pn	10 34 40.2	-0.4
AMKA				IAML		10 35 53.2	
	comp=N,95nm,0.4s						
LSPA	Little Sitkin	4.42	264		Pn	10 35 08.7	+0.8
LSSE	Little Sitkin	4.42	263		Pn	10 35 08.8	+0.7
MREP	Makushin Rep't	4.70	73		Pn	10 35 11.3	-0.2
UNV	Unalaska Valle	4.84	73	Pn	Pn	10 35 12.9	-0.5
SPIA	Saint Paul Isl	5.10	26	Pn	Pn	10 35 17.0	+0.4
LVA	Lava Point	5.18	70	Pn	Pn	10 35 18.1	+0.4
LVA				IAML		10 38 11.6	
	comp=E,99nm,1.2s						
AKUT	Akutan	5.33	70	P	Pn	10 35 19.8	+0.4
AKUT	Akutan	5.33	70	Pn	Pn	10 35 20.0	+0.6
AKUT				IAML		10 36 23.2	
	comp=E,51nm,1.1s						
FALS	False Pass	6.83	67	P	Pn	10 35 39.2	+0.4
FALS	False Pass	6.83	67	Pn	Pn	10 35 39.9	+1.1
SDPT	Sand Point	8.59	66	P	Pn	10 36 00.1	-1.5
CHNA	Chernabura Isl	9.00	70	P	Pn	10 36 04.7	-2.2
P17K	Kvichak River	11.95	50	Pn	Pn	10 36 45.3	+0.5
ACHA	Angle Creek He	12.12	55		Pn	10 36 47.7	+0.7
SII	Sitkinak Islan	12.30	64	P	Pn	10 36 48.0	-1.2
SII	Sitkinak Islan	12.30	64	Pn	Pn	10 36 48.3	-0.9
ANM	Nome	12.80	18		Pn	10 36 55.9	+0.5
OHAK	Old Harbor	12.91	61	Pn	Pn	10 36 54.3	-2.5
KDAK	Kodiak Island	13.40	59	Pn	Pn	10 36 59.4	-3.6
	comp=E,1.7nm,0.3s,baz=259,slow=10,SNR=40						
	comp=E,12nm,0.5s						
KDAK	Kodiak Island	13.40	59		Pn	10 37 01.0	-1.9
CNPM	China Poot	14.55	53		Pn	10 37 17.4	+0.2
BRLK	Bradley Lake	14.79	52	P	Pn	10 37 20.0	-0.1
STLK	Strandline Lak	15.02	45	P	P	10 37 25.0	+1.5
SLKM	Skilak Lake	15.35	50		P	10 37 26.8	-0.4
SKT	Skwentna	15.36	44		Pn	10 37 28.7	+1.6
PPLA	Purkeypile	15.54	40	P	Pn	10 37 31.3	+2.0
PPLA				IAmb	IAmb	10 38 06.1	
	comp=Z,13nm,0.7s						
J20K	Nowinta River	15.55	34	IAmb	IAmb	10 37 46.2	
	comp=Z,5.8nm,0.4s						
O22K	Cooper Landing	15.58	50	P	P	10 37 29.2	-0.3
SEW	Seward	15.59	52		P	10 37 28.4	-1.3
L22K	Petersville	15.93	42	IAmb	IAmb	10 38 04.5	
	comp=Z,7.8nm,0.8s						
PMR	Palmer	16.24	47	P	Pn	10 37 38.1	+0.5
KTH	Kantishna Hill	16.38	39	P	Pn	10 37 39.4	+0.1
KTH				IAmb	IAmb	10 37 40.9	
	comp=Z,10nm,0.7s						
IMAR	Indian Mountai	16.86	30	P	Pn	10 37 44.9	0.0
I21K	Tanana	16.91	33	IAmb	IAmb	10 37 47.1	
	comp=Z,7.5nm,0.9s						
GLI	Glacier Island	16.93	50	P	P	10 37 44.2	-0.3
HIN	Hinchinbrook I	17.08	52	P	Pn	10 37 47.2	-0.4
RND	Reindeer	17.12	41		P	10 37 46.3	-0.2
SCM	Sheep Creek Mo	17.13	47	P	P	10 37 46.9	+0.2
MCK	McKinley	17.23	40		P	10 37 48.0	+0.2
EYAK	Cordova Ski Ar	17.48	52	P	P	10 37 50.6	+0.2
KLU	Klutina	17.65	49	P	Pn	10 37 54.2	-0.2
KLU				IAmb	IAmb	10 38 03.2	
	comp=Z,13nm,1.1s						
WRH	Wood River Hil	17.92	39		P	10 37 53.8	-1.3
CCB	Clear Creek Bu	18.11	38	IAmb	IAmb	10 38 35.3	
	comp=Z,9.5nm,0.9s						
BMRM	Bremner River	18.13	51	P	Pn	10 37 59.5	-0.4
BMRM				IAmb	IAmb	10 38 21.8	
	comp=Z,18nm,1.2s						
COLA	College	18.20	38	P	Pn	10 38 01.0	+0.3
HDA	Harding Lake	18.32	39	P	P	10 38 00.6	+1.0
PAX	Paxson	18.34	44	IAmb	IAmb	10 38 02.5	
	comp=Z,6.1nm,0.8s						
IL31		18.52	38	P	P	10 38 00.6	-1.0
IL31				IAmb	IAmb	10 38 39.6	
	comp=Z,10nm,0.6s						
ILAR	Eielson Array	18.52	38	P	P	10 37 59.1	-2.6
	comp=Z,1.2nm,0.3s,baz=230,slow=11,SNR=34						
	comp=Z,2.9nm,0.6s						
H24K	Noodor Dome	18.69	35	IAmb	IAmb	10 38 05.4	
	comp=Z,8.5nm,0.7s						
RIDG	Independent Ri	18.89	43	IAmb	IAmb	10 38 41.8	
	comp=Z,5.6nm,0.7s						
DOT	Dot Lake	19.18	43	IAmb	IAmb	10 38 09.3	
	comp=Z,8.6nm,0.7s						
MESA	MESA	19.26	54	P	P	10 38 09.8	-0.1
L26K	Log Cabin Wild	19.27	45	IAmb	IAmb	10 38 16.9	
	comp=Z,9.5nm,1.3s						
B21K	Ikpikpuk River	19.32	21	IAmb	IAmb	10 38 13.5	
	comp=Z,4.7nm,0.6s						
F24K	Squaw Lake	19.64	31	IAmb	IAmb	10 38 16.1	
	comp=Z,4.6nm,0.8s						
K27K	Chicken	20.13	43	IAmb	IAmb	10 38 22.0	
	comp=Z,4.4nm,0.7s						
I26K	Coal Creek Min	20.17	39	IAmb	IAmb	10 39 02.5	
	comp=Z,3.5nm,0.7s						
D24K	Happy Valley	20.39	26	P	P	10 38 22.3	+0.6
D24K				IAmb	IAmb	10 38 23.7	
	comp=Z,4.1nm,0.6s						
G26K	Porcupine Rive	20.68	35	IAmb	IAmb	10 38 26.4	
	comp=Z,4.4nm,0.7s						
E25K	Arctic Village	20.70	31		P	10 38 25.4	+0.3
I28M	Miner Creek	21.48	40	IAmb	IAmb	10 38 35.4	
	comp=Z,5.3nm,0.8s						
J29N	Klondike Camp	21.87	43		P	10 38 37.9	+0.7
J29N				IAmb	IAmb	10 39 19.1	
	comp=Z,14nm,1.5s						
K29M	Barlow Dome	22.01	45	P	P	10 38 37.7	-0.9
K29M				IAmb	IAmb	10 38 39.1	
	comp=Z,4.2nm,0.6s						
F28M	Old Crow	22.33	35		P	10 38 41.5	+0.1
F28M				IAmb	IAmb	10 38 42.7	
	comp=Z,3.5nm,0.8s						
H29M	Whitestone	22.35	39	IAmb	IAmb	10 38 41.6	
	comp=Z,5.9nm,0.8s						
J30M	Hart River	22.69	44	IAmb	IAmb	10 38 46.1	
	comp=Z,4.1nm,0.7s						
I30M	Mount Dempster	22.83	42	IAmb	IAmb	10 38 46.4	
	comp=Z,8.3nm,1.1s						
E28M	Babbage River	22.88	33	IAmb	IAmb	10 38 47.9	
	comp=Z,3.4nm,0.7s						
E29M	Blow River	23.33	34	IAmb	IAmb	10 38 52.5	
	comp=Z,4.6nm,0.8s						
A36M	Sachs Harbour	28.62	29		P	10 39 38.0	+0.3
A36M				IAmb	IAmb	10 39 38.4	
	comp=Z,2.9nm,0.7s						
YKA	Yellowknife Ar	32.33	49	P	P	10 40 08.7	-1.7
	comp=Z,0.9nm,0.6s,baz=287,slow=8.4,SNR=5.8						
	comp=Z,0.2nm,0.6s						
NEW	Newport	35.85	74		P	10 40 41.6	+0.7
NEW				IAmb	IAmb	10 40 42.0	
	comp=Z,3.5nm,0.5s						
H11N2	WAKE ISLAND Hy	35.96	211	T	T	11 17 27.2	
	baz=21,SNR=6.5						
H11N3	WAKE ISLAND Hy	35.97	211	T	T	11 17 28.2	
	baz=21,slow=74,SNR=4.9						
H11N1	WAKE ISLAND Hy	35.98	211	T	T	11 17 30.4	
	baz=21,slow=74,SNR=7.4						
H11S1	WAKE ISLAND Hy	37.17	211	T	T	11 19 02.0	
	baz=15,slow=74,SNR=8.1						
H11S2	WAKE ISLAND Hy	37.19	211	T	T	11 19 04.1	
	baz=15,slow=74,SNR=2.0						
H11S3	WAKE ISLAND Hy	37.19	211	T	T	11 19 02.0	

GENI	**Genyem**	**1.81**	**41**	P		**Pn**	**11 18 11.3**	**+0.6**	
JAY	**Jayapura**	**2.25**	**50**	P		**Pn**	**11 18 16.4**	**-0.4**	
	40nm,0.3s,baz=216,slow=10.0,SNR=148								
JAY				S		**Sn**	**11 18 41.7**	**-1.8**	
	119nm,0.4s,baz=255,slow=16,SNR=8.0								
JAY				LR		LR	11 19 22.1		
	comp=Z,222nm,21.6s,baz=204,slow=46								
	94nm,0.3s								
JAY	**Jayapura**	**2.25**	**50**	P		**Pn**	**11 18 16.7**	**-0.1**	
SRPI	**Serui, Papua**	**3.43**	**307**	P		**Pn**	**11 18 32.5**	**-0.4**	
BAKI	**Biak**	**3.97**	**314**	P		**Pn**	**11 18 40.2**	**-0.1**	
FAKI	**Fak Fak**	**6.79**	**279**	Pn		**Pn**	**11 19 19.7**	**+0.7**	
FAKI	**Fak Fak**	**6.79**	**279**	P		**Pn**	**11 19 20.8**	**+1.8**	
SIJI	**Sorong**	**8.29**	**292**	P		**Pn**	**11 19 38.1**	**-1.5**	
	1.3nm,0.3s,baz=62,slow=9.9,SNR=7.5								
SIJI				LR		LR	11 23 18.3		
	comp=Z,37nm,20.1s,baz=73,slow=41								
	5.0nm,0.6s								
SIJI	**Sorong**	**8.29**	**292**	P		**Pn**	**11 19 40.3**	**+0.7**	
	9.4nm,0.6s								
SWI	**Sorong**	**8.29**	**292**	P		**Pn**	**11 19 40.4**	**+0.7**	
PMG	**Port Moresby**	**9.76**	**124**	P		**Pn**	**11 20 00.2**	**+0.4**	
	8.1nm,0.8s,baz=252,slow=19,SNR=2.2								
PMG	**Port Moresby**	**9.76**	**124**			**Pn**	**11 20 00.4**	**+0.6**	
COEN	**Coen**	**10.76**	**158**	Pn		**Pn**	**11 20 15.5**	**+2.1**	
MTN	**Manton Dam**	**11.74**	**221**			**Pn**	**11 20 27.9**	**+1.1**	
KNRA	**Kununurra**	**15.37**	**220**			**Pn**	**11 21 16.4**	**+0.7**	
KNRA				IAmb		IAmb	11 21 38.2		
	comp=Z,13nm,0.9s								
SOEI	**Soe**	**15.68**	**248**	Pn		**Pn**	**11 21 20.2**	**+0.3**	
WB0	**Warramunga Arr**	**16.33**	**196**			**Pn**	**11 21 28.5**	**+0.6**	
WB0				IAmb		IAmb	11 21 58.5		
	comp=Z,22nm,1.5s								
BATI	**Baumata**	**16.40**	**247**	P		**Pn**	**11 21 28.0**	**-0.9**	
	comp=Z,10.0nm,0.4s,baz=253,slow=15,SNR=1.5								
WR8	**Warramunga Arr**	**16.48**	**195**			**Pn**	**11 21 29.5**	**-0.4**	
WRAB	**Tennant Creek**	**16.50**	**195**			**Pn**	**11 21 30.8**	**+0.7**	
WRAB				IAmb		IAmb	11 22 00.8		
	comp=Z,13nm,1.1s								
WRA	**Warramunga Arr**	**16.51**	**195**	P		**Pn**	**11 21 30.6**	**+0.3**	
	comp=Z,0.8nm,0.3s,baz=17,slow=12,SNR=28								
WRA				S		**Sn**	**11 24 25.9**	**-6.8**	
	comp=Z,0.7nm,0.5s,baz=8.2,slow=22,SNR=2.0								
	comp=Z,2.3nm,0.4s								
WRA	**Warramunga Arr**	**16.51**	**195**			**Pn**	**11 21 30.9**	**+0.7**	
CTA	**Charters Tower**	**17.53**	**157**	P		**Pn**	**11 21 44.0**	**+1.1**	
	comp=Z,0.1nm,0.3s,baz=104,slow=19,SNR=1.2								
	comp=Z,4.2nm,1.0s								
GUMO	**Guam**	**18.40**	**18**	LR		LR	11 29 32.8		
	comp=Z,35nm,18.2s,baz=65,slow=39								
TOLI2	**Tolitoli**	**18.86**	**285**	P		**P**	**11 21 57.1**	**-1.0**	
TOLI2				IAmb		IAmb	11 22 03.1		
	comp=Z,7.5nm,0.7s								
FITZ	**Fitzroy Crossi**	**19.17**	**222**	P		**P**	**11 22 03.5**	**+2.0**	
	comp=Z,0.7nm,0.3s,baz=36,slow=9.7,SNR=25								
FITZ				S		**S**	**11 25 29.9**	**-6.4**	
	comp=Z,2.2nm,0.5s,baz=95,slow=12,SNR=4.0								
	comp=Z,6.0nm,0.7s								
AS31	**Alice Springs**	**20.19**	**194**			Pn	11 22 15.4	+0.6	
ASAR	**Alice Springs**	**20.19**	**194**	P		Pn	11 22 16.4	+1.6	
	comp=Z,15nm,0.6s,baz=22,slow=10.0,SNR=330								
ASAR				S		**S**	**11 25 54.1**	**-2.5**	
	comp=Z,0.7nm,0.6s,baz=7.4,slow=28,SNR=2.3								
ASAR				LR		LR	11 29 27.0		
	comp=Z,56nm,18.4s,baz=212,slow=35								
	comp=Z,15nm,0.6s								
ASAR	**Alice Springs**	**20.19**	**194**			**P**	**11 22 15.3**	**+2.7**	
INKA	**Innaminka**	**23.70**	**176**	P		**P**	**11 22 50.0**	**+0.7**	
CMAR	**Chiang Mai Arr**	**45.29**	**301**	P		**P**	**11 25 55.6**	**+0.5**	
	comp=Z,0.5nm,0.3s,baz=123,slow=6.5,SNR=7.3								
	comp=Z,0.5nm,0.3s								
CMAR	**Chiang Mai Arr**	**45.29**	**301**	P		**P**	**11 25 53.8**	**-1.4**	
MK31	**Makanchi Array**	**70.94**	**323**	P		**P**	**11 28 51.7**	**-2.4**	
MK31				IAmb		IAmb	11 29 17.3		
	comp=Z,3.3nm,1.3s								
MKAR	**Makanchi Array**	**70.94**	**323**	P		**P**	**11 28 54.7**	**+0.6**	
	comp=Z,0.6nm,0.6s,baz=115,slow=7.1,SNR=5.7								
	comp=Z,0.6nm,0.6s								
MKAR	**Makanchi Array**	**70.94**	**323**	P		**P**	**11 28 51.5**	**-2.6**	
ZAA0	**Zalesovo Array**	**73.14**	**330**	P		**P**	**11 29 05.6**	**-1.5**	
ZAA0				IAmb		IAmb	11 29 10.0		
	comp=Z,2.0nm,0.9s								
ZALV	**Zalesovo Beam**	**73.14**	**330**	P		**P**	**11 29 06.3**	**-0.8**	
	comp=Z,0.3nm,0.3s,baz=121,slow=14,SNR=1.3								
	comp=Z,0.3nm,0.3s								
ZALV	**Zalesovo Beam**	**73.14**	**330**	P		**P**	**11 29 05.9**	**-1.3**	
KURBB	**Kurchatov Arra**	**74.90**	**325**	P		**P**	**11 29 15.8**	**-1.6**	
	comp=Z,0.5nm,0.7s,baz=131,slow=3.9,SNR=4.3								
	comp=Z,0.5nm,0.7s								
BVAR	**Borovoye Array**	**80.48**	**325**	P		**P**	**11 29 49.4**	**+0.8**	
	comp=Z,1.0nm,0.4s,baz=134,slow=6.4,SNR=4.0								
	comp=Z,1.0nm,0.4s								
AB31	**Akbulak array**	**85.84**	**320**	P		**P**	**11 30 15.8**	**-0.5**	
AB31				IAmb		IAmb	11 30 23.5		
	comp=Z,2.4nm,1.1s								
ABKAR	**Akbulak array**	**85.84**	**320**	P		**P**	**11 30 15.9**	**-0.3**	
QSPA	**South Pole Qui**	**85.99**	**180**	P		**P**	**11 30 18.4**	**+1.5**	
	comp=Z,1.8nm,0.7s,baz=286,slow=1.5,SNR=14								
	comp=Z,1.8nm,0.7s								
QSPA	**South Pole Qui**	**85.99**	**180**	P		**P**	**11 30 19.1**	**+2.2**	
ILAR	**Eielson Array**	**86.86**	**24**	P		**P**	**11 30 20.4**	**-0.5**	
	comp=Z,0.4nm,0.5s,baz=264,slow=4.4,SNR=8.3								
	comp=Z,0.4nm,0.5s								
ILAR	**Eielson Array**	**86.86**	**24**	P		**P**	**11 30 20.6**	**-0.3**	
BMAR	**Burnt Mountain**	**88.46**	**22**	P		**P**	**11 30 29.8**	**+1.2**	
LPAZ	**La Paz**	**146.49**	**128**	PKPbc		**PKPab**	**11 37 21.1**	**+0.7**	
	comp=Z,0.6nm,0.8s,baz=165,slow=18,SNR=1.9								

*IDC **28** 11:33:41.1±5.9,25.°72N×126.°82E,h0km,mb3.8/6, mbtmp3.7/7, ML2.9/1, Error ellipse: s-maj=119.2km s-min=74.1km az=134.0*
*JMA **28** 11:33:56.0±0.2,26.°4N±0.°9×126.°9E±0.°7, h73km±1km, MV3.7/21, NEAR OKINAWAJIMA ISLAND*

ISC 28 11:33:54.1±1.0,26.°30N±0.°07×126.°98E±0.°06,h91km±6km, n24,σ1°50/38,mb3.8/6,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**0.18**	**278**	P	**Pn**	**11 34 06.7**	**-0.4**
JKE				S	**Sn**	**11 34 14.8**	**-2.0**
JAGN	**Aguni-jima**	**0.37**	**39**	P	**Pn**	**11 34 07.7**	**-0.3**
JAGN				S	**Sn**	**11 34 16.5**	**-1.8**
JJT3	**Tamagusuku3**	**0.74**	**102**	*i* P	**Pn**	**11 34 13.0**	**+2.0**
JJT3				*eS*	**Sn**	**11 34 25.9**	**+2.2**
JNTH	**Nagotoyohara**	**0.96**	**77**	*i* P	**Pn**	**11 34 14.7**	**+1.3**
JNTH				S	**Sn**	**11 34 28.1**	**+0.2**
JIH	**Iheya**	**1.15**	**50**	*i* P	**Pn**	**11 34 16.4**	**+0.9**
JIH				S	**Sn**	**11 34 31.1**	**-0.5**
JOW	**Kunigami**	**1.27**	**65**	P	**Pn**	**11 34 18.2**	**+1.1**
JOW				S	**Sn**	**11 34 34.4**	**0.0**
JYRO	**Yoronjima**	**1.50**	**61**	*i* P	**Pn**	**11 34 20.9**	**+1.0**
JYRO				S	**Sn**	**11 34 39.0**	**-0.4**
JOKE	**Okinoerabujima**	**1.77**	**53**	P	**Pn**	**11 34 23.9**	**+0.5**
JOKE				S	**Sn**	**11 34 44.5**	**-1.1**
JTK	**Tokunoshima**	**2.30**	**49**	*eP*	**Pn**	**11 34 30.7**	**+0.5**
JTK				S	**Sn**	**11 34 57.0**	**-0.8**
JAMN	**Amaminishikomi**	**2.75**	**45**	P	**Pn**	**11 34 36.4**	**+0.2**
JAMN				*eS*	**Sn**	**11 35 07.2**	**-1.4**
JAM	**Amami Oshima**	**3.14**	**47**	P	**Pn**	**11 34 42.0**	**+0.5**
JAM				*eS*	**Sn**	**11 35 16.6**	**-1.5**
JZK	**Kikaishima**	**3.33**	**52**	*eP*	**Pn**	**11 34 45.2**	**+1.1**
JMZ	**Minamidaito 2**	**3.85**	**96**	*eP*	**Pn**	**11 34 50.2**	**-0.8**
JMZ				*eS*	**Sn**	**11 35 30.4**	**-4.7**
JKDJ	**Kitadaitoujima**	**3.90**	**94**	*eP*	**Pn**	**11 34 51.1**	**-0.5**
JKDJ				S	**Sn**	**11 35 33.7**	**-2.7**
JYAK	**Yakushimahirau**	**5.01**	**38**	*eP*	**Pn**	**11 35 06.6**	**-0.2**
JYAK				*eS*	**Sn**	**11 36 01.6**	**-1.8**
JMTN	**Minamitane**	**5.34**	**39**	*eP*	**Pn**	**11 35 11.2**	**-0.2**
JTN	**Tanegashima 3**	**5.58**	**38**	*eP*	**Pn**	**11 35 14.3**	**-0.3**
KSRS	**Korea Array**	**11.15**	**4**	Pn	**Pn**	**11 36 29.8**	**-0.5**
	0.1nm,0.3s,baz=202,slow=12,SNR=3.0						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**40.65**	**312**	P	**P**	**11 41 25.9**	**+0.6**
	0.2nm,0.4s,baz=97,slow=10,SNR=3.7						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**41.52**	**323**	P	**P**	**11 41 33.1**	**+1.0**
	0.5nm,0.4s,baz=106,slow=6.5,SNR=2.7						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**44.03**	**317**	P	**P**	**11 41 53.4**	**+0.9**
	0.2nm,0.4s,baz=106,slow=9.2,SNR=2.2						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**49.48**	**318**	P	**P**	**11 42 33.9**	**-1.0**
	0.5nm,0.4s,baz=99,slow=9.2,SNR=1.9						
	0.5nm,0.4s						
FINES	**FINESS Array B**	**72.25**	**330**	P	**P**	**11 45 09.1**	**0.0**
	2.2nm,0.9s,baz=72,slow=8.9,SNR=5.0						
	2.2nm,0.9s						
HFS	**Hagfors**	**78.23**	**332**	P	**P**	**11 45 46.6**	**+3.1**
	3.6nm,1.0s,baz=82,slow=10,SNR=2.2						
	3.6nm,1.0s						

*UPP **28** 11:34:17.0±2.7,67.°53N×31.°12E,h0km,ML1.9,Presumed earthquake*
*KOLA **28** 11:34:21.0±0.4,67.°51N±0.°04×30.°46E±0.°07,h0km, M2.3(MOS),The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

HEL 28 11:34:19.8±0.4,67.°56N×30.°53E,h0km,ML1.7, Explosion,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRF	**Varrio**	**0.40**	**298**	PG	Pg	11 34 27.0	-0.5
VRF				SG	Sg	11 34 31.7	-0.8
APA0	**Apatity Array**	**0.94**	**86**	P	Pg	11 34 38.1	+0.3
APA0				S	Sb	11 34 51.2	-0.8
RAJF	**Raja-Jooseppi**	**1.24**	**319**	PG	Pg	11 34 42.3	-1.2
RAJF				SG	Sg	11 34 57.7	-1.9
KVDA	**Kovda**	**1.27**	**133**	P	Pg	11 34 43.7	-0.3
KVDA				S	Sg	11 34 60.0	-0.4
OLKF	**Oulanka, Finla**	**1.32**	**200**	PN	Pg	11 34 44.4	-0.8
OLKF				smax	smax	11 34 59.7	
	comp=Z,6.7nm,0.2s						
OLKF				SB	Sb	11 35 02.9	-0.1
KU6	**Riekki**	**1.56**	**190**	PG	Pn	11 34 47.3	-1.5
KU6				smax	smax	11 35 06.7	
	comp=Z,4.2nm,0.2s						
KU6				SG	Sn	11 35 07.4	-2.3
LVZ	**Lovozero**	**1.61**	**76**	P	Pb	11 34 50.4	+0.1
LVZ				S	Sg	11 35 11.5	+0.2
MSF	**Maaselka**	**1.76**	**200**	PG	Pn	11 34 51.7	+0.2
	baz=24						
MSF				SN	Sn	11 35 14.4	-0.2
RNF	**Rovaniemi**	**2.01**	**244**	PG	Pn	11 34 55.3	+0.4
	baz=62						
RNF				SG	Sb	11 35 22.2	-0.5
KU1	**Kurvinen**	**2.04**	**191**	PG	Pb	11 34 56.9	-0.9
KU2	**Taivalkoski**	**2.08**	**207**	PG	Pb	11 34 57.2	-1.0
	baz=23						
KEV	**Kevo**	**2.55**	**331**	PG	Pn	11 35 03.4	+1.1
KEV				SG	Sn	11 35 35.9	+1.9
KLF	**Kolari**	**2.56**	**266**	PN	Pn	11 35 02.5	+0.1
KLF				smax	smax	11 35 35.2	
	comp=Z,3.8nm,0.2s						
KLF				SB	Sb	11 35 37.7	-0.8
VADS	**Vadso**	**2.60**	**351**	P	Pb	11 35 05.8	-1.5
VADS				S	Sn	11 35 37.1	+1.7
ARA0	**ARCESS Array S**	**2.71**	**319**	PB	Pn	11 35 05.5	+1.0
ARA0				SB	Sb	11 35 40.9	-1.9
ARCES	**ARCESS Array B**	**2.71**	**319**	P	Pn	11 35 06.0	+1.4
ARCES				S	Sn	11 35 38.5	+0.5
HEF	**Hetta**	**2.72**	**291**	PB	Pn	11 35 06.8	+2.1
	baz=102						
HEF				smax	smax	11 35 39.9	
	comp=Z,4.1nm,0.2s						
HEF				SB	Sb	11 35 41.4	-1.8
TOF	**Tornio**	**2.87**	**242**	PN	Pn	11 35 06.2	-0.5
TOF				smax	smax	11 35 44.3	
	comp=Z,1.4nm,0.2s						
TOF				SB	Sb	11 35 46.4	-1.0
KTK1	**Kautokeino**	**3.08**	**302**	PB	Pn	11 35 10.9	+1.3
KTK1				SB	Sb	11 35 52.4	-1.0
OUL	**Oulu**	**3.11**	**219**	SG	Sb	11 35 55.8	+1.5
LANU	**Lannavaara**	**3.28**	**282**	P	Pn	11 35 12.1	-0.2
LANU				S	Sn	11 35 53.7	+1.7
LANU	**Lannavaara**	**3.28**	**282**	PB	Pn	11 35 13.9	+1.6
KALU	**Kalix**	**3.32**	**242**	P	Pn	11 35 12.4	-0.5
KALU				S	Sn	11 35 55.6	+2.6
RMF	**Romuvaara**	**3.37**	**184**	PN	Pn	11 35 14.3	+0.7
ERTU	**Ertsjaerv**	**3.42**	**257**	P	Pn	11 35 14.4	+0.1
ERTU	**Ertsjaerv**	**3.42**	**257**	PN	Pn	11 35 14.3	0.0
DUNU	**Dundret**	**3.88**	**268**	P	Pn	11 35 20.5	-0.1
KUA	**Kurravaara**	**3.90**	**280**	P	Pn	11 35 20.6	-0.3
KOVU	**Salmi**	**3.98**	**284**	P	Pn	11 35 22.3	+0.3
	baz=126						
KOVU				S	Sn	11 36 09.7	+0.5
HARU	**Harads**	**4.02**	**254**	P	Pn	11 35 22.0	-0.6
FAUS	**Fauske**	**5.86**	**275**	P	Pn	11 35 47.6	-0.2
FAUS				S	Sn	11 36 51.3	-4.3

KOLA 28 11:35:11.7,67.°51N×30.°47E,h0km,ML2.1,Error ellipse: s-maj=5.6km s-min=2.7km az=40.0,Kovdor City, Mines, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA0	**Apatity Array**	**0.97**	**83**	P	Pg	11 35 28.7	-1.6
APA0				S	Sg	11 35 41.4	-1.5
APA	**Apatity**	**1.13**	**86**	S	Sg	11 35 47.1	-0.8
KVDA	**Kovda**	**1.25**	**130**	P	Pg	11 35 33.3	-2.3
KVDA				S	Sg	11 35 50.6	-1.2
LVZ	**Lovozero**	**1.64**	**74**	S	Sn	11 36 02.3	-1.3
VADS	**Vadso**	**2.65**	**352**	S	Sn	11 36 27.1	-1.3
ARCES	**ARCESS Array B**	**2.73**	**320**	S	Sn	11 36 29.4	-1.1
FAUS	**Fauske**	**5.84**	**276**	S	Sn	11 37 43.7	-3.4

*NEIC **28** 11:38:47.4±1.2,56.°53N±0.°09×148.°8W±0.°1,h10km±2km, ML3.5/84,ML3.1(AEIC),Error ellipse: s-maj=15.0km s-min=10.6km az=168.0*
*AEIC **28** 11:38:53.6±1.2,56.°6N±0.°1×148.°8W±0.°1,h10km±7km, Error ellipse: s-maj=15.4km s-min=8.8km az=170.0*

ISC 28 11:38:45.8±1.6,56.°49N±0.°09×148.°77W±0.°06,h10km, n101,σ1°50/90,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.45**	**303**		**Pn**	**11 39 26.5**	**+0.7**
OHAK	**Old Harbor**	**2.59**	**288**	P	**Pn**	**11 39 28.0**	**+0.4**
OHAK	**Old Harbor**	**2.59**	**288**		**Sn**	**11 39 57.0**	**-2.1**
OHAK	**Old Harbor**	**2.59**	**288**		**Pn**	**11 39 28.1**	**+0.4**
SYI	**Shuyak Island**	**2.88**	**319**		**Sn**	**11 40 05.5**	**-0.9**
SYI	**Shuyak Island**	**2.88**	**319**		**Pn**	**11 39 32.9**	**+1.2**
SII	**Sitkinak Islan**	**3.00**	**273**	P	**Pn**	**11 39 35.0**	**+1.6**
SII	**Sitkinak Islan**	**3.00**	**273**		**Sn**	**11 40 07.3**	**-2.1**
SII	**Sitkinak Islan**	**3.00**	**273**	Pn	**Pn**	**11 39 34.3**	**+0.9**
SII				IAML		11 40 20.6	
	comp=N,109nm,1.8s						
SII				IAML		11 41 13.9	
	comp=E,134nm,1.7s						
MID	**Middleton Isla**	**3.21**	**23**	Pn	**Pn**	**11 39 36.8**	**+0.5**
CNPM	**China Poot**	**3.31**	**338**		**Sn**	**11 40 14.8**	**-2.2**
CNPM	**China Poot**	**3.31**	**338**		**Pn**	**11 39 38.5**	**+0.9**
BRSE	**Bradley Lake S**	**3.42**	**343**		**Pn**	**11 39 39.7**	**+0.5**
BRSE					**Sn**	**11 40 17.2**	**-2.5**
BRLK	**Bradley Lake**	**3.47**	**342**		**Pn**	**11 39 40.1**	**+0.3**
HOM	**Homer**	**3.52**	**336**	Pn	**Pn**	**11 39 39.0**	**-1.5**
HOM				IAML		11 40 09.0	
	comp=N,132nm,3.0s						
Q19K	**Cape Douglas,**	**3.58**	**315**		**Pn**	**11 39 43.1**	**+1.8**
Q19K					**Sn**	**11 40 25.0**	**+1.4**
Q19K	**Cape Douglas,**	**3.58**	**315**	IAML		11 40 33.4	
	comp=N,127nm,0.8s						
P23K	**Montague Islan**	**3.59**	**11**		**Sn**	**11 40 20.7**	**-3.1**
P23K	**Montague Islan**	**3.59**	**11**		**Pn**	**11 39 41.9**	**+0.5**
P23K				IAML		11 40 20.9	
	comp=N,122nm,2.6s						
P23K				IAML		11 40 27.3	
	comp=E,112nm,2.6s						
SEW	**Seward**	**3.64**	**355**		**Pn**	**11 39 42.4**	**+0.3**
KAHG	**Katmai Hook Gl**	**3.71**	**305**		**Pn**	**11 39 45.5**	**+2.4**
KAWH	**Katmai**	**3.77**	**303**		**Pn**	**11 39 46.4**	**+2.4**
AUI	**Augustine Isla**	**3.78**	**321**		**Pn**	**11 39 45.6**	**+1.6**
AUI					**Sn**	**11 40 26.7**	**-1.8**
KARR	**Katmai Rainbow**	**3.78**	**305**		**Pn**	**11 39 46.6**	**+2.5**
AUCH	**Augustine Cone**	**3.81**	**321**		**Pn**	**11 39 46.3**	**+1.9**
AUW	**Augustine West**	**3.82**	**321**		**Pn**	**11 39 46.5**	**+1.9**
CHIR	**Chirikof Islan**	**3.89**	**263**	P	**Pn**	**11 39 45.6**	**0.0**
CHIR	**Chirikof Islan**	**3.89**	**263**	Pn	**Pn**	**11 39 46.0**	**+0.4**
CHIR				IAML		11 40 53.4	
	comp=E,100nm,2.3s						
ACHA	**Angle Creek He**	**3.95**	**299**		**Pn**	**11 39 48.9**	**+2.4**
P19K	**Oil Pt**	**3.96**	**325**	Pn	**Pn**	**11 39 47.7**	**+1.2**
P19K				IAML		11 40 38.6	
	comp=E,58nm,0.8s						
P19K				IAML		11 40 38.7	
	comp=N,73nm,1.1s						
O22K	**Cooper Landing**	**4.03**	**353**	Pn	**Pn**	**11 39 48.8**	**+1.4**
O22K				IAML		11 40 38.4	
	comp=N,87nm,0.7s						
O22K				IAML		11 40 41.4	
	comp=E,91nm,0.7s						
HIN	**Hinchinbrook I**	**4.09**	**16**		**Pn**	**11 39 49.1**	**+0.7**
SLKM	**Skilak Lake**	**4.10**	**350**	IAML		11 40 35.9	
	comp=E,60nm,0.3s						
SLKM				IAML		11 40 37.4	
	comp=N,36nm,0.2s						
KAIM	**Kayak Island**	**4.14**	**32**	Pn	**Pn**	**11 39 50.0**	**+1.0**
PLK4	**Peulik 4**	**4.30**	**289**	Pn	**Pn**	**11 39 53.0**	**+1.7**
PLK4				IAML		11 40 45.2	
	comp=E,46nm,1.6s						
PLK4				IAML		11 40 48.3	
	comp=N,47nm,0.7s						
EYAK	**Cordova Ski Ar**	**4.36**	**20**	P	**Pn**	**11 39 52.7**	**+0.7**
EYAK	**Cordova Ski Ar**	**4.36**	**20**		**Pn**	**11 39 53.1**	**+1.1**
EYAK				IAML		11 40 40.9	
	comp=N,52nm,0.7s						
EYAK				IAML		11 40 42.3	
	comp=E,48nm,0.6s						
RED	**Redoubt Volcan**	**4.46**	**334**	IAML		11 40 48.0	
	comp=E,24nm,0.7s						
RED				IAML		11 40 48.3	
	comp=N,23nm,0.4s						
GOAT	**Goat Mountain**	**4.61**	**26**		**Pn**	**11 39 56.8**	**+1.3**
RC01	**Rabbit Creek A**	**4.64**	**354**	IAML		11 40 56.0	
	comp=E,20nm,0.4s						
O19K	**Port Alsworth**	**4.72**	**324**	IAML		11 41 03.3	
	comp=N,50nm,0.5s						
BERG	**Berg Lake**	**4.73**	**32**	Pn	**Pn**	**11 39 58.1**	**+1.0**
O18K	**Koktuh Hills**	**4.79**	**317**	IAML		11 41 32.5	
	comp=N,25nm,4.6s						
O18K				IAML		11 42 43.1	
	comp=E,23nm,4.6s						
DIV	**Divide**	**4.90**	**17**		**Pn**	**11 40 00.4**	**+0.9**
DIV	**Divide**	**4.90**	**17**	IAML		11 42 04.4	
	comp=E,18nm,3.4s						
DIV				IAML		11 42 51.8	
	comp=N,22nm,2.6s						
KNK	**Knik Glacier**	**4.94**	**2**	IAML		11 41 00.3	
	comp=N,22nm,2.3s						
KNK				IAML		11 41 34.1	
	comp=E,19nm,3.2s						
PMR	**Palmer**	**5.12**	**358**	P	**Pn**	**11 40 03.6**	**+1.2**
PMR	**Palmer**	**5.12**	**358**	IAML		11 41 17.9	
	comp=N,16nm,3.7s						
PMR				IAML		11 42 49.2	
	comp=E,23nm,3.7s						
MESA	**MESA**	**5.15**	**41**	Pn	**Pn**	**11 40 03.8**	**+0.7**
CRQM	**Cirque**	**5.19**	**32**	IAML		11 41 05.0	
	comp=E,36nm,1.2s						
KLU	**Klutina**	**5.22**	**15**	IAML		11 41 03.8	
	comp=N,32nm,0.2s						
KLU				IAML		11 41 04.1	
	comp=E,33nm,0.4s						
N19K	**Bonanza Creek**	**5.26**	**328**	IAML		11 41 38.1	
	comp=E,15nm,3.3s						
N19K				IAML		11 43 05.0	
	comp=N,18nm,4.9s						
TGL	**Tana Glacier**	**5.28**	**34**	IAML		11 41 06.0	
	comp=E,36nm,1.2s						
TGL				IAML		11 43 14.2	
	comp=N,33nm,3.5s						
GHO	**Glory Hole Cre**	**5.29**	**359**	IAML		11 40 51.8	
	comp=E,19nm,2.4s						
GHO				IAML		11 41 10.6	
	comp=N,19nm,2.3s						
SML	**Sawmill**	**5.33**	**2**	Pn	**Pn**	**11 40 06.8**	**+1.4**
SML				IAML		11 41 12.5	
	comp=E,25nm,1.6s						
SML				IAML		11 41 22.6	
	comp=N,26nm,3.0s						
SCM	**Sheep Creek Mo**	**5.41**	**7**	Pn	**Pn**	**11 40 08.1**	**+1.6**
SCM				IAML		11 41 13.1	
	comp=E,27nm,2.5s						
SCM				IAML		11 42 50.4	
	comp=N,36nm,2.8s						
VRDI	**Verde Repeater**	**5.49**	**28**	Pn	**Pn**	**11 40 08.6**	**+0.9**
GLB	**Gilahina Butte**	**5.58**	**25**	Pn	**Pn**	**11 40 10.0**	**+1.1**
N18K	**Kilae Creek**	**5.61**	**321**	Pn	**Pn**	**11 40 09.9**	**+0.7**
GRNC	**Granite Creek**	**5.61**	**38**	Pn	**Pn**	**11 40 10.5**	**+1.1**
SKT	**Skwentna**	**5.68**	**347**	Pn	**Pn**	**11 40 11.2**	**+1.0**
PCA	**Pinnacle**	**5.76**	**48**	Pn	**Pn**	**11 40 12.5**	**+1.2**
M24K	**Tolsona, Glenn**	**5.78**	**12**	Pn	**Pn**

DJA ***28*** *11:48:30.4±0.3, 7°S±3°×13°0E±°, h183km±7km, M4.1/19, mB5.3/2, mb3.9/7, MLv4.2/19, Mw(mB)4.8/2*

ISC 28 11:48:27.1±0.9**, 6.67S**±0.05×**129.86E**±0.07**, h200km, n18, σ3.54**/22**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.94**	**132**	P	**Pn**	**11 49 07.6**	**+2.6**
SAUI				S	**Sn**	**11 49 34.7**	**+0.2**
BNDI	**Bandanaira**	**2.13**	**1**	P	**Pn**	**11 49 08.9**	**+1.8**
MSAI	**Masohi**	**3.43**	**344**	P	**Pn**	**11 49 24.2**	**+2.3**
KRAI	**Karang Ratu**	**3.63**	**336**	P	**Pn**	**11 49 28.4**	**+4.0**
FAKI	**Fak Fak**	**4.42**	**33**	P	**Pn**	**11 49 34.2**	**0.0**
KMPI	**Kaimana, Papua**	**4.86**	**52**	P	**Pn**	**11 49 42.1**	**+2.3**
SIJI	**Sorong**	**5.93**	**14**	P	**Pn**	**11 49 54.1**	**+0.6**
	12nm,0.3s,baz=202,slow=18,SNR=42						
SIJI				S	**Sn**	**11 50 55.6**	**-6.3**
	22nm,0.2s,baz=248,slow=23,SNR=8.8						
SIJI	**Sorong**	**5.93**	**14**	P	**Pn**	**11 49 53.9**	**+0.3**
SWI	**Sorong**	**5.93**	**14**	P	**Pn**	**11 49 54.4**	**+0.8**
SOEI	**Soe**	**6.33**	**241**	P	**Pn**	**11 50 02.3**	**+3.5**
	0.1nm23nm,1.6s						
RKPI	**Ransiki, Papua**	**6.69**	**40**	P	**Pn**	**11 50 05.8**	**+2.4**
MWPI	**Manokwari, Pap**	**7.06**	**36**	P	**Pn**	**11 50 11.5**	**+3.2**
	96nm,0.9s						
BATI	**Baumata**	**7.06**	**240**	P	**Pn**	**11 50 11.1**	**+2.8**
	10.0nm,0.3s,baz=90,slow=19,SNR=1.6						
BATI				S	**Sn**	**11 51 26.7**	**-1.8**
	14nm,0.4s,baz=180,slow=16,SNR=1.9						
FITZ	**Fitzroy Crossi**	**12.08**	**200**	P	**Pn**	**11 51 14.4**	**+1.3**
	1.9nm,0.3s,baz=29,slow=11,SNR=28						
FITZ				S	**Sn**	**11 53 22.3**	**-5.6**
	2.1nm,0.3s,baz=327,slow=23,SNR=7.1						
WRA	**Warramunga Arr**	**13.89**	**162**	P	**Pn**	**11 51 38.1**	**+2.2**
	1.0nm,0.8s,baz=340,slow=12,SNR=17						
WRA				S	**S**	**11 54 03.0**	**-7.7**
	1.6nm,0.6s,baz=337,slow=22,SNR=9.5						
ASAR	**Alice Springs**	**17.34**	**167**	P	**Pn**	**11 52 22.4**	**+4.8**
	1.7nm,0.5s,baz=337,slow=9.4,SNR=40						
ASAR				S	**S**	**11 55 26.8**	**+0.8**
	0.6nm,0.7s,baz=357,slow=26,SNR=5.2						
MKAR	**Makanchi Array**	**67.87**	**327**	P	P	11 59 11.0	+7.1
	0.9nm,0.4s,baz=120,slow=5.2,SNR=15						
	0.9nm,0.4s						
KURBB	**Kurchatov Arra**	**72.15**	**329**	P	P	11 59 36.4	+6.5
	0.3nm,0.4s,baz=128,slow=5.0,SNR=5.3						
	0.3nm,0.4s						

IDC ***28*** *12:18:06.7±0.7, 41.47S×174.22E, h0km, mb3.9/6, mbtmp3.9/8, ML3.9/2, MS3.1/10, Error ellipse: s-maj=24.5km s-min=13.9km az=123.0*

NOU ***28*** *12:18:09.5, 41.78S×174.43E, h17km, MLv4.9/18, Cook Strait, New Zealand*

NEIC ***28*** *12:18:09.4±2.1, 41.79S±0.03×174.24E±0.03, h10km±1km, mb4.2/10, Error ellipse: s-maj=5.5km s-min=3.2km az=346.0*

WEL ***28*** *12:18:10.4±0.3, 42°S±2°×17°4E±°, h12km±3km, M4.8/81, ML4.6/18, MLv4.8/81, Error ellipse: s-maj=3.1km s-min=2.7km az=152.7, confirmed*

WEL ***28*** *12:18:10.4, 41.66S×174.25E, h19km, ML4.8, Mw4.3, Moment Tensor Solution. s5 Moment tensor: Scale 10^{15} Nm; M_{rr}1.72; $M_{\theta\theta}$2.74; $M_{\phi\phi}$-4.46; $M_{r\theta}$-0.68; $M_{\theta\phi}$0.43; $M_{\phi r}$-0.01; Fault plane solution: $M_0$3.79000×10^{15} NP1: ϕ_s315.00000°, δ72.00000°, λ19.00000°. NP2: ϕ_s219.00000°, δ72.00000°, λ161.00000°. Principal axes: T 3.0946, Plg26.0000°, Azm177.0000°; N 1.3894, Plg64.0000°, Azm357.0000°; P -4.4840, Plg0.0000°, Azm267.0000°; Stations used: NNZ KHZ MRZ QRZ LTZ STRIKE-SLIP FAULTING*

ISC 28 12:18:09.8±0.7**, 41.73S**±0.02×**174.32E**±0.02**, h19km**±2km**, n255, σ1.27**/265**, mb4.2**/14**, MS3.2**/10**, 3C, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.08**	**256**	Pg	**Pg**	**12 18 13.7**	**+0.2**
CMWZ				Sg	**Sg**	**12 18 17.1**	**+0.9**
CMWZ	**Cape Campbell**	**0.08**	**256**	P	**Pg**	**12 18 13.8**	**+0.2**
CMWZ				S	**Sg**	**12 18 17.0**	**+0.9**
SDNS	**Seddon**	**0.15**	**295**	P	**Pg**	**12 18 14.1**	**-0.1**
SDNS				S	**Sg**	**12 18 17.1**	**-0.2**
WDFS	**Ward Fire Stat**	**0.17**	**235**	P	**Pg**	**12 18 15.1**	**+0.6**
WDFS				S	**Sg**	**12 18 18.8**	**+1.2**
SEDS	**Seddon Fire St**	**0.19**	**287**	P	**Pb**	**12 18 14.4**	**+0.3**
SEDS				S	**Sg**	**12 18 17.9**	**-0.3**
KEKS	**Kekerengu Vall**	**0.34**	**228**	P	**Pb**	**12 18 18.1**	**+0.7**
MGCS	**Blenheim Marlb**	**0.36**	**308**	P	**Pg**	**12 18 16.9**	**-0.6**
MGCS				S	**Sg**	**12 18 21.9**	**-0.8**
GLOS	**29 km south-we**	**0.40**	**251**	P	**Pg**	**12 18 18.2**	**0.0**
TUWZ	**Tuamarina**	**0.41**	**316**		**Pg**	**12 18 18.5**	**+0.1**
TUWZ				Sg	**Sg**	**12 18 24.1**	**-0.1**
TUWZ	**Tuamarina**	**0.41**	**316**	P	**Pg**	**12 18 18.7**	**+0.3**
TUWZ				S	**Sg**	**12 18 24.0**	**-0.2**
BWRS	**Waikakaho Road**	**0.43**	**313**	P	**Pg**	**12 18 18.1**	**-0.5**
BWRS				S	**Sg**	**12 18 23.8**	**-0.8**
QCCS	**Picton Queen C**	**0.50**	**333**	P	**Pb**	**12 18 19.2**	**-0.8**
SNZO	**South Karori**	**0.51**	**35**	P	**Pg**	**12 18 20.8**	**+0.7**
SNZO	**South Karori**	**0.51**	**35**	S	**Sb**	**12 18 28.1**	**+1.1**
SNZO	**South Karori**	**0.51**	**35**		**Pg**	**12 18 20.7**	**+0.6**
SNZO				Sg	**Sb**	**12 18 28.2**	**+1.2**
TCW	**Tory Channel**	**0.52**	**356**		**Pb**	**12 18 19.9**	**-0.3**
TCW	**Tory Channel**	**0.52**	**356**	P	**Pb**	**12 18 19.9**	**-0.3**
TCW				S	**Sb**	**12 18 26.4**	**-1.0**
BHW	**Baring Head**	**0.52**	**52**		**Pg**	**12 18 21.3**	**+1.0**
BHW	**Baring Head**	**0.52**	**52**	P	**Pg**	**12 18 21.4**	**+1.0**
WNAS	**Wellington Int**	**0.54**	**42**	P	**Pg**	**12 18 21.5**	**+0.7**
WNKS	**Wellington Kar**	**0.55**	**35**	P	**Pg**	**12 18 21.4**	**+0.6**
MKVS	**Makara Village**	**0.55**	**32**	P	**Pg**	**12 18 21.2**	**+0.4**
WNHS	**Wellington Hig**	**0.55**	**39**	P	**Pg**	**12 18 21.5**	**+0.7**
TRTW	**Torrens Terrac**	**0.55**	**38**	P	**Pg**	**12 18 21.4**	**+0.6**
WTYS	**Wellington Ten**	**0.55**	**39**	P	**Pg**	**12 18 21.6**	**+0.7**
MISS	**Wellington Mir**	**0.56**	**42**	P	**Pg**	**12 18 21.6**	**+0.7**
TEPS	**Wellington Te**	**0.56**	**38**	P	**Pg**	**12 18 21.6**	**+0.6**
WEL	**Wellington**	**0.56**	**37**	P	**Pg**	**12 18 21.7**	**+0.7**
FKPS	**Wellington Fra**	**0.56**	**38**	P	**Pn**	**12 18 23.5**	**+0.8**
BOWS	**Bowen St Turnb**	**0.56**	**37**	P	**Pg**	**12 18 21.8**	**+0.7**
HAVS	**Havelock**	**0.61**	**318**	P	**Pb**	**12 18 21.2**	**-0.5**
HAVS				S	**Sb**	**12 18 28.3**	**-1.5**
PLWZ	**Palliser**	**0.72**	**77**		**Pn**	**12 18 25.7**	**+0.8**
PLWZ	**Palliser**	**0.72**	**77**	P	**Pn**	**12 18 25.7**	**+0.8**
MSWZ	**Moikau Station**	**0.76**	**66**		**Pn**	**12 18 26.2**	**+0.7**
MSWZ	**Moikau Station**	**0.76**	**66**	P	**Pn**	**12 18 26.2**	**+0.7**
CAW	**Cannon Point**	**0.84**	**42**	P	**Pg**	**12 18 26.5**	**+0.3**
NNZ	**Nelson**	**0.87**	**306**		**Pb**	**12 18 25.9**	**-0.4**
NNZ	**Nelson**	**0.87**	**306**	P	**Pb**	**12 18 25.9**	**-0.4**
PAWZ	**Paruwai Farm**	**0.90**	**68**	P	**Pn**	**12 18 28.2**	**+0.8**
KHZ	**Kahutara**	**0.90**	**220**	P	**Pn**	**12 18 28.0**	**+0.6**
KHZ	**Kahutara**	**0.90**	**220**	S	**Sn**	**12 18 40.4**	**+0.6**
KHZ	**Kahutara**	**0.90**	**220**		**Pn**	**12 18 28.0**	**+0.6**
KHZ	**Kahutara**	**0.90**	**220**	P	**Pn**	**12 18 28.2**	**+0.8**
KIW	**Kapiti Island**	**0.97**	**27**	P	**Pb**	**12 18 28.5**	**+0.4**
DUWZ	**D'Urville Isla**	**0.97**	**342**	P	**Pb**	**12 18 27.6**	**-0.5**
MTW	**Mount Morrison**	**1.05**	**58**	P	**Pg**	**12 18 30.2**	**-0.1**
THZ	**Tophouse**	**1.06**	**268**		**Pb**	**12 18 29.5**	**-0.1**
THZ	**Tophouse**	**1.06**	**268**	P	**Pb**	**12 18 29.6**	**0.0**
TRWZ	**Traveller**	**1.08**	**73**	P	**Pn**	**12 18 30.4**	**+0.6**
OGWZ	**Otaki Gorge**	**1.11**	**35**	P	**Pb**	**12 18 31.1**	**+0.7**
MRNZ	**Matariki Terra**	**1.22**	**285**		**Pb**	**12 18 32.3**	**+0.1**
MRNZ	**Matariki Terra**	**1.22**	**285**	P	**Pb**	**12 18 32.3**	**+0.1**
HOWZ	**Holdsworth Sta**	**1.22**	**48**	P	**Pb**	**12 18 32.5**	**+0.2**
TKNZ	**Takaka Hill**	**1.24**	**304**		**Pn**	**12 18 32.5**	**+0.5**
TKNZ	**Takaka Hill**	**1.24**	**304**	P	**Pn**	**12 18 32.2**	**+0.2**
TMWZ	**Te Maipa**	**1.33**	**63**	P	**Pn**	**12 18 33.8**	**+0.4**
MRZ	**Mangatainoka R**	**1.43**	**42**		**Pn**	**12 18 35.5**	**+0.8**
MRZ	**Mangatainoka R**	**1.43**	**42**	P	**Pn**	**12 18 35.5**	**+0.8**
TIWZ	**Tintock**	**1.52**	**52**	P	**Pn**	**12 18 36.2**	**+0.3**
GVZ	**Greta Valley S**	**1.56**	**217**		**Pn**	**12 18 37.0**	**+0.4**
GVZ	**Greta Valley S**	**1.56**	**217**	P	**Pn**	**12 18 36.9**	**+0.4**
QRZ	**Quartz Range**	**1.63**	**303**	P	**Pn**	**12 18 38.5**	**+1.1**
QRZ	**Quartz Range**	**1.63**	**303**	S	**Sb**	**12 19 00.1**	**+0.9**
QRZ	**Quartz Range**	**1.63**	**303**		**Pb**	**12 18 38.6**	**-0.5**
QRZ	**Quartz Range**	**1.63**	**303**	P	**Pb**	**12 18 38.6**	**-0.5**
CPWZ	**Castlepoint**	**1.64**	**61**	P	**Pn**	**12 18 38.2**	**+0.7**
OHWZ	**Ohakea**	**1.70**	**27**	P	**Pb**	**12 18 40.6**	**+0.2**
PRWZ	**Pori Road**	**1.71**	**47**	P	**Pn**	**12 18 39.0**	**+0.4**
POWZ	**Post Office Ro**	**1.73**	**40**	P	**Pn**	**12 18 39.3**	**+0.6**
BFZ	**Birch Farm**	**1.79**	**55**	P	**Pn**	**12 18 39.3**	**-0.3**
BFZ	**Birch Farm**	**1.79**	**55**	P	**Pn**	**12 18 39.4**	**-0.3**
LTZ	**Lake Taylor**	**1.85**	**235**		**Pn**	**12 18 41.0**	**+0.5**
LTZ	**Lake Taylor**	**1.85**	**235**	P	**Pn**	**12 18 41.0**	**+0.5**
DSZ	**Denniston Nort**	**1.89**	**269**		**Pn**	**12 18 42.5**	**+1.5**
DSZ	**Denniston Nort**	**1.89**	**269**	P	**Pn**	**12 18 42.3**	**+1.3**
AMCZ	**Amberley**	**1.90**	**220**	P	**Pn**	**12 18 41.2**	**0.0**
DVHZ	**Dannevirke**	**2.00**	**45**	P	**Pn**	**12 18 42.3**	**-0.2**
WAZ	**Wanganui**	**2.04**	**15**	P	**Pb**	**12 18 46.1**	**0.0**
ANWZ	**Angora Road**	**2.06**	**53**	P	**Pn**	**12 18 43.0**	**-0.3**
TSZ	**Takapari Road**	**2.08**	**37**	P	**Pn**	**12 18 44.0**	**+0.4**
OKCZ	**Okains Bay**	**2.20**	**205**	P	**Pn**	**12 18 44.9**	**-0.4**
LREZ	**Lake Rotokare**	**2.27**	**2**	P	**Pb**	**12 18 48.8**	**-1.2**
PRHZ	**Porangahau**	**2.28**	**51**	P	**Pn**	**12 18 45.8**	**-0.6**
PNHZ	**Pukenui**	**2.31**	**39**	P	**Pn**	**12 18 46.8**	**0.0**
WPHZ	**Waipukurau**	**2.31**	**45**	P	**Pn**	**12 18 46.8**	**-0.1**
OXZ	**Oxford**	**2.32**	**226**		**Pn**	**12 18 46.2**	**-0.7**
OXZ	**Oxford**	**2.32**	**226**	P	**Pn**	**12 18 46.2**	**-0.7**
MQZ	**McQueen's Vall**	**2.33**	**211**		**Pn**	**12 18 45.8**	**-1.2**
MQZ	**McQueen's Vall**	**2.33**	**211**	P	**Pn**	**12 18 45.8**	**-1.2**
NMEZ	**Namu Road**	**2.34**	**352**	P	**Pn**	**12 18 49.5**	**+2.3**
INZ	**Inchbonnie**	**2.36**	**244**		**Pn**	**12 18 47.9**	**+0.4**
INZ	**Inchbonnie**	**2.36**	**244**	P	**Pn**	**12 18 48.1**	**+0.6**
AKCZ	**Akaroa Harbour**	**2.38**	**205**	P	**Pn**	**12 18 47.1**	**-0.7**
PREZ	**Palmer Road**	**2.39**	**357**	P	**Pb**	**12 18 51.3**	**-0.9**
KHEZ	**Kahui Hut**	**2.44**	**354**	P	**Pb**	**12 18 51.5**	**-1.7**
KHEZ	**Kahui Hut**	**2.44**	**354**	P	**Pb**	**12 18 51.5**	**-1.7**
NBEZ	**Newall Road No**	**2.48**	**352**	P	**Pn**	**12 18 51.5**	**+2.3**
MTVZ	**Mangateitei**	**2.50**	**21**	P	**Pn**	**12 18 51.7**	**+2.2**
DREZ	**Durham Road**	**2.54**	**358**	P	**Pb**	**12 18 52.8**	**-1.9**
PKVZ	**Pokaka**	**2.56**	**18**	P	**Pn**	**12 18 52.3**	**+2.0**
MOVZ	**Moawhango**	**2.56**	**26**	P	**Pn**	**12 18 51.2**	**+0.9**
RACZ	**Rakaia**	**2.56**	**218**	P	**Pn**	**12 18 49.3**	**-1.0**
PXZ	**Pawanui**	**2.57**	**49**	P	**Pn**	**12 18 49.3**	**-1.0**
WNVZ	**Wahianoa**	**2.59**	**22**	P	**Pn**	**12 18 52.4**	**+1.6**
KRHZ	**Kereru**	**2.60**	**37**	P	**Pn**	**12 18 50.6**	**-0.2**
TRVZ	**Turoa**	**2.60**	**21**	P	**Pn**	**12 18 53.5**	**+2.5**
VRZ	**Vera Road**	**2.62**	**7**	P	**Pn**	**12 18 53.4**	**+2.3**
WHVZ	**Whangaehu Hut**	**2.63**	**22**	P	**Pn**	**12 18 53.1**	**+1.7**
MAVZ	**Matarangi**	**2.63**	**21**	P	**Pb**	**12 18 56.8**	**+0.2**
FWVZ	**Far West T-bar**	**2.64**	**21**	P	**Pn**	**12 18 53.8**	**+2.2**
MHEZ	**Mangahewa**	**2.65**	**0**	P	**Pb**	**12 18 55.4**	**-1.2**
TUVZ	**Tukino**	**2.66**	**23**	P	**Pn**	**12 18 53.5**	**+1.7**
COVZ	**Chateau Observ**	**2.69**	**21**	P	**Pn**	**12 18 53.9**	**+1.7**
MHCZ	**Mount Hutt**	**2.72**	**228**	P	**Pn**	**12 18 51.6**	**-0.9**
NGZ	**Ngauruhoe**	**2.73**	**21**	P	**Pn**	**12 18 54.7**	**+2.0**
SNVZ	**South Ngauruho**	**2.73**	**22**	P	**Pn**	**12 18 54.4**	**+1.7**
KAHZ	**Kahuranaki**	**2.74**	**46**	P	**Pn**	**12 18 52.0**	**-0.8**
OTVZ	**Oturere**	**2.76**	**22**	P	**Pn**	**12 18 54.8**	**+1.7**
WTVZ	**West Tongariro**	**2.79**	**21**	P	**Pn**	**12 18 56.5**	**+3.1**
TWVZ	**Taurewa**	**2.79**	**18**	P	**Pn**	**12 18 55.2**	**+1.8**
ETVZ	**East Tongariro**	**2.80**	**23**	P	**Pn**	**12 18 56.0**	**+2.4**
KWHZ	**Kaweka Forest**	**2.80**	**35**	P	**Pn**	**12 18 53.3**	**-0.3**
TMVZ	**Te Maari**	**2.82**	**22**	P	**Pn**	**12 18 55.9**	**+2.0**
KRVZ	**Karewarewa**	**2.82**	**21**	P	**Pn**	**12 18 55.9**	**+2.0**
NTVZ	**North Tongarir**	**2.82**	**22**	P	**Pn**	**12 18 55.5**	**+1.5**
WACZ	**Wakanui South**	**2.87**	**219**	P	**Pn**	**12 18 53.8**	**-0.6**
MCHZ	**McNeill Hill**	**2.91**	**39**	P	**Pn**	**12 18 54.8**	**-0.3**
CKHZ	**Cape Kidnapper**	**2.94**	**46**	P	**Pn**	**12 18 54.6**	**-0.9**
KATZ	**Kakaramea**	**2.94**	**21**	P	**Pb**	**12 19 01.1**	**-0.6**
WVZ	**Waitaha Valley**	**2.98**	**242**	P	**Pn**	**12 18 56.2**	**+0.3**
RITZ	**Rihia Road**	**2.99**	**24**	P	**Pn**	**12 18 58.7**	**+2.6**
BKZ	**Black Stump Fm**	**3.05**	**34**	P	**Pn**	**12 18 56.3**	**-0.7**
BKZ	**Black Stump Fm**	**3.05**	**34**		**Pn**	**12 18 56.6**	**-0.4**
BKZ	**Black Stump Fm**	**3.05**	**34**	P	**Pn**	**12 18 56.5**	**-0.5**
RATZ	**Rangitukua**	**3.07**	**22**	P	**Pb**	**12 19 02.8**	**-0.9**
RPZ	**Rata Peaks**	**3.12**	**229**	Pn	**Pn**	**12 18 57.1**	**-0.9**
	13nm,0.3s,baz=3.6,slow=2.6,SNR=56						
RPZ				Pg	**Pb**	**12 19 05.8**	**+1.1**
	106nm,0.3s,baz=354,slow=0.3,SNR=90						
RPZ				Sn	**Sn**	**12 19 32.9**	**-1.7**
	31nm,0.3s,baz=0.0,slow=20,SNR=3.0						
	39nm,0.4s						
RPZ	**Rata Peaks**	**3.12**	**229**	P	**Pn**	**12 18 57.4**	**-0.6**
RPZ	**Rata Peaks**	**3.12**	**229**		**Pn**	**12 18 57.3**	**-0.6**
RPZ	**Rata Peaks**	**3.12**	**229**	P	**Pn**	**12 18 57.5**	**-0.6**
ARHZ	**Aropaoanui**	**3.20**	**40**	P	**Pn**	**12 18 58.2**	**-0.8**
ARCZ	**Arundel**	**3.20**	**225**	P	**Pn**	**12 18 58.2**	**-0.9**
WATZ	**Wairara**	**3.21**	**20**	P	**Pn**	**12 19 00.3**	**+1.1**
HIZ	**Hauiti**	**3.24**	**7**	P	**Pn**	**12 19 01.5**	**+1.9**
HIZ	**Hauiti**	**3.24**	**7**		**Pn**	**12 19 01.8**	**+2.2**
HIZ	**Hauiti**	**3.24**	**7**	P	**Pn**	**12 19 01.9**	**+2.4**
NMHZ	**Naumai**	**3.24**	**37**	P	**Pn**	**12 18 59.1**	**-0.5**
MRHZ	**Matea Rd**	**3.31**	**30**	P	**Pn**	**12 19 00.1**	**-0.4**
WHTZ	**Whakaora**	**3.31**	**23**	P	**Pb**	**12 19 07.0**	**-0.9**
GCSZ	**Gaunt Creek Bo**	**3.35**	**240**	P	**Pn**	**12 19 01.9**	**+0.8**
KUTZ	**Kaahu Road**	**3.44**	**20**	P	**Pn**	**12 19 06.1**	**+3.9**
MTHZ	**Maungataniwha**	**3.46**	**35**	P	**Pn**	**12 19 01.8**	**-0.9**
WHHZ	**Waihua**	**3.46**	**41**	P	**Pn**	**12 19 01.7**	**-0.9**
WPRZ	**Whakapapatarin**	**3.50**	**24**	P	**Pn**	**12 19 03.4**	**+0.2**
RAHZ	**Arahi**	**3.52**	**38**	P	**Pn**	**12 19 02.3**	**-1.1**
ALRZ	**Allen Road**	**3.52**	**27**	P	**Pn**	**12 19 03.1**	**-0.3**
TLZ	**Tolley Road**	**3.52**	**16**	P	**Pn**	**12 19 05.6**	**+2.1**
PRRZ	**Plateau Road**	**3.60**	**27**	P	**Pn**	**12 19 04.2**	**-0.3**
TMZ	**Timaru**	**3.60**	**221**	P	**Pn**	**12 19 03.7**	**-0.8**
HRRZ	**Handcock Road**	**3.66**	**25**	P	**Pn**	**12 19 05.6**	**+0.2**
RTZ	**Ruatahuna**	**3.72**	**34**		**Pn**	**12 19 04.9**	**-1.3**
RTZ	**Ruatahuna**	**3.72**	**34**	P	**Pn**	**12 19 05.7**	**-0.5**
HSRZ	**Hossack Road**	**3.72**	**24**	P	**Pn**	**12 19 09.1**	**+2.9**
KNZ	**Kokohu**	**3.72**	**45**	P	**Pn**	**12 19 05.0**	**-1.2**
MUGZ	**Murupara**	**3.75**	**31**	P	**Pn**	**12 19 05.7**	**-0.9**
MHGZ	**Mahia Peninsul**	**3.76**	**48**	P	**Pn**	**12 19 05.1**	**-1.6**
FOZ	**Fox Glacier**	**3.78**	**240**		**Pn**	**12 19 07.3**	**+0.3**
FOZ	**Fox Glacier**	**3.78**	**240**	P	**Pn**	**12 19 07.3**	**+0.3**
HLRZ	**Highlands Stat**	**3.81**	**25**	P	**Pn**	**12 19 07.0**	**-0.4**
TARZ	**Mount Tarawera**	**3.87**	**26**	P	**Pn**	**12 19 08.2**	**-0.2**
PRGZ	**Paritu Road**	**3.91**	**45**	P	**Pn**	**12 19 07.1**	**-1.7**
OMRZ	**Omania**	**3.95**	**24**	P	**Pn**	**12 19 13.4**	**+4.0**
RIGZ	**Rimuhau**	**4.01**	**42**	P	**Pn**	**12 19 08.2**	**-2.0**
RAGZ	**Rawiri**	**4.01**	**37**	P	**Pn**	**12 19 08.6**	**-1.6**
LBZ	**Lake Benmore**	**4.03**	**227**		**Pn**	**12 19 11.1**	**+0.6**
LBZ	**Lake Benmore**	**4.03**	**227**	P	**Pn**	**12 19 10.5**	**+0.1**
URZ	**Urewera**	**4.07**	**33**	Pn	**Pn**	**12 19 09.5**	**-1.6**
	7.7nm,0.3s,baz=223,slow=6.0,SNR=49						
URZ				Pg	**Pb**	**12 19 18.3**	**-2.6**
	31nm,0.3s,baz=236,slow=7.4,SNR=28						
URZ				Sn	**Sn**	**12 19 56.0**	**-2.1**
	28nm,0.3s,baz=137,slow=19,SNR=5.1						
URZ				Lg	Lg	12 20 09.7	
	30nm,0.3s,baz=271,slow=23,SNR=6.2						
	19nm,0.4s						
URZ	**Urewera**	**4.07**	**33**	P	**Pn**	**12 19 09.7**	**-1.3**
URZ	**Urewera**	**4.07**	**33**	P	**Pn**	**12 19 09.2**	**-1.8**
TOZ	**Tahuroa Road**	**4.10**	**13**		**Pn**	**12 19 12.9**	**+1.6**
TOZ	**Tahuroa Road**	**4.10**	**13**	P	**Pn**	**12 19 13.6**	**+2.3**
OPRZ	**Ohinepanea**	**4.24**	**25**	P	**Pn**	**12 19 13.2**	**-0.2**
ODZ	**Otahua Downs**	**4.26**	**218**	P	**Pn**	**12 19 12.8**	**-0.8**
ODZ	**Otahua Downs**	**4.26**	**218**	P	**Pn**	**12 19 12.4**	**-1.2**
TGRZ	**Tauranga**	**4.27**	**21**	P	**Pn**	**12 19 15.0**	**+1.3**
CNGZ	**Carnagh Statio**	**4.40**	**44**	P	**Pn**	**12 19 13.5**	**-2.1**
TWGZ	**Tauwhareparae**	**4.53**	**40**	P	**Pn**	**12 19 15.5**	**-1.8**
KBAZ	**Karaka Road Bo**	**4.65**	**6**	P	**Pn**	**12 19 22.0**	**+3.0**
MKAZ	**Moumakai**	**4.67**	**8**	P	**Pn**	**12 19 20.8**	**+1.6**
AWAZ	**Awhitu Peninsu**	**4.67**	**3**	P	**Pn**	**12 19 21.3**	**+2.2**
JCZ	**Jackson Bay**	**4.69**	**238**	P	**Pn**	**12 19 19.5**	**-0.1**
JCZ	**Jackson Bay**	**4.69**	**238**	P	**Pn**	**12 19 18.7**	**-0.9**
ETAZ	**East Tamaki Re**	**4.79**	**6**	P	**Pn**	**12 19 23.0**	**+2.0**
WTAZ	**Waiatarua**	**4.79**	**2**	P	**Pn**	**12 19 23.3**	**+2.4**
EPAZ	**Eden Park BICE**	**4.86**	**4**	P	**Pn**	**12 19 24.9**	**+3.1**
HBAZ	**Herne Bay Bore**	**4.88**	**4**	P	**Pn**	**12 19 25.2**	**+3.1**
RVAZ	**Riverhead Bore**	**4.96**	**2**	P	**Pn**	**12 19 25.0**	**+1.9**
WKZ	**Wanaka**	**4.96**	**230**	Pn	**Pn**	**12 19 22.6**	**-0.7**
WKZ	**Wanaka**	**4.96**	**230**	P	**Pn**	**12 19 22.5**	**-0.7**
WIAZ	**Waiheke Island**	**4.97**	**8**	P	**Pn**	**12 19 25.6**	**+2.2**
MBAZ	**Motutapu North**	**4.97**	**5**	P	**Pn**	**12 19 25.8**	**+2.4**
EAZ	**Earnscleugh**	**5.05**	**225**	P	**Pn**	**12 19 24.2**	**-0.4**
ABAZ	**Army Bay**	**5.14**	**5**	P	**Pn**	**12 19 27.8**	**+2.2**
MXZ	**Matakaoa Point**	**5.17**	**38**	P	**Pn**	**12 19 24.6**	**-1.5**
MXZ	**Matakaoa Point**	**5.17**	**38**	Pn	**Pn**	**12 19 24.7**	**-1.5**
TUZ	**Tuapeka**	**5.42**	**217**	P	**Pn**	**12 19 28.5**	**-0.9**
MSZ	**Milford Sound**	**5.52**	**236**	P	**Pn**	**12 19 32.7**	**+1.8**
GRZ	**Great Barrier**	**5.54**	**10**	P	**Pn**	**12 19 33.3**	**+2.1**
WCZ	**Waipu Caves**	**5.78**	**0**	P	**Pn**	**12 19 36.7**	**+2.2**
MLZ	**Mavora Lakes**	**5.79**	**229**	Pn	**Pn**	**12 19 34.8**	**+0.2**
MLZ	**Mavora Lakes**	**5.79**	**229**	P	**Pn**	**12 19 34.1**	**-0.5**
SYZ	**Scrubby Hill**	**6.08**	**216**	P	**Pn**	**12 19 38.7**	**+0.1**
SYZ	**Scrubby Hill**	**6.08**	**216**	P	**Pn**	**12 19 38.6**	**0.0**
WHZ	**Wether Hill Ro**	**6.21**	**226**	P	**Pn**	**12 19 39.4**	**-1.0**
DCZ	**Deep Cove**	**6.41**	**232**	Pn	**Pn**	**12 19 41.2**	**-1.8**
OUZ	**Omahuta**	**6.53**	**355**	P	**Pn**	**12 19 46.4**	**+1.7**
OUZ	**Omahuta**	**6.53**	**355**	P	**Pn**	**12 19 46.4**	**+1.7**
APZ	**The Paps**	**6.83**	**220**	P	**Pn**	**12 19 47.9**	**-1.0**
CTZ	**Chatham Island**	**6.97**	**110**	P	**Pn**	**12 19 50.3**	**-0.4**
CTZ	**Chatham Island**	**6.97**	**110**		**Pn**	**12 19 51.1**	**+0.3**
CTZ	**Chatham Island**	**6.97**	**110**	P	**Pn**	**12 19 50.6**	**-0.1**
STKA	**Stephens Creek**	**27.84**	**280**	LR	LR	12 33 43.1	
	comp=Z,49nm,18.8s,baz=207,slow=34						
RAR	**Rarotonga**	**29.91**	**55**	LR	LR	12 34 41.7	
	comp=Z,31nm,20.7s,baz=246,slow=33						
CTA	**Charters Tower**	**32.09**	**304**	LR	LR	12 35 43.2	
	comp=Z,56nm,21.8s,baz=102,slow=33						
VNDA	**Vanda**	**36.27**	**185**	P	**P**	**12 25 13.3**	**+2.0**
	0.7nm,0.7s,baz=350,slow=5.0,SNR=2.8						
	0.7nm,0.7s						
VNDA	**Vanda**	**36.27**	**185**	P	**P**	**12 25 11.9**	**+0.6**
AS31	**Alice Springs**	**38.08**	**285**	P	**P**	**12 25 27.0**	**-0.3**
AS31				IAmb	IAmb	12 26 03.5	
	comp=Z,1.2nm,1.1s						
ASAR	**Alice Springs**	**38.08**	**285**	P	**P**	**12 25 26.3**	**-1.0**
	comp=Z,0.5nm,0.4s,baz=120,slow=7.4,SNR=22						
ASAR				PcP	**PcP**	**12 27 41.0**	**-1.2**
	comp=Z,0.4nm,0.8s,baz=123,slow=3.4,SNR=2.1						
ASAR				LR	LR	12 41 08.7	
	comp=Z,51nm,18.2s,baz=164,slow=36						
	comp=Z,0.5nm,0.4s						
ASAR	**Alice Springs**	**38.08**	**285**	P	**P**	**12 25 26.7**	**-0.6**
ASAR				PcP	**PcP**	**12 27 41.9**	**-0.4**
WR8	**Warramunga Arr**	**40.02**	**290**	P	**P**	**12 25 44.0**	**+0.5**
WR8				IAmb	IAmb	12 26 11.4	
	comp=Z,9.1nm,1.3s						
WRAB	**Tennant Creek**	**40.15**	**290**	P	**P**	**12 25 43.1**	**-1.5**
WRAB				IAmb	IAmb	12 25 48.1	
	comp=Z,2.7nm,0.7s						
WRA	**Warramunga Arr**	**40.15**	**290**	P	**P**	**12 25 43.8**	**-0.8**
	comp=Z,1.7nm,0.6s,baz=126,slow=8.3,SNR=27						
	comp=Z,1.7nm,0.6s						
WRA	**Warramunga Arr**	**40.15**	**290**	P	**P**	**12 25 43.7**	**-0.8**
WB0	**Warramunga Arr**	**40.23**	**291**	P	**P**	**12 25 44.7**	**-0.6**
WB0				IAmb	IAmb	12 26 20.4	
	comp=Z,12nm,1.5s						
CASY	**Casey**	**42.25**	**213**	P	**P**	**12 26 01.4**	**+0.1**
CASY				IAmb	IAmb	12 26 06.1	
	comp=Z,11nm,1.2s						
KRVT	**Keravat (AS076**	**42.26**	**326**	LR	LR	12 43 25.7	
	comp=Z,4.6nm,18.8s,baz=125,slow=36						
KNRA	**Kununurra**	**46.93**	**290**	P	**P**	**12 26 39.8**	**+0.6**
MTN	**Manton Dam**	**47.26**	**295**	P	**P**	**12 26 41.8**	**0.0**
QSPA	**South Pole Qui**	**48.40**	**180**	P	**P**	**12 26 52.8**	**+2.5**
	comp=Z,5.4nm,0.9s,baz=8.7,slow=0.9,SNR=21						
	comp=Z,5.4nm,0.9s						
QSPA	**South Pole Qui**	**48.40**	**180**	P	**P**	**12 26 50.1**	**-0.2**
QSPA				IAmb	IAmb	12 26 54.0	
	comp=Z,5.3nm,0.8s						
JAY	**Jayapura**	**49.34**	**313**	LR	LR	12 48 27.0	
	comp=Z,30nm,18.0s,baz=232,slow=37						
RPN	**Rapa Nui**	**62.73**	**103**	LR	LR	12 50 34.5	
	comp=Z,13nm,20.7s,baz=146,slow=31						
DAV	**Davao City (W)**	**65.87**	**305**	LR	LR	12 57 15.1	
	comp=Z,11nm,19.7s,baz=337,slow=36						
VNA3	**Neumayer Olymp**	**67.30**	**179**	⇑P	**P**	**12 29 04.6**	**+1.9**
	comp=Z,4.7nm,0.7s						
VNA2	**Neumayer--Watz**	**67.65**	**179**	⇑P	**P**	**12 29 06.7**	**+1.9**
	comp=Z,6.5nm,0.7s,baz=165,slow=6.5						
VNA1	**Neumayer--Stat**	**67.92**	**179**	⇑P	**P**	**12 29 08.4**	**+1.9**
	comp=Z,5.5nm,0.6s						
KSRS	**Korea Array**	**89.47**	**325**	P	**P**	**12 31 03.5**	**-1.6**
	comp=Z,0.6nm,0.9s,baz=149,slow=4.8,SNR=7.2						
	comp=Z,0.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**91.68**	**293**	P	**P**	**12 31 14.5**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=118,slow=3.3,SNR=4.2						
CMAR				LR	LR	13 16 54.9	
	comp=Z,8.4nm,18.2s,baz=125,slow=39						
	comp=Z,0.2nm,0.3s						
KLR	**Kul'dur**	**98.01**	**333**	LR	LR	13 09 05.1	
	comp=Z,10nm,21.8s,baz=187,slow=31						
YKA	**Yellowknife Ar**	**118.33**	**30**	PKP	**PKPdf**	**12 36 54.6**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=260,slow=2.0,SNR=4.7						
MMAI	**Mount Meron Ar**	**146.48**	**269**	PKPbc	**PKPab**	**12 37 50.4**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=70,slow=5.1,SNR=1.4						
ARCES	**ARCESS Array B**	**147.78**	**340**	PKPbc	**PKPdf**	**12 37 50.2**	**+1.1**
	comp=Z,6.9nm,1.0s,baz=51,slow=3.0,SNR=2.1						
BRTR	**Keskin Array B**	**150.31**	**279**	PKPbc	**PKPbc**	**12 37 59.7**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=172,slow=5.5,SNR=4.4						
TORD	**Torodi Ar. Bea**	**150.81**	**195**	PKPbc	**PKPbc**	**12 38 01.4**	**+0.2**
	comp=Z,1.8nm,0.5s,baz=183,slow=2.5,SNR=28						
FINES	**FINESS Array B**	**152.55**	**327**	PKPbc	**PKPbc**	**12 38 01.1**	**-2.7**
	comp=Z,2.1nm,0.9s,baz=15,slow=5.8,SNR=3.8						
AKASG	**Malin Array Be**	**154.44**	**303**	PKP	**PKPdf**	**12 37 59.8**	**0.0**
	comp=Z,0.4nm,0.4s,baz=89,slow=1.0,SNR=2.5						

KRSC ***28*** *12:41:43.8±1.7, 48.23N×154.33E, h179km±35km, Ml4.3*

MOS ***28*** *12:41:45.1±0.7, 48.32N×153.90E, h150km, mb4.0/1, Error ellipse: s-maj=31.7km s-min=6.1km az=66.0*

SKHL ***28*** *12:41:46.6±0.1, 48.30N×154.30E, h146km±4km, mb5.0/3, msh5.6/2*

IDC ***28*** *12:41:47.5±4.1, 48.60N×153.61E, h160km±39km, mb3.1/10, mbtmp3.6/12, Error ellipse: s-maj=30.6km s-min=16.3km az=131.0*

ISC 28 12:41:46.3±0.7**, 48.4N**±0.1×**154.0E**±0.1**, h150km, n57, σ1.26**/69**, mb3.3**/10**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.67**	**31**	*e*PN	**Pn**	**12 42 31.0**	**+1.6**
SKR				*e*S	**Sn**	**12 43 04.9**	**+2.1**
SKR				pmax	pmax		
	comp=Z,49nm,0.3s						
SKR				smax	smax		
	comp=E,148nm,0.2s						
SKR				smax	smax		
	comp=N,178nm,0.2s						
SKR	**Severo-Kuril's**	**2.67**	**31**	*e*P	**Pn**	**12 42 31.0**	**+1.6**
SKR				*e*S	**Sn**	**12 43 04.8**	**+1.9**
SKR	**Severo-Kuril's**	**2.67**	**31**	*e*P	**Pn**	**12 42 30.7**	**+1.2**
SKR				AMB	AMB	12 42 31.9	
	comp=N,80nm,0.4s						
SKR				*e*S	**Sn**	**12 43 03.2**	**+0.4**
SKR				A	A	12 43 08.4	
	comp=N,210nm,0.2s						
SKR				A	A	12 43 08.4	
	comp=N,150nm,0.2s						
PAU	**Pauzhetka**	**3.57**	**30**	PN	**Pn**	**12 42 42.0**	**+1.1**
PAU				S	**Sn**	**12 43 23.6**	**+0.4**
PAU	**Pauzhetka**	**3.57**	**30**	*e*P	**Pn**	**12 42 42.0**	**+1.1**
PAU				*e*S	**Sn**	**12 43 24.3**	**+1.1**
PAU	**Pauzhetka**	**3.57**	**30**	*e*P	**Pn**	**12 42 42.0**	**+1.1**
PAU				AMB	AMB	12 42 42.7	
	comp=N,190nm,0.3s						
PAU				*e*S	**Sn**	**12 43 24.2**	**+1.0**
PAU				A	A	12 43 25.2	
	comp=N,250nm,0.3s						
PAU				A	A	12 43 25.2	
	comp=N,250nm,0.3s						
MIPR	**Malaya Ipel'ka**	**4.26**	**24**	*e*P	**Pn**	**12 42 50.9**	**+1.0**
KDTR	**Khodutka, Kamc**	**4.31**	**36**	PN	**Pn**	**12 42 50.8**	**+0.3**
KDTR				S	**Sn**	**12 43 37.9**	**-2.6**
KDTR	**Khodutka, Kamc**	**4.31**	**36**	*e*P	**Pn**	**12 42 50.7**	**+0.3**
KDTR				*e*S	**Sn**	**12 43 37.8**	**-2.7**
KDTR	**Khodutka, Kamc**	**4.31**	**36**	*e*P	**Pn**	**12 42 50.8**	**+0.3**
ASAK	**Asacha**	**4.71**	**31**	PN	**Pn**	**12 42 57.1**	**+1.3**
ASAK				S	**Sn**	**12 43 50.1**	**+0.1**
MTVR	**Mutnovka**	**4.89**	**32**	PN	**Pn**	**12 42 59.9**	**+1.6**
MTVR				S	**Sn**	**12 43 54.5**	**+0.1**
MTVR	**Mutnovka**	**4.89**	**32**	*e*P	**Pn**	**12 42 59.5**	**+1.3**
MTVR				*e*S	**Sn**	**12 43 54.7**	**+0.4**
GRL	**Gorelyy**	**4.91**	**31**	PN	**Pn**	**12 43 00.0**	**+1.5**
GRL				S	**Sn**	**12 43 54.8**	**0.0**
GRL	**Gorelyy**	**4.91**	**31**	*e*P	**Pn**	**12 42 59.8**	**+1.3**
RUS	**Russkaya**	**4.97**	**34**	PN	**Pn**	**12 42 59.2**	**+0.1**
RUS				S	**Sn**	**12 43 54.4**	**-1.6**
RUS	**Russkaya**	**4.97**	**34**	*e*P	**Pn**	**12 42 59.1**	**-0.1**
RUS				*e*S	**Sn**	**12 43 54.3**	**-1.7**
RUS	**Russkaya**	**4.97**	**34**	*e*P	**Pn**	**12 42 59.2**	**+0.1**
RUS				*e*S	**Sn**	**12 43 54.4**	**-1.6**
KRMR	**Karymshinskiy**	**5.16**	**29**	PN	**Pn**	**12 43 03.0**	**+1.3**
KRMR	**Karymshinskiy**	**5.16**	**29**	*e*P	**Pn**	**12 43 02.8**	**+1.1**
KRMR	**Karymshinskiy**	**5.16**	**29**	*e*P	**Pn**	**12 43 03.0**	**+1.3**
KUR	**Kuril'sk**	**5.26**	**235**	*e*P	**Pn**	**12 43 04.2**	**+1.1**
KUR				AMB	AMB	12 43 05.9	
	comp=N,30nm,0.3s						
KUR				*e*S	**Sn**	**12 44 03.8**	**+0.8**
KUR				A	A	12 44 10.9	
	comp=N,20nm,0.5s						
PET	**Petropavlovsk**	**5.50**	**31**	PN	**Pn**	**12 43 07.3**	**+1.2**
PET	**Petropavlovsk**	**5.50**	**31**	*e*P	**Pn**	**12 43 06.8**	**+0.7**
PET				AMB	AMB	12 43 07.3	
	comp=N,20nm,0.7s						

PET					*e*S		**Sn**	12 44 07.9	-0.6
PET					A		A	12 44 15.5	
	comp=N,10.0nm,0.4s								
PET					A		A	12 44 15.5	
	comp=N,10.0nm,0.4s								
DALK	**Dalny**	**5.54**	**31**	PN			**Pn**	**12 43 07.5**	**+0.8**
DALK	**Dalny**	**5.54**	**31**	*e*P			**Pn**	**12 43 07.5**	**+0.8**
DALK	**Dalny**	**5.54**	**31**	*e*P			**Pn**	**12 43 07.5**	**+0.8**
UGLR	**Uglovaya**	**5.71**	**31**	PN			**Pn**	**12 43 10.2**	**+1.1**
KOK	**Koryaka**	**5.71**	**29**	PN			**Pn**	**12 43 10.8**	**+1.6**
KOK	**Koryaka**	**5.71**	**29**	*e*P			**Pn**	**12 43 10.8**	**+1.6**
KRER	**Koryakskii**	**5.76**	**30**	PN			**Pn**	**12 43 11.1**	**+1.2**
KRER				S			**Sn**	**12 44 14.7**	**-0.5**
SDLR	**Sedlovina**	**5.78**	**31**	PN			**Pn**	**12 43 11.2**	**+1.1**
GNL	**Ganaly**	**5.86**	**24**	PN			**Pn**	**12 43 13.1**	**+2.0**
SPN	**Mys Shipunski**	**6.06**	**37**	PN			**Pn**	**12 43 13.5**	**-0.2**
SPN	**Mys Shipunski**	**6.06**	**37**	*e*P			**Pn**	**12 43 13.2**	**-0.6**
SPN	**Mys Shipunski**	**6.06**	**37**	*e*P			**Pn**	**12 43 13.5**	**-0.2**
YUK	**Yuzh-Kuril'sk**	**7.13**	**235**	*e*P			**Pn**	**12 43 26.6**	**-1.3**
JKA	**Kamikawa-asahi**	**8.97**	**246**	*e*P			**Pn**	**12 43 54.2**	**+1.6**
ASAJ	**Asahikawa**	**8.97**	**246**	P			**Pn**	**12 43 52.4**	**-0.2**
	comp=N,17nm,0.7s,baz=60,slow=13,SNR=13								
MJAR	**Matsushiro Arr**	**16.57**	**230**	P			**P**	**12 45 28.0**	**-1.8**
	comp=N,1.1nm,0.8s,baz=27,slow=12,SNR=4.8								
KSRS	**Korea Array**	**21.89**	**250**	P			**P**	**12 46 25.5**	**-1.7**
	comp=N,0.7nm,0.6s,baz=42,slow=9.9,SNR=1.3								
	comp=N,0.7nm,0.6s								
H11N2	**WAKE ISLAND Hy**	**30.45**	**155**	T			T	13 19 42.0	
	baz=344,slow=76,SNR=8.4								
H11N1	**WAKE ISLAND Hy**	**30.46**	**155**	T			T	13 19 40.8	
	baz=344,slow=76,SNR=8.0								
H11N3	**WAKE ISLAND Hy**	**30.47**	**155**	T			T	13 20 05.7	
	baz=344,slow=76,SNR=5.1								
SONM	**Songino Array**	**31.37**	**287**	P			**P**	**12 47 51.8**	**-1.0**
	comp=N,0.2nm,0.3s,baz=73,slow=7.6,SNR=2.2								
	comp=N,0.2nm,0.3s								
H11S1	**WAKE ISLAND Hy**	**31.56**	**156**	T			T	13 21 31.1	
	baz=345,slow=76,SNR=27								
H11S3	**WAKE ISLAND Hy**	**31.57**	**157**	T			T	13 21 31.5	
	baz=345,slow=76,SNR=31								
H11S2	**WAKE ISLAND Hy**	**31.58**	**156**	T			T	13 21 56.8	
	baz=345,slow=76,SNR=29								
ILAR	**Eielson Array**	**34.90**	**40**	P			**P**	**12 48 23.0**	**0.0**
	comp=N,0.3nm,0.9s,baz=272,slow=7.4,SNR=2.7								
	comp=N,0.3nm,0.9s								
ILAR	**Eielson Array**	**34.90**	**40**	P			**P**	**12 48 23.0**	**0.0**
NVAR	**Mina Array Bea**	**61.16**	**64**	P			**P**	**12 51 47.5**	**+2.5**
	comp=N,0.1nm,0.4s,baz=317,slow=6.9,SNR=2.1								
	comp=N,0.1nm,0.4s								
FINES	**FINESS Array B**	**62.79**	**335**	P			**P**	**12 51 52.7**	**-2.5**
	comp=N,2.9nm,1.1s,baz=15,slow=5.8,SNR=2.0								
	comp=N,2.9nm,1.1s								
PDAR	**Pinedale Array**	**63.30**	**55**	P			**P**	**12 51 59.7**	**+0.4**
	comp=N,0.1nm,0.5s,baz=312,slow=6.7,SNR=2.0								
	comp=N,0.1nm,0.5s								
WRA	**Warramunga Arr**	**70.27**	**200**	P			**P**	**12 52 43.4**	**+0.3**
	comp=N,0.8nm,1.1s,baz=16,slow=6.5,SNR=6.9								
	comp=N,0.8nm,1.1s								
FITZ	**Fitzroy Crossi**	**70.88**	**209**	P			**P**	**12 52 47.4**	**+0.6**
	comp=N,2.0nm,1.0s,baz=34,slow=11,SNR=2.1								
	comp=N,2.0nm,1.0s								
ASAR	**Alice Springs**	**73.96**	**199**	P			**P**	**12 53 06.4**	**+1.3**
	comp=N,0.4nm,0.6s,baz=8.7,slow=5.6,SNR=6.4								
	comp=N,0.4nm,0.6s								
TXAR	**Lajitas Array**	**76.18**	**61**	P			**P**	**12 53 18.1**	**+0.1**
	comp=N,0.1nm,0.4s,baz=299,slow=6.6,SNR=4.2								
	comp=N,0.1nm,0.4s								

*IDC **28** 12:45:22.3±0.9, 6°.28N×72°.99W, h154km±9km, mb2.9/3, mbtmp3.4/4, Error ellipse: s-maj=45.1km s-min=7.9km az=132.0*
*RSNC **28** 12:45:24.8±0.0, 7°N±1°×7°3W±°, h122km±1km, M3.2, ML2.9*
*FUNV **28** 12:45:25.0, 6°.88N×73°.51W, h14km, MW3.3, Presumed earthquake*

ISC 28 12:45:22.5±0.8, **6°.63N**±0°.02×**73°.41W**±0°.03, **h131**km±5km, **n48**, σ1§**38**/93, **mb3.1**/3, **1D**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.23**	**100**	P		**Pn**	**12 45 40.9**	**+0.1**
BARC				P		**Pn**	**12 45 40.9**	**+0.1**
BARC				P		**Pn**	**12 45 40.9**	**+0.1**
BARC				S		**Sn**	**12 45 54.0**	**-0.5**
BARC				S		**Sn**	**12 45 54.0**	**-0.5**
BRJC	**Barrancabermej**	**0.47**	**316**	P		**Pn**	**12 45 41.5**	**0.0**
BRJC				S		**Sn**	**12 45 55.3**	**-0.5**
VMM09	**Lebrija**	**0.51**	**14**	P		**Pn**	**12 45 42.3**	**+0.5**
VMM09				S		**Sn**	**12 45 56.5**	**0.0**
RUSC	**La Rusia**	**0.80**	**156**	P		**Pn**	**12 45 44.1**	**-0.2**
RUSC				S		**Sn**	**12 46 00.1**	**-0.7**
RUSC	**La Rusia**	**0.80**	**156**	⇓*i*P		**Pn**	**12 45 44.2**	**-0.2**
RUSC				*e*S		**Sn**	**12 45 58.7**	**-2.1**
VMM07	**Puerto Wilches**	**0.84**	**329**	P		**Pn**	**12 45 45.3**	**+1.2**
VMM07				S		**Sn**	**12 46 01.9**	**+1.4**
EZNC	**La Esperanza**	**0.99**	**5**	P		**Pn**	**12 45 46.0**	**+0.6**
EZNC				S		**Sn**	**12 46 03.4**	**+0.5**
PAMC	**Pamplona, Colo**	**1.00**	**45**	P		**Pn**	**12 45 46.8**	**+0.8**
PAMC				S		**Sn**	**12 46 04.3**	**+0.6**
PTBC	**PUERTO BERRIO,**	**1.04**	**265**	P		**Pn**	**12 45 44.7**	**-1.1**
PTBC				S		**Sn**	**12 46 02.9**	**-0.7**
SPBC	**San Pablo de B**	**1.17**	**214**	P		**Pn**	**12 45 46.8**	**-0.5**
SPBC				S		**Sn**	**12 46 04.5**	**-1.6**
VMM05	**San Martn**	**1.27**	**354**	P		**Pn**	**12 45 49.9**	**+1.7**
VMM05				S		**Sn**	**12 46 10.2**	**+2.4**
OCAC	**Ocana**	**1.60**	**3**	P		**Pn**	**12 45 52.4**	**+0.5**
OCAC				S		**Sn**	**12 46 15.7**	**+1.3**
ROSC	**El Rosal**	**2.00**	**207**	P		**Pn**	**12 45 58.7**	**+1.9**
	28nm,0.3s,baz=306,slow=23,SNR=18							
ROSC				S		**Sn**	**12 46 24.6**	**+1.5**
	60nm,0.3s,baz=120,slow=18,SNR=11							
ROSC	**El Rosal**	**2.00**	**207**	P		**Pn**	**12 45 58.2**	**+1.3**
ROSC				S		**Sn**	**12 46 24.1**	**+1.0**
CHIC	**Chingaza**	**2.02**	**189**	P		**Pn**	**12 45 57.5**	**+0.4**
CHIC				S		**Sn**	**12 46 23.6**	**+0.1**
HELC	**Santa Helena**	**2.15**	**258**	P		**Pn**	**12 45 59.0**	**+0.3**
HELC				S		**Sn**	**12 46 26.4**	**0.0**
HELC	**Santa Helena**	**2.15**	**258**	*e*P		**Pn**	**12 45 59.1**	**+0.5**
HELC				*e*S		**Sn**	**12 46 26.1**	**-0.2**
UREC	**San Jos de Ur**	**2.38**	**298**	P		**Pn**	**12 46 00.7**	**-0.5**
UREC				S		**Sn**	**12 46 29.6**	**-1.4**
GUY2C	**Guyana, Caldas**	**2.39**	**234**	P		**Pn**	**12 46 02.8**	**+1.0**
GUY2C				S		**Sn**	**12 46 33.0**	**+1.0**
VILC	**Villavicencio,**	**2.52**	**186**	P		**Pn**	**12 46 03.6**	**+0.5**
VILC				P		**Pn**	**12 46 03.6**	**+0.5**
VILC				S		**Sn**	**12 46 34.1**	**-0.2**
VILC				S			12 46 34.4	
RECRC	**Villamaria, Ca**	**2.55**	**229**	P		**Pn**	**12 46 06.7**	**+2.9**
RECRC				S		**Sn**	**12 46 35.6**	**+0.1**
NIZA	**Niza - Manizal**	**2.58**	**233**	P		**Pn**	**12 46 07.1**	**+3.1**
NIZA				S		**Sn**	**12 46 37.9**	**+2.1**
CBOC	**Ciudad Bolivar**	**2.69**	**254**	P		**Pn**	**12 46 06.2**	**+0.8**
CBOC				S		**Sn**	**12 46 37.7**	**-0.7**
PTGC	**Puerto Gaitan,**	**2.73**	**152**	P		**Pn**	**12 46 04.9**	**-0.8**
PTGC				S		**Sn**	**12 46 37.8**	**-1.2**
DBBC	**Dabeiba**	**2.81**	**278**	P		**Pn**	**12 46 07.1**	**+0.4**
DBBC				S		**Sn**	**12 46 40.2**	**-0.5**
PRAC	**Prado**	**3.25**	**207**	P		**Pn**	**12 46 12.6**	**+0.2**
PRAC				S		**Sn**	**12 46 51.0**	**-0.1**
ORTC	**Ortega, Tolima**	**3.26**	**214**	P		**Pn**	**12 46 13.4**	**+0.8**
ORTC				S		**Sn**	**12 46 52.3**	**+0.9**
ARGC	**Ariguani, Magd**	**3.31**	**346**	P		**Pn**	**12 46 14.9**	**+1.7**
ARGC				S		**Sn**	**12 46 54.8**	**+2.4**
PLMC	**San Jos del P**	**3.33**	**239**	P		**Pn**	**12 46 14.0**	**+0.5**
PLMC				S		**Sn**	**12 46 53.5**	**+0.5**
APAC	**Apartado, Choc**	**3.39**	**292**	P		**Pn**	**12 46 14.7**	**+0.5**
APAC				S		**Sn**	**12 46 53.8**	**-0.3**
URMC	**La Uribe, Meta**	**3.50**	**196**	P		**Pn**	**12 46 16.4**	**+0.7**
URMC				S		**Sn**	**12 46 57.6**	**+0.7**
SDV	**Santo Domingo**	**3.55**	**51**	P		**Pn**	**12 46 17.7**	**+1.2**
	11nm,0.3s,baz=154,slow=6.0,SNR=26							
SDV				S		**Sn**	**12 46 57.9**	**-0.4**
	39nm,0.5s,baz=270,slow=18,SNR=32							
SDV	**Santo Domingo**	**3.55**	**51**	P		**Pn**	**12 46 17.6**	**+1.1**
SDV				S		**Sn**	**12 46 58.4**	**+0.1**
SDV	**Santo Domingo**	**3.55**	**51**	*e*P		**Pn**	**12 46 17.9**	**+1.4**
SDV				*e*S		**Sn**	**12 46 57.1**	**-1.1**
SJCC	**San Jacinto, C**	**3.69**	**332**	P		**Pn**	**12 46 17.5**	**-0.7**
SJCC				S		**Sn**	**12 46 59.6**	**-1.7**
SJCC	**San Jacinto, C**	**3.69**	**332**	*e*P		**Pn**	**12 46 17.4**	**-0.7**
SJCC				*e*S		**Sn**	**12 46 56.1**	**-5.2**
YOTC	**Yotoco, Valle**	**3.93**	**228**	P		**Pn**	**12 46 22.0**	**+0.5**
CAPC	**Capurgana**	**4.38**	**297**	P		**Pn**	**12 46 26.6**	**-0.8**
CAPC				S		**Sn**	**12 47 15.6**	**-2.2**
MACC	**Macarena, Meta**	**4.48**	**186**	P		**Pn**	**12 46 27.7**	**-1.0**
MACC				S		**Sn**	**12 47 17.3**	**-2.8**
GARC	**Garzon, Huila**	**4.88**	**205**	P		**Pn**	**12 46 33.7**	**-0.5**
GARC				S		**Sn**	**12 47 29.1**	**-0.9**
URIC	**Uribia, Colomb**	**5.23**	**15**	P		**Pn**	**12 46 38.6**	**-0.1**
URIC				S		**Sn**	**12 47 39.1**	**+1.1**
URIC	**Uribia, Colomb**	**5.23**	**15**	*e*P		**Pn**	**12 46 38.7**	**+0.1**
URIC				*e*S		**Sn**	**12 47 32.2**	**-5.8**
FLOC	**Florencia**	**5.49**	**204**	P		**Pn**	**12 46 42.2**	**0.0**
NVAR	**Mina Array Bea**	**51.41**	**315**	P		**P**	**12 54 15.2**	**+0.8**
	0.1nm,0.5s,baz=97,slow=7.2,SNR=1.9							
	0.1nm,0.5s							
YKA	**Yellowknife Ar**	**63.34**	**340**	P		**P**	**12 55 37.8**	**+0.4**
	0.5nm,0.7s,baz=92,slow=12,SNR=10							
	0.5nm,0.7s							
ILAR	**Eielson Array**	**77.01**	**335**	P		**P**	**12 57 01.3**	**+0.6**
	0.3nm,0.9s,baz=102,slow=4.3,SNR=2.7							
	0.3nm,0.9s							
ASAR	**Alice Springs**	**148.77**	**234**	PKPbc		**PKPdf**	**13 04 49.9**	**-1.7**
	0.3nm,0.8s,baz=108,slow=3.4,SNR=5.2							
WRA	**Warramunga Arr**	**149.99**	**241**	PKPbc		**PKPbc**	**13 04 57.4**	**-1.2**
	0.4nm,0.9s,baz=107,slow=2.3,SNR=5.5							

*IDC **28** 12:52:07.5±0.9, 7°.70S×156°.77E, h388km±9km, mb3.4/16, mbtmp4.2/18, Error ellipse: s-maj=12.6km s-min=10.7km az=142.0*

ISC 28 12:52:08.2±0.5, **7°.67S**±0°.09×**156°.85E**±0°.07, **h398**km, **n33**, σ1§**03**/39, **mb3.8**/17, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SAVO	**Savo Central**	**3.28**	**117**	P		**Pn**	**12 53 13.3**	**-0.4**
HNR	**Honiara**	**3.53**	**120**	P		**Pn**	**12 53 15.4**	**-0.4**
	6.3nm,0.3s,baz=311,slow=15,SNR=46							
HNR				S		**S**	**12 54 08.4**	**-2.2**
	3.3nm,0.5s,baz=273,slow=23,SNR=7.3							
HNR	**Honiara**	**3.53**	**120**	P		**Pn**	**12 53 15.8**	**0.0**
NGOA	**Tingoa Renbel**	**4.99**	**141**	P		**Pn**	**12 53 31.0**	**+0.9**
PMG	**Port Moresby**	**9.74**	**259**	P		**Pn**	**12 54 25.3**	**+2.1**
	11nm,0.4s,baz=62,slow=5.6,SNR=16							
COEN	**Coen**	**14.81**	**244**	P		**Pn**	**12 55 21.9**	**+0.4**
MTSU	**Mount Surprise**	**16.03**	**228**	P		**Pn**	**12 55 35.2**	**-0.4**
CTA	**Charters Tower**	**16.05**	**219**	P		**Pn**	**12 55 34.1**	**-1.7**
	6.7nm,0.3s,baz=31,slow=9.1,SNR=31							
JAY	**Jayapura**	**16.87**	**287**	P		**P**	**12 55 40.2**	**-0.9**
	15nm,0.5s,baz=130,slow=5.5,SNR=16							
DZM	**Mont Dzumac**	**17.04**	**148**	P		**P**	**12 55 43.9**	**+1.1**
	9.9nm,0.4s,baz=268,slow=6.5,SNR=3.8							
QIS	**Mount Isa**	**21.04**	**231**	P		**P**	**12 56 23.2**	**+0.8**
WRA	**Warramunga Arr**	**24.99**	**238**	P		**P**	**12 56 58.1**	**0.0**
	3.8nm,0.3s,baz=60,slow=9.1,SNR=99							
WRA				PcP		**PcP**	**13 00 20.4**	**-0.6**
	0.6nm,0.4s,baz=70,slow=2.6,SNR=5.4							
WRA				S		**S**	**13 00 50.0**	**-2.4**
	0.5nm,0.5s,baz=59,slow=14,SNR=4.3							
WRA				ScP		**ScP**	**13 03 22.9**	**+1.2**
	0.3nm,0.7s,baz=56,slow=3.0,SNR=1.8							
	3.8nm,0.3s							
SIJI	**Sorong**	**26.38**	**284**	P		**P**	**12 57 09.8**	**-0.7**
	3.4nm,0.5s,baz=38,slow=18,SNR=5.0							
	3.4nm,0.5s							
ASAR	**Alice Springs**	**27.15**	**232**	P		**P**	**12 57 16.7**	**-0.5**
	0.9nm,0.6s,baz=58,slow=10,SNR=15							
ASAR				PcP		**PcP**	**13 00 26.1**	**+0.1**
	0.4nm,0.5s,baz=66,slow=2.5,SNR=4.8							
ASAR				S		**S**	**13 01 25.4**	**-0.9**
	1.3nm,0.9s,baz=48,slow=15,SNR=6.3							
ASAR				ScP		**ScP**	**13 03 28.3**	**+0.3**
	0.2nm,0.6s,baz=79,slow=2.0,SNR=1.8							
	0.9nm,0.6s							
FITZ	**Fitzroy Crossi**	**32.09**	**248**	P		**P**	**12 57 59.4**	**-1.0**
	2.3nm,0.4s,baz=61,slow=7.5,SNR=7.3							
	2.3nm,0.4s							
TGY	**Tagaytay City**	**41.69**	**301**	P		**P**	**12 59 20.4**	**0.0**
	171nm,0.3s,baz=52,slow=12,SNR=5.0							
MJAR	**Matsushiro Arr**	**47.33**	**340**	P		**P**	**13 00 03.3**	**-0.7**
	0.6nm,0.6s,baz=177,slow=6.4,SNR=1.7							
	0.6nm,0.6s							
CMAR	**Chiang Mai Arr**	**62.73**	**295**	P		**P**	**13 01 54.3**	**+1.2**
	0.3nm,0.3s,baz=112,slow=7.2,SNR=4.6							
	0.3nm,0.3s							
VNDA	**Vanda**	**69.86**	**179**	P		**P**	**13 02 37.9**	**+1.2**
	1.0nm,0.8s,baz=334,slow=6.6,SNR=5.5							
	1.0nm,0.8s							
SONM	**Songino Array**	**70.90**	**327**	P		**P**	**13 02 44.7**	**+1.1**
	0.4nm,0.6s,baz=142,slow=5.5,SNR=2.9							
	0.4nm,0.6s							
QSPA	**South Pole Qui**	**82.31**	**180**	P		**P**	**13 03 47.0**	**+0.6**
	4.3nm,0.6s,baz=300,slow=0.5,SNR=39							
	4.3nm,0.6s							
ILAR	**Eielson Array**	**83.33**	**21**	P		**P**	**13 03 50.8**	**-0.7**
	0.8nm,0.3s,baz=258,slow=5.3,SNR=39							
	0.8nm,0.3s							
MKAR	**Makanchi Array**	**85.13**	**318**	P		**P**	**13 04 01.4**	**+0.7**
	1.0nm,0.6s,baz=96,slow=6.1,SNR=15							
	1.0nm,0.6s							
ZALV	**Zalesovo Beam**	**85.77**	**326**	P		**P**	**13 04 03.2**	**-0.4**
	0.7nm,0.4s,baz=106,slow=5.4,SNR=5.6							
	0.7nm,0.4s							
NVAR	**Mina Array Bea**	**90.70**	**51**	P		**P**	**13 04 29.2**	**+1.7**
	0.7nm,0.8s,baz=260,slow=6.2,SNR=7.2							
	0.7nm,0.8s							
BVAR	**Borovoye Array**	**93.94**	**323**	P		**P**	**13 04 41.0**	**-0.8**
	0.6nm,0.5s,baz=102,slow=4.5,SNR=4.1							
	0.6nm,0.5s							
YKA	**Yellowknife Ar**	**96.07**	**28**	P		**P**	**13 04 51.5**	**+0.3**
	0.6nm,0.7s,baz=273,slow=5.1,SNR=15							
	0.6nm,0.7s							
PDAR	**Pinedale Array**	**97.79**	**48**	P		**P**	**13 04 59.6**	**-0.2**
	0.2nm,0.6s,baz=287,slow=2.6,SNR=1.7							
	0.2nm,0.6s							
FINES	**FINESS Array B**	**115.30**	**336**	PKP		**PKPdf**	**13 10 02.3**	**-0.6**
	1.9nm,0.9s,baz=108,slow=4.5,SNR=4.0							
AKASG	**Malin Array Be**	**119.15**	**325**	PKP		**PKPdf**	**13 10 10.0**	**-0.6**
	0.5nm,0.5s,baz=57,slow=1.6,SNR=2.2							
ESDC	**Sonseca Array**	**143.78**	**335**	PKP		PKPbc	13 10 55.9	+0.3
	0.7nm,0.9s,baz=34,slow=3.5,SNR=4.8							
BDFB	**Brasilia**	**146.19**	**133**	PKPbc		**PKPbc**	**13 11 03.8**	**+0.1**
	3.3nm,0.6s,baz=180,slow=5.1,SNR=4.2							
TORD	**Torodi Ar. Bea**	**154.97**	**285**	PKPbc		**PKiKP**	**13 11 23.0**	**-1.5**
	0.4nm,0.7s,baz=55,slow=1.4,SNR=1.8							

*IDC **28** 12:58:27.0±1.4, 43°.79N×13°.44E, h0km, mb3.2/2, mbtmp3.3/6, ML3.0/4, Error ellipse: s-maj=29.0km s-min=13.6km az=101.0*
*ROM **28** 12:58:28.2±0.1, 43°.833N±0°.005×13°.401E±0°.006, h8km, ML3.2/151, Error ellipse: s-maj=0.7km s-min=0.2km az=38.0*
*LDG **28** 12:58:30.4±0.2, 43°.78N×13°.37E, h5km, Ml3.1/21, Error ellipse: s-maj=5.2km s-min=3.5km az=70.0*
*PRU **28** 12:58:31.0, 43°.88N×13°.30E, h10km*

ISC 28 12:58:29.6±0.8, **43°.80N**±0°.02×**13°.38E**±0°.02, **h20**km±3km, **n160**, σ1§**89**/235, **3C-21D**, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SENI	**Senigallia**	**0.14**	**229**	⇓*i*P		**Pg**	**12 58 32.8**	**-1.1**
SENI				S		**Sg**	**12 58 35.6**	**-1.1**
SENI				AML	AML			
SENI				AML	AML			
SENI				AML	AML			
SENI				AML	AML			
	comp=E,62700μm,1.0s							
SENI				AML	AML			
	comp=N,69700μm,0.2s							
SENI				AML	AML			
	comp=N,69650μm,0.2s							
SENI				AML	AML			
	comp=E,62700μm,1.0s							
SENI				AML	AML			
SENI				AML	AML			
SENI				AML	AML			
SENI				AML	AML			
	comp=E,61479μm,0.2s							
SENI				AML	AML			
	comp=N,69668μm,0.2s							
PCRO	**Pietralacroce**	**0.22**	**149**	P		**Pg**	**12 58 34.5**	**-0.5**
PCRO				S		**Sg**	**12 58 38.4**	**-0.2**
AOI	**Ancona**	**0.29**	**146**	⇑P		**Pb**	**12 58 35.5**	**-0.6**
AOI				S		**Sb**	**12 58 40.5**	**-0.1**
AOI				AML	AML			
	comp=N,4390μm,0.2s							
AOI				AML	AML			
	comp=E,5580μm,0.4s							
AOI				AML	AML			
	comp=E,5473μm,0.1s							
COR1	**Corinaldo**	**0.32**	**239**	⇓*i*P		**Pb**	**12 58 36.2**	**-0.4**
COR1				S		**Sb**	**12 58 42.1**	**+0.8**
COR1				AML	AML			
	comp=E,18350μm,0.9s							
COR1				AML	AML			
	comp=E,9610μm,1.0s							
COR1				AML	AML			
	comp=N,21750μm,0.7s							
COR1				AML	AML			
	comp=E,9570μm,1.0s							
COR1				AML	AML			
	comp=N,21200μm,0.3s							
COR1				AML	AML			
	comp=E,18300μm,0.9s							
COR1				AML	AML			
	comp=N,21750μm,0.7s							
COR1				AML	AML			
	comp=E,9615μm,1.0s							
COR1				AML	AML			
	comp=N,21250μm,0.3s							
COR1				AML	AML			
	comp=N,21750μm,1.3s							
COR1				AML	AML			
	comp=E,9557μm,0.3s							
COR1				AML	AML			
	comp=E,16894μm,0.3s							
COR1				AML	AML			
	comp=N,21211μm,0.3s							
COR1				AML	AML			
	comp=N,21447μm,0.3s							
FCOR	**Fonte Corniale**	**0.41**	**267**	P		**Pb**	**12 58 37.4**	**-0.7**
FCOR				S		**Sb**	**12 58 44.2**	**+0.2**
PESA	**Pesaro**	**0.41**	**291**	⇑P		**Pg**	**12 58 37.4**	**-0.8**
PESA				S		**Sb**	**12 58 44.5**	**+0.3**
PESA				AML	AML			
	comp=E,6175μm,0.2s							
PESA				AML	AML			
	comp=N,7320μm,1.5s							
PESA				AML	AML			
	comp=E,6174μm,0.2s							
ARVD	**Arcevia**	**0.43**	**227**	⇓P		**Pg**	**12 58 37.4**	**-1.1**
ARVD				S		**Sb**	**12 58 45.0**	**+0.3**
ARVD				AML	AML			
	comp=E,1385μm,1.3s							
ARVD				AML	AML			
	comp=E,1380μm,1.3s							
ARVD				AML	AML			
	comp=N,2430μm,0.3s							
ARVD				AML	AML			
	comp=E,1385μm,0.7s							
ARVD				AML	AML			
	comp=N,2426μm,0.3s							
CING	**Cingoli**	**0.44**	**197**	⇓P		**Pg**	**12 58 37.8**	**-0.9**
CING				S		**Sb**	**12 58 44.7**	**-0.2**
MMUR	**Monte Murano**	**0.45**	**218**	P		**Pg**	**12 58 38.0**	**-0.9**
PP3	**Marolino**	**0.45**	**158**	P		**Pb**	**12 58 38.6**	**-0.3**
MPAG	**Monte Paganucc**	**0.48**	**250**	⇓P		**Pg**	**12 58 38.2**	**-1.2**
MPAG				S		**Sg**	**12 58 45.4**	**-0.5**
MPAG				AML	AML			
	comp=E,2340μm,0.4s							
MPAG				AML	AML			
	comp=N,3240μm,0.3s							
MPAG				AML	AML			
	comp=E,2340μm,0.4s							
MPAG				AML	AML			
	comp=E,2175μm,0.4s							
MPAG				AML	AML			
	comp=N,3435μm,0.3s							
MPAG				AML	AML			
	comp=N,3245μm,0.3s							
MPAG				AML	AML			
	comp=N,3436μm,0.3s							
MPAG				AML	AML			
	comp=N,3242μm,0.3s							
TRE1	**Treia**	**0.49**	**185**	P		**Pg**	**12 58 38.8**	**-0.7**
TRE1				S		**Sb**	**12 58 46.5**	**+0.3**
EL6	**Elcito**	**0.51**	**203**	⇓*i*P		**Pg**	**12 58 38.9**	**-1.0**
EL6				S		**Sb**	**12 58 48.2**	**+1.4**
EL6				AML	AML			
	comp=N,3720μm,0.9s							
EL6				AML	AML			
	comp=E,4005μm,0.5s							
EL6				AML	AML			
	comp=N,3715μm,0.9s							
EL6				AML	AML			
	comp=E,4005μm,1.5s							
EL6				AML	AML			
	comp=N,3433μm,0.3s							
CIMA	**Civitanova Mar**	**0.53**	**156**	P		**Pb**	**12 58 40.5**	**+0.2**
MCIF	**Montecalvo in**	**0.54**	**272**	P		**Pb**	**12 58 40.4**	**+0.1**
FRON	**Frontone**	**0.55**	**240**	⇓*i*P		**Pg**	**12 58 39.5**	**-1.1**
FRON				AML	AML			
	comp=E,1410μm,1.2s							
FRON		

comp=E,4070µm,1.3s
CADA AML AML
comp=N,4320µm,0.8s
CADA AML AML
comp=N,4047µm,0.5s
PIEI Pieia 0.66 247 P **Pg 12 58 41.3 -1.4**
PIEI S **Sb 12 58 52.1 +0.8**
PIEI AML AML
comp=N,7905µm,0.3s
PIEI AML AML
comp=E,5400µm,0.3s
PIEI AML AML
comp=E,5399µm,0.3s
PIEI AML AML
comp=N,7906µm,0.3s
PIO1 Pioraco 0.68 205 P **Pb 12 58 42.5 -0.2**
ATBU Serra di Buran 0.68 242 ⇓P **Pg 12 58 42.0 -1.1**
ATBU S **Sb 12 58 52.9 +1.1**
RSM Repubblica di 0.68 282 P **Pb 12 58 43.3 +0.5**
FIU1 Fiuminata 0.69 208 P **Pb 12 58 42.7 -0.2**
FIU1 S **Sb 12 58 53.6 +1.7**
SAP2 Sant'Angelo in 0.70 179 P **Pb 12 58 42.9 -0.2**
SAP2 AML AML
comp=E,5460µm,0.2s
SAP2 AML AML
comp=N,27550µm,1.1s
SAP2 AML AML
comp=N,27550µm,0.9s
SAP2 AML AML
comp=E,5460µm,0.2s
CSP1 Cessapalombo 0.71 190 ⇓P **Pg 12 58 42.5 -1.2**
CSP1 S **Sb 12 58 54.8 +2.0**
CSP1 AML AML
comp=E,2570µm,0.4s
CSP1 AML AML
comp=N,2070µm,0.4s
CSP1 AML AML
comp=E,2570µm,0.4s
SEF1 Sefro 0.72 206 P **Pb 12 58 43.1 -0.3**
SEF1 S **Sb 12 58 55.0 +2.1**
ATFO Monte Foce - G 0.72 234 ⇓P **Pg 12 58 42.6 -1.3**
ATFO AML AML
comp=E,2205µm,0.8s
ATFO AML AML
comp=E,2205µm,1.2s
ATFO AML AML
comp=N,1710µm,0.9s
APEC Apecchio 0.73 252 P **Pg 12 58 42.9 -1.1**
APEC AML AML
comp=E,1880µm,0.4s
APEC AML AML
comp=N,2950µm,0.3s
APEC AML AML
comp=E,2041µm,0.3s
ATPC Poggio Castell 0.74 245 ⇓P **Pg 12 58 43.0 -1.1**
BLLA Bellaria 0.74 298 P **Pn 12 58 45.7 +0.8**
MML1 Montelago di S 0.74 204 ⇓P **Pg 12 58 42.9 -1.3**
MML1 S **Sb 12 58 55.6 +2.0**
MNTT Montottone 0.75 168 P **Pb 12 58 44.6 +0.6**
MNTT AML AML
comp=E,9985µm,0.5s
MNTT AML AML
comp=N,10950µm,1.0s
MNTT AML AML
comp=E,9990µm,0.5s
MNTT AML AML
comp=E,7918µm,0.3s
MNTT AML AML
comp=N,10806µm,0.3s
CPGN Carpegna, Ital 0.76 271 P **Pb 12 58 44.5 +0.2**
CPGN AML AML
comp=E,1580µm,0.3s
CPGN AML AML
comp=N,1675µm,0.3s
CPGN AML AML
comp=E,1945µm,0.3s
CPGN AML AML
comp=N,1395µm,1.6s
CPGN AML AML
comp=E,1945µm,1.7s
CPGN AML AML
comp=N,1675µm,1.7s
CPGN AML AML
comp=N,1395µm,0.4s
CPGN AML AML
comp=E,1580µm,0.3s
CPGN AML AML
comp=E,1948µm,0.3s
CPGN AML AML
comp=N,1671µm,0.3s
FDMO Fiordimonte 0.79 196 ⇓P **Pg 12 58 43.6 -1.4**
FDMO S **Sn 12 58 57.8 +1.0**
FDMO AML AML
comp=E,2205µm,1.2s
FDMO AML AML
comp=N,1345µm,0.5s
FDMO AML AML
comp=E,2205µm,0.8s
FDMO AML AML
comp=N,1349µm,0.5s
FDMO AML AML
comp=E,2110µm,0.3s
TB01 Gubbio 0.80 239 P **Pg 12 58 44.1 -1.1**
TB03 Pietralunga 0.81 241 P **Pg 12 58 44.1 -1.3**
MF5 Montefalcone A 0.81 176 P **Pb 12 58 44.8 -0.2**
ATCC AVT- Casa Cast 0.81 222 ⇓P **Pg 12 58 44.3 -1.2**
ATCC S **Sb 12 58 57.6 +2.0**
ATCC AML AML
comp=E,2555µm,0.4s
ATCC AML AML
comp=N,2970µm,0.3s
ATCC AML AML
comp=N,2970µm,1.7s
ATCC AML AML
comp=E,2555µm,1.6s
ATCC AML AML
comp=N,2970µm,0.3s
MURB Monte Urbino 0.82 230 ⇓P **Pg 12 58 44.3 -1.2**
MURB S **Sb 12 58 57.9 +2.2**
MURB AML AML
comp=E,6745µm,0.3s
MURB AML AML
comp=N,4750µm,0.8s
MURB AML AML
comp=E,7430µm,0.3s
MURB AML AML
comp=E,6740µm,0.3s
MURB AML AML
comp=N,5490µm,0.9s
MURB AML AML
comp=N,4750µm,1.2s
MURB AML AML
comp=N,5019µm,0.3s
MURB AML AML
comp=N,4240µm,0.5s
ATVO AVT- Monte Val 0.82 240 P **Pg 12 58 44.2 -1.4**
ATVO S **Sb 12 58 57.1 +1.4**
ATVO AML AML
comp=E,1295µm,0.3s
ATVO AML AML
comp=N,1140µm,1.0s
ATVO AML AML
comp=N,1140µm,1.0s
ATVO AML AML
comp=N,1057µm,0.3s
TB02 Pietralunga 0.82 239 P **Pg 12 58 44.7 -1.0**
PARC Parchiule 0.84 260 P **Pg 12 58 45.0 -1.0**
PARC S **Sb 12 58 57.9 +1.6**
PARC AML AML
comp=N,2310µm,1.3s
PARC AML AML
comp=E,3020µm,0.4s
PARC AML AML
comp=N,2310µm,0.7s
PARC AML AML
comp=N,2223µm,0.4s
PARC AML AML
comp=E,3018µm,0.4s
MTCL Monte Cavallo 0.85 199 P **Pg 12 58 44.9 -1.2**
ATLO AVT- Montelove 0.85 236 P **Pg 12 58 44.8 -1.4**
ATLO S **Sb 12 58 58.2 +1.5**
CESI CESI - Serrava 0.86 204 ⇓P **Pg 12 58 45.1 -1.3**
CESI S **Sn 12 58 59.6 +0.9**
CESI AML AML
comp=E,2095µm,0.4s
CESI AML AML
comp=N,3350µm,0.4s
CESI AML AML
comp=E,2170µm,0.4s
CESI AML AML
comp=N,3320µm,0.4s
CESI AML AML
comp=N,3345µm,0.4s
CESI AML AML
comp=E,2095µm,0.4s
CESI AML AML
comp=N,3347µm,0.4s
CESI AML AML
comp=N,3319µm,0.4s
CESI AML AML
comp=E,2095µm,0.4s
CESI AML AML
comp=E,2172µm,0.4s
FEMA Monte Fema 0.87 196 P **Pg 12 58 45.6 -0.9**
OFFI Offida 0.89 165 P **Pn 12 58 47.2 +0.2**
OFFI AML AML
comp=E,6120µm,0.7s
OFFI AML AML
comp=N,5300µm,0.6s
OFFI AML AML
comp=E,6120µm,1.3s
OFFI AML AML
comp=E,6118µm,0.7s
MC2 Monte Cornacci 0.89 189 P **Pg 12 58 45.9 -1.1**
CDCA Citt' di Caste 0.90 248 P **Pb 12 58 46.5 +0.1**
MMO1 Montemonaco 0.90 182 P **Pg 12 58 45.9 -1.2**
UMBT Umbertide 0.90 237 P **Pb 12 58 46.4 0.0**
ATMC Monte Cedrone 0.93 248 ⇑P **Pg 12 58 46.6 -1.1**
ATMI Monte Miggiano 0.93 241 P **Pg 12 58 46.8 -0.9**
ATMI AML AML
comp=E,1170µm,0.4s
ATMI AML AML
comp=N,1600µm,1.5s
ATMI AML AML
comp=E,1169µm,0.4s
SSP9 Sansepolcro 0.93 257 P **Pb 12 58 47.0 0.0**
SSP9 AML AML
comp=E,779µm,1.4s
SSP9 AML AML
comp=N,792µm,1.4s
SSP9 AML AML
comp=E,778µm,1.4s
SSP9 AML AML
comp=N,794µm,1.4s
SSP9 AML AML
comp=E,778µm,0.6s
SSP9 AML AML
comp=N,794µm,0.6s
SSP9 AML AML
comp=E,703µm,0.5s
ATVA AVT- Monte Val 0.95 237 P **Pg 12 58 46.9 -1.1**
ATTE AVT- Monte Tez 0.95 232 P **Pg 12 58 46.8 -1.4**
ATTE AML AML
comp=E,1455µm,0.4s
ATTE AML AML
comp=N,1040µm,1.1s
ATTE AML AML
comp=N,1040µm,0.9s
ATTE AML AML
comp=N,1039µm,1.1s
ATTE AML AML
comp=E,1455µm,0.4s
FOPC Foligno Prot C 0.96 211 P **Pg 12 58 47.2 -1.0**
NRCA Norcia 0.98 191 P **Pg 12 58 47.5 -1.1**
NRCA AML AML
comp=E,1635µm,0.9s
NRCA AML AML
comp=N,1915µm,0.7s
NRCA AML AML
comp=N,1915µm,1.3s
NRCA AML AML
comp=E,1635µm,1.1s
NRCA AML AML
comp=N,1664µm,0.2s
NRCA AML AML
comp=N,1584µm,0.2s
NRCA AML AML
comp=E,1626µm,0.2s
NRCA AML AML
comp=E,1564µm,0.2s
MTRA Matera 1.04 179 P **Pg 12 58 48.6 -1.1**
MTRA S **Sn 12 59 05.5 +2.5**
MTRA AML AML
comp=E,2730µm,0.8s
MTRA AML AML
comp=N,2425µm,1.0s
MTRA AML AML
comp=E,2685µm,0.8s
MTRA AML AML
comp=N,2440µm,1.0s
MTRA AML AML
comp=E,2730µm,1.2s
MTRA AML AML
comp=E,2685µm,1.2s
MTRA AML AML
comp=N,1887µm,0.4s
MTRA AML AML
comp=E,2538µm,0.3s
MTRA AML AML
comp=E,2554µm,0.3s
CRE Caprese Michel 1.05 261 P **Pb 12 58 49.2 +0.1**
CRE AML AML
comp=N,1170µm,0.5s
CRE AML AML
comp=E,662µm,1.0s
CRE AML AML
comp=N,1171µm,0.5s
BRSN Barisano 1.06 298 P **Pn 12 58 50.3 +1.0**
TRTR Tortoreto Alta 1.06 158 P **Pn 12 58 51.0 +1.7**
TRTR AML AML
comp=E,3590µm,0.4s
TRTR AML AML
comp=E,3590µm,1.6s
TRTR AML AML
comp=N,2585µm,0.6s
TRTR AML AML
comp=E,3592µm,0.4s
SFI Santa Sofia 1.11 276 P **Pb 12 58 50.4 +0.3**
SFI AML AML
comp=E,358µm,1.5s
SFI AML AML
comp=N,404µm,0.6s
SFI AML AML
comp=E,373µm,1.1s
SFI AML AML
comp=N,393µm,0.6s
SFI AML AML
comp=N,393µm,1.4s
SFI AML AML
comp=N,404µm,1.4s
SFI AML AML
comp=E,358µm,0.5s
BRJN Brijuni 1.14 13 P **Pn 12 58 51.1 +0.6**
ASQU Asqua 1.15 271 P **Pn 12 58 51.1 +0.4**
ASQU S **Sn 12 59 09.5 +3.7**
LMD Lutirano 1.24 284 P **Pn 12 58 52.7 +0.9**
LMD S **Sn 12 59 12.8 +4.8**
RUFI Rufina 1.35 273 P **Pg 12 58 54.7 -1.0**
RUFI S **Sn 12 59 14.6 +3.9**
AQU L'Aquila 1.44 179 *e*Pn **Pn 12 58 55.0 +0.4**
SEI Scarperia 1.48 281 P **Pg 12 58 56.8 -1.4**
SEI S **Sg 12 59 21.1 +3.6**
MTRZ Monterenzio 1.49 294 P **Pg 12 58 58.4 0.0**
MTRZ S **Sg 12 59 22.9 +5.0**
CSNT Castellina Chi 1.55 259 P **Pb 12 58 57.7 +0.1**
CSNT S **Sn 12 59 16.9 +1.3**
CSNT Castellina Chi 1.55 259 AML AML
comp=E,170µm,0.8s
CSNT AML AML
comp=N,228µm,0.5s
CSNT AML AML
comp=E,170µm,0.8s
CSNT AML AML
comp=N,228µm,0.5s
SKDS Skadanscina 1.81 14 *i* Pn **Pn 12 59 00.3 +0.6**
SKDS *i* Sn **Sn 12 59 23.8 +1.8**
SKDS IAML 12 59 25.8
comp=Z,147nm,0.2s
BDI Bagni Di Lucca 2.03 279 P **Pn 12 59 03.9 +1.2**
PII Pisa 2.07 269 P **Pn 12 59 04.7 +1.6**
GBAS Gorenja Brezov 2.27 19 *i* Pn **Pn 12 59 07.3 +1.3**
EQUI Equi 2.36 280 P **Pn 12 59 08.7 +1.5**
ROBS Robic 2.45 2 ⇓*i* Pn **Pn 12 59 09.2 +0.8**
ROBS *e*Sn **Sn 12 59 38.3 +0.5**
ROBS IAML 12 59 40.0
comp=Z,26nm,0.2s
CTI Castel Tesino 2.56 332 AML AML
comp=E,216µm,0.3s
CTI AML AML
comp=E,226µm,1.3s
CTI AML AML
comp=N,263µm,0.2s
CTI AML AML
comp=E,226µm,0.7s
CTI AML AML
comp=N,263µm,0.2s
PANI Panarotta 2.68 328 AML AML
comp=E,155µm,0.6s
PANI AML AML
comp=N,163µm,0.6s
LUSI Trento, Gardas 2.77 322 AML AML
comp=E,136µm,0.7s
LUSI AML AML
comp=N,236µm,0.9s
OBKA Obir 2.84 17 *e*Pn **Pn 12 59 15.6 +1.8**
comp=N,12nm,0.2s,SNR=15
OBKA Sn **Sn 12 59 49.2 +1.7**
comp=N,22nm,0.3s
MYKA Terra Mystica 2.84 4 *e*Pn **Pn 12 59 15.7 +1.8**
comp=N,3.2nm,0.1s,SNR=7.8
MYKA *e*Sn **Sn 12 59 49.9 +2.4**
comp=N,4.3nm,0.2s
GAGG Gaggia 2.86 324 AML AML
comp=N,146µm,1.1s
GAGG AML AML
comp=E,224µm,1.2s
GAGG AML AML
comp=N,146µm,0.9s
GAGG AML AML
comp=E,224µm,0.8s
GAGG AML AML
comp=N,209µm,0.9s
BLY Banja Luka 2.90 69 *e*Pn **Pg 12 59 23.6 -1.5**
ABTA Abfaltersbach 3.02 349 *i* Pn **Pn 12 59 18.1 +1.9**
comp=N,7.6nm,0.1s,SNR=14
ABTA *i* Sn **Sn 12 59 53.6 +1.7**
comp=N,15nm,0.4s
SOKA Soboth 3.11 22 *i* Pn **Pn 12 59 19.2 +1.6**
comp=N,1.5nm,0.2s,SNR=13
SOKA *i* Sn **Sn 12 59 55.5 +1.3**
comp=N,5.5nm,0.3s
KBA Koelnbreinsper 3.28 360 *i* Pn **Pn 12 59 21.8 +1.8**
comp=N,5.1nm,0.2s,SNR=32
KBA *i* Sn **Sn 12 59 59.7 +1.1**
comp=N,16nm,0.2s
PGF Pioggiola 3.44 250 *e*Pn **Pn 12 59 24.0 +1.9**
PGF *e*P **Pb 12 59 26.4 -3.4**
PGF *e*Sn **Sn 13 00 02.8 +0.5**
comp=N,12nm,0.6s
BEHE Becsehely 3.60 41 *e*Pn **Pg 12 59 34.8 -3.7**
LESA Schwarzleotal 3.66 353 *i* Pn **Pn 12 59 27.0 +1.8**
comp=N,42nm,0.3s,SNR=101
LESA *i* Sn **Sn 13 00 10.4 +2.5**
comp=N,21nm,0.3s
WTTA Wattenberg 3.68 341 *e*Pn **Pn 12 59 28.3 +2.8**
comp=N,5.0nm,0.2s,SNR=20
WTTA *e*Sn **Sn 13 00 10.7 +2.3**
comp=N,23nm,0.4s
FETA Feichten 3.73 331 *i* Pn **Pn 12 59 28.8 +2.6**
comp=N,6.1nm,0.3s,SNR=15
FETA *i* Sn **Sn 13 00 11.5 +2.0**
comp=N,3.2nm,0.3s
SQTA Sankt Quirin 3.75 337 *i* Pn **Pn 12 59 29.1 +2.8**
comp=N,5.7nm,0.1s,SNR=21
SQTA *i* Sn **Sn 13 00 11.8 +1.8**
comp=N,8.2nm,0.3s
WATA Walderalm 3.76 341 *e*Pn **Pn 12 59 29.4 +2.8**
comp=N,13nm,0.4s,SNR=14
WATA *i* Sn **Sn 13 00 14.0 +3.6**
comp=N,18nm,0.3s
ARSA Arzberg 3.77 23 *i* Pn **Pn 12 59 27.8 +1.2**
comp=N,7.5nm,0.2s,SNR=6.1
ARSA *e*Sn **Sn 13 00 09.9 -0.5**
comp=N,7.2nm,0.3s
TREB Trebinje 3.79 105 *e*Pn **Pn 12 59 28.1 +1.3**
KLINJ Klinje 3.84 98 *e*Pn **Pn 12 59 26.5 -1.2**
BRY Bratogost 3.87 102 *e*Pn **Pn 12 59 29.8 +1.7**
DAVOX Davos/Dischmat 3.87 322 Pn **Pn 12 59 30.5 +2.4**
comp=N,1.2nm,0.3s,baz=141,slow=18,SNR=17
DAVOX Sn **Sn 13 00 16.6 +3.5**
comp=N,1.2nm,0.3s,baz=164,slow=20,SNR=3.4
comp=N,2.1nm,0.3s
MOTA Moosalm 3.89 337 *i* Pn **Pn 12 59 31.4 +3.0**
comp=N,4.2nm,0.2s,SNR=6.7
MOTA *i* Sn **Sn 13 00 16.9 +3.4**
comp=N,18nm,0.5s
BIOA Bad Ischl, Aus 3.90 3 *i* Pn **Pn 12 59 30.3 +1.9**
comp=N,8.2nm,0.2s,SNR=6.3
BIOA *i* Sn **Sn 13 00 15.1 +1.4**
comp=N,8.8nm,0.3s
TUE Stuetta 3.91 315 AML AML
comp=N,50µm,0.4s
TUE AML AML
comp=E,51µm,0.4s
TUE AML AML
comp=N,50µm,1.6s
TUE AML AML
comp=E,51µm,0.4s
TUE AML AML
comp=N,43µm,0.5s
TUE AML AML
comp=E,51µm,1.6s
TUE AML AML
comp=E,51µm,1.6s
TUE AML AML
comp=N,43µm,1.5s
HCY Herceg Novi 3.98 108 *e*Pn **Pn 12 59 31.3 +1.8**
UPM Unac-Piva 4.07 96 *e*Pn **Pn 12 59 33.1 +2.3**
MOA Molln 4.10 8 *i* Pn **Pn 12 59 32.5 +1.4**
comp=N,3.2nm,0.2s,SNR=12
MOA *i* Sn **Sn 13 00 19.8 +1.2**
comp=N,6.9nm,0.3s
RETA Reutte 4.12 335 *i* Pn **Pn 12 59 34.0 +2.5**
comp=N,3.6nm,0.2s,SNR=13
RETA *i* Sn **Sn 13 00 21.3 +2.1**
comp=N,4.8nm,0.3s
DAVA Damuels 4.27 326 *i* Pn **Pn 12 59 36.2 +2.6**
comp=N,2.7nm,0.2s,SNR=9.6
DAVA *i* Sn **Sn 13 00 25.1 +2.2**
comp=N,12nm,0.4s
RUDO Rudo 4.35 90 *e*Pn **Pn 12 59 33.0 -1.5**
BBLS Lazi&#263i 4.36 87 *e*Pn **Pn 12 59 37.0 +2.2**
SATI Passo dei Sala 4.43 300 AML AML
comp=N,18µm,0.9s
SATI AML AML
comp=E,20µm,1.2s
SATI AML AML
comp=N,18µm,1.1s
SATI AML AML
comp=E,20µm,0.8s
SATI AML AML
comp=N,15µm,0.3s
MORH Mrgy, Hungar 4.45 55 *e*Pn Pb 12 59 41.6 -5.4
CONA Conrad Observa 4.48 22 *i* Pn **Pn 12 59 38.2 +1.8**
comp=N,5.6nm,0.2s,SNR=5.7
CONA *i* Sn **Sn 13 00 28.3 +0.2**
comp=N,13nm,0.5s
PDG Podgorica 4.51 106 *e*Pn **Pn 12 59 38.4 +1.6**
DRME Dracevica, Mon 4.55 109 *e*Pn **Pn 12 59 38.8 +1.5**
WINA Alland / Wiene 4.71 23 *i* Pn **Pn 12 59 41.2 +1.8**
comp=N,2.9nm,0.1s,SNR=15
MBDF Montbardon 4.83 283 *e*Pn **Pn 12 59 42.4 +1.1**
MBDF *e*P Pb 12 59 45.4 -8.3
MBDF *e*Sn **Sn 13 00 33.4 -3.4**
comp=N,2.6nm,0.4s
LMR La Mourre 5.01 267 *e*Pn **Pn 12 59 44.1 +0.5**
LMR *e*P Pb 12 59 47.8 -8.8
LMR *e*Sn **Sn 13 00 39.8 -1.1**
comp=N,2.7nm,0.3s
LPG La Plagne 5.02 292 *e*Pn **Pn 12 59 44.1 0.0**
LPG *e*Sn **Sn 13 00 39.3 -2.4**
comp=N,2.1nm,0.2s
LPL La Plagne 5.04 292 *e*Pn **Pn 12 59 44.2 -0.1**
LPL *e*P Pb 12 59 47.7 -10
LPL *e*Sn **Sn 13 00 38.2 -3.8**
comp=N,5.5nm,0.3s
GERES GERESS Array B 5.06 2 Pn **Pn 12 59 45.2 +0.9**
comp=N,0.2nm,0.3s,baz=178,slow=12,SNR=22
GERES Sn **Sn 13 00 41.2 -1.0**

comp=N,0.3nm,0.3s,baz=185,slow=22,SNR=6.2
comp=N,2.4nm,0.4s

CKRC	**Cesky Krumlov**	**5.07**	**7**	*e*PN		**Pn**		**12 59 45.2**	**+0.8**
CKRC				*e*SN		**Sn**		**13 00 41.7**	**-0.7**
MODS	**Modra-Piesok**	**5.32**	**29**	*e*PN		**Pn**		**12 59 50.0**	**+2.1**
MODS				*e*SN		**Sn**		**13 00 47.8**	**-0.8**
KHC	**Kasperske Hory**	**5.34**	**1**	*e*PN		**Pn**		**12 59 48.7**	**+0.5**
KHC				*ex*		x		12 59 57.5	
KHC				*e*SN		**Sn**		**13 00 47.5**	**-1.6**
ORIF	**Oris-en-Rattie**	**5.49**	**284**	*e*Pn		**Pn**		**12 59 51.1**	**+0.8**
ORIF				*e*P		Pb		12 59 55.3	-10
ORIF				*e*Sn		**Sn**		**13 00 52.2**	**-0.7**

comp=N,2.1nm,0.3s

SMRF	**Simiane la Rot**	**5.64**	**275**	*e*Pn		**Pn**		**12 59 52.0**	**-0.3**
SMRF				*e*P		Pb		12 59 56.8	-11
KRUC	**Moravsky**	**5.67**	**21**	*e*PN		**Pn**		**12 59 53.3**	**+0.7**
KRUC				*e*SN		**Sn**		**13 00 56.0**	**-1.1**
ZVC	**Zvikov**	**5.67**	**5**	*e*PN		**Pn**		**12 59 53.4**	**+0.7**
ZVC				*e*SN		**Sn**		**13 00 56.3**	**-0.9**
TREC	**Trest**	**5.69**	**14**	*e*PN		**Pn**		**12 59 53.9**	**+0.9**
CABF	**La Chapelle**	**5.87**	**301**	*e*Pn		**Pn**		**12 59 55.8**	**+0.3**
CABF				*e*Sn		**Sn**		**13 00 57.9**	**-4.3**

comp=N,4.5nm,0.5s

VRAC	**Vranov**	**5.94**	**21**	Pn		**Pn**		**12 59 56.7**	**+0.3**

comp=N,0.3nm,0.3s,baz=202,slow=10,SNR=1.4

VRAC				Sn		**Sn**		**13 01 04.6**	**+0.6**

comp=N,0.4nm,0.3s,baz=280,slow=14,SNR=1.5
comp=N,1.0nm,0.2s

HINF	**Hinteralfeld**	**6.08**	**314**	*e*Pn		**Pn**		**12 59 58.9**	**+0.6**
HINF				*e*P		Pb		13 00 02.2	-13
HINF				*e*Sn		**Sn**		**13 01 03.0**	**-4.3**

comp=N,4.7nm,0.3s

CDF	**Champ du Feu**	**6.27**	**320**	*e*Pn		**Pn**		**13 00 01.8**	**+0.8**
CDF				*e*P		Pb		13 00 05.0	-13
CDF				*e*Sn		**Sn**		**13 01 09.8**	**-2.2**

comp=N,4.3nm,0.4s

VIVF	**Saint-Julien-l**	**6.33**	**283**	*e*Pn		**Pn**		**13 00 01.8**	**0.0**
VIVF				*e*Sn		**Sn**		**13 01 10.5**	**-3.1**

comp=N,1.0nm,0.3s

HAU	**Haudompre**	**6.46**	**313**	*e*P		**Pn**		**13 00 07.5**	**+3.9**
HAU				*e*Sn		**Sn**		**13 01 11.6**	**-5.1**

comp=N,10.0nm,0.4s

NKC	**Novy Kostel**	**6.47**	**355**	*e*SN		**Sn**		**13 01 14.4**	**-2.5**
LASF	**Ste Croix**	**6.88**	**276**	*e*Pn		**Pn**		**13 00 09.7**	**+0.4**
LASF				*e*Sn		**Sn**		**13 01 24.3**	**-2.7**

comp=N,0.4nm,0.3s

SFTF	**Sexfontaines**	**7.29**	**310**	*e*Pn		**Pn**		**13 00 15.4**	**+0.5**
SFTF				*e*Sn		**Sn**		**13 01 33.6**	**-3.4**

comp=N,2.3nm,0.3s

SMF	**Signal de Mont**	**7.31**	**296**	*e*Pn		**Pn**		**13 00 15.5**	**+0.3**
SMF				*e*P		Pb		13 00 20.1	-16
SMF				*e*Sn		**Sn**		**13 01 32.3**	**-5.3**

comp=N,6.6nm,0.4s

SAVF	**Savonnieres en**	**7.48**	**313**	*e*Pn		**Pn**		**13 00 19.2**	**+1.7**
CLL	**Collm**	**7.52**	**358**	*e*Pn		**Pn**		**13 00 18.0**	**0.0**
CLL				*e*(Sn)		**Sn**		**13 01 38.0**	**-4.7**
CLL				*e*Sb		**Sb**		**13 02 10.0**	**+1.6**
CLL				*e*Sg				13 02 28.0	

comp=Z,10.0nm,1.0s

LOR	**Lormes**	**7.53**	**301**	*e*Pn		**Pn**		**13 00 18.1**	**-0.1**

baz=114

LOR				*e*P		Pb		13 00 23.0	-16
LOR				*e*Sn		**Sn**		**13 01 37.1**	**-5.9**

comp=Z,8.6nm,0.3s

SSF	**Saint Saulge**	**7.67**	**299**	*e*Pn		**Pn**		**13 00 19.1**	**-1.0**
SSF				*e*P		Pb		13 00 24.7	-17
SSF				*e*Sn		**Sn**		**13 01 40.8**	**-5.7**

comp=Z,4.1nm,0.5s

AVF	**Avril sur Loir**	**7.68**	**296**	*e*Pn		**Pn**		**13 00 19.9**	**-0.3**
AVF				*e*P		Pb		13 00 24.7	-17
AVF				*e*Sn		**Sn**		**13 01 42.1**	**-4.4**

comp=Z,1.3nm,0.4s

BGF	**Bois d'Agland**	**7.94**	**294**	*e*Pn		**Pn**		**13 00 24.0**	**+0.2**
BGF				*e*P		Pb		13 00 28.4	-18
BGF				*e*Sn		**Sn**		**13 01 47.6**	**-5.3**

comp=Z,3.8nm,0.3s

CAF	**Calviac**	**8.19**	**282**	*e*Pn		**Pn**		**13 00 27.6**	**+0.4**
CAF				*e*Sn		**Sn**		**13 01 55.2**	**-3.9**

comp=Z,0.3nm,0.2s

HYF	**Humbligny**	**8.30**	**298**	*e*P		Pn		13 00 34.0	+5.3
KEST	**Kesra**	**8.63**	**202**	Pn		**Pn**		**13 00 33.7**	**+0.3**

comp=Z,0.1nm,0.3s,baz=97,slow=4.0,SNR=1.9
comp=Z,1.4nm,0.8s

TORD	**Torodi Ar. Bea**	**32.15**	**202**	P		**P**		**13 04 54.8**	**-1.0**

comp=Z,0.2nm,0.5s,baz=1.9,slow=8.8,SNR=1.2
comp=Z,0.2nm,0.5s

MKAR	**Makanchi Array**	**47.15**	**61**	P		**P**		**13 07 01.3**	**+0.9**

comp=Z,0.2nm,0.5s,baz=280,slow=6.2,SNR=3.9
comp=Z,0.2nm,0.5s

DJA 28 13:59:34.9±0.3, 1°N±3°×12°1E±°, h57km±6km, M3.8/22, mb3.8/5, MLv3.8/22, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.62**	**105**	P	P	Pn	13 59 49.0	+1.0
MRSI				S	S	Sn	14 00 00.2	+2.6
MPSI	**Mapaga**	**1.47**	**258**	P	P	Pn	13 59 59.5	+0.3
APSI	**Ampana**	**1.57**	**169**	P	P	Pn	14 00 00.8	+0.3
GTOI	**Gorontalo**	**1.67**	**90**	P	P	Pn	14 00 01.0	-0.8
PCI	**Palu**	**2.15**	**224**	P	P	Pn	14 00 08.2	-0.2
LUWI	**Luwuk**	**2.20**	**139**	P	P	Pn	14 00 09.5	+0.4
MMSI	**Mamuju**	**4.10**	**216**	P	P	Pn	14 00 35.0	-0.2
SPSI	**Sidrap Palu**	**4.84**	**199**	P	P	Pn	14 00 46.5	+1.3
SANI	**Sanana**	**5.36**	**120**	P	P	Pn	14 00 51.9	-0.5

0.1nm9.2nm,0.8s

KKM	**Kota Kinabalu**	**7.42**	**316**	P		Pn		14 01 20.6	0.0

*MEX **28** 14:10:27.0±0.4, 14°.42N×93°.92W, h15km±999km, MD4.1*
*IDC **28** 14:10:34.6±3.5, 15°.74N×95°.66W, h0km, mb3.6/5, mbtmp3.5/6, ML3.2/1, MS3.4/4, Error ellipse: s-maj=69.4km s-min=18.4km az=136.0*
ISC 28 14:10:23.4±1.7, 14°.62N±0°.06×93°.85W±0°.04, h18km±5km, n22, σ2s11/28, mb3.7/5, MS3.3/4, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PCIG		**1.24**	**29**	*e*P		**Pg**	**14 10 49.0**	**+1.6**
PCIG				*e*S		**Sg**	**14 11 06.1**	**+2.4**
THIG		**1.56**	**79**	*e*P		**Pn**	**14 10 49.6**	**-0.6**
THIG				*e*S		**Sb**	**14 11 12.6**	**+1.4**
CARR	**Arriaga**	**1.62**	**358**	*e*P		**Pb**	**14 10 53.9**	**+1.0**
CARR				*i* S		**Sn**	**14 11 09.4**	**-2.2**
PATR	**El Naranjo**	**1.64**	**72**	*e*P		**Pb**	**14 10 54.0**	**+0.7**
PAVE	**Pavencul**	**1.72**	**70**	*e*P		**Pb**	**14 10 55.0**	**+0.4**
PAVE				*e*S		**Sb**	**14 11 17.2**	**+1.2**
CHUJ	**Union Juarez**	**1.75**	**74**	*e*P		**Pb**	**14 10 55.2**	**0.0**
CHUJ				*e*S		**Sb**	**14 11 17.1**	**+0.1**
RTAL	**Retalhuleu**	**2.09**	**92**	*e*P		**Pb**	**14 11 00.4**	**-0.4**
RTAL				*i* S		**Sn**	**14 11 23.9**	**+0.7**
TGIG		**2.26**	**18**	*e*P		**Pb**	**14 11 05.2**	**+1.4**
TGIG				*e*S		**Sb**	**14 11 32.7**	**+1.3**
TGBT	**Tuxtla Gutierr**	**2.27**	**19**	*e*P		**Pb**	**14 11 05.4**	**+1.6**
TGBT				*i* S		**Sg**	**14 11 35.0**	**-1.6**
CCIG	**Comitan**	**2.34**	**45**	*e*P		**Pb**	**14 11 06.6**	**+1.4**
CCIG				*e*S		**Sg**	**14 11 36.4**	**-2.4**
HUEH	**Huehuetenango**	**2.37**	**73**	*e*P		**Pb**	**14 11 05.5**	**-0.4**
HUEH				*e*S		**Sb**	**14 11 34.3**	**-0.6**
HUIG	**Huatulco**	**2.46**	**298**	*e*P		**Pb**	**14 11 09.3**	**+2.2**
HUIG				*e*S		**Sn**	**14 11 31.4**	**-0.9**
CMIG	**Matias Romero**	**2.65**	**338**	Pg		**Pn**	**14 11 02.2**	**-3.2**

4.5nm,0.3s,baz=184,slow=13,SNR=19

CMIG				Lg		Lg		14 11 23.5	

20nm,0.3s,baz=163,slow=19,SNR=13

TXAR	**Lajitas Array**	**17.23**	**330**	Pn		**Pn**		**14 14 17.6**	**-5.7**

baz=149,slow=13,SNR=1.8
0.2nm,0.8s

TKL	**Tuckaleechee C**	**22.82**	**22**	LR		LR		14 26 24.7	

comp=Z,60nm,18.4s,baz=138,slow=42

PDAR	**Pinedale Array**	**31.14**	**337**	P		**P**		**14 16 39.3**	**-2.0**

0.1nm,0.4s,baz=148,slow=9.7,SNR=1.6
0.1nm,0.4s

NVAR	**Mina Array Bea**	**32.08**	**322**	P		P		14 16 46.0	-3.7

0.3nm,0.6s,baz=169,slow=5.2,SNR=2.8
0.3nm,0.6s

SADO	**Sadowa**	**32.55**	**20**	LR		LR		14 32 23.8	

comp=Z,31nm,18.4s,baz=328,slow=41

SCHQ	**Schefferville**	**45.29**	**22**	P		P		14 18 50.9	+11

3.7nm,0.9s,baz=218,slow=12,SNR=2.3

SCHQ				LR		LR		14 38 53.8	

comp=Z,54nm,18.5s,baz=203,slow=38
3.7nm,0.9s

YKA	**Yellowknife Ar**	**50.03**	**348**	P		**P**		**14 19 20.4**	**+3.8**

0.8nm,0.7s,baz=157,slow=6.8,SNR=16
0.8nm,0.7s

SFJD	**Kangerlussuaq**	**59.48**	**18**	LR		LR		14 49 50.5	

comp=Z,61nm,18.1s,baz=143,slow=40

ILAR	**Eielson Array**	**61.57**	**337**	P		**P**		**14 20 41.7**	**+2.3**

0.4nm,0.7s,baz=134,slow=6.9,SNR=8.2
0.4nm,0.7s

*SJA **28** 14:21:38.6±0.8, 24°.08S×66°.97W, h206km±4km, ML3.7, MW3.5*
*GUC **28** 14:21:39.8±0.6, 24°.03S×66°.95W, h200km±7km, ML4.1*
*NEIC **28** 14:21:39.8±2.0, 24°.03S±0°.07×67°.1W±0°.1, h218km±6km, mb4.2/5, ML4.1(GUC), Error ellipse: s-maj=17.1km s-min=10.2km az=81.0*
ISC 28 14:21:38.5±0.8, 24°.05S±0°.04×67°.02W±0°.04, h209km±7km, n70, σ1s42/88, 4C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SALTA		**0.64**	**106**	⇓ *i* P		**Pn**	**14 22 07.7**	**-0.2**
SALTA		**0.64**	**106**	*e*P		**Pn**	**14 22 07.9**	**0.0**
SALTA				*e*S		**S**	**14 22 29.6**	**-1.1**
AF01	**San Pedro de A**	**1.52**	**315**	*e*P		**Pn**	**14 22 14.7**	**+1.0**
AF01	**San Pedro de A**	**1.52**	**315**	*e*P		**Pn**	**14 22 14.2**	**+0.6**
AF01	**San Pedro de A**	**1.52**	**315**	*e*P		**Pn**	**14 22 14.7**	**+1.0**
HJA	**Humahuaca**	**1.69**	**61**	*e*P		**Pn**	**14 22 15.3**	**0.0**
HJA				*e*S		**S**	**14 22 42.8**	**-0.6**
FSA	**Cafayete**	**2.26**	**156**	*e*P		**Pn**	**14 22 21.1**	**+0.5**
FSA				*e*S		**S**	**14 22 51.4**	**-1.7**
YJA	**Yavi**	**2.32**	**37**	*e*P		**Pn**	**14 22 21.7**	**+0.1**
YJA	**Yavi**	**2.32**	**37**	*e*P		**Pn**	**14 22 22.4**	**+0.9**
YJA				*e*S		**S**	**14 22 54.8**	**+0.2**
PB06	**IPOC Station P**	**2.70**	**299**			**Pn**	**14 22 26.3**	**+0.9**
PB06	**IPOC Station P**	**2.70**	**299**	*i* P		**Pn**	**14 22 26.9**	**+1.5**
PB06				*e*S		**S**	**14 23 01.3**	**-0.3**
PB06				IAML			14 23 03.9	

comp=E,781nm,0.1s

PB06	**IPOC Station P**	**2.70**	**299**	*e*P		**Pn**		**14 22 27.0**	**+1.5**
PB06				*e*S		**S**		**14 23 01.6**	**0.0**
PB06				IAML				14 23 03.7	

comp=Z,303nm,0.3s

PB09	**IPOC Station P**	**3.04**	**317**			**Pn**		**14 22 31.5**	**+2.2**
PB09	**IPOC Station P**	**3.04**	**317**	*e*P		**Pn**		**14 22 31.3**	**+2.0**
PB09				*e*S		**S**		**14 23 09.1**	**+0.6**
PB09				IAML				14 23 12.1	

comp=N,128nm,0.4s

PB09	**IPOC Station P**	**3.04**	**317**	*e*P		**Pn**		**14 22 30.7**	**+1.4**
PB09				*e*S		**S**		**14 23 08.3**	**-0.2**
PB09				IAML				14 23 14.1	

comp=Z,110nm,0.6s

PB14	**IPOC Station P**	**3.15**	**259**			**Pn**		**14 22 31.7**	**+1.1**
PB14	**IPOC Station P**	**3.15**	**259**	⇑ *i* P		**Pn**		**14 22 31.7**	**+1.1**
PB14	**IPOC Station P**	**3.15**	**259**	*e*P		**Pn**		**14 22 31.7**	**+1.1**
PB14				*e*S		**S**		**14 23 10.6**	**-0.3**
PB14				IAML				14 23 13.5	

comp=Z,91nm,0.4s

PB05	**IPOC Station P**	**3.16**	**291**			**Pn**		**14 22 31.7**	**+1.1**
PB05	**IPOC Station P**	**3.16**	**291**	⇑ *i* P		**Pn**		**14 22 32.0**	**+1.4**
PB05	**IPOC Station P**	**3.16**	**291**	*e*P		**Pn**		**14 22 31.7**	**+1.1**
PB05				*e*S		**S**		**14 23 10.6**	**-0.3**
PB05				*e*S		S		14 23 10.7	-0.3
PB05				IAML				14 23 14.6	

comp=Z,103nm,0.2s

PB03	**IPOC Station P**	**3.21**	**308**			**Pn**		**14 22 32.5**	**+1.2**
PB03	**IPOC Station P**	**3.21**	**308**	*e*P		**Pn**		**14 22 32.8**	**+1.4**
PB03	**IPOC Station P**	**3.21**	**308**	*e*P		**Pn**		**14 22 32.5**	**+1.2**
PB03				*e*S		**S**		**14 23 12.1**	**-0.1**
PB03				IAML				14 23 12.3	

comp=Z,247nm,0.5s

AC02	**Maricunga**	**3.37**	**214**			**Pn**		**14 22 35.2**	**+1.6**
AC02	**Maricunga**	**3.37**	**214**	⇑ *i* P		**Pn**		**14 22 35.1**	**+1.6**
AC02	**Maricunga**	**3.37**	**214**	*e*P		**Pn**		**14 22 34.5**	**+1.0**
AC02				*e*S		S		14 23 29.2	+13
AC02				IAML				14 23 35.1	

comp=Z,182nm,0.8s

PB07	**IPOC Station P**	**3.51**	**310**			**Pn**		**14 22 35.7**	**+0.8**
PB07	**IPOC Station P**	**3.51**	**310**	⇑ *i* P		**Pn**		**14 22 36.0**	**+1.1**
PB07	**IPOC Station P**	**3.51**	**310**	*e*P		**Pn**		**14 22 35.9**	**+0.9**
PB07				*e*S		**S**		**14 23 18.7**	**0.0**
PB07				IAML				14 23 19.6	

comp=Z,137nm,0.2s

PB01	**IPOC Station P**	**3.76**	**322**			**Pn**		**14 22 38.9**	**+1.0**
PB01	**IPOC Station P**	**3.76**	**322**	*e*P		**Pn**		**14 22 38.9**	**+1.0**
PB01	**IPOC Station P**	**3.76**	**322**	*e*P		**Pn**		**14 22 38.9**	**+1.0**
PB01				*e*S		**S**		**14 23 24.0**	**0.0**
PB01				IAML				14 23 25.3	

comp=Z,120nm,0.2s

PB02	**IPOC Station P**	**3.80**	**315**			**Pn**		**14 22 39.0**	**+0.7**
PB02	**IPOC Station P**	**3.80**	**315**	*e*P		**Pn**		**14 22 39.5**	**+1.1**
PB02	**IPOC Station P**	**3.80**	**315**	*e*P		**Pn**		**14 22 39.4**	**+1.1**
PB02				*e*S		**S**		**14 23 23.4**	**-1.4**
PB02				IAML				14 23 29.6	

comp=Z,204nm,0.4s

AC01	**Pan de Azucar**	**3.87**	**236**			**Pn**		**14 22 39.3**	**+0.3**
AC01	**Pan de Azucar**	**3.87**	**236**	*e*P		**Pn**		**14 22 39.3**	**+0.3**
AC01				*e*S		**S**		**14 23 24.9**	**-1.3**
AC01				IAML				14 23 27.8	

comp=Z,53nm,0.1s

TINO	**Tinogasta**	**4.03**	**187**	*e*P		**Pn**		**14 22 43.6**	**+2.4**
PATCX	**Punta Patache**	**4.33**	**317**	*e*P		**Pn**		**14 22 45.2**	**+0.3**
PATCX	**Punta Patache**	**4.33**	**317**	*e*P		**Pn**		**14 22 45.8**	**+1.0**
PATCX				*e*S		**S**		**14 23 29.2**	**-7.4**
PATCX				*e*S		S		14 23 36.5	-0.2
PATCX				IAML				14 23 48.3	

comp=Z,54nm,0.4s

PB08	**IPOC Station P**	**4.36**	**333**			**Pn**		**14 22 47.5**	**+2.0**
PB08	**IPOC Station P**	**4.36**	**333**	*e*P		**Pn**		**14 22 47.3**	**+1.7**
PB08	**IPOC Station P**	**4.36**	**333**	*e*P		**Pn**		**14 22 46.9**	**+1.4**
PB08				*e*S		**S**		**14 23 39.7**	**+1.8**
PB08				IAML				14 23 41.9	

comp=Z,31nm,0.3s

AC06	**Mina Casimiro**	**4.47**	**222**			**Pn**		**14 22 46.6**	**+0.1**
AC06	**Mina Casimiro**	**4.47**	**222**	*e*P		**Pn**		**14 22 46.5**	**+0.1**
TA01	**Diego Aracena**	**4.54**	**319**	*e*P		**Pn**		**14 22 48.4**	**+1.1**
TA01				IAML				14 23 54.3	

comp=Z,34nm,0.9s

GO03	**Copiapo**	**4.57**	**219**	*e*P		**Pn**		**14 22 47.8**	**0.0**
GO03	**Copiapo**	**4.57**	**219**	*e*P		**Pn**		**14 22 48.1**	**+0.3**
GO03				*e*S		**S**		**14 23 41.0**	**-1.1**
GO03				IAML				14 23 43.8	

comp=Z,110nm,0.3s

HMBC	**Humberstone**	**4.60**	**324**			**Pn**		**14 22 48.4**	**+0.1**
HMBC	**Humberstone**	**4.60**	**324**	*e*P		**Pn**		**14 22 48.0**	**-0.3**
VCA	**Vinchina**	**4.79**	**193**	*e*P		**Pn**		**14 22 54.0**	**+3.3**
GO01	**Chusmiza**	**4.80**	**335**			**Pn**		**14 22 52.5**	**+1.3**
GO01	**Chusmiza**	**4.80**	**335**	*e*P		**Pn**		**14 22 52.5**	**+1.3**
GO01	**Chusmiza**	**4.80**	**335**	*e*P		Pn		14 22 37.3	-14
GO01				IAML				14 23 51.6	

comp=Z,28nm,0.4s

PB11	**IPOC Station P**	**4.92**	**330**			**Pn**		**14 22 52.5**	**+0.1**
PB11	**IPOC Station P**	**4.92**	**330**	*e*P		**Pn**		**14 22 52.4**	**0.0**
PB11	**IPOC Station P**	**4.92**	**330**	*e*P		**Pn**		**14 22 51.9**	**-0.5**
PB11				*e*S		**S**		**14 23 48.9**	**-1.4**
PB11				IAML				14 23 53.2	

comp=Z,45nm,0.3s

PSGCX	**Pisagua**	**5.28**	**326**			**Pn**		**14 22 56.6**	**-0.3**
PSGCX	**Pisagua**	**5.28**	**326**	*e*P		**Pn**		**14 22 56.2**	**-0.7**
AC04	**Llanos de Chal**	**5.52**	**221**			**Pn**		**14 22 59.0**	**-0.7**
AC05	**El Transito**	**5.59**	**211**			**Pn**		**14 23 00.7**	**-0.1**
LCO	**Las Campanas**	**5.95**	**213**	Pn		**Pn**		**14 23 05.5**	**0.0**
PB16	**IPOC Station P**	**6.14**	**337**			**Pn**		**14 23 09.8**	**+1.4**
PB12	**IPOC Station P**	**6.22**	**330**	Pn		**Pn**		**14 23 08.7**	**-0.2**
BDFB	**Brasilia**	**19.71**	**68**	P		**P**		**14 25 54.5**	**+2.1**
BDFB				IAmb		IAmb		14 25 55.5	

comp=Z,7.9nm,0.7s

BOAV	**Boa Vista**	**27.03**	**14**	P		**P**		**14 26 59.3**	**-2.2**
BOAV				IAmb		IAmb		14 27 32.6	

comp=Z,8.6nm,1.4s

HOPE	**Hope Point**	**37.82**	**151**	P		**P**		**14 28 34.0**	**-0.6**
GOGA	**Godfrey**	**59.25**	**344**	P		**P**		**14 31 16.4**	**-1.5**
GOGA				IAmb		IAmb		14 31 19.8	

comp=Z,3.3nm,0.8s

QSPA	**South Pole Qui**	**66.16**	**180**	P		**P**		**14 32 05.6**	**+2.2**

*IDC **28** 14:27:23.3±1.0, 48°.96N×157°.37E, h0km, mb3.7/11, mbtmp3.7/11, MS3.3/1, Error ellipse: s-maj=29.3km s-min=20.4km az=111.0*
*KRSC **28** 14:27:25.8±1.2, 49°.10N×158°.00E, h38km±22km, Ml3.9*
*MOS **28** 14:27:26.8±0.9, 49°.01N×157°.46E, h38km, mb3.9/1, Error ellipse: s-maj=29.4km s-min=13.3km az=93.2*
*SKHL **28** 14:27:27.1±0.6, 49°.00N×157°.80E, h54km±1km, mb4.7/3*
ISC 28 14:27:28.3±0.9, 49°.01N±0°.08×157°.61E±0°.08, h35km, n47, σ0s77/56, mb3.8/11, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.94**	**331**	*e*PN		**Pn**	**14 27 58.3**	**-0.4**
SKR				*e*S		**Sn**	**14 28 22.1**	**+0.4**
SKR				pmax		pmax		

comp=Z,172nm,0.4s

SKR				*e*1μm,0.4s		smax		smax	

comp=N,1μm,0.7s

SKR						smax		smax	

comp=N,1μm,0.7s

SKR	**Severo-Kuril's**	**1.94**	**331**	*e*P		**Pn**		**14 27 58.2**	**-0.4**
SKR				*e*S		**Sn**		**14 28 21.7**	**0.0**
SKR	**Severo-Kuril's**	**1.94**	**331**	*e*P		**Pn**		**14 27 58.2**	**-0.4**
SKR				AMB		AMB		14 28 00.8	

comp=N,180nm,0.4s

SKR				*e*S		**Sn**		**14 28 21.0**	**-0.7**
SKR				A		A		14 28 23.0	

comp=N,800nm,0.4s

SKR				A		A		14 28 23.0	

comp=N,1μm,0.4s

PAU	**Pauzhetka**	**2.52**	**349**	*e*P		**Pn**		**14 28 07.0**	**+0.4**
PAU				*e*S		**Sn**		**14 28 36.2**	**+0.2**
PAU	**Pauzhetka**	**2.52**	**349**	*e*P		**Pn**		**14 28 06.3**	**-0.3**
PAU				AMB		AMB		14 28 09.8	

comp=N,50nm,0.2s

PAU				*e*S		**Sn**		**14 28 35.2**	**-0.8**
PAU				A		A		14 28 38.6	

comp=N,340nm,0.3s

PAU				A		A		14 28 38.6	

comp=N,230nm,0.3s

AGPR	**Aguadilla, PR**	**0.83**	**142**⇑	*e*Pg	**Pg**	**14 48 46.1**	**-0.5**
AGPR				⇓*e*Sg	**Sg**	**14 48 57.7**	**+0.2**
AGPR				IAML		14 48 59.3	
	comp=N,170nm,0.3s						
PRSN	**Puerto Rico Se**	**1.02**	**152**		**Pn**	**14 48 51.6**	**+1.7**
PRSN					**Sn**	**14 49 05.7**	**+1.3**
PRSN	**Puerto Rico Se**	**1.02**	**152**⇑	*e*Pg	**Pb**	**14 48 49.5**	**-0.5**
PRSN				⇓*e*Sg	**Sb**	**14 49 01.5**	**-1.7**
PRSN				IAML		14 49 07.3	
	comp=N,334nm,0.2s						
LSP	**Las Mesas**	**1.08**	**150**		**Pn**	**14 48 53.0**	**+1.7**
LSP					**Sn**	**14 49 06.8**	**+0.8**
HIDR	**Higuey Centro**	**1.14**	**243**⇓	*e*Pg	**Pb**	**14 48 51.5**	**-0.5**
HIDR				⇓*e*Sg	**Sb**	**14 49 04.4**	**-2.2**
HIDR				IAML		14 49 08.6	
	comp=N,210nm,0.2s						
AOPR	**Arecibo Observ**	**1.15**	**132**		**Pb**	**14 48 51.9**	**-0.2**
AOPR					**Sb**	**14 49 07.5**	**+0.6**
AOPR	**Arecibo Observ**	**1.15**	**132**	IAML		14 49 16.3	
	comp=N,168nm,0.3s						
AOPR	**Arecibo Observ**	**1.15**	**132**⇓	*e*Pg	**Pb**	**14 48 52.2**	**0.0**
AOPR				⇑*e*Sg	**Sb**	**14 49 06.4**	**-0.5**
AOPR				IAML		14 49 16.3	
	comp=N,148nm,0.2s						
CRPR	**Cabo Rojo, PR**	**1.22**	**155**	*i* P	**Pn**	**14 48 53.0**	**-0.1**
CRPR				*e*S	**Sg**	**14 49 11.2**	**+1.2**
CRPR				IAML		14 49 12.0	
	comp=Z,149nm,0.4s						
UUPR	**Utuado, UPR, P**	**1.23**	**134**		**Pn**	**14 48 53.2**	**-0.2**
UUPR					**Sg**	**14 49 10.6**	**+0.2**
EMPR	**Esperanza - Ma**	**1.24**	**121**		**Pn**	**14 48 52.8**	**-0.6**
EMPR					**Sg**	**14 49 10.9**	**+0.3**
MLPR	**Magueyes Islan**	**1.28**	**153**		**Sg**	**14 49 13.1**	**+1.1**
MLPR	**Magueyes Islan**	**1.28**	**153**		**Pg**	**14 48 55.5**	**+0.2**
MLPR	**Magueyes Islan**	**1.28**	**153**	IAML		14 49 13.0	
	comp=N,120nm,0.6s						
MLPR	**Magueyes Islan**	**1.28**	**153**⇑	*e*Pg	**Pb**	**14 48 54.4**	**0.0**
MLPR				IAML		14 49 14.0	
	comp=N,34nm,0.3s						
GBPR	**Guanica, Bosqu**	**1.35**	**147**		**Pn**	**14 48 55.5**	**+0.5**
GBPR					**Sg**	**14 49 14.9**	**+0.6**
CELP	**Cerrillos**	**1.45**	**135**		**Pn**	**14 48 56.8**	**+0.4**
CELP					**Sn**	**14 49 15.4**	**+0.1**
CELP	**Cerrillos**	**1.45**	**135**	IAML		14 49 18.7	
	comp=N,130nm,0.3s						
CELP				IAML		14 49 22.2	
	comp=N,95nm,0.3s						
CELP	**Cerrillos**	**1.45**	**135**⇑	*e*Pg	**Pn**	**14 48 56.2**	**-0.2**
CELP				⇑*e*Sg	**Sn**	**14 49 15.6**	**+0.4**
CELP				IAML		14 49 18.6	
	comp=N,46nm,0.3s						
ECPR	**Experimental S**	**1.46**	**123**		**Pn**	**14 48 56.7**	**+0.3**
ECPR					**Sn**	**14 49 15.4**	**+0.1**
ECPR	**Experimental S**	**1.46**	**123**	IAML		14 49 21.1	
	comp=N,176nm,0.2s						
OBIP	**Obispado Ponce**	**1.46**	**137**		**Pn**	**14 48 56.9**	**+0.4**
OBIP					**Sb**	**14 49 16.6**	**+0.7**
OBIP	**Obispado Ponce**	**1.46**	**137**	*i* P	**Pn**	**14 48 56.3**	**-0.2**
OBIP				*e*S	**Sn**	**14 49 15.7**	**+0.3**
OBIP				IAML		14 49 19.3	
	comp=Z,310nm,0.3s						
SMDR	**Samana, DR**	**1.46**	**277**		**Pg**	**14 48 58.0**	**-0.7**
SMDR					**Sg**	**14 49 20.6**	**+2.8**
SMDR	**Samana, DR**	**1.46**	**277**⇑	*e*Pg	**Pg**	**14 48 58.1**	**-0.7**
SMDR				⇑*e*Sg	**Sb**	**14 49 15.7**	**-0.3**
SMDR				IAML		14 49 31.8	
	comp=N,82nm,0.5s						
DR12	**Loma Pena Alta**	**1.67**	**259**		**Pg**	**14 49 02.4**	**-0.3**
DR12					**Sg**	**14 49 24.3**	**-0.1**
HATOM	**Hato Mayor del**	**1.67**	**259**⇑	*e*Pg	**Pb**	**14 49 01.5**	**+0.4**
HATOM				⇑*e*Sg	**Sn**	**14 49 20.7**	**+0.1**
HATOM				IAML		14 49 26.1	
	comp=N,48nm,0.8s						
SJG	**San Juan**	**1.74**	**125**	*i* P	**Pn**	**14 48 58.5**	**-1.9**
SJG				IAML		14 49 28.5	
	comp=Z,990nm,0.3s						
HUMP	**Col San Antoni**	**1.96**	**119**		**Pb**	**14 49 05.7**	**-0.5**
NADR	**Nagua**	**2.10**	**277**	*i* P	**Pn**	**14 49 04.6**	**-0.6**
NADR				*i* S	**Sn**	**14 49 30.8**	**-0.3**
NADR				IAML		14 49 46.7	
	comp=N,187nm,0.2s						
DR08	**Loma La Naviza**	**2.25**	**266**⇓	*e*Pg	**Pb**	**14 49 11.5**	**+0.5**
DR08				IAML		14 49 46.0	
	comp=N,908nm,0.2s						
BANI	**BANI**	**2.67**	**255**⇑	*e*Pg	**Pb**	**14 49 17.6**	**-0.5**
BANI				⇑*e*Sg	**Sb**	**14 49 50.1**	**-0.6**
BANI				IAML		14 49 59.5	
	comp=N,61nm,1.7s						
SDDR	**Presa de Saban**	**3.44**	**268**		**Pb**	**14 49 32.8**	**+1.4**
SDDR	**Presa de Saban**	**3.44**	**268**	IAML		14 50 20.6	
	comp=N,21nm,1.5s						
SDDR				IAML		14 50 25.4	
	comp=N,20nm,0.7s						
SDDR	**Presa de Saban**	**3.44**	**268**⇑	*e*Pg	**Pb**	**14 49 31.7**	**+0.3**
SDDR				⇓*e*Sg	**Sb**	**14 50 13.4**	**+0.3**
SDDR				IAML		14 50 18.6	
	comp=N,19nm,1.8s						

KRSC 28 15:01:54.3±2.6, 49°22N×158°19E, h31km±7.4km, MI3.5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.98**	**318**	*e*P	Pn	15 02 26.1	+0.4
SKR				*e*S	Sn	15 02 50.0	+0.6
PAU	**Pauzhetka**	**2.41**	**339**	*e*S	Sb	15 03 03.7	-2.7
KDTR	**Khodutka, Kamc**	**2.59**	**358**	*e*S	Sb	15 03 08.1	-3.3
ASAK	**Asacha**	**3.17**	**357**	*e*P	Pn	15 02 46.0	+3.9
RUS	**Russkaya**	**3.22**	**4**	*e*P	Pn	15 02 46.0	+3.3
RUS				*e*S	Sb	15 03 25.6	-3.9
MTVR	**Mutnovka**	**3.26**	**360**	*e*P	Pn	15 02 47.0	+3.5
MTVR				*e*S	Sn	15 03 25.1	+3.9
GRL	**Gorelyy**	**3.33**	**359**	*e*P	Pb	15 02 48.7	-4.1
DALK	**Dalny**	**3.83**	**5**	*e*P	Pn	15 02 55.0	+3.9
UGLR	**Uglovaya**	**4.01**	**5**	*e*P	Pn	15 02 58.9	+5.3
AVH	**Avacha**	**4.06**	**5**	*e*P	Pn	15 02 59.5	+5.2
KOK	**Koryaka**	**4.08**	**4**	*e*P	Pn	15 02 59.8	+5.1
SDLR	**Sedlovina**	**4.08**	**6**	*e*P	Pn	15 02 59.7	+5.0
KRX	**Arik**	**4.15**	**4**	*e*P	Pn	15 03 01.0	+5.4
KBTR	**Krutoberegovo**	**7.54**	**20**	*e*P	Pn	15 03 46.2	+4.3

*NEIC **28** 15:11:40.4±2.3, 20°.9S×170°.2W±0°.1, h10km±1km, mb4.6/13, Error ellipse: s-maj=28.4km s-min=18.8km az=151.0*
*IDC **28** 15:11:40.9±0.6, 20°.90S×174°.22W, h0km, mb4.4/14, mbtmp4.4/15, ML4.3/1, MS3.8/8, Error ellipse: s-maj=23.8km s-min=16.5km az=124.0*
*NOU **28** 15:11:47.2, 20°.60S×173°.47W, h62km, mb4.8/8, Tonga Islands*

ISC 28 15:11:40.8±0.4, 20°.80S±0°.07×173°.84W±0°.07, h10km, n165, σ1s88/159, mb4.8/36, MS3.8/6, 18C-21D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.06**	**66**	P	**Pn**	**15 12 42.1**	**-0.9**
NIUE	**Niue**	**4.06**	**66**	Pn	**Pn**	**15 12 40.5**	**-2.5**
LKBA	**Tubou, Lakemba**	**5.34**	**298**	P	Pb	15 13 07.4	-6.9
TAVE	**Taveuni**	**7.04**	**304**	P	Pn	15 13 30.8	+6.8
AFI	**Afiamalu**	**7.13**	**16**	Pn	**Pn**	**15 13 25.2**	**-0.1**
	9.0nm,0.3s,baz=260,slow=7.9,SNR=18						
AFI					Sn	**15 14 39.8**	**-6.6**
	11nm,0.3s,baz=256,slow=22,SNR=3.9						
AFI				LR	LR	15 16 13.7	
	comp=Z,409nm,20.9s,baz=192,slow=37						
DGTI	**Dogotuki**	**7.56**	**305**	P	Pn	15 13 37.2	+6.1
MSVF	**Nonsavu**	**8.24**	**290**	Pn	Pn	15 13 46.8	+6.2
	2.5nm,0.3s,baz=127,slow=15,SNR=70						
MSVF				LR	LR	15 16 31.9	
	comp=Z,3μm,18.6s,baz=119,slow=37						
MSVF	**Nonsavu**	**8.24**	**290**	P	Pn	15 13 47.1	+6.5
RAR	**Rarotonga**	**13.15**	**94**	Pn	**Pn**	**15 14 45.0**	**-2.7**
	8.6nm,0.3s,baz=197,slow=3.8,SNR=13						
RAR					Sn	15 16 59.9	-14
	2.8nm,0.3s,baz=45,slow=13,SNR=2.0						
RAR					LR	15 20 44.0	
	comp=Z,470nm,18.2s,baz=265,slow=40						
RAR	**Rarotonga**	**13.15**	**94**	P	**Pn**	**15 14 45.7**	**-2.0**
RAR	**Rarotonga**	**13.15**	**94**	Pn	**Pn**	**15 14 44.2**	**-3.5**
DZM	**Mont Dzumac**	**18.40**	**262**	P	**P**	**15 15 57.0**	**+0.7**
	19nm,0.8s,baz=73,slow=18,SNR=11						

URZ	**Urewera**	**19.08**	**202**	P	**Pn**	**15 16 03.9**	**-0.4**
	0.9nm,0.3s,baz=300,slow=2.4,SNR=12						
URZ				LR	LR	15 23 40.8	
	comp=Z,235nm,18.4s,baz=4.5,slow=38 7.9nm,0.5s						
MRZ	**Mangatainoka R**	**21.76**	**202**	P	**P**	**15 16 27.3**	**-5.2**
QRZ	**Quartz Range**	**23.09**	**207**	P	**P**	**15 16 51.4**	**+4.7**
PPT	**Papeete**	**23.14**	**86**	LR	LR	15 24 19.4	
	comp=Z,191nm,19.2s,baz=262,slow=32						
HNR	**Honiara**	**27.66**	**290**	LR	LR	15 26 52.9	
	comp=Z,9.3nm,18.7s,baz=220,slow=33						
KRVT	**Keravat (AS076**	**37.00**	**292**	LR	LR	15 32 21.2	
	comp=Z,18nm,21.5s,baz=24,slow=34						
CTA	**Charters Tower**	**37.33**	**264**	LR	LR	15 33 58.2	
	comp=Z,243nm,19.1s,baz=84,slow=36						
PMG	**Port Moresby**	**39.22**	**281**		**P**	**15 19 07.5**	**-2.1**
PMG				IAmb	IAmb	15 19 08.6	
	comp=Z,14nm,0.9s						
PMG	**Port Moresby**	**39.22**	**281**	P	**P**	**15 19 07.3**	**-2.3**
	comp=Z,16nm,1.7s						
STKA	**Stephens Creek**	**41.18**	**245**	P	**P**	**15 19 23.9**	**-1.9**
	comp=Z,4.2nm,0.8s,baz=96,slow=8.5,SNR=7.7 comp=Z,4.2nm,0.8s						
STKA	**Stephens Creek**	**41.18**	**245**	P	**P**	**15 19 23.0**	**-2.7**
INKA	**Innaminka**	**41.79**	**251**		**P**	**15 19 28.6**	**-2.1**
JAY	**Jayapura**	**47.85**	**286**	P	**P**	**15 20 18.5**	**-0.8**
	comp=Z,26nm,0.7s						
AS31	**Alice Springs**	**48.24**	**256**		**P**	**15 20 19.7**	**-2.6**
AS31				IAmb	IAmb	15 20 21.9	
	comp=Z,2.4nm,0.7s						
ASAR	**Alice Springs**	**48.24**	**256**	P	**P**	**15 20 19.6**	**-2.6**
	comp=Z,8.8nm,0.7s,baz=100,slow=7.9,SNR=134						
ASAR				PcP	**PcP**	**15 21 49.3**	**0.0**
	comp=Z,2.3nm,0.7s,baz=106,slow=4.1,SNR=5.2 comp=Z,8.8nm,0.7s						
ASAR	**Alice Springs**	**48.24**	**256**		**P**	**15 20 19.2**	**-3.0**
ASAR					**PcP**	**15 21 49.7**	**+0.3**
WR8	**Warramunga Arr**	**48.26**	**261**		**P**	**15 20 19.2**	**-3.2**
WR8				IAmb	IAmb	15 20 24.9	
	comp=Z,5.0nm,0.8s						
GENI	**Genyem**	**48.30**	**286**	P	**P**	**15 20 21.3**	**-1.4**
	comp=Z,63nm,1.1s						
WB0	**Warramunga Arr**	**48.40**	**262**		**P**	**15 20 20.3**	**-3.2**
WRAB	**Tennant Creek**	**48.40**	**261**	P	**P**	**15 20 21.0**	**-2.5**
WRAB				IAmb	IAmb	15 20 25.9	
	comp=Z,5.7nm,0.8s						
WRA	**Warramunga Arr**	**48.41**	**261**	P	**P**	**15 20 20.9**	**-2.6**
	comp=Z,6.5nm,0.7s,baz=98,slow=6.5,SNR=38						
WRA				PcP	**PcP**	**15 21 50.5**	**+0.5**
	comp=Z,1.9nm,0.8s,baz=92,slow=3.6,SNR=2.9 comp=Z,6.5nm,0.7s						
WRA	**Warramunga Arr**	**48.41**	**261**		**P**	**15 20 20.5**	**-3.0**
FAKI	**Fak Fak**	**55.37**	**281**	P	**P**	**15 21 13.6**	**-1.9**
	comp=Z,11nm,1.1s						
BNDI	**Bandanaira**	**56.92**	**278**	P	**P**	**15 21 24.1**	**-2.5**
SIJI	**Sorong**	**57.09**	**283**	P	**P**	**15 21 27.1**	**-0.7**
	comp=Z,29nm,0.8s						
SWI	**Sorong**	**57.10**	**283**	P	**P**	**15 21 27.2**	**-0.7**
	comp=Z,776nmcomp=Z,47nm,0.9s						
VNDA	**Vanda**	**57.99**	**186**	P	**P**	**15 21 34.5**	**+1.2**
	comp=Z,1.5nm,0.9s,baz=10.0,slow=8.9,SNR=4.9 comp=Z,1.5nm,0.9s						
VNDA	**Vanda**	**57.99**	**186**	P	**P**	**15 21 32.8**	**-0.5**
VNDA				IAmb	IAmb	15 21 46.7	
	comp=Z,3.3nm,1.0s						
RPN	**Rapa Nui**	**58.73**	**110**	LR	LR	15 43 01.5	
	comp=Z,140nm,19.9s,baz=242,slow=32						
SOEI	**Soe**	**60.40**	**270**	P	**P**	**15 21 50.0**	**-1.0**
	comp=Z,28nm,0.7s						
TNTI	**Ternate**	**61.31**	**283**	P	**P**	**15 21 55.9**	**-1.2**
	comp=Z,26nm,0.9s						
SANI	**Sanana**	**61.47**	**279**	P	**P**	**15 21 56.7**	**-1.4**
	comp=Z,20nm,0.9s						
KAPI	**Kappang**	**66.19**	**274**	LR	LR	15 46 41.0	
	comp=Z,9μm,21.7s,baz=356,slow=32						
MMSI	**Mamuju**	**67.80**	**276**	P	**P**	**15 22 38.9**	**-0.7**
MPSI	**Mapaga**	**68.00**	**279**	P	**P**	**15 22 39.6**	**-1.2**
QSPA	**South Pole Qui**	**69.28**	**180**	P	**P**	**15 22 49.2**	**+1.1**
	comp=Z,11nm,1.1s,baz=27,slow=3.7,SNR=9.4 comp=Z,11nm,1.1s						
QSPA	**South Pole Qui**	**69.28**	**180**	P	**P**	**15 22 47.2**	**-0.8**
MJAR	**Matsushiro Arr**	**72.82**	**321**	P	**P**	**15 23 10.5**	**+0.7**
	comp=Z,8.3nm,0.8s,baz=158,slow=6.0,SNR=22 comp=Z,8.3nm,0.8s						
MJAR	**Matsushiro Arr**	**72.82**	**321**		**P**	**15 23 09.4**	**-0.4**
MJAR				IAmb	IAmb	15 23 11.8	
	comp=Z,7.1nm,0.9s						
NVAR	**Mina Array Bea**	**78.62**	**41**	P	**P**	**15 23 46.8**	**+3.6**
	comp=Z,3.8nm,0.8s,baz=221,slow=9.0,SNR=11 comp=Z,3.8nm,0.8s						
NVAR	**Mina Array Bea**	**78.62**	**41**	P	**P**	**15 23 43.9**	**+0.7**
KSRS	**Korea Array**	**79.73**	**317**	P	**P**	**15 23 51.5**	**+2.5**
	comp=Z,6.4nm,1.0s,baz=137,slow=6.1,SNR=11 comp=Z,6.4nm,1.0s						
MAW	**Mawson**	**82.57**	**199**	P	**P**	**15 24 04.7**	**+1.0**
	comp=Z,4.1nm,0.8s,baz=203,slow=8.3,SNR=4.4 comp=Z,4.1nm,0.8s						
NJ2	**Nanjing**	**83.10**	**308**	*e*P	**P**	**15 24 07.0**	**0.0**
NJ2				pmax	pmax		
	comp=Z,27nm,0.6s						
TXAR	**Lajitas Array**	**83.97**	**56**	P	**P**	**15 24 14.6**	**+2.8**
	comp=Z,0.4nm,0.8s,baz=241,slow=2.3,SNR=5.5 comp=Z,0.4nm,0.8s						
CN2	**Changchun**	**84.95**	**321**	*e*P	**P**	**15 24 18.8**	**+2.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BNX	**BinXian**	**84.96**	**323**	⇑P	**P**	**15 24 18.8**	**+2.6**
BNX				pmax	pmax		
	comp=Z,17nm,1.1s						
PDAR	**Pinedale Array**	**86.55**	**42**	P	**P**	**15 24 26.9**	**+2.5**
	comp=Z,2.1nm,1.0s,baz=198,slow=4.4,SNR=6.1 comp=Z,2.1nm,1.0s						
ELIB	**Princess Elisa**	**86.75**	**185**	*e*P	**P**	**15 24 21.3**	**-3.6**
VNA3	**Neumayer Olymp**	**87.55**	**175**	⇑P	**P**	**15 24 30.1**	**+1.4**
	comp=Z,3.3nm,0.9s						
HEH	**HeiHe**	**87.65**	**327**	*e*P	**P**	**15 24 31.0**	**+1.7**
HEH				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ILAR	**Eielson Array**	**87.79**	**11**	P	**P**	**15 24 31.7**	**+2.0**
	comp=Z,1.0nm,0.8s,baz=224,slow=5.2,SNR=10.0 comp=Z,1.0nm,0.8s						
VNA2	**Neumayer--Watz**	**88.03**	**176**	⇑P	**P**	**15 24 33.1**	**+2.1**
	comp=Z,3.9nm,0.7s,baz=186,slow=4.2						
E19K	**Redstone River**	**88.85**	**6**	P	**P**	**15 24 35.8**	**+1.2**
E19K				IAmb	IAmb	15 24 38.1	
	comp=Z,4.1nm,1.0s						
LYN	**LuoYang**	**88.99**	**308**	P	**P**	**15 24 39.0**	**+2.9**
LYN				pmax	pmax		
	comp=Z,28nm,1.0s						
XAN	**Xi'an**	**91.44**	**306**	P	**P**	**15 24 50.3**	**+2.7**
XAN				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC	**Hu-ho-hao-te**	**92.38**	**313**	*e*P	**P**	**15 24 52.3**	**+0.5**
HHC				pmax	pmax		
	comp=Z,16nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,4.4s						
CMAR	**Chiang Mai Arr**	**93.90**	**288**	P	**P**	**15 25 00.9**	**+1.7**
	comp=Z,5.7nm,0.9s,baz=126,slow=3.0,SNR=39 comp=Z,5.7nm,0.9s						
PZH	**PanZhiHua**	**94.31**	**297**	P	**P**	**15 25 00.8**	**-0.3**
YKA	**Yellowknife Ar**	**95.19**	**24**	P	**P**	**15 25 06.9**	**+2.8**
	comp=Z,0.3nm,0.6s,baz=246,slow=4.8,SNR=5.7 comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**114.24**	**313**	PKiKP	**PKiKP**	**15 30 21.3**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=59,slow=2.6,SNR=13						
KURBB	**Kurchatov Arra**	**116.91**	**317**	PKP	**PKiKP**	**15 30 26.0**	**+0.4**
	comp=Z,1.9nm,0.7s,baz=87,slow=1.8,SNR=13						
BVAR	**Borovoye Array**	**121.81**	**320**	PKP	**PKiKP**	**15 30 35.7**	**+0.6**
	comp=Z,4.0nm,0.6s,baz=93,slow=0.7,SNR=21						
FINES	**FINESS Array B**	**137.07**	**346**	PKhKP	PKPpre	15 30 56.6	
	comp=Z,2.9nm,0.9s,baz=42,slow=2.3,SNR=2.3						
HFS	**Hagfors**	**140.34**	**354**	PKhKP	PKPpre	15 31 03.1	
	comp=Z,1.6nm,0.8s,baz=45,slow=4.3,SNR=4.3						
SUW	**Suwalki**	**144.39**	**343**	*e*PKP	**PKPdf**	**15 31 18.5**	**+1.5**
EKA	**Eskdalemuir Ar**	**144.81**	**9**	PKP	**PKPdf**	**15 31 18.2**	**+0.4**
	comp=Z,2.5nm,0.7s,baz=359,slow=4.2,SNR=4.4						
AKASG	**Malin Array Be**	**145.07**	**334**	PKPbc	**PKPdf**	**15 31 18.9**	**+0.6**
	comp=Z,14nm,0.6s,baz=42,slow=4.3,SNR=90						
KIEV	**Kiev**	**145.08**	**334**	⇑P	**PKPdf**	**15 31 19.1**	**+0.7**
BEL	**Belsk**	**146.99**	**343**	*e*PKP	**PKiKP**	**15 31 26.8**	**+0.7**
SORM	**Soroca**	**147.39**	**332**	⇓P	**PKiKP**	**15 31 26.7**	**-0.4**
KWP	**Kalwaria Pacla**	**148.36**	**339**	*e*PKP	**PKPab**	**15 31 30.0**	**-0.5**
SHIU	**Shidnytsya**	**148.49**	**338**	PKP	**PKPab**	**15 31 30.0**	**-1.1**
STNU	**Starunia**	**148.50**	**336**	PKP	**PKiKP**	**15 31 29.8**	**+0.4**
OJC	**Ojcow**	**148.72**	**343**	*e*PKP	**PKPab**	**15 31 31.0**	**-0.9**
OJC	**Ojcow**	**148.72**	**343**	PKP	**PKiKP**	**15 31 30.1**	**+0.4**

KSP	**Ksiaz**	**148.97**	**348**	*e*PKP	**PKPab**	**15 31 31.9**	**-1.0**
KSP	**Ksiaz**	**148.97**	**348**	PKP	**PKPab**	**15 31 31.5**	**-1.4**
STHS	**Stebnicka Huta**	**149.01**	**341**	*e*PKP	**PKPdf**	**15 31 25.5**	**+0.5**
CLL	**Collm**	**149.08**	**352**	*i* PKPbc	**PKiKP**	**15 31 31.3**	**+0.8**
	comp=Z,13nm,0.9s						
CLL				*e*PKPab	**pPKPab**	**15 31 35.0**	**-0.4**
CLL	**Collm**	**149.08**	**352**	PKP	**PKiKP**	**15 31 31.2**	**+0.8**
BURAR	**Bucovina Array**	**149.12**	**335**	⇓P	**PKPab**	**15 31 32.4**	**-1.3**
OSTC	**Ostas**	**149.26**	**347**	⇑*e*PKP	**PKPab**	**15 31 32.6**	**-1.5**
NIE	**Niedzica**	**149.30**	**342**	*e*PKP	**PKPab**	**15 31 33.2**	**-1.1**
MUKU	**Mukachevo**	**149.38**	**338**	PKP	**PKiKP**	**15 31 32.6**	**+1.5**
GHRR		**149.38**	**330**	⇓P	**PKPab**	**15 31 33.1**	**-1.4**
GHRR		**149.38**	**330**	PKP	**PKiKP**	**15 31 33.0**	**+1.7**
HOLU	**Holmets**	**149.42**	**339**	PKP	**PKiKP**	**15 31 32.7**	**+1.5**
DPC	**Dobruska-Polom**	**149.43**	**347**	⇑*e*PKP	**PKPab**	**15 31 32.9**	**-2.0**
DPC	**Dobruska-Polom**	**149.43**	**347**	PKP	**PKiKP**	**15 31 32.8**	**+1.5**
STEB	**Steborice**	**149.50**	**345**	⇑*e*PKP	**PKiKP**	**15 31 32.8**	**+1.4**
STEB				*e*PKPAB	**sPKPab**	**15 31 37.6**	**-0.3**
KRLC	**Kraliky**	**149.59**	**346**	⇑*e*PKP	**PKiKP**	**15 31 33.3**	**+1.7**
KRLC				*e*PKPAB	**pPKPab**	**15 31 37.5**	**-0.1**
ONER	**Baraj Valea Uz**	**149.63**	**332**	⇑P	**PKiKP**	**15 31 33.2**	**+1.5**
CFR	**Carcaliu**	**149.68**	**328**	⇓P	**PKiKP**	**15 31 33.0**	**+1.2**
MORC	**Moravsky Berou**	**149.70**	**345**	⇓P	**PKPab**	**15 31 33.7**	**-2.2**
MORC	**Moravsky Berou**	**149.70**	**345**	*e*PKP	**PKiKP**	**15 31 33.0**	**+1.2**
TPGR	**Topolog**	**149.77**	**328**	⇓P	**PKiKP**	**15 31 33.6**	**+1.5**
LANS	**Liptovska Anna**	**149.78**	**343**	*e*PKP	**PKPab**	**15 31 34.3**	**-2.0**
VRI	**Vrincioaia**	**149.84**	**331**	⇓P	**PKiKP**	**15 31 33.7**	**+1.5**
BRTR	**Keskin Array B**	**149.87**	**315**	PKPbc	**PKiKP**	**15 31 33.0**	**+0.4**
	comp=Z,6.3nm,0.8s,baz=96,slow=2.8,SNR=35						
BRTR	**Keskin Array B**	**149.87**	**315**		**PKiKP**	**15 31 33.3**	**+0.6**
BR104	**Keskin Array S**	**149.87**	**315**	PKP	**PKiKP**	**15 31 33.2**	**+0.6**
BR106	**Keskin Array S**	**149.88**	**315**	PKP	**PKiKP**	**15 31 33.5**	**+0.8**
PLOR	**Plostina**	**149.88**	**331**	⇓P	**PKiKP**	**15 31 33.6**	**+1.3**
BR105	**Keskin Array S**	**149.88**	**315**	PKP	**PKiKP**	**15 31 33.4**	**+0.7**
KIRS	**Kirsehir-Merke**	**149.98**	**314**	⇓P	**PKiKP**	**15 31 33.9**	**+1.1**
MAUC	**Maruska**	**150.01**	**345**	⇑*e*PKP	**PKiKP**	**15 31 34.6**	**+2.1**
TURR	**Turia**	**150.01**	**332**	⇑P	**PKPab**	**15 31 34.8**	**-2.6**
KECS	**Kecovo**	**150.07**	**341**	*e*PKP	**PKPab**	**15 31 35.2**	**-2.3**
OZUR		**150.08**	**332**	⇓P	**PKiKP**	**15 31 34.5**	**+1.8**
PRU	**Pruhonice**	**150.12**	**349**	⇑*e*PKP	**PKiKP**	**15 31 34.3**	**+1.7**
VRAC	**Vranov**	**150.36**	**346**	⇓P	**PKiKP**	**15 31 35.2**	**+2.1**
VRAC	**Vranov**	**150.36**	**346**	*e*PKP	**PKiKP**	**15 31 34.6**	**+1.4**
MLR	**Muntele Rosu**	**150.48**	**331**	⇓P	**PKiKP**	**15 31 35.0**	**+1.3**
MLR	**Muntele Rosu**	**150.48**	**331**	PKP	**PKiKP**	**15 31 34.8**	**+1.1**
ISR	**Istrita**	**150.49**	**330**	⇓P	**PKiKP**	**15 31 35.4**	**+1.8**
JAV	**Velka Javorina**	**150.52**	**344**	*e*PKP	**PKiKP**	**15 31 36.2**	**+2.6**
KRUC	**Moravsky**	**150.63**	**346**	*e*PKP	**PKiKP**	**15 31 35.0**	**+1.3**
ZVC	**Zvikov**	**150.71**	**349**	⇑*e*PKP	**PKiKP**	**15 31 36.2**	**+2.3**
MARR	**Marisel-Cluj**	**150.71**	**336**	⇓P	**PKiKP**	**15 31 35.7**	**+1.6**
PSZ	**Piszkesteto**	**150.76**	**341**	⇑P	**PKiKP**	**15 31 36.2**	**+2.1**
VOIR		**150.92**	**332**	⇓P	**PKiKP**	**15 31 36.8**	**+2.3**
SAHE	**Sakarya_HENDEK**	**151.03**	**319**	⇑P	**PKiKP**	**15 31 35.8**	**+1.0**
MODS	**Modra-Piesok**	**151.07**	**345**	*e*PKP	**PK

PRSN				⇓*e*Sg	**Sg**	**15 23 18.8**	**-2.1**
PRSN				IAML		15 23 24.2	
	comp=N,9μm,0.3s						
AOPR	**Arecibo Observ**	**0.52**	**5**		**Pg**	**15 23 14.5**	**+0.1**
AOPR				IAML		15 23 22.1	
	comp=N,7μm,0.3s						
AOPR	**Arecibo Observ**	**0.52**	**5**	⇓*e*Pg	**Pg**	**15 23 14.6**	**+0.1**
AOPR				IAML		15 23 30.4	
	comp=N,4μm,0.3s						
ECPR	**Experimental S**	**0.65**	**40**		**Pb**	**15 23 17.7**	**-0.1**
ECPR				IAML		15 23 27.9	
	comp=N,5μm,0.3s						
ECPR				IAML		15 23 29.6	
	comp=N,4μm,0.2s						
ECPR	**Experimental S**	**0.65**	**40**		**Sb**	**15 23 26.6**	**-0.3**
IGPR	**InterUniversit**	**0.68**	**78**		**Pn**	**15 23 20.1**	**0.0**
IGPR					**Sn**	**15 23 31.2**	**+0.5**
SJG	**San Juan**	**0.69**	**65**		**Pn**	**15 23 19.1**	**-1.0**
SJG				IAML		15 23 30.3	
	comp=N,3μm,0.6s						
SJG	**San Juan**	**0.69**	**65**		**Sb**	**15 23 29.2**	**+1.2**
SJG	**San Juan**	**0.69**	**65**	⇓*e*Pg	**Pn**	**15 23 19.4**	**-0.8**
SJG				⇓*e*Sg	**Sn**	**15 23 29.8**	**-1.1**
SJG	**San Juan**	**0.69**	**65**	*i* P	**Pn**	**15 23 19.2**	**-1.0**
SJG				*e*S	**Sn**	**15 23 29.4**	**-1.5**
SJG				IAML		15 23 29.8	
	comp=Z,27μm,0.3s						
EMPR	**Esperanza - Ma**	**0.70**	**22**		**Pb**	**15 23 18.4**	**-0.2**
EMPR					**Sg**	**15 23 27.6**	**+0.6**
AGPR	**Aguadilla, PR**	**0.70**	**336**		**Pg**	**15 23 17.0**	**-0.9**
AGPR				IAML		15 23 25.6	
	comp=Z,4μm,0.4s						
AGPR				IAML		15 23 29.9	
	comp=Z,3μm,0.5s						
AGPR	**Aguadilla, PR**	**0.70**	**336**		**Sg**	**15 23 25.3**	**-1.8**
AGPR	**Aguadilla, PR**	**0.70**	**336**	*e*Pg	**Pg**	**15 23 17.2**	**-0.8**
AGPR				IAML		15 23 25.5	
	comp=N,3μm,0.2s						
AGPR				⇓*e*Sg	**Sg**	**15 23 25.6**	**-1.6**
IDE	**Isla Desecheo**	**0.85**	**311**		**Pg**	**15 23 19.6**	**-1.1**
IDE					**Sg**	**15 23 29.7**	**-2.1**
HUMP	**Col San Antoni**	**0.96**	**71**		**Pn**	**15 23 23.7**	**-0.3**
HUMP	**Col San Antoni**	**0.96**	**71**		**Sn**	**15 23 37.7**	**-0.1**
CUPR	**Culebra, Puert**	**1.52**	**71**		**Pg**	**15 23 33.9**	**+0.2**
HIDR	**Higuey Centro**	**1.97**	**293**	⇑*e*Pg	**Pn**	**15 23 37.7**	**-0.1**
HIDR				⇓*e*Sg	**Sn**	**15 24 01.1**	**-1.6**
HIDR				IAML		15 24 06.0	
	comp=N,231nm,0.2s						
DR12	**Loma Pena Alta**	**2.63**	**292**		**Pn**	**15 23 47.9**	**+0.9**
HATOM	**Hato Mayor del**	**2.63**	**292**	⇓*e*Pg	**Pn**	**15 23 48.1**	**+1.2**
HATOM				⇑*e*Sg	**Sn**	**15 24 19.2**	**+0.2**
HATOM				IAML		15 24 28.1	
	comp=N,106nm,0.8s						
DR08	**Loma La Naviza**	**3.26**	**291**	*e*Pg	**Pn**	**15 23 57.6**	**+1.9**
DR08				⇑*e*Sg	**Sn**	**15 24 38.3**	**+3.7**
DR08				IAML		15 24 49.2	
	comp=N,1μm,0.2s						
NADR	**Nagua**	**3.27**	**298**	⇑*e*Pg	**Pn**	**15 23 58.8**	**+3.0**
NADR				⇓*e*Sg	**Sn**	**15 24 38.3**	**+3.5**
NADR				IAML		15 24 53.0	
	comp=N,372nm,0.4s						
BANI	**BANI**	**3.43**	**280**	⇑*e*Pg	**Pn**	**15 23 58.7**	**+0.7**
BANI				⇑*e*Sg	**Sn**	**15 24 42.4**	**+3.5**
BANI				IAML		15 25 01.0	
	comp=N,106nm,0.5s						
SDDR	**Presa de Saban**	**4.41**	**286**	⇑*e*Pg	**Pn**	**15 24 15.1**	**+3.6**
SDDR				⇓*e*Sg	**Sb**	**15 25 11.8**	**-3.6**
SDDR				IAML		15 25 24.1	
	comp=N,41nm,1.0s						
ANWB	**Willy Bob**	**4.79**	**91**	*e*P	**Pn**	**15 24 14.7**	**-1.9**
DHSZ	**Broadband at M**	**5.06**	**107**	*e*P	**Pn**	**15 24 23.6**	**+3.2**
MMLZ	**Guadeloupe Bro**	**5.22**	**109**	*e*P	**Pn**	**15 24 24.7**	**+2.1**
DSLB	**Salisbury**	**5.68**	**114**	*e*P	**Pn**	**15 24 30.4**	**+1.5**
DSLB				x		15 25 32.5	
BIM	**Bigot**	**6.42**	**120**	*e*P	**Pn**	**15 24 39.4**	**+0.3**
BIM				*e*S	**Sn**	**15 25 47.3**	**-5.1**

*IDC **28** 15:36:15.3s3.3,38°.59N×29°.74W,h0km,mb3.5/6, mbtmp3.5/6,MS3.2/1,Error ellipse: s-maj=78.8km s-min=41.7km az=62.0*

*SVSA **28** 15:36:19.5±1.5,38°.63N×29°.21W,h5km,ML3.7(INMG), Error ellipse: s-maj=6.4km s-min=6.0km az=79.0, #DIST_RANGE: LOCAL #IPMA_REGION: W Faial*

ISC 28 15:36:21.3±1.1,38°.67N±0°.06×28°.95W±0°.06,h21km±1km, n26,σ1s49/40,mb3.6/4,Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	**Cedros**	**0.20**	**102**	*e*P	**Pb**	**15 36 26.3**	**-0.9**
PCED				*e*S	**Sb**	**15 36 31.7**	**+0.5**
PCED				IAML		15 36 32.2	
PCED				IAML		15 36 32.5	
PCED				IAML		15 36 32.5	
CALA	**Caldeira**	**0.21**	**115**	*e*P	**Pb**	**15 36 26.3**	**-1.0**
CALA				*e*S	**Sb**	**15 36 32.0**	**+0.5**
CALA				IAML		15 36 41.7	
CALA				IAML		15 36 43.3	
CALA				IAML		15 36 55.3	
PFCBR	**Castelo Branco**	**0.23**	**129**	*e*P	**Pb**	**15 36 26.5**	**-0.8**
PFCBR				*e*S	**Sb**	**15 36 32.3**	**+0.9**
PFCBR				IAML		15 36 32.6	
PFCBR				IAML		15 36 32.8	
PFCBR				IAML		15 36 39.5	
PRIB2	**Ribeirinha**	**0.27**	**106**	*e*P	**Pb**	**15 36 27.3**	**-0.3**
PRIB2				*e*S	**Sb**	**15 36 33.6**	**+1.7**
PRIB2				IAML		15 36 36.3	
PRIB2				IAML		15 36 36.7	
PRIB2				IAML		15 36 43.8	
HOR	**Horta**	**0.28**	**120**	*e*P	**Pb**	**15 36 27.5**	**-0.3**
HOR				*e*S	**Sb**	**15 36 33.9**	**+1.6**
HOR				IAML		15 36 35.2	
HOR				IAML		15 36 36.8	
HOR				IAML		15 36 37.7	
PCAN	**Candelaria**	**0.41**	**120**	*e*P	**Pb**	**15 36 29.5**	**-0.3**
PCAN				*e*S	**Sb**	**15 36 37.6**	**+2.0**
PCAN				IAML		15 36 38.5	
PCAN				IAML		15 36 39.5	
PCAN				IAML		15 36 40.0	
PICO	**Pico**	**0.44**	**112**	*e*P	**Pb**	**15 36 30.1**	**-0.2**
PICO				*e*S	**Sn**	**15 36 38.5**	**-1.3**
PICO				IAML		15 36 39.6	
PICO				IAML		15 36 40.0	
PICO				IAML		15 36 40.2	
ROSA	**Rosais**	**0.55**	**85**	*e*P	**Pb**	**15 36 31.6**	**-0.8**
ROSA				*e*S	**Sb**	**15 36 40.8**	**+0.9**
ROSA				IAML		15 36 41.4	
ROSA				IAML		15 36 43.8	
ROSA				IAML		15 36 46.9	
PPNO	**Prainha do Nor**	**0.57**	**110**	*e*P	**Pb**	**15 36 32.1**	**-0.6**
PPNO				*e*S	**Sb**	**15 36 41.5**	**+1.1**
PPNO				IAML		15 36 44.9	
PPNO				IAML		15 36 57.5	
PMAN	**Manadas**	**0.67**	**93**	*e*P	**Pb**	**15 36 33.2**	**-1.2**
PMAN				*e*S	**Sn**	**15 36 44.8**	**-0.7**
PMAN				IAML		15 36 50.4	
PMAN				IAML		15 36 51.4	
PMAN				IAML		15 37 00.3	
SRBC	**Serra Branca**	**0.80**	**62**	*e*S	**Sn**	**15 36 48.1**	**-0.5**
SRBC				IAML		15 36 52.4	
SRBC				IAML		15 36 52.8	
SRBC				IAML		15 37 01.4	
PGRA	**Graciosa**	**0.83**	**64**	*e*P	**Pb**	**15 36 36.4**	**-0.7**
PGRA				*e*S	**Sb**	**15 36 48.5**	**+0.6**
PGRA				IAML		15 36 49.8	
PGRA				IAML		15 36 50.1	
PGRA				IAML		15 36 55.4	
ADH	**Angra Heroismo**	**1.34**	**90**	*e*P	**Pn**	**15 36 43.2**	**-1.5**
ADH				*e*S	**Sn**	**15 37 00.4**	**-1.5**
ADH				IAML		15 37 01.3	
ADH				IAML		15 37 01.9	
ADH				IAML		15 37 02.5	
PAGU	**Agualva, Azore**	**1.38**	**85**	*e*P	**Pn**	**15 36 43.8**	**-1.6**
PAGU				*e*S	**Sn**	**15 37 00.8**	**-2.2**
PAGU				IAML		15 37 03.5	
PAGU				IAML		15 37 05.0	
PAGU				IAML		15 37 05.9	
PSCM	**Serra do Cume**	**1.43**	**88**	*e*P	**Pn**	**15 36 44.0**	**-2.1**
PSCM				*e*S	**Sn**	**15 37 02.8**	**-1.5**
PSCM				IAML		15 37 04.0	
PSCM				IAML		15 37 05.7	
PSCM				IAML		15 37 06.9	
PSET	**Sete Cidades**	**2.67**	**107**	*e*P	**Pn**	**15 37 01.7**	**-1.5**
PGRON	**Lagoa das Cont**	**2.95**	**107**	*e*P	**Pn**	**15 37 06.1**	**-0.9**
BART	**Pico Bartolome**	**3.10**	**106**	*e*P	**Pn**	**15 37 07.5**	**-1.6**
PSMN	**Pico do Norte,**	**3.49**	**117**	*e*P	**Pn**	**15 37 12.2**	**-2.2**
PSMN				*e*S	**Sn**	**15 37 51.6**	**-3.5**
PSMN				IAML		15 37 54.2	
PSMN				IAML		15 37 56.1	
PSMN				IAML		15 37 57.5	
ESDC	**Sonseca Array**	**19.38**	**79**	P	**Pn**	**15 40 51.1**	**+4.1**
	0.8nm,0.8s,baz=288,slow=9.3,SNR=6.2						
	0.8nm,0.8s						
NOA	**NORSAR Array B**	**33.41**	**35**	LR	LR	15 55 09.3	
	comp=Z,35nm,18.5s,baz=55,slow=34						
TORD	**Torodi Ar. Bea**	**37.18**	**125**	P	**P**	**15 43 31.8**	**+0.7**
	1.1nm,1.0s,baz=319,slow=7.6,SNR=3.6						
	1.1nm,1.0s						
AKASG	**Malin Array Be**	**42.03**	**54**	P	**P**	**15 44 11.4**	**+0.3**
	0.2nm,0.4s,baz=291,slow=7.8,SNR=1.5						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**70.73**	**40**	P	**P**	**15 47 35.7**	**+0.1**
	0.5nm,0.8s,baz=304,slow=7.5,SNR=5.6						
	0.5nm,0.8s						
MKAR	**Makanchi Array**	**75.09**	**42**	P	**P**	**15 48 01.6**	**+0.1**
	0.4nm,0.7s,baz=319,slow=5.3,SNR=6.3						
	0.4nm,0.7s						
SONM	**Songino Array**	**85.14**	**28**	P	**P**	**15 48 56.3**	**+0.3**
	0.4nm,0.7s,baz=335,slow=6.4,SNR=4.1						
	0.4nm,0.7s						

*TAP **28** 15:39:32.7,25°.91N×122°.26E,h233km,ML3.7,D*

*JMA **28** 15:39:35.1±0.4,25°.N±3°.×122°.3E±0°.8,h232km±3km, MV3.2/14,TAIWAN REGION*

ISC 28 15:39:33.2±2.7,25°.6N±0°.1×122°.35E±0°.05,h237km±15km, n71,σ0s90/98,3C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCYT	**Pengchaiyu**	**0.26**	**286**	P	**Pn**	**15 40 02.6**	**-1.4**
SXI1	**Grass Mountain**	**0.63**	**223**	*e*P	**Pn**	**15 40 05.8**	**+0.7**
TWB1	**Santiao Chiao**	**0.64**	**211**	P	**Pn**	**15 40 06.4**	**+1.3**
TIPB	**Shuangxi**	**0.75**	**219**	P	**Pn**	**15 40 06.5**	**+0.9**
NHDH	**Xindian Distri**	**0.95**	**232**	*e*P	**Pn**	**15 40 06.8**	**+0.3**
TWE	**Neicheng**	**1.04**	**216**	*i* P	**Pn**	**15 40 08.6**	**+1.6**
TWE				*i* S	**S**	**15 40 35.3**	**+1.7**
TWC	**Suao**	**1.05**	**206**	*i* P	**Pn**	**15 40 07.9**	**+0.8**
TWC				*i* S	**S**	**15 40 35.1**	**+1.4**
FUSB	**Fushanzhiwuyua**	**1.05**	**221**	P	**Pn**	**15 40 07.9**	**+0.7**
FUSB				S	**S**	**15 40 33.6**	**-0.4**
NDS	**Dongshan**	**1.09**	**212**	P	**Pn**	**15 40 09.0**	**+1.6**
NDS				S	**S**	**15 40 35.3**	**+1.1**
NWLT	**Wulai**	**1.09**	**225**	P	**Pn**	**15 40 08.0**	**+0.5**
NWLT				S	**S**	**15 40 33.2**	**-1.0**
EOS2	**EOS2**	**1.14**	**186**	P	**Pn**	**15 40 08.9**	**+1.3**
EOS2				S	**S**	**15 40 35.1**	**+0.6**
ENTT	**Nioudou**	**1.16**	**218**	*i* P	**Pn**	**15 40 08.6**	**+0.7**
ENTT				*i* S	**S**	**15 40 34.8**	**-0.2**
EWUT	**Wuta**	**1.22**	**205**	P	**Pn**	**15 40 08.8**	**+0.6**
EWUT				*e*S	**S**	**15 40 35.2**	**-0.5**
YHNB	**Yeheng**	**1.25**	**225**	P	**Pn**	**15 40 09.0**	**+0.4**
YHNB	**Yeheng**	**1.25**	**225**	*i* P	**Pn**	**15 40 09.0**	**+0.4**
YHNB				S	**S**	**15 40 34.8**	**-1.4**
NSK	**Sanguang**	**1.26**	**226**	⇑*i* P	**Pn**	**15 40 09.0**	**+0.4**
NSK				*i* S	**S**	**15 40 35.3**	**-1.0**
LATG	**Datong**	**1.26**	**217**	P	**Pn**	**15 40 09.6**	**+0.9**
LATG				S	**S**	**15 40 36.0**	**-0.4**
EOS3	**EOS3**	**1.27**	**181**	P	**Pn**	**15 40 09.2**	**+0.8**
EOS3				S	**S**	**15 40 36.0**	**+0.1**
KSHI	**Guanxi Townshi**	**1.32**	**234**	P	**Pn**	**15 40 09.6**	**+0.6**
KSHI				*e*S	**S**	**15 40 37.1**	**+0.2**
NNS	**Nan Shan**	**1.42**	**219**	⇑*i* P	**Pn**	**15 40 10.7**	**+0.8**
NNSB	**Datong**	**1.43**	**218**	⇑P	**Pn**	**15 40 10.6**	**+0.7**
NNSB				S	**S**	**15 40 37.8**	**-0.8**
EOS4	**EOS4**	**1.43**	**181**	P	**Pn**	**15 40 10.1**	**+0.8**
NFF	**Wufeng Townshi**	**1.45**	**231**	P	**Pn**	**15 40 10.3**	**+0.4**
NFF				S	**S**	**15 40 38.3**	**-0.4**
LIOB	**Emei**	**1.52**	**233**	P	**Pn**	**15 40 11.3**	**+0.8**
LIOB				*e*S	**S**	**15 40 38.9**	**-0.7**
NSTT	**Nanjuang**	**1.53**	**233**	*i* P	**Pn**	**15 40 10.8**	**+0.3**
NSTT				*i* S	**S**	**15 40 39.2**	**-0.6**
NACB	**Ninganchiao**	**1.54**	**207**	P	**Pn**	**15 40 10.4**	**-0.2**
NACB	**Ninganchiao**	**1.54**	**207**	P	**Pn**	**15 40 10.0**	**-0.6**
ETL	**Fush Village**	**1.54**	**206**	*e*P	**Pn**	**15 40 10.4**	**-0.3**
ETLH	**Xiulin Townshi**	**1.56**	**211**	P	**Pn**	**15 40 11.3**	**+0.4**
ETLH				*e*S	**S**	**15 40 38.9**	**-1.5**
TWD	**Chiawan**	**1.62**	**205**	P	**Pn**	**15 40 11.8**	**+0.5**
TWD				S	**S**	**15 40 40.3**	**-0.9**
FUSS	**Fushou**	**1.65**	**218**	*e*P	**Pn**	**15 40 12.6**	**+0.8**
FUSS				*e*S	**S**	**15 40 41.5**	**-0.5**
TDCB	**Techi**	**1.69**	**220**	*e*P	**Pn**	**15 40 12.7**	**+0.7**
IRIF	**Iriomote-Funau**	**1.75**	**134**	*e*P	**Pn**	**15 40 12.6**	**+0.4**
IRIF				*e*S	**S**	**15 40 41.7**	**-1.2**
ETM	**Tongmen**	**1.77**	**206**	*e*P	**Pn**	**15 40 12.7**	**+0.2**
WHP	**Taichung City**	**1.81**	**225**	*e*P	**Pn**	**15 40 13.5**	**+0.5**
TWQ1	**Liyutan**	**1.87**	**230**	*e*P	**Pn**	**15 40 13.0**	**-0.5**
SHUL	**Shoufeng**	**1.90**	**202**	*e*P	**Pn**	**15 40 13.7**	**-0.1**
WUSB	**Renai**	**1.92**	**216**	*e*P	**Pn**	**15 40 14.9**	**+0.9**
WUSB				*e*S	**S**	**15 40 45.1**	**-1.0**
OWD	**Renai**	**1.92**	**214**	*e*P	**Pn**	**15 40 15.4**	**+1.4**
ESL	**Shilin**	**1.93**	**206**	*e*P	**Pn**	**15 40 13.1**	**-0.8**
WCS	**Beigang Elemen**	**1.99**	**222**	*e*P	**Pn**	**15 40 14.8**	**+0.3**
HATJ	**Hateruma jima**	**1.99**	**138**	*e*S	**S**	**15 40 45.8**	**-1.1**
JKRS	**Kuro-shima**	**2.00**	**131**	*e*P	**Pn**	**15 40 15.5**	**+0.9**
JKRS				*e*S	**S**	**15 40 45.6**	**-1.3**
JIJ	**Ishigaki jima**	**2.01**	**126**	P	**Pn**	**15 40 15.1**	**+0.4**
JIJ				S	**S**	**15 40 44.9**	**-2.4**
JISG	**Ishigakijimahi**	**2.02**	**118**	P	**Pn**	**15 40 15.7**	**+0.9**
JISG				S	**S**	**15 40 46.1**	**-1.2**
VWDT	**VWDT**	**2.11**	**212**	*e*P	**Pn**	**15 40 15.5**	**+0.8**
SMLT	**Sun Moon Lake**	**2.13**	**219**	*e*P	**Pn**	**15 40 17.4**	**+1.5**
SSLB	**Suanglung**	**2.17**	**216**	P	**Pn**	**15 40 16.6**	**+0.3**
SSLB	**Suanglung**	**2.17**	**216**	P	**Pn**	**15 40 16.9**	**+0.6**
SSLB				*e*S	**S**	**15 40 49.2**	**-0.9**
EHY	**Hungye**	**2.25**	**205**	*e*P	**Pn**	**15 40 17.1**	**+0.1**
EHYH	**Wanrong**	**2.25**	**204**	*e*P	**Pn**	**15 40 17.4**	**+0.4**
WHYT	**Xinyi Township**	**2.30**	**217**	*e*P	**Pn**	**15 40 17.2**	**-0.4**
JTJ	**Tarama**	**2.32**	**113**	P	**Pn**	**15 40 19.0**	**+1.4**
JTJ				*e*S	**S**	**15 40 51.5**	**-1.0**
YULB	**Yu-li**	**2.36**	**204**	P	**Pn**	**15 40 17.2**	**-1.0**
TWF1	**Yuli**	**2.40**	**204**	*e*P	**Pn**	**15 40 18.7**	**+0.1**
CHN5	**Tsauling**	**2.48**	**218**	P	**Pn**	**15 40 20.4**	**+1.0**
ALS	**Alishan**	**2.48**	**215**	P	**Pn**	**15 40 20.9**	**+1.2**
FULB	**Fuli**	**2.54**	**203**	*e*P	**Pn**	**15 40 21.2**	**+1.2**
CHKT	**Chengkung**	**2.61**	**200**	*e*P	**Pn**	**15 40 22.4**	**+1.7**
EHD	**Haiduan**	**2.62**	**204**	*e*P	**Pn**	**15 40 21.2**	**+0.4**
WCKO	**Fanlu**	**2.64**	**217**	*e*P	**Pn**	**15 40 22.3**	**+1.3**
ELDTW	**Lidau**	**2.65**	**208**	*e*P	**Pn**	**15 40 21.6**	**+0.3**
TPUB	**Ta-pu**	**2.74**	**215**	P	**Pn**	**15 40 21.8**	**-0.3**
TPUB	**Ta-pu**	**2.74**	**215**	*e*P	**Pn**	**15 40 21.9**	**-0.2**
JMJ	**Miyako jima 2**	**2.77**	**105**	P	Pn	15 40 09.5	-13
WTP	**Ta-pu**	**2.79**	**215**	P	**Pn**	**15 40 22.2**	**-0.5**
WSL	**Shuilin Townsh**	**2.80**	**224**	*e*P	**Pn**	**15 40 22.8**	**0.0**
JMJ2	**Miyako jima3**	**2.82**	**106**	P	**Pn**	**15 40 24.3**	**+1.5**
JMJ2				*e*S	**S**	**15 41 01.1**	**-0.8**
TWK	**Hsinying**	**2.84**	**217**	P	**Pn**	**15 40 23.5**	**+0.3**
CHN1	**Nanshi**	**2.89**	**216**	P	**Pn**	**15 40 24.2**	**+0.5**
SSD	**Sandimen**	**3.21**	**210**	P	**Pn**	**15 40 28.0**	**+0.8**

*MOS **28** 15:43:14.6±1.0,1°.70S×120°.15E,h7km,mb5.8/61, MS5.3/29,Error ellipse: s-maj=8.3km s-min=4.6km az=111.8*

*IDC **28** 15:43:15.3±0.3,1°.80S×120°.00E,h0km,mb5.1/33, mbtmp5.1/35,ML4.9/2,MS5.2/67,Error ellipse: s-maj=13.2km s-min=8.1km az=65.0*

*NEIC **28** 15:43:17.5±2.4,1°.71S±0°.06×120°.18E±0°.05,h10km±1km, mb5.6/223,Ms_20 5.5/331,Mwb5.8/100,Mww5.9/43,Error ellipse: s-maj=9.4km s-min=8.8km az=187.0,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; Mrr=0.11; Mθθ=5.85; Mφφ=-5.74; Mrθ=-1.74; Mrφ=1.82; Mθφ=0.89; Fault plane solution: M0 6.38000×10^{17} NP1: φs307.26000°,δ74.66000°,λ6.68000°. NP2:φs215.49000°, δ83.56000°,λ164.56000°. Principal axes: T 6.6392, Plg15.0000°, Azm170.0000°; N -0.5534, Plg73.0000°, Azm13.0000°; P -6.0858, Plg6.0000°, Azm262.0000°;*

*NEIC **28** 15:43:17.9, 1°.78S×120°.15E, h20km*

*ISC-PP **28** 15:43:17, 1°.71S×120°.18E, h8km, Mwppsm6.2, Moment Tensor Solution. s44 Moment tensor: Scale 10^{18}Nm; Mrr=0.06±.07; Mθθ=0.59±.17; Mφφ=-0.51±.14; Mrθ=0.04±.19; Mφθ=-0.18±.11; Mrφ=0.40±.12; Fault plane solution: M0=2.40000×10^{18} NP1:φs28.20000°,δ80.00000°, λ192.60000°. NP2:φs296.00000°,δ77.60000°, λ-10.30000°.*

*IPGP **28** 15:43:17.0, 1°.77S×120°.19E, h8km, Mw5.9, Fault plane solution: NP1:φs304.00000°,δ74.00000°,λ-8.00000°. NP2:φs36.00000°,δ82.00000°,λ-164.00000°.*

*NEIC **28** 15:43:17.9, 1°.78S×120°.15E, h20km, Moment Tensor Solution. Duration: 4s1 Moment tensor: Scale 10^{17}Nm; Mrr=0.70; Mθθ=7.31; Mφφ=-6.60; Mrθ=1.09; Mφθ=3.14; Mrφ=-2.66; Fault plane solution: M0=8.18000×10^{17} NP1:φs34.71000°, δ73.11000°,λ-167.77000°. NP2:φs301.10000°, δ78.30000°,λ-17.25000°. Principal axes: T 8.0134, Plg4.0000°, Azm349.0000°; N 0.3206, Plg69.0000°, Azm88.0000°; P -8.3340, Plg20.0000°, Azm257.0000°;*

*DJA **28** 15:43:18.4±0.2,2°.S±1°×120°.0E±°, h13km±2km, M5.8/199, mB6.2/180, mb5.8/199, MLv6.3/48, Mw5.9/236, Mw(mB)5.9/180, MwMwp5.6/157, Mwp5.7/157*

*GFZ **28** 15:43:18.6, 1°.75S×120°.16E, h15km, MW5.8, Moment Tensor Solution. s76 Moment tensor: Mrr=0.48; Mθθ=5.65; Mφφ=-5.17; Mrθ=-0.76; Mφθ=1.61; Mφr-1.04; Fault plane solution: NP1:φs306.00000°,δ76.00000°, λ-1.00000°. NP2:φs37.00000°,δ88.00000°,λ-166.00000°. Principal axes: T 6.0100, Plg7.0000°, Azm171.0000°; N -0.4400, Plg76.0000°, Azm44.0000°; P -5.5700, Plg10.0000°, Azm262.0000°;*

*NEIC **28** 15:43:18, 1°.78S×120°.16E, h10km*

*GCMT **28** 15:43:19.5±0.1, 1°.68S×120°.18E, h19km, MW5.8/164, Moment Tensor Solution. s150,c313; s164,c537; Duration: 2s0 Moment tensor: Scale 10^{18}Nm; Mrr=0.10±.01; Mθθ=0.74±.01; Mφφ=-0.64±.01; Mrθ=0.08±.01; Mθφ=0.23±.00; Mrφ=0.01±.01; Best double couple: M0=0.73100×10^{18} NP1:φs36.00000°,δ86.00000°, λ177.00000°. NP2:φs126.00000°,δ87.00000°,λ4.00000°. Principal axes: T 0.7870, Plg5.0000°, Azm351.0000°; N -0.1110, Plg85.0000°, Azm165.0000°; P -0.6760, Plg1.0000°, Azm261.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*PTWC **28** 15:43:21, 1°.70S×120°.20E, h77km, Mwp6.1/6*

ISC 28 15:43:17.1±0.2,1°.83S±0°.02×120°.09E±0°.03,h8km, h8km:pP-P,n1073,σ1s95/947,mb5.6/276,MS5.5/294, 22C-11D,Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCI	**Palu**	**0.95**	**345**	P	**Pg**	**15 43 34.3**	**-1.0**
MMSI	**Mamuju**	**1.46**	**234**	P	**Pn**	**15 43 44.8**	**+1.1**
MMSI				S	**Sg**	**15 44 06.5**	**+2.6**
APSI	**Ampana**	**1.81**	**60**	P	**Pn**	**15 43 48.1**	**-0.4**
PMSI	**Majene**	**2.03**	**215**	P	**Pn**	**15 43 54.2**	**+2.5**
SPSI	**Sidrap Palu**	**2.15**	**188**	P	**Pn**	**15 43 55.7**	**+2.5**
MPSI	**Mapaga**	**2.16**	**355**	P	**Pn**	**15 43 52.6**	**-0.8**
LUWI	**Luwuk**	**2.79**	**74**	P	**Pn**	**15 44 02.2**	**+0.1**
LUWI	**Luwuk**	**2.79**	**74**		**Pn**	**15 44 01.4**	**-0.7**
LUWI	**Luwuk**	**2.79**	**74**	P	**Pn**	**15 44 01.4**	**-0.7**
KKSI	**Kolaka, Sulawe**	**2.81**	**146**	P	**Pn**	**15 44 03.8**	**+1.5**
MRSI	**Marisa**	**2.94**	**39**	P	**Pn**	**15 44 02.7**	**-1.5**
TOLI2	**Tolitoli**	**3.00**	**13**	P	**Pn**	**15 44 06.9**	**+1.9**
TOLI2	**Tolitoli**	**3.00**	**13**		**Pn**	**15 44 06.4**	**+1.4**
TOLI2	**Tolitoli**	**3.00**	**13**	P	**Pn**	**15 44 06.5**	**+1.5**
KAPI	**Kappang**	**3.19**	**186**	Pn	**Pn**	**15 44 10.6**	**+3.0**
	173nm,0.3s,baz=337,slow=9.2,SNR=174						
KAPI				Sn	**Sn**	**15 44 46.1**	**+0.4**
	168nm,0.3s,baz=30,slow=20,SNR=4.3						
KAPI	**Kappang**	**3.19**	**186**	P	**Pn**	**15 44 11.5**	**+4.0**
KAPI	**Kappang**	**3.19**	**186**		**Pn**	**15 44 10.2**	**+2.6**
KAPI	**Kappang**	**3.19**	**186**	*c* P	**Pn**	**15 44 09.4**	**+1.9**
KAPI	**Kappang**	**3.19**	**186**	P	**Pn**	**15 44 10.5**	**+3.0**
KAPI				S	**Sb**	**15 44 51.3**	**-1.7**
KAPI	**Kappang**	**3.19**	**186**	P	**Pn**	**15 44 10.1**	**+2.6**
KAPI	**Kappang**	**3.19**	**186**	P	**Pn**	**15 44 10.7**	**+3.2**
BKB	**Balikpapan**	**3.24**	**280**	P	**Pn**	**15 44 10.9**	**+2.7**
BKB	**Balikpapan**	**3.24**	**280**	S	**Sn**	**15 44 51.3**	**+4.3**
BKB	**Balikpapan**	**3.24**	**280**		**Pn**	**15 44 10.4**	**+2.2**
BKB	**Balikpapan**	**3.24**	**280**	P	**Pn**	**15 44 10.7**	**+2.5**
BKB	**Balikpapan**	**3.24**	**280**	P	**Pn**	**15 44 10.2**	**+2.0**
MKS	**Makassar**	**3.42**	**190**	P	**Pn**	**15 44 13.2**	**+2.4**
GTOI	**Gorontalo**	**3.81**	**50**	P	**Pn**	**15 44 14.8**	**-1.3**
BSSI	**Bau Bau, Buton**	**4.31**

BNDI Bandanaira 10.16 106 P **Pn** **15 45 46.6 +3.2**
BNDI Bandanaira 10.16 106 P **Pn** **15 45 45.9 +2.5**
SNJI Sawahan-Nganju 10.19 234 P **Pn** **15 45 47.1 +3.2**
NGJI Ngawi 10.21 237 P Pn 15 45 49.1 +5.1
DAV Davao City (W) 10.40 32 Pn **Pn** **15 45 49.4 +2.8**
22nm,0.3s,baz=109,slow=3.3,SNR=28
DAV Sn **Sn** **15 47 43.9 +0.4**
22nm,0.3s,baz=77,slow=18,SNR=1.9
DAV LR LR 15 49 50.4
comp=Z,26µm,19.2s,baz=144,slow=38
DAV Davao City (W) 10.40 32 P **Pn** **15 45 49.5 +2.8**
DAV Davao City (W) 10.40 32 P **Pn** **15 45 44.7 -2.0**
32µm1µm,1.9s
BUKP Musuan 10.84 27 *e*P **Pn** **15 45 55.8 +3.0**
BUKP *e*S Sn 15 47 38.6 -16
PCJI Pacitan 10.90 234 P **Pn** **15 45 56.3 +2.8**
16µm1µm,1.3s
SMRI Semarang 10.93 241 P Pn 15 45 59.4 +5.5
SMRI Semarang 10.93 241 Pn Pn 15 45 59.2 +5.3
SMRI Semarang 10.93 241 P **Pn** **15 45 58.1 +4.2**
24µm12µm546nm,1.4s
CGP Cagayan de Oro 11.20 24 *e*P Pn 15 46 04.6 +7.0
SWI Sorong 11.21 85 P **Pn** **15 45 57.4 -0.4**
24µm8µm510nm,0.7s
SIJI Sorong 11.22 85 Pn **Pn** **15 45 59.1 +1.2**
22nm,0.3s,baz=283,slow=9.1,SNR=49
SIJI Sn **Sn** **15 48 02.5 -1.1**
6.4nm,0.3s,baz=65,slow=21,SNR=7.1
SIJI LR LR 15 51 02.6
comp=Z,13µm,21.8s,baz=249,slow=41
129nm,0.4s
SIJI Sorong 11.22 85 P **Pn** **15 45 57.2 -0.7**
20µm7µm453nm,0.9s
UGM Wanagama 11.28 237 P Pn 15 46 04.0 +5.2
UGM Wanagama 11.28 237 **Pn** **15 45 59.9 +1.1**
UGM Wanagama 11.28 237 P Pn 15 46 04.2 +5.4
UGM Wanagama 11.28 237 P **Pn** **15 46 02.6 +3.8**
15µm13µm753nm,1.5s
YOGI Yogyakarta 11.43 238 P **Pn** **15 46 04.6 +3.9**
21µm1µm,1.3s
PPR Puerto Princes 11.60 353 *e*P **Pn** **15 46 06.5 +3.3**
BIPH Bislig 11.75 32 *e*P Pn 15 46 14.9 +10
BIPH *e*S Sn 15 48 05.1 -11
CTJI Waduk Cacaban 12.02 244 P **Pn** **15 46 12.1 +3.2**
9µm261nm,1.2s
FAKI Fak Fak 12.20 95 P **Pn** **15 46 10.6 -0.7**
FAKI Fak Fak 12.20 95 **Pn** **15 46 10.4 -0.9**
FAKI Fak Fak 12.20 95 P **Pn** **15 46 10.6 -0.7**
FAKI Fak Fak 12.20 95 P **Pn** **15 46 11.2 -0.1**
22µm5µm488nm,1.2s
KPJI Karang Pucung 12.39 243 P **Pn** **15 46 18.2 +4.3**
25µm8µm526nm,1.3s
TSSP Tandag City 12.40 29 *e*P **Pn** **15 46 18.3 +4.3**
TPI Tanjungpandan 12.46 266 P **Pn** **15 46 15.8 +1.0**
21µm4µm225nm,0.9s
LLP Lapu-Lapu 12.67 18 *e*P **Pn** **15 46 21.1 +3.5**
LLP *e*S Sn 15 49 12.5 +33
SCPH Surigao 12.72 25 *e*P **Pn** **15 46 21.5 +3.0**
SAUI Saumlaki 12.73 119 P **Pn** **15 46 21.3 +2.6**
SAUI Saumlaki 12.73 119 **Pn** **15 46 18.6 0.0**
SAUI Saumlaki 12.73 119 P **Pn** **15 46 21.2 +2.6**
SAUI Saumlaki 12.73 119 P **Pn** **15 46 20.1 +1.5**
16µm13µm688nm,1.4s
LEM Lembang 13.38 248 Pn **Pn** **15 46 30.2 +2.5**
2.4nm,0.3s,baz=60,slow=9.4,SNR=24
LEM LR LR 15 51 45.7
comp=Z,24µm,19.0s,baz=72,slow=38
LEM Lembang 13.38 248 P **Pn** **15 46 31.0 +3.3**
LEM Lembang 13.38 248 P **Pn** **15 46 30.8 +3.1**
18µm10µm261nm,1.0s
RCP Roxas 13.56 11 *e*P **Pn** **15 46 33.4 +3.5**
BBJI Bungbulang 13.60 245 P **Pn** **15 46 34.2 +3.7**
BBJI Bungbulang 13.60 245 **Pn** **15 46 32.0 +1.5**
BBJI Bungbulang 13.60 245 P **Pn** **15 46 33.7 +3.2**
10µm8µm332nm,2.0s
KMPI Kaimana, Papua 13.72 98 P **Pn** **15 46 32.5 +0.4**
17µm14µm1µm,1.4s
PLP Palo 13.79 21 *e*P **Pn** **15 46 37.4 +4.3**
PPBI Pangkal Pinang 13.95 268 P **Pn** **15 46 36.9 +1.7**
MWPI Manokwari, Pap 13.98 87 P **Pn** **15 46 36.3 +0.7**
15µm17µm1µm,1.4s
RKPI Ransiki, Papua 14.09 89 P **Pn** **15 46 35.8 -1.4**
16µm8µm380nm,0.9s
DBJI Dramaga 14.10 250 P **Pn** **15 46 39.7 +2.3**
20µm13µm509nm,2.0s
SBJI Serang 14.56 253 P **Pn** **15 46 45.6 +2.0**
21µm1µm714nm,1.3s
AUDHS Darwin High Sc 14.98 135 P **Pn** **15 46 48.8 -0.6**
DRS Darwin Rock St 15.03 135 P **Pn** **15 46 49.1 -0.8**
CGJI Cibinong 15.12 251 P **Pn** **15 46 53.8 +2.6**
BLSI Bandar Lampung 15.22 256 P **Pn** **15 46 54.4 +1.8**
13µm7µm554nm,1.4s
AUQP San Andres 15.27 10 *e*P **P** **15 46 59.5 +1.5**
PMBI Palembang 15.34 266 P **Pn** **15 46 58.4 +4.3**
PMBI Palembang 15.34 266 P **Pn** **15 46 56.6 +2.5**
13µm9µm450nm,1.0s
MTN Manton Dam 15.48 136 P **Pn** **15 46 54.6 -1.3**
comp=Z,160nm,1.7s
MTN Manton Dam 15.48 136 Pn **Pn** **15 46 55.8 -0.1**
MTN IAmb IAmb 15 47 00.8
comp=Z,552nm,1.6s
MTN Manton Dam 15.48 136 P **Pn** **15 46 53.7 -2.2**
KLI Kotabumi 15.50 258 P **Pn** **15 46 56.1 -0.1**
comp=Z,13µmcomp=Z,7µmcomp=Z,417nm,0.9s
DSRI Dabo 15.56 275 P **Pn** **15 46 57.8 +0.8**
comp=Z,11µmcomp=Z,4µmcomp=Z,317nm,1.2s
KLSI 15.59 259 P **Pn** **15 46 59.1 +1.7**
TPRI Tanjung Pinang 15.79 280 P **Pn** **15 47 01.0 +1.0**
comp=Z,12µmcomp=Z,7µmcomp=Z,276nm,1.1s
TGY Tagaytay City 15.85 3 Pn **P** **15 47 06.9 +2.3**
comp=Z,15nm,0.3s,baz=209,slow=4.1,SNR=30
TGY LR LR 15 52 53.9
comp=Z,13µm,21.6s,baz=174,slow=37
KASI Kota Agung 15.98 256 P **Pn** **15 47 04.7 +2.2**
comp=Z,12µmcomp=Z,9µmcomp=Z,574nm,1.4s
BAKI Biak 16.03 88 P **Pn** **15 47 04.2 +1.1**
MDSI Maura Dua 16.10 260 P **Pn** **15 47 04.8 +0.8**
comp=Z,8µmcomp=Z,222nm,1.3s
SRPI Serui, Papua 16.15 90 P **Pn** **15 47 04.9 +0.3**
comp=Z,9µmcomp=Z,6µmcomp=Z,398nm,1.2s
KNRA Kununurra 16.21 149 P **Pn** **15 47 04.0 -1.3**
comp=Z,277nm,1.2s
KNRA Kununurra 16.21 149 Pn **Pn** **15 47 04.3 -1.0**
LWLI Liwa 16.31 258 P **Pn** **15 47 08.8 +2.0**
comp=Z,15µmcomp=Z,11µmcomp=Z,744nm,1.6s
KDU Kakadu 16.34 132 P **Pn** **15 47 05.1 -1.9**
comp=Z,86nm,1.1s
JMBI JAMBI 16.44 270 P P 15 47 20.1 +9.0
BTDF Bukit Timah Da 16.61 281 P **Pn** **15 47 12.9 +2.3**
BTDF Bukit Timah Da 16.61 281 P **Pn** **15 47 12.3 +1.7**
MYKOM Kota Tinggi 16.63 282 P **Pn** **15 47 12.2 +1.5**
MYKOM Kota Tinggi 16.63 282 **Pn** **15 47 11.4 +0.7**
MYKOM Kota Tinggi 16.63 282 P **Pn** **15 47 12.2 +1.5**
comp=Z,10µmcomp=Z,279nm,1.2s
XMI Christmas Isla 16.67 238 P **Pn** **15 47 11.7 +0.4**
FITZ Fitzroy Crossi 17.07 162 P **Pn** **15 47 15.6 -0.6**
comp=Z,1.8nm,0.3s,baz=357,slow=14,SNR=37
FITZ LR LR 15 54 45.2
comp=Z,11µm,19.2s,baz=356,slow=40
comp=Z,101nm,0.9s
MNAI Manna 17.29 261 P **P** **15 47 23.1 +2.6**
MNAI Manna 17.29 261 Pn **Pn** **15 47 17.5 -1.5**
MNAI IAmb IAmb 15 47 28.0
comp=Z,334nm,0.9s
MNAI Manna 17.29 261 P **Pn** **15 47 21.2 +2.1**
comp=Z,22µmcomp=Z,20µmcomp=Z,864nm,1.0s
KSI Kapahiang 17.57 264 P **Pn** **15 47 24.6 +2.0**
comp=Z,20µmcomp=Z,16µmcomp=Z,557nm,1.9s
MASI Maura Aman, Be 17.88 265 P **Pn** **15 47 28.3 +1.9**
comp=Z,2µm,1.4s
UBSI University, Be 17.90 263 P **Pn** **15 47 28.8 +2.2**
comp=Z,913nm,1.3s
BOLP Bolinao 18.09 359 *e*P **P** **15 47 32.0 +2.7**
EGSI Enggano, Bengk 18.11 258 P **Pn** **15 47 30.7 +1.4**
comp=Z,16µmcomp=Z,12µmcomp=Z,855nm,1.5s
KRJI Kerinci 18.61 269 P **Pn** **15 47 37.5 +2.0**
BKNI Bangkinang 19.16 276 P **Pn** **15 47 44.7 +2.6**
BKNI Bangkinang 19.16 276 P **Pn** **15 47 43.7 +1.6**
comp=Z,13µmcomp=Z,9µmcomp=Z,275nm,1.1s
MBWA Marble Bar 19.22 181 P **Pn** **15 47 44.4 +1.7**
MBWA Marble Bar 19.22 181 P **P** **15 47 39.8 -2.0**
MBWA Marble Bar 19.22 181 P **P** **15 47 42.5 +0.7**
MBWA P **P** **15 47 42.5 +0.7**
MBWA P **P** **15 47 42.5 +0.7**
MBWA S **S** **15 51 22.0 +2.2**
MBWA S **S** **15 51 22.0 +2.2**
SZP Santa 19.26 1 P **P** **15 47 43.7 +1.5**
SIPP Brgy, Tapao 19.63 1 *e*P **P** **15 47 44.2 -2.0**
PSA00 Pilbara Seismi 19.63 181 P **P** **15 47 48.5 +2.3**
PSA00 Pilbara Seismi 19.63 181 P **P** **15 47 44.1 -2.1**
PSA00 Pilbara Seismi 19.63 181 P **P** **15 47 47.5 +1.2**
PSA00 IAmb IAmb 15 47 58.8
comp=Z,91nm,1.3s
PDSI Padang 19.64 272 P **P** **15 47 47.9 +1.4**
comp=Z,14µmcomp=Z,10µmcomp=Z,333nm,1.1s
PPI Padang Panjang 19.73 274 P **P** **15 47 49.2 +1.8**
comp=Z,14µmcomp=Z,8µmcomp=Z,390nm,2.0s
PIP Pasuquin 20.03 1 *e*P **P** **15 47 50.4 -0.3**
GENI Genyem 20.08 93 P **P** **15 47 53.8 +2.5**
GENI Genyem 20.08 93 P **P** **15 47 52.0 +0.7**
comp=Z,19µmcomp=Z,13µmcomp=Z,813nm,1.7s
PPSI Pulau Pagai 20.08 267 P **P** **15 47 53.2 +1.9**
comp=Z,2µm,1.9s
JAY Jayapura 20.61 92 P **P** **15 47 57.8 +0.7**
comp=Z,74nm,1.0s,baz=266,slow=4.3,SNR=13
JAY LR LR 15 57 09.8
comp=Z,10µm,21.6s,baz=292,slow=40
comp=Z,74nm,1.0s
JAY Jayapura 20.61 92 P **P** **15 47 56.6 -0.5**
comp=Z,183nm,1.0s
KULM Kulim 20.66 290 P **P** **15 47 59.3 +1.7**
KULM Kulim 20.66 290 P **P** **15 47 58.4 +0.8**
KULM IAmb IAmb 15 48 13.4
comp=Z,581nm,1.4s
KULM Kulim 20.66 290 P **P** **15 47 58.8 +1.2**
comp=Z,9µmcomp=Z,5µmcomp=Z,312nm,1.2s
MNSI Mandailing Nat 20.67 277 P **P** **15 47 58.7 +1.1**
comp=Z,8µmcomp=Z,363nm,1.2s
MMPI Merauke 21.25 109 P **P** **15 48 04.5 +0.5**
RPSI Rantau Prapat 21.63 282 P **P** **15 48 09.4 +1.4**
RPSI IAmb IAmb 15 48 26.0
comp=Z,512nm,1.3s
PSI Prapat 21.65 282 P **P** **15 48 09.5 +1.1**
PSI Prapat 21.65 282 P **P** **15 48 09.4 +1.1**
PSI pmax pmax
comp=Z,512nm,1.3s
PSI MLR MLR
comp=Z,14µm,19.0s
PSI Prapat 21.65 282 P **P** **15 48 09.0 +0.6**
comp=Z,9µmcomp=Z,6µmcomp=Z,299nm,1.0s
PBSI Pulau Batu 21.87 274 P **P** **15 48 11.3 +0.7**
comp=Z,11µmcomp=Z,17µmcomp=Z,754nm,1.3s
TSI Tuntungan 22.15 284 P **P** **15 48 14.7 +1.1**
comp=Z,9µmcomp=Z,11µmcomp=Z,436nm,1.2s
UBPT Khong Chiam 22.32 320 P **P** **15 48 18.0 +2.7**
GSI Gunungsitoli 22.72 278 P **P** **15 48 21.6 +1.9**
GSI Gunungsitoli 22.72 278 P **P** **15 48 20.1 +0.3**
GSI Gunungsitoli 22.72 278 P **P** **15 48 20.3 +0.6**
comp=Z,9µmcomp=Z,7µmcomp=Z,321nm,1.1s
WRA Warramunga Arr 22.77 143 P **P** **15 48 19.7 -0.5**
comp=Z,246nm,0.9s,baz=319,slow=9.9,SNR=244
WRA PcP **PcP** **15 52 12.0 -0.2**
comp=Z,5.9nm,0.9s,baz=333,slow=1.7,SNR=1.7
WRA S **S** **15 52 31.3 +1.8**
comp=Z,47nm,1.3s,baz=318,slow=17,SNR=5.5
WRA LR LR 15 58 26.6
comp=Z,12µm,20.2s,baz=322,slow=40
WRAB Tennant Creek 22.77 143 P **P** **15 48 19.4 -0.8**
WRAB Tennant Creek 22.77 143 *ce*P **P** **15 48 19.8 -0.4**
WRAB pmax pmax
comp=Z,1µm,1.7s
WRAB MLR MLR
comp=Z,8µm,18.0s
KCSI Kotacane, Aceh 22.93 283 P **P** **15 48 21.7 -0.2**
comp=Z,6µmcomp=Z,226nm,1.5s
QIZ Qiongzhong 23.04 335 P **P** **15 48 25.2 +2.2**
QIZ Qiongzhong 23.04 335 P **P** **15 48 22.4 -0.6**
QIZ IAmb IAmb 15 48 36.1
comp=Z,301nm,1.2s
QIZ Qiongzhong 23.04 335 P **P** **15 48 24.8 +1.8**
QIZ S **S** **15 52 33.0 -1.2**
QIZ pmax pmax
comp=Z,160nm,1.2s
QIZ pmax pmax
comp=Z,3µm,5.9s
QIZ L L
comp=Z,5µm,20.3s
QIZ L L
comp=Z,3µm,19.7s
QIZ L L
comp=Z,6µm,19.0s
TPTI 23.45 282 P **P** **15 48 27.6 +0.4**
LHMI Lhok Sumawe 24.15 287 P **P** **15 48 36.0 +2.0**
LHMI Lhok Sumawe 24.15 287 P **P** **15 48 35.1 +1.1**
comp=Z,8µmcomp=Z,10µmcomp=Z,973nm,1.3s
MLSI Meulaboh, Aceh 24.43 284 P **P** **15 48 35.9 -0.6**
comp=Z,5µmcomp=Z,8µmcomp=Z,735nm,1.1s
TWGBT Beinan 24.51 2 P **P** **15 48 39.1 +1.9**
HKPS Hong Kong Po S 24.65 347 P **P** **15 48 41.1 +2.7**
MEEK Meekatharra 24.71 183 P **P** **15 48 40.0 +1.0**
TPUB Ta-pu 24.98 1 P **P** **15 48 43.6 +2.2**
YULB Yu-li 25.09 3 P **P** **15 48 43.5 +1.1**
YULB Yu-li 25.09 3 P **P** **15 48 42.2 -0.2**
COCO West Island 25.24 245 P **P** **15 48 46.2 +2.4**
COCO West Island 25.24 245 P **P** **15 48 45.5 +1.7**
SSLB Suanglung 25.47 2 P **P** **15 48 47.4 +1.5**
SSLB Suanglung 25.47 2 P **P** **15 48 45.4 -0.5**
AS31 Alice Springs 25.51 149 P **P** **15 48 45.6 -0.7**
ASAR Alice Springs 25.51 149 P **P** **15 48 46.3 +0.1**
comp=Z,74nm,0.7s,baz=332,slow=9.4,SNR=390
ASAR PcP **PcP** **15 52 17.9 -0.2**
comp=Z,13nm,0.7s,baz=338,slow=2.6,SNR=8.9
ASAR ScP **ScP** **15 55 57.2 -0.7**
comp=Z,2.7nm,1.0s,baz=311,slow=3.2,SNR=3.6
ASAR LR LR 15 59 34.1
comp=Z,9µm,20.8s,baz=324,slow=38
comp=Z,74nm,0.7s
ASAR Alice Springs 25.51 149 P **P** **15 48 46.0 -0.2**
AUALC St Philip's Co 25.52 150 P **P** **15 48 46.2 -0.1**
BSI Banda Aceh 25.81 287 P **P** **15 48 48.6 -0.4**
comp=Z,3µmcomp=Z,135nm,1.0s
COEN Coen 25.81 119 P **P** **15 48 48.4 -0.7**
COEN Coen 25.81 119 P **P** **15 48 48.2 -0.9**
COEN IAmb IAmb 15 49 18.7
comp=Z,198nm,1.3s
NACB Ninganchiao 25.89 3 P **P** **15 48 51.7 +2.1**
NACB Ninganchiao 25.89 3 IAmb IAmb 15 49 02.8
comp=Z,181nm,0.9s
GZH2 Guangzhou 26.09 346 P **P** **15 48 53.0 +1.6**
GZH2 S **S** **15 53 26.5 +3.5**
GZH2 SS **SnSn** **15 54 30.3 +9.2**
GZH2 pmax pmax
comp=Z,94nm,1.1s
GZH2 L L
comp=Z,9µm,17.4s
GZH2 L L
comp=Z,5µm,12.9s
GZH2 L L
comp=Z,12µm,22.6s
YHNB Yeheng 26.37 3 P **P** **15 48 56.6 +2.6**
QIS Mount Isa 26.64 136 P **P** **15 48 55.1 -1.4**
QZH2 Quanzhou 26.65 357 P **P** **15 49 00.3 +3.8**
QZH2 S **S** **15 53 37.0 +5.1**
QZH2 pmax pmax
comp=Z,200nm,1.5s
QZH2 pmax pmax
comp=Z,2µm,6.5s
QZH2 L L
comp=Z,5µm,16.5s
QZH2 L L
comp=Z,4µm,17.4s
QZH2 L L
comp=Z,7µm,16.4s
TATO Taipei 26.68 3 P **P** **15 48 58.3 +1.6**
TATO Taipei 26.68 3 P **P** **15 48 55.8 -0.9**
TATO P **P** **15 48 55.8 -0.9**
MORW Morawa 27.36 188 P **P** **15 49 03.3 +0.3**
MORW Morawa 27.36 188 P **P** **15 49 03.2 +0.3**
MORW IAmb IAmb 15 49 27.2
comp=Z,151nm,1.2s
PMG Port Moresby 27.96 107 P **P** **15 49 08.5 +0.1**
comp=Z,56nm,1.0s,baz=352,slow=7.6,SNR=26
PMG LR LR 16 03 29.1
comp=Z,5µm,18.5s,baz=282,slow=43
comp=Z,56nm,1.0s
PMG Port Moresby 27.96 107 P **P** **15 49 08.6 +0.2**
PMG Port Moresby 27.96 107 P **P** **15 49 07.0 -1.4**
PMG IAmb IAmb 15 49 37.7
comp=Z,135nm,1.0s
PMG Port Moresby 27.96 107 *c i*P **P** **15 49 08.1 -0.3**
PMG pmax pmax
comp=Z,184nm,1.3s
PMG MLR MLR
comp=Z,7µm,23.0s
PMG Port Moresby 27.96 107 P **P** **15 49 08.0 -0.3**
comp=Z,5µmcomp=Z,2µmcomp=Z,162nm,1.1s
GULI GuiLin 28.55 341 P **P** **15 49 17.8 +4.2**
GULI S **S** **15 54 08.5 +6.5**
GULI pmax pmax
comp=Z,110nm,2.0s
GULI pmax pmax
comp=Z,2µm,9.3s
GULI L L
comp=Z,6µm,18.6s
GULI L L
comp=Z,5µm,17.2s
GULI L L
comp=Z,8µm,27.7s
MTSU Mount Surprise 28.77 126 P **P** **15 49 15.5 -0.2**
BLDU Ballidu 28.81 186 P **P** **15 49 16.6 +0.8**
GUMO Guam 28.96 57 P **P** **15 49 17.8 +0.5**
comp=Z,79nm,1.0s,baz=240,slow=16,SNR=5.1
GUMO LR LR 16 01 38.0
comp=Z,3µm,18.5s,baz=236,slow=38
comp=Z,79nm,1.0s
CM31 Chiang Mai Arr 28.97 315 IAmb IAmb 15 49 27.4
comp=Z,291nm,1.6s
CM31 Chiang Mai Arr 28.97 315 P **P** **15 49 19.3 +2.0**
SNR=57
CM31 S **S** **15 54 09.8 +1.1**
CMAR Chiang Mai Arr 28.97 315 P **P** **15 49 18.5 +1.2**
comp=Z,53nm,0.9s,baz=140,slow=7.0,SNR=304
CMAR Chiang Mai Arr 28.97 315 P **P** **15 49 19.2 +1.9**
CMAR Chiang Mai Arr 28.97 315 P **P** **15 49 19.3 +1.9**
CHTO Chiang Mai 29.20 316 P **P** **15 49 21.6 +2.1**
CHTO Chiang Mai 29.20 316 P **P** **15 49 20.3 +0.8**
CHTO Chiang Mai 29.20 316 P **P** **15 49 20.3 +0.8**
CHTO pmax pmax
comp=Z,334nm,1.7s
CHTO MLR MLR
comp=Z,8µm,22.0s
CHTO Chiang Mai 29.20 316 P **P** **15 49 21.0 +1.5**
CHTO P **P** **15 49 21.0 +1.5**
CHTO S **S** **15 54 12.9 +0.6**
CHTO S **S** **15 54 12.9 +0.6**
CHTO Chiang Mai 29.20 316 P **P** **15 49 20.8 +1.3**
comp=Z,2µmcomp=Z,129nm,1.3s
JOW Kunigami 29.57 15 P **P** **15 49 23.2 +0.7**
comp=Z,29nm,0.7s,baz=215,slow=16,SNR=4.4
JOW LR LR 16 01 59.7
comp=Z,5µm,20.2s,baz=200,slow=38
comp=Z,29nm,0.7s
FORT Forrest 29.77 166 P **P** **15 49 23.3 -1.0**
FORT IAmb IAmb 15 50 18.2
comp=Z,226nm,1.6s
PBA Port Blair 30.30 297 *e*P P 15 49 26.1 -3.1
PBA IAmb IAmb 15 49 52.8
comp=Z,4µm,3.8s
PBA *e*S **S** **15 54 27.4 -2.2**
CNSH ChangSha 30.62 348 P **P** **15 49 33.5 +1.7**
CNSH S **S** **15 54 38.0 +3.7**
CNSH pmax pmax
comp=Z,13nm,0.8s
CNSH L L
comp=Z,4µm,20.4s
CNSH L L
comp=Z,5µm,15.9s
CNSH L L
comp=Z,6µm,19.6s
DGPR DIGLIPUR 30.79 300 *e*P P 15 49 29.8 -3.7
DGPR IAmb IAmb 15 49 30.6
comp=Z,412nm,2.3s
DGPR *e*S **S** **15 54 34.1 -3.3**
GYA Guiyang 30.96 336 ⇑P **P** **15 49 36.8 +1.7**
GYA PP **PP** **15 50 42.8 -2.2**
GYA S **S** **15 54 40.3 +0.3**
GYA pmax pmax
comp=Z,28nm,0.7s
GYA L L
comp=Z,5µm,16.8s
GYA L L
comp=Z,4µm,15.7s
GYA L L
comp=Z,7µm,21.4s
NWAO Narrogin (SRO) 31.05 185 LR LR 16 03 03.6
comp=Z,6µm,19.4s,baz=354,slow=38
NWAO Narrogin (SRO) 31.05 185 P **P** **15 49 35.9 +0.2**
NWAO IAmb IAmb 15 50 05.9
comp=Z,254nm,1.8s
NWAO Narrogin (SRO) 31.05 185 P **P** **15 49 35.9 +0.2**
NWAO pmax pmax
comp=Z,254nm,1.8s
NWAO MLR MLR
comp=Z,6µm,18.0s
CTA Charters Tower 31.36 127 P **P** **15 49 37.9 -0.6**
comp=Z,32nm,0.9s,baz=298,slow=9.6,SNR=17
CTA LR LR 16 04 43.1
comp=Z,5µm,18.9s,baz=297,slow=41
comp=Z,32nm,0.9s
CTAO Charters Tower 31.36 127 P **P** **15 49 38.6 +0.1**
CTAO Charters Tower 31.36 127 P **P** **15 49 37.8 -0.7**
CTAO Charters Tower 31.36 127 P **P** **15 49 37.8 -0.7**
CTAO pmax pmax
comp=Z,56nm,1.1s
CTAO MLR MLR
comp=Z,6µm,19.0s
KMI2 Kunming 31.64 329 ⇓P **P** **15 49 43.8 +2.6**
KMI2 S **S** **15 54 53.5 +2.6**
KMI2 pmax pmax
comp=Z,150nm,1.2s
KMI2 pmax pmax
comp=Z,1µm,3.0s
KMI2 L L
comp=Z,5µm,18.5s
KMI2 L L
comp=Z,8µm,18.3s
KMI2 L L
comp=Z,7µm,20.1s
KRVT Keravat (AS076 31.99 95 LR LR 16 03 07.3
comp=Z,688nm,20.5s,baz=194,slow=37
AUAYR Ayr State High 32.03 125 P **P** **15 49 44.6 +0.2**
RABL Rabaul 32.12 95 P **P** **15 49 43.8 -1.6**
INKA Ininaminka 32.48 144 P **P** **15 49 48.4 +0.1**
INKA IAmb IAmb 15 49 53.1
comp=Z,72nm,0.9s
WHN Wuhan 32.65 351 P **P** **15 49 51.3 +1.6**
WHN pP **pP** **15 49 54.8 +2.3**
WHN S **S** **15 55 05.0 -1.0**
WHN sS **sS** **15 55 15.8 +5.1**
WHN L L
comp=Z,12µm,14.6s
WHN L L
comp=Z,10µm,14.4s
WHN L L
comp=Z,21µm,18.1s
SSE Sheshan 32.76 2 P **P** **15 49 51.8 +1.2**
SSE S **S** **15 55 08.8 +1.2**
SSE pmax pmax
comp=Z,25nm,0.9s
SSE pmax pmax
comp=Z,200nm,3.5s
SSE L L
comp=Z,2µm,17.9s
SSE L L
comp=Z,1µm,18.1s
PZH PanZhiHua 33.27 329 P **P** **15 49 56.3 +1.0**
PZH pP **sP** **15 50 01.5 +2.2**
PZH S **S** **15 55 18.0 +1.9**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,210nm,5.6s
PZH L L
comp=Z,5µm,17.0s
PZH L L
comp=Z,5µm,16.7s
PZH L L
comp=Z,5µm,19.5s
ENH Enshi 33.48 343 P **P** **15 49 57.6 +0.6**
ENH Enshi 33.48 343 P **P** **15 49 57.3 +0.3**
NJ2 Nanjing 33.71 358 *e*P **P** **15 50 00.5 +1.6**
NJ2 sP **sP** **15 50 08.0 +4.9**
NJ2 S **S** **15 55 25.8 +3.3**
NJ2 PcS **PcS** **15 56 21.8 -2.8**
NJ2 pmax pmax

	comp=Z,220nm,1.9s										
NJ2					L	L					
	comp=Z,12µm,21.8s										
NJ2					L	L					
	comp=Z,9µm,21.8s										
NJ2					L	L					
	comp=Z,19µm,24.6s										
QLP	**Quilpie**	**33.82**	**139**		P	**P**	**15**	**50**	**00.5**	**+0.5**
TNCH	**TengChong**	**33.91**	**323**	⇑	P	**P**	**15**	**50**	**03.3**	**+2.3**
TNCH					S	**S**	**15**	**55**	**26.5**	**+0.4**
TNCH					pmax	pmax					
	comp=Z,87nm,1.3s										
TNCH					pmax	pmax					
	comp=Z,560nm,2.7s										
TNCH					L	L					
	comp=Z,7µm,17.1s										
TNCH					L	L					
	comp=Z,7µm,17.2s										
TNCH					L	L					
	comp=Z,13µm,17.9s										
BBOO	**Buckleboo**	**34.28**	**156**		P	**P**	**15**	**50**	**04.1**	**+0.1**
BBOO	**Buckleboo**	**34.28**	**156**		IAmb	IAmb	15	50	07.8		
	comp=Z,113nm,0.8s										
JCJ	**Chichijima**	**35.78**	**35**		P	**P**	**15**	**50**	**15.0**	**-2.0**
	comp=Z,734nm,0.7s,baz=211,slow=2.2,SNR=26										
JCJ					LR	LR	16	02	32.8		
	comp=Z,2µm,20.7s,baz=214,slow=32										
JCJ	**Chichijima**	**35.78**	**35**		P	**P**	**15**	**50**	**18.6**	**+1.7**
JCJ	**Chichijima**	**35.78**	**35**		P	P	15	50	13.7	-3.2
SAIH	**SAIHA**	**35.82**	**314**	*e*	P	P	15	50	13.9	-3.5
SAIH					IAmb	IAmb	15	50	27.2		
	comp=Z,164nm,1.3s										
SAIH				*e*	S	**S**	**15**	**55**	**53.1**	**-2.4**
MORE	**Moreh**	**36.03**	**318**		IAmb	IAmb	15	50	31.5		
	comp=Z,100nm,0.9s										
MORE					IAMs_20	IAMs_20	16	05	48.9		
	comp=Z,7µm,22.0s										
HTT	**Hallett**	**36.06**	**153**		P	**P**	**15**	**50**	**20.1**	**+0.8**
CD2	**Chengdu**	**36.08**	**336**		P	**P**	**15**	**50**	**20.3**	**+0.8**
CD2					S	**S**	**15**	**55**	**59.8**	**+0.7**
CD2					pmax	pmax					
	comp=Z,140nm,0.9s										
CD2					pmax	pmax					
	comp=Z,2µm,4.3s										
CD2					L	L					
	comp=Z,4µm,15.9s										
CD2					L	L					
	comp=Z,8µm,15.9s										
CD2					L	L					
	comp=Z,7µm,18.4s										
STKA	**Stephens Creek**	**36.12**	**148**		P	**P**	**15**	**50**	**20.1**	**+0.2**
	comp=Z,156nm,0.7s,baz=318,slow=9.0,SNR=160										
	comp=Z,156nm,0.7s										
STKA	**Stephens Creek**	**36.12**	**148**		P	**P**	**15**	**50**	**19.9**	**+0.1**
STKA	**Stephens Creek**	**36.12**	**148**	*c i*	P	**P**	**15**	**50**	**20.2**	**+0.4**
JNU	**Nakatsue**	**36.22**	**15**		P	**P**	**15**	**50**	**21.1**	**+0.5**
	comp=Z,20nm,0.8s,baz=180,slow=3.0,SNR=7.6										
	comp=Z,20nm,0.8s										
AUNRC	**North Rockhamp**	**36.45**	**128**		P	**P**	**15**	**50**	**22.0**	**-0.7**
IMP	**Imphal**	**36.67**	**318**	*e*	P	P	15	50	21.4	-3.3
IMP					IAmb	IAmb	15	50	33.6		
	comp=Z,131nm,1.1s										
IMP				*e*	S	**S**	**15**	**56**	**05.3**	**-3.1**
LYN	**LuoYang**	**36.89**	**349**	⇓	P	**P**	**15**	**50**	**27.3**	**+1.0**
LYN					sP	sP	15	50	40.5	+10
LYN					PP	**PP**	**15**	**51**	**55.5**	**+5.1**
LYN					S	**S**	**15**	**56**	**13.0**	**+1.8**
LYN					pmax	pmax					
	comp=Z,250nm,1.8s										
LYN					pmax	pmax					
	comp=Z,1µm,5.2s										
LYN					L	L					
	comp=Z,9µm,21.0s										
LYN					L	L					
	comp=Z,4µm,26.7s										
LYN					L	L					
	comp=Z,9µm,19.4s										
BRDH	**Bariadhala**	**36.91**	**313**		LR	LR	16	09	41.8		
	comp=Z,7µm,19.6s,baz=120,slow=43										
AUMAR	**Marden Senior**	**37.16**	**154**		P	**P**	**15**	**50**	**29.5**	**+0.9**
GHSS	**Government Hou**	**37.17**	**154**		P	**P**	**15**	**50**	**29.9**	**+1.2**
KOHI	**KOHIMA**	**37.17**	**319**	*e*	P	P	15	50	24.9	-4.2
KOHI					IAmb	IAmb	15	50	37.6		
	comp=Z,174nm,1.0s										
KOHI				*e*	S	**S**	**15**	**56**	**11.5**	**-4.6**
XAN	**Xi'an**	**37.19**	**345**	⇓	P	**P**	**15**	**50**	**29.0**	**+0.1**
XAN					PP	**PnPn**	**15**	**52**	**00.5**	**+6.3**
XAN					S	**S**	**15**	**56**	**15.0**	**-1.0**
XAN					pmax	pmax					
	comp=Z,130nm,1.8s										
XAN					pmax	pmax					
	comp=Z,660nm,3.6s										
XAN					L	L					
	comp=Z,6µm,23.4s										
XAN					L	L					
	comp=Z,4µm,13.1s										
XAN					L	L					
	comp=Z,8µm,24.7s										
MOKO	**MOKOCHONG**	**37.32**	**320**	*e*	P	P	15	50	26.8	-3.5
MOKO					IAML		15	50	48.0		
	comp=Z,356nm,1.0s										
MOKO				*e*	S	**S**	**15**	**56**	**13.6**	**-4.9**
BELO	**BELONIA**	**37.40**	**313**	*e*	P	**P**	**15**	**50**	**28.6**	**-2.2**
BELO					IAmb	IAmb	15	50	41.9		
	comp=Z,174nm,0.8s										
BELO				*e*	S	**S**	**15**	**56**	**16.3**	**-3.1**
SILR	**SILCHAR**	**37.41**	**317**	*e*	P	P	15	50	27.1	-3.8
SILR					IAmb	IAmb	15	50	43.1		
	comp=Z,41nm,0.9s										
SILR				*e*	S	**S**	**15**	**56**	**15.4**	**-4.2**
AUMBR	**Murray Bridge**	**37.65**	**154**		P	**P**	**15**	**50**	**33.2**	**+0.5**
JMN	**Monobe**	**37.68**	**19**		P	**P**	**15**	**50**	**36.0**	**+3.0**
JORH	**JORHAT**	**37.79**	**321**	*e*	P	P	15	50	30.9	-3.1
JORH					IAmb	IAmb	15	50	42.9		
	comp=Z,647nm,1.4s										
JORH				*e*	S	**S**	**15**	**56**	**21.5**	**-3.6**
AGT	**Agartala**	**37.94**	**314**	*e*	P	P	15	50	31.5	-3.8
AGT					IAmb	IAmb	15	50	44.2		
	comp=Z,312nm,1.9s										
AGT				*e*	S	**S**	**15**	**56**	**24.7**	**-2.9**
TIA	**Tai'an**	**37.94**	**356**		P	**P**	**15**	**50**	**35.3**	**+0.1**
TIA					PP	**PP**	**15**	**52**	**01.0**	**-1.0**
TIA					S	**S**	**15**	**56**	**26.0**	**-1.3**
TIA					pmax	pmax					
	comp=Z,45nm,1.8s										
TIA					pmax	pmax					
	comp=Z,940nm,7.8s										
TIA					L	L					
	comp=Z,3µm,16.7s										
TIA					L	L					
	comp=Z,4µm,16.7s										
TIA					L	L					
	comp=Z,6µm,20.1s										
PASG	**PASIGHAT**	**38.07**	**323**	*e*	P	P	15	50	33.4	-3.1
PASG					IAmb	IAmb	15	50	53.0		
	comp=Z,134nm,1.7s										
AULRC	**Lightning Ridg**	**38.18**	**139**		P	**P**	**15**	**50**	**37.2**	**-0.1**
CMSA	**Cobar Meteorol**	**38.18**	**143**		P	**P**	**15**	**50**	**37.6**	**+0.3**
ITAN	**ITANAGAR**	**38.40**	**320**	*e*	P	P	15	50	36.0	-3.2
ITAN					IAmb	IAmb	15	50	50.1		
	comp=Z,204nm,1.2s										
ITAN				*e*	S	**S**	**15**	**56**	**30.9**	**-3.6**
SHL	**Shillong**	**38.56**	**317**		IAmb	IAmb	15	50	52.0		
	comp=Z,104nm,0.8s										
SHL	**Shillong**	**38.56**	**317**		P	**P**	**15**	**50**	**41.4**	**+0.7**
	SNR=81										
SHL	**Shillong**	**38.56**	**317**	*e*	P	P	15	50	37.1	-3.7
SHL					IAmb	IAmb	15	50	51.9		
	comp=Z,83nm,0.8s										
SHL				*e*	S	**S**	**15**	**56**	**32.8**	**-4.4**
ZIRO	**ZIRO**	**38.59**	**321**	*e*	P	P	15	50	37.8	-3.2
ZIRO					IAmb	IAmb	15	50	48.1		
	comp=Z,145nm,1.1s										
TJN	**Taejon**	**38.61**	**9**		P	**P**	**15**	**50**	**42.3**	**+1.5**
TEZP	**TEZPUR**	**38.64**	**319**	*e*	P	P	15	50	37.6	-3.6
TEZP					IAmb	IAmb	15	50	48.4		
	comp=Z,166nm,2.1s										
TEZP				*e*	S	**S**	**15**	**56**	**35.0**	**-3.1**
GUWA	**GUWAHATI**	**39.09**	**317**	*e*	P	P	15	50	41.7	-3.3
GUWA					IAmb	IAmb	15	50	59.0		
	comp=Z,28nm,0.4s										
GUWA				*e*	S	**S**	**15**	**56**	**42.2**	**-2.8**
CAL	**Calcutta**	**39.31**	**310**	*e*	P	P	15	50	43.3	-3.6
CAL					IAmb	IAmb	15	50	43.8		
	comp=Z,94nm,0.3s										
CAL				*e*	S	**S**	**15**	**56**	**47.2**	**-1.1**
HNS	**HongShan**	**39.34**	**353**	⇑	P	**P**	**15**	**50**	**47.8**	**+0.9**
HNS					PP	**PnPn**	**15**	**52**	**26.0**	**+6.0**
HNS					S	**S**	**15**	**56**	**43.0**	**-5.4**
HNS					pmax	pmax					
	comp=Z,94nm,1.9s										
HNS					pmax	pmax					
	comp=Z,2µm,5.8s										
HNS					L	L					
	comp=Z,7µm,19.7s										
HNS					L	L					
	comp=Z,2µm,19.5s										
HNS					L	L					
	comp=Z,8µm,20.4s										
JHJ	**Hachijo jima 2**	**39.42**	**26**		LR	LR	16	06	53.4		
	comp=Z,3µm,19.6s,baz=262,slow=36										
INCN	**Inchon**	**39.58**	**8**		P	**P**	**15**	**50**	**52.5**	**+3.5**
INCN	**Inchon**	**39.58**	**8**		P	**P**	**15**	**50**	**47.0**	**-2.0**
INCN	**Inchon**	**39.58**	**8**		P	**P**	**15**	**50**	**47.0**	**-2.0**
INCN					pmax	pmax					
	comp=Z,93nm,1.4s										
INCN					MLR	MLR					
	comp=Z,3µm,21.0s										
INCN	**Inchon**	**39.58**	**8**		P	**P**	**15**	**50**	**47.4**	**-1.6**
INCN					P	**P**	**15**	**50**	**47.4**	**-1.6**
KSAR	**Wonju Array Be**	**39.73**	**10**		P	**P**	**15**	**50**	**49.7**	**-0.5**
KSAR	**Wonju Array Be**	**39.73**	**10**		P	**P**	**15**	**50**	**49.7**	**-0.5**
KSRS	**Korea Array**	**39.75**	**10**		P	**P**	**15**	**50**	**50.4**	**0.0**
	comp=Z,35nm,1.1s,baz=191,slow=8.2,SNR=30										
KSRS					LR	LR	16	08	37.9		
	comp=Z,3µm,20.0s,baz=190,slow=38										
	comp=Z,35nm,1.1s										
KS19	**Wonju Array Si**	**39.79**	**10**		P	**P**	**15**	**50**	**49.8**	**-0.9**
TAWA	**Tawang**	**39.91**	**319**	*e*	P	P	15	50	47.6	-4.7
TAWA					IAmb	IAmb	15	51	07.8		
TAWA				*e*	S	**S**	**15**	**56**	**52.5**	**-5.4**
TIY	**Taiyuan**	**39.97**	**351**	*e*	P	**P**	**15**	**50**	**55.0**	**+2.7**
TIY					S	**S**	**15**	**56**	**57.3**	**-0.7**
TIY					pmax	pmax					
	comp=Z,79nm,1.9s										
TIY					pmax	pmax					
	comp=Z,970nm,4.5s										
TIY					L	L					
	comp=Z,3µm,16.1s										
TIY					L	L					
	comp=Z,3µm,18.8s										
TIY					L	L					
	comp=Z,4µm,20.4s										
BWNR	**Bhubaneshwar**	**40.12**	**305**	*e*	P	P	15	50	50.1	-3.5
BWNR					IAmb	IAmb	15	51	10.2		
	comp=Z,54nm,0.9s										
BWNR				*e*	S	**S**	**15**	**56**	**58.5**	**-2.0**
DHUB	**DHUBRI**	**40.15**	**316**	*e*	P	P	15	50	50.7	-3.2
SAVO	**Savo Central**	**40.18**	**102**		P	**P**	**15**	**50**	**53.1**	**-1.2**
INU	**Inuyama**	**40.23**	**22**		P	**P**	**15**	**50**	**56.2**	**+1.8**
PALK	**Pallekele**	**40.32**	**283**		LR	LR	16	07	56.0		
	comp=Z,7µm,21.4s,baz=98,slow=37										
PALK	**Pallekele**	**40.32**	**283**		P	P	15	50	51.4	-4.1
PALK	**Pallekele**	**40.32**	**283**		IAMs_20	IAMs_20	16	07	44.0		
	comp=Z,7µm,21.0s										
PALK	**Pallekele**	**40.32**	**283**	*i*	P	**P**	**15**	**50**	**55.9**	**+0.3**
	SNR=8.3										
PALK	**Pallekele**	**40.32**	**283**		P	P	15	50	51.4	-4.1
PALK					pmax	pmax					
	comp=Z,107nm,1.5s										
PALK					MLR	MLR					
	comp=Z,7µm,21.0s										
PALK	**Pallekele**	**40.32**	**283**		P	**P**	**15**	**50**	**55.7**	**+0.1**
PALK					S	**S**	**15**	**57**	**04.5**	**+0.6**
PALK	**Pallekele**	**40.32**	**283**		P	**P**	**15**	**50**	**54.3**	**-1.2**
HNR	**Honiara**	**40.35**	**102**		P	**P**	**15**	**50**	**55.5**	**-0.2**
	comp=Z,6.7nm,0.8s,baz=291,slow=2.3,SNR=18										
HNR					LR	LR	16	08	02.1		
	comp=Z,112nm,21.6s,baz=352,slow=37										
HNR	**Honiara**	**40.35**	**102**		P	**P**	**15**	**50**	**55.9**	**+0.2**
HNR	**Honiara**	**40.35**	**102**		P	P	15	50	52.4	-3.3
HNR	**Honiara**	**40.35**	**102**		P	P	15	50	52.4	-3.3
HNR					pmax	pmax					
	comp=Z,302nm,1.0s										
MGBR	**Mount Gambier**	**40.39**	**155**		P	**P**	**15**	**50**	**56.8**	**+1.1**
MGBR					IAmb	IAmb	15	50	58.3		
	comp=Z,196nm,1.2s										
AUDCS	**Dubbo College**	**40.45**	**141**		P	**P**	**15**	**50**	**56.9**	**+0.6**
DL2	**Dalian**	**40.56**	**2**		P	**P**	**15**	**50**	**56.3**	**-0.7**
DL2					PP	**PnPn**	**15**	**52**	**35.5**	**+1.1**
DL2					S	**S**	**15**	**57**	**05.8**	**-0.7**
DL2					pmax	pmax					
	comp=Z,68nm,1.0s										
DL2					pmax	pmax					
	comp=Z,730nm,4.3s										
DL2					L	L					
	comp=Z,3µm,17.5s										
DL2					L	L					
	comp=Z,3µm,19.4s										
DL2					L	L					
	comp=Z,5µm,19.6s										
LZDM	**Lanzhou Array**	**40.58**	**339**		P	**P**	**15**	**50**	**57.1**	**-0.6**
	comp=Z,19nm,0.8s,baz=173,slow=13,SNR=7.6										
LZDM					LR	LR	16	08	35.5		
	comp=Z,5µm,21.1s,baz=130,slow=38										
	comp=Z,19nm,0.8s										
JGF	**Kuroka**	**40.58**	**22**		P	**P**	**15**	**50**	**58.9**	**+1.5**
LZH	**Lanzhou**	**40.65**	**340**	*e*	P	**P**	**15**	**50**	**59.5**	**+1.5**
LZH					sP	sP	15	51	08.0	+5.9
LZH					PP	**PP**	**15**	**52**	**35.0**	**+3.3**
LZH					S	**S**	**15**	**57**	**08.3**	**0.0**
LZH					pmax	pmax					
	comp=Z,68nm,1.5s										
LZH					pmax	pmax					
	comp=Z,680nm,5.2s										
LZH					L	L					
	comp=Z,3µm,16.8s										
LZH					L	L					
	comp=Z,3µm,17.5s										
LZH					L	L					
	comp=Z,5µm,18.2s										
COBR	**COOCHBEHAR**	**40.70**	**315**	*e*	P	P	15	50	55.5	-2.9
COBR					IAmb	IAmb	15	51	00.5		
	comp=Z,4µm,0.0s										
COBR				*e*	S	**S**	**15**	**57**	**05.5**	**-3.5**
VIS	**Vishakhapatnam**	**41.09**	**300**	*e*	P	P	15	50	57.1	-4.6
VIS					IAmb	IAmb	15	51	18.1		
	comp=Z,278nm,1.5s										
VIS				*e*	S	**S**	**15**	**57**	**11.2**	**-3.8**
AUPHS	**Peel High Scho**	**41.18**	**138**		P	**P**	**15**	**51**	**03.3**	**+1.0**
ARMA	**Armidale**	**41.26**	**137**		P	**P**	**15**	**51**	**04.7**	**+1.6**
ARMA	**Armidale**	**41.26**	**137**		P	**P**	**15**	**51**	**01.4**	**-1.7**
ARMA					IAmb	IAmb	15	51	06.2		
	comp=Z,243nm,1.7s										
SHBG	**Sahibganj**	**41.37**	**313**	*e*	P	**P**	**15**	**51**	**01.9**	**-2.0**
SHBG					IAmb	IAmb	15	51	17.4		
	comp=Z,102nm,0.9s										
SHBG				*e*	S	**S**	**15**	**57**	**18.2**	**-0.9**
JPG	**JALPAIGURI**	**41.38**	**315**	*e*	P	**P**	**15**	**51**	**01.6**	**-2.4**
JPG					IAmb	IAmb	15	51	23.2		
	comp=Z,341nm,0.2s										
JPG				*e*	S	**S**	**15**	**57**	**15.6**	**-3.5**
AUHPC	**Hawkesdale P12**	**41.47**	**153**		P	**P**	**15**	**51**	**06.4**	**+1.8**
RAGD	**RAYAGADA**	**41.63**	**302**	*e*	P	P	15	51	03.3	-2.8
RAGD					IAmb	IAmb	15	51	23.1		
	comp=Z,97nm,0.9s										
RAGD				*e*	S	**S**	**15**	**57**	**20.1**	**-3.0**
MJAR	**Matsushiro Arr**	**41.73**	**22**		P	**P**	**15**	**51**	**04.7**	**-2.0**
	comp=Z,63nm,1.0s,baz=192,slow=8.4,SNR=28										
MJAR					LR	LR	16	06	32.5		
	comp=Z,4µm,21.0s,baz=212,slow=34										
	comp=Z,63nm,1.0s										
MJAR	**Matsushiro Arr**	**41.73**	**22**		P	**P**	**15**	**51**	**04.5**	**-2.3**
MJAR	**Matsushiro Arr**	**41.73**	**22**		P	**P**	**15**	**51**	**04.5**	**-2.3**
MJAR					pmax	pmax					
	comp=Z,102nm,1.2s										
MAJO	**Matsushiro**	**41.73**	**22**		P	**P**	**15**	**51**	**05.7**	**-1.1**
MAJO	**Matsushiro**	**41.73**	**22**		P	P	15	51	03.4	-3.4
MAJO					IAmb	IAmb	15	51	09.7		
	comp=Z,130nm,1.2s										
MAJO	**Matsushiro**	**41.73**	**22**	*i*	P	P	15	51	03.0	-3.8
MAJO					pmax	pmax					
	comp=Z,140nm,1.3s										
MJB9	**Matsu-Tunnel**	**41.74**	**22**		IAmb	IAmb	15	51	10.7		
	comp=Z,121nm,1.2s										
BRAT	**Ballarat**	**41.77**	**151**		P	**P**	**15**	**51**	**08.3**	**+1.2**
BJI2	**Beijing**	**41.80**	**355**		P	**P**	**15**	**51**	**07.0**	**-0.2**
BJI2					pP	**pP**	**15**	**51**	**11.5**	**+1.3**
BJI2					sP	**sP**	**15**	**51**	**14.3**	**+2.9**
BJI2					PP	**PP**	**15**	**52**	**46.3**	**+2.3**
BJI2					S	**S**	**15**	**57**	**26.3**	**+1.3**
BJI2					pmax	pmax					
	comp=Z,30nm,2.0s										
BJI2					pmax	pmax					
	comp=Z,600nm,4.4s										
BJI2					L	L					
	comp=Z,2µm,19.6s										
BJI2					L	L					
	comp=Z,1µm,20.0s										
BJI2					L	L					
	comp=Z,2µm,18.5s										
BJT	**Baijiatuau**	**41.80**	**355**		P	**P**	**15**	**51**	**07.7**	**+0.5**
BJT	**Baijiatuau**	**41.80**	**355**		P	**P**	**15**	**51**	**05.3**	**-1.9**
BJT					IAmb	IAmb	15	51	18.1		
	comp=Z,114nm,1.0s										
BJT	**Baijiatuau**	**41.80**	**355**		P	**P**	**15**	**51**	**05.3**	**-1.9**
BJT					pmax	pmax					
	comp=Z,115nm,1.0s										
LSA	**Lhasa**	**41.80**	**321**		IAmb	IAmb	15	51	17.2		
	comp=Z,95nm,0.7s										
LSA	**Lhasa**	**41.80**	**321**		P	**P**	**15**	**51**	**09.9**	**+1.9**
LSA	**Lhasa**	**41.80**	**321**		P	**P**	**15**	**51**	**08.0**	**0.0**
LSA					S	**S**	**15**	**57**	**26.5**	**+0.2**
LSA					pmax	pmax					
	comp=Z,61nm,0.8s										
LSA					L	L					
	comp=Z,3µm,13.7s										
LSA					L	L					
	comp=Z,2µm,14.1s										
GTK	**Tadong**	**41.93**	**316**	*e*	P	P	15	51	03.9	-4.8
GTK					IAmb	IAmb	15	51	22.3		
	comp=Z,111nm,2.0s										
GTK				*e*	S	**S**	**15**	**57**	**24.4**	**-3.3**
MDRS	**Chennai**	**42.21**	**292**	*e*	P	P	15	51	08.0	-2.9
MDRS					IAmb	IAmb	15	51	29.4		
	comp=Z,287nm,1.4s										
MDRS				*e*	S	**S**	**15**	**57**	**30.6**	**-1.1**
JMUI	**Jamui**	**42.24**	**311**	*e*	P	P	15	51	07.7	-3.4
JMUI					IAmb	IAmb	15	51	34.4		
	comp=Z,109nm,0.9s										
JMUI				*e*	S	**S**	**15**	**57**	**30.2**	**-1.8**
GEXS	**Deakin Univers**	**42.46**	**151**		P	**P**	**15**	**51**	**14.6**	**+1.9**
MLBS	**Spotswood, Mel**	**42.46**	**151**		P	**P**	**15**	**51**	**14.4**	**+1.7**
JHSG	**JHARSUGUGA**	**42.52**	**305**	*e*	P	**P**	**15**	**51**	**11.8**	**-1.6**
JHSG					IAmb	IAmb	15	51	27.7		
	comp=Z,256nm,1.6s										
JHSG				*e*	S	**S**	**15**	**57**	**32.2**	**-4.0**
MGCD	**Mangrove Creek**	**42.66**	**140**		P	**P**	**15**	**51**	**16.7**	**+2.3**
SYDH	**Sydney Hard Ro**	**42.80**	**141**		P	**P**	**15**	**51**	**17.4**	**+1.9**
AUMTS	**Mt Stromlo**	**42.80**	**144**		P	**P**	**15**	**51**	**16.4**	**+0.8**
CAN	**Canberra**	**42.80**	**144**		P	**P**	**15**	**51**	**16.9**	**+1.3**
CAN	**Canberra**	**42.80**	**144**		P	**P**	**15**	**51**	**14.0**	**-1.6**
CAN	**Canberra**	**42.80**	**144**		P	**P**	**15**	**51**	**14.0**	**-1.6**
CAN					pmax	pmax					
	comp=Z,296nm,1.1s										
CAN					MLR	MLR					
	comp=Z,4µm,19.0s										
AUDAR	**Daramalan Coll**	**42.84**	**144**		P	**P**	**15**	**51**	**16.6**	**+0.7**
AUMHS	**Melrose High S**	**42.88**	**144**		P	**P**	**15**	**51**	**17.0**	**+0.7**
VJD	**Vijayawada**	**42.99**	**297**	*e*	P	P	15	51	14.0	-3.3
VJD					IAmb	IAmb	15	51	27.5		
	comp=Z,194nm,1.3s										
VJD				*e*	S	**S**	**15**	**57**	**40.8**	**-2.3**
CNB	**Canberra Magne**	**43.01**	**144**		P	**P**	**15**	**51**	**18.4**	**+1.1**
HHC	**Hu-ho-hao-te**	**43.18**	**351**	*e*	P	**P**	**15**	**51**	**19.3**	**+0.7**
HHC					sP	sP	15	51	27.3	+4.5
HHC					S	**S**	**15**	**57**	**46.8**	**+1.3**
HHC					sS	sS	15	57	53.8	+3.5
HHC					SS	**SS**	**16**	**00**	**54.8**	**-3.7**
HHC					ScS	**ScS**	**16**	**01**	**15.5**	**-4.2**
HHC					pmax	pmax					
	comp=Z,37nm,0.9s										
HHC					pmax	pmax					
	comp=Z,880nm,5.8s										
HHC					L	L					
	comp=Z,3µm,15.1s										
HHC					L	L					
	comp=Z,2µm,15.1s										
HHC					L	L					
	comp=Z,3µm,15.7s										
WOLH	**Wollongong Har**	**43.30**	**142**		P	**P**	**15**	**51**	**21.6**	**+2.0**
AUSMG	**Snowy Mountain**	**43.36**	**146**		P	**P**	**15**	**51**	**21.4**	**+1.2**
BTO2	**Baotou**	**43.38**	**349**	*e*	P	**P**	**15**	**51**	**20.5**	**+0.3**
BTO2					PP	**PP**	**15**	**53**	**00.0**	**-1.2**
BTO2					S	**S**	**15**	**57**	**47.0**	**-1.5**
BTO2					pmax	pmax					
	comp=Z,53nm,1.3s										
BTO2					pmax	pmax					
	comp=Z,2µm,4.6s										
BTO2					L	L					
	comp=Z,5µm,15.2s										
BTO2					L	L					
	comp=Z,3µm,17.2s										
BTO2					L	L					
	comp=Z,11µm,19.8s										
SNY	**Shenyang**	**43.56**	**4**	⇓	P	**P**	**15**	**51**	**22.

comp=Z,4µm,20.0s
CN2 Changchun 45.68 5 *e*P **P** **15 51 39.5 +1.1**
CN2 PP **PP** **15 53 26.8 +1.4**
CN2 *e*S **S** **15 58 17.0 -4.6**
CN2 SS **ScS** **16 01 38.5 +3.3**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,400nm,11.6s
CN2 L L
comp=Z,2µm,19.0s
CN2 L L
comp=Z,2µm,19.0s
CN2 L L
comp=Z,2µm,20.1s
VLA Vladivostok 45.99 12 *i* P **P** **15 51 40.1 -0.7**
VLA pmax pmax
comp=Z,115nm,1.4s
VLA MLR MLR
comp=Z,3µm,19.0s
JTM Tenmabayashi 46.53 22 P **P** **15 51 47.9 +2.8**
MDJ Mudanjiang 47.01 9 P **P** **15 51 48.1 -0.8**
MDJ Mudanjiang 47.01 9 P **P** **15 51 47.2 -1.6**
MDJ Mudanjiang 47.01 9 P **P** **15 51 48.0 -0.8**
MDJ PP **PP** **15 53 39.0 -0.5**
MDJ S S 15 58 33.5 -7.2
MDJ SS **SS** **16 02 02.5 -5.3**
MDJ pmax pmax
comp=Z,49nm,1.4s
MDJ L L
comp=Z,1µm,23.6s
MDJ L L
comp=Z,4µm,23.4s
MDJ L L
comp=Z,4µm,23.1s
USRK Ussuriysk Ar. 47.04 12 P **P** **15 51 48.7 -0.5**
comp=Z,14nm,0.5s,baz=193,slow=6.3,SNR=16
comp=Z,14nm,0.5s
KAAM Kaadhehdhoo 47.14 272 P **P** **15 51 48.8 -1.7**
KAAM IAMs_20 IAMs_20 16 11 21.0
comp=Z,7µm,21.0s
KAAM Kaadhehdhoo 47.14 272 P **P** **15 51 50.8 +0.3**
KAAM Kaadhehdhoo 47.14 272 P **P** **15 51 49.7 -0.7**
comp=Z,2µmcomp=Z,133nm,1.1s
MOO Moorlands 47.17 153 P **P** **15 51 51.7 +1.5**
TAU Tasmania Unive 47.59 153 P **P** **15 51 55.1 +1.7**
TAU Tasmania Unive 47.59 153 P **P** **15 51 52.8 -0.7**
TAU Tasmania Unive 47.59 153 P **P** **15 51 52.8 -0.7**
TAU pmax pmax
comp=Z,171nm,1.5s
DGAR Diego Garcia 47.78 262*ce*P **P** **15 51 55.3 -0.1**
DGAR pmax pmax
comp=Z,184nm,1.7s
DGAR Diego Garcia 47.78 262 P **P** **15 51 55.7 +0.3**
BNX BinXian 47.80 7 ⇑P **P** **15 51 53.5 -1.5**
BNX S **S** **15 58 47.5 -4.4**
BNX pmax pmax
comp=Z,25nm,1.4s
BNX pmax pmax
comp=Z,510nm,5.3s
BNX L L
comp=Z,2µm,20.1s
BNX L L
comp=Z,4µm,21.4s
BNX L L
comp=Z,3µm,22.9s
BHPL Bhopal 48.42 304 *e*P **P** **15 51 58.7 -1.5**
BHPL IAmb IAmb 15 52 13.6
comp=Z,71nm,1.3s
BHPL *e*S **S** **15 58 56.4 -5.1**
TEY Ternei 48.92 16⇑ *e*P **P** **15 52 01.0 -2.6**
TEY pmax pmax
comp=Z,10.0nm,1.4s
TEY pmax pmax
comp=Z,100nm,2.1s
ONTNC Ouen Toro 49.41 118 P **P** **15 52 06.3 -1.5**
POO Poona 49.76 296 *e*P P 15 52 07.2 -3.4
POO IAmb IAmb 15 52 24.9
comp=Z,127nm,1.4s
POO *e*S **S** **15 59 17.6 -2.9**
ASAJ Asahikawa 49.98 21 P **P** **15 52 11.4 -0.3**
comp=Z,68nm,0.8s,baz=231,slow=9.5,SNR=16
ASAJ LR LR 16 15 19.6
comp=Z,2µm,19.0s,baz=217,slow=38
comp=Z,68nm,0.8s
JKA Kamikawa-asahi 49.98 21 IAmb IAmb 15 52 15.2
comp=Z,72nm,0.8s
ULN Ulaanbaatar 50.78 349 P **P** **15 52 17.5 -0.5**
ULN Ulaanbaatar 50.78 349 IAMs_20 IAMs_20 16 14 38.4
comp=Z,4µm,21.0s
ULN Ulaanbaatar 50.78 349*ce*P **P** **15 52 16.7 -1.3**
ULN pmax pmax
comp=Z,296nm,2.5s
ULN MLR MLR
comp=Z,4µm,20.0s
ULN Ulaanbaatar 50.78 349 P **P** **15 52 18.8 +0.8**
ULN P **P** **15 52 18.8 +0.8**
ULN S **S** **15 59 33.6 -0.4**
ULN S **S** **15 59 33.6 -0.4**
ULN Ulaanbaatar 50.78 349 P **P** **15 52 17.7 -0.3**
SONM Songino Array 50.88 348 P **P** **15 52 18.4 -0.3**
comp=Z,9.5nm,0.7s,baz=166,slow=7.7,SNR=45
SONM LR LR 16 15 03.4
comp=Z,3µm,20.6s,baz=169,slow=38
comp=Z,9.5nm,0.7s
SONM Songino Array 50.88 348 P **P** **15 52 18.4 -0.3**
SONM IAmb IAmb 15 52 24.3
comp=Z,125nm,1.2s
SONM Songino Array 50.88 348 P **P** **15 52 18.5 -0.2**
SONM pmax pmax
comp=Z,125nm,1.2s
HIA Hailar 50.89 360 P **P** **15 52 20.8 +2.2**
HIA Hailar 50.89 360 IAmb IAmb 15 52 23.2
comp=Z,213nm,1.8s
DDI Dehra Dun 51.24 312 *e*P P 15 52 18.1 -3.5
DDI IAmb IAmb 15 53 10.7
comp=Z,54nm,0.6s
DDI *e*S **S** **15 59 36.8 -4.0**
KLR Kul'dur 51.85 10 P **P** **15 52 25.5 -0.2**
comp=Z,12nm,0.9s,baz=221,slow=4.9,SNR=16
KLR LR LR 16 14 51.1
comp=Z,2µm,20.9s,baz=200,slow=37
comp=Z,12nm,0.9s
KLR Kul'dur 51.85 10*ce*P **P** **15 52 25.6 -0.2**
KLR pmax pmax
comp=Z,18nm,1.7s
HEH HeiHe 52.26 6 *e*P **P** **15 52 27.0 -1.8**
HEH S **S** **15 59 52.5 -1.5**
HEH pmax pmax
comp=Z,72nm,0.7s
HEH pmax pmax
comp=Z,900nm,4.8s
HEH L L
comp=Z,1µm,23.8s
HEH L L
comp=Z,2µm,20.8s
HEH L L
comp=Z,3µm,21.0s
SMLA Simla 52.31 312 *e*P P 15 52 26.1 -3.4
SMLA IAmb IAmb 15 52 40.3
comp=Z,88nm,0.8s
SMLA *e*S **S** **15 59 52.0 -3.3**
YSS Yuzhno-Sakhali 52.50 19 *e*P P 15 52 27.7 -2.9
YSS *e* 15 54 23.9
YSS *e*S **S** **15 59 50.4 -7.0**
YSS pmax pmax
comp=Z,40nm,1.2s
DHRM DHARAMSHALA 53.52 313 *e*P P 15 52 35.1 -3.6
DHRM IAmb IAmb 15 52 47.8
comp=Z,25nm,0.6s
DHRM *e*S **S** **16 00 07.2 -5.0**
WMQ Urumqi 53.91 331 *e*P **P** **15 52 42.8 +1.6**
WMQ PP **PP** **15 54 45.8 +3.3**
WMQ S **S** **16 00 18.8 +1.9**
WMQ pmax pmax
comp=Z,25nm,0.7s
WMQ pmax pmax
comp=Z,310nm,3.9s
WMQ L L
comp=Z,3µm,22.3s
WMQ L L
comp=Z,2µm,16.9s
WMQ L L
comp=Z,2µm,23.3s
CIT Chita 53.93 355 *e*P **P** **15 52 41.4 +0.2**
CIT *e* 15 53 40.8
CIT *e* 15 54 41.4
CIT *e* 16 00 22.8
CIT pmax pmax
comp=Z,245nm,2.2s
ZAK Zakamensk 53.97 347 *e*P **P** **15 52 40.1 -1.4**
ZAK pmax pmax
comp=Z,88nm,1.9s
GRNR Gornyy 54.23 13⇑ *i*P **P** **15 52 41.8 -1.5**
GRNR pmax pmax
comp=Z,6.0nm,1.3s
TLY Talaya 55.10 348 P **P** **15 52 49.5 -0.2**
TLY IAmb IAmb 15 52 55.4
comp=Z,51nm,0.9s
TLY Talaya 55.10 348*ce*P **P** **15 52 49.5 -0.2**
TLY pmax pmax
comp=Z,151nm,1.7s
TLY Talaya 55.10 348 P **P** **15 52 50.4 +0.7**
TLY P **P** **15 52 50.4 +0.7**
IRK Irkutsk 55.50 348 *e*P **P** **15 52 52.6 +0.1**
IRK *e*S S 16 00 47.4 +10
IRK pmax pmax
comp=Z,214nm,2.2s
KNGR Kungurtug, Tuv 55.69 343 *i* P **P** **15 52 55.0 +1.0**
KNGR pmax pmax
comp=Z,101nm,1.5s
KNGR MLR MLR
comp=Z,3µm,20.0s
ZEA Zeya 55.69 5 *e*P **P** **15 52 52.8 -1.0**
ZEA *e*S **S** **16 00 39.4 -0.9**
ZEA pmax pmax
comp=N,100nm,2.6s
ZEA pmax pmax
comp=Z,200nm,2.7s
ZEA pmax pmax
comp=E,10.0nm,1.4s
ZEA pmax pmax
comp=N,20nm,1.3s
ZEA pmax pmax
comp=Z,40nm,1.1s
ZEA smax smax
comp=E,200nm,11.6s
MOY Mondy 55.70 346 *e*P **P** **15 52 54.4 +0.3**
MOY pmax pmax
comp=Z,317nm,2.2s
TYV Tymovskoe 55.91 17 *e*P **P** **15 52 54.7 -0.8**
TYV *e*S **S** **16 00 40.6 -2.8**
TYV pmax pmax
comp=Z,21nm,1.1s
TYV pmax pmax
comp=Z,500nm,4.7s
TYV smax smax
comp=N,900nm,5.6s
TYV smax smax
comp=E,800nm,5.6s
NIL Nilore 56.43 313 P **P** **15 52 58.8 -0.8**
NIL Nilore 56.43 313 P **P** **15 52 58.8 -0.8**
NIL pmax pmax
comp=Z,354nm,1.8s
NIL MLR MLR
comp=Z,2µm,21.0s
NIL Nilore 56.43 313 P **P** **15 52 59.2 -0.3**
NIL P **P** **15 52 59.2 -0.3**
KSH2 Kashi 57.70 320 P **P** **15 53 09.3 +0.7**
KSH2 pP *s*P 15 53 14.5 +1.8
KSH2 S **S** **16 01 07.0 -0.8**
KSH2 pmax pmax
comp=Z,110nm,0.9s
KSH2 pmax pmax
comp=Z,730nm,2.8s
KSH2 L L
comp=Z,5µm,26.8s
KSH2 L L
comp=Z,4µm,22.7s
KSH2 L L
comp=Z,6µm,24.0s
SHLS Shalkode 57.75 326⇓ *i*P **P** **15 53 08.0 -0.9**
comp=Z,89nm,1.3s
SHLS *e*S **S** **16 01 05.4 -2.9**
TARG Taragay, Kyrgy 57.82 323 IAmb IAmb 15 53 24.8
comp=Z,129nm,1.4s
PDGK Podgornoye 57.85 326 P **P** **15 53 10.2 +0.7**
ZSN Zaisan 57.93 332⇓ *i*P **P** **15 53 10.3 +0.4**
comp=Z,112nm,2.1s
ZSN *e*S **S** **16 01 10.4 +0.2**
UZB Uzynbulak 57.99 325⇓ *i*P **P** **15 53 11.4 +0.8**
comp=Z,121nm,1.6s
UZB *e*S **S** **16 01 11.7 +0.2**
SATY Saty 58.29 325⇓ *i*P **P** **15 53 13.6 +0.9**
comp=Z,56nm,1.0s
SATY *e*S **S** **16 01 15.9 +0.5**
KPKS Kokpek 58.39 326 *e*P **P** **15 53 14.0 +0.7**
KPKS *e*S **S** **16 01 16.7 +0.2**
YSA Yasawairara 58.41 108 P **P** **15 53 15.4 +1.6**
KDJ Kajisay 58.44 324 IAmb IAmb 15 53 26.6
comp=Z,93nm,1.0s
MK31 Makanchi Array 58.69 330 *i* P **P** **15 53 15.3 +0.1**
MK31 pmax pmax
comp=Z,57nm,0.7s
MKAR Makanchi Array 58.69 330 P **P** **15 53 15.5 +0.2**
comp=Z,52nm,0.8s,baz=133,slow=7.6,SNR=405
MKAR LR LR 16 20 19.0
comp=Z,2µm,20.9s,baz=136,slow=38
MKAR PKPPKP **P'P'df** **16 22 50.5 -1.1**
comp=Z,0.3nm,0.8s,baz=0.0,slow=3.2,SNR=2.5
MKAR PKP2bc **P'P'bc** **16 23 03.5 +0.9**
comp=Z,0.9nm,1.0s,baz=293,slow=1.1,SNR=3.5
comp=Z,52nm,0.8s
MKAR Makanchi Array 58.69 330 P **P** **15 53 15.2 -0.1**
MKAR Makanchi Array 58.69 330 *i* P **P** **15 53 15.6 +0.4**
MKAR pmax pmax
comp=Z,52nm,0.8s
NRN Naryn 58.74 322 IAmb IAmb 15 53 18.2
comp=Z,50nm,0.9s
MAKZ Makanchi 58.85 330 P **P** **15 53 16.0 -0.4**
MAKZ Makanchi 58.85 330 P **P** **15 53 16.0 -0.4**
MAKZ pmax pmax
comp=Z,338nm,1.8s
MAKZ MLR MLR
comp=Z,2µm,22.0s
MSVF Nonsavu 59.01 110 P **P** **15 53 19.3 +1.3**
comp=Z,67nm,0.8s,baz=259,slow=6.9,SNR=25
comp=Z,67nm,0.8s
MSVF Nonsavu 59.01 110 P **P** **15 53 20.0 +2.0**
MSVF Nonsavu 59.01 110 P **P** **15 53 18.8 +0.8**
MSVF Nonsavu 59.01 110 *i* P **P** **15 53 18.3 +0.3**
MSVF pmax pmax
comp=Z,141nm,1.0s
MSVF MLR MLR
comp=Z,1µm,17.0s
TNSS Tian-Shan 59.12 324 *e*P **P** **15 53 19.4 +0.6**
MDOK Medeo 59.14 324 *e*P **P** **15 53 19.3 +0.7**
MDOK *e*S **S** **16 01 27.2 +0.8**
AAA Alma-Ata 59.24 324 *e*P **P** **15 53 20.3 +1.1**
comp=Z,47nm,1.3s
ARXS Arharly 59.34 326 *e*P **P** **15 53 19.1 -0.8**
TDK Taldyqorghan 59.52 327⇓ *i*P **P** **15 53 21.9 +0.9**
comp=Z,35nm,0.8s
BOD Bodaibo 59.66 356 *e*P **P** **15 53 20.7 -1.0**
BOD pmax pmax
comp=Z,125nm,1.7s
TKM2 Tokmak 2 59.85 323 P **P** **15 53 24.0 +0.4**
SNR=36
DCZ Deep Cove 59.90 143 IAmb IAmb 15 53 33.3
comp=Z,61nm,1.0s
KBL Kabul 59.94 312 P **P** **15 53 24.1 -0.3**
KBL Kabul 59.94 312 P **P** **15 53 24.1 -0.3**
KBL pmax pmax
comp=Z,153nm,0.8s
KBL Kabul 59.94 312 P **P** **15 53 24.5 +0.2**
SNR=99
KBL P **P** **15 53 24.5 +0.2**
SNR=99
KBL S **S** **16 01 36.1 -1.1**
KBL S **S** **16 01 36.1 -1.1**
MSZ Milford Sound 59.95 142 P **P** **15 53 24.6 +0.7**
PYZ Puysegur Point 59.99 144 IAMs_20 IAMs_20 16 21 09.0
comp=Z,4µm,20.0s
KBK Karagaybulak 60.08 323 P **P** **15 53 26.2 +1.0**
SNR=77
UCH Uchtor 60.10 322 P **P** **15 53 26.6 +1.0**
SNR=39
JCZ Jackson Bay 60.17 141 P **P** **15 53 26.4 +0.8**
JCZ Jackson Bay 60.17 141 P **P** **15 53 25.9 +0.3**
AAK Ala-Archa 60.35 323 LR LR 16 22 52.6
comp=Z,2µm,19.8s,baz=116,slow=39
AAK Ala-Archa 60.35 323 P **P** **15 53 28.0 +1.0**
SNR=98
AAK Ala-Archa 60.35 323 P **P** **15 53 27.5 +0.6**
AAK Ala-Archa 60.35 323 *i* P **P** **15 53 27.8 +0.9**
SNR=117
AAK Ala-Archa 60.35 323*ce*P **P** **15 53 25.4 -1.5**
AAK pmax pmax
comp=Z,84nm,0.8s
AAK MLR MLR
comp=Z,4µm,23.0s
AAK Ala-Archa 60.35 323 P **P** **15 53 27.3 +0.3**
AAK P **P** **15 53 27.3 +0.3**
AAK S **S** **16 01 43.2 +1.2**
AAK S **S** **16 01 43.2 +1.2**
CHMS Chumysh 60.40 323 P **P** **15 53 27.5 +0.4**
SNR=26
DGTI Dogotuki 60.41 108 P **P** **15 53 29.0 +1.4**
MLZ Mavora Lakes 60.42 143 P **P** **15 53 26.4 -0.9**
MLZ IAmb IAmb 15 53 54.8
comp=Z,84nm,1.3s
MLZ Mavora Lakes 60.42 143 P **P** **15 53 27.3 0.0**
WHZ Wether Hill Ro 60.59 144 IAmb IAmb 15 53 32.3
comp=Z,48nm,0.9s
WHZ Wether Hill Ro 60.59 144 P **P** **15 53 28.2 -0.2**
SKR Severo-Kuril's 60.67 25 *e*P **P** **15 53 32.4 +3.7**
SKR *e* 15 55 48.5
SKR *e*S S 16 02 02.9 +17
SKR pmax pmax
comp=Z,700nm,4.0s
SKR MLR MLR
comp=Z,1µm,18.0s
USP Ospenovka 60.70 323 P **P** **15 53 29.5 +0.3**
SNR=80
SGDS Sogindy 60.73 323 *e*P **P** **15 53 29.8 +0.4**
EKS2 Erkin-Say 60.80 322 P **P** **15 53 30.9 +0.9**
SNR=60
TAVE Taveuni 60.80 108 P **P** **15 53 32.0 +1.7**
DSZ Denniston Nort 61.03 138 P **P** **15 53 32.1 +0.7**
APZ The Paps 61.12 144 P **P** **15 53 31.6 -0.3**
LBZ Lake Benmore 61.20 141 P **P** **15 53 32.3 -0.2**
INZ Inchbonnie 61.23 139 IAmb IAmb 15 53 40.8
comp=Z,69nm,1.1s
INZ Inchbonnie 61.23 139 P **P** **15 53 31.9 -0.9**
RPZ Rata Peaks 61.43 140 LR LR 16 22 17.4
comp=Z,5µm,18.7s,baz=307,slow=38
RPZ Rata Peaks 61.43 140 P **P** **15 53 33.5 -0.6**
RPZ Rata Peaks 61.43 140 P **P** **15 53 34.1 -0.1**
THZ Tophouse 61.78 137 P **P** **15 53 36.7 +0.1**
ODZ Otahua Downs 61.80 142 IAMs_20 IAMs_20 16 22 38.8
comp=Z,5µm,21.0s
OXZ Oxford 61.89 139 IAmb IAmb 15 53 45.8
comp=Z,68nm,1.0s
OXZ Oxford 61.89 139 P **P** **15 53 36.6 -0.6**
SHAA Shahritus 61.95 315 IAmb IAmb 15 54 58.1
comp=Z,192nm,1.2s
BTLS Baital 61.99 325 *e*P **P** **15 53 38.4 +0.6**
TOZ Tahuroa Road 62.02 132 IAMs_20 IAMs_20 16 17 29.4
comp=Z,5µm,22.0s
FUTU Fugatoga 62.24 105 P **P** **15 53 41.7 +1.7**
DZA Taraz 62.43 321 *e*P **P** **15 53 41.4 +0.5**
MQZ McQueen's Vall 62.46 139 IAMs_20 IAMs_20 16 20 47.1
comp=Z,4µm,18.0s
ZAA0 Zalesovo Array 62.82 337 P **P** **15 53 41.6 -1.6**
ZALV Zalesovo Beam 62.82 337 P **P** **15 53 42.6 -0.5**
comp=Z,33nm,0.8s,baz=141,slow=5.4,SNR=86
ZALV LR LR 16 22 03.2
comp=Z,2µm,21.9s,baz=140,slow=37
comp=Z,33nm,0.8s
KK31 Karatay Array 63.05 321 *i* P **P** **15 53 44.5 -0.5**
KKAR Karatay Array 63.05 321 P **P** **15 53 44.0 -1.0**
KKAR Karatay Array 63.05 321 P **P** **15 53 44.0 -1.0**
NGCH Negor - Chabah 63.07 300 P **P** **15 53 45.4 0.0**
SNR=5.7
NGCH S **S** **16 02 15.7 -1.0**
PETK Petropavlovsk- 63.12 24 LR LR 16 23 51.8
comp=Z,566nm,18.7s,baz=228,slow=39
KURBB Kurchatov Arra 63.13 332 P **P** **15 53 44.9 -0.4**
comp=Z,19nm,0.7s,baz=139,slow=6.1,SNR=183
KURBB PKPPKP **P'P'df** **16 22 43.4 -1.0**
comp=Z,1.3nm,0.9s,baz=306,slow=3.1,SNR=4.9
KURBB LR LR 16 22 45.8
comp=Z,2µm,21.1s,baz=136,slow=38
KURBB PKP2bc **P'P'bc** **16 22 49.0 -2.5**
comp=Z,1.3nm,0.9s,baz=303,slow=3.1,SNR=7.2
comp=Z,19nm,0.7s
KURK Kurchatov 63.15 332 P **P** **15 53 44.6 -0.8**
KURK Kurchatov 63.15 332*ce*P **P** **15 53 45.1 -0.3**
KURK pmax pmax
comp=Z,155nm,1.3s
KURK Kurchatov 63.15 332 P **P** **15 53 44.8 -0.6**
KURK P **P** **15 53 44.8 -0.6**
KURK S **S** **16 02 17.3 +0.5**
KURK S **S** **16 02 17.3 +0.5**
MUGZ Murupara 63.23 133 P **P** **15 53 50.2 +4.0**
CHM Chimkent 63.23 320 *e*P **P** **15 53 46.9 +0.7**
comp=Z,36nm,0.9s
BKZ Black Stump Fm 63.27 134 P **P** **15 53 46.6 0.0**
URZ Urewera 63.40 132 LR LR 16 21 22.1
comp=Z,3µm,19.7s,baz=294,slow=36
URZ Urewera 63.40 132 P **P** **15 53 49.2 +1.8**
MTHZ Maungataniwha 63.41 133 P **P** **15 53 47.6 +0.1**
BRLS Borolday 63.44 321⇓ *i*P **P** **15 53 47.3 -0.3**
comp=Z,29nm,1.1s
PET Petropavlovsk 63.46 25 P **P** **15 53 51.1 +3.7**
PET Petropavlovsk 63.46 25 *i* P **P** **15 53 46.4 -1.0**
PET pmax pmax
comp=Z,213nm,1.5s
PET MLR MLR
comp=Z,1µm,19.0s
NMHZ Naumai 63.47 133 P **P** **15 53 48.8 +0.9**
RAHZ Arahi 63.61 133 P **P** **15 53 49.3 +0.5**
BFZ Birch Farm 63.65 135 P **P** **15 53 51.1 +2.1**
RAGZ Rawiri 63.71 133 P **P** **15 53 49.6 +0.1**
RUGZ Raukumara Rang 63.72 132 P **P** **15 53 50.1 +0.5**
HAZ Te Kaha 63.73 132 P **P** **15 53 49.7 +0.2**
MWZ Matawai 63.73 132 P **P** **15 53 49.8 +0.2**
JLN Jalan Bani Buh 63.77 296 P **P** **15 53 48.9 -1.2**
SNR=11
JLN P **P** **15 53 48.9 -1.2**
SNR=11
JLN S **S** **16 02 23.1 -2.6**
JLN S **S** **16 02 23.1 -2.6**
PKGZ Pakihiroa 63.99 132 P **P** **15 53 51.6 +0.4**
TKGZ Te Karaka 64.01 132 P **P** **15 53 54.7 +3.3**
RIGZ Rimuhau 64.03 133 P **P** **15 53 55.2 +3.6**
MXZ Matakaoa Point 64.06 131 P **P** **15 53 54.2 +2.5**
MXZ Matakaoa Point 64.06 131 P **P** **15 53 54.7 +3.0**
YAK Yakutsk 64.11 5 LR LR 16 21 36.8
comp=Z,704nm,21.7s,baz=186,slow=36
YAK Yakutsk 64.11 5 P **P** **15 53 49.3 -2.2**
YAK Yakutsk 64.11 5 *e*P **P** **15 53 49.5 -2.0**
YAK *e**PP **pP** **15 53 57.0 +2.4**
YAK *e* 15 56 15.6
YAK *e*S **S** **16 02 25.4 -2.9**
YAK *e**SS sS 16 02 43.8 +10
YAK *e*SS **SS** **16 06 41.8 +4.3**
YAK *e*SSS SSS 16 09 29.0
YAK pmax pmax
comp=Z,32nm,1.0s
YAK pmax pmax
comp=N,14nm,1.2s
YAK pmax pmax
comp=E,6.0nm,1.0s
YAK pmax pmax
comp=Z,495nm,3.9s
YAK pmax pmax
comp=N,193nm,2.5s
YAK pmax pmax
comp=E,54nm,2.0s
YAK smax smax
comp=N,138nm,3.3s
YAK smax smax
comp=E,132nm,2.7s
PUZ Puketiti 64.19 132 P **P** **15 53 52.2 -0.4**
WMGZ Waiomatatini S 64.22 132 P **P** **15 53 53.1 +0.4**
WBK Wadi Bani Khal 64.28 296 P **P** **15 53 52.4 -1.1**
SNR=8.1
WBK P **P** **15 53 52.4 -1.1**
SNR=8.1
WBK S **S** **16 02 30.0 -2.0**
WBK S **S** **16 02 30.0 -2.0**
CNGZ Carnagh Statio 64.29 132 P **P** **15 53 53.2 0.0**
MSEY Mahe Island 64.55 266 IAMs_20 IAMs_20 16 17 20.0
comp=Z,4µm,21.0s
CASY Casey 64.68 184 IAMs_20 IAMs_20 16 21 07.0
comp=Z,4µm,20.0s

WSAR	**Wadi Sarin**	**64.73**	**297**	LR	LR	16 24 55.6		
	comp=Z,14nm,19.8s,baz=120,slow=39							
WSAR	**Wadi Sarin**	**64.73**	**297**	P	**P**	**15 53 55.3**	**-1.1**	
	SNR=9.1							
MHTO	**MHTO**	**64.82**	**294**	P	**P**	**15 53 55.3**	**-1.7**	
	SNR=24							
MHTO				P	**P**	**15 53 55.3**	**-1.7**	
	SNR=24							
RAO	**Raoul Island**	**64.82**	**122**	LR	LR	16 20 29.8		
	comp=Z,2µm,21.7s,baz=286,slow=34							
DQM	**DQM**	**64.99**	**293**	P	**P**	**15 53 57.8**	**-0.3**	
	SNR=11							
DQM				P	**P**	**15 53 57.8**	**-0.3**	
	SNR=11							
JMDO	**Jabal Madar**	**65.00**	**296**	P	**P**	**15 53 58.0**	**-0.2**	
	SNR=21							
JMDO				P	**P**	**15 53 58.0**	**-0.2**	
	SNR=21							
HRA	**Herat**	**65.03**	**309**	P	**P**	**15 53 56.5**	**-2.0**	
HRA				IAmb	IAmb	15 54 31.5		
	comp=Z,94nm,1.7s							
SMDO	**Samad**	**65.21**	**296**	P	**P**	**15 53 58.9**	**-0.8**	
	SNR=11							
SMDO				P	**P**	**15 53 58.9**	**-0.8**	
	SNR=11							
SMDO				P	**P**	**15 53 58.9**	**-0.8**	
	SNR=11							
BIDO	**Bidbid**	**65.25**	**297**	P	**P**	**15 53 59.5**	**-0.3**	
	SNR=8.3							
BIDO				P	**P**	**15 53 59.5**	**-0.3**	
	SNR=8.3							
BRZS	**Berezniki**	**65.64**	**329**	*e*P	**P**	**15 54 02.6**	**+0.8**	
MA2	**Magadan**	**65.78**	**17**	LR	LR	16 23 04.4		
	comp=Z,1µm,21.1s,baz=211,slow=36							
MA2	**Magadan**	**65.78**	**17**	P	**P**	**15 54 05.4**	**+2.9**	
MA2	**Magadan**	**65.78**	**17**	*i* P	**P**	**15 54 00.8**	**-1.7**	
MA2				pmax	pmax			
	comp=Z,178nm,1.9s							
BSY	**Bisya**	**65.90**	**296**	P	**P**	**15 54 03.7**	**-0.4**	
	SNR=24							
BSY				P	**P**	**15 54 03.7**	**-0.4**	
	SNR=24							
HOQ	**Hoqain**	**65.99**	**297**	P	**P**	**15 54 03.9**	**-0.6**	
	SNR=19							
HOQ				P	**P**	**15 54 03.9**	**-0.6**	
	SNR=19							
JASK	**Jask - Hormozg**	**66.05**	**299**	P	**P**	**15 54 05.2**	**+0.3**	
	SNR=8.0							
SHAO	**Shalim**	**66.40**	**290**	P	**P**	**15 54 06.7**	**-0.6**	
ARQ	**Araqi**	**66.64**	**296**	P	**P**	**15 54 08.3**	**-0.5**	
	SNR=14							
ARQ				P	**P**	**15 54 08.3**	**-0.5**	
	SNR=14							
MDH	**Madha**	**67.28**	**298**	P	**P**	**15 54 11.6**	**-1.2**	
MDH				P	**P**	**15 54 11.6**	**-1.2**	
UOSS	**Minazif**	**67.28**	**298**	P	**P**	**15 54 11.0**	**-1.8**	
UOSS				IAmb	IAmb	15 54 16.4		
	comp=Z,26nm,0.8s							
UOSS	**Minazif**	**67.28**	**298**	*i* P	**P**	**15 54 11.1**	**-1.8**	
	SNR=7.5							
UOSS	**Minazif**	**67.28**	**298**	P	**P**	**15 54 12.5**	**-0.4**	
UOSS				P	**P**	**15 54 12.5**	**-0.4**	
HATD	**Hatta, Dubai**	**67.32**	**298**	*i* P	**P**	**15 54 12.2**	**-0.9**	
	SNR=20							
HATD	**Hatta, Dubai**	**67.32**	**298**	P	**P**	**15 54 13.0**	**-0.1**	
	SNR=14							
HATD				P	**P**	**15 54 13.0**	**-0.1**	
	SNR=14							
HATD				P	**P**	**15 54 13.0**	**-0.1**	
	SNR=14							
ASHO	**Ashiyiah**	**67.35**	**298**	*i* P	**P**	**15 54 12.3**	**-1.0**	
	SNR=17							
ASHO	**Ashiyiah**	**67.35**	**298**	P	**P**	**15 54 13.1**	**-0.3**	
	SNR=11							
ASHO				P	**P**	**15 54 13.1**	**-0.3**	
	SNR=11							
MSFE	**Esma-Masafi**	**67.42**	**298**	*i* P	**P**	**15 54 12.6**	**-1.1**	
	SNR=8.1							
MASF	**Masafi**	**67.42**	**298**	P	**P**	**15 54 14.1**	**+0.4**	
MASF				P	**P**	**15 54 14.1**	**+0.4**	
BANOM	**Banah**	**67.43**	**299**	P	**P**	**15 54 13.3**	**-0.4**	
BANOM				P	**P**	**15 54 13.3**	**-0.4**	
ALNE	**Al Ain**	**67.49**	**297**	*i* P	**P**	**15 54 13.6**	**-0.5**	
	SNR=15							
ALNE	**Al Ain**	**67.49**	**297**	P	**P**	**15 54 13.7**	**-0.4**	
ALNE				P	**P**	**15 54 13.7**	**-0.4**	
SHME	**Shamm**	**67.60**	**299**	P	**P**	**15 54 14.7**	**-0.1**	
SHME				P	**P**	**15 54 14.7**	**-0.1**	
RBK	**Rabkut**	**67.65**	**290**	P	**P**	**15 54 15.0**	**-0.3**	
	SNR=5.9							
RBK				P	**P**	**15 54 15.0**	**-0.3**	
	SNR=5.9							
UMZA	**Um Al Zommool**	**67.73**	**295**	P	**P**	**15 54 14.9**	**-0.8**	
UMZA				P	**P**	**15 54 14.9**	**-0.8**	
NAZ	**Nazwa, Dubai**	**67.77**	**298**	*i* P	**P**	**15 54 14.6**	**-1.3**	
	SNR=9.4							
NAZ	**Nazwa, Dubai**	**67.77**	**298**	P	**P**	**15 54 15.5**	**-0.4**	
	SNR=5.0							
NAZ				P	**P**	**15 54 15.5**	**-0.4**	
	SNR=5.0							
FAQ	**Al Faqa, Dubai**	**67.78**	**298**	*i* P	**P**	**15 54 14.9**	**-1.1**	
	SNR=10							
FAQ	**Al Faqa, Dubai**	**67.78**	**298**	P	**P**	**15 54 14.5**	**-1.4**	
	SNR=9.6							
FAQ				P	**P**	**15 54 14.5**	**-1.4**	
	SNR=9.6							
UMQ	**Umm Al-Quwin**	**67.89**	**298**	P	**P**	**15 54 16.9**	**+0.3**	
UMQ				P	**P**	**15 54 16.9**	**+0.3**	
DOK	**Doka**	**67.91**	**291**	P	**P**	**15 54 15.0**	**-1.9**	
	SNR=9.7							
DOK				P	**P**	**15 54 15.0**	**-1.9**	
	SNR=9.7							
DOK				P	**P**	**15 54 15.0**	**-1.9**	
	SNR=9.7							
ASUD	**Al Ashush, Dub**	**67.99**	**297**	*i* P	**P**	**15 54 16.9**	**-0.3**	
	SNR=26							
ASUD	**Al Ashush, Dub**	**67.99**	**297**	P	**P**	**15 54 18.0**	**+0.7**	
	SNR=11							
ASUD				P	**P**	**15 54 18.0**	**+0.7**	
	SNR=11							
ASUD				P	**P**	**15 54 18.0**	**+0.7**	
	SNR=11							
WHFO	**Wadi Hawf**	**68.12**	**290**	P	**P**	**15 54 18.0**	**-0.3**	
	SNR=8.8							
WHFO				P	**P**	**15 54 18.0**	**-0.3**	
	SNR=8.8							
AJN	**Ajban**	**68.28**	**297**	*i* P	**P**	**15 54 17.9**	**-1.2**	
	SNR=24							
AJN	**Ajban**	**68.28**	**297**	P	**P**	**15 54 19.5**	**+0.4**	
	SNR=11							
AJN				P	**P**	**15 54 19.5**	**+0.4**	
	SNR=11							
AFI	**Afiamalu**	**68.35**	**104**	LR	LR	16 23 11.8		
	comp=Z,837nm,21.8s,baz=274,slow=35							
BVA0	**Borovoye Array**	**68.57**	**330**	P	**P**	**15 54 19.4**	**-1.0**	
BVAR	**Borovoye Array**	**68.57**	**330**	P	**P**	**15 54 19.3**	**-1.1**	
	comp=Z,15nm,0.7s,baz=132,slow=8.2,SNR=59							
BVAR				LR	LR	16 28 30.0		
	comp=Z,1µm,21.6s,baz=123,slow=40							
	comp=Z,15nm,0.7s							
BORK	**Borovoye**	**68.62**	**330**	P	**P**	**15 54 18.6**	**-2.1**	
BORK				IAmb	IAmb	15 54 46.8		
	comp=Z,42nm,0.9s							
BORK	**Borovoye**	**68.62**	**330**	IAMs_20	IAMs_20	16 26 44.4		
	comp=Z,2µm,22.0s							
BORK	**Borovoye**	**68.62**	**330**	*ce*P	**P**	**15 54 20.2**	**-0.5**	
BORK				pmax	pmax			
	comp=Z,38nm,1.0s							
SEY	**Seymchan**	**69.00**	**15**	LR	LR	16 21 59.7		
	comp=Z,952nm,21.1s,baz=221,slow=34							
SEY	**Seymchan**	**69.00**	**15**	*i* P	**P**	**15 54 21.5**	**-1.3**	
SEY				pmax	pmax			
	comp=Z,73nm,1.8s							
SEY				MLR	MLR			
	comp=Z,1µm,19.0s							
MZWR	**Madinat Zayed**	**69.10**	**296**	P	**P**	**15 54 23.1**	**-1.1**	
MZWR				P	**P**	**15 54 23.1**	**-1.1**	
MZWR				P	**P**	**15 54 23.1**	**-1.1**	
MZR	**Muzera**	**69.31**	**295**	*i* P	**P**	**15 54 24.7**	**-0.8**	
	SNR=15							
MZR	**Muzera**	**69.31**	**295**	P	**P**	**15 54 24.2**	**-1.3**	
	SNR=6.0							
MZR				P	**P**	**15 54 24.2**	**-1.3**	
	SNR=6.0							
SHEM	**Shemya Is, Ala**	**70.61**	**31**	LR	LR	16 25 25.6		
	comp=Z,479nm,19.2s,baz=248,slow=36							
SMY	**Shemya**	**70.61**	**31**	P	**P**	**15 54 36.9**	**+4.0**	
AB31	**Akbulak array**	**72.42**	**323**	IAmb	IAmb	15 55 30.8		
	comp=Z,41nm,1.1s							
AB31	**Akbulak array**	**72.42**	**323**	*i* P	**P**	**15 54 42.9**	**-1.0**	
ABKAR	**Akbulak array**	**72.42**	**323**	P	**P**	**15 54 42.8**	**-1.1**	
ABPO	**Ambohimpanom**	**73.20**	**251**	IAMs_20	IAMs_20	16 27 10.4		
	comp=Z,2µm,19.0s							
TIXI	**Tiksi**	**73.57**	**3**	LR	LR	16 30 57.5		
	comp=Z,2µm,19.3s,baz=208,slow=39							
TIXI	**Tiksi**	**73.57**	**3**	P	**P**	**15 54 47.5**	**-2.8**	
TIXI				IAmb	IAmb	15 55 05.0		
	comp=Z,83nm,1.2s							
TIXI	**Tiksi**	**73.57**	**3**	*ce*P	**P**	**15 54 47.8**	**-2.5**	
TIXI				pmax	pmax			
	comp=Z,36nm,1.0s							
TIXI				MLR	MLR			
	comp=Z,3µm,19.0s							
AKTO	**Aktyubinsk**	**74.03**	**324**	P	**P**	**15 54 52.2**	**-1.3**	
KIWB	**Kanaga Island**	**75.00**	**35**	IAmb	IAmb	15 55 03.6		
	comp=Z,47nm,0.9s							
SVE	**Sverdlovsk**	**75.35**	**331**	*e*P	**P**	**15 54 59.9**	**-1.1**	
SVE				*e*S	**S**	**16 04 44.8**	**+4.0**	
SVE				pmax	pmax			
	comp=Z,82nm,1.2s							
SVE				MLR	MLR			
	comp=Z,3µm,22.0s							
ARTI	**Arti**	**76.28**	**330**	IAMs_20	IAMs_20	16 34 57.9		
	comp=Z,3µm,20.0s							
ARTI	**Arti**	**76.28**	**330**	*c i* P	**P**	**15 55 05.1**	**-1.2**	
ARTI						15 57 58.0		
ARTI				S	**S**	**16 04 50.5**	**-0.6**	
ARTI				SS	**SS**	**16 09 43.9**	**-1.1**	
MAW	**Mawson**	**76.31**	**199**	P	**P**	**15 55 06.3**	**+0.1**	
	comp=Z,23nm,1.1s,baz=49,slow=10,SNR=11							
MAW				LR	LR	16 24 43.3		
	comp=Z,1µm,20.6s,baz=55,slow=33							
	comp=Z,23nm,1.1s							
RAYN	**Ar Rayn**	**76.62**	**295**	P	**P**	**15 55 07.9**	**-1.1**	
RAYN	**Ar Rayn**	**76.62**	**295**	P	**P**	**15 55 07.8**	**-1.1**	
RAYN	**Ar Rayn**	**76.62**	**295**	P	**P**	**15 55 07.9**	**-1.1**	
RAYN				pmax	pmax			
	comp=Z,21nm,1.0s							
RAYN				MLR	MLR			
	comp=Z,4µm,22.0s							
BILL	**Bilibino**	**76.65**	**16**	*i* P	**P**	**15 55 07.5**	**-0.6**	
BILL				MLR	MLR			
	comp=Z,2µm,21.0s							
ATD	**Arta Tunnel**	**77.87**	**282**	LR	LR	16 28 51.0		
	comp=Z,86nm,18.6s,baz=82,slow=35							
ATD	**Arta Tunnel**	**77.87**	**282**	IAMs_20	IAMs_20	16 28 20.6		
	comp=Z,2µm,20.0s							
AKT	**Akhty**	**78.07**	**313**	*e*P	**P**	**15 55 16.2**	**-0.6**	
AKT				*e*		15 55 24.8		
AKT				*e*		15 58 11.2		
AKT				*e*S	**S**	**16 05 11.4**	**0.0**	
AKT				pmax	pmax			
	comp=Z,30nm,0.8s							
MAK	**Makhachkala**	**78.57**	**314**	*c i* P	P	15 55 14.5	-4.9	
MAK				*e*		15 58 12.4		
MAK				*e*PPP	PPP	16 00 00.3		
MAK				*e*S	S	16 05 07.7	-8.7	
MAK				*e*SS	**SS**	**16 10 16.7**	**-3.5**	
MAK				*e*SSS	SSS	16 13 42.1		
MAK				pmax	pmax			
	comp=Z,321nm,1.3s							
VNDA	**Vanda**	**78.87**	**172**	P	**P**	**15 55 20.4**	**0.0**	
	comp=Z,7.0nm,1.0s,baz=305,slow=5.8,SNR=20							
VNDA				LR	LR	16 29 42.9		
	comp=Z,2µm,20.1s,baz=339,slow=35							
	comp=Z,7.0nm,1.0s							
VNDA	**Vanda**	**78.87**	**172**	P	**P**	**15 55 20.2**	**-0.2**	
VNDA	**Vanda**	**78.87**	**172**	P	**P**	**15 55 20.2**	**-0.2**	
VNDA				pmax	pmax			
	comp=Z,25nm,1.0s							
SBA	**Scott Base**	**79.85**	**171**	P	**P**	**15 55 26.7**	**+1.0**	
SBA				IAmb	IAmb	15 56 27.4		
	comp=Z,95nm,1.6s							
SBA	**Scott Base**	**79.85**	**171**	IAMs_20	IAMs_20	16 30 11.4		
	comp=Z,3µm,20.0s							
SBA	**Scott Base**	**79.85**	**171**	P	**P**	**15 55 26.7**	**+1.0**	
SBA				pmax	pmax			
	comp=Z,95nm,1.7s							
SBA				MLR	MLR			
	comp=Z,3µm,20.0s							
GNI	**Garni**	**80.01**	**311**	LR	LR	16 37 37.9		
	comp=Z,988nm,20.2s,baz=118,slow=41							
GNI	**Garni**	**80.01**	**311**	*i* P	**P**	**15 55 25.9**	**-1.7**	
GNI				pmax	pmax			
	comp=Z,67nm,1.3s							
GNI	**Garni**	**80.01**	**311**	P	**P**	**15 55 27.4**	**-0.2**	
GNI				P	**P**	**15 55 27.4**	**-0.2**	
BELG	**Belogornoye**	**80.82**	**324**	LR	LR	16 34 37.9		
	comp=Z,2µm,21.7s,baz=108,slow=38							
BELG	**Belogornoye**	**80.82**	**324**	*i* P	**P**	**15 55 29.4**	**-2.0**	
BELG				pmax	pmax			
	comp=Z,12nm,1.0s							
BELG				MLR	MLR			
	comp=Z,383nm,23.0s							
GEVA	**Gevas**	**80.97**	**309**	P	**P**	**15 55 30.8**	**-2.0**	
GEVA				IAmb	IAmb	15 55 47.2		
	comp=Z,105nm,1.1s							
KARS	**Kars**	**81.34**	**311**	P	**P**	**15 55 33.9**	**-0.8**	
KARS				IAmb	IAmb	15 55 50.4		
	comp=Z,84nm,1.0s							
KARS	**Kars**	**81.34**	**311**	P	**P**	**15 55 33.9**	**-0.8**	
KARS				pmax	pmax			
	comp=Z,84nm,1.0s							
NCK	**Nalchik**	**81.48**	**314**	*i* P	**P**	**15 55 34.0**	**-1.2**	
NCK				pmax	pmax			
	comp=Z,53nm,1.3s							
KIRV	**Kirov**	**81.58**	**330**	LR	LR	16 35 46.5		
	comp=Z,904nm,18.5s,baz=126,slow=39							
KIRV	**Kirov**	**81.58**	**330**	*i* P	**P**	**15 55 32.9**	**-2.4**	
GURO	**Guroymak-BITLI**	**81.80**	**309**	P	**P**	**15 55 37.0**	**-0.2**	
KIBK	**Kibwezi**	**81.98**	**268**	P	**P**	**15 55 36.0**	**-2.5**	
KIBK				IAMs_20	IAMs_20	16 28 35.7		
	comp=Z,2µm,21.0s							
KIBK	**Kibwezi**	**81.98**	**268**	P	**P**	**15 55 37.3**	**-1.2**	
KBZ	**Khabaz**	**82.02**	**314**	P	**P**	**15 55 37.1**	**-0.8**	
	comp=Z,8.2nm,0.9s,baz=90,slow=4.3,SNR=20							
KBZ				LR	LR	16 39 24.6		
	comp=Z,808nm,19.6s,baz=104,slow=41							
	comp=Z,8.2nm,0.9s							
KBZ	**Khabaz**	**82.02**	**314**	*i* P	**P**	**15 55 36.9**	**-1.0**	
KBZ				pmax	pmax			
	comp=Z,22nm,1.0s							
GOF	**Gofitskoye**	**82.15**	**316**	*ce*P	**P**	**15 55 40.5**	**+1.8**	
SHA1	**Shidzhatmaz**	**82.19**	**314**	*i* P	**P**	**15 55 38.0**	**-1.2**	
KVAR	**Kislovodsk Arr**	**82.20**	**315**	LR	LR	16 39 21.2		
	comp=Z,1µm,19.8s,baz=227,slow=41							
KIV	**Kislovodsk**	**82.21**	**315**	*e*P	**P**	**15 55 37.6**	**-1.5**	
KIV				*e*		15 58 44.6		
KIV				*e*S	**S**	**16 05 52.5**	**-2.4**	
KIV				pmax	pmax			
	comp=Z,5.0nm,1.0s							
KIV	**Kislovodsk**	**82.21**	**315**	P	**P**	**15 55 38.1**	**-1.0**	
KIV				P	**P**	**15 55 38.1**	**-1.0**	
KMBO	**Kilima Mbogo**	**82.80**	**269**	P	**P**	**15 55 42.3**	**-0.8**	
	baz=84,slow=5.5							
KMBO				LR	LR	16 30 09.9		
	comp=Z,3µm,20.4s,baz=100,slow=34							
KMBO	**Kilima Mbogo**	**82.80**	**269**	*i* P	**P**	**15 55 41.3**	**-1.7**	
KOPT	**Kop Dagi**	**83.20**	**310**	P	**P**	**15 55 42.8**	**-1.8**	
LABN	**Labinsk**	**83.71**	**315**	*e*P	**P**	**15 55 47.8**	**+1.1**	
LABN				pmax	pmax			
	comp=Z,16nm,0.6s							
VSLR	**Vesyoloye**	**84.03**	**314**	*i* P	**P**	**15 55 47.0**	**-1.4**	
VSLR				pmax	pmax			
	comp=Z,43nm,0.9s							
ERBR	**Yeremizino-Bor**	**84.04**	**316**	*e*P	**P**	**15 55 46.0**	**-2.4**	
ERBR				*e*S	**SKSac**	**16 06 03.8**	**-8.4**	
ERBR				pmax	pmax			
	comp=Z,24nm,0.8s							
VRH	**Novokhopyorsk**	**84.13**	**322**	*e*P	**P**	**15 55 46.6**	**-2.1**	
VRH				pmax	pmax			
	comp=Z,27nm,1.0s							
SOC	**Sochi**	**84.27**	**314**	*e*P	P	15 55 46.8	-2.8	
SOC				*e*		15 59 05.1		
SOC				*e*PPP	PPP	16 00 53.9		
SOC				*e*S	**SKSac**	**16 06 07.9**	**-5.9**	
SOC				*e*SS	**SS**	**16 11 45.2**	**0.0**	
SOC				*e*SSS	SSS	16 15 08.4		
SOC				pmax	pmax			
	comp=Z,12nm,0.8s							
SOC				MLR	MLR			
	comp=Z,1µm,21.0s							
ARPR	**Arapgir-MALATY**	**84.74**	**309**	P	**P**	**15 55 51.3**	**-1.0**	
ARPR				IAMs_20	IAMs_20	16 41 12.2		
	comp=Z,2µm,20.0s							
LODK	**Lodwar**	**84.84**	**274**	IAMs_20	IAMs_20	16 33 06.5		
	comp=Z,2µm,19.0s							
LODK	**Lodwar**	**84.84**	**274**	P	**P**	**15 55 52.4**	**-0.8**	
	SNR=6.1							
ANM	**Nome**	**85.04**	**25**	P	**P**	**15 55 51.0**	**-2.0**	
ANM	**Nome**	**85.04**	**25**	P	**P**	**15 55 51.0**	**-2.0**	
ANM				pmax	pmax			
	comp=Z,23nm,1.0s							
ASF	**Jabal al Asfar**	**85.19**	**302**	LR	LR	16 39 28.2		
	comp=Z,2µm,18.4s,baz=90,slow=40							
GAZ	**Gaziantep**	**85.41**	**307**	IAmb	IAmb	15 56 15.7		
	comp=Z,61nm,1.2s							
VORD	**Divnogorie**	**85.61**	**321**	*e*P	P	15 55 52.4	-3.7	
VORD				pmax	pmax			
	comp=Z,30nm,1.0s							
F15K	**North Star Dit**	**85.62**	**24**	IAmb	IAmb	15 56 51.2		
	comp=Z,87nm,1.5s							
VSR	**Storozhevoye**	**85.72**	**321**	*e*P	P	15 55 53.2	-3.5	
VSR				pmax	pmax			
	comp=Z,20nm,0.9s							
VORR	**Voronezh**	**85.76**	**322**	*e*P	**P**	**15 55 55.3**	**-1.6**	
VORR				pmax	pmax			
	comp=Z,39nm,0.8s							
C16K	**Lisburne Hills**	**86.01**	**21**	IAmb	IAmb	15 56 27.0		
	comp=Z,75nm,1.2s							
ANN	**Anapa**	**86.06**	**315**	*e*P	**P**	**15 55 56.2**	**-2.3**	
ANN				*e*S	**SKSac**	**16 06 23.2**	**-1.8**	
ANN				pmax	pmax			
	comp=Z,79nm,1.7s							
LPSR	**Galich'ya Gora**	**86.06**	**323**	*e*P	**P**	**15 55 56.6**	**-1.8**	
LPSR				pmax	pmax			
	comp=Z,44nm,0.8s							
TOKA	**Tokat**	**86.29**	**310**	IAmb	IAmb	15 56 19.8		
	comp=Z,50nm,1.2s							
G16K	**Koyuk River**	**86.48**	**24**	IAmb	IAmb	15 56 40.9		
	comp=Z,48nm,1.2s							
MMAI	**Mount Meron Ar**	**86.52**	**303**	P	**P**	**15 55 59.2**	**-2.0**	
	comp=Z,6.8nm,0.8s,baz=79,slow=7.8,SNR=4.9							
MMAI				LR	LR	16 40 43.5		
	comp=Z,2µm,18.2s,baz=94,slow=40							
	comp=Z,6.8nm,0.8s							
BNN	**Bunyan**	**86.64**	**309**	IAmb	IAmb	15 56 21.5		
	comp=Z,116nm,1.8s							
EIL	**Elat**	**86.66**	**300**	LR	LR	16 41 38.0		
	comp=Z,2µm,18.4s,baz=84,slow=40							
J16K	**Anvik River**	**86.81**	**26**	IAmb	IAmb	15 57 13.6		
	comp=Z,72nm,1.4s							
RDOG	**Red Dog Mine**	**86.84**	**22**	IAmb	IAmb	15 56 56.1		
	comp=Z,81nm,1.5s							
I17K	**Unalakleet**	**86.88**	**26**	IAmb	IAmb	15 57 42.1		
	comp=Z,100nm,1.9s							
KLMR	**Klimovskoe**	**86.98**	**331**	*e*P	**P**	**15 56 01.5**	**-1.2**	
KLMR				*e*		15 59 23.9		
KLMR				S	**SKSac**	**16 06 27.0**	**-3.1**	
KLMR				pmax	pmax			
	comp=Z,86nm,1.4s							
MOS	**Moscow**	**87.25**	**326**	*e*P	**P**	**15 56 03.5**	**-0.6**	
MOS				*e*		15 59 30.3		
MOS				*e*		16 06 37.1		
MOS				*e*SS	SS	16 12 31.9	+3.7	
MOS				pmax	pmax			
	comp=Z,45nm,0.8s							
H17K	**Granite Mounta**	**87.40**	**25**	IAmb	IAmb	15 57 06.3		
	comp=Z,41nm,1.4s							
J17K	**VABM Dome**	**87.51**	**26**	IAmb	IAmb	15 57 29.8		
	comp=Z,42nm,1.4s							
E18K	**Tukpahlearik C**	**87.57**	**22**	IAmb	IAmb	15 56 57.6		
	comp=Z,33nm,1.2s							
K17K	**Iditarod**	**87.76**	**27**	IAmb	IAmb	15 56 30.9		
	comp=Z,28nm,1.1s							
OBN	**Obninsk**	**87.77**	**325**	LR	LR	16 40 16.2		
	comp=Z,1µm,21.6s,baz=100,slow=39							
OBN	**Obninsk**	**87.77**	**325**	*e*P	**P**	**15 56 04.7**	**-1.9**	
OBN				*e*		15 56 07.1		
OBN				*PP	**PcP**	**15 56 08.0**	**-0.5**	
OBN						15 59 30.0		
OBN				*e*PPP	PPP	16 01 26.3		
OBN				*e*S	**SKSac**	**16 06 34.3**	**-0.7**	
OBN				*e*		16 06 53.5		
OBN				*i* PS		16 08 10.1		
OBN				*i* SSS	SSS	16 16 06.0		
OBN				pmax	pmax			
	comp=Z,81nm,1.2s							
H18K	**Honhosa River**	**88.09**	**25**	IAmb	IAmb	15 57 47.5		
	comp=Z,45nm,1.8s							
QSPA	**South Pole Qui**	**88.12**	**180**	P	**P**	**15 56 07.3**	**-1.0**	
	comp=Z,17nm,1.1s,baz=319,slow=3.7,SNR=14							
QSPA				LR	LR	16 36 22.3		
	comp=Z,2µm,18.7s,baz=349,slow=36							
	comp=Z,17nm,1.1s							
QSPA	**South Pole Qui**	**88.12**	**180**	P	**P**	**15 56 08.1**	**-0.2**	
QSPA				IAmb	IAmb	15 56 50.3		
	comp=Z,57nm,1.2s							
C19K	**Lookout Ridge**	**88.24**	**21**	IAmb	IAmb	15 56 34.0		
	comp=Z,45nm,1.2s							
CSS	**Mathiatis**	**88.37**	**305**	IAMs_20	IAMs_20	16 41 19.8		
	comp=Z,2µm,21.0s							
BR131	**Keskin Array S**	**88.42**	**310**	IAmb	IAmb	15 56 28.6		
	comp=Z,27nm,0.9s							
BR131	**Keskin Array S**	**88.42**	**310**	*i* P	**P**	**15 56 08.0**	**-2.3**	
BR131	**Keskin Array S**	**88.42**	**310**	P	**P**	**15 56 07.9**	**-2.4**	
	SNR=12							
BR131				P	**P**	**15 56 07.9**	**-2.4**	
	SNR=12							
BRTR	**Keskin Array B**	**88.42**	**310**	P	**P**	**15 56 08.6**	**-1.8**	
	comp=Z,5.8nm,0.8s,baz=134,slow=4.8,SNR=26							
BRTR				LR	LR	16 43 04.8		
	comp=Z,1µm,20.6s,baz=100,slow=41							
	comp=Z,5.8nm,0.8s							
BRTR	**Keskin Array B**	**88.42**	**310**	P	**P**	**15 56 07.9**	**-2.4**	
BRTR	**Keskin Array B**	**88.42**	**310**	P	**P**	**15 56 07.9**	**-2.4**	
SIM	**Simferopol'**	**88.42**	**315**	*e*P	P	15 56 19.6	+10	
SIM				S	**S**	**16 07 01.0**	**+5.0**	
SIM				pmax	pmax			
	comp=Z,31nm,0.9s							
SIM				pmax	pmax			
	comp=Z,150nm,5.3s							
J18K	**Innoko River**	**88.57**	**26**	IAmb	IAmb	15 56 36.1		
	comp=Z,44nm,1.5s							
G19K	**Purcell Mounta**	**88.75**	**24**	IAmb	IAmb	15 57 31.9		
	comp=Z,50nm,1.6s							
O18K	**Koktuh Hills**	**88.90**	**30**	IAmb	IAmb	15 56 34.8		
	comp=Z,33nm,1.2s							
H19K	**Roundabout Mou**	**88.93**	**24**	IAmb	IAmb	15 56 41.6		
	comp=Z,42nm,1.2s							
B20K	**Meade River**	**89.22**	**

comp=Z,2µm,41.5s
PPT2 eLR LR 16 24 58.3
comp=Z,2µm,24.2s
PPT Papeete 89.78 107 LR LR 16 33 09.5
comp=Z,748nm,20.2s,baz=267,slow=33
M20K Styx River 90.07 28 IAmb IAmb 15 56 43.5
comp=Z,47nm,1.3s
IMAR Indian Mountai 90.09 24 P P **15 56 15.5 -1.9**
KDAK Kodiak Island 90.10 32 IAMs_20 IAMs_20 16 34 32.2
comp=Z,2µm,21.0s
ELIB Princess Elisa 90.37 198 dP P **15 56 20.3 +1.5**
comp=Z,22nm,1.2s
APA Apatity 90.40 337 eP P **15 56 22.5 +3.7**
APA e 15 59 54.1
APA pmax pmax
comp=Z,14nm,1.3s
APA MLR MLR
comp=Z,4µm,26.5s
B22K Teshekpuk Lake 90.52 20 IAmb IAmb 15 56 26.9
comp=Z,77nm,1.6s
LSZ Lusaka 91.36 255 LR LR 16 34 14.4
comp=Z,4µm,20.1s,baz=110,slow=34
D23K Nanushuk River 91.41 21 IAmb IAmb 15 57 35.0
comp=Z,55nm,1.6s
I23K Minto, Yukon-K 91.88 25 IAmb IAmb 15 56 51.8
comp=Z,35nm,1.3s
BROLN Tlhalogang 91.92 249 *i* P P **15 56 24.8 -2.2**
AKASG Malin Array Be 91.95 320 P P **15 56 23.8 -2.5**
comp=Z,1.4nm,0.8s,baz=74,slow=5.1,SNR=7.3
AKASG PP PP **16 00 04.4 -1.2**
comp=Z,2.5nm,1.0s,baz=82,slow=7.6,SNR=5.9
AKASG PKKPbc **PKKPdf 16 13 43.3 +0.4**
comp=Z,0.1nm,0.3s,baz=277,slow=2.9,SNR=4.8
AKASG LR LR 16 42 01.0
comp=Z,1µm,20.8s,baz=94,slow=38
comp=Z,1.4nm,0.8s
AKASG Malin Array Be 91.95 320 P P **15 56 24.2 -2.1**
AKASG Malin Array Be 91.95 320 *i* P P **15 56 23.6 -2.7**
AKASG pmax pmax
comp=Z,1.0nm,0.7s
KIEV Kiev 91.96 320 IAMs_20 IAMs_20 16 41 39.8
comp=Z,2µm,19.0s
MCK McKinley 92.06 26 IAmb IAmb 15 56 51.7
comp=Z,46nm,1.3s
D24K Happy Valley 92.08 21 IAmb IAmb 15 57 11.6
comp=Z,74nm,1.8s
RND Reindeer 92.10 27 IAmb IAmb 15 56 51.5
comp=Z,46nm,1.5s
C24K Franklin Bluff 92.12 20 IAmb IAmb 15 56 31.7
comp=Z,62nm,1.7s
KNK Knik Glacier 92.29 29 IAmb IAmb 15 57 29.6
comp=Z,32nm,1.2s
SML Sawmill 92.35 28 IAmb IAmb 15 57 22.1
comp=Z,28nm,1.0s
WRH Wood River Hil 92.42 26 IAmb IAmb 15 56 53.2
comp=Z,43nm,1.6s
F24K Squaw Lake 92.45 23 IAmb IAmb 15 57 21.0
comp=Z,46nm,1.8s
H24K Noodor Dome 92.49 24 IAmb IAmb 15 57 06.7
comp=Z,82nm,2.0s
MNK Minsk 92.76 324 *i* P P **15 56 28.1 -1.9**
MNK comp=E,22nm,0.8s *i* P P **15 56 28.1 -1.9**
MNK comp=N,13nm,0.7s *i* P P **15 56 28.1 -1.9**
MNK comp=Z,15nm,1.0s,baz=89 *i* PP PP **16 00 07.5 -4.3**
MNK *i* PPP PPP 16 02 09.0
MNK *i* S **SKSac 16 07 01.4 -2.7**
MNK *i* SS SS 16 13 34.6 -13
MNK *i* SSS SSS 16 17 26.7
MNK *i* LQ LQ 16 31 24.1
MNK *i* LRM MLR 16 39 12.3
comp=N,2µm,28.1s
MNK *i* LRM MLR 16 39 49.5
comp=Z,2µm,24.4s
MNK *i* LRM MLR 16 39 56.4
comp=E,4µm,24.7s
MNK Minsk 92.76 324 *i* P P **15 56 28.0 -1.9**
MNK *i* 16 00 07.5
MNK *i* PPP PPP 16 02 09.0
MNK *i* S **SKSac 16 07 01.3 -2.7**
MNK *i* SSS SSS 16 17 26.7
MNK pmax pmax
comp=E,22nm,0.8s
MNK pmax pmax
comp=N,13nm,0.7s
MNK pmax pmax
comp=Z,15nm,1.0s
MNK MLR MLR
comp=Z,2µm,24.0s
MNK MLR MLR
comp=E,4µm,25.0s
ILAR Eielson Array 92.94 25 P P **15 56 28.4 -2.2**
comp=E,0.7nm,0.8s,baz=254,slow=4.4,SNR=7.0
ILAR PP PP **16 00 13.4 +0.4**
comp=E,0.9nm,0.9s,baz=277,slow=8.0,SNR=4.2
comp=E,0.7nm,0.8s
LPHEP Lephephe 93.17 247 *i* P P **15 56 30.5 -2.2**
LBTB Lobatse 93.31 245 LR LR 16 34 44.5
comp=E,886nm,19.4s,baz=90,slow=33
LBTB Lobatse 93.31 245 IAmb IAmb 15 56 37.0
comp=Z,72nm,1.9s
ARCES ARCESS Array B 93.31 339 P P **15 56 30.9 -1.3**
comp=Z,3.6nm,0.9s,baz=109,slow=7.7,SNR=4.3
ARCES LR LR 16 43 03.2
comp=Z,1µm,19.6s,baz=102,slow=38
comp=Z,3.6nm,0.9s
BOSA Boshof 93.38 241 P P **15 56 31.7 -1.9**
comp=Z,11nm,1.1s,baz=124,slow=5.2,SNR=7.1
BOSA LR LR 16 33 04.1
comp=Z,4µm,21.4s,baz=109,slow=32
comp=Z,11nm,1.1s
BOSA Boshof 93.38 241 P P **15 56 33.2 -0.4**
BOSA IAmb IAmb 15 56 53.9
comp=Z,54nm,1.6s
BOSA Boshof 93.38 241 P P **15 56 33.2 -0.4**
BOSA pmax pmax
comp=Z,54nm,1.6s
NACGM Naroch 93.39 325 eP P **15 56 31.3 -1.6**
comp=Z,15nm,0.9s,baz=88
FINES FINESS Array B 93.52 331 P P **15 56 30.8 -2.5**
comp=Z,3.0nm,0.9s,baz=108,slow=6.2,SNR=4.7
comp=Z,3.0nm,0.9s
FINES FINESS Array B 93.52 331 *i* P P **15 56 32.2 -1.1**
FINES pmax pmax
comp=Z,3.0nm,0.9s
KHWEE KHWEE 93.63 248 *i* P P **15 56 33.0 -1.8**
KHWEE KHWEE 93.63 248 IAmb IAmb 15 56 35.3
comp=Z,32nm,0.9s
BMAR Burnt Mountain 93.73 23 P P **15 56 33.1 -1.2**
C27K Jago River 93.87 20 IAmb IAmb 15 57 20.0
comp=Z,72nm,1.6s
F26K Sheenjek River 93.88 22 IAmb IAmb 15 57 12.5
comp=Z,42nm,2.0s
N25K Chitina, Valde 94.13 29 IAmb IAmb 15 57 02.4
comp=Z,35nm,1.4s
KSANE Kasane 94.14 252 *i* P P **15 56 34.6 -2.7**
KSANE Kasane 94.14 252 IAmb IAmb 15 56 47.8
comp=Z,32nm,1.2s
BMRM Bremner River 94.17 29 IAmb IAmb 15 58 12.8
comp=Z,33nm,1.3s
MLR Muntele Rosu 94.20 315 LR LR 16 46 28.2
comp=Z,2µm,20.9s,baz=74,slow=40
MLR Muntele Rosu 94.20 315 IAmb IAmb 15 57 09.1
comp=Z,69nm,1.8s
MLR IAMs_20 IAMs_20 16 45 56.0
comp=Z,2µm,21.0s
NVL N'lazarevskaya 94.24 198 eP P **15 56 37.5 +1.0**
NVL e 16 00 24.6
NVL pmax pmax
comp=Z,23nm,1.3s
KDWAN Kaudwane 94.26 247 *i* P P **15 56 36.1 -1.7**
I26K Coal Creek Min 94.48 25 IAmb IAmb 15 57 03.4
comp=Z,34nm,1.2s
GLB Gilahina Butte 94.52 29 IAmb IAmb 15 57 04.8
comp=Z,33nm,1.3s
SPITS Spitsbergen Ar 94.58 348 P P **15 56 35.9 -2.1**
comp=Z,7.4nm,0.9s,baz=107,slow=7.7,SNR=1.9
SPITS LR LR 16 43 23.6
comp=Z,2µm,21.9s,baz=71,slow=38
comp=Z,7.4nm,0.9s
M26K Nabesna, AK 94.82 28 IAmb IAmb 15 57 42.9
comp=Z,29nm,1.5s
G27K Doyon Strip 94.93 23 IAmb IAmb 15 57 30.1
comp=Z,28nm,1.5s
K27K Chicken 95.07 26 IAmb IAmb 15 57 25.8
comp=Z,30nm,1.4s
I27K Kandik River 95.09 24 IAmb IAmb 15 56 45.8
comp=Z,17nm,0.8s
IDI Anoyia 95.29 305 LR LR 16 47 09.9
comp=Z,438nm,19.8s,baz=97,slow=40
BCAR Beaver Creek A 95.31 27 P P **15 56 40.3 -1.3**
E28M Babbage River 95.48 21 IAmb IAmb 15 57 31.3
comp=Z,26nm,1.3s
BARN Barnard Glacie 95.59 29 IAmb IAmb 15 57 36.5
comp=Z,34nm,1.1s
I28M Miner Creek 95.80 24 IAmb IAmb 15 57 36.4
comp=Z,24nm,1.2s
E29M Blow River 96.11 21 IAmb IAmb 15 57 35.6
comp=Z,54nm,1.9s
H29M Whitestone 96.32 24 IAmb IAmb 15 57 36.3
comp=Z,43nm,1.4s
G29M Pine Creek 96.33 23 IAmb IAmb 15 57 55.2
comp=Z,26nm,1.3s
KGCAE Kacgae 96.56 247 *i* P P **15 56 46.4 -1.9**
J29N Klondike Camp 96.68 25 IAmb IAmb 15 57 24.2
comp=Z,21nm,1.2s
SUR Sutherland 96.86 237 LR LR 16 35 45.7
comp=Z,2µm,20.8s,baz=102,slow=32
L29M L29M 96.95 27 IAmb IAmb 15 57 32.5
comp=Z,27nm,1.1s
G30M tAoh Zrail Nji 97.02 23 IAmb IAmb 15 57 26.2
comp=Z,26nm,1.2s
F30M Barrier River 97.05 22 IAmb IAmb 15 57 33.0
comp=Z,26nm,1.2s
GRTLG Ghanzi 97.60 248 *i* P P **15 56 50.4 -2.6**
GRTLG Ghanzi 97.60 248 IAmb IAmb 15 56 59.0
comp=Z,9.5nm,0.8s
M30M Minto, Yukon 97.65 27 IAmb IAmb 15 57 19.0
comp=Z,31nm,1.6s
INK Inuvik 97.71 21 IAmb IAmb 15 57 36.1
comp=Z,17nm,1.4s
N30M Aishikik Lake 97.72 28 IAmb IAmb 15 57 13.5
comp=Z,33nm,1.4s
G31M Satah River 97.78 23 IAmb IAmb 15 57 29.6
comp=Z,37nm,1.6s
SNAA Sanae 98.16 196 LR LR 16 38 21.6
comp=Z,2µm,20.2s,baz=112,slow=34
PSZ Piszkesteto 98.19 318 IAMs_20 IAMs_20 16 45 42.1
comp=Z,2µm,22.0s
OKC Ostrava-Krasne 99.09 320 AMS AMS 16 45 20.0
comp=Z,2µm,18.1s
PDG Podgorica 99.22 313 IAMs_20 IAMs_20 16 50 49.2
comp=Z,1µm,22.0s
FARO Faro, Yukon 99.29 27 IAmb IAmb 15 57 25.4
comp=Z,33nm,1.4s
TAOE Nuku Hiva Isla 99.36 99 eLR LR 16 29 16.1
comp=Z,1µm,24.9s
HFS Hagfors 99.70 331 P **Pdif 15 56 58.9 -2.5**
comp=Z,3.0nm,0.7s,baz=69,slow=7.9,SNR=4.4
HFS LR LR 16 46 51.3
comp=Z,1µm,21.1s,baz=84,slow=38
comp=Z,3.0nm,0.7s
KRLC Kraliky 99.93 320 AMS AMS 16 45 20.0
comp=Z,2µm,20.6s
DPC Dobruska-Polom 100.17 321 AMS AMS 16 45 20.0
comp=Z,2µm,20.7s
OSTC Ostas 100.21 321 AMS AMS 16 45 30.0
comp=Z,2µm,17.5s
CHVC Chvalec 100.30 321 AMS AMS 16 45 10.0
comp=Z,3µm,23.5s
UPC Upice 100.34 321 AMS AMS 16 45 10.0
comp=Z,2µm,23.8s
NOA NORSAR Array B 100.66 332 P **Pdif 15 57 03.1 -2.6**
comp=Z,1.6nm,0.8s,baz=73,slow=4.4,SNR=4.4
ARSA Arzberg 101.21 318 ePKiKP **PKiKP 16 01 32.4 -0.8**
comp=Z,5.9nm,1.1s
PVCC Panska Ves 101.25 321 AMS AMS 16 45 50.0
comp=Z,3µm,27.3s
WIN Windhoek 101.28 247 IAMs_20 IAMs_20 16 40 57.8
comp=Z,2µm,21.0s
PRU Pruhonice 101.36 321 AMS AMS 16 46 20.0
comp=Z,2µm,18.7s
RICC Richard 101.54 321 AMS AMS 16 45 50.0
comp=Z,2µm,28.0s
SOKA Soboth 101.64 317 ePKiKP **PKiKP 16 01 29.9 -4.2**
comp=Z,18nm,1.6s
ZVC Zvikov 101.69 320 AMS AMS 16 46 40.0
comp=Z,2µm,20.5s
CKRC Cesky Krumlov 101.73 319 eSP SP 16 10 32.4 +8.2
CKRC AMS AMS 16 47 10.0
comp=Z,2µm,19.0s
HSKC Hora Svate Kat 101.94 321 AMS AMS 16 45 50.0
comp=Z,3µm,25.1s
MOA Molln 101.94 319 ePKiKP **PKiKP 16 01 34.2 -0.3**
comp=Z,16nm,2.2s
OBKA Obir 101.99 317 ePKiKP **PKiKP 16 01 34.5 -0.2**
comp=Z,11nm,1.6s
CLL Collm 102.06 322 IAMs_20 IAMs_20 16 46 25.0
comp=Z,2µm,22.0s
GERES GERESS Array B 102.12 320 P **Pdif 15 57 11.2 -1.4**
comp=Z,0.3nm,0.4s,baz=93,slow=7.1,SNR=3.8
KHC Kasperske Hory 102.15 320 eP **PP 16 01 24.1 -0.2**
KHC ePKP **PKiKP 16 01 35.5 +0.6**
KHC eSP SP 16 10 33.1 +4.5
KHC AMS AMS 16 46 50.0
comp=Z,2µm,21.3s
BIOA Bad Ischl, Aus 102.39 318 ePKiKP **PKiKP 16 01 33.5 -1.9**
comp=Z,10nm,1.8s
NKC Novy Kostel 102.64 321 AMS AMS 16 46 30.0
comp=Z,3µm,25.3s
KBA Koelnbreinsper 102.70 318 ePKiKP **PKiKP 16 01 36.0 -0.1**
comp=Z,14nm,1.5s
LESA Schwarzleotal 103.08 318 ePP **PP 16 01 33.6 +2.2**
comp=Z,7.2nm,1.4s
GRA1 Grafenberg Arr 103.53 321 IAMs_20 IAMs_20 16 46 34.0
comp=Z,1µm,22.0s
GRFO Grafenberg 103.53 321 IAMs_20 IAMs_20 16 46 34.0
comp=Z,1µm,22.0s
WTTA Wattenberg 103.80 318 ePKiKP **PKiKP 16 01 38.4 +0.3**
comp=Z,5.0nm,0.8s
RETA Reutte 104.33 319 ePKiKP **PKiKP 16 01 37.5 -1.5**
comp=Z,11nm,1.2s
FETA Feichten 104.46 318 ePKiKP **PKiKP 16 01 38.2 -1.2**
comp=Z,7.2nm,1.2s
FUORN Vienpass-Fuorn 104.86 318 IAMs_20 IAMs_20 16 50 18.7
comp=Z,1µm,21.0s
DAVA Damuels 104.96 319 ePKiKP **PKiKP 16 01 41.4 +1.1**
comp=Z,6.7nm,1.0s
STU Stuttgart 105.04 320 IAMs_20 IAMs_20 16 48 45.1
comp=Z,2µm,22.0s
TUE Stuetta 105.52 318 IAMs_20 IAMs_20 16 50 25.9
comp=Z,2µm,21.0s
BFO Black Forest 105.71 320 IAMs_20 IAMs_20 16 49 04.8
comp=Z,2µm,22.0s
ECH Echery 106.50 320 IAMs_20 IAMs_20 16 50 31.6
comp=Z,1µm,21.0s
WLF Walferdange 106.71 322 IAMs_20 IAMs_20 16 51 00.0
comp=Z,1µm,21.0s
SENIN Lac Senin/Sane 106.91 318 IAMs_20 IAMs_20 16 50 19.9
comp=Z,1µm,20.0s
YKA Yellowknife Ar 107.23 23 Pdiff **Pdif 15 57 34.6 -0.3**
comp=Z,0.4nm,0.9s,baz=301,slow=5.5,SNR=4.3
YKA PKKPbc **PKKPbc 16 13 01.0 -1.5**
comp=Z,0.5nm,1.1s,baz=123,slow=2.6,SNR=3.9
KRPM Rodgers 110.50 46 IAMs_20 IAMs_20 16 48 48.4
comp=Z,1µm,20.0s
JCC Jacoby Creek, 110.59 47 IAMs_20 IAMs_20 16 39 09.8
comp=Z,1µm,22.0s
KHMM Horse Mountain 110.80 47 IAMs_20 IAMs_20 16 38 55.1
comp=Z,1µm,22.0s
KHBM Hayfork Bally 111.23 47 IAMs_20 IAMs_20 16 39 20.6
comp=Z,2µm,22.0s
M02C Callahan 111.28 46 IAMs_20 IAMs_20 16 47 02.9
comp=Z,1µm,20.0s
N02D Trinity Center 111.51 46 IAMs_20 IAMs_20 16 39 32.0
comp=Z,2µm,22.0s
HOPS Hopland Field 111.81 48 IAMs_20 IAMs_20 16 40 19.1
comp=Z,1µm,22.0s
MCCM Marconi Confer 112.19 49 IAMs_20 IAMs_20 16 39 55.2
comp=Z,1µm,21.0s
MNRC McLaughlin Min 112.31 48 IAMs_20 IAMs_20 16 40 47.4
comp=Z,1µm,22.0s
O03E Paynes Creek 112.37 47 IAMs_20 IAMs_20 16 40 06.8
comp=Z,1µm,22.0s
ILULI Ilulissat 112.47 357 IAMs_20 IAMs_20 16 53 06.1
comp=Z,1µm,22.0s
ORV Oroville 112.81 48 IAMs_20 IAMs_20 16 41 19.6
comp=Z,1µm,21.0s
TAM Tamanrasset 113.30 294 IAMs_20 IAMs_20 16 58 01.3
comp=Z,1µm,20.0s
FORD Fort Ord Natur 113.43 51 IAMs_20 IAMs_20 16 48 56.2
comp=Z,914nm,19.0s
PMSA Palmer Station 113.49 178 eP **Pdif 15 58 04.1 +1.5**
WELL Weller Preserv 113.73 48 IAMs_20 IAMs_20 16 41 28.9
comp=Z,1µm,22.0s
HULI Fort Hunter Li 114.04 51 IAMs_20 IAMs_20 16 47 12.4
comp=Z,1µm,20.0s
CMB Columbia Colle 114.10 49 IAMs_20 IAMs_20 16 42 10.9
comp=Z,995nm,21.0s
PLID Pearl Lake 114.67 40 IAMs_20 IAMs_20 16 42 43.6
comp=Z,1µm,22.0s
CART Cartagena 115.42 311 IAMs_20 IAMs_20 16 56 39.0
comp=Z,1µm,21.0s
NVAR Mina Array Bea 115.53 48 PKP **PKiKP 16 02 00.8 +0.3**
comp=Z,2.0nm,0.7s,baz=276,slow=2.5,SNR=12
NVAR PKKPbc **PKKPbc 16 12 33.5 -1.2**
comp=Z,0.9nm,0.7s,baz=113,slow=3.4,SNR=5.4
TIN Tinemaha, Big 116.04 49 IAMs_20 IAMs_20 16 50 55.1
comp=Z,1µm,18.0s
ISA Isabella, Lake 116.29 51 IAMs_20 IAMs_20 16 54 48.9
comp=Z,881nm,19.0s
CWC Cottonwood Cre 116.35 50 IAMs_20 IAMs_20 16 51 07.4
comp=Z,1µm,20.0s
DLMT Dillon 116.72 39 IAMs_20 IAMs_20 16 43 38.7
comp=Z,966nm,21.0s
ESDC Sonseca Array 116.87 314 PKKPbc PKKPbc 16 12 30.2 +0.4
comp=Z,1.4nm,0.8s,baz=257,slow=4.0,SNR=7.0
MPMC Manual Prospec 116.92 50 IAMs_20 IAMs_20 17 00 30.6
comp=Z,911nm,18.0s
PASC Pasadena Art C 116.97 52 IAMs_20 IAMs_20 16 50 59.1
comp=Z,1µm,20.0s
MWC Mount Wilson 117.05 52 IAMs_20 IAMs_20 16 54 10.3
comp=Z,1µm,20.0s
PAB San Pablo 117.20 314 IAMs_20 IAMs_20 16 57 27.7
comp=Z,1µm,21.0s
FURC Furnace Creek, 117.27 49 IAMs_20 IAMs_20 16 51 48.7
comp=Z,971nm,20.0s
TORD Torodi Ar. Bea 118.04 284 PKP **PKPdf 16 02 03.8 -1.9**
comp=Z,1.0nm,0.7s,baz=78,slow=1.0,SNR=13
FLWY Flagg Ranch 118.51 39 IAMs_20 IAMs_20 16 44 46.2
comp=Z,1µm,22.0s
FXWY Fox Creek 118.51 40 IAMs_20 IAMs_20 16 44 33.2
comp=Z,1µm,22.0s
BAR Barrett 118.62 53 IAMs_20 IAMs_20 16 49 50.0
comp=Z,1µm,20.0s
MOOW Moose Ponds 118.64 40 IAMs_20 IAMs_20 16 45 12.6
comp=Z,1µm,22.0s
SNOW Snow King Moun 118.77 40 IAMs_20 IAMs_20 16 44 55.0
comp=Z,1µm,22.0s
LOHW Long Hollow 118.79 40 IAMs_20 IAMs_20 16 45 05.7
comp=Z,1µm,21.0s
DANC Danby, Needles 119.02 51 IAMs_20 IAMs_20 16 54 35.2
comp=Z,1µm,18.0s
HWUT Hardware Ranch 119.08 42 IAMs_20 IAMs_20 16 45 27.4
comp=Z,1µm,22.0s
BC3 Big Chuckawall 119.29 52 IAMs_20 IAMs_20 16 55 59.4
comp=Z,887nm,20.0s
PDAR Pinedale Array 119.87 40 PKP **PKPdf 16 02 08.0 -0.8**
comp=Z,0.8nm,0.7s,baz=235,slow=18,SNR=6.4
PDAR PKKPbc **PKKPbc 16 12 19.7 +0.3**
comp=Z,2.6nm,0.9s,baz=120,slow=5.3,SNR=14
GLA Glamis 119.98 53 IAMs_20 IAMs_20 16 51 58.8
comp=Z,1µm,20.0s
MESJ Messejana 120.65 314 ePP **PP 16 03 37.6 +0.2**
MESJ IAMs_20 IAMs_20 16 59 17.8
comp=Z,2µm,16.0s
MORF Marmelete 121.19 313 ePP **PP 16 03 41.0 0.0**
MORF IAMs_20 IAMs_20 16 47 53.5
comp=E,3µm,39.8s
K22A Casper 121.86 39 IAMs_20 IAMs_20 16 46 21.9
comp=Z,1µm,22.0s
ULM Lac du Bonnet 122.93 27 PKP **PKPdf 16 02 13.7 -0.4**
comp=Z,7.1nm,1.0s,baz=300,slow=4.1,SNR=7.5
MVCO Mesa Verde 123.16 46 IAMs_20 IAMs_20 16 48 31.4
comp=Z,1µm,22.0s
ISCO Idaho Springs 123.92 42 IAMs_20 IAMs_20 16 53 15.4
comp=Z,1µm,21.0s
Q24A Divide 124.65 42 IAMs_20 IAMs_20 16 49 06.9
comp=Z,1µm,22.0s
DBIC Dimbokro 124.91 277 PKP **PKPdf 16 02 17.7 -1.3**
comp=Z,4.2nm,0.8s,baz=98,slow=4.2,SNR=6.9
SDCO Great Sand Dun 125.01 44 IAMs_20 IAMs_20 16 56 34.7
comp=Z,1µm,20.0s
T25A Trinidad 126.07 44 IAMs_20 IAMs_20 16 49 02.6
comp=Z,1µm,20.0s
SCHQ Schefferville 126.86 5 PKP **PKPdf 16 02 20.6 -1.0**
comp=Z,3.2nm,0.9s,baz=17,slow=1.0,SNR=3.8
MSTX Muleshoe 128.79 46 IAMs_20 IAMs_20 16 58 10.1
comp=Z,905nm,19.0s
F42A Maple Grove Fa 129.73 25 IAMs_20 IAMs_20 17 07 58.7
comp=Z,874nm,18.0s
TXAR Lajitas Array 130.23 52 PKP **PKPdf 16 02 29.0 +0.2**
comp=Z,1.0nm,0.9s,baz=233,slow=3.3,SNR=5.5
TXAR SKPbc **SKPab 16 05 51.9 -0.3**
comp=Z,2.9nm,1.1s,baz=311,slow=2.7,SNR=5.2
OK038 West end E0370 130.26 41 IAMs_20 IAMs_20 16 56 15.4
comp=Z,906nm,20.0s
E46A Sault Ste Mari 130.78 22 IAMs_20 IAMs_20 16 59 50.3
comp=Z,1µm,22.0s
I42A Draeger Farm, 130.84 28 IAMs_20 IAMs_20 17 03 57.1
comp=Z,973nm,22.0s
OK029 Liberty Lake 131.51 41 IAMs_20 IAMs_20 17 12 47.3
comp=Z,952nm,21.0s
P38A Dawn 131.52 35 IAMs_20 IAMs_20 17 00 05.1
comp=Z,795nm,21.0s
ABTX Abilene, Hawle 131.73 46 IAMs_20 IAMs_20 17 04 08.9
comp=Z,1µm,18.0s
I45A Fountain 131.92 25 IAMs_20 IAMs_20 17 05 23.6
comp=Z,1µm,22.0s
GLMI Grayling 131.94 24 IAMs_20 IAMs_20 17 07 46.2
comp=Z,925nm,21.0s
N41A Harden Midland 132.24 32 IAMs_20 IAMs_20 17 12 45.7
comp=Z,802nm,20.0s
TUL3 Leonard 132.53 40 IAMs_20 IAMs_20 16 53 09.2
comp=Z,945nm,21.0s
JCT Junction City 132.69 49 IAMs_20 IAMs_20 16 59 10.6
comp=Z,966nm,19.0s
J47A Sunmer 133.16 25 IAMs_20 IAMs_20 17 06 19.6
comp=Z,1µm,20.0s
WHTX Lake Whitney, 133.64 46 IAMs_20 IAMs_20 17 05 28.3
comp=Z,912nm,20.0s
CCM Cathedral Cave 133.90 35 IAMs_20 IAMs_20 17 08 01.9
comp=Z,1µm,21.0s
SFIN Lafayette 134.40 29 IAMs_20 IAMs_20 16 59 36.5
comp=Z,772nm,21.0s
AAM Ann Arbor 134.42 25 IAMs_20 IAMs_20 16 59 27.8
comp=Z,862nm,22.0s
K50A Casco 134.45 23 IAMs_20 IAMs_20 17 10 49.5
comp=Z,801nm,21.0s
Z38A Mt. Pleasant 134.64 43 IAMs_20 IAMs_20 16 55 39.5
comp=Z,1µm,20.0s
P46A Rosedale 134.93 30 IAMs_20 IAMs_20 17 13 28.6
comp=Z,815nm,21.0s
S44A Carbondale 135.27 34 IAMs_20 IAMs_20 17 07 00.1
comp=Z,1µm,21.0s
N49A Columbus Grove 135.32 26 IAMs_20 IAMs_20 17 07 06.8
comp=Z,1µm,22.0s
O48B Farmland 135.42 28 IAMs_20 IAMs_20 17 04 05.4
comp=Z,899nm,21.0s
M50A Fremont 135.42 25 IAMs_20 IAMs_20 17 11 30.3
comp=Z,920nm,20.0s
LONY Lake Ozonia 135.45 15 IAMs_20 IAMs_20 17 08 59.5
comp=Z,1µm,21.0s
O49A Covington 135.85 27 IAMs_20 IAMs_20 17 15 11.8
comp=Z,953nm,22.0s
HKT Hockley 135.91 47 IAMs_20 IAMs_20 17 14 19.3
comp=Z,822nm,20.0s
P48A Milroy 135.92 29 IAMs_20 IAMs_20 17 14 23.7
comp=Z,717nm,19.0s
M52A Chesterland 136.00 23 IAMs_20 IAMs_20 17 07 15.4
comp=Z,840nm,20.0s
N51A Ashland 136.11 25 IAMs_20 IAMs_20 17 12 09.4
comp=Z,768nm,21.0s
ACSO Alum Creek Sta 136.42 26 IAMs_20 IAMs_20 17 11 41.7
comp=Z,750nm,20.0s
WCI Wyandotte Cave 136.44 31 IAMs_20 IAMs_20 17 00 34.8
comp=Z,1µm,22.0s
PLCA Paso Flores 136.55 168 PKP **PKPdf 16 02 40.9 +0.5**
comp=Z,2.4nm,0.9s,baz=40,slow=1.8,SNR=6.5
WVL Waterville 136.57 10 IAMs_20 IAMs_20 17 06 54.1
comp=Z,1µm,18.0s
LR05 Currie 136.71 166 IAMs_20 IAMs_20 16 59 16.5
comp=Z,1µm,20.0s
T47A Sharon Grove 136.95 32 IAMs_20 IAMs_20 17 10 04.5
comp=Z,918nm,21.0s
R49A Shelbyville 136.96 29 IAMs_20 IAMs_20 17 06 33.3
comp=Z,721nm,20.0s
WVT Waverly 137.19 34 IAMs_20 IAMs_20 17 08 17.8
comp=Z,1µm,20.0s
Q51A Peebles 137.24 27 IAMs_20 IAMs_20 17 15 17.5
comp=Z,878nm,21.0s

R50A	**Paris**	**137.37**	**29**	IAMs_20	IAMs_20	17 11 03.3
	comp=Z,793nm,22.0s					
GO06	**Curarrehue**	**137.45**	**167**	IAMs_20	IAMs_20	16 51 05.0
	comp=Z,1μm,22.0s					
P53A	**Whipple**	**137.72**	**25**	IAMs_20	IAMs_20	17 09 30.0
	comp=Z,959nm,22.0s					
Q52A	**Bidwell**	**137.77**	**26**	IAMs_20	IAMs_20	17 01 36.6
	comp=Z,914nm,22.0s					
K62A	**Royalston**	**137.87**	**14**	IAMs_20	IAMs_20	17 12 32.5
	comp=Z,971nm,20.0s					
U49A	**Red Boiling Sp**	**138.01**	**32**	IAMs_20	IAMs_20	17 02 53.5
	comp=Z,963nm,21.0s					
V48A	**Smith Brothers**	**138.03**	**33**	IAMs_20	IAMs_20	17 17 24.1
	comp=Z,808nm,21.0s					
T50A	**Nancy**	**138.11**	**30**	IAMs_20	IAMs_20	17 07 32.9
	comp=Z,841nm,20.0s					
N58A	**Sunbury**	**138.29**	**19**	IAMs_20	IAMs_20	17 07 06.9
	comp=Z,1μm,20.0s					
X48A	**Hartselle**	**138.84**	**35**	IAMs_20	IAMs_20	17 07 08.8
	comp=Z,977nm,21.0s					
WSPT	**Westport, CT**	**139.00**	**15**	IAMs_20	IAMs_20	17 17 05.5
	comp=Z,887nm,21.0s					
P57A	**Homestead Farm**	**139.05**	**22**	IAMs_20	IAMs_20	17 12 12.1
	comp=Z,1μm,21.0s					
M63A	**Gales Ferry**	**139.11**	**14**	IAMs_20	IAMs_20	17 06 17.3
	comp=Z,1μm,22.0s					
Z47A	**Carrollton**	**139.12**	**37**	IAMs_20	IAMs_20	16 58 04.5
	comp=Z,1μm,21.0s					
TZTN	**Tazewell**	**139.13**	**30**	IAMs_20	IAMs_20	17 07 59.7
	comp=Z,1μm,20.0s					
S54A	**Dingess, Beckl**	**139.16**	**26**	IAMs_20	IAMs_20	17 16 35.2
	comp=Z,947nm,19.0s					
R55A	**Marlinton**	**139.26**	**25**	IAMs_20	IAMs_20	17 16 48.9
	comp=Z,679nm,20.0s					
Y49A	**Blount Mountai**	**139.63**	**35**	IAMs_20	IAMs_20	17 07 38.7
	comp=Z,978nm,20.0s					
LRAL	**Lakeview Retre**	**139.88**	**36**	IAMs_20	IAMs_20	17 11 54.3
	comp=Z,916nm,20.0s					
P61A	**Hammonton**	**139.97**	**18**	IAMs_20	IAMs_20	17 16 20.1
	comp=Z,1μm,20.0s					
X51A	**Calhoun**	**139.98**	**33**	IAMs_20	IAMs_20	17 04 31.6
	comp=Z,915nm,21.0s					
BLA	**Blacksburg**	**140.04**	**26**	IAMs_20	IAMs_20	17 19 02.5
	comp=Z,891nm,20.0s					
W52A	**Murphy**	**140.07**	**31**	IAMs_20	IAMs_20	17 17 01.8
	comp=Z,895nm,22.0s					
V53A	**Saluda**	**140.18**	**30**	IAMs_20	IAMs_20	17 10 35.7
	comp=Z,1μm,22.0s					
R58B	**Mineral**	**140.43**	**23**	IAMs_20	IAMs_20	17 16 22.7
	comp=Z,939nm,21.0s					
U56A	**King**	**140.77**	**27**	IAMs_20	IAMs_20	17 09 03.1
	comp=Z,1μm,20.0s					
Y52A	**Lilburn**	**140.94**	**33**	IAMs_20	IAMs_20	17 11 37.0
	comp=Z,902nm,20.0s					
T59A	**Double "B" Far**	**141.42**	**23**	IAMs_20	IAMs_20	17 14 41.0
	comp=Z,1μm,20.0s					
152A	**Waverly Hall**	**141.47**	**35**	IAMs_20	IAMs_20	17 17 13.2
	comp=Z,847nm,22.0s					
GOGA	**Godfrey**	**141.60**	**33**		PKPpre	16 02 42.6
GOGA	**Godfrey**	**141.60**	**33**	IAMs_20	IAMs_20	17 11 52.6
	comp=Z,1μm,21.0s					
GOGA	**Godfrey**	**141.60**	**33**	PKHKP	PKPpre	16 02 42.6
GOGA				MLR	MLR	
	comp=Z,1μm,21.0s					
V58A	**Windy Hill, Pi**	**141.79**	**26**	IAMs_20	IAMs_20	17 09 12.0
	comp=Z,1μm,22.0s					
W57A	**Gilead**	**141.94**	**27**	IAMs_20	IAMs_20	17 15 00.0
	comp=Z,1μm,22.0s					
154A	**Montrose**	**142.41**	**33**	IAMs_20	IAMs_20	17 17 54.9
	comp=Z,1μm,22.0s					
Y57A	**Sumter**	**142.69**	**29**	IAMs_20	IAMs_20	17 04 33.0
	comp=Z,1μm,22.0s					
Y58A	**Scranton**	**143.12**	**28**	IAMs_20	IAMs_20	17 13 19.4
	comp=Z,856nm,20.0s					
Y60A	**Bolivia**	**143.70**	**26**	IAMs_20	IAMs_20	17 16 30.5
	comp=Z,1μm,22.0s					
PEL	**Peldehue**	**143.76**	**165**		PKPab	16 02 51.6 +1.2
PEL	**Peldehue**	**143.76**	**165**	PKIKP	PKPab	16 02 51.6 +1.2
257A	**Skidaway Islan**	**144.01**	**31**	IAMs_20	IAMs_20	17 20 24.2
	comp=Z,975nm,19.0s					
VA03	**San Esteban**	**144.16**	**165**	*i* P	**PKPab**	**16 02 52.3 +0.4**
AAGR	**Agrelo**	**144.27**	**167**	*i* P	**PKPab**	**16 02 53.9 +1.5**
456A	**Hilliard**	**144.44**	**34**	IAMs_20	IAMs_20	17 13 00.9
	comp=Z,910nm,19.0s					
CO04	**Los Peladeros**	**144.72**	**164**		**PKPab**	**16 02 54.0 -0.3**
ASAL	**Salagasta**	**144.74**	**167**	*i* P	**PKPab**	**16 02 54.0 -0.1**
AUSP	**Uspallata**	**144.97**	**166**	*i* P	**PKPab**	**16 02 55.9 +0.7**
656A	**Willston**	**145.16**	**36**	IAMs_20	IAMs_20	17 09 29.2
	comp=Z,1μm,22.0s					
ACAN	**Cantantal**	**145.39**	**169**	*i* P	**PKPbc**	**16 02 56.0 -0.2**
MRA	**San Martin**	**145.50**	**171**	*i* P	**PKPbc**	**16 02 56.9 +0.2**
ZON	**Zonda**	**145.78**	**167**	*i* P	**PKPdf**	**16 02 58.9 +1.7**
PLTB	**Pedras Altas**	**146.06**	**190**	*eP*	**PKPdf**	**16 02 57.9 +0.3**
ACHE	**Chepes**	**146.57**	**169**	*i* P	**PKPdf**	**16 03 00.1 +1.5**
TCA	**Tanti**	**146.72**	**173**	*i* P	**PKPdf**	**16 03 00.5 +1.6**
DWPF	**Disney Wildern**	**146.74**	**36**	IAMs_20	IAMs_20	17 04 34.1
	comp=Z,1μm,22.0s					
AROD	**Rodeo**	**146.90**	**165**	*i* P	**PKPdf**	**16 03 01.2 +1.8**
AVFE	**Valle Fertil**	**146.91**	**168**	*i* P	**PKPdf**	**16 03 00.5 +1.3**
ACDV	**Cuesta del Vie**	**146.99**	**165**	*i* P	**PKPdf**	**16 03 00.8 +1.4**
PSAL	**Palomas, Salto**	**147.20**	**184**	*eP*	**PKPdf**	**16 03 00.1 +0.6**
CPSB	**Cacapava Do Su**	**147.36**	**190**	*eP*	**PKPdf**	**16 03 00.1 +0.4**
LCO	**Las Campanas**	**147.64**	**162**		**PKPdf**	**16 03 03.8 +3.1**
LCO	**Las Campanas**	**147.64**	**162**	PKP2	**PKPdf**	**16 03 03.8 +3.1**
CNLB	**Canela**	**147.84**	**195**	*eP*	**PKPdf**	**16 03 01.6 +0.9**
060A	**Indiantown**	**148.17**	**36**	IAMs_20	IAMs_20	17 20 20.0
	comp=Z,913nm,21.0s					
ACLC	**CERRO LA CRUZ**	**148.20**	**168**	*i* P	**PKPdf**	**16 03 02.6 +1.2**
VCA	**Vinchina**	**148.59**	**166**	*i* P	**PKPbc**	**16 03 06.3 +0.6**
061Z	**Ochoppi**	**148.70**	**38**	IAMs_20	IAMs_20	17 16 12.3
	comp=Z,889nm,22.0s					
MAJ01	**Sao Joao Batis**	**149.11**	**199**	*eP*	**PKPdf**	**16 03 02.9 +0.1**
TINO	**Tinogasta**	**149.39**	**167**	*i* P	**PKPdf**	**16 03 04.0 +0.6**
ITAB	**Concordia**	**150.15**	**194**	*eP*	**PKPdf**	**16 03 04.8 +0.4**
AC02	**Maricunga**	**150.15**	**163**	*i* P	**PKPbc**	**16 03 10.7 +0.6**
PARB	**Paraibuna**	**151.38**	**208**	*eP*	**PKPdf**	**16 03 07.4 +0.9**
FSA	**Cafayete**	**151.62**	**168**	*i* P	**PKPdf**	**16 03 07.3 +0.3**
CPUP	**Villa Florida**	**151.90**	**185**	PKPbc	**PKPbc**	**16 03 12.4 -1.1**
	comp=Z,3.7nm,0.8s,baz=91,slow=1.7,SNR=11					
BSCB	**Bom Sucesso**	**152.90**	**212**	*eP*	**PKPdf**	**16 03 10.0 +1.1**
FRTB	**Fartura**	**153.03**	**201**	*eP*	**PKPdf**	**16 03 08.9 0.0**
JTS	**Las Juntas de**	**153.74**	**70**	IAMs_20	IAMs_20	16 56 25.2
	comp=Z,766nm,20.0s					
NBIT	**Itapeh - BA**	**153.77**	**230**	*eP*	**PKPdf**	**16 03 10.4 +0.3**
HDC	**Heredia**	**154.62**	**70**	IAMs_20	IAMs_20	16 59 36.4
	comp=Z,927nm,21.0s					
RCBR	**Riachuelo**	**154.84**	**252**	PKP	**PKPdf**	**16 03 11.4 -0.3**
	comp=Z,7.9nm,1.2s,baz=213,slow=23,SNR=4.7					
PMNB	**Patos De Minas**	**155.81**	**213**	*eP*	**PKPdf**	**16 03 13.4 +0.4**
MTDJ	**Mount Denham**	**156.24**	**46**	IAMs_20	IAMs_20	17 22 16.9
	comp=Z,681nm,22.0s					
GTBY	**Guantanamo Bay**	**156.67**	**39**	IAMs_20	IAMs_20	17 22 51.3
	comp=Z,1μm,22.0s					
AQDB	**Aquidauana**	**157.46**	**190**	*eP*	**PKPdf**	**16 03 16.1 +1.2**
BCIP	**Isla Barro Col**	**158.88**	**69**	IAMs_20	IAMs_20	17 19 03.2
	comp=Z,712nm,22.0s					
BDFB	**Brasilia**	**159.03**	**214**	PKP	**PKPdf**	**16 03 16.8 -0.3**
	comp=Z,4.4nm,0.8s,baz=156,slow=6.2,SNR=6.2					
BDFB				PKPab	**PKPab**	**16 03 54.4 +1.1**
	comp=Z,11nm,0.9s,baz=52,slow=2.5,SNR=7.2					
SDBA	**SAO DESIDERIO**	**159.45**	**226**	*eP*	**PKPdf**	**16 03 16.2 -1.3**
PP1B	**Ponte de Pedra**	**160.07**	**194**	*eP*	**PKPdf**	**16 03 18.3 +0.2**
LPAZ	**La Paz**	**160.26**	**156**	PKP	**PKPdf**	**16 03 19.6 +0.5**
	comp=Z,3.4nm,0.9s,baz=53,slow=3.3,SNR=8.8					
LPAZ				PKPab	**PKPab**	**16 03 59.5 +0.3**
	comp=Z,13nm,1.1s,baz=240,slow=1.0,SNR=7.5					
LPAZ	**La Paz**	**160.26**	**156**	PKPdf	**PKPdf**	**16 03 19.5 +0.4**
LPAZ	**La Paz**	**160.26**	**156**	PKIKP	**PKPdf**	**16 03 19.5 +0.4**
BBSD	**Serra de San D**	**161.09**	**178**	*eP*	**PKPdf**	**16 03 21.7 +2.5**
OTAV	**Otavalo**	**161.40**	**95**	*eP*	**PKPdf**	**16 03 18.4 -1.8**
SALV	**Santo Antonio**	**161.90**	**193**	*eP*	**PKPdf**	**16 03 19.2 -0.9**
SIV	**San Ignacio**	**162.26**	**176**	PKP	**PKPdf**	**16 03 20.4 -0.1**
	comp=Z,5.1nm,1.0s,baz=40,slow=2.7,SNR=8.0					
SIV				PKPab	**PKPab**	**16 04 07.9 +0.8**
	comp=Z,7.4nm,1.0s,baz=155,slow=1.3,SNR=4.4					
PTLB	**Pontes e Lacer**	**162.82**	**183**	*eP*	**PKPdf**	**16 03 21.7 +0.7**
SNDB	**Serra Nova Dou**	**163.84**	**212**	*eP*	**PKPdf**	**16 03 21.0 -1.0**
CZSB	**Cruzeiro do Su**	**164.10**	**127**	*eP*	**PKPdf**	**16 03 22.9 +0.6**
CLDB	**Colider**	**166.74**	**198**	*eP*	**PKPdf**	**16 03 24.9 +0.4**

*IDC **28** 15:51:44.2±3.6,6°.07S×149°.57E,h21km±21km,mb4.1/13, mbtmp4.3/13,Error ellipse: s-maj=26.8km s-min=16.0km az=94.0*

ISC 28 15:51:49.4±0.7,**6°.01S**±0°.09×**149°.4E**±0°.2,**h58**km,**n19,**σ1§**82**/24,**mb4.0**/12,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.02**	**213**	Pn	**Pn**	**15 52 49.7**	**+1.2**
	64nm,0.3s,baz=38,slow=7.9,SNR=172						
PMG				Sn	**Sn**	**15 53 35.9**	**+1.6**
	83nm,0.3s,baz=6.0,slow=22,SNR=8.6						
CTA	**Charters Tower**	**14.32**	**192**	Pn	**Pn**	**15 55 09.9**	**+0.8**
	0.3nm,0.3s,baz=19,slow=18,SNR=1.8						
WRA	**Warramunga Arr**	**20.12**	**225**	P	**P**	**15 56 19.2**	**+0.4**
	4.5nm,0.3s,baz=51,slow=11,SNR=91						
WRA				S	**S**	**15 59 56.4**	**-5.3**
	0.6nm,0.7s,baz=42,slow=25,SNR=1.8						
WRA				PcP	**PcP**	**16 00 31.5**	**-0.6**
	1.5nm,0.6s,baz=42,slow=2.0,SNR=5.3						
WRA				ScP	**ScP**	**16 04 07.4**	**+3.7**
	0.8nm,0.9s,baz=49,slow=2.5,SNR=4.9						
	4.5nm,0.3s						
ASAR	**Alice Springs**	**23.01**	**219**	P	**P**	**15 56 49.2**	**-0.4**
	3.3nm,0.6s,baz=42,slow=11,SNR=5.5						
ASAR				PcP	**PcP**	**16 00 37.0**	**-0.7**
	1.4nm,0.7s,baz=51,slow=2.4,SNR=5.9						
ASAR				ScP	**ScP**	**16 04 14.3**	**+3.5**
	0.6nm,0.8s,baz=23,slow=2.4,SNR=4.5						
	3.3nm,0.6s						
BATI	**Baumata**	**25.77**	**259**	P	**P**	**15 57 14.6**	**-0.5**
	10nm,0.5s,baz=66,slow=21,SNR=1.5						
	10nm,0.5s						
FITZ	**Fitzroy Crossi**	**26.08**	**240**	P	**P**	**15 57 17.4**	**-0.5**
	9.1nm,0.4s,baz=60,slow=7.0,SNR=74						
	9.1nm,0.4s						
MJAR	**Matsushiro Arr**	**43.60**	**347**	P	**P**	**15 59 47.9**	**-0.1**
	3.8nm,1.0s,baz=160,slow=12,SNR=4.5						
	3.8nm,1.0s						
KSRS	**Korea Array**	**47.64**	**337**	P	**P**	**16 00 20.0**	**+0.2**
	0.8nm,0.5s,baz=150,slow=8.2,SNR=6.4						
	0.8nm,0.5s						
SONM	**Songino Array**	**65.57**	**330**	P	**P**	**16 02 28.8**	**+1.6**
	0.9nm,0.4s,baz=131,slow=4.9,SNR=10.0						
	0.9nm,0.4s						
VNDA	**Vanda**	**71.78**	**177**	P	**P**	**16 03 05.3**	**+0.1**
	2.3nm,0.6s,baz=333,slow=6.8,SNR=24						
	2.3nm,0.6s						
MKAR	**Makanchi Array**	**79.01**	**320**	P	**P**	**16 03 48.2**	**+1.0**
	0.3nm,0.4s,baz=98,slow=8.3,SNR=7.0						
	0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**80.28**	**327**	P	**P**	**16 03 54.1**	**+0.1**
	1.0nm,0.5s,baz=116,slow=6.0,SNR=4.8						
	1.0nm,0.5s						
QSPA	**South Pole Qui**	**83.96**	**180**	P	**P**	**16 04 11.9**	**-1.3**
	3.7nm,0.6s,baz=338,slow=1.9,SNR=29						
	3.7nm,0.6s						
ILAR	**Eielson Array**	**84.58**	**23**	P	**P**	**16 04 15.0**	**-1.1**
	0.9nm,0.8s,baz=253,slow=5.3,SNR=9.5						
	0.9nm,0.8s						
BVAR	**Borovoye Array**	**88.16**	**324**	P	**P**	**16 04 33.4**	**-0.5**
	0.4nm,0.5s,baz=97,slow=6.1,SNR=2.7						
	0.4nm,0.5s						
PLCA	**Paso Flores**	**120.81**	**145**	PKP	**PKPdf**	**16 10 34.8**	**-0.7**
	0.6nm,0.4s,baz=214,slow=3.2,SNR=9.2						
SIV	**San Ignacio**	**142.78**	**126**	PKhKP	PKPpre	16 11 12.0	
	1.5nm,0.6s,baz=222,slow=2.2,SNR=6.7						
TORD	**Torodi Ar. Bea**	**147.36**	**285**	PKPbc	**PKPbc**	**16 11 26.8**	**-0.9**
	1.2nm,0.4s,baz=74,slow=2.8,SNR=11						
BDFB	**Brasilia**	**152.45**	**142**	PKPbc	**PKPbc**	**16 11 39.3**	**-1.0**
	17nm,0.7s,baz=236,slow=2.5,SNR=17						

*IDC **28** 15:55:30.9±1.2,1°.65S×120°.33E,h0km,mb3.5/4, mbtmp3.6/6,ML3.8/2,Error ellipse: s-maj=39.2km s-min=20.3km az=69.0*

*DJA **28** 15:55:32.9±0.1,2°.5S±1°×12°0E±°,h10km,M4.4/32,mb4.6/5, MLv4.3/32*

ISC 28 15:55:33.0±0.9,**1°.67S**±0°.05×**120°.17E**±0°.06,**h10**km,**n21,**σ1§**30**/22,**mb3.6**/4,**Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCI	**Palu**	**0.83**	**337**	P	**Pg**	**15 55 48.8**	**-0.2**
MMSI	**Mamuju**	**1.61**	**231**	P	**Pn**	**15 56 00.4**	**-1.2**
MMSI				S	**Sn**	**15 56 21.4**	**-1.1**
APSI	**Ampana**	**1.66**	**63**	P	**Pn**	**15 56 03.0**	**+0.8**
MPSI	**Mapaga**	**2.01**	**352**	P	**Pn**	**15 56 07.7**	**+0.7**
PMSI	**Majene**	**2.21**	**215**	P	**Pn**	**15 56 10.1**	**+0.4**
SPSI	**Sidrap Palu**	**2.31**	**190**	P	**Pn**	**15 56 10.9**	**-0.3**
LUWI	**Luwuk**	**2.68**	**77**	P	**Pn**	**15 56 16.4**	**+0.2**
MRSI	**Marisa**	**2.77**	**40**	P	**Pn**	**15 56 18.2**	**+0.7**
KKSI	**Kolaka, Sulawe**	**2.89**	**149**	P	**Pn**	**15 56 18.1**	**-1.1**
KAPI	**Kappang**	**3.35**	**187**	Pn	**Pn**	**15 56 25.9**	**+0.5**
	8.8nm,0.3s,baz=4.8,slow=12,SNR=9.7						
KAPI				Sn	**Sn**	**15 57 09.0**	**+3.7**
	11nm,0.3s,baz=306,slow=22,SNR=4.9						
	17nm,0.3s						
KAPI	**Kappang**	**3.35**	**187**	P	**Pn**	**15 56 24.8**	**-0.6**
MKS	**Makassar**	**3.59**	**191**	P	**Pn**	**15 56 30.4**	**+1.6**
GTOI	**Gorontalo**	**3.65**	**51**	P	**Pn**	**15 56 29.7**	**+0.1**
BSSI	**Bau Bau, Buton**	**4.45**	**176**	P	**Pn**	**15 56 40.7**	**+0.1**
SANI	**Sanana**	**5.83**	**94**	P	**Pn**	**15 56 59.1**	**-0.5**
KKM	**Kota Kinabalu**	**8.62**	**333**	P	**Pn**	**15 57 39.5**	**+1.5**
SIJI	**Sorong**	**11.12**	**86**	Pn	Pn	15 58 10.2	-2.0
	0.6nm,0.3s,baz=270,slow=20,SNR=1.6						
	1.7nm,0.6s						
WRA	**Warramunga Arr**	**22.84**	**144**	P	**P**	**16 00 34.9**	**-1.7**
	2.3nm,0.9s,baz=318,slow=11,SNR=4.6						
	2.3nm,0.9s						
ASAR	**Alice Springs**	**25.60**	**150**	P	**P**	**16 01 00.8**	**-1.9**
	0.5nm,0.7s,baz=324,slow=8.9,SNR=5.4						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**58.60**	**330**	P	**P**	**16 05 30.7**	**+0.5**
	0.4nm,0.6s,baz=136,slow=7.9,SNR=4.5						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**63.03**	**332**	P	**P**	**16 05 59.7**	**-0.5**
	0.2nm,0.4s,baz=133,slow=5.8,SNR=1.6						
	0.2nm,0.4s						

DJA 28 16:00:03.6±0.2,**2°.5S**±2°×**12°0E**±°,**h10**km,**M3.6**/22,**mb3.8**/1, **MLv3.5**/22,**Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCI	**Palu**	**0.85**	**339**	P	Pg	16 00 19.9	-0.2
MMSI	**Mamuju**	**1.57**	**232**	P	Pn	16 00 31.3	-0.2
APSI	**Ampana**	**1.70**	**62**	P	Pn	16 00 32.6	-0.8
MPSI	**Mapaga**	**2.05**	**353**	P	Pb	16 00 39.7	-1.2
PMSI	**Majene**	**2.16**	**215**	P	Pn	16 00 39.9	+0.2
SPSI	**Sidrap Palu**	**2.27**	**189**	P	Pn	16 00 41.2	0.0
LUWI	**Luwuk**	**2.71**	**76**	P	Pn	16 00 47.5	+0.2
GTOI	**Gorontalo**	**3.70**	**51**	P	Pn	16 01 01.8	+1.0
DBNI	**Kabupaten Domp**	**6.99**	**195**	P	Pn	16 01 46.6	+0.5

*IDC **28** 16:03:12.9±1.9,7°.18S×129°.36E,h152km±25km,mb3.2/1, mbtmp3.7/7,Error ellipse: s-maj=28.6km s-min=19.2km az=107.0*

ISC 28 16:03:11.2±0.8,**7°.28S**±0°.07×**129°.46E**±0°.09,**h150**km,**n7,**σ3§**73**/11,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.42**	**243**	P	**Pn**	**16 04 46.0**	**+2.4**
	5.0nm,0.3s,baz=77,slow=14,SNR=1.7						
BATI				S	**Sn**	**16 05 53.3**	**-2.6**
	11nm,0.4s,baz=18,slow=22,SNR=8.1						
SIJI	**Sorong**	**6.62**	**16**	P	**Pn**	**16 04 45.9**	**-0.3**
	1.7nm,0.3s,baz=198,slow=20,SNR=12						
SIJI				S	**Sn**	**16 05 55.6**	**-5.2**
	3.2nm,0.3s,baz=200,slow=22,SNR=7.6						
FITZ	**Fitzroy Crossi**	**11.38**	**199**	P	**Pn**	**16 05 51.0**	**+1.7**
	1.2nm,0.4s,baz=25,slow=11,SNR=18						
FITZ				S	**Sn**	**16 07 51.5**	**-3.7**
	1.2nm,0.3s,baz=118,slow=21,SNR=5.6						
JAY	**Jayapura**	**12.17**	**68**	P	**Pn**	**16 06 01.8**	**+2.0**
	5.4nm,0.9s,baz=149,slow=17,SNR=6.6						
WRA	**Warramunga Arr**	**13.45**	**160**	P	**Pn**	**16 06 17.6**	**+1.4**
	0.2nm,0.4s,baz=332,slow=12,SNR=10						
WRA				S	Sn	16 08 40.8	-4.4
	1.1nm,0.4s,baz=336,slow=22,SNR=8.1						
ASAR	**Alice Springs**	**16.84**	**166**	P	**Pn**	**16 07 01.9**	**+3.7**
	0.9nm,0.6s,baz=339,slow=9.5,SNR=38						
ASAR				S	**S**	**16 09 59.7**	**-5.9**
	1.3nm,0.8s,baz=337,slow=12,SNR=11						
MKAR	**Makanchi Array**	**68.17**	**327**	P	**P**	**16 13 56.1**	**+0.9**
	0.3nm,0.3s,baz=119,slow=7.6,SNR=8.5						
	0.3nm,0.3s						

*IDC **28** 16:22:00.9±1.1,1°.57S×120°.57E,h0km,mb3.6/5, mbtmp3.6/6,ML4.0/1,Error ellipse: s-maj=48.8km s-min=17.4km az=66.0*

*DJA **28** 16:22:03.2±0.2,2°.5S±2°×12°0E±°,h10km,M4.1/30,mb3.8/6, MLv4.2/30*

ISC 28 16:22:02.9±0.8,**1°.71S**±0°.04×**120°.19E**±0°.06,**h10**km,**n22,**σ1§**13**/23,**mb3.7**/6,**Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCI	**Palu**	**0.87**	**336**	P	**Pg**	**16 22 19.0**	**-0.7**
MMSI	**Mamuju**	**1.60**	**233**	P	**Pn**	**16 22 30.3**	**-1.0**
APSI	**Ampana**	**1.67**	**61**	P	**Pb**	**16 22 33.6**	**0.0**
MPSI	**Mapaga**	**2.06**	**352**	P	**Pn**	**16 22 38.4**	**+0.9**
PMSI	**Majene**	**2.18**	**216**	P	**Pn**	**16 22 40.2**	**+0.9**
SPSI	**Sidrap Palu**	**2.28**	**191**	P	**Pn**	**16 22 41.5**	**+1.0**
LUWI	**Luwuk**	**2.67**	**76**	P	**Pn**	**16 22 46.5**	**+0.6**
MRSI	**Marisa**	**2.79**	**39**	P	**Pn**	**16 22 47.9**	**+0.2**
KKSI	**Kolaka, Sulawe**	**2.85**	**149**	P	**Pn**	**16 22 48.6**	**+0.2**
KAPI	**Kappang**	**3.31**	**188**	Pn	**Pn**	**16 22 55.9**	**+1.2**
	12nm,0.3s,baz=8.7,slow=13,SNR=19						
KAPI				Sn	**Sb**	**16 23 41.0**	**-1.1**
	12nm,0.3s,baz=51,slow=22,SNR=6.1						
	36nm,0.5s						
KAPI	**Kappang**	**3.31**	**188**	P	**Pn**	**16 22 56.2**	**+1.4**
GTOI	**Gorontalo**	**3.66**	**50**	P	**Pn**	**16 23 00.7**	**+1.1**
BSSI	**Bau Bau, Buton**	**4.41**	**176**	P	**Pn**	**16 23 12.0**	**+2.1**
SANI	**Sanana**	**5.81**	**93**	P	**Pn**	**16 23 28.1**	**-1.0**
	0.1nm8.3nm,1.2s						
LBFI	**Labuhan Bajo,**	**6.73**	**183**	P	**Pn**	**16 23 42.0**	**+0.2**
NLAI	**Namlea**	**7.07**	**103**	P	**Pn**	**16 23 48.0**	**+1.5**
	0.1nm13nm,0.7s						
WRA	**Warramunga Arr**	**22.80**	**144**	P	**P**	**16 27 04.2**	**-1.8**
	1.8nm,0.9s,baz=321,slow=11,SNR=10						
	1.8nm,0.9s						
ASAR	**Alice Springs**	**25.55**	**150**	P	**P**	**16 27 31.6**	**-0.6**
	0.4nm,0.7s,baz=327,slow=8.2,SNR=9.3						
	0.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**28.96**	**315**	P	**P**	**16 28 04.6**	**+1.9**
	0.5nm,0.4s,baz=139,slow=5.9,SNR=7.2						
	0.5nm,0.4s						
KSH2	**Kashi**	**57.68**	**320**	P	**P**	**16 31 53.8**	**-0.1**
KSH2				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MKAR	**Makanchi Array**	**58.64**	**330**	P	**P**	**16 32 00.6**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=135,slow=7.5,SNR=8.2						
	comp=Z,0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**63.08**	**332**	P	**P**	**16 32 29.6**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=136,slow=6.4,SNR=4.8						
	comp=Z,0.3nm,0.6s						

IDC 28 16:31:54.0±1.3,**17°.52S**×**176°.31E**,**h404**km±36km,**mb3.1**/2, **mbtmp3.9**/2,**Error ellipse: s-maj=81.0km s-min=49.5km az=126.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**1.67**	**98**	P	P	16 32 48.0	-0.6
	9.0nm,0.8s,baz=278,slow=23,SNR=6.4						
MSVF				S		16 33 33.1	+0.6
	3.4nm,0.7s,baz=159,slow=17,SNR=1.9						
WRA	**Warramunga Arr**	**39.75**	**260**	P	P	16 38 50.1	+0.1
	0.2nm,0.3s,baz=92,slow=6.9,SNR=10						
	0.2nm,0.3s		

0.4nm,0.6s,baz=325,slow=6.5,SNR=6.8
0.4nm,0.6s
ASAR Alice Springs 72.94 133 P **P 16 51 37.3 -0.4**
0.3nm,0.7s,baz=317,slow=5.9,SNR=6.3
0.3nm,0.7s
YKA Yellowknife Ar 84.23 9 P **P 16 52 40.3 +1.1**
0.2nm,0.7s,baz=337,slow=5.7,SNR=4.2
0.2nm,0.7s

DJA 28 16:41:08.5±0.2,3°S±3'×12°9E±', h10km, M3.6/17, mb4.1/4, MLv3.3/17, Seram

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
KRAI	**Karang Ratu**	**0.99**	**234**	P		Pg	16 41 27.1	-0.4
AAI	**Ambon**	**1.38**	**226**	P		Pb	16 41 34.1	-0.2
BNDI	**Bandanaira**	**1.92**	**158**	P		Pn	16 41 41.2	0.0
NLAI	**Namlea**	**2.15**	**256**	P		Pn	16 41 44.5	+0.1
SWI	**Sorong**	**2.78**	**48**	P		Pn	16 41 53.0	-0.1
SIJI	**Sorong**	**2.78**	**48**	P		Pn	16 41 52.9	-0.2
FAKI	**Fak Fak**	**3.06**	**94**	P		Pn	16 41 55.4	-1.6
SANI	**Sanana**	**3.27**	**282**	P		Pn	16 41 58.6	-1.3
GTOI	**Gorontalo**	**7.02**	**298**	P		Pn	16 42 54.5	+3.0

GUC 28 16:41:43.9±0.9,29°94S×71°87W, h21km±9km, ML2.6, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
CO05	**La Serena**	**0.54**	**88**	*e*P		Pb	16 41 54.5	-0.3
CO05				*e*S		Sb	16 42 01.9	-0.4
CO05				IAML			16 42 04.1	
	comp=E,398nm,0.4s							
CO06	**Fray Jorge**	**0.76**	**165**	*e*P		Pb	16 41 57.5	-0.9
CO06				*e*S		Sb	16 42 07.9	-0.5
GO04	**Tololo Observa**	**0.95**	**104**	*e*P		Pb	16 42 01.4	-0.5
GO04				*e*S		Sb	16 42 14.4	+0.3
GO04				IAML			16 42 16.5	
	comp=E,835nm,0.1s							
CO03	**El Pedregal**	**1.35**	**132**	*e*P		Pn	16 42 07.7	-0.1
CO03				*e*S		Sb	16 42 25.5	-0.1
CO03				IAML			16 42 28.6	
	comp=E,94nm,0.1s							
LCO	**Las Campanas**	**1.37**	**48**	*e*P		Pn	16 42 07.9	-0.2
LCO				*e*S		Sn	16 42 25.5	-0.3
LCO				IAML			16 42 30.7	
	comp=E,335nm,0.6s							
CO02	**Combarbal**	**1.47**	**150**	*e*P		Pn	16 42 09.5	+0.3
CO02				*e*S		Sb	16 42 28.5	-0.2
CO02				IAML			16 42 36.2	
	comp=N,220nm,0.5s							
CO01	**Juntas del Tor**	**1.54**	**92**	*e*P		Pn	16 42 11.0	+0.7
CO01				*e*S		Sb	16 42 31.1	+0.2
AC05	**El Transito**	**1.77**	**52**	*e*P		Pn	16 42 14.2	+0.7
AC05				*e*S		Sb	16 42 37.3	-0.3

*SJA **28** 16:41:59.2±0.9, 35°64S×73°99W, h23km±8km, ML4.4, MW4.0*
*NEIC **28** 16:42:02.1±1.7, 35°69S±0°01×73°7W±0°1, h10km±1km, mb4.8/19, Mwr4.6/39, Mwr4.5(GUC), Error ellipse: s-maj=14.4km s-min=2.9km az=276.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}8.30; $M_{\theta\theta}$-2.24; $M_{\phi\phi}$-6.05; $M_{r\theta}$-2.82; $M_{\theta\phi}$-5.18; $M_{\phi r}$-1.68; Fault plane solution: $M_0$9.64000×10^{15} NP1:$\varphi_0$24.44000°, δ36.70000°, λ73.75000°. NP2:$\varphi_0$224.42000°, δ54.99000°, λ101.78000°. Principal axes: T 9.0161, Plg77.0000°, Azm173.0000°; N 1.1380, Plg10.0000°, Azm38.0000°; P -10.1541, Plg9.0000°, Azm306.0000°;*
*NEIC **28** 16:42:02.1, 35°69S×73°72W, h10km*
*IDC **28** 16:42:03.4±0.7, 35°71S×73°50W, h0km, mb4.4/9, mbtmp4.3/13, ML4.0/4, Error ellipse: s-maj=24.5km s-min=15.3km az=90.0*
*GUC **28** 16:42:06.5±0.7, 35°84S×73°54W, h11km±4km, ML4.5*
*VAO **28** 16:42:06.9±0.6, 35°72S×73°12W, h10km, mb4.7, Presumed earthquake*

ISC 28 16:42:02.8±0.8, 35°72S±0°03×73°55W±0°05, h4km±4km, n158, σ1§95/165, mb4.9/15, 11C-4D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
BI05	**Punta Hualpn**	**1.06**	**164**			**Pb**	**16 42 23.8**	**0.0**
BI05				Sg		**Sg**	**16 42 37.5**	**+0.5**
BI05	**Punta Hualpn**	**1.06**	**164**	*e*P		**Pb**	**16 42 23.8**	**0.0**
BI05				*i* S		**Sb**	**16 42 37.9**	**-0.1**
BI05				IAML			16 42 44.4	
	comp=N,13μm,0.4s							
BI05	**Punta Hualpn**	**1.06**	**164**	*e*P		**Pb**	**16 42 23.7**	**0.0**
BI05				IAML			16 42 44.3	
	comp=Z,7μm,0.4s							
GO05	**Hualane**	**1.50**	**62**			**Pn**	**16 42 30.2**	**-0.4**
GO05	**Hualane**	**1.50**	**62**	*e*P		**Pn**	**16 42 30.5**	**-0.1**
GO05				*i* S		**Sg**	**16 42 54.4**	**+3.3**
ML02	**Panimavida**	**1.74**	**92**			**Pb**	**16 42 34.8**	**-0.5**
ML02	**Panimavida**	**1.74**	**92**	*e*P		**Pn**	**16 42 34.6**	**+0.8**
ML02				*i* S		**Sg**	**16 42 59.2**	**+0.6**
ML02				IAML			16 43 12.7	
	comp=E,8μm,0.7s							
BO03	**Pichilemu**	**1.79**	**47**	*e*P		**Pn**	**16 42 34.1**	**-0.3**
BO03				*i* S		**Sg**	**16 43 03.6**	**+3.4**
BO03				IAML			16 43 13.1	
	comp=N,6μm,0.9s							
BI02	**San Fabín de**	**2.07**	**118**			**Pn**	**16 42 39.2**	**+0.8**
BI02	**San Fabín de**	**2.07**	**118**	*e*P		**Pn**	**16 42 39.1**	**+0.8**
BI02				IAML			16 43 15.1	
	comp=N,5μm,0.6s							
BI02	**San Fabín de**	**2.07**	**118**	*e*P		**Pn**	**16 42 39.2**	**+0.8**
BI02				*e*S		**Sg**	**16 43 10.5**	**+1.3**
BI02				IAML			16 43 15.8	
	comp=Z,3μm,0.7s							
BO01	**Tunca**	**2.42**	**57**			**Pn**	**16 42 43.1**	**-0.1**
BO01	**Tunca**	**2.42**	**57**	*e*P		**Pg**	**16 42 48.5**	**-0.6**
BO01				*i* S		**Sg**	**16 43 20.0**	**-0.6**
BO01				IAML			16 43 33.4	
	comp=E,2μm,0.6s							
BO01	**Tunca**	**2.42**	**57**	*e*P		**Pn**	**16 42 43.4**	**+0.3**
BO01				IAML			16 43 30.2	
	comp=Z,1μm,1.0s							
BO02	**Sierra Bellavi**	**2.45**	**69**			**Pn**	**16 42 43.9**	**+0.2**
BO02	**Sierra Bellavi**	**2.45**	**69**	*e*P		**Pn**	**16 42 44.1**	**+0.5**
BO02	**Sierra Bellavi**	**2.45**	**69**	*e*P		**Pn**	**16 42 44.9**	**+1.2**
BO02				IAML			16 43 29.2	
	comp=Z,2μm,1.1s							
MT01	**Popeta**	**2.65**	**46**			**Pn**	**16 42 45.6**	**-0.7**
MT01	**Popeta**	**2.65**	**46**	*e*P		**Pn**	**16 42 45.5**	**-0.7**
MT01	**Popeta**	**2.65**	**46**	*e*P		**Pn**	**16 42 45.6**	**-0.7**
MT01				IAML			16 43 43.8	
	comp=E,2μm,0.7s							
BI04	**Isla Mocha**	**2.70**	**186**	*e*P		**Pn**	**16 42 46.7**	**-0.3**
BI04				IAML			16 43 42.2	
	comp=N,2μm,0.4s							
MT09	**Talagante**	**2.87**	**48**	Pn		**Pn**	**16 42 49.5**	**0.0**
MT09	**Talagante**	**2.87**	**48**	*e*P		**Pn**	**16 42 49.8**	**+0.3**
MT09				*i* S		**Sb**	**16 43 32.1**	**+2.0**
MT09				IAML			16 43 49.8	
	comp=E,1μm,0.5s							
BO04	**La Punta**	**2.98**	**55**			**Pn**	**16 42 51.1**	**+0.4**
BO04	**La Punta**	**2.98**	**55**	*e*P		**Pn**	**16 42 51.2**	**+0.4**
BO04				IAML			16 43 47.4	
	comp=N,1μm,0.7s							
LC02	**Puerto Saavedr**	**3.07**	**178**	*e*P		**Pg**	**16 43 02.6**	**+1.1**
LC02				IAML			16 44 11.6	
	comp=N,3μm,0.5s							
VA01	**Torpederas**	**3.12**	**31**			**Pn**	**16 42 52.0**	**-0.7**
MT02	**Curacav**	**3.17**	**40**			**Pn**	**16 42 52.9**	**-0.5**
MT02	**Curacav**	**3.17**	**40**	*e*P		**Pn**	**16 42 52.8**	**-0.5**
MT02				*i* S		**Sn**	**16 43 28.2**	**-3.4**
MT02				IAML			16 44 01.8	
	comp=E,638nm,0.8s							
MT12	**Pirque**	**3.17**	**52**	*e*P		**Pn**	**16 42 54.0**	**+0.4**
MT15	**Las Vizcachas**	**3.29**	**51**	*e*P		**Pn**	**16 42 55.4**	**+0.3**
MT15				IAML			16 43 55.4	
	comp=N,1μm,0.8s							
LMEL	**Las Melosas**	**3.33**	**57**	*e*P		**Pn**	**16 42 57.6**	**+1.8**
LMEL				IAML			16 43 59.4	
	comp=N,924nm,0.5s							
MT13	**San Alfonso**	**3.34**	**55**			**Pn**	**16 42 56.4**	**+0.5**
MT13	**San Alfonso**	**3.34**	**55**	*e*P		**Pn**	**16 42 57.7**	**+1.8**
MT03	**Universidad Ad**	**3.35**	**49**			**Pn**	**16 42 56.3**	**+0.2**
MT03				IAML			16 44 09.6	
	comp=E,979nm,0.6s							
MT03	**Universidad Ad**	**3.35**	**49**	*e*P		**Pn**	**16 42 56.2**	**+0.1**
MT03				IAML			16 44 14.2	
	comp=Z,769nm,0.7s							
MT16	**CCHEN**	**3.39**	**48**			**Pn**	**16 42 55.5**	**-1.0**
MT16	**CCHEN**	**3.39**	**48**	*e*P		**Pn**	**16 42 56.9**	**+0.3**
MT16				IAML			16 44 07.6	
	comp=N,1μm,0.7s							
MT14	**Cerro Cal¡n**	**3.40**	**48**	*e*P		**Pn**	**16 42 57.0**	**+0.3**
LC01	**Cunco**	**3.44**	**158**	*e*P		Pn	16 42 47.3	-10
ROCH	**El Roble**	**3.46**	**38**	*e*P		**Pn**	**16 42 57.7**	**+0.1**
ROCH				IAML			16 44 24.5	
	comp=N,967nm,0.6s							
MT10	**Hacienda Santa**	**3.49**	**46**	*e*P		**Pn**	**16 42 58.3**	**+0.3**
MT10				IAML			16 44 08.2	
	comp=N,2μm,0.7s							
PEL	**Peldehue**	**3.50**	**43**			**Pn**	**16 42 58.4**	**+0.4**
PEL	**Peldehue**	**3.50**	**43**	*e*P		**Pn**	**16 42 58.6**	**+0.6**
PEL				IAML			16 44 14.8	
	comp=E,607nm,0.5s							
PEL	**Peldehue**	**3.50**	**43**	*e*P		**Pn**	**16 42 58.2**	**+0.1**
PEL				IAML			16 44 23.1	
	comp=Z,591nm,0.8s							
MT04	**Ro Olivares**	**3.65**	**52**	*e*P		**Pn**	**16 43 00.7**	**+0.5**
VA06	**Catapilco**	**3.67**	**31**			**Pn**	**16 42 59.6**	**-0.6**
MT08	**Bocatoma Ro**	**3.70**	**53**			**Pn**	**16 43 01.9**	**+0.9**
MT08	**Bocatoma Ro**	**3.70**	**53**	*e*P		**Pn**	**16 43 02.0**	**+1.1**
VA03	**San Esteban**	**3.86**	**41**			**Pn**	**16 43 03.3**	**+0.3**
VA03	**San Esteban**	**3.86**	**41**	*e*P		**Pn**	**16 43 03.2**	**+0.2**
VA03				IAML			16 44 22.0	
	comp=Z,576nm,0.7s							
LR04	**Corral**	**4.15**	**179**			**Pn**	**16 43 05.7**	**-1.2**
LR04	**Corral**	**4.15**	**179**	*e*P		**Pn**	**16 43 05.7**	**-1.2**
LR04				IAML			16 44 35.4	
	comp=Z,240nm,0.8s							
GO06	**Curarrehue**	**4.19**	**157**			**Pn**	**16 43 08.9**	**+1.3**
GO06	**Curarrehue**	**4.19**	**157**	*e*P		**Pn**	**16 43 08.9**	**+1.3**
GO06	**Curarrehue**	**4.19**	**157**	*e*P		**Pn**	**16 43 08.7**	**+1.1**
GO06				IAML			16 44 30.7	
	comp=Z,163nm,1.3s							
CO04	**Los Peladeros**	**4.25**	**31**	Pn		**Pn**	**16 43 08.2**	**-0.3**
CO04	**Los Peladeros**	**4.25**	**31**	*e*P		**Pn**	**16 43 07.8**	**-0.8**
RFA	**San Rafael**	**4.27**	**79**	*e*P		**Pn**	**16 43 10.6**	**+2.0**
RFA				IAML			16 44 31.9	
	comp=Z,267nm,0.9s							
LR05	**Currie**	**4.66**	**165**			**Pn**	**16 43 14.9**	**+0.9**
AAGR	**Agrelo**	**4.71**	**57**	*e*P		**Pn**	**16 43 16.6**	**+1.9**
AAGR				IAML			16 44 50.9	
	comp=Z,264nm,1.5s							
H03S1	**Juan Fernandez**	**4.79**	**292**	T		T		
	baz=113,slow=74,SNR=582						16 48 11.9	
H03S3	**Juan Fernandez**	**4.80**	**292**	T		T		
	baz=113,slow=74,SNR=411						16 48 14.3	
H03S2	**Juan Fernandez**	**4.81**	**292**	T		T		
	baz=113,slow=74,SNR=697						16 48 11.7	
AUSP	**Usp allata**	**4.92**	**46**	*e*P		**Pn**	**16 43 19.8**	**+2.1**
H03N1	**Juan Fernandez**	**4.97**	**296**	T		T		
	baz=110,slow=76,SNR=72						16 48 27.3	
H03N3	**Juan Fernandez**	**4.97**	**296**	T		T		
	baz=110,slow=76,SNR=69						16 48 30.8	
H03N2	**Juan Fernandez**	**4.99**	**296**	T		T		
	baz=110,slow=76,SNR=67						16 48 34.6	
CO06	**Fray Jorge**	**5.29**	**18**			**Pn**	**16 43 21.4**	**-1.2**
CO03	**El Pedregal**	**5.43**	**27**	Pn		**Pn**	**16 43 24.0**	**-0.6**
PLCA	**Paso Flores**	**5.53**	**156**	Pn		**Pn**	**16 43 27.6**	**+1.6**
	comp=Z,0.9nm,0.3s,baz=320,slow=11,SNR=37							
PLCA				Lg		Lg	16 44 59.4	
	comp=Z,1.8nm,0.3s,baz=275,slow=5.1,SNR=3.7							
	comp=Z,5.7nm,0.6s							
PLCA	**Paso Flores**	**5.53**	**156**	*e*P		**Pn**	**16 43 26.9**	**+1.0**
PLCA				IAML			16 45 09.8	
	comp=Z,74nm,1.2s							
PLCA	**Paso Flores**	**5.53**	**156**	*e*P		**Pn**	**16 43 27.7**	**+1.7**
ZON	**Zonda**	**5.82**	**46**	*e*P		**Pn**	**16 43 31.1**	**+1.2**
ZON				IAML			16 45 23.0	
	comp=Z,66nm,1.2s							
CFA	**Coronel Fontan**	**6.04**	**49**	Pn		**Pn**	**16 43 33.7**	**+0.7**
	comp=Z,5.4nm,0.3s,baz=224,slow=13,SNR=74							
CFA				Sn		**Sn**	**16 44 43.0**	**+0.4**
	comp=Z,4.7nm,0.3s,baz=221,slow=20,SNR=5.5							
CFA				Lg		Lg	16 45 08.2	
	comp=Z,0.2nm,0.3s,baz=135,slow=18,SNR=4.0							
	comp=Z,21nm,0.5s							
RTLL	**Cerro Villicun**	**6.10**	**45**	*e*P		**Pn**	**16 43 34.8**	**+1.0**
RTLL				IAML			16 45 16.4	
	comp=Z,98nm,0.6s							
ACAN	**Cantantal**	**6.31**	**59**	*e*P		**Pn**	**16 43 38.0**	**+1.4**
ACAN				IAML			16 45 31.9	
	comp=Z,283nm,1.0s							
LCO	**Las Campanas**	**7.11**	**21**			**Pn**	**16 43 44.8**	**-3.1**
MRA	**San Martin**	**7.29**	**65**	*e*P		**Pn**	**16 43 51.9**	**+1.8**
MRA				IAML			16 46 04.1	
	comp=Z,32nm,1.9s							
AC05	**El Transito**	**7.41**	**23**			**Pn**	**16 43 49.9**	**-1.9**
LL02	**Futaleuf**	**7.57**	**170**			**Pn**	**16 43 53.5**	**-0.4**
TINO	**Tinogasta**	**9.17**	**35**	*e*P		**Pn**	**16 44 15.0**	**-1.0**
TRQA	**Tornquist**	**9.56**	**108**			**Pn**	**16 44 21.0**	**-0.2**
AC02	**Maricunga**	**9.63**	**24**	*e*P		**Pn**	**16 44 20.2**	**-2.5**
AC02				IAML			16 46 55.3	
	comp=Z,14nm,1.3s							
AY03	**Cochrane**	**11.54**	**177**	Pn		**Pn**	**16 44 46.9**	**-1.3**
LPA	**La Plata**	**12.79**	**91**	*e*P		**Pn**	**16 45 09.9**	**+4.6**
LPA	**La Plata**	**12.79**	**91**	PN		Pn	16 45 15.8	+10
LPA				pP			16 45 21.1	
LPA				sP			16 45 28.0	
LPA				PP		**PbPb**	**16 45 34.2**	**-13**
LPA				pPP			16 45 48.6	
LPA				PPP		PPP	16 46 09.7	
LPA				S		**Sn**	**16 47 26.9**	**-1.2**
LPA	**La Plata**	**12.79**	**91**	SN		**Sn**	**16 47 30.8**	**+2.7**
LPA				sS			16 47 40.0	
LPA				SS		SnSn	16 48 30.4	+50
LPA				SSS		SSS	16 48 44.7	
LPA				PcP		**PcP**	**16 50 48.0**	**+6.4**
LPA				SCS		**ScS**	**16 57 58.5**	**+6.7**
LPA				PKIKP		PKiKP	16 58 52.9	+14
LPA				SKIKP			17 02 01.9	
LPA				PKIKS			17 02 14.2	
LPA				SKIKS			17 05 46.4	
PB01	**IPOC Station P**	**15.05**	**15**	Pn		**Pn**	**16 45 34.3**	**-2.1**
PB01				IAmb		IAmb	16 45 45.7	
	comp=Z,23nm,0.8s							
PB11	**IPOC Station P**	**16.27**	**13**			**Pn**	**16 45 50.1**	**-2.2**
PB11				IAmb		IAmb	16 46 01.5	
	comp=Z,42nm,0.9s							
GO01	**Chusmiza**	**16.45**	**15**	Pn		**Pn**	**16 45 52.2**	**-2.7**
CPUP	**Villa Florida**	**16.75**	**60**	Pn		**P**	**16 45 59.5**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=241,slow=13,SNR=4.8							
CPUP				Lg		Lg	16 50 52.0	
	baz=162,slow=20							
	comp=Z,1.9nm,0.9s							
CPUP	**Villa Florida**	**16.75**	**60**	Pn		**Pn**	**16 45 54.9**	**-3.3**
PLTB	**Pedras Altas**	**17.05**	**82**	Pn		**Pn**	**16 46 00.1**	**-2.0**
EFI	**East Falkland**	**19.42**	**150**	P		**P**	**16 46 27.2**	**-2.6**
EFI				IAmb		IAmb	16 46 47.5	
	comp=Z,101nm,1.5s							
LPAZ	**La Paz**	**19.95**	**15**	P		**Pn**	**16 46 38.5**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=173,slow=9.0,SNR=20							
	comp=Z,15nm,1.2s							
LPAZ	**La Paz**	**19.95**	**15**	*e*P		**Pn**	**16 46 39.8**	**+1.6**
ITAB	**Concordia**	**20.11**	**71**	P		**P**	**16 46 36.5**	**-1.1**
ITAB				IAmb		IAmb	16 46 51.5	
	comp=Z,36nm,1.0s							
ITAB	**Concordia**	**20.11**	**71**	*e*P		**P**	**16 46 37.8**	**+0.2**
CNLB	**Canela**	**20.16**	**78**	*e*P		**P**	**16 46 39.0**	**+0.8**
AMBA	**Amambai (Brazi**	**20.56**	**57**	*e*P		Pn	16 46 44.4	-0.3
PTGB	**Pitanga**	**21.52**	**65**	*e*P		**P**	**16 46 53.4**	**+0.4**
BBSD	**Serra de San D**	**21.75**	**35**	*e*P		**P**	**16 46 56.0**	**+0.5**
AQDB	**Aquidauana**	**21.82**	**51**	P		**P**	**16 46 53.6**	**-2.6**
AQDB				IAmb		IAmb	16 47 05.4	
	comp=Z,58nm,1.4s							
LDASE	**Londrina, Braz**	**23.00**	**64**	*e*P		**P**	**16 47 07.9**	**-0.8**
PTLB	**Pontes e Lacer**	**23.96**	**36**	P		**P**	**16 47 16.0**	**-2.2**
PTLB				IAmb		IAmb	16 47 20.1	
	comp=Z,27nm,1.0s							
PTLB	**Pontes e Lacer**	**23.96**	**36**	*e*P		**P**	**16 47 19.0**	**+0.8**
FRTB	**Fartura**	**24.17**	**66**	*e*P		**P**	**16 47 20.5**	**+0.2**
PP1B	**Ponte de Pedra**	**24.50**	**47**	*e*P		**P**	**16 47 24.0**	**+0.7**
SALV	**Santo Antonio**	**25.38**	**44**	*e*P		**P**	**16 47 31.9**	**+0.7**
SPB	**Sao Paulo**	**25.63**	**69**	P		**P**	**16 47 30.7**	**-2.8**
SPB				IAmb		IAmb	16 47 37.1	
	comp=Z,43nm,1.1s							
VILB	**Vilhena**	**25.67**	**31**	P		**P**	**16 47 31.4**	**-2.5**
VILB				IAmb		IAmb	16 47 38.9	
	comp=Z,25nm,1.0s							
VILB	**Vilhena**	**25.67**	**31**	*e*P		**P**	**16 47 34.3**	**+0.4**
ITRB	**Iturama**	**25.91**	**58**	*e*P		**P**	**16 47 37.4**	**+1.4**
RCLB	**Rio Claro- Sao**	**26.23**	**67**	*e*P		**P**	**16 47 39.5**	**+0.5**
BB19B	**Bebedouro**	**26.32**	**63**	*e*P		**P**	**16 47 39.9**	**+0.1**
VAO	**Valinhos**	**26.32**	**68**	P		**P**	**16 47 39.2**	**-0.6**
VAO				IAmb		IAmb	16 47 46.7	
	comp=Z,25nm,1.0s							
VAO	**Valinhos**	**26.32**	**68**	*e*P		**P**	**16 47 39.7**	**-0.1**
CZSB	**Cruzeiro do Su**	**27.87**	**2**	*e*P		**P**	**16 47 57.2**	**+3.5**
PDRB	**Porto dos Gac**	**28.43**	**37**	*e*P		**P**	**16 47 59.3**	**+0.5**
PMSA	**Palmer Station**	**29.64**	**172**	P		**P**	**16 48 06.5**	**-2.5**
BDFB	**Brasilia**	**30.33**	**55**	P		**P**	**16 48 15.8**	**+0.1**
	comp=Z,4.6nm,0.7s,baz=181,slow=3.5,SNR=6.6							
	comp=Z,4.6nm,0.7s							
HOPE	**Hope Point**	**31.61**	**138**	P		**P**	**16 48 24.3**	**-2.2**
JANB	**Januaria**	**33.28**	**59**	*e*P		**P**	**16 48 41.3**	**-0.3**
BSFB	**Barra de Sao F**	**33.38**	**68**	*e*P		**P**	**16 48 42.3**	**-0.1**
ITTB	**Itaituba**	**35.27**	**32**	*e*P		**P**	**16 48 58.4**	**-0.4**
SMTB	**Santa Maria do**	**35.72**	**48**	*e*P		**P**	**16 49 03.0**	**+0.4**
OTAV	**Otavalo**	**36.07**	**352**	*e*P		**P**	**16 49 09.7**	**+3.6**
CMC01	**Camacan, BA**	**36.53**	**65**	*e*P		**P**	**16 49 10.0**	**+0.4**
BOAV	**Boa Vista**	**39.83**	**21**	P		**P**	**16 49 35.0**	**-2.3**
VNA3	**Neumayer Olymp**	**48.25**	**157**	⇓P		**P**	**16 50 46.3**	**+2.0**
	comp=Z,14nm,0.9s							
VNA1	**Neumayer--Stat**	**48.59**	**156**	⇓P		**P**	**16 50 49.2**	**+2.3**
	comp=Z,10nm,0.8s							
VNA2	**Neumayer--Watz**	**48.92**	**156**	⇓P		**P**	**16 50 51.4**	**+1.9**
	comp=Z,11nm,0.9s,baz=292,slow=7.8							
SNAA	**Sanae**	**50.47**	**157**	⇓P		**P**	**16 51 03.3**	**+1.9**
	comp=Z,271nm,0.8s							
SNAA	**Sanae**	**50.47**	**157**	P		**P**	**16 51 03.0**	**+1.6**
	comp=Z,13nm,0.9s,baz=289,slow=6.1,SNR=12							
	comp=Z,13nm,0.9s							
SNAA	**Sanae**	**50.47**	**157**	P		**P**	**16 51 00.3**	**-1.1**
TROLL	**Troll, Antarti**	**52.17**	**158**	P		**P**	**16 51 16.2**	**+2.0**
QSPA	**South Pole Qui**	**54.52**	**180**	P		**P**	**16 51 33.1**	**+1.6**
	comp=Z,9.6nm,0.9s,baz=154,slow=2.3,SNR=24							
	comp=Z,9.6nm,0.9s							
QSPA	**South Pole Qui**	**54.52**	**180**	P		**P**	**16 51 32.1**	**+0.6**
QSPA				IAmb		IAmb	16 51 34.6	
	comp=Z,12nm,0.9s							
TXAR	**Lajitas Array**	**70.65**	**332**	P		**P**	**16 53 21.1**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=150,slow=8.3,SNR=4.4							
	comp=Z,0.5nm,0.6s							
DBIC	**Dimbokro**	**76.90**	**72**	P		**P**	**16 53 57.4**	**+0.8**
	comp=Z,8.0nm,0.8s,baz=247,slow=6.1,SNR=12							
	comp=Z,8.0nm,0.8s							
DBIC	**Dimbokro**	**76.90**	**72**	P		**P**	**16 53 56.4**	**-0.1**
DBIC				IAmb		IAmb	16 53 58.8	
	comp=Z,14nm,1.0s							
BOSA	**Boshof**	**80.36**	**118**	P		**P**	**16 54 16.2**	**+0.5**
	comp=Z,4.2nm,0.9s,baz=223,slow=1.3,SNR=3.2							
	comp=Z,4.2nm,0.9s							
NVAR	**Mina Array Bea**	**84.60**	**326**	P		**P**	**16 54 38.1**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=145,slow=9.7,SNR=3.9							
	comp=Z,0.6nm,0.7s							
TORD	**Torodi Ar. Bea**	**85.96**	**71**	P		**P**	**16 54 44.7**	**+0.1**
	comp=Z,2.9nm,1.0s,baz=238,slow=6.0,SNR=10							
	comp=Z,2.9nm,1.0s							
ESDC	**Sonseca Array**	**98.66**	**47**	P		Pdif	16 55 43.7	+0.6
	comp=Z,0.6nm,0.9s,baz=225,slow=3.6,SNR=3.5							
	comp=Z,0.6nm,0.9s							
WRA	**Warramunga Arr**	**118.65**	**210**	PKP		**PKiKP**	**17 00 52.3**	**-0.3**
	comp=Z,0.6nm,1.0s,baz=166,slow=1.7,SNR=4.8							
BVAR	**Borovoye Array**	**149.38**	**44**	PKPbc		**PKiKP**	**17 01 53.8**	**+0.2**
KURBB	**Kurchatov Arra**	**154.97**	**45**	PKP		**PKPdf**	**17 01 54.4**	**+1.0**
	comp=Z,0.8nm,0.9s,baz=303,slow=1.8,SNR=6.6							
KURBB				PKPab		**sPKPab**	**17 02 22.6**	**+1.1**
	comp=Z,1.0nm,0.9s,baz=301,slow=4.1,SNR=5.5							
ZALV	**Zalesovo Beam**	**156.34**	**33**	PKP		**PKPdf**	**17 01 58.4**	**+0.3**
	comp=Z,1.5nm,0.8s,baz=298,slow=4.3,SNR=5.1							
ZALV				PKPab		**pPKPab**	**17 02 27.9**	**+0.9**
	comp=Z,4.0nm,0.8s,baz=302,slow=4.9,SNR=9.8							
MKAR	**Makanchi Array**	**158.82**	**51**	PKP		**PKPdf**	**17 02 01.5**	**0.0**
	comp=Z,1.2n

RNF					*e*SB	**Sb**	**17 25 07.4**	**-1.1**
ARA0	**ARCESS Array S**	**2.59**	**46**		*e*P	**Pn**	**17 24 33.8**	**+1.0**
ARA0					*e*SB	**Sb**	**17 25 07.3**	**-1.9**
ARCES	**ARCESS Array B**	**2.59**	**46**	Pn		**Pn**	**17 24 33.8**	**+1.1**
	comp=Z,0.6nm,0.3s,baz=233,slow=15,SNR=17							
ARCES				Lg		Lg	17 25 07.3	
	comp=Z,4.0nm,0.3s,baz=231,slow=27,SNR=20							
	comp=Z,1.5nm,0.3s							
RAJF	**Raja-Jooseppi**	**3.10**	**74**		*e*P	**Pn**	**17 24 39.8**	**+0.1**
RAJF					*e*SB	**Sb**	**17 25 22.8**	**-1.0**
KEV	**Kevo**	**3.14**	**49**		*e*P	**Pn**	**17 24 41.9**	**+1.6**
KEV					*e*S	**Sn**	**17 25 19.0**	**+0.6**
KEV					smax	smax	17 25 25.3	
	comp=Z,13nm,0.3s							
RANF	**Ranua**	**3.16**	**122**		*e*P	**Pn**	**17 24 41.8**	**+1.2**
RANF					*e*SG	**Sb**	**17 25 26.5**	**+0.9**
BURU	**Burvik**	**3.29**	**171**		*e*P	**Pn**	**17 24 44.4**	**+2.1**
BURU					*e*SG	**Sg**	**17 25 34.9**	**-0.2**
VRF	**Varrio**	**3.57**	**87**		*e*P	**Pn**	**17 24 46.8**	**+0.6**
VRF					*e*S	**Sn**	**17 25 28.4**	**-0.6**
OUL	**Oulu**	**3.57**	**138**		*e*PB	**Pn**	**17 24 49.6**	**+3.4**
OUL					*e*SG	**Sb**	**17 25 40.3**	**+2.9**
KU2	**Taivalkoski**	**3.82**	**120**		*e*P	**Pn**	**17 24 51.2**	**+1.6**
OLKF	**Oulanka, Finla**	**3.90**	**108**		*e*P	**Pn**	**17 24 51.9**	**+1.2**
OLKF					*e*SG	**Sg**	**17 25 51.0**	**-3.7**
MSF	**Maaselka**	**3.98**	**115**		*e*P	**Pn**	**17 24 53.4**	**+1.6**
KU6	**Riekki**	**4.21**	**111**		*e*P	**Pn**	**17 24 54.6**	**-0.4**
KU6					*e*SG	**Sb**	**17 25 59.8**	**+3.9**
KU1	**Kurvinen**	**4.35**	**117**		*e*S	**Sn**	**17 25 48.3**	**+0.2**
HUSU	**Husum**	**4.52**	**186**		*e*PG	**Pb**	**17 25 11.0**	**+1.3**
HUSU					*e*S	**Sn**	**17 25 50.7**	**-1.6**
FINES	**FINESS Array B**	**6.88**	**156**	Pn		**Pn**	**17 25 32.2**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=348,slow=12,SNR=8.2							
FINES				Sn		**Sn**	**17 26 51.3**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=348,slow=21,SNR=6.5							
FINES				Lg		Lg	17 27 26.4	
	comp=Z,1.0nm,0.3s,baz=345,slow=26,SNR=8.5							
	comp=Z,2.9nm,1.0s							
NOA	**NORSAR Array B**	**7.83**	**214**	Pn		**Pn**	**17 25 45.8**	**+1.1**
	baz=30,slow=10,SNR=1.2							
NOA				Sn		**Sn**	**17 27 10.7**	**-3.4**
	baz=20,slow=18,SNR=1.5							
NOA				Lg		Lg	17 28 00.6	
	comp=Z,0.1nm,0.3s,baz=32,slow=22,SNR=5.9							
	comp=Z,0.7nm,0.9s							
HFS	**Hagfors**	**8.23**	**203**	Pn		**Pn**	**17 25 48.5**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=13,slow=13,SNR=2.2							
HFS				Sn		**Sn**	**17 27 20.0**	**-3.7**
	comp=Z,0.2nm,0.3s,baz=23,slow=27,SNR=1.6							
HFS				Lg		Lg	17 28 09.6	
	comp=Z,0.3nm,0.3s,baz=21,slow=25,SNR=3.4							
	comp=Z,7.8nm,1.1s							
SPITS	**Spitsbergen Ar**	**10.47**	**356**	Pn		**Pn**	**17 26 19.7**	**-1.1**
	comp=Z,17nm,1.2s,baz=166,slow=15,SNR=1.5							

NEIC ***28*** *17:24:37.1±1.4, 13°.4N±0°.1×125°.9E±0°.1, h10km±2km, mb4.2/8, Error ellipse: s-maj=24.7km s-min=16.5km az=53.0*

MAN ***28*** *17:24:39.0, 13°.28N×125°.38E, h33km, MS4.0*

IDC ***28*** *17:24:50.9±4.7, 13°.05N×125°.20E, h128km±41km, mb3.3/6, mbtmp3.8/7, MS2.6/1, Error ellipse: s-maj=51.1km s-min=14.7km az=62.0*

ISC 28 17:24:37.1±0.7, 13°.22N±0°.05×125°.35E±0°.07, h10km, n23, σ1§38/25, mb4.1/11, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PLP	**Palo**	**2.08**	**190**	*e*P		**Pn**	**17 25 14.1**	**+2.1**
PLP				*e*S		**Sg**	**17 25 45.5**	**+1.6**
RCP	**Roxas**	**3.04**	**237**	*e*P		**Pn**	**17 25 27.9**	**+2.6**
RCP				*i* S		**Sb**	**17 26 06.1**	**-2.4**
SCPH	**Surigao**	**3.42**	**178**	*e*P		Pn	17 25 23.9	-6.6
TGY	**Tagaytay City**	**4.38**	**282**	P		**Pb**	**17 25 55.0**	**+0.7**
	84nm,0.4s,baz=288,slow=7.0,SNR=4.7							
TGY				S		**Sb**	**17 26 44.2**	**-3.0**
	67nm,0.5s,baz=100,slow=18,SNR=0.8							
BIPH	**Bislig**	**5.10**	**169**	*e*P		**Pb**	**17 26 06.6**	**+0.1**
BIPH				*e*S		**Sn**	**17 26 50.9**	**-1.8**
TWG	**Pinlang**	**10.38**	**338**	Pn		**Pn**	**17 27 05.6**	**-0.4**
SIJI	**Sorong**	**15.18**	**157**	LR		LR	17 37 11.3	
	comp=Z,19nm,18.2s,baz=248,slow=49							
CMAR	**Chiang Mai Arr**	**25.92**	**285**	P		**P**	**17 30 10.1**	**+0.3**
	0.7nm,0.7s,baz=96,slow=7.8,SNR=9.6							
	0.7nm,0.7s							
MTN	**Manton Dam**	**26.52**	**167**	P		**P**	**17 30 14.8**	**-0.3**
MTN				IAmb		IAmb	17 30 20.1	
	comp=Z,8.2nm,1.1s							
KNRA	**Kununurra**	**28.91**	**173**	P		**P**	**17 30 36.3**	**-0.1**
KNRA				IAmb		IAmb	17 30 48.6	
	comp=Z,4.7nm,0.9s							
WB0	**Warramunga Arr**	**33.97**	**165**	P		**P**	**17 31 20.0**	**-1.0**
WB0				IAmb		IAmb	17 31 24.4	
	comp=Z,6.0nm,1.2s							
WRA	**Warramunga Arr**	**34.12**	**165**	P		**P**	**17 31 21.9**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=332,slow=9.9,SNR=6.3							
WRA				PcP		**PcP**	**17 33 58.5**	**-1.2**
	comp=Z,0.2nm,0.7s,baz=342,slow=2.7,SNR=1.3							
	comp=Z,0.3nm,0.6s							
WR8	**Warramunga Arr**	**34.18**	**165**	P		**P**	**17 31 22.1**	**-0.7**
WR8				IAmb		IAmb	17 31 35.8	
	comp=Z,3.4nm,1.2s							
ASAR	**Alice Springs**	**37.60**	**167**	P		**P**	**17 31 52.2**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=348,slow=7.5,SNR=13							
	comp=Z,0.5nm,0.5s							
SONM	**Songino Array**	**37.96**	**339**	P		**P**	**17 31 55.2**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=162,slow=9.1,SNR=3.6							
	comp=Z,0.5nm,0.8s							
SONM	**Songino Array**	**37.96**	**339**	IAmb		IAmb	17 32 02.8	
	comp=Z,1.5nm,1.1s							
BBOO	**Buckleboo**	**46.90**	**168**	P		**P**	**17 33 07.0**	**-0.8**
MKAR	**Makanchi Array**	**49.16**	**322**	P		**P**	**17 33 26.6**	**+1.3**
	comp=Z,1.5nm,0.8s,baz=116,slow=8.5,SNR=17							
	comp=Z,1.5nm,0.8s							
MAKZ	**Makanchi**	**49.35**	**322**	P		**P**	**17 33 27.7**	**+1.0**
MAKZ				IAmb		IAmb	17 33 29.0	
	comp=Z,2.5nm,1.1s							
KURK	**Kurchatov**	**53.15**	**325**			**P**	**17 33 56.2**	**+1.2**
KURBB	**Kurchatov Arra**	**53.16**	**325**	P		**P**	**17 33 56.1**	**+1.0**
	comp=Z,1.6nm,0.7s,baz=121,slow=7.6,SNR=11							
	comp=Z,1.6nm,0.7s							
KKAR	**Karatay Array**	**55.57**	**313**	P		**P**	**17 34 12.8**	**-0.1**
ABKAR	**Akbulak array**	**64.08**	**319**	P		**P**	**17 35 10.9**	**-0.4**

KRNET ***28*** *17:27:14.8±0.1, 40°.12N×77°.35E, h14km, mb3.1*

SOME ***28*** *17:27:16.4, 40°.20N×77°.42E, h10km*

NNC ***28*** *17:27:17.3±1.1, 40°.23N×77°.40E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=7.4km s-min=5.2km az=168.0*

ISC 28 17:27:14.2±2.3, 40°.15N±0°.09×77°.35E±0°.04, h16km±17km, n36, σ1§46/53, 13C-1D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JNKS	**Jany-Kuch**	**1.59**	**305**	⇑*i*P		**Pg**	**17 27 44.8**	**0.0**
JNKS				⇑*i*S		**Sg**	**17 28 06.5**	**+0.9**
TARG	**Taragay, Kyrgy**	**1.61**	**12**	⇑*i*P		**Pg**	**17 27 45.3**	**+0.1**
TARG				⇑*i*S		**Sg**	**17 28 08.0**	**+1.8**
NRN	**Naryn**	**1.64**	**322**	⇑*i*P		**Pg**	**17 27 45.9**	**+0.1**
NRN				⇑*i*S		**Sg**	**17 28 08.8**	**+1.7**
BOOM	**Boomskoye usch**	**2.57**	**336**	⇑*e*P		**Pb**	**17 28 00.2**	**+0.3**
BOOM				⇑*i*S		**Sb**	**17 28 33.0**	**+1.7**
SALK	**Salom-Alik**	**2.79**	**286**	⇑*e*P		**Pb**	**17 28 02.9**	**-0.8**
SALK				⇑*i*S		**Sb**	**17 28 37.9**	**+0.2**
TNSS	**Tian-Shan**	**2.90**	**354**	Pg		**Pg**	**17 28 09.2**	**-0.6**
	2.9nm,0.2s							
TNSS				Lg		Lg	17 28 46.9	
	7.2nm,0.5s							
TNSS	**Tian-Shan**	**2.90**	**354**	*e*P		**Pg**	**17 28 09.2**	**-0.6**
	2.9nm,0.2s							
TNSS				*e*S		**Sg**	**17 28 46.9**	**-0.4**
	7.2nm,0.5s							
SATY	**Saty**	**3.01**	**15**	Pg		**Pg**	**17 28 11.6**	**-0.2**
	6.6nm,0.3s							
SATY				Lg		Lg	17 28 51.7	
	13nm,0.4s							
MDOK	**Medeo**	**3.02**	**356**	Pg		**Pg**	**17 28 11.0**	**-1.0**
	8.7nm,0.3s							
MDOK				Lg		Lg	17 28 50.8	
	27nm,0.7s							
KST	**Kastek**	**3.07**	**341**	Pg		**Pg**	**17 28 13.1**	**+0.1**
	1.9nm,0.3s							
KST				Lg		Lg	17 28 54.0	
	16nm,0.5s							
KST	**Kastek**	**3.07**	**341**	*e*P		**Pg**	**17 28 13.2**	**+0.1**
	1.9nm,0.3s							
KST				*e*S		**Sg**	**17 28 54.0**	**+1.2**
	16nm,0.5s							
KOTS	**Kotyrbulak**	**3.08**	**357**	Pg		**Pg**	**17 28 12.6**	**-0.7**
	11nm,0.2s							
KOTS				Lg		Lg	17 28 53.3	
	66nm,0.3s							
KOTS	**Kotyrbulak**	**3.08**	**357**	*e*P		**Pg**	**17 28 12.6**	**-0.7**
	11nm,0.2s							
KOTS				*e*S		**Sg**	**17 28 53.3**	**+0.1**
	66nm,0.3s							
UZB	**Uzynbulak**	**3.24**	**22**	Pg		**Pg**	**17 28 14.5**	**-1.8**
	2.0nm,0.1s							
UZB				Lg		Lg	17 28 56.3	
	17nm,1.0s							
UZB	**Uzynbulak**	**3.24**	**22**	*e*P		**Pg**	**17 28 14.5**	**-1.8**
	2.0nm,0.1s							
UZB				*e*S		**Sg**	**17 28 56.3**	**-2.0**
	17nm,1.0s							
AAK	**Ala-Archa**	**3.28**	**320**	⇑Pg		**Pg**	**17 28 14.6**	**-2.6**
	1.0nm,0.5s							
AAK				⇑Lg		Lg	17 28 59.4	
	6.9nm,0.8s							
DGS	**Degeres**	**3.31**	**340**	Pg		**Pg**	**17 28 16.9**	**-0.6**
	2.7nm,0.4s							
DGS				Lg		Lg	17 29 00.7	
	10nm,0.4s							
DGS	**Degeres**	**3.31**	**340**	*e*P		**Pg**	**17 28 16.9**	**-0.6**
	2.7nm,0.4s							
DGS				*e*S		**Sg**	**17 29 00.7**	**+0.3**
	10nm,0.4s							
KURS	**Kuram**	**3.39**	**10**	Pg		**Pg**	**17 28 18.7**	**-0.4**
	2.5nm,0.5s							
KURS				Lg		Lg	17 29 03.1	
	7.1nm,0.6s							
SHLS	**Shalkode**	**3.39**	**27**	Pg		**Pg**	**17 28 20.4**	**+1.2**
	5.7nm,0.3s							
SHLS				Lg		Lg	17 29 06.7	
	11nm,0.5s							
SHLS	**Shalkode**	**3.39**	**27**	*e*P		**Pg**	**17 28 20.4**	**+1.2**
	5.7nm,0.3s							
SHLS				*e*S		**Sg**	**17 29 06.7**	**+3.6**
	11nm,0.5s							
KPKS	**Kokpek**	**3.46**	**16**	Pg		**Pg**	**17 28 18.1**	**-2.3**
	0.5nm,0.2s							
KPKS				Lg		Lg	17 29 02.2	
	9.0nm,0.5s							
KPKS	**Kokpek**	**3.46**	**16**	*e*P		**Pg**	**17 28 18.1**	**-2.3**
	0.5nm,0.2s							
KPKS				*e*S		**Sg**	**17 29 02.2**	**-3.0**
	9.0nm,0.5s							
PDGK	**Podgornoye**	**3.55**	**26**	⇑Pg		**Pb**	**17 28 18.6**	**+1.9**
	2.7nm,0.3s							
PDGK				⇓Lg		Lg	17 29 07.6	
	11nm,0.7s							
KTBS	**Karatobe**	**3.59**	**352**	Pg		**Pg**	**17 28 21.4**	**-1.6**
	2.0nm,0.3s							
KTBS				Lg		Lg	17 29 08.4	
	2.8nm,0.3s							
KTBS	**Karatobe**	**3.59**	**352**	*e*P		**Pg**	**17 28 21.4**	**-1.6**
	2.0nm,0.3s							
KTBS				*e*S		**Sg**	**17 29 08.4**	**-1.1**
	2.8nm,0.3s							
KRBS	**Karabastau**	**3.75**	**341**	Pg		**Pg**	**17 28 25.2**	**-0.9**
	1.7nm,0.3s							
KRBS				Lg		Lg	17 29 14.6	
	1.8nm,0.4s							
KRBS	**Karabastau**	**3.75**	**341**	*e*P		**Pg**	**17 28 25.2**	**-0.9**
	1.7nm,0.3s							
KRBS				*e*S		**Sg**	**17 29 14.6**	**-0.1**
	1.8nm,0.4s							
BLB	**Baldybastay**	**4.03**	**12**	Pg		**Pg**	**17 28 29.5**	**-1.8**
	5.0nm,0.2s							
BLB				Lg		Lg	17 29 22.0	
	8.6nm,0.5s							
MRKS	**Merke**	**4.04**	**311**	Pg		**Pg**	**17 28 30.8**	**-0.7**
	2.1nm,0.3s							
MRKS				Lg		Lg	17 29 24.3	
	5.1nm,0.4s							
MRKS	**Merke**	**4.04**	**311**	*e*P		**Pg**	**17 28 30.8**	**-0.7**
	2.1nm,0.3s							
MRKS				*e*S		**Sg**	**17 29 24.3**	**+0.4**
	5.1nm,0.4s							
ARXS	**Arharly**	**4.07**	**5**	Pg		**Pg**	**17 28 30.3**	**-1.8**
	2.4nm,0.4s							
ARXS				Lg		Lg	17 29 23.4	
	6.2nm,0.4s							
ARXS	**Arharly**	**4.07**	**5**	*e*P		**Pg**	**17 28 30.3**	**-1.8**
	2.4nm,0.4s							
ARXS				*e*S		**Sg**	**17 29 23.4**	**-1.5**
	6.2nm,0.4s							
KNOS	**Konyrlen**	**4.42**	**17**	Pg		**Pg**	**17 28 36.1**	**-2.6**
	1.2nm,0.4s							
KNOS				Lg		Lg	17 29 33.4	
	2.4nm,0.2s							
DJR	**Jarkent**	**4.55**	**23**	Pg		**Pg**	**17 28 39.9**	**-1.5**
	1.1nm,0.2s							
DJR				Lg		Lg	17 29 39.7	
	2.0nm,0.5s							
DJR	**Jarkent**	**4.55**	**23**	*e*P		**Pg**	**17 28 39.9**	**-1.5**
	1.1nm,0.2s							
DJR				*e*S		**Sg**	**17 29 39.7**	**-0.5**
	2.0nm,0.5s							

DJA 28 17:39:03.6±0.2, 2°.S±2°.×12°.0E±°, h10km, M3.8/27, mB4.9/1, mb4.0/5, MLv3.8/27, Mw(mB)4.2/1, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PCI	**Palu**	**0.84**	**340**	P		Pg	17 39 19.3	-0.6
MMSI	**Mamuju**	**1.57**	**231**	P		Pn	17 39 30.7	-0.8
APSI	**Ampana**	**1.71**	**63**	P		Pn	17 39 34.2	+0.7
MPSI	**Mapaga**	**2.04**	**353**	P		Pn	17 39 38.3	+0.3
PMSI	**Majene**	**2.16**	**214**	P		Pn	17 39 40.8	+1.1
SPSI	**Sidrap Palu**	**2.28**	**189**	P		Pn	17 39 41.4	+0.1
LUWI	**Luwuk**	**2.72**	**76**	P		Pn	17 39 47.8	+0.4
MRSI	**Marisa**	**2.82**	**40**	P		Pn	17 39 49.1	+0.3
KKSI	**Kolaka, Sulawe**	**2.89**	**148**	P		Pb	17 39 52.8	-2.4
KAPI	**Kappang**	**3.31**	**187**	P		Pn	17 39 55.6	0.0
GTOI	**Gorontalo**	**3.70**	**51**	P		Pn	17 40 01.3	+0.4
BBKI	**Banjar Baru**	**5.57**	**252**	P		Pn	17 40 27.3	+0.7
	0.1nm12nm,1.0s							

NEIC ***28*** *17:47:01.4±1.7, 23°.9S±0°.1×179°.9W±0°.1, h492km±8km, mb4.3/51, Error ellipse: s-maj=22.4km s-min=14.0km az=131.0*

IDC ***28*** *17:47:02.9±2.0, 23°.95S×179°.89W, h515km±21km, mb3.6/12, mbtmp4.4/14, Error ellipse: s-maj=24.8km s-min=14.6km az=150.0*

ISC 28 17:47:03.0±0.5, 23°.86S±0°.07×179°.96W±0°.07, h518km, n107, σ1§23/108, mb4.3/35, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GLKZ	**Green Lake**	**5.68**	**162**	P		**P**	**17 48 37.6**	**+0.6**
GLKZ				S		**S**	**17 49 57.8**	**+3.9**
MSVF	**Nonsavu**	**6.38**	**343**	P		**P**	**17 48 44.8**	**+0.8**
	14nm,0.5s,baz=264,slow=21,SNR=26							
MSVF	**Nonsavu**	**6.38**	**343**			**P**	**17 48 44.5**	**+0.6**
NIUE	**Niue**	**10.49**	**65**	P		**P**	**17 49 25.3**	**-0.4**
NIUE				S		**S**	**17 51 24.6**	**+1.5**
AFI	**Afiamalu**	**12.57**	**39**	P		**P**	**17 49 44.1**	**-3.6**
	18nm,0.4s,baz=53,slow=8.3,SNR=7.0							
AFI				S		S	17 51 54.1	-9.2
	17nm,0.5s,baz=43,slow=23,SNR=6.4							
OUZ	**Omahuta**	**12.62**	**205**	P		**P**	**17 49 49.5**	**+1.6**
WCZ	**Waipu Caves**	**13.00**	**201**	P		**P**	**17 49 52.8**	**+0.9**
MXZ	**Matakaoa Point**	**13.73**	**186**	P		**P**	**17 50 00.4**	**+0.9**
MKAZ	**Moumakai**	**13.85**	**196**	P		**P**	**17 50 03.4**	**+2.7**
WMGZ	**Waiomatatini S**	**13.98**	**185**	P		**P**	**17 50 05.3**	**+3.2**
HAZ	**Te Kaha**	**13.98**	**187**	P		**P**	**17 50 02.6**	**+0.5**
RUGZ	**Raukumara Rang**	**14.20**	**188**	P		**P**	**17 50 05.9**	**+1.4**
PUZ	**Puketiti**	**14.24**	**186**	P		**P**	**17 50 06.7**	**+1.8**
TOZ	**Tahuroa Road**	**14.36**	**195**	P		**P**	**17 50 06.5**	**+0.4**
TOZ	**Tahuroa Road**	**14.36**	**195**	P		**P**	**17 50 09.6**	**+3.5**
KMRZ	**Kaimai**	**14.37**	**193**	P		**P**	**17 50 07.7**	**+1.4**
TWGZ	**Tauwhareparae**	**14.38**	**187**	P		**P**	**17 50 07.4**	**+1.1**
URZ	**Urewera**	**14.57**	**189**	P		**P**	**17 50 06.7**	**-1.5**
	5.7nm,0.4s,baz=272,slow=3.1,SNR=16							
URZ				S		**S**	**17 52 36.9**	**-4.1**
	9.1nm,0.8s,baz=233,slow=23,SNR=6.1							
URZ	**Urewera**	**14.57**	**189**	P		**P**	**17 50 06.7**	**-1.5**

MWZ	**Matawai**	**14.58**	**188**	P		**P**	**17 50 08.1**	**-0.4**
CNGZ	**Carnagh Statio**	**14.66**	**186**	P		**P**	**17 50 10.1**	**+0.9**
RAGZ	**Rawiri**	**14.76**	**188**	P		**P**	**17 50 09.7**	**-0.7**
RIGZ	**Rimuhau**	**14.92**	**187**	P		**P**	**17 50 11.4**	**-0.6**
TLZ	**Tolley Road**	**14.92**	**194**	P		**P**	**17 50 14.6**	**+2.6**
RTZ	**Ruatahuna**	**14.94**	**189**	P		**P**	**17 50 11.7**	**-0.5**
RAHZ	**Arahi**	**15.21**	**189**	P		**P**	**17 50 13.5**	**-1.5**
HIZ	**Hauiti**	**15.26**	**196**	P		**P**	**17 50 18.0**	**+2.5**
NMHZ	**Naumai**	**15.43**	**189**	P		**P**	**17 50 17.3**	**-0.1**
BKZ	**Black Stump Fm**	**15.55**	**190**	P		**P**	**17 50 16.8**	**-1.7**
TSZ	**Takapari Road**	**16.51**	**191**	P		**P**	**17 50 28.0**	**-0.3**
BFZ	**Birch Farm**	**17.07**	**190**	P		**P**	**17 50 31.4**	**-2.3**
BFZ	**Birch Farm**	**17.07**	**190**	P		**P**	**17 50 31.4**	**-2.3**
MRZ	**Mangatainoka R**	**17.16**	**192**	P		**P**	**17 50 32.5**	**-2.1**
NNZ	**Nelson**	**18.18**	**196**	P		**P**	**17 50 43.1**	**-0.8**
NNZ	**Nelson**	**18.18**	**196**	P		**P**	**17 50 43.5**	**-0.4**
MRNZ	**Matariki Terra**	**18.52**	**197**	P		**P**	**17 50 48.0**	**+1.0**
THZ	**Tophouse**	**18.82**	**197**	P		**P**	**17 50 50.1**	**+0.3**
OXZ	**Oxford**	**20.50**	**197**	P		**P**	**17 51 05.7**	**+0.6**
RPZ	**Rata Peaks**	**21.14**	**198**	P		**P**	**17 51 10.7**	**-0.1**
	9.0nm,0.9s,baz=14,slow=4.2,SNR=2.3							
	9.0nm,0.9s							
WHZ	**Wether Hill Ro**	**24.06**	**201**	P		**P**	**17 51 36.9**	**0.0**
WHZ				IAmb		IAmb	17 51 41.1	
	comp=Z,16nm,1.2s							
ARMA	**Armidale**	**26.07**	**249**	P		**P**	**17 51 55.8**	**+0.7**
ARMA				IAmb		IAmb	17 52 05.9	
	comp=Z,16nm,1.3s							
EIDS	**Eidsvold**	**26.35**	**261**	P		**P**	**17 51 57.4**	**0.0**
CTA	**Charters Tower**	**31.51**	**270**	P		**P**	**17 52 43.6**	**+1.1**
	comp=Z,18nm,0.4s,baz=91,slow=10,SNR=75							
	comp=Z,18nm,0.4s							
CTAO	**Charters Tower**	**31.51**	**270**			**P**	**17 52 43.5**	**+1.0**
TOO	**Toolangi**	**32.50**	**237**	P		**P**	**17 52 50.9**	**+0.2**
MCQ	**Macquarie Isla**	**34.41**	**202**	P		**P**	**17 53 05.8**	**-0.6**
STKA	**Stephens Creek**	**34.77**	**248**	P		**P**	**17 53 09.9**	**0.0**
	comp=Z,1.4nm,0.4s,baz=74,slow=12,SNR=4.8							
	comp=Z,1.4nm,0.4s							
STKA	**Stephens Creek**	**34.77**	**248**	IAmb		IAmb	17 53 15.0	
	comp=Z,35nm,1.2s							
INKA	**Innaminka**	**35.48**	**255**	P		**P**	**17 53 16.3**	**+0.5**
BBOO	**Buckleboo**	**39.49**	**247**	P		**P**	**17 53 48.3**	**-0.4**
BBOO				IAmb		IAmb	17 53 49.3	
	comp=Z,12nm,1.1s							
AS31	**Alice Springs**	**42.07**	**261**			**P**	**17 54 09.7**	**+0.2**
ASAR	**Alice Springs**	**42.07**	**261**	P		**P**	**17 54 09.4**	**-0.1**
	comp=Z,8.0nm,0.8s,baz=97,slow=7.4,SNR=126							
	comp=Z,8.0nm,0.8s							
ASAR	**Alice Springs**	**42.07**	**261**	P		**P**	**17 54 08.7**	**-0.7**
WR8	**Warramunga Arr**	**42.29**	**266**	P		**P**	**17 54 10.8**	**-0.4**
WRAB	**Tennant Creek**	**42.44**	**266**	P		**P**	**17 54 11.9**	**-0.3**
WB0	**Warramunga Arr**	**42.44**	**266**			**P**	**17 54 12.0**	**-0.3**
WRA	**Warramunga Arr**	**42.44**	**266**	P		**P**	**17 54 12.0**	**-0.4**
	comp=Z,10nm,0.5s,baz=90,slow=5.9,SNR=304							
	comp=Z,10nm,0.5s							
FORT	**Forrest**	**46.35**	**250**	P		**P**	**17 54 41.5**	**-0.9**
FORT				IAmb		IAmb	17 54 42.7	
	comp=Z,7.2nm,0.6s							
MTN	**Manton Dam**	**47.49**	**274**	P		**P**	**17 54 50.5**	**-0.6**
MTN				IAmb		IAmb	17 54 51.5	
	comp=Z,10nm,1.1s							
KNRA	**Kununurra**	**48.72**	**270**	P		**P**	**17 55 00.4**	**0.0**
KNRA				IAmb		IAmb	17 55 01.6	
	comp=Z,12nm,0.8s							
FAKI	**Fak Fak**	**50.60**	**287**	P		**P**	**17 55 14.2**	**0.0**
FITZ	**Fitzroy Crossi**	**50.87**	**266**	P		**P**	**17 55 16.7**	**+0.6**
	comp=Z,6.0nm,0.6s,baz=102,slow=7.2,SNR=23							
	comp=Z,6.0nm,0.6s							
SIJI	**Sorong**	**52.46**	**288**	P		**P**	**17 55 28.0**	**+0.3**
SWI	**Sorong**	**52.46**	**288**	P		**P**	**17 55 28.5**	**+0.8**
SOEI	**Soe**	**54.88**	**275**	P		**P**	**17 55 45.9**	**+0.9**
PSA00	**Pilbara Seismi**	**55.20**	**260**	P		**P**	**17 55 46.5**	**-0.5**
PSA00	**Pilbara Seismi**	**55.20**	**260**	P		**P**	**17 55 46.1**	**-0.9**
PSA00				IAmb		IAmb	17 55 57.1	
	comp=Z,19nm,1.3s							
BATI	**Baumata**	**55.26**	**274**	P		**P**	**17 55 48.8**	**+1.3**
	comp=Z,12nm,0.6s,baz=181,slow=2.1,SNR=5.3							
	comp=Z,12nm,0.6s							

*MOS **28** 17:48:15.7±0.9, 17°.79S×168°.35E, h96km, mb5.1/25, Error ellipse: s-maj=9.3km s-min=7.5km az=19.6*

*NEIC **28** 17:48:16.2±2.6, 17°.82S±0°.06×168°.34E±0°.07, h84km±1km, mb5.1/250, Mwb5.8/50, Mww5.8/46, Error ellipse: s-maj=12.1km s-min=9.9km az=91.0, Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr0.98; Mθθ 1.52; Mθφ -2.50; Mrθ -2.89; Mθφ 5.00; Mφr-2.21; Fault plane solution: Mo6.56000×10^17^ NP1:φs285.46000°, δ67.13000°, λ21.42000°. NP2:φs186.79000°, δ70.34000°, λ155.62000°. Principal axes: T 7.0673, Plg31.0000°, Azm145.0000°; N -1.1805, Plg59.0000°, Azm330.0000°; P -5.8868, Plg2.0000°, Azm237.0000°;*

*BJI **28** 17:48:17.8, 17°.72S×168°.47E, h110km, mB5.1/40, mb4.6/61*

*PTWC **28** 17:48:18, 17°.70S×168°.30E, h71km, Mwp5.8/14*

*NEIC **28** 17:48:18, 17°.83S×168°.23E, h100km, Moment Tensor Solution. Duration: 4s0 Moment tensor: Scale 10^17^Nm; Mrr0.65; Mθθ3.12; Mθθ -3.77; Mrθ -2.06; Mθφ5.38; Mφr-1.87; Fault plane solution: Mo6.99000×10^17^ NP1: φs288.56000°, δ70.21000°, λ12.53000°. NP2: φs194.26000°, δ78.22000°, λ159.76000°. Principal axes: T 7.1842, Plg23.0000°, Azm150.0000°; N -0.4099, Plg67.0000°, Azm345.0000°; P -6.7743, Plg5.0000°, Azm242.0000°;*

*NOU **28** 17:48:18.1, 17°.70S×168°.27E, h83km, ML5.3/104, Vanuatu Islands*

*NEIC **28** 17:48:18, 17°.83S×168°.23E, h100km*

*NEIC **28** 17:48:18.3, 17°.81S×168°.25E, h100km*

*IDC **28** 17:48:19.2±1.3, 17°.72S×168°.36E, h112km±11km, mb4.6/24, mbtmp4.9/27, MS4.7/49, Error ellipse: s-maj=10.9km s-min=9.0km az=54.0*

*GFZ **28** 17:48:21.5, 17°.74S×168°.26E, h107km, MW5.8, Moment Tensor Solution. s33 Moment tensor: Mrr0.51; Mθθ1.95; Mθφ -2.46; Mrθ -1.96; Mθθ4.98; Mφr-1.82; Fault plane solution: NP1:φs284.00000°, δ69.00000°, λ14.00000°. NP2:φs189.00000°, δ76.00000°, λ159.00000°. Principal axes: T 6.3800, Plg24.0000°, Azm145.0000°; N -0.6400, Plg65.0000°, Azm338.0000°; P -5.7400, Plg4.0000°, Azm238.0000°;*

*GCMT **28** 17:48:22.3±0.1, 17°.72S×168°.29E, h103km, MW5.9/167, Moment Tensor Solution. s157,c320; s167,c481; Duration: 2s1 Moment tensor: Scale 10^17^Nm; Mrr-0.33±.05; Mθθ3.04±.06; Mθφ -2.71±.06; Mrθ-2.77±.04; Mθθ6.85±.05; Mφr-2.69±.04; Best double couple: Mo8.23500×10^17^ NP1:φs284.00000°, δ70.00000°, λ11.00000°. NP2:φs190.00000°, δ79.00000°, λ159.00000°. Principal axes: T 9.1240, Plg22.0000°, Azm145.0000°; N -1.7740, Plg67.0000°, Azm344.0000°; P -7.3460, Plg7.0000°, Azm238.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 28 17:48:18.1±0.3, 17.79S±0.03×168.38E±0.04, h104km±1km, h104km:pP-P, n730, σ1976/705, mb5.1/238, 14C-15D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTV	**Rentapao**	**0.04**	**89**	P	**Pn**	**17 48 30.3**	**-2.1**
RTV	**Rentapao**	**0.04**	**89**	S	**Sn**	**17 48 39.8**	**-3.3**
RTV	**Rentapao**	**0.04**	**89**	P	**Pn**	**17 48 29.6**	**-2.8**
DVP	**Devils Point**	**0.20**	**290**	P	**Pn**	**17 48 30.7**	**-2.0**
DVP	**Devils Point**	**0.20**	**290**	S	**Sn**	**17 48 41.8**	**-1.8**
DVP	**Devils Point**	**0.20**	**290**	P	**Pn**	**17 48 30.4**	**-2.3**
MARNC	**Mare, Loyalty**	**3.68**	**185**	P	**Pn**	**17 49 11.4**	**-1.6**
MARNC	**Mare, Loyalty**	**3.68**	**185**	P	**Pn**	**17 49 10.8**	**-2.3**
MARNC				Sn	**Sn**	**17 49 50.5**	**-5.1**
MARNC	**Mare, Loyalty**	**3.68**	**185**	P	**Pn**	**17 49 11.6**	**-1.4**
YATNC	**Mamie plateau,**	**4.47**	**198**	P	**Pn**	**17 49 23.8**	**+0.1**
YATNC	**Mamie plateau,**	**4.47**	**198**	P	**Pn**	**17 49 22.4**	**-1.3**
DZM	**Mont Dzumac**	**4.63**	**203**	P	**Pn**	**17 49 27.3**	**+1.4**
	3μm,0.4s,baz=24,slow=18,SNR=355						
DZM				S	**Sn**	**17 50 14.9**	**-3.7**
	8μm,0.4s,baz=311,slow=20,SNR=19						
DZM				LR	LR	17 50 34.0	
	comp=Z,4μm,20.0s,baz=92,slow=29						
NOUC	**Port Laguerre**	**4.71**	**204**	P	**Pn**	**17 49 27.3**	**+0.4**
OUENC	**Ouen Island, N**	**4.82**	**197**		**Pn**	**17 49 28.7**	**+0.3**
OUENC				Sn	**Sn**	**17 50 19.2**	**-4.0**
ONTNC	**Ouen Toro**	**4.84**	**202**	P	**Pn**	**17 49 30.2**	**+1.5**
ONTNC	**Ouen Toro**	**4.84**	**202**	S	**Sn**	**17 50 23.3**	**-0.3**
ONTNC	**Ouen Toro**	**4.84**	**202**		**Pn**	**17 49 29.1**	**+0.4**
ONTNC				Sn	**Sn**	**17 50 20.1**	**-3.5**
ONTNC	**Ouen Toro**	**4.84**	**202**	P	**Pn**	**17 49 29.3**	**+0.6**
YSA	**Yasawairara**	**8.85**	**84**	P	**Pn**	**17 50 26.1**	**+2.9**
MSVF	**Nonsavu**	**9.21**	**91**	P	**Pn**	**17 50 31.5**	**+3.3**
	67nm,1.1s,baz=224,slow=9.5,SNR=24						
MSVF				LR	LR	17 53 22.2	
	comp=Z,12μm,19.8s,baz=270,slow=33						
MSVF	**Nonsavu**	**9.21**	**91**	P	**Pn**	**17 50 31.8**	**+3.7**
MSVF	**Nonsavu**	**9.21**	**91**		**Pn**	**17 50 30.7**	**+2.5**
MSVF	**Nonsavu**	**9.21**	**91**	*i* P	**Pn**	**17 50 27.3**	**-0.8**
MSVF	**Nonsavu**	**9.21**	**91**	P	Pn	17 50 32.8	+4.7
HURO	**Huro Makira**	**9.62**	**318**	P	**Pn**	**17 50 31.3**	**-2.3**
HURO	**Huro Makira**	**9.62**	**318**	P	**Pn**	**17 50 31.5**	**-2.1**
NGOA	**Tingoa Renbel**	**10.16**	**306**	P	**Pn**	**17 50 40.0**	**-1.0**
NGOA	**Tingoa Renbel**	**10.16**	**306**	S	**Sn**	**17 52 28.5**	**-4.5**
NGOA	**Tingoa Renbel**	**10.16**	**306**	P	**Pn**	**17 50 39.8**	**-1.2**
DGTI	**Dogotuki**	**10.96**	**84**	P	**Pn**	**17 50 54.0**	**+2.2**
DGTI	**Dogotuki**	**10.96**	**84**	P	**Pn**	**17 50 54.5**	**+2.7**
NFK	**Norfolk Island**	**11.21**	**182**	P	**Pn**	**17 50 57.1**	**+2.1**
	comp=Z,1μm,0.6s,comp=Z,14μm						
NFK	**Norfolk Island**	**11.21**	**182**	P	**Pn**	**17 50 57.3**	**+2.2**
NFK	**Norfolk Island**	**11.21**	**182**	P	**Pn**	**17 50 56.9**	**+1.9**
NFK				S	**Sn**	**17 52 54.3**	**-4.0**
TAVE	**Taveuni**	**11.24**	**86**	P	Pn	17 51 00.2	+4.6
HNR	**Honiara**	**11.67**	**314**	P	**Pn**	**17 51 01.6**	**+0.3**
	comp=Z,25nm,0.6s,baz=69,slow=2.6,SNR=47						
HNR				S	**Sn**	**17 53 08.2**	**-1.5**
	comp=Z,3.8nm,0.5s,baz=262,slow=17,SNR=1.6						
HNR				LR	LR	17 55 25.1	
	comp=Z,170nm,19.0s,baz=231,slow=37						
HNR	**Honiara**	**11.67**	**314**	P	**Pn**	**17 51 00.2**	**-1.2**
HNR	**Honiara**	**11.67**	**314**	S	**Sn**	**17 53 07.6**	**-2.2**
HNR	**Honiara**	**11.67**	**314**		**Pn**	**17 50 58.9**	**-2.5**
HNR	**Honiara**	**11.67**	**314**	P	**Pn**	**17 50 58.9**	**-2.5**
HNR						17 53 08.2	
HNR	**Honiara**	**11.67**	**314**	P	**Pn**	**17 51 01.4**	**0.0**
SAVO	**Savo Central**	**11.97**	**315**	P	**Pn**	**17 51 05.0**	**-0.3**
SAVO	**Savo Central**	**11.97**	**315**	P	**Pn**	**17 51 05.8**	**+0.5**
LKBA	**Tubou, Lakemba**	**12.19**	**94**	P	**Pn**	**17 51 09.6**	**+1.4**
FUTU	**Fugatoga**	**13.43**	**77**	Pn	**Pn**	**17 51 24.7**	**+0.2**
FUNA	**Funafuti**	**13.98**	**50**	Pn	**Pn**	**17 51 29.9**	**-1.8**
AUBSH	**Beerwah State**	**16.88**	**235**	P	**P**	**17 52 09.8**	**+1.5**
RAO	**Raoul Island**	**16.95**	**135**		**Pn**	**17 52 08.4**	**-0.4**
RAO	**Raoul Island**	**16.95**	**135**	P	**Pn**	**17 52 08.4**	**-0.4**
GC1S	**Gold Coast 1 S**	**17.13**	**230**	P	**P**	**17 52 14.5**	**+3.4**
AUNRC	**North Rockhamp**	**17.60**	**249**	P	**Pn**	**17 52 19.6**	**+2.8**
EIDS	**Eidsvold**	**17.76**	**242**	P	**Pn**	**17 52 20.8**	**+2.1**
	comp=Z,78nm,0.9s,comp=Z,4μmcomp=Z,0.0nm						
EIDS	**Eidsvold**	**17.76**	**242**	P	**Pn**	**17 52 19.7**	**+1.0**
EIDS	**Eidsvold**	**17.76**	**242**		**P**	**17 52 16.9**	**-1.2**
OUZ	**Omahuta**	**17.97**	**166**	P	**Pn**	**17 52 23.5**	**+2.4**
OUZ	**Omahuta**	**17.97**	**166**	P	**Pn**	**17 52 23.6**	**+2.4**
TW1H	**Toowoomba 1 Ha**	**17.97**	**234**	P	**Pn**	**17 52 23.0**	**+1.7**
WCZ	**Waipu Caves**	**18.83**	**165**	P	**Pn**	**17 52 33.6**	**+2.1**
GRZ	**Great Barrier**	**19.42**	**163**	P	**Pn**	**17 52 39.5**	**+1.2**
AFI	**Afiamalu**	**19.47**	**81**	P	**P**	**17 52 37.6**	**+0.7**
	comp=Z,41nm,0.8s,baz=242,slow=18,SNR=6.8						
AFI				LR	LR	17 57 52.7	
	comp=Z,863nm,21.2s,baz=242,slow=29						
TARA	**Tarawa**	**19.55**	**14**		**Pn**	**17 52 38.9**	**-1.0**
ABAZ	**Army Bay**	**19.58**	**164**	P	**Pn**	**17 52 41.5**	**+1.3**
MBAZ	**Motutapu North**	**19.76**	**164**	P	**Pn**	**17 52 42.8**	**+0.6**
ARMA	**Armidale**	**19.76**	**227**	P	**Pn**	**17 52 42.4**	**-0.1**
	comp=Z,96nm,1.7s,comp=Z,3μmcomp=Z,0.0nm						
ARMA	**Armidale**	**19.76**	**227**	P	**Pn**	**17 52 41.9**	**-0.6**
ARMA	**Armidale**	**19.76**	**227**		**P**	**17 52 39.5**	**-0.6**
ARMA	**Armidale**	**19.76**	**227**	P	**Pn**	**17 52 42.8**	**+0.3**
WTAZ	**Waiatarua**	**19.83**	**165**	P	**Pn**	**17 52 44.0**	**+0.9**
WIAZ	**Waiheke Island**	**19.84**	**164**	P	**Pn**	**17 52 43.7**	**+0.5**
ETAZ	**East Tamaki Re**	**19.94**	**164**	P	**Pn**	**17 52 46.1**	**+1.7**
AUAYR	**Ayr State High**	**19.95**	**262**	P	**Pn**	**17 52 43.7**	**-0.9**
AWAZ	**Awhitu Peninsu**	**19.97**	**165**	P	**Pn**	**17 52 46.3**	**+1.5**
MKAZ	**Moumakai**	**20.14**	**164**	P	Pn	17 52 46.7	0.0
NIUE	**Niue**	**20.62**	**97**	P	Pn	17 52 50.9	-1.6
AUPHS	**Peel High Scho**	**20.68**	**227**	P	Pn	17 52 52.0	-1.1
TOZ	**Tahuroa Road**	**20.82**	**164**		**P**	**17 52 51.9**	**+0.6**
TOZ	**Tahuroa Road**	**20.82**	**164**	P	Pn	17 52 55.2	+0.5
RABL	**Rabaul**	**20.86**	**309**	P	**P**	**17 52 50.7**	**-1.1**
KMRZ	**Kaimai**	**21.05**	**163**	P	**P**	**17 52 56.5**	**+2.8**
CTA	**Charters Tower**	**21.05**	**260**	P	**P**	**17 52 55.1**	**+1.1**
	comp=Z,54nm,0.6s,baz=84,slow=11,SNR=30						
CTA				LR	LR	18 00 08.1	
	comp=Z,3μm,18.8s,baz=78,slow=34						
	comp=Z,54nm,0.6s						
CTA	**Charters Tower**	**21.05**	**260**	P	**P**	**17 52 54.9**	**+0.9**
CTAO	**Charters Tower**	**21.05**	**260**	P	**P**	**17 52 55.0**	**+1.1**
CTAO	**Charters Tower**	**21.05**	**260**		**P**	**17 52 53.1**	**-0.9**
CTAO	**Charters Tower**	**21.05**	**260**	P	**P**	**17 52 53.1**	**-0.9**
HIZ	**Hauiti**	**21.41**	**166**	P	**P**	**17 52 57.9**	**+0.4**
HIZ	**Hauiti**	**21.41**	**166**	P	**P**	**17 53 00.8**	**+3.3**
HIZ	**Hauiti**	**21.41**	**166**	P	**P**	**17 53 01.5**	**+4.1**
BULU	**Kimbe**	**21.45**	**302**	P	**P**	**17 52 59.2**	**+1.0**
HAZ	**Te Kaha**	**21.53**	**159**	P	**P**	**17 53 02.8**	**+4.0**
MXZ	**Matakaoa Point**	**21.54**	**158**	P	**P**	**17 53 02.5**	**+3.6**
MXZ	**Matakaoa Point**	**21.54**	**158**		**P**	**17 52 59.3**	**+0.4**
MXZ	**Matakaoa Point**	**21.54**	**158**	P	**P**	**17 53 03.5**	**+4.6**
URZ	**Urewera**	**21.77**	**161**	P	**P**	**17 53 03.5**	**+2.1**
	comp=Z,40nm,0.7s,baz=346,slow=2.0,SNR=20						
URZ				S	**S**	**17 57 00.1**	**+4.0**
	comp=Z,12nm,1.0s,baz=61,slow=19,SNR=2.0						
URZ				LR	LR	18 00 08.6	
	comp=Z,2μm,20.1s,baz=332,slow=32						
	comp=Z,40nm,0.7s						
URZ	**Urewera**	**21.77**	**161**	P	**P**	**17 53 04.1**	**+2.7**
AULRC	**Lightning Ridg**	**21.95**	**234**	P	**P**	**17 53 03.9**	**+0.5**
VRZ	**Vera Road**	**21.97**	**167**	P	P	17 53 11.0	+7.6
MWZ	**Matawai**	**21.97**	**160**	P	**P**	**17 53 07.1**	**+3.6**
PUZ	**Puketiti**	**21.98**	**159**	P	**P**	**17 53 07.4**	**+3.8**
RTZ	**Ruatahuna**	**22.06**	**162**	P	**P**	**17 53 05.5**	**+1.0**
NGZ	**Ngauruhoe**	**22.21**	**165**	P	P	17 53 13.4	+7.2
PMG	**Port Moresby**	**22.23**	**289**	P	**P**	**17 53 07.3**	**+0.9**
	comp=Z,48nm,0.9s,baz=138,slow=7.2,SNR=15						
	comp=Z,48nm,0.9s						
PMG	**Port Moresby**	**22.23**	**289**	P	**P**	**17 53 07.6**	**+1.1**
PMG	**Port Moresby**	**22.23**	**289**	P	**P**	**17 53 07.5**	**+1.1**
PMG	**Port Moresby**	**22.23**	**289**		**P**	**17 53 05.6**	**-0.8**
PMG	**Port Moresby**	**22.23**	**289**	*ce* P	**P**	**17 53 05.7**	**-0.8**
PMG				pmax	pmax		
	comp=Z,67nm,1.0s						
PMG	**Port Moresby**	**22.23**	**289**	P	**P**	**17 53 07.6**	**+1.1**
	comp=Z,78nm,1.0s						
SYDH	**Sydney Hard Ro**	**22.42**	**221**	P	**P**	**17 53 10.7**	**+2.5**
BKZ	**Black Stump Fm**	**22.43**	**163**	P	**P**	**17 53 09.8**	**+1.4**
BKZ	**Black Stump Fm**	**22.43**	**163**	P	**P**	**17 53 09.5**	**+1.1**
BKZ	**Black Stump Fm**	**22.43**	**163**	P	**P**	**17 53 09.6**	**+1.2**
BKZ	**Black Stump Fm**	**22.43**	**163**	P	**P**	**17 53 10.1**	**+1.7**
WAZ	**Wanganui**	**22.62**	**167**	P	**P**	**17 53 16.2**	**+6.0**
WOLH	**Wollongong Har**	**22.77**	**220**	P	**P**	**17 53 14.8**	**+3.1**
MTSU	**Mount Surprise**	**22.89**	**265**	P	**P**	**17 53 13.6**	**+0.4**
	comp=Z,79nm,0.8s						
MTSU	**Mount Surprise**	**22.89**	**265**	P	**P**	**17 53 13.6**	**+0.4**
AUDCS	**Dubbo College**	**22.90**	**227**	P	**P**	**17 53 14.4**	**+1.3**
TSZ	**Takapari Road**	**23.14**	**165**	P	**P**	**17 53 16.8**	**+1.5**
QRZ	**Quartz Range**	**23.23**	**172**	P	**P**	**17 53 18.2**	**+2.1**
QRZ	**Quartz Range**	**23.23**	**172**	P	**P**	**17 53 18.1**	**+2.0**
QRZ	**Quartz Range**	**23.23**	**172**	P	**P**	**17 53 18.9**	**+2.8**
PXZ	**Pawanui**	**23.34**	**163**	P	**P**	**17 53 19.0**	**+1.8**
TKNZ	**Takaka Hill**	**23.49**	**171**	P	**P**	**17 53 20.1**	**+1.6**
MRZ	**Mangatainoka R**	**23.62**	**166**	P	**P**	**17 53 19.9**	**+0.2**
MRZ	**Mangatainoka R**	**23.62**	**166**	P	**P**	**17 53 20.5**	**+0.8**
AUUHS	**Ulladulla High**	**23.66**	**219**	P	**P**	**17 53 23.3**	**+3.3**
NNZ	**Nelson**	**23.74**	**171**	P	**P**	**17 53 21.4**	**+0.7**
NNZ	**Nelson**	**23.74**	**171**	P	**P**	**17 53 22.3**	**+1.6**
BFZ	**Birch Farm**	**23.80**	**165**	P	**P**	**17 53 22.3**	**+1.0**
BFZ	**Birch Farm**	**23.80**	**165**	P	**P**	**17 53 22.0**	**+0.7**
MRNZ	**Matariki Terra**	**23.82**	**172**	P	**P**	**17 53 22.3**	**+0.8**
TCW	**Tory Channel**	**23.88**	**169**	P	**P**	**17 53 23.0**	**+1.0**
QLP	**Quilpie**	**23.98**	**244**	P	**P**	**17 53 23.5**	**+0.4**
	comp=Z,398nm,0.7s,comp=Z,5μm						
QLP	**Quilpie**	**23.98**	**244**	P	**P**	**17 53 22.8**	**-0.3**
TUWZ	**Tuamarina**	**24.04**	**170**	P	**P**	**17 53 24.8**	**+1.4**
DSZ	**Denniston Nort**	**24.05**	**174**	P	**P**	**17 53 24.9**	**+1.3**
DSZ	**Denniston Nort**	**24.05**	**174**	P	**P**	**17 53 26.3**	**+2.7**
SNZO	**South Karori**	**24.06**	**168**		**P**	**17 53 23.9**	**+0.3**
BHW	**Baring Head**	**24.19**	**168**	P	**P**	**17 53 25.7**	**+1.0**
BHW				IAmb	IAmb	17 53 27.5	
	comp=Z,80nm,0.7s						
THZ	**Tophouse**	**24.20**	**172**		**P**	**17 53 26.0**	**+1.0**
THZ	**Tophouse**	**24.20**	**172**	P	**P**	**17 53 26.3**	**+1.4**
MSWZ	**Moikau Station**	**24.27**	**167**	P	**P**	**17 53 26.1**	**+0.6**
YNG	**Young**	**24.27**	**224**	P	**P**	**17 53 27.8**	**+2.2**
	comp=Z,58nm,1.6s						
CNB	**Canberra Magne**	**24.30**	**220**	P	**P**	**17 53 27.6**	**+1.6**
	comp=Z,105nm,1.0s,comp=Z,2μmcomp=Z,0.0nm						
CNB	**Canberra Magne**	**24.30**	**220**	P	**P**	**17 53 27.9**	**+2.0**
AUDAR	**Daramalan Coll**	**24.39**	**221**	P	**P**	**17 53 29.9**	**+3.1**
PLWZ	**Palliser**	**24.42**	**167**	P	**P**	**17 53 27.1**	**+0.2**
AUMHS	**Melrose High S**	**24.50**	**221**	P	**P**	**17 53 30.8**	**+3.1**
AUMTS	**Mt Stromlo**	**24.52**	**221**	P	**P**	**17 53 31.3**	**+3.3**
CAN	**Canberra**	**24.53**	**221**	P	**P**	**17 53 30.0**	**+2.0**
	comp=Z,45nm,1.3s,comp=Z,2μmcomp=Z,0.0nm						
CAN	**Canberra**	**24.53**	**221**	P	**P**	**17 53 31.2**	**+3.2**
CAN	**Canberra**	**24.53**	**221**	P	**P**	**17 53 27.5**	**-0.5**
CAN				IAmb	IAmb	17 53 58.7	
	comp=Z,81nm,1.2s						
CAN	**Canberra**	**24.53**	**221**	P	**P**	**17 53 27.5**	**-0.5**
CAN				pmax	pmax		
	comp=Z,81nm,1.2s						
COEN	**Coen**	**24.54**	**275**	P	**P**	**17 53 28.9**	**+0.7**
	comp=Z,28nm,1.0s,comp=Z,1μm						
COEN	**Coen**	**24.54**	**275**	P	**P**	**17 53 29.3**	**+1.1**
COEN	**Coen**	**24.54**	**275**	P	**P**	**17 53 27.1**	**-1.1**
COEN				IAmb	IAmb	17 53 55.1	
	comp=Z,133nm,1.9s						
CMSA	**Cobar Meteorol**	**24.68**	**232**	P	**P**	**17 53 30.1**	**+0.7**
	comp=Z,117nm,0.7s,comp=Z,2μmcomp=Z,0.0nm						
CMSA	**Cobar Meteorol**	**24.68**	**232**	P	**P**	**17 53 30.1**	**+0.7**
KHZ	**Kahutara**	**24.93**	**171**		**P**	**17 53 32.2**	**+0.7**
KHZ	**Kahutara**	**24.93**	**171**	P	**P**	**17 53 32.6**	**+1.0**
INZ	**Inchbonnie**	**24.99**	**175**	P	**P**	**17 53 33.1**	**+1.1**
INZ	**Inchbonnie**	**24.99**	**175**	P	**P**	**17 53 33.4**	**+1.4**
LTZ	**Lake Taylor**	**25.13**	**173**	P	**P**	**17 53 34.4**	**+1.1**
LTZ	**Lake Taylor**	**25.13**	**173**	P	**P**	**17 53 34.5**	**+1.1**
WVZ	**Waitaha Valley**	**25.28**	**176**	P	**P**	**17 53 37.1**	**+2.5**
GVZ	**Greta Valley S**	**25.40**	**172**	P	**P**	**17 53 36.6**	**+0.8**
GVZ	**Greta Valley S**	**25.40**	**172**	P	**P**	**17 53 36.6**	**+0.8**
MILA	**Mila**	**25.59**	**218**	P	**P**	**17 53 38.7**	**+1.0**
	comp=Z,13nm,1.5s						
OXZ	**Oxford**	**25.64**	**174**		**P**	**17 53 38.6**	**+0.7**
OXZ	**Oxford**	**25.64**	**174**	P	**P**	**17 53 39.0**	**+1.1**
FOZ	**Fox Glacier**	**25.69**	**178**	P	**P**	**17 53 39.0**	**+0.7**
FOZ	**Fox Glacier**	**25.69**	**178**	P	**P**	**17 53 41.1**	**+2.8**
MANU	**Manus Island**	**25.90**	**305**		**P**	**17 53 39.7**	**-0.9**
RPZ	**Rata Peaks**	**25.94**	**176**	P	**P**	**17 53 41.8**	**+1.1**
	comp=Z,35nm,0.7s,baz=4.6,slow=6.9,SNR=19						
RPZ				LR	LR	18 02 16.8	
	comp=Z,985nm,19.8s,baz=4.0,slow=32						
	comp=Z,35nm,0.7s						
RPZ	**Rata Peaks**	**25.94**	**176**	P	**P**	**17 53 41.0**	**+0.4**
RPZ	**Rata Peaks**	**25.94**	**176**	P	**P**	**17 53 42.3**	**+1.6**
MQZ	**McQueen's Vall**	**26.08**	**173**	IAmb	IAmb	17 53 44.5	
	comp=Z,44nm,0.7s						
MQZ	**McQueen's Vall**	**26.08**	**173**	P	**P**	**17 53 43.2**	**+1.3**
JCZ	**Jackson Bay**	**26.20**	**179**	P	**P**	**17 53 45.9**	**+2.8**
JCZ	**Jackson Bay**	**26.20**	**179**	P	**P**	**17 53 47.2**	**+4.1**
PATS	**Pohnpei**	**26.42**	**337**	P	**P**	**17 53 45.9**	**+0.7**
LBZ	**Lake Benmore**	**26.55**	**177**	IAmb	IAmb	17 54 13.7	
	comp=Z,157nm,1.9s						
LBZ	**Lake Benmore**	**26.55**	**177**	P	**P**	**17 53 48.2**	**+2.0**
TMZ	**Timaru**	**26.60**	**176**	P	**P**	**17 53 48.2**	**+1.6**
WKZ	**Wanaka**	**26.96**	**179**	P	**P**	**17 53 56.1**	**+6.3**
ODZ	**Otahua Downs**	**27.24**	**176**	P	**P**	**17 53 53.8**	**+1.6**
INKA	**Innaminka**	**27.28**	**244**	P	**P**	**17 53 52.7**	**-0.2**
QIS	**Mount Isa**	**27.30**	**260**	P	**P**	**17 53 54.0**	**+0.8**
	comp=Z,56nm,0.7s,comp=Z,1μmcomp=Z,0.0nm						
QIS	**Mount Isa**	**27.30**	**260**	P	**P**	**17 53 54.0**	**+0.8**
EAZ	**Earnscleugh**	**27.37**	**179**	P	**P**	**17 53 54.8**	**+1.4**
MLZ	**Mavora Lakes**	**27.49**	**180**	P	**P**	**17 53 54.0**	**-0.6**
MLZ				IAmb	IAmb	17 54 52.8	
	comp=Z,145nm,1.9s						
MLZ	**Mavora Lakes**	**27.49**	**180**	P	**P**	**17 53 57.3**	**+2.6**
DCZ	**Deep Cove**	**27.61**	**182**	P	**P**	**17 53 55.7**	**+0.1**
DCZ				IAmb	IAmb	17 54 31.9	
	comp=Z,62nm,1.2s						
STKA	**Stephens Creek**	**27.97**	**235**	P	**P**	**17 53 59.9**	**+0.9**
	comp=Z,24nm,0.6s,baz=58,slow=7.9,SNR=31						
STKA				LR	LR	18 04 03.7	
	comp=Z,1μm,19.0s,baz=74,slow=34						
	comp=Z,24nm,0.6s						
STKA	**Stephens Creek**	**27.97**	**235**	P	**P**	**17 53 59.3**	**+0.3**
	comp=Z,305nm,1.7s,comp=Z,5μm						
STKA	**Stephens Creek**	**27.97**	**235**	P	**P**	**17 54 00.2**	**+1.2**
STKA	**Stephens Creek**	**27.97**	**235**	P	**P**	**17 53 58.5**	**-0.5**
STKA	**Stephens Creek**	**27.97**	**235**	P	**P**	**17 53 58.5**	**-0.5**
STKA				pmax	pmax		
	comp=Z,510nm,1.4s						
WHZ	**Wether Hill Ro**	**28.02**	**181**	P	**P**	**17 53 58.9**	**-0.3**
WHZ				IAmb	IAmb	17 54 52.3	
	comp=Z,59nm,1.2s						
WHZ	**Wether Hill Ro**	**28.02**	**181**	P	**P**	**17 54 00.1**	**+0.8**
TUZ	**Tuapeka**	**28.10**	**178**	P	**P**	**17 54 02.9**	**+3.0**
TOO	**Toolangi**	**28.14**	**221**	P	**P**	**17 54 00.9**	**+0.5**
	comp=Z,13nm,2.1s,comp=Z,540nm						
CTZ	**Chatham Island**	**28.80**	**157**	P	**P**	**17 54 05.5**	**-0.7**
CTZ				IAmb	IAmb	17 54 10.4	
	comp=Z,83nm,1.3s						
ARPS	**Mount Arapiles**	**30.07**	**226**	P	**P**	**17 54 19.4**	**+1.8**
	comp=Z,25nm,1.4s						
RAR	**Rarotonga**	**30.18**	**102**	P	**P**	**17 54 20.0**	**+1.4**
	comp=Z,23nm,1.0s,baz=260,slow=6.1,SNR=3.6						
	comp=Z,23nm,1.0s						
RAR	**Rarotonga**	**30.18**	**102**	P	**P**	**17 54 18.1**	**-0.6**
RAR	**Rarotonga**	**30.18**	**102**	P	**P**	**17 54 18.1**	**-0.6**
RAR				pmax	pmax		
	comp=Z,78nm,1.3s						
HTT	**Hallett**	**30.65**	**234**	P	**P**	**17 54 24.4**	**+1.5**
	comp=Z,18nm,0.9s						
HTT	**Hallett**	**30.65**	**234**	P	**P**	**17 54 24.3**	**+1.5**
TAU	**Tasmania Unive**	**30.77**	**211**	P	**P**	**17 54 23.4**	**-0.2**
TAU				IAmb	IAmb	17 54 51.6	
	comp=Z,59nm,1.2s						
TAU	**Tasmania Unive**	**30.77**	**211**	P	**P**	**17 54 23.4**	**-0.2**
TAU				pmax	pmax		
	comp=Z,59nm,1.2s						
AUMBR	**Murray Bridge**	**31.09**	**231**	P	**P**	**17 54 27.9**	**+1.4**
JAY	**Jayapura**	**31.11**	**296**	LR	LR	18 05 59.4	
	comp=Z,2μm,18.5s,baz=110,slow=34						
MGBR	**Mount Gambier**	**31.43**	**225**	P	**P**	**17 54 29.9**	**+0.4**
MGBR				IAmb	IAmb	17 54 54.1	
	comp=Z,43nm,1.1s						
AUMAR	**Marden Senior**	**31.46**	**231**	P	**P**	**17 54 32.5**	**+2.7**
GHSS	**Government Hou**	**31.50**	**231**	P	**P**	**17 54 33.5**	**+3.3**
GENI	**Genyem**	**31.53**	**295**	P	**P**	**17 54 31.4**	**+0.7**
WR8	**Warramunga Arr**	**32.10**	**261**	P	**P**	**17 54 34.6**	**-1.1**
	comp=Z,47nm,0.9s						
WRAB	**Tennant Creek**	**32.24**	**261**	P	**P**	**17 54 36.3**	**-0.6**
WRAB	**Tennant Creek**	**32.24**	**261**	P	**P**	**17 54 34.9**	**-2.0**

PSA00 IAmb IAmb 17 56 32.5
comp=Z,82nm,1.2s
MMRI Maumere 45.73 275 P **P** **17 56 29.0 -0.3**
MMRI Maumere 45.73 275 **P** **17 56 27.3 -2.0**
MMRI Maumere 45.73 275 P **P** **17 56 32.6 +3.3**
comp=Z,2µmcomp=Z,1µmcomp=Z,62nm,0.7s
PSAC1 Pilbara Seismi 45.75 257 P **P** **17 56 29.6 +0.2**
comp=Z,86nm,1.9s
MBWA Marble Bar 45.85 258 P **P** **17 56 29.8 -0.4**
comp=Z,112nm,1.1s
MBWA Marble Bar 45.85 258 P **P** **17 56 30.5 +0.3**
MBWA Marble Bar 45.85 258 P **P** **17 56 29.6 -0.6**
MBWA Marble Bar 45.85 258 P **P** **17 56 30.2 0.0**
MBWA pP **pP** **17 56 54.0 +0.4**
MEEK Meekatharra 46.67 250 P **P** **17 56 36.5 -0.1**
comp=Z,296nm,0.8s,comp=Z,3µm
MEEK Meekatharra 46.67 250 P **P** **17 56 36.4 -0.1**
MNI Manado 46.94 290 P **P** **17 56 39.5 +0.7**
comp=Z,3µmcomp=Z,73nm,0.8s
AUKUL Kulin High Sch 47.38 242 P **P** **17 56 42.1 +0.2**
KLBR Kellerberrin 47.62 243 P **P** **17 56 43.0 -0.8**
comp=Z,201nm,0.8s
KLBR Kellerberrin 47.62 243 P **P** **17 56 43.7 -0.1**
KKSI Kolaka, Sulawe 47.68 281 P **P** **17 56 45.3 +0.8**
comp=Z,3µmcomp=Z,1µmcomp=Z,59nm,0.7s
LUWI Luwuk 47.79 285 P **P** **17 56 43.3 -2.1**
LBFI Labuhan Bajo, 48.00 275 P **P** **17 56 48.1 +1.1**
WBSI Waikabubak, Su 48.16 273 P **P** **17 56 49.7 +1.4**
comp=Z,775nmcomp=Z,68nm,0.8s
NWAO Narrogin (SRO) 48.17 242 LR LR 18 15 59.5
comp=Z,2µm,18.1s,baz=69,slow=34
NWAO Narrogin (SRO) 48.17 242 P **P** **17 56 47.5 -0.6**
comp=Z,130nm,0.8s
NWAO Narrogin (SRO) 48.17 242 P **P** **17 56 47.9 -0.1**
NWAO Narrogin (SRO) 48.17 242 P **P** **17 56 47.2 -0.9**
NWAO Narrogin (SRO) 48.17 242 P **P** **17 56 47.2 -0.9**
NWAO pmax pmax
comp=Z,85nm,0.7s
NWAO Narrogin (SRO) 48.17 242 P **P** **17 56 47.5 -0.6**
NWAO x x 17 57 13.9
APSI Ampana 48.87 285 P **P** **17 56 54.7 +1.0**
comp=Z,1µmcomp=Z,74nm,1.3s
DAV Davao City (W) 48.96 297 LR LR 18 15 45.4
comp=Z,671nm,21.9s,baz=112,slow=34
MUN Mundaring 48.96 243 P **P** **17 56 54.9 +0.7**
comp=Z,64nm,0.8s
MUN Mundaring 48.96 243 P **P** **17 56 56.0 +1.9**
MORW Morawa 48.98 247 P **P** **17 56 53.3 -1.0**
comp=Z,63nm,1.4s
MORW Morawa 48.98 247 P **P** **17 56 54.4 +0.1**
MORW Morawa 48.98 247 P **P** **17 56 53.7 -0.6**
KAPI Kappang 49.18 279 P **P** **17 56 56.5 +0.5**
comp=Z,33nm,0.8s,baz=163,slow=6.4,SNR=8.1
comp=Z,33nm,0.8s
KAPI Kappang 49.18 279 P **P** **17 56 56.8 +0.8**
KAPI Kappang 49.18 279 P **P** **17 56 54.9 -1.1**
KAPI Kappang 49.18 279 *i* P **P** **17 56 55.8 -0.2**
KAPI pmax pmax
comp=Z,56nm,0.9s
KAPI Kappang 49.18 279 P **P** **17 56 57.3 +1.3**
comp=Z,28nm,0.9s
KAPI Kappang 49.18 279 P **P** **17 56 56.5 +0.5**
KAPI pP **pP** **17 57 20.8 +1.0**
KAPI sP **sP** **17 57 31.5 +0.5**
DBNI Kabupaten Domp 49.50 274 P **P** **17 56 58.4 -0.1**
comp=Z,1µmcomp=Z,85nm,0.8s
SPSI Sidrap Palu 49.51 280 P **P** **17 57 00.4 +1.8**
comp=Z,606nmcomp=Z,27nm,0.7s
PLAI Plampang 49.92 273 P **P** **17 57 02.8 +1.2**
PLAI Plampang 49.92 273 P **P** **17 57 01.4 -0.2**
comp=Z,916nmcomp=Z,52nm,0.8s
KEKH Kekaha 50.38 40 P **P** **17 57 06.7 +1.8**
TOLI2 Tolitoli 50.47 287 P **P** **17 57 06.3 +0.5**
TOLI2 Tolitoli 50.47 287 P **P** **17 57 04.4 -1.4**
PCI Palu 50.55 284 P **P** **17 57 08.8 +2.4**
TAOE Nuku Hiva Isla 50.73 87 *e*P **P** **17 57 03.3 -4.6**
comp=Z,414nm,23.5s
TAOE *e*LR LR 18 11 43.0
comp=Z,6µm,29.2s
GIRL Giralia 50.82 255 P **P** **17 57 08.2 -0.1**
MPSI Mapaga 50.97 285 P **P** **17 57 09.5 -0.1**
comp=Z,828nmcomp=Z,83nm,0.8s
JCJ Chichijima 51.35 330 LR LR 18 17 41.7
comp=Z,384nm,21.4s,baz=124,slow=34
JCJ Chichijima 51.35 330 P **P** **17 57 12.5 +0.4**
DRV Dumont d'Urvil 52.23 194 P **P** **17 57 18.4 +0.3**
DRV pP **pP** **17 57 42.9 +0.9**
DRV sP **sP** **17 57 53.8 +0.6**
IGBI Denpasar 52.42 272 P **P** **17 57 22.3 +1.9**
comp=Z,2µmcomp=Z,80nm,0.7s
JAGI Jajag, Banyuwa 53.46 273 P **P** **17 57 27.4 -0.6**
JAGI Jajag, Banyuwa 53.46 273 P **P** **17 57 25.8 -2.2**
JAGI Jajag, Banyuwa 53.46 273 P **P** **17 57 28.8 +0.8**
comp=Z,26nm,0.7s
BBKI Banjar Baru 54.31 279 P **P** **17 57 37.5 +3.3**
comp=Z,50nm,1.2s
SNJI Sawahan-Nganju 55.93 273 P **P** **17 57 48.6 +2.6**
TGY Tagaytay City 56.52 301 LR LR 18 17 21.2
comp=Z,460nm,20.6s,baz=314,slow=31
KKM Kota Kinabalu 56.67 290 P **P** **17 57 50.4 -0.9**
UGM Wanagama 57.07 272 P **P** **17 57 52.6 -1.4**
JHJ Hachijo jima 2 57.53 332 LR LR 18 18 53.8
comp=Z,282nm,21.9s,baz=78,slow=32
KPJI Karang Pucung 58.74 272 P **P** **17 58 06.6 +1.0**
comp=Z,45nm,0.7s
SBUM Sibu 58.86 284 P **P** **17 58 08.9 +2.5**
SBUM Sibu 58.86 284 P **P** **17 58 04.8 -1.6**
SBUM IAmb IAmb 17 58 47.7
comp=Z,23nm,1.7s
SBUM Sibu 58.86 284 P **P** **17 58 08.4 +2.0**
VNDA Vanda 59.84 182 P **P** **17 58 12.6 +0.4**
comp=Z,5.2nm,0.7s,baz=1.5,slow=7.1,SNR=34
VNDA LR LR 18 19 23.9
comp=Z,413nm,22.0s,baz=4.0,slow=31
comp=Z,5.2nm,0.7s
VNDA Vanda 59.84 182 P **P** **17 58 12.2 0.0**
VNDA Vanda 59.84 182 P **P** **17 58 12.2 0.0**
VNDA pmax pmax
comp=Z,46nm,1.9s
VNDA Vanda 59.84 182 P **P** **17 58 12.5 +0.3**
BBJI Bungbulang 59.93 272 P **P** **17 58 15.4 +1.5**
BBJI Bungbulang 59.93 272 P **P** **17 58 11.7 -2.2**
BBJI IAmb IAmb 17 58 18.2
comp=Z,17nm,0.8s
BBJI Bungbulang 59.93 272 P **P** **17 58 17.4 +3.5**
comp=Z,23nm,0.8s
SBA Scott Base 60.09 180 P **P** **17 58 14.9 +1.1**
SBA Scott Base 60.09 180 P **P** **17 58 15.0 +1.1**
SBA pmax pmax
comp=Z,61nm,1.3s
SBA Scott Base 60.09 180 P **P** **17 58 15.6 +1.7**
LEM Lembang 60.14 272 LR LR 18 25 38.8
comp=Z,471nm,19.0s,baz=103,slow=37
JMN Monobe 60.89 327 P **P** **17 58 21.0 +1.0**
DBJI Dramaga 61.04 272 P **P** **17 58 23.1 +1.7**
JSU Suzuyama 61.06 323 P **P** **17 58 20.8 -0.3**
MJAR Matsushiro Arr 61.10 332 P **P** **17 58 21.4 0.0**
comp=Z,6.1nm,1.0s,baz=157,slow=7.8,SNR=6.7
MJAR LR LR 18 20 15.8
comp=Z,349nm,20.9s,baz=131,slow=31
comp=Z,6.1nm,1.0s
MJAR Matsushiro Arr 61.10 332 P **P** **17 58 20.8 -0.5**
MJAR IAmb IAmb 17 59 20.0
comp=Z,34nm,1.8s
MJAR Matsushiro Arr 61.10 332 P **P** **17 58 20.8 -0.5**
MJAR pmax pmax
comp=Z,34nm,1.8s
MAJO Matsushiro 61.10 332 *i* P **P** **17 58 22.1 +0.8**
MAJO pmax pmax
comp=Z,100nm,3.8s
MJB9 Matsu-Tunnel 61.11 332 P **P** **17 58 20.9 -0.5**
MJB9 IAmb IAmb 17 58 48.5
comp=Z,22nm,1.0s
CASY Casey 61.13 203 P **P** **17 58 20.6 -0.4**
CASY IAmb IAmb 17 58 26.5
comp=Z,22nm,0.9s
NACB Ninganchiao 61.83 311 P **P** **17 58 25.6 -0.8**
TPUB Ta-pu 62.00 310 P **P** **17 58 26.6 -1.0**
JNU Nakatsue 62.02 325 LR LR 18 21 16.3
comp=Z,328nm,20.6s,baz=112,slow=32
CGJI Cibinong 62.03 272 P **P** **17 58 28.7 +0.7**
SSLB Suanglung 62.06 310 P **P** **17 58 26.6 -1.4**
CCD Concordia, Ant 62.13 192 P **P** **17 58 28.4 +0.2**
KASI Kota Agung 63.48 273 P **P** **17 58 39.9 +2.2**
comp=Z,40nm,0.7s

LWLI Liwa 64.05 273 P **P** **17 58 43.9 +2.4**
comp=Z,87nm,0.8s
MDSI Maura Dua 64.09 274 P **P** **17 58 42.8 +1.1**
comp=Z,555nmcomp=Z,25nm,0.6s
ASAJ Asahikawa 65.97 340 LR LR 18 23 21.4
comp=Z,659nm,22.0s,baz=167,slow=32
MYKOM Kota Tinggi 66.42 280 P **P** **17 58 59.1 +2.4**
MYKOM Kota Tinggi 66.42 280 P **P** **17 58 54.8 -1.9**
MYKOM IAmb IAmb 17 59 02.0
comp=Z,15nm,0.8s
MYKOM Kota Tinggi 66.42 280 P **P** **17 58 57.2 +0.5**
comp=Z,23nm,0.9s
SSE Sheshan 66.47 317 P **P** **17 58 56.8 +0.2**
SSE S **S** **18 07 36.5 -2.5**
SSE pmax pmax
comp=Z,8.0nm,1.5s
SSE pmax pmax
comp=Z,200nm,4.0s
SSE L L
comp=Z,310nm,18.9s
SSE L L
comp=Z,250nm,20.0s
KSRS Korea Array 66.86 326 P **P** **17 59 00.5 +1.5**
comp=Z,2.6nm,0.7s,baz=132,slow=5.7,SNR=8.6
KSRS LR LR 18 25 47.9
comp=Z,107nm,21.3s,baz=145,slow=34
QIZ Qiongzhong 68.16 300 P **P** **17 59 09.5 +1.9**
QIZ S **S** **18 08 01.5 +1.7**
QIZ SS **SS** **18 12 28.0 +3.1**
QIZ L L
comp=Z,600nm,27.1s
QIZ L L
comp=Z,610nm,19.8s
QIZ L L
comp=Z,1µm,29.9s
YSS Yuzhno-Sakhali 68.46 341 *e*P **P** **17 59 09.5 +0.7**
YSS *e**PP **pP** **17 59 36.7 +2.1**
YSS *e**SP **sP** **17 59 45.8 +0.1**
YSS *e*S **S** **18 08 01.8 -0.4**
YSS pmax pmax
comp=Z,30nm,1.1s
YSS pmax pmax
comp=Z,200nm,2.9s
BKNI Bangkinang 68.58 278 P **P** **17 59 12.8 +2.5**
BKNI Bangkinang 68.58 278 P **P** **17 59 08.0 -2.3**
BKNI Bangkinang 68.58 278 P **P** **17 59 12.8 +2.5**
comp=Z,1µmcomp=Z,136nm,1.3s
NJ2 Nanjing 68.61 316 *e*P **P** **17 59 12.0 +1.9**
NJ2 S **S** **18 08 11.5 +6.9**
NJ2 SS **SS** **18 12 29.5 -1.9**
NJ2 pmax pmax
comp=Z,43nm,0.9s
NJ2 L L
comp=Z,2µm,22.3s
NJ2 L L
comp=Z,2µm,21.8s
NJ2 L L
comp=Z,3µm,23.5s
PDSI Padang 68.72 276 P **P** **17 59 13.1 +1.8**
comp=Z,28nm,0.7s
USRK Ussuriysk Ar. 70.09 333 P **P** **17 59 18.4 -0.5**
comp=Z,1.5nm,0.6s,baz=136,slow=13,SNR=13
comp=Z,1.5nm,0.6s
MNSI Mandailing Nat 70.11 278 P **P** **17 59 21.0 +1.3**
comp=Z,75nm,0.7s
UBPT Khong Chiam 70.17 294 P **P** **17 59 20.9 +0.9**
PET Petropavlovsk 71.02 354 *e*P P 17 59 38.9 +15
PET *e*S **SKiKP** **18 08 54.8 -1.0**
DL2 Dalian 71.38 323 P **P** **17 59 26.5 -0.4**
DL2 pP **pP** **17 59 54.5 +1.7**
DL2 S **S** **18 08 34.5 -2.2**
DL2 pmax pmax
comp=Z,51nm,0.9s
DL2 pmax pmax
comp=Z,220nm,6.7s
DL2 L L
comp=Z,490nm,16.6s
DL2 L L
comp=Z,660nm,18.5s
DL2 L L
comp=Z,1µm,26.3s
PSI Prapat 71.39 279 P **P** **17 59 28.0 +0.3**
MDJ Mudanjiang 71.47 332 P **P** **17 59 29.7 +2.4**
MDJ Mudanjiang 71.47 332 IAmb IAmb 17 59 34.2
comp=Z,19nm,0.9s
MDJ Mudanjiang 71.47 332 P **P** **17 59 27.0 -0.3**
MDJ PcP **pP** **17 59 52.3 -1.2**
MDJ S **S** **18 08 37.8 +0.2**
MDJ ScS **ScS** **18 09 23.3 +0.6**
MDJ pmax pmax
comp=Z,14nm,1.8s
MDJ L L
comp=Z,600nm,14.5s
MDJ L L
comp=Z,560nm,22.0s
MDJ L L
comp=Z,770nm,22.2s
TSI Tuntungan 71.96 280 P **P** **17 59 31.8 +0.9**
comp=Z,81nm,0.9s
GSI Gunungsitoli 72.17 277 P **P** **17 59 32.2 0.0**
GSI Gunungsitoli 72.17 277 P **P** **17 59 30.9 -1.3**
GSI Gunungsitoli 72.17 277 P **P** **17 59 33.6 +1.4**
comp=Z,82nm,0.8s
QSPA South Pole Qui 72.25 180 P **P** **17 59 32.0 0.0**
comp=Z,42nm,0.9s,baz=13,slow=1.9,SNR=91
QSPA LR LR 18 27 04.1
comp=Z,350nm,19.7s,baz=28,slow=32
comp=Z,42nm,0.9s
QSPA South Pole Qui 72.25 180 P **P** **17 59 31.8 -0.2**
QSPA South Pole Qui 72.25 180 P **P** **17 59 32.4 +0.4**
TIA Tai'an 72.33 319 P **P** **17 59 36.0 +3.3**
TIA S **S** **18 08 51.3 +3.5**
TIA pmax pmax
comp=Z,140nm,6.9s
TIA L L
comp=Z,910nm,21.1s
TIA L L
comp=Z,820nm,25.0s
TIA L L
comp=Z,1µm,25.0s
KCSI Kotacane, Aceh 72.71 280 P **P** **17 59 35.7 +0.3**
comp=Z,19nm,0.8s
CN2 Changchun 72.81 329 *e*P **P** **17 59 36.8 +1.5**
CN2 SS SS 18 13 38.0 +2.6
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 pmax pmax
comp=Z,100nm,5.0s
CN2 L L
comp=Z,500nm,18.6s
CN2 L L
comp=Z,600nm,18.6s
CN2 L L
comp=Z,600nm,19.0s
BNX BinXian 73.33 331 ⇓P **P** **17 59 36.3 -2.0**
BNX PcP **PcP** **17 59 52.5 -1.6**
BNX pP **pP** **18 00 05.8 +1.2**
BNX sP **sP** **18 00 15.8 +0.1**
BNX S **S** **18 08 51.5 -7.2**
BNX pmax pmax
comp=Z,8.0nm,1.2s
BNX pmax pmax
comp=Z,230nm,12.0s
BNX L L
comp=Z,700nm,18.9s
BNX L L
comp=Z,720nm,18.4s
BNX L L
comp=Z,930nm,24.7s
GRNR Gornyy 73.82 340 ⇑*i*P **P** **17 59 42.9 +1.8**
GRNR pmax pmax
comp=Z,8.0nm,1.0s
ENH Enshi 74.13 310 P **P** **17 59 44.3 +0.9**
KLR Kul'dur 74.23 336 LR LR 18 29 12.0
comp=Z,522nm,21.1s,baz=148,slow=33
KLR Kul'dur 74.23 336 *e*P **P** **17 59 43.7 +0.2**
KLR pmax pmax
comp=Z,6.0nm,1.7s
MLSI Meulaboh, Aceh 74.25 280 P P 17 59 50.0 +5.6
GYA Guiyang 74.33 305 P **P** **17 59 46.0 +1.2**
GYA pP pP 18 00 12.0 +1.3
GYA S **S** **18 09 11.5 +0.5**
GYA pmax pmax
comp=Z,9.0nm,0.8s
GYA pmax pmax
comp=Z,260nm,4.2s

GYA L L
comp=Z,690nm,23.6s
LYN LuoYang 74.38 315 P **P** **17 59 46.5 +1.8**
LYN pP pP 18 00 11.5 +0.5
LYN S **S** **18 09 11.5 +0.5**
LYN SKS **SKSac** **18 09 40.3 -3.0**
LYN SS **SS** **18 13 57.5 -2.3**
LYN pmax pmax
comp=Z,39nm,0.9s
LYN pmax pmax
comp=Z,360nm,4.7s
LYN L L
comp=Z,1µm,26.1s
LYN L L
comp=Z,840nm,23.5s
LYN L L
comp=Z,2µm,25.5s
HNS HongShan 74.59 318 ⇑P **P** **17 59 48.0 +2.2**
HNS pP **pP** **18 00 10.3 -1.7**
HNS sP **sP** **18 00 25.8 +2.8**
HNS S **S** **18 09 16.0 +2.9**
HNS sS **sS** **18 09 57.8 +1.2**
HNS pmax pmax
comp=Z,17nm,1.0s
HNS L L
comp=Z,550nm,16.9s
HNS L L
comp=Z,410nm,19.4s
BJI2 Beijing 75.30 321 P **P** **17 59 51.0 +1.1**
BJI2 PcP **PcP** **18 00 04.5 +1.8**
BJI2 pP **pP** **18 00 19.5 +3.5**
BJI2 sP **sP** **18 00 32.0 +4.9**
BJI2 S **S** **18 09 21.8 +0.8**
BJI2 SS **SS** **18 14 15.5 +2.0**
BJI2 pmax pmax
comp=Z,9.0nm,1.3s
BJI2 pmax pmax
comp=Z,91nm,8.3s
BJI2 L L
comp=Z,280nm,19.5s
BJI2 L L
comp=Z,230nm,24.4s
BJI2 L L
comp=Z,840nm,28.6s
BJT Baijiatuau 75.30 321 P **P** **17 59 51.8 +1.9**
BJT Baijiatuau 75.30 321 P **P** **17 59 49.3 -0.6**
BJT IAmb IAmb 17 59 55.9
comp=Z,42nm,1.5s
BJT Baijiatuau 75.30 321 P **P** **17 59 49.3 -0.6**
BJT pmax pmax
comp=Z,42nm,1.5s
RPN Rapa Nui 75.42 114 LR LR 18 27 52.1
comp=Z,281nm,18.2s,baz=266,slow=31
BSI Banda Aceh 75.70 281 P **P** **17 59 53.5 +0.7**
comp=Z,837nmcomp=Z,60nm,1.3s
XAN Xi'an 76.54 313 ⇑P **P** **17 59 57.3 +0.1**
XAN S **S** **18 09 37.0 +2.0**
XAN pmax pmax
comp=Z,7.0nm,0.8s
XAN pmax pmax
comp=Z,300nm,5.7s
XAN L L
comp=Z,750nm,21.3s
XAN L L
comp=Z,490nm,22.7s
XAN L L
comp=Z,2µm,24.0s
HEH HeiHe 76.77 334 *e*P **P** **18 00 01.8 +3.8**
HEH pmax pmax
comp=Z,12nm,0.8s
KMI2 Kunming 76.83 302 P **P** **18 00 01.8 +2.6**
KMI2 pP pP 18 00 27.0 +1.7
KMI2 sP sP 18 00 36.3 0.0
KMI2 S **S** **18 09 40.5 +1.6**
KMI2 pmax pmax
comp=Z,14nm,1.4s
KMI2 pmax pmax
comp=Z,180nm,4.1s
KMI2 L L
comp=Z,380nm,21.9s
KMI2 L L
comp=Z,400nm,22.3s
KMI2 L L
comp=Z,580nm,23.2s
CMAR Chiang Mai Arr 77.17 294 P **P** **18 00 01.4 +0.5**
comp=Z,5.2nm,0.8s,baz=132,slow=4.2,SNR=38
comp=Z,5.2nm,0.8s
CMAR Chiang Mai Arr 77.17 294 P **P** **17 59 59.8 -1.2**
CHTO Chiang Mai 77.31 295 P **P** **18 00 02.3 +0.5**
CHTO Chiang Mai 77.31 295 P **P** **18 00 01.3 -0.5**
CHTO Chiang Mai 77.31 295 P **P** **18 00 01.3 -0.5**
CHTO pmax pmax
comp=Z,13nm,1.0s
CHTO Chiang Mai 77.31 295 P **P** **18 00 03.7 +1.9**
CHTO Chiang Mai 77.31 295 P **P** **18 00 02.0 +0.3**
XLT XiLinHaoTe 77.80 324 *e*P **P** **18 00 04.5 +0.5**
XLT PcP **PcP** **18 00 08.8 -4.8**
XLT S **S** **18 09 48.5 +0.1**
XLT ScS **ScS** **18 10 13.3 -0.6**
XLT SS **SS** **18 14 46.3 -5.1**
XLT pmax pmax
comp=Z,8.0nm,1.5s
XLT pmax pmax
comp=Z,170nm,5.2s
XLT L L
comp=Z,430nm,22.2s
XLT L L
comp=Z,710nm,22.8s
PZH PanZhiHua 78.25 303 P **P** **18 00 08.5 +1.6**
PZH pP **pP** **18 00 31.0 -2.1**
PZH S **S** **18 09 52.3 -1.6**
PZH pmax pmax
comp=Z,10.0nm,1.1s
PZH pmax pmax
comp=Z,100nm,5.7s
PZH L L
comp=Z,770nm,23.6s
PZH L L
comp=Z,1µm,23.7s
PZH L L
comp=Z,420nm,24.1s
MA2 Magadan 78.42 351 LR LR 18 31 00.3
comp=Z,544nm,20.3s,baz=134,slow=33
MA2 Magadan 78.42 351 P **P** **18 00 10.2 +3.2**
MA2 Magadan 78.42 351 P **P** **18 00 06.5 -0.4**
MA2 Magadan 78.42 351 *i* P **P** **18 00 06.4 -0.6**
MA2 pmax pmax
comp=Z,49nm,1.0s
HHC Hu-ho-hao-te 78.60 320 *e*P **P** **18 00 11.0 +2.5**
HHC S **S** **18 09 59.5 +2.4**
HHC pmax pmax
comp=Z,15nm,0.5s
HHC pmax pmax
comp=Z,99nm,3.8s
HHC L L
comp=Z,270nm,21.6s
HHC L L
comp=Z,480nm,21.2s
HHC L L
comp=Z,1µm,21.0s
CD2 Chengdu 78.72 308 P **P** **18 00 11.3 +2.0**
CD2 pP pwP 18 00 37.0 -0.7
CD2 S **S** **18 09 59.3 +0.7**
CD2 SS **SS** **18 15 09.5 +4.0**
CD2 pmax pmax
comp=Z,20nm,1.0s
CD2 pmax pmax
comp=Z,290nm,5.9s
CD2 L L
comp=Z,720nm,18.4s
CD2 L L
comp=Z,1µm,21.0s
CD2 L L
comp=Z,2µm,20.3s
MAW Mawson 79.46 202 P **P** **18 00 13.6 +0.9**
comp=Z,17nm,0.9s,baz=124,slow=4.9,SNR=23
MAW LR LR 18 31 51.0
comp=Z,617nm,19.1s,baz=98,slow=33
comp=Z,17nm,0.9s
MAW Mawson 79.46 202 P **P** **18 00 14.9 +2.2**
comp=Z,6.9nm,1.6s
MAW Mawson 79.46 202 P **P** **18 00 12.4 -0.3**
MAW Mawson 79.46 202 P **P** **18 00 12.4 -0.3**
MAW pmax pmax
comp=Z,26nm,1.8s
ZEA Zeya 79.52 337 *e*P **P** **18 00 14.5 +1.4**

ZEA e 18 00 38.4
ZEA eS **S** **18 10 10.0 +4.0**
ZEA pmax pmax
comp=Z,10.0nm,0.9s
ZEA smax smax
comp=E,200nm,13.1s
ZEA smax smax
comp=N,200nm,14.6s
BTO2 Baotou 79.59 319 eP **P** **18 00 13.8 -0.2**
BTO2 S **S** **18 10 00.5 -7.1**
BTO2 pmax pmax
comp=N,9.0nm,0.6s
BTO2 pmax pmax
comp=N,300nm,4.3s
BTO2 L L
comp=N,450nm,17.7s
BTO2 L L
comp=N,770nm,19.5s
BTO2 L L
comp=N,1µm,19.4s
TNCH TengChong 80.23 300 P **P** **18 00 19.3 +1.5**
TNCH pP pP 18 00 45.0 +0.9
TNCH S **S** **18 10 13.8 -1.3**
TNCH pmax pmax
comp=N,13nm,1.2s
TNCH pmax pmax
comp=N,160nm,3.6s
TNCH L L
comp=N,340nm,17.0s
TNCH L L
comp=N,270nm,21.8s
TNCH L L
comp=N,880nm,23.6s
LZH Lanzhou 81.16 312 eP P 18 00 29.5 +7.0
LZH pP pP 18 00 50.0 +0.9
LZH S **S** **18 10 28.3 +4.0**
LZH Lanzhou 81.16 312 SS SS 18 15 45.3 +3.2
LZH pmax pmax
comp=Z,25nm,1.5s
LZH LR LR
comp=N,460nm,16.8s
LZH LR LR
comp=E,310nm,16.1s
LZH LR LR
comp=Z,740nm,17.9s
OHAK Old Harbor 81.28 20 P **P** **18 00 22.7 +0.3**
OHAK Old Harbor 81.28 20 IAmb IAmb 18 00 22.9
comp=Z,34nm,1.3s
SEY Seymchan 81.44 353 LR LR 18 33 02.5
comp=Z,642nm,19.8s,baz=152,slow=33
SEY Seymchan 81.44 353 ceP **P** **18 00 23.4 +0.3**
SEY pmax pmax
comp=Z,28nm,0.8s
ACHA Angle Creek He 81.44 18 P **P** **18 00 23.5 +0.1**
KDAK Kodiak Island 81.95 20 LR LR 18 29 26.2
comp=Z,338nm,21.3s,baz=207,slow=30
P18K Big Mountain, 82.44 18 IAmb IAmb 18 00 33.2
comp=Z,28nm,0.9s
GAMB Gambell 82.77 9 P **P** **18 00 29.8 -0.3**
L16K Owhat River 83.27 15 IAmb IAmb 18 03 11.2
comp=Z,45nm,1.7s
O19K Port Alsworth 83.37 18 P **P** **18 00 32.4 -0.8**
O19K IAmb IAmb 18 00 38.4
comp=Z,36nm,1.0s
MORE Moreh 83.42 298 IAmb IAmb 18 00 39.4
comp=Z,14nm,0.9s
ILSW Iliamna Southw 83.54 18 P **P** **18 00 33.3 -1.0**
BELA Belgrano 2 83.60 175 **P** **18 00 33.2 -1.2**
BELA IAmb IAmb 18 00 37.8
comp=Z,31nm,0.9s
N19K Bonanza Creek 83.82 17 IAmb IAmb 18 00 40.0
comp=Z,13nm,0.8s
CIT Chita 84.24 329 eP **P** **18 00 42.0 +4.0**
CIT e 18 01 03.4
CIT e 18 01 17.0
CIT e 18 03 51.6
CIT pmax pmax
comp=Z,58nm,1.5s
J16K Anvik River 84.37 14 IAmb IAmb 18 00 45.0
comp=Z,20nm,1.1s
L18K Granite Mounta 84.39 16 IAmb IAmb 18 00 44.4
comp=Z,28nm,1.0s
K17K Iditarod 84.41 15 IAmb IAmb 18 00 45.0
comp=Z,36nm,1.3s
ANM Nome 84.54 11 IAmb IAmb 18 00 41.9
comp=Z,30nm,1.7s
M19K Big River Lodg 84.74 17 IAmb IAmb 18 00 45.7
comp=Z,18nm,1.1s
SPU Mount Spurr 84.83 18 P **P** **18 00 39.7 -1.0**
SPU IAmb IAmb 18 02 29.9
comp=Z,39nm,1.9s
TNA Tin City 85.02 10 P **P** **18 00 41.0 -0.5**
M20K Styx River 85.08 17 IAmb IAmb 18 02 51.7
comp=Z,37nm,1.8s
ULN Ulaanbaatar 85.22 324 P **P** **18 00 42.4 -0.8**
ULN IAmb IAmb 18 01 12.2
comp=Z,30nm,1.1s
ULN Ulaanbaatar 85.22 324 ceP **P** **18 00 43.0 -0.2**
ULN pmax pmax
comp=Z,20nm,1.7s
ULN Ulaanbaatar 85.22 324 P **P** **18 00 44.6 +1.4**
comp=Z,114nm,1.3s
ULN Ulaanbaatar 85.22 324 P **P** **18 00 43.6 +0.4**
ULN pP **pP** **18 01 09.6 -0.5**
ULN sP **sP** **18 01 20.0 -1.2**
YAK Yakutsk 85.26 343 LR LR 18 34 41.3
comp=Z,387nm,22.0s,baz=135,slow=33
YAK Yakutsk 85.26 343 P **P** **18 00 41.8 -0.9**
YAK Yakutsk 85.26 343 eP **P** **18 00 42.8 +0.1**
YAK e 18 03 55.9
YAK eS **SKSac** **18 11 00.7 +3.0**
YAK eSS **SS** **18 16 49.5 +8.2**
YAK eSSS SSS 18 20 08.7
YAK pmax pmax
comp=Z,27nm,0.9s
YAK pmax pmax
comp=N,9.0nm,1.1s
YAK pmax pmax
comp=E,3.0nm,1.0s
YAK pmax pmax
comp=Z,192nm,4.1s
YAK pmax pmax
comp=E,213nm,4.2s
YAK pmax pmax
comp=N,237nm,4.8s
YAK smax smax
comp=E,76nm,4.3s
YAK smax smax
comp=N,61nm,3.0s
YAK Yakutsk 85.26 343 P **P** **18 00 42.0 -0.7**
YAK sP **sP** **18 01 20.1 -0.6**
KCPM Cahto Peak 85.31 46 P **P** **18 00 43.7 0.0**
KCPM IAmb IAmb 18 00 48.8
comp=Z,20nm,0.8s
J18K Innoko River 85.44 15 IAmb IAmb 18 00 49.5
comp=Z,22nm,1.1s
KMRM Mail Ridge 85.47 45 IAmb IAmb 18 00 49.3
comp=Z,27nm,0.9s
SONM Songino Array 85.58 323 P **P** **18 00 44.9 0.0**
comp=Z,4.6nm,1.0s,baz=153,slow=6.6,SNR=16
SONM LR LR 18 38 18.1
comp=Z,240nm,21.1s,baz=133,slow=35
comp=Z,4.6nm,1.0s
SONM Songino Array 85.58 323 **P** **18 00 42.9 -2.0**
SONM IAmb IAmb 18 01 13.8
comp=Z,30nm,1.2s
SONM Songino Array 85.58 323 P **P** **18 00 42.9 -2.0**
SONM pmax pmax
comp=Z,30nm,1.2s
BILL Bilibino 85.60 359 P **P** **18 00 43.7 -0.6**
BILL Bilibino 85.60 359 ceP **P** **18 00 44.6 +0.3**
BILL pmax pmax
comp=Z,30nm,1.3s
BILL Bilibino 85.60 359 P **P** **18 00 42.2 -2.2**
GTA2 Gaotai 85.62 314 P **P** **18 00 46.5 +1.2**
GTA2 pP pP 18 01 11.3 -0.7
GTA2 SKS **SKSac** **18 11 00.8 -0.6**
GTA2 S **ScS** **18 11 15.5 -2.8**
GTA2 SS **SS** **18 16 50.8 +2.9**
GTA2 pmax pmax
comp=Z,12nm,1.5s
GTA2 L L
comp=Z,450nm,24.1s
GTA2 L L
comp=Z,820nm,22.3s
GTA2 L L
comp=Z,1µm,23.7s
KHMM Horse Mountain 85.76 45 IAmb IAmb 18 00 51.3
comp=Z,21nm,1.0s
G16K Koyuk River 85.86 12 IAmb IAmb 18 00 51.4
comp=Z,16nm,0.9s
SHL Shillong 85.96 298 IAmb IAmb 18 00 49.4
comp=Z,13nm,0.9s
H17K Granite Mounta 85.96 13 IAmb IAmb 18 00 51.6
comp=Z,15nm,0.9s
PMR Palmer 86.03 19 P **P** **18 00 50.2 +3.6**
O02D Mt. Diablo Mer 86.07 46 IAmb IAmb 18 00 53.0
comp=Z,26nm,0.9s
J19K Poorman 86.15 15 IAmb IAmb 18 00 50.5
comp=Z,23nm,1.6s
SUTB Sutter Butte 86.34 47 IAmb IAmb 18 00 53.2
comp=Z,20nm,0.8s
N02D Trinity Center 86.49 45 IAmb IAmb 18 00 54.9
comp=Z,18nm,1.1s
AFDM Forest Hills D 86.78 47 P **P** **18 00 49.9 -1.0**
AFDM IAmb IAmb 18 00 57.1
comp=Z,15nm,1.0s
O03E Paynes Creek 86.80 46 P **P** **18 00 50.2 -0.8**
O03E IAmb IAmb 18 01 21.9
comp=Z,17nm,1.1s
CMB Columbia Colle 86.81 48 P **P** **18 00 50.7 -0.4**
CMB IAmb IAmb 18 00 55.8
comp=Z,13nm,0.8s
CMB Columbia Colle 86.81 48 P **P** **18 00 50.7 -0.4**
CMB pmax pmax
comp=Z,13nm,0.9s
VES Vestal, Richgr 86.83 51 IAmb IAmb 18 00 56.4
comp=Z,11nm,0.9s
YBH Yreka Blue Hor 86.83 44 IAmb IAmb 18 01 24.8
comp=Z,27nm,1.4s
KTH Kantishna Hill 87.03 17 IAmb IAmb 18 02 38.3
comp=Z,43nm,1.8s
TPO Tropico Hills 87.08 52 P **P** **18 00 52.0 -0.5**
TPO IAmb IAmb 18 00 58.5
comp=Z,22nm,1.1s
TRF Thorofare Moun 87.12 17 **P** **18 00 51.0 -1.1**
TRF IAmb IAmb 18 00 56.2
comp=Z,12nm,0.9s
ISA Isabella, Lake 87.21 51 IAmb IAmb 18 00 59.0
comp=Z,21nm,1.2s
H19K Roundabout Mou 87.23 14 IAmb IAmb 18 01 00.5
comp=Z,22nm,1.4s
DPP Dos Picos Cty 87.31 54 P **P** **18 00 52.9 -0.7**
L04D Klamath Falls 87.32 44 IAmb IAmb 18 01 29.6
comp=Z,28nm,1.2s
ELIB Princess Elisa 87.41 190 dP **P** **18 00 53.9 +0.3**
BPAW Bear Paw Mtn. 87.44 17 IAmb IAmb 18 02 24.1
comp=Z,9.2nm,0.7s
RND Reindeer 87.50 18 IAmb IAmb 18 00 59.6
comp=Z,13nm,1.0s
MDPB Devils Postpil 87.58 49 IAmb IAmb 18 00 59.9
comp=Z,12nm,1.0s
MPK Martis Peak 87.60 47 IAmb IAmb 18 01 28.9
comp=Z,26nm,1.2s
G19K Purcell Mounta 87.61 13 P **P** **18 00 54.8 +0.6**
G19K pP **pP** **18 01 21.6 +0.3**
BEKR Beckworth 87.61 47 IAmb IAmb 18 00 59.3
comp=Z,12nm,1.0s
GOMU GeErMu 87.74 309 P **P** **18 00 58.3 +2.3**
GOMU pmax pmax
comp=Z,1.0nm,0.4s
GOMU L L
comp=Z,290nm,21.0s
GOMU L L
comp=Z,550nm,22.0s
GOMU L L
comp=Z,62µm,20.2s
PNTR Pine Nut 87.81 48 IAmb IAmb 18 01 02.7
comp=Z,17nm,1.1s
PFO Pinyon Flats O 87.92 54 LR LR 18 33 36.2
comp=Z,673nm,19.1s,baz=242,slow=31
CLC China Lake 87.92 51 IAmb IAmb 18 01 01.0
comp=Z,14nm,1.1s
CCCA Chr Cany lake 87.98 52 IAmb IAmb 18 01 03.5
comp=Z,27nm,1.4s
LSA Lhasa 88.08 302 P **P** **18 00 56.3 -1.6**
LSA pmax pmax
comp=Z,3.0nm,1.2s
LSA L L
comp=Z,250nm,17.9s
LSA L L
comp=Z,360nm,19.2s
LSA L L
comp=Z,650nm,11.0s
PAHR Pah Rah Range 88.22 47 IAmb IAmb 18 01 05.0
comp=Z,16nm,1.1s
LHV Little Huntoon 88.24 49 IAmb IAmb 18 01 32.6
comp=Z,17nm,1.2s
GSC Goldstone, Bar 88.31 52 IAmb IAmb 18 01 02.8
comp=Z,17nm,1.5s
NVAR Mina Array Bea 88.46 49 P **P** **18 00 58.8 -0.4**
comp=Z,5.4nm,1.0s,baz=227,slow=7.9,SNR=13
NVAR LR LR 18 32 14.4
comp=Z,479nm,21.2s,baz=254,slow=30
comp=Z,5.4nm,1.0s
NVAR Mina Array Bea 88.46 49 P **P** **18 00 58.7 -0.4**
NVAR pP **pP** **18 01 25.2 -0.9**
J05D Fort Rock, OR 88.50 43 IAmb IAmb 18 01 04.3
comp=Z,14nm,0.9s
WRH Wood River Hil 88.53 17 IAmb IAmb 18 01 03.0
comp=Z,32nm,1.8s
PMSA Palmer Station 88.54 160 LR LR 18 35 13.9
comp=Z,318nm,21.1s,baz=262,slow=32
GRAC Grapevine Rang 88.56 50 IAmb IAmb 18 01 05.5
comp=Z,11nm,0.8s
NV11 Mina Array Sit 88.57 49 P **P** **18 00 59.1 -0.5**
NV11 IAmb IAmb 18 01 06.1
comp=Z,18nm,1.3s
NV11 pP **pP** **18 01 25.8 -0.9**
ZAK Zakamensk 88.66 324 eP **P** **18 00 59.7 +0.1**
ZAK pmax pmax
comp=Z,13nm,1.9s
E19K Redstone River 88.69 13 IAmb IAmb 18 01 06.5
comp=Z,8.2nm,0.8s
FURC Furnace Creek, 88.73 51 IAmb IAmb 18 01 04.7
comp=Z,8.7nm,0.9s
COLA College 88.90 17 i P **P** **18 00 58.5 -1.8**
COLA pmax pmax
comp=Z,14nm,1.5s
PINE Pine Mountain 88.92 43 IAmb IAmb 18 01 48.3
comp=Z,29nm,1.5s
RIDG Independent Ri 88.95 19 IAmb IAmb 18 01 57.2
comp=Z,32nm,1.6s
C18K Utukok River 88.95 11 P **P** **18 01 00.3 -0.3**
ILAR Eielson Array 89.10 18 P **P** **18 00 59.3 -2.0**
comp=Z,2.0nm,0.7s,baz=238,slow=5.6,SNR=14
ILAR LR LR 18 40 10.8
comp=Z,239nm,18.1s,baz=217,slow=35
comp=Z,2.0nm,0.7s
ILAR Eielson Array 89.10 18 P **P** **18 00 58.9 -2.4**
TLY Talaya 89.11 326 LR LR 18 36 41.6
comp=Z,293nm,21.9s,baz=118,slow=33
TLY Talaya 89.11 326 i P **P** **18 01 01.6 0.0**
TLY pmax pmax
comp=Z,6.0nm,0.7s
IRM Iron Mountain 89.14 54 P **P** **18 01 00.7 -1.5**
IRM IAmb IAmb 18 01 06.0
comp=Z,25nm,1.6s
TPNV Topopah Spring 89.37 51 P **P** **18 01 03.0 -0.4**
TPNV IAmb IAmb 18 01 09.2
comp=Z,13nm,1.1s
TPNV Topopah Spring 89.37 51 P **P** **18 01 03.0 -0.4**
TPNV pmax pmax
comp=Z,13nm,1.2s
SCRK Sand Creek 89.39 19 IAmb IAmb 18 01 41.9
comp=Z,16nm,1.5s
J25K Salcha River, 89.43 18 IAmb IAmb 18 02 06.3
comp=Z,26nm,1.9s
GNW Green Mountain 89.43 39 IAmb IAmb 18 01 08.2
comp=Z,16nm,1.0s
LPIG La Paz 89.53 65 LR LR 18 35 17.8
comp=Z,577nm,18.1s,baz=228,slow=32
C19K Lookout Ridge 89.64 11 IAmb IAmb 18 02 06.5
comp=Z,21nm,1.9s
113A Mohawk Valley, 89.69 55 IAmb IAmb 18 01 09.4
comp=Z,16nm,1.5s
D05A Enumclaw 89.77 40 **P** **18 01 03.0 -1.8**
D05A pP **pP** **18 01 31.1 -0.5**
WVOR Wild Horse Val 89.87 45 P **P** **18 01 04.6 -1.0**
WVOR IAmb IAmb 18 01 10.1
comp=Z,14nm,1.1s
WVOR Wild Horse Val 89.87 45 P **P** **18 01 04.6 -1.0**
WVOR pmax pmax
comp=Z,14nm,1.1s
D20K Etivluk River 89.87 12 IAmb IAmb 18 01 11.7
comp=Z,12nm,1.1s
TROLL Troll, Antarti 89.91 184 P **P** **18 01 05.5 +0.2**
V12A Nelson 89.95 52 IAmb IAmb 18 01 08.8
comp=Z,22nm,1.8s
PALK Pallekele 90.00 278 P **P** **18 01 05.4 -1.3**
comp=Z,6.7nm,0.9s,baz=116,slow=3.5,SNR=5.1
PALK LR LR 18 44 45.8
comp=Z,299nm,18.1s,baz=110,slow=38
comp=Z,6.7nm,0.9s
PALK Pallekele 90.00 278 IAmb IAmb 18 01 13.4
comp=Z,11nm,0.9s
S11A Rachel 90.00 50 IAmb IAmb 18 01 14.7
comp=Z,12nm,1.0s
SHPR Sheep Range 90.01 52 P **P** **18 01 05.0 -1.4**
214A Organ Pipe Nat 90.16 56 IAmb IAmb 18 01 11.9
comp=Z,23nm,1.6s
NVL N'lazarevskaya 90.18 188 eP **P** **18 01 03.7 -2.7**
NVL e 18 04 38.7
NVL ePPP PPP 18 06 36.5
NVL eS **SKSac** **18 11 24.6 -3.1**
NVL ePS **PS** **18 13 10.0 -0.7**
NVL eSS **SS** **18 17 52.3 +1.1**
NVL eSSS SSS 18 21 29.4
NVL pmax pmax
comp=Z,33nm,0.9s
F07A Phinny Hill Vi 90.48 42 IAmb IAmb 18 01 12.4
comp=Z,9.6nm,0.9s
MXC Moxie City 90.54 41 IAmb IAmb 18 01 13.1
comp=Z,9.1nm,1.0s
SNAA Sanae 90.56 183 P **P** **18 01 08.1 -0.2**
comp=Z,549nm,0.7s
SNAA Sanae 90.56 183 P **P** **18 01 07.6 -0.7**
comp=Z,14nm,0.7s,baz=209,slow=2.9,SNR=15
SNAA LR LR 18 39 35.2
comp=Z,368nm,19.8s,baz=178,slow=34
comp=Z,14nm,0.7s
SNAA Sanae 90.56 183 P **P** **18 01 07.3 -1.0**
SNAA Sanae 90.56 183 ceP **P** **18 01 08.5 +0.2**
SNAA pmax pmax
comp=Z,33nm,0.8s
LTY Liberty 90.60 40 IAmb IAmb 18 01 12.7
comp=Z,10nm,0.9s
B20K Meade River 90.86 11 IAmb IAmb 18 01 15.7
comp=Z,12nm,1.6s
F24K Squaw Lake 90.89 15 IAmb IAmb 18 01 52.1
comp=Z,22nm,1.9s
HAWA Hanford 90.94 41 P **P** **18 01 09.7 -0.6**
HAWA IAmb IAmb 18 01 13.7
comp=Z,15nm,1.0s
HAWA **pP** **18 01 33.6 -3.6**
B21K Ikpikpuk River 91.03 12 IAmb IAmb 18 01 16.6
comp=Z,8.0nm,0.9s
EVN Everest 91.03 299 P **P** **18 01 09.7 -2.2**
EVN IAmb IAmb 18 01 24.1
comp=Z,20nm,1.6s
VNA3 Neumayer Olymp 91.18 181 ⇑P **P** **18 01 10.9 -0.2**
comp=Z,39nm,0.8s
EPH Ephrata 91.30 40 IAmb IAmb 18 01 47.4
comp=Z,19nm,1.3s
LLLB Lillooet 91.37 37 IAmb IAmb 18 01 16.8
comp=Z,9.0nm,0.9s
VNA2 Neumayer--Watz 91.46 181 ⇑P **P** **18 01 12.0 -0.4**
comp=Z,16nm,0.7s,baz=171,slow=4.4
ELK Elko 91.55 48 LR LR 18 37 57.6
comp=Z,300nm,18.6s,baz=260,slow=32
ELK Elko 91.55 48 IAmb IAmb 18 01 52.5
comp=Z,16nm,1.7s
G26K Porcupine Rive 91.57 17 IAmb IAmb 18 02 04.7
comp=Z,16nm,1.6s
D08A Wollman Farm, 91.60 41 IAmb IAmb 18 01 48.8
comp=Z,15nm,1.3s
LCMT Little Creek M 91.62 52 IAmb IAmb 18 01 18.9
comp=Z,6.5nm,0.9s
BMO Blue Mountains 91.73 43 IAmb IAmb 18 01 49.4
comp=Z,11nm,1.4s
VNA1 Neumayer--Stat 91.76 181 ⇑P **P** **18 01 12.4 -1.3**
comp=Z,31nm,1.3s
B22K Teshekpuk Lake 91.86 12 IAmb IAmb 18 01 21.4
comp=Z,7.3nm,1.1s
TUC Tucson 91.89 57 P **P** **18 01 14.5 -0.6**
TUC Tucson 91.89 57 P **P** **18 01 14.5 -0.6**
TUC pmax pmax
comp=Z,6.0nm,1.0s
KNGR Kungurtug, Tuv 92.01 323 i P **P** **18 01 15.3 0.0**
KNGR pmax pmax
comp=Z,4.0nm,0.7s
X16A Lo Mia Camp, P 92.09 55 IAmb IAmb 18 01 21.6
comp=Z,7.0nm,0.9s
U15A North Rim 92.13 52 IAmb IAmb 18 01 21.7
comp=Z,9.6nm,0.9s
F10A Beach Ranch, E 92.23 42 IAmb IAmb 18 01 52.1
comp=Z,14nm,1.2s
WUAZ Wupatki 92.52 54 IAmb IAmb 18 01 22.8
comp=Z,8.7nm,0.9s
PLID Pearl Lake 92.68 43 IAmb IAmb 18 01 57.9
comp=Z,9.3nm,1.3s
TIXI Tiksi 93.17 348 LR LR 18 39 53.2
comp=Z,376nm,21.0s,baz=156,slow=33
TIXI Tiksi 93.17 348 P **P** **18 01 18.6 -1.4**
TIXI IAmb IAmb 18 01 27.1
comp=Z,5.9nm,0.8s
TIXI Tiksi 93.17 348 ceP **P** **18 01 19.0 -0.9**
TIXI pmax pmax
comp=Z,14nm,2.4s
NEW Newport 93.20 40 LR LR 18 39 11.1
comp=Z,179nm,18.1s,baz=244,slow=33
X18A Snowflake 93.29 55 P **P** **18 01 20.9 -0.8**
X18A pP **pP** **18 01 47.0 -1.8**
G30M tAoh Zraii Nji 93.81 19 P **P** **18 01 21.9 -1.2**
G30M IAmb IAmb 18 02 41.6
comp=Z,11nm,1.3s
E28M Babbage River 93.88 17 IAmb IAmb 18 02 20.2
comp=Z,8.5nm,1.4s
BSUT Blindstream Ca 94.66 49 IAmb IAmb 18 01 32.9
comp=Z,6.4nm,1.0s
PV23 Carpenter Ridg 95.27 51 IAmb IAmb 18 01 38.4
comp=Z,6.9nm,0.8s
PV18 Skein Mesa, Pa 95.28 52 IAmb IAmb 18 01 34.5
comp=Z,11nm,1.3s
PV12 Saucer Basin, 95.38 52 IAmb IAmb 18 01 39.0
comp=Z,9.2nm,1.1s
INK Inuvik 95.44 18 LR LR 18 40 43.0
comp=Z,284nm,18.6s,baz=231,slow=33
WMQ Urumqi 95.62 314 eP **P** **18 01 29.5 -2.5**
WMQ pP pP 18 01 58.0 -0.9
WMQ sP sP 18 02 09.8 +0.1
WMQ S **S** **18 12 33.5 -6.9**
WMQ pmax pmax
comp=Z,9.0nm,0.7s
WMQ L L
comp=Z,290nm,16.1s
WMQ L L
comp=Z,450nm,19.7s
WMQ L L
comp=Z,530nm,23.9s
VHRN Van Horn 96.11 60 P **P** **18 01 33.5 -1.1**
VHRN IAmb IAmb 18 02 12.4
comp=Z,8.3nm,1.4s
ANMO Albuquerque 96.15 55 LR LR 18 35 57.5
comp=Z,192nm,21.9s,baz=256,slow=30
ANMO Albuquerque 96.15 55 i P **P** **18 01 32.8 -2.0**
ANMO pmax pmax
comp=Z,9.0nm,2.5s
PDAR Pinedale Array 96.23 47 P **P** **18 01 34.8 -0.2**
comp=Z,0.4nm,0.6s,baz=211,slow=2.6,SNR=3.7
PDAR PKKP **PKKPbc** **18 18 22.9 +0.5**
comp=Z,0.6nm,0.9s,baz=72,slow=4.8,SNR=4.8
comp=Z,0.4nm,0.6s
TXAR Lajitas Array 96.79 61 P **P** **18 01 37.8 +0.1**
comp=Z,0.9nm,0.9s,baz=225,slow=5.1,SNR=4.9
TXAR LR LR 18 39 57.0
comp=Z,256nm,18.9s,baz=258,slow=32
comp=Z,0.9nm,0.9s
YKA Yellowknife Ar 99.76 27 P **Pdif** **18 01 49.6 -0.4**
comp=Z,0.6nm,0.8s,baz=260,slow=5.0,SNR=9.9
YKA LR LR 18 41 14.1
comp=Z,393nm,19.5s,baz=278,slow=32
comp=Z,0.6nm,0.8s
MKAR Makanchi Array 100.14 316 P **Pdif** **18 01 51.5 -0.7**
comp=Z,0.7nm,0.6s,baz=88,slow=6.6,SNR=8.8
KURBB **Kurchatov Arra 103.45 319** Pdiff **Pdif** **18 02 07.3 +0.6**
comp=Z,0.2nm,0.4s,baz=91,slow=9.2,SNR=2.3
SPITS Spitsbergen Ar 118.08 354 PKP **PKPdf** **18 06 50.9 -1.1**
comp=Z,12nm,1.1s,baz=96,slow=6.0,SNR=7.9
KIRV Kirov 120.03 328 i PKIKP **PKPdf** **18 06 55.8 -0.3**

BOSA	Boshof	121.70 218		PKP		PKPdf	18 06 60.0	-0.6
	comp=Z,5.7nm,1.1s,baz=172,slow=0.7,SNR=5.8							
BOSA	Boshof	121.70 218		PKIKP		PKPdf	18 07 00.0	-0.6
BELG	Belogornoye	122.59 321	*i*	PKIKP		PKPdf	18 07 00.9	-0.4
APA	Apatity	122.61 341	⇓	*i*PKIKP		PKPdf	18 06 59.9	-1.0
APA				*e**PP		pPKPdf	18 07 31.3	+2.0
APA				pmax	pmax			
	comp=Z,15nm,1.2s							
APA				MLR	MLR			
	comp=Z,3μm,5.7s							
ARCES	ARCESS Array B	123.47 345		PKP		PKPdf	18 07 01.3	-1.3
	comp=Z,1.5nm,0.4s,baz=82,slow=1.9,SNR=11							
KLMR	Klimovskoe	123.88 333	*e*	PKIKP		PKPdf	18 07 02.1	-1.4
KLMR			*e*				18 07 29.1	
KLMR				pmax	pmax			
	comp=Z,21nm,1.1s							
MAK	Makhachkala	124.42 310	*e*	P		Pdif	18 03 41.0	+0.9
MAK			*e*				18 07 03.8	
MAK			*e*				18 07 31.2	
MAK			*e*				18 08 48.1	
MAK			*e*	PPP	PPP		18 11 29.9	
MAK			*e*				18 13 55.2	
MAK			*e*	PS	PS		18 18 53.9	+1.1
MAK			*e*	SS	SS		18 25 37.1	+0.1
MAK				pmax	pmax			
	comp=Z,261nm,1.3s							
VRH	Novokhopyorsk	126.44 321	*e*	PKIKP		PKPdf	18 07 07.9	-0.8
VRH				pmax	pmax			
	comp=Z,5.0nm,0.8s							
LPSR	Galich'ya Gora	127.59 324	*e*	PKIKP		PKPdf	18 07 11.0	+0.2
LPSR				pmax	pmax			
	comp=Z,10.0nm,0.9s							
KBZ	Khabaz	127.60 312	*i*	PKIKP		PKPdf	18 07 10.5	-0.6
KIV	Kislovodsk	127.70 312	*i*	PKIKP		PKPdf	18 07 11.7	+0.2
KIV			*e*	PS		PS	18 19 20.8	-1.1
KIV			*e*	SS		SS	18 26 18.6	+0.4
KIV				pmax	pmax			
	comp=Z,5.0nm,1.0s							
KIV				MLR	MLR			
	comp=Z,208nm,23.0s							
SHA1	Shidzhatmaz	127.77 312	*i*	PKIKP		PKPdf	18 07 10.5	-1.3
OBN	Obninsk	127.85 327	⇓	*e*PKIKP		PKPdf	18 07 11.0	-0.2
OBN			*e*				18 07 40.0	
OBN			*i*				18 07 48.9	
OBN							18 14 10.0	
OBN				PS		PS	18 19 19.0	-3.3
OBN			*e*				18 26 53.7	
OBN				SSS	SSS		18 31 00.0	
OBN				pmax	pmax			
	comp=Z,4.0nm,1.0s							
OBN				pmax	pmax			
	comp=Z,5.0nm,0.8s							
HUMP	Col San Antoni	128.57 81				PKPdf	18 07 11.1	-2.6
FINES	FINESS Array B	128.95 338		PKP		PKPdf	18 07 11.6	-1.5
	comp=Z,1.0nm,0.3s,baz=31,slow=3.2,SNR=9.3							
SOC	Sochi	129.88 312	*i*	PKIKP		PKiKP	18 07 18.4	+2.1
SOC			*e*				18 09 30.4	
SOC				MLR	MLR			
	comp=Z,353nm,21.0s							
MNK	Minsk	132.49 330	*i*	PKP		PKiKP	18 07 21.7	+0.4
	comp=E,23nm,1.0s							
MNK			*i*	PKP		PKiKP	18 07 21.7	+0.4
	comp=N,25nm,1.0s							
MNK			*i*	PKP		PKiKP	18 07 21.7	+0.4
	comp=Z,10.0nm,0.8s,baz=56							
MNK			*i*	pPKP		pPKPdf	18 07 49.5	+1.0
MNK			*i*	sPKP		sPKPdf	18 07 59.4	+0.1
MNK			*i*	PP		PP	18 09 46.9	+2.3
MNK			*i*	PPP	PPP		18 12 39.1	
MNK			*i*	SKS		SKSac	18 14 23.6	+1.7
MNK			*i*	SKKS		SKKSdf	18 24 17.0	-1.5
MNK			*i*	SS	SS		18 27 18.4	+2.9
MNK			*i*	SSS	SSS		18 32 13.6	
MNK	Minsk	132.49 330	*i*	PKIKP		PKiKP	18 07 21.6	+0.4
MNK			*i*				18 07 49.4	
MNK			*i*				18 07 59.3	
MNK			*i*				18 09 46.8	
MNK			*i*	PPP	PPP		18 12 39.0	
MNK			*i*				18 14 23.5	
MNK			*i*	SS	SS		18 27 18.4	+2.8
MNK			*i*	SSS	SSS		18 32 13.6	
MNK				pmax	pmax			
	comp=N,25nm,1.0s							
MNK				pmax	pmax			
	comp=Z,10.0nm,0.8s							
MNK				pmax	pmax			
	comp=E,23nm,1.0s							
NOA	NORSAR Array B	133.84 345		PKP		PKPdf	18 07 22.7	+0.2
	comp=E,1.9nm,1.0s,baz=29,slow=2.1,SNR=2.1							
AKASG	Malin Array Be	133.85 325		PKP		PKPdf	18 07 23.2	+0.4
	comp=E,0.6nm,0.6s,baz=82,slow=1.6,SNR=5.6							
AKASG				SKP		SKPbc	18 10 46.0	+3.6
	comp=E,2.9nm,0.8s,baz=48,slow=4.1,SNR=6.2							
AKASG	Malin Array Be	133.85 325				PKiKP	18 07 25.7	+1.6
AKBB	Malin Array Si	133.85 325	*i*	PKIKP		PKPdf	18 07 22.9	+0.1
KIEV	Kiev	133.86 325		PKP		PKPdf	18 07 22.8	0.0
AK08	Malin Array Si	133.87 325		PKP		PKPdf	18 07 21.5	-1.3
AK10	Malin Array Si	133.89 325		PKP		PKPdf	18 07 22.3	-0.6
AK15	Malin Array Si	133.91 325		PKP		PKPdf	18 07 22.6	-0.3
HFS	Hagfors	133.95 343		PKP		PKPdf	18 07 22.2	-0.5
	comp=E,2.7nm,0.8s,baz=349,slow=1.5,SNR=2.3							
LUBAR	Lubar, Ukraine	135.06 325		PKP		PKPdf	18 07 23.6	-1.5
BRTR	Keskin Array B	135.28 309		PKhKP		PKPpre	18 07 22.4	
	comp=E,1.7nm,0.8s,baz=107,slow=1.5,SNR=7.6							
BRTR				SKPbc		SKPab	18 10 51.7	-0.3
	comp=E,1.1nm,0.9s,baz=57,slow=5.3,SNR=4.3							
KMPD	K-Podol'skiy	136.49 323		PKP		PKPdf	18 07 28.3	+0.5
STHS	Stebnicka Huta	138.82 327	*e*	PKIKP		PKPdf	18 07 31.8	-0.3
STHS	Stebnicka Huta	138.82 327	*e*	PKP		PKPdf	18 07 31.8	-0.3
STEB	Steborice	140.19 330	*e*	PKP		PKiKP	18 07 37.8	+0.7
OSTC	Ostas	140.47 332	*e*	PKP		PKiKP	18 07 36.4	-1.3
OSTC	Ostas	140.47 332	*e*	PKIKP		PKiKP	18 07 36.4	-1.3
DPC	Dobruska-Polom	140.57 332	*e*	PKP		PKiKP	18 07 40.9	+3.0
DPC	Dobruska-Polom	140.57 332	*e*	PKIKP		PKiKP	18 07 40.9	+3.0
CLL	Collm	141.27 335	*e*	PKIKP		PKPdf	18 07 36.0	-0.4
CLL			*e*				18 08 03.0	
CLL				pmax	pmax			
	comp=Z,14nm,1.5s							
CLL	Collm	141.27 335	*e*	PKPdf		PKPdf	18 07 36.0	-0.4
	comp=Z,14nm,1.5s							
CLL			*e*	pPKPdf		pPKPdf	18 08 03.0	-1.9
CLL			*e*	SKPdf		SKPab	18 11 15.0	-2.8
CLL			*ex*		x		18 22 20.0	
CLL			*e*	PPS	PPS		18 23 24.0	
CLL			*ex*		x		18 24 40.0	
CLL			*e*	SS	SS		18 29 18.0	+19
CLL			*e*	SSS	SSS		18 34 18.0	
MODS	Modra-Piesok	141.49 329	*e*	PKIKP		PKPdf	18 07 36.8	-0.2
MODS	Modra-Piesok	141.49 329	*e*	PKP		PKPdf	18 07 36.8	-0.2
PRU	Pruhonice	141.63 333		AMS	AMS		19 02 50.0	
	comp=Z,900nm,27.5s							
TREC	Trest	141.71 331		AMS	AMS		19 07 00.0	
	comp=Z,700nm,21.1s							
EKA	Eskdalemuir Ar	141.97 352		PKhKP		PKPpre	18 07 32.2	
	comp=Z,0.8nm,0.5s,baz=6.4,slow=2.2,SNR=5.7							
ZVC	Zvikov	142.18 332	*e*	PKP		PKiKP	18 07 40.1	-1.1
RONA	Rosalia, Austr	142.44 329	*i*	PKP		PKPdf	18 07 37.8	-0.9
	comp=Z,2.4nm,1.0s							
CONA	Conrad Observa	142.49 329	*e*	PKP		PKPdf	18 07 36.6	-2.2
	comp=Z,4.1nm,1.0s							
CKRC	Cesky Krumlov	142.59 332	*e*	PKP		PKPdf	18 07 37.3	-1.6
CKRC				AMS	AMS		19 04 50.0	
	comp=Z,900nm,26.3s							
CKRC	Cesky Krumlov	142.59 332	*e*	PKIKP		PKPdf	18 07 37.3	-1.6
CKRC				MLR	MLR			
	comp=Z,900nm,26.3s							
KHC	Kasperske Hory	142.68 333	*e*	PKP		PKPdf	18 07 37.4	-1.7
KHC				AMS	AMS		19 05 20.0	
	comp=Z,800nm,23.0s							
KHC	Kasperske Hory	142.68 333	*e*	PKIKP		PKPdf	18 07 37.4	-1.7
KHC				MLR	MLR			
	comp=Z,800nm,23.0s							
GERES	GERESS Array B	142.84 332		PKhKP		PKPpre	18 07 36.2	
	comp=Z,1.6nm,0.8s,baz=20,slow=4.3,SNR=8.5							
ARSA	Arzberg	143.12 329	*i*	PKP		PKPdf	18 07 39.1	-0.8
	comp=Z,5.4nm,1.5s							
MOA	Molln	143.31 331	*e*	PKP		PKPdf	18 07 39.2	-1.0
	comp=Z,10.0nm,1.6s							
SOKA	Soboth	143.76 329	*i*	PKP		PKPbc	18 07 39.1	+0.1
	comp=Z,7.2nm,0.8s							
BLY	Banja Luka	143.90 324				PKPab	18 07 38.8	+0.1
OBKA	Obir	144.12 329	*i*	PKP		PKPab	18 07 39.7	+0.1
	comp=Z,7.1nm,1.1s							
KBA	Koelnbreinsper	144.30 330	*i*	PKP		PKPab	18 07 40.4	0.0
	comp=Z,7.7nm,0.9s							
BTNL	Ternell	144.34 341	*d*	PKPdf		PKPbc	18 07 41.0	+0.5
LESA	Schwarzleotal	144.35 331	*i*	PKP		PKPab	18 07 40.6	+0.1
	comp=Z,22nm,0.9s,SNR=13							
MEM	Membach	144.35 341	*d*	PKPdf		PKPdf	18 07 41.3	-0.6
LJU	Ljubljana	144.46 328	*i*	PKPdf		PKPbc	18 07 41.2	+0.2
MYKA	Terra Mystica	144.48 330	*i*	PKP		PKPab	18 07 40.5	-0.4
	comp=Z,15nm,1.1s							
BSTI	Sart Tilman	144.52 341	*d*	PKPdf		PKPdf	18 07 41.9	-0.3
CRNS	Crni Vrh	144.56 328	*e*	PKPdf		PKPbc	18 07 41.4	0.0
BHOU	Houvegnez	144.58 340	*d*	PKPdf		PKPdf	18 07 41.9	-0.4
BCLA	Clavier	144.74 341	*d*	PKPdf		PKPdf	18 07 42.5	-0.1
JAVS	Javornik	144.79 328	*e*	PKPdf		PKPbc	18 07 42.2	0.0
BGES	Gesves	144.84 341	*d*	PKP		PKPdf	18 07 44.5	+1.7
WATA	Walderalm	144.92 332	*e*	PKP		PKPab	18 07 41.6	-1.0
	comp=Z,18nm,1.4s,SNR=10							
ABTA	Abfaltersbach	144.93 331	*e*	PKP		PKPbc	18 07 40.5	-2.1
	comp=Z,26nm,0.9s,SNR=17							
WTTA	Wattenberg	144.94 332	*i*	PKP		PKPbc	18 07 42.7	0.0
	comp=Z,35nm,1.4s,SNR=14							
RCHB	Rochefort	145.00 341	*d*	PKPdf		PKPab	18 07 42.8	+0.2
RCHB			*dp*	PKPdf		pPKPdf	18 08 05.7	-5.8
BMRD	Maredsous	145.01 342	*d*	PKPdf		PKPab	18 07 42.7	+0.1
MOTA	Moosalm	145.12 333	*e*	PKP		PKPbc	18 07 43.3	0.0
	comp=Z,29nm,0.9s,SNR=14							
WLF	Walferdange	145.13 340	*d*	PKP		PKPdf	18 07 43.2	-0.1
RETA	Reutte	145.16 333	*i*	PKP		PKPdf	18 07 43.5	0.0
	comp=Z,19nm,1.1s,SNR=12							
SQTA	Sankt Quirin	145.17 332	*e*	PKP		PKPbc	18 07 42.5	-0.9
	comp=Z,37nm,1.3s,SNR=15							
DOU	Dourbes	145.24 342	*d*	PKP		PKPbc	18 07 43.2	-0.2
BFO	Black Forest	145.47 336				PKPdf	18 07 42.2	-1.7
BFO	Black Forest	145.47 336		PKIKP		PKPdf	18 07 42.3	-1.7
FETA	Feichten	145.53 333	*e*	PKP		PKPdf	18 07 44.0	-0.3
	comp=Z,28nm,1.0s,SNR=16							
DAVA	Damuels	145.69 334	*i*	PKP		PKPab	18 07 45.5	0.0
	comp=Z,66nm,1.5s,SNR=16							
ECH	Echery	146.01 337				PKPdf	18 07 43.2	-1.7
ECH						pPKPdf	18 08 10.0	-3.4
ECH	Echery	146.01 337		PKIKP		PKPdf	18 07 43.2	-1.7
RCBR	Riachuelo	146.45 132		PKPbc		PKPbc	18 07 47.7	-0.5
	comp=Z,2.4nm,0.6s,baz=268,slow=16,SNR=6.2							
NRCA	Norcia	147.39 325				PKPdf	18 07 48.6	+1.2
CESX	Cesi	147.83 325				PKPdf	18 07 48.8	+0.7
CEL	Celeste	148.49 316				PKPdf	18 07 50.7	+1.3
CEST	Esterri de Car	152.96 339				PKPdf	18 07 53.9	-2.3
KEST	Kesra	154.22 318		PKPbc		PKiKP	18 08 07.5	+1.0
	comp=Z,4.3nm,1.0s,baz=59,slow=5.9,SNR=6.2							
PBRG	Braganca	155.71 351	*e*	PKPab		PKPab	18 08 25.5	-1.1
PGAV	Gavieira, Arco	155.74 354	*e*	PKPab		PKPab	18 08 26.6	-0.2
PCAB	Cabril	155.97 353	*e*	PKPab		PKPab	18 08 25.7	-2.1
POLO	Lamas de Olo	156.27 353	*e*	PKPab		PKPab	18 08 28.9	-0.2
PVRL	Vila Real	156.36 353	*e*	PKPab		PKPab	18 08 29.4	0.0
MVO	Moncorvo	156.38 351	*e*	PKPab		PKPab	18 08 29.9	+0.3
PVIS	Viseu	156.93 353	*e*	PKPab		PKPab	18 08 32.4	+0.4
MTE	Manteigas	157.20 352	*e*	PKPab		PKPab	18 08 33.5	+0.4
ESDC	Sonseca Array	157.21 345		PKPab		PKPab	18 08 33.6	+0.5
	comp=Z,3.8nm,0.8s,baz=12,slow=3.6,SNR=14							
ESDC	Sonseca Array	157.21 345		PKPdf		PKPdf	18 07 59.7	-2.3
ESDC						PKPab	18 08 32.2	-0.9
PAB	San Pablo	157.42 345		PKPdf		PKPdf	18 07 59.9	-2.5
PAB						PKPab	18 08 33.0	-1.2
PAB	San Pablo	157.42 345		PKIKP		PKPdf	18 07 59.9	-2.5
PAB							18 08 33.0	
PCAS	Casmilo, Conde	157.65 354	*e*	PKPab		PKPab	18 08 34.5	-0.5
PCBR	Castelo Branco	157.74 352	*e*	PKPab		PKPab	18 08 35.0	-0.4
PSARD	Sardoal	158.06 353	*e*	PKPab		PKPab	18 08 39.5	+2.6
PMRV	Marv??o	158.13 351	*e*	PKPab		PKPab	18 08 38.0	+0.8
PMTG	Montargil	158.60 353	*e*	PKPab		PKPab	18 08 40.3	+1.2
PESTR	Estremoz	158.71 351	*e*	PKPab		PKPab	18 08 40.0	+0.4
PARRA	Arraiolos	158.82 352	*e*	PKPab		PKPab	18 08 40.5	+0.4
EVO	Evora	159.10 352	*e*	PKPab		PKPab	18 08 42.2	+0.9
PBAR	Barrancos	159.30 350	*e*	PKPab		PKPab	18 08 41.8	-0.4
PBEJ	Beja	159.57 351	*e*	PKPab		PKPab	18 08 42.9	-0.5
MESJ	Messejana	159.81 352	*e*	PKP		PKPab	18 08 44.7	+0.3
MESJ	Messejana	159.81 352		PKPdf		PKPdf	18 08 02.7	-2.4
MESJ						PKPab	18 08 43.2	-1.2
MESJ	Messejana	159.81 352	*e*	PKPab		PKPab	18 08 45.2	+0.8
MESJ	Messejana	159.81 352		PKP2		PKPab	18 08 43.2	-1.2
PCVE	Castro Verde	159.99 352	*e*	PKPab		PKPab	18 08 45.3	+0.1
PVAQ	Vaqueiros	160.16 351	*e*	PKPab		PKPab	18 08 46.8	+0.9
PBDV	Barranco-do-Ve	160.35 351	*e*	PKPab		PKPab	18 08 47.0	+0.2
TORD	Torodi Ar. Bea	166.37 252		PKP		PKPdf	18 08 11.0	-1.1
	comp=Z,6.5nm,1.0s,baz=159,slow=0.5,SNR=15							
TORD				PKPab		PKPab	18 09 14.2	+0.2
	comp=Z,6.5nm,0.9s,baz=107,slow=3.4,SNR=9.0							
DBIC	Dimbokro	167.13 212		PKPab		PKPab	18 09 17.9	+0.7
	comp=Z,4.5nm,0.9s,baz=163,slow=8.2,SNR=4.6							

DJA 28 18:29:15.6±0.2, 2°S±2°×12°0E±°, h10km, M4.0/25, mB5.3/1, mb4.3/2, MLv3.9/25, Mw(mB)4.7/1, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCI	Palu	0.86	339	P	Pg	18 29 32.0	-0.3
MMSI	Mamuju	1.56	232	P	Pn	18 29 42.7	-0.8
APSI	Ampana	1.71	62	P	Pn	18 29 46.1	+0.6
MPSI	Mapaga	2.06	353	P	Pb	18 29 51.8	-1.3
PMSI	Majene	2.15	215	P	Pn	18 29 53.1	+1.5
SPSI	Sidrap Palu	2.26	189	P	Pn	18 29 53.5	+0.4
LUWI	Luwuk	2.72	76	P	Pn	18 30 00.2	+0.9
MRSI	Marisa	2.83	40	P	Pn	18 30 01.4	+0.5
GTOI	Gorontalo	3.70	51	P	Pn	18 30 13.6	+0.7
SANI	Sanana	5.85	93	P	Pn	18 30 41.6	-0.9

SJA 28 18:36:27.0±0.7, 24°26S×67°11W, h183km±5km, ML3.6, MW3.4, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALTA		0.70	88	*e*P	Pn	18 36 54.6	+0.9
SALTA				*e*S	Sn	18 37 14.2	0.0
AF01	San Pedro de A	1.62	323	*e*P	Pn	18 37 01.1	+0.4
HJA	Humahuaca	1.88	57	*e*P	Pn	18 37 04.7	+1.3
HJA				*e*S	Sn	18 37 32.0	+0.5
FSA	Cafayete	2.11	151	*e*P	Pn	18 37 06.7	+1.0
FSA				*e*S	Sn	18 37 35.4	-0.4
PB06	IPOC Station P	2.73	304	*e*P	Pn	18 37 13.8	+1.0
PB06				*e*S	Sn	18 37 48.0	-0.4
PB06				IAML		18 37 50.9	
	comp=Z,172nm,0.3s						
PB14	IPOC Station P	3.02	262	*e*P	Pn	18 37 17.2	+0.9
PB14				*e*S	Sn	18 37 54.5	-0.4
PB14				IAML		18 37 56.9	
	comp=Z,110nm,0.2s						
PB09	IPOC Station P	3.14	321	*e*P	Pn	18 37 18.7	+1.1
PB09				*e*S	Sn	18 37 58.1	+1.0
AC02	Maricunga	3.15	215	*e*P	Pn	18 37 19.1	+1.0
AC02				*e*S	Sn	18 38 04.2	+6.2
PB05	IPOC Station P	3.16	296	*e*P	Pn	18 37 18.4	+0.5
PB05				*e*S	Sn	18 37 60.0	+2.4
PB05				IAML		18 38 00.5	
	comp=Z,60nm,0.4s						
PB03	IPOC Station P	3.28	312	*e*P	Pn	18 37 19.9	+0.5
PB03				*e*S	Sn	18 37 58.8	-1.4
PB03				IAML		18 38 03.6	
	comp=Z,145nm,0.2s						
PB07	IPOC Station P	3.59	314	*e*P	Pn	18 37 23.6	+0.4
PB07				*e*S	Sn	18 38 06.0	-1.2
PB07				IAML		18 38 07.6	
	comp=Z,100nm,0.3s						
AC01	Pan de Azucar	3.68	238	*e*P	Pn	18 37 24.1	0.0
AC01				*e*S	Sn	18 38 07.7	-1.2
AC01				IAML		18 38 08.3	
	comp=Z,72nm,0.2s						
TINO	Tinogasta	3.81	186	*e*P	Pn	18 37 28.7	+2.8
GO03	Copiapo	4.36	220	*e*P	Pn	18 37 32.6	-0.2
GO03				*e*S	Sn	18 38 23.9	-0.4
GO03				IAML		18 38 24.2	
	comp=Z,32nm,0.3s						
ACLC	CERRO LA CRUZ	5.15	178	*e*P	Pn	18 37 44.6	+1.5
ACLC				*e*S	Sn	18 38 44.6	+1.6
AC05	El Transito	5.37	211	*e*P	Pn	18 37 46.7	+0.7
AC05				*e*S	Sn	18 38 45.6	-2.4

IDC 28 18:37:12.3±1.9, 7°95S×126°09E, h0km, mb3.4/1, mbtmp3.6/5, ML3.6/4, Error ellipse: s-maj=39.6km s-min=27.0km az=85.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	3.28	227	Pn	Pn	18 38 05.7	+0.7
	9.0nm,0.3s,baz=50,slow=7.9,SNR=18						
BATI				Sn	Sn	18 38 44.2	-0.5
	12nm,0.3s,baz=172,slow=21,SNR=7.9						
	26nm,0.4s						
FITZ	Fitzroy Crossi	10.09	182	Pn	Pn	18 39 38.9	+0.3
	0.9nm,0.3s,baz=5.2,slow=15,SNR=27						
FITZ				Sn	Sn	18 41 26.9	-5.7
	2.3nm,0.3s,baz=339,slow=2.9,SNR=12						
	2.3nm,0.4s						
WRA	Warramunga Arr	14.35	147	Pn	Pn	18 40 36.1	-0.8
	0.2nm,0.3s,baz=324,slow=13,SNR=15						
WRA				Sn	Sn	18 43 12.1	-4.8
	0.2nm,0.3s,baz=220,slow=29,SNR=5.8						
	0.2nm,0.3s						
ASAR	Alice Springs	17.33	155	P	Pn	18 41 15.7	-0.1
	0.2nm,0.3s,baz=320,slow=10,SNR=14						
ASAR				S	Sn	18 44 25.3	-4.1
	0.6nm,0.8s,baz=316,slow=19,SNR=4.9						
	0.6nm,0.6s						
MKAR	Makanchi Array	66.96	329	P	P	18 48 06.8	0.0
	0.3nm,0.6s,baz=126,slow=7.3,SNR=3.7						
	0.3nm,0.6s						

MOS ***28*** *18:47:48.8±1.9, 38°84N×57°03E, h10km, mb4.3/4, Error ellipse: s-maj=8.9km s-min=6.8km az=30.4*
TEH ***28*** *18:47:48.5, 38°73N×57°10E, h19km±27km, ML3.9, Presumed earthquake*
IDC ***28*** *18:47:49.8±1.1, 38°68N×56°81E, h0km, mb3.6/9, mbtmp3.7/16, ML3.6/7, Error ellipse: s-maj=18.9km s-min=9.7km az=176.0*
NNC ***28*** *18:48:00.2±3.0, 39°43N×57°98E, h0km, mb3.9, Error ellipse: s-maj=31.3km s-min=16.6km az=50.0*

ISC 28 18:47:50.6±0.6, 38°83N±0°06×57°07E±0°05, h10km, n79, σ2s18/92, mb3.9/12, 12C-4D, Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRVT	Maraveh tapeh	1.40	214	Pg	**Pn**	18 48 13.7	-2.5
BJND	Bojnord	1.58	170	Pg	**Pn**	18 48 16.4	-2.6
IEMG	Emamgholi	1.89	138	Pg	**Pn**	18 48 20.2	-2.9
ISFR	Sfrayin	1.92	157	Pn	**Pn**	18 48 20.9	-2.7
IMND	Minoodasht	2.05	220	Pn	**Pn**	18 48 23.0	-2.1
SBZV	Sabzevar	2.48	170	Pn	**Pn**	18 48 28.6	-2.6
IKRD	Kardeh	2.82	136	Pn	**Pn**	18 48 33.3	-2.8
IPAY	Payeh	2.83	147	Pn	**Pn**	18 48 33.5	-2.6
IGLO	Ghaloghah	3.46	229	Pn	**Pn**	18 48 43.4	-1.4
TAPT	Tabas- Tapeh t	3.94	179	Pn	**Pn**	18 48 48.8	-2.4
IPRN	Peran	4.56	237	Pn	**Pn**	18 48 57.7	-2.1
TNSJ	Nastanj	4.87	184	Pn	**Pn**	18 49 01.6	-2.4
NDR	Nardaran	5.73	290	Pn	**Pn**	18 49 16.1	+0.4
IGZV	Ghazvin	5.96	248	Pn	**Pn**	18 49 17.3	-1.9
ANAR	Anarak	6.25	207	Pn	**Pn**	18 49 20.9	-2.1
GAS1	Astara - Iran	6.46	269	Pn	**Pn**	18 49 24.7	-1.0
LKRN	Lenkeran, Azer	6.48	272	P	**Pn**	18 49 25.5	-0.5
GLBA	Clilabad	6.76	276	Pn	**Pn**	18 49 29.4	-0.5
ICHK	Chekchek	6.92	199	Pn	**Pn**	18 49 30.0	-2.3
ZNJK	Zanjan	6.98	255	Pn	**Pn**	18 49 31.7	-1.5
IBAF	Bafgh	7.33	190	Pn	**Pn**	18 49 36.0	-1.8
AKT	Akhty	7.62	293	*e*P	**Pn**	18 49 43.4	+1.6
AKT				*e*S	**Sn**	18 51 10.8	+2.5
AKT				pmax	pmax		
	comp=Z,11nm,0.3s						
AKT				smax	smax		
	comp=N,29nm,0.4s						
AKT				smax	smax		
	comp=E,35nm,0.3s						
SEKA	Sheki	7.94	291	P	**Pn**	18 49 46.1	0.0
GANJ	Ganja	8.48	286	P	**Pn**	18 49 52.7	-0.7
VSHL	Vashlovani	8.53	290	P	**Pn**	18 49 54.9	+0.7
LGD	Lagodekhi	8.79	293	P	**Pn**	18 49 59.1	+1.3
LGD				S	**Sn**	18 51 37.0	0.0
NAX	Nakhchivan	9.02	276	P	**Pn**	18 50 00.9	0.0
DGRG	David-gareji	9.33	290	P	**Pn**	18 50 05.1	-0.1
DGRG				S	**Sn**	18 51 47.6	-2.6
CHGR	Chuyangaron	9.45	87	*i* P	**Pn**	18 50 04.8	-2.1
GNI	Garni	9.62	282	Pn	**Pn**	18 50 09.4	+0.2
	comp=E,1.2nm,0.3s,baz=350,slow=16,SNR=3.8						
	comp=E,5.0nm,0.6

ARTI	**Arti**	**17.59**	**2**	*c*	*i* P	**Pn**	**18 51 54.8**	**-0.8**
ARTI					S	**Sn**	**18 55 13.6**	**+2.2**
ARTI					pmax	pmax		
	comp=Z,6.0nm,0.9s							
BR131	**Keskin Array S**	**18.16**	**280**	*i*	P	**Pn**	**18 52 03.3**	**+0.4**
BRTR	**Keskin Array B**	**18.16**	**280**		P	**Pn**	**18 52 03.0**	**+0.1**
	baz=94,slow=13,SNR=8.8 comp=Z,1.2nm,0.8s							
BRTR	**Keskin Array B**	**18.16**	**280**	*i*	P	**Pn**	**18 52 02.4**	**-0.5**
BRTR					pmax	pmax		
	comp=Z,1.0nm,0.8s							
KURBB	**Kurchatov Arra**	**19.20**	**45**		P	**P**	**18 52 15.9**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=247,slow=12,SNR=7.6 comp=Z,1.2nm,0.8s							
KURBB	**Kurchatov Arra**	**19.20**	**45**		⇑P	**P**	**18 52 15.9**	**+1.5**
	comp=Z,13nm,2.0s							
KURK	**Kurchatov**	**19.29**	**45**	*ce*	P	**P**	**18 52 15.7**	**+0.3**
KURK					pmax	pmax		
	comp=Z,4.0nm,0.9s							
MAKZ	**Makanchi**	**19.88**	**58**		⇓P	**P**	**18 52 23.6**	**+1.7**
	comp=Z,4.7nm,1.1s							
MK31	**Makanchi Array**	**20.08**	**59**		P	**P**	**18 52 25.1**	**+0.9**
	comp=Z,1.8nm,0.7s,baz=244,slow=9.2,SNR=31							
MK31	**Makanchi Array**	**20.08**	**59**	*ce*	P	**P**	**18 52 24.8**	**+0.6**
MKAR	**Makanchi Array**	**20.08**	**59**		P	**P**	**18 52 25.6**	**+1.5**
	comp=Z,1.3nm,0.7s,baz=246,slow=9.8,SNR=12 comp=Z,1.3nm,0.7s							
AKASG	**Malin Array Be**	**22.91**	**310**		P	**P**	**18 52 55.1**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=134,slow=9.5,SNR=4.8 comp=Z,0.3nm,0.6s							
AKASG	**Malin Array Be**	**22.91**	**310**	*e*	P	**P**	**18 52 57.1**	**+2.7**
AKBB	**Malin Array Si**	**22.91**	**310**	*i*	P	**P**	**18 52 55.3**	**+0.9**
AKBB					pmax	pmax		
	comp=Z,3.0nm,0.6s							
KLMR	**Klimovskoe**	**24.62**	**339**	*e*	P	**P**	**18 53 10.1**	**-0.8**
KLMR					pmax	pmax		
	comp=Z,9.0nm,0.9s							
FINES	**FINESS Array B**	**29.61**	**330**		P	**P**	**18 53 55.7**	**0.0**
	comp=Z,3.3nm,1.0s,baz=142,slow=9.6,SNR=4.0 comp=Z,3.3nm,1.0s							
KNGR	**Kungurtug, Tuv**	**30.68**	**54**	*i*	P	**P**	**18 54 04.9**	**-0.5**
KNGR					pmax	pmax		
	comp=Z,3.0nm,1.0s							
GERES	**GERESS Array B**	**32.45**	**302**		P	**P**	**18 54 20.9**	**0.0**
	comp=Z,0.2nm,0.3s,baz=95,slow=9.2,SNR=1.9 comp=Z,0.2nm,0.3s							
CLL	**Collm**	**33.03**	**307**	*e*	P	**P**	**18 54 25.0**	**-0.8**
CLL	**Collm**	**33.03**	**307**	*e*	P	**P**	**18 54 25.0**	**-0.8**
SONM	**Songino Array**	**36.45**	**59**		P	**P**	**18 54 59.4**	**+3.8**
	comp=Z,0.3nm,0.4s,baz=269,slow=9.7,SNR=3.8 comp=Z,0.3nm,0.4s							
ULN	**Ulaanbaatar**	**36.88**	**59**	*i*	P	**P**	**18 55 01.0**	**+1.6**
ULN					pmax	pmax		
	comp=Z,3.0nm,0.6s							
ESDC	**Sonseca Array**	**46.45**	**291**		P	**P**	**18 56 17.6**	**0.0**
	comp=Z,0.3nm,0.7s,baz=52,slow=7.8,SNR=4.5 comp=Z,0.3nm,0.7s							
HEH	**HeiHe**	**49.65**	**52**	*e*	P	**P**	**18 56 46.5**	**+4.3**
HEH					pmax	pmax		
	comp=Z,7.0nm,0.8s							
TORD	**Torodi Ar. Bea**	**55.01**	**258**		P	**P**	**18 57 20.7**	**-1.7**
	comp=Z,0.8nm,0.7s,baz=58,slow=6.4,SNR=6.3 comp=Z,0.8nm,0.7s							
ILAR	**Eielson Array**	**75.03**	**10**		P	**P**	**18 59 35.2**	**+3.3**
	comp=Z,0.8nm,0.9s,baz=336,slow=4.4,SNR=8.3 comp=Z,0.8nm,0.9s							
YKA	**Yellowknife Ar**	**78.80**	**356**		P	**P**	**18 59 56.4**	**+3.2**
	comp=Z,0.5nm,0.9s,baz=354,slow=6.9,SNR=6.4 comp=Z,0.5nm,0.9s							

NEIC ***28*** *18:55:32.5±2.1, 43.4°N×0.07°×105.4°W×0.1°, h0km±1km, ML2.6/36, Error ellipse: s-maj=16.3km s-min=11.5km az=247.0*

IDC ***28*** *18:55:33.3±2.4, 43.57°N×105.43°W, h0km, mbtmp2.8/2, ML2.7/2, Error ellipse: s-maj=59.3km s-min=10.9km az=151.0*

ISC 28 18:55:28.7±1.2, 43.26N±0.06°×105.27W±0.07°, h0km, n22, σ2s08/21, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
K22A	**Casper**	**1.10**	**237**			**Pn**		**18 55 55.2**	**+3.6**
K22A						IAML		18 56 20.5	
	81nm,0.2s								
RSSD	**Black Hills**	**1.24**	**46**			**Pn**		**18 55 54.5**	**+0.9**
HAYD	**Hayden**	**3.11**	**209**	Pn		**Pb**		**18 56 23.4**	**-1.7**
HAYD						IAML		18 57 24.5	
	comp=N,14nm,3.5s								
HAYD						IAML		18 57 33.5	
	comp=E,13nm,4.2s								
BW06	**Boulder Array**	**3.18**	**263**	Pn		**Pb**		**18 56 25.6**	**-0.6**
PD31	**Pinedale Array**	**3.18**	**263**			**Pb**		**18 56 25.2**	**-1.0**
PDAR	**Pinedale Array**	**3.18**	**263**	Pn		**Pg**		**18 56 27.4**	**-2.3**
	comp=E,1.0nm,0.3s,baz=72,slow=19,SNR=21								
PDAR				Lg		Lg		18 57 10.6	
	comp=E,3.7nm,0.3s,baz=76,slow=32,SNR=3.1 comp=E,0.4nm,0.4s								
PDAR	**Pinedale Array**	**3.18**	**263**			**Pb**		**18 56 26.7**	**+0.5**
RLMT	**Red Lodge**	**3.43**	**304**			**Pn**		**18 56 25.4**	**+1.9**
RLMT					IAML			18 58 09.4	
	comp=E,14nm,4.4s								
RLMT					IAML			18 58 17.9	
	comp=E,17nm,3.7s								
ISCO	**Idaho Springs**	**3.46**	**184**	Pn		**Pb**		**18 56 30.5**	**-0.6**
ISCO					IAML			18 57 50.5	
	comp=E,6.8nm,3.2s								
LAO	**LASA Array**	**3.50**	**349**	Pn		**Pn**		**18 56 26.3**	**+1.9**
YMP	**Mirror Lake PI**	**3.83**	**294**	Pn		**Pn**		**18 56 30.4**	**+1.2**
YMP					IAML			18 57 36.4	
	comp=E,19nm,0.5s								
O20A	**White River Ci**	**3.83**	**217**	Pn		**Pn**		**18 56 32.0**	**+2.9**
YNE	**Yellowstone No**	**3.83**	**299**			**Pn**		**18 56 32.1**	**+2.9**
YNE					IAML			18 57 34.0	
	comp=N,14nm,0.5s								
YNE					IAML			18 57 39.0	
	comp=E,17nm,0.4s								
LOHW	**Long Hollow**	**3.90**	**277**			**Pn**		**18 56 30.8**	**+0.7**
LOHW					IAML			18 56 57.6	
	comp=E,8.9nm,4.3s								
LOHW					IAML			18 57 40.4	
	comp=E,9.2nm,4.5s								
MOOW	**Moose Ponds**	**4.01**	**279**	Pn		**Pn**		**18 56 33.7**	**+2.0**
MOOW					IAML			18 57 00.1	
	comp=E,5.8nm,4.9s								
MOOW					IAML			18 58 19.5	
	comp=E,6.4nm,4.5s								
FLWY	**Flagg Ranch**	**4.03**	**284**			**Pn**		**18 56 34.3**	**+2.5**
YPP	**Pitchstone Pla**	**4.14**	**286**	Pn		**Pn**		**18 56 35.5**	**+2.1**
YPP					IAML			18 57 52.2	
	comp=N,11nm,4.0s								
YPP					IAML			18 58 13.3	
	comp=E,11nm,4.5s								
YHL	**Hebgen Lake**	**4.55**	**293**	Pn		**Pn**		**18 56 41.0**	**+1.9**
YHL					IAML			18 58 18.4	
	comp=N,11nm,3.9s								
BSUT	**Blindstream Ca**	**4.92**	**238**	Pn		**Pn**		**18 56 45.9**	**+1.7**
BSUT					IAML			18 57 21.0	
	comp=E,5.8nm,4.1s								
HWUT	**Hardware Ranch**	**4.94**	**253**	Pn		**Pn**		**18 56 46.7**	**+2.3**
HWUT					IAML			18 58 07.6	
	comp=E,7.0nm,4.2s								
I10CA	**LAC DU BONNET**	**9.40**	**39**	I		I		19 50 30.0	
	baz=223,slow=296,SNR=0.4								
ULM	**Lac du Bonnet**	**9.51**	**39**	Pn		**Pn**		**18 57 47.0**	**+0.2**
	comp=E,0.1nm,0.3s,baz=232,slow=17,SNR=1.3								
ULM				Lg		Lg		19 00 21.1	
	comp=E,0.1nm,0.3s,baz=71,slow=7.8,SNR=1.3 comp=E,0.5nm,0.4s								

CATAC ***28*** *19:05:26.1±0.5, 13°N±4°×9°2W±°, h10km, M3.8/25, MLv3.8/25, Error ellipse: s-maj=9.2km s-min=2.8km az=36.9, confirmed*

SNET ***28*** *19:05:32.7±1.9, 13.70N×91.35W, h17km, ML3.6, Presumed earthquake*

GCG ***28*** *19:05:33.2±1.4, 13.70N×91.45W, h45km±42km, MD3.9, ML3.9, Presumed earthquake*

ISC 28 19:05:17.7±2.5, 12.8N±0.1°×91.71W±0.07°, h8km±11km, n47, σ1s54/59, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
ESSJ	**San Jos, E**	**1.40**	**57**	*i*	P	**Pg**		**19 05 46.6**	**+2.0**
STG5	**El Palmar, Qui**	**1.63**	**13**	*i*	P	**Pg**		**19 05 50.6**	**+1.6**
STG2	**El Palmar, Qui**	**1.66**	**11**	*i*	P	**Pg**		**19 05 51.3**	**+1.9**
STG2					IAML			19 06 12.2	
	comp=E,4μm,0.3s								
STG8	**El Palmar, Qui**	**1.67**	**12**	*i*	P	**Pg**		**19 05 51.6**	**+1.7**
RTAL	**Retalhuleu**	**1.71**	**1**		P	**Pn**		**19 05 48.6**	**+0.7**
RTAL					S	**Sn**		**19 06 04.5**	**-5.4**
FG8	**Yepocapa, Chim**	**1.83**	**38**	*i*	P	**Pn**		**19 05 49.5**	**-0.1**
FG16	**Alotenango, Sa**	**1.87**	**39**	*i*	P	**Pn**		**19 05 50.4**	**+0.2**
PCG5	**San Vicente Pa**	**1.91**	**43**	*e*	P	**Pn**		**19 05 51.2**	**+0.4**
FAME	**Alcaldia de Sa**	**1.95**	**58**		P	**Pg**		**19 05 56.1**	**+1.0**
SOKI	**Kika Raxquin**	**2.03**	**9**	*i*	P	**Pn**		**19 05 53.6**	**+1.0**
SMCA	**Catarina**	**2.07**	**350**	*i*	P	**Pb**		**19 05 55.2**	**-0.4**
LOAL	**Lomas de Alarc**	**2.22**	**58**		P	**Pg**		**19 06 00.2**	**-0.1**
SLOZ	**Alcaldia de Sa**	**2.24**	**57**		P	**Pg**		**19 06 00.2**	**-0.4**
SLOZ	**Alcaldia de Sa**	**2.24**	**57**	*e*	P	**Pg**		**19 06 01.7**	**+1.1**
CEVE	**Cerro Verde**	**2.27**	**63**		P	**Pg**		**19 06 01.1**	**-0.2**
CEVE	**Cerro Verde**	**2.27**	**63**	*e*	P	**Pg**		**19 06 01.0**	**-0.4**
SNJE	**San Jose**	**2.31**	**63**	*e*	P	**Pg**		**19 06 01.4**	**-0.6**
JAYA	**Jayaque - finc**	**2.36**	**69**		P	**Pg**		**19 06 03.3**	**+0.3**
JAYA	**Jayaque - finc**	**2.36**	**69**	*i*	P	**Pg**		**19 06 03.5**	**+0.5**
JAYA	**Jayaque - finc**	**2.36**	**69**	*e*	P	**Pg**		**19 06 03.3**	**+0.3**
UNIC	**Universidad Ca**	**2.41**	**61**		P	**Pg**		**19 06 03.8**	**-0.2**
LALI	**Alcalda de L**	**2.43**	**73**		P	**Pg**		**19 06 04.5**	**+0.2**
LALI					S	**Sg**		**19 06 35.5**	**-0.3**
CEDA	**San Andres**	**2.47**	**66**		P	**Pg**		**19 06 04.7**	**-0.3**
APG	**El Apazote**	**2.50**	**29**	*i*	P	**Pn**		**19 06 01.4**	**+2.4**
PMON	**Piamonte**	**2.50**	**69**		P	**Pg**		**19 06 05.5**	**-0.3**
PMON					S	**Sg**		**19 06 36.3**	**-1.9**
PMON	**Piamonte**	**2.50**	**69**	*e*	P	**Pg**		**19 06 06.1**	**+0.3**
PMON				*e*	S	**Sn**		**19 06 34.4**	**+0.7**
HUEH	**Huehuetenango**	**2.51**	**5**		P	**Pn**		**19 06 00.5**	**+1.5**
UEES	**Universidad Ev**	**2.57**	**69**		P	**Pg**		**19 06 06.1**	**-1.0**
UEES					S	**Sb**		**19 06 38.2**	**+2.1**
UTEC	**Universidad Te**	**2.60**	**70**		P	**Pg**		**19 06 06.5**	**-1.2**
IGN	**Direccin Gen**	**2.64**	**70**		P	**Pg**		**19 06 06.9**	**-1.4**
MTO3	**Montecristo**	**2.78**	**55**		P	**Pb**		**19 06 07.8**	**-0.1**
MTO3	**Montecristo**	**2.78**	**55**	*e*	P	**Pb**		**19 06 07.1**	**-0.8**
MTO3	**Montecristo**	**2.78**	**55**	*e*	P	**Pb**		**19 06 07.2**	**-0.8**
PAVA	**Las Pavas**	**2.85**	**71**	*e*	P	**Pg**		**19 06 11.3**	**-1.1**
COEG	**Centro de Oper**	**2.88**	**73**		P	**Pg**		**19 06 11.9**	**-1.0**
COEG					S	**Sb**		**19 06 46.3**	**+1.5**
COEG	**Centro de Oper**	**2.88**	**73**	*e*	P	**Pg**		**19 06 11.6**	**-1.3**
COEG				*e*	S	**Sn**		**19 06 41.5**	**+2.7**
ESQI	**Esquipulas**	**2.89**	**53**		P	**Pb**		**19 06 08.8**	**-0.8**
SCLA	**Alcaldia de Sa**	**3.04**	**73**		P	**Pb**		**19 06 12.5**	**+0.4**
PACA	**Pacayal**	**3.37**	**78**		P	**Pb**		**19 06 17.8**	**0.0**
PACA					S	**Sb**		**19 06 59.3**	**+0.3**
RANC	**El Ranchito**	**3.40**	**79**		P	**Pb**		**19 06 19.4**	**+1.2**
SARH	**Santa Rosa de**	**3.47**	**55**		P	**Pb**		**19 06 17.0**	**-2.6**
SARH					S	**Sn**		**19 06 56.5**	**+2.9**
SARH	**Santa Rosa de**	**3.47**	**55**	*i*	P	**Pb**		**19 06 17.0**	**-2.6**
CCIG	**Comitan**	**3.48**	**353**		P	**Pn**		**19 06 14.1**	**+1.7**
CCIG					S	**Sn**		**19 06 50.6**	**-3.3**
CNCH	**Conchagua**	**3.81**	**83**		P	**Pb**		**19 06 25.7**	**+0.4**
CNCH					S	**Sb**		**19 07 11.0**	**-0.7**
MARCA	**Marcala la Paz**	**3.82**	**69**		P	**Pb**		**19 06 23.5**	**-2.0**
CSGN	**Cosiguina Volc**	**4.05**	**87**		P	**Pb**		**19 06 28.1**	**-1.4**
CSGN					S	**Sb**		**19 07 18.1**	**-0.7**
POTN	**Potosi Cosigui**	**4.11**	**87**		P	**Pb**		**19 06 29.4**	**-0.9**

IDC ***28*** *19:28:49.0±3.6, 16.72S×174.60W, h144km±29km, mb3.5/4, mbtmp4.0/5, Error ellipse: s-maj=125.9km s-min=22.4km az=147.0*

NEIC ***28*** *19:28:49.1±2.3, 16.73S±0.05°×174.6W±0.1°, h135km±8km, mb4.3/9, Error ellipse: s-maj=17.3km s-min=6.3km az=77.0*

ISC 28 19:28:49.2±0.6, 16.68S±0.08°×174.49W±0.08°, h150km, n20, σ1s10/24, mb4.1/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
AFI	**Afiamalu**	**3.80**	**44**		P	**Pn**		**19 29 48.0**	**+1.1**
	47nm,0.3s,baz=240,slow=5.0,SNR=24								
AFI					S	**Sn**		**19 30 29.7**	**-2.1**
	265nm,0.4s,baz=10,slow=17,SNR=20								
NIUE	**Niue**	**4.96**	**119**	Pn		**Pn**		**19 30 02.9**	**+0.9**
NIUE				Sn		**Sn**		**19 30 56.7**	**-2.1**
BKZ	**Black Stump Fm**	**23.75**	**198**	P		**P**		**19 33 46.2**	**-1.5**
BKZ					IAmb	IAmb		19 34 10.8	
	comp=Z,18nm,1.2s								
COEN	**Coen**	**40.86**	**268**	P		**P**		**19 36 16.0**	**-0.7**
COEN					IAmb	IAmb		19 36 26.7	
	comp=Z,12nm,1.4s								
STKA	**Stephens Creek**	**42.49**	**241**	P		**P**		**19 36 29.7**	**0.0**
	comp=Z,2.8nm,0.6s,baz=87,slow=11,SNR=5.4 comp=Z,2.8nm,0.6s								
WR0	**Warramunga Arr**	**48.35**	**258**	P		**P**		**19 37 16.3**	**+0.3**
WR0					IAmb	IAmb		19 37 20.0	
	comp=Z,4.7nm,1.2s								
WRA	**Warramunga Arr**	**48.54**	**258**	P		**P**		**19 37 16.4**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=95,slow=6.8,SNR=18								
WRA				PcP		**PcP**		**19 38 41.0**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=94,slow=3.5,SNR=2.9 comp=Z,0.3nm,0.5s								
WRA	**Warramunga Arr**	**48.54**	**258**	P		**P**		**19 37 16.8**	**-0.7**
AS31	**Alice Springs**	**48.72**	**253**	P		**P**		**19 37 18.1**	**-0.8**
ASAR	**Alice Springs**	**48.72**	**253**	P		**P**		**19 37 18.4**	**-0.5**
	comp=Z,2.9nm,0.5s,baz=89,slow=8.4,SNR=102								
ASAR				PcP		**PcP**		**19 38 41.6**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=90,slow=3.1,SNR=2.9 comp=Z,2.9nm,0.5s								
ASAR	**Alice Springs**	**48.72**	**253**	P		**P**		**19 37 17.8**	**-1.1**
KNRA	**Kununurra**	**54.34**	**262**	P		**P**		**19 37 59.5**	**-1.2**
SOEI	**Soe**	**59.83**	**268**	P		**P**		**19 38 39.5**	**+0.1**
SBA	**Scott Base**	**61.90**	**184**	P		**P**		**19 38 54.3**	**+2.1**
SBA					IAmb	IAmb		19 39 06.6	
	comp=Z,4.6nm,1.5s								
QSPA	**South Pole Qui**	**73.37**	**180**	P		**P**		**19 40 04.8**	**+0.4**
QSPA					IAmb	IAmb		19 40 21.2	
	comp=Z,5.4nm,1.4s								
PDAR	**Pinedale Array**	**83.92**	**42**	P		**P**		**19 41 03.1**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=215,slow=4.9,SNR=3.8 comp=Z,0.3nm,0.6s								
PDAR	**Pinedale Array**	**83.92**	**42**	P		**P**		**19 41 03.0**	**+0.4**
BUR08	**Bucovina Ar. S**	**145.12**	**337**	PKPbc		**PKPdf**		**19 48 09.8**	**+0.8**
BURAR	**Bucovina Array**	**145.14**	**336**	PKPbc		**PKPab**		**19 48 09.9**	**+0.9**
BRTR	**Keskin Array B**	**146.45**	**319**	PKPbc		**PKPab**		**19 48 13.8**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=55,slow=1.9,SNR=4.0								

IDC ***28*** *19:49:13.1±0.8, 49.11N×158.37E, h0km, mb3.9/9, mbtmp3.8/10, ML3.3/1, MS3.3/1, Error ellipse: s-maj=28.2km s-min=19.9km az=124.0*

KRSC ***28*** *19:49:15.6±1.0, 49.29N×158.40E, h38km±21km, Ml4.1*

ISC 28 19:49:18.5±0.9, 49.21N±0.08°×158.22E±0.08°, h35km, n37, σ0s77/42, mb3.8/9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
SKR	**Severo-Kuril's**	**2.00**	**318**	*e*	P	**Pn**		**19 49 48.6**	**-1.2**
SKR				*e*	S	**Sn**		**19 50 12.7**	**-0.9**
PAU	**Pauzhetka**	**2.43**	**339**	*e*	P	**Pn**		**19 49 55.0**	**-0.7**
PAU				*e*	S	**Sn**		**19 50 24.4**	**+0.2**
KDTR	**Khodutka, Kamc**	**2.60**	**358**	*e*	P	**Pn**		**19 49 56.7**	**-1.3**
KDTR				*e*	S	**Sn**		**19 50 27.0**	**-1.4**
ASAK	**Asacha**	**3.18**	**356**	*e*	P	**Pn**		**19 50 06.0**	**-0.1**
ASAK				*e*	S	**Sn**		**19 50 42.8**	**0.0**
MIPR	**Malaya Ipel'ka**	**3.21**	**344**	*e*	P	**Pn**		**19 50 06.6**	**+0.2**
MIPR				*e*	S	**Sn**		**19 50 44.1**	**+0.8**
RUS	**Russkaya**	**3.23**	**3**	*e*	P	**Pn**		**19 50 06.2**	**-0.5**
RUS				*e*	S	**Sn**		**19 50 43.7**	**-0.2**
MTVR	**Mutnovka**	**3.28**	**360**	*e*	P	**Pn**		**19 50 07.2**	**-0.3**
MTVR				*e*	S	**Sn**		**19 50 45.0**	**-0.3**
GRL	**Gorelyy**	**3.35**	**358**	*e*	P	**Pn**		**19 50 08.3**	**-0.1**
GRL				*e*	S	**Sn**		**19 50 46.5**	**-0.5**
KRMR	**Karymshinskiy**	**3.62**	**359**	*e*	P	**Pn**		**19 50 12.2**	**+0.1**
KRMR				*e*	S	**Sn**		**19 50 54.0**	**+0.4**
APC	**Apacha**	**3.78**	**350**	*e*	P	**Pn**		**19 50 14.9**	**+0.7**
PET	**Petropavlovsk**	**3.83**	**4**	*e*	P	**Pn**		**19 50 14.8**	**-0.1**
PET				*e*	S	**Sn**		**19 50 58.2**	**-0.4**
DALK	**Dalny**	**3.84**	**5**	*e*	P	**Pn**		**19 50 14.9**	**-0.1**
DALK				*e*	S	**Sn**		**19 50 58.6**	**-0.3**
UGLR	**Uglovaya**	**4.02**	**5**	*e*	P	**Pn**		**19 50 17.9**	**+0.2**
SPN	**Mys Shipunski**	**4.05**	**16**	*e*	P	**Pn**		**19 50 17.8**	**-0.1**
SPN				*e*	S	**Sn**		**19 51 03.2**	**-1.0**
AVH	**Avacha**	**4.07**	**4**	*e*	P	**Pn**		**19 50 18.9**	**+0.6**
SMAR	**Somma**	**4.07**	**5**	*e*	P	**Pn**		**19 50 19.1**	**+0.6**
SDLR	**Sedlovina**	**4.09**	**6**	*e*	P	**Pn**		**19 50 19.2**	**+0.5**
KOK	**Koryaka**	**4.09**	**4**	*e*	P	**Pn**		**19 50 19.7**	**+1.0**
KRER	**Koryakskii**	**4.11**	**4**	*e*	P	**Pn**		**19 50 19.8**	**+0.8**
KRX	**Arik**	**4.16**	**4**	*e*	P	**Pn**		**19 50 20.4**	**+0.8**
KLR	**Kul'dur**	**17.27**	**280**		P	**P**		**19 53 18.6**	**+0.7**
	0.1nm,0.3s,baz=82,slow=14,SNR=2.6 1.0nm,0.7s								
H11N2	**WAKE ISLAND Hy**	**30.23**	**164**		T	T		20 27 12.4	
	baz=352								
H11N3	**WAKE ISLAND Hy**	**30.24**	**164**		T	T		20 27 06.6	
	baz=352								
H11N1	**WAKE ISLAND Hy**	**30.24**	**164**		T	T		20 27 11.7	
	baz=352								
H11S1	**WAKE ISLAND Hy**	**31.39**	**164**		T	T		20 28 33.6	
	baz=349,slow=76,SNR=5.3								
H11S3	**WAKE ISLAND Hy**	**31.40**	**164**		T	T		20 28 34.8	
	baz=349,slow=76,SNR=5.0								
H11S2	**WAKE ISLAND Hy**	**31.40**	**164**		T	T		20 28 35.5	
	baz=349,slow=76,SNR=4.6								
ILAR	**Eielson Array**	**32.46**	**41**		P	**P**		**19 55 43.4**	**-1.7**
	0.2nm,0.6s,baz=277,slow=8.9,SNR=2.6 0.2nm,0.6s								
TLY	**Talaya**	**34.16**	**295**		LR	LR		20 10 24.3	
	comp=Z,56nm,21.6s,baz=331,slow=37								
YKA	**Yellowknife Ar**	**46.87**	**39**		P	**P**		**19 57 43.9**	**-0.8**
	0.2nm,0.6s,baz=300,slow=8.5,SNR=4.7 0.2nm,0.6s								
MKAR	**Makanchi Array**	**48.85**	**298**		P	**P**		**19 57 59.8**	**-0.4**
	0.9nm,1.0s,baz=96,slow=12,SNR=5.4 0.9nm,1.0s								
KURBB	**Kurchatov Arra**	**48.95**	**304**		P	**P**		**19 58 02.5**	**+1.6**
	0.5nm,0.2s,baz=61,slow=7.9,SNR=1.3 0.5nm,0.2s								
SPITS	**Spitsbergen Ar**	**50.77**	**351**		P	**P**		**19 58 15.6**	**+1.1**
	12nm,1.1s,baz=23,slow=7.8,SNR=1.6 12nm,1.1s								
WRA	**Warramunga Arr**	**72.05**	**204**		P	**P**		**20 00 38.2**	**-0.7**
	3.3nm,0.7s,baz=20,slow=6.3,SNR=24 3.3nm,0.7s								
FITZ	**Fitzroy Crossi**	**72.99**	**212**		P	**P**		**20 00 44.1**	**-0.3**
	2.5nm,0.8s,baz=6.2,slow=6.8,SNR=3.2 2.5nm,0.8s								
TXAR	**Lajitas Array**	**73.31**	**64**		P	**P**		**20 00 47.8**	**+1.3**
	0.5nm,0.8s,baz=317,slow=7.5,SNR=4.4 0.5nm,0.8s								
ASAR	**Alice Springs**	**75.72**	**203**		P	**P**		**20 01 00.4**	**+0.1**
	0.7nm,0.7s,baz=16,slow=5.3,SNR=10 0.7nm,0.7s								

IDC ***28*** *19:52:06.0±6.5, 36.38N×70.42E, h183km±61km, mb3.1/5, mbtmp3.8/9, Error ellipse: s-maj=52.1km s-min=20.7km az=26.0*

NNC ***28*** *19:52:13.9±2.7, 37.00N×70.26E, h205km±32km, mb2.8, mpv3.7, Error ellipse: s-maj=25.0km s-min=14.8km az=26.0*

ISC 28 19:52:07.6±0.8, 36.52N±0.07°×70.47E±0.09, h204km, n29, σ2s06/38, mb3.1/4, 6C, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
TSSA	**Tissa**	**5.95**	**127**	*e*	P	**Pn**		**19 53 35.8**	**+1.4**
TSSA				*e*	S	**S**		**19 54 40.9**	**-1.9**
TSSA					IAML			19 54 43.8	
	comp=E,107nm,0.4s								
TSSA					IAML			19 54 45.2	
	comp=N,96nm,0.3s								
THN	**Thein Dam**	**5.96**	**131**	*e*	P	**Pn**		**19 53 35.6**	**+1.1**
THN				*e*	S	**S**		**19 54 42.5**	**-0.5**
THN					IAML			19 54 43.8	
	comp=E,85nm,0.5s								
THN					IAML			19 54 43.8	
	comp=N,74nm,0.6s								
DHRM	**DHARAMSHALA**	**6.43**	**130**	*e*	P	**Pn**		**19 53 41.9**	**+1.2**
DHRM				*e*	S	**S**		**19 54 52.4**	**-1.8**
DHRM					IAML			19 54 54.1	
	comp=E,105nm,0.6s								
DHRM					IAML			19 54 54.1	
	comp=N,104nm,0.3s								
UCH	**Uchtor**	**6.50**	**28**		P	**Pn**		**19 53 43.3**	**+1.6**
	SNR=17								
KK31	**Karatay Array**	**6.

RLMT	**Red Lodge**	**3.20**	**297**		**Pn**	**19 59 25.8**	**+0.1**
RLMT				IAML		20 00 14.4	
	68nm,0.3s						
RLMT				IAML		20 00 22.1	
	57nm,0.4s						
BW06	**Boulder Array**	**3.30**	**254**		**Pn**	**19 59 26.9**	**-0.2**
BW06				IAML		20 00 13.4	
	46nm,0.3s						
BW06				IAML		20 00 15.2	
	63nm,0.4s						
PD31	**Pinedale Array**	**3.30**	**254**		**Pn**	**19 59 27.2**	**+0.1**
PDAR	**Pinedale Array**	**3.30**	**254**	Pn	**Pn**	**19 59 27.1**	**+0.1**
	8.2nm,0.3s,baz=70,slow=16,SNR=105						
PDAR				Lg	Lg	20 00 07.3	
	20nm,0.3s,baz=68,slow=31,SNR=10						
	7.8nm,0.3s						
PDAR	**Pinedale Array**	**3.30**	**254**		**Pn**	**19 59 27.3**	**+0.1**
HAYD	**Hayden**	**3.55**	**206**		**Pn**	**19 59 31.5**	**+1.0**
HAYD				IAML		20 00 56.2	
	comp=N,71nm,1.1s						
HAYD				IAML		20 00 56.8	
	comp=E,58nm,1.1s						
YNE	**Yellowstone No**	**3.65**	**292**		**Pn**	**19 59 31.6**	**-0.3**
YNE				IAML		20 00 27.6	
	comp=N,59nm,0.4s						
YNE				IAML		20 00 27.6	
	comp=E,69nm,0.3s						
OGNE	**Ogallala**	**3.67**	**139**		**Pn**	**19 59 33.5**	**+1.5**
YMP	**Mirror Lake PI**	**3.67**	**287**		**Pn**	**19 59 32.1**	**-0.2**
LOHW	**Long Hollow**	**3.90**	**270**		**Pn**	**19 59 35.2**	**0.0**
LOHW				IAML		20 00 41.1	
	comp=E,26nm,1.0s						
H17A	**Grant Village**	**3.90**	**281**		**Pn**	**19 59 35.8**	**+0.4**
H17A				IAML		20 00 38.7	
	comp=N,28nm,1.6s						
ISCO	**Idaho Springs**	**3.95**	**184**		**Pn**	**19 59 36.9**	**+0.9**
ISCO				IAML		20 00 42.9	
	comp=N,31nm,1.4s						
FLWY	**Flagg Ranch**	**3.96**	**277**		**Pn**	**19 59 36.1**	**0.0**
FLWY				IAML		20 00 54.5	
	comp=N,62nm,2.1s						
MOOW	**Moose Ponds**	**3.99**	**272**		**Pn**	**19 59 37.5**	**+0.9**
SNOW	**Snow King Moun**	**4.02**	**268**		**Pn**	**19 59 37.8**	**+0.8**
SNOW				IAML		20 00 57.7	
	comp=N,37nm,1.9s						
SNOW				IAML		20 01 04.0	
	comp=N,36nm,1.4s						
YNR	**Norris Junctio**	**4.03**	**286**		**Pn**	**19 59 38.6**	**+1.4**
FXWY	**Fox Creek**	**4.20**	**271**		**Pn**	**19 59 39.8**	**+0.3**
O20A	**White River Ci**	**4.24**	**213**		**Pn**	**19 59 40.1**	**+0.1**
E28A	**Huff**	**4.29**	**47**		**Pn**	**19 59 41.6**	**+1.2**
AHID	**Auburn Hatcher**	**4.39**	**259**		**Pn**	**19 59 42.3**	**+0.2**
AHID				IAML		20 00 55.0	
	comp=N,32nm,1.8s						
AHID				IAML		20 01 04.9	
	comp=N,33nm,0.9s						
YHB	**Horse Butte**	**4.40**	**285**		**Pn**	**19 59 42.0**	**-0.1**
YHB				IAML		20 00 54.0	
	comp=E,22nm,0.8s						
RDMU	**Red Mountain**	**4.52**	**227**	Pn	**Pn**	**19 59 45.2**	**+1.4**
RDMU				IAML		20 01 00.1	
	comp=E,33nm,1.1s						
RDMU				IAML		20 01 00.4	
	comp=N,34nm,1.1s						
Q24A	**Divide**	**4.77**	**179**		**Pn**	**19 59 47.4**	**0.0**
Q24A				IAML		20 01 08.6	
	comp=N,21nm,0.4s						
BOZ	**Bozeman (W)**	**4.92**	**294**		**Pn**	**19 59 48.6**	**-0.7**
BOZ				IAML		20 01 07.1	
	comp=N,16nm,2.1s						
KSCO	**Kaye Shedlock'**	**5.12**	**157**		**Pn**	**19 59 52.7**	**+0.7**
HWUT	**Hardware Ranch**	**5.13**	**248**		**Pn**	**19 59 52.1**	**-0.1**
HWUT				IAML		20 01 21.4	
	comp=N,22nm,0.9s						
TCUT	**Toone Canyon**	**5.26**	**242**		**Pn**	**19 59 54.0**	**-0.1**
EGMT	**Eagleton**	**5.32**	**325**		**Pn**	**19 59 55.8**	**+1.2**
LRM	**Limekiln Ridge**	**5.54**	**295**		**Pn**	**19 59 57.2**	**-0.7**
P18A	**Preston Nutter**	**5.56**	**224**		**Pn**	**19 59 58.2**	**0.0**
MCMT	**McKenzie Canyo**	**5.57**	**284**		**Pn**	**19 59 58.6**	**+0.3**
MDND	**Maddock**	**5.69**	**42**		**Pn**	**20 00 00.2**	**+0.5**
BGNE	**Belgrade**	**5.73**	**112**	Pn	**Pn**	**20 00 00.2**	**-0.1**
SPUT	**South Promonto**	**5.86**	**248**		**Pn**	**20 00 02.5**	**+0.4**
PV07	**Paradox Valley**	**5.89**	**207**		**Pn**	**20 00 03.0**	**+0.3**
BCYI	**Bear Canyon**	**5.92**	**278**		**Pn**	**20 00 03.6**	**+0.6**
PV15	**Paradox Valley**	**5.92**	**206**		**Pn**	**20 00 03.5**	**+0.3**
SDCO	**Great Sand Dun**	**5.99**	**182**		**Pn**	**20 00 04.7**	**+0.5**
SRU	**San Rafael Swe**	**6.10**	**222**		**Pn**	**20 00 04.8**	**-0.7**
ECSD	**EROS Data Cent**	**6.25**	**87**		**Pn**	**20 00 08.7**	**+1.3**
ELK	**Elko**	**8.00**	**251**	Pn	**Pn**	**20 00 31.8**	**+0.1**
	comp=N,0.4nm,0.3s,baz=87,slow=11,SNR=7.2						
ELK				Lg	Lg	20 02 32.9	
	baz=95,slow=18,SNR=1.2						
	comp=N,0.7nm,0.3s						
I10CA	**LAC DU BONNET**	**9.02**	**41**	I	I	20 52 33.9	
	baz=225,slow=286						
ULM	**Lac du Bonnet**	**9.12**	**41**	Pn	**Pn**	**20 00 46.2**	**-0.5**
	comp=N,1.3nm,0.3s,baz=232,slow=17,SNR=14						
ULM				Lg	Lg	20 03 17.4	
	comp=N,0.5nm,0.3s,baz=135,slow=19,SNR=4.2						
	comp=N,2.0nm,0.3s						
TXAR	**Lajitas Array**	**14.43**	**174**	Lg	Lg	20 06 10.9	
	comp=N,0.1nm,0.3s,baz=359,slow=25,SNR=3.0						
FINES	**FINESS Array B**	**68.02**	**23**	P	**P**	**20 09 34.7**	**+0.1**
	comp=N,3.2nm,1.0s,baz=323,slow=6.0,SNR=4.3						
	comp=N,3.2nm,1.0s						
AKASG	**Malin Array Be**	**77.94**	**28**	P	**P**	**20 10 33.1**	**-0.4**
	comp=N,0.2nm,0.3s,baz=331,slow=5.2,SNR=4.6						
	comp=N,0.2nm,0.3s						

IDC 28 20:00:32.7±4.1, 8°73'S×120°26'E, h181km±23km, mb3.5/1, mbtmp3.6/5, Error ellipse: s-maj=55.5km s-min=35.9km az=27.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.66**	**114**	P	Pn	20 01 29.2	-0.4
	10nm,0.4s,baz=306,slow=9.5,SNR=11						
BATI				S	Sn	20 02 14.6	+0.4
	12nm,0.3s,baz=58,slow=20,SNR=7.8						
FITZ	**Fitzroy Crossi**	**10.68**	**151**	P	Pn	20 03 01.5	+0.3
	1.7nm,1.0s,baz=346,slow=8.3,SNR=1.8						
FITZ				S	S	20 05 00.8	+0.1
	0.5nm,0.4s,baz=4.7,slow=23,SNR=6.7						
WRA	**Warramunga Arr**	**17.60**	**131**	P	P	20 04 25.4	-0.2
	0.2nm,0.3s,baz=309,slow=12,SNR=20						
WRA				S	S	20 07 39.6	+0.3
	0.2nm,0.4s,baz=301,slow=22,SNR=4.8						
ASAR	**Alice Springs**	**19.78**	**140**	P	P	20 04 49.9	+0.7
	0.6nm,0.4s,baz=318,slow=8.6,SNR=37						
STKA	**Stephens Creek**	**30.39**	**142**	P	P	20 06 27.5	-0.4
	1.1nm,0.5s,baz=342,slow=6.4,SNR=3.6						
	1.1nm,0.5s						

*NOU **28** 20:03:44.7, 15°01'S×167°31'E, h91km, mb4.6/24, Vanuatu Islands*
*IDC **28** 20:03:45.4±3.4, 15°19'S×167°21'E, h80km±30km, mb3.8/8, mbtmp4.1/10, MS3.3/1, Error ellipse: s-maj=29.6km s-min=22.5km az=80.0*

ISC 28 20:03:46.0±0.8, 15°11'S±0°08'×167°22'E±0°08, h100km, n30, σ1§61/28, mb3.9/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**2.76**	**161**	P	**Pn**	**20 04 28.6**	**0.0**
DVP	**Devils Point**	**2.76**	**161**	S	**Sn**	**20 05 01.7**	**+0.4**
RTV	**Rentapao**	**2.91**	**157**	P	**Pn**	**20 04 29.7**	**-0.8**
RTV	**Rentapao**	**2.91**	**157**	S	**Sn**	**20 05 05.0**	**+0.2**
MARNC	**Mare, Loyalty**	**6.38**	**173**	P	**Pn**	**20 05 16.5**	**-1.0**
YATNC	**Mamie plateau,**	**6.92**	**183**	P	**Pn**	**20 05 23.7**	**-1.1**
HURO	**Huro Makira**	**6.94**	**311**	P	**Pn**	**20 05 23.8**	**-1.4**
DZM	**Mont Dzumac**	**6.96**	**186**	P	**Pn**	**20 05 24.8**	**-0.7**
	41nm,0.5s,baz=42,slow=16,SNR=54						
DZM				S	**Sn**	**20 06 40.8**	**-2.4**
	32nm,0.5s,baz=314,slow=23,SNR=6.5						
ONTNC	**Ouen Toro**	**7.20**	**186**	P	**Pn**	**20 05 28.0**	**-0.6**
NGOA	**Tingoa Renbel**	**7.81**	**296**	P	**Pn**	**20 05 35.4**	**-1.6**
HNR	**Honiara**	**9.07**	**308**	P	**Pn**	**20 05 53.5**	**-0.7**
	2.5nm,0.6s,baz=312,slow=1.9,SNR=4.4						
HNR				S	**Sn**	**20 07 30.0**	**-4.6**
	1.9nm,0.9s,baz=342,slow=4.8,SNR=1.6						
SAVO	**Savo Central**	**9.36**	**308**	P	**Pn**	**20 05 58.7**	**+0.7**
MSVF	**Nonsavu**	**10.71**	**106**	P	Pn	20 06 26.3	+10
	18nm,0.9s,baz=268,slow=12,SNR=9.1						
MSVF	**Nonsavu**	**10.71**	**106**	P	**Pn**	**20 06 14.9**	**-1.6**
PMG	**Port Moresby**	**20.40**	**284**	P	**P**	**20 08 16.4**	**+1.3**
	14nm,0.9s,baz=98,slow=10,SNR=4.7						
	14nm,0.9s						
CTA	**Charters Tower**	**20.58**	**253**	P	Pn	20 08 18.8	-1.5
	7.0nm,0.8s,baz=63,slow=10,SNR=5.9						
	7.0nm,0.8s						
CTAO	**Charters Tower**	**20.58**	**253**	P	**P**	**20 08 18.0**	**+0.9**
RMQ	**Roma**	**20.61**	**234**	P	**P**	**20 08 17.6**	**+0.3**
MTSU	**Mount Surprise**	**22.15**	**259**	P	**P**	**20 08 34.8**	**+1.0**
STKA	**Stephens Creek**	**28.71**	**230**	LR	LR	20 19 39.7	
	comp=Z,59nm,19.5s,baz=235,slow=33						
WRAB	**Tennant Creek**	**31.68**	**256**	P	**P**	**20 10 00.3**	**+0.1**
WRA	**Warramunga Arr**	**31.69**	**256**	P	**P**	**20 09 59.9**	**-0.5**
	1.8nm,0.8s,baz=86,slow=8.9,SNR=16						
	1.8nm,0.8s						
ASAR	**Alice Springs**	**32.49**	**250**	P	**P**	**20 10 07.8**	**+0.5**
	3.8nm,1.0s,baz=81,slow=9.0,SNR=18						
	3.8nm,1.0s						
FITZ	**Fitzroy Crossi**	**39.90**	**260**	P	**P**	**20 11 11.7**	**+1.2**
	5.0nm,0.7s,baz=81,slow=8.4,SNR=21						
	5.0nm,0.7s						
MEEK	**Meekatharra**	**46.59**	**248**	P	**P**	**20 12 05.4**	**+1.1**
TOLI2	**Tolitoli**	**48.66**	**285**	P	**P**	**20 12 20.5**	**+0.1**
CMAR	**Chiang Mai Arr**	**75.06**	**294**	P	**P**	**20 15 21.1**	**+3.7**
	0.5nm,0.6s,baz=122,slow=4.2,SNR=5.2						
	0.5nm,0.6s						
OHAK	**Old Harbor**	**79.16**	**21**	P	**P**	**20 15 37.6**	**-1.8**
ILAR	**Eielson Array**	**86.90**	**18**	P	**P**	**20 16 20.8**	**+1.6**
	0.3nm,0.6s,baz=235,slow=6.3,SNR=6.6						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**97.44**	**316**	P	Pdif	20 17 09.6	+1.0
	0.2nm,0.6s,baz=95,slow=6.1,SNR=3.7						
	0.2nm,0.6s						

*SFS **28** 20:16:51.0, 36°76'N×5°16'W, h5km, ML2.8/8, ML3.0/8, MLv2.8/8*
*IGIL **28** 20:16:52.7, 36°81'N×5°07'W, h20km*
*MDD **28** 20:16:53.2±0.3, 36°81'N×5°07'W, h20km, mb_Lg2.7/17, Error ellipse: s-maj=2.6km s-min=1.5km az=174.0*
*INMG **28** 20:16:53.2±2.1, 36°78'N×5°08'W, h22km±3km, ML2.4, Error ellipse: s-maj=3.5km s-min=2.2km az=179.0, #DIST_RANGE: REGIONAL #IPMA_REGION: W Malaga (ESP)*
*CNRM **28** 20:16:54.4, 36°46'N×5°32'W, h76km, ML2.1*
ISC 28 20:16:50.2±1.1, 36°76'N±0°02'×5°08'W±0°01, h17km±9km, n64, σ1§52/141, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
E1302	**La Puebla de C**	**0.40**	**341**	Pg	**Pn**	**20 17 01.5**	**+0.3**
E1302				Sg	**Sb**	**20 17 06.3**	**+1.6**
E1302				*i* lVmb_Lg		20 17 12.2	
EJIF	**Jimena Fronter**	**0.44**	**226**	Pg	**Pn**	**20 17 01.6**	**-0.2**
EJIF				Sg	**Sn**	**20 17 10.0**	**+0.6**
EMAL	**Malaga-Limoner**	**0.53**	**89**	Pg	**Pb**	**20 17 01.5**	**+0.5**
EMAL				Sg	**Sb**	**20 17 09.9**	**+1.6**
ESPR	**Espera**	**0.63**	**280**	Pg	**Pn**	**20 17 06.4**	**+2.0**
ESPR				Sg	**Sn**	**20 17 15.4**	**+1.3**
ESPR				*i* lVmb_Lg		20 17 20.3	
EGOR	**Sierra Gorda,**	**0.85**	**65**	Pg	**Pn**	**20 17 07.9**	**+0.2**
EGOR				Sg	**Sn**	**20 17 21.5**	**+1.6**
EGOR	**Sierra Gorda,**	**0.85**	**65**	Pg	**Pn**	**20 17 08.5**	**+0.9**
EGOR				Sg	**Sn**	**20 17 20.9**	**+1.0**
EGOR				*i* lVmb_Lg		20 17 25.5	
SMIR	**Smir Dam**	**1.10**	**193**	P	**Pb**	**20 17 10.9**	**+0.1**
ELGU	**Los Guajares,**	**1.17**	**84**	Pg	**Pn**	**20 17 12.4**	**+0.4**
ELGU				Sg	**Sn**	**20 17 29.4**	**+1.8**
ELGU	**Los Guajares,**	**1.17**	**84**	Pg	**Pn**	**20 17 12.5**	**+0.6**
ELGU				Sg	**Sn**	**20 17 30.0**	**+2.4**
ELGU				*i* lVmb_Lg		20 17 31.8	
ECAB	**El Cabril**	**1.34**	**349**	Pg	**Pg**	**20 17 16.2**	**+0.1**
ECAB				Sg	**Sg**	**20 17 33.5**	**-0.1**
ECAB	**El Cabril**	**1.34**	**349**	Pg	**Pg**	**20 17 16.3**	**+0.2**
ECAB				Sg	**Sg**	**20 17 33.7**	**+0.1**
EQUE	**Quentar**	**1.39**	**71**	Pg	**Pg**	**20 17 18.2**	**+1.2**
EQUE				Sg	**Sg**	**20 17 37.0**	**+1.9**
EQUE				*i* lVmb_Lg		20 17 39.6	
EADA	**Adamuz**	**1.46**	**16**	Pn	**Pg**	**20 17 17.8**	**-0.6**
EADA				Sn	**Sg**	**20 17 37.2**	**-0.2**
EADA	**Adamuz**	**1.46**	**16**	Pg	**Pg**	**20 17 18.6**	**+0.2**
EADA				Sg	**Sg**	**20 17 37.4**	**-0.1**
EADA				*i* lVmb_Lg		20 17 41.5	
EMIN	**Mina Concepcio**	**1.62**	**309**	Pg	**Pg**	**20 17 21.1**	**-0.2**
EMIN				Sg	**Sb**	**20 17 41.3**	**+1.4**
EMIN				*i* lVmb_Lg		20 17 44.0	
EBER	**Berja**	**1.77**	**85**	Pn	**Pg**	**20 17 23.7**	**-0.5**
EBER	**Berja**	**1.77**	**85**	Pg	**Pb**	**20 17 22.8**	**+0.5**
EBER				*i* lVmb_Lg		20 17 23.2	
EBER				Sg	**Sg**	**20 17 46.3**	**-0.8**
E0802	**Ubeda,Jaen**	**1.86**	**47**	Sn	**Sn**	**20 17 44.7**	**+0.2**
E0802				Sg	**Sg**	**20 17 49.5**	**-0.6**
EQES	**Quesada**	**1.91**	**56**	Pn	**Pn**	**20 17 23.0**	**+0.8**
EQES				Pg	**Pg**	**20 17 27.7**	**+0.8**
EQES				Sn	**Sn**	**20 17 45.3**	**-0.7**
EQES				Sg	**Sg**	**20 17 51.3**	**-0.5**
EQES				*i* lVmb_Lg		20 17 55.0	
EGRO	**El Granado**	**2.07**	**293**	Pn	**Pn**	**20 17 23.7**	**-0.5**
EGRO				Sn	**Sn**	**20 17 49.6**	**0.0**
EGRO	**El Granado**	**2.07**	**293**	Pn	**Pn**	**20 17 24.7**	**+0.5**
EGRO				Sn	**Sn**	**20 17 49.1**	**-0.4**
EGRO				Sg	**Sg**	**20 17 57.2**	**+0.4**
EGRO				*i* lVmb_Lg		20 18 00.8	
PBAR	**Barrancos**	**2.10**	**313**	*e*Pn	**Pn**	**20 17 26.3**	**+1.6**
PBAR				*e*Sn	**Sn**	**20 17 51.3**	**+0.8**
PBAR				*e*Sg	**Sg**	**20 17 57.5**	**-0.3**
PBAR				*i* IAML		20 18 01.7	
PBAR				*i* IAML		20 18 03.4	
PBAR				*i* IAML		20 18 05.2	
PVAQ	**Vaqueiros**	**2.20**	**288**	*e*Pn	**Pn**	**20 17 26.3**	**+0.2**
PVAQ				*e*Sn	**Sn**	**20 17 51.6**	**-1.3**
PVAQ				*e*Sg	**Sg**	**20 18 01.9**	**+0.8**
PVAQ				*i* IAML		20 18 04.8	
PVAQ				*i* IAML		20 18 05.0	
PVAQ				*i* IAML		20 18 11.0	
PVAQ	**Vaqueiros**	**2.20**	**288**	P	**Pn**	**20 17 25.9**	**-0.2**
PVAQ				S	**Sn**	**20 17 54.7**	**+1.8**
PSIM	**Granatula de C**	**2.31**	**27**	Pn	**Pn**	**20 17 29.7**	**+2.1**
PSIM				Pg	**Pb**	**20 17 32.9**	**+1.4**
PSIM				Sn	**Sn**	**20 17 55.2**	**-0.5**
PSIM				Sg	**Sb**	**20 18 01.5**	**+1.7**
ENIJ	**Nijar**	**2.32**	**84**	Pn	**Pn**	**20 17 29.7**	**+2.1**
ENIJ				Sn	**Sb**	**20 17 59.4**	**-0.5**
PBDV	**Barranco-do-Ve**	**2.33**	**283**	*e*Pn	**Pn**	**20 17 28.4**	**+0.5**
PBDV				*e*Sn	**Sn**	**20 17 56.5**	**+0.3**
PBDV				*e*Sg	**Sg**	**20 18 05.8**	**+0.6**
PBDV				*i* IAML		20 18 11.4	
PBDV				*i* IAML		20 18 14.0	
PBDV				*i* IAML		20 18 20.0	
AKLM	**AKL**	**2.45**	**156**	P	**Pn**	**20 17 28.9**	**-0.6**
AKLM				S	**Sn**	**20 17 54.5**	**-4.7**
PCVE	**Castro Verde**	**2.52**	**291**	*e*Pn	**Pn**	**20 17 30.4**	**+0.2**
PCVE				*e*Sn	**Sn**	**20 18 00.4**	**-0.3**
PCVE				*e*Sg	**Sg**	**20 18 11.1**	**0.0**
PCVE				*i* IAML		20 18 17.1	
PCVE				*i* IAML		20 18 17.9	
PCVE				*i* IAML		20 18 17.9	
PBEJ	**Beja**	**2.55**	**301**	*e*Sg	**Sg**	**20 18 11.3**	**-1.0**
PBEJ				*i* IAML		20 18 19.0	
PBEJ				*i* IAML		20 18 19.2	
PBEJ				*i* IAML		20 18 24.5	
MESJ	**Messejana**	**2.73**	**294**	*e*P	**Pn**	**20 17 33.8**	**+0.5**
MESJ	**Messejana**	**2.73**	**294**	*e*Pn	**Pn**	**20 17 33.7**	**+0.5**
MESJ				*e*Sn	**Sn**	**20 18 05.5**	**-0.3**
MESJ				*e*Sg	**Sg**	**20 18 16.1**	**-1.7**
MESJ				*i* IAML		20 18 24.9	
MESJ				*i* IAML		20 18 27.2	
MESJ				*i* IAML		20 18 30.8	
PAB	**San Pablo**	**2.84**	**12**	Pn	**Pn**	**20 17 36.4**	**+1.5**
PAB				Pg	**Pg**	**20 17 43.1**	**-1.6**
PAB				Sn	**Sn**	**20 18 06.5**	**-2.4**
PAB				Sg	**Sg**	**20 18 18.9**	**-2.7**
PAB				*i* lVmb_Lg		20 18 25.1	
PESTR	**Estremoz**	**2.89**	**317**	*e*Sn	**Sn**	**20 18 09.4**	**-0.6**
PESTR				*e*Sg	**Sg**	**20 18 22.4**	**-0.8**
PESTR				*i* IAML		20 18 26.9	
PESTR				*i* IAML		20 18 27.5	
PESTR				*i* IAML		20 18 34.8	
PESTR	**Estremoz**	**2.89**	**317**	P	**Pb**	**20 17 41.2**	**-0.2**
PESTR				S	**Sb**	**20 18 15.1**	**-1.5**
MORF	**Marmelete**	**2.91**	**282**	*e*P	**Pn**	**20 17 36.4**	**+0.6**
MORF	**Marmelete**	**2.91**	**282**	*e*Pn	**Pn**	**20 17 36.6**	**+0.8**
MORF				*e*Sn	**Sn**	**20 18 10.9**	**+0.5**
MORF				*e*Sg	**Sg**	**20 18 24.7**	**+1.0**
MORF				*i* IAML		20 18 32.2	
MORF				*i* IAML		20 18 34.1	
MORF				*i* IAML		20 18 35.8	
TAF	**Taforalt**	**2.91**	**131**	P	**Pn**	**20 17 37.4**	**+1.5**
EVO	**Evora**	**2.92**	**308**	*e*Pn	**Pn**	**20 17 37.2**	**+1.3**
EVO				*e*Sn	**Sn**	**20 18 10.9**	**+0.2**
EVO				*e*Sg	**Sg**	**20 18 21.9**	**-2.2**
EVO				*i* IAML		20 18 27.5	
EVO				*i* IAML		20 18 27.5	
EVO				*i* IAML		20 18 36.7	
PTEO	**Sao Teotonio**	**3.01**	**286**	*e*Pn	**Pn**	**20 17 38.8**	**+1.6**
PTEO				*e*Sn	**Sn**	**20 18 13.4**	**+0.5**
PTEO				*e*Sg	**Sg**	**20 18 28.8**	**+1.8**
PTEO				*i* IAML		20 18 38.8	
PTEO				*i* IAML		20 18 42.1	
PTEO				*i* IAML		20 18 42.6	
PFVI	**Vila Bisbo**	**3.02**	**278**	*e*Pn	**Pn**	**20 17 38.5**	**+1.1**
PFVI				*e*Sn	**Sn**	**20 18 12.4**	**-0.8**
PFVI				*i* IAML		20 18 14.8	
PFVI				*i* IAML		20 18 32.1	
PFVI				*i* IAML		20 18 40.9	
ESDC	**Sonseca Array**	**3.04**	**17**	Sg	**Sg**	**20 18 25.5**	**-2.4**
ESBB	**Sonseca Array**	**3.04**	**17**	Sg	**Sb**	**20 18 24.1**	**+3.2**
PARRA	**Arraiolos**	**3.12**	**312**	*e*Pn	**Pn**	**20 17 40.0**	**+1.4**
PARRA				*e*Sn	**Sn**	**20 18 14.6**	**-0.9**
PARRA				*e*Sg	**Sg**	**20 18 28.6**	**-1.7**
PARRA				*i* IAML		20 18 31.4	
PARRA				*i* IAML		20 18 35.0	
PARRA				*i* IAML		20 18 36.3	
MOE	**Montemor**	**3.13**	**305**	*e*Pn	**Pn**	**20 17 40.7**	**+1.8**
MOE				*e*Sg	**Sg**	**20 18 29.8**	**-1.2**
MOE				*i* IAML		20 18 33.8	
MOE				*i* IAML		20 18 36.5	
MOE				*i* IAML		20 18 39.2	
JBK	**JBK**	**3.17**	**139**	P	**Pn**	**20 17 40.4**	**+0.9**
JBK				S	**Sn**	**20 18 16.7**	**-0.4**
PMRV	**Marv??o**	**3.23**	**326**	*e*Pn	**Pn**	**20 17 41.6**	**+1.5**
PMRV				*e*Sn	**Sn**	**20 18 17.7**	**-0.6**
PMRV				*e*Sg	**Sg**	**20 18 31.3**	**-2.6**
PMRV				*i* IAML		20 18 36.8	
PMRV				*i* IAML		20 18 40.4	
PMRV				*i* IAML		20 18 45.6	
ETOB	**Tobarra**	**3.38**	**55**	Pn	**Pn**	**20 17 42.6**	**+0.3**
ETOB				Sn	**Sn**	**20 18 20.9**	**-1.1**
ETOB	**Tobarra**	**3.38**	**55**	Pn	**Pn**	**20 18 32.6**	**+0.3**
ETOB				Sn	**Sn**	**20 18 19.8**	**-2.2**
ETOB				Sg	**Sg**	**20 18 37.4**	**-1.3**
ETOB				*i* lVmb_Lg		20 18 43.0	
PMTG	**Montargil**	**3.39**	**314**	*e*Pn	**Pn**	**20 17 44.1**	**+1.7**
PMTG				*e*Sn	**Sn**	**20 18 20.9**	**-1.4**
PMTG				*e*Sg	**Sg**	**20 18 36.1**	**-3.0**
PMTG				*i* IAML		20 18 42.2	
PMTG				*i* IAML		20 18 44.0	
PMTG				*i* IAML		20 18 45.1	
EPLA	**Plasencia**	**3.39**	**347**	Pn	**Pn**	**20 17 43.8**	**+1.3**
EPLA				Sn	**Sn**	**20 18 19.8**	**-2.5**
EPLA				Sg	**Sg**	**20 18 36.0**	**-3.2**
EPLA				*i* lVmb_Lg		20 18 40.8	
PCBR	**Castelo Branco**	**3.61**	**329**	*e*Pn	**Pn**	**20 17 47.0**	**+1.6**
PCBR				*e*Sn	**Sn**	**20 18 26.5**	**-1.1**
PCBR				*e*Sg	**Sg**	**20 18 45.9**	**-0.2**
PCBR				*i* IAML		20 18 48.1	
PCBR				*i* IAML		20 18 55.6	
PCBR				*i* IAML		20 18 56.3	
PSARD	**Sardoal**	**3.73**	**320**	*e*Pn	**Pn**	**20 17 48.6**	**+1.5**
PSARD				*e*Sn	**Sn**	**20 18 29.8**	**-0.9**
PSARD				*e*Sg	**Sg**	**20 18 47.7**	**-2.4**
PSARD				*i* IAML		20 18 54.8	
PSARD				*i* IAML		20 18 55.0	
PSARD				*i* IAML		20 18 57.7	
MD31	**MD31**	**3.89**	**176**	P	**Pn**	**20 17 49.0**	**-0.4**
MD31				S	**Sn**	**20 18 30.0**	**-4.7**
PMAFR	**Mafra**	**3.98**	**305**	*e*Sn	**Sn**	**20 18 36.4**	**-0.4**
PMAFR				*e*Sg	**Sg**	**20 18 55.6**	**-2.5**
PMAFR				*i* IAML		20 19 00.7	
PMAFR				*i* IAML		20 19 06.3	
PMAFR				*i* IAML		20 19 08.8	
EVIV	**Cofrentes, Val**	**4.01**	**50**	Sn	**Sn**	**20 18 34.5**	**-3.1**
EVIV				Sg	**Sg**	**20 18 55.0**	**-3.9**
MTE	**Manteigas**	**4.12**	**333**	*e*Sg	**Sg**	**20 18 01.7**	**-1.3**
MTE				*i* IAML		20 19 07.2	
MTE				*i* IAML		20 19 09.8	
PCAS	**Casmilo, Conde**	**4.24**	**322**	*e*Sn	**Sn**	**20 18 42.4**	**-0.9**
PCAS				*e*Sg	**Sg**	**20 19

OTAV	Otavalo	17.26	97		Pn	20 34 53.8	-0.3
ATAH	Atahualpa	19.59	119	P	Pn	20 35 25.0	+2.4
	comp=Z,0.1nm,0.3s,baz=301,slow=15,SNR=5.1						
ATAH				LR	LR	20 41 19.3	
	comp=Z,600nm,18.5s,baz=301,slow=32						
	comp=Z,2.3nm,1.0s						
ROSC	El Rosal	21.36	83	P	P	20 35 41.9	+1.4
	comp=Z,5.8nm,0.4s,baz=287,slow=18,SNR=4.3						
ROSC				LR	LR	20 42 37.7	
	comp=Z,298nm,20.2s,baz=253,slow=33						
	comp=Z,5.8nm,0.4s						
ROSC	El Rosal	21.36	83		P	20 35 40.4	-0.1
ROSC				IAmb	IAmb	20 36 08.4	
	comp=Z,37nm,1.3s						
ZAIG	Zacatecas	21.36	342		P	20 35 41.0	+0.7
ZAIG				IAmb	IAmb	20 35 45.8	
	comp=Z,28nm,1.4s						
NNA	Nana	23.47	128	LR	LR	20 43 03.3	
	comp=Z,228nm,20.5s,baz=296,slow=31						
NNA	Nana	23.47	128	P	P	20 36 01.8	-0.6
NNA				IAmb	IAmb	20 36 22.6	
	comp=Z,27nm,1.4s						
HBVL	Hebbronville	24.72	353		P	20 36 13.3	-0.6
CZSB	Cruzeiro do Su	24.94	114	P	P	20 36 14.1	-2.0
CZSB				IAmb	IAmb	20 36 23.6	
	comp=Z,15nm,1.2s						
SDV	Santo Domingo	25.64	74	LR	LR	20 44 59.4	
	comp=Z,328nm,21.2s,baz=252,slow=33						
SDV	Santo Domingo	25.64	74		P	20 36 22.2	-0.4
SDV				IAmb	IAmb	20 36 25.1	
	comp=Z,12nm,1.1s						
TX31	Lajitas Ar. Si	27.88	345		P	20 36 42.9	+0.3
TXAR	Lajitas Array	27.88	345	P	P	20 36 43.7	+1.1
	comp=Z,1.8nm,0.8s,baz=163,slow=11,SNR=12						
TXAR				LR	LR	20 46 43.7	
	comp=Z,279nm,21.9s,baz=144,slow=34						
	comp=Z,1.8nm,0.8s						
TXAR	Lajitas Array	27.88	345	P	P	20 36 42.9	+0.3
VHRN	Van Horn	29.61	343		P	20 36 57.5	-0.5
GDL2	Guadalupe Moun	30.79	345	P	P	20 37 07.9	-0.4
319A	Douglas	31.60	337	P	P	20 37 15.9	+0.3
121A	Cookes Peak, D	32.11	340	P	P	20 37 19.4	-0.6
121A				IAmb	IAmb	20 37 27.6	
	comp=Z,8.2nm,0.9s						
SJG	San Juan	32.82	60	LR	LR	20 48 07.8	
	comp=Z,114nm,20.7s,baz=128,slow=32						
LPAZ	La Paz	32.86	125	P	P	20 37 30.4	+3.0
	comp=Z,2.2nm,0.9s,baz=344,slow=7.4,SNR=5.7						
LPAZ				LR	LR	20 50 47.2	
	comp=Z,125nm,18.2s,baz=306,slow=36						
	comp=Z,2.2nm,0.9s						
LPAZ	La Paz	32.86	125	P	P	20 37 26.7	-0.7
LPAZ				IAmb	IAmb	20 37 33.9	
	comp=Z,9.3nm,1.4s						
TUC	Tucson	33.02	336	P	P	20 37 28.2	+0.2
Y22A	Socorro	33.14	343	P	P	20 37 28.2	-0.9
Y22A				IAmb	IAmb	20 37 36.6	
	comp=Z,4.7nm,0.9s						
SBM	South Baldy	33.24	342	P	P	20 37 30.3	+0.1
PIX	Pinacate	33.56	332	P	P	20 37 32.5	-0.1
PIX				IAmb	IAmb	20 37 39.5	
	comp=Z,7.1nm,1.0s						
214A	Organ Pipe Nat	33.59	333	P	P	20 37 33.6	+0.7
214A				IAmb	IAmb	20 37 40.8	
	comp=Z,11nm,1.3s						
ELIS	Ellis County	33.70	354	P	P	20 37 34.3	+0.5
ANMO	Albuquerque	33.94	344	LR	LR	20 50 29.2	
	comp=Z,432nm,20.3s,baz=154,slow=35						
WVT	Waverly	34.34	11	P	P	20 37 39.3	+0.1
WVT				IAmb	IAmb	20 37 45.2	
	comp=Z,12nm,1.1s						
T47A	Sharon Grove	35.31	12		P	20 37 47.9	+0.3
T25A	Trinidad	35.53	348	P	P	20 37 49.6	-0.2
T25A				IAmb	IAmb	20 37 57.1	
	comp=Z,6.5nm,1.0s						
S44A	Carbondale	35.62	9	P	P	20 37 48.5	-1.8
SIUC	Southern Illin	35.64	9	P	P	20 37 50.9	+0.4
BLYC	Blythe	35.88	333	P	P	20 37 53.0	+0.4
BLYC				IAmb	IAmb	20 38 00.8	
	comp=Z,3.6nm,0.6s						
WUAZ	Wupatki	36.08	338		P	20 37 55.1	+0.6
WUAZ				IAmb	IAmb	20 38 02.3	
	comp=Z,9.4nm,1.0s						
BC3	Big Chuckawall	36.24	331	P	P	20 37 55.4	-0.4
BC3				IAmb	IAmb	20 38 04.1	
	comp=Z,11nm,1.5s						
SDCO	Great Sand Dun	36.35	347	P	P	20 37 57.4	+0.5
WCI	Wyandotte Cave	36.67	12	P	P	20 37 59.4	+0.1
PFO	Pinyon Flats O	36.69	330	LR	LR	20 50 22.1	
	comp=Z,360nm,21.1s,baz=158,slow=32						
DANC	Danby, Needles	37.01	332	P	P	20 38 02.9	+0.6
PV22	Blue Mesa, Par	37.95	343		P	20 38 10.3	-0.1
PV22				IAmb	IAmb	20 38 18.1	
	comp=Z,9.9nm,1.2s						
HMU	Henry Mountain	38.02	340	P	P	20 38 11.3	+0.2
HDIL	Hopedale	38.42	8	P	P	20 38 13.4	-0.7
SIV	San Ignacio	38.69	119	LR	LR	20 53 28.1	
	comp=Z,135nm,20.6s,baz=316,slow=35						
LRMC	Laurel Mtn Rad	38.79	331	P	P	20 38 18.2	+0.8
H03N2	Juan Fernandez	38.95	158	T	T	21 19 39.5	
	baz=334,slow=77						
H03N1	Juan Fernandez	38.96	158	T	T	21 19 39.9	
	baz=334,slow=77						
H03N3	Juan Fernandez	38.96	158	T	T	21 19 41.1	
	baz=334,slow=77						
AC05	El Transito	39.41	144	P	P	20 38 22.9	+0.2
AC05				IAmb	IAmb	20 38 30.8	
	comp=Z,13nm,1.1s						
PTLB	Pontes e Lacer	40.17	117	P	P	20 38 28.4	-0.7
DUG	Dugway, Tooele	40.75	340	P	P	20 38 34.2	+0.4
ECSD	EROS Data Cent	41.18	359	P	P	20 38 36.5	-0.6
ECSD				IAmb	IAmb	20 38 42.7	
	comp=Z,7.6nm,0.8s						
NVAR	Mina Array Bea	41.46	333	P	P	20 38 41.4	+1.7
	comp=Z,1.3nm,0.6s,baz=152,slow=8.7,SNR=10						
NVAR				LR	LR	20 53 34.2	
	comp=Z,119nm,21.3s,baz=112,slow=33						
	comp=Z,1.3nm,0.6s						
NVAR	Mina Array Bea	41.46	333	P	P	20 38 40.0	+0.3
HWUT	Hardware Ranch	41.61	342	P	P	20 38 41.2	+0.4
HWUT				IAmb	IAmb	20 38 47.9	
	comp=Z,11nm,1.1s						
PD31	Pinedale Array	42.10	345	P	P	20 38 44.8	-0.1
PDAR	Pinedale Array	42.10	345	P	P	20 38 45.5	+0.6
	comp=Z,1.6nm,0.7s,baz=148,slow=8.7,SNR=14						
PDAR				LR	LR	20 55 49.1	
	comp=Z,408nm,19.2s,baz=162,slow=36						
	comp=Z,1.6nm,0.7s						
PDAR	Pinedale Array	42.10	345	P	P	20 38 45.1	+0.2
ELK	Elko	42.12	338	LR	LR	20 56 28.9	
	comp=Z,229nm,19.0s,baz=138,slow=37						
ELK	Elko	42.12	338	P	P	20 38 45.6	+0.5
MDP	Montagnes des	42.93	85	LR	LR	20 56 17.4	
	comp=Z,104nm,18.8s,baz=268,slow=35						
LOHW	Long Hollow	43.17	344	P	P	20 38 53.9	+0.3
ORV	Oroville	43.86	331	P	P	20 38 59.8	+0.9
HLID	Hailey	44.29	340	P	P	20 39 02.3	-0.2
BCYI	Bear Canyon	44.63	342	P	P	20 39 05.7	+0.4
BCYI				IAmb	IAmb	20 39 17.2	
	comp=Z,8.2nm,1.3s						
SADO	Sadowa	44.63	17	LR	LR	20 57 33.9	
	comp=Z,61nm,19.2s,baz=202,slow=36						
MCMT	McKenzie Canyo	44.93	343	P	P	20 39 07.9	+0.2
AGMN	Agassiz Nation	45.74	360	P	P	20 39 13.6	-0.2
AGMN				IAmb	IAmb	20 39 19.5	
	comp=Z,8.2nm,0.9s						
PLID	Pearl Lake	46.17	340	P	P	20 39 17.5	0.0
PLID				IAmb	IAmb	20 39 24.7	
	comp=Z,6.4nm,1.3s						
CPUP	Villa Florida	46.70	130	LR	LR	20 58 43.6	
	comp=Z,56nm,19.8s,baz=290,slow=36						
EPLO	Experimental L	47.14	2	P	P	20 39 23.8	-0.9
ULM	Lac du Bonnet	47.69	360	P	P	20 39 27.9	-1.2
	comp=Z,2.3nm,0.8s,baz=181,slow=9.2,SNR=6.0						
ULM				LR	LR	20 59 20.1	
	comp=Z,54nm,20.7s,baz=165,slow=36						
	comp=Z,2.3nm,0.8s						
ULM	Lac du Bonnet	47.69	360	P	P	20 39 28.0	-1.0
ULM				IAmb	IAmb	20 39 34.2	
	comp=Z,5.8nm,0.8s						
PLCA	Paso Flores	48.62	155	LR	LR	20 55 43.7	
	comp=Z,297nm,18.6s,baz=329,slow=31						
NEW	Newport	49.33	341	LR	LR	21 00 25.4	
	comp=Z,167nm,19.2s,baz=182,slow=36						
BDFB	Brasilia	50.33	113	LR	LR	21 00 16.3	
	comp=Z,210nm,20.4s,baz=279,slow=35						
BBB	Bella Bella	56.55	337	LR	LR	21 02 56.2	
	comp=Z,100nm,19.9s,baz=131,slow=34						
PPT	Papeete	56.77	247	LR	LR	20 58 46.8	
	comp=Z,75nm,18.9s,baz=87,slow=30						
SCHQ	Schefferville	57.28	19	P	P	20 40 40.5	+0.4
	comp=Z,3.0nm,0.9s,baz=191,slow=5.2,SNR=2.1						
SCHQ				LR	LR	21 06 24.8	
	comp=Z,54nm,18.6s,baz=200,slow=37						
	comp=Z,3.0nm,0.9s						
SCHQ	Schefferville	57.28	19	P	P	20 40 40.6	+0.5
YKA	Yellowknife Ar	61.63	350	P	P	20 41 09.5	-0.4
	comp=Z,0.2nm,0.6s,baz=161,slow=6.1,SNR=8.6						
YKA				LR	LR	21 07 28.9	
	comp=Z,76nm,19.2s,baz=300,slow=36						
	comp=Z,0.2nm,0.6s						
YKA	Yellowknife Ar	61.63	350	P	P	20 41 10.7	+0.8
DLBC	Dease Lake	62.06	340	LR	LR	21 08 22.1	
	comp=Z,317nm,18.4s,baz=109,slow=36						
FRB	Frobisher Bay	64.35	13	LR	LR	21 08 50.8	
	comp=Z,34nm,19.6s,baz=272,slow=35						
RAR	Rarotonga	66.98	246	LR	LR	21 04 57.8	
	comp=Z,76nm,18.5s,baz=294,slow=31						
INK	Inuvik	70.65	346	LR	LR	21 13 52.7	
	comp=Z,144nm,18.3s,baz=348,slow=37						
INK	Inuvik	70.65	346		P	20 42 08.8	+1.1
INK				IAmb	IAmb	20 42 14.5	
	comp=Z,7.8nm,1.2s						
PMSA	Palmer Station	70.88	166	LR	LR	21 05 04.0	
	comp=Z,119nm,19.2s,baz=92,slow=29						
I27K	Kandik River	70.99	342	P	P	20 42 10.8	+0.8
SFJD	Kangerlussuaq	71.59	17	LR	LR	21 13 31.8	
	comp=Z,46nm,18.1s,baz=203,slow=36						
RES	Resolute Bay	72.22	0	LR	LR	21 15 09.1	
	comp=Z,92nm,18.9s,baz=142,slow=37						
ILAR	Eielson Array	72.24	339	P	P	20 42 17.1	-0.3
	comp=Z,0.9nm,0.7s,baz=142,slow=4.2,SNR=13						
	comp=Z,0.9nm,0.7s						
ILAR	Eielson Array	72.24	339	P	P	20 42 17.3	-0.2
C24K	Franklin Bluff	75.65	343	P	P	20 42 38.2	+0.8
C24K				IAmb	IAmb	20 42 49.5	
	comp=Z,6.4nm,1.1s						
AFI	Afiamalu	77.19	255	LR	LR	21 07 49.8	
	comp=Z,80nm,19.1s,baz=51,slow=29						
C16K	Lisburne Hills	80.38	339		P	20 43 04.3	+0.6
C16K				IAmb	IAmb	20 43 10.8	
	comp=Z,6.8nm,1.1s						
MDT	Midelt	89.54	57	LR	LR	21 16 51.2	
	comp=Z,41nm,20.6s,baz=284,slow=31						
ESDC	Sonseca Array	89.74	50	P	P	20 43 53.7	+2.4
	comp=Z,0.4nm,0.9s,baz=270,slow=3.7,SNR=2.5						
ESDC				LR	LR	21 17 17.0	
	comp=Z,36nm,21.6s,baz=256,slow=31						
	comp=Z,0.4nm,0.9s						
DBIC	Dimbokro	90.45	83	LR	LR	21 20 35.5	
	comp=Z,46nm,20.7s,baz=228,slow=33						
SNAA	Sanae	93.12	162	LR	LR	21 17 51.4	
	comp=Z,146nm,20.9s,baz=358,slow=30						
RPZ	Rata Peaks	94.07	227	LR	LR	21 18 19.7	
	comp=Z,63nm,20.8s,baz=95,slow=30						
NOA	NORSAR Array B	95.99	28	LR	LR	21 27 02.6	
	comp=Z,22nm,18.5s,baz=0.0,slow=35						
H11N3	WAKE ISLAND Hy	96.26	290	T	T	22 31 26.1	
	baz=86,slow=75,SNR=31						
H11N2	WAKE ISLAND Hy	96.27	290	T	T	22 31 23.4	
	baz=86,slow=75,SNR=21						
H11N1	WAKE ISLAND Hy	96.28	290	T	T	22 31 27.4	
	baz=86,slow=75,SNR=30						
H11S2	WAKE ISLAND Hy	96.56	289	T	T	22 31 42.9	
	baz=86,slow=75,SNR=130						
H11S1	WAKE ISLAND Hy	96.56	289	T	T	22 31 40.0	
	baz=86,slow=75,SNR=128						
H11S3	WAKE ISLAND Hy	96.57	289	T	T	22 31 40.5	
	baz=86,slow=75,SNR=102						
KURBB	Kurchatov Arra	126.95	5	PKP	PKPdf	20 49 57.0	+0.3
	comp=Z,0.4nm,0.8s,baz=356,slow=2.7,SNR=4.2						
ASAR	Alice Springs	127.71	242	PKP	PKPdf	20 49 59.8	+0.8
	comp=Z,0.7nm,0.6s,baz=112,slow=2.0,SNR=9.7						
WRA	Warramunga Arr	128.26	246	PKP	PKPdf	20 49 59.9	-0.2
	comp=Z,0.8nm,0.3s,baz=101,slow=3.5,SNR=32						
HHC	Hu-ho-hao-te	130.35	333	*eP*	PKPdf	20 49 58.0	-5.7
NJ2	Nanjing	132.68	319	*eP*	PKPdf	20 50 07.3	-0.8
NJ2				pmax	pmax		
	comp=Z,21nm,0.5s						
PZH	PanZhiHua	146.76	331	PKPbc	PKPdf	20 50 32.5	-1.4

*IDC **28** 20:47:53.4±4.8,4.°00S×146.°59E,h125km±50km, mb3.2/7, mbtmp3.7/9,MS3.4/8,Error ellipse: s-maj=49.0km s-min=28.1km az=111.0*

ISC 28 20:47:51.5±1.1,3.°9S±0.°1×146.°5E±0.°3,h100km,n19, σ0s85/11,mb3.4/7,Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	5.53	174	P	Pn	20 49 11.9	+0.4
	9.8nm,0.9s,baz=0.0,slow=18,SNR=2.7						
HNR	Honiara	14.42	113	LR	LR	20 57 02.4	
	comp=Z,5.2nm,18.2s,baz=358,slow=38						
CTA	Charters Tower	16.12	181	LR	LR	20 58 14.6	
	comp=Z,87nm,18.2s,baz=41,slow=39						
WRA	Warramunga Arr	19.91	216	P	P	20 52 15.2	-0.2
	13nm,0.9s,baz=38,slow=12,SNR=56						
ASAR	Alice Springs	23.15	211	P	P	20 52 48.0	-1.4
	4.1nm,1.0s,baz=35,slow=9.5,SNR=31						
ASAR				LR	LR	21 03 11.6	
	comp=Z,95nm,19.7s,baz=36,slow=40						
	4.1nm,1.0s						
BATI	Baumata	23.54	253	LR	LR	21 03 57.3	
	comp=Z,66nm,19.0s,baz=81,slow=41						
DZM	Mont Dzumac	26.46	135	LR	LR	21 02 22.3	
	comp=Z,109nm,20.0s,baz=2.0,slow=33						
JNU	Nakatsue	39.67	339	LR	LR	21 07 54.4	
	comp=Z,49nm,21.8s,baz=192,slow=30						
NWAO	Narrogin (SRO)	39.82	220	LR	LR	21 10 31.0	
	comp=Z,185nm,21.7s,baz=358,slow=34						
URZ	Urewera	44.14	145	LR	LR	21 12 32.5	
	comp=Z,73nm,20.9s,baz=331,slow=34						
KSRS	Korea Array	44.61	339	LR	LR	21 11 30.7	
	comp=Z,19nm,21.0s,baz=95,slow=32						
CMAR	Chiang Mai Arr	51.86	297	P	P	20 56 50.2	+0.2
	0.5nm,0.6s,baz=121,slow=6.0,SNR=4.8						
	0.5nm,0.6s						
SONM	Songino Array	62.33	331	P	P	20 58 03.8	+0.3
	0.3nm,0.8s,baz=145,slow=5.3,SNR=2.6						
	0.3nm,0.8s						
MKAR	Makanchi Array	75.57	320	P	P	20 59 24.4	-1.0
	0.5nm,0.8s,baz=104,slow=6.1,SNR=4.3						
	0.5nm,0.8s						
ZALV	Zalesovo Beam	76.97	328	P	P	20 59 33.3	+0.2
	baz=121,slow=6.9						
KURBB	Kurchatov Arra	79.26	323	P	P	20 59 45.6	-0.2
	0.4nm,0.8s,baz=104,slow=4.6,SNR=3.0						
	0.4nm,0.8s						
ILAR	Eielson Array	83.72	23	P	P	21 00 08.6	-0.4
	0.1nm,0.3s,baz=253,slow=4.8,SNR=1.6						
	0.1nm,0.3s						
BVAR	Borovoye Array	84.79	324	P	P	21 00 14.4	-0.3
	0.3nm,0.5s,baz=68,slow=12,SNR=2.4						
	0.3nm,0.5s						
TORD	Torodi Ar. Bea	144.07	287	PKP	PKPab	21 07 15.6	+1.4
	0.3nm,0.7s,baz=41,slow=2.6,SNR=2.1						

KRSC 28 21:07:54.3±1.9,49.°39N×158.°91E,h50km±59km,Ml3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.21	307	*eP*	Pn	21 08 29.4	+0.9
SKR				*eS*	Sn	21 08 54.9	+0.3
PAU	Pauzhetka	2.47	328	*eS*	Sn	21 09 05.2	+4.3
KDTR	Khodutka, Kamc	2.48	348	*eS*	Sn	21 09 04.6	+3.5
RUS	Russkaya	3.05	355	*eP*	Pn	21 08 43.2	+3.3
RUS				*eS*	Sn	21 09 19.0	+3.8
ASAK	Asacha	3.06	348	*eP*	Pn	21 08 44.4	+4.2
ASAK				*eS*	Sn	21 09 20.0	+4.5
MTVR	Mutnovka	3.13	352	*eP*	Pn	21 08 44.4	+3.2
MTVR				*eS*	Sn	21 09 21.4	+4.1
GRL	Gorelyy	3.21	351	*eP*	Pn	21 08 45.9	+3.7
GRL				*eS*	Sn	21 09 23.9	+4.7
KRMR	Karymshinskiy	3.48	352	*eP*	Pn	21 08 51.1	+5.3
KRMR				*eS*	Sn	21 09 31.5	+5.8
DALK	Dalny	3.64	359	*eP*	Pn	21 08 51.6	+3.5
DALK				*eS*	Sn	21 09 33.9	+4.1
SPN	Mys Shipunski	3.78	10	*eS*	Sn	21 09 37.8	+4.8
NLC	Nalytchevo	3.79	4	*eS*	Sn	21 09 36.2	+2.8
SMAR	Somma	3.88	359	*eP*	Pn	21 08 55.2	+3.8
AVH	Avacha	3.88	359	*eP*	Pn	21 08 55.2	+3.8
SDLR	Sedlovina	3.89	360	*eP*	Pn	21 08 54.9	+3.3
KOK	Koryaka	3.91	358	*eP*	Pn	21 08 56.0	+4.2
KRX	Arik	3.98	358	*eP*	Pn	21 08 56.6	+3.8
KBTR	Krutoberegovo	7.22	18	*eP*	Pn	21 09 41.5	+4.3

*NOU **28** 21:42:55.7, 15.°74S×169.°27E,h290km,ML4.5/8, Vanuatu Islands*

*IDC **28** 21:42:59.9±4.2, 15.°72S×168.°37E,h260km±34km, mb3.3/4, mbtmp4.0/5,Error ellipse: s-maj=35.7km s-min=25.1km az=30.0*

ISC 28 21:42:59.3±1.3,15.°7S±0.°1×168.°4E±0.°3,h250km,n10, σ1s34/10,mb3.6/4,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	2.02	186	P	Pn	21 43 43.6	+1.6
RTV	Rentapao	2.08	179	P	Pn	21 43 44.3	+1.8
MARNC	Mare, Loyalty	5.76	183	P	Pn	21 44 22.6	-1.8
YATNC	Mamie plateau,	6.48	192	P	Pn	21 44 32.5	-1.0
DZM	Mont Dzumac	6.60	196	P	Pn	21 44 35.1	0.0
	47nm,0.8s,baz=20,slow=15,SNR=9.6						
DZM				S	S	21 45 53.0	+1.3
	baz=342,slow=20						
ONTNC	Ouen Toro	6.82	195	P	Pn	21 44 38.2	+0.5
WRA	Warramunga Arr	32.66	257	P	P	21 49 07.5	-0.9
	0.3nm,0.4s,baz=88,slow=6.9,SNR=13						
	0.3nm,0.4s						
ASAR	Alice Springs	33.36	251	P	P	21 49 14.2	-0.3
	1.8nm,0.5s,baz=75,slow=9.3,SNR=32						
	1.8nm,0.5s						
QSPA	South Pole Qui	74.33	180	P	P	21 54 08.7	-0.6
	3.7nm,0.9s,baz=2.2,slow=4.8,SNR=18						
	3.7nm,0.9s						
ILAR	Eielson Array	87.11	18	P	P	21 55 16.4	-0.2
	0.2nm,0.6s,baz=239,slow=5.1,SNR=4.4						
	0.2nm,0.6s						

IDC 28 21:53:00.6±3.3,5.°64S×151.°99E,h0km,mb3.5/3, mbtmp3.6/4,ML1.4/1,Error ellipse: s-maj=108.1km s-min=30.6km az=113.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	1.32	2	LR	LR	21 54 08.7	
	comp=Z,27nm,19.4s,baz=99,slow=52						
PMG	Port Moresby	6.08	232	Pn	Pn	21 54 29.8	-2.0
	0.6nm,0.3s,baz=112,slow=19,SNR=1.6						
PMG				Sn	Sn	21 55 37.8	-4.3
	3.3nm,0.3s,baz=130,slow=8.8,SNR=7.8						
	13nm,0.9s						
WRA	Warramunga Arr	22.29	229	P	P	21 58 00.6	+0.8
	1.0nm,0.5s,baz=53,slow=9.8,SNR=13						
	1.0nm,0.5s						
ASAR	Alice Springs	24.99	222	P	P	21 58 26.4	+0.1
	1.2nm,0.9s,baz=56,slow=8.7,SNR=10						
	1.2nm,0.9s						
SONM	Songino Array	66.60	328	P	P	22 03 53.3	+0.3
	0.3nm,0.6s,baz=118,slow=5.8,SNR=2.3						
	0.3nm,0.6s						
TORD	Torodi Ar. Bea	149.78	286	PKPbc	PKPbc	22 12 52.9	-0.9
	1.1nm,0.7s,baz=102,slow=1.9,SNR=7.8						

*IDC **28** 21:58:06.0±1.3, 49.°04N×156.°89E,h0km,mb3.7/7, mbtmp3.7/7,Error ellipse: s-maj=36.8km s-min=31.0km az=43.0*

*MOS **28** 21:58:06.9±0.5, 49.°20N×158.°32E,h45km,mb4.4/1,Error ellipse: s-maj=28.6km s-min=4.8km az=91.4*

*KRSC **28** 21:58:08.0±1.8, 49.°46N×158.°52E,h44km±41km,Ml4.4*

ISC 28 21:58:07.2±1.2,49.°21N±0.°09×158.°36E±0.°07,h35km,n57, σ1s47/83,mb3.6/7,1D,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.06	316	*i*P	Pn	21 58 39.5	+0.2
SKR				*i*S	Sn	21 59 02.3	-1.5
SKR				pmax	pmax		
	comp=Z,400nm,0.4s						
SKR				smax	smax		
	comp=E,4μm,0.2s						
SKR				smax	smax		
	comp=N,8μm,0.7s						
SKR	Severo-Kuril's	2.06	316	*eP*	Pn	21 58 39.5	+0.2
SKR				*eS*	Sn	21 59 02.3	-1.5
PAU	Pauzhetka	2.47	337	PN	Pn	21 58 46.0	+1.2
PAU				S	Sn	21 59 13.1	-0.6
PAU	Pauzhetka	2.47	337	*eP*	Pn	21 58 46.1	+1.2
PAU				*eS*	Sn	21 59 13.1	-0.6
KDTR	Khodutka, Kamc	2.61	356	PN	Pn	21 58 47.4	+0.7
KDTR				S	Sn	21 59 15.6	-1.5
KDTR	Khodutka, Kamc	2.61	356	*eP*	Pn	21 58 47.5	+0.7
KDTR				*eS*	Sn	21 59 15.7	-1.5
ASAK	Asacha	3.19	355	PN	Pn	21 58 55.7	+0.9
ASAK				S	Sn	21 59 30.9	-0.8
ASAK	Asacha	3.19	355	*eP*	Pn	21 58 55.8	+0.9
ASAK				*eS*	Sn	21 59 30.9	-0.8
RUS	Russkaya	3.23	2	PN	Pn	21 58 56.1	+0.8
RUS				S	Sn	21 59 30.7	-1.7
RUS	Russkaya	3.23	2	*eP*	Pn	21 58 56.1	+0.8
RUS				*eS*	Sn	21 59 30.8	-1.7
MIPR	Malaya Ipel'ka	3.23	342	PN	Pn	21 58 57.5	+2.1
MIPR				S	Sn	21 59 33.5	+0.9
MIPR	Malaya Ipel'ka	3.23	342	*eP*	Pn	21 58 57.5	+2.1
MIPR				*eS*	Sn	21 59 33.5	+0.9
MTVR	Mutnovka	3.28	358	PN	Pn	21 58 57.1	+1.0
MTVR				S	Sn	21 59 32.5	-1.4
MTVR	Mutnovka	3.28	358	*eP*	Pn	21 58 57.

YAK	**Yakutsk**	**20.44**	320	*e*P		**P**	**22 02 39.0**	**-2.2**
YAK				pmax		pmax		
	comp=Z,12nm,0.9s							
H11S1	**WAKE ISLAND Hy**	**31.36**	165	T		T	22 38 25.1	
	baz=349,slow=74							
H11S3	**WAKE ISLAND Hy**	**31.37**	165	T		T	22 38 35.3	
	baz=349,slow=74							
H11S2	**WAKE ISLAND Hy**	**31.38**	165	T		T	22 38 39.0	
	baz=349							
KURK	**Kurchatov**	**48.93**	304	P		**P**	**22 06 50.0**	**+0.6**
MKAR	**Makanchi Array**	**48.93**	298	P		**P**	**22 06 46.9**	**-2.7**
	comp=Z,0.4nm,0.6s,baz=50,slow=6.6,SNR=5.5							
	comp=Z,0.4nm,0.6s							
KURBB	**Kurchatov Arra**	**49.02**	304	P		**P**	**22 06 50.0**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=63,slow=8.0,SNR=8.8							
	comp=Z,1.2nm,0.7s							
BVAR	**Borovoye Array**	**52.00**	310	P		**P**	**22 07 12.5**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=58,slow=8.1,SNR=6.3							
	comp=Z,1.3nm,0.6s							
FINES	**FINESS Array B**	**63.25**	337	P		**P**	**22 08 33.5**	**+1.9**
	comp=Z,1.7nm,0.8s,baz=37,slow=6.2,SNR=3.6							
	comp=Z,1.7nm,0.8s							
NOA	**NORSAR Array B**	**66.96**	343	P		**P**	**22 08 57.8**	**+2.1**
	comp=Z,0.4nm,0.7s,baz=47,slow=7.1,SNR=1.1							
	comp=Z,0.4nm,0.7s							
WRA	**Warramunga Arr**	**72.09**	204	P		**P**	**22 09 28.3**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=16,slow=6.3,SNR=4.8							
	comp=Z,0.6nm,0.8s							
TXAR	**Lajitas Array**	**73.23**	65	P		P	22 09 45.2	+10
	comp=Z,0.2nm,0.5s,baz=308,slow=5.2,SNR=4.1							
	comp=Z,0.2nm,0.5s							

*SSNC **28** 22:08:42.0±1.6, 19°.58N×78°.56W, h20km±20km, MD3.1, ML2.7, Presumed earthquake*
*JSN **28** 22:08:42.2±0.7, 19°.70N×78°.41W, h30km±208km, MD3.7, Presumed earthquake*

ISC 28 22:08:38.7±1.5, **19°.58N**±0°.05×**78°.51W**±0°.03, **h17**km±12km, **n17**, σ1°**82**/29, **2C**, **Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBCY	**The Bluff, Cay**	**1.19**	**278**	*i* P	**Pg**	**22 09 01.8**	**+0.2**
CBCY				*i* S	**Sb**	**22 09 13.3**	**-2.4**
CBCY				IAML		22 09 13.7	
	comp=N,724nm,0.1s						
CBCY				IAML		22 09 14.1	
	comp=E,201nm,0.1s						
LCCY	**Blossom Villag**	**1.48**	**274**	*i* P	**Pn**	**22 09 04.3**	**-0.2**
LCCY				*i* S	**Sn**	**22 09 21.3**	**-2.2**
LCCY				IAML		22 09 21.5	
	comp=E,190nm,0.2s						
LCCY				IAML		22 09 21.8	
	comp=N,270nm,0.1s						
LMGC	**Las Mercedes**	**1.50**	**71**	*i* P	**Pb**	**22 09 06.0**	**0.0**
LMGC				*i* S	**Sn**	**22 09 24.1**	**+0.2**
LMGC				IAML		22 09 24.6	
	comp=E,97nm,0.1s						
LMGC				IAML		22 09 25.0	
	comp=N,95nm,0.1s						
MTDJ	**Mount Denham**	**1.64**	**145**	*i*P	**Pb**	**22 09 08.8**	**+0.3**
MTDJ	**Mount Denham**	**1.64**	**145**	*i* P	**Pb**	**22 09 08.6**	**+0.2**
MTDJ				*i* S	**Sn**	**22 09 27.2**	**-0.2**
MTDJ				IAML		22 09 31.1	
	comp=N,138nm,0.1s						
MTDJ				IAML		22 09 31.2	
	comp=N,148nm,0.2s						
CCCC	**Cccc**	**1.75**	**23**	*i* P	**Pg**	**22 09 11.9**	**-0.5**
CHIV	**Chivirico**	**2.01**	**78**	*i* P	**Pn**	**22 09 12.6**	**+0.8**
CHIV				*i* S	**Sn**	**22 09 35.1**	**-1.5**
CHIV				IAML		22 09 35.8	
	comp=N,27nm,0.1s						
CHIV				IAML		22 09 35.9	
	comp=E,19nm,0.2s						
YAR	**Yar**	**2.17**	**68**	*i* P	**Pb**	**22 09 16.5**	**-1.0**
YAR				*i* S	**Sn**	**22 09 42.1**	**+1.6**
STH	**Stony Hill**	**2.20**	**133**	*i*P	**Pn**	**22 09 16.1**	**+1.7**
MARVS	**Santiago de Cu**	**2.49**	**80**	*i* P	**Pn**	**22 09 19.5**	**+1.0**
MARVS				*i* S	**Sn**	**22 09 47.2**	**-1.3**
MARVS				IAML		22 09 48.1	
	comp=N,16nm,0.2s						
MARVS				IAML		22 09 48.6	
	comp=E,12nm,0.1s						
RCC	**Rio Carpintero**	**2.68**	**81**	*i* P	**Pn**	**22 09 22.1**	**+1.0**
RCC				*i* S	**Sn**	**22 09 52.6**	**-0.6**
RCC				*e*Sg	**Sb**	**22 09 53.8**	**-5.1**
RCC				IAML		22 09 54.1	
	comp=E,9.1nm,0.1s						
RCC				IAML		22 09 54.5	
	comp=N,12nm,0.2s						
PINC	**Pinares de May**	**2.71**	**70**	*i* P	**Pn**	**22 09 23.8**	**+2.4**
MGV	**Manicaragua**	**2.87**	**332**	*i* P	**Pn**	**22 09 24.6**	**+1.0**
MGV				*i* S	**Sn**	**22 09 57.9**	**+0.2**
GTBY	**Guantanamo Bay**	**3.22**	**83**	*i* P	**Pn**	**22 09 30.4**	**+1.9**
GTBY				*i* S	**Sn**	**22 10 06.8**	**+0.4**
QMBU	**Quimbuelo**	**3.54**	**79**	*i* P	**Pn**	**22 09 33.7**	**+0.9**
QMBU				*i* S	**Sn**	**22 10 13.2**	**-1.0**
MASC	**Masc**	**4.07**	**81**	*i* P	**Pn**	**22 09 43.2**	**+3.1**
SOR	**Soroa**	**5.27**	**308**	*i* P	**Pn**	**22 09 59.9**	**+3.2**

*IDC **28** 22:16:37.9±1.4, 8°.07S×125°.89E, h0km, mb3.5/3, mbtmp3.6/7, ML3.8/4, Error ellipse: s-maj=39.1km s-min=21.2km az=88.0*

ISC 28 22:16:42.4±1.1, **8°.21S**±0°.09×**126°.1E**±0°.1, **h35**km, **n7**, σ1°**71**/10, **mb3.5**/3, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.13**	**230**	Pn	**Pn**	**22 17 28.4**	**-0.9**
	14nm,0.3s,baz=61,slow=1.5,SNR=13						
BATI				Sn	**Sn**	**22 18 06.8**	**+1.2**
	26nm,0.3s,baz=247,slow=20,SNR=11						
	44nm,0.4s						
FITZ	**Fitzroy Crossi**	**9.85**	**183**	Pn	**Pn**	**22 19 01.3**	**-0.3**
	1.6nm,0.3s,baz=21,slow=12,SNR=27						
FITZ				Sn	**Sn**	**22 20 49.6**	**-1.3**
	3.8nm,0.3s,baz=337,slow=5.0,SNR=16						
	1.3nm,0.3s						
WRA	**Warramunga Arr**	**14.13**	**147**	Pn	**Pn**	**22 20 02.0**	**+1.8**
	0.3nm,0.3s,baz=320,slow=14,SNR=13						
WRA				Sn	**Sn**	**22 22 33.1**	**-2.8**
	0.4nm,0.3s,baz=320,slow=26,SNR=6.1						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**17.09**	**155**	P	**P**	**22 20 42.4**	**+2.1**
	0.4nm,0.3s,baz=324,slow=11,SNR=24						
	1.4nm,0.5s						
SONM	**Songino Array**	**58.46**	**345**	P	**P**	**22 26 34.7**	**-0.2**
	0.2nm,0.5s,baz=164,slow=5.8,SNR=1.7						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**67.19**	**329**	P	**P**	**22 27 32.6**	**-0.4**
	0.7nm,0.8s,baz=122,slow=7.0,SNR=7.2						
	0.7nm,0.8s						
KURBB	**Kurchatov Arra**	**71.58**	**330**	P	**P**	**22 27 59.1**	**-0.9**
	0.1nm,0.3s,baz=132,slow=5.3,SNR=4.0						
	0.1nm,0.3s						

*IDC **28** 22:17:57.4±0.8, 2°.11N×126°.53E, h0km, mb3.9/12, mbtmp3.9/12, MS2.9/2, Error ellipse: s-maj=49.1km s-min=14.7km az=70.0*
*DJA **28** 22:18:02.5±0.3, 2°.N×4°×12°.7E±°, h10km, M4.2/18, mB4.8/2, mb4.5/5, MLv4.0/18, Mw(mB)4.0/2.*
*NEIC **28** 22:18:04.3±1.7, 2°.22N±0°.08×126°.86E±0°.10, h51km±7km, mb4.2/20, Error ellipse: s-maj=16.5km s-min=8.5km az=55.0*

ISC 28 22:18:04.9±0.5, **2°.20N**±0°.06×**126°.89E**±0°.06, **h63**km, **n53**, σ1°**21**/51, **mb4.1**/20, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**0.96**	**112**	P	**Pn**	**22 18 21.8**	**-0.8**
TNTI	**Ternate**	**1.50**	**162**		**Pn**	**22 18 29.1**	**-0.6**
TNTI					**Sn**	**22 18 48.8**	**+0.5**
TNTI	**Ternate**	**1.50**	**162**	P	**Pn**	**22 18 29.3**	**-0.4**
MNI	**Manado**	**2.19**	**250**	P	**Pn**	**22 18 37.6**	**-1.4**
GTOI	**Gorontalo**	**4.18**	**248**	P	**Pn**	**22 19 08.3**	**+2.1**
SANI	**Sanana**	**4.32**	**192**	P	**Pn**	**22 19 07.2**	**-0.9**
LUWI	**Luwuk**	**5.23**	**232**	Pn	**Pn**	**22 19 21.3**	**+0.7**
LUWI	**Luwuk**	**5.23**	**232**	P	**Pn**	**22 19 23.2**	**+2.6**
MRSI	**Marisa**	**5.24**	**251**	P	**Pn**	**22 19 21.8**	**+1.1**
	0.2nm1µm69nm,0.8s						
SIJI	**Sorong**	**5.33**	**125**	LR	LR	22 21 55.8	
	comp=Z,86nm,20.0s,baz=94,slow=43						
SIJI	**Sorong**	**5.33**	**125**	P	**Pn**	**22 19 23.1**	**+1.1**

KRAI	**Karang Ratu**	**5.69**	**165**	P		Pn	22 19 34.5	+7.6
BIPH	**Bislig**	**5.97**	**355**	*e*P		**Pn**	**22 19 32.4**	**+1.7**
BIPH				*e*S		Sn	22 20 19.2	-18
APSI	**Ampana**	**6.09**	**240**	P		**Pn**	**22 19 33.7**	**+1.4**
TOLI2	**Tolitoli**	**6.20**	**260**			**Pn**	**22 19 32.4**	**-1.6**
MPSI	**Mapaga**	**7.23**	**255**	P		**Pn**	**22 19 50.9**	**+2.8**
KKM	**Kota Kinabalu**	**11.31**	**290**	Pn		**Pn**	**22 20 43.4**	**-0.5**
SBUM	**Sibu**	**14.66**	**271**			**Pn**	**22 21 28.0**	**-1.0**
MTN	**Manton Dam**	**15.53**	**164**	Pn		**Pn**	**22 21 39.0**	**-1.2**
JAGI	**Jajag, Banyuwa**	**16.55**	**230**			**Pn**	**22 21 53.3**	**+0.3**
KNRA	**Kununurra**	**17.86**	**174**			**P**	**22 22 08.1**	**-1.1**
TPUB	**Ta-pu**	**21.83**	**344**	P		**P**	**22 22 49.9**	**-2.3**
WB0	**Warramunga Arr**	**23.04**	**162**	P		**P**	**22 23 04.1**	**-1.0**
WB0				IAmb		IAmb	22 23 14.8	
	comp=Z,7.0nm,0.8s							
WRA	**Warramunga Arr**	**23.19**	**162**	P		**P**	**22 23 06.4**	**-0.1**
	comp=Z,2.5nm,0.4s,baz=338,slow=11,SNR=9.3							
	comp=Z,2.5nm,0.4s							
WRA	**Warramunga Arr**	**23.19**	**162**	P		**P**	**22 23 04.0**	**-2.5**
AS31	**Alice Springs**	**26.60**	**166**	P		**P**	**22 23 38.5**	**+0.9**
ASAR	**Alice Springs**	**26.60**	**166**	P		**P**	**22 23 38.2**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=346,slow=10,SNR=9.3							
	comp=Z,1.2nm,0.6s							
CMAR	**Chiang Mai Arr**	**31.80**	**302**	P		**P**	**22 24 22.6**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=117,slow=9.5,SNR=1.8							
	comp=Z,0.4nm,0.3s							
CHTO	**Chiang Mai**	**31.96**	**303**	P		**P**	**22 24 24.3**	**-0.9**
CHTO				IAmb		IAmb	22 24 25.5	
	comp=Z,2.1nm,0.7s							
FORT	**Forrest**	**32.82**	**178**	P		**P**	**22 24 33.8**	**+1.3**
FORT				IAmb		IAmb	22 24 45.7	
	comp=Z,12nm,1.2s							
KSRS	**Korea Array**	**35.09**	**1**	P		**P**	**22 24 53.8**	**+1.7**
	comp=Z,0.9nm,0.7s,baz=175,slow=11,SNR=2.3							
	comp=Z,0.9nm,0.7s							
BBOO	**Buckleboo**	**35.89**	**167**	P		**P**	**22 24 58.4**	**-0.6**
STKA	**Stephens Creek**	**36.66**	**159**	P		**P**	**22 25 05.7**	**+0.1**
	comp=Z,2.8nm,0.7s,baz=339,slow=8.7,SNR=5.5							
	comp=Z,2.8nm,0.7s							
STKA	**Stephens Creek**	**36.66**	**159**	P		**P**	**22 25 05.7**	**+0.1**
ARMA	**Armidale**	**40.11**	**146**	P		**P**	**22 25 35.8**	**+1.0**
SHL	**Shillong**	**40.92**	**308**	P		**P**	**22 25 40.4**	**-1.3**
SHL				IAmb		IAmb	22 25 41.4	
	comp=Z,2.5nm,0.7s							
USRK	**Ussuriysk Ar.**	**42.06**	**5**	P		**P**	**22 25 52.0**	**+1.5**
	comp=Z,2.6nm,0.8s,baz=181,slow=6.6,SNR=6.5							
	comp=Z,2.6nm,0.8s							
MDJ	**Mudanjiang**	**42.30**	**3**	P		**P**	**22 25 51.9**	**-0.5**
EVN	**Everest**	**46.04**	**308**	P		**P**	**22 26 22.4**	**-0.9**
EVN				IAmb		IAmb	22 26 24.5	
	comp=Z,2.0nm,0.7s							
SONM	**Songino Array**	**48.79**	**342**	P		**P**	**22 26 43.7**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=167,slow=8.5,SNR=3.5							
	comp=Z,0.3nm,0.5s							
SONM	**Songino Array**	**48.79**	**342**	P		**P**	**22 26 43.5**	**-0.2**
SONM				IAmb		IAmb	22 26 56.4	
	comp=Z,2.7nm,1.5s							
TLY	**Talaya**	**53.02**	**342**	LR		LR	22 49 54.5	
	comp=Z,14nm,21.5s,baz=301,slow=36							
MKAR	**Makanchi Array**	**58.90**	**326**	P		**P**	**22 27 57.3**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=116,slow=6.8,SNR=8.4							
	comp=Z,0.4nm,0.5s							
KURBB	**Kurchatov Arra**	**63.11**	**328**	P		**P**	**22 28 25.4**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=130,slow=6.0,SNR=13							
	comp=Z,0.8nm,0.6s							
KKAR	**Karatay Array**	**64.46**	**317**	P		**P**	**22 28 35.0**	**+0.1**
BVAR	**Borovoye Array**	**68.68**	**327**	P		**P**	**22 29 01.9**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=126,slow=9.7,SNR=2.6							
	comp=Z,0.3nm,0.4s							
AB31	**Akbulak array**	**73.43**	**321**	P		**P**	**22 29 30.1**	**-0.4**
AB31				IAmb		IAmb	22 30 04.8	
	comp=Z,3.6nm,1.5s							
ABKAR	**Akbulak array**	**73.43**	**321**	P		**P**	**22 29 30.5**	**0.0**
ARTI	**Arti**	**76.39**	**328**	P		**P**	**22 29 47.4**	**-0.1**
ARTI				IAmb		IAmb	22 29 52.7	
	comp=Z,3.3nm,0.6s							
VNDA	**Vanda**	**81.90**	**173**	P		**P**	**22 30 18.0**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=312,slow=7.8,SNR=2.8							
	comp=Z,0.4nm,0.5s							
VNDA	**Vanda**	**81.90**	**173**	P		**P**	**22 30 17.7**	**+0.6**
VNDA				IAmb		IAmb	22 30 27.2	
	comp=Z,3.7nm,1.5s							
D19K	**Kuna River**	**82.48**	**21**	P		**P**	**22 30 22.5**	**+2.1**
D19K				IAmb		IAmb	22 30 25.4	
	comp=Z,1.7nm,0.8s							
KBZ	**Khabaz**	**84.14**	**314**	P		**P**	**22 30 29.7**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=76,slow=4.2,SNR=3.8							
	comp=Z,1.4nm,0.8s							

*AZER **28** 22:18:07.6, 40°.96N×44°.11E, h11km, ml2.0*
*NORS **28** 22:18:08.6, 41°.38N×43°.88E, h1km, MPVA2.8*

ISC 28 22:18:07.4±1.5, **41°.05N**±0°.03×**44°.08E**±0°.05, **h6**km±11km, **n17**, σ1°**65**/34, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QZX	**Qazax, Azerbai**	**0.98**	**89**	P	**Pn**	**22 18 27.7**	**0.0**
QZX				S	**Sn**	**22 18 43.0**	**+1.1**
IGDI	**IGDIR**	**1.18**	**180**	P	**Pn**	**22 18 30.4**	**-0.1**
IGDI				S	**Sn**	**22 18 47.0**	**+0.1**
GDB	**GEDABAY**	**1.31**	**104**	P	**Pg**	**22 18 33.4**	**+0.8**
GDB				S	**Sn**	**22 18 52.2**	**+1.9**
GUDG	**Gudauri**	**1.45**	**12**	*e*Pg	**Pn**	**22 18 33.1**	**-1.2**
GUDG				*e*Sg	**Sn**	**22 18 52.4**	**-1.3**
HYR	**Heyderabad**	**1.45**	**156**	P	**Pg**	**22 18 36.5**	**+1.3**
HYR				S	**Sg**	**22 18 57.9**	**+3.8**
GANJ	**Ganja**	**1.75**	**103**	P	**Pg**	**22 18 40.1**	**-0.8**
GANJ				S	**Sg**	**22 19 05.3**	**+1.7**
LACR	**Lac**	**1.78**	**5**	*e*Pg	**Pn**	**22 18 40.2**	**+1.4**
LACR				*e*Sg	**Sn**	**22 19 01.3**	**-0.7**
DIGR	**Digorskoe uzhe**	**1.89**	**349**	*e*Pg	**Pn**	**22 18 40.5**	**+0.2**
DIGR				*e*Sg	**Sn**	**22 19 04.4**	**-0.2**
SBZ	**Shahbuz**	**2.00**	**145**	P	**Pg**	**22 18 44.5**	**-1.2**
SBZ				S	**Sg**	**22 19 11.9**	**+0.3**
ZKTA	**Zakatala**	**2.00**	**72**	P	**Pb**	**22 18 44.0**	**-0.3**
ZKTA				S	**Sg**	**22 19 10.8**	**-0.9**
SEKA	**Sheki**	**2.36**	**85**	P	**Pb**	**22 18 50.9**	**+0.5**
SEKA				S	**Sg**	**22 19 22.5**	**-0.8**
NEUR	**Neytrino**	**2.44**	**336**	*e*Pg	**Pn**	**22 18 48.9**	**+0.9**
NEUR				*e*Sg	**Sn**	**22 19 17.8**	**-0.4**
DVE	**Vedeno**	**2.44**	**38**	*e*Pn	**Pb**	**22 18 52.1**	**+0.4**
DVE				*e*Sn	**Sb**	**22 19 24.7**	**+2.6**
ORD	**Ordubad**	**2.58**	**145**	P	**Pb**	**22 18 53.5**	**-0.6**
ORD				S	**Sg**	**22 19 25.9**	**-4.4**
QBL	**Gabala**	**2.85**	**91**	P	**Pb**	**22 18 57.2**	**-1.4**
QBL				S	**Sb**	**22 19 33.1**	**-0.7**
IML	**Ismayilli**	**3.12**	**93**	P	**Pb**	**22 19 02.2**	**-1.1**
IML				S	**Sb**	**22 19 39.7**	**-1.9**
PQL	**Pirkuli**	**3.43**	**93**	P	**Pn**	**22 19 04.3**	**+2.8**
PQL				S	**Sb**	**22 19 48.2**	**-2.4**

*IDC **28** 22:28:20.2±1.1, 24°.72N×128°.04E, h0km, mb3.8/7, mbtmp3.8/9, ML3.6/2, MS2.8/4, Error ellipse: s-maj=42.1km s-min=16.8km az=73.0*
*JMA **28** 22:28:21.4±0.3, 25°N±1°×12°8E±°, h74km, MV3.1/20, FAR S OFF OKINAWAJIMA*
*NEIC **28** 22:28:21.7±1.7, 24°.73N±0°.08×128°.17E±0°.09, h10km±1km, mb4.3/9, Error ellipse: s-maj=16.3km s-min=9.2km az=227.0*

ISC 28 22:28:20.5±2.7, **24°.73N**±0°.06×**128°.01E**±0°.05, **h8**km±16km, **n51**, σ1°**86**/57, **mb4.1**/12, **Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT3	**Tamagusuku3**	**1.42**	**352**	P	**Pb**	**22 28 47.0**	**-0.3**
JJT3				*e*S	**Sg**	**22 29 05.8**	**-0.5**
JNTH	**Nagotoyohara**	**1.78**	**0**	P	**Pn**	**22 28 51.4**	**-0.3**
JNTH				*e*S	**Sn**	**22 29 13.3**	**-1.2**
JKE	**Kume jima 2**	**1.94**	**325**	P	**Pn**	**22 28 53.8**	**0.0**
JAGN	**Aguni-jima**	**1.98**	**340**	S	**Sn**	**22 29 17.4**	**-2.0**
JOW	**Kunigami**	**2.11**	**6**	Pn	**Pn**	**22 28 56.3**	**+0.1**
	39nm,0.3s,baz=175,slow=13,SNR=46						
JOW				Sn	**Sn**	**22 29 18.9**	**-3.6**
	22nm,0.3s,baz=115,slow=25,SNR=9.6						
JOW				LR	LR	22 29 54.0	
	comp=Z,77nm,22.0s,baz=32,slow=44						
	84nm,0.4s						
JOW	**Kunigami**	**2.11**	**6**	P	**Pn**	**22 28 56.2**	**+0.1**
JOW	**Kunigami**	**2.11**	**6**		**Pn**	**22 28 56.0**	**-0.1**
JOW				Sn	**Sn**	**22 29 19.5**	**-3.1**
JOW	**Kunigami**	**2.11**	**6**	*e*P	**Pn**	**22 28 56.2**	**+0.1**

JIH	**Iheya**	**2.29**	**359**	*e*S		**Sn**	**22 29 25.2**	**-2.0**
JYRO	**Yoronjima**	**2.32**	**10**	P		**Pn**	**22 28 59.0**	**-0.1**
JOGS	**Gusukube**	**2.37**	**271**	*e*S		**Sn**	**22 29 26.0**	**-3.1**
JMJ2	**Miyako jima3**	**2.44**	**271**	*e*P		**Pn**	**22 28 60.0**	**-0.8**
JMJ2				*e*S		**Sn**	**22 29 28.7**	**-2.1**
JMJ	**Miyako jima 2**	**2.47**	**273**	P		**Pn**	**22 29 00.2**	**-1.0**
JMJ	**Miyako jima 2**	**2.47**	**273**	S		**Sn**	**22 29 29.2**	**-2.4**
JTJ	**Tarama**	**3.01**	**269**	*e*P		**Pn**	**22 29 07.5**	**-1.1**
JMZ	**Minamidaito 2**	**3.10**	**69**	P		**Pn**	**22 29 08.0**	**-1.8**
JMZ	**Minamidaito 2**	**3.10**	**69**	S		**Sn**	**22 29 44.6**	**-2.5**
JMZ	**Minamidaito 2**	**3.10**	**69**	Pn		**Pn**	**22 29 07.8**	**-2.0**
JMZ				Sn		**Sn**	**22 29 42.9**	**-4.3**
JMZ	**Minamidaito 2**	**3.10**	**69**	P		**Pn**	**22 29 07.8**	**-2.0**
JKDJ	**Kitadaitoujima**	**3.21**	**67**	P		**Pn**	**22 29 09.5**	**-1.8**
JKDJ				*e*S		**Sn**	**22 29 46.9**	**-2.9**
JAMN	**Amaminishikomi**	**3.65**	**16**	*e*P		**Pn**	**22 29 18.6**	**+1.2**
JAM	**Amami Oshima**	**3.93**	**21**	*e*S		**Sn**	**22 30 02.7**	**-5.0**
NACB	**Ninganchiao**	**5.88**	**266**	P		**Pn**	**22 29 45.5**	**-2.5**
YHNB	**Yeheng**	**6.04**	**271**	P		**Pn**	**22 29 48.8**	**-1.5**
YULB	**Yu-li**	**6.28**	**259**	P		**Pn**	**22 29 50.3**	**-3.3**
SSLB	**Suanglung**	**6.51**	**263**	P		**Pn**	**22 29 54.9**	**-1.9**
SSLB	**Suanglung**	**6.51**	**263**	S		**Sn**	**22 31 08.1**	**-3.2**
TPUB	**Ta-pu**	**6.90**	**260**	P		**Pn**	**22 30 00.6**	**-1.5**
JSU	**Suzuyama**	**7.08**	**17**	Pn		**Pn**	**22 30 05.7**	**+1.0**
JNU	**Nakatsue**	**8.73**	**16**	Pn		**Pn**	**22 30 27.2**	**+0.1**
	0.4nm,0.3s,baz=204,slow=18,SNR=1.6							
	9.6nm,0.8s							
KSRS	**Korea Array**	**12.68**	**360**	LR		LR	22 36 25.7	
	comp=Z,25nm,19.1s,baz=170,slow=38							
LZDM	**Lanzhou Array**	**23.72**	**304**	P		**P**	**22 33 33.6**	**+0.1**
	1.6nm,0.3s,baz=120,slow=8.7,SNR=3.9							
	1.6nm,0.3s							
SONM	**Songino Array**	**28.72**	**329**	P		**P**	**22 34 20.9**	**+2.4**
	0.3nm,0.6s,baz=140,slow=9.1,SNR=2.2							
SONM				LR		LR	22 47 52.7	
	comp=Z,21nm,20.4s,baz=160,slow=41							
	0.3nm,0.6s							
KNRA	**Kununurra**	**40.17**	**179**	P		**P**	**22 35 57.0**	**-0.4**
KNRA				IAmb		IAmb	22 35 58.2	
	comp=Z,5.0nm,0.8s							
MKAR	**Makanchi Array**	**42.40**	**313**	P		**P**	**22 36 16.4**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=100,slow=9.6,SNR=8.9							
	comp=Z,0.5nm,0.5s							
MKAR	**Makanchi Array**	**42.40**	**313**	P		**P**	**22 36 15.5**	**-0.1**
WB0	**Warramunga Arr**	**44.66**	**171**	P		**P**	**22 36 33.8**	**-0.2**
WRA	**Warramunga Arr**	**44.83**	**172**	P		**P**	**22 36 35.5**	**+0.2**
	comp=Z,4.3nm,0.7s,baz=352,slow=8.7,SNR=40							
	comp=Z,4.3nm,0.7s							
WRA	**Warramunga Arr**	**44.83**	**172**	P		**P**	**22 36 34.6**	**-0.8**
KURBB	**Kurchatov Arra**	**45.81**	**318**	P		**P**	**22 36 43.5**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=104,slow=8.9,SNR=4.8							
	comp=Z,0.4nm,0.5s							
AS31	**Alice Springs**	**48.45**	**173**	P		**P**	**22 37 03.1**	**-0.5**
ASAR	**Alice Springs**	**48.45**	**173**	P		**P**	**22 37 04.8**	**+1.1**
	comp=Z,1.4nm,0.8s,baz=354,slow=8.9,SNR=17							
	comp=Z,1.4nm,0.8s							
ASAR	**Alice Springs**	**48.45**	**173**	P		**P**	**22 37 03.9**	**+0.2**
KKAR	**Karatay Array**	**50.13**	**306**	P		**P**	**22 37 17.4**	**+0.9**
BVAR	**Borovoye Array**	**51.27**	**319**	P		**P**	**22 37 26.5**	**+1.6**
	comp=Z,0.7nm,0.6s,baz=96,slow=7.2,SNR=3.7							
BVAR				LR		LR	23 01 33.4	
	comp=Z,47nm,18.4s,baz=307,slow=39							
	comp=Z,0.7nm,0.6s							
KBL	**Kabul**	**51.55**	**295**	P		**P**	**22 37 28.5**	**+0.9**
KBL				IAmb		IAmb	22 37 30.4	
	comp=Z,4.8nm,1.2s							
AB31	**Akbulak array**	**57.53**	**314**	P		**P**	**22 38 11.6**	**+1.1**
AB31				IAmb		IAmb	22 38 12.9	
	comp=Z,3.3nm,1.4s							
ABKAR	**Akbulak array**	**57.53**	**314**	P		**P**	**22 38 11.4**	**+0.9**
D19K	**Kuna River**	**61.32**	**24**	P		**P**	**22 38 37.5**	**+1.1**
D19K				IAmb		IAmb	22 39 05.5	
	comp=Z,3.4nm,1.4s							
D23K	**Nanushuk River

217nm,0.3s,baz=336,slow=23,SNR=15
HELC Santa Helena 2.46 254 P **Pn** **22 40 02.4 -0.3**
HELC S **Sn** **22 40 33.4 -0.7**
HELC Santa Helena 2.46 254 *e*P **Pn** **22 40 04.2 +1.5**
HELC *e*S **Sn** **22 40 33.9 -0.2**
CVER Cruz Verde, Cu 2.52 202 P **Pn** **22 40 04.4 +0.9**
CVER S **Sn** **22 40 35.1 -0.4**
UREC San Jos de Ur 2.52 290 P **Pn** **22 40 02.5 -0.5**
UREC S **Sn** **22 40 33.2 -1.6**
GUY2C Guyana, Caldas 2.75 233 P **Pn** **22 40 06.9 +0.5**
GUY2C S **Sn** **22 40 39.4 -1.3**
VILC Villavicencio, 2.80 191 P **Pn** **22 40 06.2 -0.5**
VILC S **Sn** **22 40 40.9 -0.5**
RECRC Villamaria, Ca 2.91 229 P **Pn** **22 40 09.2 +0.8**
RECRC S **Sn** **22 40 43.3 -1.0**
NIZA Niza - Manizal 2.94 232 P **Pn** **22 40 09.8 +1.3**
NIZA S **Sn** **22 40 43.3 -1.3**
CBOC Ciudad Bolivar 3.02 251 P **Pn** **22 40 10.3 +0.8**
CBOC S **Sn** **22 40 45.8 -0.5**
DBBC Dabeiba 3.04 273 P **Pn** **22 40 10.2 +0.5**
DBBC S **Sn** **22 40 46.2 -0.5**
ARGC Ariguani, Magd 3.15 340 P **Pn** **22 40 12.4 +1.4**
ARGC S **Sn** **22 40 50.4 +1.2**
SDV Santo Domingo 3.19 51 P **Pn** **22 40 12.3 +0.6**
22nm,0.3s,baz=185,slow=1.9,SNR=54
SDV S **Sn** **22 40 48.6 -1.6**
65nm,0.4s,baz=255,slow=22,SNR=43
SDV Santo Domingo 3.19 51 P **Pn** **22 40 12.3 +0.6**
SDV S **Sn** **22 40 48.6 -1.6**
SDV Santo Domingo 3.19 51⇑*e*P **Pn** **22 40 12.2 +0.6**
SDV *e*S **Sn** **22 40 48.5 -1.8**
APAC Apartado, Choc 3.55 287 P **Pn** **22 40 16.3 +0.2**
APAC S **Sn** **22 40 57.5 -0.8**
PRAC Prado 3.59 209 P **Pn** **22 40 16.7 0.0**
PRAC S **Sn** **22 40 58.4 -0.9**
SJCC San Jacinto, C 3.61 326 P **Pn** **22 40 16.7 -0.3**
SJCC S **Sn** **22 40 57.9 -1.9**
SJCC San Jacinto, C 3.61 326 *e*P **Pn** **22 40 16.9 -0.1**
SJCC *e*S **Sn** **22 40 54.5 -5.3**
ORTC Ortega, Tolima 3.62 215 P **Pn** **22 40 18.0 +1.0**
ORTC S **Sn** **22 41 00.0 +0.1**
PLMC San Jos del P 3.68 238 P **Pn** **22 40 18.5 +0.6**
PLMC S **Sn** **22 41 01.4 -0.1**
LCBC Los crdobas, 3.75 302 P **Pn** **22 40 19.6 +0.9**
LCBC S **Sn** **22 41 02.9 +0.1**
URMC La Uribe, Meta 3.81 199 P **Pn** **22 40 18.8 -0.8**
URMC S **Sn** **22 41 02.3 -2.2**
YOTC Yotoco, Valle 4.29 228 P **Pn** **22 40 26.1 +0.2**
YOTC S **Sn** **22 41 14.6 -1.2**
SMRC Santa Marta, M 4.39 346 P **Pn** **22 40 27.3 +0.2**
SMRC S **Sn** **22 41 15.7 -2.3**
CAPC Capurgana 4.52 293 P **Pn** **22 40 28.1 -0.7**
CAPC S **Sn** **22 41 19.0 -1.9**
MACC Macarena, Meta 4.75 188 P **Pn** **22 40 29.5 -2.4**
MACC S **Sn** **22 41 21.8 -4.8**
URIC Uribia, Colomb 4.93 13 P **Pn** **22 40 33.2 -1.0**
URIC S **Sn** **22 41 28.7 -2.0**
URIC Uribia, Colomb 4.93 13 *e*P **Pn** **22 40 33.5 -0.7**
URIC *e*S **Sn** **22 41 25.2 -5.5**
GARC Garzon, Huila 5.21 207 P **Pn** **22 40 37.9 -0.4**
GARC S **Sn** **22 41 33.0 -4.9**
POPC Popayan, Colom 5.56 219 P **Pn** **22 40 41.8 -1.1**
3.7nm,0.7s
POPC S **Sn** **22 41 44.7 -1.5**
3.7nm,0.7s
TXAR Lajitas Array 36.41 312 P **P** **22 46 12.7 +0.4**
0.4nm,0.8s,baz=133,slow=9.7,SNR=5.1
0.4nm,0.8s
PDAR Pinedale Array 48.02 324 P **P** **22 47 46.1 -0.1**
0.1nm,0.4s,baz=118,slow=7.7,SNR=1.5
0.1nm,0.4s
SCHQ Schefferville 48.09 5 P **P** **22 47 46.5 +0.2**
3.3nm,1.1s,baz=203,slow=7.7,SNR=2.1
3.3nm,1.1s
YKA Yellowknife Ar 63.20 340 P **P** **22 49 33.5 -0.4**
0.3nm,0.6s,baz=137,slow=6.2,SNR=7.0
0.3nm,0.6s
WRA Warramunga Arr 150.34 241 PKPbc **PKPdf** **22 58 54.6 +3.3**
0.2nm,0.4s,baz=109,slow=2.6,SNR=6.9

*SOF **28** 22:44:56.7,41.°29N±0.°02×23.°75E±0.°01,h20km±2km, MD2.5/7*
*ATH **28** 22:44:56.8,41.°25N×23.°73E,h15km±1km,ML2.3/9, Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*
*BEO **28** 22:44:58.4±0.4,41.°27N×23.°72E,h0km,ML2.2/11*
*SKO **28** 22:44:58.2,41.°27N×23.°71E,h0km,ML2.1*
*ISK **28** 22:44:59.6,41.°23N×24.°05E,h9km,ML2.3/20*
ISC 28 22:44:55.8±1.0,41.°19N±0.°02×23.°82E±0.°02,h13km±8km, n54,σ1°14/85,Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
SRS	**Serrai**	**0.19**	**247**	*e*Pg		**Pb**	**22 45 01.4**	**+0.3**
SRS				*e*Sg		**Sb**	**22 45 04.4**	**-0.3**
SRS	**Serrai**	**0.19**	**247**	P		**Pb**	**22 45 01.2**	**+0.1**
SRS				S		**Sb**	**22 45 04.2**	**-0.5**
MMB	**Musomishta**	**0.36**	**351**	*e*Pg		**Pg**	**22 45 03.6**	**+0.3**
MMB				*e*Sg		**Sg**	**22 45 06.9**	**-1.1**
SOH	**Sokhos**	**0.51**	**224**	P		**Pb**	**22 45 07.0**	**+0.4**
SOH				S		**Sb**	**22 45 14.1**	**+0.1**
KAVA	**Kavala**	**0.56**	**110**	P		**Pn**	**22 45 09.6**	**+0.2**
KAVA				S		**Sn**	**22 45 17.6**	**-0.9**
KNT	**Kendrikon**	**0.70**	**268**	P		**Pg**	**22 45 09.0**	**-0.4**
KNT				S		**Sg**	**22 45 18.0**	**-0.6**
THS1	**Thassos, Thass**	**0.73**	**128**	P		**Pn**	**22 45 13.2**	**+1.5**
HORT	**Hortiatis**	**0.81**	**223**	P		**Pn**	**22 45 12.2**	**-0.7**
HORT				S		**Sn**	**22 45 23.6**	**-1.2**
KKB	**Krupnik**	**0.83**	**321**	*e*Pg		**Pb**	**22 45 11.5**	**-0.6**
KKB				*e*Sg		**Sb**	**22 45 21.3**	**-1.9**
RZN	**Rozhen**	**0.85**	**54**	*e*Pg		**Pn**	**22 45 14.0**	**+0.4**
RZN				*e*Sg		**Sn**	**22 45 25.3**	**-0.8**
THE	**Thessaloniki**	**0.86**	**230**	P		**Pn**	**22 45 13.0**	**-0.5**
THE				S		**Sg**	**22 45 24.5**	**+0.9**
PLG	**Polygyros**	**0.87**	**199**	P		**Pn**	**22 45 14.1**	**+0.5**
THAS	**Thassos island**	**0.90**	**130**	P		**Pn**	**22 45 15.7**	**+1.7**
THAS				S		**Sn**	**22 45 28.6**	**+1.8**
VAY	**Valandovo**	**0.95**	**278**	*i* Pg		**Pg**	**22 45 14.3**	**+0.1**
VAY				*i* Sg		**Sb**	**22 45 25.9**	**-0.8**
VAY				*e*Lg		Lg	22 45 26.7	
	comp=N,47nm,0.3s							
VAY				*e*Lg		Lg	22 45 27.0	
	comp=E,30nm,0.3s							
GRG	**Griva**	**1.10**	**258**	P		**Pn**	**22 45 16.8**	**-0.1**
GRG				S		**Sb**	**22 45 30.2**	**-0.7**
PLD	**Plovdiv**	**1.18**	**36**	Pg		**Pg**	**22 45 19.3**	**+0.8**
PLD				Sg		**Sn**	**22 45 33.4**	**-0.4**
PLD	**Plovdiv**	**1.18**	**36**	*e*Pg		**Pg**	**22 45 19.1**	**+0.6**
PLD				*e*Sg		**Sg**	**22 45 33.9**	**0.0**
PLD	**Plovdiv**	**1.18**	**36**	*e*Pg		**Pg**	**22 45 18.7**	**+0.2**
PLD				*e*Sg		**Sn**	**22 45 33.6**	**-0.2**
PLN1	**Chaniotis**	**1.21**	**189**	P		**Pg**	**22 45 20.4**	**+1.4**
KDZ	**Kurdzhali**	**1.22**	**68**	Pg		**Pg**	**22 45 19.1**	**-0.2**
KDZ				Sg		**Sg**	**22 45 35.0**	**-0.2**
RDO	**Rodhopi**	**1.29**	**91**	Pn		**Pg**	**22 45 21.6**	**+0.9**
RDO	**Rodhopi**	**1.29**	**91**	P		**Pg**	**22 45 21.3**	**+0.6**
PLNA	**Plana**	**1.32**	**347**	*i* Pg		**Pg**	**22 45 21.1**	**-0.1**
PLNA				*i* Sg		**Sb**	**22 45 37.4**	**+0.1**
SMTH	**Samothraki Isl**	**1.48**	**119**	P		**Pg**	**22 45 23.8**	**-0.5**
VTS	**Vitosha**	**1.49**	**343**	*e*Pg		**Pb**	**22 45 23.2**	**-0.2**
VTS				*e*Sg		**Sb**	**22 45 42.5**	**+0.2**
VTS	**Vitosha**	**1.49**	**343**	*e*Pg		**Pb**	**22 45 23.1**	**-0.3**
VTS				*e*Sg		**Sn**	**22 45 41.2**	**-0.6**
DIM	**Dimitrovgrad**	**1.57**	**56**	*e*Pg		**Pg**	**22 45 27.2**	**+1.3**
DIM				*e*Sg		**Sg**	**22 45 48.6**	**+2.3**
BOSS	**Bosilegrad**	**1.65**	**323**	*e*Pg		**Pg**	**22 45 25.6**	**-0.4**
BOSS				*e*Sg		**Sb**	**22 45 47.0**	**+0.4**
LIA	**Limnos Island**	**1.66**	**141**	P		**Pg**	**22 45 26.7**	**-0.8**
ALN	**Alexandroupoli**	**1.71**	**99**	Pn		**Pg**	**22 45 27.7**	**-0.8**
ALN				Sn		**Sb**	**22 45 48.4**	**+0.1**
ALN	**Alexandroupoli**	**1.71**	**99**	P		**Pb**	**22 45 27.2**	**+0.2**
BLSH	**Balsha**	**1.71**	**346**	*i* Pg		**Pg**	**22 45 28.7**	**0.0**
BLSH				*i* Sg		**Sg**	**22 45 50.4**	**-0.5**
ENEZ	**Enez**	**1.82**	**104**	Pn		**Pg**	**22 45 29.7**	**-1.0**
GADA	**Gvkgeada**	**1.87**	**122**	Pn		**Pg**	**22 45 30.5**	**-1.1**
ERIK	**Erikli-Kesan**	**2.10**	**103**	Pn		**Pb**	**22 45 33.7**	**0.0**
UKOP	**Uzunkopru-Edir**	**2.12**	**91**	Pn		**Pb**	**22 45 33.5**	**-0.6**
GELI	**Tayfur-Gelibol**	**2.16**	**111**	Pn		**Pb**	**22 45 34.5**	**-0.3**
BOZC	**Bozcaada**	**2.17**	**128**	Pn		**Pb**	**22 45 35.3**	**+0.4**
BARS	**Barje**	**2.21**	**318**	*e*Pn		**Pb**	**22 45 35.7**	**+0.2**
BARS				*e*Sn		**Sb**	**22 46 01.2**	**-1.6**
ZAPS	**Zavoj**	**2.26**	**337**	*e*Pn		**Pb**	**22 45 35.2**	**-1.3**
ZAPS				*e*Sn		**Sb**	**22 46 02.4**	**-1.9**
EDRB	**Edirne**	**2.29**	**72**	Pn		**Pb**	**22 45 36.0**	**-0.9**
COMU	**Canakkale**	**2.29**	**118**	Pn		**Pb**	**22 45 36.5**	**-0.5**
EZN	**Ezine**	**2.34**	**125**	Pn		**Pb**	**22 45 37.5**	**-0.4**
LPK	**Lapseki**	**2.38**	**109**	Pn		**Pb**	**22 45 37.4**	**-1.0**
SIGR	**SIGRI**	**2.52**	**141**	Pn		**Pb**	**22 45 40.0**	**-0.8**
BLKB	**Belogradchik**	**2.57**	**341**	*e*Pn		**Pb**	**22 45 40.2**	**-1.6**
BLKB				*e*Sn		**Sb**	**22 46 12.6**	**-0.8**
RKY	**Sarkoy-Tekirda**	**2.59**	**100**	Pn		**Pb**	**22 45 40.6**	**-1.5**
GAZK	**Gazikoy-TEKIRD**	**2.69**	**98**	Pn		**Pb**	**22 45 41.5**	**-2.2**
CANM	**Can-anakkale**	**2.73**	**115**	Pn		**Pb**	**22 45 42.8**	**-1.6**
KRBG	**Karabiga-Canak**	**2.76**	**106**	Pn		**Pb**	**22 45 42.8**	**-2.1**
SELS	**Selova**	**2.85**	**316**	*e*Pn		**Pb**	**22 45 43.7**	**-2.9**
SELS				*e*Sn		**Sb**	**22 46 19.0**	**-2.4**
ZAGS	**Zajecar**	**2.87**	**336**	*e*Pn		**Pn**	**22 45 43.0**	**+1.8**
ZAGS				*e*Sn		**Sn**	**22 46 17.8**	**+2.2**
BOVS	**Bovan**	**2.90**	**328**	*e*Pn		**Pn**	**22 45 43.5**	**+1.9**
BOVS				*e*Sn		**Sn**	**22 46 18.1**	**+1.8**
GOCS	**Kraljevo Serbi**	**3.22**	**318**	*e*Pn		**Pn**	**22 45 49.1**	**+3.0**
GOCS				*e*Sn		**Sn**	**22 46 26.3**	**+1.9**

SJA 28 22:52:12.8±0.6,31.°84S×64.°90W,h34km±2km,ML3.2, MW3.5,Cordoba Province

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
TCA	**Tanti**	**0.56**	**28**	*e*P		Pb	22 52 25.8	+1.3
TCA				*e*S		Sn	22 52 34.1	+1.4
TCA				IAML			22 52 34.9	
	comp=Z,530nm,0.3s							
PIL	**Pilar**	**0.88**	**79**	*e*P		Pb	22 52 32.1	+2.4
MRA	**San Martin**	**0.91**	**230**	*e*P		Pb	22 52 30.7	+0.5
MRA				IAML			22 52 44.3	
	comp=Z,640nm,0.2s							
ACHE	**Chepes**	**1.65**	**294**	*e*P		Pb	22 52 41.7	-1.0
ACHE				*e*S		Sb	22 53 04.2	+1.0
ACAN	**Cantantal**	**1.99**	**257**	*e*P		Pb	22 52 46.4	-2.1
ACAN				IAML			22 53 19.6	
	comp=Z,585nm,0.3s							
AVFE	**Valle Fertil**	**2.48**	**298**	*e*P		Pn	22 52 53.8	+2.9
AVFE				*e*S		Sn	22 53 23.4	+3.4
AVFE				IAML			22 53 36.0	
	comp=Z,57nm,0.5s							
CFA	**Coronel Fontan**	**2.85**	**274**	*e*P		Pn	22 52 58.6	+2.6
CFA				*e*S		Sb	22 53 42.6	+5.0
CFA				IAML			22 53 46.2	
	comp=Z,82nm,1.2s							
ACLC	**CERRO LA CRUZ**	**2.98**	**323**	*e*P		Pn	22 53 00.5	+2.6
ACLC				*e*S		Sb	22 53 49.7	+8.3
ACLC				IAML			22 53 53.7	
	comp=Z,48nm,0.3s							
RTLL	**Cerro Villicun**	**3.09**	**278**	*e*P		Pn	22 53 02.5	+3.2
RTLL				*e*S		Sb	22 53 51.5	+7.0
RTLL				IAML			22 54 05.1	
	comp=Z,124nm,1.1s							
SJA	**San Juan**	**3.13**	**275**	IAML			22 53 55.7	
	comp=Z,45nm,0.5s							
SJA				*e*S		Sb	22 53 55.9	+10
ZON	**Zonda**	**3.23**	**274**	*e*P		Pn	22 53 04.1	+2.9
ZON				*e*S		Sb	22 53 54.1	+5.6
ZON				IAML			22 53 57.2	
	comp=Z,46nm,0.9s							
ASAL	**Salagasta**	**3.42**	**256**	*e*P		Pn	22 53 07.5	+3.7
ASAL				*e*S		Sb	22 53 57.7	+3.8
AVIZ	**Vizcaceras**	**3.46**	**241**	*e*P		Pn	22 52 48.1	-16
AVIZ				*e*S		Sb	22 54 00.8	+5.7
AAGR	**Agrelo**	**3.55**	**248**	*e*P		Pn	22 53 09.0	+3.4
AAGR				*e*S		Sb	22 54 02.8	+5.2
AAGR				IAML			22 54 14.5	
	comp=Z,40nm,0.6s							
ARCO	**CERRO ARCO**	**3.56**	**253**	*e*S		Sb	22 54 08.4	+10
ARCO				IAML			22 54 10.6	
	comp=Z,70nm,0.8s							
RFA	**San Rafael**	**4.18**	**225**	*e*P		Pn	22 53 17.0	+2.8
RFA				*e*S		Sb	22 54 16.8	+1.1
RFA				IAML			22 54 39.2	
	comp=Z,27nm,0.4s							
AROD	**Rodeo**	**4.26**	**292**	*e*P		Pn	22 53 19.4	+3.8
AROD				*e*S		Sb	22 54 20.3	+1.9
CO03	**El Pedregal**	**5.05**	**280**	*e*P		Pn	22 53 26.5	+0.3
CO03				*e*S		Sn	22 54 23.5	+0.1
CO03				IAML			22 54 56.6	
	comp=Z,20nm,0.6s							

*IDC **28** 23:01:10.3±1.5,24.°20S×67.°00W,h155km±14km,mb3.6/11, mbtmp4.1/18,MS2.6/1, Error ellipse: s-maj=17.0km s-min=10.3km az=88.0*
*SJA **28** 23:01:10.9±1.2,24.°25S×67.°14W,h192km±7km,ML4.3, MW4.0*
*NEIC **28** 23:01:11.9±1.8,24.°27S±0.°06×67.°03W±0.°09,h178km±8km, mb4.4/12, Mwr4.4(GUC), Error ellipse: s-maj=12.1km s-min=8.9km az=89.0*
*GUC **28** 23:01:12.1±0.7,24.°21S×67.°11W,h193km±5km,ML4.8*
*VAO **28** 23:01:13.1±0.8,24.°20S×67.°01W,h199km±7km,mb4.2, Presumed earthquake*
ISC 28 23:01:12.2±0.6,24.°22S±0.°04×67.°14W±0.°04,h183km±6km, n142,σ1°50/169,mb3.7/11,13C-1D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
SALTA		**0.73**	**91**	⇓*e*P		**Pn**	**23 01 39.8**	**+0.7**
SALTA				*e*S		**Sn**	**23 02 01.1**	**+1.3**
SALTA		**0.73**	**91**	*i* P		**Pn**	**23 01 39.9**	**+0.8**
SALTA				*i* S		**Sn**	**23 02 00.1**	**+0.3**
SALTA				IAML			23 02 01.8	
	comp=Z,322nm,0.9s							
AF01	**San Pedro de A**	**1.58**	**323**			**Pn**	**23 01 47.5**	**+2.0**
AF01				Sn		**Sn**	**23 02 14.1**	**+2.8**
AF01	**San Pedro de A**	**1.58**	**323**	*e*P		**Pn**	**23 01 48.2**	**+2.7**
AF01				*e*S		**Sn**	**23 02 14.8**	**+3.5**
AF01				IAML			23 02 17.9	
	comp=N,3μm,0.2s							
HJA	**Humahuaca**	**1.88**	**58**	*i* P		**Pn**	**23 01 48.8**	**+0.1**
HJA				*i* S		**Sn**	**23 02 17.6**	**+0.8**
HJA				IAML			23 02 20.6	
	comp=Z,86nm,0.9s							
FSA	**Cafayete**	**2.16**	**151**	*i* P		**Pn**	**23 01 51.1**	**-0.3**
FSA				*i* S		**Sn**	**23 02 20.7**	**-1.3**
YJA	**Yavi**	**2.52**	**37**⇑*e*P			**Pn**	**23 01 56.5**	**+0.6**
YJA	**Yavi**	**2.52**	**37**	*i* P		**Pn**	**23 01 56.5**	**+0.6**
YJA				*i* S		**Sn**	**23 02 30.2**	**+0.5**
PB06	**IPOC Station P**	**2.69**	**304**			**Pn**	**23 01 58.8**	**+1.4**
PB06				Sn		**Sn**	**23 02 32.6**	**-0.1**
PB06	**IPOC Station P**	**2.69**	**304**⇑*e*P			**Pn**	**23 01 58.7**	**+1.2**
PB06				*e*S		**Sn**	**23 02 32.8**	**+0.1**
PB06				IAML			23 02 34.8	
	comp=E,4μm,0.3s							
PB06	**IPOC Station P**	**2.69**	**304**	*i* P		**Pn**	**23 01 59.0**	**+1.5**
PB06				*i* S		**Sn**	**23 02 32.4**	**-0.2**
PB06				IAML			23 02 35.6	
	comp=Z,2μm,0.3s							
PB14	**IPOC Station P**	**3.00**	**262**			**Pn**	**23 02 01.8**	**+0.5**
PB14	**IPOC Station P**	**3.00**	**262**⇑*e*P			**Pn**	**23 02 02.0**	**+0.7**
PB14				*e*S		**Sn**	**23 02 38.5**	**-1.0**
PB14				IAML			23 02 41.7	
	comp=E,473nm,0.4s							
PB14	**IPOC Station P**	**3.00**	**262**	*i* P		**Pn**	**23 02 01.9**	**+0.6**
PB14				*i* S		**Sn**	**23 02 38.1**	**-1.4**
PB14				IAML			23 02 49.3	
	comp=Z,453nm,0.5s							
AHML	**Horco Molle**	**3.04**	**148**⇑*e*P			Pn	23 01 45.3	-16
AHML	**Horco Molle**	**3.04**	**148**	*e*P		Pn	23 01 44.9	-17
PB09	**IPOC Station P**	**3.09**	**321**			**Pn**	**23 02 03.7**	**+1.4**
PB09	**IPOC Station P**	**3.09**	**321**⇑*e*P			**Pn**	**23 02 04.0**	**+1.7**
PB09				*e*S		**Sn**	**23 02 42.0**	**+0.7**
PB09				IAML			23 02 46.8	
	comp=N,1μm,0.7s							
PB09	**IPOC Station P**	**3.09**	**321**	*i* P		**Pn**	**23 02 03.7**	**+1.4**
PB09				IAML			23 02 46.9	
	comp=Z,969nm,0.4s							
PB05	**IPOC Station P**	**3.12**	**295**			**Pn**	**23 02 03.3**	**+0.8**
PB05	**IPOC Station P**	**3.12**	**295**⇑*e*P			**Pn**	**23 02 03.4**	**+0.8**
PB05				*e*S		**Sn**	**23 02 40.6**	**-1.2**
PB05				IAML			23 02 44.3	
	comp=E,1μm,0.2s							
PB05	**IPOC Station P**	**3.12**	**295**	*i* P		**Pn**	**23 02 03.4**	**+0.8**
PB05				*i* S		**Sn**	**23 02 40.0**	**-1.8**
PB05				IAML			23 02 43.9	
	comp=Z,624nm,0.2s							
AC02	**Maricunga**	**3.17**	**214**			**Pn**	**23 02 04.5**	**+1.1**
AC02	**Maricunga**	**3.17**	**214**⇑*e*P			**Pn**	**23 02 04.5**	**+1.1**
AC02				*e*S		**Sn**	**23 02 45.4**	**+1.9**
AC02	**Maricunga**	**3.17**	**214**	*i* P		**Pn**	**23 02 04.6**	**+1.1**
AC02				IAML			23 02 51.8	
	comp=Z,90nm,0.7s							
PB03	**IPOC Station P**	**3.23**	**311**			**Pn**	**23 02 04.7**	**+0.7**
PB03	**IPOC Station P**	**3.23**	**311**⇑*e*P			**Pn**	**23 02 04.7**	**+0.7**
PB03				*e*S		**Sn**	**23 02 43.1**	**-1.2**
PB03	**IPOC Station P**	**3.23**	**311**	*i* P		**Pn**	**23 02 04.2**	**+0.3**
PB03				*i* S		**Sn**	**23 02 42.8**	**-1.5**
PB03				IAML			23 02 46.7	
	comp=Z,2μm,0.2s							
PB07	**IPOC Station P**	**3.54**	**314**			**Pn**	**23 02 08.5**	**+0.7**
PB07	**IPOC Station P**	**3.54**	**314**⇑*e*P			**Pn**	**23 02 08.3**	**+0.5**
PB07				*e*S		**Sn**	**23 02 49.7**	**-1.5**
PB07	**IPOC Station P**	**3.54**	**314**	*i* P		**Pn**	**23 02 08.7**	**+0.8**
PB07				*i* S		**Sn**	**23 02 49.8**	**-1.5**
PB07				IAML			23 02 55.2	
	comp=Z,1μm,0.3s							
AC01	**Pan de Azucar**	**3.67**	**238**			**Pn**	**23 02 09.0**	**-0.3**
AC01	**Pan de Azucar**	**3.67**	**238**⇑*e*P			**Pn**	**23 02 08.8**	**-0.4**
AC01				*e*S		**Sn**	**23 02 51.8**	**-2.2**
AC01	**Pan de Azucar**	**3.67**	**238**	*i* P		**Pn**	**23 02 08.8**	**-0.4**
AC01				*i* S		**Sn**	**23 02 51.2**	**-2.7**
AC01				IAML			23 02 53.3	
	comp=Z,252nm,0.3s							
PB01	**IPOC Station P**	**3.83**	**325**			**Pn**	**23 02 11.3**	**0.0**
PB01	**IPOC Station P**	**3.83**	**325**⇑*e*P			**Pn**	**23 02 11.4**	**0.0**
PB01	**IPOC Station P**	**3.83**	**325**	*i* P		**Pn**	**23 02 10.9**	**-0.5**
PB01				*i* S		**Sn**	**23 02 56.7**	**-0.9**
PB01				IAML			23 03 02.6	
	comp=Z,737nm,0.2s							
PB02	**IPOC Station P**	**3.84**	**318**			**Pn**	**23 02 11.6**	**0.0**
PB02	**IPOC Station P**	**3.84**	**318**⇑*e*P			**Pn**	**23 02 11.8**	**+0.3**
PB02	**IPOC Station P**	**3.84**	**318**	*i* P		**Pn**	**23 02 11.2**	**-0.4**
PB02				*i* S		**Sn**	**23 02 55.9**	**-2.1**
PB02				IAML			23 03 02.3	
	comp=Z,2μm,0.3s							
TINO	**Tinogasta**	**3.85**	**186**	*i* P		**Pn**	**23 02 12.6**	**+1.0**
AC06	**Mina Casimiro**	**4.26**	**222**			**Pn**	**23 02 16.1**	**-0.6**
AC06	**Mina Casimiro**	**4.26**	**222**⇑*e*P			**Pn**	**23 02 16.2**	**-0.5**
GO03	**Copiapo**	**4.37**	**219**			**Pn**	**23 02 17.8**	**-0.3**
GO03	**Copiapo**	**4.37**	**219**	*e*P		**Pn**	**23 02 17.2**	**-0.9**
GO03	**Copiapo**	**4.37**	**219**	*i* P		**Pn**	**23 02 16.9**	**-1.2**
GO03				*i* S		**Sn**	**23 03 06.8**	**-3.0**
GO03				IAML			23 03 11.3	
	comp=Z,303nm,0.4s							
PATCX	**Punta Patache**	**4.38**	**320**			**Pn**	**23 02 18.2**	**-0.1**
PATCX	**Punta Patache**	**4.38**	**320**	*e*P		**Pn**	**23 02 17.6**	**-0.7**
PATCX	**Punta Patache**	**4.38**	**320**	*i* P		**Pn**	**23 02 17.7**	**-0.6**
PATCX				IAML			23 03 17.0	
	comp=Z,446nm,0.3s							
PB08	**IPOC Station P**	**4.46**	**335**			**Pn**	**23 02 20.5**	**+0.8**
PB08	**IPOC Station P**	**4.46**	**335**	*i* P		**Pn**	**23 02 20.5**	**+0.8**
PB08				IAML			23 03 19.1	
	comp=Z,232nm,0.4s							
TA01	**Diego Aracena**	**4.59**	**322**			**Pn**	**23 02 20.9**	**0.0**
TA01	**Diego Aracena**	**4.59**	**322**	*i* P		**Pn**	**23 02 21.0**	**0.0**
TA01				IAML			23 03 22.0	
	comp=Z,229nm,0.6s							
VCA	**Vinchina**	**4.60**	**192**	*i* P		**Pn**	**23 02 23.0**	**+1.8**
GO01	**Chusmiza**	**4.91**	**337**			**Pn**	**23 02 25.7**	**+0.2**
GO01	**Chusmiza**	**4.91**	**337**	*e*P		**Pn**	**23 02 25.7**	**+0.2**
GO01	**Chusmiza**	**4.91**	**337**	*i* P		**Pn**	**23 02 25.4**	**-0.1**
GO01				IAML			23 03 27.7	
	comp=Z,135nm,0.3s							
PB11	**IPOC Station P**	**5.01**	**332**			**Pn**	**23 02 25.5**	**-1.0**
PB11	**IPOC Station P**	**5.01**	**332**	*i* P		**Pn**	**23 02 25.5**	**-1.0**
PB11				IAML			23 03 25.2	
	comp=Z,322nm,0.4s							
ACLC	**CERRO LA CRUZ**	**5.19**	**178**	*i* P		**Pn**	**23 02 28.5**	**-0.3**
AC04	**Llanos de Chal**	**5.31**	**221**			**Pn**	**23 02 28.5**	**-1.7**
AC04	**Llanos de Chal**	**5.31**	**221**	*e*P		**Pn**	**23 02 28.7**	**-1.5**
AC04	**Llanos de Chal**	**5.31**	**221**	*i* P		**Pn**	**23 02 28.8**	**-1.5**
AC04				*i* S		**Sn**	**23 03 27.8**	**-3.9**
AC04				IAML			23 03 32.0	
	comp=Z,151nm,0.5s							
PSGCX	**Pisagua**	**5.36**	**328**			**Pn**	**23 02 28.6**	**-2.5**
PSGCX	**Pisagua**	**5.36**	**328**	*e*P		**Pn**	**23 02 28.9**	**-2.2**
PSGCX	**Pisagua**	**5.36**	**328**	*i* P		**Pn**	**23 02 29.6**	**-1.4**
PSGCX				IAML			23 03 32.7	
	comp=Z,164nm,0.5s							
AC05	**El Transito**	**5.39**	**211**			**Pn**	**23 02 30.4**	**-0.9**
AC05	**El Transito**	**5.39**	**211**	*e*P		**

GO08				IAmb	IAmb	23 06 19.6	
	comp=Z,9.3nm,0.8s						
NBPS	**Pedro II - PI**	**31.64**	**56**	*eP*	**P**	**23 07 16.1**	**-2.3**
MTO3	**Montecristo**	**44.09**	**328**	P	**P**	**23 09 03.3**	**+0.8**
BELA	**Belgrano 2**	**55.84**	**172**	P	**P**	**23 10 30.5**	**+0.5**
SNAA	**Sanae**	**59.19**	**161**	P	**P**	**23 10 54.1**	**+0.6**
	comp=Z,2.8nm,0.6s,baz=300,slow=6.8,SNR=3.9						
	comp=Z,2.8nm,0.6s						
SNAA	**Sanae**	**59.19**	**161**	P	**P**	**23 10 53.8**	**+0.2**
SNAA				IAmb	IAmb	23 10 54.9	
	comp=Z,3.8nm,0.7s						
TXAR	**Lajitas Array**	**63.78**	**325**	P	**P**	**23 11 26.7**	**+1.9**
	comp=Z,0.4nm,0.8s,baz=111,slow=5.5,SNR=4.0						
	comp=Z,0.4nm,0.8s						
TXAR	**Lajitas Array**	**63.78**	**325**	P	**P**	**23 11 25.4**	**+0.6**
QSPA	**South Pole Qui**	**65.99**	**180**	P	**P**	**23 11 40.3**	**+1.7**
	comp=Z,3.3nm,0.5s,baz=198,slow=1.4,SNR=38						
	comp=Z,3.3nm,0.5s						
QSPA	**South Pole Qui**	**65.99**	**180**	P	**P**	**23 11 40.0**	**+1.3**
QSPA				IAmb	IAmb	23 11 43.0	
	comp=Z,2.6nm,0.7s						
VNDA	**Vanda**	**74.47**	**190**	P	**P**	**23 12 31.3**	**+1.5**
	comp=Z,1.0nm,0.9s,baz=138,slow=5.9,SNR=3.5						
	comp=Z,1.0nm,0.9s						
SUR	**Sutherland**	**75.82**	**119**	P	**P**	**23 12 38.4**	**-0.2**
TORD	**Torodi Ar. Bea**	**76.77**	**69**	P	**P**	**23 12 43.8**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=262,slow=5.9,SNR=6.0						
	comp=Z,1.1nm,0.6s						
PDAR	**Pinedale Array**	**77.27**	**329**	P	**P**	**23 12 47.4**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=139,slow=7.2,SNR=3.4						
	comp=Z,0.3nm,0.5s						
NVAR	**Mina Array Bea**	**78.62**	**321**	P	**P**	**23 12 56.1**	**+2.1**
	comp=Z,0.2nm,0.3s,baz=116,slow=4.0,SNR=2.6						
	comp=Z,0.2nm,0.3s						
BOSA	**Boshof**	**80.75**	**117**	P	**P**	**23 13 06.3**	**+0.6**
	comp=Z,1.6nm,0.6s,baz=272,slow=3.6,SNR=9.5						
	comp=Z,1.6nm,0.6s						
BOSA	**Boshof**	**80.75**	**117**	P	**P**	**23 13 04.9**	**-0.7**
BOSA				IAmb	IAmb	23 13 16.2	
	comp=Z,11nm,1.3s						
MAW	**Mawson**	**81.27**	**163**	P	**P**	**23 13 08.8**	**+1.3**
	comp=Z,4.0nm,0.8s,baz=312,slow=4.2,SNR=2.8						
	comp=Z,4.0nm,0.8s						
MAW	**Mawson**	**81.27**	**163**	P	**P**	**23 13 08.1**	**+0.7**
ESDC	**Sonseca Array**	**86.64**	**44**	P	**P**	**23 13 36.0**	**+0.9**
	comp=Z,0.3nm,0.8s,baz=235,slow=4.5,SNR=2.0						
	comp=Z,0.3nm,0.8s						
YKA	**Yellowknife Ar**	**94.28**	**340**	P	**P**	**23 14 11.1**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=131,slow=3.6,SNR=8.6						
	comp=Z,0.4nm,0.8s						

*DJA **28** 23:06:51.8±0.7,2˚N±5˚×9˚6E±˚, h10km,M3.8/17,mb4.2/1, MLv3.5/17*

*IDC **28** 23:06:51.4±10.0,2˚53N×96˚11E,h0km,mb3.7/3, mbtmp3.7/4,ML4.3/1,Error ellipse: s-maj=212.9km s-min=118.6km az=146.0*

*NEIC **28** 23:06:55.4±1.1,2˚48N±0˚10×95˚9E±0˚1,h27km±6km, mb4.0/5,Error ellipse: s-maj=20.6km s-min=13.6km az=73.0*

ISC 28 23:06:54.5±1.0,2˚53N±0˚08×95˚84E±0˚09,h25km,n34, σ1§19/25,mb3.9/5,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**1.52**	**61**	P	**Pb**	**23 07 20.3**	**-1.7**
MLSI	**Meulaboh, Aceh**	**1.82**	**18**	P	**Pb**	**23 07 25.7**	**-1.4**
GSI	**Gunungsitoli**	**2.12**	**125**	Pn	**Pn**	**23 07 27.8**	**-0.5**
GSI	**Gunungsitoli**	**2.12**	**125**	P	**Pn**	**23 07 27.5**	**-0.8**
KCSI	**Kotacane, Aceh**	**2.17**	**63**	P	**Pb**	**23 07 30.5**	**-2.5**
BSI	**Banda Aceh**	**3.00**	**350**	P	**Pn**	**23 07 39.6**	**-0.9**
RPSI	**Rantau Prapat**	**3.08**	**87**		**Pn**	**23 07 42.6**	**+1.0**
PSI	**Prapat**	**3.09**	**85**	P	**Pn**	**23 07 43.0**	**+1.2**
PBSI	**Pulau Batu**	**3.54**	**136**	P	**Pn**	**23 07 47.6**	**-0.3**
KULM	**Kulim**	**5.53**	**60**		**Pn**	**23 08 16.0**	**+0.7**
KULM	**Kulim**	**5.53**	**60**	P	**Pn**	**23 08 16.9**	**+1.7**
MNAI	**Manna**	**9.87**	**134**	Pn	**Pn**	**23 09 14.7**	**-0.1**
LWLI	**Liwa**	**11.11**	**132**	P	**Pn**	**23 09 34.5**	**+2.4**
CMAR	**Chiang Mai Arr**	**16.12**	**11**	Pn	**Pn**	**23 10 39.0**	**-0.6**
	0.4nm,0.3s,baz=188,slow=12,SNR=4.0						
	0.4nm,0.3s						
H08S2	**Diego Garcia H**	**25.39**	**246**	T	T	23 38 31.4	
	baz=67,slow=76,SNR=104						
H08S3	**Diego Garcia H**	**25.39**	**246**	T	T	23 38 31.5	
	baz=67,slow=76,SNR=154						
H08S1	**Diego Garcia H**	**25.41**	**246**	T	T	23 38 32.0	
	baz=67,slow=76,SNR=81						
H01W3	**Cape Leeuwin H**	**40.98**	**157**	T	T	23 57 59.1	
	baz=332,slow=76,SNR=71						
H01W2	**Cape Leeuwin H**	**41.00**	**157**	T	T	23 58 02.2	
	baz=332,slow=76,SNR=76						
H01W1	**Cape Leeuwin H**	**41.00**	**157**	T	T	23 58 01.2	
	baz=332,slow=76,SNR=51						
WRA	**Warramunga Arr**	**43.88**	**122**	P	**P**	**23 14 58.9**	**-0.5**
WRA				IAmb	IAmb	23 15 19.4	
	comp=Z,2.2nm,0.9s						
MKAR	**Makanchi Array**	**45.64**	**347**	P	**P**	**23 15 14.0**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=158,slow=7.9,SNR=9.9						
	comp=Z,0.8nm,0.7s						
MKAR	**Makanchi Array**	**45.64**	**347**	P	**P**	**23 15 12.5**	**-0.5**
MAKZ	**Makanchi**	**45.73**	**347**	P	**P**	**23 15 14.0**	**+0.4**
MAKZ				IAmb	IAmb	23 15 16.0	
	comp=Z,1.5nm,0.7s						
SONM	**Songino Array**	**46.05**	**10**	P	**P**	**23 15 16.5**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=186,slow=8.2,SNR=5.2						
	comp=Z,0.4nm,0.4s						
SONM	**Songino Array**	**46.05**	**10**	P	**P**	**23 15 16.4**	**+0.1**
SONM				IAmb	IAmb	23 15 25.4	
	comp=Z,3.2nm,1.4s						
KK31	**Karatay Array**	**46.28**	**334**	P	**P**	**23 15 19.0**	**+1.0**
KKAR	**Karatay Array**	**46.28**	**334**	P	**P**	**23 15 19.5**	**+1.4**
ZALV	**Zalesovo Beam**	**52.05**	**352**	P	**P**	**23 16 03.0**	**+1.0**
	comp=Z,0.7nm,0.4s,baz=177,slow=5.8,SNR=5.0						
	comp=Z,0.7nm,0.4s						
ZALV	**Zalesovo Beam**	**52.05**	**352**	P	**P**	**23 16 02.6**	**+0.6**
BORK	**Borovoye**	**54.60**	**341**	P	**P**	**23 16 21.2**	**+0.3**
H04S1	**CROZET ISLANDS**	**62.48**	**212**	T	T	00 24 55.5	
	baz=52,slow=75,SNR=22						
H04S3	**CROZET ISLANDS**	**62.49**	**212**	T	T	00 24 54.8	
	baz=52,slow=75,SNR=31						
H04S2	**CROZET ISLANDS**	**62.50**	**212**	T	T	00 24 57.8	
	baz=52,slow=75,SNR=24						

*BJI **28** 23:10:32.3,7˚63S×124˚38E,h593km,mB5.0/28,mb5.4/82*

*MOS **28** 23:10:37.8±0.9,7˚05S×124˚06E,h603km,mb5.0/59,Error ellipse: s-maj=8.5km s-min=4.8km az=112.9*

*GCMT **28** 23:10:38.5±0.3,7˚14S±0˚03×123˚97E±0˚02,h595km±2km, MW5.4/79,Moment Tensor Solution. s79,c93; Duration: 1§1 Moment tensor: Scale 10^17Nm; Mrr=0.60±.04; Mθθ=0.67±.06; Mφφ 1.27±.05; Mrθ=0.22±.07; Mθφ=0.91±.06; Mφr0.29±.06; Best double couple: M0 1.36700×10^17 NP1:φ=24.00000°,δ74.00000°,λ=-3.00000°. NP2: φ=115.00000°,δ87.00000°,λ=164.00000°. Principal axes: T 1.6850, Plg9.0000°, Azm248.0000°; N -0.6340, Plg74.0000°, Azm125.0000°; P -1.0490, Plg13.0000°, Azm340.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

*NEIC **28** 23:10:38.5±1.6,7˚14S±0˚08×124˚02E±0˚08,h590km±4km, mb5.1/101,Mww5.3/11 Error ellipse: s-maj=12.5km s-min=11.0km az=60.0*

*GFZ **28** 23:10:38.7,7˚13S×124˚04E,h587km,MW5.2,Moment Tensor Solution. s52 Moment tensor: Mrr=0.26; Mθθ=0.65; Mφφ 0.91; Mrθ=0.10; Mθφ=0.38; Mφr0.14; Fault plane solution: NP1:φ=122.00000°,δ89.00000°, λ=169.00000°. Principal axes: T 1.0100, Plg7.0000°, Azm256.0000°; N -0.2700, Plg79.0000°, Azm126.0000°; P -0.7500, Plg8.0000°, Azm347.0000°;*

*DJA **28** 23:10:38.2±0.1,7˚S±2˚×12˚4E±˚,h595km±1km,M5.0/164, mB5.5/129,mb5.4/164,MLv5.8/44,Mw5.2/85, Mw(mB)5.0/129,MwMwp4.8/37,Mwp5.2/37*

*IDC **28** 23:10:38.3±0.5,7˚15S×124˚09E,h593km±5km,mb4.5/34, mbtmp5.4/41,Error ellipse: s-maj=9.1km s-min=5.3km az=73.0*

ISC 28 23:10:38.5±0.3,7˚15S±0˚03×124˚06E±0˚04,h601km±3km, h602km:pP-P,n776,σ1§14/854,mb5.1/171,23C-21D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**2.34**	**231**	P	**P**	**23 11 53.6**	**-0.7**
MMRI	**Maumere**	**2.34**	**231**		**S**	**23 12 55.0**	**-1.0**
MMRI	**Maumere**	**2.34**	**231**		**P**	**23 11 53.4**	**-0.9**
MMRI	**Maumere**	**2.34**	**231**	P	**P**	**23 11 52.8**	**-1.5**
SOEI	**Soe**	**2.60**	**176**	P	**P**	**23 11 55.6**	**-0.1**
SOEI	**Soe**	**2.60**	**176**	S	**S**	**23 12 57.8**	**-0.8**
SOEI	**Soe**	**2.60**	**176**		**S**	**23 11 55.8**	**0.0**
SOEI				S	**S**	**23 12 57.4**	**-1.2**
SOEI	**Soe**	**2.60**	**176**	P	**P**	**23 11 55.2**	**-0.5**
BATI	**Baumata**	**3.07**	**187**	P	**P**	**23 11 58.3**	**+0.1**
	5µm,0.3s,baz=48,slow=1.1,SNR=1567						
BATI				S	**S**	**23 13 00.0**	**-3.0**
	2µm,0.5s,baz=255,slow=3.5,SNR=5.6						
BATI	**Baumata**	**3.07**	**187**	P	**P**	**23 11 57.4**	**-0.7**
BSSI	**Bau Bau, Buton**	**3.68**	**285**	P	**P**	**23 12 02.3**	**+0.4**
KKSI	**Kolaka, Sulawe**	**3.80**	**321**	P	**P**	**23 12 03.9**	**+1.2**
LBFI	**Labuhan Bajo,**	**4.34**	**252**	P	**P**	**23 12 04.8**	**-1.6**
KAPI	**Kappang**	**4.78**	**296**	P	**P**	**23 12 11.5**	**+1.7**
	5µm,1.1s,baz=127,slow=4.3,SNR=432						
KAPI				S	**S**	**23 13 22.5**	**-1.6**
	89nm,0.8s,baz=326,slow=20,SNR=0.7						
KAPI	**Kappang**	**4.78**	**296**	P	**P**	**23 12 11.6**	**+1.9**
KAPI	**Kappang**	**4.78**	**296**		**P**	**23 12 11.4**	**+1.7**
KAPI				S	**S**	**23 13 24.0**	**-0.1**
KAPI	**Kappang**	**4.78**	**296**	P	**P**	**23 12 11.5**	**+1.7**
KAPI				S	**S**	**23 13 24.0**	**-0.1**
KAPI	**Kappang**	**4.78**	**296**	P	**P**	**23 12 11.0**	**+1.3**
NLAI	**Namlea**	**4.92**	**38**	P	**P**	**23 12 10.7**	**-0.1**
MKS	**Makassar**	**4.95**	**292**	P	**P**	**23 12 12.4**	**+1.3**
WBSI	**Waikabubak, Su**	**5.24**	**241**	P	**P**	**23 12 11.8**	**-1.6**
SPSI	**Sidrap Palu**	**5.31**	**306**	P	**P**	**23 12 14.4**	**+0.4**
	3.7nm13µm1µm,0.7s						
SANI	**Sanana**	**5.41**	**21**	P	**P**	**23 12 15.2**	**+0.4**
SANI	**Sanana**	**5.41**	**21**	S	**S**	**23 13 33.4**	**0.0**
SANI	**Sanana**	**5.41**	**21**	P	**P**	**23 12 14.8**	**0.0**
	4.3nm10µm1µm,0.8s						
KRAI	**Karang Ratu**	**5.75**	**49**	P	**P**	**23 12 15.5**	**-2.1**
	4.6nm3µm17µm1µm,1.1s						
DBNI	**Kabupaten Domp**	**5.85**	**256**	P	**P**	**23 12 16.2**	**-2.2**
	3.5nm11µm674nm,0.6s						
LUWI	**Luwuk**	**6.20**	**348**	P	**P**	**23 12 23.0**	**+1.6**
LUWI	**Luwuk**	**6.20**	**348**	S	**S**	**23 13 45.2**	**-0.3**
LUWI	**Luwuk**	**6.20**	**348**		**P**	**23 12 22.6**	**+1.2**
LUWI	**Luwuk**	**6.20**	**348**	P	**P**	**23 12 22.3**	**+0.9**
	2.7nm8µm677nm,0.8s						
PMSI	**Majene**	**6.27**	**305**	P	**P**	**23 12 23.5**	**+1.4**
BNDI	**Bandanaira**	**6.37**	**66**	P	**P**	**23 12 23.0**	**+0.1**
BNDI	**Bandanaira**	**6.37**	**66**	S	**S**	**23 13 49.0**	**+0.7**
BNDI	**Bandanaira**	**6.37**	**66**	P	**P**	**23 12 22.3**	**-0.6**
PLAI	**Plampang**	**6.44**	**255**	P	**P**	**23 12 22.3**	**-1.3**
PLAI	**Plampang**	**6.44**	**255**	P	**P**	**23 12 21.2**	**-2.4**
	5.3nm3µm15µm1µm,0.8s						
APSI	**Ampana**	**6.64**	**339**	P	**P**	**23 12 26.6**	**+1.2**
	2.8nm7µm872nm,0.8s						
MMSI	**Mamuju**	**6.78**	**311**	P	**P**	**23 12 27.8**	**+1.2**
SAUI	**Saumlaki**	**7.22**	**97**	P	**P**	**23 12 30.6**	**0.0**
SAUI	**Saumlaki**	**7.22**	**97**		**P**	**23 12 29.7**	**-0.9**
SAUI	**Saumlaki**	**7.22**	**97**	P	**P**	**23 12 29.5**	**-1.1**
	15µm2µm,0.9s						
PCI	**Palu**	**7.49**	**326**	P	**P**	**23 12 34.2**	**+1.0**
GTOI	**Gorontalo**	**7.80**	**352**	P	**P**	**23 12 37.1**	**+1.1**
	12µm1µm,1.0s						
MRSI	**Masa**	**7.86**	**344**	P	**P**	**23 12 36.7**	**+0.1**
KHKI	**Kahang-Kahang**	**8.46**	**261**	P	**P**	**23 12 40.8**	**-1.5**
	3µm5µm455nm,0.8s						
AUDHS	**Darwin High Sc**	**8.49**	**129**	P	**P**	**23 12 42.9**	**+0.3**
MPSI	**Mapaga**	**8.51**	**331**	P	**P**	**23 12 43.0**	**+0.2**
	2µm6µm429nm,0.8s						
TNTI	**Ternate**	**8.53**	**23**	P	**P**	**23 12 43.3**	**+0.3**
TNTI	**Ternate**	**8.53**	**23**	S	**S**	**23 14 24.6**	**-0.3**
TNTI	**Ternate**	**8.53**	**23**		**P**	**23 12 42.6**	**-0.4**
TNTI	**Ternate**	**8.53**	**23**	P	**P**	**23 12 42.6**	**-0.4**
	5µm400nm,0.8s						
DRS	**Darwin Rock St**	**8.54**	**128**	P	**P**	**23 12 43.5**	**+0.5**
MNI	**Manado**	**8.57**	**5**	P	**P**	**23 12 43.2**	**-0.2**
	12µm1µm,1.0s						
TOLI2	**Tolitoli**	**8.83**	**338**	P	**P**	**23 12 46.0**	**+0.1**
TOLI2	**Tolitoli**	**8.83**	**338**	S	**S**	**23 14 29.7**	**-0.5**
TOLI2	**Tolitoli**	**8.83**	**338**		**P**	**23 12 45.9**	**+0.1**
DNP	**Denpasar**	**8.90**	**260**	P	**P**	**23 12 45.8**	**-0.7**
	18µm1µm,0.6s						
MTN	**Manton Dam**	**8.97**	**130**	P	**P**	**23 12 46.6**	**-0.6**
	comp=Z,309nm,0.6s,comp=Z,4µm						
MTN	**Manton Dam**	**8.97**	**130**		**P**	**23 12 46.9**	**-0.4**
IGBI	**Denpasar**	**8.98**	**259**	P	**P**	**23 12 45.3**	**-2.0**
RTBI	**Rangdo, Negare**	**9.13**	**261**	P	**P**	**23 12 46.7**	**-2.1**
	comp=Z,3µmcomp=Z,8µmcomp=Z,511nm,0.9s						
FAKI	**Fak Fak**	**9.17**	**63**	P	**P**	**23 12 48.0**	**-1.2**
FAKI	**Fak Fak**	**9.17**	**63**	S	**S**	**23 14 35.1**	**-1.3**
FAKI	**Fak Fak**	**9.17**	**63**		**P**	**23 12 47.6**	**-1.7**
FAKI	**Fak Fak**	**9.17**	**63**	P	**P**	**23 12 47.5**	**-1.7**
BKB	**Balikpapan**	**9.23**	**309**	P	**P**	**23 12 53.3**	**+3.5**
BKB	**Balikpapan**	**9.23**	**309**		**P**	**23 12 49.6**	**-0.2**
BKB	**Balikpapan**	**9.23**	**309**	P	**P**	**23 12 52.6**	**+2.9**
	comp=Z,253nm,1.1s						
SWI	**Sorong**	**9.51**	**49**	P	**P**	**23 12 51.9**	**-0.6**
	comp=Z,3µmcomp=Z,13µmcomp=Z,1µm,0.9s						
SIJI	**Sorong**	**9.51**	**49**	P	**P**	**23 12 52.6**	**+0.1**
	comp=Z,639nm,0.7s,baz=252,slow=4.6,SNR=194						
SIJI				S	**S**	**23 14 40.6**	**-1.9**
	comp=Z,62nm,1.0s,baz=87,slow=22,SNR=9.0						
SIJI	**Sorong**	**9.51**	**49**	P	**P**	**23 12 51.7**	**-0.9**
	comp=Z,3µmcomp=Z,8µmcomp=Z,787nm,1.0s						
KNRA	**Kununurra**	**9.65**	**152**	P	**P**	**23 12 53.7**	**-0.1**
	comp=Z,1µm,1.1s,comp=Z,13µm						
KNRA	**Kununurra**	**9.65**	**152**		**P**	**23 12 53.7**	**-0.1**
ABJI	**Asem Bagus**	**9.77**	**266**	P	**P**	**23 12 52.8**	**-2.2**
	comp=Z,3µmcomp=Z,7µmcomp=Z,342nm,0.9s						
BBKI	**Banjar Baru**	**9.88**	**291**	P	**P**	**23 12 56.9**	**+0.7**
	comp=Z,11µmcomp=Z,1µm,1.2s						
JAGI	**Jajag, Banyuwa**	**9.90**	**262**	P	**P**	**23 12 54.2**	**-2.2**
JAGI	**Jajag, Banyuwa**	**9.90**	**262**		**P**	**23 12 53.8**	**-2.6**
JAGI	**Jajag, Banyuwa**	**9.90**	**262**	P	**P**	**23 12 53.6**	**-2.8**
	comp=Z,2µmcomp=Z,9µmcomp=Z,725nm,0.6s						
KDU	**Kakadu**	**9.95**	**124**	P	**P**	**23 12 56.3**	**-0.5**
	comp=Z,53nm,0.8s,comp=Z,503nm						
KMMI	**Kalianget**	**10.02**	**270**	P	**P**	**23 12 57.3**	**-0.2**
	comp=Z,4µmcomp=Z,5µmcomp=Z,315nm,1.4s						
KMPI	**Kaimana, Papua**	**10.20**	**71**	P	**P**	**23 12 59.0**	**-0.4**
	comp=Z,4µmcomp=Z,16µmcomp=Z,2µm,0.8s						
BLJI	**Banyuglugur**	**10.39**	**266**	P	**P**	**23 12 59.4**	**-1.8**
	comp=Z,3µmcomp=Z,6µmcomp=Z,453nm,0.6s						
SGSI	**Sangihe**	**10.86**	**8**	P	**P**	**23 13 06.0**	**+0.1**
FITZ	**Fitzroy Crossi**	**11.00**	**172**	P	**P**	**23 13 06.7**	**-0.4**
	comp=Z,252nm,0.3s,baz=358,slow=9.1,SNR=861						
FITZ				S	**S**	**23 15 07.5**	**-1.7**
	comp=Z,27nm,0.5s,baz=162,slow=22,SNR=6.4						
RKPI	**Ransiki, Papua**	**11.53**	**61**	P	**P**	**23 13 12.3**	**-0.4**
MWPI	**Manokwari, Pap**	**11.71**	**59**	P	**P**	**23 13 15.0**	**+0.6**
	comp=Z,11µmcomp=Z,1µm,0.8s						
SNJI	**Sawahan-Nganju**	**12.21**	**266**	P	**P**	**23 13 18.2**	**-1.5**
	comp=Z,5µmcomp=Z,293nm,0.5s						
TARAI	**Tarakan**	**12.25**	**328**	P	P	23 13 01.7	-18
NGJI	**Ngawi**	**12.50**	**268**	P	**P**	**23 13 21.9**	**-0.4**
	comp=Z,150nm,0.8s						
PCJI	**Pacitan**	**12.81**	**264**	P	**P**	**23 13 22.3**	**-3.2**
	comp=Z,10µmcomp=Z,657nm,0.5s						
SRPI	**Serui, Papua**	**13.22**	**67**	P	**P**	**23 13 29.3**	**-0.4**
	comp=Z,9µmcomp=Z,1µm,0.8s						
BAKI	**Biak**	**13.39**	**64**	P	**P**	**23 13 32.2**	**+0.9**
	comp=Z,9µmcomp=Z,1µm,1.0s						
UGM	**Wanagama**	**13.44**	**266**	P	**P**	**23 13 29.9**	**-2.0**
UGM	**Wanagama**	**13.44**	**266**	S	**S**	**23 15 54.9**	**+0.7**
UGM	**Wanagama**	**13.44**	**266**		**P**	**23 13 29.3**	**-2.6**
UGM	**Wanagama**	**13.44**	**266**	P	**P**	**23 13 29.5**	**-2.4**
SMRI	**Semarang**	**13.52**	**270**	P	**P**	**23 13 32.5**	**-0.2**
SMRI	**Semarang**	**13.52**	**270**	S	**S**	**23 15 57.8**	**+2.3**
SMRI	**Semarang**	**13.52**	**270**	P	**P**	**23 13 30.9**	**-1.8**
SMRI	**Semarang**	**13.52**	**270**	P	**P**	**23 13 31.4**	**-1.3**
	comp=Z,166nm,0.8s						
YOGI	**Yogyakarta**	**13.67**	**266**	P	**P**	**23 13 31.5**	**-2.7**
	comp=Z,4µmcomp=Z,270nm,0.9s						
DAV	**Davao City (W)**	**14.20**	**6**	P	**P**	**23 13 39.2**	**-0.2**
	comp=Z,347nm,0.7s,baz=74,slow=1.3,SNR=20						
DAV				S	**S**	**23 16 05.3**	**-1.9**
	comp=Z,99nm,0.4s,baz=147,slow=18,SNR=1.6						
DAV	**Davao City (W)**	**14.20**	**6**	P	**P**	**23 13 40.6**	**+1.2**
DAV	**Davao City (W)**	**14.20**	**6**	S	**S**	**23 16 09.2**	**+2.0**
DAV	**Davao City (W)**	**14.20**	**6**	P	**P**	**23 13 39.0**	**-0.5**
DAV	**Davao City (W)**	**14.20**	**6**	P	**P**	**23 13 38.9**	**-0.5**
	comp=Z,6µmcomp=Z,464nm,0.8s						
MBWA	**Marble Bar**	**14.55**	**196**	P	**P**	**23 13 41.8**	**-0.7**
	comp=Z,386nm,1.0s,comp=Z,4µm						
MBWA	**Marble Bar**	**14.55**	**196**	P	**P**	**23 13 42.0**	**-0.5**
MBWA	**Marble Bar**	**14.55**	**196**	P	**P**	**23 13 41.8**	**-0.7**
CTJI	**Waduk Cacaban**	**14.77**	**270**	P	**P**	**23 13 43.4**	**-1.2**
	comp=Z,3µmcomp=Z,152nm,0.9s						
PSAC1	**Pilbara Seismi**	**14.88**	**196**	P	**P**	**23 13 44.5**	**-1.0**
	comp=Z,833nm,1.0s,comp=Z,6µm						
PSA00	**Pilbara Seismi**	**14.91**	**195**	P	**P**	**23 13 45.3**	**-0.5**
	comp=Z,870nm,0.9s,comp=Z,7µm						
PSA00	**Pilbara Seismi**	**14.91**	**195**	P	**P**	**23 13 45.7**	**-0.1**
PSA00	**Pilbara Seismi**	**14.91**	**195**	S	**S**	**23 16 20.1**	**+1.4**
PSA00	**Pilbara Seismi**	**14.91**	**195**	P	**P**	**23 13 45.3**	**-0.5**
KPJI	**Karang Pucung**	**15.01**	**268**	P	**P**	**23 13 45.6**	**-1.2**
	comp=Z,5µmcomp=Z,405nm,0.6s						
SBUM	**Sibu**	**15.18**	**308**	P	**P**	**23 13 49.7**	**+1.3**
SBUM	**Sibu**	**15.18**	**308**	S	**S**	**23 16 25.7**	**+2.3**
SBUM	**Sibu**	**15.18**	**308**	P	**P**	**23 13 49.6**	**+1.1**
SBUM	**Sibu**	**15.18**	**308**	P	**P**	**23 13 49.5**	**+1.1**
KKM	**Kota Kinabalu**	**15.26**	**329**	P	**P**	**23 13 49.6**	**+0.3**
KKM	**Kota Kinabalu**	**15.26**	**329**	S	**S**	**23 16 27.0**	**+2.1**
KKM	**Kota Kinabalu**	**15.26**	**329**	P	**P**	**23 13 49.1**	**-0.1**
KKM	**Kota Kinabalu**	**15.26**	**329**	P	**P**	**23 13 49.7**	**+0.4**
	comp=Z,4µmcomp=Z,360nm,1.1s						
WB0	**Warramunga Arr**	**16.06**	**142**	P	**P**	**23 13 56.0**	**-0.5**
WRA	**Warramunga Arr**	**16.16**	**143**	P	**P**	**23 13 57.2**	**-0.2**
	comp=Z,150nm,0.8s,baz=321,slow=11,SNR=311						
WRA				S	**S**	**23 16 38.0**	**-1.4**
	comp=Z,182nm,1.0s,baz=319,slow=18,SNR=21						
WRA	**Warramunga Arr**	**16.16**	**143**	P	**P**	**23 13 57.0**	**-0.4**
WRAB	**Tennant Creek**	**16.16**	**143**	P	**P**	**23 13 57.9**	**+0.5**
WRAB	**Tennant Creek**	**16.16**	**143**	*ceP*	**P**	**23 13 57.4**	**0.0**
WRAB				pmax	pmax		
	comp=Z,229nm,0.8s						
MMPI	**Merauke**	**16.23**	**96**	P	**P**	**23 13 59.5**	**+1.5**
	comp=Z,12µmcomp=Z,942nm,0.9s						
BBJI	**Bungbulang**	**16.28**	**268**	P	**P**	**23 13 57.8**	**-0.8**
BBJI	**Bungbulang**	**16.28**	**268**	P	**P**	**23 13 56.6**	**-2.0**
BBJI	**Bungbulang**	**16.28**	**268**	P	**P**	**23 13 56.9**	**-1.7**
	comp=Z,1µmcomp=Z,5µmcomp=Z,433nm,0.8s						
LEM	**Lembang**	**16.32**	**270**	P	**P**	**23 13 59.2**	**+0.1**
	comp=Z,125nm,0.6s,baz=64,slow=8.5,SNR=42						
LEM				S	**S**	**23 16 39.5**	**-3.0**
	comp=Z,35nm,0.8s,baz=298,slow=18,SNR=4.8						
GENI	**Genyem**	**16.67**	**75**	P	**P**	**23 14 02.9**	**+0.8**
GENI	**Genyem**	**16.67**	**75**	P	**P**	**23 14 02.5**	**+0.4**
TPI	**Tanjungpandan**	**16.91**	**284**	P	**P**	**23 14 06.1**	**+1.8**
	comp=Z,1µmcomp=Z,4µmcomp=Z,401nm,1.2s						
DBJI	**Dramaga**	**17.20**	**271**	P	**P**	**23 14 06.4**	**-0.5**
JAY	**Jayapura**	**17.21**	**75**	P	**P**	**23 14 06.7**	**-0.4**
	comp=Z,193nm,0.8s,baz=77,slow=1.4,SNR=21						
JAY				S	**S**	**23 16 53.9**	**-2.8**
	comp=Z,15nm,0.9s,baz=36,slow=15,SNR=2.0						
JAY	**Jayapura**	**17.21**	**75**	P	**P**	**23 14 08.8**	**+1.8**
	comp=Z,2µmcomp=Z,305nm,0.9s						
SBJI	**Serang**	**17.84**	**272**	P	**P**	**23 14 13.4**	**+0.6**
	comp=Z,228nm,1.3s						
GIRL	**Giralia**	**18.08**	**211**	P	**P**	**23 14 15.6**	**+0.8**
	comp=Z,235nm,0.7s,comp=Z,2µm						
GIRL	**Giralia**	**18.08**	**211**

NWAO Narrogin (SRO) 26.43 193 P P 23 15 29.7 +0.6
NWAO Narrogin (SRO) 26.43 193 P P 23 15 28.8 -0.4
RPSI Rantau Prapat 26.92 290 P P 23 15 33.4 -0.3
PSI Prapat 26.96 291 P P 23 15 34.2 -0.1
PSI Prapat 26.96 291 P P 23 15 33.4 -0.9
QLP Quilpie 27.24 138 P P 23 15 37.6 +1.2
comp=Z,193nm,0.9s,comp=Z,2µm
QLP Quilpie 27.24 138 P P 23 15 37.7 +1.3
GSI Gunungsitoli 27.73 287 P P 23 15 39.9 -0.9
BBOO Buckleboo 27.87 158 P P 23 15 41.9 +0.2
comp=Z,123nm,0.8s,comp=Z,2µm
BBOO Buckleboo 27.87 158 P P 23 15 41.9 +0.2
BBOO Buckleboo 27.87 158 P P 23 15 41.6 -0.1
RKGY Rocky Gully 28.10 192 P P 23 15 44.3 +0.5
comp=Z,246nm,0.8s
RABL Rabaul 28.11 86 P P 23 15 43.5 -0.7
KCSI Kotacane, Aceh 28.30 291 P P 23 15 44.7 -1.1
TPTI 28.75 290 P P 23 15 50.1 +0.4
GUMO Guam 29.18 45 P P 23 15 53.1 -0.2
comp=Z,80nm,0.5s,baz=202,slow=11,SNR=6.7
comp=Z,80nm,0.5s
GUMO Guam 29.18 45 P P 23 15 52.2 -1.1
GUMO Guam 29.18 45 P P 23 15 52.2 -1.1
GUMO pmax pmax
comp=Z,578nm,1.8s
QIZ Qiongzhong 29.54 332 P P 23 15 56.9 +0.5
QIZ Qiongzhong 29.54 332 P P 23 15 56.2 -0.2
QIZ IAmb IAmb 23 15 57.6
comp=Z,76nm,0.8s
QIZ Qiongzhong 29.54 332 P P 23 15 56.5 +0.1
QIZ S S 23 20 11.3 +0.8
QIZ pmax pmax
comp=Z,98nm,0.9s
STKA Stephens Creek 29.55 149 P P 23 15 56.9 +0.6
comp=Z,76nm,0.7s,baz=317,slow=9.1,SNR=102
STKA S S 23 20 09.4 -0.9
comp=Z,33nm,1.1s,baz=140,slow=18,SNR=6.4
STKA ScP ScP 23 21 26.9 -0.6
comp=Z,13nm,0.7s,baz=313,slow=5.4,SNR=5.4
comp=Z,76nm,0.7s
STKA Stephens Creek 29.55 149 P P 23 15 56.9 +0.6
comp=Z,506nm,0.9s,comp=Z,7µm
STKA Stephens Creek 29.55 149 P P 23 15 57.6 +1.3
HTT Hallett 29.56 154 P P 23 15 57.3 +0.8
comp=Z,85nm,0.5s,comp=Z,2µm
HTT Hallett 29.56 154 P P 23 15 57.5 +1.1
LHMI Lhok Sumawe 29.72 294 P P 23 15 58.5 +0.5
LHMI Lhok Sumawe 29.72 294 P P 23 15 57.6 -0.4
LHMI Lhok Sumawe 29.72 294 P P 23 15 58.3 +0.3
comp=Z,155nm,0.8s
MLSI Meulaboh, Aceh 29.84 292 P P 23 15 58.0 -1.0
comp=Z,177nm,0.7s
TWGBT Beinan 29.92 354 P P 23 15 58.1 -1.5
TWG Pinlang 29.92 354 P P 23 15 57.8 -1.9
TWG IAmb IAmb 23 15 58.7
comp=Z,82nm,0.9s
AUNRC North Rockhamp 30.11 125 P P 23 16 01.7 +0.5
TPUB Ta-pu 30.44 354 P P 23 16 03.5 -0.6
YULB Yu-li 30.47 355 P P 23 16 02.3 -2.0
HKPS Hong Kong Po S 30.81 342 P P 23 16 07.8 +0.6
HKPS Hong Kong Po S 30.81 342 P P 23 16 07.1 -0.2
SSLB Suanglung 30.89 354 P P 23 16 06.6 -1.3
SSLB Suanglung 30.89 354 P P 23 16 06.1 -1.8
AUMBR Murray Bridge 31.18 155 P P 23 16 11.4 +1.3
NACB Ninganchiao 31.22 356 P P 23 16 09.6 -1.1
BSI Banda Aceh 31.33 293 P P 23 16 10.5 -1.3
comp=Z,57nm,0.7s
EIDS Eidsvold 31.53 128 P P 23 16 13.1 -0.2
CMSA Cobar Meteorol 31.57 143 P P 23 16 14.7 +1.1
comp=Z,151nm,0.9s,comp=Z,2µm
CMSA Cobar Meteorol 31.57 143 P P 23 16 14.5 +0.9
AULRC Lightning Ridg 31.60 138 P P 23 16 15.1 +1.3
YHNB Yeheng 31.73 355 P P 23 16 14.1 -1.0
YHNB Yeheng 31.73 355 P P 23 16 13.8 -1.3
GZH2 Guangzhou 32.25 342 P P 23 16 20.0 +0.6
GZH2 PcP PcP 23 18 45.5 -3.6
GZH2 sP sP 23 19 08.0 +2.0
GZH2 S S 23 20 54.0 +2.2
GZH2 pmax pmax
comp=Z,210nm,0.9s
QZH2 Quanzhou 32.34 351 eP P 23 16 19.8 -0.3
TW1H Toowoomba 1 Ha 33.34 131 P P 23 16 29.8 +1.2
JMZ Minamidaito 2 33.50 12 P P 23 16 29.9 0.0
ARPS Mount Arapiles 33.65 154 P P 23 16 32.0 +1.0
comp=Z,103nm,0.7s,comp=Z,1µm
AUDCS Dubbo College 33.85 141 P P 23 16 34.4 +1.6
JOW Kunigami 34.02 7 P P 23 16 34.6 +0.4
comp=Z,107nm,0.9s,baz=178,slow=4.6,SNR=11
comp=Z,107nm,0.9s
JOW Kunigami 34.02 7 P P 23 16 34.7 +0.4
JOW Kunigami 34.02 7 P P 23 16 34.3 +0.1
AUPHS Peel High Scho 34.60 137 P P 23 16 41.7 +2.6
ARMA Armidale 34.70 135 P P 23 16 42.6 +2.6
comp=Z,39nm,1.3s
ARMA Armidale 34.70 135 P P 23 16 42.5 +2.5
ARMA Armidale 34.70 135 P P 23 16 42.1 +2.1
ARMA IAmb IAmb 23 16 43.3
comp=Z,42nm,1.1s
GULI GuiLin 34.89 338 P P 23 16 44.0 +2.5
GULI pmax pmax
comp=Z,180nm,0.9s
YNG Young 35.13 144 P P 23 16 44.8 +1.4
comp=Z,109nm,0.9s
BRAT Ballarat 35.24 152 P P 23 16 45.9 +1.7
SAVO Savo Central 35.44 96 P P 23 16 46.0 -0.3
CM31 Chiang Mai Arr 35.52 316 P P 23 16 47.4 +0.6
CM31 IAmb IAmb 23 16 48.7
comp=Z,67nm,0.8s
CMAR Chiang Mai Arr 35.52 316 P P 23 16 47.6 +0.8
comp=Z,46nm,0.8s,baz=145,slow=6.5,SNR=247
CMAR PcP PcP 23 19 00.2 +1.4
comp=Z,6.4nm,0.8s,baz=168,slow=3.0,SNR=7.1
CMAR ScP ScP 23 21 50.2 +1.6
comp=Z,11nm,0.9s,baz=163,slow=3.2,SNR=20
comp=Z,46nm,0.8s
CMAR Chiang Mai Arr 35.52 316 P P 23 16 47.3 +0.5
CMAR PcP PcP 23 18 59.8 +0.9
CMAR ScP ScP 23 21 48.7 +0.1
CMAR Chiang Mai Arr 35.52 316 ceP P 23 16 47.5 +0.8
CMAR pmax pmax
comp=Z,49nm,0.8s
HNR Honiara 35.57 96 P P 23 16 47.7 +0.4
HNR Honiara 35.57 96 P P 23 16 47.3 0.0
HNR Honiara 35.57 96 P P 23 16 47.3 0.0
HNR pmax pmax
comp=Z,656nm,1.0s
CHTO Chiang Mai 35.76 317 P P 23 16 49.1 +0.3
CHTO Chiang Mai 35.76 317 P P 23 16 49.1 +0.3
CHTO IAmb IAmb 23 16 50.6
comp=Z,77nm,0.8s
CHTO Chiang Mai 35.76 317 P P 23 16 49.1 +0.3
CHTO pmax pmax
comp=Z,77nm,0.8s
CHTO Chiang Mai 35.76 317 P P 23 16 49.1 +0.3
comp=Z,1µmcomp=Z,116nm,1.0s
GEXS Deakin Univers 35.93 152 P P 23 16 52.5 +2.6
TOO Toolangi 36.00 150 P P 23 16 52.5 +1.9
comp=Z,12nm,1.1s
TOO Toolangi 36.00 150 P P 23 16 52.2 +1.6
TOO IAmb IAmb 23 18 34.9
comp=Z,50nm,1.4s
TOO PcP PcP 23 19 00.9 +0.9
TOO Toolangi 36.00 150 P P 23 16 52.2 +1.6
TOO 23 19 00.9
TOO pmax pmax
comp=Z,50nm,1.4s
AUMTS Mt Stromlo 36.20 144 P P 23 16 54.4 +2.1
CAN Canberra 36.20 144 P P 23 16 53.9 +1.6
comp=Z,135nm,0.8s
CAN Canberra 36.20 144 P P 23 16 54.4 +2.1
CAN Canberra 36.20 144 P P 23 16 54.0 +1.8
CAN Canberra 36.20 144 P P 23 16 54.1 +1.8
CAN pmax pmax
comp=Z,101nm,0.8s
AUDAR Daramalan Coll 36.23 144 P P 23 16 54.2 +1.7
AUMHS Melrose High S 36.28 144 P P 23 16 54.9 +2.0
CNB Canberra Magne 36.41 144 P P 23 16 55.2 +1.2
comp=Z,36nm,0.9s
CNB Canberra Magne 36.41 144 P P 23 16 55.9 +1.9
WOLH Wollongong Har 36.70 141 P P 23 16 57.4 +1.1
CNSH ChangSha 36.73 343 P P 23 16 57.3 +0.8
CNSH pmax pmax
comp=Z,67nm,0.9s
AUSMG Snowy Mountain 36.77 146 P P 23 16 58.6 +1.7

AUUHS Ulladulla High 37.09 143 P P 23 17 00.7 +1.2
GYA Guiyang 37.43 334 ⇓P P 23 17 03.0 +0.6
GYA pmax pmax
comp=Z,170nm,0.9s
HURO Huro Makira 37.52 98 P P 23 17 04.0 +0.7
MILA Mila 37.53 146 P P 23 17 04.6 +1.6
comp=Z,13nm,1.5s
KMI2 Kunming 38.22 328 ⇓P P 23 17 10.5 +1.5
KMI2 pP PP 23 18 55.8 -0.6
KMI2 pmax pmax
comp=Z,95nm,1.1s
KMI2 pmax pmax
comp=Z,290nm,4.0s
JCJ Chichijima 38.30 27 P P 23 17 09.2 -0.1
comp=Z,117nm,0.7s,baz=260,slow=21,SNR=7.3
comp=Z,117nm,0.7s
JCJ Chichijima 38.30 27 P P 23 17 08.7 -0.7
WHN Wuhan 38.61 347 ⇓iP P 23 17 12.8 +1.0
WHN pmax pmax
comp=Z,500nm,0.9s
JSU Suzuyama 38.91 9 P P 23 17 14.6 +0.3
JSU Suzuyama 38.91 9 P P 23 17 14.2 0.0
JSU IAmb IAmb 23 17 15.5
comp=Z,106nm,0.9s
NJ2 Nanjing 39.29 353 ⇓iP P 23 17 18.0 +0.8
NJ2 pP pP 23 19 01.8 +2.6
NJ2 sP sP 23 20 07.8 +0.6
NJ2 ScP ScP 23 22 03.5 +0.9
NJ2 pmax pmax
comp=Z,430nm,0.9s
ENH Enshi 39.75 340 P P 23 17 21.2 +0.3
ENH Enshi 39.75 340 P P 23 17 20.8 -0.1
TNCH TengChong 40.51 323 ⇓iP P 23 17 28.0 +0.7
TNCH pP pP 23 19 12.5 +2.0
TNCH sP sP 23 20 10.5 -7.5
TNCH S S 23 22 56.0 +1.4
TNCH sS sS 23 26 02.0 +1.1
TNCH pmax pmax
comp=Z,100nm,1.1s
JNU Nakatsue 40.56 9 P P 23 17 27.3 -0.1
comp=Z,94nm,0.9s,baz=151,slow=2.8,SNR=26
comp=Z,94nm,0.9s
TAU Tasmania Unive 41.09 154 P P 23 17 32.0 +0.6
TAU IAmb IAmb 23 19 19.4
comp=Z,47nm,1.3s
TAU Tasmania Unive 41.09 154 P P 23 17 32.0 +0.6
TAU pmax pmax
comp=Z,47nm,1.3s
JMN Monobe 41.70 12 P P 23 17 37.8 +1.4
JMN Monobe 41.70 12 P P 23 17 37.1 +0.7
CD2 Chengdu 42.54 334 ⇓P P 23 17 43.0 0.0
CD2 ScP ScP 23 22 17.0 +1.2
CD2 S S 23 23 20.0 -3.3
CD2 pmax pmax
comp=Z,270nm,1.0s
CD2 pmax pmax
comp=Z,860nm,2.6s
LYN LuoYang 42.89 346 ⇓iP P 23 17 45.5 -0.1
LYN PcP PcP 23 19 23.8 +1.4
LYN PP PP 23 19 41.3 +2.5
LYN ScP ScP 23 22 18.3 +1.3
LYN S S 23 23 25.0 -3.1
LYN pmax pmax
comp=Z,200nm,1.0s
LYN pmax pmax
comp=Z,240nm,4.7s
XAN Xi'an 43.40 342 ⇓P P 23 17 49.0 -0.6
XAN pmax pmax
comp=Z,300nm,0.9s
XAN pmax pmax
comp=Z,220nm,4.5s
TJN Taejon 43.40 4 P P 23 17 50.5 +1.0
TJN Taejon 43.40 4 P P 23 17 50.0 +0.5
TJN Taejon 43.40 4 P P 23 17 50.0 +0.5
TJN pmax pmax
comp=Z,840nm,1.0s
BRDH Bariadhala 43.42 314 P P 23 17 50.9 +1.1
comp=Z,92nm,0.7s,baz=91,slow=7.3,SNR=24
comp=Z,92nm,0.7s
ONTNC Ouen Toro 43.51 115 P P 23 17 50.5 0.0
ONTNC IAmb IAmb 23 17 52.4
comp=Z,118nm,1.2s
TIA Tai'an 43.62 352 P P 23 17 50.5 -0.7
TIA pmax pmax
comp=Z,74nm,0.9s
YATNC Mamie plateau, 43.84 114 P P 23 17 54.5 +1.3
OUENC Ouen Island, N 43.88 115 P P 23 17 54.1 +0.6
OUENC IAmb IAmb 23 17 55.9
comp=Z,75nm,1.0s
INU Inuyama 44.00 15 P P 23 17 54.9 +0.8
INU Inuyama 44.00 15 P P 23 17 54.2 +0.1
INU IAmb IAmb 23 17 55.6
comp=Z,41nm,1.0s
JGF Kuroka 44.32 16 P P 23 17 57.2 +0.5
JGF Kuroka 44.32 16 P P 23 17 56.6 -0.1
INCN Inchon 44.46 3 P P 23 17 58.3 +0.6
INCN Inchon 44.46 3 P P 23 17 57.8 +0.1
INCN IAmb IAmb 23 17 59.3
comp=Z,72nm,1.1s
INCN 44.46 3 P P 23 17 57.8 +0.1
INCN pmax pmax
comp=Z,72nm,1.1s
KSAR Wonju Array Be 44.50 4 P P 23 17 58.7 +0.8
KSAR PcP PcP 23 19 28.5 +0.7
KSAR Wonju Array Be 44.50 4 P P 23 17 58.7 +0.8
KSAR 23 19 28.5
KSRS Korea Array 44.51 4 P P 23 17 58.9 +0.9
comp=Z,72nm,0.9s,baz=180,slow=9.1,SNR=183
KSRS PcP PcP 23 19 28.7 +0.8
comp=Z,5.7nm,0.7s,baz=183,slow=3.2,SNR=8.4
KSRS ScP ScP 23 22 24.1 +0.5
comp=Z,3.4nm,0.8s,baz=197,slow=4.2,SNR=6.1
comp=Z,72nm,0.9s
KS19 Wonju Array Si 44.56 4 P P 23 17 58.7 +0.3
KS19 IAmb IAmb 23 18 00.0
comp=Z,85nm,0.9s
MARNC Mare, Loyalty 44.75 113 P P 23 18 00.6 +0.4
SHL Shillong 45.12 317 P P 23 18 02.8 -0.3
SHL IAmb IAmb 23 18 04.9
comp=Z,71nm,0.8s
SHL Shillong 45.12 317 P P 23 18 02.8 -0.3
SHL pmax pmax
comp=Z,71nm,0.8s
HNS HongShan 45.17 349 ⇓P P 23 18 02.8 -0.2
HNS ScP ScP 23 22 27.5 +1.2
HNS S S 23 23 57.5 -2.4
HNS pmax pmax
comp=Z,160nm,1.0s
MAJO Matsushiro 45.44 16 P P 23 18 05.2 +0.1
MAJO Matsushiro 45.44 16 P P 23 18 04.6 -0.5
MAJO IAmb IAmb 23 18 06.0
comp=Z,84nm,0.9s
MAJO Matsushiro 45.44 16 iP P 23 18 04.4 -0.7
MAJO pmax pmax
comp=Z,89nm,0.9s
MJAR Matsushiro Arr 45.44 16 P P 23 18 04.9 -0.3
comp=Z,69nm,0.8s,baz=191,slow=8.1,SNR=125
MJAR PcP PcP 23 19 31.7 +0.5
comp=Z,2.3nm,0.7s,baz=176,slow=2.9,SNR=2.6
MJAR ScP ScP 23 22 28.2 +0.7
comp=Z,4.0nm,0.8s,baz=194,slow=4.6,SNR=6.6
comp=Z,69nm,0.8s
MJAR Matsushiro Arr 45.44 16 P P 23 18 04.7 -0.4
MJAR IAmb IAmb 23 18 06.0
comp=Z,87nm,0.9s
MJAR Matsushiro Arr 45.44 16 P P 23 18 04.7 -0.4
MJAR pmax pmax
comp=Z,87nm,1.0s
MJB9 Matsu-Tunnel 45.44 16 P P 23 18 04.8 -0.4
MJB9 IAmb IAmb 23 18 06.0
comp=Z,84nm,0.9s
PALK Pallekele 45.55 287 P P 23 18 05.9 -0.5
PALK PcP PcP 23 19 33.7 +1.5
DL2 Dalian 45.87 357 P P 23 18 08.0 -0.3
DL2 pmax pmax
comp=Z,160nm,1.0s
LZDM Lanzhou Array 46.96 337 P P 23 18 17.7 +0.7
comp=Z,35nm,0.7s,baz=168,slow=10,SNR=55
LZDM ScP ScP 23 22 35.8 +1.4
comp=Z,3.9nm,0.5s,baz=181,slow=7.4,SNR=7.1
comp=Z,35nm,0.7s
LZH Lanzhou 47.01 338 P P 23 18 18.5 +1.3
LZH sP sP 23 21 06.3 -4.2
LZH ScP ScP 23 22 36.0 +1.6
LZH pmax pmax
comp=Z,220nm,1.5s
LZH pmax pmax
comp=Z,120nm,4.5s
BJI2 Beijing 47.49 352 P P 23 18 20.3 -0.2
BJI2 PcP PcP 23 19 39.5 +1.0
BJI2 pP pP 23 20 09.5 +1.1
BJI2 ScP ScP 23 22 36.8 +0.8
BJI2 pmax pmax
comp=Z,47nm,0.8s
BJT Baijiatuau 47.49 352 P P 23 18 20.1 -0.4
BJT Baijiatuau 47.49 352 P P 23 18 20.3 -0.2
BJT IAmb IAmb 23 18 21.4
comp=Z,75nm,0.8s
BJT Baijiatuau 47.49 352 P P 23 18 20.3 -0.2
BJT pmax pmax
comp=Z,75nm,0.8s
LSA Lhasa 48.40 321 P P 23 18 29.1 +1.1
LSA IAmb IAmb 23 18 30.3
comp=Z,71nm,0.7s
LSA Lhasa 48.40 321 P P 23 18 29.3 +1.3
LSA Lhasa 48.40 321 P P 23 18 29.1 +1.1
LSA pmax pmax
comp=Z,71nm,0.7s
LSA Lhasa 48.40 321 P P 23 18 26.8 -1.2
LSA pmax pmax
comp=Z,97nm,0.7s
HHC Hu-ho-hao-te 49.12 347 eP P 23 18 32.8 +0.1
HHC pmax pmax
comp=Z,51nm,0.7s
HHC pmax pmax
comp=Z,86nm,4.1s
PSTR Posyet 49.94 6 iP P 23 18 38.3 -0.1
EVN Everest 50.12 316 P P 23 18 41.5 +0.6
JTM Tenmabayashi 50.20 17 P P 23 18 41.2 +0.8
JTM Tenmabayashi 50.20 17 P P 23 18 40.6 +0.2
JTM IAmb IAmb 23 18 42.0
comp=Z,96nm,0.9s
VLA Vladivostok 50.53 7c iP P 23 18 43.3 +0.6
VLA pmax pmax
comp=Z,156nm,1.0s
GOMU GeErMu 51.12 329 P P 23 18 47.8 +0.2
HYB Hyderabad 51.16 299 eP P 23 18 47.8 -0.1
HYB ePcP PcP 23 19 53.0 +0.4
HYB eS S 23 25 23.1 +0.5
DGAR Diego Garcia 51.17 266 P P 23 18 49.3 +1.3
DGAR IAmb IAmb 23 19 51.6
comp=Z,133nm,1.1s
DGAR Diego Garcia 51.17 266 P P 23 18 49.3 +1.3
DGAR pmax pmax
comp=Z,133nm,1.1s
XLT XiLinHaoTe 51.32 353 eP P 23 18 49.0 +0.4
XLT pmax pmax
comp=Z,120nm,0.9s
GTA2 Gaotai 51.56 336 P P 23 18 51.3 +0.8
GTA2 PcP PcP 23 19 55.0 +1.2
GTA2 ScP ScP 23 22 55.0 +1.2
GTA2 S S 23 25 26.8 -0.8
GTA2 ScS ScS 23 27 37.5 -0.1
GTA2 pmax pmax
comp=Z,77nm,1.0s
GTA2 pmax pmax
comp=Z,280nm,4.1s
USRK Ussuriysk Ar. 51.60 7 P P 23 18 51.0 +0.5
comp=Z,57nm,0.7s,baz=341,slow=5.0,SNR=4.3
USRK ScP ScP 23 22 53.5 -0.1
comp=Z,2.2nm,0.7s,baz=157,slow=4.7,SNR=4.1
comp=Z,57nm,0.7s
MDJ Mudanjiang 51.76 5 P P 23 18 52.5 +0.9
MDJ Mudanjiang 51.76 5 P P 23 18 52.1 +0.4
MDJ Mudanjiang 51.76 5 P P 23 18 52.5 +0.9
MDJ S S 23 25 29.0 -0.7
MDJ pmax pmax
comp=Z,260nm,1.1s
BNX BinXian 52.73 3 ⇑P P 23 18 58.5 0.0
BNX S S 23 25 42.3 -0.2
BNX pmax pmax
comp=Z,49nm,0.9s
BNX pmax pmax
comp=Z,250nm,4.7s
YSA Yasawairara 53.08 105 P P 23 19 02.6 +1.1
TEY Ternei 53.15 11 ⇓eP P 23 19 01.2 -0.3
TEY pmax pmax
comp=N,30nm,0.8s
TEY pmax pmax
comp=Z,70nm,0.7s
TEY pmax pmax
comp=N,100nm,1.4s
TEY pmax pmax
comp=Z,100nm,1.6s
DCZ Deep Cove 53.29 143 P P 23 19 03.9 +1.4
MSZ Milford Sound 53.34 142 P P 23 19 04.7 +1.8
JCZ Jackson Bay 53.57 141 P P 23 19 06.2 +1.5
JCZ Jackson Bay 53.57 141 P P 23 19 06.5 +1.8
MSVF Nonsavu 53.60 107 P P 23 19 06.6 +1.3
MSVF Nonsavu 53.60 107 P P 23 19 06.3 +1.0
MSVF IAmb IAmb 23 19 08.3
comp=Z,87nm,0.9s
MSVF Nonsavu 53.60 107 iP P 23 19 05.6 +0.3
MSVF pmax pmax
comp=Z,117nm,1.1s
ASAJ Asahikawa 53.70 17 P P 23 19 05.9 +0.5
ASAJ pmax pmax
comp=Z,76nm,1.0s
JKA Kamikawa-asahi 53.70 17 P P 23 19 05.9 +0.4
JKA IAmb IAmb 23 19 07.2
comp=Z,76nm,1.0s
MLZ Mavora Lakes 53.82 143 P P 23 19 07.3 +1.1
MLZ IAmb IAmb 23 19 08.4
comp=Z,55nm,1.0s
MLZ Mavora Lakes 53.82 143 P P 23 19 07.4 +1.1
FOZ Fox Glacier 53.96 140 P P 23 19 08.2 +0.9
WHZ Wether Hill Ro 53.99 143 P P 23 19 08.6 +1.1
WVZ Waitaha Valley 54.34 139 P P 23 19 11.3 +1.3
DSZ Denniston Nort 54.46 137 P P 23 19 13.3 +2.4
EAZ Earnscleugh 54.47 142 P P 23 19 11.8 +0.9
APZ The Paps 54.51 144 P P 23 19 12.5 +1.4
QRZ Quartz Range 54.57 136 P P 23 19 13.9 +2.3
LBZ Lake Benmore 54.60 141 P P 23 19 12.5 +0.7
RPZ Rata Peaks 54.84 140 P P 23 19 14.6 +1.1
RPZ Rata Peaks 54.84 140 P P 23 19 14.5 +1.1
RPZ Rata Peaks 54.84 140 P P 23 19 14.6 +1.1
TKNZ Takaka Hill 54.95 136 P P 23 19 15.6 +1.3
MRNZ Matariki Terra 54.96 136 P P 23 19 15.6 +1.2
TUZ Tuapeka 55.03 143 P P 23 19 15.6 +0.9
MHCZ Mount Hutt 55.09 139 P P 23 19 16.3 +1.0
TMZ Timaru 55.12 140 P P 23 19 15.6 +0.2
DGTI Dogotuki 55.12 105 P P 23 19 16.7 +0.8
ODZ Otahua Downs 55.20 141 P P 23 19 17.0 +1.0
ODZ Otahua Downs 55.20 141 P P 23 19 17.0 +1.0
THZ Tophouse 55.21 137 P P 23 19 17.4 +1.2
LTZ Lake Taylor 55.22 138 P P 23 19 17.8 +1.7
OXZ Oxford 55.30 139 P P 23 19 17.1 +0.4
NNZ Nelson 55.31 136 P P 23 19 17.5 +0.7
TAVE Taveuni 55.48 105 P P 23 19 19.9 +1.5
VRZ Vera Road 55.49 133 P P 23 19 20.7 +2.6
DUWZ D'Urville Isla 55.52 135 P P 23 19 20.4 +2.1
MQZ McQueen's Vall 55.87 139 P P 23 19 21.6 +1.0
KHZ Kahutara 55.91 137 P P 23 19 22.0 +1.1
TCW Tory Channel 55.93 136 P P 23 19 21.6 +0.6
TCW Tory Channel 55.93 136 P P 23 19 22.0 +0.9
NGZ Ngauruhoe 56.12 133 P P 23 19 24.6 +2.0
TMVZ Te Maari 56.17 133 P P 23 19 25.2 +2.2
HIA Hailar 56.30 357 P P 23 19 24.3 +0.9
HIA Hailar 56.30 357 P P 23 19 23.8 +0.4
HIA IAmb IAmb 23 19 25.2
comp=Z,66nm,0.9s
HIA Hailar 56.30 357 P P 23 19 23.8 +0.4
HIA pmax pmax
comp=Z,66nm,0.9s
KUR Kuril'sk 56.35 20 P P 23 19 24.8 +1.1
KUR pmax pmax
comp=Z,179nm,1.0s
YSS Yuzhno-Sakhali 56.36 15 P P 23 19 24.0 +0.2
YSS Yuzhno-Sakhali 56.36 15 P P 23 19 23.7 -0.1
YSS IAmb IAmb 23 19 25.3
comp=Z,57nm,0.9s
YSS Yuzhno-Sakhali 56.36 15 eP P 23 19 24.3 +0.5
YSS e 23 20 07.7
YSS pmax pmax
comp=Z,60nm,1.0s
KLR Kul'dur 56.54 6 ceP P 23 19 24.3 -0.7
KLR pmax pmax
comp=Z,6.0nm,0.8s

MRZ	**Mangatainoka R**	**56.64**	**135**	P		**P**		**23 19 26.3**	**+0.4**
TSZ	**Takapari Road**	**56.69**	**134**	P		**P**		**23 19 27.0**	**+0.7**
BKZ	**Black Stump Fm**	**56.77**	**133**	P		**P**		**23 19 27.3**	**+0.4**
BKZ	**Black Stump Fm**	**56.77**	**133**	P		**P**		**23 19 27.6**	**+0.7**
ULN	**Ulaanbaatar**	**56.80**	**346**	P		**P**		**23 19 27.6**	**+0.6**
ULN	**Ulaanbaatar**	**56.80**	**346**	*ce*P		**P**		**23 19 27.5**	**+0.6**
ULN				pmax	pmax				
	comp=Z,114nm,1.7s								
ULN	**Ulaanbaatar**	**56.80**	**346**	P		**P**		**23 19 27.2**	**+0.2**
	comp=Z,3µmcomp=Z,289nm,1.3s								
URZ	**Urewera**	**56.92**	**131**	P		**P**		**23 19 28.4**	**+0.5**
SONM	**Songino Array**	**56.92**	**346**	P		**P**		**23 19 28.3**	**+0.4**
	comp=Z,41nm,0.7s,baz=166,slow=9.0,SNR=342								
SONM				ScP		**ScP**		**23 23 17.6**	**+0.5**
	comp=Z,4.2nm,0.9s,baz=160,slow=5.1,SNR=5.5								
	comp=Z,41nm,0.7s								
SONM	**Songino Array**	**56.92**	**346**	P		**P**		**23 19 28.1**	**+0.3**
SONM				IAmb	IAmb			23 19 29.4	
	comp=Z,53nm,0.8s								
SONM						**ScP**		**23 23 17.1**	**0.0**
RTZ	**Ruatahuna**	**56.94**	**132**	P		**P**		**23 19 28.9**	**+0.8**
BFZ	**Birch Farm**	**57.12**	**134**	P		**P**		**23 19 30.1**	**+0.9**
HEH	**HeiHe**	**57.24**	**3**	*e*P		**P**		**23 19 30.0**	**+0.3**
HEH				pmax	pmax				
	comp=Z,230nm,0.9s								
HEH				pmax	pmax				
	comp=Z,220nm,4.2s								
MWZ	**Matawai**	**57.26**	**131**	P		**P**		**23 19 31.1**	**+0.9**
HAZ	**Te Kaha**	**57.27**	**131**	P		**P**		**23 19 30.6**	**+0.4**
PXZ	**Pawanui**	**57.33**	**133**	P		**P**		**23 19 32.1**	**+1.5**
MXZ	**Matakaoa Point**	**57.60**	**130**	P		**P**		**23 19 33.7**	**+1.2**
MXZ	**Matakaoa Point**	**57.60**	**130**	P		**P**		**23 19 33.8**	**+1.3**
GRNR	**Gornyy**	**58.66**	**9**	⇓*i*P		**P**		**23 19 40.4**	**+1.1**
GRNR				pmax	pmax				
	comp=N,20nm,1.0s								
GRNR				pmax	pmax				
	comp=Z,30nm,1.2s								
CIT	**Chita**	**59.62**	**352**	*e*P		**P**		**23 19 45.6**	**-0.1**
CIT				*e*				23 20 24.6	
CIT				pmax	pmax				
	comp=Z,96nm,1.9s								
CASY	**Casey**	**59.78**	**186**	P		**P**		**23 19 46.7**	**+0.2**
TYV	**Tymovskoe**	**59.97**	**13**	*e*P		**P**		**23 19 49.0**	**+1.0**
TYV				*e*S		**S**		**23 27 15.7**	**+0.6**
TYV				pmax	pmax				
	comp=Z,38nm,1.3s								
TYV				pmax	pmax				
	comp=Z,500nm,3.5s								
TYV				smax	smax				
	comp=N,400nm,4.3s								
TYV				smax	smax				
	comp=E,700nm,4.3s								
ZAK	**Zakamensk**	**60.06**	**345**	*e*P		**P**		**23 19 48.2**	**-0.6**
ZAK				pmax	pmax				
	comp=Z,41nm,1.1s								
WMQ	**Urumqi**	**60.45**	**330**	⇓P		**P**		**23 19 52.3**	**+0.9**
WMQ				PcP	PcP	**PcP**		**23 20 25.5**	**-3.2**
WMQ				pP	pP			23 21 45.0	-2.9
WMQ				ScP		**ScP**		**23 23 32.5**	**-0.3**
WMQ				S		**S**		**23 27 19.0**	**-2.6**
WMQ				ScS	SKKSac			23 28 40.0	-2.4
WMQ				pmax	pmax				
	comp=Z,57nm,0.9s								
WMQ				pmax	pmax				
	comp=Z,310nm,3.6s								
ZEA	**Zeya**	**60.71**	**2**	*e*P		**P**		**23 19 53.6**	**+0.8**
ZEA				pmax	pmax				
	comp=E,10.0nm,1.1s								
ZEA				pmax	pmax				
	comp=N,30nm,1.0s								
ZEA				pmax	pmax				
	comp=Z,100nm,0.9s								
TLY	**Talaya**	**61.16**	**346**	P		**P**		**23 19 56.4**	**+0.6**
TLY	**Talaya**	**61.16**	**346**	*ce*P		**P**		**23 19 56.6**	**+0.7**
TLY				pmax	pmax				
	comp=Z,35nm,1.0s								
IRK	**Irkutsk**	**61.53**	**346**	*e*P		**P**		**23 19 57.8**	**-0.4**
IRK				pmax	pmax				
	comp=Z,71nm,1.8s								
MOY	**Mondy**	**61.84**	**344**	*e*P		**P**		**23 20 01.2**	**+0.8**
MOY				pmax	pmax				
	comp=Z,80nm,2.7s								
KNGR	**Kungurtug, Tuv**	**61.94**	**341**	*i* P		**P**		**23 20 01.6**	**+0.6**
KNGR				pmax	pmax				
	comp=Z,23nm,1.0s								
NIL	**Nilore**	**62.94**	**313**	P		**P**		**23 20 07.4**	**-0.4**
NIL				IAmb	IAmb			23 20 08.6	
	comp=Z,58nm,0.7s								
NIL	**Nilore**	**62.94**	**313**	P		**P**		**23 20 07.4**	**-0.4**
NIL				pmax	pmax				
	comp=Z,58nm,0.7s								
WUS	**Wushi**	**63.26**	**323**	P		**P**		**23 20 10.2**	**+0.4**
WUS				IAmb	IAmb			23 20 11.8	
	comp=Z,97nm,1.4s								
KSH2	**Kashi**	**64.30**	**320**	P		**P**		**23 20 16.5**	**+0.1**
KSH2				pmax	pmax				
	comp=Z,57nm,0.7s								
SHLS	**Shalkode**	**64.35**	**325**	⇓*i*P		**P**		**23 20 15.6**	**-1.0**
SHLS				*e*S		**S**		**23 28 06.9**	**-2.3**
TARG	**Taragay, Kyrgy**	**64.43**	**323**	P		**P**		**23 20 17.8**	**+0.3**
TARG	**Taragay, Kyrgy**	**64.43**	**323**	P		**P**		**23 20 17.8**	**+0.3**
TARG				pmax	pmax				
	comp=Z,23nm,0.8s								
ZSN	**Zaisan**	**64.45**	**332**	*e*P		**P**		**23 20 17.6**	**+0.5**
ZSN				*e*S		**S**		**23 28 10.7**	**+0.7**
PRZ	**Przheval'sk**	**64.54**	**324**	P		**P**		**23 20 18.8**	**+0.9**
PRZ				IAmb	IAmb			23 20 20.1	
	comp=Z,41nm,0.8s								
PRZ	**Przheval'sk**	**64.54**	**324**	P		**P**		**23 20 18.8**	**+0.9**
PRZ				pmax	pmax				
	comp=Z,41nm,0.8s								
UZB	**Uzynbulak**	**64.59**	**325**	⇓*i*P		**P**		**23 20 18.6**	**+0.4**
SATY	**Saty**	**64.89**	**325**	⇓*i*P		**P**		**23 20 20.4**	**+0.3**
KPKS	**Kokpek**	**64.99**	**325**	*e*P		**P**		**23 20 21.1**	**+0.5**
KDJ	**Kajisay**	**65.04**	**323**	P		**P**		**23 20 21.5**	**+0.4**
KDJ	**Kajisay**	**65.04**	**323**	P		**P**		**23 20 21.5**	**+0.4**
KDJ				pmax	pmax				
	comp=Z,27nm,0.8s								
MK31	**Makanchi Array**	**65.25**	**330**	*ce*P		**P**		**23 20 22.4**	**+0.4**
MKAR	**Makanchi Array**	**65.25**	**330**	P		**P**		**23 20 22.5**	**+0.4**
	comp=Z,48nm,0.6s,baz=133,slow=7.9,SNR=571								
MKAR				PKP2bc		**P'P'bc**		**23 48 58.6**	**-1.9**
	comp=Z,0.6nm,1.0s,baz=347,slow=2.1,SNR=3.7								
	comp=Z,48nm,0.6s								
BOD	**Bodaibo**	**65.26**	**354**	⇑*i*P		**P**		**23 20 22.3**	**+0.5**
BOD				pmax	pmax				
	comp=Z,130nm,1.0s								
NRN	**Naryn**	**65.34**	**322**	P		**P**		**23 20 23.0**	**-0.1**
NRN	**Naryn**	**65.34**	**322**	P		**P**		**23 20 23.0**	**-0.1**
NRN				pmax	pmax				
	comp=Z,22nm,1.0s								
MAKZ	**Makanchi**	**65.41**	**330**	P		**P**		**23 20 23.2**	**+0.1**
MAKZ				IAmb	IAmb			23 20 24.4	
	comp=Z,36nm,0.8s								
MAKZ	**Makanchi**	**65.41**	**330**	P		**P**		**23 20 23.2**	**+0.1**
MAKZ				pmax	pmax				
	comp=Z,36nm,0.8s								
TNSS	**Tian-Shan**	**65.72**	**324**	*e*P		**P**		**23 20 25.6**	**0.0**
MDOK	**Medeo**	**65.74**	**324**	*e*P		**P**		**23 20 25.8**	**+0.4**
AAA	**Alma-Ata**	**65.85**	**324**	*e*P		**P**		**23 20 26.4**	**+0.4**
TDK	**Taldygorghan**	**66.11**	**326**	⇓*i*P		**P**		**23 20 28.0**	**+0.6**
	comp=Z,85nm,1.4s								
KBL	**Kabul**	**66.43**	**312**	P		**P**		**23 20 29.8**	**-0.1**
KBL				IAmb	IAmb			23 20 31.0	
	comp=Z,58nm,0.7s								
KBL	**Kabul**	**66.43**	**312**	P		**P**		**23 20 29.8**	**-0.1**
KBL				pmax	pmax				
	comp=Z,58nm,0.7s								
PEA0B	**Petropavlovsk-**	**66.45**	**21**	P		**P**		**23 20 30.2**	**+0.8**
PEA0B				IAmb	IAmb			23 20 31.0	
	comp=Z,49nm,0.8s								
PEA0B	**Petropavlovsk-**	**66.45**	**21**	P		**P**		**23 20 30.2**	**+0.8**
PEA0B				pmax	pmax				
	comp=Z,49nm,0.9s								
TKM2	**Tokmak 2**	**66.45**	**323**	P		**P**		**23 20 30.2**	**+0.4**
	SNR=21								
KBK	**Karagaybulak**	**66.69**	**323**	P		**P**		**23 20 31.8**	**+0.6**
	SNR=18								
UCH	**Uchtor**	**66.70**	**322**	P		**P**		**23 20 32.5**	**+0.8**
	SNR=21								
DRK	**Karamyk**	**66.93**	**318**	P		**P**		**23 20 33.8**	**+0.8**
DRK				IAmb	IAmb			23 20 34.5	
	comp=Z,51nm,0.6s								
DRK	**Karamyk**	**66.93**	**318**	P		**P**		**23 20 33.8**	**+0.8**
DRK				pmax	pmax				
	comp=Z,51nm,0.6s								
AAK	**Ala-Archa**	**66.95**	**322**	P		**P**		**23 20 33.8**	**+0.9**
	comp=Z,35nm,0.7s,baz=136,slow=5.1,SNR=160								
	comp=Z,35nm,0.7s								
AAK	**Ala-Archa**	**66.95**	**322**	P		**P**		**23 20 33.8**	**+0.9**
	SNR=58								
AAK	**Ala-Archa**	**66.95**	**322**	P		**P**		**23 20 33.7**	**+0.9**
AAK				IAmb	IAmb			23 20 34.7	
	comp=Z,38nm,0.7s								
AAK	**Ala-Archa**	**66.95**	**322**	*i* P		**P**		**23 20 33.7**	**+0.9**
	SNR=66								
AAK	**Ala-Archa**	**66.95**	**322**	P		**P**		**23 20 33.7**	**+0.9**
AAK				pmax	pmax				
	comp=Z,38nm,0.7s								
FRU1	**Bishkek**	**66.97**	**323**	P		**P**		**23 20 33.1**	**+0.3**
FRU1	**Bishkek**	**66.97**	**323**	P		**P**		**23 20 33.1**	**+0.3**
FRU1				pmax	pmax				
	comp=Z,12nm,0.8s								
CHMS	**Chumysh**	**67.00**	**323**	P		**P**		**23 20 33.2**	**+0.2**
	SNR=13								
ARSB	**Arslanbob**	**67.15**	**321**	P		**P**		**23 20 34.4**	**+0.3**
ARSB				IAmb	IAmb			23 20 35.7	
	comp=Z,64nm,0.8s								
ARSB	**Arslanbob**	**67.15**	**321**	P		**P**		**23 20 34.4**	**+0.3**
ARSB				pmax	pmax				
	comp=Z,64nm,0.8s								
USP	**Ospenovka**	**67.31**	**323**	P		**P**		**23 20 35.5**	**+0.6**
	SNR=40								
SGDS	**Sogindy**	**67.34**	**323**	⇓*i*P		**P**		**23 20 35.4**	**+0.3**
EKS2	**Erkin-Say**	**67.40**	**322**	P		**P**		**23 20 36.6**	**+1.0**
	SNR=29								
GAR	**Garm**	**67.68**	**317**	P		**P**		**23 20 37.5**	**+0.2**
GAR				IAmb	IAmb			23 20 38.4	
	comp=Z,35nm,0.8s								
CHGR	**Chuyangaron**	**68.29**	**316**	P		**P**		**23 20 40.8**	**-0.2**
CHGR				IAmb	IAmb			23 20 42.0	
	comp=Z,56nm,1.0s								
CHGR	**Chuyangaron**	**68.29**	**316**	P		**P**		**23 20 40.8**	**-0.2**
CHGR				pmax	pmax				
	comp=Z,56nm,1.0s								
DZA	**Taraz**	**69.03**	**321**	*e*P		**P**		**23 20 45.5**	**+0.2**
YAK	**Yakutsk**	**69.11**	**3**	P		**P**		**23 20 45.6**	**+0.4**
YAK	**Yakutsk**	**69.11**	**3**	*ce*P		**P**		**23 20 45.4**	**+0.2**
YAK				pmax	pmax				
	comp=Z,160nm,0.7s								
ZAA0	**Zalesovo Array**	**69.23**	**336**	P		**P**		**23 20 45.8**	**-0.4**
ZAA0				IAmb	IAmb			23 20 46.8	
	comp=Z,108nm,0.9s								
KK31	**Karatay Array**	**69.65**	**321**	P		**P**		**23 20 48.5**	**-0.5**
KK31	**Karatay Array**	**69.65**	**321**	P		**P**		**23 20 48.5**	**-0.5**
KK31				pmax	pmax				
	comp=Z,10.0nm,0.9s								
KKAR	**Karatay Array**	**69.65**	**321**	P		**P**		**23 20 48.7**	**-0.3**
KKAR	**Karatay Array**	**69.65**	**321**	P		**P**		**23 20 48.7**	**-0.3**
KURBB	**Kurchatov Arra**	**69.66**	**331**	P		**P**		**23 20 49.1**	**+0.3**
	comp=Z,44nm,0.7s,baz=138,slow=4.9,SNR=328								
KURBB				PKP2bc		**P'P'bc**		**23 48 48.7**	**+1.0**
	comp=Z,0.6nm,0.9s,baz=298,slow=3.1,SNR=5.4								
	comp=Z,44nm,0.7s								
KURK	**Kurchatov**	**69.68**	**331**	P		**P**		**23 20 49.3**	**+0.4**
KURK				IAmb	IAmb			23 20 50.2	
	comp=Z,83nm,0.8s								
KURK	**Kurchatov**	**69.68**	**331**	P		**P**		**23 20 49.3**	**+0.4**
KURK				pmax	pmax				
	comp=Z,83nm,0.8s								
MA2	**Magadan**	**69.83**	**14**	P		**P**		**23 20 50.6**	**+1.0**
MA2	**Magadan**	**69.83**	**14**	P		**P**		**23 20 50.1**	**+0.5**
MA2				IAmb	IAmb			23 20 51.7	
	comp=Z,58nm,0.8s								
MA2	**Magadan**	**69.83**	**14**	*ce*P		**P**		**23 20 51.2**	**+1.6**
MA2				pmax	pmax				
	comp=Z,108nm,2.5s								
MA2	**Magadan**	**69.83**	**14**	P		**P**		**23 20 50.4**	**+0.8**
	comp=Z,103nm,1.0s								
BRLS	**Boroldoy**	**70.04**	**321**	⇓*i*P		**P**		**23 20 51.3**	**0.0**
HRA	**Herat**	**71.45**	**310**	P		**P**		**23 20 59.9**	**0.0**
BRZS	**Berezniki**	**72.21**	**328**	*e*P		**P**		**23 21 04.6**	**+0.8**
MAW	**Mawson**	**72.70**	**201**	P		**P**		**23 21 07.0**	**+0.8**
	comp=Z,4.8nm,0.5s,baz=68,slow=6.2,SNR=22								
	comp=Z,4.8nm,0.5s								
MAW	**Mawson**	**72.70**	**201**	P		**P**		**23 21 07.0**	**+0.8**
	comp=Z,3.2nm,1.2s								
MAW	**Mawson**	**72.70**	**201**	P		**P**		**23 21 06.8**	**+0.6**
MAW	**Mawson**	**72.70**	**201**	P		**P**		**23 21 06.8**	**+0.6**
MAW				pmax	pmax				
	comp=Z,3.0nm,1.1s								
VNDA	**Vanda**	**73.07**	**172**	P		**P**		**23 21 08.8**	**+0.6**
	comp=Z,4.0nm,0.3s,baz=323,slow=6.4,SNR=67								
	comp=Z,4.0nm,0.3s								
VNDA	**Vanda**	**73.07**	**172**	P		**P**		**23 21 08.4**	**+0.2**
VNDA	**Vanda**	**73.07**	**172**	P		**P**		**23 21 08.4**	**+0.2**
VNDA				pmax	pmax				
	comp=Z,10.0nm,1.0s								
SEY	**Seymchan**	**73.16**	**13**	*ce*P		**P**		**23 21 09.9**	**+1.1**
SEY				pmax	pmax				
	comp=Z,50nm,0.6s								
UOSS	**Minazif**	**73.28**	**299**	P		**P**		**23 21 10.2**	**-0.2**
MDH	**Madha**	**73.30**	**299**	P		**P**		**23 21 10.0**	**-0.5**
HATD	**Hatta, Dubai**	**73.31**	**298**	*i* P		**P**		**23 21 10.7**	**+0.1**
	SNR=6.7								
ASHO	**Ashiyiah**	**73.33**	**298**	*i* P		**P**		**23 21 11.1**	**+0.3**
	SNR=6.0								
ALNE	**Al Ain**	**73.43**	**298**	*i* P		**P**		**23 21 11.7**	**+0.4**
	SNR=11								
FAQ	**Al Faqa, Dubai**	**73.76**	**298**	*i* P		**P**		**23 21 13.4**	**+0.3**
	SNR=7.8								
NAZ	**Nazwa, Dubai**	**73.76**	**299**	P		**P**		**23 21 13.5**	**+0.3**
ASUD	**Al Ashush, Dub**	**73.95**	**298**	P		**P**		**23 21 15.1**	**+0.9**
SBA	**Scott Base**	**74.02**	**171**	P		**P**		**23 21 14.8**	**+1.2**
SBA	**Scott Base**	**74.02**	**171**	P		**P**		**23 21 14.8**	**+1.2**
BVAR	**Borovoye Array**	**75.13**	**330**	P		**P**		**23 21 20.5**	**+0.3**
	comp=Z,37nm,0.7s,baz=127,slow=6.6,SNR=263								
	comp=Z,37nm,0.7s								
MZR	**Muzera**	**75.17**	**296**	P		**P**		**23 21 21.8**	**+0.7**
BORK	**Borovoye**	**75.18**	**330**	P		**P**		**23 21 20.7**	**+0.3**
BORK				IAmb	IAmb			23 21 21.8	
	comp=Z,57nm,0.9s								
BORK	**Borovoye**	**75.18**	**330**	P		**P**		**23 21 20.7**	**+0.3**
BORK				pmax	pmax				
	comp=Z,57nm,0.9s								
VOI	**Vohitsoka**	**75.58**	**249**	P		**P**		**23 21 23.5**	**-0.1**
VOI				IAmb	IAmb			23 22 20.8	
	comp=Z,70nm,1.7s								
TIXI	**Tiksi**	**78.70**	**2**	P		**P**		**23 21 38.7**	**-0.4**
TIXI				IAmb	IAmb			23 21 39.8	
	comp=Z,33nm,0.7s								
TIXI	**Tiksi**	**78.70**	**2**	*ce*P		**P**		**23 21 38.3**	**-0.8**
TIXI				pmax	pmax				
	comp=Z,88nm,1.7s								
AB31	**Akbulak array**	**79.02**	**323**	P		**P**		**23 21 41.4**	**+0.1**
AB31				IAmb	IAmb			23 21 42.4	
	comp=Z,68nm,1.4s								
ABKAR	**Akbulak array**	**79.02**	**323**	P		**P**		**23 21 41.3**	**0.0**
AKTO	**Aktyubinsk**	**80.64**	**324**	P		**P**		**23 21 50.5**	**+0.7**
	comp=Z,34nm,0.6s,baz=122,slow=4.8,SNR=78								
	comp=Z,34nm,0.6s								
BILL	**Bilibino**	**80.68**	**15**	P		**P**		**23 21 49.4**	**-0.2**
BILL	**Bilibino**	**80.68**	**15**	*ce*P		**P**		**23 21 50.0**	**+0.4**
BILL				pmax	pmax				
	comp=Z,10.0nm,1.3s								
SVE	**Sverdlovsk**	**81.90**	**330**	*e*P		**P**		**23 21 56.3**	**+0.2**
SVE				*e*S		**SKSac**		**23 31 16.6**	**-2.8**
SVE				pmax	pmax				
	comp=Z,51nm,1.2s								
RAYN	**Ar Rayn**	**82.43**	**295**	P		**P**		**23 22 00.1**	**+0.5**
RAYN	**Ar Rayn**	**82.43**	**295**	*i* P		**P**		**23 22 00.3**	**+0.7**
	SNR=15								
RAYN	**Ar Rayn**	**82.43**	**295**	P		**P**		**23 22 00.1**	**+0.5**
RAYN				pmax	pmax				
	comp=Z,14nm,0.8s								
QSPA	**South Pole Qui**	**82.83**	**180**	P		**P**		**23 22 01.1**	**+0.3**
	comp=Z,8.1nm,0.4s,baz=158,slow=1.9,SNR=110								
	comp=Z,8.1nm,0.4s								
QSPA	**South Pole Qui**	**82.83**	**180**	P		**P**		**23 22 01.1**	**+0.3**
ARTI	**Arti**	**82.84**	**329**	P		**P**		**23 22 00.6**	**-0.1**
	comp=Z,23nm,0.6s,baz=133,slow=2.2,SNR=63								
	comp=Z,23nm,0.6s								
ARTI	**Arti**	**82.84**	**329**	P		**P**		**23 22 00.5**	**-0.3**
ARTI				IAmb	IAmb			23 22 01.5	
	comp=Z,44nm,0.6s								
ARTI	**Arti**	**82.84**	**329**	*di* P		**P**		**23 22 00.7**	**-0.1**
ARTI				*PP		**pP**		**23 24 08.1**	**+0.1**
ARTI								23 25 17.6	
ARTI				S		**SKSac**		**23 31 23.9**	**-1.6**
ARTI				pmax	pmax				
	comp=Z,95nm,1.7s								
AKT	**Akhty**	**84.57**	**313**	*e*P		**P**		**23 22 09.7**	**-0.1**
AKT				*e*				23 25 37.3	
AKT				*e*S		**SKSac**		**23 31 34.9**	**-2.5**
AKT				pmax	pmax				
	comp=Z,42nm,1.4s								
GAMB	**Gambell**	**85.36**	**24**	P		**P**		**23 22 13.1**	**+0.2**
GNI	**Garni**	**86.47**	**311**	P		**P**		**23 22 19.1**	**+0.1**
	comp=Z,8.6nm,1.1s								
ELIB	**Princess Elisa**	**86.57**	**198**	*d*P		**P**		**23 22 20.1**	**+1.3**
	comp=Z,14nm,1.0s								
BELG	**Belogornoye**	**87.42**	**323**	P		**P**		**23 22 22.9**	**-0.1**
	comp=Z,38nm,0.8s,baz=96,slow=4.5,SNR=9.1								
	comp=Z,38nm,0.8s								
BELG	**Belogornoye**	**87.42**	**323**	*i* P		**P**		**23 22 21.5**	**-1.4**
BELG				pmax	pmax				
	comp=Z,8.0nm,0.9s								
NCK	**Nalchik**	**88.00**	**314**	*i* P		**P**		**23 22 25.2**	**-0.7**
NCK				pmax	pmax				
	comp=Z,9.0nm,0.7s								
KIRV	**Kirov**	**88.14**	**330**	*ce*P		**P**		**23 22 26.2**	**+0.1**
GURO	**Guroymak-BITLI**	**88.21**	**309**	P		**P**		**23 22 27.3**	**+0.2**
KBZ	**Khabaz**	**88.54**	**314**	P		**P**		**23 22 28.9**	**+0.5**
	comp=Z,9.3nm,0.8s,baz=127,slow=1.8,SNR=28								
	comp=Z,9.3nm,0.8s								
KBZ	**Khabaz**	**88.54**	**314**	*ce*P		**P**		**23 22 28.3**	**-0.1**
KBZ				pmax	pmax				
	comp=Z,10.0nm,0.8s								
NEUR	**Neytrino**	**88.59**	**314**	*i* P		**P**		**23 22 26.8**	**-2.1**
NEUR				pmax	pmax				
	comp=Z,4.0nm,0.9s								
SHA1	**Shidzhatmaz**	**88.72**	**314**	*ce*P		**P**		**23 22 30.1**	**+0.6**
KIV	**Kislovodsk**	**88.74**	**314**	*e*P		**P**		**23 22 28.6**	**-0.8**
KIV				pmax	pmax				
	comp=Z,7.0nm,1.1s								
KIV	**Kislovodsk**	**88.74**	**314**	P		**P**		**23 22 28.9**	**-0.5**
	comp=Z,6.4nm,1.1s								
F15K	**North Star Dit**	**88.90**	**23**	P		**P**		**23 22 29.6**	**+0.1**
KOPT	**Kop Dagi**	**89.64**	**310**	P		**P**		**23 22 34.3**	**+0.3**
KOPT				IAmb	IAmb			23 22 36.3	
	comp=Z,37nm,1.6s								
F17K	**Baldwin Pennin**	**90.45**	**23**	P		**P**		**23 22 36.8**	**+0.2**
NVL	**N'lazarevskaya**	**90.45**	**198**	*e*P		**P**		**23 22 36.7**	**0.0**
NVL				*e*				23 26 22.1	
NVL				*e*PPP	PPP			23 28 25.8	
NVL				*e*S		**SKSac**		**23 32 11.1**	**+0.2**
NVL				*e*SS		**SS**		**23 39 02.3**	**+2.4**
NVL				*e*SSS	SSS			23 42 48.0	
NVL				pmax	pmax				
	comp=Z,25nm,1.8s								
VRH	**Novokhopyorsk**	**90.73**	**321**	*e*P		**P**		**23 22 36.8**	**-1.5**
VRH				pmax	pmax				
	comp=Z,17nm,0.8s								
SII	**Sitkinak Islan**	**91.38**	**33**	P		**P**		**23 22 41.1**	**-0.1**
VORD	**Divnogorie**	**92.21**	**321**	*e*P		**P**		**23 22 41.9**	**-3.2**
VORD				pmax	pmax				
	comp=Z,9.0nm,0.9s								
VSR	**Storozhevoye**	**92.32**	**321**	*e*P		**P**		**23 22 42.0**	**-3.6**
VSR				pmax	pmax				
	comp=Z,10.0nm,1.0s								
VORR	**Voronezh**	**92.36**	**322**	*e*P		**P**		**23 22 44.4**	**-1.4**
VORR				pmax	pmax				
	comp=Z,10.0nm,0.7s								
ANN	**Anapa**	**92.59**	**315**	*e*P		**P**		**23 22 46.1**	**-0.9**
ANN				pmax	pmax				
	comp=Z,10.0nm,0.6s								
LPSR	**Galich'ya Gora**	**92.67**	**323**	*e*P		**P**		**23 22 46.5**	**-0.7**
LPSR				pmax	pmax				
	comp=Z,22nm,0.9s								
MMAI	**Mount Meron Ar**	**92.72**	**303**	P		**P**		**23 22 48.7**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=64,slow=3.4,SNR=1.0								
	comp=Z,1.1nm,0.6s								
IMAR	**Indian Mountai**	**93.30**	**24**	P		**P**		**23 22 49.6**	**-0.2**
KLMR	**Klimovskoe**	**93.53**	**331**	*e*P		**P**		**23 22 48.6**	**-2.3**
KLMR				*e*				23 26 44.6	
KLMR				pmax	pmax				
	comp=Z,20nm,0.8s								
SNAA	**Sanae**	**94.09**	**195**	P		**P**		**23 22 53.0**	**-0.4**
	comp=Z,1.8nm,0.3s,baz=184,slow=3.9,SNR=4.9								
	comp=Z,1.8nm,0.3s								
SNAA	**Sanae**	**94.09**	**195**	P		**P**		**23 22 54.2**	**+0.7**
SNAA				IAmb	IAmb			23 26 12.6	
	comp=Z,28nm,1.7s								
SNAA	**Sanae**	**94.09**	**195**	P		**P**		**23 22 54.2**	**+0.7**
SNAA				pmax	pmax				

AK16	**Malin Array Si**	**98.62**	**320**	P		Pdif	23 23 13.2	-0.8
AK22	**Malin Array Si**	**98.64**	**320**	P		Pdif	23 23 13.1	-1.0
AK18	**Malin Array Si**	**98.64**	**320**	P		Pdif	23 23 12.9	-1.2
AK13	**Malin Array Si**	**98.65**	**320**	P		Pdif	23 23 13.3	-0.9
AK17	**Malin Array Si**	**98.65**	**320**	P		Pdif	23 23 13.3	-0.9
AK21	**Malin Array Si**	**98.66**	**320**	P		Pdif	23 23 13.2	-1.0
AK19	**Malin Array Si**	**98.68**	**320**	P		Pdif	23 23 13.3	-1.0
AK20	**Malin Array Si**	**98.68**	**320**	P		Pdif	23 23 13.4	-0.9
KIS	**Kishinev**	**98.75**	**316**	P		Pdif	23 23 13.9	-0.8
MNK	**Minsk**	**99.36**	**324**	*i* P		**Pdif**	**23 23 15.8**	**-1.4**
	comp=E,10.0nm,0.9s							
MNK				*i* P		**Pdif**	**23 23 15.8**	**-1.4**
	comp=N,8.0nm,1.0s							
MNK				*i* P		**Pdif**	**23 23 15.8**	**-1.4**
	comp=Z,7.0nm,0.9s,baz=89							
MNK				*i* pP		**pP**	**23 25 25.1**	**-3.1**
MNK				*i* sP		**sP**	**23 26 25.1**	**-2.6**
MNK				*i* PP		**PP**	**23 27 29.1**	**-1.5**
MNK				*i* PPP		PPP	23 29 40.5	
MNK				*i* S		**SKSac**	**23 32 56.4**	**-1.6**
MNK				*i* SS		**SS**	**23 41 08.8**	**+3.0**
MNK				*i* SSS		SSS	23 44 57.6	
MNK				*i* SKKS		**SKKSdf**	**23 45 52.0**	**-6.8**
MNK	**Minsk**	**99.36**	**324**	*i* P		**Pdif**	**23 23 15.8**	**-1.4**
MNK				*i* *PP		**pP**	**23 25 25.0**	**-3.1**
MNK				*i* *SP		**sP**	**23 26 25.0**	**-2.6**
MNK				*i*			23 27 29.1	
MNK				*i* PPP		PPP	23 29 40.5	
MNK				*i* S		**SKSac**	**23 32 56.4**	**-1.6**
MNK				*i* SS		**SS**	**23 41 08.8**	**+3.0**
MNK				*i* SSS		SSS	23 44 57.5	
MNK				pmax		pmax		
	comp=E,10.0nm,0.9s							
MNK				pmax		pmax		
	comp=Z,7.0nm,0.9s							
MNK				pmax		pmax		
	comp=N,8.0nm,1.0s							
ARCES	**ARCESS Array B**	**99.65**	**339**	P		**Pdif**	**23 23 17.8**	**-0.4**
	comp=N,2.4nm,0.6s,baz=90,slow=4.9,SNR=6.8							
ARCES					PKKPbc	**PKKPbc**	**23 39 36.4**	**-3.4**
	comp=N,3.5nm,0.7s,baz=260,slow=4.5,SNR=4.7							
	comp=N,2.4nm,0.6s							
FINES	**FINESS Array B**	**100.05**	**331**	P		**Pdif**	**23 23 18.9**	**-1.3**
	comp=N,2.8nm,0.9s,baz=5.4,slow=6.1,SNR=5.2							
FINES					PKiKP	**PKiKP**	**23 27 44.3**	**+0.4**
	comp=N,2.5nm,0.9s,baz=96,slow=7.7,SNR=5.1							
FINES	**FINESS Array B**	**100.05**	**331**	*i* P		**Pdif**	**23 23 20.0**	**-0.2**
FINES				pmax		pmax		
	comp=Z,3.0nm,0.9s							
TESR	**Tescani**	**100.24**	**316**	⇑P		**Pdif**	**23 23 21.2**	**-0.2**
NEHR	**Nehoiu**	**100.50**	**315**	⇑P		**Pdif**	**23 23 22.1**	**-0.5**
SPITS	**Spitsbergen Ar**	**100.55**	**348**	P		**Pdif**	**23 23 21.1**	**-1.0**
	comp=Z,11nm,1.1s,baz=96,slow=8.5,SNR=5.0							
BURAR	**Bucovina Array**	**101.20**	**317**	⇑P		**Pdif**	**23 23 26.1**	**+0.3**
LANS	**Liptovska Anna**	**104.91**	**319**	*e*PP		**PP**	**23 28 15.8**	**+4.1**
CONA	**Conrad Observa**	**107.45**	**318**	*e*PP		**PP**	**23 28 31.9**	**+1.8**
	comp=Z,8.5nm,1.3s							
ARSA	**Arzberg**	**107.78**	**317**	*i* PP		**PP**	**23 28 34.6**	**+2.3**
	comp=Z,6.4nm,1.3s							
OBKA	**Obir**	**108.56**	**317**	*i* PP		**PP**	**23 28 39.2**	**+1.2**
	comp=Z,3.8nm,1.2s							
CLL	**Collm**	**108.66**	**322**	*e*PKiKP		**PKiKP**	**23 28 01.0**	**+0.9**
CLL				*e*PP		**PP**	**23 28 38.0**	**-0.4**
GERES	**GERESS Array B**	**108.71**	**319**	PKiKP		**PKiKP**	**23 28 00.6**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=76,slow=2.2,SNR=6.3							
GERES				PP		**PP**	**23 28 38.0**	**-1.0**
	comp=Z,0.8nm,0.7s,baz=80,slow=9.6,SNR=3.5							
LESA	**Schwarzleotal**	**109.66**	**318**	*i* PP		**PP**	**23 28 45.3**	**-0.5**
	comp=Z,5.4nm,1.2s							
ABTA	**Abfaltersbach**	**109.90**	**317**	*i* PKiKP		**PKiKP**	**23 28 03.0**	**+0.3**
	comp=Z,3.4nm,1.1s							
WTTA	**Wattenberg**	**110.38**	**318**	*i* PKiKP		**PKiKP**	**23 28 03.9**	**+0.1**
	comp=Z,2.9nm,0.5s							
WTTA				*i* PP		**PP**	**23 28 51.1**	**+0.1**
	comp=Z,8.4nm,1.8s							
WATA	**Walderalm**	**110.41**	**318**	*i* PKiKP		**PKiKP**	**23 28 03.6**	**-0.1**
	comp=Z,1.3nm,0.5s							
YKA	**Yellowknife Ar**	**110.43**	**25**	PKiKP		**PKiKP**	**23 28 03.0**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=319,slow=2.5,SNR=20							
YKA					SKP	**SKPdf**	**23 30 42.2**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=312,slow=2.2,SNR=5.6							
YKA					PKKPbc	**PKKPbc**	**23 39 05.1**	**-2.2**
	comp=Z,0.3nm,0.7s,baz=87,slow=2.1,SNR=4.0							
YKA					SKKPbc	**SKKPbc**	**23 41 50.1**	**-5.1**
	comp=Z,0.2nm,0.8s,baz=90,slow=1.5,SNR=4.5							
YKA	**Yellowknife Ar**	**110.43**	**25**	*i* PKiKP		**PKiKP**	**23 28 03.0**	**-0.1**
SQTA	**Sankt Quirin**	**110.68**	**318**	*i* PKiKP		**PKiKP**	**23 28 05.0**	**+0.7**
	comp=Z,1.7nm,0.8s							
SQTA				*i* PP		**PP**	**23 28 54.1**	**+1.1**
	comp=Z,4.8nm,1.2s							
MOTA	**Moosalm**	**110.72**	**318**	*i* PKiKP		**PKiKP**	**23 28 04.2**	**-0.1**
	comp=Z,2.5nm,0.6s							
MOTA				*i* PP		**PP**	**23 28 54.4**	**+1.0**
	comp=Z,3.3nm,0.8s							
RETA	**Reutte**	**110.92**	**318**	*i* PKiKP		**PKiKP**	**23 28 04.9**	**+0.3**
	comp=Z,1.3nm,0.7s							
RETA				*i* PP		**PP**	**23 28 56.1**	**+1.4**
	comp=Z,7.2nm,1.7s							
FETA	**Feichten**	**111.04**	**318**	*i* PKiKP		**PKiKP**	**23 28 05.2**	**+0.2**
	comp=Z,2.9nm,1.2s							
DAVA	**Damuels**	**111.54**	**318**	*i* PKiKP		**PKiKP**	**23 28 06.1**	**+0.2**
	comp=Z,1.9nm,0.5s							
DAVA				*i* PP		**PP**	**23 28 59.1**	**0.0**
	comp=Z,5.5nm,0.9s							
KEST	**Kesra**	**114.17**	**306**	PKiKP		**PKiKP**	**23 28 12.1**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=141,slow=1.9,SNR=9.1							
EDM	**Edmonton**	**114.84**	**34**			PKPdf	23 28 11.7	-0.2
EDM	**Edmonton**	**114.84**	**34**	PKiKP		PKPdf	23 28 11.7	-0.2
F10A	**Beach Ranch, E**	**114.90**	**42**			PKPdf	23 28 12.0	-0.3
NVAR	**Mina Array Bea**	**115.98**	**51**	PKP		**PKiKP**	**23 28 16.0**	**+1.2**
	comp=Z,1.7nm,0.6s,baz=249,slow=2.0,SNR=11							
EKA	**Eskdalemuir Ar**	**116.38**	**329**	PKP		**PKiKP**	**23 28 15.0**	**+0.3**
	comp=Z,1.5nm,0.6s,baz=83,slow=7.2,SNR=5.2							
EKA	**Eskdalemuir Ar**	**116.38**	**329**	PKiKP		**PKiKP**	**23 28 15.0**	**+0.3**
MPMC	**Manual Prospec**	**117.09**	**53**			**PKPdf**	**23 28 16.6**	**-0.3**
HLID	**Hailey**	**117.52**	**44**			**PKiKP**	**23 28 18.1**	**+0.5**
ELK	**Elko**	**117.73**	**48**			**PKiKP**	**23 28 18.2**	**+0.1**
ELK	**Elko**	**117.73**	**48**	PKiKP		**PKiKP**	**23 28 18.2**	**+0.1**
PFO	**Pinyon Flats O**	**118.40**	**56**			**PKiKP**	**23 28 19.8**	**+0.3**
PFO	**Pinyon Flats O**	**118.40**	**56**	PKiKP		**PKiKP**	**23 28 19.8**	**+0.3**
TAM	**Tamanrasset**	**119.02**	**292**			**PKiKP**	**23 28 21.4**	**+0.4**
TAM	**Tamanrasset**	**119.02**	**292**	PKiKP		**PKiKP**	**23 28 21.4**	**+0.4**
DUG	**Dugway, Tooele**	**119.66**	**48**			**PKiKP**	**23 28 22.3**	**+0.5**
DUG	**Dugway, Tooele**	**119.66**	**48**	PKiKP		**PKiKP**	**23 28 22.3**	**+0.5**
FFC	**Flin Flon**	**120.02**	**29**			**PKPdf**	**23 28 21.6**	**-0.1**
FFC	**Flin Flon**	**120.02**	**29**	PKiKP		**PKPdf**	**23 28 21.6**	**-0.1**
AHID	**Auburn Hatcher**	**120.07**	**44**			**PKiKP**	**23 28 22.7**	**+0.1**
GO09	**Cerro Castillo**	**120.12**	**168**	PKPdf		**PKiKP**	**23 28 22.4**	**+0.1**
MPU	**Maple Canyon**	**120.58**	**47**			**PKPdf**	**23 28 23.4**	**-0.2**
PDAR	**Pinedale Array**	**121.13**	**44**	PKP		**PKiKP**	**23 28 24.9**	**+0.1**
	comp=Z,1.5nm,0.5s,baz=162,slow=0.6,SNR=22							
PDAR	**Pinedale Array**	**121.13**	**44**			**PKPdf**	**23 28 24.6**	**+0.1**
LAO	**LASA Array**	**121.74**	**39**			**PKiKP**	**23 28 25.7**	**+0.1**
TORD	**Torodi Ar. Bea**	**123.05**	**281**	PKP		**PKPdf**	**23 28 28.8**	**+0.1**
	comp=Z,8.6nm,0.6s,baz=129,slow=1.0,SNR=55							
TORD					SKP	**SKPdf**	**23 31 07.9**	**-0.1**
	comp=Z,5.3nm,1.0s,baz=122,slow=1.4,SNR=9.5							
TORD					PKKPbc	**PKKPbc**	**23 38 22.5**	**+0.1**
	comp=Z,1.0nm,0.9s,baz=261,slow=3.6,SNR=3.6							
ESDC	**Sonseca Array**	**123.39**	**313**	PKP		**PKiKP**	**23 28 29.1**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=21,slow=2.6,SNR=22							
ESDC					PP	**PP**	**23 30 16.6**	**-3.4**
	comp=Z,1.1nm,0.9s,baz=60,slow=6.9,SNR=7.0							
ESDC	**Sonseca Array**	**123.39**	**313**	PKPdf		**PKPdf**	**23 28 28.9**	**+0.1**
POLO	**Lamas de Olo**	**125.43**	**317**	*e*PKPdf		**PKiKP**	**23 28 33.4**	**+0.3**
PGAV	**Gavieira, Arco**	**125.50**	**317**	*e*PKPdf		**PKiKP**	**23 28 33.9**	**+0.7**
NRS	**Narsarsuaq**	**125.53**	**354**	PKPdf		**PKPdf**	**23 28 32.2**	**+0.1**
NRS	**Narsarsuaq**	**125.53**	**354**	PKiKP		**PKPdf**	**23 28 32.2**	**+0.1**
MTE	**Manteigas**	**125.66**	**315**	*e*PKPdf		**PKiKP**	**23 28 34.3**	**+0.7**
ULM	**Lac du Bonnet**	**125.68**	**30**	PKP		**PKPdf**	**23 28 32.6**	**-0.2**
	comp=Z,6.8nm,0.6s,baz=295,slow=1.6,SNR=15							
PCBR	**Castelo Branco**	**125.84**	**315**	*e*PKPdf		**PKiKP**	**23 28 34.6**	**+0.8**
PMRV	**Marv??o**	**125.94**	**314**	*e*PKPdf		**PKiKP**	**23 28 34.0**	**-0.1**
ANMO	**Albuquerque**	**126.07**	**52**			**PKiKP**	**23 28 34.6**	**-0.1**
ANMO	**Albuquerque**	**126.07**	**52**	PKiKP		**PKiKP**	**23 28 34.6**	**-0.1**
PBAR	**Barrancos**	**126.17**	**313**	*e*PKPdf		**PKiKP**	**23 28 35.4**	**+0.9**
MD31	**MD31**	**126.17**	**306**	PKPdf		**PKiKP**	**23 28 34.8**	**0.0**
PESTR	**Estremoz**	**126.30**	**314**	*e*PKPdf		**PKiKP**	**23 28 35.0**	**+0.2**
PCAS	**Casmilo, Conde**	**126.47**	**315**	*e*PKPdf		**PKiKP**	**23 28 35.6**	**+0.5**
PARRA	**Arraiolos**	**126.65**	**314**	*e*PKPdf		**PKiKP**	**23 28 36.4**	**+0.9**
MOE	**Montemor**	**126.99**	**314**	*e*PKPdf		**PKiKP**	**23 28 36.8**	**+0.6**
PCVE	**Castro Verde**	**127.11**	**312**	*e*PKPdf		**PKiKP**	**23 28 37.3**	**+0.9**
EPLO	**Experimental L**	**127.11**	**30**			**PKPdf**	**23 28 35.5**	**0.0**
MESJ	**Messejana**	**127.16**	**313**	*e*PKPdf		**PKiKP**	**23 28 37.3**	**+0.7**
MORF	**Marmelete**	**127.68**	**312**	*e*PKPdf		**PKiKP**	**23 28 38.2**	**+0.5**
PFVI	**Vila Bisbo**	**127.88**	**312**	*e*PKPdf		**PKiKP**	**23 28 38.7**	**+0.7**
ECSD	**EROS Data Cent**	**129.10**	**38**			**PKPdf**	**23 28 39.4**	**-0.1**
DBIC	**Dimbokro**	**129.31**	**273**	PKP		**PKiKP**	**23 28 41.4**	**-0.1**
	comp=Z,5.9nm,0.6s,baz=133,slow=2.0,SNR=18							
DBIC					SKPbc	SKPbc	23 31 07.7	+0.5
	comp=Z,36nm,0.8s,baz=125,slow=4.5,SNR=42							
DBIC	**Dimbokro**	**129.31**	**273**			**PKPdf**	**23 28 40.8**	**+0.1**
DBIC	**Dimbokro**	**129.31**	**273**	PKiKP		**PKPdf**	**23 28 40.8**	**+0.1**
TBO	**Thunder Bay**	**129.90**	**28**			**PKPdf**	**23 28 41.3**	**+0.4**
TXAR	**Lajitas Array**	**130.02**	**58**	PKP		**PKiKP**	**23 28 43.3**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=220,slow=1.5,SNR=14							
TXAR					SKPbc	**SKPab**	**23 31 10.2**	**+0.5**
	comp=Z,5.5nm,0.8s,baz=260,slow=4.1,SNR=39							
TXAR	**Lajitas Array**	**130.02**	**58**	PKPdf		**PKiKP**	**23 28 42.8**	**+0.1**
PLCA	**Paso Flores**	**130.50**	**165**	PKP		**PKiKP**	**23 28 43.7**	**+0.4**
	comp=Z,3.1nm,0.7s,baz=295,slow=1.1,SNR=12							
PLCA					SKPbc	**SKPbc**	**23 31 10.4**	**-0.4**
	comp=Z,13nm,0.9s,baz=205,slow=3.4,SNR=24							
SCHQ	**Schefferville**	**131.65**	**8**	PKP		**PKiKP**	**23 28 44.9**	**-0.2**
	comp=Z,4.0nm,0.4s,baz=284,slow=1.4,SNR=27							
SCHQ					SKPbc	**SKPbc**	**23 31 14.1**	**-0.3**
	baz=6.0,slow=2.9,SNR=4.0							
BI02	**San Fabin de**	**134.11**	**163**	PKPdf		**PKPdf**	**23 28 49.1**	**-0.1**
TRQA	**Tornquist**	**134.68**	**173**			**PKPdf**	**23 28 50.0**	**-0.2**
TRQA	**Tornquist**	**134.68**	**173**	PKIKP		**PKPdf**	**23 28 50.0**	**-0.2**
MIAR	**Mount Ida**	**135.92**	**46**	PKPdf		**PKPdf**	**23 28 52.9**	**+0.3**
MIAR	**Mount Ida**	**135.92**	**46**	PKIKP		**PKPdf**	**23 28 52.9**	**+0.3**
WLAR	**White Oak Lake**	**136.68**	**47**	PKPdf		**PKPdf**	**23 28 54.2**	**+0.2**
N49A	**Columbus Grove**	**137.99**	**32**			**PKPdf**	**23 28 56.1**	**-0.1**
CFA	**Coronel Fontan**	**139.72**	**164**	PKP		**PKPdf**	**23 29 00.1**	**+0.4**
	comp=Z,3.8nm,0.7s,baz=292,slow=2.3,SNR=8.7							
CFA					SKPbc	**SKPbc**	**23 31 38.5**	**-1.3**
	comp=Z,5.6nm,0.7s,baz=224,slow=2.2,SNR=14							
V55A	**Taylorsville**	**143.23**	**35**	PKPdf		PKPbc	23 29 04.4	+0.1
GOGA	**Godfrey**	**143.49**	**41**			PKPbc	23 29 05.1	0.0
GOGA	**Godfrey**	**143.49**	**41**	PKIKP		PKPab	23 29 05.1	+0.1
AC02	**Maricunga**	**143.88**	**160**	PKPbc		PKPab	23 29 07.5	+0.2
BIRD	**Birdtown, Kers**	**144.52**	**36**			PKPbc	23 29 08.4	+0.2
ITAB	**Concordia**	**145.63**	**186**	PKPbc		**PKPbc**	**23 29 11.4**	**-0.3**
TEIG	**Tepich**	**146.08**	**64**			**PKPbc**	**23 29 12.5**	**-0.7**
MTO3	**Montecristo**	**146.42**	**75**			**PKPbc**	**23 29 13.7**	**-0.8**
CPUP	**Villa Florida**	**146.70**	**178**	PKPbc		**PKPbc**	**23 29 15.1**	**+0.4**
	comp=Z,31nm,0.9s,baz=166,slow=2.5,SNR=47							
CPUP	**Villa Florida**	**146.70**	**178**			**PKPdf**	**23 29 12.8**	**+0.8**
PB05	**IPOC Station P**	**147.08**	**155**			**PKPbc**	**23 29 15.8**	**-0.2**
DUB01	**Friburgo-RJ**	**148.06**	**204**	*e*P		**PKPdf**	**23 29 15.4**	**+1.0**
PARB	**Paraibuna**	**148.07**	**198**	*e*P		**PKPdf**	**23 29 13.3**	**-1.1**
VAO	**Valinhos**	**148.78**	**196**	PKPbc		**PKPbc**	**23 29 19.4**	**-0.8**
TA01	**Diego Aracena**	**149.11**	**153**	PKPbc		**PKPbc**	**23 29 20.9**	**-0.1**
NNA	**Nana**	**151.83**	**132**	PKPbc		**PKiKP**	**23 29 27.9**	**+0.2**
	comp=Z,13nm,0.7s,baz=226,slow=3.9,SNR=6.9							
NNA	**Nana**	**151.83**	**132**	PKPbc		**PKPbc**	**23 29 27.2**	**-0.3**
NNA	**Nana**	**151.83**	**132**	PKIKP		**PKPbc**	**23 29 27.2**	**-0.3**
ATAH	**Atahualpa**	**153.49**	**122**	PKP		**PKPdf**	**23 29 25.2**	**+1.9**
	comp=Z,5.6nm,1.0s,baz=176,slow=4.1,SNR=6.9							
ATAH					PKPbc	**PKiKP**	**23 29 33.8**	**+2.2**
	comp=Z,25nm,0.7s,baz=161,slow=2.4,SNR=52							
LPAZ	**La Paz**	**153.78**	**153**	PKP		**PKPdf**	**23 29 25.3**	**+1.5**
	comp=Z,3.1nm,0.9s,baz=107,slow=1.7,SNR=8.7							
LPAZ					PKPbc	**PKiKP**	**23 29 33.5**	**+1.1**
	comp=Z,2.3nm,0.4s,baz=73,slow=3.8,SNR=18							
LPAZ	**La Paz**	**153.78**	**153**			**PKPbc**	**23 29 32.0**	**-0.3**
LPAZ	**La Paz**	**153.78**	**153**	*e*P		**PKPdf**	**23 29 21.7**	**-2.1**
BDFB	**Brasilia**	**156.04**	**199**	PKP		**PKPdf**	**23 29 27.0**	**+0.7**
	comp=Z,1.4nm,0.4s,baz=128,slow=8.4,SNR=3.4							
BDFB					PKPab	**PKPab**	**23 29 57.8**	**+0.5**
	comp=Z,4.7nm,0.7s,baz=208,slow=3.9,SNR=6.0							
SIV	**San Ignacio**	**156.46**	**168**	PKP		**PKPdf**	**23 29 28.1**	**+1.4**
	comp=Z,2.1nm,0.7s,baz=104,slow=2.3,SNR=11							
SIV					PKPab	**PKPab**	**23 30 00.2**	**+1.2**
	comp=Z,13nm,0.8s,baz=182,slow=4.2,SNR=28							
SALV	**Santo Antonio**	**157.10**	**181**	*e*P		**PKPdf**	**23 29 26.3**	**-1.1**
VILB	**Vilhena**	**159.59**	**168**	PKPdf		**PKPdf**	**23 29 30.9**	**+0.5**
ROSC	**El Rosal**	**161.58**	**96**	PKP		**PKPdf**	**23 29 33.9**	**+0.8**
	comp=Z,4.1nm,0.3s,baz=202,slow=22,SNR=4.3							
ROSC					PKPab	**PKPab**	**23 30 23.7**	**+1.4**
	comp=Z,5.2nm,0.3s,baz=164,slow=2.3,SNR=5.7							
ROSC	**El Rosal**	**161.58**	**96**			**PKPdf**	**23 29 32.5**	**-0.6**

*IDC **28** 23:15:56.8±1.3,2˚.83S×129˚.69E, h0km, mb4.1/4, mbtmp4.1/6, ML3.2/1, Error ellipse: s-maj=40.5km s-min=22.0km az=73.0*
ISC 28 23:15:58.3±1.2,**2.72S**±0˚.10×**130˚.0E**±0˚.2,**h10**km,**n6,** σ2**9**.**55**/**7**,**mb4.2**/**4**,**Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.22**	**34**	Pn		Pn		**23 16 37.2**	**+2.0**
	4.6nm,0.3s,baz=204,slow=10.0,SNR=25								
SIJI				Sn		**Sn**		**23 16 59.7**	**-3.1**
	24nm,0.3s,baz=239,slow=22,SNR=22								
	17nm,0.2s								
WRA	**Warramunga Arr**	**17.63**	**166**	P		**Pn**		**23 20 02.8**	**-1.4**
	3.3nm,0.7s,baz=344,slow=12,SNR=1.0								
ASAR	**Alice Springs**	**21.16**	**170**	P		**P**		**23 20 42.0**	**-1.8**
	4.0nm,0.5s,baz=348,slow=7.5,SNR=6.0								
	4.0nm,0.5s								
CTA	**Charters Tower**	**23.43**	**139**	P		**P**		**23 21 10.6**	**+2.7**
	15nm,1.0s,baz=311,slow=9.3,SNR=4.0								
	15nm,1.0s								
MKAR	**Makanchi Array**	**64.70**	**326**	P		**P**		**23 26 36.2**	**-0.4**
	0.4nm,0.6s,baz=134,slow=8.4,SNR=2.1								
	0.4nm,0.6s								
KURBB	**Kurchatov Arra**	**68.91**	**328**	P		**P**		**23 27 03.8**	**+0.4**
	0.8nm,0.3s,baz=114,slow=5.6,SNR=3.6								
	0.8nm,0.3s								

*SNET **28** 23:20:10.6±1.4, 13˚.57N×91˚.31W, h2km±22km, ML3.5, Presumed earthquake*
*CATAC **28** 23:20:11.3±0.5, 14˚.N±3˚×9˚.1W±˚, h27km±5km, M3.6/24, MLv3.6/24, Error ellipse: s-maj=6.7km s-min=2.3km az=36.0, confirmed*
*GCG **28** 23:20:12.5±1.4, 13˚.69N×91˚.47W, h36km±7km, MD4.2, ML3.9, Presumed earthquake*
ISC 28 23:20:09.7±1.9,**13˚.60N**±0˚.07×**91˚.34W**±0˚.05,**h7**km±10km, **n44,** σ1**9**30/64,**Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Op	ISC	Time h m s	Res ISC
STG5	**El Palmar, Qui**	**0.80**	**360**	*i* P		**Pn**		**23 20 29.9**	**+2.4**
ESSJ	**San Jos, E**	**0.82**	**92**	*i* P		**Pg**		**23 20 25.9**	**+0.4**
STG2	**El Palmar, Qui**	**0.84**	**358**	*i* P		**Pn**		**23 20 30.6**	**+2.6**
STG2				IAML				23 20 51.0	
	comp=N,2μm,0.2s								
STG8	**El Palmar, Qui**	**0.85**	**360**	*i* P		**Pn**		**23 20 31.0**	**+2.7**
RTAL	**Retalhuleu**	**0.98**	**340**	P		**Pg**		**23 20 28.7**	**+0.1**
RTAL				S		**Sg**		**23 20 41.5**	**0.0**
FG8	**Yepocapa, Chim**	**1.01**	**49**	*i* P		**Pg**		**23 20 28.7**	**-0.3**
FG16	**Alotenango, Sa**	**1.05**	**50**	*i* P		**Pg**		**23 20 29.9**	**-0.1**
FG16				IAML				23 20 45.2	
	comp=N,10μm,0.3s								
PCG5	**San Vicente Pa**	**1.12**	**57**	*i* P		**Pb**		**23 20 30.9**	**-0.7**
SOKI	**Kika Raxquin**	**1.22**	**357**	*i* P		**Pb**		**23 20 32.9**	**-0.4**
GCG4	**OSOP**	**1.26**	**39**	*i* P		**Pg**		**23 20 34.8**	**+0.9**
GCG4				*i* S		**Sn**		**23 20 52.1**	**+0.9**
GCG4				IAML				23 20 57.6	
	comp=E,1μm,0.5s								
FAME	**Alcaldia de Sa**	**1.31**	**79**	P		**Pn**		**23 20 34.0**	**-0.4**
FAME				S		**Sg**		**23 20 53.4**	**+1.3**
LOAL	**Lomas de Alarc**	**1.57**	**75**	P		**Pb**		**23 20 38.8**	**-0.4**
LOAL				S		**Sg**		**23 20 59.8**	**-0.4**
SLOZ	**Alcaldia de Sa**	**1.57**	**74**	P		**Pn**		**23 20 38.5**	**+0.4**
SLOZ				S		**Sg**		**23 21 00.7**	**+0.3**
APG	**El Apazote**	**1.64**	**31**	*i* P		**Pb**		**23 20 40.8**	**+0.4**
CEVE	**Cerro Verde**	**1.69**	**82**	P		**Pn**		**23 20 40.3**	**+0.5**
CEVE				S		**Sg**		**23 21 03.8**	**-0.3**
CEVE	**Cerro Verde**	**1.69**	**82**	*e*P		**Pn**		**23 20 40.5**	**+0.7**
CEVE				*e*S		**Sg**		**23 21 05.3**	**+1.3**
CEVE				IAML				23 21 08.5	
	comp=Z,514nm,0.2s								
HUEH	**Huehuetenango**	**1.72**	**355**	P		**Pn**		**23 20 40.0**	**-0.3**
HUEH				S		**Sb**		**23 21 03.7**	**+0.1**
HUEH	**Huehuetenango**	**1.72**	**355**	*i* P		**Pn**		**23 20 40.4**	**+0.1**
HUEH	**Huehuetenango**	**1.72**	**355**	*e*P		**Pn**		**23 20 41.9**	**+0.2**
UNIC	**Universidad Ca**	**1.79**	**77**	P		**Pn**		**23 20 41.8**	**+0.8**
UNIC				S		**Sg**		**23 21 06.0**	**-1.2**
JAYA	**Jayaque - finc**	**1.84**	**88**	P		**Pn**		**23 20 42.3**	**+0.4**
JAYA				S		**Sb**		**23 21 07.4**	**+0.3**
JAYA	**Jayaque - finc**	**1.84**	**88**	IAML				23 21 13.5	
	comp=N,1μm,0.3s								
JAYA	**Jayaque - finc**	**1.84**	**88**	*e*P		**Pn**		**23 20 42.1**	**+0.2**
CEDA	**San Andres**	**1.91**	**84**	P		**Pb**		**23 20 44.0**	**-0.8**
CEDA				S		**Sb**		**23 21 09.1**	**+0.3**
PMON	**Piamonte**	**1.98**	**86**	P		**Pn**		**23 20 44.6**	**+0.9**
PMON				S		**Sb**		**23 21 10.8**	**-0.1**
UEES	**Universidad Ev**	**2.05**	**86**	P		**Pn**		**23 20 46.2**	**+1.5**
UEES				S		**Sb**		**23 21 12.7**	**-0.3**
MTO3	**Montecristo**	**2.08**	**67**	P		**Pn**		**23 20 46.4**	**+1.2**
MTO3				S		**Sb**		**23 21 12.9**	**-1.2**
MTO3	**Montecristo**	**2.08**	**67**	*i* P		**Pn**		**23 20 46.5**	**+1.2**
MTO3	**Montecristo**	**2.08**	**67**	*e*P		**Pn**		**23 20 46.7**	**+1.4**
MTO3				*e*S		**Sg**		**23 21 15.1**	**-1.7**
ESQI	**Esquipulas**	**2.17**	**64**	P		**Pb**		**23 20 47.9**	**-1.4**
ESQI				S		**Sb**		**23 21 15.6**	**-0.8**
ESQI	**Esquipulas**	**2.17**	**64**	*e*P		**Pb**		**23 20 48.3**	**-1.0**
LFRS	**El Faro**	**2.22**	**89**	*e*P		**Pn**		**23 20 47.9**	**+0.9**
**

WHHZ	Waihua	1.17	88	P	Pn	23 41 45.3 +1.7
CKHZ	Cape Kidnapper	1.17	118	P	Pn	23 41 45.6 +2.0
DVHZ	Dannevirke	1.23	164	P	Pn	23 41 45.7 +1.5
PREZ	Palmer Road	1.24	259	P	Pn	23 41 47.1 +2.6
PXZ	Pawanui	1.26	137	P	Pn	23 41 46.4 +1.8
POWZ	Post Office Ro	1.27	179	P	Pn	23 41 46.2 +1.4
PRHZ	Porangahau	1.34	149	P	Pn	23 41 47.3 +1.9
KHEZ	Kahui Hut	1.35	262	P	Pn	23 41 47.8 +2.2
KHEZ	Kahui Hut	1.35	262	P	Sn	23 42 07.3 +2.1
KHEZ	Kahui Hut	1.35	262	P	Pn	23 41 47.8 +2.2
MARZ	Manawahe	1.35	33	P	Pn	23 41 46.6 +0.9
URZ	Urewera	1.38	52	P	Pn	23 41 46.2 +0.3
URZ	Urewera	1.38	52	P	Sn	23 42 04.4 -1.2
URZ	Urewera	1.38	52	P	Pn	23 41 46.3 +0.5
TOZ	Tahuroa Road	1.40	352	P	Pn	23 41 47.4 +1.3
OPRZ	Ohinepanea	1.43	27	P	Pn	23 41 47.4 +1.0
PRWZ	Pori Road	1.45	173	P	Pn	23 41 48.4 +1.8
TGRZ	Tauranga	1.45	17	P	Pn	23 41 47.8 +1.1
RAGZ	Rawiri	1.46	65	P	Pn	23 41 47.8 +0.9
ANWZ	Angora Road	1.46	157	P	Pn	23 41 48.7 +1.9
NBEZ	Newall Road No	1.46	264	P	Pn	23 41 48.9 +2.1
KNZ	Kokohu	1.51	87	P	Pn	23 41 48.6 +1.2
MRZ	Mangatainoka R	1.54	184	P	Pn	23 41 49.1 +1.3
MWZ	Matawai	1.61	61	P	Pn	23 41 49.4 +0.8
BFZ	Birch Farm	1.61	166	P	Pn	23 41 50.1 +1.5
BFZ	Birch Farm	1.61	166	P	Sn	23 42 10.1 -0.4
BFZ	Birch Farm	1.61	166	P	Pn	23 41 50.1 +1.5
RIGZ	Rimuhau	1.64	76	P	Pn	23 41 50.2 +1.3
TIWZ	Tintock	1.66	176	P	Pn	23 41 50.6 +1.4
PRGZ	Paritu Road	1.69	84	P	Pn	23 41 50.8 +1.3
MHGZ	Mahia Peninsul	1.69	92	P	Pn	23 41 51.0 +1.5
OGWZ	Otaki Gorge	1.75	194	P	Pn	23 41 51.6 +1.4
TKGZ	Te Karaka	1.79	68	P	Pn	23 41 52.0 +1.4
CPWZ	Castlepoint	1.82	169	P	Pn	23 41 53.0 +1.9
KIW	Kapiti Island	1.85	200	P	Pn	23 41 52.5 +1.0
RUGZ	Raukumara Rang	1.91	54	P	Pn	23 41 52.6 +0.3
TMWZ	Te Maipa	1.99	177	P	Pn	23 41 54.2 +1.0
TWGZ	Tauwhareparae	2.00	63	P	Pn	23 41 54.7 +1.4
CNGZ	Carnagh Station	2.04	73	P	Pn	23 41 55.2 +1.5
MTW	Mount Morrison	2.04	185	P	Pn	23 41 54.6 +0.8
CAW	Cannon Point	2.05	194	P	Pn	23 41 54.8 +0.9
DUWZ	D'Urville Isla	2.18	219	P	Pn	23 41 56.3 +0.7
PKGZ	Pakihiroa	2.23	57	P	Pn	23 41 57.0 +0.9
PUZ	Puketiti	2.24	63	P	Pn	23 41 56.9 +0.6
PAWZ	Paruwai Farm	2.27	186	P	Pn	23 41 57.3 +0.5
TRWZ	Traveller	2.28	181	P	Pn	23 41 56.4 -0.4
WEL	Wellington	2.29	199	P	Pn	23 41 57.5 +0.7
MSWZ	Moikau Station	2.32	189	P	Pn	23 41 57.9 +0.5
SNZO	South Karori	2.33	199	P	Pn	23 41 57.8 +0.5
SNZO	South Karori	2.33	199	S	Sn	23 42 26.1 -0.1
TCW	Tory Channel	2.37	208	P	Pn	23 41 58.5 +0.6
WMGZ	Waiomatatini S	2.47	59	P	Pn	23 41 60.0 +0.7
PLWZ	Palliser	2.48	188	P	Pn	23 41 59.6 +0.3
MXZ	Matakaoa Point	2.55	53	P	Pn	23 42 02.0 +1.7
MXZ	Matakaoa Point	2.55	53	P	Pn	23 42 01.4 +1.1
TUWZ	Tuamarina	2.68	210	P	Pn	23 42 03.2 +1.2
NNZ	Nelson	2.77	220	P	Pn	23 42 03.5 +0.5
TKNZ	Takaka Hill	2.86	227	P	Pn	23 42 04.5 +0.2
QRZ	Quartz Range	2.99	234	P	Pn	23 42 06.2 +0.2
QRZ	Quartz Range	2.99	234	S	Sn	23 42 41.3 -0.3
QRZ	Quartz Range	2.99	234	P	Pn	23 42 06.4 +0.4
MRNZ	Matariki Terra	3.22	224	P	Pn	23 42 09.1 +0.1
THZ	Tophouse	3.41	218	P	Pn	23 42 11.7 +0.1
KHZ	Kahutara	3.69	206	P	Pn	23 42 14.8 -0.4
KHZ	Kahutara	3.69	206	S	Sn	23 42 57.2 -0.9
KHZ	Kahutara	3.69	206	P	Pn	23 42 15.0 -0.2
DSZ	Denniston Nort	3.99	278	P	Pn	23 42 18.7 -0.4
GVZ	Greta Valley S	4.35	207	P	Pn	23 42 23.2 -0.8
LTZ	Lake Taylor	4.50	214	P	Pn	23 42 24.9 -1.2
OKCZ	Okains Bay	5.02	203	P	Pn	23 42 31.8 -1.2
TMZ	Timaru	6.34	212	P	Pn	23 42 49.4 -1.3
ODZ	Otahua Downs	7.03	211	P	Pn	23 42 59.4 -0.6

*IDC **28** 23:45:36.0±0.9, 1.65S×120.41E, h0km, mb3.9/7, mbtmp3.9/8, ML3.4/1, MS2.5/2, Error ellipse: s-maj=47.3km s-min=14.9km az=66.0*
*DJA **28** 23:45:38.1±0.2, 2.2°S±2.2°×12.0°E±°, h10km, M4.1/27, mb4.1/2, ML4.1/27*
ISC 28 23:45:38.0±0.8, **1.72S**±0.04×**120.19E**±0.06, **h10**km, **n21**, σ1§**17**/21, **mb4.0**/**7**, **Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCI	**Palu**	**0.89**	**336**	P	**Pg**	**23 45 54.1**	**-1.0**
MMSI	**Mamuju**	**1.60**	**233**	P	**Pn**	**23 46 05.4**	**-1.1**
APSI	**Ampana**	**1.66**	**61**	P	**Pn**	**23 46 08.5**	**+1.3**
MPSI	**Mapaga**	**2.06**	**352**	P	**Pn**	**23 46 13.7**	**+0.9**
PMSI	**Majene**	**2.18**	**216**	P	**Pn**	**23 46 15.6**	**+1.2**
SPSI	**Sidrap Palu**	**2.27**	**191**	P	**Pn**	**23 46 15.4**	**-0.2**
LUWI	**Luwuk**	**2.66**	**75**	P	**Pn**	**23 46 22.0**	**+1.0**
MRSI	**Marisa**	**2.79**	**39**	P	**Pn**	**23 46 23.4**	**+0.6**
KKSI	**Kolaka, Sulawe**	**2.84**	**149**	P	**Pn**	**23 46 23.9**	**+0.5**
KAPI	**Kappang** 3.3nm,0.3s,baz=346,slow=8.8,SNR=9.8	**3.30**	**188**	Pn	**Pn**	**23 46 30.7**	**+0.9**
KAPI	3.5nm,0.3s,baz=231,slow=14,SNR=5.6			Sn	**Sn**	**23 47 11.6**	**+2.5**
KAPI	comp=Z,47nm,19.3s,baz=90,slow=40 12nm,0.4s			LR	LR	23 47 51.0	
KAPI	**Kappang**	**3.30**	**188**	P	**Pn**	**23 46 30.5**	**+0.7**
GTOI	**Gorontalo**	**3.66**	**50**	P	**Pn**	**23 46 35.3**	**+0.6**
SANI	**Sanana** 0.1nm11nm,1.0s	**5.80**	**93**	P	**Pn**	**23 47 02.6**	**-1.5**
JAY	**Jayapura** comp=Z,18nm,18.1s,baz=332,slow=45	**20.51**	**93**	LR	LR	00 00 49.6	
WRA	**Warramunga Arr** 4.5nm,0.9s,baz=319,slow=11,SNR=22 4.5nm,0.9s	**22.79**	**144**	P	**P**	**23 50 39.2**	**-1.8**
ASAR	**Alice Springs** 0.9nm,0.7s,baz=331,slow=8.5,SNR=13 0.9nm,0.7s	**25.54**	**150**	P	**P**	**23 51 06.3**	**-0.8**
CMAR	**Chiang Mai Arr** 0.5nm,0.6s,baz=140,slow=7.1,SNR=4.6 0.5nm,0.6s	**28.97**	**315**	P	**P**	**23 51 39.2**	**+1.3**
STKA	**Stephens Creek** 2.5nm,0.7s,baz=313,slow=10,SNR=3.9 2.5nm,0.7s	**36.15**	**148**	P	**P**	**23 52 40.5**	**-0.1**
SONM	**Songino Array** 0.8nm,0.8s,baz=164,slow=8.4,SNR=5.3 0.8nm,0.8s	**50.80**	**348**	P	**P**	**23 54 38.7**	**0.0**
MKAR	**Makanchi Array** 1.6nm,0.7s,baz=132,slow=7.7,SNR=18 1.6nm,0.7s	**58.65**	**330**	P	**P**	**23 55 35.5**	**0.0**
KURBB	**Kurchatov Arra** 0.9nm,0.7s,baz=138,slow=6.3,SNR=9.8 0.9nm,0.7s	**63.09**	**332**	P	**P**	**23 56 04.5**	**-1.1**

*TAP **28** 23:47:33.8, 23.26N×121.56E, h39km, ML3.5, C*
*JMA **28** 23:47:33.7±0.1, 23.3N±0.6×12.2E±°, h39km±2km, MV3.0/11, TAIWAN REGION*
ISC 28 23:47:33.7±0.9, **23.24N**±0.02×**121.64E**±0.02, **h32**km±6km, **n151**, σ1§**05**/259, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECBN	**Changbin**	**0.18**	**293**	*i* P	**Pn**	**23 47 40.6**	**+0.3**
ECBN				*e*S	**Sb**	**23 47 45.5**	**+1.1**
CHKH	**Chenggong**	**0.23**	**257**	*i* P	**Pn**	**23 47 40.5**	**-0.4**
CHKH				S	**Sn**	**23 47 45.3**	**-0.1**
CHKT	**Chengkung**	**0.29**	**240**	*i* P	**Pb**	**23 47 41.1**	**-0.1**
CHKT				S	**Sn**	**23 47 46.6**	**-0.3**
EYUL	**Yuli**	**0.31**	**290**	P	**Pb**	**23 47 41.9**	**+0.3**
EYUL				S	**Sb**	**23 47 49.4**	**+2.6**
FULB	**Fuli**	**0.32**	**262**	*i* P	**Pb**	**23 47 41.4**	**-0.3**
FULB				S	**Sn**	**23 47 47.8**	**+0.1**
TWF1	**Yuli**	**0.33**	**289**	*i* P	**Pb**	**23 47 41.7**	**-0.1**
TWF1				S	**Sn**	**23 47 47.2**	**-0.8**
YULB	**Yu-li**	**0.34**	**296**	P	**Pb**	**23 47 41.6**	**-0.4**
YULB	**Yu-li**	**0.34**	**296**	S	**Sn**	**23 47 47.2**	**-1.2**
YULB	**Yu-li**	**0.34**	**296**	*i* P	**Pb**	**23 47 41.7**	**-0.3**
YULB				S	**Sn**	**23 47 47.5**	**-0.9**
EHYH	**Wanrong**	**0.36**	**313**	*i* P	**Pb**	**23 47 42.1**	**-0.2**
EHYH				S	**Sb**	**23 47 48.2**	**+0.1**
EHY	**Hungye**	**0.39**	**312**	*i* P	**Pb**	**23 47 42.2**	**-0.5**
EHY				S	**Sb**	**23 47 48.3**	**-0.4**
EHD	**Haiduan**	**0.41**	**257**	*i* P	**Pb**	**23 47 42.3**	**-0.6**
EHD				S	**Sb**	**23 47 48.4**	**-0.7**
ECS	**Chishang**	**0.41**	**249**	P	**Pb**	**23 47 43.2**	**+0.2**
ECS				*e*S	**Sb**	**23 47 50.4**	**+1.1**
TEGC	**Jichi Village**	**0.47**	**349**	P	**Pb**	**23 47 43.8**	**-0.1**
TEGC				S	**Sb**	**23 47 51.2**	**+0.4**
WARBT	**Fenglin Townsh**	**0.52**	**334**	P	**Pb**	**23 47 43.8**	**-0.9**
WARBT				S	**Sb**	**23 47 50.9**	**-1.4**
SHUL	**Shoufeng**	**0.55**	**353**	*i* P	**Pn**	**23 47 44.6**	**-0.7**
SHUL				*e*S	**Sb**	**23 47 52.8**	**+0.1**
ELDTW	**Lidau**	**0.57**	**265**	*i* P	**Pn**	**23 47 44.3**	**-1.4**
ELDTW				S	**Sb**	**23 47 51.4**	**-2.2**
LONT	**Longtian**	**0.57**	**234**	*i* P	**Pn**	**23 47 44.9**	**-0.8**
LONT				S	**Sb**	**23 47 53.1**	**-0.4**
LDUT	**Ludao**	**0.59**	**195**	P	**Pn**	**23 47 45.1**	**-0.8**
LDUT				S	**Sb**	**23 47 53.7**	**-0.2**
ESL	**Shilin**	**0.60**	**342**	P	**Pn**	**23 47 44.8**	**-1.2**
ESL				*e*S	**Sb**	**23 47 52.6**	**-1.6**
TEYL	**Yanliau Villag**	**0.62**	**357**	P	**Pn**	**23 47 46.1**	**-0.2**
TEYL				S	**Sn**	**23 47 55.8**	**+0.6**
TTN	**Taitung**	**0.66**	**223**	P	**Pn**	**23 47 46.3**	**-0.6**
TTN				*e*S	**Sn**	**23 47 57.0**	**+0.8**
TWGBT	**Beinan**	**0.66**	**230**	P	**Pn**	**23 47 45.2**	**-1.7**
TWGBT	**Beinan**	**0.66**	**230**	S	**Sn**	**23 47 54.7**	**-1.6**
TWGBT	**Beinan**	**0.66**	**230**	P	**Pn**	**23 47 45.7**	**-1.2**
TWGBT				S	**Sn**	**23 47 54.7**	**-1.6**
TWG	**Pinlang**	**0.67**	**231**	P	**Pn**	**23 47 45.7**	**-1.3**
TWG				S	**Sn**	**23 47 54.6**	**-1.7**
VWDT	**VWDT**	**0.68**	**318**	P	**Pn**	**23 47 46.3**	**-0.8**
VWDT				*e*S	**Sn**	**23 47 55.3**	**-1.4**
ETM	**Tongmen**	**0.73**	**350**	P	**Pn**	**23 47 47.0**	**-0.9**
ETM				S	**Sn**	**23 47 56.3**	**-1.6**
HWA	**Hwalien**	**0.73**	**358**	*i* P	**Pn**	**23 47 47.2**	**-0.6**
HWA				S	**Sn**	**23 47 57.6**	**-0.3**
STYH	**Taoyuan**	**0.79**	**265**	*i* P	**Pn**	**23 47 48.0**	**-0.7**
STYH				S	**Sn**	**23 47 58.1**	**-1.3**
ALS	**Alishan**	**0.81**	**289**	*i* P	**Pn**	**23 47 48.4**	**-0.4**
ALS				*e*S	**Sn**	**23 47 58.5**	**+1.7**
OWD	**Renai**	**0.82**	**329**	*i* P	**Pn**	**23 47 48.3**	**-1.0**
OWD				*e*S	**Sn**	**23 47 58.0**	**-2.4**
SSLB	**Suanglung**	**0.83**	**311**	P	**Pn**	**23 47 48.3**	**-0.9**
SSLB	**Suanglung**	**0.83**	**311**	S	**Sn**	**23 47 58.6**	**-1.7**
SSLB	**Suanglung**	**0.83**	**311**	*i* P	**Pn**	**23 47 48.4**	**-0.9**
SSLB				*e*S	**Sn**	**23 47 58.2**	**-2.1**
TWD	**Chiawan**	**0.83**	**358**	P	**Pn**	**23 47 48.4**	**-0.9**
TWD				*e*S	**Sn**	**23 47 59.6**	**-0.9**
WHYT	**Xinyi Township**	**0.85**	**302**	*i* P	**Pn**	**23 47 49.2**	**-0.3**
WHYT				S	**Sn**	**23 48 00.3**	**-0.6**
WUSB	**Renai**	**0.88**	**328**	P	**Pn**	**23 47 49.5**	**-0.6**
WUSB				S	**Sn**	**23 47 60.0**	**-1.9**
ECL	**Taimali**	**0.90**	**224**	P	**Pn**	**23 47 48.7**	**-1.5**
ECL				S	**Sn**	**23 47 60.0**	**-2.1**
ETL	**Fush Village**	**0.91**	**359**	P	**Pn**	**23 47 49.5**	**-0.9**
ETL				*e*S	**Sn**	**23 48 01.2**	**-1.2**
TPUB	**Ta-pu**	**0.93**	**274**	P	**Pn**	**23 47 50.7**	**+0.1**
TPUB	**Ta-pu**	**0.93**	**274**	S	**Sn**	**23 48 03.1**	**+0.3**
TPUB	**Ta-pu**	**0.93**	**274**	P	**Pn**	**23 47 50.6**	**+0.1**
TPUB				S	**Sn**	**23 48 02.3**	**-0.5**
NACB	**Ninganchiao**	**0.93**	**358**	P	**Pn**	**23 47 49.7**	**-0.9**
NACB	**Ninganchiao**	**0.93**	**358**	S	**Sn**	**23 48 01.0**	**-1.8**
NACB	**Ninganchiao**	**0.93**	**358**	P	**Pn**	**23 47 49.6**	**-1.0**
NACB				S	**Sn**	**23 48 01.2**	**-1.6**
SMLT	**Sun Moon Lake**	**0.93**	**313**	*i* P	**Pn**	**23 47 50.3**	**-0.3**
SMLT				*e*S	**Sn**	**23 48 01.6**	**-1.3**
WTP	**Ta-pu**	**0.94**	**270**	*i* P	**Pn**	**23 47 50.9**	**+0.1**
WTP				S	**Sn**	**23 48 03.6**	**+0.5**
SLGT	**Liugui**	**0.94**	**255**	*i* P	**Pn**	**23 47 50.9**	**+0.1**
SLGT				S	**Sn**	**23 48 02.9**	**-0.3**
CHN5	**Tsauling**	**0.95**	**292**	P	**Pn**	**23 47 51.1**	**+0.2**
CHN5				S	**Sn**	**23 48 03.6**	**+0.3**
WHF	**Hehuan Shan**	**0.96**	**339**	P	**Pn**	**23 47 50.4**	**-1.0**
WHF				*e*S	**Sn**	**23 48 01.9**	**-2.2**
WCKO	**Fanlu**	**0.97**	**282**	*i* P	**Pn**	**23 47 51.4**	**-0.3**
WCKO				S	**Sn**	**23 48 03.8**	**+0.1**
ETLH	**Xiulin Townshi**	**0.97**	**352**	P	**Pn**	**23 47 50.1**	**-1.1**
ETLH				S	**Sn**	**23 48 01.8**	**-2.2**
TYC	**Yuchr**	**0.97**	**313**	P	**Pn**	**23 47 51.0**	**-0.1**
TYC				*e*S	**Sn**	**23 48 03.5**	**-0.3**
SGST	**Jiashian**	**0.98**	**261**	P	**Pn**	**23 47 50.7**	**-0.6**
SGST				S	**Sn**	**23 48 04.1**	**0.0**
WJS	**Zhushan**	**1.01**	**305**	*i* P	**Pn**	**23 47 52.1**	**+0.4**
WJS				S	**Sn**	**23 48 05.5**	**+0.7**
CHN1	**Nanshi**	**1.02**	**267**	P	**Pn**	**23 47 52.5**	**+0.6**
CHN1				*e*S	**Sn**	**23 48 06.1**	**+1.0**
WCS	**Beigang Elemen**	**1.05**	**321**	P	**Pn**	**23 47 52.1**	**-0.1**
SSD	**Sandimen**	**1.05**	**242**	*e*P	**Pn**	**23 47 52.2**	**0.0**
SSD				*e*S	**Sn**	**23 48 07.3**	**+1.6**
TWK	**Hsinying**	**1.05**	**271**	*i* P	**Pn**	**23 47 52.8**	**+0.4**
TWK				S	**Sn**	**23 48 06.5**	**+0.5**
TSMG	**Majia**	**1.06**	**240**	*e*P	**Pn**	**23 47 52.6**	**+1.2**
TSMG				*e*S	**Sn**	**23 48 07.2**	**+1.2**
FUSS	**Fushou**	**1.06**	**340**	*e*P	**Pn**	**23 47 52.3**	**-0.3**
FUSS				*e*S	**Sn**	**23 48 04.5**	**-1.9**
EOS4	**EOS4**	**1.07**	**36**	*e*P	**Pn**	**23 47 52.4**	**+0.2**
EOS4				*e*S	**Sn**	**23 48 05.7**	**-0.2**
WNT	**Mingjian**	**1.08**	**306**	P	**Pn**	**23 47 53.2**	**+0.6**
WNT				*e*S	**Sn**	**23 48 07.5**	**+1.0**
WGK	**Gukeng**	**1.08**	**294**	P	**Pn**	**23 47 53.5**	**+0.8**
WGK				S	**Sn**	**23 48 08.1**	**+1.6**
EAHA	**Aohua**	**1.08**	**5**	*e*P	**Pn**	**23 47 52.1**	**-0.6**
EAHA				*e*S	**Sn**	**23 48 05.7**	**-1.0**
TWT	**Tachien**	**1.09**	**337**	P	**Pn**	**23 47 53.1**	**+0.2**
TWT				S	**Sn**	**23 48 05.6**	**-1.5**
TDCB	**Techi**	**1.10**	**337**	P	**Pn**	**23 47 53.0**	**0.0**
TDCB				S	**Sn**	**23 48 05.8**	**-1.3**
WDLH	**Douliu**	**1.10**	**294**	*i* P	**Pn**	**23 47 53.7**	**+0.8**
WDLH				S	**Sn**	**23 48 08.1**	**+1.0**
SCST	**Cishan**	**1.11**	**251**	*e*S	**Sn**	**23 48 10.3**	**+1.8**
TAW	**Tawu**	**1.11**	**218**	*e*P	**Pn**	**23 47 53.1**	**0.0**
MASBT	**Mashibuluo**	**1.12**	**236**	P	**Pn**	**23 47 52.9**	**-0.3**
MASBT				*e*S	**Sb**	**23 48 10.3**	**+1.5**
EAST	**Anshuo**	**1.12**	**220**	*e*P	**Pn**	**23 47 52.8**	**-0.5**
CHY	**Chiayi**	**1.14**	**283**	*e*P	**Pn**	**23 47 54.2**	**+0.7**
CHY				*e*S	**Sn**	**23 48 08.8**	**+0.8**
CHN3	**Shinhua**	**1.18**	**262**	P	**Pb**	**23 47 56.3**	**+0.7**
CHN3				*e*S	**Sn**	**23 48 10.8**	**+1.8**
TWM1	**Shoushan**	**1.19**	**250**	P	**Pb**	**23 47 57.6**	**+1.8**
LAY	**Lan-yu**	**1.20**	**184**	P	**Pn**	**23 47 53.7**	**-0.7**
LAY				*e*S	**Sn**	**23 48 07.2**	**-2.3**
NNSB	**Datong**	**1.20**	**349**	P	**Pn**	**23 47 54.1**	**-0.4**
NNSB				S	**Sn**	**23 48 08.5**	**-1.3**
EWUT	**Wuta**	**1.20**	**6**	*i* P	**Pn**	**23 47 53.9**	**-0.4**
EWUT				*e*S	**Sn**	**23 48 08.6**	**-1.0**
WHP	**Taichung City**	**1.21**	**329**	P	**Pn**	**23 47 55.4**	**+0.9**
WHP				S	**Sn**	**23 48 09.1**	**+0.8**
EOS3	**EOS3**	**1.21**	**31**	*e*P	**Pn**	**23 47 54.7**	**+0.4**
EOS3				*e*S	**Sn**	**23 48 09.5**	**-0.1**
NNS	**Nan Shan**	**1.22**	**349**	P	**Pn**	**23 47 54.8**	**+0.1**
NNS				*e*S	**Sn**	**23 48 08.4**	**-1.6**
WTK	**Tuku**	**1.23**	**291**	S	**Sn**	**23 48 10.8**	**+0.7**
LYUB	**Lan-yu**	**1.24**	**182**	P	**Pn**	**23 47 53.6**	**-1.2**
SSPT	**Xinbi**	**1.24**	**233**	*e*P	**Pn**	**23 47 54.1**	**-0.8**
SSHA	**Shanhua**	**1.24**	**265**	*e*S	**Sn**	**23 48 12.2**	**+1.7**
ICHU	**Yijhu**	**1.25**	**276**	*e*P	**Pn**	**23 47 55.6**	**+0.6**
ICHU				*e*S	**Sn**	**23 48 12.0**	**+1.3**
TCU	**Taichung**	**1.26**	**316**	*e*P	**Pn**	**23 47 55.9**	**+0.8**
TCU				*e*S	**Sn**	**23 48 12.9**	**+2.0**
SCZT	**Fangliau**	**1.28**	**227**	*e*P	**Pn**	**23 47 55.6**	**+0.3**
SCZT				*e*S	**Sn**	**23 48 11.8**	**+0.5**
SLIU	**Shizi**	**1.28**	**217**	P	**Pn**	**23 47 55.4**	**-0.1**
SLIU				*e*S	**Sn**	**23 48 10.2**	**-1.3**
LATG	**Datong**	**1.29**	**356**	P	**Pn**	**23 47 55.3**	**-0.3**
WCHH	**Zhanghua**	**1.29**	**310**	*e*P	**Pn**	**23 47 56.1**	**+0.6**
WCHH				*e*S	**Sn**	**23 48 13.6**	**+1.9**
WCH1	**Changhua City**	**1.29**	**310**	*e*S	**Sn**	**23 48 13.2**	**+1.4**
TAI1	**Yung-k'ang**	**1.31**	**261**	*e*P	**Pn**	**23 47 57.5**	**+1.7**
TAI1				*e*S	**Sb**	**23 48 14.8**	**+0.6**
CHN8	**Yiju**	**1.31**	**275**	P	**Pn**	**23 47 56.1**	**+0.3**
CHN8				S	**Sn**	**23 48 13.2**	**+1.0**
WSL	**Shuilin Townsh**	**1.32**	**282**	P	**Pn**	**23 47 56.3**	**+0.3**
WSL				S	**Sn**	**23 48 12.9**	**+0.4**
WRL	**Guolierlin Hig**	**1.33**	**300**	P	**Pn**	**23 47 56.3**	**+0.2**
WRL				*i* S	**Sn**	**23 48 13.1**	**+0.5**
RLNB	**Erlin**	**1.34**	**299**	*e*P	**Pn**	**23 47 56.9**	**+0.7**
RLNB				*e*S	**Sn**	**23 48 13.0**	**+0.2**
TWQ1	**Liyutan**	**1.35**	**324**	*i* P	**Pn**	**23 47 57.7**	**+1.2**
TWQ1				S	**Sn**	**23 48 15.2**	**+1.9**
WSF	**Szhu**	**1.36**	**287**	*e*S	**Sn**	**23 48 13.6**	**+0.3**
TWC	**Suao**	**1.37**	**8**	*e*P	**Sn**	**23 47 56.9**	**+0.2**
TWC				*e*S	**Sn**	**23 48 14.1**	**+0.3**
NDS	**Dongshan**	**1.39**	**3**	P	**Sn**	**23 47 57.8**	**+0.9**
NDS				*e*S	**Sn**	**23 48 13.9**	**-0.2**
WTCT	**Ta-ch'eng**	**1.39**	**297**	P	**Pn**	**23 47 57.0**	**+0.1**
WTCT				S	**Sn**	**23 48 14.9**	**+0.8**
ENTT	**Nioudou**	**1.39**	**357**	*e*P	**Pn**	**23 47 56.8**	**-0.2**
WSSB	**Gushan**	**1.40**	**245**	*e*S	**Sn**	**23 48 16.6**	**+2.1**
SMST	**Manzhou Townsh**	**1.42**	**211**	P	**Pn**	**23 47 57.0**	**-0.4**
SMST				S	**Sn**	**23 48 13.3**	**-1.7**
WDJ	**Dajia District**	**1.43**	**321**	*i* P	**Pn**	**23 47 58.8**	**+1.3**
WDJ				S	**Sn**	**23 48 17.8**	**+2.7**
TSCK	**Chigu Township**	**1.43**	**266**	P	**Pn**	**23 47 57.9**	**+0.5**
TSCK				S	**Sn**	**23 48 15.9**	**+0.8**
YHNB	**Yeheng**	**1.44**	**351**	P	**Pn**	**23 47 57.9**	**+0.3**
YHNB	**Yeheng**	**1.44**	**351**	P	**Pn**	**23 47 58.0**	**+0.3**
YHNB				S	**Sn**	**23 48 15.4**	**-0.1**
NSK	**Sanguang**	**1.45**	**350**	P	**Pn**	**23 47 58.3**	**+0.5**
NSK				*e*S	**Sn**	**23 48 15.1**	**-0.6**
NFF	**Wufeng Townshi**	**1.46**	**341**	*e*P	**Pn**	**23 47 58.9**	**+0.9**
NFF				*e*S	**Sn**	**23 48 16.6**	**+0.6**
TWE	**Neicheng**	**1.47**	**1**	P	**Pn**	**23 47 58.6**	**+0.6**
TWE				*e*S	**Sn**	**23 48 16.5**	**+0.3**
HEN	**Hengchun**	**1.48**	**214**	*e*S	**Sn**	**23 48 17.2**	**+0.7**
NSTT	**Nanjuang**	**1.50**	**337**	P	**Pn**	**23 47 59.7**	**+1.3**
NSTT				S	**Sn**	**23 48 17.6**	**+0.7**
TSEB	**Hengchuen, Pin**	**1.50**	**207**	*e*S	**Sn**	**23 48 17.0**	**+0.1**
NMLH	**Miaoli**	**1.50**	**329**	P	**Pn**	**23 47 59.1**	**+0.6**
NMLH				*e*S	**Sn**	**23 48 19.8**	**+2.8**
TWKBT	**Hengchun**	**1.50**	**211**	*e*P	**Pn**	**23 47 58.2**	**-0.3**
TWKBT				S	**Sn**	**23 48 16.7**	**-0.3**
TWK1	**Hengchun**	**1.50**	**211**	*e*P	**Pn**	**23 47 58.3**	**-0.1**
TWK1				*e*S	**Sn**	**23 48 16.0**	**-1.0**
LIOB	**Emei**	**1.51**	**338**	P	**Pn**	**23 47 59.8**	**+1.2**
LIOB				*e*S	**Sn**	**23 48 17.4**	**+0.3**
FUSB	**Fushanzhiwuyua**	**1.51**	**358**	*e*P	**Pn**	**23 47 59.0**	**+0.4**
FUSB				*e*S	**Sn**	**23 48 17.3**	**+0.1**
ILA	**Ilan**	**1.52**	**4**	*e*P	**Pn**	**23 47 59.5**	**+0.8**
NWLT	**Wulai**	**1.53**	**355**	*e*P	**Pn**	**23 47 59.5**	**+0.6**
NWLT				*e*S	**Sn**	**23 48 16.9**	**-0.8**
KSHI	**Guanxi Townshi**	**1.58**	**345**	P	**Pn**	**23 48 01.5**	**+1.9**
KSHI				*e*S	**Sn**	**23 48 20.9**	**+1.9**
TIPB	**Shuangxi**	**1.73**	**6**	*e*P	**Pn**	**23 48 02.6**	**+1.0**
TIPB				*e*S	**Sn**	**23 48 22.3**	**-0.3**
TWA	**Mucha**	**1.73**	**358**	*e*S	**Sn**	**23 48 22.3**	**-0.3**
TWB1	**Santiao Chiao**	**1.79**	**10**	*e*P	**Pn**	**23 48 04.2**	**+1.8**
SXI1	**Grass Mountain**	**1.85**	**7**	P	**Pn**	**23 48 04.8**	**+1.3**
SXI1				*e*S	**Sn**	**23 48 28.1**	**+2.3**
TWS1	**Kuangyinshan**	**1.86**	**354**	*e*S	**Sb**	**23 48 29.7**	**-0.3**
ZUZH	**Zhuzihu**	**1.91**	**358**	*e*P	**Pn**	**23 48 04.6**	**+0.5**
ZUZH				*e*S	**Sn**	**23 48 28.7**	**+1.6**
PHUB	**P'eng-hu**	**1.92**

GSTR				Sn	Sn	00 21 41.4	+0.7	
GSTR				IAML		00 21 46.5		
	comp=E,817nm,0.5s							
GSIG	**Igitkin Island**	**1.48**	**62**		Pn	00 21 23.4	+0.6	
CEPE	**Semis' Perret**	**1.58**	**295**		Pn	00 21 24.5	+0.4	
CESW	**Semis' Southwe**	**1.60**	**292**		Pn	00 21 24.7	+0.2	
AMKA	**Amchitka**	**1.66**	**273**		Pn	00 21 25.3	0.0	
AMKA				Sn	Sn	00 21 45.9	+0.3	
KOWE	**Korovin West**	**2.58**	**65**		Pn	00 21 38.8	+1.0	
KOKL	**Mount Kliuchef**	**2.59**	**66**		Pn	00 21 39.1	+1.1	
KONW	**Korovin Northw**	**2.61**	**64**		Pn	00 21 39.0	+0.7	
KOFP	**Korovin Flat P**	**2.63**	**67**		Pn	00 21 39.8	+1.3	
KOSE	**Korovin Southe**	**2.68**	**66**		Pn	00 21 40.6	+1.3	
OKTU	**Okmok Mt. Tuli**	**6.47**	**67**	Pn	Pn	00 22 32.8	+1.7	
MGOD	**Makushin Gods**	**7.25**	**66**		Pn	00 22 43.6	+1.9	
UNV	**Unalaska Valle**	**7.47**	**66**		Pn	00 22 46.2	+1.5	
P16K	**Nushagak River**	**13.78**	**48**	Pn	Pn	00 24 11.8	+1.1	
J14K	**Nanvaranak Lak**	**13.86**	**29**		P	00 24 17.3	-1.1	
K15K	**Wolf Creek Mou**	**14.18**	**33**		P	00 24 20.6	-1.4	
M16K	**Timber Creek**	**14.35**	**40**	Pn	Pn	00 24 20.3	+2.0	
N17K	**Nushagak Hills**	**14.83**	**43**	Pn	Pn	00 24 25.0	+0.5	
P18K	**Big Mountain,**	**15.22**	**49**	Pn	Pn	00 24 31.2	+1.6	
P18K				IAmb	IAmb	00 25 00.7		
	comp=Z,28nm,1.1s							
O18K	**Koktuh Hills**	**15.41**	**47**		P	00 24 34.4	-1.2	
O18K				IAmb	IAmb	00 24 44.9		
	comp=Z,5.2nm,1.0s							
KDAK	**Kodiak Island**	**16.06**	**56**	Pn	Pn	00 24 39.6	-0.7	
SKT	**Skwentna**	**17.92**	**43**		P	00 25 02.7	-0.6	
SLKM	**Skilak Lake**	**17.97**	**48**	P	P	00 25 03.8	-0.1	
SEW	**Seward**	**18.22**	**50**	P	P	00 25 06.0	-0.5	
SEW				IAmb	IAmb	00 25 31.7		
	comp=Z,12nm,1.2s							
KTH	**Kantishna Hill**	**18.87**	**39**	P	P	00 25 13.2	-0.6	
KTH				IAmb	IAmb	00 25 23.5		
	comp=Z,1.7nm,0.9s							
E19K	**Redstone River**	**19.17**	**25**	P	P	00 25 16.6	-0.4	
E19K				IAmb	IAmb	00 25 18.1		
	comp=Z,2.0nm,1.1s							
C18K	**Utukok River**	**19.19**	**19**	P	P	00 25 16.9	-0.3	
RND	**Reindeer**	**19.64**	**41**	P	P	00 25 21.3	-0.8	
D19K	**Kuna River**	**19.74**	**22**	P	P	00 25 22.9	-0.2	
D19K				IAmb	IAmb	00 25 27.6		
	comp=Z,2.5nm,1.1s							
D20K	**Etivluk River**	**20.26**	**23**	P	P	00 25 28.1	-0.7	
D20K				IAmb	IAmb	00 25 29.5		
	comp=Z,1.6nm,0.6s							
BMAR	**Burnt Mountain**	**23.03**	**33**	P	P	00 25 57.2	-1.2	

*AZER **29** 00:46:36.4, 38.˚30N×44.˚50E, h2km, ml3.3*
*NSSP **29** 00:46:38.4, 38.˚38N×44.˚55E, h10km, Ms3.2*
*TEH **29** 00:46:39.2, 38.˚46N×44.˚57E, h9km, ML2.9, Presumed earthquake*
*ISK **29** 00:46:41.2, 38.˚44N×44.˚34E, h9km, ML3.0/9*

ISC 29 00:46:37.1±1.2, 38.˚33N±0.˚03×44.˚49E±0.˚02, h5km±11km, n59, σ2s42/100, 2D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.91**	**287**	Pg	**Pn**	**00 46 55.3**	**-1.3**
VANB				Sg	**Sg**	**00 47 06.5**	**+0.2**
HAKT	**HAKKARI**	**0.99**	**219**	P	**Pn**	**00 46 58.0**	**+0.2**
HAKT				S	**Sn**	**00 47 14.0**	**+1.7**
MAKU	**Maku**	**1.04**	**8**	Pg	**Pg**	**00 46 56.6**	**-0.4**
ERCV	**ERCIS-VAN**	**1.14**	**308**	Pg	**Pn**	**00 47 00.2**	**+0.3**
ERCV				Sg	**Sb**	**00 47 14.3**	**-0.3**
NAX	**Nakhchivan**	**1.15**	**42**	P	**Pn**	**00 47 01.7**	**+1.7**
NAX				S	**Sn**	**00 47 18.8**	**+2.6**
CUKT	**Cukurca**	**1.29**	**213**	Pg	**Pn**	00 47 06.4	+4.7
CUKT				Sn	**Sn**	**00 47 24.8**	**+5.3**
ITBZ	**Tabriz**	**1.30**	**94**	Pg	**Pg**	**00 47 03.2**	**+1.2**
ORD	**Ordubad**	**1.32**	**62**	P	**Pg**	**00 47 05.1**	**+2.7**
ORD				S	**Sg**	**00 47 23.5**	**+4.0**
IAZR	**Azarshahr**	**1.34**	**118**	Pg	**Pg**	**00 47 05.6**	**+2.8**
SBZ	**Shahbuz**	**1.35**	**37**	P	**Pg**	**00 47 06.5**	**+3.5**
SBZ				S	**Sg**	**00 47 25.2**	**+4.7**
HYR	**Heyderabad**	**1.42**	**11**	P	**Pg**	**00 47 06.5**	**+2.3**
HYR				S	**Sg**	**00 47 28.9**	**+6.3**
VAYK	**Vayk**	**1.55**	**28**	*eP*	**Pg**	**00 47 07.7**	**+1.0**
VAYK				*eS*	**Sg**	**00 47 28.0**	**+1.2**
IGDI	**IGDIR**	**1.57**	**348**	P	**Pg**	**00 47 08.5**	**+1.3**
IGDI				S	**Sg**	**00 47 31.6**	**+4.0**
ALVK	**Alvank**	**1.58**	**67**	*eP*	**Pg**	**00 47 07.8**	**+0.5**
ALVK				*eS*	**Sg**	**00 47 29.2**	**+1.4**
AGRB	**Hanur-Agry**	**1.71**	**317**	Pn	**Pg**	**00 47 09.3**	**-0.6**
AGRB				Sn	**Sb**	**00 47 29.9**	**-1.1**
MLAZ	**Malazgirt-MUS**	**1.72**	**299**	Pn	**Pg**	**00 47 09.7**	**-0.4**
MLAZ				Sn	**Sb**	**00 47 30.6**	**-0.8**
GNI	**Garni**	**1.83**	**6**	Pn	**Pg**	**00 47 12.2**	**0.0**
GNI	**Garni**	**1.83**	**6**	*eP*	**Pg**	**00 47 12.7**	**+0.6**
GNI				*eS*	**Sg**	**00 47 38.5**	**+2.6**
MAHB	**Mahabad**	**1.83**	**148**	Pn	**Pg**	**00 47 15.4**	**+3.2**
EGVZ	**Egvard**	**1.83**	**60**	*eP*	**Pg**	**00 47 12.1**	**-0.2**
EGVZ				*eS*	**Sg**	**00 47 37.0**	**+1.0**
GRS	**Goris**	**1.85**	**50**	*eP*	**Pg**	**00 47 14.0**	**+1.4**
GRS				*eS*	**Sg**	**00 47 38.0**	**+1.4**
GURO	**Guroymak-BITLI**	**1.95**	**277**	Pn	**Pg**	**00 47 13.4**	**-1.0**
ARUZ	**Aruch**	**1.98**	**351**	*eP*	**Pg**	**00 47 14.2**	**-0.8**
ARUZ				*eS*	**Sg**	**00 47 41.2**	**+0.5**
IHRS	**Heris**	**2.00**	**89**	Pn	**Pg**	**00 47 16.2**	**+0.7**
AYRK	**Ayrk**	**2.05**	**29**	*eP*	**Pg**	**00 47 16.1**	**-0.2**
AYRK				*eS*	**Sg**	**00 47 42.9**	**0.0**
AMBZ	**Amberd**	**2.07**	**355**	*eP*	**Pg**	**00 47 16.4**	**-0.3**
AMBZ				*eS*	**Sg**	**00 47 44.6**	**+1.1**
IHSH	**Hashtrud**	**2.42**	**114**	Pn	**Pg**	**00 47 21.8**	**-1.7**
QRD	**Qoradiz**	**2.48**	**62**	P	**Pb**	**00 47 22.1**	**0.0**
QRD				S	**Sg**	**00 47 57.4**	**+0.7**
VRTB	**Varto-Mus**	**2.52**	**290**	Pn	**Pb**	**00 47 21.5**	**-1.4**
KARS	**Kars**	**2.54**	**335**	Pn	**Pb**	**00 47 21.5**	**-1.8**
ISRB	**Sarab**	**2.55**	**100**	Pn	**Pg**	**00 47 23.8**	**-2.2**
GDB	**GEDABAY**	**2.58**	**22**	P	**Pg**	**00 47 25.9**	**-0.6**
GDB				S	**Sg**	**00 47 58.1**	**-1.9**
LSVT	**Lusahovit**	**2.64**	**12**	*eP*	**Pg**	**00 47 26.1**	**-1.6**
LSVT				*eS*	**Sg**	**00 48 01.1**	**-0.8**
AGDM	**Agdam**	**2.70**	**48**	P	**Pb**	**00 47 25.8**	**-0.1**
AGDM				S	**Sg**	**00 48 01.5**	**-2.3**
GANJ	**Ganja**	**2.71**	**31**	P	**Pb**	**00 47 25.1**	**-1.0**
GANJ				S	**Sg**	**00 48 03.0**	**-1.2**
SRTK	**Saratovka**	**2.74**	**357**	*eP*	**Pb**	**00 47 27.4**	**+0.8**
SRTK				*eS*	**Sg**	**00 48 04.1**	**-1.0**
BLQ	**Beylaqan**	**2.76**	**59**	P	**Pb**	**00 47 26.1**	**-0.8**
BLQ				S	**Sg**	**00 48 03.7**	**-2.1**
SENK	**Senkaya-Erzuru**	**2.78**	**324**	Pn	**Pb**	**00 47 24.9**	**-2.5**
QZX	**Qazax, Azerbai**	**2.81**	**14**	P	**Pb**	**00 47 27.1**	**-0.7**
QZX				S	**Sg**	**00 48 05.3**	**-2.0**
BRDA	**Brd**	**2.84**	**46**	P	**Pb**	**00 47 26.7**	**-1.6**
BRDA				S	**Sg**	**00 48 05.9**	**-2.5**
YRD	**Yardimli**	**2.99**	**78**	P	**Pb**	**00 47 28.7**	**-2.3**
YRD				S	**Sg**	**00 48 09.9**	**-3.3**
LRK	**Lerik**	**3.04**	**83**	P	**Pb**	**00 47 29.4**	**-2.3**
LRK				S	**Sb**	**00 48 07.1**	**-2.0**
AKH	**Akhalkalaki**	**3.17**	**346**	P	**Pg**	**00 47 37.2**	**-0.7**
GLBA	**Clilabad**	**3.18**	**72**	P	**Pb**	**00 47 31.7**	**-2.4**
GLBA				S	**Sb**	**00 48 10.1**	**-3.1**
DGRG	**David-gareji**	**3.19**	**12**	P	**Pg**	**00 47 37.7**	**-0.6**
TRLG	**Trialeti**	**3.22**	**355**	P	**Pb**	**00 47 36.1**	**+1.2**
VSHL	**Vashlovani**	**3.25**	**26**	P	**Pb**	**00 47 34.3**	**-1.0**
ASTR	**Astara**	**3.38**	**85**	P	**Pb**	**00 47 34.9**	**-2.6**
ASTR				S	**Sb**	**00 48 15.8**	**-3.1**
LKRN	**Lenkeran, Azer**	**3.38**	**82**	P	**Pb**	**00 47 34.6**	**-2.9**
LKRN				S	**Sb**	**00 48 16.2**	**-2.8**
SEKA	**Sheki**	**3.55**	**35**	P	**Pb**	**00 47 37.9**	**-2.6**
SEKA				S	**Sb**	**00 48 23.5**	**-0.4**
QBL	**Gabala**	**3.67**	**44**	P	**Pb**	**00 47 37.9**	**-4.7**
ZKTA	**Zakatala**	**3.69**	**26**	P	**Pb**	**00 47 39.7**	**-3.1**
ZKTA				S	**Sb**	**00 48 26.8**	**-1.0**
IML	**Ismayilli**	**3.77**	**48**	P	**Pn**	**00 47 39.0**	**+3.2**
IML				S	**Sb**	**00 48 28.4**	**-1.7**
XNQ	**Khinaliq**	**4.00**	**44**	P	**Pn**	**00 47 42.2**	**+3.0**
XNQ				S	**Sb**	**00 48 33.0**	**-3.9**
PQL	**Pirkuli**	**4.01**	**51**	P	**Pn**	**00 47 42.2**	**+2.8**
PQL				S	**Sb**	**00 48 34.1**	**-3.0**
GBS	**Qobustan**	**4.09**	**56**	P	**Pn**	**00 47 43.1**	**+2.8**
GBS				S	**Sb**	**00 48 34.8**	**-4.5**
ATGJ	**Altiaghaj**	**4.26**	**52**	P	**Pn**	**00 47 45.8**	**+3.0**
ATGJ				S	**Sb**	**00 48 38.9**	**-5.5**
QSAR	**Qusar**	**4.30**	**41**	P	**Pn**	**00 47 46.5**	**+3.2**
QSAR				S	**Sb**	**00 48 40.7**	**-4.8**
QUBA	**Quba, Azerbaij**	**4.32**	**44**	P	**Pn**	**00 47 46.6**	**+3.2**
QUBA				S	**Sb**	**00 48 41.2**	**-4.6**

*YARS **29** 00:54:60.0, 56.˚81N×124.˚83E, h13km, mb5.4/1, ML2.4/8*
*IDC **29** 00:55:00.1±0.7, 56.˚67N×124.˚78E, h0km, mb3.8/12, mbtmp3.9/16, ML3.9/5, Error ellipse: s-maj=15.2km s-min=10.8km az=119.0*

ISC 29 00:55:00.4±1.0, 56.˚72N±0.˚03×124.˚77E±0.˚03, h7km±7km, n31, σ2s50/51, mb3.9/11, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLNS	**Chul'man**	**0.14**	**29**	*i* Pg	**Pg**	**00 55 02.6**	**-0.6**
	665nm,0.3s						
CLNS				*e*Sg	**Sg**	**00 55 04.2**	**-1.0**
	6µm,0.6s						
CLNS				*e*Sg	**Sg**	**00 55 04.2**	**-1.0**
	4µm,0.6s						
TNDR	**Tynda**	**1.58**	**181**	*i* Pg	**Pb**	**00 55 29.9**	**+0.1**
	12nm,0.8s						
TNDR				*e*Sg	**Sg**	**00 55 51.7**	**+0.7**
	28nm,0.6s						
ALDR	**Aldan**	**1.93**	**10**	*e*Pg	**Pn**	**00 55 33.8**	**+0.1**
	29nm,1.2s						
ALDR				*e*Sg	**Sn**	**00 55 57.8**	**-0.3**
	38nm,0.5s						
BMKR	**Bomnak**	**3.06**	**129**	*e*Pg	**Pb**	**00 55 56.0**	**+1.0**
	560nm,0.8s						
BMKR				*e*Sg	**Sg**	**00 56 37.4**	**-1.1**
	120nm,0.5s						
ZEA	**Zeya**	**3.31**	**154**	*i* Pg	**Pb**	**00 56 00.8**	**+1.5**
	200nm,0.9s						
ZEA				*e*Sg	**Sg**	**00 56 44.8**	**-1.7**
	300nm,0.6s						
TUP	**Tupik**	**3.57**	**232**	*e*Pg	**Pb**	**00 56 04.6**	**+0.6**
	152nm,0.8s						
TUP				*e*Sg	**Sg**	**00 56 53.4**	**-1.6**
	428nm,1.0s						
CRS	**Chara**	**3.58**	**276**	*e*Sg	**Sg**	**00 56 54.4**	**-0.9**
	232nm,1.0s						
CGD	**Chagda**	**3.74**	**55**	*i* Pn	**Pn**	**00 55 57.1**	**-1.4**
CGD				*i* Pg	**Pb**	**00 56 06.1**	**-0.6**
	9.6nm,0.8s						
CGD				*e*Sg	**Sb**	**00 56 55.2**	**+3.1**
	50nm,0.5s						
OLMR	**Olekminsk**	**4.31**	**330**	*i* Pn	**Pn**	**00 56 05.1**	**-1.1**
OLMR				*i* Pg	**Pb**	**00 56 16.8**	**+0.5**
	5.0nm,0.7s						
OLMR				*e*Sn	**Sn**	**00 56 53.8**	**-2.9**
OLMR				*e*Sn	**Sn**	**00 56 53.8**	**-2.9**
OLMR				*e*Sg	**Sb**	**00 57 11.5**	**+3.1**
	18nm,1.2s						
BLSR	**Buluus**	**5.15**	**23**	*i* Pn	**Pn**	**00 56 17.2**	**-0.6**
BLSR				*i* Pg	**Pb**	**00 56 31.2**	**+0.6**
	2.4nm,0.8s						
BLSR				*e*Sg	**Sb**	**00 57 36.9**	**+4.3**
	20nm,0.8s						
TBGR	**Tabaga**	**5.69**	**24**	*i* Pn	**Pn**	**00 56 24.8**	**-0.4**
	2.7nm,0.7s						
TBGR				*e*Sg	**Sb**	**00 57 53.4**	**+5.1**
	50nm,0.8s						
YAK	**Yakutsk**	**5.89**	**23**	Pn	**Pn**	**00 56 27.6**	**-0.4**
	5.1nm,0.3s,baz=259,slow=19,SNR=5.9						
YAK				Sn	**Sn**	**00 57 34.6**	**-1.0**
	2.2nm,0.3s,baz=180,slow=23,SNR=9.1						
YAK				Lg	Lg	00 57 58.6	
	6.6nm,0.3s,baz=233,slow=22,SNR=14						
	15nm,0.4s						
YAK	**Yakutsk**	**5.89**	**23**	*i* Pn	**Pn**	**00 56 27.5**	**-0.5**
YAK				*i* Pg	**Pb**	**00 56 44.7**	**+1.5**
	0.2nm,0.6s						
YAK				*e*Sg	**Sb**	**00 58 00.4**	**+6.5**
	1.7nm,0.8s						
EKMR	**Ekimchan**	**5.97**	**124**	*e*Sg	**Sg**	**00 58 08.4**	**-3.4**
	60nm,0.8s						
KLR	**Kul'dur**	**8.60**	**148**	Pn	**Pn**	**00 57 06.3**	**+1.2**
	0.8nm,0.3s,baz=334,slow=13,SNR=27						
KLR				Sn	**Sn**	**00 58 37.5**	**-4.8**
	0.4nm,0.3s,baz=174,slow=9.8,SNR=6.2						
KLR				Lg	Lg	00 59 30.6	
	0.8nm,0.3s,baz=163,slow=22,SNR=7.9						
	7.6nm,0.6s						
TLY	**Talaya**	**13.33**	**257**	Lg	Lg	01 02 01.7	
	baz=129,slow=14						
SONM	**Songino Array**	**14.30**	**239**	Pn	**Pn**	**00 58 24.2**	**+0.9**
	0.1nm,0.3s,baz=38,slow=9.7,SNR=1.5						
SONM				Lg	Lg	01 02 31.9	
	0.2nm,0.3s,baz=48,slow=26,SNR=8.7						
TIXI	**Tiksi**	**15.09**	**5**	Pn	**Pn**	**00 58 29.5**	**-4.2**
	0.8nm,0.3s,baz=217,slow=10,SNR=15						
TIXI				Sn	**Sn**	**01 01 11.6**	**-9.2**
	0.3nm,0.3s,baz=113,slow=15,SNR=1.7						
TIXI				Lg	Lg	01 03 03.4	
	0.5nm,0.3s,baz=157,slow=22,SNR=4.6						
	4.0nm,0.5s						
KSRS	**Korea Array**	**19.39**	**172**	P	**Pn**	**00 59 28.5**	**+0.7**
	0.1nm,0.3s,baz=355,slow=11,SNR=5.4						
	2.0nm,0.8s						
NRIK	**Noril'sk**	**20.64**	**322**	P	**P**	**00 59 40.1**	**0.0**
	1.8nm,0.4s,baz=104,slow=11,SNR=9.2						
	1.8nm,0.4s						
ZALV	**Zalesovo Beam**	**22.67**	**280**	P	**P**	**01 00 03.0**	**+0.9**
	0.2nm,0.4s,baz=62,slow=10.0,SNR=1.9						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**27.62**	**277**	P	**P**	**01 00 49.2**	**+1.0**
	0.6nm,0.3s,baz=63,slow=9.3,SNR=6.5						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**27.68**	**267**	P	**P**	**01 00 49.5**	**+0.6**
	0.3nm,0.7s,baz=58,slow=4.6,SNR=3.6						
	0.3nm,0.7s						
BVAR	**Borovoye Array**	**30.82**	**287**	P	**P**	**01 01 18.2**	**+1.6**
	1.5nm,0.8s,baz=62,slow=6.9,SNR=10						
	1.5nm,0.8s						
ILAR	**Eielson Array**	**40.48**	**41**	P	**P**	**01 02 40.0**	**+0.8**
	1.8nm,1.0s,baz=302,slow=6.4,SNR=18						
	1.8nm,1.0s						
FINES	**FINESS Array B**	**46.24**	**319**	P	**P**	**01 03 26.8**	**+1.1**
	3.1nm,0.7s,baz=49,slow=7.3,SNR=15						
	3.1nm,0.7s						
AKASG	**Malin Array Be**	**52.41**	**307**	P	**P**	**01 04 13.1**	**+0.1**
	0.7nm,0.5s,baz=42,slow=8.2,SNR=5.4						
	0.7nm,0.5s						
YKA	**Yellowknife Ar**	**52.52**	**30**	P	**P**	**01 04 14.7**	**+1.1**
	1.4nm,0.8s,baz=326,slow=8.1,SNR=22						
	1.4nm,0.8s						
PDAR	**Pinedale Array**	**70.87**	**39**	P	**P**	**01 06 18.8**	**+0.9**
	0.3nm,0.7s,baz=22,slow=4.8,SNR=4.6						
	0.3nm,0.7s						
NVAR	**Mina Array Bea**	**71.31**	**48**	P	**P**	**01 06 20.5**	**-0.3**
	0.6nm,0.8s,baz=303,slow=6.3,SNR=4.3						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**76.79**	**171**	P	**P**	**01 06 52.8**	**+0.4**
	1.3nm,0.8s,baz=354,slow=6.6,SNR=10						
	1.3nm,0.8s						

*NEIC **29** 01:27:06.4, 31.˚72N×103.˚97W, h5km*
*NEIC **29** 01:27:06.3±1.5, 31.˚70N±0.˚01×104.˚03W±0.˚02, h5km±1km, mb_Lg3.5/160, ML3.6/88, Mwr3.5/24, Error ellipse: s-maj=2.9km s-min=2.6km az=62.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=2.52; $M_{\theta\theta}$2.33; $M_{\phi\phi}$0.18; $M_{r\theta}$-0.54; $M_{\theta\phi}$-0.12; $M_{\phi r}$-0.45; Fault plane solution: $M_0$2.53000×10^{14} NP1:ϕ_s83.21000°, δ51.79000°, λ-102.03000°. NP2:ϕ_s282.21000°, δ39.78000°, λ-75.17000°. Principal axes: T 2.3957, Plg6.0000°, Azm182.0000°; N 0.2574, Plg9.0000°, Azm91.0000°; P -2.6531, Plg79.0000°, Azm304.0000°;*
*TXNET **29** 01:27:06.3, 31.˚7N±0.˚4×104.˚1W±0.˚5, h6km±1km, ML3.6/22 Error ellipse: s-maj=0.8km s-min=0.5km az=51.7, final*

ISC 29 01:27:06.8±0.8, 31.˚70N±0.˚02×104.˚06W±0.˚02, h14km±6km, n116, σ0s96/141, 1D, Western Texas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPB09	**Culberson Coun**	**0.22**	**291**		**Pg**	**01 27 11.6**	**-0.3**
TPB09					**Sg**	**01 27 14.8**	**-0.5**
TPB09	**Culberson Coun**	**0.22**	**291**	‖P	**Pg**	**01 27 11.6**	**-0.3**
TPB09				S	**Sg**	**01 27 14.8**	**-0.5**
TPB13	**Reeves - Culbe**	**0.23**	**128**	P	**Pg**	**01 27 12.1**	**+0.1**
TPB13				S	**Sg**	**01 27 15.9**	**+0.5**
TPB11	**China Draw**	**0.24**	**5**	P	**Pg**	**01 27 11.8**	**-0.4**
TPB11				S	**Sg**	**01 27 15.0**	**-0.8**
TPB07	**Mentone**	**0.35**	**109**	P	**Pb**	**01 27 14.4**	**-0.5**
TPB07				S	**Sb**	**01 27 19.8**	**-0.5**
PECS	**Pecos**	**0.36**	**153**		**Pg**	**01 27 13.8**	**-0.4**
PECS				Sg	**Sg**	**01 27 19.4**	**+0.1**
PECS				IAML		01 27 22.8	
	6µm,0.7s						
PECS				IAML		01 27 24.5	
	6µm,0.6s						
PECS	**Pecos**	**0.36**	**153**	P	**Pg**	**01 27 14.2**	**-0.1**
PECS				S	**Sg**	**01 27 19.7**	**+0.4**
TPB10	**Southeast of T**	**0.48**	**148**		**Pg**	**01 27 16.5**	**0.0**
TPB10					**Sb**	**01 27 23.9**	**-0.3**
TPB10	**Southeast of T**	**0.48**	**148**	P	**Pg**	**01 27 16.5**	**0.0**
TPB10				S	**Sb**	**01 27 23.9**	**-0.3**
TPB12	**Southwest of T**	**0.49**	**170**		**Pg**	**01 27 16.5**	**0.0**
TPB12					**Sb**	**01 27 23.7**	**-0.6**
TPB12	**Southwest of T**	**0.49**	**170**	P	**Pg**	**01 27 16.5**	**0.0**
TPB12				S	**Sb**	**01 27 23.7**	**-0.6**
PCOS	**Crockett Middl**	**0.55**	**121**		**Sb**	**01 27 25.9**	**0.0**
PCOS	**Crockett Middl**	**0.55**	**121**	S	**Sb**	**01 27 25.9**	**0.0**
GDL2	**Guadalupe Moun**	**0.57**	**333**		**Pg**	**01 27 17.3**	**-0.8**
GDL2	**Guadalupe Moun**	**0.57**	**333**	P	**Pg**	**01 27 17.5**	**-0.6**
CLNB	**Carlsbad**	**0.59**	**15**		**Pg**	**01 27 17.8**	**-0.6**
CLNB	**Carlsbad**	**0.59**	**15**	P	**Pg**	**01 27 18.0**	**-0.4**
CLNB	**Carlsbad**	**0.59**	**15**	P	**Pg**	**01 27 18.0**	**-0.4**
CLNB				S	**Sb**	**01 27 26.9**	**-0.3**
TPB06	**Permian Basin**	**0.72**	**94**	P	**Pb**	**01 27 20.8**	**-0.4**
TPB06				S	**Sb**	**01 27 31.2**	**+0.4**
CBET	**Carlsbad E Tow**	**0.73**	**4**	P	**Pg**	**01 27 20.6**	**-0.5**
TPB03	**Saragosa**	**0.77**	**143**		**Pb**	**01 27 21.7**	**-0.3**
TPB03					**Sb**	**01 27 32.2**	**-0.1**
TPB03	**Saragosa**	**0.77**	**143**	P	**Pb**	**01 27 21.7**	**-0.3**
TPB03				S	**Sb**	**01 27 32.2**	**-0.1**
TPB01	**Permian Basin**	**0.79**	**162**	P	**Pg**	**01 27 21.5**	**-0.6**
TPB01				S	**Sb**	**01 27 32.8**	**-0.1**
TPB27	**North of Pyote**	**0.80**	**98**	P	**Pb**	**01 27 22.3**	**-0.3**
TPB27				S	**Sb**	**01 27 33.9**	**+0.6**
TPB04	**Verhalen**	**0.84**	**127**		**Pb**	**01 27 23.1**	**-0.2**
TPB04					**Sb**	**01 27 35.0**	**+0.5**
TPB04	**Verhalen**	**0.84**	**127**	P	**Pb**	**01 27 23.1**	**-0.2**
TPB04				S	**Sb**	**01 27 35.0**	**+0.5**
HTMS	**Hat Mesa**	**0.85**	**25**		**Pg**	**01 27 22.6**	**-0.9**
HTMS	**Hat Mesa**	**0.85**	**25**	P	**Pg**	**01 27 22.9**	**-0.6**
HTMS				S	**Sb**	**01 27 34.7**	**-0.2**
HTMS	**Hat Mesa**	**0.85**	**25**	P	**Pg**	**01 27 22.9**	**-0.6**
TPB16	**Coyonosa**	**0.89**	**129**		**Pb**	**01 27 24.0**	**-0.2**
TPB16					**Sb**	**01 27 36.0**	**+0.1**
TPB16	**Coyonosa**	**0.89**	**129**	P	**Pb**	**01 27 24.0**	**-0.2**
TPB16				S	**Sb**	**01 27 36.0**	**+0.1**
TPB19	**West of Imperi**	**0.91**	**115**		**Pb**	**01 27 24.0**	**-0.3**
TPB19					**Sb**	**01 27 37.0**	**+0.7**
TPB19	**West of Imperi**	**0.91**	**115**	P	**Pb**	**01 27 24.0**	**-0.3**
TPB19				S	**Sb**	**01 27 37.0**	**+0.7**
TPB15	**Southwest of C**	**0.96**	**120**		**Pg**	**01 27 25.0**	**-0.5**
TPB15					**Sb**	**01 27 38.4**	**+0.5**
TPB15	**Southwest of C**	**0.96**	**120**	P	**Pg**	**01 27 25.0**	**-0.5**
TPB15				S	**Sb**	**01 27 38.4**	**+0.5**
TPB05	**Hovey Rd**	**0.99**	**141**	P	**Pg**	**01 27 25.6**	**-0.5**
TPB05				S	**Sb**	**01 27 39.4**	**+0.5**
MNTX	**Cornudas Mount**	**1.13**	**271**		**Pg**	**01 27 27.8**	**-0.9**
MNTX					**Sg**	**01 27 42.8**	**-0.6**
MNTX	**Cornudas Mount**	**1.13**	**271**	P	**Pg**	**01 27 27.8**	**-0.9**
MNTX				S	**Sg**	**01 27 42.8**	**-0.6**
MNHN	**Monahans**	**1.16**	**107**		**Pg**	**01 27 27.8**	**-1.5**
MNHN					**Sb**	**01 27 44.1**	**+0.4**
MNHN				IAML		01 27 48.2	
	2µm,0.3s						
MNHN				IAML		01 27 50.4	
	892nm,0.2s						
MNHN	**Monahans**	**1.16**	**107**	P	**Pg**	**01 27 28.1**	**-1.1**
MNHN				S	**Sb**	**01 27 44.1**	**+0.4**
VHRN	**Van Horn**	**1.21**	**222**		**Pg**	**01 27 29.0**	**-1.1**
VHRN					**Sn**	**01 27 43.7**	**+1.8**
VHRN				IAML		01 27 50.1	
	717nm,0.6s						
VHRN				I

TASM				IAML		01 29 08.5		
	comp=Z,131nm,0.9s							
TASM	**ASL Pad, Albuq**	**3.81**	**329**	Pn	**Pn**	**01 28 05.8**	**+0.5**	
TASM				IAML		01 29 08.5		
	comp=Z,134nm,0.9s							
TASM				IAML		01 29 10.9		
	comp=Z,166nm,0.9s							
TASM	**ASL Pad, Albuq**	**3.81**	**329**	Pn	**Pn**	**01 28 06.8**	**+1.4**	
TASM				IAML		01 29 08.5		
	comp=Z,138nm,0.9s							
TASM				IAML		01 29 10.8		
	comp=Z,164nm,0.9s							
JCT	**Junction City**	**3.85**	**107**		**Pn**	**01 28 07.0**	**+1.4**	
ABTX	**Abilene, Hawle**	**3.86**	**75**		**Pn**	**01 28 07.5**	**+1.8**	
ABTX				IAmb_Lg		01 29 17.5		
	comp=Z,118nm,0.9s							
PH02	**Texas Public H**	**4.09**	**25**	IAML		01 29 18.4		
	comp=Z,1µm,0.8s							
PH02				IAmb_Lg		01 29 19.7		
	comp=Z,164nm,0.7s							
PH02				IAML		01 29 19.9		
	comp=Z,954nm,0.7s							
BRDY	**Brady**	**4.34**	**94**		**Pn**	**01 28 13.1**	**+0.8**	
BRDY				IAmb_Lg		01 29 29.8		
	comp=Z,91nm,0.8s							
DUN6	**Lazy B Ranch**	**4.36**	**283**		**Pn**	**01 28 13.7**	**+1.0**	
319A	**Douglas**	**4.47**	**267**		**Pn**	**01 28 15.0**	**+0.7**	
319A				IAML		01 29 35.3		
	comp=E,80nm,0.8s							
HNDO	**Hondo**	**4.65**	**116**		**Pn**	**01 28 17.1**	**+0.5**	
HNDO				IAmb_Lg		01 29 34.2		
	comp=Z,96nm,0.9s							
SMWD	**Samnorwood**	**4.66**	**42**		**Pn**	**01 28 17.6**	**+0.7**	
RTBA	**Rita Blanca**	**4.86**	**13**		**Pn**	**01 28 20.4**	**+0.8**	
HPIG		**4.95**	**197**		**Pn**	**01 28 20.4**	**-0.5**	
HPIG				IAML		01 29 51.5		
	comp=N,27nm,0.6s							
HPIG				IAML		01 29 56.5		
	comp=E,48nm,0.8s							
833A	**Chaparral WMA,**	**5.26**	**129**	IAmb_Lg		01 30 02.2		
	comp=Z,56nm,0.9s							
WMOK	**Wichita Mounta**	**5.36**	**54**	IAmb_Lg		01 30 08.9		
	comp=Z,89nm,0.9s							
EF02	**Christine**	**5.60**	**120**	IAmb_Lg		01 30 16.3		
	comp=Z,73nm,0.8s							
TUC	**Tucson**	**5.75**	**278**	IAmb_Lg		01 30 15.4		
	comp=Z,8.4nm,0.9s							
ELIS	**Ellis County**	**5.82**	**40**	IAmb_Lg		01 30 21.1		
	comp=Z,74nm,0.8s							
EF04	**Eagle Ford 04**	**5.95**	**113**	IAmb_Lg		01 30 25.9		
	comp=Z,86nm,0.9s							
MLDN	**Muldoon**	**6.31**	**106**	IAmb_Lg		01 30 38.0		
	comp=Z,66nm,0.8s							
FNO	**Franklin**	**6.60**	**56**	IAmb_Lg		01 30 42.9		
	comp=Z,81nm,0.8s							
TREL	**Terrell**	**6.83**	**79**	IAmb_Lg		01 31 00.4		
	comp=Z,68nm,0.8s							
OK029	**Liberty Lake**	**6.85**	**52**	IAmb_Lg		01 31 00.3		
	comp=Z,50nm,0.8s							
W35A	**Tecumseh**	**6.92**	**58**	IAmb_Lg		01 30 48.6		
	comp=Z,57nm,0.7s							
CROK	**Carrier**	**6.96**	**45**	IAmb_Lg		01 30 59.8		
	comp=Z,43nm,0.9s							
KSCO	**Kaye Shedlock'**	**7.39**	**9**	IAmb_Lg		01 31 21.0		
	comp=Z,55nm,0.8s							
OK052	**Battle Ridge R**	**7.40**	**53**	IAmb_Lg		01 31 16.2		
	comp=Z,41nm,0.9s							
HNVL	**Huntsville, TX**	**7.42**	**95**	IAmb_Lg		01 31 20.5		
	comp=Z,49nm,1.0s							
OK048	**Pawnee Station**	**7.55**	**49**	IAmb_Lg		01 31 13.3		
	comp=Z,31nm,0.8s							
BLOK	**Blackwell**	**7.59**	**46**	IAmb_Lg		01 31 23.5		
	comp=Z,51nm,1.0s							
Z38A	**Mt. Pleasant**	**7.82**	**76**	IAmb_Lg		01 31 33.3		
	comp=Z,46nm,0.8s							
CBKS	**Cedar Bluff**	**7.93**	**25**	IAmb_Lg		01 31 28.4		
	comp=Z,65nm,0.8s							
R32A	**Long Quarter,**	**8.01**	**32**	IAmb_Lg		01 31 42.3		
	comp=Z,47nm,0.9s							
TUL3	**Leonard**	**8.06**	**56**	IAmb_Lg		01 31 31.3		
	comp=Z,36nm,0.9s							
RLO	**Rose Lookout**	**8.73**	**57**	IAmb_Lg		01 31 51.5		
	comp=Z,28nm,0.8s							
U38A	**Gravette**	**9.31**	**57**	IAmb_Lg		01 32 03.5		
	comp=Z,28nm,0.9s							

*ATH **29** 01:27:09.9, 38˚.46N×26˚.85E, h6$^{km}_{\pm 1}$, ML2.8/11,*
Latitude uncertainty: 0 km; Longitude uncertainty: 1 km
*ISK **29** 01:27:10.4, 38˚.43N×26˚.77E, h8^{km}, ML3.2/33*
*AFAD **29** 01:27:10.9, 38˚.43N×26˚.76E, h7^{km}×2^{km}, ML3.1*
*THE **29** 01:27:11.1, 38˚N±1˚×2˚7E±˚, h4$^{km}_{\pm 1}$, M2.8/14,*
MLh2.8/14

ISC 29 01:27:11.2±0.9, **38˚.44N**±0˚.02×**26˚.77E**±0˚.02, **h10**$^{km}_{\pm 7}$, **n123**, σ0°**48**/147, **10C-7D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.22**	**103**	P	**Pg**	**01 27 15.6**	**-0.2**
BLCB				S	**Sg**	**01 27 18.8**	**0.0**
BLCB	**Balcova**	**0.22**	**103**	Pg	**Pg**	**01 27 15.5**	**-0.2**
BLCB				Sg	**Sg**	**01 27 19.0**	**+0.2**
BAGT	**Foa**	**0.23**	**16**	P	**Pg**	**01 27 15.9**	**0.0**
BAGT				IAML		01 27 19.0	
	comp=N,3µm,0.4s						
BAGT				S	**Sg**	**01 27 19.3**	**+0.2**
BAGT				IAML		01 27 20.0	
	comp=E,4µm,0.3s						
KRBN	**Karaburun**	**0.23**	**313**	Pg	**Pg**	**01 27 15.7**	**-0.2**
KRBN				Sg	**Sg**	**01 27 19.3**	**+0.1**
FOCM	**Foa**	**0.28**	**354**	Pg	**Pg**	**01 27 15.9**	**-0.9**
FOCM				Sg	**Sg**	**01 27 20.7**	**+0.1**
ZEYE	**Izmir, Urla-Ze**	**0.29**	**227**	P	**Pg**	**01 27 16.7**	**-0.3**
KARB	**zmir-Karabur**	**0.36**	**309**	P	**Pg**	**01 27 18.2**	**-0.1**
KARB				S	**Sg**	**01 27 23.8**	**+0.7**
KARB				IAML		01 27 24.0	
	comp=N,2µm,0.3s						
KARB				IAML		01 27 24.0	
	comp=E,2µm,0.3s						
GMLD	**Gumuldur**	**0.38**	**162**	Pg	**Pg**	**01 27 17.9**	**-0.7**
GMLD				Sg	**Sg**	**01 27 23.7**	**+0.1**
CESE	**eme**	**0.38**	**254**	Pg	**Pg**	**01 27 18.4**	**-0.3**
CESE				Sg	**Sg**	**01 27 24.1**	**+0.3**
DGB	**zmir**	**0.39**	**167**	P	**Pg**	**01 27 18.8**	**-0.2**
DGB				S	**Sg**	**01 27 23.6**	**-0.5**
DGB				IAML		01 27 24.0	
	comp=N,2µm,0.5s						
DGB				IAML		01 27 24.0	
	comp=E,2µm,0.2s						
CAMT	**Merkez**	**0.53**	**54**	P	**Pg**	**01 27 21.7**	**+0.2**
EAG2	**Marmaro, Chios**	**0.53**	**282**	P	**Pg**	**01 27 21.3**	**-0.2**
EAG2				S	**Sb**	**01 27 29.3**	**-1.0**
CHOS	**Chios island**	**0.56**	**265**	P	**Pg**	**01 27 22.2**	**+0.1**
CHOS				S	**Sg**	**01 27 29.7**	**+0.1**
CHOS	**Chios island**	**0.56**	**265**	P	**Pg**	**01 27 22.1**	**-0.1**
CHOS				S	**Sb**	**01 27 30.9**	**-0.4**
DUVT	**Torbali**	**0.58**	**112**	P	**Pg**	**01 27 22.3**	**0.0**
ZEDA	**zmir-Bergama**	**0.58**	**24**	P	**Pg**	**01 27 22.2**	**-0.3**
ZEDA				S	**Sg**	**01 27 30.0**	**-0.2**
KRL1	**Karlovasi Samo**	**0.64**	**184**	P	**Pg**	**01 27 22.9**	**-0.7**
KRL1				S	**Sg**	**01 27 32.4**	**+0.4**
DKL	**Dikili**	**0.64**	**9**	Pg	**Pg**	**01 27 23.5**	**-0.1**
KUSD	**Kusadasi-Aydin**	**0.70**	**144**	Pg	**Pg**	**01 27 24.7**	**-0.1**
SMG	**Samos**	**0.73**	**176**	P	**Pg**	**01 27 24.6**	**-0.6**
SMG				S	**Sb**	**01 27 35.7**	**-0.3**
SMG	**Samos**	**0.73**	**176**	P	**Pg**	**01 27 24.5**	**-0.7**
SMG				S	**Sg**	**01 27 35.1**	**+0.3**
GCAM	**G?zelcaml?**	**0.82**	**153**	Pg	**Pg**	**01 27 26.7**	**-0.3**
GCAM	**G?zelcaml?**	**0.82**	**153**	P	**Pg**	**01 27 26.7**	**-0.3**
AYVA	**Ayvalik**	**0.87**	**356**	P	**Pg**	**01 27 27.8**	**-0.2**
PRK	**Paraskevi**	**0.90**	**335**	P	**Pg**	**01 27 28.0**	**-0.5**
PRK				S	**Sb**	**01 27 40.3**	**-0.6**
PRK	**Paraskevi**	**0.90**	**335**	P	**Pg**	**01 27 27.7**	**-0.8**
PRK				S	**Sg**	**01 27 39.5**	**-0.6**
AKS	**Akhisar**	**0.93**	**61**	Pg	**Pg**	**01 27 28.9**	**-0.2**
AKHS	**Akhisar**	**0.93**	**61**	P	**Pg**	**01 27 28.8**	**-0.3**
SOMA	**Soma-Manisa**	**0.94**	**39**	Pg	**Pg**	**01 27 29.0**	**-0.2**
GOMA	**Golmarmara-Man**	**0.94**	**73**	Pg	**Pg**	**01 27 28.7**	**-0.6**
IZMR	**zmir-demi**	**0.98**	**107**	P	**Pg**	**01 27 29.7**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**1.01**	**119**	Pg	**Pg**	**01 27 30.3**	**-0.3**
ODEM	**Odemis-Izmir**	**1.04**	**98**	Pg	**Pg**	**01 27 30.7**	**-0.4**
SIGR	**SIGRI**	**1.05**	**318**	P	**Pg**	**01 27 30.7**	**-0.7**
SIGR				S	**Sb**	**01 27 45.7**	**+0.4**
SIGR	**SIGRI**	**1.05**	**318**	Pg	**Pg**	**01 27 30.9**	**-0.5**
SIGR	**SIGRI**	**1.05**	**318**	P	**Pg**	**01 27 30.7**	**-0.7**
SIGR				S	**Sb**	**01 27 45.5**	**+0.2**
KTTT	**Salihli**	**1.07**	**76**	P	**Pb**	**01 27 31.8**	**+0.1**
BUHA	**Balikesir, Bur**	**1.09**	**13**	P	**Pg**	**01 27 31.6**	**-0.5**
GPNR	**Gulpinar-Canak**	**1.13**	**334**	Pn	**Pg**	**01 27 32.3**	**-0.6**
KOCA	**Canakkale, Ayv**	**1.17**	**335**	P	**Pg**	**01 27 33.0**	**-0.8**
STEP	**BALIKESIR_Sava**	**1.20**	**38**	P	**Pg**	**01 27 33.6**	**-0.5**
GORD	**Gordes-Manisa**	**1.20**	**66**	Pn	**Pg**	**01 27 33.5**	**-0.7**
NAZL	**Nazilli-Aydin**	**1.29**	**111**	Pn	**Pn**	**01 27 35.3**	**0.0**
BAYC	**CANAKKALE_Bayr**	**1.31**	**353**	P	**Pn**	**01 27 34.9**	**-0.7**
MLSB	**Milas**	**1.39**	**145**	Pn	**Pn**	**01 27 36.3**	**-0.3**
EZN	**Ezine**	**1.43**	**346**	P	**Pn**	**01 27 36.3**	**-0.9**
EZN				S	**Sg**	**01 27 57.0**	**-0.2**
EZN	**Ezine**	**1.43**	**346**	Pn	**Pn**	**01 27 37.3**	**+0.1**
BODT	**Bodrum**	**1.44**	**162**	P	**Pn**	**01 27 37.7**	**+0.4**
BODT				S	**Sg**	**01 27 57.5**	**+0.1**
BODT	**Bodrum**	**1.44**	**162**	Pn	**Pn**	**01 27 37.1**	**-0.2**
BALB	**Balikesir**	**1.48**	**35**	Pn	**Pn**	**01 27 37.9**	**0.0**
KULA	**Kula-Manisa**	**1.49**	**86**	Pn	**Pn**	**01 27 38.4**	**+0.4**
YENI	**Yenice-Canakka**	**1.54**	**14**	Pn	**Pn**	**01 27 38.9**	**+0.2**
CANM	**Can-anakkale**	**1.59**	**8**	Pn	**Pn**	**01 27 39.9**	**+0.5**
COMU	**Canakkale**	**1.68**	**352**	Pn	**Pn**	**01 27 40.7**	**+0.1**
GONE	**Gonen-Balikesi**	**1.76**	**24**	Pn	**Pn**	**01 27 42.2**	**+0.5**
YER	**Yerkesik**	**1.77**	**137**	P	**Pn**	**01 27 41.4**	**-0.5**
YER	**Yerkesik**	**1.77**	**137**	Pn	**Pn**	**01 27 42.0**	**+0.1**
DAT	**Datca**	**1.82**	**159**	Pn	**Pn**	**01 27 42.7**	**+0.1**
SIMA	**Simav-Kutahya**	**1.85**	**69**	Pn	**Pn**	**01 27 43.0**	**0.0**
BIGA	**Biga-Canakkale**	**1.87**	**9**	Pn	**Pn**	**01 27 43.5**	**+0.3**
GADA	**Gvkgeada**	**1.88**	**339**	P	**Pn**	**01 27 42.8**	**-0.5**
GADA	**Gvkgeada**	**1.88**	**339**	Pn	**Pn**	**01 27 43.6**	**+0.3**
KARY	**Karystos**	**1.88**	**258**	P	**Pn**	**01 27 42.9**	**-0.4**
KARY	**Karystos**	**1.88**	**258**	P	**Pn**	**01 27 43.6**	**+0.2**
LIA	**Limnos Island**	**1.91**	**320**	P	**Pn**	**01 27 43.5**	**-0.2**
LIA	**Limnos Island**	**1.91**	**320**	P	**Pn**	**01 27 43.2**	**-0.6**
LPK	**Lapseki**	**1.93**	**360**	Pn	**Pn**	**01 27 44.1**	**0.0**
LMN1	**MIRINA LIMNOU**	**1.96**	**318**	P	**Pn**	**01 27 44.2**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.97**	**353**	Pn	**Pn**	**01 27 44.5**	**-0.1**
KRBG	**Karabiga-Canak**	**2.00**	**12**	Pn	**Pn**	**01 27 45.4**	**+0.4**
TURN	**Turunc**	**2.03**	**144**	Pn	**Pn**	**01 27 45.5**	**+0.1**
EDC	**Edincik**	**2.09**	**24**	Pn	**Pn**	**01 27 46.5**	**+0.3**
KYMI	**Kymi, Euboea I**	**2.10**	**276**	P	**Pn**	**01 27 46.2**	**-0.2**
KYMI	**Kymi, Euboea I**	**2.10**	**276**	P	**Pn**	**01 27 46.5**	**+0.1**
BAND	**Balkesir-Ban**	**2.18**	**28**	⇑P	**Pn**	**01 27 48.3**	**+0.8**
DALY	**Dalyan (Mula)**	**2.20**	**137**	Pn	**Pn**	**01 27 48.2**	**+0.4**
SMTH	**Samothraki Isl**	**2.25**	**335**	P	**Pn**	**01 27 48.0**	**-0.5**
SMTH	**Samothraki Isl**	**2.25**	**335**	P	**Pn**	**01 27 47.7**	**-0.7**
DION	**Dionisos Attik**	**2.26**	**262**	P	**Pn**	**01 27 49.4**	**+0.8**
DION	**Dionisos Attik**	**2.26**	**262**	P	**Pn**	**01 27 49.5**	**+0.9**
THR8	**Santorini-Mono**	**2.27**	**207**	P	**Pn**	**01 27 49.6**	**+0.9**
ENEZ	**Enez**	**2.35**	**348**	P	**Pn**	**01 27 49.9**	**+0.1**
ENEZ				S	**Sn**	**01 28 19.1**	**+0.4**
ARG	**Arkhangelos**	**2.47**	**154**	P	**Pn**	**01 27 51.0**	**-0.4**
ALN	**Alexandroupoli**	**2.52**	**347**	P	**Pn**	**01 27 51.8**	**-0.4**
ALN				S	**Sn**	**01 28 23.2**	**+0.3**
ALN	**Alexandroupoli**	**2.52**	**347**	P	**Pn**	**01 27 51.7**	**-0.4**
THAS	**Thassos island**	**2.69**	**324**	P	**Pn**	**01 27 53.8**	**-0.7**
THAS	**Thassos island**	**2.69**	**324**	P	**Pn**	**01 27 53.7**	**-0.7**
RDO	**Rodhopi**	**2.87**	**341**	P	**Pn**	**01 27 56.9**	**-0.1**
RDO	**Rodhopi**	**2.87**	**341**	P	**Pn**	**01 27 56.7**	**-0.2**
KAVA	**Kavala**	**3.09**	**326**	P	**Pn**	**01 27 59.8**	**-0.3**
HORT	**Hortiatis**	**3.57**	**308**	P	**Pn**	**01 28 07.0**	**+0.3**
RZN	**Rozhen**	**3.61**	**335**	P	**Pn**	**01 28 07.6**	**+0.3**
RZN	**Rozhen**	**3.61**	**335**	*e*P	**Pn**	**01 28 07.6**	**+0.3**
SRS	**Serrai**	**3.63**	**319**	P	**Pn**	**01 28 07.4**	**0.0**
NVR	**Nevrokopi**	**3.67**	**323**	P	**Pn**	**01 28 08.0**	**0.0**
DIM	**Dimitrovgrad**	**3.72**	**346**	P	**Pn**	**01 28 08.6**	**0.0**
DIM	**Dimitrovgrad**	**3.72**	**346**	*e*P	**Pn**	**01 28 08.8**	**+0.2**
ANX	**Ano Chora**	**3.81**	**274**	P	**Pn**	**01 28 10.2**	**+0.4**
MMB	**Musomishta**	**3.88**	**324**	P	**Pn**	**01 28 11.3**	**+0.4**
MMB	**Musomishta**	**3.88**	**324**	*i* P	**Pn**	**01 28 11.5**	**+0.6**
PLD	**Plovdiv**	**4.02**	**338**	P	**Pn**	**01 28 13.0**	**+0.3**
KNT	**Kendrikon**	**4.04**	**314**	P	**Pn**	**01 28 13.5**	**+0.5**
JMB	**Yambol**	**4.05**	**357**	*i* P	**Pn**	**01 28 12.7**	**-0.6**
KKB	**Krupnik**	**4.40**	**322**	*i* P	**Pn**	**01 28 19.6**	**+1.6**
ELND	**Elena**	**4.54**	**352**	⇓P	**Pn**	**01 28 19.9**	**0.0**
SZH	**Strazhitsa**	**4.86**	**353**	*i* P	**Pn**	**01 28 24.8**	**+0.4**
LOZB	**Loznitsa**	**4.93**	**359**	⇑P	**Pn**	**01 28 25.4**	**+0.1**
VTS	**Vitosha**	**4.97**	**328**	*i* P	**Pn**	**01 28 26.8**	**+0.8**
PLVB	**Pleven**	**5.21**	**342**	⇓P	**Pn**	**01 28 29.7**	**+0.6**
MPEP	**Malo Peshtene**	**5.42**	**336**	*i* P	**Pn**	**01 28 32.6**	**+0.5**
ICOR	**Ion Corvin**	**5.73**	**7**	⇑P	**Pn**	**01 28 36.9**	**+0.6**
BOVS	**Bovan**	**6.45**	**325**	⇑P	**Pn**	**01 28 47.1**	**+0.9**
MLR	**Muntele Rosu**	**7.08**	**355**	⇑P	**Pn**	**01 28 54.6**	**-0.3**
VOIR		**7.11**	**350**	⇑P	**Pn**	**01 28 55.0**	**-0.3**
PLOR	**Plostina**	**7.41**	**359**	⇑P	**Pn**	**01 28 59.6**	**-0.4**
VLDR	**Vladesti**	**7.47**	**7**	⇑P	**Pn**	**01 29 00.2**	**+0.1**
GZR	**Gura Zlata**	**7.56**	**338**	⇑P	**Pn**	**01 29 01.7**	**+0.2**
DOPR	**Dopca**	**7.60**	**353**	⇓P	**Pn**	**01 29 02.4**	**+0.5**
TURR	**Turia**	**7.63**	**356**	⇑P	**Pn**	**01 29 03.5**	**+1.1**
OZUR		**7.69**	**355**	⇓P	**Pn**	**01 29 03.4**	**+0.2**
MDB	**Medias**	**7.90**	**348**	⇓P	**Pn**	**01 29 05.9**	**-0.2**
BURAR	**Bucovina Array**	**9.24**	**353**	⇑P	**Pn**	**01 29 26.2**	**+1.6**
MORH	**Mrgy, Hungar**	**9.82**	**325**	⇑P	**Pn**	**01 29 33.3**	**+0.9**

*ISK **29** 01:34:23.6, 38˚.32N×38˚.75E, h5^{km}, ML3.7/13*
*AFAD **29** 01:34:23.9, 38˚.29N×38˚.71E, h7^{km}×2^{km}, MW3.7*

ISC 29 01:34:24.2±0.9, **38˚.29N**±0˚.02×**38˚.73E**±0˚.02, **h10**$^{km}_{\pm 9}$, **n38**, σ0°**60**/46, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAYA	**Malatya/Merkez**	**0.24**	**279**	P	**Pg**	**01 34 29.0**	**-0.3**
MAYA				S	**Sg**	**01 34 32.5**	**-0.1**
MAYA				IAML		01 34 33.0	
	comp=N,1µm,0.7s						
MAYA				IAML		01 34 34.0	
	comp=E,10µm,0.2s						
MDYL	**Doganyol-Malat**	**0.25**	**84**	Pg	**Pg**	**01 34 29.2**	**-0.1**
MDYL				Sg	**Sg**	**01 34 32.9**	**+0.1**
ELZG	**Elazig**	**0.29**	**44**	P	**Pg**	**01 34 30.5**	**+0.3**
ELZG				S	**Sg**	**01 34 34.8**	**+0.6**
ELZG				IAML		01 34 35.0	
	comp=N,3µm,0.3s						
ELZG				IAML		01 34 35.0	
	comp=E,3µm,0.3s						
ESGZ	**Sivrice-Elazig**	**0.30**	**62**	Pg	**Pg**	**01 34 30.2**	**-0.2**
ESGZ				Sg	**Sg**	**01 34 34.7**	**+0.2**
NARI	**Adyaman-Kaht**	**0.40**	**176**	P	**Pg**	**01 34 32.1**	**-0.1**
CNGT	**ngs**	**0.46**	**99**	P	**Pg**	**01 34 32.9**	**-0.3**
CNGT				S	**Sg**	**01 34 39.4**	**+0.1**
CNGT				IAML		01 34 41.0	
	comp=E,3µm,0.4s						
CNGT				IAML		01 34 44.0	
	comp=N,3µm,0.5s						
SVRC	**Sivrice-ELAZID**	**0.47**	**79**	Pg	**Pg**	**01 34 32.9**	**-0.5**
SVRC				Sg	**Sb**	**01 34 40.7**	**-0.9**
ESIJ	**Sivrice-Elazig**	**0.49**	**70**	Pg	**Pg**	**01 34 33.6**	**-0.2**
ESIJ				Sg	**Sb**	**01 34 41.6**	**-0.6**
KAHTU	**Kahta**	**0.49**	**191**	P	**Pg**	**01 34 33.7**	**-0.1**
ELZ	**Elazig**	**0.55**	**43**	P	**Pg**	**01 34 35.0**	**0.0**
ELZ				S	**Sg**	**01 34 42.7**	**+0.4**
ELZ				IAML		01 34 44.0	
	comp=N,6µm,0.4s						
ELZ				IAML		01 34 45.0	
	comp=E,5µm,0.5s						
AZEY	**Adyaman-Merk**	**0.61**	**219**	P	**Pg**	**01 34 36.4**	**+0.3**
AKCD	**Akcadag**	**0.63**	**271**	P	**Pg**	**01 34 36.0**	**-0.5**
HANM	**anlurfa/Hi**	**0.72**	**170**	P	**Pg**	**01 34 38.0**	**-0.1**
MDNT	**Maden**	**0.76**	**82**	P	**Pb**	**01 34 39.9**	**+0.3**
MCKZ	**Bingol**	**0.85**	**13**	P	**Pg**	**01 34 40.1**	**-0.6**
ARPR	**Arapgir-MALATY**	**0.86**	**339**	Pg	**Pg**	**01 34 40.6**	**-0.3**
ARPR				Sg	**Sb**	**01 34 53.9**	**+0.9**
ATAB	**Bozova**	**0.89**	**203**	P	**Pg**	**01 34 41.1**	**-0.2**
KOVA	**Elazig, Kovanc**	**0.95**	**64**	P	**Pg**	**01 34 42.4**	**-0.1**
AKCA	**Adyaman/G¶l**	**0.96**	**239**	P	**Pg**	**01 34 42.1**	**-0.5**
SANL	**SANLIURFA_Merk**	**1.13**	**169**	P	**Pb**	**01 34 45.8**	**-0.2**
DIYA	**Diyarbakir**	**1.16**	**108**	P	**Pg**	**01 34 46.4**	**-0.1**
MDIV		**1.16**	**333**	P	**Pb**	**01 34 46.3**	**-0.2**
MIMR	**Divri**	**1.16**	**333**	P	Pn	01 34 55.3	+8.7
DYBB	**Diyarbakir**	**1.16**	**106**	Pn	**Pg**	**01 34 46.5**	**-0.1**
ILIC	**ilic-Erzincan**	**1.17**	**354**	Pn	**Pb**	**01 34 45.5**	**-0.7**
GZT	**Gaziantep**	**1.31**	**225**	P	**Pn**	**01 34 49.3**	**-0.4**
MAYK		**1.36**	**70**	P	**Pb**	**01 34 49.8**	**-0.1**
SURC	**SANLIURFA_SURC**	**1.41**	**184**	P	**Pn**	**01 34 50.0**	**0.0**
ERZN	**Erzincan**	**1.51**	**31**	Pn	**Pg**	**01 34 52.7**	**-0.6**
EUZM	**Uzumlu**	**1.61**	**28**	P	**Pb**	**01 34 54.0**	**0.0**
GAZ	**Gaziantep**	**1.64**	**228**	Pn	**Pg**	**01 34 55.4**	**-0.3**
KMRS	**Kahramanmaras**	**1.64**	**242**	Pn	**Pb**	**01 34 55.1**	**+0.5**
BNGB	**Bingl**	**1.68**	**65**	Pn	**Pb**	**01 34 55.1**	**-0.2**
YEDI	**Yedisu-Bingol**	**1.83**	**50**	Pn	**Pb**	**01 34 56.9**	**-0.9**
KARO	**Karliova-Bingo**	**2.08**	**60**	Pn	**Pb**	**01 35 00.9**	**-1.3**
VRTB	**Varto-Mus**	**2.31**	**67**	Pn	**Pb**	**01 35 04.3**	**-1.7**
BAYT	**Aydıntepe-Bayb**	**2.37**	**27**	Pn	**Pn**	**01 35 04.7**	**+1.4**
GURO	**Guroymak-BITLI**	**2.61**	**83**	Pn	**Pn**	**01 35 08.0**	**+1.4**

*NOU **29** 01:37:40.6, 40˚.44S×176˚.33E, h36^{km}, MLv3.9/18, North Island, New Zealand*
*WEL **29** 01:37:40.8±0.5, 40˚S±3˚×17˚6E±˚, h28$^{km}_{\pm 4}$, M3.7/70, ML3.8/14, MLv3.7/70, Error ellipse: s-maj=3.5km s-min=3.3km az=176.4, confirmed*

ISC 29 01:37:41.1±0.9, **40˚.43S**±0˚.02×**176˚.32E**±0˚.03, **h35**$^{km}_{\pm 3}$, **n137**, σ1°**102**/147, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBFS	**Weber Fire Sta**	**0.03**	**352**	P	**Pb**	**01 37 46.9**	**0.0**
WBFS				S	**Sb**	**01 37 51.3**	**+0.5**
ANWZ	**Angora Road**	**0.12**	**103**	P	**Pb**	**01 37 47.9**	**+0.7**
ANWZ				S	**Sb**	**01 37 53.4**	**+1.9**
DVHZ	**Dannevirke**	**0.17**	**319**	P	**Pn**	**01 37 46.9**	**+0.3**
DVHZ				S	**Sb**	**01 37 51.1**	**-1.1**
BFZ	**Birch Farm**	**0.26**	**192**	P	**Pb**	**01 37 49.1**	**+0.5**
BFZ	**Birch Farm**	**0.26**	**192**	S	**Sb**	**01 37 55.4**	**+1.8**
BFZ	**Birch Farm**	**0.26**	**192**	P	**Pb**	**01 37 49.2**	**+0.7**
BFZ				S	**Sb**	**01 37 55.4**	**+1.8**
PGFS	**Porangahau Fir**	**0.26**	**60**	P	**Pb**	**01 37 50.1**	**+1.6**
PGFS				S	**Sb**	**01 37 55.2**	**+1.6**
DVHS	**Dannevirke Hig**	**0.28**	**324**	P	**Pb**	**01 37 47.9**	**-0.9**
DVHS				S	**Sn**	**01 37 53.4**	**+0.2**
PRWZ	**Pori Road**	**0.29**	**245**	P	**Pn**	**01 37 49.4**	**+0.4**
PRWZ				S	**Sb**	**01 37 55.9**	**+1.6**
PRHZ	**Porangahau**	**0.29**	**56**	P	**Pb**	**01 37 49.2**	**+0.3**
PRHZ				S	**Sb**	**01 37 55.7**	**+1.4**
TRMS	**Tiraumea**	**0.34**	**226**	P	**Pn**	**01 37 50.2**	**+0.5**
TRMS				S	**Sb**	**01 37 57.3**	**+1.9**
WDPS	**Woodville Poli**	**0.35**	**285**	P	**Pb**	**01 37 49.2**	**-0.5**
WDPS				S	**Sb**	**01 37 55.5**	**-0.1**
WPHZ	**Waipukurau**	**0.38**	**15**	P	**Pb**	**01 37 49.7**	**-0.4**
POWZ	**Post Office Ro**	**0.42**	**275**	P	**Pb**	**01 37 50.3**	**-0.3**
TSZ	**Takapari Road**	**0.46**	**324**	P	**Pb**	**01 37 50.1**	**-1.1**
CPFS	**Castlepoint Fi**	**0.47**	**189**	P	**Pn**	**01 37 52.9**	**+1.5**
TIWZ	**Tintock**	**0.48**	**223**	P	**Pn**	**01 37 52.1**	**+0.6**
CPWZ	**

CTZ	**Chatham Island**	**6.21**	**124**	P	**Pn**	**01 39 10.1**	**-0.1**
ODZ	**Otahua Downs**	**6.22**	**220**	P	**Pn**	**01 39 09.9**	**-0.5**
ODZ	**Otahua Downs**	**6.22**	**220**	P	**Pn**	**01 39 08.1**	**-2.3**
JCZ	**Jackson Bay**	**6.67**	**234**	P	**Pn**	**01 39 15.7**	**-0.9**
JCZ	**Jackson Bay**	**6.67**	**234**	P	**Pn**	**01 39 14.4**	**-2.3**

SCB ***29*** *01:48:26.7±0.9, 21°.46S×66°.82W, h217km±15km, ML3.6/1, Error ellipse: s-maj=6.2km s-min=4.8km az=0.0*
ISC 29 01:48:27.6±1.5, 21°.45S±0'.06×66°.81W±0'.06, h207km, n29, σ0$46/33, 2C, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**1.11**	**80**	P	**Pn**	**01 48 59.9**	**+0.4**
YJA	**Yavi**	**1.41**	**121**	P	**Pn**	**01 49 01.9**	**+0.2**
PB09	**IPOC Station P**	**2.28**	**261**	*e*P	**Pn**	**01 49 10.8**	**+0.9**
PB09	**IPOC Station P**	**2.28**	**261**	P	**Pn**	**01 49 10.1**	**+0.3**
PB01	**IPOC Station P**	**2.53**	**279**	*e*P	**Pn**	**01 49 12.7**	**+0.3**
PB01				IAML		01 49 49.6	
	comp=E,167nm,0.1s						
PB01	**IPOC Station P**	**2.53**	**279**	P	**Pn**	**01 49 12.9**	**+0.5**
PB08	**IPOC Station P**	**2.55**	**300**	*e*P	**Pn**	**01 49 13.9**	**+1.0**
PB08				IAML		01 49 51.9	
	comp=E,51nm,0.2s						
PB08	**IPOC Station P**	**2.55**	**300**	P	**Pn**	**01 49 13.5**	**+0.5**
PB03	**IPOC Station P**	**2.79**	**257**	*e*P	**Pn**	**01 49 15.8**	**+0.3**
PB03				*e*S	**S**	**01 49 52.0**	**-0.3**
PB03				IAML		01 49 53.6	
	comp=E,116nm,0.1s						
PB06	**IPOC Station P**	**2.84**	**244**	*e*P	**Pn**	**01 49 16.2**	**+0.2**
PB06				IAML		01 49 54.8	
	comp=N,78nm,0.2s						
PB06	**IPOC Station P**	**2.84**	**244**	P	**Pn**	**01 49 16.4**	**+0.4**
GO01	**Chusmiza**	**2.85**	**308**	*e*P	**Pn**	**01 49 17.1**	**+0.6**
GO01	**Chusmiza**	**2.85**	**308**	P	**Pn**	**01 49 16.5**	**0.0**
PB07	**IPOC Station P**	**2.87**	**264**	*e*P	**Pn**	**01 49 16.4**	**+0.1**
PB07				IAML		01 49 54.5	
	comp=E,118nm,0.1s						
PB02	**IPOC Station P**	**2.88**	**272**	*e*P	**Pn**	**01 49 16.4**	**0.0**
PB02				*e*S	**S**	**01 49 53.0**	**-0.8**
PB02	**IPOC Station P**	**2.88**	**272**	P	**Pn**	**01 49 16.5**	**+0.2**
PB02				S	**S**	**01 49 53.6**	**-0.2**
PB02				IAML		01 49 56.3	
	comp=E,126nm,0.2s						
SOEO	**Opoqueri**	**3.05**	**340**	P	**Pn**	**01 49 19.6**	**+0.8**
PB11	**IPOC Station P**	**3.15**	**302**	P	**Pn**	**01 49 19.4**	**-0.2**
PATCX	**Punta Patache**	**3.18**	**281**⇑	*e*P	**Pn**	**01 49 19.6**	**-0.2**
TA01	**Diego Aracena**	**3.27**	**285**⇑	*e*P	**Pn**	**01 49 20.2**	**-0.6**
PB05	**IPOC Station P**	**3.44**	**245**	*e*P	**Pn**	**01 49 22.8**	**-0.1**
SOET	**ToroToro**	**3.45**	**16**	P	**Pn**	**01 49 23.5**	**+0.1**
AOEA	**Aiquile**	**3.58**	**25**	P	**Pn**	**01 49 24.4**	**-0.5**
PB16	**IPOC Station P**	**4.01**	**320**	*e*P	**Pn**	**01 49 30.9**	**+0.5**
PB16				*e*S	**S**	**01 50 19.4**	**+0.3**
PB16	**IPOC Station P**	**4.01**	**320**	P	**Pn**	**01 49 30.5**	**+0.1**
SOEJ	**Jacaque**	**4.64**	**343**	P	**Pn**	**01 49 38.7**	**+0.4**
BBOE	**La Paz, Chanca**	**4.75**	**346**	P	**Pn**	**01 49 39.6**	**0.0**
BBOD	**La Paz, Gloria**	**5.08**	**340**	P	**Pn**	**01 49 43.9**	**+0.1**
LPAZ	**La Paz**	**5.29**	**346**	P	**Pn**	**01 49 46.3**	**-0.3**

IDC ***29*** *01:48:54.0±2.4, 54°.77N×162°.32E, h0km, mb3.8/12, mbtmp3.8/12, MS3.6/1, Error ellipse: s-maj=64.3km s-min=22.7km az=1.0*
KRSC ***29*** *01:48:58.9±1.1, 54°.81N×162°.88E, h46km±30km, Ml4.2*
ISC 29 01:49:01.5±1.1, 54°.87N±0'.04×162°.89E±0'.04, h52km±11km, n53, σ1$15/72, mb3.7/12, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**1.34**	**358**	*e*P	**Pn**	**01 49 23.4**	**-0.4**
KBTR				*e*S	**Sn**	**01 49 40.5**	**0.0**
KBG	**Krutoberegovo**	**1.39**	**356**	*e*P	**Pn**	**01 49 24.2**	**-0.3**
KBG				*e*S	**Sn**	**01 49 42.3**	**+0.6**
TUMD	**Tumrok D**	**1.47**	**284**	*e*P	**Pn**	**01 49 26.1**	**+0.5**
TUMD				*e*S	**Sn**	**01 49 44.2**	**+0.4**
BZGR	**Bezymyannyi-Gr**	**1.65**	**311**	*e*P	**Pn**	**01 49 27.8**	**-0.2**
ZLN	**Zelenaya**	**1.65**	**315**	*e*P	**Pn**	**01 49 26.7**	**-1.5**
BZP	**Bezymyannyi-Pe**	**1.70**	**309**	*e*P	**Pn**	**01 49 28.4**	**-0.5**
BZWR	**Bezymyannyi-We**	**1.75**	**310**	*e*P	**Pn**	**01 49 30.2**	**+0.7**
KMNR	**Kamenistaya**	**1.76**	**301**	*e*P	**Pn**	**01 49 30.3**	**+0.7**
KMNR				*e*S	**Sn**	**01 49 51.6**	**+0.7**
BKI	**Bering**	**1.80**	**78**	*e*P	**Pn**	**01 49 30.2**	**+0.1**
BKI				*e*S	**Sn**	**01 49 51.1**	**-0.7**
KPT	**Kopyto**	**1.88**	**307**	*e*P	**Pn**	**01 49 31.7**	**+0.5**
SMKR	**Semkarok**	**1.89**	**335**	*e*P	**Pn**	**01 49 31.8**	**+0.4**
KLY	**Klyuchi**	**1.93**	**320**	*e*P	**Pn**	**01 49 31.2**	**-0.6**
KLY				*e*S	**Sn**	**01 49 54.5**	**-0.3**
KOZ	**Kozyrevsk**	**2.09**	**306**	*e*P	**Pn**	**01 49 34.9**	**+0.9**
KII	**Karymskiy**	**2.18**	**249**	*e*P	**Pn**	**01 49 36.1**	**+0.8**
KII				*e*S	**Sn**	**01 50 00.5**	**-0.6**
SRDR	**Sredinnyy**	**2.31**	**310**	*e*P	**Pn**	**01 49 37.6**	**+0.5**
SPN	**Mys Shipunski**	**2.46**	**225**	*e*P	**Pn**	**01 49 38.0**	**-1.0**
SPN				*e*S	**Sn**	**01 50 04.9**	**-2.8**
ESO	**Esso**	**2.61**	**296**	*e*P	**Pn**	**01 49 41.3**	**+0.1**
ESO				*e*S	**Sn**	**01 50 10.8**	**-0.9**
NLC	**Nalytchevo**	**2.70**	**232**	*e*P	**Pn**	**01 49 42.0**	**-0.3**
NLC				*e*S	**Sn**	**01 50 13.1**	**-0.6**
SDLR	**Sedlovina**	**2.85**	**238**	*e*P	**Pn**	**01 49 45.7**	**+1.1**
SDLR				*e*S	**Sn**	**01 50 17.2**	**-0.4**
SMAR	**Somma**	**2.90**	**238**	*e*P	**Pn**	**01 49 46.5**	**+1.2**
SMAR				*e*S	**Sn**	**01 50 18.4**	**-0.6**
KRER	**Koryakskii**	**2.90**	**239**	*e*P	**Pn**	**01 49 46.7**	**+1.4**
KRER				*e*S	**Sn**	**01 50 18.3**	**-0.8**
UGLR	**Uglovaya**	**2.92**	**237**	*e*P	**Pn**	**01 49 46.8**	**+1.3**
UGLR				*e*S	**Sn**	**01 50 19.5**	**+0.1**
KRX	**Arik**	**2.92**	**240**	*e*P	**Pn**	**01 49 48.6**	**+0.6**
KRX				*e*S	**Sn**	**01 50 19.9**	**+0.5**
AVH	**Avacha**	**2.93**	**238**	*e*P	**Pn**	**01 49 47.0**	**+1.5**
AVH				*e*S	**Sn**	**01 50 19.2**	**-0.3**
KOK	**Koryaka**	**2.96**	**239**	*e*P	**Pn**	**01 49 47.4**	**+1.3**
KOK				*e*S	**Sn**	**01 50 19.8**	**-0.7**
DALK	**Dalny**	**3.06**	**235**	*e*P	**Pn**	**01 49 48.1**	**+0.8**
DALK				*e*S	**Sn**	**01 50 22.5**	**-0.2**
PET	**Petropavlovsk**	**3.12**	**235**	*e*P	**Pn**	**01 49 48.6**	**+0.6**
PET				*e*S	**Sn**	**01 50 23.3**	**-0.7**
GNL	**Ganaly**	**3.13**	**250**	*e*P	**Pn**	**01 49 50.0**	**+1.6**
KRMR	**Karymshinskiy**	**3.48**	**236**	*e*P	**Pn**	**01 49 54.2**	**+1.1**
KRMR				*e*S	**Sn**	**01 50 34.1**	**+1.1**
RUS	**Russkaya**	**3.57**	**229**	*e*P	**Pn**	**01 49 54.7**	**+0.4**
RUS				*e*S	**Sn**	**01 50 33.5**	**-1.7**
MTVR	**Mutnovka**	**3.68**	**231**	*e*P	**Pn**	**01 49 57.1**	**+1.1**
MTVR				*e*S	**Sn**	**01 50 38.0**	**-0.2**
GRL	**Gorelyy**	**3.69**	**233**	*e*P	Pn	01 49 57.7	+1.7
GRL				*e*S	**Sn**	**01 50 36.9**	**-1.4**
TIGL	**Tigil**	**3.73**	**323**	*e*P	**Pn**	**01 49 56.7**	**+0.2**
ASAK	**Asacha**	**3.88**	**232**	*e*P	**Pn**	**01 50 00.1**	**+1.5**
ASAK				*e*S	**Sn**	**01 50 43.9**	**+1.0**
APC	**Apacha**	**3.91**	**242**	*e*P	Pn	01 50 00.8	+1.9
APC				*e*S	**Sn**	**01 50 46.2**	**+2.7**
KDTR	**Khodutka, Kamc**	**4.21**	**225**	*e*P	**Pn**	**01 50 03.3**	**+0.2**
KDTR				*e*S	**Sn**	**01 50 48.6**	**-2.3**
PALN	**Palana**	**4.52**	**340**	*e*P	Pn	01 50 10.7	+3.5
ILAR	**Eielson Array**	**26.39**	**48**	P	**P**	**01 54 33.8**	**+1.3**
	0.4nm,0.8s,baz=259,slow=8.2,SNR=5.5 0.4nm,0.8s						
JHJ	**Hachijo jima 2**	**27.14**	**226**	LR	LR	02 07 32.4	
	comp=Z,133nm,19.1s,baz=337,slow=42						
H11N2	**WAKE ISLAND Hy**	**35.21**	**173**	T	T	02 33 11.3	
	baz=355,slow=76,SNR=30						
H11N3	**WAKE ISLAND Hy**	**35.23**	**173**	T	T	02 33 15.6	
	baz=355,slow=76,SNR=25						
H11N1	**WAKE ISLAND Hy**	**35.23**	**173**	T	T	02 33 18.5	
	baz=355,slow=76,SNR=27						
YKA	**Yellowknife Ar**	**40.73**	**45**	P	**P**	**01 56 38.2**	**+1.6**
	0.1nm,0.5s,baz=299,slow=9.1,SNR=2.4 0.1nm,0.5s						
SPITS	**Spitsbergen Ar**	**45.65**	**351**	P	**P**	**01 57 16.4**	**+0.3**
	14nm,1.1s,baz=54,slow=7.3,SNR=6.2 14nm,1.1s						
KURBB	**Kurchatov Arra**	**48.30**	**302**	P	**P**	**01 57 33.6**	**-3.4**
	0.2nm,0.3s,baz=57,slow=8.1,SNR=8.1 0.2nm,0.3s						
MKAR	**Makanchi Array**	**48.87**	**296**	P	**P**	**01 57 39.9**	**-1.7**
	0.4nm,0.8s,baz=49,slow=7.6,SNR=3.2 0.4nm,0.8s						
FINES	**FINESS Array B**	**59.13**	**337**	P	**P**	**01 58 56.0**	**+0.1**
	1.7nm,0.5s,baz=31,slow=8.7,SNR=19 1.7nm,0.5s						
NOA	**NORSAR Array B**	**62.27**	**345**	P	**P**	**01 59 17.1**	**-0.4**
	0.4nm,0.6s,baz=20,slow=6.6,SNR=1.3 0.4nm,0.6s						
HFS	**Hagfors**	**62.74**	**343**	P	**P**	**01 59 19.9**	**-0.6**
	6.1nm,1.0s,baz=57,slow=5.3,SNR=4.3 6.1nm,1.0s						
AKASG	**Malin Array Be**	**67.91**	**330**	P	**P**	**01 59 53.8**	**-0.3**
	0.7nm,0.3s,baz=29,slow=6.9,SNR=7.4 0.7nm,0.3s						
TXAR	**Lajitas Array**	**68.44**	**70**	P	**P**	**02 00 00.4**	**+2.5**
	0.3nm,0.5s,baz=309,slow=5.5,SNR=6.6 0.3nm,0.5s						
KBZ	**Khabaz**	**69.35**	**318**	P	**P**	**02 00 02.9**	**-0.2**
	0.9nm,0.5s,baz=333,slow=0.4,SNR=4.1 0.9nm,0.5s						
BRTR	**Keskin Array B**	**76.27**	**322**	P	**P**	**02 00 42.6**	**-1.8**
	0.4nm,0.7s,baz=49,slow=5.1,SNR=2.8 0.4nm,0.7s						

JMA ***29*** *02:00:12.0±0.2, 43°.1N±0°.6×145°.6E±0°.7, h48km±1km, MV2.6/34, OFF NEMURO PENINSULA*
SKHL ***29*** *02:00:13.4±0.7, 43°.10N×145°.60E, h36km±5km, mb3.8/2*
ISC 29 02:00:13.9±1.2, 43°.17N±0°.06×145°.48E±0°.05, h33km±4km, n13, σ1$30/21, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKHN	**Kushirohamanak**	**0.25**	**250**	*i* P	**Pn**	**02 00 21.4**	**+0.3**
JKHN				*e*S	**Sb**	**02 00 28.4**	**+2.5**
NMR	**Nemuro--Hokkai**	**0.27**	**41**	*e*P	**Pb**	**02 00 20.8**	**-0.4**
NMR				*e*S	**Sb**	**02 00 25.8**	**-0.4**
NEM2	**Nemuro 2**	**0.27**	**44**	*i* P	**Pb**	**02 00 20.7**	**-0.6**
NEM2				S	**Sb**	**02 00 26.8**	**+0.4**
AKK	**Akkeshi**	**0.49**	**252**	*e*P	**Pb**	**02 00 23.7**	**-0.7**
JAK	**Akkeshi**	**0.60**	**254**	*i* P	**Pb**	**02 00 25.1**	**-1.0**
JAK				S	**Sb**	**02 00 34.5**	**+0.1**
JNK	**Nakash**	**0.70**	**307**	*i* P	**Pn**	**02 00 27.1**	**-0.3**
JNK				S	**Sb**	**02 00 37.4**	**+0.3**
JNSB	**Nemuroshibetsu**	**0.70**	**330**	P	**Pn**	**02 00 27.2**	**-0.3**
JNSB				S	**Sb**	**02 00 38.5**	**+1.3**
JRA	**Rausu**	**0.81**	**341**	P	**Pn**	**02 00 28.7**	**-0.3**
JRA				*e*S	**Sn**	**02 00 40.8**	**+0.9**
YUK	**Yuzh-Kuril'sk**	**0.91**	**17**	*e*P	**Pn**	**02 00 29.1**	**-1.2**
YUK				AMB	AMB	02 00 30.8	
	60nm,0.3s						
YUK				*e*S	**Sn**	**02 00 41.2**	**-1.1**
YUK				A	A	02 00 43.0	
	120nm,0.3s						
YUK				A	A	02 00 43.0	
	220nm,0.3s						
SHO	**Shikotan**	**1.20**	**54**	*e*P	Pb	02 00 42.2	+6.1
SHO				AMB	AMB	02 00 43.9	
	20nm,0.2s						
SHO				*e*S	**Sb**	**02 00 55.0**	**+3.6**
SHO				A	A	02 00 58.1	
	90nm,0.2s						
SHO				A	A	02 00 58.1	
	100nm,0.2s						
JOB	**Onbets**	**1.24**	**258**	*e*P	**Pn**	**02 00 33.9**	**-1.0**
JAR	**Ashorobuto**	**1.26**	**276**	P	**Pn**	**02 00 34.9**	**-0.2**
JTKR	**Abashiri--Toko**	**1.40**	**306**	P	**Pn**	**02 00 37.7**	**+0.7**

CATAC ***29*** *02:10:35.4±0.3, 13°.N±2°×9°.0W±°, h9km±1km, M4.0/33, MLv4.0/33, Error ellipse: s-maj=3.7km s-min=2.1km az=21.4, confirmed*
GCG ***29*** *02:10:36.8±1.2, 13°.14N×90°.16W, h13km±17km, MD4.5, ML3.8, Presumed earthquake*
SNET ***29*** *02:10:37.4±2.0, 13°.10N×90°.04W, h15km, ML3.7, Presumed earthquake*
ISC 29 02:10:36.0±1.5, 13°.05N±0'.05×90°.07W±0'.03, h11km±9km, n56, σ0$77/92, 2C-16D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	**Alcaldia de Sa**	**0.79**	**4**	P	**Pg**	**02 10 51.1**	**-0.2**
FAME				⇓S	**Sb**	**02 11 02.2**	**-0.3**
LALI	**Alcalda de L**	**0.85**	**59**	P	**Pg**	**02 10 52.9**	**+0.5**
LALI	**Alcalda de L**	**0.85**	**59**	*e*P	**Pg**	**02 10 52.8**	**+0.4**
LALI				*e*S	**Sg**	**02 11 03.1**	**-0.3**
JAYA	**Jayaque - finc**	**0.85**	**45**	P	**Pg**	**02 10 52.6**	**+0.1**
JAYA				⇓S	**Sb**	**02 11 04.6**	**+0.3**
JAYA	**Jayaque - finc**	**0.85**	**45**	*e*P	**Pg**	**02 10 52.6**	**+0.1**
JAYA				*e*S	**Sb**	**02 11 04.0**	**-0.3**
JAYA	**Jayaque - finc**	**0.85**	**45**	*e*P	**Pg**	**02 10 52.8**	**+0.3**
CEVE	**Cerro Verde**	**0.88**	**29**	⇓P	**Pg**	**02 10 53.2**	**0.0**
CEVE	**Cerro Verde**	**0.88**	**29**	*e*P	**Pg**	**02 10 53.2**	**0.0**
CEVE				*e*S	**Sn**	**02 11 06.8**	**-0.8**
LOAL	**Lomas de Alarc**	**0.98**	**16**	⇓P	**Pg**	**02 10 54.9**	**0.0**
LOAL				S	**Sb**	**02 11 07.7**	**-0.4**
PMON	**Piamonte**	**0.98**	**48**	⇓P	**Pg**	**02 10 54.8**	**-0.3**
PMON				S	**Sb**	**02 11 08.5**	**+0.4**
CEDA	**San Andres**	**0.99**	**41**	⇓P	**Pb**	**02 10 54.9**	**-0.3**
CEDA	**San Andres**	**0.99**	**41**	*e*P	**Pb**	**02 10 54.9**	**-0.3**
CEDA				*e*S	**Sb**	**02 11 08.3**	**-0.1**
SLOZ	**Alcaldia de Sa**	**1.01**	**16**	⇓P	**Pb**	**02 10 54.9**	**-0.6**
PANCS	**Alcalda de**	**1.03**	**57**	P	**Pb**	**02 10 55.2**	**-0.6**
PANCS				S	**Sb**	**02 11 09.5**	**+0.1**
UEES	**Universidad Ev**	**1.04**	**51**	⇓P	**Pb**	**02 10 55.5**	**-0.6**
UEES				S	**Sg**	**02 11 10.2**	**+0.5**
SEMO	**Seminario San**	**1.05**	**52**	P	**Pb**	**02 10 55.9**	**-0.2**
SEMO				S	**Sn**	**02 11 11.3**	**0.0**
UNIC	**Universidad Ca**	**1.05**	**29**	⇓P	**Pb**	**02 10 55.5**	**-0.8**
UNIC				S	**Sn**	**02 11 10.4**	**-1.1**
UTEC	**Universidad Te**	**1.06**	**52**	P	**Pb**	**02 10 55.8**	**-0.7**
UTEC				S	**Sg**	**02 11 10.5**	**+0.1**
IGN	**Direccin Gen**	**1.09**	**53**	P	**Pb**	**02 10 56.4**	**-0.6**
IGN				S	**Sg**	**02 11 11.6**	**+0.2**
UDBS	**Universidad Do**	**1.11**	**53**	P	**Pb**	**02 10 56.5**	**-0.7**
UDBS				S	**Sb**	**02 11 11.5**	**-0.1**
PAVA	**Las Pavas**	**1.28**	**59**	P	**Pn**	**02 10 59.6**	**-0.3**
PAVA				S	**Sb**	**02 11 16.8**	**+0.1**
COEG	**Centro de Oper**	**1.29**	**64**	⇓P	**Pn**	**02 10 59.1**	**-0.8**
COEG				S	**Sb**	**02 11 17.2**	**+0.4**
FG16	**Alotenango, Sa**	**1.29**	**341**	*e*P	**Pg**	**02 11 03.4**	**+2.5**
FG16				IAML		02 11 26.6	
	comp=E,4μm,0.2s						
FG8	**Yepocapa, Chim**	**1.29**	**338**	*e*P	**Pg**	**02 11 02.9**	**+2.0**
TECO	**Alcaldia de Te**	**1.34**	**69**	⇓P	**Pn**	**02 10 59.9**	**-0.8**
TECO				S	**Sb**	**02 11 17.4**	**-1.0**
SCLA	**Alcaldia de Sa**	**1.45**	**63**	P	**Pn**	**02 11 02.2**	**-0.1**
SCLA				S	**Sb**	**02 11 22.0**	**+0.4**
MTO3	**Montecristo**	**1.50**	**27**	⇓P	**Pn**	**02 11 02.7**	**-0.5**
MTO3				S	**Sb**	**02 11 23.1**	**-0.2**
MTO3	**Montecristo**	**1.50**	**27**	*i* P	**Pn**	**02 11 02.6**	**-0.5**
LLGN	**La Laguna**	**1.55**	**45**	P	**Pn**	**02 11 03.4**	**-0.2**
LLGN				S	**Sb**	**02 11 24.4**	**-0.2**
P5NO	**Presa 5 de nov**	**1.58**	**54**	⇓P	**Pn**	**02 11 03.6**	**-0.3**
P5NO				S	**Sb**	**02 11 24.8**	**-0.3**
GCG4	**OSOP**	**1.59**	**344**	*e*P	**Pn**	**02 11 03.7**	**-0.5**
ESQI	**Esquipulas**	**1.66**	**25**	⇓P	**Pn**	**02 11 05.0**	**-0.1**
ESQI				S	**Sb**	**02 11 27.3**	**-0.2**
ESQI	**Esquipulas**	**1.66**	**25**	*e*P	**Pn**	**02 11 03.9**	**-1.3**
ZAFR2	**Estanzuela, Za**	**1.67**	**25**	*e*P	**Pg**	**02 11 09.1**	**+1.0**
ZAFR2				IAML		02 11 53.2	
	comp=E,625nm,0.9s						
PACA	**Pacayal**	**1.75**	**76**	P	**Pn**	**02 11 06.6**	**+0.2**
PACA				S	**Sn**	**02 11 29.7**	**+1.1**
RANC	**El Ranchito**	**1.77**	**77**	P	**Pn**	**02 11 07.3**	**+0.5**
RANC				S	**Sb**	**02 11 30.7**	**-0.2**
STG5	**El Palmar, Qui**	**1.83**	**317**	*e*P	**Pg**	**02 11 11.3**	**+0.1**
STG8	**El Palmar, Qui**	**1.87**	**318**	*e*P	**Pg**	**02 11 11.2**	**-0.7**
STG8				IAML		02 11 43.7	
	comp=N,313nm,0.3s						
INTP	**Intipuca**	**1.97**	**86**	*e*P	**Pn**	**02 11 08.6**	**-0.6**
APG	**El Apazote**	**1.98**	**349**	*e*P	**Pn**	**02 11 09.5**	**-0.2**
SARH	**Santa Rosa de**	**2.13**	**36**	⇓P	**Pn**	**02 11 11.8**	**+0.2**
SARH				S	**Sn**	**02 11 39.0**	**+0.9**
SARH	**Santa Rosa de**	**2.13**	**36**	*e*P	**Pn**	**02 11 11.8**	**+0.2**
LCND	**La Caada**	**2.13**	**83**	⇑P	**Pn**	**02 11 11.6**	**0.0**
RTAL	**Retalhuleu**	**2.16**	**313**	P	**Pn**	**02 11 10.7**	**-1.2**
RTAL				S	**Sn**	**02 11 39.5**	**+0.9**
CNCH	**Conchagua**	**2.19**	**84**	P	**Pn**	**02 11 11.8**	**-0.6**
CNCH				S	**Sn**	**02 11 41.1**	**+1.6**
CNCH	**Conchagua**	**2.19**	**84**	*e*P	**Pn**	**02 11 11.1**	**-1.3**
MARCA	**Marcala la Paz**	**2.26**	**61**	⇓P	**Pn**	**02 11 14.0**	**+0.5**
MARCA				S	**Sb**	**02 11 43.8**	**-1.2**
CSGN	**Cosiguina Volc**	**2.45**	**91**	P	**Pn**	**02 11 15.5**	**-0.4**
CSGN				S	**Sn**	**02 11 46.6**	**+0.7**
HUEH	**Huehuetenango**	**2.65**	**328**	P	**Pn**	**02 11 19.4**	**+0.5**
HUEH				S	**Sn**	**02 11 51.4**	**+0.3**
TGUH	**Tegucigalpa,Un**	**2.90**	**69**	P	**Pn**	**02 11 21.9**	**-0.3**
TGUH				S	**Sn**	**02 11 57.8**	**+0.7**
CRIN	**San Cristobal**	**2.96**	**96**	P	**Pn**	**02 11 24.4**	**+1.4**
CRIN				S	**Sn**	**02 11 59.8**	**+1.2**
YUSH	**Yuscaran**	**3.26**	**74**	P	**Pn**	**02 11 26.2**	**-1.0**
YUSH				S	**Sn**	**02 12 08.3**	**+2.2**
CNGN	**Cerro Negro**	**3.33**	**99**	P	**Pn**	**02 11 26.9**	**-1.2**
CNGN				S	**Sn**	**02 12 06.7**	**-1.0**
COPN	**Copaltepe**	**3.50**	**104**	P	**Pn**	**02 11 29.6**	**-0.8**
MOM3	**MOM3**	**3.50**	**98**	P	**Pn**	**02 11 29.6**	**-0.8**
LIMN	**Finca el Limon**	**3.61**	**89**	⇑P	**Pn**	**02 11 32.0**	**+0.1**
LIMN				S	**Sn**	**02 12 16.1**	**+1.5**

RSNC ***29*** *02:13:07.5±0.0, 7°.N±1°×7°.3W±°, h142km±2km, M2.5, ML2.2 FUNV* ***29*** *02:13:08.1, 6°.90N×73°.20W, h132km, MW2.9, Presumed earthquake*
ISC 29 02:13:06.0±1.5, 6°.86N±0°.03×73°.13W±0°.05, h147km±9km, n23, σ1$41/45, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**190**	P	**Pn**	**02 13 26.8**	**+0.3**
BARC				P	**Pn**	**02 13 26.8**	**+0.3**
BARC				S	**Sn**	**02 13 41.5**	**-0.5**
BARC				S		02 13 41.6	
PAMC	**Pamplona, Colo**	**0.64**	**42**	P	**Pn**	**02 13 29.5**	**+1.0**
PAMC				S	**Sn**	**02 13 46.4**	**+0.9**
RUSC	**La Rusia**	**0.96**	**177**	P	**Pn**	**02 13 30.6**	**-0.2**
RUSC				S	**Sn**	**02 13 48.7**	**-1.0**
RUSC	**La Rusia**	**0.96**	**177**	*e*P	**Pn**	**02 13 31.1**	**+0.3**
RUSC				*e*S	**Sn**	**02 13 48.1**	**-1.5**
PTBC	**PUERTO BERRIO,**	**1.35**	**257**	P	**Pn**	**02 13 33.8**	**-0.1**
PTBC				S	**Sn**	**02 13 55.0**	**-0.1**
OCAC	**Ocana**	**1.38**	**352**	P	**Pn**	**02 13 35.2**	**+0.8**
OCAC				S	**Sn**	**02 13 56.7**	**+0.6**
SPBC	**San Pablo de B**	**1.52**	**218**	P	**Pn**	**02 13 35.8**	**+0.1**
SPBC				S	**Sn**	**02 13 58.1**	**-0.3**
NORC	**Norcasia**	**2.15**	**233**	P	**Pn**	**02 13 43.3**	**+0.4**
NORC				S	**Sn**	**02 14 10.7**	**-0.5**
CHIC	**Chingaza**	**2.29**	**195**	P	**Pn**	**02 13 45.1**	**+0.2**
CHIC				S	**Sn**	**02 14 13.8**	**-1.0**
HELC	**Santa Helena**	**2.47**	**255**	P	**Pn**	**02 13 48.8**	**+1.8**
HELC				S	**Sn**	**02 14 18.5**	**0.0**
HELC	**Santa Helena**	**2.47**	**255**	*e*P	**Pn**	**02 13 47.1**	**+0.1**
HELC				*e*S	**Sn**	**02 14 14.7**	**-3.8**
UREC	**San Jos de Ur**	**2.54**	**291**	P	**Pn**	**02 13 47.4**	**-0.1**
UREC				S	**Sn**	**02 14 18.3**	**-1.2**
GUY2C	**Guyana, Caldas**	**2.75**	**234**	P	**Pn**	**02 13 51.5**	**+0.9**
GUY2C				S	**Sn**	**02 14 27.6**	**+2.7**
VILC	**Villavicencio,**	**2.78**	**192**	P	**Pn**	**02 13 50.7**	**0.0**
VILC				S	**Sn**	**02 14 26.4**	**+1.2**
CBOC	**Ciudad Bolivar**	**3.03**	**251**	P	**Pn**	**02 13 55.1**	**+1.3**
CBOC				S	**Sn**	**02 14 30.6**	**-0.1**
ARGC	**Ariguani, Magd**	**3.18**	**340**	P	**Pn**	**02 13 57.6**	**+2.0**
ARGC				S	**Sn**	**02 14 36.7**	**+2.7**
SDV	**Santo Domingo**	**3.19**	**51**	*e*P	**Pn**	**02 13 56.6**	**+0.7**
SDV				*e*S	**Sn**	**02 14 31.8**	**-2.8**
PRAC	**Prado**	**3.58**	**209**	P	**Pn**	**02 14 01.2**	**+0.4**
PRAC				S	**Sn**	**02 14 42.6**	**-0.7**
SJCC	**San Jacinto, C**	**3.63**	**326**	P	**Pn**	**02 14 01.2**	**-0.3**
SJCC				S	**Sn**	**02 14 43.1**	**-1.5**
SJCC	**San Jacinto, C**	**3.63**	**326**	*e*P	**Pn**	**02 14 01.7**	**+0.2**
SJCC				*e*S	**Sn**	**02 14 40.2**	**-4.4**
PLMC	**San Jos del P**	**3

VRAC			eSG	Sg	02 29 13.6	-0.7
NIE	**Niedzica**	**1.35 109**	ePg	Pg	02 28 56.0	-3.2
NIE			eSg	Sg	02 29 14.9	-1.7
DPC	**Dobruska-Polom**	**1.39 291**	ePG	Pg	02 28 58.0	-2.0
DPC			eSG	Sg	02 29 17.7	-0.4
	comp=Z,8.0nm,0.6s					
KRUC	**Moravsky**	**1.51 238**	ePg	Pn	02 28 59.6	-2.1
	baz=59					
KRUC			eSg	Sg	02 29 20.7	-1.2
	2.6nm,0.3s,baz=59					
KRUC	**Moravsky**	**1.51 238**	ePG	Pn	02 28 59.7	-2.0
KRUC			eSG	Sg	02 29 20.8	-1.1
UPC	**Upice**	**1.63 294**	eSG	Sg	02 29 25.9	+0.1
MODS	**Modra-Piesok**	**1.66 206**	ePG	Pn	02 29 02.3	-1.4
MODS			eSG	Sn	02 29 24.9	-0.8
STHS	**Stebnicka Huta**	**1.94 102**	ePG	Pn	02 29 05.8	-1.8
STHS			eSG	Sn	02 29 31.8	-0.8
STHS			eLG	Lg	02 29 36.4	
KECS	**Kecovo**	**1.97 134**	eSG	Sn	02 29 32.1	-1.4
PVCC	**Panska Ves**	**2.52 287**	eSG	Sg	02 29 53.9	-0.3
KHC	**Kasperske Hory**	**3.20 258**	eSG	Sg	02 30 14.2	-1.9

NOU ***29*** *02:32:42.1,29°.33S×177°.01W,h457km,mb4.1/9, Kermadec Islands, New Zealand*
IDC ***29*** *02:32:52.4±0.8,29°.72S×179°.47W,h312km±12km,mb3.4/4, mbtmp4.2/5,Error ellipse: s-maj=26.3km s-min=20.1km az=55.0*
ISC 29 02:32:53.0±0.9,**29°.76S**±0°.09×**179°.6W**±0°.1,**h300**km,**n45,** σ1§**86**/54,**mb3.7**/4,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**1.50**	**70**	P		**Pn**	**02 33 38.9**	**+2.7**
GLKZ	**Green Lake**	**1.50**	**71**	P		**Pn**	**02 33 38.6**	**+2.5**
GLKZ				S		**S**	**02 34 13.8**	**+3.3**
RAO	**Raoul Island**	**1.51**	**71**	P		**Pn**	**02 33 37.6**	**+1.5**
	257nm,0.2s,baz=233,slow=20,SNR=7.7							
RAO				S		**S**	**02 34 11.1**	**+0.5**
	191nm,0.2s,baz=323,slow=20,SNR=1.5							
RAO	**Raoul Island**	**1.51**	**71**	P		**Pn**	**02 33 38.8**	**+2.6**
MXZ	**Matakaoa Point**	**7.98**	**192**	P		Pn	02 34 50.8	+4.6
MXZ	**Matakaoa Point**	**7.98**	**192**	P		**Pn**	**02 34 49.8**	**+3.7**
MXZ				S		**S**	**02 36 14.6**	**-3.4**
WCZ	**Waipu Caves**	**8.02**	**218**	P		Pn	02 34 54.4	+7.7
WMGZ	**Waiomatatini S**	**8.21**	**191**	P		**Pn**	**02 34 52.5**	**+3.6**
WMGZ				S		**S**	**02 36 25.3**	**+2.1**
HAZ	**Te Kaha**	**8.28**	**195**	P		**Pn**	**02 34 51.0**	**+1.3**
HAZ				S		**S**	**02 36 26.7**	**+2.1**
PKGZ	**Pakihiroa**	**8.32**	**193**	P		Pn	02 34 55.1	+4.7
PKGZ				S		**S**	**02 36 25.9**	**+0.3**
MBAZ	**Motutapu North**	**8.39**	**212**	P			02 34 59.1	
PUZ	**Puketiti**	**8.48**	**192**	P		**Pn**	**02 34 55.4**	**+3.0**
PUZ				S		**S**	**02 36 28.5**	**-0.9**
RUGZ	**Raukumara Rang**	**8.50**	**195**	P		**Pn**	**02 34 54.0**	**+1.3**
MKAZ	**Moumakai**	**8.55**	**210**	P		**P**	**02 35 01.3**	**+2.9**
TWGZ	**Tauwhareparae**	**8.64**	**193**	P		**P**	**02 34 58.2**	**-1.2**
TWGZ				S		**S**	**02 36 33.7**	**+0.8**
OPRZ	**Ohinepanea**	**8.69**	**201**	P		**P**	**02 35 00.5**	**+0.5**
AWAZ	**Awhitu Peninsu**	**8.75**	**212**	P		**P**	**02 35 03.1**	**+2.4**
MWZ	**Matawai**	**8.89**	**195**	P		**Pn**	**02 34 58.1**	**+0.7**
MWZ				S		**S**	**02 36 39.0**	**+0.5**
CNGZ	**Carnagh Statio**	**8.89**	**191**	P		**Pn**	**02 34 58.2**	**+0.9**
URZ	**Urewera**	**8.92**	**197**	P		**Pn**	**02 34 58.8**	**+1.2**
	20nm,0.3s,baz=11,slow=10,SNR=84							
URZ				S		**S**	**02 36 37.9**	**-1.2**
	6.5nm,0.3s,baz=13,slow=18,SNR=11							
URZ	**Urewera**	**8.92**	**197**	P		**Pn**	**02 35 00.0**	**+2.4**
URZ	**Urewera**	**8.92**	**197**	P		**P**	**02 35 00.3**	**-2.1**
URZ				S		**S**	**02 36 39.9**	**+0.8**
TKGZ	**Te Karaka**	**8.92**	**193**	P		**Pn**	**02 34 57.4**	**-0.3**
TKGZ				S		**S**	**02 36 39.5**	**+0.4**
TOZ	**Tahuroa Road**	**8.95**	**206**	P		**P**	**02 35 04.9**	**+2.0**
RIGZ	**Rimuhau**	**9.19**	**193**	P		**Pn**	**02 35 02.6**	**+1.5**
MUGZ	**Murupara**	**9.21**	**198**	P		**Pn**	**02 35 02.3**	**+1.0**
MUGZ				S		**S**	**02 36 47.7**	**+1.9**
KNZ	**Kokohu**	**9.52**	**193**	P		**P**	**02 35 07.5**	**-1.7**
HIZ	**Hauiti**	**9.88**	**206**	P		**P**	**02 35 14.7**	**+1.5**
HIZ	**Hauiti**	**9.88**	**206**	P		**P**	**02 35 15.7**	**+2.5**
BKZ	**Black Stump Fm**	**9.93**	**198**	P		**Pn**	**02 35 10.6**	**+0.4**
BKZ	**Black Stump Fm**	**9.93**	**198**	P		**Pn**	**02 35 11.2**	**+1.1**
NGZ	**Ngauruhoe**	**10.21**	**202**	P		**P**	**02 35 16.6**	**-0.4**
VRZ	**Vera Road**	**10.45**	**205**	P		**P**	**02 35 20.3**	**+0.8**
PXZ	**Pawanui**	**10.66**	**195**	P		**Pn**	**02 35 19.3**	**+0.3**
TSZ	**Takapari Road**	**10.91**	**199**	P		**Pn**	**02 35 21.8**	**-0.4**
BFZ	**Birch Farm**	**11.42**	**196**	P		**Pn**	**02 35 26.9**	**-1.4**
BFZ	**Birch Farm**	**11.42**	**196**	P		**Pn**	**02 35 27.6**	**-0.7**
SNZO	**South Karori**	**12.43**	**201**	P		**Pn**	**02 35 39.9**	**-0.6**
QRZ	**Quartz Range**	**12.79**	**208**	P		**Pn**	**02 35 45.2**	**+0.3**
KHZ	**Kahutara**	**13.80**	**202**	P		**P**	**02 35 54.7**	**-1.9**
STKA	**Stephens Creek**	**33.32**	**256**	P		**P**	**02 39 03.7**	**+0.4**
	1.5nm,0.6s,baz=100,slow=19,SNR=3.4							
	1.5nm,0.6s							
ASAR	**Alice Springs**	**41.80**	**267**	P		**P**	**02 40 12.4**	**-1.7**
	1.1nm,0.7s,baz=109,slow=8.4,SNR=13							
	1.1nm,0.7s							
WRA	**Warramunga Arr**	**42.73**	**272**	P		**P**	**02 40 20.1**	**-1.5**
	2.4nm,0.5s,baz=112,slow=6.9,SNR=43							
	2.4nm,0.5s							
QSPA	**South Pole Qui**	**60.34**	**180**	P		**P**	**02 42 29.8**	**-0.8**
	1.8nm,0.7s,baz=24,slow=0.3,SNR=10							
	1.8nm,0.7s							
TORD	**Torodi Ar. Bea**	**163.43**	**184**	PKPab		**PKPab**	**02 53 09.5**	**-3.6**
	0.4nm,0.6s,baz=180,slow=4.7,SNR=4.8							

JMA ***29*** *02:40:24.7±0.1,25°.N±1°×122°.7E±0°.4,h110km±1km, MV3.7/19,NW OFF ISHIGAKIJIMA IS*
TAP ***29*** *02:40:24.8,24°.68N×122°.77E,h108km,ML4.5,C*
IDC ***29*** *02:40:25.5±4.2,24°.80N×122°.90E,h126km±45km, mb3.4/10,mbtmp3.9/12,MS2.9/1,Error ellipse: s-maj=35.5km s-min=12.4km az=65.0*
ISC 29 02:40:24.5±0.7,**24°.64N**±0°.03×**122°.76E**±0°.02,**h114**km±4km, **n156,** σ0§**98**/271,**mb3.6**/9,**6C-15D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.25**	**139**	P		**Pn**	**02 40 40.4**	**-0.2**
JYNG				S		**Sn**	**02 40 52.0**	**-0.5**
YOJ	**Yonaguni jima**	**0.29**	**128**	P		**Pn**	**02 40 40.8**	**+0.1**
YOJ	**Yonaguni jima**	**0.29**	**128**	S		**Sn**	**02 40 52.6**	**-0.2**
YOJ	**Yonaguni jima**	**0.29**	**128**	↑*i*P		**Pn**	**02 40 40.5**	**-0.2**
YOJ				S		**Sn**	**02 40 52.1**	**-0.8**
YOJ	**Yonaguni jima**	**0.29**	**128**	P		**Pn**	**02 40 40.5**	**-0.2**
YOJ				S		**Sn**	**02 40 52.3**	**-0.6**
EOS2	**EOS2**	**0.53**	**245**	P		**Pn**	**02 40 42.2**	**+0.4**
EOS2				S		**Sn**	**02 40 55.4**	**+0.5**
EOS3	**EOS3**	**0.54**	**229**	P		**Pn**	**02 40 42.3**	**+0.5**
EOS3				S		**Sn**	**02 40 55.6**	**+0.8**
EOS4	**EOS4**	**0.66**	**218**	P		**Pn**	**02 40 42.7**	**+0.3**
EOS4				S		**Sn**	**02 40 56.3**	**+0.2**
EGS		**0.78**	**285**	P		**Pn**	**02 40 44.1**	**+0.2**
TWB1	**Santiao Chiao**	**0.79**	**298**	↓P		**Pn**	**02 40 44.1**	**+0.1**
TWB1				S		**Sn**	**02 40 57.7**	**-1.0**
TWC	**Suao**	**0.83**	**268**	↓*i*P		**Pn**	**02 40 44.1**	**-0.2**
TWC				S		**Sn**	**02 40 57.7**	**-1.7**
ESAO	**Su ao**	**0.84**	**266**	P		**Pn**	**02 40 44.5**	**0.0**
ESAO				S		**Sn**	**02 40 58.1**	**-1.3**
TIPB	**Shuangxi**	**0.91**	**291**	↓P		**Pn**	**02 40 45.4**	**+0.2**
TIPB				S		**Sn**	**02 40 59.8**	**-1.0**
EWUT	**Wuta**	**0.92**	**258**	*e*P		**Pn**	**02 40 45.3**	**+0.2**
EWUT				eS		**Sn**	**02 41 00.0**	**-0.7**
SXI1	**Grass Mountain**	**0.92**	**299**	↓*i*P		**Pn**	**02 40 45.6**	**+0.3**
SXI1				S		**Sn**	**02 41 00.8**	**-0.3**
ILA	**Ilan**	**0.93**	**278**	*e*P		**Pn**	**02 40 45.6**	**+0.4**
ILA				S		**Sn**	**02 40 59.9**	**-1.1**
IRIF	**Iriomote-Funau**	**0.93**	**109**	P		**Pn**	**02 40 45.5**	**+0.2**
IRIF				S		**Sn**	**02 41 00.6**	**-0.4**
NDS	**Dongshan**	**0.95**	**270**	*e*P		**Pn**	**02 40 45.9**	**+0.4**
NDS				eS		**Sn**	**02 41 00.3**	**-1.1**
EAHA	**Aohua**	**0.98**	**252**	*e*P		**Pn**	**02 40 45.9**	**+0.1**
EAHA				eS		**Sn**	**02 41 01.7**	**-0.2**
NWF	**Wu-fen Shan**	**0.99**	**296**	↓P		**Pn**	**02 40 46.4**	**+0.4**
WFSB	**Wu-fen Shan**	**0.99**	**296**	↓P		**Pn**	**02 40 46.4**	**+0.5**
WFSB				eS		**Sn**	**02 41 01.3**	**-0.8**
TWE	**Neicheng**	**1.00**	**275**	↓P		**Pn**	**02 40 46.2**	**+0.3**
TWE				eS		**Sn**	**02 41 01.2**	**-1.0**
TNOU	**National Taiwa**	**1.03**	**300**	*e*P		**Pn**	**02 40 46.7**	**+0.4**
TNOU				eS		**Sn**	**02 41 02.5**	**-0.3**
FUSB	**Fushanzhiwuyua**	**1.07**	**277**	↓*i*P		**Pn**	**02 40 47.2**	**+0.4**
FUSB				eS		**Sn**	**02 41 02.7**	**-1.1**
ENTT	**Nioudou**	**1.09**	**270**	*e*P		**Pn**	**02 40 47.5**	**+0.5**
ENTT				eS		**Sn**	**02 41 03.5**	**-0.4**
HATJ	**Hateruma jima**	**1.12**	**121**	P		**Pn**	**02 40 47.8**	**+0.7**
HATJ				eS		**Sn**	**02 41 04.6**	**+0.3**
TWA	**Mucha**	**1.12**	**288**	↓P		**Pn**	**02 40 47.5**	**+0.3**
TWA				eS		**Sn**	**02 41 03.5**	**-1.0**
LATG	**Datong**	**1.13**	**265**	↓P		**Pn**	**02 40 47.9**	**+0.4**
LATG				S		**Sn**	**02 41 04.3**	**-0.6**
NDT	**Datong Townshi**	**1.14**	**268**	P		**Pn**	**02 40 48.2**	**+0.8**
NDT				S		**Sn**	**02 41 05.1**	**+0.3**
ETL	**Fush Village**	**1.14**	**245**	P		**Pn**	**02 40 47.3**	**-0.2**
ETL				S		**Sn**	**02 41 04.2**	**-0.8**
NWLT	**Wulai**	**1.15**	**277**	P		**Pn**	**02 40 47.9**	**+0.2**
NWLT				S		**Sn**	**02 41 04.1**	**-1.1**
NACB	**Ninganchiao**	**1.16**	**247**	P		**Pn**	**02 40 47.6**	**-0.1**
NACB	**Ninganchiao**	**1.16**	**247**	*e*P		**Pn**	**02 40 47.1**	**-0.6**
NACB				eS		**Sn**	**02 41 03.8**	**-1.5**
PCYT	**Pengchaiyu**	**1.17**	**328**	*e*P		**Pn**	**02 40 48.5**	**+0.8**
TWD	**Chiawan**	**1.20**	**242**	*e*P		**Pn**	**02 40 47.9**	**-0.2**
TWD				eS		**Sn**	**02 41 04.9**	**-1.1**
TATO	**Taipei**	**1.20**	**286**	P		**Pn**	**02 40 48.7**	**+0.6**
TATO	**Taipei**	**1.20**	**286**	S		**Sn**	**02 41 05.9**	**-0.2**
JKRS	**Kuro-shima**	**1.21**	**109**	P		**Pn**	**02 40 48.5**	**+0.4**
JKRS				S		**Sn**	**02 41 06.2**	**+0.1**
ZUZH	**Zhuzihu**	**1.22**	**295**	↓P		**Pn**	**02 40 48.7**	**+0.3**
ZUZH				eS		**Sn**	**02 41 05.5**	**-1.0**
TWY	**Chenhua**	**1.23**	**301**	*e*P		**Pn**	**02 40 49.0**	**+0.6**
TWY				eS		**Sn**	**02 41 06.2**	**-0.4**
ETLH	**Xiulin Townshi**	**1.25**	**250**	*e*P		**Pn**	**02 40 48.7**	**0.0**
ETLH				eS		**Sn**	**02 41 06.1**	**-1.0**
HWA	**Hwalien**	**1.25**	**238**	*e*P		**Pn**	**02 40 48.8**	**+0.2**
HWA				eS		**Sn**	**02 41 06.6**	**-0.1**
YHNB	**Yeheng**	**1.26**	**272**	P		**Pn**	**02 40 49.7**	**+0.8**
YHNB	**Yeheng**	**1.26**	**272**	S		**Sn**	**02 41 06.7**	**-0.7**
YHNB	**Yeheng**	**1.26**	**272**	↓P		**Pn**	**02 40 49.5**	**+0.6**
YHNB				eS		**Sn**	**02 41 06.7**	**-0.7**
NNSB	**Datong**	**1.27**	**261**	*e*P		**Pn**	**02 40 49.3**	**+0.2**
NNSB				eS		**Sn**	**02 41 06.8**	**-0.8**
NSK	**Sanguang**	**1.28**	**272**	↓P		**Pn**	**02 40 49.6**	**+0.6**
NSK				eS		**Sn**	**02 41 07.1**	**-0.5**
NNS	**Nan Shan**	**1.28**	**261**	*e*P		**Pn**	**02 40 49.4**	**+0.3**
NNS				eS		**Sn**	**02 41 07.3**	**-0.5**
JIJ	**Ishigaki jima**	**1.29**	**102**	P		**Pn**	**02 40 49.3**	**+0.2**
JIJ				S		**Sn**	**02 41 06.7**	**-1.0**
NTST	**Danshui**	**1.30**	**294**	*e*P		**Pn**	**02 40 50.0**	**+0.8**
NTST				eS		**Sn**	**02 41 07.7**	**-0.2**
TWS1	**Kuangyinshan**	**1.30**	**291**	*e*P		**Pn**	**02 40 49.8**	**+0.5**
TWS1				eS		**Sn**	**02 41 07.5**	**-0.5**
TEYL	**Yanliau Villag**	**1.31**	**234**	*e*P		**Pn**	**02 40 49.2**	**-0.1**
TEYL				eS		**Sn**	**02 41 07.5**	**-0.7**
ETM	**Tongmen**	**1.34**	**240**	*e*P		**Pn**	**02 40 49.5**	**-0.2**
ETM				eS		**Sn**	**02 41 07.8**	**-1.0**
SHUL	**Shoufeng**	**1.39**	**232**	*e*P		**Pn**	**02 40 50.5**	**+0.3**
SHUL				eS		**Sn**	**02 41 09.2**	**-0.5**
JISG	**Ishigakijimahi**	**1.41**	**92**	P		**Pn**	**02 40 50.7**	**+0.3**
JISG				eS		**Sn**	**02 41 09.3**	**-0.9**
FUSS	**Fushou**	**1.44**	**254**	*e*P		**Pn**	**02 40 51.6**	**+0.5**
FUSS				eS		**Sn**	**02 41 10.5**	**-0.7**
KSHI	**Guanxi Townshi**	**1.45**	**276**	*e*P		**Pn**	**02 40 51.8**	**+0.9**
KSHI				eS		**Sn**	**02 41 11.6**	**+0.6**
TEGC	**Jichi Village**	**1.45**	**230**	*e*P		**Pn**	**02 40 51.2**	**+0.3**
TEGC				eS		**Sn**	**02 41 10.9**	**-0.2**
WHF	**Hehuan Shan**	**1.45**	**250**	*e*P		**Pn**	**02 40 51.8**	**+0.4**
WHF				eS		**Sn**	**02 41 11.1**	**-0.7**
ESL	**Shilin**	**1.47**	**236**	↑P		**Pn**	**02 40 51.0**	**-0.2**
ESL				eS		**Sn**	**02 41 10.2**	**-1.2**
NCUH	**Zhongli**	**1.47**	**283**	*e*P		**Pn**	**02 40 52.0**	**+0.8**
NCUH				eS		**Sn**	**02 41 11.7**	**+0.2**
NFF	**Wufeng Townshi**	**1.50**	**270**	*e*P		**Pn**	**02 40 52.1**	**+0.6**
NFF				eS		**Sn**	**02 41 11.8**	**-0.3**
TWT	**Tachien**	**1.50**	**255**	↓P		**Pn**	**02 40 52.7**	**+1.0**
TWT				eS		**Sn**	**02 41 12.6**	**+0.2**
TDCB	**Techi**	**1.51**	**256**	↓P		**Pn**	**02 40 52.7**	**+0.9**
TDCB				eS		**Sn**	**02 41 12.1**	**-0.5**
WARBT	**Fenglin Townsh**	**1.56**	**234**	↑P		**Pn**	**02 40 51.9**	**-0.3**
WARBT				eS		**Sn**	**02 41 11.8**	**-1.5**
LIOB	**Emei**	**1.59**	**270**	*e*P		**Pn**	**02 40 53.3**	**+0.7**
LIOB				eS		**Sn**	**02 41 13.4**	**-0.6**
OWD	**Renai**	**1.60**	**245**	*e*P		**Pn**	**02 40 53.2**	**+0.3**
OWD				eS		**Sn**	**02 41 13.4**	**-1.1**
NSTT	**Nanjuang**	**1.60**	**270**	*e*P		**Pn**	**02 40 53.3**	**+0.5**
NSTT				eS		**Sn**	**02 41 13.8**	**-0.4**
SBCB	**Hsinchu**	**1.62**	**276**	*e*S		**Sn**	**02 41 14.5**	**-0.2**
WUSB	**Renai**	**1.63**	**247**	*e*P		**Pn**	**02 40 53.9**	**+0.6**
WUSB				eS		**Sn**	**02 41 14.6**	**-0.6**
HSN	**Hsinchu**	**1.64**	**276**	*e*P		**Pn**	**02 40 53.4**	**+0.3**
HSN				eS		**Sn**	**02 41 13.9**	**-1.1**
WHP	**Taichung City**	**1.69**	**258**	*e*P		**Pn**	**02 40 55.5**	**+1.5**
WHP				eS		**Sn**	**02 41 16.9**	**+0.5**
VWDT	**VWDT**	**1.72**	**239**	*e*P		**Pn**	**02 40 55.0**	**+0.8**
VWDT				eS		**Sn**	**02 41 15.9**	**-0.9**
EHYH	**Wanrong**	**1.73**	**229**	*e*P		**Pn**	**02 40 54.3**	**0.0**
EHYH				eS		**Sn**	**02 41 15.9**	**-1.1**
EHY	**Hungye**	**1.73**	**230**	*e*P		**Pn**	**02 40 54.1**	**-0.3**
EHY				eS		**Sn**	**02 41 15.9**	**-1.2**
JTJ	**Tarama**	**1.77**	**90**	P		**Pn**	**02 40 55.4**	**+0.6**
JTJ				S		**Sn**	**02 41 17.0**	**-0.7**
ECBN	**Changbin**	**1.78**	**223**	*e*P		**Pn**	**02 40 55.2**	**+0.3**
ECBN				eS		**Sn**	**02 41 17.3**	**-0.9**
WCS	**Beigang Elemen**	**1.79**	**251**	*e*P		**Pn**	**02 40 56.3**	**+1.4**
WCS				eS		**Sn**	**02 41 18.9**	**+0.7**
NMLH	**Miaoli**	**1.80**	**267**	*e*P		**Pn**	**02 40 56.1**	**+1.0**
NMLH				eS		**Sn**	**02 41 18.3**	**-0.2**
YULB	**Yu-li**	**1.83**	**227**	P		**Pn**	**02 40 55.6**	**+0.1**
YULB	**Yu-li**	**1.83**	**227**	S		**Sn**	**02 41 18.1**	**-1.1**
YULB	**Yu-li**	**1.83**	**227**	*e*P		**Pn**	**02 40 55.5**	**0.0**
YULB				eS		**Sn**	**02 41 17.4**	**-1.8**
TWQ1	**Liyutan**	**1.83**	**261**	*e*P		**Pn**	**02 40 56.5**	**+0.9**
TWQ1				eS		**Sn**	**02 41 19.3**	**-0.1**
TWF1	**Yuli**	**1.86**	**227**	*e*P		**Pn**	**02 40 55.8**	**0.0**
TWF1				eS		**Sn**	**02 41 18.7**	**-1.1**
SSLB	**Suanglung**	**1.86**	**243**	P		**Pn**	**02 40 56.7**	**+0.8**
SSLB	**Suanglung**	**1.86**	**243**	S		**Sn**	**02 41 19.3**	**-0.6**
SSLB	**Suanglung**	**1.86**	**243**	*e*P		**Pn**	**02 40 56.6**	**+0.7**
SSLB				eS		**Sn**	**02 41 19.8**	**-0.1**
SMLT	**Sun Moon Lake**	**1.86**	**246**	*e*P		**Pn**	**02 40 57.1**	**+1.1**
SMLT				eS		**Sn**	**02 41 20.3**	**+0.2**
TYC	**Yuchr**	**1.89**	**247**	*e*P		**Pn**	**02 40 57.5**	**+1.2**
TYC				eS		**Sn**	**02 41 21.4**	**+1.0**
CHHH	**Chenggong**	**1.91**	**221**	*e*P		**Pn**	**02 40 56.4**	**-0.1**
CHKH				eS		**Sn**	**02 41 19.2**	**-1.7**
WDJ	**Dajia District**	**1.96**	**262**	*e*P		**Pn**	**02 40 58.1**	**+1.1**
WDJ				eS		**Sn**	**02 41 22.4**	**+0.4**
FULB	**Fuli**	**1.97**	**223**	*e*P		**Pn**	**02 40 57.5**	**+0.2**
FULB				eS		**Sn**	**02 41 22.3**	**0.0**
WHYT	**Xinyi Township**	**1.98**	**242**	*e*P		**Pn**	**02 40 59.0**	**+1.5**
WHYT				eS		**Sn**	**02 41 23.3**	**+0.6**
CHKT	**Chengkung**	**2.00**	**220**	*e*P		**Pn**	**02 40 57.3**	**-0.3**
CHKT				eS		**Sn**	**02 41 21.0**	**-2.0**
WNT	**Mingjian**	**2.04**	**249**	*e*P		**Pn**	**02 41 00.2**	**+2.1**
WNT				eS		**Sn**	**02 41 25.9**	**+2.0**
EHD	**Haiduan**	**2.06**	**224**	*e*P		**Pn**	**02 40 58.2**	**-0.2**
EHD				eS		**Sn**	**02 41 23.0**	**-1.3**
WCHH	**Zhanghua**	**2.09**	**255**	*e*P		**Pn**	**02 40 59.4**	**+0.7**
WCHH				eS		**Sn**	**02 41 24.9**	**0.0**
ECS	**Chishang**	**2.09**	**223**	*e*P		**Pn**	**02 40 59.4**	**+0.5**
ECS				eS		**Sn**	**02 41 25.9**	**+0.8**
WCH1	**Changhua City**	**2.10**	**255**	*e*S		**Sn**	**02 41 26.6**	**+0.4**
ALS	**Alishan**	**2.11**	**238**	↑*e*P		**Pn**	**02 41 00.7**	**+1.4**
ALS				eS		**Sn**	**02 41 26.3**	**+0.3**
ELDTW	**Lidau**	**2.15**	**228**	*e*P		**Pn**	**02 40 59.8**	**+0.1**
ELDTW				eS		**Sn**	**02 41 25.6**	**-1.1**
WDLH	**Douliu**	**2.24**	**245**	*e*P		**Pn**	**02 41 02.0**	**+1.3**
WDLH				eS		**Sn**	**02 41 30.1**	**+1.6**
JIKM	**Ikemajima**	**2.28**	**82**	*e*P		**Pn**	**02 41 01.8**	**+0.7**
JIKM				eS		**Sn**	**02 41 29.1**	**-0.1**
LONT	**Longtian**	**2.29**	**221**	*e*P		**Pn**	**02 41 01.4**	**+0.1**
LDUT	**Ludao**	**2.29**	**211**	*e*P		**Pn**	**02 41 01.3**	**-0.1**
LDUT				eS		**Sn**	**02 41 28.2**	**-1.4**
WRL	**Guolierlin Hig**	**2.30**	**252**	*e*P		**Pn**	**02 41 02.1**	**+0.6**
WRL				eS		**Sn**	**02 41 29.1**	**-0.7**
WCKO	**Fanlu**	**2.31**	**239**	*e*P		**Pn**	**02 41 03.4**	**+1.8**
WCKO				eS		**Sn**	**02 41 32.2**	**+2.1**
RLNB	**Erlin**	**2.32**	**252**	*e*S		**Sn**	**02 41 30.4**	**+0.2**
STYH	**Taoyuan**	**2.33**	**232**	*e*P		**Pn**	**02 41 03.5**	**+1.6**
STYH				eS		**Sn**	**02 41 31.1**	**+0.5**
JMJ2	**Miyako jima3**	**2.34**	**87**	P		**Pn**	**02 41 02.9**	**+1.0**
JMJ2				eS		**Sn**	**02 41 30.8**	**+0.2**
TPUB	**Ta-pu**	**2.36**	**236**	P		**Pn**	**02 41 03.6**	**+1.3**
TPUB	**Ta-pu**	**2.36**	**236**	*e*P		**Pn**	**02 41 03.8**	**+1.5**
TPUB				eS		**Sn**	**02 41 32.8**	**+1.5**
TWGBT	**Beinan**	**2.38**	**221**	P		**Pn**	**02 41 02.6**	**+0.1**
TWGBT	**Beinan**	**2.38**	**221**	S		**Sn**	**02 41 30.9**	**-0.8**
TWGBT	**Beinan**	**2.38**	**221**	↑P		**Pn**	**02 41 02.2**	**-0.3**
TWGBT				eS		**Sn**	**02 41 30.8**	**-1.0**
TWG	**Pinlang**	**2.38**	**221**	*e*P		**Pn**	**02 41 02.5**	**-0.1**
TWG				eS		**Sn**	**02 41 30.4**	**-1.3**
WTP	**Ta-pu**	**2.41**	**235**	*e*P		**Pn**	**02 41 04.3**	**+1.4**
WTP				eS		**Sn**	**02 41 34.0**	**+1.6**
JOGS	**Gusukube**	**2.41**	**87**	*e*P		**Pn**	**02 41 04.0**	**+1.2**
JOGS				eS		**Sn**	**02 41 31.8**	**-0.5**
CHY	**Chiayi**	**2.42**	**242**	*e*P		**Pn**	**02 41 04.7**	**+1.6**
CHY				eS		**Sn**	**02 41 33.8**	**+1.2**
TWK	**Hsinying**	**2.49**	**237**	*e*P		**Pn**	**02 41 05.5**	**+1.5**
TWK				eS		**Sn**	**02 41 36.1**	**+1.8**
CHN1	**Nanshi**	**2.51**	**235**	*e*P		**Pn**	**02 41 05.8**	**+1.6**
WSF	**Szhu**	**2.53**	**247**	*e*S		**Sn**	**02 41 35.9**	**+0.9**
SGST	**Jiashian**	**2.53**	**233**	*e*P		**Pn**	**02 41 05.4**	**+1.0**
SGST				eS		**Sn**	**02 41 35.9**	**+0.8**
WSL	**Shuilin Townsh**	**2.57**	**245**	*e*P		**Pn**	**02 41 06.0**	**+1.1**
WSL				eS		**Sn**	**02 41 36.3**	**+0.2**
ECL	**Taimali**	**2.62**	**220**	*e*P		**Pn**	**02 41 05.3**	**-0.4**
ECL				eS		**Sn**	**02 41 34.8**	**-2.5**
SSD	**Sandimen**	**2.71**	**226**	*e*P		**Pn**	**02 41 08.6**	**+1.7**
SSD				eS		**Sn**	**02 41 40.8**	**+1.3**
MASBT	**Mashibuluo**	**2.81**	**224**	*e*P		**Pn**	**02 41 09.6**	**+1.5**
MASBT				eS		**Sn**	**02 41 42.7**	**+1.1**
LAY	**Lan-yu**	**2.82**	**203**	*e*P		**Pn**	**02 41 07.9**	**-0.4**
LAY				eS		**Sn**	**02 41 39.4**	**-2.6**
LYUB	**Lan-yu**	**2.84**	**203**	↑P		**Pn**	**02 41 07.8**	**-0.7**
LYUB				eS		**Sn**	**02 41 39.2**	**-2.8**
EAST	**Anshuo**	**2.85**	**218**	*e*P		**Pn**	**02 41 08.8**	**+0.1**
TSCK	**Chigu Township**	**2.87**	**239**	*e*P		**

FAKI Fak Fak 12.15 280 P **Pn** **02 48 51.8 +1.0**
comp=Z,41nm,1.2s
SIJI Sorong 13.62 288 P **Pn** **02 49 10.2 0.0**
comp=Z,14nm,0.4s,baz=107,slow=19,SNR=13
SIJI S **Sn** **02 51 42.9 +2.7**
comp=Z,3.4nm,0.4s,baz=197,slow=19,SNR=1.2
SIJI LR LR 02 55 27.0
comp=Z,83nm,19.7s,baz=75,slow=41
SIJI Sorong 13.62 288 P **Pn** **02 49 09.6 -0.6**
comp=Z,600nmcomp=Z,32nm,0.7s
SWI Sorong 13.63 288 P **Pn** **02 49 10.8 +0.5**
comp=Z,52nm,0.8s
CTA Charters Tower 14.97 173 P **Pn** **02 49 27.7 +0.2**
comp=Z,22nm,1.0s,baz=351,slow=13,SNR=13
CTA LR LR 02 55 56.7
comp=Z,187nm,18.3s,baz=12,slow=40
CTA Charters Tower 14.97 173 P **P** **02 49 29.7 -0.9**
CTAO Charters Tower 14.97 173 P **P** **02 49 29.7 -0.9**
CTAO Charters Tower 14.97 173 Pn **02 49 28.2 +0.7**
CTAO Charters Tower 14.97 173 P **Pn** **02 49 28.2 +0.7**
MTN Manton Dam 15.01 239 Pn **02 49 28.0 0.0**
DRS Darwin Rock St 15.01 240 P **Pn** **02 49 29.2 +1.1**
AUDHS Darwin High Sc 15.08 240 P **Pn** **02 49 29.7 +0.8**
MSAI Masohi 15.36 276 P **Pn** **02 49 32.9 +0.4**
comp=Z,43nm,0.6s
KRAI Karang Ratu 15.89 276 P **Pn** **02 49 39.5 +0.3**
comp=Z,5µmcomp=Z,39nm,0.9s
QIS Mount Isa 15.95 196 P **P** **02 49 41.2 -0.3**
SAVO Savo Central 15.96 105 P **Pn** **02 49 40.6 +0.5**
AAI Ambon 16.05 275 P **Pn** **02 49 41.4 +0.3**
comp=Z,4µmcomp=Z,68nm,0.5s
HNR Honiara 16.16 106 P **Pn** **02 49 41.9 -0.5**
comp=Z,16nm,0.7s,baz=315,slow=1.4,SNR=9.7
HNR S **S** **02 52 48.3 -0.3**
comp=Z,1.9nm,0.6s,baz=326,slow=3.6,SNR=1.3
HNR LR LR 02 55 28.3
comp=Z,4.9nm,21.7s,baz=354,slow=36
HNR Honiara 16.16 106 P **P** **02 49 43.6 -0.3**
HNR Honiara 16.16 106 P **Pn** **02 49 43.0 +0.6**
NGOA Tingoa Renbel 16.90 113 P **P** **02 49 53.6 +1.5**
NLAI Namlea 17.18 276 P **Pn** **02 49 54.7 -0.4**
comp=Z,40nm,1.1s
WB0 Warramunga Arr 17.39 213 P **02 49 57.5 +0.1**
WR8 Warramunga Arr 17.49 212 P **02 49 58.4 -0.1**
WRAB Tennant Creek 17.55 212 P **Pn** **02 49 59.5 0.0**
WRAB Tennant Creek 17.55 212 P **P** **02 49 58.3 -0.9**
WRAB Tennant Creek 17.55 212*ce*P **Pn** **02 49 59.9 +0.4**
WRAB pmax pmax
comp=Z,32nm,1.3s
WRA Warramunga Arr 17.56 212 P **P** **02 49 59.5 +0.1**
comp=Z,11nm,0.7s,baz=38,slow=12,SNR=59
WRA S **Sn** **02 53 07.7 -7.6**
comp=Z,5.0nm,0.8s,baz=28,slow=22,SNR=4.7
WRA Warramunga Arr 17.56 212 P **P** **02 49 59.3 0.0**
WRA Warramunga Arr 17.56 212 *i* P **P** **02 49 59.5 +0.1**
WRA pmax pmax
comp=Z,19nm,0.9s
HURO Huro Makira 18.28 108 P **Pn** **02 50 08.4 0.0**
KNRA Kununurra 18.43 234 P **02 50 09.0 +0.1**
PATS Pohnpei 18.43 50 P **Pn** **02 50 10.8 +0.6**
SANI Sanana 18.46 279 P **Pn** **02 50 11.7 +1.2**
SANI Sanana 18.46 279 P **P** **02 50 08.7 -0.6**
comp=Z,32nm,1.0s
GUMO Guam 18.64 2 P **P** **02 50 10.0 -1.2**
comp=Z,84nm,0.6s,baz=181,slow=16,SNR=5.0
GUMO Guam 18.64 2 P **Pn** **02 50 12.1 -0.5**
GUMO Guam 18.64 2 P **Pn** **02 50 12.1 -0.5**
SOEI Soe 20.30 256 P Pn 02 50 32.8 +0.5
SOEI Soe 20.30 256 P Pn 02 50 31.9 -0.4
SOEI Soe 20.30 256 P **P** **02 50 28.9 -0.6**
comp=Z,2µmcomp=Z,120nm,0.9s
AS31 Alice Springs 20.91 207 P **P** **02 50 36.3 +0.5**
ASAR Alice Springs 20.91 207 P **P** **02 50 36.0 +0.2**
comp=Z,15nm,0.7s,baz=25,slow=9.6,SNR=81
ASAR S **S** **02 54 23.0 -0.7**
comp=Z,3.5nm,1.0s,baz=26,slow=20,SNR=3.2
comp=Z,15nm,0.7s
ASAR Alice Springs 20.91 207 P **02 50 36.2 +0.4**
ASAR Alice Springs 20.91 207 P **P** **02 50 36.2 +0.4**
AUALC St Philip's Co 20.94 207 P Pn 02 50 39.2 -0.4
BATI Baumata 20.98 255 P Pn 02 50 38.5 -1.6
comp=Z,14nm,0.3s,baz=98,slow=7.1,SNR=5.5
BATI S **S** **02 54 25.5 +0.3**
comp=Z,8.8nm,0.3s,baz=78,slow=19,SNR=2.1
BATI LR LR 02 59 09.0
comp=Z,138nm,21.8s,baz=77,slow=37
comp=Z,14nm,0.3s
BATI Baumata 20.98 255 P **P** **02 50 36.1 -0.5**
comp=Z,1µmcomp=Z,57nm,0.6s
EIDS Eidsvold 21.14 163 P **P** **02 50 41.1 +2.9**
EIDS Eidsvold 21.14 163 P **P** **02 50 39.4 +1.2**
QLP Quilpie 21.30 180 P **P** **02 50 42.1 +2.2**
LUWI Luwuk 21.80 280 P **P** **02 50 48.0 +2.6**
FITZ Fitzroy Crossi 22.25 233 P **P** **02 50 50.4 +0.3**
comp=Z,4.8nm,0.7s,baz=50,slow=7.3,SNR=21
FITZ S **S** **02 54 51.5 +2.6**
comp=Z,5.8nm,0.8s,baz=186,slow=11,SNR=2.0
FITZ LR LR 03 00 05.0
comp=Z,194nm,18.6s,baz=51,slow=38
comp=Z,4.8nm,0.7s
APSI Ampana 22.93 280 P **P** **02 50 55.9 -1.2**
comp=Z,2µmcomp=Z,64nm,0.7s
MRSI Marisa 22.95 283 P **P** **02 50 56.4 -0.9**
TW1H Toowoomba 1 Ha 23.45 162 P **P** **02 51 02.7 +0.8**
TOLI2 Tolitoli 24.23 284 P **P** **02 51 09.2 +0.2**
TOLI2 Tolitoli 24.23 284 P **P** **02 51 08.8 -0.2**
KAPI Kappang 24.38 269 LR LR 03 03 27.2
comp=Z,36nm,18.2s,baz=100,slow=43
KAPI Kappang 24.38 269 *i* P **P** **02 51 10.5 +0.2**
KAPI pmax pmax
comp=Z,15nm,1.5s
ARMA Armidale 26.07 165 P **P** **02 51 27.2 +1.6**
STKA Stephens Creek 26.69 185 P **P** **02 51 31.2 +0.1**
comp=Z,4.2nm,0.5s,baz=1.1,slow=11,SNR=9.7
STKA LR LR 03 02 53.6
comp=Z,95nm,19.4s,baz=4.2,slow=38
comp=Z,4.2nm,0.5s
STKA Stephens Creek 26.69 185 P **P** **02 51 31.5 +0.4**
STKA IAmb IAmb 02 52 15.3
comp=Z,66nm,1.0s
STKA Stephens Creek 26.69 185 P **P** **02 51 31.5 +0.4**
STKA pmax pmax
comp=Z,66nm,1.0s
MARNC Mare, Loyalty 28.20 127 P **P** **02 51 45.7 +1.0**
BBOO Buckleboo 28.54 194 P **P** **02 51 48.5 +0.8**
FORT Forrest 29.68 209 P **P** **02 51 57.6 -0.1**
TGY Tagaytay City 30.00 310 LR LR 03 06 42.4
comp=Z,93nm,18.4s,baz=102,slow=41
KKM Kota Kinabalu 30.10 291 P **P** **02 52 01.4 -0.3**
CAN Canberra 30.33 172 P **P** **02 52 04.4 +0.9**
CAN IAmb IAmb 02 52 22.7
comp=Z,52nm,1.5s
CAN Canberra 30.33 172 P **P** **02 52 04.4 +0.9**
CAN pmax pmax
comp=Z,52nm,1.5s
MILA Mila 32.06 173 P **P** **02 52 19.5 +0.9**
JCJ Chichijima 32.13 357 P **P** **02 52 17.1 -2.2**
TOO Toolangi 32.28 178 P **P** **02 52 21.8 +1.3**
TOO Toolangi 32.28 178 P **P** **02 52 21.8 +1.3**
TOO pmax pmax
comp=Z,16nm,1.5s
MGBR Mount Gambier 32.58 185 P **P** **02 52 24.9 +1.8**
SBUM Sibu 32.85 283 P **P** **02 52 26.2 +0.4**
MSVF Nonsavu 35.35 114 P **P** **02 52 49.3 +1.8**
MSVF IAmb IAmb 02 52 50.1
comp=Z,30nm,1.1s
MSVF Nonsavu 35.35 114 *i* P **P** **02 52 48.6 +1.1**
MSVF pmax pmax
comp=Z,32nm,1.1s
MSVF Nonsavu 35.35 114 P **P** **02 52 49.4 +1.8**
JOW Kunigami 35.36 335 LR LR 03 03 53.4
comp=Z,89nm,21.6s,baz=26,slow=30
JOW Kunigami 35.36 335 P **P** **02 52 47.5 +0.2**
TWG Pinlang 35.86 322 P **P** **02 52 49.6 -2.1**
YULB Yu-li 36.15 323 P **P** **02 52 54.4 +0.3**
BBJI Bungbulang 36.42 264 P **P** **02 52 56.7 0.0**
BBJI IAmb IAmb 02 53 31.6
comp=Z,43nm,1.7s
TPUB Ta-pu 36.49 322 P **P** **02 52 55.4 -1.6**
NACB Ninganchiao 36.56 324 P **P** **02 52 57.6 0.0**
SSLB Suanglung 36.65 323 P **P** **02 52 56.8 -1.6**
SSLB IAmb IAmb 02 53 13.0
comp=Z,26nm,1.0s
MOO Moorlands 37.22 176 P **P** **02 53 04.8 +1.9**
TATO Taipei 37.24 325 P **P** **02 53 03.6 +0.3**

NWAO Narrogin (SRO) 37.37 219 LR LR 03 09 46.9
comp=Z,116nm,19.2s,baz=178,slow=38
TAU Tasmania Unive 37.69 176 P **P** **02 53 07.7 +0.8**
TAU Tasmania Unive 37.69 176 P **P** **02 53 07.7 +0.8**
TAU pmax pmax
comp=Z,142nm,1.8s
FUTU Fugatoga 38.16 107 P **P** **02 53 13.5 +2.3**
FUTU IAmb IAmb 02 53 42.0
comp=Z,39nm,0.9s
JMN Monobe 39.90 347 P **P** **02 53 25.3 -0.3**
JNU Nakatsue 40.13 343 LR LR 03 07 03.6
comp=Z,71nm,21.5s,baz=186,slow=32
OUZ Omahuta 40.36 142 P **P** **02 53 32.5 +3.1**
INU Inuyama 40.86 351 P **P** **02 53 32.2 -1.2**
JGF Kuroka 41.06 351 P **P** **02 53 33.6 -1.4**
WCZ Waipu Caves 41.29 142 P **P** **02 53 39.7 +2.7**
MJAR Matsushiro Arr 41.87 353 P **P** **02 53 39.2 -2.5**
comp=Z,4.1nm,0.5s,baz=178,slow=8.8,SNR=22
comp=Z,4.1nm,0.5s
MJAR Matsushiro Arr 41.87 353 P **P** **02 53 40.5 -1.2**
MJAR Matsushiro Arr 41.87 353 P **P** **02 53 40.5 -1.2**
MJAR pmax pmax
comp=Z,14nm,1.5s
MAJO Matsushiro 41.87 353 P **P** **02 53 40.1 -1.6**
MAJO IAmb IAmb 02 53 41.4
comp=Z,58nm,1.4s
MAJO Matsushiro 41.87 353 *i* P **P** **02 53 39.9 -1.8**
MAJO pmax pmax
comp=Z,47nm,1.5s
MAJO Matsushiro 41.87 353 P **P** **02 53 40.6 -1.0**
MJB9 Matsu-Tunnel 41.87 353 P **P** **02 53 41.5 -0.2**
MJB9 IAmb IAmb 02 53 42.8
comp=Z,58nm,1.4s
RAO Raoul Island 43.06 128 LR LR 03 07 30.1
comp=Z,113nm,20.1s,baz=50,slow=30
HIZ Hauiti 43.30 144 P **P** **02 53 56.6 +3.3**
QRZ Quartz Range 43.64 149 P **P** **02 53 57.8 +1.8**
QRZ Quartz Range 43.64 149 P **P** **02 53 58.6 +2.6**
DSZ Denniston Nort 43.95 150 P **P** **02 54 01.6 +3.1**
NGZ Ngauruhoe 44.18 144 P **P** **02 54 03.8 +3.4**
NJ2 Nanjing 44.19 329 ⇑P **P** **02 54 01.5 +1.1**
NJ2 pmax pmax
comp=Z,48nm,0.7s
JCZ Jackson Bay 44.36 155 P **P** **02 54 03.9 +2.1**
NNZ Nelson 44.37 148 P **P** **02 54 03.3 +1.6**
URZ Urewera 44.48 142 LR LR 03 10 23.1
comp=Z,59nm,20.6s,baz=298,slow=33
URZ Urewera 44.48 142 P **P** **02 54 04.3 +1.7**
INZ Inchbonnie 44.51 151 P **P** **02 54 03.7 +0.9**
HAZ Te Kaha 44.57 141 P **P** **02 54 05.9 +2.4**
RTZ Ruatahuna 44.62 143 P **P** **02 54 05.4 +1.5**
BKZ Black Stump Fm 44.69 144 P **P** **02 54 06.1 +1.7**
BKZ IAmb IAmb 02 54 06.9
comp=Z,23nm,0.9s
BKZ Black Stump Fm 44.69 144 P **P** **02 54 06.2 +1.7**
KULM Kulim 44.74 283 P **P** **02 54 05.1 0.0**
MWZ Matawai 44.78 142 P **P** **02 54 07.3 +2.2**
LTZ Lake Taylor 44.95 151 P **P** **02 54 07.1 +0.6**
LTZ IAmb IAmb 02 54 13.5
comp=Z,53nm,1.3s
LTZ Lake Taylor 44.95 151 P **P** **02 54 07.4 +0.9**
TSZ Takapari Road 44.97 145 P **P** **02 54 08.4 +1.8**
KSRS Korea Array 45.04 342 P **P** **02 54 07.1 +0.1**
comp=Z,14nm,0.8s,baz=159,slow=8.8,SNR=32
KSRS PcP **PcP** **02 55 47.0 +0.6**
comp=Z,2.7nm,0.8s,baz=162,slow=4.7,SNR=4.1
KSRS LR LR 03 09 31.8
comp=Z,52nm,21.8s,baz=140,slow=31
comp=Z,14nm,0.8s
KSAR Wonju Array Be 45.04 342 P **02 54 06.6 -0.5**
KSAR Wonju Array Be 45.04 342 P **P** **02 54 06.6 -0.5**
PUZ Puketiti 45.06 141 P **P** **02 54 08.9 +1.5**
RPZ Rata Peaks 45.09 152 LR LR 03 13 02.6
comp=Z,61nm,18.5s,baz=340,slow=36
RPZ Rata Peaks 45.09 152 P **P** **02 54 08.7 +1.3**
RPZ Rata Peaks 45.09 152 P **P** **02 54 08.8 +1.3**
KS19 Wonju Array Si 45.10 342 P **P** **02 54 07.2 -0.4**
KS19 IAmb IAmb 02 54 08.1
comp=Z,42nm,1.2s
MLZ Mavora Lakes 45.14 156 P **P** **02 54 09.1 +1.2**
MLZ IAmb IAmb 02 54 35.1
comp=Z,65nm,1.7s
MLZ Mavora Lakes 45.14 156 P **P** **02 54 09.3 +1.5**
MRZ Mangatainoka R 45.16 146 P **P** **02 54 09.2 +1.1**
LBZ Lake Benmore 45.22 154 P **P** **02 54 09.1 +0.6**
LBZ IAmb IAmb 02 54 10.2
comp=Z,26nm,0.9s
LBZ Lake Benmore 45.22 154 P **P** **02 54 09.4 +0.9**
KHZ Kahutara 45.32 149 P **P** **02 54 09.3 +0.1**
GVZ Greta Valley S 45.47 150 P **P** **02 54 11.8 +1.3**
BFZ Birch Farm 45.55 146 P **P** **02 54 12.3 +1.1**
WHN Wuhan 45.58 323 P **P** **02 54 13.0 +1.5**
WHN pmax pmax
comp=Z,110nm,1.2s
TMZ Timaru 45.58 153 P **P** **02 54 12.2 +0.8**
JTM Tenmabayashi 45.82 357 P **P** **02 54 12.7 -0.4**
JTM IAmb IAmb 02 54 13.3
comp=Z,41nm,0.8s
MQZ McQueen's Vall 45.83 151 P **P** **02 54 14.4 +1.1**
TUZ Tuapeka 46.23 156 P **P** **02 54 17.8 +1.4**
GYA Guiyang 48.08 313 ⇑P **P** **02 54 32.8 +1.6**
GYA pmax pmax
comp=Z,35nm,0.9s
TIA Tai'an 48.36 330 P **P** **02 54 32.5 -0.5**
TIA pmax pmax
comp=Z,13nm,1.0s
ASAJ Asahikawa 49.08 358 LR LR 03 16 11.0
comp=Z,17nm,18.8s,baz=92,slow=37
PSTR Posyet 49.13 347 *i* P **P** **02 54 36.7 -2.1**
LYN LuoYang 49.57 325 P **P** **02 54 42.3 0.0**
LYN pmax pmax
comp=Z,44nm,0.7s
KMI2 Kunming 50.32 309 P **P** **02 54 50.3 +1.9**
KMI2 pmax pmax
comp=Z,20nm,1.1s
USRK Ussuriysk Ar. 50.36 349 P **P** **02 54 47.7 -0.4**
comp=Z,14nm,0.8s,baz=176,slow=10,SNR=13
comp=Z,8.2nm,0.8s
CMAR Chiang Mai Arr 50.43 299 P **P** **02 54 50.4 +1.3**
comp=Z,9.1nm,0.5s,baz=113,slow=7.6,SNR=64
comp=Z,9.1nm,0.5s
HNS HongShan 50.49 329 ⇓P **P** **02 54 48.8 -0.4**
HNS pmax pmax
comp=Z,35nm,0.8s
CHTO Chiang Mai 50.57 299 P **P** **02 54 51.0 +0.9**
CHTO IAmb IAmb 02 54 52.2
comp=Z,27nm,1.1s
CHTO Chiang Mai 50.57 299 P **P** **02 54 51.0 +0.9**
CHTO pmax pmax
comp=Z,27nm,1.1s
CHTO Chiang Mai 50.57 299 P **P** **02 54 51.4 +1.2**
CHTO sP **sP** **02 55 23.4 -1.0**
CHTO PcP **PcP** **02 56 06.1 -0.7**
XAN Xi'an 51.31 322 ⇓P **P** **02 54 55.3 -0.2**
XAN pP pP 02 55 18.8 -0.1
XAN sP sP 02 55 29.3 -0.4
XAN pmax pmax
comp=Z,55nm,1.0s
XAN pmax pmax
comp=Z,170nm,4.2s
XAN Xi'an 51.31 322 P **P** **02 54 55.5 +0.1**
XAN PcP **PcP** **02 56 09.0 -0.2**
CN2 Changchun 51.60 343 P **P** **02 54 57.8 +0.4**
CN2 PcP **PcP** **02 56 09.5 -0.5**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
PZH PanZhiHua 51.79 310 P **P** **02 55 01.5 +2.2**
BJI2 Beijing 51.85 333 P **P** **02 54 58.8 -0.5**
BJI2 pP **pP** **02 55 22.5 -0.1**
BJI2 sP **sP** **02 55 34.0 +0.6**
BJI2 PcP **PcP** **02 56 09.5 -1.5**
BJI2 PP **PP** **02 56 59.8 +1.6**
BJI2 ScP **ScP** **02 59 55.8 -3.5**
BJI2 pmax pmax
comp=Z,8.0nm,0.9s
BJT Baijiatuan 51.85 333 P **P** **02 54 59.7 +0.3**
BJT PcP **PcP** **02 56 11.0 0.0**
YSS Yuzhno-Sakhali 51.91 359 *eP* **P** **02 54 59.0 -0.6**
YSS pmax pmax
comp=Z,20nm,0.9s
CD2 Chengdu 52.73 315 P **P** **02 55 07.0 +0.9**
CD2 pmax pmax
comp=Z,100nm,0.5s
BNX BinXian 52.85 345 ⇑P **P** **02 55 06.0 -0.6**

BNX pmax pmax
comp=Z,14nm,1.0s
HHC Hu-ho-hao-te 54.70 330 *eP* **P** **02 55 21.0 +0.6**
HHC pmax pmax
comp=Z,28nm,0.8s
HHC pmax pmax
comp=Z,100nm,6.4s
KLR Kul'dur 55.25 350 LR LR 03 16 59.8
comp=Z,28nm,20.7s,baz=222,slow=34
KLR Kul'dur 55.25 350*ce*P **P** **02 55 24.2 +0.2**
KLR pmax pmax
comp=Z,2.0nm,1.3s
BTO2 Baotou 55.48 329 *eP* **P** **02 55 26.0 0.0**
BTO2 pP **pP** **02 55 48.5 -1.1**
BTO2 S **S** **03 03 03.5 -0.5**
BTO2 pmax pmax
comp=Z,39nm,0.7s
BTO2 pmax pmax
comp=Z,340nm,4.4s
BTO2 L L
comp=Z,270nm,6.2s
BTO2 L L
comp=Z,200nm,5.0s
BTO2 L L
comp=Z,170nm,8.0s
LZH Lanzhou 55.80 321 P **P** **02 55 29.8 +1.4**
LZH pP pP 02 55 52.8 +0.8
LZH sP sP 02 56 03.5 +0.8
LZH pmax pmax
comp=Z,71nm,1.5s
LZDM Lanzhou Array 55.81 320 P **P** **02 55 29.7 +1.0**
comp=Z,5.7nm,0.5s,baz=140,slow=7.5,SNR=9.3
comp=Z,5.7nm,0.5s
SHL Shillong 59.25 304 P **P** **02 55 53.7 +0.8**
SHL Shillong 59.25 304 P **P** **02 55 53.7 +0.8**
SHL pmax pmax
comp=Z,97nm,1.8s
ZEA Zeya 60.40 348 *eP* **P** **02 56 00.0 +0.1**
ZEA *e* 02 56 26.9
ZEA pmax pmax
comp=N,10.0nm,1.6s
ZEA pmax pmax
comp=Z,10.0nm,1.5s
GTA2 Gaotai 60.43 321 P **P** **02 56 01.3 +0.6**
GTA2 pmax pmax
comp=Z,18nm,0.8s
LSA Lhasa 61.54 308 P **P** **02 56 08.0 -0.8**
LSA pmax pmax
comp=Z,15nm,0.8s
GOMU GeErMu 61.86 316 P **P** **02 56 11.8 +1.1**
GOMU pmax pmax
comp=Z,15nm,0.9s
ULN Ulaanbaatar 62.08 333 P **P** **02 56 12.4 +0.8**
ULN Ulaanbaatar 62.08 333*ce*P **P** **02 56 11.5 -0.1**
ULN pmax pmax
comp=Z,18nm,0.7s
ULN Ulaanbaatar 62.08 333 P **P** **02 56 12.5 +0.9**
SONM Songino Array 62.36 332 P **P** **02 56 13.9 +0.4**
comp=Z,9.5nm,0.8s,baz=155,slow=6.5,SNR=51
SONM LR LR 03 22 03.3
comp=Z,37nm,20.7s,baz=110,slow=35
comp=Z,9.5nm,0.8s
SONM Songino Array 62.36 332 P **P** **02 56 13.7 +0.3**
SONM IAmb IAmb 02 56 14.9
comp=Z,41nm,1.6s
SONM Songino Array 62.36 332 P **P** **02 56 13.7 +0.3**
SONM pmax pmax
comp=Z,41nm,1.6s
SHEM Shemya Is, Ala 62.98 20 LR LR 03 19 44.1
comp=Z,26nm,19.7s,baz=129,slow=32
MA2 Magadan 64.75 4 LR LR 03 24 02.1
comp=Z,9.4nm,19.1s,baz=192,slow=35
MA2 Magadan 64.75 4 P **P** **02 56 28.5 -0.3**
comp=Z,36nm,1.5s
ZAK Zakamensk 65.61 333 *eP* **P** **02 56 34.5 -0.2**
ZAK *e* 02 56 58.2
ZAK pmax pmax
comp=Z,41nm,0.9s
ZAK pmax pmax
comp=Z,10.0nm,1.1s
PPT Papeete 65.78 107 LR LR 03 21 22.3
comp=Z,47nm,19.6s,baz=176,slow=32
PPT2 Papeete2 65.78 107 *e*LR LR 03 16 33.0
comp=Z,100nm,27.8s
PPT2 *e*LR LR 03 16 38.4
comp=Z,103nm,28.8s
TBI Tubuai 66.24 113 *e*LR LR 03 16 43.1
comp=Z,811nm,33.8s
TLY Talaya 66.36 334 LR LR 03 24 11.9
comp=Z,21nm,21.8s,baz=122,slow=34
TLY Talaya 66.36 334 P **P** **02 56 40.0 +0.7**
TLY Talaya 66.36 334*ce*P **P** **02 56 38.3 -1.1**
TLY pmax pmax
comp=Z,12nm,1.3s
MOY Mondy 67.54 333 *eP* **P** **02 56 46.8 -0.2**
MOY pmax pmax
comp=Z,23nm,2.2s
YAK Yakutsk 67.93 353 LR LR 03 25 39.5
comp=Z,12nm,19.1s,baz=162,slow=35
SEY Seymchan 68.19 4*ce*P **P** **02 56 50.9 +0.3**
SEY pmax pmax
comp=Z,12nm,1.0s
KNGR Kungurtug, Tuv 68.51 330 *i* P **P** **02 56 53.5 +0.4**
KNGR pmax pmax
comp=Z,22nm,1.0s
HYB Hyderabad 68.58 291 *eP* **P** **02 56 54.1 0.0**
HYB *ep*P **PcP** **02 57 17.6 -0.9**
HYB *ePcP* **pP** **02 57 18.4 -0.5**
HYB *ePP* **PP** **02 59 26.8 +0.1**
HYB *eS* **S** **03 05 49.7 +0.2**
WMQ Urumqi 70.37 320 *eP* **P** **02 57 05.8 +1.2**
WMQ sP sP 02 57 42.5 +2.7
WMQ pmax pmax
comp=Z,17nm,0.9s
UNV Unalaska Valle 71.76 28 P **P** **02 57 13.4 +0.8**
baz=233
SPIA Saint Paul Isl 72.24 24 P **P** **02 57 16.5 +1.0**
baz=228
VNDA Vanda 72.92 176 P **P** **02 57 18.9 -0.3**
comp=Z,1.8nm,1.0s,baz=349,slow=5.6,SNR=4.7
comp=Z,1.8nm,1.0s
ZSN Zaisan 73.81 323 *eP* **P** **02 57 25.3 +0.3**
BILL Bilibino 74.67 8 **P** **02 57 29.6 0.0**
BILL Bilibino 74.67 8*ce*P **P** **02 57 30.0 +0.5**
BILL pmax pmax
comp=Z,15nm,1.7s
TAOE Nuku Hiva Isla 75.05 98 *e*LR LR 03 20 45.1
comp=Z,166nm,28.8s
MK31 Makanchi Array 75.11 321*ce*P **P** **02 57 33.0 +0.4**
MKAR Makanchi Array 75.11 321 P **P** **02 57 32.7 +0.1**
comp=Z,4.3nm,0.4s,baz=109,slow=7.8,SNR=72
MKAR LR LR 03 30 06.5
comp=Z,18nm,21.4s,baz=28,slow=35
comp=Z,4.3nm,0.4s
MKAR Makanchi Array 75.11 321 **P** **02 57 32.9 +0.3**
MKAR Makanchi Array 75.11 321 P **P** **02 57 32.9 +0.3**
MAKZ Makanchi 75.31 321 **P** **02 57 34.1 +0.4**
MAKZ IAmb IAmb 02 57 35.1
comp=Z,30nm,1.1s
MAKZ Makanchi 75.31 321 P **P** **02 57 34.1 +0.4**
MAKZ pmax pmax
comp=Z,30nm,1.2s
MAKZ Makanchi 75.31 321 P **P** **02 57 34.1 +0.4**
SDPT Sand Point 75.50 29 P **P** **02 57 35.4 +0.9**
baz=238
SHLS Shalkode 75.53 317 *eP* **P** **02 57 33.7 -1.5**
comp=Z,12nm,1.0s
PDGK Podgornoye 75.58 317 P **P** **02 57 35.9 +0.4**
CHNA Chernabura Isl 75.65 30 P **P** **02 57 36.1 +0.7**
baz=239
UZB Uzynbulak 75.83 317 *eP* **P** **02 57 37.0 +0.1**
comp=Z,7.4nm,0.6s
M11K Mekoryuk 75.92 23 P **P** **02 57 37.5 +0.7**
baz=231
KPKS Kokpek 76.17 317 *eP* **P** **02 57 38.9 +0.1**
GAMB Gambell 76.24 19 P **P** **02 57 39.1 +0.5**
GAMB Gambell 76.24 19 P **P** **02 57 39.3 +0.7**
baz=225
S14K Fog Glacier 76.43 28 P **P** **02 57 40.3 +0.3**
baz=238
TDK Taldyqorghan 76.91 318 *eP* **P** **02 57 43.0 +0.2**
comp=Z,7.0nm,0.5s
KSH2 Kashi 76.96 312 P **P** **02 57 44.3 +0.9**
KSH2 pmax pmax
comp=Z,12nm,0.8s
CHGN Chignik 76.98 29 P **P** **02 57 43.6 +0.7**

baz=239
M13K **Dall Lake** 77.07 24 P P 02 57 44.1 +0.8
baz=234
MDOK **Medeo** 77.19 316 eP P 02 57 44.8 +0.2
NIL **Nilore** 77.20 306 P P 02 57 45.2 +0.6
NIL **Nilore** 77.20 306 P P 02 57 45.3 +0.6
NIL pmax pmax
comp=Z,58nm,0.6s
TNSS **Tian-Shan** 77.22 316 eP P 02 57 44.8 -0.2
O14K **Tigyukauivet M** 77.27 25 P P 02 57 45.2 +0.8
baz=236
AAA **Alma-Ata** 77.30 316 eP P 02 57 45.3 +0.2
comp=Z,7.4nm,0.6s
TIXI **Tiksi** 77.33 355 LR LR 03 31 17.4
comp=Z,11nm,19.2s,baz=194,slow=35
TIXI **Tiksi** 77.33 355 P 02 57 43.5 -1.0
TIXI **Tiksi** 77.33 355 *i* P P 02 57 42.9 -1.6
TIXI pmax pmax
comp=Z,6.0nm,0.8s
N14K **Kuskokwak Cree** 77.47 25 P P 02 57 46.2 +0.7
baz=236
K13K **Kusilvak Mount** 77.47 22 P P 02 57 46.6 +1.0
baz=232
M14K **Bethel** 77.83 24 IAmb IAmb 02 57 50.4
comp=Z,28nm,1.0s
M14K **Bethel** 77.83 24 P P 02 57 48.4 +0.9
baz=235
O15K **Ungalikthiuk R** 77.85 26 P P 02 57 48.6 +0.9
baz=238
L14K **Kuka Creek** 77.88 23 IAmb IAmb 02 57 49.5
comp=Z,20nm,0.8s
L14K **Kuka Creek** 77.88 23 P P 02 57 48.5 +0.7
baz=234
R16K **Pilot Point** 78.02 28 P P 02 57 49.7 +1.0
baz=240
TKM2 **Tokmak 2** 78.11 316 P P 02 57 50.6 +0.8
SNR=10
CHIR **Chirikof Islan** 78.11 30 P P 02 57 50.3 +1.1
baz=242
N15K **Kwethluk River** 78.27 25 P P 02 57 51.2 +1.1
baz=237
M15K **Kasigluk River** 78.31 24 P P 02 57 51.4 +1.2
baz=236
J14K **Nanvaranak Lak** 78.38 22 P P 02 57 51.6 +1.1
baz=233
L15K **Ungalak Mounta** 78.54 23 P P 02 57 52.3 +0.8
baz=236
P16K **Nushagak River** 78.58 27 P P 02 57 52.2 +0.5
P16K **Nushagak River** 78.58 27 P P 02 57 52.6 +0.9
baz=239
R17L **Mt. Peulik Vol** 78.62 28 P P 02 57 52.2 +0.1
baz=241
TNA **Tin City** 78.65 18 P P 02 57 52.5 +0.5
baz=229
UCH **Uchtor** 78.66 315 P P 02 57 54.5 +1.4
SNR=8.2
AAK **Ala-Archa** 78.80 315 P P 02 57 53.6 +0.1
comp=Z,4.2nm,0.6s,baz=137,slow=8.0,SNR=13
AAK LR LR 03 36 53.5
comp=Z,11nm,18.0s,baz=58,slow=39
comp=Z,4.2nm,0.6s
AAK **Ala-Archa** 78.80 315 P P 02 57 54.2 +0.6
SNR=6.8
AAK **Ala-Archa** 78.80 315 P P 02 57 54.3 +0.8
AAK **Ala-Archa** 78.80 315 *ce*P P 02 57 53.0 -0.5
AAK pmax pmax
comp=Z,6.0nm,0.6s
AAK **Ala-Archa** 78.80 315 P P 02 57 54.0 +0.4
AAK sP **sP** 02 58 28.0 -1.1
O16K **Kokwok River B** 78.82 26 IAmb IAmb 02 57 54.3
comp=Z,23nm,0.6s
O16K **Kokwok River B** 78.82 26 P P 02 57 53.4 +0.4
baz=239
ANM **Nome** 78.84 20 P P 02 57 53.8 +0.7
ANM **Nome** 78.84 20 P P 02 57 53.8 +0.7
ANM pmax pmax
comp=Z,14nm,1.1s
ANM **Nome** 78.84 20 P P 02 57 54.1 +1.0
baz=231
K15K **Wolf Creek Mou** 78.87 23 P P 02 57 54.1 +0.8
baz=235
KURK **Kurchatov** 78.90 324 P 02 57 53.8 +0.2
KURK **Kurchatov** 78.90 324 *ce*P P 02 57 53.9 +0.2
KURK pmax pmax
comp=Z,25nm,1.3s
KURK **Kurchatov** 78.90 324 P P 02 57 53.8 +0.2
KURBB **Kurchatov Arra** 78.92 324 P P 02 57 53.3 -0.5
comp=Z,6.9nm,1.0s,baz=110,slow=4.7,SNR=29
comp=Z,6.9nm,1.0s
KURBB **Kurchatov Arra** 78.92 324 P P 02 57 53.8 0.0
USP **Ospenovka** 78.98 316 P P 02 57 54.5 +0.1
SNR=9.7
N16K **Nishlik Lake** 78.99 25 P P 02 57 55.0 +1.0
baz=238
Q16K **King Salmon** 79.00 27 P P 02 57 54.9 +0.9
baz=240
F14K **Arctic Creek** 79.10 19 P P 02 57 55.2 +0.7
baz=230,SNR=11
Q17K **Contact Creek** 79.15 28 P P 02 57 54.6 -0.4
baz=241
SII **Sitkinak Islan** 79.17 30 P P 02 57 56.0 +0.9
baz=243
M16K **Timber Creek** 79.20 25 IAmb IAmb 02 57 57.0
comp=Z,39nm,1.1s
M16K **Timber Creek** 79.20 25 P P 02 57 55.8 +0.7
baz=238
EKS2 **Erkin-Say** 79.31 315 P P 02 57 57.1 +0.8
SNR=7.9
O17K **Koliganek Bris** 79.35 26 P P 02 57 56.5 +0.6
baz=240
P17K **Kvichak River** 79.35 27 P P 02 57 56.9 +1.0
baz=241
L16K **Owhat River** 79.36 24 P P 02 57 56.6 +0.6
baz=237
ACHA **Angle Creek He** 79.39 28 P P 02 57 56.3 0.0
G15K **Niukluk** 79.56 20 P P 02 57 57.5 +0.5
baz=233,SNR=9.3
N17K **Nushagak Hills** 79.69 25 P P 02 57 58.8 +1.0
baz=240
Q18K **Katmai Hardscr** 79.74 28 P P 02 57 58.9 +0.7
baz=242
J16K **Anvik River** 79.78 22 IAmb IAmb 02 58 00.4
comp=Z,53nm,1.6s
J16K **Anvik River** 79.78 22 P P 02 57 59.1 +0.9
baz=236
F15K **North Star Dit** 79.79 19 IAmb IAmb 02 57 59.9
comp=Z,26nm,1.1s
F15K **North Star Dit** 79.79 19 P P 02 57 58.8 +0.6
baz=232
OHAK **Old Harbor** 79.91 29 P P 02 57 59.6 +0.7
OHAK **Old Harbor** 79.91 29 P P 02 57 59.5 +0.6
baz=244
H16K **Elim** 79.97 21 P P 02 57 59.7 +0.5
baz=234,SNR=10
P18K **Big Mountain,** 79.99 27 P P 02 57 59.2 -0.2
P18K IAmb IAmb 02 59 12.1
comp=Z,95nm,2.0s
P18K **Big Mountain,** 79.99 27 P P 02 58 00.1 +0.7
baz=242
M17K **Holitna River** 80.03 25 IAmb IAmb 02 58 01.8
comp=Z,29nm,0.8s
M17K **Holitna River** 80.03 25 P P 02 58 00.7 +1.2
baz=239
L17K **Donlin** 80.06 24 P P 02 58 00.7 +0.9
baz=238
I17K **Unalakleet** 80.09 22 P P 02 58 01.2 +1.4
I17K IAmb IAmb 02 58 02.0
comp=Z,22nm,0.8s
I17K **Unalakleet** 80.09 22 P P 02 58 01.0 +1.2
baz=236
O18K **Koktuh Hills** 80.22 26 P P 02 58 00.6 -0.1
O18K IAmb IAmb 03 00 24.5
comp=Z,39nm,1.4s
O18K **Koktuh Hills** 80.22 26 P P 02 58 01.3 +0.6
baz=242
N18K **Kilae Creek** 80.32 26 P P 02 58 02.1 +1.0
baz=241
K17K **Iditarod** 80.36 23 IAmb IAmb 02 58 03.3
comp=Z,37nm,0.8s
K17K **Iditarod** 80.36 23 P P 02 58 02.0 +0.7
baz=238
G16K **Koyuk River** 80.37 20 P P 02 58 02.0 +0.7
G16K IAmb IAmb 02 58 02.9
comp=Z,24nm,0.9s
G16K **Koyuk River** 80.37 20 P P 02 58 02.0 +0.7
baz=234,SNR=22
J17K **VABM Dome** 80.42 22 P P 02 58 02.3 +0.7
baz=238,SNR=18
KDAK **Kodiak Island** 80.49 29 LR LR 03 26 34.2
comp=Z,22nm,21.6s,baz=220,slow=30
KDAK **Kodiak Island** 80.49 29 P P 02 58 02.6 +0.5
KDAK **Kodiak Island** 80.49 29 P P 02 58 02.6 +0.5
KDAK pmax pmax
comp=Z,273nm,2.0s
KDAK **Kodiak Island** 80.49 29 P P 02 58 02.6 +0.5
Q19K **Cape Douglas,** 80.50 28 P P 02 58 02.1 -0.1
Q19K **Cape Douglas,** 80.50 28 P P 02 58 02.6 +0.4
baz=243
M18K **Stony River** 80.74 25 P P 02 58 04.3 +0.9
baz=241
L18K **Granite Mounta** 80.75 24 IAmb IAmb 02 58 05.9
comp=Z,40nm,1.3s
L18K **Granite Mounta** 80.75 24 P P 02 58 04.1 +0.6
baz=240
KBL **Kabul** 80.80 306 P P 02 58 04.1 -0.5
KBL **Kabul** 80.80 306 P P 02 58 04.1 -0.5
KBL pmax pmax
comp=Z,10.0nm,0.8s
Q20K **Shuyak Island** 80.94 28 P P 02 58 05.1 +0.6
baz=244
H17K **Granite Mounta** 80.96 21 IAmb IAmb 02 58 06.3
comp=Z,33nm,0.7s
H17K **Granite Mounta** 80.96 21 P P 02 58 05.3 +0.8
baz=237,SNR=11
N19K **Bonanza Creek** 80.99 26 IAmb IAmb 02 58 06.3
comp=Z,23nm,0.8s
N19K **Bonanza Creek** 80.99 26 P P 02 58 05.2 +0.3
baz=242
G17K **Kiwalik Mounta** 81.01 20 P P 02 58 05.7 +0.9
baz=236
P19K **Oil Pt** 81.02 27 P P 02 58 04.9 0.0
P19K **Oil Pt** 81.02 27 P P 02 58 04.9 0.0
baz=243
DZA **Taraz** 81.10 315 eP P 02 58 05.9 +0.2
C16K **Lisinne Hills** 81.19 17 P P 02 58 05.8 +0.2
baz=231,SNR=16
ILSW **Iliamna Southw** 81.20 27 P P 02 58 04.2 -1.8
ILSW IAmb IAmb 02 59 03.7
comp=Z,42nm,1.4s
F17K **Baldwin Pennin** 81.35 19 IAmb IAmb 02 58 08.1
comp=Z,19nm,0.8s
F17K **Baldwin Pennin** 81.35 19 P P 02 58 07.2 +0.7
baz=235,SNR=15
J18K **Innoko River** 81.37 23 P P 02 58 07.0 +0.3
baz=240
L19K **White Mountain** 81.48 24 IAmb IAmb 02 58 09.0
comp=Z,28nm,0.9s
L19K **White Mountain** 81.48 24 P P 02 58 07.9 +0.6
baz=242
D17K **Noatak River** 81.50 18 P P 02 58 08.0 +0.7
baz=233,SNR=33
E17K **Hotham Inlet** 81.53 19 P P 02 58 08.2 +0.8
baz=234,SNR=43
M19K **Big River Lodg** 81.54 25 P P 02 58 08.2 +0.6
baz=242
H18K **Honhosa River** 81.63 21 P P 02 58 08.1 +0.1
baz=238,SNR=7.4
CHGR **Chuyangaron** 81.64 310 P P 02 58 08.8 0.0
CHGR IAmb IAmb 02 58 09.7
comp=Z,29nm,0.7s
CHGR **Chuyangaron** 81.64 310 P P 02 58 08.8 0.0
CHGR pmax pmax
comp=Z,29nm,0.7s
KK31 **Karatay Array** 81.74 315 eP P 02 58 09.0 -0.1
KKAR **Karatay Array** 81.74 315 P P 02 58 09.0 -0.1
KKAR **Karatay Array** 81.74 315 P P 02 58 09.0 -0.1
HOM **Homer** 81.74 27 P P 02 58 09.0 +0.3
HOM **Homer** 81.74 27 P P 02 58 09.2 +0.5
baz=245
RDOG **Red Dog Mine** 81.77 18 IAmb IAmb 02 58 10.3
comp=Z,29nm,0.8s
RDOG **Red Dog Mine** 81.77 18 P P 02 58 09.4 +0.7
baz=233,SNR=16
CNPM **China Poot** 81.88 28 P P 02 58 09.3 -0.2
G18K **Tagagawik** 81.92 20 IAmb IAmb 02 58 10.7
comp=Z,26nm,0.7s
G18K **Tagagawik** 81.92 20 P P 02 58 09.6 +0.1
baz=238
C17K **DeLong Mountai** 81.94 17 P P 02 58 10.1 +0.4
baz=233
GCSA **Galena City Sc** 81.95 22 P P 02 58 10.1 +0.4
baz=239,SNR=19
MAW **Mawson** 81.95 202 LR LR 03 33 14.0
comp=Z,49nm,18.6s,baz=299,slow=34
F18K **Selawik** 81.97 20 P P 02 58 10.0 +0.3
baz=237,SNR=8.8
J19K **Poorman** 82.05 23 IAmb IAmb 02 58 11.8
comp=Z,18nm,0.6s
J19K **Poorman** 82.05 23 P P 02 58 10.8 +0.5
baz=241
M20K **Styx River** 82.06 25 IAmb IAmb 02 58 11.8
comp=Z,24nm,0.7s
M20K **Styx River** 82.06 25 P P 02 58 11.0 +0.6
baz=243
E18K **Tukpahlearik C** 82.11 19 P P 02 58 11.2 +0.6
baz=236,SNR=26
BRLK **Bradley Lake** 82.14 28 P P 02 58 11.2 +0.4
N20K **Mount Spurr** 82.16 26 P P 02 58 11.1 +0.1
baz=244
SPCR **Spurr Chakacha** 82.16 26 P P 02 58 11.3 +0.3
baz=244
CHM **Chimkent** 82.19 314 eP P 02 58 11.8 +0.3
BRSE **Bradley Lake S** 82.19 28 P P 02 58 11.6 +0.5
baz=246
BRLS **Boroldav** 82.20 315 eP P 02 58 11.8 +0.2
SPU **Mount Spurr** 82.22 26 P P 02 58 10.5 -0.7
K20K **Telida** 82.35 24 IAmb IAmb 02 58 13.5
comp=Z,23nm,0.7s
K20K **Telida** 82.35 24 P P 02 58 12.2 +0.3
baz=242
CAPN **Captain Cook N** 82.44 27 P P 02 58 12.9 +0.6
baz=245
STLK **Strandline Lak** 82.45 26 P P 02 58 11.0 -1.5
H19K **Roundabout Mou** 82.51 21 IAmb IAmb 02 58 14.2
comp=Z,30nm,0.8s
H19K **Roundabout Mou** 82.51 21 P P 02 58 13.3 +0.7
baz=240,SNR=21
G19K **Purcell Mounta** 82.60 21 IAmb IAmb 02 58 14.8
comp=Z,26nm,0.9s
G19K **Purcell Mounta** 82.60 21 P P 02 58 13.7 +0.6
baz=239,SNR=30
C18K **Utukok River** 82.63 18 P P 02 58 13.3 +0.1
baz=235
J20K **Nowinta River** 82.71 23 IAmb IAmb 02 58 15.4
comp=Z,22nm,0.8s
J20K **Nowinta River** 82.71 23 P P 02 58 14.3 +0.6
baz=242
F19K **Shaleruckik Mo** 82.72 20 P P 02 58 13.6 0.0
baz=238
SLKM **Skilak Lake** 82.75 27 IAmb IAmb 02 58 14.3
comp=Z,17nm,0.6s
SKT **Skwentna** 82.78 25 IAmb IAmb 03 00 49.0
comp=Z,49nm,2.0s
SKT **Skwentna** 82.78 25 P P 02 58 13.7 -0.4
baz=245
I20K **Naaghedeneel** 82.88 22 P P 02 58 14.1 -0.4
baz=242
PPLA **Purkeypile** 82.91 24 IAmb IAmb 02 58 15.3
comp=Z,11nm,0.5s
PPLA **Purkeypile** 82.91 24 P P 02 58 14.7 -0.2
baz=244
SEW **Seward** 82.94 28 P P 02 58 15.1 +0.2
baz=247
O22K **Cooper Landing** 82.96 27 P P 02 58 15.2 +0.2
baz=246
H20K **Anotleneega Mo** 83.06 22 P P 02 58 15.8 +0.3
baz=241
RC01 **Rabbit Creek A** 83.20 27 P P 02 58 15.9 -0.4
RC01 **Rabbit Creek A** 83.20 27 P P 02 58 15.9 -0.4
baz=246,SNR=8.1
E19K **Redstone River** 83.23 19 IAmb IAmb 02 58 17.9
comp=Z,26nm,0.8s
CHUM **Lake Minchumin** 83.29 23 P P 02 58 17.0 +0.3
baz=244,SNR=25
M22K **Willow** 83.30 26 P P 02 58 15.3 -1.4
M22K **Willow** 83.30 26 P P 02 58 15.9 -0.8
baz=246
L22K **Petersville** 83.34 25 P P 02 58 15.7 -1.4
L22K IAmb IAmb 02 58 16.8
comp=Z,24nm,0.6s
C19K **Lookout Ridge** 83.37 17 IAmb IAmb 02 58 19.0
comp=Z,32nm,1.0s
C19K **Lookout Ridge** 83.37 17 P P 02 58 17.3 +0.2
baz=236
D19K **Kuna River** 83.49 18 IAmb IAmb 02 58 19.7
comp=Z,35nm,1.2s
D19K **Kuna River** 83.49 18 P P 02 58 18.2 +0.5
baz=238,SNR=24
CUT **Chulitna** 83.50 25 P P 02 58 17.3 -0.5
baz=246,SNR=5.8
F20K **Avaraart Lake** 83.53 20 IAmb IAmb 02 58 19.5
comp=Z,14nm,0.7s
F20K **Avaraart Lake** 83.53 20 P P 02 58 18.6 +0.8
baz=240,SNR=22
A19K **Wainwright** 83.57 16 P P 02 58 18.4 +0.5
baz=235
NRIK **Noril'sk** 83.65 343 P P 02 58 18.4 0.0
comp=Z,24nm,0.7s,baz=118,slow=5.7,SNR=37
comp=Z,24nm,0.7s
PMR **Palmer** 83.67 26 IAmb IAmb 02 58 18.9
comp=Z,16nm,0.8s
PMR **Palmer** 83.67 26 P P 02 58 18.2 -0.4
baz=247,SNR=6.8
IMAR **Indian Mountai** 83.70 21 P P 02 58 19.0 +0.2
KTH **Kantishna Hill** 83.71 24 IAmb IAmb 02 58 19.0
comp=Z,24nm,0.8s
GHO **Glory Hole Cre** 83.83 26 IAmb IAmb 02 58 19.7
comp=Z,24nm,1.0s
P23K **Montague Islan** 83.85 28 P P 02 58 19.8 +0.2
baz=248
KNK **Knik Glacier** 83.89 27 P P 02 58 19.4 -0.4
KNK IAmb IAmb 02 58 20.7
comp=Z,35nm,1.0s
KNK **Knik Glacier** 83.89 27 P P 02 58 19.8 0.0
baz=248,SNR=8.3
H21K **Melozitna Rive** 83.90 22 P P 02 58 20.0 +0.2
baz=243
BPAW **Bear Paw Mtn.** 83.91 24 P P 02 58 19.3 -0.6
BPAW IAmb IAmb 02 58 20.8
comp=Z,21nm,1.1s
BPAW **Bear Paw Mtn.** 83.91 24 P P 02 58 19.8 -0.1
baz=245,SNR=8.0
TRF **Thorofare Moun** 83.92 24 IAmb IAmb 02 58 21.9
comp=Z,23nm,0.9s
TRF **Thorofare Moun** 83.92 24 P P 02 58 19.5 -0.7
baz=246,SNR=13
E20K **Nigu River** 83.98 19 P P 02 58 20.8 +0.6
baz=240
G21K **Allakaket** 84.04 21 P P 02 58 20.9 +0.4
baz=242
D20K **Etivluk River** 84.08 18 P P 02 58 21.0 +0.4
baz=239
SML **Sawmill** 84.10 26 P P 02 58 20.9 -0.1
baz=248,SNR=11
Q23K **Middleton Isla** 84.14 29 P P 02 58 21.6 +0.6
baz=250
GLI **Glacier Island** 84.31 27 P P 02 58 21.8 -0.1
GLI **Glacier Island** 84.31 27 P P 02 58 22.0 0.0
baz=249
M23K **Glacier View** 84.36 26 P P 02 58 21.8 -0.4
baz=248,SNR=6.3
F21K **Alatna River** 84.38 20 P P 02 58 22.2 0.0
baz=242
WAT1 **Susitna Watana** 84.40 25 P P 02 58 22.0 -0.4
baz=247
MLY **Manley** 84.41 23 P P 02 58 22.3 -0.2
MLY IAmb IAmb 02 58 23.4
comp=Z,20nm,0.6s
MLY **Manley** 84.41 23 P P 02 58 22.2 -0.2
baz=245,SNR=8.7
BVA0 **Borovoye Array** 84.48 324 *i* P P 02 58 23.3 +0.3
BVAR **Borovoye Array** 84.48 324 P P 02 58 22.9 0.0
comp=Z,13nm,0.6s,baz=111,slow=6.3,SNR=40
comp=Z,13nm,0.6s
BORK **Borovoye** 84.52 324 P 02 58 22.7 -0.5
BORK IAmb IAmb 02 58 24.3
comp=Z,19nm,0.8s
BORK **Borovoye** 84.52 324 *ce*P P 02 58 23.7 +0.5
BORK pmax pmax
comp=Z,52nm,1.7s
BORK **Borovoye** 84.52 324 P P 02 58 23.6 +0.5
H22K **Ishtalitna Cre** 84.53 22 P P 02 58 23.2 +0.2
baz=244
SCM **Sheep Creek Mo** 84.55 26 IAmb IAmb 02 58 24.1
comp=Z,34nm,0.9s
SCM **Sheep Creek Mo** 84.55 26 P P 02 58 23.4 +0.1
baz=248,SNR=7.5
B20K **Meade River** 84.58 17 P P 02 58 23.4 +0.3
baz=239
MCK **McKinley** 84.59 24 P P 02 58 22.6 -0.8
baz=247,SNR=26
WAT6 **Susitna Watana** 84.65 26 P P 02 58 23.5 -0.3
baz=248,SNR=9.7
E21K **Killik River** 84.79 19 IAmb IAmb 02 58 25.6
comp=Z,13nm,0.7s
E21K **Killik River** 84.79 19 P P 02 58 24.7 +0.4
baz=242
QSPA **South Pole Qui** 84.80 180 P P 02 58 23.7 -0.8
comp=Z,4.5nm,0.8s,baz=349,slow=4.6,SNR=18
QSPA LR LR 03 36 27.2
comp=Z,72nm,18.3s,baz=281,slow=36
comp=Z,4.5nm,0.8s
QSPA **South Pole Qui** 84.80 180 P 02 58 24.2 -0.3
QSPA IAmb IAmb 02 59 14.7
comp=Z,38nm,1.8s
QSPA **South Pole Qui** 84.80 180 P P 02 58 24.5 0.0
QSPA pP **pP** 02 58 49.2 -0.9
QSPA sP **sP** 02 58 58.5 -2.0
C21K **Knifeblade Rid** 84.87 18 P P 02 58 25.1 +0.5
baz=241
NEA2 **Nenana** 84.88 23 IAmb IAmb 02 58 24.8
comp=Z,19nm,0.6s
NEA2 **Nenana** 84.88 23 P P 02 58 24.3 -0.5
baz=247,SNR=18
G22K **Bettles** 84.93 21 P P 02 58 25.2 +0.3
baz=244
F22K **John River** 84.96 20 P P 02 58 25.5 +0.4
baz=244
I23K **Minto, Yukon-K** 84.99 23 P P 02 58 25.3 0.0
baz=246,SNR=8.0
DHY **Denali Highway** 84.99 25 P P 02 58 25.3 -0.2
baz=248,SNR=48
DIV **Divide** 85.00 27 IAmb IAmb 02 58 26.6
comp=Z,32nm,0.8s
KLU **Klutina** 85.06 27 IAmb IAmb 02 58 27.0
comp=Z,18nm,0.8s
KLU **Klutina** 85.06 27 P P 02 58 26.1 +0.3
baz=250,SNR=7.5
B21K **Ikpikpuk River** 85.15 18 IAmb IAmb 02 58 28.8
comp=Z,25nm,0.7s
B21K **Ikpikpuk River** 85.15 18 P P 02 58 26.7 +0.7
baz=241
M24K **Tolsona, Glenn** 85.16 26 P P 02 58 26.9 +0.6
baz=250,SNR=9.8
H23K **Yukon River** 85.19 22 IAmb IAmb 02 58 27.5
comp=Z,14nm,0.8s
H23K **Yukon River** 85.19 22 P P 02 58 26.4 +0.1
baz=246
WRH **Wood River Hil** 85.22 24 IAmb IAmb 02 58 26.4
comp=Z,24nm,0.8s
KAIM **Kayak Island** 85.23 29 P P 02 58 26.9 +0.4
baz=251
E22K **Anaktuvuk Pass** 85.36 20 IAmb IAmb 02 58 28.6
comp=Z,20nm,1.1s
E22K **Anaktuvuk Pass** 85.36 20 P P 02 58 27.8 +0.7
baz=244
G23K **Bananza Creek** 85.38 21 IAmb IAmb 02 58 28.6
comp=Z,18nm,0.8s
G23K **Bananza Creek** 85.38 21 P P 02 58 27.9 +0.6
baz=246,SNR=23
A21K **Barrow** 85.42 16 P P 02 58 27.6 +0.4
baz=239,SNR=5.6
COLA **College** 85.47 23 *i* P P 02 58 26.6 -1.0
COLA pmax pmax
comp=Z,20nm,0.7s
COLA **College** 85.47 23 P P 02 58 27.7 0.0
baz=248
BMRM **Bremner River** 85.48 28 IAmb IAmb 02 58 28.8
comp=Z,32nm,1.0s
BMRM **Bremner River** 85.48 28 P P 02 58 28.4 +0.5
baz=251,SNR=5.2
COLD **Coldfoot** 85.53 21 IAmb IAmb 02 58 29.6
comp=Z,17nm,0.9s
COLD **Coldfoot** 85.53 21 P P 02 58 28.3 +0.3
baz=245,SNR=20
HDA **Harding Lake** 85.66 24 IAmb IAmb 02 58 29.3
comp=Z,15nm,0.6s
HDA **Harding Lake** 85.66 24 P P 02 58 27.8 -0.8
baz=249,SNR=19
N25K **Chitina, Valde** 85.69 27 P P 02 58 29.1 +0.1
baz=251

A22K	Sinclair Lake	85.72	17	P		P	02 58 29.0	+0.3
	baz=241,SNR=12							
POKR	Poker Plat Res	85.73	23	P		P	02 58 28.9	-0.1
	baz=248							
PAX	Paxson	85.77	26	IAmb		IAmb	02 58 30.5	
	comp=Z,9.8nm,0.6s							
PAX	Paxson	85.77	26	P		P	02 58 29.3	0.0
	baz=250,SNR=12							
ILAR	Eielson Array	85.81	24	P		P	02 58 27.7	-1.7
	comp=Z,18nm,0.6s,baz=258,slow=5.3,SNR=214							
	comp=Z,18nm,0.6s							
H24K	Noodor Dome	85.83	22	IAmb		IAmb	02 58 30.5	
	comp=Z,13nm,0.8s							
H24K	Noodor Dome	85.83	22	P		P	02 58 29.8	+0.3
	baz=248							
BGLC	Bering Glacier	85.83	29	P		P	02 58 29.9	+0.3
	baz=252							
B22K	Teshekpuk Lake	85.86	17	IAmb		IAmb	02 58 31.5	
	comp=Z,26nm,1.0s							
B22K	Teshekpuk Lake	85.86	17	P		P	02 58 29.8	+0.3
	baz=242							
K24K	Donnelly Dome	85.92	25	IAmb		IAmb	02 58 31.4	
	comp=Z,20nm,0.9s							
K24K	Donnelly Dome	85.92	25	P		P	02 58 30.2	+0.2
	baz=250,SNR=7.9							
GLB	Gilahina Butte	86.00	27	IAmb		IAmb	02 58 31.4	
	comp=Z,20nm,0.9s							
E23K	Chandalar	86.08	20	IAmb		IAmb	02 58 32.4	
	comp=Z,15nm,0.8s							
E23K	Chandalar	86.08	20	P		P	02 58 31.5	+0.8
	baz=246,SNR=23							
CRQM	Cirque	86.10	28	IAmb		IAmb	02 58 32.3	
	comp=Z,23nm,0.7s							
D23K	Nanushuk River	86.10	19	IAmb		IAmb	02 58 32.9	
	comp=Z,22nm,0.8s							
D23K	Nanushuk River	86.10	19	P		P	02 58 31.8	+1.1
	baz=245							
CRQE	Cirque	86.12	28	P		P	02 58 31.5	+0.3
	baz=252,SNR=7.0							
TGL	Tana Glacier	86.24	28	IAmb		IAmb	02 58 32.9	
	comp=Z,20nm,0.8s							
RIDG	Independent Ri	86.29	25	P		P	02 58 31.7	-0.2
	baz=251,SNR=13							
HRA	Herat	86.29	305	IAmb		IAmb	02 58 34.3	
	comp=Z,16nm,0.9s							
G24K	Hadweenzic Riv	86.30	22	IAmb		IAmb	02 58 33.1	
	comp=Z,15nm,0.8s							
G24K	Hadweenzic Riv	86.30	22	P		P	02 58 32.1	+0.3
	baz=248,SNR=15							
TOLK	Toolik Lake Re	86.33	20	P		P	02 58 32.6	+0.7
	baz=246,SNR=11							
MCARA	McCarthy VSAT	86.34	27	P		P	02 58 32.5	+0.4
	baz=252							
J25K	Salcha River,	86.37	24	IAmb		IAmb	02 58 32.6	
	comp=Z,31nm,1.0s							
J25K	Salcha River,	86.37	24	P		P	02 58 31.5	-0.7
	baz=250,SNR=26							
F24K	Squaw Lake	86.47	21	IAmb		IAmb	02 58 34.4	
	comp=Z,23nm,0.8s							
F24K	Squaw Lake	86.47	21	P		P	02 58 33.5	+0.9
	baz=248,SNR=40							
E24K	Your Creek	86.47	20	P		P	02 58 32.8	+0.2
	baz=247							
MESA	MESA	86.49	29	P		P	02 58 33.4	+0.4
	baz=253							
C23K	Itkillik River	86.49	18	P		P	02 58 33.4	+0.8
	baz=245							
DOT	Dot Lake	86.59	25	P		P	02 58 32.9	-0.4
PRP	Porcupine Dome	86.62	23	P		P	02 58 33.9	+0.4
	baz=250							
M26K	Nabesna, AK	86.66	26	P		P	02 58 34.1	+0.4
	baz=252							
L26K	Log Cabin Wild	86.70	26	P		P	02 58 33.9	+0.1
L26K	Log Cabin Wild	86.70	26	P		P	02 58 34.3	+0.5
	baz=252,SNR=16							
SCRK	Sand Creek	86.73	25	P		P	02 58 34.2	+0.1
	baz=251,SNR=12							
GRNC	Granite Creek	86.74	28	P		P	02 58 34.2	-0.1
GRNC				IAmb		IAmb	03 00 38.9	
	comp=Z,56nm,1.8s							
D24K	Happy Valley	86.78	19	IAmb		IAmb	02 58 36.2	
	comp=Z,35nm,1.1s							
D24K	Happy Valley	86.78	19	P		P	02 58 35.2	+1.2
	baz=247							
G25K	Bearman Lake	86.84	22	P		P	02 58 34.9	+0.6
	baz=249							
BARN	Barnard Glacie	86.88	28	P		P	02 58 35.7	+0.8
CTG	Chitna Glacier	87.00	28	P		P	02 58 35.9	+0.4
	baz=254,SNR=11							
CTGM	Chitina Glacie	87.00	28	P		P	02 58 35.4	-0.1
C24K	Franklin Bluff	87.05	19	P		P	02 58 36.0	+0.7
	baz=247							
FYU	Fort Yukon	87.09	22	P		P	02 58 35.3	-0.3
M27K	Edge Creek, AK	87.15	27	P		P	02 58 36.7	+0.5
	baz=253							
PINM	Pinnacle	87.28	29	P		P	02 58 37.6	+0.9
	baz=255							
F25K	Christian Rive	87.30	21	P		P	02 58 37.3	+0.7
	baz=250,SNR=12							
L27K	Beaver Creek,	87.37	26	IAmb		IAmb	02 58 38.4	
	comp=Z,14nm,0.8s							
L27K	Beaver Creek,	87.37	26	P		P	02 58 37.6	+0.5
	baz=253							
BCAR	Beaver Creek A	87.39	26			P	02 58 37.6	+0.4
I26K	Coal Creek Min	87.49	24	P		P	02 58 38.2	+0.7
	baz=252							
O28M	Mount Upton	87.49	28	IAmb		IAmb	02 58 39.3	
	comp=Z,22nm,1.1s							
O28M	Mount Upton	87.49	28	P		P	02 58 38.4	+0.4
	baz=255							
E25K	Arctic Village	87.50	21	P		P	02 58 38.5	+0.9
	baz=250,SNR=14							
K27K	Chicken	87.55	25	IAmb		IAmb	02 58 39.7	
	comp=Z,26nm,0.8s							
BVCY	Beaver Creek	87.62	27	P		P	02 58 39.0	+0.7
	baz=254,SNR=13							
BMAR	Burnt Mountain	87.62	21			P	02 58 39.2	+1.0
YUK3	Moose Creek	87.63	27	P		P	02 58 38.8	+0.3
	baz=255,SNR=13							
D25K	Kavik River	87.66	19	IAmb		IAmb	02 58 39.7	
	comp=Z,25nm,0.9s							
D25K	Kavik River	87.66	19	P		P	02 58 38.7	+0.4
	baz=249,SNR=30							
G26K	Porcupine Rive	87.76	22	P		P	02 58 39.8	+1.0
	baz=251,SNR=28							
YUK8	Steele Glacier	87.82	28	P		P	02 58 40.3	+0.7
	baz=255,SNR=6.0							
F26K	Sheenjek River	87.87	21	P		P	02 58 40.6	+1.3
	baz=251							
O29M	Mount Kennedy	88.15	29	IAmb		IAmb	02 58 42.6	
	comp=Z,17nm,0.7s							
O29M	Mount Kennedy	88.15	29	P		P	02 58 41.7	+0.8
	baz=256							
I27K	Kandik River	88.19	24	IAmb		IAmb	02 58 42.5	
	comp=Z,22nm,1.0s							
I27K	Kandik River	88.19	24	P		P	02 58 41.7	+0.7
	baz=253							
C26K	Camden Bay	88.34	19	P		P	02 58 42.6	+1.1
	baz=250							
YUK4	Talbot Arm	88.36	28	P		P	02 58 43.0	+1.0
	baz=256,SNR=13							
YUK6	Outpost Mounta	88.40	28	P		P	02 58 42.7	+0.5
	baz=256							
H27K	Steamboat Moun	88.40	23	IAmb		IAmb	02 58 43.8	
	comp=Z,22nm,0.9s							
H27K	Steamboat Moun	88.40	23	P		P	02 58 42.9	+0.9
	baz=254,SNR=22							
G27K	Doyon Strip	88.52	22	P		P	02 58 43.2	+0.7
	baz=253,SNR=11							
C27K	Jago River	88.64	19	IAmb		IAmb	02 58 45.0	
	comp=Z,12nm,0.7s							
C27K	Jago River	88.64	19	P		P	02 58 43.9	+1.0
	baz=251,SNR=18							
M29M	Somme Creek	88.71	27	IAmb		IAmb	02 58 45.0	
	comp=Z,17nm,0.8s							
M29M	Somme Creek	88.71	27	P		P	02 58 43.9	+0.4
	baz=256							
HYT	Haines Junctio	88.78	29	IAmb		IAmb	02 58 45.5	
	comp=Z,18nm,0.9s							
HYT	Haines Junctio	88.78	29	P		P	02 58 44.5	+0.6
	baz=257,SNR=10							
S31K	Pelican	88.81	32	P		P	02 58 44.7	+0.8
	baz=258							
I28M	Miner Creek	88.82	24	IAmb		IAmb	02 58 45.2	
	comp=Z,45nm,1.9s							
I28M	Miner Creek	88.82	24	P		P	02 58 44.6	+0.7
	baz=255,SNR=10							
P30M	Million Dollar	88.89	29	P		P	02 58 45.3	+0.9
	baz=258							
E27K	Coleen River	88.94	21	IAmb		IAmb	02 58 46.2	
	comp=Z,18nm,1.0s							
E27K	Coleen River	88.94	21	P		P	02 58 45.1	+0.8
	baz=253,SNR=28							
L29M	L29M	89.01	26	P		P	02 58 45.5	+0.7
	baz=257							
N30M	Aishikik Lake	89.12	28	IAmb		IAmb	02 58 46.8	
	comp=Z,9.5nm,0.7s							
N30M	Aishikik Lake	89.12	28	P		P	02 58 45.8	+0.4
	baz=258							
SIT	Sitka	89.12	33	P		P	02 58 46.2	+0.9
	baz=259							
J29N	Klondike Camp	89.28	25	IAmb		IAmb	02 58 48.0	
	comp=Z,14nm,1.0s							
J29N	Klondike Camp	89.28	25	P		P	02 58 46.8	+0.7
	baz=257							
F28M	Old Crow	89.41	22	P		P	02 58 47.5	+0.9
	baz=255,SNR=7.6							
K29M	Barlow Dome	89.44	26	P		P	02 58 47.7	+0.8
	baz=257							
O30N	Mendenhall	89.45	29	IAmb		IAmb	02 58 47.8	
	comp=Z,13nm,1.1s							
O30N	Mendenhall	89.45	29	P		P	02 58 47.4	+0.4
	baz=258,SNR=5.4							
D27M	Malcolm River	89.45	20	P		P	02 58 47.7	+0.8
	baz=254							
I29M	Ogilvie Camp,	89.46	24	P		P	02 58 47.1	+0.3
	baz=256,SNR=10							
M30M	Minto, Yukon	89.49	27	P		P	02 58 47.5	+0.4
	baz=258,SNR=7.8							
SKAG	Skagway	89.57	30	P		P	02 58 48.2	+0.8
	baz=259							
S32K	Killisnoo	89.59	32	P		P	02 58 48.2	+0.7
	baz=260							
H29M	Whitestone	89.64	23	IAmb		IAmb	02 59 52.8	
	comp=Z,29nm,1.6s							
H29M	Whitestone	89.64	23	P		P	02 58 48.2	+0.5
	baz=256							
N31M	Braeburn, Yuko	89.74	28	P		P	02 58 48.9	+0.6
N31M				IAmb		IAmb	02 58 49.6	
	comp=Z,12nm,0.7s							
N31M	Braeburn, Yuko	89.74	28	P		P	02 58 48.9	+0.6
	baz=259							
R32K	Eaglecrest	89.77	31	P		P	02 58 48.9	+0.4
	baz=260							
E28M	Babbage River	89.78	21	P		P	02 58 48.9	+0.6
	baz=255							
G29M	Pine Creek	89.93	23	IAmb		IAmb	02 58 50.4	
	comp=Z,18nm,1.2s							
G29M	Pine Creek	89.93	23	P		P	02 58 49.8	+0.7
	baz=257,SNR=9.3							
WHY	Whitehorse	90.01	29	IAmb		IAmb	02 58 50.8	
	comp=Z,16nm,0.7s							
WHY	Whitehorse	90.01	29	P		P	02 58 50.0	+0.4
	baz=260							
CRAG	Craig	90.06	34	P		P	02 58 50.1	+0.3
	baz=261							
MAYO	Mayo, Yukon	90.10	26	P		P	02 58 49.0	-0.9
MAYO	Mayo, Yukon	90.10	26	P		P	02 58 50.3	+0.4
	baz=259							
J30M	Hart River	90.11	25	IAmb		IAmb	02 58 51.5	
	comp=Z,12nm,0.8s							
J30M	Hart River	90.11	25	P		P	02 58 50.4	+0.3
	baz=258,SNR=14							
AB31	Akbulak array	90.14	319	P		P	02 58 49.1	-1.3
AB31	Akbulak array	90.14	319	*i* P		P	02 58 48.9	-1.5
ABKAR	Akbulak array	90.14	319			P	02 58 49.1	-1.3
U33K	Whale Pass	90.16	34	P		P	02 58 49.4	-0.8
I30M	Mount Dempster	90.22	24	P		P	02 58 50.8	+0.3
	baz=258							
D28M	Stokes Point	90.24	20	P		P	02 58 51.1	+0.7
	baz=256							
E29M	Blow River	90.32	21	P		P	02 58 51.0	+0.2
	baz=257							
EPYK	Eagle Plains	90.32	23	P		P	02 58 51.2	+0.3
	baz=258,SNR=9.9							
P32M	Atlin	90.40	30	P		P	02 58 51.3	-0.1
P32M	Atlin	90.40	30	P		P	02 58 51.7	+0.3
	baz=260							
M31M	Drury Creek, Y	90.52	28	P		P	02 58 52.2	+0.4
	baz=260							
WRAK	Wrangell Islan	90.63	34	P		P	02 58 52.4	0.0
	baz=262							
G30M	tAoh Zraii Nji	90.64	23	P		P	02 58 52.4	0.0
	baz=258,SNR=7.0							
V35K	Ketchikan	90.89	35	P		P	02 58 53.6	0.0
	baz=262							
F30M	Barrier River	90.93	22	IAmb		IAmb	02 58 54.5	
	comp=Z,16nm,1.1s							
F30M	Barrier River	90.93	22	P		P	02 58 54.0	+0.3
	baz=259,SNR=8.4							
P33M	Teslin, Yukon	90.94	30	P		P	02 58 54.0	0.0
P33M				IAmb		IAmb	02 58 54.1	
	comp=Z,20nm,1.7s							
P33M	Teslin, Yukon	90.94	30	P		P	02 58 53.9	-0.1
	baz=261							
N32M	Quiet Lake	90.96	29	IAmb		IAmb	02 58 55.2	
	comp=Z,15nm,1.1s							
N32M	Quiet Lake	90.96	29	P		P	02 58 54.1	+0.2
	baz=261							
Q32M	Nakina River	91.04	31	P		P	02 58 54.8	+0.2
	baz=262							
H31M	Peel River	91.16	24	IAmb		IAmb	02 58 55.5	
	comp=Z,9.5nm,0.5s							
H31M	Peel River	91.16	24	P		P	02 58 55.1	+0.3
	baz=260,SNR=8.9							
G31M	Satah River	91.38	23	IAmb		IAmb	02 58 56.4	
	comp=Z,12nm,0.7s							
G31M	Satah River	91.38	23	P		P	02 58 55.5	-0.2
	baz=260,SNR=11							
S34M	Telegraph Cree	91.49	32	P		P	02 58 56.0	-0.4
	baz=263							
AKTO	Aktyubinsk	91.53	320	P		P	02 58 55.2	-1.6
	comp=Z,2.9nm,0.7s,baz=95,slow=3.6,SNR=8.4							
	comp=Z,2.9nm,0.7s							
AKTO	Aktyubinsk	91.53	320	P		P	02 58 55.0	-1.8
F31M	Tsiigehtchic	91.67	22	IAmb		IAmb	02 58 57.4	
	comp=Z,8.7nm,0.9s							
F31M	Tsiigehtchic	91.67	22	P		P	02 58 57.3	+0.3
	baz=261							
R33M	Jennings River	91.76	31	P		P	02 58 57.7	-0.1
	baz=263							
T35M	Bob Quinn	91.85	33	P		P	02 58 58.3	+0.1
	baz=263							
INK	Inuvik	91.89	22	IAmb		IAmb	02 58 58.5	
	comp=Z,11nm,1.1s							
INK	Inuvik	91.89	22	P		P	02 58 58.2	+0.2
	baz=261							
ARTI	Arti	91.95	326	P		P	02 58 56.9	-1.7
	comp=Z,1.6nm,0.4s,baz=45,slow=1.4,SNR=4.4							
ARTI				LR		LR	03 43 18.2	
	comp=Z,20nm,18.1s,baz=28,slow=37							
	comp=Z,1.6nm,0.4s							
ARTI	Arti	91.95	326	IAmb		IAmb	03 01 31.4	
	comp=Z,27nm,1.8s							
ARTI	Arti	91.95	326	*d i* P		P	02 58 56.5	-2.1
ARTI							03 02 35.8	
ARTI				S		SKSac	03 09 19.2	-3.6
ARTI				pmax		pmax		
	comp=Z,10.0nm,1.5s							
MMPY	Sheldon Lake,	92.02	27	P		P	02 58 59.3	+0.5
	baz=263							
DLBC	Dease Lake	92.13	32	P		P	02 58 59.9	+0.4
	baz=264							
WTLY	Watson Lake, Y	92.93	30	P		P	02 59 03.2	+0.1
WTLY	Watson Lake, Y	92.93	30	P		P	02 59 04.0	+0.9
	baz=265							
TGTN	Hyland Airport	93.31	29	P		P	02 59 05.0	+0.2
	baz=265							
A36M	Sachs Harbour	95.04	18	P		P	02 59 12.6	+0.2
	baz=269							
KOTAN	Kotaneelee Air	95.30	30	P		P	02 59 13.9	0.0
	baz=269							
C36M	Paulatuk	95.40	21	P		P	02 59 14.1	-0.1
	baz=270							
BELG	Belogornoye	98.09	322	P		P	02 59 25.4	-1.3
	comp=Z,17nm,0.8s,baz=89,slow=6.4,SNR=3.5							
NVAR	Mina Array Bea	99.04	52	P		Pdif	02 59 30.9	-0.7
	comp=Z,0.6nm,0.9s,baz=289,slow=5.3,SNR=3.8							
	comp=Z,0.6nm,0.9s							
YKA	Yellowknife Ar	99.72	28	P		Pdif	02 59 33.1	-0.7
	comp=Z,0.6nm,0.7s,baz=281,slow=5.0,SNR=11							
YKA				PP		PP	03 03 36.1	-2.9
	comp=Z,0.2nm,0.3s,baz=278,slow=8.8,SNR=7.2							
YKA				PKKPbc		PKKPbc	03 15 54.8	-2.4
	comp=Z,0.1nm,0.3s,baz=85,slow=2.0,SNR=3.9							
	comp=Z,0.6nm,0.7s							
OBN	Obninsk	104.28	326	*i* P		Pdif	02 59 53.2	-1.0
OBN				*e*			03 04 14.1	
OBN				pmax		pmax		
	comp=Z,6.0nm,1.2s							
PDAR	Pinedale Array	105.39	47	PKiKP		PKiKP	03 04 10.9	-2.2
	comp=Z,0.2nm,0.6s,baz=285,slow=4.1,SNR=2.5							
FINES	FINESS Array B	107.71	334	Pdiff		Pdif	03 00 06.7	-2.6
	comp=Z,3.5nm,1.0s,baz=78,slow=4.6,SNR=5.4							
FINES				PKiKP		PKiKP	03 04 16.0	-0.6
	comp=Z,3.5nm,0.8s,baz=67,slow=3.6,SNR=8.3							
AKASG	Malin Array Be	109.67	322	PKiKP		PKiKP	03 04 19.8	-0.7
	comp=Z,0.4nm,0.4s,baz=69,slow=1.7,SNR=4.2							
TXAR	Lajitas Array	111.77	61	PKiKP		PKiKP	03 04 23.5	-1.9
	comp=Z,0.1nm,0.4s,baz=307,slow=2.9,SNR=5.6							
LANS	Liptovska Anna	116.12	323	*e*P		Pdif	03 00 47.5	+0.4
LANS	Liptovska Anna	116.12	323	*e*PDIFF		Pdif	03 00 47.5	+0.4
LANS	Liptovska Anna	116.12	323	*e*PDIFF		Pdif	03 00 47.5	+0.4
STEB	Steborice	116.78	324	*e*PKPDF		PKiKP	03 04 34.8	+0.6
MORC	Moravsky Berou	116.99	324	*e*PKP		PKiKP	03 04 35.1	+0.4
MAUC	Maruska	117.00	324	*e*PKPDF		PKiKP	03 04 35.6	+0.9
KRLC	Kraliky	117.29	325	*e*PKPDF		PKiKP	03 04 35.6	+0.3
KRLC	Kraliky	117.29	325	*e*PKiKP		PKiKP	03 04 35.6	+0.3
JAVC	Velka Javorina	117.31	323	*e*PKP		PKiKP	03 04 36.7	+1.3
DPC	Dobruska-Polom	117.43	325	*e*PKPDF		PKiKP	03 04 36.4	+0.9
DPC	Dobruska-Polom	117.43	325	*e*PKiKP		PKiKP	03 04 36.4	+0.9
VRAC	Vranov	117.75	324	*e*PKP		PKiKP	03 04 36.6	+0.5
KRUC	Moravsky	117.98	324	*e*PKP		PKiKP	03 04 36.6	0.0
PVCC	Panska Ves	118.33	326	*e*PKPDF		PKiKP	03 04 37.9	+0.7
PVCC	Panska Ves	118.33	326	*e*PKiKP		PKiKP	03 04 37.9	+0.7
PRU	Pruhonice	118.61	326	*e*PKPDF		PKiKP	03 04 37.9	+0.2
PRU	Pruhonice	118.61	326	*e*PKiKP		PKiKP	03 04 37.9	+0.2
RONA	Rosalia, Austr	118.65	323	*i* PKP		PKPdf	03 04 37.9	0.0
	comp=Z,1.0nm,0.5s							
CLL	Collm	118.79	327	*i* PKiKP		PKiKP	03 04 38.0	0.0
CLL	Collm	118.79	327	*i* PKiKP		PKiKP	03 04 38.0	0.0
CONA	Conrad Observa	118.81	323	*i* PKP		PKPdf	03 04 38.1	-0.1
	comp=Z,1.7nm,0.5s							
KHC	Kasperske Hory	119.58	325	*e*PKPDF		PKiKP	03 04 40.3	+0.6
KHC	Kasperske Hory	119.58	325	*e*PKiKP		PKiKP	03 04 40.3	+0.6
GERES	GERESS Array B	119.64	325	PKP		PKPdf	03 04 39.8	-0.1
	comp=Z,1.6nm,0.3s,baz=64,slow=2.3,SNR=23							
NKC	Novy Kostel	119.65	327	*e*PKPDF		PKiKP	03 04 40.1	+0.3
NKC	Novy Kostel	119.65	327	*e*PKiKP		PKiKP	03 04 40.1	+0.3
MOA	Molln	119.80	323	*i* PKP		PKPdf	03 04 39.8	-0.3
	comp=Z,1.2nm,0.4s							
BIOA	Bad Ischl, Aus	120.24	324	*i* PKP		PKPdf	03 04 40.4	-0.6
	comp=Z,1.6nm,0.4s							
OBKA	Obir	120.25	322	*i* PKP		PKPdf	03 04 40.7	-0.4
	comp=Z,0.6nm,0.4s							
BOJS	Bojanci	120.27	321	*i* PKPdf		PKiKP	03 04 41.6	+0.5
LJU	Ljubljana	120.48	322	*i* PKPdf		PKiKP	03 04 41.9	+0.4
CEY	Cerknica	120.68	321	*i* PKPdf		PKiKP	03 04 42.1	+0.1
KBA	Koelnbreinsper	120.72	323	*i* PKP		PKPdf	03 04 41.3	-0.8
	comp=Z,1.0nm,0.3s,SNR=5.1							
LESA	Schwarzleotal	120.94	324	*i* PKP		PKPdf	03 04 41.9	-0.5
	comp=Z,3.1nm,0.5s							
ABTA	Abfaltersbach	121.38	323	*e*PKP		PKPdf	03 04 42.8	-0.5
	comp=Z,2.2nm,0.5s							
WATA	Walderalm	121.63	324	*e*PKP		PKPdf	03 04 43.6	-0.2
	comp=Z,3.2nm,0.5s							
WTTA	Wattenberg	121.64	324	*e*PKiKP		PKPdf	03 04 43.7	-0.2
	comp=Z,5.6nm,0.4s							
MOTA	Moosalm	121.91	324	*e*PKP		PKPdf	03 04 44.0	-0.3
	comp=Z,5.2nm,0.4s,SNR=12							
SQTA	Sankt Quirin	121.91	324	*e*PKiKP		PKPdf	03 04 44.3	0.0
	comp=Z,5.3nm,0.8s							
RETA	Reutte	122.03	325	*i* PKP		PKPdf	03 04 44.4	-0.1
	comp=Z,1.5nm,0.4s							
FETA	Feichten	122.29	324	*i* PKiKP		PKiKP	03 04 45.3	0.0
	comp=Z,2.8nm,0.6s,SNR=5.8							
DAVA	Damuels	122.64	325	*i* PKiKP		PKiKP	03 04 46.1	+0.1
	comp=Z,5.4nm,0.4s							
AQU	L'Aquila	122.86	318	PKP		PKiKP	03 04 47.1	+0.7
TUE	Stuetta	123.39	324	PKP		PKiKP	03 04 47.4	-0.1
EKA	Eskdalemuir Ar	123.55	338	PKP		PKPdf	03 04 46.5	-0.5
	comp=Z,1.7nm,0.4s,baz=33,slow=2.7,SNR=12							
BMRD	Maredsous	123.64	330	*d*PKP		PKiKP	03 04 47.9	+0.3
PLCA	Paso Flores	124.30	148	PKP		PKiKP	03 04 49.8	+0.4
	comp=Z,0.5nm,0.4s,baz=256,slow=8.4,SNR=5.4							
SCHQ	Schefferville	124.51	21	PKP		PKPdf	03 04 48.6	-0.3
	comp=Z,1.8nm,0.6s,baz=270,slow=2.0,SNR=6.4							
KEST	Kesra	128.59	312	PKP		PKiKP	03 04 58.3	+0.2
	comp=Z,3.7nm,0.9s,baz=37,slow=3.0,SNR=10							
ESDC	Sonseca Array	135.24	325	PKP		PKPdf	03 05 09.9	+0.1
	comp=Z,0.3nm,0.4s,baz=28,slow=2.0,SNR=13							
ESDC				PP		PP	03 07 45.0	-0.9
	comp=Z,0.7nm,0.9s,baz=46,slow=6.3,SNR=5.3							
LPAZ	La Paz	141.54	124	PKhKP		PKPpre	03 05 17.1	
	comp=Z,1.9nm,0.7s,baz=253,slow=1.8,SNR=7.5							
TORD	Torodi Ar. Bea	142.21	285	PKhKP		PKPpre	03 05 17.3	
	comp=Z,3.1nm,1.0s,baz=74,slow=2.3,SNR=24							
TORD				SKPbc		SKPbc	03 08 52.8	+0.4
	comp=Z,1.2nm,0.9s,baz=70,slow=1.7,SNR=3.8							
SDV	Santo Domingo	145.22	82	PKPbc		PKPbc	03 05 28.0	-0.6
	comp=Z,9.2nm,0.8s,baz=286,slow=2.6,SNR=6.5							
SDV				SKPbc		SKPbc	03 08 58.8	-1.0
	comp=Z,5.4nm,0.8s,baz=242,slow=3.7,SNR=5.1						

AGEO	AgiosGiorgios,	0.88	60	P		Pg	02 53 08.2	+0.1
MG00	Magoula, Dorid	0.89	49	P		Pg	02 53 08.4	+0.2
ITM	Ithomi	0.93	134	P		Pg	02 53 09.1	+0.1
ITM	Ithomi	0.93	134	P		Pg	02 53 09.0	0.0
ITM				S		Sn	02 53 23.3	+0.1
NYDR	Nydri-Lefkada	0.93	341	P		Pb	02 53 09.0	-0.2
NYDR	Nydri-Lefkada	0.93	341	P		Pb	02 53 09.2	0.0
DRAG	Dragano-Lefkad	0.94	334	P		Pb	02 53 09.2	-0.2
DRAG	Dragano-Lefkad	0.94	334	P		Pb	02 53 09.2	-0.2
SERG	Sergoula	0.95	52	P		Pb	02 53 09.4	-0.2
GUR	Goura	0.99	84	P		Pb	02 53 09.9	-0.4
KALE	Kalithea	0.99	56	P		Pb	02 53 09.9	-0.4
KALE	Kalithea	0.99	56	P		Pb	02 53 10.3	0.0
ANC	Ano Chora	1.00	40	P		Pg	02 53 10.7	+0.2
ANX	Ano Chora	1.00	40	P		Pg	02 53 10.6	+0.2
LKD2	Lefkada island	1.01	340	P		Pb	02 53 10.5	-0.2
LKD2	Lefkada island	1.01	340	P		Pb	02 53 10.6	0.0
TSLK	Tsoukalades, L	1.05	341	P		Pb	02 53 11.3	+0.1
TSLK	Tsoukalades, L	1.05	341	P		Pg	02 53 11.5	+0.2
PYL	PYLOS	1.07	151	P		Pb	02 53 11.2	-0.3
AMPL	Ampelaki	1.09	5	P		Pn	02 53 12.2	-0.1
VLX	Vlachokerasia	1.12	114	P		Pg	02 53 12.9	+0.3
EVR	Evrytania	1.22	27	P		Pb	02 53 14.4	+0.3
MAKR	Makrakomi, Fth	1.43	34	P		Pb	02 53 17.9	+0.2
LTK	Loutraki	1.49	82	P		Pb	02 53 18.7	0.0
TETR	Tetrakomo, Epi	1.52	5	P		Pb	02 53 19.3	+0.1
AXAR	Agios Charalam	1.54	52	P		Pb	02 53 19.8	+0.1

*IDC **29** 03:00:48.1±2.0, 13°.38N×88°.96W, h0km, mb3.6/6, mbtmp3.7/7, ML2.9/1, MS3.2/5, Error ellipse: s-maj=57.0km s-min=29.6km az=35.0*

*CATAC **29** 03:00:53.9±0.4, 13°.N±2°×8°.9W±°, h24km±2km, M4.4/31, MLv4.4/31, Error ellipse: s-maj=4.7km s-min=2.4km az=34.8, confirmed*

*SNET **29** 03:00:55.7±2.0, 13°.12N×89°.22W, h23km, ML4.2, Presumed earthquake*

*GCG **29** 03:00:56.2±0.9, 13°.13N×89°.36W, h48km±9km, MD4.5, ML4.3, Presumed earthquake*

*NEIC **29** 03:00:57.3±2.1, 13°.22N±0°.06×89°.08W±0°.06, h75km±11km, mb4.2/14, Error ellipse: s-maj=10.2km s-min=6.6km az=221.0*

ISC 29 03:00:55.5±0.8, **13°.12N**±0°.05×**89°.19W**±0°.03, **h52**km±7km, **n110**, σ1§**77**/128, **mb4.1**/12, **MS3.2**/4, **3C-16D**, **El Salvador**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.39**	**340**	⇓P		**Pn**	**03 01 05.4**	**-0.2**
LALI				S		**Sn**	**03 01 12.8**	**0.0**
LALI	**Alcalda de L**	**0.39**	**340**	*e*P		**Pn**	**03 01 05.3**	**-0.4**
PANCS	**Alcalda de**	**0.48**	**1**	⇓P		**Pn**	**03 01 06.8**	**0.0**
PANCS				S		**Sn**	**03 01 16.1**	**+1.2**
TECO	**Alcaldia de Te**	**0.57**	**44**	⇓P		**Pn**	**03 01 08.0**	**+0.2**
TECO				S		**Sn**	**03 01 18.2**	**+1.6**
UTEC	**Universidad Te**	**0.57**	**359**	⇓P		**Pn**	**03 01 08.1**	**+0.3**
UTEC				S		**Sn**	**03 01 18.2**	**+1.5**
COEG	**Centro de Oper**	**0.58**	**31**	⇓P		**Pn**	**03 01 08.1**	**+0.3**
COEG				S		**Sn**	**03 01 18.4**	**+1.6**
COEG	**Centro de Oper**	**0.58**	**31**	*e*P		**Pn**	**03 01 08.2**	**+0.3**
SEMO	**Seminario San**	**0.58**	**357**	P		**Pn**	**03 01 08.0**	**+0.1**
SEMO				S		**Sn**	**03 01 18.2**	**+1.4**
JAYA	**Jayaque - finc**	**0.58**	**334**	⇓P		**Pn**	**03 01 07.5**	**-0.6**
JAYA				S		**Sn**	**03 01 16.4**	**-0.7**
JAYA	**Jayaque - finc**	**0.58**	**334**	*e*P		**Pn**	**03 01 07.5**	**-0.6**
JAYA				*e*S		**Sn**	**03 01 17.1**	**-0.1**
IGN	**Direccin Gen**	**0.59**	**2**	⇓P		**Pn**	**03 01 08.5**	**+0.5**
IGN				S		**Sn**	**03 01 18.4**	**+1.4**
IGN	**Direccin Gen**	**0.59**	**2**	*e*P		**Pn**	**03 01 08.5**	**+0.5**
UDBS	**Universidad Do**	**0.59**	**3**	⇓P		**Pn**	**03 01 08.4**	**+0.4**
UDBS				S		**Sn**	**03 01 18.8**	**+1.8**
UEES	**Universidad Ev**	**0.59**	**355**	⇓P		**Pn**	**03 01 08.2**	**+0.1**
UEES				S		**Sn**	**03 01 18.5**	**+1.4**
PMON	**Piamonte**	**0.60**	**348**	⇓P		**Pn**	**03 01 08.1**	**-0.1**
PMON				S		**Sn**	**03 01 18.7**	**+1.4**
BOQS	**Boqueron**	**0.61**	**352**	*i* P		**Pn**	**03 01 08.7**	**+0.2**
PAVA	**Las Pavas**	**0.64**	**23**	⇓P		**Pn**	**03 01 09.1**	**+0.5**
PAVA				S		**Sn**	**03 01 20.5**	**+2.3**
CEDA	**San Andres**	**0.70**	**343**	⇓P		**Pn**	**03 01 09.4**	**0.0**
CEDA	**San Andres**	**0.70**	**343**	*e*P		**Pn**	**03 01 09.4**	**0.0**
CEDA				*e*S		**Sn**	**03 01 20.8**	**+1.3**
SCLA	**Alcaldia de Sa**	**0.73**	**38**	⇓P		**Pn**	**03 01 10.6**	**+0.8**
SCLA				S		**Sn**	**03 01 23.6**	**+3.5**
CEVE	**Cerro Verde**	**0.82**	**329**	⇓P		**Pn**	**03 01 10.8**	**-0.3**
CEVE	**Cerro Verde**	**0.82**	**329**	*e*P		**Pn**	**03 01 11.3**	**+0.2**
CEVE				*e*S		**Sn**	**03 01 23.8**	**+1.3**
PACA	**Pacayal**	**0.91**	**68**	⇓P		**Pn**	**03 01 13.2**	**+1.0**
PACA				S		**Sn**	**03 01 27.5**	**+3.1**
UNIC	**Universidad Ca**	**0.92**	**338**	⇑P		**Pn**	**03 01 12.4**	**+0.1**
UNIC				S		**Sn**	**03 01 26.0**	**+1.3**
RANC	**El Ranchito**	**0.93**	**70**	P		**Pn**	**03 01 13.5**	**+1.1**
P5NO	**Presa 5 de nov**	**0.95**	**26**	⇓P		**Pn**	**03 01 13.5**	**+0.8**
P5NO				S		**Sn**	**03 01 27.9**	**+2.6**
LOAL	**Lomas de Alarc**	**1.04**	**327**	P		**Pn**	**03 01 14.0**	**+0.1**
LOAL				S		**Sn**	**03 01 28.7**	**+1.2**
LLGN	**La Laguna**	**1.06**	**13**	P		**Pn**	**03 01 15.0**	**+0.8**
LLGN				S		**Sn**	**03 01 30.9**	**+2.9**
SLOZ	**Alcaldia de Sa**	**1.07**	**327**	⇑P		**Pn**	**03 01 14.3**	**0.0**
SLOZ				S		**Sn**	**03 01 29.9**	**+1.8**
FAME	**Alcaldia de Sa**	**1.08**	**312**	⇑P		**Pn**	**03 01 13.1**	**-1.2**
LCND	**La Caada**	**1.28**	**82**	S		**Sn**	**03 01 14.8**	**+2.8**
MTO3	**Montecristo**	**1.28**	**352**	Pn		**Sn**	**03 01 17.4**	**+0.2**
MTO3				Sn		**Sn**	**03 01 34.6**	**+1.1**
MTO3	**Montecristo**	**1.28**	**352**	P		**Pn**	**03 01 17.5**	**+0.2**
MTO3				S		**Sn**	**03 01 35.5**	**+2.1**
MTO3	**Montecristo**	**1.28**	**352**	*e*P		**Pn**	**03 01 17.6**	**+0.3**
CNCH	**Conchagua**	**1.33**	**83**	P		**Pn**	**03 01 18.7**	**+0.9**
CNCH				S		**Sn**	**03 01 37.0**	**+2.6**
CNCH	**Conchagua**	**1.33**	**83**	*e*P		**Pn**	**03 01 18.7**	**+0.9**
ESSJ	**San Jos, E**	**1.35**	**289**	*i* P		Pn	03 01 22.4	+4.4
ESQI	**Esquipulas**	**1.44**	**354**	Pn		**Pn**	**03 01 19.8**	**+0.5**
ESQI				Sn		**Sn**	**03 01 39.0**	**+1.9**
ESQI	**Esquipulas**	**1.44**	**354**	P		**Pn**	**03 01 18.5**	**-0.7**
ESQI	**Esquipulas**	**1.44**	**354**	*e*P		**Pn**	**03 01 20.1**	**+0.8**
ESQI				*e*S		**Sn**	**03 01 39.0**	**+1.9**
ESQI				*e*S			03 01 39.3	
ZAFR2	**Estanzuela, Za**	**1.46**	**354**	*e*P		Pn	03 01 25.8	+6.3
MARCA	**Marcala la Paz**	**1.52**	**47**	P		**Pn**	**03 01 22.1**	**+1.6**
MARCA				S		**Sn**	**03 01 42.1**	**+2.9**
MARCA	**Marcala la Paz**	**1.52**	**47**	*e*P		**Pn**	**03 01 21.7**	**+1.2**
PCG5	**San Vicente Pa**	**1.59**	**313**	*e*P		**Pn**	**03 01 24.8**	**+3.5**
CSGN	**Cosiguina Volc**	**1.59**	**95**	P		**Pn**	**03 01 21.8**	**+0.4**
CSGN				S		**Sn**	**03 01 42.9**	**+1.9**
POTN	**Potosi Cosigui**	**1.64**	**94**	P		**Pn**	**03 01 22.1**	**+0.1**
POTN				S		**Sn**	**03 01 44.8**	**+2.8**
SARH	**Santa Rosa de**	**1.69**	**14**	P		**Pn**	**03 01 24.3**	**+1.6**
SARH	**Santa Rosa de**	**1.69**	**14**	*e*P		**Pn**	**03 01 24.1**	**+1.4**
FG16	**Alotenango, Sa**	**1.72**	**312**	*e*P		Pn	03 01 28.0	+4.7
FG16				IAML			03 02 00.1	
	comp=N,9μm,0.2s							
FG8	**Yepocapa, Chim**	**1.75**	**310**	*e*P		Pn	03 01 28.3	+4.8
GCG4	**OSOP**	**1.96**	**318**	*e*P		**Pn**	**03 01 26.1**	**-0.4**
TGUH	**Tegucigalpa,Un**	**2.08**	**63**			**Pn**	**03 01 29.0**	**+0.9**
TGUH				Sn		**Sn**	**03 01 55.6**	**+2.7**
TGUH	**Tegucigalpa,Un**	**2.08**	**63**	P		**Pn**	**03 01 29.0**	**+0.9**
TGUH				S		**Sn**	**03 01 56.2**	**+3.3**
CRIN	**San Cristobal**	**2.13**	**101**			**Pn**	**03 01 28.9**	**+0.3**
CRIN				Sn		**Sn**	**03 01 55.0**	**+1.1**
CRIN	**San Cristobal**	**2.13**	**101**	P		**Pn**	**03 01 29.3**	**+0.6**
CRIN				S		**Sn**	**03 01 56.5**	**+2.5**
APG	**El Apazote**	**2.24**	**327**	*i* P		**Pn**	**03 01 30.6**	**+0.2**
QUEN	**Al S del Volca**	**2.34**	**103**	P		**Pn**	**03 01 30.2**	**-1.4**
HERN	**Volcan Telica**	**2.35**	**102**	Pn		**Pn**	**03 01 31.4**	**-0.4**
HERN				Sn		**Sn**	**03 02 00.1**	**+0.5**
HERN	**Volcan Telica**	**2.35**	**102**	P		**Pn**	**03 01 31.2**	**-0.6**
HERN				S		**Sn**	**03 02 00.8**	**+1.2**
TELN	**Telica**	**2.35**	**102**	P		**Pn**	**03 01 31.4**	**-0.5**
TELN				S		**Sn**	**03 02 00.8**	**+1.2**
HOYN	**Al Sur del Vol**	**2.36**	**103**	P		**Pn**	**03 01 31.7**	**-0.2**
HOYN				S		**Sn**	**03 02 01.3**	**+1.5**
STG5	**El Palmar, Qui**	**2.46**	**301**	*e*P		**Pn**	**03 01 37.0**	**+3.8**
STG5				*e*S		**Sn**	**03 02 09.0**	**+7.0**
STG8	**El Palmar, Qui**	**2.48**	**302**	*e*P		**Pn**	**03 01 37.6**	**+3.9**
STG8				*e*S		**Sn**	**03 02 10.1**	**+7.2**
STG8				IAML			03 02 14.1	
	comp=N,1μm,0.4s							
STG2	**El Palmar, Qui**	**2.49**	**302**	*e*P		Pn	03 01 38.4	+4.7
CNGA	**Al SSO del Vol**	**2.50**	**104**	P		**Pn**	**03 01 34.1**	**+0.2**
CNGA				S		**Sn**	**03 02 04.0**	**+0.7**
CNGN	**Cerro Negro**	**2.51**	**104**			**Pn**	**03 01 33.8**	**-0.1**
RTAL	**Retalhuleu**	**2.81**	**300**	Pn		**Pn**	**03 01 40.9**	**+3.0**
MGAN	**Managua**	**3.03**	**108**			**Pn**	**03 01 41.5**	**+0.5**
HUEH	**Huehuetenango**	**3.13**	**314**			**Pn**	**03 01 45.0**	**+2.4**
SMCA	**Catarina**	**3.29**	**302**	*e*P		**Pn**	**03 01 44.2**	**-0.3**
BOAB	**BOACO BROADBAN**	**3.50**	**101**			**Pn**	**03 01 47.1**	**-0.3**
CCIG	**Comitan**	**4.24**	**318**			**Pn**	**03 01 59.8**	**+2.0**
CCIG	**Comitan**	**4.24**	**318**	*i* P		**Pn**	**03 02 00.3**	**+2.5**
SIUN	**Universidad Ur**	**4.33**	**82**			**Pn**	**03 01 59.0**	**+0.1**
JUD3	**Juan Diaz 3**	**4.63**	**129**			**Pn**	**03 02 03.8**	**+0.8**
JTS	**Las Juntas de**	**5.01**	**124**			**Pn**	**03 02 09.7**	**+1.5**
RAFA	**San Farael, Vo**	**6.14**	**120**	Pn		**Pn**	**03 02 25.8**	**+1.9**
PIRO	**Carate, Puerto**	**7.42**	**129**	Pn		**Pn**	**03 02 43.5**	**+2.3**
BRU2	**Volcan**	**7.69**	**123**			**Pn**	**03 02 46.5**	**+1.4**
TLIG	**Tlapa**	**10.06**	**297**	Pn		**Pn**	**03 03 19.4**	**+1.8**
SDV	**Santo Domingo**	**18.69**	**101**	P		**P**	**03 05 08.1**	**-1.8**
	comp=N,0.3nm,0.3s,baz=287,slow=11,SNR=5.3							
SDV				LR		LR	03 13 03.4	
	comp=N,36nm,19.9s,baz=307,slow=40							
	comp=N,4.0nm,0.7s							
BRDY	**Brady**	**20.21**	**335**	P		**P**	**03 05 25.6**	**-0.6**
BRDY				IAmb		IAmb	03 05 27.2	
	comp=Z,7.0nm,0.7s							
TXAR	**Lajitas Array**	**21.00**	**322**	P		**P**	**03 05 34.6**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=138,slow=8.6,SNR=16							
TXAR				PcP		**PcP**	**03 09 40.5**	**0.0**
	comp=Z,0.4nm,0.9s,baz=137,slow=3.3,SNR=2.6							
	comp=Z,1.0nm,0.7s							
TX31	**Lajitas Ar. Si**	**21.00**	**322**			**P**	**03 05 35.2**	**+0.4**
JSC	**Jenkinsville**	**22.26**	**18**	P		**P**	**03 05 44.6**	**-3.6**
TKL	**Tuckaleechee C**	**22.96**	**11**	LR		LR	03 14 21.3	
	comp=Z,82nm,18.7s,baz=151,slow=36							
DKNS	**Dickens**	**23.07**	**334**			**P**	**03 05 55.7**	**-1.2**
FNO	**Franklin**	**23.25**	**343**	P		**P**	**03 05 57.0**	**-1.4**
FNO				IAmb		IAmb	03 06 33.2	
	comp=Z,8.5nm,0.9s							
PDAR	**Pinedale Array**	**34.39**	**333**	P		P	03 07 35.6	-2.4
	comp=Z,0.3nm,0.6s,baz=144,slow=10,SNR=2.9							
PDAR				PcP		**PcP**	**03 10 11.5**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=124,slow=3.7,SNR=1.7							
	comp=Z,0.3nm,0.6s							
SNOW	**Snow King Moun**	**35.48**	**333**	P		P	03 07 46.7	-0.7
SNOW				IAmb		IAmb	03 07 49.0	
	comp=Z,3.0nm,0.6s							
LOHW	**Long Hollow**	**35.53**	**333**	P		**P**	**03 07 47.4**	**-0.4**
LOHW				IAmb		IAmb	03 07 49.3	
	comp=Z,2.3nm,1.1s							
G62A	**West of Eustis**	**35.71**	**23**	P		P	03 07 46.8	-2.2
G62A				IAmb		IAmb	03 08 05.2	
	comp=Z,7.7nm,1.2s							
LPAZ	**La Paz**	**35.88**	**144**	LR		LR	03 23 29.0	
	comp=Z,35nm,18.4s,baz=202,slow=38							
NVAR	**Mina Array Bea**	**36.09**	**320**	P		P	03 07 52.3	-0.4
	comp=Z,0.3nm,0.7s,baz=106,slow=10,SNR=3.7							
	comp=Z,0.3nm,0.7s							
ULM	**Lac du Bonnet**	**37.42**	**353**	P		P	03 08 00.8	-2.8
	comp=Z,1.1nm,0.7s,baz=172,slow=14,SNR=3.0							
ULM				LR		LR	03 26 38.9	
	comp=Z,27nm,19.1s,baz=156,slow=42							
	comp=Z,1.1nm,0.7s							
BATG	**Bathurst New B**	**39.17**	**25**	P		P	03 08 16.7	-1.6
SCHQ	**Schefferville**	**45.15**	**18**	P		P	03 09 03.7	-3.2
	comp=Z,2.9nm,0.9s,baz=231,slow=13,SNR=1.6							
	comp=Z,2.9nm,0.9s							
H03N2	**Juan Fernandez**	**47.33**	**168**	T		T	03 59 44.7	
	baz=348							
H03N1	**Juan Fernandez**	**47.33**	**168**	T		T	03 59 45.7	
	baz=348							
H03N3	**Juan Fernandez**	**47.34**	**168**	T		T	03 59 47.4	
	baz=348							
BLKN	**Baker Lake**	**51.35**	**356**	P		P	03 09 51.7	-2.7
BLKN				IAmb		IAmb	03 10 00.7	
	comp=Z,3.2nm,1.5s							
RUBB	**Prince Rupert**	**52.19**	**331**	P		P	03 09 59.6	-1.2
YKAW1	**Yellowknife Wh**	**52.49**	**346**	P		P	03 10 00.6	-2.4
YKAW1				IAmb		IAmb	03 10 01.3	
	comp=Z,2.0nm,0.8s							
YKA	**Yellowknife Ar**	**52.53**	**345**	P		P	03 10 00.8	-2.5
	comp=Z,0.4nm,0.4s,baz=147,slow=6.9,SNR=11							
	comp=Z,0.4nm,0.4s							
YKA	**Yellowknife Ar**	**52.53**	**345**	P		P	03 10 00.4	-2.9
YKAW3	**Yellowknife Wh**	**52.59**	**346**	P		P	03 10 00.5	-3.2
YKAW3				IAmb		IAmb	03 10 02.0	
	comp=Z,3.1nm,1.1s							
DLBC	**Dease Lake**	**54.58**	**335**	LR		LR	03 38 31.4	
	comp=Z,38nm,18.7s,baz=260,slow=42							
HHC	**Hu-ho-hao-te**	**122.96**	**341**	*e*P		PKPdf	03 19 41.3	-5.3
WRA	**Warramunga Arr**	**137.82**	**255**	PKP		**PKPdf**	**03 20 14.6**	**-0.5**
	comp=Z,0.7nm,1.1s,baz=89,slow=2.3,SNR=2.3							
PZH	**PanZhiHua**	**139.20**	**345**	PKP		**PKPdf**	**03 20 15.0**	**-2.7**

*NEIC **29** 03:17:51.8±1.4, 9°.0S±0°.1×158°.8E±0°.1, h514km±10km, mb4.4/19, Error ellipse: s-maj=19.4km s-min=16.0km az=109.0*

*IDC **29** 03:17:51.8±1.1, 9°.00S×158°.70E, h519km±12km, mb3.2/13, mbtmp4.1/13, Error ellipse: s-maj=22.0km s-min=13.3km az=98.0*

ISC 29 03:17:50.8±0.5, **8°.95S**±0°.08×**158°.61E**±0°.10, **h500**km, **n46**, σ1§**30**/49, **mb4.0**/23, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.41**	**110**	P		**P**	**03 18 56.2**	**+2.8**
	16nm,0.7s,baz=293,slow=4.9,SNR=10.0							
HNR	**Honiara**	**1.41**	**110**	P		**P**	**03 18 55.5**	**+2.1**
HNR				S		**S**	**03 19 45.6**	**+1.5**
PMG	**Port Moresby**	**11.31**	**267**	P		**P**	**03 20 24.2**	**+2.0**
CTAO	**Charters Tower**	**16.28**	**226**	P		**P**	**03 21 16.4**	**+1.9**
CTAO				IAmb		IAmb	03 21 46.1	
	comp=Z,29nm,1.5s							
ARMA	**Armidale**	**22.33**	**196**	P		**P**	**03 22 11.6**	**+1.0**
ARMA				IAmb		IAmb	03 22 12.8	
	comp=Z,19nm,1.4s							
WR8	**Warramunga Arr**	**25.74**	**242**	P		**P**	**03 22 41.5**	**+0.5**
WB0	**Warramunga Arr**	**25.77**	**243**	P		**P**	**03 22 41.8**	**+0.6**
WB0				IAmb		IAmb	03 22 42.4	
	comp=Z,6.5nm,1.0s							
WRA	**Warramunga Arr**	**25.88**	**242**	P		**P**	**03 22 42.6**	**+0.3**
	comp=Z,2.7nm,0.5s,baz=68,slow=8.5,SNR=41							
WRA				PcP		**PcP**	**03 25 54.3**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=68,slow=2.0,SNR=5.8							
WRA				S		**S**	**03 26 31.7**	**-4.8**
	comp=Z,1.4nm,0.7s,baz=72,slow=15,SNR=6.9							
	comp=Z,2.7nm,0.5s							
CAN	**Canberra**	**27.68**	**197**	P		**P**	**03 22 58.4**	**+0.4**
STKA	**Stephens Creek**	**27.75**	**212**	P		**P**	**03 22 58.8**	**+0.3**
	comp=Z,1.2nm,0.4s,baz=38,slow=16,SNR=6.7							
	comp=Z,1.2nm,0.4s							
STKA	**Stephens Creek**	**27.75**	**212**	P		**P**	**03 22 58.8**	**+0.3**
STKA				IAmb		IAmb	03 23 27.5	
	comp=Z,20nm,1.1s							
ASAR	**Alice Springs**	**27.79**	**235**	P		**P**	**03 22 58.7**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=56,slow=9.4,SNR=19							
ASAR				PcP		**PcP**	**03 25 58.5**	**-1.2**
	comp=Z,0.6nm,0.4s,baz=71,slow=2.4,SNR=8.1							
ASAR				ScP		**ScP**	**03 28 51.4**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=63,slow=3.6,SNR=4.3							
	comp=Z,0.9nm,0.5s							
ASAR	**Alice Springs**	**27.79**	**235**	P		**P**	**03 22 59.7**	**+0.6**
KNRA	**Kununurra**	**29.89**	**254**	P		**P**	**03 23 17.6**	**+0.1**
KNRA				IAmb		IAmb	03 23 18.2	
	comp=Z,10nm,1.3s							
BBOO	**Buckleboo**	**31.60**	**218**	P		**P**	**03 23 32.1**	**+0.2**
BBOO				IAmb		IAmb	03 24 09.2	
	comp=Z,16nm,1.2s							
BKZ	**Black Stump Fm**	**34.09**	**155**	P		**P**	**03 23 52.5**	**-0.6**
BKZ				IAmb		IAmb	03 23 56.8	
	comp=Z,12nm,1.2s							
FORT	**Forrest**	**35.81**	**228**	P		**P**	**03 24 07.9**	**+0.4**
FORT				IAmb		IAmb	03 24 16.2	
	comp=Z,7.5nm,0.8s							
PSA00	**Pilbara Seismi**	**39.32**	**247**	P		**P**	**03 24 36.3**	**-0.1**
PSA00	**Pilbara Seismi**	**39.32**	**247**	P		**P**	**03 24 36.1**	**-0.4**
PSA00				IAmb		IAmb	03 25 18.6	
	comp=Z,18nm,1.3s							
MBWA	**Marble Bar**	**39.34**	**248**	P		**P**	**03 24 36.5**	**-0.1**
MBWA				IAmb		IAmb	03 24 42.9	
	comp=Z,22nm,1.3s							
UGM	**Wanagama**	**47.55**	**267**	P		**P**	**03 25 41.1**	**+0.2**
SSLB	**Suanglung**	**49.11**	**312**	P		**P**	**03 25 52.3**	**-0.1**
SSLB				IAmb		IAmb	03 26 20.8	
	comp=Z,25nm,1.2s							
MJAR	**Matsushiro Arr**	**49.15**	**338**	P		**P**	**03 25 51.9**	**-0.4**
	comp=Z,1.2nm,0.4s,baz=162,slow=8.2,SNR=4.2							
	comp=Z,1.2nm,0.4s							
KSRS	**Korea Array**	**54.37**	**330**	P		**P**	**03 26 29.7**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=141,slow=7.7,SNR=2.3							
	comp=Z,0.6nm,0.6s							
USRK	**Ussuriysk Ar.**	**58.13**	**338**	P		**P**	**03 26 57.1**	**+1.1**
	comp=Z,2.8nm,0.6s,baz=134,slow=3.8,SNR=3.3							
	comp=Z,2.8nm,0.6s							
AMKA	**Amchitka**	**62.69**	**14**	P		**P**	**03 27 25.2**	**-0.8**
CMAR	**Chiang Mai Arr**	**64.85**	**295**	P		**P**	**03 27 41.5**	**+0.9**
	comp=Z,1.0nm,0.3s,baz=109,slow=5.8,SNR=7.8							
	comp=Z,1.0nm,0.3s							
CMAR	**Chiang Mai Arr**	**64.85**	**295**	P		**P**	**03 27 41.3**	**+0.7**
VNDA	**Vanda**	**68.57**	**179**	P		**P**	**03 28 02.4**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=348,slow=6.2,SNR=3.0							
	comp=Z,0.7nm,0.8s							
GTA2	**Gaotai**	**72.68**	**316**	*e*P		**P**	**03 28 29.0**	**+1.3**
GTA2				pmax	pmax			
	comp=Z,6.0nm,0.8s							
SONM	**Songino Array**	**72.92**	**326**	P		**P**	**03 28 29.1**	**+0.2**
	comp=Z,3.1nm,0.6s,baz=136,slow=5.5,SNR=13							
	comp=Z,3.1nm,0.6s							
SONM	**Songino Array**	**72.92**	**326**	P		**P**	**03 28 29.6**	**+0.7**
QSPA	**South Pole Qui**	**81.04**	**180**	P		**P**	**03 29 11.6**	**-1.3**
	comp=Z,1.2nm,0.7s,baz=22,slow=5.4,SNR=9.2							
	comp=Z,1.2nm,0.7s							
QSPA	**South Pole Qui**	**81.04**	**180**	P		**P**	**03 29 11.6**	**-1.3**
ILAR	**Eielson Array**	**83.90**	**21**	P		**P**	**03 29 25.7**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=236,slow=5.3,SNR=2.4							
	comp=Z,0.2nm,0.4s							
MKAR	**Makanchi Array**	**87.23**	**318**	P		**P**	**03 29 43.1**	**-0.7**
	comp=Z,1.1nm,0.6s,baz=105,slow=6.3,SNR=11							
	comp=Z,1.1nm,0.6s							
KURBB	**Kurchatov Arra**	**90.61**	**321**	P		**P**	**03 29 57.4**	**-1.9**
	comp=Z,0.3nm,0.5s,baz=116,slow=3.2,SNR=3.2							
	comp=Z,0.3nm,0.5s							
AKASG	**Malin Array Be**	**121.19**	**325**	PKP		**PKPdf**	**03 35 44.9**	**-1.6**
	comp=Z,0.3nm,0.4s,baz=85,slow=1.5,SNR=2.1							
BOSA	**Boshof**	**121.51**	**229**	PKP		**PKPdf**	**03 35 46.6**	**-1.4**
	comp=Z,1.2nm,0.9s,baz=135,slow=1.4,SNR=1.2							
BDFB	**Brasilia**	**144.05**	**133**	PKPbc		PKPbc	03 36 28.5	-1.0
	comp=Z,2.7nm,0.7s,baz=208,slow=4.4,SNR=6.0							
BDFB	**Brasilia**	**144.05**	**133**			PKPbc	03 36 28.3	-1.3
ESDC	**Sonseca Array**	**145.67**	**336**	PKPbc		**PKPdf**	**03 36 32.8**	**+0.4**
	comp=Z,0.4nm,0.9s,baz=25,slow=3.0,SNR=4.9							
ESDC	**Sonseca Array**	**145.67**	**336**			**PKPdf**	**03 36 32.2**	**-0.2**
MTE	**Manteigas**	**146.34**	**341**	PKPbc		**PKPdf**	**03 36 35.0**	**+1.6**
MD01	**Mid

RDO	Rodhopi	2.87	341	P	Pn	03 22 22.6 +0.5
KAVA	Kavala	3.09	326	P	Pn	03 22 25.7 +0.4
RZN	Rozhen	3.61	335	P	Pn	03 22 33.2 +0.7
SRS	Serrai	3.63	319	P	Pn	03 22 33.3 +0.7
NVR	Nevrokopi	3.67	323	P	Pn	03 22 33.7 +0.4

IDC ***29*** *03:38:56.5±0.6,24˚.25N×124˚.09E,h0km,mb4.0/18, mbtmp4.0/21,ML3.5/3,Error ellipse: s-maj=21.0km s-min=14.9km az=69.0*

JMA ***29*** *03:38:58.1±0.1,24˚.2N±0˚.6×124˚.2E±0˚.6,h10km±2km, MD4.4/14,MV4.0/14,NEAR ISHIGAKIJIMA ISLAND*

JMA Felt I J1 at NEAR ISHIGAKIJIMA ISLAND.

NEIC ***29*** *03:38:59.2±1.6,24˚.16N±0˚.08×124˚.11E±0˚.05,h10km±1km, mb4.7/55,Error ellipse: s-maj=13.2km s-min=8.1km az=179.0*

ISC 29 03:38:58.6±1.0,24˚18N±0˚.05×124˚15E±0˚.03,h13km±5km, n131,σ0s99/116,mb4.6/49,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKRS	**Kuro-shima**	**0.14**	**294**	P	**Pg**	**03 39 02.6**	**+0.5**
JKRS				A	A	03 39 02.6	
	comp=N,115nm,2.4s,comp=E,107nm,3.5s						
JKRS				S	**Sg**	**03 39 05.4**	**+0.8**
JIJ	**Ishigaki jima**	**0.18**	**359**	P	**Pg**	**03 39 02.7**	**-0.1**
JIJ				A	A	03 39 02.7	
	comp=N,49nm,3.8s,comp=E,34nm,2.1s						
JIJ				S	**Sg**	**03 39 05.8**	**+0.1**
HATJ	**Hateruma jima**	**0.34**	**249**	P	**Pb**	**03 39 05.7**	**-0.8**
HATJ				A	A	03 39 05.7	
	comp=N,61nm,4.0s,comp=E,56nm,3.2s						
HATJ				*e*S	**Sb**	**03 39 11.7**	**-0.1**
IRIF	**Iriomote-Funau**	**0.41**	**292**	P	**Pb**	**03 39 07.4**	**-0.4**
IRIF				A	A	03 39 07.4	
	comp=N,20nm,1.1s,comp=E,31nm,0.4s						
IRIF				*e*S	**Sb**	**03 39 14.1**	**+0.2**
JISG	**Ishigakijimahi**	**0.43**	**20**	*i* P	**Pg**	**03 39 06.6**	**-0.6**
JISG				A	A	03 39 06.6	
	comp=N,19nm,2.7s,comp=E,36nm,0.6s						
JISG				*e*S	**Sg**	**03 39 13.2**	**+0.1**
JTJ	**Tarama**	**0.68**	**48**	P	**Pg**	**03 39 11.0**	**-1.0**
JTJ				A	A	03 39 11.0	
	comp=N,33nm,4.4s,comp=E,30nm,3.5s						
JTJ				*e*S	**Sg**	**03 39 20.1**	**-0.9**
YOJ	**Yonaguni jima**	**1.07**	**285**	P	**Pn**	**03 39 19.0**	**-0.3**
YOJ	**Yonaguni jima**	**1.07**	**285**	Pg	**Pn**	**03 39 19.1**	**-0.3**
YOJ	**Yonaguni jima**	**1.07**	**285**	P	**Pn**	**03 39 19.2**	**-0.2**
YOJ				A	A	03 39 19.2	
	comp=N,11nm,2.4s,comp=E,12nm,1.4s						
YOJ				*e*S	**Sn**	**03 39 34.9**	**+0.7**
JYNG	**Yonagunijimaku**	**1.13**	**284**	P	**Pn**	**03 39 19.9**	**-0.3**
JYNG				A	A	03 39 19.9	
	comp=N,19nm,0.6s,comp=E,13nm,0.9s						
JYNG				S	**Sn**	**03 39 35.8**	**+0.2**
JMJ2	**Miyako jima3**	**1.21**	**62**	P	**Pn**	**03 39 20.5**	**-0.8**
JMJ2				A	A	03 39 20.5	
	comp=N,18nm,1.4s,comp=E,19nm,1.4s						
JMJ2				*e*S	**Sb**	**03 39 37.7**	**+0.7**
JIKM	**Ikemajima**	**1.25**	**53**	*e*P	**Pn**	**03 39 21.2**	**-0.5**
JIKM				*e*S	**Sb**	**03 39 38.7**	**+0.7**
JOGS	**Gusukube**	**1.28**	**63**	P	**Pn**	**03 39 21.8**	**-0.5**
JOGS				S	**Sg**	**03 39 40.8**	**+0.8**
NACB	**Ninganchiao**	**2.33**	**270**	P	**Pn**	**03 39 37.8**	**+1.1**
NACB	**Ninganchiao**	**2.33**	**270**	Pn	**Pn**	**03 39 36.7**	**0.0**
TATO	**Taipei**	**2.55**	**289**	P	**Pb**	**03 39 42.0**	**-2.2**
TATO	**Taipei**	**2.55**	**289**	S	**Sn**	**03 40 12.0**	**+1.4**
TATO	**Taipei**	**2.55**	**289**	Pn	**Pn**	**03 39 40.1**	**+0.5**
YHNB	**Yeheng**	**2.57**	**281**	P	**Pb**	**03 39 42.1**	**-2.6**
YHNB	**Yeheng**	**2.57**	**281**	Pn	**Pn**	**03 39 41.0**	**+0.9**
YULB	**Yu-li**	**2.73**	**254**	P	**Pn**	**03 39 41.9**	**-0.3**
YULB	**Yu-li**	**2.73**	**254**	S	**Sn**	**03 40 14.7**	**-0.3**
YULB	**Yu-li**	**2.73**	**254**	Pn	**Pn**	**03 39 41.9**	**-0.3**
SSLB	**Suanglung**	**2.95**	**263**	P	**Pn**	**03 39 45.9**	**+0.7**
SSLB	**Suanglung**	**2.95**	**263**	Pn	**Pn**	**03 39 46.1**	**+0.9**
TWGBT	**Beinan**	**3.13**	**245**	P	**Pn**	**03 39 47.1**	**-0.5**
TWGBT	**Beinan**	**3.13**	**245**	S	**Sn**	**03 40 24.3**	**-0.6**
TWG	**Pinlang**	**3.13**	**245**	Pn	**Pn**	**03 39 47.1**	**-0.6**
TPUB	**Ta-pu**	**3.34**	**256**	P	**Pn**	**03 39 52.0**	**+1.4**
TPUB	**Ta-pu**	**3.34**	**256**		**Pn**	**03 39 51.1**	**+0.5**
JOW	**Kunigami**	**4.57**	**54**	Pn	**Pn**	**03 40 08.7**	**+1.3**
	comp=E,5.1nm,0.3s,baz=233,slow=12,SNR=5.1 comp=E,30nm,0.6s						
JOW	**Kunigami**	**4.57**	**54**	Pn	**Pn**	**03 40 08.8**	**+1.3**
KNMB	**Chin-men Tao**	**5.26**	**274**	Pn	**Pn**	**03 40 17.3**	**+0.3**
NJ2	**Nanjing**	**9.13**	**330**	*e*P	**Pn**	**03 41 12.3**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
KSRS	**Korea Array**	**13.62**	**13**	Pn	**Pn**	**03 42 11.1**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=197,slow=12,SNR=7.5 comp=Z,0.5nm,0.6s						
KSRS	**Korea Array**	**13.62**	**13**		**Pn**	**03 42 11.1**	**-0.4**
MJAR	**Matsushiro Arr**	**17.27**	**41**	P	**Pn**	**03 43 00.1**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=232,slow=6.0,SNR=5.3 comp=Z,1.0nm,0.4s						
MJAR	**Matsushiro Arr**	**17.27**	**41**	P	**Pn**	**03 43 00.1**	**+0.6**
HHC	**Hu-ho-hao-te**	**19.68**	**331**	*e*P	**Pn**	**03 43 29.5**	**+0.4**
HHC				pmax	pmax		
	comp=Z,18nm,0.5s						
HHC				pmax	pmax		
	comp=Z,88nm,4.8s						
HHC				LR	LR		
	comp=N,450nm,10.6s						
HHC				LR	LR		
	comp=E,280nm,11.1s						
HHC				LR	LR		
	comp=Z,400nm,12.8s						
PZH	**PanZhiHua**	**20.38**	**281**	P	Pn	03 43 37.5	+0.1
CHTO	**Chiang Mai**	**24.04**	**262**	P	**P**	**03 44 14.3**	**+0.7**
CMAR	**Chiang Mai Arr**	**24.14**	**261**	P	**P**	**03 44 15.9**	**+1.3**
	comp=Z,1.0nm,0.3s,baz=72,slow=10.0,SNR=7.8 comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**24.14**	**261**	P	**P**	**03 44 14.7**	**+0.1**
GTA2	**Gaotai**	**25.62**	**312**	*e*P	**P**	**03 44 28.0**	**0.0**
GTA2				sP	sP	03 44 41.8	+8.5
GTA2				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SONM	**Songino Array**	**27.50**	**334**	P	**P**	**03 44 42.0**	**-2.8**
	comp=Z,0.6nm,0.6s,baz=149,slow=10,SNR=1.5 comp=Z,0.6nm,0.6s						
SONM	**Songino Array**	**27.50**	**334**	P	**P**	**03 44 42.0**	**-2.8**
SONM	**Songino Array**	**27.50**	**334**	IAmb	IAmb	03 44 49.0	
	comp=Z,1.0nm,0.9s						
SHL	**Shillong**	**29.27**	**280**	P	**P**	**03 45 00.4**	**-0.5**
WMQ	**Urumqi**	**35.63**	**312**	*e*P	**P**	**03 45 56.3**	**0.0**
WMQ				pmax	pmax		
	comp=Z,21nm,0.7s						
H11N1	**WAKE ISLAND Hy**	**39.78**	**88**	T	T	04 28 49.2	
	baz=283						
H11N2	**WAKE ISLAND Hy**	**39.78**	**88**	T	T	04 28 48.2	
	baz=283						
H11N3	**WAKE ISLAND Hy**	**39.80**	**88**	T	T	04 28 49.5	
	baz=283						
H11S3	**WAKE ISLAND Hy**	**39.91**	**90**	T	T	04 28 56.3	
	baz=285						
H11S1	**WAKE ISLAND Hy**	**39.92**	**90**	T	T	04 28 59.6	
	baz=285						
H11S2	**WAKE ISLAND Hy**	**39.93**	**90**	T	T	04 28 58.0	
	baz=285						
MKAR	**Makanchi Array**	**40.24**	**315**	P	**P**	**03 46 34.2**	**-0.9**
	comp=Z,1.2nm,0.5s,baz=101,slow=9.0,SNR=15						
MKAR				PcP	**PcP**	**03 48 39.0**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=112,slow=3.9,SNR=1.9 comp=Z,1.2nm,0.5s						
MKAR	**Makanchi Array**	**40.24**	**315**	P	**P**	**03 46 34.2**	**-0.9**
MKAR					**PcP**	**03 48 39.0**	**+0.1**
ZALV	**Zalesovo Beam**	**41.74**	**326**	P	**P**	**03 46 47.9**	**+0.5**
	comp=Z,0.8nm,0.5s,baz=121,slow=35,SNR=4.5 comp=Z,0.8nm,0.5s						
ZALV	**Zalesovo Beam**	**41.74**	**326**	P	**P**	**03 46 47.9**	**+0.5**
KURK	**Kurchatov**	**43.85**	**319**	P	**P**	**03 47 02.6**	**-1.9**
KURBB	**Kurchatov Arra**	**43.87**	**319**	P	**P**	**03 47 02.6**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=119,slow=7.7,SNR=5.0 comp=Z,0.1nm,0.3s						
WRA	**Warramunga Arr**	**44.97**	**166**	P	**P**	**03 47 13.1**	**-0.6**
	comp=Z,2.9nm,0.8s,baz=346,slow=7.8,SNR=17 comp=Z,2.9nm,0.8s						
WRA	**Warramunga Arr**	**44.97**	**166**	P	**P**	**03 47 13.1**	**-0.6**
WRA	**Warramunga Arr**	**44.97**	**166**	IAmb	IAmb	03 47 19.7	
	comp=Z,0.5nm,1.4s						
WR8	**Warramunga Arr**	**45.01**	**166**	P	**P**	**03 47 13.2**	**-0.9**
NIL	**Nilore**	**45.16**	**294**	P	**P**	**03 47 15.7**	**+0.5**
ASAR	**Alice Springs**	**48.49**	**168**	P	**P**	**03 47 41.8**	**+0.4**
	comp=Z,5.9nm,1.3s,baz=349,slow=8.2,SNR=20 comp=Z,5.9nm,1.3s						
ASAR	**Alice Springs**	**48.49**	**168**	P	**P**	**03 47 41.8**	**+0.4**
AB31	**Akbulak array**	**55.38**	**314**	P	**P**	**03 48 33.3**	**+0.9**
STKA	**Stephens Creek**	**58.19**	**163**	P	**P**	**03 48 53.2**	**+0.8**
	comp=Z,2.6nm,0.6s,baz=352,slow=9.7,SNR=4.2 comp=Z,2.6nm,0.6s						
D19K	**Kuna River**	**63.25**	**24**	P	**P**	**03 49 27.0**	**+0.4**
D19K				IAmb	IAmb	03 49 33.8	
	comp=Z,5.0nm,0.8s						
E19K	**Redstone River**	**63.56**	**25**	P	**P**	**03 49 29.1**	**+0.5**
E19K				IAmb	IAmb	03 49 33.9	
	comp=Z,4.6nm,0.8s						
D20K	**Etivluk River**	**63.80**	**24**	IAmb	IAmb	03 49 32.8	
	comp=Z,5.7nm,0.9s						
B21K	**Ikpikpuk River**	**64.52**	**23**	IAmb	IAmb	03 49 37.3	
	comp=Z,5.8nm,0.8s						
B22K	**Teshekpuk Lake**	**64.91**	**22**	P	**P**	**03 49 38.1**	**+0.7**
B22K				IAmb	IAmb	03 49 39.6	
	comp=Z,6.1nm,0.9s						
F21K	**Alatna River**	**65.01**	**25**	IAmb	IAmb	03 49 40.5	
	comp=Z,4.1nm,0.9s						
G21K	**Allakaket**	**65.04**	**26**	IAmb	IAmb	03 49 42.5	
	comp=Z,3.9nm,0.9s						
H21K	**Melozitna Rive**	**65.39**	**27**	P	**P**	**03 49 42.2**	**+1.6**
H21K				IAmb	IAmb	03 49 42.7	
	comp=Z,3.9nm,0.8s						
E22K	**Anaktuvuk Pass**	**65.59**	**24**	IAmb	IAmb	03 49 49.6	
	comp=Z,5.6nm,0.8s						
C23K	**Itkillik River**	**65.90**	**22**	IAmb	IAmb	03 49 47.6	
	comp=Z,7.1nm,1.2s						
H22K	**Ishtalitna Cre**	**65.95**	**27**	P	**P**	**03 49 45.8**	**+1.6**
H22K				IAmb	IAmb	03 49 49.9	
	comp=Z,5.4nm,0.8s						
G23K	**Bananza Creek**	**66.41**	**26**	IAmb	IAmb	03 49 50.2	
	comp=Z,4.5nm,1.1s						
E23K	**Chandalar**	**66.42**	**24**	IAmb	IAmb	03 49 52.7	
	comp=Z,6.2nm,0.8s						
H23K	**Yukon River**	**66.71**	**27**	IAmb	IAmb	03 49 55.3	
	comp=Z,5.9nm,0.8s						
E24K	**Your Creek**	**66.84**	**24**	IAmb	IAmb	03 49 55.6	
	comp=Z,5.1nm,0.7s						
NEA2	**Nenana**	**67.07**	**28**	P	**P**	**03 49 52.5**	**+1.1**
RND	**Reindeer**	**67.34**	**29**	P	**P**	**03 49 53.4**	**+0.2**
H24K	**Noodor Dome**	**67.39**	**26**	P	**P**	**03 49 54.6**	**+1.2**
H24K				IAmb	IAmb	03 50 00.9	
	comp=Z,3.2nm,1.0s						
G24K	**Hadweenzic Riv**	**67.42**	**26**	IAmb	IAmb	03 49 56.8	
	comp=Z,5.8nm,0.9s						
D25K	**Kavik River**	**67.44**	**23**	IAmb	IAmb	03 49 58.6	
	comp=Z,4.0nm,0.8s						
KBZ	**Khabaz**	**67.59**	**309**	P	**P**	**03 49 55.6**	**+0.6**
	comp=Z,2.7nm,0.8s,baz=69,slow=14,SNR=5.7 comp=Z,2.7nm,0.8s						
ILAR	**Eielson Array**	**67.97**	**28**	P	**P**	**03 49 56.6**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=284,slow=7.0,SNR=10 comp=Z,0.5nm,0.8s						
ILAR	**Eielson Array**	**67.97**	**28**	P	**P**	**03 49 56.6**	**-0.5**
F25K	**Christian Rive**	**67.98**	**24**	IAmb	IAmb	03 50 00.2	
	comp=Z,5.4nm,0.8s						
C27K	**Jago River**	**68.31**	**22**	P	**P**	**03 50 00.2**	**+1.1**
BMAR	**Burnt Mountain**	**68.41**	**25**		**P**	**03 50 01.0**	**+1.1**
F26K	**Sheenjek River**	**68.53**	**24**	IAmb	IAmb	03 50 04.1	
	comp=Z,4.9nm,0.9s						
G26K	**Porcupine Rive**	**68.81**	**25**	IAmb	IAmb	03 50 11.9	
	comp=Z,6.7nm,1.1s						
I26K	**Coal Creek Min**	**69.42**	**27**	IAmb	IAmb	03 50 15.9	
	comp=Z,3.1nm,0.8s						
I27K	**Kandik River**	**69.97**	**26**		**P**	**03 50 10.8**	**+1.2**
I27K				IAmb	IAmb	03 50 11.9	
	comp=Z,6.4nm,0.9s						
E28M	**Babbage River**	**70.00**	**23**	IAmb	IAmb	03 50 15.2	
	comp=Z,3.8nm,0.8s						
F28M	**Old Crow**	**70.14**	**24**		**P**	**03 50 11.6**	**+1.1**
F28M				IAmb	IAmb	03 50 12.6	
	comp=Z,6.0nm,1.1s						
KOPT	**Kop Dagi**	**70.22**	**306**	P	**P**	**03 50 13.2**	**+1.3**
KOPT				IAmb	IAmb	03 50 32.2	
	comp=Z,3.7nm,0.9s						
BCAR	**Beaver Creek A**	**70.54**	**29**	P	**P**	**03 50 14.5**	**+1.4**
I28M	**Miner Creek**	**70.69**	**26**		**P**	**03 50 15.2**	**+1.2**
I28M				IAmb	IAmb	03 50 23.0	
	comp=Z,4.6nm,0.9s						
G30M	**tAoh Zraii Nji**	**71.67**	**24**	IAmb	IAmb	03 50 39.7	
	comp=Z,7.0nm,1.4s						
L29M	**L29M**	**72.12**	**28**	IAmb	IAmb	03 50 28.5	
	comp=Z,4.8nm,0.9s						
INK	**Inuvik**	**72.20**	**22**		**P**	**03 50 23.7**	**+0.8**
J30M	**Hart River**	**72.41**	**27**	P	**P**	**03 50 26.0**	**+1.5**
FIA1	**FINESS Array S**	**72.81**	**330**	P	**P**	**03 50 28.1**	**+1.4**
FINES	**FINESS Array B**	**72.81**	**330**	P	**P**	**03 50 26.7**	**0.0**
	comp=Z,4.5nm,0.9s,baz=63,slow=6.9,SNR=5.3 comp=Z,4.5nm,0.9s						
FINES	**FINESS Array B**	**72.81**	**330**	P	**P**	**03 50 27.8**	**+1.1**
AKASG	**Malin Array Be**	**74.66**	**319**	P	**P**	**03 50 36.4**	**-1.4**
	comp=Z,0.5nm,0.5s,baz=60,slow=6.7,SNR=5.9 comp=Z,0.5nm,0.5s						
AKASG	**Malin Array Be**	**74.66**	**319**	P	**P**	**03 50 36.4**	**-1.4**
BRTR	**Keskin Array B**	**75.34**	**307**	P	**P**	**03 50 41.0**	**-1.2**
	comp=Z,0.9nm,0.8s,baz=91,slow=5.8,SNR=4.4 comp=Z,0.9nm,0.8s						
BRTR	**Keskin Array B**	**75.34**	**307**	P	**P**	**03 50 41.0**	**-1.2**
HFS	**Hagfors**	**78.88**	**331**	P	**P**	**03 51 00.9**	**-0.5**
	comp=Z,3.5nm,0.9s,baz=82,slow=5.1,SNR=4.8 comp=Z,3.5nm,0.9s						
NOA	**NORSAR Array B**	**79.48**	**333**	P	**P**	**03 51 02.7**	**-2.0**
	comp=Z,2.1nm,1.0s,baz=52,slow=5.7,SNR=3.2 comp=Z,2.1nm,1.0s						
STEB	**Steborice**	**81.69**	**321**	*e*P	**P**	**03 51 17.0**	**+0.2**
YKA	**Yellowknife Ar**	**81.91**	**24**	P	**P**	**03 51 17.8**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=306,slow=6.0,SNR=4.1 comp=Z,0.9nm,0.7s						
YKA	**Yellowknife Ar**	**81.91**	**24**	P	**P**	**03 51 17.8**	**+0.2**
KRLC	**Kraliky**	**82.19**	**322**	*e*P	**P**	**03 51 19.1**	**-0.4**
DPC	**Dobruska-Polom**	**82.32**	**322**	*e*P	**P**	**03 51 20.0**	**-0.1**
ZVC	**Zvikov**	**83.97**	**322**	*e*P	**P**	**03 51 29.0**	**+0.4**
CKRC	**Cesky Krumlov**	**84.21**	**321**	*e*P	**P**	**03 51 30.7**	**+0.8**
GERES	**GERESS Array B**	**84.55**	**322**	P	**P**	**03 51 31.5**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=62,slow=5.0,SNR=9.0 comp=Z,1.2nm,0.7s						
GERES	**GERESS Array B**	**84.55**	**322**	P	**P**	**03 51 31.4**	**-0.2**
ILON	**Igloolik, Nuna**	**84.84**	**9**	P	**P**	**03 51 32.6**	**0.0**
KEK	**Kerkira**	**85.14**	**311**	P	**P**	**03 51 35.9**	**+1.2**
NVAR	**Mina Array Bea**	**94.57**	**44**	P	**P**	**03 52 19.6**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=272,slow=4.4,SNR=3.8 comp=Z,0.3nm,0.6s						
NVAR	**Mina Array Bea**	**94.57**	**44**	P	**P**	**03 52 19.6**	**+0.1**

IDC ***29*** *03:39:45.6±0.5,24˚.2N×124˚.11E,h0km,mb4.3/25, mbtmp4.3/29,ML3.8/4,MS3.8/11,Error ellipse: s-maj=15.8km s-min=11.8km az=70.0*

BJI ***29*** *03:39:45.1,24˚.13N×124˚.23E,h10km,mB4.8/9,mb4.3/43, ML4.3/2,Ms4.5/37,Ms7 4.2/37*

MOS ***29*** *03:39:46.9±1.1,24˚.19N×124˚.15E,h18km,mb4.8/26,Error ellipse: s-maj=9.9km s-min=6.4km az=106.5*

NEIC ***29*** *03:39:47.5±2.1,24˚.18N±0˚.07×124˚.19E±0˚.05,h10km±1km, mb5.0/192,Mww4.7/10,Error ellipse: s-maj=12.4km s-min=7.4km az=182.0*

NIED ***29*** *03:39:47.2,24˚.18N×124˚.21E,h10km,MW4.7,Moment Tensor Solution. s3 Moment tensor: Scale 10^16Nm; Mrr=0.78; Mθθ0.31; Mφφ0.48; Mrθ0.97; Mθφ-0.55; Mφr-0.05; Fault plane solution: Mo1.30000×10^16 NP1: φs163.00000°,δ31.00000°,λ-40.00000°. NP2: φs289.00000°,δ71.00000°,λ-115.00000°.*

NEIC ***29*** *03:39:47.6,24˚.16N×124˚.19E,h10km*

JMA ***29*** *03:39:47.2±0.2,24˚.2N±0˚.7×124˚.2E±0˚.7,h10km±3km, MD5.0/10,MV4.4/10,NEAR ISHIGAKIJIMA ISLAND*

JMA Felt II J1 at NEAR ISHIGAKIJIMA ISLAND.

NEIC ***29*** *03:39:48.1,24˚.16N×124˚.30E,h12km,Moment Tensor Solution. Duration: 1s1 Moment tensor: Scale 10^16Nm; Mrr-0.77; Mθθ0.41; Mφφ0.36; Mrθ0.64; Mθφ-0.65; Mφr-0.48; Fault plane solution: Mo1.23000×10^16 NP1: φs142.24000°,δ24.71000°,λ-77.15000°. NP2: φs308.14000°,δ65.95000°,λ-95.85000°. Principal axes: T 1.3382, Plg21.0000°, Azm43.0000°; N -0.2543, Plg5.0000°, Azm311.0000°; P -1.0838, Plg69.0000°, Azm207.0000°;*

ISC 29 03:39:47.8±0.7,24˚14N±0˚.03×124˚21E±0˚.03,h15km±4km, n597,σ1s08/525,mb4.9/158,MS4.0/9,39C-15D,

Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKRS	**Kuro-shima**	**0.21**	**297**	P	**Pg**	**03 39 51.4**	**-1.1**
JKRS				A	A	03 39 51.4	
	comp=N,747nm,3.3s,comp=E,501nm,3.3s						
JKRS				*e*S	**Sg**	**03 39 54.6**	**-1.2**
JIJ	**Ishigaki jima**	**0.23**	**344**	P	**Pg**	**03 39 51.5**	**-1.5**
JIJ				A	A	03 39 51.5	
	comp=N,300nm,4.0s,comp=E,149nm,6.8s						
JIJ				S	**Sg**	**03 39 54.6**	**-1.8**
HATJ	**Hateruma jima**	**0.38**	**257**	P	**Pg**	**03 39 54.9**	**-0.7**
HATJ				A	A	03 39 54.9	
	comp=N,291nm,2.4s,comp=E,340nm,3.1s						
HATJ				*e*S	**Sb**	**03 40 01.4**	**-0.7**
JISG	**Ishigakijimahi**	**0.45**	**11**	P	**Pg**	**03 39 55.5**	**-1.4**
JISG				A	A	03 39 55.5	
	comp=N,129nm,4.0s,comp=E,106nm,2.2s						
JISG				*e*S	**Sg**	**03 40 02.0**	**-1.0**
IRIF	**Iriomote-Funau**	**0.48**	**294**	P	**Pg**	**03 39 56.2**	**-1.2**
IRIF				A	A	03 39 56.2	
	comp=N,104nm,3.7s,comp=E,124nm,2.9s						
IRIF				*e*S	**Sg**	**03 40 03.1**	**-0.8**
JTJ	**Tarama**	**0.67**	**42**	P	**Pg**	**03 40 00.0**	**-0.8**
JTJ				A	A	03 40 00.0	
	comp=N,235nm,4.5s,comp=E,166nm,6.2s						
JTJ				S	**Sg**	**03 40 09.8**	**+0.1**
YOJ	**Yonaguni jima**	**1.14**	**286**		**Pb**	**03 40 07.8**	**-1.4**
YOJ				Sg	**Sb**	**03 40 23.2**	**-0.7**
YOJ	**Yonaguni jima**	**1.14**	**286**	*e*P	**Pb**	**03 40 08.2**	**-1.0**
YOJ				A	A	03 40 08.2	
	comp=N,49nm,1.1s,comp=E,43nm,3.2s						
YOJ				S	**Sb**	**03 40 23.7**	**-0.3**
JMJ2	**Miyako jima3**	**1.18**	**59**	A	A	03 40 08.9	
	comp=N,116nm,5.5s,comp=E,103nm,5.8s						
JYNG	**Yonagunijimaku**	**1.20**	**285**	A	A	03 40 09.2	
	comp=N,47nm,5.8s,comp=E,44nm,0.9s						
JIKM	**Ikemajima**	**1.22**	**50**	A	A	03 40 09.5	
	comp=N,60nm,3.4s,comp=E,100nm,1.3s						
JOGS	**Gusukube**	**1.25**	**60**	A	A	03 40 10.1	
	comp=N,129nm,5.3s,comp=E,143nm,4.4s						
NACB	**Ninganchiao**	**2.39**	**271**	Pn	**Pn**	**03 40 28.1**	**+1.6**
TATO	**Taipei**	**2.62**	**289**	Pn	**Pn**	**03 40 30.7**	**+1.2**
YHNB	**Yeheng**	**2.64**	**282**	Pn	**Pn**	**03 40 31.1**	**+1.1**
TPUB	**Ta-pu**	**3.39**	**256**	Pn	**Pn**	**03 40 41.7**	**+1.5**
JOW	**Kunigami**	**4.54**	**53**	Pn	**Pn**	**03 40 57.0**	**+0.9**
	comp=E,14nm,0.3s,baz=243,slow=11,SNR=6.0						
JOW				Sn	**Sn**	**03 41 50.1**	**+1.4**
	baz=292,slow=19 comp=E,22nm,0.3s						
JOW	**Kunigami**	**4.54**	**53**		**Pn**	**03 40 56.6**	**+0.6**
KNMB	**Chin-men Tao**	**5.33**	**275**	Pn	**Pn**	**03 41 06.3**	**-0.4**
SSE	**Sheshan**	**7.43**	**339**	Pn	**Pn**	**03 41 35.8**	**+0.1**
SSE				Sn	**Sn**	**03 43 02.0**	**+2.3**
SSE				L	L		
	comp=E,560nm,7.7s						
SSE				L	L		
	comp=E,570nm,7.8s						
NJ2	**Nanjing**	**9.19**	**330**	*e*P	**Pn**	**03 41 59.5**	**-0.3**
NJ2				pmax	pmax		
	comp=E,11nm,0.5s						
NJ2				L	L		
	comp=E,4μm,10.8s						
NJ2				L	L		
	comp=E,2μm,9.6s						
NJ2				L	L		
	comp=E,5μm,10.2s						
TGY	**Tagaytay City**	**10.46**	**198**	LR	LR	03 46 20.6	
	comp=E,520nm,20.7s,baz=294,slow=38						
JNU	**Nakatsue**	**10.69**	**32**	LR	LR	03 46 39.5	
	comp=E,757nm,18.8s,baz=184,slow=39						
WHN	**Wuhan**	**10.84**	**308**	P	**Pn**	**03 42 23.5**	**+1.1**
KSAR	**Wonju Array Be**	**13.63**	**12**		**Pn**	**03 43 00.5**	**0.0**
KSAR	**Wonju Array Be**	**13.63**	**12**	P	**Pn**	**03 43 00.5**	**0.0**
KSRS	**Korea Array**	**13.64**	**13**	Pn	**Pn**	**03 43 01.4**	**+0.7**
	comp=E,0.3nm,0.3s,baz=190,slow=13,SNR=11						
KSRS				LR	LR	03 48 37.8	
	comp=E,437nm,19.4s,baz=200,slow=39 comp=E,9.4nm,1.1s						
QIZ	**Qiongzhong**	**14.30**	**252**	P	**Pn**	**03 43 08.0**	**-1.8**
QIZ				S	**Sn**	**03 45 48.5**	**+0.2**
QIZ				L	L		
	comp=E,820nm,15.5s						
QIZ				L	L		
	comp=E,720nm,16.3s						
QIZ				L	L		
	comp=E,630nm,13.9s						
DL2	**Dalian**	**14.88**	**352**	P	**P**	**03 43 26.0**	**+2.7**
DL2				S	**S**	**03 46 19.3**	**-1.0**
DL2				pmax	pmax		
	comp=Z,40nm,1.4s						
DL2				pmax	pmax		
	comp=Z,72nm,3.9s						
DL2				LR	LR		
	comp=N,1μm,18.1s						
DL2				LR	LR		
	comp=E,1μm,18.6s		

comp=Z,690nm,13.0s
CN2 L L
comp=Z,870nm,13.0s
CN2 L L
comp=Z,600nm,11.0s
HHC Hu-ho-hao-te 19.75 331 *e*P **Pn** **03 44 19.0 +0.3**
HHC pP sP 03 44 22.0 -1.1
HHC S **Sn** **03 48 03.0 +2.7**
HHC SS **SnSn** **03 48 17.0 +2.2**
HHC pmax pmax
comp=Z,11nm,0.6s
HHC pmax pmax
comp=Z,120nm,4.2s
HHC L L
comp=Z,460nm,11.1s
HHC L L
comp=Z,280nm,11.5s
HHC L L
comp=Z,400nm,11.5s
PZH PanZhiHua 20.45 281 P Pn 03 44 26.8 -0.3
BTO2 Baotou 20.46 327 *e*P Pn 03 44 26.5 -0.6
BTO2 PP **PnPn** **03 44 47.0 +4.7**
BTO2 pmax pmax
comp=Z,20nm,0.6s
BTO2 pmax pmax
comp=Z,330nm,4.4s
BTO2 L L
comp=Z,900nm,11.4s
BTO2 L L
comp=Z,1μm,9.9s
BTO2 L L
comp=Z,900nm,10.9s
XLT XiLinHaoTe 20.81 343 *e*P Pn 03 44 34.3 +3.2
XLT pP sP 03 44 38.8 +4.4
XLT sP pP 03 44 42.5 +10
XLT pmax pmax
comp=Z,8.0nm,0.8s
XLT L L
comp=Z,51nm,11.0s
XLT L L
comp=Z,310nm,10.7s
XLT L L
comp=Z,460nm,11.7s
USRK Ussuriysk Ar. 21.00 16 P **P** **03 44 31.2 +0.7**
comp=Z,1.2nm,0.6s,baz=213,slow=10,SNR=4.3
comp=Z,1.2nm,0.6s
LZH Lanzhou 21.22 309 P **P** **03 44 34.3 +1.1**
LZH sP sP 03 44 41.0 +1.8
LZH S **S** **03 48 28.0 -0.8**
LZH pmax pmax
comp=Z,15nm,1.5s
LZH L L
comp=Z,400nm,8.9s
LZH L L
comp=Z,390nm,8.6s
LZH L L
comp=Z,380nm,8.3s
LZDM Lanzhou Array 21.26 308 P **P** **03 44 34.6 +0.7**
comp=Z,1.5nm,0.3s,baz=127,slow=9.6,SNR=5.5
comp=Z,1.5nm,0.3s
BNX BinXian 21.70 6 ⇑P **P** **03 44 38.8 +0.6**
BNX pmax pmax
comp=Z,6.0nm,0.8s
JTM Tenmabayashi 21.79 36 P **P** **03 44 38.7 -0.5**
JTM IAmb IAmb 03 44 51.2
comp=Z,59nm,1.4s
GAMI Galela, Maluku 22.44 171 P **P** **03 44 45.7 -0.6**
comp=Z,2μmcomp=Z,107nm,1.2s
TOLI2 Tolitoli 23.13 189 **P** **03 44 52.8 -0.8**
GTOI Gorontalo 23.39 183 P **P** **03 44 53.7 -2.5**
comp=Z,39nm,1.2s
TNTI Ternate 23.43 172 P **P** **03 44 56.6 0.0**
MRSI Marisa 23.63 186 P **P** **03 44 57.4 -1.1**
comp=Z,1μmcomp=Z,54nm,1.0s
MPSI Mapaga 24.03 191 P **P** **03 45 02.5 +0.2**
comp=Z,30nm,1.4s
CHTO Chiang Mai 24.09 262 **P** **03 45 01.9 -1.0**
CHTO Chiang Mai 24.09 262 P **P** **03 45 01.9 -1.0**
CHTO pmax pmax
comp=Z,15nm,1.0s
CHTO Chiang Mai 24.09 262 P **P** **03 45 01.1 -1.8**
comp=Z,18nm,1.0s
CM31 Chiang Mai Arr 24.20 261 P **P** **03 45 03.1 -0.9**
CMAR Chiang Mai Arr 24.20 261 P **P** **03 45 05.1 +1.2**
comp=Z,4.7nm,0.8s,baz=72,slow=8.8,SNR=13
CMAR PcP **PcP** **03 48 45.1 +0.6**
comp=Z,0.5nm,0.3s,baz=54,slow=4.5,SNR=1.9
comp=Z,4.7nm,0.8s
CMAR Chiang Mai Arr 24.20 261 **P** **03 45 04.4 +0.5**
CMAR Chiang Mai Arr 24.20 261 P **P** **03 45 04.4 +0.5**
CMAR 03 48 45.1
SBUM Sibu 24.48 210 P **P** **03 45 06.1 -0.4**
SBUM Sibu 24.48 210 P **P** **03 45 08.0 +1.5**
ASAJ Asahikawa 24.97 33 P **P** **03 45 10.9 +0.2**
comp=Z,9.1nm,1.0s,baz=236,slow=11,SNR=4.6
comp=Z,9.1nm,1.0s
ASAJ Asahikawa 24.97 33 P **P** **03 45 10.9 +0.2**
ASAJ pmax pmax
comp=Z,55nm,1.5s
JKA Kamikawa-asahi 24.97 33 P **P** **03 45 10.9 +0.2**
JKA Kamikawa-asahi 24.97 33 IAmb IAmb 03 45 24.9
comp=Z,54nm,1.5s
APSI Ampana 25.03 186 P **P** **03 45 11.3 -0.1**
comp=Z,1μmcomp=Z,76nm,1.2s
LUWI Luwuk 25.07 183 P **P** **03 45 12.6 +0.8**
GTA2 Gaotai 25.69 312 *e*P **P** **03 45 17.5 0.0**
GTA2 pmax pmax
comp=Z,8.0nm,0.8s
GTA2 L L
comp=Z,350nm,13.7s
GTA2 L L
comp=Z,290nm,15.1s
GTA2 L L
comp=Z,340nm,14.4s
KLR Kulʾdur 25.73 11 *i*P **P** **03 45 17.1 -0.5**
KLR pmax pmax
comp=Z,4.0nm,0.9s
SIJI Sorong 25.79 164 P **P** **03 45 20.0 +1.7**
comp=Z,6.7nm,0.7s,baz=352,slow=16,SNR=3.9
comp=Z,6.7nm,0.7s
SANI Sanana 26.09 176 P **P** **03 45 23.3 +2.2**
comp=Z,726nmcomp=Z,45nm,1.2s
HEH HeiHe 26.18 5 *e*P **P** **03 45 22.5 +0.9**
HEH pmax pmax
comp=Z,6.0nm,1.0s
MMSI Mamuju 27.16 192 P **P** **03 45 33.5 +2.7**
comp=Z,22nm,1.0s
YSS Yuzhno-Sakhali 27.17 28 *e*P **P** **03 45 31.8 +1.2**
YSS pmax pmax
comp=Z,20nm,1.1s
YSS MLR MLR
comp=Z,500nm,12.0s
SONM Songino Array 27.56 334 P **P** **03 45 33.1 -1.1**
comp=Z,2.6nm,0.6s,baz=149,slow=7.6,SNR=8.7
SONM PcP **PcP** **03 48 51.6 -0.3**
comp=Z,0.8nm,1.0s,baz=146,slow=2.8,SNR=2.4
comp=Z,2.6nm,0.6s
KRAI Karang Ratu 27.60 171 P **P** **03 45 35.5 +0.9**
comp=Z,8μmcomp=Z,12nm,0.9s
GOMU GeErMu 28.00 302 P **P** **03 45 37.5 -1.1**
GOMU pP pP 03 45 41.5 -1.6
GOMU sP sP 03 45 43.3 -1.6
GOMU S **S** **03 50 21.5 -1.3**
GOMU pmax pmax
comp=Z,5.0nm,0.8s
SHL Shillong 29.34 280 **P** **03 45 50.2 -0.1**
SHL Shillong 29.34 280 P **P** **03 45 50.2 -0.1**
SHL pmax pmax
comp=Z,22nm,1.3s
GENI Genyem 30.77 148 P **P** **03 45 58.5 -4.4**
PSI Prapat 32.35 233 P **P** **03 46 16.8 -0.2**
PSI pmax pmax
comp=Z,20nm,1.0s
PSI Prapat 32.35 233 P **P** **03 46 19.5 +2.5**
comp=Z,22nm,1.0s
RPSI Rantau Prapat 32.42 233 **P** **03 46 16.8 -0.7**
RPSI IAmb IAmb 03 46 23.7
comp=Z,20nm,1.0s
LBFI Labuhan Bajo, 32.70 188 P **P** **03 46 20.1 +0.3**
MOY Mondy 32.75 333 *e*P **P** **03 46 18.5 -1.6**
MOY pmax pmax
comp=Z,14nm,1.9s
MNSI Mandailing Nat 33.29 229 P **P** **03 46 24.9 -0.1**
PPI Padang Panjang 33.64 227 P **P** **03 46 29.9 +1.8**
comp=Z,21nm,1.1s
EVN Everest 33.73 285 P **P** **03 46 28.5 -1.1**

KPJI Karang Pucung 34.66 207 P **P** **03 46 37.5 +0.7**
comp=Z,22nm,1.5s
WMQ Urumqi 35.70 312 *e*P **P** **03 46 46.0 +0.2**
WMQ pmax pmax
comp=Z,22nm,0.9s
MTN Manton Dam 37.38 169 **P** **03 46 58.5 -1.6**
YAK Yakutsk 38.06 4 *e*P **P** **03 47 04.5 -0.9**
YAK *e**PP **sP** **03 47 14.1 +2.6**
YAK *e* 03 48 32.4
YAK *e* 03 49 19.3
YAK *e*S **S** **03 52 55.5 -1.7**
YAK *e*SS **SnSn** **03 55 40.7 +0.7**
YAK *e*SSS SSS 03 55 58.5
YAK pmax pmax
comp=Z,9.0nm,1.1s
YAK pmax pmax
comp=N,5.0nm,1.5s
YAK pmax pmax
comp=E,3.0nm,1.5s
YAK pmax pmax
comp=Z,130nm,4.3s
YAK pmax pmax
comp=N,82nm,4.6s
YAK pmax pmax
comp=E,73nm,4.4s
YAK smax smax
comp=E,130nm,4.3s
YAK smax smax
comp=N,83nm,4.7s
YAK MLR MLR
comp=Z,352nm,25.0s
YAK MLR MLR
comp=N,253nm,22.0s
YAK MLR MLR
comp=E,98nm,13.0s
H11N1 WAKE ISLAND Hy 39.72 88 T T 04 29 35.0
baz=283,slow=74,SNR=15
H11N2 WAKE ISLAND Hy 39.73 88 T T 04 29 34.4
baz=283,slow=74,SNR=18
H11N3 WAKE ISLAND Hy 39.74 88 T T 04 29 35.4
baz=283,slow=74,SNR=19
H11S3 WAKE ISLAND Hy 39.85 90 T T 04 29 50.5
baz=285,slow=75,SNR=16
H11S1 WAKE ISLAND Hy 39.86 90 T T 04 29 44.9
baz=285,slow=75,SNR=14
H11S2 WAKE ISLAND Hy 39.87 90 T T 04 29 49.8
baz=285,slow=75,SNR=12
MK31 Makanchi Array 40.31 315 *i*P **P** **03 47 23.6 -1.0**
MKAR Makanchi Array 40.31 315 P **P** **03 47 23.3 -1.2**
comp=E,2.2nm,0.6s,baz=102,slow=10,SNR=9.6
MKAR PcP **PcP** **03 49 28.4 +0.5**
comp=E,2.1nm,0.7s,baz=102,slow=3.6,SNR=7.3
comp=E,2.2nm,0.6s
MKAR Makanchi Array 40.31 315 **P** **03 47 22.6 -2.0**
MKAR Makanchi Array 40.31 315 P **P** **03 47 22.6 -2.0**
MKAR 03 49 28.4
MAKZ Makanchi 40.52 315 P **P** **03 47 24.9 -1.4**
MAKZ Makanchi 40.52 315 P **P** **03 47 24.9 -1.4**
MAKZ pmax pmax
comp=Z,4.0nm,1.0s
ZAA0 Zalesovo Array 41.81 326 P **P** **03 47 35.0 -1.7**
ZALV Zalesovo Beam 41.81 326 P **P** **03 47 35.1 -1.6**
comp=Z,3.4nm,0.6s,baz=118,slow=8.8,SNR=5.5
ZALV PcP **PcP** **03 49 31.5 -1.1**
comp=Z,0.7nm,0.5s,baz=124,slow=5.5,SNR=2.0
comp=Z,3.4nm,0.6s
COEN Coen 42.16 152 **P** **03 47 40.2 +0.3**
HYB Hyderabad 43.07 270 *e*P **P** **03 47 47.3 -0.2**
NRN Naryn 43.46 305 P **P** **03 47 50.0 -0.8**
NRN Naryn 43.46 305 P **P** **03 47 50.0 -0.8**
NRN pmax pmax
comp=Z,10.0nm,0.9s
KURK Kurchatov 43.92 319 **PcP** **03 49 39.0 -0.7**
KURK Kurchatov 43.92 319 P **P** **03 47 52.5 -1.3**
KURK Kurchatov 43.92 319 IAmb IAmb 03 47 55.9
comp=Z,4.0nm,1.1s
KURK Kurchatov 43.92 319 *i*P **P** **03 47 53.1 -0.8**
KURK pmax pmax
comp=Z,5.0nm,1.4s
KURBB Kurchatov Arra 43.94 319 P **P** **03 47 52.5 -1.5**
comp=Z,1.7nm,0.8s,baz=113,slow=8.1,SNR=7.0
KURBB PcP **PcP** **03 49 39.0 -0.8**
comp=Z,0.9nm,0.6s,baz=121,slow=3.7,SNR=5.2
comp=Z,1.7nm,0.8s
AAK Ala-Archa 44.74 307 LR LR 04 09 35.9
comp=Z,100nm,18.1s,baz=94,slow=40
AAK Ala-Archa 44.74 307 *ce*P **P** **03 48 01.3 +0.5**
AAK pmax pmax
comp=Z,6.0nm,1.3s
WB0 Warramunga Arr 44.76 166 **P** **03 48 00.6 -0.3**
WB0 IAmb IAmb 03 48 02.5
comp=Z,25nm,1.1s
WRAB Tennant Creek 44.91 166 P **P** **03 48 00.9 -1.2**
WRAB IAmb IAmb 03 48 03.9
comp=Z,19nm,1.1s
WRAB Tennant Creek 44.91 166 *i*P **P** **03 48 02.1 +0.1**
WRAB pmax pmax
comp=Z,17nm,1.0s
WRA Warramunga Arr 44.91 166 P **P** **03 48 02.7 +0.6**
comp=Z,12nm,1.0s,baz=346,slow=7.6,SNR=20
WRA PcP **PcP** **03 49 43.6 0.0**
comp=Z,1.4nm,0.9s,baz=342,slow=3.2,SNR=3.0
comp=Z,12nm,1.0s
WRA Warramunga Arr 44.91 166 **P** **03 48 00.9 -1.2**
WR8 Warramunga Arr 44.96 166 P **P** **03 48 01.5 -1.0**
WR8 IAmb IAmb 03 48 04.3
comp=Z,28nm,1.1s
NIL Nilore 45.23 294 **P** **03 48 02.8 -1.9**
NIL IAmb IAmb 03 48 07.1
comp=Z,12nm,0.9s
NIL Nilore 45.23 294 P **P** **03 48 02.8 -1.9**
NIL pmax pmax
comp=Z,12nm,1.0s
PSA00 Pilbara Seismi 45.64 186 **P** **03 48 07.1 -0.7**
PSA00 IAmb IAmb 03 48 12.2
comp=Z,21nm,1.1s
PSA00 Pilbara Seismi 45.64 186 P **P** **03 48 06.1 -1.7**
PSA00 IAmb IAmb 03 48 08.7
comp=Z,26nm,1.0s
TIXI Tiksi 47.61 2 **P** **03 48 21.9 -0.8**
TIXI Tiksi 47.61 2 *i*P **P** **03 48 22.9 +0.2**
TIXI pmax pmax
comp=Z,4.0nm,1.0s
ASAR Alice Springs 48.45 168 P **P** **03 48 30.8 +1.0**
comp=Z,8.1nm,1.1s,baz=350,slow=8.3,SNR=19
ASAR PcP **PcP** **03 49 56.4 +0.4**
comp=Z,1.9nm,0.7s,baz=344,slow=3.4,SNR=7.3
comp=Z,8.1nm,1.1s
ASAR Alice Springs 48.45 168 **P** **03 48 30.1 +0.3**
ASAR Alice Springs 48.45 168 P **P** **03 48 30.1 +0.3**
ASAR 03 49 56.4
BVAR Borovoye Array 49.47 320 P **P** **03 48 35.5 -1.9**
comp=Z,0.7nm,0.5s,baz=96,slow=5.8,SNR=3.8
BVAR PcP **PcP** **03 49 59.8 +0.5**
comp=Z,1.9nm,0.7s,baz=95,slow=3.2,SNR=4.8
comp=Z,0.7nm,0.5s
BORK Borovoye 49.52 320 *i*P **P** **03 48 37.1 -0.6**
BORK pmax pmax
comp=Z,3.0nm,0.6s
NRIK Norilʾsk 50.18 344 P **P** **03 48 41.7 -0.8**
comp=Z,2.4nm,0.6s,baz=115,slow=5.3,SNR=2.8
comp=Z,2.4nm,0.6s
NRIK Norilʾsk 50.18 344 IAmb IAmb 03 48 43.9
comp=Z,12nm,1.4s
NRIK Norilʾsk 50.18 344 P **P** **03 48 41.7 -0.8**
NRIK pmax pmax
comp=Z,12nm,1.5s
ABKAR Akbulak array 55.45 314 **P** **03 49 21.4 -0.3**
SPIA Saint Paul Isl 56.83 36 P **P** **03 49 31.2 -0.2**
baz=264
GAMB Gambell 57.20 28 **P** **03 49 34.8 +0.9**
GAMB IAmb IAmb 03 49 37.2
comp=Z,16nm,1.4s
GAMB Gambell 57.20 28 P **P** **03 49 33.9 0.0**
baz=258,SNR=5.5
BBOO Buckleboo 57.75 168 IAmb IAmb 03 49 43.3
comp=Z,18nm,0.8s
STKA Stephens Creek 58.13 163 P **P** **03 49 41.0 +0.2**
comp=Z,11nm,0.8s,baz=339,slow=8.2,SNR=9.9
comp=Z,11nm,0.8s
STKA Stephens Creek 58.13 163 *i*P **P** **03 49 41.5 +0.7**
UNV Unalaska Valle 58.73 40 P **P** **03 49 43.9 -0.9**
baz=269
TNA Tin City 59.13 27 P **P** **03 49 46.7 -0.8**
baz=260
M11K Mekoryuk 59.25 33 P **P** **03 49 48.3 0.0**

baz=265
F14K Arctic Creek 59.77 27 P **P** **03 49 51.6 -0.3**
baz=262,SNR=12
ANM Nome 60.06 28 P **P** **03 49 54.9 +1.0**
ANM IAmb IAmb 03 49 56.5
comp=Z,13nm,1.1s
ANM Nome 60.06 28 P **P** **03 49 54.9 +1.0**
ANM pmax pmax
comp=Z,13nm,1.1s
ANM Nome 60.06 28 P **P** **03 49 53.4 -0.5**
baz=263
K13K Kusilvak Mount 60.13 31 P **P** **03 49 54.1 -0.3**
baz=266
F15K North Star Dit 60.50 27 IAmb IAmb 03 49 60.0
comp=Z,8.8nm,1.0s
F15K North Star Dit 60.50 27 P **P** **03 49 56.4 -0.5**
baz=263
FALS False Pass 60.54 39 P **P** **03 49 57.1 -0.2**
baz=271
C16K Lisburne Hills 60.57 24 P **P** **03 49 57.3 0.0**
baz=261
M13K Dall Lake 60.67 33 P **P** **03 49 58.0 0.0**
baz=268
G15K Niukluk 60.67 28 P **P** **03 49 57.9 -0.1**
baz=264
J14K Nanvaranak Lak 60.70 30 P **P** **03 49 58.5 +0.2**
baz=266
L14K Kuka Creek 61.03 32 P **P** **03 50 00.6 +0.1**
baz=268,SNR=5.8
D17K Noatak River 61.34 25 P **P** **03 50 02.6 0.0**
baz=264,SNR=8.7
M14K Bethel 61.36 33 P **P** **03 50 03.1 +0.3**
baz=269
C17K DeLong Mountai 61.40 24 P **P** **03 50 02.6 -0.4**
baz=263
H16K Elim 61.41 28 P **P** **03 50 02.6 -0.5**
baz=266,SNR=5.2
G16K Koyuk River 61.42 27 P **P** **03 50 02.7 -0.4**
baz=266
RDOG Red Dog Mine 61.45 24 P **P** **03 50 02.2 -1.1**
baz=264
N14K Kuskokwak Cree 61.48 33 P **P** **03 50 02.8 -0.8**
baz=269
K15K Wolf Creek Mou 61.61 31 P **P** **03 50 04.4 -0.1**
baz=268
L15K Ungalak Mounta 61.62 31 P **P** **03 50 04.7 +0.2**
baz=269
O14K Tigyukauivet M 61.69 34 P **P** **03 50 04.5 -0.5**
baz=270
E17K Hotham Inlet 61.77 25 P **P** **03 50 05.5 +0.1**
baz=265,SNR=7.0
KIRV Kirov 61.84 325 *ce*P **P** **03 50 04.9 -1.1**
F17K Baldwin Pennin 61.95 26 IAmb IAmb 03 50 09.4
comp=Z,9.7nm,1.1s
F17K Baldwin Pennin 61.95 26 P **P** **03 50 06.1 -0.6**
baz=266
M15K Kasigluk River 61.99 33 P **P** **03 50 07.2 +0.2**
baz=270
J16K Anvik River 62.07 30 P **P** **03 50 07.8 +0.3**
baz=268
G17K Kiwalik Mounta 62.13 27 P **P** **03 50 07.8 -0.2**
baz=267
C18K Utukok River 62.14 24 P **P** **03 50 08.0 0.0**
baz=265,SNR=7.4
SDPT Sand Point 62.21 39 P **P** **03 50 08.6 0.0**
baz=273
E18K Tukpahlearik C 62.27 25 P **P** **03 50 09.1 +0.3**
baz=266
N15K Kwethluk River 62.28 33 P **P** **03 50 09.2 +0.1**
baz=271
A19K Wainwright 62.33 22 P **P** **03 50 08.8 -0.3**
baz=264,SNR=6.1
H17K Granite Mounta 62.42 28 IAmb IAmb 03 50 13.2
comp=Z,11nm,1.1s
H17K Granite Mounta 62.42 28 P **P** **03 50 09.8 -0.1**
baz=268
O15K Ungalikthiuk R 62.44 34 P **P** **03 50 10.3 +0.2**
baz=271
L16K Owhat River 62.58 31 P **P** **03 50 11.2 +0.3**
baz=270
F18K Selawik 62.59 26 P **P** **03 50 11.0 0.0**
baz=268,SNR=15
S14K Fog Glacier 62.69 38 P **P** **03 50 11.4 -0.5**
baz=273
CHNA Chernabura Isl 62.75 39 P **P** **03 50 12.2 0.0**
baz=274
C19K Lookout Ridge 62.75 23 IAmb IAmb 03 50 18.4
comp=Z,6.2nm,0.8s
C19K Lookout Ridge 62.75 23 P **P** **03 50 12.6 +0.5**
baz=266,SNR=7.2
J17K VABM Dome 62.76 30 P **P** **03 50 12.5 +0.4**
baz=270
M16K Timber Creek 62.83 32 P **P** **03 50 12.9 +0.2**
baz=271
N16K Nishlik Lake 62.94 33 P **P** **03 50 13.6 +0.2**
baz=272
G18K Tagagawik 62.98 27 IAmb IAmb 03 50 16.4
comp=Z,14nm,1.2s
G18K Tagagawik 62.98 27 P **P** **03 50 13.5 -0.1**
baz=269
H18K Honhosa River 63.09 28 IAmb IAmb 03 50 18.7
comp=Z,13nm,1.2s
H18K Honhosa River 63.09 28 P **P** **03 50 14.3 0.0**
baz=270
K17K Iditarod 63.12 30 P **P** **03 50 14.9 +0.4**
baz=271
L17K Donlin 63.13 31 P **P** **03 50 15.2 +0.6**
baz=271
BELG Belogornoye 63.18 318 *i*P **P** **03 50 17.1 +2.0**
BELG pmax pmax
comp=Z,3.0nm,0.9s
D19K Kuna River 63.26 24 P **P** **03 50 16.2 +0.7**
baz=268,SNR=19
O16K Kokwok River B 63.31 34 P **P** **03 50 15.6 -0.2**
baz=273
CHGN Chignik 63.32 37 P **P** **03 50 16.6 +0.6**
baz=274
F19K Shaleruckik Mo 63.35 26 IAmb IAmb 03 50 19.3
comp=Z,7.7nm,1.1s
F19K Shaleruckik Mo 63.35 26 P **P** **03 50 16.4 +0.4**
baz=269
P16K Nushagak River 63.39 34 P **P** **03 50 16.3 -0.1**
baz=273
M17K Holitna River 63.56 32 P **P** **03 50 17.6 +0.1**
baz=272
E19K Redstone River 63.57 25 IAmb IAmb 03 50 23.7
comp=Z,7.8nm,0.8s
E19K Redstone River 63.57 25 P **P** **03 50 17.9 +0.4**
baz=269,SNR=9.6
G19K Purcell Mounta 63.62 26 IAmb IAmb 03 50 20.2
comp=Z,11nm,1.2s
G19K Purcell Mounta 63.62 26 P **P** **03 50 17.9 0.0**
baz=270,SNR=7.5
B20K Meade River 63.65 22 IAmb IAmb 03 50 25.3
comp=Z,6.7nm,0.9s
B20K Meade River 63.65 22 P **P** **03 50 18.2 +0.2**
baz=268
R16K Pilot Point 63.69 36 P **P** **03 50 18.9 +0.5**
baz=274
GCSA Galena City Sc 63.72 28 P **P** **03 50 18.9 +0.4**
baz=271
N17K Nushagak Hills 63.72 33 P **P** **03 50 18.6 0.0**
baz=273
O17K Koliganek Bris 63.80 34 P **P** **03 50 19.4 +0.3**
baz=273
D20K Etivluk River 63.81 24 IAmb IAmb 03 50 25.4
comp=Z,13nm,0.8s
D20K Etivluk River 63.81 24 P **P** **03 50 19.5 +0.4**
baz=269,SNR=13
J18K Innoko River 63.82 29 IAmb IAmb 03 50 21.6
comp=Z,12nm,1.2s
J18K Innoko River 63.82 29 P **P** **03 50 19.1 -0.1**
baz=272
A21K Barrow 63.88 21 P **P** **03 50 19.7 +0.4**
baz=268,SNR=5.9
L18K Granite Mounta 63.88 31 IAmb IAmb 03 50 23.3
comp=Z,16nm,1.3s
L18K Granite Mounta 63.88 31 P **P** **03 50 19.5 -0.1**
baz=272
H19K Roundabout Mou 63.89 27 P **P** **03 50 19.3 -0.3**
baz=271
E20K Nigu River 63.97 24 P **P** **03 50 20.0 -0.1**
baz=270
Q16K King Salmon 64.10 35 P **P** **03 50 20.9 -0.2**
baz=274
F20K Avaraart Lake 64.15 25 IAmb IAmb 03 50 25.8

comp=Z,14nm,1.2s
F20K **Avaraart Lake** 64.15 25 P P 03 50 21.5 +0.2
baz=271,SNR=9.7
P17K **Kvichak River** 64.17 34 P P 03 50 21.2 -0.3
baz=274
J19K **Poorman** 64.29 29 P P 03 50 22.5 +0.2
baz=273,SNR=8.4
M18K **Stony River** 64.33 32 P P 03 50 22.4 -0.1
baz=274
R17L **Mt. Peulik Vol** 64.34 36 P P 03 50 23.2 +0.5
baz=275
N18K **Kilae Creek** 64.35 33 P P 03 50 22.8 +0.1
baz=274
A22K **Sinclair Lake** 64.40 21 P P 03 50 23.1 +0.2
baz=270,SNR=8.1
C21K **Knifeblade Rid** 64.47 23 P P 03 50 23.7 +0.3
baz=271
B21K **Ikpikpuk River** 64.53 23 P P 03 50 24.0 +0.3
baz=271
Q17K **Contact Creek** 64.54 35 P P 03 50 23.7 -0.4
baz=275
H20K **Anotleneega Mo** 64.54 27 P P 03 50 24.1 +0.2
baz=272
L19K **White Mountain** 64.74 31 IAmb IAmb 03 50 39.2
comp=Z,23nm,1.5s
L19K **White Mountain** 64.74 31 P P 03 50 25.2 0.0
baz=274
I20K **Naaghedeneel** 64.75 28 P P 03 50 25.7 +0.5
baz=273
O18K **Koktuh Hills** 64.75 33 P P 03 50 25.9 +0.5
baz=275
P18K **Big Mountain,** 64.78 34 P P 03 50 26.0 +0.4
baz=275
E21K **Killik River** 64.79 24 P P 03 50 25.7 +0.2
baz=272
CHIR **Chirikof Islan** 64.92 38 P P 03 50 27.0 +0.4
baz=276
J20K **Nowinta River** 64.92 29 IAmb IAmb 03 50 29.6
comp=Z,18nm,1.2s
J20K **Nowinta River** 64.92 29 P P 03 50 26.5 +0.1
baz=274,SNR=7.9
B22K **Teshekpuk Lake** 64.93 22 IAmb IAmb 03 50 29.3
comp=Z,18nm,1.1s
B22K **Teshekpuk Lake** 64.93 22 P P 03 50 26.7 +0.4
baz=272
Q18K **Katmai Hardscr** 64.96 35 P P 03 50 26.8 -0.1
baz=276
M19K **Big River Lodg** 64.98 31 P P 03 50 27.3 +0.4
baz=275
IMAR **Indian Mountai** 64.98 27 P P 03 50 28.1 +1.3
K20K **Telida** 65.02 29 IAmb IAmb 03 50 32.1
comp=Z,19nm,1.2s
K20K **Telida** 65.02 29 P P 03 50 27.4 +0.3
baz=274,SNR=6.5
F21K **Alatna River** 65.02 25 IAmb IAmb 03 50 30.4
comp=Z,11nm,1.4s
F21K **Alatna River** 65.02 25 P P 03 50 27.2 +0.1
baz=273
N19K **Bonanza Creek** 65.03 32 P P 03 50 27.5 +0.2
baz=275
G21K **Allakaket** 65.05 26 IAmb IAmb 03 50 31.9
comp=Z,16nm,1.0s
G21K **Allakaket** 65.05 26 P P 03 50 27.7 +0.5
baz=273
H21K **Melozitna Rive** 65.39 27 P P 03 50 30.2 +0.8
baz=274
F22K **John River** 65.51 25 P P 03 50 30.5 +0.3
baz=274,SNR=18
M20K **Styx River** 65.58 31 P P 03 50 30.1 -0.7
baz=276
E22K **Anaktuvuk Pass** 65.61 24 P P 03 50 30.3 -0.5
baz=274
SII **Sitkinak Islan** 65.63 37 P P 03 50 30.6 -0.5
baz=277
Q19K **Cape Douglas,** 65.64 34 P P 03 50 31.5 +0.4
baz=277
CHUM **Lake Minchumin** 65.75 29 P P 03 50 32.5 +0.7
baz=276
P19K **Oil Pt** 65.77 34 P P 03 50 32.5 +0.5
baz=277
I21K **Tanana** 65.78 27 IAmb IAmb 03 50 34.5
comp=Z,15nm,1.1s
I21K **Tanana** 65.78 27 P P 03 50 32.5 +0.6
baz=275
G22K **Bettles** 65.82 25 P P 03 50 32.6 +0.5
baz=275,SNR=8.3
PPLA **Purkeypile** 65.91 30 P P 03 50 33.1 +0.1
baz=276
C23K **Itkillik River** 65.91 22 IAmb IAmb 03 50 35.5
comp=Z,13nm,1.1s
C23K **Itkillik River** 65.91 22 P P 03 50 33.0 +0.3
baz=274,SNR=6.7
D23K **Nanushuk River** 65.96 23 P P 03 50 33.4 +0.4
baz=275
H22K **Ishtalitna Cre** 65.96 27 P P 03 50 33.2 +0.1
baz=276,SNR=18
OHAK **Old Harbor** 66.04 36 P P 03 50 34.2 +0.6
baz=278
N20K **Mount Spurr** 66.09 32 P P 03 50 34.4 +0.3
baz=277
SPCR **Spurr Chakacha** 66.09 32 P P 03 50 34.6 +0.6
baz=277
COLD **Coldfoot** 66.30 25 IAmb IAmb 03 50 39.9
comp=Z,12nm,1.2s
COLD **Coldfoot** 66.30 25 P P 03 50 35.4 +0.1
baz=276,SNR=9.2
BPAW **Bear Paw Mtn.** 66.31 29 IAmb IAmb 03 50 45.5
comp=Z,9.0nm,0.9s
BPAW **Bear Paw Mtn.** 66.31 29 P P 03 50 35.9 +0.5
baz=277
MLY **Manley** 66.31 28 P P 03 50 36.2 +0.7
baz=276
SKT **Skwentna** 66.32 31 P P 03 50 35.5 +0.1
baz=277
Q20K **Shuyak Island** 66.32 35 P P 03 50 35.7 +0.2
baz=278
KDAK **Kodiak Island** 66.34 36 P P 03 50 34.8 -0.8
baz=278
TOLK **Toolik Lake Re** 66.39 24 P P 03 50 36.0 +0.1
baz=276,SNR=8.1
KTH **Kantishna Hill** 66.41 29 IAmb IAmb 03 50 49.0
comp=Z,14nm,1.1s
G23K **Bananza Creek** 66.42 26 IAmb IAmb 03 50 42.6
comp=Z,11nm,0.8s
G23K **Bananza Creek** 66.42 26 P P 03 50 35.2 -0.9
baz=276,SNR=12
E23K **Chandalar** 66.43 24 P P 03 50 36.4 +0.2
baz=276,SNR=11
HOM **Homer** 66.56 33 P P 03 50 37.3 +0.3
baz=278
C24K **Franklin Bluff** 66.58 22 P P 03 50 37.0 -0.1
baz=276
D24K **Happy Valley** 66.60 23 P P 03 50 37.8 +0.6
baz=276
CAPN **Captain Cook N** 66.65 32 P P 03 50 38.0 +0.5
baz=278
KLMR **Klimovskoe** 66.67 328 *e*P P 03 50 37.0 -0.7
KLMR pmax pmax
comp=Z,52nm,1.6s
TRF **Thorofare Moun** 66.70 29 P P 03 50 38.5 +0.4
baz=278
H23K **Yukon River** 66.72 27 P P 03 50 38.4 +0.4
baz=277
CUT **Chulitna** 66.85 30 P P 03 50 39.7 +0.9
baz=278
E24K **Your Creek** 66.85 24 P P 03 50 39.6 +0.7
baz=277
I23K **Minto, Yukon-K** 66.88 27 P P 03 50 39.0 +0.1
baz=278
BRSE **Bradley Lake S** 67.00 33 P P 03 50 40.0 +0.1
baz=279
M22K **Willow** 67.01 31 P P 03 50 40.5 +0.7
baz=278
NEA2 **Nenana** 67.08 28 P P 03 50 41.0 +0.8
baz=278,SNR=17
F24K **Squaw Lake** 67.15 25 P P 03 50 41.8 +1.1
baz=278,SNR=30
MCK **McKinley** 67.26 29 P P 03 50 42.1 +0.6
baz=279,SNR=9.6
RC01 **Rabbit Creek A** 67.29 32 P P 03 50 42.1 +0.4
baz=279
O22K **Cooper Landing** 67.39 32 P P 03 50 42.6 +0.3
baz=279
H24K **Noodor Dome** 67.39 26 IAmb IAmb 03 50 45.5
comp=Z,18nm,1.2s
H24K **Noodor Dome** 67.39 26 P P 03 50 43.0 +0.7
baz=279,SNR=11
G24K **Hadweenzic Riv** 67.43 26 IAmb IAmb 03 50 46.1
comp=Z,16nm,1.1s
G24K **Hadweenzic Riv** 67.43 26 P P 03 50 43.6 +1.1
baz=279,SNR=11
D25K **Kavik River** 67.45 23 IAmb IAmb 03 50 45.7
comp=Z,16nm,1.1s
D25K **Kavik River** 67.45 23 P P 03 50 43.3 +0.7
baz=278
PMR **Palmer** 67.50 31 P P 03 50 43.7 +0.8
baz=279
WRH **Wood River Hil** 67.51 28 IAmb IAmb 03 50 48.0
comp=Z,11nm,1.0s
COLA **College** 67.55 27 *i* P P 03 50 44.2 +1.0
COLA pmax pmax
comp=Z,10.0nm,0.9s
COLA **College** 67.55 27 P P 03 50 43.8 +0.6
baz=279
WAT1 **Susitna Watana** 67.57 30 P P 03 50 43.8 +0.4
baz=279
SEW **Seward** 67.59 33 P P 03 50 43.7 +0.2
baz=280
KBZ **Khabaz** 67.66 309 P P 03 50 45.1 +0.8
comp=Z,5.6nm,1.0s,baz=72,slow=3.2,SNR=6.6
comp=Z,5.6nm,1.0s
KBZ **Khabaz** 67.66 309 *ce*P P 03 50 43.8 -0.5
KBZ pmax pmax
comp=Z,8.0nm,1.1s
POKR **Power Plat Res** 67.69 27 P P 03 50 44.4 +0.3
baz=279
KIV **Kislovodsk** 67.76 309 P 03 50 44.5 -0.5
KIV IAmb IAmb 03 50 48.6
comp=Z,16nm,1.0s
SML **Sawmill** 67.84 31 P P 03 50 45.4 +0.2
baz=280
KNK **Knik Glacier** 67.85 31 P P 03 50 45.2 0.0
baz=280
C26K **Camden Bay** 67.86 22 P P 03 50 45.0 -0.1
baz=280,SNR=12
E25K **Arctic Village** 67.93 24 IAmb IAmb 03 50 49.3
comp=Z,12nm,1.1s
E25K **Arctic Village** 67.93 24 P P 03 50 46.4 +0.7
baz=280,SNR=12
G25K **Bearman Lake** 67.96 25 P P 03 50 46.4 +0.7
baz=280,SNR=7.2
ILAR **Eielson Array** 67.98 28 P P 03 50 45.5 -0.4
comp=Z,1.3nm,0.9s,baz=280,slow=5.5,SNR=9.2
comp=Z,1.3nm,0.9s
WAT6 **Susitna Watana** 67.98 30 P P 03 50 46.5 +0.3
baz=280
F25K **Christian Rive** 67.99 24 IAmb IAmb 03 50 50.0
comp=Z,17nm,1.1s
F25K **Christian Rive** 67.99 24 P P 03 50 46.4 +0.4
baz=280,SNR=16
HDA **Harding Lake** 68.01 28 P P 03 50 46.5 +0.3
baz=280,SNR=9.1
DHY **Denali Highway** 68.06 29 P P 03 50 46.6 -0.1
baz=280
M23K **Glacier View** 68.13 31 P P 03 50 46.9 -0.1
baz=280
SCM **Sheep Creek Mo** 68.31 31 P P 03 50 47.6 -0.5
baz=281
C27K **Jago River** 68.32 22 IAmb IAmb 03 50 51.6
comp=Z,8.6nm,0.9s
C27K **Jago River** 68.32 22 P P 03 50 47.5 -0.5
baz=281,SNR=13
PRP **Porcupine Dome** 68.41 27 P P 03 50 48.6 -0.2
baz=281
BMAR **Burnt Mountain** 68.42 25 P 03 50 51.2 +2.4
F26K **Sheenjek River** 68.54 24 P P 03 50 49.4 -0.1
baz=281
P23K **Montague Islan** 68.62 33 P P 03 50 50.1 +0.1
baz=281
K24K **Donnelly Dome** 68.63 28 P P 03 50 50.1 0.0
baz=281,SNR=7.3
J25K **Salcha River,** 68.65 28 P P 03 50 50.4 +0.2
baz=281
M24K **Tolsona, Glenn** 68.79 30 P P 03 50 51.3 +0.2
baz=282
G26K **Porcupine Rive** 68.82 25 P P 03 50 51.6 +0.5
baz=282,SNR=11
PAX **Paxson** 68.93 29 IAmb IAmb 03 50 53.7
comp=Z,18nm,1.4s
PAX **Paxson** 68.93 29 P P 03 50 51.8 -0.3
baz=282
KLU **Klutina** 69.03 31 P P 03 50 53.0 +0.3
baz=282
RIDG **Independent Ri** 69.05 28 P P 03 50 52.8 +0.1
baz=282,SNR=8.3
OBN **Obninsk** 69.24 322 *e*P P 03 50 53.9 0.0
OBN *e* 03 51 18.1
OBN *e* 03 53 26.1
OBN *e*PPP PPP 03 55 07.8
OBN pmax pmax
comp=Z,6.0nm,1.1s
Q23K **Middleton Isla** 69.26 33 P P 03 50 54.7 +0.7
baz=282
EYAK **Cordova Ski Ar** 69.31 32 P P 03 50 54.9 +0.6
baz=282
D27M **Malcolm River** 69.35 22 IAmb IAmb 03 50 57.9
comp=Z,12nm,1.0s
D27M **Malcolm River** 69.35 22 P P 03 50 55.3 +0.8
baz=284
SCRK **Sand Creek** 69.37 28 P 03 50 55.2 +0.4
SCRK IAmb IAmb 03 50 58.6
comp=Z,20nm,1.2s
SCRK **Sand Creek** 69.37 28 P P 03 50 55.5 +0.7
baz=283,SNR=8.7
E27K **Coleen River** 69.37 23 IAmb IAmb 03 50 58.1
comp=Z,9.6nm,1.0s
E27K **Coleen River** 69.37 23 P P 03 50 55.0 +0.4
baz=283,SNR=8.6
DOT **Dot Lake** 69.41 28 IAmb IAmb 03 50 57.2
comp=Z,17nm,1.1s
I26K **Coal Creek Min** 69.42 27 IAmb IAmb 03 50 58.6
comp=Z,11nm,1.0s
I26K **Coal Creek Min** 69.42 27 P P 03 50 55.4 +0.4
baz=283
N25K **Chitina, Valde** 69.62 31 P P 03 50 56.7 +0.4
baz=283
G27K **Doyon Strip** 69.67 25 IAmb IAmb 03 51 01.5
comp=Z,10nm,1.1s
G27K **Doyon Strip** 69.67 25 P P 03 50 57.0 +0.5
baz=284,SNR=11
BMRM **Bremner River** 69.77 31 P P 03 50 58.2 +1.0
baz=283
H27K **Steamboat Moun** 69.86 26 P P 03 50 57.9 +0.2
baz=284
L26K **Log Cabin Wild** 69.86 29 IAmb IAmb 03 51 00.5
comp=Z,13nm,1.2s
L26K **Log Cabin Wild** 69.86 29 P P 03 50 58.0 +0.2
baz=284
I27K **Kandik River** 69.98 26 P P 03 50 58.0 -0.5
baz=284
E28M **Babbage River** 70.01 23 IAmb IAmb 03 51 04.9
comp=Z,12nm,0.9s
E28M **Babbage River** 70.01 23 P P 03 50 58.7 +0.1
baz=285,SNR=15
GLB **Gilahina Butte** 70.03 31 IAmb IAmb 03 51 04.3
comp=Z,12nm,1.0s
D28M **Stokes Point** 70.10 22 P P 03 50 59.4 +0.4
baz=285
KAIM **Kayak Island** 70.10 32 P P 03 50 59.7 +0.5
baz=284
F28M **Old Crow** 70.15 24 IAmb IAmb 03 51 03.3
comp=Z,21nm,1.1s
F28M **Old Crow** 70.15 24 P P 03 50 59.5 +0.2
baz=285,SNR=15
M26K **Nabesna, AK** 70.17 30 IAmb IAmb 03 51 02.8
comp=Z,13nm,1.0s
M26K **Nabesna, AK** 70.17 30 P P 03 50 59.4 -0.3
baz=284
K27K **Chicken** 70.18 28 IAmb IAmb 03 51 02.5
comp=Z,21nm,1.2s
KOPT **Kop Dagi** 70.29 306 IAmb IAmb 03 51 12.2
comp=Z,16nm,1.4s
MCARA **McCarthy VSAT** 70.41 31 P P 03 51 01.5 +0.4
baz=284
L27K **Beaver Creek,** 70.53 29 IAmb IAmb 03 51 06.8
comp=Z,19nm,1.2s
L27K **Beaver Creek,** 70.53 29 P P 03 51 01.6 -0.2
baz=285
CRQE **Cirque** 70.54 31 P P 03 51 01.9 -0.1
baz=285
BCAR **Beaver Creek A** 70.55 29 P 03 51 02.6 +0.6
E29M **Blow River** 70.65 23 P P 03 51 02.4 0.0
baz=286
M27K **Edge Creek, AK** 70.69 30 IAmb IAmb 03 51 06.5
comp=Z,8.7nm,1.0s
M27K **Edge Creek, AK** 70.69 30 P P 03 51 02.6 -0.4
baz=285
I28M **Miner Creek** 70.69 26 IAmb IAmb 03 51 10.7
comp=Z,13nm,1.0s
I28M **Miner Creek** 70.69 26 P P 03 51 02.6 -0.3
baz=286,SNR=9.1
G29M **Pine Creek** 71.03 24 P P 03 51 05.3 +0.5
baz=287,SNR=13
H29M **Whitestone** 71.10 25 P P 03 51 05.8 +0.6
baz=287,SNR=12
BVCY **Beaver Creek** 71.13 29 P P 03 51 05.8 +0.3
baz=286
MESA **MESA** 71.23 32 P P 03 51 05.6 -0.8
baz=286
CTG **Chitna Glacier** 71.31 31 P P 03 51 06.4 -0.3
baz=286
I29M **Ogilvie Camp,** 71.37 26 IAmb IAmb 03 51 10.6
comp=Z,26nm,1.4s
I29M **Ogilvie Camp,** 71.37 26 P P 03 51 06.3 -0.6
baz=287,SNR=11
YUK3 **Moose Creek** 71.49 30 P P 03 51 06.4 -1.5
baz=286
F30M **Barrier River** 71.64 23 IAmb IAmb 03 51 11.1
comp=Z,18nm,1.1s
F30M **Barrier River** 71.64 23 P P 03 51 08.1 -0.4
baz=289
J29N **Klondike Camp** 71.68 27 P P 03 51 08.8 -0.1
baz=288
G30M **tAoh Zraii Nji** 71.69 24 P P 03 51 08.6 -0.1
baz=288,SNR=13
EPYK **Eagle Plains** 71.69 25 IAmb IAmb 03 51 12.6
comp=Z,25nm,1.2s
EPYK **Eagle Plains** 71.69 25 P P 03 51 08.7 -0.1
baz=288,SNR=11
O28M **Mount Upton** 71.90 31 IAmb IAmb 03 51 17.0
comp=Z,19nm,0.9s
O28M **Mount Upton** 71.90 31 P P 03 51 10.1 -0.4
baz=287
YUK8 **Steele Glacier** 71.95 30 P P 03 51 10.4 -0.3
baz=287
PINM **Pinnacle** 72.07 32 P P 03 51 11.2 -0.1
baz=287
L29M **L29M** 72.13 28 IAmb IAmb 03 51 15.6
comp=Z,17nm,1.0s
L29M **L29M** 72.13 28 P P 03 51 11.7 +0.2
baz=288,SNR=11
K29M **Barlow Dome** 72.16 27 IAmb IAmb 03 51 20.1
comp=Z,12nm,1.1s
K29M **Barlow Dome** 72.16 27 P P 03 51 12.1 +0.3
baz=288
M29M **Somme Creek** 72.19 29 IAmb IAmb 03 51 18.9
comp=Z,8.3nm,0.9s
M29M **Somme Creek** 72.19 29 P P 03 51 11.6 -0.3
baz=288,SNR=7.5
I30M **Mount Dempster** 72.19 26 IAmb IAmb 03 51 16.3
comp=Z,13nm,1.1s
I30M **Mount Dempster** 72.19 26 P P 03 51 12.0 +0.1
baz=289,SNR=7.9
INK **Inuvik** 72.22 22 LR LR 04 26 09.5
comp=Z,84nm,19.0s,baz=327,slow=39
INK **Inuvik** 72.22 22 IAmb IAmb 03 51 14.3
comp=Z,11nm,1.0s
INK **Inuvik** 72.22 22 P P 03 51 12.3 +0.4
baz=290,SNR=10.0
J30M **Hart River** 72.42 27 P P 03 51 12.5 -0.8
baz=289
G31M **Satah River** 72.43 24 P P 03 51 13.4 +0.3
baz=290
F31M **Tsiigehtchic** 72.44 23 IAmb IAmb 03 51 14.9
comp=Z,16nm,1.1s
F31M **Tsiigehtchic** 72.44 23 P P 03 51 13.5 +0.3
baz=290,SNR=7.8
YUK4 **Talbot Arm** 72.45 30 P P 03 51 13.5 -0.2
baz=288
YUK6 **Outpost Mounta** 72.70 30 P P 03 51 15.5 +0.3
baz=288
H31M **Peel River** 72.79 25 IAmb IAmb 03 51 19.1
comp=Z,22nm,1.2s
H31M **Peel River** 72.79 25 P P 03 51 15.7 +0.3
baz=290
O29M **Mount Kennedy** 72.81 31 P P 03 51 16.0 +0.3
baz=288
FINES **FINESS Array B** 72.87 330 P P 03 51 15.7 -0.1
comp=Z,1.8nm,0.6s,baz=65,slow=5.3,SNR=10
comp=Z,1.8nm,0.6s
FINES **FINESS Array B** 72.87 330 *ce*P P 03 51 17.7 +1.8
FINES pmax pmax
comp=Z,2.0nm,0.6s
M30M **Minto, Yukon** 72.88 29 IAmb IAmb 03 51 20.6
comp=Z,17nm,1.2s
M30M **Minto, Yukon** 72.88 29 P P 03 51 16.5 +0.5
baz=289,SNR=8.0
MAYO **Mayo, Yukon** 72.93 27 P P 03 51 16.3 +0.1
baz=290
N30M **Aishikik Lake** 73.12 30 P P 03 51 17.9 +0.5
baz=289
HYT **Haines Junctio** 73.14 30 IAmb IAmb 03 51 24.5
comp=Z,13nm,1.0s
HYT **Haines Junctio** 73.14 30 P P 03 51 18.0 +0.4
baz=289
A36M **Sachs Harbour** 73.33 18 P P 03 51 18.6 +0.1
baz=297,SNR=5.7
P30M **Million Dollar** 73.63 31 P P 03 51 20.4 -0.1
baz=290
N31M **Braeburn, Yuko** 73.70 29 IAmb IAmb 03 51 27.2
comp=Z,14nm,0.9s
N31M **Braeburn, Yuko** 73.70 29 P P 03 51 21.1 +0.3
baz=290
O30N **Mendenhall** 73.81 30 P P 03 51 21.6 +0.1
baz=290
M31M **Drury Creek, Y** 74.06 29 P P 03 51 23.0 +0.1
baz=291
WHY **Whitehorse** 74.41 30 IAmb IAmb 03 51 31.1
comp=Z,15nm,1.0s
WHY **Whitehorse** 74.41 30 P P 03 51 24.6 -0.5
baz=291
SKAG **Skagway** 74.63 31 P P 03 51 26.0 -0.2
baz=291
AKASG **Malin Array Be** 74.73 319 P P 03 51 25.7 -1.2
comp=Z,2.9nm,0.7s,baz=66,slow=6.0,SNR=11
comp=Z,2.9nm,0.7s
AKASG **Malin Array Be** 74.73 319 P P 03 51 25.5 -1.5
AKASG **Malin Array Be** 74.73 319 P P 03 51 25.5 -1.5
AKASG pmax pmax
comp=Z,4.0nm,1.1s
AKBB **Malin Array Si** 74.73 319 *ce*P P 03 51 25.6 -1.4
AKBB pmax pmax
comp=Z,6.0nm,1.1s
AK01 **Malin Array Si** 74.74 319 P P 03 51 27.1 +0.1
AK10 **Malin Array Si** 74.75 319 P P 03 51 26.9 -0.2
AK18 **Malin Array Si** 74.82 319 P P 03 51 26.9 -0.6
C36M **Paulatuk** 74.91 20 IAmb IAmb 03 51 28.4
comp=Z,21nm,1.4s
C36M **Paulatuk** 74.91 20 P P 03 51 26.7 -0.9
baz=299,SNR=8.3
N32M **Quiet Lake** 75.03 29 IAmb IAmb 03 51 32.8
comp=Z,18nm,1.3s
N32M **Quiet Lake** 75.03 29 P P 03 51 28.5 -0.1
baz=293
P32M **Atlin** 75.35 31 P P 03 51 29.9 -0.6
baz=293
KIRS **Kirsehir-Merke** 75.41 307 ⇑P P 03 51 30.4 -0.8
BR131 **Keskin Array S** 75.42 307 IAmb IAmb 03 51 33.9
comp=Z,13nm,1.2s
BR131 **Keskin Array S** 75.42 307 *i* P P 03 51 31.3 -0.1
BRTR **Keskin Array B** 75.42 307 P P 03 51 31.2 -0.1
comp=Z,5.2nm,1.0s,baz=94,slow=4.3,SNR=13
comp=Z,5.2nm,1.0s
BRTR **Keskin Array B** 75.42 307 P 03 51 31.1 -0.3
BRTR **Keskin Array B** 75.42 307 *ce*P P 03 51 31.6 +0.2
BRTR pmax pmax
comp=Z,6.0nm,1.0s
BR104 **Keskin Array S** 75.42 307 P P 03 51 31.6 +0.2
comp=Z,5.0nm,1.1s
R32K **Eaglecrest** 75.47 32 P P 03 51 30.7 -0.4
baz=292
P33M **Teslin, Yukon** 75.52 30 P P 03 51 30.9 -0.6
baz=293
SIT **Sitka** 75.52 34 P P 03 51 31.1 -0.3
baz=292
S32K **Killisnoo** 75.74 33 P P 03 51 32.1 -0.6
baz=292
LUBAR **Lubar, Ukraine** 75.88 319 P P 03 51 33.1 -0.5
SORM **Soroca** 76.15 317 ⇓P P 03 51 34.8 -0.4
SORM **Soroca** 76.15 317 ⇓P P 03 51 34.8 -0.4
Q32M **Nakina River** 76.28 31 P P 03 51 35.3 -0.7
baz=294
RNPP9 **Sopachiv** 76.45 320 P P 03 51 37.5 +0.7
NDNU **Novodnistrovsk** 76.59 317 P P 03 51 37.1 -0.6

R33M	**Jennings River** baz=295	**76.71**	**31**	P		**P**	**03 51 37.9 -0.5**
TGTN	**Hyland Airport** baz=297	**76.98**	**28**	P		**P**	**03 51 39.8 +0.1**
SUW	**Suwalki**	**76.99**	**324**	*eP*		**P**	**03 51 40.7 +0.9**
SUW	**Suwalki**	**76.99**	**324**	P		**P**	**03 51 38.5 -1.2**
SUW	**Suwalki**	**76.99**	**324**	P		**P**	**03 51 38.6 -1.2**
U33K	**Whale Pass** baz=294	**77.01**	**34**	P		**P**	**03 51 40.1 +0.2**
S34M	**Telegraph Cree** baz=295	**77.26**	**32**	P		**P**	**03 51 41.5 +0.3**
CRAG	**Craig** baz=294	**77.27**	**35**	P		**P**	**03 51 41.4 +0.1**
TPGR	**Topolog**	**77.27**	**313**	⇓P		**P**	**03 51 42.5 +0.8**
WRAK	**Wrangell Islan** baz=294	**77.28**	**34**	P		**P**	**03 51 41.5 +0.1**
CFR	**Carcaliu**	**77.34**	**314**	⇑P		**P**	**03 51 41.4 -0.6**
CFR	**Carcaliu**	**77.34**	**314**	⇑P		**P**	**03 51 41.4 -0.6**
DLBC	**Dease Lake** baz=296	**77.56**	**31**	P		**P**	**03 51 42.7 -0.4**
GIRR	**Girov**	**77.74**	**316**	⇑P		**P**	**03 51 43.1 -1.1**
TESR	**Tescani**	**77.82**	**316**	⇑P		**P**	**03 51 44.7 +0.1**
VRI	**Vrincioaia**	**78.01**	**315**	⇑P		**P**	**03 51 46.2 +0.5**
VRI	**Vrincioaia**	**78.01**	**315**	⇑P		**P**	**03 51 46.2 +0.5**
ONER	**Baraj Valea Uz**	**78.05**	**315**	⇓P		**P**	**03 51 47.0 +1.1**
PLOR	**Plostina**	**78.06**	**315**	⇑P		**P**	**03 51 49.9 +3.8**
PLOR	**Plostina**	**78.06**	**315**	⇑P		**P**	**03 51 49.9 +3.8**
T35M	**Bob Quinn** baz=296	**78.09**	**33**	P		**P**	**03 51 46.0 0.0**
V35K	**Ketchikan** baz=295	**78.11**	**34**	P		**P**	**03 51 45.2 -0.8**
WRGLY	**Wrigley** baz=300	**78.14**	**25**	P		**P**	**03 51 46.3 +0.2**
BURAR	**Bucovina Array**	**78.30**	**317**	⇑P		**P**	**03 51 47.4 0.0**
BURAR	**Bucovina Array**	**78.30**	**317**	⇑P		**P**	**03 51 47.4 0.0**
TURR	**Turia**	**78.40**	**315**	⇑P		**P**	**03 51 48.9 +1.0**
ISR	**Istrita**	**78.41**	**314**	⇑P		**P**	**03 51 49.8 +1.8**
ISR	**Istrita**	**78.41**	**314**	⇑P		**P**	**03 51 49.8 +1.8**
OZUR		**78.53**	**315**	⇓P		**P**	**03 51 49.9 +1.2**
MLR	**Muntele Rosu**	**78.66**	**315**	⇑P		**P**	**03 51 50.6 +1.1**
MLR	**Muntele Rosu**	**78.66**	**315**			**P**	**03 51 51.7 +2.2**
MLR	**Muntele Rosu** comp=Z,5.0nm,0.9s	**78.66**	**315**	P		**P**	**03 51 51.7 +2.2**
MLR					pmax	pmax	
U35K	**Hyder** baz=296	**78.67**	**34**	P		**P**	**03 51 47.8 -1.3**
SULR		**78.77**	**314**	⇑P		**P**	**03 51 51.7 +1.8**
HFS	**Hagfors** comp=Z,4.5nm,0.7s,baz=84,slow=5.9,SNR=5.3 comp=Z,4.5nm,0.7s	**78.94**	**331**	P		**P**	**03 51 50.3 -0.2**
KWP	**Kalwaria Pacla**	**79.02**	**320**	*eP*		**P**	**03 51 51.6 +0.4**
LOZB	**Loznitsa**	**79.05**	**313**	⇑P		**P**	**03 51 50.7 -0.8**
KOTAN	**Kotaneelee Air** baz=300	**79.47**	**28**	P		**P**	**03 51 53.2 -0.2**
NB2	**NORSAR Subarra** comp=Z,1.0nm,0.6s,baz=55,slow=5.6	**79.54**	**333**	P		**P**	**03 51 54.0 +0.1**
NOA	**NORSAR Array B** comp=Z,1.9nm,0.6s,baz=56,slow=5.5,SNR=6.0 comp=Z,1.9nm,0.6s	**79.54**	**333**	P		**P**	**03 51 52.6 -1.3**
ARR	**Arges**	**79.56**	**315**	⇓P		**P**	**03 51 55.3 +1.0**
HUMR	**Humele**	**79.67**	**314**	⇓P		**P**	**03 51 55.0 +0.2**
MESR	**Meseseni**	**79.90**	**317**	⇓P		P	03 51 51.1 -4.9
MARR	**Marisel-Cluj**	**79.99**	**317**	⇓P		**P**	**03 51 57.7 +1.0**
LOT	**Lotru**	**80.08**	**315**	⇓P		**P**	**03 51 57.8 +0.6**
DRGR		**80.19**	**317**	⇑P		**P**	**03 51 58.0 +0.2**
DRGR		**80.19**	**317**	⇑P		**P**	**03 51 58.0 +0.2**
DEV	**Deva**	**80.45**	**316**	⇑P		**P**	**03 51 59.9 +0.9**
DEV	**Deva**	**80.45**	**316**	⇑P		**P**	**03 51 59.9 +0.9**
OJC	**Ojcow**	**80.47**	**321**	*eP*		**P**	**03 51 55.9 -3.1**
OJC	**Ojcow**	**80.47**	**321**			**P**	**03 51 59.0 -0.1**
OJC	**Ojcow**	**80.47**	**321**	P		**P**	**03 51 59.0 -0.1**
OJC	**Ojcow** comp=Z,18nm,1.8s	**80.47**	**321**	P		**P**	**03 51 59.3 +0.2**
NIE	**Niedzica**	**80.53**	**320**	*eP*		**P**	**03 52 01.0 +1.5**
GZR	**Gura Zlata**	**80.74**	**316**	⇑P		**P**	**03 52 01.9 +1.2**
GZR	**Gura Zlata**	**80.74**	**316**	⇑P		**P**	**03 52 01.9 +1.2**
HERR	**Herculane**	**81.19**	**315**	⇑P		**P**	**03 52 03.3 +0.3**
PSZ	**Piszkesteto**	**81.43**	**319**	⇓P		**P**	**03 52 05.3 +0.9**
PSZ	**Piszkesteto**	**81.43**	**319**	⇓P		**P**	**03 52 05.3 +0.9**
YKA	**Yellowknife Ar** comp=Z,2.5nm,0.8s,baz=307,slow=6.0,SNR=16 comp=Z,2.5nm,0.8s	**81.92**	**24**	*ceP*		**P**	**03 52 07.2 +0.7**
YKA					pmax	pmax	
	comp=Z,3.0nm,0.8s						
MORC	**Moravsky Berou**	**81.97**	**321**	⇓P		**P**	**03 52 07.8 +0.7**
MORC	**Moravsky Berou**	**81.97**	**321**	⇓P		**P**	**03 52 07.8 +0.7**
MORC	**Moravsky Berou**	**81.97**	**321**	*eP*		**P**	**03 52 04.5 -2.6**
KSP	**Ksiaz**	**82.17**	**322**	*eP*		**P**	**03 52 11.9 +3.8**
BOVS	**Bovan**	**82.18**	**314**	⇑P		**P**	**03 52 09.0 +0.7**
KRLC	**Kraliky**	**82.26**	**322**	*eP*		**P**	**03 52 09.2 +0.6**
KRLC	**Kraliky**	**82.26**	**322**	*eP*		**P**	**03 52 09.2 +0.6**
JAVC	**Velka Javorina**	**82.32**	**320**	*eP*		**P**	**03 52 10.6 +1.6**
DPC	**Dobruska-Polom**	**82.39**	**322**	*eP*		**P**	**03 52 09.1 -0.2**
DPC	**Dobruska-Polom**	**82.39**	**322**	*eP*		**P**	**03 52 09.1 -0.2**
VRAC	**Vranov**	**82.73**	**321**	⇑P		**P**	**03 52 12.0 +0.9**
VRAC	**Vranov**	**82.73**	**321**	⇑P		**P**	**03 52 12.0 +0.9**
VRAC	**Vranov**	**82.73**	**321**	*eP*		**P**	**03 52 10.1 -1.0**
KRUC	**Moravsky**	**82.97**	**321**	*eP*		**P**	**03 52 12.5 +0.2**
MORH	**Mrgy, Hungar**	**82.97**	**318**	⇑P		**P**	**03 52 13.7 +1.4**
CLL	**Collm**	**83.73**	**324**	*eP*		**P**	**03 52 17.0 +0.8**
CLL	**Collm**	**83.73**	**324**	*eP*		**P**	**03 52 17.0 +0.8**
CONA	**Conrad Observa** comp=Z,0.5nm,0.4s	**83.83**	**320**	*eP*		**P**	**03 52 17.0 +0.2**
ZVC	**Zvikov**	**84.03**	**322**	*eP*		**P**	**03 52 18.0 +0.2**
KHC	**Kasperske Hory**	**84.54**	**322**	*eP*		**P**	**03 52 22.5 +2.1**
KHC	**Kasperske Hory**	**84.54**	**322**	*eP*		**P**	**03 52 22.5 +2.1**
BLY	**Banja Luka**	**84.57**	**317**	⇓P		**P**	**03 52 21.7 +1.2**
BLY	**Banja Luka** comp=Z,7.6nm,0.9s	**84.57**	**317**	IAmb		IAmb	03 52 25.5
GERES	**GERESS Array B** comp=Z,2.3nm,0.7s,baz=58,slow=7.3,SNR=13 comp=Z,2.3nm,0.7s	**84.61**	**322**	P		**P**	**03 52 21.0 +0.2**
MOA	**Molln** comp=Z,1.0nm,0.5s	**84.80**	**321**	*eP*		**P**	**03 52 22.0 +0.3**
ILON	**Igloolik, Nuna** comp=Z,13nm,0.9s	**84.87**	**9**	IAmb		IAmb	03 52 23.1
OBKA	**Obir** comp=Z,0.6nm,0.4s	**85.31**	**319**	*eP*		**P**	**03 52 24.3 -0.1**
KBA	**Koelnbreinsper** comp=Z,1.4nm,0.5s	**85.73**	**320**	*eP*		**P**	**03 52 26.7 +0.1**
WTTA	**Wattenberg** comp=Z,0.6nm,0.5s	**86.62**	**321**	*eP*		**P**	**03 52 30.4 -0.5**
DAVA	**Damuels** comp=Z,0.3nm,0.2s	**87.61**	**322**	*eP*		**P**	**03 52 35.9 +0.1**
FUORN	**Ofenpass-Fuorn**	**87.76**	**321**			**P**	**03 52 36.9 +0.3**
FUORN	comp=Z,12nm,1.5s				IAmb	IAmb	03 52 39.5
B08A	**Colville Reser** comp=Z,12nm,1.2s	**88.19**	**37**	IAmb		IAmb	03 52 40.7
MXC	**Moxie City** comp=Z,14nm,1.3s	**88.67**	**39**	IAmb		IAmb	03 52 45.1
E07A	**Sunnyside** comp=Z,7.6nm,1.0s	**88.93**	**38**	IAmb		IAmb	03 52 50.6
WAH2	**Wahluke Slope** comp=Z,13nm,1.2s	**88.98**	**38**	IAmb		IAmb	03 52 47.0
D08A	**Wollman Farm,** comp=Z,6.5nm,0.8s	**89.17**	**38**	IAmb		IAmb	03 52 48.9
NEW	**Newport** comp=Z,4.7nm,0.8s	**89.44**	**36**	IAmb		IAmb	03 52 50.1
FCC	**Fort Churchill** comp=Z,7.5nm,1.3s	**91.52**	**19**	IAmb		IAmb	03 52 56.2
J08A	**Circle Bar Ran** comp=Z,7.8nm,1.1s	**91.58**	**40**	P		**P**	**03 52 55.7 +1.3**
J08A				IAmb		IAmb	03 53 01.1
FFC	**Flin Flon**	**92.04**	**25**			**P**	**03 52 56.9 +0.8**
FFC	**Flin Flon** comp=Z,16nm,1.4s	**92.04**	**25**	P		**P**	**03 52 56.9 +0.8**
FFC					pmax	pmax	
MFID	**Camas Ranch** comp=Z,6.4nm,1.0s	**93.09**	**39**	IAmb		IAmb	03 53 07.9
DLMT	**Dillon** comp=Z,7.3nm,1.1s	**93.68**	**36**	IAmb		IAmb	03 53 12.6
NVAR	**Mina Array Bea** comp=Z,0.3nm,0.6s,baz=307,slow=6.6,SNR=5.9	**94.55**	**44**	P		**P**	**03 53 08.6 +0.2**
NVAR	comp=Z,30nm,18.6s,baz=340,slow=34 comp=Z,0.3nm,0.6s			LR		LR	04 33 04.0
ELK	**Elko** comp=Z,49nm,20.6s,baz=126,slow=33	**95.07**	**41**	LR		LR	04 32 16.9
PDAR	**Pinedale Array** comp=Z,0.4nm,0.9s,baz=304,slow=6.3,SNR=2.0 comp=Z,0.4nm,0.9s	**97.03**	**37**	P		Pdif	03 53 21.3 +1.7
TORD	**Torodi Ar. Bea** comp=Z,0.6nm,0.7s,baz=54,slow=4.8,SNR=4.3	**112.74**	**297**	Pdiff		**Pdif**	**03 54 34.1 +4.4**
TORD				PKiKP		**PKiKP**	**03 58 23.2 -1.6**
ROSC	**El Rosal** comp=Z,3.2nm,0.5s,baz=315,slow=20,SNR=2.0	**146.00**	**35**	PKPbc		**PKPdf**	**03 59 26.5 -1.1**
LPAZ	**La Paz** comp=Z,1.3nm,0.9s,baz=269,slow=3.6,SNR=5.6	**166.03**	**58**	PKP		**PKPdf**	**03 59 52.9 -0.9**

TEH 29 03:45:10.3, 30.58N×57.37E, h8km±19km, ML3.7, Presumed earthquake, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRM1	**Kerman Provinc**	**0.11**	**227**	Pg	Pg	03 45 13.3	+0.3
KRM1				Sg	Sg	03 45 15.3	+0.4
CHMN	**Cheshme madani**	**0.73**	**168**	Pg	Pg	03 45 24.5	+0.1
KHGB	**Koh Gabri**	**0.80**	**255**	Pg	Pg	03 45 25.9	+0.3
KHGB				Sg	Sg	03 45 37.1	-0.5
ZRDN	**Zarand Kerman**	**0.81**	**299**	Pg	Pb	03 45 27.0	+0.2
NGRK	**Negar Kerman**	**1.08**	**211**	Pg	Pb	03 45 31.8	+0.2
KBAM	**BAM**	**1.72**	**146**	Pg	Pb	03 45 42.4	+0.2
IBAF	**Bafgh**	**1.84**	**304**	Pn	Pb	03 45 44.9	+0.5
BSRN	**Basiran**	**2.04**	**47**	Pn	Pb	03 45 47.2	-0.6
IKOO	**Kooshah**	**2.31**	**37**	Pn	Pb	03 45 50.8	-1.6
IMEH	**Mehriz**	**2.50**	**290**	Pn	Pb	03 45 54.0	-1.6
TPRV	**Parvadeh(Tabas**	**2.51**	**347**	Pn	Pn	03 45 53.4	+1.8
ITEG	**Tejag**	**2.59**	**27**	Pn	Pn	03 45 54.3	+1.5
TKDS	**Koohdasht(Taba**	**3.03**	**356**	Pn	Pn	03 46 00.6	+1.8
AFRZ	**Afriz**	**3.16**	**26**	Pn	Pn	03 46 02.6	+2.0
TNSJ	**Nastanj**	**3.44**	**349**	Pn	Pn	03 46 06.2	+1.9
SRVN	**Saravan**	**5.42**	**124**	Pn	Pn	03 46 34.2	+2.5
SBZV	**Sabzevar**	**5.80**	**2**	Pn	Pn	03 46 38.7	+1.9

VIE 29 03:50:05.0±0.1, 46.88N×13.62E, h4km, ml0.1/3, Error ellipse: s-maj=1.2km s-min=1.1km az=26.0 8 km ESE of Gmnd (Ktn), Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYKA	**Terra Mystica** 0.2nm,0.1s	**0.25**	**177**	*i* Pg	Pg	03 50 10.3	+0.4
MYKA	0.7nm,0.1s			*i* Sg	Sg	03 50 13.6	+0.5
KBA	**Koelnbreinsper** 0.1nm,0.0s	**0.27**	**316**	*i* Pg	Pg	03 50 11.0	+0.5
KBA	0.4nm,0.2s			*i* Sg	Sg	03 50 14.3	+0.3

*IDC **29** 03:52:00.0±0.7, 24.16N×123.96E, h0km, mb3.7/12, mbtmp3.7/15, ML3.0/3, Error ellipse: s-maj=25.2km s-min=15.5km az=75.0*
*JMA **29** 03:52:01.9±0.2, 24.2N±0.6×124.2E±0.6, h12km±2km, MD3.9/14, MV3.8/14, NEAR ISHIGAKIJIMA ISLAND*
JMA Felt I J1 at NEAR ISHIGAKIJIMA ISLAND.
ISC 29 03:52:02.2±1.2, 24.18N±0.06×124.18E±0.03, h13km±7km, n39, σ1°15/48, mb3.7/12, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKRS	**Kuro-shima**	**0.17**	**290**	*i* P	**Pb**	**03 52 06.8**	**-0.4**
JKRS	comp=N,53nm,0.4s,comp=E,50nm,0.4s			A	A	03 52 06.8	
JKRS				S	**Sb**	**03 52 10.6**	**+0.1**
JIJ	**Ishigaki jima**	**0.19**	**349**	*i* P	**Pg**	**03 52 06.6**	**+0.1**
JIJ	comp=N,19nm,4.1s,comp=E,28nm,0.4s			A	A	03 52 06.6	
JIJ				*e*S	**Sg**	**03 52 09.5**	**+0.1**
HATJ	**Hateruma jima**	**0.36**	**251**	*i* P	**Pg**	**03 52 09.8**	**+0.2**
HATJ	comp=N,22nm,3.0s,comp=E,24nm,3.2s			A	A	03 52 09.8	
HATJ				S	**Sb**	**03 52 15.7**	**-0.5**
JISG	**Ishigakijimahi**	**0.42**	**16**	*i* P	**Pg**	**03 52 10.4**	**-0.3**
JISG	comp=N,11nm,0.4s,comp=E,17nm,0.6s			A	A	03 52 10.4	
JISG				*e*S	**Sg**	**03 52 16.5**	**+0.1**
IRIF	**Iriomote-Funau**	**0.44**	**291**	*i* P	**Pb**	**03 52 11.6**	**-0.3**
IRIF	comp=N,7.0nm,0.5s,comp=E,10.0nm,1.7s			A	A	03 52 11.6	
IRIF				*e*S	**Sb**	**03 52 18.5**	**+0.2**
JTJ	**Tarama**	**0.66**	**46**	*i* P	**Pg**	**03 52 14.7**	**-0.4**
JTJ	comp=N,11nm,5.1s,comp=E,15nm,0.6s			A	A	03 52 14.7	
YOJ	**Yonaguni jima**	**1.10**	**285**	P	**Pn**	**03 52 23.2**	**-0.1**
YOJ	**Yonaguni jima**	**1.10**	**285**	S	**Sn**	**03 52 38.7**	**+0.2**
YOJ	**Yonaguni jima**	**1.10**	**285**	*e*P	**Pn**	**03 52 23.3**	**-0.1**
YOJ				S	**Sn**	**03 52 38.0**	**-0.5**
JYNG	**Yonagunijimaku**	**1.16**	**284**	*e*P	**Pn**	**03 52 24.1**	**0.0**
JYNG				S	**Sn**	**03 52 40.1**	**+0.3**
JMJ2	**Miyako jima3**	**1.19**	**62**	*e*P	**Pn**	**03 52 23.1**	**-1.4**
JMJ2				*e*S	**Sb**	**03 52 38.5**	**-1.3**
JMJ	**Miyako jima 2**	**1.20**	**58**	P	**Pn**	**03 52 24.2**	**-0.4**
JMJ	**Miyako jima 2**	**1.20**	**58**	S	**Sb**	**03 52 40.8**	**+0.7**
JIKM	**Ikemajima**	**1.22**	**52**	*e*P	**Pn**	**03 52 24.1**	**-0.8**
JIKM				*e*S	**Sb**	**03 52 40.2**	**-0.7**
JOGS	**Gusukube**	**1.26**	**62**	P	**Pn**	**03 52 25.3**	**-0.2**
JOGS				*e*S	**Sb**	**03 52 40.9**	**-1.0**
NACB	**Ninganchiao**	**2.36**	**270**	P	**Pn**	**03 52 41.4**	**+0.7**
YULB	**Yu-li**	**2.76**	**254**	P	**Pn**	**03 52 45.8**	**-0.3**
YULB	**Yu-li**	**2.76**	**254**	S	**Sn**	**03 53 19.7**	**+0.4**
SSLB	**Suanglung**	**2.98**	**263**	P	**Pn**	**03 52 50.6**	**+1.4**
TWGBT	**Beinan**	**3.15**	**245**	P	**Pn**	**03 52 51.3**	**-0.3**
TPUB	**Ta-pu**	**3.37**	**256**	P	**Pn**	**03 52 56.7**	**+2.1**
JOW	**Kunigami** comp=E,3.0nm,0.3s,baz=236,slow=18,SNR=1.7	**4.54**	**54**	Pn	**Pn**	**03 53 10.9**	**+0.1**
JOW	comp=E,2.3nm,0.3s,baz=243,slow=9.0,SNR=1.8 comp=E,15nm,0.6s			Sn	**Sn**	**03 54 08.7**	**+5.2**
KSRS	**Korea Array** comp=E,0.2nm,0.3s,baz=197,slow=11,SNR=2.3 comp=E,0.5nm,0.3s	**13.62**	**13**	Pn	**Pn**	**03 55 16.1**	**+1.1**
MJAR	**Matsushiro Arr** baz=228,slow=9.6,SNR=2.2 comp=E,0.7nm,0.6s	**17.25**	**41**	P	**P**	**03 56 05.8**	**+1.5**
SONM	**Songino Array** comp=E,0.3nm,0.4s,baz=150,slow=9.2,SNR=4.2 comp=E,0.3nm,0.4s	**27.51**	**334**	P	**P**	**03 57 47.1**	**-1.4**
H11N1	**WAKE ISLAND Hy** baz=284,slow=74,SNR=6.1	**39.75**	**88**	T	T	04 41 49.1	
H11N2	**WAKE ISLAND Hy** baz=284,slow=74,SNR=5.2	**39.75**	**88**	T	T	04 41 48.5	
H11N3	**WAKE ISLAND Hy** baz=284,slow=74,SNR=3.9	**39.77**	**88**	T	T	04 41 49.4	
MKAR	**Makanchi Array** comp=E,0.4nm,0.4s,baz=99,slow=12,SNR=6.4 comp=E,0.4nm,0.4s	**40.27**	**315**	P	**P**	**03 59 37.9**	**-1.0**
ZALV	**Zalesovo Beam** comp=E,0.5nm,0.3s,baz=126,slow=7.4,SNR=1.5 comp=E,0.5nm,0.3s	**41.76**	**326**	P	**P**	**03 59 50.2**	**-0.9**
KURBB	**Kurchatov Arra** comp=E,0.2nm,0.4s,baz=99,slow=8.6,SNR=1.4 comp=E,0.2nm,0.4s	**43.89**	**319**	P	**P**	**04 00 06.6**	**-1.8**
WRA	**Warramunga Arr** comp=E,1.5nm,0.8s,baz=345,slow=8.0,SNR=12 comp=E,1.5nm,0.8s	**44.96**	**166**	P	**P**	**04 00 17.2**	**0.0**
ASAR	**Alice Springs** comp=E,0.5nm,0.6s,baz=348,slow=8.6,SNR=9.7	**48.49**	**168**	P	**P**	**04 00 44.8**	**0.0**
ASAR				PcP	**PcP**	**04 02 10.4**	**-0.4**
STKA	**Stephens Creek** comp=E,0.2nm,0.6s,baz=341,slow=3.6,SNR=2.0 comp=E,0.5nm,0.6s	**58.17**	**163**	P	**P**	**04 01 56.0**	**+0.1**
ILAR	**Eielson Array** comp=E,1.6nm,0.6s,baz=346,slow=10,SNR=4.3 comp=E,1.6nm,0.6s	**67.96**	**28**	P	**P**	**04 03 01.5**	**+0.9**
FINES	**FINESS Array B** comp=E,0.4nm,0.9s,baz=281,slow=5.4,SNR=4.8 comp=E,0.4nm,0.9s	**72.82**	**330**	P	**P**	**04 03 31.1**	**+0.8**
NOA	**NORSAR Array B** comp=E,4.4nm,1.1s,baz=76,slow=8.7,SNR=3.4 comp=E,4.4nm,1.1s	**79.49**	**333**	P	**P**	**04 04 08.1**	**-0.3**
YKA	**Yellowknife Ar** comp=E,0.8nm,0.8s,baz=55,slow=8.0,SNR=1.2 comp=E,0.8nm,0.8s	**81.89**	**24**	P	**P**	**04 04 21.7**	**+0.5**
GERES	**GERESS Array B** comp=E,0.3nm,0.8s,baz=307,slow=6.0,SNR=5.7 comp=E,0.3nm,0.8s	**84.57**	**322**	P	**P**	**04 04 33.6**	**-1.8**
GERES	**GERESS Array B** comp=E,0.4nm,0.7s,baz=72,slow=7.0,SNR=3.7 comp=E,0.4nm,0.7s	**84.57**	**322**	P	**P**	**04 04 33.6**	**-1.8**

*IDC **29** 04:01:11.2±2.9, 6.59S×129.55E, h123km±37km, mb3.4/2, mbtmp3.7/6, Error ellipse: s-maj=66.7km s-min=20.8km az=90.0*
*DJA **29** 04:01:13.2±0.4, 7.7°S±3.7°×13.0°E±.7°, h182km±13km, M4.2/15, mB5.0/5, mb4.1/9, MLv4.2/15, Mw(mB)4.3/5*

ISC 29 04:01:11.4±0.9, 6.61S±0.06×129.8E±0.1, h150km, n15, σ3.9/09/18, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.04**	**132**	P	**Pn**	**04 01 51.6**	**+4.6**
FAKI	**Fak Fak**	**4.42**	**34**	P	**Pn**	**04 02 17.4**	**+0.2**
KMPI	**Kaimana, Papua**	**4.89**	**53**	P	**Pn**	**04 02 24.7**	**+1.3**
SIJI	**Sorong** 12nm,0.4s,baz=198,slow=20,SNR=29	**5.89**	**15**	P	**Pn**	**04 02 37.3**	**+0.5**
SIJI	12nm,0.2s,baz=198,slow=20,SNR=11			S	**Sn**	**04 03 38.5**	**-5.0**
SIJI	**Sorong**	**5.89**	**15**	P	**Pn**	**04 02 36.5**	**-0.3**
SWI	**Sorong** 0.2nm11nm,0.6s	**5.90**	**15**	P	**Pn**	**04 02 37.7**	**+0.9**
SOEI	**Soe** 0.1nm10nm,0.5s	**6.28**	**240**	P	**Pn**	**04 02 44.9**	**+2.9**
RKPI	**Ransiki, Papua**	**6.71**	**41**	P	**Pn**	**04 02 47.8**	**+0.2**
MWPI	**Manokwari, Pap** 50nm,0.6s	**7.07**	**37**	P	**Pn**	**04 02 55.0**	**+2.5**
BAKI	**Biak**	**8.30**	**50**	P	**Pn**	**04 03 09.7**	**+0.8**
FITZ	**Fitzroy Crossi** 0.7nm,0.3s,baz=27,slow=8.8,SNR=17	**12.11**	**199**	P	**Pn**	**04 04 00.4**	**+1.2**
FITZ	1.9nm,0.3s,baz=79,slow=16,SNR=9.0			S	**Sn**	**04 06 07.0**	**-6.0**
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=339,slow=14,SNR=18	**13.98**	**162**	P	**Pn**	**04 04 23.6**	**+0.5**
WRA	1.4nm,0.5s,baz=338,slow=22,SNR=9.7			S	Sn	04 06 49.5	-8.7
ASAR	**Alice Springs** 0.6nm,0.6s,baz=343,slow=10,SNR=4.2	**17.42**	**167**	P	**Pn**	**04 05 07.6**	**+2.1**
ASAR	0.3nm,0.6s,baz=354,slow=27,SNR=2.0			S	**S**	**04 08 12.9**	**-5.4**
MKAR	**Makanchi Array** 0.8nm,0.5s,baz=122,slow=6.9,SNR=10 0.8nm,0.5s	**67.77**	**327**	P	**P**	**04 11 55.2**	**+2.2**
KURBB	**Kurchatov Arra** 0.3nm,0.5s,baz=136,slow=5.9,SNR=4.0 0.3nm,0.5s	**72.06**	**329**	P	**P**	**04 12 20.5**	**+1.5**

*IDC **29** 04:06:02.1±0.5, 58.58S×25.18W, h0km, mb4.5/14, mbtmp4.5/16, ML4.6/2, MS4.0/30, Error ellipse: s-maj=18.9km s-min=14.5km az=61.0*
*NEIC **29** 04:06:07.6±1.7, 58.64S±0.10×25.2W±0.2, h35km±1km, mb4.9/76, Error ellipse: s-maj=18.3km s-min=12.8km az=215.0*
*GCMT **29** 04:06:10.6±0.3, 58.67S±0.04×24.52W±0.04, h30km, MW4.9/71, Moment Tensor Solution. s41,c49; s71,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.55±.18; $M_{\theta\theta}$0.19±.13; $M_{\phi\phi}$-2.74±.11; $M_{r\theta}$0.19±.22; $M_{r\phi}$-0.82±.09; $M_{\theta\phi}$0.96±.13; Best double couple: $M_0$2.92200×10^{16} NP1:ϕ_s196.00000°, δ35.00000°, λ92.00000°. NP2: ϕ_s13.00000°, δ55.00000°, λ88.00000°. Principal axes: T 2.7210, Plg80.0000°, Azm276.0000°; N 0.4060, Plg1.0000°, Azm14.0000°; P -3.1240, Plg10.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 04:06:06.4±0.3, 58.64S±0.07×25.18W±0.08, h28km, n196, σ0.90/169, mb4.8/43, MS4.1/29, 4C-3D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.63**	**300**	Pn	**Pn**	**04 07 57.7**	**+2.1**
VNA1	**Neumayer--Stat** comp=Z,21nm,0.2s	**13.98**	**156**	⇓P	**Pn**	**04 09 21.1**	**-1.1**
VNA3	**Neumayer Olymp** comp=Z,29nm,0.3s	**14.18**	**159**	⇓P	**Pn**	**04 09 23.1**	**-1.8**
VNA3	comp=E,4.0nm,0.2s			⇑S	Sn	04 11 46.0	-15
VNA2	**Neumayer--Watz** comp=Z,14nm,0.2s,baz=323,slow=14	**14.38**	**156**	⇑P	**Pn**	**04 09 25.9**	**-1.8**
VNA2	comp=N,16nm,0.7s,baz=310,slow=24			⇑S	Sn	04 11 53.6	-12
SNAA	**Sanae** comp=Z,581nm,0.3s	**15.93**	**154**	⇑P	**Pn**	**04 09 47.5**	**-0.6**
SNAA	**Sanae** comp=Z,12nm,0.3s,baz=318,slow=16,SNR=64	**15.93**	**154**	Pn	**Pn**	**04 09 47.4**	**-0.8**
SNAA	comp=Z,0.5nm,0.3s,baz=318,slow=16,SNR=1.9			Sn	Sn	04 12 30.2	-13
SNAA	comp=Z,875nm,18.9s,baz=1.5,slow=33 comp=Z,22nm,0.3s			LR	LR	04 14 48.6	
SNAA	**Sanae**	**15.93**	**154**		**Pn**	**04 09 47.6**	**-0.6**
TROLL	**Troll, Antarti**	**17.44**	**151**	P	**Pn**	**04 10 07.2**	**-0.1**
PMSA	**Palmer Station** comp=Z,0.5nm,0.3s,baz=111,slow=14,SNR=1.8	**19.16**	**235**	P	**Pn**	**04 10 27.6**	**-0.5**
PMSA	comp=Z,379nm,19.2s,baz=60,slow=34 comp=Z,24nm,0.9s			LR	LR	04 16 53.9	
PMSA	**Palmer Station** comp=Z,82nm,1.3s	**19.16**	**235**	IAmb	IAmb	04 10 35.3	
BELA	**Belgrano 2**	**19.59**	**186**	P	**Pn**	**04 10 32.9**	**-0.3**
EFI	**East Falkland**	**19.88**	**276**	Pn	**Pn**	**04 10 37.0**	**+0.2**
EFI	comp=Z,59nm,1.2s			IAmb	IAmb	04 10 47.2	
MG01	**Puerto William**	**23.25**	**261**	P	**P**	**04 11 12.6**	**+1.6**
MG02	**Cerro Sombrero**	**25.12**	**264**	P	**P**	**04 11 27.3**	**-1.1**
MG03	**Isla Dawson**

BO01	**Tunca**	**38.72**	**288**		**P**	**P**	**04 13 28.0 +0.2**
BO01				IAmb	IAmb		04 13 42.9
	comp=Z,21nm,1.1s						
BO04	**La Punta**	**38.81**	**289**	P	**P**	**P**	**04 13 28.3 -0.2**
BO04				IAmb	IAmb		04 13 40.6
	comp=Z,28nm,1.4s						
VAO	**Valinhos**	**38.86**	**327**	P	**P**	**P**	**04 13 29.6 +0.5**
VAO				IAmb	IAmb		04 13 32.1
	comp=Z,16nm,0.8s						
VAO	**Valinhos**	**38.86**	**327**	*eP*	**P**	**P**	**04 13 29.4 +0.3**
PTGB	**Pitanga**	**38.87**	**319**	*eP*	**P**	**P**	**04 13 28.6 -0.5**
MT08	**Bocatoma Ro**	**38.96**	**290**	P	**P**	**P**	**04 13 30.5 +0.5**
MT08				IAmb	IAmb		04 13 33.1
	comp=Z,13nm,0.9s						
MT03	**Universidad Ad**	**39.16**	**290**	P	**P**	**P**	**04 13 31.6 +0.1**
MT03				IAmb	IAmb		04 13 52.9
	comp=Z,40nm,1.6s						
MT09	**Talagante**	**39.17**	**289**			**P**	**04 13 31.4 -0.3**
MT09				IAmb	IAmb		04 13 33.1
	comp=Z,22nm,0.7s						
MT16	**CCHEN**	**39.22**	**290**	P	**P**	**P**	**04 13 32.2 +0.3**
MT16				IAmb	IAmb		04 13 33.6
	comp=Z,20nm,0.8s						
MT01	**Popeta**	**39.23**	**289**	P	**P**	**P**	**04 13 31.1 -0.9**
MT01				IAmb	IAmb		04 13 49.0
	comp=Z,54nm,1.6s						
FRTB	**Fartura**	**39.32**	**323**	*eP*	**P**	**P**	**04 13 34.7 +1.8**
CPUP	**Villa Florida**	**39.34**	**311**	P	**P**	**P**	**04 13 31.3 -1.6**
	comp=Z,2.4nm,0.8s,baz=160,slow=13,SNR=7.8						
CPUP				PcP	**PcP**		**04 15 41.1 +0.1**
	comp=Z,3.4nm,1.0s,baz=194,slow=4.2,SNR=4.7						
CPUP				LR	LR		04 28 27.9
	comp=Z,175nm,20.8s,baz=154,slow=34						
	comp=Z,2.4nm,0.8s						
CPUP	**Villa Florida**	**39.34**	**311**			**P**	**04 13 32.8 -0.1**
CPUP	**Villa Florida**	**39.34**	**311**	*eP*		**P**	**04 13 28.9 -4.1**
PEL	**Peldehue**	**39.53**	**290**	P		**P**	**04 13 35.2 +0.7**
PEL	**Peldehue**	**39.53**	**290**	P		**P**	**04 13 35.3 +0.8**
PEL				x		x	04 13 45.0
ALF01	**Guarapari-ES**	**39.62**	**337**	*eP*		**P**	**04 13 35.3 0.0**
MT02	**Curacav**	**39.66**	**289**	IAmb	IAmb		04 13 37.1
	comp=Z,24nm,0.8s						
VA03	**San Esteban**	**39.77**	**290**	P		**P**	**04 13 37.4 +0.8**
VA03				IAmb	IAmb		04 13 59.8
	comp=Z,19nm,0.9s						
LDASE	**Londrina, Braz**	**39.77**	**321**	*eP*		**P**	**04 13 36.8 +0.2**
ZON	**Zonda**	**39.86**	**294**			**P**	**04 13 36.8 -0.5**
BSCB	**Bom Sucesso**	**40.18**	**331**	*eP*		**P**	**04 13 40.9 +0.8**
VA06	**Catapilco**	**40.30**	**290**	P		**P**	**04 13 40.9 0.0**
VA06				IAmb	IAmb		04 14 12.3
	comp=Z,25nm,1.1s						
SUR	**Sutherland**	**40.38**	**70**	LR	LR		04 26 26.7
	comp=Z,323nm,19.5s,baz=207,slow=30						
CO04	**Los Peladeros**	**40.56**	**291**	P		**P**	**04 13 44.2 +0.8**
CO04				IAmb	IAmb		04 13 52.6
	comp=Z,22nm,1.2s						
RIB01	**Linhares ES**	**40.82**	**338**	*eP*		**P**	**04 13 46.1 +0.9**
TRCB	**Terra Rica**	**40.84**	**319**	*eP*		**P**	**04 13 46.8 +1.4**
BB19B	**Bebedouro**	**41.15**	**326**	*eP*		**P**	**04 13 49.2 +1.2**
CO02	**Combarbal**	**41.26**	**291**	P		**P**	**04 13 50.7 +1.7**
BSFB	**Barra de Sao F**	**41.38**	**337**	*eP*		**P**	**04 13 50.7 +0.9**
CO03	**El Pedregal**	**41.41**	**292**	P		**P**	**04 13 51.6 +1.4**
CO03				IAmb	IAmb		04 14 15.3
	comp=Z,52nm,1.9s						
AMBA	**Amambai (Brazi**	**41.54**	**316**	*eP*		**P**	**04 13 49.8 -1.4**
SJMB	**Sao Joao De Ma**	**41.57**	**337**	*eP*		**P**	**04 13 51.7 +0.3**
DIAM	**Diamantina, MG**	**42.51**	**334**	*eP*		**P**	**04 13 59.7 +0.4**
LCO	**Las Campanas**	**42.93**	**293**	P		**P**	**04 14 02.7 -0.1**
LCO				IAmb	IAmb		04 14 10.3
	comp=Z,36nm,1.5s						
PMNB	**Patos De Minas**	**42.97**	**330**	*eP*		**P**	**04 14 03.5 +0.6**
ITRB	**Iturama**	**42.98**	**324**	*eP*		**P**	**04 14 03.9 +0.9**
GUA01	**Guaratinga, BA**	**43.36**	**339**	*eP*		**P**	**04 14 06.1 +0.1**
SBA	**Scott Base**	**43.56**	**184**	P		**P**	**04 14 08.5 +1.5**
SBA				IAmb	IAmb		04 15 15.4
	comp=Z,51nm,1.7s						
AC04	**Llanos de Chal**	**43.78**	**294**	P		**P**	**04 14 08.5 -0.8**
AC04				IAmb	IAmb		04 14 55.5
	comp=Z,25nm,1.1s						
IPMB	**Ipameri, GO**	**43.98**	**328**	*eP*		**P**	**04 14 10.9 -0.2**
AC02	**Maricunga**	**44.02**	**297**	P		**P**	**04 14 11.6 -0.2**
VNDA	**Vanda**	**44.02**	**182**	P		**P**	**04 14 12.1 +1.4**
	comp=Z,5.2nm,0.8s,baz=179,slow=6.8,SNR=19						
VNDA				LR	LR		04 31 31.6
	comp=Z,128nm,20.3s,baz=181,slow=35						
	comp=Z,5.2nm,0.8s						
VNDA	**Vanda**	**44.02**	**182**	P		**P**	**04 14 12.5 +1.8**
VNDA	**Vanda**	**44.02**	**182**	P		**P**	**04 14 13.1 +2.3**
AQDB	**Aquidauana**	**44.05**	**317**	P		**P**	**04 14 10.5 -1.0**
AQDB	**Aquidauana**	**44.05**	**317**	*eP*		**P**	**04 14 10.0 -1.5**
H04S2	**CROZET ISLANDS**	**45.55**	**110**	T		T	05 03 49.0
	baz=225,slow=75,SNR=31						
H04S3	**CROZET ISLANDS**	**45.56**	**110**	T		T	05 03 49.8
	baz=225,slow=75,SNR=24						
H04S1	**CROZET ISLANDS**	**45.57**	**110**	T		T	05 03 50.1
	baz=225,slow=75,SNR=23						
BOSA	**Boshof**	**45.66**	**71**	P		**P**	**04 14 24.2 -0.3**
	comp=Z,1.9nm,0.6s,baz=203,slow=7.0,SNR=10						
BOSA				LR	LR		04 29 30.8
	comp=Z,197nm,18.8s,baz=256,slow=31						
	comp=Z,1.9nm,0.6s						
BOSA	**Boshof**	**45.66**	**71**	P		**P**	**04 14 24.3 -0.1**
BOSA				IAmb	IAmb		04 16 06.4
	comp=Z,26nm,1.6s						
JANB	**Januaria**	**45.78**	**334**	*eP*		**P**	**04 14 25.5 +0.1**
BDFB	**Brasilia**	**46.15**	**329**	P		**P**	**04 14 28.9 +0.5**
	comp=Z,10nm,0.9s,baz=153,slow=9.0,SNR=14						
BDFB				LR	LR		04 33 54.2
	comp=Z,184nm,18.2s,baz=180,slow=36						
	comp=Z,10nm,0.9s						
BDFB	**Brasilia**	**46.15**	**329**	P		**P**	**04 14 28.9 +0.5**
BDFB				IAmb	IAmb		04 14 29.9
	comp=Z,10nm,0.9s						
PP1B	**Ponte de Pedra**	**46.42**	**319**	*eP*		**P**	**04 14 30.0 -0.4**
ARAG	**Araguaiana, MT**	**47.19**	**324**	*eP*		**P**	**04 14 37.0 +0.6**
KOOLE	**Kule**	**47.97**	**62**	P		**P**	**04 14 43.2 +0.7**
KOOLE				IAmb	IAmb		04 14 44.7
	comp=Z,12nm,0.8s						
SALV	**Santo Antonio**	**48.27**	**319**	*eP*		**P**	**04 14 45.6 +0.8**
PB09	**IPOC Station P**	**48.40**	**300**	P		**P**	**04 14 46.3 +0.4**
PB09				IAmb	IAmb		04 15 38.2
	comp=Z,22nm,1.2s						
PB03	**IPOC Station P**	**48.41**	**299**	P		**P**	**04 14 45.0 -1.0**
SDBA	**SAO DESIDERIO**	**48.48**	**334**	*eP*		**P**	**04 14 46.2 -0.2**
PB07	**IPOC Station P**	**48.75**	**300**	P		**P**	**04 14 47.5 -1.2**
LBTB	**Lobatse**	**48.82**	**69**	LR	LR		04 31 36.0
	comp=Z,282nm,19.5s,baz=181,slow=31						
LBTB	**Lobatse**	**48.82**	**69**	P		**P**	**04 14 49.8 +0.7**
BBSD	**Serra de San D**	**48.88**	**313**	*eP*		**P**	**04 14 48.2 -1.2**
KGCAE	**Kacgae**	**49.02**	**64**	P		**P**	**04 14 51.1 +0.5**
PB01	**IPOC Station P**	**49.17**	**300**	P		**P**	**04 14 51.2 -0.6**
PB08	**IPOC Station P**	**49.81**	**301**	P		**P**	**04 14 57.0 0.0**
PB08				IAmb	IAmb		04 15 50.1
	comp=Z,12nm,1.3s						
PTLB	**Pontes e Lacer**	**49.91**	**315**	P		**P**	**04 14 56.8 -0.5**
PTLB	**Pontes e Lacer**	**49.91**	**315**	*eP*		**P**	**04 14 56.5 -0.9**
TSUM	**Tsumeb**	**50.09**	**57**	LR	LR		04 31 31.8
	comp=Z,180nm,21.8s,baz=198,slow=31						
TSUM	**Tsumeb**	**50.09**	**57**	P		**P**	**04 14 59.1 +0.2**
TSUM				IAmb	IAmb		04 15 12.0
	comp=Z,12nm,1.4s						
H10S2	**ASCENSION HYDR**	**50.22**	**14**	T		T	05 09 16.5
	baz=33,slow=74,SNR=13						
H10S3	**ASCENSION HYDR**	**50.23**	**14**	T		T	05 09 14.7
	baz=187,slow=74,SNR=16						
GO01	**Chusmiza**	**50.24**	**302**	P		**P**	**04 14 59.7 -0.7**
PB11	**IPOC Station P**	**50.36**	**301**	P		**P**	**04 14 59.7 -1.2**
PB11				IAmb	IAmb		04 16 52.1
	comp=Z,17nm,1.1s						
H10N1	**ASCENSION HYDR**	**51.34**	**14**	T		T	05 10 35.6
	baz=188,slow=74,SNR=8.9						
H10N3	**ASCENSION HYDR**	**51.34**	**14**	T		T	05 10 44.6
	baz=188,slow=74,SNR=14						
H10N2	**ASCENSION HYDR**	**51.36**	**14**	T		T	05 10 40.8
	baz=188,slow=74,SNR=12						
PB16	**IPOC Station P**	**51.55**	**302**	P		**P**	**04 15 09.6 -0.8**
PB16				IAmb	IAmb		04 15 34.6
	comp=Z,33nm,2.0s						
PB18	**Visviri**	**52.19**	**303**	P		**P**	**04 15 15.3 +0.2**
SMTB	**Santa Maria do**	**52.54**	**332**	*eP*		**P**	**04 15 17.7 +0.6**
VILB	**Vilhena**	**52.60**	**315**	P		**P**	**04 15 16.1 -1.4**
VILB				IAmb	IAmb		04 15 18.4
	comp=Z,10nm,0.7s						
VILB	**Vilhena**	**52.60**	**315**	*eP*		**P**	**04 15 16.4 -1.1**
PDRB	**Porto dos Gac**	**52.62**	**320**	*eP*		**P**	**04 15 16.7 -1.0**
LPAZ	**La Paz**	**52.76**	**305**	P		**P**	**04 15 18.8 -0.6**
	comp=Z,3.9nm,0.6s,baz=145,slow=2.8,SNR=16						
LPAZ				LR	LR		04 39 38.6
	comp=Z,83nm,19.3s,baz=183,slow=38						
	comp=Z,3.9nm,0.6s						
LPAZ	**La Paz**	**52.76**	**305**	P		**P**	**04 15 18.6 -0.8**
LPAZ	**La Paz**	**52.76**	**305**	*eP*		**P**	**04 15 18.8 -0.6**
LPAZ	**La Paz**	**52.76**	**305**	P		**P**	**04 15 19.1 -0.3**
RCBR	**Rinchuelo**	**53.33**	**347**	LR	LR		04 33 24.0
	comp=Z,43nm,21.5s,baz=212,slow=31						
NBPS	**Pedro II - PI**	**55.57**	**340**	*eP*		**P**	**04 15 39.4 +0.2**
PRPB	**Parauapebas**	**55.69**	**330**	*eP*		**P**	**04 15 40.4 +0.4**
NBMO	**Morrinhos-CE**	**56.39**	**342**	*eP*		**P**	**04 15 44.9 -0.1**
NPGB	**Novo Progresso**	**56.46**	**323**	*eP*		**P**	**04 15 45.0 -0.5**
LSZ	**Lusaka**	**58.38**	**65**	LR	LR		04 37 56.2
	comp=Z,368nm,19.3s,baz=180,slow=33						
NNA	**Nana**	**60.44**	**298**	LR	LR		04 40 45.6
	comp=Z,149nm,21.6s,baz=136,slow=34						
TEFE	**Tefe**	**62.94**	**315**	*eP*		**P**	**04 16 28.8 -1.3**
OPO	**Ambohidratompo**	**65.16**	**85**	LR	LR		04 38 17.4
	comp=Z,102nm,21.9s,baz=8.5,slow=30						
ATAH	**Atahualpa**	**65.42**	**299**	LR	LR		04 44 42.0
	comp=Z,73nm,20.6s,baz=189,slow=36						
BOAV	**Boa Vista**	**66.99**	**321**	P		**P**	**04 16 55.5 -0.9**
BOAV				IAmb	IAmb		04 17 17.8
	comp=Z,8.3nm,1.0s						
BOAV	**Boa Vista**	**66.99**	**321**	*eP*		**P**	**04 16 55.3 -1.1**
DBIC	**Dimbokro**	**67.12**	**22**	P		**P**	**04 16 57.2 0.0**
	comp=Z,6.4nm,0.9s,baz=188,slow=6.6,SNR=9.0						
	comp=Z,6.4nm,0.9s						
DBIC	**Dimbokro**	**67.12**	**22**	P		**P**	**04 16 57.9 +0.6**
DBIC				IAmb	IAmb		04 17 06.0
	comp=Z,17nm,1.3s						
DBIC	**Dimbokro**	**67.12**	**22**	P		**P**	**04 16 57.8 +0.6**
MDP	**Montagnes des**	**67.24**	**330**	LR	LR		04 43 20.0
	comp=Z,111nm,22.0s,baz=148,slow=33						
OTAV	**Otavalo**	**71.99**	**303**	P		**P**	**04 17 28.1 +0.3**
OTAV	**Otavalo**	**71.99**	**303**	*eP*		**P**	**04 17 26.4 -1.5**
OTAV	**Otavalo**	**71.99**	**303**	P		**P**	**04 17 28.5 +0.7**
MBAR	**Mbarara**	**72.43**	**60**	LR	LR		04 46 35.5
	comp=Z,141nm,18.4s,baz=205,slow=34						
ROSC	**El Rosal**	**74.37**	**308**	P		**P**	**04 17 41.1 -0.7**
	comp=Z,2.2nm,0.4s,baz=150,slow=20,SNR=1.9						
ROSC				LR	LR		04 50 50.6
	comp=Z,173nm,21.5s,baz=162,slow=36						
	comp=Z,2.2nm,0.4s						
ROSC	**El Rosal**	**74.37**	**308**	IAmb	IAmb		04 17 53.9
	comp=Z,12nm,1.3s						
TORD	**Torodi Ar. Bea**	**74.83**	**27**	P		**P**	**04 17 44.5 +0.6**
	comp=Z,4.7nm,0.5s,baz=201,slow=7.0,SNR=69						
	comp=Z,4.7nm,0.5s						
KMBO	**Kilima Mbogo**	**75.01**	**67**	LR	LR		04 47 53.1
	comp=Z,209nm,18.1s,baz=209,slow=34						
SDV	**Santo Domingo**	**76.60**	**314**	LR	LR		04 52 26.7
	comp=Z,202nm,19.8s,baz=83,slow=36						
SJG	**San Juan**	**83.56**	**321**	LR	LR		04 55 06.8
	comp=Z,31nm,21.8s,baz=80,slow=35						
TBI	**Tubuai**	**86.26**	**230**	*e*LR	LR		04 46 04.7
	comp=Z,536nm,28.8s						
ATD	**Arta Tunnel**	**88.71**	**65**	LR	LR		04 56 52.9
	comp=Z,8.0nm,19.0s,baz=139,slow=34						
STKA	**Stephens Creek**	**89.15**	**169**	P		**P**	**04 18 59.8 +0.7**
	comp=Z,1.3nm,0.5s,baz=153,slow=2.3,SNR=4.2						
STKA				LR	LR		04 56 24.5
	comp=Z,129nm,21.3s,baz=205,slow=34						
	comp=Z,1.3nm,0.5s						
PPT2	**Papeete2**	**91.48**	**232**	*e*LR	LR		04 48 27.9
	comp=Z,95nm,22.0s						
PPT2				*e*LR	LR		04 48 32.7
	comp=Z,110nm,26.0s						
RAR	**Rarotonga**	**92.06**	**222**	LR	LR		04 55 23.3
	comp=Z,39nm,19.1s,baz=165,slow=32						
MDT	**Midelt**	**92.72**	**17**	LR	LR		04 56 11.8
	comp=Z,80nm,18.6s,baz=210,slow=32						
CMIG	**Matias Romero**	**94.33**	**296**	LR	LR		04 56 36.9
	comp=Z,60nm,19.4s,baz=172,slow=32						
ASAR	**Alice Springs**	**96.18**	**161**	P		**P**	**04 19 30.7 -1.0**
	comp=Z,1.3nm,0.9s,baz=197,slow=5.2,SNR=9.0						
ASAR				PKKPbc	**PKKPdf**		**04 36 13.7 -0.8**
	comp=Z,0.3nm,0.6s,baz=2.2,slow=2.0,SNR=6.0						
ASAR				LR	LR		05 00 54.1
	comp=Z,170nm,19.3s,baz=188,slow=34						
	comp=Z,1.3nm,0.9s						
WRA	**Warramunga Arr**	**99.90**	**160**	P		**Pdif**	**04 19 47.8 -0.5**
	comp=Z,0.3nm,0.7s,baz=191,slow=4.8,SNR=2.2						
	comp=Z,0.3nm,0.7s						
WRA	**Warramunga Arr**	**99.90**	**160**	IAmb	IAmb		04 19 54.2
	comp=Z,0.9nm,1.8s						
PDAR	**Pinedale Array**	**122.61**	**300**	PKP		**PKPdf**	**04 24 57.9 -0.6**
	comp=Z,0.5nm,0.5s,baz=142,slow=2.7,SNR=10						
ULM	**Lac du Bonnet**	**122.86**	**314**	PKP		**PKPdf**	**04 24 57.4 -1.1**
	comp=Z,3.0nm,0.6s,baz=151,slow=1.7,SNR=7.1						
CMAR	**Chiang Mai Arr**	**123.14**	**110**	PKP		**PKPdf**	**04 24 59.9 -0.1**
	comp=Z,1.1nm,0.3s,baz=217,slow=1.9,SNR=8.1						
NVAR	**Mina Array Bea**	**123.37**	**290**	PKP		**PKiKP**	**04 25 01.6 +1.3**
	comp=Z,1.7nm,0.8s,baz=124,slow=2.2,SNR=11						
FINES	**FINESS Array B**	**126.17**	**28**	PKP		**PKPdf**	**04 25 04.4 0.0**
	comp=Z,1.7nm,0.8s,baz=190,slow=4.2,SNR=6.6						
PZH	**PanZhiHua**	**131.29**	**108**	PKP		**PKiKP**	**04 25 16.3 -0.1**
BVAR	**Borovoye Array**	**135.23**	**59**	PKP		**PKPdf**	**04 25 22.0 +0.2**
	comp=Z,1.4nm,0.7s,baz=217,slow=3.6,SNR=4.8						
CD2	**Chengdu**	**135.90**	**106**	PKP		**PKPdf**	**04 25 24.0 +0.1**
MKAR	**Makanchi Array**	**136.65**	**73**	PKP		**PKPdf**	**04 25 23.9 -0.8**
	comp=Z,0.3nm,0.5s,baz=248,slow=3.9,SNR=3.6						
WMQ	**Urumqi**	**137.33**	**80**	*e*PKP		**PKiKP**	**04 25 28.0 -0.1**
WMQ				sPKP	sPKPdf		04 25 41.3 +3.1
WMQ				LR	LR		
	comp=N,730nm,14.1s						
WMQ				LR	LR		
	comp=E,730nm,24.0s						
WMQ				LR	LR		
	comp=Z,130nm,23.9s						
KURBB	**Kurchatov Arra**	**137.39**	**66**	PKP		**PKPdf**	**04 25 25.7 -0.3**
	comp=Z,0.8nm,0.8s,baz=233,slow=2.8,SNR=5.2						
KURK	**Kurchatov**	**137.50**	**66**			**PKPdf**	**04 25 25.7 -0.5**
YKA	**Yellowknife Ar**	**138.81**	**315**	PKP		**PKPdf**	**04 25 28.4 +0.3**
	comp=Z,0.4nm,0.8s,baz=126,slow=1.5,SNR=5.3						
YKA				SKPbc	**SKPbc**		**04 29 00.0 -0.6**
	comp=Z,0.3nm,0.6s,baz=129,slow=2.7,SNR=6.1						
XAN	**Xi'an**	**141.00**	**109**	PKP		**PKPdf**	**04 25 33.5 +0.3**
NJ2	**Nanjing**	**144.05**	**122**	*e*P		**PKPdf**	**04 25 40.3 +1.7**
NJ2				pmax	pmax		
	comp=Z,25nm,0.5s						
HNS	**HongShan**	**146.51**	**112**	⇓PKPbc	**PKPbc**		**04 25 44.5 +0.4**
TIA	**Tai'an**	**146.72**	**116**	P	**PKPbc**		**04 25 45.0 +0.2**
TIA				PKPbc	**PKPbc**		**04 25 45.0 +0.2**
TIA				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC	**Hu-ho-hao-te**	**147.59**	**104**	*e*P		**PKPdf**	**04 25 45.5 +1.0**
G29M	**Pine Creek**	**149.69**	**314**			**PKPbc**	**04 25 52.0 +0.3**
SONM	**Songino Array**	**149.73**	**89**	PKPbc	**PKPbc**		**04 25 52.3 -0.2**
	comp=Z,3.5nm,0.6s,baz=224,slow=2.3,SNR=17						
SONM	**Songino Array**	**149.73**	**89**			**PKPbc**	**04 25 52.2 -0.3**
NRIK	**Noril'sk**	**150.30**	**41**	PKPbc	**PKPbc**		**04 25 52.7 -0.4**
	comp=Z,3.3nm,1.0s,baz=315,slow=1.4,SNR=4.3						
KSRS	**Korea Array**	**152.53**	**129**	PKPbc	**PKiKP**		**04 25 59.5 +0.1**
	comp=Z,2.5nm,1.0s,baz=214,slow=1.3,SNR=5.4						
ILAR	**Eielson Array**	**152.61**	**308**	PKPbc	**PKPbc**		**04 25 58.0 -0.5**
	comp=Z,14nm,0.8s,baz=131,slow=1.8,SNR=102						
ILAR	**Eielson Array**	**152.61**	**308**		**PKiKP**		**04 25 58.9 +0.2**

*NOU **29** 04:09:36.8,41.87S×174.31E,h16km,MLv3.7/13,Cook Strait, New Zealand*
*WEL **29** 04:09:36.7±0.6,42.2S×17.4E±°,h9km±3km,M3.2/19, ML3.2/8,MLv3.2/19,Error ellipse: s-maj=3.4km s-min=2.9km az=101.8,confirmed*

ISC 29 04:09:37.0±0.8,41.77S±0.03×174.12E±0.03,h17km±5km, n50,σ0.976/42,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WDFS	**Ward Fire Stat**	**0.06**	**164**	P	**Pg**	**04 09 39.8**	**-0.4**
WDFS				S	**Sg**	**04 09 42.1**	**-0.1**
CMWZ	**Cape Campbell**	**0.08**	**77**	P	**Pg**	**04 09 40.2**	**-0.1**
CMWZ				S	**Sg**	**04 09 42.8**	**+0.4**
SEDS	**Seddon Fire St**	**0.10**	**343**	P	**Pg**	**04 09 39.7**	**-0.7**
SEDS				S	**Sg**	**04 09 42.1**	**-0.6**
SDNS	**Seddon**	**0.10**	**9**	P	**Pg**	**04 09 40.2**	**-0.3**
SDNS				S	**Sg**	**04 09 43.0**	**+0.2**
KEKS	**Kekerengu Vall**	**0.21**	**208**	P	**Pg**	**04 09 41.9**	**-0.1**
KEKS				S	**Sg**	**04 09 45.4**	**0.0**
GLOS	**29 km south-we**	**0.24**	**247**	P	**Pg**	**04 09 41.7**	**-0.7**
MGCS	**Blenheim Marlb**	**0.29**	**334**	P	**Pg**	**04 09 42.6**	**-0.6**
TUWZ	**Tuamarina**	**0.36**	**339**	P	**Pg**	**04 09 44.8**	**+0.4**
BWRS	**Waikakaho Road**	**0.36**	**334**	P	**Pg**	**04 09 43.9**	**-0.6**
BWRS				S	**Sg**	**04 09 49.0**	**-0.6**
QCCS	**Picton Queen C**	**0.49**	**352**	P	**Pg**	**04 09 46.1**	**-0.7**
LOKS	**Mount Lookout**	**0.53**	**242**	P	**Pg**	**04 09 47.4**	**-0.2**
HAVS	**Havelock**	**0.55**	**333**	P	**Pg**	**04 09 47.2**	**-0.7**
TCW	**Tory Channel**	**0.57**	**12**	P	**Pg**	**04 09 47.7**	**-0.6**
WVFS	**Wairau Valley**	**0.59**	**284**	P	**Pg**	**04 09 48.3**	**-0.3**
WVFS				S	**Sg**	**04 09 56.4**	**-0.1**
SNZO	**South Karori**	**0.64**	**44**	P	**Pb**	**04 09 49.6**	**0.0**
SNZO	**South Karori**	**0.64**	**44**	S	**Sb**	**04 09 59.1**	**+0.9**
BHW	**Baring Head**	**0.67**	**58**	P	**Pb**	**04 09 50.6**	**+0.3**
WEL	**Wellington**	**0.69**	**46**	P	**Pb**	**04 09 50.6**	**+0.1**
NNZ	**Nelson**	**0.78**	**315**	P	**Pg**	**04 09 51.1**	**-1.0**
KHZ	**Kahutara**	**0.78**	**213**	P	**Pb**	**04 09 52.6**	**+0.5**
KHZ	**Kahutara**	**0.78**	**213**	S	**Sn**	**04 10 04.1**	**-0.4**
KHZ	**Kahutara**	**0.78**	**213**	P	**Pb**	**04 09 52.5**	**+0.5**
PLWZ	**Palliser**	**0.88**	**77**	P	**Pn**	**04 09 54.2**	**-0.4**
THZ	**Tophouse**	**0.91**	**270**	P	**Pg**	**04 09 53.7**	**-0.9**
MSWZ	**Moikau Station**	**0.92**	**68**	MLv			
CAW	**Cannon Point**	**0.97**	**48**	P	**Pg**	**04 09 55.5**	**-0.3**
DUWZ	**D'Urville Isla**	**0.97**	**351**	P	**Pb**	**04 09 54.6**	**-0.8**
PAWZ	**Paruwai Farm**	**1.06**	**69**	MLv			
MRNZ	**Matariki Terra**	**1.08**	**289**	MLv			
KIW	**Kapiti Island**	**1.08**	**34**	MLv			
TKNZ	**Takaka Hill**	**1.14**	**310**	MLv			
MTW	**Mount Morrison**	**1.21**	**60**	MLv			
TRWZ	**Traveller**	**1.24**	**73**	MLv			
OGWZ	**Otaki Gorge**	**1.24**	**40**	MLv			
HOWZ	**Holdsworth Sta**	**1.36**	**51**	MLv			
TMWZ	**Te Maipa**	**1.49**	**64**	MLv			
QRZ	**Quartz Range**	**1.52**	**308**	P	**Pn**	**04 10 04.2**	**+0.8**
QRZ	**Quartz Range**	**1.52**	**308**	MLv			
MRZ	**Mangatainoka R**	**1.56**	**45**	MLv			
TIWZ	**Tintock**	**1.66**	**54**	MLv			
PRWZ	**Pori Road**	**1.85**	**50**	MLv			
POWZ	**Post Office Ro**	**1.86**	**43**	MLv			
BFZ	**Birch Farm**	**1.94**	**57**	P	**Pn**	**04 10 08.2**	**-1.0**
KHEZ	**Kahui Hut**	**2.47**	**358**	P	**Pn**	**04 10 19.1**	**+2.5**
RPZ	**Rata Peaks**	**2.98**	**228**	P	**Pn**	**04 10 23.4**	**-0.1**
BKZ	**Black Stump Fm**	**3.17**	**36**	P	**Pn**	**04 10 25.9**	**-0.2**
HIZ	**Hauiti**	**3.30**	**10**	P	**Pn**	**04 10 29.7**	**+1.8**
ODZ	**Otahua Downs**	**4.14**	**216**	P	**Pn**	**04 10 38.6**	**-0.8**
URZ	**Urewera**	**4.19**	**34**	P	**Pn**	**04 10 39.9**	**-0.2**
JCZ	**Jackson Bay**	**4.54**	**238**	P	**Pn**	**04 10 46.1**	**+1.0**

IDC 29 04:09:49.4±3.3,5.92S×148.10E,h40km±32km,mb3.6/3, mbtmp3.7/5,ML3.6/1,Error ellipse: s-maj=58.4km s-min=17.8km az=115.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.59**	**195**	P	Pn	04 10 42.2	-0.3
	14nm,0.4s,baz=24,slow=7.8,SNR=9.8						
PMG				S	Sn	04 11 24.4	+0.8
	29nm,0.4s,baz=12,slow=20,SNR=7.3						
WRA	**Warramunga Arr**	**19.32**	**223**	P	P	04 14 11.4	+0.1
	0.2nm,0.3s,baz=49,slow=10,SNR=9.6						
	0.7nm,0.5s						
ASAR	**

AYDB	Zeytinkoy-Aydi	2.34	7	Pn		Pn	04 10 32.3	+1.0		
NAZL	Nazilli-Aydin	2.42	14	Pn		Pn	04 10 33.3	+1.1		
DGB	zmir	2.49	348	P		Pn	04 10 33.7	+0.6		
IZMR	zmir-demi	2.54	7	P		Pn	04 10 34.9	+1.1		
DUVT	Torbali	2.60	358	P		Pn	04 10 36.4	+1.7		
SULTU	Buldan	2.63	22	P		Pn	04 10 37.2	+2.0		
INCE	Denizli-Bozkur	2.65	37	P		Pb	04 10 37.8	-2.4		
KORT	Korkueli	2.66	58	Pn		Pn	04 10 36.7	+1.1		
KIRA	zmir-Kiraz	2.67	15	P		Pn	04 10 36.5	+0.9		
ODEM	Odemis-Izmir	2.69	9	Pn		Pn	04 10 36.9	+0.9		
IMMV	Iera Moni Meta	2.91	268	P		Pn	04 10 38.9	+0.1		
VLI	Veliai	3.88	288	P		Pn	04 10 53.0	+0.7		
VLI				S		Sn	04 11 37.9	-0.2		
NATA	Nata	4.20	100	P		Pn	04 10 56.9	+0.2		
BRTR	Keskin Array B 0.1nm,0.3s,baz=225,slow=16,SNR=6.3	6.34	48	Pn		Pn	04 11 27.3	+1.1		
BRTR				Sn		Sn	04 12 40.6	+1.7		
	baz=228,slow=15,SNR=2.6 0.5nm,0.5s									
ESDC	Sonseca Array 0.3nm,0.9s,baz=87,slow=9.1,SNR=4.1 0.3nm,0.9s	25.20	289	P		P	04 15 19.6	+1.2		
TORD	Torodi Ar. Bea 0.4nm,0.4s,baz=36,slow=7.5,SNR=8.1 0.4nm,0.4s	32.29	233	P		P	04 16 21.2	-0.6		
KURBB	Kurchatov Arra 0.3nm,0.5s,baz=277,slow=8.5,SNR=3.3 0.3nm,0.5s	39.32	51	P		P	04 17 21.6	-0.1		
MKAR	Makanchi Array 0.2nm,0.6s,baz=289,slow=9.0,SNR=2.2 0.2nm,0.6s	41.90	57	P		P	04 17 42.9	-0.2		

*IDC **29** 04:29:13.4±0.7,58°.57S×25°.20W,h0km,mb4.0/11, mbtmp4.0/12,ML4.6/1,MS3.4/4,Error ellipse: s-maj=23.7km s-min=18.5km az=57.0*
*NEIC **29** 04:29:19.0±1.5,58°.6S±0°.1×25°.2W±0°.2,h35km±2km, mb4.4/17,Error ellipse: s-maj=23.2km s-min=16.1km az=210.0*

ISC 29 04:29:17.3±0.5,58°.61S±0°.09×25°.1W±0°.1,h28km,n104, σ1§05/93,mb4.1/13,MS3.5/3,2C-3D,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat comp=Z,8.4nm,0.2s	13.99	156	⇓P	Pn	04 32 32.8	-0.5
VNA3	Neumayer Olymp comp=Z,6.4nm,0.2s	14.19	159	⇑P	Pn	04 32 34.7	-1.4
VNA3				⇑S	Sn	04 34 57.8	-15
	comp=N,2.6nm,0.3s						
VNA2	Neumayer--Watz comp=Z,5.5nm,0.2s,baz=324,slow=13	14.39	156	⇓P	Pn	04 32 36.9	-1.8
SNAA	Sanae comp=Z,113nm,0.2s	15.94	154	⇓P	Pn	04 32 59.0	-0.3
SNAA	Sanae comp=Z,2.5nm,0.3s,baz=315,slow=15,SNR=14	15.94	154	Pn	Pn	04 32 57.9	-1.4
SNAA				Sn	Sn	04 35 41.6	-13
	comp=Z,0.2nm,0.3s,baz=63,slow=20,SNR=1.2 comp=Z,4.8nm,0.3s						
SNAA	Sanae	15.94	154		Pn	04 32 58.8	-0.5
PMSA	Palmer Station comp=Z,111nm,20.6s,baz=55,slow=32	19.20	235	LR	LR	04 39 20.3	
EFI	East Falkland comp=Z,49nm,1.4s	19.91	276	Pn	Pn	04 33 47.8	-0.3
EFI				IAmb	IAmb	04 34 19.3	
QSPA	South Pole Qui comp=Z,0.8nm,0.6s,baz=225,slow=1.4,SNR=1.8 comp=Z,0.8nm,0.6s	31.63	180	P	P	04 35 38.9	+1.3
QSPA	South Pole Qui comp=Z,7.0nm,1.3s	31.63	180	P	P	04 35 39.1	+1.5
QSPA				IAmb	IAmb	04 35 52.6	
PLCA	Paso Flores comp=Z,1.7nm,0.9s,baz=140,slow=10,SNR=6.3 comp=Z,1.7nm,0.9s	33.60	282	P	P	04 35 54.8	-0.1
PLCA	Paso Flores comp=Z,4.9nm,1.1s	33.60	282	P	P	04 35 54.9	-0.1
PLCA				IAmb	IAmb	04 35 59.9	
GO06	Curarrehue comp=Z,7.9nm,1.5s	34.92	282	P	P	04 36 07.0	+0.5
GO06				IAmb	IAmb	04 36 22.8	
GO05	Hualane comp=Z,12nm,0.9s	38.68	287	P	P	04 36 37.1	-1.3
GO05				IAmb	IAmb	04 36 39.3	
MT09	Talagante	39.19	289	P	P	04 36 43.1	+0.3
MT01	Popeta	39.25	289	P	P	04 36 43.7	+0.6
CPUP	Villa Florida comp=Z,1.5nm,0.9s,baz=166,slow=8.3,SNR=3.3 comp=Z,1.5nm,0.9s	39.35	311	P	P	04 36 43.6	-0.4
CPUP	Villa Florida	39.35	311	P	P	04 36 44.2	+0.3
ZON	Zonda	39.88	293	P	P	04 36 46.8	-1.6
SUR	Sutherland comp=Z,27nm,20.4s,baz=168,slow=28	40.34	70	LR	LR	04 47 56.3	
AQDB	Aquidauana	44.05	317	P	P	04 37 21.6	-0.9
VNDA	Vanda comp=Z,1.7nm,0.9s,baz=192,slow=4.6,SNR=5.1 comp=Z,1.7nm,0.9s	44.05	182	P	P	04 37 23.0	+1.1
VNDA	Vanda comp=Z,6.4nm,1.3s	44.05	182	P	P	04 37 23.1	+1.2
VNDA				IAmb	IAmb	04 37 42.7	
H04S2	CROZET ISLANDS baz=225,slow=75,SNR=16	45.53	110	T	T	05 27 02.5	
H04S3	CROZET ISLANDS baz=225,slow=75,SNR=24	45.54	110	T	T	05 27 03.6	
H04S1	CROZET ISLANDS baz=225,slow=75,SNR=18	45.55	110	T	T	05 27 03.4	
BOSA	Boshof comp=Z,2.1nm,0.8s,baz=227,slow=6.5,SNR=6.5 comp=Z,2.1nm,0.8s	45.62	71	P	P	04 37 34.9	-0.1
BOSA	Boshof	45.62	71	P	P	04 37 35.0	-0.1
BDFB	Brasilia comp=Z,1.9nm,0.7s,baz=160,slow=18,SNR=3.9 comp=Z,1.9nm,0.7s	46.15	329	P	P	04 37 39.3	0.0
BDFB	Brasilia	46.15	329	P	P	04 37 40.1	+0.8
BDFB				IAmb	IAmb	04 37 53.1	
LBTB	Lobatse comp=Z,84nm,18.9s,baz=190,slow=31	48.78	69	LR	LR	04 54 34.8	
TSUM	Tsumeb	50.05	57	LR	LR	04 55 42.3	
SIV	San Ignacio comp=Z,0.6nm,0.5s,baz=164,slow=18,SNR=7.4 comp=Z,0.6nm,0.5s	50.15	313	P	P	04 38 08.7	-1.4
H10S2	ASCENSION HYDR baz=187,slow=74,SNR=21	50.19	14	T	T	05 32 26.3	
H10S3	ASCENSION HYDR baz=33,slow=74,SNR=19	50.19	13	T	T	05 32 26.6	
H10N1	ASCENSION HYDR baz=181,slow=72,SNR=6.4	51.30	14	T	T	05 33 50.5	
H10N3	ASCENSION HYDR baz=181,slow=72,SNR=9.5	51.31	14	T	T	05 33 50.8	
H10N2	ASCENSION HYDR baz=181,slow=72,SNR=16	51.32	14	T	T	05 33 51.8	
LPAZ	La Paz comp=Z,1.4nm,0.7s,baz=148,slow=2.6,SNR=4.7 comp=Z,1.4nm,0.7s	52.77	305	P	P	04 38 30.3	-0.2
LPAZ	La Paz	52.77	305	P	P	04 38 30.4	-0.1
LPAZ				IAmb	IAmb	04 38 51.0	
	comp=Z,4.0nm,1.3s						
BOAV	Boa Vista comp=Z,5.7nm,1.0s	66.99	321	P	P	04 40 06.6	-0.8
BOAV				IAmb	IAmb	04 40 06.9	
DBIC	Dimbokro comp=Z,1.5nm,0.8s,baz=196,slow=7.9,SNR=1.6 comp=Z,1.5nm,0.8s	67.08	22	P	P	04 40 08.4	+0.6
DBIC	Dimbokro	67.08	22	P	P	04 40 08.5	+0.6
TORD	Torodi Ar. Bea comp=Z,0.9nm,0.5s,baz=203,slow=7.0,SNR=12 comp=Z,0.9nm,0.5s	74.79	27	P	P	04 40 55.8	+1.2
ASAR	Alice Springs comp=Z,0.5nm,0.9s,baz=200,slow=4.9,SNR=2.2 comp=Z,0.5nm,0.8s	96.20	161	P	P	04 42 42.4	-0.3
NVAR	Mina Array Bea comp=Z,0.5nm,0.8s,baz=144,slow=2.0,SNR=3.1	123.39	290	PKP	PKPdf	04 48 10.8	-0.3
YKA	Yellowknife Ar comp=Z,0.8nm,0.7s,baz=124,slow=1.9,SNR=15	138.81	315	PKP	PKPdf	04 48 39.5	+0.3
YKA				SKPbc	SKPbc	04 52 11.5	-0.2
	comp=Z,0.1nm,0.7s,baz=127,slow=3.3,SNR=3.7						
LZH	Lanzhou	140.02	101	eP	Pdif	04 45 51.3	-6.1
LZH				sP	pPdif	04 45 59.8	-5.7
LZH				pmax	pmax		
	comp=Z,20nm,1.5s						
R32K	Eaglecrest	144.62	301	PKPdf	PKPdf	04 48 49.5	-0.2
P33M	Teslin, Yukon	144.86	304	PKPdf	PKPdf	04 48 50.2	+0.1
N32M	Quiet Lake baz=119	145.44	306	P	PKPab	04 48 52.1	+0.6
C36M	Paulatuk	145.65	322		PKPab	04 48 51.8	0.0
C36M	Paulatuk baz=114	145.65	322	P	PKPbc	04 48 51.4	-0.1
M31M	Drury Creek, Y baz=116	146.48	307	P	PKPab	04 48 55.2	-0.1
N31M	Braeburn, Yuko baz=117	146.74	305	P	PKPab	04 48 55.8	-0.6
A36M	Sachs Harbour	146.98	326		PKPab	04 48 56.2	-0.7
A36M	Sachs Harbour baz=109	146.98	326	P	PKPab	04 48 56.0	-0.9
M30M	Minto, Yukon baz=115	147.65	306	P	PKPbc	04 48 57.9	+0.3
YUK4	Talbot Arm baz=115	147.92	304	P	PKiKP	04 48 59.7	-0.7
H31M	Peel River baz=111	147.93	313	P	PKPbc	04 48 58.7	+0.5
J30M	Hart River baz=112	148.25	310	P	PKiKP	04 49 00.1	-0.8
F31M	Tsiigehtchic baz=109	148.28	316	P	PKiKP	04 48 59.6	-1.0
G31M	Satah River baz=110	148.30	315	P	PKiKP	04 48 59.7	-1.0
M29M	Somme Creek baz=114	148.30	306	P	PKiKP	04 49 00.5	-0.5
L29M	L29M baz=113	148.43	307	P	PKiKP	04 49 00.6	-0.6
K29M	Barlow Dome baz=112	148.46	308	P	PKPbc	04 49 00.1	+0.3
INK	Inuvik baz=108	148.48	318	P	PKiKP	04 49 00.5	-0.6
I30M	Mount Dempster baz=111	148.51	311	P	PKPbc	04 49 00.3	+0.4
EPYK	Eagle Plains baz=109	149.04	313	P	PKiKP	04 49 01.8	-0.5
G30M	tAoh Zraii Nji baz=108	149.04	314	P	PKiKP	04 49 01.9	-0.5
F30M	Barrier River	149.08	316		PKiKP	04 49 01.7	-0.7
F30M	Barrier River baz=108	149.08	316	P	PKiKP	04 49 01.5	-0.8
BVCY	Beaver Creek baz=112	149.31	305	P	PKiKP	04 49 02.4	-0.6
I29M	Ogilvie Camp, baz=110	149.32	311	P	PKPbc	04 49 01.9	+0.1
H29M	Whitestone baz=108	149.62	313	P	PKPbc	04 49 02.6	+0.2
SONM	Songino Array comp=Z,0.4nm,0.4s,baz=218,slow=4.2,SNR=1.6	149.70	89	PKPbc	PKPbc	04 49 03.4	0.0
G29M	Pine Creek baz=107	149.70	314	P	PKiKP	04 49 03.5	-0.2
M27K	Edge Creek, AK baz=112	149.73	304	P	PKiKP	04 49 04.2	+0.2
L27K	Beaver Creek, baz=111	149.97	306	P	PKiKP	04 49 04.7	+0.3
I28M	Miner Creek baz=108	149.99	311	P	PKiKP	04 49 04.0	-0.4
E29M	Blow River baz=105	150.06	317	P	PKiKP	04 49 03.7	-0.6
F28M	Old Crow baz=105	150.58	315	P	PKiKP	04 49 06.0	+0.5
L26K	Log Cabin Wild baz=110	150.60	305	P	PKiKP	04 49 06.1	+0.5
E28M	Babbage River baz=103	150.70	317	P	PKiKP	04 49 05.7	0.0
I27K	Kandik River baz=107	150.71	311	P	PKiKP	04 49 06.5	+0.7
H27K	Steamboat Moun baz=106	150.85	312	P	PKiKP	04 49 06.9	+0.8
G27K	Doyon Strip baz=105	151.05	313	P	PKiKP	04 49 07.1	+0.6
SCRK	Sand Creek baz=108	151.19	307	P	PKiKP	04 49 07.9	+1.0
I26K	Coal Creek Min baz=106	151.24	310	P	PKiKP	04 49 07.8	+1.0
E27K	Coleen River baz=102	151.35	316	P	PKiKP	04 49 07.6	+0.6
RIDG	Independent Ri baz=108	151.48	306	P	PKiKP	04 49 08.6	+1.1
G26K	Porcupine Rive baz=103	151.90	313	P	PKiKP	04 49 08.8	+0.7
SCM	Sheep Creek Mo baz=110	151.94	301	P	PKiKP	04 49 09.9	+1.4
J25K	Salcha River, baz=106	151.95	308	P	PKiKP	04 49 09.6	+1.2
F26K	Sheenjek River baz=101	152.19	314	P	PKiKP	04 49 10.1	+1.3
C27K	Jago River baz=98	152.36	318	P	PKiKP	04 49 10.2	+1.2
ILAR	Eielson Array comp=Z,3.3nm,0.8s,baz=136,slow=2.1,SNR=36	152.62	308	PKPbc	PKiKP	04 49 10.2	+0.5
F25K	Christian Rive baz=100	152.74	314	P	PKiKP	04 49 11.5	+1.6
G25K	Bearman Lake baz=101	152.76	312	P	PKiKP	04 49 11.7	+1.8
E25K	Arctic Village baz=99	152.80	315	P	PKiKP	04 49 11.4	+1.3
D25K	Kavik River baz=96	153.25	318	P	PKiKP	04 49 12.0	+1.1
H24K	Noodor Dome baz=102	153.27	310	P	PKiKP	04 49 12.3	+1.2
G24K	Hadweenzic Riv baz=100	153.28	312	P	PKiKP	04 49 12.7	+1.7
TOLK	Toolik Lake Re baz=95	154.34	316	P	PKiKP	04 49 14.2	+1.0

*IDC **29** 04:29:17.7±1.5,32°.27N×92°.78E,h0km,mb3.3/5, mbtmp3.3/7,ML2.7/2,MS3.9/1,Error ellipse: s-maj=59.7km s-min=22.4km az=62.0*

ISC 29 04:29:22.8±1.5,32°.4N±0°.2×92°.7E±0°.3,h35km,n9,σ1§20/7, mb3.4/5,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr comp=Z,13nm,19.5s,baz=160,slow=42	14.92	157	LR	LR	04 39 45.4	
MKAR	Makanchi Array baz=150,slow=13,SNR=1.7 0.2nm,0.5s	16.50	334	Pn	Pn	04 33 11.1	-0.4
SONM	Songino Array 0.1nm,0.3s,baz=218,slow=13,SNR=2.5 0.5nm,0.7s	18.62	30	P	Pn	04 33 37.9	+0.1
KURBB	Kurtov Arra 0.7nm,0.6s,baz=144,slow=10,SNR=6.7 0.7nm,0.6s	21.07	334	P	P	04 34 02.4	-1.4
BVAR	Borovoye Array 0.2nm,0.3s,baz=130,slow=5.8,SNR=1.9 0.2nm,0.3s	26.20	329	P	P	04 34 55.8	+1.7
BATI	Baumata comp=Z,110nm,19.6s,baz=248,slow=40	51.61	140	LR	LR	05 03 13.3	
WRA	Warramunga Arr 0.3nm,0.8s,baz=316,slow=8.2,SNR=1.6 0.3nm,0.8s	65.49	137	P	P	04 40 01.8	-0.8
ASAR	Alice Springs 0.2nm,0.5s,baz=323,slow=6.0,SNR=4.4 0.2nm,0.5s	68.18	139	P	P	04 40 20.0	+0.2
ILAR	Eielson Array 0.4nm,1.0s,baz=294,slow=6.8,SNR=4.5 0.4nm,1.0s	72.68	23	P	P	04 40 47.1	+0.4

*NAO **29** 04:34:00.8,35°.01N×23°.20E,h10km,MB4.6*
*IDC **29** 04:34:23.3±0.8,37°.37N×20°.66E,h0km,mb3.8/15, mbtmp3.8/25,ML3.2/8,MS3.4/9,Error ellipse: s-maj=17.4km s-min=12.9km az=178.0*
*NEIC **29** 04:34:25.6±2.4,37°.26N±0°.04×20°.60E±0°.05,h10km±1km, mb4.2/7,Error ellipse: s-maj=7.9km s-min=5.4km az=139.0*
*ATH **29** 04:34:25.5,37°.30N×20°.52E,h6km±1km,ML4.0/41, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **29** 04:34:26.5,37°.N±2°.×2°.1E±°,h2km±1km,M3.7/50,mb4.0/1, MLh3.7/50*

ISC 29 04:34:25.7±1.2,37°.33N±0°.03×20°.58E±0°.03,h17km±7km, n262,σ1§43/291,mb3.8/16,MS3.2/5,20C-9D,Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTHK	Lithakia	0.43	28	P	Pb	04 34 35.0	+0.1
LTHK				S	Sb	04 34 40.1	-1.0
LTHK	Lithakia	0.43	28	P	Pb	04 34 34.8	-0.1
LTHK				S	Sb	04 34 41.8	+0.7
KYPS	Kipseli, Zakin	0.53	21	P	Pb	04 34 36.5	0.0
KYPS				S	Sb	04 34 44.3	+0.5
ORTH	Orthonies,Zaky	0.53	10	P	Pb	04 34 37.0	+0.4
ORTH				S	Sb	04 34 44.6	+0.6
CLEM	Kyllini,Ilia,G	0.71	38	P	Pb	04 34 40.1	+0.4
CLEM				S	Sb	04 34 50.1	+0.9
RTZL	Ratzakli, Kefa RTZL	0.76	11	P S	Pb Sb	04 34 40.7 04 34 52.1	+0.2 +1.5
LCHA	Lechaina LCHA	0.81	41	P S	Pn Sb	04 34 42.5 04 34 53.3	+0.1 +1.2
KFL1	Kefalonia,Entr	0.84	355	P	Pb	04 34 41.9	0.0
VLS	Valsamata VLS	0.85	0	P S	Pg Sb	04 34 41.7 04 34 53.9	-0.5 +0.8
VLS	Valsamata VLS	0.85	0	P S	Pb Sb	04 34 42.1 04 34 54.5	+0.1 +1.4
ARG2	Argostoli	0.85	355	S	Sb	04 34 53.1	0.0
ARG2	Argostoli	0.85	355	P	Pg	04 34 41.8	-0.6
ZARO	Zacharo ZARO	0.86	79	P S	Pn Sn	04 34 43.6 04 34 55.7	+0.5 +0.4
LXR1	Lixouri, Cepha LXR1	0.88	353	P S	Pb Sb	04 34 42.6 04 34 55.2	+0.1 +1.3
AMT	Artemida-Makis AMT	0.92	77	P S	Pb Sb	04 34 43.9 04 34 56.5	+0.6 +1.3
AMT	Artemida-Makis AMT	0.92	77	P S	Pn Sb	04 34 44.4 04 34 56.7	+0.5 +1.5
DMLN	Damoulianata-K DMLN	0.92	350	P S	Pg Sn	04 34 43.0 04 34 57.2	-0.7 +0.4
DMLN	Damoulianata-K DMLN	0.92	350	P S	Pb Sb	04 34 44.1 04 34 56.0	+0.8 +0.7
PYL1	Pylos	0.98	115	P	Pb	04 34 45.2	+1.0
RLS	Riolos of Patr RLS	1.01	44	P S	Pb Sn	04 34 44.9 04 35 00.3	+0.1 +1.3
RLS	Riolos of Patr RLS	1.01	44	P S	Pn Sn	04 34 45.6 04 34 59.5	+0.5 +0.6
PYL	PYLOS PYL	1.02	115	P S	Pn Sn	04 34 46.1 04 35 00.3	+0.8 +1.1
MTHA	Methoni	1.03	119	P	Pn	04 34 46.5	+1.1
AXS	Araxos	1.07	36	P	Pn	04 34 45.9	+0.1
ITM	Ithomi	1.08	97		Pg	04 34 46.3	-0.6
ITM	Ithomi	1.08	97	P	Pg	04 34 46.3	-0.4
ITM	Ithomi	1.08	97	P	Pg	04 34 46.3	-0.4
DRO	Drossia	1.09	55	P	Pn	04 34 46.8	+0.5
FSK	Fiskardo	1.13	359	P	Pb	04 34 47.1	+0.3
EVGI	Lefkada island	1.29	3	P	Pn	04 34 49.5	+0.5
EVGI	Lefkada island	1.29	3	P	Pn	04 34 49.7	+0.7
PATC	Patra C	1.32	44	P	Pg	04 34 51.1	-0.2
UPR	University Cam	1.35	45	P	Pg	04 34 51.5	-0.3
DRAG	Dragano-Lefkad	1.35	360	P	Pn	04 34 50.7	+0.8
DRAG	Dragano-Lefkad	1.35	360	P	Pn	04 34 50.6	+0.8
NYDR	Nydri-Lefkada	1.39	4	P	Pb	04 34 51.3	+0.1
NYDR	Nydri-Lefkada	1.39	4	P	Pg	04 34 51.6	-0.9
AGRP	Agrapidokambos	1.40	40	P	Pg	04 34 51.9	-0.8
VLX	Vlachokerasia	1.43	88	P	Pg	04 34 52.6	-0.7
KLV	Kalavryta, Ach	1.44	60	P	Pg	04 34 52.7	-0.7
KLV	Kalavryta, Ach	1.44	60	P	Pg	04 34 52.5	-0.9
ZIRI	Ziria, Aigiali	1.46	48	P	Pg	04 34 52.9	-0.9
LKD2	Lefkada island LKD2	1.46	2	P S	Pb Sg	04 34 52.5 04 35 13.3	0.0 +0.4
LKD2	Lefkada island	1.46	2	P	Pb	04 34 52.8	+0.4
MALA	Malamata, Dori	1.48	43	P	Pg	04 34 53.4	-0.7
PVO	Paravola	1.49	30	P	Pg	04 34 53.6	-0.8
PVO	Paravola	1.49	30	P	Pg	04 34 53.8	-0.6
TSLK	Tsoukalades, L TSLK	1.50	2	P S	Pg Sg	04 34 53.6 04 35 14.0	-1.0 0.0
TSLK	Tsoukalades, L	1.50	2	P	Pb	04 34 53.4	+0.4
EFP	Efpalio EFP	1.52	43	P S	Pg Sg	04 34 53.9 04 35 13.9	-1.0 -0.8
EFP	Efpalio	1.52	43	P	Pg	04 34 54.1	-0.9
GUR	Goura GUR	1.52	66	P S	Pb Sg	04 34 53.8 04 35 15.2	+0.2 +0.2
GUR	Goura	1.52	66	P	Pb	04 34 54.0	+0.4
MG00	Magoula, Dorid	1.53	44	P	Pb	04 34 53.9	+0.3
SERG	Sergoula	1.59	47	P	Pb	04 34 55.0	+0.5
SERG	Sergoula	1.59	47	P	Pb	04 34 55.0	+0.3
KALE	Kalithea KALE	1.63	49	P S	Pb Sg	04 34 55.1 04 35 16.9	-0.2 -1.4
KALE	Kalithea	1.63	49	P	Pg	04 34 56.1	-1.0
ANX	Ano Chora	1.65	40	P	Pg	04 34 56.3	-1.1
ANX	Ano Chora	1.65	40	P	Pg	04 34 56.3	-1.1
AMPL	Ampelaki	1.67	17	P	Pb	04 34 56.1	+0.1
AMPL	Ampelaki	1.67	17	P	Pb	04 34 56.3	+0.3
EVR	Evrytania	1.86	31	P	Pb	04 34 59.7	+0.4
VLI	Veliai	1.98	107	P	Pb	04 35 01.0	-0.3
LTK	Loutraki	2.02	69	P	Pn	04 35 00.7	+1.7
LTK	Loutraki	2.02	69	P	Pb	04 35 01.1	-0.9
MNVA	Monemvasia	2.07	107	P	Pb	04 35 02.1	-0.7
MAKR	Makrakomi, Fth	2.08	36	P	Pb	04 35 02.6	-0.4
TETR	Tetrakomo, Epi	2.09	15	P	Pb	04 35 02.6	-0.5
AXAR	Agios Charalam AXAR	2.18	48	P S	Pb Sb	04 35 03.6 04 35 31.7	-1.1 +0.3
AXAR	Agios Charalam	2.18	48	P	Pb	04 35 03.5	-0.9
AGG	Agios Georgios	2.18	39	P	Pb	04 35 03.9	-0.8
MET2	Kameni Chora,	2.21	82	P	Pn	04 35 03.0	+1.5
IGT	Igoumenitsa	2.21	355	P	Pn	04 35 03.3	+1.6
IGT	Igoumenitsa	2.21	355	P	Pn	04 35 03.8	+2.2
MET6	Megalochori,Me	2.22	82	P	Pn	04 35 03.3	+1.5
MET5	Makryloggos,Me	2.23	82	P	Pn	04 35 03.8	+1.9
PRMD	Pramanda	2.23	10	P	Pb	04 35 04.4	-1.2
PRMD	Pramanda	2.23	10	P	Pb	04 35 04.5	-1.2
KTHA	Kythira Island	2.26	117	P	Pn	04 35 04.7	+2.4
MET4	Agioi Theodoro	2.26	82	P	Pn	04 35 03.9	+1.6
VIL2	Platees	2.31	67	P	Pn	04 35 04.8	+1.8
VILL	Villia VILL	2.32	68	P S	Pn Sb	04 35 04.4 04 35 35.6	+1.2 +0.1
LKR	Lokris	2.32	55	P	Pn	04 35 05.2	+2.1
LKR	Lokris	2.32	55	P	Pn	04 35 05.3	+2.1
JAN	Janina	2.33	5	P	Pn	04 35 05.8	+2.4
ATAL	Atalanti ATAL	2.36	54	P S	Pn Sn	04 35 05.2 04 35 35.0	+2.3 +2.8
ATAL	Atalanti	2.36	54	P	Pn	04 35 05.9	+2.3
MAGU	Magoula	2.44	71	P	Pn	04 35 07.1	+2.3
KEK	Kerkira	2.46	346		Pn	04 35 07.2	+2.1
KEK	Kerkira	2.46	346	P	Pn	04 35 06.6	+1.6
KEK	Kerkira	2.46	346	P	Pn	04 35 07.0	+1.9
STFN	Stefani	2.50	69	P	Pn	04 35 07.5	+1.9
STFN	Stefani	2.50	69	P	Pn	04 35 07.9	+2.3
THL	Klokotos Trika	2.50	26	P	Pn	04 35 08.2	+2.6
THL	Klokotos Trika	2.50	26	P	Pn	04 35 07.9	+2.3
ATH	Athens Observa	2.57	75	P	Pn	04 35 08.8	+2.3
SRN	Sarande	2.59	350	P	Pn	04 35 08.8	+2.0
VLY	Voula,Athens	2.60	77	P	Pn	04 35 08.0	+0.9
VLY	Voula,Athens	2.60	77	P	Pn	04 35 08.0	+0.9
ATHU	Athens Univers	2.62	75	P	Pn	04 35 08.8	+1.6
KPRO	Kipourio	2.69	13	P	Pn	04 35 10.6	+2.2
PTL	Penteli	2.70	74	P	Pn	04 35 10.7	+2.3
GIAN	Giannouli	2.73	31	P	Pn	04 35 11.2	+2.5
DION	Dionisos Attik	2.76	73	P	Pn	04 35 10.6	+1.4
DION	Dionisos Attik	2.76	73	P	Pn	04

KKB Krupnik 4.92 23 P Pn 04 35 40.3 +1.4
KKB Krupnik 4.92 23 P Pn 04 35 40.8 +1.9
RAFF Raffo Rosso 4.96 271 Pn 04 35 39.5 +0.1
DRME Dracevica, Mon 4.97 348 *e*Pn Pn 04 35 40.1 +0.5
WDD Wied Dalam 5.10 255 Pn 04 35 41.2 0.0
PDG Podgorica 5.20 349 ⇑P Pn 04 35 43.2 +0.6
PDG Podgorica 5.20 349 Pn 04 35 44.7 +2.0
PDG Podgorica 5.20 349 *e*Pn Pn 04 35 43.0 +0.4
HCY Herceg Novi 5.36 343 *e*Pn Pn 04 35 45.6 +0.7
RDO Rodhopi 5.42 44 Pn 04 35 46.7 +1.0
RZN Rozhen 5.42 35 P Pn 04 35 47.4 +1.5
ALN Alexandroupoli 5.55 48 P Pn 04 35 49.5 +2.0
PLNA Plana 5.59 22 P Pn 04 35 49.9 +1.8
TREB Trebinje 5.65 343 ⇑Pn Pn 04 35 48.1 -0.8
VTS Vitosha 5.66 20 P Pn 04 35 50.7 +1.5
BRY Bratogost 5.78 345 *e*Pn Pn 04 35 50.3 -0.5
SGRT San Giovanni R 5.79 321 Pn 04 35 50.8 -0.1
BLSH Balsha 5.90 20 P Pn 04 35 54.5 +2.2
SJES Sjenica 5.95 356 *e*Pn Pn 04 35 53.5 +0.5
PAOL Paolisi 5.96 310 Pn 04 35 54.1 +1.0
UPM Unac-Piva 6.01 348 *e*Pn Pn 04 35 54.7 +0.7
KLINJ Klinje 6.03 346 *e*Pn Pn 04 35 57.8 +3.6
DIM Dimitrovgrad 6.09 38 P Pn 04 35 56.5 +1.7
BALB Balikesir 6.17 66 Pn 04 35 57.1 +1.0
RUDO Rudo 6.35 352 *e*Pn Pn 04 36 00.4 +1.9
BOVS Bovan 6.36 7 ⇑P Pn 04 35 59.1 +0.5
MANT Manisa 6.41 77 Pn Pn 04 35 58.8 -0.8
MPEP Malo Peshtene 6.49 21 P Pn 04 36 02.5 +2.1
BBLS Lazi&#263i 6.59 353 *e*Pn Pn 04 36 03.8 +1.9
PLVB Pleven 6.79 26 ⇑P Pn 04 36 06.6 +2.1
ELND Elena 6.91 34 ⇓P Pn 04 36 08.6 +2.5
AKAS Kas 7.32 96 Pn Pn 04 36 13.6 +1.6
AQU L'Aquila 7.46 314 Pn Pn 04 36 16.3 +2.5
AQU L'Aquila 7.46 314 *e*Pn Pn 04 36 21.3 +7.5
ELL Elmali 7.48 92 Pn Pn 04 36 16.1 +1.9
HERR Herculane 7.67 10 ⇑P Pn 04 36 17.5 +0.9
BLY Banja Luka 7.84 342 ⇓P Pn 04 36 19.5 +0.5
BLY Banja Luka 7.84 342 Pn 04 36 21.4 +2.4
BLY Banja Luka 7.84 342 *e*Pn Pn 04 36 20.7 +1.7
FRGS Fruska Gora 7.84 356 *e*Pn Pn 04 36 18.1 -0.9
NRCA Norcia 7.94 316 Pn 04 36 23.0 +2.7
FDMO Fiordimonte 8.09 317 Pn 04 36 24.9 +2.5
CESX Cesi 8.10 313 Pn Pn 04 36 24.9 +2.5
GZR Gura Zlata 8.22 11 ⇓P Pn 04 36 24.7 +0.5
BZS Buzias 8.32 5 ⇑P Pn 04 36 25.5 0.0
LOT Lotru 8.46 15 ⇑P Pn 04 36 28.8 +1.3
MURB Monte Urbino 8.54 316 Pn 04 36 31.7 +3.1
ARR Arges 8.59 19 ⇓P Pn 04 36 30.7 +1.5
SAHE Sakarya_HENDEK 8.73 63 ⇓P Pn 04 36 36.2 +5.0
VOIR 8.77 21 ⇑P Pn 04 36 33.6 +1.9
MORH Mrgy, Hungar 9.00 351 ⇑P Pn 04 36 35.4 +0.6
MORH Mrgy, Hungar 9.00 351 *e*Pn Pn 04 36 34.2 -0.6
MLR Muntele Rosu 9.09 25 Pn Pn 04 36 39.2 +3.0
0.5nm,0.3s,baz=250,slow=12,SNR=11
MLR LR LR 04 40 39.0
comp=Z,117nm,18.6s,baz=228,slow=42
MLR Muntele Rosu 9.09 25 ⇑P Pn 04 36 38.4 +2.2
MLR Muntele Rosu 9.09 25 Pn 04 36 39.3 +3.1
NEHR Nehoiu 9.16 26 ⇑P Pn 04 36 39.2 +2.2
KEST Kesra 9.18 263 Pn Pn 04 36 38.6 +1.2
0.6nm,0.3s,baz=63,slow=2.3,SNR=17
KEST Sn Sn 04 38 19.0 -1.4
0.2nm,0.3s,baz=98,slow=15,SNR=1.2
9.5nm,0.8s
KEST Kesra 9.18 263 Pn 04 36 38.8 +1.4
DOPR Dopca 9.35 21 ⇑P Pn 04 36 41.7 +2.1
COVR Voineasa-Covas 9.49 25 ⇑P Pn 04 36 44.4 +2.7
TPGR Topolog 9.56 36 ⇓P Pn 04 36 44.4 +1.8
OZUR 9.58 22 ⇑P Pn 04 36 45.2 +2.3
DRGR 9.59 9 ⇑P Pn 04 36 43.9 +0.9
TURR Turia 9.62 23 ⇑P Pn 04 36 45.0 +1.7
PLOR Plostina 9.65 26 ⇓P Pn 04 36 46.2 +2.4
VRI Vrincioaia 9.69 26 ⇑P Pn 04 36 47.0 +2.7
SABO M.te Sabotino 10.10 331 Pn 04 36 50.9 +1.1
OBKA Obir 10.21 336 *i* Pn Pn 04 36 51.6 +0.1
0.3nm,0.2s
TEOL Teolo 10.45 323 Pn Pn 04 36 54.9 +0.2
BRTR Keskin Array B 10.51 73 Pn Pn 04 36 57.1 +1.4
0.1nm,0.3s,baz=259,slow=15,SNR=6.0
BRTR LR LR 04 42 00.7
comp=Z,128nm,18.8s,baz=264,slow=44
0.5nm,0.7s
BRTR Keskin Array B 10.51 73 Pn Pn 04 36 55.2 -0.5
ARSA Arzberg 10.60 341 *e*Pn Pn 04 36 56.4 -0.3
0.3nm,0.3s
PSZ Piszkesteto 10.60 357 ⇑P Pn 04 36 58.4 +1.6
PSZ Piszkesteto 10.60 357 Pn 04 36 57.4 +0.7
STAL STALIGIAL 10.68 329 Pn Pn 04 36 58.7 +0.9
BURAR Bucovina Array 10.83 17 Pn Pn 04 37 03.1 +3.1
CTI Castel Tesino 10.97 325 Pn Pn 04 37 02.8 +0.8
KBA Koelnbreinsper 11.12 333 *e*Pn Pn 04 37 04.1 +0.1
0.3nm,0.3s
KECS Kecovo 11.15 360 *e*PN Pn 04 37 03.8 -0.5
ABTA Abfaltersbach 11.15 330 *i* Pn Pn 04 37 04.3 -0.1
0.6nm,0.4s
SALO Salr 11.20 321 Pn Pn 04 37 05.2 +0.3
MOA Molln 11.49 338 *e*Pn Pn 04 37 09.8 +0.8
0.6nm,0.3s
BIOA Bad Ischl, Aus 11.55 336 *e*Pn Pn 04 37 10.6 +0.8
0.5nm,0.2s
LESA Schwarzleotal 11.65 332 *e*Pn Pn 04 37 12.3 +1.1
0.8nm,0.4s
WTTA Wattenberg 11.93 329 *e*Pn Pn 04 37 15.9 +0.8
0.2nm,0.2s
WATA Walderalm 12.01 329 *e*Pn Pn 04 37 16.8 +0.7
0.2nm,0.2s
FUORN Ofenpass-Fuorn 12.04 324 Pn 04 37 18.1 +1.5
SNOP Sinop 12.20 63 Pn Pn 04 37 18.6 0.0
MOTA Moosalm 12.21 328 *e*Pn Pn 04 37 22.0 +3.1
0.5nm,0.3s
VRAC Vranov 12.32 348 LR LR 04 43 12.3
comp=Z,122nm,19.0s,baz=156,slow=43
DAVOX Davos/Dischmat 12.34 323 Pn Pn 04 37 21.7 +1.0
0.1nm,0.3s,baz=151,slow=19,SNR=4.3
DAVOX Sn Sn 04 39 33.0 -4.8
0.2nm,0.3s,baz=222,slow=12,SNR=2.6
0.9nm,0.6s
TUE Stuetta 12.38 321 Pn 04 37 21.9 +0.6
GEC2 GERESS Array S 12.55 339 Pn Pn 04 37 25.7 +2.1
GERES GERESS Array B 12.55 339 Pn Pn 04 37 24.1 +0.6
baz=151,slow=13,SNR=6.0
GERES Sn Sn 04 39 33.5 -9.4
baz=148,slow=27,SNR=2.8
0.3nm,0.5s
KHC Kasperske Hory 12.85 339 *e*PN Pn 04 37 30.5 +3.0
EIL Elat 14.21 118 Pn Pn 04 37 45.8 -0.3
0.4nm,0.3s,baz=314,slow=18,SNR=1.7
EIL Sn Sn 04 40 11.1 -12
1.4nm,0.3s,baz=330,slow=20,SNR=4.1
2.1nm,0.5s
ASF Jabal al Asfar 14.36 106 Pn Pn 04 37 48.5 +0.2
0.1nm,0.3s,baz=294,slow=18,SNR=1.3
ASF Sn Sn 04 40 24.1 -3.2
0.1nm,0.3s,baz=300,slow=20,SNR=1.7
2.4nm,1.0s
AKASG Malin Array Be 14.73 22 Pn Pn 04 37 52.2 -0.9
1.5nm,0.9s,baz=210,slow=9.0,SNR=19
AKASG LR LR 04 44 51.8
comp=Z,274nm,18.9s,baz=192,slow=43
MNK Minsk 17.89 14 *i* P Pn 04 38 32.9 -0.7
comp=E,19nm,1.0s
MNK *i* P Pn 04 38 32.9 -0.7
comp=N,15nm,1.1s
MNK *i* P Pn 04 38 32.9 -0.7
comp=Z,14nm,1.0s,baz=199
MNK *i* PP PnPn 04 38 43.6 -0.8
MNK *i* PPP PPP 04 38 51.7
MNK *i* S Sn 04 41 52.8 +0.2
MNK *i* SS SnSn 04 42 07.9 +1.7
MNK *i* SSS SSS 04 42 20.6
MNK *i* LQ LQ 04 43 51.2
MNK *i* LR LR 04 45 09.4
MNK *i* LRM MLR 04 46 20.3
comp=Z,145nm,18.1s
MNK *i* LRM MLR 04 46 46.0
comp=E,177nm,18.8s
MNK *i* LRM MLR 04 46 49.4
comp=N,54nm,9.0s
NACGM Naroch 18.08 12 *e*P P 04 38 37.2 +1.0
comp=Z,7.0nm,0.9s,baz=196
KBZ Khabaz 18.10 62 P P 04 38 38.1 +1.5
comp=Z,3.0nm,0.8s,baz=315,slow=2.9,SNR=5.8
ESDC Sonseca Array 19.34 285 P P 04 38 51.1 +0.9
baz=88,slow=12,SNR=13
comp=Z,1.5nm,0.9s
MDT Midelt 21.08 265 P P 04 39 10.0 +0.7
comp=Z,4.0nm,0.8s,baz=82,slow=12,SNR=14
comp=Z,4.0nm,0.8s
MD01 Midelt array s 21.18 265 P P 04 39 11.3 +0.9
MD31 MD31 21.18 265 P P 04 39 10.9 +0.5
MD31 IAmb IAmb 04 39 12.5
comp=Z,4.6nm,0.8s
HFS Hagfors 23.25 351 P P 04 39 31.0 -0.9
comp=Z,3.6nm,0.8s,baz=168,slow=11,SNR=9.4
HFS LR LR 04 50 30.5
comp=Z,74nm,18.1s,baz=92,slow=42
comp=Z,3.6nm,0.8s
EKA Eskdalemuir Ar 24.15 326 P P 04 39 40.6 -0.1
comp=Z,1.6nm,0.6s,baz=125,slow=9.4,SNR=4.9
comp=Z,1.6nm,0.6s
FINES FINESS Array B 24.39 6 P P 04 39 41.5 -1.3
comp=Z,1.3nm,0.5s,baz=187,slow=9.9,SNR=7.4
comp=Z,1.3nm,0.5s
NB2 NORSAR Subarra 24.46 349 P P 04 39 43.5 0.0
comp=Z,7.5nm,0.9s,baz=158,slow=9.3
NOA NORSAR Array B 24.46 349 P P 04 39 43.5 0.0
comp=Z,1.0nm,0.8s,baz=160,slow=9.9,SNR=7.1
NOA LR LR 04 51 56.3
comp=Z,45nm,18.3s,baz=130,slow=43
comp=Z,1.0nm,0.8s
TORD Torodi Ar. Bea 29.41 220 P P 04 40 28.1 -0.2
comp=Z,0.6nm,0.4s,baz=29,slow=8.6,SNR=7.6
comp=Z,0.6nm,0.4s
TORD Torodi Ar. Bea 29.41 220 IAmb IAmb 04 41 09.4
comp=Z,4.2nm,1.0s
AKTO Aktyubinsk 29.66 52 P P 04 40 29.7 -0.6
comp=Z,0.6nm,0.5s,baz=279,slow=13,SNR=2.0
comp=Z,0.6nm,0.5s
ARTI Arti 31.56 41 P P 04 40 46.0 -0.9
comp=Z,3.5nm,0.7s,baz=236,slow=11,SNR=2.5
comp=Z,3.5nm,0.7s
ARTI Arti 31.56 41 IAmb IAmb 04 40 51.8
comp=Z,6.3nm,0.8s
BVAR Borovoye Array 37.63 49 P P 04 41 38.2 -1.3
comp=Z,0.6nm,0.6s,baz=264,slow=5.5,SNR=3.5
comp=Z,0.6nm,0.6s
DBIC Dimbokro 38.30 223 LR LR 04 57 10.2
comp=Z,35nm,20.9s,baz=34,slow=36
KURBB Kurchatov Arra 42.70 53 P P 04 42 21.1 -0.4
comp=Z,0.5nm,0.4s,baz=279,slow=8.7,SNR=5.8
comp=Z,0.5nm,0.4s
KURK Kurchatov 42.75 53 P P 04 42 21.1 -0.8
MKAR Makanchi Array 45.71 58 P P 04 42 44.7 -1.0
comp=Z,0.5nm,0.5s,baz=280,slow=7.2,SNR=8.3
comp=Z,0.5nm,0.5s
SCHQ Schefferville 59.12 318 LR LR 05 08 27.5
comp=Z,59nm,21.1s,baz=144,slow=35
SONM Songino Array 60.96 50 P P 04 44 37.4 -0.6
comp=Z,0.4nm,0.5s,baz=282,slow=8.0,SNR=2.2
comp=Z,0.4nm,0.5s
SONM Songino Array 60.96 50 IAmb IAmb 04 45 01.2
comp=Z,1.0nm,1.0s
CMAR Chiang Mai Arr 69.96 82 P P 04 45 36.6 +0.2
comp=Z,1.7nm,0.3s,baz=305,slow=7.5,SNR=5.4
comp=Z,1.7nm,0.3s
YKA Yellowknife Ar 74.20 340 P P 04 46 02.4 +1.2
comp=Z,0.2nm,0.8s,baz=30,slow=5.7,SNR=5.1
comp=Z,0.2nm,0.8s
KSRS Korea Array 79.83 51 P P 04 46 33.7 +0.5
comp=Z,0.6nm,0.6s,baz=305,slow=4.3,SNR=1.9
comp=Z,0.6nm,0.6s
BBB Bella Bella 86.76 341 LR LR 05 29 05.7
comp=Z,52nm,19.4s,baz=136,slow=38

*IDC **29** 04:41:05.8±0.6, 41˚.07N×72˚.93E, h0km, mb4.3/28, mbtmp4.3/33, ML3.9/6, MS3.6/10, Error ellipse: s-maj=10.7km s-min=7.7km az=155.0*
*BJI **29** 04:41:06.5, 41˚.31N×72˚.73E, h15km, mB4.8/6, mb4.5/24, ML4.4/5, Ms4.1/10, Ms7 3.8/11*
*KRNET **29** 04:41:06.3±0.1, 41˚.15N×72˚.90E, h23km, mb5.0*
*SOME **29** 04:41:07.8, 41˚.20N×73˚.00E, h5km*
*MOS **29** 04:41:07.9±1.2, 41˚.26N×72˚.79E, h13km, mb4.7/33, Error ellipse: s-maj=4.9km s-min=4.3km az=95.6*
*NNC **29** 04:41:09.0±0.9, 41˚.22N×72˚.95E, h0km, mb5.2, mpv4.9, Error ellipse: s-maj=7.5km s-min=4.0km az=172.0*
*ISU **29** 04:41:08, 41˚.25N×72˚.79E, h3km*
*NEIC **29** 04:41:08.8±2.3, 41˚.17N±0˚.05×72˚.90E±0˚.06, h10km±1km, mb4.6/77, Error ellipse: s-maj=8.9km s-min=7.1km az=134.0*
*KNET **29** 04:41:10.5±0.3, 41˚.29N×73˚.11E, h9km±2km, ml4.6, Error ellipse: s-maj=2.9km s-min=2.4km az=139.0*
ISC 29 04:41:07.8±0.6, **41˚.18N**±0˚.02×**72˚.90E**±0˚.02, **h10**km±3km, **n589,σ1§40**/633, **mb4.5**/99, **MS3.6**/9, **64C-37D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.16**	**24**	Op	**Pg**	**04 41 11.8**	**+0.5**
ARSB				Sg	**Sg**	04 41 15.4	+1.5
ARSB	**Arslanbob**	**0.16**	**24**	⇑*i*P	**Pg**	04 41 10.9	-0.5
ARSB				⇑*i*S	**Sg**	04 41 14.2	+0.4
OHH	**Osh**	**0.66**	**188**	⇑*e*P	**Pg**	04 41 18.6	-2.0
OHH				⇑*i*S	**Sg**	04 41 27.0	-2.2
SALK	**Salom-Alik**	**0.76**	**113**	⇓*i*P	**Pg**	04 41 20.7	-1.7
SALK				⇓*i*S	**Sg**	04 41 30.7	-1.6
ARK	**Arkit**	**0.94**	**312**	⇑*i*P	**Pg**	04 41 24.4	-1.4
ARK				⇑*i*S	**Sg**	04 41 37.2	-0.8
SFK	**Sufi-Kurgan**	**1.25**	**158**	⇑*i*P	**Pn**	04 41 29.1	-2.5
SFK				⇑*i*S	**Sb**	04 41 45.5	-2.5
ARLS	**Aral**	**1.27**	**57**	⇑*i*P	**Pn**	04 41 29.9	-1.9
ARLS				⇑*i*S	**Sb**	04 41 47.1	-1.3
MNAS	**Manas**	**1.34**	**347**	⇑*i*P	**Pn**	04 41 31.5	-1.3
MNAS				⇑*i*S	**Sn**	04 41 49.8	-0.9
TRKS	**Terek-Say**	**1.37**	**285**	⇑*i*P	**Pn**	04 41 31.0	-2.2
TRKS				⇑*i*S	**Sb**	04 41 48.9	-2.4
MRKS	**Merke**	**1.58**	**9**	P	**Pg**	04 41 37.3	-0.9
	715nm,0.3s						
MRKS				S	**Sg**	04 41 58.3	-0.4
	9μm,0.4s						
MRKS	**Merke**	**1.58**	**9**	*e*P	**Pg**	04 41 37.3	-0.9
	715nm,0.3s						
MRKS				*e*S	**Sg**	04 41 58.2	-0.5
	9μm,0.4s						
UCH	**Uchtor**	**1.60**	**49**	P	**Pb**	04 41 37.3	-0.5
	806nm,0.2s,SNR=1181						
UCH				⇑S	**Sg**	04 41 58.2	-1.1
	4μm,0.4s						
UCH	**Uchtor**	**1.60**	**49**	⇓*i*P	**Pn**	04 41 36.1	-0.5
UCH				⇓*i*S	**Sb**	04 41 57.7	-0.5
EKS2	**Erkin-Say**	**1.62**	**24**	⇓P	**Pg**	04 41 37.8	-1.1
	892nm,0.4s,SNR=145						
EKS2				⇓S	**Sg**	04 41 59.0	-0.9
	2μm,0.4s						
EKS2	**Erkin-Say**	**1.62**	**24**	⇓*i*P	**Pn**	04 41 36.3	-0.3
EKS2				⇓*i*S	**Sg**	04 41 58.3	-1.6
MINT	**Mingtut**	**1.62**	**245**	P	**Pg**	04 41 39.4	+0.4
MINT				S	**Sg**	04 42 01.8	+1.8
AAK	**Ala-Archa**	**1.88**	**39**	Pg	**Pg**	04 41 42.7	-1.2
	992nm,0.3s,baz=212,slow=6.1,SNR=1523						
AAK				Lg	Lg	04 42 07.7	
	645nm,0.3s,baz=180,slow=20,SNR=11						
AAK	**Ala-Archa**	**1.88**	**39**	⇓P	**Pb**	04 41 42.4	+0.1
	3μm,0.4s,SNR=2509						
AAK				⇑S	**Sg**	04 42 06.5	-1.8
	6μm,0.4s						
AAK	**Ala-Archa**	**1.88**	**39**		**Pb**	04 41 42.2	-0.1
AAK				Sg	**Sg**	04 42 07.8	-0.5
AAK	**Ala-Archa**	**1.88**	**39**	⇓P	**Pg**	04 41 42.8	-1.1
	635nm,0.6s						
AAK				⇑S	**Sg**	04 42 07.5	-0.8
	350nm,0.4s						
AAK	**Ala-Archa**	**1.88**	**39**	*ce*PN	**Pb**	04 41 42.5	+0.1
AAK				pmax	pmax		
	comp=Z,1μm,0.5s						
AAK	**Ala-Archa**	**1.88**	**39**	⇓*i*P	**Pn**	04 41 40.2	0.0
AAK				⇓*i*S	**Sb**	04 42 04.9	-1.1
DRK	**Karamyk**	**1.89**	**207**		**Pb**	04 41 42.9	+0.2
DRK				Sg	**Sg**	04 42 09.7	+1.0
DRK	**Karamyk**	**1.89**	**207**	PN	**Pb**	04 41 42.9	+0.2
DRK						04 42 09.7	
DRK	**Karamyk**	**1.89**	**207**	⇑*i*P	**Pn**	04 41 39.8	-0.7
DRK				⇑*i*S	**Sn**	04 42 04.1	-0.5
BTK	**Batken**	**1.94**	**235**		**Pb**	04 41 42.8	-0.5
BTK					**Sg**	04 42 11.2	+1.1
BTK	**Batken**	**1.94**	**235**	PN	**Pb**	04 41 42.8	-0.5
BTK						04 42 11.2	
BTK	**Batken**	**1.94**	**235**	⇑*i*P	**Pn**	04 41 40.4	-0.6
BTK				⇑*i*S	**Sn**	04 42 05.0	-0.5
JNKS	**Jany-Kuch**	**2.06**	**93**	⇑*i*P	**Pn**	04 41 42.9	+0.1
JNKS				⇑*i*S	**Sn**	04 42 09.3	+0.5
DZA	**Taraz**	**2.07**	**326**	Pg	**Pg**	04 41 47.4	-0.1
	comp=Z,1μm,0.4s						
DZA	**Taraz**	**2.07**	**326**	*e*P	**Pb**	04 41 45.1	-0.5
DZA				*e*Pg	**Pg**	04 41 46.5	-1.0
DZA	**Taraz**	**2.07**	**326**	*e*P	**Pg**	04 41 46.4	-1.1
	comp=Z,1μm,0.4s						
DZA				*e*S	**Sg**	04 42 13.8	-0.6
	comp=Z,13μm,0.4s						
FRU1	**Bishkek**	**2.08**	**38**		**Pg**	04 41 47.3	-0.4
FRU1	**Bishkek**	**2.08**	**38**	PN	**Pg**	04 41 47.3	-0.4
FRU1	**Bishkek**	**2.08**	**38**	⇓*i*P	**Pn**	04 41 43.1	+0.2
FRU1				⇓*i*S	**Sb**	04 42 09.8	-1.8
KBK	**Karagaybulak**	**2.12**	**45**	⇑P	**Pb**	04 41 46.9	+0.4
	comp=Z,656nm,0.3s,SNR=516						
KBK				⇓S	**Sg**	04 42 13.9	-2.2
	comp=Z,5μm,0.3s						
KBK	**Karagaybulak**	**2.12**	**45**	⇓*i*P	**Pn**	04 41 43.7	+0.1
KBK				⇓*i*S	**Sn**	04 42 10.7	+0.5
CHMS	**Chumysh**	**2.28**	**37**	⇓P	**Pb**	04 41 48.8	-0.3
	comp=Z,1μm,0.4s,SNR=764						
CHMS				⇑S	**Sg**	04 42 18.8	-2.3
	comp=Z,4μm,0.5s						
CHMS	**Chumysh**	**2.28**	**37**	⇑*i*P	**Pn**	04 41 45.7	+0.1
CHMS				⇑*i*S	**Sn**	04 42 14.3	+0.5
NRN	**Naryn**	**2.35**	**83**		**Pn**	04 41 47.9	+1.1
NRN	**Naryn**	**2.35**	**83**	PN	**Pn**	04 41 47.9	+1.1
NRN	**Naryn**	**2.35**	**83**	⇑*i*P	**Pn**	04 41 46.2	-0.6
NRN				⇑*i*S	**Sn**	04 42 15.1	-0.8
USP	**Ospenovka**	**2.40**	**29**	P	**Pb**	04 41 50.6	-0.6
	comp=Z,1μm,0.5s,SNR=372						
USP				⇓S	**Sb**	04 42 21.9	+1.0
	comp=Z,5μm,0.4s						
USP	**Ospenovka**	**2.40**	**29**	⇑*e*P	**Pn**	04 41 47.5	+0.2
USP				⇑*i*S	**Sn**	04 42 17.3	+0.5
SGDS	**Sogindy**	**2.61**	**29**	Pg	**Pb**	04 41 54.7	-0.1
	comp=Z,98nm,0.5s						
SGDS				Lg	Lg	04 42 28.5	
	comp=Z,3μm,0.5s						
SGDS	**Sogindy**	**2.61**	**29**	*e*P	**Pb**	04 41 53.8	-0.9
KK31	**Karatay Array**	**2.62**	**318**		**Pn**	04 41 52.0	+1.8
KK31	**Karatay Array**	**2.62**	**318**	⇑Pn	**Pb**	04 41 53.0	-1.9
	comp=Z,658nm,0.8s,baz=126,slow=13,SNR=2014						
KK31				Lg	Lg	04 42 30.1	
	comp=Z,2μm,0.7s,baz=129,slow=21,SNR=20						
KK31	**Karatay Array**	**2.62**	**318**	PN	**Pb**	04 41 52.9	-1.9
KKAR	**Karatay Array**	**2.62**	**318**		**Pb**	04 41 52.7	-2.1
KKAR	**Karatay Array**	**2.62**	**318**	PN	**Pb**	04 41 52.7	-2.1
BOOM	**Boomskoye usch**	**2.62**	**59**		**Pb**	04 41 53.4	-1.6
BOOM	**Boomskoye usch**	**2.62**	**59**	PN	**Pb**	04 41 53.4	-1.6
BOOM	**Boomskoye usch**	**2.62**	**59**	⇓*i*P	**Pn**	04 41 50.5	+0.1
BOOM				⇓*i*S	**Sn**	04 42 22.4	0.0
TKM2	**Tokmak 2**	**2.66**	**48**	⇓P	**Pb**	04 41 54.2	-1.4
	comp=Z,792nm,0.4s,SNR=664						
TKM2				⇓S	**Sb**	04 42 27.9	-0.5
	comp=Z,2μm,0.4s						
TKM2	**Tokmak 2**	**2.66**	**48**	⇑*i*P	**Pn**	04 41 51.0	+0.1
TKM2				⇑*i*S	**Sn**	04 42 23.5	+0.1
CHM	**Chimkent**	**2.72**	**296**	*e*P	**Pb**	04 41 54.2	-2.3
CHM	**Chimkent**	**2.72**	**296**	*e*P	**Pg**	04 41 59.2	-0.7
	comp=Z,361nm,0.2s						
CHM				*e*S	**Sg**	04 42 36.2	+1.2
	comp=Z,4μm,0.6s						
ULHL	**Ulahol**	**2.72**	**66**	⇑P	**Pb**	04 41 54.6	-2.1
	comp=Z,483nm,0.6s,SNR=71						
ULHL				⇓S	**Sb**	04 42 29.3	-0.9
	comp=Z,918nm,0.4s						
ULHL	**Ulahol**	**2.72**	**66**	⇑*i*P	**Pn**	04 41 51.8	0.0
ULHL				⇑*e*S	**Sn**	04 42 24.9	0.0
KSH2	**Kashi**	**2.88**	**134**	Pn	**Pn**	04 41 56.0	+2.0
KSH2				Sn	**Sb**	04 42 33.0	-1.8
KSH2				SMN			
	comp=Z,3μm,0.8s						
KSH2				SME			
	comp=Z,1μm,0.7s						
BRLS	**Boroldav**	**2.94**	**310**	Pg	**Pb**	04 42 01.1	+0.9
	comp=Z,486nm,0.6s						
BRLS	**Boroldav**	**2.94**	**310**	*e*P	**Pn**	04 41 56.0	+1.4
BRLS	**Boroldav**	**2.94**	**310**	*e*P	**Pb**	04 42 01.1	+0.9
	comp=Z,486nm,0.6s						
BRLS				*e*S	**Sg**	04 42 38.7	-3.4
	comp=Z,2μm,0.6s						
GAR	**Garm**	**2.94**	**223**		**Pn**	04 41 57.8	+3.0
GAR	**Garm**	**2.94**	**223**	⇑*i*P	**Pn**	04 41 54.4	-0.4
GAR				⇑*i*S	**Sn**	04 42 29.3	-1.0
DGS	**Degeres**	**2.97**	**45**	Pg	**Pb**	04 42 01.9	+1.1
	comp=Z,364nm,0.4s						
DGS				Lg	Lg	04 42 41.0	
	comp=Z,3μm,0.6s						
DGS	**Degeres**	**2.97**	**45**	*e*P	**Pb**	04 42 01.9	+1.1
	comp=Z,364nm,0.4s						
DGS				*e*S	**Sg**	04 42 41.0	-2.1
	comp=Z,3μm,0.6s						
KRBS	**Karabastau**	**3.25**	**38**	Pg	**Pb**	04 42 06.3	+0.7
	comp=Z,656nm,0.5s						
KRBS				Lg	Lg	04 42 48.7	
	comp=Z,2μm,0.7s						
KRBS	**Karabastau**	**3.25**	**38**	*e*P	**Pb**	04 42 05.7	+0.1
	comp=Z,656nm,0.5s						
KRBS				*e*S	**Sb**	04 42 47.2	+2.0
	comp=Z,2μm,0.7s						
IZV	**Izvestkoviy**	**3.33**	**55**	Pg	**Pb**	04 42 08.0	+0.9
	comp=Z,209nm,0.4s						
IZV				Lg	Lg	04 42 51.3	
	comp=Z,949nm,0.5s						
IZV	**Izvestkoviy**	**3.33**	**55**	*e*P	**Pb**	04 42 08.0	+0.9
	comp=Z,209nm,0.4s						
IZV				*e*S	**Sg**	04 42 51.3	-3.4
	comp=Z,949nm,0.5s						
KDJ	**Kajisay**	**3.35**	**72**		**Pn**	04 42 02.8	+2.4
KDJ	**Kajisay**	**3.35**	**72**	PN	**Pn**	04 42 02.8	+2.4
KDJ	**Kajisay**	**3.35**	**72**	⇓*i*P	**Pn**	04 42 00.6	+0.2
KDJ				⇓*i*S	**Sn**	04 42 40.0	-0.3
TNSS	**Tian-Shan**	**3.54**	**57**	Pg	**Pb**	04 42 11.6	+0.9
	comp=Z,51nm,0.6s						
TNSS				Lg	Lg	04 42 57.5	
	comp=Z,204nm,0.5s						
TNSS	**Tian-Shan**	**3.54**	**57**	*e*P	**Pb**	04 42 07.4	-3.4
TNSS				*e*S	**Sb**	04 42 50.1	-3.8
TNSS	**Tian-Shan**	**3.54**	**57**	*e*P	**Pb**	04 42 11.6	+0.9
	comp=Z,51nm,0.6s						
TNSS				*e*S	**Sg**	04 42 57.5	-3.9
	comp=Z,204nm,0.5s						
AAA	**Alma-Ata**	**3.61**	**54**	Pg	**Pb**	04 42 13.7	+2.0
	comp=Z,463nm,0.4s						
AAA				Lg	Lg	04 43 00.8	
	comp=Z,35nm,0.3s						
AAA	**Alma-Ata**	**3.61**	**54**	*e*P	**Pb**	04 42 08.4

CHGR	**Chuyangaron**	**3.82**	**230**		PN		**Pn**	**04 42 10.1**	**+3.2**
CHGR	**Chuyangaron**	**3.82**	**230**	⇑	*e*P		**Pn**	**04 42 06.4**	**-0.5**
CHGR				⇑	*e*S		**Sn**	**04 42 50.4**	**-1.5**
BTLS	**Baital**	**3.95**	**12**		Pg		**Pb**	**04 42 19.1**	**+1.6**
	comp=Z,107nm,0.6s									
BTLS					Lg		Lg	04 43 10.3		
	comp=Z,882nm,0.5s									
BTLS	**Baital**	**3.95**	**12**	*e*	P		**Pn**	**04 42 10.9**	**+2.4**
BTLS	**Baital**	**3.95**	**12**	*e*	P		**Pb**	**04 42 19.1**	**+1.6**
	comp=Z,107nm,0.6s									
BTLS				*e*	S		**Sg**	**04 43 10.3**	**-4.3**
	comp=Z,882nm,0.5s									
PRZ	**Przheval'sk**	**4.31**	**71**		Pn		**Pn**	**04 42 16.4**	**+2.7**
PRZ	**Przheval'sk**	**4.31**	**71**		PN		**Pn**	**04 42 16.4**	**+2.7**
SATY	**Saty**	**4.51**	**64**		Pg		**Pb**	**04 42 30.0**	**+2.9**
	comp=Z,190nm,0.5s									
SATY					Lg		Lg	04 43 29.1		
	comp=Z,554nm,1.0s									
SATY	**Saty**	**4.51**	**64**	*e*	P		Pn	04 42 21.5	+5.3	
SATY				*e*	Pg		**Pg**	**04 42 35.5**	**+1.4**	
SATY				*e*	S		**Sb**	**04 43 15.3**	**-6.2**	
KURS	**Kuram**	**4.54**	**58**		Pg		**Pb**	**04 42 30.4**	**+2.8**	
	comp=Z,115nm,0.6s									
KURS					Lg		Lg	04 43 29.7		
	comp=Z,222nm,0.7s									
ARXS	**Arharly**	**4.73**	**49**		Pg		**Pb**	**04 42 32.9**	**+2.0**	
	comp=Z,278nm,0.5s									
ARXS					Lg		Lg	04 43 34.0		
	comp=Z,623nm,0.4s									
ARXS	**Arharly**	**4.73**	**49**	*e*	PN		**Pn**	**04 42 21.6**	**+2.3**	
ARXS	**Arharly**	**4.73**	**49**	*e*	P		**Pb**	**04 42 32.9**	**+2.0**	
	comp=Z,278nm,0.5s									
ARXS				*e*	S		**Sg**	**04 43 34.0**	**-5.7**	
	comp=Z,623nm,0.4s									
WUS	**Wushi**	**4.77**	**88**				**Pn**	**04 42 21.6**	**+1.7**	
UZB	**Uzynbulak**	**4.96**	**65**		Pg		**Pb**	**04 42 37.4**	**+2.6**	
	comp=Z,174nm,0.6s									
UZB					Lg		Lg	04 43 41.7		
	comp=Z,246nm,0.6s									
UZB	**Uzynbulak**	**4.96**	**65**	*e*	P		Pn	04 42 27.5	+5.0	
UZB	**Uzynbulak**	**4.96**	**65**	*e*	P		**Pb**	**04 42 37.4**	**+2.6**	
	comp=Z,174nm,0.6s									
UZB				*e*	S		**Sg**	**04 43 41.7**	**-5.2**	
	comp=Z,246nm,0.6s									
SHAA	**Shahritus**	**5.17**	**227**				**Pn**	**04 42 27.3**	**+2.0**	
SHLS	**Shalkode**	**5.26**	**66**		Pg		**Pg**	**04 42 49.0**	**+0.4**	
	comp=Z,63nm,0.8s									
SHLS					Lg		Lg	04 44 01.6		
	comp=Z,425nm,0.6s									
SHLS	**Shalkode**	**5.26**	**66**	*e*	P		Pb	04 42 34.4	-5.6	
SHLS	**Shalkode**	**5.26**	**66**	*e*	P		**Pg**	**04 42 49.0**	**+0.4**	
	comp=Z,63nm,0.8s									
SHLS				*e*	S		**Sg**	**04 44 01.6**	**+4.9**	
	comp=Z,425nm,0.6s									
PDGK	**Podgornoye**	**5.34**	**64**	⇑	Pg		**Pb**	**04 42 44.7**	**+3.3**	
	comp=Z,80nm,0.6s									
PDGK				⇓	Lg		Lg	04 43 57.2		
	comp=Z,424nm,0.8s									
PDGK	**Podgornoye**	**5.34**	**64**		PN		**Pb**	**04 42 44.6**	**+3.3**	
TDK	**Taldyqorghan**	**5.55**	**45**	*e*	P		**Pn**	**04 42 33.7**	**+3.1**	
KNOS	**Konyrlen**	**5.61**	**53**		Pg		**Pb**	**04 42 49.0**	**+3.1**	
	comp=Z,34nm,0.6s									
KNOS					Lg		Lg	04 44 01.6		
	comp=Z,284nm,0.5s									
DJR	**Jarkent**	**5.97**	**56**		Pg		Pg	04 42 57.7	-4.4	
	comp=Z,83nm,0.7s									
DJR	**Jarkent**	**5.97**	**56**	*e*	P		Pg	04 42 57.7	-4.4	
	comp=Z,83nm,0.7s									
DJR				*e*	S		**Sg**	**04 44 16.5**	**-2.9**	
	comp=Z,153nm,0.7s									
KBL	**Kabul**	**7.29**	**206**				**Pn**	**04 42 57.5**	**+2.9**	
KBL	**Kabul**	**7.29**	**206**		P		**Pn**	**04 42 57.6**	**+2.9**	
NIL	**Nilore**	**7.52**	**178**				**Pn**	**04 43 00.1**	**+2.5**	
NIL	**Nilore**	**7.52**	**178**		P		**Pn**	**04 43 00.1**	**+2.5**	
MAKZ	**Makanchi**	**8.63**	**46**				**Pn**	**04 43 14.5**	**+1.8**	
MAKZ	**Makanchi**	**8.63**	**46**	⇓	Pn		**Pn**	**04 43 14.9**	**+2.2**	
	comp=Z,12nm,0.7s									
MAKZ				⇓	Lg		Lg	04 45 42.6		
	comp=Z,82nm,0.9s									
MAKZ	**Makanchi**	**8.63**	**46**		P		**Pn**	**04 43 14.9**	**+2.2**	
MK31	**Makanchi Array**	**8.79**	**47**		Pn		**Pn**	**04 43 17.1**	**+2.2**	
	comp=Z,12nm,0.5s,baz=230,slow=13,SNR=66									
MK31				⇓	Lg		Lg	04 45 47.7		
	comp=Z,50nm,0.7s									
MK31	**Makanchi Array**	**8.79**	**47**	*ce*	P		**Pn**	**04 43 17.5**	**+2.5**	
MKAR	**Makanchi Array**	**8.79**	**47**		Pn		**Pn**	**04 43 17.1**	**+2.2**	
	comp=Z,5.8nm,0.3s,baz=236,slow=14,SNR=115									
MKAR					Lg		Lg	04 45 42.8		
	comp=Z,3.7nm,0.3s,baz=240,slow=31,SNR=4.7									
MKAR					LR		LR	04 46 51.8		
	comp=Z,264nm,20.2s,baz=246,slow=39									
	comp=Z,15nm,0.5s									
MKAR	**Makanchi Array**	**8.79**	**47**				**Pn**	**04 43 17.5**	**+2.5**	
KURBB	**Kurchatov Arra**	**10.22**	**21**		Pn		**Pn**	**04 43 34.4**	**-0.1**	
	comp=Z,1.1nm,0.3s,baz=213,slow=13,SNR=54									
KURBB					Lg		Lg	04 46 27.1		
	comp=Z,1.1nm,0.3s,baz=211,slow=27,SNR=5.8									
KURBB					LR		LR	04 47 42.8		
	comp=Z,299nm,19.0s,baz=157,slow=38									
	comp=Z,8.0nm,0.6s									
KURBB	**Kurchatov Arra**	**10.22**	**21**	⇑	Pn		**Pn**	**04 43 35.0**	**+0.4**	
	comp=Z,27nm,0.6s									
KURBB				⇑	Lg		Lg	04 46 33.5		
	comp=Z,468nm,0.9s									
KURBB	**Kurchatov Arra**	**10.22**	**21**		P		**Pn**	**04 43 34.9**	**+0.4**	
KURK	**Kurchatov**	**10.33**	**21**				**Pn**	**04 43 35.8**	**-0.2**	
KURK	**Kurchatov**	**10.33**	**21**	⇓	Pn		**Pn**	**04 43 35.8**	**-0.2**	
	comp=Z,3.4nm,0.7s									
KURK				⇑	Lg		Lg	04 46 36.0		
	comp=Z,210nm,1.1s									
KURK	**Kurchatov**	**10.33**	**21**	*ce*	P		**Pn**	**04 43 36.9**	**+0.9**	
KURK					pmax		pmax			
	comp=Z,14nm,1.0s									
WMQ	**Urumqi**	**11.24**	**72**	*e*	P		**Pn**	**04 43 52.3**	**+3.8**	
WMQ					L		L			
	comp=Z,120nm,15.7s									
BVA0	**Borovoye Array**	**11.97**	**353**		Pn		**Pn**	**04 44 00.0**	**+1.6**	
	comp=Z,5.7nm,0.5s,baz=152,slow=11,SNR=19									
BVA0				⇑	Sn		**Sn**	**04 46 16.3**	**+4.3**	
	comp=Z,21nm,0.7s									
BVA0				⇓	Lg		Lg	04 47 27.3		
	comp=Z,137nm,0.8s									
BVA0	**Borovoye Array**	**11.97**	**353**	*i*	P		**Pn**	**04 43 57.9**	**-0.6**	
BVAR	**Borovoye Array**	**11.97**	**353**		Pn		**Pn**	**04 43 57.9**	**-0.6**	
	comp=Z,0.1nm,0.3s,baz=159,slow=12,SNR=15									
BVAR					Lg		Lg	04 47 23.0		
	comp=Z,0.6nm,0.3s,baz=170,slow=26,SNR=2.5									
BVAR					LR		LR	04 48 48.4		
	comp=Z,262nm,20.1s,baz=162,slow=38									
	comp=Z,4.9nm,0.7s									
BORK	**Borovoye**	**12.00**	**352**				**Pn**	**04 43 59.2**	**+0.3**	
BORK	**Borovoye**	**12.00**	**352**	*ce*	P		**Pn**	**04 43 57.0**	**-1.8**	
BORK					pmax		pmax			
	comp=Z,8.0nm,0.8s									
AB31	**Akbulak array**	**12.18**	**316**				**Pn**	**04 44 01.3**	**0.0**	
AB31	**Akbulak array**	**12.18**	**316**		Pn		**Pn**	**04 44 03.0**	**+1.7**	
	comp=Z,19nm,0.7s,baz=129,slow=12,SNR=169									
AB31				⇑	Lg		Lg	04 47 34.6		
	comp=Z,95nm,1.2s									
AB31	**Akbulak array**	**12.18**	**316**	*i*	P		**Pn**	**04 44 00.7**	**-0.6**	
ABKAR	**Akbulak array**	**12.18**	**316**				**Pn**	**04 44 01.0**	**-0.3**	
AKTO	**Aktyubinsk**	**13.88**	**317**		Pn		**Pn**	**04 44 24.7**	**+0.1**	
	comp=Z,0.5nm,0.3s,baz=127,slow=13,SNR=8.5									
AKTO					Sn		**Sn**	**04 46 57.3**	**-1.4**	
	comp=Z,0.3nm,0.3s,baz=195,slow=20,SNR=1.4									
AKTO					Lg		Lg	04 48 29.0		
	baz=54,slow=17									
	comp=Z,15nm,0.8s									
AKTO	**Aktyubinsk**	**13.88**	**317**	⇓	Pn		**Pn**	**04 44 26.7**	**+2.1**	
	comp=Z,15nm,0.8s									
AKTO				⇓	Lg		Lg	04 48 31.7		
	comp=Z,54nm,1.4s									
ZAA0	**Zalesovo Array**	**15.07**	**28**				**Pn**	**04 44 42.2**	**+1.5**	
ZAA0					IAmb		IAmb	04 44 47.8		
	comp=Z,22nm,0.7s									
ZALV	**Zalesovo Beam**	**15.07**	**28**		Pn		**Pn**	**04 44 41.9**	**+1.2**	
	comp=Z,2.1nm,0.3s,baz=216,slow=13,SNR=38									
ZALV					Sn		**Sn**	**04 47 30.0**	**+2.5**	
	comp=Z,0.4nm,0.3s,baz=220,slow=18,SNR=1.9									
ZALV					Lg		Lg	04 49 02.8		
	baz=221,slow=28									
ZALV					LR		LR	04 50 47.5		
	comp=Z,236nm,19.2s,baz=175,slow=38									
EVN	**Everest**	**17.44**	**135**				**Pn**	**04 45 09.0**	**-2.9**	
SVE	**Sverdlovsk**	**17.56**	**337**	*e*	P		**P**	**04 45 18.8**	**+5.2**	
SVE					pmax		pmax			
	comp=Z,20nm,1.2s									

GOMU	**GeErMu**	**17.80**	**99**		P		**P**	**04 45 16.8**	**0.0**	
GOMU					pmax		pmax			
	comp=Z,3.0nm,0.5s									
ARTI	**Arti**	**17.91**	**333**		P		**Pn**	**04 45 16.8**	**-0.1**	
	comp=Z,0.4nm,0.3s,baz=146,slow=10,SNR=5.0									
ARTI					Lg		Lg	04 50 35.5		
	comp=Z,0.4nm,0.3s,baz=180,slow=20,SNR=4.5									
ARTI					LR		LR	04 52 26.5		
	comp=Z,214nm,18.8s,baz=159,slow=38									
	comp=Z,3.6nm,0.6s									
ARTI	**Arti**	**17.91**	**333**				**Pn**	**04 45 16.6**	**-0.3**	
ARTI	**Arti**	**17.91**	**333**		P		**Pn**	**04 45 15.1**	**-1.8**	
ARTI					S		**Sn**	**04 48 29.0**	**-7.5**	
ARTI					MLR		MLR			
	comp=Z,266nm,10.0s									
LKRN	**Lenkeran, Azer**	**18.65**	**270**		P		**P**	**04 45 24.5**	**-1.2**	
AKT	**Akhty**	**18.89**	**279**	*e*	P		**Pn**	**04 45 30.2**	**+1.1**	
AKT				*e*	S		**S**	**04 49 02.2**	**-1.0**	
AKT					pmax		pmax			
	comp=Z,14nm,0.5s									
AKT					smax		smax			
	comp=E,7.0nm,0.7s									
AKT					smax		smax			
	comp=N,6.0nm,0.4s									
MAK	**Makhachkala**	**18.92**	**284**	*c*	P		**P**	**04 45 25.1**	**-3.5**	
MAK				*e*	S		**Sn**	**04 48 54.2**	**-6.8**	
MAK					pmax		pmax			
	comp=Z,150nm,1.0s									
MAK					MLR		MLR			
	comp=Z,242nm,14.0s									
SEKA	**Sheki**	**19.32**	**279**		P		**Pn**	**04 45 33.9**	**-0.3**	
KNGR	**Kungurtug, Tuv**	**19.48**	**53**	*i*	P		**Pn**	**04 45 38.1**	**+2.0**	
KNGR					pmax		pmax			
	comp=Z,35nm,1.1s									
MNGR	**Mingechevir, A**	**19.48**	**277**		P		**Pn**	**04 45 36.0**	**0.0**	
GANJ	**Ganja**	**20.07**	**277**		P		**P**	**04 45 42.3**	**+1.0**	
BELG	**Belogornoye**	**20.51**	**312**		P		**P**	**04 45 46.2**	**+0.3**	
	comp=Z,46nm,0.9s,baz=123,slow=17,SNR=6.5									
	comp=Z,46nm,0.9s									
BELG	**Belogornoye**	**20.51**	**312**	*i*	P		**P**	**04 45 45.8**	**-0.1**	
BELG					pmax		pmax			
	comp=Z,9.0nm,1.0s									
GTA2	**Gaotai**	**20.52**	**86**		P		Pn	04 45 48.5	0.0	
GTA2					pP		sP	04 45 52.8	+1.9	
GTA2					pmax		pmax			
	comp=Z,29nm,0.7s									
GTA2					L		L			
	comp=Z,170nm,12.7s									
GTA2					L		L			
	comp=Z,160nm,12.0s									
GTA2					L		L			
	comp=Z,210nm,15.1s									
GNI	**Garni**	**21.35**	**277**		P		**P**	**04 45 56.2**	**+0.8**	
	comp=Z,22nm,0.9s,baz=90,slow=20,SNR=7.4									
GNI					LR		LR	04 55 38.9		
	comp=Z,53nm,19.1s,baz=15,slow=41									
	comp=Z,22nm,0.9s									
GNI	**Garni**	**21.35**	**277**		P		**P**	**04 45 53.8**	**-1.6**	
GNI					IAmb		IAmb	04 46 03.8		
	comp=Z,23nm,0.8s									
GNI	**Garni**	**21.35**	**277**	*ce*	P		**P**	**04 45 57.4**	**+2.1**	
GNI					pmax		pmax			
	comp=Z,19nm,0.8s									
NCK	**Nalchik**	**21.74**	**286**	*i*	P		**P**	**04 45 58.8**	**-0.5**	
NCK					pmax		pmax			
	comp=Z,30nm,1.4s									
MOY	**Mondy**	**21.89**	**52**	*e*	P		**P**	**04 46 05.0**	**+4.0**	
MOY					pmax		pmax			
	comp=Z,19nm,2.9s									
SHL	**Shillong**	**22.15**	**129**		P		**P**	**04 46 04.5**	**+0.5**	
SHL	**Shillong**	**22.15**	**129**		P		**P**	**04 46 04.5**	**+0.5**	
SHL					pmax		pmax			
	comp=Z,6.0nm,0.6s									
KBZ	**Khabaz**	**22.23**	**287**		P		**P**	**04 46 04.5**	**0.0**	
	comp=Z,3.3nm,0.9s,baz=90,slow=7.9,SNR=6.5									
	comp=Z,3.3nm,0.9s									
KBZ	**Khabaz**	**22.23**	**287**	*ce*	P		**P**	**04 46 03.4**	**-1.1**	
KBZ					pmax		pmax			
	comp=Z,8.0nm,0.9s									
KVAR	**Kislovodsk Arr**	**22.36**	**287**		P		**P**	**04 46 05.6**	**-0.5**	
	comp=Z,1.2nm,0.3s,baz=90,slow=20,SNR=1.8									
	comp=Z,1.2nm,0.3s									
KIV	**Kislovodsk**	**22.36**	**287**				**P**	**04 46 05.2**	**-0.8**	
KIV					IAmb		IAmb	04 46 49.4		
	comp=Z,23nm,0.8s									
NEUR	**Neytrino**	**22.41**	**285**	*i*	P		**P**	**04 46 07.0**	**+0.4**	
NEUR					pmax		pmax			
	comp=Z,7.0nm,1.3s									
KARS	**Kars**	**22.50**	**278**		P		**P**	**04 46 08.4**	**+0.8**	
KARS					IAmb		IAmb	04 46 16.5		
	comp=Z,31nm,1.4s									
KARS	**Kars**	**22.50**	**278**		P		**P**	**04 46 08.4**	**+0.8**	
KARS					pmax		pmax			
	comp=Z,31nm,1.4s									
KIRV	**Kirov**	**22.87**	**328**	*ce*	P		**P**	**04 46 12.6**	**+1.4**	
ZAK	**Zakamensk**	**22.96**	**56**	*e*	P		**P**	**04 46 13.0**	**+0.6**	
ZAK					pmax		pmax			
	comp=Z,11nm,1.6s									
GEVA	**Gevas**	**23.07**	**273**		P		**P**	**04 46 13.8**	**+0.1**	
GEVA					IAmb		IAmb	04 46 22.1		
	comp=Z,19nm,0.9s									
TLY	**Talaya**	**23.48**	**53**		LR		LR	04 55 44.8		
	comp=Z,63nm,21.5s,baz=260,slow=37									
TLY	**Talaya**	**23.48**	**53**		P		**P**	**04 46 19.6**	**+2.0**	
VRH	**Novokhopyorsk**	**23.63**	**306**	*e*	P		**P**	**04 46 19.1**	**+0.2**	
VRH					pmax		pmax			
	comp=Z,25nm,0.8s									
GURO	**Guroymak-BITLI**	**23.78**	**274**		P		**P**	**04 46 21.2**	**+0.5**	
GURO					IAmb		IAmb	04 46 28.9		
	comp=Z,12nm,1.1s									
LZDM	**Lanzhou Array**	**24.56**	**92**		P		**P**	**04 46 29.1**	**+0.9**	
	comp=Z,1.1nm,0.3s,baz=290,slow=8.4,SNR=1.5									
	comp=Z,1.1nm,0.3s									
SONM	**Songino Array**	**24.66**	**63**		P		**P**	**04 46 30.1**	**+1.4**	
	comp=Z,1.8nm,0.7s,baz=274,slow=6.5,SNR=6.1									
	comp=Z,1.8nm,0.7s									
SONM	**Songino Array**	**24.66**	**63**		P		**P**	**04 46 30.2**	**+1.4**	
SONM					IAmb		IAmb	04 46 48.8		
	comp=Z,6.2nm,0.6s									
SONM	**Songino Array**	**24.66**	**63**		P		**P**	**04 46 30.2**	**+1.4**	
SONM					pmax		pmax			
	comp=Z,6.0nm,0.6s									
VORD	**Divnogorie**	**25.09**	**304**	*e*	P		**P**	**04 46 31.1**	**-1.3**	
VORD					pmax		pmax			
	comp=Z,20nm,0.9s									
MARD	**Mardin**	**25.09**	**272**		P		**P**	**04 46 33.9**	**+1.1**	
ULN	**Ulaanbaatar**	**25.10**	**63**	*ce*	P		**P**	**04 46 34.7**	**+1.9**	
ULN					pmax		pmax			
	comp=Z,14nm,1.7s									
VSR	**Storozhevoye**	**25.21**	**305**	*e*	P		**P**	**04 46 33.5**	**0.0**	
VSR					pmax		pmax			
	comp=Z,24nm,0.6s									
VORR	**Voronezh**	**25.27**	**306**	*e*	P		**P**	**04 46 34.5**	**+0.5**	
VORR					pmax		pmax			
	comp=Z,35nm,0.6s									
LPSR	**Galich'ya Gora**	**25.63**	**308**	*e*	P		**P**	**04 46 37.1**	**-0.2**	
LPSR					pmax		pmax			
	comp=Z,36nm,0.7s									
OBN	**Obninsk**	**27.60**	**313**	*e*	P		**P**	**04 46 55.8**	**+0.8**	
OBN				*e*	PPP		PPP	04 47 47.2		
OBN				*e*				04 50 12.5		
OBN					pmax		pmax			
	comp=Z,24nm,1.3s									
OBN					MLR		MLR			
	comp=Z,100nm,15.0s									
PZH	**PanZhiHua**	**27.92**	**113**		P		**P**	**04 47 01.3**	**+3.0**	
KLMR	**Klimovskoe**	**28.30**	**325**	*e*	P		**P**	**04 47 01.2**	**0.0**	
KLMR					pmax		pmax			
	comp=Z,18nm,1.4s									
HHC	**Hu-ho-hao-te**	**29.02**	**78**	*e*	P		**P**	**04 47 10.0**	**+2.0**	
HHC					pmax		pmax			
	comp=Z,10.0nm,0.6s									
HHC					pmax		pmax			
	comp=Z,75nm,5.7s									
NRIK	**Noril'sk**	**29.26**	**11**		P		**P**	**04 47 10.3**	**+0.6**	
	comp=Z,5.5nm,1.0s,baz=208,slow=6.7,SNR=6.4									
	comp=Z,5.5nm,1.0s									
NRIK	**Noril'sk**	**29.26**	**11**		IAmb		IAmb	04 47 11.8		
	comp=Z,7.7nm,1.1s									
BR131	**Keskin Array S**	**29.74**	**280**		P		**P**	**04 47 14.8**	**+0.4**	
BR131	**Keskin Array S**	**29.74**	**280**		P		**P**	**04 47 14.9**	**+0.4**	
BR131					pmax		pmax			
	comp=Z,6.0nm,1.0s									
BRTR	**Keskin Array B**	**29.74**	**280**		P		**P**	**04 47 15.3**	**+0.8**	
	comp=Z,3.4nm,0.9s,baz=86,slow=7.2,SNR=17									
	comp=Z,3.4nm,0.9s									

BRTR	**Keskin Array B**	**29.74**	**280**		P		**P**	**04 47 15.6**	**+1.2**	
BRTR	**Keskin Array B**	**29.74**	**280**	*i*	P		**P**	**04 47 16.0**	**+1.5**	
BRTR					pmax		pmax			
	comp=Z,3.0nm,0.9s									
AKASG	**Malin Array Be**	**31.42**	**303**		P		**P**	**04 47 29.1**	**+0.2**	
	comp=Z,2.6nm,0.9s,baz=80,slow=8.0,SNR=16									
	comp=Z,2.6nm,0.9s									
AKASG	**Malin Array Be**	**31.42**	**303**		P		**P**	**04 47 30.0**	**+1.1**	
AKASG	**Malin Array Be**	**31.42**	**303**		P		**P**	**04 47 30.0**	**+1.1**	
AKASG					pmax		pmax			
	comp=Z,2.0nm,0.9s									
AKBB	**Malin Array Si**	**31.42**	**303**		IAmb		IAmb	04 47 30.1		
	comp=Z,7.8nm,0.8s									
AKBB	**Malin Array Si**	**31.42**	**303**	*ce*	P		**P**	**04 47 28.7**	**-0.2**	
KIEV	**Kiev**	**31.43**	**303**		P		**P**	**04 47 29.5**	**+0.5**	
KIEV					IAmb		IAmb	04 47 30.1		
	comp=Z,7.0nm,0.8s									
KIEV	**Kiev**	**31.43**	**303**		P		**P**	**04 47 29.5**	**+0.5**	
KIEV					pmax		pmax			
	comp=Z,7.0nm,0.8s									
CMAR	**Chiang Mai Arr**	**31.77**	**128**		P		**P**	**04 47 31.6**	**-0.7**	
	comp=Z,1.1nm,0.3s,baz=326,slow=8.3,SNR=1.1									
	comp=Z,1.1nm,0.3s									
MNK	**Minsk**	**32.43**	**310**	*i*	P		**P**	**04 47 38.0**	**+0.1**	
	comp=E,17nm,0.8s									
MNK				*i*	P		**P**	**04 47 38.0**	**+0.1**	
	comp=N,30nm,0.9s									
MNK				*i*	P		**P**	**04 47 38.0**	**+0.1**	
	comp=Z,31nm,0.9s,baz=95									
MNK				*i*	PP		**PnPn**	**04 48 42.0**	**-2.6**	
MNK				*i*	PPP		PPP	04 48 51.4		
MNK				*i*	S		**S**	**04 52 52.0**	**-0.1**	
MNK				*i*	SS		**SnSn**	**04 54 45.0**	**+0.3**	
MNK				*i*	SSS		SSS	04 55 00.4		
MNK				*i*	LQ		LQ	04 58 06.2		
MNK				*i*	LR		LR	05 00 24.9		
MNK				*i*	LRM		MLR	05 01 36.7		
	comp=Z,135nm,13.3s									
MNK				*i*	LRM		MLR	05 01 39.6		
	comp=N,123nm,15.6s									
MNK				*i*	LRM		MLR	05 01 56.4		
	comp=E,31nm,6.7s									
MNK	**Minsk**	**32.43**	**310**	*i*	P		**P**	**04 47 37.9**	**+0.1**	
MNK				*i*				04 48 41.9		
MNK				*i*	S		**S**	**04 52 52.0**	**-0.1**	
MNK				*i*	SS		**SnSn**	**04 54 45.0**	**+0.3**	
MNK								04 58 06.1		
MNK					pmax		pmax			
	comp=E,17nm,0.8s									
MNK					pmax		pmax			
	comp=Z,31nm,0.9s									
MNK					pmax		pmax			
	comp=N,30nm,0.9s									
MNK					MLR		MLR			
	comp=Z,135nm,13.0s									
MNK					MLR		MLR			
	comp=N,123nm,16.0s									
MNK					MLR		MLR			
	comp=E,31nm,7.0s									
NACGM	**Naroch**	**33.11**	**310**	*e*	P		**P**	**04 47 44.9**	**+1.2**	
	comp=E,23nm,1.0s									
MLR	**Muntele Rosu**	**34.04**	**293**		P		**P**	**04 47 52.9**	**+0.8**	
MLR	**Muntele Rosu**	**34.04**	**293**		P		**P**	**04 47 52.9**	**+0.8**	
MLR					pmax		pmax			
	comp=Z,9.0nm,0.7s									
BURAR	**Bucovina Array**	**34.23**	**297**		P		**P**	**04 47 54.7**	**+1.0**	
BUR08	**Bucovina Ar. S**	**34.23**	**297**		P		**P**	**04 47 54.1**	**+0.3**	
BUR08					IAmb		IAmb	04 48 18.7		
	comp=Z,11nm,1.5s									
FINES	**FINESS Array B**	**34.57**	**322**		P		**P**	**04 47 56.8**	**+0.4**	
	comp=Z,2.0nm,0.5s,baz=102,slow=8.3,SNR=17									
	comp=Z,2.0nm,0.5s									
FINES	**FINESS Array B**	**34.57**	**322**	*i*	P		**P**	**04 47 56.5**	**+0.1**	
FINES					pmax		pmax			
	comp=Z,2.0nm,0.5s									
SUW	**Suwalki**	**35.16

TIXI pmax pmax
comp=Z,26nm,1.3s
ZVC Zvikov 41.16 302 *e*P **P 04 48 53.8 +1.6**
KLR Kul'dur 41.30 58*ce*P **P 04 48 54.5 +1.2**
KLR pmax pmax
comp=Z,5.0nm,1.7s
MOA Molln 41.46 300 *e*P **P 04 48 55.1 +0.5**
comp=Z,6.7nm,1.4s
CLL Collm 41.56 305 *e*P **P 04 48 55.0 -0.4**
CLL Collm 41.56 305 *e*P **P 04 48 55.0 -0.4**
CLL *e*PPP PPP 04 50 59.0
OBKA Obir 41.59 298 *e*P **P 04 48 56.9 +1.1**
comp=Z,4.2nm,1.0s,SNR=5.2
GEC2 GERESS Array S 41.60 301 P **P 04 48 57.0 +1.0**
GEC2 IAmb IAmb 04 48 58.1
comp=Z,7.4nm,0.9s
GERES GERESS Array B 41.60 301 P **P 04 48 56.4 +0.5**
comp=Z,5.4nm,0.9s,baz=82,slow=8.0,SNR=24
comp=Z,5.4nm,0.9s
KHC Kasperske Hory 41.62 302 *e*P **P 04 48 56.9 +0.9**
KHC Kasperske Hory 41.62 302*ce*P **P 04 48 58.0 +2.0**
KHC pmax pmax
comp=Z,7.0nm,1.7s
NB2 NORSAR Subarra 41.65 320 P **P 04 48 55.7 -0.4**
comp=Z,6.0nm,0.8s,baz=89,slow=7.9
NB2 NORSAR Subarra 41.65 320 P **P 04 48 56.8 +0.7**
NOA NORSAR Array B 41.65 320 P **P 04 48 55.5 -0.6**
comp=Z,5.0nm,0.8s,baz=90,slow=8.2,SNR=11
comp=Z,5.0nm,0.8s
LJU Ljubljana 41.72 297 *i* P **P 04 48 57.8 +1.0**
CEY Cerknica 41.87 297 *i* P **P 04 48 58.7 +0.6**
BIOA Bad Ischl, Aus 41.91 300 *e*P **P 04 48 59.3 +0.9**
comp=Z,5.7nm,1.2s
KBA Koelnbreinsper 42.25 299 *e*pP **P 04 49 02.9 +1.6**
comp=Z,1.5nm,0.8s
TRI Trieste 42.33 297 P **P 04 49 02.1 +0.4**
TRI IAmb IAmb 04 49 03.8
comp=Z,16nm,1.0s
TRI Trieste 42.33 297 P **P 04 49 02.1 +0.4**
TRI pmax pmax
comp=Z,16nm,1.0s
SABO M.te Sabotino 42.36 297 P 04 49 02.1 0.0
SABO IAmb IAmb 04 49 03.5
comp=Z,12nm,1.0s
LESA Schwarzleotal 42.60 299 *e*P **P 04 49 04.5 +0.4**
comp=Z,5.3nm,1.1s
CUC Castrocucco 42.69 288 P **P 04 49 06.0 +1.2**
CUC IAmb IAmb 04 49 17.6
comp=Z,9.8nm,1.0s
USRK Ussuriysk Ar. 42.73 65 P **P 04 49 06.2 +1.2**
comp=Z,3.0nm,0.7s,baz=268,slow=7.3,SNR=2.5
comp=Z,3.0nm,0.7s
ABTA Abfaltersbach 42.89 299 *e*P **P 04 49 05.9 -0.5**
comp=Z,5.0nm,1.4s
SPITS Spitsbergen Ar 43.31 345 P **P 04 49 10.5 +1.2**
comp=Z,19nm,1.1s,baz=99,slow=18,SNR=1.9
comp=Z,19nm,1.1s
WTTA Wattenberg 43.33 300 *e*P **P 04 49 10.3 +0.2**
comp=Z,3.1nm,0.8s
WATA Walderalm 43.35 300 *e*P **P 04 49 10.4 +0.2**
comp=Z,1.3nm,0.6s
FDMO Fiordimonte 43.59 293 P P 04 49 12.2 +0.2
AQU L'Aquila 43.59 292 P P 04 49 13.1 +1.0
AQU IAmb IAmb 04 49 18.7
comp=Z,8.6nm,1.0s
AQU L'Aquila 43.59 292 P P 04 49 13.1 +1.0
AQU pmax pmax
comp=Z,9.0nm,1.0s
NRCA Norcia 43.63 293 IAmb IAmb 04 49 24.8
comp=Z,8.6nm,1.1s
TEOL Teolo 43.84 297 IAmb IAmb 04 49 24.9
comp=Z,12nm,0.9s
RETA Reutte 43.84 300 *e*P **P 04 49 15.1 +1.0**
comp=Z,0.6nm,0.5s
MURB Monte Urbino 43.90 294 P P 04 49 14.9 +0.2
MURB IAmb IAmb 04 49 17.6
comp=Z,12nm,1.1s
CESX Cesi 44.08 293 P P 04 49 16.5 +0.5
CESX IAmb IAmb 04 49 27.5
comp=Z,6.6nm,1.0s
FUORN Ofenpass-Fuorn 44.41 299 P P 04 49 20.2 +1.4
DAVA Damuels 44.47 300 *e*P **P 04 49 19.5 +0.3**
comp=Z,5.6nm,0.7s
STU Stuttgart 44.51 302 P P 04 49 19.9 +0.5
STU IAmb IAmb 04 49 21.3
comp=Z,11nm,1.2s
STU Stuttgart 44.51 302 P P 04 49 19.9 +0.5
STU pmax pmax
comp=Z,11nm,1.2s
SEY Seymchan 49.74 36*ce*P **P 04 50 01.4 +1.5**
SEY pmax pmax
comp=Z,6.0nm,1.3s
MJAR Matsushiro Arr 50.00 73 P **P 04 50 01.1 -1.2**
comp=Z,5.9nm,0.8s,baz=299,slow=8.6,SNR=10
comp=Z,5.9nm,0.8s
EKA Eskdalemuir Ar 50.04 314 P P 04 50 02.1 -0.2
comp=Z,5.4nm,0.7s,baz=80,slow=8.1,SNR=14
comp=Z,5.4nm,0.7s
BILL Bilibino 53.77 28*ce*P **P 04 50 31.8 +1.9**
BILL pmax pmax
comp=Z,7.0nm,1.7s
PETK Petropavlovsk- 55.63 47 LR LR 05 16 39.3
comp=Z,272nm,18.2s,baz=50,slow=38
ESBB Sonseca Array 56.67 296 P P 04 50 51.7 +0.3
ESDC Sonseca Array 56.67 296 P P 04 50 50.8 -0.5
comp=Z,1.6nm,0.7s,baz=66,slow=6.5,SNR=23
comp=Z,1.6nm,0.7s
ESDC Sonseca Array 56.67 296 P P 04 50 51.2 -0.1
SUMG Summit 57.14 340 P 04 50 55.3 +0.7
SUMG Summit 57.14 340 P P 04 50 55.3 +0.7
SUMG pmax pmax
comp=Z,11nm,0.9s
A19K Wainwright 62.26 18 P P 04 51 28.6 -0.8
baz=316
A21K Barrow 62.42 16 P P 04 51 29.7 -0.7
baz=320
C16K Lisburne Hills 62.56 21 IAmb IAmb 04 51 32.5
comp=Z,3.8nm,0.8s
C16K Lisburne Hills 62.56 21 P P 04 51 31.6 +0.2
baz=314
C17K DeLong Mountai 62.99 20 P P 04 51 34.7 +0.3
baz=315
A22K Sinclair Lake 63.00 16 P P 04 51 34.9 +0.6
baz=321
B20K Meade River 63.30 17 P P 04 51 36.6 +0.3
baz=320
RDOG Red Dog Mine 63.36 20 P P 04 51 36.5 -0.2
baz=316
C18K Utukok River 63.37 19 IAmb IAmb 04 51 38.1
comp=Z,3.5nm,0.8s
C18K Utukok River 63.37 19 P P 04 51 37.2 +0.3
baz=317,SNR=5.6
C19K Lookout Ridge 63.43 19 IAmb IAmb 04 51 38.4
comp=Z,3.3nm,0.8s
C19K Lookout Ridge 63.43 19 P P 04 51 37.1 -0.2
baz=318
D17K Noatak River 63.57 21 P P 04 51 38.5 +0.4
baz=316,SNR=11
GAMB Gambell 63.65 27 P P 04 51 39.0 +0.3
baz=310
TNA Tin City 63.68 24 P P 04 51 38.9 +0.1
baz=313
B22K Teshekpuk Lake 63.85 16 P P 04 51 40.0 +0.1
baz=323
RES Resolute Bay 64.13 356 LR LR 05 21 25.5
comp=Z,46nm,19.2s,baz=10,slow=38
B21K Ikpikpuk River 64.17 17 P P 04 51 42.0 -0.1
baz=322
F14K Arctic Creek 64.22 23 P P 04 51 41.9 -0.6
baz=314
D19K Kuna River 64.24 19 P P 04 51 43.1 +0.5
baz=319
E17K Hotham Inlet 64.36 21 P P 04 51 43.8 +0.5
baz=317,SNR=5.1
E18K Tukpahlearik C 64.43 20 IAmb IAmb 04 51 55.8
comp=Z,3.9nm,1.0s
E18K Tukpahlearik C 64.43 20 P P 04 51 44.1 +0.4
baz=318
D20K Etivluk River 64.43 18 P P 04 51 44.1 +0.3
baz=320
C21K Knifeblade Rid 64.50 17 P P 04 51 44.6 +0.3
baz=322
F15K North Star Dit 64.56 23 IAmb IAmb 04 51 55.8
comp=Z,3.2nm,0.9s
F15K North Star Dit 64.56 23 P P 04 51 45.0 +0.3
baz=315
C23K Itkillik River 64.82 15 P P 04 51 46.8 +0.5
baz=325
E20K Nigu River 64.88 18 P P 04 51 46.7 -0.1
baz=321
F17K Baldwin Pennin 64.98 21 P P 04 51 47.8 +0.4
baz=318,SNR=5.2
ANM Nome 65.16 24 P P 04 51 48.8 +0.2
baz=315
G15K Niukluk 65.25 23 P P 04 51 48.9 -0.2
baz=316
E19K Redstone River 65.25 19 IAmb IAmb 04 51 57.1
comp=Z,3.0nm,0.9s
E19K Redstone River 65.25 19 P P 04 51 49.5 +0.3
baz=320
F18K Selawik 65.29 20 P P 04 51 49.3 -0.1
baz=319
C24K Franklin Bluff 65.30 15 P P 04 51 49.3 -0.1
baz=327
G16K Koyuk River 65.45 22 P P 04 51 50.3 -0.1
baz=317
D23K Nanushuk River 65.53 16 P P 04 51 51.1 +0.1
baz=325
F19K Shaleruckik Mo 65.60 20 P P 04 51 51.0 -0.4
baz=320
D24K Happy Valley 65.75 15 P P 04 51 52.3 0.0
baz=327
C26K Camden Bay 65.82 13 P P 04 51 52.6 -0.2
baz=330
G17K Kiwalik Mounta 65.85 22 P P 04 51 52.5 -0.6
baz=318
F20K Avaraart Lake 65.94 19 P P 04 51 53.3 -0.3
baz=322
E22K Anaktuvuk Pass 65.97 17 P P 04 51 53.3 -0.5
baz=324
TOLK Toolik Lake Re 66.03 16 P P 04 51 53.8 -0.4
baz=326,SNR=6.3
H16K Elim 66.04 23 P P 04 51 53.7 -0.6
baz=317
D25K Kavik River 66.07 14 IAmb IAmb 04 52 02.2
comp=Z,5.0nm,1.0s
D25K Kavik River 66.07 14 P P 04 51 53.8 -0.7
baz=328
G18K Tagagawik 66.09 21 P P 04 51 54.7 +0.1
baz=320
C27K Jago River 66.28 13 IAmb IAmb 04 51 57.7
comp=Z,3.0nm,0.8s
C27K Jago River 66.28 13 P P 04 51 55.6 -0.2
baz=331
G19K Purcell Mounta 66.31 20 P P 04 51 56.0 0.0
baz=321
F22K John River 66.40 17 P P 04 51 56.6 0.0
baz=324,SNR=5.7
A36M Sachs Harbour 66.41 6 P 04 51 56.0 -0.5
A36M Sachs Harbour 66.41 6 P **P 04 51 56.6 0.0**
baz=345,SNR=5.5
H17K Granite Mounta 66.48 22 P P 04 51 57.5 +0.4
baz=319
E23K Chandalar 66.50 16 IAmb IAmb 04 51 58.0
comp=Z,4.2nm,0.8s
E23K Chandalar 66.50 16 P P 04 51 57.1 -0.2
baz=326
E24K Your Creek 66.72 16 IAmb IAmb 04 51 60.0
comp=Z,3.0nm,0.8s
E24K Your Creek 66.72 16 P P 04 51 58.8 +0.1
baz=327
H18K Honhosa River 66.74 21 P P 04 51 59.0 +0.2
baz=320
G21K Allakaket 66.90 18 P P 04 52 00.1 +0.3
baz=324
H19K Roundabout Mou 66.95 20 P P 04 52 00.6 +0.5
baz=322
G22K Bettles 67.03 17 P P 04 52 01.0 +0.4
baz=325
I17K Unalakleet 67.05 23 P P 04 52 01.3 +0.6
baz=319
COLD Coldfoot 67.07 17 P 04 52 01.2 +0.3
COLD Coldfoot 67.07 17 P P 04 52 00.7 -0.1
baz=326,SNR=7.0
D27M Malcolm River 67.08 12 P P 04 52 01.4 +0.4
baz=333
E25K Arctic Village 67.26 15 P P 04 52 02.9 +0.8
baz=329
K13K Kusilvak Mount 67.27 26 P P 04 52 02.6 +0.4
baz=316
F24K Squaw Lake 67.31 16 P P 04 52 02.8 +0.4
baz=328
TORD Torodi Ar. Bea 67.35 268 P P 04 52 02.5 -0.9
comp=Z,3.1nm,0.7s,baz=49,slow=4.6,SNR=26
comp=Z,3.1nm,0.7s
TORD Torodi Ar. Bea 67.35 268 IAmb IAmb 04 52 46.2
comp=Z,2.9nm,0.7s
D28M Stees Point 67.36 12 P P 04 52 02.9 +0.3
baz=335
H20K Anotleneega Mo 67.39 20 P P 04 52 03.2 +0.3
baz=323
GCSA Galena City Sc 67.46 21 P P 04 52 02.7 -0.6
baz=321
J16K Anvik River 67.53 23 P P 04 52 03.9 +0.1
baz=319
G23K Bananza Creek 67.54 17 P P 04 52 03.7 -0.2
baz=326
GUMO Guam 67.65 91 LR LR 05 23 19.5
comp=Z,37nm,20.4s,baz=82,slow=38
F25K Christian Rive 67.70 15 IAmb IAmb 04 52 06.6
comp=Z,3.4nm,0.8s
F25K Christian Rive 67.70 15 P P 04 52 04.4 -0.5
baz=330
H21K Melozitna Rive 67.77 19 P P 04 52 05.1 -0.2
baz=324
M11K Mekoryuk 67.87 27 P P 04 52 05.7 -0.2
baz=316
E28M Babbage River 67.89 12 IAmb IAmb 04 52 07.6
comp=Z,2.8nm,0.8s
E28M Babbage River 67.89 12 P P 04 52 06.3 +0.2
baz=334
J17K VABM Dome 67.89 23 P P 04 52 06.1 0.0
baz=320
F26K Sheenjek River 67.90 14 P P 04 52 06.1 0.0
baz=331
H22K Ishtalitna Cre 67.91 18 P P 04 52 06.5 +0.3
baz=325
E27K Coleen River 67.92 13 P P 04 52 06.8 +0.5
baz=333
K15K Wolf Creek Mou 68.00 24 P P 04 52 07.5 +0.8
baz=319
I20K Naaghedeneel 68.05 20 P P 04 52 07.2 +0.2
baz=323
G24K Hadweenzic Riv 68.10 16 P P 04 52 07.9 +0.5
baz=328
G25K Bearman Lake 68.33 16 P P 04 52 08.7 0.0
baz=329
E29M Blow River 68.34 12 P P 04 52 09.6 +0.8
baz=336
L14K Kuka Creek 68.35 25 P P 04 52 09.2 +0.2
baz=318
I21K Tanana 68.36 19 P P 04 52 08.9 0.0
baz=325
H23K Yukon River 68.39 17 P P 04 52 09.0 -0.2
baz=327
J19K Poorman 68.39 21 P P 04 52 09.0 -0.2
baz=323
L15K Ungalak Mounta 68.48 25 P P 04 52 09.6 -0.1
baz=319
J18K Innoko River 68.51 22 P P 04 52 09.6 -0.4
baz=322
G26K Porcupine Rive 68.62 15 P P 04 52 10.4 -0.1
baz=331
SPIA Saint Paul Isl 68.63 31 P P 04 52 10.9 +0.1
baz=314
J20K Nowinta River 68.63 20 P P 04 52 10.2 -0.5
baz=324
K17K Iditarod 68.64 23 P P 04 52 11.3 +0.5
baz=321
F28M Old Crow 68.73 13 P P 04 52 11.6 +0.3
baz=334
H24K Nondor Dome 68.75 17 P P 04 52 12.0 +0.5
baz=328
I23K Minto, Yukon-K 69.00 18 P P 04 52 13.3 +0.3
baz=327
M14K Bethel 69.02 25 P P 04 52 13.4 +0.2
baz=319
INK Inuvik 69.05 10 P 04 52 13.4 +0.2
INK Inuvik 69.05 10 P P 04 52 13.4 +0.2
INK pmax pmax
comp=Z,8.0nm,1.2s
INK Inuvik 69.05 10 P P 04 52 13.9 +0.7
baz=339,SNR=7.7
L16K Owhat River 69.07 24 P P 04 52 13.9 +0.4
baz=320
C36M Paulatuk 69.08 6 P P 04 52 12.9 -0.4
C36M Paulatuk 69.08 6 P P 04 52 13.5 +0.2
baz=346,SNR=5.7
L17K Donlin 69.10 23 P P 04 52 13.9 +0.3
baz=321
G27K Doyon Strip 69.14 14 P P 04 52 14.1 +0.2
baz=333
K20K Telida 69.31 21 P P 04 52 15.0 0.0
baz=324
CHUM Lake Minchumin 69.34 20 P P 04 52 15.2 +0.1
baz=325
F30M Barrier River 69.38 11 P P 04 52 14.9 -0.4
baz=337
POKR Poker Plat Res 69.46 17 P P 04 52 15.5 -0.4
baz=329
M15K Kasigluk River 69.47 25 P P 04 52 15.6 -0.4
baz=320
L18K Granite Mounta 69.50 22 P P 04 52 15.0 -1.2
baz=322
COLA College 69.58 17 *i* P **P 04 52 16.4 -0.1**
COLA pmax pmax
comp=Z,28nm,3.7s
COLA College 69.58 17 P P 04 52 16.3 -0.2
baz=328
G29M Pine Creek 69.67 12 P P 04 52 17.6 +0.5
baz=336
H27K Steamboat Moun 69.68 14 P P 04 52 17.4 +0.1
baz=333
N14K Kuskokwak Cree 69.74 26 P P 04 52 17.8 +0.2
baz=319
F31M Tsiigehtchic 69.83 11 P P 04 52 18.0 0.0
baz=339
ILAR Eielson Array 69.88 17 P P 04 52 17.1 -1.3
comp=Z,1.9nm,0.8s,baz=332,slow=6.2,SNR=20
comp=Z,1.9nm,0.8s
G30M tAoh Zraii Nji 69.90 12 P P 04 52 18.4 -0.1
baz=337
M17K Holitna River 69.93 23 P P 04 52 18.7 -0.1
baz=322
L19K White Mountain 70.05 22 P P 04 52 18.8 -0.8
baz=324
HDA Harding Lake 70.18 17 P P 04 52 19.2 -1.1
baz=329
PPLA Purkeypile 70.19 20 P P 04 52 20.6 +0.1
baz=325
I26K Coal Creek Min 70.19 15 P P 04 52 20.2 -0.2
baz=332
TRF Thorofare Moun 70.21 19 P P 04 52 20.6 -0.1
baz=327
I27K Kandik River 70.23 14 P P 04 52 20.8 +0.2
baz=333
G31M Satah River 70.24 11 P P 04 52 20.0 -0.6
baz=338
H29M Whitestone 70.25 13 IAmb IAmb 04 52 21.9
comp=Z,4.2nm,0.7s
H29M Whitestone 70.25 13 P P 04 52 21.4 +0.7
baz=335
N16K Nishlik Lake 70.25 24 P P 04 52 19.8 -1.0
baz=321
MCK McKinley 70.30 18 P P 04 52 20.6 -0.4
baz=328
M18K Stony River 70.33 23 P P 04 52 20.6 -0.6
baz=323
J25K Salcha River, 70.34 16 P P 04 52 21.0 -0.4
baz=330
EPYK Eagle Plains 70.38 12 P P 04 52 21.3 -0.2
baz=337
O14K Tigyukauivet M 70.39 26 P P 04 52 21.5 -0.1
baz=320
M19K Big River Lodg 70.41 22 P P 04 52 20.8 -0.9
baz=324
I28M Miner Creek 70.68 14 IAmb IAmb 04 52 24.2
comp=Z,3.6nm,0.8s
I28M Miner Creek 70.68 14 P P 04 52 23.1 -0.3
baz=334
N17K Nushagak Hills 70.70 24 P P 04 52 23.2 -0.3
baz=322
M20K Styx River 70.77 21 P P 04 52 23.5 -0.5
baz=325
O15K Ungalikthiuk R 70.92 26 P P 04 52 24.0 -0.9
baz=321
K24K Donnelly Dome 70.96 17 P P 04 52 25.1 0.0
baz=330
N18K Kilae Creek 70.96 23 P P 04 52 24.6 -0.6
baz=323
I29M Ogilvie Camp, 71.04 13 P P 04 52 25.8 +0.2
baz=336
SKT Skwentna 71.12 20 P P 04 52 26.3 +0.2
baz=326
O16K Kokwok River B 71.15 25 P P 04 52 26.3 +0.1
baz=322
WAT1 Susitna Watana 71.16 19 P P 04 52 26.2 -0.1
baz=328
SCRK Sand Creek 71.20 16 P P 04 52 26.2 -0.5
baz=331
RIDG Independent Ri 71.22 17 P P 04 52 25.9 -0.8
baz=331
DHY Denali Highway 71.23 18 P P 04 52 26.8 -0.1
baz=329
N19K Bonanza Creek 71.27 22 P P 04 52 26.8 -0.3
baz=324
H31M Peel River 71.28 11 P P 04 52 27.0 0.0
baz=339
O17K Koliganek Bris 71.32 24 P P 04 52 27.2 0.0
baz=322
I30M Mount Dempster 71.50 13 IAmb IAmb 04 52 29.7
comp=Z,3.1nm,0.8s
I30M Mount Dempster 71.50 13 P P 04 52 28.2 -0.2
baz=337
WAT6 Susitna Watana 71.56 19 P P 04 52 28.9 -0.1
baz=329
SPCR Spurr Chakacha 71.58 21 P P 04 52 28.5 -0.5
baz=326
N20K Mount Spurr 71.58 21 P P 04 52 28.3 -0.6
baz=326
P16K Nushagak River 71.63 25 P P 04 52 29.2 +0.1
baz=322
M22K Willow 71.68 20 P P 04 52 29.9 +0.5
baz=327
PAX Paxson 71.76 17 P P 04 52 29.8 -0.2
baz=330
O19K Port Alsworth 71.81 23 P P 04 52 30.3 +0.1
baz=324
P17K Kvichak River 71.99 24 P P 04 52 31.0 -0.3
baz=323
PMR Palmer 72.07 20 P P 04 52 31.8 +0.1
baz=328
SML Sawmill 72.08 19 P P 04 52 32.3 +0.4
baz=328
J30M Hart River 72.10 13 P P 04 52 32.1 0.0
baz=337
P18K Big Mountain, 72.20 24 P P 04 52 32.7 +0.1
baz=324
M23K Glacier View 72.25 19 P P 04 52 33.6 +0.7
baz=329
SCM Sheep Creek Mo 72.31 19 P P 04 52 34.2 +0.9
baz=329
RC01 Rabbit Creek A 72.34 20 P P 04 52 32.8 -0.5
baz=328
KNK Knik Glacier 72.39 19 P P 04 52 33.3 -0.5
baz=328
L27K Beaver Creek, 72.46 16 P P 04 52 34.1 0.0
baz=333
UNV Unalaska Valle 72.50 32 P P 04 52 35.0 +0.5
baz=317
K29M Barlow Dome 72.57 14 P P 04 52 34.9 0.0
baz=336
P19K Oil Pt 72.58 23 P P 04 52 34.5 -0.4
baz=325
M26K Nabesna, AK 72.80 17 P P 04 52 36.5 +0.3
baz=332
O22K Cooper Landing 72.86 21 P P 04 52 36.9 +0.4
baz=328
Q18K Katmai Hardscr 72.87 24 P P 04 52 36.7 0.0
baz=324
Q17K Contact Creek 72.91 25 P P 04 52 37.1 +0.1
baz=324
R16K Pilot Point 72.92 26 P P 04 52 37.0 +0.1
baz=322
FALS False Pass 72.96 30 P P 04 52 38.2 +1.1
baz=319
HOM Homer 73.03 22 P P 04 52 37.7 +0.3
baz=326
Q19K Cape Douglas, 73.05 23 P P 04 52 37.9 +0.2
baz=325
M27K Edge Creek, AK 73.08 16 P P 04 52 38.4 +0.4
baz=333
L29M L29M 73.14 14 P P 04 52 38.1 -0.1

n92,σ1$59/144,mb3.5/9,58C-30D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARSB	**Arslanbob**	**0.21**	**7**	⇓*iP*	**Pg**	**04 51 41.9**	**+0.6**
ARSB				⇓*iS*	**Sg**	**04 51 44.9**	**+0.9**
OHH	**Osh**	**0.61**	**192**	⇑*eP*	**Pg**	**04 51 49.3**	**+0.4**
OHH				⇑*iS*	**Sb**	**04 51 58.1**	**-1.3**
SALK	**Salom-Alik**	**0.70**	**109**	⇑*iP*	**Pg**	**04 51 51.1**	**+0.4**
SALK				⇑*iS*	**Sb**	**04 52 00.9**	**-1.3**
ARK	**Arkit**	**1.01**	**313**	⇓*iP*	**Pg**	**04 51 55.2**	**-1.3**
ARK				⇓*iS*	**Sg**	**04 52 08.5**	**-1.1**
SFK	**Sufi-Kurgan**	**1.18**	**159**	⇑*iP*	**Pg**	**04 51 59.8**	**-0.1**
SFK				⇑*iS*	**Sb**	**04 52 16.0**	**-0.1**
ARLS	**Aral**	**1.27**	**54**	⇑*iP*	**Pg**	**04 52 00.3**	**-1.3**
ARLS				⇑*iS*	**Sg**	**04 52 17.2**	**-0.9**
MNAS	**Manas**	**1.41**	**346**	⇑*iP*	**Pn**	**04 52 02.5**	**-1.3**
MNAS				⇑*eS*	**Sb**	**04 52 20.6**	**-1.9**
TRKS	**Terek-Say**	**1.42**	**287**	⇑*eP*	**Pn**	**04 52 02.3**	**-1.7**
TRKS				⇑*iS*	**Sb**	**04 52 20.4**	**-2.6**
UCH	**Uchtor**	**1.61**	**46**	⇑P	**Pb**	**04 52 07.8**	**0.0**
	191nm,0.2s,SNR=362						
UCH				⇑S	**Sb**	**04 52 29.1**	**+0.4**
	539nm,0.3s						
UCH	**Uchtor**	**1.61**	**46**	⇑*iP*	**Pn**	**04 52 06.4**	**-0.5**
UCH				⇑*iS*	**Sn**	**04 52 27.6**	**-0.8**
MRKS	**Merke**	**1.64**	**7**	P	**Pb**	**04 52 08.0**	**-0.1**
	146nm,0.2s						
MRKS				S	**Sn**	**04 52 28.9**	**+0.4**
	917nm,0.2s						
MRKS	**Merke**	**1.64**	**7**	*e*P	**Pb**	**04 52 08.0**	**-0.1**
	146nm,0.2s						
MRKS				*e*S	**Sn**	**04 52 28.2**	**-0.3**
	917nm,0.2s						
EKS2	**Erkin-Say**	**1.66**	**22**	⇓P	**Pb**	**04 52 08.3**	**-0.2**
	114nm,0.2s,SNR=46						
EKS2				⇓S	**Sn**	**04 52 29.5**	**+0.4**
	226nm,0.2s						
EKS2	**Erkin-Say**	**1.66**	**22**	⇓*iP*	**Pn**	**04 52 06.8**	**-0.5**
EKS2				⇓*iS*	**Sn**	**04 52 28.3**	**-0.8**
DRK	**Karamyk**	**1.86**	**209**	⇑*iP*	**Pn**	**04 52 10.6**	**+0.5**
DRK				⇑*iS*	**Sn**	**04 52 34.8**	**+0.6**
AAK	**Ala-Archa**	**1.91**	**37**	Pg	**Pb**	**04 52 12.8**	**+0.1**
	166nm,0.3s,baz=200,slow=3.8,SNR=616						
AAK				Lg	Lg	04 52 38.0	
	103nm,0.3s,baz=162,slow=20,SNR=21						
AAK	**Ala-Archa**	**1.91**	**37**	⇑P	**Pb**	**04 52 12.5**	**-0.2**
	354nm,0.3s,SNR=609						
AAK				⇓S	**Sb**	**04 52 37.3**	**+0.4**
	572nm,0.3s						
AAK	**Ala-Archa**	**1.91**	**37**	⇑Pn	**Pb**	**04 52 13.5**	**+0.8**
	37nm,0.3s						
AAK				⇑Sn	**Sb**	**04 52 37.7**	**+0.9**
	728nm,1.0s						
AAK	**Ala-Archa**	**1.91**	**37**	⇑*iP*	**Pn**	**04 52 10.7**	**0.0**
AAK				⇑*iS*	**Sn**	**04 52 34.9**	**-0.3**
BTK	**Batken**	**1.94**	**238**	⇑*eP*	**Pn**	**04 52 11.2**	**+0.2**
BTK				⇑*iS*	**Sn**	**04 52 36.0**	**+0.1**
JNKS	**Jany-Kuch**	**2.02**	**91**	⇑*iP*	**Pn**	**04 52 13.0**	**+0.6**
JNKS				⇑*iS*	**Sn**	**04 52 39.1**	**+0.9**
FRU1	**Bishkek**	**2.10**	**36**	⇑*iP*	**Pn**	**04 52 13.5**	**+0.2**
FRU1				⇑*iS*	**Sn**	**04 52 39.8**	**-0.2**
KBK	**Karagaybulak**	**2.14**	**43**	⇑P	**Pb**	**04 52 17.7**	**+1.0**
	142nm,0.2s,SNR=41						
KBK				⇓S	**Sg**	**04 52 45.3**	**-0.7**
	630nm,0.3s						
KBK	**Karagaybulak**	**2.14**	**43**	⇑*iP*	**Pn**	**04 52 14.0**	**+0.1**
KBK				⇑*iS*	**Sn**	**04 52 40.7**	**-0.3**
DZA	**Taraz**	**2.14**	**326**	Pg	**Pg**	**04 52 18.5**	**+0.2**
	320nm,0.1s						
DZA	**Taraz**	**2.14**	**326**	*e*P	**Pg**	**04 52 18.5**	**+0.2**
	320nm,0.1s						
DZA				*e*S	**Sg**	**04 52 46.5**	**+0.4**
	3μm,0.3s						
CHMS	**Chumysh**	**2.31**	**35**	⇑P	**Pb**	**04 52 19.5**	**0.0**
	85nm,0.2s,SNR=58						
CHMS				⇓S	**Sb**	**04 52 49.4**	**+1.1**
	712nm,0.5s						
CHMS	**Chumysh**	**2.31**	**35**	⇑*iP*	**Pn**	**04 52 16.0**	**-0.1**
CHMS				⇑*iS*	**Sn**	**04 52 44.2**	**-0.8**
NRN	**Naryn**	**2.32**	**81**	⇓*iP*	**Pn**	**04 52 16.4**	**-0.1**
NRN				⇓*iS*	**Sn**	**04 52 45.1**	**-0.6**
USP	**Ospenovka**	**2.44**	**28**	⇓P	**Pb**	**04 52 20.7**	**-0.9**
	138nm,0.3s,SNR=66						
USP				⇑S	**Sb**	**04 52 52.7**	**+0.7**
	484nm,0.3s						
USP	**Ospenovka**	**2.44**	**28**	⇑*iP*	**Pn**	**04 52 17.8**	**-0.1**
USP				⇑*iS*	**Sn**	**04 52 47.4**	**-0.7**
BOOM	**Boomskoye usch**	**2.62**	**58**	⇓*iP*	**Pn**	**04 52 20.8**	**+0.3**
BOOM				⇓*iS*	**Sn**	**04 52 52.5**	**-0.4**
SGDS	**Sogindy**	**2.64**	**28**	Pg	**Pb**	**04 52 25.8**	**+0.6**
	13nm,0.2s						
SGDS				Lg	Lg	04 52 59.0	
	338nm,0.5s						
TKM2	**Tokmak 2**	**2.67**	**47**	⇑P	**Pb**	**04 52 24.8**	**-1.0**
	238nm,0.4s,SNR=45						
TKM2				⇓S	**Sb**	**04 52 58.8**	**-0.1**
	129nm,0.2s						
TKM2	**Tokmak 2**	**2.67**	**47**	⇓*iP*	**Pn**	**04 52 21.4**	**+0.2**
TKM2				⇓*iS*	**Sn**	**04 52 53.6**	**-0.5**
KK31	**Karatay Array**	**2.69**	**318**	Pn	**Pn**	**04 52 23.7**	**+2.4**
	22nm,0.3s,baz=126,slow=12,SNR=253						
KK31				⇑Lg	Lg	04 53 01.5	
	143nm,0.3s,baz=158,slow=27,SNR=21						
ULHL	**Ulahol**	**2.71**	**64**	⇓P	**Pb**	**04 52 25.8**	**-0.6**
	36nm,0.3s,SNR=14						
ULHL				⇑S	**Sb**	**04 53 00.5**	**+0.4**
	77nm,0.2s						
ULHL	**Ulahol**	**2.71**	**64**	⇓*eP*	**Pn**	**04 52 22.1**	**+0.3**
ULHL				⇓*iS*	**Sn**	**04 52 54.7**	**-0.4**
CHM	**Chimkent**	**2.78**	**297**	*e*P	**Pg**	**04 52 30.3**	**-0.1**
	81nm,0.1s						
CHM				*e*S	**Sg**	**04 53 06.5**	**+0.1**
	927nm,0.4s						
GAR	**Garm**	**2.93**	**225**	⇑*iP*	**Pn**	**04 52 25.2**	**+0.5**
GAR				⇑*iS*	**Sn**	**04 53 00.2**	**-0.1**
DGS	**Degeres**	**2.98**	**44**	Pg	**Pb**	**04 52 32.7**	**+1.7**
	68nm,0.4s						
DGS				Lg	Lg	04 53 10.8	
	246nm,0.7s						
DGS	**Degeres**	**2.98**	**44**	*e*P	**Pb**	**04 52 32.7**	**+1.7**
	68nm,0.4s						
DGS				*e*S	**Sg**	**04 53 10.8**	**-2.2**
	246nm,0.7s						
BRLS	**Boroldoy**	**3.00**	**311**	Pg	**Pb**	**04 52 32.4**	**+1.1**
	43nm,0.4s						
BRLS	**Boroldoy**	**3.00**	**311**	*e*P	**Pb**	**04 52 32.4**	**+1.1**
	43nm,0.4s						
BRLS				*e*S	**Sb**	**04 53 09.8**	**+1.4**
	413nm,0.5s						
KRBS	**Karabastau**	**3.27**	**37**	Pg	**Pb**	**04 52 38.1**	**+2.3**
	98nm,0.4s						
KRBS				Lg	Lg	04 53 19.9	
	44nm,0.5s						
KRBS	**Karabastau**	**3.27**	**37**	*e*P	**Pb**	**04 52 38.1**	**+2.3**
	98nm,0.4s						
KRBS				*e*S	**Sg**	**04 53 19.9**	**-2.4**
	44nm,0.5s						
KDJ	**Kajisay**	**3.33**	**71**	⇓*iP*	**Pn**	**04 52 30.7**	**+0.5**
KDJ				⇓*iS*	**Sn**	**04 53 09.9**	**-0.4**
IZV	**Izvestkoviy**	**3.33**	**54**	Pg	**Pb**	**04 52 38.9**	**+1.9**
	24nm,0.4s						
IZV				Lg	Lg	04 53 21.3	
	96nm,0.5s						
IZV	**Izvestkoviy**	**3.33**	**54**	*e*P	**Pb**	**04 52 38.9**	**+1.9**
	24nm,0.4s						
IZV				*e*S	**Sb**	**04 53 21.3**	**+3.3**
	96nm,0.5s						
TNSS	**Tian-Shan**	**3.54**	**56**	Pg	**Pg**	**04 52 43.4**	**-1.7**
	12nm,0.4s						
TNSS				Lg	Lg	04 53 27.9	
	18nm,0.1s						
TNSS	**Tian-Shan**	**3.54**	**56**	*e*P	**Pg**	**04 52 43.4**	**-1.7**
	12nm,0.4s						
TNSS				*e*S	**Sg**	**04 53 27.9**	**-3.0**
	18nm,0.1s						
AAA	**Alma-Ata**	**3.61**	**53**	Pg	**Pg**	**04 52 45.5**	**-0.9**
	24nm,0.1s						
AAA				Lg	Lg	04 53 32.6	
	7.4nm,0.4s						
AAA	**Alma-Ata**	**3.61**	**53**	*e*P	**Pg**	**04 52 45.5**	**-0.9**
	24nm,0.1s						
AAA				*e*S	**Sg**	**04 53 32.6**	**-0.6**
	7.4nm,0.4s						
KNDC	**Almaty**	**3.65**	**54**	⇓Pg	**Pg**	**04 52 45.9**	**-1.2**
	79nm,0.6s						
KNDC				⇑Lg	Lg	04 53 33.9	
	102nm,0.6s						
MDOK	**Medeo**	**3.67**	**55**	Pg	**Pb**	**04 52 45.3**	**+2.6**
	21nm,0.5s						
MDOK				Lg	Lg	04 53 32.2	
	110nm,0.4s						
TARG	**Taragay, Kyrgy**	**3.70**	**79**	⇑*iP*	**Pn**	**04 52 36.0**	**+0.4**
TARG				⇑*iS*	**Sn**	**04 53 19.0**	**-0.8**
KOTS	**Kotyrbulak**	**3.75**	**54**	Pg	**Pg**	**04 52 47.2**	**-1.8**
	19nm,0.3s						
KOTS				Lg	Lg	04 53 35.6	
	103nm,0.4s						
KOTS	**Kotyrbulak**	**3.75**	**54**	*e*P	**Pg**	**04 52 47.2**	**-1.8**
	19nm,0.3s						
KOTS				*e*S	**Sg**	**04 53 35.6**	**-2.0**
	103nm,0.4s						
KTBS	**Karatobe**	**3.79**	**46**	Pg	**Pb**	**04 52 46.8**	**+2.1**
	18nm,0.3s						
KTBS				Lg	Lg	04 53 34.8	
	49nm,0.6s						
KTBS	**Karatobe**	**3.79**	**46**	*e*P	**Pb**	**04 52 46.8**	**+2.1**
	18nm,0.3s						
KTBS				*e*S	**Sb**	**04 53 34.8**	**+3.9**
	49nm,0.6s						
CHGR	**Chuyangaron**	**3.81**	**231**	⇑*iP*	**Pn**	**04 52 37.5**	**+0.7**
CHGR				⇑*iS*	**Sn**	**04 53 21.2**	**-1.0**
BTLS	**Baital**	**4.00**	**11**	Pg	**Pb**	**04 52 50.2**	**+1.9**
	13nm,0.4s						
BTLS				Lg	Lg	04 53 40.6	
	127nm,0.4s						
BTLS	**Baital**	**4.00**	**11**	*e*P	**Pb**	**04 52 50.2**	**+1.9**
	13nm,0.4s						
BTLS				*e*S	**Sb**	**04 53 40.6**	**+3.5**
	127nm,0.4s						
SATY	**Saty**	**4.50**	**63**	Pg	**Pg**	**04 53 00.9**	**-2.5**
	23nm,0.5s						
SATY				Lg	Lg	04 53 59.0	
	40nm,0.3s						
KURS	**Kuram**	**4.54**	**57**	Pg	**Pg**	**04 53 02.6**	**-1.6**
	14nm,0.6s						
KURS				Lg	Lg	04 53 59.3	
	18nm,0.9s						
ARXS	**Arharly**	**4.74**	**48**	Pg	**Pb**	**04 53 04.6**	**+3.7**
	40nm,0.4s						
ARXS				Lg	Lg	04 54 05.3	
	71nm,0.4s						
ARXS	**Arharly**	**4.74**	**48**	*e*P	**Pb**	**04 53 04.6**	**+3.7**
	40nm,0.4s						
ARXS				*e*S	**Sg**	**04 54 05.3**	**-4.2**
	71nm,0.4s						
UZB	**Uzynbulak**	**4.95**	**64**	Pg	**Pb**	**04 53 08.5**	**+4.0**
	17nm,0.6s						
UZB				Lg	Lg	04 54 11.9	
	28nm,0.9s						
UZB	**Uzynbulak**	**4.95**	**64**	*e*P	**Pb**	**04 53 08.5**	**+4.0**
	17nm,0.6s						
UZB				*e*S	**Sg**	**04 54 11.9**	**-4.2**
	28nm,0.9s						
PDGK	**Podgornoye**	**5.33**	**63**	⇓Pg	**Pb**	**04 53 14.4**	**+3.3**
	11nm,0.6s						
PDGK				⇑Lg	Lg	04 54 27.8	
	22nm,0.6s						
MAKZ	**Makanchi**	**8.64**	**46**	⇑Pn	**Pn**	**04 53 45.1**	**+2.1**
	3.2nm,0.9s						
MAKZ				⇑Lg	Lg	04 56 11.7	
	11nm,1.1s						
MK31	**Makanchi Array**	**8.80**	**47**	Pn	**Pn**	**04 53 47.8**	**+2.6**
	2.9nm,0.7s,baz=232,slow=11,SNR=16						
MK31				⇑Lg	Lg	04 56 16.7	
	10.0nm,0.8s						
MKAR	**Makanchi Array**	**8.80**	**47**	Pn	**Pn**	**04 53 47.4**	**+2.1**
	0.6nm,0.3s,baz=229,slow=14,SNR=13						
MKAR				Lg	Lg	04 56 15.1	
	0.4nm,0.3s,baz=236,slow=28,SNR=2.6						
	1.2nm,0.4s						
KURBB	**Kurchatov Arra**	**10.27**	**20**	Pn	**Pn**	**04 54 05.3**	**+0.1**
	0.2nm,0.3s,baz=213,slow=13,SNR=2.2						
KURBB				Lg	Lg	04 57 00.7	
	0.3nm,0.3s,baz=212,slow=26,SNR=6.4						
	1.0nm,0.2s						
KURBB	**Kurchatov Arra**	**10.27**	**20**	⇑Pn	**Pn**	**04 54 05.6**	**+0.3**
	9.9nm,1.2s						
KURBB				⇑Lg	Lg	04 57 02.2	
	48nm,0.9s						
KURK	**Kurchatov**	**10.38**	**20**	⇑Lg	Lg	04 57 05.6	
	16nm,0.9s						
BVA0	**Borovoye Array**	**12.04**	**353**	⇓Pn	**Pn**	**04 54 33.7**	**+4.2**
	2.4nm,0.9s,baz=153,slow=12,SNR=4.3						
BVA0				⇓Sn	**Sn**	**04 56 46.8**	**+2.7**
	3.6nm,1.1s,baz=170,slow=23,SNR=2.6						
BVA0				⇓Lg	Lg	04 57 59.1	
	17nm,1.1s,baz=164,slow=27,SNR=4.9						
BVAR	**Borovoye Array**	**12.04**	**353**	Pn	**Pn**	**04 54 29.7**	**+0.2**
	baz=164,slow=16,SNR=4.2						
BVAR				Lg	Lg	04 57 53.4	
	0.2nm,0.3s,baz=164,slow=27,SNR=6.7						
	0.5nm,0.4s						
AB31	**Akbulak array**	**12.25**	**316**	⇑Pn	**Pn**	**04 54 33.0**	**+0.6**
	1.3nm,0.5s,baz=120,slow=13,SNR=4.4						
AB31				⇑Lg	Lg	04 58 08.0	
	3.3nm,0.7s						
AKTO	**Aktyubinsk**	**13.96**	**317**	Pn	**Pn**	**04 54 55.7**	**0.0**
	0.2nm,0.3s,baz=133,slow=15,SNR=1.5						
AKTO				Sn	**Sn**	**04 57 27.3**	**-3.6**
	baz=119,slow=13						
AKTO				Lg	Lg	04 59 00.0	
	baz=155,slow=19						
	1.8nm,0.6s						
AKTO	**Aktyubinsk**	**13.96**	**317**	⇑Pn	**Pn**	**04 54 56.5**	**+0.9**
	1.6nm,0.9s						
AKTO				⇓Lg	Lg	04 58 58.9	
	3.6nm,1.1s						
ARTI	**Arti**	**17.98**	**333**	P	**P**	**04 55 50.2**	**+1.7**
	0.2nm,0.3s,baz=162,slow=20,SNR=1.2						
ARTI				S	**S**	**04 59 16.6**	**+1.4**
	1.0nm,0.4s,baz=127,slow=20,SNR=1.5						
ARTI				Lg	Lg	05 01 11.8	
	0.3nm,0.3s,baz=198,slow=20,SNR=2.5						
ARTI				LR	LR	05 02 33.4	
	comp=Z,65nm,18.0s,baz=179,slow=36						
	0.8nm,0.3s						
AKASG	**Malin Array Be**	**31.48**	**303**	P	**P**	**04 57 59.9**	**0.0**
	0.1nm,0.4s,baz=80,slow=8.4,SNR=2.4						
	0.1nm,0.4s						
CMAR	**Chiang Mai Arr**	**31.70**	**128**	P	**P**	**04 58 01.0**	**-1.0**
	0.8nm,0.3s,baz=297,slow=5.8,SNR=1.9						
	0.8nm,0.3s						
FINES	**FINESS Array B**	**34.64**	**322**	P	**P**	**04 58 27.1**	**-0.2**
	1.4nm,0.8s,baz=102,slow=12,SNR=5.7						
	1.4nm,0.8s						
HFS	**Hagfors**	**40.49**	**319**	P	**P**	**04 59 17.1**	**+0.2**
	1.8nm,0.6s,baz=92,slow=7.9,SNR=5.4						
	1.8nm,0.6s						
GERES	**GERESS Array B**	**41.67**	**301**	P	**P**	**04 59 26.3**	**-0.5**
	0.3nm,0.5s,baz=76,slow=8.0,SNR=4.4						
	0.3nm,0.5s						
NOA	**NORSAR Array B**	**41.72**	**320**	P	**P**	**04 59 25.7**	**-1.2**
	1.7nm,0.9s,baz=105,slow=7.7,SNR=1.8						
	1.7nm,0.9s						
ESDC	**Sonseca Array**	**56.73**	**296**	P	**P**	**05 01 22.4**	**+0.3**
	0.1nm,0.4s,baz=68,slow=6.5,SNR=4.7						
	0.1nm,0.4s						
TORD	**Torodi Ar. Bea**	**67.38**	**268**	P	**P**	**05 02 32.9**	**-1.0**
	0.7nm,0.8s,baz=51,slow=6.0,SNR=5.1						
	0.7nm,0.8s						
ILAR	**Eielson Array**	**69.92**	**17**	P	**P**	**05 02 48.2**	**-0.8**
	0.3nm,0.8s,baz=333,slow=6.5,SNR=4.1						
	0.3nm,0.8s						
YKA	**Yellowknife Ar**	**76.56**	**4**	P	**P**	**05 03 28.0**	**-0.2**
	0.2nm,0.7s,baz=350,slow=6.5,SNR=4.1						
	0.2nm,0.7s						
	baz=336						
N25K	**Chitina, Valde**	**73.15**	**18**	P	**P**	**04 52 38.0**	**-0.3**
	baz=331						
GLI	**Glacier Island**	**73.19**	**19**	P	**P**	**04 52 38.6**	**+0.1**
	baz=330						
BRSE	**Bradley Lake S**	**73.21**	**21**	P	**P**	**04 52 39.0**	**+0.5**
	baz=327						
BVCY	**Beaver Creek**	**73.24**	**16**	P	**P**	**04 52 38.9**	**+0.1**
	baz=334						
SEW	**Seward**	**73.25**	**21**	P	**P**	**04 52 39.2**	**+0.4**
	baz=328						
S14K	**Fog Glacier**	**73.27**	**27**	P	**P**	**04 52 39.9**	**+0.8**
	baz=321						
R17L	**Mt. Peulik Vol**	**73.27**	**25**	P	**P**	**04 52 39.0**	**0.0**
	baz=323						
CHGN	**Chignik**	**73.65**	**27**	P	**P**	**04 52 41.8**	**+0.7**
	baz=322						
SDPT	**Sand Point**	**73.67**	**29**	P	**P**	**04 52 41.3**	**0.0**
	baz=321						
Q20K	**Shuyak Island**	**73.68**	**23**	P	**P**	**04 52 41.4**	**+0.1**
	baz=326						
M29M	**Somme Creek**	**73.69**	**15**	P	**P**	**04 52 41.6**	**+0.1**
	baz=336						
MCARA	**McCarthy VSAT**	**73.70**	**17**	P	**P**	**04 52 41.6**	**+0.1**
	baz=333						
BMRM	**Bremner River**	**73.71**	**18**	P	**P**	**04 52 41.2**	**-0.4**
	baz=331						
EYAK	**Cordova Ski Ar**	**73.81**	**19**	P	**P**	**04 52 42.1**	**+0.1**
	baz=331						
M30M	**Minto, Yukon**	**73.87**	**14**	P	**P**	**04 52 42.0**	**-0.5**
	baz=337						
P23K	**Montague Islan**	**73.87**	**20**	P	**P**	**04 52 42.2**	**-0.3**
	baz=330						
YUK3	**Moose Creek**	**73.90**	**16**	P	**P**	**04 52 43.1**	**+0.2**
	baz=334						
CRQE	**Cirque**	**74.25**	**17**	P	**P**	**04 52 44.5**	**-0.4**
	baz=333						
KDAK	**Kodiak Island**	**74.31**	**23**	P	**P**	**04 52 44.3**	**-0.7**
	baz=326						
CHNA	**Chernabura Isl**	**74.39**	**28**	P	**P**	**04 52 45.0**	**-0.6**
	baz=322						
CTG	**Chitna Glacier**	**74.45**	**17**	P	**P**	**04 52 45.1**	**-0.9**
	baz=334						
YUK8	**Steele Glacier**	**74.49**	**16**	P	**P**	**04 52 45.3**	**-1.1**
	baz=335						
OHAK	**Old Harbor**	**74.57**	**24**	P	**P**	**04 52 45.3**	**-1.2**
	baz=326						
Q23K	**Middleton Isla**	**74.63**	**20**	P	**P**	**04 52 46.3**	**-0.6**
	baz=330						
M31M	**Drury Creek, Y**	**74.64**	**13**	P	**P**	**04 52 47.2**	**+0.2**
	baz=339						
YUK4	**Talbot Arm**	**74.66**	**15**	P	**P**	**04 52 46.0**	**-1.3**
	baz=336						
KAIM	**Kayak Island**	**74.67**	**18**	P	**P**	**04 52 46.9**	**-0.2**
	baz=332						
BGLC	**Bering Glacier**	**74.77**	**18**	P	**P**	**04 52 47.6**	**0.0**
	baz=332						
SII	**Sitkinak Islan**	**74.83**	**25**	P	**P**	**04 52 48.2**	**0.0**
	baz=325						
O28M	**Mount Upton**	**74.86**	**16**	P	**P**	**04 52 48.0**	**-0.6**
	baz=335						
CHIR	**Chirikof Islan**	**74.97**	**26**	P	**P**	**04 52 48.3**	**-0.6**
	baz=324						
MESA	**MESA**	**75.02**	**17**	P	**P**	**04 52 48.7**	**-0.7**
	baz=334						
N31M	**Braeburn, Yuko**	**75.07**	**14**	P	**P**	**04 52 49.2**	**-0.3**
	baz=338						
YUK6	**Outpost Mounta**	**75.08**	**15**	P	**P**	**04 52 49.2**	**-0.6**
	baz=336						
WRGLY	**Wrigley**	**75.12**	**8**	P	**P**	**04 52 49.1**	**-0.5**
	baz=347						
HYT	**Haines Junctio**	**75.36**	**15**	P	**P**	**04 52 50.9**	**-0.4**
	baz=337						
PINM	**Pinnacle**	**75.47**	**16**	P	**P**	**04 52 51.8**	**0.0**
	baz=335						
O29M	**Mount Kennedy**	**75.63**	**16**	P	**P**	**04 52 52.5**	**-0.3**
	baz=336						
O30N	**Mendenhall**	**75.68**	**14**	P	**P**	**04 52 52.8**	**-0.2**
	baz=338						
N32M	**Quiet Lake**	**75.85**	**13**	P	**P**	**04 52 53.9**	**-0.1**
	baz=340						
WHY	**Whitehorse**	**76.00**	**14**	P	**P**	**04 52 54.5**	**-0.4**
	baz=339						
P30M	**Million Dollar**	**76.11**	**15**	P	**P**	**04 52 55.2**	**-0.3**
	baz=337						
TGTN	**Hyland Airport**	**76.21**	**10**	P	**P**	**04 52 55.8**	**-0.2**
	baz=344						
DBIC	**Dimbokro**	**76.43**	**267**	P	**P**	**04 52 57.0**	**-0.9**
	comp=Z,2.5nm,0.6s,baz=42,slow=7.3,SNR=5.7						
	comp=Z,2.5nm,0.6s						
YKA	**Yellowknife Ar**	**76.50**	**4**	P	**P**	**04 52 57.3**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=351,slow=6.1,SNR=28						
	comp=Z,1.9nm,0.8s						
YKAW1	**Yellowknife Wh**	**76.52**	**4**	P	**P**	**04 52 58.0**	**+0.4**
YKAW1				IAmb	IAmb	04 52 58.6	
	comp=Z,4.7nm,0.8s						
P33M	**Teslin, Yukon**	**76.78**	**13**	P	**P**	**04 52 59.0**	**-0.3**
	baz=340						
SKAG	**Skagway**	**77.04**	**14**	P	**P**	**04 53 00.3**	**-0.3**
	baz=339						
P32M	**Atlin**	**77.21**	**14**	P	**P**	**04 53 01.7**	**0.0**
	baz=340						
WTLY	**Watson Lake, Y**	**77.50**	**11**	P	**P**	**04 53 03.1**	**-0.2**
	baz=343						
R33M	**Jennings River**	**77.86**	**12**	P	**P**	**04 53 05.6**	**+0.2**
	baz=342						
Q32M	**Nakina River**	**78.06**	**13**	P	**P**	**04 53 06.8**	**+0.2**
	baz=341						
KOTAN	**Kotaneelee Air**	**78.09**	**9**	P	**P**	**04 53 07.2**	**+0.6**
	baz=347						
S31K	**Pelican**	**78.26**	**15**	P	**P**	**04 53 07.4**	**-0.1**
	baz=338						
DLBC	**Dease Lake**	**78.92**	**12**	P	**P**	**04 53 10.7**	**-0.6**
	baz=343						
S32K	**Killisnoo**	**79.04**	**15**	P	**P**	**04 53 11.8**	**0.0**
	baz=339						
S34M	**Telegraph Cree**	**79.24**	**13**	P	**P**	**04 53 13.2**	**+0.3**
	baz=342						
SIT	**Sitka**	**79.28**	**15**	P	**P**	**04 53 13.5**	**+0.4**
	baz=339						
WRAK	**Wrangell Islan**	**80.45**	**14**	P	**P**	**04 53 19.6**	**+0.1**
	baz=341						
U33K	**Whale Pass**	**80.59**	**14**	P	**P**	**04 53 19.8**	**-0.4**
	baz=340						
CRAG	**Craig**	**81.20**	**15**	P	**P**	**04 53 24.1**	**+0.6**
	baz=340						
U35K	**Hyder**	**81.33**	**13**	P	**P**	**04 53 24.5**	**+0.3**
	baz=343						
V35K	**Ketchikan**	**81.62**	**14**	P	**P**	**04 53 25.6**	**-0.1**
	baz=342						
BOSA	**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBI	**Tubuai**	**44.84**	**272**	*e*LR	LR	06 11 47.4	
	1μm,27.5s						
TAOE	**Nuku Hiva Isla**	**46.00**	**296**	*e*LR	LR	06 12 46.7	
	192nm,22.6s						
PPT2	**Papeete2**	**47.89**	**279**	*e*LR	LR	06 13 20.4	
	302nm,25.5s						
PPT2				*e*LR	LR	06 13 21.8	
	199nm,28.2s						

NNC 29 05:54:20.5±3.7, 45.10N×88.59E, *h*0km, mb3.6, mpv3.1, 4C-3D Error ellipse: s-maj=50.8km s-min=30.1km az=22.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**4.71**	**293**	⇑Pn	Pn	05 55 31.6	-1.1
	3.0nm,1.1s,baz=105,slow=14,SNR=5.2						
MK31				⇑Lg	Lg	05 56 47.6	
	10nm,1.4s,baz=114,slow=30,SNR=5.3						
MAKZ	**Makanchi**	**4.92**	**293**	⇑Pn	Pn	05 55 36.8	+1.2
	4.4nm,0.9s						
MAKZ				⇑Lg	Lg	05 56 58.4	
	9.2nm,1.2s						
PDGK	**Podgornoye**	**6.78**	**258**	⇓Lg	Lg	05 57 56.9	
	9.0nm,1.4s						
KURBB	**Kurchatov Arra**	**8.73**	**313**	⇓Lg	Lg	05 58 58.7	
	13nm,1.4s						
KURK	**Kurchatov**	**8.73**	**314**	⇓Lg	Lg	05 58 59.8	
	2.6nm,1.2s						

*IDC **29** 05:56:37.9±0.9, 39.05N×27.80E, *h*0km, mb3.5/7, mbtmp3.5/15, ML3.3/7, MS3.2/17, Error ellipse: s-maj=12.9km s-min=11.1km az=107.0*
*ATH **29** 05:56:38.8, 39.02N×27.95E, *h*11km±4km, ML3.7/16, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*AFAD **29** 05:56:39.5, 39.01N×27.83E, *h*7km±2km, MW4.1*
*ISK **29** 05:56:39.2, 39.01N×27.83E, *h*11km, ML4.1/40*
*THE **29** 05:56:40.8, 39°N±3.2°, 28E±.°, *h*11km, MS3.7/37, MLh3.7/37*
*SOF **29** 05:56:42.7, 39.3N±0.1×27.75E±0.05, *h*20km±12km, MD4.1/9*
*CFUSG **29** 05:56:47.4, 39.55N×28.05E, *h*15km, Mb3.2/6, MD3.4/7, MSH3.4/7*

ISC 29 05:56:39.3±0.8, 39.02N±0.02×27.86E±0.02, h15km±5km, n219, σ1.529/247, mb3.4/6, MS3.2/8, 18C-15D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.15**	**195**	P	**Pg**	**05 56 42.8**	**-0.4**
AKHS				S	**Sg**	**05 56 45.4**	**-0.4**
AKHS				IAML		05 56 46.0	
	comp=N,17nm,0.6s						
AKHS				IAML		05 56 46.0	
	comp=E,3μm,0.2s						
AKS	**Akhisar**	**0.15**	**196**	Pg	**Pg**	**05 56 42.6**	**-0.6**
AKS				Sg	**Sg**	**05 56 45.6**	**-0.1**
GORD	**Gordes-Manisa**	**0.27**	**115**	Pg	**Pg**	**05 56 45.4**	**+0.3**
GORD				Sg	**Sb**	**05 56 50.7**	**+0.3**
SOMA	**Soma-Manisa**	**0.29**	**298**	Pg	**Pg**	**05 56 45.1**	**-0.4**
SOMA				Sg	**Sb**	**05 56 50.2**	**-0.8**
GOMA	**Golmarmara-Man**	**0.32**	**172**	Pg	**Pg**	**05 56 45.7**	**-0.2**
GOMA				Sg	**Sg**	**05 56 50.6**	**+0.3**
STEP	**BALIKESIR_Sava**	**0.37**	**342**	P	**Pg**	**05 56 47.1**	**+0.2**
STEP				S	**Sg**	**05 56 52.0**	**-0.1**
STEP				IAML		05 56 53.0	
	comp=N,8μm,0.7s						
STEP				IAML		05 56 53.0	
	comp=E,8μm,0.3s						
KTTT	**Salihli**	**0.38**	**152**	P	**Pg**	**05 56 47.2**	**+0.2**
KTTT				S	**Sg**	**05 56 52.1**	**-0.2**
KTTT				IAML		05 56 53.0	
	comp=N,6μm,0.5s						
KTTT				IAML		05 57 08.0	
	comp=E,0.4nm,1.1s						
CAMT	**Merkez**	**0.51**	**238**	P	**Pb**	**05 56 49.6**	**-0.4**
CAMT				S	**Sb**	**05 56 57.7**	**-0.6**
CAMT				IAML		05 56 58.0	
	comp=N,1μm,0.7s						
CAMT				IAML		05 57 01.0	
	comp=E,9μm,0.5s						
ZEDA	**zmir-Bergama**	**0.62**	**265**	P	**Pb**	**05 56 51.6**	**-0.2**
ZEDA				S	**Sb**	**05 57 00.0**	**-0.3**
ZEDA				IAML		05 57 01.0	
	comp=N,9μm,0.6s						
ZEDA				IAML		05 57 02.0	
	comp=E,4μm,0.4s						
BALB	**Balikesir**	**0.62**	**1**	Pg	**Pg**	**05 56 51.4**	**-0.1**
DEMI	**Demirci**	**0.66**	**88**	P	**Pg**	**05 56 52.9**	**+0.5**
BKES	**Balkesir-Mer**	**0.71**	**4**	P	**Pb**	**05 56 53.8**	**+0.3**
BALY	**Balya**	**0.74**	**345**	P	**Pb**	**05 56 54.3**	**+0.2**
DKL	**Dikili**	**0.75**	**274**	Pg	**Pb**	**05 56 54.3**	**+0.2**
DURS	**Dursunbey**	**0.75**	**39**	P	**Pg**	**05 56 53.8**	**-0.1**
MANT	**Manisa**	**0.76**	**134**	P	**Pg**	**05 56 54.2**	**+0.1**
ODEM	**Odemis-Izmir**	**0.76**	**167**	Pg	**Pb**	**05 56 54.7**	**+0.3**
BUHA	**Balikesir, Bur**	**0.78**	**308**	P	**Pb**	**05 56 54.6**	**0.0**
KULA	**Kula-Manisa**	**0.80**	**129**	Pg	**Pg**	**05 56 54.9**	**-0.1**
DST	**Dursunbey**	**0.83**	**45**	Pg	**Pb**	**05 56 56.6**	**+1.1**
BLKS	**Balkesir-Sus**	**0.86**	**5**	P	**Pg**	**05 56 56.0**	**+0.1**
DUVT	**Torbali**	**0.86**	**202**	P	**Pb**	**05 56 56.2**	**+0.1**
DUVT				IAML		05 57 00.0	
	comp=N,2μm,1.1s						
DUVT				S	**Sg**	**05 57 07.0**	**-0.4**
DUVT				IAML		05 57 14.0	
	comp=E,2μm,0.6s						
BAGT	**Foa**	**0.87**	**245**	P	**Pb**	**05 56 56.6**	**+0.4**
SIMA	**Simav-Kutahya**	**0.87**	**86**	Pg	**Pg**	**05 56 56.6**	**+0.3**
SMAA	**Simav-Kutahya**	**0.87**	**84**	Pg	**Pb**	**05 56 57.1**	**+0.8**
IZMR	**zmir-demi**	**0.89**	**175**	P	**Pb**	**05 56 56.8**	**+0.4**
BLCB	**Balcova**	**0.90**	**226**	Pg	**Pg**	**05 56 56.2**	**-0.6**
KIRA	**zmir-Kiraz**	**0.93**	**153**	P	**Pg**	**05 56 57.6**	**+0.4**
FOCM	**Foa**	**0.94**	**251**	Pg	**Pb**	**05 56 57.3**	**0.0**
USAK	**Uak-Merkez**	**0.95**	**108**	P	**Pg**	**05 56 58.0**	**+0.2**
AYVA	**Ayvalik**	**0.96**	**288**	P	**Pn**	**05 56 58.2**	**-0.1**
CMHT	**Manyas**	**0.99**	**5**	P	**Pg**	**05 56 58.6**	**0.0**
GONE	**Gonen-Balikesi**	**1.03**	**352**	Pg	**Pb**	**05 56 59.6**	**+0.6**
YENI	**Yenice-Canakka**	**1.03**	**332**	Pg	**Pg**	**05 56 59.2**	**-0.1**
SHAP	**Saphane-Kutahy**	**1.06**	**89**	Pn	**Pg**	**05 57 00.5**	**+0.7**
AYDB	**Zeytinkoy-Aydi**	**1.07**	**179**	Pg	**Pg**	**05 56 59.9**	**-0.2**
NAZL	**Nazilli-Aydin**	**1.11**	**162**	Pn	**Pg**	**05 57 01.0**	**+0.3**
KRBN	**Karaburun**	**1.11**	**248**	Pn	**Pg**	**05 57 00.4**	**-0.3**
CANM	**Can-anakkale**	**1.17**	**328**	Pn	**Pg**	**05 57 01.9**	**0.0**
EMET	**Ktahya-Emet**	**1.19**	**72**	P	**Pg**	**05 57 02.9**	**+0.7**
KARB	**zmir-Karabur**	**1.19**	**253**	P	**Pg**	**05 57 02.0**	**-0.3**
SULTU	**Buldan**	**1.20**	**143**	P	**Pg**	**05 57 02.8**	**+0.3**
GMLD	**Gumuldur**	**1.20**	**219**	Pn	**Pg**	**05 57 02.9**	**+0.4**
GEDZ	**Gediz**	**1.21**	**88**	Pn	**Pg**	**05 57 03.3**	**+0.7**
DGB	**zmir**	**1.24**	**219**	P	**Pn**	**05 57 02.2**	**0.0**
KUSD	**Kusadasi-Aydin**	**1.25**	**202**	Pn	**Pn**	**05 57 02.8**	**+0.5**
BAYC	**CANAKKALE_Bayr**	**1.25**	**306**	P	**Pg**	**05 57 03.1**	**-0.3**
PRK	**Paraskevi**	**1.26**	**281**	P	**Pb**	**05 57 02.9**	**+0.2**
PRK				S	**Sn**	**05 57 20.1**	**+1.0**
PRK	**Paraskevi**	**1.26**	**281**	P	**Pg**	**05 57 03.3**	**-0.2**
PRK				S	**Sn**	**05 57 20.7**	**+1.5**
GDZ	**Gediz**	**1.26**	**86**	P	**Pg**	**05 57 04.1**	**+0.4**
ESEN	**Aydn-Nazilli**	**1.28**	**163**	P	**Pb**	**05 57 03.6**	**+0.4**
ORLT	**Orhaneli**	**1.30**	**38**	Pn	**Pb**	**05 57 04.4**	**+0.9**
ORLT	**Orhaneli**	**1.30**	**38**	P	**Pg**	**05 57 05.0**	**+0.6**
KCTX	**Karacabey (Bur**	**1.30**	**17**	Pn	**Pn**	**05 57 03.8**	**+0.8**
TVSB	**Tavsanli**	**1.31**	**70**	Pn	**Pb**	**05 57 04.5**	**+0.7**
ZEYE	**Izmir, Urla-Ze**	**1.32**	**234**	P	**Pn**	**05 57 03.7**	**+0.4**
EDC	**Edincik**	**1.32**	**360**	Pn	**Pn**	**05 57 04.0**	**+0.6**
BAND	**Balkesir-Ban**	**1.34**	**8**	⇓P	**Pn**	**05 57 04.5**	**+0.9**
BAND				⇑S	**Sg**	**05 57 22.9**	**+0.1**
BAND	**Balkesir-Ban**	**1.34**	**8**	P	**Pb**	**05 57 04.8**	**+0.5**
AYDN	**Tasoluk**	**1.36**	**179**	P	**Pn**	**05 57 03.9**	**+0.1**
BIGA	**Biga-Canakkale**	**1.37**	**337**	Pn	**Pb**	**05 57 04.9**	**+0.1**
EZNE	**Ezine-Canakkal**	**1.37**	**303**	Pn	**Pb**	**05 57 04.9**	**+0.1**
CESE	**eme**	**1.41**	**241**	Pn	**Pb**	**05 57 05.5**	**+0.2**
GCAM	**G?zelcaml?**	**1.41**	**201**	Pn	**Pn**	**05 57 04.7**	**+0.2**
GCAM	**G?zelcaml?**	**1.41**	**201**	P	**Pn**	**05 57 04.3**	**-0.2**
GPNR	**Gulpinar-Canak**	**1.41**	**288**	Pn	**Pb**	**05 57 05.5**	**+0.1**
KOCA	**Canakkale, Ayv**	**1.42**	**290**	P	**Pb**	**05 57 05.5**	**-0.1**
EZN	**Ezine**	**1.44**	**304**	P	**Pn**	**05 57 05.4**	**+0.5**
EZN				S	**Sb**	**05 57 24.1**	**+0.2**
EZN	**Ezine**	**1.44**	**304**	Pn	**Pn**	**05 57 05.2**	**+0.3**
KRBG	**Karabiga-Canak**	**1.44**	**342**	Pn	**Pn**	**05 57 05.7**	**+0.8**
PASA	**Karahalli, USA**	**1.44**	**117**	P	**Pb**	**05 57 06.7**	**+0.8**
COMU	**Canakkale**	**1.52**	**315**	Pn	**Pb**	**05 57 07.0**	**-0.3**
SMG	**Samos**	**1.54**	**212**	P	**Pn**	**05 57 05.5**	**-0.8**
SMG				S	**Sn**	**05 57 26.0**	**-0.1**
SMG	**Samos**	**1.54**	**212**	P	**Pn**	**05 57 06.8**	**+0.5**
SMG				S	**Sb**	**05 57 27.6**	**+0.6**
MDNY	**Mudanya-Bursa**	**1.56**	**30**	Pn	**Pn**	**05 57 07.5**	**+0.9**
SIGR	**SIGRI**	**1.57**	**278**	P	**Pn**	**05 57 07.1**	**+0.3**
SIGR				S	**Sn**	**05 57 26.7**	**-0.2**
SIGR	**SIGRI**	**1.57**	**278**	Pn	**Pn**	**05 57 07.2**	**+0.4**
MRMT	**Marmara Adasi**	**1.59**	**353**	Pn	**Pn**	**05 57 08.1**	**+1.0**
LPK	**Lapseki**	**1.60**	**328**	Pn	**Pn**	**05 57 08.1**	**+1.0**
DDIM	**Aydin, Didim**	**1.64**	**198**	P	**Pg**	**05 57 10.9**	**+0.1**
DIDI	**Didim-Aydin**	**1.71**	**197**	Pn	**Pn**	**05 57 09.8**	**+1.1**
MLSB	**Milas**	**1.73**	**182**	Pn	**Pn**	**05 57 09.7**	**+0.8**
ALT	**Altintas**	**1.75**	**88**	Pn	**Pb**	**05 57 11.2**	**0.0**
YER	**Yerkesik**	**1.91**	**170**	P	**Pn**	**05 57 11.7**	**+0.2**
YER	**Yerkesik**	**1.91**	**170**	Pn	**Pn**	**05 57 12.4**	**+0.9**
GADA	**Gvkgeada**	**1.92**	**308**	P	**Pn**	**05 57 12.2**	**+0.8**
GADA				S	**Sn**	**05 57 36.1**	**+0.8**
BODT	**Bodrum**	**2.00**	**193**	P	**Pn**	**05 57 13.7**	**+1.0**
CAVK	**Edirne/Enez-Ca**	**2.12**	**322**	⇓P	**Pn**	**05 57 15.8**	**+1.6**
ENEZ	**Enez**	**2.16**	**323**	P	**Pn**	**05 57 16.2**	**+1.3**
ENEZ				S	**Sn**	**05 57 41.8**	**+0.4**
LIA	**Limnos Island**	**2.25**	**294**	P	**Pn**	**05 57 17.0**	**+0.9**
LIA				S	**Sn**	**05 57 43.8**	**+0.2**
LIA	**Limnos Island**	**2.25**	**294**	P	**Pn**	**05 57 16.7**	**+0.6**
LIA				S	**Sn**	**05 57 45.4**	**+1.8**
SMTH	**Samothraki Isl**	**2.31**	**310**	P	**Pn**	**05 57 17.6**	**+0.7**
SMTH				S	**Sn**	**05 57 45.7**	**+0.6**
SMTH	**Samothraki Isl**	**2.31**	**310**	P	**Pn**	**05 57 17.6**	**+0.7**
SMTH				S	**Sn**	**05 57 47.0**	**+1.9**
ALN	**Alexandroupoli**	**2.34**	**324**	P	**Pn**	**05 57 18.2**	**+0.9**
ALN	**Alexandroupoli**	**2.34**	**324**	P	**Pn**	**05 57 17.9**	**+0.7**
ISP	**Isparta**	**2.41**	**119**	P	**Pn**	**05 57 17.1**	**-1.2**
ISP				S	**Sn**	**05 57 46.5**	**-1.1**
SILT	**Sile**	**2.53**	**32**	⇓P	**Pn**	**05 57 20.7**	**+0.8**
RDO	**Rodhopi**	**2.77**	**321**	P	**Pn**	**05 57 24.3**	**+1.1**
RDO	**Rodhopi**	**2.77**	**321**	P	**Pn**	**05 57 23.9**	**+0.6**
RDO				S	**Sn**	**05 57 57.8**	**+1.3**
ARG	**Arkhangelos**	**2.81**	**176**	P	**Pn**	**05 57 24.1**	**+0.3**
ARG	**Arkhangelos**	**2.81**	**176**	P	**Pn**	**05 57 23.8**	**0.0**
KARY	**Karystos**	**2.86**	**251**	P	**Pn**	**05 57 25.2**	**+0.7**
KARY	**Karystos**	**2.86**	**251**	P	**Pn**	**05 57 25.2**	**+0.7**
THAS	**Thassos island**	**2.89**	**304**	P	**Pn**	**05 57 25.3**	**+0.4**
THAS	**Thassos island**	**2.89**	**304**	P	**Pn**	**05 57 25.4**	**+0.5**
THAS				S	**Sn**	**05 58 00.7**	**+1.3**
KYMI	**Kymi, Euboea I**	**2.96**	**264**	P	**Pn**	**05 57 27.1**	**+1.2**
KSL	**Kastellorizon**	**3.17**	**154**	P	**Pn**	**05 57 29.8**	**+1.0**
DION	**Dionisos Attik**	**3.22**	**254**	P	**Pn**	**05 57 30.4**	**+0.9**
DION	**Dionisos Attik**	**3.22**	**254**	P	**Pn**	**05 57 30.1**	**+0.6**
KAVA	**Kavala**	**3.24**	**309**	P	**Pn**	**05 57 30.6**	**+0.9**
VLY	**Voula,Athens**	**3.40**	**251**	P	**Pn**	**05 57 33.3**	**+1.4**
VLY	**Voula,Athens**	**3.40**	**251**	P	**Pn**	**05 57 33.0**	**+1.0**
DIM	**Dimitrovgrad**	**3.49**	**331**	P	**Pn**	**05 57 34.2**	**+1.1**
DIM				S	**Sn**	**05 58 15.2**	**+1.1**
DIM	**Dimitrovgrad**	**3.49**	**331**	P	**Pn**	**05 57 34.2**	**+1.1**
STFN	**Stefani**	**3.49**	**257**	P	**Pn**	**05 57 34.8**	**+1.6**
KARP	**Karpathos**	**3.51**	**189**	P	**Pn**	**05 57 34.0**	**+0.5**
KARP	**Karpathos**	**3.51**	**189**	P	**Pn**	**05 57 34.4**	**+0.9**
KARP				S	**Sn**	**05 58 15.8**	**+0.9**
RZN	**Rozhen**	**3.58**	**319**	P	**Pn**	**05 57 36.0**	**+1.4**
RZN	**Rozhen**	**3.58**	**319**	P	**Pn**	**05 57 36.0**	**+1.4**
PLG	**Polygyros**	**3.67**	**293**	P	**Pn**	**05 57 36.5**	**+0.9**
VIL2	**Platees**	**3.69**	**259**	P	**Pn**	**05 57 37.3**	**+1.4**
ATAL	**Atalanti**	**3.79**	**267**	P	**Pn**	**05 57 38.2**	**+0.9**
LKR	**Lokris**	**3.82**	**266**	P	**Pn**	**05 57 39.5**	**+1.9**
NVR	**Nevrokopi**	**3.85**	**308**	P	**Pn**	**05 57 39.2**	**+1.1**
SRS	**Serrai**	**3.89**	**304**	P	**Pn**	**05 57 39.5**	**+0.8**
SOH	**Sokhos**	**3.91**	**299**	P	**Pn**	**05 57 40.1**	**+1.2**
PLD	**Plovdiv**	**3.92**	**324**	P	**Pn**	**05 57 40.5**	**+1.4**
PLD	**Plovdiv**	**3.92**	**324**	P	**Pn**	**05 57 40.4**	**+1.4**
HORT	**Hortiatis**	**3.99**	**295**	P	**Pn**	**05 57 41.3**	**+1.2**
MMB	**Musomishta**	**4.03**	**310**	P	**Pn**	**05 57 41.8**	**+1.2**
MMB				S	**Sn**	**05 58 29.2**	**+1.5**
MMB	**Musomishta**	**4.03**	**310**	P	**Pn**	**05 57 41.8**	**+1.2**
ELND	**Elena**	**4.18**	**340**	⇓P	**Pn**	**05 57 43.6**	**+1.0**
KNT	**Kendrikon**	**4.37**	**301**	P	**Pn**	**05 57 46.5**	**+1.3**
IDI	**Anoyia**	**4.42**	**213**	Pn	**Pn**	**05 57 45.3**	**-0.6**
	3.0nm,0.4s,baz=307,slow=3.0,SNR=8.1						
IDI				Pg	**Pb**	**05 57 60.0**	**+3.2**
	1.8nm,0.3s,baz=20,slow=13,SNR=7.3						
IDI				Lg	Lg	05 58 57.0	
	0.7nm,0.3s,baz=298,slow=15,SNR=1.6						
IDI	**Anoyia**	**4.42**	**213**	P	**Pn**	**05 57 46.7**	**+0.7**
MAKR	**Makrakomi, Fth**	**4.46**	**272**	P	**Pn**	**05 57 47.5**	**+0.9**
GUR	**Goura**	**4.47**	**258**	P	**Pn**	**05 57 47.4**	**+0.7**
GUR	**Goura**	**4.47**	**258**	P	**Pn**	**05 57 47.7**	**+1.1**
SZH	**Strazhitsa**	**4.47**	**342**	P	**Pn**	**05 57 47.4**	**+0.8**
PGB	**Panagyurishte**	**4.47**	**322**	P	**Pn**	**05 57 48.1**	**+1.4**
VLI	**Veliai**	**4.53**	**241**	P	**Pn**	**05 57 47.8**	**+0.5**
VLI	**Veliai**	**4.53**	**241**	P	**Pn**	**05 57 48.1**	**+0.8**
BRTR	**Keskin Array B**	**4.53**	**79**	Pn	**Pn**	**05 57 50.0**	**+2.4**
	1.4nm,0.3s,baz=254,slow=14,SNR=29						
BRTR				Pg	**Pg**	**05 58 03.5**	**-2.6**
	2.1nm,0.3s,baz=260,slow=15,SNR=36						
BRTR				Sn	**Sn**	**05 58 39.2**	**-0.8**
	0.7nm,0.3s,baz=249,slow=24,SNR=1.7						
BRTR				Lg	Lg	05 59 04.3	
	1.1nm,0.3s,baz=252,slow=23,SNR=5.6						
BRTR				LR	LR	06 00 11.6	
	comp=Z,177nm,20.5s,baz=264,slow=47 3.9nm,0.5s						
THL	**Klokotos Trika**	**4.57**	**279**	P	**Pn**	**05 57 49.2**	**+1.3**
THL	**Klokotos Trika**	**4.57**	**279**	P	**Pn**	**05 57 48.7**	**+0.8**
KKB	**Krupnik**	**4.58**	**309**	P	**Pn**	**05 57 49.8**	**+1.6**
KKB	**Krupnik**	**4.58**	**309**	P	**Pn**	**05 57 50.1**	**+2.0**
KLV	**Kalavryta, Ach**	**4.58**	**259**	P	**Pn**	**05 57 49.5**	**+1.2**
KLV	**Kalavryta, Ach**	**4.58**	**259**	P	**Pn**	**05 57 49.2**	**+1.0**
GRG	**Griva**	**4.62**	**296**	P	**Pn**	**05 57 50.4**	**+1.7**
VAY	**Valandovo**	**4.66**	**301**	*i* Pn	**Pn**	**05 57 51.3**	**+2.1**
ANX	**Ano Chora**	**4.66**	**267**	P	**Pn**	**05 57 50.6**	**+1.2**
PLNA	**Plana**	**4.82**	**317**	P	**Pn**	**05 57 54.0**	**+2.4**
KZN	**Kozani**	**4.87**	**287**	P	**Pn**	**05 57 53.3**	**+1.0**
PLVB	**Pleven**	**5.00**	**332**	⇓P	**Pn**	**05 57 55.3**	**+1.4**
VTS	**Vitosha**	**5.02**	**317**	P	**Pn**	**05 57 55.9**	**+1.6**
VTS	**Vitosha**	**5.02**	**317**	P	**Pn**	**05 57 56.1**	**+1.8**
ICOR	**Ion Corvin**	**5.09**	**359**	⇑P	**Pn**	**05 57 56.7**	**+1.5**
BLSH	**Balsha**	**5.17**	**319**	P	**Pn**	**05 57 58.5**	**+2.2**
MPEP	**Malo Peshtene**	**5.33**	**326**	P	**Pn**	**05 58 00.0**	**+1.6**
OHR	**Ohrid**	**5.81**	**293**	*i* Pn	**Pn**	**05 58 07.9**	**+2.9**
CFR	**Carcaliu**	**6.16**	**2**	⇓P	**Pn**	**05 58 10.4**	**+0.7**
TLER		**6.20**	**1**	⇓P	**Pn**	**05 58 12.2**	**+1.9**
PHP	**Peshkopia**	**6.26**	**297**	P	**Pn**	**05 58 13.3**	**+2.0**
BOVS	**Bovan**	**6.54**	**317**	⇑P	**Pn**	**05 58 17.0**	**+2.0**
MLR	**Muntele Rosu**	**6.62**	**348**	Pn	**Pn**	**05 58 18.1**	**+1.8**
	0.7nm,0.3s,baz=190,slow=2.9,SNR=18						
MLR				Sn	**Sn**	**05 59 30.2**	**-1.3**
	3.5nm,0.3s,baz=149,slow=17,SNR=6.7						
MLR				Lg	Lg	06 00 07.2	
	1.3nm,0.3s,baz=71,slow=17,SNR=1.7						
MLR				LR	LR	06 00 22.6	
	comp=Z,45nm,18.7s,baz=123,slow=34 13nm,0.9s						
MLR	**Muntele Rosu**	**6.62**	**348**	⇑P	**Pn**	**05 58 18.8**	**+2.6**
VOIR		**6.74**	**343**	⇑P	**Pn**	**05 58 19.2**	**+1.3**
ODBI	**Odobesti**	**6.76**	**355**	⇑P	**Pn**	**05 58 20.8**	**+2.7**
ARR	**Arges**	**6.78**	**340**	⇑P	**Pn**	**05 58 19.1**	**+0.8**
VLDR	**Vladesti**	**6.82**	**1**	⇓P	**Pn**	**05 58 19.9**	**+1.1**
VARL	**Varlezi**	**6.87**	**360**	⇑P	**Pn**	**05 58 22.2**	**+2.6**
PLOR	**Plostina**	**6.88**	**353**	⇑P	**Pn**	**05 58 22.5**	**+2.8**
RVI	**Vrincioaia**	**6.89**	**353**	⇑P	**Pn**	**05 58 22.1**	**+2.2**
COVR	**Voineasa-Covas**	**6.93**	**350**	⇓P	**Pn**	**05 58 22.6**	**+2.2**
SEV	**Sevastopol'**	**7.02**	**36**	⇓*e*P	**Pn**	**05 58 22.5**	**+1.0**
SEV				pmax	pmax	05 58 27.7	
	comp=Z,3.0nm,0.3s						
SEV				*e*S	**Sn**	**05 59 37.5**	**-3.6**
SEV				smax	smax	05 59 42.1	
	comp=N,8.0nm,0.5s						
HERR	**Herculane**	**7.12**	**327**	⇓P	**Pn**	**05 58 23.2**	**+0.1**
TURR	**Turia**	**7.16**	**350**	⇓P	**Pn**	**05 58 26.1**	**+2.5**
DOPR	**Dopca**	**7.18**	**346**	⇑P	**Pn**	**05 58 25.6**	**+1.8**
YAL	**Yalta**	**7.21**	**39**	*ex*	x	05 58 25.9	
YAL				pmax	pmax	05 58 30.7	
	comp=Z,3.0nm,0.3s						
YAL				*e*S	**Sn**	**05 59 44.2**	**-1.5**
YAL				smax	smax	05 59 46.0	
	comp=N,11nm,0.5s						
YAL				smax	smax	05 59 46.0	
	comp=E,24nm,0.5s						
TARU	**Tarkhankut**	**7.23**	**27**	*e*P	**Pn**	**05 58 25.5**	**+1.0**
TARU				pmax	pmax	05 58 30.7	
	comp=Z,8.0nm,0.4s						
TARU				*i* S	**Sn**	**05 59 43.4**	**-3.0**
TARU				smax	smax	05 59 46.9	
	comp=N,41nm,0.6s						
TARU				smax	smax	05 59 46.9	
	comp=E,13nm,0.6s						
OZUR		**7.23**	**348**	⇑P	**Pn**	**05 58 26.3**	**+1.7**
BIR	**Birlad**	**7.24**	**359**	⇑P	**Pn**	**05 58 25.5**	**+0.8**
ONER	**Baraj Valea Uz**	**7.39**	**352**	⇓P	**Pn**	**05 58 28.8**	**+2.1**
GZR	**Gura Zlata**	**7.40**	**331**	⇑P	**Pn**	**05 58 27.3**	**+0.4**
ALU	**Alushta**	**7.47**	**39**	*e*P	**Pn**	**05 58 28.0**	**+0.3**
ALU				pmax	pmax	05 58 34.2	
	comp=Z,8.0nm,0.4s						
ALU				*e*S	**Sn**	**05 59 47.0**	**-5.2**
ALU				smax	smax	05 59 54.3	
	comp=N,55nm,0.4s						
ALU				smax	smax	05 59 54.3	
	comp=E,33nm,0.4s						
DNZ2	**Donuzlav2**	**7.49**	**30**	*ex*	x	05 58 28.6	
DNZ2				pmax	pmax	05 58 34.8	
	comp=Z,5.0nm,0.4s						
DNZ2				*e*S	**Sn**	**05 59 48.4**	**-4.2**
DNZ2				smax	smax	05 59 53.1	
	comp=N,15nm,0.4s						
DNZ2				smax	smax	05 59 53.1	
	comp=E,7.0nm,0.5s						
SIM	**Simferopol'**	**7.53**	**36**	*ex*	x	05 58 29.4	
SIM				pmax	pmax	05 58 38.0	
	comp=Z,42nm,0.3s						
SIM				*e*S	**Sn**	**05 59 49.4**	**-4.4**
SIM				smax	smax	05 59 53.6	
	comp=N,19nm,0.4s						
SIM				smax	smax	05 59 53.6	
	comp=E,23nm,0.5s						
TESR	**Tescani**	**7.54**	**354**	⇑P	**Pn**	**05 58 29.3**	**+0.6**
DEV	**Deva**	**7.78**	**333**	⇑P	**Pn**	**05 58 33.1**	**+1.2**
SUDU	**Sudak**	**7.91**	**40**	*e*P	**Pn**	**05 58 36.2**	**+2.4**
SUDU				pmax	pmax	05 58 36.6	
	comp=Z,4.0nm,0.4s						
SUDU				*e*S	**Sn**	**06 00 01.4**	**-1.7**
SUDU				smax	smax	06 00 08.2	
	comp=N,39nm,0.5s						
SUDU				smax	smax	06 00 08.2	
	comp=E,13nm,0.5s						
MARR	**Marisel-Cluj**	**8.40**	**337**	⇑P	**Pn**	**05 58 42.5**	**+1.8**
DRGR		**8.63**	**336**	⇑P	**Pn**	**05 58 44.8**	**+0.9**
BURAR	**Bucovina Array**	**8.80**	**348**	⇓P	**Pn**	**05 58 48.2**	**+2.0**
MORH	**Mrgy, Hungar**	**9.89**	**320**	⇓P	**Pn**	**05 59 01.8**	**+0.9**
ASF	**Jabal al Asfar**	**10.04**	**130**	LR	LR	06 03 24.1	
	comp=E,29nm,20.1s,baz=337,slow=40						
EIL	**Elat**	**11.01**	**146**	Pn	**Pn**	**05 59 15.3**	**-1.0**
	comp=E,0.6nm,0.3s,baz=80,slow=20,SNR=2.3 comp=E,3.8nm,0.6s						
AKASG	**Malin Array Be**	**11.72**	**4**	Pn	**Pn**	**05 59 25.0**	**-1.0**
	comp=E,0.4nm,0.3s,baz

ϕ_s59.31000°, δ60.74000°, λ32.70000°. NP2:ϕ_s311.90000°, δ61.88000°, λ146.35000°. Principal axes: T 7.8740, Plg43.0000°, Azm275.0000°; N 0.6183, Plg47.0000°, Azm97.0000°; P -8.4924, Plg1.0000°, Azm6.0000°;

*NEIC **29** 06:11:56, 64.60N×138.77W, h11km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_r3.48; $M_{\theta\theta}$-8.94; $M_{\phi\phi}$ 1.96; $M_{r\theta}$0.98; $M_{\theta\phi}$3.93; $M_{\phi r}$4.01; Fault plane solution: M_o9.00000×10^{14} NP1:ϕ_s73.00000°, δ58.00000°, λ35.00000°. NP2:ϕ_s323.00000°, δ61.00000°, λ143.00000°. Principal axes: T 8.6432, Plg46.0000°, Azm287.0000°; N 0.4065, Plg44.0000°, Azm110.0000°; P -9.0497, Plg1.0000°, Azm18.0000°;*

*PGC **29** 06:11:56.0±0.0, 64.6°N×138.77°W, h5km, ML4.3/42, Mw3.9, 68km northeast of Dawson, Yt Southern Yukon Territory, Canada*

ISC 29 06:11:55.1±1.0, 64.63N±0.01×138.75W±0.02, h7km±7km, n526, σ0.91/563, mb4.1/21, MS3.7/5, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
J29N	**Klondike Camp**	**0.29**	**128**			**Pg**	**06 12 01.3**	**+0.5**
J29N				Sg		**Sg**	**06 12 05.2**	**+0.6**
J29N	comp=N,65μm,0.6s			IAML			06 12 06.1	
J29N	comp=E,33μm,0.6s			IAML			06 12 08.3	
J29N	**Klondike Camp**	**0.29**	**128**	P		**Pg**	**06 12 01.3**	**+0.5**
J29N				S		**Sg**	**06 12 05.2**	**+0.6**
J29N	**Klondike Camp** baz=304,SNR=1000	**0.29**	**128**	P		**Pg**	**06 12 01.3**	**+0.5**
J29N	baz=304			S		**Sg**	**06 12 05.3**	**+0.6**
I29M	**Ogilvie Camp,**	**0.76**	**14**			**Pg**	**06 12 10.5**	**+0.9**
I29M	**Ogilvie Camp,**	**0.76**	**14**			**Sb**	**06 12 21.5**	**+0.3**
I29M	**Ogilvie Camp,**	**0.76**	**14**	P		**Pb**	**06 12 10.7**	**+0.1**
I29M				S		**Sb**	**06 12 21.5**	**+0.3**
I29M	**Ogilvie Camp,** baz=195,SNR=760	**0.76**	**14**	P		**Pg**	**06 12 10.6**	**+0.9**
I29M	baz=195			S		**Sb**	**06 12 21.2**	**0.0**
K29M	**Barlow Dome**	**0.96**	**145**			**Pg**	**06 12 13.2**	**-0.2**
K29M						**Sg**	**06 12 25.9**	**+0.1**
K29M	**Barlow Dome**	**0.96**	**145**	P		**Pg**	**06 12 13.2**	**-0.2**
K29M	**Barlow Dome** baz=325	**0.96**	**145**	P		**Pg**	**06 12 13.1**	**-0.2**
K29M	baz=325			S		**Sg**	**06 12 25.4**	**-0.4**
I28M	**Miner Creek**	**0.96**	**329**			**Pb**	**06 12 14.5**	**+0.3**
I28M						**Pn**	**06 12 14.8**	**-0.3**
I28M						**Sb**	**06 12 28.0**	**+0.8**
I28M						**Sb**	**06 12 28.1**	**+0.9**
I28M	**Miner Creek** comp=E,7μm,0.7s	**0.96**	**329**	IAML			06 12 28.7	
I28M	comp=N,6μm,0.6s			IAML			06 12 30.0	
I28M	**Miner Creek**	**0.96**	**329**	P		**Pg**	**06 12 14.0**	**+0.4**
I28M				S		**Sb**	**06 12 28.1**	**+0.9**
I28M	**Miner Creek** baz=149	**0.96**	**329**	P		**Pg**	**06 12 14.1**	**+0.6**
I28M	baz=149			S		**Sb**	**06 12 27.6**	**+0.5**
J30M	**Hart River**	**1.04**	**92**			**Pg**	**06 12 14.6**	**-0.5**
J30M						**Pb**	**06 12 14.7**	**-0.8**
J30M						**Sb**	**06 12 30.1**	**+0.6**
J30M	**Hart River**	**1.04**	**92**	P		**Pg**	**06 12 14.2**	**-0.9**
J30M				S		**Sg**	**06 12 28.2**	**-0.4**
J30M	**Hart River** baz=273	**1.04**	**92**	P		**Pg**	**06 12 14.1**	**-1.0**
I30M	**Mount Dempster**	**1.17**	**58**			**Pg**	**06 12 17.6**	**0.0**
I30M						**Pb**	**06 12 17.8**	**0.0**
I30M	**Mount Dempster**	**1.17**	**58**			**Sb**	**06 12 33.7**	**+0.5**
I30M	**Mount Dempster**	**1.17**	**58**	P		**Pg**	**06 12 17.5**	**0.0**
I30M				S		**Sg**	**06 12 33.5**	**+0.8**
I30M	**Mount Dempster** baz=240,SNR=1000	**1.17**	**58**	P		**Pg**	**06 12 17.5**	**0.0**
I30M	baz=240			S		**Sg**	**06 12 33.5**	**+0.8**
L29M	**L29M**	**1.55**	**170**			**Pn**	**06 12 23.2**	**0.0**
L29M						**Pb**	**06 12 23.3**	**-0.9**
L29M	**L29M**	**1.55**	**170**	Sn		**Sn**	**06 12 42.7**	**-1.0**
L29M	comp=E,4μm,0.6s			IAML			06 12 46.0	
L29M	**L29M**	**1.55**	**170**	Pn		**Pn**	**06 12 22.9**	**-0.3**
L29M				Sn		**Sn**	**06 12 43.2**	**-0.5**
L29M	**L29M** baz=350,SNR=1000	**1.55**	**170**	P		**Pn**	**06 12 23.0**	**-0.3**
L29M	baz=350			S		**Sn**	**06 12 43.2**	**-0.5**
I27K	**Kandik River**	**1.56**	**310**			**Sn**	**06 12 43.8**	**0.0**
I27K						**Sg**	**06 12 46.4**	**+1.3**
I27K	**Kandik River**	**1.56**	**310**			**Pn**	**06 12 24.0**	**+0.7**
I27K	comp=E,3μm,0.7s			IAML			06 12 46.9	
I27K	comp=N,2μm,0.8s			IAML			06 12 48.0	
I27K	**Kandik River** baz=128,SNR=1000	**1.56**	**310**	P		**Pn**	**06 12 23.9**	**+0.7**
I27K	baz=128			S		**Sn**	**06 12 44.5**	**+0.7**
K27K	**Chicken**	**1.57**	**249**			**Pn**	**06 12 22.9**	**-0.5**
K27K						**Pb**	**06 12 24.4**	**-0.1**
K27K						**Sn**	**06 12 43.6**	**-0.4**
K27K						**Sb**	**06 12 44.6**	**+0.1**
K27K	**Chicken** comp=N,4μm,0.6s	**1.57**	**249**	IAML			06 12 45.8	
H29M	**Whitestone**	**1.60**	**5**			**Sn**	**06 12 45.6**	**+0.8**
H29M						**Sb**	**06 12 46.5**	**+1.0**
H29M	**Whitestone**	**1.60**	**5**			**Pn**	**06 12 24.6**	**+0.7**
H29M	**Whitestone**	**1.60**	**5**	Pn		**Pn**	**06 12 24.4**	**+0.5**
H29M	**Whitestone** baz=186,SNR=1000	**1.60**	**5**	P		**Pn**	**06 12 24.6**	**+0.7**
H29M	baz=186			S		**Sn**	**06 12 46.0**	**+1.1**
MAYO	**Mayo, Yukon**	**1.63**	**128**			**Sn**	**06 12 45.5**	**+0.1**
MAYO						**Sg**	**06 12 47.8**	**+0.5**
MAYO	**Mayo, Yukon**	**1.63**	**128**			**Pn**	**06 12 24.8**	**+0.6**
MAYO	**Mayo, Yukon**	**1.63**	**128**	Pn		**Pb**	**06 12 25.3**	**-0.2**
MAYO	**Mayo, Yukon** baz=310,SNR=99	**1.63**	**128**	P		**Pn**	**06 12 24.6**	**+0.4**
MAYO	baz=310			S		**Sb**	**06 12 46.3**	**+0.1**
EPYK	**Eagle Plains** comp=E,2μm,1.0s	**1.94**	**25**	IAML			06 13 00.6	
EPYK	comp=N,2μm,0.5s			IAML			06 13 06.7	
EPYK	**Eagle Plains**	**1.94**	**25**			**Pn**	**06 12 29.6**	**+1.0**
EPYK						**Sn**	**06 12 53.9**	**+0.7**
EPYK						**Sb**	**06 12 55.4**	**+0.2**
EPYK	**Eagle Plains**	**1.94**	**25**	Pn		**Pn**	**06 12 29.1**	**+0.5**
EPYK				Sn		**Sb**	**06 12 55.1**	**-0.1**
EPYK	**Eagle Plains** baz=207,SNR=69	**1.94**	**25**	P		**Pn**	**06 12 29.1**	**+0.5**
EPYK	baz=207			S		**Sn**	**06 12 53.9**	**+0.7**
H27K	**Steamboat Moun**	**1.98**	**325**			**Pn**	**06 12 30.1**	**+0.9**
H27K						**Pb**	**06 12 30.4**	**-1.1**
H27K						**Sn**	**06 12 54.9**	**+0.6**
H27K						**Sb**	**06 12 57.4**	**+0.9**
H27K	**Steamboat Moun**	**1.98**	**325**	Pn		**Pn**	**06 12 29.9**	**+0.7**
H27K	**Steamboat Moun** baz=144	**1.98**	**325**	P		**Pn**	**06 12 29.7**	**+0.6**
H27K	baz=144			Sb		**Sb**	**06 12 57.3**	**+0.9**
I26K	**Coal Creek Min**	**1.99**	**292**			**Pn**	**06 12 29.5**	**+0.3**
I26K						**Pb**	**06 12 29.9**	**-1.8**
I26K						**Sn**	**06 12 54.9**	**+0.5**
I26K						**Sb**	**06 12 57.0**	**+0.3**
I26K	**Coal Creek Min** comp=N,3μm,0.5s	**1.99**	**292**	IAML			06 12 57.9	
I26K	comp=E,3μm,0.6s			IAML			06 13 00.8	
I26K	**Coal Creek Min** baz=108	**1.99**	**292**	P		**Pn**	**06 12 29.2**	**0.0**
I26K	baz=108			Sb		**Sb**	**06 12 56.7**	**0.0**
BC03		**2.07**	**222**			**Pn**	**06 12 30.8**	**+0.5**
L27K	**Beaver Creek,**	**2.08**	**222**			**Pn**	**06 12 30.7**	**+0.1**
L27K	**Beaver Creek,** comp=N,3μm,0.3s	**2.08**	**222**	IAML			06 13 00.8	
L27K	**Beaver Creek,**	**2.08**	**222**	Pn		**Pn**	**06 12 30.6**	**+0.1**
L27K	**Beaver Creek,**	**2.08**	**222**	P		**Pn**	**06 12 30.1**	**-0.5**
L27K	baz=40			Sb		**Sb**	**06 12 59.0**	**-0.4**
H31M	**Peel River**	**2.20**	**56**			**Pn**	**06 12 32.7**	**+0.6**
H31M						**Sn**	**06 13 00.9**	**+1.4**
H31M	**Peel River** comp=E,2μm,0.8s	**2.20**	**56**	IAML			06 13 08.4	
H31M	**Peel River**	**2.20**	**56**	Pn		**Pn**	**06 12 32.7**	**+0.6**
H31M				Sn		**Sn**	**06 13 01.3**	**+1.7**
H31M	**Peel River** baz=239	**2.20**	**56**	P		**Pn**	**06 12 32.7**	**+0.6**
H31M	baz=239			S		**Sn**	**06 13 00.7**	**+1.2**
M29M	**Somme Creek**	**2.20**	**177**			**Pn**	**06 12 32.4**	**+0.2**
M29M	**Somme Creek** comp=E,2μm,0.6s	**2.20**	**177**	IAML			06 13 08.3	
M29M	**Somme Creek**	**2.20**	**177**	Pn		**Pn**	**06 12 32.2**	**+0.1**
M29M	**Somme Creek** baz=356,SNR=401	**2.20**	**177**	P		**Pn**	**06 12 32.3**	**+0.1**
M29M	baz=356			Sb		**Sb**	**06 13 03.3**	**+0.6**
M30M	**Minto, Yukon**	**2.24**	**156**			**Pn**	**06 12 32.2**	**-0.5**
M30M	comp=E,2μm,0.8s			IAML			06 13 07.1	
M30M	comp=N,1μm,0.6s			IAML			06 13 12.8	
M30M	**Minto, Yukon**	**2.24**	**156**	Pn		**Pn**	**06 12 32.1**	**-0.5**
M30M				Sg		**Sb**	**06 13 04.3**	**+0.4**
M30M	**Minto, Yukon** baz=338,SNR=172	**2.24**	**156**	P		**Pn**	**06 12 32.2**	**-0.5**
M30M	baz=338			Sb		**Sb**	**06 13 04.2**	**+0.4**
G29M	**Pine Creek**	**2.31**	**7**			**Sn**	**06 13 02.6**	**+0.3**
G29M	**Pine Creek**	**2.31**	**7**			**Pn**	**06 12 33.6**	**0.0**
G29M	comp=N,2μm,0.9s			IAML			06 13 14.8	
G29M	comp=E,1μm,0.9s			IAML			06 13 16.4	
G29M	**Pine Creek**	**2.31**	**7**	Pn		**Pn**	**06 12 33.8**	**+0.2**
G29M				Sn		**Sn**	**06 13 02.9**	**+0.7**
G29M	**Pine Creek** baz=188,SNR=248	**2.31**	**7**	P		**Pn**	**06 12 33.8**	**+0.2**
G29M	baz=188			S		**Sn**	**06 13 02.7**	**+0.5**
SCRK	**Sand Creek**	**2.38**	**256**			**Pn**	**06 12 33.9**	**-0.7**
SCRK	comp=N,1μm,0.4s			IAML			06 13 09.9	
SCRK	comp=E,1μm,0.4s			IAML			06 13 10.0	
SCRK	**Sand Creek** baz=72,SNR=100	**2.38**	**256**	P		**Pn**	**06 12 34.0**	**-0.7**
SCRK	baz=72			Sb		**Sb**	**06 13 08.1**	**+0.3**
BVCY	**Beaver Creek**	**2.42**	**204**	Pn		**Pn**	**06 12 35.0**	**0.0**
BVCY				Sg		**Sb**	**06 13 09.6**	**+0.7**
BVCY	**Beaver Creek** baz=22,SNR=251	**2.42**	**204**	P		**Pn**	**06 12 35.1**	**0.0**
BVCY	baz=22			Sb		**Sb**	**06 13 09.7**	**+0.7**
G27K	**Doyon Strip**	**2.50**	**333**			**Pn**	**06 12 36.9**	**+0.7**
G27K	**Doyon Strip**	**2.50**	**333**	Pn		**Pn**	**06 12 36.8**	**+0.7**
G27K	**Doyon Strip** baz=150,SNR=180	**2.50**	**333**	P		**Pn**	**06 12 36.7**	**+0.6**
G27K	baz=150			S		**Sn**	**06 13 07.8**	**+0.9**
DOT	**Dot Lake**	**2.53**	**249**			**Pn**	**06 12 36.0**	**-0.6**
DOT	**Dot Lake**	**2.53**	**249**	Pn		**Pn**	**06 12 35.9**	**-0.7**
DOT				Sg		**Sb**	**06 13 12.7**	**+0.6**
G30M	**tAoh Zraii Nji**	**2.58**	**23**			**Pn**	**06 12 37.8**	**+0.4**
G30M	**tAoh Zraii Nji**	**2.58**	**23**	Pn		**Pn**	**06 12 37.7**	**+0.4**
G30M	**tAoh Zraii Nji** baz=205,SNR=1000	**2.58**	**23**	P		**Pn**	**06 12 37.7**	**+0.4**
G30M	baz=205			S		**Sn**	**06 13 10.2**	**+1.2**
L26K	**Log Cabin Wild**	**2.60**	**234**			**Pn**	**06 12 36.9**	**-0.7**
L26K	**Log Cabin Wild** baz=50,SNR=28	**2.60**	**234**	P		**Pn**	**06 12 37.4**	**-0.2**
L26K	baz=50			Sb		**Sb**	**06 13 15.2**	**+1.1**
M27K	**Edge Creek, AK**	**2.68**	**213**			**Pn**	**06 12 38.3**	**-0.5**
M27K	**Edge Creek, AK** baz=30,SNR=613	**2.68**	**213**	P		**Pn**	**06 12 38.2**	**-0.5**
M27K	baz=30			Sb		**Sb**	**06 13 17.6**	**+1.0**
MENT	**Mentasta**	**2.79**	**235**			**Pn**	**06 12 39.9**	**-0.2**
RIDG	**Independent Ri**	**2.81**	**254**			**Pn**	**06 12 39.8**	**-0.8**
RIDG	comp=N,1μm,0.5s			IAML			06 13 25.9	
RIDG	comp=E,1μm,0.9s			IAML			06 13 29.3	
RIDG	**Independent Ri** baz=69	**2.81**	**254**	P		**Pn**	**06 12 39.9**	**-0.6**
RIDG	baz=69			Sb		**Sb**	**06 13 21.4**	**+1.0**
J25K	**Salcha River,**	**2.85**	**273**			**Pn**	**06 12 40.6**	**-0.5**
J25K	comp=E,722nm,0.5s			IAML			06 13 29.3	
J25K	comp=N,1μm,0.9s			IAML			06 13 31.6	
J25K	**Salcha River,** baz=87	**2.85**	**273**	P		**Pn**	**06 12 40.6**	**-0.5**
M26K	**Nabesna, AK**	**2.94**	**222**			**Pn**	**06 12 42.5**	**+0.3**
M26K	**Nabesna, AK** baz=38	**2.94**	**222**	P		**Pn**	**06 12 41.9**	**-0.4**
M26K	baz=38			Sb		**Sb**	**06 13 25.1**	**+1.2**
YUK3	**Moose Creek**	**2.97**	**196**	Pn		**Pn**	**06 12 43.1**	**+0.3**
YUK3				Sg		**Sb**	**06 13 25.6**	**+0.7**
YUK3	**Moose Creek** baz=14,SNR=675	**2.97**	**196**	P		**Pn**	**06 12 42.8**	**-0.1**
YUK3	baz=14			Sb		**Sb**	**06 13 25.5**	**+0.5**
PRP	**Porcupine Dome**	**3.00**	**290**			**Pn**	**06 12 43.0**	**-0.2**
PRP	comp=N,713nm,0.9s			IAML			06 13 36.0	
PRP	**Porcupine Dome** baz=105	**3.00**	**290**	P		**Pn**	**06 12 43.0**	**-0.2**
YUK2	**White River**	**3.01**	**199**	Pn		**Pn**	**06 12 43.3**	**0.0**
YUK2				Sn		**Sn**	**06 13 21.1**	**+1.5**
F28M	**Old Crow**	**3.03**	**352**			**Pn**	**06 12 43.9**	**+0.4**
F28M	**Old Crow**	**3.03**	**352**	Pn		**Pn**	**06 12 43.7**	**+0.2**
F28M	**Old Crow** baz=171,SNR=88	**3.03**	**352**	P		**Pn**	**06 12 43.5**	**0.0**
G26K	**Porcupine Rive** comp=N,611nm,0.8s	**3.12**	**321**	IAML			06 13 38.8	
G26K	comp=E,984nm,1.0s			IAML			06 13 39.4	
G26K	**Porcupine Rive**	**3.12**	**321**	Pn		**Pn**	**06 12 45.0**	**+0.3**
G26K	**Porcupine Rive** baz=136,SNR=88	**3.12**	**321**	P		**Pn**	**06 12 44.4**	**-0.3**
M31M	**Drury Creek, Y**	**3.13**	**139**			**Pn**	**06 12 44.5**	**-0.3**
M31M	**Drury Creek, Y** comp=N,713nm,0.6s	**3.13**	**139**	IAML			06 13 34.7	
M31M	comp=E,623nm,0.6s			IAML			06 13 40.3	
M31M	**Drury Creek, Y**	**3.13**	**139**	Pn		**Pn**	**06 12 44.0**	**-0.8**
M31M				Sg		**Sb**	**06 13 31.0**	**+1.7**
M31M	**Drury Creek, Y** baz=323,SNR=22	**3.13**	**139**	P		**Pn**	**06 12 44.0**	**-0.8**
K24K	**Donnelly Dome**	**3.18**	**258**			**Pn**	**06 12 45.0**	**-0.6**
K24K	**Donnelly Dome** baz=72	**3.18**	**258**	P		**Pn**	**06 12 45.3**	**-0.3**
F30M	**Barrier River**	**3.23**	**21**			**Pn**	**06 12 46.9**	**+0.8**
F30M	**Barrier River**	**3.23**	**21**	Pn		**Pn**	**06 12 46.4**	**+0.2**
F30M	**Barrier River** baz=203	**3.23**	**21**	P		**Pn**	**06 12 46.4**	**+0.2**
N30M	**Aishikik Lake**	**3.27**	**166**			**Pn**	**06 12 47.1**	**+0.2**
N30M	**Aishikik Lake** comp=E,708nm,0.7s	**3.27**	**166**	IAML			06 13 44.6	
N30M	comp=N,1μm,0.7s			IAML			06 13 44.9	
N30M	**Aishikik Lake**	**3.27**	**166**	Pn		**Pn**	**06 12 47.0**	**+0.2**
N30M				Sg		**Sb**	**06 13 35.5**	**+2.0**
N30M	**Aishikik Lake** baz=347,SNR=308	**3.27**	**166**	P		**Pn**	**06 12 47.0**	**+0.2**
BRWY	**Burwash Landin**	**3.28**	**182**	Pn		**Pn**	**06 12 47.5**	**+0.6**
BRWY				Sn		**Sn**	**06 13 26.8**	**+0.6**
BRWY				Sg		**Sg**	**06 13 37.1**	**-3.1**
YUK4	**Talbot Arm**	**3.30**	**179**	Pn		**Pn**	**06 12 46.7**	**-0.6**
YUK4				Sg		**Sb**	**06 13 35.5**	**+1.0**
YUK4	**Talbot Arm** baz=358,SNR=739	**3.30**	**179**	P		**Pn**	**06 12 46.7**	**-0.6**
FYU	**Fort Yukon**	**3.32**	**309**			**Pn**	**06 12 47.7**	**+0.3**
FYU	comp=E,815nm,1.2s			IAML			06 13 45.7	
YUK8	**Steele Glacier**	**3.39**	**188**	Pn		**Pn**	**06 12 49.4**	**+0.7**
YUK8				Sg		**Sb**	**06 13 40.0**	**+2.9**
YUK8	**Steele Glacier** baz=7.3,SNR=740	**3.39**	**188**	P		**Pn**	**06 12 49.2**	**+0.5**
PAX	**Paxson**	**3.42**	**244**			**Pn**	**06 12 48.9**	**0.0**
PAX	comp=E,776nm,0.8s			IAML			06 13 48.9	
PAX	**Paxson**	**3.42**	**244**	Pn		**Pn**	**06 12 49.1**	**+0.3**
PAX	**Paxson** baz=58	**3.42**	**244**	P		**Pn**	**06 12 48.6**	**-0.3**
N31M	**Braeburn, Yuko**	**3.43**	**155**			**Pn**	**06 12 49.1**	**+0.1**
N31M	**Braeburn, Yuko**	**3.43**	**155**	Pn		**Pn**	**06 12 49.2**	**+0.1**
N31M	**Braeburn, Yuko** baz=338,SNR=49	**3.43**	**155**	P		**Pn**	**06 12 49.1**	**+0.1**
F31M	**Tsiigehtchic**	**3.48**	**34**			**Pn**	**06 12 49.5**	**-0.1**
F31M	comp=E,472nm,1.1s			IAML			06 13 48.6	
F31M	comp=N,604nm,0.9s			IAML			06 13 51.3	
F31M	**Tsiigehtchic**	**3.48**	**34**	Pn		**Pn**	**06 12 49.9**	**+0.2**
F31M	**Tsiigehtchic** baz=218,SNR=160	**3.48**	**34**	P		**Pn**	**06 12 49.6**	**-0.1**
ILAR	**Eielson Array** comp=N,32nm,0.3s,baz=95,slow=13,SNR=758	**3.50**	**276**	Pn		**Pn**	**06 12 49.1**	**-0.8**
ILAR	comp=N,68nm,0.3s,baz=76,slow=29,SNR=7.3 comp=N,87nm,0.5s			Lg		Lg	06 13 40.2	
YUK5	**Granite Creek**	**3.54**	**173**			**Pn**	**06 12 50.7**	**+0.1**
YUK5	**Granite Creek**	**3.54**	**173**	Pn		**Pn**	**06 12 50.8**	**+0.3**
YUK5				Sg		**Sb**	**06 13 44.3**	**+3.1**
HDA	**Harding Lake**	**3.55**	**270**			**Pn**	**06 12 49.9**	**-0.7**
HDA	comp=E,887nm,0.5s			IAML			06 13 50.9	
HDA	**Harding Lake** baz=83	**3.55**	**270**	P		**Pn**	**06 12 50.1**	**-0.5**
WACK	**Wrangell Chich**	**3.66**	**226**			**Pn**	**06 12 52.4**	**+0.1**
BMAR	**Burnt Mountain**	**3.68**	**322**			**Pn**	**06 12 52.6**	**+0.1**
YUK6	**Outpost Mounta**	**3.71**	**177**			**Pn**	**06 12 53.3**	**+0.3**
YUK6	**Outpost Mounta**	**3.71**	**177**	Pn		**Pn**	**06 12 53.6**	**+0.6**
YUK6	**Outpost Mounta** baz=357,SNR=346	**3.71**	**177**	P		**Pn**	**06 12 52.9**	**-0.1**
G25K	**Bearman Lake**	**3.72**	**308**			**Pn**	**06 12 53.4**	**+0.6**
G25K	**Bearman Lake**	**3.72**	**308**	Pn		**Pn**	**06 12 53.3**	**+0.4**
G25K	**Bearman Lake** baz=122	**3.72**	**308**	P		**Pn**	**06 12 52.8**	**-0.1**
POKR	**Poker Plat Res** baz=94	**3.74**	**281**	P		**Pn**	**06 12 52.9**	**-0.3**
E27K	**Coleen River**	**3.75**	**344**			**Pn**	**06 12 54.2**	**+0.8**
E27K	**Coleen River** comp=E,355nm,1.1s	**3.75**	**344**	IAML			06 14 01.2	
E27K	**Coleen River**	**3.75**	**344**	Pn		**Pn**	**06 12 53.9**	**+0.5**
E27K	**Coleen River** baz=161,SNR=25	**3.75**	**344**	P		**Pn**	**06 12 54.0**	**+0.6**
F26K	**Sheenjek River**	**3.78**	**327**			**Pn**	**06 12 54.5**	**+0.8**
F26K	**Sheenjek River**	**3.78**	**327**	Pn		**Pn**	**06 12 54.9**	**+1.2**
F26K	**Sheenjek River** baz=142	**3.78**	**327**	P		**Pn**	**06 12 54.5**	**+0.8**
E29M	**Blow River**	**3.79**	**5**			**Pn**	**06 12 54.6**	**+0.7**
E29M	**Blow River** comp=N,343nm,1.1s	**3.79**	**5**	IAML			06 14 03.4	
E29M	**Blow River**	**3.79**	**5**	Pn		**Pn**	**06 12 54.1**	**+0.2**
E29M	**Blow River** baz=186	**3.79**	**5**	P		**Pn**	**06 12 54.0**	**+0.1**
MCARA	**McCarthy VSAT**	**3.80**	**213**			**Pn**	**06 12 55.0**	**+0.9**
MCARA	**McCarthy VSAT**	**3.80**	**213**	Pn		**Pn**	**06 12 54.8**	**+0.8**
MCARA	**McCarthy VSAT** baz=29,SNR=219	**3.80**	**213**	P		**Pn**	**06 12 54.8**	**+0.8**
BARN	**Barnard Glacie**	**3.83**	**202**			**Pn**	**06 12 55.4**	**+0.8**
BARN	comp=N,728nm,0.9s			IAML			06 13 59.5	
BARN	comp=E,586nm,0.6s			IAML			06 13 59.6	
PTPK	**Patty Peak**	**3.85**	**208**	Pn		**Pn**	**06 12 55.7**	**+0.8**
HYT	**Haines Junctio**	**3.86**	**171**			**Pn**	**06 12 55.8**	**+0.8**
HYT	**Haines Junctio**	**3.86**	**171**	Pn		**Pn**	**06 12 55.2**	**+0.2**
HYT				Sn		**Sn**	**06 13 40.4**	**-0.3**
HYT				Sg		**Sb**	**06 13 53.4**	**+2.8**
HYT	**Haines Junctio** baz=352,SNR=84	**3.86**	**171**	P		**Pn**	**06 12 55.2**	**+0.2**
CTGM	**Chitina Glacie**	**3.87**	**199**			**Pn**	**06 12 56.0**	**+0.9**
CTGM	comp=N,395nm,0.6s			IAML			06 13 58.3	
CTGM	comp=E,496nm,0.7s			IAML			06 14 02.9	
CTGM	**Chitina Glacie**	**3.87**	**199**	Pn		**Pn**	**06 12 56.0**	**+0.9**
CTGM				Sn		**Sn**	**06 13 40.7**	**-0.1**
CTGM				Sg		**Sb**	**06 13 54.4**	**+3.7**
CTG	**Chitna Glacier** baz=17,SNR=206	**3.87**	**199**	P		**Pn**	**06 12 55.9**	**+0.8**
CCB	**Clear Creek Bu**	**3.90**	**274**			**Pn**	**06 12 54.5**	**-0.8**
CCB	comp=N,393nm,0.9s			IAML			06 13 58.7	
CCB	comp=E,307nm,0.8s			IAML			06 14 00.3	
COLA	**College**	**3.91**	**278**			**Pn**	**06 12 55.4**	**-0.1**
COLA	**College** baz=90	**3.91**	**278**	P		**Pn**	**06 12 55.0**	**-0.5**
O28M	**Mount Upton** comp=N,426nm,1.1s	**3.93**	**190**	IAML			06 14 01.4	
O28M	comp=E,284nm,0.9s			IAML			06 14 06.4	
O28M	**Mount Upton**	**3.93**	**190**	Pn		**Pn**	**06 12 57.2**	**+1.1**
O28M				Sn		**Sn**	**06 13 42.6**	**0.0**
O28M	**Mount Upton** baz=9.0,SNR=247	**3.93**	**190**	P		**Pn**	**06 12 56.8**	**+0.7**
GLB	**Gilahina Butte** comp=E,287nm,1.1s	**3.94**	**218**	IAML			06 14 00.6	
GLB	comp=N,345nm,0.8s			IAML			06 14 04.1	
LOGN	**Logan Glacier** comp=E,601nm,1.0s	**3.96**	**196**	IAML			06 14 02.1	
LOGN	comp=N,551nm,0.7s			IAML			06 14 03.8	
LOGN	**Logan Glacier**	**3.96**	**196**	Pn		**Pn**	**06 12 57.5**	**+1.2**
BALM	**Baldy**	**3.97**	**206**	Pn		**Pn**	**06 12 57.1**	**+0.7**
E28M	**Babbage River**	**4.00**	**356**			**Pn**	**06 12 57.2**	**+0.4**
E28M	**Babbage River**	**4.00**	**356**	Pn		**Pn**	**06 12 57.4**	**+0.6**
E28M	**Babbage River** baz=175	**4.00**	**356**	P		**Pn**	**06 12 57.1**	**+0.2**
H24K	**Noodor Dome**	**4.03**	**292**			**Pn**	**06 12 57.0**	**-0.2**
H24K	**Noodor Dome** comp=N,303nm,0.6s	**4.03**	**292**	IAML			06 14 09.7	
H24K	comp=E,343nm,0.8s			IAML			06 14 10.2	
H24K	**Noodor Dome** baz=104	**4.03**	**292**	P		**Pn**	**06 12 56.6**	**-0.7**
N25K	**Chitina, Valde** comp=N,262nm,0.9s	**4.03**	**224**	IAML			06 14 07.2	
N25K	**Chitina, Valde**	**4.03**	**224**	Pn		**Pn**	**06 12 57.3**	**0.0**
N25K	**Chitina, Valde** baz=39	**4.03**	**224**	P		**Pn**	**06 12 57.3**	**0.0**
VRDI	**Verde Repeater**	**4.04**	**214**			**Pn**	**06 12 57.4**	**0.0**
VRDI	**Verde Repeater** comp=N,289nm,1.0s	**4.04**	**214**	IAML			06 14 13.2	
WRH	**Wood River Hil**	**4.04**	**272**			**Pn**	**06 12 57.0**	**-0.3**
WRH	**Wood River Hil** comp=E,385nm,0.6s	**4.04**	**272**	IAML			06 14 06.5	
WRH	comp=N,399nm,1.2s			IAML			06 14 11.2	
O30N	**Mendenhall** comp=E,553n

comp=E,470nm,0.7s
GRNC Granite Creek 4.15 201 Pn Pn 06 13 00.6 +1.5
GRNC Sn Sn **06 13 48.6 +0.7**
G24K Hadweenzic Riv 4.17 304 Pn 06 12 59.1 0.0
G24K Hadweenzic Riv 4.17 304 IAML 06 14 13.2
comp=N,284nm,1.1s
G24K IAML 06 14 18.2
comp=E,238nm,0.8s
G24K Hadweenzic Riv 4.17 304 P Pn 06 12 58.7 -0.3
baz=116
M24K Tolsona, Glenn 4.19 236 P Pn 06 12 59.4 -0.1
baz=50
INK Inuvik 4.24 27 Pn Pn 06 12 59.7 -0.3
comp=E,2.8nm,0.3s,baz=214,slow=20,SNR=66
INK Pg Pb **06 13 09.1 -0.8**
comp=E,5.1nm,0.3s,baz=187,slow=15,SNR=13
INK Sn Sn **06 13 47.7 -2.1**
comp=E,17nm,0.3s,baz=258,slow=30,SNR=7.0
INK Lg Lg 06 14 06.2
comp=E,14nm,0.3s,baz=116,slow=26,SNR=6.7
comp=E,9.1nm,0.3s
INK Inuvik 4.24 27 Pn 06 13 00.1 0.0
INK Inuvik 4.24 27 Pn Pn 06 12 60.0 -0.1
INK Inuvik 4.24 27 P Pn 06 12 59.8 -0.3
baz=212,SNR=127
TGL Tana Glacier 4.32 208 Pn 06 13 01.7 +0.5
O29M Mount Kennedy 4.35 179 Pn 06 13 03.0 +1.4
O29M Mount Kennedy 4.35 179 IAML 06 14 12.8
comp=E,392nm,0.7s
O29M IAML 06 14 15.4
comp=N,288nm,0.7s
O29M Mount Kennedy 4.35 179 Pn Pn 06 13 03.1 +1.5
O29M Mount Kennedy 4.35 179 P Pn 06 13 02.9 +1.2
baz=359,SNR=180
N32M Quiet Lake 4.35 141 Pn Pn 06 13 00.9 -0.8
N32M Quiet Lake 4.35 141 P Pn 06 13 00.8 -0.8
baz=326
WHY Whitehorse 4.37 154 Pn 06 13 01.9 0.0
WHY Whitehorse 4.37 154 IAML 06 14 20.8
comp=N,377nm,0.8s
WHY Whitehorse 4.37 154 Pn Pn 06 13 01.4 -0.5
WHY Sn Sn **06 13 53.6 +0.5**
WHY Whitehorse 4.37 154 P Pn 06 13 01.1 -0.8
baz=337,SNR=93
CRQE Cirque 4.38 209 P Pn 06 13 03.1 +1.0
baz=25
CRQM Cirque 4.38 209 Pn 06 13 03.5 +1.2
NEA2 Nenana 4.45 274 Pn 06 13 02.0 -0.9
NEA2 Nenana 4.45 274 IAML 06 14 22.4
comp=N,301nm,0.9s
NEA2 IAML 06 14 28.3
comp=E,261nm,0.7s
NEA2 Nenana 4.45 274 P Pn 06 13 02.0 -0.9
baz=85
E25K Arctic Village 4.45 325 Pn Pn 06 13 04.2 +1.2
E25K Arctic Village 4.45 325 P Pn 06 13 04.1 +1.2
baz=139,SNR=12
WAT6 Susitna Watana 4.51 247 P Pn 06 13 04.2 +0.2
baz=59
RKAV Rock Avalanche 4.51 197 Pn 06 13 05.5 +1.6
RKAV Rock Avalanche 4.51 197 Pn Pn 06 13 05.9 +2.0
RKAV Sg Sb **06 14 13.6 +4.3**
KLU Klutina 4.54 229 Pn 06 13 05.8 +1.5
KLU Klutina 4.54 229 IAML 06 14 16.6
comp=N,417nm,0.7s
KLU IAML 06 14 20.7
comp=E,228nm,1.0s
KLU Klutina 4.54 229 P Pn 06 13 05.1 +0.9
baz=43
MCK McKinley 4.55 263 IAML 06 14 22.0
comp=N,287nm,0.9s
MCK IAML 06 14 26.8
comp=E,291nm,0.7s
MCK McKinley 4.55 263 P Pn 06 13 04.8 +0.5
baz=74
I23K Minto, Yukon-K 4.55 281 Pn 06 13 03.3 -1.0
I23K IAML 06 14 26.5
comp=E,389nm,0.8s
I23K Minto, Yukon-K 4.55 281 P Pn 06 13 04.0 -0.3
baz=92
BMRM Bremner River 4.55 219 Pn 06 13 05.1 +0.6
BMRM IAML 06 14 23.3
comp=E,300nm,0.8s
BMRM IAML 06 14 23.5
comp=N,361nm,1.0s
BMRM Bremner River 4.55 219 P Pn 06 13 05.7 +1.2
baz=34
BARK Barkley Ridge 4.58 204 Pn 06 13 06.8 +1.9
P30M Million Dollar 4.60 169 Pn 06 13 05.7 +0.5
P30M Million Dollar 4.60 169 IAML 06 14 25.2
comp=N,297nm,0.8s
P30M Million Dollar 4.60 169 Pn Pn 06 13 05.6 +0.5
P30M Million Dollar 4.60 169 P Pn 06 13 05.1 0.0
baz=350
PCA Pinnacle 4.61 189 Pn 06 13 07.1 +2.0
PCA Pinnacle 4.61 189 Pn Pn 06 13 07.4 +2.2
PINM Pinnacle 4.61 189 P Pn 06 13 07.2 +2.0
baz=8.0,SNR=266
RND Reindeer 4.61 259 IAML 06 14 28.5
comp=N,273nm,1.0s
RND IAML 06 14 29.8
comp=E,234nm,0.8s
BWN Browne 4.67 269 Pn 06 13 03.8 -2.2
H23K Yukon River 4.70 290 Pn 06 13 05.4 -1.0
H23K Yukon River 4.70 290 IAML 06 14 29.9
comp=N,224nm,0.8s
H23K IAML 06 14 36.5
comp=E,210nm,1.0s
H23K Yukon River 4.70 290 P Pn 06 13 05.4 -1.0
baz=100
MESA MESA 4.71 200 Pn 06 13 08.9 +2.1
MESA IAML 06 14 27.5
comp=E,246nm,0.7s
MESA MESA 4.71 200 Pn Pn 06 13 08.6 +1.9
MESA MESA 4.71 200 P Pn 06 13 08.8 +2.1
baz=17,SNR=148
BCPM Bancas Point 4.71 185 Pn 06 13 08.2 +1.6
BCPM IAML 06 14 25.4
comp=E,322nm,0.8s
BCPM IAML 06 14 28.9
comp=N,320nm,1.0s
D27M Malcolm River 4.71 350 Pn 06 13 07.8 +1.2
D27M Malcolm River 4.71 350 P Pn 06 13 07.7 +1.1
baz=168
F24K Squaw Lake 4.72 312 Pn 06 13 07.9 +1.3
F24K Squaw Lake 4.72 312 P Pn 06 13 07.7 +1.1
baz=124
WAT1 Susitna Watana 4.72 252 P Pn 06 13 07.3 +0.7
baz=63
D28M Stokes Point 4.72 0 Pn Pn 06 13 08.0 +1.4
D28M Stokes Point 4.72 0 P Pn 06 13 08.0 +1.4
baz=180,SNR=29
DIV Divide 4.76 226 Pn 06 13 08.9 +1.6
DIV Divide 4.76 226 IAML 06 14 40.1
comp=N,197nm,0.9s
DIV Divide 4.76 226 Pn Pn 06 13 09.1 +1.8
DIV Sg Sb **06 14 21.5 +5.1**
SCM Sheep Creek Mo 4.79 238 Pn 06 13 09.8 +2.1
SCM Sheep Creek Mo 4.79 238 P Pn 06 13 07.0 -0.7
baz=50
BERG Berg Lake 4.83 211 Pn 06 13 10.1 +1.9
BERG Berg Lake 4.83 211 IAML 06 14 38.5
comp=N,263nm,1.1s
GOAT Goat Mountain 4.91 217 Pn 06 13 11.8 +2.5
M23K Glacier View 4.96 239 Pn 06 13 11.8 +1.8
M23K Glacier View 4.96 239 P Pn 06 13 09.6 -0.4
baz=51
BGLC Bering Glacier 4.99 207 P Pn 06 13 10.9 +0.5
baz=23
RAGM Ragged Mountai 5.07 216 Pn 06 13 12.0 +0.6
RAGM Ragged Mountai 5.07 216 IAML 06 14 45.3
comp=E,284nm,0.8s
G23K Bananza Creek 5.11 299 Pn 06 13 11.9 -0.1
G23K Bananza Creek 5.11 299 IAML 06 14 43.2
comp=N,127nm,0.8s
G23K Bananza Creek 5.11 299 P Pn 06 13 11.9 -0.1
baz=109
MLY Manley 5.14 280 IAML 06 14 40.4
comp=E,156nm,0.8s
MLY IAML 06 14 47.8
comp=N,166nm,0.9s
MLY Manley 5.14 280 P Pn 06 13 12.2 -0.2
baz=89
SML Sawmill 5.18 241 Pn 06 13 14.6 +1.6
SML Sawmill 5.18 241 P Pn 06 13 14.0 +1.0
baz=53
TRF Thorofare Moun 5.21 262 IAML 06 14 44.6
comp=N,209nm,0.7s
TRF IAML 06 14 46.5
comp=E,234nm,0.7s
TRF Thorofare Moun 5.21 262 P Pn 06 13 13.8 +0.3
baz=72
EYAK Cordova Ski Ar 5.22 221 Pn 06 13 15.2 +1.7
EYAK Cordova Ski Ar 5.22 221 P Pn 06 13 13.5 0.0
baz=35
P33M Teslin, Yukon 5.22 145 IAML 06 14 41.0
comp=N,151nm,0.9s
P33M IAML 06 14 48.8
comp=E,155nm,0.7s
P33M Teslin, Yukon 5.22 145 Pn Pn 06 13 13.7 0.0
P33M Teslin, Yukon 5.22 145 P Pn 06 13 13.6 0.0
baz=330,SNR=12
E24K Your Creek 5.22 316 Pn 06 13 15.2 +1.6
E24K Your Creek 5.22 316 P Pn 06 13 13.2 -0.4
baz=127
BPAW Bear Paw Mtn. 5.34 270 Pn 06 13 14.7 -0.5
BPAW Bear Paw Mtn. 5.34 270 IAML 06 14 46.7
comp=E,171nm,0.9s
BPAW Bear Paw Mtn. 5.34 270 P Pn 06 13 14.5 -0.7
baz=79
COLD Coldfoot 5.36 304 Pn Pn 06 13 16.5 +1.0
COLD Sn Sn **06 14 18.1 +0.7**
COLD Coldfoot 5.36 304 P Pn 06 13 16.0 +0.5
baz=114
GLI Glacier Island 5.37 229 IAML 06 14 49.2
comp=E,112nm,1.2s
GLI IAML 06 14 49.5
comp=N,107nm,0.8s
GLI Glacier Island 5.37 229 P Pn 06 13 15.6 0.0
baz=42
C27K Jago River 5.38 341 Pn 06 13 17.7 +2.0
C27K Jago River 5.38 341 Pn Pn 06 13 17.3 +1.6
C27K Jago River 5.38 341 P Pn 06 13 17.1 +1.5
baz=157
KAIM Kayak Island 5.41 212 P Pn 06 13 16.9 +0.7
baz=27
GHO Glory Hole Cre 5.42 243 Pn 06 13 17.9 +1.5
SKAG Skagway 5.43 161 P Pn 06 13 16.7 +0.3
baz=344
H22K Ishtalitna Cre 5.45 289 P Pn 06 13 16.7 -0.1
baz=98
KNK Knik Glacier 5.47 238 P Pn 06 13 17.2 +0.2
baz=50
HIN Hinchinbrook I 5.56 224 Pn 06 13 19.6 +1.3
E23K Chandalar 5.56 313 Pn 06 13 20.0 +1.7
E23K Chandalar 5.56 313 P Pn 06 13 19.6 +1.3
baz=123
D25K Kavik River 5.58 331 Pn 06 13 20.0 +1.5
D25K Kavik River 5.58 331 Pn Pn 06 13 20.0 +1.5
D25K Sn Sn **06 14 23.0 +0.2**
D25K Kavik River 5.58 331 P Pn 06 13 19.5 +1.0
baz=144
P32M Atlin 5.58 153 Pn 06 13 19.1 +0.6
P32M Atlin 5.58 153 Pn Pn 06 13 18.9 +0.4
P32M Atlin 5.58 153 P Pn 06 13 18.5 -0.1
baz=337,SNR=35
PMR Palmer 5.61 242 P Pn 06 13 19.1 +0.2
baz=53
CUT Chulitna 5.62 252 P Pn 06 13 19.4 +0.5
baz=62
I21K Tanana 5.66 282 Pn 06 13 19.9 +0.3
I21K Tanana 5.66 282 P Pn 06 13 19.2 -0.3
baz=90
G22K Bettles 5.73 299 Pn 06 13 21.6 +1.0
G22K Bettles 5.73 299 P Pn 06 13 20.2 -0.3
baz=108
C26K Camden Bay 5.82 339 Pn Pn 06 13 22.9 +1.2
C26K Camden Bay 5.82 339 P Pn 06 13 22.5 +0.8
baz=153
TOLK Toolik Lake Re 5.89 318 Pn 06 13 24.7 +1.9
TOLK Toolik Lake Re 5.89 318 P Pn 06 13 24.2 +1.5
baz=128
M22K Willow 5.90 246 P Pn 06 13 23.2 +0.4
baz=56
CHUM Lake Minchumin 5.96 269 Pn 06 13 23.3 -0.4
CHUM Lake Minchumin 5.96 269 P Pn 06 13 23.2 -0.5
baz=77
H21K Melozitna Rive 6.02 286 P Pn 06 13 24.0 -0.5
baz=94
D24K Happy Valley 6.02 323 Pn 06 13 25.3 +0.8
D24K Happy Valley 6.02 323 P Pn 06 13 25.0 +0.5
baz=134
F22K John River 6.18 304 Pn 06 13 27.8 +1.1
F22K John River 6.18 304 P Pn 06 13 27.5 +0.8
baz=112
PPLA Purkeypile 6.21 260 P Pn 06 13 27.3 +0.1
baz=68
E22K Anaktuvuk Pass 6.31 310 Pn 06 13 29.9 +1.3
E22K Anaktuvuk Pass 6.31 310 P Pn 06 13 29.8 +1.3
baz=118
SKT Skwentna 6.34 251 Pn 06 13 30.2 +1.2
SKT Skwentna 6.34 251 P Pn 06 13 29.9 +1.0
baz=60
BESE Bessie Mountai 6.35 161 Pn 06 13 30.2 +1.1
R33M Jennings River 6.40 142 P Pn 06 13 30.2 +0.3
baz=328
C24K Franklin Bluff 6.40 327 P Pn 06 13 30.2 +0.5
baz=138
G21K Allakaket 6.41 294 Pn 06 13 30.2 +0.4
G21K Allakaket 6.41 294 P Pn 06 13 29.0 -0.7
baz=100
D23K Nanushuk River 6.41 318 P Pn 06 13 30.5 +0.6
baz=127
IMAR Indian Mountai 6.43 289 Pn 06 13 29.1 -1.0
Q32M Nakina River 6.46 149 Pn 06 13 31.1 +0.4
Q32M Nakina River 6.46 149 P Pn 06 13 31.3 +0.5
baz=334,SNR=40
F21K Alatna River 6.56 300 Pn 06 13 32.3 +0.4
F21K Alatna River 6.56 300 P Pn 06 13 31.9 0.0
baz=107
J20K Nowinta River 6.69 273 P Pn 06 13 32.8 -0.8
baz=79
I20K Naaghedeneel 6.74 279 Pn 06 13 33.9 -0.4
I20K Naaghedeneel 6.74 279 P Pn 06 13 34.0 -0.4
baz=84
S31K Pelican 6.80 169 P Pn 06 13 35.3 +0.1
baz=351,SNR=17
K20K Telida 6.86 266 Pn 06 13 35.5 -0.5
K20K Telida 6.86 266 P Pn 06 13 34.9 -1.1
baz=73
H20K Anotleneega Mo 6.88 284 Pn 06 13 36.7 +0.4
H20K Anotleneega Mo 6.88 284 P Pn 06 13 35.7 -0.6
baz=90
C23K Itkillik River 6.95 324 P Pn 06 13 37.0 -0.2
baz=133
SPCR Spurr Chakacha 7.04 247 P Pn 06 13 37.7 -0.9
baz=55
M20K Styx River 7.05 254 Pn 06 13 39.5 +0.8
M20K Styx River 7.05 254 P Pn 06 13 38.4 -0.3
baz=61
SPNN North Nagishla 7.14 249 Pn 06 13 40.8 +0.7
E21K Killik River 7.17 309 Pn 06 13 41.4 +1.1
E21K Killik River 7.17 309 P Pn 06 13 40.6 +0.4
baz=115
J19K Poorman 7.36 273 P Pn 06 13 42.4 -0.5
baz=78
F20K Avaraart Lake 7.37 297 Pn 06 13 43.2 +0.2
F20K Avaraart Lake 7.37 297 P Pn 06 13 42.6 -0.4
baz=102
C36M Paulatuk 7.43 44 Pn 06 13 42.7 -1.1
C36M Paulatuk 7.43 44 Pn Pn 06 13 42.9 -0.9
C36M Paulatuk 7.43 44 P Pn 06 13 43.6 -0.2
baz=238
BRSE Bradley Lake S 7.45 234 Pn 06 13 44.4 +0.3
BRSE Bradley Lake S 7.45 234 P Pn 06 13 43.8 -0.2
baz=44
DLBC Dease Lake 7.47 142 Pn Pn 06 13 44.3 -0.3
comp=N,1.6nm,0.3s,baz=330,slow=7.6,SNR=9.5
DLBC Lg Lg 06 15 47.2
comp=N,4.4nm,0.3s,baz=41,slow=26,SNR=20
DLBC LR LR 06 17 18.0
comp=N,56nm,20.4s,baz=98,slow=43
comp=N,4.7nm,0.4s
DLBC Dease Lake 7.47 142 Pn 06 13 44.9 +0.3
DLBC Dease Lake 7.47 142 Pn Pn 06 13 44.3 -0.3
DLBC Dease Lake 7.47 142 P Pn 06 13 44.2 -0.3
baz=330
RDT Redoubt 7.49 243 Pn 06 13 45.4 +0.6
H19K Roundabout Mou 7.53 285 Pn 06 13 45.4 +0.3
H19K Roundabout Mou 7.53 285 P Pn 06 13 44.9 -0.2
baz=89
DFR Drift River 7.59 244 Pn 06 13 46.8 +0.7
L19K White Mountain 7.63 259 P Pn 06 13 46.5 -0.1
baz=64
S34M Telegraph Cree 7.67 148 Pn 06 13 48.0 +0.9
S34M Telegraph Cree 7.67 148 P Pn 06 13 47.5 +0.4
baz=335,SNR=9.0
RDWB Redoubt West 7.72 244 Pn 06 13 48.6 +0.7
C21K Knifeblade Rid 7.75 313 P Pn 06 13 48.5 +0.3
baz=118
GCSA Galena City Sc 7.77 279 P Pn 06 13 48.5 +0.1
baz=83
SIT Sitka 7.78 166 P Pn 06 13 48.6 0.0
baz=349
G19K Purcell Mounta 7.80 289 Pn 06 13 49.0 +0.1
G19K Purcell Mounta 7.80 289 P Pn 06 13 48.3 -0.6
baz=93
E20K Nigu River 7.86 305 P Pn 06 13 50.5 +0.7
baz=110
B21K Ikpikpuk River 7.94 316 P Pn 06 13 51.1 +0.4
baz=122
J18K Innoko River 7.96 270 Pn 06 13 50.8 -0.4
J18K Innoko River 7.96 270 P Pn 06 13 50.7 -0.5
baz=74
B22K Teshekpuk Lake 8.01 322 P Pn 06 13 51.4 -0.4
baz=129
E19K Redstone River 8.03 299 P Pn 06 13 51.5 -0.5
baz=102
ILW Iliamna West 8.10 242 Pn 06 13 54.0 +0.8
F19K Shaleruckik Mo 8.13 294 Pn 06 13 53.4 0.0
F19K Shaleruckik Mo 8.13 294 P Pn 06 13 52.9 -0.5
baz=97
D20K Etivluk River 8.17 308 P Pn 06 13 53.8 -0.2
baz=112
N19K Bonanza Creek 8.17 249 P Pn 06 13 52.5 -1.6
baz=55
KOTAN Kotaneelee Air 8.17 117 P Pn 06 13 54.3 +0.2
baz=310
H18K Honhosa River 8.35 282 Pn 06 13 56.4 -0.1
H18K Honhosa River 8.35 282 P Pn 06 13 56.3 -0.1
baz=85
M18K Stony River 8.36 256 P Pn 06 13 55.7 -0.9
baz=60
L18K Granite Mounta 8.39 261 Pn 06 13 57.2 +0.1
L18K Granite Mounta 8.39 261 P Pn 06 13 56.4 -0.6
baz=66
P19K Oil Pt 8.41 240 P Pn 06 13 56.8 -0.5
baz=48
G18K Tagagawik 8.44 288 Pn 06 13 57.7 +0.1
G18K Tagagawik 8.44 288 P Pn 06 13 56.8 -0.8
baz=90
O19K Port Alsworth 8.47 246 P Pn 06 13 57.4 -0.8
baz=52
D19K Kuna River 8.62 305 Pn 06 14 00.8 +0.7
D19K Kuna River 8.62 305 P Pn 06 14 00.3 +0.2
baz=108
T35M Bob Quinn 8.72 148 P Pn 06 14 01.4 -0.1
baz=335
N18K Kilae Creek 8.82 251 P Pn 06 14 02.3 -0.5
baz=56
A22K Sinclair Lake 8.83 323 P Pn 06 14 02.9 -0.1
baz=128
F18K Selawik 8.86 292 P Pn 06 14 02.9 -0.4
baz=93
Q20K Shuyak Island 8.86 233 P Pn 06 14 02.6 -0.8
baz=41
A36M Sachs Harbour 8.89 28 Pn 06 14 02.6 -1.1
A36M Sachs Harbour 8.89 28 P Pn 06 14 03.4 -0.4
baz=221,SNR=11
K17K Iditarod 8.89 266 P Pn 06 14 02.9 -0.9
baz=69
B20K Meade River 8.89 315 P Pn 06 14 03.6 -0.2
baz=118
U33K Whale Pass 8.98 159 P Pn 06 14 04.2 -0.8
baz=344
J17K VABM Dome 9.00 271 P Pn 06 14 04.3 -1.1
baz=73
H17K Granite Mounta 9.03 282 P Pn 06 14 05.1 -0.6
baz=82
Q19K Cape Douglas, 9.07 238 P Pn 06 14 04.9 -1.4
baz=45
M17K Holitna River 9.08 258 P Pn 06 14 05.8 -0.6
baz=61
L17K Donlin 9.12 263 P Pn 06 14 06.3 -0.6
baz=66
G17K Kiwalik Mounta 9.28 285 P Pn 06 14 08.9 -0.2
baz=86
E18K Tukpahlearik C 9.30 297 Pn 06 14 09.8 +0.4
E18K Tukpahlearik C 9.30 297 P Pn 06 14 09.4 -0.1
baz=97
C19K Lookout Ridge 9.31 308 P Pn 06 14 09.6 -0.1
baz=109
P18K Big Mountain, 9.34 243 P Pn 06 14 10.1 0.0
baz=49
A21K Barrow 9.45 323 P Pn 06 14 11.7 +0.3
baz=126
F17K Baldwin Pennin 9.49 291 P Pn 06 14 11.9 -0.1
baz=91
FNSB Fort Nelson 9.56 120 Sn Sn 06 16 01.6 +0.9
I17K Unalakleet 9.56 275 Pn 06 14 12.9 -0.1
I17K Unalakleet 9.56 275 P Pn 06 14 12.8 -0.2
baz=76
CRAG Craig 9.61 160 P Pn 06 14 13.4 -0.2
baz=345
J16K Anvik River 9.69 272 P Pn 06 14 14.4 -0.4
baz=72
E17K Hotham Inlet 9.74 295 Pn 06 14 15.5 0.0
E17K Hotham Inlet 9.74 295 P Pn 06 14 15.3 -0.1
baz=94
C18K Utukok River 9.75 304 P Pn 06 14 15.5 -0.1
baz=104
L16K Owhat River 9.80 262 P Pn 06 14 15.5 -0.8
baz=64
O17K Koliganek Bris 9.84 249 P Pn 06 14 15.5 -1.3
baz=53
V35K Ketchikan 9.98 156 P Pn 06 14 18.4 -0.4
baz=342
G16K Koyuk River 10.00 285 P Pn 06 14 18.8 -0.2
baz=84
KUKN Kugluktuk,NWT 10.04 61 Pn Pn 06 14 18.4 -1.1
H16K Elim 10.06 281 P Pn 06 14 19.4 -0.5
baz=80
N16K Nishlik Lake 10.12 255 P Pn 06 14 19.8 -0.8
baz=57
A19K Wainwright 10.19 313 P Pn 06 14 21.2 -0.3
baz=112
D17K Noatak River 10.28 298 P Pn 06 14 22.6 -0.2
baz=96
O16K Kokwok River B 10.35 250 P Pn 06 14 22.5 -1.3
baz=53
C17K DeLong Mountai 10.42 302 P Pn 06 14 25.0 +0.2
baz=100
K15K Wolf Creek Mou 10.44 267 Pn 06 14 24.7 -0.3
K15K Wolf Creek Mou 10.44 267 P Pn 06 14 25.4 +0.4
baz=67
L15K Ungalak Mounta 10.68 264 P Pn 06 14 28.1 -0.2
baz=64
G15K Niukluk 10.76 283 P Pn 06 14 29.4 +0.1
baz=80
M15K Kasigluk River 10.80 259 P Pn 06 14 29.8 -0.2
baz=59
N15K Kwethluk River 10.84 255 P Pn 06 14 30.4 -0.1
baz=57
F15K North Star Dit 10.91 287 Pn 06 14 33.8 +2.3
F15K North Star Dit 10.91 287 P Pn 06 14 32.6 +1.1
baz=84
YKAW3 Yellowknife Wh 10.92 90 Pn 06 14 31.4 -0.1
YKAW3 Yellowknife Wh 10.92 90 P Pn 06 14 31.1 -0.5
YKA Yellowknife Ar 10.95 90 Pn Pn 06 14 30.1 -1.9
comp=N,0.7nm,0.3s,baz=306,slow=12,SNR=26
YKA Sn Sn 06 16 24.9 -10
comp=N,0.5nm,0.3s,baz=292,slow=24,SNR=4.7
comp=N,2.9nm,0.8s
YKA Yellowknife Ar 10.95 90 Pn 06 14 31.9 0.0
YKAW1 Yellowknife Wh 11.00 90 Pn 06 14 32.6 -0.1
YKAW1 Yellowknife Wh 11.00 90 P Pn 06 14 32.3 -0.4
J14K Nanvaranak Lak 11.14 272 P Pn 06 14 33.9 -0.7
baz=69
C16K Lisburne Hills 11.19 301 Pn 06 14 35.5 +0.3
C16K Lisburne Hills 11.19 301 P Pn 06 14 35.1 -0.1
baz=96
M14K Bethel 11.31 261 P Pn 06 14 36.3 -0.7
baz=60
L14K Kuka Creek 11.34 264 Pn Pn 06 14 36.7 -0.6
L14K Kuka Creek 11.34 264 P Pn 06 14 37.1 -0.2
baz=63
ANM Nome 11.40 282 P Pn 06 14 37.9 -0.3
baz=78
F14K Arctic Creek 11.63 287 P Pn 06 14 41.6 +0.3

	baz=82						
TNA	**Tin City**	**12.28**	**287**		**Pn**	06 14 50.9	**+0.8**
TNA	**Tin City**	**12.28**	**287**	P	**Pn**	06 14 50.2	**+0.1**
	baz=81						
GAMB	**Gambell**	**14.28**	**282**	P	**Pn**	06 15 17.0	**-0.5**
	baz=72						
EDM	**Edmonton**	**17.24**	**120**		**P**	06 16 00.9	**+3.2**
RES	**Resolute Bay**	**17.72**	**37**	P	**Pn**	06 15 59.6	**-2.2**
	comp=N,0.5nm,0.3s,baz=255,slow=9.7,SNR=18						
RES				S	Sn	06 19 04.8	-14
	comp=N,3.9nm,0.8s,baz=276,slow=14,SNR=4.1						
	comp=N,2.2nm,0.5s						
RES	**Resolute Bay**	**17.72**	**37**		**Pn**	06 15 59.7	**-2.2**
RES	**Resolute Bay**	**17.72**	**37**	P	**Pn**	06 15 59.5	**-2.4**
NEW	**Newport**	**20.11**	**134**	P	**P**	06 16 29.3	**+0.1**
	comp=N,0.9nm,0.6s,baz=350,slow=9.5,SNR=6.4						
	comp=N,0.9nm,0.6s						
NEW	**Newport**	**20.11**	**134**	IAmb	IAmb	06 16 38.7	
	comp=Z,10nm,1.3s						
C09A	**Chrisman Ranch**	**20.18**	**137**	IAmb	IAmb	06 16 36.6	
	comp=Z,8.4nm,1.1s						
BILL	**Bilibino**	**21.70**	**304**	P	**P**	06 16 44.2	**-1.9**
ILON	**Igloolik, Nuna**	**22.00**	**52**	P	**P**	06 16 49.7	**+0.3**
ILON				IAmb	IAmb	06 16 59.2	
	comp=Z,5.8nm,0.7s						
POIN	**Pond Inlet**	**22.48**	**43**	P	**P**	06 16 52.8	**-1.7**
POIN				IAmb	IAmb	06 16 59.8	
	comp=Z,8.4nm,1.3s						
EGMT	**Eagleton**	**22.80**	**123**	IAmb	IAmb	06 17 04.7	
	comp=Z,9.3nm,1.1s						
LOHW	**Long Hollow**	**26.34**	**129**	IAmb	IAmb	06 17 38.0	
	comp=Z,3.5nm,0.8s						
PD31	**Pinedale Array**	**27.44**	**129**	P	**P**	06 17 40.8	**-0.8**
PD31				IAmb	IAmb	06 17 51.6	
	comp=Z,3.8nm,1.2s						
PDAR	**Pinedale Array**	**27.44**	**129**	P	**P**	06 17 43.0	**+1.4**
	comp=Z,1.3nm,0.8s,baz=351,slow=5.2,SNR=13						
	comp=Z,1.3nm,0.8s						
PDAR	**Pinedale Array**	**27.44**	**129**	P	**P**	06 17 40.4	**-1.2**
NVAR	**Mina Array Bea**	**28.88**	**145**	P	**P**	06 17 55.5	**+1.1**
	comp=Z,1.3nm,0.9s,baz=333,slow=6.9,SNR=7.3						
NVAR				LR	LR	06 31 02.3	
	comp=Z,51nm,19.8s,baz=180,slow=40						
	comp=Z,1.3nm,0.9s						
NVAR	**Mina Array Bea**	**28.88**	**145**	P	**P**	06 17 53.5	**-1.0**
MA2	**Magadan**	**31.78**	**294**	LR	LR	06 33 20.8	
	comp=Z,26nm,18.9s,baz=180,slow=40						
MSTX	**Muleshoe**	**37.66**	**127**	IAmb	IAmb	06 19 15.7	
	comp=Z,5.1nm,1.0s						
SADO	**Sadowa**	**37.94**	**92**	LR	LR	06 35 10.8	
	comp=Z,113nm,19.7s,baz=126,slow=37						
TXAR	**Lajitas Array**	**41.61**	**131**	P	**P**	06 19 45.9	**+2.3**
	comp=Z,0.6nm,0.7s,baz=343,slow=5.2,SNR=6.8						
	comp=Z,0.6nm,0.7s						
NRIK	**Noril'sk**	**42.43**	**338**	P	**P**	06 19 50.5	**+0.7**
	comp=Z,1.8nm,0.6s,baz=58,slow=4.2,SNR=4.2						
	comp=Z,1.8nm,0.6s						
FINES	**FINESS Array B**	**53.73**	**9**	P	**P**	06 21 16.8	**-0.3**
	comp=Z,2.7nm,0.9s,baz=332,slow=6.5,SNR=6.0						
	comp=Z,2.7nm,0.9s						
FINES	**FINESS Array B**	**53.73**	**9**	P	**P**	06 21 16.7	**-0.4**
HFS	**Hagfors**	**53.83**	**17**	P	**P**	06 21 17.2	**-0.8**
	comp=Z,4.2nm,1.0s,baz=321,slow=2.0,SNR=1.8						
	comp=Z,4.2nm,1.0s						
SONM	**Songino Array**	**56.98**	**313**	P	**P**	06 21 42.6	**+1.6**
	comp=Z,1.2nm,0.8s,baz=20,slow=5.3,SNR=7.3						
	comp=Z,1.2nm,0.8s						
BVAR	**Borovoye Array**	**60.53**	**340**	P	**P**	06 22 04.6	**-0.9**
	comp=Z,1.4nm,0.7s,baz=49,slow=6.8,SNR=4.6						
	comp=Z,1.4nm,0.7s						
KURK	**Kurchatov**	**61.38**	**334**	P	**P**	06 22 10.5	**-0.7**
HHC	**Hu-ho-hao-te**	**61.45**	**306**	*eP*	**P**	06 22 11.0	**-1.0**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,52nm,6.6s						
KURBB	**Kurchatov Arra**	**61.49**	**334**	P	**P**	06 22 12.0	**+0.1**
	comp=Z,1.8nm,0.7s,baz=24,slow=5.9,SNR=14						
	comp=Z,1.8nm,0.7s						
MK31	**Makanchi Array**	**64.38**	**330**	P	**P**	06 22 30.9	**-0.4**
MK31				IAmb	IAmb	06 22 30.9	
	comp=Z,1.3nm,0.9s						
MKAR	**Makanchi Array**	**64.38**	**330**	P	**P**	06 22 30.8	**-0.5**
	comp=Z,1.0nm,0.8s,baz=54,slow=7.8,SNR=12						
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**64.38**	**330**	P	**P**	06 22 31.0	**-0.2**
AKASG	**Malin Array Be**	**64.62**	**8**	P	**P**	06 22 31.9	**-0.8**
	comp=Z,0.3nm,0.4s,baz=356,slow=7.0,SNR=2.8						
	comp=Z,0.3nm,0.4s						
AB31	**Akbulak array**	**65.52**	**347**	P	**P**	06 22 37.8	**-0.8**
ABKAR	**Akbulak array**	**65.52**	**347**	P	**P**	06 22 37.7	**-0.9**
GTA2	**Gaotai**	**66.58**	**314**	*eP*	**P**	06 22 47.0	**+1.2**
GTA2				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ESDC	**Sonseca Array**	**70.14**	**36**	LR	LR	06 53 50.7	
	comp=Z,61nm,20.6s,baz=236,slow=36						
KK31	**Karatay Array**	**70.17**	**338**	P	**P**	06 23 08.0	**0.0**
KKAR	**Karatay Array**	**70.17**	**338**	P	**P**	06 23 08.3	**+0.3**
KSH2	**Kashi**	**73.10**	**333**	P	**P**	06 23 27.0	**+1.1**
BRTR	**Keskin Array B**	**75.81**	**6**	P	**P**	06 23 41.9	**+0.3**
	comp=Z,0.6nm,0.7s,baz=2.3,slow=6.9,SNR=3.0						
	comp=Z,0.6nm,0.7s						
KEST	**Kesra**	**76.87**	**26**	LR	LR	06 59 30.8	
	comp=Z,34nm,18.2s,baz=307,slow=37						
CMAR	**Chiang Mai Arr**	**86.25**	**306**	P	**P**	06 24 37.5	**+0.2**
	comp=Z,1.0nm,0.6s,baz=2.2,slow=5.6,SNR=9.1						
	comp=Z,1.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**86.25**	**306**	P	**P**	06 24 36.8	**-0.5**

KRSC 29 06:12:42.2±1.6, 49°.37N×158°.81E, h42km±42km, Ml4.2, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.18**	**308**	*eP*	Pn	06 13 16.6	+0.7
SKR				*eS*	Sn	06 13 42.6	+1.0
PAU	**Pauzhetka**	**2.46**	**329**	*eP*	Pn	06 13 22.7	+2.9
PAU				*eS*	Sn	06 13 53.0	+4.4
KDTR	**Khodutka, Kamc**	**2.49**	**349**	*eP*	Pn	06 13 23.1	+2.9
KDTR				*eS*	Sn	06 13 52.7	+3.5
ASAK	**Asacha**	**3.07**	**350**	*eP*	Pn	06 13 32.2	+3.9
RUS	**Russkaya**	**3.07**	**357**	*eP*	Pn	06 13 31.6	+3.4
RUS				*eS*	Sn	06 14 07.4	+3.7
MTVR	**Mutnovka**	**3.14**	**353**	*eP*	Pn	06 13 33.5	+4.2
MTVR				*eS*	Sn	06 14 09.2	+3.6
GRL	**Gorelyy**	**3.22**	**352**	*eP*	Pn	06 13 34.9	+4.5
GRL				*eS*	Sn	06 14 12.0	+4.5
KRMR	**Karymshinskiy**	**3.49**	**353**	*eP*	Pn	06 13 38.6	+4.6
KRMR				*eS*	Sn	06 14 19.5	+5.5
PET	**Petropavlovsk**	**3.66**	**359**	*eS*	Sn	06 14 22.7	+4.6
DALK	**Dalny**	**3.67**	**359**	*eP*	Pn	06 13 40.3	+4.0
DALK				*eS*	Sn	06 14 22.5	+4.3
APC	**Apacha**	**3.71**	**344**	*eP*	Pn	06 13 41.1	+4.2
SPN	**Mys Shipunski**	**3.81**	**11**	*eP*	Pn	06 13 42.1	+3.7
SPN				*eS*	Sn	06 14 26.3	+4.5
KOK	**Koryaka**	**3.93**	**358**	*eP*	Pn	06 13 45.0	+4.9
GNL	**Ganaly**	**4.37**	**353**	*eP*	Pn	06 13 51.3	+5.3
KBTR	**Krutoberegovo**	**7.27**	**18**	*eP*	Pn	06 14 29.9	+4.2

IDC 29 06:16:51.8±12.0, 19°.71S×178°.92W, h576km±50km, mb3.0/4, mbtmp4.0/5, Error ellipse: s-maj=250.9km s-min=109.0km az=87.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.48**	**304**	P	P	06 18 12.1	0.0
	5.5nm,0.5s,baz=114,slow=19,SNR=11						
CTA	**Charters Tower**	**32.71**	**263**	P	P	06 22 37.6	-0.5
	2.2nm,0.6s,baz=90,slow=5.1,SNR=1.8						
	2.2nm,0.6s						
STKA	**Stephens Creek**	**37.36**	**243**	P	P	06 23 15.8	-0.7
	0.9nm,0.5s,baz=79,slow=16,SNR=1.8						
	0.9nm,0.5s						
WRA	**Warramunga Arr**	**43.86**	**261**	P	P	06 24 08.3	0.0
	0.7nm,0.3s,baz=97,slow=7.6,SNR=39						
	0.7nm,0.3s						
ASAR	**Alice Springs**	**43.86**	**256**	P	P	06 24 08.3	0.0
	1.2nm,0.5s,baz=94,slow=7.6,SNR=32						
	1.2nm,0.5s						

*SNET **29** 06:18:01.8±1.1, 14°.04N×90°.07W, h145km, ML3.1, Presumed earthquake*
*GCG **29** 06:18:02.3±0.9, 13°.96N×90°.04W, h145km±14km, MD4.1, Presumed earthquake*
*CATAC **29** 06:18:10.5±0.4, 14°.N×3°×9°.0W±°, h61km±3km, M2.6/18, MLv2.6/18, Error ellipse: s-maj=5.7km s-min=5.4km az=154.6, confirmed*

ISC 29 06:18:08.2±1.6, 14°.24N±0°.06×89°.69W±0°.04, h96km±9km, n35, σ1°52/49, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLOZ	**Alcaldia de Sa**	**0.23**	**205**	P	**Pn**	06 18 22.3	**+0.2**
SLOZ				S	**Sn**	06 18 30.6	**-1.9**
LOAL	**Lomas de Alarc**	**0.25**	**201**	P	**Pn**	06 18 22.5	**+0.2**
LOAL				S	**Sn**	06 18 31.1	**-1.6**
UNIC	**Universidad Ca**	**0.29**	**152**	P	**Pn**	06 18 23.3	**+0.9**
UNIC				S	**Sn**	06 18 31.6	**-1.3**
MTO3	**Montecristo**	**0.35**	**63**	P	**Pn**	06 18 25.3	**+2.4**
MTO3				S	**Sn**	06 18 29.9	**-4.0**
MTO3	**Montecristo**	**0.35**	**63**	*i* P	**Pn**	06 18 25.3	**+2.4**
CEVE	**Cerro Verde**	**0.41**	**172**	P	**Pn**	06 18 23.8	**+0.4**
CEVE				S	**Sn**	06 18 33.9	**-0.6**
CEVE	**Cerro Verde**	**0.41**	**172**	*eP*	**Pn**	06 18 23.6	**+0.2**
CEVE				*eS*	Sn	06 18 40.4	+5.8
ESQI	**Esquipulas**	**0.46**	**46**	P	Pn	06 18 26.4	+2.9
ESQI				S	**Sn**	06 18 32.3	**-2.6**
ESQI	**Esquipulas**	**0.46**	**46**	*eP*	Pn	06 18 26.5	+3.0
ESQI				*eS*	Sn	06 18 43.4	+8.6
FAME	**Alcaldia de Sa**	**0.51**	**219**	P	**Pn**	06 18 25.8	**+2.1**
FAME				S	**Sn**	06 18 36.6	**+1.4**
JAYA	**Jayaque - finc**	**0.62**	**158**	P	**Pn**	06 18 24.6	**-0.2**
JAYA				S	**Sn**	06 18 37.7	**+0.5**
JAYA	**Jayaque - finc**	**0.62**	**158**	*eP*	**Pn**	06 18 24.4	**-0.4**
JAYA				*eS*	**Sn**	06 18 41.0	**+3.9**
PMON	**Piamonte**	**0.63**	**145**	P	**Pn**	06 18 25.2	**+0.4**
PMON				S	**Sn**	06 18 38.5	**+1.3**
UEES	**Universidad Ev**	**0.67**	**140**	P	**Pn**	06 18 25.6	**+0.4**
UEES				S	**Sn**	06 18 36.9	**-0.9**
UTEC	**Universidad Te**	**0.71**	**138**	P	**Pn**	06 18 26.1	**+0.6**
LLGN	**La Laguna**	**0.72**	**96**	P	**Pn**	06 18 25.0	**-0.6**
UDBS	**Universidad Do**	**0.73**	**135**	P	**Pn**	06 18 26.3	**+0.6**
UDBS				S	**Sn**	06 18 37.9	**-0.8**
FG16	**Alotenango, Sa**	**0.80**	**273**	*eP*	**Pn**	06 18 26.6	**+0.1**
FG8	**Yepocapa, Chim**	**0.85**	**272**	*eP*	**Pn**	06 18 27.0	**+0.2**
PAVA	**Las Pavas**	**0.89**	**125**	P	**Pn**	06 18 28.1	**+0.8**
PAVA				S	**Sn**	06 18 39.6	**-2.1**
P5NO	**Presa 5 de nov**	**0.93**	**105**	P	**Pn**	06 18 29.2	**+1.6**
COEG	**Centro de Oper**	**0.99**	**128**	P	**Pn**	06 18 28.7	**+0.3**
COEG				S	**Sn**	06 18 41.6	**-1.9**
COEG	**Centro de Oper**	**0.99**	**128**	*eP*	**Pn**	06 18 28.8	**+0.5**
SARH	**Santa Rosa de**	**1.04**	**59**	*i* P	**Pn**	06 18 32.2	**+3.3**
SCLA	**Alcaldia de Sa**	**1.07**	**120**	P	**Pn**	06 18 30.0	**+0.8**
TECO	**Alcaldia de Te**	**1.12**	**128**	P	**Pn**	06 18 29.9	**+0.1**
TECO				S	**Sn**	06 18 45.6	**-0.3**
PACA	**Pacayal**	**1.53**	**120**	S	**Sn**	06 18 53.9	**-1.0**
INTHN	**La Esperanza I**	**1.54**	**87**	P	**Pn**	06 18 35.4	**+0.5**
RANC	**El Ranchito**	**1.57**	**120**	P	**Pn**	06 18 35.4	**0.0**
MARCA	**Marcala la Paz**	**1.60**	**93**	P	**Pn**	06 18 36.5	**+0.8**
STG5	**El Palmar, Qui**	**1.62**	**276**	*eP*	**Pn**	06 18 34.2	**-1.7**
STG5				*i* S	**Sn**	06 18 59.2	**+2.3**
TGUH	**Tegucigalpa,Un**	**2.35**	**94**	P	**Pn**	06 18 46.1	**+0.8**
PETF	**Flores**	**2.67**	**356**	P	**Pn**	06 18 49.6	**+0.1**
YUSH	**Yuscaran**	**2.77**	**95**	P	**Pn**	06 18 51.5	**+0.6**
CRIN	**San Cristobal**	**2.98**	**120**	P	**Pn**	06 18 54.1	**+0.3**

*KRNET **29** 06:37:46.6±0.1, 42°.15N×72°.07E, h30km, mb2.8*
*SOME **29** 06:37:46.1, 42°.10N×72°.05E, h10km*
*NNC **29** 06:37:48.9±2.1, 42°.25N×72°.07E, h0km, mb2.6, mpv2.8, Error ellipse: s-maj=24.8km s-min=5.6km az=7.0*

ISC 29 06:37:46.6±1.2, 42°.14N±0°.03×72°.05E±0°.03, h10km±11km, n17, σ0°82/32, 18C-2D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARK	**Arkit**	**0.35**	**191**	⇑*i* P	**Pb**	06 37 54.9	**-0.1**
ARK				⇑*i* S	**Sb**	06 38 00.6	**0.0**
MNAS	**Manas**	**0.48**	**44**	⇑*i* P	**Pb**	06 37 56.5	**-0.8**
MNAS				⇑*i* S	**Sb**	06 38 03.2	**-1.3**
TRKS	**Terek-Say**	**0.92**	**228**	⇑*i* P	**Pb**	06 38 04.8	**+0.1**
TRKS				⇑*i* S	**Sb**	06 38 17.5	**+0.6**
MRKS	**Merke**	**1.06**	**55**	P	**Pb**	06 38 07.1	**0.0**
	4.8nm,0.1s						
MRKS				S	**Sb**	06 38 20.7	**-0.4**
	22nm,0.3s						
MRKS	**Merke**	**1.06**	**55**	*eP*	**Pg**	06 38 06.4	**-0.5**
	4.8nm,0.1s						
MRKS				*eS*	**Sb**	06 38 20.8	**-0.3**
	22nm,0.3s						
ARSB	**Arslanbob**	**1.07**	**139**	⇓*i* P	**Pg**	06 38 06.5	**-0.8**
ARSB				⇓*i* S	**Sg**	06 38 21.0	**-0.2**
EKS2	**Erkin-Say**	**1.38**	**67**	⇑*i* P	**Pn**	06 38 11.6	**-0.5**
EKS2				⇑*i* S	**Sb**	06 38 29.5	**-0.8**
KK31	**Karatay Array**	**1.49**	**311**	⇑P	**Pg**	06 38 14.9	**-0.3**
	0.9nm,0.1s,baz=136,slow=16,SNR=26						
KK31				⇑S	**Sg**	06 38 35.4	**+0.9**
	2.6nm,0.2s,baz=126,slow=27,SNR=15						
ARLS	**Aral**	**1.72**	**99**	⇑*i* P	**Pn**	06 38 16.9	**+0.2**
ARLS				⇑*i* S	**Sn**	06 38 38.9	**+0.1**
SALK	**Salom-Alik**	**1.83**	**133**	⇑*i* P	**Pn**	06 38 18.5	**+0.2**
SALK				⇑*i* S	**Sn**	06 38 41.7	**+0.1**
UCH	**Uchtor**	**1.83**	**86**	⇑*i* P	**Pn**	06 38 18.5	**-0.1**
UCH				⇑*i* S	**Sn**	06 38 41.6	**-0.5**
BRLS	**Borolday**	**1.86**	**299**	Pg	**Pg**	06 38 21.6	**-0.7**
	1.9nm,0.3s						
BRLS				Lg	Lg	06 38 47.6	
	24nm,0.4s						
BRLS	**Borolday**	**1.86**	**299**	*eP*	**Pg**	06 38 21.8	**-0.6**
	1.9nm,0.3s						
BRLS				*eS*	**Sg**	06 38 46.6	**+0.2**
	24nm,0.4s						
AAK	**Ala-Archa**	**1.88**	**74**	⇑Pn	**Pb**	06 38 20.9	**-0.2**
	1.9nm,0.8s						
AAK				⇑Sn	**Sg**	06 38 49.1	**+2.1**
	2.8nm,0.8s						
AAK	**Ala-Archa**	**1.88**	**74**	*i* P	**Pn**	06 38 18.9	**0.0**
AAK				*i* S	**Sn**	06 38 42.4	**-0.3**
SGDS	**Sogindy**	**2.31**	**55**	Pg	**Pb**	06 38 28.7	**+0.3**
	1.2nm,0.1s						
SGDS				Lg	Lg	06 38 58.7	
	12nm,0.4s						
KRBS	**Karabastau**	**3.08**	**59**	*eP*	**Pb**	06 38 42.3	**+0.8**
	0.6nm,0.2s						
KRBS				*eS*	**Sb**	06 39 21.8	**+2.6**
	3.3nm,0.2s						

*UPP **29** 06:41:10.8±0.1, 67°.85N×20°.18E, h0km, ML2.5, Confirmed Induced event*
*HEL **29** 06:41:11.8±0.2, 67°.77N×20°.19E, h0km, ML1.2, Suspected explosion*

ISC 29 06:41:11.3±0.8, 67°.85N±0°.03×20°.18E±0°.03, h0km, n16, σ0°62/27, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.12**	**30**	P	**Pg**	06 41 13.2	**-0.4**
	baz=234						
KUA				S	**Sg**	06 41 15.1	**-0.1**
RATU	**Laukkuluspa**	**0.23**	**264**	P	**Pg**	06 41 15.3	**-0.3**
RATU				S	**Sg**	06 41 18.7	**+0.2**
KOVU	**Salmi**	**0.38**	**359**	P	**Pg**	06 41 18.0	**-0.5**
KOVU				S	**Sg**	06 41 23.5	**+0.2**
NIKU	**Nikkaluokta**	**0.43**	**273**	P	**Pg**	06 41 19.1	**-0.5**
NIKU				S	**Sg**	06 41 25.4	**+0.2**
LANU	**Lannavaara**	**0.71**	**73**	P	**Pg**	06 41 24.3	**-0.7**
LANU				S	**Sg**	06 41 34.0	**-0.2**
LANU	**Lannavaara**	**0.71**	**73**	PG	**Pg**	06 41 24.7	**-0.2**
LANU				SG	**Sg**	06 41 34.5	**+0.3**
DUNU	**Dundret**	**0.75**	**168**	S	**Sg**	06 41 35.2	**-0.1**
HEF	**Hetta**	**1.42**	**65**	PG	**Pn**	06 41 37.9	**-0.4**
	baz=242						
HEF				smax	smax	06 41 55.4	
	comp=Z,1.6nm,0.2s						
HEF				SG	**Sg**	06 41 56.6	**-0.3**
ERTU	**Ertsjaerv**	**1.52**	**148**	PN	**Pn**	06 41 39.1	**-0.6**
ERTU				SN	**Sn**	06 42 00.4	**+0.2**
KLF	**Kolari**	**1.58**	**111**	PN	**Pn**	06 41 40.2	**-0.3**
KLF				smax	smax	06 41 58.2	
	comp=Z,1.2nm,0.2s						
KLF				SN	**Sn**	06 42 01.2	**-0.4**
KTK1	**Kautokeino**	**1.62**	**43**	PG	**Pb**	06 41 42.0	**-0.1**
KTK1				SG	**Sg**	06 42 04.2	**+0.7**
TRO	**Tromso**	**1.85**	**346**	SG	**Sb**	06 42 09.8	**+0.3**
TOF	**Tornio**	**2.41**	**136**	PG	**Pn**	06 41 52.8	**+0.9**
TOF				smax	smax	06 42 21.5	
	comp=Z,1.0nm,0.2s						
ARA0	**ARCESS Array S**	**2.58**	**47**	SB	**Sb**	06 42 30.3	**-0.3**
RNF	**Rovaniemi**	**2.59**	**116**	PB	**Pn**	06 41 56.0	**+1.6**
RNF				SG	**Sb**	06 42 30.3	**-0.6**
RAJF	**Raja-Jooseppi**	**3.10**	**75**	SG	**Sb**	06 42 47.2	**+1.6**

IDC 29 06:45:15.6±8.5, 5°.14S×129°.37E, h172km±112km, mb2.8/1, mbtmp3.6/4, Error ellipse: s-maj=177.7km s-min=19.3km az=82.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.65**	**24**	P	Pn	06 46 26.6	+1.7
	11nm,0.2s,baz=239,slow=16,SNR=12						
SIJI				S	Sn	06 47 18.5	-0.7
	6.0nm,0.2s,baz=247,slow=7.5,SNR=2.4						
WRA	**Warramunga Arr**	**15.48**	**162**	P	Pn	06 48 43.2	-1.9
	0.3nm,0.4s,baz=335,slow=13,SNR=17						
ASAR	**Alice Springs**	**18.93**	**167**	P	P	06 49 24.1	+0.6
	1.5nm,0.5s,baz=348,slow=11,SNR=32						
MKAR	**Makanchi Array**	**66.34**	**327**	P	P	06 55 45.6	-0.2
	0.1nm,0.4s,baz=110,slow=7.4,SNR=1.9						
	0.1nm,0.4s						

*IDC **29** 06:47:31.2±1.2, 49°.12N×157°.97E, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=37.5km s-min=30.2km az=64.0*
*SKHL **29** 06:47:34.5±0.1, 49°.00N×158°.10E, h53km±3km, mb4.8/3*
*KRSC **29** 06:47:34.3±2.0, 49°.26N×158°.37E, h41km±26km, Ml3.9*

ISC 29 06:47:36.2±1.1, 49°.13N±0°.08×158°.04E±0°.09, h35km, n31, σ0°83/39, mb3.6/5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.00**	**322**	*eP*	**Pn**	06 48 06.3	**-1.1**
SKR				*eS*	**Sn**	06 48 30.2	**-0.9**
SKR	**Severo-Kuril's**	**2.00**	**322**	*i* P	**Pn**	06 48 06.6	**-0.8**
SKR				AMB	AMB	06 48 07.5	
	350nm,0.4s						
SKR				*i* S	**Sn**	06 48 30.6	**-0.5**
SKR				A	A	06 48 31.2	
	1μm,0.5s						
SKR				A	A	06 48 31.2	
	1μm,0.5s						
PAU	**Pauzhetka**	**2.47**	**342**	*eP*	**Pn**	06 48 14.5	**+0.5**
PAU				*eS*	**Sn**	06 48 44.0	**+1.1**
PAU	**Pauzhetka**	**2.47**	**342**	*eP*	**Pn**	06 48 14.2	**+0.2**
PAU				AMB	AMB	06 48 16.5	
	50nm,0.3s						
PAU				*eS*	**Sn**	06 48 44.1	**+1.2**
PAU				A	A	06 48 44.6	
	130nm,0.3s						
PAU				A	A	06 48 44.6	
	180nm,0.3s						
KDTR	**Khodutka, Kamc**	**2.69**	**0**	*eP*	**Pn**	06 48 16.0	**-0.8**
KDTR				*eS*	**Sn**	06 48 46.8	**-1.4**
ASAK	**Asacha**	**3.26**	**358**	*eP*	**Pn**	06 48 24.8	**-0.1**
RUS	**Russkaya**	**3.32**	**5**	*eP*	**Pn**	06 48 25.2	**-0.5**
MTVR	**Mutnovka**	**3.36**	**1**	*eP*	**Pn**	06 48 26.4	**+0.1**
GRL	**Gorelyy**	**3.43**	**0**	*eP*	**Pn**	06 48 27.7	**+0.4**
KRMR	**Karymshinskiy**	**3.71**	**1**	*eP*	**Pn**	06 48 31.3	**+0.3**
APC	**Apacha**	**3.84**	**352**	*eP*	**Pn**	06 48 33.4	**+0.6**
PET	**Petropavlovsk**	**3.92**	**5**	*eP*	**Pn**	06 48 33.7	**-0.2**
PET	**Petropavlovsk**	**3.92**	**5**	*eP*	**Pn**	06 48 33.8	**-0.1**
PET				AMB	AMB	06 48 34.1	
	80nm,0.4s						
PET				*eS*	**Sn**	06 49 18.0	**-0.6**
PET				A	A	06 49 20.6	
	40nm,0.4s						
PET				A	A	06 49 20.6	
	40nm,0.4s						
DALK	**Dalny**	**3.94**	**6**	*eP*	**Pn**	06 48 34.0	**-0.1**
DALK				*eS*	**Sn**	06 49 20.0	**+1.1**
UGLR	**Uglovaya**	**4.12**	**7**	*eP*	**Pn**	06 48 36.9	**+0.2**
AVH	**Avacha**	**4.17**	**6**	*eP*	**Pn**	06 48 37.9	**+0.6**
SPN	**Mys Shipunski**	**4.17**	**17**	*eP*	**Pn**	06 48 36.4	**-0.9**
SPN				*eS*	**Sn**	06 49 22.3	**-2.4**
SMAR	**Somma**	**4.17**	**6**	*eP*	**Pn**	06 48 38.3	**+0.8**
KOK	**Koryaka**	**4.19**	**5**	*eP*	**Pn**	06 48 38.5	**+0.9**
SDLR	**Sedlovina**	**4.19**	**7**	*eP*	**Pn**	06 48 37.1	**-0.6**
KRER	**Koryakskii**	**4.21**	**6**	*eP*	**Pn**	06 48 38.6	**+0.6**
KRX	**Arik**	**4.25**	**5**	*eP*	**Pn**	06 48 39.3	**+0.

*UPP **29** 06:50:12.1±0.1, 67°.87N×20°.16E, h0km, ML2.5, Confirmed Induced event*
*HEL **29** 06:50:13.6±0.2, 67°.83N×20°.26E, h0km, ML1.2, Suspected explosion*

ISC 29 06:50:12.1±0.8, **67°.83N**±0°.03×**20°.21E**±0°.02, **h0**km, **n26, σ1§31/40, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.14**	**21**	P	**Pg**	**06 50 14.6**	**-0.2**
	baz=199						
KUA				S	**Sg**	**06 50 16.3**	**-0.2**
RATU	**Laukkuluspa**	**0.23**	**269**	P	**Pg**	**06 50 16.5**	**0.0**
RATU				S	**Sg**	**06 50 19.8**	**+0.2**
KOVU	**Salmi**	**0.40**	**358**	P	**Pg**	**06 50 18.9**	**-0.8**
KOVU				S	**Sg**	**06 50 23.7**	**-1.2**
NIKU	**Nikkaluokta**	**0.45**	**276**	P	**Pg**	**06 50 20.3**	**-0.3**
NIKU				S	**Sg**	**06 50 26.3**	**-0.1**
LANU	**Lannavaara**	**0.71**	**71**	P	**Pg**	**06 50 25.6**	**-0.2**
LANU				S	**Sg**	**06 50 35.7**	**+0.7**
LANU	**Lannavaara**	**0.71**	**71**	PG	**Pg**	**06 50 25.5**	**-0.2**
LANU				SG	**Sg**	**06 50 34.7**	**-0.2**
MASU	**Masugnsbyn**	**0.78**	**118**	P	**Pg**	**06 50 27.3**	**+0.3**
SALU	**Saltoluokta**	**0.79**	**236**	P	**Pg**	**06 50 26.9**	**-0.4**
HEF	**Hetta**	**1.42**	**64**	PG	**Pn**	**06 50 38.6**	**-0.5**
HEF				smax	smax	06 50 55.9	
	comp=Z,1.4nm,0.2s						
HEF				SG	**Sg**	**06 50 56.8**	**-0.8**
ERTU	**Ertsjaerv**	**1.50**	**148**	PG	**Pn**	**06 50 40.2**	**0.0**
ERTU				SG	**Sn**	**06 51 00.9**	**+0.5**
KLF	**Kolari**	**1.56**	**111**	PG	**Pn**	**06 50 41.0**	**0.0**
	baz=294						
KLF				smax	smax	06 51 00.0	
	comp=Z,1.5nm,0.2s						
KLF				SN	**Sg**	**06 51 02.6**	**+0.4**
KTK1	**Kautokeino**	**1.64**	**42**	*eP*	**Pb**	**06 50 42.8**	**-0.3**
KTK1	**Kautokeino**	**1.64**	**42**	PG	**Pg**	**06 50 43.0**	**-0.4**
KTK1				SN	**Sg**	**06 51 05.5**	**+0.9**
TRO	**Tromso**	**1.87**	**346**	PG	**Pb**	**06 50 46.8**	**-0.3**
TRO				SG	**Sg**	**06 51 11.5**	**-0.7**
TOF	**Tornio**	**2.39**	**135**	PN	**Pb**	**06 50 54.4**	**-1.6**
TOF				smax	smax	06 51 24.1	
	comp=Z,1.3nm,0.2s						
TOF				SG	**Sb**	**06 51 26.3**	**+0.4**
RNF	**Rovaniemi**	**2.57**	**116**	PB	**Pb**	**06 50 57.5**	**-1.5**
RNF				SG	**Sb**	**06 51 30.4**	**-0.7**
ARA0	**ARCESS Array S**	**2.59**	**46**	*eP*	**Pn**	**06 50 56.4**	**+1.2**
ARA0	**ARCESS Array S**	**2.59**	**46**	SG	**Sb**	**06 51 30.9**	**-0.7**
RAJF	**Raja-Jooseppi**	**3.10**	**74**	PG	**Pb**	**06 51 09.6**	**+1.5**
RAJF				SG	**Sb**	**06 51 48.2**	**+1.8**
KEV	**Kevo**	**3.14**	**49**	SG	**Sb**	**06 51 46.6**	**-0.9**
RANF	**Ranua**	**3.17**	**122**	SG	**Sg**	**06 51 51.9**	**-1.8**
OUL	**Oulu**	**3.58**	**138**	SG	**Sb**	**06 52 02.3**	**+2.3**
KU2	**Taivalkoski**	**3.83**	**120**	SG	**Sb**	**06 52 10.9**	**+3.7**
OLKF	**Oulanka, Finla**	**3.90**	**109**	SG	**Sg**	**06 52 14.4**	**-2.9**
MSF	**Maaselka**	**3.98**	**115**	PG	**Pb**	**06 51 24.6**	**+1.6**
KU6	**Riekki**	**4.22**	**111**	SG	**Sg**	**06 52 24.3**	**-3.2**

KRSC 29 06:52:03.4±2.9, **49°.24N**×**158°.35E, h32**km±66km, **MI3.6, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.04**	**316**	*eP*	Pn	06 52 36.1	+0.7
SKR				*eS*	Sn	06 53 00.3	+0.5
PAU	**Pauzhetka**	**2.44**	**337**	*eS*	Sb	06 53 13.9	-2.2
KDTR	**Khodutka, Kamc**	**2.58**	**356**	*eP*	Pb	06 52 46.5	-2.4
KDTR				*eS*	Sb	06 53 17.2	-2.8
ASAK	**Asacha**	**3.16**	**355**	*eP*	Pn	06 52 54.7	+3.8
RUS	**Russkaya**	**3.20**	**2**	*eP*	Pn	06 52 55.0	+3.7
MTVR	**Mutnovka**	**3.25**	**358**	*eP*	Pn	06 52 55.8	+3.6
MTVR				*eS*	Sn	06 53 32.8	+3.1
GRL	**Gorelyy**	**3.32**	**357**	*eP*	Pb	06 52 58.1	-3.5
KRMR	**Karymshinskiy**	**3.59**	**358**	*eP*	Pn	06 53 00.8	+4.0
UGLR	**Uglovaya**	**3.98**	**4**	*eP*	Pn	06 53 07.0	+4.7
AVH	**Avacha**	**4.04**	**3**	*eP*	Pb	06 53 08.4	-5.3
SMAR	**Somma**	**4.04**	**4**	*eP*	Pb	06 53 08.8	-5.1
SDLR	**Sedlovina**	**4.05**	**1**	*eP*	Pn	06 53 07.2	+3.9
KOK	**Koryaka**	**4.06**	**2**	*eP*	Pn	06 53 08.4	+5.1
KRER	**Koryakskii**	**4.07**	**3**	*eP*	Pn	06 53 08.1	+4.5
KRX	**Arik**	**4.13**	**2**	*eP*	Pn	06 53 08.7	+4.5
GNL	**Ganaly**	**4.47**	**357**	*eP*	Pn	06 53 14.4	+5.5
KBTR	**Krutoberegovo**	**7.48**	**20**	*eP*	Pn	06 53 54.6	+4.4

IDC 29 06:54:24.2±3.2, **25°.86N**×**144°.27E, h0**km, **mb3.5**/3, **mbtmp3.5/5, ML3.1/2, Error ellipse: s-maj=101.8km s-min=24.1km az=69.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.24**	**304**	Pn	Pn	06 55 01.9	-0.6
	16nm,0.3s,baz=269,slow=23,SNR=20						
JCJ				Sn	Sn	06 55 26.9	-4.1
	31nm,0.3s,baz=91,slow=23,SNR=12						
	46nm,0.4s						
MJAR	**Matsushiro Arr**	**11.84**	**336**	Pn	Pn	06 57 14.9	+0.6
	baz=149,slow=16,SNR=4.1						
	0.7nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**21.72**	**102**	T	T	07 22 03.5	
	baz=291,slow=74,SNR=4.3						
H11N1	**WAKE ISLAND Hy**	**21.72**	**102**	T	T	07 22 04.0	
	baz=291,slow=74,SNR=3.7						
H11N3	**WAKE ISLAND Hy**	**21.73**	**102**	T	T	07 22 04.0	
	baz=291,slow=74,SNR=5.3						
WRA	**Warramunga Arr**	**46.54**	**193**	P	P	07 02 53.7	0.0
	0.8nm,0.4s,baz=17,slow=8.6,SNR=5.1						
	0.8nm,0.4s						
ASAR	**Alice Springs**	**50.25**	**192**	P	P	07 03 22.1	-0.2
	0.2nm,0.7s,baz=18,slow=6.9,SNR=0.9						
	0.2nm,0.7s						
KURBB	**Kurchatov Arra**	**55.24**	**315**	P	P	07 03 58.9	-0.1
	0.4nm,0.8s,baz=90,slow=7.8,SNR=4.9						
	0.4nm,0.8s						

*IDC **29** 06:57:14.1±7.1, 4°.47S×151°.43E, h226km±45km, mb3.5/3, mbtmp4.1/5, Error ellipse: s-maj=79.9km s-min=51.6km az=87.0*
*NEIC **29** 06:57:19.2±0.8, 4°.7S±0°.1×151°.3E±0°.1, h250km±16km, mb4.0/12, Error ellipse: s-maj=22.0km s-min=14.3km az=67.0*

ISC 29 06:57:19.1±1.0, **4°.8S**±0°.1×**151°.3E**±0°.1, **h250**km, **n21, σ0§79/21, mb4.0/9, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.07**	**56**		**Pn**	**06 57 54.1**	**-0.5**
MANU	**Manus Island**	**4.76**	**305**	Pn	**Pn**	**06 58 31.5**	**-0.5**
PMG	**Port Moresby**	**6.14**	**221**	P	**Pn**	**06 58 47.6**	**-1.4**
	8.7nm,0.4s,baz=63,slow=4.4,SNR=8.9						
PMG	**Port Moresby**	**6.14**	**221**		**Pn**	**06 58 49.6**	**+0.6**
CTA	**Charters Tower**	**15.97**	**197**	P	**Pn**	**07 00 52.0**	**+1.0**
	3.5nm,0.8s,baz=20,slow=12,SNR=2.0						
CTAO	**Charters Tower**	**15.97**	**197**	P	**Pn**	**07 00 50.1**	**-0.8**
CTAO				IAmb	IAmb	07 00 56.2	
	comp=Z,7.9nm,1.1s						
MTN	**Manton Dam**	**21.43**	**247**	P	**P**	**07 01 48.3**	**+0.2**
MTN				IAmb	IAmb	07 02 15.1	
	comp=Z,4.9nm,0.8s						
WB0	**Warramunga Arr**	**22.18**	**226**	P	**P**	**07 01 55.1**	**+0.2**
WB0				IAmb	IAmb	07 01 55.7	
	comp=Z,5.2nm,0.9s						
WR8	**Warramunga Arr**	**22.22**	**226**	P	**P**	**07 01 55.7**	**+0.4**
WR8				IAmb	IAmb	07 01 56.5	
	comp=Z,3.4nm,0.7s						
WRAB	**Tennant Creek**	**22.32**	**226**	P	**P**	**07 01 56.6**	**+0.4**
WRA	**Warramunga Arr**	**22.33**	**226**	P	**P**	**07 01 56.5**	**+0.2**
	comp=Z,3.7nm,0.3s,baz=51,slow=9.5,SNR=79						
	comp=Z,3.7nm,0.3s						
WRA	**Warramunga Arr**	**22.33**	**226**	P	**P**	**07 01 55.3**	**-1.0**
KNRA	**Kununurra**	**24.62**	**242**	P	**P**	**07 02 18.4**	**+1.3**
KNRA				IAmb	IAmb	07 02 22.8	
	comp=Z,2.3nm,0.7s						
AS31	**Alice Springs**	**25.15**	**220**	P	**P**	**07 02 21.9**	**0.0**
ASAR	**Alice Springs**	**25.15**	**220**	P	**P**	**07 02 21.8**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=56,slow=8.6,SNR=23						
	comp=Z,0.9nm,0.7s						
STKA	**Stephens Creek**	**28.43**	**197**	P	**P**	**07 02 50.6**	**-0.3**
	comp=Z,1.0nm,0.4s,baz=14,slow=9.6,SNR=2.9						
	comp=Z,1.0nm,0.4s						
STKA	**Stephens Creek**	**28.43**	**197**	P	**P**	**07 02 51.4**	**+0.5**
BBOO	**Buckleboo**	**31.29**	**205**	P	**P**	**07 03 15.9**	**-0.2**
MORW	**Morawa**	**41.17**	**230**	P	**P**	**07 04 38.8**	**-0.8**
MORW				IAmb	IAmb	07 05 00.9	
	comp=Z,7.4nm,1.1s						
QSPA	**South Pole Qui**	**85.17**	**180**	P	**P**	**07 09 27.1**	**-0.1**
QSPA				IAmb	IAmb	07 09 36.1	
	comp=Z,0.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**148.85**	**288**	PKPbc	**PKPdf**	**07 16 35.6**	**+1.6**
	comp=Z,0.3nm,0.5s,baz=85,slow=3.1,SNR=2.4						

*PDG **29** 07:00:07.8±0.3, 42°.78N×18°.05E, h10km, MD2.9/1, ML2.8/11, Error ellipse: s-maj=0.8km s-min=0.5km az=90.0*
*RHSSO **29** 07:00:08.1±0.5, 42°.79N×18°.04E, h5km±2km, ML2.9/10*
*BEO **29** 07:00:08.1±0.3, 42°.74N×18°.01E, h6km±1km, ML2.8/22*
*PRU **29** 07:00:12.1, 42°.88N×18°.29E, h10km*

ISC 29 07:00:07.9±0.8, **42°.76N**±0°.02×**18°.04E**±0°.01, **h10**km±6km, **n93, σ1§12/147, 23C-14D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBRK	**Dubrovnik**	**0.12**	**139**	*i* Pg	**Pg**	**07 00 10.9**	**+0.1**
DBRK				Sg	**Sg**	**07 00 13.1**	**+0.2**
TREB	**Trebinje**	**0.23**	**101**	*e*Pg	**Pg**	**07 00 12.4**	**-0.3**
TREB				*e*Sg	**Sg**	**07 00 16.0**	**+0.1**
TREB	**Trebinje**	**0.23**	**101**	⇑*i*Pg	**Pg**	**07 00 12.4**	**-0.3**
TREB				*e*Sg	**Sg**	**07 00 16.2**	**+0.3**
STON	**Ston**	**0.27**	**294**	*i* Pg	**Pg**	**07 00 13.0**	**-0.3**
STON				Sg	**Sg**	**07 00 17.4**	**+0.4**
STON	**Ston**	**0.27**	**294**	*e*Pg	**Pg**	**07 00 13.1**	**-0.3**
STON				*e*Sg	**Sg**	**07 00 17.6**	**+0.6**
BRY	**Bratogost**	**0.40**	**69**	⇑*i*Pg	**Pg**	**07 00 15.1**	**-0.6**
BRY				*i* Sg	**Sg**	**07 00 20.9**	**0.0**
BRY	**Bratogost**	**0.40**	**69**	⇓*i*Pg	**Pg**	**07 00 15.0**	**-0.6**
BRY				*e*Sg	**Sg**	**07 00 20.9**	**0.0**
HCY	**Herceg Novi**	**0.46**	**133**	⇓*i*Pg	**Pg**	**07 00 16.9**	**+0.1**
HCY				*i* Sg	**Sg**	**07 00 23.9**	**+0.9**
HCY	**Herceg Novi**	**0.46**	**133**	⇓*i*Pg	**Pg**	**07 00 17.0**	**+0.1**
HCY				*e*Sg	**Sb**	**07 00 24.6**	**-0.5**
KLINJ	**Klinje**	**0.57**	**45**	*e*Pg	**Pg**	**07 00 17.9**	**-1.1**
KLINJ				*e*Sg	**Sg**	**07 00 26.6**	**0.0**
NKME	**Niksic**	**0.68**	**89**	⇑*i*Pg	**Pg**	**07 00 19.9**	**-1.0**
NKME				*i* Sg	**Sb**	**07 00 30.6**	**-0.6**
UPM	**Unac-Piva**	**0.77**	**55**	⇓*i*Pg	**Pg**	**07 00 21.4**	**-1.4**
UPM				*i* Sg	**Sb**	**07 00 33.9**	**-0.4**
UPM	**Unac-Piva**	**0.77**	**55**	⇑*i*Pg	**Pg**	**07 00 21.5**	**-1.4**
UPM				*e*Sg	**Sb**	**07 00 33.2**	**-1.1**
BUM	**Brajici-Budva**	**0.78**	**126**	⇓*i*Pg	**Pg**	**07 00 22.1**	**-0.9**
BUM				*i* Sg	**Sb**	**07 00 34.8**	**+0.4**
LSTV	**Lastovo**	**0.84**	**271**	*e*Pg	**Pg**	**07 00 22.4**	**-1.7**
LSTV				Sg	**Sg**	**07 00 35.1**	**0.0**
MAKA	**Makarska**	**0.91**	**305**	*i* Pg	**Pg**	**07 00 24.3**	**-1.1**
MAKA				Sg	**Sb**	**07 00 38.5**	**+0.5**
PDG	**Podgorica**	**0.96**	**110**	⇑P	**Pg**	**07 00 25.5**	**-0.9**
PDG				⇓S	**Sb**	**07 00 39.4**	**0.0**
PDG	**Podgorica**	**0.96**	**110**	*e*Pg	**Pg**	**07 00 25.4**	**-0.9**
PDG				*e*Sg	**Sb**	**07 00 39.9**	**+0.6**
PDG	**Podgorica**	**0.96**	**110**	⇑*i*Pg	**Pg**	**07 00 25.2**	**-1.1**
PDG				*i* Sg	**Sn**	**07 00 40.5**	**-0.6**
PDG	**Podgorica**	**0.96**	**110**	⇑*i*Pg	**Pg**	**07 00 24.9**	**-1.4**
PDG				*e*Sg	**Sb**	**07 00 39.4**	**0.0**
RICI	**Ricice**	**0.99**	**318**	*i* Pg	**Pg**	**07 00 25.5**	**-1.4**
RICI				Sg	**Sn**	**07 00 41.6**	**-0.4**
DRME	**Dracevica, Mon**	**1.03**	**124**	⇑*i*Pg	**Pg**	**07 00 26.6**	**-1.0**
DRME				*i* Sg	**Pg**	**07 00 43.0**	**+0.2**
DRME	**Dracevica, Mon**	**1.03**	**124**	⇑*i*Pg	**Pg**	**07 00 26.5**	**-1.0**
DRME				*e*Sg	**Sb**	**07 00 41.7**	**+0.4**
KOME	**Kolasin**	**1.09**	**85**	⇓*i*Pg	**Pg**	**07 00 27.6**	**-1.3**
KOME				*i* Sg	**Sn**	**07 00 44.7**	**+0.1**
ULC	**Ulcinj**	**1.20**	**131**	⇓*i*Pg	**Pb**	**07 00 29.3**	**-1.4**
ULC				*i* Sg	**Sn**	**07 00 48.5**	**+1.3**
RUDO	**Rudo**	**1.30**	**48**	*e*Pg	**Pn**	**07 00 31.6**	**-0.6**
RUDO				*e*Sg	**Sn**	**07 00 49.5**	**-0.1**
RUDO	**Rudo**	**1.30**	**48**	⇑*i*Pg	**Pn**	**07 00 31.5**	**-0.6**
RUDO				*e*Sg	**Sb**	**07 00 48.8**	**-0.3**
IVA	**Berane**	**1.37**	**85**	⇓*i*Pg	**Pn**	**07 00 33.4**	**+0.2**
IVA				*i* Sg	**Sg**	**07 00 53.9**	**+1.9**
PVY	**Plav**	**1.43**	**96**	⇓*i*Pg	**Pn**	**07 00 34.2**	**+0.2**
PVY				*i* Sg	**Sg**	**07 00 56.3**	**+2.5**
BBLS	**Lazi&#263i**	**1.49**	**42**	*e*Pg	**Pb**	**07 00 35.8**	**+0.1**
BBLS				*e*Sg	**Sg**	**07 00 57.1**	**+1.4**
BBLS	**Lazi&#263i**	**1.49**	**42**	⇑*e*Pn	**Pb**	**07 00 35.4**	**+0.3**
BBLS				*e*Sn	**Sg**	**07 00 55.3**	**-0.4**
SJES	**Sjenica**	**1.50**	**70**	*e*Pg	**Pg**	**07 00 36.3**	**-0.5**
SJES				*e*Sg	**Sg**	**07 00 57.4**	**+1.1**
SJES	**Sjenica**	**1.50**	**70**	⇑*i*Pn	**Pn**	**07 00 35.1**	**0.0**
SJES				*e*Sn	**Sg**	**07 00 55.8**	**-0.5**
KIJV	**Kijevo**	**1.72**	**317**	*e*Pn	**Pn**	**07 00 38.8**	**+0.9**
KIJV				Sn	**Sg**	**07 01 03.7**	**+0.5**
IVAS	**Ivanjica**	**1.75**	**62**	*e*Pn	**Pb**	**07 00 40.1**	**0.0**
IVAS				*e*Sn	**Sg**	**07 01 03.1**	**-1.0**
DIVS	**Divibare**	**1.95**	**46**	*e*Pn	**Pn**	**07 00 42.1**	**+0.9**
DIVS				*e*Sn	**Sb**	**07 01 06.6**	**-1.4**
ZIRJ	**Zirje**	**1.96**	**298**	*i* Pn	**Pn**	**07 00 42.1**	**+0.9**
ZIRJ				Sn	**Sb**	**07 01 09.1**	**+0.8**
MORI	**Morici**	**2.03**	**304**	*i* Pn	**Pn**	**07 00 43.4**	**+1.3**
MORI				Sn	**Sb**	**07 01 11.5**	**+1.4**
BLY	**Banja Luka**	**2.08**	**343**	⇓P	**Pb**	**07 00 44.9**	**-0.8**
BLY				⇑S	**Sb**	**07 01 11.9**	**0.0**
BLY	**Banja Luka**	**2.08**	**343**	*e*Pn	**Pb**	**07 00 44.9**	**-0.8**
BLY	**Banja Luka**	**2.08**	**343**	*e*Pn	**Pn**	**07 00 43.3**	**+0.4**
BLY				*e*Sn	**Sn**	**07 01 09.4**	**+0.6**
TEKS	**Tekeris**	**2.09**	**31**	*e*Pn	**Pn**	**07 00 43.4**	**+0.4**
GOCS	**Kraljevo Serbi**	**2.22**	**68**	*e*Pn	**Pb**	**07 00 46.5**	**-1.7**
GRUS	**Gruza**	**2.25**	**59**	*e*Pn	**Pn**	**07 00 46.1**	**+0.8**
TRUS	**Trudelj**	**2.26**	**49**	*e*Pn	**Pn**	**07 00 45.9**	**+0.6**
SELS	**Selova**	**2.31**	**78**	*e*Pn	**Pn**	**07 00 47.7**	**+1.7**
MATE	**Matera**	**2.34**	**206**	⇑P	**Pn**	**07 00 45.5**	**-0.8**
MATE				⇑S	**Sn**	**07 01 13.2**	**-1.9**
UDBI	**Udbina**	**2.42**	**318**	*e*Pn	**Pb**	**07 00 49.7**	**-1.8**
UDBI				Sn	**Sb**	**07 01 21.7**	**+0.4**
DUGI	**Dugi Otok**	**2.50**	**301**	*e*Pn	**Pn**	**07 00 49.8**	**+1.2**
DUGI				Sn	**Sb**	**07 01 22.4**	**-1.2**
AVAS	**Avala Beograd**	**2.64**	**42**	*e*Pn	**Pn**	**07 00 51.0**	**+0.5**
OHR	**Ohrid**	**2.64**	**128**	*i* Pn	**Pb**	**07 00 54.9**	**-0.5**
VIRC	**Vir**	**2.65**	**306**	*i* Pn	**Pn**	**07 00 52.5**	**+1.2**
VIRC				Sn	**Sn**	**07 01 34.4**	**+2.4**
FRGS	**Fruska Gora**	**2.71**	**28**	*e*Pn	**Pn**	**07 00 51.5**	**-0.1**
FRGS	**Fruska Gora**	**2.71**	**28**	⇑*i*Pn	**Pn**	**07 00 51.9**	**+0.3**
FRGS				*e*Sn	**Sn**	**07 01 25.1**	**+0.6**
PLIT	**Plitvice**	**2.74**	**321**	*e*Pn	**Pb**	**07 00 55.0**	**-2.1**
PLIT				Sn	**Sb**	**07 01 28.9**	**-1.9**
BARS	**Barje**	**2.78**	**88**	*e*Pn	**Pn**	**07 00 53.2**	**+0.7**
BOVS	**Bovan**	**2.82**	**71**	⇑P	**Pn**	**07 00 54.3**	**+1.2**
BOVS				⇑S	**Sn**	**07 01 28.8**	**+1.7**
BOVS	**Bovan**	**2.82**	**71**	*e*Pn	**Pn**	**07 00 54.3**	**+1.2**
NVLJ	**Novalja**	**2.92**	**309**	*e*Pn	**Pn**	**07 00 55.6**	**+1.3**
NVLJ				Sn	**Sn**	**07 01 31.8**	**+2.3**
KUBS	**Kucevo**	**3.12**	**57**	*e*Pn	**Pn**	**07 00 56.9**	**-0.2**
ZAGS	**Zajecar**	**3.24**	**70**	*e*Pn	**Pn**	**07 00 59.8**	**+1.0**
BOSS	**Bosilegrad**	**3.29**	**93**	*e*Pn	**Pn**	**07 01 00.0**	**+0.5**
VRSS	**Vrsac**	**3.35**	**44**	*e*Pn	**Pn**	**07 01 00.1**	**-0.2**
BOJS	**Bojanci**	**3.40**	**325**	*e*Pn	**Pn**	**07 01 02.8**	**+1.9**
ZAPS	**Zavoj**	**3.41**	**80**	*e*Pn	**Pn**	**07 01 02.6**	**+1.7**
MORH	**Mrgy, Hungar**	**3.48**	**7**	⇑P	**Pn**	**07 01 02.8**	**+0.1**
MORH	**Mrgy, Hungar**	**3.48**	**7**	*e*Pn	**Pn**	**07 01 02.2**	**+0.1**
MORH				*e*Sn	**Sn**	**07 01 42.9**	**-0.4**
BLKB	**Belogradchik**	**3.50**	**74**	⇑S	**Sn**	**07 01 45.1**	**+1.2**
RIY	**Rijeka**	**3.62**	**316**	*e*Pn	**Pn**	**07 01 04.2**	**+0.1**
IGT	**Igoumenitsa**	**3.66**	**151**	*e*Pn	**Pn**	**07 01 04.1**	**-0.5**
HERR	**Herculane**	**3.81**	**55**	⇑P	**Pn**	**07 01 08.4**	**+1.8**
BEHE	**Becsehely**	**3.81**	**347**	*e*Pn	**Pn**	**07 01 07.7**	**+1.0**
BEHE				*e*Sn	**Sn**	**07 01 51.5**	**-0.1**
BZS	**Buzias**	**3.84**	**41**	⇓P	**Pn**	**07 01 08.0**	**+0.9**
BZS	**Buzias**	**3.84**	**41**	*e*Pn	**Pn**	**07 01 06.7**	**-0.4**
CEY	**Cerknica**	**3.95**	**320**	*e*Pn	**Pn**	**07 01 10.1**	**+1.5**
SKDS	**Skadanscina**	**4.01**	**315**	*e*Pn	**Pn**	**07 01 10.5**	**+1.0**
GZR	**Gura Zlata**	**4.31**	**51**	⇓P	**Pn**	**07 01 14.6**	**+1.1**
GZR	**Gura Zlata**	**4.31**	**51**	*e*Pn	**Pn**	**07 01 14.1**	**+0.5**
OBKA	**Obir**	**4.50**	**328**	*e*Pn	**Pn**	**07 01 17.8**	**+1.6**
	0.2nm,0.1s						
ARSA	**Arzberg**	**4.83**	**339**	*i* Pn	**Pn**	**07 01 22.7**	**+2.0**
	3.2nm,0.4s						
ARSA				*e*Sn	**Sn**	**07 02 19.6**	**+3.0**
	1.1nm,0.4s						
RONA	**Rosalia, Austr**	**5.09**	**347**	*e*Pn	**Pn**	**07 01 24.9**	**+0.6**
	1.0nm,0.4s						
DRGR		**5.22**	**38**	⇓P	**Pn**	**07 01 28.0**	**+1.8**
MARR	**Marisel-Cluj**	**5.33**	**41**	⇑P	**Pn**	**07 01 29.4**	**+1.7**
CONA	**Conrad Observa**	**5.39**	**344**	*e*Pn	**Pn**	**07 01 29.2**	**+0.8**
	0.5nm,0.3s						
CONA				*e*Sn	**Sn**	**07 02 31.5**	**+1.0**
	0.8nm,0.3s						
MODS	**Modra-Piesok**	**5.64**	**355**	*e*PN	**Pn**	**07 01 33.3**	**+1.6**
VOIR		**5.71**	**60**	⇑P	**Pn**	**07 01 34.4**	**+1.5**
MOA	**Molln**	**5.74**	**334**	*e*Pn	**Pn**	**07 01 34.4**	**+1.3**
	0.3nm,0.2s						
MOA				*e*Sn	**Sn**	**07 02 41.1**	**+2.0**
	3.5nm,0.6s						
LESA	**Schwarzleotal**	**6.01**	**323**	*e*Pn	**Pn**	**07 01 37.4**	**+0.5**
	0.5nm,0.3s						
WTTA	**Wattenberg**	**6.39**	**317**	*e*Pn	**Pn**	**07 01 43.4**	**+1.2**
	0.1nm,0.2s						
WATA	**Walderalm**	**6.47**	**317**	*e*Pn	**Pn**	**07 01 44.2**	**+0.9**
	0.2nm,0.2s						
SQTA	**Sankt Quirin**	**6.58**	**315**	*e*Pn	**Pn**	**07 01 46.3**	**+1.5**
	0.8nm,0.3s						
KHC	**Kasperske Hory**	**7.08**	**336**	*e*PN	**Pn**	**07 01 55.7**	**+4.1**
KHC				*e*SN	**Sn**	**07 03 11.6**	**-0.6**
ZVC	**Zvikov**	**7.19**	**340**	*e*SN	**Sn**	**07 03 14.3**	**-0.5**

*IDC **29** 07:04:12.6±4.4, 10°.30S×111°.82E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=247.3km s-min=29.2km az=46.0*
*DJA **29** 07:04:21.0±0.4, 10°S±3°×111°3E±°, h10km, M3.5/21, MLv3.5/21*

ISC 29 07:04:22.2±1.3, **9°.61S**±0°.09×**112°.91E**±0°.06, **h35**km, **n17, σ1§42/20, mb3.0/3, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**1.43**	**22**	P	**Pn**	**07 04 45.0**	**-0.6**
JAGI	**Jajag, Banyuwa**	**1.67**	**48**	P	**Pn**	**07 04 48.7**	**-0.3**
JAGI				S	**Sn**	**07 05 08.9**	**-0.3**
BLJI	**Banyuglugur**	**1.97**	**20**	P	**Pn**	**07 04 54.5**	**+1.4**
BLJI				S	**Sn**	**07 05 18.7**	**+2.1**
BYJI	**Banyuwangi**	**1.99**	**46**	P	**Pn**	**07 04 51.6**	**-1.8**
BYJI				S	**Sn**	**07 05 18.8**	**+1.7**
SNJI	**Sawahan-Nganju**	**2.14**	**328**	P	**Pn**	**07 04 56.7**	**+1.1**
PCJI	**Pacitan**	**2.21**	**309**	P	**Pn**	**07 04 56.8**	**+0.4**
ABJI	**Asem Bagus**	**2.23**	**36**	P	**Pn**	**07 04 57.4**	**+0.8**
RTBI	**Rangdo, Negare**	**2.31**	**61**	P	**Pn**	**07 04 58.8**	**+1.0**
IGBI	**Denpasar**	**2.35**	**71**	P	**Pn**	**07 04 59.1**	**+0.8**
SRBI	**Singaraja**	**2.74**	**57**	P	**Pn**	**07 05 02.2**	**-1.4**
KMMI	**Kalianget**	**2.75**	**23**	P	**Pn**	**07 05 04.5**	**+0.7**
UGM	**Wanagama**	**2.90**	**305**	P	**Pn**	**07 05 06.8**	**+0.9**
KLNI	**Mataram**	**3.36**	**70**	P	**Pn**	**07 05 13.8**	**+1.5**
PLAI	**Plampang**	**4.87**	**81**	P	**Pn**	**07 05 34.1**	**+1.1**
WRA	**Warramunga Arr**	**23.10**	**119**	P	**P**	**07 09 26.9**	**+1.7**
	0.3nm,1.0s,baz=291,slow=9.8,SNR=2.0						
	0.3nm,1.0s						
ASAR	**Alice Springs**	**24.45**	**127**	P	**P**	**07 09 37.5**	**-0.4**

ROTM AML AML
comp=E,7780µm,0.5s
ENR Entracque 0.78 175 P **Pg 07 11 48.2 -0.4**
ENR S **Sg 07 11 58.1 -0.9**
ENR Entracque 0.78 175 ⇑P **Pg 07 11 48.3 -0.4**
ENR S **Sg 07 11 58.0 -1.0**
ENR AML AML
comp=N,2390µm,1.3s
ENR AML AML
comp=N,2390µm,0.7s
ENR AML AML
comp=E,4335µm,0.1s
OGAG Argentiere 0.78 226 P **Pg 07 11 46.2 -2.5**
OGAG S **Sg 07 11 54.0 -5.0**
MRGE Morge 0.79 347 P **Pn 07 11 49.9 -0.3**
MRGE S **Sb 07 11 59.9 +0.3**
MRGE Morge 0.79 347 P **Pn 07 11 50.0 -0.3**
MRGE S **Sb 07 12 00.2 +0.6**
MRGE AML AML
comp=E,2225µm,0.5s
MRGE AML AML
comp=N,3185µm,1.4s
MRGE AML AML
comp=N,3185µm,0.6s
MRGE AML AML
comp=E,2225µm,1.5s
RSL Roselend 0.84 325 P **Pn 07 11 50.8 -0.2**
RSL S **Sg 07 12 01.1 +0.1**
ISO Isola 0.84 193 P **Pb 07 11 50.2 +0.3**
ISO S **Sb 07 12 01.9 +0.9**
GBOS Grotte di Boss 0.85 154 P **Pb 07 11 50.4 +0.4**
GBOS S **Sb 07 12 01.2 0.0**
GBOS Grotte di Boss 0.85 154 ⇑P **Pb 07 11 50.4 +0.4**
GBOS S **Sb 07 12 01.2 0.0**
GBOS AML AML
comp=E,3245µm,0.4s
GBOS AML AML
comp=N,2095µm,0.4s
ACQ Acqui Terme 0.88 111 P **Pn 07 11 51.9 +0.7**
BLANC P.ta Helbronne 0.88 342 P **Pn 07 11 52.0 +0.2**
BLANC S **Sb 07 12 03.1 +0.6**
SATI Passo dei Sala 0.95 24 P **Pb 07 11 51.5 -0.5**
SATI S **Sg 07 12 05.6 +1.0**
SATI Passo dei Sala 0.95 24 P **Pb 07 11 51.5 -0.5**
SATI AML AML
comp=E,1230µm,0.3s
SATI AML AML
comp=N,848µm,0.7s
PCP Piancastagn 0.99 117 P **Pn 07 11 53.6 +0.7**
PCP S **Sn 07 12 06.7 0.0**
PCP Piancastagn 0.99 117 ⇑P **Pn 07 11 53.6 +0.7**
PCP S **Sn 07 12 06.8 +0.2**
PCP AML AML
comp=E,2260µm,0.4s
PCP AML AML
comp=N,2545µm,0.5s
PCP AML AML
comp=N,2545µm,1.5s
QLNO Quiliano 1.00 132 P **Pn 07 11 53.8 +0.8**
QLNO S **Sn 07 12 06.9 0.0**
QLNO Quiliano 1.00 132 ⇑P **Pn 07 11 53.8 +0.8**
QLNO S **Sn 07 12 07.1 +0.2**
QLNO AML AML
comp=N,1965µm,0.5s
QLNO AML AML
comp=E,2265µm,0.5s
ORIF Oris-en-Rattie 1.02 266 *e*Pg **Pn 07 11 53.8 +0.4**
ORIF *e*Sg **Sb 07 12 06.9 +0.6**
comp=E,1µm,0.3s
ORIF Oris-en-Rattie 1.02 266 ⇓P **Pn 07 11 53.9 +0.4**
ORIF AML AML
comp=E,2210µm,1.2s
ORIF AML AML
comp=E,2210µm,0.8s
ORIF AML AML
comp=N,2395µm,0.3s
CANO Canova, Maglio 1.03 140 P **Pn 07 11 54.0 +0.5**
CANO S **Sg 07 12 07.2 +0.3**
CANO Canova, Maglio 1.03 140 P **Pn 07 11 54.1 +0.5**
CANO S **Sg 07 12 07.2 +0.3**
CANO AML AML
comp=E,5605µm,1.4s
CANO AML AML
comp=N,5995µm,0.3s
CANO AML AML
comp=N,5995µm,1.7s
CANO AML AML
comp=E,5605µm,0.6s
SAOF Saorge 1.03 170 P **Pb 07 11 53.0 -0.1**
SAOF Saorge 1.03 170 ⇑P **Pb 07 11 52.5 -0.6**
SAOF AML AML
comp=E,1935µm,0.2s
SAOF AML AML
comp=N,1380µm,0.4s
RORO Rocca Rossa 1.04 149 P **Pg 07 11 53.6 +0.1**
RORO S **Sg 07 12 07.0 -0.2**
RORO Rocca Rossa 1.04 149 ⇓P **Pg 07 11 53.7 +0.1**
RORO S **Sb 07 12 06.8 +0.2**
RORO AML AML
comp=E,2180µm,0.3s
RORO AML AML
comp=N,1885µm,0.5s
DIX Grande Dixence 1.08 3 P **Pn 07 11 54.5 +0.1**
DIX S **Sn 07 12 09.3 +0.1**
DIX Grande Dixence 1.08 3 ⇓P **Pn 07 11 54.5 +0.1**
DIX AML AML
comp=E,4290µm,1.3s
DIX AML AML
comp=E,4290µm,0.7s
DIX AML AML
comp=N,3715µm,0.6s
MVIF Mont Vial 1.11 186 P **Pb 07 11 54.6 +0.1**
SARZ Sarezzano 1.14 96 P **Pg 07 11 58.2 +2.7**
SARZ S **Sg 07 12 13.9 +3.6**
SARZ Sarezzano 1.14 96 P **Pg 07 11 57.9 +2.4**
SARZ AML AML
comp=N,5155µm,1.6s
SARZ AML AML
comp=E,4515µm,0.4s
SARZ AML AML
comp=N,5275µm,1.6s
SARZ AML AML
comp=N,5275µm,0.4s
SARZ AML AML
comp=E,4415µm,0.4s
SARZ AML AML
comp=N,5155µm,0.4s
MMK Mattmark 1.14 23 P **Pb 07 11 54.7 -0.4**
MMK Mattmark 1.14 23 ⇓P **Pb 07 11 54.7 -0.4**
MMK AML AML
comp=E,174µm,0.6s
MMK AML AML
comp=N,164µm,0.2s
SBF Sospel 1.14 176 *e*Pn **Pb 07 11 54.4 -0.6**
OGDI Digne 1.15 220 P **Pg 07 11 58.1 +2.3**
OGDI S **Sg 07 12 14.6 +3.8**
IMI Imperia 1.17 159 P **Pn 07 11 55.4 0.0**
IMI S **Sb 07 12 10.1 -0.3**
IMI Imperia 1.17 159 ⇑P **Pn 07 11 55.4 0.0**
IMI S **Sb 07 12 10.4 0.0**
IMI AML AML
comp=E,2030µm,1.0s
IMI AML AML
comp=N,2370µm,0.3s
ESCA l'Escarene 1.17 178 P **Pn 07 11 55.3 -0.1**
VANNI Vissoie, Val d 1.22 9 P **Pb 07 11 56.9 +0.4**
VANNI S **Sb 07 12 11.2 -0.9**
BURY Giardini Botan 1.23 172 P **Pn 07 11 55.9 -0.3**
BURY Giardini Botan 1.23 172 ⇑P **Pn 07 11 55.9 -0.3**
EMBD Embd, Matterta 1.27 16 P **Pb 07 11 57.4 +0.2**
EMBD S **Sb 07 12 12.4 -0.9**
MON Monaco 1.27 177 P **Pg 07 11 57.9 -0.2**
RNCA Ronca, Sant'Ol 1.28 114 P **Pg 07 11 58.6 +0.4**
RNCA S **Sg 07 12 16.5 +1.7**
RNCA Ronca, Sant'Ol 1.28 114 P **Pg 07 11 58.6 +0.4**
RNCA S **Sg 07 12 16.7 +1.9**
RNCA AML AML
comp=E,510µm,0.6s
RNCA AML AML
comp=N,682µm,0.5s
GNV Genova 1.28 116 P **Pg 07 11 59.1 +0.9**
GENL Genova Univers 1.32 116 P **Pg 07 12 16.9 +0.3**
GENL S **Sg 07 12 16.9 +0.8**
SIMPL Simplonpass 1.33 21 P **Pb 07 11 58.3 0.0**
SIMPL S **Sg 07 12 16.3 -0.3**
VARE Varese 1.34 49 P **Pn 07 11 57.8 -0.1**
VARE S **Sb 07 12 14.1 -1.3**
VARE Varese 1.34 49 P **Pn 07 11 57.7 -0.1**
VARE S **Sb 07 12 14.2 -1.3**
VARE AML AML
comp=E,868µm,1.6s
VARE AML AML
comp=N,1044µm,0.8s
VARE AML AML
comp=E,868µm,0.4s
VARE AML AML
comp=N,1044µm,1.2s
SENIN Lac Senin/Sane 1.36 359 P **Pg 07 12 00.1 +0.4**
SENIN S **Sg 07 12 20.9 +3.5**
LAUCH Lauchernalp 1.45 13 P **Pb 07 12 00.9 +0.6**
GORR Gorreto 1.46 105 P **Pb 07 12 01.0 +0.6**
GORR S **Sg 07 12 20.7 +0.1**
GORR Gorreto 1.46 105 P **Pb 07 12 01.0 +0.6**
GORR S **Sg 07 12 21.1 +0.5**
GORR AML AML
comp=E,1543µm,0.4s
GORR AML AML
comp=N,2310µm,0.4s
GORR AML AML
comp=N,2310µm,1.6s
EILF Villa Eilenroc 1.46 185 P **Pb 07 12 01.1 +0.7**
EILF S **Sg 07 12 20.3 -0.3**
MUGIO Muggio 1.52 52 P **Pn 07 12 00.3 0.0**
MUGIO S **Sn 07 12 18.6 -1.2**
MUGIO Muggio 1.52 52 P **Pn 07 12 00.5 +0.2**
MUGIO AML AML
comp=E,496µm,0.8s
MUGIO AML AML
comp=E,496µm,0.8s
MUGIO AML AML
comp=N,563µm,0.6s
MUGIO AML AML
comp=E,496µm,1.2s
MUGIO AML AML
comp=N,563µm,1.4s
BOB Bobbio (Coli) 1.53 98 P **Pg 07 12 04.2 +1.3**
FIESA Fiescheralp 1.54 21 P **Pb 07 12 02.1 +0.3**
FIESA S **Sg 07 12 24.9 +1.8**
SMRF Simiane la Rot 1.62 231 *e*Pg **Pg 07 12 04.4 -0.2**
SMRF *e*Sg **Sg 07 12 27.0 +1.4**
comp=N,405nm,0.5s
MERA Merate 1.62 65 P **Pb 07 12 02.5 -0.7**
GIMEL St. Georges / 1.70 335 ⇓P **Pb 07 12 05.0 +0.4**
GIMEL AML AML
comp=E,404µm,1.6s
GIMEL AML AML
comp=N,396µm,1.3s
GIMEL AML AML
comp=E,404µm,1.6s
GIMEL AML AML
comp=E,404µm,0.4s
GIMEL AML AML
comp=N,396µm,0.7s
LEC Lecco 1.71 59 P **Pn 07 12 03.1 +0.4**
FUSIO Fusio 1.73 32 P **Pn 07 12 03.2 0.0**
FUSIO AML AML
comp=E,312µm,0.5s
FUSIO AML AML
comp=N,320µm,0.9s
FUSIO AML AML
comp=N,320µm,0.9s
FUSIO AML AML
comp=E,312µm,0.5s
FUSIO AML AML
comp=N,320µm,1.1s
CABF La Chapelle 1.82 332 *e*Pn **Pb 07 12 06.4 -0.2**
MDI Monti di Nese 1.85 64 P **Pn 07 12 04.8 -0.1**
MDI S **Sn 07 12 26.5 -1.6**
MDI Monti di Nese 1.85 64 P **Pn 07 12 04.8 -0.1**
MDI AML AML
comp=N,632µm,0.6s
MDI AML AML
comp=E,880µm,1.1s
MDI AML AML
comp=N,740µm,0.6s
MDI AML AML
comp=E,928µm,1.1s
VIVF Saint-Julien-I 1.89 266 *e*Pn **Pn 07 12 05.9 +0.7**
VIVF *e*Sn **Sn 07 12 29.2 +0.5**
comp=E,404nm,0.4s
BNALP Bannalp 2.02 22 P **Pb 07 12 09.7 -0.3**
BNALP AML AML
comp=E,508µm,0.6s
BNALP AML AML
comp=N,316µm,1.1s
BNALP AML AML
comp=E,508µm,1.4s
TUE Stuetta 2.04 43 P **Pn 07 12 08.7 +1.2**
TUE AML AML
comp=E,372µm,0.9s
TUE AML AML
comp=N,681µm,0.7s
TUE AML AML
comp=E,376µm,0.9s
TUE AML AML
comp=N,681µm,0.6s
SALO Salr 2.34 74 P **Pn 07 12 12.3 +0.8**
SALO AML AML
comp=N,370µm,1.5s
SALO AML AML
comp=N,370µm,0.5s
SALO AML AML
comp=E,462µm,0.8s
SALO AML AML
comp=N,353µm,1.1s
SALO AML AML
comp=E,420µm,0.8s
BALST Balsthal 2.35 6 *e*Pn **Pn 07 12 13.8 +2.2**
BALST *e*Sn **Sn 07 12 42.3 +2.1**
BERNI Berninapass 2.36 52 P **Pn 07 12 13.2 +1.3**
BERNI S **Sn 07 12 39.8 -1.0**
BERNI AML AML
comp=E,206µm,0.8s
BERNI AML AML
comp=N,160µm,0.3s
MAGA Magasa 2.46 71 P **Pn 07 12 13.1 0.0**
MABI Malga Bissina 2.48 64 P **Pn 07 12 13.8 +0.3**
MABI S **Sn 07 12 42.1 -1.5**
MABI AML AML
comp=N,223µm,0.4s
MABI AML AML
comp=E,124µm,0.3s
PLONS Plons/SG 2.50 34 *e*Pn **Pn 07 12 15.5 +1.7**
DAVOX Davos/Dischmat 2.52 44 Pn **Pn 07 12 15.9 +1.8**
comp=E,6.0nm,0.3s,baz=227,slow=6.7,SNR=63
DAVOX Sn **Sn 07 12 45.7 +1.0**
comp=E,11nm,0.3s,baz=196,slow=15,SNR=7.1
comp=E,14nm,0.3s
DAVOX Davos/Dischmat 2.52 44 P **Pn 07 12 16.0 +1.8**
DAVOX AML AML
comp=E,566µm,1.5s
DAVOX AML AML
comp=N,616µm,0.4s
DAVOX AML AML
comp=E,566µm,0.5s
SULZ Cheisacher 2.58 12 *e*Pn **Pn 07 12 16.9 +2.0**
SULZ *e*Sn **Sn 07 12 47.8 +1.8**
MBAL Monte Baldo - 2.59 73 P **Pn 07 12 15.6 +0.6**
MBAL AML AML
comp=N,289µm,0.8s
MBAL AML AML
comp=E,274µm,0.2s
MBAL AML AML
comp=N,266µm,0.3s
MBAL AML AML
comp=E,296µm,1.5s
BRMO Bormio 2.60 54 P **Pn 07 12 16.7 +1.6**
BRMO AML AML
comp=N,97µm,1.4s
BRMO AML AML
comp=N,97µm,0.6s
BRMO AML AML
comp=E,97µm,1.0s
FUORN Ofenpass-Fuorn 2.62 51 P **Pn 07 12 17.7 +2.2**
FUORN AML AML
comp=N,121µm,0.6s
FUORN AML AML
comp=E,111µm,0.4s
PII Pisa 2.63 118 P **Pn 07 12 16.5 +1.0**
PII AML AML
comp=E,173µm,0.5s
PII AML AML
comp=E,173µm,1.5s
PII AML AML
comp=N,195µm,0.7s
POPM Popiglio 2.64 110 P **Pn 07 12 17.7 +2.1**
POPM AML AML
comp=E,206µm,0.3s
POPM AML AML
comp=N,216µm,0.5s
LASF Ste Croix 2.64 251 *e*Pn **Pn 07 12 16.5 +0.9**
LASF *e*P **Pb 07 12 18.3 -2.3**
LASF *e*Sn **Sn 07 12 47.5 +0.1**
comp=N,101nm,0.5s
VARA Varagna 2.65 71 P **Pn 07 12 17.0 +1.1**
VARA AML AML
comp=E,432µm,0.7s
VARA AML AML
comp=N,363µm,0.3s
ZCCA Zocca 2.69 103 P **Pb 07 12 19.6 -1.8**
ZCCA AML AML
comp=N,190µm,0.6s
ZCCA AML AML
comp=E,212µm,0.6s
LUSI Trento, Gardas 2.72 68 P **Pn 07 12 17.4 +0.6**
LUSI S **Sn 07 12 48.4 -1.1**
LUSI AML AML
comp=E,275µm,1.3s
LUSI AML AML
comp=N,396µm,0.3s
LUSI AML AML
comp=E,275µm,0.7s
PGF Pioggiola 2.74 153 *e*Pn **Pn 07 12 16.7 -0.4**
PGF *e*Sn **Sn 07 12 48.0 -1.9**
comp=E,37nm,0.2s
PGF Pioggiola 2.74 153 P **Pn 07 12 16.6 -0.4**
PGF AML AML
comp=N,88µm,1.0s
PGF AML AML
comp=E,132µm,0.3s
CARE Lago del Cares 2.76 58 P **Pn 07 12 18.9 +1.5**
CARE AML AML
comp=E,655µm,1.5s
CARE AML AML
comp=N,172µm,1.6s
CARE AML AML
comp=E,101µm,0.5s
CARE AML AML
comp=N,110µm,1.2s
CARE AML AML
comp=N,172µm,0.4s
CARE AML AML
comp=E,101µm,1.5s
MOSI Grossmontoni 2.78 53 P **Pn 07 12 20.4 +2.8**
MOSI AML AML
comp=E,356µm,0.5s
MOSI AML AML
comp=N,453µm,1.6s
MOSI AML AML
comp=N,453µm,0.4s
METMA Mettma DE 2.79 13 *e*Pn **Pn 07 12 19.1 +1.5**
METMA *e*Sn **Sn 07 12 52.2 +1.2**
HINF Hinteralfeld 2.83 354 *e*Pn **Pn 07 12 19.8 +1.5**
HINF *e*Sn **Sn 07 12 52.1 0.0**
comp=N,32nm,0.3s
HINF *e*Sg **Sg 07 13 06.2 +1.7**
comp=N,170nm,0.5s
DOSS Dosso del Somm 2.86 71 P **Pn 07 12 19.2 +0.5**
DOSS AML AML
comp=E,304µm,1.6s
DOSS AML AML
comp=E,243µm,1.4s
DOSS AML AML
comp=E,243µm,0.6s
DOSS AML AML
comp=N,272µm,0.7s
DOSS AML AML
comp=N,252µm,0.6s
DOSS AML AML
comp=E,304µm,0.4s
SLE Schleitheim 2.88 16 *e*Pn **Pn 07 12 20.3 +1.4**
SLE *e*Sn **Sn 07 12 55.3 +2.1**
DAVA Damuels 2.90 37 *e*Pn **Pn 07 12 21.5 +2.3**
comp=E,0.8nm,0.1s,SNR=20
DAVA Sn **Sn 07 12 56.5 +2.7**
comp=E,40nm,0.4s
DAVA Damuels 2.90 37 *e*Pn **Pb 07 12 22.3 -2.6**
DAVA *e*Sn **Sn 07 12 57.1 +3.2**
BERGE Lenzkirch (DE) 2.93 11 *e*Pn **Pn 07 12 21.0 +1.4**
BERGE *e*Sn **Sn 07 12 55.3 +0.7**
SMF Signal de Mont 2.93 305 *e*Pn **Pn 07 12 20.9 +1.3**
SMF *e*Sg **Sg 07 13 07.1 -0.6**
comp=E,89nm,0.4s
OZOL Ozolo 2.97 60 P **Pn 07 12 22.2 +2.1**
OZOL AML AML
comp=N,218µm,0.6s
OZOL AML AML
comp=E,338µm,0.5s
ZOVE Zovencedo 2.98 80 P **Pn 07 12 20.3 0.0**
PANI Panarotta 3.01 68 P **Pn 07 12 21.6 +0.8**
PANI AML AML
comp=E,113µm,0.9s
PANI AML AML
comp=N,238µm,0.3s
PANI AML AML
comp=E,113µm,1.1s
WALHA Wallhausen, DE 3.02 24 *e*Pn **Pn 07 12 22.7 +1.9**
WALHA *e*Sn **Sn 07 12 58.2 +1.4**
CELB S.Piero in Cam 3.08 136 P **Pn 07 12 22.2 +0.6**
CELB AML AML
comp=E,100µm,1.4s
CELB AML AML
comp=N,87µm,0.7s
CELB AML AML
comp=E,100µm,0.6s
EMING Emmingen-Lipti 3.08 19 *e*Pn **Pn 07 12 23.0 +1.4**
EMING *e*Sn **Sn 07 12 59.6 +1.5**
HAU Haudompre 3.08 348 *e*Pn **Pn 07 12 23.3 +1.7**
HAU *e*Sn **Sn 07 12 57.9 -0.2**
comp=E,70nm,0.3s
BRIS BRISIGHELLA 3.12 104 P **Pb 07 12 26.9 -1.7**
BRIS AML AML
comp=E,140µm,0.7s
BRIS AML AML
comp=N,112µm,0.7s
BRIS AML AML
comp=E,140µm,1.3s
BRIS AML AML
comp=N,112µm,1.3s
FETA Feichten 3.12 48 *i* Pn **Pn 07 12 24.4 +2.1**
comp=N,1.0nm,0.2s,SNR=20
FETA *e*Sn **Sn 07 13 00.9 +1.6**
comp=N,10nm,0.3s
ECH Echery 3.22 358 *e*Pn **Pn 07 12 25.0 +1.5**
ECH *e*Sn **Sn 07 13 00.9 -0.7**
CTI Castel Tesino 3.22 70 P **Pn 07 12 24.6 +0.9**
CTI AML AML
comp=N,290µm,0.3s
CTI AML AML
comp=E,279µm,0.8s
CSNT Castellina Chi 3.24 117 P **Pn 07 12 25.3 +1.5**
CSNT AML AML
comp=E,55µm,0.5s
CSNT AML AML
comp=N,62µm,0.6s
CSNT AML AML
comp=N,62µm,1.4s
SMPL Sampolo 3.24 153 P **Pn 07 12 24.8 +0.9**
SMPL AML AML
comp=N,37µm,1.4s
SMPL AML AML
comp=N,37µm,0.6s
SMPL AML AML
comp=E,42µm,1.5s
AJAC Base Areonaval 3.25 161 P **Pn 07 12 24.8 +0.9**
AJAC AML AML
comp=E,318µm,0.3s
AJAC AML AML
comp=N,276µm,0.4s
CGRP Cima Grappa 3.27 73 P **Pn 07 12 25.0 +0.5**
CGRP AML AML
comp=N,188µm,0.5s
CGRP AML AML
comp=E,222µm,0.4s
AVF Avril sur Loir 3.30 304 *e*P **Pn 07 12 27.0 +2.4**
AVF *e*Sg **Sg 07 13 18.8 -0.5**

comp=E,108nm,0.4s
UBR Ueberruh 3.30 35 *e*Pn **Pn 07 12 26.6 +1.8**
UBR *e*Sn **Sn 07 13 05.8 +2.0**
LOR Lormes 3.30 315 *e*Pn **Pn 07 12 26.6 +1.9**
LOR Lormes 3.30 315 *e*Pn **Pn 07 12 26.7 +2.0**
LOR *e*Sn **Sn 07 13 03.3 -0.4**
comp=E,64nm,0.3s
LOR *e*Sg **Sg 07 13 18.9 -0.7**
comp=E,60nm,0.4s
SSF Saint Saulge 3.36 309 *e*Pn **Pn 07 12 27.5 +2.0**
SSF *e*Sn **Sn 07 13 03.9 -1.2**
comp=E,40nm,0.3s
SSF *e*Sg **Sg 07 13 20.7 -0.7**
comp=E,64nm,0.4s
CASP Castiglione de 3.39 130 P **Pn 07 12 26.3 +0.5**
CASP AML AML
comp=N,64µm,0.7s
CASP AML AML
comp=E,57µm,1.3s
BFO Black Forest 3.40 11 *e*Pn **Pn 07 12 27.1 +1.1**
BFO *e*Sn **Sn 07 13 06.6 +0.5**
CDF Champ du Feu 3.41 360 *e*Pn **Pn 07 12 27.4 +1.2**
CDF *e*P **Pb 07 12 29.5 -4.2**
CDF *e*Sn **Sn 07 13 06.1 -0.3**
comp=E,28nm,0.3s
WLS Welschbruch 3.41 0 *e*Pn **Pn 07 12 27.6 +1.4**
ROSI Rosskopf 3.44 55 P **Pn 07 12 29.6 +2.8**
ROSI AML AML
comp=N,242µm,1.1s
ROSI AML AML
comp=E,183µm,0.4s
ROSI AML AML
comp=N,242µm,0.9s
RETA Reutte 3.45 43 Pn **Pn 07 12 28.2 +1.5**
comp=N,0.4nm,0.2s,SNR=19
RETA *e*Sn **Sn 07 13 07.6 +0.2**
comp=N,5.6nm,0.3s
RETA Reutte 3.45 43 *e*Pn **Pn 07 12 28.4 +1.6**
BGF Bois d'Agland 3.49 298 *e*P **Pn 07 12 30.1 +2.8**
BGF *e*Sg **Sg 07 13 24.7 -1.0**
comp=N,249nm,0.5s
SQTA Sankt Quirin 3.50 49 *i* Pn **Pn 07 12 29.5 +2.0**
comp=N,0.5nm,0.1s,SNR=19
SQTA *e*Sn **Sn 07 13 08.7 +0.1**
comp=N,23nm,0.3s
SQTA Sankt Quirin 3.50 49 *e*Pn **Pn 07 12 29.8 +2.3**
ZUGS Zugspitze, Sch 3.50 45 *e*Pn **Pn 07 12 29.7 +2.0**
VARN Col Varnada, M 3.51 72 P **Pn 07 12 28.2 +0.6**
VARN AML AML
comp=N,238µm,0.4s
VARN AML AML
comp=E,313µm,0.7s
MOTA Moosalm 3.52 47 *i* Pn **Pn 07 12 29.5 +1.7**
comp=E,0.9nm,0.1s,SNR=14
MOTA *e*Sn **Sn 07 13 08.8 -0.5**
comp=E,10nm,0.3s
AGOR Agordo 3.56 67 P **Pn 07 12 30.0 +1.8**
SFTF Sexfontaines 3.57 335 *e*Pn **Pn 07 12 30.6 +2.3**
SFTF *e*P Pb 07 12 31.7 -4.6
CRE Caprese Michel 3.60 111 P **Pn 07 12 30.9 +2.1**
CRE AML AML
comp=E,76µm,0.6s
CRE AML AML
comp=N,75µm,0.6s
CRE AML AML
comp=E,76µm,1.4s
PAGF Fort de Pagny 3.72 343 *e*Pn **Pn 07 12 31.5 +1.1**
CAF Calviac 3.73 271 *e*P **Pn 07 12 33.9 +3.3**
WTTA Wattenberg 3.76 51 *i* Pn **Pn 07 12 33.4 +2.3**
comp=E,3.8nm,0.2s,SNR=41
WTTA *e*Sn **Sn 07 13 15.8 +0.6**
comp=E,28nm,0.3s
WTTA Wattenberg 3.76 51 P **Pn 07 12 33.6 +2.5**
WTTA AML AML
comp=E,140µm,1.2s
WTTA AML AML
comp=N,168µm,0.8s
WATA Walderalm 3.77 50 *i* Pn **Pn 07 12 33.3 +2.1**
comp=N,0.4nm,0.1s,SNR=17
WATA *e*Sn **Sn 07 13 15.3 0.0**
comp=N,10nm,0.3s
MAON Monte Argentar 3.78 132 P **Pn 07 12 32.0 +0.9**
MAON AML AML
comp=E,536µm,1.6s
MAON AML AML
comp=N,540µm,0.7s
MAON AML AML
comp=E,536µm,0.4s
MAON AML AML
comp=N,540µm,1.3s
TCF Toulx Ste Croi 3.81 292 *e*Pn **Pn 07 12 33.6 +2.0**
TCF *e*Sn **Sn 07 13 15.6 -0.5**
TCF *e*Sg **Sg 07 13 34.6 -1.1**
comp=N,227nm,0.7s
CIMO Cimolais 3.82 68 P **Pn 07 12 33.4 +1.5**
CIMO AML AML
comp=E,60µm,0.5s
CIMO AML AML
comp=N,78µm,0.8s
CIMO AML AML
comp=E,53µm,0.5s
CIMO AML AML
comp=N,87µm,0.9s
CIMO AML AML
comp=N,78µm,1.2s
CIMO AML AML
comp=E,53µm,1.5s
CIMO AML AML
comp=E,60µm,1.5s
CIMO AML AML
comp=N,87µm,1.1s
MEZF Maizieres J'vi 3.83 337 *e*Pn **Pn 07 12 34.2 +2.3**
MEZF *e*P **Pb 07 12 36.6 -4.2**
MEZF *e*Sn **Sn 07 13 15.7 -0.9**
comp=N,58nm,0.5s
SAVF Savonnieres en 3.92 338 *e*Pn **Pn 07 12 34.8 +1.7**
SAVF *e*P Pb 07 12 36.8 -5.4
SAVF *e*P Pg 07 12 36.9 -12
baz=156
SAVF *e*Sn **Sn 07 13 18.2 -0.5**
PE3 Peglio 3.94 108 AML AML
comp=E,840µm,1.6s
PE3 AML AML
comp=N,525µm,1.6s
PE3 AML AML
comp=N,525µm,0.4s
HYF Humbligny 3.96 307 *e*P **Pn 07 12 36.4 +2.6**
BE1 Monatshausen 3.97 41 *e*Pn **Pn 07 12 36.1 +2.2**
STU Stuttgart 3.98 18 *e*Pn **Pn 07 12 35.1 +1.1**
STAL STALIGIAL 3.99 70 P **Pn 07 12 35.0 +1.0**
STAL AML AML
comp=E,264µm,1.5s
STAL AML AML
comp=N,296µm,1.0s
STAL AML AML
comp=N,196µm,0.2s
STAL AML AML
comp=E,218µm,0.7s
ABTA Abfaltersbach 4.03 62 *i* Pn **Pn 07 12 36.2 +1.6**
comp=E,7.5nm,0.2s,SNR=42
ABTA *i* Sn **Sn 07 13 21.7 +0.1**
comp=E,9.6nm,0.4s
MTLF Montolieu 4.03 247 *e*Pn **Pn 07 12 35.5 +0.9**
MTLF *e*P Pb 07 12 37.8 -6.4
MTLF *e*Sn **Sn 07 13 19.9 -1.7**
comp=E,16nm,0.2s
AGLI Aglientu 4.11 160 P **Pn 07 12 36.5 +0.9**
AGLI AML AML
comp=E,38µm,1.3s
AGLI AML AML
comp=E,38µm,0.7s
AGLI AML AML
comp=N,30µm,0.5s
RJF Les Rejaudoux 4.12 276 *e*P **Pn 07 12 39.0 +3.2**
MURB Monte Urbino 4.13 113 P **Pn 07 12 38.4 +2.3**
MURB AML AML
comp=E,95µm,1.1s
MURB AML AML
comp=E,95µm,0.9s
MURB AML AML
comp=N,109µm,0.4s
CLUD Cludinico 4.16 68 P **Pn 07 12 37.6 +1.1**
CLUD AML AML
comp=N,49µm,0.7s
CLUD AML AML
comp=E,46µm,0.5s

MPRI Monte Prat 4.17 71 P **Pn 07 12 37.5 +1.0**
MPRI AML AML
comp=N,132µm,0.5s
MPRI AML AML
comp=N,132µm,1.5s
MPRI AML AML
comp=E,84µm,0.4s
FUR Furstenfeldbru 4.18 39 *e*Pn **Pn 07 12 38.4 +1.7**
FUR *e*Sn **Sn 07 13 24.2 -1.1**
LDE Landau 4.21 7 *e*Pn **Pn 07 12 38.7 +1.6**
GEPF Gemona 4.28 71 P **Pn 07 12 38.9 +0.9**
MOMA Monte Martano 4.39 118 P **Pn 07 12 41.7 +2.1**
MOMA AML AML
comp=E,26µm,1.3s
MOMA AML AML
comp=N,23µm,1.5s
LESA Schwarzleotal 4.44 55 *i* Pn **Pn 07 12 42.2 +1.9**
comp=N,0.4nm,0.2s,SNR=24
LESA *e*Sn **Sn 07 13 31.1 -0.7**
comp=N,3.0nm,0.3s
EL6 Elcito 4.49 110 P **Pn 07 12 43.1 +2.1**
EL6 AML AML
comp=E,67µm,1.2s
EL6 AML AML
comp=N,99µm,1.2s
EL6 AML AML
comp=E,67µm,0.8s
ACOM Acomizza, Ital 4.60 68 P **Pn 07 12 44.1 +1.4**
ACOM AML AML
comp=E,89µm,0.6s
ACOM AML AML
comp=N,116µm,0.6s
ACOM AML AML
comp=E,89µm,1.4s
ACOM AML AML
comp=N,116µm,1.4s
FDMO Fiordimonte 4.60 113 AML AML
comp=N,22µm,1.4s
FDMO AML AML
comp=E,21µm,0.7s
LFF La Frestale 4.67 272 *e*P **Pn 07 12 47.2 +3.8**
RJOB Jochberg 4.67 52 *e*Pn **Pn 07 12 45.9 +2.4**
RJOB *e*Sn **Sn 07 13 37.2 -0.3**
KBA Koelnbreinsper 4.68 62 *e*Pn **Pn 07 12 45.5 +1.8**
comp=E,1.9nm,0.2s,SNR=16
KBA *e*Sn **Sn 07 13 38.0 +0.1**
comp=E,2.9nm,0.3s
KBA Koelnbreinsper 4.68 62 *e*Pn **Pn 07 12 46.1 +2.3**
MYKA Terra Mystica 4.71 68 *i* Pn **Pn 07 12 45.3 +1.2**
comp=E,1.2nm,0.2s
RIVT Riveris 4.72 356 *e*Pn **Pn 07 12 46.3 +2.1**
RIVT *e*Sn **Sn 07 13 39.5 +0.9**
WLF Walferdange 4.73 351 *e*Pn **Pn 07 12 47.4 +3.2**
WLF Walferdange 4.73 351 *d*P Pb 07 12 50.7 -5.4
ABH Alteburg 4.88 2 *e*Pn **Pn 07 12 48.0 +1.6**
MNTT Montottone 4.92 111 AML AML
comp=N,176µm,1.4s
MNTT AML AML
comp=E,180µm,1.0s
MNTT AML AML
comp=N,176µm,0.6s
BIOA Bad Ischl, Aus 5.13 56 *i* Pn **Pn 07 12 52.7 +2.8**
comp=N,2.6nm,0.3s,SNR=5.0
BIOA *e*Sn **Sn 07 13 48.2 -0.7**
comp=N,13nm,0.4s
TNS Taunus Mts 5.28 8 *e*Pn **Pn 07 12 53.0 +1.1**
TNS *e*Sn **Sn 07 13 52.8 +0.4**
OBKA Obir 5.28 71 *e*Pn **Pn 07 12 52.7 +0.7**
comp=N,0.7nm,0.2s
RCHB Rochefort 5.35 345 *d*P **Pn 07 12 54.8 +2.1**
RCHB *d*S **Sn 07 13 53.9 0.0**
GIVF Givet 5.37 343 *e*Pn **Pn 07 12 54.7 +1.6**
GIVF *e*P Pb 07 12 57.7 -9.3
GRF Grafenberg Arr 5.39 28 *e*Pn **Pn 07 12 54.3 +1.0**
GRF *e*Sn **Sn 07 13 53.0 -2.1**
EPF Esparros 5.41 251 *e*Pn **Pn 07 12 54.1 +0.5**
DOU Dourbes 5.42 341 *d*P **Pn 07 12 56.1 +2.4**
DOU *d*S **Sn 07 13 55.2 -0.5**
MFF Saint Martin d 5.46 290 *e*P **Pn 07 12 57.0 +2.7**
BAIF Baives 5.48 339 *e*Pn **Pn 07 12 56.3 +1.8**
BAIF *e*P **Pn 07 12 58.5 +4.0**
BMRD Maredsous 5.58 343 *d*P **Pn 07 12 58.2 +2.4**
MOA Molln 5.58 57 *i* Pn **Pn 07 12 56.8 +0.8**
comp=N,0.4nm,0.1s,SNR=12
MOA *e*Sn **Sn 07 13 58.6 -1.2**
comp=N,2.6nm,0.2s
MOA Molln 5.58 57 *e*Pn **Pn 07 12 57.7 +1.7**
MOA *e*Sn **Sn 07 13 58.6 -1.2**
BCA Clavier 5.59 347 *d*P **Pn 07 12 58.3 +2.2**
BGES Gesves 5.59 345 *d*P **Pn 07 12 58.2 +2.1**
WET Wettzell 5.62 41 *e*Pn **Pn 07 12 56.9 +0.4**
WET *e*Sn **Sn 07 13 55.3 -5.5**
BTNL Ternell 5.64 352 *d*P **Pn 07 12 59.4 +2.5**
MEM Membach 5.68 352 *d*P **Pn 07 12 59.1 +1.8**
MEM *d*S **Sn 07 14 02.5 +0.4**
BSTI Sart Tilman 5.71 349 *d*P **Pn 07 13 00.5 +2.8**
DREG Dreilaegerbach 5.71 353 *e*Pn **Pn 07 13 00.5 +2.7**
VSL Villasalto 5.71 164 P **Pn 07 12 59.5 +1.7**
ROTZ Rotzenmuhle 5.81 33 *e*Pn **Pn 07 12 59.3 +0.2**
GEC2 GERESS Array S 5.82 46 *e*Pn **Pn 07 13 00.1 +0.8**
GEC2 *e*Sn **Sn 07 14 01.2 -4.6**
GERES GERESS Array B 5.82 46 Pn **Pn 07 12 59.5 +0.2**
comp=N,0.6nm,0.3s,baz=234,slow=13,SNR=102
GERES Sn **Sn 07 14 00.5 -5.4**
comp=N,0.6nm,0.3s,baz=236,slow=23,SNR=11
comp=N,5.3nm,0.3s
CGL Cagliari Serpe 5.83 165 P **Pn 07 13 00.9 +1.4**
SU26 Carbonia-Igles 5.94 171 P **Pn 07 13 02.6 +1.7**
KHC Kasperske Hory 5.94 44 *e*PN **Pn 07 13 02.2 +1.2**
KHC *e*SN **Sn 07 14 03.0 -5.8**
ETSF Etsaut 6.06 252 *e*Pn **Pn 07 13 03.1 +0.4**
CKRC Cesky Krumlov 6.12 49 *e*PN **Pn 07 13 03.0 -0.4**
CKRC *e*SN **Sn 07 14 08.5 -4.7**
ARSA Arzberg 6.13 66 *e*Pn **Pn 07 13 03.3 -0.2**
comp=N,2.1nm,0.4s,SNR=8.1
LDF La Druitiere 6.24 308 *e*Pn **Pn 07 13 06.7 +1.7**
SJPF Ste Jean 6.44 256 *e*Pn **Pn 07 13 08.5 +0.7**
ZVC Zvikov 6.45 44 *e*PN **Pn 07 13 08.6 +0.7**
ZVC *e*SN **Sn 07 14 14.9 -6.3**
FLN La Foliniere 6.54 308 *e*Pn **Pn 07 13 10.7 +1.7**
GRR Gorron 6.56 304 *e*Pn **Pn 07 13 11.4 +2.0**
GRR *e*Sn **Sn 07 14 21.2 -2.7**
comp=N,25nm,0.5s
CONA Conrad Observa 6.58 61 *e*Pn **Pn 07 13 10.2 +0.4**
comp=N,0.3nm,0.2s
CONA *e*Sn **Sn 07 14 22.9 -1.7**
comp=N,1.6nm,0.3s
RONA Rosalia, Austr 6.77 63 *i* Pn **Pn 07 13 12.5 +0.1**
comp=N,0.9nm,0.2s
PRU Pruhonice 6.99 42 *e*PN **Pn 07 13 16.6 +1.4**
TREC Trest 7.03 49 *e*PN **Pn 07 13 16.6 +0.7**
TREC *e*SN **Sn 07 14 30.8 -4.7**
KRUC Moravsky 7.41 54 *e*PN **Pn 07 13 20.9 -0.2**
KRUC *e*SN **Sn 07 14 38.7 -6.1**
SGMF Saint Gilles 7.54 299 *e*P **Pn 07 13 25.0 +2.2**
MODS Modra-Piesok 7.63 60 *e*PN **Pn 07 13 25.4 +1.3**
MODS *e*SN **Sn 07 14 46.2 -4.1**
VRAC Vranov 7.65 52 Pn **Pn 07 13 22.5 -1.8**
comp=N,0.6nm,0.3s,baz=243,slow=11,SNR=4.0
VRAC Sn **Sn 07 14 45.5 -5.2**
comp=N,0.7nm,0.3s,baz=334,slow=14,SNR=4.6
comp=N,1.3nm,0.3s
VRAC Vranov 7.65 52 *e*PN **Pn 07 13 24.5 +0.2**
VRAC *e*SN **Sn 07 14 45.5 -5.2**
QUIF Quistinic 7.80 296 *e*Pn **Pn 07 13 27.3 +0.9**
ROSF Rostrenen 8.01 298 *e*P **Pn 07 13 32.4 +3.1**
DPC Dobruska-Polom 8.09 45 *e*PN **Pn 07 13 31.0 +0.5**
DPC *e*SN **Sn 07 14 55.6 -6.0**
CHVC Chvalec 8.11 43 *e*PN **Pn 07 13 31.2 +0.5**
KRLC Kraliky 8.17 48 *e*PN **Pn 07 13 32.0 +0.5**
KRLC *e*SN **Sn 07 14 57.8 -5.7**
OSTC Ostas 8.17 44 *e*PN **Pn 07 13 32.7 +1.2**
MAUC Maruska 8.38 55 *e*PN **Pn 07 13 35.3 +0.9**
MORC Moravsky Berou 8.42 52 *e*PN **Pn 07 13 35.0 +0.1**
MORC *e*SN **Sn 07 15 02.9 -6.8**
STEB Steborice 8.63 51 *e*PN **Pn 07 13 37.5 -0.2**
STEB *e*SN **Sn 07 15 07.8 -6.9**
ESDC Sonseca Array 9.90 241 Pn **Pn 07 13 55.5 +0.2**
comp=N,0.2nm,0.3s,baz=48,slow=14,SNR=14
comp=N,0.7nm,0.5s
EKA Eskdalemuir Ar 12.31 331 Pn **Pn 07 14 28.2 +0.1**
baz=141,slow=14
comp=N,0.6nm,0.2s
KURBB Kurchatov Arra 46.46 56 P **P 07 19 59.7 +0.1**
comp=N,0.1nm,0.3s,baz=292,slow=8.6,SNR=2.1
comp=N,0.1nm,0.3s
ZALV Zalesovo Beam 48.76 50 LR LR 07 41 30.8
comp=N,50nm,18.1s,baz=130,slow=37
MKAR Makanchi Array 50.32 60 P **P 07 20 29.6 +0.1**
comp=N,0.2nm,0.3s,baz=301,slow=7.3,SNR=4.9
comp=N,0.2nm,0.3s

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*IDC **29** 07:12:06.0±8.3,4.°98S×152.°83E,h97km±57km, mb3.2/4, mbtmp3.6/5, ML1.7/1, Error ellipse: s-maj=90.9km s-min=40.7km az=111.0*
ISC 29 07:11:58.7±2.3, 5.°1S±0.°4×153.°4E±0.°4, h56km, n6, σ1°49/7, mb3.2/4, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.54**	**235**	P	**Pn**	**07 13 46.8**	**+0.7**
	0.7nm,0.3s,baz=308,slow=19,SNR=1.2						
PMG				S	**Sn**	**07 15 10.2**	**+0.1**
	2.2nm,0.3s,baz=147,slow=21,SNR=1.5						
	4.6nm,0.5s						
WRA	**Warramunga Arr**	**23.71**	**230**	P	**P**	**07 17 07.1**	**+1.3**
	0.4nm,0.4s,baz=53,slow=9.5,SNR=20						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**26.34**	**224**	P	**P**	**07 17 30.4**	**+0.7**
	0.2nm,0.7s,baz=56,slow=9.9,SNR=7.0						
	0.2nm,0.7s						
FITZ	**Fitzroy Crossi**	**30.06**	**242**	P	**P**	**07 18 00.5**	**-2.4**
	2.0nm,0.6s,baz=70,slow=6.0,SNR=5.9						
	2.0nm,0.6s						
MKAR	**Makanchi Array**	**80.98**	**319**	P	**P**	**07 24 08.2**	**+0.8**
	0.2nm,0.6s,baz=122,slow=3.7,SNR=2.2						
	0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**151.00**	**288**	PKPbc	**PKiKP**	**07 31 46.7**	**-0.3**
	0.7nm,0.8s,baz=90,slow=2.8,SNR=2.9						

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*IDC **29** 07:12:43.7±3.6,61.°94N×31.°03E,h0km, mbtmp4.0/1, ML1.7/2, Error ellipse: s-maj=39.7km s-min=14.5km az=121.0*
*HEL **29** 07:12:43.4±0.1,61.°88N×31.°23E,h0km, ML1.3, Explosion*
ISC 29 07:12:42.9±1.6, 62.°01N±0.°05×31.°06E±0.°08, h0km, n15, σ1°68/22, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOF	**Joensuu**	**0.92**	**7**	*e*P	**Pg**	**07 13 00.4**	**-0.1**
JOF	**Joensuu**	**0.92**	**7**	*e*S	**Sb**	**07 13 15.3**	**+0.9**
RUF	**Ruokolahti**	**1.17**	**241**	*e*P	**Pg**	**07 13 04.8**	**-0.4**
RUF				*e*S	**Sg**	**07 13 19.6**	**-0.7**
NIF	**Nilsia**	**2.04**	**314**	*e*PB	**Pg**	**07 13 21.7**	**-0.2**
NIF				*e*SB	**Sg**	**07 13 49.8**	**+1.4**
NIF				smax	smax	07 13 52.5	
	comp=Z,1.2nm,0.1s						
VJF	**Virojoki**	**2.25**	**230**	*e*PB	**Pn**	**07 13 22.2**	**+0.9**
VJF				*e*SB	**Sn**	**07 13 50.7**	**+1.1**
VJF				smax	smax	07 13 53.1	
	comp=Z,0.8nm,0.1s						
RMF	**Romuvaara**	**2.27**	**347**	*e*P	**Pb**	**07 13 24.2**	**-0.6**
RMF				*e*S	**Sb**	**07 13 53.7**	**+0.4**
RMF				smax	smax	07 13 57.7	
	comp=Z,1.0nm,0.1s						
SUF	**Sumiainen**	**2.40**	**289**	*e*P	**Pb**	**07 13 27.2**	**+0.4**
SUF	**Sumiainen**	**2.40**	**289**	*e*PB	**Pb**	**07 13 27.2**	**+0.4**
SUF				*e*SG	**Sg**	**07 14 00.7**	**+0.9**
SUF				smax	smax	07 14 03.4	
	comp=Z,1.2nm,0.1s						
FIA0	**FINESS Array S**	**2.44**	**259**	*e*P	**Pn**	**07 13 25.2**	**+1.3**
FIA0				*e*SB	**Sb**	**07 13 58.6**	**+0.4**
FIA0				smax	smax	07 14 02.9	
	comp=Z,1.1nm,0.1s						
FINES	**FINESS Array B**	**2.44**	**259**	Pn	**Pn**	**07 13 25.6**	**+1.7**
	comp=Z,0.3nm,0.3s,baz=82,slow=15,SNR=14						
FINES				Sn	**Sb**	**07 13 57.1**	**-1.1**
	comp=Z,1.8nm,0.3s,baz=75,slow=26,SNR=30						
KEF	**Keuruu**	**2.92**	**276**	*e*P	**Pb**	**07 13 34.0**	**-1.7**
MEF	**Metsahovi**	**3.70**	**244**	*e*P	**Pn**	**07 13 41.7**	**+0.5**
VAF	**Ylistaro**	**4.02**	**289**	*e*P	**Pn**	**07 13 49.2**	**+3.5**
I43RU	**DUBNA INFRASON**	**6.17**	**147**	I	I	07 49 40.0	
	baz=336,slow=329,SNR=3.6						
ARCES	**ARCESS Array B**	**7.89**	**346**	Pn	**Pn**	**07 14 37.7**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=155,slow=12,SNR=2.3						
ARCES				Sn	**Sn**	**07 16 03.7**	**-4.9**
	comp=Z,0.1nm,0.3s,baz=168,slow=22,SNR=1.5						
	comp=Z,12nm,1.2s						

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*NEIC **29** 07:21:04.7±0.8,45.°85N±0.°03×73.°53W±0.°06,h11km±8km, mb_Lg3.0/53, ML3.1/6, mb_Lg3.6(OTT), Error ellipse: s-maj=6.1km s-min=3.8km az=71.0*
*OTT **29** 07:21:04.5±0.1,45.°85N×73.°51W,h18km, MN3.7/32*
OTT 2km west from L'Epiphanie, Qc. Felt Eastern Background Seismic Zone. Felt in Montreal area.
ISC 29 07:21:04.0±0.9, 45.°86N±0.°02×73.°51W±0.°02, h16km±7km, n107, σ0°90/120, 1D, Southern Quebec

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SJUQ	**Ste-Julie**	**0.32**	**156**	PG	**Pg**	**07 21 11.0**	**+0.2**
SJUQ				SG	**Sg**	**07 21 15.4**	**+0.1**
MRBQ	**Mirabel**	**0.34**	**260**	PG	**Pg**	**07 21 11.4**	**+0.4**
MRBQ				SG	**Sg**	**07 21 16.4**	**+0.5**
MNTQ	**Montreal, Queb**	**0.37**	**193**		**Pg**	**07 21 11.6**	**+0.1**
MNTQ				Sg	**Sg**	**07 21 14.8**	**-1.8**
MNTQ				IAML		07 21 16.8	
	comp=N,2µm,0.2s						
MNTQ				IAML		07 21 16.8	
	comp=E,3µm,0.3s						
MNTQ	**Montreal, Queb**	**0.37**	**193**	⇓PG	**Pg**	**07 21 11.6**	**+0.1**
MNTQ				SG	**Sg**	**07 21 16.7**	**+0.1**
MNTQ				Trac		07 21 17.2	
	comp=E,789nm,0.0s						
RIGQ	**Rigaud**	**0.67**	**232**	PG	**Pg**	**07 21 16.8**	**-0.3**
RIGQ				SG	**Sg**	**07 21 26.2**	**+0.3**
DRMQ	**Drummondville**	**0.72**	**86**	PG	**Pg**	**07 21 17.7**	**-0.4**
DRMQ				SG	**Sg**	**07 21 27.6**	**-0.1**
HWKO	**Hawkesbury**	**0.81**	**252**	PG	**Pg**	**07 21 19.4**	**-0.3**
HWKO				SG	**Sg**	**07 21 30.4**	**+0.1**
TRQ	**Mont Tremblant**	**0.81**	**297**		**Pg**	**07 21 19.3**	**-0.6**
TRQ				Sg	**Sg**	**07 21 30.2**	**-0.4**
TRQ				IAML		07 21 34.3	
	comp=E,672nm,0.1s						
TRQ				IAML		07 21 35.5	
	comp=N,843nm,0.1s						
TRQ	**Mont Tremblant**	**0.81**	**297**	PG	**Pg**	**07 21 19.3**	**-0.6**
TRQ				SG	**Sg**	**07 21 30.3**	**-0.4**
TRQ				Trac		07 21 34.3	
	comp=N,149nm,0.0s						
BECQ	**Becancour**	**0.86**	**55**	PG	**Pb**	**07 21 20.2**	**-0.3**
BECQ				SG	**Sg**	**07 21 32.0**	**-0.1**
BECQ				Trac		07 21 36.5	
	comp=N,80nm,0.1s						
DPQ	**Saint Jean**	**0.97**	**31**	PG	**Pb**	**07 21 21.9**	**-0.4**
DPQ				SG	**Sb**	**07 21 34.7**	**-0.1**
DPQ				Trac		07 21 35.9	
	comp=N,315nm,0.1s						
FRNY	**Flat Rock**	**1.02**	**183**		**Pb**	**07 21 22.1**	**-1.2**
FRNY				Sg	**Sb**	**07 21 35.6**	**-0.9**
FRNY	**Flat Rock**	**1.02**	**183**	PG	**Pb**	**07 21 22.2**	**-1.1**
FRNY				SG	**Sb**	**07 21 36.0**	**-0.5**
FRNY				Trac		07 21 37.0	
	comp=N,258nm,0.1s						
MOQ	**Mont Orford**	**1.04**	**121**	PG	**Pb**	**07 21 23.2**	**-0.3**
MOQ				SG	**Sb**	**07 21 37.2**	**+0.3**
MOQ				Trac		07 21 38.3	
	comp=N,90nm,0.0s						
GAC	**Glen Almond**	**1.39**	**264**	PG	**Pn**	**07 21 29.1**	**+0.5**
GAC				SG	**Sb**	**07 21 47.5**	**+0.5**
GAC				Trac		07 21 49.0	
	comp=N,347nm,0.1s						
SURQ	**Ste-Clotilde**	**1.44**	**118**	PG	Pn	07 21 17.1	-12
SURQ				SG	Sn	07 21 26.7	-21
LONY	**Lake Ozonia**	**1.45**	**212**		**Pn**	**07 21 29.7**	**+0.1**
LONY				Sg	**Sn**	**07 21 48.9**	**+0.6**
ORIO	**Orleans, Innes**	**1.46**	**255**	PG	**Pn**	**07 21 30.4**	**+0.7**
ORIO				SG	**Sb**	**07 21 50.0**	**+0.9**
ORIO				Trac		07 21 50.9	
	comp=N,367nm,0.2s						
WBO	**Williamsburg**	**1.51**	**236**		**Pn**	**07 21 31.0**	**+0.7**
WBO	**Williamsburg**	**1.51**	**236**	PG	**Pn**	**07 21 31.0**	**+0.7**
WBO				SG	**Sb**	**07 21 51.6**	**+1.1**
WBO				Trac		07 21 58.1	
	comp=N,145nm,0.1s						

OTT	**Ottawa**	**1.62 254**	PG	**Pn**	**07 21 33.1 +1.3**	
OTT			SG	**Sb**	**07 21 54.7 +1.1**	
OTT			Trac		07 21 56.0	
	comp=N,202nm,0.1s					
GRQ	**Grand Remous**	**1.80 295**	PN	**Pn**	**07 21 35.7 +1.5**	
GRQ			SN	**Sn**	**07 21 56.8 +0.1**	
GRQ			LG	Lg	07 22 00.5	
GRQ			Trac		07 22 03.8	
	comp=N,124nm,0.1s					
QCQ	**Quebec**	**1.80 58**	PN	**Pn**	**07 21 35.1 +0.8**	
QCQ			SN	**Sn**	**07 21 57.0 +0.3**	
QCQ			LG	Lg	07 22 00.9	
NCB	**Newcomb**	**1.95 195**		**Pn**	**07 21 37.4 +1.0**	
NCB			IAmb_Lg		07 22 10.8	
	comp=Z,94nm,0.9s					
LBNH	**Lisbon**	**1.97 145**		**Pn**	**07 21 38.3 +1.7**	
SGRQ	**St-Georges**	**2.06 81**	PN	**Pn**	**07 21 38.2 +0.3**	
SGRQ			SN	**Sn**	**07 22 03.3 0.0**	
H62A	**Milan**	**2.10 127**		**Pn**	**07 21 39.7 +1.2**	
G62A	**West of Eustis**	**2.19 106**		**Pn**	**07 21 41.1 +1.4**	
G62A			IAmb_Lg		07 22 15.9	
	comp=Z,86nm,0.8s					
SFA	**Sept-Chutes**	**2.24 55**	PN	**Pn**	**07 21 41.5 +1.1**	
SFA			SN	**Sn**	**07 22 07.8 0.0**	
HNH	**Hanover**	**2.32 158**	Pn	**Pn**	**07 21 43.1 +1.6**	
J59A	**Piesco**	**2.50 197**		**Pn**	**07 21 44.9 +1.0**	
I62A	**Tamworth**	**2.51 141**		**Pn**	**07 21 45.6 +1.5**	
SLBQ	**St-Lucie-de-Be**	**2.57 69**	PN	**Pn**	**07 21 46.0 +1.1**	
SLBQ			SN	**Sn**	**07 22 14.9 -1.0**	
BSPQ	**Baie-St-Paul**	**2.60 51**	PN	**Pn**	**07 21 46.5 +1.2**	
BSPQ			SN	**Sn**	**07 22 16.3 -0.3**	
J61A	**Chester**	**2.60 164**		**Pn**	**07 21 46.5 +1.2**	
LDAQ	**Lac Daran**	**2.62 36**		**Pn**	**07 21 46.7 +1.1**	
LDAQ			IAmb_Lg		07 22 31.1	
	comp=Z,43nm,0.8s					
LDAQ	**Lac Daran**	**2.62 36**	PN	**Pn**	**07 21 46.5 +0.9**	
LDAQ			SN	**Sn**	**07 22 16.0 -1.1**	
LDAQ			LG	Lg	07 22 25.4	
LDAQ			Trac		07 22 27.2	
	comp=Z,94nm,0.2s					
PEMO	**Pembroke**	**2.62 267**	PN	**Pn**	**07 21 46.1 +0.5**	
PEMO			SN	**Sn**	**07 22 16.0 -1.0**	
PEMO			Trac		07 22 24.9	
	comp=Z,258nm,0.2s					
PLVO	**Plevna**	**2.64 253**	PN	**Pn**	**07 21 46.5 +0.6**	
PLVO			SN	**Sn**	**07 22 17.0 -0.5**	
PLVO			Trac		07 22 32.5	
	comp=Z,73nm,0.1s					
A54	**Misere**	**2.67 52**	PN	**Pn**	**07 21 47.1 +0.9**	
A54			SN	**Sn**	**07 22 17.7 -0.4**	
A54			LG	Lg	07 22 27.4	
A54			Trac		07 22 29.2	
	comp=Z,66nm,0.1s					
KGNO	**Kingston**	**2.67 233**	PN	**Pn**	**07 21 46.4 +0.1**	
KGNO			SN	**Sn**	**07 22 17.9 -0.4**	
KGNO			LG	Lg	07 22 27.1	
KGNO			Trac		07 22 38.0	
	comp=Z,13nm,0.0s					
A11	**Saint Roch-des**	**2.67 58**	PN	**Pn**	**07 21 47.3 +1.0**	
A11			SN	**Sn**	**07 22 18.3 0.0**	
A11			Trac		07 22 26.2	
	comp=Z,49nm,0.2s					
CHRO	**Chalk River**	**2.71 275**	PN	**Pn**	**07 21 46.7 0.0**	
CHRO			SN	**Sn**	**07 22 18.4 -0.7**	
CHRO			LG	Lg	07 22 27.7	
CHRO			Trac		07 22 29.9	
	comp=Z,82nm,0.2s					
I63A	**Otisfield**	**2.75 130**		**Pn**	**07 21 48.4 +0.9**	
LMQ	**La Malbaie**	**2.77 51**		**Pn**	**07 21 49.0 +1.3**	
LMQ			IAmb_Lg		07 22 33.0	
	comp=Z,66nm,0.8s					
LMQ	**La Malbaie**	**2.77 51**	PN	**Pn**	**07 21 48.4 +0.7**	
LMQ			SN	**Sn**	**07 22 20.1 -0.5**	
LMQ			LG	Lg	07 22 30.4	
LMQ			Trac		07 22 33.8	
	comp=Z,76nm,0.1s					
E62A	**Clayton Lake**	**2.87 73**		**Pn**	**07 21 50.1 +1.1**	
A16	**Riviere Ouelle**	**2.90 55**	Trac		07 22 35.8	
	comp=Z,44nm,0.1s					
A61	**Sainte Mathild**	**2.98 51**	Trac		07 22 40.9	
	comp=Z,28nm,0.1s					
WVL	**Waterville**	**3.01 114**	Pn	**Pn**	**07 21 52.2 +1.3**	
PKME	**Peaks-Kenny Pk**	**3.02 100**		**Pn**	**07 21 52.2 +1.1**	
PKME			IAmb_Lg		07 22 43.4	
	comp=Z,48nm,0.8s					
J57A	**Williamstown**	**3.02 217**		**Pn**	**07 21 52.5 +1.4**	
TRY	**Troy**	**3.13 182**	Pn	**Pn**	**07 21 53.8 +1.2**	
TRY			IAmb_Lg		07 22 52.0	
	comp=Z,55nm,0.8s					
PECO	**Prince Edward**	**3.14 233**		**Pn**	**07 21 53.6 +1.0**	
PECO	**Prince Edward**	**3.14 233**	Trac		07 22 46.7	
	comp=Z,57nm,0.1s					
A64	**Saint Simeon**	**3.17 50**	Trac		07 22 44.2	
	comp=Z,30nm,0.1s					
DELO	**Deloro Mine**	**3.20 247**		**Pn**	**07 21 54.5 +0.9**	
DELO			IAmb_Lg		07 22 51.2	
	comp=Z,58nm,1.0s					
DELO	**Deloro Mine**	**3.20 247**	Trac		07 22 49.5	
	comp=Z,58nm,0.1s					
A21	**Saint Andre**	**3.21 53**	Trac		07 22 52.2	
	comp=Z,86nm,0.3s					
D62A	**Allapoint, All**	**3.31 67**		**Pn**	**07 21 56.0 +0.9**	
K62A	**Royalston**	**3.32 164**	IAmb_Lg		07 22 54.1	
	comp=Z,38nm,0.9s					
BSCQ	**Baie-Sainte-Ca**	**3.44 48**	Trac		07 22 53.4	
	comp=Z,52nm,0.2s					
CACQ	**Cacouna**	**3.45 51**	Trac		07 22 58.7	
	comp=Z,34nm,0.1s					
L61B	**Northampton**	**3.46 170**		**Pn**	**07 21 57.9 +0.8**	
VLDQ	**Val d'Or**	**3.52 311**		**Pn**	**07 22 01.6 +3.7**	
VLDQ			IAmb_Lg		07 23 11.4	
	comp=Z,31nm,1.0s					
VLDQ	**Val d'Or**	**3.52 311**	Trac		07 23 00.2	
	comp=Z,23nm,0.1s					
F64A	**Sherman**	**3.60 88**		**Pn**	**07 21 59.7 +0.6**	
F64A			IAmb_Lg		07 23 08.5	
	comp=Z,36nm,0.8s					
HRV	**Adam Dziewonsk**	**3.63 157**	Pn	**Pn**	**07 21 59.8 +0.3**	
K57A	**Scipio Center**	**3.80 216**	Pn	**Pn**	**07 22 02.6 +0.8**	
WES	**Weston**	**3.81 155**	Pn	**Pn**	**07 22 02.0 +0.1**	
L59A	**Walton**	**3.83 197**		**Pn**	**07 22 03.9 +1.7**	
KIPQ	**Kipawa,Quebec**	**3.96 286**	Trac		07 23 09.5	
	comp=Z,66nm,0.2s					
WLVO	**Wesleyville**	**3.98 243**	Trac		07 23 06.6	
	comp=Z,40nm,0.1s					
J55A	**Hilton**	**4.02 231**	Pn	**Pn**	**07 22 05.5 +0.6**	
J55A			IAmb_Lg		07 23 12.6	
	comp=Z,40nm,0.8s					
BINY	**Binghamton**	**4.07 207**	IAmb_Lg		07 23 14.7	
	comp=Z,48nm,0.8s					
SADO	**Sadowa**	**4.12 257**	Pn	**Pn**	**07 22 06.5 +0.3**	
SADO			IAmb_Lg		07 23 17.7	
	comp=Z,38nm,1.0s					
SADO	**Sadowa**	**4.12 257**	Trac		07 23 14.3	
	comp=Z,22nm,0.1s					
KSCT	**Kent School, K**	**4.13 180**	Pn	**Pn**	**07 22 07.6 +1.2**	
KSCT			IAmb_Lg		07 23 15.2	
	comp=Z,43nm,0.7s					
BUKO	**Buck Lake**	**4.15 266**	Pn	**Pn**	**07 22 06.7 0.0**	
BUKO			IAmb_Lg		07 23 24.0	
	comp=Z,31nm,0.8s					
BUKO	**Buck Lake**	**4.15 266**	Trac		07 23 15.0	
	comp=Z,28nm,0.1s					
G65A	**Princeton**	**4.23 97**	Pn	**Pn**	**07 22 07.9 +0.2**	
MCNB	**McAdam**	**4.34 91**	Trac		07 23 20.6	
	comp=Z,13nm,0.2s					
EMMW	**East Machias**	**4.42 103**		**Pn**	**07 22 11.0 +0.7**	
MEDO	**Medina**	**4.45 234**	Pn	**Pn**	**07 22 10.8 +0.1**	
M63A	**Gales Ferry**	**4.58 166**	Pn	**Pn**	**07 22 12.7 +0.2**	
KSPA	**Keystone Colle**	**4.60 202**		**Pn**	**07 22 14.1 +1.3**	
KSPA			IAmb_Lg		07 23 26.7	
	comp=Z,30nm,0.7s					
WSPT	**Westport, CT**	**4.69 178**	IAmb_Lg		07 23 36.5	
	comp=Z,39nm,0.8s					
L56A	**Greenwood**	**4.73 220**	Pn	**Pn**	**07 22 15.7 +1.0**	
GGN	**Saint George**	**4.75 97**	Pn	**Pn**	**07 22 15.1 +0.3**	
PAL	**Palisades**	**4.86 184**	Pn	**Pn**	**07 22 17.2 +0.8**	
PAL			IAmb_Lg		07 23 36.9	
	comp=Z,37nm,0.7s					
M57A	**Sunshine Farm,**	**5.23 211**		**Pn**	**07 22 22.6 +1.2**	
M57A			IAmb_Lg		07 23 46.9	
	comp=Z,32nm,0.8s					
BATG	**Bathurst New B**	**5.33 72**	Pn	**Pn**	**07 22 22.5 -0.3**	
N58A	**Sunbury**	**5.53 206**	Pn	**Pn**	**07 22 26.1 +0.5**	
N58A			IAmb_Lg		07 23 57.4	
	comp=Z,33nm,0.7s					
ICQ	**Pointe Anglais**	**5.58 47**		**Pn**	**07 22 26.7 +0.5**	
ICQ			IAmb_Lg		07 23 59.5	
	comp=Z,26nm,0.9s					
LMN	**Caledonia Moun**	**6.08 87**	Pn	**Pn**	**07 22 32.9 -0.3**	
SSPA	**Standing Stone**	**6.12 213**	Pn	**Pn**	**07 22 34.2 +0.5**	
SSPA			IAmb_Lg		07 24 14.8	
	comp=Z,26nm,0.9s					
MVL	**Millersville**	**6.21 201**	IAmb_Lg		07 24 28.6	
	comp=Z,19nm,0.8s					
PAMR	**Moraine State**	**6.87 227**	Pn	**Pn**	**07 22 45.4 +1.4**	
SDMD	**Soldier's Deli**	**6.89 202**	Pn	**Pn**	**07 22 45.0 +0.6**	
M52A	**Chesterland**	**7.14 236**	Pn	**Pn**	**07 22 48.5 +0.8**	
N53A	**Lisbon**	**7.35 229**	Pn	**Pn**	**07 22 51.6 +1.0**	
O53A	**New Philadelph**	**7.95 228**	Pn	**Pn**	**07 22 59.0 +0.2**	
Q56A	**Snyder Ridge,**	**8.00 214**	Pn	**Pn**	**07 23 00.7 +1.2**	
ACSO	**Alum Creek Sta**	**8.93 234**	IAmb_Lg		07 25 46.3	
	comp=Z,15nm,0.8s					
R55A	**Marlinton**	**9.02 215**	Pn	**Pn**	**07 23 14.3 +0.7**	
N49A	**Columbus Grove**	**9.20 241**	Pn	**Pn**	**07 23 15.6 -0.4**	
SCHQ	**Schefferville**	**9.94 23**	Pn	**Pn**	**07 23 25.6 -0.4**	

*MDD **29** 07:26:07.8±1.1,36°.67N×12°.59W,h25^{km},Mb3.9/8, M_mb3.2/8,Error ellipse: s-maj=8.9km s-min=5.6km az=91.0*
*IGIL **29** 07:26:09.1,36°.67N×12°.59W,h25^{km},ML1.7*
*INMG **29** 07:26:11.3±1.0,36°.66N×12°.68W,h10^{km},ML1.9,Error ellipse: s-maj=5.6km s-min=3.3km az=93.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe*
*CNRM **29** 07:26:19.0,36°.45N×11°.31W,h10^{km},ML3.0*

ISC 29 07:26:05.9±3.2,36.71N±0°.08×12.4W±0°.2,h10^{km},n34, σ2^{s}94/60,7C,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**2.89**	**80**	*e*P		**Pn**	**07 26 54.3**	**+2.4**
PFVI				*e*S		**Sn**	**07 27 27.1**	**+0.4**
PFVI				*i*	IAML		07 27 28.0	
PFVI				*i*	IAML		07 27 28.2	
PFVI				*i*	IAML		07 27 28.7	
MORF	**Marmelete**	**3.05**	**78**	*e*P		**Pn**	**07 26 56.6**	**+2.4**
MORF				*e*S		**Sn**	**07 27 31.4**	**+0.6**
MORF					IAML		07 27 35.9	
	comp=N,4.6nm,0.1s							
MORF	**Marmelete**	**3.05**	**78**	*e*P		**Pn**	**07 26 56.7**	**+2.4**
MORF				*e*S		**Sn**	**07 27 31.5**	**+0.6**
MORF				*i*	IAML		07 27 31.6	
MORF				*i*	IAML		07 27 32.0	
MORF				*i*	IAML		07 27 33.9	
PMAFR	**Mafra**	**3.33**	**47**	*e*P		**Pn**	**07 27 00.3**	**+2.3**
PMAFR				*e*S		**Sn**	**07 27 37.6**	**-0.1**
PMAFR				*i*	IAML		07 27 38.2	
PMAFR				*i*	IAML		07 27 40.1	
PMAFR				*i*	IAML		07 27 44.5	
MESJ	**Messejana**	**3.51**	**70**	*e*S		**Sn**	**07 27 42.3**	**+0.1**
MESJ					IAML		07 27 44.3	
	comp=N,1.1nm,0.2s							
MESJ	**Messejana**	**3.51**	**70**	*e*P		**Pn**	**07 27 02.1**	**+1.5**
MESJ				*e*S		**Sn**	**07 27 42.2**	**+0.1**
MESJ				*i*	IAML		07 27 44.7	
MESJ				*i*	IAML		07 27 45.2	
MESJ				*i*	IAML		07 27 46.0	
PCVE	**Castro Verde**	**3.59**	**74**	*e*P		**Pn**	**07 27 04.4**	**+2.7**
PCVE				*e*S		**Sn**	**07 27 44.1**	**-0.1**
PCVE				*i*	IAML		07 27 47.6	
PCVE				*i*	IAML		07 27 49.8	
PBDV	**Barranco-do-Ve**	**3.61**	**80**	*e*P		**Pn**	**07 27 04.8**	**+2.8**
PBDV				*e*S		**Sn**	**07 27 44.9**	**+0.2**
PBDV				*i*	IAML		07 27 47.6	
PBDV				*i*	IAML		07 27 49.0	
PBDV				*i*	IAML		07 27 50.9	
MOE	**Montemor**	**3.68**	**59**	*e*P		**Pn**	**07 27 05.2**	**+2.3**
MOE				*e*S		**Sn**	**07 27 46.0**	**-0.4**
MOE				*i*	IAML		07 27 46.7	
MOE				*i*	IAML		07 27 50.1	
MOE				*i*	IAML		07 27 50.9	
PVAQ	**Vaqueiros**	**3.80**	**78**	*e*P		**Pn**	**07 27 07.5**	**+2.9**
PVAQ				*e*S		**Sn**	**07 27 49.6**	**+0.3**
PVAQ				*i*	IAML		07 27 51.5	
PVAQ				*i*	IAML		07 27 52.2	
PVAQ				*i*	IAML		07 27 52.6	
PVAQ	**Vaqueiros**	**3.80**	**78**	P		**Pn**	**07 27 07.0**	**+2.4**
PVAQ				S		**Sn**	**07 27 46.0**	**-3.3**
PSBE	**So Bento**	**3.99**	**44**	*e*P		**Pn**	**07 27 09.7**	**+2.6**
PSBE				*e*S		**Sn**	**07 27 52.6**	**-1.3**
PSBE				*i*	IAML		07 27 54.4	
PSBE				*i*	IAML		07 27 55.6	
PSBE				*i*	IAML		07 27 57.5	
EGRO	**El Granado**	**4.01**	**77**	Pn		**Pn**	**07 27 09.3**	**+2.0**
EGRO				⇑*i*	IVmb_VC		07 27 11.9	
	comp=N,129nm,SNR=1.7							
EGRO				Sn		**Sn**	**07 27 54.0**	**-0.3**
PARRA	**Arraiolos**	**4.04**	**57**	*e*P		**Pn**	**07 27 09.9**	**+2.1**
PARRA				*e*S		**Sn**	**07 27 53.8**	**-1.4**
PARRA				*i*	IAML		07 27 55.1	
PARRA				*i*	IAML		07 27 56.7	
PARRA				*i*	IAML		07 28 00.6	
PMTG	**Montargil**	**4.05**	**53**	*e*P		**Pn**	**07 27 10.2**	**+2.2**
PMTG				*e*S		**Sn**	**07 27 54.1**	**-1.3**
PESTR	**Estremoz**	**4.37**	**59**	*e*P		**Pn**	**07 27 15.7**	**+3.3**
PESTR				*e*S		**Sn**	**07 28 02.2**	**-1.1**
PESTR				*i*	IAML		07 28 05.0	
PESTR				*i*	IAML		07 28 05.5	
PESTR	**Estremoz**	**4.37**	**59**	P		**Pn**	**07 27 16.8**	**+4.4**
PESTR				S		**Sn**	**07 28 02.6**	**-0.8**
PSARD	**Sardoal**	**4.41**	**48**	*e*P		**Pn**	**07 27 15.5**	**+2.6**
PSARD				*e*S		**Sn**	**07 28 02.7**	**-1.6**
PSARD				*i*	IAML		07 28 04.8	
PSARD				*i*	IAML		07 28 05.0	
PSARD				*i*	IAML		07 28 06.0	
PBAR	**Barrancos**	**4.50**	**69**	*e*P		**Pn**	**07 27 17.4**	**+3.2**
PBAR				*e*S		**Sn**	**07 28 05.7**	**-0.9**
PBAR				*i*	IAML		07 28 06.8	
PBAR				*i*	IAML		07 28 08.5	
PBAR				*i*	IAML		07 28 12.1	
PCAS	**Casmilo, Conde**	**4.53**	**41**	*e*P		**Pn**	**07 27 17.1**	**+2.6**
PCAS				*e*S		**Sn**	**07 28 05.4**	**-1.8**
PCAS				*i*	IAML		07 28 09.8	
PCAS				*i*	IAML		07 28 10.0	
PCAS				*i*	IAML		07 28 20.7	
EMIN	**Mina Concepcio**	**4.68**	**75**	⇑*i*	IVmb_VC		07 27 18.8	
	comp=N,29nm,SNR=0.6							
EMIN				Sn		**Sn**	**07 28 09.5**	**-1.5**
PMRV	**Marv??o**	**4.79**	**54**	*e*P		**Pn**	**07 27 20.4**	**+2.2**
PMRV				*e*S		**Sn**	**07 28 12.1**	**-1.6**
PMRV				*i*	IAML		07 28 13.0	
PMRV				*i*	IAML		07 28 14.1	
PMRV				*i*	IAML		07 28 17.0	
PVIS	**Viseu**	**5.33**	**40**	*e*S		**Sn**	**07 28 24.2**	**-2.8**
ECAB	**El Cabril**	**5.72**	**74**	Pn		**Pn**	**07 27 32.4**	**+1.5**
ECAB				⇑*i*	IVmb_VC		07 27 34.4	
	comp=N,56nm,SNR=1.7							
ECAB				Sn		**Sn**	**07 28 34.6**	**-2.0**
ZHG	**ZHG**	**5.72**	**123**	P		**Pn**	**07 27 33.3**	**+2.3**
ZHG				S		**Sn**	**07 28 28.8**	**-8.1**
POLO	**Lamas de Olo**	**5.87**	**36**	*e*S		**Sn**	**07 28 37.1**	**-3.4**
POLO				*i*	IAML		07 28 38.9	
POLO				*i*	IAML		07 28 39.3	
POLO				*i*	IAML		07 28 39.7	
MVO	**Moncorvo**	**6.10**	**42**	*e*S		**Sn**	**07 28 42.5**	**-3.7**
PGAV	**Gavieira, Arco**	**6.14**	**30**	*e*S		**Sn**	**07 28 43.7**	**-3.5**
PGAV				*i*	IAML		07 28 49.4	
PGAV				*i*	IAML		07 28 49.5	
PGAV				*i*	IAML		07 29 02.5	
ELOB	**Lobios**	**6.15**	**32**	⇑*i*	IVmb_VC		07 27 39.5	
	comp=N,41nm,SNR=0.4							
ELOB				Sn		**Sn**	**07 28 43.6**	**-3.7**
EADA	**Adamuz**	**6.38**	**74**	Pn		**Pn**	**07 27 42.0**	**+1.9**
EADA				⇑*i*	IVmb_VC		07 27 45.8	
	comp=N,34nm,SNR=0.8							
EADA				Sn		**Sn**	**07 28 51.3**	**-1.8**
ECAL	**Calabor**	**6.82**	**38**	⇑*i*	IVmb_VC		07 27 49.6	
	comp=N,85nm,SNR=0.6							
ECAL				Sn		**Sn**	**07 29 00.3**	**-3.5**
EAGO	**Agolada(Pontev**	**6.93**	**27**	Pn		**Pn**	**07 27 48.7**	**+1.1**
EAGO				⇑*i*	IVmb_VC		07 27 51.8	
	comp=N,134nm,SNR=1.2							
EAGO				Sn		**Sn**	**07 29 00.4**	**-6.1**
MD31	**MD31**	**7.35 119**	P			**Pn**	**07 27 54.5**	**+1.1**
MD31			S			**Sn**	**07 29 09.1**	**-7.8**
MDT	**Midelt**	**7.49 119**	P			**Pn**	**07 27 56.9**	**+1.6**
MDT			S			**Sn**	**07 29 12.2**	**-8.2**

*IDC **29** 07:38:58.4±1.7,6°.44S×130°.18E,h152^{km}±16^{km},mb3.6/8, mbtmp4.3/13,Error ellipse: s-maj=26.4km s-min=12.4km az=70.0*
*NEIC **29** 07:38:59.0±1.6,6°.38S±0°.07×130°.16E±0°.09,h158^{km}±9^{km}, mb4.3/19,Error ellipse: s-maj=13.6km s-min=9.9km az=67.0*
*DJA **29** 07:38:59.7±0.3,6°.S±2°.×13°.0E±°,h160^{km}±6^{km},M4.6/24, mB5.2/7,mb4.6/13,MLv4.7/24,Mw(mB)4.5/7,MwMwp4.5/1, Mwp4.9/1*

ISC 29 07:38:57.6±0.5,6°.40S±0°.04×130°.12E±0°.05,h146^{km},n83, σ2^{s}07/87,mb4.0/12,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.88**	**353**	P		**Pn**	**07 39 35.3**	**+4.2**
BNDI	**Bandanaira**	**1.88**	**353**	P		**Pn**	**07 39 35.1**	**+4.0**
SAUI	**Saumlaki**	**1.96**	**143**	P		**Pn**	**07 39 35.7**	**+3.7**
SAUI	**Saumlaki**	**1.96**	**143**	S		**Sn**	**07 40 02.8**	**+4.4**
SAUI	**Saumlaki**	**1.96**	**143**			**Pn**	**07 39 34.1**	**+2.1**
SAUI				Sn		**Sn**	**07 39 59.7**	**+1.3**
SAUI	**Saumlaki**	**1.96**	**143**	P		**Pn**	**07 39 35.4**	**+3.4**
MSAI	**Masohi**	**3.26**	**339**	P		**Pn**	**07 39 51.7**	**+3.6**
MSAI				S		**Sn**	**07 40 28.5**	**+1.2**
AAI	**Ambon**	**3.31**	**324**	P		**Pn**	**07 39 52.9**	**+4.1**
KRAI	**Karang Ratu**	**3.51**	**331**	P		**Pn**	**07 39 55.5**	**+4.1**
FAKI	**Fak Fak**	**4.06**	**32**	P		**Pn**	**07 39 59.3**	**+0.7**
FAKI	**Fak Fak**	**4.06**	**32**			**Pn**	**07 39 59.5**	**+0.9**
FAKI	**Fak Fak**	**4.06**	**32**	P		**Pn**	**07 39 59.2**	**+0.7**
NLAI	**Namlea**	**4.35**	**316**	P		**Pn**	**07 40 06.0**	**+3.6**
KMPI	**Kaimana, Papua**	**4.49**	**53**	P		**Pn**	**07 40 05.5**	**+1.3**
SIJI	**Sorong**	**5.61**	**12**	P		**Pn**	**07 40 19.6**	**+0.5**
	30nm,0.2s,baz=212,slow=14,SNR=27							
SIJI				S		**Sn**	**07 41 18.4**	**-4.5**
	80nm,0.2s,baz=263,slow=23,SNR=24							
SIJI	**Sorong**	**5.61**	**12**	P		**Pn**	**07 40 19.8**	**+0.6**
SWI	**Sorong**	**5.62**	**12**	P		**Pn**	**07 40 20.4**	**+1.2**
DRS	**Darwin Rock St**	**6.04**	**173**	P		**Pn**	**07 40 25.8**	**+1.0**
RKPI	**Ransiki, Papua**	**6.32**	**40**	P		**Pn**	**07 40 30.2**	**+1.6**
MTN	**Manton Dam**	**6.48**	**171**			**Pn**	**07 40 32.2**	**+1.5**
SOEI	**Soe**	**6.68**	**240**	P		**Pn**	**07 40 36.6**	**+3.0**
SOEI	**Soe**	**6.68**	**240**	S		**Sn**	**07 41 51.3**	**+2.6**
SOEI	**Soe**	**6.68**	**240**			**Pn**	**07 40 35.1**	**+1.6**
SOEI	**Soe**	**6.68**	**240**	P		**Pn**	**07 40 36.0**	**+2.5**
	0.3nm54nm,0.8s							
MWPI	**Manokwari, Pap**	**6.70**	**36**	P		**Pn**	**07 40 35.9**	**+2.3**
	93nm,0.8s							
BATI	**Baumata**	**7.42**	**239**	P		**Pn**	**07 40 44.8**	**+1.4**
	41nm,0.4s,baz=105,slow=8.2,SNR=9.2							
BATI				S		**Sn**	**07 42 03.7**	**-2.6**
	74nm,0.5s,baz=38,slow=22,SNR=7.4							
BATI	**Baumata**	**7.42**	**239**	P		**Pn**	**07 40 44.7**	**+1.4**
	0.4nm66nm,0.9s							
BAKI	**Biak**	**7.90**	**49**	P		**Pn**	**07 40 53.0**	**+3.2**
KNRA	**Kununurra**	**9.31**	**188**			**Pn**	**07 41 08.3**	**-0.3**
KAPI	**Kappang**	**10.41**	**277**	P		**Pn**	**07 41 24.9**	**+1.7**
FITZ	**Fitzroy Crossi**	**12.42**	**200**	P		**Pn**	**07 41 48.9**	**-0.6**
	2.3nm,0.3s,baz=17,slow=8.5,SNR=14							
FITZ				S		Sn	07 43 56.3	-10
	6.1nm,0.3s,baz=351,slow=18,SNR=7.5							
PLAI	**Plampang**	**12.47**	**258**	P		**Pn**	**07 41 50.5**	**+0.3**
WB0	**Warramunga Arr**	**13.92**	**163**			**Pn**	**07 42 06.6**	**-2.1**
WRAB	**Tennant Creek**	**14.06**	**163**	P		**Pn**	**07 42 08.7**	**-1.9**
WRAB	**Tennant Creek**	**14.06**	**163**			**Pn**	**07 42 07.2**	**-3.4**
WRA	**Warramunga Arr**	**14.07**	**163**	P		**Pn**	**07 42 08.7**	**-1.9**
	2.7nm,0.4s,baz=348,slow=12,SNR=34							
WRA				S		Sn	07 44 37.0	-10
	7.6nm,0.5s,baz=348,slow=22,SNR=12							
WRA	**Warramunga Arr**	**14.07**	**163**			**Pn**	**07 42 08.5**	**-2.2**
WB2	**Warramunga Arr**	**14.07**	**163**	Pn		**Pn**	**07 42 08.9**	**-1.8**
WR8	**Warramunga Arr**	**14.13**	**163**			**Pn**	**07 42 09.9**	**-1.5**
WR0	**Warramunga Arr**	**14.14**	**163**	Pn		**Pn**	**07 42 10.8**	**-0.8**
COEN	**Coen**	**14.88**	**121**	P		**Pn**	**07 42 21.1**	**+0.3**
COEN	**Coen**	**14.88**	**121**			**Pn**	**07 42 20.4**	**-0.4**
JAGI	**Jajag, Banyuwa**	**15.97**	**262**	P		**Pn**	**07 42 34.4**	**+0.1**
JAGI	**Jajag, Banyuwa**	**15.97**	**262**			**Pn**	**07 42 34.2**	**-0.1**
JAGI				IAmb	IAmb		07 42 34.4	
	comp=Z,12nm,0.7s							
QIS	**Mount Isa**	**16.81**	**148**	P		**Pn**	**07 42 45.6**	**+1.0**
QIS	**Mount Isa**	**16.81**	**148**	P		**Pn**	**07 42 45.5**	**+1.0**
PMG	**Port Moresby**	**17.14**	**101**	P		**P**	**07 42 46.8**	**-1.0**
PMG				IAmb	IAmb		07 43 15.0	
	comp=Z,15nm,1.1s							
AS31	**Alice Springs**	**17.55**	**168**	P		**Pn**	**07 42 54.1**	**+0.8**
AS31				IAmb	IAmb

comp=Z,0.4nm,0.5s
QSPA South Pole Qui 83.57 180 P **P** **07 51 09.0 -0.2**
comp=Z,0.8nm,0.6s,baz=150,slow=2.5,SNR=5.9
comp=Z,0.8nm,0.6s

IDC 29 08:05:04.1±4.3, 25°07S×175°30W, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=227.2km s-min=33.1km az=154.0, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**46.07**	**261**	P	P	08 13 30.9	+0.7
	0.3nm,0.4s,baz=101,slow=7.2,SNR=13						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**46.60**	**266**	P	P	08 13 33.3	-1.0
	0.2nm,0.4s,baz=105,slow=7.8,SNR=10						
	0.2nm,0.4s						
PDAR	**Pinedale Array**	**90.61**	**42**	P	P	08 18 08.1	-0.6
	0.1nm,0.3s,baz=204,slow=6.7,SNR=2.4						
	0.1nm,0.3s						
ILAR	**Eielson Array**	**92.23**	**12**	P	P	08 18 16.0	+0.7
	0.2nm,0.6s,baz=194,slow=5.6,SNR=1.9						
	0.2nm,0.6s						

*IDC **29** 08:18:29.0±1.6, 30°60N×41°54W, h0km, mb3.8/11, mbtmp3.8/11, MS3.4/21, Error ellipse: s-maj=54.7km s-min=18.8km az=12.0*
ISC 29 08:18:30.3±1.7, 30°6N±0°4×41°6W±0°2, h10km, n33, σ0§42/11, mb3.9/10, MS3.4/21, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**25.54**	**247**	LR	LR	08 32 31.7	
	comp=Z,14nm,21.3s,baz=108,slow=33						
SCHQ	**Schefferville**	**30.23**	**331**	LR	LR	08 36 16.1	
	comp=Z,113nm,18.8s,baz=146,slow=35						
SADO	**Sadowa**	**32.64**	**306**	LR	LR	08 36 04.9	
	comp=Z,55nm,20.3s,baz=112,slow=32						
TKL	**Tuckaleechee C**	**35.52**	**290**	LR	LR	08 36 45.6	
	comp=Z,57nm,19.2s,baz=116,slow=31						
SFJD	**Kangerlussuaq**	**36.86**	**354**	LR	LR	08 38 16.9	
	comp=Z,53nm,21.0s,baz=166,slow=32						
FRB	**Frobisher Bay**	**37.34**	**341**	LR	LR	08 38 43.7	
	comp=Z,48nm,19.6s,baz=82,slow=33						
DBIC	**Dimbokro**	**41.82**	**117**	LR	LR	08 41 28.2	
	comp=Z,26nm,19.6s,baz=328,slow=33						
TORD	**Torodi Ar. Bea**	**43.43**	**104**	P	**P**	**08 26 33.5**	**-0.2**
	2.5nm,1.0s,baz=298,slow=7.1,SNR=9.4						
	2.5nm,1.0s						
ULM	**Lac du Bonnet**	**44.68**	**312**	P	**P**	**08 26 42.5**	**-0.8**
	1.9nm,0.8s,baz=114,slow=7.2,SNR=3.0						
ULM				LR	LR	08 45 42.1	
	comp=Z,34nm,18.2s,baz=80,slow=37						
	1.9nm,0.8s						
H10N2	**ASCENSION HYDR**	**46.17**	**141**	T	T	09 16 27.4	
	baz=328,slow=75,SNR=23						
H10N3	**ASCENSION HYDR**	**46.18**	**141**	T	T	09 16 27.4	
	baz=328,slow=75,SNR=17						
H10N1	**ASCENSION HYDR**	**46.19**	**141**	T	T	09 16 28.5	
	baz=328,slow=75,SNR=29						
H10S3	**ASCENSION HYDR**	**47.02**	**142**	T	T	09 17 31.8	
	baz=253,slow=74,SNR=21						
H10S2	**ASCENSION HYDR**	**47.04**	**142**	T	T	09 17 33.0	
	baz=327,slow=74,SNR=20						
CMIG	**Matias Romero**	**50.17**	**267**	LR	LR	08 47 54.1	
	comp=Z,19nm,20.1s,baz=18,slow=35						
RES	**Resolute Bay**	**51.34**	**344**	LR	LR	08 47 50.8	
	comp=Z,20nm,20.1s,baz=27,slow=34						
ANMO	**Albuquerque**	**53.90**	**293**	P	**P**	**08 27 54.3**	**+0.1**
	0.2nm,0.3s,baz=99,slow=14,SNR=3.2						
ANMO				LR	LR	08 49 01.6	
	comp=Z,28nm,20.2s,baz=93,slow=34						
	0.2nm,0.3s						
PDAR	**Pinedale Array**	**54.52**	**303**	P	**P**	**08 27 59.2**	**+0.4**
	2.1nm,1.0s,baz=77,slow=7.8,SNR=16						
PDAR				LR	LR	08 49 06.8	
	comp=Z,58nm,21.5s,baz=102,slow=34						
	2.1nm,1.0s						
AKASG	**Malin Array Be**	**55.18**	**47**	P	**P**	**08 28 03.2**	**+0.1**
	0.1nm,0.2s,baz=278,slow=6.3,SNR=6.2						
	0.1nm,0.2s						
YKA	**Yellowknife Ar**	**55.60**	**327**	P	**P**	**08 28 05.8**	**0.0**
	0.7nm,1.0s,baz=82,slow=6.6,SNR=7.8						
YKA				LR	LR	08 50 39.2	
	comp=Z,84nm,21.5s,baz=0.5,slow=35						
	0.7nm,1.0s						
NEW	**Newport**	**58.65**	**311**	LR	LR	08 53 40.6	
	comp=Z,25nm,18.5s,baz=63,slow=36						
BRTR	**Keskin Array B**	**60.53**	**59**	P	**P**	**08 28 41.2**	**+0.3**
	0.8nm,0.8s,baz=243,slow=8.2,SNR=4.4						
	0.8nm,0.8s						
NVAR	**Mina Array Bea**	**62.06**	**300**	P	**P**	**08 28 52.0**	**+0.5**
	0.9nm,0.9s,baz=69,slow=6.9,SNR=6.7						
NVAR				LR	LR	08 55 13.7	
	comp=Z,90nm,18.5s,baz=90,slow=36						
	0.9nm,0.9s						
PFO	**Pinyon Flats O**	**62.20**	**294**	LR	LR	08 53 59.6	
	comp=Z,42nm,20.1s,baz=126,slow=34						
DLBC	**Dease Lake**	**63.73**	**324**	LR	LR	08 56 00.1	
	comp=Z,64nm,19.4s,baz=96,slow=35						
BBB	**Bella Bella**	**64.49**	**317**	LR	LR	08 56 46.4	
	comp=Z,61nm,19.6s,baz=332,slow=36						
ILAR	**Eielson Array**	**68.93**	**334**	P	**P**	**08 29 35.5**	**+0.3**
	1.1nm,0.8s,baz=58,slow=5.4,SNR=14						
	1.1nm,0.8s						
H09N1	**TRISTAN DA CUN**	**72.65**	**156**	T	T	09 48 44.3	
	SNR=25						
KDAK	**Kodiak Island**	**74.84**	**329**	LR	LR	09 03 54.5	
	comp=Z,74nm,18.1s,baz=64,slow=36						
MBAR	**Mbarara**	**75.11**	**100**	LR	LR	09 03 46.6	
	comp=Z,40nm,18.5s,baz=188,slow=36						
TSUM	**Tsumeb**	**75.37**	**123**	LR	LR	08 59 20.5	
	comp=Z,25nm,19.6s,baz=156,slow=32						
KURBB	**Kurchatov Arra**	**83.42**	**34**	P	**P**	**08 30 57.6**	**-0.3**
	1.5nm,1.1s,baz=318,slow=5.5,SNR=5.6						
	1.5nm,1.1s						
ZALV	**Zalesovo Beam**	**83.93**	**29**	P	**P**	**08 31 00.1**	**-0.3**
	0.3nm,0.4s,baz=302,slow=4.3,SNR=1.8						
	0.3nm,0.4s						

*OSPL **29** 08:20:16.7±2.1, 19°42N×64°94W, h31km±107km, ML4.1, Presumed earthquake*
*PTWC **29** 08:20:17, 19°30N×65°20W, h10km, Ml3.9/14*
*NEIC **29** 08:20:19.2±1.0, 19°19N±0°04×65°19W±0°04, h32km±10km, mb4.1/7, ML3.9/49, Md3.9/19(RSPR), Error ellipse: s-maj=7.0km s-min=4.2km az=141.0*
ISC 29 08:20:14.7±2.0, 19°34N±0°06×65°25W±0°07, h3km±14km, n78, σ1§48/83, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUPR	**Culebra, Puert**	**1.03**	**182**		**Pg**	**08 20 35.0**	**+0.6**
CUPR					**Sg**	**08 20 46.8**	**-1.0**
CUPR	**Culebra, Puert**	**1.03**	**182**	P	**Pg**	**08 20 35.1**	**+0.6**
HUMP	**Col San Antoni**	**1.32**	**206**		**Pn**	**08 20 39.6**	**-0.5**
HUMP					**Sb**	**08 20 54.5**	**-2.9**
HUMP				IAML		08 21 02.0	
	1µm,0.2s						
HUMP	**Col San Antoni**	**1.32**	**206**	P	**Pn**	**08 20 39.5**	**-0.5**
ECPR	**Experimental S**	**1.47**	**226**		**Pn**	**08 20 42.3**	**+0.3**
ECPR				IAML		08 21 06.2	
	3µm,0.3s						
ECPR	**Experimental S**	**1.47**	**226**	P	**Pn**	**08 20 41.9**	**-0.1**
EMPR	**Esperanza - Ma**	**1.49**	**235**		**Pn**	**08 20 43.3**	**+1.1**
EMPR					**Sn**	**08 21 04.8**	**+2.6**
EMPR	**Esperanza - Ma**	**1.49**	**235**	P	**Pn**	**08 20 43.4**	**+1.1**
SJG	**San Juan**	**1.49**	**215**		**Pn**	**08 20 42.0**	**-0.3**
SJG	**San Juan**	**1.49**	**215**	P	**Pn**	**08 20 41.0**	**-1.3**
SJG	**San Juan**	**1.49**	**215**	*eP*	**Pn**	**08 20 42.5**	**+0.1**
SJG	**San Juan**	**1.49**	**215**	*iP*	**Pn**	**08 20 42.4**	**0.0**
SJG				*eS*	**Sn**	**08 21 02.9**	**+0.6**
SJG				IAML		08 21 08.9	
	comp=Z,6µm,0.2s						
IGPR	**InterUniversit**	**1.59**	**211**		**Pn**	**08 20 44.0**	**+0.3**
IGPR					**Sn**	**08 21 05.1**	**+0.3**
IGPR	**InterUniversit**	**1.59**	**211**	P	**Pn**	**08 20 44.7**	**+1.0**
AOPR	**Arecibo Observ**	**1.73**	**235**		**Pn**	**08 20 46.2**	**+0.5**
AOPR				IAML		08 21 14.8	
	comp=Z,2µm,0.3s						
AOPR	**Arecibo Observ**	**1.73**	**235**	P	**Pn**	**08 20 46.3**	**+0.5**
UUPR	**Utuado, UPR, P**	**1.77**	**232**		**Pn**	**08 20 46.5**	**+0.4**
UUPR	**Utuado, UPR, P**	**1.77**	**232**	P	**Pn**	**08 20 46.5**	**+0.4**
CELP	**Cerrillos**	**1.78**	**225**		**Pn**	**08 20 46.7**	**+0.3**
CELP					**Sn**	**08 21 08.8**	**-0.8**
CELP				IAML		08 21 11.4	
	comp=Z,701nm,0.7s						
CELP	**Cerrillos**	**1.78**	**225**	P	**Pn**	**08 20 46.9**	**+0.5**
OBIP	**Obispado Ponce**	**1.82**	**225**		**Pn**	**08 20 47.5**	**+0.6**
OBIP	**Obispado Ponce**	**1.82**	**225**	P	**Pn**	**08 20 47.5**	**+0.6**
OBIP	**Obispado Ponce**	**1.82**	**225**	*iP*	**Pn**	**08 20 47.6**	**+0.7**
OBIP				*eS*	**Sn**	**08 21 12.1**	**+1.6**
OBIP				IAML		08 21 12.7	
	comp=Z,1µm,0.6s						
AGPR	**Aguadilla, PR**	**1.96**	**244**		**Pn**	**08 20 49.8**	**+1.0**
AGPR	**Aguadilla, PR**	**1.96**	**244**	P	**Pn**	**08 20 49.9**	**+1.0**
GBPR	**Guanica, Bosqu**	**2.06**	**229**		**Pn**	**08 20 51.5**	**+1.3**
GBPR	**Guanica, Bosqu**	**2.06**	**229**	P	**Pn**	**08 20 51.4**	**+1.3**
LSP	**Las Mesas**	**2.09**	**237**		**Pn**	**08 20 51.6**	**+1.0**
LSP					**Sn**	**08 21 19.9**	**+2.7**
LSP	**Las Mesas**	**2.09**	**237**	P	**Pn**	**08 20 51.6**	**+1.0**
PRSN	**Puerto Rico Se**	**2.12**	**238**		**Pn**	**08 20 52.3**	**+1.4**
PRSN				IAML		08 21 23.7	
	comp=Z,1µm,0.3s						
PRSN				IAML		08 21 28.6	
	comp=Z,868nm,0.4s						
MLPR	**Magueyes Islan**	**2.18**	**232**		**Pn**	**08 20 52.9**	**+1.1**
CRPR	**Cabo Rojo, PR**	**2.21**	**233**	*iP*	**Pn**	**08 20 53.2**	**+1.0**
CRPR				IAML		08 21 28.4	
	comp=Z,201nm,0.6s						
IDE	**Isla Desecheo**	**2.31**	**246**		**Pn**	**08 20 54.9**	**+1.2**
IDE	**Isla Desecheo**	**2.31**	**246**	P	**Pn**	**08 20 54.8**	**+1.2**
SMRT	**St. Maarten**	**2.43**	**122**		**Pn**	**08 20 54.9**	**-0.4**
SMRT				IAML		08 21 34.4	
	comp=N,416nm,0.5s						
SMRT				IAML		08 21 46.1	
	comp=E,555nm,0.3s						
SMRT	**St. Maarten**	**2.43**	**122**	P	**Pn**	**08 20 56.1**	**+0.8**
SABA	**Saba**	**2.56**	**132**		**Pn**	**08 20 57.7**	**+0.6**
SABA				IAML		08 21 46.6	
	comp=N,496nm,0.8s						
SABA				IAML		08 21 49.0	
	comp=E,792nm,0.6s						
SABA	**Saba**	**2.56**	**132**	P	**Pn**	**08 20 58.1**	**+1.0**
SABA	**Saba**	**2.56**	**132**	*eP*	**Pn**	**08 20 58.5**	**+1.4**
SKI	**Saint Kitts**	**3.11**	**130**	*eP*	**Pn**	**08 21 05.0**	**+0.3**
ANWB	**Willy Bob**	**3.69**	**116**	*eP*	**Pn**	**08 21 10.6**	**-1.9**
DR12	**Loma Pena Alta**	**3.95**	**263**		**Pn**	**08 21 17.0**	**+0.9**
SDD	**Santo Domingo**	**4.50**	**259**	Pn	**Pn**	**08 21 22.9**	**-0.8**
SDD				IAML		08 22 30.1	
	comp=E,155nm,2.1s						
SDD				IAML		08 23 43.1	
	comp=N,155nm,2.1s						
GDHS	**Morne Mazeau,**	**4.51**	**132**	Pn	**Pn**	**08 21 21.9**	**-2.0**
GDHS				IAML		08 22 11.3	
	comp=N,196nm,0.6s						
ABD	**La Joyeuse, An**	**4.58**	**128**	Pn	**Pn**	**08 21 22.8**	**-2.0**
CBE	**Ff, Capester**	**4.76**	**133**	Pn	**Pn**	**08 21 27.7**	**+0.4**
TBG	**Guadaloupe-3**	**4.88**	**135**	*eP*	**Pn**	**08 21 29.6**	**+0.5**
BANI	**BANI**	**4.93**	**260**	Pn	**Pn**	**08 21 32.7**	**+3.0**
MAGL	**Barre de l'ile**	**5.07**	**131**	Pn	**Pn**	**08 21 31.4**	**-0.2**
SC01	**Santiago de lo**	**5.17**	**272**		**Pn**	**08 21 34.7**	**+1.7**
SC01				IAML		08 23 20.6	
	comp=N,87nm,1.6s						
DSLB	**Salisbury**	**5.33**	**136**	*eP*	**Pn**	**08 21 36.0**	**+0.8**
LOPP1	**Punta Rusia, P**	**5.63**	**276**	*iP*	**Pn**	**08 21 40.3**	**+1.0**
LOPP1				IAML		08 22 46.5	
	comp=Z,54nm,1.6s						
SDDR	**Presa de Saban**	**5.72**	**267**		**Pn**	**08 21 42.2**	**+1.6**
SDDR	**Presa de Saban**	**5.72**	**267**	P	**Pn**	**08 21 42.8**	**+2.2**
SDDR	**Presa de Saban**	**5.72**	**267**	*eP*	**Pn**	**08 21 43.0**	**+2.4**
SDDR				*eS*	**Sn**	**08 22 48.7**	**+2.0**
SDDR				*eSg*	Sg	08 22 50.8	-28
SDDR				IAML		08 22 52.2	
	comp=Z,26nm,0.3s						
SDDR				IAML		08 22 52.7	
	comp=Z,40nm,0.3s						
LONE3	**El Aguacate, B**	**5.92**	**264**	*iP*	**Pn**	**08 21 45.6**	**+2.2**
LONE3				IAML		08 22 57.2	
	comp=Z,17nm,3.0s						
GRTK	**Grand Turk**	**5.92**	**292**	*iP*	**Pn**	**08 21 43.9**	**+0.5**
GRTK				*eS*	**Sn**	**08 22 46.9**	**-4.9**
GRTK				IAML		08 22 50.1	
	comp=Z,89nm,1.6s						
LOVI	**El Cajuil, Ovi**	**6.00**	**256**	*iP*	**Pn**	**08 21 46.7**	**+2.3**
LOVI				*eS*	**Sn**	**08 22 51.6**	**-2.0**
LOVI				IAML		08 22 57.1	
	comp=Z,79nm,1.0s						
LOBH	**Bahia de las A**	**6.24**	**257**	*iP*	**Pn**	**08 21 49.5**	**+1.9**
LOBH				IAML		08 23 09.6	
	comp=Z,50nm,2.8s						
BIM	**Bigot**	**6.25**	**140**	Pn	**Pn**	**08 21 47.4**	**-0.4**
SLBI	**Saint Lucia, B**	**6.69**	**142**	*eP*	Pn	08 21 50.7	-3.1
MASC	**Masc**	**8.50**	**277**	*eP*	**Pn**	**08 22 16.7**	**-2.0**
QMBU	**Quimbuelo**	**9.04**	**277**	*eP*	Pn	08 22 22.9	-3.3
QMBU				*eS*	Sn	08 23 58.8	-10
QMBU				IAML		08 24 05.4	
	comp=E,15nm,0.4s						
QMBU				IAML		08 24 08.4	
	comp=N,12nm,0.3s						
NMDO	**Nuevo Mundo**	**9.23**	**279**	*eP*	**Pn**	**08 22 26.5**	**-2.2**
GTBY	**Guantanamo Bay**	**9.31**	**275**	*eP*	**Pn**	**08 22 27.1**	**-2.7**
GTBY				*eS*	Sn	08 24 05.7	-9.4
GTBY				IAML		08 24 14.6	
	comp=N,22nm,0.6s						
GTBY				IAML		08 24 14.8	
	comp=N,14nm,0.5s						
RCC	**Rio Carpintero**	**9.86**	**276**	*eP*	Pn	08 22 34.4	-3.0
PINC	**Pinares de May**	**9.98**	**278**	*eP*	Pn	08 22 35.4	-3.7
MARVS	**Santiago de Cu**	**10.06**	**276**	*eP*	**Pn**	**08 22 39.4**	**-0.7**
CHIV	**Chivirico**	**10.54**	**275**	*eP*	Pn	08 22 43.1	-3.5
SDV	**Santo Domingo**	**11.63**	**207**	Pn	**Pn**	**08 23 01.6**	**-0.2**
CCCC	**Cccc**	**11.89**	**281**	*eP*	Pn	08 22 57.1	-8.1
BOAV	**Boa Vista**	**17.47**	**164**		**Pn**	**08 24 16.7**	**-2.7**
656A	**Willston**	**18.62**	**306**	P	**P**	**08 24 34.3**	**+0.9**
656A				IAmb	IAmb	08 24 40.1	
	comp=Z,26nm,1.2s						
RGRS	**Roger Stewart**	**19.01**	**318**		**P**	**08 24 38.8**	**+1.2**
RGRS				IAmb	IAmb	08 25 04.6	
	comp=Z,56nm,1.0s						
NHSC	**New Hope**	**19.13**	**319**		**P**	**08 24 40.6**	**+1.7**
V61A	**Roper**	**19.19**	**331**	P	**P**	**08 24 41.2**	**+1.7**
Y58A	**Scranton**	**19.37**	**321**	P	**P**	**08 24 42.2**	**+0.6**
SDCO	**Great Sand Dun**	**39.47**	**306**	P	**P**	**08 27 47.2**	**+0.5**
SDCO				IAmb	IAmb	08 27 49.3	
	comp=Z,2.8nm,1.1s						

IDC 29 08:37:35.9±8.4, 20°01S×175°26W, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=362.3km s-min=43.6km az=144.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**47.13**	**256**	P	P	08 46 10.1	-0.2
	0.2nm,0.8s,baz=97,slow=8.1,SNR=5.0						
	0.2nm,0.8s						
WRA	**Warramunga Arr**	**47.21**	**261**	P	P	08 46 10.8	-0.1
	0.3nm,1.0s,baz=97,slow=7.4,SNR=6.9						
	0.3nm,1.0s						
ILAR	**Eielson Array**	**87.29**	**12**	P	P	08 50 24.0	0.0
	0.1nm,0.3s,baz=205,slow=4.0,SNR=1.6						
	0.1nm,0.3s						

IDC 29 08:42:13.1±9.5, 49°72S×124°42E, h0km, mb3.4/2, mbtmp3.4/2, MS3.3/1, Error ellipse: s-maj=656.7km s-min=73.6km az=97.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**16.62**	**329**	T	T	09 02 27.0	
	baz=158,slow=74,SNR=6.4						
H01W2	**Cape Leeuwin H**	**16.63**	**329**	T	T	09 02 32.2	
	baz=158						
H01W3	**Cape Leeuwin H**	**16.64**	**329**	T	T	09 02 28.1	
	baz=158,slow=74,SNR=4.8						
ASAR	**Alice Springs**	**27.05**	**19**	P	P	08 47 57.3	+0.2
	0.7nm,0.9s,baz=200,slow=8.3,SNR=6.3						
	0.7nm,0.9s						
WRA	**Warramunga Arr**	**30.75**	**18**	P	P	08 48 29.7	-0.3
	0.4nm,1.2s,baz=186,slow=9.7,SNR=1.5						
	0.4nm,1.2s						
LEM	**Lembang**	**45.02**	**336**	LR	LR	09 05 30.5	
	comp=Z,34nm,21.5s,baz=196,slow=31						
H09W1	**TRISTAN DA CUN**	**85.48**	**213**	T	T	10 28 57.5	
	SNR=23						
YKA	**Yellowknife Ar**	**145.98**	**45**	PKPbc	PKPdf	09 01 52.5	-0.1
	0.2nm,0.7s,baz=282,slow=3.1,SNR=5.4						

*NEIC **29** 09:01:31.7±1.4, 17°7S×172°75W±0°08, h10km±2km, mb4.5/12, Error ellipse: s-maj=38.4km s-min=4.8km az=18.0*
*IDC **29** 09:01:32.8±0.7, 17°70S×173°22W, h0km, mb4.1/11, mbtmp4.1/11, MS3.6/34, Error ellipse: s-maj=29.2km s-min=18.9km az=132.0*
ISC 29 09:01:36.2±0.6, 17°8S±0°1×173°09W±0°08, h26km, n69, σ1§18/37, mb4.3/15, MS3.7/32, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**3.25**	**113**		**Pn**	09 02 19.7	-5.8
NIUE					Sn	09 02 51.8	-12
AFI	**Afiamalu**	**4.09**	**18**	Pn	Pn	09 02 32.4	-4.8
	11nm,0.3s,baz=83,slow=11,SNR=14						
AFI					Sn	09 03 14.5	-10
	23nm,0.3s,baz=192,slow=23,SNR=5.9						
AFI				LR	LR	09 03 45.0	
	comp=Z,135nm,18.9s,baz=152,slow=33						
FUTU	**Fugatoga**	**5.97**	**305**	Pn	**Pn**	**09 03 02.3**	**-0.7**
MSVF	**Nonsavu**	**8.44**	**269**	Pn	Pn	09 03 42.0	+5.1
	0.8nm,0.3s,baz=107,slow=17,SNR=19						
MSVF				LR	LR	09 06 26.4	
	comp=Z,1µm,20.7s,baz=101,slow=35						
MSVF	**Nonsavu**	**8.44**	**269**		Pn	09 03 44.9	+7.9
RAR	**Rarotonga**	**13.00**	**107**	Pn	**Pn**	**09 04 37.2**	**-2.0**
	2.2nm,0.3s,baz=247,slow=4.0,SNR=4.0						
RAR	**Rarotonga**	**13.00**	**107**	Pn	Pn	09 04 32.5	-6.8
MARNC	**Mare, Loyalty**	**18.15**	**255**	P	**P**	**09 05 47.6**	**+0.9**
OUENC	**Ouen Island, N**	**19.39**	**253**	P	**Pn**	**09 06 01.3**	**-0.2**
OUENC				IAmb	IAmb	09 06 15.3	
	comp=Z,34nm,1.1s						
ONTNC	**Ouen Toro**	**19.72**	**254**	P	**Pn**	**09 06 05.7**	**+0.1**
URZ	**Urewera**	**22.09**	**201**	P	**P**	**09 06 30.4**	**+1.1**
	comp=Z,10nm,0.4s,baz=340,slow=4.9,SNR=19						
	comp=Z,10nm,0.4s						
PPT	**Papeete**	**22.40**	**93**	LR	LR	09 12 41.5	
	comp=Z,91nm,20.7s,baz=271,slow=30						
HNR	**Honiara**	**27.47**	**284**	LR	LR	09 16 40.5	
	comp=Z,14nm,18.4s,baz=174,slow=33						
KRVT	**Keravat (AS076**	**36.69**	**287**	LR	LR	09 22 20.9	
	comp=Z,30nm,18.1s,baz=26,slow=34						
CTA	**Charters Tower**	**38.45**	**260**	LR	LR	09 23 40.8	
	comp=Z,152nm,18.4s,baz=73,slow=35						
CTAO	**Charters Tower**	**38.45**	**260**	P	**P**	**09 08 55.6**	**-0.6**
CTAO				IAmb	IAmb	09 09 05.5	
	comp=Z,14nm,1.1s						
PMG	**Port Moresby**	**39.46**	**277**	LR	LR	09 23 49.0	
	comp=Z,66nm,18.1s,baz=162,slow=34						
TOO	**Toolangi**	**41.21**	**233**	P	**P**	**09 09 19.4**	**+0.4**
COEN	**Coen**	**42.17**	**269**	P	**P**	**09 09 26.4**	**-0.6**
STKA	**Stephens Creek**	**43.13**	**242**	LR	LR	09 26 09.6	
	comp=Z,79nm,19.2s,baz=200,slow=34						
JAY	**Jayapura**	**47.79**	**283**	LR	LR	09 28 43.5	
	comp=Z,87nm,21.3s,baz=9.5,slow=34						
BBOO	**Buckleboo**	**47.89**	**242**	P	**P**	**09 10 10.8**	**-1.6**
WRAB	**Tennant Creek**	**49.61**	**259**	P	**P**	**09 10 24.9**	**-0.9**
WRAB				IAmb	IAmb	09 10 29.1	
	comp=Z,3.0nm,0.8s						
WRA	**Warramunga Arr**	**49.62**	**259**	P	**P**	**09 10 24.9**	**-1.0**
	comp=Z,1.2nm,0.6s,baz=98,slow=6.4,SNR=38						
WRA				PcP	**PcP**	**09 11 47.8**	**+0.6**
	comp=Z,1.2nm,0.9s,baz=97,slow=3.5,SNR=3.1						
	comp=Z,1.2nm,0.6s						
WRA	**Warramunga Arr**	**49.62**	**259**	P	**P**	**09 10 24.0**	**-1.9**
AS31	**Alice Springs**	**49.68**	**254**	P	**P**	**09 10 25.4**	**-0.9**
AS31				IAmb	IAmb	09 10 35.9	
	comp=Z,3.4nm,0.6s						
ASAR	**Alice Springs**	**49.69**	**254**	P	**P**	**09 10 26.1**	**-0.3**
	comp=Z,4.4nm,0.6s,baz=89,slow=8.5,SNR=67						
ASAR				PcP	**PcP**	**09 11 49.0**	**+1.6**
	comp=Z,1.6nm,0.8s,baz=110,slow=3.6,SNR=5.2						
ASAR				LR	LR	09 29 43.6	
	comp=Z,44nm,19.2s,baz=92,slow=34						
	comp=Z,4.4nm,0.6s						
ASAR	**Alice Springs**	**49.69**	**254**	P	**P**	**09 10 25.3**	**-1.0**
MTN	**Manton Dam**	**53.87**	**267**	P	**P**	**09 10 57.9**	**+0.3**
MTN				IAmb	IAmb	09 11 03.0	
	comp=Z,5.1nm,1.0s						
SIJI	**Sorong**	**57.17**	**281**	LR	LR	09 34 36.8	
	comp=Z,64nm,20.2s,baz=38,slow=35						
RPN	**Rapa Nui**	**59.11**	**111**	LR	LR	09 31 16.3	
	comp=Z,64nm,18.2s,baz=246,slow=30						
VNDA	**Vanda**	**61.01**	**186**	LR	LR	09 36 07.1	
	comp=Z,52nm,18.2s,baz=294,slow=34						
BATI	**Baumata**	**61.60**	**268**	LR	LR	09 37 29.6	
	comp=Z,70nm,18.9s,baz=142,slow=35						
JCJ	**Chichijima**	**62.26**	**315**	LR	LR	09 35 10.5	
	comp=Z,88nm,19.2s,baz=152,slow=32						
DAV	**Davao City (W)**	**65.40**	**287**	LR	LR	09 39 00.2	
	comp=Z,50nm,19.3s,baz=76,slow=34						
MJAR	**Matsushiro Arr**	**70.98**	**320**	P	**P**	**09 12 51.3**	**-0.4**
	comp=Z,2.4nm,0.9s,baz=150,slow=5.0,SNR=4.9						
	comp=Z,2.4nm,0.9s						
SHEM	**Shemya Is, Ala**	**71.13**	**352**	LR	LR	09 38 10.1	
	comp=Z,50nm,20.6s,baz=116,slow=31						
JOW	**Kunigami**	**72.16**	**307**	LR	LR	09 38 43.4	
	comp=Z,72nm,19.3s,baz=121,slow=31						

WTTA	**Wattenberg**	**150.38**	**353**	*e*PKiKP	**PKiKP**	**09 21 28.1**	**+1.8**
	comp=Z,1.9nm,0.7s						
FETA	**Feichten**	**150.72**	**355**	*e*PKiKP	**PKiKP**	**09 21 28.8**	**+1.9**
	comp=Z,3.9nm,1.0s						
ABTA	**Abfaltersbach**	**150.79**	**352**	*e*PKP	**PKiKP**	**09 21 28.3**	**+1.3**
	comp=Z,2.7nm,0.8s						

IDC 29 09:08:01.9±4.7, 11°.41N×57°.78E, h0km, mb3.8/3, mbtmp3.8/3, MS2.9/1, Error ellipse: s-maj=846.1km s-min=32.4km az=33.0, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**40.91**	**26**	LR		LR	09 32 24.3	
	comp=Z,15nm,18.8s,baz=302,slow=36							
ESDC	**Sonseca Array**	**61.10**	**309**	P		P	09 18 18.1	0.0
	0.5nm,0.6s,baz=89,slow=6.4,SNR=5.4							
	0.5nm,0.6s							
WRA	**Warramunga Arr**	**81.51**	**112**	P		P	09 20 22.1	+0.1
	0.8nm,0.7s,baz=297,slow=4.2,SNR=10							
	0.8nm,0.7s							
ASAR	**Alice Springs**	**82.12**	**116**	P		P	09 20 25.1	-0.1
	0.5nm,0.5s,baz=289,slow=5.1,SNR=13							
	0.5nm,0.5s							

*SJA **29** 09:17:30.8±0.7, 28°.13S×71°.73W, h24km±2km, ML3.3, MW3.5*
*GUC **29** 09:17:34.8±0.8, 28°.25S×71°.49W, h37km±8km, ML3.2*
ISC 29 09:17:31.3±1.7, 28°.16S±0°.03×71°.69W±0°.06, h8km±11km, n32, σ1§82/57, 3C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
AC04	**Llanos de Chal**	**0.55**	**95**	*e*P		**Pb**	**09 17 43.5**	**+0.2**
AC04				*i* S		**Sg**	**09 17 49.1**	**-0.1**
AC04				IAML			09 17 49.4	
	comp=N,5μm,0.4s							
AC04	**Llanos de Chal**	**0.55**	**95**	*e*P		**Pb**	**09 17 42.7**	**-0.5**
AC04				*e*S		**Sb**	**09 17 51.6**	**+0.2**
AC04				IAML			09 17 52.5	
	comp=Z,812nm,0.3s							
LCO	**Las Campanas**	**1.22**	**135**	*e*P		**Pb**	**09 17 53.6**	**-1.3**
LCO				*i* S		**Sb**	**09 18 07.0**	**-4.0**
LCO	**Las Campanas**	**1.22**	**135**	*e*P		Pb	09 17 48.5	-6.4
LCO				IAML			09 18 08.2	
	comp=Z,2μm,0.1s							
GO03	**Copiapo**	**1.41**	**67⇑**	*e*P		**Pn**	**09 17 57.5**	**+0.1**
GO03				*i* S		**Sb**	**09 18 14.6**	**-1.5**
GO03				IAML			09 18 20.4	
	comp=N,846nm,0.4s							
GO03	**Copiapo**	**1.41**	**67**	*e*P		**Pb**	**09 17 57.7**	**-0.2**
GO03				*e*S		**Sg**	**09 18 17.5**	**+0.8**
GO03				IAML			09 18 17.8	
	comp=Z,392nm,0.1s							
AC05	**El Transito**	**1.42**	**119⇑**	*i*P		**Pn**	**09 17 57.2**	**-0.4**
AC05				*i* S		**Sn**	**09 18 12.5**	**-4.2**
AC05	**El Transito**	**1.42**	**119**	*e*P		**Pn**	**09 17 57.3**	**-0.4**
AC05				*e*S		**Sn**	**09 18 13.9**	**-2.8**
AC05				IAML			09 18 14.2	
	comp=Z,278nm,0.7s							
AC06	**Mina Casimiro**	**1.43**	**56⇑**	*i*P		**Pg**	**09 17 58.7**	**-0.1**
AC06				*i* S		**Sn**	**09 18 15.1**	**-1.6**
AC06				IAML			09 18 20.2	
	comp=E,385nm,0.2s							
CO05	**La Serena**	**1.80**	**167**	*e*P		**Pn**	**09 18 03.6**	**+0.8**
CO05				*i* S		**Sn**	**09 18 23.8**	**-2.1**
CO05				IAML			09 18 27.3	
	comp=N,520nm,0.2s							
GO04	**Tololo Observa**	**2.16**	**159**	*i* S		**Sn**	**09 18 35.0**	**0.0**
GO04	**Tololo Observa**	**2.16**	**159**	*e*P		**Pn**	**09 18 09.3**	**+1.4**
GO04				*e*S		**Sb**	**09 18 37.9**	**0.0**
GO04				IAML			09 18 44.9	
	comp=Z,478nm,0.4s							
AC01	**Pan de Azucar**	**2.23**	**26**	*e*P		**Pn**	**09 18 09.6**	**+1.0**
AC01				*i* S		**Sn**	**09 18 35.0**	**-1.3**
AC01				IAML			09 18 51.8	
	comp=E,148nm,0.8s							
AC01	**Pan de Azucar**	**2.23**	**26**	*e*P		**Pn**	**09 18 09.7**	**+1.0**
AC01				*e*S		**Sn**	**09 18 36.7**	**+0.3**
AC01				IAML			09 18 49.4	
	comp=Z,73nm,0.6s							
CO01	**Juntas del Tor**	**2.29**	**143**	*e*P		**Pn**	**09 18 11.3**	**+1.5**
CO01				*i* S		**Sn**	**09 18 36.9**	**-1.5**
CO01				IAML			09 18 41.5	
	comp=E,314nm,0.2s							
CO01	**Juntas del Tor**	**2.29**	**143**	*e*P		**Pn**	**09 18 10.7**	**+1.0**
CO01				*e*S		**Sn**	**09 18 39.9**	**+1.5**
CO01				IAML			09 18 40.3	
	comp=Z,238nm,0.3s							
AC02	**Maricunga**	**2.63**	**61**	*e*P		**Pn**	**09 18 16.4**	**+1.7**
AC02				*e*S		**Sb**	**09 18 49.7**	**-2.1**
AC02				IAML			09 19 01.1	
	comp=Z,446nm,1.2s							
AROD	**Rodeo**	**2.79**	**136**	*e*P		**Pb**	**09 18 20.0**	**-1.7**
AROD				*e*S		**Sn**	**09 18 49.5**	**-1.3**
CO03	**El Pedregal**	**2.81**	**162**	*e*P		**Pn**	**09 18 17.3**	**+0.5**
CO03				IAML			09 19 03.1	
	comp=E,149nm,0.6s							
CO03	**El Pedregal**	**2.81**	**162**	*e*P		**Pn**	**09 18 17.7**	**+0.9**
CO03				*e*S		**Sn**	**09 18 52.3**	**+1.3**
CO03				IAML			09 19 00.6	
	comp=Z,91nm,0.7s							
ACDV	**Cuesta del Vie**	**3.02**	**132**	*e*P		**Pb**	**09 18 23.5**	**-2.0**
ACDV				*e*S		**Sn**	**09 18 57.5**	**+1.4**
ACDV				IAML			09 19 03.0	
	comp=Z,57nm,0.5s							
CO02	**Combarbal**	**3.10**	**169**	*e*P		**Pn**	**09 18 20.9**	**+0.2**
CO02	**Combarbal**	**3.10**	**169**	*e*P		**Pn**	**09 18 21.2**	**+0.5**
CO02				IAML			09 19 08.8	
	comp=Z,133nm,0.9s							
VCA	**Vinchina**	**3.13**	**101**	*e*P		**Pn**	**09 18 20.8**	**-0.4**
VCA				*e*S		**Sg**	**09 19 12.9**	**+1.1**
VCA				IAML			09 19 14.2	
	comp=Z,118nm,0.7s							
TINO	**Tinogasta**	**3.65**	**90**	*e*P		**Pn**	**09 18 31.4**	**+3.1**
PB14	**IPOC Station P**	**3.70**	**19**	*e*P		**Pn**	**09 18 29.7**	**+0.5**
PB14				*e*S		**Sn**	**09 19 13.4**	**+0.2**
PB14				IAML			09 19 39.8	
	comp=Z,23nm,0.6s							
ACLC	**CERRO LA CRUZ**	**4.35**	**108**	*e*P		**Pn**	**09 18 40.6**	**+2.6**
ACLC				*e*S		**Sn**	**09 19 34.2**	**+5.2**
ACLC				IAML			09 19 52.1	
	comp=Z,20nm,0.7s							
AVFE	**Valle Fertil**	**4.46**	**125**	*e*P		**Pn**	**09 18 41.8**	**+2.4**
AVFE				*e*S		**Sn**	**09 19 29.6**	**-2.0**
AVFE				IAML			09 19 45.1	
	comp=Z,25nm,0.4s							
CFA	**Coronel Fontan**	**4.56**	**140**	*e*P		**Pn**	**09 18 43.2**	**+2.4**
CFA				*e*S		**Sn**	**09 19 36.0**	**+1.9**
CFA				IAML			09 19 53.6	
	comp=Z,18nm,1.1s							
VA03	**San Esteban**	**4.70**	**168**	*e*P		**Pn**	**09 18 44.8**	**+2.1**
VA03				*e*S		**Sb**	**09 19 49.6**	**-1.3**
VA03				IAML			09 20 00.7	
	comp=Z,35nm,0.7s							
MT02	**Curacav**	**5.11**	**175**	*e*P		**Pn**	**09 18 48.6**	**+0.4**
MT02				*e*S		**Sb**	**09 20 04.5**	**+1.9**
MT02				IAML			09 20 38.2	
	comp=Z,18nm,2.5s							
ACHE	**Chepes**	**5.30**	**126**	*e*P		**Pn**	**09 18 53.2**	**+2.1**
ACHE				*e*S		**Sn**	**09 19 55.5**	**+3.0**

*IDC **29** 09:21:59.0±1.7, 1°.63S×120°.63E, h0km, mb3.1/3, mbtmp3.2/4, ML3.8/1, Error ellipse: s-maj=52.1km s-min=25.7km az=73.0*
*DJA **29** 09:22:01.1±0.2, 2°.5S±1°×12°.0E±°, h10km, M3.8/24, MLv3.8/24*
ISC 29 09:22:00.9±0.9, 1°.80S±0°.04×120°.17E±0°.06, h10km, n14, σ1§47/17, mb3.2/3, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
PCI	**Palu**	**0.94**	**339**	P		**Pg**	**09 22 18.9**	**-0.2**
PCI				S		**Sg**	**09 22 31.1**	**-0.3**
TTSI	**Tana Toraja**	**1.29**	**196**	P		**Pn**	**09 22 24.3**	**-0.7**
TTSI				S		**Sb**	**09 22 42.6**	**+0.7**
MMSI	**Mamuju**	**1.54**	**235**	P		**Pn**	**09 22 28.8**	**+0.4**
APSI	**Ampana**	**1.72**	**59**	P		**Pg**	**09 22 32.5**	**-1.4**
PMSI	**Majene**	**2.11**	**216**	P		**Pn**	**09 22 37.4**	**+1.1**
MPSI	**Mapaga**	**2.14**	**353**	P		**Pn**	**09 22 37.2**	**+0.6**
SPSI	**Sidrap Palu**	**2.19**	**191**	P		**Pn**	**09 22 39.1**	**+1.7**
MRSI	**Marisa**	**2.87**	**38**	P		**Pn**	**09 22 47.3**	**+0.6**
KAPI	**Kappang**	**3.23**	**187**	Pn		**Pn**	**09 22 54.3**	**+2.7**
	8.4nm,0.3s,baz=332,slow=11,SNR=16							
KAPI					Sn	**Sb**	**09 23 37.9**	**+0.3**
	4.6nm,0.3s,baz=112,slow=20,SNR=6.1							
	9.0nm,0.4s							
KAPI	**Kappang**	**3.23**	**187**	P		**Pn**	**09 22 52.5**	**+0.9**
GTOI	**Gorontalo**	**3.73**	**50**	P		**Pn**	**09 23 01.4**	**+2.9**
WRA	**Warramunga Arr**	**22.74**	**143**	P		**P**	**09 27 02.2**	**-1.1**
	0.5nm,0.6s,baz=318,slow=11,SNR=8.6							
	0.5nm,0.6s							
ASAR	**Alice Springs**	**25.49**	**150**	P		**P**	**09 27 27.5**	**-2.1**
	0.2nm,0.8s,baz=326,slow=8.6,SNR=4.4							
	0.2nm,0.8s							
MKAR	**Makanchi Array**	**58.71**	**330**	P		**P**	**09 31 59.1**	**+0.3**
	0.2nm,0.6s,baz=141,slow=7.4,SNR=2.5							
	0.2nm,0.6s							

*JMA **29** 09:34:48.5±0.4, 44°.2°×14°.7E±°, h154km±4km, MV3.4/31, NEAR ETOROFU ISLAND*
*SKHL **29** 09:34:49.1±0.2, 44°.40N×147°.20E, h133km±2km, mb4.5/4, msh5.3/4*
*IDC **29** 09:34:51.0±2.6, 44°.70N×146°.69E, h181km±25km, mb3.1/5, mbtmp3.6/6, Error ellipse: s-maj=33.9km s-min=25.0km az=131.0*
ISC 29 09:34:47.9±0.9, 44°.47N±0°.08×147°.12E±0°.07, h149km±7km, n34, σ0§75/37, mb3.3/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.63**	**200**	*e*P		Pn	09 35 21.1	+11
SHO					AMB	AMB	09 35 21.5	
	350nm,0.3s							
SHO				*e*S		Sn	09 35 37.1	+11
SHO				A		A	09 35 38.1	
	690nm,0.2s							
SHO				A		A	09 35 38.1	
	810nm,0.2s							
KUR	**Kuril'sk**	**0.93**	**34**	*e*P		**Pn**	**09 35 12.2**	**+0.3**
KUR					AMB	AMB	09 35 12.8	
	100nm,0.3s							
KUR				*i* S		**Sn**	**09 35 29.6**	**-0.7**
KUR				A		A	09 35 31.0	
	200nm,0.5s							
KUR				A		A	09 35 31.0	
	120nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**1.01**	**245**	*e*P		**Pn**	**09 35 12.7**	**+0.2**
YUK					AMB	AMB	09 35 14.1	
	160nm,0.4s							
YUK				*i* S		**Sn**	**09 35 30.5**	**-0.8**
YUK				A		A	09 35 34.9	
	650nm,0.5s							
YUK				A		A	09 35 34.9	
	960nm,0.5s							
GLVR	**Golovnino**	**1.37**	**238**	*e*P		**Pn**	**09 35 16.8**	**+0.9**
GLVR					AMB	AMB	09 35 18.3	
	60nm,0.2s							
GLVR				*i* S		**Sn**	**09 35 38.5**	**+1.2**
GLVR				A		A	09 35 43.1	
	720nm,0.3s							
GLVR				A		A	09 35 43.1	
	380nm,0.3s							
NEM2	**Nemuro 2**	**1.49**	**223**	*i* P		**Pn**	**09 35 17.3**	**+0.2**
NEM2				S		**Sn**	**09 35 38.6**	**-1.0**
NMR	**Nemuro--Hokkai**	**1.49**	**223**	*i* P		**Pn**	**09 35 17.4**	**+0.2**
NMR				*i* S		**Sn**	**09 35 38.5**	**-1.1**
JRA	**Rausu**	**1.53**	**251**	P		**Pn**	**09 35 17.8**	**+0.1**
JNSB	**Nemuroshibetsu**	**1.68**	**246**	P		**Pn**	**09 35 19.9**	**+0.7**
JNSB				S		**Sn**	**09 35 44.1**	**+0.9**
JNK	**Nakash**	**1.95**	**244**	P		**Pn**	**09 35 22.7**	**+0.4**
JKHN	**Kushirohamanak**	**1.98**	**226**	P		**Pn**	**09 35 23.2**	**+0.4**
JKHN				S		**Sn**	**09 35 49.0**	**-0.4**
AKK	**Akkeshi**	**2.20**	**230**	*e*P		**Pn**	**09 35 25.5**	**+0.2**
JAK	**Akkeshi**	**2.29**	**231**	*i* P		**Pn**	**09 35 26.7**	**+0.3**
JAK				S		**Sn**	**09 35 55.4**	**-0.6**
JTKR	**Abashiri--Toko**	**2.37**	**259**	P		**Pn**	**09 35 27.0**	**-0.2**
JTKR				S		**Sn**	**09 35 57.3**	**-0.3**
JAR	**Ashorobuto**	**2.69**	**245**	*i* P		**Pn**	**09 35 32.2**	**+0.9**
JAR				S		**Sn**	**09 36 05.5**	**+0.7**
JMP	**Maruseppu**	**2.75**	**262**	P		**Pn**	**09 35 31.6**	**-0.3**
JOB	**Onbets**	**2.85**	**238**	*i* P		**Pn**	**09 35 34.0**	**+0.7**
JOB				S		**Sn**	**09 36 07.5**	**-0.8**
JKK2	**Kamakawa 2**	**3.21**	**261**	P		**Pn**	**09 35 38.0**	**+0.2**
ASAJ	**Asahikawa**	**3.27**	**265**	P		**Pn**	**09 35 39.5**	**+0.9**
	26nm,0.6s,baz=104,slow=9.4,SNR=40							
ASAJ	**Asahikawa**	**3.27**	**265**	P		**Pn**	**09 35 38.9**	**+0.3**
JSE	**Soyaes**	**3.27**	**280**	P		**Pn**	**09 35 37.9**	**-0.7**
JCH	**Churui**	**3.30**	**237**	P		**Pn**	**09 35 39.2**	**+0.1**
JCH				S		**Sn**	**09 36 16.4**	**-2.3**
JWK2	**Keihoku**	**3.81**	**285**	P		**Pn**	**09 35 46.1**	**+0.6**
JNBK	**Urakawa-nobuka**	**3.87**	**237**	P		**Pn**	**09 35 45.7**	**-0.6**
H11N2	**WAKE ISLAND Hy**	**29.66**	**140**	T		T	10 12 03.9	
	baz=330,slow=75,SNR=13							
H11N1	**WAKE ISLAND Hy**	**29.67**	**140**	T		T	10 12 07.0	
	baz=330,slow=75,SNR=4.9							
H11N3	**WAKE ISLAND Hy**	**29.68**	**140**	T		T	10 12 00.7	
	baz=330,slow=75,SNR=4.0							
H11S1	**WAKE ISLAND Hy**	**30.64**	**141**	T		T	10 13 16.7	
	baz=330,slow=76,SNR=21							
H11S3	**WAKE ISLAND Hy**	**30.64**	**141**	T		T	10 13 05.9	
	baz=330,slow=76,SNR=15							
H11S2	**WAKE ISLAND Hy**	**30.65**	**141**	T		T	10 13 19.3	
	baz=330,slow=76,SNR=9.2							
ILAR	**Eielson Array**	**40.92**	**37**	P		**P**	**09 42 14.9**	**-0.3**
	0.6nm,1.0s,baz=275,slow=7.5,SNR=5.4							
	0.6nm,1.0s							
KURBB	**Kurchatov Arra**	**45.20**	**303**	P		P	09 42 46.9	-2.8
	0.3nm,0.4s,baz=74,slow=9.1,SNR=4.7							
	0.3nm,0.4s							
YKA	**Yellowknife Ar**	**55.22**	**34**	P		**P**	**09 44 04.7**	**-0.1**
	0.3nm,0.7s,baz=300,slow=7.2,SNR=4.0							
	0.3nm,0.7s							
FINES	**FINESS Array B**	**64.23**	**333**	P		P	09 45 03.1	-3.3
	4.4nm,1.1s,baz=51,slow=6.5,SNR=3.6							
	4.4nm,1.1s							
WRA	**Warramunga Arr**	**65.15**	**193**	P		**P**	**09 45 13.6**	**+0.7**
	0.2nm,0.5s,baz=7.6,slow=6.2,SNR=1.5							
	0.2nm,0.5s							

*JMA **29** 09:51:03.6±0.6, 20°.0N±2°.2×121°.9E±°, h26km, MV3.9/10, PHILIPPINE ISL REGION*
*MAN **29** 09:51:06.0, 20°.08N×121°.69E, h68km, MS2.9*
ISC 29 09:51:03.5±2.0, 20°.2N±0°.5×121°.9E±0°.9, h27km, n7, σ1§17/13, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**2.21**	**215**	*i* P		**Pn**	**09 51 38.9**	**+0.5**
PIP				*i* S		**Sn**	**09 52 03.4**	**-1.4**
SIPP	**Brgy, Tapao**	**2.63**	**212**	*e*P		**Pn**	**09 51 45.0**	**+0.9**
SIPP				*e*S		**Sn**	**09 52 14.7**	**-0.5**
HATJ	**Hateruma jima**	**4.25**	**24**	*e*P		**Pn**	**09 52 07.2**	**+0.8**
HATJ				S		**Sn**	**09 52 54.7**	**-0.5**
IRIF	**Iriomote-Funau**	**4.48**	**21**	P		**Pn**	**09 52 10.7**	**+1.1**
IRIF				S		**Sn**	**09 53 00.3**	**-0.5**
JKRS	**Kuro-shima**	**4.49**	**25**	P		**Pn**	**09 52 11.0**	**+1.2**
JIJ	**Ishigaki jima**	**4.66**	**26**	P		**Pn**	**09 52 12.8**	**+0.7**
JIJ				S		**Sn**	**09 53 04.6**	**-0.7**
JISG	**Ishigakijimahi**	**4.93**	**26**	P		**Pn**	**09 52 16.3**	**+0.5**
JISG				S		**Sn**	**09 53 09.6**	**-2.3**

KRSC 29 09:53:03.1±1.6, 49°.42N×158°.88E, h40km±26km, MI3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.18**	**307**	*e*P		Pn	09 53 38.2	+1.4
SKR				*e*S		Sn	09 54 02.8	+0.2
PAU	**Pauzhetka**	**2.44**	**328**	*e*S		Sn	09 54 12.4	+3.4
KDTR	**Khodutka, Kamc**	**2.45**	**348**	*e*P		Pn	09 53 43.2	+2.7
KDTR				*e*S		Sn	09 54 12.5	+3.4
RUS	**Russkaya**	**3.03**	**356**	*e*P		Pn	09 53 51.9	+3.4
RUS				*e*S		Sn	09 54 27.2	+3.7
ASAK	**Asacha**	**3.04**	**349**	*e*P		Pn	09 53 52.4	+3.8
ASAK				*e*S		Sn	09 54 27.9	+4.2
MTVR	**Mutnovka**	**3.10**	**352**	*e*P		Pn	09 53 53.4	+3.8
MTVR				*e*S		Sn	09 54 29.4	+3.9
GRL	**Gorelyy**	**3.18**	**351**	*e*P		Pn	09 53 54.9	+4.2
GRL				*e*S		Sn	09 54 31.7	+4.4
KRMR	**Karymshinskiy**	**3.45**	**352**	*e*P		Pn	09 53 59.1	+4.9
KRMR				*e*S		Sn	09 54 38.4	+4.6
SPN	**Mys Shipunski**	**3.76**	**11**	*e*P		Pn	09 54 02.6	+4.1
SPN				*e*S		Sn	09 54 45.3	+3.9
UGLR	**Uglovaya**	**3.80**	**360**	*e*P		Pn	09 54 03.5	+4.4
SMAR	**Somma**	**3.85**	**359**	*e*P		Pn	09 54 04.4	+4.5
AVH	**Avacha**	**3.86**	**359**	*e*P		Pn	09 54 04.2	+4.3
SDLR	**Sedlovina**	**3.87**	**0**	*e*P		Pn	09 54 04.1	+4.1
KOK	**Koryaka**	**3.88**	**358**	*e*P		Pn	09 54 05.1	+4.8
KRX	**Arik**	**3.95**	**358**	*e*P		Pn	09 54 05.7	+4.4
GNL	**Ganaly**	**4.33**	**353**	*e*P		Pn	09 54 11.9	+5.6
KBTR	**Krutoberegovo**	**7.21**	**18**	*e*P		Pn	09 54 50.7	+4.9

KRSC 29 09:56:36.6±3.3, 49°.24N×158°.32E, h30km±30km, MI3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.02**	**316**	*e*P		Pn	09 57 09.0	+0.3
SKR				*e*S		Sn	09 57 32.7	-0.3
PAU	**Pauzhetka**	**2.43**	**337**	*e*S		Sb	09 57 46.1	-2.9
KDTR	**Khodutka, Kamc**	**2.57**	**357**	*e*P		Pb	09 57 19.5	-2.5
KDTR				*e*S		Sn	09 57 49.2	+2.7
ASAK	**Asacha**	**3.15**	**355**	*e*P		Pn	09 57 23.1	-1.2
RUS	**Russkaya**	**3.19**	**2**	*e*P		Pb	09 57 28.8	-3.8
RUS				*e*S		Sb	09 58 07.3	-3.7
MTVR	**Mutnovka**	**3.24**	**359**	*e*P		Pb	09 57 29.6	-4.0
MTVR				*e*S		Sn	09 58 07.2	+3.9
GRL	**Gorelyy**	**3.32**	**357**	*e*P		Pb	09 57 30.8	-3.9
KRMR	**Karymshinskiy**	**3.59**	**358**	*e*P		Pb	09 57 34.9	-4.4
DALK	**Dalny**	**3.80**	**4**	*e*P		Pn	09 57 37.4	+4.3
UGLR	**Uglovaya**	**3.98**	**4**	*e*P		Pn	09 57 40.5	+4.7
SPN	**Mys Shipunski**	**4.00**	**15**	*e*P		Pn	09 57 40.0	+4.1
AVH	**Avacha**	**4.04**	**4**	*e*P		Pn	09 57 41.5	+5.1
SMAR	**Somma**	**4.04**	**4**	*e*P		Pn	09 57 41.6	+5.1
SDLR	**Sedlovina**	**4.05**	**5**	*e*P		Pn	09 57 40.9	+4.2
KOK	**Koryaka**	**4.06**	**3**	*e*P		Pb	09 57 42.1	-5.3
KRX	**Arik**	**4.13**	**3**	*e*P		Pn	09 57 42.6	+4.9
GNL	**Ganaly**	**4.46**	**357**	*e*P		Pb	09 57 49.2	-5.1
KBTR	**Krutoberegovo**	**7.49**	**20**	*e*P		Pn	09 58 28.4	+4.7

*IDC **29** 10:35:25.5±2.6, 42°.00N×22°.28E, h0km, mb3.8/1, mbtmp3.3/3, ML3.3/2, MS2.9/5, Error ellipse: s-maj=81.5km s-min=20.8km az=178.0*
*SOF **29** 10:35:26.6, 41°.78N±0°.01×22°.25E±0°.02, h20km±11km, MD3.5/7*
*KRSZO **29** 10:35:27.5±4.4, 41°.62N×22°.32E, h6km, ML4.8/20, Error ellipse: s-maj=48.8km s-min=25.4km az=147.0*
*BEO **29** 10:35:28.7±0.3, 41°.83N×22°.27E, h8km±2km, ML3.3/20*
*SKO **29** 10:35:28.0, 41°.76N×22°.24E, h16km, ML3.5*
*THE **29** 10:35:29.9, 42°.N±2°.×2°.2E±°, h0km±1km, M3.1/32, MLh3.1/32*
*ATH **29** 10:35:30.5±0.4, 41°.69N×22°.39E, h10km, ML3.2/23, Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
ISC 29 10:35:28.1±1.0, 41°.80N±0°.01×22°.32E±0°.02, h7km±8km, n184, σ1§21/229, 13C-12D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.52**	**159⇑**	*i*Pg		**Pg**	**10 35 38.5**	**+0.5**
VAY				*e*Lg		Lg	10 35 46.1	
	comp=E,4μm,0.6s							
VAY				*i* Sg		**Sg**	**10 35 46.1**	**+1.3**
VAY				*e*Lg		Lg	10 35 46.2	
	comp=N,4μm,0.4s							
KKB	**Krupnik**	**0.60**	**86**	P		**Pb**	**10 35 40.4**	**-0.5**
KKB				S		**Sb**	**10 35 49.3**	**-0.5**
KKB	**Krupnik**	**0.60**	**86**	*e*Pg		**Pb**	**10 35 40.6**	**-0.4**
KKB				*e*Sg		**Sb**	**10 35 49.2**	**-0.5**
SKO	**Skopje**	**0.68**	**285**	*i* Pg		**Pg**	**10 35 40.2**	**-0.7**
BOSS	**Bosilegrad**	**0.70**	**10**	*e*Pg		**Pg**	**10 35 41.9**	**+0.2**
BOSS				*e*Sg		**Sg**	**10 35 50.3**	**-0.5**
KNT	**Kendrikon**	**0.77**	**146**	P		**Pg**	**10 35 42.9**	**0.0**
KNT				S		**Sb**	**10 35 53.5**	**-1.0**
KNT	**Kendrikon**	**0.77**	**146**	P		**Pb**	**10 35 43.3**	**-0.6**
KNT				S		**Sg**	**10 35 53.1**	**+0.2**
GRG	**Griva**	**0.85**	**176**	P		**Pg**	**10 35 43.7**	**-0.6**
GRG				S		**Sg**	**10 35 56.0**	**+0.7**
GRG	**Griva**	**0.85**	**176**	P		**Pg**	**10 35 44.0**	**-0.3**
GRG				S		**Sg**	**10 35 55.0**	**-0.3**
TRAN	**Tran**	**1.06**	**13**	*e*Pg		**Pb**	**10 35 49.0**	**+0.2**
TRAN				*e*Sg		**Sb**	**10 36 03.3**	**+0.4**
VTS	**Vitosha**	**1.06**	**39**	*e*Pg		**Pb**	**10 35 48.6**	**-0.3**
VTS				*e*Sg		**Sb**	**10 36 03.0**	**0.0**
VTS	**Vitosha**	**1.06**	**39**	*e*Pg		**Pb**	**10 35 48.5**	**-0.3**
VTS				*e*Sg		**Sg**	**10 36 02.2**	**-0.1**
PLNA	**Plana**	**1.06**	**50**	*e*Pg		**Pn**	**10 35 49.6**	**+0.1**
PLNA				*e*Sg		**Sn**	**10 36 04.0**	**-0.4**
BARS	**Barje**	**1.08**	**340**	*e*Pg		**Pg**	**10 35 47.8**	**-1.1**
BARS				*e*Sg		**Sg**	**10 36 01.3**	**-1.6**
MMB	**Musomishta**	**1.10**	**103**	P		**Pn**	**10 35 49.8**	**-0.2**
MMB				S		**Sn**	**10 36 05.2**	**-0.1**
MMB	**Musomishta**	**1.10**	**103**	*e*Pg		**Pb**	**10 35 49.4**	**0.0**

BOVS				*e*Sn		**Sn**	**10 36 24.0**	**-0.8**
KPRO	**Kipourio**	**1.98**	**202**	P		**Pn**	**10 36 03.7**	**+1.6**
KPRO	**Kipourio**	**1.98**	**202**	P		**Pn**	**10 36 03.1**	**+1.1**
ZAGS	**Zajecar**	**2.01**	**358**	*e*Pn		**Pn**	**10 36 02.3**	**-0.1**
ZAGS				*e*Sn		**Sn**	**10 36 27.2**	**-0.6**
GOCS	**Kraljevo Serbi**	**2.06**	**329**	*e*Pn		**Pn**	**10 36 02.7**	**-0.5**
GOCS				*e*Sn		**Sn**	**10 36 28.8**	**-0.3**
THAS	**Thassos island**	**2.17**	**123**	P		**Pn**	**10 36 05.2**	**+0.6**
THAS	**Thassos island**	**2.17**	**123**	P		**Pn**	**10 36 05.1**	**+0.6**
THL	**Klokotos Trika**	**2.25**	**186**	P		**Pn**	**10 36 06.0**	**+0.4**
THL	**Klokotos Trika**	**2.25**	**186**	P		**Pn**	**10 36 05.7**	**+0.1**
SJES	**Sjenica**	**2.27**	**311**	*e*Pn		**Pn**	**10 36 06.0**	**-0.1**
SJES	**Sjenica**	**2.27**	**311**	*e*Pn		**Pn**	**10 36 06.2**	**+0.1**
BORS2	**Bor- Borsko je**	**2.30**	**355**	*e*Pn		**Pn**	**10 36 05.1**	**-1.3**
PLVB	**Pleven**	**2.32**	**46**	⇓P		**Pb**	**10 36 09.1**	**-1.1**
PLVB				⇑S		**Sb**	**10 36 38.5**	**-0.5**
PDG	**Podgorica**	**2.37**	**286**	⇓P		**Pn**	**10 36 08.1**	**+0.8**
PDG				⇑S		**Sn**	**10 36 36.5**	**-0.1**
PDG	**Podgorica**	**2.37**	**286**	*e*Pn		**Pn**	**10 36 08.1**	**+0.8**
DRME	**Dracevica, Mon**	**2.37**	**280**	*e*Pn		**Pn**	**10 36 08.4**	**+1.0**
IVAS	**Ivanjica**	**2.39**	**319**	*e*Pn		**Pn**	**10 36 06.8**	**-0.9**
GRUS	**Gruza**	**2.40**	**331**	*e*Pn		**Pn**	**10 36 07.7**	**0.0**
JAN	**Janina**	**2.42**	**208**	P		**Pn**	**10 36 09.9**	**+1.8**
PRMD	**Pramanda**	**2.45**	**203**	P		**Pn**	**10 36 10.4**	**+1.8**
PRMD	**Pramanda**	**2.45**	**203**	P		**Pn**	**10 36 09.7**	**+1.1**
RDO	**Rodhopi**	**2.50**	**104**	P		**Pn**	**10 36 10.3**	**+1.1**
RDO				S		**Sn**	**10 36 41.4**	**+1.6**
RDO	**Rodhopi**	**2.50**	**104**	P		**Pn**	**10 36 10.5**	**+1.3**
TETR	**Tetrakomo, Epi**	**2.58**	**198**	P		**Pn**	**10 36 12.5**	**+2.2**
TETR	**Tetrakomo, Epi**	**2.58**	**198**	P		**Pn**	**10 36 11.5**	**+1.2**
NEO	**Neokhori**	**2.58**	**164**	P		**Pn**	**10 36 10.3**	**-0.1**
NEO	**Neokhori**	**2.58**	**164**	P		**Pn**	**10 36 10.7**	**+0.4**
SRN	**Sarande**	**2.61**	**223**	P		**Pn**	**10 36 12.5**	**+2.0**
SRN				S		**Sn**	**10 36 44.7**	**+2.2**
KUBS	**Kucevo**	**2.65**	**350**	*e*Pn		**Pn**	**10 36 10.6**	**-0.6**
KUBS				*e*Sn		**Sn**	**10 36 44.5**	**+0.9**
IGT	**Igoumenitsa**	**2.73**	**214**	P		**Pn**	**10 36 14.5**	**+2.2**
IGT				S		**Sn**	**10 36 48.5**	**+3.1**
IGT	**Igoumenitsa**	**2.73**	**214**	*e*Pn		**Pn**	**10 36 14.2**	**+2.0**
IGT	**Igoumenitsa**	**2.73**	**214**	P		**Pn**	**10 36 14.0**	**+1.7**
SMTH	**Samothraki Isl**	**2.76**	**118**	P		**Pn**	**10 36 13.5**	**+0.8**
SMTH	**Samothraki Isl**	**2.76**	**118**	P		**Pn**	**10 36 12.7**	**-0.1**
AGG	**Agios Georgios**	**2.78**	**180**	P		**Pn**	**10 36 13.5**	**+0.6**
AGG	**Agios Georgios**	**2.78**	**180**	P		**Pn**	**10 36 13.1**	**+0.2**
MAKR	**Makrakomi, Fth**	**2.79**	**183**	P		**Pn**	**10 36 14.1**	**+0.9**
MAKR	**Makrakomi, Fth**	**2.79**	**183**	P		**Pn**	**10 36 14.0**	**+0.9**
TRUS	**Trudelj**	**2.80**	**331**	*e*Pn		**Pn**	**10 36 12.7**	**-0.6**
KEK	**Kerkira**	**2.83**	**223**	P		**Pn**	**10 36 14.9**	**+1.1**
RUDO	**Rudo**	**2.83**	**311**	*e*Pn		**Pn**	**10 36 12.1**	**-1.6**
RUDO	**Rudo**	**2.83**	**311**	*e*Pn		**Pn**	**10 36 11.6**	**-2.1**
DIVS	**Divibare**	**2.86**	**324**	*e*Pn		**Pn**	**10 36 13.6**	**-0.6**
ELND	**Elena**	**2.86**	**66**	⇑P		**Pn**	**10 36 16.2**	**+2.1**
LIA	**Limnos Island**	**2.88**	**130**	P		**Pn**	**10 36 16.1**	**+1.7**
LIA	**Limnos Island**	**2.88**	**130**	P		**Pn**	**10 36 14.7**	**+0.3**
UPM	**Unac-Piva**	**2.89**	**300**	*e*Pn		**Pn**	**10 36 15.4**	**+0.7**
AOS2	**Alonissos-2**	**2.89**	**156**	P		**Pn**	**10 36 14.7**	**+0.1**
EVR	**Evrytania**	**2.91**	**188**	P		**Pn**	**10 36 16.7**	**+1.8**
EVR	**Evrytania**	**2.91**	**188**	P		**Pn**	**10 36 15.4**	**+0.5**
HCY	**Herceg Novi**	**2.92**	**284**	*e*Pn		**Pn**	**10 36 17.6**	**+2.7**
ALN	**Alexandroupoli**	**2.94**	**107**	P		**Pn**	**10 36 16.7**	**+1.5**
ALN	**Alexandroupoli**	**2.94**	**107**	P		**Pn**	**10 36 16.2**	**+1.0**
BBLS	**Lazi&#263i**	**2.98**	**315**	Pn		**Pn**	**10 36 16.6**	**+0.8**
BBLS	**Lazi&#263i**	**2.98**	**315**	*e*Pn		**Pn**	**10 36 15.8**	**0.0**
BBLS	**Lazi&#263i**	**2.98**	**315**	*e*Pn		**Pn**	**10 36 14.4**	**-1.4**
AMPL	**Ampelaki**	**3.00**	**197**	P		**Pn**	**10 36 17.5**	**+1.5**
BRY	**Bratogost**	**3.01**	**293**	*e*Pn		**Pn**	**10 36 18.1**	**+1.8**
AXAR	**Agios Charalam**	**3.04**	**175**	P		**Pn**	**10 36 17.4**	**+0.8**
SZH	**Strazhitsa**	**3.07**	**60**	P		**Pn**	**10 36 19.4**	**+2.5**
HERR	**Herculane**	**3.08**	**1**	⇑P		**Pn**	**10 36 17.7**	**+0.6**
KLINJ	**Klinje**	**3.08**	**298**	*e*Pn		**Pn**	**10 36 19.4**	**+2.1**
TREB	**Trebinje**	**3.09**	**289**	*e*Pn		**Pn**	**10 36 18.3**	**+1.1**
TREB	**Trebinje**	**3.09**	**289**	*e*Pn		**Pn**	**10 36 18.4**	**+1.2**
ATAL	**Atalanti**	**3.15**	**170**	P		**Pn**	**10 36 19.7**	**+1.6**
AVAS	**Avala Beograd**	**3.18**	**336**	*e*Pn		**Pn**	**10 36 18.5**	**0.0**
JMB	**Yambol**	**3.20**	**76**	P		**Pn**	**10 36 20.4**	**+1.6**
ANX	**Ano Chora**	**3.22**	**186**	P		**Pn**	**10 36 20.9**	**+1.8**
ANX	**Ano Chora**	**3.22**	**186**	P		**Pn**	**10 36 20.4**	**+1.3**
PVO	**Paravola**	**3.24**	**191**	P		**Pn**	**10 36 21.5**	**+2.2**
PVO	**Paravola**	**3.24**	**191**	P		**Pn**	**10 36 20.1**	**+0.8**
LKD2	**Lefkada island**	**3.27**	**203**	P		**Pn**	**10 36 21.7**	**+2.0**
LKD2	**Lefkada island**	**3.27**	**203**	P		**Pn**	**10 36 21.3**	**+1.6**
NYDR	**Nydri-Lefkada**	**3.33**	**202**	P		**Pn**	**10 36 21.9**	**+1.4**
NYDR	**Nydri-Lefkada**	**3.33**	**202**	P		**Pn**	**10 36 21.1**	**+0.6**
EFP	**Efpalio**	**3.39**	**186**	P		**Pn**	**10 36 21.7**	**+0.4**
SERG	**Sergoula**	**3.39**	**164**	P		**Pn**	**10 36 22.8**	**+1.4**
VRSS	**Vrsac**	**3.40**	**348**	*e*Pn		**Pn**	**10 36 20.5**	**-1.0**
TEKS	**Tekeris**	**3.42**	**324**	*e*Pn		**Pn**	**10 36 21.0**	**-0.9**
STON	**Ston**	**3.59**	**289**	*e*Pn		**Pn**	**10 36 25.2**	**+1.1**
GZR	**Gura Zlata**	**3.61**	**5**	⇓P		**Pn**	**10 36 24.8**	**+0.4**
GZR	**Gura Zlata**	**3.61**	**5**	Pn		**Pn**	**10 36 24.2**	**-0.2**
GZR	**Gura Zlata**	**3.61**	**5**	*e*Pn		**Pn**	**10 36 24.3**	**-0.1**
VILL	**Villia**	**3.71**	**168**	P		**Pn**	**10 36 26.8**	**+1.0**
KLV	**Kalavryta, Ach**	**3.76**	**182**	P		**Pn**	**10 36 27.2**	**+0.7**
LOT	**Lotru**	**3.79**	**16**	⇓P		**Pn**	**10 36 28.5**	**+1.5**
LOT	**Lotru**	**3.79**	**16**	Pn		**Pn**	**10 36 28.4**	**+1.3**
FRGS	**Fruska Gora**	**3.82**	**332**	*e*Pn		**Pn**	**10 36 26.5**	**-0.8**
FRGS	**Fruska Gora**	**3.82**	**332**	*e*Pn		**Pn**	**10 36 26.2**	**-1.1**
BZS	**Buzias**	**3.85**	**353**	Pn		**Pn**	**10 36 26.4**	**-1.3**
BZS	**Buzias**	**3.85**	**353**	*e*Pn		**Pn**	**10 36 26.3**	**-1.3**
ARR	**Arges**	**3.94**	**24**	⇓P		**Pn**	**10 36 29.9**	**+0.9**
DEV	**Deva**	**4.10**	**6**	Pn		**Pn**	**10 36 34.5**	**+3.4**
VOIR		**4.14**	**26**	⇓P		**Pn**	**10 36 33.2**	**+1.5**
MATE	**Matera**	**4.39**	**257**	⇓P		**Pn**	**10 36 35.9**	**+0.8**
MATE	**Matera**	**4.39**	**257**	Pn		**Pn**	**10 36 35.0**	**-0.1**
MLR	**Muntele Rosu**	**4.53**	**34**	⇑P		**Pn**	**10 36 39.9**	**+2.8**
MLR	**Muntele Rosu**	**4.53**	**34**	Pn		**Pn**	**10 36 41.8**	**+4.7**
DOPR	**Dopca**	**4.72**	**27**	⇑P		**Pn**	**10 36 41.3**	**+1.7**
BLY	**Banja Luka**	**4.77**	**310**	*e*Pn		**Pn**	**10 36 41.2**	**+0.9**
MARR	**Marisel-Cluj**	**4.91**	**6**	⇓P		**Pn**	**10 36 44.1**	**+1.8**
DRGR		**5.00**	**3**	⇑P		**Pn**	**10 36 44.3**	**+0.8**
DRGR		**5.00**	**3**	Pn		**Pn**	**10 36 43.8**	**+0.3**
DRGR		**5.00**	**3**	*e*Pn		**Pn**	**10 36 43.3**	**-0.2**
PLOR	**Plostina**	**5.12**	**36**	⇓P		**Pn**	**10 36 46.9**	**+1.8**
MORH	**Mrgy, Hungar**	**5.15**	**330**	⇑P		**Pn**	**10 36 45.4**	**-0.1**
MORH	**Mrgy, Hungar**	**5.15**	**330**	*e*Pn		**Pn**	**10 36 44.2**	**-1.3**
VRI	**Vrincioaia**	**5.16**	**37**	⇑P		**Pn**	**10 36 48.1**	**+2.4**
CFR	**Carcaliu**	**5.41**	**49**	⇑P		**Pn**	**10 36 51.7**	**+2.6**
PSZ	**Piszkesteto**	**6.36**	**345**	⇓P		**Pn**	**10 37 02.9**	**+0.8**
AQU	**L'Aquila**	**6.66**	**278**	*e*Pn		**Pn**	**10 37 06.4**	**0.0**
GROS	**Grobnik**	**6.76**	**316**	*i* Pn		**Pn**	**10 37 01.4**	**+0.2**
KECS	**Kecovo**	**6.81**	**350**	*e*PN		**Pn**	**10 37 09.1**	**+0.8**
JAVS	**Javornik**	**7.24**	**307**	*i* Pn		**Pn**	**10 37 15.9**	**+1.7**
ARSA	**Arzberg**	**7.30**	**321**	*e*Pn		**Pn**	**10 37 15.7**	**+0.7**
	comp=E,0.6nm,0.3s							
ARSA				*e*Sn		**Sn**	**10 38 39.5**	**+1.4**
	comp=E,0.8nm,0.3s							
OBKA	**Obir**	**7.31**	**313**	*e*Pn		**Pn**	**10 37 15.2**	**0.0**
	comp=E,0.4nm,0.2s							
MODS	**Modra-Piesok**	**7.48**	**333**	*e*PN		**Pn**	**10 37 21.2**	**+3.7**
MODS				*e*SN		**Sn**	**10 38 37.0**	**-5.5**
CONA	**Conrad Observa**	**7.65**	**325**	*e*Sn		**Sn**	**10 38 47.0**	**+0.1**
	comp=E,1.0nm,0.4s							
WINA	**Alland / Wiene**	**7.71**	**327**	*e*Sn		**Sn**	**10 38 49.7**	**+1.6**
KBA	**Koelnbreinsper**	**8.31**	**312**	*e*Pn		**Pn**	**10 37 29.3**	**+0.2**
	comp=E,0.4nm,0.3s							
VRAC	**Vranov**	**8.51**	**334**	LR		LR	10 40 47.9	
	comp=E,35nm,19.8s,baz=176,slow=39							
BIOA	**Bad Ischl, Aus**	**8.53**	**317**	*e*Pn		**Pn**	**10 37 32.6**	**+0.6**
	comp=E,1.3nm,0.4s							
BIOA				*e*Sn		**Sn**	**10 39 08.8**	**+0.4**
	comp=E,1.2nm,0.3s							
BRTR	**Keskin Array B**	**8.84**	**100**	Pn		**Pn**	**10 37 36.8**	**+0.5**
	comp=E,0.2nm,0.3s,baz=285,slow=12,SNR=4.3 comp=E,0.3nm,0.5s							
LESA	**Schwarzleotal**	**8.88**	**313**	*e*Pn		**Pn**	**10 37 38.3**	**+1.4**
	comp=E,1.8nm,0.4s							
LESA				*e*Sn		**Sn**	**10 39 15.3**	**-1.8**
	comp=E,1.3nm,0.5s							
WTTA	**Wattenberg**	**9.38**	**309**	*e*Pn		**Pn**	**10 37 44.2**	**+0.4**
	comp=E,1.1nm,0.2s							
AKASG	**Malin Array Be**	**10.10**	**26**	LR		LR	10 42 02.5	
	comp=E,20nm,19.4s,baz=334,slow=40							
DAVOX	**Davos/Dischmat**	**10.21**	**303**	LR		LR	10 42 27.2	
	comp=E,58nm,18.1s,baz=244,slow=42							
GNI	**Garni**	**17.01**	**88**	LR		LR	10 46 40.0	
	comp=E,33nm,18.2s,baz=195,slow=40							
ESDC	**Sonseca Array**	**20.01**	**273**	P		**P**	**10 39 59.2**	**-2.1**
	baz=67,slow=11,SNR=4.9 comp=E,0.7nm,0.9s							
TORD	**Torodi Ar. Bea**	**33.72**	**218**	P		**P**	**10 42 09.8**	**-0.3**
	comp=E,1.0nm,0.8s,baz=26,slow=6.8,SNR=5.8							
	comp=E,1.0nm,0.8s							
SUR	**Sutherland**	**73.83**	**181**	LR		LR	11 21 29.3	
	comp=E,59nm,18.2s,baz=154,slow=37							

*IDC **29** 10:52:56.5±3.0, 7°.55S×120°.24E, h243km±48km, mb3.2/2, mbtmp3.6/5, Error ellipse: s-maj=142.8km s-min=47.3km az=69.0*
*DJA **29** 10:52:56.9±0.7, 8°.5S±5°×12°.0E±°, h156km±9km, M3.2/8, MLv3.2/8*
ISC 29 10:52:54.0±1.0, **8°.18S**±0°.07×**119°.99E**±0°.05, **h200**km, **n13,** σ2**s12**/19, **Flores region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LBFI	**Labuhan Bajo,**	**0.31**	**199**	P		**Pn**	**10 53 19.6**	**-0.9**
WBSI	**Waikabubak, Su**	**1.56**	**202**	P		**Pn**	**10 53 27.4**	**-0.9**
WBSI				S		**Sn**	**10 53 52.2**	**-2.9**
DBNI	**Kabupaten Domp**	**1.69**	**259**	P		**Pn**	**10 53 29.6**	**+0.1**
DBNI				S		**Sn**	**10 53 54.0**	**-3.0**
BSSI	**Bau Bau, Buton**	**2.09**	**14**	P		**Pn**	**10 53 32.9**	**-0.6**
MMRI	**Maumere**	**2.27**	**102**	P		**Pn**	**10 53 35.6**	**+0.3**
PLAI	**Plampang**	**2.28**	**254**	P		**Pn**	**10 53 35.8**	**+0.3**
PLAI				S		**Sn**	**10 54 05.9**	**-1.9**
TWSI	**Taliwang, Sumb**	**3.13**	**260**	P		**Pn**	**10 53 45.7**	**+0.6**
TWSI				S		**Sn**	**10 54 24.3**	**-0.8**
KAPI	**Kappang**	**3.16**	**356**	P		**Pn**	**10 53 44.0**	**-1.6**
	4.9nm,0.3s,baz=221,slow=17,SNR=3.8							
BATI	**Baumata**	**4.14**	**119**	S		**Sn**	**10 54 44.2**	**-3.3**
	9.8nm,0.3s,baz=235,slow=2.5,SNR=1.8							
FITZ	**Fitzroy Crossi**	**11.28**	**151**	P		**P**	**10 55 37.2**	**+1.5**
	1.6nm,0.8s,baz=333,slow=14,SNR=2.1							
FITZ				S		**Sn**	**10 57 31.4**	**-4.2**
	1.1nm,0.3s,baz=172,slow=22,SNR=8.2							
WRA	**Warramunga Arr**	**18.15**	**132**	P		**Pn**	**10 56 54.0**	**+0.1**
	0.5nm,0.3s,baz=311,slow=10,SNR=47							
WRA				S				
	0.3nm,0.7s,baz=303,slow=26,SNR=2.7							
ASAR	**Alice Springs**	**20.36**	**141**	P		**P**	**10 57 18.4**	**+2.9**
	0.5nm,0.3s,baz=316,slow=9.1,SNR=34							
	0.5nm,0.3s							
STKA	**Stephens Creek**	**30.98**	**143**	P		**P**	**10 58 54.7**	**+2.1**
	0.9nm,0.4s,baz=321,slow=8.9,SNR=4.1							
	0.9nm,0.4s							

*IDC **29** 11:00:47.8±1.7, 24°.26S×67°.12W, h143km±23km, mb3.2/1, mbtmp3.6/6, Error ellipse: s-maj=39.7km s-min=14.2km az=98.0*
*SJA **29** 11:00:48.3±0.7, 24°.30S×67°.25W, h188km±4km, ML3.6, MW3.5*
*NEIC **29** 11:00:49.8±1.1, 24°.32S±0°.08×67°.4W±0°.2, h189km±14km, mb4.2/5, ML4.1(GUC), Error ellipse: s-maj=22.1km s-min=10.7km az=104.0*
*GUC **29** 11:00:50.8±0.8, 24°.23S×67°.53W, h205km±7km, ML4.1*
ISC 29 11:00:49.2±0.7, **24°.27S**±0°.04×**67°.30W**±0°.04, **h182**km±7km, **n78,** σ1**s24**/109, **5C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SALTA		**0.88**	**87**	⇓*e*P		**Pn**	**11 01 16.8**	**-0.1**
SALTA		**0.88**	**87**	*e*P		**Pn**	**11 01 17.0**	**+0.1**
SALTA				*e*S		**Sn**	**11 01 37.5**	**-0.7**
AF01	**San Pedro de A**	**1.54**	**328**			**Pn**	**11 01 23.2**	**+1.1**
AF01	**San Pedro de A**	**1.54**	**328**	*e*P		**Pn**	**11 01 23.5**	**+1.5**
AF01				*e*S		**Sn**	**11 01 49.2**	**+1.7**
AF01	**San Pedro de A**	**1.54**	**328**	*e*P		**Pn**	**11 01 22.1**	**0.0**
AF01				*e*S		**Sn**	**11 01 48.1**	**+0.6**
AF01				IAML			11 02 03.4	
	comp=Z,178nm,0.5s							
HJA	**Humahuaca**	**2.03**	**59**	*e*P		**Pn**	**11 01 28.0**	**+0.8**
HJA				*e*S		**Sn**	**11 01 56.4**	**-0.2**
FSA	**Cafayete**	**2.19**	**147**	*e*P		**Pn**	**11 01 28.0**	**-0.7**
FSA				*e*S		**Sn**	**11 01 58.3**	**-1.1**
PB06	**IPOC Station P**	**2.60**	**306**			**Pn**	**11 01 34.5**	**+1.1**
PB06	**IPOC Station P**	**2.60**	**306**	⇑*e*P		**Pn**	**11 01 34.6**	**+1.3**
PB06				⇑*i*P			11 01 34.7	
PB06				*e*S		**Sn**	**11 02 07.0**	**-0.6**
PB06				IAML			11 02 10.2	
	comp=N,700nm,0.5s							
PB06	**IPOC Station P**	**2.60**	**306**	*e*P		**Pn**	**11 01 34.6**	**+1.3**
PB06				*e*S		**Sn**	**11 02 07.8**	**+0.1**
PB06				IAML			11 02 11.7	
	comp=Z,433nm,0.2s							
PB14	**IPOC Station P**	**2.85**	**262**			**Pn**	**11 01 36.8**	**+0.4**
PB14	**IPOC Station P**	**2.85**	**262**	*e*P		**Pn**	**11 01 37.1**	**+0.7**
PB14				*e*S		**Sn**	**11 02 12.1**	**-1.0**
PB14	**IPOC Station P**	**2.85**	**262**	*e*P		**Pn**	**11 01 37.2**	**+0.7**
PB14				*e*S		**Sn**	**11 02 13.2**	**0.0**
PB14				IAML			11 02 16.7	
	comp=Z,105nm,0.5s							
PB05	**IPOC Station P**	**3.01**	**297**			**Pn**	**11 01 38.5**	**+0.3**
PB05	**IPOC Station P**	**3.01**	**297**	⇑*i*P		**Pn**	**11 01 39.2**	**+1.0**
PB05				*e*S		**Sn**	**11 02 14.8**	**-1.6**
PB05				IAML			11 02 18.4	
	comp=N,277nm,0.3s							
PB05	**IPOC Station P**	**3.01**	**297**	*e*P		**Pn**	**11 01 39.2**	**+1.0**
PB05				*e*S		**Sn**	**11 02 16.7**	**+0.3**
PB05				IAML			11 02 19.5	
	comp=Z,217nm,0.6s							
AC02	**Maricunga**	**3.04**	**212**			**Pn**	**11 01 39.6**	**+0.7**
AC02	**Maricunga**	**3.04**	**212**	⇑*i*P		**Pn**	**11 01 40.2**	**+1.3**
AC02	**Maricunga**	**3.04**	**212**	*e*P		**Pn**	**11 01 39.5**	**+0.7**
AC02				*e*S		**Sn**	**11 02 23.0**	**+5.3**
PB09	**IPOC Station P**	**3.04**	**324**			**Pn**	**11 01 40.1**	**+1.5**
PB09	**IPOC Station P**	**3.04**	**324**	*e*P		**Pn**	**11 01 40.1**	**+1.5**
PB09				*i* S		**Sn**	**11 02 16.2**	**-1.0**
PB09				IAML			11 02 19.4	
	comp=N,207nm,0.5s							
PB09				IAML			11 02 19.6	
	comp=E,200nm,0.6s							
PB09	**IPOC Station P**	**3.04**	**324**	*e*P		**Pn**	**11 01 39.8**	**+1.2**
PB09				*e*S		**Sn**	**11 02 17.4**	**+0.2**
PB09				IAML			11 02 21.8	
	comp=Z,125nm,0.2s							
PB03	**IPOC Station P**	**3.16**	**314**			**Pn**	**11 01 40.6**	**+0.6**
PB03	**IPOC Station P**	**3.16**	**314**	*e*P		**Pn**	**11 01 41.0**	**+0.9**
PB03				*i* S		**Sn**	**11 02 17.9**	**-1.7**
PB03	**IPOC Station P**	**3.16**	**314**	*e*P		**Pn**	**11 01 41.0**	**+0.9**
PB03				*e*S		**Sn**	**11 02 19.8**	**+0.1**
PB03				IAML			11 02 21.9	
	comp=Z,320nm,0.3s							
PB07	**IPOC Station P**	**3.47**	**316**			**Pn**	**11 01 44.3**	**+0.3**
PB07	**IPOC Station P**	**3.47**	**316**	⇓*e*P		**Pn**	**11 01 44.8**	**+0.8**
PB07	**IPOC Station P**	**3.47**	**316**	*e*P		**Pn**	**11 01 44.8**	**+0.8**
PB07				IAML			11 02 26.4	
	comp=Z,316nm,0.5s							
AC01	**Pan de Azucar**	**3.52**	**237**			**Pn**	**11 01 44.2**	**-0.2**
AC01	**Pan de Azucar**	**3.52**	**237**	⇑*i*P		**Pn**	**11 01 44.3**	**-0.1**
AC01				*i* S		**Sn**	**11 02 25.5**	**-2.0**
AC01	**Pan de Azucar**	**3.52**	**237**	*e*P		**Pn**	**11 01 44.4**	**+0.1**
AC01				*e*S		**Sn**	**11 02 26.4**	**-1.1**
AC01				IAML			11 02 27.7	
	comp=Z,49nm,0.3s							
TINO	**Tinogasta**	**3.79**	**184**	*e*P		**Pn**	**11 01 49.0**	**+1.3**
PB02	**IPOC Station P**	**3.79**	**320**			**Pn**	**11 01 48.2**	**+0.4**
PB02	**IPOC Station P**	**3.79**	**320**	*e*P		**Pn**	**11 01 48.1**	**+0.4**
PB02	**IPOC Station P**	**3.79**	**320**	*e*P		**Pn**	**11 01 48.3**	**+0.4**
PB02				*e*S		**Sn**	**11 02 33.5**	**-0.1**
PB02				IAML			11 02 38.6	
	comp=Z,237nm,0.4s							
PB01	**IPOC Station P**	**3.79**	**327**			**Pn**	**11 01 48.2**	**+0.3**
PB01	**IPOC Station P**	**3.79**	**327**	*e*P		**Pn**	**11 01 48.3**	**+0.3**
PB01				*e*S		**Sn**	**11 02 31.9**	**-1.8**
PB01	**IPOC Station P**	**3.79**	**327**	*e*P		**Pn**	**11 01 48.2**	**+0.3**
PB01				*e*S		**Sn**	**11 02 33.0**	**-0.8**
PB01				IAML			11 02 42.5	
	comp=Z,70nm,0.3s							
AC06	**Mina Casimiro**	**4.12**	**221**			**Pn**	**11 01 51.8**	**-0.1**
AC06	**Mina Casimiro**	**4.12**	**221**	*e*P		**Pn**	**11 01 51.4**	**-0.5**
AC06				*i* S		**Sn**	**11 02 39.2**	**-1.9**
AC06				IAML			11 02 46.6	
GO03	**Copiapo**	**4.23**	**218**			**Pn**	**11 01 52.4**	**-1.0**
GO03	**Copiapo**	**4.23**	**218**	*e*P		**Pn**	**11 01 53.1**	**-0.3**
GO03				*i* S		**Sn**	**11 02 41.5**	**-2.2**
GO03	**Copiapo**	**4.23**	**218**	*e*P		**Pn**	**11 01 53.2**	**-0.1**
GO03				*e*S		**Sn**	**11 02 41.7**	**-2.0**
GO03				IAML			11 02 44.9	
	comp=Z,55nm,0.5s							
PATCX	**Punta Patache**	**4.33**	**322**			**Pn**	**11 01 54.5**	**-0.2**
PATCX	**Punta Patache**	**4.33**	**322**	*e*P		**Pn**	**11 01 56.0**	**+1.3**
PATCX				*e*S		**Sn**	**11 02 44.7**	**-1.2**
PATCX				IAML			11 02 50.6	
	comp=Z,42nm,0.3s							
PB08	**IPOC Station P**	**4.45**	**337**			**Pn**	**11 01 57.3**	**+0.7**
PB08	**IPOC Station P**	**4.45**	**337**	*e*P		**Pn**	**11 01 57.2**	**+0.7**
PB08				*e*S		**Sn**	**11 02 48.0**	**-1.3**
PB08				IAML			11 02 51.4	
	comp=Z,23nm,0.2s							
TA01	**Diego Aracena**	**4.55**	**324**			**Pn**	**11 01 57.5**	**+0.1**
TA01	**Diego Aracena**	**4.55**	**324**	*e*P		**Pn**	**11 01 58.0**	**+0.6**
TA01				*e*S		**Sn**	**11 02 50.0**	**-0.9**
TA01				IAML			11 03 13.0	
	comp=Z,31nm,0.5s							
HMBC	**Humberstone**	**4.64**	**328**			**Pn**	**11 01 58.0**	**-0.7**
GO01	**Chusmiza**	**4.90**	**339**			**Pn**	**11 02 03.1**	**+0.6**
PB11	**IPOC Station P**	**4.99**	**334**			**Pn**	**11 02 02.4**	**-0.9**
PB11	**IPOC Station P**	**4.99**	**334**	*e*P		**Pn**	**11 02 02.7**	**-0.6**
PB11				*e*S		**Sn**	**11 02 59.7**	**-1.7**
PB11				IAML			11 03 02.9	
	comp=Z,24nm,0.5s							
AC04	**Llanos de Chal**	**5.18**	**220**			**Pn**	**11 02 04.5**	**-1.0**
AC04	**Llanos de Chal**	**5.18**	**220**	*e*P		**Pn**	**11 02 04.3**	**-1.2**
AC04				*e*S		**Sn**	**11 03 02.8**	**-2.7**
AC04				IAML			11 03 10.8	
	comp=Z,21nm,0.9s							
AC05	**El Transito**	**5.27**	**210**			**Pn**	**11 02 06.3**	**-0.5**
AC05	**El Transito**	**5.27**	**210**	*e*P		**Pn**	**11 02 06.5**	**-0.3**
AC05				IAML			11 03 11.3	
	comp=Z,23nm,0.7s							
PSGCX	**Pisagua**	**5.33**	**330**	*e*P		**Pn**	**11 02 07.1**	**-0.6**
PSGCX				IAML			11 03 10.1	
	comp=Z,17nm,0.4s							
LCO	**Las Campanas**	**5.62**	**212**			**Pn**	**

NIED ***29*** *11:05:38.5, 40.64N×141.51E, h89km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr1.41; Mθθ-0.92; Mφφ-0.49; Mrθ0.46; Mrφ1.49; Mθφ-1.50; Fault plane solution: M0 2.47000×10¹⁴ NP1: φs281.00000°, δ34.00000°, λ40.00000°. NP2: φs156.00000°, δ68.00000°, λ118.00000°.*

JMA ***29*** *11:05:38.5±0.1, 40.6N±0.3×141.5E±0.7, h89km, MV3.5/40, E OFF AOMORI PREF*

JMA Felt I J1 at E OFF AOMORI PREF .

IDC ***29*** *11:05:39.1±1.9, 40.64N×141.59E, h103km±22km, mb3.3/4, mbtmp3.6/6, Error ellipse: s-maj=33.9km s-min=16.1km az=92.0*

ISC 29 11:05:38.4±1.0, 40°63'N±0'.03×141°51'E±0'.08, h87km±6km, n19, σ0°72/30, mb3.6/4, 6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JANG	**Nango**	**0.26**	**179**	P	**Pn**	**11 05 51.6**	**+0.2**
JANG				S	**Sn**	**11 06 00.8**	**-0.1**
JTM	**Tenmabayashi**	**0.37**	**295**	P	**Pn**	**11 05 51.9**	**-0.1**
JTM				S	**Sn**	**11 06 02.1**	**+0.1**
JARK	**Aomorirokkasho**	**0.39**	**344**	*i* P	**Pn**	**11 05 52.3**	**+0.3**
JARK				*e*S	**Sn**	**11 06 02.4**	**+0.2**
JAH	**Hinai**	**0.80**	**237**	P	**Pn**	**11 05 56.1**	**+0.4**
JAH				S	**Sn**	**11 06 09.3**	**+0.6**
JOT	**Ohata**	**0.83**	**335**	P	**Pn**	**11 05 56.2**	**+0.3**
JOT				*e*S	**Sn**	**11 06 09.5**	**+0.4**
JIW	**Iwasaki**	**1.15**	**268**	P	**Pn**	**11 06 00.1**	**+0.5**
JOM	**Ohasama**	**1.17**	**188**	⇓P	**Pn**	**11 06 00.5**	**+0.6**
JOM				⇓*e*S	**Sn**	**11 06 16.9**	**+0.7**
JSR	**Shiriuchi**	**1.22**	**318**	P	**Pn**	**11 06 00.7**	**+0.2**
JKB	**Kayabe**	**1.30**	**344**	P	**Pn**	**11 06 02.2**	**+0.6**
JKB				S	**Sn**	**11 06 19.6**	**+0.6**
JRG	**Rokugo**	**1.41**	**209**	⇓P	**Pn**	**11 06 03.7**	**+0.9**
JRG				⇓*e*S	**Sn**	**11 06 22.5**	**+1.2**
JOMM	**Oshimamatsumae**	**1.45**	**309**	P	**Pn**	**11 06 03.4**	**+0.1**
JMK	**Ichinoseki**	**1.69**	**188**	⇓P	**Pn**	**11 06 06.8**	**+0.2**
JMK				⇓*e*S	**Sn**	**11 06 27.8**	**0.0**
JYM2	**Yakumo 2**	**1.71**	**330**	P	**Pn**	**11 06 07.4**	**+0.7**
JYM2				*e*S	**Sn**	**11 06 28.8**	**+0.5**
ASAJ	**Asahikawa**	**3.57**	**13**	P	**Pn**	**11 06 32.8**	**+1.2**
	7.7nm,0.3s,baz=206,slow=9.9,SNR=100						
ASAJ				S	**Sn**	**11 07 13.7**	**+1.0**
	8.5nm,0.5s,baz=40,slow=27,SNR=1.8						
MJAR	**Matsushiro Arr**	**4.83**	**213**	P	**Pn**	**11 06 50.2**	**+1.4**
	1.7nm,0.4s,baz=24,slow=16,SNR=16						
MKAR	**Makanchi Array**	**42.36**	**299**	P	**P**	**11 13 23.1**	**-0.7**
	0.5nm,0.6s,baz=84,slow=11,SNR=5.5						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**43.92**	**305**	P	**P**	**11 13 35.9**	**-0.3**
	0.6nm,0.5s,baz=79,slow=8.6,SNR=7.7						
	0.6nm,0.5s						
WRA	**Warramunga Arr**	**60.63**	**188**	P	**P**	**11 15 38.6**	**-1.5**
	0.3nm,0.3s,baz=5.0,slow=7.1,SNR=18						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**64.36**	**188**	P	**P**	**11 16 04.5**	**-0.4**
	0.5nm,0.7s,baz=7.0,slow=6.5,SNR=6.9						
	0.5nm,0.7s						

NOU ***29*** *11:18:43.4, 18.42S×175.10W, h284km, mb4.0/9, Tonga Islands*

IDC ***29*** *11:18:45.7±3.1, 19.11S×175.46W, h243km±28km, mb3.6/7, mbtmp4.2/9, Error ellipse: s-maj=26.1km s-min=21.1km az=144.0*

ISC 29 11:18:43.4±0.8, 18°8S±0'.1×175°31W±0'.10, h231km, n18, σ1°65/18, mb3.8/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**5.10**	**94**	P	**Pn**	**11 19 59.8**	**-0.1**
FUTU	**Fugatoga**	**5.24**	**329**	P	**Pn**	**11 20 00.3**	**-1.4**
DGTI	**Dogotuki**	**5.35**	**297**	P	**Pn**	**11 20 05.2**	**+2.1**
MSVF	**Nonsavu**	**6.40**	**279**	P	**Pn**	**11 20 17.3**	**+0.8**
	24nm,0.9s,baz=112,slow=14,SNR=16						
MSVF	**Nonsavu**	**6.40**	**279**	P	**Pn**	**11 20 18.8**	**+2.4**
DZM	**Mont Dzumac**	**17.40**	**256**	P	**P**	**11 22 31.6**	**+0.7**
	6.5nm,0.9s,baz=81,slow=19,SNR=1.6						
URZ	**Urewera**	**20.46**	**197**	P	**P**	**11 23 01.5**	**-2.0**
	3.7nm,0.6s,baz=318,slow=1.2,SNR=7.3						
	3.7nm,0.6s						
URZ	**Urewera**	**20.46**	**197**	P	**P**	**11 23 03.5**	**0.0**
BKZ	**Black Stump Fm**	**21.48**	**198**	P	**P**	**11 23 14.4**	**+0.4**
QRZ	**Quartz Range**	**24.28**	**203**	P	**P**	**11 23 39.7**	**0.0**
CTA	**Charters Tower**	**36.21**	**262**	P	**P**	**11 25 24.5**	**-0.1**
	12nm,0.9s,baz=81,slow=9.6,SNR=13						
	12nm,0.9s						
CTA	**Charters Tower**	**36.21**	**262**	P	**P**	**11 25 22.0**	**-2.6**
CTAO	**Charters Tower**	**36.21**	**262**	P	**P**	**11 25 21.9**	**-2.6**
STKA	**Stephens Creek**	**40.80**	**243**	P	**P**	**11 26 02.3**	**-0.3**
	1.0nm,0.4s,baz=80,slow=7.9,SNR=3.0						
	1.0nm,0.4s						
WRA	**Warramunga Arr**	**47.36**	**260**	P	**P**	**11 26 53.8**	**-1.0**
	1.8nm,0.3s,baz=97,slow=7.5,SNR=155						
	1.8nm,0.3s						
ASAR	**Alice Springs**	**47.38**	**255**	P	**P**	**11 26 54.0**	**-0.9**
	5.1nm,0.7s,baz=90,slow=7.8,SNR=60						
	5.1nm,0.7s						
FITZ	**Fitzroy Crossi**	**55.78**	**261**	P	**P**	**11 27 56.6**	**-0.4**
	0.6nm,0.3s,baz=85,slow=6.9,SNR=1.7						
	0.6nm,0.3s						
NVAR	**Mina Array Bea**	**78.08**	**42**	P	**P**	**11 30 19.9**	**+2.8**
	0.7nm,0.7s,baz=227,slow=9.1,SNR=7.2						
	0.7nm,0.7s						

IDC 29 11:27:19.3±1.5, 2.83S×139.19E, h0km, mb3.3/3, mbtmp3.4/4, ML3.6/1, MS2.7/2, Error ellipse: s-maj=32.4km s-min=14.0km az=158.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.54**	**78**	Pg	Pg	11 27 49.1	+0.1
	10nm,0.3s,baz=229,slow=11,SNR=30						
JAY				Lg	Lg	11 28 07.0	
	22nm,0.3s,baz=272,slow=11,SNR=6.9						
SIJI	**Sorong**	**8.16**	**284**	LR	LR	11 32 23.3	
	comp=Z,20nm,19.9s,baz=152,slow=37						
WRA	**Warramunga Arr**	**17.65**	**195**	P	Pn	11 31 27.2	+0.2
	0.2nm,0.3s,baz=18,slow=13,SNR=13						
	0.9nm,0.6s						
FITZ	**Fitzroy Crossi**	**20.17**	**220**	P	P	11 31 56.3	+0.8
	1.4nm,0.7s,baz=44,slow=15,SNR=2.1						
FITZ				LR	LR	11 40 07.4	
	comp=Z,62nm,20.9s,baz=125,slow=38						
	1.4nm,0.7s						
ASAR	**Alice Springs**	**21.34**	**193**	P	P	11 32 07.5	-0.7
	0.6nm,0.7s,baz=25,slow=9.2,SNR=15						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**70.18**	**322**	P	P	11 38 33.6	-0.5
	0.1nm,0.3s,baz=123,slow=7.1,SNR=1.8						
	0.1nm,0.3s						

BGSI ***29*** *11:29:55.2±1.4, 26.77S×30.41E, h31km±120km, ML3.0*

PRE 29 11:30:03.4±1.0, 26°47S×29°38E, h0km, ML2.6, Suspected explosion, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WDLM	**Western Deep L**	**1.76**	**271**	*e*P	Pb	11 30 36.0	-0.6
WDLM				*e*S	Sb	11 30 59.4	+0.1
WDLM				IAML		11 31 00.7	
	comp=Z,114nm,0.2s						
PRYS	**Parys**	**1.86**	**256**	*e*P	Pn	11 30 37.0	+0.3
PRYS				*e*S	Sb	11 31 02.2	-0.1
PRYS				IAML		11 31 08.7	
	comp=Z,37nm,0.5s						
PILG	**Pilgrimsrest,**	**1.95**	**38**	*e*P	Pn	11 30 38.3	+0.3
PILG				*e*S	Sb	11 31 04.2	-0.7
PILG				IAML		11 31 05.3	
	comp=Z,189nm,0.3s						
SNKL	**Senekal, Frees**	**2.30**	**218**	*e*P	Pn	11 30 44.1	+1.3
SNKL				*e*S	Sb	11 31 13.5	-1.3
SNKL				IAML		11 31 23.1	
	comp=Z,56nm,0.5s						
HOED	**Hoedspruit, Li**	**2.48**	**35**	*e*P	Pn	11 30 46.1	+0.9
HOED				*e*S	Sn	11 31 16.8	+0.5
HOED				IAML		11 31 20.0	
	comp=Z,125nm,0.3s						
TEMBE	**Tembe Elephant**	**2.78**	**102**	*e*P	Pn	11 30 50.2	+1.0
TEMBE				*e*S	Sn	11 31 24.8	+1.2
TEMBE				IAML		11 31 40.2	
	comp=Z,55nm,0.5s						
LEPH	**Lephalale, Lim**	**2.97**	**331**	*e*P	Pn	11 30 52.4	+0.4
LEPH				*e*S	Sn	11 31 27.8	-0.5
LEPH				IAML		11 31 32.1	
	comp=Z,54nm,0.4s						
PMBG	**Pietermaritzbu**	**3.19**	**162**	*e*P	Pn	11 30 55.2	+0.3
PMBG				*e*S	Sn	11 31 33.1	-0.5
PMBG				IAML		11 31 53.1	
	comp=Z,30nm,0.3s						
LBTB	**Lobatse**	**3.71**	**292**	*e*P	Pn	11 31 03.6	+1.5
LBTB				*e*S	Sn	11 31 47.1	+0.6
LBTB				IAML		11 32 02.1	
	comp=Z,29nm,0.4s						
MAKGR	**Makgori**	**4.17**	**278**	*i* P	Pn	11 31 07.4	-1.0
MAKGR				*i* S	Sn	11 32 02.8	+4.9
MAKGR				IAML		11 32 20.0	
	comp=N,124nm,0.4s						
MUSN	**Musina, Limpop**	**4.19**	**6**	*e*P	Pn	11 31 09.5	+0.9
MUSN				*e*S	Sn	11 31 57.8	-0.5
MUSN				IAML		11 32 12.8	
	comp=Z,39nm,0.4s						
BOSA	**Boshof**	**4.24**	**239**	*e*P	Pn	11 31 10.4	+1.0
BOSA				*e*S	Sn	11 31 59.0	-0.6
BOSA				IAML		11 32 27.5	
	comp=Z,14nm,0.4s						
LPHEP	**Lephephe**	**4.45**	**313**	*i* P	Pn	11 31 11.2	-1.1
LPHEP				IAML		11 32 21.2	
	comp=N,20nm,0.5s						
KDWAN	**Kaudwane**	**5.28**	**305**	*i* P	Pn	11 31 23.2	-0.4
KDWAN				IAML		11 32 50.6	
	comp=N,24nm,0.4s						
BROLN	**Tlhalogang**	**5.67**	**340**	*i* P	Pn	11 31 24.9	-4.1
BROLN				*i* S	Sn	11 32 29.5	-5.4
BROLN				IAML		11 32 59.8	
	comp=E,35nm,0.4s						
KHWEE	**KHWEE**	**5.76**	**321**	*i* P	Pn	11 31 27.8	-2.5
GRAF	**Camdeboo Natio**	**7.19**	**215**	*e*P	Pn	11 31 50.3	+0.5
GRAF				*e*S	Sn	11 33 09.1	-3.2
GRAF				IAML		11 33 22.7	
	comp=Z,2.1nm,0.5s						
BFON	**Badsfontein, M**	**7.28**	**222**	*e*P	Pn	11 31 51.7	+0.6
BFON				*e*S	Sn	11 33 11.2	-3.3
BFON				IAML		11 33 56.8	
	comp=Z,6.8nm,0.6s						
BRAK	**Brakfontein**	**7.75**	**225**	*e*P	Pn	11 31 58.6	+0.9
BRAK				*e*S	Sn	11 33 23.4	-2.8
BRAK				IAML		11 33 36.0	
	comp=Z,2.3nm,0.4s						
ROOI	**Rooidraai Farm**	**7.86**	**219**	*e*P	Pn	11 32 00.0	+0.9
ROOI				*e*S	Sn	11 33 25.1	-3.8
ROOI				IAML		11 33 47.3	
	comp=Z,2.3nm,0.4s						
GRAN	**Grantham**	**8.56**	**226**	*e*P	Pn	11 32 09.9	+1.3
GRAN				*e*S	Sn	11 33 42.2	-3.9
GRAN				IAML		11 34 41.9	
	comp=Z,4.3nm,0.5s						
FRAZ	**Fraserburg**	**8.84**	**230**	*e*P	Pn	11 32 13.7	+1.2
FRAZ				*e*S	Sn	11 33 48.7	-4.2
FRAZ				IAML		11 33 51.9	
	comp=Z,2.2nm,0.5s						
MERW	**Merweville**	**9.22**	**226**	*e*P	Pn	11 32 18.4	+0.7
MERW				*e*S	Sn	11 33 58.2	-4.1
MERW				IAML		11 34 13.8	
	comp=Z,1.5nm,1.0s						
SUR	**Sutherland**	**9.51**	**230**	*e*P	Pn	11 32 22.7	+0.9
SUR				*e*S	Sn	11 34 06.0	-3.5
SUR				IAML		11 34 25.8	
	comp=Z,2.2nm,0.5s						

IDC ***29*** *11:32:10.7±0.8, 52.87N×168.47W, h0km, mb3.9/15, mbtmp3.9/16, ML3.7/1, MS3.2/3, Error ellipse: s-maj=25.9km s-min=16.4km az=163.0*

NEIC ***29*** *11:32:15.4±1.7, 52.66N±0.05×168.71W±0.1, h10km±2km, mb4.1/7, ML4.1/14, ML3.5(AEIC), Error ellipse: s-maj=12.1km s-min=7.2km az=298.0*

AEIC ***29*** *11:32:18.3±3.7, 52.87N±0.08×168.71W±0.1, h22km±8km, Error ellipse: s-maj=13.1km s-min=7.7km az=149.0*

ISC 29 11:32:11.7±0.7, 52°53N±0'.08×168°00W±0'.06, h10km, n96, σ2°35/85, mb4.0/15, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKSP	**Okmok Steeple**	**0.75**	**346**		**Pg**	**11 32 27.2**	**+1.1**
OKTU	**Okmok Mt. Tuli**	**0.86**	**358**		**Pb**	**11 32 29.5**	**+0.8**
OKFG	**Magazine Ridge**	**0.89**	**3**		**Pb**	**11 32 30.0**	**+0.8**
OKCE	**Okmok Cone E**	**0.91**	**354**		**Pg**	**11 32 29.9**	**+0.8**
OKNC	**Okmok New Cone**	**0.93**	**355**		**Pb**	**11 32 30.7**	**+0.7**
MAPS	**Pakushin South**	**1.43**	**26**		**Pn**	**11 32 38.8**	**+1.1**
MGOD	**Makushin Gods**	**1.44**	**28**		**Pn**	**11 32 38.5**	**+0.6**
MREP	**Makushin Rep't**	**1.49**	**30**		**Pn**	**11 32 39.6**	**+1.0**
MNAT	**Makushin Natee**	**1.57**	**30**		**Pn**	**11 32 40.8**	**+1.1**
UNV	**Unalaska Valle**	**1.60**	**34**		**Pn**	**11 32 41.6**	**+1.6**
UNV				IAML		11 33 03.7	
	comp=E,2μm,0.5s						
UNV	**Unalaska Valle**	**1.60**	**34**		**Sn**	**11 32 59.3**	**-1.3**
AKMO	**Akutan Morgan**	**1.97**	**37**		**Pn**	**11 32 47.5**	**+2.4**
AKRB	**Akutan Reef Bi**	**1.98**	**35**		**Pb**	**11 32 48.2**	**+0.4**
ZRO	**Akutan Zero**	**1.98**	**37**		**Pn**	**11 32 47.5**	**+2.2**
AKBBA	**Akutan Broad B**	**2.00**	**37**		**Pn**	**11 32 48.1**	**+2.5**
AKV	**Akutan Volcano**	**2.01**	**37**		**Pn**	**11 32 48.4**	**+2.6**
LVA	**Lava Point**	**2.02**	**35**		**Pb**	**11 32 49.0**	**+0.6**
LVA				IAML		11 33 22.2	
	comp=E,2μm,0.6s						
AHB	**Akutan Harbor**	**2.06**	**39**		**Pn**	**11 32 48.6**	**+2.2**
AKGG	**Akutan Green G**	**2.06**	**35**		**Pn**	**11 32 49.1**	**+2.7**
AKUT	**Akutan**	**2.09**	**39**		**Pn**	**11 32 49.7**	**+2.9**
AKSA	**Akutan Strait**	**2.12**	**40**		**Pn**	**11 32 49.8**	**+2.6**
SSLN	**Shishaldin Nor**	**3.30**	**45**		**Pn**	**11 33 07.2**	**+3.8**
ISNN	**Isanotski Nort**	**3.41**	**46**		**Pn**	**11 33 08.3**	**+3.4**
FALS	**False Pass**	**3.58**	**48**	Pn	**Pn**	**11 33 10.1**	**+2.9**
KOFP	**Korovin Flat P**	**3.74**	**269**		**Pn**	**11 33 12.3**	**+2.7**
KOKV	**Korovin Volcan**	**3.78**	**270**		**Pn**	**11 33 12.9**	**+2.9**
KOKL	**Mount Kliuchef**	**3.80**	**269**		**Pn**	**11 33 12.9**	**+2.6**
KOWE	**Korovin West**	**3.83**	**270**		**Pn**	**11 33 13.1**	**+2.4**
DOL	**Dolgoi Island**	**4.48**	**52**		**Pn**	**11 33 23.6**	**+4.0**
SPIA	**Saint Paul Isl**	**4.83**	**345**	Pn	**Pn**	**11 33 25.5**	**+1.0**
SPIA				IAML		11 34 24.3	
	comp=E,210nm,1.1s						
SPIA				IAML		11 34 42.5	
	comp=N,237nm,1.4s						
GSMY	**Great Sitkin M**	**4.97**	**268**		**Pn**	**11 33 28.6**	**+2.3**
SDPT	**Sand Point**	**5.26**	**55**	Pn	**Pn**	**11 33 33.6**	**+3.2**
SDPT				IAML		11 34 57.3	
	comp=N,90nm,1.1s						
SDPT				IAML		11 35 03.4	
	comp=E,67nm,1.2s						
ADK	**Adak**	**5.38**	**267**	Pn	**Pn**	**11 33 34.2**	**+2.3**
ADK				IAML		11 34 52.9	
	comp=E,78nm,1.0s						
ADK				IAML		11 34 53.4	
	comp=E,92nm,0.8s						
KIWB	**Kanaga Island**	**5.67**	**267**	Pn	**Pn**	**11 33 38.9**	**+2.9**
GAKI	**Gareloi-Kavalg**	**6.74**	**266**		**Pn**	**11 33 53.6**	**+3.0**
CEPE	**Semis' Perret**	**7.61**	**271**		**Pn**	**11 34 05.5**	**+3.0**
O14K	**Tigyukauivet M**	**7.73**	**27**	Pn	**Pn**	**11 34 07.0**	**+2.9**
AMKA	**Amchitka**	**7.93**	**267**	Pn	**Pn**	**11 34 09.4**	**+2.5**
M11K	**Mekoryuk**	**7.94**	**6**	Pn	**Pn**	**11 34 09.8**	**+2.8**
O15K	**Ungalikthiuk R**	**8.09**	**31**	Pn	**Pn**	**11 34 12.3**	**+3.2**
M13K	**Dall Lake**	**8.31**	**16**	Pn	**Pn**	**11 34 15.5**	**+3.4**
P16K	**Nushagak River**	**8.61**	**37**	Pn	**Pn**	**11 34 19.9**	**+3.7**
N15K	**Kwethluk River**	**8.82**	**27**	Pn	**Pn**	**11 34 22.2**	**+3.1**
O16K	**Kokwok River B**	**8.98**	**34**	Pn	**Pn**	**11 34 23.5**	**+2.2**
L15K	**Ungalak Mounta**	**9.83**	**18**		**Pn**	**11 34 35.6**	**+2.7**
P18K	**Big Mountain,**	**9.91**	**41**	Pn	**Pn**	**11 34 38.1**	**+4.0**
KDAK	**Kodiak Island**	**10.26**	**53**	Pn	**Pn**	**11 34 40.2**	**+1.4**
	comp=E,0.7nm,0.3s,baz=148,slow=1.1,SNR=20						
KDAK				Sn	**Sn**	**11 36 28.0**	**-5.8**
	baz=325,slow=21						
K15K	**Wolf Creek Mou**	**10.39**	**17**	Pn	**Pn**	**11 34 43.6**	**+3.1**
N18K	**Kilae Creek**	**10.53**	**34**	Pn	**Pn**	**11 34 45.4**	**+2.8**
SHEM	**Shemya Is, Ala**	**10.89**	**278**	LR	LR	11 38 17.5	
	comp=E,69nm,19.5s,baz=62,slow=35						
ILSW	**Iliamna Southw**	**11.12**	**42**	Pn	Pn	11 34 56.0	+5.4
J17K	**VABM Dome**	**11.87**	**20**	Pn	**Pn**	**11 35 02.9**	**+2.1**
ANM	**Nome**	**12.15**	**5**	Pn	**Pn**	**11 35 07.1**	**+2.5**
TNA	**Tin City**	**13.07**	**0**	Pn	**Pn**	**11 35 19.1**	**+2.0**
KNK	**Knik Glacier**	**13.83**	**42**	Pn	**Pn**	**11 35 28.6**	**+1.1**
SML	**Sawmill**	**14.09**	**41**	Pn	**Pn**	**11 35 32.0**	**+0.8**
G18K	**Tagagawik**	**14.21**	**16**	Pn	**Pn**	**11 35 34.5**	**+1.7**
KTH	**Kantishna Hill**	**14.21**	**32**	Pn	**Pn**	**11 35 33.8**	**+0.9**
G19K	**Purcell Mounta**	**14.71**	**18**	Pn	**Pn**	**11 35 43.0**	**+3.5**
I21K	**Tanana**	**15.08**	**27**	Pn	**P**	**11 35 49.4**	**-0.5**
M24K	**Tolsona, Glenn**	**15.12**	**42**	Pn	**Pn**	**11 35 46.2**	**+1.1**
IMAR	**Indian Mountai**	**15.27**	**22**	Pn	**Pn**	**11 35 49.9**	**+2.8**
BMRM	**Bremner River**	**15.29**	**47**	Pn	**P**	**11 35 51.7**	**-0.6**
BMRM				IAmb	IAmb	11 36 06.2	
	comp=Z,26nm,1.4s						
N25K	**Chitina, Valde**	**15.55**	**45**	Pn	**Pn**	**11 35 51.5**	**+0.6**
N25K				IAmb	IAmb	11 36 16.9	
	comp=Z,14nm,1.4s						
G21K	**Allakaket**	**15.77**	**22**	Pn	**Pn**	**11 35 56.2**	**+2.7**
G21K				IAmb	IAmb	11 36 03.0	
	comp=Z,8.1nm,1.5s						
H22K	**Ishtalitna Cre**	**15.79**	**26**	Pn	**P**	**11 35 58.0**	**+0.2**
I23K	**Minto, Yukon-K**	**15.81**	**30**	Pn	**Pn**	**11 35 56.7**	**+2.6**
I23K				IAmb	IAmb	11 35 58.9	
	comp=Z,5.1nm,0.4s						
CRQM	**Cirque**	**15.88**	**49**	Pn	**Pn**	**11 35 57.0**	**+1.8**
CRQM				IAmb	IAmb	11 36 05.6	
	comp=Z,30nm,1.3s						
ILAR	**Eielson Array**	**16.35**	**33**	Pn	**Pn**	**11 35 59.5**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=233,slow=12,SNR=18						
	comp=Z,0.5nm,0.4s						
YKA	**Yellowknife Ar**	**29.50**	**49**	P	**P**	**11 38 14.7**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=279,slow=7.9,SNR=8.0						
YKA				PcP	**PcP**	**11 41 21.0**	**+0.4**
	comp=Z,0.4nm,0.9s,baz=296,slow=2.9,SNR=4.3						
	comp=Z,0.3nm,0.3s						
YAK	**Yakutsk**	**33.70**	**311**	LR	LR	11 52 31.0	
	comp=Z,20nm,21.0s,baz=2.5,slow=37						
H11N2	**WAKE ISLAND Hy**	**38.11**	**220**	T	T	12 20 26.9	
	baz=24,slow=76,SNR=419						
H11N3	**WAKE ISLAND Hy**	**38.12**	**220**	T	T	12 20 27.5	
	baz=24,slow=76,SNR=484						
H11N1	**WAKE ISLAND Hy**	**38.13**	**220**	T	T	12 20 29.2	
	baz=24,slow=76,SNR=330						
H11S1	**WAKE ISLAND Hy**	**39.29**	**220**	T	T	12 21 56.1	
	baz=23,slow=76,SNR=548						
H11S2	**WAKE ISLAND Hy**	**39.31**	**220**	T	T	12 21 57.9	
	baz=23,slow=76,SNR=582						
H11S3	**WAKE ISLAND Hy**	**39.31**	**220**	T	T	12 21 53.6	
	baz=23,slow=76,SNR=529						
PDAR	**Pinedale Array**	**39.55**	**80**	P	**P**	**11 39 45.7**	**+2.8**
	comp=Z,0.4nm,0.5s,baz=303,slow=2.9,SNR=12						
	comp=Z,0.4nm,0.5s						
KSRS	**Korea Array**	**46.22**	**278**	P	**P**	**11 40 35.1**	**-1.6**
	comp=Z,0.5nm,0.6s,baz=59,slow=7.0,SNR=2.5						
	comp=Z,0.5nm,0.6s						
TXAR	**Lajitas Array**	**51.91**	**90**	P	**P**	**11 41 23.5**	**+3.0**
	comp=Z,0.7nm,0.7s,baz=300,slow=6.2,SNR=8.9						
	comp=Z,0.7nm,0.7s						
SONM	**Songino Array**	**51.94**	**301**	P	**P**	**11 41 18.2**	**-2.4**
	comp=Z,0.5nm,0.4s,baz=64,slow=3.4,SNR=2.9						
	comp=Z,0.5nm,0.4s						
SCHQ	**Schefferville**	**54.74**	**44**	P	**P**	**11 41 41.6**	**+0.7**
	comp=Z,2.3nm,0.8s,baz=321,slow=9.3,SNR=2.2						
	comp=Z,2.3nm,0.8s						
ZALV	**Zalesovo Beam**	**57.87**	**318**	PcP	**PcP**	**11 42 54.8**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=62,slow=3.4,SNR=3.2						
BVAR	**Borovoye Array**	**64.06**	**325**	P	**P**	**11 42 43.5**	**-1.7**
	comp=Z,1.5nm,0.5s,baz=67,slow=11,SNR=4.7						
	comp=Z,1.5nm,0.5s						
FINES	**FINESS Array B**	**65.82**	**353**	P	**P**	**11 42 54.0**	**-2.5**
	comp=Z,1.3nm,0.8s,baz=18,slow=8.4,SNR=5.3						
	comp=Z,1.3nm,0.8s						
NOA	**NORSAR Array B**	**66.78**	**0**	P	**P**	**11 43 00.8**	**-2.0**
	comp=Z,1.8nm,1.1s,baz=342,slow=4.7,SNR=2.1						
	comp=Z,1.8nm,1.1s						
HFS	**Hagfors**	**67.68**	**359**	P	**P**	**11 43 06.5**	**-2.0**
	comp=Z,1.4nm,0.3s,baz=2.2,slow=3.1,SNR=19						
	comp=Z,1.4nm,0.3s						
AKASG	**Malin Array Be**	**76.12**	**349**	P	**P**	**11 43 56.9**	**-2.3**
	comp=Z,0.8nm,0.5s,baz=17,slow=5.6,SNR=5.1						
	comp=Z,0.8nm,0.5s						
CMAR	**Chiang Mai Arr**	**77.40**	**284**	P	**P**	**11 44 06.8**	**-0.2**
	comp=Z,2.9nm,0.8s,baz=26,slow=6.4,SNR=20						
	comp=Z,2.9nm,0.8s						
BRDH	**Bariadhala**	**78.34**	**292**	LR	LR	12 24 40.7	
	comp=Z,37nm,18.1s,baz=129,slow=40						
ESDC	**Somseca Array**	**87.13**	**12**	P	**P**	**11 44 56.9**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=343,slow=4.5,SNR=6.1						
	comp=Z,0.5nm,0.7s						
WRA	**Warramunga Arr**	**87.77**	**233**	P	**P**	**11 45 00.3**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=31,slow=5.0,SNR=2.4						
	comp=Z,0.3nm,0.6s						
ASAR	**Alice Springs**	**91.14**	**231**	P	**P**

BO01	**Tunca**	**2.50**	**58**	*eP*		**Pn**	**11 52 06.3**	**-0.3**
BO01				*i* S		**Sg**	**11 52 44.3**	**-0.9**
BO01				IAML			11 52 53.8	
	comp=E,767nm,0.4s							
BO01	**Tunca**	**2.50**	**58**	*eP*		**Pn**	**11 52 05.9**	**-0.7**
BO01				*e*S		**Sg**	**11 52 44.2**	**-1.1**
BO01				IAML			11 52 53.1	
	comp=Z,723nm,0.7s							
BO02	**Sierra Bellavi**	**2.53**	**69**			**Pn**	**11 52 06.3**	**-0.8**
BO02	**Sierra Bellavi**	**2.53**	**69**	*eP*		**Pn**	**11 52 06.8**	**-0.3**
BO02				IAML			11 52 51.4	
	comp=N,2µm,0.4s							
BO02	**Sierra Bellavi**	**2.53**	**69**	*eP*		**Pn**	**11 52 06.3**	**-0.8**
BO02				IAML			11 52 52.1	
	comp=Z,2µm,1.0s							
BI04	**Isla Mocha**	**2.66**	**184**	*eP*		**Pn**	**11 52 09.9**	**+1.2**
BI04				IAML			11 52 44.2	
	comp=N,847nm,0.4s							
MT01	**Popeta**	**2.73**	**47**			**Pn**	**11 52 08.8**	**-0.9**
MT01	**Popeta**	**2.73**	**47**	*eP*		**Pn**	**11 52 08.7**	**-1.0**
MT01	**Popeta**	**2.73**	**47**	*eP*		**Pn**	**11 52 08.1**	**-1.6**
MT01				IAML			11 52 59.9	
	comp=Z,518nm,0.6s							
MT09	**Talagante**	**2.95**	**49**			**Pn**	**11 52 12.1**	**-0.7**
MT09	**Talagante**	**2.95**	**49**	*eP*		**Pn**	**11 52 12.5**	**-0.4**
MT09				IAML			11 53 10.2	
	comp=E,731nm,0.6s							
BO04	**La Punta**	**3.06**	**56**			**Pn**	**11 52 14.2**	**-0.1**
BO04	**La Punta**	**3.06**	**56**	*eP*		**Pn**	**11 52 14.2**	**-0.1**
BO04				IAML			11 53 08.9	
	comp=N,714nm,0.6s							
VA01	**Torpederas**	**3.19**	**32**			**Pn**	**11 52 14.9**	**-1.0**
VA01	**Torpederas**	**3.19**	**32**	*eP*		**Pn**	**11 52 14.7**	**-1.3**
VA01				IAML			11 53 19.2	
	comp=Z,229nm,2.2s							
MT02	**Curacav**	**3.24**	**41**			**Pn**	**11 52 15.9**	**-0.8**
MT12	**Pirque**	**3.25**	**53**	*eP*		**Pn**	**11 52 17.2**	**+0.2**
MT15	**Las Vizcachas**	**3.36**	**51**	*eP*		**Pn**	**11 52 18.9**	**+0.3**
MT15				IAML			11 53 19.0	
	comp=E,782nm,0.6s							
LMEL	**Las Melosas**	**3.41**	**57**	*eP*		**Pn**	**11 52 20.0**	**+0.7**
LMEL				IAML			11 53 17.5	
	comp=N,872nm,0.8s							
MT13	**San Alfonso**	**3.42**	**55**			**Pn**	**11 52 19.3**	**0.0**
MT13	**San Alfonso**	**3.42**	**55**	*eP*		**Pn**	**11 52 19.8**	**+0.5**
MT13	**San Alfonso**	**3.42**	**55**	*eP*		**Pn**	**11 52 19.6**	**+0.3**
MT13				*e*S		**Sg**	**11 53 12.8**	**-1.9**
MT13				IAML			11 53 21.6	
	comp=Z,487nm,1.4s							
MT03	**Universidad Ad**	**3.43**	**50**			**Pn**	**11 52 18.8**	**-0.7**
MT03	**Universidad Ad**	**3.43**	**50**	*eP*		**Pn**	**11 52 20.1**	**+0.7**
MT03				IAML			11 53 33.2	
	comp=E,612nm,0.6s							
MT03	**Universidad Ad**	**3.43**	**50**	*eP*		**Pn**	**11 52 18.8**	**-0.7**
MT03				*e*S		**Sn**	**11 52 59.9**	**-0.8**
MT03				IAML			11 53 26.3	
	comp=Z,627nm,0.7s							
EDS3	**Malargue**	**3.46**	**92**	*eP*		**Pn**	**11 52 18.3**	**-1.6**
EDS3				*e*S		**Sg**	**11 53 19.9**	**+0.1**
MT16	**CCHEN**	**3.47**	**49**			**Pn**	**11 52 19.9**	**-0.1**
MT16	**CCHEN**	**3.47**	**49**	*eP*		**Pn**	**11 52 20.3**	**+0.4**
MT16				IAML			11 53 28.3	
	comp=N,545nm,0.7s							
MT14	**Cerro Cal¡n**	**3.48**	**48**	*eP*		**Pn**	**11 52 20.3**	**+0.2**
ROCH	**El Roble**	**3.53**	**39**	*eP*		**Pn**	**11 52 20.4**	**-0.5**
ROCH				⇑*eP*		Pb	11 52 21.1	-7.1
ROCH				IAML			11 53 35.2	
	comp=N,582nm,0.8s							
MT10	**Hacienda Santa**	**3.57**	**47**	*eP*		**Pn**	**11 52 21.3**	**-0.1**
PEL	**Peldehue**	**3.57**	**44**			**Pn**	**11 52 21.5**	**+0.1**
PEL	**Peldehue**	**3.57**	**44**	*eP*		**Pn**	**11 52 16.9**	**-4.5**
PEL				*e*S		**Sg**	**11 53 23.4**	**+3.7**
PEL				IAML			11 53 31.8	
	comp=Z,544nm,0.8s							
MT04	**Ro Olivares**	**3.73**	**52**	*eP*		**Pn**	**11 52 24.1**	**+0.5**
MT04	**Ro Olivares**	**3.73**	**52**	*eP*		**Pn**	**11 52 23.5**	**-0.1**
MT04				*e*S		**Sn**	**11 53 07.8**	**-0.4**
MT04				IAML			11 53 30.3	
	comp=Z,298nm,1.0s							
MT08	**Bocatoma Ro**	**3.78**	**54**			**Pn**	**11 52 24.8**	**+0.4**
MT08	**Bocatoma Ro**	**3.78**	**54**	*eP*		**Pn**	**11 52 25.0**	**+0.7**
MT08	**Bocatoma Ro**	**3.78**	**54**	*eP*		**Pn**	**11 52 25.1**	**+0.8**
MT08				*e*S		**Sg**	**11 53 21.8**	**-4.4**
MT08				*e*S		**Sb**	**11 53 23.4**	**+4.6**
MT08				IAML			11 53 31.5	
	comp=Z,306nm,1.1s							
VA03	**San Esteban**	**3.93**	**42**			**Pn**	**11 52 26.1**	**-0.3**
VA03	**San Esteban**	**3.93**	**42**	*eP*		**Pn**	**11 52 25.8**	**-0.6**
VA03				*e*S		**Sn**	**11 53 11.8**	**-1.3**
VA03				IAML			11 53 53.4	
	comp=Z,359nm,0.8s							
LR04	**Corral**	**4.12**	**178**			**Pn**	**11 52 28.3**	**-0.5**
LR04	**Corral**	**4.12**	**178**	*eP*		**Pn**	**11 52 29.3**	**+0.5**
LR04				IAML			11 53 49.0	
	comp=Z,106nm,0.7s							
GO06	**Curarrehue**	**4.20**	**156**			**Pn**	**11 52 30.8**	**+0.8**
GO06	**Curarrehue**	**4.20**	**156**	*eP*		Pn	11 52 25.9	-4.1
GO06				*e*S		**Sb**	**11 53 30.1**	**-0.6**
GO06				IAML			11 53 50.3	
	comp=Z,108nm,0.7s							
CO04	**Los Peladeros**	**4.32**	**32**			**Pn**	**11 52 31.2**	**-0.6**
RFA	**San Rafael**	**4.35**	**79**	*eP*		**Pn**	**11 52 32.7**	**+0.6**
RFA				*e*S		**Sb**	**11 53 37.7**	**+2.6**
RFA				IAML			11 53 49.2	
	comp=Z,238nm,0.8s							
LR05	**Currie**	**4.66**	**164**			**Pn**	**11 52 37.3**	**+1.1**
LR05	**Currie**	**4.66**	**164**	*eP*		**Pn**	**11 52 32.7**	**-3.5**
LR05				*e*S		**Sb**	**11 53 38.3**	**-5.4**
LR05				IAML			11 54 03.0	
	comp=Z,166nm,1.2s							
H03S1	**Juan Fernandez**	**4.73**	**292**	Pn		**Pn**	**11 52 39.0**	**+2.1**
	baz=105,slow=3.1							
H03S1				T		T	11 57 38.1	
	baz=113,slow=73,SNR=598							
H03S3	**Juan Fernandez**	**4.74**	**292**	Pn		**Pn**	**11 52 38.8**	**+1.8**
	baz=105,slow=3.1							
H03S3				T		T	11 57 38.9	
	baz=113,slow=73,SNR=400							
H03S2	**Juan Fernandez**	**4.74**	**292**	Pn		**Pn**	**11 52 38.5**	**+1.3**
	baz=105,slow=3.1							
H03S2				T		T	11 57 35.6	
	baz=113,slow=73,SNR=478							
H03N1	**Juan Fernandez**	**4.92**	**296**	Pn		**Pn**	**11 52 41.2**	**+1.7**
	baz=135,slow=25							
H03N1				T		T	11 57 55.5	
	baz=110,slow=77,SNR=34							
H03N3	**Juan Fernandez**	**4.92**	**296**	Pn		**Pn**	**11 52 41.2**	**+1.7**
	baz=135,slow=25							
H03N3				T		T	11 57 55.4	
	baz=110,slow=77,SNR=39							
H03N2	**Juan Fernandez**	**4.93**	**296**	Pn		**Pn**	**11 52 41.6**	**+1.9**
	baz=135,slow=25							
H03N2				T		T	11 57 58.2	
	baz=110,slow=77,SNR=33							
CO02	**Combarbal**	**5.05**	**27**			**Pn**	**11 52 41.1**	**-0.5**
CO02	**Combarbal**	**5.05**	**27**	*eP*		**Pn**	**11 52 40.8**	**-0.9**
CO02				*e*S		**Sn**	**11 53 38.4**	**-2.3**
CO02				IAML			11 54 31.4	
	comp=Z,152nm,0.7s							
CO03	**El Pedregal**	**5.49**	**28**			**Pn**	**11 52 47.7**	**-0.1**
PLCA	**Paso Flores**	**5.54**	**155**	Pn		**Pn**	**11 52 50.3**	**+1.9**
	comp=Z,1.2nm,0.3s,baz=322,slow=11,SNR=61							
PLCA				LR		LR	11 54 18.5	
	comp=Z,62nm,18.9s,baz=332,slow=31							
PLCA				Lg		Lg	11 54 20.8	
	comp=Z,3.6nm,0.3s,baz=65,slow=20,SNR=5.2							
	comp=Z,3.1nm,0.4s							
PLCA	**Paso Flores**	**5.54**	**155**			**Pn**	**11 52 49.6**	**+1.2**
PLCA	**Paso Flores**	**5.54**	**155**	*eP*		**Pn**	**11 52 49.9**	**+1.5**
ZON	**Zonda**	**5.90**	**46**			**Pn**	**11 52 53.7**	**+0.4**
GO04	**Tololo Observa**	**6.06**	**24**			**Pn**	**11 52 56.3**	**+0.6**
CFA	**Coronel Fontan**	**6.12**	**49**	Pn		**Pn**	**11 52 57.1**	**+0.8**
	comp=Z,2.8nm,0.3s,baz=226,slow=12,SNR=44							
CFA				Lg		Lg	11 54 30.9	
	comp=Z,0.7nm,0.3s,baz=324,slow=14,SNR=4.7							
	comp=Z,9.0nm,0.4s							
CO01	**Juntas del Tor**	**6.49**	**28**			**Pn**	**11 53 02.0**	**+0.4**
LCO	**Las Campanas**	**7.17**	**21**			**Pn**	**11 53 09.9**	**-1.0**
AC05	**El Transito**	**7.46**	**23**			**Pn**	**11 53 14.1**	**-0.8**
LL02	**Futaleuf**	**7.56**	**170**			**Pn**	**11 53 16.1**	**0.0**
AC04	**Llanos de Chal**	**7.84**	**17**	Pn		**Pn**	**11 53 19.2**	**-0.7**
AY01	**Puyuhuapi**	**8.69**	**175**	Pn		**Pn**	**11 53 33.1**	**+1.5**
TRQA	**Tornquist**	**9.62**	**107**			**Pn**	**11 53 45.9**	**+1.4**
AC02	**Maricunga**	**9.69**	**25**			**Pn**	**11 53 45.1**	**-0.7**

CPUP	**Villa Florida**	**16.83**	**61**	Pn		**Pn**	**11 55 22.3**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=228,slow=14,SNR=3.1							
	comp=Z,1.0nm,0.7s							
PB16	**IPOC Station P**	**17.73**	**13**	P		**P**	**11 55 35.6**	**+1.1**
LPAZ	**La Paz**	**20.00**	**16**	P		**Pn**	**11 56 01.6**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=125,slow=8.8,SNR=4.3							
	comp=Z,1.4nm,0.8s							
LPAZ	**La Paz**	**20.00**	**16**	*eP*		**P**	**11 55 54.0**	**-5.5**
ITAB	**Concordia**	**20.19**	**71**	P		**P**	**11 56 01.0**	**+0.2**
ITAB				IAmb		IAmb	11 56 13.9	
	comp=Z,37nm,1.3s							
ITAB	**Concordia**	**20.19**	**71**	*eP*		Pn	11 56 01.7	-1.0
AMBA	**Amambai (Brazi**	**20.64**	**57**	*eP*		Pn	11 56 07.0	-1.0
BDQN	**Bodoquena, MS**	**21.27**	**49**	*eP*		**P**	**11 56 12.9**	**+0.3**
PTGB	**Pitanga**	**21.60**	**65**	*eP*		**P**	**11 56 17.3**	**+1.1**
BBSD	**Serra de San D**	**21.82**	**35**	*eP*		**P**	**11 56 17.3**	**-1.2**
AQDB	**Aquidauana**	**21.90**	**51**	*eP*		**P**	**11 56 18.3**	**-1.1**
TRCB	**Terra Rica**	**22.36**	**60**			**P**	**11 56 23.4**	**-0.9**
TRCB				IAmb		IAmb	11 56 26.6	
	comp=Z,20nm,0.6s							
TRCB	**Terra Rica**	**22.36**	**60**	*eP*		**P**	**11 56 26.2**	**+1.8**
MAJ01	**Sao Joao Batis**	**22.54**	**75**	*eP*		**P**	**11 56 28.8**	**+2.6**
SIV	**San Ignacio**	**22.66**	**33**	P		**P**	**11 56 28.1**	**+0.5**
	comp=Z,3.9nm,1.1s,baz=214,slow=14,SNR=7.4							
	comp=Z,3.9nm,1.1s							
LDASE	**Londrina, Braz**	**23.08**	**64**	*eP*		**P**	**11 56 32.4**	**+0.5**
PTLB	**Pontes e Lacer**	**24.03**	**36**			**P**	**11 56 41.2**	**-0.1**
PTLB				IAmb		IAmb	11 56 42.8	
	comp=Z,7.1nm,1.0s							
PTLB	**Pontes e Lacer**	**24.03**	**36**	*eP*		**P**	**11 56 42.0**	**+0.8**
FRTB	**Fartura**	**24.26**	**66**	*eP*		**P**	**11 56 45.6**	**+2.1**
SALV	**Santo Antonio**	**25.45**	**44**	*eP*		**P**	**11 56 51.9**	**-2.3**
VILB	**Vilhena**	**25.74**	**31**	P		**P**	**11 56 57.0**	**+0.1**
VILB				IAmb		IAmb	11 57 29.8	
	comp=Z,7.4nm,0.8s							
RCLB	**Rio Claro- Sao**	**26.31**	**67**	*eP*		**P**	**11 57 04.2**	**+2.1**
BB19B	**Bebedouro**	**26.40**	**63**	*eP*		**P**	**11 57 03.7**	**+0.8**
BDFB	**Brasilia**	**30.41**	**55**	P		**P**	**11 57 40.6**	**+1.8**
	comp=Z,2.4nm,0.8s,baz=221,slow=3.3,SNR=3.8							
BDFB				LR		LR	12 11 04.2	
	comp=Z,141nm,19.7s,baz=225,slow=39							
	comp=Z,2.4nm,0.8s							
RPN	**Rapa Nui**	**31.50**	**276**	LR		LR	12 07 07.4	
	comp=Z,73nm,19.3s,baz=122,slow=30							
NPGB	**Novo Progresso**	**33.13**	**35**	*eP*		**P**	**11 57 59.1**	**-3.4**
SJMB	**Sao Joao De Ma**	**33.29**	**68**	*eP*		**P**	**11 58 04.0**	**0.0**
MDP	**Montagnes des**	**45.17**	**30**	LR		LR	12 20 19.3	
	comp=Z,136nm,18.2s,baz=189,slow=38							
SNAA	**Sanae**	**50.48**	**157**	P		**P**	**12 00 25.1**	**+1.3**
	comp=Z,5.2nm,0.8s,baz=265,slow=12,SNR=3.5							
	comp=Z,5.2nm,0.8s							
QSPA	**South Pole Qui**	**54.49**	**180**	P		**P**	**12 00 55.7**	**+1.9**
	comp=Z,2.6nm,0.9s,baz=164,slow=1.2,SNR=7.8							
	comp=Z,2.6nm,0.9s							
QSPA	**South Pole Qui**	**54.49**	**180**	P		**P**	**12 00 54.1**	**+0.4**
QSPA				IAmb		IAmb	12 01 11.4	
	comp=Z,4.1nm,1.1s							
TXAR	**Lajitas Array**	**70.64**	**332**	P		**P**	**12 02 44.4**	**+2.5**
	comp=Z,0.2nm,0.7s,baz=143,slow=6.9,SNR=2.1							
TXAR				LR		LR	12 29 07.9	
	comp=Z,48nm,18.9s,baz=158,slow=32							
	comp=Z,0.2nm,0.7s							
DBIC	**Dimbokro**	**76.99**	**72**	P		**P**	**12 03 19.7**	**+0.2**
	comp=Z,2.3nm,0.8s,baz=246,slow=10,SNR=3.5							
	comp=Z,2.3nm,0.8s							
KHZ	**Kahutara**	**80.94**	**224**	P		**P**	**12 03 37.5**	**-3.3**
TORD	**Torodi Ar. Bea**	**86.04**	**71**	P		**P**	**12 04 07.2**	**-0.1**
	comp=Z,2.6nm,1.3s,baz=240,slow=4.3,SNR=4.2							
	comp=Z,2.6nm,1.3s							
MDT	**Midelt**	**93.94**	**52**	LR		LR	12 48 00.7	
	comp=Z,32nm,18.1s,baz=220,slow=36							
WRA	**Warramunga Arr**	**118.59**	**210**	PKP		**PKiKP**	**12 10 16.3**	**+1.4**
	comp=Z,0.1nm,0.5s,baz=155,slow=1.6,SNR=1.2							

*IDC **29** 12:17:34.3±2.2,31.05N×138.35E,h412km±100km, mb2.4/3,mbtmp3.4/5,Error ellipse: s-maj=241.9km s-min=16.3km az=66.0*
*JMA **29** 12:17:35.3±0.3,31.2°×13.9E±.°,h417km,MV3.2/31, NEAR TORISHIMA IS*
ISC 29 12:17:34.2±0.9,31.05N±0.07×138.3E±0.1,h394km,n16, σ28/22,mb2.5/3,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**2.39**	**30**	P		**Pn**	**12 18 34.9**	**+2.7**
	416nm,0.4s,baz=68,slow=23,SNR=2.8							
JTNC	**Tanabenakahech**	**3.60**	**321**	*eP*		**Pn**	**12 18 45.4**	**+3.4**
JIE	**Ise**	**3.60**	**338**	*eP*		**Pn**	**12 18 45.9**	**+3.9**
JKN2	**Miekihoku**	**3.62**	**332**	*eP*		**Pn**	**12 18 45.9**	**+3.7**
BSO3	**Boso 3**	**4.16**	**25**	*eP*		**Pn**	**12 18 49.2**	**+2.2**
BSO3				*e*S		**S**	**12 19 46.8**	**+0.6**
BSO1	**Boso 1**	**4.22**	**31**	P		**Pn**	**12 18 49.8**	**+2.5**
BSO1				*e*S		**S**	**12 19 48.8**	**+2.0**
JRY	**Ryogami san**	**4.97**	**5**	*eP*		**Pn**	**12 18 58.0**	**+2.5**
CBIJ	**Chichi jima**	**5.18**	**139**	*eP*		**Pn**	**12 19 00.1**	**+2.2**
CBIJ				*e*S		**S**	**12 20 06.7**	**+0.9**
JCJ	**Chichijima**	**5.18**	**139**	P		**Pn**	**12 18 59.8**	**+1.9**
	67nm,0.9s,baz=278,slow=20,SNR=2.2							
JCJ				S		**S**	**12 20 06.3**	**+0.5**
	33nm,0.4s,baz=285,slow=22,SNR=12							
JYT	**Yasato**	**5.39**	**16**	*eP*		**Pn**	**12 19 00.4**	**+0.6**
JYT				*e*S		**S**	**12 20 06.5**	**-3.0**
JAG	**Ashikaga**	**5.44**	**9**	P		**Pn**	**12 19 01.1**	**+0.8**
MJAR	**Matsushiro Arr**	**5.47**	**359**	P		**Pn**	**12 19 01.2**	**+0.4**
	1.4nm,0.5s,baz=170,slow=11,SNR=7.2							
JHO	**Hitachi**	**5.84**	**18**	P		**Pn**	**12 19 05.5**	**+0.7**
JHO				*e*S		**S**	**12 20 17.1**	**-1.5**
MKAR	**Makanchi Array**	**45.39**	**307**	P		**P**	**12 25 13.1**	**-2.1**
	0.1nm,0.4s,baz=91,slow=5.8,SNR=2.5							
	0.1nm,0.4s							
WRA	**Warramunga Arr**	**50.85**	**185**	P		**P**	**12 25 55.5**	**-1.1**
	0.2nm,0.5s,baz=359,slow=7.5,SNR=5.8							
	0.2nm,0.5s							
ASAR	**Alice Springs**	**54.58**	**185**	P		**P**	**12 26 22.1**	**-1.4**
	0.2nm,0.8s,baz=354,slow=6.3,SNR=1.8							
	0.2nm,0.8s							

*NEIC **29** 12:48:30.8±1.1, 17.96N±0.03×66.757W±0.009, h10km±1km,ML2.9/31,Md2.9/20(RSPR),Error ellipse: s-maj=4.7km s-min=1.7km az=184.0*
*OSPL **29** 12:48:31.3±0.6, 17.89N×66.76W,h1km±999km,ML3.4, Presumed earthquake*
*SDD **29** 12:48:32.3±1.7, 17.99N×66.76W, h0km±6km, MD2.6, ML2.7,MW2.4, Presumed earthquake*
ISC 29 12:48:31.2±1.0, 17.98N±0.04×66.76W±0.02, h12km±6km, n37, σ0°66/56, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GBPR	**Guanica, Bosqu**	**0.11**	**270**			**Pg**	**12 48 33.5**	**-0.6**
GBPR						**Sg**	**12 48 35.6**	**-0.6**
OBIP	**Obispado Ponce**	**0.16**	**65**			**Pg**	**12 48 34.7**	**-0.2**
OBIP						**Sg**	**12 48 38.0**	**+0.4**
OBIP	**Obispado Ponce**	**0.16**	**65**	IAML			12 48 38.5	
	comp=N,577nm,0.2s							
OBIP	**Obispado Ponce**	**0.16**	**65**	*i* P		**Pg**	**12 48 34.8**	**-0.2**
OBIP				*e*S		**Sg**	**12 48 38.0**	**+0.4**
OBIP				IAML			12 48 38.9	
	comp=Z,8µm,0.1s							
CELP	**Cerrillos**	**0.20**	**60**			**Pg**	**12 48 35.5**	**-0.1**
CELP	**Cerrillos**	**0.20**	**60**			**Sg**	**12 48 38.8**	**+0.2**
CELP				IAML			12 48 39.8	
	comp=Z,2µm,0.2s							
CELP				IAML			12 48 40.7	
	comp=Z,643nm,0.2s							
CELP	**Cerrillos**	**0.20**	**60**	*i* P		**Pg**	**12 48 35.5**	**-0.1**
CELP				*i* S		**Sg**	**12 48 39.2**	**+0.7**
CELP				IAML			12 48 39.7	
	comp=N,637nm,0.2s							
MLPR	**Magueyes Islan**	**0.27**	**269**			**Pg**	**12 48 36.4**	**-0.3**
MLPR	**Magueyes Islan**	**0.27**	**269**			**Sg**	**12 48 40.3**	**-0.1**
MLPR				IAML			12 48 41.9	
	comp=N,586nm,0.2s							
MLPR				IAML			12 48 42.2	
	comp=N,852nm,0.3s							
MLPR	**Magueyes Islan**	**0.27**	**269**	*i* P		**Pg**	**12 48 36.4**	**-0.3**
MLPR				*i* S		**Sg**	**12 48 40.7**	**+0.3**
MLPR				IAML			12 48 41.1	
	comp=N,199nm,0.5s							
UUPR	**Utuado, UPR, P**	**0.28**	**8**			**Pg**	**12 48 36.5**	**-0.4**
UUPR						**Sg**	**12 48 40.6**	**-0.3**
UUPR	**Utuado, UPR, P**	**0.28**	**8**	IAML			12 48 41.3	
	comp=N,14µm,0.4s							
UUPR				IAML			12 48 43.4	
	comp=N,9µm,0.3s							
CRPR	**Cabo Rojo, PR**	**0.33**	**276**	*i* P		**Pg**	**12 48 37.5**	**-0.4**
CRPR				*e*S		**Sg**	**12 48 42.4**	**0.0**
CRPR				IAML			12 48 45.1	
	comp=Z,307nm,0.3s							
LSP	**Las Mesas**	**0.37**	**303**			**Pg**	**12 48 38.2**	**-0.4**
LSP						**Sg**	**12 48 44.5**	**+1.1**
AOPR	**Arecibo Observ**	**0.37**	**1**			**Pg**	**12 48 38.1**	**-0.5**
AOPR						**Sg**	**12 48 43.5**	**-0.1**
AOPR	**Arecibo Observ**	**0.37**	**1**	IAML			12 48 44.4	
	comp=Z,3µm,0.3s							
AOPR				IAML			12 48 45.3	
	comp=Z,1µm,0.2s							
AOPR	**Arecibo Observ**	**0.37**	**1**	*i* P		**Pg**	**12 48 38.2**	**-0.4**
AOPR				*i* S		**Sg**	**12 48 43.4**	**-0.1**
AOPR				IAML			12 48 45.3	
	comp=N,1µm,0.2s							
PRSN	**Puerto Rico Se**	**0.44**	**304**			**Pg**	**12 48 39.4**	**-0.5**
PRSN				IAML			12 48 48.1	
	comp=N,883nm,0.3s							
PRSN				IAML			12 48 50.5	
	comp=N,1µm,0.3s							
PRSN	**Puerto Rico Se**	**0.44**	**304**	*i* P		**Pg**	**12 48 39.4**	**-0.5**
PRSN				*i* S		**Sg**	**12 48 46.4**	**+0.8**
PRSN				IAML			12 48 50.5	
	comp=N,634nm,0.3s							
ECPR	**Experimental S**	**0.51**	**48**			**Pg**	**12 48 40.6**	**-0.6**
ECPR				IAML			12 48 49.8	
	comp=N,613nm,0.2s							
ECPR				IAML			12 48 54.6	
	comp=N,631nm,0.2s							
EMPR	**Esperanza - Ma**	**0.55**	**24**			**Pg**	**12 48 42.2**	**+0.3**
EMPR						**Sg**	**12 48 50.1**	**+1.0**
AGPR	**Aguadilla, PR**	**0.59**	**326**			**Pg**	**12 48 42.1**	**-0.6**
AGPR				IAML			12 48 53.8	
	comp=N,315nm,0.6s							
AGPR				IAML			12 48 56.0	
	comp=N,320nm,0.7s							
AGPR	**Aguadilla, PR**	**0.59**	**326**			**Sg**	**12 48 50.6**	**0.0**
AGPR	**Aguadilla, PR**	**0.59**	**326**	*i* P		**Pg**	**12 48 42.3**	**-0.4**
AGPR				*i* S		**Sg**	**12 48 50.8**	**+0.2**
AGPR				IAML			12 48 55.8	
	comp=N,233nm,0.6s							
SJG	**San Juan**	**0.60**	**77**			**Pg**	**12 48 42.2**	**-0.6**
SJG	**San Juan**	**0.60**	**77**	*i* P		**Pg**	**12 48 42.7**	**-0.1**
SJG				*i* S		**Sg**	**12 48 50.5**	**-0.3**
SJG	**San Juan**	**0.60**	**77**	*i* P		**Pg**	**12 48 42.5**	**-0.4**
SJG				*e*S		**Sg**	**12 48 51.0**	**+0.3**
SJG				IAML			12 48 52.7	
	comp=Z,2µm,0.2s							
IGPR	**InterUniversit**	**0.62**	**91**			**Pg**	**12 48 43.2**	**-0.1**
IGPR						**Sg**	**12 48 52.5**	**+0.9**
IDE	**Isla Desecheo**	**0.79**	**301**			**Pg**	**12 48 45.6**	**-0.9**
IDE						**Sg**	**12 48 57.4**	**+0.5**
HUMP	**Col San Antoni**	**0.88**	**79**			**Pg**	**12 48 47.2**	**-1.0**
HUMP						**Sg**	**12 48 58.9**	**-1.0**
CUPR	**Culebra, Puert**	**1.45**	**77**	Pn		**Pn**	**12 48 57.2**	**0.0**
HIDR	**Higuey Centro**	**1.96**	**289**	*i* P		**Pn**	**12 49 05.4**	**+1.2**
HIDR				*i* S		**Sn**	**12 49 28.9**	**+0.1**
HIDR				IAML			12 49 54.4	
	comp=N,33nm,1.6s							
DR12	**Loma Pena Alta**	**2.61**	**288**	Pn		**Pn**	**12 49 14.5**	**+1.1**
HATOM	**Hato Mayor del**	**2.62**	**288**	*i* P		**Pn**	**12 49 13.2**	**-0.1**
HATOM				*i* S		**Sn**	**12 49 45.0**	**-0.1**
HATOM				IAML			12 50 16.5	
	comp=N,17nm,1.6s							
SMDR	**Samana, DR**	**2.65**	**300**	*i* P		**Pn**	**12 49 13.5**	**-0.2**
SMDR				*i* S		**Sn**	**12 49 44.2**	**-1.6**
DR08	**Loma La Naviza**	**3.25**	**288**	*i* P		**Pn**	**12 49 23.8**	**+1.7**
DR08				IAML			12 50 25.6	
	comp=N,275nm,0.2s						

22nm,0.3s,baz=268,slow=7.5,SNR=66
RAR Sn Sn 13 39 28.3 -18
3.8nm,0.3s,baz=69,slow=16,SNR=3.6
RAR LR LR 13 42 46.3
comp=Z,343nm,18.3s,baz=240,slow=38
RAR Rarotonga 14.12 81 P **Pn 13 37 06.3 -3.1**
RAR Rarotonga 14.12 81 Pn 13 37 05.5 -4.0
OUZ Omahuta 14.99 220 P **P 13 37 30.2 +3.5**
HAZ Te Kaha 15.03 203 P **Pn 13 37 15.0 -6.7**
WCZ Waipu Caves 15.09 216 P **P 13 37 26.4 -1.5**
PUZ Puketiti 15.14 202 P **Pn 13 37 17.6 -5.7**
RUGZ Raukumara Rang 15.25 203 P **Pn 13 37 19.4 -5.4**
TWGZ Tauwhareparae 15.33 202 P **Pn 13 37 23.0 -2.8**
CNGZ Carnagh Statio 15.54 201 P **Pn 13 37 22.8 -5.6**
MWZ Matawai 15.63 203 P **Pn 13 37 24.8 -5.0**
URZ Urewera 15.72 204 Pn **Pn 13 37 30.8 0.0**
1.5nm,0.3s,baz=254,slow=6.0,SNR=8.9
URZ Sn Sn 13 40 13.3 -12
1.2nm,0.3s,baz=137,slow=22,SNR=6.5
2.8nm,0.3s
URZ Urewera 15.72 204 P **Pn 13 37 25.9 -4.9**
BKZ Black Stump Fm 16.75 204 P **Pn 13 37 41.4 -2.7**
BKZ Black Stump Fm 16.75 204 P **Pn 13 37 41.3 -2.7**
YATNC Mamie plateau, 17.02 273 P **P 13 37 49.5 +0.1**
DZM Mont Dzumac 17.43 273 P **P 13 37 54.4 +0.5**
34nm,0.7s,baz=58,slow=18,SNR=19
DZM LR LR 13 42 04.9
comp=Z,224nm,18.9s,baz=72,slow=29
DVHZ Dannevirke 17.86 203 P **Pn 13 37 58.2 +0.3**
BFZ Birch Farm 18.17 202 P **Pn 13 38 00.5 -1.2**
MRZ Mangatainoka R 18.39 204 P **Pn 13 37 59.6 -4.8**
MRZ Mangatainoka R 18.39 204 P **Pn 13 38 00.3 -4.1**
TMWZ Te Maipa 18.67 203 P **Pn 13 38 09.3 +1.5**
OGWZ Otaki Gorge 18.68 205 P **P 13 38 03.8 -3.7**
CAW Cannon Point 18.97 204 P **P 13 38 07.5 -3.3**
TRWZ Traveller 19.00 203 P **Pn 13 38 12.3 +0.5**
PAWZ Paruwai Farm 19.08 203 P **Pn 13 38 13.5 +0.7**
MSWZ Moikau Station 19.17 203 P **Pn 13 38 14.1 +0.2**
PLWZ Palliser 19.31 203 P **Pn 13 38 15.2 -0.3**
TUWZ Tuamarina 19.68 206 P **P 13 38 13.4 -5.1**
TUWZ Tuamarina 19.68 206 P **P 13 38 17.3 -1.3**
MRNZ Matariki Terra 20.15 208 P Pn 13 38 25.4 -0.1
THZ Tophouse 20.39 207 P Pn 13 38 29.3 +0.9
KHZ Kahutara 20.68 205 P Pn 13 38 31.8 +0.1
KHZ Kahutara 20.68 205 P **P 13 38 26.3 -3.1**
GVZ Greta Valley S 21.35 205 P **P 13 38 39.3 +2.7**
LTZ Lake Taylor 21.50 207 P **P 13 38 39.1 +0.8**
INZ Inchbonnie 21.80 208 P **P 13 38 39.5 -1.9**
INZ Inchbonnie 21.80 208 P **P 13 38 43.2 +1.8**
OXZ Oxford 22.04 206 P **P 13 38 45.1 +1.1**
WVZ Waitaha Valley 22.39 209 P **P 13 38 50.6 +2.8**
FOZ Fox Glacier 23.16 209 P **P 13 38 55.8 0.0**
FOZ IAmb IAmb 13 39 01.1
comp=Z,36nm,0.7s
JCZ Jackson Bay 24.05 210 P **P 13 39 07.3 +2.6**
PPT Papeete 24.39 79 LR LR 13 47 49.3
comp=Z,235nm,19.3s,baz=272,slow=34
DCZ Deep Cove 25.86 210 P **P 13 39 22.3 +1.2**
HNR Honiara 28.21 297 LR LR 13 49 06.0
comp=Z,4.4nm,18.9s,baz=228,slow=33
ARMA Armidale 30.47 251 P **P 13 40 01.6 -1.0**
EIDS Eidsvold 31.02 260 P **P 13 40 07.3 0.0**
EIDS Eidsvold 31.02 260 **P 13 40 05.4 -1.8**
EIDS IAmb IAmb 13 40 12.0
comp=Z,48nm,1.6s
AULRC Lightning Ridg 33.60 253 P **P 13 40 31.7 +1.8**
CMSA Cobar Meteorol 35.62 249 P **P 13 40 47.4 +0.1**
CTA Charters Tower 36.28 269 P **P 13 40 52.7 -0.4**
comp=Z,20nm,0.5s,baz=90,slow=9.8,SNR=60
CTA LR LR 13 53 47.0
comp=Z,26nm,20.3s,baz=83,slow=33
comp=Z,20nm,0.5s
CTA Charters Tower 36.28 269 P **P 13 40 52.7 -0.4**
CTAO Charters Tower 36.28 269 P **P 13 40 52.7 -0.4**
CTAO Charters Tower 36.28 269 **P 13 40 52.3 -0.8**
CTAO Charters Tower 36.28 269 P **P 13 40 52.3 -0.8**
CTAO pmax pmax
comp=Z,25nm,0.6s
QLP Quilpie 37.04 257 P **P 13 40 59.4 -0.2**
KRVT Keravat (AS076 37.58 296 LR LR 13 54 29.5
comp=Z,7.3nm,20.3s,baz=78,slow=33
MTSU Mount Surprise 38.55 271 P **P 13 41 11.9 -0.5**
STKA Stephens Creek 39.11 249 P **P 13 41 16.7 -0.3**
comp=Z,4.5nm,0.7s,baz=91,slow=9.0,SNR=9.6
STKA LR LR 13 56 03.7
comp=Z,210nm,18.9s,baz=47,slow=34
comp=Z,4.5nm,0.7s
STKA Stephens Creek 39.11 249 **P 13 41 17.2 +0.2**
STKA IAmb IAmb 13 41 18.1
comp=Z,38nm,1.1s
STKA Stephens Creek 39.11 249⇑ *i*P **P 13 41 18.1 +1.1**
PMG Port Moresby 39.15 285 LR LR 13 55 38.4
comp=Z,75nm,20.6s,baz=150,slow=34
PMG Port Moresby 39.15 285 P **P 13 41 19.0 +1.6**
PMG Port Moresby 39.15 285 **P 13 41 15.0 -2.4**
PMG IAmb IAmb 13 41 17.4
comp=Z,56nm,1.2s
PMG Port Moresby 39.15 285⇓ *i*P **P 13 41 16.5 -0.9**
PMG pmax pmax
comp=Z,54nm,1.3s
PMG Port Moresby 39.15 285 P **P 13 41 16.1 -1.3**
comp=Z,35nm,1.4s
INKA Innaminka 40.03 255 **P 13 41 23.9 -0.8**
AUMBR Murray Bridge 41.12 244 P **P 13 41 34.6 +1.0**
HTT Hallett 41.38 246 P **P 13 41 36.1 +0.3**
QIS Mount Isa 42.23 265 P **P 13 41 44.4 +1.5**
BBOO Buckleboo 43.79 247 P **P 13 41 54.8 -0.6**
ASAR Alice Springs 46.73 260 P **P 13 42 18.1 -0.8**
comp=Z,14nm,1.0s,baz=89,slow=6.2,SNR=92
ASAR PcP **PcP 13 43 54.1 +1.7**
comp=Z,1.7nm,0.5s,baz=105,slow=4.0,SNR=4.5
ASAR S **S 13 49 05.1 -3.9**
comp=Z,0.7nm,0.9s,baz=99,slow=16,SNR=4.1
ASAR LR LR 14 01 26.2
comp=Z,153nm,18.2s,baz=132,slow=36
comp=Z,14nm,1.0s
AUALC St Philip's Co 46.75 260 P **P 13 42 20.0 +1.0**
WR8 Warramunga Arr 47.03 265 P **P 13 42 19.7 -1.5**
WR8 IAmb IAmb 13 42 20.9
comp=Z,13nm,0.8s
WRAB Tennant Creek 47.17 265 P **P 13 42 20.9 -1.5**
WRAB Tennant Creek 47.17 265 P **P 13 42 20.9 -1.5**
WRAB pmax pmax
comp=Z,21nm,1.0s
WB0 Warramunga Arr 47.17 265 **P 13 42 20.7 -1.7**
WRA Warramunga Arr 47.18 265 P **P 13 42 21.0 -1.4**
comp=Z,19nm,0.8s,baz=104,slow=8.0,SNR=132
WRA PcP **PcP 13 43 55.5 +1.5**
comp=Z,4.9nm,0.9s,baz=99,slow=4.4,SNR=5.5
comp=Z,19nm,0.8s
WRA Warramunga Arr 47.18 265 **P 13 42 20.6 -1.8**
WRA Warramunga Arr 47.18 265 *eP* **P 13 42 20.6 -1.8**
JAY Jayapura 48.06 290 LR LR 14 02 27.5
comp=Z,92nm,18.5s,baz=22,slow=36
FORT Forrest 50.73 249 P **P 13 42 49.0 -0.5**
FORT IAmb IAmb 13 42 50.5
comp=Z,8.1nm,0.6s
KNRA Kununurra 53.49 268 **P 13 43 09.0 -1.2**
KNRA IAmb IAmb 13 43 10.4
comp=Z,17nm,0.8s
GUMO Guam 54.41 309 LR LR 14 04 29.6
comp=Z,24nm,19.7s,baz=98,slow=34
VNDA Vanda 54.63 186 P **P 13 43 18.2 +0.6**
comp=Z,1.9nm,1.0s,baz=18,slow=9.6,SNR=4.3
comp=Z,1.9nm,1.0s
VNDA Vanda 54.63 186 IAmb IAmb 13 43 39.6
comp=Z,37nm,1.9s
SIJI Sorong 57.09 286 P **P 13 43 33.8 -2.5**
comp=Z,24nm,0.7s,baz=80,slow=7.1,SNR=16
SIJI LR LR 14 06 48.4
comp=Z,37nm,20.1s,baz=118,slow=35
comp=Z,24nm,0.7s
SIJI Sorong 57.09 286 P **P 13 43 34.5 -1.8**
comp=Z,34nm,0.8s
SWI Sorong 57.10 286 P **P 13 43 35.0 -1.3**
comp=Z,56nm,0.8s
RPN Rapa Nui 58.46 108 LR LR 14 07 00.5
comp=Z,16nm,18.0s,baz=158,slow=34
KRAI Karang Ratu 58.53 281 P **P 13 43 45.2 -1.2**
comp=Z,16nm,1.0s
KLBR Kellerberrin 59.33 246 P **P 13 43 53.1 +1.4**
NWAO Narrogin (SRO) 59.51 245 LR LR 14 08 18.7
comp=Z,66nm,18.4s,baz=311,slow=35
SOEI Soe 59.65 273 P **P 13 43 55.8 +1.5**
SOEI Soe 59.65 273 P **P 13 43 55.1 +0.8**
comp=Z,91nm,0.9s
PSA00 Pilbara Seismi 59.84 258 P **P 13 43 54.4 -1.0**
BATI Baumata 60.03 272 LR LR 14 10 26.0
comp=Z,158nm,19.0s,baz=130,slow=37
BATI Baumata 60.03 272 P **P 13 43 57.7 +0.9**
comp=Z,16nm,0.7s
LBFI Labuhan Bajo, 64.13 272 P **P 13 44 23.0 -1.3**
DBNI Kabupaten Domp 65.56 271 P **P 13 44 33.7 0.0**
comp=Z,22nm,0.8s
KAPI Kappang 65.62 276 LR LR 14 12 32.7
comp=Z,22nm,19.4s,baz=110,slow=36
DAV Davao City (W) 65.91 290 LR LR 14 12 50.3
comp=Z,24nm,18.0s,baz=308,slow=36
PLAI Plampang 65.93 271 P **P 13 44 36.0 0.0**
QSPA South Pole Qui 65.98 180 P **P 13 44 37.7 +2.0**
comp=Z,5.7nm,1.1s,baz=54,slow=2.6,SNR=8.2
comp=Z,5.7nm,1.1s
QSPA South Pole Qui 65.98 180 P **P 13 44 36.2 +0.5**
QSPA IAmb IAmb 13 45 14.2
comp=Z,15nm,1.2s
TOLI2 Tolitoli 67.30 282 P **P 13 44 43.8 -1.0**
TOLI2 IAmb IAmb 13 44 45.2
comp=Z,8.9nm,0.8s
MPSI Mapaga 67.75 281 P **P 13 44 46.4 -1.2**
comp=Z,901nmcomp=Z,14nm,1.3s
SNJI Sawahan-Nganju 71.83 269 P **P 13 45 14.0 +1.0**
comp=Z,17nm,1.4s
KPJI Karang Pucung 74.58 269 P **P 13 45 29.3 +0.2**
comp=Z,27nm,1.6s
JOW Kunigami 74.78 309 LR LR 14 16 30.2
comp=Z,41nm,19.3s,baz=277,slow=34
MJAR Matsushiro Arr 74.89 322 P **P 13 45 29.5 -0.8**
comp=Z,3.3nm,0.9s,baz=158,slow=5.7,SNR=7.9
MJAR LR LR 14 19 24.7
comp=Z,27nm,18.3s,baz=160,slow=37
comp=Z,3.3nm,0.9s
BBJI Bungbulang 75.70 268 P **P 13 45 36.2 +0.6**
BBJI Bungbulang 75.70 268 P **P 13 45 33.1 -2.5**
BBJI IAmb IAmb 13 45 36.7
comp=Z,14nm,0.8s
BBJI Bungbulang 75.70 268 P **P 13 45 35.3 -0.3**
comp=Z,20nm,0.8s
LEM Lembang 75.98 269 LR LR 14 20 29.6
comp=Z,35nm,18.1s,baz=210,slow=37
DBJI Dramaga 76.88 269 P **P 13 45 42.8 +0.6**
comp=Z,5µmcomp=Z,25nm,0.7s
JNU Nakatsue 76.95 316 LR LR 14 14 26.0
comp=Z,30nm,21.7s,baz=119,slow=32
SHEM Shemya Is, Ala 77.13 353 LR LR 14 12 43.4
comp=Z,65nm,19.8s,baz=260,slow=30
CGJI Cibinong 77.82 268 P **P 13 45 47.5 0.0**
NACB Ninganchiao 78.18 303 P **P 13 45 49.1 -0.1**
NACB Ninganchiao 78.18 303 P **P 13 45 46.9 -2.3**
ASAJ Asahikawa 78.33 330 LR LR 14 20 11.1
comp=Z,29nm,18.4s,baz=165,slow=36
LPIG La Paz 78.73 57 LR LR 14 12 59.8
comp=Z,97nm,19.2s,baz=214,slow=30
MAW Mawson 79.18 199 P **P 13 45 55.1 +1.1**
comp=Z,6.2nm,0.9s,baz=79,slow=9.4,SNR=4.2
comp=Z,6.2nm,0.9s
KLSI 79.46 270 P **P 13 45 56.3 -0.2**
PFO Pinyon Flats O 79.80 46 LR LR 14 14 49.4
comp=Z,90nm,18.8s,baz=222,slow=31
PFO Pinyon Flats O 79.80 46⇑ *eP* **P 13 45 59.4 +1.3**
PFO pmax pmax
comp=Z,9.0nm,1.3s
LWLI Liwa 79.94 269 P **P 13 45 59.5 +0.2**
MDSI Maura Dua 80.05 270 P **P 13 45 59.5 -0.2**
comp=Z,43nm,0.9s
YSS Yuzhno-Sakhali 80.47 332 P **P 13 46 02.5 +1.4**
YSS Yuzhno-Sakhali 80.47 332 *de*P **P 13 46 02.2 +1.1**
YSS pmax pmax
comp=Z,41nm,1.0s
DSP Deep Springs 81.18 42 **P 13 46 02.3 -2.9**
PNTR Pine Nut 81.30 40 P **P 13 46 03.4 -2.7**
KSRS Korea Array 81.57 317 P **P 13 46 07.3 0.0**
comp=Z,2.8nm,0.7s,baz=133,slow=6.3,SNR=13
KSRS LR LR 14 19 26.2
comp=Z,24nm,19.6s,baz=150,slow=34
comp=Z,2.8nm,0.7s
NVAR Mina Array Bea 81.65 41 P **P 13 46 09.1 +1.1**
comp=Z,2.1nm,0.8s,baz=226,slow=8.8,SNR=9.2
NVAR LR LR 14 14 42.7
comp=Z,71nm,21.1s,baz=198,slow=30
comp=Z,2.1nm,0.8s
KSI Kapahiang 81.83 270 P **P 13 46 10.0 +0.7**
MASI Maura Aman, Be 82.35 270 P **P 13 46 12.3 +0.3**
MYKOM Kota Tinggi 82.88 275 P **P 13 46 16.3 +1.6**
MYKOM Kota Tinggi 82.88 275 P **P 13 46 16.1 +1.4**
comp=Z,25nm,1.2s
ELIB Princess Elisa 83.39 186 *d*P **P 13 46 19.1 +2.5**
comp=Z,7.9nm,1.1s
TYV Tymovskoe 83.57 334 *eP* **P 13 46 18.0 +0.7**
TYV pmax pmax
comp=Z,16nm,0.7s
TYV pmax pmax
comp=Z,100nm,2.9s
USRK Ussuriysk Ar. 83.63 325 P **P 13 46 18.3 +0.4**
comp=Z,7.3nm,0.9s,baz=111,slow=3.0,SNR=8.9
comp=Z,7.3nm,0.9s
KDAK Kodiak Island 83.67 12 LR LR 14 16 17.4
comp=Z,32nm,21.2s,baz=161,slow=30
CCUT Cedar City 84.18 45 IAmb IAmb 13 46 27.1
comp=Z,9.7nm,1.1s
KNB Kanab 84.22 45 IAmb IAmb 13 46 27.3
comp=Z,8.7nm,1.1s
U15A North Rim 84.22 46 IAmb IAmb 13 46 28.1
comp=Z,16nm,1.3s
NJ2 Nanjing 84.48 309 *eP* **P 13 46 22.5 0.0**
NJ2 pmax pmax
comp=Z,18nm,0.5s
PLCA Paso Flores 84.62 132 P **P 13 46 25.9 +2.6**
comp=Z,1.6nm,0.9s,baz=206,slow=16,SNR=3.7
PLCA LR LR 14 18 19.6
comp=Z,33nm,18.4s,baz=228,slow=32
comp=Z,1.6nm,0.9s
MDJ Mudanjiang 85.19 324 P **P 13 46 27.2 +1.4**
MDJ Mudanjiang 85.19 324 P **P 13 46 26.5 +0.7**
MDJ pmax pmax
comp=Z,12nm,0.8s
MTPU Mount Pierson 85.23 45 IAmb IAmb 13 46 33.0
comp=Z,15nm,1.1s
L14K Kuka Creek 85.70 6 IAmb IAmb 13 46 32.7
comp=Z,16nm,1.0s
HAWA Hanford 86.12 35 IAmb IAmb 13 46 35.3
comp=Z,27nm,1.6s
BBB Bella Bella 86.20 27 LR LR 14 16 13.1
comp=Z,70nm,21.3s,baz=346,slow=30
MFID Camas Ranch 86.24 39 IAmb IAmb 13 46 36.8
comp=Z,15nm,1.6s
TXAR Lajitas Array 86.52 56 P **P 13 46 35.0 +2.1**
comp=Z,4.2nm,0.9s,baz=216,slow=6.2,SNR=23
comp=Z,4.2nm,0.9s
TXAR Lajitas Array 86.52 56 P **P 13 46 35.0 +2.1**
CN2 Changchun 86.99 321 P **P 13 46 35.5 +0.9**
CN2 SKS **SKSac 13 57 00.0 -1.8**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
ALPN Alpine 87.06 55 IAmb IAmb 13 46 40.8
comp=Z,14nm,1.1s
BNX BinXian 87.10 324⇓ P **P 13 46 35.5 +0.3**
BNX pmax pmax
comp=Z,17nm,1.1s
KLR Kul'dur 87.16 328 LR LR 14 22 42.0
comp=Z,27nm,18.8s,baz=137,slow=34
KLR Kul'dur 87.16 328⇑ *i*P **P 13 46 37.0 +1.6**
KLR pmax pmax
comp=Z,13nm,1.5s
ANMO Albuquerque 87.36 50 LR LR 14 18 42.4
comp=Z,135nm,19.4s,baz=238,slow=31
ANMO Albuquerque 87.36 50⇓ *i*P **P 13 46 37.4 +0.4**
ANMO pmax pmax
comp=Z,12nm,1.4s
PSI Prapat 87.78 274 P **P 13 46 40.4 +1.0**
PSI Prapat 87.78 274 P **P 13 46 39.6 +0.2**
comp=Z,20nm,0.9s
J16K Anvik River 87.81 6 **P 13 46 36.2 -1.9**
J16K IAmb IAmb 13 46 43.5
comp=Z,11nm,1.1s
S32K Killisnoo 87.97 20 P **P 13 46 36.3 -2.7**
CMIG Matias Romero 87.98 70 LR LR 14 18 40.9
comp=Z,33nm,19.4s,baz=184,slow=31
MA2 Magadan 88.07 343 LR LR 14 33 14.2
comp=Z,11nm,18.0s,baz=202,slow=41
I17K Unalakleet 88.39 6 P **P 13 46 39.1 -1.8**
I17K IAmb IAmb 13 46 45.7
comp=Z,13nm,1.3s
GSI Gunungsitoli 88.41 272 P **P 13 46 44.8 +2.6**
GSI Gunungsitoli 88.41 272 P **P 13 46 40.6 -1.7**
GSI Gunungsitoli 88.41 272 P **P 13 46 42.6 +0.4**
comp=Z,2µmcomp=Z,53nm,0.9s
NEW Newport 88.58 34 LR LR 14 26 42.9
comp=Z,122nm,18.1s,baz=226,slow=36
DRIO Del Rio 88.88 57 IAmb IAmb 13 46 49.0
comp=Z,13nm,1.1s
DHY Denali Highway 89.56 12 IAmb IAmb 13 46 49.2
comp=Z,14nm,1.3s
PDAR Pinedale Array 89.57 42 P **P 13 46 47.8 +0.5**
comp=Z,0.9nm,0.9s,baz=235,slow=5.2,SNR=6.3
PDAR LR LR 14 20 27.4
comp=Z,32nm,20.3s,baz=266,slow=31
comp=Z,0.9nm,0.9s
RND Reindeer 89.58 11 P **P 13 46 44.2 -2.4**
RND Reindeer 89.58 11 P **P 13 46 44.2 -2.4**
RND pmax pmax
comp=Z,16nm,1.0s
YHL Hebgen Lake 89.78 40 IAmb IAmb 13 46 54.1
comp=Z,24nm,1.9s
PAX Paxson 89.84 13 IAmb IAmb 13 46 51.9
comp=Z,9.1nm,1.1s
MCK McKinley 89.87 11 P **P 13 46 46.6 -1.3**
MCK McKinley 89.87 11 P **P 13 46 46.6 -1.3**
MCK pmax pmax
comp=Z,28nm,1.3s
HEH HeiHe 89.96 327 *eP* **P 13 46 49.3 +0.7**
HEH pmax pmax
comp=Z,9.0nm,1.2s
MENT Mentasta 90.18 14 P **P 13 46 49.4 0.0**
DLBC Dease Lake 90.23 22 LR LR 14 30 18.6
comp=Z,36nm,18.0s,baz=76,slow=38
L26K Log Cabin Wild 90.33 14 IAmb IAmb 13 46 54.9
comp=Z,12nm,1.2s
LYN LuoYang 90.35 308 P **P 13 46 52.3 +1.5**
LYN pmax pmax
comp=Z,22nm,0.6s
ENH Enshi 90.54 303 P **P 13 46 52.8 +1.0**
SEY Seymchan 90.58 346⇑ *i*P **P 13 46 52.0 +0.8**
SEY pmax pmax
comp=Z,17nm,1.6s
WRH Wood River Hil 90.70 11 P **P 13 46 50.0 -1.8**
RTBA Rita Blanca 90.72 50 IAmb IAmb 13 46 57.2
comp=Z,17nm,1.3s
DOT Dot Lake 90.73 13 IAmb IAmb 13 46 53.9
comp=Z,11nm,1.0s
F17K Baldwin Pennin 90.85 5 IAmb IAmb 13 46 56.7
comp=Z,12nm,1.1s
HDA Harding Lake 90.85 12 IAmb IAmb 13 46 56.5
comp=Z,9.9nm,0.9s
CCB Clear Creek Bu 90.91 11 IAmb IAmb 13 46 58.4
comp=Z,8.3nm,1.1s
BRDY Brady 90.99 56 IAmb IAmb 13 46 59.2
comp=Z,15nm,1.6s
SCRK Sand Creek 91.04 13 IAmb IAmb 13 46 58.0
comp=Z,8.2nm,1.1s
COLA College 91.11 11 P **P 13 46 53.6 0.0**
COLA College 91.11 11⇓ *i*P **P 13 46 53.5 0.0**
COLA pmax pmax
comp=Z,14nm,1.0s
ILAR Eielson Array 91.19 12 P **P 13 46 53.5 -0.5**
comp=Z,2.8nm,0.9s,baz=219,slow=5.1,SNR=21
comp=Z,2.8nm,0.9s
F19K Shaleruckik Mo 91.56 7 IAmb IAmb 13 47 00.3
comp=Z,10.0nm,1.1s
E18K Tukpahlearik C 91.86 5 IAmb IAmb 13 46 58.9
comp=Z,7.8nm,0.9s
BSI Banda Aceh 92.18 275 P **P 13 46 59.7 -0.1**
comp=Z,601nmcomp=Z,21nm,0.9s
ZEA Zeya 92.24 330 *eP* **P 13 47 00.7 +1.6**
XAN Xi'an 92.70 306⇓ P **P 13 47 01.3 -0.5**
XAN pmax pmax
comp=Z,8.0nm,0.8s
ATAH Atahualpa 92.88 99 LR LR 14 20 18.0
comp=Z,39nm,21.2s,baz=242,slow=30
BILL Bilibino 92.94 353⇑ *i*P **P 13 47 02.6 +0.6**
BILL pmax pmax
comp=Z,14nm,3.1s
C18K Utukok River 93.02 5 IAmb IAmb 13 47 04.0
comp=Z,7.3nm,1.4s
I30M Mount Dempster 93.81 15 IAmb IAmb 13 47 10.8
comp=Z,7.5nm,1.1s
HHC Hu-ho-hao-te 94.01 313 *eP* **P 13 47 06.5 -1.3**
HHC pmax pmax
comp=Z,19nm,0.8s
HHC pmax pmax
comp=Z,84nm,5.2s
CMAR Chiang Mai Arr 94.13 288 P **P 13 47 08.3 -0.3**
comp=Z,1.3nm,0.4s,baz=122,slow=3.3,SNR=23
CMAR LR LR 14 31 01.0
comp=Z,7.7nm,18.2s,baz=105,slow=37
comp=Z,1.3nm,0.4s
CHTO Chiang Mai 94.27 289 P **P 13 47 11.3 +2.0**
CHTO Chiang Mai 94.27 289 P **P 13 47 10.3 +1.0**
BTO2 Baotou 95.09 312 *eP* **P 13 47 12.5 -0.3**
BTO2 pmax pmax
comp=Z,11nm,0.5s
BTO2 pmax pmax
comp=Z,150nm,4.3s
CD2 Chengdu 95.25 301 *eP* **P 13 47 12.0 -1.6**
F31M Tsiigehtchic 96.24 15 IAmb IAmb 13 47 21.8
comp=Z,8.1nm,1.0s
YAK Yakutsk 96.58 337 LR LR 14 27 06.7
comp=Z,12nm,19.2s,baz=211,slow=33
LPAZ La Paz 97.92 112 LR LR 14 23 03.5
comp=Z,32nm,21.5s,baz=230,slow=30
YKA Yellowknife Ar 98.54 24 P **P 13 47 28.0 +0.4**
comp=Z,0.8nm,0.9s,baz=244,slow=4.8,SNR=6.5
comp=Z,0.8nm,0.9s
WMQ Urumqi 111.55 310 *e*PKP **PKiKP 13 52 22.8 -1.2**
MKAR Makanchi Array 115.85 312 PKP **PKPdf 13 52 30.1 -2.0**
comp=Z,0.6nm,0.9s,baz=103,slow=1.6,SNR=4.5
KURK Kurchatov 118.67 316⇓ *i*PKIKP **PKPdf 13 52 37.2 -0.1**
KURK pmax pmax
comp=Z,2.0nm,1.0s
KURBB Kurchatov Arra 118.73 316 PKP **PKPdf 13 52 36.4 -1.1**
comp=Z,1.1nm,0.9s,baz=92,slow=2.2,SNR=7.6
BVAR Borovoye Array 123.77 319 PKP **PKPdf 13 52 45.9 -1.2**
comp=Z,1.3nm,0.7s,baz=141,slow=5.7,SNR=4.6
ARTI Arti 129.98 325 *i* PKIKP **PKPdf 13 52 58.1 -0.7**
ARTI 13 55 09.9
ARTI SS SS 14 12 38.9 +3.0
FINES FINESS Array B 140.05 345 PKP **PKPdf 13 53 15.3 -2.2**
comp=Z,2.2nm,0.8s,baz=25,slow=4.6,SNR=3.6
OBN Obninsk 141.35 331 *e*PKIKP **PKPdf 13 53 19.7 -0.3**
OBN *e* 13 56 22.2
OBN pmax pmax
comp=Z,3.0nm,0.8s
NOA NORSAR Array B 142.86 355 PKP **PKPdf 13 53 22.0 -0.6**
comp=Z,1.2nm,0.8s,baz=278,slow=2.3,SNR=3.5
NCK Nalchik 143.15 311⇑ *e*PKIKP PKPbc 13 53 20.1 -0.4
HFS Hagfors 143.52 353 PKP PKPbc 13 53 21.6 +0.6
comp=Z,3.2nm,0.8s,baz=78,slow=14,SNR=4.3
KBZ Khabaz 143.55 312⇓ *e*PKIKP PKPbc 13 53 21.8 +0.2
SHA1 Shidzhatmaz 143.71 312⇓ *e*PKIKP PKPab 13 53 21.3 -0.3
NEUR Neytrino 143.84 311⇑ *e*PKIKP **PKPdf 13 53 25.1 0.0**
MBAR Mbarara 145.14 229 *c* IKIKP **PKiKP 13 53 30.8 -1.3**
MBAR pmax pmax
comp=Z,40nm,1.7s
MNK Minsk 145.28 337 *i* PKP **PKPbc 13 53 26.8 +0.1**
comp=E,33nm,0.8s
MNK *i* PKP **PKPbc 13 53 26.8 +0.1**
comp=N,26nm,1.0s
MNK *i* PKP **PKPbc 13 53 26.8 +0.1**
comp=Z,34nm,1.0s,baz=38
MNK *i* PKiKP **PKiKP 13 53 31.1 +0.3**
MNK *i* PP **PP 13 56 47.4 +1.6**
MNK *i* PPP PPP 14 00 00.3
MNK *i* SKS **SKSdf 14 00 36.1 0.0**
MNK *i* SKKS **SKKSdf 14 09 43.6 -2.9**
MNK *i* SS **SS 14 15 41.0 +4.5**
MNK *i* SSS SSS 14 21 08.8
MNK *i* LQ LQ 14 50 50.5
MNK *i* LRM MLR 14 59 23.6
comp=E,1µm,4.5s
MNK *i* LRM MLR 14 59 23.6
comp=Z,2µm,4.4s
MNK *i* LRM MLR 14 59 25.1
comp=N,1µm,3.9s
MNK Minsk 145.28 337 *i* PKIKP **PKPbc 13 53 26.7 +0.1**
MNK *i* 13 53 31.1
MNK *i* 13 56 47.4
MNK *i* PPP PPP 14 00 00.3
MNK *i* 14 00 36.0
MNK *i* SS SS 14 15 40.9 +4.4

MNK			*i* SSS	SSS	14 21 08.8		
MNK			pmax	pmax			
	comp=E,33nm,0.8s						
MNK			pmax	pmax			
	comp=N,26nm,1.0s						
MNK			pmax	pmax			
	comp=Z,34nm,1.0s						
MNK			MLR	MLR			
	comp=E,1μm,4.0s						
MNK			MLR	MLR			
	comp=Z,2μm,4.0s						
MNK			MLR	MLR			
	comp=N,1μm,4.0s						
SUW	**Suwalki**	**147.25 340**	*e*PKP	**PKPab**	**13 53 34.6**	**+0.3**	
AKASG	**Malin Array Be**	**147.61 331**	PKPbc	**PKPdf**	**13 53 31.7**	**+0.7**	
	comp=N,4.9nm,0.7s,baz=40,slow=4.1,SNR=17						
AKBB	**Malin Array Si**	**147.61 331**	*i* PKP2	**PKPbc**	**13 53 33.0**	**-0.7**	
EKA	**Eskdalemuir Ar**	**148.20 9**	PKPbc	**PKPbc**	**13 53 35.8**	**+0.7**	
	comp=N,9.0nm,0.8s,baz=323,slow=2.7,SNR=8.3						
BR131	**Keskin Array S**	**151.47 310**	*i* PKIKP	**PKPbc**	**13 53 44.2**	**+0.3**	
BRTR	**Keskin Array B**	**151.47 310**	PKP	**PKPdf**	**13 53 35.0**	**-2.7**	
	comp=N,0.6nm,0.9s,baz=36,slow=4.9,SNR=3.9						
BRTR			PKPbc	**PKPbc**	**13 53 43.9**	**0.0**	
	comp=N,3.1nm,0.8s,baz=140,slow=3.2,SNR=16						
OJC	**Ojcow**	**151.58 340**	*e*PKP	**PKiKP**	**13 53 44.8**	**+0.8**	
STHS	**Stebnicka Huta**	**151.80 338**	*e*PKIKP	**PKiKP**	**13 53 45.9**	**+1.4**	
STHS	**Stebnicka Huta**	**151.80 338**	*e*PKP	**PKiKP**	**13 53 45.9**	**+1.4**	
KSP	**Ksiaz**	**151.98 345**	*e*PKP	**PKiKP**	**13 53 46.5**	**+1.7**	
NIE	**Niedzica**	**152.12 339**	*e*PKP	**PKiKP**	**13 53 47.1**	**+1.9**	
MMAI	**Mount Meron Ar**	**152.15 295**	PKPbc	**PKiKP**	**13 53 46.5**	**+0.6**	
	comp=N,7.2nm,0.8s,baz=339,slow=6.9,SNR=4.2						
CLL	**Collm**	**152.20 350**	*i* PKIKP	**PKiKP**	**13 53 45.6**	**+0.4**	
CLL			*i*		13 53 48.9		
CLL			pmax	pmax			
	comp=Z,16nm,1.1s						
CLL	**Collm**	**152.20 350**	*i* PKPbc	**PKiKP**	**13 53 45.6**	**+0.4**	
	comp=Z,16nm,1.1s						
CLL			*i* x	x	13 53 48.9		
	comp=Z,15nm,1.0s						
CLL			*e*PKPab	**PKPab**	**13 53 53.0**	**-1.6**	
CLL			*i* x	x	13 53 57.6		
OSTC	**Ostas**	**152.26 345**	*e*PKP	**PKiKP**	**13 53 46.7**	**+1.3**	
OSTC	**Ostas**	**152.26 345**	*e*PKIKP	**PKiKP**	**13 53 46.7**	**+1.3**	
DPC	**Dobruska-Polom**	**152.43 345**	*e*PKP	**PKiKP**	**13 53 47.1**	**+1.3**	
DPC	**Dobruska-Polom**	**152.43 345**	*e*PKIKP	**PKiKP**	**13 53 47.1**	**+1.3**	
STEB	**Steborice**	**152.43 342**	*e*PKP	**PKiKP**	**13 53 46.4**	**+0.6**	
STEB			*e*PKPAB	**PKiKP**	**13 53 56.4**	**+0.8**	
MORC	**Moravsky Berou**	**152.64 343**	*e*PKP	**PKiKP**	**13 53 47.4**	**+1.1**	
MAUC	**Maruska**	**152.93 342**	*e*PKP	**PKiKP**	**13 53 48.5**	**+1.6**	
VRAC	**Vranov**	**153.32 343**	*e*PKP	**PKiKP**	**13 53 48.9**	**+1.3**	
VRAC			*e*		13 53 59.7		
VRAC			*e*		13 54 03.4		
JAVC	**Velka Javorina**	**153.43 341**	*e*PKP	**PKiKP**	**13 53 49.8**	**+1.8**	
KRUC	**Moravsky**	**153.60 343**	*e*PKP	**PKiKP**	**13 53 49.5**	**+1.3**	
KRUC			*e*		13 53 59.8		
KRUC			*e*		13 54 04.3		
MODS	**Modra-Piesok**	**153.98 342**	*e*PKIKP	**PKiKP**	**13 53 51.1**	**+2.0**	
MODS	**Modra-Piesok**	**153.98 342**	*e*PKP	**PKiKP**	**13 53 51.0**	**+2.0**	
SRO	**Srobarova**	**154.16 340**	*e*PKIKP	**PKPbc**	**13 53 49.6**	**+0.2**	
SRO	**Srobarova**	**154.16 340**	*e*PKP	**PKPbc**	**13 53 49.5**	**+0.2**	
KHC	**Kasperske Hory**	**154.18 347**	*e*PKP	**PKiKP**	**13 53 52.7**	**+3.2**	
KHC			*e*PKPAB	**PKiKP**	**13 54 02.8**	**-0.3**	
KHC	**Kasperske Hory**	**154.18 347**	*e*PKIKP	**PKiKP**	**13 53 52.7**	**+3.2**	
KHC			*e*		13 54 02.8		
CKRC	**Cesky Krumlov**	**154.32 346**	*e*PKP	**PKiKP**	**13 53 50.1**	**+0.3**	
CKRC			*e*PKPAB	**PKPab**	**13 54 01.9**	**-1.8**	
CKRC	**Cesky Krumlov**	**154.32 346**	*e*PKIKP	**PKiKP**	**13 53 50.1**	**+0.3**	
CKRC			*e*		13 54 01.9		
GERES	**GERESS Array B**	**154.43 347**	PKPbc	**PKiKP**	**13 53 51.0**	**+0.9**	
	comp=Z,0.7nm,0.8s,baz=316,slow=5.6,SNR=4.6						
CONA	**Conrad Observa**	**154.78 343**	*i* pPKP	**PKPab**	**13 54 06.9**	**+1.2**	
	comp=Z,0.8nm,0.3s						
RONA	**Rosalia, Austr**	**154.87 342**	*ep*PKP	**PKPab**	**13 54 06.4**	**+0.4**	
	comp=Z,3.3nm,0.6s						
SOKA	**Soboth**	**156.15 343**	*ep*PKP	**PKPab**	**13 54 12.2**	**+0.5**	
	comp=Z,4.4nm,0.9s						
KBA	**Koelnbreinsper**	**156.18 346**	*ep*PKP	**PKPab**	**13 54 11.9**	**+0.1**	
	comp=Z,3.5nm,0.8s						
RETA	**Reutte**	**156.26 351**	*ep*PKP	**PKPab**	**13 54 12.1**	**+0.1**	
	comp=Z,2.5nm,1.1s						
WATA	**Walderalm**	**156.28 349**	*ep*PKP	**PKPab**	**13 54 12.7**	**+0.4**	
	comp=Z,1.4nm,0.6s						
MOTA	**Moosalm**	**156.35 350**	*ep*PKP	**PKPab**	**13 54 12.7**	**+0.1**	
	comp=Z,4.0nm,1.0s						
OBKA	**Obir**	**156.43 344**	*ep*PKP	**PKPab**	**13 54 12.7**	**-0.1**	
	comp=Z,3.6nm,0.9s						
MYKA	**Terra Mystica**	**156.54 345**	*ep*PKP	**PKPab**	**13 54 13.2**	**-0.1**	
	comp=Z,2.4nm,0.6s						
FETA	**Feichten**	**156.72 350**	*ep*PKP	**PKPab**	**13 54 15.1**	**+1.0**	
	comp=Z,3.9nm,1.1s						
ESDC	**Sonseca Array**	**162.64 24**	PKP	**PKPdf**	**13 53 52.9**	**+1.1**	
	comp=Z,1.3nm,1.1s,baz=331,slow=2.9,SNR=5.1						
ESDC			PKPab	**PKPab**	**13 54 40.0**	**+0.1**	
	comp=Z,0.8nm,0.8s,baz=325,slow=4.8,SNR=5.0						
TORD	**Torodi Ar. Bea**	**168.59 162**	PKP	**PKPdf**	**13 53 58.1**	**+0.8**	
	comp=Z,1.7nm,1.1s,baz=278,slow=1.8,SNR=6.6						
TORD			PKPab	**PKPab**	**13 55 07.0**	**+0.4**	
	comp=Z,1.5nm,0.9s,baz=188,slow=5.0,SNR=4.4						

SKO ***29*** *13:37:08.0, 41°.63N×19°.25E, h0km*
RHSSO ***29*** *13:37:08.4±0.7, 41°.43N×19°.44E, h8km±2km, ML3.1/9*
TIR ***29*** *13:37:08.8, 41°.57N×19°.46E, h28km, Md2.8/6, Ml3.0/7*
PDG ***29*** *13:37:10.5±0.8, 41°.61N×19°.34E, h18km±1km, ML2.8/12, Error ellipse: s-maj=0.9km s-min=1.3km az=0.0*
BEO ***29*** *13:37:10.2±0.4, 41°.56N×19°.46E, h10km±2km, ML2.7/12*
ROM ***29*** *13:37:10.1±0.2, 41°.55N±0°.02×19°.42E±0°.03, h18km, ML3.0/38, Error ellipse: s-maj=2.6km s-min=1.7km az=43.0*

ISC 29 13:37:09.0±1.1, 41°.56N±0°.02×19°.43E±0°.02, h5km±9km, n100, σ0.88/148, 20C-11D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
TIR	**Tirane**	**0.39**	**123**	P		**Pg**	**13 37 17.1**	**+0.5**
TIR				S		**Sb**	**13 37 23.2**	**-1.5**
TIR				AML		AML	13 37 24.0	
	8.6nm,0.4s							
TIR				AMd			13 37 54.4	
TIR	**Tirane**	**0.39**	**123**	P		**Pb**	**13 37 17.7**	**-0.8**
TIR				S		**Sb**	**13 37 24.2**	**-0.5**
TIR				AML		AML		
	comp=E,6995μm,0.3s							
TIR				AML		AML		
	comp=N,7205μm,0.4s							
TIR				AML		AML		
	comp=E,6995μm,1.7s							
TIR				AML		AML		
	comp=N,7205μm,1.6s							
ULC	**Ulcinj**	**0.43**	**341**	*i* Pg		**Pg**	**13 37 17.7**	**+0.4**
ULC				*i* Sg		**Sg**	**13 37 24.1**	**+1.3**
SDA	**Shkodra**	**0.49**	**6**	P		**Pg**	**13 37 18.8**	**+0.3**
SDA				S		**Sg**	**13 37 24.9**	**0.0**
SDA				AML		AML	13 37 28.5	
	comp=N,1.4nm,0.5s							
SDA				AMd			13 38 27.1	
DRME	**Dracevica, Mon**	**0.65**	**344**	*i* Pg		**Pb**	**13 37 22.3**	**-0.7**
DRME				*i* Sg		**Sb**	**13 37 31.6**	**-0.8**
DRME	**Dracevica, Mon**	**0.65**	**344**	*e*Pg		**Pg**	**13 37 22.0**	**+0.4**
DRME				*e*Sg		**Sb**	**13 37 33.7**	**+1.3**
PHP	**Peshkopia**	**0.77**	**80**	P		**Pg**	**13 37 23.4**	**-0.3**
PHP				S		**Sb**	**13 37 33.8**	**-1.9**
PHP				AML		AML	13 37 38.4	
	comp=N,2.4nm,0.5s							
PHP				AMd			13 38 10.6	
BUM	**Brajici-Budva**	**0.84**	**332**	*i* Pg		**Pg**	**13 37 25.6**	**+0.4**
BUM				*i* Sg		**Sb**	**13 37 37.5**	**-0.4**
PDG	**Podgorica**	**0.88**	**351**	P		**Pn**	**13 37 27.4**	**-0.7**
PDG				S		**Sb**	**13 37 39.5**	**+0.7**
PDG	**Podgorica**	**0.88**	**351**	S		**Sb**	**13 37 38.5**	**-0.3**
PDG	**Podgorica**	**0.88**	**351**	*e*Sg		**Sb**	**13 37 38.2**	**-0.7**
PDG	**Podgorica**	**0.88**	**351**	P		**Pn**	**13 37 28.5**	**+0.4**
PDG	**Podgorica**	**0.88**	**351**	*i* Pg		**Pg**	**13 37 25.7**	**-0.2**
PDG				*i* Sg		**Sb**	**13 37 39.1**	**+0.2**
PDG	**Podgorica**	**0.88**	**351**	*e*Pg		**Pb**	**13 37 26.3**	**-0.5**
PDG				*e*Sg		**Sb**	**13 37 39.9**	**+1.0**
VLO	**Vlora**	**1.09**	**177**	P		**Pn**	**13 37 31.3**	**+0.3**
VLO				S		**Sg**	**13 37 44.3**	**+0.1**
VLO				AML		AML	13 37 55.2	
	comp=N,1.8nm,0.5s							
VLO				AMd			13 38 35.1	
VLO	**Vlora**	**1.09**	**177**	P		**Pn**	**13 37 32.3**	**+1.2**
PVY	**Plav**	**1.10**	**21**	*i* Pg		**Pb**	**13 37 30.4**	**-0.3**
PVY				*i* Sg		**Sn**	**13 37 48.7**	**+1.6**
OHR	**Ohrid**	**1.12**	**113**	*i* Pg		**Pb**	**13 37 30.9**	**-0.1**
OHR				*e*Sg		**Sn**	**13 37 49.0**	**+1.6**
HCY	**Herceg Novi**	**1.13**	**322**	*i* Pg		**Pg**	**13 37 29.6**	**-1.1**
HCY				*i* Sg		**Sb**	**13 37 46.5**	**+0.4**
HCY	**Herceg Novi**	**1.13**	**322**	*e*Pg		**Pb**	**13 37 31.0**	**-0.1**
HCY				*e*Sg		**Sn**	**13 37 48.4**	**+0.9**
NKME	**Niksic**	**1.26**	**344**	*i* Pg		**Pn**	**13 37 33.6**	**+0.2**
NKME				*i* Sg		**Sn**	**13 37 51.4**	**+0.7**
KOME	**Kolasin**	**1.29**	**3**	*i* Pg		**Pg**	**13 37 33.3**	**-0.5**
KOME				*i* Sg		**Sn**	**13 37 53.6**	**+2.0**
IVA	**Berane**	**1.35**	**14**	*i* Pg		**Pg**	**13 37 34.0**	**-1.0**
IVA				*i* Sg		**Sn**	**13 37 55.7**	**+2.5**
KBN	**Korca**	**1.39**	**132**	P		**Pb**	**13 35.8**	**+0.3**
KBN				S		**Sg**	**13 37 52.6**	**-1.0**
KBN				AML		AML	13 37 59.8	
	comp=N,0.6nm,0.6s							
KBN				AMd			13 38 34.8	
KBN	**Korca**	**1.39**	**132**	P		**Pb**	**13 37 37.0**	**+1.5**
TREB	**Trebinje**	**1.41**	**325**	*e*Pg		**Pn**	**13 37 35.2**	**-0.2**
TREB				*e*Sg		**Sn**	**13 37 56.3**	**+1.9**
TREB	**Trebinje**	**1.41**	**325**	*i* Pg		**Pn**	**13 37 35.5**	**+0.1**
TREB				*e*Sg		**Sn**	**13 37 56.6**	**+2.2**
BRY	**Bratogost**	**1.50**	**334**	*i* Pg		**Pb**	**13 37 37.2**	**-0.2**
BRY				*i* Sg		**Sn**	**13 37 57.9**	**+1.2**
BRY	**Bratogost**	**1.50**	**334**	*i* Pn		**Pb**	**13 37 37.2**	**-0.2**
BRY				*e*Sn		**Sn**	**13 37 57.9**	**+1.2**
MESG	**Mesagne**	**1.54**	**231**	P		**Pn**	**13 37 36.7**	**-0.5**
SKO	**Skopje**	**1.56**	**74**	*i* Pg		**Pg**	**13 37 38.6**	**-0.3**
SKO				*e*Sg		**Sg**	**13 38 00.7**	**+1.7**
SCTE	**Santa Cesarea**	**1.66**	**207**	P		**Pb**	**13 37 40.8**	**+0.7**
UPM	**Unac-Piva**	**1.69**	**347**	*i* Pn		**Pb**	**13 37 40.1**	**-0.6**
UPM				*i* Sn		**Sb**	**13 38 02.3**	**0.0**
UPM	**Unac-Piva**	**1.69**	**347**	*e*Pn		**Pb**	**13 37 40.4**	**-0.3**
UPM				*e*Sn		**Sg**	**13 38 03.2**	**0.0**
KLINJ	**Klinje**	**1.73**	**339**	*e*Pn		**Pn**	**13 37 40.3**	**+0.4**
KLINJ				*e*Sn		**Sg**	**13 38 03.8**	**-0.7**
SRN	**Sarande**	**1.73**	**165**	P		**Pn**	**13 37 40.0**	**+0.2**
SRN				S		**Sb**	**13 38 04.3**	**+0.8**
SRN				AML		AML	13 38 10.7	
	comp=N,0.1nm,0.4s							
SRN				AMd			13 39 05.6	
SJES	**Sjenica**	**1.75**	**13**	*e*Pn		**Pb**	**13 37 41.4**	**-0.3**
SJES				*e*Sn		**Sb**	**13 38 03.2**	**-0.8**
SJES	**Sjenica**	**1.75**	**13**	*i* Pn		**Pb**	**13 37 41.0**	**-0.7**
SJES				*e*Sn		**Sg**	**13 38 04.5**	**-0.6**
PLE	**Pljevlja**	**1.77**	**359**	*i* Pn		**Pb**	**13 37 41.4**	**-0.6**
PLE				*i* Sn		**Sb**	**13 38 04.7**	**+0.1**
STON	**Ston**	**1.84**	**316**	*e*Pn		**Pb**	**13 37 43.0**	**-0.1**
STON				*e*Sn		**Sn**	**13 38 05.2**	**+0.3**
STON	**Ston**	**1.84**	**316**	P		**Pn**	**13 37 41.4**	**+0.2**
STON				S		**Sn**	**13 38 05.4**	**+0.5**
STON				AML		AML		
	comp=N,246μm,0.7s							
STON				AML		AML		
	comp=E,212μm,1.0s							
KEK	**Kerkira**	**1.87**	**171**	P		**Pn**	**13 37 41.8**	**+0.1**
KEK				S		**Sn**	**13 38 05.7**	**0.0**
KEK				AML		AML		
	comp=N,109μm,0.9s							
KEK				AML		AML		
	comp=E,152μm,0.5s							
TAR1	**Taranto**	**1.93**	**238**	P		**Pn**	**13 37 42.0**	**-0.5**
TAR1				AML		AML		
	comp=N,282μm,0.6s							
TAR1				AML		AML		
	comp=E,344μm,1.3s							
TAR1				AML		AML		
	comp=N,282μm,1.4s							
NOCI	**Noci**	**1.95**	**247**	S		**Sn**	**13 38 09.3**	**+1.6**
NOCI				AML		AML	13 38 13.0	
	comp=N,1.3nm,0.3s							
NOCI	**Noci**	**1.95**	**247**	P		**Pn**	**13 37 42.7**	**-0.1**
NOCI				AML		AML		
	comp=E,377μm,0.4s							
NOCI				AML		AML		
	comp=N,449μm,0.3s							
NOCI				AML		AML		
	comp=N,449μm,1.7s							
RUDO	**Rudo**	**2.06**	**359**	*e*Pn		**Pb**	**13 37 45.8**	**-1.1**
RUDO	**Rudo**	**2.06**	**359**	*e*Pn		**Pb**	**13 37 45.6**	**-1.3**
RUDO				*e*Sn		**Sb**	**13 38 12.5**	**-0.3**
SELS	**Selova**	**2.08**	**36**	*e*Pn		**Pn**	**13 37 45.2**	**+0.6**
SELS				*e*Sn		**Sn**	**13 38 10.1**	**-0.8**
IVAS	**Ivanjica**	**2.08**	**15**	*e*Pn		**Pn**	**13 37 45.2**	**+0.5**
IGT	**Igoumenitsa**	**2.14**	**161**	*e*Pn		**Pn**	**13 37 45.3**	**-0.1**
IGT				*e*Sn		**Sn**	**13 38 11.8**	**-0.6**
BARS	**Barje**	**2.17**	**54**	*e*Pn		**Pn**	**13 37 46.3**	**+0.4**
AMUR	**Altamura**	**2.23**	**254**	P		**Pn**	**13 37 46.2**	**-0.6**
AMUR				AML		AML		
	comp=N,124μm,0.4s							
AMUR				AML		AML		
	comp=E,142μm,0.5s							
MATE	**Matera**	**2.25**	**247**	⇑P		**Pn**	**13 37 47.8**	**+0.9**
MATE				⇑S		**Sn**	**13 38 16.3**	**+1.2**
GOCS	**Kraljevo Serbi**	**2.27**	**28**	*e*Pn		**Pn**	**13 37 48.0**	**+0.7**
GOCS				*e*Sn		**Sn**	**13 38 15.9**	**+0.2**
BBLS	**Lazi&#263i**	**2.30**	**360**	*e*Pn		**Pn**	**13 37 49.0**	**+1.2**
BBLS	**Lazi&#263i**	**2.30**	**360**	*e*Pn		**Pn**	**13 37 49.2**	**+1.4**
BBLS				*e*Sn		**Sb**	**13 38 18.7**	**-1.3**
VAY	**Valandovo**	**2.37**	**95**	*i* Pn		**Pn**	**13 37 49.7**	**+1.1**
BOSS	**Bosilegrad**	**2.46**	**67**	*e*Pn		**Pn**	**13 37 50.2**	**+0.4**
BOSS				*e*Sn		**Sn**	**13 38 19.7**	**-0.5**
MIGL	**Miglionico**	**2.46**	**248**	P		**Pn**	**13 37 49.8**	**0.0**
MIGL				AML		AML		
	comp=E,528μm,1.1s							
MIGL				AML		AML		
	comp=N,596μm,1.3s							
MIGL				AML		AML		
	comp=N,596μm,0.7s							
MIGL				AML		AML		
	comp=E,528μm,0.9s							
GRUS	**Gruza**	**2.51**	**22**	*e*Pn		**Pn**	**13 37 50.6**	**0.0**
CRAC	**Craco**	**2.56**	**243**	P		**Pn**	**13 37 51.8**	**+0.5**
CRAC				AML		AML		
	comp=E,363μm,0.6s							
CRAC				AML		AML		
	comp=N,288μm,1.0s							
CRAC				AML		AML		
	comp=N,288μm,1.0s							
CRAC				AML		AML		
	comp=E,363μm,1.4s							
DIVS	**Divibare**	**2.57**	**9**	*e*Pn		**Pn**	**13 37 53.0**	**+1.6**
BOVS	**Bovan**	**2.67**	**38**	⇑P		**Pn**	**13 37 53.1**	**+0.4**
BOVS				⇑S		**Sn**	**13 38 26.7**	**+1.3**
BOVS	**Bovan**	**2.67**	**38**	*e*Sn		**Sn**	**13 38 25.2**	**-0.2**
APRC	**Apricena**	**2.92**	**275**	P		**Pn**	**13 37 55.7**	**-0.6**
APRC				AML		AML		
	comp=E,60μm,0.5s							
APRC				AML		AML		
	comp=N,114μm,1.6s							
ZAPS	**Zavoj**	**2.92**	**53**	*e*Pn		**Pn**	**13 37 57.0**	**+0.7**
VTS	**Vitosha**	**3.02**	**68**	*e*Pn		**Pn**	**13 37 57.9**	**+0.2**
ZAGS	**Zajecar**	**3.05**	**42**	*e*Pn		**Pn**	**13 37 57.7**	**-0.3**
ZAGS				*e*Sn		**Sn**	**13 38 34.6**	**-0.3**
TIP	**Timpagrande**	**3.14**	**222**	⇑P		**Pn**	**13 37 58.9**	**-0.3**
BLKB	**Belogradchik**	**3.16**	**48**	⇑S		**Sn**	**13 38 39.3**	**+1.7**
BORS2	**Bor- Borsko je**	**3.16**	**36**	*e*Pn		**Pn**	**13 37 59.2**	**-0.3**
SRS	**Serrai**	**3.16**	**97**	*e*Pn		**Pn**	**13 38 00.0**	**+0.5**
KUBS	**Kucevo**	**3.29**	**29**	*e*Pn		**Pn**	**13 38 00.7**	**-0.6**
KUBS				*e*Sn		**Sn**	**13 38 38.9**	**-1.9**
BLY	**Banja Luka**	**3.59**	**333**	⇓P		**Pn**	**13 38 06.2**	**+0.9**
BLY	**Banja Luka**	**3.59**	**333**	*e*Pn		**Pn**	**13 38 05.7**	**+0.4**
BLY	**Banja Luka**	**3.59**	**333**	*i* Pn		**Pn**	**13 38 05.5**	**+0.2**
BLY				*e*Sn		**Sn**	**13 38 49.4**	**+1.3**
FRGS	**Fruska Gora**	**3.61**	**4**	*e*Pn		**Pn**	**13 38 06.1**	**+0.5**
FRGS	**Fruska Gora**	**3.61**	**4**	*e*Pn		**Pn**	**13 38 05.7**	**+0.1**
FRGS				*e*Sn		**Sn**	**13 38 49.3**	**+0.7**
HERR	**Herculane**	**3.97**	**32**	⇓P		**Pn**	**13 38 11.4**	**+0.8**
PLD	**Plovdiv**	**4.01**	**80**	*e*Pn		**Pn**	**13 38 12.3**	**+1.1**
BZS	**Buzias**	**4.35**	**21**	⇓P		**Pn**	**13 38 17.0**	**+1.1**
BZS	**Buzias**	**4.35**	**21**	*e*Pn		**Pn**	**13 38 15.9**	**0.0**
GZR	**Gura Zlata**	**4.54**	**31**	*e*Pn		**Pn**	**13 38 19.9**	**+1.4**
AQU	**L'Aquila**	**4.57**	**282**	*e*Pn		**Pn**	**13 38 17.3**	**-1.6**
AQU				*e*Sn		**Sn**	**13 39 09.8**	**-2.5**
MORH	**Mrgy, Hungar**	**4.69**	**353**	⇑P		**Pn**	**13 38 21.1**	**+0.7**
MORH	**Mrgy, Hungar**	**4.69**	**353**	*e*Pn		**Pn**	**13 38 20.7**	**+0.3**
MORH				*e*Sn		**Sn**	**13 39 15.9**	**+0.7**
BOJS	**Bojanci**	**4.98**	**324**	*e*Pn		**Pn**	**13 38 24.0**	**-0.4**
VOIR		**5.63**	**45**	⇑P		**Pn**	**13 38 34.4**	**+0.9**
MARR	**Marisel-Cluj**	**5.76**	**26**	⇑P		**Pn**	**13 38 35.0**	**-0.3**
OBKA	**Obir**	**6.07**	**326**	*e*Pn		**Pn**	**13 38 39.2**	**-0.3**
	comp=N,1.1nm,0.4s							
OBKA				*e*Sn		**Sn**	**13 39 48.5**	**-0.9**
	comp=N,1.9nm,0.4s							
MLR	**Muntele Rosu**	**6.15**	**48**	⇓P		**Pn**	**13 38 40.7**	**+0.1**
ARSA	**Arzberg**	**6.34**	**335**	*e*Pn		**Pn**	**13 38 42.5**	**-0.7**
	comp=N,1.0nm,0.4s							
KECS	**Kecovo**	**6.96**	**6**	*e*PN		Pn	13 38 58.1	+6.4
MODS	**Modra-Piesok**	**6.98**	**348**	*e*PN		Pn	13 38 59.2	+7.2
ABTA	**Abfaltersbach**	**7.18**	**319**	*e*Pn		**Pn**	**13 38 53.7**	**-1.1**
	comp=N,1.2nm,0.5s							
MOA	**Molln**	**7.28**	**331**	*e*Pn		**Pn**	**13 38 55.8**	**-0.3**
	comp=N,0.3nm,0.2s							
LESA	**Schwarzleotal**	**7.59**	**323**	*e*Pn		**Pn**	**13 39 00.0**	**-0.4**
	comp=N,1.0nm,0.4s							
WTTA	**Wattenberg**	**7.97**	**318**	*e*Pn		**Pn**	**13 39 05.2**	**-0.6**
	comp=N,0.3nm,0.2s							
WATA	**Walderalm**	**8.05**	**318**	*e*Pn		**Pn**	**13 39 06.6**	**-0.2**
	comp=N,0.7nm,0.2s							
SQTA	**Sankt Quirin**	**8.16**	**317**	*e*Pn		**Pn**	**13 39 08.2**	**-0.1**
	comp=N,0.9nm,0.3s							

IDC 29 13:39:49.7±11.0, 2°.07S×141°.94E, h0km, mb3.4/2, mbtmp3.4/3, ML3.1/1, Error ellipse: s-maj=420.8km s-min=33.1km az=90.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.32**	**250**	LR	LR	13 40 40.0	
	comp=Z,386nm,21.6s,baz=358,slow=38						
WRA	**Warramunga Arr**	**19.26**	**202**	P	P	13 44 16.3	+0.2
	0.1nm,0.3s,baz=25,slow=12,SNR=1.7						
	0.9nm,0.8s						
ASAR	**Alice Springs**	**22.84**	**199**	P	P	13 44 54.7	0.0
	0.6nm,0.5s,baz=23,slow=12,SNR=4.9						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**71.28**	**321**	P	P	13 51 11.2	0.0
	0.4nm,0.8s,baz=111,slow=7.9,SNR=3.7						
	0.4nm,0.8s						

IGQ ***29*** *13:56:52.6±0.8, 0°.N±5°.×8°.0W±°., h10km, M3.6/21, Mjma3.5/21, ML3.8/20, MLv3.4/21, Ms(BB)3.5/13*
RSNC ***29*** *13:56:56.1±0.0, 0°.S±11°.×8°.0W±1°.1, h0km±11km, M3.1, ML2.6*

ISC 29 13:56:50.6±2.2, 0°.13N±0°.06×80°.25W±0°.08, h1km±14km, n55, σ1.92/63, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PECV	**Mancha de Ca P**	**0.92**	**168**	P	**Pn**	**13 57 10.3**	**-0.5**
BV15	**Puerto Quito-O**	**1.02**	**88**	P	**Pn**	**13 57 12.2**	**+0.1**
BV15				S	**Sn**	**13 57 28.9**	**+1.7**
ASDO	**Santo Domingo**	**1.19**	**109**	P	**Pb**	**13 57 13.5**	**-0.5**
PAC1	**Pacto, Paraso**	**1.46**	**85**	P	**Pg**	**13 57 19.3**	**+0.6**
PAC1	**Pacto, Paraso**	**1.46**	**85**	P	**Pg**	**13 57 19.3**	**+0.6**
PAC1				S	**Sg**	**13 57 38.6**	**+0.9**
JIPI	**JIPIJAPA**	**1.52**	**192**	P	**Pb**	**13 57 19.7**	**+0.1**
GGPT	**Toaza - Volcan**	**1.67**	**102**	P	**Pb**	**13 57 22.0**	**-0.3**
TERV	**Terraza Guagua**	**1.67**	**100**	P	**Pb**	**13 57 22.7**	**+0.1**
JUA2	**San Juan 2**	**1.68**	**102**	P	**Pb**	**13 57 22.9**	**+0.3**
YANA	**Yana**	**1.69**	**98**	P	**Pg**	**13 57 23.7**	**+0.6**
ILLI	**Illinizas Sur**	**1.74**	**119**	P	**Pb**	**13 57 23.4**	**-0.2**
PULU	**Pululahua**	**1.75**	**94**	P	**Pb**	**13 57 23.7**	**0.0**
OTAV	**Otavalo**	**1.80**	**87**	P	**Pb**	**13 57 24.2**	**-0.5**
OTAV	**Otavalo**	**1.80**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.09**	**312**	*eP*	**Pn**	**14 14 14.9**	**-0.6**
SKR				*eS*	**Sn**	**14 14 39.7**	**-1.4**
PAU	**Pauzhetka**	**2.43**	**333**	*eP*	**Pn**	**14 14 20.9**	**+0.7**
PAU				*eS*	**Sn**	**14 14 49.6**	**+0.2**
KDTR	**Khodutka, Kamc**	**2.52**	**353**	*eP*	**Pn**	**14 14 21.0**	**-0.3**
KDTR				*eS*	**Sn**	**14 14 49.7**	**-1.8**
ASAK	**Asacha**	**3.10**	**352**	*eP*	**Pn**	**14 14 30.5**	**+1.0**
ASAK				*eS*	**Sn**	**14 15 06.8**	**+0.7**
RUS	**Russkaya**	**3.12**	**359**	*eP*	**Pn**	**14 14 29.5**	**-0.2**
RUS				*eS*	**Sn**	**14 15 04.7**	**-1.8**
MTVR	**Mutnovka**	**3.18**	**356**	*eP*	**Pn**	**14 14 31.0**	**+0.4**
GRL	**Gorelyy**	**3.25**	**355**	*eP*	**Pn**	**14 14 32.3**	**+0.7**
GRL				*eS*	**Sn**	**14 15 09.0**	**-0.9**
KRMR	**Karymshinskiy**	**3.53**	**356**	*eP*	**Pn**	**14 14 36.8**	**+1.5**
KRMR				*eS*	**Sn**	**14 15 17.7**	**+1.2**
PET	**Petropavlovsk**	**3.71**	**1**	*eP*	**Pn**	**14 14 38.3**	**+0.5**
APC	**Apacha**	**3.72**	**347**	*eP*	**Pn**	**14 14 38.9**	**+1.0**
DALK	**Dalny**	**3.72**	**2**	*eP*	**Pn**	**14 14 38.2**	**+0.2**
DALK				*eS*	**Sn**	**14 15 19.5**	**-1.7**
SPN	**Mys Shipunski**	**3.89**	**13**	*eP*	**Pn**	**14 14 40.4**	**+0.1**
SPN				*eS*	**Sn**	**14 15 23.7**	**-1.8**
UGLR	**Uglovaya**	**3.90**	**2**	*eP*	**Pn**	**14 14 41.1**	**+0.6**
SMAR	**Somma**	**3.95**	**2**	*eP*	**Pn**	**14 14 42.0**	**+0.7**
AVH	**Avacha**	**3.96**	**1**	*eP*	**Pn**	**14 14 42.3**	**+1.1**
KOK	**Koryaka**	**3.98**	**1**	*eP*	**Pn**	**14 14 42.6**	**+1.0**
KRX	**Arik**	**4.05**	**1**	*eP*	**Pn**	**14 14 43.2**	**+0.7**
GNL	**Ganaly**	**4.40**	**355**	*eP*	**Pn**	**14 14 49.3**	**+1.9**
KBTR	**Krutoberegovo**	**7.37**	**19**	*eP*	**Pn**	**14 15 28.5**	**+0.6**
YKA	**Yellowknife Ar** 0.1nm,0.4s,baz=283,slow=5.1,SNR=4.8	**46.64**	**40**	P	P	14 22 04.8	-3.4
MKAR	**Makanchi Array** 0.1nm,0.4s	**49.00**	**298**	P	**P**	**14 22 27.2**	**+0.4**
KURBB	**Kurchatov Arra** 0.2nm,0.4s,baz=59,slow=5.8,SNR=5.1	**49.08**	**304**	P	**P**	**14 22 28.4**	**+1.2**
BVAR	**Borovoye Array** 0.2nm,0.4s,baz=61,slow=7.3,SNR=3.6	**52.04**	**310**	P	**P**	**14 22 49.9**	**+0.3**
WRA	**Warramunga Arr** 0.5nm,0.6s,baz=55,slow=8.0,SNR=4.2	**72.24**	**204**	P	**P**	**14 25 04.7**	**-0.6**
TXAR	**Lajitas Array** 0.4nm,0.7s,baz=19,slow=6.1,SNR=3.0	**73.06**	**65**	P	**P**	**14 25 10.3**	**-0.2**
ASAR	**Alice Springs** 0.2nm,0.5s,baz=306,slow=3.5,SNR=3.6	**75.91**	**203**	P	**P**	**14 25 26.9**	**+0.1**
	0.1nm,0.5s,baz=13,slow=4.6,SNR=4.2 0.1nm,0.5s						

*SOME **29** 14:22:10.5, 42.28N×85.03E, h10km*
*IDC **29** 14:22:19.5±1.1, 42.53N×84.95E, h0km, mb3.6/6, mbtmp3.5/12, ML2.9/6, Error ellipse: s-maj=28.3km s-min=15.1km az=54.0*
*NNC **29** 14:22:24.3±2.0, 42.72N×84.51E, h0km, mb3.9, mpv3.7, Error ellipse: s-maj=15.6km s-min=9.0km az=131.0*
ISC 29 14:22:22.2±0.8, 42°61N±0.05×84°89E±0.04, h10km, n51, σ3s09/69, mb3.5/5, 18C-11D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen** 7.2nm,0.5s	**3.43**	**286**	Pg	**Pn**	**14 23 18.2**	**+2.3**
KTMS				Lg	Lg	14 24 07.2	
KTMS	**Ketmen** 7.2nm,0.5s	**3.43**	**286**	*eP*	**Pn**	**14 23 18.2**	**+2.3**
KTMS				*eS*	**Sb**	**14 24 07.2**	**+2.2**
PDGK	**Podgornoye** 2.1nm,0.2s	**4.03**	**282**	⇑Pn	**Pn**	**14 23 26.5**	**+2.4**
PDGK				⇑Pg	**Pb**	**14 23 35.5**	**+2.2**
PDGK				⇓Lg	Lg	14 24 22.9	
DJR	**Jarkent** 6.4nm,0.2s	**4.09**	**297**	Pg	**Pn**	**14 23 28.9**	**+4.0**
DJR				Lg	Lg	14 24 26.2	
DJR	**Jarkent** 6.4nm,0.2s	**4.09**	**297**	*eP*	**Pn**	**14 23 28.9**	**+4.0**
DJR				*eS*	**Sb**	**14 24 26.2**	**+2.3**
UZB	**Uzynbulak**	**4.35**	**279**	Pg	**Pn**	**14 23 32.1**	**+3.7**
UZB				Lg	Lg	14 24 31.1	
UZB	**Uzynbulak**	**4.35**	**279**	*eP*	**Pn**	**14 23 32.1**	**+3.7**
UZB				*eS*	**Sb**	**14 24 31.1**	**-0.1**
KNOS	**Konyrlen** 8.5nm,0.2s	**4.51**	**295**	Pg	Pn	14 23 36.5	+5.8
KNOS				Lg	Lg	14 24 38.7	
MK31	**Makanchi Array** 0.3nm,0.2s,baz=150,slow=14,SNR=136	**4.58**	**337**	⇑Pn	**Pn**	**14 23 32.6**	**+1.1**
MK31				⇓Pg	**Pb**	**14 23 44.1**	**+1.5**
MK31	9.3nm,0.5s,baz=153,slow=14,SNR=49 13nm,0.4s			⇓Sn	**Sn**	**14 24 25.3**	**+0.6**
MK31				⇑Lg	Lg	14 24 42.1	
MKAR	**Makanchi Array** 0.7nm,0.3s,baz=155,slow=14,SNR=38	**4.58**	**337**	Pn	**Pn**	**14 23 32.4**	**+0.9**
MKAR	6.0nm,0.3s,baz=150,slow=17,SNR=50			Pg	**Pb**	**14 23 44.4**	**+1.8**
MKAR	5.7nm,0.3s,baz=158,slow=17,SNR=5.3			Sn	**Sn**	**14 24 19.0**	**-5.7**
MKAR	14nm,0.3s,baz=145,slow=28,SNR=9.6 1.1nm,0.4s			Lg	Lg	14 24 41.9	
KPKS	**Kokpek** 0.1nm,0.1s	**4.63**	**283**	Pg	Pb	14 23 40.2	-3.3
KPKS				Lg	Lg	14 24 45.2	
KPKS	**Kokpek** 0.1nm,0.1s	**4.63**	**283**	*eP*	Pb	14 23 40.2	-3.3
KPKS				*eS*	**Sb**	**14 24 45.2**	**+5.8**
MAKZ	**Makanchi** 0.5nm,0.1s	**4.69**	**335**	⇓Pn	**Pn**	**14 23 34.6**	**+1.6**
MAKZ				⇓Pg	**Pb**	**14 23 44.4**	**0.0**
MAKZ	5.5nm,0.4s			⇑Sn	**Sn**	**14 24 28.3**	**+0.9**
MAKZ	15nm,0.7s			⇑Lg	Lg	14 24 44.7	
SATY	**Saty** 11nm,0.2s	**4.79**	**278**	Pg	Pn	14 23 41.1	+6.6
SATY				Lg	Lg	14 24 45.9	
ZSN	**Zaisan** 3.0nm,0.2s	**4.84**	**360**	Pg	**Pb**	**14 23 45.6**	**-1.5**
ZSN				Lg	Lg	14 24 55.1	
ZSN	**Zaisan** 3.0nm,0.2s	**4.84**	**360**	*eP*	**Pb**	**14 23 45.6**	**-1.5**
ZSN				*eS*	**Sg**	**14 24 55.1**	**-2.5**
BLB	**Baldybastay** 18nm,0.1s	**4.91**	**290**	Pg	Pb	14 23 44.0	-4.2
BLB				Lg	Lg	14 24 52.1	
KURS	**Kuram** 2.6nm,0.2s	**5.00**	**282**	Pg	**Pb**	**14 23 46.9**	**-3.0**
KURS				Lg	Lg	14 24 56.4	
TDK	**Taldyqorghan** 13nm,0.2s	**5.27**	**299**	Pg	**Pb**	**14 23 52.9**	**-1.4**
TDK				Lg	Lg	14 25 06.6	
TDK	**Taldyqorghan** 13nm,0.2s	**5.27**	**299**	*eP*	**Pb**	**14 23 52.9**	**-1.4**
TDK				*eS*	**Sg**	**14 25 06.6**	**-4.6**
ARXS	**Arharly** 5.9nm,0.2s	**5.39**	**290**	Pg	**Pb**	**14 23 53.5**	**-2.9**
ARXS				Lg	Lg	14 25 08.6	
ARXS	**Arharly** 5.9nm,0.2s	**5.39**	**290**	*eP*	**Pb**	**14 23 53.5**	**-2.9**
ARXS				*eS*	**Sb**	**14 25 08.6**	**+7.4**
MDOK	**Medeo**	**5.79**	**278**	Pg	**Pb**	**14 24 00.3**	**-3.0**
MDOK	2.9nm,0.3s			Lg	Lg	14 25 19.8	
KNDC	**Almaty** 9.6nm,0.4s	**5.85**	**279**	⇑Pn	**Pn**	**14 23 50.4**	**+1.4**
KNDC				⇑Pg	**Pb**	**14 24 08.0**	**+3.7**
KNDC	155nm,0.8s			⇑Lg	Lg	14 25 20.7	
TNSS	**Tian-Shan** 1.5nm,0.5s	**5.86**	**277**	Pg	**Pb**	**14 24 02.8**	**-1.8**
TNSS				*eP*	**Pb**	**14 24 02.8**	**-1.8**
TNSS	9.1nm,0.6s			*eS*	**Sb**	**14 25 24.0**	**+9.0**
KTBS	**Karatobe** 14nm,0.5s	**6.10**	**283**	Pg	**Pb**	**14 24 06.6**	**-2.0**
KTBS				Lg	Lg	14 25 30.6	
KTBS	**Karatobe** 14nm,0.5s	**6.10**	**283**	*eP*	**Pb**	**14 24 06.6**	**-2.0**
KTBS				*eS*	**Sb**	**14 25 30.6**	**+8.9**
KST	**Kastek** 5.3nm,0.6s	**6.58**	**277**	Pg	**Pb**	**14 24 16.1**	**-0.7**
KST	**Kastek** 5.3nm,0.6s	**6.58**	**277**	*eP*	**Pb**	**14 24 16.1**	**-0.7**
KST	30nm,0.7s			*eS*	**Sg**	**14 25 47.4**	**-5.9**
DGS	**Degeres** 1.7nm,0.1s	**6.72**	**278**	Pg	**Pb**	**14 24 19.1**	**-0.1**
DGS	**Degeres** 1.7nm,0.1s	**6.72**	**278**	*eP*	**Pb**	**14 24 19.1**	**-0.1**
DGS	38nm,0.4s			*eS*	**Sg**	**14 25 52.6**	**-5.3**
KRBS	**Karabastau** 2.5nm,0.5s	**6.83**	**282**	Pg	**Pb**	**14 24 19.7**	**-1.2**
KRBS	14nm,0.5s			Lg	Lg	14 25 53.1	
KRBS	**Karabastau** 2.5nm,0.5s	**6.83**	**282**	*eP*	**Pb**	**14 24 19.7**	**-1.2**
KRBS	14nm,0.5s			*eS*	Sb	14 25 53.1	+11
AAK	**Ala-Archa** 0.4nm,0.3s,baz=108,slow=10.0,SNR=9.3	**7.67**	**274**	Pn	**Pn**	**14 24 14.0**	**-0.1**
AAK	1.3nm,0.3s,baz=227,slow=20,SNR=7.0 1.1nm,0.4s			Lg	Lg	14 26 28.2	
AAK	**Ala-Archa** 0.4nm,0.5s	**7.67**	**274**	⇑Pn	**Pn**	**14 24 15.5**	**+1.4**
AAK	6.6nm,0.6s			⇓Lg	Lg	14 26 19.0	
KURBB	**Kurchatov Arra** baz=140,slow=13,SNR=8.8 0.2nm,0.3s	**9.13**	**334**	Pn	**Pn**	**14 24 32.8**	**-1.1**
KURBB	**Kurchatov Arra** 0.8nm,0.6s	**9.13**	**334**	⇑Pn	**Pn**	**14 24 32.6**	**-1.3**
KURBB	12nm,0.6s			⇑Sn	**Sn**	**14 26 15.1**	**-1.5**
KURBB	36nm,0.6s			⇑Lg	Lg	14 27 08.0	
KURK	**Kurchatov** 0.6nm,1.4s	**9.18**	**334**	⇓Pn	**Pn**	**14 24 32.4**	**-2.2**
KURK	3.9nm,0.8s			⇑Sn	**Sn**	**14 26 16.3**	**-1.5**
KURK	11nm,0.7s			⇑Lg	Lg	14 27 09.3	
KK31	**Karatay Array** 0.4nm,0.6s,baz=83,slow=15,SNR=6.3	**10.57**	**278**	⇓Pn	**Pn**	**14 24 52.4**	**-1.3**
KK31	5.2nm,0.7s,baz=120,slow=3.9,SNR=3.2			⇑Lg	Lg	14 27 54.8	
ZAA0	**Zalesovo Array** 1.6nm,0.6s	**11.35**	**360**	⇑Pn	**Pn**	**14 25 06.5**	**+2.2**
ZAA0	5.4nm,1.1s			⇓Sn	**Sn**	**14 27 11.2**	**+0.2**
ZAA0	3.6nm,0.8s			⇓Lg	Lg	14 28 19.4	
ZALV	**Zalesovo Beam** 0.3nm,0.3s,baz=179,slow=15,SNR=6.0	**11.35**	**360**	Pn	**Pn**	**14 25 02.4**	**-1.9**
ZALV	0.4nm,0.3s,baz=183,slow=24,SNR=7.4 0.9nm,0.4s			Sn	**Sn**	**14 27 05.6**	**-5.4**
BVA0	**Borovoye Array** 2.4nm,1.3s,baz=130,slow=9.5,SNR=4.2	**14.24**	**322**	⇑Pn	**Pn**	**14 25 47.3**	**+3.6**
BVA0	11nm,1.2s			⇓Lg	Lg	14 29 50.9	
BVAR	**Borovoye Array** baz=127,slow=9.3,SNR=5.3	**14.24**	**322**	Pn	**Pn**	**14 25 42.3**	**-1.4**
BVAR	baz=153,slow=22,SNR=5.4 0.4nm,0.5s			Lg	Lg	14 29 56.4	
SONM	**Songino Array** 0.1nm,0.3s,baz=253,slow=13,SNR=2.1 0.2nm,0.4s	**16.01**	**64**	Pn	**Pn**	**14 26 07.2**	**-0.3**
AKTO	**Aktyubinsk** 2.3nm,0.6s,baz=109,slow=11,SNR=5.0 2.3nm,0.6s	**20.00**	**302**	P	**P**	**14 26 55.6**	**+0.8**
ARTI	**Arti** 1.7nm,0.5s,baz=157,slow=3.5,SNR=3.6 1.7nm,0.5s	**21.87**	**318**	P	**P**	**14 27 15.8**	**+0.9**
CMAR	**Chiang Mai Arr** 0.4nm,0.3s,baz=328,slow=8.4,SNR=1.3 0.4nm,0.3s	**26.87**	**149**	P	**P**	**14 28 02.4**	**-0.7**
BRTR	**Keskin Array B** 0.5nm,0.7s,baz=96,slow=8.8,SNR=3.9 0.5nm,0.7s	**38.21**	**283**	P	**P**	**14 29 42.3**	**+0.1**
NOA	**NORSAR Array B** 0.5nm,0.6s,baz=79,slow=8.1,SNR=1.8 0.5nm,0.6s	**46.35**	**320**	P	**P**	**14 30 46.7**	**-1.4**
WRA	**Warramunga Arr** 0.3nm,0.8s,baz=332,slow=5.3,SNR=6.1 0.3nm,0.8s	**77.12**	**133**	P	**P**	**14 34 13.7**	**-2.2**

*IDC **29** 14:28:23.7±1.7, 39.77N×77.21E, h0km, mb3.8/3, mbtmp3.5/8, ML3.0/5, Error ellipse: s-maj=23.5km s-min=22.7km az=161.0*
*KRNET **29** 14:28:25.7±0.1, 39.93N×77.34E, h9km, mb3.9*
*SOME **29** 14:28:26.3, 40.07N×77.42E, h5km*
*NNC **29** 14:28:30.2±1.0, 40.16N×77.42E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=7.3km s-min=5.9km az=164.0*
ISC 29 14:28:29.0±1.4, 39°87N±0.04×77°41E±0.04, h33km±8km, n82, σ1s57/120, 38C-22D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNKS	**Jany-Kuch**	**1.80**	**312**	⇓*iP*	**Pn**	**14 28 57.3**	**-0.7**
JNKS				⇓*iS*	**Sn**	**14 29 20.0**	**+0.1**
TARG	**Taragay, Kyrgy**	**1.88**	**9**	⇓*iP*	**Pn**	**14 28 59.2**	**-0.1**
TARG				⇓*iS*	**Sn**	**14 29 23.8**	**+1.7**
NRN	**Naryn**	**1.89**	**326**	⇓*iP*	**Pn**	**14 28 59.0**	**-0.4**
NRN				⇓*iS*	**Sn**	**14 29 23.5**	**+1.2**
KDJ	**Kajisay**	**2.27**	**356**	⇑*iP*	**Pn**	**14 29 04.5**	**+0.1**
KDJ				⇑*iS*	**Sn**	**14 29 32.8**	**+1.5**
ULHL	**Ulahol** SNR=11	**2.53**	**340**	P	**Pn**	**14 29 10.0**	**+1.9**
ULHL	**Ulahol**	**2.53**	**340**	⇑*iP*	**Pn**	**14 29 08.1**	**0.0**
ULHL				⇑*iS*	**Sn**	**14 29 39.0**	**+1.1**
BOOM	**Boomskoye usch**	**2.84**	**338**	⇑*iP*	**Pn**	**14 29 12.4**	**+0.1**
BOOM				⇑*iS*	**Sn**	**14 29 46.6**	**+1.1**
SALK	**Salom-Alik**	**2.92**	**291**	⇓*iP*	**Pn**	**14 29 13.5**	**+0.1**
SALK				⇓*iS*	**Sn**	**14 29 48.6**	**+1.2**
SFK	**Sufi-Kurgan**	**3.00**	**274**	⇑*iP*	**Pn**	**14 29 14.8**	**+0.2**
SFK				⇑*iS*	**Sn**	**14 29 51.1**	**+1.5**
ARLS	**Aral**	**3.07**	**311**	⇑*iP*	**Pn**	**14 29 15.3**	**-0.1**
ARLS				⇑*iS*	**Sn**	**14 29 51.8**	**+0.7**
TNSS	**Tian-Shan** 13nm,0.6s	**3.18**	**354**	Pg	**Pb**	**14 29 22.5**	**-2.6**
TNSS	43nm,0.4s			Lg	Lg	14 30 02.4	
TNSS	**Tian-Shan** 13nm,0.6s	**3.18**	**354**	*eP*	**Pb**	**14 29 22.5**	**-2.6**
TNSS	43nm,0.4s			*eS*	**Sb**	**14 30 02.4**	**-1.2**
UCH	**Uchtor** SNR=9.8	**3.22**	**318**	P	**Pn**	**14 29 19.7**	**+2.1**
UCH	**Uchtor**	**3.22**	**318**	⇑*iP*	**Pn**	**14 29 17.8**	**+0.1**
UCH				⇑*iS*	**Sn**	**14 29 55.8**	**+0.7**
IZV	**Izvestkoviy** 22nm,0.6s	**3.22**	**350**	Pg	**Pb**	**14 29 23.4**	**-2.2**
IZV	47nm,0.7s			Lg	Lg	14 30 03.7	
IZV	**Izvestkoviy** 22nm,0.6s	**3.22**	**350**	*eP*	**Pb**	**14 29 23.4**	**-2.2**
IZV	47nm,0.7s			*eS*	**Sb**	**14 30 03.7**	**-0.7**
SATY	**Saty** 76nm,0.2s	**3.27**	**13**	Pg	**Pb**	**14 29 23.8**	**-2.7**
SATY				Lg	Lg	14 30 04.4	
MDOK	**Medeo** 27nm,0.2s	**3.30**	**355**	Pg	**Pb**	**14 29 24.5**	**-2.5**
MDOK				Lg	Lg	14 30 05.6	
TKM2	**Tokmak 2** SNR=6.7	**3.34**	**337**	P	**Pn**	**14 29 21.0**	**+1.9**
TKM2	**Tokmak 2**	**3.34**	**337**	⇑*iP*	**Pn**	**14 29 19.4**	**+0.2**
TKM2				⇑*iS*	**Sn**	**14 29 58.4**	**+0.6**
KBK	**Karagaybulak** SNR=13	**3.34**	**327**	P	**Pb**	**14 29 25.2**	**-2.6**
KBK	**Karagaybulak**	**3.34**	**327**	⇓*iP*	**Pn**	**14 29 19.3**	**+0.1**
KBK				⇓*iS*	**Sn**	**14 29 58.6**	**+0.7**
KST	**Kastek** 10nm,0.5s	**3.35**	**342**	Pg	**Pb**	**14 29 26.0**	**-1.8**
KST	69nm,0.8s			Lg	Lg	14 30 08.1	
KST	**Kastek** 10nm,0.5s	**3.35**	**342**	*eP*	**Pb**	**14 29 26.0**	**-1.8**
KST	69nm,0.8s			*eS*	**Sb**	**14 30 08.1**	**-0.1**
KNDC	**Almaty** 41nm,0.4s	**3.36**	**354**	⇓Pn	**Pn**	**14 29 22.3**	**+2.9**
KNDC	451nm,0.5s			⇓Lg	Lg	14 30 09.8	
KOTS	**Kotyrbulak** 36nm,0.3s	**3.37**	**356**	Pg	**Pb**	**14 29 26.9**	**-1.3**
KOTS	220nm,0.6s			Lg	Lg	14 30 09.4	
KOTS	**Kotyrbulak** 36nm,0.3s	**3.37**	**356**	*eP*	**Pb**	**14 29 26.9**	**-1.3**
KOTS	220nm,0.6s			*eS*	**Sb**	**14 30 09.4**	**+0.7**
UZB	**Uzynbulak** 53nm,0.2s	**3.49**	**20**	Pg	**Pb**	**14 29 28.4**	**-1.8**
UZB	64nm,0.3s			Lg	Lg	14 30 12.3	
UZB	**Uzynbulak** 53nm,0.2s	**3.49**	**20**	*eP*	**Pb**	**14 29 28.4**	**-1.8**
UZB	64nm,0.3s			*eS*	**Sb**	**14 30 12.3**	**0.0**
AAK	**Ala-Archa** 3.4nm,0.3s,baz=149,slow=8.0,SNR=20	**3.53**	**322**	Pn	**Pn**	**14 29 22.7**	**+0.9**
AAK	8.0nm,0.3s,baz=50,slow=20,SNR=12 7.5nm,0.4s			Lg	Lg	14 30 14.2	
AAK	**Ala-Archa** SNR=8.9	**3.53**	**322**	P	**Pn**	**14 29 25.4**	**+3.7**
AAK	**Ala-Archa** 37nm,1.2s	**3.53**	**322**	⇓Pn	**Pn**	**14 29 25.3**	**+3.5**
AAK	90nm,0.9s			⇑Lg	Lg	14 30 15.1	
AAK	**Ala-Archa**	**3.53**	**322**	⇑*iP*	**Pn**	**14 29 22.0**	**+0.3**
AAK				⇑*iS*	**Sn**	**14 30 02.9**	**+0.4**
DGS	**Degeres** 26nm,0.4s	**3.59**	**341**	Pg	**Pb**	**14 29 30.8**	**-1.0**
DGS	34nm,0.3s			Lg	Lg	14 30 16.6	
DGS	**Degeres** 26nm,0.4s	**3.59**	**341**	*eP*	**Pb**	**14 29 30.8**	**-1.0**
DGS	34nm,0.3s			*eS*	**Sb**	**14 30 16.6**	**+1.7**
OHH	**Osh**	**3.60**	**282**	⇓*iP*	**Pn**	**14 29 22.9**	**+0.3**
OHH				⇓*iS*	**Sn**	**14 30 05.0**	**+1.0**
FRU1	**Bishkek**	**3.61**	**325**	⇑*iP*	**Pn**	**14 29 23.0**	**+0.3**
FRU1				⇑*iS*	**Sn**	**14 30 05.0**	**+0.8**
KURS	**Kuram** 36nm,1.2s	**3.66**	**9**	Pg	**Pb**	**14 29 30.9**	**-2.1**
KURS	40nm,0.4s			Lg	Lg	14 30 16.7	
ARSB	**Arslanbob**	**3.67**	**295**	⇓*iP*	**Pn**	**14 29 23.8**	**+0.2**
ARSB				⇓*iS*	**Sn**	**14 30 06.4**	**+0.6**
CHMS	**Chumysh** SNR=7.5	**3.71**	**328**	P	**Pn**	**14 29 26.2**	**+2.1**
CHMS	**Chumysh**	**3.71**	**328**	⇓*iP*	**Pn**	**14 29 24.3**	**+0.2**
CHMS				⇓*iS*	**Sn**	**14 30 07.0**	**+0.3**
KPKS	**Kokpek** 0.2nm,0.4s	**3.72**	**14**	Pg	**Pb**	**14 29 31.8**	**-2.2**
KPKS	112nm,0.5s			Lg	Lg	14 30 18.1	
KPKS	**Kokpek** 0.2nm,0.4s	**3.72**	**14**	*eP*	**Pb**	**14 29 31.8**	**-2.2**
KPKS	112nm,0.5s			*eS*	**Sb**	**14 30 18.1**	**-0.7**
PDGK	**Podgornoye** 2.8nm,0.3s	**3.79**	**24**	⇑Pn	**Pn**	**14 29 26.2**	**+0.9**
PDGK	35nm,0.7s			⇓Pg	**Pb**	**14 29 33.7**	**-1.6**
PDGK	117nm,0.6s			⇑Lg	Lg	14 30 22.4	
EKS2	**Erkin-Say** SNR=36	**3.91**	**317**	P	**Pn**	**14 29 29.6**	**+2.8**
EKS2	**Erkin-Say**	**3.91**	**317**	⇑*iP*	**Pn**	**14 29 27.0**	**+0.1**
EKS2				⇑*iS*	**Sn**	**14 30 11.8**	**+0.1**
USP	**Ospenovka**	**4.04**	**328**	⇑*iP*	**Pn**	**14 29 28.8**	**+0.2**
USP				⇑*iS*	**Sn**	**14 30 14.9**	**+0.2**
KRBS	**Karabastau** 20nm,0.7s	**4.04**	**342**	Pg	**Pb**	**14 29 39.1**	**-0.3**
KRBS	26nm,0.4s			Lg	Lg	14 30 30.4	
KRBS	**Karabastau** 20nm,0.7s	**4.04**	**342**	*eP*	**Pb**	**14 29 39.1**	**-0.3**
KRBS	26nm,0.4s			*eS*	**Sb**	**14 30 30.4**	**+2.6**
SGDS	**Sogindy** 2.2nm,0.5s	**4.14**	**331**	Pg	**Pb**	**14 29 39.8**	**-1.4**
SGDS	16nm,0.4s			Lg	Lg	14 30 31.7	
KTMS	**Ketmen** 7.5nm,0.3s	**4.20**	**31**	Pg	**Pb**	**14 29 41.6**	**-0.6**
KTMS	34nm,0.6s			Lg	Lg	14 30 34.9	
KTMS	**Ketmen** 7.5nm,0.3s	**4.20**	**31**	*eP*	**Pb**	**14 29 41.6**	**-0.6**
KTMS	34nm,0.6s			*eS*	**Sb**	**14 30 34.9**	**+2.4**
MRKS	**Merke** 12nm,0.5s	**4.26**	**314**	Pg	**Pb**	**14 29 42.9**	**-0.5**
MRKS	30nm,0.5s			Lg	Lg	14 30 36.9	
MRKS	**Merke** 12nm,0.5s	**4.26**	**314**	*eP*	**Pb**	**14 29 42.9**	**-0.5**
MRKS	30nm,0.5s			*eS*	**Sb**	**14 30 36.9**	**+2.6**
BLB	**Baldybastay** 56nm,0.5s	**4.30**	**10**	Pg	**Pb**	**14 29 43.7**	**-0.2**
BLB	161nm,0.4s			Lg	Lg	14 30 38.9	
DRK	**Karamyk**	**4.34**	**267**	⇑*iP*	**Pn**	**14 29 33.8**	**+0.8**
DRK				⇑*iS*	**Sn**	**14 30 23.6**	**+0.9**
ARXS	**Arharly** 14nm,0.4s	**4.35**	**4**	Pg	**Pb**	**14 29 44.6**	**-0.2**
ARXS	81nm,0.3s			Lg	Lg	14 30 40.1	
ARXS	**Arharly** 14nm,0.4s	**4.35**	**4**	*eP*	**Pb**	**14 29 44.6**	**-0.2**
ARXS	81nm,0.3s			*eS*	**Sb**	**14 30 40.1**	**+3.3**
ARK	**Arkit**	**4.56**	**297**	⇑*iP*	**Pn**	**14 29 36.3**	**+0.5**
ARK				⇑*iS*	**Sn**	**14 30 27.6**	**-0.1**
KNOS	**Konyrlen** 16nm,0.5s	**4.68**	**16**	Pg	**Pb**	**14 29 50.3**	**-0.1**
KNOS	17nm,0.5s			Lg	Lg	14 30 49.8	
DJR	**Jarkent** 9.9nm,0.3s	**4.80**	**21**	Pg	**Pb**	**14 29 53.2**	**+0.8**
DJR	45nm,0.4s			Lg	Lg	14 30 54.6	
DJR	**Jarkent** 9.9nm,0.3s	**4.80**	**21**	*eP*	**Pb**	**14 29 53.2**	**+0.8**
DJR	45nm,0.4s			*eS*	**Sb**	**14 30 54.6**	**+4.9**
TRKS	**Terek-Say**	**5.04**	**291**	⇑*iP*	**Pn**	**14 29 42.4**	**-0.1**
TRKS				⇑*iS*	**Sn**	**14 30 38.4**	**-1.4**
KK31	**Karatay Array** 3.8nm,0.6s,baz=120,slow=14,SNR=4.6	**6.10**	**304**	⇑Pg	**Pb**	**14 30 17.6**	**+3.0**
KK31	9.8nm,0.8s,baz=121,slow=28,SNR=5.5			⇓Lg	Lg	14 31 38.7	
TSSA	**Tissa**	**7.09**	**189**	*eP*	**Pn**	**14 30 12.1**	**+1.4**
TSSA				*eS*	**Sn**	**14 31 29.8**	**-0.4**
TSSA	comp=E,34nm,0.2s			IAML		14 31 41.6	
TSSA	comp=N,48nm,0.3s			IAML		14 31 42.1	
THN	**Thein Dam**	**7.53**	**191**	*eP*	**Pn**	**14 30 17.9**	**+1.3**
THN				*eS*	**Sn**	**14 31 42.2**	**+1.3**
THN				IAML		14 31 50.9	

	comp=E,16nm,0.5s							
THN					IAML		14 31 55.1	
	comp=N,17nm,0.5s							
DHRM	**DHARAMSHALA**	**7.66**	**187**	*e*P		**Pn**	**14 30 19.4**	**+0.9**
DHRM				*e*S		**Sn**	**14 31 42.6**	**-1.6**
DHRM					IAML		14 31 49.8	
	comp=E,50nm,0.4s							
DHRM					IAML		14 31 51.8	
	comp=N,38nm,0.6s							
MAKZ	**Makanchi**	**7.69**	**24**	⇑Pn		**Pn**	**14 30 19.8**	**+1.1**
	comp=N,3.6nm,1.4s							
MAKZ				⇑Lg		Lg	14 32 26.3	
	comp=N,3.2nm,0.8s							
MK31	**Makanchi Array**	**7.78**	**26**	⇑Pn		**Pn**	**14 30 20.2**	**+0.3**
	comp=N,0.4nm,0.3s,baz=197,slow=14,SNR=21							
MK31				⇑Lg		Lg	14 32 29.1	
	comp=N,3.6nm,0.7s							
MKAR	**Makanchi Array**	**7.78**	**26**	Pn		**Pn**	**14 30 20.8**	**+0.8**
	comp=N,0.7nm,0.3s,baz=206,slow=12,SNR=10.0							
MKAR				Lg		Lg	14 32 29.7	
	comp=N,0.5nm,0.3s,baz=211,slow=25,SNR=2.5							
	comp=N,0.9nm,0.3s							
KLP	**Kalpa**	**8.35**	**175**	*e*P		**Pn**	**14 30 29.0**	**+1.0**
KLP				*e*S		**Sn**	**14 32 00.9**	**-0.4**
KLP					IAML		14 32 12.8	
	comp=E,20nm,0.7s							
KLP					IAML		14 32 13.7	
	comp=N,12nm,0.5s							
WMQ	**Urumqi**	**8.63**	**59**	Pn		**Pn**	**14 30 30.0**	**-1.7**
WMQ				Sn		**Sn**	**14 32 12.0**	**+4.1**
WMQ				smax		smax		
	comp=N,13nm,0.9s							
WMQ				smax		smax		
	comp=E,14nm,0.7s							
SMLA	**Simla**	**8.72**	**181**	*e*P		**Pn**	**14 30 32.8**	**-0.1**
SMLA				*e*S		**Sn**	**14 32 07.2**	**-2.8**
SMLA					IAML		14 32 09.2	
	comp=N,25nm,0.5s							
SMLA					IAML		14 32 14.5	
	comp=E,25nm,0.4s							
KURBB	**Kurchatov Arra**	**10.78**	**4**	Pn		**Pn**	**14 31 00.3**	**-0.7**
	baz=187,slow=12,SNR=3.9							
KURBB				Lg		Lg	14 34 01.8	
	comp=E,0.1nm,0.3s,baz=194,slow=26,SNR=5.6							
	comp=E,0.5nm,0.7s							
KURBB	**Kurchatov Arra**	**10.78**	**4**	⇓Lg		Lg	14 34 06.3	
	comp=E,10nm,0.7s							
KURK	**Kurchatov**	**10.88**	**4**	⇑Lg		Lg	14 34 06.3	
	comp=E,5.1nm,1.3s							
BVA0	**Borovoye Array**	**14.01**	**342**	⇑Lg		Lg	14 35 46.6	
	comp=E,0.8nm,0.8s,baz=146,slow=32,SNR=4.0							
BVAR	**Borovoye Array**	**14.01**	**342**	Pn		**Pn**	**14 31 42.9**	**-2.1**
	baz=146,slow=16,SNR=2.3							
BVAR				Lg		Lg	14 35 45.3	
	baz=140,slow=38,SNR=4.4							
	comp=E,0.3nm,0.6s							
ZALV	**Zalesovo Beam**	**14.95**	**17**	Pn		**Pn**	**14 31 56.4**	**-1.4**
	comp=E,0.2nm,0.3s,baz=212,slow=12,SNR=4.2							
	comp=E,0.2nm,0.3s							
SONM	**Songino Array**	**22.27**	**59**	P		**P**	**14 33 24.7**	**+1.4**
	comp=E,0.5nm,0.6s,baz=256,slow=12,SNR=2.9							
	comp=E,0.5nm,0.6s							
HFS	**Hagfors**	**43.67**	**319**	P		**P**	**14 36 29.9**	**-0.4**
	comp=E,3.5nm,0.9s,baz=97,slow=12,SNR=1.9							
	comp=E,3.5nm,0.9s							
TORD	**Torodi Ar. Bea**	**70.77**	**271**	P		**P**	**14 39 40.9**	**-1.5**
	comp=E,1.3nm,0.6s,baz=53,slow=4.7,SNR=9.5							
	comp=E,1.3nm,0.6s							

*IDC **29** 14:34:07.7±1.4,4.°28S×127.°85E,h278km±17km,mb3.3/7, mbtmp4.0/11,Error ellipse: s-maj=21.5km s-min=10.6km az=86.0*
*NEIC **29** 14:34:08.5±0.8,4.°34S±0.°07×127.°76E±0.°08,h281km±8km, mb4.1/19,Error ellipse: s-maj=12.0km s-min=10.8km az=76.0*
*DJA **29** 14:34:08.6±0.1,4.°5S±2.°×12.°8E±.°,h267km±2km,M4.3/32, mb4.3/32,mB5.0/13,MLv4.4/31,Mw(mB)4.3/13*

ISC 29 14:34:08.3±0.4,**4.°37S**±0.°05×**127.°79E**±0.°05,**h300**km,**n84,**
σ2ᵏ32/90,**mb3.9**/12,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.79**	**31**	P	**Pn**	**14 34 45.0**	**-2.9**
AAI				S	**S**	**14 35 13.2**	**-6.1**
KRAI	**Karang Ratu**	**1.21**	**30**	P	**Pn**	**14 34 46.9**	**-2.9**
KRAI				S	**S**	**14 35 15.2**	**-7.6**
NLAI	**Namlea**	**1.32**	**328**	P	**Pn**	**14 34 48.3**	**-2.1**
NLAI				S	**S**	**14 35 18.0**	**-5.9**
BNDI	**Bandanaira**	**2.11**	**94**	P	**Pn**	**14 34 54.4**	**-1.6**
BNDI	**Bandanaira**	**2.11**	**94**	P	**Pn**	**14 34 54.3**	**-1.7**
SANI	**Sanana**	**2.92**	**322**	P	**Pn**	**14 35 01.7**	**-1.7**
SANI	**Sanana**	**2.92**	**322**	P	**Pn**	**14 35 00.4**	**-3.0**
SANI				S	**S**	**14 35 38.9**	**-8.4**
FAKI	**Fak Fak**	**4.68**	**72**	P	**Pn**	**14 35 21.2**	**-1.0**
FAKI	**Fak Fak**	**4.68**	**72**		**Pn**	**14 35 21.2**	**-1.0**
FAKI	**Fak Fak**	**4.68**	**72**	P	**Pn**	**14 35 21.2**	**-1.0**
SIJI	**Sorong**	**4.91**	**45**	P	**Pn**	**14 35 24.0**	**-1.0**
	54nm,0.3s,baz=230,slow=14,SNR=97						
SIJI				S	**S**	**14 36 21.1**	**-5.4**
	50nm,0.2s,baz=42,slow=23,SNR=22						
SIJI	**Sorong**	**4.91**	**45**	P	**Pn**	**14 35 23.8**	**-1.1**
SWI	**Sorong**	**4.91**	**45**	P	**Pn**	**14 35 23.5**	**-1.4**
SAUI	**Saumlaki**	**5.01**	**136**	P	**Pn**	**14 35 26.0**	**0.0**
SAUI	**Saumlaki**	**5.01**	**136**		**Pn**	**14 35 26.0**	**0.0**
SAUI	**Saumlaki**	**5.01**	**136**	P	**Pn**	**14 35 25.7**	**-0.3**
	0.6nm3μm129nm,0.8s						
KMPI	**Kaimana, Papua**	**5.94**	**83**	P	**Pn**	**14 35 35.8**	**-1.2**
SOEI	**Soe**	**6.39**	**213**	P	**Pn**	**14 35 43.6**	**+1.1**
SOEI	**Soe**	**6.39**	**213**	Pn	**Pn**	**14 35 42.9**	**+0.3**
SOEI	**Soe**	**6.39**	**213**	P	**Pn**	**14 35 42.8**	**+0.3**
	0.1nm26nm,1.2s						
RKPI	**Ransiki, Papua**	**6.98**	**66**	P	**Pn**	**14 35 50.1**	**+0.5**
BATI	**Baumata**	**7.10**	**215**	P	**Pn**	**14 35 51.0**	**0.0**
	29nm,0.5s,baz=95,slow=1.9,SNR=12						
BATI				S	S	14 37 27.0	+13
	18nm,0.4s,baz=286,slow=17,SNR=7.4						
BATI	**Baumata**	**7.10**	**215**	P	**Pn**	**14 35 50.5**	**-0.5**
	0.2nm44nm,0.8s						
MWPI	**Manokwari, Pap**	**7.12**	**61**	P	**Pn**	**14 35 52.6**	**+1.4**
	87nm,1.0s						
BSSI	**Bau Bau, Buton**	**7.48**	**256**	P	**Pn**	**14 35 53.9**	**-1.7**
	0.1nm30nm,0.7s						
MRSI	**Marisa**	**7.57**	**309**	P	**Pn**	**14 35 55.4**	**-1.3**
	0.1nm23nm,0.8s						
SPSI	**Sidrap Palu**	**8.01**	**273**	P	**Pn**	**14 36 01.9**	**-0.2**
	0.1nm1μm38nm,0.8s						
DRS	**Darwin Rock St**	**8.58**	**159**	P	**P**	**14 36 09.7**	**-4.6**
LBFI	**Labuhan Bajo,**	**8.85**	**242**	P	**P**	**14 36 12.7**	**-4.6**
TOLI2	**Tolitoli**	**8.87**	**308**	P	**Pn**	**14 36 11.6**	**-1.1**
TOLI2	**Tolitoli**	**8.87**	**308**	Pn	**Pn**	**14 36 11.3**	**-1.4**
BAKI	**Biak**	**8.89**	**69**	P	**Pn**	**14 36 13.6**	**+0.7**
MPSI	**Mapaga**	**9.17**	**300**	P	**Pn**	**14 36 16.1**	**-0.2**
	7.5nm,0.7s						
WBSI	**Waikabubak, Su**	**9.84**	**237**	P	**P**	**14 36 26.9**	**-1.5**
	41nm,0.5s						
DBNI	**Kabupaten Domp**	**10.27**	**246**	P	**Pn**	**14 36 27.9**	**-2.0**
	11nm,0.8s						
PLAI	**Plampang**	**10.89**	**245**	P	**P**	**14 36 37.8**	**-2.2**
PLAI	**Plampang**	**10.89**	**245**	P	**P**	**14 36 37.7**	**-2.2**
	39nm,0.8s						
KNRA	**Kununurra**	**11.28**	**175**		**P**	**14 36 42.4**	**-1.9**
BKB	**Balikpapan**	**11.31**	**286**	P	**P**	**14 36 45.3**	**+0.6**
TWSI	**Taliwang, Sumb**	**11.67**	**248**	P	**P**	**14 36 47.2**	**-1.5**
	23nm,0.7s						
FITZ	**Fitzroy Crossi**	**13.81**	**189**	P	**Pn**	**14 37 12.8**	**+0.2**
	1.8nm,0.3s,baz=20,slow=12,SNR=20						
JAGI	**Jajag, Banyuwa**	**14.15**	**253**	P	**Pn**	**14 37 17.9**	**+1.1**
JAGI	**Jajag, Banyuwa**	**14.15**	**253**	P	**Pn**	**14 37 16.8**	**-0.1**
KKM	**Kota Kinabalu**	**15.51**	**312**	P	**Pn**	**14 37 32.1**	**-0.9**
KKM	**Kota Kinabalu**	**15.51**	**312**	P	**Pn**	**14 37 31.7**	**-1.3**
KKM				IAmb	IAmb	14 37 33.2	
	comp=Z,13nm,0.9s						
SNJI	**Sawahan-Nganju**	**16.30**	**257**	P	**Pn**	**14 37 40.4**	**-1.8**
	comp=Z,14nm,0.7s						
WB0	**Warramunga Arr**	**16.60**	**158**	P	**Pn**	**14 37 44.2**	**-1.3**
WB0				IAmb	IAmb	14 38 09.8	
	comp=Z,4.9nm,1.0s						
WRAB	**Tennant Creek**	**16.74**	**158**	P	**Pn**	**14 37 46.1**	**-1.1**
WRAB	**Tennant Creek**	**16.74**	**158**	P	**Pn**	**14 37 46.0**	**-1.1**
WRAB				IAmb	IAmb	14 37 57.8	
	comp=Z,8.2nm,1.2s						
WRA	**Warramunga Arr**	**16.74**	**158**	P	**Pn**	**14 37 45.6**	**-1.6**
	comp=Z,1.2nm,0.6s,baz=336,slow=12,SNR=21						
WRA				S	**S**	**14 40 40.5**	**-3.6**
	comp=Z,1.1nm,0.8s,baz=337,slow=19,SNR=5.6						
WRA	**Warramunga Arr**	**16.74**	**158**	P	**Pn**	**14 37 44.1**	**-3.1**
WB1	**Warramunga Ar.**	**16.76**	**158**	P	**Pn**	**14 37 46.5**	**-0.9**
WR8	**Warramunga Arr**	**16.82**	**158**	P	**Pn**	**14 37 46.4**	**-1.7**
WR8				IAmb	IAmb	14 38 01.6	
	comp=Z,10.0nm,1.2s						
SBUM	**Sibu**	**16.97**	**293**	P	**Pn**	**14 37 49.4**	**-0.5**
SBUM	**Sibu**	**16.97**	**293**		**Pn**	**14 37 49.0**	**-1.0**
SBUM	**Sibu**	**16.97**	**293**	P	**Pn**	**14 37 48.5**	**-1.4**
	comp=Z,21nm,0.9s						
COEN	**Coen**	**17.91**	**123**	P	**Pn**	**14 37 59.3**	**-1.7**
QIS	**Mount Isa**	**19.78**	**145**	P	**P**	**14 38 20.2**	**+3.2**
AS31	**Alice Springs**	**20.07**	**163**	P	**P**	**14 38 21.2**	**+1.1**
ASAR	**Alice Springs**	**20.07**	**163**	P	**P**	**14 38 21.2**	**+1.1**
	comp=Z,0.9nm,0.3s,baz=344,slow=12,SNR=47						
ASAR				S	**S**	**14 41 50.1**	**+2.0**
	comp=Z,2.7nm,0.9s,baz=350,slow=21,SNR=12						
	comp=Z,0.9nm,0.3s						
BBJI	**Bungbulang**	**20.27**	**260**	P	**P**	**14 38 23.2**	**+1.0**
BBJI	**Bungbulang**	**20.27**	**260**		**P**	**14 38 19.9**	**-2.4**
BBJI				IAmb	IAmb	14 38 21.3	
	comp=Z,7.6nm,0.6s						
MEEK	**Meekatharra**	**23.82**	**201**	P	**P**	**14 38 57.5**	**+2.5**
KULM	**Kulim**	**28.75**	**289**	P	**P**	**14 39 39.8**	**+0.6**
KULM				IAmb	IAmb	14 39 40.6	
	comp=Z,9.2nm,1.1s						
BBOO	**Buckleboo**	**29.33**	**166**	P	**P**	**14 39 46.1**	**+2.1**
STKA	**Stephens Creek**	**30.28**	**156**	P	P	14 39 55.0	+2.8
	comp=Z,1.2nm,0.5s,baz=340,slow=9.1,SNR=6.7						
	comp=Z,1.2nm,0.5s						
STKA	**Stephens Creek**	**30.28**	**156**	P	**P**	**14 39 54.3**	**+2.1**
CMAR	**Chiang Mai Arr**	**36.37**	**309**	P	**P**	**14 40 46.7**	**+1.9**
	comp=Z,2.6nm,0.5s,baz=135,slow=7.2,SNR=23						
	comp=Z,2.6nm,0.5s						
CHTO	**Chiang Mai**	**36.58**	**310**	P	**P**	**14 40 47.2**	**+0.7**
CHTO				IAmb	IAmb	14 40 49.0	
	comp=Z,5.8nm,0.7s						
CHTO	**Chiang Mai**	**36.58**	**310**	P	**P**	**14 40 48.1**	**+1.5**
KSRS	**Korea Array**	**41.61**	**0**	P	**P**	**14 41 28.6**	**+1.0**
	comp=Z,1.1nm,0.4s,baz=178,slow=9.9,SNR=7.5						
	comp=Z,1.1nm,0.4s						
JKA	**Kamikawa-asahi**	**50.07**	**14**	P	**P**	**14 42 34.8**	**+1.6**
EVN	**Everest**	**50.90**	**312**	P	**P**	**14 42 41.5**	**+1.0**
EVN				IAmb	IAmb	14 42 42.5	
	comp=Z,5.9nm,0.5s						
MKAR	**Makanchi Array**	**64.84**	**327**	P	**P**	**14 44 17.0**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=116,slow=7.6,SNR=11						
	comp=Z,0.4nm,0.3s						
MKAR	**Makanchi Array**	**64.84**	**327**	P	**P**	**14 44 16.9**	**+1.2**
KURBB	**Kurchatov Arra**	**69.13**	**329**	P	**P**	**14 44 42.8**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=135,slow=5.1,SNR=8.6						
	comp=Z,0.6nm,0.7s						
KURK	**Kurchatov**	**69.14**	**329**	P	**P**	**14 44 43.9**	**+1.4**
KURK				IAmb	IAmb	14 44 50.8	
	comp=Z,2.6nm,1.2s						
BVAR	**Borovoye Array**	**74.68**	**328**	P	**P**	**14 45 16.2**	**+1.0**
	comp=Z,0.6nm,0.8s,baz=111,slow=7.9,SNR=2.7						
	comp=Z,0.6nm,0.8s						
TIXI	**Tiksi**	**75.88**	**0**	P	**P**	**14 45 23.4**	**+1.8**
TIXI				IAmb	IAmb	14 45 37.5	
	comp=Z,3.8nm,1.4s						
MAW	**Mawson**	**76.59**	**201**	P	**P**	**14 45 27.3**	**+1.6**
DES	**Desert**	**79.06**	**69**	P	**P**	**14 45 41.0**	**+0.6**
AB31	**Akbulak array**	**79.09**	**322**	P	**P**	**14 45 41.2**	**+1.4**
ABKAR	**Akbulak array**	**79.09**	**322**	P	**P**	**14 45 41.1**	**+1.3**
D20K	**Etivluk River**	**88.85**	**21**	P	**P**	**14 46 30.4**	**+2.1**
D20K				IAmb	IAmb	14 47 08.8	
	comp=Z,4.4nm,1.4s						

*SOME **29** 14:41:54.9,39.°92N×77.°32E,h10km*
*KRNET **29** 14:41:55.8±0.1,39.°95N×77.°32E,h9km,mb3.1*
*NNC **29** 14:41:58.0±1.3,40.°06N×77.°37E,h0km,mb3.5,mpv3.1, Error ellipse: s-maj=9.3km s-min=7.2km az=156.0*

ISC 29 14:41:58.7±1.8,**40.°02N**±0.°08×**77.°34E**±0.°05,**h10**km,**n35,**
σ1ᵏ31/55,**21C-13D,Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNKS	**Jany-Kuch**	**1.67**	**309**	⇑*i*P	**Pn**	**14 42 27.0**	**-1.3**
JNKS				⇑*i*S	**Sn**	**14 42 49.7**	**-0.1**
NRN	**Naryn**	**1.75**	**325**	⇑*i*P	**Pn**	**14 42 28.7**	**-0.7**
NRN				⇑*i*S	**Sb**	**14 42 53.2**	**0.0**
TARG	**Taragay, Kyrgy**	**1.75**	**11**	⇓*i*P	**Pn**	**14 42 29.3**	**-0.2**
TARG				⇓*i*S	**Sb**	**14 42 53.9**	**+0.5**
KDJ	**Kajisay**	**2.12**	**357**	⇑*i*P	**Pn**	**14 42 34.6**	**+0.2**
KDJ				⇑*i*S	**Sb**	**14 43 03.0**	**-0.7**
ULHL	**Ulahol**	**2.38**	**340**	⇓*i*P	**Pn**	**14 42 38.2**	**+0.2**
ULHL				⇓*i*S	**Sn**	**14 43 09.2**	**+1.9**
BOOM	**Boomskoye usch**	**2.69**	**337**	⇓*i*P	**Pn**	**14 42 42.6**	**+0.4**
BOOM				⇓*i*S	**Sn**	**14 43 16.6**	**+1.7**
SALK	**Salom-Alik**	**2.82**	**289**	⇑*i*P	**Pn**	**14 42 43.7**	**-0.3**
SALK				⇑*i*S	**Sn**	**14 43 18.8**	**+0.6**
ARLS	**Aral**	**2.94**	**310**	⇑*i*P	**Pn**	**14 42 45.4**	**-0.2**
ARLS				⇑*i*S	**Sn**	**14 43 21.7**	**+0.7**
SFK	**Sufi-Kurgan**	**2.95**	**271**	⇑*i*P	**Pn**	**14 42 45.1**	**-0.7**
SFK				⇑*i*S	**Sn**	**14 43 21.3**	**-0.1**
TNSS	**Tian-Shan**	**3.03**	**355**	Pg	**Pb**	**14 42 52.7**	**-0.4**
	1.9nm,0.6s						
TNSS				Lg	Lg	14 43 34.2	
	5.8nm,0.4s						
TNSS	**Tian-Shan**	**3.03**	**355**	*e*P	**Pb**	**14 42 52.7**	**-0.4**
	1.9nm,0.6s						
TNSS				*e*S	**Sg**	**14 43 34.2**	**-2.0**
	5.8nm,0.4s						
UCH	**Uchtor**	**3.07**	**317**	⇑*i*P	**Pn**	**14 42 47.9**	**+0.1**
UCH				⇑*i*S	**Sn**	**14 43 25.6**	**+0.8**
SATY	**Saty**	**3.15**	**14**	Pg	**Pb**	**14 42 54.0**	**-0.8**
	12nm,0.3s						
SATY				Lg	Lg	14 43 36.1	
	18nm,0.5s						
MDOK	**Medeo**	**3.15**	**356**	Pg	**Pb**	**14 42 54.9**	**-0.1**
	3.3nm,0.3s						
MDOK				Lg	Lg	14 43 37.6	
	29nm,0.4s						
TKM2	**Tokmak 2**	**3.19**	**336**	⇓*i*P	**Pn**	**14 42 49.5**	**+0.4**
TKM2				⇓*i*S	**Sn**	**14 43 28.5**	**+1.3**
KBK	**Karagaybulak**	**3.19**	**326**	⇑*i*P	**Pn**	**14 42 49.5**	**+0.3**
KBK				⇑*i*S	**Sn**	**14 43 28.5**	**+1.1**
KST	**Kastek**	**3.20**	**342**	Pg	**Pb**	**14 42 56.7**	**+1.0**
	2.2nm,0.2s						
KST				Lg	Lg	14 43 41.3	
	7.4nm,0.5s						
KST	**Kastek**	**3.20**	**342**	*e*P	**Pb**	**14 42 56.7**	**+1.0**
	2.2nm,0.2s						
KST				*e*S	**Sg**	**14 43 41.3**	**-0.2**
	7.4nm,0.5s						
KNDC	**Almaty**	**3.21**	**355**	⇑Pg	**Pb**	**14 42 54.0**	**-1.9**
	5.8nm,0.3s						
KNDC				⇑Lg	Lg	14 43 39.3	
	43nm,0.5s						
KOTS	**Kotyrbulak**	**3.22**	**357**	Pg	**Pb**	**14 42 56.0**	**-0.1**
	8.6nm,0.3s						
KOTS				Lg	Lg	14 43 39.8	
	23nm,0.3s						
KOTS	**Kotyrbulak**	**3.22**	**357**	*e*P	**Pb**	**14 42 56.0**	**-0.1**
	8.6nm,0.3s						
KOTS				*e*S	**Sg**	**14 43 39.8**	**-2.4**
	23nm,0.3s						
UZB	**Uzynbulak**	**3.38**	**21**	Pg	**Pb**	**14 42 58.6**	**-0.1**
	5.7nm,0.3s						
UZB				Lg	Lg	14 43 44.1	
	10nm,0.4s						
UZB	**Uzynbulak**	**3.38**	**21**	*e*P	**Pb**	**14 42 58.6**	**-0.1**
	5.7nm,0.3s						
UZB				*e*S	**Sg**	**14 43 44.1**	**-3.0**
	10nm,0.4s						
AAK	**Ala-Archa**	**3.38**	**322**	⇓Pn	**Pn**	**14 42 53.9**	**+2.2**
	0.6nm,0.5s						
AAK				⇓Lg	Lg	14 43 43.8	
	11nm,0.9s						
AAK	**Ala-Archa**	**3.38**	**322**	⇓*i*P	**Pn**	**14 42 51.9**	**+0.1**
AAK				⇓*i*S	**Sn**	**14 43 32.9**	**+0.8**
DGS	**Degeres**	**3.43**	**340**	Pg	**Pb**	**14 43 00.2**	**+0.5**
	4.6nm,0.5s						
DGS				Lg	Lg	14 43 46.9	
	8.8nm,0.4s						
DGS	**Degeres**	**3.43**	**340**	*e*P	**Pb**	**14 43 00.1**	**+0.5**
	4.6nm,0.5s						
DGS				*e*S	**Sg**	**14 43 46.9**	**-2.0**
	8.8nm,0.4s						
KURS	**Kuram**	**3.53**	**10**	Pg	**Pb**	**14 43 00.6**	**-0.6**
	4.1nm,0.5s						
KURS				Lg	Lg	14 43 48.0	
	3.0nm,0.4s						
KPKS	**Kokpek**	**3.59**	**16**	Pg	**Pb**	**14 43 01.7**	**-0.7**
	0.2nm,0.1s						
KPKS				Lg	Lg	14 43 49.8	
	14nm,0.6s						
KPKS	**Kokpek**	**3.59**	**16**	*e*P	**Pb**	**14 43 01.7**	**-0.7**
	0.2nm,0.1s						
KPKS				*e*S	**Sb**	**14 43 49.8**	**+3.7**
	14nm,0.6s						
PDGK	**Podgornoye**	**3.68**	**25**	⇓Pn	**Pn**	**14 42 56.0**	**+0.2**
	1.1nm,0.6s						
PDGK				⇑Lg	Lg	14 43 53.7	
	11nm,0.8s						
MRKS	**Merke**	**4.12**	**313**	Pg	**Pb**	**14 43 11.8**	**+0.4**
	2.4nm,0.5s						
MRKS				Lg	Lg	14 44 07.4	
	4.0nm,0.4s						
MRKS	**Merke**	**4.12**	**313**	*e*P	**Pb**	**14 43 11.8**	**+0.4**
	2.4nm,0.5s						
MRKS				*e*S	**Sg**	**14 44 07.4**	**-3.8**
	4.0nm,0.4s						
KNOS	**Konyrlen**	**4.55**	**17**	Pg	**Pb**	**14 43 20.6**	**+1.8**
	2.3nm,0.6s						
KNOS				Lg	Lg	14 44 21.7	
	3.0nm,0.3s						
KK31	**Karatay Array**	**5.98**	**303**	⇑Pg	**Pb**	**14 43 45.6**	**+2.5**
	0.3nm,0.5s,baz=170,slow=3.6,SNR=4.8						
KK31				⇑Lg	Lg	14 45 03.9	
	1.1nm,0.6s,baz=112,slow=26,SNR=3.9						

*SKHL **29** 14:59:50.7±0.4,45.°20N×148.°90E,h99km±8km,mb4.4/3, msh5.2/4*
*JMA **29** 14:59:51.7±0.8,45.°3N±.°3×148.°9E±.°,h30km,MV3.6/11, NEAR ETOROFU ISLAND*

ISC 29 14:59:51.8±3.8,**45.°2N**±0.°1×**148.°8E**±0.°3,**h100**km,**n15,**
σ2ᵏ49/21,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.69**	**276**	*e*P	**Pn**	**15 00 08.9**	**-0.2**
KUR				AMB	AMB	15 00 09.3	
	80nm,0.2s						
KUR				*i* S	**Sn**	**15 00 21.3**	**-0.7**
KUR				A	A	15 00 22.0	
	540nm,0.3s						
KUR				A	A	15 00 22.0	
	260nm,0.3s						
SHO	**Shikotan**	**1.94**	**229**	*e*P	Pn	15 00 33.3	+10
SHO				AMB	AMB	15 00 36.8	
	10.0nm,0.2s						
SHO				*e*S	**Sn**	**15 00 56.2**	**+8.5**
SHO				A	A	15 01 00.2	
	130nm,0.3s						
SHO				A	A	15 01 00.2	
	80nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.41**	**243**	*e*P	**Pn**	**15 00 30.0**	**+0.3**
YUK				AMB	AMB	15 00 32.2	
	40nm,0.2s						
YUK				*i* S	**Sn**	**15 00 58.5**	**-0.2**
YUK				A	A	15 01 07.1	
	140nm,0.3s						
YUK				A	A	15 01 07.1	
	170nm,0.3s						
GLVR	**Golovnino**	**2.77**	**240**	*e*P	**Pn**	**15 00 35.8**	**+1.3**
GLVR				AMB	AMB	15 00 39.9	
	20nm,0.2s						
GLVR				*i* S	**Sn**	**15 01 09.7**	**+2.4**
GLVR				A	A	15 01 16.6	
	120nm,0.2s						
GLVR				A	A	15 01 16.6	
	160nm,0.2s						
NEM2	**Nemuro 2**	**2.86**	**232**	P	**Pn**	**15 00 35.0**	**-0.7**
NEM2				*e*S	**Sn**	**15 01 07.1**	**-2.4**
NMR	**Nemuro--Hokkai**	**2.87**	**232**	*e*P	**Pn**	**15 00 34.8**	**-0.9**
NMR				*i* S	**Sn**	**15 01 07.9**	**-1.7**
JRA	**Rausu**	**2.93**	**246**	*e*P	**Pn**	**15 00 37.6**	**+1.1**
JNK	**Nakash**	**3.35**	**243**	P	**Pn**	**15 00 42.9**	**+0.7**
AKK	**Akkeshi**	**3.59**	**235**	*e*P	**Pn**	**15 00 44.7**	**-0.8**
JAK	**Akkeshi**	**3.69**	**235**	P	**Pn**	**15 00 46.5**	**-0.2**
JAK				*e*S	**Sn**	**15 01 27.2**	**-2.1**
JAR	**Ashorobuto**	**4.10**	**245**	*e*P	**Pn**	**15 00 53.7**	**+1.5**
YSS	**Yuzhno-Sakhali**	**4.59**	**295**	*e*P	**Pn**	**15 00 59.2**	**+0.3**
JCH	**Churui**	**4.71**	**239**	P	**Pn**	**15 01 00.2**	**-0.3**
JCH				*e*S	**Sn**	**15 01 51.2**	**-2.8**
JNBK	**Urakawa-nobuka**	**5.27**	**239**	P	**Pn**	**15 01 05.8**	**-2.3**
JANG	**Nango**	**7.21**	**231**	*e*S	Sn	15 02 45.7	-9.1

*NIED **29** 15:01:34.5,24.°18N×124.°22E,h13km,MW3.8,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr=3.04; Mθθ2.53; Mφφ0.51; Mrθ3.25; Mθφ-4.27; Mrφ0.05; Fault plane solution: M₀5.96000×10¹⁴ NP1: φs164.00000°,δ44.00000°,λ-30.00000°. NP2: φs277.00000°,δ70.00000°,λ-130.00000°.*
*JMA **29** 15:01:34.5±

ILAR	**Eielson Array**	**67.96**	**28**	P		**P**		**15 12 35.4**	**+1.3**
	0.3nm,0.8s,baz=254,slow=5.1,SNR=6.6 0.3nm,0.8s								
FINES	**FINESS Array B**	**72.88**	**330**	P		**P**		**15 13 05.5**	**+1.3**
	2.5nm,1.0s,baz=141,slow=6.9,SNR=3.7 2.5nm,1.0s								
NOA	**NORSAR Array B**	**79.55**	**333**	P		**P**		**15 13 41.0**	**-1.2**
	1.7nm,1.0s,baz=56,slow=9.5,SNR=2.2 1.7nm,1.0s								

KRSC 29 15:05:57.9±1.6, 49°15'N×158°04'E, h32km±41km, MI3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.98**	**322**	*eP*	Pn	15 06 29.6	+0.5
SKR				*eS*	Sn	15 06 53.3	+0.6
PAU	**Pauzhetka**	**2.45**	**342**	*eS*	Sb	15 07 07.8	-3.1
KDTR	**Khodutka, Kamc**	**2.66**	**0**	*eP*	Pn	15 06 41.6	+3.1
KDTR				*eS*	Sn	15 07 13.3	+3.7
ASAK	**Asacha**	**3.24**	**358**	*eP*	Pb	15 06 50.6	-4.1
RUS	**Russkaya**	**3.30**	**5**	*eP*	Pn	15 06 51.1	+3.8
RUS				*eS*	Sb	15 07 30.5	-4.9
MTVR	**Mutnovka**	**3.34**	**1**	*eP*	Pn	15 06 51.7	+3.7
MTVR				*eS*	Sb	15 07 32.2	-4.3
GRL	**Gorelyy**	**3.41**	**0**	*eP*	Pn	15 06 52.9	+4.1
GRL				*eS*	Sb	15 07 33.9	-4.6
DALK	**Dalny**	**3.91**	**6**	*eP*	Pn	15 06 60.0	+4.3
DALK				*eS*	Sn	15 07 45.8	+5.4
AVH	**Avacha**	**4.14**	**6**	*eP*	Pn	15 07 03.8	+4.9
SMAR	**Somma**	**4.15**	**6**	*eP*	Pn	15 07 03.7	+4.6
KOK	**Koryaka**	**4.17**	**5**	*eP*	Pn	15 07 04.2	+4.9
KRX	**Arik**	**4.23**	**5**	*eP*	Pn	15 07 05.5	+5.3
KBTR	**Krutoberegovo**	**7.64**	**20**	*eP*	Pn	15 07 51.1	+4.3

KRSC 29 15:21:59.9±2.1, 49°31'N×158°89'E, h35km±55km, MI3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.26**	**309**	*eP*	Pn	15 22 36.0	+1.3
SKR				*eS*	Sn	15 23 01.9	+0.6
PAU	**Pauzhetka**	**2.54**	**329**	*eS*	Sb	15 23 12.6	-2.9
KDTR	**Khodutka, Kamc**	**2.56**	**349**	*eP*	Pn	15 22 41.6	+2.8
KDTR				*eS*	Sn	15 23 12.0	+3.3
RUS	**Russkaya**	**3.14**	**356**	*eP*	Pn	15 22 50.1	+3.3
ASAK	**Asacha**	**3.14**	**349**	*eP*	Pb	15 22 51.9	-3.1
MTVR	**Mutnovka**	**3.21**	**352**	*eP*	Pn	15 22 51.5	+3.6
MTVR				*eS*	Sn	15 23 28.9	+3.8
GRL	**Gorelyy**	**3.29**	**351**	*eP*	Pn	15 22 52.9	+3.9
GRL				*eS*	Sn	15 23 31.1	+4.1
KRMR	**Karymshinskiy**	**3.56**	**353**	*eP*	Pn	15 22 57.1	+4.6
KRMR				*eS*	Sn	15 23 38.8	+5.4
DALK	**Dalny**	**3.73**	**359**	*eP*	Pn	15 22 58.6	+3.7
UGLR	**Uglovaya**	**3.91**	**359**	*eP*	Pb	15 23 03.4	-4.7
SMAR	**Somma**	**3.96**	**359**	*eP*	Pn	15 23 02.9	+4.5
AVH	**Avacha**	**3.96**	**359**	*eP*	Pb	15 23 03.7	-5.3
KOK	**Koryaka**	**3.99**	**358**	*eP*	Pn	15 23 03.4	+4.8
KRX	**Arik**	**4.06**	**358**	*eP*	Pn	15 23 03.6	+4.0
GNL	**Ganaly**	**4.43**	**353**	*eP*	Pn	15 23 10.2	+5.4
KBTR	**Krutoberegovo**	**7.31**	**18**	*eP*	Pn	15 23 48.7	+4.6

IDC 29 15:23:03.9±27.0, 18°53'S×173°31'W, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=504.1km s-min=167.2km az=75.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**38.13**	**261**	P	P	15 30 26.0	+0.9
	3.1nm,0.9s,baz=102,slow=9.3,SNR=1.6 3.1nm,0.9s						
STKA	**Stephens Creek**	**42.62**	**243**	P	P	15 31 01.9	-0.3
	0.6nm,0.4s,baz=82,slow=7.1,SNR=1.4 0.6nm,0.4s						
WRA	**Warramunga Arr**	**49.28**	**259**	P	P	15 31 54.7	-0.3
	0.8nm,0.3s,baz=97,slow=7.5,SNR=66 0.8nm,0.3s						
ASAR	**Alice Springs**	**49.29**	**254**	P	P	15 31 54.6	-0.4
	0.7nm,0.5s,baz=88,slow=8.3,SNR=44 0.7nm,0.5s						

*IDC **29** 16:08:11.9±2.1, 24°.66S×179°.98E, h498km±20km, mb3.2/7, mbtmp4.1/9, Error ellipse: s-maj=26.5km s-min=20.4km az=137.0*
*NEIC **29** 16:08:12.4±1.2, 24°.8S±0°.1×180°.0E±0°.1, h499km±6km, mb4.3/23, Error ellipse: s-maj=19.1km s-min=17.6km az=61.0*

ISC 29 16:08:12.2±0.7, 24°.74S±0°.09×179°.9E±0°.1, h500km, n39, σ0s58/39, mb4.2/20, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.89**	**157**	P	**P**	**16 09 36.9**	**-1.1**
MSVF	**Nonsavu**	**7.19**	**345**	P	**P**	**16 10 00.5**	**0.0**
	4.7nm,0.8s,baz=207,slow=22,SNR=4.3						
URZ	**Urewera**	**13.69**	**189**	P	**P**	**16 11 08.8**	**+0.3**
	9.7nm,1.0s,baz=62,slow=16,SNR=2.1						
BKZ	**Black Stump Fm**	**14.68**	**191**	P	**P**	**16 11 19.4**	**+0.5**
MSWZ	**Moikau Station**	**17.09**	**192**	P	**P**	**16 11 43.9**	**+0.1**
QRZ	**Quartz Range**	**17.20**	**199**	P	**P**	**16 11 44.8**	**-0.1**
RPZ	**Rata Peaks**	**20.28**	**199**	P	**P**	**16 12 13.4**	**+0.2**
CTAO	**Charters Tower**	**31.43**	**272**	P	**P**	**16 13 52.7**	**+0.7**
CTAO				IAmb	IAmb	16 13 52.8	
	comp=Z,29nm,1.4s						
STKA	**Stephens Creek**	**34.37**	**249**	P	**P**	**16 14 17.4**	**+0.6**
	comp=Z,1.9nm,0.4s,baz=90,slow=10,SNR=9.7 comp=Z,1.9nm,0.4s						
PMG	**Port Moresby**	**34.72**	**290**	P	**P**	**16 14 20.0**	**+0.1**
PMG				IAmb	IAmb	16 14 51.3	
	comp=Z,31nm,1.4s						
INKA	**Innaminka**	**35.18**	**256**	P	**P**	**16 14 24.2**	**+0.6**
BBOO	**Buckleboo**	**39.07**	**248**	P	**P**	**16 14 55.4**	**-0.2**
BBOO				IAmb	IAmb	16 15 32.6	
	comp=Z,20nm,1.4s						
ASAR	**Alice Springs**	**41.85**	**262**	P	**P**	**16 15 18.0**	**0.0**
	comp=Z,2.6nm,0.8s,baz=90,slow=6.9,SNR=85 comp=Z,2.6nm,0.8s						
WR8	**Warramunga Arr**	**42.15**	**267**	P	**P**	**16 15 19.7**	**-0.8**
WR8				IAmb	IAmb	16 15 20.3	
	comp=Z,4.1nm,0.6s						
WRAB	**Tennant Creek**	**42.29**	**267**	P	**P**	**16 15 20.9**	**-0.7**
WRAB				IAmb	IAmb	16 15 21.3	
	comp=Z,5.9nm,0.6s						
WB0	**Warramunga Arr**	**42.30**	**267**	P	**P**	**16 15 20.9**	**-0.6**
WB0				IAmb	IAmb	16 15 21.8	
	comp=Z,7.7nm,0.6s						
WRA	**Warramunga Arr**	**42.30**	**267**	P	**P**	**16 15 21.3**	**-0.3**
	comp=Z,5.7nm,0.6s,baz=98,slow=6.8,SNR=115						
WRA				ScP	**ScP**	**16 20 08.5**	**+1.7**
	comp=Z,0.9nm,0.9s,baz=95,slow=3.7,SNR=7.2 comp=Z,5.7nm,0.6s						
WRA	**Warramunga Arr**	**42.30**	**267**	P	**P**	**16 15 21.1**	**-0.5**
FORT	**Forrest**	**45.97**	**250**	P	**P**	**16 15 49.3**	**-0.6**
FORT				IAmb	IAmb	16 16 11.6	
	comp=Z,6.9nm,1.0s						
KNRA	**Kununurra**	**48.63**	**271**	P	**P**	**16 16 10.0**	**-0.2**
KNRA				IAmb	IAmb	16 16 52.5	
	comp=Z,16nm,1.3s						
PSA00	**Pilbara Seismi**	**54.96**	**260**	P	**P**	**16 16 55.0**	**-0.8**
MBWA	**Marble Bar**	**55.18**	**261**	P	**P**	**16 16 56.4**	**-0.9**
MBWA				IAmb	IAmb	16 17 40.2	
	comp=Z,21nm,1.2s						
MORW	**Morawa**	**56.54**	**250**	P	**P**	**16 17 06.6**	**-0.2**
MORW				IAmb	IAmb	16 17 41.5	
	comp=Z,24nm,1.4s						
LUWI	**Luwuk**	**59.97**	**284**	P	**P**	**16 17 29.5**	**-0.7**
JCJ	**Chichijima**	**63.10**	**322**	P	**P**	**16 17 50.4**	**0.0**
QSPA	**South Pole Qui**	**65.35**	**180**	P	**P**	**16 18 05.0**	**+0.7**
	comp=Z,1.1nm,0.8s,baz=296,slow=1.0,SNR=1.7 comp=Z,1.1nm,0.8s						
QSPA	**South Pole Qui**	**65.35**	**180**	P	**P**	**16 18 04.8**	**+0.5**
KKM	**Kota Kinabalu**	**69.09**	**287**	P	**P**	**16 18 28.0**	**-0.2**
KKM				IAmb	IAmb	16 18 32.5	
	comp=Z,20nm,1.1s						
MJAR	**Matsushiro Arr**	**72.55**	**326**	P	**P**	**16 18 47.9**	**-0.1**
MJAR				IAmb	IAmb	16 18 54.0	
	comp=Z,6.8nm,1.5s						
MAJO	**Matsushiro**	**72.56**	**326**	P	**P**	**16 18 47.8**	**-0.2**
MAJO				IAmb	IAmb	16 19 24.1	
	comp=Z,7.2nm,1.1s						
KSRS	**Korea Array**	**78.85**	**320**	P	**P**	**16 19 22.6**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=115,slow=4.2,SNR=2.7 comp=Z,0.5nm,0.6s						
GSI	**Gunungsitoli**	**83.60**	**274**	P	**P**	**16 19 48.5**	**+0.5**
KVN	**Kaiserville**	**85.89**	**44**	P	**P**	**16 19 59.2**	**+0.3**
CMAR	**Chiang Mai Arr**	**89.76**	**290**	P	**P**	**16 20 17.8**	**+0.5**
	comp=Z,0.9nm,0.9s,baz=144,slow=4.3,SNR=5.6 comp=Z,0.9nm,0.9s						
TXAR	**Lajitas Array**	**90.92**	**58**	P	**P**	**16 20 22.6**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=213,slow=6.0,SNR=4.2 comp=Z,0.3nm,0.7s						
HFS	**Hagfors**	**143.35**	**348**	PKP	PKPab	16 26 45.4	-1.3
	comp=Z,1.5nm,0.4s,baz=50,slow=4.6,SNR=11						
AKASG	**Malin Array Be**	**145.64**	**327**	PKPbc	**PKPdf**	**16 26 52.8**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=49,slow=1.1,SNR=4.6						
MMAI	**Mount Meron Ar**	**147.99**	**293**	PKPbc	**PKPbc**	**16 27 01.2**	**-0.1**
	comp=Z,1.3nm,0.4s,baz=120,slow=5.7,SNR=2.4						
BRTR	**Keskin Array B**	**148.03**	**306**	PKPbc	**PKPbc**	**16 27 00.6**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=112,slow=3.1,SNR=5.7						

IDC 29 16:28:49.7±1.3, 2°.56S×128°.64E, h0km, mb3.3/3, mbtmp3.2/5, ML2.7/2, MS2.8/1, Error ellipse: s-maj=41.6km s-min=24.6km az=71.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.12**	**57**	Pn	Pn	16 29 40.2	-0.1
	0.9nm,0.3s,baz=93,slow=24,SNR=6.7						
SIJI				Sn	Sn	16 30 09.3	-9.0
	0.8nm,0.3s,baz=202,slow=23,SNR=6.6 3.3nm,0.5s						
BATI	**Baumata**	**9.06**	**213**	LR	LR	16 34 52.4	
	comp=Z,69nm,20.9s,baz=312,slow=40						
WRA	**Warramunga Arr**	**18.15**	**163**	P	Pn	16 33 02.9	-0.6
	baz=344,slow=12,SNR=1.7 0.4nm,1.1s						
ASAR	**Alice Springs**	**21.59**	**167**	P	P	16 33 41.8	+0.4
	0.3nm,0.7s,baz=351,slow=11,SNR=8.2 0.3nm,0.7s						
MKAR	**Makanchi Array**	**63.79**	**326**	P	P	16 39 23.2	-0.6
	0.3nm,0.3s,baz=119,slow=8.5,SNR=5.9 0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**68.04**	**328**	P	P	16 39 51.6	+0.6
	0.1nm,0.4s,baz=119,slow=6.2,SNR=4.7 0.1nm,0.4s						

IDC 29 16:30:00.4±5.2, 28°.07S×176°.71W, h0km, mb3.6/2, mbtmp3.6/2, Error ellipse: s-maj=263.7km s-min=44.0km az=156.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**44.42**	**264**	P	P	16 38 13.0	-0.2
	0.3nm,0.6s,baz=107,slow=7.1,SNR=13 0.3nm,0.6s						
WRA	**Warramunga Arr**	**45.20**	**269**	P	P	16 38 19.6	+0.1
	0.8nm,0.6s,baz=109,slow=7.9,SNR=12 0.8nm,0.6s						
FINES	**FINESS Array B**	**143.32**	**342**	PKhKP	PKPpre	16 49 31.1	
	1.5nm,0.8s,baz=85,slow=1.5,SNR=5.8						
HFS	**Hagfors**	**147.16**	**350**	PKPbc	PKPbc	16 49 45.4	+0.5
	3.7nm,1.0s,baz=61,slow=4.1,SNR=5.3						
AKASG	**Malin Array Be**	**150.07**	**326**	PKPbc	PKPbc	16 49 51.0	-1.7
	1.0nm,0.6s,baz=47,slow=3.2,SNR=6.7						

KRSC 29 17:02:41.1±0.6, 55°.67N×164°.59E, h50km±16km, MI3.9, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.91**	**120**	*eP*	Pn	17 02 59.5	+1.9
BKI				*eS*	Sn	17 03 11.7	+1.9
KBTR	**Krutoberegovo**	**1.14**	**299**	*eP*	Pn	17 03 01.7	+1.1
KBTR				*eS*	Sn	17 03 15.3	+0.2
KBG	**Krutoberegovo**	**1.21**	**300**	*eP*	Pn	17 03 02.8	+1.2
KBG				*eS*	Sn	17 03 18.0	+1.0
SMKR	**Semkarok**	**1.97**	**299**	*eP*	Pn	17 03 15.2	+3.1
SMKR				*eS*	Sn	17 03 39.2	+3.5
KLY	**Klyuchi**	**2.31**	**288**	*eP*	Pn	17 03 18.6	+2.0
TUMD	**Tumrok D**	**2.44**	**261**	*eP*	Pn	17 03 22.0	+3.6
KMNR	**Kamenistaya**	**2.47**	**274**	*eP*	Pn	17 03 21.1	+2.2
KOZ	**Kozyrevsk**	**2.69**	**280**	*eP*	Pn	17 03 26.1	+4.3
ESO	**Esso**	**3.34**	**277**	*eP*	Pn	17 03 33.8	+3.1
OSSR	**Ossora**	**3.68**	**348**	*eP*	Pn	17 03 38.2	+2.8
SDLR	**Sedlovina**	**4.10**	**237**	*eP*	Pn	17 03 44.7	+3.4
SMAR	**Somma**	**4.15**	**237**	*eP*	Pn	17 03 45.6	+3.5
KRX	**Arik**	**4.17**	**239**	*eP*	Pn	17 03 45.8	+3.6
UGLR	**Uglovaya**	**4.17**	**236**	*eP*	Pn	17 03 46.0	+3.7
AVH	**Avacha**	**4.18**	**237**	*eP*	Pn	17 03 46.5	+4.1
KOK	**Koryaka**	**4.21**	**238**	*eP*	Pn	17 03 47.0	+4.2
DALK	**Dalny**	**4.32**	**235**	*eP*	Pn	17 03 47.3	+3.1
GNL	**Ganaly**	**4.34**	**246**	*eP*	Pn	17 03 48.4	+3.8
KRMR	**Karymshinskiy**	**4.74**	**236**	*eP*	Pn	17 03 54.1	+4.2
RUS	**Russkaya**	**4.83**	**230**	*eP*	Pn	17 03 54.2	+3.0
MTVR	**Mutnovka**	**4.94**	**232**	*eP*	Pn	17 03 56.4	+3.6
GRL	**Gorelyy**	**4.95**	**234**	*eP*	Pn	17 03 56.7	+3.8
ASAK	**Asacha**	**5.14**	**233**	*eP*	Pn	17 03 59.7	+4.2

*OTT **29** 17:04:46.6±0.0, 43°.44N×78°.36W, h2km, MN2.8/22, Sothern Lake Ontario 57km south from Port Hope, On Eastern Background Seismic Zone.*
*NEIC **29** 17:04:46.6±0.8, 43°.43N±0°.02×78°.36W±0°.03, h5km±1km, mb_Lg2.6/6, ML2.3/8, Error ellipse: s-maj=3.8km s-min=3.1km az=287.0*

ISC 29 17:04:46.0±1.1, 43°.44N±0°.02×78°.36W±0°.02, h2km±10km, n47, σ0s65/71, New York

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEDO	**Medina**	**0.29**	**195**	Pg	**Pg**	**17 04 51.5**	**0.0**
MEDO				Sg	**Sg**	**17 04 55.2**	**+0.1**
MEDO				IAML		17 04 55.6	
	comp=E,571nm,0.1s						
MEDO	**Medina**	**0.29**	**195**	PG	**Pg**	**17 04 51.5**	**0.0**
MEDO				SG	**Sg**	**17 04 55.3**	**+0.1**
MEDO				Trac		17 04 56.2	
	comp=E,128nm,0.0s						
J55A	**Hilton**	**0.43**	**114**	Pg	**Pg**	**17 04 54.0**	**-0.2**
J55A				IAML		17 05 00.3	
	comp=E,312nm,0.1s						
WLVO	**Wesleyville**	**0.48**	**356**	PG	**Pg**	**17 04 55.7**	**+0.5**
WLVO				SG	**Sg**	**17 05 01.8**	**+0.3**
WLVO				Trac		17 05 03.0	
	comp=E,17nm,0.0s						
DRCO	**St. Marys Ceme**	**0.50**	**330**	PG	**Pg**	**17 04 55.9**	**+0.3**
DRCO				SG	**Sg**	**17 05 02.6**	**+0.5**
DRCO				Trac		17 05 05.6	
	comp=E,28nm,0.0s						
DRWO	**Darlington Wes**	**0.51**	**328**	PG	**Pg**	**17 04 56.3**	**+0.6**
DRWO				SG	**Sg**	**17 05 03.0**	**+0.6**
DRWO				Trac		17 05 05.0	
	comp=E,48nm,0.1s						
STCO	**Saint Catharin**	**0.64**	**249**	PG	**Pg**	**17 04 58.2**	**-0.1**
STCO				SG	**Sg**	**17 05 06.6**	**+0.1**
STCO				Trac		17 05 09.4	
	comp=E,29nm,0.1s						
PKRO	**Pickering**	**0.74**	**315**	PG	**Pg**	**17 05 00.5**	**+0.4**
PKRO				SG	**Sg**	**17 05 09.9**	**+0.3**
PKRO				Trac		17 05 15.0	
	comp=E,26nm,0.1s						
EFO	**Effingham**	**0.78**	**244**	PG	**Pg**	**17 05 00.7**	**-0.3**
EFO				SG	**Sg**	**17 05 10.8**	**-0.3**
EFO				Trac		17 05 12.4	
	comp=E,10.0nm,0.1s						
MMNY	**Mt. Morris Dam**	**0.78**	**155**	Pg	**Pg**	**17 05 01.1**	**+0.1**
PECO	**Prince Edward**	**1.10**	**63**	Pg	**Pg**	**17 05 06.2**	**-0.8**
PECO				Sg	**Sg**	**17 05 20.7**	**-0.7**
PECO				IAML		17 05 22.6	
	comp=N,62nm,0.2s						
PECO	**Prince Edward**	**1.10**	**63**	PG	**Pg**	**17 05 06.3**	**-0.8**
PECO				SG	**Sg**	**17 05 21.0**	**-0.4**
PECO				Trac		17 05 25.1	
	comp=N,31nm,0.1s						
TYNO	**Tyneside**	**1.16**	**253**	PG	**Pg**	**17 05 07.6**	**-0.6**
TYNO				SG	**Sg**	**17 05 22.9**	**-0.3**
TYNO				Trac		17 05 28.8	
	comp=N,83nm,0.1s						
DELO	**Deloro Mine**	**1.20**	**26**		**Pg**	**17 05 08.4**	**-0.6**
DELO				IAML		17 05 28.5	
	comp=N,55nm,0.3s						
DELO	**Deloro Mine**	**1.20**	**26**	PG	**Pg**	**17 05 08.5**	**-0.4**
DELO				SG	**Sg**	**17 05 24.3**	**-0.2**
DELO				Trac		17 05 29.1	
	comp=N,17nm,0.1s						
ACTO	**Acton**	**1.25**	**278**	PG	**Pg**	**17 05 09.2**	**-0.7**
ACTO				SG	**Sg**	**17 05 25.6**	**-0.6**
ACTO				Trac		17 05 30.8	
	comp=N,38nm,0.1s						
L56A	**Greenwood**	**1.43**	**156**	Pg	**Pn**	**17 05 12.0**	**-0.9**
SADO	**Sadowa**	**1.44**	**337**		**Pn**	**17 05 12.4**	**-0.6**
SADO	**Sadowa**	**1.44**	**337**	PG	**Pn**	**17 05 12.7**	**-0.3**
SADO				SG	**Sb**	**17 05 31.6**	**-0.7**
SADO				Trac		17 05 34.8	
	comp=N,32nm,0.1s						
K57A	**Scipio Center**	**1.52**	**117**		**Pn**	**17 05 13.7**	**-0.5**
K57A				IAmb_Lg		17 05 37.4	
	comp=Z,13nm,0.9s						
KGNO	**Kingston**	**1.56**	**59**	PG	**Pn**	**17 05 14.9**	**+0.3**
KGNO				SG	**Sn**	**17 05 35.7**	**+0.3**
KGNO				Trac		17 05 37.6	
	comp=Z,10nm,0.0s						
J57A	**Williamstown**	**1.72**	**90**	Pn	**Pn**	**17 05 16.7**	**-0.2**
CLWO	**Collingwood**	**1.73**	**306**	PN	**Pn**	**17 05 17.5**	**+0.4**
CLWO				SN	**Sn**	**17 05 39.8**	**+0.2**
CLWO				Trac		17 05 44.2	
	comp=Z,21nm,0.1s						
ERPA	**Erie**	**1.79**	**223**	Pn	**Pn**	**17 05 17.8**	**-0.1**
PLVO	**Plevna**	**1.84**	**30**	PN	**Pn**	**17 05 18.9**	**+0.4**
PLVO				SG	**Sn**	**17 05 43.8**	**+1.4**
PLVO				Trac		17 05 46.2	
	comp=Z,20nm,0.1s						
BWLO	**Walkerton**	**2.13**	**289**	PN	**Pn**	**17 05 23.2**	**+0.7**
BWLO				SN	**Sn**	**17 05 49.2**	**-0.2**
BWLO				Trac		17 05 54.4	
	comp=Z,24nm,0.1s						
BUKO	**Buck Lake**	**2.13**	**340**	Pn	**Pn**	**17 05 23.8**	**+1.2**
BUKO	**Buck Lake**	**2.13**	**340**	PN	**Pn**	**17 05 22.9**	**+0.3**
BUKO				SN	**Sn**	**17 05 49.4**	**-0.2**
BUKO				LG	Lg	17 05 53.3	
BUKO				Trac		17 05 55.0	
	comp=Z,6.5nm,0.1s						
BINY	**Binghamton**	**2.14**	**125**	Pn	**Pn**	**17 05 24.2**	**+1.5**
PAOC	**Oil Creek Stat**	**2.16**	**207**	Pn	**Pn**	**17 05 23.9**	**+0.9**
PAOC				IAmb_Lg		17 05 56.2	
	comp=Z,26nm,0.8s						
ELFO	**Elginfield**	**2.18**	**264**	PN	**Pn**	**17 05 23.3**	**+0.2**
ELFO				SN	**Sn**	**17 05 50.4**	**-0.3**
ELFO				LG	Lg	17 05 54.8	
ELFO				Trac		17 05 56.7	
	comp=Z,25nm,0.1s						
M57A	**Sunshine Farm,**	**2.29**	**156**	Pn	**Pn**	**17 05 26.4**	**+1.7**
KLBO	**Killbear Provi**	**2.33**	**326**	PN	**Pn**	**17 05 25.2**	**0.0**
KLBO				SN	**Sn**	**17 05 54.1**	**-0.3**
KLBO				LG	Lg	17 05 59.1	
KLBO				Trac		17 06 04.9	
	comp=Z,5.8nm,0.1s						
BMRO	**Meriville Lake**	**2.36**	**300**	PN	**Pn**	**17 05 26.4**	**+0.6**
BMRO				SN	**Sn**	**17 05 54.8**	**-0.5**
BMRO				Trac		17 06 00.7	
	comp=Z,14nm,0.2s						
BMRO				LG	Lg	17 06 00.7	
PEMO	**Pembroke**	**2.37**	**19**	PN	**Pn**	**17 05 26.0**	**+0.2**
PEMO				SN	**Sn**	**17 05 55.1**	**-0.4**
PEMO				LG	Lg	17 06 00.9	
PEMO				Trac		17 06 01.6	
	comp=Z,24nm,0.2s						
BASO	**Ashfield**	**2.47**	**285**	PN	**Pn**	**17 05 27.6**	**+0.4**
BASO				SN	**Sn**	**17 05 57.0**	**-0.7**
BASO				LG	Lg	17 06 03.5	
BASO				Trac		17 06 08.4	
	comp=Z,13nm,0.2s						
KSPA	**Keystone Colle**	**2.69**	**134**	Pn	**Pn**	**17 05 31.4**	**+1.2**
CHRO	**Chalk River**	**2.69**	**15**	PN	**Pn**	**17 05 30.5**	**+0.4**
CHRO				SN	**Sn**	**17 06 03.0**	**-0.2**
CHRO				LG	Lg	17 06 09.8	
CHRO				Trac		17 06 10.5	
	comp=Z,7.4nm,0.1s						
WBO	**Williamsburg**	**2.71**	**54**	PN	**Pn**	**17 05 30.8**	**+0.4**
WBO				SN	**Sn**	**17 06 03.0**	**-0.7**
WBO				LG	Lg	17 06 10.6	
WBO				Trac		17 06 17.1	
	comp=Z,7.8nm,0.1s						
J59A	**Piesco**	**2.80**	**88**	Pn	**Pn**	**17 05 32.5**	**+0.7**
N58A	**Sunbury**	**2.87**	**154**	Pn	**Pn**	**17 05 33.5**	**+0.7**
LONY	**Lake Ozonia**	**2.96**	**65**	Pn	**Pn**	**17 05 35.1**	**+1.1**
TRY	**Troy**	**3.51**	**100**	Pn	**Pn**	**17 05 42.8**	**+1.4**
KSCT	**Kent School, K**	**3.98**	**114**	Pn	**Pn**	**17 05 48.7**	**+0.7**
HNH	**Hanover**	**4.42**	**85**	Pn	**Pn**	**17 05 54.7**	**+0.8**
P51A	**Williamsport**	**5.31**	**223**	IAmb_Lg		17 07 35.1	
	comp=Z,35nm,1.1s						
U56A	**King**	**7.26**	**193**	IAmb_Lg		17 08 48.9	
	comp=Z,7.7nm,1.2s						

IDC 29 17:23:10.5±18.0, 19°.88S×177°.76W, h500km±178km, mb2.8/4, mbtmp3.7/4, Error ellipse: s-maj=123.5km s-min=42.8km az=116.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**44.89**	**256**	P	P	17 30 40.2	+0.1
	0.5nm,0.6s,baz=88,slow=7.9,SNR=14						
ASAR				PcP	PcP	17 32 10.8	-0.6
	0.3nm,0.7s,baz=106,slow=3.8,SNR=4.7 0.5nm,0.6s						
WRA	**Warramunga Arr**	**44.92**	**261**	P	P	17 30 40.1	-0.3
	0.4nm,0.3s,baz=96,slow=7.6,SNR=36 0.4nm,0.3s						
MJAR	**Matsushiro Arr**	**69.85**	**323**	P	P	17 33 30.7	+0.2
	0.9nm,0.6s,baz=146,slow=7.2,SNR=5.2 0.9nm,0.6s						
ILAR	**Eielson Array**	**87.66**	**13**	P	P	17 35 04.6	-0.3
	0.3nm,0.8s,baz=199,slow=4.6,SNR

H10S2	**ASCENSION HYDR**	**47.22**	**143**	T		T		18 31 07.2	
	baz=253,slow=74,SNR=26								
FINES	**FINESS Array B**	**52.73**	**34**	P		**P**		**17 41 26.8**	**+0.5**
	4.1nm,0.9s,baz=244,slow=8.8,SNR=3.8								
	4.1nm,0.9s								
TXAR	**Lajitas Array**	**53.20**	**285**	P		**P**		**17 41 29.9**	**-0.5**
	1.3nm,1.2s,baz=102,slow=5.8,SNR=5.2								
	1.3nm,1.2s								
LPAZ	**La Paz**	**53.44**	**212**	P		**P**		**17 41 32.4**	**-0.3**
	1.6nm,0.8s,baz=0.1,slow=6.0,SNR=7.1								
	1.6nm,0.8s								
MLR	**Muntele Rosu**	**53.47**	**54**	P		**P**		**17 41 30.2**	**-2.0**
MLR				IAmb		IAmb		17 41 35.2	
	comp=Z,7.9nm,1.2s								
ANMO	**Albuquerque**	**53.86**	**293**	LR		LR		18 02 01.6	
	comp=Z,40nm,21.1s,baz=89,slow=33								
YNE	**Yellowstone No**	**54.34**	**306**	P		**P**		**17 41 38.8**	**+0.1**
YNE				IAmb		IAmb		17 41 46.5	
	comp=Z,4.7nm,1.0s								
BW06	**Boulder Array**	**54.43**	**303**	P		**P**		**17 41 39.2**	**-0.2**
PDAR	**Pinedale Array**	**54.43**	**303**	P		**P**		**17 41 40.0**	**+0.6**
	comp=Z,1.8nm,0.7s,baz=84,slow=7.1,SNR=15								
PDAR				LR		LR		18 04 07.1	
	comp=Z,46nm,18.7s,baz=76,slow=35								
	comp=Z,1.8nm,0.7s								
AKASG	**Malin Array Be**	**54.91**	**47**	P		**P**		**17 41 41.8**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=274,slow=7.0,SNR=5.1								
	comp=Z,0.6nm,0.6s								
YKA	**Yellowknife Ar**	**55.39**	**327**	P		**P**		**17 41 45.4**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=87,slow=6.7,SNR=4.9								
	comp=Z,0.3nm,0.8s								
HWUT	**Hardware Ranch**	**56.14**	**302**	P		**P**		**17 41 52.6**	**+1.0**
HWUT				IAmb		IAmb		17 42 03.6	
	comp=Z,4.0nm,1.1s								
DUG	**Dugway, Tooele**	**57.40**	**301**	P		**P**		**17 42 00.9**	**+0.3**
DUG				IAmb		IAmb		17 42 08.7	
	comp=Z,5.6nm,1.1s								
CCUT	**Cedar City**	**58.52**	**298**	P		**P**		**17 42 09.6**	**+1.0**
CCUT				IAmb		IAmb		17 42 17.1	
	comp=Z,4.2nm,1.0s								
BRTR	**Keskin Array B**	**60.30**	**59**	P		**P**		**17 42 21.4**	**+0.7**
	comp=Z,1.5nm,0.9s,baz=290,slow=4.5,SNR=6.9								
	comp=Z,1.5nm,0.9s								
KVN	**Kaiserville**	**61.63**	**301**			**P**		**17 42 30.8**	**+0.9**
KVN				IAmb		IAmb		17 42 37.5	
	comp=Z,3.0nm,1.2s								
NVAR	**Mina Array Bea**	**61.98**	**300**	P		**P**		**17 42 33.5**	**+1.2**
	comp=Z,0.7nm,0.7s,baz=67,slow=7.6,SNR=5.6								
NVAR				LR		LR		18 07 45.0	
	comp=Z,56nm,20.5s,baz=92,slow=34								
	comp=Z,0.7nm,0.7s								
KBZ	**Khabaz**	**65.61**	**52**	P		**P**		**17 42 57.4**	**+1.5**
	comp=Z,1.9nm,0.9s,baz=304,slow=7.3,SNR=5.1								
	comp=Z,1.9nm,0.9s								
ILAR	**Eielson Array**	**68.70**	**334**	P		**P**		**17 43 16.4**	**+1.3**
	comp=Z,1.2nm,1.0s,baz=54,slow=4.7,SNR=7.0								
	comp=Z,1.2nm,1.0s								
BVAR	**Borovoye Array**	**77.67**	**35**	P		**P**		**17 44 08.7**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=318,slow=4.1,SNR=3.5								
	comp=Z,0.7nm,0.8s								
KURBB	**Kurchatov Arra**	**83.12**	**34**	P		**P**		**17 44 38.5**	**+0.9**
	comp=Z,1.1nm,0.9s,baz=317,slow=4.9,SNR=8.9								
	comp=Z,1.1nm,0.9s								
ZALV	**Zalesovo Beam**	**83.63**	**29**	P		**P**		**17 44 40.7**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=282,slow=7.1,SNR=2.3								
	comp=Z,0.2nm,0.3s								

KRSC 29 17:42:39.7±2.2, 49°.34N×158°.33E, h47$^{km}_{\pm}$25^{km}, MI3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.96**	**314**	*e*P	Pn	17 43 10.4	-0.1
SKR				*e*S	Sn	17 43 34.3	+0.5
PAU	**Pauzhetka**	**2.34**	**336**	*e*P	Pn	17 43 19.3	+3.7
PAU				*e*S	Sn	17 43 46.9	+3.8
KDTR	**Khodutka, Kamc**	**2.48**	**356**	*e*P	Pn	17 43 20.1	+2.6
KDTR				*e*S	Sn	17 43 50.7	+4.2
ASAK	**Asacha**	**3.06**	**355**	*e*P	Pn	17 43 29.0	+3.4
RUS	**Russkaya**	**3.10**	**2**	*e*P	Pn	17 43 29.2	+3.1
MTVR	**Mutnovka**	**3.15**	**358**	*e*P	Pn	17 43 30.4	+3.5
GRL	**Gorelyy**	**3.22**	**357**	*e*P	Pn	17 43 31.5	+3.7
KRMR	**Karymshinskiy**	**3.50**	**358**	*e*P	Pn	17 43 35.5	+4.0
PET	**Petropavlovsk**	**3.69**	**3**	*e*P	Pn	17 43 38.1	+3.9
DALK	**Dalny**	**3.71**	**4**	*e*P	Pn	17 43 37.9	+3.6
DALK				*e*S	Sn	17 44 20.4	+3.7
UGLR	**Uglovaya**	**3.89**	**4**	*e*P	Pn	17 43 41.9	+4.9
SPN	**Mys Shipunski**	**3.91**	**15**	*e*P	Pn	17 43 41.4	+4.2
AVH	**Avacha**	**3.94**	**4**	*e*P	Pn	17 43 42.1	+4.4
SMAR	**Somma**	**3.94**	**4**	*e*P	Pn	17 43 42.8	+5.0
SDLR	**Sedlovina**	**3.96**	**5**	*e*P	Pn	17 43 41.0	+3.0
KOK	**Koryaka**	**3.96**	**3**	*e*P	Pn	17 43 42.8	+4.9
KRER	**Koryakskii**	**3.98**	**4**	*e*P	Pn	17 43 43.0	+4.7
KRX	**Arik**	**4.03**	**3**	*e*P	Pn	17 43 43.0	+4.1
GNL	**Ganaly**	**4.37**	**357**	*e*P	Pn	17 43 48.2	+4.7
KBTR	**Krutoberegovo**	**7.40**	**20**	*e*P	Pn	17 44 28.7	+3.7

*NEIC **29** 18:02:34, 31°.06N×41°.41W, h12^{km}, Moment Tensor Solution. Duration: 1^{s}7 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.68; $M_{\theta\theta}$0.47; $M_{\phi\phi}$2.21; $M_{r\theta}$0.34; $M_{\theta\phi}$0.79; $M_{\phi r}$-3.53; Fault plane solution: $M_0$4.40000×10^{16} NP1: ϕ_s213.81000°, δ20.65000°, λ-58.61000°. NP2:ϕ_s0.70000°, δ72.48000°, λ-101.11000°. Principal axes: T 4.1428, Plg27.0000°, Azm99.0000°; N 0.4734, Plg11.0000°, Azm4.0000°; P -4.6162, Plg61.0000°, Azm254.0000°;*

*IDC **29** 18:02:39.5±0.5, 30°.95N×41°.42W, h0^{km}, mb4.3/37, mbtmp4.3/37, MS4.2/47 Error ellipse: s-maj=13.8km s-min=10.9km az=170.0*

*MOS **29** 18:02:40.1±1.1, 31°.11N×41°.37W, h10^{km}, mb5.2/55, Error ellipse: s-maj=11.3km s-min=5.9km az=48.0*

*NEIC **29** 18:02:41.7, 31°.06N×41°.41W, h10^{km}*

*NEIC **29** 18:02:41.5±2.2, 31°.0N±0°.1×41°.4W±0°.1, h10$^{km}_{\pm}$1^{km}, mb5.2/249, Mww5.0/20, Error ellipse: s-maj=20.5km s-min=17.6km az=189.0*

*GCMT **29** 18:02:43.7±0.2, 31°.01N±0°.02×41°.40W±0°.01, h12^{km}, MW5.0/113, Moment Tensor Solution. s44,c51; s113,c174; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.52±.07; $M_{\theta\theta}$0.68±.07; $M_{\phi\phi}$2.84±.06; $M_{r\theta}$1.01±.30; $M_{\theta\phi}$0.65±.06; $M_{\phi r}$-0.28±.23; Best double couple: $M_0$3.39800×10^{16} NP1:ϕ_s209.00000°, δ47.00000°, λ-71.00000°. NP2:ϕ_s2.00000°, δ47.00000°, λ-109.00000°. Principal axes: T 3.0200, Plg0.0000°, Azm105.0000°; N 0.7530, Plg14.0000°, Azm15.0000°; P -3.7770, Plg76.0000°, Azm195.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*INMG **29** 18:02:44.0±6.1, 30°.94N×41°.66W, h10^{km}, M4.7, mb5.0, Ms4.1, #DIST_RANGE: DISTANT*

ISC 29 18:02:41.3±0.3, 30°.92N±0°.05×41°.47W±0°.05, h13^{km}, n449, σ1^{s}§19/324, mb5.1/230, MS4.2/56, 29C-30D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMOZ	**Porto Moniz, M**	**20.69**	**78**	*e*LR	LR	18 12 07.5	
PMOZ				*i* IAms_20	IAms_20	18 13 11.7	
	563nm,20.0s						
PMAR	**Madeira**	**20.93**	**79**	*e*P	Pn	18 07 28.9	+2.4
PMAR				*i* IAmb	IAmb	18 07 30.3	
	278nm,2.3s						
PMAR				*i* tx	tx	18 08 00.2	
PMPST	**Porto Santo, M**	**21.41**	**78**	*e*P	**P**	**18 07 31.8**	**+2.8**
PMPST				*i* IAmb	IAmb	18 07 39.1	
	300nm,1.8s						
DRLN	**Deer Lake**	**21.97**	**331**		**P**	**18 07 34.0**	**-0.7**
DRLN				IAmb	IAmb	18 07 41.5	
	comp=Z,172nm,1.5s						
LMN	**Caledonia Moun**	**23.49**	**316**	P	**P**	**18 07 49.7**	**-1.0**
LMN				IAmb	IAmb	18 07 59.1	
	comp=Z,153nm,1.7s						
GGN	**Saint George**	**24.38**	**313**	P	**P**	**18 07 59.4**	**+0.3**
GGN				IAmb	IAmb	18 08 08.0	
	comp=Z,91nm,1.4s						
G65A	**Princeton**	**24.88**	**312**		**P**	**18 08 04.6**	**+1.0**
G65A				IAmb	IAmb	18 08 12.0	
	comp=Z,81nm,1.4s						
BATG	**Bathurst New B**	**24.97**	**318**		**P**	**18 08 03.0**	**-1.4**
F64A	**Sherman**	**25.66**	**313**		**P**	**18 08 10.8**	**0.0**
SJG	**San Juan**	**25.75**	**246**	LR	LR	18 16 11.9	
	comp=Z,288nm,22.0s,baz=76,slow=32						
E62A	**Clayton Lake**	**26.73**	**314**		**P**	**18 08 21.6**	**+1.3**
PFVI	**Vila Bisbo**	**27.66**	**68**	*e*P	**P**	**18 08 31.8**	**+2.9**
PFVI				*i* IAmb	IAmb	18 08 39.6	
	comp=Z,54nm,1.3s						
MDP	**Montagnes des**	**27.75**	**204**	LR	LR	18 17 07.6	
	comp=Z,271nm,19.1s,baz=341,slow=31						
MORF	**Marmelete**	**27.81**	**68**	*e*P	P	18 08 43.1	+13
MORF				*i* IAmb	IAmb	18 08 48.5	
	comp=Z,40nm,2.1s						
BBTS	**Babate**	**28.01**	**120**	LR	LR	18 17 51.0	
	comp=Z,9.6nm,20.0s,baz=264,slow=33						
MOE	**Montemor**	**28.15**	**65**	*e*P	P	18 08 38.5	+5.2
MESJ	**Messejana**	**28.19**	**67**	*e*P	**P**	**18 08 36.0**	**+2.3**
PCAS	**Casmilo, Conde**	**28.22**	**62**	*e*P	**P**	**18 08 30.5**	**-3.4**
PARRA	**Arraiolos**	**28.42**	**65**	*e*P	**P**	**18 08 38.0**	**+2.3**
PARRA				*i* IAmb	IAmb	18 08 44.2	
	comp=Z,20nm,1.7s						
PBEJ	**Beja**	**28.48**	**66**	P	P	18 08 43.2	+7.0
PVAQ	**Vaqueiros**	**28.56**	**68**	*e*LR	LR	18 15 51.4	
PVAQ				*i* IAMs_20	IAMs_20	18 17 18.4	
	comp=Z,1μm,20.0s						
PGAV	**Gavieira, Arco**	**28.73**	**58**	*e*LR	LR	18 16 13.5	
PGAV				*i* IAMs_20	IAMs_20	18 17 22.0	
	comp=Z,478nm,20.0s						
PESTR	**Estremoz**	**28.77**	**65**	*e*P	P	18 08 46.0	+7.2
PESTR				*i* IAmb	IAmb	18 09 04.2	
	comp=Z,29nm,1.7s						
PMRV	**Marv??o**	**28.98**	**64**	*e*P	**P**	**18 08 40.6**	**0.0**
PMRV				*i* IAmb	IAmb	18 08 44.7	
	comp=Z,22nm,1.4s						
PMRV				*e*LR	LR	18 15 58.6	
PMRV				*i* IAMs_20	IAMs_20	18 17 10.2	
	comp=Z,362nm,22.0s						
MTE	**Manteigas**	**28.99**	**62**	*e*LR	LR	18 15 57.3	
MTE				*i* IAMs_20	IAMs_20	18 17 32.4	
	comp=Z,479nm,20.0s						
PBAR	**Barrancos**	**29.15**	**66**	*e*P	P	18 08 49.2	+7.2
MVO	**Moncorvo**	**29.50**	**60**	*e*LR	LR	18 16 14.4	
MVO				*i* IAMs_20	IAMs_20	18 17 36.5	
	comp=Z,409nm,20.0s						
SCHQ	**Schefferville**	**29.97**	**330**	P	**P**	**18 08 49.4**	**+0.2**
	comp=Z,4.2nm,0.9s,baz=91,slow=6.7,SNR=4.0						
SCHQ				LR	LR	18 19 56.7	
	comp=Z,743nm,20.7s,baz=134,slow=35						
	comp=Z,4.2nm,0.9s						
SCHQ	**Schefferville**	**29.97**	**330**	P	**P**	**18 08 44.9**	**-4.3**
SCHQ				IAmb	IAmb	18 08 56.0	
	comp=Z,33nm,1.2s						
MDT	**Midelt**	**31.26**	**77**	LR	LR	18 18 33.0	
	comp=Z,685nm,21.9s,baz=292,slow=30						
ESDC	**Sonseca Array**	**31.65**	**64**	P	**P**	**18 09 03.6**	**-0.6**
	comp=Z,2.9nm,1.1s,baz=254,slow=8.4,SNR=10						
ESDC				LR	LR	18 18 52.4	
	comp=Z,340nm,21.8s,baz=254,slow=31						
	comp=Z,2.9nm,1.1s						
Q56A	**Snyder Ridge,**	**31.78**	**295**	P	**P**	**18 09 05.5**	**+0.2**
Q56A				IAmb	IAmb	18 09 14.0	
	comp=Z,47nm,1.4s						
SADO	**Sadowa**	**32.51**	**306**	LR	LR	18 20 43.5	
	comp=Z,479nm,19.8s,baz=131,slow=33						
KUQ	**Kuujjuuaa**	**32.86**	**334**		**P**	**18 09 14.7**	**+0.1**
BOAV	**Boa Vista**	**33.61**	**216**		**P**	**18 09 20.9**	**-0.6**
BOAV				IAmb	IAmb	18 09 29.4	
	comp=Z,45nm,1.6s						
BOAV	**Boa Vista**	**33.61**	**216**	*e*P	**P**	**18 09 24.0**	**+2.4**
SDV	**Santo Domingo**	**34.91**	**237**	LR	LR	18 21 38.4	
	comp=Z,264nm,21.8s,baz=64,slow=33						
SDV	**Santo Domingo**	**34.91**	**237**		**P**	**18 09 34.0**	**+0.9**
SDV	**Santo Domingo**	**34.91**	**237**	*e*P	**P**	**18 09 35.1**	**+2.0**
TKL	**Tuckaleechee C**	**35.48**	**289**	P	**P**	**18 09 38.7**	**+1.0**
	comp=Z,2.1nm,0.7s,baz=78,slow=5.5,SNR=4.9						
TKL				LR	LR	18 21 19.6	
	comp=Z,692nm,21.5s,baz=94,slow=32						
	comp=Z,2.1nm,0.7s						
TKL	**Tuckaleechee C**	**35.48**	**289**	P	**P**	**18 09 39.9**	**+2.2**
TKL	**Tuckaleechee C**	**35.48**	**289**	P	**P**	**18 09 39.9**	**+2.2**
TKL				pmax	pmax		
	comp=Z,17nm,1.2s						
R50A	**Paris**	**35.79**	**294**		**P**	**18 09 41.5**	**+1.3**
R50A				IAmb	IAmb	18 09 52.8	
	comp=Z,38nm,1.4s						
BORG	**Borgarnes**	**36.11**	**15**	LR	LR	18 21 29.8	
	comp=Z,109nm,18.1s,baz=212,slow=31						
BORG	**Borgarnes**	**36.11**	**15**	*e*P	**P**	**18 09 46.0**	**+3.4**
EKA	**Eskdalemuir Ar**	**36.40**	**37**	P	**P**	**18 09 44.9**	**-0.4**
	comp=Z,5.0nm,0.9s,baz=235,slow=7.1,SNR=5.7						
EKA				LR	LR	18 21 34.1	
	comp=Z,287nm,18.6s,baz=228,slow=31						
	comp=Z,5.0nm,0.9s						
SFJD	**Kangerlussuaq**	**36.53**	**354**	LR	LR	18 21 08.4	
	comp=Z,163nm,20.6s,baz=178,slow=30						
RCBR	**Riachuelo**	**36.92**	**171**	LR	LR	18 21 18.3	
	comp=Z,33nm,19.2s,baz=21,slow=30						
U49A	**Red Boiling Sp**	**37.03**	**291**	P	**P**	**18 09 51.5**	**+0.6**
FRB	**Frobisher Bay**	**37.04**	**340**	LR	LR	18 22 43.7	
	comp=Z,190nm,21.9s,baz=131,slow=32						
CLTN	**Cedars of Leba**	**37.51**	**290**	P	**P**	**18 09 55.1**	**+0.1**
ITTB	**Itaituba**	**37.64**	**204**	*e*P	**P**	**18 09 57.4**	**+1.3**
PRPB	**Parauapebas**	**37.73**	**194**	*e*P	**P**	**18 09 57.0**	**+0.1**
NBMA	**Muriti-CE**	**38.15**	**176**	*e*P	**P**	**18 09 57.9**	**-2.6**
MACA	**Manacapuru-AM**	**38.53**	**212**	*e*P	**P**	**18 10 03.4**	**-0.3**
WVT	**Waverly**	**38.72**	**290**		**P**	**18 10 05.6**	**+0.5**
WVT	**Waverly**	**38.72**	**290**	P	**P**	**18 10 05.6**	**+0.5**
WVT				pmax	pmax		
	comp=Z,38nm,1.3s						
Z47A	**Carrollton**	**39.31**	**286**	P	**P**	**18 10 07.7**	**-2.4**
Z47A				IAmb	IAmb	18 10 18.5	
	comp=Z,43nm,1.1s						
SMTB	**Santa Maria do**	**39.98**	**189**	*e*P	**P**	**18 10 16.5**	**+0.7**
NPGB	**Novo Progresso**	**40.02**	**202**	*e*P	**P**	**18 10 15.9**	**-0.2**
OXF	**Oxford**	**40.20**	**288**	P	**P**	**18 10 17.5**	**0.0**
OXF				IAmb	IAmb	18 10 25.7	
	comp=Z,46nm,1.0s						
OXF	**Oxford**	**40.20**	**288**	P	**P**	**18 10 17.5**	**0.0**
OXF				pmax	pmax		
	comp=Z,46nm,1.0s						
ROSC	**El Rosal**	**40.33**	**237**	LR	LR	18 26 00.9	
	comp=Z,244nm,21.6s,baz=64,slow=35						
Y45A	**Yeager Farm, C**	**40.42**	**287**	P	**P**	**18 10 20.0**	**+0.7**
TEFE	**Tefe**	**40.75**	**217**	*e*P	**P**	**18 10 21.9**	**-0.2**
SUMG	**Summit**	**41.75**	**1**	P	**P**	**18 10 27.2**	**-3.0**
SUMG	**Summit**	**41.75**	**1**	P	**P**	**18 10 27.2**	**-3.0**
SUMG				pmax	pmax		
	comp=Z,27nm,1.0s						
SUMG	**Summit**	**41.75**	**1**	*i* P	**P**	**18 10 29.7**	**-0.5**
SUMG				IAmb	IAmb	18 10 37.4	
	comp=Z,22nm,0.8s						
TUE	**Stuetta**	**41.86**	**53**	P	**P**	**18 10 32.2**	**+0.9**
	comp=Z,63nm,2.3s						
DBIC	**Dimbokro**	**41.90**	**118**	P	**P**	**18 10 31.6**	**-0.1**
	comp=Z,7.9nm,0.8s,baz=326,slow=10,SNR=8.4						
DBIC				LR	LR	18 25 07.5	
	comp=Z,733nm,21.9s,baz=340,slow=32						
	comp=Z,7.9nm,0.8s						
DBIC	**Dimbokro**	**41.90**	**118**	P	**P**	**18 10 31.0**	**-0.7**
DBIC	**Dimbokro**	**41.90**	**118**	P	**P**	**18 10 31.0**	**-0.7**
DBIC				pmax	pmax		
	comp=Z,12nm,1.0s						
DAVA	**Damuels**	**42.27**	**52**	P	**P**	**18 10 33.1**	**-1.5**
	comp=Z,12nm,2.1s						
KEST	**Kesra**	**42.35**	**69**	P	**P**	**18 10 34.6**	**-0.6**
	comp=Z,4.6nm,1.1s,baz=284,slow=8.3,SNR=5.2						
KEST				LR	LR	18 24 50.6	
	comp=Z,232nm,20.5s,baz=73,slow=32						
	comp=Z,4.6nm,1.1s						
TAM	**Tamanrasset**	**42.44**	**89**		**P**	**18 10 37.2**	**+0.9**
TAM	**Tamanrasset**	**42.44**	**89**	P	**P**	**18 10 37.2**	**+0.9**
TAM				pmax	pmax		
	comp=Z,92nm,0.2s						
FETA	**Feichten**	**42.84**	**53**	*e*pP	**P**	**18 10 39.6**	**+0.4**
	comp=Z,9.8nm,1.4s						
RETA	**Reutte**	**42.88**	**52**	*e*P	**P**	**18 10 38.8**	**-0.6**
	comp=Z,9.7nm,1.3s						
MOTA	**Moosalm**	**43.11**	**52**	*e*pP	**P**	**18 10 41.3**	**-0.1**
	comp=Z,12nm,1.1s						
SQTA	**Sankt Quirin**	**43.17**	**52**	*e*pP	**P**	**18 10 42.0**	**+0.1**
	comp=Z,5.1nm,1.1s						
SDBA	**SAO DESIDERIO**	**43.20**	**185**	*e*P	**P**	**18 10 41.8**	**-0.4**
TORD	**Torodi Ar. Bea**	**43.43**	**104**	P	**P**	**18 10 43.7**	**-0.4**
	comp=Z,12nm,0.9s,baz=301,slow=7.8,SNR=34						
TORD				LR	LR	18 27 21.9	
	comp=Z,252nm,18.2s,baz=304,slow=34						
	comp=Z,12nm,0.9s						
TORD	**Torodi Ar. Bea**	**43.43**	**104**	P	**P**	**18 10 42.7**	**-1.4**
WATA	**Walderalm**	**43.43**	**52**	*e*P	**P**	**18 10 42.6**	**-1.3**
	comp=Z,5.9nm,1.0s						
WTTA	**Wattenberg**	**43.47**	**52**	*e*pP	**P**	**18 10 44.4**	**+0.1**
	comp=Z,11nm,1.0s						
SNDB	**Serra Nova Dou**	**43.68**	**194**	*e*P	**P**	**18 10 45.2**	**-0.7**
CLDB	**Colider**	**43.77**	**201**	*e*P	**P**	**18 10 46.7**	**-0.1**
ABTA	**Abfaltersbach**	**44.05**	**53**	*e*P	**P**	**18 10 48.4**	**-0.5**
	comp=Z,6.0nm,1.0s						
LESA	**Schwarzleotal**	**44.18**	**52**	*e*pP	**P**	**18 10 49.6**	**-0.3**
	comp=Z,5.2nm,1.0s						
KONO	**Kongsberg**	**44.38**	**34⇓**	*e*P	**P**	**18 10 49.2**	**-2.0**
KONO				pmax	pmax		
	comp=Z,22nm,1.1s						
KULLO	**Kullorsuaq**	**44.45**	**354**	*i* P	**P**	**18 10 52.2**	**+0.7**
KULLO				IAmb	IAmb	18 10 58.0	
	comp=Z,39nm,1.3s						
FDMO	**Fiordimonte**	**44.51**	**58**	IAmb	IAmb	18 10 60.0	
	comp=Z,46nm,1.8s						
ULM	**Lac du Bonnet**	**44.51**	**312**	P	**P**	**18 10 51.8**	**-0.7**
	comp=Z,2.8nm,0.7s,baz=77,slow=8.9,SNR=4.5						
ULM				LR	LR	18 29 07.9	
	comp=Z,218nm,18.3s,baz=99,slow=36						
	comp=Z,2.8nm,0.7s						
ULM	**Lac du Bonnet**	**44.51**	**312**	⇓*i* P	**P**	**18 10 52.2**	**-0.2**
CLL	**Collm**	**44.64**	**47**	*i* P	**P**	**18 10 52.5**	**-0.9**
CLL				*i*		18 10 59.8	
CLL				pmax	pmax		
	comp=Z,16nm,1.2s						
CLL				MLR	MLR		
	comp=Z,300nm,21.2s						
CLL	**Collm**	**44.64**	**47**	*i* P	**P**	**18 10 52.5**	**-0.9**
	comp=Z,16nm,1.2s						
CLL				*i* x	x	18 10 59.8	
CLL				*e*S	**S**	**18 17 36.0**	**+6.8**
CLL				*e*SSS	SSS	18 21 30.0	
CLL				AMS	AMS	18 26 00.0	
	comp=Z,300nm,21.2s						
CLL	**Collm**	**44.64**	**47**	P	**P**	**18 10 53.6**	**+0.2**
	comp=Z,15nm,1.9s						
ILON	**Igloolik, Nuna**	**44.75**	**341**	P	**P**	**18 10 53.1**	**-1.0**
PDRB	**Porto dos Gac**	**44.76**	**201**	*e*P	**P**	**18 10 54.6**	**0.0**
DBG	**Daneborg**	**44.77**	**8**	*i* P	**P**	**18 10 54.5**	**+0.4**
DBG				IAmb	IAmb	18 11 01.8	
	comp=Z,20nm,1.3s						
AQU	**L'Aquila**	**44.78**	**59**	P	**P**	**18 10 55.1**	**+0.3**
	comp=Z,13nm,1.1s						
MYKA	**Terra Mystica**	**44.83**	**53**	*e*pP	**P**	**18 10 54.8**	**-0.3**
	comp=Z,1.8nm,0.5s						
BIOA	**Bad Ischl, Aus**	**44.84**	**52**	*e*P	**P**	**18 10 54.6**	**-0.5**
	comp=Z,6.9nm,1.0s						
KHC	**Kasperske Hory**	**44.85**	**50**	*e*P	**P**	**18 10 55.1**	**-0.1**
KHC	**Kasperske Hory**	**44.85**	**50**	⇓*i* P	**P**	**18 10 53.8**	**-1.4**
KHC				pmax	pmax		
	comp=Z,17nm,1.4s						
KHC	**Kasperske Hory**	**44.85**	**50**	P	**P**	**18 10 55.4**	**+0.2**
	comp=Z,13nm,2.0s						
HSKC	**Hora Svate Kat**	**44.85**	**48**	AMS	AMS	18 26 50.0	
	comp=Z,700nm,19.3s						
GERES	**GERESS Array B**	**44.92**	**50**	P	**P**	**18 10 55.7**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=253,slow=8.2,SNR=5.5						
	comp=Z,1.3nm,0.7s						
JTS	**Las Juntas de**	**45.22**	**253**	LR	LR	18 28 57.0	
	comp=Z,194nm,18.5s,baz=42,slow=35						
MOA	**Molln**	**45.27**	**52**	*e*P	**P**	**18 10 57.9**	**-0.6**
	comp=Z,8.6nm,1.2s						
ZVC	**Zvikov**	**45.27**	**49**	*e*P	**P**	**18 10 58.4**	**-0.1**
CKRC	**Cesky Krumlov**	**45.32**	**50**	*e*P	**P**	**18 10 58.6**	**-0.3**
CKRC	**Cesky Krumlov**	**45.32**	**50**	*e*P	**P**	**18 10 58.6**	**-0.3**
OBKA	**Obir**	**45.45**	**53**	*e*P	**P**	**18 10 59.6**	**-0.5**
	comp=Z,12nm,1.0s						
PRU	**Pruhonice**	**45.52**	**49**	AMS	AMS	18 28 20.0	
	comp=Z,500nm,16.5s						
NOA	**NORSAR Array B**	**45.56**	**33**	P	**P**	**18 11 00.8**	**+0.2**
	comp=Z,3.9nm,1.0s,baz=256,slow=8.3,SNR=4.4						
NOA				LR	LR	18 26 41.1	
	comp=Z,96nm,21.3s,baz=245,slow=32						
	comp=Z,3.9nm,1.0s						
PVCC	**Panska Ves**	**45.57**	**48**	AMS	AMS	18 27 10.0	
	comp=Z,600nm,14.9s						
PAOL	**Paolisi**	**45.77**	**61**	IAmb	IAmb	18 11 09.7	
	comp=Z,41nm,1.7s						
SOKA	**Soboth**	**45.78**	**53**	*e*P	**P**	**18 11

SRO pmax pmax
comp=Z,38nm,1.8s
SRO Srobarova 47.99 52 *e*P **P 18 11 19.6 -0.2**
MORH Mrgy, Hungar 48.30 54 ⇑P **P 18 11 22.1 -0.1**
MORH Mrgy, Hungar 48.30 54 P **P 18 11 21.9 -0.3**
comp=Z,8.7nm,1.3s
SALV Santo Antonio 48.52 198 *e*P **P 18 11 24.4 +0.3**
FFC Flin Flon 48.56 318 P **P 18 11 23.8 -0.3**
FFC IAmb IAmb 18 11 31.5
comp=Z,23nm,1.2s
FFC Flin Flon 48.56 318 P **P 18 11 23.8 -0.3**
FFC pmax pmax
comp=Z,23nm,1.2s
CZSB Cruzeiro do Su 48.70 223 *e*P **P 18 11 24.4 -1.2**
LANS Liptovska Anna 48.72 50 *e*P **P 18 11 27.9 +2.4**
LANS Liptovska Anna 48.72 50 *e*P **P 18 11 27.9 +2.4**
OJC Ojcow 48.91 48 *e*P **P 18 11 27.2 +0.3**
OJC Ojcow 48.91 48 P **P 18 11 27.0 +0.1**
comp=Z,13nm,1.6s
DIAM Diamantina, MG 48.97 183 *e*P **P 18 11 27.3 -0.5**
IPMB Ipameri, GO 49.05 189 *e*P **P 18 11 26.2 -2.0**
PSZ Piszkesteto 49.05 51 P **P 18 11 25.1 -3.0**
PSZ Piszkesteto 49.05 51 P **P 18 11 25.1 -3.0**
PSZ pmax pmax
comp=Z,12nm,1.2s
PTLB Pontes e Lacer 49.13 203 *e*P **P 18 11 28.6 -0.2**
NIE Niedzica 49.26 49 *e*P **P 18 11 31.1 +1.5**
NIE Niedzica 49.26 49 P **P 18 11 30.6 +1.0**
comp=Z,6.3nm,1.6s
SJMB Sao Joao De Ma 49.33 180 *e*P **P 18 11 29.9 -0.5**
PMNB Patos De Minas 49.40 186 *e*P **P 18 11 30.6 -0.4**
BEL Belsk 49.52 46 *e*P **P 18 11 31.7 +0.3**
STHS Stebnicka Huta 49.87 49 *e*P **P 18 11 36.4 +2.1**
STHS Stebnicka Huta 49.87 49 *e*P **P 18 11 36.4 +2.1**
CMIG Matias Romero 50.27 267 LR LR 18 31 21.8
comp=Z,176nm,20.5s,baz=356,slow=34
SIV San Ignacio 50.30 205 LR LR 18 30 55.0
comp=Z,157nm,18.7s,baz=88,slow=34
BZS Buzias 50.41 54 ⇓P **P 18 11 39.1 +0.7**
BZS Buzias 50.41 54 ⇓P **P 18 11 39.1 +0.7**
DRIO Del Rio 50.63 284 IAmb IAmb 18 11 47.5
comp=Z,40nm,1.2s
HOLU Holmets 50.67 50 P **P 18 11 40.9 +0.6**
BOVS Bovan 50.72 57 ⇓P **P 18 11 40.5 -0.2**
KWP Kalwaria Pacla 50.81 49 *e*P **P 18 11 42.3 +0.9**
KWP Kalwaria Pacla 50.81 49 P **P 18 11 42.2 +0.9**
BERU Beregovo 50.87 51 P **P 18 11 42.7 +0.9**
SUW Suwalki 50.96 43 *e*P P 18 11 48.9 +6.6
RES Resolute Bay 51.03 344 P **P 18 11 42.7 +0.1**
comp=Z,3.1nm,1.0s,baz=108,slow=4.8,SNR=6.7
RES LR LR 18 32 13.3
comp=Z,94nm,21.6s,baz=27,slow=35
comp=Z,3.1nm,1.0s
RES Resolute Bay 51.03 344 P **P 18 11 41.1 -1.4**
RES Resolute Bay 51.03 344 P **P 18 11 41.2 -1.4**
RES pmax pmax
comp=Z,25nm,1.4s
HERR Herculane 51.06 55 ⇑P **P 18 11 43.8 +0.5**
BRIU Brid 51.11 51 P **P 18 11 44.4 +0.8**
BBSD Serra de San D 51.25 204 *e*P **P 18 11 45.3 +0.4**
GZR Gura Zlata 51.25 54 ⇓P **P 18 11 44.9 +0.1**
GZR Gura Zlata 51.25 54 ⇓P **P 18 11 44.9 +0.1**
DEV Deva 51.28 54 ⇑P **P 18 11 45.7 +0.8**
DEV Deva 51.28 54 ⇑P **P 18 11 45.7 +0.8**
MARR Marisel-Cluj 51.34 53 ⇑P **P 18 11 45.2 -0.3**
NOR Nord 51.65 5 *i* P **P 18 11 46.6 -0.6**
NOR IAmb IAmb 18 11 54.0
comp=Z,23nm,1.1s
ATAH Atahualpa 51.78 229 LR LR 18 33 17.3
comp=Z,244nm,21.9s,baz=358,slow=36
LOT Lotru 51.94 54 ⇓P **P 18 11 49.9 -0.1**
MDB Medias 52.27 53 ⇑P **P 18 11 53.0 +0.7**
MDB Medias 52.27 53 ⇑P **P 18 11 53.0 +0.7**
VLAD Vladila 52.59 56 ⇑P **P 18 11 54.7 -0.1**
BURAR Bucovina Array 52.65 51 ⇓P **P 18 11 56.3 +1.0**
BURAR Bucovina Array 52.65 51 ⇓P **P 18 11 56.3 +1.0**
FINES FINESS Array B 52.69 34 P **P 18 11 55.0 -0.2**
comp=Z,4.0nm,0.7s,baz=240,slow=7.7,SNR=16
FINES LR LR 18 30 53.5
comp=Z,66nm,21.3s,baz=278,slow=32
comp=Z,4.0nm,0.7s
RNPP8 Varash 52.70 47 P **P 18 11 55.3 -0.1**
DUB01 Friburgo-RJ 52.70 181 *e*P **P 18 11 55.5 -0.2**
VOIR 52.83 54 ⇓P **P 18 11 56.1 -0.5**
VOIR 52.83 54 ⇓P **P 18 11 56.1 -0.5**
DOPR Dopca 52.99 53 ⇑P **P 18 11 57.8 +0.2**
BDQN Bodoquena, MS 53.14 198 *e*P **P 18 11 58.7 -0.2**
HAYD Hayden 53.17 300 IAmb IAmb 18 12 12.2
comp=Z,48nm,1.6s
TXAR Lajitas Array 53.19 285 LR LR 18 33 43.8
comp=Z,136nm,19.4s,baz=166,slow=35
RCLB Rio Claro- Sao 53.35 187 *e*P **P 18 11 59.8 -0.7**
ARCES ARCESS Array B 53.36 24 P **P 18 12 00.2 +0.2**
comp=Z,3.6nm,0.7s,baz=251,slow=5.4,SNR=4.2
comp=Z,3.6nm,0.7s
MLR Muntele Rosu 53.45 54 LR LR 18 33 40.7
comp=Z,111nm,19.6s,baz=257,slow=35
MLR Muntele Rosu 53.45 54 ⇑P **P 18 12 01.3 +0.1**
MLR Muntele Rosu 53.45 54 P **P 18 12 00.6 -0.6**
MLR IAmb IAmb 18 12 03.8
comp=Z,35nm,1.4s
MLR Muntele Rosu 53.45 54 P **P 18 12 00.6 -0.6**
MLR pmax pmax
comp=Z,35nm,1.4s
LPAZ La Paz 53.48 212 P **P 18 12 02.5 +0.3**
comp=Z,3.3nm,0.8s,baz=343,slow=7.3,SNR=12
LPAZ LR LR 18 33 21.9
comp=Z,226nm,20.1s,baz=2.5,slow=34
comp=Z,3.3nm,0.8s
SPITS Spitsbergen Ar 53.52 13 P **P 18 12 01.2 +0.2**
comp=Z,17nm,1.1s,baz=242,slow=11,SNR=2.3
comp=Z,17nm,1.1s
COVR Voineasa-Covas 53.57 53 ⇑P **P 18 12 02.0 +0.1**
MNK Minsk 53.70 43 *i* P **P 18 12 02.3 -0.4**
comp=E,9.0nm,0.8s
MNK *i* P **P 18 12 02.3 -0.4**
comp=N,27nm,1.0s
MNK *i* P **P 18 12 02.3 -0.4**
comp=Z,43nm,1.1s,baz=274
MNK *i* PP **PP 18 14 03.4 +0.1**
MNK *i* PPP PPP 18 15 08.8
MNK *i* S **S 18 19 36.5 +0.3**
MNK *i* SS **SKiKP 18 23 18.3 +1.3**
MNK *i* SSS SSS 18 25 11.4
MNK *i* LQ LQ 18 31 16.5
MNK *i* LR LR 18 35 08.5
MNK *i* LRM MLR 18 37 29.4
comp=E,553nm,18.7s
MNK *i* LRM MLR 18 37 29.4
comp=N,624nm,20.5s
MNK *i* LRM MLR 18 37 29.4
comp=Z,93nm,16.1s
MNK Minsk 53.70 43 *i* P **P 18 12 02.3 -0.4**
MNK *i* 18 14 03.3
MNK *i* PPP PPP 18 15 08.7
MNK *i* S **S 18 19 36.5 +0.3**
MNK *i* SS **SKiKP 18 23 18.2 +1.3**
MNK pmax pmax
comp=E,9.0nm,0.8s
MNK pmax pmax
comp=N,27nm,1.0s
MNK pmax pmax
comp=Z,43nm,1.1s
MNK MLR MLR
comp=Z,93nm,16.0s
MNK MLR MLR
comp=N,624nm,21.0s
MNK MLR MLR
comp=E,553nm,19.0s
RLMT Red Lodge 53.78 306 P **P 18 12 02.9 -0.8**
RLMT IAmb IAmb 18 12 10.7
comp=Z,27nm,1.4s
ELND Elena 53.83 57 ⇑P **P 18 12 03.6 -0.3**
ANMO Albuquerque 53.84 293 LR LR 18 33 01.5
comp=Z,517nm,20.4s,baz=134,slow=34
ANMO Albuquerque 53.84 293⇑ *e*P **P 18 12 07.4 +3.1**
ANMO pmax pmax
comp=Z,19nm,1.5s
VAO Valinhos 53.87 186 *e*P **P 18 12 04.2 -0.1**
PLOR Plostina 53.88 53 ⇓P **P 18 12 04.7 +0.5**
PLOR Plostina 53.88 53 ⇓P **P 18 12 04.7 +0.5**
VRI Vrincioaia 53.93 53 ⇑P **P 18 12 04.4 -0.2**
VRI Vrincioaia 53.93 53 ⇑P **P 18 12 04.4 -0.2**
O20A White River Ci 53.98 299 IAmb IAmb 18 12 13.1
comp=Z,31nm,1.3s
LOZB Loznitsa 54.27 56 ⇑P **P 18 12 06.7 -0.4**
YNE Yellowstone No 54.31 306 IAmb IAmb 18 12 15.2
comp=Z,40nm,1.3s
PDAR Pinedale Array 54.41 303 P **P 18 12 08.3 0.0**
comp=Z,5.2nm,0.8s,baz=85,slow=7.2,SNR=26
PDAR LR LR 18 34 25.6
comp=Z,569nm,18.7s,baz=106,slow=35
comp=Z,5.2nm,0.8s
TRCB Terra Rica 54.47 193 *e*P **P 18 12 09.5 +0.9**
MURT Porto Murtinho 54.52 199 *e*P **P 18 12 08.9 -0.1**
LDASE Londrina, Braz 54.79 191 *e*P **P 18 12 10.7 -0.2**
IDI Anoyia 54.83 66 IAmb IAmb 18 13 36.3
comp=Z,34nm,1.2s
KIEV Kiev 54.87 47 P **P 18 12 09.7 -1.6**
KIEV IAmb IAmb 18 12 11.6
comp=Z,35nm,1.6s
KIEV Kiev 54.87 47 P **P 18 12 09.7 -1.6**
KIEV pmax pmax
comp=Z,35nm,1.6s
AKASG Malin Array Be 54.88 47 P **P 18 12 10.5 -0.9**
comp=Z,6.2nm,1.0s,baz=274,slow=6.6,SNR=19
AKASG LR LR 18 33 59.9
comp=Z,280nm,18.1s,baz=274,slow=34
comp=Z,6.2nm,1.0s
AKASG Malin Array Be 54.88 47 *i* P **P 18 12 10.8 -0.6**
AKASG pmax pmax
comp=Z,5.0nm,0.9s
AKBB Malin Array Si 54.88 47 IAmb IAmb 18 12 11.7
comp=Z,39nm,1.6s
AKBB Malin Array Si 54.88 47⇓ *e*P **P 18 12 10.3 -1.1**
AKBB pmax pmax
comp=Z,27nm,1.6s
AMBA Amambai (Brazi 55.09 195 *e*P **P 18 12 12.8 -0.3**
SNOW Snow King Moun 55.13 304 IAmb IAmb 18 12 21.2
comp=Z,42nm,1.3s
YHL Hebgen Lake 55.16 306 IAmb IAmb 18 12 22.0
comp=Z,24nm,1.3s
PET01 Itanhaem-SP 55.17 186 *e*P **P 18 12 13.0 -0.7**
FXWY Fox Creek 55.29 304 IAmb IAmb 18 12 22.2
comp=Z,23nm,1.4s
YKA Yellowknife Ar 55.35 327 P **P 18 12 14.1 -0.5**
comp=Z,1.4nm,0.9s,baz=86,slow=6.8,SNR=16
YKA PcP **PcP 18 13 14.6 -0.3**
comp=Z,0.4nm,0.7s,baz=85,slow=3.9,SNR=4.3
YKA LR LR 18 34 48.9
comp=Z,508nm,21.9s,baz=92,slow=35
comp=Z,1.4nm,0.9s
YKA Yellowknife Ar 55.35 327 P **P 18 12 13.9 -0.7**
YKA Yellowknife Ar 55.35 327 *i* P **P 18 12 14.3 -0.3**
YKA pmax pmax
comp=Z,1.0nm,0.9s
YKAW3 Yellowknife Wh 55.35 327 IAmb IAmb 18 12 21.0
comp=Z,30nm,1.6s
121A Cookes Peak, D 55.58 290 IAmb IAmb 18 12 31.0
comp=Z,25nm,1.3s
P18A Preston Nutter 55.60 299 IAmb IAmb 18 12 24.8
comp=Z,44nm,1.2s
BALB Balikesir 56.02 61 IAmb IAmb 18 12 27.7
comp=Z,36nm,1.2s
DLMT Dillon 56.05 306 IAmb IAmb 18 12 27.7
comp=Z,25nm,1.2s
APA Apatity 56.07 27⇓ *e*P P 18 12 24.9 +5.2
APA *e* 18 13 18.3
APA pmax pmax
comp=Z,15nm,1.3s
APA MLR MLR
comp=Z,2μm,14.8s
TCUT Toone Canyon 56.11 301 IAmb IAmb 18 12 32.3
comp=Z,28nm,1.2s
HWUT Hardware Ranch 56.11 302 IAmb IAmb 18 12 27.9
comp=Z,35nm,1.4s
Q16A Castle Valley 56.47 299 IAmb IAmb 18 12 31.1
comp=Z,32nm,1.3s
MPU Maple Canyon 56.54 300 IAmb IAmb 18 12 31.3
comp=Z,30nm,1.3s
MSO Missoula 56.68 308 IAmb IAmb 18 12 32.6
comp=Z,31nm,1.6s
BGU Big Grassy Mou 57.35 301 IAmb IAmb 18 12 36.8
comp=Z,21nm,1.3s
MTPU Mount Pierson 57.47 298 IAmb IAmb 18 12 55.2
comp=Z,29nm,1.7s
WUAZ Wupatki 57.55 295 IAmb IAmb 18 12 39.5
comp=Z,24nm,1.2s
PKCU Pink Cliffs 57.73 297 IAmb IAmb 18 12 40.1
comp=Z,30nm,1.4s
MAJ01 Sao Joao Batis 58.43 188 *e*P **P 18 12 34.4 -2.4**
PLID Pearl Lake 58.45 307 IAmb IAmb 18 12 44.7
comp=Z,25nm,1.2s
NEW Newport 58.49 311 P **P 18 12 37.2 0.0**
comp=Z,2.5nm,0.9s,baz=68,slow=6.2,SNR=3.7
NEW LR LR 18 38 11.0
comp=Z,263nm,18.1s,baz=108,slow=36
comp=Z,2.5nm,0.9s
CCUT Cedar City 58.50 298 IAmb IAmb 18 12 45.9
comp=Z,32nm,1.2s
PSUT Pine Spring 58.59 299 IAmb IAmb 18 12 46.8
comp=Z,35nm,1.3s
OBN Obninsk 58.61 41 LR LR 18 36 36.7
comp=Z,112nm,18.2s,baz=342,slow=35
OBN Obninsk 58.61 41 *c iP* **P 18 12 38.0 +0.2**
OBN *e* 18 13 27.4
OBN *e* 18 14 49.3
OBN *e*PPP PPP 18 16 05.9
OBN pmax pmax
comp=Z,26nm,1.1s
OBN MLR MLR
comp=Z,146nm,16.0s
MFID Camas Ranch 58.74 305 P **P 18 12 37.4 -1.6**
CPUP Villa Florida 58.91 197 P **P 18 12 40.9 +0.8**
comp=Z,0.6nm,0.5s,baz=359,slow=7.8,SNR=4.1
comp=Z,0.6nm,0.5s
ELK Elko 59.01 302 P **P 18 12 41.4 +0.2**
comp=Z,1.1nm,0.8s,baz=44,slow=5.9,SNR=4.5
comp=Z,1.1nm,0.8s
A36M Sachs Harbour 59.01 339 IAmb IAmb 18 12 48.3
comp=Z,21nm,1.4s
F10A Beach Ranch, E 59.08 308 IAmb IAmb 18 12 47.7
comp=Z,27nm,1.6s
MOS Moscow 59.09 40 *e*P **P 18 12 40.4 -0.7**
MOS pmax pmax
comp=Z,37nm,1.1s
KLMR Klimovskoe 59.22 34 *e*P **P 18 12 41.7 -0.2**
KLMR pmax pmax
comp=Z,25nm,1.5s
W13A Hualapai Mount 59.64 295 IAmb IAmb 18 12 54.3
comp=Z,20nm,1.4s
214A Organ Pipe Nat 59.80 291 IAmb IAmb 18 12 54.8
comp=Z,24nm,1.6s
V12A Nelson 60.19 296 IAmb IAmb 18 12 57.5
comp=Z,26nm,1.4s
BR131 Keskin Array S 60.28 59 *d iP* **P 18 12 49.4 -0.4**
BRTR Keskin Array B 60.28 59 P **P 18 12 49.3 -0.5**
comp=Z,3.7nm,0.8s,baz=273,slow=5.2,SNR=21
BRTR LR LR 18 38 05.2
comp=Z,76nm,18.6s,baz=272,slow=35
comp=Z,3.7nm,0.8s
BRTR Keskin Array B 60.28 59 *i* P **P 18 12 50.0 +0.2**
BRTR pmax pmax
comp=Z,4.0nm,0.8s
113A Mohawk Valley, 60.30 292 IAmb IAmb 18 12 57.9
comp=Z,19nm,1.3s
G08A Pilot Rock 60.43 308 IAmb IAmb 18 12 58.4
comp=Z,21nm,1.3s
LPSR Galich'ya Gora 60.49 44 *e*P **P 18 12 49.1 -1.7**
LPSR pmax pmax
comp=Z,30nm,0.9s
LPIG La Paz 60.59 282 P **P 18 12 52.2 +0.3**
comp=Z,17nm,0.7s,baz=270,slow=4.6,SNR=5.8
comp=Z,17nm,0.7s
E07A Sunnyside 60.70 309 IAmb IAmb 18 13 00.0
comp=Z,28nm,1.5s
VORR Voronezh 60.87 45 *e*P **P 18 12 53.2 -0.2**
VORR pmax pmax
comp=Z,10.0nm,0.4s
IRM Iron Mountain 60.92 294 IAmb IAmb 18 13 01.8
comp=Z,24nm,1.5s
VSR Storozhevoye 60.96 45 *e*P **P 18 12 53.3 -0.7**
VSR pmax pmax
comp=Z,17nm,1.3s
LLLB Lillooet 60.98 314 IAmb IAmb 18 13 00.8
comp=Z,26nm,1.3s
MXC Moxie City 60.99 309 IAmb IAmb 18 13 01.6
comp=Z,38nm,1.5s
WVOR Wild Horse Val 60.99 304 IAmb IAmb 18 13 02.3
comp=Z,32nm,1.4s
LTY Liberty 61.06 310 IAmb IAmb 18 13 01.8
comp=Z,34nm,1.4s
VORD Divnogorie 61.10 45 *e*P **P 18 12 53.4 -1.5**
VORD pmax pmax
comp=Z,10.0nm,1.0s
WCT Wildcat Mounta 61.21 298 IAmb IAmb 18 13 04.7
comp=Z,28nm,1.3s
GWY Greenwater Val 61.44 297 IAmb IAmb 18 13 10.8
comp=Z,43nm,1.8s
ANN Anapa 61.52 53 *e*P **P 18 12 57.1 -0.8**
ANN *e**PP **pP 18 12 59.7 -1.4**
ANN *e*S **S 18 21 18.0 -1.2**
ANN pmax pmax
comp=Z,22nm,0.9s
KVN Kaiserville 61.61 301 **P 18 12 57.9 -1.0**
KVN IAmb IAmb 18 13 06.1
comp=Z,16nm,1.2s
KVN Kaiserville 61.61 301 P **P 18 12 57.9 -1.0**
KVN pmax pmax
comp=Z,17nm,1.2s
QSM Queen of Sheba 61.66 297 IAmb IAmb 18 13 12.2
comp=Z,37nm,1.6s
NVAR Mina Array Bea 61.96 300 P **P 18 13 01.5 +0.2**
comp=Z,1.7nm,0.7s,baz=77,slow=6.0,SNR=8.3
NVAR LR LR 18 39 04.1
comp=Z,901nm,19.3s,baz=86,slow=35
comp=Z,1.7nm,0.7s
CPSB Cacapava Do Su 62.04 192 *e*P **P 18 13 01.6 +0.2**
DSP Deep Springs 62.05 299 IAmb IAmb 18 13 09.4
comp=Z,22nm,1.4s
MPMC Manual Prospec 62.11 297 IAmb IAmb 18 13 10.5
comp=Z,28nm,1.4s
PFO Pinyon Flats O 62.13 294 P **P 18 13 03.9 +1.4**
comp=Z,0.5nm,0.3s,baz=100,slow=6.1,SNR=3.9
PFO LR LR 18 37 58.8
comp=Z,515nm,21.2s,baz=36,slow=34
comp=Z,0.5nm,0.3s
LHV Little Huntoon 62.16 300 IAmb IAmb 18 13 10.2
comp=Z,32nm,1.3s
BNN Bunyan 62.17 59 IAmb IAmb 18 13 09.7
comp=Z,15nm,1.1s
CLC China Lake 62.27 297 IAmb IAmb 18 13 16.1
comp=Z,29nm,1.9s
INK Inuvik 62.41 335 LR LR 18 38 15.7
comp=Z,296nm,21.6s,baz=14,slow=34
VRH Novokhopyorsk 62.51 45 *e*P **P 18 13 04.3 -0.2**
VRH pmax pmax
comp=Z,28nm,0.9s
PNTR Pine Nut 62.70 301 IAmb IAmb 18 13 13.4
comp=Z,24nm,1.4s
DPP Dos Picos Cty 62.73 294 IAmb IAmb 18 13 10.1
comp=Z,18nm,1.5s
MDPB Devils Postpil 62.79 299 IAmb IAmb 18 13 15.3
comp=Z,17nm,1.2s
ISA Isabella, Lake 62.99 297 IAmb IAmb 18 13 17.1
comp=Z,30nm,1.2s
ERBR Yeremizino-Bor 63.31 51 *e*P **P 18 13 11.1 +1.2**
ERBR *e**PP **pP 18 13 13.7 +0.6**
ERBR *e*S **S 18 21 44.9 +3.1**
ERBR pmax pmax
comp=Z,9.0nm,0.6s
DLBC Dease Lake 63.50 324 LR LR 18 40 39.8
comp=Z,422nm,19.5s,baz=88,slow=36
CMB Columbia Colle 63.63 300 IAmb IAmb 18 13 20.4
comp=Z,25nm,1.4s
BBOR Butler Butte 63.70 306 IAmb IAmb 18 13 18.2
comp=Z,14nm,1.1s
LABN Labinsk 63.81 52 *e*P **P 18 13 13.2 0.0**
LABN *e**PP **pP 18 13 16.1 -0.3**
LABN *e*S **S 18 21 48.2 +0.2**
LABN pmax pmax
comp=Z,17nm,0.7s
MMAI Mount Meron Ar 63.81 66 P **P 18 13 13.8 +0.3**
comp=Z,0.8nm,0.5s,baz=286,slow=5.8,SNR=1.4
comp=Z,0.8nm,0.5s
ORV Oroville 63.95 302 IAmb IAmb 18 13 21.5
comp=Z,24nm,1.4s
I30M Mount Dempster 64.37 332 IAmb IAmb 18 13 24.2
comp=Z,18nm,1.4s
E28M Babbage River 64.45 336 IAmb IAmb 18 13 28.9
comp=Z,38nm,1.9s
M31M Drury Creek, Y 64.47 329 IAmb IAmb 18 13 25.4
comp=Z,25nm,1.2s
J30M Hart River 64.55 332 IAmb IAmb 18 13 25.9
comp=Z,25nm,1.3s
KIRV Kirov 64.62 35⇓ *e*P **P 18 13 17.7 -0.6**
H29M Whitestone 64.82 334 IAmb IAmb 18 13 27.4
comp=Z,25nm,1.2s
F28M Old Crow 64.91 335 IAmb IAmb 18 13 27.8
comp=Z,32nm,1.3s
I29M Ogilvie Camp, 65.09 333 IAmb IAmb 18 13 28.9
comp=Z,33nm,1.4s
K29M Barlow Dome 65.29 331 IAmb IAmb 18 13 30.6
comp=Z,24nm,1.4s
E27K Coleen River 65.31 336 IAmb IAmb 18 13 29.8
comp=Z,27nm,1.4s
KIV Kislovodsk 65.36 52 P **P 18 13 24.1 +0.6**
KIV IAmb IAmb 18 13 46.6
comp=Z,30nm,1.4s
SHA1 Shidzhatmaz 65.42 52 *d iP* **P 18 13 25.0 +1.0**
KBZ Khabaz 65.58 52 P **P 18 13 25.1 +0.4**
comp=Z,4.6nm,0.8s,baz=273,slow=8.4,SNR=12
comp=Z,4.6nm,0.8s
KBZ Khabaz 65.58 52⇓ *e*P **P 18 13 25.7 +0.9**
KBZ pmax pmax
comp=Z,10.0nm,1.0s
NEUR Neytrino 65.61 53⇑ *e*P **P 18 13 25.7 +0.5**
NEUR pmax pmax
comp=Z,7.0nm,1.5s
BELG Belogornoye 65.65 42 LR LR 18 40 22.4
comp=Z,292nm,18.4s,baz=279,slow=34
BELG Belogornoye 65.65 42⇓ *e*P **P 18 13 24.3 -0.7**
BELG pmax pmax
comp=Z,8.0nm,1.0s
N30M Aishikik Lake 65.92 328 IAmb IAmb 18 13 34.5
comp=Z,23nm,1.2s
NCK Nalchik 66.14 52⇑ *e*P **P 18 13 29.9 +1.4**
NCK pmax pmax
comp=Z,26nm,1.2s
F26K Sheenjek River 66.39 336 IAmb IAmb 18 13 37.5
comp=Z,20nm,1.4s
D25K Kavik River 66.46 338 IAmb IAmb 18 13 37.8
comp=Z,16nm,1.2s
G26K Porcupine Rive 66.56 335 P **P 18 13 29.6 -1.1**
D24K Happy Valley 67.32 338 IAmb IAmb 18 13 43.6
comp=Z,22nm,1.2s
PRP Porcupine Dome 67.81 334 **P 18 13 39.6 +0.8**
G24K Hadweenzic Riv 67.99 336 IAmb IAmb 18 13 48.5
comp=Z,24nm,1.4s
L26K Log Cabin Wild 68.02 331 IAmb IAmb 18 13 47.9
comp=Z,20nm,1.4s
B22K Teshekpuk Lake 68.14 340 IAmb IAmb 18 13 48.6
comp=Z,21nm,1.2s
GNI Garni 68.17 55 **P 18 13 40.0 -1.5**
GNI IAmb IAmb 18 13 49.5
comp=Z,25nm,1.1s
GNI Garni 68.17 55 *d iP* **P 18 13 42.2 +0.7**
GNI pmax pmax
comp=Z,30nm,1.2s
H24K Noodor Dome 68.53 335 **P 18 13 43.7 +0.4**
H24K IAmb IAmb 18 13 51.8
comp=Z,24nm,1.4s
ILAR Eielson Array 68.66 334 P **P 18 13 44.5 +0.6**
comp=Z,8.3nm,1.1s,baz=58,slow=4.1,SNR=28
comp=Z,8.3nm,1.1s
HDA Harding Lake 68.85 333 P **P 18 13 45.6 +0.5**
B21K Ikpikpuk River 68.87 340 IAmb IAmb 18 13 53.4
comp=Z,19nm,1.3s
G23K Bananza Creek 68.88 336 IAmb IAmb 18 13 54.0
comp=Z,24nm,1.2s
COLA College 68.97 334⇓ *e*P **P 18 13 46.3 +0.4**
COLA pmax pmax
comp=Z,35nm,1.4s
CCB Clear Creek Bu 69.06 334 **P 18 13 47.0 +0.5**
H23K Yukon River 69.14 335 IAmb IAmb 18 13 54.9
comp=Z,31nm,1.4s
E21K Killik River 69.30 339 IAmb IAmb 18 13 55.9
comp=Z,19nm,1.2s
B20K Meade River 69.40 341 IAmb IAmb 18 13 56.7
comp=Z,17nm,1.2s
AKT Akhty 69.73 53 *e*P **P 18 13 50.6 -0.6**
AKT *e* 18 14 12.5
AKT *e*S **S 18 22 59.9 -0.1**
AKT pmax pmax
comp=Z,23nm,1.6s
H22K Ishtalitna Cre 69.76 336 IAmb IAmb 18 13 58.5
comp=Z,31nm,1.6s
ARTI Arti 69.93 36 *c iP* **P 18 13 52.5 +0.5**

ARTI							18 14 14.2	
ARTI							18 16 22.6	
ARTI					S	**S**	**18 22 59.7**	**-1.9**
ARTI					SS	**SS**	**18 27 23.8**	**-6.1**
ARTI					pmax	pmax		
	comp=Z,13nm,1.4s							
D20K	**Etivluk River**	**69.97**	**339**		P	**P**	**18 13 52.3**	**+0.3**
D20K					IAmb	IAmb	18 14 00.2	
	comp=Z,26nm,1.2s							
G21K	**Allakaket**	**70.18**	**337**		IAmb	IAmb	18 14 01.5	
	comp=Z,24nm,1.4s							
D19K	**Kuna River**	**70.55**	**340**		IAmb	IAmb	18 14 03.6	
	comp=Z,23nm,1.2s							
F20K	**Avaraat Lake**	**70.62**	**338**		IAmb	IAmb	18 14 04.1	
	comp=Z,18nm,1.3s							
SVE	**Sverdlovsk**	**70.85**	**35**	*e*	P	**P**	**18 13 58.1**	**+0.5**
SVE					pmax	pmax		
	comp=Z,27nm,1.4s							
E19K	**Redstone River**	**70.87**	**338**		IAmb	IAmb	18 14 05.7	
	comp=Z,16nm,1.2s							
TRQA	**Tornquist**	**71.24**	**197**	*e*	P	**P**	**18 13 59.9**	**-0.1**
C18K	**Utukok River**	**71.36**	**340**		IAmb	IAmb	18 14 08.5	
	comp=Z,18nm,1.3s							
F19K	**Shaleruckik Mo**	**71.41**	**338**		IAmb	IAmb	18 14 08.7	
	comp=Z,29nm,1.5s							
G19K	**Purcell Mounta**	**71.59**	**337**		IAmb	IAmb	18 14 09.5	
	comp=Z,42nm,1.6s							
J20K	**Nowinta River**	**71.67**	**335**		IAmb	IAmb	18 14 10.0	
	comp=Z,22nm,1.3s							
H19K	**Roundabout Mou**	**71.73**	**337**		IAmb	IAmb	18 14 10.8	
	comp=Z,19nm,1.4s							
RDOG	**Red Dog Mine**	**72.23**	**340**		IAmb	IAmb	18 14 13.7	
	comp=Z,20nm,1.1s							
J18K	**Innoko River**	**73.02**	**335**		IAmb	IAmb	18 14 17.8	
	comp=Z,20nm,1.4s							
L19K	**White Mountain**	**73.06**	**333**		IAmb	IAmb	18 14 18.7	
	comp=Z,34nm,1.3s							
H17K	**Granite Mounta**	**73.25**	**337**		P	**P**	**18 14 12.0**	**+0.1**
H17K					IAmb	IAmb	18 14 20.2	
	comp=Z,30nm,1.2s							
NRIK	**Noril'sk**	**73.39**	**17**		P	**P**	**18 14 13.3**	**+0.8**
	comp=Z,1.9nm,0.7s,baz=349,slow=2.8,SNR=3.8							
	comp=Z,34nm,1.9s							
NRIK	**Noril'sk**	**73.39**	**17**		IAmb	IAmb	18 14 21.2	
	comp=Z,34nm,1.5s							
NRIK	**Noril'sk**	**73.39**	**17**	⇑*i*	P	**P**	**18 14 14.0**	**+1.4**
NRIK					pmax	pmax		
	comp=Z,25nm,1.5s							
F15K	**North Star Dit**	**74.29**	**339**		IAmb	IAmb	18 14 26.5	
	comp=Z,27nm,1.3s							
MBAR	**Mbarara**	**75.09**	**100**		LR	LR	18 46 25.1	
	comp=Z,495nm,19.7s,baz=319,slow=35							
MBAR	**Mbarara**	**75.09**	**100**	*ce*	P	**P**	**18 14 21.9**	**-1.7**
MBAR					pmax	pmax		
	comp=Z,15nm,2.5s							
TSUM	**Tsumeb**	**75.49**	**123**		LR	LR	18 42 41.1	
	comp=Z,192nm,20.1s,baz=302,slow=32							
PLCA	**Paso Flores**	**76.20**	**202**		P	**P**	**18 14 30.1**	**+0.8**
	comp=Z,4.3nm,1.2s,baz=34,slow=7.8,SNR=4.9							
	comp=Z,4.3nm,1.2s							
L14K	**Kuka Creek**	**76.52**	**335**		IAmb	IAmb	18 14 39.5	
	comp=Z,35nm,1.2s							
LODK	**Lodwar**	**76.95**	**94**			**P**	**18 14 33.6**	**-0.5**
TIXI	**Tiksi**	**77.49**	**3**	⇓*e*	P	**P**	**18 14 36.6**	**+0.5**
TIXI					pmax	pmax		
	comp=Z,23nm,1.2s							
BORK	**Borovoye**	**77.59**	**35**	⇑*e*	P	**P**	**18 14 36.1**	**-0.9**
BORK					pmax	pmax		
	comp=Z,9.0nm,1.2s							
BVAR	**Borovoye Array**	**77.63**	**35**		P	**P**	**18 14 37.6**	**+0.3**
	comp=Z,2.2nm,0.9s,baz=310,slow=5.6,SNR=10							
	comp=Z,2.2nm,0.9s							
BILL	**Bilibino**	**79.19**	**350**	*de*	P	**P**	**18 14 45.6**	**0.0**
BILL					pmax	pmax		
	comp=Z,23nm,1.3s							
ATD	**Arta Tunnel**	**79.34**	**83**		LR	LR	18 49 04.4	
	comp=Z,16nm,19.6s,baz=340,slow=35							
LSZ	**Lusaka**	**81.11**	**114**		LR	LR	18 48 46.1	
	comp=Z,227nm,21.7s,baz=328,slow=34							
KURK	**Kurchatov**	**83.06**	**34**			**P**	**18 15 06.1**	**-0.4**
KURK					IAmb	IAmb	18 15 13.8	
	comp=Z,15nm,1.2s							
KURK	**Kurchatov**	**83.06**	**34**	*d*	P	**P**	**18 15 06.4**	**-0.1**
KURK					pmax	pmax		
	comp=Z,18nm,1.3s							
KURBB	**Kurchatov Arra**	**83.08**	**34**		P	**P**	**18 15 07.0**	**+0.4**
	comp=Z,3.6nm,1.0s,baz=312,slow=5.4,SNR=19							
	comp=Z,3.6nm,1.0s							
ZALV	**Zalesovo Beam**	**83.59**	**29**		P	**P**	**18 15 09.6**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=316,slow=6.2,SNR=9.1							
	comp=Z,1.5nm,0.7s							
ZALV	**Zalesovo Beam**	**83.59**	**29**			**P**	**18 15 08.8**	**-0.3**
ZALV	**Zalesovo Beam**	**83.59**	**29**		P	**P**	**18 15 08.8**	**-0.3**
SEY	**Seymchan**	**85.82**	**354**	⇑*i*	P	**P**	**18 15 20.9**	**+0.7**
SEY					pmax	pmax		
	comp=Z,13nm,1.4s							
GAR	**Garm**	**85.88**	**47**		P	**P**	**18 15 21.9**	**+0.8**
ARSB	**Arslanbob**	**86.08**	**43**		IAmb	IAmb	18 15 30.2	
	comp=Z,16nm,1.1s							
AAK	**Ala-Archa**	**86.13**	**42**		P	**P**	**18 15 23.0**	**+0.6**
	comp=Z,2.4nm,0.9s,baz=321,slow=4.5,SNR=6.8							
	comp=Z,2.4nm,0.9s							
AAK	**Ala-Archa**	**86.13**	**42**		P	**P**	**18 15 22.7**	**+0.3**
AAK	**Ala-Archa**	**86.13**	**42**	⇓*e*	P	**P**	**18 15 23.4**	**+1.0**
AAK					pmax	pmax		
	comp=Z,7.0nm,1.3s							
YAK	**Yakutsk**	**87.11**	**4**		P	**P**	**18 15 26.6**	**0.0**
YAK	**Yakutsk**	**87.11**	**4**	*e*	P	**P**	**18 15 26.0**	**-0.5**
YAK				*e*	*PP	**pP**	**18 15 29.4**	**-0.5**
YAK				*e*			18 15 31.6	
YAK				*e*			18 18 48.4	
YAK				*e*	PPP	PPP	18 20 43.0	
YAK				*e*	S	**SKSac**	**18 25 52.3**	**-1.0**
YAK				*e*	SS	**SS**	**18 31 45.0**	**-1.9**
YAK					pmax	pmax		
	comp=Z,10.0nm,1.1s							
YAK					pmax	pmax		
	comp=N,4.0nm,1.0s							
YAK					pmax	pmax		
	comp=E,2.0nm,1.3s							
YAK					pmax	pmax		
	comp=Z,74nm,5.4s							
YAK					pmax	pmax		
	comp=N,57nm,4.2s							
YAK					pmax	pmax		
	comp=E,59nm,4.8s							
YAK					smax	smax		
	comp=E,36nm,2.9s							
YAK					smax	smax		
	comp=N,35nm,2.6s							
MAKZ	**Makanchi**	**87.35**	**35**			**P**	**18 15 26.8**	**-1.3**
MAKZ	**Makanchi**	**87.35**	**35**		P	**P**	**18 15 26.8**	**-1.3**
MAKZ					pmax	pmax		
	comp=Z,12nm,1.6s							
MK31	**Makanchi Array**	**87.52**	**35**	⇑*i*	P	**P**	**18 15 28.7**	**-0.2**
MKAR	**Makanchi Array**	**87.52**	**35**		P	**P**	**18 15 28.6**	**-0.3**
	comp=Z,0.9nm,0.9s,baz=319,slow=3.4,SNR=7.1							
	comp=Z,0.9nm,0.9s							
KSH2	**Kashi**	**88.99**	**44**		P	**P**	**18 15 37.8**	**+1.6**
KSH2					pP	pwP	18 15 43.8	+0.3
KNGR	**Kungurtug, Tuv**	**91.10**	**25**	⇓*e*	P	**P**	**18 15 47.5**	**+1.7**
KNGR					pmax	pmax		
	comp=Z,9.0nm,1.5s							
TLY	**Talaya**	**92.23**	**21**	⇓*e*	P	**P**	**18 15 52.3**	**+1.5**
TLY					pmax	pmax		
	comp=Z,9.0nm,1.6s							
WMQ	**Urumqi**	**92.30**	**34**	*e*	P	**P**	**18 15 52.3**	**+0.9**
WMQ					LR	LR		
	comp=Z,170nm,24.7s							
ZAK	**Zakamensk**	**93.24**	**22**	*e*	P	P	18 15 48.7	-7.0
ZAK					pmax	pmax		
	comp=Z,7.0nm,1.8s							
ZEA	**Zeya**	**95.13**	**7**	*e*	P	P	18 16 10.5	+6.4
CD2	**Chengdu**	**110.21**	**31**		Pdif	**Pdif**	**18 17 08.5**	**-3.5**
PZH	**PanZhiHua**	**112.94**	**36**		PKP	**PKiKP**	**18 21 16.8**	**-2.0**
NJ2	**Nanjing**	**114.66**	**18**	*e*	P	**PKiKP**	**18 21 20.5**	**-1.2**
NJ2					pmax	pmax		
	comp=Z,9.0nm,0.5s							
CMAR	**Chiang Mai Arr**	**117.89**	**43**		PKP	**PKPdf**	**18 21 27.9**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=308,slow=3.7,SNR=4.0							
KAPI	**Kappang**	**148.76**	**38**		PKPbc	**PKPbc**	**18 22 28.8**	**-0.4**
	comp=Z,17nm,1.1s,baz=317,slow=5.4,SNR=7.4							
WRA	**Warramunga Arr**	**168.44**	**20**		PKP	**PKPdf**	**18 22 47.9**	**-0.5**
	comp=Z,1.0nm,1.1s,baz=312,slow=1.1,SNR=4.0							
ASAR	**Alice Springs**	**171.69**	**31**		PKP	**PKPdf**	**18 22 49.6**	**-0.5**
	comp=Z,1.1nm,1.0s,baz=229,slow=0.5,SNR=6.1							
ASAR					PKPab	**PKPab**	**18 24 12.0**	**+0.3**
	comp=Z,1.4nm,1.1s,baz=315,slow=5.0,SNR=5.5							

KRSC 29 18:03:46.0±2.0, 49.46N×158.83E, h42km±26km, MI3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.14**	**306**	*e*P		Pn	18 04 19.6	+0.5
SKR				*e*S		Sn	18 04 44.9	+0.5
PAU	**Pauzhetka**	**2.39**	**328**	*e*S		Sn	18 04 55.2	+4.6
KDTR	**Khodutka, Kamc**	**2.40**	**349**	*e*P		Pn	18 04 25.6	+2.8
KDTR				*e*S		Sn	18 04 54.5	+3.5
RUS	**Russkaya**	**2.99**	**356**	*e*P		Pn	18 04 34.1	+3.3
RUS				*e*S		Sn	18 05 09.0	+3.7
ASAK	**Asacha**	**2.99**	**349**	*e*P		Pn	18 04 35.7	+4.7
MTVR	**Mutnovka**	**3.06**	**353**	*e*P		Pn	18 04 35.4	+3.4
MTVR				*e*S		Sn	18 05 11.3	+4.0
GRL	**Gorelyy**	**3.14**	**352**	*e*P		Pn	18 04 36.8	+3.8
GRL				*e*S		Sn	18 05 13.8	+4.6
KRMR	**Karymshinskiy**	**3.41**	**353**	*e*P		Pn	18 04 40.2	+3.6
KRMR				*e*S		Sn	18 05 19.5	+3.8
DALK	**Dalny**	**3.58**	**359**	*e*P		Pn	18 04 42.6	+3.7
DALK				*e*S		Sn	18 05 24.3	+4.3
SPN	**Mys Shipunski**	**3.72**	**11**	*e*P		Pn	18 04 44.5	+3.6
UGLR	**Uglovaya**	**3.76**	**360**	*e*P		Pn	18 04 44.0	+2.4
SMAR	**Somma**	**3.81**	**360**	*e*P		Pn	18 04 48.3	+6.0
AVH	**Avacha**	**3.81**	**359**	*e*P		Pn	18 04 47.5	+5.2
SDLR	**Sedlovina**	**3.83**	**0**	*e*P		Pn	18 04 47.4	+4.9
KOK	**Koryaka**	**3.84**	**358**	*e*P		Pn	18 04 46.9	+4.3
KRX	**Arik**	**3.91**	**358**	*e*P		Pn	18 04 47.6	+4.0
GNL	**Ganaly**	**4.28**	**353**	*e*P		Pn	18 04 53.7	+5.0
KBTR	**Krutoberegovo**	**7.18**	**18**	*e*P		Pn	18 05 32.7	+4.4

*IDC **29** 18:17:42.9±0.9, 32.70N×76.05E, h0km, mb4.1/23, mbtmp4.1/25, ML4.0/2, MS3.4/4, Error ellipse: s-maj=20.8km s-min=14.0km az=19.0*
*NDI **29** 18:17:43.4±3.6, 32.93N×76.39E, h7km±8km, ML4.2, MW4.1, Presumed earthquake*
*MOS **29** 18:17:44.0±1.2, 32.79N×76.16E, h14km, mb4.6/17, Error ellipse: s-maj=8.6km s-min=4.6km az=98.7*
*NEIC **29** 18:17:45.5±1.3, 33.0N±0.1×76.4E±0.09, h10km±1km, mb4.3/16, Error ellipse: s-maj=19.3km s-min=11.2km az=200.0*
*NNC **29** 18:17:48.7±3.5, 33.19N×75.98E, h0km, mb4.2, Error ellipse: s-maj=43.0km s-min=26.5km az=129.0*
ISC 29 18:17:44.8±0.7, 32.78N±0.03×76.34E±0.03, h10km±4km, n195, σ2827/243, mb4.3/42, MS3.3/4, 16C-14D, Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TSSA	**Tissa**	**0.17**	**291**	*e*P		**Pg**	**18 17 48.4**	**-0.3**
TSSA					IAML		18 17 51.3	
	comp=N,92μm,0.1s							
TSSA					IAML		18 17 51.5	
	comp=E,50μm,0.1s							
TSSA				*e*S		**Sg**	**18 17 52.4**	**+0.9**
DHRM	**DHARAMSHALA**	**0.53**	**184**	*e*P		**Pg**	**18 17 55.6**	**+0.5**
DHRM				*e*P		**Pb**	**18 17 57.4**	**+1.1**
DHRM				*e*S		**Sg**	**18 18 03.3**	**+1.2**
DHRM					IAML		18 18 06.6	
	comp=E,6μm,0.5s							
DHRM					IAML		18 18 06.8	
	comp=N,8μm,0.3s							
DHRM					IAML		18 18 06.9	
	comp=N,7μm,0.2s							
DHRM				*e*S		**Sn**	**18 18 07.2**	**-0.4**
DHRM					IAML		18 18 09.9	
	comp=E,7μm,0.3s							
THN	**Thein Dam**	**0.60**	**236**	*e*P		**Pb**	**18 17 57.3**	**-0.1**
THN					IAML		18 18 04.8	
	comp=N,19μm,1.0s							
THN					IAML		18 18 04.8	
	comp=E,18μm,0.9s							
THN				*e*S		**Sb**	**18 18 07.6**	**+1.7**
JMU	**Jammu**	**1.27**	**271**	*e*P		**Pn**	**18 18 07.3**	**-1.4**
JMU				*e*S		**Sg**	**18 18 27.2**	**+1.4**
JMU					IAML		18 18 29.6	
	comp=E,2μm,0.1s							
JMU					IAML		18 18 33.7	
	comp=N,2μm,0.0s							
BHK	**Bhakra**	**1.38**	**179**	*e*P		**Pg**	**18 18 11.7**	**+0.4**
BHK				*e*S		**Sg**	**18 18 32.9**	**+3.7**
BHK					IAML		18 18 33.7	
	comp=E,4μm,0.4s							
BHK					IAML		18 18 34.0	
	comp=N,11μm,0.5s							
ALCI	**Alchi Leh**	**1.60**	**26**	*e*P		**Pn**	**18 18 10.1**	**-3.4**
ALCI				*e*S		**Sn**	**18 18 30.2**	**-4.1**
ALCI					IAML		18 18 43.7	
	comp=N,1μm,0.6s							
ALCI					IAML		18 18 45.0	
	comp=E,1μm,0.5s							
SMLA	**Simla**	**1.79**	**157**	*e*P		**Pb**	**18 18 17.1**	**-0.5**
SMLA				*e*P		**Pg**	**18 18 18.8**	**-0.3**
SMLA				*e*S		**Sg**	**18 18 41.5**	**-0.8**
SMLA				*e*S		**Sb**	**18 18 43.1**	**+3.1**
SMLA					IAML		18 18 46.0	
	comp=N,9μm,0.4s							
SMLA					IAML		18 18 46.8	
	comp=N,7μm,0.4s							
SMLA					IAML		18 18 47.5	
	comp=E,8μm,0.2s							
SMLA					IAML		18 18 47.6	
	comp=E,8μm,0.2s							
SRNI	**Srinagar**	**1.81**	**315**	*e*P		**Pn**	**18 18 13.3**	**-2.9**
SRNI				*e*S		**Sn**	**18 18 37.0**	**-2.3**
SRNI					IAML		18 18 49.2	
	comp=E,7μm,0.3s							
SRNI					IAML		18 18 51.4	
	comp=N,5μm,0.4s							
KLP	**Kalpa**	**2.04**	**127**	*e*P		**Pn**	**18 18 20.2**	**+0.8**
KLP				*e*S		**Sn**	**18 18 42.8**	**-2.3**
KLP					IAML		18 18 56.9	
	comp=E,5μm,0.4s							
KLP					IAML		18 18 57.1	
	comp=N,4μm,0.3s							
NIL	**Nilore**	**2.73**	**289**			**Pn**	**18 18 29.0**	**+0.2**
NIL					Sn	**Sn**	**18 19 02.6**	**+0.7**
NIL	**Nilore**	**2.73**	**289**		P	**Pn**	**18 18 29.0**	**+0.2**
NIL							18 19 02.6	
DDI	**Dehra Dun**	**2.85**	**149**	*e*P		**Pn**	**18 18 31.3**	**+0.9**
DDI				*e*P		**Pb**	**18 18 34.2**	**-1.6**
DDI				*e*S		**Sn**	**18 19 06.0**	**+1.2**
DDI				*e*S		**Sb**	**18 19 06.2**	**-4.5**
DDI					IAML		18 19 13.3	
	comp=N,2μm,0.1s							
DDI					IAML		18 19 13.9	
	comp=E,1μm,0.2s							
DDI					IAML		18 19 21.9	
	comp=N,2μm,0.4s							
DDI					IAML		18 19 22.9	
	comp=E,2μm,0.5s							
JOSI	**Joshimath**	**3.52**	**128**	*e*P		**Pn**	**18 18 40.4**	**+0.6**
JOSI				*e*S		**Sn**	**18 19 20.9**	**-0.7**
JOSI					IAML		18 19 31.2	
	comp=N,850nm,0.4s							
JOSI					IAML		18 19 33.6	
	comp=E,857nm,0.4s							
BHGR	**Bahadurgarh**	**4.11**	**173**	*e*P		**Pn**	**18 18 49.7**	**+2.0**
BHGR				*e*S		**Sn**	**18 19 37.8**	**+2.1**
BHGR					IAML		18 19 55.0	
	comp=N,1μm,0.6s							
BHGR					IAML		18 19 55.5	
	comp=E,890nm,0.5s							
PTH	**Pithoragarh**	**4.59**	**133**	*e*P		**Pn**	**18 18 52.6**	**-1.8**
PTH				*e*S		**Sn**	**18 19 45.9**	**-2.0**
PTH					IAML		18 19 52.8	
	comp=N,181nm,0.2s							
PTH					IAML		18 19 53.8	
	comp=E,276nm,0.2s							
KBL	**Kabul**	**6.34**	**288**	Pn		**Pn**	**18 19 13.8**	**-4.6**
KBL	**Kabul**	**6.34**	**288**	P		**Pn**	**18 19 13.9**	**-4.6**
KSH2	**Kashi**	**6.39**	**355**	P		**Pn**	**18 19 23.5**	**+4.4**
KSH2				sP		Pb	18 19 28.3	-7.9
KSH2				S		**Sn**	**18 20 37.0**	**+4.9**
KSH2				pmax		pmax		
	comp=Z,33nm,0.7s							
KSH2				LR		LR		
	comp=N,940nm,8.2s							
KSH2				LR		LR		
	comp=E,800nm,7.9s							
KSH2				LR		LR		
	comp=Z,940nm,9.3s							
PYUN	**Piuthan**	**7.39**	**127**	Pn		**Pn**	**18 19 35.4**	**+2.4**
	baz=130,slow=0.0							
PYUN				Sn		**Sn**	**18 20 55.8**	**-1.2**
	baz=130,slow=0.0							
DRK	**Karamyk**	**7.63**	**333**	Pn		**Pn**	**18 19 37.4**	**+1.1**
DRK	**Karamyk**	**7.63**	**333**	P		**Pn**	**18 19 37.4**	**+1.1**
DANN	**Dangsing**	**7.77**	**123**	Pn		**Pn**	**18 19 40.1**	**+1.9**
	baz=125,slow=0.0							
DANN				Sn		**Sn**	**18 21 05.4**	**-1.0**
	baz=125,slow=0.0							
GAR	**Garm**	**7.90**	**323**			**Pn**	**18 19 38.8**	**-1.1**
KOLN	**Koldanda**	**8.02**	**127**	Pn		**Pn**	**18 19 43.1**	**+1.6**
	baz=129,slow=0.0							
KOLN				Sn		**Sn**	**18 21 12.7**	**+0.3**
	comp=Z,338nm,0.7s,baz=129,slow=0.0							
CHGR	**Chuyangaron**	**8.28**	**317**	⇑*e*P		**Pn**	**18 19 43.6**	**-1.4**
BTK	**Batken**	**8.52**	**330**	Pn		**Pn**	**18 19 48.6**	**+0.3**
BTK	**Batken**	**8.52**	**330**	P		**Pn**	**18 19 48.6**	**+0.3**
GKN	**Gorkha**	**8.60**	**121**	Pn		**Pn**	**18 19 51.2**	**+1.7**
	baz=124,slow=0.0							
GKN				Sn		**Sn**	**18 21 24.6**	**-2.0**
	comp=Z,216nm,0.4s,baz=124,slow=0.0							
NRN	**Naryn**	**8.65**	**358**			**Pn**	**18 19 52.6**	**+2.3**
NRN	**Naryn**	**8.65**	**358**	P		**Pn**	**18 19 52.6**	**+2.3**
WUS	**Wushi**	**8.71**	**14**			**Pn**	**18 19 53.4**	**+2.4**
ARSB	**Arslanbob**	**8.94**	**344**			**Pn**	**18 19 54.2**	**0.0**
ARSB	**Arslanbob**	**8.94**	**344**	P		**Pn**	**18 19 54.2**	**0.0**
TARG	**Taragay, Kyrgy**	**9.01**	**7**			**Pn**	**18 19 58.9**	**+3.6**
TARG	**Taragay, Kyrgy**	**9.01**	**7**	P		**Pn**	**18 19 58.9**	**+3.6**
DMN	**Daman**	**9.16**	**122**	Pn		**Pn**	**18 19 58.5**	**+1.2**
	baz=124,slow=0.0							
DMN				Sn		**Sn**	**18 21 38.7**	**-2.0**
	comp=Z,152nm,0.4s,baz=124,slow=0.0							
KKN	**Kakani**	**9.19**	**120**	Pn		**Pn**	**18 19 59.1**	**+1.5**
	baz=123,slow=0.0							
KKN				Sn		**Sn**	**18 21 37.6**	**-3.5**
	comp=Z,100nm,0.3s,baz=123,slow=0.0							
KDJ	**Kajisay**	**9.36**	**4**			**Pn**	**18 20 02.9**	**+3.0**
KDJ	**Kajisay**	**9.36**	**4**	P		**Pn**	**18 20 02.9**	**+3.0**
PKIN	**Phulchoki**	**9.39**	**121**	Pn		**Pn**	**18 20 01.7**	**+1.2**
	baz=123,slow=0.0							
PKIN				Sn		**Sn**	**18 21 43.5**	**-2.8**
	comp=Z,193nm,0.4s,baz=123,slow=0.0							
PKI	**Pulchoki**	**9.40**	**121**	Pn		**Pn**	**18 20 01.7**	**+1.0**
	baz=123,slow=0.0							
PKI				Sn		**Sn**	**18 21 43.5**	**-3.2**
	comp=Z,141nm,0.3s,baz=123,slow=0.0							
UCH	**Uchtor**	**9.55**	**352**	P		**Pn**	**18 20 04.1**	**+1.4**
	SNR=19							
BHPL	**Bhopal**	**9.55**	**174**	*e*P		**Pn**	**18 20 01.3**	**-1.1**
BHPL				*e*S		**Sn**	**18 21 43.6**	**-6.2**
BHPL					IAML		18 21 47.2	
	comp=N,50nm,0.5s							
BHPL					IAML		18 21 48.5	
	comp=E,63nm,0.6s							
GUN	**Gumba**	**9.56**	**118**	Pn		**Pn**	**18 20 03.7**	**+0.9**
	baz=120,slow=0.0							
GUN				Sn		**Sn**	**18 21 46.6**	**-3.9**
	comp=E,86nm,0.4s,baz=120,slow=0.0							
PRZ	**Przheval'sk**	**9.83**	**9**			**Pn**	**18 20 09.8**	**+3.5**
PRZ	**Przheval'sk**	**9.83**	**9**	P		**Pn**	**18 20 09.8**	**+3.5**
JIRN	**Jiri**	**9.93**	**118**	Pn		**Pn**	**18 20 08.9**	**+1.0**
	baz=120,slow=0.0							
JIRN				Sn		**Sn**	**18 21 55.1**	**-4.4**
	comp=E,120nm,0.3s,baz=120,slow=0.0							
KBK	**Karagaybulak**	**9.93**	**354**	P		**Pn**	**18 20 10.7**	**+3.1**
	SNR=6.8							
AAK	**Ala-Archa**	**9.95**	**352**	Pn		**Pn**	**18 20 07.6**	**-0.4**
	comp=E,0.3nm,0.3s,baz=198,slow=12,SNR=25							
AAK				Sn		**Sn**	**18 21 53.6**	**-6.2**
	comp=E,0.3nm,0.3s,baz=208,slow=23,SNR=1.2							
AAK				LR		LR	18 24 17.0	
	comp=E,249nm,18.7s,baz=180,slow=39							
	comp=E,5.0nm,0.8s							
AAK	**Ala-Archa**	**9.95**	**352**	P		**Pn**	**18 20 09.5**	**+1.5**
	SNR=12							
AAK	**Ala-Archa**	**9.95**	**352**			**Pn**	**18 20 09.1**	**+1.1**
AAK	**Ala-Archa**	**9.95**	**352**	⇓P		**Pn**	**18 20 09.2**	**+1.2**
	comp=E,7.6nm,0.9s							
AAK				⇑S		**Sn**	**18 21 57.4**	**-2.4**
	comp=E,27nm,1.2s							
AAK	**Ala-Archa**	**9.95**	**352**	P		**Pn**	**18 20 09.2**	**+1.2**
AAK				S		**Sn**	**18 21 57.4**	**-2.4**
EKS2	**Erkin-Say**	**10.07**	**349**	P		**Pn**	**18 20 12.9**	**+3.3**
	SNR=6.8							
TKM2	**Tokmak 2**	**10.14**	**357**	P		**Pn**	**18 20 12.7**	**+2.0**
	SNR=6.3							
EVN	**Everest**	**10.24**	**115**			**Pn**	**18 20 13.1**	**+0.6**
RAMN	**Ramite**	**10.63**	**120**	Pn		**Pn**	**18 20 17.8**	**+0.4**
	baz=122,slow=0.0							
RAMN				Sn		**Sn**	**18 22 12.1**	**-4.5**
	comp=E,175nm,0.5s,baz=122,slow=0.0							
PDGK	**Podgornoye**	**10.82**	**12**	⇑P		**Pn**	**18 20 21.8**	**+1.8**
	comp=E,12nm,0.5s							
PDGK				⇓S		**Sn**	**18 22 19.7**	**-1.4**
	comp=E,24nm,1.0s							
PDGK	**Podgornoye**	**10.82**	**12**	P		**Pn**	**18 20 21.7**	**+1.8**
PDGK				S		**Sn**	**18 22 19.7**	**-1.4**
ODAN	**Odare**	**11.26**	**119**	Pn		**Pn**	**18 20 27.2**	**+1.2**
	baz=121,slow=0.0							
ODAN				Sn		**Sn**	**18 22 27.4**	**-4.6**
	comp=E,164nm,0.6s,baz=121,slow=0.0

comp=N,110nm,16.5s
GTA2 LR LR
comp=E,230nm,13.7s
GTA2 LR LR
comp=Z,270nm,11.7s
AB31 Akbulak array 20.52 328 ⇑P **P 18 22 24.1 +1.1**
comp=Z,4.0nm,0.7s
BVA0 Borovoye Array 20.69 350 P **P 18 22 24.4 -0.5**
comp=Z,13nm,0.9s,baz=155,slow=7.8,SNR=53
BVA0 Borovoye Array 20.69 350 *i*P **P 18 22 24.4 -0.5**
BVAR Borovoye Array 20.69 350 P **P 18 22 23.9 -0.9**
comp=Z,8.5nm,0.7s,baz=162,slow=10,SNR=77
BVAR LR LR 18 31 01.6
comp=Z,110nm,20.5s,baz=183,slow=38
comp=Z,8.5nm,0.7s
BVAR Borovoye Array 20.69 350 P **P 18 22 24.0 -0.9**
BORK Borovoye 20.72 350 **P 18 22 23.7 -1.5**
BORK IAmb IAmb 18 22 26.6
comp=Z,15nm,0.8s
BORK Borovoye 20.72 350*c i*P **P 18 22 25.0 -0.2**
BORK pmax pmax
comp=Z,27nm,0.9s
TNCH TengChong 20.87 106 ⇑P **P 18 22 24.0 -3.2**
TNCH sP Pn 18 22 29.5 -0.2
TNCH S S 18 26 07.5 -13
TNCH SS **SnSn 18 26 45.0 +4.7**
TNCH pmax pmax
comp=Z,11nm,1.2s
TNCH pmax pmax
comp=Z,110nm,4.1s
TNCH LR LR
comp=N,97nm,2.7s
TNCH LR LR
comp=E,85nm,4.4s
TNCH LR LR
comp=Z,72nm,4.5s
ZAA0 Zalesovo Array 22.01 13 **P 18 22 37.2 -1.9**
ZAA0 IAmb IAmb 18 22 42.1
comp=Z,8.7nm,0.8s
ZALV Zalesovo Beam 22.01 13 P **P 18 22 38.4 -0.6**
comp=Z,9.0nm,0.8s,baz=212,slow=11,SNR=21
ZALV LR LR 18 32 47.1
comp=Z,48nm,18.4s,baz=158,slow=41
comp=Z,9.0nm,0.8s
ZALV Zalesovo Beam 22.01 13 **P 18 22 36.5 -2.6**
AKTO Aktyubinsk 22.24 328 P **P 18 22 40.7 -0.8**
comp=Z,6.4nm,0.7s,baz=150,slow=5.5,SNR=11
comp=Z,6.4nm,0.7s
AKTO Aktyubinsk 22.24 328 ⇑P **P 18 22 41.1 -0.4**
comp=Z,16nm,1.3s
LZDM Lanzhou Array 22.77 74 P **P 18 22 50.1 +2.3**
comp=Z,3.6nm,0.3s,baz=256,slow=9.8,SNR=2.0
comp=Z,3.6nm,0.3s
LZH Lanzhou 22.89 74 *e*P **P 18 22 54.3 +5.4**
LZH pP sP 18 23 01.0 +6.4
LZH pmax pmax
comp=Z,20nm,1.6s
PZH PanZhiHua 22.91 99 P **P 18 22 45.8 -3.3**
KMI2 Kunming 24.28 101 P **P 18 23 04.3 +1.7**
KMI2 pmax pmax
comp=Z,16nm,0.5s
CHTO Chiang Mai 24.57 119 P **P 18 23 06.1 +1.0**
CHTO IAmb IAmb 18 23 12.6
comp=Z,5.5nm,0.9s
CHTO Chiang Mai 24.57 119 P **P 18 23 06.1 +1.0**
CHTO pmax pmax
comp=Z,6.0nm,0.9s
CM31 Chiang Mai Arr 24.80 120 P **P 18 23 08.6 +1.5**
CM31 IAmb IAmb 18 23 15.9
comp=Z,11nm,1.0s
CMAR Chiang Mai Arr 24.80 120 P **P 18 23 08.9 +1.8**
comp=Z,2.8nm,1.0s,baz=301,slow=9.7,SNR=13
comp=Z,2.8nm,1.0s
PALK Pallekele 25.70 170 LR LR 18 32 53.7
comp=Z,91nm,18.2s,baz=25,slow=36
GNI Garni 26.36 295 P **P 18 23 19.1 -2.2**
GNI Garni 26.36 295⇑ *e*P **P 18 23 23.4 +2.1**
GNI pmax pmax
comp=Z,20nm,1.1s
ARTI Arti 26.69 338*d i*P **P 18 23 26.2 +2.4**
ARTI 18 24 03.5
ARTI S **S 18 28 03.2 +4.2**
ARTI SS **SnSn 18 29 06.0 +4.1**
ARTI pmax pmax
comp=Z,39nm,3.8s
SONM Songino Array 27.20 48 P **P 18 23 31.5 +2.8**
comp=Z,3.0nm,0.7s,baz=245,slow=9.1,SNR=16
comp=Z,3.0nm,0.7s
SONM Songino Array 27.20 48 P **P 18 23 27.1 -1.6**
SONM Songino Array 27.20 48 *e*P **P 18 23 31.7 +3.0**
SONM pmax pmax
comp=Z,3.0nm,0.7s
TLY Talaya 27.41 38⇑ *e*P **P 18 23 29.3 -1.2**
TLY pmax pmax
comp=Z,3.0nm,0.8s
ULN Ulaanbaatar 27.62 48 P **P 18 23 31.6 -1.0**
ULN IAmb IAmb 18 23 36.0
comp=Z,6.0nm,1.1s
ULN Ulaanbaatar 27.62 48*c i*P **P 18 23 34.8 +2.3**
ULN pmax pmax
comp=Z,6.0nm,1.1s
SHA1 Shidzhatmaz 28.44 302⇑ *i*P **P 18 23 39.0 -1.0**
RAYN Ar Rayn 28.63 259 P **18 23 35.8 -5.8**
RAYN IAmb IAmb 18 24 04.7
comp=Z,6.7nm,1.1s
RAYN Ar Rayn 28.63 259 P P 18 23 35.8 -5.8
RAYN pmax pmax
comp=Z,7.0nm,1.1s
HHC Hu-ho-hao-te 29.18 64 *e*P **P 18 23 44.5 -1.9**
HHC pmax pmax
comp=Z,11nm,0.6s
HHC pmax pmax
comp=Z,51nm,5.4s
LABN Labinsk 29.98 304 *e*P **P 18 23 52.5 -0.9**
LABN *e**PP **pP 18 23 56.2 -1.2**
LABN *e*S **S 18 28 49.6 -1.5**
LABN pmax pmax
comp=Z,11nm,0.6s
ERBR Yeremizino-Bor 30.37 306 *e*P **P 18 23 57.2 +0.4**
ERBR *e**PP **pP 18 23 59.7 -1.1**
ERBR *e*S **S 18 28 57.0 -0.1**
ERBR pmax pmax
comp=Z,8.0nm,0.8s
ANN Anapa 32.32 303 *e*P **P 18 24 14.4 +0.4**
ANN *e**PP **pP 18 24 17.6 -0.4**
ANN *e*S **S 18 29 28.5 +0.9**
ANN pmax pmax
comp=Z,12nm,0.8s
BR131 Keskin Array S 34.87 294⇑ *e*P **P 18 24 35.5 -0.9**
BRTR Keskin Array B 34.87 294 P **P 18 24 35.2 -1.2**
comp=Z,0.9nm,0.9s,baz=98,slow=8.9,SNR=5.9
comp=Z,0.9nm,0.9s
BRTR Keskin Array B 34.87 294 *e*P **P 18 24 35.5 -1.0**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
OBN Obninsk 35.61 321 *e*P **P 18 24 43.1 +0.7**
OBN *e* 18 27 10.6
OBN pmax pmax
comp=Z,7.0nm,1.0s
NRIK Noril'sk 37.16 7 P **P 18 24 57.0 +1.6**
comp=Z,2.1nm,0.7s,baz=168,slow=5.5,SNR=3.0
comp=Z,2.1nm,0.7s
NRIK Noril'sk 37.16 7⇑ *e*P **P 18 24 56.2 +0.8**
NRIK pmax pmax
comp=Z,5.0nm,1.0s
AKASG Malin Array Be 38.71 312 P **P 18 25 08.8 +0.1**
comp=Z,0.7nm,0.6s,baz=78,slow=6.6,SNR=1.3
comp=Z,0.7nm,0.6s
AKBB Malin Array Si 38.71 312⇓ *e*P **P 18 25 10.6 +1.9**
AKBB pmax pmax
comp=Z,22nm,2.3s
ZEA Zeya 41.50 44 *e*P **P 18 25 34.7 +2.8**
KSRS Korea Array 42.02 69 P **P 18 25 37.6 +1.3**
comp=Z,1.6nm,1.0s,baz=276,slow=9.4,SNR=3.9
comp=Z,1.6nm,1.0s
FINES FINESS Array B 43.01 327 P **P 18 25 43.0 -1.1**
comp=Z,1.8nm,0.9s,baz=133,slow=8.4,SNR=5.2
comp=Z,1.8nm,0.9s
FINES FINESS Array B 43.01 327 *e*P **P 18 25 45.9 +1.8**
FINES pmax pmax
comp=Z,2.0nm,0.7s
KLR Kul'dur 43.91 51⇓ *i*P **P 18 25 52.6 +1.0**
YAK Yakutsk 44.58 33 P **P 18 25 54.2 -2.5**
YAK Yakutsk 44.58 33 *e*P **P 18 25 57.8 +1.1**
YAK pmax pmax
comp=Z,9.0nm,1.1s
YAK pmax pmax
comp=N,2.0nm,1.0s
YAK pmax pmax
comp=E,3.0nm,1.5s
YAK Yakutsk 44.58 33 *e**SS **P 18 25 57.6 +0.9**
ARCES ARCESS Array B 46.25 338 P **P 18 26 09.8 -0.1**
comp=E,4.0nm,0.8s,baz=110,slow=8.0,SNR=2.4
comp=E,4.0nm,0.8s
TIXI Tiksi 47.67 20 P **P 18 26 22.5 +1.6**
comp=E,1.2nm,0.3s,baz=315,slow=2.1,SNR=3.7
comp=E,1.2nm,0.3s
TIXI Tiksi 47.67 20⇓ *e*P **P 18 26 22.2 +1.3**
TIXI pmax pmax
comp=Z,3.0nm,1.0s
HFS Hagfors 48.69 324 P **P 18 26 28.6 -0.4**
comp=Z,3.4nm,0.8s,baz=116,slow=6.9,SNR=5.8
comp=Z,3.4nm,0.8s
NOA NORSAR Array B 49.98 325 P **P 18 26 38.1 -0.7**
comp=Z,0.9nm,0.8s,baz=103,slow=7.1,SNR=2.2
comp=Z,0.9nm,0.8s
MJAR Matsushiro Arr 50.26 67 P **P 18 26 42.1 +0.8**
comp=Z,2.4nm,0.8s,baz=288,slow=9.6,SNR=6.7
comp=Z,2.4nm,0.8s
MJA0 Matsu Arr-Jizo 50.29 67 *e*P **P 18 26 42.1 +0.5**
MJA0 pmax pmax
comp=Z,3.0nm,0.8s
BFO Black Forest 52.28 309 *i*P **P 18 26 57.9 +1.5**
SEY Seymchan 55.10 33 P **P 18 27 18.5 +1.8**
comp=Z,5.1nm,0.7s,baz=261,slow=7.8,SNR=13
comp=Z,5.1nm,0.7s
SEY Seymchan 55.10 33⇓ *i*P **P 18 27 17.6 +0.9**
SEY pmax pmax
comp=Z,9.0nm,0.9s
NOR Nord 58.24 350 *i*P P 18 27 34.0 -4.8
NOR IAmb IAmb 18 27 37.6
comp=Z,3.3nm,0.8s
DAG Danmarks Havn 59.51 345 *i*P **P 18 27 47.0 -0.6**
DAG IAmb IAmb 18 27 52.7
comp=Z,3.5nm,1.1s
BILL Bilibino 60.03 26⇓ *i*P **P 18 27 52.5 +1.2**
BILL pmax pmax
comp=Z,19nm,3.5s
DBG Daneborg 60.51 342 *i*P **P 18 27 58.4 +3.8**
DBG IAmb IAmb 18 28 02.5
comp=Z,3.6nm,1.2s
ESDC Sonseca Array 63.12 301 P **P 18 28 10.9 -1.8**
comp=Z,0.5nm,0.7s,baz=46,slow=7.1,SNR=4.7
comp=Z,0.5nm,0.7s
NEEM North Greenlan 65.56 349 *i*P **P 18 28 28.2 -0.2**
NEEM IAmb IAmb 18 28 29.9
comp=Z,6.2nm,0.7s
SUMG Summit 65.96 343 *i*P **P 18 28 33.2 +2.0**
SUMG IAmb IAmb 18 28 38.9
comp=Z,6.9nm,0.8s
C16K Lisburne Hills 69.43 20 sP **P 18 28 53.7 +1.0**
baz=308
C17K DeLong Mountai 69.94 20 sP **P 18 28 56.8 +1.0**
baz=309
TORD Torodi Ar. Bea 70.18 273 P **P 18 28 55.1 -3.0**
comp=Z,3.9nm,0.8s,baz=53,slow=4.2,SNR=7.4
comp=Z,3.9nm,0.8s
TORD Torodi Ar. Bea 70.18 273 P **P 18 28 54.4 -3.7**
TORD IAmb IAmb 18 29 01.7
comp=Z,3.8nm,0.9s
C18K Utukok River 70.38 19 sP **P 18 28 59.4 +0.8**
baz=311
D17K Noatak River 70.46 20 sP **P 18 29 00.3 +1.4**
baz=310
C19K Lookout Ridge 70.51 18 P **P 18 29 00.0 +0.7**
C19K Lookout Ridge 70.51 18 sP **P 18 29 00.6 +1.2**
baz=312
B20K Meade River 70.51 17 sP **P 18 29 00.6 +1.3**
baz=314
E17K Hotham Inlet 71.23 21 sP **P 18 29 04.9 +1.2**
baz=311
D19K Kuna River 71.32 18 sP **P 18 29 05.2 +0.9**
baz=314
E18K Tukpahlearik C 71.36 20 P **P 18 29 04.3 -0.2**
E18K Tukpahlearik C 71.36 20 sP **P 18 29 05.6 +1.1**
baz=312
B21K Ikpikpuk River 71.41 17 sP **P 18 29 05.8 +1.1**
baz=316
D20K Etivluk River 71.56 18 sP **P 18 29 06.5 +0.8**
baz=315
C21K Knifeblade Rid 71.71 17 sP **P 18 29 07.8 +1.2**
baz=316
ANM Nome 71.73 24 sP **P 18 29 08.6 +1.9**
baz=309
F17K Baldwin Pennin 71.83 21 sP **P 18 29 09.1 +1.8**
baz=312
E20K Nigu River 72.00 18 sP **P 18 29 09.1 +0.7**
baz=315
C23K Ikpikpuk River 72.18 15 sP **P 18 29 10.6 +1.2**
baz=320
F18K Selawik 72.20 20 sP **P 18 29 10.7 +1.3**
baz=313
E19K Redstone River 72.29 19 sP **P 18 29 11.3 +1.2**
baz=315
E21K Killik River 72.43 17 sP **P 18 29 12.0 +1.0**
baz=317
H16K Elim 72.72 23 sP **P 18 29 14.4 +1.8**
baz=311
D23K Nanushuk River 72.84 16 sP **P 18 29 14.2 +0.9**
baz=320
G19K Purcell Mounta 73.26 20 sP **P 18 29 16.6 +0.8**
baz=315
C26K Camden Bay 73.33 14 sP **P 18 29 17.5 +1.3**
baz=324
TOLK Toolik Lake Re 73.34 16 sP **P 18 29 17.2 +0.8**
baz=321
F21K Alatna River 73.46 18 sP **P 18 29 17.9 +0.8**
baz=318
D25K Kavik River 73.51 15 sP **P 18 29 18.4 +1.1**
baz=323
C27K Jago River 73.81 14 sP **P 18 29 20.0 +1.0**
baz=326
E24K Your Creek 74.04 16 sP **P 18 29 21.6 +1.1**
baz=322
G22K Bettles 74.20 18 sP **P 18 29 22.2 +0.9**
baz=320
F25K Christian Rive 75.08 15 sP **P 18 29 27.9 +1.4**
baz=324
G24K Hadweenzic Riv 75.37 17 sP **P 18 29 28.9 +0.7**
baz=323
E29M Blow River 75.97 12 sP **P 18 29 32.6 +1.0**
baz=331
WRA Warramunga Arr 76.27 125 P **P 18 29 34.6 +0.7**
comp=Z,1.2nm,0.9s,baz=310,slow=5.7,SNR=1.6
comp=Z,1.2nm,0.9s
INK Inuvik 76.79 11 P **P 18 29 36.6 +0.5**
comp=Z,0.9nm,0.6s,baz=333,slow=4.5,SNR=3.8
comp=Z,0.9nm,0.6s
ILAR Eielson Array 77.07 18 P **P 18 29 38.5 +0.6**
comp=Z,0.7nm,0.6s,baz=310,slow=4.9,SNR=9.2
comp=Z,0.7nm,0.6s
ILAR Eielson Array 77.07 18 *e*P **P 18 29 38.1 +0.3**
ILAR pmax pmax
comp=Z,1.0nm,0.8s
YKA Yellowknife Ar 84.65 5 P **P 18 30 17.1 -1.2**
comp=Z,0.6nm,0.7s,baz=344,slow=5.7,SNR=7.7
comp=Z,0.6nm,0.7s
YKA Yellowknife Ar 84.65 5 *e*P **P 18 30 17.9 -0.4**
YKA pmax pmax
comp=Z,1.0nm,0.8s

IDC ***29*** *18:19:12.8±0.4,21˚44S×169˚68E,h0km,mb4.9/35, mbtmp4.8/37,ML4.7/2,MS5.1/51,Error ellipse: s-maj=13.5km s-min=12.1km az=155.0*
IPGP ***29*** *18:19:13.0,21˚39S×169˚46E,h25km,Mw5.6,Fault plane solution: NP1:ϕs303.00000°,δ34.00000°,λ52.00000°. NP2:ϕs166.00000°,δ64.00000°,λ113.00000°.*
MOS ***29*** *18:19:13.8±1.1,21˚42S×169˚44E,h10km,mb5.7/34, MS5.4/13,Error ellipse: s-maj=9.4km s-min=7.8km az=123.5*
NEIC ***29*** *18:19:14.2±2.1,21˚42S±0˚10×169˚49E±0˚04,h10km±1km, mb5.5/186,Ms_20 5.4/574,Mwb5.6/75,Mww5.7/38,Error ellipse: s-maj=16.9km s-min=3.3km az=162.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr1.53; Mθθ0.55; Mϕϕ-2.08; Mrθ0.07; Mϕϕ1.57; Mϕr-1.86; Fault plane solution: Mo3.07000×10¹⁷ NP1: ϕs301.98000°,δ34.54000°,λ38.26000°. NP2: ϕs178.97000°,δ69.44000°,λ118.39000°. Principal axes: T 2.5115, Plg56.0000°, Azm126.0000°; N 0.9096, Plg26.0000°, Azm348.0000°; P -3.4210, Plg20.0000°, Azm248.0000°;*
NEIC ***29*** *18:19:15.1,21˚47S×169˚41E,h26km*
GFZ ***29*** *18:19:15.9,21˚42S×169˚66E,h19km,MW5.6,Moment Tensor Solution. s89 Moment tensor: Mrr2.61; Mθθ-0.33; Mϕϕ-2.28; Mrθ-0.37; Mθϕ1.61; Mϕr-0.51; Fault plane solution: NP1:ϕs164.00000°,δ49.00000°, λ109.00000°. NP2:ϕs316.00000°,δ44.00000°,λ68.00000°. Principal axes: T 2.7800, Plg75.0000°, Azm140.0000°; N 0.4300, Plg14.0000°, Azm331.0000°; P -3.2000, Plg2.0000°, Azm241.0000°;*
NEIC ***29*** *18:19:15.1,21˚47S×169˚52E,h26km,Moment Tensor Solution. Duration: 3s5 Moment tensor: Scale 10¹⁷Nm; Mrr2.13; Mθθ0.12; Mϕϕ-2.25; Mrθ0.34; Mθϕ1.85; Mϕr-2.77; Fault plane solution: Mo4.00000×10¹⁷ NP1: ϕs304.65000°,δ27.87000°,λ47.49000°. NP2: ϕs170.69000°,δ69.84000°,λ109.66000°. Principal axes: T 3.5517, Plg60.0000°, Azm109.0000°; N 0.7844, Plg18.0000°, Azm344.0000°; P -4.3362, Plg22.0000°, Azm246.0000°;*
NEIC ***29*** *18:19:17.6,21˚46S×169˚49E,h35km*
NOU ***29*** *18:19:18.8,21˚48S×169˚33E,h12km,ML5.4/109, Southeast of Loyalty Islands*
BGR ***29*** *18:19:20.0,20˚43S×171˚17E,h33km,Ms5.3*
PTWC ***29*** *18:19:19,21˚50S×169˚20E,h69km,Mwp5.9/10*
GCMT ***29*** *18:19:21.1±0.1,21˚48S±0˚01×169˚43E±0˚01,h23km, MW5.7/143,Moment Tensor Solution. s139,c268; s143,c275; Duration: 1s7 Moment tensor: Scale 10¹⁷ Nm; Mrr3.10±.04; Mθθ-0.37±.03; Mϕϕ-2.72±.03; Mrθ0.16±.06; Mθϕ1.73±.02; Mϕr-2.31±.06; Best double couple: Mo4.10500×10¹⁷ NP1:ϕs316.00000°,δ31.00000°, λ63.00000°. NP2:ϕs166.00000°,δ63.00000°,λ105.00000°. Principal axes: T 3.9500, Plg69.0000°, Azm107.0000°; N 0.3170, Plg13.0000°, Azm339.0000°; P -4.2610, Plg16.0000°, Azm245.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 29 18:19:14.5±0.4,21˚50S±0˚03×169˚69E±0˚03,h13km±2km, h13km:pP-P,n1249,σ2s06/912,mb5.4/224,MS5.4/361, 49C-44D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.55**	**270**	P	**Pn**	**18 19 39.5**	**-2.3**
MARNC	**Mare, Loyalty**	**1.55**	**270**	S	**Sn**	**18 19 58.1**	**-3.7**
MARNC	**Mare, Loyalty**	**1.55**	**270**		**Pn**	**18 19 39.0**	**-2.8**
MARNC				Sn	**Sn**	**18 19 57.5**	**-4.2**
MARNC	**Mare, Loyalty**	**1.55**	**270**	P	**Pn**	**18 19 39.2**	**-2.6**
YATNC	**Mamie plateau,**	**2.66**	**257**	P	**Pn**	**18 19 55.4**	**-1.8**
YATNC	**Mamie plateau,**	**2.66**	**257**	S	**Sn**	**18 20 26.5**	**-2.8**
YATNC	**Mamie plateau,**	**2.66**	**257**	P	**Pn**	**18 19 54.3**	**-2.9**
OUENC	**Ouen Island, N**	**2.80**	**250**	P	**Pn**	**18 19 58.1**	**-1.0**
OUENC	**Ouen Island, N**	**2.80**	**250**	S	**Sn**	**18 20 30.3**	**-2.4**
OUENC	**Ouen Island, N**	**2.80**	**250**		**Pn**	**18 19 57.4**	**-1.6**
DZM	**Mont Dzumac**	**3.07**	**259**	Pn	**Pn**	**18 20 02.5**	**-0.4**
	49nm,0.3s,baz=116,slow=11,SNR=257						
DZM				Sn	**Sn**	**18 20 36.1**	**-3.5**
	82nm,0.3s,baz=112,slow=21,SNR=6.3						
DZM				LR	LR	18 20 42.6	
	comp=Z,25μm,20.8s,baz=158,slow=29						
	402nm,0.6s						
ONTNC	**Ouen Toro**	**3.11**	**254**	P	**Pn**	**18 20 02.7**	**-0.7**
ONTNC	**Ouen Toro**	**3.11**	**254**	S	**Sn**	**18 20 37.8**	**-2.6**
ONTNC	**Ouen Toro**	**3.11**	**254**		**Pn**	**18 20 01.5**	**-1.8**
ONTNC	**Ouen Toro**	**3.11**	**254**	P	**Pn**	**18 20 01.7**	**-1.7**
NOUC	**Port Laguerre**	**3.21**	**259**	P	**Pn**	**18 20 03.1**	**-1.5**
RTV	**Rentapao**	**3.87**	**342**	P	**Pn**	**18 20 15.6**	**+1.8**
RTV	**Rentapao**	**3.87**	**342**	S	**Sn**	**18 21 02.0**	**+2.8**
RTV	**Rentapao**	**3.87**	**342**	P	**Pn**	**18 20 15.3**	**+1.5**
DVP	**Devils Point**	**4.01**	**339**	P	**Pn**	**18 20 17.2**	**+1.5**
DVP	**Devils Point**	**4.01**	**339**	P	**Pn**	**18 20 17.2**	**+1.5**
NFK	**Norfolk Island**	**7.68**	**192**	P	**Pn**	**18 21 07.6**	**+1.4**
NFK	**Norfolk Island**	**7.68**	**192**	P	**Pn**	**18 21 06.9**	**+0.8**
NFK	**Norfolk Island**	**7.68**	**192**	P	**Pn**	**18 21 06.9**	**+0.8**
NFK	**Norfolk Island**	**7.68**	**192**	P	**Pn**	**18 21 07.0**	**+0.9**
MSVF	**Nonsavu**	**8.72**	**66**	Pn	Pn	18 21 28.0	+7.5
	5.6nm,0.3s,baz=250,slow=9.3,SNR=54						
MSVF				LR	LR	18 24 02.2	
	comp=Z,37μm,18.6s,baz=245,slow=33						
MSVF	**Nonsavu**	**8.72**	**66**	P	Pn	18 21 29.1	+8.5
MSVF	**Nonsavu**	**8.72**	**66**	Pn	Pn	18 21 22.4	+1.8
MSVF	**Nonsavu**	**8.72**	**66***d*	*i*P	Pn	18 21 27.5	+6.9
MSVF	**Nonsavu**	**8.72**	**66**	P	Pn	18 21 28.0	+7.4
HURO	**Huro Makira**	**13.28**	**325**	P	**Pn**	**18 22 26.6**	**+3.8**
NGOA	**Tingoa Renbel**	**13.52**	**315**	P	**Pn**	**18 22 25.7**	**-0.5**
RAO	**Raoul Island**	**13.60**	**127**	LR	LR	18 25 35.8	
	comp=Z,2μm,19.5s,baz=320,slow=28						
GLKZ	**Green Lake**	**13.60**	**127**	P	P	18 22 41.5	+5.3
FUTU	**Fugatoga**	**13.62**	**60**	P	**P**	**18 22 36.0**	**-0.5**
FUTU	**Fugatoga**	**13.62**	**60**	Pn	**Pn**	**18 22 28.9**	**+1.4**
OUZ	**Omahuta**	**14.10**	**167**	P	**Pn**	**18 22 37.2**	**+3.3**
OUZ	**Omahuta**	**14.10**	**167**	P	**Pn**	**18 22 37.5**	**+3.5**
WCZ	**Waipu Caves**	**14.95**	**165**	P	P	18 22 56.6	+5.4
HNR	**Honiara**	**15.22**	**321**	Pn	**Pn**	**18 22 51.2**	**+1.8**
	0.4nm,0.3s,baz=97,slow=3.5,SNR=11						
HNR				LR	LR	18 27 55.7	
	comp=Z,272nm,19.2s,baz=223,slow=34						
HNR	**Honiara**	**15.22**	**321**	P	**P**	**18 22 52.9**	**-1.4**
HNR	**Honiara**	**15.22**	**321**	P	**P**	**18 22 52.2**	**-2.1**
HNR				IAmb	IAmb	18 22 52.9	
	comp=Z,380nm,1.9s						
HNR	**Honiara**	**15.22**	**321**	pmax	pmax		
	comp=Z,380nm,2.0s						
HNR	**Honiara**	**15.22**	**321**	PKP2	**P**	**18 22 52.2**	**-2.1**
SAVO	**Savo Central**	**15.53**	**321**	P	**P**	**18 22 56.8**	**-0.9**
GRZ	**Great Barrier**	**15.54**	**162**	P	**P**	**18 23 02.3**	**+4.7**
GC1S	**Gold Coast 1 S**	**16.11**	**242**	P	**Pn**	**18 23 01.3**	**+0.5**
AUBSH	**Beerwah State**	**16.18**	**247**	P	**Pn**	**18 23 02.0**	**+0.3**
TW1H	**Toowoomba 1 Ha**	**17.20**	**246**	P	**P**	**18 23 16.4**	**+0.1**
EIDS	**Eidsvold**	**17.50**	**254**	P	**P**	**18 23 20.6**	**+1.1**
	comp=Z,184nm,1.8s,comp=Z,0.0nm						
EIDS	**Eidsvold**	**17.50**	**254**	P	**P**	**18 23 19.6**	**0.0**
HAZ	**Te Kaha**	**17.65**	**158**	P	**P**	**18 23 25.5**	**+4.4**
AUNRC	**North Rockhamp**	**17.81**	**260**	P	**P**	**18 23 24.3**	**+1.3**
URZ	**Urewera**	**17.89**	**161**	P	**P**	**18 23 27.1**	**+3.4**
	comp=Z,65nm,0.8s,baz=315,slow=3.4,SNR=23						
URZ				LR	LR	18 29 37.2	
	comp=Z,9μm,18.4s,baz=336,slow=35						
URZ	**Urewera**	**17.89**	**161**	P	**P**	**18 23 28.5**	**+4.8**
MWZ	**Matawai**	**18.09**	**160**	P	**P**	**18 23 31.0**	**+5.1**
PUZ	**Puketiti**	**18.10**	**158**	P	**P**	**18 23 30.6**	**+4.5**
SNVZ	**South Ngauruho**	**18.36**	**165**	P	**P**	**18 23 32.7**	**+3.6**
ARMA	**Armidale**	**18.49**	**238**	P	**Pn**	**18 23 33.5**	**+2.8**
	comp=Z,154nm,1.7s,comp=Z,0.0nm						
ARMA	**Armidale**	**18.49**	**238**	P	**Pn**	**18 23 32.7**	**+2.0**
ARMA	**Armidale**	**18.49**	**238**		**P**	**18 23 26.1**	**-4.5**
BKZ	**Black Stump Fm**	**18.55**	**163**	P	**Pn**	**18 23 35.2**	**+3.9**
BKZ	**Black Stump Fm**	**18.55**	**163**		**Pn**	**18 23 34.2**	**+2.9**
BKZ				IAmb	IAmb	18 23 38.3	
ASAR	**Alice Springs**	**16.91**	**167**	P	**P**	**18 22 21.2**	**+1.4**
	0.4nm,0.8s,baz=348,slow=10.0,SNR=6.8						
ASAR				S	**Sn**	**18 25 25.1**	**-2.4**
	0.1nm,0.6s,baz=352,slow=25,SNR=1.1						
MKAR	**Makanchi Array**	**68.25**	**327**	P	**P**	**18 29 17.1**	**-1.6**
	0.2nm,0.4s,baz=116,slow=8.1,SNR=5.5						
	0.2nm,0.4s						

IDC ***29*** *18:18:29.1±1.7,7˚06S×129˚85E,h115km±23km,mb3.2/1, mbtmp3.4/6,Error ellipse: s-maj=23.5km s-min=13.0km az=103.0*
ISC 29 18:18:29.0±0.9,7˚10S±0˚06×129˚9E±0˚1,h104km,n6, σ2s13/10,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.34**	**13**	P	**Pn**	**18 20 00.8**	**+0.8**
	3.8nm,0.7s,baz=168,slow=19,SNR=13						
SIJI				S	**Sn**	**18 21 09.9**	**-1.2**
	4.9nm,0.2s,baz=236,slow=22,SNR=7.0						
BATI	**Baumata**	**6.89**	**243**	P	**Pn**	**18 20 08.6**	**+1.2**
	9.5nm,0.4s,baz=9.0,slow=19,SNR=11						
BATI				S	**Sn**	**18 21 23.1**	**-1.3**
	6.7nm,0.4s,baz=0.0,slow=20,SNR=2.0						
FITZ	**Fitzroy Crossi**	**11.69**	**200**	P	**Pn**	**18 21 14.2**	**+1.7**
	1.1nm,0.8s,baz=22,slow=10,SNR=1.8						
WRA	**Warramunga Arr**	**13.47**	**162**	P	**Pn**	**18 21 38.1**	**+2.0**
	0.2nm,0.6s,baz=344,slow=13,SNR=5.8						
WRA				S	**Sn**	**18 24 01.4**	**-3.1**
	0.2nm,0.4s,baz=332,slow=22,SNR=5.7						

comp=Z,228nm,1.1s
BKZ Black Stump Fm 18.55 163 P Pn 18 23 35.3 +4.0
KNZ Kokohu 18.76 160 P Pn 18 23 37.5 +3.7
KRHZ Kereru 18.97 164 P Pn 18 23 38.4 +2.1
PNHZ Pukenui 19.18 165 P Pn 18 23 41.5 +2.6
AFI Afiamalu 19.19 70 P Pn 18 23 39.4 +0.2
comp=Z,5.4nm,0.3s,baz=246,slow=9.7,SNR=6.8
AFI LR LR 18 29 35.0
comp=Z,9µm,21.6s,baz=244,slow=32
comp=Z,26nm,0.6s
NIUE Niue 19.27 86 P Pn 18 23 49.6 +10
AUPHS Peel High Scho 19.36 237 P Pn 18 23 42.5 +1.4
QRZ Quartz Range 19.42 174 P P 18 23 39.3 -1.2
DVHZ Dannevirke 19.54 165 P Pn 18 23 44.8 +1.7
PRWZ Pori Road 19.73 166 P Pn 18 23 47.4 +1.9
MRZ Mangatainoka R 19.75 167 P 18 23 43.8 -0.3
MRZ Mangatainoka R 19.75 167 P Pn 18 23 46.2 +0.6
RMQ Roma 19.75 251 P Pn 18 23 48.3 +2.5
RMQ Roma 19.75 251 P Pn 18 23 46.6 +0.8
KIW Kapiti Island 19.81 168 P Pn 18 23 47.8 +1.4
BFZ Birch Farm 19.92 165 P Pn 18 23 48.7 +1.0
HOWZ Holdsworth Sta 19.96 167 P Pn 18 23 48.1 -0.1
MRNZ Matariki Terra 20.01 173 P Pn 18 23 48.2 -0.5
TCW Tory Channel 20.03 170 P P 18 23 47.3 +0.1
TCW Tory Channel 20.03 170 P Pn 18 23 49.9 +0.9
CAW Cannon Point 20.07 168 P P 18 23 47.5 -0.2
AUKHS Kincumber High 20.11 230 P Pn 18 23 51.3 +1.3
MGCD Mangrove Creek 20.18 231 P Pn 18 23 53.2 +2.4
MGCD Mangrove Creek 20.18 231 P Pn 18 23 51.3 +0.5
TUWZ Tuamarina 20.20 171 P P 18 23 49.2 +0.3
MTW Mount Morrison 20.21 167 P P 18 23 47.8 -1.4
THZ Tophouse 20.39 173 P Pn 18 23 52.8 -0.4
THZ Tophouse 20.39 173 P Pn 18 23 54.4 +1.2
MSWZ Moikau Station 20.41 168 P P 18 23 51.8 +0.5
MSWZ Moikau Station 20.41 168 P Pn 18 23 52.9 -0.6
RIV Riverview 20.46 229 P Pn 18 23 56.0 +1.9
RIV Riverview 20.46 229 P Pn 18 23 55.1 +1.0
PLWZ Palliser 20.56 168 P P 18 23 53.0 0.0
PLWZ Palliser 20.56 168 P Pn 18 23 55.3 +0.1
SYDH Sydney Hard Ro 20.72 230 P Pn 18 23 57.2 +0.1
AUAYR Ayr State High 20.95 271 P Pn 18 23 59.8 -0.1
WOLH Wollongong Har 20.97 228 P Pn 18 24 00.2 +0.1
KHZ Kahutara 21.11 172 P P 18 23 58.5 -0.3
KHZ IAmb IAmb 18 24 12.5
comp=Z,188nm,1.2s
KHZ Kahutara 21.11 172 P P 18 24 00.7 +1.9
AULRC Lightning Ridg 21.11 244 P P 18 24 00.4 +1.4
LTZ Lake Taylor 21.33 175 P P 18 24 05.2 +3.9
AUDCS Dubbo College 21.58 236 P P 18 24 06.8 +2.8
GVZ Greta Valley S 21.59 173 P P 18 24 06.9 +2.8
OXZ Oxford 21.86 175 P P 18 24 06.0 -0.8
CTA Charters Tower 21.95 269 P P 18 24 08.5 +0.3
comp=Z,20nm,0.7s,baz=88,slow=9.7,SNR=26
CTA LR LR 18 32 41.9
comp=Z,19µm,18.2s,baz=86,slow=37
comp=Z,20nm,0.7s
CTA Charters Tower 21.95 269 P P 18 24 09.6 +1.5
comp=Z,3.1nm,1.4s,comp=Z,0.0nm
CTA Charters Tower 21.95 269 P P 18 24 09.8 +1.6
CTAO Charters Tower 21.95 269 P P 18 24 09.8 +1.6
CTAO Charters Tower 21.95 269 P P 18 24 05.5 -2.7
CTAO IAmb IAmb 18 24 20.6
comp=Z,409nm,1.6s
CTAO Charters Tower 21.95 269 P P 18 24 05.5 -2.7
CTAO pmax pmax
comp=Z,409nm,1.7s
CTAO MLR MLR
comp=Z,19µm,18.0s
FOZ Fox Glacier 21.97 180 P P 18 24 08.6 +0.4
FOZ IAmb IAmb 18 24 22.6
comp=Z,428nm,1.8s
FOZ Fox Glacier 21.97 180 P P 18 24 10.5 +2.4
RPZ Rata Peaks 22.18 177 LR LR 18 31 57.3
comp=Z,8µm,20.8s,baz=26,slow=34
CNB Canberra Magne 22.51 228 P P 18 24 17.2 +3.2
comp=Z,224nm,2.0s,comp=Z,0.0nm
CNB Canberra Magne 22.51 228 P P 18 24 16.6 +2.5
JCZ Jackson Bay 22.53 182 P P 18 24 17.7 +3.5
JCZ Jackson Bay 22.53 182 P P 18 24 19.9 +5.7
AUDAR Daramalan Coll 22.63 228 P P 18 24 18.0 +2.7
YNG Young 22.68 231 P P 18 24 18.6 +2.8
comp=Z,78nm,1.9s
AUMHS Melrose High S 22.72 228 P P 18 24 18.7 +2.4
AUMTS Mt Stromlo 22.76 228 P P 18 24 19.1 +2.4
CAN Canberra 22.76 228 P P 18 24 19.0 +2.3
comp=Z,185nm,1.9s,comp=Z,0.0nm
CAN Canberra 22.76 228 P P 18 24 19.1 +2.3
CAN Canberra 22.76 228 P P 18 24 14.1 -2.6
CAN Canberra 22.76 228 P P 18 24 14.1 -2.6
CAN pmax pmax
comp=Z,487nm,1.6s
LBZ Lake Benmore 22.83 179 P P 18 24 21.9 +4.6
MILA Mila 23.61 224 P P 18 24 28.8 +3.4
comp=Z,51nm,1.6s
MILA Mila 23.61 224 P P 18 24 27.5 +2.1
AUSMG Snowy Mountain 23.62 226 P P 18 24 28.0 +2.5
CMSA Cobar Meteorol 23.64 240 P P 18 24 27.1 +1.4
comp=Z,460nm,1.6s
CMSA Cobar Meteorol 23.64 240 P P 18 24 27.0 +1.4
QLP Quilpie 23.77 253 P P 18 24 27.8 +0.8
comp=Z,1µm,1.6s,comp=Z,0.0nm
QLP Quilpie 23.77 253 P P 18 24 27.8 +0.8
MLZ Mavora Lakes 23.84 183 P P 18 24 28.6 +1.2
MLZ Mavora Lakes 23.84 183 P P 18 24 31.2 +3.7
MTSU Mount Surprise 24.10 274 P P 18 24 31.1 +1.0
comp=Z,76nm,1.0s
MTSU Mount Surprise 24.10 274 P P 18 24 30.9 +0.8
WHZ Wether Hill Ro 24.38 183 P P 18 24 35.3 +2.9
PMG Port Moresby 24.78 296 P P 18 24 36.1 -0.2
comp=Z,21nm,0.9s,baz=92,slow=5.4,SNR=10
PMG LR LR 18 32 35.4
comp=Z,7µm,19.9s,baz=111,slow=32
comp=Z,21nm,0.9s
PMG Port Moresby 24.78 296 P P 18 24 36.8 +0.4
PMG Port Moresby 24.78 296 P P 18 24 36.7 +0.4
PMG Port Moresby 24.78 296 P P 18 24 35.1 -1.2
PMG IAmb IAmb 18 24 57.5
comp=Z,191nm,1.5s
PMG Port Moresby 24.78 296⇑ *e*P P 18 24 36.6 +0.2
PMG pmax pmax
comp=Z,238nm,2.5s
PMG Port Moresby 24.78 296 P P 18 24 36.5 +0.2
comp=Z,3µmcomp=Z,2µmcomp=Z,97nm,1.1s
SYZ Scrubby Hill 24.98 181 P P 18 24 41.3 +3.5
COEN Coen 26.32 282 P P 18 24 51.9 +1.6
comp=Z,38nm,1.2s
COEN Coen 26.32 282 P P 18 24 51.4 +1.1
COEN Coen 26.32 282 P P 18 24 48.2 -2.1
COEN IAmb IAmb 18 25 24.1
comp=Z,128nm,1.4s
TOO Toolangi 26.34 227 P P 18 24 52.6 +2.2
comp=Z,31nm,1.2s,comp=Z,0.0nm
GLAD Gladstone 26.73 218 P P 18 24 55.9 +2.2
INKA Innaminka 27.00 251 P P 18 24 53.1 -3.3
INKA IAmb IAmb 18 25 04.7
comp=Z,260nm,2.0s
STKA Stephens Creek 27.08 242 P P 18 24 57.8 +0.8
comp=Z,24nm,0.6s,baz=82,slow=11,SNR=33
STKA LR LR 18 34 45.4
comp=Z,10µm,20.6s,baz=87,slow=34
comp=Z,24nm,0.6s
STKA Stephens Creek 27.08 242 P P 18 24 58.5 +1.5
comp=Z,485nm,2.3s,comp=Z,0.0nm
STKA Stephens Creek 27.08 242 P P 18 24 58.2 +1.2
STKA Stephens Creek 27.08 242 P P 18 24 53.8 -3.2
STKA Stephens Creek 27.08 242 *d i*P P 18 24 57.7 +0.7
BRAT Ballarat 27.41 229 P P 18 25 02.7 +2.8
QIS Mount Isa 28.08 266 P P 18 25 06.5 +0.3
comp=Z,29nm,1.7s
QIS Mount Isa 28.08 266 P P 18 25 06.4 +0.3
MOO Moorlands 28.14 217 P P 18 25 07.4 +1.0
comp=Z,75nm,0.8s
RAR Rarotonga 28.42 95 LR LR 18 34 29.1
comp=Z,1µm,21.1s,baz=261,slow=32
ARPS Mount Arapiles 28.56 232 P P 18 25 12.1 +1.9
comp=Z,39nm,1.0s
MANU Manus Island 29.09 309 P P 18 25 13.2 -1.9
MANU IAmb IAmb 18 25 22.2
comp=Z,131nm,1.6s
HTT Hallett 29.66 240 P P 18 25 21.4 +1.3
comp=Z,35nm,1.5s
HTT Hallett 29.66 240 P P 18 25 21.6 +1.4
comp=Z,86nm,1.5s
HTT Hallett 29.66 240 P P 18 25 21.0 +0.8

AUMBR Murray Bridge 29.88 236 P P 18 25 22.9 +0.9
PATS Pohnpei 30.29 337 IAMs_20 IAMs_20 18 37 37.6
comp=Z,8µm,19.0s
BBOO Buckleboo 31.85 242 P P 18 25 40.1 +0.7
comp=Z,80nm,1.9s
BBOO Buckleboo 31.85 242 P P 18 25 40.3 +0.9
BBOO Buckleboo 31.85 242 P 18 25 37.3 -2.1
BBOO IAmb IAmb 18 25 46.4
comp=Z,101nm,1.2s
WR8 Warramunga Arr 32.91 266 P P 18 25 46.7 -2.1
WB0 Warramunga Arr 33.04 267 P P 18 25 48.0 -1.9
WRAB Tennant Creek 33.05 266 P P 18 25 48.8 -1.3
WRAB Tennant Creek 33.05 266 P P 18 25 46.9 -3.2
WRAB IAmb IAmb 18 25 55.4
comp=Z,142nm,1.8s
WRAB Tennant Creek 33.05 266 *d i*P P 18 25 48.1 -2.0
WRAB pmax pmax
comp=Z,90nm,1.8s
AS31 Alice Springs 33.06 259 P P 18 25 46.7 -3.5
WRA Warramunga Arr 33.06 266 P P 18 25 48.7 -1.4
comp=Z,5.0nm,0.5s,baz=93,slow=7.9,SNR=61
WRA PcP PcP 18 28 31.9 -1.8
comp=Z,1.6nm,0.8s,baz=101,slow=2.2,SNR=1.8
comp=Z,5.0nm,0.5s
WRA Warramunga Arr 33.06 266 P P 18 25 46.2 -4.0
WRA Warramunga Arr 33.06 266 P P 18 25 46.2 -4.0
WRA pmax pmax
comp=Z,11nm,1.8s
ASAR Alice Springs 33.06 259 P P 18 25 49.2 -1.0
comp=Z,13nm,0.6s,baz=89,slow=9.1,SNR=232
ASAR PcP PcP 18 28 33.6 -0.1
comp=Z,3.0nm,0.7s,baz=111,slow=2.8,SNR=4.5
ASAR LR LR 18 39 57.8
comp=Z,9µm,18.3s,baz=92,slow=38
comp=Z,13nm,0.6s
AUALC St Philip's Co 33.08 259 P P 18 25 49.7 -0.6
JAY Jayapura 33.93 300 P P 18 25 58.0 +0.2
comp=Z,14nm,0.8s,baz=128,slow=3.2,SNR=5.7
JAY LR LR 18 38 49.2
comp=Z,2µm,21.9s,baz=104,slow=35
comp=Z,14nm,0.8s
JAY Jayapura 33.93 300 P P 18 25 58.0 +0.2
JAY Jayapura 33.93 300 P P 18 26 01.6 +3.8
comp=Z,2µmcomp=Z,79nm,1.8s
GENI Genyem 34.32 299 P P 18 26 02.9 +1.8
KDU Kakadu 36.56 278 P P 18 26 20.4 0.0
comp=Z,8.5nm,1.0s,comp=Z,0.0nm
TBI Tubuai 37.72 101 *e*P P 18 26 28.8 -1.4
comp=Z,2µm,27.0s
TBI *e*S S 18 32 24.0 +3.6
comp=Z,5µm,28.5s
TBI *e*LQ LQ 18 35 09.7
comp=Z,29µm,31.5s
TBI *e*LR LR 18 36 46.2
comp=Z,13µm,25.2s
MTN Manton Dam 37.75 277 P P 18 26 28.0 -2.5
SRPI Serui, Papua 37.96 296 P P 18 26 35.8 +3.5
comp=Z,1µmcomp=Z,38nm,1.7s
WRKA Warakurna 38.09 256 P P 18 26 33.6 +0.3
comp=Z,24nm,1.7s
AUDHS Darwin High Sc 38.16 277 P P 18 26 33.4 -0.5
FORT Forrest 38.32 247 P P 18 26 35.7 +0.6
comp=Z,45nm,0.8s
PPT2 Papeete2 38.51 92 *e*PKP1 P 18 26 36.2 -0.8
comp=Z,414nm,25.0s
PPT2 *e*LR LR 18 37 13.4
comp=Z,4µm,23.0s
PPT Papeete 38.51 91 LR LR 18 38 46.4
comp=Z,2µm,19.0s,baz=255,slow=30
KNRA Kununurra 39.14 271 P P 18 26 41.7 -0.5
comp=Z,52nm,1.2s
KNRA Kununurra 39.14 271 P P 18 26 41.4 -0.9
KNRA IAmb IAmb 18 26 48.1
comp=Z,223nm,1.9s
SAUI Saumlaki 39.36 284 IAMs_20 IAMs_20 18 43 23.6
comp=Z,5µm,19.0s
RKPI Ransiki, Papua 39.89 295 P P 18 26 48.7 +0.3
comp=Z,2µmcomp=Z,33nm,1.1s
FAKI Fak Fak 40.81 292 P P 18 26 58.2 +2.1
FAKI Fak Fak 40.81 292 P P 18 26 52.0 -4.1
FAKI IAmb IAmb 18 27 12.1
comp=Z,240nm,1.8s
FAKI Fak Fak 40.81 292 P P 18 26 54.6 -1.5
comp=Z,2µmcomp=Z,55nm,1.5s
FITZ Fitzroy Crossi 41.49 267 LR LR 18 44 43.7
comp=Z,18µm,18.6s,baz=102,slow=37
GUMO Guam 42.54 323 LR LR 18 43 54.4
comp=Z,2µm,20.1s,baz=137,slow=35
SIJI Sorong 42.69 294 P P 18 27 10.8 -0.7
comp=Z,7.4nm,0.7s,baz=99,slow=7.0,SNR=6.4
SIJI LR LR 18 44 21.8
comp=Z,4µm,20.3s,baz=106,slow=35
comp=Z,7.4nm,0.7s
SIJI Sorong 42.69 294 P P 18 27 09.2 -2.4
comp=Z,1µmcomp=Z,49nm,1.9s
SWI Sorong 42.70 294 P P 18 27 11.2 -0.4
comp=Z,1µmcomp=Z,63nm,1.0s
KMBL Kambalda 43.64 247 P P 18 27 19.2 +0.2
KRAI Karang Ratu 43.99 288 P P 18 27 21.7 -0.3
SOEI Soe 45.12 278 IAMs_20 IAMs_20 18 46 46.4
comp=Z,6µm,20.0s
SOEI Soe 45.12 278 P P 18 27 30.3 -0.9
comp=Z,2µmcomp=Z,67nm,1.2s
NLAI Namlea 45.17 288 P P 18 27 30.8 -0.7
comp=Z,2µmcomp=Z,57nm,1.6s
BATI Baumata 45.52 277 LR LR 18 46 21.6
comp=Z,12µm,21.4s,baz=146,slow=36
BATI Baumata 45.52 277 P P 18 27 33.2 -1.1
PSAC2 Pilbara Seismi 46.15 260 P P 18 27 38.7 -0.5
PSAB3 Pilbara Seismi 46.19 260 P P 18 27 39.4 0.0
PSA00 Pilbara Seismi 46.20 260 P P 18 27 40.0 +0.5
PSA00 Pilbara Seismi 46.20 260 P P 18 27 42.7 +3.2
PSA00 Pilbara Seismi 46.20 260 P P 18 27 36.1 -3.5
MBWA Marble Bar 46.37 261 P P 18 27 41.5 +0.6
MBWA Marble Bar 46.37 261 P P 18 27 41.5 +0.6
MEEK Meekatharra 46.67 253 P P 18 27 43.0 -0.3
SANI Sanana 46.70 288 P P 18 27 46.6 +3.0
SANI Sanana 46.70 288 P P 18 27 42.7 -0.9
comp=Z,2µmcomp=Z,2µmcomp=Z,118nm,1.7s
AUKUL Kulin High Sch 46.82 245 P P 18 27 43.7 -0.6
TNTI Ternate 46.88 293 P P 18 27 45.0 +0.1
KLBR Kellerberrin 47.16 246 P P 18 27 46.7 -0.3
KLBR Kellerberrin 47.16 246 P P 18 27 46.3 -0.7
MMRI Maumere 47.39 278 P P 18 27 52.7 +3.8
MMRI Maumere 47.39 278 P P 18 27 45.0 -3.9
comp=Z,2µmcomp=Z,59nm,1.4s
NWAO Narrogin (SRO) 47.59 245 P P 18 27 50.2 -0.2
comp=Z,15nm,0.7s,baz=87,slow=5.6,SNR=11
NWAO LR LR 18 47 05.1
comp=Z,10µm,21.1s,baz=94,slow=35
comp=Z,15nm,0.7s
NWAO Narrogin (SRO) 47.59 245 P P 18 27 50.7 +0.3
NWAO Narrogin (SRO) 47.59 245 P P 18 27 50.3 0.0
BLDU Ballidu 48.09 248 P P 18 27 54.0 -0.2
MUN Mundaring 48.47 246 P P 18 27 59.7 +2.5
MUN Mundaring 48.47 246 P P 18 27 59.7 +2.5
MORW Morawa 48.75 250 P P 18 28 00.0 +0.7
MORW Morawa 48.75 250 P P 18 27 59.8 +0.5
MORW Morawa 48.75 250 P P 18 27 57.0 -2.3
MORW IAmb IAmb 18 28 07.7
comp=Z,89nm,1.4s
MNI Manado 49.39 292 P P 18 28 04.7 +0.3
comp=Z,3µmcomp=Z,75nm,0.8s
LBFI Labuhan Bajo, 49.61 277 P P 18 28 03.7 -2.4
KKSI Kolaka, Sulawe 49.66 283 P P 18 28 06.6 +0.2
comp=Z,1µmcomp=Z,37nm,1.6s
WBSI Waikabubak, Su 49.67 276 P P 18 28 06.4 -0.2
TAOE Nuku Hiva Isla 49.81 83 *e*PKP1 P 18 28 06.0 -1.7
comp=Z,614nm,24.8s
TAOE *e*S S 18 35 15.9 -1.5
comp=Z,2µm,26.1s
TAOE *e*SS SS 18 38 44.8 -5.4
comp=Z,628nm,27.4s
TAOE *e*LQ LQ 18 40 04.7
comp=Z,3µm,24.9s
TAOE *e*LR LR 18 42 27.5
comp=Z,4µm,23.4s
BSSI Bau Bau, Buton 49.92 280 P P 18 28 09.3 +0.8
comp=Z,1µmcomp=Z,33nm,1.5s
SGSI Sangihe 49.95 295 P P 18 28 08.8 +0.2
LUWI Luwuk 50.02 288 P P 18 28 10.3 +1.2
comp=Z,2µmcomp=Z,100nm,1.5s
KAPI Kappang 51.04 281 P P 18 28 16.5 -0.4
comp=Z,5.7nm,0.7s,baz=98,slow=7.7,SNR=11
KAPI LR LR 18 52 24.8
comp=Z,2µm,18.1s,baz=124,slow=39

comp=Z,5.7nm,0.7s
KAPI Kappang 51.04 281 P P 18 28 17.9 +1.0
KAPI Kappang 51.04 281 *d i*P P 18 28 16.7 -0.2
KAPI pmax pmax
comp=Z,122nm,1.8s
KAPI Kappang 51.04 281 P P 18 28 15.3 -1.6
DBNI Kabupaten Domp 51.06 277 P P 18 28 15.2 -1.9
comp=Z,2µmcomp=Z,59nm,0.8s
APSI Ampana 51.08 287 P P 18 28 18.1 +1.0
comp=Z,2µmcomp=Z,65nm,1.6s
MKS Makassar 51.22 281 P P 18 28 17.2 -1.0
comp=Z,2µmcomp=Z,58nm,1.6s
PLAI Plampang 51.44 276 P P 18 28 20.8 +0.9
PLAI Plampang 51.44 276 P P 18 28 19.8 -0.1
comp=Z,1µmcomp=Z,57nm,1.5s
SPSI Sidrap Palu 51.45 283 P P 18 28 19.1 -0.9
comp=Z,29nm,1.4s
MRSI Marisa 51.46 289 P P 18 28 23.2 +3.2
DAV Davao City (W) 51.75 298 P P 18 28 22.6 +0.4
comp=Z,68nm,0.3s,baz=207,slow=2.3,SNR=3.8
DAV LR LR 18 50 11.4
comp=Z,1µm,20.5s,baz=120,slow=36
DAV Davao City (W) 51.75 298 P P 18 28 21.6 -0.6
TTSI Tana Toraja 51.79 284 P P 18 28 22.6 +0.1
comp=Z,2µmcomp=Z,104nm,1.4s
PMSI Majene 52.42 283 P P 18 28 26.1 -1.1
comp=Z,1µmcomp=Z,2µmcomp=Z,59nm,1.8s
PCI Palu 52.69 286 P P 18 28 29.5 +0.3
MMSI Mamuju 52.76 284 P P 18 28 27.9 -1.8
TOLI2 Tolitoli 52.77 289 P P 18 28 33.4 +3.6
MPSI Mapaga 53.20 287 P P 18 28 31.5 -1.4
comp=Z,910nmcomp=Z,37nm,1.3s
KHKI Kahang-Kahang 53.62 275 P P 18 28 32.8 -3.2
comp=Z,835nmcomp=Z,45nm,1.2s
DNP Denpasar 53.88 275 P P 18 28 38.4 +0.5
comp=Z,104nm,0.9s
IGBI Denpasar 53.89 275 P P 18 28 37.3 -0.7
comp=Z,3µmcomp=Z,72nm,1.3s
RTBI Rangdo, Negare 54.20 275 P P 18 28 36.7 -3.6
comp=Z,1µmcomp=Z,70nm,1.8s
JAGI Jajag, Banyuwa 54.93 275 P P 18 28 46.2 +0.6
JAGI Jajag, Banyuwa 54.93 275 IAMs_20 IAMs_20 18 52 29.2
comp=Z,3µm,20.0s
JAGI Jajag, Banyuwa 54.93 275 P P 18 28 40.6 -5.0
comp=Z,1µmcomp=Z,80nm,1.8s
ABJI Asem Bagus 55.09 276 P P 18 28 43.7 -3.0
comp=Z,2µmcomp=Z,34nm,0.9s
JCJ Chichijima 55.16 330 P P 18 28 46.8 -0.2
comp=Z,42nm,0.6s,baz=135,slow=17,SNR=2.2
comp=Z,42nm,0.6s
JCJ Chichijima 55.16 330 P P 18 28 43.8 -3.1
BKB Balikpapan 55.18 284 P P 18 28 46.4 -1.0
comp=Z,2µmcomp=Z,68nm,1.7s
BLJI Banyuglugur 55.70 275 P P 18 28 49.3 -1.8
comp=Z,33nm,0.7s
BBKI Banjar Baru 56.15 281 P P 18 28 53.7 -0.7
comp=Z,67nm,2.1s
VNDA Vanda 56.20 182 P P 18 28 54.8 +1.0
comp=Z,5.6nm,0.8s,baz=4.6,slow=6.5,SNR=8.7
VNDA LR LR 18 50 12.8
comp=Z,891nm,18.1s,baz=24,slow=33
comp=Z,5.6nm,0.8s
VNDA Vanda 56.20 182 P P 18 28 55.4 +1.6
VNDA Vanda 56.20 182 P P 18 28 55.4 +1.6
VNDA pmax pmax
comp=Z,21nm,1.2s
SBA Scott Base 56.42 181 P P 18 28 58.0 +2.6
SBA IAmb IAmb 18 28 59.3
comp=Z,45nm,1.0s
SBA Scott Base 56.42 181 P P 18 28 58.0 +2.6
SBA pmax pmax
comp=Z,45nm,1.0s
TARAI Tarakan 56.64 289 P P 18 28 57.6 -0.3
comp=Z,4µmcomp=Z,93nm,1.8s
SNJI Sawahan-Nganju 57.39 275 P P 18 29 01.9 -1.5
comp=Z,60nm,1.3s
PCJI Pacitan 57.79 274 P P 18 29 04.9 -1.1
NGJI Ngawi 57.81 275 P P 18 29 06.8 +0.7
comp=Z,101nm,1.7s
KKM Kota Kinabalu 59.13 291 P P 18 29 18.8 +3.3
KKM Kota Kinabalu 59.13 291 P P 18 29 15.7 +0.2
comp=Z,2µmcomp=Z,61nm,1.6s
CTJI Waduk Cacaban 60.05 274 P P 18 29 22.7 +1.0
comp=Z,57nm,1.7s
KPJI Karang Pucung 60.17 274 P P 18 29 21.4 -1.2
comp=Z,42nm,1.2s
SBUM Sibu 61.00 286 P P 18 29 32.5 +4.3
SBUM Sibu 61.00 286 P P 18 29 29.0 +0.8
BBJI Bungbulang 61.32 273 P P 18 29 30.3 -0.2
BBJI Bungbulang 61.32 273 P P 18 29 29.5 -1.0
comp=Z,34nm,1.7s
LEM Lembang 61.57 274 P P 18 29 32.4 +0.2
comp=Z,14nm,0.6s,baz=120,slow=2.7,SNR=6.6
LEM LR LR 18 55 55.2
comp=Z,3µm,21.0s,baz=112,slow=36
comp=Z,14nm,0.6s
LEM Lembang 61.57 274 P P 18 29 32.2 -0.1
comp=Z,1µmcomp=Z,114nm,1.6s
DBJI Dramaga 62.47 274 P P 18 29 35.8 -2.4
comp=Z,1µmcomp=Z,163nm,1.5s
JOW Kunigami 62.58 318 P P 18 29 38.1 -0.5
comp=Z,4.8nm,0.5s,baz=252,slow=18,SNR=1.5
JOW LR LR 18 57 12.9
comp=Z,905nm,18.1s,baz=128,slow=36
comp=Z,4.8nm,0.5s
TNG Tangerang 62.70 274 P pP 18 29 39.4 -3.7
TNG P P 18 29 39.0 -0.7
TPI Tanjungpandan 63.03 278 P P 18 29 39.1 -2.8
comp=Z,29nm,1.5s
SBJI Serang 63.20 274 P P 18 29 42.2 -0.8
CGJI Cibinong 63.43 273 P P 18 29 43.0 -1.5
BLSI Bandar Lampung 64.29 274 P P 18 29 48.7 -1.5
INU Inuyama 64.47 331 P P 18 29 51.7 +0.8
TWGBT Beinan 64.68 310 P P 18 29 57.4 +4.9
KLI Kotabumi 64.83 275 P P 18 29 54.2 +0.5
comp=Z,41nm,1.1s
YULB Yu-li 64.89 311 P P 18 29 58.3 +4.4
KASI Kota Agung 64.93 274 P P 18 29 52.4 -2.0
comp=Z,75nm,1.6s
MJAR Matsushiro Arr 64.94 332 P P 18 29 53.8 -0.2
comp=Z,11nm,0.8s,baz=175,slow=7.1,SNR=32
MJAR LR LR 18 55 08.8
comp=Z,729nm,21.7s,baz=143,slow=33
comp=Z,11nm,0.8s
MJAR Matsushiro Arr 64.94 332 P 18 29 54.1 +0.2
MJAR Matsushiro Arr 64.94 332 P P 18 29 54.1 +0.2
MJAR pmax pmax
comp=Z,69nm,1.3s
MAJO Matsushiro 64.94 332 P P 18 29 54.6 +0.7
MAJO Matsushiro 64.94 332 P P 18 29 52.6 -1.4
MAJO Matsushiro 64.94 332 *ce*P P 18 29 54.3 +0.4
MAJO pmax pmax
comp=Z,69nm,1.1s
KLSI 65.01 275 P P 18 29 51.4 -3.5
NACB Ninganchiao 65.18 312 P P 18 30 00.0 +4.2
NACB Ninganchiao 65.18 312 P P 18 29 52.5 -3.3
TPUB Ta-pu 65.31 310 P P 18 30 01.2 +4.6
TPUB Ta-pu 65.31 310 P P 18 29 53.9 -2.7
SSLB Suanglung 65.39 311 P P 18 30 02.2 +5.1
LWLI Liwa 65.52 274 P P 18 29 56.8 -1.5
comp=Z,112nm,1.1s
MDSI Maura Dua 65.60 275 P P 18 29 54.7 -4.0
comp=Z,936nmcomp=Z,42nm,1.2s
PMBI Palembang 65.62 277 IAMs_20 IAMs_20 18 57 31.7
comp=Z,2µm,22.0s
PMBI Palembang 65.62 277 P P 18 29 57.9 -1.0
YHNB Yeheng 65.66 312 P P 18 30 01.6 +2.7
JNU Nakatsue 65.74 325 LR LR 18 56 44.3
comp=Z,644nm,20.3s,baz=128,slow=34
TATO Taipei 65.77 312 P P 18 30 04.0 +4.4
JMBI JAMBI 67.16 278 P P 18 30 09.5 +0.8
TPRI Tanjung Pinang 67.34 280 P P 18 30 09.7 -0.2
comp=Z,886nmcomp=Z,1µmcomp=Z,55nm,1.2s
KSI Kapahiang 67.37 275 P P 18 30 06.5 -3.7
comp=Z,84nm,1.1s
JTM Tenmabayashi 67.44 337 P P 18 30 15.8 +5.9
MYKOM Kota Tinggi 68.31 281 P P 18 30 18.0 +2.0
comp=Z,665nmcomp=Z,30nm,1.5s
QSPA South Pole Qui 68.57 180 LR LR 18 57 23.2
comp=Z,1µm,19.1s,baz=28,slow=33
QSPA South Pole Qui 68.57 180 P P 18 30 17.1 +0.2
QSPA South Pole Qui 68.57 180 IAMs_20 IAMs_20 18 56 42.5
comp=Z,2µm,20.0s
ASAJ Asahikawa 69.85 340 P P 18 30 26.1 +1.2
comp=Z,14nm,0.6s,baz=235,slow=4.6,SNR=22
ASAJ LR LR 18 56 44.0

comp=Z,2µm,21.9s,baz=171,slow=32
comp=Z,14nm,0.6s
SSE Sheshan 70.00 317 P **P** **18 30 27.5 +1.5**
SSE S **S** **18 39 37.5 +1.2**
SSE pmax pmax
comp=Z,6.0nm,1.1s
SSE pmax pmax
comp=Z,76nm,3.3s
SSE L L
comp=Z,240nm,16.5s
SSE L L
comp=Z,270nm,16.7s
TJN Taejon 70.09 325 P P 18 30 31.7 +5.2
BKNI Bangkinang 70.31 278 IAMs_20 IAMs_20 19 04 34.8
comp=Z,2µm,19.0s
KSRS Korea Array 70.60 326 P **P** **18 30 30.9 +1.4**
comp=Z,3.2nm,0.9s,baz=138,slow=5.7,SNR=10
comp=Z,3.2nm,0.9s
KSRS Korea Array 70.60 326 P **P** **18 30 31.0 +1.4**
QIZ Qiongzhong 71.07 300 P **P** **18 30 33.0 +0.2**
QIZ PcP **PcP** **18 30 50.3 -2.8**
QIZ S **S** **18 39 48.5 -0.8**
QIZ ScS **SKSac** **18 40 35.3 -0.4**
QIZ SS **SS** **18 44 25.0 +1.9**
QIZ pmax pmax
comp=Z,530nm,7.8s
QIZ L L
comp=Z,670nm,28.9s
QIZ L L
comp=Z,440nm,31.4s
QIZ L L
comp=Z,660nm,22.6s
INCN Inchon 71.31 325 P **P** **18 30 35.3 +1.4**
NJ2 Nanjing 72.12 316 ⇑P **P** **18 30 38.8 -0.1**
NJ2 sP **pwP** **18 30 45.5 +0.3**
NJ2 PcP **PcP** **18 30 54.5 -2.7**
NJ2 S **S** **18 40 00.5 -0.5**
NJ2 pmax pmax
comp=Z,1µm,3.6s
NJ2 L L
comp=Z,2µm,18.9s
NJ2 L L
comp=Z,2µm,18.5s
NJ2 L L
comp=Z,3µm,19.9s
YSS Yuzhno-Sakhali 72.34 341 P **P** **18 30 42.1 +2.2**
YSS Yuzhno-Sakhali 72.34 341 **P** **18 30 41.1 +1.2**
YSS IAMs_20 IAMs_20 18 59 56.2
comp=Z,2µm,20.0s
YSS Yuzhno-Sakhali 72.34 341 *e*P **P** **18 30 41.3 +1.4**
YSS *e*S **S** **18 40 04.9 +2.0**
YSS pmax pmax
comp=N,300nm,4.2s
YSS pmax pmax
comp=Z,600nm,4.2s
YSS pmax pmax
comp=Z,70nm,1.2s
YSS smax smax
comp=N,500nm,9.5s
YSS smax smax
comp=E,700nm,8.4s
TEY Ternei 72.76 336 *e*P **P** **18 30 41.1 -1.3**
TEY *e* 18 40 04.3
RPN Rapa Nui 72.82 113 LR LR 18 55 16.0
comp=E,910nm,21.2s,baz=268,slow=30
VLA Vladivostok 73.11 332 *de*P **P** **18 30 45.9 +1.4**
VLA pmax pmax
comp=Z,119nm,1.6s
RPSI Rantau Prapat 73.18 280 IAMs_20 IAMs_20 19 07 45.3
comp=Z,2µm,18.0s
PSTR Posyet 73.21 331 ⇓*i*P **P** **18 30 46.6 +1.5**
PSI Prapat 73.22 280 P **P** **18 30 49.2 +3.2**
PSI Prapat 73.22 280 P **P** **18 30 45.3 -0.7**
comp=Z,21nm,1.3s
GSI Gunungsitoli 73.88 278 P **P** **18 30 54.1 +4.3**
GSI Gunungsitoli 73.88 278 IAMs_20 IAMs_20 19 03 10.8
comp=Z,2µm,22.0s
GSI Gunungsitoli 73.88 278 P **P** **18 30 51.1 +1.3**
comp=Z,2µmcomp=Z,47nm,0.9s
USRK Ussuriysk Ar. 73.93 333 P **P** **18 30 49.1 -0.2**
comp=Z,3.3nm,0.5s,baz=177,slow=3.8,SNR=16
comp=Z,3.3nm,0.5s
GULI GuiLin 74.02 306 *e*P **P** **18 30 54.3 +4.0**
GULI S **S** **18 40 26.5 +3.6**
GULI pmax pmax
comp=Z,77nm,1.5s
GULI pmax pmax
comp=Z,470nm,8.1s
GULI L L
comp=Z,420nm,19.5s
GULI L L
comp=Z,410nm,21.7s
GULI L L
comp=Z,790nm,20.6s
WHN Wuhan 74.18 312 P **P** **18 30 53.8 +2.7**
WHN pP **pwP** **18 30 57.5 +0.2**
WHN S **S** **18 40 23.8 -0.6**
WHN pmax pmax
comp=Z,160nm,1.4s
WHN pmax pmax
comp=Z,1µm,9.0s
WHN L L
comp=Z,2µm,19.8s
PET Petropavlovsk 74.82 353 IAMs_20 IAMs_20 19 02 02.1
comp=Z,2µm,19.0s
PET Petropavlovsk 74.82 353 *e*P **P** **18 30 55.5 +1.2**
PET *e*S **S** **18 40 31.6 +1.0**
PET pmax pmax
comp=Z,400nm,14.2s
PET pmax pmax
comp=Z,700nm,13.1s
PET MLR MLR
comp=Z,1µm,14.0s
PETK Petropavlovsk- 75.02 353 LR LR 19 01 45.8
comp=Z,601nm,18.2s,baz=176,slow=34
DL2 Dalian 75.06 323 P **P** **18 30 57.5 +1.4**
DL2 S **S** **18 40 33.5 -0.5**
DL2 pmax pmax
comp=Z,56nm,1.7s
DL2 pmax pmax
comp=Z,790nm,6.3s
DL2 L L
comp=Z,480nm,19.2s
DL2 L L
comp=Z,690nm,18.2s
DL2 L L
comp=Z,740nm,19.0s
MDJ Mudanjiang 75.30 332 P **P** **18 30 58.8 +1.5**
MDJ Mudanjiang 75.30 332 P **P** **18 30 56.3 -1.1**
MDJ Mudanjiang 75.30 332 P **P** **18 30 57.5 +0.2**
MDJ PcP **PcP** **18 31 10.3 -0.3**
MDJ S **S** **18 40 38.0 +1.6**
MDJ SS **SS** **18 45 30.5 +3.5**
MDJ pmax pmax
comp=Z,25nm,1.8s
MDJ L L
comp=Z,960nm,22.7s
MDJ L L
comp=Z,590nm,22.7s
MDJ L L
comp=Z,2µm,24.1s
TYV Tymovskoe 75.89 343 *e*P **P** **18 31 02.2 +1.7**
TYV *e*S **S** **18 40 44.9 +2.4**
TYV pmax pmax
comp=Z,26nm,1.1s
TYV pmax pmax
comp=Z,100nm,2.0s
TYV smax smax
comp=N,500nm,7.3s
TYV smax smax
comp=E,400nm,7.3s
TIA Tai'an 75.91 319 P **P** **18 31 02.0 +1.0**
TIA S **S** **18 40 43.0 -0.5**
TIA SS **SS** **18 45 40.8 +4.3**
TIA pmax pmax
comp=E,14nm,1.1s
TIA pmax pmax
comp=E,470nm,6.0s
TIA L L
comp=E,600nm,19.6s
TIA L L
comp=E,580nm,19.2s
TIA L L
comp=E,1µm,19.6s
LHMI Lhok Sumawe 75.99 281 IAMs_20 IAMs_20 19 09 16.8
comp=Z,2µm,19.0s
SNY Shenyang 76.09 326 ⇓P **P** **18 31 03.0 +1.1**
SNY S **S** **18 40 45.5 +0.3**
SNY SS **SS** **18 45 39.5 +0.5**
SNY pmax pmax
comp=Z,9.0nm,1.0s
SNY L L
comp=Z,470nm,17.5s
SNY L L
comp=Z,260nm,17.1s
SNY L L
comp=Z,750nm,18.9s
MAW Mawson 76.51 202 P **P** **18 31 06.0 +2.0**
comp=Z,18nm,0.8s,baz=113,slow=7.4,SNR=19
MAW LR LR 19 02 03.2
comp=Z,1µm,18.5s,baz=103,slow=34
comp=Z,18nm,0.8s
CN2 Changchun 76.60 329 P **P** **18 31 06.0 +1.3**
CN2 PcP **PcP** **18 31 17.8 +1.6**
CN2 S **S** **18 40 52.0 +1.3**
CN2 SS **SS** **18 45 49.8 +3.1**
CN2 pmax pmax
comp=Z,30nm,1.8s
CN2 L L
comp=Z,540nm,18.0s
CN2 L L
comp=Z,720nm,22.0s
BNX BinXian 77.15 331 ⇓P **P** **18 31 08.0 +0.2**
BNX PcP **PcP** **18 31 19.3 +0.8**
BNX S **S** **18 40 57.5 +0.9**
BNX pmax pmax
comp=Z,15nm,0.8s
BNX pmax pmax
comp=Z,380nm,5.7s
BNX L L
comp=Z,470nm,19.7s
BNX L L
comp=Z,590nm,17.8s
BNX L L
comp=Z,790nm,23.8s
ENH Enshi 77.43 310 P **P** **18 31 10.5 +0.7**
GYA Guiyang 77.45 305 ⇑P **P** **18 31 14.0 +3.9**
GYA S **S** **18 41 00.0 -1.1**
GYA pmax pmax
comp=Z,43nm,1.5s
GYA pmax pmax
comp=Z,440nm,3.1s
GYA L L
comp=Z,950nm,21.6s
BSI Banda Aceh 77.60 281 P **P** **18 31 13.1 +2.0**
comp=Z,2µmcomp=Z,66nm,1.4s
GRNR Gornyy 77.70 339 ⇓*i*P **P** **18 31 12.3 +1.5**
GRNR pmax pmax
comp=Z,30nm,1.1s
UNV Unalaska Valle 77.80 14 P **P** **18 31 07.7 -3.5**
baz=203
LYN LuoYang 77.85 315 ⇓P **P** **18 31 13.5 +1.5**
LYN pP pwP 18 31 18.5 -0.4
LYN S **S** **18 41 05.0 +0.2**
LYN pmax pmax
comp=Z,28nm,0.9s
LYN pmax pmax
comp=Z,920nm,6.9s
LYN L L
comp=Z,750nm,17.9s
LYN L L
comp=Z,450nm,20.6s
LYN L L
comp=Z,1µm,18.8s
KLR Kul'dur 78.09 336 P **P** **18 31 14.0 +1.1**
comp=Z,8.5nm,0.8s,baz=137,slow=5.1,SNR=30
comp=Z,8.5nm,0.8s
HNS HongShan 78.16 318 ⇓P **P** **18 31 15.3 +1.7**
HNS S **S** **18 41 08.0 +0.1**
HNS pmax pmax
comp=Z,17nm,1.6s
HNS L L
comp=Z,610nm,17.3s
HNS L L
comp=Z,690nm,17.5s
HNS L L
comp=Z,920nm,20.3s
NKL Nikolayevsk 78.48 343 *e*P **P** **18 31 14.4 -0.6**
NKL *e*S **S** **18 41 15.1 +4.5**
NKL pmax pmax
comp=N,40nm,1.0s
NKL pmax pmax
comp=Z,171nm,1.4s
NKL pmax pmax
comp=E,86nm,1.5s
NKL smax smax
comp=E,266nm,4.2s
NKL smax smax
comp=N,155nm,4.8s
BJI2 Beijing 78.94 321 P **P** **18 31 18.8 +0.9**
BJI2 pP **pwP** **18 31 23.8 -1.0**
BJI2 PP **PP** **18 34 19.3 +2.2**
BJI2 S **S** **18 41 18.8 +2.6**
BJI2 pmax pmax
comp=N,6.0nm,1.8s
BJI2 pmax pmax
comp=N,190nm,7.2s
BJI2 L L
comp=N,260nm,16.7s
BJI2 L L
comp=N,350nm,18.7s
BJI2 L L
comp=N,470nm,20.0s
BJT Baijiatuan 78.94 321 P **P** **18 31 19.8 +1.9**
FALS False Pass 79.46 15 IAMs_20 IAMs_20 18 59 45.2
comp=Z,1µm,21.0s
FALS False Pass 79.46 15 P **P** **18 31 16.6 -3.7**
baz=206
TIY Taiyuan 79.77 317 *e*P **P** **18 31 23.3 +0.7**
TIY S **S** **18 41 28.3 +3.0**
TIY pmax pmax
comp=Z,320nm,5.5s
TIY L L
comp=Z,500nm,18.5s
TIY L L
comp=Z,250nm,20.6s
TIY L L
comp=Z,670nm,19.2s
CMAR Chiang Mai Arr 79.82 294 P **P** **18 31 24.8 +1.6**
comp=Z,4.8nm,0.9s,baz=133,slow=4.3,SNR=30
CMAR PKKPbc **PKKPbc** **18 50 10.2 +0.6**
comp=Z,0.9nm,0.6s,baz=282,slow=3.9,SNR=6.9
comp=Z,4.8nm,0.9s
BELA Belgrano 2 79.82 175 **P** **18 31 22.4 +0.2**
BELA IAmb IAmb 18 31 25.1
comp=Z,41nm,0.8s
KMI2 Kunming 79.83 302 ⇑P **P** **18 31 25.3 +1.9**
KMI2 S **S** **18 41 28.8 +2.0**
KMI2 pmax pmax
comp=Z,73nm,1.6s
KMI2 pmax pmax
comp=Z,610nm,3.8s
KMI2 L L
comp=Z,510nm,21.5s
KMI2 L L
comp=Z,360nm,19.8s
KMI2 L L
comp=Z,570nm,23.4s
XAN Xi'an 79.94 313 ⇑P **P** **18 31 24.8 +1.2**
XAN S **S** **18 41 28.5 +1.3**
XAN pmax pmax
comp=Z,67nm,1.6s
XAN pmax pmax
comp=Z,960nm,6.9s
XAN L L
comp=Z,410nm,19.9s
XAN L L
comp=Z,470nm,19.2s
XAN L L
comp=Z,590nm,20.6s
CHTO Chiang Mai 79.97 295 P **P** **18 31 26.1 +2.1**
CHTO Chiang Mai 79.97 295 P **P** **18 31 24.1 +0.1**
comp=Z,1µmcomp=Z,57nm,1.5s
CNBA Chernabura Isl 80.43 17 IAMs_20 IAMs_20 19 02 47.5
comp=Z,2µm,19.0s
CHNA Chernabura Isl 80.44 17 P **P** **18 31 22.8 -2.8**
baz=209
HEH HeiHe 80.62 334 *e*P **P** **18 31 27.5 +0.8**
HEH pP **sP** **18 31 31.5 +0.2**
HEH S **S** **18 41 35.5 +2.0**
HEH sS **sS** **18 41 41.5 +2.4**
HEH SS **SS** **18 46 46.5 -0.4**
HEH pmax pmax
comp=Z,23nm,1.5s
HEH pmax pmax
comp=Z,610nm,3.9s
HEH L L
comp=Z,450nm,22.5s
HEH L L
comp=Z,990nm,19.2s
HEH L L
comp=Z,1µm,21.0s
PZH PanZhiHua 81.28 303 P **P** **18 31 32.5 +1.5**
PZH S **S** **18 41 41.5 -0.2**
PZH pmax pmax
comp=Z,100nm,6.4s
PZH L L
comp=Z,350nm,17.3s
PZH L L
comp=Z,550nm,19.9s
PZH L L
comp=Z,560nm,21.7s
XLT XiLinHaoTe 81.51 324 *e*P **P** **18 31 29.5 -2.3**
XLT sP PcP 18 31 38.0 +0.3
XLT S **S** **18 41 40.3 -3.0**
XLT sS SKSac 18 41 52.3 +1.1
XLT pmax pmax
comp=Z,8.0nm,0.9s
XLT pmax pmax
comp=Z,250nm,4.5s
XLT L L
comp=Z,680nm,20.7s
XLT L L
comp=Z,310nm,21.8s
CD2 Chengdu 81.94 308 P **P** **18 31 33.3 -1.0**
CD2 S **S** **18 41 49.3 +1.1**
CD2 pmax pmax
comp=Z,40nm,0.7s
CD2 pmax pmax
comp=Z,570nm,7.2s
CD2 L L
comp=Z,760nm,18.0s
CD2 L L
comp=Z,690nm,17.8s
HHC Hu-ho-hao-te 82.20 319 *e*P **P** **18 31 36.0 +0.5**
HHC sP pwP 18 31 42.8 +0.3
HHC S **S** **18 41 48.8 -1.8**
HHC SS **SS** **18 47 11.8 +0.7**
HHC pmax pmax
comp=Z,22nm,1.2s
HHC pmax pmax
comp=Z,210nm,5.5s
HHC L L
comp=Z,290nm,18.7s
HHC L L
comp=Z,490nm,17.9s
HHC L L
comp=Z,640nm,20.2s
MA2 Magadan 82.26 350 P **P** **18 31 35.2 0.0**
comp=Z,1.8nm,0.3s,baz=174,slow=13,SNR=2.2
MA2 LR LR 19 03 24.6
comp=Z,762nm,22.0s,baz=170,slow=32
comp=Z,1.8nm,0.3s
MA2 Magadan 82.26 350 ⇓*e*P **P** **18 31 33.7 -1.5**
MA2 pmax pmax
comp=Z,18nm,1.2s
CHIR Chirikof Islan 82.45 19 P **P** **18 31 33.7 -2.6**
baz=212
TNCH TengChong 83.14 300 ⇑P **P** **18 31 40.0 -0.9**
TNCH S **SKSac** **18 42 01.0 -2.2**
TNCH sS ScS 18 42 13.0 -2.1
TNCH SS **SS** **18 47 28.5 +2.7**
TNCH pmax pmax
comp=Z,73nm,1.9s
TNCH pmax pmax
comp=Z,590nm,3.5s
TNCH L L
comp=Z,310nm,16.1s
TNCH L L
comp=Z,360nm,17.9s
TNCH L L
comp=Z,740nm,19.6s
BTO2 Baotou 83.17 319 *e*P **P** **18 31 42.3 +1.7**
BTO2 PP **PP** **18 34 56.3 +4.1**
BTO2 S **SKSac** **18 42 03.0 +0.5**
BTO2 pmax pmax
comp=Z,18nm,1.0s
BTO2 pmax pmax
comp=Z,780nm,6.9s
BTO2 L L
comp=Z,900nm,15.6s
BTO2 L L
comp=Z,610nm,12.5s
BTO2 L L
comp=Z,2µm,19.2s
ZEA Zeya 83.39 336 *e*P **P** **18 31 42.6 +1.4**
ZEA *e*S **SKSac** **18 42 04.4 +1.4**
ZEA *e*SS **SS** **18 47 24.8 -3.1**
ZEA pmax pmax
comp=N,20nm,1.3s
ZEA pmax pmax
comp=Z,40nm,1.3s
ZEA pmax pmax
comp=N,100nm,3.4s
ZEA pmax pmax
comp=Z,300nm,3.6s
ZEA smax smax
comp=E,300nm,6.6s
ZEA smax smax
comp=N,300nm,8.9s
SII Sitkinak Islan 83.51 19 P P 18 31 36.9 -4.9
baz=214
R17L Mt. Peulik Vol 83.78 18 P **P** **18 31 38.8 -4.4**
baz=212
M11K Mekoryuk 83.92 12 IAMs_20 IAMs_20 19 04 17.8
comp=Z,1µm,21.0s
M11K Mekoryuk 83.92 12 P **P** **18 31 39.6 -4.1**
baz=203
O14K Tigyukauivet M 83.93 15 P **P** **18 31 39.3 -4.6**
baz=207
ELIB Princess Elisa 84.00 190 *d*P **P** **18 31 44.5 +0.1**
comp=Z,16nm,1.2s
O15K Ungalikthiuk R 84.21 15 P **P** **18 31 41.6 -3.7**
baz=208
OHAK Old Harbor 84.33 19 P **P** **18 31 42.9 -3.1**
baz=214
N14K Kuskokwak Cree 84.43 14 IAMs_20 IAMs_20 19 05 19.7
comp=Z,1µm,20.0s
N14K Kuskokwak Cree 84.43 14 P **P** **18 31 43.2 -3.2**
baz=207
Q17K Contact Creek 84.45 17 P **P** **18 31 42.8 -3.8**
baz=212
M13K Dall Lake 84.51 13 IAMs_20 IAMs_20 19 05 29.7
comp=Z,1µm,20.0s
M13K Dall Lake 84.51 13 P **P** **18 31 43.0 -3.8**
baz=205
LZH Lanzhou 84.55 312 P **P** **18 31 48.8 +1.0**
LZH sP pwP 18 31 55.8 +1.1
LZH S **SKSac** **18 42 11.0 -0.8**
LZH SS **SS** **18 47 49.3 +3.1**
LZH pmax pmax
comp=Z,14nm,1.4s
LZH pmax pmax
comp=Z,490nm,5.5s
LZH L L
comp=Z,370nm,14.4s
LZH L L
comp=Z,310nm,16.5s
LZH L L
comp=Z,650nm,15.5s
LZDM Lanzhou Array 84.58 312 P **P** **18 31 49.6 +1.4**
comp=Z,3.1nm,0.4s,baz=132,slow=2.1,SNR=4.9
comp=Z,3.1nm,0.4s
Q16K King Salmon 84.59 17 P P 18 31 42.0 -5.2
baz=211
PMSA Palmer Station 84.66 160 LR LR 19 03 21.6
comp=Z,868nm,20.4s,baz=228,slow=31
O16K Kokwok River B 85.00 16 P **P** **18 31 44.7 -4.6**
baz=210
KDAK Kodiak Island 85.01 19 P **P** **18 31 49.6 +0.3**
comp=Z,8.7nm,0.8s,baz=290,slow=9.6,SNR=2.0
KDAK LR LR 19 05 45.9
comp=Z,903nm,18.3s,baz=216,slow=33
comp=Z,8.7nm,0.8s
KDAK Kodiak Island 85.01 19 P **P** **18 31 45.0 -4.4**
baz=215
N15K Kwethluk River 85.02 15 IAMs_20 IAMs_20 19 03 06.2
comp=Z,1µm,21.0s
N15K Kwethluk River 85.02 15 P P 18 31 44.7 -4.7

	baz=208								
Q18K	**Katmai Hardscr**	**85.02**	**18**	P	**P**	18 31 46.3	-3.3		
	baz=213								
P17K	**Kvichak River**	**85.09**	**17**	P	**P**	18 31 45.8	-3.9		
	baz=212								
M14K	**Bethel**	**85.12**	**14**	IAmb	IAmb	18 32 04.5			
	comp=Z,59nm,1.5s								
M14K				IAMs_20	IAMs_20	19 05 29.7			
	comp=Z,1µm,20.0s								
M14K	**Bethel**	**85.12**	**14**	P	**P**	18 31 45.7	-4.1		
	baz=207								
SEY	**Seymchan**	**85.25**	**352**	P	**P**	18 31 50.6	+0.1		
	comp=Z,4.3nm,0.7s,baz=152,slow=6.2,SNR=11								
	comp=Z,4.3nm,0.7s								
SEY	**Seymchan**	**85.25**	**352**	⇓ *i* P	**P**	18 31 50.9	+0.4		
SEY				pmax	pmax				
	comp=Z,71nm,1.7s								
M15K	**Kasigluk River**	**85.35**	**14**	P	**P**	18 31 47.1	-3.9		
	baz=208								
O17K	**Koliganek Bris**	**85.42**	**16**	P	P	18 31 46.5	-4.9		
	baz=211								
L14K	**Kuka Creek**	**85.50**	**13**	IAmb	IAmb	18 31 53.8			
	comp=Z,71nm,1.8s								
L14K	**Kuka Creek**	**85.50**	**13**	P	**P**	18 31 47.4	-4.3		
	baz=206								
P18K	**Big Mountain,**	**85.59**	**17**	P	P	18 31 46.3	-6.0		
	baz=213								
N16K	**Nishlik Lake**	**85.60**	**15**	P	P	18 31 47.6	-4.7		
	baz=209								
K13K	**Kusilvak Mount**	**85.64**	**12**	IAMs_20	IAMs_20	19 04 51.3			
	comp=Z,2µm,20.0s								
K13K	**Kusilvak Mount**	**85.64**	**12**	P	**P**	18 31 47.8	-4.6		
	baz=204								
Q19K	**Cape Douglas,**	**85.64**	**18**	P	**P**	18 31 48.3	-4.2		
	baz=214								
O18K	**Koktuh Hills**	**85.98**	**17**	P	**P**	18 31 50.6	-3.7		
	baz=213								
M16K	**Timber Creek**	**86.04**	**15**	P	**P**	18 31 51.2	-3.3		
	baz=209								
N17K	**Nushagak Hills**	**86.04**	**16**	P	**P**	18 31 50.3	-4.2		
	baz=211								
L15K	**Ungalak Mounta**	**86.05**	**13**	P	P	18 31 49.0	-5.4		
	baz=207								
GAMB	**Gambell**	**86.23**	**8**	P	P	18 31 49.8	-5.4		
	baz=198,SNR=5.5								
MORE	**Moreh**	**86.23**	**298**	IAmb	IAmb	18 32 02.5			
	comp=Z,57nm,1.6s								
TROLL	**Troll, Antarti**	**86.32**	**184**	P	**P**	18 31 55.7	-0.4		
P19K	**Oil Pt**	**86.36**	**18**	IAMs_20	IAMs_20	19 12 39.1			
	comp=Z,2µm,19.0s								
P19K	**Oil Pt**	**86.36**	**18**	P	P	18 31 49.8	-6.3		
	baz=214								
N18K	**Kilae Creek**	**86.50**	**16**	P	P	18 31 51.0	-5.8		
	baz=212								
O19K	**Port Alsworth**	**86.51**	**17**	P	P	18 31 51.8	-5.0		
	baz=213								
L16K	**Owhat River**	**86.53**	**14**	P	**P**	18 31 58.0	+1.2		
L16K				IAmb	IAmb	18 32 52.7			
	comp=Z,87nm,1.9s								
L16K				IAMs_20	IAMs_20	19 06 03.0			
	comp=Z,1µm,20.0s								
L16K	**Owhat River**	**86.53**	**14**	P	**P**	18 31 52.4	-4.4		
	baz=209								
K15K	**Wolf Creek Mou**	**86.59**	**13**	IAMs_20	IAMs_20	19 04 39.7			
	comp=Z,1µm,20.0s								
K15K	**Wolf Creek Mou**	**86.59**	**13**	P	**P**	18 31 52.9	-4.2		
	baz=207								
J14K	**Nanvaranak Lak**	**86.60**	**12**	IAMs_20	IAMs_20	19 05 10.7			
	comp=Z,1µm,20.0s								
J14K	**Nanvaranak Lak**	**86.60**	**12**	P	**P**	18 31 53.7	-3.4		
	baz=205								
NVL	**N'lazarevskaya**	**86.68**	**187**	*e* P	**P**	18 31 56.7	-1.0		
NVL				*e*		18 35 19.0			
NVL				*e*S	**SKSac**	18 42 22.9	-1.0		
NVL				*e*SS	**SS**	18 48 18.0	+3.7		
NVL				*e*SSS	SSS	18 51 50.6			
NVL				pmax	pmax				
	comp=Z,134nm,2.3s								
FORD	**Fort Ord Natur**	**86.72**	**49**	IAMs_20	IAMs_20	19 04 16.6			
	comp=Z,1µm,19.0s								
M17K	**Holitna River**	**86.73**	**15**	IAMs_20	IAMs_20	19 04 07.8			
	comp=Z,1µm,21.0s								
M17K	**Holitna River**	**86.73**	**15**	P	**P**	18 31 54.1	-3.8		
	baz=211								
HOM	**Homer**	**86.83**	**19**	P	P	18 31 51.4	-6.9		
	baz=216								
CNPM	**China Poot**	**86.84**	**19**	IAMs_20	IAMs_20	19 11 57.9			
	comp=Z,2µm,19.0s								
SNAA	**Sanae**	**86.94**	**182**	⇑P	**P**	18 31 59.0	-0.1		
	comp=Z,374nm,0.7s								
SNAA	**Sanae**	**86.94**	**182**	P	**P**	18 31 59.3	+0.3		
	comp=Z,21nm,0.9s,baz=130,slow=4.1,SNR=11								
SNAA				LR	LR	19 09 28.6			
	comp=Z,800nm,18.3s,baz=189,slow=35								
	comp=Z,21nm,0.9s								
SNAA	**Sanae**	**86.94**	**182**		**P**	18 31 56.9	-2.1		
SNAA				IAmb	IAmb	18 32 00.7			
	comp=Z,50nm,1.2s								
SNAA	**Sanae**	**86.94**	**182**	*d i* P	**P**	18 31 59.9	+0.9		
SNAA				pmax	pmax				
	comp=Z,89nm,2.0s								
SAO	**San Andreas Ge**	**86.99**	**49**	IAMs_20	IAMs_20	19 04 43.7			
	comp=Z,1µm,20.0s								
N19K	**Bonanza Creek**	**86.99**	**17**	P	P	18 31 51.5	-7.7		
	baz=213								
HOPS	**Hopland Field**	**86.99**	**46**	IAMs_20	IAMs_20	19 05 00.7			
	comp=Z,2µm,19.0s								
KCPM	**Cahto Peak**	**87.01**	**45**	IAmb	IAmb	18 32 26.5			
	comp=Z,45nm,1.2s								
KCPM				IAMs_20	IAMs_20	19 05 30.0			
	comp=Z,2µm,18.0s								
KMPM	**Mount Pierce**	**87.03**	**44**	IAMs_20	IAMs_20	19 05 28.6			
	comp=Z,2µm,20.0s								
CVS	**Carmenet Viney**	**87.08**	**47**	IAMs_20	IAMs_20	19 05 03.0			
	comp=Z,1µm,20.0s								
MHC	**Mount Hamilton**	**87.14**	**48**	IAmb	IAmb	18 32 41.1			
	comp=Z,55nm,1.8s								
MHC				IAMs_20	IAMs_20	19 15 23.6			
	comp=Z,2µm,18.0s								
BRLK	**Bradley Lake**	**87.14**	**19**	IAMs_20	IAMs_20	19 04 52.4			
	comp=Z,1µm,20.0s								
L17K	**Donlin**	**87.17**	**14**	P	P	18 31 52.8	-7.1		
	baz=210								
KMRM	**Mail Ridge**	**87.20**	**45**	IAMs_20	IAMs_20	19 05 34.8			
	comp=Z,2µm,19.0s								
M18K	**Stony River**	**87.21**	**16**	P	P	18 31 55.0	-5.2		
	baz=212								
PKD	**Bear Valley Ra**	**87.22**	**50**	IAmb	IAmb	18 32 31.8			
	comp=Z,24nm,1.2s								
PKD				IAMs_20	IAMs_20	19 09 32.1			
	comp=Z,2µm,18.0s								
JCC	**Jacoby Creek,**	**87.30**	**44**	IAMs_20	IAMs_20	19 06 23.4			
	comp=Z,1µm,18.0s								
MNRC	**McLaughlin Min**	**87.36**	**46**	IAMs_20	IAMs_20	19 05 04.3			
	comp=Z,2µm,19.0s								
KRPM	**Rodgers**	**87.48**	**44**	IAMs_20	IAMs_20	19 05 32.2			
	comp=Z,2µm,21.0s								
VNA3	**Neumayer Olymp**	**87.51**	**180**	⇑P	**P**	18 32 00.8	-0.9		
	comp=Z,90nm,0.7s								
KHMM	**Horse Mountain**	**87.52**	**44**	IAMs_20	IAMs_20	19 04 40.6			
	comp=Z,2µm,19.0s								
L18K	**Granite Mounta**	**87.62**	**15**	IAMs_20	IAMs_20	19 09 24.3			
	comp=Z,1µm,20.0s								
L18K	**Granite Mounta**	**87.62**	**15**	P	P	18 31 56.4	-5.7		
	baz=211								
J16K	**Anvik River**	**87.67**	**13**	IAMs_20	IAMs_20	19 05 14.2			
	comp=Z,1µm,21.0s								
J16K	**Anvik River**	**87.67**	**13**	P	P	18 31 57.4	-5.0		
	baz=208								
K17K	**Iditarod**	**87.67**	**14**	IAMs_20	IAMs_20	19 06 58.5			
	comp=Z,1µm,20.0s								
K17K	**Iditarod**	**87.67**	**14**	P	P	18 31 56.1	-6.3		
	baz=210								
KHBM	**Hayfork Bally**	**87.75**	**45**	IAMs_20	IAMs_20	19 04 10.5			
	comp=Z,2µm,20.0s								
O02D	**Mt. Diablo Mer**	**87.78**	**45**		**P**	18 32 03.5	0.0		
O02D				IAmb	IAmb	18 32 19.7			
	comp=Z,37nm,1.2s								
O02D				IAMs_20	IAMs_20	19 05 28.5			
	comp=Z,1µm,18.0s								
VNA2	**Neumayer--Watz**	**87.81**	**181**	⇑P	**P**	18 32 03.8	+0.6		
	comp=Z,56nm,0.6s,baz=191,slow=4.5								
CAPN	**Captain Cook N**	**87.88**	**18**	P	P	18 31 56.6	-6.8		
	baz=216								
OSI	**Osito Audit: C**	**87.90**	**52**	IAMs_20	IAMs_20	19 06 23.2			
	comp=Z,1µm,20.0s								
KBO	**Bosley Butte**	**87.90**	**43**	IAMs_20	IAMs_20	19 03 44.3			
	comp=Z,2µm,20.0s								
N20K	**Mount Spurr**	**87.93**	**17**	P	P	18 31 57.2	-6.5		
	baz=215								
SPCR	**Spurr Chakacha**	**87.93**	**17**	P	P	18 31 57.2	-6.5		
	baz=215								
ANM	**Nome**	**87.93**	**10**	IAMs_20	IAMs_20	19 06 07.8			
	comp=Z,1µm,20.0s								
ANM	**Nome**	**87.93**	**10**	P	P	18 31 57.8	-5.8		
	baz=203								
SLKM	**Skilak Lake**	**87.94**	**19**	IAMs_20	IAMs_20	19 05 27.9			
	comp=Z,2µm,20.0s								
SUTB	**Sutter Butte**	**87.97**	**46**	IAmb	IAmb	18 32 18.6			
	comp=Z,45nm,1.2s								
CIT	**Chita**	**88.04**	**329**	*e* P	**P**	18 32 05.4	+0.9		
CIT				*e*		18 35 37.6			
CIT				pmax	pmax				
	comp=Z,151nm,2.0s								
L19K	**White Mountain**	**88.05**	**16**	P	P	18 31 58.7	-5.5		
	baz=213								
O22K	**Cooper Landing**	**88.07**	**19**	IAMs_20	IAMs_20	19 13 03.2			
	comp=Z,1µm,18.0s								
O22K	**Cooper Landing**	**88.07**	**19**	P	P	18 31 57.2	-7.1		
	baz=218								
PASC	**Pasadena Art C**	**88.09**	**52**	IAMs_20	IAMs_20	19 06 20.2			
	comp=Z,1µm,19.0s								
J17K	**VABM Dome**	**88.10**	**14**	IAMs_20	IAMs_20	19 07 42.5			
	comp=Z,1µm,20.0s								
J17K	**VABM Dome**	**88.10**	**14**	P	P	18 31 58.6	-5.8		
	baz=209								
I17K	**Unalakleet**	**88.19**	**13**	IAMs_20	IAMs_20	19 05 39.8			
	comp=Z,2µm,21.0s								
I17K	**Unalakleet**	**88.19**	**13**	P	P	18 31 59.6	-5.2		
	baz=208								
MWC	**Mount Wilson**	**88.21**	**52**	IAMs_20	IAMs_20	19 06 43.3			
	comp=Z,1µm,19.0s								
VES	**Vestal, Richgr**	**88.22**	**50**	IAmb	IAmb	18 33 35.9			
	comp=Z,21nm,1.0s								
M20K	**Styx River**	**88.24**	**17**	IAMs_20	IAMs_20	19 08 03.6			
	comp=Z,1µm,20.0s								
M20K	**Styx River**	**88.24**	**17**	P	P	18 31 58.3	-7.0		
	baz=214								
N02D	**Trinity Center**	**88.24**	**44**	IAMs_20	IAMs_20	19 04 25.6			
	comp=Z,1µm,20.0s								
CPE	**Camp Elliot**	**88.31**	**54**	IAMs_20	IAMs_20	19 05 40.1			
	comp=Z,2µm,19.0s								
Q23K	**Middleton Isla**	**88.31**	**21**	P	P	18 31 60.0	-5.5		
	baz=220								
ORV	**Oroville**	**88.33**	**46**	IAMs_20	IAMs_20	19 06 13.0			
	comp=Z,1µm,19.0s								
CMB	**Columbia Colle**	**88.34**	**48**	IAmb	IAmb	18 32 08.6			
	comp=Z,64nm,2.0s								
CMB				IAMs_20	IAMs_20	19 03 21.6			
	comp=Z,1µm,20.0s								
TPO	**Tropico Hills**	**88.39**	**51**	IAmb	IAmb	18 32 38.4			
	comp=Z,51nm,1.5s								
AFDM	**Forest Hills D**	**88.39**	**47**		**P**	18 32 07.0	+0.6		
AFDM				IAmb	IAmb	18 32 20.6			
	comp=Z,69nm,2.0s								
ELS	**Elsinore Mount**	**88.41**	**53**	IAmb	IAmb	18 32 09.0			
	comp=Z,47nm,2.0s								
TNA	**Tin City**	**88.46**	**9**	P	P	18 32 01.0	-5.0		
	baz=201								
BAR	**Barrett**	**88.54**	**54**	IAMs_20	IAMs_20	19 05 36.2			
	comp=Z,1µm,19.0s								
RC01	**Rabbit Creek A**	**88.55**	**18**	IAMs_20	IAMs_20	19 05 27.9			
	comp=Z,2µm,21.0s								
G15K	**Niukluk**	**88.56**	**11**	P	P	18 32 00.7	-5.8		
	baz=205								
H16K	**Elim**	**88.56**	**12**	P	**P**	18 32 02.0	-4.5		
	baz=206								
ISA	**Isabella, Lake**	**88.57**	**51**	IAmb	IAmb	18 32 21.9			
	comp=Z,48nm,1.6s								
ISA				IAMs_20	IAMs_20	19 09 32.8			
	comp=Z,1µm,18.0s								
F14K	**Arctic Creek**	**88.62**	**10**	P	P	18 32 01.8	-5.0		
	baz=202								
YBH	**Yreka Blue Hor**	**88.62**	**44**	IAmb	IAmb	18 32 22.5			
	comp=Z,51nm,1.6s								
J18K	**Innoko River**	**88.69**	**14**	IAMs_20	IAMs_20	19 07 51.4			
	comp=Z,1µm,20.0s								
J18K	**Innoko River**	**88.69**	**14**	P	P	18 32 02.1	-5.0		
	baz=211								
SKT	**Skwentna**	**88.76**	**17**	P	P	18 32 01.5	-6.1		
	baz=216								
SHL	**Shillong**	**88.78**	**298**		**P**	18 32 07.3	-1.4		
SHL	**Shillong**	**88.78**	**298**	P	**P**	18 32 07.3	-1.4		
SHL				pmax	pmax				
	comp=Z,83nm,1.3s								
ULN	**Ulaanbaatar**	**88.92**	**323**		**P**	18 32 08.1	-0.7		
ULN	**Ulaanbaatar**	**88.92**	**323**	*c i* P	**P**	18 32 08.9	+0.1		
ULN				pmax	pmax				
	comp=Z,75nm,1.5s								
ULN	**Ulaanbaatar**	**88.92**	**323**	P	**P**	18 32 09.0	+0.1		
M22K	**Willow**	**88.97**	**18**	IAMs_20	IAMs_20	19 16 15.0			
	comp=Z,1µm,18.0s								
M22K	**Willow**	**88.97**	**18**	P	P	18 32 03.2	-5.2		
	baz=217								
HATC	**Hat Creek Radi**	**88.98**	**45**	IAMs_20	IAMs_20	19 06 37.2			
	comp=Z,1µm,20.0s								
GTA2	**Gaotai**	**89.05**	**313**	P	**P**	18 32 11.0	+1.3		
GTA2				pP	pwP	18 32 16.8	+0.2		
GTA2				SKS	**SKSac**	18 42 36.5	-2.9		
GTA2				pmax	pmax				
	comp=Z,8.0nm,1.3s								
GTA2				pmax	pmax				
	comp=Z,260nm,6.5s								
GTA2				L	L				
	comp=Z,430nm,17.9s								
GTA2				L	L				
	comp=Z,350nm,19.9s								
GTA2				L	L				
	comp=Z,580nm,23.0s								
LRMC	**Laurel Mtn Rad**	**89.06**	**51**	IAMs_20	IAMs_20	19 10 06.8			
	comp=Z,1µm,18.0s								
MDPB	**Devils Postpil**	**89.06**	**49**	IAmb	IAmb	18 32 25.3			
	comp=Z,27nm,1.4s								
F15K	**North Star Dit**	**89.11**	**10**	IAMs_20	IAMs_20	19 07 14.9			
	comp=Z,1µm,20.0s								
F15K	**North Star Dit**	**89.11**	**10**	P	P	18 32 04.1	-5.1		
	baz=204								
PFO	**Pinyon Flats O**	**89.12**	**53**	P	**P**	18 32 10.1	0.0		
	comp=Z,2.4nm,0.7s,baz=269,slow=5.5,SNR=4.7								
PFO				LR	LR	19 06 52.8			
	comp=Z,1µm,18.0s,baz=239,slow=32								
	comp=Z,2.4nm,0.7s								
PFO	**Pinyon Flats O**	**89.12**	**53**	IAMs_20	IAMs_20	19 07 51.5			
	comp=Z,2µm,18.0s								
PMR	**Palmer**	**89.13**	**18**	P	**P**	18 32 06.0	-3.3		
	baz=218								
YAK	**Yakutsk**	**89.14**	**342**	P	**P**	18 32 09.2	-0.1		
	comp=Z,18nm,0.6s,baz=25,slow=0.9,SNR=22								
YAK				LR	LR	19 07 38.2			
	comp=Z,1µm,21.9s,baz=146,slow=33								
	comp=Z,18nm,0.6s								
YAK	**Yakutsk**	**89.14**	**342**		**P**	18 32 07.3	-2.0		
YAK	**Yakutsk**	**89.14**	**342**	IAMs_20	IAMs_20	19 14 35.6			
	comp=Z,2µm,19.0s								
YAK	**Yakutsk**	**89.14**	**342**	*e* P	**P**	18 32 07.9	-1.4		
YAK				*e**PP	**pP**	18 32 12.1	-0.6		
YAK				*e*		18 35 35.8			
YAK				*e*S	**SKSac**	18 42 37.6	-0.9		
YAK				*e*		18 42 54.8			
YAK				*e*SS	**SS**	18 48 50.5	-1.5		
YAK				*e*SSS	SSS	18 52 19.6			
YAK				pmax	pmax				
	comp=Z,34nm,1.4s								
YAK				pmax	pmax				
	comp=E,6.0nm,1.8s								
YAK				pmax	pmax				
	comp=N,7.0nm,1.6s								
YAK				pmax	pmax				
	comp=Z,104nm,4.6s								
YAK				pmax	pmax				
	comp=N,98nm,4.9s								
YAK				pmax	pmax				
	comp=E,63nm,4.5s								
YAK				smax	smax				
	comp=N,119nm,4.0s								
YAK				smax	smax				
	comp=E,24nm,2.7s								
YAK				MLR	MLR				
	comp=Z,1µm,25.0s								
YAK				MLR	MLR				
	comp=N,949nm,22.0s								
YAK				MLR	MLR				
	comp=E,512nm,22.0s								
KNK	**Knik Glacier**	**89.19**	**19**	IAMs_20	IAMs_20	19 13 45.8			
	comp=Z,1µm,19.0s								
KNK	**Knik Glacier**	**89.19**	**19**	P	P	18 32 04.8	-4.8		
	baz=219								
CWC	**Cottonwood Cre**	**89.21**	**50**	IAMs_20	IAMs_20	19 05 55.8			
	comp=Z,2µm,19.0s								
G16K	**Koyuk River**	**89.22**	**11**	IAMs_20	IAMs_20	19 07 32.1			
	comp=Z,2µm,20.0s								
G16K	**Koyuk River**	**89.22**	**11**	P	**P**	18 32 06.2	-3.4		
	baz=206								
K20K	**Telida**	**89.23**	**15**	P	**P**	18 32 06.0	-3.8		
	baz=214								
SONM	**Songino Array**	**89.27**	**323**	P	**P**	18 32 10.8	+0.4		
	comp=Z,4.0nm,0.9s,baz=145,slow=4.3,SNR=26								
SONM				PKKPbc	**PKKPbc**	18 49 47.9	-0.8		
	comp=Z,0.4nm,0.8s,baz=236,slow=0.5,SNR=3.5								
SONM				LR	LR	19 09 59.1			
	comp=Z,697nm,21.8s,baz=113,slow=34								
	comp=Z,4.0nm,0.9s								
SONM	**Songino Array**	**89.27**	**323**		**P**	18 32 10.2	-0.3		
SONM	**Songino Array**	**89.27**	**323**	P	**P**	18 32 10.2	-0.3		
SONM				pmax	pmax				
	comp=Z,62nm,1.4s								
CLC	**China Lake**	**89.27**	**51**	IAmb	IAmb	18 32 26.2			
	comp=Z,81nm,1.9s								
H17K	**Granite Mounta**	**89.28**	**12**	IAMs_20	IAMs_20	19 06 43.7			
	comp=Z,1µm,20.0s								
H17K	**Granite Mounta**	**89.28**	**12**	P	**P**	18 32 06.7	-3.2		
	baz=208								
BILL	**Bilibino**	**89.31**	**359**		**P**	18 32 08.8	-1.2		
BILL				IAmb	IAmb	18 32 23.8			
	comp=Z,54nm,1.3s								
BILL	**Bilibino**	**89.31**	**359**	*d i* P	**P**	18 32 10.3	+0.3		
BILL				pmax	pmax				
	comp=Z,66nm,1.6s								
PPLA	**Purkeypile**	**89.33**	**16**	P	**P**	18 32 06.2	-4.2		
	baz=215								
GHO	**Glory Hole Cre**	**89.33**	**18**	IAMs_20	IAMs_20	19 14 20.5			
	comp=Z,2µm,19.0s								
KAIM	**Kayak Island**	**89.33**	**21**	P	**P**	18 32 06.0	-4.2		
	baz=222								
EYAK	**Cordova Ski Ar**	**89.36**	**20**	P	P	18 32 05.6	-4.7		
	baz=221								
TIN	**Tinemaha, Big**	**89.39**	**50**	IAmb	IAmb	18 32 57.7			
	comp=Z,31nm,1.0s								
TIN				IAMs_20	IAMs_20	19 04 15.4			
	comp=Z,1µm,21.0s								
PNTR	**Pine Nut**	**89.39**	**47**	IAmb	IAmb	18 32 42.2			
	comp=Z,17nm,0.9s								
J19K	**Poorman**	**89.39**	**15**	P	**P**	18 32 06.2	-4.3		
	baz=212								
CUT	**Chulitna**	**89.45**	**17**	P	P	18 32 05.7	-5.1		
	baz=217								
MPMC	**Manual Prospec**	**89.46**	**51**	IAMs_20	IAMs_20	19 05 07.4			
	comp=Z,1µm,20.0s								
SML	**Sawmill**	**89.53**	**19**	IAMs_20	IAMs_20	19 06 18.9			
	comp=Z,1µm,21.0s								
SML	**Sawmill**	**89.53**	**19**	P	P	18 32 04.9	-6.4		
	baz=219								
RAGM	**Ragged Mountai**	**89.59**	**21**	IAMs_20	IAMs_20	19 14 06.6			
	comp=Z,2µm,18.0s								
G17K	**Kiwalik Mounta**	**89.64**	**12**	P	**P**	18 32 07.3	-4.3		
	baz=208								
M23K	**Glacier View**	**89.70**	**19**	P	P	18 32 06.7	-5.3		
	baz=219								
COR	**Corvallis**	**89.71**	**41**	IAMs_20	IAMs_20	19 03 57.9			
	comp=Z,2µm,20.0s								
DSP	**Deep Springs**	**89.72**	**49**	IAmb	IAmb	18 32 27.4			
	comp=Z,38nm,1.5s								
LHV	**Little Huntoon**	**89.75**	**48**	IAmb	IAmb	18 32 49.1			
	comp=Z,28nm,1.4s								
GCSA	**Galena City Sc**	**89.75**	**14**	P	P	18 32 06.6	-5.5		
	baz=211								
H18K	**Honhosa River**	**89.79**	**13**	IAMs_20	IAMs_20	19 06 19.1			
	comp=Z,2µm,21.0s								
H18K	**Honhosa River**	**89.79**	**13**	P	**P**	18 32 07.8	-4.5		
	baz=210								
DIV	**Divide**	**89.79**	**20**	IAMs_20	IAMs_20	19 12 12.0			
	comp=Z,1µm,18.0s								
BGLC	**Bering Glacier**	**89.86**	**21**	P	P	18 32 06.2	-6.5		
	baz=223								
I04A	**Tendick Farm,**	**89.86**	**42**	IAmb	IAmb	18 32 28.1			
	comp=Z,29nm,1.2s								
BC3	**Big Chuckawall**	**89.89**	**54**	IAMs_20	IAMs_20	19 06 47.9			
	comp=Z,1µm,18.0s								
J20K	**Nowinta River**	**89.90**	**15**	IAMs_20	IAMs_20	19 09 57.2			
	comp=Z,1µm,19.0s								
J20K	**Nowinta River**	**89.90**	**15**	P	P	18 32 07.1	-5.7		
	baz=214								
NVAR	**Mina Array Bea**	**89.97**	**48**	P	**P**	18 32 15.0	+0.9		
	comp=Z,6.1nm,0.6s,baz=226,slow=8.2,SNR=39								
NVAR				LR	LR	19 04 20.0			
	comp=Z,1µm,20.9s,baz=265,slow=30								
	comp=Z,6.1nm,0.6s								
GRAC	**Grapevine Rang**	**89.98**	**50**	IAmb	IAmb	18 32 44.9			
	comp=Z,23nm,1.1s								
LPIG	**La Paz**	**90.01**	**64**	LR	LR	19 03 17.7			
	comp=Z,2µm,21.9s,baz=234,slow=29								
KLU	**Klutina**	**90.02**	**20**	IAMs_20	IAMs_20	19 12 58.0			
	comp=Z,1µm,18.0s								
KLU	**Klutina**	**90.02**	**20**	P	P	18 32 08.6	-4.9		
	baz=221								
BMRM	**Bremner River**	**90.05**	**20**	IAMs_20	IAMs_20	19 07 19.7			
	comp=Z,1µm,20.0s								
NV11	**Mina Array Sit**	**90.08**	**48**	IAmb	IAmb	18 32 34.3			
	comp=Z,29nm,1.3s								
GLA	**Glamis**	**90.10**	**54**	IAmb	IAmb	18 32 47.9			
	comp=Z,30nm,1.1s								
GLA				IAMs_20	IAMs_20	19 08 39.5			
	comp=Z,2µm,18.0s								
FURC	**Furnace Creek,**	**90.10**	**51**	IAMs_20	IAMs_20	19 05 47.2			
	comp=Z,1µm,20.0s								
CHUM	**Lake Minchumin**	**90.11**	**16**	P	P	18 32 08.1	-5.7		
	baz=215								
KTH	**Kantishna Hill**	**90.20**	**17**	IAMs_20	I

G19K Purcell Mounta 90.92 13 IAMs_20 IAMs_20 19 07 14.9
comp=Z,2µm,21.0s
G19K Purcell Mounta 90.92 13 P **P** **18 32 14.0 -3.5**
baz=211
GOMU GeErMu 91.01 309 P **P** **18 32 20.0 +0.8**
GOMU pmax pmax
comp=Z,6.0nm,1.9s
LSA Lhasa 91.07 301 IAmb IAmb 18 32 27.8
comp=Z,53nm,1.6s
LSA Lhasa 91.07 301 P **P** **18 32 18.8 -0.9**
LSA pmax pmax
comp=Z,6.0nm,1.1s
LSA L L
comp=Z,310nm,22.7s
LSA L L
comp=Z,210nm,23.8s
LSA L L
comp=Z,260nm,22.0s
U33K Whale Pass 91.10 28 IAMs_20 IAMs_20 19 11 53.4
comp=Z,1µm,18.0s
U33K Whale Pass 91.10 28 P **P** **18 32 15.8 -2.7**
baz=232
BBB Bella Bella 91.12 33 LR LR 19 09 45.7
comp=Z,715nm,18.0s,baz=236,slow=33
D17K Noatak River 91.19 10 P **P** **18 32 16.8 -1.9**
baz=205
PAX Paxson 91.28 19 P **P** **18 32 16.3 -3.1**
baz=221
V35K Ketchikan 91.29 29 IAMs_20 IAMs_20 19 06 13.6
comp=Z,1µm,19.0s
V35K Ketchikan 91.29 29 P **P** **18 32 16.5 -3.0**
baz=233
S32K Killisnoo 91.33 27 IAMs_20 IAMs_20 19 07 20.4
comp=Z,2µm,19.0s
S32K Killisnoo 91.33 27 P **P** **18 32 17.7 -1.9**
baz=230
E18K Tukpahlearik C 91.36 11 IAmb IAmb 18 32 33.3
comp=Z,23nm,1.4s
E18K IAMs_20 IAMs_20 19 08 48.4
comp=Z,2µm,20.0s
E18K Tukpahlearik C 91.36 11 P **P** **18 32 17.4 -2.2**
baz=208
C16K Lisburne Hills 91.36 9 IAmb IAmb 18 32 33.1
comp=Z,58nm,1.9s
C16K IAMs_20 IAMs_20 19 09 12.9
comp=Z,1µm,20.0s
C16K Lisburne Hills 91.36 9 P **P** **18 32 17.1 -2.5**
baz=203
F19K Shaleruckik Mo 91.37 12 IAmb IAmb 18 32 32.8
comp=Z,68nm,2.0s
F19K IAMs_20 IAMs_20 19 08 40.0
comp=Z,1µm,20.0s
F19K Shaleruckik Mo 91.37 12 P **P** **18 32 15.6 -4.0**
baz=210
O28M Mount Upton 91.40 22 IAMs_20 IAMs_20 19 09 33.0
comp=Z,1µm,19.0s
O28M Mount Upton 91.40 22 P **P** **18 32 16.9 -3.4**
baz=226
MLY Manley 91.44 16 IAMs_20 IAMs_20 19 11 05.1
comp=Z,1µm,20.0s
MLY Manley 91.44 16 P **P** **18 32 17.3 -2.8**
baz=217
H21K Melozitna Rive 91.45 15 IAMs_20 IAMs_20 19 11 34.2
comp=Z,1µm,20.0s
H21K Melozitna Rive 91.45 15 P **P** **18 32 17.6 -2.5**
baz=215
NEA2 Nenana 91.52 17 P **P** **18 32 16.6 -3.8**
baz=218
BOD Bodaibo 91.54 334 *e*P **P** **18 32 20.2 -0.4**
BOD pmax pmax
comp=Z,63nm,1.7s
RDOG Red Dog Mine 91.54 10 P **P** **18 32 19.4 -1.0**
baz=206
WVOR Wild Horse Val 91.61 45 IAmb IAmb 18 32 36.9
comp=Z,32nm,1.6s
WRAK Wrangell Islan 91.63 28 IAMs_20 IAMs_20 19 12 08.4
comp=Z,1µm,19.0s
O29M Mount Kennedy 91.65 23 IAMs_20 IAMs_20 19 08 32.8
comp=Z,2µm,20.0s
WRH Wood River Hil 91.69 17 IAmb IAmb 18 32 38.8
WRH IAMs_20 IAMs_20 19 15 10.8
comp=Z,1µm,18.0s
PALK Pallekele 91.69 277 LR LR 19 17 52.1
comp=Z,1µm,18.1s,baz=120,slow=38
PALK Pallekele 91.69 277 IAMs_20 IAMs_20 19 17 23.0
comp=Z,1µm,19.0s
PALK Pallekele 91.69 277 P **P** **18 32 23.6 +1.2**
K24K Donnelly Dome 91.82 18 IAMs_20 IAMs_20 19 07 41.5
comp=Z,1µm,20.0s
K24K Donnelly Dome 91.82 18 P **P** **18 32 18.5 -3.3**
baz=221
R32K Eaglecrest 91.87 26 P **P** **18 32 18.6 -3.6**
baz=231
C17K DeLong Mountai 91.88 10 P **P** **18 32 19.7 -2.3**
baz=205,SNR=6.4
I23K Minto, Yukon-K 91.89 16 IAMs_20 IAMs_20 19 10 19.9
comp=Z,1µm,20.0s
I23K Minto, Yukon-K 91.89 16 P **P** **18 32 19.9 -2.2**
baz=218
YUK8 Steele Glacier 91.90 22 P **P** **18 32 18.2 -4.4**
baz=226
CCB Clear Creek Bu 91.90 17 IAMs_20 IAMs_20 19 14 25.4
comp=Z,1µm,18.0s
BESE Bessie Mountai 91.93 26 IAMs_20 IAMs_20 19 13 29.1
comp=Z,1µm,18.0s
M27K Edge Creek, AK 91.95 20 P **P** **18 32 19.1 -3.6**
baz=224
HDA Harding Lake 91.95 17 IAMs_20 IAMs_20 19 15 33.9
comp=Z,1µm,18.0s
HDA Harding Lake 91.95 17 P **P** **18 32 18.9 -3.5**
baz=220
L26K Log Cabin Wild 91.97 19 IAMs_20 IAMs_20 19 18 42.5
comp=Z,978nm,18.0s
L26K Log Cabin Wild 91.97 19 P P 18 32 17.9 -4.7
baz=223
F20K Avaraart Lake 91.97 13 IAmb IAmb 18 32 36.8
comp=Z,20nm,1.4s
F20K IAMs_20 IAMs_20 19 07 47.0
comp=Z,2µm,21.0s
F20K Avaraart Lake 91.97 13 P **P** **18 32 19.9 -2.5**
baz=212
H22K Ishtalitna Cre 91.98 15 IAmb IAmb 18 32 36.6
comp=Z,53nm,2.0s
H22K IAMs_20 IAMs_20 19 13 25.4
comp=Z,1µm,19.0s
H22K Ishtalitna Cre 91.98 15 P **P** **18 32 18.9 -3.7**
baz=216
G21K Allakaket 92.00 14 IAmb IAmb 18 32 36.7
comp=Z,18nm,1.2s
G21K IAMs_20 IAMs_20 19 12 57.8
comp=Z,1µm,19.0s
G21K Allakaket 92.00 14 P **P** **18 32 18.7 -3.9**
baz=214
YUK3 Moose Creek 92.01 21 P **P** **18 32 18.4 -4.6**
baz=226
E19K Redstone River 92.02 12 IAmb IAmb 18 32 37.1
comp=Z,15nm,1.1s
E19K IAMs_20 IAMs_20 19 08 51.1
comp=Z,1µm,20.0s
E19K Redstone River 92.02 12 P **P** **18 32 18.3 -4.3**
baz=211
RIDG Independent Ri 92.05 18 IAmb IAmb 18 32 36.4
comp=Z,35nm,1.4s
RIDG Independent Ri 92.05 18 P **P** **18 32 18.6 -4.4**
baz=222
COLA College 92.07 17 P P 18 32 28.7 +5.8
COLA College 92.07 17 IAMs_20 IAMs_20 19 15 58.7
comp=Z,1µm,19.0s
COLA College 92.07 17⇑ *i*P **P** **18 32 22.7 -0.2**
COLA pmax pmax
comp=Z,25nm,1.4s
DOT Dot Lake 92.21 19 IAMs_20 IAMs_20 19 16 23.8
comp=Z,955nm,18.0s
ILAR Eielson Array 92.25 17 P **P** **18 32 22.4 -1.4**
comp=Z,1.8nm,0.7s,baz=238,slow=4.9,SNR=24
ILAR PKiKP **PKiKP** **18 37 12.8 -0.4**
comp=Z,0.4nm,0.5s,baz=282,slow=3.5,SNR=6.4
ILAR PKKPbc **PKKPdf** **18 49 40.8 +0.9**
comp=Z,0.3nm,0.8s,baz=352,slow=2.9,SNR=4.5
comp=Z,1.8nm,0.7s
BVCY Beaver Creek 92.33 21 P **P** **18 32 21.4 -2.8**
baz=225
YUK4 Talbot Arm 92.34 22 P **P** **18 32 20.2 -4.3**
baz=227
C18K Utukok River 92.35 10 IAmb IAmb 18 32 36.7
comp=Z,32nm,1.7s
C18K IAMs_20 IAMs_20 19 08 57.6
comp=Z,1µm,20.0s
C18K Utukok River 92.35 10 P **P** **18 32 20.9 -3.4**
baz=207,SNR=5.6
U35K Hyder 92.36 29 IAMs_20 IAMs_20 19 06 57.0
comp=Z,1µm,21.0s
ZAK Zakamensk 92.37 324 *e*P **P** **18 32 23.7 -1.1**
ZAK pmax pmax
comp=Z,51nm,1.7s
POKR Poker Plat Res 92.37 17 P **P** **18 32 20.8 -3.6**
baz=220
H23K Yukon River 92.38 16 IAMs_20 IAMs_20 19 11 22.9
comp=Z,1µm,20.0s
H23K Yukon River 92.38 16 P **P** **18 32 20.3 -4.1**
baz=218
HYT Haines Junctio 92.39 23 IAmb IAmb 18 32 38.3
comp=Z,33nm,1.4s
HYT Haines Junctio 92.39 23 P P 18 32 18.2 -6.4
baz=228
L27K Beaver Creek, 92.48 20 P **P** **18 32 20.5 -4.4**
baz=224
SCRK Sand Creek 92.48 19 IAmb IAmb 18 32 38.7
comp=Z,38nm,1.5s
SCRK IAMs_20 IAMs_20 19 17 06.8
comp=Z,1µm,19.0s
SCRK Sand Creek 92.48 19 P P 18 32 19.7 -5.3
baz=223
J25K Salcha River, 92.55 18 IAmb IAmb 18 32 56.7
comp=Z,37nm,1.9s
J25K IAMs_20 IAMs_20 19 15 47.7
comp=Z,1µm,19.0s
J25K Salcha River, 92.55 18 P P 18 32 19.5 -5.7
baz=221
F21K Alatna River 92.60 14 IAmb IAmb 18 32 44.7
comp=Z,44nm,1.9s
F21K IAMs_20 IAMs_20 19 10 13.4
comp=Z,1µm,20.0s
F21K Alatna River 92.60 14 P **P** **18 32 21.8 -3.6**
baz=214
D19K Kuna River 92.75 11 IAmb IAmb 18 33 05.7
comp=Z,30nm,1.6s
D19K IAMs_20 IAMs_20 19 09 45.4
comp=Z,2µm,20.0s
D19K Kuna River 92.75 11 P **P** **18 32 23.2 -2.8**
baz=210
G22K Bettles 92.79 14 P **P** **18 32 22.1 -4.0**
baz=216
H24K Noodor Dome 92.81 16 IAMs_20 IAMs_20 19 10 26.4
comp=Z,1µm,21.0s
H24K Noodor Dome 92.81 16 P **P** **18 32 22.5 -3.9**
baz=219
IRK Irkutsk 92.82 326 *e*P **P** **18 32 26.1 -0.6**
IRK pmax pmax
comp=Z,47nm,1.6s
TLY Talaya 92.85 325 LR LR 19 14 00.8
comp=Z,390nm,19.3s,baz=124,slow=35
TLY Talaya 92.85 325 **P** **18 32 27.2 +0.4**
TLY IAmb IAmb 18 32 40.8
comp=Z,20nm,1.1s
TLY Talaya 92.85 325 *c i*P **P** **18 32 26.1 -0.8**
TLY pmax pmax
comp=Z,31nm,1.3s
O30N Mendenhall 92.88 23 IAMs_20 IAMs_20 19 11 25.9
comp=Z,2µm,19.0s
O30N Mendenhall 92.88 23 P P 18 32 20.4 -6.4
baz=229
T35M Bob Quinn 92.89 28 IAMs_20 IAMs_20 19 12 58.8
comp=Z,1µm,19.0s
T35M Bob Quinn 92.89 28 P P 18 32 20.7 -6.2
baz=234
TUC Tucson 92.89 56 IAMs_20 IAMs_20 19 09 02.6
comp=Z,1µm,18.0s
E20K Nigu River 92.92 12 P P 18 32 20.9 -6.0
baz=212
LCMT Little Creek M 92.95 51 P **P** **18 32 26.8 -1.1**
N30M Aishikik Lake 92.97 23 IAMs_20 IAMs_20 19 09 54.7
comp=Z,2µm,20.0s
G23K Bananza Creek 92.97 15 P P 18 32 22.5 -4.7
baz=217
P32M Atlin 93.03 25 IAMs_20 IAMs_20 19 11 00.1
comp=Z,1µm,19.0s
C19K Lookout Ridge 93.03 11 IAMs_20 IAMs_20 19 10 02.6
comp=Z,1µm,20.0s
C19K Lookout Ridge 93.03 11 P **P** **18 32 23.4 -3.9**
baz=209
S34M Telegraph Cree 93.06 27 IAMs_20 IAMs_20 19 06 59.2
comp=Z,1µm,20.0s
S34M Telegraph Cree 93.06 27 P **P** **18 32 23.3 -4.4**
baz=233
K27K Chicken 93.09 19 IAmb IAmb 18 32 42.5
comp=Z,15nm,1.1s
F22K John River 93.12 14 P **P** **18 32 24.2 -3.6**
baz=215
ELK Elko 93.13 47 P **P** **18 32 28.7 0.0**
comp=Z,1.8nm,0.8s,baz=279,slow=3.4,SNR=5.7
ELK LR LR 19 08 39.4
comp=Z,849nm,19.1s,baz=258,slow=32
comp=Z,1.8nm,0.8s
ELK Elko 93.13 47 IAmb IAmb 18 32 43.0
comp=Z,28nm,1.9s
M29M Somme Creek 93.15 21 IAmb IAmb 18 32 52.6
comp=Z,27nm,1.4s
M29M IAMs_20 IAMs_20 19 10 52.9
comp=Z,1µm,19.0s
PRP Porcupine Dome 93.19 17 IAMs_20 IAMs_20 19 16 30.6
comp=Z,2µm,18.0s
PRP Porcupine Dome 93.19 17 P **P** **18 32 23.7 -4.6**
baz=221
Q32M Nakina River 93.22 26 IAMs_20 IAMs_20 19 08 59.3
comp=Z,1µm,20.0s
D20K Etivluk River 93.22 12 IAMs_20 IAMs_20 19 09 50.8
comp=Z,2µm,20.0s
D20K Etivluk River 93.22 12 P **P** **18 32 24.3 -3.9**
baz=211
WHY Whitehorse 93.26 24 P P 18 32 22.7 -6.0
baz=230
KNB Kanab 93.26 52 IAmb IAmb 18 33 02.6
comp=Z,37nm,1.7s
COLD Coldfoot 93.34 15 IAMs_20 IAMs_20 19 12 52.2
comp=Z,1µm,19.0s
COLD Coldfoot 93.34 15 P P 18 32 22.6 -6.2
baz=217
N31M Braeburn, Yuko 93.46 23 IAMs_20 IAMs_20 19 10 00.3
comp=Z,2µm,20.0s
E21K Killik River 93.51 13 IAMs_20 IAMs_20 19 08 47.5
comp=Z,1µm,21.0s
E21K Killik River 93.51 13 P **P** **18 32 25.5 -4.1**
baz=214
G24K Hadweenzic Riv 93.59 16 IAmb IAmb 18 32 43.5
comp=Z,28nm,1.6s
G24K IAMs_20 IAMs_20 19 11 41.9
comp=Z,1µm,20.0s
G24K Hadweenzic Riv 93.59 16 P P 18 32 25.3 -4.7
baz=220
I26K Coal Creek Min 93.70 18 IAMs_20 IAMs_20 19 11 20.4
comp=Z,1µm,20.0s
I26K Coal Creek Min 93.70 18 P **P** **18 32 27.0 -3.5**
baz=223
E22K Anaktuvuk Pass 93.71 14 IAmb IAmb 18 33 03.5
comp=Z,40nm,1.6s
E22K IAMs_20 IAMs_20 19 11 19.9
comp=Z,1µm,20.0s
E22K Anaktuvuk Pass 93.71 14 P **P** **18 32 26.4 -4.1**
baz=216,SNR=5.7
L29M L29M 93.72 21 IAmb IAmb 18 32 44.5
comp=Z,40nm,1.4s
L29M L29M 93.72 21 P **P** **18 32 26.8 -3.8**
baz=228
WUAZ Wupatki 93.72 53 IAMs_20 IAMs_20 19 08 24.4
comp=Z,1µm,19.0s
A19K Wainwright 93.77 10 P **P** **18 32 26.2 -4.4**
baz=207
P33M Teslin, Yukon 93.77 25 IAMs_20 IAMs_20 19 14 28.7
comp=Z,1µm,18.0s
P33M Teslin, Yukon 93.77 25 P **P** **18 32 26.4 -4.5**
baz=232
PKCU Pink Cliffs 93.81 51 IAmb IAmb 18 32 36.4
comp=Z,54nm,1.9s
M30M Minto, Yukon 93.81 22 IAMs_20 IAMs_20 19 11 21.5
comp=Z,1µm,20.0s
M30M Minto, Yukon 93.81 22 P **P** **18 32 28.2 -2.9**
baz=229
DLBC Dease Lake 93.84 27 LR LR 19 08 24.2
comp=Z,1µm,19.4s,baz=246,slow=32
DLBC Dease Lake 93.84 27 P **P** **18 32 27.8 -3.6**
baz=234
MFID Camas Ranch 93.90 45 IAMs_20 IAMs_20 19 09 37.3
comp=Z,1µm,20.0s
C21K Knifeblade Rid 93.95 12 P **P** **18 32 28.1 -3.5**
baz=213,SNR=9.1
G25K Bearman Lake 93.99 16 P **P** **18 32 29.5 -2.2**
baz=221
R33M Jennings River 94.02 26 IAMs_20 IAMs_20 19 09 34.4
comp=Z,1µm,19.0s
R33M Jennings River 94.02 26 P **P** **18 32 30.0 -2.2**
baz=234
FYU Fort Yukon 94.07 16 IAMs_20 IAMs_20 19 16 54.5
comp=Z,1µm,18.0s
F24K Squaw Lake 94.12 15 IAmb IAmb 18 32 46.8
comp=Z,32nm,1.6s
F24K IAMs_20 IAMs_20 19 12 58.2
comp=Z,1µm,20.0s
F24K Squaw Lake 94.12 15 P **P** **18 32 29.9 -2.6**
baz=219
E23K Chandalar 94.14 14 IAmb IAmb 18 32 46.7
comp=Z,26nm,1.5s
E23K IAMs_20 IAMs_20 19 13 19.3
comp=Z,1µm,19.0s
E23K Chandalar 94.14 14 P **P** **18 32 29.9 -2.6**
baz=218
MTPU Mount Pierson 94.14 51 IAmb IAmb 18 32 36.7
comp=Z,31nm,1.9s
B20K Meade River 94.24 11 IAmb IAmb 18 32 49.0
comp=Z,45nm,1.8s
B20K IAMs_20 IAMs_20 19 10 43.6
comp=Z,2µm,20.0s
B20K Meade River 94.24 11 P **P** **18 32 31.0 -1.7**
baz=211
MOY Mondy 94.26 324 *e*P **P** **18 32 33.6 +0.1**
MOY pmax pmax
comp=Z,50nm,2.4s
I27K Kandik River 94.36 18 IAmb IAmb 18 32 47.2
comp=Z,18nm,1.3s
I27K IAMs_20 IAMs_20 19 12 20.6
comp=Z,1µm,20.0s
I27K Kandik River 94.36 18 P **P** **18 32 31.6 -2.0**
baz=225
B21K Ikpikpuk River 94.38 12 IAmb IAmb 18 32 46.2
comp=Z,54nm,1.9s
B21K Ikpikpuk River 94.38 12 P **P** **18 32 31.2 -2.3**
baz=213
K29M Barlow Dome 94.42 21 P P 18 32 29.1 -4.8
baz=228
E24K Your Creek 94.42 15 IAMs_20 IAMs_20 19 13 19.8
comp=Z,1µm,19.0s
E24K Your Creek 94.42 15 P **P** **18 32 31.7 -2.1**
baz=219
M31M Drury Creek, Y 94.43 23 P **P** **18 32 30.1 -3.8**
baz=231
DUG Dugway, Tooele 94.58 49 IAMs_20 IAMs_20 19 07 22.6
comp=Z,1µm,20.0s
TOLK Toolik Lake Re 94.62 14 P **P** **18 32 31.7 -2.9**
baz=218
H03S2 Juan Fernandez 94.63 129 T T 20 17 58.7
baz=236
D23K Nanushuk River 94.64 13 **P** **18 32 34.0 -0.6**
D23K IAmb IAmb 18 32 49.4
comp=Z,19nm,1.2s
D23K IAMs_20 IAMs_20 19 09 56.4
comp=Z,1µm,20.0s
D23K Nanushuk River 94.64 13 P **P** **18 32 32.4 -2.2**
baz=217
H03S1 Juan Fernandez 94.64 129 T T 20 18 13.6
baz=236
H03S3 Juan Fernandez 94.65 129 T T 20 17 56.9
baz=236
F25K Christian Rive 94.74 16 IAMs_20 IAMs_20 19 12 37.2
comp=Z,1µm,20.0s
F25K Christian Rive 94.74 16 P **P** **18 32 32.6 -2.7**
baz=221
G26K Porcupine Rive 94.74 17 IAmb IAmb 18 32 49.4
comp=Z,31nm,1.4s
G26K Porcupine Rive 94.74 17 P **P** **18 32 33.3 -1.9**
baz=223
I28M Miner Creek 94.75 19 IAMs_20 IAMs_20 19 16 16.9
comp=Z,987nm,19.0s
I28M Miner Creek 94.75 19 P **P** **18 32 33.8 -1.6**
baz=226
H27K Steamboat Moun 94.84 18 IAmb IAmb 18 32 49.8
comp=Z,28nm,1.5s
H27K Steamboat Moun 94.84 18 P **P** **18 32 34.1 -1.6**
baz=225
HLID Hailey 94.89 45 IAMs_20 IAMs_20 19 08 23.6
comp=Z,1µm,20.0s
E25K Arctic Village 95.15 15 IAMs_20 IAMs_20 19 12 41.2
comp=Z,1µm,20.0s
E25K Arctic Village 95.15 15 P **P** **18 32 35.3 -1.8**
baz=221
I29M Ogilvie Camp, 95.19 19 P **P** **18 32 35.9 -1.4**
baz=228
D24K Happy Valley 95.19 14 IAMs_20 IAMs_20 19 17 47.0
comp=Z,1µm,18.0s
D24K Happy Valley 95.19 14 P **P** **18 32 35.1 -2.0**
baz=218
F26K Sheenjek River 95.19 16 IAMs_20 IAMs_20 19 13 02.3
comp=Z,1µm,20.0s
F26K Sheenjek River 95.19 16 P **P** **18 32 35.1 -2.2**
baz=223
B22K Teshekpuk Lake 95.21 12 P **P** **18 32 35.2 -2.0**
baz=214
G27K Doyon Strip 95.22 17 P **P** **18 32 35.3 -2.1**
baz=225
NEW Newport 95.22 40 LR LR 19 07 48.0
comp=Z,583nm,20.4s,baz=250,slow=31
NEW Newport 95.22 40 IAMs_20 IAMs_20 19 15 59.1
comp=Z,1µm,18.0s
J30M Hart River 95.29 21 IAMs_20 IAMs_20 19 22 00.4
comp=Z,1µm,18.0s
J30M Hart River 95.29 21 P **P** **18 32 35.7 -2.2**
baz=229
C23K Itkillik River 95.35 13 IAMs_20 IAMs_20 19 10 52.1
comp=Z,1µm,20.0s
C23K Itkillik River 95.35 13 P **P** **18 32 34.9 -3.0**
baz=217,SNR=5.8
A22K Sinclair Lake 95.48 11 P **P** **18 32 36.9 -1.5**
baz=213
C24K Franklin Bluff 95.66 13 IAMs_20 IAMs_20 19 14 41.6
comp=Z,1µm,20.0s
C24K Franklin Bluff 95.66 13 P **P** **18 32 37.0 -2.3**
baz=219
KNGR Kungurtug, Tuv 95.69 322‖ *e*P **P** **18 32 41.4 +1.3**
KNGR pmax pmax
comp=Z,21nm,1.3s
I30M Mount Dempster 95.70 20 P **P** **18 32 36.8 -3.0**
baz=229,SNR=6.1
H29M Whitestone 95.75 19 IAMs_20 IAMs_20 19 19 18.4
comp=Z,1µm,18.0s
H29M Whitstone 95.75 19 P **P** **18 32 37.6 -2.2**
baz=228
MMPY Sheldon Lake, 95.83 23 P **P** **18 32 39.1 -1.2**
baz=234
D25K Kavik River 95.88 14 P **P** **18 32 37.8 -2.6**
baz=221
EPT El Paso 96.04 58 IAMs_20 IAMs_20 19 11 20.0
comp=Z,1µm,19.0s
E27K Coleen River 96.22 16 IAmb IAmb 18 32 56.3
comp=Z,22nm,1.4s
E27K IAMs_20 IAMs_20 19 19 11.4
comp=Z,1µm,18.0s
E27K Coleen River 96.22 16 P **P** **18 32 39.3 -2.6**
baz=225
F28M Old Crow 96.28 17 IAMs_20 IAMs_20 19 12 29.1
comp=Z,1µm,20.0s
F28M Old Crow 96.28 17 P **P** **18 32 41.0 -1.2**
baz=226
G29M Pine Creek 96.32 18 IAMs_20 IAMs_20 19 13 10.4
comp=Z,1µm,20.0s
G29M Pine Creek 96.32 18 P **P** **18 32 39.2 -3.2**
baz=228
TGTN Hyland Airport 96.34 25 P **P** **18 32 40.0 -2.7**
baz=236
EPYK Eagle Plains 96.35 19 P **P** **18 32 41.6 -1.0**
EPYK Eagle Plains 96.35 19 P **P** **18 32 40.2 -2.4**
baz=229
KAAM Kaadhehdhoo 96.41 268 IAMs_20 IAMs_20 19 18 30.7
comp=Z,2µm,19.0s
MSO Missoula 96.56 42 IAMs_20 IAMs_20 19 12 57.6
comp=Z,1µm,19.0s
PLCA Paso Flores 96.57 138 P **P** **18 32 45.5 +1.0**
comp=Z,1.3nm,0.8s,baz=206,slow=3.9,SNR=8.4
PLCA LR LR 19 06 40.3
comp=Z,463nm,21.9s,baz=230,slow=30
comp=Z,1.3nm,0.8s
C26K Camden Bay 96.66 14 P **P** **18 32 41.5 -2.3**
baz=222
H31M Peel River 96.73 20 P **P** **18 32 42.1 -2.3**
baz=231

C27K	Jago River	96.73	15	IAMs_20	IAMs_20	19 14 33.7			
	comp=Z,1µm,20.0s								
C27K	Jago River	96.73	15	P	P	18 32 41.6	-2.6		
	baz=223								
G30M	tAoh Zraii Nji	96.90	19	P	P	18 32 42.7	-2.4		
	baz=230								
TIXI	Tiksi	97.03	348	P	P	18 32 45.4	-0.1		
	comp=Z,2.6nm,0.2s,baz=124,slow=5.1,SNR=7.8								
TIXI				LR	LR	19 16 45.9			
	comp=Z,714nm,18.7s,baz=154,slow=36								
	comp=Z,2.6nm,0.2s								
TIXI	Tiksi	97.03	348	‖ eP	P	18 32 44.4	-1.1		
TIXI				pmax	pmax				
	comp=Z,13nm,2.2s								
E28M	Babbage River	97.06	17	IAMs_20	IAMs_20	19 18 34.6			
	comp=Z,1µm,18.0s								
E28M	Babbage River	97.06	17	P	P	18 32 43.6	-2.1		
	baz=227,SNR=8.5								
D27M	Malcolm River	97.13	16	IAMs_20	IAMs_20	19 19 46.4			
	comp=Z,1µm,18.0s								
D27M	Malcolm River	97.13	16	P	P	18 32 42.9	-3.2		
	baz=226								
ANMO	Albuquerque	97.23	55	LR	LR	19 10 34.6			
	comp=Z,1µm,18.8s,baz=264,slow=32								
ANMO	Albuquerque	97.23	55	IAMs_20	IAMs_20	19 10 32.0			
	comp=Z,1µm,19.0s								
ANMO	Albuquerque	97.23	55	IAMs_20	IAMs_20	19 10 32.0			
	comp=Z,1µm,19.0s								
ANMO	Albuquerque	97.23	55	IAMs_20	IAMs_20	19 10 32.0			
	comp=Z,1µm,19.0s								
HYB	Hyderabad	97.24	286	eP	P	18 32 45.5	-2.3		
HYB				ePP	PP	18 36 42.0	-2.5		
HYB				eSKSac	SKSac	18 43 23.4	-1.9		
E29M	Blow River	97.35	17	P	P	18 32 44.6	-2.4		
	baz=228								
MOOW	Moose Ponds	97.40	46	IAMs_20	IAMs_20	19 18 58.4			
	comp=Z,888nm,18.0s								
F30M	Barrier River	97.44	18	IAMs_20	IAMs_20	19 11 29.9			
	comp=Z,971nm,20.0s								
F30M	Barrier River	97.44	18	P	P	18 32 45.6	-1.9		
	baz=230								
TXAR	Lajitas Array	97.47	62	P	P	18 32 48.4	-0.3		
	comp=Z,0.3nm,0.6s,baz=250,slow=3.7,SNR=4.1								
TXAR				LR	LR	19 10 54.4			
	comp=Z,1µm,18.1s,baz=228,slow=32								
	comp=Z,0.3nm,0.6s								
D28M	Stokes Point	97.76	16	P	P	18 32 46.9	-1.9		
	baz=228								
PDAR	Pinedale Array	97.83	47	LR	LR	19 13 19.5			
	comp=Z,296nm,18.2s,baz=242,slow=33								
UNM	Universidad Na	97.89	72	IAMs_20	IAMs_20	19 07 07.8			
	comp=Z,2µm,21.0s								
F31M	Tsiigehtchic	97.94	19		P	18 32 48.8	-0.9		
F31M	Tsiigehtchic	97.94	19	P	P	18 32 47.2	-2.4		
	baz=232,SNR=6.3								
BI02	San Fabin de	98.44	135	IAMs_20	IAMs_20	19 07 09.8			
	comp=Z,988nm,20.0s								
HMDM	Hanimaadhoo	98.48	274	IAMs_20	IAMs_20	19 26 06.6			
	comp=Z,1µm,18.0s								
INK	Inuvik	98.54	18	P	P	18 32 51.2	-1.2		
	comp=Z,2.1nm,0.9s,baz=235,slow=5.1,SNR=5.9								
INK				PKiKP	PKiKP	18 37 24.1	+0.1		
	comp=Z,0.9nm,0.6s,baz=101,slow=4.5,SNR=4.2								
INK				LR	LR	19 13 04.5			
	comp=Z,785nm,19.6s,baz=246,slow=33								
	comp=Z,2.1nm,0.9s								
INK	Inuvik	98.54	18	P	P	18 32 50.2	-2.2		
	baz=232								
RLMT	Red Lodge	98.90	45	IAMs_20	IAMs_20	19 12 59.9			
	comp=Z,1µm,20.0s								
GO05	Hualane	98.93	133	IAMs_20	IAMs_20	19 08 17.5			
	comp=Z,1µm,19.0s								
SDCO	Great Sand Dun	98.93	53	IAMs_20	IAMs_20	19 12 00.9			
	comp=Z,1µm,19.0s								
WMQ	Urumqi	99.06	313	eP	Pdif	18 32 54.0	-1.4		
WMQ				PP	PP	18 37 02.5	+4.5		
WMQ				SKS	SKSac	18 43 33.5	0.0		
WMQ				S	ScS	18 44 27.8	+1.6		
WMQ				SS	SS	18 51 16.8	+2.1		
WMQ				L	L				
	comp=Z,450nm,12.7s								
WMQ				L	L				
	comp=Z,630nm,19.1s								
WMQ				L	L				
	comp=Z,430nm,24.1s								
T25A	Trinidad	99.54	54	IAMs_20	IAMs_20	19 17 26.1			
	comp=Z,879nm,18.0s								
BO01	Tunca	99.85	133	IAMs_20	IAMs_20	19 12 29.9			
	comp=Z,1µm,18.0s								
VA01	Torpederas	100.23	131	IAMs_20	IAMs_20	19 13 24.3			
	comp=Z,2µm,20.0s								
MT02	Curacav	100.45	132	IAMs_20	IAMs_20	19 13 11.9			
	comp=Z,1µm,19.0s								
VA06	Catapilco	100.73	131	IAMs_20	IAMs_20	19 14 20.4			
	comp=Z,1µm,18.0s								
AMTX	Amarillo	100.90	57	IAMs_20	IAMs_20	19 14 19.5			
	comp=Z,1µm,18.0s								
JCT	Junction City	101.01	62	IAMs_20	IAMs_20	19 11 23.8			
	comp=Z,1µm,20.0s								
ABTX	Abilene, Hawle	101.81	60	IAMs_20	IAMs_20	19 12 46.7			
	comp=Z,924nm,18.0s								
C36M	Paulatuk	101.98	19	P	Pdif	18 33 05.4	-2.2		
	baz=241								
RSSD	Black Hills	102.07	47	IAMs_20	IAMs_20	19 21 36.3			
	comp=Z,1µm,18.0s								
YKA	Yellowknife Ar	102.47	27	PKiKP	PKiKP	18 37 31.5	+0.2		
	comp=Z,0.3nm,0.7s,baz=283,slow=2.1,SNR=5.1								
A36M	Sachs Harbour	102.95	17	P	Pdif	18 33 09.2	-2.7		
	baz=240								
WMOK	Wichita Mounta	103.13	58	IAMs_20	IAMs_20	19 15 09.5			
	comp=Z,1µm,19.0s								
MKAR	Makanchi Array	103.63	315	Pdiff	Pdif	18 33 16.3	+0.6		
	comp=Z,0.5nm,0.6s,baz=92,slow=6.7,SNR=7.5								
MKAR				PKiKP	PKiKP	18 37 33.9	-0.1		
	comp=Z,0.8nm,0.7s,baz=90,slow=3.9,SNR=5.3								
MKAR				PKKPbc	PKKPbc	18 49 09.0	-0.1		
	comp=Z,1.1nm,0.7s,baz=292,slow=3.0,SNR=8.1								
MKAR				PKKPab	PKKPdf	18 49 28.1	+10		
	comp=Z,0.8nm,0.7s,baz=294,slow=4.2,SNR=5.4								
Z35A	Perchaven, San	103.94	59	IAMs_20	IAMs_20	19 14 05.0			
	comp=Z,840nm,19.0s								
HKT	Hockley	104.13	63	IAMs_20	IAMs_20	19 12 22.6			
	comp=Z,1µm,20.0s								
ZALV	Zalesovo Beam	104.16	323	PKKPbc	PKKPbc	18 49 05.9	-1.8		
	comp=Z,0.7nm,0.5s,baz=297,slow=3.9,SNR=3.7								
R32A	Long Quarter,	104.23	54	IAMs_20	IAMs_20	19 14 01.3			
	comp=Z,1µm,20.0s								
K30B	Basset	104.74	50	IAMs_20	IAMs_20	19 13 54.1			
	comp=Z,1µm,20.0s								
E28A	Huff	105.04	46	IAMs_20	IAMs_20	19 12 58.4			
	comp=Z,1µm,21.0s								
SUSD	Miller	105.66	48	IAMs_20	IAMs_20	19 24 14.3			
	comp=Z,832nm,18.0s								
TUL3	Leonard	105.80	57	IAMs_20	IAMs_20	19 17 32.3			
	comp=Z,1µm,18.0s								
KSU1	Kansas State U	106.00	54	IAMs_20	IAMs_20	19 16 58.0			
	comp=Z,1µm,19.0s								
FFC	Flin Flon	106.32	37	IAMs_20	IAMs_20	19 22 37.2			
	comp=Z,892nm,19.0s								
KURBB	Kurchatov Arra	107.03	318	Pdiff	Pdif	18 33 30.7	+0.2		
	comp=Z,0.4nm,0.7s,baz=181,slow=18,SNR=4.1								
KURBB				PKiKP	PKiKP	18 37 40.0	0.0		
	comp=Z,0.3nm,0.3s,baz=94,slow=1.8,SNR=9.9								
KURBB				PP	PP	18 37 57.5	+0.2		
	comp=Z,0.7nm,0.7s,baz=105,slow=4.6,SNR=5.3								
KURBB				PKKPbc	PKKPbc	18 48 58.5	-0.2		
	comp=Z,0.9nm,0.2s,baz=294,slow=3.6,SNR=4.2								
U38A	Gravette	107.03	57	IAMs_20	IAMs_20	19 15 17.9			
	comp=Z,1µm,20.0s								
ECSD	EROS Data Cent	107.13	49	IAMs_20	IAMs_20	19 22 07.2			
	comp=Z,1µm,18.0s								
N35A	Tabor	107.15	52	IAMs_20	IAMs_20	19 17 52.3			
	comp=Z,1µm,19.0s								
NRIK	Noril'sk	107.18	338	Pdiff	Pdif	18 33 30.1	-0.8		
	comp=Z,0.6nm,0.4s,baz=85,slow=8.2,SNR=3.9								
NRIK				PKiKP	PKiKP	18 37 40.1	+0.3		
	comp=Z,1.1nm,0.5s,baz=14,slow=3.4,SNR=1.6								
F33A	5 Mile Ranch,	107.83	47	IAMs_20	IAMs_20	19 20 57.4			
	comp=Z,830nm,19.0s								
JTS	Las Juntas de	107.90	86	IAMs_20	IAMs_20	19 12 04.3			
	comp=Z,800nm,19.0s								
143A	Socs Landing,	108.51	61	IAMs_20	IAMs_20	19 16 28.3			
	comp=Z,1µm,20.0s								
N38A	Joes South For	108.92	53	IAMs_20	IAMs_20	19 29 22.1			
	comp=Z,1µm,20.0s								
ULM	Lac du Bonnet	109.00	43	PKiKP	PKiKP	18 37 42.6	-1.1		
	comp=Z,1.9nm,0.6s,baz=238,slow=3.3,SNR=5.3								
VBMS	Vicksburg	109.12	62	IAMs_20	IAMs_20	19 16 27.8			
	comp=Z,1µm,20.0s								
T42A	Van Buren	109.75	57	IAMs_20	IAMs_20	19 17 29.7			
	comp=Z,1µm,20.0s								
OTAV	Otavalo	110.38	98	IAMs_20	IAMs_20	19 18 57.5			
	comp=Z,760nm,18.0s								
146A	Union	110.42	62	IAMs_20	IAMs_20	19 19 12.1			
	comp=Z,1µm,20.0s								
N41A	Harden Midland	110.67	53	IAMs_20	IAMs_20	19 18 09.6			
	comp=Z,1µm,20.0s								
CHGR	Chuyangaron	111.10	304	‖ iPKiKP	PKiKP	18 37 47.9	-0.3		
S44A	Carbondale	111.31	57	IAMs_20	IAMs_20	19 19 24.1			
	comp=Z,1µm,20.0s								
Z47A	Carrollton	111.35	62	IAMs_20	IAMs_20	19 18 08.6			
	comp=Z,1µm,21.0s								
P43A	Skaggs, Pawnee	111.47	55	IAMs_20	IAMs_20	19 21 19.1			
	comp=Z,976nm,18.0s								
JFWS	Jewell Farm	111.51	51	IAMs_20	IAMs_20	19 22 13.5			
	comp=Z,1µm,19.0s								
G40A	Rib Lake	111.92	49	IAMs_20	IAMs_20	19 25 55.1			
	comp=Z,1µm,18.0s								
WVT	Waverly	112.14	59	IAMs_20	IAMs_20	19 21 32.1			
	comp=Z,991nm,19.0s								
LRAL	Lakeview Retre	112.20	62	IAMs_20	IAMs_20	19 19 17.2			
	comp=Z,868nm,20.0s								
BVAR	Borovoye Array	112.41	320	Pdiff	Pdif	18 33 54.9	+0.4		
	comp=Z,0.1nm,0.4s,baz=83,slow=4.5,SNR=1.8								
BVAR				PKiKP	PKiKP	18 37 50.0	-0.2		
	comp=Z,1.2nm,0.5s,baz=90,slow=0.9,SNR=9.6								
BVAR				PKKPbc	PKKPbc	18 48 40.4	-1.1		
	comp=Z,1.0nm,0.6s,baz=283,slow=3.5,SNR=7.5								
BVAR	Borovoye Array	112.41	320	i PKiKP	PKiKP	18 37 50.0	-0.2		
BORK	Borovoye	112.46	320	⇑ iPKiKP	PKiKP	18 37 50.2	0.0		
	comp=Z,748nm,19.0s								
V48A	Smith Brothers	112.86	59	IAMs_20	IAMs_20	19 22 04.5			
	comp=Z,842nm,19.0s								
M44A	Midewin, Midew	112.88	53	IAMs_20	IAMs_20	19 22 39.1			
	comp=Z,910nm,19.0s								
F42A	Maple Grove Fa	113.43	48	IAMs_20	IAMs_20	19 25 25.9			
	comp=Z,912nm,19.0s								
W50A	Signal Mountai	113.98	60	IAMs_20	IAMs_20	19 23 16.1			
	comp=Z,1µm,18.0s								
152A	Waverly Hall	114.01	63	IAMs_20	IAMs_20	19 23 52.2			
	comp=Z,808nm,19.0s								
CPUP	Villa Florida	114.14	134	PKP	PKPdf	18 37 54.6	+0.3		
	comp=Z,0.7nm,0.6s,baz=284,slow=4.2,SNR=3.5								
N47A	Urbana	114.56	54	IAMs_20	IAMs_20	19 20 10.7			
	comp=Z,1µm,20.0s								
T50A	Nancy	114.66	58	IAMs_20	IAMs_20	19 20 12.9			
	comp=Z,1µm,20.0s								
TIGA	Tifton	114.72	64	IAMs_20	IAMs_20	19 19 53.1			
	comp=Z,910nm,20.0s								
O48B	Farmland	114.89	55	IAMs_20	IAMs_20	19 24 16.3			
	comp=Z,1µm,19.0s								
W52A	Murphy	115.08	60	IAMs_20	IAMs_20	19 21 20.2			
	comp=Z,1µm,20.0s								
GOGA	Godfrey	115.17	62	IAMs_20	IAMs_20	19 19 51.1			
	comp=Z,806nm,20.0s								
R50A	Paris	115.25	57	IAMs_20	IAMs_20	19 20 04.4			
	comp=Z,1µm,20.0s								
154A	Montrose	115.33	63	IAMs_20	IAMs_20	19 20 56.3			
	comp=Z,845nm,21.0s								
TZTN	Tazewell	115.61	59	IAMs_20	IAMs_20	19 22 18.1			
	comp=Z,1µm,20.0s								
N49A	Columbus Grove	115.70	54	IAMs_20	IAMs_20	19 20 21.9			
	comp=Z,913nm,22.0s								
456A	Hilliard	115.90	65	IAMs_20	IAMs_20	19 22 09.6			
	comp=Z,915nm,20.0s								
V53A	Saluda	116.07	60	IAMs_20	IAMs_20	19 23 41.4			
	comp=Z,724nm,19.0s								
Q51A	Peebles	116.11	56	IAMs_20	IAMs_20	19 26 50.3			
	comp=Z,908nm,19.0s								
M50A	Fremont, Midw	116.61	53	IAMs_20	IAMs_20	19 23 56.9			
	comp=Z,953nm,20.0s								
060A	Indiantown	116.62	70	IAMs_20	IAMs_20	19 20 58.0			
	comp=Z,753nm,20.0s								
Q52A	Bidwell	116.94	56	IAMs_20	IAMs_20	19 23 26.9			
	comp=Z,1µm,19.0s								
257A	Skidaway Islan	116.96	64	IAMs_20	IAMs_20	19 25 48.5			
	comp=Z,774nm,19.0s								
I49A	Point Hope	117.00	51	IAMs_20	IAMs_20	19 21 20.8			
	comp=Z,1µm,20.0s								
V55A	Taylorsville	117.38	60	IAMs_20	IAMs_20	19 24 39.1			
	comp=Z,975nm,19.0s								
NHSC	New Hope	117.84	63	IAMs_20	IAMs_20	19 25 56.9			
	comp=Z,1µm,20.0s								
M52A	Chesterland	117.89	53	IAMs_20	IAMs_20	19 26 06.6			
	comp=Z,825nm,19.0s								
TULEG	Thule	117.91	13	i P	PKPdf	18 37 59.3	-0.7		
U56A	King	118.11	59	IAMs_20	IAMs_20	19 22 17.4			
	comp=Z,1µm,21.0s								
BLA	Blacksburg	118.19	58	IAMs_20	IAMs_20	19 23 11.2			
	comp=Z,930nm,21.0s								
Y58A	Scranton	118.38	62	IAMs_20	IAMs_20	19 24 09.9			
	comp=Z,1µm,20.0s								
ERPA	Erie	118.95	53	IAMs_20	IAMs_20	19 26 53.6			
	comp=Z,1µm,19.0s								
V58A	Windy Hill, Pi	119.07	60	IAMs_20	IAMs_20	19 25 57.8			
	comp=Z,1µm,18.0s								
S57A	Dark Hollow, R	119.40	58	IAMs_20	IAMs_20	19 25 07.3			
	comp=Z,1µm,20.0s								
ARTI	Arti	119.41	324	i PKiKP	PKiKP	18 38 04.2	+0.7		
ARTI						18 39 21.4			
ARTI						18 45 16.3			
ARTI				SS	SS	18 55 44.7	-2.7		
BOSA	Boshof	119.50	216	PKP	PKiKP	18 38 05.7	+0.9		
	comp=Z,2.5nm,0.7s,baz=222,slow=2.7,SNR=4.8								
T59A	Double "B" Far	120.44	59	IAMs_20	IAMs_20	19 26 44.0			
	comp=Z,750nm,19.0s								
NEEM	North Greenlan	120.65	10	i P	PKPdf	18 38 04.7	-1.0		
SDV	Santo Domingo	120.77	92	IAMs_20	IAMs_20	19 26 48.0			
	comp=Z,603nm,18.0s								
V61A	Roper	121.12	60	IAMs_20	IAMs_20	19 24 20.2			
	comp=Z,1µm,20.0s								
KULLO	Kullorsuaq	121.42	13	i P	PKPdf	18 38 06.1	-0.7		
K57A	Scipio Center	121.54	52	IAMs_20	IAMs_20	19 24 20.2			
	comp=Z,1µm,21.0s								
KBS	Kingsbay	121.61	355	i P	PKiKP	18 38 09.2	+1.9		
SPITS	Spitsbergen Ar	121.88	354	PKP	PKPdf	18 38 06.9	-0.8		
	comp=Z,7.3nm,0.8s,baz=89,slow=7.0,SNR=17								
BINY	Binghamton	121.93	53	IAMs_20	IAMs_20	19 27 16.4			
	comp=Z,1µm,20.0s								
SALV	Santo Antonio	122.02	126	eP	PKiKP	18 38 11.6	+1.7		
UPNV	Upernavik	122.75	15	i P	PKPdf	18 38 08.3	-1.1		
SDDR	Presa de Saban	123.05	81	IAMs_20	IAMs_20	19 19 28.6			
	comp=Z,893nm,22.0s								
TRY	Troy	123.64	52	IAMs_20	IAMs_20	19 29 10.7			
	comp=Z,811nm,19.0s								
KIRV	Kirov	123.80	327	‖ iPKiKP	PKPdf	18 38 11.9	+0.1		
NUUG	Nuugaatsiaq	124.24	15	i P	PKPdf	18 38 11.3	-0.9		
L61B	Northampton	124.38	53	IAMs_20	IAMs_20	19 27 26.2			
	comp=Z,1µm,21.0s								
DAG	Danmarks Havn	124.52	2	i P	PKPdf	18 38 11.0	-1.7		
ARAG	Araguaiana, MT	125.01	129	eP	PKPdf	18 38 15.6	+0.1		
IPMB	Ipameri, GO	125.98	134	eP	PKPdf	18 38 17.5	+0.1		
BELG	Belogornoye	126.22	320	⇑ iPKiKP	PKPdf	18 38 16.4	-0.2		
ILULI	Ilulissat	126.30	17	i P	PKPdf	18 38 15.5	-0.8		
SCHQ	Schefferville	126.47	37	PKP	PKPdf	18 38 15.8	-1.3		
	comp=Z,4.3nm,0.7s,baz=310,slow=3.5,SNR=8.2								
APA	Apatity	126.50	341	i PKiKP	PKiKP	18 38 26.6	+9.4		
APA				pmax	pmax				
	comp=Z,20nm,1.1s								
APA				MLR	MLR				
	comp=Z,2µm,6.1s								
DBG	Daneborg	126.89	3	i P	PKPdf	18 38 17.3	0.0		
ARCES	ARCESS Array B	127.35	345	PKP	PKPdf	18 38 18.4	+0.1		
	comp=Z,1.0nm,0.5s,baz=58,slow=0.9,SNR=34								
MAK	Makhachkala	127.70	308	eP	Pdif	18 34 54.0	-8.7		
MAK				ePPP	PPP	18 43 01.2			
MAK				e		18 45 19.4			
MAK				ePS	PS	18 50 24.9	-2.8		
MAK				eSS	SS	18 57 27.8	-5.5		
MAK				eSSS	SSS	19 02 15.4			
MAK				pmax	pmax				
	comp=Z,233nm,1.1s								
KLMR	Klimovskoe	127.72	332	eP KiKP	PKPdf	18 38 18.7	-0.5		
KLMR				pmax	pmax				
	comp=Z,55nm,1.4s								
BDFB	Brasilia	127.75	132	PKP	PKPdf	18 38 20.8	0.0		
	comp=Z,5.5nm,0.6s,baz=275,slow=0.5,SNR=13								
SNDB	Serra Nova Dou	127.79	126	eP	PKPdf	18 38 21.1	+0.3		
ITTB	Itaituba	128.62	115	eP	PKPdf	18 38 21.8	-0.7		
RAYN	Ar Rayn	128.68	283	IAMs_20	IAMs_20	19 31 35.5			
	comp=Z,1µm,22.0s								
RAYN	Ar Rayn	128.68	283	⇑ PKiKP	PKiKP	18 38 23.1	+0.1		
DIAM	Diamantina, MG	128.70	138	eP	PKPdf	18 38 22.6	-0.1		
SJMB	Sao Joao De Ma	129.90	141	eP	PKPdf	18 38 24.9	+0.1		
GNI	Garni	130.01	305	⇑ ePKiKP	PKiKP	18 38 25.3	0.0		
SMRT	St. Maarten	130.41	84	IAMs_20	IAMs_20	19 27 05.8			
	comp=Z,690nm,19.0s								
NCK	Nalchik	130.48	309	‖ ePKiKP	PKPdf	18 38 25.3	+0.2		
MOS	Moscow	130.79	326	ePKiKP	PKPdf	18 38 24.0	-1.2		
MOS				MLR	MLR				
	comp=Z,600nm,21.0s								
KBZ	Khabaz	130.94	310	PKP	PKiKP	18 38 26.4	-0.4		
	comp=Z,2.2nm,1.1s,baz=164,slow=8.7,SNR=4.3								
KBZ	Khabaz	130.94	310	‖ ePKiKP	PKiKP	18 38 27.0	+0.2		
SHA1	Shidzhatmaz	131.11	310	‖ ePKiKP	PKPdf	18 38 26.3	-0.3		
NEUR	Neytrino	131.16	309	‖ ePKiKP	PKiKP	18 38 28.2	+0.7		
OBN	Obninsk	131.60	326	‖ ePKiKP	PKiKP	18 38 27.7	0.0		
OBN				e		18 40 47.0			
OBN				ePPP	PPP	18 43 36.8			
OBN				pmax	pmax				
	comp=Z,11nm,1.1s								
SMTB	Santa Maria do	132.57	126	eP	PKiKP	18 38 30.6	-0.5		
FINES	FINESS Array B	132.82	337	PKP	PKiKP	18 38 29.8	-0.3		
	comp=Z,2.5nm,0.5s,baz=142,slow=4.3,SNR=6.7								
FINES				SKPbc	SKPbc	18 41 56.4	+0.3		
	comp=Z,6.9nm,0.9s,baz=64,slow=4.4,SNR=8.7								
SOC	Sochi	133.24	310	i PKiKP	PKiKP	18 38 31.9	+0.4		
SOC				e		18 40 56.3			
SOC				ePPP	PPP	18 43 56.0			
SOC				eSSS	SSS	19 03 31.7			
MNK	Minsk	136.29	329	i PKiKP	PKiKP	18 38 38.2	+0.9		
	comp=E,21nm,1.3s								
MNK				i PKiKP	PKiKP	18 38 38.2	+0.9		
	comp=N,29nm,1.2s								
MNK				i PKiKP	PKiKP	18 38 38.2	+0.9		
	comp=Z,8.0nm,1.0s,baz=57								
MNK				i PP	PP	18 41 16.5	+0.5		
MNK				i PPP	PPP	18 44 12.9			
MNK				i SKS	SKSdf	18 45 47.3	+1.2		
MNK				i SKKS	SKKSdf	18 55 27.8	-0.9		
MNK				i SSS	SSS	19 04 20.8			
MNK	Minsk	136.29	329	i PKiKP	PKiKP	18 38 38.2	+0.9		
MNK				i		18 41 16.4			
MNK				i PPP	PPP	18 44 12.9			
MNK				i		18 45 47.3			
MNK				i SSS	SSS	19 04 20.7			
MNK				pmax	pmax				
	comp=N,29nm,1.2s								
MNK				pmax	pmax				
	comp=Z,8.0nm,1.0s								
MNK				pmax	pmax				
	comp=E,21nm,1.3s								
SIM	Simferopol'	136.79	313	ePKiKP	PKiKP	18 38 40.0	+1.4		
SIM				pmax	pmax				
	comp=Z,100nm,11.0s								
AKASG	Malin Array Be	137.55	323	PKP	PKPdf	18 38 39.0	+1.0		
	comp=Z,2.6nm,0.7s,baz=70,slow=1.8,SNR=9.7								
AKASG				SKPbc	SKPbc	18 42 11.2	-0.2		
	comp=Z,4.0nm,1.0s,baz=49,slow=3.9,SNR=6.6								
AKBB	Malin Array Si	137.55	323	‖ ePKiKP	PKPdf	18 38 37.0	-1.1		
NB2	NORSAR Subarra	137.72	345	PKPdf	PKPdf	18 38 39.1	+0.9		
	comp=Z,2.6nm,0.8s,baz=31,slow=1.9								
NOA	NORSAR Array B	137.72	345	PKP	PKPdf	18 38 39.0	+0.9		
	comp=Z,1.4nm,0.6s,baz=31,slow=2.1,SNR=6.9								
HFS	Hagfors	137.83	342	PKP	PKiKP	18 38 39.6	-0.7		
	comp=Z,6.2nm,0.9s,baz=97,slow=6.1,SNR=6.4								
BRTR	Keskin Array B	138.50	306	PKP	PKPdf	18 38 40.5	0.0		
	comp=Z,0.6nm,0.7s,baz=126,slow=3.8,SNR=4.2								
CSS	Mathiatis	139.59	299	IAMs_20	IA

CLL			*e*PKPlp			18 38 55.0	
	comp=Z,300nm,19.0s						
CLL			*i* x	x		18 38 56.8	
	comp=Z,98nm,1.2s						
CLL			*i* x	x		18 39 03.5	
	comp=Z,92nm,1.0s						
CLL			*e*PP	**PP**		**18 42 12.0**	**+2.1**
CLL			*e*SKPdf	**SKPbc**		**18 42 31.0**	**0.0**
CLL			*e*PPP	PPP		18 45 18.0	
CLL			*e*PPPP			18 47 30.0	
CLL			*e*SKKSac	**SKKSac**		**18 49 06.0**	**+3.6**
CLL			*ex*	x		18 49 24.0	
CLL			*ex*	x		18 50 30.0	
CLL			*e*PSKS			18 52 24.0	
CLL			*e*SS	**SS**		**19 00 55.0**	**-4.5**
CLL			*e*SSS	SSS		19 06 13.0	
CLL			*e*SSSS			19 09 42.0	
CLL			AMS	AMS		19 51 00.0	
	comp=N,400nm,19.5s						
CLL			AMS	AMS		19 51 00.0	
	comp=E,300nm,20.5s						
CLL			AMS	AMS		19 51 00.0	
	comp=Z,500nm,19.2s						
CLL	**Collm**	**145.13 334**	*e*PKPbc	**PKPab**		**18 38 51.2**	**0.0**
	baz=36,slow=3.0						
EDI	**Edinburgh**	**145.21 353**	*e*P	**PKPab**		**18 38 51.3**	**0.0**
RICC	**Richard**	**145.25 332**	*e*PKP	**PKPdf**		**18 38 51.9**	**0.0**
KRUC	**Moravsky**	**145.25 329**	*e*PKP	**PKPdf**		**18 38 52.0**	**+0.1**
MODS	**Modra-Piesok**	**145.27 327**	*e*PKIKP	**PKPdf**		**18 38 52.4**	**+0.4**
MODS	**Modra-Piesok**	**145.27 327**	*e*PKP	**PKPdf**		**18 38 52.4**	**+0.4**
RETH	**Rethem/Aller,**	**145.33 339**	*e*PKPbc	**PKPdf**		**18 38 52.0**	**+0.2**
	baz=36,slow=3.0						
KKB	**Krupnik**	**145.37 314**	*i* P	**PKPbc**		**18 38 51.8**	**-0.5**
ASSE	**Asse, Remlinge**	**145.37 337**	*e*PKPbc	**PKPab**		**18 38 52.2**	**+0.3**
	baz=36,slow=3.0						
PRU	**Pruhonice**	**145.46 331**	*e*PKP	**PKPbc**		**18 38 52.1**	**-0.2**
PRU			AMS	AMS		19 41 50.0	
	comp=Z,1μm,23.9s						
PRU	**Pruhonice**	**145.46 331**	*e*PKIKP	**PKPbc**		**18 38 52.1**	**-0.2**
PRU			MLR	MLR			
	comp=Z,1μm,23.9s						
BOVS	**Bovan**	**145.47 317**	⇓P	**PKPab**		**18 38 53.4**	**+0.7**
HSKC	**Hora Svate Kat**	**145.48 333**	*e*PKP	**PKPab**		**18 38 52.7**	**+0.1**
NEUB	**Neuenburg**	**145.69 335**	*e*PKPbc	**PKPab**		**18 38 53.3**	**+0.1**
	baz=36,slow=3.0						
CLZ	**Clausthal**	**145.72 337**	*e*PKPbc	**PKPab**		**18 38 53.6**	**+0.2**
	baz=36,slow=3.0						
EKA	**Eskdalemuir Ar**	**145.79 353**	PKPbc	**PKPdf**		**18 38 52.2**	**-0.5**
	comp=Z,21nm,0.5s,baz=356,slow=2.4,SNR=137						
ESK	**Eskdalemuir**	**145.81 353**	*e*P	**PKPdf**		**18 38 52.3**	**-0.4**
FRGS	**Fruska Gora**	**145.83 321**	⇑*i*P	**PKPab**		**18 38 54.0**	**-0.1**
MORH	**Mrgy, Hungar**	**145.90 323**	⇑P	**PKPdf**		**18 38 52.8**	**-0.3**
MORH	**Mrgy, Hungar**	**145.90 323**	⇑*i*P	**PKPdf**		**18 38 52.3**	**-0.8**
VAY	**Valandovo**	**145.97 313**	*i* P	**PKPbc**		**18 38 54.2**	**+0.1**
ZVC	**Zvikov**	**146.01 331**	*e*PKP	**PKPab**		**18 38 54.3**	**-0.3**
ZVC			AMS	AMS		19 42 30.0	
	comp=Z,1μm,22.7s						
TANN	**Tannenbergstha**	**146.03 334**	*e*PKPbc	**PKPab**		**18 38 54.8**	**+0.1**
	baz=36,slow=3.0						
WINA	**Alland / Wiene**	**146.05 328**	*ep*PKP	**PKPab**		**18 38 54.5**	**-0.3**
	comp=Z,86nm,1.8s,SNR=21						
PLN	**Plauen**	**146.10 334**	*e*PKPbc	**PKPab**		**18 38 54.9**	**+0.1**
	baz=36,slow=3.0						
GTTG	**Gottingen**	**146.11 337**	*e*PKPbc	**PKPab**		**18 38 54.8**	**0.0**
	baz=36,slow=3.0						
NEWG	**New Galloway**	**146.12 354**	*e*P	**PKPdf**		**18 38 53.3**	**+0.1**
EDMD	**Edmundbyers**	**146.12 351**	*e*P	**PKPdf**		**18 38 52.9**	**-0.4**
MOX	**Moxa**	**146.20 335**	*e*PKPbc	**PKPab**		**18 38 55.2**	**0.0**
	baz=36,slow=3.0						
MOX			*e*L	L		19 47 40.6	
	comp=Z,543nm,19.5s						
RONA	**Rosalia, Austr**	**146.21 327**	*e*PKP	**PKPbc**		**18 38 54.3**	**-0.5**
	comp=Z,22nm,0.8s,SNR=20						
IBBN	**Ibbenburen**	**146.22 340**	*e*PKPbc	**PKPbc**		**18 38 54.8**	**+0.3**
	baz=36,slow=3.0						
CONA	**Conrad Observa**	**146.28 328**	*e*PKP	**PKPdf**		**18 38 54.4**	**+0.6**
	comp=Z,36nm,1.1s,SNR=24						
IDI	**Amoyia**	**146.31 302**	PKPbc	**PKPab**		**18 38 56.7**	**+0.4**
	comp=Z,15nm,0.9s,baz=98,slow=4.0,SNR=5.5						
CKRC	**Cesky Krumlov**	**146.41 330**	*e*PKP	**PKPbc**		**18 38 54.7**	**-0.5**
CKRC			AMS	AMS		19 42 20.0	
	comp=Z,900nm,29.6s						
CKRC	**Cesky Krumlov**	**146.41 330**	*e*PKP2	**PKPbc**		**18 38 54.7**	**-0.5**
GAL1	**Galloway**	**146.41 354**	*e*P	**PKPdf**		**18 38 54.3**	**+0.6**
KESW	**Keswick, Cumbr**	**146.51 352**	*e*P	**PKPbc**		**18 38 55.2**	**-0.1**
KHC	**Kasperske Hory**	**146.51 331**	*e*PKP	**PKPbc**		**18 38 55.3**	**-0.3**
KHC			AMS	AMS		19 42 30.0	
	comp=Z,1μm,23.5s						
KHC	**Kasperske Hory**	**146.51 331**	*e*PKP2	**PKPbc**		**18 38 55.3**	**-0.3**
KHC			MLR	MLR			
	comp=Z,1μm,23.5s						
GEC2	**GERESS Array S**	**146.67 331**		**PKPbc**		**18 38 55.5**	**-0.6**
GEC2	**GERESS Array S**	**146.67 331**	*e*PKPbc	**PKPbc**		**18 38 56.4**	**+0.3**
	baz=36,slow=3.0						
GERES	**GERESS Array B**	**146.67 331**	PKPbc	**PKPbc**		**18 38 56.3**	**+0.2**
	comp=Z,13nm,0.6s,baz=38,slow=2.6,SNR=47						
UBBA	**Unterbreizbach**	**146.68 336**	*e*PKPbc	**PKPab**		**18 38 56.6**	**-0.3**
	baz=36,slow=3.0						
SJES	**Sjenica**	**146.75 318**	*e*P	**PKPdf**		**18 38 55.7**	**+0.9**
BEHE	**Becsehely**	**146.76 325**	*e*P	**PKPbc**		**18 38 56.7**	**+0.4**
BBLS	**Lazi&#263i**	**146.78 319**	⇑*i*P	**PKPbc**		**18 38 56.1**	**-0.5**
WET	**Wettzell**	**146.81 332**	*e*PKPbc	**PKPbc**		**18 38 57.0**	**+0.6**
	baz=36,slow=3.0						
ARSA	**Arzberg**	**146.90 327**	*e*PKP	**PKPdf**		**18 38 54.9**	**0.0**
	comp=Z,12nm,1.5s						
KASTN	**Kahler Asten**	**146.94 338**	*e*PKPbc	**PKPbc**		**18 38 56.9**	**+0.2**
	baz=36,slow=3.0						
RUDO	**Rudo**	**146.94 319**	⇑*i*P	**PKPbc**		**18 38 56.5**	**-0.4**
IOMK	**Kirk Michael**	**147.00 354**	*e*P	**PKPbc**		**18 38 56.5**	**-0.2**
GRF	**Grafenberg Arr**	**147.10 334**	*e*PKPbc	**PKPbc**		**18 38 57.9**	**+0.6**
	baz=36,slow=3.0						
GRF			*e*L	L		19 53 57.0	
	comp=Z,499nm,18.9s						
MOA	**Molln**	**147.11 329**	*e*PKP	**PKPbc**		**18 38 56.5**	**-0.8**
	comp=Z,7.0nm,0.6s						
BUG	**Bochum--Univer**	**147.12 340**	*e*PKPbc	**PKPbc**		**18 38 57.2**	**+0.1**
	baz=36,slow=3.0						
OHR	**Ohrid**	**147.26 314**	*i* P	**PKPbc**		**18 38 58.9**	**+0.9**
LBWR	**Ladybower, Pea**	**147.48 350**	*e*P	**PKPbc**		**18 38 57.9**	**-0.2**
PERS	**Pernice**	**147.52 327**	*e*PKPbc	**PKPbc**		**18 38 58.5**	**-0.1**
BIOA	**Bad Ischl, Aus**	**147.52 329**	*ep*PKP	**PKPbc**		**18 38 57.6**	**-0.8**
	comp=Z,7.0nm,0.7s						
SOKA	**Soboth**	**147.53 327**	*e*PKP	**PKPdf**		**18 38 56.3**	**+0.3**
	comp=Z,24nm,1.4s,SNR=8.3						
BLY	**Banja Luka**	**147.59 322**	⇑P	**PKPbc**		**18 38 58.6**	**-0.1**
BLY	**Banja Luka**	**147.59 322**		**PKPbc**		**18 38 59.2**	**+0.5**
BLY			IAMs_20	IAMs_20		19 49 00.5	
	comp=Z,614nm,20.0s						
BLY	**Banja Luka**	**147.59 322**	⇑*i*P	**PKPbc**		**18 38 58.6**	**-0.1**
PDG	**Podgorica**	**147.63 317**	⇑P	**PKPbc**		**18 38 59.0**	**+0.2**
PDG	**Podgorica**	**147.63 317**		**PKPdf**		**18 38 54.2**	**-1.9**
PDG			IAMs_20	IAMs_20		19 49 51.6	
	comp=Z,549nm,20.0s						
PDG	**Podgorica**	**147.63 317**	⇑*i*P	**PKPbc**		**18 38 58.1**	**-0.8**
TNS	**Taunus Mts**	**147.74 337**	*e*PKPbc	**PKPbc**		**18 38 59.5**	**+0.5**
	baz=36,slow=3.0						
DRME	**Dracevica, Mon**	**147.80 317**	⇑*i*P	**PKPbc**		**18 38 59.1**	**-0.3**
BRY	**Bratogost**	**147.83 318**	⇑*i*P	**PKPbc**		**18 38 59.2**	**-0.4**
OBKA	**Obir**	**147.90 327**	*e*PKP	**PKPdf**		**18 38 56.6**	**0.0**
	comp=Z,2.4nm,0.7s						
TREB	**Trebinje**	**148.05 318**	⇑*i*P	**PKPbc**		**18 38 58.8**	**-1.2**
CWF	**Charnwood Fore**	**148.05 350**	*e*P	**PKPbc**		**18 38 58.9**	**-0.7**
KBA	**Koelnbreinsper**	**148.10 329**	*e*PKP	**PKPdf**		**18 38 58.2**	**+1.1**
	comp=Z,5.9nm,0.5s						
LESA	**Schwarzleotal**	**148.17 330**	*ep*PKP	**PKPbc**		**18 38 59.6**	**-0.6**
	comp=Z,7.9nm,0.4s,SNR=11						
BEBN	**Eben Emael**	**148.18 341**	*d*PKP	**PKPbc**		**18 38 59.4**	**-0.6**
BOJS	**Bojanci**	**148.19 325**	*i* PKPbc	**PKPbc**		**18 38 59.9**	**-0.4**
LJU	**Ljubljana**	**148.22 326**	*e*PKPdf	**PKPdf**		**18 38 56.5**	**-0.5**
LJU			*e*PKPbc	**PKPbc**		**18 39 00.2**	**-0.2**
BTNL	**Ternell**	**148.22 340**	*d*PKP	**PKPbc**		**18 39 00.9**	**+0.6**
MEM	**Membach**	**148.24 340**	*d*PKP	**PKPbc**		**18 38 59.4**	**-0.8**
FUR	**Furstenfeldbru**	**148.25 332**	*e*PKPbc	**PKPbc**		**18 39 01.0**	**+0.6**
	baz=36,slow=3.0						
MYKA	**Terra Mystica**	**148.27 328**	*e*PKP	**PKPdf**		**18 38 55.7**	**-1.5**
	comp=Z,5.8nm,0.7s,SNR=6.4						
BSTI	**Sart Tilman**	**148.40 341**	*d*PKP	**PKPbc**		**18 38 59.8**	**-0.9**
BHOU	**Houvegnez**	**148.46 340**	*d*PKP	**PKPbc**		**18 39 00.3**	**-0.5**
CADS	**Cadrg**	**148.50 327**	*e*PKPbc	**PKPbc**		**18 38 59.9**	**-1.3**
HLM1	**Long Mynd**	**148.51 351**	*e*P	**PKPbc**		**18 39 00.8**	**-0.1**
UCC	**Uccle**	**148.57 342**		**PKiKP**		**18 39 02.1**	**-0.5**
UCC	**Uccle**	**148.57 342**	PKP2	**PKiKP**		**18 39 02.1**	**-0.5**
UCC	**Uccle**	**148.57 342**	*d*PKPdf	**PKPdf**		**18 38 56.0**	**-1.4**
UCC			*d*PKP	**PKPbc**		**18 39 01.0**	**-0.1**
STU	**Stuttgart**	**148.64 335**		**PKPbc**		**18 39 01.6**	**+0.2**
STU	**Stuttgart**	**148.64 335**	PKP2	**PKPbc**		**18 39 01.6**	**+0.2**
STU	**Stuttgart**	**148.64 335**	*e*PKPbc	**PKPbc**		**18 39 01.7**	**+0.4**
	baz=36,slow=3.0						
BGES	**Gesves**	**148.72 341**	*d*PKPdf	**PKPdf**		**18 38 56.7**	**-1.0**
BGES			*d*PKP	**sPKPdf**		**18 39 02.4**	**0.0**
ABTA	**Abfaltersbach**	**148.74 329**	*e*PKiKP	**PKPbc**		**18 39 01.0**	**-0.8**
	comp=Z,7.6nm,0.6s,SNR=10						
WATA	**Walderalm**	**148.74 331**	*i* PKP	**PKPdf**		**18 38 55.8**	**-2.2**
	comp=Z,14nm,1.9s						
WATA			*e*PKiKP	**pPKPdf**		**18 39 01.6**	**+0.1**
	comp=Z,6.8nm,0.6s						
WTTA	**Wattenberg**	**148.77 331**	*i* PKP	**PKPdf**		**18 38 56.8**	**-1.3**
	comp=Z,16nm,1.4s						
WTTA			*i* PKiKP	**pPKPdf**		**18 39 01.8**	**+0.1**
	comp=Z,13nm,0.7s,SNR=14						
RCHB	**Rochefort**	**148.88 341**	*d*PKP	**PKPbc**		**18 39 01.4**	**-0.5**
BMRD	**Maredsous**	**148.89 341**	*d*PKP	**PKPbc**		**18 39 02.0**	**+0.1**
MOTA	**Moosalm**	**148.95 331**	*e*PKP	**PKPdf**		**18 38 56.8**	**-1.6**
	comp=Z,9.2nm,1.3s						
MOTA			*e*PKiKP	**pPKPdf**		**18 39 02.0**	**+0.1**
	comp=Z,12nm,0.6s,SNR=9.4						
RETA	**Reutte**	**148.99 332**	*i* PKiKP	**PKPbc**		**18 39 02.2**	**-0.2**
	comp=Z,6.0nm,0.6s						
SQTA	**Sankt Quirin**	**149.00 331**	*ep*PKP	**PKPdf**		**18 38 58.4**	**-0.1**
	comp=Z,7.8nm,1.5s						
SQTA			*i* PKiKP	**PKPbc**		**18 39 02.2**	**-0.3**
	comp=Z,14nm,0.6s,SNR=8.6						
WLF	**Walferdange**	**149.01 339**	*d*PKP	**PKPbc**		**18 39 02.7**	**+0.4**
WLF	**Walferdange**	**149.01 339**	*e*PKPbc	**PKiKP**		**18 39 03.1**	**-0.4**
	baz=36,slow=3.0						
MCH1	**Michaelchurch**	**149.03 351**	*e*P	**PKPbc**		**18 39 01.9**	**-0.3**
DOU	**Dourbes**	**149.13 341**	*d*PKP	**PKPbc**		**18 39 02.5**	**0.0**
UBR	**Ueberruh**	**149.13 333**	*e*PKPbc	**PKPbc**		**18 39 02.8**	**+0.1**
	baz=36,slow=3.0						
SWN1	**Swindon**	**149.31 350**	*e*P	**PKPbc**		**18 39 02.8**	**-0.2**
BFO	**Black Forest**	**149.34 335**	IAMs_20	IAMs_20		19 52 45.7	
	comp=Z,601nm,20.0s						
BFO	**Black Forest**	**149.34 335**	*e*PKPbc	**PKPbc**		**18 39 03.3**	**+0.2**
	baz=36,slow=3.0						
FETA	**Feichten**	**149.36 331**	*ep*PKP	**PKPdf**		**18 38 59.2**	**+0.2**
	comp=Z,8.0nm,1.3s						
FETA			*i* PKiKP	**PKPbc**		**18 39 03.1**	**-0.4**
	comp=Z,31nm,1.4s,SNR=9.8						
WOL	**Wolverton**	**149.41 349**	*e*P	**PKPbc**		**18 39 02.7**	**-0.5**
DAVA	**Damuels**	**149.53 332**	*i* PKiKP	**PKPbc**		**18 39 03.4**	**-0.5**
	comp=Z,58nm,1.8s,SNR=7.7						
MATE	**Matera**	**150.19 316**	⇑P	**PKPbc**		**18 39 05.5**	**+0.1**
SALO	**Salr**	**150.50 330**		**PKPbc**		**18 39 05.8**	**-0.3**
TIP	**Timpagrande**	**150.90 313**	⇑P	**PKPbc**		**18 39 07.2**	**-0.1**
TIP	**Timpagrande**	**150.90 313**	IAMs_20	IAMs_20		19 48 49.4	
	comp=Z,728nm,22.0s						
CCA1	**Carnmenellis**	**151.09 353**	*e*P	**PKPbc**		**18 39 05.3**	**-2.0**
CUC	**Castrocucco**	**151.11 316**	IAMs_20	IAMs_20		19 51 53.9	
	comp=Z,787nm,21.0s						
AQU	**L'Aquila**	**151.23 322**	⇑*i*P	**PKPbc**		**18 39 07.8**	**-0.1**
JSA	**Saint Aubin**	**151.62 349**	*e*P	**PKPbc**		**18 39 08.4**	**0.0**
WDD	**Wied Dalam**	**154.04 309**	IAMs_20	IAMs_20		20 02 04.6	
	comp=Z,634nm,18.0s						
VSL	**Villasalto**	**155.40 321**	IAMs_20	IAMs_20		19 50 46.2	
	comp=Z,467nm,21.0s						
KEST	**Kesra**	**157.72 314**	PKP	**PKPdf**		**18 39 10.5**	**-0.8**
	comp=Z,1.7nm,1.0s,baz=0.0,slow=0.0,SNR=1.1						
KEST			PKPab	**PKPab**		**18 39 43.8**	**+0.1**
	comp=Z,4.7nm,0.9s,baz=0.0,slow=8.1,SNR=4.0						
PBRG	**Braganca**	**159.53 352**	*e*PKPdf	PKPdf		18 39 22.2	+9.0
PBRG			*e*PKPab	sPKPab		18 39 59.3	+3.5
POLO	**Lamas de Olo**	**160.07 354**	*e*PKPab	**PKPab**		**18 39 53.8**	**+0.3**
POLO			*i* tx	tx		18 40 00.0	
PVRL	**Vila Real**	**160.16 354**	*e*PKPab	**PKPab**		**18 39 53.8**	**-0.1**
PVRL			*i* tx	tx		18 40 00.8	
MVO	**Moncorvo**	**160.20 353**	*e*PKPab	**PKPab**		**18 39 54.0**	**-0.1**
MVO			*i* tx	tx		18 40 00.4	
PVIS	**Viseu**	**160.73 354**	*e*PKPab	**PKPab**		**18 39 56.4**	**0.0**
PVIS			*i* tx	tx		18 40 03.1	
MTE	**Manteigas**	**161.01 353**	*e*PKPab	**PKPab**		**18 39 57.8**	**+0.2**
ESDC	**Sonseca Array**	**161.09 345**	PKPab	**PKPab**		**18 39 57.4**	**-0.6**
	comp=Z,1.7nm,0.7s,baz=13,slow=4.3,SNR=14						
PCAS	**Casmilo, Conde**	**161.44 356**	*e*PKPab	**PKPab**		**18 39 59.4**	**0.0**
PCBR	**Castelo Branco**	**161.56 353**	*e*PKPdf	PKPdf		18 39 28.4	+13
PCBR			*e*PKPab	**PKPab**		**18 40 00.4**	**+0.5**
PSBE	**So Bento**	**161.99 356**	*e*PKPab	**PKPab**		**18 40 00.3**	**-1.6**
PMTG	**Montargil**	**162.39 355**	*e*PKPab	**PKPab**		**18 40 09.9**	**+6.3**
PESTR	**Estremoz**	**162.53 353**	*e*PKPab	**PKPab**		**18 40 03.3**	**-1.0**
PARRA	**Arraiolos**	**162.63 354**	*e*PKPab	**PKPab**		**18 40 03.4**	**-1.2**
PARRA			*i* tx	tx		18 40 11.3	
EVO	**Evora**	**162.91 354**	*e*PKPab	**PKPab**		**18 40 05.8**	**0.0**
MOE	**Montemor**	**162.95 355**	*e*PKPab	**PKPab**		**18 39 59.0**	**-7.0**
PBAR	**Barrancos**	**163.14 351**	*e*PKPab	**PKPab**		**18 40 06.9**	**0.0**
PBEJ	**Beja**	**163.39 353**	*e*PKPab	**PKPab**		**18 40 08.3**	**+0.3**
MESJ	**Messejana**	**163.61 354**	*e*PKPdf	**PKPdf**		**18 39 17.6**	**+0.1**
MESJ			*e*PKPab	**PKPab**		**18 40 09.2**	**+0.2**
MESJ			IAMs_20	IAMs_20		19 53 33.7	
	comp=Z,973nm,21.3s						
MESJ	**Messejana**	**163.61 354**	*e*PKPab	**PKPab**		**18 40 10.2**	**+1.2**
MESJ	**Messejana**	**163.61 354**	*e*PKP2	**PKPab**		**18 40 09.2**	**+0.2**
PCVE	**Castro Verde**	**163.80 354**	*e*PKPab	**PKPab**		**18 40 10.5**	**+0.7**
PCVE			*i* tx	tx		18 40 16.9	
PVAQ	**Vaqueiros**	**163.99 352**	*e*PKPab	**PKPab**		**18 40 11.0**	**+0.3**
DBIC	**Dimbokro**	**164.34 200**	PKP	**PKPdf**		**18 39 19.3**	**+0.4**
	comp=Z,2.5nm,0.9s,baz=127,slow=5.1,SNR=2.2						
DBIC			PKPab	**PKPab**		**18 40 13.4**	**+0.7**
	comp=Z,9.5nm,0.8s,baz=175,slow=3.6,SNR=10						
DBIC			PP	**PP**		**18 43 58.6**	**+1.3**
	comp=Z,2.6nm,0.8s,baz=174,slow=6.3,SNR=3.6						
TORD	**Torodi Ar. Bea**	**165.85 236**	PKP	**PKPbc**		**18 39 20.2**	**+0.1**
	comp=Z,2.4nm,0.9s,baz=148,slow=0.6,SNR=11						
TORD			PKPab	**PKPab**		**18 40 19.6**	**0.0**
	comp=Z,4.5nm,1.2s,baz=144,slow=5.8,SNR=3.8						
TORD			PP	**PP**		**18 44 07.9**	**+1.4**
	comp=Z,1.3nm,1.1s,baz=230,slow=1.4,SNR=5.1						

JMA ***29*** *18:24:52.6±0.2,24˚N±2˚×122˚9E±0˚.5, h89km±1km, MV2.1/16, NW OFF ISHIGAKIJIMA IS*
TAP ***29*** *18:24:52.4, 24˚.43N×122˚.94E, h90km, ML3.2, C*
ISC 29 18:24:53.1±1.3, 24˚.41N±0˚.05×122˚.94E±0˚.02, h86km±7km, n81,σ0°77/153, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.04**	**3**	P	**Pn**	**18 25 05.3**	**-0.1**
JYNG				*e*S	**Sn**	**18 25 14.3**	**0.0**
YOJ	**Yonaguni jima**	**0.08**	**49**	*i* P	**Pn**	**18 25 05.4**	**0.0**
YOJ				*i* S	**Sn**	**18 25 14.6**	**+0.2**
YOJ	**Yonaguni jima**	**0.08**	**49**	*e*P	**Pn**	**18 25 05.2**	**-0.1**
YOJ				S	**Sn**	**18 25 14.3**	**-0.1**
EOS3	**EOS3**	**0.58**	**258**	*i* P	**Pn**	**18 25 08.5**	**+0.5**
EOS3				*i* S	**Sn**	**18 25 20.8**	**+1.7**
EOS4	**EOS4**	**0.64**	**244**	*i* P	**Pn**	**18 25 08.4**	**+0.2**
EOS4				*i* S	**Sn**	**18 25 20.4**	**+0.8**
EOS2	**EOS2**	**0.65**	**271**	P	**Pn**	**18 25 09.4**	**+0.8**
EOS2				*e*S	**Sn**	**18 25 21.2**	**+1.0**
IRIF	**Iriomote-Funau**	**0.72**	**96**	P	**Pn**	**18 25 09.4**	**0.0**
IRIF				S	**Sn**	**18 25 21.8**	**+0.1**
HATJ	**Hateruma jima**	**0.86**	**114**	*e*S	**Sn**	**18 25 24.9**	**+0.6**
JKRS	**Kuro-shima**	**0.99**	**100**	P	**Pn**	**18 25 12.7**	**+0.3**
JKRS				S	**Sn**	**18 25 27.1**	**+0.3**
TWC	**Suao**	**1.02**	**282**	P	**Pn**	**18 25 12.4**	**-0.4**
TWC				S	**Sn**	**18 25 26.2**	**-1.2**
ENA	**Nanau**	**1.09**	**271**	*e*P	**Pn**	**18 25 13.7**	**0.0**
ENA				*e*S	**Sn**	**18 25 28.7**	**-0.4**
JIJ	**Ishigaki jima**	**1.10**	**92**	P	**Pn**	**18 25 13.4**	**-0.3**
JIJ				S	**Sn**	**18 25 28.2**	**-0.9**
NTC	**Toucheng**	**1.11**	**294**	*e*P	**Pn**	**18 25 13.1**	**-0.7**
NTC				*e*S	**Sn**	**18 25 28.8**	**-0.5**
TIPB	**Shuangxi**	**1.16**	**299**	*e*S	**Sn**	**18 25 29.7**	**-0.9**
TWE	**Neicheng**	**1.20**	**285**	*e*P	**Pn**	**18 25 15.9**	**+0.9**
TWE				*e*S	**Sn**	**18 25 30.9**	**-0.5**
ETL	**Fush Village**	**1.23**	**259**	*e*P	**Pn**	**18 25 15.1**	**-0.3**
ETL				*e*S	**Sn**	**18 25 31.3**	**-0.8**
NACB	**Ninganchiao**	**1.25**	**260**	P	**Pn**	**18 25 14.7**	**-0.9**
NACB				S	**Sn**	**18 25 31.0**	**-1.5**
JISG	**Ishigakijimahi**	**1.26**	**82**	P	**Pn**	**18 25 15.2**	**-0.4**
JISG				*e*S	**Sn**	**18 25 32.2**	**-0.4**
TWD	**Chiawan**	**1.27**	**255**	*e*P	**Pn**	**18 25 15.6**	**-0.2**
TWD				S	**Sn**	**18 25 31.7**	**-1.2**
ENTT	**Nioudou**	**1.27**	**281**	*e*P	**Pn**	**18 25 16.1**	**+0.2**
ENTT				*e*S	**Sn**	**18 25 32.9**	**-0.1**
FUSB	**Fushanzhiwuyua**	**1.28**	**286**	*e*P	**Pn**	**18 25 16.2**	**+0.2**
FUSB				*e*S	**Sn**	**18 25 33.3**	**0.0**
HWA	**Hwalien**	**1.29**	**251**	*e*S	**Sn**	**18 25 33.2**	**-0.1**
LATG	**Datong**	**1.30**	**276**	P	**Pn**	**18 25 16.1**	**-0.1**
LATG				S	**Sn**	**18 25 33.2**	**-0.4**
TEYL	**Yanliau Villag**	**1.34**	**247**	*e*S	**Sn**	**18 25 33.5**	**-0.9**
ETLH	**Xiulin Townshi**	**1.35**	**262**	*e*P	**Pn**	**18 25 16.8**	**0.0**
ETLH				*e*S	**Sn**	**18 25 34.1**	**-0.6**
NWLT	**Wulai**	**1.36**	**286**	*e*P	**Pn**	**18 25 17.1**	**+0.1**
NWLT				*e*S	**Sn**	**18 25 34.2**	**-0.8**
SHUL	**Shoufeng**	**1.40**	**244**	*e*P	**Pn**	**18 25 17.2**	**-0.3**
SHUL				*e*S	**Sn**	**18 25 35.0**	**-0.8**
NNSB	**Datong**	**1.42**	**271**	*e*P	**Pn**	**18 25 17.8**	**0.0**
NNSB				*e*S	**Sn**	**18 25 35.3**	**-1.2**
NNSH	**Datong**	**1.42**	**271**	*e*P	**Pn**	**18 25 17.6**	**-0.2**
NNSH				*e*S	**Sn**	**18 25 35.4**	**-1.1**
NNS	**Nan Shan**	**1.43**	**272**	*e*P	**Pn**	**18 25 17.6**	**-0.3**
NNS				*e*S	**Sn**	**18 25 36.2**	**-0.5**
LXIB	**Xiulin Townshi**	**1.45**	**255**	*e*S	**Sn**	**18 25 35.8**	**-1.3**
YHNB	**Yeheng**	**1.45**	**281**	*e*P	**Pn**	**18 25 18.3**	**+0.1**
YHNB				*e*S	**Sn**	**18 25 36.7**	**-0.4**
TEGC	**Jichi Village**	**1.46**	**242**	*e*P	**Pn**	**18 25 18.4**	**+0.2**
TEGC				*e*S	**Sn**	**18 25 36.4**	**-0.6**
NSK	**Sanguang**	**1.47**	**281**	*e*P	**Pn**	**18 25 18.5**	**+0.2**
NSK				*e*S	**Sn**	**18 25 36.7**	**-0.7**
ESL	**Shilin**	**1.50**	**247**	*e*P	**Pn**	**18 25 18.0**	**-0.7**
ESL				*e*S	**Sn**	**18 25 37.3**	**-0.8**
WHF	**Hehuan Shan**	**1.55**	**261**	*e*P	**Pn**	**18 25 19.8**	**0.0**
WHF				*e*S	**Sn**	**18 25 39.0**	**-0.9**
FUSS	**Fushou**	**1.56**	**264**	P	**Pn**	**18 25 19.5**	**-0.2**
FUSS				S	**Sn**	**18 25 38.7**	**-1.0**
EGFH	**Guangfu**	**1.57**	**242**	*e*S	**Sn**	**18 25 38.3**	**-1.3**
WARBT	**Fenglin Townsh**	**1.58**	**245**	*i* P	**Sn**	**18 25 19.0**

NCSB	**Newcastle Ridg**	**2.66**	**90**	Pn	**Pn**	**18 29 37.5**	**+1.2**
GDR	**Gold River**	**2.78**	**103**	Pn	**Pn**	**18 29 38.6**	**+1.0**
MOBC	**Moresby Island**	**2.89**	**339**	Pn	**Pn**	**18 29 40.4**	**+1.1**
GRIB	**Gribbell Islan**	**2.95**	**13**	Pn	**Pn**	**18 29 41.2**	**+1.1**
BNAB	**Bonilla**	**3.04**	**355**	Pn	**Pn**	**18 29 42.4**	**+1.1**
DIB	**Dawson Inlet,**	**3.08**	**334**		**Pn**	**18 29 42.2**	**+0.5**
DIB	**Dawson Inlet,**	**3.08**	**334**	Pn	**Pn**	**18 29 42.6**	**+0.8**
MYRA	**Myra Falls**	**3.13**	**105**	Pn	**Pn**	**18 29 43.9**	**+1.2**
CBB	**Campbell River**	**3.14**	**96**	Pn	**Pn**	**18 29 44.5**	**+1.7**
CBB				IAML		18 30 56.5	
	comp=N,122nm,1.1s						
CBB	**Campbell River**	**3.14**	**96**	Pn	**Pn**	**18 29 44.4**	**+1.7**
GRNB	**Grenville Isla**	**3.39**	**3**	Pn	**Pn**	**18 29 47.5**	**+1.4**
KITB	**Kitimat**	**3.74**	**14**	Pn	**Pn**	**18 29 52.7**	**+1.7**
KITB				Sn	**Sn**	**18 30 36.9**	**+1.3**
TXDB	**Texada**	**3.80**	**100**	Pn	**Pn**	**18 29 53.4**	**+1.6**
TXDB				Sn	**Sn**	**18 30 37.5**	**+0.4**
RUBB	**Prince Rupert**	**3.86**	**360**	Pn	**Pn**	**18 29 54.2**	**+1.7**
RUBB				IAML		18 31 19.3	
	comp=E,42nm,1.7s						
RUBB	**Prince Rupert**	**3.86**	**360**	Pn	**Pn**	**18 29 54.6**	**+2.0**
MGRB	**Mount Grey**	**3.87**	**110**	Pn	**Pn**	**18 29 54.7**	**+1.9**
SHB	**Sechelt**	**4.18**	**100**	Pn	**Pn**	**18 29 59.1**	**+2.0**
SHB				Sn	**Sn**	**18 30 48.7**	**+2.1**
CLRS	**Cowichan Lake**	**4.28**	**110**	Pn	**Pn**	**18 30 00.5**	**+2.1**
CLRS				IAML		18 31 32.1	
	comp=N,34nm,3.7s						
CLRS				IAML		18 31 50.6	
	comp=E,54nm,3.0s						
C03A	**Quillayute Air**	**4.48**	**122**	Pn	**Pn**	**18 30 02.6**	**+1.5**
SYMB	**Survey Mountai**	**4.60**	**112**	Pn	**Pn**	**18 30 05.0**	**+2.2**
WSLR	**Whistler**	**4.69**	**91**	Pn	**Pn**	**18 30 06.6**	**+2.6**
PGC	**Sidney**	**4.76**	**110**	Pn	**Pn**	**18 30 05.8**	**+0.8**
PGC				IAML		18 31 37.8	
	comp=N,32nm,3.1s						
PGC				IAML		18 32 58.4	
	comp=E,30nm,3.5s						
V35K	**Ketchikan**	**4.94**	**351**	Pn	**Pn**	**18 30 08.1**	**+0.7**
V35K				IAML		18 31 08.7	
	comp=E,37nm,2.6s						
V35K				IAML		18 32 49.9	
	comp=N,34nm,3.2s						
B04A	**Port Angeles**	**5.01**	**116**	Pn	**Pn**	**18 30 09.0**	**+0.6**
B04A				IAML		18 32 25.6	
	comp=E,41nm,2.2s						
B04A				IAML		18 33 21.4	
	comp=N,44nm,2.1s						
A04D	**Lummi Island**	**5.19**	**107**	Pn	**Pn**	**18 30 11.7**	**+0.9**
NLWA	**Neilton Lookou**	**5.19**	**124**	Pn	**Pn**	**18 30 12.1**	**+1.1**
NLWA				IAML		18 32 03.7	
	comp=N,43nm,3.5s						
NLWA				IAML		18 33 32.5	
	comp=N,45nm,3.1s						
CRAG	**Craig**	**5.31**	**342**	Pn	**Pn**	**18 30 13.1**	**+0.7**
CRAG				IAML		18 31 48.9	
	comp=N,49nm,2.7s						
LLLB	**Lillooet**	**5.32**	**85**		**Pn**	**18 30 12.6**	**-0.1**
LLLB				IAML		18 32 03.8	
	comp=N,39nm,1.3s						
LLLB				IAML		18 32 05.1	
	comp=E,30nm,1.4s						
LLLB	**Lillooet**	**5.32**	**85**	Pn	**Pn**	**18 30 15.1**	**+2.5**
FSJB	**Fort St James**	**5.39**	**40**	Pn	**Pn**	**18 30 16.7**	**+3.0**
WISH	**Wishkah**	**5.42**	**126**	Pn	Pn	18 30 12.5	-1.5
U35K	**Hyder**	**5.46**	**1**		**Pn**	**18 30 14.1**	**-0.4**
VDEB	**Vedder Mountai**	**5.47**	**102**	Pn	**Pn**	**18 30 17.7**	**+2.9**
U33K	**Whale Pass**	**5.92**	**344**	Pn	**Pn**	**18 30 19.9**	**-0.9**
WRAK	**Wrangell Islan**	**6.09**	**349**	Pn	**Pn**	**18 30 22.1**	**-1.1**
D05A	**Enumclaw**	**6.35**	**118**	Pn	**Pn**	**18 30 25.9**	**-0.8**
T35M	**Bob Quinn**	**6.52**	**360**		**Pn**	**18 30 29.7**	**+0.5**
LON	**Longmire**	**6.70**	**121**		**Pn**	**18 30 33.9**	**+2.3**
LTY	**Liberty**	**7.07**	**113**		**Pn**	**18 30 39.0**	**+2.3**
B08A	**Colville Reser**	**7.41**	**102**		**Pn**	**18 30 41.3**	**0.0**
S34M	**Telegraph Cree**	**7.48**	**356**	Pn	**Pn**	**18 30 42.8**	**+0.6**
EPH	**Ephrata**	**7.66**	**110**	Pn	**Pn**	**18 30 45.6**	**+0.8**
NBC8	**Simpson Ranch**	**7.68**	**34**	Pn	**Pn**	**18 30 48.8**	**+3.7**
E07A	**Sunnyside**	**7.91**	**116**	Pn	**Pn**	**18 30 49.0**	**+0.7**
H04A	**Detroit Lake**	**7.93**	**134**	Pn	**Pn**	**18 30 50.2**	**+1.7**
BUCK	**Buck Mountain**	**7.96**	**139**	Pn	**Pn**	**18 30 48.9**	**-0.1**
WAH2	**Wahluke Slope**	**7.97**	**114**		**Pn**	**18 30 49.7**	**+0.6**
D08A	**Wollman Farm,**	**8.21**	**110**		**Pn**	**18 30 52.9**	**+0.7**
I03D	**Drain, OR**	**8.23**	**143**	Pn	**Pn**	**18 30 53.1**	**+0.5**
C09A	**Chrisman Ranch**	**8.27**	**104**		**Pn**	**18 30 53.5**	**+0.3**
NBC5	**NorthernBC 5**	**8.34**	**29**	Pn	**Pn**	**18 30 57.3**	**+3.2**
J01E	**Myrtle Point**	**8.48**	**147**	Pn	**Pn**	**18 30 56.4**	**+0.4**
WIFE	**Three Sisters-**	**8.58**	**135**	Pn	**Pn**	**18 30 58.0**	**+0.4**
NEW	**Newport**	**8.83**	**99**	Pn	**Pn**	**18 31 01.2**	**+0.4**
BBOR	**Butler Butte**	**9.18**	**143**	Pn	**Pn**	**18 31 05.9**	**+0.1**
KBO	**Bosley Butte**	**9.24**	**151**	Pn	**Pn**	**18 31 07.7**	**+1.2**
F10A	**Beach Ranch, E**	**9.76**	**112**		**Pn**	**18 31 14.2**	**+0.5**
JTMT	**Jette**	**10.79**	**98**	Pn	**Pn**	**18 31 28.3**	**+0.4**
PLID	**Pearl Lake**	**10.97**	**114**		**Pn**	**18 31 30.0**	**-0.3**
MMPY	**Sheldon Lake,**	**12.19**	**358**	Pn	**Pn**	**18 31 46.6**	**-0.3**
LRM	**Limekiln Ridge**	**12.73**	**105**	Pn	Pn	18 31 53.1	-1.4

FUNV ***29*** *18:34:50.3, 7°.61N×73°.97W, h37km, MW3.5, Presumed earthquake*

RSNC ***29*** *18:34:53.0±0.0, 7°.N±1°×7°.4W±°, h14km±2km, M1.5, ML1.2*

ISC 29 18:34:51.6±1.0, 7°.26N±0°.03×73°.95W±0°.03, h23km±7km, n18, σ0°82/34, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VMM07	**Puerto Wilches**	**0.14**	**43**	P	**Pb**	**18 34 56.5**	**+0.1**
VMM07				S	**Sb**	**18 34 59.7**	**+0.2**
BRJC	**Barrancabermej**	**0.35**	**145**	P	**Pb**	**18 34 58.5**	**-0.8**
BRJC				S	**Sb**	**18 35 03.8**	**-0.6**
VMM09	**Lebrija**	**0.66**	**101**	P	**Pb**	**18 35 04.2**	**-0.5**
VMM09				S	**Sb**	**18 35 12.3**	**-1.2**
EZNC	**La Esperanza**	**0.72**	**60**	P	**Pb**	**18 35 05.3**	**-0.3**
EZNC				S	**Sb**	**18 35 15.0**	**-0.1**
VMM05	**San Martn**	**0.75**	**31**	P	**Pn**	**18 35 06.7**	**-0.2**
VMM05				S	**Sn**	**18 35 17.2**	**-0.3**
PTBC	**PUERTO BERRIO,**	**0.88**	**215**	P	**Pb**	**18 35 07.2**	**-1.0**
PTBC				S	**Sb**	**18 35 17.9**	**-1.7**
BARC	**Barichara**	**1.01**	**131**	P	**Pb**	**18 35 10.9**	**+0.3**
BARC				S	**Sb**	**18 35 23.8**	**+0.3**
OCAC	**Ocana**	**1.15**	**32**	P	**Pb**	**18 35 12.6**	**-0.4**
OCAC				S	**Sn**	**18 35 27.4**	**-0.3**
PAMC	**Pamplona, Colo**	**1.24**	**86**	P	**Pn**	**18 35 14.0**	**0.0**
PAMC				S	**Sn**	**18 35 29.2**	**-1.1**
SPBC	**San Pablo de B**	**1.60**	**185**	P	**Pn**	**18 35 19.6**	**+0.9**
SPBC				S	**Sn**	**18 35 38.9**	**+0.2**
RUSC	**La Rusia**	**1.61**	**148**	P	**Pn**	**18 35 19.8**	**+0.7**
RUSC				S	**Sn**	**18 35 39.3**	**-0.1**
RUSC	**La Rusia**	**1.61**	**148**	*eP*	**Pn**	**18 35 20.1**	**+1.0**
RUSC				*eS*	**Sb**	**18 35 41.8**	**+0.8**
HELC	**Santa Helena**	**1.90**	**236**	P	**Pn**	**18 35 24.6**	**+1.6**
HELC				S	**Sb**	**18 35 48.4**	**-0.9**
HELC	**Santa Helena**	**1.90**	**236**	*eP*	**Pn**	**18 35 22.4**	**-0.7**
HELC				*eS*	**Sn**	**18 35 46.1**	**-0.3**
NORC	**Norcasia**	**1.92**	**209**	P	**Pn**	**18 35 23.6**	**+0.6**
NORC				S	**Sn**	**18 35 47.5**	**+1.0**
LL8C	**La Loma 8 Chim**	**2.07**	**4**	P	**Pn**	**18 35 25.7**	**+0.6**
LL8C				S	**Sb**	**18 35 55.1**	**+1.2**
GUY2C	**Guyana, Caldas**	**2.47**	**215**	P	**Pn**	**18 35 31.8**	**+0.9**
GUY2C				S	**Sn**	**18 36 01.4**	**+0.8**
SJCC	**San Jacinto, C**	**2.89**	**335**	*eS*	Sn	18 35 57.0	-13

IDC ***29*** *18:39:28.4±1.5, 30°.83N×41°.41W, h0km, mb3.8/12, mbtmp3.8/12, MS4.8/4, Error ellipse: s-maj=46.5km s-min=18.1km az=6.0*

NEIC ***29*** *18:39:28.5±1.4, 30°.6N±0°.2×41°.4W±0°.1, h10km±2km, mb4.6/12, Error ellipse: s-maj=35.3km s-min=4.5km az=149.0*

ISC 29 18:39:28.6±1.0, 30°.6N±0°.2×41°.42W±0°.09, h10km, n44, σ0°94/36, mb4.2/28, MS4.9/4, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMLA	**Cha da Macela**	**14.94**	**57**	Pn	**Pn**	**18 42 58.7**	**-1.2**
PMOZ	**Porto Moniz, M**	**20.71**	**78**	P	**P**	**18 44 08.4**	**-0.8**
OBIP	**Obispado Ponce**	**26.08**	**247**	P	**P**	**18 45 00.5**	**-1.9**
OBIP				IAmb	IAmb	18 45 17.4	
	comp=Z,15nm,1.1s						
DAVA	**Damuels**	**42.42**	**52**	*eP*	**P**	**18 47 24.0**	**+0.5**
	comp=Z,6.2nm,1.1s						
RETA	**Reutte**	**43.03**	**52**	*eP*	**P**	**18 47 28.8**	**+0.4**
	comp=Z,4.8nm,1.1s						
SQTA	**Sankt Quirin**	**43.31**	**52**	*eP*	**P**	**18 47 30.9**	**+0.2**
	comp=Z,4.2nm,1.1s						
TORD	**Torodi Ar. Bea**	**43.32**	**104**	P	**P**	**18 47 32.6**	**+1.6**
	comp=Z,3.5nm,1.0s,baz=300,slow=7.9,SNR=9.5						
	comp=Z,3.5nm,1.0s						
WATA	**Walderalm**	**43.57**	**52**	*eP*	**P**	**18 47 32.4**	**-0.4**
	comp=Z,5.9nm,1.5s						
WTTA	**Wattenberg**	**43.61**	**52**	*eP*	**P**	**18 47 33.1**	**0.0**
	comp=Z,6.0nm,1.0s						
ABTA	**Abfaltersbach**	**44.19**	**53**	*eP*	**P**	**18 47 38.4**	**+0.7**
	comp=Z,4.4nm,0.9s						
LESA	**Schwarzleotal**	**44.32**	**52**	*eP*	**P**	**18 47 39.4**	**+0.6**
	comp=Z,4.5nm,1.1s						
FDMO	**Fiordimonte**	**44.63**	**58**	P	**P**	**18 47 39.1**	**-2.1**
GERES	**GERESS Array B**	**45.07**	**50**	P	**P**	**18 47 44.6**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=274,slow=5.2,SNR=3.5						
	comp=Z,0.9nm,0.8s						
MOA	**Molln**	**45.41**	**51**	P	**P**	**18 47 47.8**	**+0.4**
	comp=Z,6.0nm,1.3s						
OBKA	**Obir**	**45.59**	**53**	P	**P**	**18 47 49.3**	**+0.4**
	comp=Z,6.2nm,0.8s						
SOKA	**Soboth**	**45.92**	**53**	P	**P**	**18 47 51.0**	**-0.5**
	comp=Z,4.4nm,1.5s						
H10N2	**ASCENSION HYDR**	**46.15**	**142**	T	T	19 37 16.7	
	baz=328,slow=75,SNR=56						
H10N3	**ASCENSION HYDR**	**46.16**	**142**	T	T	19 37 16.8	
	baz=328,slow=75,SNR=61						
H10N1	**ASCENSION HYDR**	**46.17**	**142**	T	T	19 37 18.1	
	baz=328,slow=75,SNR=128						
ARSA	**Arzberg**	**46.26**	**52**	P	**P**	**18 47 53.6**	**-0.5**
	comp=Z,4.3nm,1.0s						
H10S3	**ASCENSION HYDR**	**47.00**	**143**	T	T	19 38 21.0	
	baz=327,slow=74,SNR=87						
H10S2	**ASCENSION HYDR**	**47.02**	**143**	T	T	19 38 22.1	
	baz=253,slow=74,SNR=73						
FINES	**FINESS Array B**	**52.90**	**34**	P	**P**	**18 48 44.0**	**-0.5**
	comp=Z,1.7nm,0.7s,baz=241,slow=5.7,SNR=5.8						
	comp=Z,1.7nm,0.7s						
TXAR	**Lajitas Array**	**53.30**	**285**	P	**P**	**18 48 48.5**	**+0.5**
	comp=Z,0.1nm,0.5s,baz=80,slow=9.5,SNR=1.7						
	comp=Z,0.1nm,0.5s						
MLR	**Muntele Rosu**	**53.58**	**54**	P	**P**	**18 48 50.6**	**+0.7**
MLR				IAmb	IAmb	18 48 52.8	
	comp=Z,17nm,1.4s						
RDO	**Rodhopi**	**54.05**	**59**	P	**P**	**18 48 52.5**	**-0.6**
RDO				IAmb	IAmb	18 48 55.4	
	comp=Z,7.6nm,1.1s						
NNA	**Nana**	**54.36**	**224**	LR	LR	19 11 18.9	
	comp=Z,666nm,21.7s,baz=242,slow=35						
PD31	**Pinedale Array**	**54.59**	**303**	P	**P**	**18 48 56.8**	**-0.7**
PD31				IAmb	IAmb	18 49 13.4	
	comp=Z,4.5nm,1.1s						
PDAR	**Pinedale Array**	**54.59**	**303**	P	**P**	**18 48 57.8**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=89,slow=7.9,SNR=7.5						
	comp=Z,0.7nm,0.7s						
BW06	**Boulder Array**	**54.59**	**303**	P	**P**	**18 48 57.0**	**-0.5**
AKASG	**Malin Array Be**	**55.04**	**47**	P	**P**	**18 48 59.2**	**-1.0**
	comp=Z,1.2nm,0.7s,baz=275,slow=6.6,SNR=8.6						
	comp=Z,1.2nm,0.7s						
YKA	**Yellowknife Ar**	**55.61**	**327**	P	**P**	**18 49 04.4**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=85,slow=6.7,SNR=5.2						
YKA				LR	LR	19 13 35.6	
	comp=Z,919nm,19.8s,baz=264,slow=37						
	comp=Z,0.3nm,0.7s						
BRTR	**Keskin Array B**	**60.39**	**59**	P	**P**	**18 49 39.0**	**+0.7**
	comp=Z,1.6nm,0.9s,baz=267,slow=4.9,SNR=8.5						
	comp=Z,1.6nm,0.9s						
NVAR	**Mina Array Bea**	**62.13**	**300**	P	**P**	**18 49 50.7**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=42,slow=6.9,SNR=4.5						
	comp=Z,0.6nm,0.7s						
VTX	**Valle De La Tr**	**62.52**	**292**	P	**P**	**18 49 51.9**	**-0.8**
KBZ	**Khabaz**	**65.73**	**52**	P	**P**	**18 50 15.4**	**+1.9**
	comp=Z,2.2nm,0.8s,baz=301,slow=8.5,SNR=4.8						
	comp=Z,2.2nm,0.8s						
I28M	**Miner Creek**	**65.96**	**333**	P	**P**	**18 50 15.8**	**+1.1**
I28M				IAmb	IAmb	18 50 24.5	
	comp=Z,4.6nm,1.2s						
ILAR	**Eielson Array**	**68.92**	**334**	P	**P**	**18 50 34.6**	**+1.3**
	comp=Z,1.4nm,0.9s,baz=61,slow=4.2,SNR=8.8						
	comp=Z,1.4nm,0.9s						
CCB	**Clear Creek Bu**	**69.33**	**334**	P	**P**	**18 50 34.8**	**-1.1**
BVAR	**Borovoye Array**	**77.84**	**35**	P	**P**	**18 51 27.2**	**+1.1**
	comp=Z,0.9nm,0.9s,baz=283,slow=7.0,SNR=2.9						
	comp=Z,0.9nm,0.9s						
LSZ	**Lusaka**	**80.96**	**114**	LR	LR	19 24 43.6	
	comp=Z,697nm,21.5s,baz=124,slow=34						
KURK	**Kurchatov**	**83.28**	**34**	P	**P**	**18 51 55.0**	**-0.3**
KURK				IAmb	IAmb	18 51 57.4	
	comp=Z,3.0nm,1.1s						
KURBB	**Kurchatov Arra**	**83.30**	**34**	P	**P**	**18 51 56.0**	**+0.6**
	comp=Z,4.1nm,0.2s,baz=315,slow=6.1,SNR=4.0						
AAK	**Ala-Archa**	**86.32**	**42**	LR	LR	19 28 06.0	
	comp=Z,480nm,21.4s,baz=126,slow=34						

IDC 29 18:54:27.8±3.4, 28°.00S×135°.73E, h0km, mbtmp2.6/3, ML2.6/3, Error ellipse: s-maj=58.1km s-min=21.8km az=60.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**4.62**	**339**	Pn	Pn	18 55 40.9	+2.0
	0.1nm,0.3s,baz=153,slow=12,SNR=9.2						
ASAR				Sn	Sn	18 56 33.4	+0.1
	0.4nm,0.3s,baz=157,slow=23,SNR=15						
ASAR				Lg	Lg	18 56 52.6	
	0.2nm,0.3s,baz=296,slow=14,SNR=5.4						
	0.3nm,0.9s						
STKA	**Stephens Creek**	**6.39**	**129**	Pn	Pn	18 56 01.8	-1.3
	0.1nm,0.3s,baz=317,slow=19,SNR=1.7						
STKA				Sn	Sn	18 57 08.3	-8.5
	0.2nm,0.3s,baz=330,slow=20,SNR=3.0						
	0.6nm,0.5s						
WRA	**Warramunga Arr**	**8.12**	**351**	Pn	Pn	18 56 27.7	+0.7
	0.1nm,0.3s,baz=166,slow=13,SNR=10.0						
WRA				Sn	Sn	18 57 54.9	-4.6
	0.1nm,0.3s,baz=172,slow=25,SNR=5.2						
WRA				Lg	Lg	18 58 44.8	
	baz=178,slow=26,SNR=1.6						
	0.2nm,0.4s						

IDC 29 18:57:24.1±2.5, 3°.97S×132°.12E, h0km, mb3.3/1, mbtmp3.4/5, ML3.2/4, Error ellipse: s-maj=125.1km s-min=21.6km az=80.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.19**	**345**	Pn	Pn	18 58 15.7	0.0
	1.2nm,0.3s,baz=162,slow=20,SNR=15						
SIJI				Sn	Sn	18 58 55.7	+1.2
	1.9nm,0.3s,baz=132,slow=23,SNR=8.0						
	2.6nm,0.3s						
FITZ	**Fitzroy Crossi**	**15.41**	**204**	Pn	Pn	19 01 02.6	-0.5
	0.1nm,0.3s,baz=5.8,slow=9.6,SNR=6.2						
FITZ				Sn	Sn	19 03 46.0	-8.5
	0.1nm,0.3s,baz=316,slow=11,SNR=2.5						
	1.3nm,0.7s						
WRA	**Warramunga Arr**	**16.02**	**172**	Pn	Pn	19 01 12.8	+1.7
	0.1nm,0.3s,baz=353,slow=12,SNR=9.3						
WRA				Sn	Sn	19 03 52.4	-17
	0.1nm,0.3s,baz=347,slow=25,SNR=5.1						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**19.66**	**175**	P	P	19 01 54.4	-0.5
	0.1nm,0.3s,baz=0.3,slow=12,SNR=12						
	1.1nm,0.8s						
MKAR	**Makanchi Array**	**66.91**	**325**	P	P	19 08 18.4	0.0
	0.2nm,0.5s,baz=118,slow=7.5,SNR=2.5						
	0.2nm,0.5s						

WEL 29 19:02:26.8±1.0, 34°S±8°×17°9W±1°6, h33km, M4.3/7, mB5.6/2, ML4.0/7, MLv4.3/7, Mw(mB)5.1/2, Error ellipse: s-maj=22.2km s-min=7.1km az=110.0, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.45**	**9**	P	Pn	19 03 30.8	-1.1
WMGZ	**Waiomatatini S**	**4.76**	**209**	P	Pn	19 03 38.0	+1.9
WMGZ				S	Sn	19 04 29.6	-0.6
PKGZ	**Pakihiroa**	**4.94**	**211**	P	Pn	19 03 38.2	-0.5
PKGZ				S	Sn	19 04 33.9	-0.7
HAZ	**Te Kaha**	**4.98**	**214**	P	Pn	19 03 39.2	0.0
HAZ				S	Sn	19 04 36.5	+0.9
WSRZ	**White Island S**	**5.10**	**220**	P	Pn	19 03 42.3	+1.4
RUGZ	**Raukumara Rang**	**5.20**	**214**	P	Pn	19 03 42.3	0.0
TWGZ	**Tauwhareparae**	**5.24**	**210**	P	Pn	19 03 43.7	+0.8
CNGZ	**Carnagh Statio**	**5.42**	**207**	P	Pn	19 03 44.9	-0.3
TKGZ	**Te Karaka**	**5.52**	**210**	P	Pn	19 03 47.0	+0.4
URZ	**Urewera**	**5.70**	**215**	P	Pn	19 03 48.8	-0.3
RIGZ	**Rimuhau**	**5.78**	**209**	P	Pn	19 03 50.5	+0.3
MUGZ	**Murupara**	**6.04**	**216**	P	Pn	19 03 52.0	-1.8
WCZ	**Waipu Caves**	**6.16**	**247**	P	Pn	19 03 56.7	+1.3
MTHZ	**Maungataniwha**	**6.30**	**214**	P	Pn	19 03 57.5	+0.1
NMHZ	**Naumai**	**6.52**	**213**	P	Pn	19 04 00.7	+0.3
OUZ	**Omahuta**	**6.56**	**254**	P	Pn	19 04 00.3	-0.6
BKZ	**Black Stump Fm**	**6.72**	**214**	P	Pn	19 04 04.1	+1.0
KWHZ	**Kaweka Forest**	**6.96**	**213**	P	Pn	19 04 06.1	-0.3

IDC ***29*** *19:02:40.1±0.8, 30°.91N×41°.47W, h0km, mb4.0/19, mbtmp4.0/19, MS4.1/11, Error ellipse: s-maj=23.0km s-min=14.8km az=1.0*

NEIC ***29*** *19:02:40.4±2.5, 30°.9N±0°.2×41°.34W±0°.05, h10km±2km, mb4.7/37, Error ellipse: s-maj=35.3km s-min=4.8km az=190.0*

ISC 29 19:02:41.4±0.7, 30°.9N±0°.1×41°.43W±0°.08, h13km, n64, σ1°39/42, mb4.5/35, MS4.1/11, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMLA	**Cha da Macela**	**14.82**	**58**	P	**P**	**19 06 16.1**	**-0.5**
PMOZ	**Porto Moniz, M**	**20.66**	**78**	P	**P**	**19 07 16.3**	**-4.8**
MACI	**Morro de la Ar**	**21.82**	**91**	P	**P**	**19 07 31.4**	**-2.3**
MACI				IAmb	IAmb	19 07 49.7	
	comp=Z,30nm,1.0s						
MDT	**Midelt**	**31.24**	**77**	LR	LR	19 18 35.1	
	comp=Z,183nm,20.6s,baz=231,slow=30						
ESDC	**Sonseca Array**	**31.63**	**64**	P	**P**	**19 09 05.0**	**+0.7**
	comp=Z,0.4nm,0.9s,baz=263,slow=6.8,SNR=2.2						
	comp=Z,0.4nm,0.9s						
ESDC	**Sonseca Array**	**31.63**	**64**	P	**P**	**19 09 04.4**	**+0.1**
EKA	**Eskdalemuir Ar**	**36.41**	**37**	P	**P**	**19 09 45.7**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=231,slow=8.0,SNR=3.7						
	comp=Z,0.7nm,0.6s						
ROSC	**El Rosal**	**40.34**	**237**	LR	LR	19 25 47.8	
	comp=Z,228nm,21.8s,baz=228,slow=34						
DBIC	**Dimbokro**	**41.86**	**118**	P	**P**	**19 10 32.1**	**+0.7**
	comp=Z,1.8nm,0.5s,baz=334,slow=7.7,SNR=3.9						
	comp=Z,1.8nm,0.5s						
KEST	**Kesra**	**42.33**	**69**	P	**P**	**19 10 35.4**	**+0.2**
	comp=Z,1.5nm,0.9s,baz=305,slow=12,SNR=1.7						
	comp=Z,1.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**43.39**	**104**	P	**P**	**19 10 44.3**	**+0.4**
	comp=Z,2.1nm,0.7s,baz=299,slow=6.7,SNR=10						
	comp=Z,2.1nm,0.7s						
TORD	**Torodi Ar. Bea**	**43.39**	**104**		**P**	**19 10 41.9**	**-2.1**
GERES	**GERESS Array B**	**44.92**	**50**	P	**P**	**19 10 56.6**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=254,slow=8.2,SNR=2.7						
	comp=Z,0.6nm,0.5s						
H10N2	**ASCENSION HYDR**	**46.35**	**142**	T	T	20 00 30.7	
	baz=328,slow=75,SNR=64						
H10N3	**ASCENSION HYDR**	**46.35**	**142**	T	T	20 00 31.0	
	baz=328,slow=75,SNR=96						
H10N1	**ASCENSION HYDR**	**46.36**	**142**	T	T	20 00 32.1	
	baz=328,slow=75,SNR=122						
H10S3	**ASCENSION HYDR**	**47.20**	**143**	T	T	20 01 38.8	
	baz=327,slow=74,SNR=120						
H10S2	**ASCENSION HYDR**	**47.21**	**143**	T	T	20 01 40.3	
	baz=253,slow=74,SNR=95						
FFC	**Flin Flon**	**48.61**	**318**		**P**	**19 11 24.0**	**-0.6**
FFC				IAmb	IAmb	19 11 36.5	
	comp=Z,8.1nm,1.1s						
FINES	**FINESS Array B**	**52.70**	**34**	P	**P**	**19 11 55.8**	**+0.4**
	comp=Z,2.7nm,0.8s,baz=258,slow=3.7,SNR=8.1						
	comp=Z,2.7nm,0.8s						
TXAR	**Lajitas Array**	**53.23**	**285**	P	**P**	**19 12 00.2**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=77,slow=5.4,SNR=6.1						
	comp=Z,0.8nm,0.8s						
LPAZ	**La Paz**	**53.47**	**212**	P	**P**	**19 12 03.2**	**+1.0**
	comp=Z,2.1nm,0.8s,baz=56,slow=3.5,SNR=8.1						
LPAZ				LR	LR	19 33 11.4	
	comp=Z,147nm,18.0s,baz=116,slow=34						
	comp=Z,2.1nm,0.8s						
VHRN	**Van Horn**	**53.87**	**287**		**P**	**19 12 05.7**	**+1.0**
ANMO	**Albuquerque**	**53.89**	**293**	LR	LR	19 32 39.6

comp=Z,0.8nm,0.7s,baz=274,slow=7.0,SNR=4.7
comp=Z,0.8nm,0.7s

ZALV	**Zalesovo Beam**	**83.60**	**29**	P		**P**	**19 15 08.4**	**-0.9**
MKAR	**Makanchi Array**	**87.53**	**35**	P		**P**	**19 15 29.4**	**+0.3**

comp=Z,0.2nm,0.6s,baz=324,slow=7.1,SNR=1.9
comp=Z,0.2nm,0.6s

KRSC 29 19:21:36.7±1.4, 49°.47N×158°.82E, h41km±38km, MI3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.12**	**306**	*eP*	Pn	19 22 10.8	+1.2
SKR				*eS*	Sn	19 22 36.4	+1.7
PAU	**Pauzhetka**	**2.38**	**328**	*eS*	Sn	19 22 45.5	+4.5
KDTR	**Khodutka, Kamc**	**2.39**	**349**	*eP*	Pn	19 22 15.9	+2.7
KDTR				*eS*	Sn	19 22 44.6	+3.4
RUS	**Russkaya**	**2.97**	**356**	*eP*	Pn	19 22 24.5	+3.2
RUS				*eS*	Sn	19 22 59.4	+3.8
ASAK	**Asacha**	**2.97**	**349**	*eP*	Pn	19 22 25.6	+4.2
MTVR	**Mutnovka**	**3.04**	**353**	*eS*	Sn	19 23 01.4	+3.8
GRL	**Gorelyy**	**3.12**	**352**	*eP*	Pn	19 22 26.6	+3.2
GRL				*eS*	Sn	19 23 03.2	+3.7
KRMR	**Karymshinskiy**	**3.39**	**353**	*eS*	Sn	19 23 11.1	+5.2
AVH	**Avacha**	**3.80**	**359**	*eP*	Pn	19 22 37.4	+4.7
KOK	**Koryaka**	**3.83**	**358**	*eP*	Pn	19 22 37.8	+4.7
KRX	**Arik**	**3.90**	**358**	*eP*	Pn	19 22 38.8	+4.7
KBTR	**Krutoberegovo**	**7.17**	**18**	*eP*	Pn	19 23 23.0	+4.2

*PGC **29** 19:32:02.5±2.8, 50°.50N×130°.20W, h10km, MLSn3.4/24, Mw4.3, 192km west of Port Hardy, Bc Vancouver Island, Canada Region*

*NEIC **29** 19:32:02.5, 50°.50N×130°.20W, h6km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.28; $M_{\theta\theta}$-3.51; $M_{\phi\phi}$3.15; $M_{r\theta}$-1.27; $M_{\theta\phi}$-1.58; $M_{\phi r}$0.39; Fault plane solution: M_o3.90000×10^{15} NP1:∅=31.00000°, δ71.00000°, λ-5.00000°. NP2:∅=123.00000°, δ85.00000°, λ-161.00000°. Principal axes: T 3.8333, Plg10.0000°, Azm256.0000°; N 0.1605, Plg71.0000°, Azm136.0000°; P -3.9938, Plg17.0000°, Azm349.0000°;*

*NEIC **29** 19:32:03.5±1.7, 50°.65N×0°.06×130°.05W±0°.08, h10km±2km, mb3.7/32, Mwr4.3(OTT) Error ellipse: s-maj=12.2km s-min=6.2km az=214.0*

*IDC **29** 19:32:05.2±1.5, 50°.64N×129°.86W, h0km, mb3.5/3, mbtmp3.5/10, ML3.3/7, Error ellipse: s-maj=21.8km s-min=12.5km az=68.0*

ISC 29 19:32:03.9±4.1, 50°.60N±0°.06×130°.08W±0°.05, h13km±29km, n127, σ1$ 34/130, mb3.5/4, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.24**	**87**		**Pn**	**19 32 25.3**	**-1.6**
HOLB					Sn	**19 32 41.0**	**-2.1**
HOLB	**Holberg**	**1.24**	**87**	P	**Pn**	**19 32 25.5**	**-1.4**
HOLB				S	**Sb**	**19 32 40.5**	**-2.5**
BPEB	**Brooks Peninsu**	**1.54**	**106**	Pn	**Pn**	**19 32 28.4**	**-2.6**
PACB	**Port Alice, BC**	**1.66**	**95**	Pn	**Pn**	**19 32 30.8**	**-1.8**
PACB					Sn	**19 32 50.1**	**-3.6**
PHC	**Port Hardy**	**1.69**	**85**	Pn	**Pn**	**19 32 31.8**	**-1.2**
PHC					Sn	**19 32 51.7**	**-2.7**
HG4B	**Hotspring**	**1.83**	**338**	Pn	**Pn**	**19 32 32.7**	**-2.3**
HG4B					Sn	**19 32 54.8**	**-3.3**
JEDB	**Jedway, Haida**	**1.83**	**338**	Pn	**Pn**	**19 32 32.9**	**-2.1**
FHBB	**Fair Harbour**	**1.98**	**105**	Pn	**Pn**	**19 32 35.0**	**-1.9**
BBB	**Bella Bella**	**2.01**	**37**	Pn	**Pn**	**19 32 37.2**	**-0.2**
	8.0nm,0.3s,baz=227,slow=16,SNR=104						
BBB					Sn	**19 33 00.8**	**-1.5**
	19nm,0.3s,baz=274,slow=13,SNR=4.8						
BBB	**Bella Bella**	**2.01**	**37**		**Pn**	**19 32 37.2**	**-0.2**
BBB					Sn	**19 32 59.6**	**-2.8**
BBB	**Bella Bella**	**2.01**	**37**	Pn	**Pn**	**19 32 36.6**	**-0.8**
EDB	**Eliza Dome**	**2.04**	**110**	Pn	**Pn**	**19 32 35.3**	**-2.4**
EDB					Sn	**19 33 00.8**	**-2.2**
BAIB	**Barry Inlet**	**2.24**	**333**	Pn	**Pn**	**19 32 38.8**	**-1.8**
WOSB	**Woss**	**2.29**	**100**	Pn	**Pn**	**19 32 40.1**	**-1.2**
TAHB	**Tahsis**	**2.30**	**107**	Pn	**Pn**	**19 32 39.6**	**-1.8**
NTKA	**Nootka**	**2.45**	**113**	Pn	**Pn**	**19 32 40.9**	**-2.5**
NCSB	**Newcastle Ridg**	**2.58**	**93**	Pn	**Pn**	**19 32 44.2**	**-1.1**
GDR	**Gold River**	**2.73**	**106**	Pn	**Pn**	**19 32 45.6**	**-1.7**
GDR					Sn	**19 33 18.2**	**-1.8**
MOBC	**Moresby Island**	**2.80**	**336**	Pn	**Pn**	**19 32 47.1**	**-1.3**
GRIB	**Gribbell Islan**	**2.81**	**12**	Pn	**Pn**	**19 32 48.0**	**-0.3**
BNAB	**Bonilla**	**2.92**	**353**	Pn	**Pn**	**19 32 48.8**	**-1.1**
DIB	**Dawson Inlet,**	**3.00**	**331**	Pn	**Pn**	**19 32 49.3**	**-1.7**
DIB	**Dawson Inlet,**	**3.00**	**331**	Pn	**Pn**	**19 32 50.6**	**-0.4**
CBB	**Campbell River**	**3.08**	**99**		**Pn**	**19 32 51.2**	**-0.8**
CBB	**Campbell River**	**3.08**	**99**	Pn	**Pn**	**19 32 51.3**	**-0.8**
MYRA	**Myra Falls**	**3.09**	**108**	Pn	**Pn**	**19 32 50.8**	**-1.5**
GRNB	**Grenville Isla**	**3.25**	**1**	Pn	**Pn**	**19 32 54.2**	**-0.3**
KITB	**Kitimat**	**3.59**	**14**	Pn	**Pn**	**19 32 59.5**	**+0.3**
RUBB	**Prince Rupert**	**3.73**	**358**	Pn	**Pn**	**19 33 00.9**	**-0.2**
RUBB	**Prince Rupert**	**3.73**	**358**	Pn	**Pn**	**19 33 01.3**	**+0.3**
TXDB	**Texada**	**3.74**	**102**	Pn	**Pn**	**19 33 01.0**	**-0.2**
MGRB	**Mount Grey**	**3.84**	**113**	Pn	**Pn**	**19 33 01.4**	**-1.3**
SHB	**Sechelt**	**4.12**	**102**	Pn	**Pn**	**19 33 06.0**	**-0.5**
PTRF	**Port Renfrew**	**4.22**	**117**	Pn	**Pn**	**19 33 07.0**	**-0.8**
CLRS	**Cowichan Lake**	**4.25**	**112**	Pn	**Pn**	**19 33 07.3**	**-0.9**
C03A	**Quillayute Air**	**4.48**	**124**	Pn	**Pn**	**19 33 09.6**	**-1.8**
SYMB	**Survey Mountai**	**4.57**	**114**	Pn	**Pn**	**19 33 12.1**	**-0.6**
WSLR	**Whistler**	**4.61**	**93**	Pn	**Pn**	**19 33 12.9**	**-0.2**
PGC	**Sidney**	**4.73**	**112**	Pn	**Pn**	**19 33 14.2**	**-0.6**
V35K	**Ketchikan**	**4.83**	**350**	Pn	**Pn**	**19 33 14.3**	**-1.7**
B04A	**Port Angeles**	**5.00**	**118**	Pn	**Pn**	**19 33 17.1**	**-1.3**
A04D	**Lummi Island**	**5.15**	**109**	Pn	**Pn**	**19 33 20.6**	**+0.1**
NLWA	**Neilton Lookou**	**5.20**	**126**	Pn	**Pn**	**19 33 20.9**	**-0.4**
CRAG	**Craig**	**5.21**	**341**	Pn	**Pn**	**19 33 20.6**	**-0.8**
LLLB	**Lillooet**	**5.22**	**87**	Pn	**Pn**	**19 33 21.0**	**-0.6**
LLLB	**Lillooet**	**5.22**	**87**	Pn	**Pn**	**19 33 22.1**	**+0.5**
FSJB	**Fort St James**	**5.24**	**40**	Pn	**Pn**	**19 33 23.4**	**+1.7**
U35K	**Hyder**	**5.33**	**0**	Pn	**Pn**	**19 33 22.4**	**-0.5**
WISH	**Wishkah**	**5.43**	**127**	Pn	**Pn**	**19 33 25.0**	**+0.6**
U33K	**Whale Pass**	**5.82**	**343**	Pn	**Pn**	**19 33 28.9**	**-0.8**
WRAK	**Wrangell Islan**	**5.99**	**348**	Pn	**Pn**	**19 33 32.2**	**+0.2**
T35M	**Bob Quinn**	**6.39**	**359**		**Pn**	**19 33 36.2**	**-1.4**
LON	**Longmire**	**6.70**	**122**		**Pn**	**19 33 41.5**	**-0.3**
B08A	**Colville Reser**	**7.35**	**104**	Pn	**Pn**	**19 33 51.1**	**+0.2**
NBC8	**Simpson Ranch**	**7.53**	**34**	Pn	**Pn**	**19 33 55.8**	**+2.6**
EPH	**Ephrata**	**7.63**	**111**	Pn	**Pn**	**19 33 54.9**	**+0.3**
DLBC	**Dease Lake**	**7.86**	**0**	Pn	**Pn**	**19 34 00.1**	**+2.4**
	0.5nm,0.3s,baz=172,slow=16,SNR=8.0						
	3.1nm,0.5s						
E07A	**Sunnyside**	**7.89**	**117**	Pn	**Pn**	**19 33 58.3**	**+0.1**
H04A	**Detroit Lake**	**7.96**	**135**	Pn	**Pn**	**19 33 58.5**	**-0.8**
D08A	**Wollman Farm,**	**8.17**	**111**	Pn	**Pn**	**19 34 01.4**	**-0.7**
NBC5	**NorthernBC 5**	**8.19**	**29**	Pn	**Pn**	**19 34 04.2**	**+1.9**
Q32M	**Nakina River**	**8.47**	**352**	Pn	**Pn**	**19 34 05.8**	**-0.5**
NEW	**Newport**	**8.77**	**100**	Pn	**Pn**	**19 34 10.7**	**+0.5**
	0.1nm,0.3s,baz=318,slow=22,SNR=1.9						
	0.7nm,0.5s						
R33M	**Jennings River**	**8.83**	**357**	Pn	**Pn**	**19 34 10.6**	**-0.5**
K02D	**Willamette Mer**	**9.05**	**148**	Pn	**Pn**	**19 34 15.0**	**+0.8**
P32M	**Atlin**	**9.25**	**348**	Pn	**Pn**	**19 34 16.3**	**-0.5**
P33M	**Teslin, Yukon**	**9.76**	**352**	Pn	**Pn**	**19 34 22.0**	**-1.8**
YBH	**Yreka Blue Hor**	**10.23**	**147**		**Pn**	**19 34 30.8**	**+0.4**
WHY	**Whitehorse**	**10.44**	**347**	Pn	**Pn**	**19 34 32.4**	**-0.8**
PLID	**Pearl Lake**	**10.95**	**115**	Pn	**Pn**	**19 34 38.9**	**-1.4**
KMRM	**Mail Ridge**	**11.30**	**154**	Pn	**Pn**	**19 34 45.8**	**+0.9**
GRNC	**Granite Creek**	**12.08**	**332**	Pn	**Pn**	**19 34 54.8**	**-0.9**
ORV	**Oroville**	**12.59**	**148**		**Pn**	**19 35 02.7**	**+0.2**
BEKR	**Beckworth**	**12.72**	**144**		**Pn**	**19 35 04.7**	**+0.2**
YHL	**Hebgen Lake**	**13.95**	**107**		**Pn**	**19 35 21.1**	**-0.2**
YMR	**Madison River**	**14.17**	**107**	Pn	**Pn**	**19 35 24.6**	**+0.3**
YHH	**Holmes Hill**	**14.18**	**107**	Pn	**Pn**	**19 35 24.3**	**-0.2**
YKA	**Yellowknife Ar**	**14.60**	**29**	Pn	**Pn**	**19 35 29.1**	**-0.8**
	0.1nm,0.3s,baz=223,slow=12,SNR=17						
	1.0nm,0.8s						
YKA	**Yellowknife Ar**	**14.60**	**29**	Pn	**Pn**	**19 35 28.8**	**-1.1**
YKAW1	**Yellowknife Wh**	**14.63**	**30**		**Pn**	**19 35 30.2**	**-0.1**
YKAW3	**Yellowknife Wh**	**14.65**	**29**		**Pn**	**19 35 30.0**	**-0.6**
NVAR	**Mina Array Bea**	**14.76**	**141**	Pn	**P**	**19 35 37.5**	**-0.9**
	0.1nm,0.3s,baz=329,slow=20,SNR=2.5						
	0.8nm,0.9s						
MOOW	**Moose Ponds**	**14.80**	**110**		**Pn**	**19 35 33.4**	**+0.4**
LOHW	**Long Hollow**	**14.97**	**110**		**Pn**	**19 35 35.4**	**+0.3**
RLMT	**Red Lodge**	**14.99**	**103**	Pn	**Pn**	**19 35 36.6**	**+1.1**
SCRK	**Sand Creek**	**15.32**	**336**	P	**P**	**19 35 42.4**	**-2.0**
SCRK				IAmb	IAmb	19 35 54.9	
	comp=Z,4.0nm,1.0s						
RIDG	**Independent Ri**	**15.35**	**335**	Pn	**Pn**	**19 35 41.2**	**+1.3**
HWUT	**Hardware Ranch**	**15.64**	**118**	Pn	**Pn**	**19 35 44.7**	**+0.7**
HWUT				IAmb	IAmb	19 36 01.4	
	comp=Z,5.1nm,1.3s						
M22K	**Willow**	**15.71**	**323**	Pn	**Pn**	**19 35 43.9**	**-0.6**
DUG	**Dugway, Tooele**	**15.94**	**124**		**Pn**	**19 35 47.9**	**+0.1**
TCUT	**Toone Canyon**	**16.06**	**119**	Pn	**Pn**	**19 35 48.5**	**-0.9**
BW06	**Boulder Array**	**16.08**	**111**		**Pn**	**19 35 49.5**	**-0.2**
BW06				IAmb	IAmb	19 35 53.9	
	comp=Z,5.4nm,1.1s						
PD31	**Pinedale Array**	**16.08**	**111**	Pn	**Pn**	**19 35 49.3**	**-0.4**
PD31				IAmb	IAmb	19 35 53.9	
	comp=Z,4.7nm,1.1s						
PDAR	**Pinedale Array**	**16.08**	**111**	Pn	**P**	**19 35 53.1**	**+0.1**
	baz=316,slow=12,SNR=17						
	comp=Z,2.5nm,1.0s						
I26K	**Coal Creek Min**	**16.24**	**340**		**Pn**	**19 35 50.7**	**-0.6**
I26K				IAmb	IAmb	19 36 02.8	
	comp=Z,5.5nm,0.9s						
CWC	**Cottonwood Cre**	**16.58**	**144**	Pn	**Pn**	**19 35 57.0**	**+0.9**
ILAR	**Eielson Array**	**16.72**	**334**	Pn	**P**	**19 36 02.1**	**+2.4**
	comp=Z,0.1nm,0.3s,baz=148,slow=11,SNR=6.3						
	comp=Z,0.6nm,0.9s						
WCT	**Wildcat Mounta**	**16.85**	**140**		**Pn**	**19 35 60.0**	**+0.6**
WCT				IAmb	IAmb	19 36 05.2	
	comp=Z,7.7nm,1.4s						
TPNV	**Topopah Spring**	**16.87**	**139**	P	**Pn**	**19 36 00.9**	**+1.2**
TPNV				IAmb	IAmb	19 36 09.9	
	comp=Z,10nm,1.4s						
MPMC	**Manual Prospec**	**17.14**	**143**	P	**Pn**	**19 36 03.3**	**+0.1**
FFC	**Flin Flon**	**17.48**	**65**	P	**P**	**19 36 07.5**	**-0.7**
FFC				IAmb	IAmb	19 36 44.6	
	comp=Z,9.9nm,1.4s						
SHPR	**Sheep Range**	**17.71**	**137**	P	**P**	**19 36 11.3**	**+0.2**
INK	**Inuvik**	**17.84**	**356**	P	**P**	**19 36 15.6**	**+3.5**
	baz=188,slow=15,SNR=2.5						
	comp=Z,0.9nm,0.7s						
F26K	**Sheenjek River**	**18.51**	**343**	P	**Pn**	**19 36 19.4**	**-0.3**
F26K				IAmb	IAmb	19 36 31.5	
	comp=Z,5.7nm,1.1s						
E28M	**Babbage River**	**18.64**	**349**	P	**Pn**	**19 36 21.3**	**+0.1**
HMU	**Henry Mountain**	**18.69**	**125**	P	**P**	**19 36 21.7**	**-0.3**
HMU				IAmb	IAmb	19 36 25.6	
	comp=Z,5.5nm,1.1s						
F25K	**Christian Rive**	**18.72**	**341**	P	**Pn**	**19 36 21.9**	**-0.4**
F25K				IAmb	IAmb	19 36 34.6	
	comp=Z,9.9nm,1.3s						
C36M	**Paulatuk**	**19.03**	**7**		**Pn**	**19 36 25.4**	**-0.4**
C36M				IAmb	IAmb	19 36 31.1	
	comp=Z,5.2nm,1.3s						
U15A	**North Rim**	**19.09**	**131**	P	**P**	**19 36 26.9**	**+0.6**
PV23	**Carpenter Ridg**	**19.24**	**121**	P	**P**	**19 36 27.8**	**-0.2**
PV23				IAmb	IAmb	19 36 41.0	
	comp=Z,6.6nm,0.9s						
PV19	**Morning Glory**	**19.36**	**121**	P	**P**	**19 36 28.8**	**-0.4**
PV12	**Saucer Basin,**	**19.45**	**121**	P	**P**	**19 36 29.3**	**-0.9**
J16K	**Anvik River**	**20.68**	**319**		**P**	**19 36 43.0**	**-0.2**
F20K	**Avaraart Lake**	**20.90**	**332**	P	**P**	**19 36 45.5**	**0.0**
F20K				IAmb	IAmb	19 37 00.4	
	comp=Z,7.7nm,1.2s						
E19K	**Redstone River**	**21.61**	**331**	P	**P**	**19 36 53.6**	**+0.4**
E19K				IAmb	IAmb	19 37 07.8	
	comp=Z,5.0nm,0.9s						
ULM	**Lac du Bonnet**	**21.69**	**78**	P	**P**	**19 36 56.3**	**+2.2**
	comp=Z,3.0nm,0.9s,baz=266,slow=8.9,SNR=4.5						
	comp=Z,3.0nm,0.9s						
F17K	**Baldwin Pennin**	**22.36**	**327**	P	**P**	**19 36 60.0**	**-1.2**
BLKN	**Baker Lake**	**22.54**	**40**		**P**	**19 37 03.4**	**+0.3**
B22K	**Teshekpuk Lake**	**22.60**	**340**	P	**P**	**19 37 05.0**	**+1.3**
TXAR	**Lajitas Array**	**29.08**	**127**	P	**P**	**19 38 06.6**	**+2.6**
	comp=Z,0.6nm,0.9s,baz=326,slow=4.2,SNR=4.9						
	comp=Z,0.6nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**57.93**	**262**	T	T	20 44 28.8	
	baz=41,slow=76,SNR=136						
H11N3	**WAKE ISLAND Hy**	**57.93**	**262**	T	T	20 44 28.2	
	baz=41,slow=76,SNR=206						
H11N1	**WAKE ISLAND Hy**	**57.95**	**262**	T	T	20 44 28.9	
	baz=41,slow=76,SNR=133						
H11S1	**WAKE ISLAND Hy**	**58.96**	**261**	T	T	20 45 44.9	
	baz=46,slow=75,SNR=15						
H11S2	**WAKE ISLAND Hy**	**58.97**	**261**	T	T	20 45 44.3	
	baz=46,slow=75,SNR=16						
H11S3	**WAKE ISLAND Hy**	**58.98**	**261**	T	T	20 45 45.0	
	baz=46,slow=75,SNR=13						
MKAR	**Makanchi Array**	**79.04**	**338**	P	**P**	**19 44 09.9**	**+2.6**
	comp=Z,0.2nm,0.7s,baz=17,slow=5.3,SNR=2.1						
	comp=Z,0.2nm,0.7s						

KRSC 29 19:42:10.2±1.6, 49°.41N×158°.83E, h38km±36km, MI3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.16**	**307**	*eP*	Pn	19 42 45.3	+1.7
SKR				*eS*	Sn	19 43 10.3	+1.2
PAU	**Pauzhetka**	**2.43**	**329**	*eS*	Sn	19 43 19.3	+3.6
KDTR	**Khodutka, Kamc**	**2.45**	**349**	*eP*	Pn	19 42 50.5	+3.0
KDTR				*eS*	Sn	19 43 19.2	+3.0
RUS	**Russkaya**	**3.03**	**356**	*eP*	Pn	19 42 58.9	+3.4
RUS				*eS*	Sn	19 43 34.3	+3.8
ASAK	**Asacha**	**3.03**	**349**	*eP*	Pn	19 42 59.7	+4.0
MTVR	**Mutnovka**	**3.10**	**353**	*eS*	Sn	19 43 36.1	+3.6
GRL	**Gorelyy**	**3.18**	**352**	*eP*	Pn	19 43 01.8	+4.0
GRL				*eS*	Sn	19 43 38.4	+4.0
KRMR	**Karymshinskiy**	**3.45**	**353**	*eS*	Sn	19 43 46.2	+5.3
DALK	**Dalny**	**3.62**	**359**	*eP*	Pn	19 43 07.6	+3.9
SPN	**Mys Shipunski**	**3.77**	**11**	*eP*	Pn	19 43 09.8	+4.2
UGLR	**Uglovaya**	**3.80**	**360**	*eP*	Pn	19 43 11.3	+5.0
AVH	**Avacha**	**3.86**	**359**	*eP*	Pn	19 43 12.2	+5.2
KOK	**Koryaka**	**3.89**	**358**	*eP*	Pn	19 43 12.3	+4.9
KRX	**Arik**	**3.95**	**358**	*eP*	Pn	19 43 12.4	+4.1
GNL	**Ganaly**	**4.32**	**353**	*eP*	Pn	19 43 18.8	+5.4
KBTR	**Krutoberegovo**	**7.22**	**18**	*eP*	Pn	19 43 57.6	+4.5

*JMA **29** 20:11:16.0±0.6, 32°.N×142°.×14°.1E±°, h41km, MV3.6/33, E OFF HACHIJOJIMA ISLAND*

*IDC **29** 20:11:16.1±2.1, 31°.95N×140°.83E, h58km±18km, mb3.4/7, mbtmp3.7/9, ML3.2/2, Error ellipse: s-maj=37.3km s-min=16.3km az=72.0*

ISC 29 20:11:14.5±0.8, 32°.09N±0°.06×141°.17E±0°.08, h57km, n24, σ2$ 59/32, mb3.8/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**1.25**	**288**	P	**Pn**	**20 11 35.5**	**-0.2**
JHCJ	**Hachijojimakas**	**1.52**	**311**	P	**Pn**	**20 11 38.7**	**-0.6**
JHJ2	**Mitsune**	**1.53**	**312**	P	**Pn**	**20 11 39.0**	**-0.5**
JHJ2				*eS*	**Sn**	**20 11 55.1**	**-3.2**
JHJ	**Hachijo jima 2**	**1.56**	**312**	P	**Pn**	**20 11 39.0**	**-0.8**
	169nm,0.3s,baz=112,slow=23,SNR=24						
JHJ				S	**Sn**	**20 11 55.0**	**-4.0**
	166nm,0.3s,baz=82,slow=20,SNR=7.4						
JMKN	**Mikurajimanish**	**2.24**	**324**	*eP*	**Pn**	**20 11 49.2**	**+0.1**
JMKN				*eS*	**Sn**	**20 12 13.2**	**-2.3**
BSO1	**Boso 1**	**2.57**	**357**	*eP*	**Pn**	**20 11 53.9**	**+0.8**
JIM2	**Oshima 3**	**3.00**	**332**	P	**Pn**	**20 11 60.0**	**+0.4**
JOD2	**Odawara 2**	**3.61**	**332**	*eP*	**Pn**	**20 12 08.3**	**+0.4**
JYN	**Shimob**	**4.04**	**328**	*eP*	**Pn**	**20 12 16.1**	**+2.3**
JNY	**Yasuok**	**4.27**	**321**	*eP*	**Pn**	**20 12 18.6**	**+1.6**
JRY	**Ryogami san**	**4.35**	**335**	*eP*	**Pn**	**20 12 19.9**	**+1.9**
JRY				*eS*	**Sn**	**20 13 06.8**	**-0.7**
JHO	**Hitachi**	**4.54**	**354**	P	**Pn**	**20 12 20.8**	**+0.2**
JHO				*eS*	**Sn**	**20 13 08.0**	**-4.1**
JCJ	**Chichijima**	**5.05**	**170**	P	**Pn**	**20 12 28.9**	**+1.3**
	2.5nm,0.3s,baz=358,slow=20,SNR=7.1						
JCJ				S	**Sn**	**20 13 20.5**	**-4.2**
	25nm,0.5s,baz=265,slow=16,SNR=1.3						
	22nm,0.7s						
MJAR	**Matsushiro Arr**	**5.07**	**332**	P	**Pn**	**20 12 30.7**	**+2.7**
	0.3nm,0.3s,baz=160,slow=14,SNR=16						
	2.4nm,0.4s						
JYTA	**Yamagatataniai**	**5.08**	**315**	P	**Pn**	**20 12 29.7**	**+1.6**
JYTA				*eS*	**Sn**	**20 13 21.0**	**-4.4**
JFK	**Kawauchi**	**5.27**	**357**	*eS*	**Sn**	**20 13 24.0**	**-6.2**
JOTO	**OTAMA OYAMA**	**5.50**	**353**	*eP*	**Pn**	**20 12 34.1**	**+0.3**
JOTO				*eS*	**Sn**	**20 13 30.6**	**-5.2**
MKAR	**Makanchi Array**	**46.72**	**306**	P	**P**	**20 19 38.2**	**+0.5**
	1.1nm,0.4s,baz=87,slow=9.5,SNR=32						
	1.1nm,0.4s						
KURBB	**Kurchatov Arra**	**49.00**	**311**	P	**P**	**20 19 55.3**	**+0.1**
	0.7nm,0.5s,baz=91,slow=8.6,SNR=14						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**52.15**	**188**	P	**P**	**20 20 18.8**	**-0.4**
	0.2nm,0.3s,baz=5.9,slow=7.3,SNR=7.0						
	0.2nm,0.3s						
ILAR	**Eielson Array**	**53.82**	**30**	P	**P**	**20 20 33.8**	**+2.7**
	0.6nm,0.9s,baz=278,slow=7.0,SNR=4.8						
	0.6nm,0.9s						
BVAR	**Borovoye Array**	**53.84**	**315**	P	**P**	**20 20 31.4**	**0.0**
	0.3nm,0.3s,baz=94,slow=5.4,SNR=4.4						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**55.87**	**188**	P	**P**	**20 20 46.6**	**+0.3**
	0.1nm,0.5s,baz=8.5,slow=8.0,SNR=2.0						
	0.1nm,0.5s						
FINES	**FINESS Array B**	**73.10**	**333**	P	**P**	**20 22 41.4**	**+3.1**
	2.5nm,1.0s,baz=3.8,slow=4.2,SNR=3.5						
	2.5nm,1.0s						

*IDC **29** 20:13:28.3±3.1, 23°.09N×143°.04E, h97km±28km, mb3.7/13, mbtmp4.0/15, Error ellipse: s-maj=34.9km s-min=12.8km az=77.0*

ISC 29 20:13:25.2±0.8, 23°.06N±0°.09×143°.1E±0°.2, h71km, n23, σ1$ 11/19, mb4.0/13, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**4.11**	**348**	P	**Pn**	**20 14 28.4**	**+3.0**
	24nm,0.3s,baz=25,slow=23,SNR=16						
JCJ				S	**Sn**	**20 15 12.2**	**-0.1**
	307nm,0.5s,baz=118,slow=23,SNR=37						
MJAR	**Matsushiro Arr**	**14.09**	**344**	P	**Pn**	**20 16 39.1**	**-2.2**
	0.9nm,0.4s,baz=160,slow=9.9,SNR=6.5						
KSRS	**Korea Array**	**19.41**	**321**	P	**Pn**	**20 17 47.8**	**+0.5**
	3.1nm,0.7s,baz=136,slow=12,SNR=14						
H11N1	**WAKE ISLAND Hy**	**22.38**	**94**	T	T	20 42 29.9	
	baz=282						
H11N2	**WAKE ISLAND Hy**	**22.38**	**94**	T	T	20 42 29.2	
	baz=282,slow=74						
H11N3	**WAKE ISLAND Hy**	**22.39**	**94**	T	T	20 42 28.3	
	baz=282,slow=74						
H11S3	**WAKE ISLAND Hy**	**22.49**	**97**	T	T	20 41 34.6	
	baz=284,slow=75						
H11S1	**WAKE ISLAND Hy**	**22.50**	**97**	T	T	20 41 36.1	
	baz=284,slow=75						
H11S2	**WAKE ISLAND Hy**	**22.51**	**97**	T	T	20 41 40.7	
	baz=284,slow=75						
USRK	**Ussuriysk Ar.**	**22.99**	**339**	P	**P**	**20 18 23.4**	**-0.5**
	1.8nm,0.6s,baz=119,slow=9.0,SNR=2.7						
	1.8nm,0.6s						
KLR	**Kul'dur**	**27.62**	**344**	P	**P**	**20 19 05.4**	**-0.4**
	1.3nm,0.4s,baz=155,slow=9.6,SNR=7.1						
	1.3nm,0.4s						
SONM	**Songino Array**	**38.26**	**319**	P	**P**	**20 20 38.7**	**+0.1**
	0.3nm,0.5s,baz=124,slow=5.5,SNR=2.5						
	0.3nm,0.5s						
WRA	**Warramunga Ar**	**43.59**	**192**	P	**P**	**20 21 23.1**	**+0.6**
	1.3nm,0.3s,baz=6.4,slow=8.9,SNR=34						
WRA				PcP	**PcP**	**20 23 09.2**	**+0.2**
	0.4nm,0.6s,baz=13,slow=3.8,SNR=2.4						
	1.3nm,0.3s						
ASAR	**Alice Springs**	**47.30**	**192**	P	**P**	**20 21 51.9**	**+0.1**
	0.3nm,0.4s,baz=10,slow=7.7,SNR=14			

comp=E,17µm,0.5s
CEVE Cerro Verde 1.78 81 P **Pn** **20 26 30.0 +0.4**
CEVE S **Sn** **20 26 53.7 +2.1**
CEVE Cerro Verde 1.78 81 *e*P **Pn** **20 26 29.9 +0.4**
SBLS San Blas 1.78 80 *e*P **Pn** **20 26 30.7 +1.1**
UNIC Universidad Ca 1.88 76 P **Pn** **20 26 31.4 +0.5**
UNIC S **Sn** **20 26 56.1 +2.4**
UNIC Universidad Ca 1.88 76 *e*P **Pn** **20 26 31.3 +0.5**
JAYA Jayaque - finc 1.93 87 P **Pn** **20 26 31.6 +0.1**
JAYA S **Sn** **20 26 57.1 +2.0**
JAYA Jayaque - finc 1.93 87 *i* P **Pn** **20 26 31.7 +0.1**
JAYA Jayaque - finc 1.93 87 *e*P **Pn** **20 26 31.9 +0.3**
CEDA San Andres 2.00 82 P **Pn** **20 26 33.1 +0.7**
CEDA S **Sn** **20 26 57.9 +1.3**
LALI Alcalda de L 2.05 91 P **Pn** **20 26 34.4 +1.3**
LALI S **Sn** **20 26 59.7 +1.7**
LALI Alcalda de L 2.05 91 *i* P **Pn** **20 26 34.1 +1.0**
PMON Piamonte 2.06 85 P **Pn** **20 26 34.0 +0.6**
PMON S **Sn** **20 27 00.6 +2.2**
BOQS Boqueron 2.10 85 *e*P **Pn** **20 26 34.7 +0.7**
PIC2 El Picacho 2.12 84 *e*P **Pn** **20 26 35.8 +1.5**
UEES Universidad Ev 2.14 85 P **Pn** **20 26 35.2 +0.8**
UEES S **Sn** **20 27 02.1 +1.9**
SEMO Seminario San 2.15 86 P **Pn** **20 26 36.4 +1.8**
SEMO S **Sn** **20 27 01.5 +1.0**
UTEC Universidad Te 2.17 86 S **Sn** **20 27 03.2 +2.2**
UTEC Universidad Te 2.17 86 *e*P **Pn** **20 26 36.5 +1.6**
MTO3 Montecristo 2.18 67 **Pn** **20 26 36.1 +1.0**
MTO3 Montecristo 2.18 67 P **Pn** **20 26 36.2 +1.1**
MTO3 S **Sn** **20 27 04.2 +2.8**
MTO3 Montecristo 2.18 67 *i* P **Pn** **20 26 36.1 +1.0**
MTO3 Montecristo 2.18 67 *i* P **Pn** **20 26 36.0 +0.9**
PANCS Alcalda de 2.19 88 P **Pn** **20 26 36.8 +1.8**
PANCS S **Sn** **20 27 03.5 +2.1**
IGN Direccin Gen 2.21 85 P **Pn** **20 26 37.5 +2.2**
IGN S **Sn** **20 27 05.1 +3.3**
UDBS Universidad Do 2.22 85 P **Pn** **20 26 37.9 +2.4**
UDBS S **Sn** **20 27 04.8 +2.6**
UDBS Universidad Do 2.22 85 *e*P **Pn** **20 26 37.4 +1.9**
ESQI Esquipulas 2.27 63 **Pn** **20 26 37.5 +1.3**
ESQI Esquipulas 2.27 63 P **Pn** **20 26 37.6 +1.4**
ESQI S **Sn** **20 27 06.3 +2.9**
ESQI Esquipulas 2.27 63 *i* P **Pn** **20 26 37.5 +1.3**
ZAFR2 Estanzuela, Za 2.27 63 *i* P **Pn** **20 26 37.8 +1.7**
LFRS El Faro 2.31 88 *i* P **Pn** **20 26 38.0 +1.2**
LBRS Las Brisas 2.33 85 *e*P **Pn** **20 26 38.4 +1.4**
PAVA Las Pavas 2.43 86 P **Pn** **20 26 39.6 +1.1**
PAVA Las Pavas 2.43 86 *e*P **Pn** **20 26 39.6 +1.1**
COEG Centro de Oper 2.48 88 P **Pn** **20 26 40.7 +1.6**
COEG S **Sn** **20 27 11.7 +3.0**
LLGN La Laguna 2.49 75 P **Pn** **20 26 40.3 +1.0**
LLGN S **Sn** **20 27 11.4 +2.5**
LLGN La Laguna 2.49 75 *e*P **Pn** **20 26 40.3 +1.0**
TECO Alcaldia de Te 2.58 90 P **Pn** **20 26 41.7 +1.3**
TECO S **Sn** **20 27 12.5 +1.5**
SCLA Alcaldia de Sa 2.63 86 P **Pn** **20 26 42.6 +1.4**
P5NO Presa 5 de nov 2.63 80 P **Pn** **20 26 42.0 +0.9**
P5NO S **Sn** **20 27 15.0 +2.7**
PQSS Presa 15 de Se 2.79 88 *e*P **Pn** **20 26 44.7 +1.4**
CCIG Comitan 2.81 346 **Pn** **20 26 46.2 +2.5**
CCIG Comitan 2.81 346 P **Pn** **20 26 46.3 +2.6**
CCIG S **Sn** **20 27 19.1 +2.3**
CCIG Comitan 2.81 346 *i* P **Pn** **20 26 46.3 +2.6**
TECA Tecapa 2.85 91 *e*P **Pn** **20 26 45.6 +1.4**
SARH Santa Rosa de 2.87 64 P **Pn** **20 26 46.0 +1.6**
SARH Santa Rosa de 2.87 64 *ij* P **Pn** **20 26 46.0 +1.6**
PACA Pacayal 3.02 91 P **Pn** **20 26 48.0 +1.4**
PACA S **Sn** **20 27 25.4 +3.3**
PACA Pacayal 3.02 91 *e*P **Pn** **20 26 49.9 +3.3**
RANC El Ranchito 3.06 92 P **Pn** **20 26 48.7 +1.6**
RANC S **Sn** **20 27 26.2 +3.2**
RANC El Ranchito 3.06 92 *e*P **Pn** **20 26 49.1 +2.0**
BLLM Bellamira 3.11 91 *e*P **Pn** **20 26 51.8 +4.1**
INTP Intipuca 3.30 96 *e*P **Pn** **20 26 53.1 +2.8**
INTP *e*S **Sn** **20 27 28.6 -0.2**
LCND La Caada 3.45 93 P **Pn** **20 26 54.2 +1.8**
CNCH Conchagua 3.51 94 P **Pn** **20 26 55.4 +2.1**
CNCH S **Sn** **20 27 35.3 +1.1**
CNCH Conchagua 3.51 94 *e*P **Pn** **20 26 55.5 +2.2**
TGIG 3.61 333 *i* P **Pn** **20 26 55.2 +0.7**
PETF Flores 3.68 24 P **Pn** **20 26 57.9 +2.4**
PETF Flores 3.68 24 *i* P **Pn** **20 26 57.5 +2.0**
CSGN Cosiguina Volc 3.81 98 P **Pn** **20 26 59.5 +2.1**
POTN Potosi Cosigui 3.86 98 P **Pn** **20 27 00.2 +2.2**
POTN S **Sn** **20 27 45.1 +2.6**
TGUH Tegucigalpa,Un 4.07 82 P **Pn** **20 27 02.1 +1.1**
CRIN San Cristobal 4.35 101 **Pn** **20 27 07.5 +2.7**
CRIN San Cristobal 4.35 101 P **Pn** **20 27 07.5 +2.7**
CRIN San Cristobal 4.35 101 P **Pn** **20 27 07.0 +2.2**
YUSH Yuscaran 4.48 84 P **Pn** **20 27 08.0 +1.4**
HERN Volcan Telica 4.58 101 **Pn** **20 27 09.8 +1.9**
HERN Volcan Telica 4.58 101 P **Pn** **20 27 09.5 +1.5**
HERN S **Sn** **20 28 00.3 -0.1**
TELN Telica 4.58 101 P **Pn** **20 27 08.4 +0.4**
HOYN Al Sur del Vol 4.58 101 S **Sn** **20 28 00.7 +0.2**
POLN Al Sur del Vol 4.59 101 P **Pn** **20 27 08.5 +0.5**
POLN S **Sn** **20 28 01.2 +0.6**
CNGA Al SSO del Vol 4.73 102 P **Pn** **20 27 11.9 +2.0**
CNGN Cerro Negro 4.73 102 **Pn** **20 27 11.5 +1.5**
CNGN Cerro Negro 4.73 102 P **Pn** **20 27 12.0 +2.0**
CMIG Matias Romero 4.85 317 Pn **Pn** **20 27 11.7 +0.1**
comp=E,5.9nm,0.3s,baz=135,slow=11,SNR=45
CMIG Sn **Sn** **20 28 09.0 +2.0**
comp=E,33nm,0.3s,baz=82,slow=14,SNR=8.0
CMIG LR LR 20 29 30.4
comp=E,1µm,21.3s,baz=105,slow=40
MOM3 MOM3 4.90 102 P **Pn** **20 27 14.4 +2.1**
COPN Copaltepe 4.91 105 P **Pn** **20 27 14.4 +1.9**
MOM2 El Cardon 4.95 102 S **Sn** **20 28 12.7 +3.3**
LIMN Finca el Limon 4.95 95 P **Pn** **20 27 14.6 +1.5**
LIMN S **Sn** **20 28 12.2 +2.5**
RCFN Al S de San Ju 5.08 90 P **Pn** **20 27 17.3 +2.4**
RCVN Varillal2 5.09 89 P **Pn** **20 27 18.7 +1.6**
MGAN Managua 5.24 105 Pn **Pn** **20 27 16.9 +1.8**
BOAB BOACO BROADBAN 5.72 100 Pn **Pn** **20 27 24.4 +0.7**
SIUN Universidad Ur 6.47 88 **Pn** **20 27 35.9 +1.9**
JUD3 Juan Diaz 3 6.67 120 **Pn** **20 27 39.5 +2.8**
JTS Las Juntas de 7.12 116 Pn **Pn** **20 27 46.6 +3.8**
comp=E,1.8nm,0.3s,baz=310,slow=9.3,SNR=9.5
JTS Sn Sn 20 28 52.8 -10
baz=347,slow=21
JTS Lg Lg 20 29 29.2
baz=87,slow=19
JTS Las Juntas de 7.12 116 **Pn** **20 27 46.7 +3.9**
TEIG Tepich 7.30 24 **Pn** **20 27 46.6 +1.4**
TEIG Tepich 7.30 24 P **Pn** **20 27 46.3 +1.0**
comp=E,15µmcomp=E,1µm,0.5s
TLIG Tlapa 7.95 301 **Pn** **20 27 57.7 +3.3**
PIRO Carate, Puerto 9.45 122 Pn 20 28 19.9 +5.2
833A Chaparral WMA, 16.47 334 **P** **20 29 55.0 +2.9**
HNDO Hondo 17.49 337 P **P** **20 30 05.8 +2.4**
346A Big Creek Wild 17.85 5 P **Pn** **20 30 06.7 -0.2**
346A IAmb IAmb 20 30 25.2
comp=Z,67nm,0.8s
GUY2C Guyana, Caldas 17.87 116 P **P** **20 30 10.0 +1.8**
comp=Z,37nm,0.8s
BBAC Balboa, Cauca 18.11 128 P **P** **20 30 13.3 +2.7**
comp=Z,14nm,0.9s
POPC Popayan, Colom 18.23 126 P **P** **20 30 13.5 +1.5**
TIGA Tifton 19.21 21 IAmb IAmb 20 30 47.1
comp=Z,48nm,0.8s
TXAR Lajitas Array 19.38 326 P **Pn** **20 30 27.6 +2.0**
comp=Z,0.8nm,0.3s,baz=154,slow=12,SNR=110
TXAR PcP **PcP** **20 34 47.3 +1.4**
comp=Z,0.7nm,0.8s,baz=107,slow=0.5,SNR=4.0
TXAR ScP **ScP** **20 38 21.3 +1.0**
comp=Z,0.6nm,0.9s,baz=94,slow=2.3,SNR=4.5
comp=Z,11nm,0.7s
PAMC Pamplona, Colo 19.42 107 P **P** **20 30 24.7 -0.6**
comp=Z,128nmcomp=Z,17nm,0.9s
OZNA Ozona 19.46 334 P **P** **20 30 26.1 +0.9**
OZNA IAmb IAmb 20 30 29.0
comp=Z,18nm,0.7s
Z47A Carrollton 19.80 8 P **P** **20 30 29.9 +1.1**
Z47A IAmb IAmb 20 30 51.4
comp=Z,48nm,1.1s
LRAL Lakeview Retre 19.82 11 P **P** **20 30 28.8 -0.2**
LRAL IAmb IAmb 20 30 36.5
comp=Z,27nm,1.0s
VILC Villavicencio, 19.86 117 P **Pn** **20 30 32.5 +1.1**
comp=Z,26µmcomp=Z,35nm,0.9s

Z38A Mt. Pleasant 19.89 351 IAmb IAmb 20 30 34.3
comp=Z,20nm,0.8s
152A Waverly Hall 20.00 17 IAmb IAmb 20 30 37.5
comp=Z,32nm,0.6s
PLPT Palo Pinto 20.19 343 P **P** **20 30 33.0 0.0**
PLPT IAmb IAmb 20 30 47.8
comp=Z,18nm,0.7s
ALPN Alpine 20.19 328 P **P** **20 30 34.7 +1.5**
ALPN IAmb IAmb 20 30 38.7
comp=Z,30nm,1.0s
SGCY Sterling City 20.33 336 P **P** **20 30 33.6 -1.1**
SGCY IAmb IAmb 20 30 37.8
comp=Z,42nm,0.9s
Z35A Perchaven, San 20.40 346 P **P** **20 30 33.7 -1.6**
Z35A IAmb IAmb 20 30 43.5
comp=Z,19nm,0.8s
ABTX Abilene, Hawle 20.42 340 **P** **20 30 34.1 -1.6**
ABTX IAmb IAmb 20 30 38.0
comp=Z,25nm,0.6s
229A Bryant Ranch, 20.66 334 IAmb IAmb 20 30 41.1
comp=Z,17nm,0.8s
TPB01 Permian Basin 20.72 329 IAmb IAmb 20 30 43.6
comp=Z,29nm,0.8s
Y49A Blount Mountai 20.73 12 P **P** **20 30 38.8 -0.1**
MACC Macarena, Meta 20.75 122 P Pn 20 30 42.5 +0.7
SDV Santo Domingo 20.91 101 P **P** **20 30 38.1 -3.2**
comp=Z,7.9nm,0.8s,baz=356,slow=2.1,SNR=7.5
SDV Santo Domingo 20.91 101 P **P** **20 30 39.7 -1.6**
SDV Santo Domingo 20.91 101 P **P** **20 30 38.9 -2.4**
comp=Z,12nm,0.7s
TPB06 Permian Basin 21.02 331 IAmb IAmb 20 30 45.5
comp=Z,36nm,0.8s
GOGA Godfrey 21.07 19 P **P** **20 30 41.8 -0.8**
GOGA IAmb IAmb 20 31 04.3
comp=Z,33nm,1.0s
ODSA Odessa 21.11 333 IAmb IAmb 20 30 45.8
comp=Z,26nm,0.8s
TPB07 Mentone 21.18 330 IAmb IAmb 20 30 49.5
comp=Z,75nm,0.7s
X48A Hartselle 21.19 10 P **P** **20 30 42.7 -1.1**
X48A IAmb IAmb 20 31 08.8
comp=Z,17nm,0.8s
APMT Aspermont 21.23 340 IAmb IAmb 20 30 51.1
comp=Z,23nm,0.8s
VHRN Van Horn 21.23 326 IAmb IAmb 20 30 48.4
comp=Z,30nm,1.0s
TPB13 Reeves - Culbe 21.25 330 IAmb IAmb 20 30 48.8
comp=Z,146nm,0.8s
129A Stewart Farms, 21.26 335 IAmb IAmb 20 30 47.1
comp=Z,37nm,0.8s
Y52A Lilburn 21.31 17 IAmb IAmb 20 31 08.6
comp=Z,29nm,0.9s
POST Post 21.50 336 IAmb IAmb 20 30 49.2
comp=Z,24nm,0.7s
128A Castleberry Fa 21.51 334 IAmb IAmb 20 30 51.8
comp=Z,24nm,0.7s
DKNS Dickens 21.82 338 IAmb IAmb 20 30 56.5
comp=Z,21nm,0.6s
SWET Sewanee 22.14 12 IAmb IAmb 20 30 56.2
comp=Z,22nm,0.9s
MNTX Cornudas Mount 22.15 327 IAmb IAmb 20 30 59.0
comp=Z,29nm,0.8s
W50A Signal Mountai 22.26 13 IAmb IAmb 20 31 14.1
comp=Z,22nm,0.8s
FNO Franklin 22.28 347 IAmb IAmb 20 30 59.0
comp=Z,26nm,0.8s
LCAR Lake Charles 22.43 1 IAmb IAmb 20 30 58.6
comp=Z,14nm,0.7s
V48A Smith Brothers 22.49 10 IAmb IAmb 20 31 19.9
comp=Z,16nm,0.9s
W52A Murphy 22.50 16 IAmb IAmb 20 31 17.1
comp=Z,22nm,0.7s
JSC Jenkinsville 22.61 22 IAmb IAmb 20 31 07.0
comp=Z,40nm,1.1s
CPCT Cooper Cave 22.68 15 IAmb IAmb 20 31 20.8
comp=Z,34nm,1.5s
BG3 Lake Jocassee 22.70 18 IAmb IAmb 20 31 19.2
comp=Z,18nm,0.9s
WVT Waverly 22.72 8 P **P** **20 30 58.7 -1.6**
MSTX Muleshoe 22.80 335 IAmb IAmb 20 31 03.9
comp=Z,21nm,0.6s
OK029 Liberty Lake 22.81 347 IAmb IAmb 20 31 23.0
comp=Z,14nm,0.8s
TKL Tuckaleechee C 23.07 16 IAmb IAmb 20 31 20.5
comp=Z,44nm,1.3s
KMSC Kings Mountain 23.36 21 IAmb IAmb 20 31 32.9
comp=Z,20nm,1.0s
V53A Saluda 23.36 18 IAmb IAmb 20 31 38.5
comp=Z,14nm,0.6s
T42A Van Buren 23.39 1 IAmb IAmb 20 31 09.3
comp=Z,10nm,0.5s
U49A Red Boiling Sp 23.43 12 IAmb IAmb 20 31 29.2
comp=Z,20nm,1.0s
MGMO Mountain Grove 23.52 358 IAmb IAmb 20 31 09.3
comp=Z,26nm,1.0s
CGM3 Cape Girardeau 23.71 4 IAmb IAmb 20 31 11.5
comp=Z,11nm,0.6s
NOKA Waynoka 23.96 345 IAmb IAmb 20 31 16.1
comp=Z,10nm,0.7s
TZTN Tazewell 23.97 16 IAmb IAmb 20 31 34.9
comp=Z,35nm,1.1s
121A Cookes Peak, D 24.10 324 IAmb IAmb 20 31 20.1
comp=Z,30nm,1.4s
T50A Nancy 24.11 13 IAmb IAmb 20 31 35.9
comp=Z,48nm,1.5s
S44A Carbondale 24.13 4 IAmb IAmb 20 31 44.1
comp=Z,22nm,0.8s
SIUC Southern Illin 24.15 4 IAmb IAmb 20 31 37.7
comp=Z,35nm,1.1s
319A Douglas 24.17 320 IAmb IAmb 20 31 21.2
comp=Z,18nm,0.8s
ATAH Atahualpa 24.28 147 LR LR 20 39 44.6
comp=Z,316nm,18.0s,baz=30,slow=34
CCM Cathedral Cave 24.41 0 P **P** **20 31 14.3 -2.4**
CCM IAmb IAmb 20 31 17.3
comp=Z,27nm,0.8s
R40A Maddies Statio 24.66 358 IAmb IAmb 20 31 19.3
comp=Z,23nm,0.8s
Y22A Socorro 24.72 328 IAmb IAmb 20 31 24.2
comp=Z,15nm,0.8s
V58A Windy Hill, Pi 24.77 24 IAmb IAmb 20 31 20.0
comp=Z,14nm,1.0s
RTBA Rita Blanca 24.95 338 IAmb IAmb 20 31 24.0
comp=Z,12nm,0.7s
S51A Beatyville 24.99 15 IAmb IAmb 20 31 44.8
comp=Z,13nm,0.9s
WCI Wyandotte Cave 25.01 10 P **P** **20 31 20.0 -2.0**
WCI IAmb IAmb 20 31 55.2
comp=Z,18nm,0.8s
OLIL Olney 25.26 6 P **P** **20 31 23.9 -0.5**
OLIL IAmb IAmb 20 31 29.3
comp=Z,14nm,0.8s
TUC Tucson 25.74 320 P **P** **20 31 30.9 +2.0**
214A Organ Pipe Nat 26.83 317 P **P** **20 31 40.2 +1.5**
X16A Lo Mia Camp, P 27.58 322 P **P** **20 31 46.0 +0.5**
MVCO Mesa Verde 28.07 330 P **P** **20 31 50.6 +0.5**
MVCO IAmb IAmb 20 31 53.0
comp=Z,10nm,0.8s
WUAZ Wupatki 28.31 324 P **P** **20 31 54.9 +2.8**
PV01 Paradox Valley 28.84 331 P **P** **20 31 57.5 +0.6**
GLA Gilmas 28.84 316 P **P** **20 31 56.5 -0.2**
PV13 Radium Mtn., P 28.98 331 P **P** **20 31 59.1 +1.1**
NNA Nana 29.20 150 LR LR 20 41 33.9
comp=Z,147nm,21.6s,baz=354,slow=32
W13A Hualapai Mount 29.52 321 P **P** **20 32 03.4 +0.4**
HMU Henry Mountain 29.75 328 P **P** **20 32 05.7 +0.7**
HMU IAmb IAmb 20 32 13.2
comp=Z,8.7nm,0.8s
PKCU Pink Cliffs 30.22 326 IAmb IAmb 20 32 15.3
comp=Z,12nm,1.0s
LCMT Little Creek M 30.43 324 P **P** **20 32 13.2 +2.3**
SZCU Shurtz Canyon 30.76 325 IAmb IAmb 20 32 18.5
comp=Z,7.5nm,0.8s
P17A Butcher Ranch, 30.93 330 IAmb IAmb 20 32 18.7
comp=Z,12nm,1.0s
MPU Maple Canyon 31.79 330 IAmb IAmb 20 32 25.7
comp=Z,8.8nm,0.9s
PSUT Pine Spring 31.85 325 IAmb IAmb 20 32 28.3
comp=Z,8.8nm,0.9s
SADO Sadowa 32.84 16 P **P** **20 32 29.3 -2.5**
comp=Z,3.3nm,0.4s,baz=218,slow=10,SNR=7.4
SADO LR LR 20 46 40.0
comp=Z,357nm,18.2s,baz=200,slow=38
comp=Z,3.3nm,0.4s
HWUT Hardware Ranch 33.00 332 IAmb IAmb 20 32 37.6
comp=Z,11nm,0.9s
PDAR Pinedale Array 33.06 335 P **P** **20 32 34.5 +0.4**
comp=Z,0.8nm,0.5s,baz=129,slow=10,SNR=12
PDAR PcP **PcP** **20 35 17.4 +0.1**
comp=Z,0.6nm,0.6s,baz=147,slow=5.2,SNR=5.6
PDAR ScP **ScP** **20 39 00.7 +0.6**
comp=Z,0.8nm,0.9s,baz=140,slow=5.3,SNR=5.0
comp=Z,0.8nm,0.5s
BGU Big Grassy Mou 33.17 329 IAmb IAmb 20 32 38.5
comp=Z,7.3nm,0.8s
VES Vestal, Richgr 33.32 317 IAmb IAmb 20 32 40.3
comp=Z,12nm,0.9s
HVU Hansel Valley 33.70 331 IAmb IAmb 20 32 42.5
comp=Z,6.1nm,0.8s
AHID Auburn Hatcher 33.71 333 IAmb IAmb 20 32 41.7
comp=Z,5.5nm,0.8s
ELK Elko 34.17 327 IAmb IAmb 20 32 48.2
comp=Z,6.0nm,0.7s
MDPB Devils Postpil 34.37 319 IAmb IAmb 20 32 49.5
comp=Z,8.1nm,1.2s
NVAR Mina Arroyo Bea 34.37 321 P **P** **20 32 48.4 +2.9**
comp=Z,11nm,0.9s,baz=137,slow=8.3,SNR=41
NVAR PcP **PcP** **20 35 22.2 +1.1**
comp=Z,2.1nm,0.8s,baz=128,slow=3.8,SNR=6.3
NVAR ScP **ScP** **20 39 05.9 +1.2**
comp=Z,0.6nm,0.6s,baz=100,slow=4.5,SNR=1.8
comp=Z,11nm,0.9s
NVAR Mina Arroyo Bea 34.37 321 P **P** **20 32 45.1 -0.4**
NVAR **PcP** **20 35 23.0 +1.9**
LHV Little Huntoon 34.38 321 P **P** **20 32 45.3 +0.1**
LHV IAmb IAmb 20 32 53.4
comp=Z,8.4nm,0.9s
KVN Kaiserville 34.64 322 **P** **20 32 46.8 -1.0**
RLMT Red Lodge 34.94 338 IAmb IAmb 20 32 53.4
comp=Z,8.0nm,1.4s
CMB Columbia Colle 35.44 319 P **P** **20 32 56.2 +1.7**
PNTR Pine Nut 35.57 321 IAmb IAmb 20 33 01.8
comp=Z,9.2nm,0.7s
HLID Hailey 35.84 331 P **P** **20 32 59.5 +1.5**
HLID IAmb IAmb 20 33 01.8
comp=Z,6.5nm,0.9s
MCMT McKenzie Canyo 36.12 334 P **P** **20 33 02.1 +1.6**
ULM Lac du Bonnet 36.78 355 P **P** **20 33 04.0 -1.8**
comp=Z,5.7nm,0.8s,baz=169,slow=7.4,SNR=11
comp=Z,5.7nm,0.8s
WVOR Wild Horse Val 37.18 326 IAmb IAmb 20 33 14.1
comp=Z,12nm,0.8s
LPAZ La Paz 37.54 141 LR LR 20 49 36.2
comp=Z,138nm,18.3s,baz=356,slow=38
EGMT Eagleton 37.60 340 IAmb IAmb 20 33 15.1
comp=Z,7.1nm,0.8s
LYMT Lyon Mountain 37.63 336 P **P** **20 33 12.7 -0.6**
MDP Montagnes des 39.14 99 LR LR 20 49 50.4
comp=Z,115nm,20.5s,baz=312,slow=37
PINE Pine Mountain 39.34 326 IAmb IAmb 20 33 30.8
comp=Z,12nm,0.8s
WIFE Three Sisters- 39.99 325 IAmb IAmb 20 33 37.0
comp=Z,8.8nm,0.9s
I04A Tendick Farm, 40.16 325 IAmb IAmb 20 33 39.2
comp=Z,8.3nm,0.9s
G05A Wamic 40.50 327 IAmb IAmb 20 33 43.9
comp=Z,19nm,0.9s
H04A Detroit Lake 40.60 326 **P** **20 33 38.0 +0.1**
NEW Newport 40.65 334 LR LR 20 53 09.4
comp=Z,335nm,19.0s,baz=59,slow=40
E07A Sunnyside 40.66 330 IAmb IAmb 20 33 40.9
comp=Z,9.9nm,0.8s
H04D Lebanon 40.80 325 IAmb IAmb 20 33 42.9
comp=Z,17nm,0.8s
EPH Ephrata 41.10 331 IAmb IAmb 20 33 44.7
comp=Z,8.1nm,0.8s
LTY Liberty 41.55 330 IAmb IAmb 20 33 48.6
comp=Z,12nm,1.2s
LON Longmire 41.77 329 IAmb IAmb 20 33 50.9
comp=Z,14nm,0.9s
SIV San Ignacio 41.98 133 LR LR 20 50 24.5
comp=Z,182nm,18.1s,baz=299,slow=35
D05A Enumclaw 42.15 329 IAmb IAmb 20 33 54.0
comp=Z,18nm,1.0s
EDM Edmonton 43.24 341 IAmb IAmb 20 34 00.1
comp=Z,12nm,0.6s
RPN Rapa Nui 44.01 203 LR LR 20 47 51.8
comp=Z,160nm,18.1s,baz=96,slow=30
LLLB Lillooet 44.48 333 IAmb IAmb 20 34 13.4
comp=Z,7.6nm,0.9s
SCHQ Scheffervill 45.46 20 P **P** **20 34 14.7 -2.4**
comp=Z,13nm,0.9s,baz=210,slow=4.8,SNR=12
SCHQ LR LR 20 55 09.0
comp=Z,217nm,18.1s,baz=212,slow=39
comp=Z,13nm,0.9s
H03N2 Juan Fernandez 48.22 166 T T 21 26 28.2
baz=347
H03N1 Juan Fernandez 48.22 166 T T 21 26 26.7
baz=347
H03N3 Juan Fernandez 48.23 166 T T 21 26 28.7
baz=347
YKAW1 Yellowknife Wh 51.56 347 P **P** **20 35 02.6 -1.2**
YKAW1 IAmb IAmb 20 35 04.1
comp=Z,8.0nm,0.7s
YKA Yellowknife Ar 51.59 347 P **P** **20 35 03.5 -0.6**
comp=Z,3.4nm,0.7s,baz=152,slow=7.0,SNR=49
YKA PcP **PcP** **20 36 17.6 -0.1**
comp=Z,0.6nm,0.5s,baz=154,slow=2.9,SNR=4.6
YKA ScP **ScP** **20 40 12.7 -0.2**
comp=Z,0.2nm,0.7s,baz=160,slow=3.1,SNR=3.6
comp=Z,3.4nm,0.7s
U35K Hyder 51.66 333 P **P** **20 35 04.9 +0.2**
baz=129
CPUP Villa Florida 51.68 140 LR LR 20 56 19.7
comp=Z,86nm,19.5s,baz=358,slow=35
BDFB Brasilia 51.81 123 P P 20 35 02.7 -3.9
comp=Z,1.0nm,0.3s,baz=224,slow=15,SNR=3.2
comp=Z,1.0nm,0.3s
V35K Ketchikan 52.01 332 P **P** **20 35 08.0 +0.7**
baz=127
KOTAN Kotaneelee Air 52.30 340 P **P** **20 35 10.9 +1.4**
baz=138
T35M Bob Quinn 52.44 334 P **P** **20 35 11.6 +1.0**
baz=130
FRB Frobisher Bay 52.63 13 P **P** **20 35 08.9 -2.9**
comp=Z,8.3nm,0.7s,baz=215,slow=8.7,SNR=13
FRB LR LR 20 58 52.8
comp=Z,124nm,18.1s,baz=256,slow=38
comp=Z,8.3nm,0.7s
CRAG Craig 52.78 332 P **P** **20 35 14.6 +1.5**
baz=126
WRAK Wrangell Islan 53.00 333 P **P** **20 35 16.1 +1.5**
baz=127
U33K Whale Pass 53.16 332 P **P** **20 35 16.2 +0.4**
baz=126
DLBC Dease Lake 53.29 336 P **P** **20 35 17.9 +0.9**
baz=131
S34M Telegraph Cree 53.40 335 P **P** **20 35 18.4 +0.8**
baz=129
T33K Petersburg 53.50 333 P **P** **20 35 19.1 +0.7**
baz=127
WTLY Watson Lake, Y 53.95 338 P **P** **20 35 22.8 +1.1**
baz=133
R33M Jennings River 54.29 336 P **P** **20 35 25.2 +1.0**
baz=130
WRGLY Wrigley 54.49 343 P **P** **20 35 26.1 +0.7**
baz=141
Q32M Nakina River 54.53 335 IAmb IAmb 20 35 32.4
comp=Z,12nm,1.2s
Q32M Nakina River 54.53 335 P **P** **20 35 27.2 +1.1**
baz=129
S32K Killisnoo 54.60 333 P **P** **20 35 27.8 +1.4**
baz=125
SIT Sitka 54.70 332 P **P** **20 35 28.7 +1.6**
baz=124
TGTN Hyland Airport 54.74 339 P **P** **20 35 28.9 +1.4**
baz=134
R32K Eaglecrest 55.05 334 P **P** **20 35 31.2 +1.6**
baz=126
P32M Atlin 55.50 335 P **P** **20 35 34.3 +1.4**
baz=127
P33M Teslin, Yukon 55.53 336 P **P** **20 35 34.5 +1.4**
baz=129
S31K Pelican 55.62 333 P **P** **20 35 35.0 +1.4**
baz=124
R31K City Hall, Gus 55.66 334 P **P** **20 35 34.9 +0.9**
baz=125
SKAG Skagway 56.09 335 P **P** **20 35 38.2 +1.2**
baz=126
N32M Quiet Lake 56.22 337 P **P** **20 35 38.9 +0.8**
baz=129
MMPY Sheldon Lake, 56.52 339 IAmb IAmb 20 35 43.0
comp=Z,7.6nm,0.9s
MMPY Sheldon Lake, 56.52 339 P **P** **20 35 41.4 +1.2**
baz=132

WHY	Whitehorse baz=127	56.62 336	P	P	20 35 41.9	+1.0
P30M	Million Dollar baz=124	57.14 335	P	P	20 35 45.7	+1.0
O30N	Mendenhall baz=126	57.16 336	P	P	20 35 46.4	+1.6
PLCA	Paso Flores comp=Z,158nm,19.2s,baz=30,slow=30	57.37 161	LR	LR	20 55 06.4	
M31M	Drury Creek, Y baz=128	57.37 338	P	P	20 35 47.7	+1.5
N31M	Braeburn, Yuko baz=126	57.46 337	P	P	20 35 47.8	+0.9
HYT	Haines Junctio baz=124	57.76 335	P	P	20 35 50.3	+1.2
O29M	Mount Kennedy baz=123	57.91 334	P	P	20 35 51.1	+0.9
N30M	Aishikik Lake baz=125	57.96 336	P	P	20 35 51.4	+1.0
YUK6	Outpost Mounta baz=123	58.18 335	P	P	20 35 53.0	+0.9
RCBR	Riachuelo comp=Z,48nm,18.2s,baz=279,slow=38	58.39 106	LR	LR	21 02 45.5	
M30M	Minto, Yukon baz=126	58.49 337	P	P	20 35 55.3	+1.3
YUK4	Talbot Arm baz=123	58.51 335	P	P	20 35 55.6	+1.1
PINM	Pinnacle baz=121	58.52 334	P	P	20 35 55.2	+0.9
MAYO	Mayo, Yukon baz=127	58.77 339	P	P	20 35 56.9	+1.0
O28M	Mount Upton baz=121	58.84 334	P	P	20 35 57.5	+0.7
YUK8	Steele Glacier baz=122	58.94 335	P	P	20 35 57.6	+0.2
M29M	Somme Creek baz=124	59.05 337	P	P	20 35 58.5	+0.5
MESA	MESA baz=119	59.30 333	P	P	20 36 00.5	+0.6
L29M	L29M baz=125	59.30 337	P	P	20 36 00.4	+0.7
CTG	Chitna Glacier baz=120	59.42 334	P	P	20 36 00.7	0.0
C36M	Paulatuk baz=142	59.46 347	P	P	20 36 01.2	+0.7
YUK3	Moose Creek baz=122	59.48 335	P	P	20 36 01.3	+0.1
K29M	Barlow Dome baz=126	59.50 338	P	P	20 36 01.7	+0.6
J30M	Hart River baz=127	59.52 339	P	P	20 36 01.2	-0.1
SFJD	Kangerlussuaq comp=Z,175nm,19.8s,baz=220,slow=36	59.78 17	LR	LR	21 02 11.1	
BGLC	Bering Glacier baz=118	59.85 333	P	P	20 36 04.4	+1.0
I30M	Mount Dempster I30M comp=Z,4.6nm,0.9s	59.93 340	IAmb	P IAmb	20 36 04.0 20 36 05.0	0.0
I30M	Mount Dempster baz=127	59.93 340	P	P	20 36 03.8	-0.3
BVCY	Beaver Creek baz=121	59.97 336	P	P	20 36 04.5	+0.2
CRQE	Cirque baz=118	60.07 334	P	P	20 36 05.7	+0.6
KAIM	Kayak Island baz=117	60.27 332	P	P	20 36 06.4	0.0
MCARA	McCarthy VSAT baz=119	60.34 334	P	P	20 36 06.7	-0.1
M27K	Edge Creek, AK baz=120	60.35 336	P	P	20 36 07.4	+0.3
F31M	Tsiigehtchic baz=131	60.52 343	P	P	20 36 08.0	+0.2
I29M	Ogilvie Camp, baz=126	60.66 339	P	P	20 36 09.1	+0.2
L27K	Beaver Creek, comp=Z,6.7nm,0.8s	60.69 336	IAmb	IAmb	20 36 10.9	
L27K	Beaver Creek, baz=121	60.69 336	P	P	20 36 09.3	+0.1
BMRM	Bremner River baz=117	60.82 333	P	P	20 36 10.9	+0.8
M26K	Nabesna, AK baz=119	60.82 335	P	P	20 36 10.8	+0.6
Q23K	Middleton Isla baz=114	60.94 331	P	P	20 36 11.3	+0.5
G30M	tAoh Zraii Nji baz=128	60.96 342	P	P	20 36 10.6	-0.4
INK	Inuvik baz=132,SNR=5.7	61.03 343	P	P	20 36 11.3	0.0
N25K	Chitina, Valde baz=117,SNR=7.0	61.11 334	P	P	20 36 11.7	-0.4
EYAK	Cordova Ski Ar baz=116	61.14 333	P	P	20 36 11.9	-0.3
RES	Resolute Bay comp=Z,120nm,18.9s,baz=240,slow=39	61.16 359	LR	LR	21 05 41.7	
RES	Resolute Bay comp=Z,4.5nm,0.8s	61.16 359	IAmb	IAmb	20 36 11.0	
H29M	Whitestone baz=126	61.18 340	P	P	20 36 13.0	+0.5
F30M	Barrier River baz=129	61.23 342	P	P	20 36 13.0	+0.3
I28M	Miner Creek baz=124	61.27 339	P	P	20 36 13.4	+0.2
L26K	Log Cabin Wild baz=119	61.27 336	P	P	20 36 12.9	-0.2
G29M	Pine Creek baz=126	61.48 341	P	P	20 36 15.1	+0.6
KLU	Klutina baz=116,SNR=5.8	61.63 334	P	P	20 36 16.0	+0.4
P23K	Montague Islan baz=114	61.66 332	P	P	20 36 15.4	-0.3
A36M	Sachs Harbour baz=142	61.80 349	P	P	20 36 16.5	+0.1
DOT	Dot Lake comp=Z,8.6nm,1.1s	61.86 336	IAmb	IAmb	20 36 18.9	
GLI	Glacier Island baz=114	61.88 333	P	P	20 36 17.6	+0.3
I27K	Kandik River comp=Z,6.4nm,1.0s	61.94 339	IAmb	IAmb	20 36 19.7	
I27K	Kandik River baz=122	61.94 339	P	P	20 36 18.2	+0.6
SCRK	Sand Creek baz=119	61.99 337	P	P	20 36 18.3	+0.2
M24K	Tolsona, Glenn baz=116	62.01 334	P	P	20 36 18.5	+0.4
PAX	Paxson comp=Z,6.7nm,0.8s	62.10 335	IAmb	IAmb	20 36 19.8	
PAX	Paxson baz=117,SNR=5.1	62.10 335	P	P	20 36 18.3	-0.5
RIDG	Independent Ri baz=118	62.21 336	P	P	20 36 18.8	-0.7
H27K	Steamboat Moun comp=Z,4.8nm,1.0s	62.25 339	IAmb	IAmb	20 36 21.5	
H27K	Steamboat Moun baz=122	62.25 339	P	P	20 36 19.1	-0.6
E29M	Blow River comp=Z,11nm,1.4s	62.34 342	IAmb	IAmb	20 36 21.5	
E29M	Blow River baz=127	62.34 342	P	P	20 36 19.7	-0.5
I26K	Coal Creek Min baz=120	62.34 338	P	P	20 36 19.6	-0.6
SCM	Sheep Creek Mo baz=115	62.38 334	P	P	20 36 20.0	-0.7
F28M	Old Crow baz=125,SNR=20	62.48 341	P	P	20 36 20.6	-0.5
M23K	Glacier View baz=114	62.54 334	P	P	20 36 20.7	-0.9
K24K	Donnelly Dome baz=117	62.60 336	P	P	20 36 21.9	-0.2
G27K	Doyon Strip baz=123	62.61 340	P	P	20 36 21.3	-0.8
SEW	Seward baz=112	62.65 331	P	P	20 36 22.3	-0.1
KNK	Knik Glacier baz=113	62.70 333	P	P	20 36 22.5	-0.3
SML	Sawmill baz=114	62.80 333	P	P	20 36 23.0	-0.5
J25K	Salcha River, baz=118	62.82 337	P	P	20 36 22.7	-0.8
WAT6	Susitna Watana baz=115	62.87 334	P	P	20 36 23.9	-0.2
O22K	Cooper Landing baz=112	62.92 332	P	P	20 36 24.3	+0.1
DHY	Denali Highway baz=115	62.93 335	P	P	20 36 24.5	+0.1
E28M	Babbage River comp=Z,5.8nm,1.2s	62.95 342	IAmb	IAmb	20 36 25.4	
E28M	Babbage River baz=126	62.95 342	P	P	20 36 24.3	+0.1
PMR	Palmer baz=113	63.07 333	P	P	20 36 25.9	+0.7
BRSE	Bradley Lake S baz=110	63.12 331	P	P	20 36 26.2	+0.6
D28M	Stokes Point baz=127,SNR=5.9	63.15 343	P	P	20 36 25.9	+0.4
RC01	Rabbit Creek A baz=112	63.15 332	P	P	20 36 26.3	+0.6
PRP	Porcupine Dome baz=118,SNR=5.8	63.31 338	P	P	20 36 27.0	+0.1
WAT1	Susitna Watana baz=114	63.31 334	P	P	20 36 27.2	+0.4
HDA	Harding Lake baz=116,SNR=5.4	63.34 336	P	P	20 36 27.4	+0.5
E27K	Coleen River comp=Z,4.7nm,0.9s	63.34 341	IAmb	IAmb	20 36 27.6	
E27K	Coleen River baz=123,SNR=6.3	63.34 341	P	P	20 36 27.6	+0.6
KDAK	Kodiak Island baz=108	63.39 328	P	P	20 36 28.0	+0.7
G26K	Porcupine Rive comp=Z,7.5nm,1.1s	63.40 340	IAmb	IAmb	20 36 28.8	
G26K	Porcupine Rive baz=120	63.40 340	P	P	20 36 28.0	+0.8
ILAR	Eielson Array comp=Z,5.1nm,0.9s,baz=136,slow=4.5,SNR=43 comp=Z,5.1nm,0.9s	63.47 337	P	P	20 36 27.8	0.0
HOM	Homer baz=109	63.53 331	P	P	20 36 28.9	+0.7
Q20K	Shuyak Island baz=108	63.55 329	P	P	20 36 29.4	+1.0
M22K	Willow baz=112	63.57 333	P	P	20 36 29.2	+0.7
OHAK	Old Harbor baz=107	63.59 328	P	P	20 36 29.4	+0.8
CAPN	Captain Cook N baz=110	63.68 332	P	P	20 36 29.4	+0.3
D27M	Malcolm River baz=124	63.74 342	P	P	20 36 29.3	-0.2
POKR	Poker Plat Res baz=116	63.84 337	P	P	20 36 30.3	+0.1
MCK	McKinley baz=114,SNR=5.7	63.84 335	P	P	20 36 30.3	0.0
CUT	Chulitna baz=112	63.88 334	P	P	20 36 31.0	+0.5
COLA	College baz=116	63.89 337	P	P	20 36 31.1	+0.6
F26K	Sheenjek River baz=120,SNR=5.8	63.90 340	P	P	20 36 31.3	+0.7
G25K	Bearman Lake baz=118	64.10 339	P	P	20 36 32.1	+0.2
NEA2	Nenana baz=114,SNR=5.0	64.25 336	P	P	20 36 33.1	+0.2
Q19K	Cape Douglas, baz=107	64.27 329	P	P	20 36 33.7	+0.5
SKT	Skwentna baz=111,SNR=9.4	64.27 333	P	P	20 36 33.5	+0.3
TRF	Thorofare Moun baz=112,SNR=7.0	64.28 335	P	P	20 36 34.0	+0.6
P19K	Oil Pt baz=108	64.29 330	P	P	20 36 33.9	+0.6
N20K	Mount Spurr baz=110	64.31 332	P	P	20 36 33.7	+0.2
SPCR	Spurr Chakacha baz=110	64.31 332	P	P	20 36 33.8	+0.3
H24K	Noodor Dome comp=Z,7.4nm,1.0s	64.32 338	IAmb	IAmb	20 36 37.9	
H24K	Noodor Dome baz=116	64.32 338	P	P	20 36 33.8	+0.4
F25K	Christian Rive comp=Z,11nm,1.1s	64.34 340	IAmb	IAmb	20 36 36.3	
F25K	Christian Rive baz=119,SNR=8.6	64.34 340	P	P	20 36 33.9	+0.3
CHIR	Chirikof Islan baz=104	64.47 326	P	P	20 36 34.4	-0.1
G24K	Hadweenzic Riv comp=Z,7.4nm,1.2s	64.56 339	IAmb	IAmb	20 36 37.5	
G24K	Hadweenzic Riv baz=117	64.56 339	P	P	20 36 35.2	+0.2
E25K	Arctic Village baz=119	64.58 340	P	P	20 36 35.4	+0.3
I23K	Minto, Yukon-K baz=114,SNR=9.2	64.59 337	P	P	20 36 35.4	+0.3
C27K	Jago River comp=Z,5.8nm,1.1s	64.76 342	IAmb	IAmb	20 36 38.0	
C27K	Jago River baz=122	64.76 342	P	P	20 36 36.4	+0.2
BPAW	Bear Paw Mtn. baz=112,SNR=8.1	64.82 335	P	P	20 36 36.5	-0.1
Q18K	Katmai Hardscr baz=106	64.87 329	P	P	20 36 37.3	0.0
PPLA	Purkeypile baz=110	64.88 334	P	P	20 36 37.0	-0.3
H23K	Yukon River baz=114	64.94 337	P	P	20 36 37.5	+0.1
M20K	Styx River baz=109	64.95 333	P	P	20 36 38.1	+0.4
O19K	Port Alsworth baz=107	64.98 331	P	P	20 36 38.3	+0.6
F24K	Squaw Lake baz=117	65.07 339	P	P	20 36 38.3	0.0
MLY	Manley baz=113,SNR=8.3	65.08 336	P	P	20 36 38.2	-0.2
PPT	Papeete comp=Z,171nm,20.4s,baz=9.5,slow=29	65.18 243	LR	LR	20 58 05.4	
P18K	Big Mountain, baz=106	65.19 330	P	P	20 36 39.6	+0.5
Q17K	Contact Creek baz=105	65.22 328	P	P	20 36 40.2	+0.7
N19K	Bonanza Creek baz=107	65.24 331	P	P	20 36 40.3	+0.8
C26K	Camden Bay baz=121	65.27 342	P	P	20 36 40.1	+0.7
CHUM	Lake Minchumin baz=111	65.28 335	P	P	20 36 39.9	+0.3
R17L	Mt. Peulik Vol baz=104	65.30 328	P	P	20 36 40.3	+0.4
O18K	Koktuh Hills baz=106	65.31 330	P	P	20 36 40.2	+0.3
D25K	Kavik River baz=119,SNR=8.2	65.42 341	P	P	20 36 40.6	+0.1
G23K	Bananza Creek baz=114	65.48 338	P	P	20 36 40.9	0.0
E24K	Your Creek baz=116	65.52 340	P	P	20 36 41.1	-0.2
M19K	Big River Lodg baz=108	65.53 332	P	P	20 36 41.1	-0.2
H22K	Ishtalitna Cre comp=Z,8.3nm,1.1s	65.66 337	IAmb	IAmb	20 36 43.4	
H22K	Ishtalitna Cre baz=112	65.66 337	P	P	20 36 42.4	+0.3
Q16K	King Salmon baz=104	65.71 329	P	P	20 36 42.8	+0.3
P17K	Kvichak River baz=105	65.73 329	P	P	20 36 41.9	-0.7
COLD	Coldfoot baz=114,SNR=5.2	65.75 339	P	P	20 36 42.6	-0.1
L19K	White Mountain baz=108	65.82 333	P	P	20 36 43.0	-0.2
K20K	Telida baz=109	65.84 334	P	P	20 36 42.9	-0.4
N18K	Kilae Creek	65.86 331		P	20 36 43.6	+0.1
N18K	Kilae Creek baz=106	65.86 331	P	P	20 36 43.1	-0.4
E23K	Chandalar baz=115	65.90 340	P	P	20 36 43.5	-0.2
R16K	Pilot Point baz=103	65.92 327	P	P	20 36 44.0	+0.2
M18K	Stony River baz=106,SNR=8.4	66.06 332	P	P	20 36 45.4	+0.7
CHGN	Chignik baz=102	66.10 326	P	P	20 36 45.0	0.0
G22K	Bettles baz=113	66.10 338	P	P	20 36 45.5	+0.6
H21K	Melozitna Rive comp=Z,11nm,1.5s	66.11 337	IAmb	IAmb	20 36 46.7	
H21K	Melozitna Rive baz=111	66.11 337	P	P	20 36 45.2	+0.2
D24K	Happy Valley baz=116	66.12 341	P	P	20 36 45.1	+0.2
TOLK	Toolik Lake Re baz=115	66.14 340	P	P	20 36 45.6	+0.4
J20K	Nowinta River comp=Z,6.9nm,0.7s	66.14 335	IAmb	IAmb	20 36 46.0	
J20K	Nowinta River baz=109	66.14 335	P	P	20 36 45.3	+0.1
O17K	Koliganek Bris baz=104	66.20 330	P	P	20 36 45.6	0.0
C24K	Franklin Bluff comp=Z,6.3nm,0.8s	66.33 341	IAmb	IAmb	20 36 47.2	
C24K	Franklin Bluff baz=117	66.33 341	P	P	20 36 46.8	+0.5
N17K	Nushagak Hills	66.44 331		P	20 36 46.8	-0.3
N17K	Nushagak Hills baz=105	66.44 331	P	P	20 36 47.0	-0.2
P16K	Nushagak River baz=103	66.47 329	P	P	20 36 47.3	0.0
CHNA	Chernabura Isl baz=100	66.47 324	P	P	20 36 47.4	-0.1
I20K	Naaghedeneel baz=109	66.48 335	P	P	20 36 47.7	+0.4
F22K	John River baz=112	66.57 339	P	P	20 36 48.0	+0.1
D23K	Nanushuk River baz=114	66.64 340	P	P	20 36 48.4	+0.1
O16K	Kokwok River B baz=103	66.65 329	P	P	20 36 49.1	+0.6
L18K	Granite Mounta baz=106	66.65 332	P	P	20 36 49.1	+0.6
E22K	Anaktuvuk Pass comp=Z,6.5nm,1.0s	66.68 339	IAmb	IAmb	20 36 50.5	
E22K	Anaktuvuk Pass baz=113,SNR=7.6	66.68 339	P	P	20 36 48.6	0.0
G21K	Allakaket baz=111	66.69 337	P	P	20 36 48.4	-0.2
J19K	Poorman baz=108	66.70 334	P	P	20 36 48.3	-0.5
S14K	Fog Glacier baz=101	66.72 326	P	P	20 36 49.1	0.0
M17K	Holitna River baz=105	66.78 331	P	P	20 36 49.0	-0.3
H20K	Anotleneega Mo baz=109	66.87 336	P	P	20 36 49.7	-0.1
F21K	Alatna River baz=111,SNR=23	66.93 338	P	P	20 36 50.2	0.0
C23K	Itkillik River comp=Z,8.7nm,1.0s	66.98 341	IAmb	IAmb	20 36 51.9	
C23K	Itkillik River baz=115	66.98 341	P	P	20 36 51.1	+0.6
J18K	Innoko River comp=Z,8.3nm,1.2s	67.01 334	IAmb	IAmb	20 37 05.5	
J18K	Innoko River baz=106	67.01 334	P	P	20 36 51.1	+0.3
SDPT	Sand Point baz=100	67.07 325	P	P	20 36 51.2	0.0
N16K	Nishlik Lake baz=103	67.19 330	P	P	20 36 52.5	+0.6
L17K	Donlin baz=104	67.36 332	P	P	20 36 53.1	+0.1
M16K	Timber Creek baz=103	67.40 331	P	P	20 36 53.8	+0.5
O15K	Ungalikthiuk R baz=102	67.42 329	P	P	20 36 53.6	+0.1
GCSA	Galena City Sc baz=107	67.44 335	P	P	20 36 54.5	+1.0
H19K	Roundabout Mou baz=107	67.50 336	P	P	20 36 54.5	+0.7
K17K	Iditarod baz=104,SNR=5.7	67.51 333	P	P	20 36 53.9	0.0
E21K	Killik River comp=Z,3.8nm,0.8s	67.54 339	IAmb	IAmb	20 36 55.4	
E21K	Killik River baz=111	67.54 339	P	P	20 36 54.3	+0.2
F20K	Avaraat Lake comp=Z,3.9nm,0.7s	67.70 338	IAmb	IAmb	20 36 56.6	
F20K	Avaraart Lake baz=109	67.70 338	P	P	20 36 54.6	-0.4
N15K	Kwethluk River baz=102	67.76 330	P	P	20 36 55.6	0.0
L16K	Owhat River	67.80 331		P	20 36 55.2	-0.6
L16K	Owhat River baz=103	67.80 331	P	P	20 36 55.5	-0.3
G19K	Purcell Mounta baz=107,SNR=8.4	67.94 336	P	P	20 36 56.4	-0.1
J17K	VABM Dome baz=104	68.02 333	P	P	20 36 56.7	-0.4
B22K	Teshekpuk Lake comp=Z,7.3nm,0.8s	68.06 341	IAmb	IAmb	20 36 58.3	
B22K	Teshekpuk Lake baz=112	68.06 341	P	P	20 36 57.5	+0.3
C21K	Knifeblade Rid baz=110	68.07 340	P	P	20 36 57.6	+0.2
M15K	Kasigluk River baz=102	68.16 330	P	P	20 36 58.2	+0.2
H18K	Honhosa River comp=Z,8.0nm,0.9s	68.17 335	IAmb	IAmb	20 36 59.7	
H18K	Honhosa River baz=105	68.17 335	P	P	20 36 58.4	+0.4
O14K	Tigyukauivet M baz=100	68.17 329	P	P	20 36 58.6	+0.5
B21K	Ikpikpuk River baz=111	68.18 340	P	P	20 36 58.6	+0.6
E20K	Nigu River baz=109	68.25 339	P	P	20 36 59.1	+0.5
E19K	Redstone River baz=107	68.38 338	P	P	20 36 59.9	+0.5
F19K	Shaleruckik Mo comp=Z,2.9nm,0.7s	68.40 337	IAmb	IAmb	20 37 00.6	
F19K	Shaleruckik Mo baz=107	68.40 337	P	P	20 36 59.2	-0.2
G18K	Tagagawik comp=Z,15nm,1.5s	68.48 336	IAmb	IAmb	20 37 02.0	
G18K	Tagagawik baz=105	68.48 336	P	P	20 36 59.2	-0.8
N14K	Kuskokwak Cree baz=100	68.50 329	P	P	20 37 00.6	+0.4
D20K	Etivluk River baz=108	68.55 339	P	P	20 37 00.8	+0.4
J16K	Anvik River baz=103	68.66 333	P	P	20 37 01.5	+0.4
FALS	False Pass baz=97	68.67 324	P	P	20 37 01.4	+0.1
L15K	Ungalak Mounta baz=101	68.73 331	P	P	20 37 02.2	+0.6
H17K	Granite Mounta baz=104	68.75 335	P	P	20 37 02.3	+0.6
M14K	Bethel baz=100,SNR=11	68.78 330	P	P	20 37 02.3	+0.4
A22K	Sinclair Lake baz=111	68.79 342	P	P	20 37 02.8	+1.0
I17K	Unalakleet baz=103	68.83 334	P	P	20 37 02.0	-0.1
K15K	Wolf Creek Mou baz=101,SNR=7.7	68.87 332	P	P	20 37 02.4	-0.1
D19K	Kuna River comp=Z,4.5nm,0.7s	69.01 339	IAmb	IAmb	20 37 04.5	
D19K	Kuna River baz=107	69.01 339	P	P	20 37 04.0	+0.7
F18K	Selawik baz=105	69.06 337	P	P	20 37 03.5	0.0
B20K	Meade River comp=Z,9.7nm,0.9s	69.14 340	IAmb	IAmb	20 37 05.8	
B20K	Meade River baz=108	69.14 340	P	P	20 37 03.9	-0.1
G17K	Kiwalik Mounta baz=103	69.18 335	P	P	20 37 04.4	+0.1
L14K	Kuka Creek comp=Z,7.0nm,0.8s	69.23 331	IAmb	IAmb	20 37 09.2	
L14K	Kuka Creek baz=100	69.23 331	P	P	20 37 04.8	+0.1
BORG	Borgarnes comp=Z,64nm,18.2s,baz=272,slow=35	69.38 26	LR	LR	21 06 50.1	
M13K	Dall Lake baz=99	69.40 330	P	P	20 37 06.0	+0.3
A21K	Barrow baz=109	69.40 342	P	P	20 37 05.7	+0.2
E18K	Tukpahlearik C baz=104	69.62 337	P	P	20 37 07.8	+0.8
F17K	Baldwin Pennin baz=103	69.64 336	P	P	20 37 07.3	+0.2
H16K	Elim baz=102,SNR=7.9	69.65 334	P	P	20 37 07.6	+0.3
C19K	Lookout Ridge baz=106	69.69 339	P	P	20 37 08.3	+0.8
G16K	Koyuk River baz=102	69.85 335	P	P	20 37 09.0	+0.5
J14K	Nanvaranak Lak baz=100,SNR=8.1	69.88 332	P	P	20 37 09.3	+0.7
E17K	Hotham Inlet baz=103	70.01 337	P	P	20 37 09.3	-0.1
C18K	Utukok River baz=104	70.14 339	P	P	20 37 10.3	0.0
K13K	Kusilvak Mount baz=98	70.26 331	P	P	20 37 11.7	+0.7
UNV	Unalaska Valle baz=94	70.37 323	P	P	20 37 12.1	+0.2
G15K	Niukluk baz=100	70.48 335	P	P	20 37 12.6	+0.3

A19K	**Wainwright**	**70.48**	**340**	P		**P**		**20 37 12.5**	**+0.2**
	baz=105									
D17K	**Noatak River**	**70.61**	**337**	P		**P**		**20 37 13.2**	**+0.1**
	baz=102									
RDOG	**Red Dog Mine**	**70.62**	**338**	P		**P**		**20 37 14.1**	**+1.0**
	baz=102									
M11K	**Mekoryuk**	**70.80**	**330**	P		**P**		**20 37 14.3**	**-0.1**
	baz=96									
C17K	**DeLong Mountai**	**70.81**	**338**	P		**P**		**20 37 14.5**	**+0.2**
	baz=102									
F15K	**North Star Dit**	**70.85**	**335**	IAmb		IAmb		20 37 16.3		
	comp=Z,4.7nm,0.7s									
F15K	**North Star Dit**	**70.85**	**335**	P		**P**		**20 37 14.6**	**0.0**
	baz=100									
ANM	**Nome**	**70.97**	**334**	P		**P**		**20 37 15.5**	**+0.1**
	baz=99									
F14K	**Arctic Creek**	**71.50**	**335**	P		**P**		**20 37 18.6**	**0.0**
	baz=98									
DBG	**Daneborg**	**71.99**	**16**	*i* P		**P**		**20 37 19.3**	**-2.0**
TNA	**Tin City**	**72.17**	**335**	IAmb		IAmb		20 37 24.6		
	comp=Z,6.5nm,1.1s									
TNA	**Tin City**	**72.17**	**335**	P		**P**		**20 37 22.6**	**+0.1**
	baz=97									
SPIA	**Saint Paul Isl**	**72.67**	**326**	P		**P**		**20 37 25.7**	**+0.1**
	baz=92									
DAG	**Danmarks Havn**	**72.98**	**13**	*i* P		**P**		**20 37 24.8**	**-2.3**
DAG				IAmb		IAmb		20 37 25.1		
	comp=Z,3.9nm,0.5s									
GAMB	**Gambell**	**73.65**	**333**	P		**P**		**20 37 31.9**	**+0.6**
	baz=93									
NOR	**Nord**	**74.47**	**8**	*i* P		**P**		**20 37 33.8**	**-2.0**
NOR				IAmb		IAmb		20 37 34.6		
	comp=Z,2.3nm,0.5s									
EKA	**Eskdalemuir Ar**	**78.01**	**36**	P		P		20 37 52.4	-4.1	
	comp=Z,2.1nm,0.8s,baz=282,slow=3.9,SNR=3.8									
	comp=Z,2.1nm,0.8s									
ESDC	**Sonseca Array**	**79.56**	**52**	P		P		20 38 01.2	-4.2	
	comp=Z,0.7nm,0.8s,baz=281,slow=4.5,SNR=4.5									
	comp=Z,0.7nm,0.8s									
MDT	**Midelt**	**80.16**	**59**	LR		LR		21 05 32.8		
	comp=Z,40nm,21.6s,baz=232,slow=30									
NOA	**NORSAR Array B**	**84.28**	**29**	P		**P**		**20 38 27.9**	**-1.8**
	comp=Z,1.5nm,0.9s,baz=285,slow=5.3,SNR=3.3									
NOA				LR		LR		21 14 04.2		
	comp=Z,24nm,20.6s,baz=335,slow=34									
	comp=Z,1.5nm,0.9s									
DBIC	**Dimbokro**	**85.15**	**84**	LR		LR		21 12 03.6		
	comp=Z,54nm,20.8s,baz=282,slow=33									
HFS	**Hagfors**	**85.73**	**29**	P		**P**		**20 38 34.3**	**-2.7**
	comp=Z,4.4nm,0.9s,baz=338,slow=5.3,SNR=2.6									
HFS				LR		LR		21 15 16.6		
	comp=Z,42nm,20.5s,baz=276,slow=35									
	comp=Z,4.4nm,0.9s									
DAVOX	**Davos/Dischmat**	**87.82**	**42**	LR		LR		21 12 42.9		
	comp=Z,40nm,20.1s,baz=261,slow=32									
SEY	**Seymchan**	**89.39**	**336**	P		**P**		**20 38 55.3**	**+0.8**
	comp=Z,4.0nm,1.0s,baz=64,slow=3.7,SNR=6.0									
	comp=Z,4.0nm,1.0s									
GERES	**GERESS Array B**	**89.60**	**40**	LR		LR		21 14 08.4		
	comp=Z,50nm,20.5s,baz=68,slow=32									
TORD	**Torodi Ar. Bea**	**89.95**	**77**	P		**P**		**20 38 54.9**	**-3.1**
	comp=Z,0.4nm,1.0s,baz=295,slow=6.1,SNR=1.6									
FINES	**FINESS Array B**	**90.67**	**25**	LR		LR		21 20 07.0		
	comp=Z,30nm,19.0s,baz=298,slow=36									
TIXI	**Tiksi**	**90.81**	**348**	LR		LR		21 23 22.5		
	comp=Z,43nm,21.8s,baz=15,slow=38									
VRAC	**Vranov**	**91.20**	**38**	LR		LR		21 17 24.3		
	comp=Z,35nm,18.1s,baz=269,slow=34									
MA2	**Magadan**	**91.75**	**333**	P		**P**		**20 39 06.0**	**+0.5**
	comp=Z,3.8nm,0.6s,baz=353,slow=6.3,SNR=3.8									
	comp=Z,3.8nm,0.6s									
NRIK	**Noril'sk**	**97.33**	**0**	LR		LR		21 26 34.0		
	comp=Z,79nm,20.6s,baz=3.5,slow=37									
AKASG	**Malin Array Be**	**97.80**	**34**	LR		LR		21 23 53.6		
	comp=Z,26nm,21.5s,baz=336,slow=36									
YAK	**Yakutsk**	**98.06**	**342**	LR		LR		21 30 41.7		
	comp=Z,38nm,19.9s,baz=56,slow=40									
KURBB	**Kurchatov Arra**	**115.51**	**7**	PKP		**PKiKP**		**20 44 40.0**	**0.0**
	comp=Z,0.4nm,0.5s,baz=348,slow=1.8,SNR=8.9									
SONM	**Songino Array**	**116.86**	**347**	PKP		**PKPdf**		**20 44 43.3**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=319,slow=2.5,SNR=3.9									
KSRS	**Korea Array**	**117.23**	**325**	PKP		**PKiKP**		**20 44 45.8**	**+2.0**
	comp=Z,0.4nm,0.4s,baz=334,slow=0.7,SNR=4.5									
MKAR	**Makanchi Array**	**119.68**	**5**	PKP		**PKPdf**		**20 44 47.8**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=308,slow=3.1,SNR=4.6									
HHC	**Hu-ho-hao-te**	**121.84**	**340**	*e*P		**PKPdf**		**20 44 50.8**	**-1.9**
WMQ	**Urumqi**	**122.91**	**1**	*e*PKP		**PKPdf**		**20 44 55.3**	**+0.7**
WMQ				sPKP		sPKPdf		20 45 16.5	+11	
NJ2	**Nanjing**	**126.17**	**328**	*e*P		**PKPdf**		**20 44 59.8**	**-1.3**
NJ2				pmax		pmax				
	comp=Z,21nm,0.5s									
GTA2	**Gaotai**	**126.22**	**349**	PKP		**PKPdf**		**20 45 02.0**	**+0.8**
GTA2				sPKP		sPKPdf		20 45 10.5	-1.9	
WRA	**Warramunga Arr**	**135.82**	**255**	PKP		**PKPdf**		**20 45 20.1**	**+0.4**
	comp=Z,1.3nm,0.8s,baz=100,slow=1.6,SNR=8.6									
ASAR	**Alice Springs**	**136.03**	**250**	PKP		**PKPdf**		**20 45 20.3**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=101,slow=2.1,SNR=12									
PZH	**PanZhiHua**	**138.18**	**342**	PKP		**PKPdf**		**20 45 25.3**	**+1.3**
CMAR	**Chiang Mai Arr**	**146.60**	**342**	PKPbc		**PKPbc**		**20 45 40.9**	**+0.4**
	comp=Z,12nm,0.8s,baz=347,slow=3.5,SNR=82									

*IDC **29** 20:30:18.7±1.8, 32.°48N×139.°88E, h152km±24km, mb3.0/4, mbtmp3.5/6, Error ellipse: s-maj=93.7km s-min=13.7km az=73.0*

ISC 29 20:30:18.2±1.1, 32.°5N±0.°2×139.°8E±0.°5, h150km, n6, σ1§36/8, mb3.3/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m	s	ISC
MJAR	**Matsushiro Arr**	**4.25**	**342**	P		**Pn**	**20**	**31**	**23.2**	**+1.6**
	2.7nm,0.7s,baz=176,slow=13,SNR=11									
MJAR				S		**Sn**	**20**	**32**	**08.7**	**-2.3**
	3.4nm,0.5s,baz=108,slow=3.3,SNR=1.3									
JCJ	**Chichijima**	**5.76**	**159**	P		**Pn**	**20**	**31**	**41.7**	**-0.1**
	18nm,0.4s,baz=357,slow=19,SNR=8.9									
JCJ				S		**Sn**	**20**	**32**	**46.2**	**-0.9**
	42nm,0.7s,baz=236,slow=23,SNR=5.8									
KURBB	**Kurchatov Arra**	**47.88**	**311**	P		**P**	**20**	**38**	**40.3**	**-0.6**
	0.2nm,0.6s,baz=89,slow=8.4,SNR=2.4									
	0.2nm,0.6s									
WRA	**Warramunga Arr**	**52.42**	**187**	P		**P**	**20**	**39**	**15.5**	**+0.2**
	0.2nm,0.5s,baz=3.8,slow=7.4,SNR=8.4									
	0.2nm,0.5s									
ASAR	**Alice Springs**	**56.15**	**187**	P		**P**	**20**	**39**	**42.6**	**+0.4**
	0.2nm,0.4s,baz=10.0,slow=7.8,SNR=8.6									
	0.2nm,0.4s									
FINES	**FINESS Array B**	**72.22**	**332**	P		**P**	**20**	**41**	**26.9**	**+0.4**
	0.5nm,0.4s,baz=57,slow=5.1,SNR=6.8									
	0.5nm,0.4s									

*KRSC **29** 20:33:42.8±2.2, 51.°92N×161.°06E, h50km±23km, Ml3.7*
*IDC **29** 20:33:43.5±0.9, 52.°12N×160.°55E, h0km, mb3.7/14, mbtmp3.7/15, ML3.2/1, Error ellipse: s-maj=26.4km s-min=18.7km az=147.0*

ISC 29 20:33:46.7±0.7, 51.°99N±0.°06×160.°86E±0.°05, h28km, n40, σ1§46/44, mb3.6/14, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m	s	ISC
SPN	**Mys Shipunski**	**1.23**	**336**	*e*P		**Pn**	**20**	**34**	**06.5**	**-1.4**
SPN				*e*S		**Sn**	**20**	**34**	**22.3**	**-1.2**
NLC	**Nalytchevo**	**1.50**	**323**	*e*P		**Pn**	**20**	**34**	**11.3**	**-0.4**
RUS	**Russkaya**	**1.51**	**288**	*e*P		**Pn**	**20**	**34**	**10.8**	**-1.0**
RUS				*e*S		**Sn**	**20**	**34**	**30.6**	**0.0**
DALK	**Dalny**	**1.66**	**310**	*e*P		**Pn**	**20**	**34**	**13.6**	**-0.2**
DALK				*e*S		**Sb**	**20**	**34**	**35.1**	**-1.9**
PET	**Petropavlovsk**	**1.70**	**308**	*e*P		**Pn**	**20**	**34**	**11.0**	**-3.4**
MTVR	**Mutnovka**	**1.72**	**288**	*e*P		**Pn**	**20**	**34**	**14.3**	**-0.5**
KDTR	**Khodutka, Kamc**	**1.74**	**265**	*e*P		**Pn**	**20**	**34**	**13.6**	**-1.3**
KDTR				*e*S		**Sn**	**20**	**34**	**34.5**	**-1.6**
UGLR	**Uglovaya**	**1.75**	**315**	*e*P		**Pn**	**20**	**34**	**15.6**	**+0.5**
SDLR	**Sedlovina**	**1.77**	**318**	*e*P		**Pn**	**20**	**34**	**15.7**	**+0.2**
SMAR	**Somma**	**1.79**	**316**	*e*P		**Pn**	**20**	**34**	**16.7**	**+0.8**
GRL	**Gorelyy**	**1.81**	**289**	*e*P		**Pn**	**20**	**34**	**16.3**	**+0.3**
AVH	**Avacha**	**1.82**	**315**	*e*P		**Pn**	**20**	**34**	**16.8**	**+0.6**
KRER	**Koryakskii**	**1.84**	**317**	*e*P		**Pn**	**20**	**34**	**17.3**	**+0.7**
ASAK	**Asacha**	**1.87**	**283**	*e*P		**Pn**	**20**	**34**	**16.6**	**-0.2**
KRMR	**Karymshinskiy**	**1.88**	**298**	*e*P		**Pn**	**20**	**34**	**16.5**	**-0.3**
KOK	**Koryaka**	**1.88**	**315**	*e*P		**Pn**	**20**	**34**	**17.0**	**0.0**
KRX	**Arik**	**1.93**	**316**	*e*P		**Pn**	**20**	**34**	**17.9**	**+0.3**
KII	**Karymskiy**	**2.22**	**338**	*e*P		**Pn**	**20**	**34**	**22.3**	**+0.6**
APC	**Apacha**	**2.45**	**294**	*e*P		**Pn**	**20**	**34**	**25.6**	**+0.8**
GNL	**Ganaly**	**2.46**	**315**	*e*P		**Pn**	**20**	**34**	**26.2**	**+1.2**
PAU	**Pauzhetka**	**2.57**	**260**	*e*P		**Pn**	**20**	**34**	**26.9**	**+0.5**
TUMD	**Tumrok D**	**3.23**	**355**	*e*S		**Sn**	**20**	**35**	**13.8**	**+0.7**
KBTR	**Krutoberegovo**	**4.38**	**14**	*e*P		**Pn**	**20**	**34**	**51.0**	**-0.2**
BKI	**Bering**	**4.43**	**41**	*e*S		**Sn**	**20**	**35**	**39.0**	**-3.5**
SHEM	**Shemya Is, Ala**	**8.14**	**80**	Sn		**Sn**	**20**	**37**	**09.3**	**-4.4**
	3.4nm,0.3s,baz=221,slow=23,SNR=1.0									
ASAJ	**Asahikawa**	**14.51**	**244**	Pn		**Pn**	**20**	**37**	**09.3**	**-0.6**
	0.2nm,0.3s,baz=224,slow=26,SNR=1.5									
	2.7nm,0.7s									
MJAR	**Mashiro Arr**	**22.26**	**235**	P		**P**	**20**	**38**	**42.6**	**+1.4**
	0.8nm,0.6s,baz=23,slow=12,SNR=5.8									
	0.8nm,0.6s									
ILAR	**Eielson Array**	**29.27**	**44**	P		**P**	**20**	**39**	**47.8**	**+1.8**
	0.5nm,1.1s,baz=270,slow=8.6,SNR=2.1									
	0.5nm,1.1s									
SPITS	**Spitsbergen Ar**	**48.30**	**351**	P		**P**	**20**	**42**	**25.3**	**+0.6**
	3.1nm,0.6s,baz=28,slow=6.8,SNR=7.0									
	3.1nm,0.6s									
KURBB	**Kurchatov Arra**	**48.83**	**303**	P		**P**	**20**	**42**	**27.3**	**-1.7**
	0.1nm,0.3s,baz=61,slow=7.8,SNR=2.4									
	0.1nm,0.3s									
MKAR	**Makanchi Array**	**49.07**	**297**	P		**P**	**20**	**42**	**28.6**	**-2.4**
	0.2nm,0.7s,baz=52,slow=9.3,SNR=2.0									
	0.2nm,0.7s									
BVAR	**Borovoye Array**	**51.45**	**309**	P		**P**	**20**	**42**	**47.1**	**-1.8**
	0.5nm,0.5s,baz=55,slow=7.7,SNR=5.5									
	0.5nm,0.5s									
PDAR	**Pinedale Array**	**57.65**	**61**	P		**P**	**20**	**43**	**35.1**	**+0.7**
	0.2nm,0.5s,baz=316,slow=7.7,SNR=3.0									
	0.2nm,0.5s									
CMAR	**Chiang Mai Arr**	**58.43**	**259**	P		**P**	**20**	**43**	**39.4**	**-0.4**
	0.6nm,0.3s,baz=48,slow=7.1,SNR=6.1									
	0.6nm,0.3s									
FINES	**FINESS Array B**	**61.32**	**337**	P		**P**	**20**	**43**	**59.9**	**+0.8**
	1.0nm,0.6s,baz=31,slow=12,SNR=7.0									
	1.0nm,0.6s									
HFS	**Hagfors**	**65.15**	**343**	P		**P**	**20**	**44**	**25.2**	**+0.8**
	1.7nm,0.8s,baz=10,slow=8.8,SNR=5.1									
	1.7nm,0.8s									
AKASG	**Malin Array Be**	**69.81**	**330**	P		**P**	**20**	**44**	**53.6**	**-0.4**
	1.1nm,0.6s,baz=34,slow=8.0,SNR=4.1									
	1.1nm,0.6s									
TXAR	**Lajitas Array**	**70.64**	**67**	P		**P**	**20**	**45**	**01.6**	**+2.0**
	0.3nm,0.7s,baz=281,slow=4.5,SNR=5.8									
	0.3nm,0.7s									
KBZ	**Khabaz**	**70.67**	**317**	P		**P**	**20**	**44**	**59.9**	**+0.5**
	1.3nm,0.8s,baz=38,slow=19,SNR=3.7									
	1.3nm,0.8s									
ASAR	**Alice Springs**	**78.95**	**205**	P		**P**	**20**	**45**	**48.8**	**+1.4**
	0.3nm,0.7s,baz=37,slow=4.3,SNR=4.3									
	0.3nm,0.7s									

*IDC **29** 20:57:52.6±0.6, 2.°93S×129.°69E, h0km, mb4.1/10, mbtmp4.1/13, ML4.1/3, MS3.3/1, Error ellipse: s-maj=35.8km s-min=11.4km az=75.0*
*NEIC **29** 20:57:54.6±1.5, 3.°12S±0.°09×129.°7E±0.°1, h10km±2km, mb4.3/13, Error ellipse: s-maj=20.1km s-min=12.2km az=59.0*
*DJA **29** 20:57:56.7±0.2, 3.°S±2.°×13.°0E±.°, h10km, M4.7/31, mB5.4/4, mb4.8/10, MLv4.6/31, Mw(mB)4.8/4*

ISC 29 20:57:57.0±0.5, 2.°88S±0.°05×129.°70E±0.°05, h28km, n57, σ2§17/58, mb4.3/14, Seram

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m	s	ISC
KRAI	**Karang Ratu**	**1.38**	**251**	P		**Pb**	**20**	**58**	**23.6**	**+1.5**
BNDI	**Bandanaira**	**1.64**	**173**	P		**Pb**	**20**	**58**	**27.2**	**+0.5**
BNDI	**Bandanaira**	**1.64**	**173**	P		**Pb**	**20**	**58**	**26.7**	**0.0**
BNDI				S		Sb	20	58	57.1	+10
SIJI	**Sorong**	**2.54**	**38**	Pn		**Pn**	**20**	**58**	**35.0**	**-1.4**
	21nm,0.3s,baz=41,slow=7.2,SNR=171									
	53nm,0.2s									
SIJI	**Sorong**	**2.54**	**38**	P		**Pn**	**20**	**58**	**35.8**	**-0.6**
SWI	**Sorong**	**2.54**	**38**	P		**Pn**	**20**	**58**	**35.0**	**-1.3**
FAKI	**Fak Fak**	**2.54**	**91**	P		**Pn**	**20**	**58**	**35.9**	**-0.6**
FAKI	**Fak Fak**	**2.54**	**91**			**Pn**	**20**	**58**	**35.4**	**-1.1**
FAKI	**Fak Fak**	**2.54**	**91**	P		**Pn**	**20**	**58**	**35.5**	**-1.0**
NLAI	**Namlea**	**2.62**	**262**	P		**Pb**	**20**	**58**	**39.8**	**-3.5**
SANI	**Sanana**	**3.80**	**282**	P		**Pn**	**20**	**58**	**53.0**	**-0.7**
KMPI	**Kaimana, Papua**	**4.07**	**101**	P		**Pn**	**20**	**58**	**57.2**	**-0.3**
KMPI				S		**Sn**	**20**	**59**	**45.9**	**+1.7**
TNTI	**Ternate**	**4.31**	**327**	P		**Pb**	**20**	**59**	**09.3**	**-2.9**
TNTI	**Ternate**	**4.31**	**327**	P		**Pn**	**20**	**59**	**02.1**	**+1.3**
RKPI	**Ransiki, Papua**	**4.67**	**73**	P		**Pn**	**20**	**59**	**04.9**	**-0.9**
MWPI	**Manokwari, Pap**	**4.75**	**66**	P		**Pn**	**20**	**59**	**08.5**	**+1.7**
MNI	**Manado**	**6.49**	**311**	P		**Pn**	**20**	**59**	**31.9**	**+1.2**
SRPI	**Serui, Papua**	**6.61**	**81**	P		**Pn**	**20**	**59**	**35.1**	**+2.7**
	0.5nm91nm,1.0s									
BAKI	**Biak**	**6.62**	**75**	P		**Pn**	**20**	**59**	**34.0**	**+1.5**
	0.3nm79nm,1.1s									
GTOI	**Gorontalo**	**7.54**	**297**	P		Pn	20	59	51.0	+5.8
	0.4nm539nm38nm,0.8s									
APSI	**Ampana**	**8.28**	**284**	P		**Pn**	**20**	**59**	**58.6**	**+3.3**
	118nm,1.0s									
SOEI	**Soe**	**8.71**	**218**	P		Pn	21	00	05.2	+3.9
BATI	**Baumata**	**9.43**	**219**	Pn		Pn	21	00	20.2	+9.0
	2.9nm,0.3s,baz=82,slow=2.5,SNR=3.8									
BATI				LR		LR	21	04	08.8	
	comp=Z,186nm,19.1s,baz=68,slow=40									
KAPI	**Kappang**	**10.15**	**258**	Pn		**Pn**	**21**	**00**	**25.0**	**+4.0**
	baz=179,slow=21									
KNRA	**Kununurra**	**12.75**	**184**			**Pn**	**21**	**00**	**55.6**	**-1.0**
PLAI	**Plampang**	**13.25**	**243**	P		**P**	**21**	**01**	**11.7**	**-1.2**
FITZ	**Fitzroy Crossi**	**15.64**	**194**	Pn		**Pn**	**21**	**01**	**33.7**	**-1.9**
	0.5nm,0.3s,baz=33,slow=9.4,SNR=15									
	2.4nm,0.9s									
JAGI	**Jajag, Banyuwa**	**16.43**	**250**	P		**P**	**21**	**01**	**53.5**	**+5.1**
WB0	**Warramunga Arr**	**17.40**	**165**			**Pn**	**21**	**01**	**52.4**	**-5.5**
WB0				IAmb		IAmb	21	02	05.0	
	comp=Z,17nm,0.7s									
WRAB	**Tennant Creek**	**17.55**	**165**	P		**Pn**	**21**	**01**	**56.3**	**-3.4**
WRAB				IAmb		IAmb	21	02	06.8	
	comp=Z,14nm,0.7s									
WRA	**Warramunga Arr**	**17.55**	**165**	P		**Pn**	**21**	**01**	**57.1**	**-2.7**
	comp=Z,0.7nm,0.3s,baz=346,slow=12,SNR=24									
WRA				PcP		**PcP**	**21**	**06**	**39.8**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=330,slow=1.9,SNR=1.4									
	comp=Z,3.4nm,0.6s									
WRA	**Warramunga Arr**	**17.55**	**165**			**Pn**	**21**	**01**	**54.0**	**-5.8**
WR8	**Warramunga Arr**	**17.61**	**165**	P		**P**	**21**	**01**	**59.9**	**-1.5**
SBUM	**Sibu**	**18.26**	**287**	P		**Pn**	**21**	**02**	**12.6**	**+4.0**
UGM	**Wanagama**	**19.73**	**255**	P		**P**	**21**	**02**	**23.4**	**-1.4**
QIS	**Mount Isa**	**20.05**	**152**	P		Pn	21	02	28.2	-1.8
MBWA	**Marble Bar**	**20.60**	**207**			**P**	**21**	**02**	**30.5**	**-3.6**
PSA00	**Pilbara Seismi**	**20.91**	**207**	P		Pn	21	02	40.3	+0.3
PSA00	**Pilbara Seismi**	**20.91**	**207**	P		**P**	**21**	**02**	**36.9**	**-0.5**
PSA00				IAmb		IAmb	21	02	58.8	
	comp=Z,19nm,1.1s									
AS31	**Alice Springs**	**21.06**	**169**	P		**P**	**21**	**02**	**39.1**	**0.0**
AS31				IAmb		IAmb	21	02	48.5	
	comp=Z,14nm,0.7s									
ASAR	**Alice Springs**	**21.06**	**169**	P		**P**	**21**	**02**	**38.7**	**-0.4**
	comp=Z,11nm,0.5s,baz=351,slow=11,SNR=158									
ASAR				S		**S**	**21**	**06**	**33.0**	**+0.7**
	comp=Z,2.7nm,1.0s,baz=354,slow=23,SNR=5.7									
ASAR				PcP		**PcP**	**21**	**06**	**45.8**	**+0.4**
	comp=Z,2.5nm,0.5s,baz=343,slow=2.1,SNR=9.8									
	comp=Z,11nm,0.5s									
BBJI	**Bungbulang**	**22.42**	**257**	P		**P**	**21**	**02**	**51.9**	**-2.0**
BBJI				IAmb		IAmb	21	02	57.9	
	comp=Z,10nm,0.6s									
FORT	**Forrest**	**27.79**	**183**	P		**P**	**21**	**03**	**39.4**	**-4.4**
FORT				IAmb		IAmb	21	04	07.9	
	comp=Z,4.8nm,0.8s									
CMAR	**Chiang Mai Arr**	**36.97**	**306**	P		**P**	**21**	**05**	**04.4**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=133,slow=7.2,SNR=5.7									
CMAR				PcP		**PcP**	**21**	**07**	**26.8**	**+1.6**
	comp=Z,0.8nm,0.9s,baz=128,slow=3.5,SNR=4.1									
	comp=Z,0.6nm,0.6s									
CHTO	**Chiang Mai**	**37.16**	**307**			**P**	**21**	**05**	**07.0**	**+1.2**
CHTO				IAmb		IAmb	21	05	12.6	
	comp=Z,4.8nm,0.8s									
EVN	**Everest**	**51.38**	**310**			**P**	**21**	**07**	**01.0**	**+0.6**
SONM	**Songino Array**	**54.47**	**341**	P		**P**	**21**	**07**	**22.1**	**0.0**
	comp=Z,0.1nm,0.3s,baz=153,slow=5.8,SNR=1.7									
SONM				PcP		**PcP**	**21**	**08**	**25.7**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=160,slow=2.7,SNR=1.3									
	comp=Z,0.1nm,0.3s									
MKAR	**Makanchi Array**	**64.65**	**326**	P		**P**	**21**	**08**	**32.1**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=115,slow=8.0,SNR=19									
	comp=Z,0.3nm,0.5s									
ZALV	**Zalesovo Beam**	**67.79**	**333**	P		**P**	**21**	**08**	**51.5**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=119,slow=5.0,SNR=7.1									
	comp=Z,1.2nm,0.6s									
KURBB	**Kurchatov Arra**	**68.87**	**328**	P		**P**	**21**	**08**	**59.3**	**+0.2**
	comp=Z,4.3nm,0.7s,baz=126,slow=5.9,SNR=26									
	comp=Z,4.3nm,0.7s									
BVAR	**Borovoye Array**	**74.45**	**327**	P		**P**	**21**	**09**	**32.5**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=132,slow=8.6,SNR=6.5									
	comp=Z,0.8nm,0.6s									
VNDA	**Vanda**	**76.55**	**173**	P		**P**	**21**	**09**	**42.7**	**-1.5**
	comp=Z,1.3nm,0.8s,baz=296,slow=2.9,SNR=3.1									
	comp=Z,1.3nm,0.8s									
NRIK	**Noril'sk**	**77.52**	**346**	P		**P**	**21**	**09**	**50.2**	**+0.4**
	comp=Z,1.6nm,0.5s,baz=136,slow=7.4,SNR=3.9									
	comp=Z,1.6nm,0.5s									
QSPA	**South Pole Qui**	**87.07**	**180**	P		**P**	**21**	**10**	**40.9**	**+0.9**
	comp=Z,2.2nm,0.8s,baz=6.3,slow=3.8,SNR=5.1									
	comp=Z,2.2nm,0.8s									
PLCA	**Paso Flores**	**132.81**	**159**	PKP		**PKiKP**	**21**	**17**	**11.6**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=134,slow=6.4,SNR=4.3									
CPUP	**Villa Florida**	**150.18**	**167**	PKPbc		**PKiKP**	**21**	**17**	**46.4**	**-0.6**
	comp=Z,1.3nm,0.6s,baz=266,slow=1.5,SNR=5.6									
LPAZ	**La Paz**	**154.05**	**138**	PKPbc		**PKiKP**	**21**	**17**	**57.2**	**+1.2**
	comp=Z,1.2nm,0.8s,baz=223,slow=5.5,SNR=3.6									

IDC 29 20:58:26.1±1.4, 2.°87S×129.°71E, h0km, mb4.1/3, mbtmp4.2/5, ML4.3/2, MS3.1/1, Error ellipse: s-maj=45.7km s-min=24.5km az=78.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m	s	ISC
SIJI	**Sorong**	**2.52**	**38**	Pn		Pn	20	59	08.5	+0.1
	61nm,0.3s,baz=222,slow=22,SNR=3.9									
SIJI				Sn		Sn	20	59	37.4	-2.4
	20nm,0.3s,baz=233,slow=23,SNR=1.3									
	188nm,0.3s									
DAV	**Davao City (W)**	**10.70**	**337**	LR		LR	21	06	05.4	
	comp=Z,104nm,20.3s,baz=33,slow=43									
WRA	**Warramunga Arr**	**17.56**	**165**	P		Pn	21	02	31.8	-0.7
	1.1nm,0.3s,

UNIC	**Universidad Ca**	**1.77**	**78**	P	**Pb**	**21 06 30.0**	**-0.2**
UNIC				S	**Sg**	**21 06 55.6**	**+0.7**
JAYA	**Jayaque - finc**	**1.83**	**89**	P	**Pb**	**21 06 30.7**	**-0.6**
JAYA				S	**Sb**	**21 06 53.4**	**-0.8**
JAYA	**Jayaque - finc**	**1.83**	**89**	*i* P	**Pn**	**21 06 29.7**	**+0.5**
JAYA	**Jayaque - finc**	**1.83**	**89**	*eP*	**Pb**	**21 06 30.7**	**-0.6**
JAYA				*eS*	**Sb**	**21 06 52.8**	**-1.4**
LALI	**Alcalda de L**	**1.96**	**94**	S	**Sg**	**21 06 59.9**	**-1.1**
PMON	**Piamonte**	**1.97**	**87**	P	**Pb**	**21 06 32.5**	**-1.1**
PMON				S	**Sb**	**21 06 58.5**	**+0.5**
PMON	**Piamonte**	**1.97**	**87**	*eP*	**Pb**	**21 06 31.9**	**-1.6**
BOQS	**Boqueron**	**2.00**	**87**	*eP*	**Pb**	**21 06 34.2**	**0.0**
UEES	**Universidad Ev**	**2.04**	**87**	P	**Pb**	**21 06 34.5**	**-0.3**
UEES				S	**Sb**	**21 07 00.3**	**+0.2**
MTO3	**Montecristo**	**2.06**	**68**	P	**Pb**	**21 06 34.0**	**-1.3**
MTO3				S	**Sg**	**21 07 02.6**	**-1.7**
MTO3	**Montecristo**	**2.06**	**68**	*eP*	**Pb**	**21 06 33.7**	**-1.6**
LOMA	**Loma Larga**	**2.10**	**89**	P	**Pb**	**21 06 34.0**	**-1.9**
LOMA				S	**Sb**	**21 07 02.0**	**0.0**
UDBS	**Universidad Do**	**2.12**	**87**	S	**Sb**	**21 07 02.7**	**+0.3**
COEG	**Centro de Oper**	**2.39**	**90**	P	**Pb**	**21 06 39.8**	**-0.9**
COEG				S	**Sb**	**21 07 09.5**	**-0.6**
TECO	**Alcaldia de Te**	**2.48**	**92**	S	**Sb**	**21 07 11.9**	**-0.9**
P5NO	**Presa 5 de nov**	**2.53**	**82**	P	**Pn**	**21 06 39.9**	**+1.3**
LCY	**Lacayo**	**2.96**	**94**	*eP*	**Pn**	**21 06 43.0**	**-1.7**

IDC 29 21:37:54.6±2.8, 10°.47S×115°.89E, h0km, mb3.1/4, mbtmp3.3/5, ML3.0/1, Error ellipse: s-maj=165.1km s-min=23.2km az=48.0, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.12**	**130**	Pn	Pn	21 40 46.8	-1.8
	0.1nm,0.3s,baz=309,slow=15,SNR=1.4						
FITZ				Sn	Sn	21 42 51.1	-13
	0.1nm,0.3s,baz=120,slow=12,SNR=1.4						
	1.0nm,0.7s						
WRA	**Warramunga Arr**	**20.13**	**120**	P	Pn	21 42 31.4	-0.8
	0.3nm,0.8s,baz=295,slow=11,SNR=2.2						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**21.62**	**130**	P	P	21 42 46.7	+0.1
	0.2nm,0.5s,baz=299,slow=10,SNR=5.6						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**64.42**	**335**	P	P	21 48 32.5	-0.2
	0.2nm,0.5s,baz=147,slow=6.7,SNR=5.4						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**69.36**	**341**	P	P	21 49 04.2	+0.2
	0.3nm,0.4s,baz=150,slow=6.3,SNR=2.0						
	0.3nm,0.4s						

*IDC **29** 21:56:46.0±0.8, 49°.16N×157°.70E, h0km, mb3.9/20, mbtmp3.9/22, ML3.4/2, MS2.8/5, Error ellipse: s-maj=20.9km s-min=15.8km az=140.0*
*KRSC **29** 21:56:49.0±2.2, 49°.30N×158°.21E, h43km±26km, Ml4.0*
*NEIC **29** 21:56:51.9±1.4, 49°.2N±0°.1×157°.6E±0°.2, h37km±7km, mb4.3/34, Error ellipse: s-maj=18.3km s-min=11.6km az=134.0*

ISC 29 21:56:50.9±0.6, 49°.14N±0°.07×157°.74E±0°.07, h35km, n85, σ1s00/86, mb4.1/36, MS2.7/3, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.86**	**326**	*eP*	**Pn**	**21 57 19.6**	**-0.7**
SKR				*eS*	**Sn**	**21 57 42.4**	**-0.2**
PAU	**Pauzhetka**	**2.40**	**346**	*eP*	**Pn**	**21 57 27.9**	**+0.2**
PAU				*eS*	**Sn**	**21 57 56.8**	**+0.9**
KDTR	**Khodutka, Kamc**	**2.68**	**5**	*eP*	**Pn**	**21 57 30.7**	**-0.8**
KDTR				*eS*	**Sn**	**21 58 00.7**	**-2.0**
ASAK	**Asacha**	**3.25**	**2**	*eP*	**Pn**	**21 57 39.6**	**+0.2**
RUS	**Russkaya**	**3.33**	**8**	*eP*	**Pn**	**21 57 39.5**	**-0.9**
RUS				*eS*	**Sn**	**21 58 16.7**	**-2.0**
MTVR	**Mutnovka**	**3.36**	**5**	*eP*	**Pn**	**21 57 40.3**	**-0.7**
MTVR				*eS*	**Sn**	**21 58 18.2**	**-1.4**
GRL	**Gorelyy**	**3.42**	**3**	*eP*	**Pn**	**21 57 42.0**	**+0.1**
KRMR	**Karymshinskiy**	**3.70**	**4**	*eP*	**Pn**	**21 57 43.7**	**-1.9**
APC	**Apacha**	**3.80**	**355**	*eP*	**Pn**	**21 57 47.6**	**+0.6**
PET	**Petropavlovsk**	**3.93**	**8**	Pn	**Pn**	**21 57 47.9**	**-0.8**
DALK	**Dalny**	**3.95**	**9**	*eP*	**Pn**	**21 57 48.4**	**-0.5**
PEA0B	**Petropavlovsk-**	**3.97**	**360**	Pn	**Pn**	**21 57 48.4**	**-0.9**
UGLR	**Uglovaya**	**4.13**	**9**	*eP*	**Pn**	**21 57 50.6**	**-1.0**
AVH	**Avacha**	**4.17**	**8**	*eP*	**Pn**	**21 57 52.7**	**+0.5**
SMAR	**Somma**	**4.18**	**9**	*eP*	**Pn**	**21 57 52.2**	**-0.1**
KOK	**Koryaka**	**4.19**	**7**	*eP*	**Pn**	**21 57 53.0**	**+0.5**
SDLR	**Sedlovina**	**4.20**	**9**	*eP*	**Pn**	**21 57 52.1**	**-0.4**
SPN	**Mys Shipunski**	**4.21**	**19**	*eP*	**Pn**	**21 57 51.6**	**-1.0**
KRER	**Koryakskii**	**4.21**	**8**	*eP*	**Pn**	**21 57 53.1**	**+0.3**
KRX	**Arik**	**4.26**	**7**	*eP*	**Pn**	**21 57 53.7**	**+0.3**
GNL	**Ganaly**	**4.56**	**2**	*eP*	**Pn**	**21 57 58.4**	**+0.9**
KII	**Karymskiy**	**5.01**	**12**	*eP*	**Pn**	**21 58 04.3**	**+0.7**
MKZ	**Mys Kozlova**	**5.96**	**23**	*eP*	**Pn**	**21 58 14.4**	**-2.1**
KBTR	**Krutoberegovo**	**7.72**	**22**	*eP*	**Pn**	**21 58 39.7**	**-1.0**
MA2	**Magadan**	**11.21**	**341**	LR	LR	22 04 03.3	
	comp=Z,20nm,20.7s,baz=118,slow=39						
JKA	**Kamikawa-asahi**	**11.55**	**250**	Pn	**Pn**	**21 59 31.5**	**-1.7**
ASAJ	**Asahikawa**	**11.55**	**250**	Pn	**Pn**	**21 59 33.8**	**+0.6**
	0.3nm,0.3s,baz=286,slow=15,SNR=2.2						
	5.3nm,0.7s						
KLR	**Kul'dur**	**16.97**	**280**	Pn	**P**	**22 00 46.1**	**-0.8**
	0.1nm,0.3s,baz=76,slow=8.9,SNR=4.1						
KLR				LR	LR	22 07 01.5	
	comp=Z,37nm,18.4s,baz=102,slow=36						
	1.0nm,0.5s						
JGF	**Kuroka**	**20.16**	**235**	P	**P**	**22 01 22.4**	**+0.3**
JGF				IAmb	IAmb	22 02 00.5	
	comp=Z,15nm,1.2s						
YAK	**Yakutsk**	**20.23**	**320**	LR	LR	22 08 25.9	
	comp=Z,31nm,19.6s,baz=92,slow=35						
CLES	**Cleveland East**	**20.61**	**67**	P	Pn	22 01 28.4	-0.9
JHJ2	**Mitsune**	**20.86**	**226**	P	**P**	**22 01 26.3**	**-3.4**
M11K	**Mekoryuk**	**23.33**	**48**	P	**P**	**22 01 56.7**	**+1.1**
M11K				IAmb	IAmb	22 02 33.4	
	comp=Z,12nm,1.1s						
TNA	**Tin City**	**24.30**	**35**	P	**P**	**22 02 05.7**	**+1.1**
TNA				IAmb	IAmb	22 02 07.2	
	comp=Z,4.3nm,0.8s						
KSRS	**Korea Array**	**24.48**	**253**	P	**P**	**22 02 06.1**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=42,slow=11,SNR=1.8						
	comp=Z,0.4nm,0.4s						
ANM	**Nome**	**24.90**	**38**	P	**P**	**22 02 11.7**	**+1.5**
ANM				IAmb	IAmb	22 02 13.4	
	comp=Z,8.8nm,1.1s						
J14K	**Nanvaranak Lak**	**25.12**	**43**	P	**P**	**22 02 13.4**	**+1.2**
J14K				IAmb	IAmb	22 02 42.8	
	comp=Z,4.9nm,1.0s						
F15K	**North Star Dit**	**25.60**	**36**	P	**P**	**22 02 17.0**	**+0.4**
K15K	**Wolf Creek Mou**	**25.93**	**44**	P	**P**	**22 02 20.9**	**+1.4**
K15K				IAmb	IAmb	22 02 26.1	
	comp=Z,14nm,1.5s						
O15K	**Ungalikthiuk R**	**26.36**	**52**	P	**P**	**22 02 23.9**	**+0.6**
O15K				IAmb	IAmb	22 03 05.8	
	comp=Z,25nm,1.4s						
G16K	**Koyuk River**	**26.39**	**37**	P	**P**	**22 02 24.1**	**+0.5**
C16K	**Lisburne Hills**	**26.44**	**30**	P	**P**	**22 02 24.9**	**+0.9**
E18K	**Tukpahlearik C**	**27.73**	**33**	P	**P**	**22 02 36.3**	**+0.6**
C18K	**Utukok River**	**27.98**	**31**	P	**P**	**22 02 38.9**	**+0.9**
C19K	**Lookout Ridge**	**28.70**	**30**	P	**P**	**22 02 45.4**	**+1.1**
P18K	**Big Mountain,**	**28.72**	**51**	P	**P**	**22 02 42.5**	**-2.1**
D20K	**Etivluk River**	**29.57**	**32**	P	**P**	**22 02 53.2**	**+1.1**
D20K				IAmb	IAmb	22 03 25.7	
	comp=Z,4.3nm,1.2s						
H21K	**Melozitna Rive**	**30.32**	**39**	P	**P**	**22 02 59.2**	**+0.6**
H21K				IAmb	IAmb	22 03 41.5	
	comp=Z,4.0nm,1.3s						
F21K	**Alatna River**	**30.33**	**35**	P	**P**	**22 03 00.4**	**+1.7**
F21K				IAmb	IAmb	22 03 34.5	
	comp=Z,3.7nm,1.4s						
E22K	**Anaktuvuk Pass**	**31.14**	**34**	P	**P**	**22 03 05.5**	**-0.5**
JOW	**Kunigami**	**31.84**	**236**	LR	LR	22 16 56.5	
	comp=Z,17nm,20.4s,baz=246,slow=38						
ILAR	**Eielson Array**	**32.72**	**41**	P	**P**	**22 03 19.6**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=247,slow=7.6,SNR=7.3						
	comp=Z,0.3nm,0.6s						
O29M	**Mount Kennedy**	**36.97**	**48**	P	**P**	**22 03 55.5**	**-1.0**
YKA	**Yellowknife Ar**	**47.12**	**39**	P	**P**	**22 05 20.0**	**+0.9**
	comp=Z,0.7nm,0.7s,baz=300,slow=8.0,SNR=8.6						
	comp=Z,0.7nm,0.7s						
YKA	**Yellowknife Ar**	**47.12**	**39**	P	**P**	**22 05 19.9**	**+0.7**
MKAR	**Makanchi Array**	**48.60**	**298**	P	**P**	**22 05 30.6**	**-0.2**
	comp=Z,1.0nm,0.8s,baz=67,slow=7.3,SNR=10						
MKAR				LR	LR	22 25 57.5	
	comp=Z,20nm,19.6s,baz=114,slow=36						
	comp=Z,1.0nm,0.8s						
KURK	**Kurchatov**	**48.62**	**304**	P	**P**	**22 05 29.4**	**-1.5**
KURK				IAmb	IAmb	22 05 31.9	
	comp=Z,2.1nm,0.6s						
KURBB	**Kurchatov Arra**	**48.72**	**304**	P	**P**	**22 05 31.2**	**-0.4**
	comp=Z,1.5nm,0.6s,baz=65,slow=8.2,SNR=12						
	comp=Z,1.5nm,0.6s						
SPITS	**Spitsbergen Ar**	**50.79**	**350**	P	**P**	**22 05 46.6**	**-0.4**
	comp=Z,14nm,1.1s,baz=41,slow=7.7,SNR=5.8						
	comp=Z,14nm,1.1s						
BVAR	**Borovoye Array**	**51.73**	**310**	P	**P**	**22 05 54.1**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=52,slow=6.8,SNR=5.4						
	comp=Z,1.1nm,0.5s						
KDJ	**Kajisay**	**54.25**	**295**	P	**P**	**22 06 12.5**	**-0.9**
KDJ				IAmb	IAmb	22 06 15.6	
	comp=Z,4.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**55.92**	**259**	P	**P**	**22 06 26.4**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=47,slow=7.7,SNR=4.1						
	comp=Z,0.4nm,0.3s						
ARCES	**ARCESS Array B**	**56.58**	**342**	P	**P**	**22 06 28.8**	**-0.6**
	comp=Z,4.2nm,0.9s,baz=35,slow=7.0,SNR=1.6						
	comp=Z,4.2nm,0.9s						
BTK	**Batken**	**59.30**	**297**	P	**P**	**22 06 49.9**	**+0.8**
BTK				IAmb	IAmb	22 06 50.6	
	comp=Z,2.9nm,0.7s						
GAR	**Garm**	**60.28**	**296**	P	**P**	**22 06 56.1**	**+0.2**
PDAR	**Pinedale Array**	**60.83**	**57**	P	**P**	**22 07 00.8**	**+1.1**
	comp=Z,0.6nm,0.8s,baz=343,slow=1.5,SNR=4.7						
	comp=Z,0.6nm,0.8s						
CHGR	**Chuyangaron**	**61.19**	**297**	P	**P**	**22 07 01.9**	**-0.2**
NIL	**Nilore**	**62.06**	**290**	P	**P**	**22 07 07.6**	**-0.2**
FINES	**FINESS Array B**	**63.15**	**336**	P	**P**	**22 07 14.3**	**-0.4**
	comp=Z,2.5nm,1.0s,baz=42,slow=6.4,SNR=3.9						
	comp=Z,2.5nm,1.0s						
NOA	**NORSAR Array B**	**66.91**	**343**	P	**P**	**22 07 39.7**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=11,slow=7.0,SNR=1.7						
	comp=Z,0.5nm,0.7s						
HFS	**Hagfors**	**67.24**	**341**	P	**P**	**22 07 41.5**	**+0.3**
	comp=Z,3.1nm,1.0s,baz=23,slow=7.8,SNR=1.6						
	comp=Z,3.1nm,1.0s						
AKASG	**Malin Array Be**	**71.22**	**328**	P	**P**	**22 08 05.2**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=32,slow=6.4,SNR=4.1						
	comp=Z,0.3nm,0.4s						
AKASG	**Malin Array Be**	**71.22**	**328**	P	**P**	**22 08 05.4**	**-0.5**
AKASG				IAmb	IAmb	22 08 06.4	
	comp=Z,3.0nm,1.4s						
KBZ	**Khabaz**	**71.37**	**316**	P	**P**	**22 08 08.0**	**+1.1**
	comp=Z,1.1nm,0.9s,baz=18,slow=6.4,SNR=2.2						
	comp=Z,1.1nm,0.9s						
WB0	**Warramunga Arr**	**71.68**	**203**	P	**P**	**22 08 09.1**	**+0.1**
WB0				IAmb	IAmb	22 08 09.4	
	comp=Z,3.9nm,0.8s						
WR0	**Warramunga Arr**	**71.83**	**203**	P	**P**	**22 08 10.1**	**+0.2**
WR0				IAmb	IAmb	22 08 25.2	
	comp=Z,8.2nm,1.4s						
WR8	**Warramunga Arr**	**71.83**	**203**	P	**P**	**22 08 09.9**	**0.0**
WR8				IAmb	IAmb	22 08 34.0	
	comp=Z,4.1nm,1.1s						
WRAB	**Tennant Creek**	**71.85**	**203**	P	**P**	**22 08 10.4**	**+0.4**
WRAB				IAmb	IAmb	22 08 33.0	
	comp=Z,5.3nm,1.2s						
WB2	**Warramunga Arr**	**71.86**	**203**	P	**P**	**22 08 10.7**	**+0.6**
WRA	**Warramunga Arr**	**71.86**	**203**	P	**P**	**22 08 10.2**	**0.0**
	comp=Z,1.8nm,0.7s,baz=21,slow=6.4,SNR=11						
	comp=Z,1.8nm,0.7s						
WRA	**Warramunga Arr**	**71.86**	**203**	P	**P**	**22 08 09.4**	**-0.7**
TXAR	**Lajitas Array**	**73.63**	**64**	P	**P**	**22 08 21.2**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=308,slow=5.3,SNR=3.6						
	comp=Z,0.2nm,0.5s						
ASAR	**Alice Springs**	**75.54**	**202**	P	**P**	**22 08 32.2**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=12,slow=4.8,SNR=7.6						
	comp=Z,0.7nm,0.7s						
GERES	**GERESS Array B**	**77.58**	**337**	P	**P**	**22 08 44.9**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=46,slow=8.4,SNR=1.7						
	comp=Z,0.2nm,0.3s						
BRTR	**Keskin Array B**	**78.69**	**319**	P	**P**	**22 08 50.6**	**+1.1**
	comp=Z,0.7nm,0.8s,baz=30,slow=7.0,SNR=3.6						
	comp=Z,0.7nm,0.8s						

*MEX **29** 21:57:10.9±1.0, 15°.07N×92°.63W, h100km±10km, MD3.7*
*GCG **29** 21:57:10.3±2.1, 15°.13N×92°.63W, h90km±14km, MD3.7, ML3.5, Presumed earthquake*

ISC 29 21:57:05.6±1.8, 14°.90N±0°.08×92°.67W±0°.07, h122km±11km, n19, σ2s22/33, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.39**	**89**	*eP*	**Pn**	**21 57 24.6**	**+1.4**
THIG				*eS*	**Sn**	**21 57 34.7**	**-1.8**
THIG		**0.39**	**89**	*i* P	**Pn**	**21 57 24.7**	**+1.5**
THIG				*i* S	**Sn**	**21 57 34.6**	**-1.8**
THIG				*i* S		21 57 36.4	
THIG				IAML		21 57 37.1	
	comp=N,3μm,0.5s						
PATR	**El Naranjo**	**0.47**	**63**	*eP*	**Pn**	**21 57 24.5**	**+0.5**
PATR				*eS*	**Sn**	**21 57 35.7**	**-2.0**
PAVE	**Pavencul**	**0.56**	**58**	*eP*	**Pn**	**21 57 25.2**	**+0.7**
PAVE				*eS*	**Sn**	**21 57 36.9**	**-1.8**
CHUJ	**Union Juarez**	**0.57**	**70**	*eP*	**Pn**	**21 57 25.3**	**+0.7**
CHUJ				*eS*	**Sn**	**21 57 37.9**	**-1.0**
SMCA	**Catarina**	**0.57**	**94**	*i* P	**Pn**	**21 57 25.8**	**+1.5**
SMCA				*i* S	**Sn**	**21 57 37.6**	**-0.8**
SMCA				IAML		21 57 39.3	
	comp=N,723nm,0.1s						
PCIG		**0.96**	**326**	*eP*	**Pn**	**21 57 29.4**	**+1.9**
PCIG				*eS*	**Sn**	**21 57 43.8**	**-0.3**
RTAL	**Retalhuleu**	**1.01**	**112**	*i* P	**Pn**	**21 57 31.6**	**+3.6**
RTAL				*eS*	**Sn**	**21 57 46.5**	**+1.6**
STG2	**El Palmar, Qui**	**1.33**	**110**	*i* P	**Pn**	**21 57 31.1**	**-0.4**
STG2				*i* S	**Sn**	**21 57 46.7**	**-4.4**
STG2				IAML		21 57 49.7	
	comp=E,2μm,0.3s						
STG8	**El Palmar, Qui**	**1.35**	**109**	*i* P	**Pn**	**21 57 31.1**	**-0.7**
STG8				IAML		21 57 52.1	
	comp=N,466nm,0.1s						
STG5	**El Palmar, Qui**	**1.37**	**111**	*i* P	**Pn**	**21 57 31.5**	**-0.4**
CCIG	**Comitan**	**1.47**	**20**	*eP*	**Pn**	**21 57 34.9**	**+1.9**
CCIG				*eS*	**Sn**	**21 57 53.0**	**-0.8**
CCIG	**Comitan**	**1.47**	**20**	*i* P	**Pn**	**21 57 35.5**	**+2.4**
CARR	**Arriaga**	**1.80**	**318**	*eP*	**Pn**	**21 57 40.3**	**+3.6**
CARR				*eS*	**Sn**	**21 58 03.2**	**+2.7**
TGIG		**1.92**	**347**	*eP*	**Pn**	**21 57 38.7**	**+0.4**
TGIG				*eS*	**Sn**	**21 58 00.7**	**-2.6**
TGIG		**1.92**	**347**	*i* S	**Sn**	**21 57 59.5**	**-3.7**
APG	**El Apazote**	**2.13**	**87**	*i* P	**Pn**	**21 57 45.0**	**+3.9**
CMIG	**Matias Romero**	**3.05**	**316**	*eP*	**Pn**	**21 57 52.4**	**-0.2**
CMIG				*eS*	**Sn**	**21 58 26.0**	**-2.9**
NEUV	**Arroyo Zacate**	**4.11**	**313**	*eP*	**Pn**	**21 58 07.3**	**+0.7**
NEUV				*eS*	**Sn**	**21 58 51.6**	**-2.5**

*SNET **29** 22:14:14.7±1.3, 12°.28N×88°.43W, h12km, ML3.6, Presumed earthquake*
*CATAC **29** 22:14:15.3±0.4, 12°.N±3°.×8°.8W±°, h24km, M3.6/27, MLv3.6/27, Error ellipse: s-maj=6.4km s-min=2.2km az=28.2, confirmed*
*IDC **29** 22:14:15.2±5.1, 13°.20N×87°.60W, h0km, mb3.7/4, mbtmp3.7/4, MS2.7/1, Error ellipse: s-maj=97.9km s-min=63.3km az=5.0*

ISC 29 22:14:13.2±2.5, 12°.25N±0°.07×88°.42W±0°.04, h12km±15km, n64, σ0s95/83, mb3.7/4, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INTP	**Intipuca**	**1.01**	**21**	*eP*	**Pn**	**22 14 33.5**	**+0.3**
CSGN	**Cosiguina Volc**	**1.11**	**49**	P	**Pb**	**22 14 34.8**	**+0.4**
CSGN				S	**Sn**	**22 14 50.0**	**+0.1**
POTN	**Potosi Cosigui**	**1.16**	**50**	P	**Pb**	**22 14 35.8**	**+0.5**
POTN				S	**Sn**	**22 14 51.1**	**0.0**
CNCH	**Conchagua**	**1.17**	**29**	P	**Pb**	**22 14 35.8**	**+0.3**
CNCH	**Conchagua**	**1.17**	**29**	*eP*	**Pn**	**22 14 36.2**	**+0.7**
LCND	**La Caada**	**1.17**	**26**	P	**Pb**	**22 14 35.8**	**+0.4**
LCY	**Lacayo**	**1.17**	**6**	*eP*	**Pb**	**22 14 36.0**	**+0.4**
RANC	**El Ranchito**	**1.19**	**6**	P	**Pb**	**22 14 36.2**	**+0.4**
BLLM	**Bellamira**	**1.20**	**8**	*eP*	**Pb**	**22 14 36.0**	**0.0**
PACA	**Pacayal**	**1.22**	**4**	P	**Pb**	**22 14 36.3**	**+0.1**
PACA				S	**Sn**	**22 14 52.3**	**-0.4**
PACA	**Pacayal**	**1.22**	**4**	*eP*	**Pb**	**22 14 36.5**	**+0.2**
TECA	**Tecapa**	**1.24**	**356**	*i* P	**Pb**	**22 14 36.6**	**-0.1**
TECO	**Alcaldia de Te**	**1.33**	**345**	P	**Pn**	**22 14 37.9**	**+0.3**
TECO				S	**Sb**	**22 14 55.0**	**-0.2**
PQSS	**Presa 15 de Se**	**1.37**	**354**	*eP*	**Pn**	**22 14 38.4**	**+0.1**
CRIN	**San Cristobal**	**1.41**	**71**	P	**Pn**	**22 14 39.9**	**+1.1**
COEG	**Centro de Oper**	**1.44**	**342**	P	**Pn**	**22 14 39.2**	**0.0**
COEG				S	**Sg**	**22 14 58.9**	**-0.6**
COEG	**Centro de Oper**	**1.44**	**342**	*eP*	**Pn**	**22 14 38.9**	**-0.3**
SJTE	**Alcalda de S**	**1.47**	**337**	*eP*	**Pn**	**22 14 39.7**	**0.0**
SCLA	**Alcaldia de Sa**	**1.48**	**348**	P	**Pn**	**22 14 40.8**	**+1.1**
SCLA				S	**Sb**	**22 14 59.6**	**+0.2**
SCLA	**Alcaldia de Sa**	**1.48**	**348**	*eP*	**Pn**	**22 14 40.5**	**+0.8**
LFRS	**El Faro**	**1.50**	**335**	*eP*	**Pn**	**22 14 39.9**	**-0.2**
LALI	**Alcalda de L**	**1.51**	**325**	P	**Pn**	**22 14 40.5**	**+0.3**
PAVA	**Las Pavas**	**1.54**	**341**	P	**Pn**	**22 14 41.1**	**+0.4**
PAVA				S	**Sn**	**22 15 00.8**	**+0.1**
PAVA	**Las Pavas**	**1.54**	**341**	*eP*	**Pn**	**22 14 41.0**	**+0.4**
LOMA	**Loma Larga**	**1.57**	**332**	*eP*	**Pn**	**22 14 41.6**	**+0.5**
TELN	**Telica**	**1.59**	**77**	P	**Pn**	**22 14 41.2**	**-0.1**
HERN	**Volcan Telica**	**1.59**	**77**	P	**Pn**	**22 14 41.4**	**+0.1**
HERN				S	**Sn**	**22 15 02.0**	**+0.1**
HOYN	**Al Sur del Vol**	**1.59**	**77**	P	**Pn**	**22 14 41.5**	**+0.2**
HOYN				S	**Sn**	**22 15 00.9**	**-1.0**
POLN	**Al Sur del Vol**	**1.62**	**76**	S	**Sn**	**22 15 02.4**	**-0.1**
LFU	**La Fuente**	**1.64**	**336**	*eP*	**Pn**	**22 14 42.3**	**+0.3**
ROCN	**Rota Cerro Neg**	**1.66**	**80**	P	**Pn**	**22 14 42.8**	**+0.6**
UEES	**Universidad Ev**	**1.66**	**331**	P	**Pn**	**22 14 44.1**	**+1.7**
UEES				S	**Sn**	**22 15 03.3**	**-0.4**
PMON	**Piamonte**	**1.70**	**329**	P	**Pn**	**22 14 43.0**	**+0.2**
PMON				S	**Sn**	**22 15 04.2**	**-0.3**
PMON	**Piamonte**	**1.70**	**329**	*eP*	**Pn**	**22 14 43.0**	**+0.2**
BOQS	**Boqueron**	**1.70**	**330**	*eP*	**Pn**	**22 14 43.4**	**+0.4**
CNGN	**Cerro Negro**	**1.70**	**81**	P	**Pn**	**22 14 44.6**	**+1.8**
JAYA	**Jayaque - finc**	**1.72**	**324**	P	**Pn**	**22 14 43.8**	**+0.6**
JAYA				S	**Sn**	**22 15 04.2**	**-1.0**
P5NO	**Presa 5 de nov**	**1.76**	**349**	P	**Pn**	**22 14 44.7**	**+1.1**
P5NO				S	**Sn**	**22 15 05.7**	**-0.2**
P5NO	**Presa 5 de nov**	**1.76**	**349**	*i* P	**Pn**	**22 14 44.4**	**+0.9**
COPN	**Copaltepe**	**1.79**	**92**	P	**Pn**	**22 14 43.3**	**-0.6**
CEDA	**San Andres**	**1.81**	**328**	S	**Sn**	**22 15 07.0**	**-0.4**
MOM3	**MOM3**	**1.88**	**82**	P	**Pn**	**22 14 45.3**	**+0.2**
MOM3				S	**Sn**	**22 15 09.5**	**+0.8**
MOM2	**El Cardon**	**1.90**	**84**	P	**Pn**	**22 14 46.2**	**+0.7**
MOM2				S	**Sn**	**22 15 09.3**	**-0.1**
UNIC	**Universidad Ca**	**2.04**	**328**	P	**Pn**	**22 14 49.4**	**+1.8**
UNIC				S	**Sn**	**22 15 13.6**	**+0.5**
TISN	**Laguna Tiscapa**	**2.10**	**93**	P	**Pn**	**22 14 48.0**	**-0.3**
UNAN	**Cigeo UNAN**	**2.10**	**94**	P	**Pn**	**22 14 49.2**	**+0.9**
UNAN				S	**Sn**	**22 15 14.5**	**0.0**
TGUH	**Tegucigalpa,Un**	**2.12**	**32**	P	**Pn**	**22 14 50.0**	**+1.4**
TGUH				S	**Sn**	**22 15 15.6**	**+0.7**
LIMN	**Finca el Limon**	**2.16**	**68**	P	**Pn**	**22 14 49.3**	**+0.1**
LIMN				S	**Sn**	**22 15 15.2**	**-0.8**
WILN	**Americas 2**	**2.18**	**92**	S	**Sn**	**22 15 16.2**	**-0.2**
SLOZ	**Alcaldia de Sa**	**2.21**	**323**	P	**Pn**	**22 14 51.6**	**+1.7**
SLOZ				S	**Sn**	**22 15 19.0**	**+1.9**
YUSH	**Yuscaran**	**2.29**	**42**	P	**Pn**	**22 14 52.0**	**+1.1**
MTO3	**Montecristo**	**2.33**	**337**	P	**Pn**	**22 14 53.0**	**+1.4**
MTO3	**Montecristo**	**2.33**	**337**	*eP*	**Pn**	**22 14 52.7**	**+1.1**
RCFN	**Al S de San Ju**	**2.50**	**59**	P	**Pn**	**22 14 54.9**	**+0.9**
RCON	**San Juan de Ri**	**2.52**	**61**	P	**Pn**	**22 14 55.5**	**+1.3**
RCVN	**Varillal2**	**2.54

	0.9nm,0.8s						
MJAR	**Matsushiro Arr**	**16.40**	**35**		**Pn**	**22 37 21.9**	**-1.0**
SIJI	**Sorong**	**24.74**	**169**	LR	LR	22 46 23.5	
	comp=Z,33nm,20.8s,baz=163,slow=31						
CMAR	**Chiang Mai Arr**	**26.20**	**264**	LR	LR	22 49 09.2	
	comp=Z,23nm,20.3s,baz=220,slow=36						
TLY	**Talaya**	**33.11**	**334**	LR	LR	22 54 48.9	
	comp=Z,29nm,18.9s,baz=114,slow=38						
MKAR	**Makanchi Array**	**42.20**	**314**	P	**P**	**22 41 27.1**	**+2.3**
	2.1nm,0.7s,baz=99,slow=8.8,SNR=20						
	2.1nm,0.7s						
MAKZ	**Makanchi**	**42.41**	**314**	P	**P**	**22 41 26.7**	**+0.2**
MAKZ				IAmb	IAmb	22 41 29.8	
	comp=Z,3.7nm,0.9s						
ZAA0	**Zalesovo Array**	**43.46**	**325**	P	**P**	**22 41 35.4**	**+0.6**
ZAA0				IAmb	IAmb	22 41 37.3	
	comp=Z,2.0nm,0.6s						
ZALV	**Zalesovo Beam**	**43.46**	**325**	P	**P**	**22 41 36.2**	**+1.4**
	comp=Z,2.3nm,0.6s,baz=116,slow=8.0,SNR=12						
ZALV				LR	LR	23 00 10.2	
	comp=Z,23nm,19.6s,baz=320,slow=37						
	comp=Z,2.3nm,0.6s						
WB0	**Warramunga Arr**	**43.76**	**169**	P	**P**	**22 41 38.1**	**+0.6**
WB0				IAmb	IAmb	22 41 39.2	
	comp=Z,4.7nm,1.1s						
WRA	**Warramunga Arr**	**43.92**	**169**	P	**P**	**22 41 39.5**	**+0.6**
	comp=Z,2.2nm,0.5s,baz=348,slow=8.8,SNR=52						
	comp=Z,2.2nm,0.5s						
WRA	**Warramunga Arr**	**43.92**	**169**	P	**P**	**22 41 37.9**	**-1.0**
WR8	**Warramunga Arr**	**43.97**	**169**	P	**P**	**22 41 39.9**	**+0.7**
KURK	**Kurchatov**	**45.72**	**319**	P	**P**	**22 41 54.3**	**+1.5**
KURK				IAmb	IAmb	22 41 55.7	
	comp=Z,4.7nm,1.2s						
KURBB	**Kurchatov Arra**	**45.74**	**319**	P	**P**	**22 41 55.5**	**+2.4**
	comp=Z,2.1nm,0.9s,baz=107,slow=8.1,SNR=11						
	comp=Z,2.1nm,0.9s						
CTA	**Charters Tower**	**47.48**	**154**	LR	LR	23 01 14.5	
	comp=Z,33nm,20.2s,baz=222,slow=35						
ASAR	**Alice Springs**	**47.51**	**171**	P	**P**	**22 42 08.8**	**+1.6**
	comp=Z,0.4nm,0.4s,baz=353,slow=8.7,SNR=11						
	comp=Z,0.4nm,0.4s						
BVAR	**Borovoye Array**	**51.24**	**320**	P	**P**	**22 42 37.4**	**+2.0**
	comp=Z,0.3nm,0.5s,baz=112,slow=9.0,SNR=3.0						
	comp=Z,0.3nm,0.5s						
BORK	**Borovoye**	**51.29**	**320**	P	**P**	**22 42 37.7**	**+2.0**
BORK				IAmb	IAmb	22 42 41.2	
	comp=Z,1.4nm,0.9s						
FINES	**FINESS Array B**	**74.39**	**331**	LR	LR	23 22 24.8	
	comp=Z,32nm,18.7s,baz=304,slow=39						
NB201	**NORSAR Array S**	**80.95**	**334**	P	**P**	**22 45 46.3**	**+0.4**

NEIC ***29*** *22:47:18.8±1.7, 43.86N±0.05×105.42W±0.06, h0km±1km, ML2.8/45, Error ellipse: s-maj=10.4km s-min=3.8km az=319.0*

IDC ***29*** *22:47:20.2±1.8, 43.73N×105.46W, h0km, mbtmp3.5/2, ML3.2/2, Error ellipse: s-maj=46.7km s-min=8.5km az=150.0*

ISC 29 22:47:18.2±1.1, 43.96N±0.05×105.52W±0.05, h0km, n23, σ2s08/20, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**1.08**	**81**		**Pn**	**22 47 39.8**	**-1.0**
K22A	**Casper**	**1.50**	**210**		**Pb**	**22 47 46.5**	**-0.5**
LAO	**LASA Array**	**2.78**	**350**	Pn	**Pb**	**22 48 07.8**	**-1.0**
RLMT	**Red Lodge**	**2.92**	**295**	Pn	**Pb**	**22 48 09.6**	**-1.7**
RLMT				IAML		22 48 28.6	
	19nm,0.3s						
RLMT				IAML		22 49 10.1	
	16nm,1.2s						
BW06	**Boulder Array**	**3.18**	**249**	Pn	**Pn**	**22 48 11.5**	**+1.9**
BW06				IAML		22 49 05.2	
	24nm,0.6s						
PD31	**Pinedale Array**	**3.18**	**249**	Pn	**Pn**	**22 48 11.6**	**+1.9**
PDAR	**Pinedale Array**	**3.18**	**249**	Pn	**Pb**	**22 48 14.2**	**-1.4**
	2.3nm,0.3s,baz=78,slow=17,SNR=63						
PDAR				Pg	**Pg**	**22 48 20.4**	**+1.3**
	3.1nm,0.3s,baz=76,slow=18,SNR=18						
PDAR				Lg	Lg	22 48 58.9	
	5.0nm,0.3s,baz=73,slow=30,SNR=17						
	2.0nm,0.3s						
YNE	**Yellowstone No**	**3.38**	**290**	Pn	**Pb**	**22 48 16.6**	**-2.5**
YNE				IAML		22 49 19.9	
	comp=E,17nm,0.4s						
YNE				IAML		22 49 20.0	
	comp=N,18nm,0.3s						
YMP	**Mirror Lake Pl**	**3.42**	**285**	Pn	**Pb**	**22 48 19.0**	**-0.8**
YMP				IAML		22 49 20.2	
	comp=E,22nm,0.7s						
YMP				IAML		22 49 22.2	
	comp=N,23nm,0.4s						
H17A	**Grant Village**	**3.66**	**279**	Pn	**Pb**	**22 48 21.1**	**-2.8**
H17A				IAML		22 49 26.4	
	comp=N,11nm,1.3s						
H17A				IAML		22 49 28.2	
	comp=E,13nm,2.0s						
HAYD	**Hayden**	**3.67**	**201**		**Pn**	**22 48 17.5**	**+1.1**
HAYD				IAML		22 49 18.0	
	comp=E,20nm,1.8s						
LOHW	**Long Hollow**	**3.70**	**266**	Pn	**Pb**	**22 48 23.6**	**-0.9**
FLWY	**Flagg Ranch**	**3.74**	**274**	Pn	**Pb**	**22 48 23.2**	**-2.0**
MOOW	**Moose Ponds**	**3.79**	**269**	Pn	**Pb**	**22 48 22.7**	**-3.4**
YPP	**Pitchstone Pla**	**3.82**	**277**	Pn	**Pn**	**22 48 19.8**	**+1.2**
YPP				IAML		22 49 40.3	
	comp=N,9.1nm,3.0s						
YPP				IAML		22 50 46.2	
	comp=E,14nm,4.4s						
SNOW	**Snow King Moun**	**3.83**	**264**	Pn	**Pb**	**22 48 22.4**	**-4.4**
SNOW				IAML		22 49 38.6	
	comp=E,16nm,2.1s						
OGNE	**Ogallala**	**3.96**	**138**	Pn	**Pn**	**22 48 20.1**	**-0.2**
FXWY	**Fox Creek**	**4.00**	**267**	IAML		22 50 11.3	
	comp=E,8.4nm,4.6s						
ISCO	**Idaho Springs**	**4.15**	**181**	Pn	**Pn**	**22 48 23.2**	**0.0**
ISCO				IAML		22 49 07.7	
	comp=E,7.6nm,5.0s						
ISCO				IAML		22 49 34.4	
	comp=E,10nm,3.0s						
YHL	**Hebgen Lake**	**4.16**	**284**	IAML		22 50 21.6	
	comp=E,11nm,4.0s						
YHL				IAML		22 50 36.5	
	comp=N,13nm,4.0s						
BOZ	**Bozeman (W)**	**4.65**	**293**	IAML		22 49 11.6	
	comp=N,7.9nm,4.5s						
BOZ				IAML		22 49 59.2	
	comp=N,7.1nm,3.6s						
I10CA	**LAC DU BONNET**	**8.99**	**43**	I	I	23 41 40.0	
	baz=225,slow=252,SNR=3.0						
ULM	**Lac du Bonnet**	**9.10**	**43**	Pn	**Pn**	**22 49 32.8**	**+2.0**
	comp=N,0.7nm,0.3s,baz=229,slow=13,SNR=8.1						
ULM				Lg	Lg	22 52 03.2	
	comp=N,0.1nm,0.3s,baz=198,slow=19,SNR=1.2						
	comp=N,1.6nm,0.3s						

SNET ***29*** *22:49:07.7±2.1, 13.72N×91.49W, h38km, ML3.5, Presumed earthquake*

GCG ***29*** *22:49:09.0±1.4, 13.71N×91.46W, h42km±65km, MD4.1, ML3.9, Presumed earthquake*

CATAC ***29*** *22:49:09.5±0.8, 14.N±3.×9.1W±., h29km±10km, M3.4/19, MLv3.4/19, Error ellipse: s-maj=9.8km s-min=4.2km az=46.8, confirmed:*

ISC 29 22:49:03.3±2.3, 13.55N±0.10×91.49W±0.07, h1km±12km, n42, σ1s59/51, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STG5	**El Palmar, Qui**	**0.86**	**9**	*i* P	**Pn**	**22 49 26.4**	**+3.7**
STG2	**El Palmar, Qui**	**0.89**	**7**	*i* P	**Pn**	**22 49 27.3**	**+4.2**
STG2				IAML		22 49 44.2	
	comp=E,3µm,0.2s						
STG8	**El Palmar, Qui**	**0.91**	**8**	*i* P	**Pn**	**22 49 27.7**	**+4.2**
ESSJ	**San Jos, E**	**0.96**	**89**	*i* P	**Pg**	**22 49 22.4**	**+0.7**
RTAL	**Retalhuleu**	**0.99**	**348**	P	**Pn**	**22 49 25.2**	**+0.8**
RTAL				S	**Sn**	**22 49 37.8**	**-1.2**
FG8	**Yepocapa, Chim**	**1.15**	**52**	*i* P	**Pg**	**22 49 25.3**	**0.0**
FG16	**Alotenango, Sa**	**1.19**	**53**	*i* P	**Pg**	**22 49 26.3**	**+0.1**
FG16				IAML		22 49 43.7	
	comp=E,6µm,0.2s						
PCG5	**San Vicente Pa**	**1.27**	**58**	*i* P	**Pg**	**22 49 27.2**	**-0.4**
SOKI	**Kika Raxquin**	**1.27**	**4**	*i* P	**Pn**	**22 49 29.3**	**+0.8**
SMCA	**Catarina**	**1.42**	**336**	*i* P	**Pn**	**22 49 31.0**	**+0.7**
FAME	**Alcaldia de Sa**	**1.46**	**78**	P	**Pn**	**22 49 30.8**	**0.0**
FAME				S	**Sg**	**22 49 49.7**	**-0.5**
LOAL	**Lomas de Alarc**	**1.72**	**75**	P	**Pb**	**22 49 35.7**	**0.0**
LOAL				S	**Sb**	**22 49 56.5**	**-1.3**
SLOZ	**Alcaldia de Sa**	**1.72**	**74**	P	**Pg**	**22 49 36.7**	**+0.3**
SLOZ				S	**Sb**	**22 49 56.6**	**-1.3**
APG	**El Apazote**	**1.76**	**34**	*i* P	**Pg**	**22 49 37.2**	**+0.2**
HUEH	**Huehuetenango**	**1.76**	**359**	P	**Pg**	**22 49 37.4**	**+0.3**
RTR	**El Retiro**	**1.82**	**79**	*eP*	**Pn**	**22 49 37.3**	**+1.3**
SNJE	**San Jose**	**1.86**	**80**	*eP*	**Pn**	**22 49 37.2**	**+0.8**
UNIC	**Universidad Ca**	**1.93**	**77**	S	**Sb**	**22 50 02.8**	**-1.2**
JAYA	**Jayaque - finc**	**1.98**	**87**	P	**Pn**	**22 49 39.4**	**+1.3**
JAYA				S	**Sn**	**22 50 03.8**	**+0.1**
JAYA	**Jayaque - finc**	**1.98**	**87**	*i* P	**Pn**	**22 49 38.7**	**+0.5**
JAYA				IAML		22 50 10.1	
	comp=N,832nm,0.2s						
JAYA	**Jayaque - finc**	**1.98**	**87**	*eP*	**Pn**	**22 49 39.2**	**+1.0**
CEDA	**San Andres**	**2.05**	**83**	S	**Sn**	**22 50 04.9**	**-0.3**
PMON	**Piamonte**	**2.12**	**85**	P	**Pn**	**22 49 42.2**	**+2.2**
PMON				S	**Sn**	**22 50 06.7**	**-0.2**
PMON	**Piamonte**	**2.12**	**85**	*eP*	**Pn**	**22 49 41.8**	**+1.9**
PMON				*eS*	**Sn**	**22 50 05.9**	**-1.0**
BOQS	**Boqueron**	**2.15**	**85**	*eP*	**Pn**	**22 49 41.0**	**+0.5**
UEES	**Universidad Ev**	**2.19**	**85**	P	**Pb**	**22 49 43.6**	**-0.2**
UEES				S	**Sn**	**22 50 09.2**	**+0.5**
MTO3	**Montecristo**	**2.23**	**67**	P	**Pn**	**22 49 42.8**	**+1.3**
MTO3	**Montecristo**	**2.23**	**67**	*i* P	**Pn**	**22 49 43.0**	**+1.4**
ESQI	**Esquipulas**	**2.31**	**64**	P	**Pn**	**22 49 44.4**	**+1.8**
ESQI	**Esquipulas**	**2.31**	**64**	*eP*	**Pn**	**22 49 44.2**	**+1.6**
LFRS	**El Faro**	**2.36**	**88**	*eP*	**Pn**	**22 49 44.2**	**+0.9**
SJTE	**Alcalda de S**	**2.41**	**88**	*eP*	**Pn**	**22 49 45.9**	**+1.9**
PAVA	**Las Pavas**	**2.48**	**86**	P	**Pn**	**22 49 47.4**	**+2.4**
PAVA	**Las Pavas**	**2.48**	**86**	*eP*	**Pn**	**22 49 46.7**	**+1.7**
COEG	**Centro de Oper**	**2.54**	**88**	P	**Pn**	**22 49 45.9**	**+0.3**
COEG				S	**Sn**	**22 50 16.8**	**-0.4**
COEG	**Centro de Oper**	**2.54**	**88**	*eP*	**Pn**	**22 49 47.3**	**+1.7**
LLGN	**La Laguna**	**2.54**	**76**	P	**Pn**	**22 49 47.2**	**+1.4**
P5NO	**Presa 5 de nov**	**2.69**	**80**	P	**Pn**	**22 49 48.8**	**+1.1**
SCLA	**Alcaldia de Sa**	**2.69**	**86**	P	**Pb**	**22 49 51.1**	**-1.1**
CCIG	**Comitan**	**2.79**	**347**	P	**Pb**	**22 49 52.3**	**-1.8**
SARH	**Santa Rosa de**	**2.91**	**65**	P	**Pn**	**22 49 52.7**	**+1.8**
LCND	**La Caada**	**3.51**	**93**	P	**Pn**	**22 50 01.6**	**+2.7**

IDC 29 22:49:37.2±15.0, 59.56S×101.14E, h0km, Error ellipse: s-maj=40.0km s-min=11.7km az=153.0, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**26.10**	**25**	H	H	23 22 22.1	
	baz=195,slow=76,SNR=14						
H01W1	**Cape Leeuwin H**	**26.11**	**25**	H	H	23 22 22.8	
	baz=195,slow=76,SNR=11						
H01W3	**Cape Leeuwin H**	**26.12**	**25**	H	H	23 22 23.3	
	baz=195,slow=76,SNR=11						
H04S1	**CROZET ISLANDS**	**31.34**	**272**	H	H	23 29 17.7	
	baz=131,slow=75,SNR=12						
H04S2	**CROZET ISLANDS**	**31.34**	**272**	H	H	23 29 17.7	
	baz=131,slow=75,SNR=8.0						
H04S3	**CROZET ISLANDS**	**31.36**	**272**	H	H	23 29 17.7	
	baz=131,slow=75,SNR=9.6						
H08S2	**Diego Garcia H**	**56.17**	**325**	H	H	23 59 51.6	
	baz=163,slow=76,SNR=29						
H08S1	**Diego Garcia H**	**56.18**	**325**	H	H	23 59 52.0	
	baz=163,slow=76,SNR=26						
H08S3	**Diego Garcia H**	**56.19**	**325**	H	H	23 59 54.2	
	baz=163,slow=76,SNR=44						

NEIC ***29*** *22:53:21.3±1.0, 11.04S±0.06×115.29E±0.08, h10km±1km, mb4.2/12, Error ellipse: s-maj=14.4km s-min=6.4km az=235.0*

DJA ***29*** *22:53:24.7±0.3, 11.S±3.×115.E±., h10km, M4.3/25, mB4.7/3, mb4.3/11, MLv4.3/25, Mw(mB)4.0/3*

IDC ***29*** *22:53:32.0±5.2, 10.69S×115.68E, h83km±46km, mb3.5/10, mbtmp3.9/12, ML3.9/2, MS2.6/1, Error ellipse: s-maj=39.8km s-min=17.8km az=63.0*

ISC 29 22:53:24.1±0.9, 11.11S±0.05×115.29E±0.05, h37km±11km, n67, σ1s71/77, mb4.0/11, South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGBI	**Denpasar**	**2.28**	**356**	P	**Pn**	**22 53 59.2**	**-0.1**
IGBI				S	**Sn**	**22 54 24.4**	**-1.8**
DNP	**Denpasar**	**2.42**	**358**	P	**Pn**	**22 54 02.6**	**+1.4**
DNP				S	**Sn**	**22 54 29.9**	**+0.4**
RTBI	**Rangdo, Negare**	**2.66**	**352**	P	**Pn**	**22 54 04.5**	**0.0**
RTBI				S	**Sn**	**22 54 34.3**	**-1.2**
KHKI	**Kahang-Kahang**	**2.75**	**7**	P	**Pn**	**22 54 07.1**	**+1.4**
KHKI				S	**Sn**	**22 54 38.4**	**+0.8**
TWSI	**Taliwang, Sumb**	**2.83**	**34**	P	**Pn**	**22 54 07.9**	**+1.1**
JAGI	**Jajag, Banyuwa**	**2.86**	**337**	P	**Pn**	**22 54 06.4**	**-0.8**
JAGI	**Jajag, Banyuwa**	**2.86**	**337**		**Pn**	**22 54 05.8**	**-1.4**
JAGI				Sn	**Sn**	**22 54 38.2**	**-2.1**
JAGI	**Jajag, Banyuwa**	**2.86**	**337**	P	**Pn**	**22 54 06.4**	**-0.8**
JAGI				S	**Sn**	**22 54 37.9**	**-2.4**
PLAI	**Plampang**	**3.34**	**47**	P	**Pn**	**22 54 14.8**	**+1.0**
PLAI	**Plampang**	**3.34**	**47**	P	**Pn**	**22 54 15.0**	**+1.2**
PLAI				S	**Sn**	**22 54 50.8**	**-1.4**
ABJI	**Asem Bagus**	**3.46**	**342**	P	**Pn**	**22 54 16.9**	**+1.5**
BLJI	**Banyuglugur**	**3.74**	**333**	P	**Pn**	**22 54 19.7**	**+0.4**
BLJI				S	**Sn**	**22 55 02.1**	**0.0**
DBNI	**Kabupaten Domp**	**3.95**	**49**	P	**Pn**	**22 54 24.2**	**+2.0**
KMMI	**Kalianget**	**4.24**	**342**	P	**Pn**	**22 54 27.3**	**+1.1**
WBSI	**Waikabubak, Su**	**4.29**	**70**	P	**Pn**	**22 54 27.3**	**+0.4**
SNJI	**Sawahan-Nganju**	**4.81**	**313**	P	**Pn**	**22 54 35.1**	**+1.0**
PCJI	**Pacitan**	**4.99**	**305**	P	**Pn**	**22 54 34.2**	**-2.3**
LBFI	**Labuhan Bajo,**	**5.23**	**60**	P	**Pn**	**22 54 41.3**	**+1.5**
UGM	**Wanagama**	**5.68**	**304**	P	**Pn**	**22 54 44.7**	**-1.3**
UGM	**Wanagama**	**5.68**	**304**	S	**Sn**	**22 55 47.2**	**-2.8**
UGM	**Wanagama**	**5.68**	**304**		**Pn**	**22 54 45.0**	**-0.9**
UGM	**Wanagama**	**5.68**	**304**	P	**Pn**	**22 54 45.3**	**-0.7**
	0.3nm28nm,0.5s						
BSSI	**Bau Bau, Buton**	**7.13**	**47**	P	**Pn**	**22 55 08.7**	**+2.8**
	0.1nm28nm,0.7s						
KAPI	**Kappang**	**7.50**	**36**	P	**Pn**	**22 55 11.5**	**+0.6**
	1.9nm,0.3s,baz=205,slow=4.4,SNR=3.6						
KAPI				S	**Sn**	**22 56 29.7**	**-5.0**
	4.6nm,0.3s,baz=65,slow=23,SNR=6.1						
	5.0nm,0.3s						
KAPI	**Kappang**	**7.50**	**36**		**Pn**	**22 55 09.6**	**-1.4**
KAPI	**Kappang**	**7.50**	**36**	P	**Pn**	**22 55 13.2**	**+2.3**
	0.1nm6.8nm,0.9s						
BATI	**Baumata**	**8.28**	**85**	P	**Pn**	**22 55 22.5**	**+0.8**
	1.8nm,0.3s,baz=250,slow=22,SNR=1.5						
BATI				S	**Sn**	**22 56 51.3**	**-2.7**
	18nm,0.4s,baz=337,slow=19,SNR=7.6						
	6.0nm,0.3s						
BBJI	**Bungbulang**	**8.37**	**295**	Pn	**Pn**	**22 55 21.8**	**-1.2**
BBJI	**Bungbulang**	**8.37**	**295**	P	**Pn**	**22 55 23.2**	**+0.2**
	8.3nm,0.8s						
PMSI	**Majene**	**8.37**	**26**	P	**Pn**	**22 55 23.9**	**+0.9**
	27nm,0.9s						
SOEI	**Soe**	**8.93**	**82**	Pn	**Pn**	**22 55 29.6**	**-1.1**
SOEI	**Soe**	**8.93**	**82**	P	**Pn**	**22 55 35.1**	**+4.4**
MBWA	**Marble Bar**	**10.86**	**157**	P	**Pn**	**22 55 55.4**	**-1.7**
MBWA	**Marble Bar**	**10.86**	**157**		**Pn**	**22 55 55.0**	**-2.0**
PSA00	**Pilbara Seismi**	**11.28**	**158**	P	**Pn**	**22 56 01.6**	**-1.2**
PSA00	**Pilbara Seismi**	**11.28**	**158**	Pn	**Pn**	**22 56 01.9**	**-1.0**
PSA00	**Pilbara Seismi**	**11.28**	**158**	Pn	**Pn**	**22 56 01.2**	**-1.6**
GIRL	**Giralia**	**11.51**	**185**	Pn	**Pn**	**22 56 05.3**	**-0.7**
FITZ	**Fitzroy Crossi**	**12.18**	**126**	P	**Pn**	**22 56 14.9**	**-0.2**
	1.5nm,0.5s,baz=307,slow=8.4,SNR=10						
FITZ				S	Sn	22 58 21.8	-8.0
	3.6nm,0.5s,baz=176,slow=20,SNR=6.7						
SBUM	**Sibu**	**13.82**	**347**	P	**Pn**	**22 56 37.1**	**-0.4**
SBUM	**Sibu**	**13.82**	**347**	Pn	**Pn**	**22 56 36.0**	**-1.5**
MNAI	**Manna**	**13.94**	**298**	P	Pn	22 56 35.2	-4.0
MEEK	**Meekatharra**	**15.76**	**169**	P	**Pn**	**22 57 02.0**	**-1.4**
MORW	**Morawa**	**17.88**	**178**		**P**	**22 57 31.1**	**+0.7**
MORW				IAmb	IAmb	22 57 45.5	
	comp=Z,19nm,1.2s						
FAKI	**Fak Fak**	**18.68**	**65**	P	**P**	**22 57 39.7**	**+0.4**
FAKI	**Fak Fak**	**18.68**	**65**	P	**P**	**22 57 38.8**	**-0.5**
FAKI				IAmb	IAmb	22 58 00.5	
	comp=Z,36nm,1.2s						
WB0	**Warramunga Arr**	**20.31**	**117**	P	**P**	**22 57 57.2**	**+0.2**
WRA	**Warramunga Arr**	**20.32**	**118**	P	Pn	22 58 00.7	+1.3
	comp=Z,3.0nm,0.9s,baz=299,slow=11,SNR=27						
WRA				S	**S**	**23 01 38.6**	**-4.6**
	comp=Z,0.2nm,0.4s,baz=292,slow=25,SNR=4.6						
	comp=Z,3.0nm,0.9s						
WRA	**Warramunga Arr**	**20.32**	**118**	P	**P**	**22 57 57.8**	**+0.5**
WR8	**Warramunga Arr**	**20.47**	**118**	P	**P**	**22 57 59.0**	**+0.2**
ASAR	**Alice Springs**	**21.68**	**128**	P	**P**	**22 58 15.9**	**+4.2**
	comp=Z,1.2nm,0.7s,baz=301,slow=9.9,SNR=14						
ASAR				S	**S**	**23 02 08.8**	**-1.2**
	comp=Z,1.0nm,0.9s,baz=301,slow=23,SNR=6.0						
	comp=Z,1.2nm,0.7s						
FORT	**Forrest**	**22.88**	**151**	P	**P**	**22 58 27.2**	**+2.7**
FORT				IAmb	IAmb	22 59 09.7	
	comp=Z,7.8nm,0.9s						
PBA	**Port Blair**	**31.84**	**315**	P	**P**	**22 59 43.7**	**-1.9**
STKA	**Stephens Creek**	**31.87**	**134**	P	**P**	**22 59 45.9**	**0.0**
CMAR	**Chiang Mai Arr**	**33.52**	**331**	P	**P**	**23 00 02.3**	**+1.9**
	comp=Z,0.6nm,0.3s,baz=145,slow=8.3,SNR=5.7						
CMAR				LR	LR	23 16 41.4	
	comp=Z,10.0nm,18.7s,baz=190,slow=42						
	comp=Z,0.6nm,0.3s						
KSRS	**Korea Array**	**49.74**	**13**	P	**P**	**23 02 11.6**	**-1.2**
	comp=Z,0.9nm,0.7s,baz=186,slow=6.7,SNR=2.1						
	comp=Z,0.9nm,0.7s						
MJAR	**Matsushiro Arr**	**52.08**	**23**	P	**P**	**23 02 29.4**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=212,slow=6.7,SNR=2.4						
	comp=Z,0.6nm,0.3s						
MJAR	**Matsushiro Arr**	**52.08**	**23**	P	**P**	**23 02 29.2**	**-1.3**
MJAR				IAmb	IAmb	23 02 54.8	
	comp=Z,4.7nm,1.3s						
JTM	**Tenmabayashi**	**56.87**	**23**	P	**P**	**23 03 05.0**	**-0.1**
SONM	**Songino Array**	**59.22**	**353**	P	**P**	**23 03 22.2**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=177,slow=8.0,SNR=1.9						
	comp=Z,0.3nm,0.4s						
SONM	**Songino Array**	**59.22**	**353**	P	**P**	**23 03 21.9**	**+0.3**
SONM				IAmb	IAmb	23 03 33.7	
	comp=Z,2.1nm,1.4s						
MKAR	**Makanchi Array**	**64.76**	**336**	P	**P**	**23 04 00.1**	**+1.3**
	comp=Z,0.7nm,0.6s,baz=143,slow=7.5,SNR=8.6						
	comp=Z,0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**69.31**	**336**	P	**P**	**23 04 28.7**	**+1.1**
	comp=Z,1.3nm,0.7s,baz=150,slow=5.2,SNR=13						
	comp=Z,1.3nm,0.7s						
KURK	**Kurchatov**	**69.35**	**336**	P	**P**	**23 04 29.0**	**+1.3**
KURK				IAmb	IAmb	23 04 29.9	
	comp=Z,2.1nm,0.8s						
ZALV	**Zalesovo Beam**	**69.78**	**341**	P	**P**	**23 04 31.2**	**+0.8**
	comp=Z,1.3nm,0.5s,baz=159,slow=4.7,SNR=6.5						
	comp=Z,1.3nm,0.5s						
ZALV	**Zalesovo Beam**	**69.78**	**341**	P	**P**	**23 04 30.9**	**+0.5**
BVAR	**Borovoye Array**	**74.50**	**334**	P	**P**	**23 05 00.7**	**+2.0**
	comp=Z,1.4nm,0.8s,baz=146,slow=8.2,SNR=8.8						
	comp=Z,1.4nm,0.8s						

KRSC 29 23:06:06.4±2.1, 49.36N×158.96E, h39km±48km, MI3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.26**	**307**	*eS*	Sn	23 07 08.0	+0.2
KDTR	**Khodutka, Kamc**	**2.52**	**347**	*eS*	Sn	23 07 17.6	+3.5
RUS	**Russkaya**	**3.09**	**355**	*eS*	Sn	23 07 32.1	+3.8
MTVR	**Mutnovka**	**3.17**	**351**	*eS*	Sn	23 07 34.1	+3.8
GRL	**Gorelyy**	**3.25**	**350**	*eS*	Sn	23 07 36.8	+4.5
KRMR	**Karymshinskiy**	**3.52**	**352**	*eS*	Sn	23 07 43.9	+5.2
DALK	**Dalny**	**3.68**	**358**	*eS*	Sn	23 07 47.2	+4.4
SPN	**Mys Shipunski**	**3.80**	**10**	*eP*	Pn	23 07 06.8	+4.4
AVH	**Avacha**	**3.91**	**358**	*eP*	Pn	23 07 08.7	+4.7
SDLR	**Sedlovina**	**3.92**	**359**	*eP*	Pn	23 07 08.5	+4.3
KOK	**Koryaka**	**3.94**	**357**	*eP*	Pn	23 07 09.3	+4.9
KRX	**Arik**	**4.01**	**357**	*eP*	Pn	23 07 10.8	+5.5
GNL	**Ganaly**	**4.39**	**352**	*eP*	Pn	23 07 15.9	+5.4
KBTR	**Krutoberegovo**	**7.25**	**17**	*eP*	Pn	23 07 54.3	+4.7

NEIC ***29*** *23:08:45.9±2.8, 17.7S±0.1×178.78W±0.1, h522km±10km, mb4.2/7, Error ellipse: s-maj=22.1km s-min=15.3km az=125.0*

IDC ***29*** *23:08:47.0±2.0, 17.77S×178.80W, h548km±20km, mb3.1/6, mbtmp3.9/7, Error ellipse: s-maj=41.0km s-min=20.7km az=143.0*

ISC 29 23:08:45.9±0.6, 17.7S±0.1×178.78W±0.09, h539km, n21, σ1s77/21, mb3.9/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.02**	**270**	P	**P**	**23 10 02.0**	**+1.8**

CRPR					IAML		23 13 22.4	
	comp=Z,570nm,0.5s							
LSP	**Las Mesas**	**0.42**	**308**			**Pg**	**23 13 16.0**	**-0.2**
LSP						**Sg**	**23 13 22.7**	**+0.7**
AOPR	**Arecibo Observ**	**0.43**	**358**			**Pg**	**23 13 15.7**	**-0.7**
AOPR					Sg	**Sg**	**23 13 22.2**	**-0.1**
AOPR					IAML		23 13 24.0	
	comp=Z,1μm,0.3s							
AOPR					IAML		23 13 26.0	
	comp=Z,940nm,0.3s							
PRSN	**Puerto Rico Se**	**0.49**	**308**			**Pg**	**23 13 17.1**	**-0.3**
PRSN					Sg	**Sg**	**23 13 24.1**	**0.0**
ECPR	**Experimental S**	**0.54**	**41**			**Pg**	**23 13 18.1**	**-0.2**
ECPR					Sg	**Sg**	**23 13 25.1**	**-0.4**
ECPR					IAML		23 13 28.5	
	comp=Z,1μm,0.2s							
SJG	**San Juan**	**0.59**	**70**			**Pg**	**23 13 19.2**	**-0.2**
SJG					Sg	**Sb**	**23 13 27.9**	**-0.1**
SJG	**San Juan**	**0.59**	**70**	*i* P		**Pg**	**23 13 19.1**	**-0.2**
SJG				*eS*		**Sb**	**23 13 28.0**	**0.0**
SJG					IAML		23 13 30.0	
	comp=Z,5μm,0.3s							
EMPR	**Esperanza - Ma**	**0.60**	**19**			**Pg**	**23 13 19.4**	**0.0**
EMPR						**Sg**	**23 13 28.3**	**+0.9**
IGPR	**InterUniversit**	**0.60**	**85**			**Pb**	**23 13 19.4**	**-0.5**
IGPR						**Sb**	**23 13 28.2**	**0.0**
AGPR	**Aguadilla, PR**	**0.66**	**327**			**Pg**	**23 13 20.0**	**-0.6**
AGPR					Sg	**Sg**	**23 13 29.4**	**+0.1**
IDE	**Isla Desecheo**	**0.85**	**304**			**Pg**	**23 13 23.2**	**-0.9**
IDE						**Sg**	**23 13 34.9**	**-0.3**
HUMP	**Col San Antoni**	**0.87**	**75**			**Pg**	**23 13 23.8**	**-0.8**
HUMP					Sg	**Sb**	**23 13 36.2**	**+0.1**
HUMP					IAML		23 13 37.2	
	comp=Z,209nm,0.2s							
CUPR	**Culebra, Puert**	**1.44**	**74**	Pn		**Pn**	**23 13 33.5**	**+0.3**
DR12	**Loma Pena Alta**	**2.66**	**290**	Pn		**Pn**	**23 13 51.1**	**+1.0**

*IDC **29** 23:27:41.1±0.7, 6°.71N×72°.91W, h160km±7km, mb3.4/4, mbtmp3.9/6, Error ellipse: s-maj=27.5km s-min=7.5km az=132.0*

*CATAC **29** 23:27:41.6±0.7, 7°.1N±2°×7°.3W±°, h150km±6km, M4.1/9, mb3.7/1, mB4.4/1, MLv4.2/9, Mw(mB)3.5/1, Error ellipse: s-maj=9.7km s-min=4.7km az=84.2, confirmed*

*RSNC **29** 23:27:42.5±0.0, 7°.1N±1°×7°.3W±°, h146km±1km, M3.9, mB4.7, mb4.1, ML3.5, Mw(mB)3.9*

*FUNV **29** 23:27:43.4, 7°.18N×73°.24W, h2km, MW3.9, Presumed earthquake*

ISC 29 23:27:41.0±0.7, 6°.86N±0°.03×73°.15W±0°.03, h155km±5km, n66, σ1°53/115, mb3.9/3, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.27**	**187**	P	**Pn**	**23 28 02.4**	**+0.1**
BARC				S	**Sn**	**23 28 17.7**	**-0.9**
BRJC	**Barrancabermej**	**0.60**	**281**	P	**Pn**	**23 28 04.1**	**+0.7**
BRJC				S	**Sn**	**23 28 21.2**	**+0.8**
PAMC	**Pamplona, Colo**	**0.65**	**43**	P	**Pn**	**23 28 05.2**	**+0.9**
PAMC				S	**Sn**	**23 28 21.9**	**-0.1**
RUSC	**La Rusia**	**0.96**	**176**	P	**Pn**	**23 28 06.1**	**-0.4**
RUSC				S	**Sn**	**23 28 25.2**	**-0.8**
RUSC	**La Rusia**	**0.96**	**176**	P	**Pn**	**23 28 06.3**	**-0.2**
RUSC				S	**Sn**	**23 28 24.6**	**-1.4**
RUSC	**La Rusia**	**0.96**	**176**	*eP*	**Pn**	**23 28 06.6**	**+0.1**
RUSC				*eS*	**Sn**	**23 28 24.8**	**-1.2**
PTBC	**PUERTO BERRIO,**	**1.34**	**256**	P	**Pn**	**23 28 08.7**	**-0.6**
PTBC				S	**Sn**	**23 28 30.2**	**-0.7**
OCAC	**Ocana**	**1.38**	**353**	P	**Pn**	**23 28 10.6**	**+0.8**
OCAC				S	**Sn**	**23 28 32.0**	**0.0**
SPBC	**San Pablo de B**	**1.51**	**217**	P	**Pn**	**23 28 11.1**	**0.0**
SPBC				S	**Sn**	**23 28 33.6**	**-0.7**
NORC	**Norcasia**	**2.14**	**233**	P	**Pn**	**23 28 17.9**	**-0.2**
NORC				S	**Sn**	**23 28 45.5**	**-1.2**
CHIC	**Chingaza**	**2.29**	**195**	P	**Pn**	**23 28 20.3**	**0.0**
CHIC				S	**Sn**	**23 28 49.6**	**-0.9**
ROSC	**El Rosal**	**2.32**	**210**	P	**Pn**	**23 28 22.4**	**+1.8**
	129nm,0.3s,baz=238,slow=23,SNR=115						
ROSC				S	**Sn**	**23 28 52.0**	**+0.9**
	990nm,0.3s,baz=184,slow=22,SNR=10						
HELC	**Santa Helena**	**2.46**	**254**	P	**Pn**	**23 28 23.8**	**+1.7**
HELC				S	**Sn**	**23 28 54.4**	**+0.6**
HELC	**Santa Helena**	**2.46**	**254**	P	**Pn**	**23 28 22.6**	**+0.4**
HELC				S	**Sn**	**23 28 53.0**	**-0.9**
HELC	**Santa Helena**	**2.46**	**254**	*eP*	**Pn**	**23 28 24.9**	**+2.7**
HELC				*eS*	**Sn**	**23 28 54.0**	**+0.2**
CVER	**Cruz Verde, Cu**	**2.50**	**202**	P	**Pn**	**23 28 23.8**	**+1.0**
CVER				S	**Sn**	**23 28 55.6**	**+0.5**
UREC	**San Jos de Ur**	**2.52**	**291**	P	**Pn**	**23 28 22.1**	**-0.5**
UREC				S	**Sn**	**23 28 53.2**	**-1.6**
GUY2C	**Guyana, Caldas**	**2.74**	**234**	P	**Pn**	**23 28 26.3**	**+0.6**
GUY2C				S	**Sn**	**23 28 59.8**	**-0.5**
VILC	**Villavicencio,**	**2.79**	**191**	P	**Pn**	**23 28 25.7**	**-0.3**
VILC				S	**Sn**	**23 28 59.4**	**-1.4**
NIZA	**Niza - Manizal**	**2.92**	**232**	P	**Pn**	**23 28 28.4**	**+0.6**
NIZA				S	**Sn**	**23 29 03.6**	**-0.5**
CBOC	**Ciudad Bolivar**	**3.01**	**251**	P	**Pn**	**23 28 29.5**	**+0.6**
CBOC				S	**Sn**	**23 29 04.4**	**-1.5**
DBBC	**Dabeiba**	**3.04**	**273**	P	**Pn**	**23 28 30.0**	**+0.9**
DBBC				S	**Sn**	**23 29 04.5**	**-1.9**
ARGC	**Ariguani, Magd**	**3.17**	**340**	P	**Pn**	**23 28 32.4**	**+1.7**
ARGC				S	**Sn**	**23 29 09.2**	**-0.1**
SDV	**Santo Domingo**	**3.20**	**51**	P	**Pn**	**23 28 32.1**	**+0.8**
	46nm,0.3s,baz=230,slow=7.6,SNR=131						
SDV				S	**Sn**	**23 29 09.1**	**-1.2**
	85nm,0.4s,baz=53,slow=12,SNR=35						
SDV	**Santo Domingo**	**3.20**	**51**	P	**Pn**	**23 28 32.1**	**+0.8**
SDV				S	**Sn**	**23 29 09.7**	**-0.6**
SDV	**Santo Domingo**	**3.20**	**51**	*eP*	**Pn**	**23 28 31.8**	**+0.6**
SDV				*eS*	**Sn**	**23 29 09.3**	**-0.9**
APAC	**Apartado, Choc**	**3.56**	**287**	P	**Pn**	**23 28 36.2**	**+0.6**
APAC				S	**Sn**	**23 29 18.0**	**0.0**
PRAC	**Prado**	**3.57**	**209**	P	**Pn**	**23 28 36.0**	**+0.1**
PRAC				S	**Sn**	**23 29 18.0**	**-0.6**
PRAC	**Prado**	**3.57**	**209**	P	**Pn**	**23 28 36.1**	**+0.2**
PRAC				S	**Sn**	**23 29 16.7**	**-1.9**
ORTC	**Ortega, Tolima**	**3.60**	**216**	P	**Pn**	**23 28 36.6**	**+0.3**
ORTC				S	**Sn**	**23 29 18.9**	**-0.3**
SJCC	**San Jacinto, C**	**3.62**	**326**	P	**Pn**	**23 28 36.3**	**-0.3**
SJCC				S	**Sn**	**23 29 17.6**	**-2.1**
SJCC	**San Jacinto, C**	**3.62**	**326**	P	**Pn**	**23 28 36.0**	**-0.6**
SJCC				S	**Sn**	**23 29 17.6**	**-2.1**
SJCC	**San Jacinto, C**	**3.62**	**326**	*eP*	**Pn**	**23 28 36.0**	**-0.6**
SJCC				*eS*	**Sn**	**23 29 14.0**	**-5.7**
PLMC	**San Jos del P**	**3.67**	**238**	P	**Pn**	**23 28 37.9**	**+0.7**
PLMC				S	**Sn**	**23 29 19.6**	**-1.3**
LCBC	**Los crdobas,**	**3.75**	**302**	P	**Pn**	**23 28 38.1**	**-0.1**
LCBC				S	**Sn**	**23 29 19.6**	**-3.0**
URMC	**La Uribe, Meta**	**3.79**	**199**	P	**Pn**	**23 29 39.2**	**+0.4**
URMC				S	**Sn**	**23 29 22.9**	**-0.8**
YOTC	**Yotoco, Valle**	**4.28**	**228**	P	**Pn**	**23 28 44.9**	**-0.2**
YOTC				S	**Sn**	**23 29 33.8**	**-1.3**
SMRC	**Santa Marta, M**	**4.41**	**346**	P	**Pn**	**23 28 47.6**	**+0.9**
SMRC				S	**Sn**	**23 29 35.1**	**-2.8**
CAPC	**Capurgana**	**4.52**	**293**	P	**Pn**	**23 28 48.6**	**+0.4**
CAPC				S	**Sn**	**23 29 38.2**	**-2.4**
CAP2	**Capurgana**	**4.54**	**293**	P	**Pn**	**23 28 52.2**	**+3.9**
CAP2				S	**Sn**	**23 29 39.8**	**-1.1**
BETC	**Betania**	**4.74**	**209**	P	**Pn**	**23 28 50.4**	**-0.7**
BETC				S	**Sn**	**23 29 43.3**	**-2.6**
URIC	**Uribia, Colomb**	**4.94**	**13**	P	**Pn**	**23 28 52.5**	**-1.2**
URIC				S	**Sn**	**23 29 47.2**	**-3.4**
URIC	**Uribia, Colomb**	**4.94**	**13**	*eP*	**Pn**	**23 28 53.0**	**-0.8**
URIC				*eS*	**Sn**	**23 29 44.7**	**-5.9**
JAMC	**Jamundi, Valle**	**5.04**	**224**	P	**Pn**	**23 28 54.8**	**-0.5**
	868nm13nm,0.4s						
JAMC				S	**Sn**	**23 29 50.2**	**-3.1**
	868nm13nm,0.4s						
GARC	**Garzon, Huila**	**5.20**	**207**	P	**Pn**	**23 28 56.3**	**-1.1**
GARC				S	**Sn**	**23 29 54.0**	**-3.0**
POPC	**Popayan, Colom**	**5.55**	**219**	P	**Pn**	**23 29 01.9**	**-0.1**
	10nm,0.5s						
POPC				S	**Sn**	**23 30 02.8**	**-2.5**
	10nm,0.5s						
FLOC	**Florencia**	**5.81**	**206**	P	**Pn**	**23 29 05.1**	**-0.1**
FLOC				S	**Sn**	**23 30 07.5**	**-3.7**
FLOC	**Florencia**	**5.81**	**206**	P	**Pn**	**23 29 04.7**	**-0.6**
	608nm16nm,0.6s						
BBAC	**Balboa, Cauca**	**6.31**	**221**	P	**Pn**	**23 29 11.1**	**-1.0**
MTDJ	**Mount Denham**	**12.08**	**340**	*eP*	**Pn**	**23 30 30.8**	**+2.5**
GTBY	**Guantanamo Bay**	**13.13**	**352**	*eP*	**P**	**23 30 45.1**	**-1.0**

MASC	**Masc**	**13.28**	**356**	*eP*		**P**	**23 30 48.8**	**+1.0**
RCC	**Rio Carpintero**	**13.29**	**350**	*eP*		**P**	**23 30 47.8**	**-0.1**
MARVS	**Santiago de Cu**	**13.33**	**349**	*eP*		**P**	**23 30 48.3**	**-0.1**
QMBU	**Quimbuelo**	**13.36**	**353**	*eP*		**P**	**23 30 48.3**	**-0.4**
YAR	**Yar**	**13.79**	**347**	*eP*		**P**	**23 30 54.4**	**+1.0**
CBCY	**The Bluff, Cay**	**14.32**	**334**	*i* P		**Pn**	**23 30 57.3**	**+0.6**
CBCY				*eP*		**P**	**23 30 58.0**	**-1.3**
LCCY	**Blossom Villag**	**14.40**	**333**	*eP*		**P**	**23 31 02.2**	**+1.9**
TXAR	**Lajitas Array**	**36.41**	**312**	P		**P**	**23 34 32.4**	**+1.5**
	0.3nm,0.5s,baz=120,slow=7.9,SNR=6.3							
	0.3nm,0.5s							
ULM	**Lac du Bonnet**	**47.24**	**340**	P		**P**	**23 35 59.1**	**+0.8**
	2.5nm,0.8s,baz=147,slow=6.4,SNR=2.9							
	2.5nm,0.8s							
SCHQ	**Schefferville**	**48.10**	**5**	P			**23 36 06.1**	**+1.2**
	2.7nm,0.5s,baz=184,slow=7.4,SNR=14							
	2.7nm,0.5s							
TORD	**Torodi Ar. Bea**	**73.76**	**78**	P		**P**	**23 38 56.9**	**-1.9**
	0.1nm,0.3s,baz=279,slow=7.0,SNR=1.6							
	0.1nm,0.3s							
MKAR	**Makanchi Array**	**122.29**	**20**	PKP		**PKPdf**	**23 46 17.5**	**-0.4**
	0.3nm,0.5s,baz=326,slow=2.7,SNR=6.9							
ASAR	**Alice Springs**	**149.11**	**234**	PKPbc		**PKPbc**	**23 47 11.2**	**-0.7**
	0.7nm,0.6s,baz=117,slow=3.7,SNR=6.7							
WRA	**Warramunga Arr**	**150.33**	**241**	PKPbc		**PKPbc**	**23 47 14.1**	**-0.8**
	0.6nm,0.5s,baz=109,slow=2.6,SNR=12							
WRA				pPKPbc		**pPKPbc**	**23 47 55.8**	**-0.6**
	0.3nm,0.5s,baz=107,slow=2.6,SNR=2.4							
CMAR	**Chiang Mai Arr**	**153.66**	**17**	PKPbc		**PKiKP**	**23 47 22.7**	**+0.1**
	0.9nm,0.3s,baz=18,slow=2.2,SNR=1.4							

*IDC **29** 23:36:50.8±1.1, 26°.25N×128°.32E, h0km, mb3.7/9, mbtmp3.7/9, MS3.0/2, Error ellipse: s-maj=42.5km s-min=15.8km az=79.0*

*JMA **29** 23:36:53.9±0.3, 26°.4N±0°.9×12°.9E±°, h37km±3km, MV3.3/17, NEAR OKINAWAJIMA ISLAND*

ISC 29 23:36:51.5±3.3, 26°.40N±0°.05×128°.87E±0°.04, h17km±22km, n25, σ0°99/31, mb3.6/9, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOW	**Kunigami**	**0.68**	**309**	Pn	**Pn**	**23 37 06.5**	**0.0**
	358nm,0.3s,baz=118,slow=24,SNR=851						
JOW				Sn	**Sb**	**23 37 13.8**	**-0.4**
	216nm,0.3s,baz=123,slow=24,SNR=11						
JOW	**Kunigami**	**0.68**	**309**	*i* P	**Pn**	**23 37 06.4**	**-0.1**
JYRO	**Yoronjima**	**0.72**	**329**	*i* P	**Pn**	**23 37 07.2**	**+0.2**
JYRO				S	**Sn**	**23 37 16.4**	**-1.4**
JNTH	**Nagotoyohara**	**0.77**	**279**	P	**Pn**	**23 37 07.3**	**-0.3**
JOKE	**Okinoerabujima**	**0.99**	**345**	*i* P	**Pn**	**23 37 11.5**	**+0.8**
JOKE				S	**Sn**	**23 37 24.1**	**-0.3**
JJT3	**Tamagusuku3**	**1.01**	**255**	*eP*	**Pn**	**23 37 11.5**	**+0.6**
JJT3				S	**Sn**	**23 37 24.8**	**0.0**
JIH	**Iheya**	**1.02**	**308**	*i* P	**Pn**	**23 37 11.7**	**+0.5**
JTK	**Tokunoshima**	**1.38**	**3**	*i* P	**Pb**	**23 37 16.9**	**0.0**
JTK				S	**Sb**	**23 37 32.9**	**-1.4**
JAGN	**Aguni-jima**	**1.47**	**278**	*i* P	**Pb**	**23 37 17.9**	**-0.5**
JAGN				S	**Sn**	**23 37 35.6**	**-0.5**
JAMN	**Amaminishikomi**	**1.85**	**8**	P	**Pn**	**23 37 23.6**	**+1.1**
JKE	**Kume jima 2**	**1.87**	**268**	P	**Pn**	**23 37 22.9**	**+0.1**
JAM	**Amami Oshima**	**2.11**	**18**	*eP*	**Pn**	**23 37 27.0**	**+0.9**
JMZ	**Minamidaito 2**	**2.19**	**105**	*i* P	**Pn**	**23 37 27.5**	**+0.2**
JMZ				S	**Sn**	**23 37 51.7**	**-2.4**
JKDJ	**Kitadaitoujima**	**2.23**	**101**	P	**Pn**	**23 37 28.4**	**+0.6**
JKDJ				S	**Sn**	**23 37 53.5**	**-1.4**
LZDM	**Lanzhou Array**	**23.49**	**300**	P	**P**	**23 41 59.9**	**-1.1**
	1.2nm,0.3s,baz=104,slow=12,SNR=2.1						
	1.2nm,0.3s						
SONM	**Songino Array**	**27.72**	**326**	P	**P**	**23 42 41.0**	**+1.8**
	1.2nm,0.6s,baz=133,slow=10,SNR=6.1						
	1.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**28.72**	**260**	LR	LR	23 55 33.6	
	comp=Z,8.8nm,18.9s,baz=325,slow=40						
MKAR	**Makanchi Array**	**41.85**	**312**	P	**P**	**23 44 39.5**	**-1.2**
	0.2nm,0.5s,baz=88,slow=10,SNR=5.8						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**42.46**	**322**	P	**P**	**23 44 44.5**	**-1.0**
	0.8nm,0.6s,baz=108,slow=6.9,SNR=3.6						
	0.8nm,0.6s						
KURBB	**Kurchatov Arra**	**45.12**	**316**	P	**P**	**23 45 06.5**	**-0.4**
	0.2nm,0.4s,baz=105,slow=8.9,SNR=4.4						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**46.37**	**173**	P	**P**	**23 45 18.0**	**+0.9**
	0.6nm,0.7s,baz=354,slow=7.9,SNR=6.2						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**50.01**	**174**	P	**P**	**23 45 46.5**	**+1.2**
	0.4nm,0.6s,baz=357,slow=9.2,SNR=7.3						
	0.4nm,0.6s						
ARTI	**Arti**	**57.71**	**322**	LR	LR	00 16 18.7	
	comp=Z,39nm,19.6s,baz=141,slow=41						
AKASG	**Malin Array Be**	**75.77**	**320**	P	**P**	**23 48 36.4**	**0.0**
	0.2nm,0.3s,baz=55,slow=7.1,SNR=2.1						
	0.2nm,0.3s						
BRTR	**Keskin Array B**	**77.38**	**308**	P	**P**	**23 48 47.1**	**+1.1**
	0.8nm,0.8s,baz=64,slow=6.6,SNR=4.5						
	0.8nm,0.8s						

*ISN **29** 23:49:27.0±0.3, 33°.95N×45°.40E, h10km, ML2.8, Presumed earthquake*

*TEH **29** 23:49:27.3, 33°.86N×45°.40E, h10km±23km, ML2.8, Presumed earthquake*

ISC 29 23:49:29.7±3.4, 33°.8N±0°.2×45°.51E±0°.09, h10km, n6, σ1°30/8, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLG1	**Gilan-e-Gharb**	**0.43**	**51**	Pg	**Pg**	**23 49 37.0**	**-1.2**
IGHG	**Ghaleghazi**	**1.00**	**61**	Pg	**Pg**	**23 49 48.2**	**-0.9**
IGHG				Sg	**Sb**	**23 50 04.0**	**+1.2**
IDHR	**Dehrash**	**1.12**	**40**	Pg	**Pg**	**23 49 50.0**	**-1.4**
KCHF	**Cheshme Sefid,**	**1.34**	**71**	Pg	**Pn**	**23 49 54.7**	**0.0**
IKRK	**Kirkuk**	**1.83**	**329**	*e*Pg	**Pn**	**23 50 01.0**	**-0.2**
	baz=155						
IKRK				*e*Sg	**Sn**	**23 50 26.0**	**+1.5**
IBZA	**Bozab**	**2.05**	**72**	Pn	**Pn**	**23 50 05.1**	**+0.6**

*IDC **30** 00:04:59.7±1.1, 19°.05S×172°.90W, h0km, mb3.7/7, mbtmp3.8/7, MS3.3/4, Error ellipse: s-maj=54.2km s-min=21.9km az=143.0*

ISC 30 00:05:03.0±1.0, 19°.1S±0°.3×172°.9W±0°.3, h21km, n12, σ0°67/8, mb3.7/7, MS3.3/3, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**8.68**	**277**	LR	LR	00 10 11.0	
	comp=Z,224nm,18.7s,baz=79,slow=36						
URZ	**Urewera**	**21.00**	**202**	P	**P**	**00 09 44.9**	**-0.1**
	8.2nm,0.8s,baz=348,slow=19,SNR=7.3						
	8.2nm,0.8s						
PPT	**Papeete**	**22.21**	**90**	LR	LR	00 16 51.2	
	comp=Z,65nm,18.0s,baz=178,slow=32						
ASAR	**Alice Springs**	**49.51**	**255**	P	**P**	**00 13 52.6**	**+0.2**
	2.6nm,0.8s,baz=85,slow=8.3,SNR=20						
	2.6nm,0.8s						
WRA	**Warramunga Arr**	**49.55**	**260**	P	**P**	**00 13 52.6**	**-0.2**
	0.5nm,0.3s,baz=98,slow=6.8,SNR=18						
	0.5nm,0.3s						
JCJ	**Chichijima**	**63.25**	**315**	LR	LR	00 39 16.3	
	comp=Z,27nm,18.8s,baz=136,slow=32						
MJAR	**Matsushiro Arr**	**72.03**	**320**	LR	LR	00 42 04.2	
	comp=Z,18nm,21.5s,baz=190,slow=31						
NVAR	**Mina Array Bea**	**76.75**	**41**	P	**P**	**00 16 52.8**	**-0.4**
	0.3nm,0.6s,baz=209,slow=8.3,SNR=3.6						
	0.3nm,0.6s						
TXAR	**Lajitas Array**	**82.28**	**55**	P	**P**	**00 17 23.1**	**-0.3**
	0.2nm,0.8s,baz=211,slow=6.6,SNR=4.2						
	0.2nm,0.8s						
PDAR	**Pinedale Array**	**84.69**	**41**	P	**P**	**00 17 36.9**	**+1.3**
	0.1nm,0.4s,baz=238,slow=3.9,SNR=1.2						
	0.1nm,0.4s						
ILAR	**Eielson Array**	**85.94**	**11**	P	**P**	**00 17 40.7**	**-0.3**
	0.6nm,1.1s,baz=202,slow=4.8,SNR=1.8						
	0.6nm,1.1s						
BRTR	**Keskin Array B**	**149.22**	**318**	PKPbc	**PKPbc**	**00 24 50.6**	**+0.2**
	0.8nm,0.8s,baz=80,slow=3.5,SNR=5.3						

*IDC **30** 00:06:44.5±1.0, 2°.82S×129°.73E, h0km, mb3.7/3, mbtmp3.8/6, ML3.7/3, MS2.6/2, Error ellipse: s-maj=33.7km s-min=19.6km az=91.0*

*DJA **30** 00:06:47.8±0.6, 3°.5±3°×13°.0E±°, h11km±5km, M3.8/16, mB4.9/1, mb3.9/1, MLv3.7/16, Mw(mB)4.2/1*

ISC 30 00:06:49.7±0.8, 2°.77S±0°.06×129°.78E±0°.05, h35km, n17, σ1°42/19, mb3.9/3, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.02**	**236**	P	**Pn**	**00 07 07.9**	**+0.4**
KRAI	**Karang Ratu**	**1.48**	**248**	P	**Pn**	**00 07 15.1**	**+1.2**
BNDI	**Bandanaira**	**1.75**	**176**	P	**Pn**	**00 07 19.5**	**+2.0**
AAI	**Ambon**	**1.82**	**240**	P	**Pn**	**00 07 19.3**	**+0.7**
SIJI	**Sorong**	**2.40**	**38**	Pn	**Pn**	**00 07 27.0**	**+0.5**
	14nm,0.3s,baz=254,slow=23,SNR=83						
SIJI				Sn	**Sn**	**00 07 56.1**	**+1.3**
	13nm,0.3s,baz=56,slow=19,SNR=14						
SIJI				LR	LR	00 08 56.2	
	comp=Z,128nm,18.8s,baz=112,slow=53						
	44nm,0.2s						
SIJI	**Sorong**	**2.40**	**38**	P	**Pn**	**00 07 27.1**	**+0.5**
SWI	**Sorong**	**2.40**	**38**	P	**Pn**	**00 07 27.7**	**+1.2**
FAKI	**Fak Fak**	**2.48**	**94**	P	**Pn**	**00 07 28.0**	**+0.5**
NLAI	**Namlea**	**2.71**	**260**	P	**Pn**	**00 07 31.7**	**+0.9**
NLAI				S	**Sn**	**00 08 04.8**	**+2.4**
SANI	**Sanana**	**3.85**	**281**	P	**Pn**	**00 07 45.1**	**-1.3**
KAPI	**Kappang**	**10.25**	**257**	LR	LR	00 13 31.2	
	comp=Z,24nm,19.9s,baz=0.5,slow=40						
FITZ	**Fitzroy Crossi**	**15.77**	**195**	Pn	**Pn**	**00 10 27.6**	**-1.6**
	0.3nm,0.3s,baz=21,slow=13,SNR=5.7						
	1.2nm,0.5s						
WRA	**Warramunga Arr**	**17.64**	**166**	P	**Pn**	**00 10 49.9**	**-3.0**
	0.3nm,0.3s,baz=346,slow=12,SNR=21						
	1.6nm,0.6s						
ASAR	**Alice Springs**	**21.16**	**169**	P	**P**	**00 11 30.6**	**-1.4**
	3.9nm,0.6s,baz=348,slow=11,SNR=52						
ASAR				PcP	**PcP**	**00 15 37.5**	**+0.4**
	0.3nm,0.5s,baz=351,slow=1.8,SNR=4.7						
	3.9nm,0.6s						
MKAR	**Makanchi Array**	**64.60**	**326**	P	**P**	**00 17 23.9**	**+0.3**
	0.2nm,0.4s,baz=126,slow=7.4,SNR=5.2						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**68.82**	**328**	P	**P**	**00 17 50.8**	**+0.4**
	0.6nm,0.5s,baz=130,slow=6.0,SNR=16						
	0.6nm,0.5s						
CPUP	**Villa Florida**	**150.27**	**167**	PKPbc	**PKPbc**	**00 26 38.0**	**0.0**
	0.6nm,0.6s,baz=202,slow=19,SNR=2.9						

*VAO **30** 00:14:46.2±2.0, 22°.07S×68°.77W, h74km±11km, mb4.1, Presumed earthquake*

*SJA **30** 00:14:49.7±1.3, 22°.28S×68°.75W, h120km, ML3.5, MW3.6*

*GUC **30** 00:14:49.9±0.8, 22°.30S×68°.69W, h112km±4km, ML3.6*

*IDC **30** 00:15:15.9±7.2, 19°.88S×67°.55W, h267km±44km, mb3.2/2, mbtmp3.6/5, Error ellipse: s-maj=103.6km s-min=24.1km az=24.0*

ISC 30 00:14:49.4±0.7, 22°.27S±0°.04×68°.69W±0°.04, h123km±6km, n57, σ1°19/80, 6C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.69**	**313**	*i*P	**Pn**	**00 15 09.8**	**+0.5**
PB09				*e*S	**Sn**	**00 15 24.1**	**-0.1**
PB09				IAML		00 15 25.6	
	comp=N,2μm,0.5s						
PB09	**IPOC Station P**	**0.69**	**313**	*e*P	**Pn**	**00 15 09.8**	**+0.5**
PB09				IAML		00 15 27.9	
	comp=Z,1μm,0.4s						
AF01	**San Pedro de A**	**0.83**	**145**	*i*P	**Pn**	**00 15 10.2**	**-0.3**
AF01				*e*S	**Sn**	**00 15 25.4**	**-1.1**
AF01				IAML		00 15 38.3	
	comp=N,3μm,0.7s						
AF01	**San Pedro de A**	**0.83**	**145**	*e*P	**Pn**	**00 15 10.2**	**-0.3**
AF01				*e*S	**Sn**	**00 15 29.2**	**+2.8**
AF01				IAML		00 15 49.2	
	comp=Z,1μm,1.2s						
PB06	**IPOC Station P**	**0.92**	**242**	*i*P	**Pn**	**00 15 11.2**	**+0.1**
PB06				*e*S	**Sn**	**00 15 27.5**	**-0.1**
PB06				IAML		00 15 33.2	
	comp=E,1μm,0.2s						
PB06	**IPOC Station P**	**0.92**	**242**	*e*P	**Pn**	**00 15 11.3**	**+0.1**
PB06				*e*S	**Sn**	**00 15 28.0**	**+0.3**
PB06				IAML		00 15 29.9	
	comp=Z,713nm,0.2s						
PB03	**IPOC Station P**	**1.01**	**282**	*i

comp=Z,2.0nm,0.7s,baz=173,slow=4.4,SNR=4.8
BBSD Serra de San D 9.14 58 *e*P **Pn 00 16 55.5 -2.8**
SIV San Ignacio 9.53 50 P **Pn 00 17 00.5 -3.1**
comp=Z,2.6nm,0.7s,baz=237,slow=8.6,SNR=16
MURT Porto Murtinho 10.30 89 *e*P **Pn 00 17 10.6 -3.3**
BDQN Bodoquena, MS 11.28 83 *e*P **Pn 00 17 25.4 -1.6**
AMBA Amambai (Brazi 12.68 96 *e*P **Pn 00 17 45.0 -0.4**
TRCB Terra Rica 14.85 95 *e*P **Pn 00 18 13.7 +0.4**
PTGB Pitanga 15.45 102 *e*P **P 00 18 22.1 -0.5**
PDRB Porto dos Gac 15.59 49 *e*P **Pn 00 18 21.3 -1.2**
ITAB Concordia 15.83 112 *e*P **P 00 18 27.5 +0.7**
CPSB Cacapava Do Su 15.88 124 *e*P **P 00 18 27.7 +0.5**
LDASE Londrina, Braz 16.24 97 *e*P **P 00 18 31.4 +0.1**
CLDB Colider 16.75 50 *e*P **Pn 00 18 37.0 +0.1**
ARAG Araguaiana, MT 17.24 71 *e*P **Pn 00 18 43.0 +0.2**
ITRB Iturama 17.31 85 *e*P **Pn 00 18 44.3 +0.7**
FRTB Fartura 17.67 97 *e*P **Pn 00 18 48.1 +0.2**
SNDB Serra Nova Dou 19.51 61 *e*P **P 00 19 06.5 -0.7**
PET01 Itanhaem-SP 19.78 100 *e*P **Pn 00 19 11.9 -0.8**
NPGB Novo Progresso 19.86 42 *e*P **P 00 19 10.8 -0.2**
BDFB Brasilia 20.63 75 P **P 00 19 18.1 -1.3**
comp=Z,1.9nm,0.6s,baz=239,slow=11,SNR=4.6
ITTB Itaituba 21.78 37 *e*P **P 00 19 30.5 -1.0**
JANB Januaria 24.17 77 *e*P **P 00 19 54.0 -0.5**
SMTB Santa Maria do 24.27 60 *e*P **P 00 19 55.8 +0.5**
TORD Torodi Ar. Bea 77.42 70 P **P 00 26 32.9 +1.4**
comp=Z,0.9nm,0.3s,baz=250,slow=5.8,SNR=32
comp=Z,0.9nm,0.3s
YKA Yellowknife Ar 91.97 341 P **P 00 27 43.6 0.0**
comp=Z,0.1nm,0.7s,baz=145,slow=4.1,SNR=2.1
comp=Z,0.1nm,0.7s
MKAR Makanchi Array 146.13 37 PKP **PKiKP 00 34 18.5 +0.3**
comp=Z,0.2nm,0.7s,baz=331,slow=2.9,SNR=1.5

*IDC **30** 00:28:00.7±0.9,2°.91S×129°.69E, h0km, mb3.9/5, mbtmp3.9/8, ML3.7/3, MS3.0/2, Error ellipse: s-maj=37.3km s-min=19.3km az=76.0*
*DJA **30** 00:28:04.6±0.5,3°S±3°×13°0E±°, h13km±5km, M4.1/19, mb4.9/1, MLv3.7/19*
ISC 30 00:28:01.9±0.7, 2.75S±0.05×129°.89E±0.05, h10km, n19, σ1$24/22, mb3.9/5, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.12**	**238**	P	**Pb**	**00 28 23.8**	**+0.3**
MSAI				S	**Sb**	**00 28 39.6**	**+1.4**
KRAI	**Karang Ratu**	**1.59**	**249**	P	**Pn**	**00 28 31.3**	**+1.1**
BNDI	**Bandanaira**	**1.76**	**179**	P	**Pb**	**00 28 35.6**	**+1.2**
AAI	**Ambon**	**1.93**	**241**	P	**Pn**	**00 28 35.9**	**+1.1**
SIJI	**Sorong**	**2.32**	**36**	Pn	**Pb**	**00 28 43.9**	**-0.1**
	15nm,0.3s,baz=261,slow=24,SNR=35						
SIJI				Sn	**Sb**	**00 29 12.8**	**0.0**
	7.8nm,0.3s,baz=19,slow=23,SNR=4.1						
SIJI				LR	LR	00 30 12.6	
	comp=Z,146nm,18.1s,baz=132,slow=51						
	58nm,0.2s						
SIJI	**Sorong**	**2.32**	**36**	P	**Pn**	**00 28 42.7**	**+2.4**
SWI	**Sorong**	**2.33**	**36**	P	**Pb**	**00 28 43.8**	**-0.2**
SWI				S	**Sb**	**00 29 13.4**	**+0.6**
FAKI	**Fak Fak**	**2.37**	**94**	P	**Pb**	**00 28 43.9**	**-0.8**
NLAI	**Namlea**	**2.82**	**260**	P	**Pn**	**00 28 47.4**	**+0.2**
SANI	**Sanana**	**3.96**	**280**	P	**Pn**	**00 29 01.0**	**-1.7**
BATI	**Baumata**	**9.64**	**220**	LR	LR	00 34 22.3	
	comp=Z,124nm,18.8s,baz=205,slow=41						
FITZ	**Fitzroy Crossi**	**15.81**	**195**	Pn	**Pn**	**00 31 42.9**	**-2.0**
	0.2nm,0.3s,baz=32,slow=5.8,SNR=7.2						
	1.3nm,0.6s						
WRA	**Warramunga Arr**	**17.63**	**166**	P	**Pn**	**00 32 05.2**	**-2.7**
	0.3nm,0.3s,baz=346,slow=12,SNR=19						
	1.7nm,0.5s						
ASAR	**Alice Springs**	**21.15**	**170**	P	**P**	**00 32 46.6**	**-0.8**
	5.3nm,0.6s,baz=349,slow=11,SNR=50						
ASAR				PcP	**PcP**	**00 36 53.9**	**+0.4**
	0.3nm,0.6s,baz=356,slow=2.0,SNR=6.7						
	5.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**37.04**	**306**	P	**P**	**00 35 12.3**	**-0.2**
	0.7nm,0.3s,baz=134,slow=6.0,SNR=6.2						
	0.7nm,0.3s						
SONM	**Songino Array**	**54.41**	**341**	P	**P**	**00 37 30.2**	**+0.8**
	0.7nm,0.6s,baz=142,slow=6.5,SNR=2.1						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**64.65**	**326**	P	**P**	**00 38 40.3**	**+0.3**
	0.3nm,0.4s,baz=133,slow=6.3,SNR=5.3						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**68.86**	**328**	P	**P**	**00 39 07.1**	**+0.4**
	0.8nm,0.6s,baz=128,slow=6.2,SNR=15						
	0.8nm,0.6s						
CPUP	**Villa Florida**	**150.26**	**167**	PKPbc	**PKPbc**	**00 47 53.8**	**-0.4**
	0.5nm,0.6s,baz=138,slow=15,SNR=3.1						

*SJA **30** 00:29:49.1±0.6,35°.48S×74°.50W, h10km, ML3.2, MW3.6*
*GUC **30** 00:30:01.1±0.8,35°.75S×73°.59W, h34km±3km, ML3.2*
ISC 30 00:29:57.5±2.0, 35°.68S±0°.04×73°.63W±0°.08, h4km±12km, n20, σ1$78/35, 1C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BI05	**Punta Hualpn**	**1.12**	**162**	*e*P	**Pg**	**00 30 18.9**	**-0.1**
BI05				*i*S	**Sg**	**00 30 32.4**	**-1.2**
BI05				IAML		00 30 38.6	
	comp=N,704nm,0.2s						
GO05	**Hualane**	**1.54**	**65**	*e*P	**Pn**	**00 30 26.3**	**+0.5**
GO05				*i*S	**Sg**	**00 30 46.7**	**-0.4**
GO05				IAML		00 30 55.2	
	comp=N,320nm,0.3s						
ML02	**Panimavida**	**1.80**	**93**	*e*P	**Pn**	**00 30 30.5**	**+1.2**
ML02				*i*S	**Sb**	**00 30 51.8**	**-2.2**
ML02				IAML		00 31 03.3	
	comp=N,723nm,0.6s						
BO03	**Pichilemu**	**1.81**	**50**	*e*P	**Pn**	**00 30 30.6**	**+1.2**
BO03				*i*S	**Sg**	**00 30 55.9**	**+0.2**
BO03				IAML		00 31 06.8	
	comp=N,347nm,0.5s						
BI02	**San Fabin de**	**2.14**	**118**	*e*P	**Pn**	**00 30 35.1**	**+1.0**
BI02				*e*S	**Sn**	**00 31 00.2**	**-1.0**
BI02				IAML		00 31 09.0	
	comp=N,283nm,0.5s						
BI02	**San Fabin de**	**2.14**	**118**	*e*P	**Pn**	**00 30 35.3**	**+1.2**
BI02				*e*S	**Sg**	**00 31 06.3**	**-0.1**
BI02				IAML		00 31 10.9	
	comp=Z,169nm,1.1s						
BO01	**Tunca**	**2.46**	**59**	*e*P	**Pn**	**00 30 40.1**	**+1.8**
BO01				*e*S	**Sn**	**00 31 09.4**	**+0.7**
BO01				IAML		00 31 25.6	
	comp=E,100nm,0.5s						
BO02	**Sierra Bellavi**	**2.50**	**70**	*e*P	**Pn**	**00 30 40.5**	**+1.6**
BO02				*e*S	**Sn**	**00 31 09.7**	**-0.2**
BO02				IAML		00 31 25.9	
	comp=N,333nm,0.4s						
MT01	**Popeta**	**2.67**	**48**	*e*P	**Pn**	**00 30 42.5**	**+1.2**
MT01				*i*S	**Sn**	**00 31 11.8**	**-2.2**
MT01				IAML		00 31 39.7	
	comp=E,55nm,0.2s						
BO04	**La Punta**	**3.01**	**57**	*e*P	**Pn**	**00 30 48.0**	**+2.1**
BO04				*e*S	**Sn**	**00 31 22.4**	**-0.1**
BO04				IAML		00 31 43.3	
	comp=E,111nm,0.5s						
CANA	**Caviahue**	**3.02**	**138**	*e*P	**Pn**	**00 30 49.0**	**+2.8**
CANA				*e*S	**Sg**	**00 31 33.3**	**-1.1**
CANA				IAML		00 31 58.8	
	comp=Z,16nm,0.9s						
MT02	**Curacav**	**3.18**	**41⇑**	*e*P	**Pn**	**00 30 49.4**	**+1.2**
LMEL	**Las Melosas**	**3.36**	**58**	*e*P	**Pn**	**00 30 53.7**	**+2.7**
MT03	**Universidad Ad**	**3.38**	**51**	*e*P	**Pn**	**00 30 53.0**	**+1.9**
ROCH	**El Roble**	**3.47**	**39**	*e*P	**Pn**	**00 30 54.5**	**+2.0**
ROCH				*e*S	**Sn**	**00 31 34.8**	**+0.8**
ROCH				IAML		00 31 39.1	
	comp=N,18nm,0.3s						
MT10	**Hacienda Santa**	**3.51**	**48**	*e*P	**Pn**	**00 30 54.9**	**+2.0**
MT10				*e*S	**Sn**	**00 31 35.5**	**+0.5**
VA06	**Catapilco**	**3.67**	**33**	*e*P	**Pn**	**00 30 56.4**	**+1.4**
VA06				*i*S	**Sn**	**00 31 35.6**	**-3.1**
CO04	**Los Peladeros**	**4.25**	**32**	*e*P	**Pn**	**00 31 04.5**	**+1.2**
CO04				*i*S	**Sn**	**00 31 50.4**	**-3.1**
GO06	**Curarrehue**	**4.25**	**157**	*e*P	**Pn**	**00 31 04.5**	**+1.3**
RFA	**San Rafael**	**4.33**	**79**	*e*P	**Pn**	**00 31 07.9**	**+3.8**

*MEX **30** 00:32:07.8±0.5, 14°.80N×93°.48W, h16km±14km, MD3.8*
*GCG **30** 00:32:08.6±1.0, 15°.14N×93°.01W, h0km±20km, MD4.0, ML2.9, Presumed earthquake*

ISC 30 00:32:01.9±1.9, 14°.76N±0°.09×93°.52W±0°.06, h10km, n15, σ1$50/20, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.99**	**17**	*e*P	**Pg**	**00 32 21.9**	**+1.0**
PCIG				*e*S	**Sg**	**00 32 33.7**	**-0.1**
PATR	**El Naranjo**	**1.29**	**74**	*e*P	**Pn**	**00 32 27.0**	**+0.7**
PATR				*e*S	**Sb**	**00 32 42.2**	**-1.0**
PAVE	**Pavencul**	**1.37**	**71**	*e*P	**Pn**	**00 32 28.2**	**+0.9**
PAVE				*e*S	**Sb**	**00 32 43.4**	**-2.1**
CHUJ	**Union Juarez**	**1.41**	**76**	*e*P	**Pn**	**00 32 28.6**	**+0.8**
CHUJ				*e*S	**Sb**	**00 32 44.6**	**-1.9**
CARR	**Arriaga**	**1.53**	**346**	*e*P	**Pn**	**00 32 30.0**	**+0.7**
CARR				*e*S	**Sn**	**00 32 47.8**	**-1.5**
RTAL	**Retalhuleu**	**1.78**	**97**	*e*P	**Pn**	**00 32 34.3**	**+1.5**
RTAL				*e*S	**Sn**	**00 32 54.5**	**-1.1**
CCIG	**Comitan**	**2.02**	**41**	*e*P	Pn	00 32 34.3	-1.9
CCIG				*e*S	**Sn**	**00 33 02.7**	**+1.0**
TGIG		**2.05**	**11**	*e*P	**Pn**	**00 32 38.1**	**+1.7**
TGIG				*e*S	**Sn**	**00 33 00.7**	**-1.4**
TGIG		**2.05**	**11**	*e*P	**Pn**	**00 32 38.2**	**+1.7**
TGIG				*i*S	**Sn**	**00 33 02.3**	**+0.2**
STG2	**El Palmar, Qui**	**2.10**	**98**	*i*P	Pn	00 32 34.8	-2.5
STG8	**El Palmar, Qui**	**2.12**	**98**	*i*P	Pn	00 32 35.3	-2.3
STG8				*e*S	Sn	00 32 57.1	-7.2
STG8				IAML		00 33 01.7	
	comp=N,193nm,0.1s						
STG5	**El Palmar, Qui**	**2.13**	**99**	*i*P	Pn	00 32 35.6	-2.1
STG5				*e*S	Sn	00 32 57.0	-7.3
CMIG	**Matias Romero**	**2.67**	**331**	*e*P	Pn	00 32 44.3	-0.6
CMIG				*e*S	**Sn**	**00 33 14.5**	**-2.9**
FG16	**Alotenango, Sa**	**2.96**	**99**	*e*P	Pn	00 32 47.5	-1.6
NEUV	**Arroyo Zacate**	**3.67**	**324**	*e*P	**Pn**	**00 33 00.1**	**+1.4**
NEUV				*e*S	**Sn**	**00 33 40.8**	**-1.2**

*IDC **30** 00:34:15.7±3.5, 32°.25S×179°.68E, h396km±33km, mb2.6/2, mbtmp3.4/2, Error ellipse: s-maj=44.5km s-min=41.0km az=24.0*
*WEL **30** 00:34:19.3±0.9, 32°S±7°×18°0W±1°.7, h338km±13km, M4.3/23, mB4.8/17, ML4.5/9, MLv4.8/23, Mw(mB)4.0/17, Error ellipse: s-maj=22.7km s-min=5.7km az=108.5, confirmed*
ISC 30 00:34:14.3±0.9, 32°.06S±0°.09×179°.8E±0°.2, h400km, n83, σ1$68/80, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.40**	**36**	P	**Pn**	**00 35 20.2**	**-0.8**
GLKZ				S	**S**	**00 36 12.4**	**-2.4**
GRZ	**Great Barrier**	**5.53**	**220**	P	Pn	00 35 45.6	+3.8
MXZ	**Matakaoa Point**	**5.63**	**192**	P	**Pn**	**00 35 44.4**	**+1.5**
MXZ				S	**S**	**00 36 52.9**	**-2.1**
WMGZ	**Waiomatatini S**	**5.87**	**191**	P	**Pn**	**00 35 48.6**	**+3.2**
WMGZ				S	**S**	**00 36 57.7**	**-1.8**
HAZ	**Te Kaha**	**5.93**	**196**	P	**Pn**	**00 35 46.3**	**+0.3**
HAZ				S	**S**	**00 36 59.4**	**-1.4**
WCZ	**Waipu Caves**	**5.97**	**228**	P	Pn	00 35 50.4	+3.9
WIAZ	**Waiheke Island**	**6.11**	**218**	P	Pn	00 35 52.3	+4.2
PUZ	**Puketiti**	**6.14**	**192**	P	**Pn**	**00 35 50.1**	**+1.8**
PUZ				S	**S**	**00 37 02.4**	**-2.7**
RUGZ	**Raukumara Rang**	**6.15**	**196**	P	**Pn**	**00 35 49.9**	**+1.2**
TWGZ	**Tauwhareparae**	**6.29**	**193**	P	**Pn**	**00 35 50.7**	**+0.7**
TWGZ				S	**S**	**00 37 07.4**	**-0.8**
OPRZ	**Ohinepanea**	**6.37**	**204**	P	Pn	00 35 55.1	+4.3
MWZ	**Matawai**	**6.54**	**196**	P	**Pn**	**00 35 54.0**	**+1.2**
EDRZ	**Edgecumbe**	**6.54**	**202**	P	Pn	00 35 56.7	+3.8
CNGZ	**Carnagh Statio**	**6.55**	**191**	P	**Pn**	**00 35 55.9**	**+3.0**
TKGZ	**Te Karaka**	**6.57**	**194**	P	**Pn**	**00 35 54.2**	**+1.2**
URZ	**Urewera**	**6.58**	**199**	P	**Pn**	**00 35 52.2**	**-0.9**
	44nm,0.3s,baz=259,slow=2.9,SNR=129						
URZ				S	**S**	**00 37 10.0**	**-3.8**
	27nm,0.4s,baz=93,slow=23,SNR=13						
URZ	**Urewera**	**6.58**	**199**	P	**Pn**	**00 35 52.6**	**-0.5**
KMRZ	**Kaimai**	**6.60**	**208**	P	Pn	00 35 57.7	+4.3
KARZ	**Kaharoa**	**6.63**	**205**	P	Pn	00 35 57.8	+4.0
TOZ	**Tahuroa Road**	**6.68**	**211**	P	Pn	00 36 00.2	+5.9
RAGZ	**Rawiri**	**6.72**	**196**	P	**Pn**	**00 35 55.2**	**+0.4**
NGRZ	**Ngongotaha**	**6.73**	**205**	P	Pn	00 35 59.3	+4.4
TARZ	**Mount Tarawera**	**6.74**	**203**	P	**P**	**00 35 59.1**	**+3.4**
HLRZ	**Highlands Stat**	**6.80**	**204**	P	**P**	**00 35 59.7**	**+3.4**
RIGZ	**Rimuhau**	**6.84**	**194**	P	**P**	**00 35 56.5**	**-0.3**
MUGZ	**Murupara**	**6.88**	**200**	P	**P**	**00 35 58.2**	**+1.1**
RTZ	**Ruatahuna**	**6.94**	**199**	P	**P**	**00 35 58.6**	**+0.7**
HRRZ	**Handcock Road**	**6.95**	**204**	P	**P**	**00 36 01.2**	**+3.2**
PRRZ	**Plateau Road**	**7.01**	**203**	P	**P**	**00 36 01.0**	**+2.4**
PRGZ	**Paritu Road**	**7.03**	**192**	P	**P**	**00 36 02.9**	**+3.5**
ALRZ	**Allen Road**	**7.09**	**203**	P	**P**	**00 36 01.8**	**+2.4**
KNZ	**Kokohu**	**7.17**	**194**	P	**P**	**00 36 01.3**	**+1.0**
TLZ	**Tolley Road**	**7.17**	**208**	P	P	00 36 05.1	+4.6
RAHZ	**Arahi**	**7.20**	**197**	P	**P**	**00 36 01.9**	**+1.2**
MTHZ	**Maungataniwha**	**7.20**	**199**	P	**P**	**00 36 02.2**	**+1.4**
MHGZ	**Mahia Peninsul**	**7.25**	**192**	P	**P**	**00 36 03.7**	**+2.5**
MRHZ	**Matea Rd**	**7.31**	**201**	P	**P**	**00 36 03.7**	**+1.7**
WHHZ	**Waihua**	**7.32**	**196**	P	**P**	**00 36 04.0**	**+2.0**
NMHZ	**Naumai**	**7.44**	**198**	P	**P**	**00 36 04.2**	**+0.8**
ARHZ	**Aropaoanui**	**7.55**	**197**	P	**P**	**00 36 06.6**	**+2.0**
RATZ	**Rangitukua**	**7.55**	**205**	P	**P**	**00 36 07.1**	**+2.4**
BKZ	**Black Stump Fm**	**7.59**	**200**	P	**P**	**00 36 05.9**	**+0.8**
HIZ	**Hauiti**	**7.61**	**211**	P	P	00 36 09.3	+4.0
RITZ	**Rihia Road**	**7.62**	**204**	P	**P**	**00 36 07.2**	**+1.8**
KATZ	**Kakaramea**	**7.68**	**205**	P	**P**	**00 36 09.5**	**+3.3**
NTVZ	**North Tongarir**	**7.80**	**205**	P	**P**	**00 36 09.0**	**+1.6**
MCHZ	**McNeill Hill**	**7.80**	**198**	P	**P**	**00 36 08.3**	**+1.0**
TMVZ	**Te Maari**	**7.80**	**204**	P	**P**	**00 36 08.7**	**+1.2**
ETVZ	**East Tongariro**	**7.82**	**204**	P	**P**	**00 36 08.3**	**+0.7**
WTVZ	**West Tongariro**	**7.84**	**205**	P	**P**	**00 36 09.5**	**+1.6**
KWHZ	**Kaweka Forest**	**7.85**	**200**	P	**P**	**00 36 08.9**	**+0.9**
OTVZ	**Oturere**	**7.86**	**204**	P	**P**	**00 36 07.3**	**-0.9**
TWVZ	**Taurewa**	**7.86**	**206**	P	**P**	**00 36 09.2**	**+1.1**
SNVZ	**South Ngauruho**	**7.89**	**204**	P	**P**	**00 36 09.3**	**+0.8**
NGZ	**Ngauruhoe**	**7.89**	**205**	P	**P**	**00 36 09.9**	**+1.4**
COVZ	**Chateau Observ**	**7.93**	**205**	P	**P**	**00 36 10.7**	**+1.7**
TUVZ	**Tukino**	**7.95**	**204**	P	**P**	**00 36 10.6**	**+1.4**
FWVZ	**Far West T-bar**	**7.98**	**205**	P	**P**	**00 36 10.8**	**+1.2**
WNVZ	**Wahianoa**	**8.03**	**204**	P	**P**	**00 36 10.5**	**+0.5**
MOVZ	**Moawhango**	**8.05**	**203**	P	**P**	**00 36 10.3**	**+0.1**
KRHZ	**Kereru**	**8.07**	**199**	P	**P**	**00 36 10.5**	**+0.1**
KAHZ	**Kahuranaki**	**8.08**	**196**	P	**P**	**00 36 11.1**	**+0.6**
PKVZ	**Pokaka**	**8.08**	**206**	P	**P**	**00 36 11.6**	**+1.1**
MTVZ	**Mangateitei**	**8.12**	**205**	P	**P**	**00 36 12.5**	**+1.5**
VRZ	**Vera Road**	**8.17**	**209**	P	**P**	**00 36 13.9**	**+2.4**
PXZ	**Pawanui**	**8.31**	**196**	P	**P**	**00 36 14.0**	**+1.0**
PNHZ	**Pukenui**	**8.37**	**200**	P	**P**	**00 36 12.7**	**-1.0**
WPHZ	**Waipukurau**	**8.45**	**198**	P	**P**	**00 36 15.8**	**+1.2**
TSZ	**Takapari Road**	**8.57**	**200**	P	**P**	**00 36 16.1**	**+0.1**
PRHZ	**Porangahau**	**8.59**	**197**	P	**P**	**00 36 17.0**	**+0.9**
WAZ	**Wanganui**	**8.62**	**206**	P	**P**	**00 36 18.0**	**+1.5**
BFZ	**Birch Farm**	**9.08**	**198**	P	**P**	**00 36 22.1**	**+0.6**
MRZ	**Mangatainoka R**	**9.24**	**201**	P	**P**	**00 36 22.6**	**-0.7**
NNZ	**Nelson**	**10.50**	**208**	P	**Pn**	**00 36 36.5**	**-1.5**
QRZ	**Quartz Range**	**10.54**	**212**	P	**Pn**	**00 36 38.2**	**-0.2**
THZ	**Tophouse**	**11.15**	**208**	P	**Pn**	**00 36 44.7**	**-0.9**
KHZ	**Kahutara**	**11.48**	**204**	P	**Pn**	**00 36 48.7**	**-0.7**
GVZ	**Greta Valley S**	**12.15**	**204**	P	**Pn**	**00 36 56.7**	**-0.4**
LTZ	**Lake Taylor**	**12.27**	**207**	P	**Pn**	**00 36 57.3**	**-1.2**
MQZ	**McQueen's Vall**	**12.93**	**204**	P	**Pn**	**00 37 05.2**	**-0.8**
ASAR	**Alice Springs**	**41.20**	**270**	P	**P**	**00 41 23.0**	**+0.8**
	0.3nm,0.5s,baz=112,slow=7.2,SNR=5.2						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**42.34**	**275**	P	**P**	**00 41 31.8**	**+0.5**
	0.3nm,0.4s,baz=113,slow=7.8,SNR=8.4						
WRA				ScP	**ScP**	**00 46 28.7**	**+0.6**
	0.2nm,0.7s,baz=105,slow=5.6,SNR=1.7						
	0.3nm,0.4s						
FINES	**FINESS Array B**	**146.01**	**338**	PKPbc	**PKPbc**	**00 53 08.6**	**+1.3**
	1.2nm,0.5s,baz=50,slow=4.2,SNR=9.4						

*IDC **30** 00:46:06.0±1.3,2°.89S×129°.71E, h0km, mb3.5/3, mbtmp3.6/6, ML3.4/3, MS3.5/1, Error ellipse: s-maj=37.9km s-min=21.0km az=95.0*
*DJA **30** 00:46:10.2±0.6,3°S±3°×13°0E±°, h11km±5km, M3.3/14, MLv3.3/14*
ISC 30 00:46:07.6±0.8, 2.74S±0.06×129°.87E±0.06, h10km, n16, σ1$71/17, mb3.5/3, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.11**	**237**	P	**Pb**	**00 46 29.8**	**+0.9**
KRAI	**Karang Ratu**	**1.57**	**249**	P	**Pn**	**00 46 37.0**	**+1.4**
BNDI	**Bandanaira**	**1.77**	**179**	P	**Pb**	**00 46 41.3**	**+1.2**
AAI	**Ambon**	**1.91**	**241**	P	**Pn**	**00 46 43.0**	**+2.7**
SIJI	**Sorong**	**2.33**	**37**	Pn	**Pn**	**00 46 48.8**	**+2.8**
	8.3nm,0.3s,baz=248,slow=22,SNR=35						
SIJI				Sn	**Sb**	**00 47 19.5**	**+0.9**
	8.1nm,0.3s,baz=47,slow=17,SNR=7.6						
	21nm,0.2s						
SIJI	**Sorong**	**2.33**	**37**	P	**Pb**	**00 46 49.3**	**-0.4**
SIJI				S	**Sb**	**00 47 19.2**	**+0.6**
SWI	**Sorong**	**2.33**	**37**	P	**Pb**	**00 46 49.2**	**-0.5**
FAKI	**Fak Fak**	**2.39**	**94**	P	**Pb**	**00 46 50.3**	**-0.4**
NLAI	**Namlea**	**2.81**	**260**	P	**Pn**	**00 46 52.9**	**+0.4**
SANI	**Sanana**	**3.93**	**280**	P	**Pn**	**00 47 07.4**	**-0.7**
FITZ	**Fitzroy Crossi**	**15.81**	**195**	Pn	**Pn**	**00 49 47.4**	**-3.0**
	baz=18,slow=19,SNR=2.6						
	2.6nm,1.1s						
WRA	**Warramunga Arr**	**17.64**	**166**	P	**Pn**	**00 50 10.8**	**-2.9**
	0.2nm,0.3s,baz=346,slow=12,SNR=16						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**21.16**	**170**	P	**P**	**00 50 52.5**	**-0.7**
	2.6nm,0.5s,baz=350,slow=11,SNR=31						
	2.6nm,0.5s						
AFI	**Afiamalu**	**58.66**	**105**	LR	LR	01 18 59.9	
	comp=Z,43nm,21.1s,baz=32,slow=34						
MKAR	**Makanchi Array**	**64.63**	**326**	P	**P**	**00 56 46.3**	**+0.8**
	0.1nm,0.5s,baz=121,slow=7.3,SNR=1.6						
	0.1nm,0.5s						
KURBB	**Kurchatov Arra**	**68.85**	**328**	P	**P**	**00 57 12.1**	**-0.2**
	0.2nm,0.5s,baz=128,slow=6.0,SNR=3.3						
	0.2nm,0.5s						

*IDC **30** 01:49:29.3±3.8, 35°.77N×69°.88E, h75km±32km, mb3.6/19, mbtmp4.0/23, MS2.9/6, Error ellipse: s-maj=22.8km s-min=14.6km az=1.0*
*NEIC **30** 01:49:33.7±1.3, 36°.03N±0°.07×69°.9E±0°.1, h98km±7km, mb4.2/29, Error ellipse: s-maj=13.2km s-min=8.5km az=52.0*
*MOS **30** 01:49:33.1±1.2, 36°.04N×69°.98E, h102km, mb4.0/19, Error ellipse: s-maj=7.8km s-min=4.8km az=88.9*
*NNC **30** 01:49:33.9±6.0, 36°.28N×69°.44E, h52km±106km, mb4.5, mpv4.3, Error ellipse: s-maj=42.8km s-min=33.6km az=30.0*
ISC 30 01:49:33.0±0.4, 35°.90N±0°.05×69°.93E±0°.04, h100km, n170, σ1$77/191, mb4.0/40, 16C-16D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHAA	**Shahritus**	**2.21**	**319**		**Pn**	**01 50 05.9**	**-2.4**
SHAA				Sn	**Sn**	**01 50 31.9**	**-3.5**
CHGR	**Chuyangaron**	**2.83**	**348**		**Pn**	**01 50 14.7**	**-1.8**
CHGR	**Chuyangaron**	**2.83**	**348**	*d*	*i*PN	**01 50 14.6**	**-1.8**
GAR	**Garm**	**3.11**	**6**		**Pn**	**01 50 19.3**	**-1.1**
NIL	**Nilore**	**3.53**	**128**		**Pn**	**01 50 27.8**	**+1.9**
NIL	**Nilore**	**3.53**	**128**	PN	Pn	**01 50 27.8**	**+1.9**
DRK	**Karamyk**	**3.87**	**22**		**Pn**	**01 50 30.9**	**+0.2**
DRK	**Karamyk**	**3.87**	**22**	PN	Pn	**01 50 30.9**	**+0.2**
BTK	**Batken**	**4.21**	**9**		**Pn**	**01 50 35.4**	**+0.3**
BTK	**Batken**	**4.21**	**9**	PN	Pn	**01 50 35.4**	**+0.3**
JMU	**Jammu**	**5.11**	**126**	*e*P	**Pn**	**01 50 48.6**	**+1.5**
JMU				*e*S	**Sn**	**01 51 44.0**	**-0.8**
JMU				IAML		01 52 25.3	
	comp=N,458nm,1.4s						
JMU				IAML		01 52 26.8	
	comp=E,421nm,2.6s						
KSH2	**Kashi**	**5.53**	**52**	P	**Pn**	**01 50 56.5**	**+3.5**
KSH2				S	**Sn**	**01 51 59.0**	**+3.7**
KSH2				pmax	pmax		
	comp=Z,88nm,1.0s						
KSH2				LR	LR		
	comp=N,230nm,3.3s						
KSH2				LR	LR		
	comp=E,180nm,2.9s						
ARSB	**Arslanbob**	**5.92**	**23**	Pn	**Pn**	**01 50 57.6**	**-0.7**
ARSB	**Arslanbob**	**5.92**	**23**	PN	Pn	**01 50 57.6**	**-0.7**
THN	**Thein Dam**	**5.93**	**124**	*e*P	**Pn**	**01 50 59.9**	**+1.6**
THN			

PRZ	**Przheval'sk**	**9.30**	**42**			**Pn**	**01 51 43.6**	**-0.6**
PRZ	**Przheval'sk**	**9.30**	**42**	P		**Pn**	**01 51 43.6**	**-0.6**
NDI	**New Delhi**	**9.47**	**137**	*eP*		**Pn**	**01 51 46.4**	**0.0**
NDI				*eS*		Sn	01 53 25.2	-5.8
NDI				IAML			01 53 29.7	
	comp=E,51nm,0.9s							
NDI				IAML			01 53 29.9	
	comp=N,35nm,0.8s							
SONA	**Sohna**	**9.73**	**140**	*eP*		**Pn**	**01 51 48.7**	**-1.3**
SONA				*eS*		Sn	01 53 31.2	-6.2
SONA				IAML			01 53 36.7	
	comp=N,82nm,0.8s							
SONA				IAML			01 53 37.5	
	comp=E,126nm,0.8s							
PDGK	**Podgornoye**	**10.46**	**42**	⇓P		**Pn**	**01 51 57.8**	**-2.1**
	comp=E,13nm,1.1s							
LGTI	**Lohaghat**	**10.73**	**124**	*eP*		**Pn**	**01 52 04.0**	**+0.2**
LGTI				*eS*		Sn	01 53 54.4	-7.6
LGTI				IAML			01 53 59.0	
	comp=N,73nm,0.9s							
LGTI				IAML			01 53 59.5	
	comp=E,52nm,0.8s							
PYUN	**Piuthan**	**13.53**	**121**	Pn		**Pn**	**01 52 38.6**	**-2.3**
	baz=128,slow=0.0							
PYUN				Sn		Sn	01 55 01.4	-8.5
	baz=128,slow=0.0							
DANN	**Dangsing**	**13.91**	**119**	Pn		Pn	01 52 43.4	-2.7
	baz=125,slow=0.0							
MAKZ	**Makanchi**	**14.15**	**36**			**Pn**	**01 52 47.8**	**-0.9**
MAKZ	**Makanchi**	**14.15**	**36**	⇓P		**Pn**	**01 52 48.4**	**-0.3**
	comp=E,17nm,0.7s							
MAKZ	**Makanchi**	**14.15**	**36**	P		**Pn**	**01 52 47.8**	**-0.9**
KOLN	**Koldanda**	**14.15**	**121**	Pn		**Pn**	**01 52 46.8**	**-2.3**
	baz=127,slow=0.0							
KOLN				Sn		Sn	01 55 15.4	-10
	comp=E,55nm,0.9s,baz=127,slow=0.0							
MK31	**Makanchi Array**	**14.29**	**37**	⇓P		**Pn**	**01 52 50.9**	**+0.4**
	comp=E,5.6nm,0.6s,baz=231,slow=14,SNR=65							
MK31	**Makanchi Array**	**14.29**	**37**	*deP*		**Pn**	**01 52 50.1**	**-0.4**
MKAR	**Makanchi Array**	**14.29**	**37**	P		**Pn**	**01 52 50.3**	**-0.2**
	comp=E,1.6nm,0.7s,baz=230,slow=15,SNR=17							
GKN	**Gorkha**	**14.74**	**118**	Pn		Pn	01 52 53.6	-3.0
	baz=124,slow=0.0							
GKN				Sn		Sn	01 55 29.7	-10
	comp=E,30nm,0.3s,baz=124,slow=0.0							
AB31	**Akbulak array**	**15.22**	**334**	⇑P		**Pn**	**01 52 58.9**	**-3.4**
	comp=E,10nm,0.4s,baz=154,slow=13,SNR=602							
AB31				⇑S		Sn	01 55 38.4	-12
	comp=E,3.5nm,0.7s,baz=159,slow=22,SNR=4.2							
DMN	**Daman**	**15.31**	**118**	Pn		**Pn**	**01 53 01.5**	**-2.4**
	baz=124,slow=0.0							
DMN				Sn		Sn	01 55 41.5	-12
	comp=E,40nm,0.6s,baz=124,slow=0.0							
KKN	**Kakani**	**15.33**	**118**	Pn		**Pn**	**01 53 01.4**	**-2.7**
	baz=123,slow=0.0							
KKN				Sn		Sn	01 55 42.5	-11
	comp=E,74nm,1.1s,baz=123,slow=0.0							
PKIN	**Phulchoki**	**15.54**	**118**	Pn		**Pn**	**01 53 04.1**	**-2.6**
	baz=123,slow=0.0							
PKIN				Sn		Sn	01 55 47.4	-11
	comp=E,34nm,0.6s,baz=123,slow=0.0							
PKI	**Pulchoki**	**15.55**	**118**	Pn		**Pn**	**01 53 04.4**	**-2.6**
	baz=123,slow=0.0							
PKI				Sn		Sn	01 55 47.4	-12
	comp=E,35nm,0.8s,baz=123,slow=0.0							
GUN	**Gumba**	**15.70**	**116**	Pn		**Pn**	**01 53 06.5**	**-2.3**
	baz=121,slow=0.0							
GUN				Sn		Sn	01 55 50.3	-12
	comp=E,21nm,0.5s,baz=121,slow=0.0							
WMQ	**Urumqi**	**15.75**	**54**	*eP*		**P**	**01 53 11.5**	**+0.5**
WMQ				pmax		pmax		
	comp=Z,22nm,0.9s							
KURBB	**Kurchatov Arra**	**15.98**	**20**	P		**Pn**	**01 53 08.2**	**-3.6**
	comp=Z,13nm,0.8s,baz=210,slow=11,SNR=8.7							
KURBB	**Kurchatov Arra**	**15.98**	**20**	⇑P		**P**	**01 53 14.4**	**+1.1**
	comp=Z,17nm,0.8s							
JIRN	**Jiri**	**16.06**	**116**	Pn		**Pn**	**01 53 11.6**	**-1.8**
	baz=121,slow=0.0							
JIRN				Sn		Sn	01 55 59.8	-12
	comp=Z,35nm,0.6s,baz=121,slow=0.0							
KURK	**Kurchatov**	**16.09**	**20**	P		**Pn**	**01 53 12.6**	**-0.5**
KURK				IAmb		IAmb	01 53 16.9	
	comp=Z,14nm,0.9s							
KURK	**Kurchatov**	**16.09**	**20**	⇑P		**P**	**01 53 15.1**	**+0.5**
	comp=Z,5.0nm,0.9s							
KURK	**Kurchatov**	**16.09**	**20**	P		**Pn**	**01 53 12.6**	**-0.5**
KURK				pmax		pmax		
	comp=Z,14nm,1.0s							
EVN	**Everest**	**16.36**	**114**			**Pn**	**01 53 15.7**	**-1.6**
RAMN	**Ramite**	**16.77**	**117**	Pn		**Pn**	**01 53 20.2**	**-1.8**
	baz=122,slow=0.0							
RAMN				Sn		Sn	01 56 17.4	-11
	comp=Z,38nm,0.8s,baz=122,slow=0.0							
AKTO	**Aktyubinsk**	**16.90**	**333**	P		**Pn**	**01 53 20.3**	**-2.9**
	comp=Z,19nm,0.7s,baz=146,slow=12,SNR=49							
AKTO				S		Sn	01 56 13.2	-17
	comp=Z,1.1nm,0.5s,baz=92,slow=23,SNR=1.4							
AKTO	**Aktyubinsk**	**16.90**	**333**	⇓P		**Pn**	**01 53 21.5**	**-1.6**
	comp=Z,12nm,0.7s							
AKTO				⇑S		Sn	01 56 18.5	-12
	comp=Z,3.5nm,0.9s							
BVA0	**Borovoye Array**	**17.13**	**1**	P		**P**	**01 53 26.1**	**+0.1**
	comp=Z,6.7nm,1.1s,baz=181,slow=15,SNR=22							
BVAR	**Borovoye Array**	**17.13**	**1**	P		**Pn**	**01 53 23.7**	**-2.3**
	comp=Z,4.5nm,0.6s,baz=165,slow=11,SNR=24							
BVAR				LR		LR	02 00 59.6	
	comp=Z,26nm,19.4s,baz=206,slow=40							
BORK	**Borovoye**	**17.15**	**1**			**P**	**01 53 25.9**	**-0.4**
BORK	**Borovoye**	**17.15**	**1**	⇓*eP*		**P**	**01 53 26.2**	**-0.1**
BORK				pmax		pmax		
	comp=Z,21nm,1.7s							
ODAN	**Odare**	**17.40**	**116**	Pn		**P**	**01 53 28.1**	**-1.4**
	baz=121,slow=0.0							
ODAN				Sn		Sn	01 56 30.1	-13
	comp=Z,40nm,1.2s,baz=121,slow=0.0							
AKT	**Akhty**	**18.19**	**295**	*eP*		**Pn**	**01 53 39.7**	**+0.7**
AKT				*eS*		**Sn**	**01 57 02.9**	**+0.9**
AKT				pmax		pmax		
	comp=Z,3.0nm,0.5s							
AKT				smax		smax		
	comp=E,5.0nm,0.6s							
AKT				smax		smax		
	comp=N,5.0nm,0.7s							
GOMU	**GeErMu**	**20.11**	**82**	P		**P**	**01 53 58.8**	**-0.4**
GOMU				pmax		pmax		
	comp=Z,2.0nm,0.4s							
GNI	**Garni**	**20.27**	**290**	P		**P**	**01 53 58.4**	**-2.3**
	comp=Z,1.3nm,0.7s,baz=351,slow=5.0,SNR=16							
	comp=Z,1.3nm,0.7s							
GNI	**Garni**	**20.27**	**290**	P		Pn	01 54 03.2	-0.3
GNI				IAmb		IAmb	01 54 06.7	
	comp=Z,15nm,1.1s							
GNI	**Garni**	**20.27**	**290**	*c iP*		Pn	01 54 03.1	-0.4
GNI				pmax		pmax		
	comp=Z,15nm,1.0s							
ZAA0	**Zalesovo Array**	**20.83**	**25**	P		**P**	**01 54 06.2**	**-0.1**
ZAA0				IAmb		IAmb	01 54 08.6	
	comp=Z,16nm,0.7s							
SHL	**Shillong**	**21.45**	**113**	P		**P**	**01 54 15.4**	**+2.0**
SHL				IAmb		IAmb	01 54 40.8	
	comp=Z,10nm,0.5s							
SHL	**Shillong**	**21.45**	**113**	P		**P**	**01 54 15.4**	**+2.0**
SHL				pmax		pmax		
	comp=Z,10.0nm,0.5s							
NCK	**Nalchik**	**21.58**	**299**	⇑*iP*		**P**	**01 54 15.5**	**+1.0**
NCK				pmax		pmax		
	comp=Z,10.0nm,0.8s							
SVE	**Sverdlovsk**	**21.86**	**346**	*eP*		**P**	**01 54 17.6**	**+0.4**
SVE				*eS*		**S**	**01 58 13.2**	**+0.5**
SVE				pmax		pmax		
	comp=Z,17nm,1.6s							
ARTI	**Arti**	**21.94**	**343**	P		**P**	**01 54 16.7**	**-1.4**
	comp=Z,5.9nm,0.8s,baz=149,slow=6.9,SNR=9.2							
	comp=Z,5.9nm,0.8s							
ARTI	**Arti**	**21.94**	**343**			**P**	**01 54 18.2**	**0.0**
ARTI				IAmb		IAmb	01 54 23.6	
	comp=Z,10nm,0.7s							
ARTI	**Arti**	**21.94**	**343**	*c iP*		**P**	**01 54 20.4**	**+2.2**
ARTI							01 54 48.6	
ARTI				S		**S**	**01 58 15.8**	**+1.6**
ARTI				SS		**SnSn**	**01 58 55.1**	**+5.8**
ARTI				pmax		pmax		
	comp=Z,9.0nm,0.8s							
KBZ	**Khabaz**	**22.12**	**299**	P		**P**	**01 54 19.2**	**-1.0**
	comp=Z,3.3nm,0.7s,baz=98,slow=11,SNR=10							
	comp=Z,3.3nm,0.7s							
KBZ	**Khabaz**	**22.12**	**299**	⇑*iP*		**P**	**01 54 20.8**	**+0.6**
KBZ				pmax		pmax		
	comp=Z,3.0nm,0.7s							
NEUR	**Neytrino**	**22.18**	**298**	‖*eP*		**P**	**01 54 21.5**	**+0.5**
NEUR				pmax		pmax		
	comp=Z,4.0nm,1.4s							
SHA1	**Shidzhatmaz**	**22.30**	**299**	*deP*		**P**	**01 54 23.8**	**+1.5**
KIV	**Kislovodsk**	**22.32**	**299**	*eP*		**P**	**01 54 22.9**	**+0.5**
KIV				*eS*		**S**	**01 58 20.8**	**-0.3**
KIV				pmax		pmax		
	comp=Z,9.0nm,1.0s							
BELG	**Belogornoye**	**22.84**	**323**	⇓*iP*		**P**	**01 54 27.3**	**-0.1**
BELG				pmax		pmax		
	comp=Z,4.0nm,0.8s							
GTA2	**Gaotai**	**23.82**	**72**	*eP*		**P**	**01 54 39.5**	**+2.6**
GTA2				sP		sP	01 55 24.5	+13
GTA2				pmax		pmax		
	comp=Z,6.0nm,0.9s							
KNGR	**Kungurtug, Tuv**	**24.71**	**45**	‖*eP*		**P**	**01 54 46.6**	**+1.8**
KNGR				pmax		pmax		
	comp=Z,4.0nm,0.6s							
KIRV	**Kirov**	**26.42**	**336**	⇑*eP*		**P**	**01 55 01.6**	**+1.7**
VORD	**Divnogorie**	**26.63**	**314**	*eP*		**P**	**01 55 04.1**	**+2.2**
VORD				pmax		pmax		
	comp=Z,2.0nm,0.8s							
VSR	**Storozhevoye**	**26.80**	**314**	*eP*		**P**	**01 55 04.3**	**+0.9**
VSR				pmax		pmax		
	comp=Z,2.0nm,1.0s							
PZH	**PanZhiHua**	**28.67**	**100**	P		**P**	**01 55 23.5**	**+2.9**
BR131	**Keskin Array S**	**28.80**	**289**	⇑*eP*		**P**	**01 55 23.4**	**+1.8**
BRTR	**Keskin Array B**	**28.80**	**289**	P		**P**	**01 55 20.8**	**-0.9**
	comp=Z,0.9nm,0.7s,baz=89,slow=7.5,SNR=7.2							
	comp=Z,0.9nm,0.7s							
BRTR	**Keskin Array B**	**28.80**	**289**	*ceP*		**P**	**01 55 23.7**	**+2.0**
BRTR				pmax		pmax		
	comp=Z,1.0nm,0.7s							
SONM	**Songino Array**	**29.39**	**55**	P		**P**	**01 55 24.6**	**-2.1**
	comp=Z,0.5nm,0.7s,baz=244,slow=13,SNR=3.8							
	comp=Z,0.5nm,0.7s							
AKASG	**Malin Array Be**	**32.66**	**310**	P		**P**	**01 55 55.1**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=86,slow=7.2,SNR=9.3							
	comp=Z,0.9nm,0.6s							
AKASG	**Malin Array Be**	**32.66**	**310**	*i P*		**P**	**01 55 55.2**	**-0.1**
AKASG				pmax		pmax		
	comp=Z,2.0nm,0.7s							
HHC	**Hu-ho-hao-te**	**32.78**	**69**	*eP*		**P**	**01 55 59.0**	**+2.3**
HHC				pmax		pmax		
	comp=Z,8.0nm,0.6s							
HHC				pmax		pmax		
	comp=Z,57nm,4.2s							
MLR	**Muntele Rosu**	**34.33**	**300**	P		**P**	**01 56 11.2**	**+1.2**
MLR	**Muntele Rosu**	**34.33**	**300**	P		**P**	**01 56 11.2**	**+1.2**
MLR				pmax		pmax		
	comp=Z,9.0nm,1.0s							
MNK	**Minsk**	**34.33**	**316**	*i P*		**P**	**01 56 11.7**	**+2.0**
	comp=E,18nm,1.1s							
MNK				*i P*		**P**	**01 56 11.7**	**+2.0**
	comp=N,16nm,1.0s							
MNK				*i P*		**P**	**01 56 11.7**	**+2.0**
	comp=Z,3.0nm,0.8s,baz=105							
MNK				*i* pP		**pP**	**01 56 34.4**	**+1.5**
MNK				*i* PP		**PP**	**01 57 29.3**	**+0.1**
MNK				*i* S		**S**	**02 01 31.8**	**+2.1**
MNK				*i* sS		**sS**	**02 02 11.7**	**+0.6**
MNK				*i* SS		**SnSn**	**02 03 52.1**	**+2.4**
MNK				*i* LR		LR	02 10 51.0	
MNK				*i* LRM		MLR	02 12 16.5	
	comp=N,640nm,22.5s							
MNK				*i* LRM		MLR	02 12 17.8	
	comp=E,970nm,21.6s							
MNK				*i* LRM		MLR	02 12 18.4	
	comp=Z,51nm,18.7s							
MNK	**Minsk**	**34.33**	**316**	*i P*		**P**	**01 56 11.7**	**+2.0**
MNK				*i* *PP		**pP**	**01 56 34.3**	**+1.5**
MNK				*i*			01 57 29.3	
MNK				*i* S		**S**	**02 01 31.7**	**+2.1**
MNK				*i* *SS		**sS**	**02 02 11.6**	**+0.6**
MNK				*i* SS		**SnSn**	**02 03 52.0**	**+2.4**
MNK				pmax		pmax		
	comp=N,16nm,1.0s							
MNK				pmax		pmax		
	comp=E,18nm,1.1s							
MNK				pmax		pmax		
	comp=Z,3.0nm,0.8s							
MNK				MLR		MLR		
	comp=N,640nm,22.0s							
MNK				MLR		MLR		
	comp=E,970nm,22.0s							
MNK				MLR		MLR		
	comp=Z,51nm,19.0s							
NRIK	**Noril'sk**	**34.88**	**11**	P		**P**	**01 56 15.9**	**+1.7**
	comp=Z,4.1nm,0.6s,baz=202,slow=5.7,SNR=11							
NRIK				LR		LR	02 13 07.2	
	comp=Z,18nm,18.5s,baz=14,slow=40							
	comp=Z,4.1nm,0.6s							
NRIK	**Noril'sk**	**34.88**	**11**	P		**P**	**01 56 14.9**	**+0.6**
NRIK				IAmb		IAmb	01 56 16.7	
	comp=Z,4.7nm,0.7s							
NRIK	**Noril'sk**	**34.88**	**11**	*ceP*		**P**	**01 56 15.8**	**+1.5**
NRIK				pmax		pmax		
	comp=Z,4.0nm,0.6s							
HNS	**HongShan**	**35.70**	**74**	⇓P		P	01 56 30.3	+8.6
HNS				pmax		pmax		
	comp=Z,7.0nm,0.6s							
FINES	**FINESS Array B**	**37.51**	**327**	P		**P**	**01 56 36.9**	**+0.2**
	comp=Z,2.9nm,0.8s,baz=108,slow=12,SNR=6.0							
	comp=Z,2.9nm,0.8s							
STHS	**Stebnicka Huta**	**37.62**	**307**	*eP*		**P**	**01 56 38.7**	**+0.8**
STHS	**Stebnicka Huta**	**37.62**	**307**	*eP*		**P**	**01 56 38.7**	**+0.8**
LVZ	**Lovozero**	**37.71**	**339**	P		**P**	**01 56 38.0**	**-0.4**
LVZ	**Lovozero**	**37.71**	**339**	P		**P**	**01 56 38.0**	**-0.4**
LVZ				pmax		pmax		
	comp=Z,9.0nm,0.9s							
MODS	**Modra-Piesok**	**40.23**	**305**	*eP*		**P**	**01 57 03.4**	**+3.7**
MODS	**Modra-Piesok**	**40.23**	**305**	*eP*		**P**	**01 57 03.4**	**+3.7**
ARCES	**ARCESS Array B**	**41.38**	**338**	P		**P**	**01 57 08.6**	**-0.2**
	comp=Z,4.3nm,0.7s,baz=111,slow=9.2,SNR=16							
	comp=Z,4.3nm,0.7s							
KULM	**Kulim**	**41.53**	**130**	P		**P**	**01 57 11.5**	**+0.8**
TIP	**Timpagrande**	**41.80**	**291**	P		**P**	**01 57 11.4**	**-1.3**
CUC	**Castrocucco**	**42.33**	**292**	P		**P**	**01 57 18.0**	**+1.0**
CUC				IAmb		IAmb	01 57 21.5	
	comp=Z,5.7nm,0.9s							
HFS	**Hagfors**	**43.01**	**322**	P		**P**	**01 57 21.4**	**-0.8**
	comp=Z,3.4nm,0.6s,baz=114,slow=9.9,SNR=11							
HFS				LR		LR	02 17 07.1	
	comp=Z,60nm,18.5s,baz=50,slow=38							
	comp=Z,3.4nm,0.6s							
ZEA	**Zeya**	**43.11**	**47**	*eP*		**P**	**01 57 20.2**	**-2.9**
NB2	**NORSAR Subarra**	**44.35**	**323**	P		**P**	**01 57 32.1**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=98,slow=7.9							
NOA	**NORSAR Array B**	**44.35**	**323**	P		**P**	**01 57 32.2**	**-0.8**
	comp=Z,1.5nm,0.6s,baz=99,slow=8.0,SNR=8.0							
NOA				LR		LR	02 18 18.3	
	comp=Z,14nm,19.3s,baz=355,slow=39							
	comp=Z,1.5nm,0.6s							
KLR	**Kul'dur**	**46.20**	**53**	LR		LR	02 18 22.7	
	comp=Z,11nm,20.7s,baz=6.5,slow=37							
KLR	**Kul'dur**	**46.20**	**53**	⇑*eP*		**P**	**01 57 49.3**	**+1.7**
KLR				pmax		pmax		
	comp=Z,2.0nm,0.7s							
TIXI	**Tiksi**	**46.66**	**22**	P		**P**	**01 57 51.5**	**+0.6**
TIXI				IAmb		IAmb	01 57 52.3	
	comp=Z,5.9nm,0.8s							
TIXI	**Tiksi**	**46.66**	**22**	⇓*iP*		**P**	**01 57 51.8**	**+0.9**
TIXI				pmax		pmax		
	comp=Z,6.0nm,0.8s							
SPITS	**Spitsbergen Ar**	**47.88**	**347**	P		**P**	**01 58 00.0**	**-0.4**
	comp=Z,9.7nm,1.1s,baz=125,slow=10,SNR=4.1							
	comp=Z,9.7nm,1.1s							
KEST	**Kesra**	**48.41**	**289**	P		**P**	**01 58 05.0**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=204,slow=3.4,SNR=5.1							
	comp=Z,0.9nm,0.5s							
KEST	**Kesra**	**48.41**	**289**	P		**P**	**01 58 05.2**	**+0.1**
KEST				IAmb		IAmb	01 58 06.4	
	comp=Z,2.1nm,1.0s							
ROCAM	**Rodrigues Isla**	**55.69**	**187**	P		**P**	**01 59 01.4**	**+2.5**
ESDC	**Sonseca Array**	**56.98**	**298**	P		**P**	**01 59 05.8**	**-2.3**
	comp=Z,0.7nm,0.7s,baz=62,slow=7.6,SNR=5.0							
	comp=Z,0.7nm,0.7s							
TORD	**Torodi Ar. Bea**	**64.84**	**268**	P		**P**	**01 59 59.9**	**-1.7**
	comp=Z,0.8nm,0.6s,baz=39,slow=4.3,SNR=9.0							
	comp=Z,0.8nm,0.6s							
C16K	**Lisburne Hills**	**68.31**	**19**	P		**P**	**02 00 22.6**	**-0.2**
C16K				IAmb		IAmb	02 00 23.8	
	comp=Z,2.4nm,0.8s							
C19K	**Lookout Ridge**	**69.16**	**17**	P		**P**	**02 00 29.0**	**+0.8**
C19K				IAmb		IAmb	02 00 31.8	
	comp=Z,1.8nm,0.7s							
F19K	**Shaleruckik Mo**	**71.34**	**18**	P		**P**	**02 00 40.3**	**-1.2**
A36M	**Sachs Harbour**	**71.88**	**5**	P		**P**	**02 00 45.1**	**+0.6**
COLD	**Coldfoot**	**72.78**	**15**	P		**P**	**02 00 50.3**	**+0.2**
COLD				IAmb		IAmb	02 00 53.5	
	comp=Z,2.8nm,1.0s							
E27K	**Coleen River**	**73.58**	**12**	P		**P**	**02 00 55.3**	**+0.6**
C36M	**Paulatuk**	**74.56**	**5**	P		**P**	**02 01 00.5**	**+0.2**
INK	**Inuvik**	**74.64**	**9**	P		**P**	**02 01 01.6**	**+0.8**
INK				IAmb		IAmb	02 01 02.1	
	comp=Z,2.9nm,0.7s							
INK	**Inuvik**	**74.64**	**9**	P		**P**	**02 01 01.6**	**+0.8**
INK				pmax		pmax		
	comp=Z,3.0nm,0.7s							
G30M	**tAoh Zraii Nji**	**75.52**	**10**	P		**P**	**02 01 06.7**	**+0.7**
G30M				IAmb		IAmb	02 01 07.6	
	comp=Z,2.5nm,0.9s							
ILAR	**Eielson Array**	**75.59**	**15**	P		**P**	**02 01 05.2**	**-1.2**
	comp=Z,0.6nm,0.9s,baz=286,slow=5.6,SNR=7.4							
	comp=Z,0.6nm,0.9s							
BLKN	**Baker Lake**	**79.50**	**354**	P		**P**	**02 01 28.2**	**+0.1**
BLKN				IAmb		IAmb	02 01 33.6	
	comp=Z,2.3nm,1.1s							
YKAW3	**Yellowknife W**	**81.81**	**2**	P		**P**	**02 01 40.7**	**+0.2**
YKA	**Yellowknife Ar**	**81.88**	**2**	P		**P**	**02 01 40.8**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=348,slow=5.9,SNR=13							
	comp=Z,0.6nm,0.7s							
YKA	**Yellowknife Ar**	**81.88**	**2**	P		**P**	**02 01 40.4**	**-0.5**
WRA	**Warramunga Arr**	**82.41**	**121**	P		**P**	**02 01 43.7**	**-0.6**
	comp=Z,0.9nm,0.4s,baz=323,slow=4.9,SNR=14							
	comp=Z,2.0nm,0.4s							
WRA	**Warramunga Arr**	**82.41**	**121**	P		**P**	**02 01 44.1**	**-0.1**
WRA	**Warramunga Arr**	**82.41**	**121**	P		**P**	**02 01 44.1**	**-0.1**
ASAR	**Alice Springs**	**84.62**	**124**	P		**P**	**02 01 54.9**	**-0.6**
	comp=Z,3.0nm,0.5s,baz=308,slow=4.5,SNR=3.0							
	comp=Z,0.3nm,0.5s							
NVL	**N'lazarevskaya**	**114.11**	**198**	*e*PKIKP		PKiKP	02 08 08.1	+8.8
NVL				pmax		pmax		
	comp=Z,59nm,1.8s							
PLCA	**Paso Flores**	**148.81**	**249**	PKPbc		**PKPbc**	**02 09 07.6**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=351,slow=15,SNR=3.2							

*IDC **30** 02:34:60.0±1.6,24°.27S×179°.79W,h492km±17km,mb3.4/9, mbtmp4.2/11,Error ellipse: s-maj=18.2km s-min=15.8km az=107 NEIC **30** 02:35:01.5±2.4,24°.2S±0°.1×179°.8W±0°.2,h508km±9km, mb4.2/13,Error ellipse: s-maj=21.6km s-min=18.9km az=98.0*

ISC 30 02:35:02.2±0.6,24°.15S±0°.07×179°.9W±0°.1,h518km,n60, σ1§84/62,mb4.1/15,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**5.38**	**161**	P	**P**	**02 36 36.5**	**+3.1**
GLKZ	**Green Lake**	**5.39**	**162**	P	**P**	**02 36 34.2**	**+0.7**
GLKZ				S	**S**	**02 37 47.3**	**-0.8**
MSVF	**Nonsavu**	**6.67**	**343**	P	**P**	**02 36 44.6**	**-1.3**
	18nm,0.7s,baz=148,slow=5.6,SNR=14						
MSVF	**Nonsavu**	**6.67**	**343**	P	**P**	**02 36 45.0**	**-1.0**
MARNC	**Mare, Loyalty**	**11.47**	**281**	P	**P**	**02 37 35.7**	**+0.5**
OUZ	**Omahuta**	**12.41**	**206**	P	**P**	**02 37 48.7**	**+3.9**
AFI	**Afiamalu**	**12.73**	**38**	S	S	02 39 53.5	-12
	23nm,0.7s,baz=90,slow=18,SNR=4.1						
HAZ	**Te Kaha**	**13.72**	**188**	P	**P**	**02 38 00.4**	**+1.9**
PKGZ	**Pakihiroa**	**13.79**	**187**	P	**P**	**02 38 04.1**	**+4.7**
RUGZ	**Raukumara Rang**	**13.94**	**188**	P	**P**	**02 38 03.0**	**+2.0**
PUZ	**Puketiti**	**13.97**	**186**	P	**P**	**02 38 04.7**	**+3.5**
TWGZ	**Tauwhareparae**	**14.11**	**187**	P	**P**	**02 38 04.6**	**+1.9**
TOZ	**Tahuroa Road**	**14.11**	**195**	P	P	02 38 07.8	+5.1
URZ	**Urewera**	**14.30**	**190**	P	**P**	**02 38 01.9**	**-2.7**
	3.2nm,0.3s,baz=242,slow=3.6,SNR=18						
URZ				S	**S**	**02 40 31.1**	**-4.1**
	7.6nm,0.5s,baz=51,slow=20,SNR=18						
URZ	**Urewera**	**14.30**	**190**	P	**P**	**02 38 04.6**	**0.0**
MWZ	**Matawai**	**14.32**	**188**	P	**P**	**02 38 07.1**	**+2.2**
RAGZ	**Rawiri**	**14.49**	**189**	P	**P**	**02 38 08.2**	**+1.4**
MUGZ	**Murupara**	**14.57**	**191**	P	**P**	**02 38 08.2**	**+0.8**
RTZ	**Ruatahuna**	**14.67**	**190**	P	**P**	**02 38 10.6**	**+1.9**
HIZ	**Hauiti**	**15.01**	**196**	P	**P**	**02 38 16.4**	**+4.3**
BKZ	**Black Stump Fm**	**15.29**	**191**	P	**P**	**02 38 13.7**	**-1.4**
BKZ	**Black Stump Fm**	**15.29**	**191**	P	**P**	**02 38 15.1**	**+0.1**
VRZ	**Vera Road**	**15.61**	**196**	P	**P**	**02 38 22.3**	**+4.0**
TSZ	**Takapauri Road**	**16.25**	**192**	P	**P**	**02 38 25.2**	**+0.3**
MRZ	**Mangataainoka R**	**16.91**	**192**	P	**P

IDC 30 02:37:49.0±2.0, 18°.73S×177°.58W, h0km, mb4.0/5, mbtmp4.0/5, Error ellipse: s-maj=111.7km s-min=26.5km az=149.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.93**	**242**	P	P	02 45 15.9	-0.9
	0.9nm,0.4s,baz=74,slow=8.5,SNR=2.1 0.9nm,0.4s						
WRA	**Warramunga Arr**	**45.26**	**260**	P	P	02 46 09.1	+0.3
	1.8nm,0.3s,baz=97,slow=7.7,SNR=47 1.8nm,0.3s						
ASAR	**Alice Springs**	**45.33**	**255**	P	P	02 46 09.2	0.0
	3.9nm,0.7s,baz=88,slow=8.5,SNR=30 3.9nm,0.7s						
TXAR	**Lajitas Array**	**85.77**	**57**	P	P	02 50 31.0	+0.3
	0.1nm,0.5s,baz=219,slow=4.2,SNR=1.4 0.1nm,0.5s						
ILAR	**Eielson Array**	**86.51**	**13**	P	P	02 50 33.1	-0.3
	0.7nm,0.9s,baz=222,slow=5.7,SNR=9.5 0.7nm,0.9s						

IDC 30 02:55:54.5±3.3, 56°.65S×147°.62E, h0km, mb3.6/3, mbtmp3.6/3, MS3.6/4, Error ellipse: s-maj=368.0km s-min=29.2km az=76.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**21.55**	**172**	P	P	03 00 44.9	0.0
	1.3nm,0.8s,baz=338,slow=11,SNR=1.8 1.3nm,0.8s						
H01W1	**Cape Leeuwin H**	**31.41**	**300**	T	T	03 35 50.8	
	baz=144,slow=74,SNR=7.7						
H01W2	**Cape Leeuwin H**	**31.41**	**300**	T	T	03 35 48.5	
	baz=144,slow=74,SNR=9.7						
H01W3	**Cape Leeuwin H**	**31.43**	**300**	T	T	03 35 46.6	
	baz=144,slow=74,SNR=8.1						
ASAR	**Alice Springs**	**34.44**	**337**	P	P	03 02 43.5	-0.2
	0.6nm,0.8s,baz=177,slow=10.0,SNR=4.7 0.6nm,0.8s						
CTA	**Charters Tower**	**36.52**	**358**	LR	LR	03 16 04.5	
	comp=Z,54nm,19.0s,baz=232,slow=33						
MAW	**Mawson**	**37.88**	**218**	LR	LR	03 16 39.8	
	comp=Z,89nm,19.2s,baz=123,slow=33						
WRA	**Warramunga Arr**	**37.96**	**339**	P	P	03 03 13.8	0.0
	1.2nm,0.8s,baz=167,slow=7.6,SNR=8.9 1.2nm,0.8s						
H04S1	**CROZET ISLANDS**	**55.36**	**236**	T	T	04 05 31.7	
	baz=139,slow=75,SNR=4.4						
H04S2	**CROZET ISLANDS**	**55.36**	**236**	T	T	04 05 34.0	
	baz=139,slow=75,SNR=4.6						
H04S3	**CROZET ISLANDS**	**55.38**	**236**	T	T	04 05 31.4	
	baz=139,slow=75,SNR=4.1						
RPN	**Rapa Nui**	**74.52**	**116**	LR	LR	03 33 52.9	
	comp=Z,164nm,18.7s,baz=22,slow=31						
H08S2	**Diego Garcia H**	**75.48**	**278**	T	T	04 30 35.2	
	baz=147,slow=76,SNR=5.6						
H08S1	**Diego Carcia H**	**75.49**	**278**	T	T	04 30 31.4	
	baz=147,slow=76,SNR=7.5						
H08S3	**Diego Garcia H**	**75.50**	**278**	T	T	04 30 37.2	
	baz=147,slow=76,SNR=6.3						
CMAR	**Chiang Mai Arr**	**85.19**	**314**	LR	LR	03 47 28.6	
	comp=Z,8.8nm,18.9s,baz=140,slow=36						

*BER **30** 03:03:32.0±3.3, 70°.88N×6°.93W, h10km, ML2.9, Mw3.7, ML1.6(DNK), Confirmed Earthquake*
*DNK **30** 03:03:35.6±2.8, 71°.25N×7°.86W, h0km±106km, ML1.6, Presumed earthquake*

ISC 30 03:03:26.8±0.8, 70°.90N±0°.08×6°.61W±0°.05, h10km, n31, σ3§19/43, 4C, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNE	**Jan Mayen East**	**0.56**	**280**	⇑*i* P	**Pb**	**03 03 40.5**	**+1.8**
JNE				*e*S	**Sb**	**03 03 48.0**	**+1.3**
JNE				IAML		03 03 50.8	
	comp=Z,1μm,0.3s						
JNW	**Jan Mayen West**	**0.61**	**283**	⇑*i* P	**Pb**	**03 03 41.1**	**+1.5**
JNW				*e*S	**Sb**	**03 03 48.8**	**+0.7**
JNW				IAML		03 03 49.4	
	comp=Z,1μm,0.3s						
JMIC	**Jan Mayen**	**0.63**	**279**	⇑*i* P	**Pb**	**03 03 41.3**	**+1.5**
JMIC				*e*S	**Sb**	**03 03 49.3**	**+0.6**
JMIC				IAML		03 03 51.1	
	comp=Z,654nm,0.3s						
JMI	**Jan Mayen**	**0.70**	**273**	⇑*i* P	**Pb**	**03 03 42.7**	**+1.7**
JMI				*e*S	**Sb**	**03 03 52.4**	**+1.8**
JMI				IAML		03 03 52.8	
	comp=Z,551nm,0.2s						
DBG	**Daneborg**	**5.32**	**316**	*i* P	**Pn**	**03 04 46.8**	**+0.7**
DBG				*i* S	**Sn**	**03 05 41.4**	**-5.9**
DBG				IAML		03 05 43.1	
	comp=Z,1.9nm,0.3s						
DBG	**Daneborg**	**5.32**	**316**	*i* P	**Pn**	**03 04 46.8**	**+0.7**
DBG				*i* S	**Sn**	**03 05 41.4**	**-5.9**
DBG				IAML		03 05 43.1	
	comp=Z,1.9nm,0.3s						
DAG	**Danmarks Havn**	**6.77**	**336**	*i* P	**Pn**	**03 05 07.0**	**+1.0**
DAG				*i* S	**Sn**	**03 06 16.9**	**-6.1**
DAG				IAML		03 06 21.2	
	comp=Z,3.6nm,0.4s						
DAG	**Danmarks Havn**	**6.77**	**336**	*i* P	**Pn**	**03 05 07.0**	**+1.0**
DAG				*i* S	**Sn**	**03 06 16.9**	**-6.1**
DAG				IAML		03 06 21.2	
	comp=Z,3.6nm,0.4s						
LOF	**Lofoten**	**7.58**	**102**	*e*P	**Pn**	**03 05 18.5**	**+1.4**
LOF				IAML		03 05 27.7	
	comp=Z,5.4nm,0.7s						
VAGH	**Vaagaholmen**	**8.30**	**111**	*e*P	**Pn**	**03 05 28.4**	**+1.5**
VAGH				IAML		03 05 31.1	
	comp=Z,3.5nm,0.8s						
KONS	**Konsvik**	**8.40**	**112**	*e*P	**Pn**	**03 05 30.5**	**+2.1**
KONS				IAML		03 05 47.9	
	comp=Z,3.0nm,0.9s						
KONS				*e*S	**Sn**	**03 06 59.0**	**-4.1**
STOK	**Stokkvaagen**	**8.48**	**113**	*e*P	**Pn**	**03 05 31.5**	**+2.1**
STOK				IAML		03 05 32.9	
	comp=Z,5.1nm,0.5s						
STOK				*e*S	**Sn**	**03 07 00.7**	**-4.3**
FAUS	**Fauske**	**8.54**	**104**	*e*P	**Pn**	**03 05 32.6**	**+2.3**
FAUS				IAML		03 05 35.7	
	comp=Z,2.9nm,0.6s						
FAUS				*e*S	**Sn**	**03 07 03.2**	**-3.4**
HSPB	**Hornsund (broa**	**8.59**	**35**	*e*P	**Pn**	**03 05 35.0**	**+4.1**
HSPB				IAML		03 05 35.5	
	comp=Z,2.5nm,0.8s						
LEIR	**Leirfjorden**	**8.66**	**114**	*e*P	**Pn**	**03 05 33.8**	**+1.9**
LEIR				IAML		03 05 38.7	
	comp=Z,2.5nm,0.5s						
LEIR				*e*S	**Sn**	**03 07 05.4**	**-4.0**
TRO	**Tromso**	**8.70**	**86**	*e*P	**Pn**	**03 05 33.2**	**+0.8**
TRO				IAML		03 05 34.5	
	comp=Z,2.9nm,0.6s						
RAUS	**Rausandaksla**	**8.72**	**111**	*e*P	**Pn**	**03 05 35.4**	**+2.5**
RAUS				IAML		03 05 51.6	
	comp=Z,2.4nm,0.8s						
RAUS				*e*S	**Sn**	**03 07 07.0**	**-4.1**
MOR8	**Moi Rana**	**9.02**	**111**	*e*P	**Pn**	**03 05 38.5**	**+1.6**
BRBB	**Barentsburg B**	**9.04**	**28**	*e*P	Pn	03 05 42.8	+5.7
JETT	**Jettan, Norway**	**9.21**	**85**	*e*P	**Pn**	**03 05 41.2**	**+1.6**
KBS	**Kingsbay**	**9.32**	**22**	*e*P	**Pn**	**03 05 45.2**	**+4.3**
KBS				IAML		03 05 52.3	
	comp=Z,1.6nm,0.7s						
KBS	**Kingsbay**	**9.32**	**22**	*i* P	**Pn**	**03 05 45.3**	**+4.3**
SPA0	**Spitsbergen Ar**	**9.44**	**29**	*e*P	Pn	03 05 47.4	+4.8
SPA0				IAML		03 05 48.0	
	comp=Z,2.2nm,0.7s						
NSS	**Namsos**	**9.48**	**123**	*e*P	**Pn**	**03 05 45.6**	**+2.5**
NSS				IAML		03 05 47.2	
	comp=Z,5.0nm,0.2s						
NSS				*e*S	**Sn**	**03 07 24.6**	**-4.9**
SALU	**Saltoluokta**	**9.58**	**99**	*e*P	**Pn**	**03 05 47.1**	**+2.5**
KTK1	**Kautokeino**	**10.35**	**86**	*e*P	**Pn**	**03 05 57.3**	**+2.2**
KTK1				IAML		03 05 58.6	
	comp=Z,1.4nm,0.5s						
HOPEN	**Hopen**	**10.36**	**43**	*e*P	**Pn**	**03 05 59.7**	**+4.5**
NOR	**Nord**	**10.99**	**352**	*i* P	**Pn**	**03 06 06.3**	**+2.6**
NOR	**Nord**	**10.99**	**352**	*i* P	**Pn**	**03 06 06.3**	**+2.6**
NEEM	**North Greenlan**	**13.39**	**319**	*i* P	**Pn**	**03 06 36.0**	**-0.8**
NEEM	**North Greenlan**	**13.39**	**319**	*i* P	**Pn**	**03 06 36.0**	**-0.8**

*IDC **30** 03:07:00.8±1.1, 11°.19N×138°.64E, h0km, mb3.3/6, mbtmp3.3/6, Error ellipse: s-maj=52.8km s-min=22.8km az=91.0*

ISC 30 03:07:06.1±1.1, 11°.2N±0°.2×138°.6E±0°.4, h35km, n9, σ0§48/6, mb3.4/6, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11N1	**WAKE ISLAND Hy**	**28.51**	**69**	T	T	03 44 07.9	
	baz=255						
H11N2	**WAKE ISLAND Hy**	**28.52**	**69**	T	T	03 44 08.6	
	baz=255						
H11N3	**WAKE ISLAND Hy**	**28.53**	**69**	T	T	03 44 12.6	
	baz=255						
WRA	**Warramunga Arr**	**31.19**	**188**	P	**P**	**03 13 21.6**	**-0.5**
	0.4nm,0.8s,baz=2.4,slow=9.9,SNR=4.6 0.4nm,0.8s						
ASAR	**Alice Springs**	**34.91**	**188**	P	**P**	**03 13 55.1**	**+0.5**
	0.3nm,0.5s,baz=16,slow=12,SNR=10 0.3nm,0.5s						
MKAR	**Makanchi Array**	**59.11**	**318**	P	**P**	**03 17 03.4**	**+0.3**
	0.2nm,0.5s,baz=121,slow=7.4,SNR=2.2 0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**62.62**	**322**	P	**P**	**03 17 26.5**	**-0.4**
	0.1nm,0.5s,baz=115,slow=5.4,SNR=1.9 0.1nm,0.5s						
ILAR	**Eielson Array**	**73.37**	**26**	P	**P**	**03 18 34.2**	**0.0**
	0.2nm,0.7s,baz=244,slow=6.9,SNR=5.4 0.2nm,0.7s						
YKA	**Yellowknife Ar**	**87.78**	**26**	P	**P**	**03 19 51.3**	**0.0**
	0.2nm,0.7s,baz=290,slow=5.3,SNR=2.7 0.2nm,0.7s						

*IDC **30** 03:15:30.0±3.5, 12°.52N×143°.36E, h54km±31km, mb3.4/7, mbtmp3.7/7, Error ellipse: s-maj=42.4km s-min=14.7km az=116.0*

ISC 30 03:15:26.8±0.8, 12°.5N±0°.2×143°.4E±0°.2, h27km, n15, σ0§59/10, mb3.8/7, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.78**	**53**	P	**Pb**	**03 15 58.4**	**-0.3**
	257nm,0.3s,baz=200,slow=5.7,SNR=5.4						
GUMO				S	**Sb**	**03 16 21.1**	**+0.5**
	296nm,0.3s,baz=204,slow=23,SNR=6.5						
H11S3	**WAKE ISLAND Hy**	**23.19**	**72**	T	T	03 44 26.4	
	baz=254,slow=74						
H11S1	**WAKE ISLAND Hy**	**23.21**	**72**	T	T	03 44 34.3	
	baz=254,slow=74						
H11S2	**WAKE ISLAND Hy**	**23.21**	**72**	T	T	03 44 33.8	
	baz=254						
H11N1	**WAKE ISLAND Hy**	**23.65**	**69**	T	T	03 45 09.8	
	baz=256						
H11N2	**WAKE ISLAND Hy**	**23.66**	**69**	T	T	03 45 07.5	
	baz=256,slow=74						
H11N3	**WAKE ISLAND Hy**	**23.67**	**69**	T	T	03 45 14.3	
	baz=256,slow=74						
WRA	**Warramunga Arr**	**33.46**	**196**	P	**P**	**03 22 03.9**	**+0.1**
	1.2nm,0.6s,baz=20,slow=9.6,SNR=23 1.2nm,0.6s						
ASAR	**Alice Springs**	**37.14**	**195**	P	**P**	**03 22 35.6**	**+0.2**
	0.5nm,0.5s,baz=19,slow=12,SNR=14 0.5nm,0.5s						
STKA	**Stephens Creek**	**44.17**	**182**	P	**P**	**03 23 33.2**	**-0.1**
	1.0nm,0.7s,baz=333,slow=18,SNR=1.5 1.0nm,0.7s						
KURBB	**Kurchatov Arra**	**64.53**	**320**	P	**P**	**03 26 01.8**	**+0.4**
	0.3nm,0.6s,baz=103,slow=7.4,SNR=2.6 0.3nm,0.6s						
ILAR	**Eielson Array**	**70.14**	**25**	P	**P**	**03 26 35.6**	**-1.0**
	0.4nm,0.7s,baz=250,slow=5.9,SNR=9.1 0.4nm,0.7s						
YKA	**Yellowknife Ar**	**84.46**	**27**	P	**P**	**03 27 56.8**	**-0.1**
	0.3nm,0.4s,baz=292,slow=5.4,SNR=11 0.3nm,0.4s						
NVAR	**Mina Array Bea**	**88.70**	**51**	P	**P**	**03 28 19.2**	**+0.8**
	0.5nm,0.6s,baz=269,slow=5.6,SNR=5.7 0.5nm,0.6s						
LPAZ	**La Paz**	**149.24**	**101**	PKPbc	**PKPbc**	**03 35 14.3**	**-0.3**
	1.3nm,1.0s,baz=217,slow=3.5,SNR=1.8						

*IDC **30** 03:18:51.8±3.0, 34°.12S×179°.31W, h0km, mb3.6/2, mbtmp3.8/3, ML4.1/1, Error ellipse: s-maj=70.4km s-min=36.1km az=116.0*
*WEL **30** 03:18:53.9±1.4, 34°.S±11°×17°.9W±1°.8, h12km, M4.0/7, mB4.7/3, ML4.0/12, MLv4.0/7, Mw(mB)3.9/3, Error ellipse: s-maj=25.4km s-min=11.4km az=114.9, confirmed*

ISC 30 03:18:53.2±2.0, 34°.3S±0°.1×178°.6W±0°.2, h35km, n23, σ1§07/28, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.14**	**217**	P	**Pn**	**03 19 53.2**	**-0.7**
HAZ	**Te Kaha**	**4.56**	**219**	P	**Pn**	**03 20 00.8**	**+1.1**
HAZ				S	**Sn**	**03 20 53.1**	**+1.8**
PUZ	**Puketiti**	**4.57**	**213**	P	**Pn**	**03 20 00.7**	**+0.8**
RUGZ	**Raukumara Rang**	**4.77**	**218**	P	**Pn**	**03 20 02.8**	**+0.2**
TWGZ	**Tauwhareparae**	**4.79**	**214**	P	**Pn**	**03 20 04.7**	**+1.8**
TWGZ				S	**Sn**	**03 20 59.0**	**+1.9**
CNGZ	**Carnagh Statio**	**4.94**	**211**	P	**Pn**	**03 20 06.4**	**+1.5**
MWZ	**Matawai**	**5.13**	**217**	P	**Pn**	**03 20 07.5**	**0.0**
URZ	**Urewera**	**5.29**	**220**	Pn	**Pn**	**03 20 09.4**	**-0.2**
	6.7nm,0.3s,baz=20,slow=18,SNR=38						
URZ				Sn	**Sn**	**03 21 08.0**	**-1.3**
	1.9nm,0.3s,baz=86,slow=20,SNR=1.6 14nm,0.3s						
URZ	**Urewera**	**5.29**	**220**	P	**Pn**	**03 20 09.3**	**-0.3**
RAGZ	**Rawiri**	**5.31**	**216**	P	**Pn**	**03 20 10.6**	**+0.5**
RIGZ	**Rimuhau**	**5.32**	**213**	P	**Pn**	**03 20 10.4**	**+0.4**
RIGZ				S	**Sn**	**03 21 09.6**	**-0.5**
RTZ	**Ruatahuna**	**5.62**	**218**	P	**Pn**	**03 20 14.2**	**-0.1**
RAHZ	**Arahi**	**5.80**	**216**	P	**Pn**	**03 20 17.3**	**+0.6**
MTHZ	**Maungataniwha**	**5.87**	**217**	P	**Pn**	**03 20 18.5**	**+0.8**
MTHZ				S	**Sn**	**03 21 23.0**	**-0.8**
NMHZ	**Naumai**	**6.08**	**216**	P	**Pn**	**03 20 21.2**	**+0.7**
BKZ	**Black Stump Fm**	**6.28**	**218**	P	**Pn**	**03 20 22.6**	**-0.8**
OUZ	**Omahuta**	**6.50**	**259**	P	**Pn**	**03 20 27.9**	**+1.5**
NTVZ	**North Tongarir**	**6.67**	**222**	P	**Pn**	**03 20 28.5**	**-0.2**
ETVZ	**East Tongariro**	**6.67**	**222**	P	**Pn**	**03 20 28.4**	**-0.5**
OTVZ	**Oturere**	**6.72**	**222**	P	**Pn**	**03 20 29.5**	**0.0**
ASAR	**Alice Springs**	**42.55**	**271**	P	**P**	**03 26 43.8**	**-2.0**
	0.4nm,0.5s,baz=116,slow=7.8,SNR=6.6 0.4nm,0.5s						
WRA	**Warramunga Arr**	**43.89**	**276**	P	**P**	**03 26 55.9**	**-0.7**
	0.8nm,0.7s,baz=118,slow=7.5,SNR=7.9 0.8nm,0.7s						
FINES	**FINESS Array B**	**148.56**	**337**	PKPbc	**PKiKP**	**03 38 38.1**	**+1.1**
	2.6nm,0.7s,baz=64,slow=3.2,SNR=5.8						

*DJA **30** 03:41:41.7±0.5, 6°N±4°×12°6E±°, h10km, M4.5/12, mB4.9/4, mb4.7/9, MLv4.5/12, Mw(mB)4.2/4*
*MAN **30** 03:41:42.0, 5°.78N×126°.12E, h50km, MS4.1*
*IDC **30** 03:41:44.9±2.1, 6°.14N×126°.38E, h78km±18km, mb3.5/9, mbtmp3.8/9, MS2.7/2, Error ellipse: s-maj=63.8km s-min=14.4km az=67.0*
*NEIC **30** 03:41:45.9±1.7, 6°.09N±0°.08×126°.0E±0°.2, h83km±9km, mb4.3/8, Error ellipse: s-maj=22.5km s-min=9.8km az=71.0*

ISC 30 03:41:45.7±0.9, 5°.98N±0°.05×126°.02E±0°.07, h79km±8km, n51, σ1§67/53, mb3.9/13, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.34**	**292**	*i* P	**Pn**	**03 41 55.8**	**-2.2**
DDMP				*i* S	Sn	03 42 00.5	-6.7
GSPH	**General Santos**	**1.07**	**276**	*i* P	Pn	03 42 03.5	-2.2
GSPH				*i* S	**Sn**	**03 42 17.4**	**-3.2**
DAV	**Davao City (W)**	**1.17**	**338**	P	**Pn**	**03 42 06.2**	**-0.6**
	288nm,0.4s,baz=298,slow=1.6,SNR=4.1						
DAV				S	**Sn**	**03 42 22.8**	**+0.2**
	489nm,0.3s,baz=91,slow=21,SNR=7.7						
DAV				LR	LR	03 42 50.2	
	comp=Z,124nm,20.6s,baz=135,slow=54						
DAV	**Davao City (W)**	**1.17**	**338**		**Pn**	**03 42 05.4**	**-1.4**
DAV	**Davao City (W)**	**1.17**	**338**	P	Pn	03 42 01.0	-5.8
DMPH	**Davao City--Mi**	**1.21**	**335**	*e*P	**Pn**	**03 42 06.8**	**-0.5**
DMPH				*i* S	**Sn**	**03 42 23.1**	**-0.4**
KCP	**Kidapawan**	**1.38**	**318**	*i* P	**Pn**	**03 42 09.3**	**-0.3**
KCP				*i* S	**Sn**	**03 42 27.2**	**-0.2**
CDOP	**Cateel, Davao**	**1.84**	**13**	*e*P	**Pn**	**03 42 15.6**	**+0.1**
CDOP				*e*S	**Sn**	**03 42 39.3**	**+1.2**
BUKP	**Musuan**	**2.12**	**333**	*e*P	**Pn**	**03 42 19.6**	**+0.4**
BUKP				*e*S	**Sn**	**03 42 45.4**	**+0.6**
BIPH	**Bislig**	**2.22**	**9**	*e*P	**Pn**	**03 42 21.9**	**+1.4**
BIPH				*e*S	**Sn**	**03 42 50.5**	**+3.4**
SGSI	**Sangihe**	**2.33**	**192**	P	**Pn**	**03 42 20.3**	**-1.7**
CGP	**Cagayan de Oro**	**2.79**	**332**	*e*P	**Pn**	**03 42 28.0**	**-0.3**
CGP				*e*S	**Sn**	**03 43 02.0**	**+1.0**
TSSP	**Tandag City**	**3.05**	**3**	*e*P	**Pn**	**03 42 33.6**	**+1.8**
TSSP				*e*S	**Sn**	**03 43 04.5**	**-2.7**
DCPH	**Dipolog City**	**3.71**	**315**	*e*P	**Pn**	**03 42 45.2**	**+4.6**
SCPH	**Surigao**	**3.82**	**352**	*e*P	**Pn**	**03 42 43.0**	**+0.8**
SCPH				*e*S	Sn	03 43 37.8	+12
GAMI	**Galela, Maluku**	**4.47**	**157**	P	**Pn**	**03 42 51.9**	**+0.8**
PLP	**Palo**	**5.26**	**349**	*e*P	**Pn**	**03 43 02.3**	**+0.5**
PLP				*e*S	**Sn**	**03 44 02.7**	**+1.6**
TNTI	**Ternate**	**5.34**	**165**	Pn	**Pn**	**03 43 03.9**	**+1.0**
TNTI	**Ternate**	**5.34**	**165**	P	**Pn**	**03 43 04.0**	**+1.0**
	0.2nm47nm,0.5s						
GTOI	**Gorontalo**	**6.10**	**210**	P	**Pn**	**03 43 13.2**	**-0.1**
	0.3nm964nm49nm,0.5s						
MRSI	**Marisa**	**6.81**	**217**	P	**Pn**	**03 43 24.1**	**+1.0**
	33nm,0.7s						
TOLI2	**Tolitoli**	**7.12**	**227**	Pn	**Pn**	**03 43 25.6**	**-1.7**
LUWI	**Luwuk**	**7.69**	**205**	Pn	Pn	03 43 40.1	+5.0
LUWI	**Luwuk**	**7.69**	**205**	P	**Pn**	**03 43 39.6**	**+4.6**
SANI	**Sanana**	**7.97**	**180**	P	**Pn**	**03 43 38.0**	**-0.9**
APSI	**Ampana**	**8.12**	**213**	P	**Pn**	**03 43 42.1**	**+1.3**
FAKI	**Fak Fak**	**10.80**	**145**	Pn	**Pn**	**03 44 18.8**	**+1.3**
SBUM	**Sibu**	**14.20**	**256**		**Pn**	**03 45 07.3**	**+4.2**
KNRA	**Kununurra**	**21.68**	**173**	P	**P**	**03 46 29.5**	**-0.6**
KNRA				IAmb	IAmb	03 47 00.9	
	comp=Z,9.3nm,1.1s						
WB0	**Warramunga Arr**	**26.87**	**162**	P	**P**	**03 47 19.1**	**-0.2**
WRA	**Warramunga Arr**	**27.02**	**163**	P	**P**	**03 47 20.4**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=343,slow=11,SNR=8.9 comp=Z,0.6nm,0.7s						
WRA	**Warramunga Arr**	**27.02**	**163**	P	**P**	**03 47 18.7**	**-2.0**
WR8	**Warramunga Arr**	**27.08**	**162**	P	**P**	**03 47 20.9**	**-0.2**
WR8				IAmb	IAmb	03 48 03.9	
	comp=Z,7.4nm,1.4s						
CMAR	**Chiang Mai Arr**	**29.17**	**298**	LR	LR	03 58 36.8	
	comp=Z,10.0nm,21.6s,baz=160,slow=34						
ASAR	**Alice Springs**	**30.45**	**166**	P	**P**	**03 47 51.3**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=346,slow=7.5,SNR=8.5 comp=Z,0.3nm,0.4s						
BBOO	**Buckleboo**	**39.73**	**167**	P	**P**	**03 49 11.5**	**+0.9**
STKA	**Stephens Creek**	**40.47**	**159**	P	**P**	**03 49 15.9**	**-0.8**
	comp=Z,1.4nm,0.8s,baz=323,slow=10.0,SNR=4.4 comp=Z,1.4nm,0.8s						
STKA	**Stephens Creek**	**40.47**	**159**	P	**P**	**03 49 17.7**	**+1.0**
H11S3	**WAKE ISLAND Hy**	**41.53**	**69**	T	T	04 33 28.4	
	baz=258						
H11S1	**WAKE ISLAND Hy**	**41.55**	**69**	T	T	04 33 29.5	
	baz=258						
H11S2	**WAKE ISLAND Hy**	**41.55**	**69**	T	T	04 33 33.0	
	baz=258						
MKAR	**Makanchi Array**	**55.32**	**325**	P	**P**	**03 51 10.3**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=122,slow=7.2,SNR=3.8 comp=Z,0.2nm,0.4s						
MAKZ	**Makanchi**	**55.51**	**325**	P	**P**	**03 51 11.9**	**-0.8**
MAKZ				IAmb	IAmb	03 51 43.8	
	comp=Z,4.3nm,0.6s						
KURBB	**Kurchatov Arra**	**59.48**	**327**	P	**P**	**03 51 40.2**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=126,slow=6.6,SNR=6.8 comp=Z,0.5nm,0.5s						
KURK	**Kurchatov**	**59.48**	**327**	P	**P**	**03 51 40.5**	**0.0**
KURK				IAmb	IAmb	03 51 57.3	
	comp=Z,2.4nm,1.1s						
ILAR	**Eielson Array**	**83.39**	**26**	P	**P**	**03 54 01.8**	**-2.3**
	comp=Z,0.4nm,0.7s,baz=237,slow=4.9,SNR=5.1 comp=Z,0.4nm,0.7s						
SPITS	**Spitsbergen Ar**	**88.15**	**349**	P	**P**	**03 54 26.6**	**-0.8**
	comp=Z,5.8nm,0.9s,baz=96,slow=6.9,SNR=6.4 comp=Z,5.8nm,0.9s						
FINES	**FINESS Array B**	**89.53**	**332**	P	**P**	**03 54 33.6**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=86,slow=7.1,SNR=1.6 comp=Z,1.3nm,0.8s						
AKASG	**Malin Array Be**	**89.72**	**321**	P	**P**	**03 54 35.6**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=86,slow=1.2,SNR=1.4 comp=Z,0.2nm,0.4s						
NOA	**NORSAR Array B**	**96.48**	**334**	LR	LR	04 41 08.7	
	comp=Z,6.3nm,20.9s,baz=340,slow=37						
TORD	**Torodi Ar. Bea**	**121.54**	**289**	PKP	**PKPdf**	**04 00 30.7**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=78,slow=1.4,SNR=7.6						

*IDC **30** 03:42:45.8±0.7, 0°.42N×80°.64W, h0km, mb3.9/13, mbtmp4.0/16, ML4.1/2, MS3.2/16, Error ellipse: s-maj=29.2km s-min=14.9km az=60.0*
*NEIC **30** 03:42:48.9±2.3, 0°.37N±0°.08×80°.65W±0°.10, h10km±1km, mb4.4/27, Error ellipse: s-maj=16.1km s-min=13.1km az=270.0*
*IGQ **30** 03:42:50.3±0.6, 0°N±3°×8°1W±°, h10km, M4.3/30, mb4.9/1, mB5.2/1, Mjma4.1/30, ML4.5/28, MLv4.0/30, Ms(BB)4.0/25, Mw(mB)4.5/1*

ISC 30 03:42:44.9±1.5, 0°.28N±0°.03×80°.71W±0°.04, h2km±9km, n139, σ1§91/142, mb4.2/22, MS3.3/13, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABH3	**Manabi, Bahia**	**0.92**	**162**	P	**Pn**	**03 43 05.0**	**+0.2**
ABH3				S	**Sn**	**03 43 18.2**	**-0.5**
ABH2	**Ecuador-Univer**	**0.99**	**162**	P	**Pn**	**03 43 06.2**	**+0.4**
ABH2				S	**Sn**	**03 43 21.6**	**+1.2**
AMNT	**Manta-Manabi**	**1.22**	**181**	P	**Pn**	**03 43 08.2**	**-0.8**
AMNT				S	**Sb**	**03 43 23.6**	**-1.2**
PECV	**Mancha de Ca P**	**1.24**	**148**	P	**Pn**	**03 43 07.5**	**-1.8**
BV15	**Puerto Quito-O**	**1.49**	**95**	P	**Pg**	**03 43 14.2**	**-0.7**
BV15				S	Sn	03 43 22.0

BONI				S		**Sb**	**03 44 20.2**	**-1.5**
SANGA	**Volcan Sangay**	**3.29**	**135**	P		**Pb**	**03 43 43.1**	**-1.2**
CASC	**Dorado de Casc**	**3.37**	**92**	P		**Pb**	**03 43 46.4**	**+0.9**
CASC	**Dorado de Casc**	**3.37**	**92**	P		**Pb**	**03 43 45.6**	**+0.1**
CASC				S		**Sb**	**03 44 28.3**	**+1.3**
GCUF	**Volcan Galeras**	**3.49**	**74**	P		**Pb**	**03 43 43.7**	**-4.0**
GCUF				S		**Sb**	**03 44 26.7**	**-4.1**
PKYU	**Pakayacu**	**3.65**	**122**	P		**Pb**	**03 43 48.2**	**-2.0**
PCRA	**Pucara 2**	**3.67**	**161**	P		**Pn**	**03 43 44.2**	**+1.1**
MAPC	**Malpelo**	**3.80**	**346**	P		**Pn**	**03 43 42.8**	**-1.8**
MAPC				S		**Sn**	**03 44 24.7**	**-5.3**
BBAC	**Balboa, Cauca**	**3.87**	**63**	P		**Pn**	**03 43 47.4**	**+1.8**
BBAC				S		**Sn**	**03 44 32.1**	**+0.3**
CRUC	**La Cruz**	**3.96**	**71**	P		**Pb**	**03 43 51.5**	**-4.3**
CRUC				S		**Sb**	**03 44 41.0**	**-3.4**
BOSC	**San Juan Bosco**	**4.07**	**147**	P		**Pb**	**03 43 54.5**	**-2.9**
POPC	**Popayan, Colom**	**4.61**	**61**	P		**Pn**	**03 43 58.1**	**+2.2**
POPC				S		**Sn**	**03 44 50.4**	**+0.2**
MCRA	**Macar, Loja**	**4.68**	**171**	P		**Pn**	**03 43 57.8**	**+1.1**
MCRA				S		**Sn**	**03 44 51.1**	**-0.6**
JAMC	**Jamundi, Valle** 599nm26nm,0.6s	**4.97**	**54**	P		**Pn**	**03 44 02.3**	**+1.4**
JAMC	599nm26nm,0.6s			S		**Sn**	**03 44 57.6**	**-1.5**
ZUMB	**Zumba**	**5.35**	**163**	P		**Pn**	**03 44 09.4**	**+3.5**
YOTC	**Yotoco, Valle** 11nm,0.5s	**5.70**	**50**	P		**Pn**	**03 44 11.2**	**+0.4**
YOTC	11nm,0.5s			S		**Sn**	**03 45 14.8**	**-2.1**
PLMC	**San Jos del P** 11nm,0.4s	**6.37**	**44**	P		**Pn**	**03 44 22.1**	**+2.1**
PLMC	11nm,0.4s			S		**Sn**	**03 45 33.0**	**-0.4**
PRAC	**Prado** 17nm,0.6s	**6.74**	**60**	P		Pn	03 44 28.5	+3.5
PRAC	17nm,0.6s			S		**Sn**	**03 45 45.9**	**+3.4**
MACC	**Macarena, Meta**	**7.10**	**75**	P		Pn	03 44 34.9	+4.9
GUY2C	**Guyana, Caldas**	**7.25**	**47**	P		Pn	03 44 36.8	+4.4
GUY2C				S		**Sn**	**03 45 58.3**	**+2.7**
ATAH	**Atahualpa** 2.4nm,0.3s,baz=42,slow=6.8,SNR=76	**7.72**	**163**	Pn		**Pn**	**03 44 43.0**	**+4.2**
ATAH	comp=Z,90nm,20.4s,baz=331,slow=33 6.6nm,0.4s			LR		LR	03 47 02.9	
JTS	**Las Juntas de** comp=Z,83nm,19.2s,baz=163,slow=31	**10.80**	**337**	LR		LR	03 48 12.9	
NNA	**Nana** 1.2nm,0.3s,baz=241,slow=6.6,SNR=2.2	**12.78**	**163**	Pn		**Pn**	**03 45 48.7**	**+0.9**
NNA	0.4nm,0.3s,baz=256,slow=4.9,SNR=1.3 3.0nm,0.3s			Sn		**Sn**	**03 48 05.1**	**-5.8**
NNA	**Nana**	**12.78**	**163**	Pn		**Pn**	**03 45 48.0**	**+0.1**
SDV	**Santo Domingo** 1.2nm,0.5s,baz=275,slow=14,SNR=1.8	**13.18**	**49**	Pn		**Pn**	**03 45 51.7**	**-1.7**
SDV	comp=Z,67nm,22.0s,baz=207,slow=41			LR		LR	03 51 43.0	
LPAZ	**La Paz** 2.1nm,0.5s,baz=240,slow=3.8,SNR=6.4 2.1nm,0.5s	**20.62**	**144**	P		Pn	03 47 29.0	+0.4
CMIG	**Matias Romero** 4.0nm,0.9s,baz=68,slow=2.4,SNR=5.1	**21.77**	**321**	P		**P**	**03 47 38.8**	**+0.7**
CMIG	comp=Z,34nm,19.6s,baz=145,slow=32 4.0nm,0.9s			LR		LR	03 54 30.8	
SJG	**San Juan** comp=Z,12nm,20.3s,baz=237,slow=36	**22.77**	**38**	LR		LR	03 56 12.1	
SIV	**San Ignacio** comp=Z,148nm,18.4s,baz=296,slow=39	**25.24**	**131**	LR		LR	03 59 07.7	
MDP	**Montagnes des** comp=Z,47nm,20.9s,baz=279,slow=38	**28.43**	**80**	LR		LR	04 00 56.4	
H03N2	**Juan Fernandez** baz=354	**33.59**	**177**	T		T	04 24 45.6	
H03N1	**Juan Fernandez** baz=354	**33.59**	**177**	T		T	04 24 45.1	
H03N3	**Juan Fernandez** baz=354	**33.60**	**177**	T		T	04 24 44.3	
HNDO	**Hondo**	**34.05**	**330**	P		**P**	**03 49 30.7**	**-0.1**
HNDO	comp=Z,11nm,1.3s			IAmb		IAmb	03 49 38.8	
CPCT	**Cooper Cave**	**35.17**	**355**	P		**P**	**03 49 42.1**	**+1.8**
CPCT	comp=Z,3.4nm,0.9s			IAmb		IAmb	03 49 43.2	
TKL	**Tuckaleechee C** comp=Z,26nm,18.6s,baz=168,slow=36	**35.31**	**356**	LR		LR	04 03 37.2	
BDFB	**Brasilia**	**35.95**	**118**	P		**P**	**03 49 48.0**	**+0.5**
TZTN	**Tazewell**	**36.17**	**356**	P		**P**	**03 49 50.3**	**+1.4**
TXAR	**Lajitas Array** comp=Z,0.3nm,0.7s,baz=161,slow=8.0,SNR=4.0	**36.26**	**325**	P		**P**	**03 49 48.6**	**-1.3**
TXAR	comp=Z,0.6nm,0.8s,baz=153,slow=6.0,SNR=6.1 comp=Z,0.3nm,0.7s			PcP		**PcP**	**03 52 16.4**	**+1.2**
S51A	**Beattyville** comp=Z,6.6nm,1.1s	**37.27**	**356**	P		**P**	**03 49 59.2**	**+1.0**
S51A				IAmb		IAmb	03 50 02.5	
VHRN	**Van Horn**	**38.10**	**325**	P		**P**	**03 50 07.5**	**+1.9**
VHRN	comp=Z,3.7nm,0.8s			IAmb		IAmb	03 50 08.1	
MNTX	**Cornudas Mount**	**39.00**	**326**	P		**P**	**03 50 14.8**	**+1.8**
R32A	**Long Quarter,**	**41.41**	**338**	P		**P**	**03 50 35.0**	**+2.1**
CRNM	**Carthage**	**41.44**	**327**	P		**P**	**03 50 35.6**	**+2.2**
PLCA	**Paso Flores** comp=Z,1.7nm,0.9s,baz=279,slow=10.0,SNR=3.0 1.7nm,0.9s	**41.86**	**168**	P		**P**	**03 50 38.3**	**+1.7**
ANMO	**Albuquerque** comp=Z,22nm,19.8s,baz=115,slow=37	**42.04**	**328**	LR		LR	04 08 55.0	
ANMO	**Albuquerque**	**42.04**	**328**			**P**	**03 50 40.9**	**+2.5**
ANMO	comp=Z,4.2nm,0.8s			IAmb		IAmb	03 50 41.7	
SDCO	**Great Sand Dun**	**43.73**	**331**	P		**P**	**03 50 54.9**	**+2.8**
SDCO	comp=Z,5.9nm,0.8s			IAmb		IAmb	03 50 55.7	
SADO	**Sadowa** comp=Z,18nm,21.2s,baz=194,slow=35	**44.32**	**2**	LR		LR	04 08 36.2	
K30B	**Basset,**	**45.49**	**340**	P		**P**	**03 51 07.6**	**+1.8**
HMU	**Henry Mountain**	**46.57**	**327**	P		**P**	**03 51 17.2**	**+2.6**
HMU	comp=Z,6.5nm,1.1s			IAmb		IAmb	03 51 19.0	
PFO	**Pinyon Flats O** comp=Z,31nm,18.5s,baz=94,slow=34	**47.16**	**318**	LR		LR	04 09 31.9	
RSSD	**Black Hills**	**48.34**	**338**			**P**	**03 51 30.8**	**+2.5**
E28A	**Huff**	**49.32**	**342**			**P**	**03 51 37.4**	**+1.8**
PDAR	**Pinedale Array** comp=Z,0.4nm,0.7s,baz=128,slow=12,SNR=4.0 comp=Z,0.4nm,0.7s	**49.59**	**332**	P		**P**	**03 51 37.8**	**-0.1**
BGU	**Big Grassy Mou**	**49.95**	**328**	P		**P**	**03 51 42.8**	**+2.2**
ELK	**Elko** comp=Z,37nm,18.1s,baz=182,slow=36	**51.02**	**326**	LR		LR	04 13 10.4	
FLWY	**Flagg Ranch**	**51.13**	**332**	P		**P**	**03 51 51.5**	**+1.9**
FLWY	comp=Z,8.6nm,1.4s			IAmb		IAmb	03 51 54.6	
NV11	**Mina Array Sit**	**51.20**	**322**	P		**P**	**03 51 50.8**	**+0.6**
NVAR	**Mina Array Bea** comp=Z,1.7nm,0.7s,baz=138,slow=7.4,SNR=16	**51.30**	**322**	P		**P**	**03 51 52.5**	**+1.6**
NVAR	comp=Z,38nm,18.3s,baz=293,slow=38 comp=Z,1.7nm,0.7s			LR		LR	04 15 16.6	
NVAR	**Mina Array Bea**	**51.30**	**322**	P		**P**	**03 51 53.7**	**+2.8**
ULM	**Lac du Bonnet** comp=Z,4.6nm,0.9s,baz=158,slow=9.0,SNR=6.3 comp=Z,4.6nm,0.9s	**51.44**	**348**	P		**P**	**03 51 51.2**	**-0.3**
HLID	**Hailey**	**52.55**	**329**			**P**	**03 52 00.9**	**+0.8**
BCYI	**Bear Canyon**	**52.59**	**331**	P		**P**	**03 52 02.5**	**+2.0**
BCYI	comp=Z,5.0nm,1.2s			IAmb		IAmb	03 52 03.6	
MCMT	**McKenzie Canyo**	**52.70**	**332**	P		**P**	**03 52 03.9**	**+2.6**
BOZ	**Bozeman (W)**	**52.72**	**333**	P		**P**	**03 52 02.0**	**+0.7**
BOZ	comp=Z,3.1nm,0.9s			IAmb		IAmb	03 52 03.7	
G08A	**Pilot Rock** comp=Z,4.2nm,0.9s	**56.10**	**328**	P		**P**	**03 52 27.9**	**+2.1**
G08A				IAmb		IAmb	03 52 28.9	
NEW	**Newport** comp=Z,29nm,18.5s,baz=106,slow=38	**57.23**	**332**	LR		LR	04 18 35.2	
YKA	**Yellowknife Ar** comp=Z,1.8nm,0.8s,baz=141,slow=5.3,SNR=25 comp=Z,1.8nm,0.8s	**67.06**	**344**	P		**P**	**03 53 40.3**	**+0.9**
YKA	**Yellowknife Ar**	**67.06**	**344**	P		**P**	**03 53 39.6**	**+0.2**
DBIC	**Dimbokro** comp=Z,5.9nm,0.9s,baz=242,slow=3.0,SNR=5.0 comp=Z,5.9nm,0.9s	**75.91**	**83**	P		**P**	**03 54 34.4**	**+0.5**
A36M	**Sachs Harbour**	**76.91**	**347**	P		**P**	**03 54 38.8**	**+0.4**
ESDC	**Sonseca Array** comp=Z,1.5nm,0.7s,baz=263,slow=6.1,SNR=18 comp=Z,1.5nm,0.7s	**79.62**	**50**	P		**P**	**03 54 55.2**	**+1.0**
ESDC	**Sonseca Array**	**79.62**	**50**	P		**P**	**03 54 55.6**	**+1.4**
ESDC	comp=Z,5.1nm,1.5s			IAmb		IAmb	03 54 59.2	
ILAR	**Eielson Array** comp=Z,0.4nm,0.9s,baz=97,slow=6.2,SNR=3.2 comp=Z,0.4nm,0.9s	**79.78**	**337**	P		**P**	**03 54 56.1**	**+1.7**
KDAK	**Kodiak Island** comp=Z,30nm,19.0s,baz=47,slow=36	**80.17**	**329**	LR		LR	04 30 23.7	
TORD	**Torodi Ar. Bea** comp=Z,0.2nm,0.5s,baz=270,slow=5.4,SNR=2.0 comp=Z,0.2nm,0.5s	**82.53**	**77**	P		**P**	**03 55 10.5**	**+0.4**
QSPA	**South Pole Qui** comp=Z,1.3nm,0.8s,baz=207,slow=3.3,SNR=2.9 comp=Z,1.3nm,0.8s	**90.33**	**180**	P		**P**	**03 55 48.9**	**+1.4**
VRAC	**Vranov** comp=Z,15nm,19.2s,baz=288,slow=33	**94.56**	**41**	LR		LR	04 34 16.4	
KURBB	**Kurchatov Arra** comp=Z,0.8nm,0.6s,baz=311,slow=2.2,SNR=7.9	**126.28**	**16**	PKP		**PKiKP**	**04 01 49.7**	**-0.1**
MKAR	**Makanchi Array** comp=Z,0.4nm,0.8s,baz=302,slow=2.7,SNR=2.7	**130.80**	**15**	PKP		**PKiKP**	**04 01 58.0**	**-1.1**
KSRS	**Korea Array** comp=Z,0.6nm,0.5s,baz=29,slow=3.5,SNR=2.0	**134.07**	**328**	PKP		**PKiKP**	**04 02 04.6**	**-1.3**
HHC	**Hu-ho-hao-te**	**137.57**	**346**	*eP*		PKPdf	04 02 03.0	-8.2
ASAR	**Alice Springs** comp=Z,1.0nm,0.8s,baz=100,slow=2.3,SNR=8.4	**139.16**	**233**	PKP		**PKiKP**	**04 02 14.3**	**-2.4**
WRA	**Warramunga Arr** comp=Z,1.6nm,0.7s,baz=111,slow=1.9,SNR=23	**140.52**	**238**	PKP		**PKPdf**	**04 02 16.8**	**-0.3**
NJ2	**Nanjing**	**142.90**	**332**	*eP*		**PKPdf**	**04 02 17.0**	**-3.9**
NJ2	comp=Z,23nm,0.5s			pmax		pmax		
PZH	**PanZhiHua**	**153.26**	**355**	PKPbc		**PKPdf**	**04 02 31.3**	**-6.9**

*IDC **30** 04:05:34.8±1.3,45.2°18N×116.4°41E,h0km,mb3.9/6, mbtmp3.8/9,ML3.2/3,MS2.7/5,Error ellipse: s-maj=31.3km s-min=21.4km az=164.0*

ISC 30 04:05:39.3±1.0,45.2°N±0.2°×116.5°50E±0.0°08,h35km,n12, σ1s10/10,mb3.9/6,Northeastern China

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array** 0.6nm,0.3s,baz=98,slow=14,SNR=7.0	**7.46**	**294**	Pn		**Pn**	**04 07 24.7**	**-1.1**
SONM	7.9nm,0.3s,baz=91,slow=28,SNR=10 1.2nm,0.5s			Lg		Lg	04 09 17.0	
TLY	**Talaya** comp=Z,32nm,19.3s,baz=108,slow=36	**10.73**	**312**	LR		LR	04 12 05.0	
USRK	**Ussuriysk Ar.** 0.1nm,0.3s,baz=291,slow=11,SNR=1.1	**11.07**	**90**	Pn		**Pn**	**04 08 14.6**	**-0.5**
USRK	0.3nm,0.3s,baz=274,slow=19,SNR=2.6 1.1nm,0.8s			Lg		Lg	04 11 20.5	
KLR	**Kul'dur** 0.4nm,0.3s,baz=294,slow=14,SNR=5.4	**11.14**	**63**	Pn		**Pn**	**04 08 16.6**	**+0.6**
KLR	0.3nm,0.3s,baz=246,slow=3.1,SNR=5.9			Sn		**Sn**	**04 10 17.6**	**-1.6**
KLR	1.0nm,0.3s,baz=168,slow=18,SNR=6.7			Lg		Lg	04 11 20.2	
KLR	comp=Z,14nm,21.1s,baz=242,slow=42 1.6nm,0.4s			LR		LR	04 13 24.4	
YAK	**Yakutsk** comp=Z,31nm,19.9s,baz=153,slow=35	**18.55**	**20**	LR		LR	04 16 32.4	
KURBB	**Kurchatov Arra** 1.3nm,0.8s,baz=84,slow=9.8,SNR=12 1.3nm,0.8s	**25.83**	**296**	P		**P**	**04 11 07.5**	**+0.4**
TIXI	**Tiksi** comp=Z,33nm,18.2s,baz=174,slow=37	**27.21**	**9**	LR		LR	04 22 15.0	
CMAR	**Chiang Mai Arr** 1.1nm,0.3s,baz=9.1,slow=12,SNR=5.9	**30.39**	**214**	P		**P**	**04 11 48.2**	**+0.1**
CMAR	comp=Z,18nm,20.5s,baz=15,slow=41 1.1nm,0.3s			LR		LR	04 26 18.1	
ARCES	**ARCESS Array B** 3.4nm,0.8s,baz=84,slow=11,SNR=1.7 3.4nm,0.8s	**48.90**	**332**	P		**P**	**04 14 19.9**	**-1.3**
FINES	**FINESS Array B** 2.7nm,0.9s,baz=78,slow=8.7,SNR=2.3 2.7nm,0.9s	**51.87**	**322**	P		**P**	**04 14 44.1**	**+0.4**
ILAR	**Eielson Array** 0.5nm,0.6s,baz=288,slow=6.3,SNR=7.4 0.5nm,0.6s	**52.86**	**32**	P		**P**	**04 14 52.2**	**+1.1**
YKA	**Yellowknife Ar** 0.3nm,0.6s,baz=328,slow=7.1,SNR=5.5 0.3nm,0.6s	**65.17**	**23**	P		**P**	**04 16 17.4**	**+1.0**

MEX 30 04:09:06.4±0.5,16.4°46N×98.8°88W,h6km±4km,MD4.0,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CRIG	**Cruz Grande**	**0.37**	**319**	*eP*		Pg	04 09 13.2	-0.3
CRIG				*eS*		Sg	04 09 18.4	+0.1
PNIG	**Pinotepa**	**0.72**	**95**	*eP*		Pg	04 09 18.9	-1.5
PNIG				*eS*		Sg	04 09 28.6	-1.1
MGIG	**Malinaltepec**	**0.80**	**17**	*eP*		Pg	04 09 20.4	-1.5
MGIG				*eS*		Sg	04 09 31.0	-1.4
DAIG	**Los Arroyos**	**0.93**	**307**	*eP*		Pg	04 09 22.3	-2.0
DAIG				*eS*		Sg	04 09 34.1	-2.1
TLIG	**Tlapa**	**1.14**	**15**	*eP*		Pg	04 09 39.2	-2.0
TLIG				*eS*		Sg	04 09 39.7	-3.3
TXIG	**Tlaxiaco**	**1.32**	**53**	*eP*		Pn	04 09 28.7	-3.0
TXIG				*eS*		Sg	04 09 45.1	-4.0
YOIG	**Yosondua**	**1.34**	**73**	*eP*		Pn	04 09 28.3	-3.6
YOIG				*eS*		Sg	04 09 45.9	-3.6
CAIG	**El Cayaco**	**1.45**	**294**	*eP*		Pn	04 09 27.4	-5.8
CAIG				*eS*		Sn	04 09 49.4	-3.1
FTIG	**Fresnillo de T**	**1.61**	**26**	*eP*		Pn	04 09 31.3	-4.1
FTIG				*eS*		Sn	04 09 49.3	-7.3
MEIG	**Mezcala**	**1.62**	**334**	*eP*		Pn	04 09 28.8	-6.8
MEIG				*eS*		Sn	04 09 52.0	-4.8
HLIG	**Huajuapan de L**	**1.71**	**37**	*eP*		Pn	04 09 36.4	-0.5
HLIG				*eS*		Sn	04 09 54.2	-5.0
PLIG	**Platanillo**	**2.01**	**343**	*eP*		Pn	04 09 38.6	-2.4
PLIG				*eS*		Sn	04 10 04.3	-2.2
ARIG	**Puente Sto Nin**	**2.29**	**322**	*eP*		Pb	04 09 47.0	-1.1
ARIG				*eS*		Sn	04 10 10.9	-2.4
TOIG	**Toxpalan**	**2.38**	**47**	*eS*		Sn	04 10 12.6	-3.0
YAIG	**Yautepec**	**2.40**	**356**	*eP*		Pn	04 09 46.9	+0.6
YAIG				*eS*		Sn	04 10 13.2	-2.8
TPIG	**Tehuac#an**	**2.43**	**36**	*eP*		Pn	04 09 42.7	-4.1
TPIG				*eS*		Sn	04 10 13.8	-3.1

*IDC **30** 04:21:37.9±1.5,21.7°71N×143.6°06E,h290km±13km, mb3.7/24,mbtmp4.4/26,Error ellipse: s-maj=13.9km s-min=9.2km az=81.0*

*NEIC **30** 04:21:38.9±1.6,21.7°70N±0.0°07×143.1°E±0.1°1,h295km±6km, mb4.2/50,Error ellipse: s-maj=16.3km s-min=9.1km az=72.0*

*JMA **30** 04:21:40.3±0.3,22.2°N±2.2°×14.4°E±.°,h318km,MV4.7/22, IOTO ISLANDS REGION*

ISC 30 04:21:38.7±0.4,21.7°71N±0.0°05×143.2°12E±0.0°09,h300km, n106,σ0s98/110,mb4.2/53,2C,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**4.98**	**350**	*eS*		**S**	**04 23 54.9**	**-3.1**
CBIJ	**Chichi jima**	**5.43**	**351**	*eP*		**Pn**	**04 23 01.2**	**0.0**
CBIJ				*eS*		**S**	**04 24 04.9**	**-2.7**
JCJ	**Chichijima** 145nm,0.3s,baz=164,slow=3.7,SNR=24	**5.43**	**351**	P		**Pn**	**04 23 01.1**	**-0.2**
JCJ	271nm,0.7s,baz=253,slow=19,SNR=8.8			S		**S**	**04 24 05.7**	**-1.9**
JCJ	**Chichijima**	**5.43**	**351**			**Pn**	**04 23 00.9**	**-0.3**
JHCJ	**Hachijojimakas**	**11.70**	**346**	*eP*		**Pn**	**04 24 17.6**	**+0.1**
JHJ2	**Mitsune**	**11.73**	**346**	Pn		**Pn**	**04 24 17.1**	**-0.8**
BSO3	**Boso 3**	**13.25**	**351**	*eP*		**Pn**	**04 24 36.0**	**+0.1**
BSO4	**Boso 4**	**13.46**	**350**	*eP*		**Pn**	**04 24 38.8**	**+0.2**
JKN2	**Miekihoku**	**13.87**	**336**	*eP*		**Pn**	**04 24 44.9**	**+1.3**
JTO	**Tosashimizu**	**14.40**	**323**	*eP*		**Pn**	**04 24 52.6**	**+2.7**
JMN	**Monobe**	**14.49**	**328**			**Pn**	**04 24 53.2**	**+2.0**
INU	**Inuyama**	**14.61**	**340**			**Pn**	**04 24 53.3**	**+0.9**
JEG	**Eigenji**	**14.62**	**348**	*eP*		**Pn**	**04 24 53.8**	**+1.2**
JRY	**Ryogami san**	**14.73**	**346**	*eP*		**P**	**04 24 53.2**	**+0.5**
JGF	**Kuroka**	**14.73**	**341**			**P**	**04 24 52.4**	**-0.4**
MJAR	**Matsushiro Arr** 6.3nm,0.5s,baz=172,slow=11,SNR=18	**15.39**	**345**	P		**P**	**04 24 59.0**	**-1.0**
MJAR	**Matsushiro Arr**	**15.39**	**345**			**P**	**04 25 00.5**	**+0.5**
MJAR	comp=Z,5.0nm,0.8s			IAmb		IAmb	04 25 01.4	
MAJO	**Matsushiro**	**15.39**	**345**	P		**P**	**04 24 59.9**	**-0.1**
MJB9	**Matsu-Tunnel**	**15.39**	**345**			**P**	**04 24 59.7**	**-0.4**
JHS	**Saijyo**	**15.89**	**329**	*eP*		**Pn**	**04 25 07.5**	**+0.1**
JTM	**Tenmabayashi**	**19.10**	**355**	P		**P**	**04 25 41.9**	**+1.9**
KSRS	**Korea Array** comp=Z,2.8nm,0.5s,baz=147,slow=9.1,SNR=19 comp=Z,2.8nm,0.5s	**20.47**	**323**	P		**P**	**04 25 53.4**	**-1.0**
H11N3	**WAKE ISLAND Hy** SNR=5.5	**22.34**	**91**	T		T	04 48 06.1	
BNX	**BinXian**	**27.20**	**335**	⇑P		**P**	**04 26 56.5**	**+1.2**
BNX	comp=Z,7.0nm,0.6s			pmax		pmax		
HNS	**HongShan**	**29.10**	**309**	⇑P		**P**	**04 27 12.3**	**+0.1**
HNS	comp=Z,11nm,0.7s			pmax		pmax		
KKM	**Kota Kinabalu** comp=Z,21nm,1.3s	**30.32**	**243**	P		**P**	**04 27 23.2**	**-0.1**
KKM				IAmb		IAmb	04 27 55.7	
HHC	**Hu-ho-hao-te**	**32.78**	**313**	*eP*		**P**	**04 27 46.5**	**+2.0**
HHC	comp=Z,3.0nm,0.7s			pmax		pmax		
HHC	comp=Z,70nm,5.3s			pmax		pmax		
COEN	**Coen**	**35.44**	**180**	P		**P**	**04 28 07.4**	**+0.2**
COEN	comp=Z,13nm,1.1s			IAmb		IAmb	04 28 08.6	
SBUM	**Sibu**	**35.62**	**242**	P		**P**	**04 28 09.4**	**+0.5**
SBUM	comp=Z,2.8nm,0.6s			IAmb		IAmb	04 28 11.2	
LZDM	**Lanzhou Array** comp=Z,4.5nm,0.4s,baz=161,slow=5.5,SNR=7.4 comp=Z,4.5nm,0.4s	**37.08**	**301**	P		**P**	**04 28 21.9**	**+0.6**
PZH	**PanZhiHua**	**37.95**	**286**	P		**P**	**04 28 29.3**	**+0.8**
SONM	**Songino Array** comp=Z,0.6nm,0.4s,baz=130,slow=5.9,SNR=6.5 comp=Z,0.6nm,0.4s	**39.30**	**320**	P		**P**	**04 28 39.3**	**0.0**
SONM	**Songino Array**	**39.30**	**320**	P		**P**	**04 28 40.1**	**+0.9**
KNRA	**Kununurra**	**39.73**	**202**	P		**P**	**04 28 42.5**	**-0.5**
KNRA	comp=Z,4.9nm,0.8s			IAmb		IAmb	04 28 43.2	
GTA2	**Gaotai**	**40.88**	**306**	*eP*		**P**	**04 28 52.5**	**+0.2**
GTA2	comp=Z,3.0nm,0.7s			pmax		pmax		
CMAR	**Chiang Mai Arr** comp=Z,1.5nm,0.5s,baz=81,slow=6.0,SNR=7.9 comp=Z,1.5nm,0.5s	**41.52**	**274**	P		**P**	**04 28 58.0**	**+0.4**
CTA	**Charters Tower** comp=Z,1.6nm,0.5s,baz=0.0,slow=10,SNR=1.4 comp=Z,1.6nm,0.5s	**41.65**	**176**	P		**P**	**04 28 58.4**	**-0.2**
WB0	**Warramunga Arr**	**42.09**	**192**	P		**P**	**04 29 01.6**	**-0.4**
WR8	**Warramunga Arr**	**42.25**	**192**	P		**P**	**04 29 02.9**	**-0.5**
WRAB	**Tennant Creek**	**42.26**	**192**	P		**P**	**04 29 03.2**	**-0.2**
WRAB				IAmb		IAmb	04 29 03.8	
WRA	**Warramunga Arr** comp=Z,4.1nm,0.6s,baz=15,slow=8.5,SNR=82	**42.27**	**192**	P		**P**	**04 29 03.1**	**-0.4**
WRA	comp=Z,0.3nm,0.5s,baz=15,slow=3.4,SNR=2.7			PcP		**PcP**	**04 30 51.3**	**+0.1**
WRA	comp=Z,0.4nm,1.0s,baz=14,slow=3.9,SNR=2.2 comp=Z,4.1nm,0.6s			ScP		**ScP**	**04 34 13.9**	**+1.1**
WRA	**Warramunga Arr**	**42.27**	**192**	P		**P**	**04 29 03.0**	**-0.5**
UGM	**Wanagama**	**43.46**	**231**	P		**P**	**04 29 12.9**	**-0.3**
KULM	**Kulim**	**44.21**	**255**	P		**P**	**04 29 19.8**	**+0.7**
KULM	comp=Z,9.1nm,0.6s			IAmb		IAmb	04 29 20.8	
GOMU	**GeErMu**	**44.23**	**300**	P		**P**	**04 29 19.8**	**+0.4**
GOMU	comp=Z,5.0nm,0.8s			pmax		pmax		
BBJI	**Bungbulang**	**45.28**	**234**	P		**P**	**04 29 25.9**	**-1.7**
BBJI	comp=Z,18nm,1.5s			IAmb		IAmb	04 29 32.1	
ASAR	**Alice Springs** comp=Z,1.0nm,0.4s,baz=16,slow=12,SNR=27	**45.98**	**192**	P		**P**	**04 29 32.2**	**-0.5**
ASAR	comp=Z,0.3nm,0.5s,baz=0.0,slow=3.1,SNR=1.9 comp=Z,1.0nm,0.4s			PcP		**PcP**	**04 31 03.2**	**-0.8**
SHL	**Shillong**	**46.87**	**285**			**P**	**04 29 39.4**	**-0.4**
PSA00	**Pilbara Seismi**	**48.64**	**209**	P		**P**	**04 29 52.7**	**-0.4**
UNV	**Unalaska Valle**	**49.64**	**37**	P		**P**	**04 30 00.6**	**+0.4**
LVA	**Lava Point**	**50.01**	**37**	P		**P**	**04 30 03.2**	**+0.2**
AKUT	**Akutan**	**50.14**	**37**	P		**P**	**04 30 05.0**	**+1.0**
WMQ	**Urumqi**	**50.53**	**309**	*eP*		**P**	**04 30 08.3**	**+1.1**
WMQ	comp=Z,18nm,0.9s			pmax		pmax		
EVN	**Everest**	**51.11**	**289**			**P**	**04 30 12.4**	**0.0**
EVN	comp=Z,6.1nm,0.5s			IAmb		IAmb	04 30 14.2	
GIRL	**Giralia**	**52.30**	**214**	P		**P**	**04 30 20.9**	**+0.6**
STKA	**Stephens Creek** comp=Z,1.1nm,0.5s,baz=7.3,slow=6.7,SNR=1.7 comp=Z,1.1nm,0.5s	**53.30**	**182**	P		**P**	**04 30 27.1**	**-0.3**
STKA	**Stephens Creek**	**53.30**	**182**	P		**P**	**04 30 27.0**	**-0.4**
STKA	comp=Z,28nm,1.3s			IAmb		IAmb	04 30 49.1	
FORT	**Forrest**	**54.15**	**196**	P		**P**	**04 30 33.1**	**-0.4**
FORT	comp=Z,7.1nm,1.2s			IAmb		IAmb	04 30 47.5	
ZALV	**Zalesovo Beam** comp=Z,2.4nm,0.6s,baz=107,slow=7.9,SNR=11 comp=Z,2.4nm,0.6s	**54.17**	**322**	P		**P**	**04 30 33.0**	**-0.4**
MKAR	**Makanchi Array** comp=Z,1.1nm,0.3s,baz=90,slow=9.3,SNR=20 comp=Z,1.1nm,0.3s	**54.65**	**313**	P		**P**	**04 30 37.3**	**+0.2**
O15K	**Ungalikthiuk R**	**54.86**	**32**	P		**P**	**04 30 39.7**	**+1.4**
O15K	comp=Z,16nm,1.4s			IAmb		IAmb	04 30 53.1	
P16K	**Nushagak River**	**55.73**	**32**	P		**P**	**04 30 45.2**	**+0.8**
MORW	**Morawa**	**56.83**	**208**	P		**P**	**04 30 51.0**	**-1.5**
MORW	comp=Z,20nm,1.4s			IAmb		IAmb	04 31 10.6

comp=Z,4.2nm,0.5s,baz=74,slow=8.7,SNR=21
comp=Z,4.2nm,0.5s
KCPM Cahto Peak 78.90 52 P P 04 33 10.9 +1.5
KBZ Khabaz 82.32 314 P P 04 33 27.8 +0.6
comp=Z,6.6nm,0.8s,baz=104,slow=4.9,SNR=16
comp=Z,6.6nm,0.8s
FINES FINESS Array B 83.15 334 P P 04 33 30.3 -0.8
comp=Z,4.7nm,0.5s,baz=63,slow=4.6,SNR=43
comp=Z,4.7nm,0.5s
NVAR Mina Array Bea 83.19 51 P P 04 33 33.5 +1.4
comp=Z,2.6nm,0.7s,baz=272,slow=5.2,SNR=21
comp=Z,2.6nm,0.7s
NVAR Mina Array Bea 83.19 51 P P 04 33 32.4 +0.3
PDAR Pinedale Array 87.43 45 P P 04 33 53.1 +0.2
comp=Z,0.3nm,0.5s,baz=205,slow=2.6,SNR=6.3
comp=Z,0.3nm,0.5s
AKASG Malin Array Be 87.47 324 P P 04 33 51.1 -1.4
comp=Z,0.4nm,0.3s,baz=52,slow=4.8,SNR=13
comp=Z,0.4nm,0.3s
AKBB Malin Array Si 87.47 324 P P 04 33 50.9 -1.7
AKBB IAmb IAmb 04 33 52.0
comp=Z,2.8nm,0.7s
HFS Hagfors 88.70 337 P P 04 33 56.4 -1.7
comp=Z,1.9nm,0.4s,baz=85,slow=4.9,SNR=21
comp=Z,1.9nm,0.4s
NOA NORSAR Array B 88.92 339 P P 04 33 57.9 -1.3
comp=Z,0.7nm,0.7s,baz=46,slow=4.5,SNR=1.8
comp=Z,0.7nm,0.7s
RSSD Black Hills 90.28 42 P P 04 34 06.2 0.0
RSSD IAmb IAmb 04 34 09.2
comp=Z,3.2nm,0.8s
BRTR Keskin Array B 90.29 313 P P 04 34 04.9 -1.3
comp=Z,0.6nm,0.7s,baz=91,slow=3.5,SNR=4.4
comp=Z,0.6nm,0.7s
TORD Torodi Ar. Bea 128.69 309 PKP PKPdf 04 40 10.8 -0.4
comp=Z,0.2nm,0.4s,baz=30,slow=0.7,SNR=7.2
PLCA Paso Flores 145.81 131 PKPbc PKPab 04 40 44.0 0.0
comp=Z,8.0nm,0.6s,baz=229,slow=4.5,SNR=23
BOAV Boa Vista 146.71 47 PKPbc PKPbc 04 40 45.8 -0.5
LPAZ La Paz 150.00 85 PKPbc PKiKP 04 40 56.5 +0.4
comp=Z,5.9nm,0.6s,baz=312,slow=1.7,SNR=21
ZON Zonda 150.02 116 PKPbc PKPbc 04 40 54.7 +0.4

NOU ***30*** *04:27:26.1, 42.83S×172.93E, h16km, MLv3.5/13, South Island, New Zealand*
WEL ***30*** *04:27:26.5±0.4, 43.2°×17.3E±, h11km±3km, M3.2/11, ML3.0/11, MLv3.2/11, Error ellipse: s-maj=2.6km s-min=2.3km az=106.8, confirmed*
ISC 30 04:27:26.4±0.8, 42.73S±0.02×172.85E±0.02, h17km±5km, n67, σ0.92/85, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CULC	**Culverden Airl**	**0.05**	**231**	P	**Pg**	**04 27 30.1**	**+0.5**
WIGC	**Waiau Gorge**	**0.05**	**306**	P	**Pg**	**04 27 29.2**	**-0.3**
WTMC	**Te Mara Farm W**	**0.18**	**54**	P	**Pb**	**04 27 31.6**	**+0.3**
WTMC				S	**Sb**	**04 27 35.6**	**+1.0**
HSES	**Hanmer Springs**	**0.21**	**355**	P	**Pg**	**04 27 30.7**	**-0.6**
HSES				S	**Sg**	**04 27 33.7**	**-1.0**
SCAC	**Scargill**	**0.21**	**166**	P	**Pb**	**04 27 33.3**	**+1.4**
SCAC				S	**Sb**	**04 27 38.2**	**+2.7**
WAKC	**Waikari**	**0.26**	**205**	P	**Pb**	**04 27 33.6**	**+1.0**
WAKC				S	**Sb**	**04 27 38.1**	**+1.3**
LSRC	**Lake Sumner Ro**	**0.27**	**238**	P	**Pb**	**04 27 33.4**	**+0.6**
LSRC				S	**Sb**	**04 27 38.2**	**+1.2**
GVZ	**Greta Valley S**	**0.27**	**151**	P	**Pn**	**04 27 34.5**	**-1.2**
GVZ				S	**Sn**	**04 27 40.2**	**-1.2**
CECS	**Cheviot Emerge**	**0.32**	**105**	P	**Pn**	**04 27 35.4**	**-0.9**
CECS				S	**Sn**	**04 27 41.9**	**-0.6**
LTZ	**Lake Taylor**	**0.43**	**263**	P	**Pg**	**04 27 35.3**	**+0.1**
LTZ				S	**Sg**	**04 27 41.2**	**0.0**
AMBC	**Amberley HDC**	**0.43**	**192**	P	**Pn**	**04 27 37.2**	**-0.6**
AMCZ	**Amberley**	**0.47**	**198**	P	**Pn**	**04 27 37.9**	**-0.5**
ASHY	**Ashley**	**0.58**	**199**	P	**Pn**	**04 27 39.8**	**0.0**
KHZ	**Kahutara**	**0.60**	**59**	P	**Pb**	**04 27 39.1**	**+0.8**
KHZ	**Kahutara**	**0.60**	**59**	S	**Sb**	**04 27 47.4**	**+1.0**
KHZ	**Kahutara**	**0.60**	**59**	P	**Pb**	**04 27 39.0**	**+0.7**
KHZ				S	**Sb**	**04 27 47.9**	**+1.4**
SJFS	**Springs Juncti**	**0.63**	**308**	P	**Pg**	**04 27 38.2**	**-0.8**
SJFS				S	**Sg**	**04 27 46.0**	**-1.4**
SMHS	**Summerhill**	**0.65**	**215**	P	**Pn**	**04 27 40.9**	**0.0**
CSTC	**Cust School**	**0.68**	**211**	P	**Pn**	**04 27 41.3**	**+0.1**
KIKS	**Kaikoura**	**0.68**	**64**	P	**Pb**	**04 27 40.4**	**+0.6**
MOLW	**Molesworth Sta**	**0.71**	**25**	P	**Pg**	**04 27 39.7**	**-0.6**
OXZ	**Oxford**	**0.84**	**225**	P	**Pn**	**04 27 43.2**	**-0.3**
OXZ				S	**Sn**	**04 27 55.5**	**0.0**
MNZS	**Menzies Bay Ba**	**0.91**	**174**	P	**Pn**	**04 27 45.4**	**+1.0**
THZ	**Tophouse**	**0.97**	**2**	P	**Pb**	**04 27 44.1**	**-0.6**
MQZ	**McQueen's Vall**	**0.99**	**188**	P	**Pn**	**04 27 45.4**	**-0.1**
OKCZ	**Okains Bay**	**1.00**	**171**	P	**Pn**	**04 27 46.4**	**+0.7**
INZ	**Inchbonnie**	**1.04**	**270**	P	**Pb**	**04 27 45.9**	**0.0**
RACZ	**Rakaia**	**1.12**	**207**	P	**Pb**	**04 27 47.1**	**-0.2**
AKCZ	**Akaroa Harbour**	**1.14**	**178**	P	**Pn**	**04 27 47.8**	**+0.2**
MHCZ	**Mount Hutt**	**1.24**	**228**	P	**Pn**	**04 27 48.4**	**-0.5**
DSZ	**Dennistoun Nort**	**1.25**	**321**	P	**Pn**	**04 27 49.2**	**+0.1**
WACZ	**Wakanui South**	**1.42**	**211**	P	**Pn**	**04 27 51.1**	**-0.3**
TUWZ	**Tuamarina**	**1.53**	**32**	P	**Pn**	**04 27 53.8**	**+0.9**
NNZ	**Nelson**	**1.56**	**15**	P	**Pn**	**04 27 54.2**	**+0.9**
WVZ	**Waitaha Valley**	**1.59**	**257**	P	**Pn**	**04 27 54.5**	**+0.7**
RPZ	**Rata Peaks**	**1.64**	**233**	P	**Pn**	**04 27 54.1**	**-0.4**
RPZ	**Rata Peaks**	**1.64**	**233**	P	**Pn**	**04 27 54.3**	**-0.2**
TKNZ	**Takaka Hill**	**1.70**	**3**	P	**Pn**	**04 27 56.0**	**+0.8**
ARCZ	**Arundel**	**1.73**	**225**	P	**Pn**	**04 27 55.2**	**-0.4**
TCW	**Tory Channel**	**1.85**	**35**	P	**Pn**	**04 27 57.6**	**+0.3**
QRZ	**Quartz Range**	**1.92**	**353**	P	**Pn**	**04 27 59.9**	**+1.7**
QRZ	**Quartz Range**	**1.92**	**353**	S	**Sb**	**04 28 25.3**	**+0.8**
QRZ	**Quartz Range**	**1.92**	**353**	P	**Pn**	**04 27 59.3**	**+1.1**
GCSZ	**Gaunt Creek Bo**	**1.94**	**252**	P	**Pn**	**04 27 59.2**	**+0.6**
SNZO	**South Karori**	**1.98**	**45**	P	**Pn**	**04 27 59.4**	**+0.4**
BHW	**Baring Head**	**2.00**	**49**	P	**Pn**	**04 27 59.4**	**0.0**
WEL	**Wellington**	**2.03**	**45**	P	**Pn**	**04 27 57.8**	**-1.9**
DUWZ	**D'Urville Isla**	**2.08**	**23**	P	**Pn**	**04 28 01.3**	**+1.2**
TMZ	**Timaru**	**2.13**	**218**	P	**Pn**	**04 28 00.9**	**-0.3**
MSWZ	**Moikau Station**	**2.21**	**54**	P	**Pn**	**04 28 02.1**	**-0.2**
CAW	**Cannon Point**	**2.31**	**46**	P	**Pn**	**04 28 03.6**	**-0.1**
PAWZ	**Paruwai Farm**	**2.34**	**56**	P	**Pn**	**04 28 03.6**	**-0.5**
FOZ	**Fox Glacier**	**2.36**	**249**	P	**Pn**	**04 28 05.3**	**+1.0**
KIW	**Kapiti Island**	**2.42**	**40**	P	**Pn**	**04 28 05.3**	**+0.2**
KIW				S	**Sn**	**04 28 34.1**	**-0.2**
LBZ	**Lake Benmore**	**2.55**	**229**	P	**Pn**	**04 28 06.9**	**-0.1**
LBZ				S	**Sn**	**04 28 37.2**	**-0.4**
OGWZ	**Otaki Gorge**	**2.58**	**43**	P	**Pn**	**04 28 07.2**	**-0.2**
OGWZ				S	**Sn**	**04 28 37.6**	**-0.7**
ODZ	**Otahua Downs**	**2.81**	**214**	P	**Pn**	**04 28 10.2**	**-0.3**
ODZ	**Otahua Downs**	**2.81**	**214**	S	**Sn**	**04 28 43.1**	**-0.9**
ODZ	**Otahua Downs**	**2.81**	**214**	P	**Pn**	**04 28 10.1**	**-0.5**
ODZ				S	**Sn**	**04 28 41.6**	**-2.4**
MRZ	**Mangatainoka R**	**2.91**	**46**	P	**Pn**	**04 28 11.1**	**-0.7**
MRZ				S	**Sn**	**04 28 44.9**	**-1.4**
JCZ	**Jackson Bay**	**3.25**	**244**	P	**Pn**	**04 28 16.7**	**0.0**
JCZ	**Jackson Bay**	**3.25**	**244**	S	**Sn**	**04 28 55.5**	**+0.4**
JCZ	**Jackson Bay**	**3.25**	**244**	P	**Pn**	**04 28 16.4**	**-0.3**
JCZ				S	**Sn**	**04 28 54.3**	**-0.7**
KHEZ	**Kahui Hut**	**3.54**	**15**	P	**Pn**	**04 28 22.2**	**+1.6**
EAZ	**Earnscleugh**	**3.58**	**224**	P	**Pn**	**04 28 20.1**	**-0.9**
EAZ				S	**Sn**	**04 29 00.1**	**-2.8**
HIZ	**Hauiti**	**4.48**	**21**	P	**Pn**	**04 28 34.7**	**+1.3**
BKZ	**Black Stump Fm**	**4.50**	**39**	P	**Pn**	**04 28 34.2**	**+0.4**

WEL 30 04:46:35.8±1.1, 35.5S±19.5×178.0W±2.2, h170km±28km, M3.6/10, ML3.7/7, MLv3.6/10, Error ellipse: s-maj=34.6km s-min=13.2km az=129.2, confirmed, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.04**	**213**	P	Pn	04 47 24.2	-0.2
WMGZ	**Waiomatatini S**	**3.21**	**210**	P	Pn	04 47 27.4	+1.0
PKGZ	**Pakihiroa**	**3.39**	**213**	P	Pn	04 47 28.2	-0.5
HAZ	**Te Kaha**	**3.44**	**217**	P	Pn	04 47 27.8	-1.6
HAZ				S	Sn	04 48 12.7	+1.4
PUZ	**Puketiti**	**3.49**	**209**	P	Pn	04 47 30.0	0.0
RUGZ	**Raukumara Rang**	**3.66**	**216**	P	Pn	04 47 32.4	+0.1
RUGZ				S	Sn	04 48 16.0	-0.3
TWGZ	**Tauwhareparae**	**3.69**	**211**	P	Pn	04 47 32.7	+0.1
CNGZ	**Carnagh Statio**	**3.87**	**207**	P	Pn	04 47 34.7	-0.1
MWZ	**Matawai**	**4.02**	**214**	P	Pn	04 47 36.5	-0.3
MWZ				S	Sn	04 48 25.1	+0.6
URZ	**Urewera**	**4.17**	**219**	P	Pn	04 47 37.9	-0.8
URZ				S	Sn	04 48 25.7	-2.1
RAGZ	**Rawiri**	**4.21**	**214**	P	Pn	04 47 39.0	-0.2
RAGZ				S	Sn	04 48 29.0	+0.2
RIGZ	**Rimuhau**	**4.23**	**209**	P	Pn	04 47 38.5	-1.0
RIGZ				S	Sn	04 48 31.1	+1.7
MUGZ	**Murupara**	**4.51**	**219**	P	Pn	04 47 42.8	-0.3
MUGZ				S	Sn	04 48 37.5	+1.7
RTZ	**Ruatahuna**	**4.51**	**217**	P	Pn	04 47 43.2	+0.1
RTZ				S	Sn	04 48 35.7	-0.1
RAHZ	**Arahi**	**4.70**	**214**	P	Pn	04 47 45.9	+0.4
TOZ	**Tahuroa Road**	**4.79**	**234**	P	Pn	04 47 46.8	+0.2
BKZ	**Black Stump Fm**	**5.17**	**216**	P	Pn	04 47 53.5	+1.7
BKZ				S	Sn	04 48 53.2	+1.8
NTVZ	**North Tongarir**	**5.54**	**222**	P	Pn	04 47 56.3	-0.4
OTVZ	**Oturere**	**5.60**	**221**	P	Pn	04 47 58.6	+1.2
MRZ	**Mangatainoka R**	**6.79**	**213**	P	Pn	04 48 14.6	+1.6
MRZ				S	Sn	04 49 28.0	-1.5

IDC 30 04:50:19.9±7.1, 16.57S×171.58E, h0km, mb3.7/3, mbtmp3.7/3, MS3.1/4, Error ellipse: s-maj=328.2km s-min=37.2km az=144.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.29**	**102**	LR	LR	04 53 35.8	
	comp=Z,73nm,19.8s,baz=316,slow=31						
DZM	**Mont Dzumac**	**7.31**	**221**	LR	LR	04 54 25.2	
	comp=Z,239nm,18.5s,baz=30,slow=34						
RAR	**Rarotonga**	**27.47**	**104**	LR	LR	05 04 31.7	
	comp=Z,32nm,21.9s,baz=68,slow=31						
WRA	**Warramunga Arr**	**35.48**	**259**	P	P	04 57 18.4	0.0
	0.8nm,0.4s,baz=87,slow=8.3,SNR=4.8						
	0.8nm,0.4s						
ASAR	**Alice Springs**	**35.99**	**252**	P	P	04 57 22.7	-0.2
	1.5nm,0.8s,baz=86,slow=8.8,SNR=14						
	1.5nm,0.8s						
JOW	**Kunigami**	**60.24**	**315**	LR	LR	05 24 01.0	
	comp=Z,28nm,21.6s,baz=252,slow=34						
BBB	**Bella Bella**	**86.04**	**32**	LR	LR	05 33 07.2	
	comp=Z,249nm,21.8s,baz=128,slow=30						
ILAR	**Eielson Array**	**87.05**	**17**	P	P	05 03 06.9	0.0
	0.2nm,0.6s,baz=206,slow=6.3,SNR=4.1						
	0.2nm,0.6s						

IDC ***30*** *05:08:17.6±0.6, 16.46N×98.76W, h0km, mb4.4/19, mbtmp4.4/23, ML3.8/5, MS4.0/50, Error ellipse: s-maj=18.3km s-min=11.0km az=44.0*
NEIC ***30*** *05:08:18.7±1.7, 16.44N±0.04×98.89W±0.05, h10km±1km, mb4.7/409, Md4.8/93(MEX), Error ellipse: s-maj=8.6km s-min=6.2km az=232.0*
MEX ***30*** *05:08:21.1±0.7, 16.46N×98.88W, h7km±6km, MD5.1*
GCMT ***30*** *05:08:22.7±0.4, 16.57N±0.02×98.87W±0.02, h28km±1km, MW4.9/90, Moment Tensor Solution. s36,c42; s90,c118; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 2.00±.12; Mθθ -1.64±.08; Mϕϕ -0.35±.07; Mrθ 1.44±.10; Mϕθ 0.46±.05; Mϕr -1.92±.13; Best double couple: Mo 3.02400×10^16 NP1: ϕs 276.00000°, δ23.00000°, λ55.00000°. NP2: ϕs 133.00000°, δ72.00000°, λ104.00000°. Principal axes: T 3.3030, Plg61.0000°, Azm264.0000°; N -0.5520, Plg13.0000°, Azm309.0000°; P -2.7450, Plg25.0000°, Azm213.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
CATAC ***30*** *05:08:24.6±0.6, 17.7N×93.3W±, h7km±3km, M5.3/12, mb5.2/12, mB5.2/6, MLv5.8/9, Mw(mB)4.6/6 Error ellipse: s-maj=8.5km s-min=4.4km az=38.6, Moment Tensor Solution. Moment tensor: Scale 10^16 Nm; Mrr 0.87; Mθθ -0.35; Mϕϕ -0.52; Mrθ 1.21; Mϕθ 0.38; Mϕr 0.66; Fault plane solution: Mo 1.62354×10^16 NP1: ϕs 74.55814°, δ78.93465°, λ76.75729°. NP2: ϕs 305.35898°, δ17.19354°, λ139.51240°. Principal axes: T 1.8647, Plg54.2154°, Azm328.4760°; N -0.7651, Plg12.9922°, Azm77.1443°; P -1.0997, Plg32.6696°, Azm175.6524°; confirmed*
ISC 30 05:08:18.8±1.2, 16.51N±0.03×98.86W±0.02, h12km±7km, n428, σ2.92/325, mb4.8/156, MS4.0/48, 16C-3D, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIG	**Cruz Grande**	**0.35**	**312**		**Pb**	**05 08 27.6**	**+0.7**
CRIG					**Sb**	**05 08 32.9**	**+0.5**
CRIG	**Cruz Grande**	**0.35**	**312**	*eP*	**Pb**	**05 08 27.6**	**+0.7**
CRIG				*eS*	**Sb**	**05 08 32.9**	**+0.5**
PNIG	**Pinotepa**	**0.71**	**99**		**Pb**	**05 08 33.3**	**+0.1**
PNIG					**Sb**	**05 08 42.6**	**-0.4**
PNIG	**Pinotepa**	**0.71**	**99**	*eP*	**Pb**	**05 08 33.3**	**+0.1**
PNIG				*eS*	**Sb**	**05 08 42.6**	**-0.4**
MGIG	**Malinaltepec**	**0.76**	**17**		**Pn**	**05 08 35.0**	**-0.5**
MGIG					**Sn**	**05 08 45.6**	**-1.4**
MGIG	**Malinaltepec**	**0.76**	**17**	*eP*	**Pn**	**05 08 35.0**	**-0.5**
MGIG				*eS*	**Sn**	**05 08 45.6**	**-1.4**
DAIG	**Los Arroyos**	**0.91**	**304**		**Pb**	**05 08 36.8**	**+0.2**
DAIG					**Sg**	**05 08 48.2**	**-0.3**
DAIG	**Los Arroyos**	**0.91**	**304**	*eP*	**Pb**	**05 08 36.8**	**+0.2**
DAIG				*eS*	**Sg**	**05 08 48.2**	**-0.3**
ACP2	**Acapulco**	**1.05**	**291**		**Pb**	**05 08 38.5**	**-0.4**
ACP2					**Sb**	**05 08 51.0**	**-1.6**
ACP2	**Acapulco**	**1.05**	**291**	*eP*	**Pb**	**05 08 38.5**	**-0.4**
ACP2				*eS*	**Sb**	**05 08 51.0**	**-1.6**
TLIG	**Tlapa**	**1.09**	**15**		**Pn**	**05 08 40.4**	**+0.4**
TLIG	**Tlapa**	**1.09**	**15**	*eP*	**Pn**	**05 08 40.4**	**+0.4**
TLIG				*iS*	**Sn**	**05 08 55.6**	**+0.5**
TLIG	**Tlapa**	**1.09**	**15**	*eP*	**Pn**	**05 08 40.1**	**0.0**
TLIG				*S*	**Sb**	**05 08 52.7**	**-1.2**
TXIG	**Tlaxiaco**	**1.28**	**54**		**Pg**	**05 08 43.0**	**-0.6**
TXIG					**Sb**	**05 08 58.6**	**-1.1**
TXIG	**Tlaxiaco**	**1.28**	**54**	*eP*	**Pg**	**05 08 43.0**	**-0.6**
TXIG				*eS*	**Sb**	**05 08 58.6**	**-1.1**
YOIG	**Yosondua**	**1.31**	**74**		**Pn**	**05 08 43.1**	**-0.1**
YOIG	**Yosondua**	**1.31**	**74**	*eP*	**Pn**	**05 08 43.1**	**-0.1**
CAIG	**El Cayaco**	**1.45**	**292**		**Pn**	**05 08 44.0**	**-0.9**
CAIG					**Sn**	**05 09 00.7**	**-3.2**
CAIG	**El Cayaco**	**1.45**	**292**	*eP*	**Pn**	**05 08 44.0**	**-0.9**
CAIG				*eS*	**Sn**	**05 09 00.7**	**-3.2**
FTIG	**Fresnillo de T**	**1.56**	**26**		**Pb**	**05 08 47.2**	**-0.5**
FTIG					**Sn**	**05 09 05.4**	**-1.4**
FTIG	**Fresnillo de T**	**1.56**	**26**	*eP*	**Pb**	**05 08 47.2**	**-0.5**
FTIG				*eS*	**Sn**	**05 09 05.4**	**-1.4**
MEIG	**Mezcala**	**1.59**	**333**		**Pb**	**05 08 47.8**	**-0.4**
MEIG					**Sn**	**05 09 04.9**	**-2.5**
MEIG	**Mezcala**	**1.59**	**333**	*eP*	**Pb**	**05 08 47.8**	**-0.4**
MEIG				*eS*	**Sn**	**05 09 04.9**	**-2.5**
ATYC	**Atoyac**	**1.66**	**295**		Pn	05 08 42.6	-5.2
ATYC					**Sn**	**05 09 06.2**	**-2.8**
ATYC	**Atoyac**	**1.66**	**295**	*eP*	Pn	05 08 42.6	-5.2
ATYC				*eS*	**Sn**	**05 09 06.2**	**-2.8**
HLIG	**Huajuapan de L**	**1.66**	**37**		**Pb**	**05 08 48.6**	**-0.9**
HLIG					**Sn**	**05 09 05.8**	**-3.6**
HLIG	**Huajuapan de L**	**1.66**	**37**	*eP*	**Pb**	**05 08 48.6**	**-0.9**
HLIG				*eS*	**Sn**	**05 09 05.8**	**-3.6**
PEIG	**Puerto Escondi**	**1.72**	**107**		**Pn**	**05 08 49.2**	**+0.6**
PEIG					**Sn**	**05 09 10.5**	**-0.1**
PEIG	**Puerto Escondi**	**1.72**	**107**	*eP*	**Pn**	**05 08 49.2**	**+0.6**
PEIG				*iS*	**Sn**	**05 09 10.5**	**-0.1**
PLIG	**Platanillo**	**1.97**	**342**		**Pb**	**05 08 53.8**	**-1.0**
PLIG					**Sn**	**05 09 16.8**	**-0.2**
PLIG	**Platanillo**	**1.97**	**342**	*eP*	**Pb**	**05 08 53.8**	**-1.0**
PLIG				*eS*	**Sn**	**05 09 16.8**	**-0.2**
OXIG	**Oaxaca**	**2.12**	**74**		**Pn**	**05 08 54.6**	**+0.4**
OXIG					**Sb**	**05 09 22.6**	**-1.0**
VHO	**Vista Hermosa**	**2.12**	**74**	*eP*	**Pn**	**05 08 54.6**	**+0.4**
VHO				*eS*	**Sb**	**05 09 22.6**	**-1.0**
ARIG	**Puente Sto Nin**	**2.27**	**321**		**Pn**	**05 08 57.6**	**+1.4**
ARIG	**Puente Sto Nin**	**2.27**	**321**	*eP*	**Pn**	**05 08 57.6**	**+1.4**
TOIG	**Toxpalan**	**2.33**	**47**		**Pn**	**05 08 57.5**	**+0.3**
TOIG					**Sn**	**05 09 26.6**	**+0.7**
TOIG	**Toxpalan**	**2.33**	**47**	*eP*	**Pn**	**05 08 57.5**	**+0.3**
TOIG				*eS*	**Sn**	**05 09 26.6**	**+0.7**
YAIG	**Yautepec**	**2.35**	**355**		**Pn**	**05 08 58.7**	**+1.2**
YAIG					**Sn**	**05 09 25.3**	**-1.0**
YAIG	**Yautepec**	**2.35**	**355**	*eP*	**Pn**	**05 08 58.7**	**+1.2**
YAIG				*eS*	**Sn**	**05 09 25.3**	**-1.0**
TPIG	**Tehuac#an**	**2.38**	**37**		**Pn**	**05 08 58.6**	**+0.7**
TPIG					**Sn**	**05 09 27.1**	**0.0**
TPIG	**Tehuac#an**	**2.38**	**37**	*eP*	**Pn**	**05 08 58.6**	**+0.7**
TPIG				*eS*	**Sn**	**05 09 27.1**	**0.0**
MAVM	**Malinalco, Edo**	**2.51**	**346**		**Pb**	**05 09 02.5**	**-1.6**
MAVM					**Sn**	**05 09 29.6**	**-0.8**
MAVM	**Malinalco, Edo**	**2.51**	**346**	*eP*	**Pb**	**05 09 02.5**	**-1.6**
MAVM				*eS*	**Sn**	**05 09 29.6**	**-0.8**
PET2	**Petatlan**	**2.52**	**294**		**Pb**	**05 09 04.2**	**+0.3**
PET2					**Sn**	**05 09 27.0**	**-3.1**
PET2	**Petatlan**	**2.52**	**294**	*eP*	**Pb**	**05 09 04.2**	**+0.3**
PET2				*eS*	**Sn**	**05 09 27.0**	**-3.1**
AMVM	**AMECAMECA**	**2.61**	**2**		**Pb**	**05 09 03.7**	**-2.1**
AMVM					**Sn**	**05 09 29.0**	**-4.0**
AMVM	**AMECAMECA**	**2.61**	**2**	*eP*	**Pb**	**05 09 03.7**	**-2.1**
AMVM				*eS*	**Sn**	**05 09 29.0**	**-4.0**
MPVM	**San Francisco**	**2.69**	**357**		**Pb**	**05 09 04.7**	**-2.3**
MPVM					**Sn**	**05 09 34.7**	**0.0**
MPVM	**San Francisco**	**2.69**	**357**	*eP*	**Pb**	**05 09 04.7**	**-2.3**
MPVM				*eS*	**Sn**	**05 09 34.7**	**0.0**
MZVM		**2.69**	**353**		**Pn**	**05 09 03.9**	**+1.9**
MZVM					**Sn**	**05 09 35.0**	**+0.5**
MZVM		**2.69**	**353**	*eP*	**Pn**	**05 09 03.9**	**+1.9**
MZVM				*eS*	**Sn**	**05 09 35.0**	**+0.5**
TLVM	**San Miguel Top**	**2.71**	**354**		**Pn**	**05 09 04.0**	**+1.5**
TLVM					**Sn**	**05 09 30.5**	**-4.8**
TLVM	**San Miguel Top**	**2.71**	**354**	*eP*	**Pn**	**05 09 04.0**	**+1.5**
TLVM				*eS*	**Sn**	**05 09 30.5**	**-4.8**
ZIIG	**Zihuatanejo**	**2.72**	**294**		**Pn**	**05 09 00.4**	**-2.0**
ZIIG					**Sn**	**05 09 35.0**	**-0.2**
ZIIG	**Zihuatanejo**	**2.72**	**294**	*eP*	**Pn**	**05 09 00.4**	**-2.0**
ZIIG				*eS*	**Sn**	**05 09 35.0**	**-0.2**
XCVM	**Xochimilco**	**2.74**	**355**		**Pb**	**05 09 05.4**	**-2.6**
XCVM					**Sn**	**05 09 29.8**	**-6.4**
XCVM	**Xochimilco**	**2.74**	**355**	*eP*	**Pb**	**05 09 05.4**	**-2.6**
XCVM				*eS*	**Sn**	**05 09 29.8**	**-6.4**
HUIG	**Huatulco**	**2.75**	**105**		**Pn**	**05 09 01.0**	**-0.8**
HUIG					**Sn**	**05 09 30.8**	**-5.1**
HUIG	**Huatulco**	**2.75**	**105**	*eP*	**Pn**	**05 09 01.9**	**-0.8**
HUIG				*eS*	**Sn**	**05 09 30.8**	**-5.1**
AOVM	**Tlapan**	**2.78**	**351**		**Pn**	**05 09 05.2**	**+1.6**
AOVM					**Sn**	**05 09 36.8**	**-0.6**
AOVM	**Tlapan**	**2.78**	**351**	*eP*	**Pn**	**05 09 05.2**	**+1.6**
AOVM				*eS*	**Sn**	**05 09 36.8**	**-0.6**
THVM	**De Xico**	**2.79**	**358**		**Pn**	**05 09 04.6**	**+1.0**
THVM					**Sn**	**05 09 32.7**	**-4.7**
THVM	**De Xico**	**2.79**	**358**	*eP*	**Pn**	**05 09 04.6**	**+1.0**
THVM				*eS*	**Sn**	**05 09 32.7**	**-4.7**
INVM	**La Marquesa**	**2.81**	**350**		**Pn**	**05 09 06.0**	**+1.9**
INVM					**Sn**	**05 09 37.0**	**-1.1**
INVM	**La Marquesa**	**2.81**	**350**	*eP*	**Pn**	**05 09 06.0**	**+1.9**
INVM				*eS*	**Sn**	**05 09 37.0**	**-1.1**
UNM	**Universidad Na**	**2.83**	**354**		**Pn**	**05 09 06.4**	**+2.3**
CUP5	**Mexico City**	**2.83**	**354**		**Pb**	**05 09 07.6**	**-1.8**
CUP5					**Sn**	**05 09 38.9**	**+0.7**
CUP5	**Mexico City**	**2.83**	**354**	*eP*	**Pb**	**05 09 07.6**	**-1.8**
CUP5				*eS*	**Sn**	**05 09 38.9**	**+0.7**
COVM	**Coyoacan**	**2.84**	**354**	*eS*	**Sn**	**05 09 37.9**	**-0.8**
BJVM	**Benito Juarez**	**2.87**	**354**		**Pn**	**05 09 05.6**	**+1.0**
BJVM					**Sn**	**05 09 38.0**	**-1.3**
BJVM	**Benito Juarez**	**2.87**	**354**	*eP*	**Pn**	**05 09 05.6**	**+1.0**
BJVM				*eS*	**Sn**	**05 09 38.0**	**-1.3**
MHVM	**Bosque de Chap**	**2.91**	**354**		**Pn**	**05 09 06.5**	**+1.3**
MHVM					**Sn**	**05 09 38.0**	**-2.3**
MHVM	**Bosque de Chap**	**2.91**	**354**	*eP*	**Pn**	**05 09 06.5**	**+1.3**
MHVM				*eS*	**Sn**	**05 09 38.0**	**-2.3**
VRVM	**Mexico City**	**2.91**	**355**		**Sn**	**05 09 39.6**	**-0.6**
VRVM	**Mexico City**	**2.91**	**355**	*eS*	**Sn**	**05 09 39.6**	**-0.6**
CTVM	**Cuauhtemoc**	**2.94**	**354**		**Sn**	**05 09 40.8**	**-0.2**
CTVM	**Cuauhtemoc**	**2.94**	**354**	*eS*	**Sn**	**05 09 40.8**	**-0.2**
APVM	**Azcapotzalco**	**2.99**	**354**		**Pn**	**05 09

TXAR Lg Lg 05 15 27.8
0.1nm,0.3s,baz=156,slow=23,SNR=5.6
TXAR LR LR 05 17 37.2
comp=Z,703nm,18.1s,baz=146,slow=41
2.9nm,0.9s
SIUN Universidad Ur 13.88 100 Pn Pn 05 11 36.0 +0.5
JTS Las Juntas de 14.87 113 Pn **Pn 05 11 49.2 +0.1**
3.8nm,0.3s,baz=305,slow=12,SNR=15
26nm,0.9s
JTS Las Juntas de 14.87 113 Pn 05 11 49.9 +0.9
JTS Las Juntas de 14.87 113 P **Pn 05 11 51.6 +2.5**
JTS S **Sn 05 14 32.4 -1.4**
TPB01 Permian Basin 15.06 344 IAmb IAmb 05 12 00.8
comp=Z,22nm,0.9s
SGCY Sterling City 15.48 353 IAmb IAmb 05 12 41.8
comp=Z,48nm,0.9s
PECS Pecos 15.49 344 IAmb IAmb 05 12 45.0
comp=Z,32nm,1.0s
TPB06 Permian Basin 15.59 346 IAmb IAmb 05 12 13.6
comp=Z,19nm,0.9s
229A Bryant Ranch, 15.63 351 IAmb IAmb 05 12 24.5
comp=Z,18nm,1.0s
TPB07 Mentone 15.63 345 IAmb IAmb 05 12 12.2
comp=Z,26nm,0.8s
TPB13 Reeves - Culbe 15.65 344 IAmb IAmb 05 12 14.8
comp=Z,47nm,0.9s
NATX Nacogdoches 15.66 13 IAmb IAmb 05 12 05.8
comp=Z,64nm,0.8s
HDC Heredia 15.74 112 IAmb IAmb 05 12 25.9
comp=Z,49nm,0.6s
HDC Heredia 15.74 112 *e*P **Pn 05 12 01.4 +0.8**
PLPT Palo Pinto 16.25 2 IAmb IAmb 05 12 13.4
comp=Z,82nm,1.0s
129A Stewart Farms, 16.29 351 IAmb IAmb 05 12 27.3
comp=Z,21nm,0.9s
TREL Terrell 16.35 8 IAmb IAmb 05 12 18.0
comp=Z,67nm,1.2s
128A Castleberry Fa 16.38 349 IAmb IAmb 05 12 15.3
comp=Z,24nm,0.9s
FW06 Azle 16.44 4 IAmb IAmb 05 12 22.9
comp=Z,38nm,0.8s
OCHAL Ojochal 16.56 115 P **P 05 12 14.1 +0.6**
Z35A Perchaven, San 16.82 5 IAmb IAmb 05 12 18.4
comp=Z,63nm,1.0s
DRK0 Durika 16.83 113 P **Pn 05 12 13.0 -1.7**
Z38A Mt. Pleasant 17.05 11 IAmb IAmb 05 12 25.7
comp=Z,72nm,0.9s
346A Big Creek Wild 17.11 28 IAmb IAmb 05 12 23.9
comp=Z,64nm,1.1s
PIRO Carate, Puerto 17.16 116 IAmb IAmb 05 12 31.8
comp=Z,61nm,0.5s
VBMS Vicksburg 17.38 24 IAmb IAmb 05 12 28.9
comp=Z,48nm,1.1s
LOOK Love County 17.48 5 IAmb IAmb 05 13 00.9
comp=Z,62nm,1.1s
143A Socs Landing, 17.48 21 IAmb IAmb 05 12 30.4
comp=Z,87nm,1.0s
BRU2 Volcan 17.53 114 IAmb IAmb 05 12 31.2
comp=Z,74nm,1.2s
Z41A Richland Creek 17.55 17 IAmb IAmb 05 12 31.1
comp=Z,100nm,1.1s
WLAR White Oak Lake 17.88 16 IAmb IAmb 05 12 44.6
comp=Z,51nm,0.9s
146A Union 18.35 27 IAmb IAmb 05 12 42.7
comp=Z,42nm,1.0s
MIAR Mount Ida 18.58 14 IAmb IAmb 05 13 10.6
comp=Z,37nm,0.9s
W35A Tecumseh 18.66 5 IAmb IAmb 05 12 46.5
comp=Z,39nm,1.0s
TUC Tucson 19.09 328 Pn 05 12 43.1 +0.8
Z47A Carrollton 19.27 28 IAmb IAmb 05 12 51.0
comp=Z,42nm,0.8s
DEOK Depew 19.38 6 IAmb IAmb 05 12 53.0
comp=Z,46nm,1.0s
OK052 Battle Ridge R 19.50 5 IAmb IAmb 05 12 54.5
comp=Z,47nm,0.8s
TUL3 Leonard 19.52 7 IAmb IAmb 05 12 53.3
comp=Z,56nm,1.0s
ANMO Albuquerque 19.58 341 P **Pn 05 12 49.7 +1.4**
comp=Z,0.3nm,0.3s,baz=151,slow=12,SNR=52
ANMO Lg Lg 05 18 36.2
comp=Z,0.1nm,0.3s,baz=53,slow=8.5,SNR=1.8
ANMO LR LR 05 21 07.1
comp=Z,2µm,18.2s,baz=153,slow=39
comp=Z,12nm,0.8s
ANMO Albuquerque 19.58 341 P **P 05 12 46.8 -0.3**
WHAR Wooly Hollow 19.61 16 IAmb IAmb 05 12 56.2
comp=Z,26nm,0.9s
LRAL Lakeview Retre 19.64 31 IAmb IAmb 05 12 55.1
comp=Z,42nm,1.3s
QUOK Quay 19.68 5 IAmb IAmb 05 12 56.2
comp=Z,31nm,1.0s
DWPF Disney Wildern 19.81 51 P **P 05 12 49.0 -0.3**
DWPF IAmb IAmb 05 12 52.2
comp=Z,42nm,1.0s
OXF Oxford 19.84 24 IAmb IAmb 05 12 57.4
comp=Z,65nm,1.0s
OK038 West end E0370 19.89 0 IAmb IAmb 05 12 59.3
comp=Z,47nm,0.9s
CROK Carrier 19.94 2 IAmb IAmb 05 12 58.0
comp=Z,44nm,0.9s
PIX Pinacate 20.03 321 P Pn 05 12 54.7 +1.3
NOKA Waynoka 20.05 360 IAmb IAmb 05 13 04.3
comp=Z,40nm,1.2s
RTBA Rita Blanca 20.15 351 IAmb IAmb 05 12 57.0
comp=Z,32nm,1.0s
FCAR Ozark Folk Cen 20.22 16 IAmb IAmb 05 12 59.9
comp=Z,48nm,1.0s
BLOK Blackwell 20.23 4 IAmb IAmb 05 12 57.3
comp=Z,70nm,1.1s
U38A Gravette 20.25 10 IAmb IAmb 05 13 01.0
comp=Z,22nm,0.8s
TIGA Tifton 20.35 40 P **P 05 12 55.3 +0.1**
TIGA IAmb IAmb 05 13 18.5
comp=Z,39nm,1.1s
MTDJ Mount Denham 20.43 82 P **P 05 12 55.8 -0.5**
T35A Sooner Cattle 20.44 5 P **P 05 12 56.1 0.0**
T35A IAmb IAmb 05 12 57.5
comp=Z,54nm,0.9s
152A Waverly Hall 20.56 36 P **P 05 12 57.4 -0.1**
152A IAmb IAmb 05 13 04.2
comp=Z,51nm,1.1s
Y49A Blount Mountai 20.59 31 P **P 05 12 57.8 0.0**
Y49A IAmb IAmb 05 13 07.9
comp=Z,32nm,0.9s
LCAR Lake Charles 20.66 18 IAmb IAmb 05 13 09.4
comp=Z,25nm,0.9s
X48A Hartselle 20.78 28 P **P 05 12 59.1 -0.7**
X48A IAmb IAmb 05 13 03.2
comp=Z,35nm,0.8s
X16A Lo Mia Camp, P 21.11 330 IAmb IAmb 05 13 20.7
comp=Z,26nm,0.9s
T25A Trinidad 21.13 348 IAmb IAmb 05 13 11.2
comp=Z,45nm,0.9s
MGMO Mountain Grove 21.38 15 IAmb IAmb 05 13 15.7
comp=Z,61nm,1.2s
FPAL Fort Paine 21.54 31 IAmb IAmb 05 13 12.2
comp=Z,39nm,0.8s
T42A Van Buren 21.57 17 IAmb IAmb 05 13 15.0
comp=Z,21nm,0.8s
CHIV Chivirico 21.59 77 IAmb IAmb 05 13 09.8
comp=Z,39nm,0.8s
S39A Bolivar 21.66 12 IAmb IAmb 05 13 35.6
comp=Z,22nm,0.9s
R32A Long Quarter, 21.84 0 IAmb IAmb 05 13 15.7
comp=Z,31nm,1.1s
WVT Waverly 21.87 25 P **P 05 13 10.4 -1.2**
WVT IAmb IAmb 05 13 14.9
comp=Z,42nm,0.9s
ESJX Sierra Juarez 21.88 318 P **P 05 13 13.0 +1.2**
GLA Glamis 21.90 322 IAmb IAmb 05 13 24.5
comp=Z,28nm,1.1s
SWET Sewanee 21.93 29 IAmb IAmb 05 13 15.8
comp=Z,38nm,0.9s
V48A Smith Brothers 21.96 27 IAmb IAmb 05 13 24.6
comp=Z,32nm,1.2s
WUAZ Wupatki 21.98 332 IAmb IAmb 05 13 23.4
comp=Z,30nm,0.9s
W50A Signal Mountai 22.21 31 IAmb IAmb 05 13 18.2
comp=Z,32nm,0.8s
CBKS Cedar Bluff 22.24 358 IAmb IAmb 05 13 27.1
comp=Z,45nm,0.9s
CGM3 Cape Girardeau 22.25 20 IAmb IAmb 05 13 29.8
comp=Z,26nm,1.0s
MVCO Mesa Verde 22.32 339 IAmb IAmb 05 13 21.8
comp=Z,36nm,1.1s
KSU1 Kansas State U 22.60 5 IAmb IAmb 05 13 40.7
comp=Z,16nm,0.8s

FVM French Village 22.65 18 IAmb IAmb 05 13 49.2
comp=Z,19nm,1.0s
KSCO Kaye Shedlock' 22.66 352 IAmb IAmb 05 13 29.0
comp=Z,38nm,1.0s
S44A Carbondale 22.75 20 IAmb IAmb 05 13 27.0
comp=Z,28nm,0.8s
SIUC Southern Illin 22.78 20 IAmb IAmb 05 13 36.4
comp=Z,35nm,0.9s
BORC Borrego Spring 23.01 320 P **P 05 13 23.7 0.0**
U49A Red Boiling Sp 23.07 28 IAmb IAmb 05 13 27.7
comp=Z,30nm,1.0s
HODGE Hodges 23.11 37 IAmb IAmb 05 13 25.9
comp=Z,34nm,1.0s
U15A North Rim 23.15 332 IAmb IAmb 05 13 30.6
comp=Z,25nm,1.2s
PV01 Paradox Valley 23.18 340 IAmb IAmb 05 13 30.0
comp=Z,18nm,1.0s
PFO Pinyon Flats O 23.27 320 LR LR 05 21 56.6
comp=Z,256nm,19.8s,baz=148,slow=35
PV13 Radium Mtn., P 23.28 340 IAmb IAmb 05 13 30.6
comp=Z,20nm,0.9s
PV02 Paradox Valley 23.30 340 IAmb IAmb 05 13 30.9
comp=Z,40nm,1.0s
PV05 Paradox Valley 23.30 339 IAmb IAmb 05 13 30.8
comp=Z,17nm,1.0s
SLM Saint Louis 23.31 17 IAmb IAmb 05 13 29.2
comp=Z,35nm,0.9s
PV15 Paradox Valley 23.34 341 IAmb IAmb 05 14 03.9
comp=Z,28nm,1.2s
TKL Tuckaleechee C 23.34 32 LR LR 05 25 13.5
comp=Z,147nm,21.3s,baz=221,slow=44
PV18 Skein Mesa, Pa 23.39 340 IAmb IAmb 05 13 31.6
comp=Z,36nm,1.1s
PV12 Saucer Basin, 23.42 340 IAmb IAmb 05 13 32.8
comp=Z,33nm,1.0s
P38A Dawn 23.50 10 IAmb IAmb 05 13 29.9
comp=Z,15nm,0.8s
PV04 Paradox Valley 23.52 340 P **P 05 13 28.9 -0.1**
PV04 IAmb IAmb 05 13 33.6
comp=Z,22nm,0.9s
CSU Charleston Sou 23.61 43 P **P 05 13 27.4 -2.3**
PV23 Carpenter Ridg 23.61 340 IAmb IAmb 05 13 32.8
comp=Z,34nm,1.0s
PV22 Blue Mesa, Par 23.61 340 IAmb IAmb 05 13 32.9
comp=Z,27nm,1.1s
NHSC New Hope 23.62 42 P **P 05 13 29.8 0.0**
JSC Jenkinville 23.73 38 IAmb IAmb 05 13 33.4
comp=Z,35nm,1.3s
T50A Nancy 23.91 29 IAmb IAmb 05 13 34.0
comp=Z,29nm,1.0s
ISCO Idaho Springs 23.95 347 IAmb IAmb 05 13 44.7
comp=Z,19nm,1.1s
SJCC San Jacinto, C 23.96 103 P **P 05 13 35.5 +2.2**
PKCU Pink Cliffs 24.00 333 IAmb IAmb 05 13 39.0
comp=Z,31nm,1.2s
MTPC Mountain Pass 24.07 325 P **P 05 13 33.4 -0.9**
Y57A Sumter 24.08 40 IAmb IAmb 05 13 35.5
comp=Z,43nm,1.2s
KMSC Kings Mountain 24.29 37 IAmb IAmb 05 13 47.4
comp=Z,27nm,1.0s
WCI Wyandotte Cave 24.30 25 P **P 05 13 36.3 +0.1**
P43A Skaggs, Pawnee 24.45 18 IAmb IAmb 05 13 51.0
comp=Z,26nm,1.0s
BIRD Birdtown, Kers 24.46 39 IAmb IAmb 05 13 45.1
comp=Z,19nm,0.9s
R49A Shelbyville 24.82 26 IAmb IAmb 05 13 41.6
comp=Z,18nm,1.0s
BGNE Belgrade 24.82 1 IAmb IAmb 05 13 42.7
comp=Z,24nm,0.9s
V55A Taylorsville 24.86 36 IAmb IAmb 05 13 49.0
comp=Z,29nm,1.0s
O20A White River Ci 24.92 343 IAmb IAmb 05 13 46.8
comp=Z,37nm,1.2s
HAYD Hayden 25.02 345 IAmb IAmb 05 13 47.4
comp=Z,25nm,1.1s
BLO Blomington 25.03 23 IAmb IAmb 05 13 44.9
comp=Z,23nm,0.9s
CCCA Chr Cany lake 25.12 322 IAmb IAmb 05 13 53.0
comp=Z,30nm,1.2s
QSM Queen of Sheba 25.15 324 IAmb IAmb 05 13 59.2
comp=Z,22nm,1.2s
R50A Paris 25.18 28 IAmb IAmb 05 13 45.3
comp=Z,16nm,0.7s
TPO Tropico Hills 25.20 320 P **P 05 13 45.9 +1.3**
TPO IAmb IAmb 05 13 59.8
comp=Z,33nm,1.3s
LRMC Laurel Mtn Rad 25.28 322 IAmb IAmb 05 13 51.1
comp=Z,16nm,1.1s
L34A Svendsen Farm, 25.46 4 IAmb IAmb 05 14 22.9
comp=Z,25nm,0.8s
FURC Furnace Creek, 25.51 325 IAmb IAmb 05 14 01.7
comp=Z,15nm,1.2s
TPNV Topopah Spring 25.53 326 IAmb IAmb 05 14 06.0
comp=Z,23nm,1.1s
WCT Wildcat Mountain 25.61 325 IAmb IAmb 05 14 04.2
comp=Z,17nm,1.1s
U56A King 25.69 36 IAmb IAmb 05 14 01.8
comp=Z,28nm,1.2s
P48A Milroy 25.70 25 IAmb IAmb 05 14 01.7
comp=Z,14nm,1.0s
RDMU Red Mountain 25.72 341 IAmb IAmb 05 14 02.2
comp=Z,34nm,1.3s
SCIA State Center 25.78 10 IAmb IAmb 05 13 57.2
comp=Z,25nm,0.8s
S11A Rachel 25.79 328 IAmb IAmb 05 13 57.8
comp=Z,36nm,1.4s
OTAV Otavalo 25.81 127 P **P 05 13 53.6 +3.0**
ISA Isabella, Lake 25.88 321 P **P 05 13 50.3 -0.4**
ISA IAmb IAmb 05 13 57.2
comp=Z,17nm,1.2s
BSUT Blindstream Ca 26.08 339 IAmb IAmb 05 13 58.8
comp=Z,19nm,0.9s
VES Vestal, Richgr 26.36 321 IAmb IAmb 05 14 10.9
comp=Z,30nm,1.2s
SDDR Presa de Saban 26.37 80 P **P 05 13 55.0 -0.2**
TIN Tinemaha, Big 26.69 324 IAmb IAmb 05 14 14.0
comp=Z,26nm,1.2s
ROSC El Rosal 26.72 113 P **P 05 14 00.1 +1.3**
comp=Z,1.2nm,0.3s,baz=109,slow=10,SNR=8.1
comp=Z,1.2nm,0.3s
ROSC El Rosal 26.72 113 P 05 14 03.4 +4.6
ROSC IAmb IAmb 05 14 08.7
comp=Z,30nm,1.2s
TCUT Toone Canyon 26.82 339 IAmb IAmb 05 14 05.5
comp=Z,15nm,0.9s
K22A Casper 26.87 347 IAmb IAmb 05 14 02.9
comp=Z,17nm,1.0s
ECSD EROS Data Cent 27.21 4 IAmb IAmb 05 14 05.1
comp=Z,9.9nm,0.8s
S57A Dark Hollow, R 27.50 36 IAmb IAmb 05 14 11.7
comp=Z,16nm,0.8s
P53A Whipple 27.51 30 IAmb IAmb 05 14 13.5
comp=Z,19nm,0.9s
NVAR Mina Array Bea 27.72 326 P **P 05 14 10.3 +2.9**
comp=Z,4.8nm,0.9s,baz=152,slow=10,SNR=30
NVAR PcP **PcP 05 17 25.6 +1.4**
comp=Z,1.2nm,0.9s,baz=97,slow=2.7,SNR=3.6
NVAR LR LR 05 26 56.2
comp=Z,543nm,18.1s,baz=139,slow=40
comp=Z,4.8nm,0.9s
NVAR Mina Array Bea 27.72 326 P **P 05 14 06.9 -0.5**
BW06 Boulder Array 27.73 343 IAmb IAmb 05 14 23.3
comp=Z,18nm,1.1s
PDAR Pinedale Array 27.73 343 P **P 05 14 09.3 +1.9**
comp=Z,6.6nm,0.9s,baz=142,slow=7.5,SNR=38
PDAR PcP **PcP 05 17 24.8 +0.7**
comp=Z,0.7nm,0.8s,baz=134,slow=1.8,SNR=4.2
PDAR LR LR 05 26 31.9
comp=Z,367nm,19.5s,baz=152,slow=39
comp=Z,6.6nm,0.9s
RSSD Boulder Hills 27.88 352 P **P 05 14 09.6 +0.9**
HVU Hansel Valley 27.89 337 IAmb IAmb 05 14 16.2
comp=Z,11nm,0.9s
Q56A Snyder Ridge, 28.29 34 IAmb IAmb 05 14 48.3
comp=Z,18nm,0.9s
SDV Santo Domingo 28.53 102 LR LR 05 27 17.9
comp=Z,234nm,19.6s,baz=315,slow=40
SDV Santo Domingo 28.53 102 P **P 05 14 13.8 -1.0**
SDV IAmb IAmb 05 14 26.9
comp=Z,20nm,0.8s
SNOW Snow King Moun 28.71 342 IAmb IAmb 05 14 31.3
comp=Z,24nm,1.1s
N53A Lisbon 28.80 29 IAmb IAmb 05 14 25.7
comp=Z,21nm,0.9s
LOHW Long Hollow 28.80 342 IAmb IAmb 05 14 29.3
comp=Z,16nm,1.1s
MOOW Moose Ponds 28.97 342 PcP **PcP 05 17 25.7 -1.5**
FLWY Flagg Ranch 29.26 342 IAmb IAmb 05 14 41.8

comp=Z,20nm,1.3s
MPK Martis Peak 29.28 325 IAmb IAmb 05 14 26.2
comp=Z,18nm,1.1s
RLMT Red Lodge 29.84 345 IAmb IAmb 05 14 29.8
comp=Z,25nm,1.3s
YMR Madison River 29.88 343 IAmb IAmb 05 14 38.9
comp=Z,16nm,1.2s
YHL Hebgen Lake 30.11 342 IAmb IAmb 05 14 41.9
comp=Z,14nm,1.4s
SUTB Sutter Butte 30.22 323 IAmb IAmb 05 14 33.8
comp=Z,14nm,1.4s
BCYI Bear Canyon 30.32 339 IAmb IAmb 05 14 42.2
comp=Z,10.0nm,1.2s
MFID Camas Ranch 30.46 335 IAmb IAmb 05 14 40.8
comp=Z,16nm,1.4s
LAO LASA Array 30.71 350 IAmb IAmb 05 14 36.5
comp=Z,17nm,1.1s
WVOR Wild Horse Val 30.89 331 IAmb IAmb 05 14 50.6
comp=Z,15nm,1.3s
ATAH Atahualpa 31.01 138 LR LR 05 24 25.5
comp=Z,157nm,20.0s,baz=322,slow=31
SJG San Juan 31.25 82 LR LR 05 29 06.5
comp=Z,273nm,19.3s,baz=276,slow=40
J08A Circle Bar Ran 31.54 332 IAmb IAmb 05 14 45.2
comp=Z,17nm,1.2s
AGMN Agassiz Nation 31.80 4 IAmb IAmb 05 14 53.4
comp=Z,9.8nm,0.7s
PLID Pearl Lake 31.93 337 IAmb IAmb 05 14 53.2
comp=Z,9.3nm,0.9s
EGMT Eagleton 32.69 346 IAmb IAmb 05 14 55.5
comp=Z,25nm,1.4s
SADO Sadowa 32.71 26 LR LR 05 31 41.0
comp=Z,250nm,18.2s,baz=246,slow=43
TBO Thunder Bay 32.98 12 IAmb IAmb 05 14 56.1
comp=Z,14nm,0.8s
BUKO Buck Lake 33.14 25 IAmb IAmb 05 14 55.8
comp=Z,15nm,0.9s
G08A Pilot Rock 33.29 334 IAmb IAmb 05 14 59.5
comp=Z,8.1nm,1.0s
ULM Lac du Bonnet 33.75 3 P **P 05 14 59.5 -0.6**
comp=Z,2.9nm,0.7s,baz=180,slow=14,SNR=5.8
ULM LR LR 05 28 42.2
comp=Z,90nm,21.0s,baz=184,slow=36
comp=Z,2.9nm,0.7s
NEW Newport 35.04 339 LR LR 05 31 19.4
comp=Z,546nm,18.1s,baz=167,slow=39
C09A Chrisman Ranch 35.06 337 IAmb IAmb 05 15 15.2
comp=Z,9.1nm,0.8s
LTY Liberty 35.57 334 IAmb IAmb 05 15 19.1
comp=Z,13nm,1.0s
B08A Colville Reser 35.92 337 IAmb IAmb 05 15 22.2
comp=Z,8.9nm,1.1s
FFC Flin Flon 38.22 357 P 05 15 39.5 +1.1
EDM Edmonton 38.36 346 IAmb IAmb 05 15 42.3
comp=Z,20nm,1.0s
FCC Fort Churchill 42.34 4 P **P 05 16 12.4 0.0**
FCC PcP **PcP 05 18 01.6 -4.2**
LPAZ La Paz 44.50 136 P **P 05 16 29.9 -1.2**
comp=Z,1.4nm,0.8s,baz=317,slow=4.0,SNR=4.9
LPAZ LR LR 05 33 02.9
comp=Z,134nm,21.0s,baz=289,slow=34
comp=Z,1.4nm,0.8s
RPN Rapa Nui 44.55 193 LR LR 05 30 29.3
comp=Z,197nm,21.1s,baz=50,slow=30
SCHQ Schefferville 45.51 25 P **P 05 16 38.5 +0.4**
comp=Z,15nm,0.8s,baz=221,slow=5.8,SNR=17
SCHQ LR LR 05 38 22.7
comp=Z,169nm,18.3s,baz=226,slow=40
comp=Z,15nm,0.8s
MDP Montagnes des 46.68 99 LR LR 05 37 36.5
comp=Z,123nm,18.9s,baz=315,slow=38
YKA Yellowknife Ar 47.25 350 P **P 05 16 52.4 +0.8**
comp=Z,5.1nm,0.9s,baz=165,slow=6.8,SNR=64
YKA PcP **PcP 05 18 23.0 +0.3**
comp=Z,0.2nm,0.7s,baz=162,slow=6.7,SNR=4.3
comp=Z,5.1nm,0.9s
YKA Yellowknife Ar 47.25 350 P 05 16 52.2 +0.6
YKAW3 Yellowknife Wh 47.32 350 P **P 05 16 53.1 +1.0**
YKAW3 IAmb IAmb 05 16 54.1
comp=Z,9.0nm,0.9s
BLKN Baker Lake 47.81 2 P 05 16 56.6 +0.7
VILB Vilhena 48.13 125 P **P 05 16 59.0 -0.1**
SIV San Ignacio 49.32 129 LR LR 05 36 13.3
comp=Z,105nm,19.0s,baz=313,slow=34
PDRB Porto dos Gac 50.16 121 *e*P **P 05 17 14.1 -0.6**
BBSD Serra de San D 50.42 130 *e*P **P 05 17 15.4 -1.1**
PTLB Pontes e Lacer 50.45 127 P **P 05 17 16.3 -0.4**
FRB Frobisher Bay 51.60 17 LR LR 05 41 38.2
comp=Z,140nm,18.9s,baz=233,slow=39
H03N2 Juan Fernandez 53.18 159 T T 06 14 37.3
baz=338,slow=77,SNR=723
H03N1 Juan Fernandez 53.19 159 T T 06 14 38.4
baz=338,slow=77,SNR=760
H03N3 Juan Fernandez 53.20 159 T T 06 14 37.5
baz=338,slow=77,SNR=1003
SALV Santo Antonio 53.39 125 *e*P **P 05 17 38.5 -0.3**
ILON Igloolik, Nuna 53.91 7 P 05 17 42.7 +0.9
ILON IAmb IAmb 05 17 43.2
comp=Z,10nm,0.8s
SNDB Serra Nova Dou 54.89 118 *e*P **P 05 17 49.5 -0.2**
PP1B Ponte de Pedra 55.00 126 *e*P **P 05 17 51.0 +0.4**
BDQN Bodoquena, MS 55.30 130 *e*P **P 05 17 51.6 -1.0**
MURT Porto Murtinho 55.44 132 *e*P **P 05 17 52.8 -0.7**
I29M Ogilvie Camp, 55.47 341 IAmb IAmb 05 18 04.1
comp=Z,10nm,1.1s
F31M Tsiigehtchic 55.66 345 IAmb IAmb 05 18 03.1
comp=Z,12nm,1.3s
H29M Whitestone 56.07 342 IAmb IAmb 05 18 00.4
comp=Z,12nm,0.9s
AQDB Aquidauana 56.09 129 P 05 17 57.8 -0.5
AQDB IAmb IAmb 05 18 03.8
comp=Z,8.3nm,1.0s
INK Inuvik 56.26 345 LR LR 05 42 15.1
comp=Z,230nm,19.1s,baz=273,slow=36
INK Inuvik 56.26 345 IAmb IAmb 05 18 06.7
comp=Z,9.4nm,1.0s
DOT Dot Lake 56.34 338 IAmb IAmb 05 18 03.2
comp=Z,9.2nm,1.2s
PAX Paxson 56.48 337 IAmb IAmb 05 18 39.2
comp=Z,6.9nm,1.1s
SCRK Sand Creek 56.50 338 IAmb IAmb 05 18 34.2
comp=Z,11nm,1.4s
SMTB Santa Maria do 56.64 113 *e*P **P 05 18 03.2 +0.8**
RIDG Independent Ri 56.67 337 P **P 05 18 03.2 +1.3**
H27K Steamboat Moun 57.04 341 IAmb IAmb 05 18 32.2
comp=Z,10.0nm,1.4s
KDAK Kodiak Island 57.15 329 LR LR 05 41 25.3
comp=Z,214nm,20.2s,baz=125,slow=35
J25K Salcha River, 57.36 338 IAmb IAmb 05 18 25.8
comp=Z,7.7nm,1.2s
F28M Old Crow 57.45 343 IAmb IAmb 05 18 10.4
comp=Z,9.8nm,0.9s
POIN Pond Inlet 57.48 7 IAmb IAmb 05 18 14.9
comp=Z,11nm,1.3s
A36M Sachs Harbour 57.61 351 IAmb IAmb 05 18 15.6
comp=Z,9.8nm,1.0s
HDA Harding Lake 57.82 338 IAmb IAmb 05 18 30.1
comp=Z,10nm,1.3s
PRP Porcupine Dome 57.93 339 IAmb IAmb 05 18 23.8
comp=Z,14nm,1.2s
ILAR Eielson Array 57.99 338 P **P 05 18 12.3 +1.3**
comp=Z,3.9nm,1.0s,baz=139,slow=4.6,SNR=27
ILAR LR LR 05 45 38.6
comp=Z,256nm,19.8s,baz=113,slow=39
comp=Z,3.9nm,1.0s
MCK McKinley 58.21 336 IAmb IAmb 05 18 24.6
comp=Z,14nm,1.1s
RES Resolute Bay 58.23 1 LR LR 05 42 40.4
comp=Z,64nm,19.3s,baz=252,slow=35
WRH Wood River Hil 58.27 337 IAmb IAmb 05 18 56.9
comp=Z,9.3nm,1.3s
CPUP Villa Florida 58.67 136 P **P 05 18 15.9 -0.5**
comp=Z,1.4nm,0.8s,baz=325,slow=9.5,SNR=7.4
CPUP LR LR 05 41 47.6
comp=Z,48nm,19.2s,baz=2.0,slow=34
comp=Z,1.4nm,0.8s
H24K Noodor Dome 58.92 339 IAmb IAmb 05 18 20.8
comp=Z,11nm,1.0s
I23K Minto, Yukon-K 59.09 338 IAmb IAmb 05 18 31.8
comp=Z,9.2nm,1.0s
SFJD Kangerlussuaq 59.29 20 LR LR 05 45 33.2
comp=Z,110nm,20.3s,baz=243,slow=38
BDFB Brasilia 59.48 120 P **P 05 18 22.5 +0.2**
comp=Z,8.8nm,0.7s,baz=291,slow=10,SNR=21
comp=Z,8.8nm,0.7s
BDFB Brasilia 59.48 120 P 05 18 20.9 -1.4
MLY Manley 59.53 337 IAmb IAmb 05 18 33.7
comp=Z,9.0nm,1.0s

K20K	**Telida**	**60.08**	**335**	lAmb	lAmb	05	18	39.5	
	comp=Z,12nm,1.1s								
PPT	**Papeete**	**60.35**	**238**	LR	LR	05	38	01.0	
	comp=Z,156nm,22.0s,baz=61,slow=30								
NBPS	**Pedro II - PI**	**60.42**	**105**	*eP*	**P**	**05**	**18**	**29.9**	**+1.0**
SDBA	**SAO DESIDERIO**	**60.59**	**115**	*eP*	**P**	**05**	**18**	**29.8**	**-0.1**
E22K	**Anaktuvuk Pass**	**61.43**	**340**	P	**P**	**05**	**18**	**35.9**	**+1.1**
E22K				lAmb	lAmb	05	18	37.0	
	comp=Z,5.8nm,1.1s								
H19K	**Roundabout Mou**	**61.91**	**337**	lAmb	lAmb	05	18	40.2	
	comp=Z,4.7nm,1.0s								
JANB	**Januaria**	**62.31**	**117**	*eP*	**P**	**05**	**18**	**41.8**	**+0.3**
PLCA	**Paso Flores**	**62.72**	**156**	P	**P**	**05**	**18**	**44.5**	**+0.7**
	comp=Z,1.3nm,0.8s,baz=320,slow=7.6,SNR=11								
	comp=Z,1.3nm,0.8s								
ITAB	**Concordia**	**62.81**	**133**	*eP*	**P**	**05**	**18**	**43.8**	**-0.8**
F19K	**Shaleruckik Mo**	**62.92**	**338**	lAmb	lAmb	05	18	47.1	
	comp=Z,7.6nm,1.1s								
E18K	**Tukpahlearik C**	**64.16**	**338**		**P**	**05**	**18**	**54.3**	**+1.4**
E18K				lAmb	lAmb	05	19	04.4	
	comp=Z,7.8nm,1.1s								
LL02	**Futaleuf**	**64.37**	**158**	P	**P**	**05**	**18**	**52.8**	**-1.8**
LL02				lAmb	lAmb	05	19	02.5	
	comp=Z,10.0nm,1.1s								
ANM	**Nome**	**65.18**	**334**		**P**	**05**	**19**	**02.0**	**+2.4**
ANM				lAmb	lAmb	05	19	11.8	
	comp=Z,7.0nm,1.2s								
AY01	**Puyuhuapi**	**65.18**	**160**	P	**P**	**05**	**19**	**00.3**	**+0.5**
NEEM	**North Greenlan**	**65.39**	**10**	*i* P	**P**	**05**	**19**	**01.9**	**+0.7**
NEEM				lAmb	lAmb	05	19	03.0	
	comp=Z,16nm,0.8s								
SUMG	**Summit**	**65.67**	**17**		**P**	**05**	**19**	**04.3**	**+1.2**
SUMG	**Summit**	**65.67**	**17**	*i* P	**P**	**05**	**19**	**04.6**	**+1.4**
SUMG				lAmb	lAmb	05	19	05.5	
	comp=Z,8.8nm,0.8s								
RCBR	**Riachuelo**	**66.08**	**104**	LR	LR	05	50	13.9	
	comp=Z,33nm,18.8s,baz=254,slow=38								
COYC	**Coyhaique**	**66.39**	**160**	P	**P**	**05**	**19**	**04.3**	**-3.3**
TNA	**Tin City**	**66.46**	**335**	P	**P**	**05**	**19**	**07.0**	**-0.9**
TNA				lAmb	lAmb	05	19	19.9	
	comp=Z,7.1nm,1.0s								
CMC01	**Camacan, BA**	**66.57**	**115**	*eP*	**P**	**05**	**19**	**10.4**	**+1.0**
BORG	**Borgarnes**	**69.89**	**26**	LR	LR	05	52	17.2	
	comp=Z,48nm,18.6s,baz=298,slow=38								
RAR	**Rarotonga**	**70.51**	**240**	LR	LR	05	41	59.7	
	comp=Z,136nm,18.3s,baz=48,slow=29								
DBG	**Daneborg**	**71.15**	**16**	*i* P	**P**	**05**	**19**	**37.7**	**+0.8**
DBG				lAmb	lAmb	05	19	39.4	
	comp=Z,1.9nm,0.9s								
DAG	**Danmarks Havn**	**71.80**	**14**	*i* P	**P**	**05**	**19**	**41.0**	**+0.1**
DAG				lAmb	lAmb	05	19	42.0	
	comp=Z,7.3nm,0.9s								
NOR	**Nord**	**72.63**	**9**	*i* P	**P**	**05**	**19**	**46.6**	**+0.9**
NOR				lAmb	lAmb	05	19	47.7	
	comp=Z,7.4nm,1.0s								
JMIC	**Jan Mayen**	**74.64**	**20**	LR	LR	05	54	19.7	
	comp=Z,57nm,21.6s,baz=245,slow=37								
AFI	**Afiamalu**	**78.10**	**252**	LR	LR	05	47	01.2	
	comp=Z,58nm,19.1s,baz=94,slow=30								
SPITS	**Spitsbergen Ar**	**78.93**	**11**	P	**P**	**05**	**20**	**22.7**	**+0.9**
	comp=Z,4.9nm,0.8s,baz=320,slow=13,SNR=2.3								
SPITS				LR	LR	05	56	20.6	
	comp=Z,199nm,21.0s,baz=354,slow=36								
	comp=Z,4.9nm,0.8s								
EKA	**Eskdalemuir Ar**	**79.79**	**35**	P	**P**	**05**	**20**	**27.6**	**+0.8**
	comp=Z,3.3nm,0.8s,baz=287,slow=5.8,SNR=5.6								
EKA				LR	LR	05	57	40.4	
	comp=Z,83nm,18.3s,baz=294,slow=37								
	comp=Z,3.3nm,0.8s								
ESDC	**Sonseca Array**	**83.32**	**51**	P	**P**	**05**	**20**	**46.5**	**+0.5**
	comp=Z,1.9nm,0.8s,baz=291,slow=4.7,SNR=10								
ESDC				LR	LR	05	55	30.2	
	comp=Z,113nm,18.6s,baz=282,slow=34								
	comp=Z,1.9nm,0.8s								
MDT	**Midelt**	**84.70**	**57**	LR	LR	05	53	33.0	
	comp=Z,72nm,20.9s,baz=288,slow=32								
NOA	**NORSAR Array B**	**85.05**	**27**	P	**P**	**05**	**20**	**56.0**	**+1.7**
	comp=Z,1.1nm,0.9s,baz=302,slow=4.4,SNR=3.3								
NOA				LR	LR	06	01	21.1	
	comp=Z,30nm,18.2s,baz=295,slow=37								
	comp=Z,1.1nm,0.9s								
ARCES	**ARCESS Array B**	**85.77**	**17**	LR	LR	06	01	12.0	
	comp=Z,77nm,18.1s,baz=316,slow=37								
MA2	**Magadan**	**85.81**	**331**	LR	LR	05	59	24.2	
	comp=Z,81nm,21.6s,baz=70,slow=36								
TIXI	**Tiksi**	**86.36**	**346**	LR	LR	06	05	42.4	
	comp=Z,101nm,18.3s,baz=52,slow=40								
TIXI	**Tiksi**	**86.36**	**346**	P	**P**	**05**	**20**	**59.7**	**-0.9**
TIXI				lAmb	lAmb	05	21	12.5	
	comp=Z,7.7nm,1.1s								
HFS	**Hagfors**	**86.55**	**28**	LR	LR	06	02	21.7	
	comp=Z,47nm,18.2s,baz=256,slow=38								
MSVF	**Nonsavu**	**88.59**	**251**	LR	LR	05	51	59.1	
	comp=Z,90nm,19.2s,baz=86,slow=30								
DAVOX	**Davos/Dischmat**	**90.39**	**41**	LR	LR	06	04	50.9	
	comp=Z,53nm,18.1s,baz=261,slow=38								
FINES	**FINESS Array B**	**90.94**	**23**	LR	LR	06	04	23.8	
	comp=Z,114nm,19.7s,baz=328,slow=37								
GERES	**GERESS Array B**	**91.79**	**38**	P	**P**	**05**	**21**	**27.5**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=268,slow=19,SNR=4.3								
	comp=Z,0.4nm,0.4s								
DBIC	**Dimbokro**	**91.95**	**83**	P	**P**	**05**	**21**	**27.2**	**-0.9**
	comp=Z,2.7nm,0.8s,baz=323,slow=6.1,SNR=3.5								
DBIC				LR	LR	06	00	22.6	
	comp=Z,50nm,19.9s,baz=347,slow=34								
	comp=Z,2.7nm,0.8s								
YAK	**Yakutsk**	**92.89**	**339**	LR	LR	06	05	29.8	
	comp=Z,106nm,20.8s,baz=18,slow=37								
VRAC	**Vranov**	**93.23**	**36**	LR	LR	06	06	52.3	
	comp=Z,85nm,18.5s,baz=275,slow=38								
NRIK	**Noril'sk**	**94.27**	**358**	P	**P**	**05**	**21**	**37.9**	**+0.2**
	comp=Z,2.0nm,0.6s,baz=168,slow=4.1,SNR=4.2								
NRIK				LR	LR	06	07	06.9	
	comp=Z,36nm,18.0s,baz=48,slow=37								
	comp=Z,2.0nm,0.6s								
KEST	**Kesra**	**94.57**	**51**	LR	LR	06	01	01.8	
	comp=Z,83nm,20.1s,baz=295,slow=34								
URZ	**Urewera**	**95.48**	**232**	LR	LR	05	55	47.4	
	comp=Z,57nm,19.3s,baz=18,slow=30								
TORD	**Torodi Ar. Bea**	**96.17**	**74**	P	**P**	**05**	**21**	**45.8**	**-1.6**
	comp=Z,0.6nm,0.8s,baz=267,slow=4.8,SNR=2.7								
	comp=Z,0.6nm,0.8s								
AKASG	**Malin Array Be**	**99.11**	**30**	LR	LR	06	09	35.8	
	comp=Z,40nm,19.8s,baz=252,slow=37								
HHC	**Hu-ho-hao-te**	**116.33**	**335**	*eP*	**PKPdf**	**05**	**27**	**05.3**	**+2.5**
WMQ	**Urumqi**	**119.67**	**355**	*e*PKP	**PKiKP**	**05**	**27**	**12.8**	**+3.6**
WMQ				LR	LR				
	comp=Z,87nm,19.5s								
NJ2	**Nanjing**	**119.69**	**323**	*eP*	**PKiKP**	**05**	**27**	**12.5**	**+3.1**
NJ2				pmax	pmax				
	comp=Z,31nm,0.7s								
XAN	**Xi'an**	**123.19**	**332**	Pdif	**Pdif**	**05**	**23**	**48.3**	**+0.7**
XAN				PKPbc	**PKiKP**	**05**	**27**	**16.5**	**+0.1**
WRA	**Warramunga Arr**	**129.52**	**258**	PKP	**PKiKP**	**05**	**27**	**29.2**	**0.0**
	comp=Z,1.1nm,0.9s,baz=83,slow=1.7,SNR=5.3								
ASAR	**Alice Springs**	**130.16**	**253**	PKP	**PKiKP**	**05**	**27**	**30.4**	**-0.1**
	comp=Z,0.9nm,1.0s,baz=108,slow=2.5,SNR=4.2								
PZH	**PanZhiHua**	**132.79**	**335**	PKP	**PKiKP**	**05**	**27**	**35.5**	**-0.4**
CMAR	**Chiang Mai Arr**	**141.09**	**332**	PKP	**PKPdf**	**05**	**27**	**48.5**	**-1.6**
	comp=Z,0.8nm,0.3s,baz=14,slow=2.6,SNR=5.4								

IDC 30 05:33:55.3±2.0, 37.09N×134.56E, h152km±54km, mb3.0/1, mbtmp3.1/3, Error ellipse: s-maj=131.0km s-min=28.6km az=5.0, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**2.98**	**99**	P	Pn	05 34 43.0	+0.5
	3.4nm,0.5s,baz=280,slow=13,SNR=12						
KSRS	**Korea Array**	**5.30**	**276**	P	Pn	05 35 13.2	+0.4
	0.8nm,0.5s,baz=89,slow=14,SNR=4.7						
SONM	**Songino Array**	**23.26**	**306**	P	P	05 38 49.2	0.0
	0.9nm,0.7s,baz=90,slow=10,SNR=3.2						
	0.9nm,0.7s						

IDC 30 06:03:36.2±1.7, 0.80N×126.21E, h0km, mb3.3/4, mbtmp3.4/4, Error ellipse: s-maj=171.3km s-min=22.6km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.10**	**159**	P	P	06 08 32.5	-0.8
	0.9nm,0.7s,baz=338,slow=11,SNR=9.5						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**25.44**	**163**	P	P	06 09 06.6	+0.6
	0.3nm,0.6s,baz=343,slow=9.9,SNR=7.7						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**59.67**	**326**	P	P	06 13 42.4	-0.1
	0.2nm,0.4s,baz=110,slow=7.8,SNR=4.7						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.93**	**328**	P	P	06 14 11.0	0.0
	0.3nm,0.5s,baz=138,slow=5.8,SNR=2.7						
	0.3nm,0.5s						

*IDC **30** 06:14:30.9±8.5, 55.79S×28.14W, h73km±80km, mb3.7/5, mbtmp4.0/6, ML4.5/1, Error ellipse: s-maj=43.4km s-min=20.2km az=65.0*
*NEIC **30** 06:14:34.5±1.7, 56.1S±0.2×29.0W±0.3, h78km±8km, mb4.3/10, Error ellipse: s-maj=28.3km s-min=14.2km az=218.0*
ISC 30 06:14:28.7±0.8, 55.8S±0.1×28.1W±0.2, h50km, n25, σ0 93/23, mb4.2/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.08**	**284**	Pn	**Pn**	**06 15 42.2**	**+0.1**
SNAA	**Sanae**	**19.19**	**156**	P	**P**	**06 18 47.8**	**-0.1**
	1.6nm,0.3s,baz=296,slow=11,SNR=12						
	6.1nm,0.5s						
SNAA	**Sanae**	**19.19**	**156**	P	**P**	**06 18 48.2**	**+0.4**
SNAA				lAmb	lAmb	06 18 48.5	
	comp=Z,30nm,1.5s						
BELA	**Belgrano 2**	**22.31**	**184**	P	**P**	**06 19 21.4**	**0.0**
QSPA	**South Pole Qui**	**34.47**	**180**	P	**P**	**06 21 11.2**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=193,slow=14,SNR=12						
	comp=Z,1.5nm,0.7s						
QSPA	**South Pole Qui**	**34.47**	**180**	P	**P**	**06 21 11.1**	**-0.3**
QSPA				lAmb	lAmb	06 21 34.5	
	comp=Z,5.5nm,1.4s						
CPUP	**Villa Florida**	**36.27**	**312**	P	**P**	**06 21 26.4**	**-0.5**
	comp=Z,3.4nm,0.7s,baz=152,slow=8.4,SNR=20						
	comp=Z,3.4nm,0.7s						
ZON	**Zonda**	**37.28**	**293**	P	**P**	**06 21 35.5**	**-0.2**
ZON				lAmb	lAmb	06 21 53.7	
	comp=Z,12nm,1.5s						
AQDB	**Aquidauana**	**40.87**	**318**	P	**P**	**06 22 05.4**	**-0.2**
AQDB				lAmb	lAmb	06 22 38.2	
	comp=Z,4.8nm,1.4s						
PTLB	**Pontes e Lacer**	**46.77**	**317**	P	**P**	**06 22 52.9**	**0.0**
PTLB				lAmb	lAmb	06 22 53.5	
	comp=Z,3.3nm,1.0s						
VNDA	**Vanda**	**46.82**	**183**	P	**P**	**06 22 52.8**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=180,slow=6.0,SNR=5.7						
	comp=Z,0.9nm,0.6s						
VNDA	**Vanda**	**46.82**	**183**	lAmb	lAmb	06 23 30.2	
	comp=Z,2.9nm,1.3s						
CRZF	**Crozet Islands**	**48.37**	**114**	P	P	06 23 10.4	+5.3
LPAZ	**La Paz**	**49.82**	**306**	P	**P**	**06 23 17.1**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=165,slow=6.4,SNR=2.8						
	comp=Z,0.5nm,0.3s						
OTAV	**Otavalo**	**69.10**	**304**	P	**P**	**06 25 30.6**	**+0.7**
TORD	**Torodi Ar. Bea**	**73.06**	**30**	P	**P**	**06 25 53.4**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=200,slow=7.7,SNR=4.1						
	comp=Z,0.4nm,0.4s						
CNGN	**Cerro Negro**	**83.71**	**303**	P	**P**	**06 26 53.0**	**+1.0**
F28M	**Old Crow**	**147.42**	**319**	PKPdf	**PKPdf**	**06 34 04.2**	**+1.5**
D27M	**Malcolm River**	**148.14**	**322**	PKPdf	**PKPbc**	**06 34 06.6**	**-0.7**
RIDG	**Independent Ri**	**148.46**	**311**	PKPdf	**PKPbc**	**06 34 07.3**	**-1.0**
F26K	**Sheenjek River**	**149.04**	**318**	PKPdf	**PKPbc**	**06 34 07.8**	**-1.8**
C27K	**Jago River**	**149.15**	**322**	PKPdf	**PKPbc**	**06 34 08.7**	**-1.1**
ILAR	**Eielson Array**	**149.57**	**312**	PKPbc	**PKPbc**	**06 34 09.1**	**-1.8**
	comp=Z,0.8nm,0.7s,baz=132,slow=1.9,SNR=9.3						
F25K	**Christian Rive**	**149.59**	**318**	PKPdf	**PKPbc**	**06 34 10.1**	**-0.9**
E25K	**Arctic Village**	**149.63**	**319**	PKPdf	**PKPbc**	**06 34 09.3**	**-1.8**

*IDC **30** 06:21:09.2±2.0, 3.60N×126.08E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=199.0km s-min=23.0km az=66.0*
*MAN **30** 06:21:16.0, 3.84N×126.48E, h13km, MS3.2*
*DJA **30** 06:21:16.0±0.9, 4.1N±8.2×12.7E±0.1, h41km±12km, M4.0/11, mb4.2/2, MLv3.9/11*
ISC 30 06:21:15.1±1.2, 3.85N±0.06×126.7E±0.1, h45km, n10, σ1 74/12, mb3.4/4, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.16**	**262**	P	**Pn**	**06 21 35.4**	**+0.4**
SGSI				S	**Sn**	**06 21 50.1**	**+0.4**
DDMP	**Don Marcelino,**	**2.44**	**337**	*eP*	**Pn**	**06 21 55.2**	**+2.6**
DDMP				*eS*	**Sn**	**06 22 17.9**	**-3.3**
KCP	**Kidapawan**	**3.52**	**333**	*eP*	**Pn**	**06 22 08.6**	**+1.1**
GTOI	**Gorontalo**	**4.86**	**229**	P	**Pn**	**06 22 27.4**	**+1.6**
MRSI	**Marisa**	**5.80**	**235**	P	**Pn**	**06 22 40.0**	**+1.3**
SANI	**Sanana**	**5.90**	**187**	P	**Pn**	**06 22 39.0**	**-1.0**
WRA	**Warramunga Arr**	**24.81**	**163**	P	**P**	**06 26 32.1**	**-1.1**
	0.3nm,0.4s,baz=340,slow=10,SNR=16						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**28.24**	**166**	P	**P**	**06 27 04.6**	**+0.5**
	0.1nm,0.3s,baz=346,slow=10,SNR=4.4						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**57.44**	**325**	P	**P**	**06 30 58.7**	**-0.7**
	0.2nm,0.4s,baz=123,slow=7.1,SNR=4.7						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**61.62**	**327**	P	**P**	**06 31 27.9**	**-0.2**
	0.2nm,0.5s,baz=132,slow=6.9,SNR=2.8						
	0.2nm,0.5s						

*ASRS **30** 06:35:20.0±0.8, 54.16N×87.18E, h0km, M2.8(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 30 06:35:23.7±2.6, 54.11N×87.18E, h0km, mbtmp3.0/3, ML2.7/3, Error ellipse: s-maj=22.8km s-min=14.7km az=72.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.40**	**265**	I	I	06 44 40.0	
	baz=82,slow=330,SNR=4.7						
ZALV	**Zalesovo Beam**	**1.40**	**264**	Pg	Pn	06 35 49.0	-1.6
	4.4nm,0.3s,baz=82,slow=16,SNR=30						
ZALV				Lg	Lg	06 36 08.3	
	1.3nm,0.3s,baz=82,slow=31,SNR=4.5						
KURBB	**Kurchatov Arra**	**6.34**	**240**	Pn	Pn	06 36 59.1	+0.8
	0.2nm,0.3s,baz=54,slow=13,SNR=10						
KURBB				Sn	Sn	06 38 10.4	-1.0
	baz=52,slow=21,SNR=1.7						
KURBB				Lg	Lg	06 38 44.6	
	baz=57,slow=29,SNR=1.3						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**7.96**	**205**	Pn	Pn	06 37 21.7	+1.1
	0.1nm,0.3s,baz=29,slow=13,SNR=5.3						
MKAR				Sn	Sn	06 38 50.5	-0.7
	0.1nm,0.3s,baz=27,slow=26,SNR=2.1						
MKAR				Lg	Lg	06 39 37.4	
	baz=22,slow=31,SNR=3.5						
	0.1nm,0.3s						
BVAR	**Borovoye Array**	**10.05**	**271**	Pn	Pn	06 37 48.5	-0.7
	0.1nm,0.3s,baz=74,slow=17,SNR=2.7						
	0.4nm,0.3s						

*IDC **30** 06:44:25.7±0.5, 56.09S×59.79W, h0km, mb4.7/11, mbtmp4.6/14, ML4.4/3, MS3.7/14, Error ellipse: s-maj=22.6km s-min=15.0km az=76.0*
*MOS **30** 06:44:26.4±1.1, 56.00S×59.84W, h10km, mb5.2/11, Error ellipse: s-maj=32.0km s-min=8.8km az=96.4*
*NEIC **30** 06:44:27.2±1.4, 56.08S±0.04×60.2W±0.1, h10km±1km, mb5.0/56, Error ellipse: s-maj=13.3km s-min=2.8km az=301.0*
ISC 30 06:44:26.9±0.3, 56.07S±0.06×60.12W±0.07, h10km, n195, σ0 83/193, mb4.9/36, MS3.7/14, 6C-1D, Drake Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MG01	**Puerto William**	**4.42**	**282**		**Pn**	**06 45 34.9**	**+0.9**
EFI	**East Falkland**	**4.57**	**16**		**Pn**	**06 45 36.1**	**+0.1**
EFI	**East Falkland**	**4.57**	**16**	*i* P	**Pn**	**06 45 35.3**	**-0.7**
USHA	**Ushuaia**	**4.89**	**281**	P	**Pn**	**06 45 41.9**	**+1.4**
	4.5nm,0.3s,baz=120,slow=13,SNR=23						
USHA				Sn	**Sn**	**06 46 39.1**	**+2.0**
	9.5nm,0.3s,baz=22,slow=21,SNR=2.1						
	27nm,0.4s						
MG02	**Cerro Sombrero**	**6.25**	**298**		**Pn**	**06 45 58.4**	**-0.7**
MG03	**Isla Dawson**	**6.36**	**286**	Pn	**Pn**	**06 46 00.7**	**+0.1**
MG05	**Puerto Natales**	**8.54**	**296**	Pn	**Pn**	**06 46 28.4**	**-2.0**
PMSA	**Palmer Station**	**8.95**	**191**	Pn	**Pn**	**06 46 36.1**	**+0.1**
	0.8nm,0.3s,baz=29,slow=10,SNR=1.4						
PMSA				LR	LR	06 49 08.3	
	comp=Z,241nm,20.2s,baz=334,slow=32						
	20nm,0.9s						
GO08	**Villa O'Higgin**	**10.76**	**310**	Pn	**Pn**	**06 46 58.9**	**-2.0**
AY03	**Cochrane**	**11.73**	**314**	Pn	**Pn**	**06 47 12.7**	**-1.5**
COYC	**Coyhaique**	**12.93**	**319**	Pn	**Pn**	**06 47 31.5**	**+1.0**
LL02	**Futaleuf**	**14.93**	**325**		**Pn**	**06 47 58.4**	**+0.5**
PLCA	**Paso Flores**	**16.81**	**332**	Pn	**P**	**06 48 24.2**	**-0.2**
	0.9nm,0.3s,baz=179,slow=7.8,SNR=15						
	1.3nm,0.4s						
TRQA	**Tornquist**	**18.06**	**355**	P	**P**	**06 48 39.2**	**+0.9**
TRQA	**Tornquist**	**18.06**	**355**	P	**P**	**06 48 39.2**	**+0.9**
TRQA				pmax	pmax		
	comp=Z,35nm,1.0s						
GO06	**Curarrehue**	**18.13**	**331**		**P**	**06 48 39.8**	**+0.7**
BI02	**San Fabin de**	**20.83**	**334**		**P**	**06 49 09.6**	**+1.0**
BI02	**San Fabin de**	**20.83**	**334**	*eP*	**P**	**06 49 10.1**	**+1.6**
ML02	**Panimavida**	**21.72**	**334**	P	**P**	**06 49 18.8**	**+0.7**
ML02				lAmb	lAmb	06 49 25.4	
	comp=Z,28nm,0.6s						
BO02	**Sierra Bellavi**	**22.50**	**337**	P	**P**	**06 49 26.6**	**+0.1**
GO05	**Hualane**	**22.56**	**334**		**P**	**06 49 27.1**	**-0.1**
GO05				lAmb	lAmb	06 49 29.9	
	comp=Z,28nm,0.7s						
GO05	**Hualane**	**22.56**	**334**	*eP*	**P**	**06 49 27.4**	**+0.3**
BO01	**Tunca**	**22.96**	**336**	P	**P**	**06 49 30.5**	**-0.7**
BO04	**La Punta**	**23.24**	**337**	P	**P**	**06 49 34.1**	**0.0**
MT13	**San Alfonso**	**23.41**	**338**	P	**P**	**06 49 37.1**	**+1.1**
MT01	**Popeta**	**23.50**	**336**	P	**P**	**06 49 35.8**	**-1.0**
MT09	**Talagante**	**23.53**	**337**		**P**	**06 49 36.4**	**-0.7**
MT09				lAmb	lAmb	06 49 48.1	
	comp=Z,83nm,1.5s						
MT09	**Talagante**	**23.53**	**337**	*eP*	**P**	**06 49 36.5**	**-0.7**
MT15	**Las Vizcachas**	**23.59**	**338**	*eP*	**P**	**06 49 38.0**	**+0.3**
BELA	**Belgrano 2**	**23.61**	**167**		**P**	**06 49 37.9**	**+0.4**
MT08	**Bocatoma Ro**	**23.64**	**339**	P	**P**	**06 49 39.1**	**+0.7**
MT08				lAmb	lAmb	06 49 52.8	
	comp=Z,50nm,1.6s						
MT03	**Universidad Ad**	**23.70**	**338**	P	**P**	**06 49 39.0**	**+0.2**
MT03				lAmb	lAmb	06 49 49.2	
	comp=Z,34nm,0.8s						
MT16	**CCHEN**	**23.76**	**338**		**P**	**06 49 39.2**	**-0.2**
MT16				lAmb	lAmb	06 49 54.7	
	comp=Z,20nm,0.8s						
MT02	**Curacav**	**24.06**	**337**	P	**P**	**06 49 40.9**	**-1.2**
MT02	**Curacav**	**24.06**	**337**	*eP*	**P**	**06 49 43.2**	**+1.1**
PEL	**Peldehue**	**24.07**	**338**		**P**	**06 49 42.4**	**+0.1**
PEL				lAmb	lAmb	06 49 52.6	
	comp=Z,29nm,0.7s						
PEL	**Peldehue**	**24.07**	**338**	P	**P**	**06 49 42.4**	**+0.1**
PEL				pmax	pmax		
	comp=Z,29nm,0.7s						
VA03	**San Esteban**	**24.41**	**338**	P	**P**	**06 49 45.5**	**0.0**
VA06	**Catapilco**	**24.76**	**337**	P	**P**	**06 49 49.0**	**+0.5**
PSAL	**Palomas, Salto**	**25.04**	**5**	*eP*	**P**	**06 49 51.4**	**+0.4**
CO04	**Los Peladeros**	**25.19**	**338**	P	**P**	**06 49 52.6**	**-0.2**
CO04				lAmb	lAmb	06 50 13.2	
	comp=Z,49nm,1.0s						
VNA3	**Neumayer Olymp**	**25.98**	**145**	⇑P	**P**	**06 50 00.1**	**+0.8**
	comp=Z,12nm,0.8s						
CO02	**Combarbal**	**26.01**	**338**		**P**	**06 49 59.5**	**-0.5**
CPSB	**Cacapava Do Su**	**26.08**	**13**	*eP*	**P**	**06 50 01.3**	**+0.8**
CO01	**Juntas del Tor**	**27.02**	**341**	lAmb	lAmb	06 50 31.4	
	comp=Z,74nm,1.8s						
CNLB	**Canela**	**27.54**	**18**	*eP*	**P**	**06 50 14.8**	**+1.0**
LCO	**Las Campanas**	**28.08**	**340**		**P**	**06 50 18.5**	**-0.3**
LCO				lAmb	lAmb	06 50 27.3	
	comp=Z,24nm,1.2s						
LCO	**Las Campanas**	**28.08**	**340**	*eP*	**P**	**06 50 18.5**	**-0.3**
SNAA	**Sanae**	**28.20**	**146**	P	**P**	**06 50 18.9**	**-0.3**
	comp=Z,4.5nm,0.7s,baz=270,slow=13,SNR=2.9						
SNAA				LR	LR	06 58 42.6	
	comp=Z,151nm,21.3s,baz=150,slow=30						
	comp=Z,4.5nm,0.7s						
SNAA	**Sanae**	**28.20**	**146**	*i* P	**P**	**06 50 19.1**	**-0.1**
SNAA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
AC04	**Llanos de Chal**	**28.93**	**340**	lAmb	lAmb	06 50 30.2	
	comp=Z,22nm,0.7s						
CPUP	**

OTAV	**Otavalo**	**58.07**	**338**			**P**		06 54 19.8	**-0.9**
OTAV				IAmb		IAmb		06 54 26.2	
	comp=Z,24nm,1.4s								
OTAV	**Otavalo**	**58.07**	**338**	P		**P**		**06 54 19.8**	**-0.9**
OTAV				pmax		pmax			
	comp=Z,24nm,1.4s								
OTAV	**Otavalo**	**58.07**	**338**	*eP*		**P**		**06 54 19.9**	**-0.8**
BOAV	**Boa Vista**	**58.27**	**360**	IAmb		IAmb		06 54 22.7	
	comp=Z,10nm,1.0s								
BOAV	**Boa Vista**	**58.27**	**360**	*eP*		**P**		**06 54 21.7**	**+0.1**
MDP	**Montagnes des**	**61.27**	**8**	LR		LR		07 21 50.3	
	comp=Z,64nm,21.4s,baz=190,slow=37								
ROSC	**El Rosal**	**61.81**	**344**	P		**P**		**06 54 46.9**	**+0.6**
ROSC				LR		LR		07 24 46.8	
	comp=Z,101nm,19.2s,baz=204,slow=39								
	comp=Z,7.5nm,0.8s								
ROSC	**El Rosal**	**61.81**	**344**	P		**P**		**06 54 45.0**	**-1.3**
ROSC				IAmb		IAmb		06 54 49.2	
	comp=Z,7.2nm,0.8s								
ROSC	**El Rosal**	**61.81**	**344**	P		**P**		**06 54 45.0**	**-1.3**
ROSC				pmax		pmax			
	comp=Z,7.0nm,0.8s								
BOSA	**Boshof**	**64.26**	**103**	P		**P**		**06 55 01.1**	**-1.2**
	comp=Z,5.9nm,0.8s,baz=213,slow=7.9,SNR=9.6								
	comp=Z,5.9nm,0.8s								
SDV	**Santo Domingo**	**65.31**	**349**	LR		LR		07 25 58.6	
	comp=Z,79nm,18.1s,baz=184,slow=38								
SDV	**Santo Domingo**	**65.31**	**349**			**P**		**06 55 07.4**	**-1.7**
SDV				IAmb		IAmb		06 55 09.8	
	comp=Z,6.5nm,0.8s								
LKGWB	**Lokgwabe**	**65.57**	**97**	P		**P**		**06 55 11.8**	**+1.0**
MAKGR	**Makgori**	**66.21**	**101**	P		**P**		**06 55 14.4**	**-0.5**
KGCAE	**Kacgae**	**67.12**	**97**	P		**P**		**06 55 20.6**	**-0.2**
LBTB	**Lobatse**	**67.28**	**101**	P		**P**		**06 55 21.4**	**-0.4**
LBTB	**Lobatse**	**67.28**	**101**	P		**P**		**06 55 21.4**	**-0.4**
LBTB				pmax		pmax			
	comp=Z,23nm,1.2s								
TSUM	**Tsumeb**	**67.44**	**91**	P		**P**		**06 55 22.9**	**0.0**
TSUM				IAmb		IAmb		06 55 39.4	
	comp=Z,13nm,1.4s								
GRTLG	**Ghanzi**	**67.75**	**95**	P		**P**		**06 55 24.1**	**-0.7**
JTS	**Las Juntas de**	**69.28**	**334**	*i* P		**P**		**06 55 35.1**	**+1.0**
JTS				pmax		pmax			
	comp=Z,9.0nm,0.9s								
SIUN	**Universidad Ur**	**72.53**	**335**	P		**P**		**06 55 54.5**	**+0.7**
SIUN				IAmb		IAmb		06 56 02.7	
	comp=Z,6.2nm,0.8s								
SJG	**San Juan**	**74.06**	**354**	LR		LR		07 30 16.2	
	comp=Z,56nm,20.7s,baz=220,slow=37								
DBIC	**Dimbokro**	**77.18**	**57**	P		**P**		**06 56 21.1**	**+0.3**
	comp=Z,9.7nm,0.6s,baz=220,slow=4.7,SNR=17								
	comp=Z,9.7nm,0.6s								
DBIC	**Dimbokro**	**77.18**	**57**	P		**P**		**06 56 20.9**	**+0.1**
DBIC				IAmb		IAmb		06 56 21.7	
	comp=Z,13nm,0.8s								
DBIC	**Dimbokro**	**77.18**	**57**	P		**P**		**06 56 20.9**	**+0.1**
DBIC				pmax		pmax			
	comp=Z,13nm,0.8s								
EDA	**Edea**	**82.26**	**71**	P		**P**		**06 56 48.8**	**+0.3**
EDA				IAmb		IAmb		06 56 50.0	
	comp=Z,9.9nm,0.8s								
TORD	**Torodi Ar. Bea**	**85.93**	**59**	P		**P**		**06 57 06.8**	**-0.3**
	comp=Z,3.5nm,0.7s,baz=211,slow=5.7,SNR=17								
	comp=Z,3.5nm,0.7s								
TORD	**Torodi Ar. Bea**	**85.93**	**59**	P		**P**		**06 57 06.2**	**-0.8**
TORD				IAmb		IAmb		06 57 08.4	
	comp=Z,28nm,1.9s								
STKA	**Stephens Creek**	**90.47**	**198**	*i* P		**P**		**06 57 28.7**	**+0.1**
HPIG		**91.29**	**320**	IAmb		IAmb		06 57 34.9	
	comp=Z,4.4nm,0.8s								
TXAR	**Lajitas Array**	**92.79**	**323**	P		**P**		**06 57 40.2**	**+1.0**
	comp=Z,1.1nm,0.7s,baz=156,slow=6.7,SNR=13								
	comp=Z,1.1nm,0.7s								
TKL	**Tuckaleechee C**	**93.57**	**341**	LR		LR		07 44 11.7	
	comp=Z,20nm,19.7s,baz=164,slow=38								
TPB01	**Permian Basin**	**94.31**	**323**	IAmb		IAmb		06 57 48.5	
	comp=Z,2.8nm,0.6s								
WMOK	**Wichita Mounta**	**96.26**	**329**	P		**P**		**06 57 52.5**	**-2.4**
WMOK				IAmb		IAmb		06 57 56.1	
	comp=Z,4.2nm,0.8s								
WMOK	**Wichita Mounta**	**96.26**	**329**	P		**P**		**06 57 52.5**	**-2.4**
WMOK				pmax		pmax			
	comp=Z,4.0nm,0.8s								
ANMO	**Albuquerque**	**98.86**	**323**	*i* P		**P**		**06 58 07.5**	**+0.6**
ANMO				pmax		pmax			
	comp=Z,12nm,3.7s								
ASAR	**Alice Springs**	**99.69**	**193**	P		**Pdif**		**06 58 11.1**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=164,slow=4.0,SNR=11								
ASAR				PKKP		**PKKPdf**		**07 14 30.8**	**-1.3**
	comp=Z,0.3nm,0.6s,baz=354,slow=2.7,SNR=4.9								
	comp=Z,0.9nm,0.7s								
WRA	**Warramunga Arr**	**103.31**	**194**	Pdiff		**Pdif**		**06 58 27.3**	**+0.3**
	comp=Z,1.6nm,0.8s,baz=177,slow=4.0,SNR=22								
WRA				PKiKP		**PKiKP**		**07 02 45.9**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=190,slow=1.2,SNR=4.7								
ISP	**Isparta**	**120.70**	**67***c*	*i* PKIKP		**PKiKP**		**07 03 19.5**	**+0.9**
GERES	**GERESS Array B**	**121.22**	**48**	PKP		**PKPdf**		**07 03 18.5**	**-0.5**
	comp=Z,1.8nm,0.6s,baz=216,slow=3.2,SNR=6.1								
BRTR	**Keskin Array B**	**123.74**	**68**	PKP		**PKPdf**		**07 03 23.8**	**-0.5**
	comp=Z,1.8nm,0.7s,baz=222,slow=1.9,SNR=9.1								
BERU	**Beregovo**	**124.64**	**54**	PKP		**PKPdf**		**07 03 24.5**	**-1.0**
BRIU	**Brid**	**124.89**	**54**	PKP		**PKPdf**		**07 03 25.3**	**-0.7**
YKA	**Yellowknife Ar**	**125.60**	**332**	PKP		**PKiKP**		**07 03 27.2**	**0.0**
	comp=Z,1.4nm,0.6s,baz=149,slow=1.5,SNR=32								
MORS	**Morshin**	**125.86**	**54**	PKP		**PKPdf**		**07 03 27.3**	**-0.5**
KIS	**Kishinev**	**126.62**	**58**	PKP		**PKPdf**		**07 03 28.8**	**-0.5**
KMPD	**K-Podol'skiy**	**126.63**	**56**	PKP		**PKPdf**		**07 03 28.5**	**-0.8**
NDNU	**Novodnistrovsk**	**127.07**	**56**	PKP		**PKPdf**		**07 03 29.5**	**-0.6**
MI28	**Mi28,Pidlybu**	**128.86**	**54**	PKP		**PKPdf**		**07 03 32.4**	**-1.1**
SUMG	**Summit**	**129.23**	**8**	*i* P		**PKiKP**		**07 03 35.3**	**+0.5**
AK13	**Malin Array Si**	**129.27**	**55**	PKP		**PKPdf**		**07 03 33.8**	**-0.5**
AK07	**Malin Array Si**	**129.30**	**56**	PKP		**PKPdf**		**07 03 34.4**	**-0.6**
AK14	**Malin Array Si**	**129.31**	**55**	PKP		**PKPdf**		**07 03 33.9**	**-0.4**
AK06	**Malin Array Si**	**129.32**	**55**	PKP		**PKPdf**		**07 03 34.3**	**0.0**
AK17	**Malin Array Si**	**129.32**	**55**	PKP		**PKPdf**		**07 03 34.3**	**0.0**
AK19	**Malin Array Si**	**129.33**	**55**	PKP		**PKPdf**		**07 03 34.3**	**-0.1**
AK16	**Malin Array Si**	**129.34**	**55**	PKP		**PKPdf**		**07 03 33.9**	**-0.5**
AK12	**Malin Array Si**	**129.34**	**55**	PKP		**PKPdf**		**07 03 33.8**	**-0.6**
AK20	**Malin Array Si**	**129.34**	**55**	PKP		**PKPdf**		**07 03 33.9**	**-0.5**
AK05	**Malin Array Si**	**129.34**	**55**	PKP		**PKPdf**		**07 03 34.0**	**-0.4**
AK10	**Malin Array Si**	**129.35**	**55**	PKP		**PKPdf**		**07 03 34.3**	**-0.1**
AK18	**Malin Array Si**	**129.35**	**55**	PKP		**PKPdf**		**07 03 34.0**	**-0.4**
AK15	**Malin Array Si**	**129.36**	**55**	PKP		**PKPdf**		**07 03 33.9**	**-0.5**
AK11	**Malin Array Si**	**129.37**	**55**	PKP		**PKPdf**		**07 03 33.9**	**-0.5**
AK02	**Malin Array Si**	**129.37**	**55**	PKP		**PKPdf**		**07 03 34.0**	**-0.4**
AKASG	**Malin Array Be**	**129.41**	**55**	PKP		**PKPdf**		**07 03 34.1**	**-0.4**
	comp=Z,2.3nm,0.5s,baz=254,slow=2.1,SNR=14								
AKBB	**Malin Array Si**	**129.41**	**55***c*	*i* PKIKP		**PKiKP**		**07 03 34.8**	**-0.4**
AKBB	**Malin Array Si**	**129.41**	**55**	PKP		**PKPdf**		**07 03 33.9**	**-0.6**
NB2	**NORSAR Subarra**	**129.49**	**37**	PKPdf		**PKiKP**		**07 03 35.2**	**0.0**
	comp=Z,11nm,1.0s,baz=223,slow=2.0								
NB2	**NORSAR Subarra**	**129.49**	**37**	PKPdf		**PKiKP**		**07 03 35.2**	**0.0**
NOA	**NORSAR Array B**	**129.49**	**37**	PKP		**PKiKP**		**07 03 34.7**	**-0.4**
	comp=Z,3.0nm,0.8s,baz=229,slow=2.1,SNR=6.2								
HFS	**Hagfors**	**129.68**	**39**	PKP		**PKPdf**		**07 03 34.3**	**-0.5**
	comp=Z,2.7nm,0.8s,baz=256,slow=5.8,SNR=4.8								
KBZ	**Khabaz**	**131.44**	**70***c*	*i* PKIKP		**PKiKP**		**07 03 39.7**	**+0.1**
KIV	**Kislovodsk**	**131.49**	**70**	*e*PKIKP		**PKiKP**		**07 03 39.6**	**-0.2**
KIV				pmax		pmax			
	comp=Z,9.0nm,1.1s								
DBG	**Daneborg**	**132.81**	**14**	*i* P		**PKiKP**		**07 03 42.1**	**+0.7**
NEEM	**North Greenlan**	**133.37**	**3**	*i* P		**PKiKP**		**07 03 44.4**	**+1.5**
FINES	**FINESS Array B**	**135.09**	**43**	PKP		**PKPdf**		**07 03 44.9**	**0.0**
	comp=Z,6.0nm,0.8s,baz=242,slow=3.0,SNR=9.6								
DAG	**Danmarks Havn**	**135.15**	**12**	*i* P		**PKPdf**		**07 03 45.1**	**+0.5**
OBN	**Obninsk**	**135.66**	**55**	⇓*i* PKIKP		**PKPdf**		**07 03 46.5**	**+0.4**
OBN				*e*				07 06 23.6	
OBN				*e*SS		SS		07 24 54.3	+32
OBN				pmax		pmax			
	comp=Z,53nm,2.5s								
OBN				MLR		MLR			
	comp=Z,25nm,9.0s								
ILAR	**Eielson Array**	**137.27**	**321**	PKP		**PKPdf**		**07 03 49.5**	**+0.7**
	comp=Z,4.0nm,0.9s,baz=191,slow=1.1,SNR=27								
BELG	**Belogornoye**	**139.38**	**64**	*i* PKIKP		**PKPdf**		**07 03 53.4**	**+0.3**
ANM	**Nome**	**144.15**	**315**	PKPdf		**PKPdf**		**07 04 00.4**	**-0.9**
ANM	**Nome**	**144.15**	**315**	PKIKP		**PKPdf**		**07 04 00.4**	**-0.9**
RDOG	**Red Dog Mine**	**144.48**	**321**	PKPdf		**PKPdf**		**07 04 01.4**	**-0.4**
KSH2	**Kashi**	**146.36**	**101**	P		**PKPab**		**07 04 07.5**	**-0.8**
KSH2				pmax		pmax			
	comp=Z,18nm,0.7s								
ARSB	**Arslanbob**	**146.43**	**96**	PKPdf		**PKPbc**		**07 04 06.6**	**-1.0**
ARSB	**Arslanbob**	**146.43**	**96**	PKP2		**PKPbc**		**07 04 06.6**	**-1.0**
ARTI	**Arti**	**146.82**	**63**	PKPbc		**PKPbc**		**07 04 07.7**	**-0.3**
ARTI	**Arti**	**146.82**	**63***c*	*i* PKP2		**PKPbc**		**07 04 07.9**	**-0.1**
ARTI				pmax		pmax			
	comp=Z,32nm,1.3s								
PZH	**PanZhiHua**	**147.68**	**149**	PKPbc		**PKPbc**		**07 04 10.3**	**-1.2**
AAK	**Ala-Archa**	**148.15**	**96**			**PKPbc**		**07 04 12.2**	**-0.1**
AAK	**Ala-Archa**	**148.15**	**96**	*i* PKIKP		**PKPdf**		**07 04 09.0**	**0.0**
BORK	**Borovoye**	**151.60**	**75**	PKPbc		**PKiKP**		**07 04 20.4**	**-0.1**
BORK	**Borovoye**	**151.60**	**75***c*	*i* PKIKP		**PKiKP**		**07 04 20.6**	**+0.1**
BORK				pmax		pmax			
	comp=Z,13nm,1.0s								
BVAR	**Borovoye Array**	**151.62**	**75**	PKP		**PKPdf**		**07 04 13.8**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=236,slow=2.7,SNR=3.8								
BVAR				PKPbc		**PKiKP**		**07 04 20.3**	**-0.4**
	comp=Z,14nm,0.8s,baz=270,slow=2.7,SNR=39								
BVAR				PKPab		**PKPab**		**07 04 28.1**	**-0.9**
	comp=Z,7.3nm,0.8s,baz=246,slow=4.1,SNR=9.7								
CD2	**Chengdu**	**152.40**	**149**	PKPbc		**PKPdf**		**07 04 16.0**	**+0.1**
KURBB	**Kurchatov Arra**	**155.01**	**85**	PKP		**PKPdf**		**07 04 18.5**	**-0.4**
	comp=Z,0.6nm,0.9s,baz=252,slow=1.7,SNR=4.9								
KURBB				PKPbc				07 04 27.3	
	comp=Z,1.3nm,0.6s,baz=241,slow=2.9,SNR=13								
KURBB				PKPab		**PKPab**		**07 04 42.3**	**-1.1**
	comp=Z,2.4nm,0.7s,baz=246,slow=5.2,SNR=12								
MKAR	**Makanchi Array**	**155.08**	**96**	PKP		**PKPdf**		**07 04 19.0**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=270,slow=1.3,SNR=6.7								
MKAR				PKPbc				07 04 27.5	
	comp=Z,0.8nm,0.7s,baz=270,slow=1.4,SNR=6.6								
MKAR				PKPab		**PKPab**		**07 04 42.6**	**-1.2**
	comp=Z,0.8nm,0.5s,baz=245,slow=5.1,SNR=9.2								
KURK	**Kurchatov**	**155.11**	**85**	PKIKP		**PKPdf**		**07 04 18.5**	**-0.5**
KURK								07 04 42.3	
XAN	**Xi'an**	**156.71**	**156**	PKP		**PKPdf**		**07 04 23.3**	**+1.5**
HHC	**Hu-ho-hao-te**	**163.82**	**157**	*eP*		**PKPdf**		**07 04 26.5**	**-3.0**

*NNC **30** 06:55:56.4±0.8,51.91N×74.33E,h0km,mb3.0,mpv2.6, Error ellipse: s-maj=61.7km s-min=4.9km az=25.0, Suspected Mining explosion.*
*IDC **30** 06:55:58.5±0.8,51.89N×74.27E,h0km,mbtmp2.7/4, ML2.3/3,Error ellipse: s-maj=32.9km s-min=6.3km az=27.0*

ISC 30 06:55:57.7±1.1,51.9N±0.1×74.29E±0.0,h0km,n9, σ1s21/10,4C-2D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BVA0	**Borovoye Array**	**2.65**	**297**	Pg	**Pb**	**06 56 45.0**	**-1.0**
	1.4nm,0.4s,baz=118,slow=17,SNR=17						
BVA0				⇓Lg	Lg	06 57 19.5	
	4.9nm,0.4s,baz=113,slow=22,SNR=12						
BVAR	**Borovoye Array**	**2.65**	**297**	Pn	**Pn**	**06 56 42.8**	**+1.1**
	0.4nm,0.3s,baz=123,slow=16,SNR=16						
BVAR				Pg	**Pb**	**06 56 45.2**	**-0.8**
	0.4nm,0.3s,baz=116,slow=16,SNR=19						
BVAR				Lg	Lg	06 57 19.5	
	1.1nm,0.3s,baz=114,slow=28,SNR=32						
	2.9nm,0.3s						
KURBB	**Kurchatov Arra**	**2.94**	**113**	Pn	**Pn**	**06 56 47.0**	**+1.3**
	0.2nm,0.3s,baz=298,slow=14,SNR=18						
KURBB				Pg	**Pb**	**06 56 50.3**	**-0.7**
	0.3nm,0.3s,baz=304,slow=17,SNR=9.8						
KURBB				Lg	Lg	06 57 30.5	
	0.3nm,0.3s,baz=303,slow=31,SNR=4.5						
	0.9nm,0.4s						
KURBB	**Kurchatov Arra**	**2.94**	**113**	⇑Pg	**Pb**	**06 56 50.6**	**-0.4**
	1.8nm,0.3s						
KURBB				⇑Lg	Lg	06 57 28.7	
	25nm,0.7s						
KURK	**Kurchatov**	**2.96**	**111**	⇓Pg	**Pb**	**06 56 50.6**	**-0.6**
	0.6nm,0.4s						
KURK				⇑Lg	Lg	06 57 28.3	
	4.7nm,0.9s						
I46RU	**ZALESOVO INFRA**	**6.71**	**68**	I	I	07 36 20.0	
	baz=258,slow=326,SNR=4.8						
ZALV	**Zalesovo Beam**	**6.71**	**68**	Pn	**Pn**	**06 57 38.1**	**+0.8**
	1.1nm,0.5s,baz=263,slow=13,SNR=5.3						
MK31	**Makanchi Array**	**7.29**	**131**	⇑Lg	Lg	06 59 48.9	
	1.9nm,0.7s,baz=323,slow=31,SNR=4.5						
MKAR	**Makanchi Array**	**7.29**	**131**	Pn	**Pn**	**06 57 46.3**	**+1.0**
	0.1nm,0.3s,baz=324,slow=11,SNR=2.7						
MKAR				Sn	**Sn**	**06 59 07.0**	**-1.7**
	0.2nm,0.3s,baz=312,slow=21,SNR=2.1						
MKAR				Lg	Lg	06 59 45.8	
	0.3nm,0.3s,baz=325,slow=25,SNR=6.4						
	0.1nm,0.3s						

WBNET 30 07:09:12.0,50.26N×12.45E,h10km,MI0.2,4C-4D, Germany

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LBCW	**Luby**	**0.02**	**278**	⇑P	Pg	07 09 14.0	+0.1
LBCW				S	Sg	07 09 15.4	+0.2
STCW	**Studenec**	**0.04**	**94**	⇓P	Pg	07 09 14.1	+0.1
STCW				S	Sg	07 09 15.4	-0.1
VAC	**Vackov**	**0.06**	**240**	⇓P	Pg	07 09 14.2	+0.1
VAC				S	Sg	07 09 15.5	-0.1
POCW	**Potky**	**0.06**	**346**	⇑P	Pg	07 09 14.3	+0.1
POCW				S	Sg	07 09 15.8	0.0
KVC	**Kvetna**	**0.07**	**143**	⇓P	Pg	07 09 14.3	+0.1
KVC				S	Sg	07 09 15.8	0.0
KRCW	**Kraslice**	**0.09**	**36**	⇑P	Pg	07 09 14.5	0.0
KRCW				S	Sg	07 09 16.1	-0.2
KOCW	**Kopaniny**	**0.14**	**271**	⇓P	Pg	07 09 15.2	0.0
KOCW				S	Sg	07 09 17.3	-0.1
ZHC	**Zelena Hora**	**0.21**	**205**	⇑P	Pg	07 09 16.5	+0.1
ZHC				S	Sg	07 09 19.5	+0.1

*VIE **30** 07:10:12.5±0.2,46.49N×14.34E,h10km±2km, mb1.7/9, ml2.2/12,Error ellipse: s-maj=0.8km s-min=0.8km az=38.0 4 km WNW of Zell Pfarre felt 3-4 ems98 at Ferlach / Carinthia*
*LJU **30** 07:10:12.2,46.50N×14.33E,h12km,ML1.9*

ROM 30 07:10:12.3±0.2,46.476N±0.006×14.327E±0.008, h7km±1km,ML1.9/16,1C,Error ellipse: s-maj=0.6km s-min=0.6km az=205.0,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OBKA	**Obir**	**0.16**	**78**	*i* Pg	Pg	07 10 16.0	+0.5
	11nm,0.1s,SNR=279						
OBKA				*e*Sg	Sg	07 10 18.6	+0.8
	97nm,0.1s						
MOZS	**Mozjanca**	**0.20**	**156**	*i* Pg	Pg	07 10 17.1	+0.8
MOZS				*i* Sg	Sg	07 10 20.3	+1.3
MOZS				IAML		07 10 21.0	
	comp=Z,68nm,0.1s						
GORS	**Gorjuse**	**0.28**	**235**	*i* Pg	Pg	07 10 18.5	+0.6
GORS				*i* Sg	Sg	07 10 23.0	+1.5
GORS				IAML		07 10 23.4	
	comp=Z,296nm,0.1s						
CRNS	**Crni Vrh**	**0.40**	**187**	*i* Pg	Pb	07 10 21.0	-0.7
CRNS				IAML		07 10 27.7	
	comp=Z,33nm,0.1s						
LJU	**Ljubljana**	**0.45**	**162**	*i* Pg	Pg	07 10 21.9	+0.8
LJU				IAML		07 10 29.4	
	comp=Z,34nm,0.1s						
LJU	**Ljubljana**	**0.45**	**162**	P	Pg	07 10 21.9	+0.8
LJU				S	Sb	07 10 29.0	-0.7
LJU				AML	AML		
	comp=N,1142μm,0.1s						
LJU				AML	AML		
	comp=E,916μm,0.9s						
LJU				AML	AML		
	comp=E,916μm,1.1s						
VNDS	**Vrh nad Dolski**	**0.46**	**145**	*i* Pg	Pg	07 10 21.9	+0.7
VNDS				*i* Sg	Sg	07 10 28.2	+1.1
VNDS				IAML		07 10 30.9	
	comp=Z,24nm,0.1s						
CADS	**Cadrg**	**0.48**	**239**	*i* Pg	Pg	07 10 21.9	+0.3
CADS				*i* Sg	Sb	07 10 29.3	-1.1
CADS				IAML		07 10 30.7	
	comp=Z,40nm,0.1s						
ZAVS	**Zavodnje**	**0.48**	**95**	*i* Pg	Pg	07 10 22.0	+0.3
ZAVS				*i* Sg	Sg	07 10 29.1	+1.1
ZAVS				IAML		07 10 29.7	
	comp=Z,59nm,0.1s						
MYKA	**Terra Mystica**	**0.50**	**288**	*i* Pg	Pg	07 10 22.5	+0.6
	comp=Z,0.5nm,0.1s						
MYKA				*i* Sg	Sg	07 10 29.6	+1.1
	comp=Z,1.8nm,0.0s,SNR=10						
SOKA	**Soboth**	**0.53**	**67**	*i* Pg	Pg	07 10 22.6	+0.1
	comp=Z,0.8nm,0.0s,SNR=14						
SOKA				*e*Sg	Sg	07 10 29.4	0.0
	comp=Z,26nm,0.1s						
PRED	**Cave del Predi**	**0.53**	**267**	P	Pg	07 10 23.1	+0.6
PRED				S	Sb	07 10 31.4	-0.5
VOJS	**Vojsko**	**0.54**	**215**	*i* Pg	Pg	07 10 23.0	+0.3
VOJS				IAML		07 10 35.6	
	comp=Z,14nm,0.1s						
GBAS	**Gorenja Brezov**	**0.55**	**172**	*i* Pg	Pg	07 10 23.4	+0.5
GBAS				IAML		07 10 32.5	
	comp=Z,34nm,0.1s						
LSR	**Lussari**	**0.55**	**270**	*e*Pg	Pb	07 10 23.8	-0.7
LSR				*e*Sg	Sb	07 10 32.3	-0.4
DRE	**Drenchia**	**0.56**	**238**	*e*Pg	Pb	07 10 24.1	-0.5
DRE				*e*Sg	Sb	07 10 32.3	-0.5
DRE	**Drenchia**	**0.56**	**238**	P	Pg	07 10 23.7	+0.5
DRE				S	Sb	07 10 32.5	-0.3
ACOM	**Acomizza, Ital**	**0.57**	**278**	*e*Pg	Pg	07 10 23.9	+0.6
ACOM				*e*Sg	Sb	07 10 32.2	-0.9
ACOM	**Acomizza, Ital**	**0.57**	**278**	P	Pg	07 10 23.9	+0.6
ACOM				S	Sb	07 10 32.2	-0.9
ACOM				AML	AML		
	comp=E,236μm,1.3s						
ACOM				AML	AML		
	comp=E,256μm,1.3s						
ACOM				AML	AML		
	comp=E,236μm,0.7s						
ACOM				AML	AML		
	comp=N,216μm,0.5s						
ACOM				AML	AML		
	comp=N,239μm,1.3s						
ACOM				AML	AML		
	comp=E,256μm,0.7s						
PERS	**Pernice**	**0.57**	**73**	*i* Pg	Pg	07 10 23.6	+0.3
PERS				*i* Sg	Sg	07 10 30.7	0.0
PERS				IAML		07 10 31.4	
	comp=Z,24nm,0.1s						
JAVS	**Javornik**	**0.61**	**197**	*i* Pg	Pg	07 10 24.2	+0.1
JAVS				IAML		07 10 35.7	
	comp=Z,26nm,0.1s						
ROBS	**Robic**	**0.61**	**248**	*i* Pg	Pg	07 10 24.3	+0.2
ROBS				*i* Sg	Sb	07 10 33.2	-1.0
ROBS				IAML		07 10 35.1	
	comp=Z,12nm,0.1s						
PDKS	**Podkum**	**0.62**	**131**	*i* Pg	Pg	07 10 24.9	+0.6
PDKS				IAML		07 10 34.8	
	comp=Z,25nm,0.2s						
PTCC	**Patocco-Chiusa**	**0.68**	**264**	P	Pb	07 10 26.0	-0.5
PTCC				S	Sb	07 10 35.5	-0.6
PTCC				AML	AML		
	comp=N,52μm,0.2s						
PTCC				AML	AML		
	comp=E,60μm,0.3s						
PTCC				AML	AML		
	comp=N,52μm,0.2s						
PTCC				AML	AML		
	comp=N,52μm,1.8s						
SABO	**M.te Sabotino**	**0.71**	**226**	P	Pg	07 10 25.9	0.0
SABO				S	Sb	07 10 36.8	-0.2
CEY	**Cerknica**	**0.74**	**175**	*i* Pg	Pb	07 10 27.2	-0.3
CEY				IAML		07 10 39.9	
	comp=Z,26nm,0.1s						
VINO	**Villanova**	**0.76**	**254**	*e*Pg	Pb	07 10 27.4	-0.4
VINO				*e*Sg	Sb	07 10 38.5	+0.1
VINO	**Villanova**	**0.76**	**254**	P	Pg	07 10 27.1	+0.3
VINO				AML	AML		
	comp=E,68μm,1.6s						
VINO				AML	AML		
	comp=N,89μm,1.2s						
VINO				AML	AML		
	comp=N,89μm,0.8s						
VINO				AML	AML		
	comp=E,68μm,0.4s						
VISS	**Visnje**	**0.76**	**152**	*i* Pg	Pb	07 10 27.5	-0.4
VISS				IAML		07 10 39.8	
	comp=Z,18nm,0.1s						
BAD	**Bernadia**	**0.79**	**253**	*e*Pg	Pb	07 10 28.0	-0.4
BAD				*e*Sg	Sb	07 10 40.0	+0.8
BAD	**Bernadia**	**0.79**	**253**	P

DDMP	**Don Marcelino,**	**0.88**	**358**	*i* P		**Pn**	**07 16 01.6**	**+0.6**
DDMP				*e*S		**Sn**	**07 16 22.0**	**-1.6**
GSPH	**General Santos**	**1.18**	**317**	*i* P		Pn	07 15 56.9	-6.2
GSPH				*i* S		**Sn**	**07 16 24.6**	**-2.7**
SGSI	**Sangihe**	**1.54**	**188**	P		**Pn**	**07 16 06.4**	**+0.4**
SGSI				S		**Sn**	**07 16 32.0**	**-0.5**
DAV	**Davao City (W)**	**1.85**	**355**	P		**Pn**	**07 16 10.0**	**+1.1**
CDOP	**Cateel, Davao**	**2.64**	**15**	*e*P		**Pn**	**07 16 18.5**	**+1.1**
CDOP				*e*S		**Sn**	**07 16 52.9**	**-0.2**
BIPH	**Bislig**	**3.01**	**12**	*e*P		**Pn**	**07 16 23.0**	**+1.3**
BIPH				*e*S		**Sn**	**07 17 01.1**	**+0.4**
TSSP	**Tandag City**	**3.83**	**7**	*e*P		**Pn**	**07 16 32.3**	**+0.7**
TNTI	**Ternate**	**4.70**	**160**	Pn		**Pn**	**07 16 38.0**	**-4.5**
TNTI				Sn		**Sn**	**07 16 33.9**	**-4.4**
TNTI	**Ternate**	**4.70**	**160**	P		**Pn**	**07 16 42.7**	**+0.1**
GTOI	**Gorontalo**	**5.31**	**211**	P		**Pn**	**07 16 51.4**	**+1.1**
KRAI	**Karang Ratu**	**8.88**	**163**	P		**Pn**	**07 17 38.0**	**+1.3**
KKM	**Kota Kinabalu**	**9.52**	**275**	Pn		Pn	07 17 37.5	-7.6
SAUI	**Saumlaki**	**14.23**	**157**	Pn		**Pn**	**07 18 43.9**	**-0.9**
MTN	**Manton Dam**	**18.72**	**163**	P		**P**	**07 19 36.7**	**+1.0**
MTN				IAmb		IAmb	07 19 38.4	
	comp=Z,12nm,1.2s							
NACB	**Ninganchiao**	**19.27**	**348**	P		**P**	**07 19 38.4**	**-3.1**
NACB				IAmb		IAmb	07 20 07.7	
	comp=Z,14nm,0.8s							
GUMO	**Guam**	**20.60**	**65**	P		**P**	**07 19 56.4**	**+0.5**
KNRA	**Kununurra**	**20.97**	**172**	P		**P**	**07 20 00.6**	**+0.9**
FITZ	**Fitzroy Crossi**	**23.17**	**180**	P		**P**	**07 20 22.1**	**+1.3**
	comp=Z,2.5nm,0.3s,baz=2.5,slow=8.6,SNR=36							
	comp=Z,2.5nm,0.3s							
WB0	**Warramunga Arr**	**26.24**	**161**	P		**P**	**07 20 49.4**	**+0.7**
WRA	**Warramunga Arr**	**26.39**	**162**	P		**P**	**07 20 50.7**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=343,slow=10,SNR=19							
WRA				ScP		**ScP**	**07 27 32.0**	**+0.5**
	comp=Z,0.3nm,0.8s,baz=344,slow=2.8,SNR=2.5							
	comp=Z,0.8nm,0.6s							
WRA	**Warramunga Arr**	**26.39**	**162**	P		**P**	**07 20 49.6**	**-0.5**
WB2	**Warramunga Arr**	**26.39**	**162**	P		**P**	**07 20 51.9**	**+1.8**
WB2				IAmb		IAmb	07 20 53.7	
	comp=Z,11nm,1.1s							
WR8	**Warramunga Arr**	**26.45**	**161**	P		**P**	**07 20 51.6**	**+1.0**
WR0	**Warramunga Arr**	**26.47**	**161**	P		**P**	**07 20 51.3**	**+0.6**
WR0				IAmb		IAmb	07 20 54.5	
	comp=Z,8.6nm,1.5s							
PSA00	**Pilbara Seismi**	**27.24**	**192**	P		**P**	**07 20 57.8**	**+0.2**
PSA00				IAmb		IAmb	07 20 58.8	
	comp=Z,8.5nm,1.1s							
AS31	**Alice Springs**	**29.79**	**165**	P		**P**	**07 21 21.6**	**+1.4**
AS31				IAmb		IAmb	07 21 23.0	
	comp=Z,1.6nm,0.2s							
ASAR	**Alice Springs**	**29.79**	**165**	P		**P**	**07 21 21.2**	**+1.0**
	comp=Z,0.7nm,0.4s,baz=342,slow=7.0,SNR=35							
ASAR				ScP		**ScP**	**07 27 42.0**	**0.0**
	comp=Z,0.2nm,0.5s,baz=343,slow=3.0,SNR=4.3							
	comp=Z,0.7nm,0.4s							
KSRS	**Korea Array**	**32.15**	**3**	P		**P**	**07 21 41.4**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=186,slow=9.6,SNR=5.5							
	comp=Z,1.1nm,0.5s							
MORW	**Morawa**	**35.34**	**195**	P		**P**	**07 22 08.8**	**+0.4**
FORT	**Forrest**	**35.86**	**177**	P		**P**	**07 22 14.1**	**+1.4**
FORT				IAmb		IAmb	07 22 48.2	
	comp=Z,6.4nm,1.1s							
NWAO	**Narrogin (SRO)**	**38.78**	**191**	P		**P**	**07 22 38.3**	**+1.0**
BBOO	**Buckleboo**	**39.06**	**166**	P		**P**	**07 22 41.2**	**+1.6**
STKA	**Stephens Creek**	**39.86**	**159**	P		**P**	**07 22 48.0**	**+1.8**
	comp=Z,1.1nm,0.6s,baz=324,slow=4.8,SNR=3.1							
	comp=Z,1.1nm,0.6s							
STKA	**Stephens Creek**	**39.86**	**159**	P		**P**	**07 22 48.3**	**+2.1**
SONM	**Songino Array**	**45.59**	**342**	P		**P**	**07 23 30.6**	**-1.6**
TOO	**Toolangi**	**46.37**	**158**	IAmb		IAmb	07 23 38.2	
TOO				P		**P**	**07 23 38.3**	**0.0**
MKAR	**Makanchi Array**	**55.78**	**325**	P		**P**	**07 24 46.7**	**-1.5**
	comp=Z,0.3nm,0.4s,baz=118,slow=9.1,SNR=5.2							
	comp=Z,0.3nm,0.4s							
ZALV	**Zalesovo Beam**	**58.83**	**333**	P		**P**	**07 25 07.5**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=133,slow=7.2,SNR=2.2							
	comp=Z,0.3nm,0.3s							
ZALV	**Zalesovo Beam**	**58.83**	**333**	P		**P**	**07 25 07.2**	**-2.0**
ARSB	**Arslanbob**	**59.12**	**316**	P		**P**	**07 25 08.6**	**-3.1**
ARSB				IAmb		IAmb	07 25 09.0	
	comp=Z,3.3nm,0.6s							
KURBB	**Kurchatov Arra**	**59.97**	**327**	P		**P**	**07 25 15.8**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=128,slow=5.9,SNR=8.3							
	comp=Z,0.4nm,0.5s							
KURK	**Kurchatov**	**59.97**	**327**	P		**P**	**07 25 15.6**	**-1.5**
TIXI	**Tiksi**	**66.38**	**1**	P		**P**	**07 25 59.3**	**+0.4**
TIXI				IAmb		IAmb	07 25 59.4	
	comp=Z,3.9nm,0.6s							
O15K	**Ungalikthiuk R**	**77.58**	**31**	P		**P**	**07 27 07.8**	**+2.2**
O15K				IAmb		IAmb	07 27 08.7	
	comp=Z,7.9nm,1.1s							
G16K	**Koyuk River**	**77.79**	**24**	P		**P**	**07 27 07.9**	**+1.3**
G16K				IAmb		IAmb	07 27 36.9	
	comp=Z,6.1nm,1.5s							
IL31		**84.19**	**25**	P		**P**	**07 27 40.9**	**+0.4**
IL31				IAmb		IAmb	07 28 16.0	
	comp=Z,3.4nm,1.3s							
ILAR	**Eielson Array**	**84.19**	**25**	P		**P**	**07 27 41.0**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=257,slow=5.3,SNR=11							
	comp=Z,0.4nm,0.5s							
J25K	**Salcha River,**	**84.84**	**26**	P		**P**	**07 27 44.4**	**+0.5**
BMRM	**Bremner River**	**85.31**	**29**	P		**P**	**07 27 47.8**	**+1.6**
BMRM				IAmb		IAmb	07 28 12.9	
	comp=Z,10nm,1.0s							
I27K	**Kandik River**	**86.38**	**25**	P		**P**	**07 27 50.8**	**-0.6**
SPITS	**Spitsbergen Ar**	**88.84**	**349**	P		**P**	**07 28 02.5**	**-0.3**
	comp=Z,5.3nm,0.9s,baz=70,slow=5.1,SNR=4.1							
	comp=Z,5.3nm,0.9s							

*IDC **30** 07:23:39.5±1.2,42°.21N×144°.59E, h0km, mb3.5/8, mbtmp3.5/10, ML3.1/2, MS2.7/2, Error ellipse: s-maj=26.7km s-min=23.4km az=60.0*
*SKHL **30** 07:23:42.5±0.1,42°.20N×144°.60E, h30km±3km, mb4.6/3*
*NIED **30** 07:23:44.0,42°.39N×144°.64E, h37km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr-2.16; Mθθ2.37; Mφφ-0.21; Mrθ-2.07; Mθφ1.59; Mφr-1.61; Fault plane solution: M₀3.74000×10¹⁴ NP1: φs262.00000°,δ25.00000°,λ-63.00000°. NP2:φs53.00000°, δ68.00000°,λ-102.00000°.*
*JMA **30** 07:23:44.0±0.1,42°.4N±0°.2×144°.6E±0°.4, h37km, MV3.6/40, SE OFF TOKACHI*

ISC 30 07:23:44.1±1.4, 42°.39N±0°.06×144°.59E±0°.04, h28km±9km, n32, σ1ᵉ06/35, mb3.5/8, 2D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAK	**Akkeshi**	**0.62**	**8**	P	**Pb**	**07 23 56.0**	**-0.4**
JAK				S	**Sb**	**07 24 04.4**	**-0.4**
AKK	**Akkeshi**	**0.66**	**17**	*e*P	**Pb**	**07 23 56.6**	**-0.5**
JOB	**Onbets**	**0.76**	**313**	P	**Pn**	**07 23 58.8**	**-0.1**
JOB				*e*S	**Sb**	**07 24 08.8**	**+0.1**
JKHN	**Kushirohamanak**	**0.82**	**31**	P	**Pn**	**07 23 59.2**	**-0.5**
JCH	**Churui**	**0.93**	**285**	S	**Sn**	**07 24 14.2**	**+0.4**
JAR	**Ashorobuto**	**1.09**	**327**	⇓P	**Pn**	**07 24 03.0**	**-0.5**
JAR				⇓*e*S	**Sn**	**07 24 15.6**	**-2.1**
JEM	**Erimo**	**1.12**	**251**	P	**Pb**	**07 24 05.1**	**+0.2**
JEM				*e*S	**Sb**	**07 24 19.4**	**+0.2**
JNK	**Nakash**	**1.20**	**5**	P	**Pn**	**07 24 04.1**	**-1.0**
JNK				*e*S	**Sn**	**07 24 19.5**	**-0.9**
NMR	**Nemuro--Hokkai**	**1.29**	**40**	*e*P	**Pn**	**07 24 05.4**	**-0.9**
NMR				*e*S	**Sn**	**07 24 22.5**	**-0.1**
NEM2	**Nemuro 2**	**1.30**	**41**	P	**Pn**	**07 24 05.4**	**-0.9**
NEM2				*e*S	**Sn**	**07 24 21.3**	**-1.4**
JNBK	**Urakawa-nobuka**	**1.36**	**266**	P	**Pn**	**07 24 07.5**	**+0.3**
GLVR	**Golovnino**	**1.52**	**26**	*e*P	**Pn**	**07 24 09.7**	**+0.4**
GLVR				AMB	AMB	07 24 10.3	
	250nm,0.2s						
GLVR				*e*S	**Sn**	**07 24 29.7**	**+1.6**
GLVR				A	A	07 24 33.4	
	530nm,0.3s						
GLVR				A	A	07 24 33.4	
	740nm,0.3s						
JRA	**Rausu**	**1.60**	**14**	P	**Pn**	**07 24 10.0**	**-0.5**
YUK	**Yuzh-Kuril'sk**	**1.89**	**29**	*e*P	**Pn**	**07 24 14.6**	**+0.1**
YUK				AMB	AMB	07 24 15.1	
	80nm,0.2s						
YUK				*e*S	**Sn**	**07 24 37.8**	**+0.4**
YUK				A	A	07 24 43.0	
	230nm,0.3s						
YUK				A	A	07 24 43.0	
	640nm,0.3s						

SHO	**Shikotan**	**2.21**	**47**	*e*P		Pb	07 24 29.7	+6.3
SHO				AMB		AMB	07 24 31.4	
	20nm,0.2s							
SHO				*e*S		**Sb**	**07 24 53.3**	**+2.9**
SHO				A		A	07 24 58.6	
	130nm,0.3s							
SHO				A		A	07 24 58.6	
	130nm,0.3s							
ASAJ	**Asahikawa**	**2.26**	**321**	Pn		**Pn**	**07 24 21.4**	**+1.8**
	4.6nm,0.3s,baz=192,slow=15,SNR=24							
ASAJ				Sn		**Sb**	**07 24 52.5**	**+0.7**
	18nm,0.3s,baz=313,slow=13,SNR=13							
	28nm,0.5s							
MJAR	**Matsushiro Arr**	**7.64**	**222**	Pn		**Pn**	**07 25 32.2**	**-1.3**
	0.1nm,0.3s,baz=28,slow=14,SNR=9.2							
MJAR				LR		LR	07 28 58.7	
	comp=Z,39nm,18.2s,baz=40,slow=42							
	1.5nm,0.3s							
KLR	**Kul'dur**	**11.27**	**312**	LR		LR	07 31 12.5	
	comp=Z,42nm,18.2s,baz=158,slow=40							
SONM	**Songino Array**	**27.30**	**295**	P		**P**	**07 29 25.0**	**-1.2**
	0.3nm,0.4s,baz=91,slow=8.6,SNR=2.3							
	0.3nm,0.4s							
H11N2	**WAKE ISLAND Hy**	**29.42**	**133**	T		T	08 00 58.1	
	baz=326,slow=75,SNR=54							
H11N1	**WAKE ISLAND Hy**	**29.43**	**133**	T		T	08 01 00.5	
	baz=326,slow=75,SNR=40							
H11N3	**WAKE ISLAND Hy**	**29.43**	**133**	T		T	08 01 03.7	
	baz=326,slow=75,SNR=31							
H11S1	**WAKE ISLAND Hy**	**30.32**	**135**	T		T	08 02 12.1	
	baz=328,slow=76,SNR=37							
H11S3	**WAKE ISLAND Hy**	**30.32**	**135**	T		T	08 02 11.9	
	baz=328,slow=76,SNR=30							
H11S2	**WAKE ISLAND Hy**	**30.34**	**135**	T		T	08 02 12.2	
	baz=328,slow=76,SNR=22							
MKAR	**Makanchi Array**	**43.56**	**298**	P		**P**	**07 31 46.0**	**+0.7**
	0.4nm,0.6s,baz=73,slow=5.5,SNR=6.9							
	0.4nm,0.6s							
ILAR	**Eielson Array**	**43.69**	**35**	P		**P**	**07 31 47.5**	**+1.4**
	0.3nm,0.7s,baz=276,slow=8.5,SNR=4.1							
	0.3nm,0.7s							
KURBB	**Kurchatov Arra**	**44.82**	**304**	P		**P**	**07 31 55.9**	**+0.6**
	0.8nm,0.7s,baz=74,slow=9.0,SNR=6.8							
	0.8nm,0.7s							
BVAR	**Borovoye Array**	**48.92**	**310**	P		**P**	**07 32 27.3**	**0.0**
	0.6nm,0.5s,baz=62,slow=7.0,SNR=3.9							
	0.6nm,0.5s							
FINES	**FINESS Array B**	**65.22**	**332**	P		**P**	**07 34 22.3**	**-0.1**
	1.7nm,0.8s,baz=27,slow=5.8,SNR=3.4							
	1.7nm,0.8s							
ASAR	**Alice Springs**	**66.46**	**191**	P		**P**	**07 34 29.2**	**-1.6**
	0.5nm,1.0s,baz=351,slow=6.1,SNR=2.5							
	0.5nm,1.0s							
TXAR	**Lajitas Array**	**84.97**	**55**	P		**P**	**07 36 17.6**	**+0.6**
	0.1nm,0.7s,baz=312,slow=4.5,SNR=1.7							
	0.1nm,0.7s							

*NEIC **30** 07:45:35.9±1.6, 18°.84N±0°.06×145°.9E±0°.1, h143km±8km, mb4.4/20, Error ellipse: s-maj=17.1km s-min=2.7km az=117.0*
*IDC **30** 07:45:39.2±2.8, 18°.84N×145°.82E, h176km±28km, mb3.1/8, mbtmp3.6/9, Error ellipse: s-maj=35.6km s-min=18.0km az=93.0*

ISC 30 07:45:32.6±0.6, 19°.00N±0°.06×145°.9E±0°.1, h109km, n33, σ1ᵉ69/35, mb4.3/17, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DPSS	**Saipan**	**3.74**	**182**	Pn	**Pn**	**07 46 29.6**	**+1.2**
DPSS				Sn	**Sn**	**07 47 13.5**	**+1.8**
GUMO	**Guam**	**5.47**	**191**	P	Pn	07 46 57.5	+5.7
	80nm,0.9s,baz=206,slow=18,SNR=1.4						
GUMO				S	**Sn**	**07 47 58.1**	**+4.6**
	58nm,0.4s,baz=35,slow=22,SNR=2.9						
GUMO	**Guam**	**5.47**	**191**	Pn	**Pn**	**07 46 53.2**	**+1.4**
GUMO				Sn	**Sn**	**07 47 53.5**	**0.0**
JMZ	**Minamidaito 2**	**15.20**	**299**	Pn	**P**	**07 49 03.4**	**-0.5**
JOW	**Kunigami**	**18.03**	**299**	P	**Pn**	**07 49 36.2**	**0.0**
INU	**Inuyama**	**18.10**	**336**	P	**Pn**	**07 49 38.1**	**+1.2**
INU				IAmb	IAmb	07 50 02.2	
	comp=Z,26nm,1.5s						
KLR	**Kul'dur**	**32.26**	**342**	P	**P**	**07 51 52.4**	**+1.8**
	comp=Z,1.1nm,0.5s,baz=170,slow=11,SNR=3.9						
	comp=Z,1.1nm,0.5s						
COEN	**Coen**	**32.86**	**185**	P	**P**	**07 51 54.0**	**-2.2**
COEN				IAmb	IAmb	07 52 08.8	
	comp=Z,19nm,1.5s						
KNRA	**Kununurra**	**38.38**	**207**	P	**P**	**07 52 41.9**	**-1.5**
KNRA				IAmb	IAmb	07 53 07.1	
	comp=Z,8.4nm,1.3s						
WB0	**Warramunga Arr**	**40.15**	**197**	P	**P**	**07 52 57.0**	**-1.1**
WB0				IAmb	IAmb	07 53 11.4	
	comp=Z,8.0nm,1.4s						
WR8	**Warramunga Arr**	**40.30**	**197**	P	**P**	**07 52 56.8**	**-2.6**
WRA	**Warramunga Arr**	**40.33**	**197**	P	**P**	**07 52 58.2**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=8.4,slow=8.3,SNR=9.6						
	comp=Z,0.2nm,0.3s						
WRA	**Warramunga Arr**	**40.33**	**197**	P	**P**	**07 52 55.2**	**-4.5**
ASAR	**Alice Springs**	**44.00**	**196**	P	**P**	**07 53 27.7**	**-1.7**
	comp=Z,0.2nm,0.7s,baz=10,slow=6.6,SNR=2.4						
	comp=Z,0.2nm,0.7s						
AKUT	**Akutan**	**50.80**	**35**	P	**P**	**07 54 21.3**	**-0.3**
CNBA	**Chernabura Isl**	**54.41**	**35**	P	**P**	**07 54 49.3**	**+1.1**
F15K	**North Star Dit**	**56.69**	**22**	P	**P**	**07 55 04.8**	**+0.4**
L16K	**Owhat River**	**56.93**	**28**	P	**P**	**07 55 05.5**	**-0.6**
L16K				IAmb	IAmb	07 55 32.0	
	comp=Z,7.5nm,1.4s						
MKAR	**Makanchi Array**	**58.42**	**314**	P	**P**	**07 55 17.0**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=99,slow=8.9,SNR=2.4						
	comp=Z,0.3nm,0.8s						
H18K	**Honhosa River**	**58.77**	**24**	P	**P**	**07 55 20.9**	**+1.9**
H18K				IAmb	IAmb	07 55 54.9	
	comp=Z,6.8nm,1.4s						
SLKM	**Skilak Lake**	**60.82**	**31**	P	**P**	**07 55 34.7**	**+1.6**
SLKM				IAmb	IAmb	07 56 07.2	
	comp=Z,21nm,1.4s						
D20K	**Etivluk River**	**60.85**	**21**	P	**P**	**07 55 35.4**	**+2.2**
D20K				IAmb	IAmb	07 55 36.3	
	comp=Z,4.7nm,1.2s						
RC01	**Rabbit Creek A**	**61.19**	**30**	P	**P**	**07 55 36.3**	**+0.7**
KURK	**Kurchatov**	**61.20**	**318**	P	**P**	**07 55 34.8**	**-1.0**
KURBB	**Kurchatov Arra**	**61.25**	**318**	P	**P**	**07 55 35.5**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=88,slow=7.4,SNR=1.9						
	comp=Z,0.3nm,0.4s						
ILAR	**Eielson Array**	**63.28**	**26**	P	**P**	**07 55 49.8**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=256,slow=5.9,SNR=5.4						
	comp=Z,0.3nm,0.5s						
BVAR	**Borovoye Array**	**66.39**	**320**	P	**P**	**07 56 09.4**	**-0.5**
	comp=Z,0.9nm,0.5s,baz=92,slow=5.2,SNR=5.1						
	comp=Z,0.9nm,0.5s						
D27M	**Malcolm River**	**66.40**	**22**	P	**P**	**07 56 10.3**	**+0.6**
N31M	**Braeburn, Yuko**	**67.91**	**30**	P	**P**	**07 56 19.0**	**-0.4**
N31M				IAmb	IAmb	07 56 40.0	
	comp=Z,12nm,1.5s						
YKA	**Yellowknife Ar**	**77.62**	**28**	P	**P**	**07 57 16.9**	**+0.3**
	comp=Z,0.1nm,0.6s,baz=293,slow=6.3,SNR=2.5						
	comp=Z,0.1nm,0.6s						
YKA	**Yellowknife Ar**	**77.62**	**28**	P	**P**	**07 57 15.9**	**-0.7**
LNOR	**Lincton Mounta**	**80.51**	**45**	P	**P**	**07 57 32.1**	**-0.7**
LNOR				IAmb	IAmb	07 58 04.2	
	comp=Z,5.6nm,1.1s						
QSPA	**South Pole Qui**	**108.80**	**180**	Pdif	**Pdif**	**07 59 42.5**	**-1.7**

*IDC **30** 07:47:47.7±4.6, 16°.17N×98°.80W, h0km, mb3.4/3, mbtmp3.4/6, ML3.3/3, MS3.0/2, Error ellipse: s-maj=82.4km s-min=20.4km az=6.0*
*MEX **30** 07:47:52.3±0.8, 16°.42N×98°.89W, h6km±7km, MD4.0*

ISC 30 07:47:49.5±1.6, 16°.35N±0°.07×98°.83W±0°.03, h9km±9km, n20, σ1ᵉ37/27, mb3.4/3, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIG	**Cruz Grande**	**0.48**	**323**	*e*P	**Pg**	**07 47 59.5**	**+0.7**
CRIG				*i* S	**Sg**	**07 48 05.0**	**-0.2**
PNIG	**Pinotepa**	**0.68**	**86**	*e*P	**Pn**	**07 48 04.9**	**-0.4**
PNIG				*e*S	**Sn**	**07 48 14.3**	**-1.7**
MGIG	**Malinaltepec**	**0.90**	**12**	*e*P	**Pg**	**07 48 06.8**	**0.0**
MGIG				*e*S	**Sg**	**07 48 18.0**	**-0.6**
DAIG	**Los Arroyos**	**1.03**	**311**	*e*P	**Pb**	**07 48 08.3**	**-1.2**
DAIG				*e*S	**Sb**	**07 48 20.5**	**-2.7**
YOIG	**Yosondua**	**1.33**	**68**	*e*P	**Pg**	**07 48 14.8**	**-0.3**
YOIG				*e*S	**Sg**	**07 48 32.8**	**+0.4**
TXIG	**Tlaxiaco**	**1.36**	**48**	*e*P	**Pb**	**07 48 14.8**	**-0.4**
TXIG				*e*S	**Sb**	**07 48 31.5**	**-1.4**

CAIG	**El Cayaco**	**1.54**	**297**	*e*P		**Pn**	**07 48 15.8**	**-1.3**
PEIG	**Puerto Escondi**	**1.66**	**102**	*e*P		**Pb**	**07 48 18.8**	**-1.4**
FTIG	**Fresnillo de T**	**1.69**	**23**	*e*P		**Pn**	**07 48 19.1**	**-0.2**
FTIG				*e*S		**Sn**	**07 48 38.8**	**-2.4**
HLIG	**Huajuapan de L**	**1.77**	**34**	*e*P		**Pn**	**07 48 20.4**	**-0.1**
HLIG				*e*S		**Sn**	**07 48 42.2**	**-1.1**
TOIG	**Toxpalan**	**2.42**	**44**	*e*P		**Pn**	**07 48 30.0**	**+0.6**
TOIG				*e*S		**Sb**	**07 49 02.5**	**-0.9**
CMIG	**Matias Romero**	**3.85**	**78**	Pn		**Pn**	**07 48 49.1**	**+0.2**
	2.2nm,0.3s,baz=261,slow=14,SNR=26							
CMIG				Sn		**Sn**	**07 49 33.7**	**-0.7**
	4.5nm,0.3s,baz=250,slow=16,SNR=4.4							
CMIG				Lg		Lg	07 49 50.7	
	66nm,0.3s,baz=348,slow=17,SNR=36							
	5.6nm,0.3s							
TXAR	**Lajitas Array**	**13.67**	**342**	Pn		**Pn**	**07 51 07.0**	**+3.3**
	baz=161,slow=14,SNR=5.7							
	0.2nm,0.7s							
ANMO	**Albuquerque**	**19.74**	**341**	P		**Pn**	**07 52 21.7**	**+0.4**
	baz=147,slow=11,SNR=6.7							
ANMO				LR		LR	08 00 47.4	
	comp=Z,71nm,18.6s,baz=151,slow=39							
	0.9nm,0.5s							
PDAR	**Pinedale Array**	**27.88**	**343**	P		**P**	**07 53 41.3**	**+1.4**
	0.5nm,0.8s,baz=151,slow=10,SNR=4.9							
PDAR				LR		LR	08 06 44.8	
	comp=Z,21nm,19.4s,baz=158,slow=40							
	0.5nm,0.8s							
YKA	**Yellowknife Ar**	**47.41**	**350**	P		**P**	**07 56 23.5**	**-0.4**
	0.4nm,0.9s,baz=164,slow=6.7,SNR=6.3							
	0.4nm,0.9s							
H03N2	**Juan Fernandez**	**53.03**	**159**	T		T	08 54 05.2	
	baz=338,slow=77,SNR=32							
H03N1	**Juan Fernandez**	**53.04**	**159**	T		T	08 54 06.0	
	baz=338,slow=77,SNR=50							
H03N3	**Juan Fernandez**	**53.05**	**159**	T		T	08 54 17.6	
	baz=338,slow=77,SNR=56							
ILAR	**Eielson Array**	**58.14**	**338**	P		**P**	**07 57 45.1**	**+1.8**
	0.4nm,1.0s,baz=151,slow=6.7,SNR=4.3							
	0.4nm,1.0s							

*IDC **30** 07:58:47.5±1.2, 9°.55N×58°.18E, h0km, mb3.7/8, mbtmp3.7/8, MS3.2/8, Error ellipse: s-maj=34.2km s-min=27.1km az=60.0*

ISC 30 07:58:50.2±1.3, 9°.6N±0°.2×58°.2E±0°.2, h17km, n16, σ1ᵉ33/8, mb3.5/7, MS3.2/8, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALK	**Pallekele**	**22.41**	**94**	LR	LR	08 10 36.0	
	comp=Z,34nm,18.5s,baz=124,slow=32						
ASF	**Jabal al Asfar**	**29.86**	**322**	LR	LR	08 16 18.6	
	comp=Z,36nm,19.6s,baz=12,slow=35						
MMAI	**Mount Meron Ar**	**31.35**	**321**	LR	LR	08 18 43.4	
	comp=Z,20nm,19.2s,baz=194,slow=38						
GNI	**Garni**	**32.67**	**341**	LR	LR	08 20 00.1	
	comp=Z,42nm,18.5s,baz=170,slow=39						
AAK	**Ala-Archa**	**35.87**	**21**	LR	LR	08 20 41.4	
	comp=Z,40nm,21.0s,baz=228,slow=37						
MKAR	**Makanchi Array**	**42.36**	**25**	P	**P**	**08 06 45.5**	**+2.0**
	0.3nm,0.5s,baz=215,slow=9.8,SNR=2.4						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**44.21**	**19**	P	**P**	**08 06 59.5**	**+1.1**
	0.7nm,0.9s,baz=218,slow=9.1,SNR=2.6						
	0.7nm,0.9s						
BVAR	**Borovoye Array**	**44.40**	**11**	P	**P**	**08 06 59.9**	**0.0**
	0.6nm,0.5s,baz=190,slow=7.3,SNR=3.6						
	0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**49.09**	**21**	P	**P**	**08 07 36.2**	**-0.4**
	2.2nm,0.8s,baz=215,slow=8.8,SNR=5.3						
	2.2nm,0.8s						
TSUM	**Tsumeb**	**49.19**	**234**	LR	LR	08 27 07.1	
	comp=Z,27nm,20.9s,baz=156,slow=35						
BOSA	**Boshof**	**49.55**	**219**	LR	LR	08 26 09.3	
	comp=Z,46nm,19.3s,baz=53,slow=33						
SUR	**Sutherland**	**54.91**	**219**	LR	LR	08 29 30.9	
	comp=Z,38nm,18.7s,baz=106,slow=34						
TORD	**Torodi Ar. Bea**	**55.38**	**279**	P	**P**	**

M_{rr}-2.60; $M_{\theta\theta}$-1.99; $M_{\phi\phi}$4.60; $M_{r\theta}$7.04; $M_{\theta\phi}$1.02; $M_{\phi r}$4.63; Fault plane solution: $M_0$9.34000×10^{14} NP1: ϕ_s338.00000°, δ23.00000°, λ-160.00000°. NP2: ϕ_s230.00000°, δ82.00000°, λ-68.00000°.

*NEIC **30** 08:15:10.5±1.2, 35°.26N±0°.03×140°.4E±0°.1, h24km±5km, mb4.5/11, Mwr3.9/12 Error ellipse: s-maj=11.9km s-min=4.0km az=95.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-2.31; $M_{\theta\theta}$-0.72; $M_{\phi\phi}$3.03; $M_{r\theta}$7.12; $M_{\theta\phi}$4.32; $M_{\phi r}$2.85; Fault plane solution: $M_0$9.22000×10^{14} NP1: ϕ_s247.34000°, δ81.13000°, λ-61.86000°. NP2: ϕ_s353.42000°, δ29.40000°, λ-161.69000°. Principal axes: T 9.6367, Plg30.0000°, Azm315.0000°; N -0.8984, Plg28.0000°, Azm63.0000°; P -8.7383, Plg46.0000°, Azm186.0000°;*

*NEIC **30** 08:15:10.3, 35°.27N×140°.37E, h24km*

ISC 30 08:15:10.8±0.7, 35°.29N±0°.04×140°.37E±0°.05, h30km±5km, n74, σ0°.94/65, mb4.1/18, 9D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I30JP	**ISUMI INFRASON**	**0.05**	**289**	Pg	**Pb**	**08 15 15.3**	**-0.6**
	baz=174,slow=225						
I30JP				Lg	Lg	08 15 19.8	
	baz=174,slow=225						
JCCN	**Chibachonan**	**0.14**	**310**	P	**Pb**	**08 15 15.8**	**-0.7**
JCCN				A	A	08 15 15.8	
	comp=N,278nm,0.9s,comp=E,269nm,0.8s						
JCCN				S	**Sb**	**08 15 20.6**	**+0.2**
KTR	**Katsuura**	**0.15**	**197**	P	**Pb**	**08 15 16.5**	**0.0**
KTR				S	**Sb**	**08 15 20.9**	**+0.5**
JKUC	**kamogawauchiur**	**0.19**	**227**	⇓P	**Pb**	**08 15 16.9**	**0.0**
JKUC				A	A	08 15 16.9	
	comp=N,17nm,0.8s,comp=E,22nm,1.0s						
JKUC				⇓S	**Sn**	**08 15 21.9**	**0.0**
BSO4	**Boso 4**	**0.30**	**185**	P	**Pn**	**08 15 19.4**	**+0.3**
BSO4				X		08 15 27.9	
JSMT	**Sammumatsuo**	**0.36**	**10**	⇓P	**Pb**	**08 15 17.6**	**-1.5**
JSMT				A	A	08 15 17.6	
	comp=N,43nm,1.5s,comp=E,31nm,0.2s						
JSMT				⇓S	**Sb**	**08 15 23.5**	**-1.2**
TATJ	**Tateyama 2**	**0.47**	**237**	A	A	08 15 20.9	
	comp=N,17nm,2.8s,comp=E,17nm,0.7s						
BSO3	**Boso 3**	**0.50**	**167**	⇓*i*P	**Pn**	**08 15 22.0**	**+0.3**
JYO	**Yokosk**	**0.58**	**263**	A	A	08 15 22.0	
	comp=N,22nm,1.3s,comp=E,29nm,0.4s						
JCAJ	**Choshiashikaji**	**0.58**	**43**	A	A	08 15 20.8	
	comp=N,17nm,0.3s,comp=E,8.0nm,0.8s						
TOK	**Tokyo**	**0.64**	**308**	A	A	08 15 21.8	
	comp=N,44nm,0.5s,comp=E,40nm,0.5s						
JIHU	**Itakohorinouch**	**0.68**	**11**	A	A	08 15 22.0	
	comp=N,29nm,0.7s,comp=E,22nm,1.0s						
BSO1	**Boso 1**	**0.81**	**142**	⇓*i*P	**Pn**	**08 15 25.2**	**-0.4**
BSO1				⇓X		08 15 37.6	
JIM2	**Oshima 3**	**0.96**	**234**	⇓*i*P	**Pn**	**08 15 27.3**	**-0.9**
JIM2				A	A	08 15 27.3	
	comp=N,7.0nm,0.6s,comp=E,7.0nm,3.0s						
JIM2				⇓*e*S	**Sn**	**08 15 39.8**	**-1.1**
JOD2	**Odawara 2**	**1.05**	**269**	*i* P	**Pn**	**08 15 28.9**	**-0.6**
JOD2				S	**Sn**	**08 15 42.2**	**-0.9**
JHTM	**Izuhatsuma**	**1.16**	**254**	A	A	08 15 31.4	
	comp=N,9.0nm,0.4s,comp=E,9.0nm,0.4s						
JIZS	**Izushimoda**	**1.35**	**245**	A	A	08 15 34.5	
	comp=N,4.0nm,0.3s,comp=E,4.0nm,0.4s						
JAG	**Ashikaga**	**1.35**	**327**	A	A	08 15 32.8	
	comp=N,2.0nm,3.2s,comp=E,2.0nm,2.4s						
JSG	**Sagara**	**1.90**	**252**	P	**Pb**	**08 15 43.4**	**-1.3**
JSG	**Sagara**	**1.90**	**252**		**Pn**	**08 15 40.2**	**-0.8**
MJAR	**Matsushiro Arr**	**2.15**	**306**	Pn	**Pn**	**08 15 44.8**	**+0.2**
	comp=E,5.4nm,0.3s,baz=139,slow=14,SNR=56						
MJAR				Sn	**Sn**	**08 16 11.4**	**+1.0**
	comp=E,5.7nm,0.3s,baz=144,slow=12,SNR=4.5						
MJAR				LR	LR	08 16 39.8	
	comp=E,195nm,20.8s,baz=133,slow=42 comp=E,16nm,0.4s						
MJAR	**Matsushiro Arr**	**2.15**	**306**		**Pn**	**08 15 43.9**	**-0.7**
MAJO	**Matsushiro**	**2.15**	**306**	P	**Pn**	**08 15 45.5**	**+0.8**
MAJO	**Matsushiro**	**2.15**	**306**		**Pn**	**08 15 44.9**	**+0.3**
MJB9	**Matsu-Tunnel**	**2.16**	**306**		**Pn**	**08 15 44.7**	**0.0**
JHJ	**Hachijo jima 2**	**2.22**	**193**	Pn	**Pn**	**08 15 45.0**	**-0.6**
	comp=E,2μm,0.3s,baz=95,slow=23,SNR=165						
JHJ				Sn	**Sn**	**08 16 11.4**	**-0.6**
	comp=E,442nm,0.3s,baz=75,slow=23,SNR=13						
JHJ				LR	LR	08 16 39.7	
	comp=E,92nm,20.5s,baz=98,slow=42						
JHJ2	**Mitsune**	**2.22**	**192**	P	**Pn**	**08 15 45.6**	**0.0**
JHJ2	**Mitsune**	**2.22**	**192**		**Pn**	**08 15 45.3**	**-0.3**
JGF	**Kuroka**	**2.48**	**278**	P	**Pn**	**08 15 50.5**	**+1.4**
JGF	**Kuroka**	**2.48**	**278**		**Pn**	**08 15 50.1**	**+0.9**
INU	**Inuyama**	**2.74**	**272**	P	**Pn**	**08 15 54.8**	**+2.1**
INU	**Inuyama**	**2.74**	**272**		**Pn**	**08 15 53.3**	**+0.6**
JTM	**Tenmabayashi**	**5.51**	**6**	P	**Pn**	**08 16 31.5**	**+0.7**
JTM	**Tenmabayashi**	**5.51**	**6**	Pn	**Pn**	**08 16 31.2**	**+0.4**
JMN	**Monobe**	**5.58**	**256**	P	**Pn**	**08 16 32.5**	**+0.7**
JCJ	**Chichijima**	**8.32**	**169**	Pn	**Pn**	**08 17 07.0**	**-2.3**
	comp=E,81nm,0.3s,baz=298,slow=23,SNR=19						
JCJ				Sn	**Sn**	**08 18 41.5**	**-0.7**
	comp=E,4.3nm,0.3s,baz=269,slow=21,SNR=1.6						
JCJ	**Chichijima**	**8.32**	**169**		**Pn**	**08 17 08.7**	**-0.7**
ASAJ	**Asahikawa**	**8.98**	**10**	Pn	**Pn**	**08 17 19.1**	**+0.8**
	comp=E,0.7nm,0.3s,baz=212,slow=10.0,SNR=6.2 comp=E,5.0nm,0.7s						
JKA	**Kamikawa-asahi**	**8.98**	**10**		**Pn**	**08 17 18.6**	**+0.2**
KSRS	**Korea Array**	**10.27**	**286**	Pn	**Pn**	**08 17 39.4**	**+3.4**
	comp=E,0.2nm,0.3s,baz=90,slow=14,SNR=4.3						
USRK	**Ussuriysk Ar.**	**10.98**	**327**	Pn	**Pn**	**08 17 45.0**	**-0.8**
	comp=E,0.2nm,0.3s,baz=58,slow=13,SNR=4.0 comp=E,1.4nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.05**	**117**	T	T	08 50 21.1	
	baz=309,slow=75,SNR=370						
H11N1	**WAKE ISLAND Hy**	**28.06**	**117**	T	T	08 50 19.6	
	baz=309,slow=75,SNR=372						
H11N3	**WAKE ISLAND Hy**	**28.07**	**117**	T	T	08 50 20.4	
	baz=309,slow=75,SNR=378						
H11S3	**WAKE ISLAND Hy**	**28.69**	**119**	T	T	08 51 01.2	
	baz=312,slow=76,SNR=167						
H11S1	**WAKE ISLAND Hy**	**28.70**	**119**	T	T	08 51 05.2	
	baz=312,slow=76,SNR=344						
H11S2	**WAKE ISLAND Hy**	**28.71**	**119**	T	T	08 50 58.8	
	baz=312,slow=76,SNR=170						
ZAA0	**Zalesovo Array**	**42.48**	**314**	P	**P**	**08 23 03.5**	**+0.5**
ZALV	**Zalesovo Beam**	**42.48**	**314**	P	**P**	**08 23 03.1**	**+0.1**
	comp=E,1.8nm,0.6s,baz=100,slow=6.1,SNR=8.7 comp=E,1.8nm,0.6s						
ZALV	**Zalesovo Beam**	**42.48**	**314**		**P**	**08 23 03.5**	**+0.5**
MKAR	**Makanchi Array**	**44.35**	**303**	P	**P**	**08 23 17.6**	**-0.5**
	comp=E,0.9nm,0.5s,baz=87,slow=10.0,SNR=12 comp=E,0.9nm,0.5s						
KURK	**Kurchatov**	**46.36**	**309**		**P**	**08 23 34.1**	**+0.1**
KURK				IAmb	IAmb	08 23 43.6	
	comp=E,6.5nm,0.8s						
KURBB	**Kurchatov Arra**	**46.42**	**309**	P	**P**	**08 23 34.0**	**-0.5**
	comp=E,3.3nm,0.6s,baz=83,slow=7.6,SNR=27 comp=E,3.3nm,0.6s						
COEN	**Coen**	**49.05**	**176**	P	**P**	**08 23 55.7**	**+0.6**
COEN				IAmb	IAmb	08 24 01.3	
	comp=E,4.9nm,0.8s						
BVAR	**Borovoye Array**	**51.13**	**313**	P	**P**	**08 24 11.2**	**+0.6**
	comp=E,0.7nm,0.5s,baz=81,slow=9.1,SNR=3.8 comp=E,0.7nm,0.5s						
ILAR	**Eielson Array**	**51.42**	**32**	P	**P**	**08 24 12.8**	**+0.2**
	comp=E,0.8nm,0.8s,baz=267,slow=6.1,SNR=10 comp=E,0.8nm,0.8s						
KNRA	**Kununurra**	**51.87**	**194**	P	**P**	**08 24 16.6**	**+0.1**
KNRA				IAmb	IAmb	08 24 19.4	
	comp=E,2.8nm,0.5s						
WB0	**Warramunga Arr**	**55.05**	**187**	P	**P**	**08 24 39.4**	**-0.4**
WB0				IAmb	IAmb	08 24 41.9	
	comp=E,4.6nm,0.7s						
WRAB	**Tennant Creek**	**55.22**	**187**	P	**P**	**08 24 40.6**	**-0.4**
WRAB				IAmb	IAmb	08 24 43.3	
	comp=E,4.2nm,0.9s						
WR8	**Warramunga Arr**	**55.23**	**187**	P	**P**	**08 24 40.3**	**-0.7**
WR8				IAmb	IAmb	08 24 43.3	
	comp=E,4.7nm,0.9s						
WRA	**Warramunga Arr**	**55.23**	**187**	P	**P**	**08 24 40.1**	**-0.9**
	comp=E,1.9nm,0.4s,baz=1.3,slow=7.5,SNR=33 comp=E,1.9nm,0.4s						
WRA	**Warramunga Arr**	**55.23**	**187**	P	**P**	**08 24 40.4**	**-0.7**
ARTI	**Arti**	**57.22**	**319**	P	**P**	**08 24 55.4**	**+0.5**
AS31	**Alice Springs**	**58.95**	**187**	P	**P**	**08 25 05.8**	**-1.6**
AS31				IAmb	IAmb	08 25 13.7	
	comp=Z,0.7nm,0.5s						
ASAR	**Alice Springs**	**58.95**	**187**	P	**P**	**08 25 06.5**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=5.8,slow=7.1,SNR=9.4 comp=Z,0.4nm,0.5s						
MBWA	**Marble Bar**	**59.46**	**202**	P	**P**	**08 25 10.3**	**-0.6**
SPITS	**Spitsbergen Ar**	**62.06**	**349**	LR	LR	08 56 04.8	
	comp=Z,44nm,18.4s,baz=22,slow=40						
FINES	**FINESS Array B**	**69.96**	**332**	P	**P**	**08 26 19.4**	**+0.5**
	comp=Z,1.5nm,0.8s,baz=40,slow=11,SNR=3.3 comp=Z,1.5nm,0.8s						
AKASG	**Malin Array Be**	**75.15**	**322**	P	**P**	**08 26 49.9**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=48,slow=5.3,SNR=4.6 comp=Z,0.3nm,0.3s						
NVAR	**Mina Array Bea**	**76.71**	**52**	P	**P**	**08 27 01.2**	**+1.7**
	comp=Z,0.2nm,0.6s,baz=310,slow=5.7,SNR=2.2 comp=Z,0.2nm,0.6s						
PDAR	**Pinedale Array**	**79.49**	**45**	P	**P**	**08 27 15.8**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=280,slow=1.5,SNR=4.5 comp=Z,0.3nm,0.6s						
H03N2	**Juan Fernandez**	**147.65**	**98**	T	T	11 19 42.9	
	baz=290,slow=76,SNR=14						
H03N3	**Juan Fernandez**	**147.66**	**98**	T	T	11 19 42.7	
	baz=290,slow=76,SNR=21						
H03N1	**Juan Fernandez**	**147.66**	**98**	T	T	11 19 42.8	
	baz=290,slow=76,SNR=12						

*IDC **30** 08:20:57.8±0.7, 40°.18N×112°.00E, h0km, mb4.0/17, mbtmp4.0/20, ML4.1/3, MS3.5/14, Error ellipse: s-maj=18.8km s-min=14.2km az=56.0*

*BJI **30** 08:20:59.0, 40°.15N×111°.87E, h12km, mB4.4/1, mb4.5/10, ML4.5/14, Ms3.9/10, Ms7 3.7/11*

*NEIC **30** 08:21:00.3±1.1, 40°.17N±0°.07×111°.84E±0°.08, h10km±1km, mb4.5/34, Error ellipse: s-maj=11.6km s-min=10.4km az=190.0*

ISC 30 08:20:59.9±0.4, 40°.14N±0°.04×111°.89E±0°.03, h10km, n80, σ1°.85/84, mb4.5/31, MS3.4/10, Northeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HHC	**Hu-ho-hao-te**	**0.75**	**341**	*e*Pg	**Pg**	**08 21 13.8**	**-0.7**
HHC				Sg	**Sg**	**08 21 23.0**	**-1.3**
HHC				SMN			
	5μm,0.7s						
HHC				SME			
	3μm,0.6s						
BTO2	**Baotou**	**1.65**	**292**	*e*Pg	**Pn**	**08 21 29.0**	**0.0**
BTO2				Sg	**Sn**	**08 21 50.0**	**-0.3**
BJT	**Baijiatuau**	**3.29**	**91**	Pn	**Pn**	**08 21 52.1**	**+0.7**
BJT				Sn	**Sn**	**08 22 32.5**	**+2.0**
BJI2	**Beijing**	**3.29**	**91**	Pn	**Pn**	**08 21 51.8**	**+0.4**
BJI2				Pg	**Pb**	**08 21 59.5**	**+1.2**
BJI2				Sn	**Sn**	**08 22 32.5**	**+1.9**
BJI2				Sg	**Sb**	**08 22 41.3**	**+2.9**
BJI2				SMN			
	420nm,0.5s						
BJI2				SME			
	300nm,0.5s						
XLT	**XiLinHaoTe**	**4.89**	**38**	*e*Pn	**Pn**	**08 22 14.5**	**+1.0**
XLT				Sg	**Sb**	**08 23 30.3**	**+5.8**
XLT				SMN			
	50nm,0.9s						
XLT				SME			
	470nm,0.8s						
LZH	**Lanzhou**	**7.52**	**240**	Pg	**Pb**	**08 23 14.5**	**+4.0**
LZH				Sn	**Sn**	**08 24 08.0**	**-7.1**
LZH				Sg	**Sb**	**08 24 48.0**	**+7.8**
LZH				SMN			
	330nm,1.6s						
LZH				SME			
	300nm,1.9s						
DL2	**Dalian**	**7.63**	**96**	Pn	**Pn**	**08 22 53.5**	**+2.4**
DL2				Pg	Pb	08 23 19.3	+7.0
DL2				Sn	**Sn**	**08 24 19.3**	**+1.7**
DL2				Sg	**Sg**	**08 24 59.3**	**-5.4**
DL2				SMN			
	87nm,0.6s						
DL2				SME			
	49nm,0.8s						
DL2				L	L		
	comp=N,360nm,12.9s						
DL2				L	L		
	comp=E,360nm,13.4s						
DL2				L	L		
	comp=Z,510nm,13.6s						
LZDM	**Lanzhou Array**	**7.69**	**240**	Pn	**Pn**	**08 22 52.7**	**+0.5**
	baz=76,slow=6.3						
LZDM				Lg	Lg	08 25 02.3	
	baz=55,slow=41 5.0nm,0.3s						
ULN	**Ulaanbaatar**	**8.47**	**337**		**Pn**	**08 23 02.7**	**-0.1**
SONM	**Songino Array**	**8.65**	**335**	Pn	**Pn**	**08 23 04.0**	**-1.2**
	1.9nm,0.3s,baz=150,slow=14,SNR=9.7						
SONM				Lg	Lg	08 25 27.1	
	9.8nm,0.3s,baz=146,slow=26,SNR=8.4						
SONM				LR	LR	08 26 50.7	
	comp=Z,342nm,19.2s,baz=152,slow=41 7.5nm,0.6s						
SONM	**Songino Array**	**8.65**	**335**		**Pn**	**08 23 04.9**	**-0.3**
GTA2	**Gaotai**	**9.36**	**270**	P	**Pn**	**08 23 14.5**	**-0.4**
GTA2				pP		08 23 17.8	
GTA2				pmax	pmax		
	comp=Z,320nm,0.5s						
GTA2				L	L		
	comp=N,370nm,12.0s						
GTA2				L	L		
	comp=E,280nm,12.0s						
GTA2				L	L		
	comp=Z,340nm,13.7s						
ENH	**Enshi**	**10.04**	**192**	Pn	**Pn**	**08 23 24.4**	**+0.3**
HIA	**Hailar**	**10.70**	**29**	Pn	**Pn**	**08 23 32.9**	**-0.2**
TJN	**Taejon**	**12.73**	**102**	Pn	**Pn**	**08 24 00.5**	**-0.4**
KS19	**Wonju Array Si**	**12.74**	**97**	Pn	**Pn**	**08 24 00.1**	**-1.0**
KSRS	**Korea Array**	**12.80**	**97**	Pn	**Pn**	**08 24 04.3**	**+2.5**
	0.3nm,0.3s,baz=286,slow=13,SNR=8.1						
TLY	**Talaya**	**12.88**	**336**	Pn	**Pn**	**08 24 01.4**	**-1.5**
	0.3nm,0.3s,baz=164,slow=8.4,SNR=7.6						
TLY				Lg	Lg	08 27 39.6	
	0.2nm,0.3s,baz=80,slow=17,SNR=4.3						
TLY				LR	LR	08 29 18.9	
	comp=Z,233nm,18.4s,baz=142,slow=39 3.0nm,0.6s						
TLY	**Talaya**	**12.88**	**336**	Pn	**Pn**	**08 24 02.9**	**0.0**
GOMU	**GeErMu**	**13.99**	**259**	P	**Pn**	**08 24 15.8**	**-2.7**
GOMU				pmax	pmax		
	comp=Z,8.0nm,0.6s						
JNU	**Nakatsue**	**16.76**	**109**	LR	LR	08 32 29.5	
	comp=Z,98nm,19.9s,baz=360,slow=41						
WMQ	**Urumqi**	**18.34**	**289**	*e*P	**P**	**08 25 17.8**	**+3.4**
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
JMN	**Monobe**	**18.69**	**103**	P	**P**	**08 25 18.3**	**0.0**
JMN				IAmb	IAmb	08 25 27.2	
	comp=Z,40nm,1.0s						
JOW	**Kunigami**	**19.01**	**129**	LR	LR	08 33 14.6	
	comp=Z,108nm,19.5s,baz=270,slow=39						
MJAR	**Matsushiro Arr**	**20.93**	**91**	P	**P**	**08 25 41.1**	**-1.6**
	comp=Z,0.6nm,0.5s,baz=288,slow=11,SNR=1.6 comp=Z,0.6nm,0.5s						
MJAR	**Matsushiro Arr**	**20.93**	**91**	P	**P**	**08 25 43.1**	**+0.4**
MKAR	**Makanchi Array**	**22.40**	**297**	P	**P**	**08 25 58.3**	**-0.1**
	comp=Z,5.5nm,0.7s,baz=95,slow=12,SNR=32						
MKAR				LR	LR	08 34 56.7	
	comp=Z,72nm,19.3s,baz=91,slow=37 comp=Z,5.5nm,0.7s						
ZALV	**Zalesovo Beam**	**22.86**	**316**	P	**P**	**08 26 03.8**	**+0.6**
	comp=Z,7.5nm,0.7s,baz=112,slow=9.2,SNR=6.9						
ZALV				LR	LR	08 35 13.4	
	comp=Z,139nm,18.2s,baz=134,slow=37 comp=Z,7.5nm,0.7s						
JHJ	**Hachijo jima 2**	**23.40**	**99**	LR	LR	08 35 14.5	
	comp=Z,86nm,19.0s,baz=346,slow=37						
CMAR	**Chiang Mai Arr**	**24.32**	**211**	P	**P**	**08 26 18.5**	**+0.7**
	comp=Z,1.1nm,0.3s,baz=15,slow=8.7,SNR=4.2						
CMAR				LR	LR	08 37 06.7	
	comp=Z,27nm,21.9s,baz=50,slow=40 comp=Z,1.1nm,0.3s						
KURK	**Kurchatov**	**25.43**	**306**		**P**	**08 26 27.3**	**-0.2**
KURBB	**Kurchatov Arra**	**25.46**	**305**	P	**P**	**08 26 28.1**	**+0.2**
	comp=Z,7.1nm,1.0s,baz=102,slow=10,SNR=18						
KURBB				LR	LR	08 35 57.6	
	comp=Z,70nm,19.3s,baz=182,slow=35 comp=Z,7.1nm,1.0s						
TARG	**Taragay, Kyrgy**	**25.70**	**285**	P	**P**	**08 26 30.0**	**-0.7**
TARG				IAmb	IAmb	08 26 33.3	
	comp=Z,15nm,1.5s						
AAK	**Ala-Archa**	**28.02**	**287**	LR	LR	08 39 35.1	
	comp=Z,85nm,18.9s,baz=83,slow=40						
BVAR	**Borovoye Array**	**30.85**	**309**	P	**P**	**08 27 16.1**	**+0.2**
	comp=Z,1.8nm,0.8s,baz=92,slow=9.6,SNR=7.8						
BVAR				LR	LR	08 40 13.6	
	comp=Z,114nm,18.4s,baz=102,slow=37 comp=Z,1.8nm,0.8s						
BORK	**Borovoye**	**30.89**	**309**	P	**P**	**08 27 16.5**	**+0.1**
NRIK	**Noril'sk**	**31.98**	**344**	P	**P**	**08 27 25.6**	**-0.1**
	comp=Z,2.1nm,0.5s,baz=134,slow=5.1,SNR=5.6 comp=Z,2.1nm,0.5s						
NRIK	**Noril'sk**	**31.98**	**344**		**P**	**08 27 25.8**	**0.0**
NRIK				IAmb	IAmb	08 27 34.4	
	comp=Z,11nm,1.5s						
TIXI	**Tiksi**	**32.73**	**10**		**P**	**08 27 31.9**	**-0.3**
TIXI				IAmb	IAmb	08 27 38.4	
	comp=Z,7.2nm,0.9s						
SBUM	**Sibu**	**37.52**	**179**	P	**P**	**08 28 12.9**	**-1.1**
ARTI	**Arti**	**38.07**	**314**	P	**P**	**08 28 17.7**	**-0.7**
ARTI				IAmb	IAmb	08 28 25.1	
	comp=Z,11nm,0.8s						
AKTO	**Aktyubinsk**	**38.49**	**304**	LR	LR	08 44 54.7	
	comp=Z,93nm,20.7s,baz=69,slow=37						
PALK	**Pallekele**	**43.00**	**229**	P	**P**	**08 28 58.4**	**-1.1**
OBN	**Obninsk**	**50.42**	**314**	LR	LR	08 52 20.1	
	comp=Z,94nm,18.4s,baz=296,slow=37						
C16K	**Lisburne Hills**	**50.81**	**28**	P	**P**	**08 30 00.4**	**+0.4**
C16K				IAmb	IAmb	08 30 17.0	
	comp=Z,8.2nm,1.4s						
F15K	**North Star Dit**	**51.64**	**32**	P	**P**	**08 30 06.8**	**+0.6**
F15K				IAmb	IAmb	08 30 08.1	
	comp=Z,8.3nm,1.4s						
C18K	**Utukok River**	**52.23**	**28**	P	**P**	**08 30 11.3**	**+0.6**
C18K				IAmb	IAmb	08 30 43.4	
	comp=Z,8.5nm,1.5s						
FINES	**FINESS Array B**	**53.84**	**324**	P	**P**	**08 30 22.4**	**-0.2**
	comp=Z,3.2nm,1.0s,baz=69,slow=10,SNR=5.0 comp=Z,3.2nm,1.0s						
D23K	**Nanushuk River**	**55.74**	**26**	P	**P**	**08 30 37.4**	**+1.1**
D23K				IAmb	IAmb	08 30 56.4	
	comp=Z,8.6nm,1.4s						
AKASG	**Malin Array Be**	**56.10**	**311**	P	**P**	**08 30 38.7**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=55,slow=7.3,SNR=6.5 comp=Z,1.2nm,0.6s						
AKASG	**Malin Array Be**	**56.10**	**311**	P	**P**	**08 30 38.2**	**-0.8**
AKBB	**Malin Array Si**	**56.10**	**311**	P	**P**	**08 30 37.5**	**-1.5**
D24K	**Happy Valley**	**56.27**	**25**	P	**P**	**08 30 39.1**	**-0.9**
D24K				IAmb	IAmb	08 30 58.1	
	comp=Z,9.3nm,1.4s						
BRTR	**Keskin Array B**	**58.05**	**297**	P	**P**	**08 30 53.6**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=76,slow=6.1,SNR=5.8 comp=Z,0.9nm,0.5s						
ILAR	**Eielson Array**	**58.93**	**29**	P	**P**	**08 30 58.0**	**-0.8**
	comp=Z,0.7nm,0.9s,baz=300,slow=6.7,SNR=3.1 comp=Z,0.7nm,0.9s						
G27K	**Doyon Strip**	**59.76**	**26**	P	**P**	**08 31 04.6**	**0.0**
G27K				IAmb	IAmb	08 31 06.1	
	comp=Z,4.2nm,1.1s						
SCM	**Sheep Creek Mo**	**60.19**	**32**	P	**P**	**08 31 08.3**	**+0.6**
M24K	**Tolsona, Glenn**	**60.52**	**32**	P	**P**	**08 31 10.8**	**+0.9**
NOA	**NORSAR Array B**	**60.54**	**327**	P	**P**	**08 31 08.3**	**-1.7**
	comp=Z,1.0nm,0.8s,baz=60,slow=6.3,SNR=3.8 comp=Z,1.0nm,0.8s						
NC204	**NORSAR Array S**	**60.61**	**327**	P	**P**	**08 31 10.9**	**+0.4**
NBO00	**NORSAR Array S**	**60.73**	**327**	P	**P**	**08 31 10.7**	**-0.5**
K27K	**Chicken**	**61.10**	**29**	P	**P**	**08 31 13.9**	**+0.2**
K27K				IAmb	IAmb	08 31 15.0	
	comp=Z,4.6nm,1.2s						
INK	**Inuvik**	**61.48**	**23**	P	**P**	**08 31 16.5**	**+0.3**
INK				IAmb	IAmb	08 31 16.7	
	comp=Z,3.0nm,0.9s						
PSA00	**Pilbara Seismi**	**61.84**	**172**	P	**P**	**08 31 19.2**	**+0.1**
PSA00				IAmb	IAmb	08 31 56.2	
	comp=Z,4.9nm,1.4s						
AKAS	**Kas**	**62.54**	**295**	P	**P**	**08 31 23.2**	**-0.8**
WB0	**Warramunga Arr**	**63.18**	**156**	P	**P**	**08 31 28.8**	**+0.7**
WB0				IAmb	IAmb	08 31 36.7	
	comp=Z,6.2nm,1.4s						
WRA	**Warramunga Arr**	**63.33**	**156**	P	**P**	**08 31 29.0**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=350,slow=7.1,SNR=7.6 comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	**63.33**	**156**	P	**P**	**08 31 28.6**	**-0.6**
WR8	**Warramunga Arr**	**63.39**	**156**	P	**P**	**08 31 30.0**	**+0.4**
WR8				IAmb	IAmb	08 32 11.9	
	comp=Z,5.6nm,1.3s						
GERES	**GERESS Array B**	**65.80**	**314**	P	**P**	**08 31 45.3**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=40,slow=9.3,SNR=5.3 comp=Z,0.3nm,0.3s						
AS31	**Alice Springs**	**66.71**	**158**	P	**P**	**08 31 50.4**	**-0.7**
ASAR	**Alice Springs**	**66.71**	**158**	P	**P**	**08 31 50.7**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=346,slow=6.9,SNR=9.5 comp=Z,0.9nm,0.8s						
FUORN	**Ofenpass-Fuorn**	**68.98**	**314**	P	**P**	**08 32 05.7**	**+0.1**
TIP	**Timpagrande**	**69.47**	**304**	P	**P**	**08 32 08.0**	**-0.4**
TIP				IAmb	IAmb	08 32 32.6	
	comp=Z,5.6nm,1.3s						
FDMO	**Fiordimonte**	**69.47**	**309**	P	**P**	**08 32 08.2**	**-0.2**
NRCA	**Norcia**	**69.58**	**309**	P	**P**	**08 32 08.8**	**-0.3**
NRCA				IAmb	IAmb	08 32

AKLV Akutan Long Va 0.61 12 Pn 08 21 29.8 +0.1
AKLV Sn 08 21 41.3 +0.2
AKUT Akutan 0.61 22 P Pn 08 21 29.7 +0.1
AKUT Akutan 0.61 22 P Sn 08 21 41.5 +0.5
AKUT Akutan 0.61 22 Pn 08 21 29.9 +0.2
AKUT Sn Sn 08 21 41.5 +0.5
AKUT IAML 08 21 41.9
comp=N,41µm,0.7s
AKUT IAML 08 21 42.2
comp=E,40µm,0.3s
AKSA Akutan Strait 0.63 26 Pn 08 21 29.7 -0.2
AKSA Sn 08 21 40.8 -0.6
AKGG Akutan Green G 0.64 9 Pn 08 21 30.3 +0.4
AKGG Sn 08 21 41.7 +0.2
OKFG Magazine Ridge 1.06 262 Pn 08 21 34.8 +0.4
OKNC Okmok New Cone 1.18 265 Pn 08 21 36.2 +0.3
OKNC Sn 08 21 52.4 +0.4
OKCE Okmok Cone E 1.20 264 Pn 08 21 36.8 +0.6
SSBA Shishaldin 1.70 44 Pn 08 21 42.5 -0.1
SSBA Sn 08 22 04.1 +0.2
SSLS Shishaldin Sou 1.71 47 Pn 08 21 42.8 +0.1
SSLS Sn 08 22 05.0 +0.7
SSLN Shishaldin Nor 1.78 45 Pn 08 21 44.0 +0.4
SSLN Sn 08 22 05.6 -0.2
ISNN Isanotski Nort 1.89 47 Pn 08 21 45.7 +0.8
FALS False Pass 2.07 50 P Pn 08 21 47.6 +0.4
FALS False Pass 2.07 50 S Sn 08 22 13.4 +1.1
FALS False Pass 2.07 50 Pn 08 21 47.5 +0.4
FALS Sn 08 22 12.8 +0.4
FALS False Pass 2.07 50 P Pn 08 21 47.6 +0.4
baz=231,SNR=434
FALS S Sn 08 22 12.0 -0.3
baz=231
DT1 Dutton Round H 2.75 54 Pn 08 21 56.5 +0.2
DTNA Dutton South F 2.78 54 Pn 08 21 57.1 +0.3
HAG Hague Volcano 3.04 53 Pn 08 22 01.1 +0.7
HAG Hague Volcano 3.04 53 P Pn 08 22 01.1 +0.7
PN7A Pavlof North-7 3.06 51 Pn 08 22 01.3 +0.6
PS4A Pavlof South-4 3.08 53 Pn 08 22 01.5 +0.7
PS1A Pavlof South-1 3.18 52 Pn 08 22 02.7 +0.6
SDPT Sand Point 3.77 59 P Pn 08 22 10.1 0.0
SDPT Sand Point 3.77 59 S Sn 08 22 52.5 -0.8
SDPT Sand Point 3.77 59 Pn 08 22 10.1 0.0
SDPT IAML 08 23 12.1
comp=N,2µm,0.9s
SDPT Sand Point 3.77 59 P Pn 08 22 10.1 0.0
baz=244,SNR=96
SDPT S Sn 08 22 51.0 -2.3
baz=244
CNBA Chernabura Isl 4.06 69 Pn 08 22 13.0 -1.1
CHNA Chernabura Isl 4.06 69 P Pn 08 22 13.0 -1.1
CHNA Chernabura Isl 4.06 69 P Pn 08 22 13.0 -1.1
baz=254,SNR=90
CHNA S Sn 08 22 57.1 -3.4
baz=254
SPIA Saint Paul Isl 4.30 329 P Pn 08 22 18.7 +1.4
SPIA Saint Paul Isl 4.30 329 Pn 08 22 18.7 +1.4
SPIA Saint Paul Isl 4.30 329 P Pn 08 22 18.6 +1.4
baz=145,SNR=17
SPIA S Sn 08 23 07.6 +1.4
baz=145
S14K Fog Glacier 4.69 52 P Pn 08 22 23.6 +1.0
baz=237
VNFG Fog Glacier, M 4.69 52 Pn 08 22 23.6 +0.9
VNFG IAML 08 23 36.5
comp=E,1µm,0.8s
VNFG IAML 08 23 41.1
comp=N,1µm,0.7s
KOSE Korovin Southe 4.92 259 Pn 08 22 27.1 +1.3
KOKL Mount Kliuchef 5.02 259 Pn 08 22 28.5 +1.3
CHGN Chignik 5.24 55 Pn 08 22 30.2 +0.2
CHGN Chignik 5.24 55 P Pn 08 22 30.1 0.0
baz=241,SNR=60
CHGN S Sn 08 23 27.5 -1.6
baz=241
ANNW Aniakchak Nort 5.68 50 Pn 08 22 37.0 +0.8
GSTR Great Sitkin T 6.18 260 Pn 08 22 44.8 +1.9
GSTD Great Sitkin T 6.24 260 Pn 08 22 44.3 +0.5
GSSP Great Sitkin S 6.25 260 Pn 08 22 44.4 +0.6
R16K Pilot Point 6.31 47 Pn 08 22 45.6 +1.0
R16K Pilot Point 6.31 47 P Pn 08 22 45.5 +1.0
baz=234,SNR=21
O14K Tigyukauivet M 6.31 24 Pn 08 22 46.3 +1.6
O14K Tigyukauivet M 6.31 24 P Pn 08 22 46.2 +1.5
baz=207,SNR=17
CHIR Chirikof Islan 6.51 65 P Pn 08 22 46.5 -1.0
CHIR Chirikof Islan 6.51 65 Pn 08 22 46.5 -1.0
CHIR Chirikof Islan 6.51 65 P Pn 08 22 46.4 -1.0
baz=254,SNR=16
CHIR S Sn 08 23 54.2 -6.0
baz=254
ADK Adak 6.61 259 P Pn 08 22 49.4 +0.7
ADK Adak 6.61 259 Pn 08 22 49.5 +0.7
ADK Adak 6.61 259 P Pn 08 22 49.5 +0.7
O15K Ungalikthiuk R 6.63 29 Pn 08 22 49.6 +0.6
O15K Ungalikthiuk R 6.63 29 P Pn 08 22 49.8 +0.8
baz=214,SNR=61
N14K Kuskokwak Cree 6.83 19 Pn 08 22 53.5 +1.8
N14K Kuskokwak Cree 6.83 19 P Pn 08 22 53.2 +1.5
baz=203,SNR=9.9
M11K Mekoryuk 6.84 360 Pn 08 22 53.2 +1.4
M11K Mekoryuk 6.84 360 P Pn 08 22 53.1 +1.4
baz=180,SNR=30
M11K S Sn 08 24 08.7 +0.8
baz=180
R17L Mt. Peulik Vol 6.89 50 P Pn 08 22 53.3 +0.7
baz=238
PLK4 Peulik 4 6.89 50 Pn 08 22 53.6 +1.0
KIWB Kanaga Island 6.89 260 Pn 08 22 53.7 +1.0
KIKV Kanaga Island 6.90 260 Pn 08 22 53.5 +0.8
PLK3 Peulik 3 6.96 50 Pn 08 22 54.2 +0.7
KIMD Kanaga Island 6.97 259 Pn 08 22 54.4 +0.6
M13K Dall Lake 7.03 11 Pn 08 22 56.6 +2.1
M13K Dall Lake 7.03 11 P Pn 08 22 56.6 +2.1
baz=194,SNR=19
P16K Nushagak River 7.12 36 Pn 08 22 57.1 +1.5
P16K Nushagak River 7.12 36 P Pn 08 22 57.0 +1.5
baz=223,SNR=28
TAPA Tanaga Point A 7.29 261 Pn 08 22 58.9 +0.8
Q16K King Salmon 7.38 42 Pn 08 23 00.7 +1.6
Q16K King Salmon 7.38 42 P Pn 08 23 00.6 +1.5
baz=230,SNR=35
N15K Kwethluk River 7.40 24 Pn 08 23 01.5 +2.0
N15K Kwethluk River 7.40 24 P Pn 08 23 01.3 +1.7
baz=209,SNR=56
N15K S Sn 08 24 22.1 +0.2
baz=209
Q17K Contact Creek 7.45 47 P Pn 08 23 00.8 +0.6
baz=235,SNR=34
TANO Tanaga North 7.45 262 Pn 08 23 01.2 +1.1
O16K Kokwok River B 7.50 33 Pn 08 23 02.5 +1.6
O16K Kokwok River B 7.50 33 P Pn 08 23 01.9 +1.1
baz=220,SNR=136
SII Sitkinak Islan 7.50 62 P Pn 08 22 59.5 -1.5
SII Sitkinak Islan 7.50 62 Pn 08 22 59.4 -1.5
SII Sitkinak Islan 7.50 62 P Pn 08 22 59.3 -1.6
baz=251,SNR=19
M14K Bethel 7.56 16 Pn 08 23 03.1 +1.5
M14K Bethel 7.56 16 P Pn 08 23 02.9 +1.3
baz=199,SNR=24
M14K S Sn 08 24 25.2 -0.3
baz=199
ACHA Angle Creek He 7.66 48 Pn 08 23 03.8 +0.6
M15K Kasigluk River 7.74 20 Pn 08 23 05.2 +1.1
M15K Kasigluk River 7.74 20 P Pn 08 23 05.2 +1.1
baz=205,SNR=32
M15K S Sn 08 24 29.4 -0.6
baz=205
P17K Kvichak River 7.80 40 Pn 08 23 06.5 +1.6
P17K Kvichak River 7.80 40 P Pn 08 23 06.5 +1.6
baz=228,SNR=46
GANE Gareloi Northe 7.86 262 Pn 08 23 06.5 +0.7
GALAA Gareloi Lava P 7.88 262 Pn 08 23 06.6 +0.5
GANO Gareloi North 7.88 262 Pn 08 23 06.5 +0.4
O17K Koliganek Bris 7.97 35 P Pn 08 23 08.3 +1.1
baz=222,SNR=37
N16K Nishlik Lake 8.01 27 Pn 08 23 09.5 +1.6
N16K Nishlik Lake 8.01 27 P Pn 08 23 09.4 +1.6
baz=213,SNR=83
N16K S Sn 08 24 36.6 0.0
baz=213
L14K Kuka Creek 8.02 12 Pn 08 23 09.1 +1.2
L14K Kuka Creek 8.02 12 P Pn 08 23 09.0 +1.2
baz=195,SNR=24
L14K S Sn 08 24 36.4 -0.3
baz=195
Q18K Katmai Hardscr 8.04 46 P Pn 08 23 08.7 +0.3
baz=235,SNR=61
OHAK Old Harbor 8.19 58 P Pn 08 23 08.2 -2.1
OHAK Old Harbor 8.19 58 Pn 08 23 08.2 -2.1
OHAK Old Harbor 8.19 58 P Pn 08 23 08.2 -2.1
baz=249,SNR=29
P18K Big Mountain, 8.40 42 Pn 08 23 14.4 +1.3
P18K Big Mountain, 8.40 42 P Pn 08 23 14.2 +1.1
baz=230,SNR=33
M16K Timber Creek 8.43 25 Pn 08 23 14.8 +1.3
M16K Timber Creek 8.43 25 P Pn 08 23 14.8 +1.3
baz=210
M16K S Sn 08 24 46.2 -0.6
baz=210
K13K Kusilvak Mount 8.43 5 Pn 08 23 14.9 +1.4
K13K Kusilvak Mount 8.43 5 P Pn 08 23 14.8 +1.3
baz=186,SNR=23
K13K S Sn 08 24 45.5 -1.3
baz=186
L15K Ungalak Mounta 8.51 15 Pn 08 23 15.5 +0.9
L15K Ungalak Mounta 8.51 15 P Pn 08 23 15.5 +0.9
baz=199,SNR=17
L15K S Sn 08 24 47.4 -1.3
baz=199
N17K Nushagak Hills 8.51 31 Pn 08 23 16.2 +1.5
N17K Nushagak Hills 8.51 31 P Pn 08 23 16.1 +1.4
baz=219,SNR=40
O18K Koktuh Hills 8.71 39 Pn 08 23 18.8 +1.4
O18K Koktuh Hills 8.71 39 P Pn 08 23 18.7 +1.3
baz=228,SNR=62
O18K S Sn 08 24 52.3 -1.5
baz=228
KDAK Kodiak Island 8.76 56 P Pn 08 23 15.9 -2.0
comp=N,170nm,0.3s,baz=226,slow=6.0,SNR=1107
KDAK S Sn 08 24 48.5 -6.3
comp=N,27nm,0.4s,baz=27,slow=20,SNR=2.1
KDAK Kodiak Island 8.76 56 Pn 08 23 15.8 -2.1
KDAK Kodiak Island 8.76 56 P Pn 08 23 15.8 -2.1
baz=247
KDAK S Sn 08 24 48.4 -6.4
baz=247
Q19K Cape Douglas, 8.79 47 Pn 08 23 18.1 -0.3
Q19K Cape Douglas, 8.79 47 P Pn 08 23 18.2 -0.3
baz=238,SNR=26
CESW Semis' Southwe 8.82 265 Pn 08 23 19.7 +0.8
L16K Owhat River 8.91 21 Pn 08 23 21.0 +0.9
L16K Owhat River 8.91 21 P Pn 08 23 20.9 +0.9
baz=206
L16K S Sn 08 24 57.0 -1.6
baz=206
N18K Kilae Creek 9.05 34 Pn Pn 08 23 22.9 +0.9
N18K Kilae Creek 9.05 34 P Pn 08 23 22.9 +0.9
baz=222,SNR=13
K15K Wolf Creek Mou 9.09 14 Pn 08 23 23.7 +1.2
K15K Wolf Creek Mou 9.09 14 P Pn 08 23 23.5 +1.0
baz=198,SNR=17
K15K S Sn 08 25 02.0 -0.9
baz=198
AMKA Amchitka 9.14 262 Pn 08 23 23.2 0.0
M17K Holitna River 9.14 27 Pn 08 23 23.9 +0.7
M17K Holitna River 9.14 27 P Pn 08 23 24.2 +1.0
baz=214,SNR=22
M17K S Sn 08 25 02.8 -1.4
baz=214
Q20K Shuyak Island 9.20 51 P Pn 08 23 22.5 -1.5
baz=242,SNR=18
Q20K S Sn 08 25 00.1 -5.5
baz=242
SYI Shuyak Island 9.20 51 Pn 08 23 22.9 -1.1
O19K Port Alsworth 9.27 40 Pn 08 23 25.9 +0.9
O19K Port Alsworth 9.27 40 P Pn 08 23 25.2 +0.2
baz=229,SNR=41
J14K Nanvaranak Lak 9.31 7 Pn 08 23 26.8 +1.3
J14K Nanvaranak Lak 9.31 7 P Pn 08 23 26.3 +0.8
baz=189,SNR=10
J14K S Sn 08 25 06.5 -1.7
baz=189
P19K Oil Pt 9.37 44 Pn 08 23 26.8 +0.4
P19K Oil Pt 9.37 44 P Pn 08 23 26.2 -0.2
baz=235
LSPA Little Sitkin 9.39 266 Pn 08 23 28.6 +1.9
LSSE Little Sitkin 9.40 266 Pn 08 23 28.7 +1.9
LSNW Little Sitkin 9.43 266 Pn 08 23 28.9 +1.8
L17K Donlin 9.55 23 P Pn 08 23 29.7 +1.0
baz=209,SNR=13
L17K S Sn 08 25 12.1 -2.0
baz=209
ILSW Iliamna Southw 9.60 43 Pn 08 23 30.0 +0.4
N19K Bonanza Creek 9.63 36 Pn 08 23 30.9 +1.0
N19K Bonanza Creek 9.63 36 P Pn 08 23 30.2 +0.3
baz=226
IVE Iliamna Volcan 9.67 43 Pn 08 23 30.7 +0.2
M18K Stony River 9.68 31 Pn 08 23 31.4 +0.8
M18K Stony River 9.68 31 P Pn 08 23 31.2 +0.7
baz=219,SNR=40
M18K S Sn 08 25 16.5 -0.9
baz=219
RED Redoubt Volcan 10.01 41 Pn 08 23 35.1 0.0
L18K Granite Mounta 10.02 26 Pn 08 23 35.6 +0.4
L18K Granite Mounta 10.02 26 P Pn 08 23 34.8 -0.4
baz=214,SNR=5.3
L18K S Sn 08 25 24.5 -1.1
baz=214
RDSO Redoubt South 10.04 41 Pn 08 23 35.6 -0.1
HOM Homer 10.05 47 Pn 08 23 34.6 -1.0
HOM Homer 10.05 47 P Pn 08 23 34.7 -0.8
baz=239
K17K Iditarod 10.06 21 P Pn 08 23 36.9 +1.1
baz=208,SNR=10
K17K S Sn 08 25 26.6 0.0
baz=208
CNPM China Poot 10.16 48 Pn 08 23 35.6 -1.6
J16K Anvik River 10.17 14 P Pn 08 23 38.3 +1.2
baz=199
J16K S Sn 08 25 28.1 -1.0
baz=199
BRLK Bradley Lake 10.44 47 Pn 08 23 38.4 -2.5
BRSE Bradley Lake S 10.49 48 P Pn 08 23 39.2 -2.4
baz=240,SNR=7.7
L19K White Mountain 10.51 30 Pn 08 23 43.2 +1.3
L19K White Mountain 10.51 30 P Pn 08 23 42.6 +0.7
baz=220,SNR=39
J17K VABM Dome 10.52 18 P Pn 08 23 42.9 +0.9
baz=204
J17K S Sn 08 25 36.2 -1.7
baz=204
GAMB Gambell 10.63 347 Pn 08 23 45.5 +2.0
GAMB Gambell 10.63 347 P Pn 08 23 44.9 +1.5
baz=162,SNR=16
GAMB S Sn 08 25 40.9 +0.5
baz=162
SPCR Spurr Chakacha 10.71 39 P Pn 08 23 45.2 +0.5
baz=230,SNR=29
I17K Unalakleet 10.73 13 Pn Pn 08 23 46.2 +1.5
I17K Unalakleet 10.73 13 P Pn 08 23 46.2 +1.5
baz=198
I17K S Sn 08 25 42.1 -0.6
baz=198
SPU Mount Spurr 10.76 39 Pn 08 23 45.7 +0.4
M20K Styx River 10.84 35 P Pn 08 23 48.3 +1.8
baz=225,SNR=45
ANM Nome 11.04 2 Pn 08 23 50.6 +1.6
ANM Nome 11.04 2 P Pn 08 23 50.6 +1.6
ANM Nome 11.04 2 P Pn 08 23 50.1 +1.1
baz=182,SNR=12
STLK Strandline Lak 11.04 38 Pn 08 23 49.7 +0.5
J18K Innoko River 11.07 23 P Pn 08 23 50.2 +0.7
baz=210,SNR=11
SLKM Skilak Lake 11.10 45 Pn 08 23 48.1 -1.9
SEW Seward 11.23 48 Pn 08 23 49.3 -2.3
SEW Seward 11.23 48 P Pn 08 23 49.1 -2.5
baz=242,SNR=16
H16K Elim 11.28 9 P Pn 08 23 51.5 -0.8
baz=192,SNR=5.3
O22K Cooper Landing 11.30 46 Pn Pn 08 23 51.0 -1.6
O22K Cooper Landing 11.30 46 P Pn 08 23 50.1 -2.4
baz=239,SNR=10
SKT Skwentna 11.47 37 Pn 08 23 55.8 +1.0
SKT Skwentna 11.47 37 P Pn 08 23 55.0 +0.1
baz=229,SNR=14
G15K Niukluk 11.51 5 P Pn 08 23 56.7 +1.2
baz=186,SNR=14
RC01 Rabbit Creek A 11.62 43 Pn 08 23 54.6 -2.3
RC01 Rabbit Creek A 11.62 43 P Pn 08 23 53.8 -3.1
baz=237,SNR=12
K20K Telida 11.65 28 P Pn 08 23 57.9 +0.5
baz=218,SNR=31
K20K S Sn 08 26 03.8 -1.6
baz=218
J19K Poorman 11.78 23 P Pn 08 23 59.9 +0.9
baz=212,SNR=19
J19K S Sn 08 26 06.2 -2.2
baz=212
H17K Granite Mounta 11.84 13 P Pn 08 24 01.0 +1.2
baz=198,SNR=8.3
M22K Willow 11.85 40 Pn 08 23 58.5 -1.4
M22K Willow 11.85 40 P Pn 08 23 58.0 -1.9
baz=233,SNR=29
PPLA Purkeypile 11.87 33 Pn 08 24 02.5 +2.1
PPLA Purkeypile 11.87 33 P Pn 08 24 01.5 +1.0
baz=224,SNR=7.7
SHEM Shemya Is, Ala 11.88 274 P Pn 08 24 00.7 +0.2
comp=N,33nm,0.3s,baz=47,slow=3.9,SNR=7.1
SMY Shemya 11.88 274 P Pn 08 24 02.0 +1.6
F14K Arctic Creek 11.95 360 P Pn 08 24 02.8 +1.6
baz=179,SNR=29
G16K Koyuk River 12.02 8 P Pn 08 24 03.6 +1.4
baz=191,SNR=19
TNA Tin City 12.06 356 Pn 08 24 04.0 +1.2
TNA Tin City 12.06 356 P Pn 08 24 03.7 +0.9
baz=175,SNR=21
L22K Petersville 12.09 36 Pn 08 24 03.3 0.0
P23K Montague Islan 12.11 50 Pn 08 24 00.7 -2.8
P23K Montague Islan 12.11 50 P Pn 08 24 00.1 -3.4
baz=246,SNR=10
PMR Palmer 12.14 42 P Pn 08 24 03.0 -0.9
PMR Palmer 12.14 42 Pn 08 24 02.0 -1.9
PMR Palmer 12.14 42 P Pn 08 24 02.0 -1.9
PMR Palmer 12.14 42 P Pn 08 24 01.4 -2.4
baz=236
GCSA Galena City Sc 12.16 19 P Pn 08 24 04.7 +0.5
baz=207,SNR=9.3
CUT Chuliitna 12.19 37 Pn 08 24 04.1 -0.5
CUT Chuliitna 12.19 37 P Pn 08 24 03.1 -1.5
baz=230,SNR=7.3
F15K North Star Dit 12.20 3 P Pn 08 24 05.6 +0.8
baz=184,SNR=11
H18K Honhosa River 12.27 16 P Pn 08 24 06.7 +1.1
baz=202,SNR=14
G17K Kiwalik Mounta 12.29 11 P Pn 08 24 06.1 +0.2
baz=195
J20K Nowinta River 12.29 25 P Pn 08 24 06.7 +0.8
baz=216,SNR=26
KNK Knik Glacier 12.31 43 Pn 08 24 03.4 -2.9
KNK Knik Glacier 12.31 43 P Pn 08 24 02.7 -3.6
baz=238,SNR=14
Q23K Middleton Isla 12.39 54 P Pn 08 24 04.0 -3.3
baz=250,SNR=5.5
MID Middleton Isla 12.40 54 Pn Pn 08 24 04.3 -3.0
CHUM Lake Minchumin 12.56 29 P Pn 08 24 10.4 +0.9
baz=221,SNR=29
SML Sawmill 12.58 42 P Pn 08 24 06.7 -3.1
baz=237,SNR=7.6
GLI Glacier Island 12.63 47 P Pn 08 24 06.5 -4.0
baz=243,SNR=5.8
I20K Naaghedeneel 12.72 23 P Pn 08 24 13.0 +1.3
baz=213
M23K Glacier View 12.81 43 P Pn 08 24 10.1 -2.8
baz=238,SNR=56
TRF Thorofare Moun 12.88 33 P Pn 08 24 13.6 -0.4
baz=227
G18K Tagagawik 12.92 14 P Pn 08 24 14.2 -0.1
baz=200,SNR=16
H19K Roundabout Mou 12.94 18 P Pn 08 24 14.5 -0.1
baz=206,SNR=5.2
SCM Sheep Creek Mo 12.99 43 P Pn 08 24 12.4 -3.0
baz=239,SNR=38
WAT1 Susitna Watana 13.08 38 P Pn 08 24 13.4 -3.1
baz=233
EYAK Cordova Ski Ar 13.09 50 P Pn 08 24 13.2 -3.3
baz=247,SNR=20
BPAW Bear Paw Mtn. 13.12 30 P Pn 08 24 17.1 +0.2
baz=223,SNR=11
F17K Baldwin Pennin 13.14 9 P Pn 08 24 17.8 +0.6
baz=193
H20K Anotleneega Mo 13.23 21 P Pn 08 24 20.0 +1.6
baz=210,SNR=18
WAT6 Susitna Watana 13.24 40 P Pn 08 24 15.1 -3.6
baz=235,SNR=26
G19K Purcell Mounta 13.39 16 P Pn 08 24 21.3 +0.7
baz=204,SNR=28
KLU Klutina 13.41 46 P Pn 08 24 17.5 -3.4
baz=243,SNR=104
F18K Selawik 13.46 11 P Pn 08 24 21.9 +0.5
baz=197,SNR=29
KAIM Kayak Island 13.48 53 P Pn 08 24 19.1 -2.7
baz=251
MCK McKinley 13.52 34 P Pn 08 24 20.3 -2.0
baz=229
M24K Tolsona, Glenn 13.60 43 P Pn 08 24 20.6 -2.8
baz=240,SNR=49
I21K Tanana 13.66 26 P Pn 08 24 24.1 +0.1
baz=218
DHY Denali Highway 13.66 38 P Pn 08 24 20.6 -3.7
baz=234,SNR=15
E17K Hotham Inlet 13.72 7 P Pn 08 24 25.6 +0.7
baz=191,SNR=16
BMRM Bremner River 13.77 49 P Pn 08 24 22.5 -3.0
baz=247,SNR=18
H21K Melozitna Rive 13.84 24 P Pn 08 24 27.2 +0.9
baz=215,SNR=20
MLY Manley 13.88 28 P Pn 08 24 26.0 -1.0
baz=221,SNR=12
F19K Shaleruckik Mo 13.93 14 P Pn 08 24 28.3 +0.8
baz=201,SNR=23
N25K Chitina, Valde 14.03 46 P Pn 08 24 26.2 -2.8
baz=244,SNR=62
NEA2 Nenana 14.06 31 P Pn 08 24 28.7 -0.6
baz=226
BGLC Bering Glacier 14.09 53 P Pn 08 24 28.8 -0.8
baz=252
E18K Tukpahlearik C 14.16 9 P Pn 08 24 31.3 +0.8
baz=194,SNR=16
D17K Noatak River 14.26 5 P Pn 08 24 32.4 +0.6
baz=187,SNR=14
PAX Paxson 14.33 41 P Pn 08 24 30.2 -2.6
baz=238,SNR=22
I23K Minto, Yukon-K 14.36 30 P Pn 08 24 32.1 -1.0
baz=224,SNR=8.8
H22K Ishtalitna Cre 14.38 25 P Pn 08 24 34.5 +1.1
baz=218,SNR=19
CRQE Cirque 14.38 51 P Pn 08 24 30.4 -3.1
baz=250,SNR=20
G21K Allakaket 14.40 21 P Pn 08 24 34.5 +0.9
baz=212,SNR=38
F20K Avaraaart Lake 14.45 17 P Pn 08 24 35.7 +1.5
baz=206,SNR=23
E19K Redstone River 14.59 14 P Pn 08 24 37.2 +1.1
baz=201,SNR=37
RDOG Red Dog Mine 14.62 5 P Pn 08 24 36.6 +0.1
baz=188,SNR=19
HDA Harding Lake 14.62 34 P Pn 08 24 35.6 -0.9
baz=231,SNR=9.2
COLA College 14.63 32 Pn Pn 08 24 35.0 -1.6
COLA College 14.63 32 i P Pn 08 24 34.0 -2.6
MCARA McCarthy VSAT 14.63 48 Pn 08 24 34.9 -1.8
MCARA McCarthy VSAT 14.63 48 P Pn 08 24 34.5 -2.2
baz=248,SNR=17
K24K Donnelly Dome 14.67 38 Pn 08 24 35.5 -1.6
K24K Donnelly Dome 14.67 38 P Pn 08 24 35.9 -1.3
baz=235,SNR=14
MESA MESA 14.74 54 Pn 08 24 37.1 -1.2
MESA MESA 14.74 54 P Pn 08 24 36.6 -1.7
baz=254,SNR=7.9
C16K Lisburne Hills 14.76 1 P Pn 08 24 39.7 +1.4
baz=182
H23K Yukon River 14.81 27 P Pn 08 24 39.6 +0.7
baz=222
ILAR Eielson Array 14.88 33 P Pn 08 24 36.2 -3.5
comp=N,1.8nm,0.4s,baz=231,slow=13,SNR=5.2
ILAR S Sn 08 27 19.1 -4.3
comp=N,0.6nm,0.4s,baz=194,slow=25,SNR=1.4
ILAR LR LR 08 29 59.2
comp=N,96nm,19.4s,baz=258,slow=36
POKR Poker Plat Res 14.93 32 P Pn 08 24 37.5 -2.9
baz=228
RIDG Independent Ri 14.98 39 P Pn 08 24 38.8 -2.3
baz=237,SNR=17
GRNC Granite Creek 14.99 52 Pn 08 24 39.7 -1.8
F21K Alatna River 15.01 19 P Pn 08 24 42.2 +0.7
baz=210,SNR=16

C17K **DeLong Mountai** 15.03 4 P Pn 08 24 42.5 +0.8
baz=187,SNR=13
M26K **Nabesna, AK** 15.06 45 P Pn 08 24 39.7 -2.5
baz=244,SNR=50
G22K **Bettles** 15.18 22 P Pn 08 24 41.9 -1.7
baz=215
L26K **Log Cabin Wild** 15.19 42 Pn 08 24 42.2 -1.6
L26K **Log Cabin Wild** 15.19 42 P Pn 08 24 42.3 -1.6
baz=242,SNR=9.4
CTG **Chitna Glacier** 15.26 51 P Pn 08 24 43.2 -1.7
baz=252,SNR=18
CTGM **Chitina Glacie** 15.26 51 Pn 08 24 43.5 -1.4
H24K **Noodor Dome** 15.29 29 P Pn 08 24 41.3 -3.7
baz=225
J25K **Salcha River,** 15.29 35 P Pn 08 24 41.6 -3.5
baz=233,SNR=6.7
C18K **Utukok River** 15.31 7 P Pn 08 24 46.3 +1.0
baz=191
G23K **Bananza Creek** 15.36 25 P Pn 08 24 47.0 +1.0
baz=219,SNR=14
SCRK **Sand Creek** 15.43 39 P Pn 08 24 42.4 -4.5
baz=238
D19K **Kuna River** 15.45 11 Pn 08 24 46.4 -0.8
D19K **Kuna River** 15.45 11 P Pn 08 24 47.7 +0.6
baz=198,SNR=13
E20K **Nigu River** 15.48 14 P Pn 08 24 48.0 +0.6
baz=203
M27K **Edge Creek, AK** 15.51 46 P Pn 08 24 46.4 -1.6
baz=246,SNR=24
F22K **John River** 15.52 20 P Pn 08 24 47.6 -0.4
baz=212
PCA **Pinnacle** 15.54 55 Pn 08 24 47.4 -0.9
PINM **Pinnacle** 15.54 55 P Pn 08 24 46.9 -1.4
baz=256,SNR=17
YKU2 **Yakutat** 15.71 57 P P 08 24 51.7 -0.9
COLD **Coldfoot** 15.73 23 Pn 08 24 51.0 +0.4
COLD **Coldfoot** 15.73 23 P Pn 08 24 50.6 0.0
baz=217,SNR=13
O28M **Mount Upton** 15.74 52 P Pn 08 24 50.2 -0.8
baz=254
PRP **Porcupine Dome** 15.80 33 P Pn 08 24 47.8 -3.8
baz=230
BCPM **Bancas Point** 15.81 56 Pn 08 24 51.4 -0.3
L27K **Beaver Creek,** 15.83 43 P Pn 08 24 50.0 -1.8
baz=244,SNR=10
D20K **Etivluk River** 15.85 13 P Pn 08 24 52.5 +0.5
baz=201,SNR=60
C19K **Lookout Ridge** 15.89 9 P P 08 24 53.8 -0.9
baz=194
YUK3 **Moose Creek** 15.92 49 P Pn 08 24 51.8 -1.4
baz=250,SNR=30
BVCY **Beaver Creek** 15.97 46 P Pn 08 24 51.9 -1.8
baz=248,SNR=18
E21K **Killik River** 15.99 16 P P 08 24 55.4 -0.3
baz=207
G24K **Hadweenzic Riv** 16.02 28 P Pn 08 24 53.6 -0.6
baz=224,SNR=6.8
YUK8 **Steele Glacier** 16.09 51 P Pn 08 24 54.6 -0.7
baz=253,SNR=35
E22K **Anaktuvuk Pass** 16.12 20 P P 08 24 56.6 -0.7
baz=212,SNR=22
O29M **Mount Kennedy** 16.40 55 P Pn 08 24 59.2 0.0
baz=258,SNR=60
G25K **Bearman Lake** 16.45 29 P Pn 08 24 58.0 -1.6
baz=226
I26K **Coal Creek Min** 16.46 35 P Pn 08 24 58.9 -0.8
baz=235
C21K **Knifeblade Rid** 16.51 14 P Pn 08 25 00.6 +0.2
baz=204,SNR=28
F24K **Squaw Lake** 16.52 25 P Pn 08 25 00.7 +0.3
baz=221,SNR=6.1
E23K **Chandalar** 16.53 22 P Pn 08 25 00.4 -0.2
baz=216
YUK4 **Talbot Arm** 16.62 51 P Pn 08 25 01.9 0.0
baz=254,SNR=7.4
YUK6 **Outpost Mounta** 16.65 53 P Pn 08 25 02.0 -0.3
baz=256,SNR=12
E24K **Your Creek** 16.80 23 P Pn 08 25 03.8 -0.2
baz=219,SNR=13
A19K **Wainwright** 16.86 6 P P 08 25 05.1 -0.1
baz=190,SNR=26
B21K **Ikpikpuk River** 16.96 14 P Pn 08 25 05.7 -0.1
baz=204,SNR=37
B20K **Meade River** 17.00 11 P P 08 25 06.6 -0.2
baz=198,SNR=17
TOLK **Toolik Lake Re** 17.01 21 P P 08 25 06.9 -0.1
baz=215,SNR=10
M29M **Somme Creek** 17.03 48 P Pn 08 25 05.6 -1.2
baz=251,SNR=24
HYT **Haines Junctio** 17.03 53 Pn 08 25 05.9 -1.0
HYT **Haines Junctio** 17.03 53 P Pn 08 25 05.8 -1.1
baz=257,SNR=14
D23K **Nanushuk River** 17.05 19 P P 08 25 07.7 +0.2
baz=213,SNR=28
I27K **Kandik River** 17.16 36 P Pn 08 25 07.0 -1.3
baz=237
F25K **Christian Rive** 17.16 27 P Pn 08 25 07.4 -1.0
baz=225,SNR=16
P30M **Million Dollar** 17.16 56 P Pn 08 25 08.3 -0.2
baz=260,SNR=16
G26K **Porcupine Rive** 17.26 30 P Pn 08 25 06.5 -3.0
baz=230
S31K **Pelican** 17.32 63 P Pn 08 25 10.2 -0.1
baz=268,SNR=14
N30M **Aishikik Lake** 17.37 51 P Pn 08 25 10.5 -0.5
baz=256,SNR=39
L29M **L29M** 17.40 46 P Pn 08 25 10.4 -0.8
baz=250,SNR=14
H27K **Steamboat Moun** 17.54 34 P P 08 25 10.2 -2.7
baz=235
E25K **Arctic Village** 17.56 26 P 08 25 13.1 0.0
E25K **Arctic Village** 17.56 26 P P 08 25 12.7 -0.4
baz=224,SNR=16
D24K **Happy Valley** 17.59 21 P P 08 25 12.7 -0.6
baz=216
R31K **City Hall, Gus** 17.60 62 P P 08 25 13.4 -0.1
baz=267
F26K **Sheenjek River** 17.65 28 P P 08 25 13.5 -0.5
baz=227
I28M **Miner Creek** 17.68 37 P P 08 25 12.9 -1.6
baz=240
O30N **Mendenhall** 17.70 54 P P 08 25 14.7 +0.1
baz=259,SNR=18
B22K **Teshekpuk Lake** 17.79 14 P P 08 25 14.9 -0.6
baz=205,SNR=14
C23K **Itkillik River** 17.81 18 P P 08 25 15.7 0.0
baz=211,SNR=38
M30M **Minto, Yukon** 17.81 48 P P 08 25 14.7 -1.1
baz=253,SNR=10
SIT **Sitka** 17.81 66 P Pn 08 25 17.6 +1.4
SIT **Sitka** 17.81 66 P P 08 25 15.3 -0.5
baz=272,SNR=5.1
G27K **Doyon Strip** 17.83 32 P P 08 25 14.9 -1.1
baz=234,SNR=6.5
J29N **Klondike Camp** 17.87 41 P P 08 25 15.9 -0.7
baz=246
SKAG **Skagway** 17.89 58 P Pn 08 25 20.0 +2.8
SKAG **Skagway** 17.89 58 P P 08 25 13.7 -3.0
baz=264
K29M **Barlow Dome** 17.92 44 P 08 25 17.2 +0.2
K29M **Barlow Dome** 17.92 44 P P 08 25 16.8 -0.3
baz=248,SNR=15
N31M **Braeburn, Yuko** 17.99 52 P P 08 25 18.0 +0.2
baz=258,SNR=20
C24K **Franklin Bluff** 18.07 20 P P 08 25 18.4 -0.2
baz=215
A22K **Sinclair Lake** 18.20 12 P P 08 25 19.9 0.0
baz=202,SNR=37
S32K **Killisnoo** 18.21 65 P P 08 25 20.0 -0.1
S32K **Killisnoo** 18.21 65 P P 08 25 19.9 -0.3
baz=271,SNR=10.0
I29M **Ogilvie Camp,** 18.24 39 P P 08 25 20.0 -0.5
D25K **Kavik River** 18.26 23 P Pn 08 25 21.4 -0.2
D25K **Kavik River** 18.26 23 P P 08 25 20.6 -0.1
baz=220
WHY **Whitehorse** 18.27 55 P Pn 08 25 22.4 +0.5
baz=261,SNR=26
JIS **Juneau Island** 18.31 62 P Pn 08 25 24.0 +1.8
A21K **Barrow** 18.31 10 P P 08 25 21.4 +0.2
baz=198,SNR=28
MAYO **Mayo, Yukon** 18.51 45 P P 08 25 23.6 +0.1
H29M **Whitestone** 18.62 36 P P 08 25 23.8 -0.8
H29M **Whitestone** 18.62 36 P P 08 25 24.4 -0.3
baz=240
J30M **Hart River** 18.67 42 P P 08 25 25.3 0.0
baz=248,SNR=16
E27K **Coleen River** 18.70 29 P P 08 25 25.2 -0.3
baz=230
P32M **Atlin** 18.72 58 P P 08 25 25.9 0.0
baz=265,SNR=15
M31M **Drury Creek, Y** 18.79 50 P Pn 08 25 28.9 +0.9
baz=257,SNR=50
F28M **Old Crow** 18.87 32 P 08 25 26.8 -0.6
F28M **Old Crow** 18.87 32 P P 08 25 26.4 -1.0
baz=235
I30M **Mount Dempster** 18.91 40 P P 08 25 26.8 -1.1
baz=246,SNR=11
C26K **Camden Bay** 19.05 23 P P 08 25 29.5 +0.2
baz=221
G29M **Pine Creek** 19.09 35 P P 08 25 28.6 -1.2
baz=239,SNR=11
U33K **Whale Pass** 19.10 69 P P 08 25 30.3 +0.4
baz=276
C27K **Jago River** 19.11 24 P P 08 25 30.6 +0.6
C27K **Jago River** 19.11 24 P P 08 25 30.1 +0.1
baz=224,SNR=47
CRAG **Craig** 19.18 71 P Pn 08 25 32.6 +0.1
P33M **Teslin, Yukon** 19.23 56 P Pn 08 25 33.0 -0.2
baz=264,SNR=34
EPYK **Eagle Plains** 19.28 37 P P 08 25 31.3 -0.6
EPYK **Eagle Plains** 19.28 37 P P 08 25 31.2 -0.7
baz=242,SNR=23
Q32M **Nakina River** 19.43 60 P P 08 25 34.1 +0.3
baz=269
BILL **Bilibino** 19.51 329 P 08 25 35.1 +0.8
BILL **Bilibino** 19.51 329 *ce*P P 08 25 33.7 -0.6
BILL pmax pmax
comp=Z,64nm,1.7s
D27M **Malcolm River** 19.56 27 P P 08 25 35.3 +0.4
baz=229,SNR=21
E28M **Babbage River** 19.56 29 P P 08 25 35.1 +0.2
baz=233,SNR=12
G30M **tAoh Zrail Nji** 19.74 36 P P 08 25 35.4 -1.5
baz=242,SNR=17
H31M **Peel River** 19.92 40 P P 08 25 37.6 -1.2
baz=247,SNR=15
E29M **Blow River** 19.92 31 P 08 25 38.1 -0.7
E29M **Blow River** 19.92 31 P P 08 25 38.2 -0.6
baz=236,SNR=26
S34M **Telegraph Cree** 20.04 63 P Pn 08 25 41.5 -1.2
baz=272,SNR=13
V35K **Ketchikan** 20.05 71 P P 08 25 41.3 +1.1
R33M **Jennings River** 20.11 59 P Pn 08 25 43.3 -0.4
baz=269,SNR=33
F30M **Barrier River** 20.19 34 P P 08 25 39.8 -2.0
baz=241,SNR=16
D28M **Stokes Point** 20.23 28 P P 08 25 42.1 0.0
baz=232
MOBC **Moresby Island** 20.30 77 P Pn 08 25 45.0 -0.8
T35M **Bob Quinn** 20.59 66 P Pn 08 25 48.5 -0.6
baz=276
DLBC **Dease Lake** 20.61 62 P Pn 08 25 48.6 -0.7
comp=Z,34nm,0.8s,baz=246,slow=9.7,SNR=40
DLBC LR LR 08 34 17.7
comp=Z,36nm,18.2s,baz=280,slow=38
DLBC **Dease Lake** 20.61 62 P Pn 08 25 48.2 -1.2
baz=272,SNR=18
F31M **Tsiigehtchic** 20.81 36 P P 08 25 46.6 -1.7
baz=244,SNR=12
PET **Petropavlovsk** 20.91 283 *e*P Pn 08 25 53.9 +1.0
PET *e*S S 08 29 40.1 +2.5
PET pmax pmax
comp=Z,25nm,0.7s
PET MLR MLR
comp=Z,100nm,15.0s
RUBB **Prince Rupert** 21.01 73 P P 08 25 52.6 +2.0
INK **Inuvik** 21.27 34 P P 08 25 52.0 -1.3
comp=Z,31nm,0.6s,baz=248,slow=8.3,SNR=33
INK LR LR 08 35 10.8
comp=Z,53nm,18.1s,baz=346,slow=40
comp=Z,31nm,0.6s
INK **Inuvik** 21.27 34 P P 08 25 51.7 -1.6
baz=242,SNR=23
SEY **Seymchan** 23.33 310 *ce*P P 08 26 13.0 -1.6
SEY pmax pmax
comp=Z,22nm,0.9s
WRGLY **Wrigley** 23.92 49 P P 08 26 21.6 +1.8
MA2 **Magadan** 24.12 302 P P 08 26 21.8 0.0
MA2 **Magadan** 24.12 302 *de*P P 08 26 20.0 -1.7
MA2 pmax pmax
comp=Z,33nm,0.9s
MA2 **Magadan** 24.12 302 P P 08 26 21.8 0.0
comp=Z,57nm,0.8s
C36M **Paulatuk** 24.84 34 P 08 26 27.9 -0.2
C36M **Paulatuk** 24.84 34 P P 08 26 27.5 -0.7
baz=252,SNR=44
A36M **Sachs Harbour** 25.44 28 P 08 26 34.0 +0.5
A36M IAmb IAmb 08 26 37.6
comp=Z,52nm,0.8s
A36M **Sachs Harbour** 25.44 28 P P 08 26 33.7 +0.1
baz=245,SNR=62
YKAW3 **Yellowknife Wh** 27.98 51 P P 08 26 57.8 +1.4
YKA **Yellowknife Ar** 27.99 51 P P 08 26 57.5 +1.0
comp=Z,0.8nm,0.4s,baz=279,slow=8.0,SNR=39
YKA PcP PcP 08 30 10.2 +1.0
comp=Z,0.8nm,0.8s,baz=288,slow=3.2,SNR=4.0
YKA ScP ScP 08 33 43.2 +1.2
comp=Z,1.1nm,0.9s,baz=275,slow=4.0,SNR=7.3
YKA LR LR 08 37 59.0
comp=Z,25nm,18.2s,baz=250,slow=36
comp=Z,0.8nm,0.4s
YKA **Yellowknife Ar** 27.99 51 *i* P P 08 26 57.7 +1.2
YKA pmax pmax
comp=Z,1.0nm,0.4s
YKAW1 **Yellowknife Wh** 28.04 51 P P 08 26 57.9 +0.9
D05A **Enumclaw** 28.51 85 P P 08 27 00.1 -1.2
D05A IAmb IAmb 08 28 04.9
comp=Z,68nm,1.5s
LON **Longmire** 28.83 85 P P 08 27 04.2 -0.1
LON **Longmire** 28.83 85 P P 08 27 04.2 -0.1
LON pmax pmax
comp=Z,11nm,1.1s
I03D **Drain, OR** 29.55 92 P P 08 27 10.1 -0.5
I03D IAmb IAmb 08 27 38.8
comp=Z,88nm,1.6s
WAH2 **Wahluke Slope** 30.16 84 P P 08 27 17.9 +2.0
WAH2 IAmb IAmb 08 27 35.3
comp=Z,17nm,0.4s
I05D **Terrebonne, OR** 30.39 89 P P 08 27 17.6 -0.5
I05D IAmb IAmb 08 27 39.2
comp=Z,20nm,1.4s
NEW **Newport** 30.86 80 LR LR 08 37 16.6
comp=Z,47nm,22.0s,baz=298,slow=31
NEW **Newport** 30.86 80 P P 08 27 24.0 +1.8
NEW **Newport** 30.86 80 P P 08 27 24.0 +1.8
NEW pmax pmax
comp=Z,5.0nm,1.0s
EDM **Edmonton** 30.90 69 P P 08 27 24.1 +1.7
EDM IAmb IAmb 08 27 43.5
comp=Z,16nm,0.8s
EDM **Edmonton** 30.90 69 P P 08 27 24.1 +1.7
EDM pmax pmax
comp=Z,16nm,0.8s
PINE **Pine Mountain** 30.93 90 P P 08 27 24.3 +1.2
L04D **Klamath Falls** 31.04 93 P P 08 27 25.8 +1.9
L04D IAmb IAmb 08 28 30.8
comp=Z,60nm,1.8s
KMPM **Mount Pierce** 31.07 98 P P 08 27 26.3 +2.2
KMPM IAmb IAmb 08 27 35.1
comp=Z,60nm,1.7s
YBH **Yreka Blue Hor** 31.09 95 P P 08 27 25.3 +1.0
YBH **Yreka Blue Hor** 31.09 95 P P 08 27 25.3 +1.0
YBH pmax pmax
comp=Z,7.0nm,1.1s
M02C **Callahan** 31.21 95 P P 08 27 25.8 +0.4
M02C IAmb IAmb 08 28 12.0
comp=Z,33nm,1.9s
KMRM **Mail Ridge** 31.43 98 P P 08 27 29.1 +1.7
KMRM IAmb IAmb 08 28 12.9
comp=Z,55nm,1.8s
O02D **Mt. Diablo Mer** 32.01 97 P P 08 27 35.6 +3.3
HOPS **Hopland Field** 32.60 99 P P 08 27 39.8 +2.3
HOPS IAmb IAmb 08 27 54.3
comp=Z,64nm,1.9s
TIXI **Tiksi** 32.73 328 *i* P P 08 27 36.2 -2.0
TIXI pmax pmax
comp=Z,5.0nm,0.9s
JTMT **Jette** 32.78 79 P P 08 27 40.9 +1.8
YAK **Yakutsk** 33.86 310 P P 08 27 47.3 -0.8
YAK **Yakutsk** 33.86 310 *eP* P 08 27 46.5 -1.6
YAK *e**PP pP 08 28 04.2 -3.8
YAK *e* 08 28 59.3
YAK *e* 08 30 24.4
YAK *e*S S 08 33 04.7 -1.0
YAK *e**SS sS 08 33 33.4 -6.5
YAK *e*SS SnSn 08 35 15.9 -3.4
YAK *e* 08 38 03.1
YAK pmax pmax
comp=Z,97nm,1.5s
YAK pmax pmax
comp=N,12nm,1.4s
YAK pmax pmax
comp=E,24nm,1.5s
YAK pmax pmax
comp=Z,175nm,5.6s
YAK pmax pmax
comp=N,116nm,6.9s
YAK pmax pmax
comp=E,130nm,7.1s
YAK smax smax
comp=N,258nm,7.3s
YAK smax smax
comp=E,178nm,7.4s
PAHR **Pah Rah Range** 34.33 95 IAmb IAmb 08 28 24.2
comp=Z,10.0nm,1.1s
LYMT **Lyon Mountain** 34.34 79 P P 08 27 53.9 +1.1
RES **Resolute Bay** 34.44 26 IAmb IAmb 08 27 53.2
comp=Z,8.2nm,0.7s
GRNR **Gornyy** 34.51 289 *eP* P 08 27 51.3 -2.6
PNTR **Pine Nut** 34.59 96 IAmb IAmb 08 28 32.4
comp=Z,13nm,0.7s
EGMT **Eagleton** 35.27 76 IAmb IAmb 08 28 03.4
comp=Z,13nm,0.8s
BOZ **Bozeman (W)** 35.46 80 P P 08 28 02.2 -0.1
BOZ IAmb IAmb 08 28 05.2
comp=Z,13nm,1.6s
BOZ **Bozeman (W)** 35.46 80 P P 08 28 02.2 -0.1
BOZ pmax pmax
comp=Z,13nm,1.6s
KVN **Kaiserville** 35.51 94 P P 08 28 02.9 0.0
KVN **Kaiserville** 35.51 94 P P 08 28 02.9 0.0
KVN pmax pmax
comp=Z,4.0nm,1.2s
NVAR **Mina Array Bea** 35.79 95 P P 08 28 06.5 +1.2
comp=Z,1.6nm,0.9s,baz=312,slow=7.3,SNR=8.8
NVAR PcP PcP 08 30 31.8 +0.7
comp=Z,0.4nm,0.7s,baz=290,slow=3.6,SNR=3.7
NVAR LR LR 08 40 57.9
comp=Z,15nm,20.3s,baz=288,slow=33
comp=Z,1.6nm,0.9s
NVAR **Mina Array Bea** 35.79 95 P P 08 28 05.5 +0.2
NVAR PcP 08 30 32.6 +1.5
BLKN **Baker Lake** 35.84 44 P 08 28 05.6 +0.4
BLKN IAmb IAmb 08 28 05.9
comp=Z,7.8nm,0.6s
MDPB **Devils Postpil** 35.86 97 IAmb IAmb 08 28 30.3
comp=Z,6.4nm,0.8s
YHL **Hebgen Lake** 36.13 81 IAmb IAmb 08 28 26.6
comp=Z,7.3nm,0.7s
YMR **Madison River** 36.37 81 P P 08 28 11.0 +0.9
YMR IAmb IAmb 08 28 27.3
comp=Z,14nm,0.6s
FFC **Flin Flon** 36.44 62 P P 08 28 11.8 +1.4
FFC IAmb IAmb 08 29 26.3
comp=Z,16nm,1.8s
FFC **Flin Flon** 36.44 62 P P 08 28 11.8 +1.4
FFC pmax pmax
comp=Z,16nm,1.8s
YNR **Norris Junctio** 36.51 81 IAmb IAmb 08 28 41.2
comp=Z,17nm,1.4s
HVU **Hansel Valley** 36.98 86 IAmb IAmb 08 28 34.9
comp=Z,12nm,0.6s
KLR **Kul'dur** 37.89 289 P P 08 28 21.1 -1.6
comp=Z,6.7nm,0.5s,baz=70,slow=7.2,SNR=21
KLR LR LR 08 46 04.8
comp=Z,22nm,18.0s,baz=60,slow=40
comp=Z,6.7nm,0.5s
KLR **Kul'dur** 37.89 289 *ce*P P 08 28 21.6 -1.1
KLR pmax pmax
comp=Z,3.0nm,1.7s
DUG **Dugway, Tooele** 37.94 88 P P 08 28 23.1 -0.3
DUG **Dugway, Tooele** 37.94 88 P P 08 28 23.1 -0.3
DUG pmax pmax
comp=Z,3.0nm,0.9s
ZEA **Zeya** 38.14 298 *eP* P 08 28 23.0 -1.8
ZEA pmax pmax
comp=Z,10.0nm,0.5s
QSM **Queen of Sheba** 38.29 97 P P 08 28 28.4 +2.1
CCCA **Chr Cany lake** 38.30 98 P P 08 28 29.1 +2.8
CCCA IAmb IAmb 08 28 56.9
comp=Z,9.4nm,0.6s
PDAR **Pinedale Array** 38.30 83 P P 08 28 26.8 +0.2
comp=Z,1.2nm,0.8s,baz=296,slow=4.5,SNR=9.5
PDAR LR LR 08 43 09.5
comp=Z,17nm,21.1s,baz=290,slow=34
comp=Z,1.2nm,0.8s
FCC **Fort Churchill** 38.68 53 P P 08 28 29.9 +0.7
FCC IAmb IAmb 08 28 32.5
comp=Z,12nm,1.1s
FCC **Fort Churchill** 38.68 53 P P 08 28 29.9 +0.7
FCC pmax pmax
comp=Z,12nm,1.1s
BSUT **Blindstream Ca** 38.95 86 IAmb IAmb 08 28 51.6
comp=Z,25nm,1.7s
ALE **Alert** 39.02 12 P P 08 28 32.1 +0.4
ALE sP sP 08 29 02.6 +0.8
POIN **Pond Inlet** 39.51 28 P P 08 28 35.8 -0.2
POIN IAmb IAmb 08 29 49.7
comp=Z,25nm,2.0s
ILON **Igloolik, Nuna** 39.52 34 P P 08 28 36.0 0.0
ILON IAmb IAmb 08 28 36.8
comp=Z,15nm,0.7s
H11N2 **WAKE ISLAND Hy** 39.62 222 T T 09 10 45.3
baz=25,slow=76,SNR=1094
H11N3 **WAKE ISLAND Hy** 39.63 222 T T 09 10 45.8
baz=25,slow=76,SNR=1079
H11N1 **WAKE ISLAND Hy** 39.64 222 T T 09 10 29.3
baz=25,slow=76,SNR=638
Q16A **Castle Valley** 39.73 89 IAmb IAmb 08 28 58.5
comp=Z,6.3nm,0.7s
HEH **HeiHe** 39.77 293 *eP* P 08 28 36.3 -2.1
HEH pmax pmax
comp=Z,11nm,0.7s
SRU **San Rafael Swe** 39.99 88 IAmb IAmb 08 29 00.3
comp=Z,12nm,0.7s
K22A **Casper** 40.16 81 P P 08 28 43.1 +1.2
TULEG **Thule** 40.32 21 P 08 28 42.6 0.0
TULEG IAmb IAmb 08 28 42.8
comp=Z,6.9nm,0.5s
TULEG **Thule** 40.32 21 *i* P P 08 28 42.2 -0.4
TULEG IAmb IAmb 08 28 42.5
comp=Z,7.3nm,0.5s
HMU **Henry Mountain** 40.62 90 IAmb IAmb 08 29 05.8
comp=Z,15nm,0.7s
O20A **White River Ci** 40.70 85 IAmb IAmb 08 29 22.8
comp=Z,17nm,0.7s
U15A **North Rim** 40.70 93 P P 08 28 46.4 -0.1
RSSD **Black Hills** 40.74 77 P P 08 28 47.8 +1.0
RSSD IAmb IAmb 08 29 00.8
comp=Z,13nm,0.5s
RSSD **Black Hills** 40.74 77 P P 08 28 47.8 +1.0
RSSD pmax pmax
comp=Z,13nm,0.5s
RSSD **Black Hills** 40.74 77 P P 08 28 53.4 +6.6
H11S1 **WAKE ISLAND Hy** 40.80 221 T T 09 12 13.9
baz=24,slow=76,SNR=5429
H11S2 **WAKE ISLAND Hy** 40.82 221 T T 09 12 18.7
baz=24,slow=76,SNR=4341
H11S3 **WAKE ISLAND Hy** 40.82 221 T T 09 12 15.2
baz=24,slow=76,SNR=1948
E28A **Huff** 41.24 72 P P 08 28 52.4 +1.8
E28A IAmb IAmb 08 29 35.6
comp=Z,76nm,1.9s
PV23 **Carpenter Ridg** 41.31 88 IAmb IAmb 08 29 10.8
comp=Z,8.2nm,0.8s
PV10 **Paradox Valley** 41.35 88 P P 08 28 52.9 +1.1
PV10 IAmb IAmb 08 29 22.8
comp=Z,11nm,1.0s
PV22 **Blue Mesa, Par** 41.40 87 P 08 28 53.0 +0.9
PV04 **Paradox Valley** 41.42 88 P P 08 28 52.7 +0.4
PV19 **Morning Glory** 41.42 88 P P 08 28 53.0 +0.5
PV19 IAmb IAmb 08 29 26.1
comp=Z,29nm,1.5s
PV16 **Nyswonger Mesa** 41.46 88 P P 08 28 52.5 -0.3
PV11 **David Mesa, Pa** 41.50 88 IAmb IAmb 08 29 12.1
comp=Z,8.0nm,0.6s
PV18 **Skein Mesa, Pa** 41.51 88 IAmb IAmb 08 29 30.7
comp=Z,13nm,0.9s
PV12 **Saucer Basin,** 41.53 88 IAmb IAmb 08 29 30.3

comp=Z,9.2nm,0.9s
PV13 Radium Mtn., P 41.62 88 IAmb IAmb 08 28 55.9
comp=Z,11nm,0.8s
PV02 Paradox Valley 41.64 88 IAmb IAmb 08 29 31.8
comp=Z,16nm,0.7s
MJAR Matsushiro Arr 41.67 269 P **P** **08 28 54.1 -0.1**
comp=Z,2.4nm,0.6s,baz=34,slow=6.9,SNR=9.0
comp=Z,2.4nm,0.6s
MJAR Matsushiro Arr 41.67 269 P **P** **08 28 54.0 -0.2**
MJAR Matsushiro Arr 41.67 269 P **P** **08 28 54.0 -0.2**
MJAR pmax pmax
comp=Z,5.0nm,1.5s
MJB9 Matsu-Tunnel 41.67 269 P **P** **08 28 54.1 -0.1**
MJB9 IAmb IAmb 08 28 56.8
comp=Z,11nm,0.9s
MAJO Matsushiro 41.67 269 P **P** **08 28 54.8 +0.6**
MAJO IAmb IAmb 08 28 56.8
comp=Z,11nm,0.8s
MAJO Matsushiro 41.67 269 *i* P **P** **08 28 53.4 -0.8**
MAJO pmax pmax
comp=Z,9.0nm,0.9s
ULM Lac du Bonnet 41.88 65 P **P** **08 28 55.8 +0.1**
comp=Z,1.3nm,0.4s,baz=301,slow=8.8,SNR=4.4
ULM LR LR 08 47 54.5
comp=Z,32nm,18.4s,baz=289,slow=38
comp=Z,1.3nm,0.4s
ULM Lac du Bonnet 41.88 65 IAmb IAmb 08 29 35.0
comp=Z,34nm,1.8s
JHJ Hachijo jima 2 43.09 264 LR LR 08 47 07.2
comp=Z,33nm,19.1s,baz=359,slow=36
NEEM North Greenlan 43.29 17 *i* P **P** **08 29 06.8 -0.4**
NEEM IAmb IAmb 08 29 08.0
comp=Z,52nm,0.7s
KULLO Kullorsuaq 43.81 21 *i* P **P** **08 29 10.9 -0.1**
KULLO IAmb IAmb 08 29 11.7
comp=Z,9.2nm,0.6s
NOR Nord 44.08 6 *i* P **P** **08 29 12.7 -0.4**
NOR IAmb IAmb 08 29 13.6
comp=Z,25nm,1.0s
TUC Tucson 44.45 96 P **P** **08 29 17.7 +1.0**
TUC IAmb IAmb 08 29 49.2
comp=Z,21nm,2.0s
TUC Tucson 44.45 96 P **P** **08 29 17.7 +1.0**
TUC pmax pmax
comp=Z,21nm,2.0s
UPNV Upernavik 45.14 23 *i* P **P** **08 29 21.1 -0.4**
UPNV IAmb IAmb 08 29 23.7
comp=Z,13nm,0.7s
ANMO Albuquerque 45.18 89 LR LR 08 46 35.1
comp=Z,18nm,21.7s,baz=302,slow=34
NRIK Noril'sk 46.29 332 P **P** **08 29 30.0 -0.6**
comp=Z,5.0nm,0.4s,baz=68,slow=9.3,SNR=18
comp=Z,5.0nm,0.4s
NRIK Noril'sk 46.29 332 **P** **08 29 30.2 -0.4**
NRIK IAmb IAmb 08 29 32.6
comp=Z,29nm,1.5s
NRIK Noril'sk 46.29 332 *i* P **P** **08 29 29.7 -0.9**
NRIK pmax pmax
comp=Z,10.0nm,0.9s
NUUG Nuugaatsiaq 46.63 24 *i* P **P** **08 29 33.6 +0.4**
NUUG IAmb IAmb 08 29 34.3
comp=Z,12nm,0.7s
FRB Frobisher Bay 46.86 37 LR LR 08 48 54.1
comp=Z,52nm,19.3s,baz=262,slow=36
NIAQ Niaqornat 47.01 25 *i* P **P** **08 29 36.9 +0.6**
KSRS Korea Array 47.17 278 P **P** **08 29 38.3 +0.3**
comp=Z,3.9nm,0.6s,baz=56,slow=7.7,SNR=12
KSRS PcP **PcP** **08 31 09.5 +1.4**
comp=Z,2.2nm,0.6s,baz=62,slow=3.7,SNR=5.7
comp=Z,3.9nm,0.6s
SAATT Saattut 47.50 24 *i* P **P** **08 29 40.1 +0.1**
SAATT IAmb IAmb 08 29 41.8
comp=Z,12nm,0.7s
KBS Kingsbay 47.76 0 P **P** **08 29 42.4 +0.3**
KBS Kingsbay 47.76 0 *eP* **P** **08 29 42.3 +0.3**
KBS Kingsbay 47.76 0 *ceP* **P** **08 29 42.3 +0.3**
KBS pmax pmax
comp=Z,25nm,0.9s
KBS Kingsbay 47.76 0 *i* P **P** **08 29 42.7 +0.8**
KBS Kingsbay 47.76 0 P **P** **08 29 42.6 +0.6**
KBS pP **pP** **08 30 03.2 +0.4**
KBS sP **sP** **08 30 13.3 +0.8**
DAG Danmarks Havn 48.30 10 *i* P **P** **08 29 46.0 -0.2**
DAG IAmb IAmb 08 29 46.5
comp=Z,69nm,0.7s
JNU Nakatsue 48.39 271 P **P** **08 29 47.6 +0.2**
comp=Z,9.2nm,0.7s,baz=46,slow=7.6,SNR=7.9
comp=Z,9.2nm,0.7s
SPA0 Spitsbergen Ar 48.51 359 *eP* **P** **08 29 47.1 -0.7**
SPITS Spitsbergen Ar 48.51 359 P **P** **08 29 46.8 -1.0**
comp=Z,6.8nm,0.4s,baz=44,slow=5.0,SNR=91
SPITS PcP **PcP** **08 31 12.6 +0.2**
comp=Z,4.3nm,0.4s,baz=11,slow=1.5,SNR=13
comp=Z,6.8nm,0.4s
SUMG Summit 49.05 18 **P** **08 29 53.0 +0.6**
SUMG Summit 49.05 18 P **P** **08 29 53.0 +0.6**
SUMG pmax pmax
comp=Z,50nm,0.5s
SUMG Summit 49.05 18 *i* P **P** **08 29 52.9 +0.5**
SUMG IAmb IAmb 08 29 53.4
comp=Z,50nm,0.5s
HSPB Hornsund (broa 49.70 359 *eP* **P** **08 29 56.9 +0.1**
XLT XiLinHaoTe 49.76 292 *eP* **P** **08 29 58.0 +0.2**
XLT pP sP 08 30 26.8 -1.8
XLT sP pP 08 30 31.5 +13
XLT pmax pmax
comp=Z,16nm,0.6s
XLT pmax pmax
comp=Z,130nm,4.8s
WMOK Wichita Mounta 49.89 84 IAmb IAmb 08 30 36.9
comp=Z,5.4nm,0.8s
HOPEN Hopen 50.00 357 *eP* **P** **08 29 58.7 -0.4**
DBG Daneborg 50.37 11 *i* P **P** **08 30 01.8 -0.1**
DBG IAmb IAmb 08 30 02.1
comp=Z,46nm,0.8s
KUQ Kuujjuuaa 50.40 43 **P** **08 30 02.2 -0.1**
KUQ IAmb IAmb 08 30 02.6
comp=Z,12nm,0.6s
SFJD Kangerlussuaq 50.43 27 **P** **08 30 02.8 +0.3**
SFJD Kangerlussuaq 50.43 27 P **P** **08 30 02.8 +0.3**
SFJD pmax pmax
comp=Z,31nm,1.2s
SFJD Kangerlussuaq 50.43 27 *i* P **P** **08 30 02.6 +0.2**
SFJD IAmb IAmb 08 30 04.2
comp=Z,27nm,1.2s
P40A Paris 50.57 74 **P** **08 30 03.9 -0.1**
LPIG La Paz 50.81 103 LR LR 08 47 48.5
comp=Z,24nm,20.1s,baz=344,slow=31
TX31 Lajitas Ar. Si 50.82 92 P **P** **08 30 07.1 +1.1**
TX31 IAmb IAmb 08 30 39.4
comp=Z,7.9nm,1.1s
TXAR Lajitas Array 50.82 92 P **P** **08 30 07.1 +1.1**
comp=Z,1.9nm,0.6s,baz=300,slow=5.6,SNR=56
comp=Z,1.9nm,0.6s
TLY Talaya 51.18 307 P **P** **08 30 08.4 0.0**
comp=Z,36nm,0.5s,baz=63,slow=4.5,SNR=29
TLY LR LR 08 52 25.8
comp=Z,16nm,21.5s,baz=38,slow=37
comp=Z,36nm,0.5s
TLY Talaya 51.18 307 **P** **08 30 08.4 0.0**
TLY Talaya 51.18 307 P **P** **08 30 08.6 +0.2**
R40A Maddies Statio 51.28 76 P **P** **08 30 08.4 -0.8**
R40A IAmb IAmb 08 30 20.1
comp=Z,6.8nm,0.7s
ULN Ulaanbaatar 51.98 301 **P** **08 30 14.1 -0.5**
ULN IAmb IAmb 08 30 14.9
comp=Z,17nm,0.7s
ULN Ulaanbaatar 51.98 301 *ceP* **P** **08 30 14.2 -0.3**
ULN pmax pmax
comp=Z,5.0nm,0.5s
BRDY Brady 52.20 87 **P** **08 30 16.7 +0.5**
SONM Songino Array 52.33 302 P **P** **08 30 16.7 -0.5**
comp=Z,4.8nm,0.6s,baz=44,slow=6.4,SNR=9.9
SONM PcP **PcP** **08 31 27.9 +0.8**
comp=Z,2.0nm,0.4s,baz=80,slow=2.1,SNR=6.6
SONM ScP **ScP** **08 35 17.3 +1.2**
comp=Z,0.3nm,0.5s,baz=38,slow=5.4,SNR=4.5
comp=Z,4.8nm,0.6s
SONM Songino Array 52.33 302 P **P** **08 30 16.1 -1.0**
SONM IAmb IAmb 08 30 18.0
comp=Z,15nm,1.6s
SONM **PcP** **08 31 27.6 +0.6**
SONM Songino Array 52.33 302 P **P** **08 30 16.1 -1.0**
SONM 08 31 27.7
SONM pmax pmax
comp=Z,15nm,1.6s

FCAR Ozark Folk Cen 53.01 78 IAmb IAmb 08 30 33.4
comp=Z,9.0nm,0.7s
SCHQ Schefferville 53.22 45 P **P** **08 30 23.4 0.0**
comp=Z,8.0nm,0.8s,baz=302,slow=8.6,SNR=15
SCHQ LR LR 08 54 15.3
comp=Z,42nm,18.1s,baz=322,slow=37
comp=Z,8.0nm,0.8s
SCHQ Schefferville 53.22 45 IAmb IAmb 08 30 28.1
comp=Z,7.8nm,0.8s
SADO Sadowa 54.17 61 LR LR 08 52 44.7
comp=Z,36nm,20.0s,baz=334,slow=35
HHC Hu-ho-hao-te 54.28 292 *eP* **P** **08 30 31.0 -0.5**
HHC pmax pmax
comp=Z,15nm,0.6s
HHC pmax pmax
comp=Z,120nm,4.0s
TIA Tai'an 54.34 284 P **P** **08 30 31.5 -0.3**
TIA pmax pmax
comp=Z,9.0nm,0.7s
JOW Kunigami 54.49 268 P **P** **08 30 33.5 +0.5**
comp=Z,42nm,0.9s,baz=19,slow=12,SNR=4.3
comp=Z,42nm,0.9s
KNGR Kungurtug, Tuv 54.78 309 *i* P **P** **08 30 34.3 -0.6**
KNGR pmax pmax
comp=Z,16nm,0.9s
HNS HongShan 54.90 287 ⇓P **P** **08 30 36.5 +0.7**
HNS pmax pmax
comp=Z,17nm,0.9s
TRQ Mont Tremblant 55.52 57 IAmb IAmb 08 31 12.2
comp=Z,21nm,1.4s
HAMF Hammerfest 55.89 356 *eP* **P** **08 30 41.5 -1.0**
VADS Vadso 56.11 354 *eP* **P** **08 30 43.0 -1.0**
NJ2 Nanjing 56.28 280 *eP* **P** **08 30 46.0 +0.2**
NJ2 pmax pmax
comp=Z,35nm,0.7s
ARA0 ARCESS Array S 56.91 355 *eP* **P** **08 30 48.7 -1.0**
ARCES ARCESS Array B 56.91 355 P **P** **08 30 48.4 -1.4**
comp=Z,10nm,0.8s,baz=6.6,slow=7.0,SNR=17
ARCES PcP **PcP** **08 31 44.4 +0.2**
comp=Z,7.2nm,0.7s,baz=11,slow=3.8,SNR=6.6
comp=Z,10nm,0.8s
K57A Scipio Center 56.95 62 P **P** **08 30 50.8 +0.3**
TRO Tromso 57.05 358 *eP* **P** **08 30 50.5 -0.2**
JETT Jettan, Norway 57.09 357 *eP* **P** **08 30 51.0 0.0**
NCB Newcomb 57.27 59 P **P** **08 30 53.5 +0.9**
KTK1 Kautokeino 57.54 356 *eP* **P** **08 30 53.8 -0.4**
E62A Clayton Lake 57.73 54 P **P** **08 30 55.8 0.0**
ZAA0 Zalesovo Array 57.82 319 P **P** **08 30 56.0 -0.3**
ZALV Zalesovo Beam 57.82 319 P **P** **08 30 55.8 -0.6**
comp=Z,19nm,0.4s,baz=43,slow=6.8,SNR=88
ZALV LR LR 08 56 02.5
comp=Z,33nm,18.2s,baz=327,slow=36
comp=Z,19nm,0.4s
TKL Tuckaleechee C 57.98 72 LR LR 08 54 22.3
comp=Z,35nm,20.2s,baz=332,slow=34
G62A West of Eustis 58.23 56 P **P** **08 31 00.1 +0.7**
APA Apatity 58.30 351 *eP* **P** **08 30 58.4 -1.0**
APA *e* 08 31 47.4
APA pmax pmax
comp=Z,12nm,1.2s
APA MLR MLR
comp=Z,1μm,5.0s
STEI Steigen 58.82 359 *eP* **P** **08 31 02.2 -0.8**
BATG Bathurst New B 58.90 52 P **P** **08 31 04.5 +0.5**
BORG Borgarnes 58.94 17 LR LR 08 58 57.3
comp=Z,18nm,18.6s,baz=354,slow=38
FAUS Fauske 59.37 359 *eP* **P** **08 31 06.2 -0.7**
VAGH Vaagaholmen 60.03 0 *eP* **P** **08 31 10.8 -0.5**
KONS Konsvik 60.26 0 *eP* **P** **08 31 12.3 -0.6**
RAUS Rausandaksla 60.32 360 *eP* **P** **08 31 12.9 -0.5**
XAN Xi'an 60.59 288 ⇓P **P** **08 31 15.0 -0.8**
XAN pP pP 08 31 37.3 -0.2
XAN pmax pmax
comp=Z,13nm,0.9s
MOR8 Moi Rana 60.59 360 *eP* **P** **08 31 13.3 -2.0**
LEIR Leirfjorden 60.65 0 *eP* **P** **08 31 15.1 -0.5**
SSLB Suanglung 61.13 271 **P** **08 31 19.9 +0.3**
GTA2 Gaotai 61.60 299 *eP* **P** **08 31 22.3 -0.4**
GTA2 pmax pmax
comp=Z,26nm,0.8s
LZH Lanzhou 61.92 293 *eP* **P** **08 31 25.5 +0.6**
LZH pP pP 08 31 45.8 -0.9
LZH pmax pmax
comp=Z,35nm,1.4s
LZDM Lanzhou Array 62.09 293 P **P** **08 31 26.1 -0.1**
comp=Z,3.9nm,0.3s,baz=45,slow=6.3,SNR=9.1
comp=Z,3.9nm,0.3s
NSS Namsos 62.23 1 *eP* **P** **08 31 25.8 -0.4**
KURK Kurchatov 62.74 320 **P** **08 31 29.8 -0.1**
KURK **PcP** **08 32 09.1 +1.4**
KURK Kurchatov 62.74 320 *ceP* **P** **08 31 29.5 -0.4**
KURK pmax pmax
comp=Z,26nm,1.1s
KURK Kurchatov 62.74 320 P **P** **08 31 29.7 -0.1**
KURK sP **sP** **08 32 01.8 +0.5**
ZSN Zaisan 62.75 314 ⇑*i* P **P** **08 31 29.9 -0.2**
comp=Z,8.6nm,0.9s
TLIG Tlapa 62.77 97 P **P** **08 31 32.3 +1.6**
TLIG IAmb IAmb 08 32 44.6
comp=Z,37nm,1.9s
KURBB Kurchatov Arra 62.85 320 P **P** **08 31 30.2 -0.5**
comp=Z,23nm,0.8s,baz=55,slow=7.5,SNR=117
KURBB PcP **PcP** **08 32 08.2 0.0**
comp=Z,1.5nm,0.6s,baz=43,slow=4.0,SNR=4.0
KURBB LR LR 09 00 31.2
comp=Z,21nm,18.3s,baz=174,slow=38
comp=Z,23nm,0.8s
ENH Enshi 63.04 285 IAmb IAmb 08 31 32.8
comp=Z,12nm,0.7s
BVAR Borovoye Array 63.83 326 P **P** **08 31 37.0 -0.1**
comp=Z,31nm,0.5s,baz=50,slow=6.7,SNR=133
BVAR PcP **PcP** **08 32 12.4 +0.2**
comp=Z,12nm,0.6s,baz=26,slow=2.9,SNR=10
BVAR LR LR 08 59 12.6
comp=Z,28nm,18.7s,baz=34,slow=36
comp=Z,31nm,0.5s
BVAR Borovoye Array 63.83 326 P **P** **08 31 37.0 -0.1**
BORK Borovoye 63.83 326 **P** **08 31 37.5 +0.5**
BORK Borovoye 63.83 326 *ceP* **P** **08 31 37.0 -0.1**
BORK pmax pmax
comp=Z,27nm,1.0s
BORK Borovoye 63.83 326 P **P** **08 31 37.4 +0.3**
BORK PcP **PcP** **08 32 12.4 +0.3**
MOL Molde 64.10 3 *eP* **P** **08 31 38.5 -0.1**
KLMR Klimovskoe 64.10 346 *eP* **P** **08 31 36.2 -2.5**
KLMR pmax pmax
comp=Z,5.0nm,0.8s
WMQ Urumqi 64.29 309 *eP* **P** **08 31 43.0 +2.6**
WMQ pmax pmax
comp=Z,18nm,1.1s
MK31 Makanchi Array 64.36 315 *ceP* **P** **08 31 39.8 -0.9**
MKAR Makanchi Array 64.36 315 P **P** **08 31 39.7 -1.0**
comp=Z,17nm,0.7s,baz=44,slow=5.7,SNR=139
MKAR LR LR 08 59 51.5
comp=Z,10nm,20.2s,baz=9.5,slow=36
comp=Z,17nm,0.7s
AKN Aaknes 64.47 4 *eP* **P** **08 31 41.3 +0.1**
MAKZ Makanchi 64.48 315 **P** **08 31 40.9 -0.6**
MAKZ Makanchi 64.48 315 P **P** **08 31 40.9 -0.6**
MAKZ pmax pmax
comp=Z,43nm,1.2s
MAKZ Makanchi 64.48 315 P **P** **08 31 40.8 -0.7**
MAKZ pP **pP** **08 32 03.6 +0.2**
MAKZ sP **sP** **08 32 13.5 +0.5**
MAKZ PcP **PcP** **08 32 15.3 +0.3**
ARTI Arti 64.49 334 **P** **08 31 41.0 -0.3**
ARTI Arti 64.49 334 *d i*P **P** **08 31 41.0 -0.3**
ARTI *PP **pP** **08 32 02.2 -1.1**
ARTI 08 32 14.1
ARTI S **S** **08 40 11.8 -1.4**
ARTI pmax pmax
comp=Z,26nm,0.8s
ARTI Arti 64.49 334 P **P** **08 31 40.9 -0.4**
ARTI pP **pP** **08 32 03.8 +0.5**
ARTI sP **sP** **08 32 13.3 +0.6**
ARTI PcP **PcP** **08 32 15.2 +0.4**
KIRV Kirov 64.56 340 *ceP* **P** **08 31 41.5 -0.2**
DOMB Dombas 64.67 2 *eP* **P** **08 31 42.0 -0.5**
FIA1 FINESS Array S 64.92 354 P **P** **08 31 43.4 -0.6**
FINES FINESS Array B 64.92 354 P **P** **08 31 42.9 -1.2**
comp=Z,14nm,0.5s,baz=15,slow=7.2,SNR=85
comp=Z,14nm,0.5s
FINES FINESS Array B 64.92 354 *eP* **P** **08 31 43.1 -0.9**
NC204 NORSAR Array S 65.48 2 P **P** **08 31 47.1 -0.6**
NC204 IAmb IAmb 08 31 48.5
comp=Z,24nm,0.9s
NC405 NORSAR Array S 65.66 1 P **P** **08 31 48.6 -0.2**
NB201 NORSAR Array S 65.71 1 P **P** **08 31 49.5 +0.3**
NB2 NORSAR Subarra 65.72 1 P **P** **08 31 48.6 -0.7**
comp=Z,4.7nm,0.6s,baz=360,slow=6.2
NB2 NORSAR Subarra 65.72 1 P **P** **08 31 48.6 -0.7**
NOA NORSAR Array B 65.72 1 P **P** **08 31 48.7 -0.7**
comp=Z,10nm,0.8s,baz=0.1,slow=6.4,SNR=26
comp=Z,10nm,0.8s
NBO00 NORSAR Array S 65.72 2 P **P** **08 31 49.1 -0.1**
SKAR Skarslia 66.02 3 *eP* **P** **08 31 50.9 -0.3**
ASK Askoy 66.09 5 *eP* **P** **08 31 52.3 +0.8**
HFS Hagfors 66.65 0 P **P** **08 31 54.2 -0.9**
comp=Z,27nm,0.4s,baz=27,slow=3.5,SNR=106
comp=Z,27nm,0.4s
GOMU GeErMu 66.65 300 P **P** **08 31 54.5 -1.6**
GOMU pmax pmax
comp=Z,18nm,0.9s
KONO Kongsberg 67.08 2 P **P** **08 31 57.9 0.0**
KONO Kongsberg 67.08 2 P **P** **08 31 57.9 0.0**
KONO pmax pmax
comp=Z,110nm,1.8s
TDK Taldyqorghan 67.42 316 *eP* **P** **08 32 00.1 -0.3**
comp=Z,15nm,0.7s
GYA Guiyang 67.54 284 ⇓P **P** **08 32 02.0 +0.5**
GYA pmax pmax
comp=Z,38nm,1.2s
STRU Stroemstad 67.73 1 *i* P **P** **08 32 01.6 -0.4**
VSU Vasula 67.84 353 *ceP* **P** **08 32 01.9 -0.8**
VSU pmax pmax
comp=Z,24nm,1.3s
SNART Snartemo 68.32 4 *i* P **P** **08 32 06.3 +0.6**
KPKS Kokpek 68.55 315 *eP* **P** **08 32 07.4 -0.2**
UZB Uzynbulak 68.67 315 *eP* **P** **08 32 08.1 -0.2**
comp=Z,9.0nm,0.7s
TJOU Tjoern 68.74 1 *i* P **P** **08 32 08.3 0.0**
SATY Saty 69.00 315 *eP* **P** **08 32 10.2 -0.2**
comp=Z,8.1nm,0.8s
BTLS Baital 69.15 319 *eP* **P** **08 32 11.1 0.0**
comp=Z,15nm,0.7s
BORU Boraas 69.15 1 *i* P **P** **08 32 10.4 -0.5**
ONAU Onsala 69.38 1 *i* P **P** **08 32 11.5 -0.8**
PRZ Przheval'sk 69.48 314 IAmb IAmb 08 32 15.1
comp=Z,16nm,0.6s
MDOK Medeo 69.49 316 *eP* **P** **08 32 13.1 -0.4**
AAA Alma-Ata 69.50 316 *eP* **P** **08 32 13.2 -0.3**
comp=Z,10.0nm,0.5s
TNSS Tian-Shan 69.63 316 *eP* **P** **08 32 14.1 -0.6**
FABU Falkenberg 69.79 1 *i* P **P** **08 32 14.0 -0.8**
AKTO Aktyubinsk 69.91 332 LR LR 09 09 15.0
comp=Z,12nm,19.1s,baz=40,slow=41
OBN Obninsk 70.07 346 ⇓*eP* **P** **08 32 15.7 -0.8**
OBN *e* 08 32 36.9
OBN *e* 08 34 50.7
OBN *eS* **SKiKP** **08 41 46.4 -7.0**
OBN pmax pmax
comp=Z,16nm,0.9s
OBN MLR MLR
comp=Z,55nm,16.0s
WUS Wushi 70.17 313 P **P** **08 32 17.8 +0.1**
WUS PcP **PcP** **08 32 38.9 -0.2**
WUS pP **pP** **08 32 40.2 +0.3**
WUS sP **sP** **08 32 50.1 +0.7**
KDJ Kajisay 70.28 315 **P** **08 32 18.6 +0.2**
KDJ IAmb IAmb 08 32 19.5
comp=Z,30nm,0.9s
KDJ Kajisay 70.28 315 P **P** **08 32 18.6 +0.2**
KDJ pmax pmax
comp=Z,30nm,0.9s
TKM2 Tokmak 2 70.29 317 P **P** **08 32 18.6 +0.2**
SNR=43
PZH PanZhiHua 70.32 288 P **P** **08 32 19.3 +0.6**
PZH pmax pmax
comp=Z,30nm,0.9s
DEL Delary 70.32 360 *i* P **P** **08 32 17.8 -0.3**
USP Ospenovka 70.44 317 P **P** **08 32 19.8 +0.6**
SNR=23
BLEU Blekinge 70.48 359 *i* P **P** **08 32 18.3 -0.7**
EKA Eskdalemuir Ar 70.56 10 P **P** **08 32 19.6 0.0**
comp=Z,5.8nm,0.5s,baz=343,slow=4.6,SNR=34
comp=Z,5.8nm,0.5s
CHMS Chumysh 70.57 317 P **P** **08 32 20.5 +0.6**
SNR=17
ULHL Ulahol 70.58 316 P **P** **08 32 20.6 +0.4**
SNR=11
BELG Belogornoye 70.70 339 *c i*P **P** **08 32 19.1 -1.3**
BELG pmax pmax
comp=Z,8.0nm,0.9s
BJUU Bjuv 70.72 0 *i* P **P** **08 32 20.0 -0.5**
KBK Karagaybulak 70.77 317 P **P** **08 32 21.7 +0.4**
SNR=22
AAK Ala-Archa 70.97 317 LR LR 09 06 21.7
comp=Z,10nm,19.5s,baz=31,slow=38
AAK Ala-Archa 70.97 317 P **P** **08 32 23.1 +0.5**
SNR=37
AAK Ala-Archa 70.97 317 **P** **08 32 22.9 +0.4**
AAK Ala-Archa 70.97 317 *ceP* **P** **08 32 23.0 +0.5**
AAK pmax pmax
comp=Z,34nm,0.9s
AAK Ala-Archa 70.97 317 P **P** **08 32 23.2 +0.7**
AAK PcP **PcP** **08 32 42.2 -0.2**
AAK pP **pP** **08 32 45.0 +0.3**
LUNU Lund 71.16 0 *i* P **P** **08 32 22.9 -0.3**
EKS2 Erkin-Say 71.24 318 P **P** **08 32 24.9 +0.8**
SNR=8.8
UCH Uchtor 71.31 317 P **P** **08 32 25.4 +0.5**
SNR=13
NRN Naryn 71.35 315 IAmb IAmb 08 32 26.5
comp=Z,25nm,0.8s
DAV Davao City (W) 71.49 256 LR LR 09 02 56.9
comp=Z,8.5nm,19.5s,baz=2.5,slow=35
HAMD Hammershus, De 71.53 359 *i* P **P** **08 32 24.8 -0.5**
MNK Minsk 71.67 351 *i* P **P** **08 32 26.5 +0.3**
comp=E,15nm,0.6s
MNK *i* P **P** **08 32 26.5 +0.3**
comp=N,20nm,0.6s
MNK *i* P **P** **08 32 26.5 +0.3**
comp=Z,33nm,0.8s,baz=8.7
MNK *i* pP **pP** **08 32 49.7 +1.2**
MNK *i* PP **PP** **08 35 06.4 +0.9**
MNK *i* PPP PPP 08 36 50.4
MNK *i* S **S** **08 41 39.6 +0.9**
MNK *i* sS **SKSac** **08 42 19.8 -1.8**
MNK *i* SS **SS** **08 46 17.8 +3.4**
MNK *i* SSS SSS 08 49 37.8
MNK *i* LR LR 09 04 15.7
MNK *i* LRM MLR 09 06 35.5
comp=Z,102nm,15.2s
MNK *i* LRM MLR 09 06 40.0
comp=N,854nm,21.7s
MNK *i* LRM MLR 09 07 32.7
comp=E,2μm,21.3s
MNK Minsk 71.67 351 *i* P **P** **08 32 26.5 +0.3**
MNK *i* *PP **pP** **08 32 49.7 +1.2**
MNK *i* 08 35 06.4
MNK *i* PPP PPP 08 36 50.4
MNK *i* S **S** **08 41 39.6 +0.9**
MNK *i* *SS **SKSac** **08 42 19.8 -1.8**
MNK *i* SS **SS** **08 46 17.7 +3.4**
MNK pmax pmax
comp=E,15nm,0.6s
MNK pmax pmax
comp=N,20nm,0.6s
MNK pmax pmax
comp=Z,33nm,0.8s
MNK MLR MLR
comp=Z,102nm,15.0s
MNK MLR MLR
comp=N,854nm,22.0s
MNK MLR MLR
comp=E,2μm,21.0s
BSD Bornholm Skovb 71.68 359 *i* P **P** **08 32 25.8 -0.5**
BSD IAmb IAmb 08 32 26.3
comp=Z,7.0nm,0.6s
DZA Taraz 72.02 319 *eP* **P** **08 32 28.4 -0.2**
comp=Z,11nm,0.6s
LPSR Galich'ya Gora 72.15 344 *eP* **P** **08 32 25.1 -4.0**
LPSR pmax pmax
comp=Z,10.0nm,0.9s
BRLS Borolday 72.47 320 ⇑*i* P **P** **08 32 32.6 +1.3**
comp=Z,8.0nm,0.8s
SUW Suwalki 72.51 354 *eP* **P** **08 32 30.8 -0.5**
PASG PASIGHAT 72.69 294 *eP* **P** **08 32 32.1 -0.7**
PASG IAmb IAmb 08 32 37.4
comp=Z,16nm,0.8s

VORR	**Voronezh**	**73.00**	**344**	*e*P		**P**	**08 32 32.2**	**-2.0**
VORR				pmax		pmax			
	comp=Z,10.0nm,0.9s								
VRH	**Novokhopyorsk**	**73.01**	**342**	*e*P		**P**	**08 32 31.5**	**-2.8**
VRH				pmax		pmax			
	comp=Z,10.0nm,1.0s								
CHM	**Chimkent**	**73.17**	**320**	*e*P		**P**	**08 32 35.2**	**-0.3**
VSR	**Storozhevoye**	**73.44**	**344**	*e*P		**P**	**08 32 33.3**	**-3.5**
VSR				pmax		pmax			
	comp=Z,10.0nm,1.0s								
LSA	**Lhasa**	**73.64**	**298**	P		P	**08 32 37.5**	**-1.4**
LSA				pmax		pmax			
	comp=Z,26nm,0.8s								
VORD	**Divnogorie**	**73.66**	**344**	*e*P		**P**	**08 32 34.8**	**-3.3**
VORD				pmax		pmax			
	comp=Z,20nm,0.9s								
ZIRO	**ZIRO**	**73.91**	**294**	*e*P		**P**	**08 32 40.3**	**+0.1**
MOKO	**MOKOCHONG**	**74.50**	**293**	*e*P		**P**	**08 32 44.4**	**+0.8**
MOKO				IAmb		IAmb	08 32 45.6		
	comp=Z,32nm,0.7s								
SIJI	**Sorong**	**74.77**	**247**	P		**P**	**08 32 45.6**	**+0.6**
	comp=Z,17nm,0.6s,baz=41,slow=7.2,SNR=8.7								
	comp=Z,17nm,0.6s								
RNPP9	**Sopachiv**	**74.90**	**352**	P		**P**	**08 32 44.4**	**-0.9**
RNPP5	**Staryi Chortor**	**75.09**	**352**	P		**P**	**08 32 45.5**	**-0.9**
KOHI	**KOHIMA**	**75.20**	**293**	*e*P		**P**	**08 32 47.6**	**-0.1**
KOHI				IAmb		IAmb	08 32 49.0		
	comp=Z,29nm,0.9s								
TEZP	**TEZPUR**	**75.20**	**295**	*e*P		**P**	**08 32 46.5**	**-0.9**
TEZP				IAmb		IAmb	08 32 48.3		
	comp=Z,14nm,1.1s								
MI28	**MI28,Pidlybu**	**75.23**	**351**	P		**P**	**08 32 45.4**	**-1.8**
AK21	**Malin Array Si**	**75.25**	**350**	P		**P**	**08 32 46.0**	**-1.3**
AK22	**Malin Array Si**	**75.26**	**350**	P		**P**	**08 32 45.8**	**-1.6**
AK03	**Malin Array Si**	**75.28**	**350**	P		**P**	**08 32 45.7**	**-1.8**
AK20	**Malin Array Si**	**75.28**	**350**	P		**P**	**08 32 46.0**	**-1.5**
AK04	**Malin Array Si**	**75.28**	**350**	P		**P**	**08 32 46.2**	**-1.3**
AK18	**Malin Array Si**	**75.30**	**350**	P		**P**	**08 32 46.3**	**-1.3**
AKASG	**Malin Array Be**	**75.30**	**350**	P		**P**	**08 32 46.5**	**-1.2**
	comp=Z,17nm,0.5s,baz=15,slow=5.8,SNR=84								
	comp=Z,17nm,0.5s								
AKASG	**Malin Array Be**	**75.30**	**350**	P		**P**	**08 32 46.6**	**-1.0**
AKASG	**Malin Array Be**	**75.30**	**350**	P		**P**	**08 32 46.6**	**-1.0**
AKASG				pmax		pmax			
	comp=Z,10.0nm,1.3s								
AKBB	**Malin Array Si**	**75.30**	**350**	*ce*P		**P**	**08 32 46.7**	**-0.9**
AKBB				pmax		pmax			
	comp=Z,29nm,0.9s								
AKBB	**Malin Array Si**	**75.30**	**350**	P		**P**	**08 32 46.1**	**-1.5**
AK19	**Malin Array Si**	**75.30**	**350**	P		**P**	**08 32 46.0**	**-1.6**
KIEV	**Kiev**	**75.31**	**350**	⇑P		**P**	**08 32 46.6**	**-1.1**
KIEV	**Kiev**	**75.31**	**350**			**P**	**08 32 46.5**	**-1.2**
KIEV	**Kiev**	**75.31**	**350**	P		**P**	**08 32 46.5**	**-1.2**
KIEV				pmax		pmax			
	comp=Z,31nm,0.7s								
KIEV	**Kiev**	**75.31**	**350**	P		**P**	**08 32 45.8**	**-1.8**
	comp=Z,205nm,0.7s								
KIEV	**Kiev**	**75.31**	**350**	P		**P**	**08 32 46.6**	**-1.1**
KIEV				PcP		**PcP**	**08 33 01.7**	**+1.1**
AK01	**Malin Array Si**	**75.31**	**350**	P		**P**	**08 32 46.3**	**-1.4**
AK15	**Malin Array Si**	**75.32**	**350**	P		**P**	**08 32 46.5**	**-1.2**
AK11	**Malin Array Si**	**75.33**	**350**	P		**P**	**08 32 46.3**	**-1.5**
AK17	**Malin Array Si**	**75.33**	**350**	P		**P**	**08 32 46.2**	**-1.6**
AK16	**Malin Array Si**	**75.34**	**350**	P		**P**	**08 32 46.7**	**-1.2**
AK02	**Malin Array Si**	**75.35**	**350**	P		**P**	**08 32 46.0**	**-1.9**
AK08	**Malin Array Si**	**75.36**	**350**	P		**P**	**08 32 46.3**	**-1.7**
AK12	**Malin Array Si**	**75.36**	**350**	P		**P**	**08 32 46.6**	**-1.4**
AK09	**Malin Array Si**	**75.38**	**350**	P		**P**	**08 32 46.7**	**-1.4**
AK14	**Malin Array Si**	**75.38**	**350**	P		**P**	**08 32 46.5**	**-1.6**
AK05	**Malin Array Si**	**75.38**	**350**	P		**P**	**08 32 46.4**	**-1.7**
AK10	**Malin Array Si**	**75.40**	**350**	P		**P**	**08 32 46.8**	**-1.4**
CLL	**Collm**	**75.50**	**1**	P		**P**	**08 32 48.7**	**0.0**
CLL				IAmb		IAmb	08 32 49.3		
	comp=Z,9.1nm,0.8s								
CLL	**Collm**	**75.50**	**1**	P		**P**	**08 32 48.7**	**0.0**
CLL				pmax		pmax			
	comp=Z,9.0nm,0.8s								
CLL	**Collm**	**75.50**	**1**	*i*P		**P**	**08 32 48.3**	**-0.4**
	comp=Z,9.0nm,0.7s								
IMP	**Imphal**	**75.99**	**293**	*e*P		**P**	**08 32 51.8**	**-0.3**
IMP				IAmb		IAmb	08 32 52.3		
	comp=Z,26nm,0.7s								
MEM	**Membach**	**75.99**	**5**	*d*P		**P**	**08 32 50.8**	**-0.8**
BSTI	**Sart Tilman**	**75.99**	**5**	*d*P		**P**	**08 32 51.5**	**0.0**
BTNL	**Ternell**	**76.02**	**5**	*d*P		**P**	**08 32 50.9**	**-0.8**
GUWA	**GUWAHATI**	**76.14**	**295**	*e*P		**P**	**08 32 52.0**	**-0.8**
GUWA				IAmb		IAmb	08 32 53.4		
	comp=Z,11nm,0.8s								
BCLA	**Clavier**	**76.14**	**6**	*d*P		**P**	**08 32 52.0**	**-0.4**
BGES	**Gesves**	**76.16**	**6**	*d*P		**P**	**08 32 52.3**	**-0.3**
HSKC	**Hora Svate Kat**	**76.20**	**0**	*e*P		**P**	**08 32 53.0**	**+0.2**
CHVC	**Chvalec**	**76.20**	**359**	*e*P		**P**	**08 32 52.2**	**-0.6**
CHVC	**Chvalec**	**76.20**	**359**	*e*P		**P**	**08 32 52.2**	**-0.6**
LUBAR	**Lubar, Ukraine**	**76.22**	**351**	P		**P**	**08 32 51.0**	**-1.9**
BMRD	**Maredsous**	**76.22**	**6**	*d*P		**P**	**08 32 52.8**	**-0.1**
RCHB	**Rochefort**	**76.40**	**6**	*d*P		**P**	**08 32 53.8**	**0.0**
DOU	**Dourbes**	**76.42**	**6**	*d*P		**P**	**08 32 54.0**	**0.0**
DPC	**Dobruska-Polom**	**76.44**	**358**	*e*P		**P**	**08 32 54.6**	**+0.4**
DPC	**Dobruska-Polom**	**76.44**	**358**	*e*P		**P**	**08 32 54.6**	**+0.4**
DPC	**Dobruska-Polom**	**76.44**	**358**	P		**P**	**08 32 53.9**	**-0.3**
	comp=Z,20nm,0.8s								
SHL	**Shillong**	**76.53**	**295**	IAmb		IAmb	08 32 55.0		
	comp=Z,15nm,0.7s								
SHL	**Shillong**	**76.53**	**295**	*e*P		**P**	**08 32 54.3**	**-1.0**
SHL				IAmb		IAmb	08 32 56.4		
	comp=Z,15nm,0.9s								
LVV	**L'vov**	**76.63**	**353**	P		**P**	**08 32 54.5**	**-0.7**
KRLC	**Kraliky**	**76.70**	**358**	*e*P		**P**	**08 32 55.8**	**+0.1**
KRLC	**Kraliky**	**76.70**	**358**	*e*P		**P**	**08 32 55.8**	**+0.1**
STEB	**Steborice**	**76.82**	**357**	*e*P		**P**	**08 32 56.4**	**+0.1**
ALCI	**Alchi Leh**	**76.85**	**310**	*e*P		**P**	**08 32 57.5**	**+0.3**
ALCI				IAmb		IAmb	08 32 58.4		
	comp=Z,28nm,0.9s								
KWP	**Kalwaria Pacla**	**76.90**	**354**	*e*P		**P**	**08 32 57.3**	**+0.6**
KWP	**Kalwaria Pacla**	**76.90**	**354**	P		**P**	**08 32 56.7**	**-0.1**
	comp=Z,86nm,0.9s								
OKC	**Ostrava-Krasne**	**76.91**	**357**	*e*P		**P**	**08 32 56.9**	**+0.2**
OKC	**Ostrava-Krasne**	**76.91**	**357**	*e*P		**P**	**08 32 56.9**	**+0.2**
MORC	**Moravsky Berou**	**76.98**	**358**	⇓P		**P**	**08 32 57.1**	**-0.1**
MORC	**Moravsky Berou**	**76.98**	**358**	IAmb		IAmb	08 32 58.4		
	comp=Z,9.1nm,0.8s								
MORC	**Moravsky Berou**	**76.98**	**358**	P		**P**	**08 32 57.1**	**-0.1**
MORC	**Moravsky Berou**	**76.98**	**358**	*e*P		**P**	**08 32 57.2**	**-0.1**
STHS	**Stebnicka Huta**	**77.20**	**355**	*e*P		**P**	**08 32 58.3**	**-0.1**
STHS				pmax		pmax			
	comp=Z,34nm,0.7s								
STHS	**Stebnicka Huta**	**77.20**	**355**	*e*P		**P**	**08 32 58.3**	**-0.1**
HNLY	**HANLEY**	**77.22**	**308**	*e*P		**P**	**08 32 59.8**	**+0.3**
NIE	**Niedzica**	**77.24**	**356**	*e*P		**P**	**08 32 59.8**	**+1.1**
SHIU	**Shidnytsya**	**77.27**	**354**	P		**P**	**08 32 59.0**	**+0.2**
ZVC	**Zvikov**	**77.37**	**360**	*e*P		**P**	**08 32 59.7**	**+0.3**
MAUC	**Maruska**	**77.39**	**357**	*e*P		**P**	**08 32 59.7**	**+0.2**
VRAC	**Vranov**	**77.47**	**358**	*e*P		**P**	**08 32 59.8**	**-0.2**
NDNU	**Novodnistrovsk**	**77.57**	**351**	P		**P**	**08 32 58.8**	**-1.7**
KHC	**Kasperske Hory**	**77.68**	**0**	IAmb		IAmb	08 33 02.6		
	comp=Z,36nm,1.8s								
KHC	**Kasperske Hory**	**77.68**	**0**	*e*P		**P**	**08 33 01.6**	**+0.5**
KHC	**Kasperske Hory**	**77.68**	**0**	*ce*P		**P**	**08 33 01.0**	**-0.1**
KHC				pmax		pmax			
	comp=Z,14nm,1.3s								
KMPD	**K-Podol'skiy**	**77.68**	**351**	P		**P**	**08 32 59.5**	**-1.6**
KMPD				P		**P**	**08 32 59.9**	**-1.2**
KRUC	**Moravsky**	**77.72**	**358**	*e*P		**P**	**08 33 01.1**	**-0.2**
JAVC	**Velka Javorina**	**77.90**	**357**	*e*P		**P**	**08 33 03.6**	**+1.2**
SORM	**Soroca**	**77.93**	**350**	⇓P		**P**	**08 33 01.8**	**-0.7**
SORM	**Soroca**	**77.93**	**350**	P		**P**	**08 33 01.7**	**-0.7**
SORM	**Soroca**	**77.93**	**350**	P		**P**	**08 33 00.9**	**-1.5**
	comp=Z,39nm,1.1s								
GEC2	**GERESS Array S**	**77.96**	**0**	P		**P**	**08 33 03.2**	**+0.4**
GERES	**GERESS Array B**	**77.96**	**0**	P		**P**	**08 33 02.1**	**-0.7**
	comp=Z,3.6nm,0.7s,baz=8.3,slow=5.8,SNR=14								
	comp=Z,3.6nm,0.7s								
CKRC	**Cesky Krumlov**	**77.99**	**360**	*e*P		**P**	**08 33 02.9**	**+0.1**
CKRC	**Cesky Krumlov**	**77.99**	**360**	*e*P		**P**	**08 33 02.9**	**+0.1**
HOLU	**Holmets**	**78.02**	**354**	P		**P**	**08 33 03.2**	**+0.2**
MUKU	**Mukachevo**	**78.08**	**354**	P		**P**	**08 33 03.4**	**+0.1**
KECS	**Kecovo**	**78.17**	**355**	*e*P		**P**	**08 33 04.5**	**+0.7**
KECS				pmax		pmax			
	comp=Z,27nm,0.7s								
KECS	**Kecovo**	**78.17**	**355**	*e*P		**P**	**08 33 04.5**	**+0.7**
BRIU	**Brid**	**78.17**	**354**	P		**P**	**08 33 03.7**	**-0.1**
CMAR	**Chiang Mai Arr**	**78.21**	**285**	P		**P**	**08 33 04.8**	**+0.3**
	comp=Z,9.2nm,0.8s,baz=39,slow=6.7,SNR=4.5								
CMAR				LR		LR	09 09 12.9		
	comp=Z,5.6nm,20.8s,baz=185,slow=37								
	comp=Z,9.2nm,0.8s								
CMAR	**Chiang Mai Arr**	**78.21**	**285**	*i*P		**P**	**08 33 01.3**	**-3.2**
CMAR				pmax		pmax			
	comp=Z,1.0nm,0.3s								
SMOL	**Smolenice**	**78.25**	**358**	*e*P		**P**	**08 33 05.9**	**+1.6**
BERU	**Beregovo**	**78.30**	**354**	P		**P**	**08 33 04.7**	**+0.2**
CLF	**Chambon-Foret**	**78.31**	**8**	P		**P**	**08 33 05.5**	**+0.9**
CLF	**Chambon-Foret**	**78.31**	**8**	P		**P**	**08 33 05.3**	**+0.8**
KORU	**Korolevo**	**78.34**	**354**	P		**P**	**08 33 04.7**	**-0.1**
SAIH	**SAIHA**	**78.38**	**292**	*e*P		**P**	**08 33 05.4**	**-0.1**
MODS	**Modra-Piesok**	**78.39**	**358**	*e*P		**P**	**08 33 06.0**	**+0.9**
MODS				pmax		pmax			
	comp=Z,54nm,1.4s								
MODS	**Modra-Piesok**	**78.39**	**358**	*e*P		**P**	**08 33 06.0**	**+0.9**
ECH	**Echery**	**78.43**	**5**	IAmb		IAmb	08 33 06.3		
	comp=Z,9.2nm,1.0s								
KLP	**Kalpa**	**78.59**	**308**	*e*P		**P**	**08 33 06.5**	**-0.3**
GOF	**Gofitskoye**	**78.63**	**339**	*ce*P		**P**	**08 33 05.3**	**-1.1**
BURAR	**Bucovina Array**	**78.73**	**352**	⇑P		**P**	**08 33 06.7**	**-0.3**
BURAR	**Bucovina Array**	**78.73**	**352**	P		**P**	**08 33 06.7**	**-0.3**
PSZ	**Piszkesteto**	**78.76**	**356**	⇓P		**P**	**08 33 06.0**	**-1.2**
PSZ	**Piszkesteto**	**78.76**	**356**	IAmb		IAmb	08 33 09.0		
	comp=Z,24nm,1.2s								
PSZ	**Piszkesteto**	**78.76**	**356**	P		**P**	**08 33 05.9**	**-1.2**
JOSI	**Joshimath**	**78.79**	**307**	*e*P		**P**	**08 33 07.0**	**-0.8**
CONA	**Conrad Observa**	**78.86**	**359**	*i*P		**P**	**08 33 08.3**	**+0.6**
	comp=Z,5.6nm,0.6s,SNR=5.2								
DHRM	**DHARAMSHALA**	**78.90**	**310**	*e*P		**P**	**08 33 08.1**	**-0.3**
DHRM				IAmb		IAmb	08 33 11.3		
	comp=Z,29nm,0.9s								
NIL	**Nilore**	**79.07**	**313**			**P**	**08 33 09.3**	**+0.2**
NIL	**Nilore**	**79.07**	**313**	P		**P**	**08 33 09.3**	**+0.2**
NIL				pmax		pmax			
	comp=Z,48nm,0.9s								
BIOA	**Bad Ischl, Aus**	**79.12**	**0**	*e*P		**P**	**08 33 09.5**	**+0.4**
	comp=Z,2.2nm,0.4s								
LESA	**Schwarzleotal**	**79.38**	**1**	*e*P		**P**	**08 33 11.0**	**+0.5**
	comp=Z,10nm,1.1s								
MOTA	**Moosalm**	**79.44**	**2**	*i*P		**P**	**08 33 11.1**	**+0.1**
	comp=Z,11nm,1.0s								
SMLA	**Simla**	**79.44**	**309**	*e*P		**P**	**08 33 10.8**	**-0.2**
WATA	**Walderalm**	**79.45**	**2**	*i*P		**P**	**08 33 11.2**	**+0.2**
	comp=Z,4.4nm,0.5s								
WTTA	**Wattenberg**	**79.53**	**2**	*i*P		**P**	**08 33 12.0**	**+0.5**
	comp=Z,4.2nm,0.5s								
ARSA	**Arzberg**	**79.55**	**359**			**P**	**08 33 11.8**	**+0.4**
ARSA	**Arzberg**	**79.55**	**359**	*e*P		**P**	**08 33 12.1**	**+0.7**
	comp=Z,11nm,0.9s								
SQTA	**Sankt Quirin**	**79.56**	**2**	*e*P		**P**	**08 33 12.0**	**+0.4**
	comp=Z,18nm,1.0s,SNR=5.2								
DDI	**Dehra Dun**	**79.69**	**308**	*e*P		**P**	**08 33 12.3**	**-0.2**
KBA	**Koelnbreinsper**	**79.73**	**0**	*i*P		**P**	**08 33 13.4**	**+0.8**
	comp=Z,32nm,1.0s,SNR=7.7								
DRGR		**79.73**	**354**	⇓P		**P**	**08 33 12.4**	**-0.1**
DRGR		**79.73**	**354**	P		**P**	**08 33 12.4**	**-0.1**
FETA	**Feichten**	**79.75**	**2**	*e*P		**P**	**08 33 13.2**	**+0.5**
	comp=Z,6.1nm,0.7s,SNR=5.2								
KIV	**Kislovodsk**	**79.75**	**339**	⇑P		**P**	**08 33 13.7**	**+1.0**
KIV	**Kislovodsk**	**79.75**	**339**			**P**	**08 33 13.4**	**+0.7**
KIV	**Kislovodsk**	**79.75**	**339**	*e*P		**P**	**08 33 13.0**	**+0.4**
KIV				pmax		pmax			
	comp=Z,58nm,1.0s								
KIV				MLR		MLR			
	comp=Z,17nm,19.0s								
KIV	**Kislovodsk**	**79.75**	**339**	P		**P**	**08 33 13.1**	**+0.4**
	comp=Z,469nmcomp=Z,61nm,0.9s								
KIV	**Kislovodsk**	**79.75**	**339**	P		**P**	**08 33 13.3**	**+0.6**
MARR	**Marisel-Cluj**	**79.82**	**354**	⇓P		**P**	**08 33 12.6**	**-0.4**
ONER	**Baraj Valea Uz**	**79.90**	**351**	⇓P		**P**	**08 33 13.8**	**+0.4**
KBZ	**Khabaz**	**79.93**	**339**	P		**P**	**08 33 14.2**	**+0.7**
	comp=Z,36nm,0.9s,baz=16,slow=6.1,SNR=65								
	comp=Z,36nm,0.9s								
KBZ	**Khabaz**	**79.93**	**339**	*ce*P		**P**	**08 33 13.8**	**+0.4**
KBZ				pmax		pmax			
	comp=Z,40nm,0.9s								
SHA1	**Shidzhatmaz**	**79.97**	**339**	*ce*P		**P**	**08 33 14.9**	**+0.9**
ABTA	**Abfaltersbach**	**80.06**	**1**	*i*P		**P**	**08 33 15.1**	**+0.8**
	comp=Z,5.1nm,0.8s								
KBL	**Kabul**	**80.09**	**317**	P		**P**	**08 33 14.1**	**-0.7**
KBL	**Kabul**	**80.09**	**317**	P		**P**	**08 33 14.1**	**-0.7**
KBL				pmax		pmax			
	comp=Z,42nm,0.7s								
SOKA	**Soboth**	**80.13**	**359**	*i*P		**P**	**08 33 15.0**	**+0.4**
	comp=Z,11nm,1.0s,SNR=6.7								
FUORN	**Ofenpass-Fuorn**	**80.14**	**2**	P		**P**	**08 33 15.5**	**+0.5**
FUORN				IAmb		IAmb	08 33 16.8		
	comp=Z,16nm,1.2s								
PERS	**Pernice**	**80.17**	**359**	*i*P		**P**	**08 33 15.4**	**+0.5**
TUE	**Stuetta**	**80.26**	**3**	P		**P**	**08 33 16.4**	**+0.8**
TUE				IAmb		IAmb	08 33 17.2		
	comp=Z,16nm,1.2s								
OBKA	**Obir**	**80.30**	**360**	*i*P		**P**	**08 33 16.2**	**+0.7**
	comp=Z,16nm,0.5s,SNR=5.5								
GROS	**Grobnik**	**80.34**	**359**	*i*P		**P**	**08 33 16.0**	**+0.2**
PRED	**Cave del Predi**	**80.37**	**0**	P		**P**	**08 33 15.6**	**-0.3**
PRED				IAmb		IAmb	08 33 16.6		
	comp=Z,12nm,1.1s								
NEUR	**Neytrino**	**80.41**	**339**	*i*P		**P**	**08 33 16.3**	**-0.1**
NEUR				pmax		pmax			
	comp=Z,16nm,1.3s								
GORS	**Gorjuse**	**80.49**	**360**	*e*P		**P**	**08 33 16.1**	**-0.5**
CTI	**Castel Tesino**	**80.74**	**2**	P		**P**	**08 33 17.5**	**-0.5**
CTI				IAmb		IAmb	08 33 18.6		
	comp=Z,9.4nm,1.1s								
CTI	**Castel Tesino**	**80.74**	**2**	P		**P**	**08 33 17.5**	**-0.5**
CTI				pmax		pmax			
	comp=Z,9.0nm,1.1s								
MLR	**Muntele Rosu**	**80.78**	**351**	⇓P		**P**	**08 33 19.2**	**+1.0**
MLR	**Muntele Rosu**	**80.78**	**351**	P		**P**	**08 33 19.2**	**+1.0**
VOIR		**80.91**	**352**	⇑P		**P**	**08 33 19.2**	**+0.4**
VOIR		**80.91**	**352**	P		**P**	**08 33 19.2**	**+0.4**
AKT	**Akhty**	**80.93**	**335**	*e*P		**P**	**08 33 19.3**	**+0.2**
AKT				*e*S		**S**	**08 43 23.6**	**+2.9**
AKT				pmax		pmax			
	comp=Z,100nm,0.7s								
BZS	**Buzias**	**80.97**	**354**	⇑P		**P**	**08 33 19.0**	**0.0**
BZS	**Buzias**	**80.97**	**354**	P		**P**	**08 33 19.0**	**0.0**
ARR	**Arges**	**81.01**	**352**	⇓P		**P**	**08 33 19.7**	**+0.4**
GZR	**Gura Zlata**	**81.12**	**354**	⇑P		**P**	**08 33 19.8**	**-0.2**
GZR	**Gura Zlata**	**81.12**	**354**	P		**P**	**08 33 19.7**	**-0.2**
TPGR	**Topolog**	**81.16**	**350**	⇑P		**P**	**08 33 19.9**	**-0.1**
GBRS	**Gornja Briga**	**81.28**	**359**	*i*P		**P**	**08 33 20.8**	**+0.1**
TIRR	**Tirgusor**	**81.56**	**350**	P		**P**	**08 33 22.1**	**0.0**
TIRR				IAmb		IAmb	08 33 22.7		
	comp=Z,17nm,0.9s								
TIRR	**Tirgusor**	**81.56**	**350**	P		**P**	**08 33 22.1**	**0.0**
TIRR				pmax		pmax			
	comp=Z,17nm,0.9s								
BNI	**Bardonecchia**	**81.57**	**5**	IAmb		IAmb	08 33 25.0		
	comp=Z,30nm,1.2s								
SONA	**Sohna**	**81.91**	**307**	*e*P		**P**	**08 33 23.2**	**-1.1**
ALBI	**Allahabad**	**82.02**	**302**	*e*P		**P**	**08 33 23.6**	**-1.3**
ALBI				IAmb		IAmb	08 33 24.3		
	comp=Z,37nm,1.0s								
KUDL	**Kundal**	**82.26**	**308**	*e*P		**P**	**08 33 25.4**	**-0.7**
ZCCA	**Zocca**	**82.43**	**2**	P		**P**	**08 33 27.9**	**+1.1**
ZCCA				IAmb		IAmb	08 33 42.4		
	comp=Z,58nm,1.9s								
HRA	**Herat**	**82.89**	**321**	P		**P**	**08 33 29.6**	**0.0**
HRA				IAmb		IAmb	08 33 30.5		
	comp=Z,30nm,0.9s								
GNI	**Garni**	**82.92**	**337**	*ce*P		**P**	**08 33 26.6**	**-3.0**
GNI				pmax		pmax			
	comp=Z,17nm,1.3s								
BOVS	**Bovan**	**82.94**	**354**	⇓P		**P**	**08 33 29.0**	**-0.4**
ELND	**Elena**	**83.32**	**351**	⇓P		**P**	**08 33 30.8**	**-0.6**
JHNI	**Jhansi**	**83.49**	**305**	*e*P		**P**	**08 33 31.1**	**-1.4**
JHNI				IAmb		IAmb	08 33 31.8		
	comp=Z,16nm,0.8s								
MURB	**Monte Urbino**	**83.54**	**1**	P		**P**	**08 33 33.7**	**+1.2**
MURB				IAmb		IAmb	08 33 35.3		
	comp=Z,22nm,1.0s								
FDMO	**Fiordimonte**	**83.77**	**1**	IAmb		IAmb	08 33 35.0		
	comp=Z,11nm,1.1s								
NRCA	**Norcia**	**83.97**	**1**	IAmb		IAmb	08 33 36.6		
	comp=Z,18nm,1.2s								
CASP	**Castiglione de**	**83.98**	**2**	IAmb		IAmb	08 33 36.2		
	comp=Z,35nm,1.6s								
PDG	**Podgorica**	**84.27**	**356**	⇑P		**P**	**08 33 35.8**	**-0.3**
PDG	**Podgorica**	**84.27**	**356**	IAmb		IAmb	08 33 36.7		
	comp=Z,13nm,0.7s								
AQU	**L'Aquila**	**84.45**	**0**	IAmb		IAmb	08 33 46.6		
	comp=Z,17nm,1.1s								
AJM	**Ajmer**	**84.59**	**308**	*e*P		**P**	**08 33 37.4**	**-0.8**
GUNA	**GUNA**	**84.80**	**305**	*e*P		**P**	**08 33 38.7**	**-0.5**
INTR	**Introdacqua**	**84.80**	**360**	IAmb		IAmb	08 33 41.1		
	comp=Z,18nm,1.0s								
SGRT	**San Giovanni R**	**85.04**	**359**	IAmb		IAmb	08 33 41.2		
	comp=Z,9.5nm,0.9s								
GURO	**Guroymak-BITLI**	**85.07**	**338**	IAmb		IAmb	08 33 42.7		
	comp=Z,16nm,1.0s								
RDO	**Rodhopi**	**85.12**	**351**	IAmb		IAmb	08 33 41.6		
	comp=Z,13nm,0.7s								
BR106	**Keskin Array S**	**85.51**	**345**	P		**P**	**08 33 42.8**	**+0.1**
	comp=Z,152nmcomp=Z,18nm,1.1s								
BR131	**Keskin Array S**	**85.52**	**345**	*i*P		**P**	**08 33 41.9**	**-0.8**
BRTR	**Keskin Array B**	**85.52**	**345**	P		**P**	**08 33 42.9**	**+0.2**
	comp=Z,16nm,0.8s,baz=29,slow=2.5,SNR=54								
BRTR				LR		LR	09 17 57.8		
	comp=Z,7.5nm,18.9s,baz=46,slow=40								
	comp=Z,16nm,0.8s								
BRTR	**Keskin Array B**	**85.52**	**345**	*i*P		**P**	**08 33 43.2**	**+0.5**
BRTR				pmax		pmax			
	comp=Z,16nm,0.8s								
BR105	**Keskin Array S**	**85.53**	**345**	P		**P**	**08 33 42.9**	**+0.1**
	comp=Z,173nmcomp=Z,23nm,0.9s								
BR104	**Keskin Array S**	**85.54**	**345**	P		**P**	**08 33 42.7**	**-0.1**
	comp=Z,184nmcomp=Z,22nm,0.8s								
PAOL	**Paolisi**	**85.77**	**359**	IAmb		IAmb	08 33 44.7		
	comp=Z,22nm,1.2s								
ESDC	**Sonseca Array**	**85.87**	**14**	P		**P**	**08 33 44.4**	**0.0**
	comp=Z,1.4nm,0.7s,baz=339,slow=4.7,SNR=10.0								
	comp=Z,1.4nm,0.7s								
ESDC	**Sonseca Array**	**85.87**	**14**	IAmb		IAmb	08 33 45.6		
	comp=Z,6.6nm,1.4s								
KIRS	**Kirsehir-Merke**	**86.05**	**344**	⇑P		**P**	**08 33 46.0**	**+0.7**
MATE	**Matera**	**86.12**	**358**	⇓P		**P**	**08 33 45.7**	**+0.2**
RAGD	**RAYAGADA**	**86.17**	**297**	*e*P		**P**	**08 33 46.0**	**-0.1**
NRDN	**NARMADA NAGAR**	**86.50**	**304**	*e*P		**P**	**08 33 48.2**	**+0.5**
UDPR	**Udaipur**	**86.59**	**308**	*e*P		**P**	**08 33 47.1**	**-1.0**
CUC	**Castrocucco**	**86.80**	**358**	IAmb		IAmb	08 33 49.0		
	comp=Z,16nm,1.1s								
MANT	**Manisa**	**87.43**	**348**	IAmb		IAmb	08 33 52.8		
	comp=Z,15nm,1.1s								
TIP	**Timpagrande**	**87.59**	**358**	⇑P	

0.5nm,0.2s

ASRS ***30*** *08:33:58.0±1.0, 53.°96N×86.°59E, h0km, M2.4(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 30 08:34:01.8±2.4, 53.°91N×86.°49E, h0km, mbtmp3.1/2, ML2.8/2, Error ellipse: s-maj=20.6km s-min=12.3km az=65.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.99**	**273**	I	I	08 38 40.8	
	baz=92,slow=337,SNR=4.2						
ZALV	**Zalesovo Beam**	**0.99**	**273**	Pg	Pg	08 34 19.3	-1.4
	0.7nm,0.3s,baz=87,slow=16,SNR=7.9						
ZALV				Lg	Lg	08 34 35.2	
	2.7nm,0.3s,baz=93,slow=30,SNR=13						
KURBB	**Kurchatov Arra**	**5.89**	**239**	Pn	Pn	08 35 31.5	+1.2
	0.1nm,0.3s,baz=56,slow=15,SNR=5.4						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**7.62**	**202**	Pn	Pn	08 35 54.9	+0.9
	0.3nm,0.3s,baz=24,slow=14,SNR=8.6						
	0.5nm,0.2s						

ASRS ***30*** *08:42:28.0±0.8, 53.°60N×87.°06E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 30 08:42:31.5±3.4, 53.°60N×87.°28E, h0km, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=32.5km s-min=18.0km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.50**	**284**	I	I	08 52 05.7	
	baz=102,slow=332,SNR=5.4						
ZALV	**Zalesovo Beam**	**1.50**	**284**	Pg	Pg	08 42 58.2	-1.4
	0.4nm,0.3s,baz=110,slow=12,SNR=5.3						
ZALV				Lg	Lg	08 43 19.1	
	0.4nm,0.3s,baz=105,slow=27,SNR=7.8						
KURBB	**Kurchatov Arra**	**6.16**	**245**	Pn	Pn	08 44 04.2	+0.7
	baz=62,slow=14,SNR=4.8						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**7.53**	**207**	Pn	Pn	08 44 23.7	+1.3
	0.1nm,0.3s,baz=14,slow=6.7,SNR=2.1						
	0.1nm,0.2s						

IDC ***30*** *08:45:36.2±2.4, 6.°64S×132.°31E, h0km, mb4.0/2, mbtmp3.9/6, ML3.9/4, MS2.3/1, Error ellipse: s-maj=80.6km s-min=24.3km az=81.0*
NEIC ***30*** *08:45:37.1±1.1, 6.°63S±0.°03×132.°49E±0.°08, h10km±1km, mb4.4/10, Error ellipse: s-maj=13.9km s-min=3.0km az=73.0*
DJA ***30*** *08:45:42.5±0.5, 7.°5S±4.′×13.°2E±.°, h83km±12km, M4.7/19, mb4.7/11, mB5.3/8, MLv4.5/19, Mw(mB)4.7/8*
ISC 30 08:45:39.5±0.6, 6.°71S±0.°04×132.°36E±0.°06, h35km, n49, σ2s24/52, mb4.3/7, 1C, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.65**	**220**	Pn	**Pn**	**08 46 07.0**	**+1.0**
BNDI	**Bandanaira**	**3.27**	**311**	P	**Pn**	**08 46 29.8**	**+1.4**
BNDI	**Bandanaira**	**3.27**	**311**	S	**Sn**	**08 47 07.1**	**+1.1**
BNDI	**Bandanaira**	**3.27**	**311**	P	**Pn**	**08 46 29.7**	**+1.4**
KMPI	**Kaimana, Papua**	**3.31**	**24**	P	**Pn**	**08 46 29.8**	**+1.0**
FAKI	**Fak Fak**	**3.77**	**358**	P	**Pn**	**08 46 35.1**	**0.0**
FAKI	**Fak Fak**	**3.77**	**358**	S	**Sn**	**08 47 14.8**	**-3.5**
FAKI	**Fak Fak**	**3.77**	**358**		**Pn**	**08 46 33.8**	**-1.4**
FAKI	**Fak Fak**	**3.77**	**358**	P	**Pn**	**08 46 34.8**	**-0.3**
AAI	**Ambon**	**5.12**	**306**	P	**Pn**	**08 46 53.9**	**+0.1**
KRAI	**Karang Ratu**	**5.19**	**310**	P	**Pn**	**08 46 56.8**	**+2.0**
	0.3nm4µm75nm,0.7s						
RKPI	**Ransiki, Papua**	**5.47**	**19**	P	**Pn**	**08 47 00.8**	**+2.2**
DRS	**Darwin Rock St**	**5.87**	**194**	P	Pn	08 47 09.3	+5.3
SIJI	**Sorong**	**5.90**	**349**	Pn	**Pn**	**08 47 04.0**	**-0.5**
	4.0nm,0.3s,baz=165,slow=20,SNR=9.9						
SIJI				Sn	**Sn**	**08 48 03.9**	**-7.1**
	21nm,0.3s,baz=39,slow=23,SNR=19						
SIJI				LR	LR	08 50 26.0	
	comp=Z,26nm,18.8s,baz=142,slow=50						
	10nm,0.3s						
SIJI	**Sorong**	**5.90**	**349**	P	**Pn**	**08 47 03.8**	**-0.7**
SWI	**Sorong**	**5.91**	**349**	P	**Pn**	**08 47 05.0**	**+0.4**
	0.8nm4µm23nm,0.5s						
MWPI	**Manokwari, Pap**	**5.98**	**16**	P	**Pn**	**08 47 07.5**	**+1.9**
	0.7nm3µm132nm,0.4s						
SRPI	**Serui, Papua**	**6.17**	**39**	P	**Pn**	**08 47 10.7**	**+2.5**
MTN	**Manton Dam**	**6.22**	**191**		**Pn**	**08 47 10.8**	**+2.0**
BAKI	**Biak**	**6.63**	**34**	P	**Pn**	**08 47 18.5**	**+3.9**
SANI	**Sanana**	**7.86**	**306**	P	**Pn**	**08 47 31.9**	**+0.5**
SANI	**Sanana**	**7.86**	**306**	P	**Pn**	**08 47 31.8**	**+0.4**
SOEI	**Soe**	**8.56**	**249**	Pn	**Pn**	**08 47 42.6**	**+1.3**
KNRA	**Kununurra**	**9.59**	**201**		**Pn**	**08 47 58.1**	**+3.0**
MMRI	**Maumere**	**10.22**	**259**	P	**Pn**	**08 48 07.4**	**+3.6**
MMRI	**Maumere**	**10.22**	**259**	Pn	**Pn**	**08 48 05.7**	**+1.9**
COEN	**Coen**	**12.84**	**125**	P	**Pn**	**08 48 42.2**	**+2.5**
COEN	**Coen**	**12.84**	**125**	Pn	**Pn**	**08 48 38.0**	**-1.8**
FITZ	**Fitzroy Crossi**	**13.08**	**209**	Pn	**Pn**	**08 48 44.0**	**+1.0**
	1.0nm,0.3s,baz=31,slow=11,SNR=35						
FITZ				Sn	**Sn**	**08 51 00.5**	**-6.9**
	2.0nm,0.3s,baz=186,slow=18,SNR=9.0						
	2.1nm,0.3s						
WRAB	**Tennant Creek**	**13.29**	**172**	Pn	**Pn**	**08 48 45.4**	**-0.4**
WRA	**Warramunga Arr**	**13.30**	**172**	Pn	**Pn**	**08 48 47.1**	**+1.1**
	0.4nm,0.3s,baz=357,slow=13,SNR=28						
WRA				Sn	**Sn**	**08 51 08.1**	**-4.5**
	0.7nm,0.3s,baz=351,slow=23,SNR=5.6						
	0.6nm,0.4s						
WRA	**Warramunga Arr**	**13.30**	**172**		**Pn**	**08 48 45.5**	**-0.4**
WB2	**Warramunga Arr**	**13.30**	**172**	Pn	**Pn**	**08 48 45.6**	**-0.3**
WR8	**Warramunga Arr**	**13.33**	**171**	Pn	**Pn**	**08 48 46.9**	**+0.5**
QIS	**Mount Isa**	**15.46**	**154**	P	**P**	**08 49 17.5**	**-1.7**
AS31	**Alice Springs**	**16.93**	**175**		**P**	**08 49 36.6**	**+1.1**
ASAR	**Alice Springs**	**16.93**	**175**	Pn	**P**	**08 49 35.9**	**+0.4**
	0.3nm,0.3s,baz=349,slow=14,SNR=15						
ASAR				Sn	**Sn**	**08 52 37.5**	**-3.5**
	0.3nm,0.3s,baz=355,slow=26,SNR=7.0						
	0.4nm,0.4s						
MBWA	**Marble Bar**	**18.86**	**219**	P	**P**	**08 49 57.7**	**+0.9**
MBWA				IAmb	IAmb	08 50 15.8	
	comp=Z,16nm,1.3s						
KKM	**Kota Kinabalu**	**20.50**	**308**	P	**P**	**08 50 15.2**	**+0.4**
KKM				IAmb	IAmb	08 50 25.1	
	comp=Z,22nm,1.0s						
FORT	**Forrest**	**24.29**	**189**	P	**P**	**08 50 55.0**	**+1.3**
FORT				IAmb	IAmb	08 51 22.9	
	comp=Z,8.6nm,1.1s						
BBJI	**Bungbulang**	**24.54**	**267**	P	**P**	**08 50 57.0**	**+0.7**
BBJI				IAmb	IAmb	08 50 57.4	
	comp=Z,15nm,1.4s						
GSI	**Gunungsitoli**	**35.62**	**282**	P	**P**	**08 52 35.5**	**+1.2**
GSI				IAmb	IAmb	08 52 53.9	
	comp=Z,22nm,0.9s						
CMAR	**Chiang Mai Arr**	**41.38**	**308**	P	**P**	**08 53 23.2**	**+0.6**
	comp=Z,1.2nm,0.3s,baz=123,slow=7.8,SNR=4.2						
	comp=Z,1.2nm,0.3s						
JYT	**Yasato**	**43.34**	**9**	P	**P**	**08 53 37.9**	**-0.3**
MAJO	**Matsushiro**	**43.37**	**7**	P	**P**	**08 53 38.4**	**-0.2**
MAJO				IAmb	IAmb	08 53 50.5	
	comp=Z,4.3nm,0.8s						
BNX	**BinXian**	**52.40**	**356**	⇑P	**P**	**08 54 47.5**	**-0.8**
BNX				pmax	pmax		
	comp=Z,5.0nm,1.4s						
PEA0B	**Petropavlovsk-**	**63.34**	**17**	P	**P**	**08 56 04.5**	**-0.5**
PET	**Petropavlovsk**	**63.55**	**17**	P	**P**	**08 56 06.5**	**+0.2**
MKAR	**Makanchi Array**	**69.29**	**326**	P	**P**	**08 56 45.0**	**+1.8**
	comp=Z,0.4nm,0.5s,baz=123,slow=7.8,SNR=6.7						
	comp=Z,0.4nm,0.5s						

SJA 30 09:05:15.1±1.2, 27.°99S×66.°70W, h175km±9km, ML2.6, MW4.6, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TINO	**Tinogasta**	**0.77**	**265**	*e*P	Pn	09 05 41.2	+0.3
TINO				*e*S	Sn	09 06 00.9	+0.1
AANI	**Anillaco**	**0.84**	**194**	*e*P	Pn	09 05 41.4	0.0
AANI				IAML		09 06 17.3	
	comp=Z,59nm,0.4s						
ACLC	**CERRO LA CRUZ**	**1.44**	**189**	*e*P	Pn	09 05 46.9	+0.6
ACLC				IAML		09 06 29.6	
	comp=Z,5.0nm,0.6s						
VCA	**Vinchina**	**1.52**	**241**	*e*P	Pn	09 05 48.9	+1.9
VCA				*e*S	Sn	09 06 11.3	-0.4
	comp=Z,142nm,0.5s			IAML		09 06 16.3	
FSA	**Cafayete**	**1.98**	**19**	*e*P	Pn	09 05 52.6	+0.7
AVFE	**Valle Fertil**	**2.74**	**194**	*e*P	Pn	09 06 01.4	+1.0
AVFE				IAML		09 06 54.5	
	comp=Z,4.8nm,0.7s						
ACHE	**Chepes**	**3.16**	**179**	*e*P	Pn	09 06 06.8	+1.3
ACHE				*e*S	Sn	09 06 44.7	-0.3
AROD	**Rodeo**	**3.25**	**228**	*e*P	Pn	09 06 08.1	+1.1
RTLL	**Cerro Villicun**	**3.67**	**205**	*e*P	Pn	09 06 12.8	+1.0
RTLL				IAML		09 07 28.7	
	comp=Z,21nm,1.4s						
AUSP	**Uspallata**	**4.82**	**208**	*e*P	Pn	09 06 27.3	+0.5
ARCO	**CERRO ARCO**	**5.20**	**201**	*e*P	Pn	09 06 32.5	+0.8
ARCO				IAML		09 08 31.0	
	comp=Z,9.1nm,2.9s						

MOS ***30*** *09:09:04.8±1.0, 0.°33N×77.°69W, h144km, mb5.6/20, Error ellipse: s-maj=12.0km s-min=6.4km az=101.0*
VAO ***30*** *09:09:04.5±0.3, 0.°27N×77.°70W, h137km±2km, mb5.7, Presumed earthquake*
NEIC ***30*** *09:09:05.8, 0.°29N×77.°38W, h160km, Moment Tensor Solution. Duration: 1s8 Moment tensor: Scale 1016Nm; Mrr0.25; Mθθ-1.70; Mφφ 1.45; Mrθ-5.57; Mθφ3.23; Mφr-2.99; Fault plane solution: M0 7.28000×10-16 NP1: φs160.08000°, δ29.29000°, λ179.57000°. NP2: φs250.45000°, δ89.79000°, λ60.71000°. Principal axes: T 7.8999, Plg38.0000°, Azm134.0000°; N -1.4705, Plg29.0000°, Azm251.0000°; P -6.4295, Plg38.0000°, Azm6.0000°;*
NEIC ***30*** *09:09:05.8, 0.°29N×77.°68W, h160km*
GFZ ***30*** *09:09:05.9, 0.°38N×77.°59W, h150km, MW5.2, Moment Tensor Solution. s88 Moment tensor: Mrr0.21; Mθθ-4.32; Mφφ4.11; Mrθ-4.72; Mθφ0.64; Mφr-2.84; Fault plane solution: NP1: φs141.00000°, δ37.00000°, λ178.00000°. NP2: φs232.00000°, δ89.00000°, λ52.00000°. Principal axes: T 6.4700, Plg34.0000°, Azm111.0000°; N 0.9100, Plg37.0000°, Azm233.0000°; P -7.3800, Plg33.0000°, Azm353.0000°;*
NEIC ***30*** *09:09:05.9±1.5, 0.°29N±0.°05×77.°69W±0.°06, h131km±4km, mb5.6/890, Mww5.2/56 Error ellipse: s-maj=9.7km s-min=7.1km az=123.0*
IDC ***30*** *09:09:05.8±0.6, 0.°34N×77.°65W, h144km±4km, mb4.8/23, mbtmp5.3/30, MS3.7/38, Error ellipse: s-maj=11.5km s-min=6.9km az=68.0*
IGQ ***30*** *09:09:06.5±1.1, 0.°7N±4.′×7.°8W±.°, h131km±9km, M5.2/57, mBc6.8/1, MLv4.7/57, MLv4.2/18*
CATAC ***30*** *09:09:06.3±0.1, 0.°1N±1.′×7.°8W±.°, h126km±1km, M5.2/73, mb5.6/73, mB5.7/62, MLv5.1/13, Mw(mB)5.2/62, MwWwp4.9/6, Mwp5.2/6, Error ellipse: s-maj=3.3km s-min=2.7km az=116.8, Moment Tensor Solution. Moment tensor: Scale 1016Nm; Mrr2.57; Mθθ-6.59; Mφφ4.02; Mrθ-5.99; Mθφ0.73; Mφr-2.67; Fault plane solution: M0 8.75078×10-16 NP1: φs135.48003°, δ34.18402°, λ160.00815°. NP2: φs242.22954°, δ78.92523°, λ57.45136°. Principal axes: T 7.6018, Plg46.1184°, Azm118.9426°; N 1.9642, Plg31.8702°, Azm249.2193°; P -9.5660, Plg26.6871°, Azm357.4304°; confirmed*
BJI ***30*** *09:09:06.0, 0.°30N×77.°70W, h136km, mB5.3/6*
GCMT ***30*** *09:09:08.9±0.2, 0.°43N±0.°01×77.°66W±0.°01, h150km±1km, MW5.2/135, Moment Tensor Solution. s78, c111; s135, c222; Duration: 1s0 Moment tensor: Scale 1016 Nm; Mrr1.36±.13; Mθθ-5.05±.16; Mφφ3.69±.18; Mrθ-5.97±.10; Mθφ2.45±.15; Mφr-3.71±.12; Best double couple: M0 8.71000×10-16 NP1: φs145.00000°, δ35.00000°, λ171.00000°. NP2: φs243.00000°, δ85.00000°, λ55.00000°. Principal axes: T 8.7960, Plg40.0000°, Azm121.0000°; N -0.1720, Plg35.0000°, Azm247.0000°; P -8.6250, Plg31.0000°, Azm1.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 30 09:09:05.2±0.2, 0.°31N±0.°03×77.°76W±0.°03, h140km±2km, h141km:pP-P, n1227, σ1s24/956, mb5.5/460, 34C-52D, Colombia-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BONI	**La Bonita**	**0.27**	**57**	⇑P	**Pn**	**09 09 25.9**	**+1.1**
BONI	**La Bonita**	**0.27**	**57**	P	Pn	09 09 25.7	+0.9
BONI				S	**Sn**	**09 09 39.0**	**-0.6**
YAHU	**Yahuarcocha**	**0.32**	**281**	⇑P	**Pn**	**09 09 25.8**	**+0.7**
ANGU	**Angureal**	**0.36**	**224**	P	**Pn**	**09 09 26.9**	**+1.3**
CAYR	**Refugio Cayamb**	**0.38**	**221**	⇓P	**Pn**	**09 09 26.9**	**+1.2**
TULM	**Tulcn-Chalpat**	**0.41**	**355**	P	**Pn**	**09 09 26.5**	**+0.8**
TULM				S	**Sn**	**09 09 40.9**	**-0.2**
TULM	**Tulcn-Chalpat**	**0.41**	**355**	⇑P	**Pn**	**09 09 26.5**	**+0.8**
TULM	**Tulcn-Chalpat**	**0.41**	**355**	P	**Pn**	**09 09 26.4**	**+0.8**
TULM				S	**Sn**	**09 09 42.4**	**+1.3**
REVS	**Reventador Sur**	**0.43**	**162**	⇓P	**Pn**	**09 09 26.5**	**+1.0**
IMBA	**Imbabura, San**	**0.45**	**266**	P	**Pn**	**09 09 27.1**	**+1.4**
IMBA				S	**Sn**	**09 09 41.5**	**+0.3**
IMBA	**Imbabura, San**	**0.45**	**266**	⇑P	**Pn**	**09 09 27.0**	**+1.3**
CASC	**Dorado de Casc**	**0.45**	**112**	⇓P	**Pn**	**09 09 26.3**	**+1.0**
CASC	**Dorado de Casc**	**0.45**	**112**	P	**Pn**	**09 09 26.3**	**+1.0**
CASC				S	**Sn**	**09 09 42.2**	**+1.6**
AAT1	**Ecuador-Atunta**	**0.46**	**273**	⇑P	**Pn**	**09 09 26.5**	**+0.9**
ATUL	**Tulcn**	**0.46**	**4**	⇑P	**Pn**	**09 09 26.9**	**+1.3**
LNGL	**El Angel-Carch**	**0.50**	**330**	⇑P	**Pn**	**09 09 26.0**	**-0.1**
AV03	**Acelerografo,**	**0.51**	**120**	P	**Pn**	**09 09 26.5**	**+0.9**
CHL2	**Volcn Chiles**	**0.52**	**342**	⇑P	**Pn**	**09 09 27.2**	**+1.0**
URCU	**Urcuqui**	**0.52**	**285**	⇑P	**Pn**	**09 09 26.6**	**+0.6**
CHL1	**Volcn Chiles**	**0.52**	**338**	⇑P	**Pn**	**09 09 27.2**	**+1.0**
ECEN	**Cerro Negro**	**0.56**	**337**	⇑P	**Pn**	**09 09 27.3**	**+0.8**
COTA	**Cotacachi**	**0.58**	**273**	⇑P	**Pn**	**09 09 27.1**	**+0.6**
CUIC	**Cuicocha-Domo**	**0.61**	**270**	⇑P	**Pn**	**09 09 26.8**	**+0.3**
CHMA	**Chilma**	**0.63**	**331**	⇑P	**Pn**	**09 09 26.5**	**-0.1**
CMBC	**Cumbal**	**0.63**	**354**	⇓P	**Pn**	**09 09 28.0**	**+1.3**
CMBC	**Cumbal**	**0.63**	**354**	P	**Pn**	**09 09 28.1**	**+1.3**
CUSE	**Cuicocha Este**	**0.64**	**270**	⇑P	**Pn**	**09 09 27.0**	**+0.2**
CUSE	**Cuicocha Este**	**0.64**	**270**	P	**Pn**	**09 09 27.0**	**+0.2**
CUSE				S	**Sn**	**09 09 44.1**	**+1.0**
OTAV	**Otavalo**	**0.70**	**264**		**Pn**	**09 09 27.3**	**+0.1**
OTAV	**Otavalo**	**0.70**	**264**	P	**Pn**	**09 09 27.3**	**+0.1**
OTAV	**Otavalo**	**0.70**	**264**	P	**Pn**	**09 09 27.3**	**+0.1**
OTAV				S	**Sn**	**09 09 43.1**	**-0.8**
OTAV	**Otavalo**	**0.70**	**264**	⇑P	**Pn**	**09 09 27.3**	**+0.1**
OTAV	**Otavalo**	**0.70**	**264**	P	**Pn**	**09 09 27.3**	**+0.1**
OTAV				S	**Sn**	**09 09 44.1**	**+0.3**
OTAV	**Otavalo**	**0.70**	**264**	*e*P	**Pn**	**09 09 27.0**	**-0.2**
OTAV				*e*S	**Sn**	**09 09 44.1**	**+0.3**
AV11	**Acelerografo,**	**0.72**	**238**	P	**Pn**	**09 09 28.7**	**+1.5**
APS4	**Papallacta**	**0.76**	**208**	P	**Pn**	**09 09 28.4**	**+0.8**
ALIT	**Ecuador-Imbabu**	**0.78**	**309**	⇑P	**Pn**	**09 09 27.8**	**+0.4**
LITE1	**Lita**	**0.78**	**309**	⇑P	**Pn**	**09 09 26.9**	**-0.5**
PULU	**Pululahua**	**0.80**	**249**	P	**Pn**	**09 09 27.8**	**-0.1**
PULU				S	**Sn**	**09 09 45.0**	**0.0**
PULU	**Pululahua**	**0.80**	**249**	⇑P	**Pn**	**09 09 27.8**	**-0.1**
ANTI	**Antisana**	**0.85**	**208**	⇓P	**Pn**	**09 09 29.7**	**+1.2**
FENY	**Casa Vinicio C**	**0.86**	**238**	P	**Pn**	**09 09 29.5**	**+1.3**
ANTS	**Antisana-Sarah**	**0.90**	**207**	P	**Pn**	**09 09 30.2**	**+1.2**
ANTS				S	**Sn**	**09 09 48.0**	**+1.1**
ANTS	**Antisana-Sarah**	**0.90**	**207**	⇓P	**Pn**	**09 09 30.1**	**+1.2**
YANA	**Yana**	**0.92**	**243**	⇑P	**Pn**	**09 09 29.2**	**+0.3**
APR1	**Acelerografo,**	**0.93**	**248**	P	**Pn**	**09 09 29.9**	**+1.0**
ANTG	**Antisana-Guama**	**0.95**	**212**	⇓P	**Pn**	**09 09 30.3**	**+1.0**
ANTM	**Antisana-La Mi**	**0.96**	**209**	⇓P	**Pn**	**09 09 30.5**	**+1.2**
GGPC	**Guagua Pichinc**	**0.97**	**240**	P	**Pn**	**09 09 30.2**	**+0.8**
GGPC				S	**Sn**	**09 09 48.6**	**+0.8**
GGPC	**Guagua Pichinc**	**0.97**	**240**	⇑P	**Pn**	**09 09 30.1**	**+0.6**
TERV	**Terraza Guagua**	**0.97**	**241**	⇑P	**Pn**	**09 09 30.1**	**+0.7**
JUA2	**San Juan 2**	**1.00**	**239**	P	**Pn**	**09 09 30.2**	**+0.7**
GCUF	**Volcan Galeras**	**1.00**	**24**	P	**Pn**	**09 09 31.2**	**+1.6**
GCUF				S	**Sn**	**09 09 50.3**	**+2.1**
GGPT	**Toaza - Volcan**	**1.01**	**239**	⇑P	**Pn**	**09 09 30.4**	**+0.8**
PAC1	**Pacto, Paraso**	**1.04**	**268**	⇑P	**Pn**	**09 09 29.7**	**+0.2**
PAC1	**Pacto, Paraso**	**1.04**	**268**	P	**Pn**	**09 09 29.6**	**+0.1**
PAC1				S	**Sn**	**09 09 48.0**	**0.0**
TOMA	**Boca Toma-Volc**	**1.05**	**220**	⇓P	**Pn**	**09 09 31.2**	**+1.2**
PITA	**Cotopaxi Volc**	**1.09**	**218**	⇓P	**Pn**	**09 09 31.4**	**+1.0**
VC1	**Cotopaxi 1**	**1.15**	**214**	⇓P	**Pn**	**09 09 32.1**	**+1.1**
BVC2	**Cotopaxi Volca**	**1.16**	**214**	⇓P	**Pn**	**09 09 32.4**	**+1.2**
BTAM	**Cotopaxi Volca**	**1.17**	**213**	⇓P	**Pn**	**09 09 32.4**	**+1.2**
TAMB	**Tambo**	**1.17**	**212**	⇓P	**Pn**	**09 09 32.5**	**+1.2**
BREF	**Cotopaxi Volca**	**1.19**	**215**	⇓P	**Pn**	**09 09 32.8**	**+1.2**
SUCR	**Mariscal Sucre**	**1.20**	**218**	⇓P	**Pn**	**09 09 32.8**	**+1.4**
APR2	**Miler**	**1.23**	**259**	⇑P	**Pn**	**09 09 31.6**	**+0.3**
BMOR	**Cotopaxi Volca**	**1.25**	**214**	⇓P	**Pn**	**09 09 33.0**	**+1.0**
VCES	**Cotopaxi**	**1.27**	**210**	P	**Pn**	**09 09 33.6**	**+1.3**
VCES				S	**Sn**	**09 09 52.9**	**+0.1**
VCES	**Cotopaxi**	**1.27**	**210**	⇓P	**Pn**	**09 09 33.5**	**+1.3**
ARDO	**Archidona, Ten**	**1.29**	**182**	⇓P	**Pn**	**09 09 33.0**	**+1.0**
ARDO				S	**Sn**	**09 09 54.7**	**+2.3**
BRRN	**Barrancas-Volc**	**1.30**	**214**	⇓P	**Pn**	**09 09 33.6**	**+1.2**
SRAM	**San Ramn-Vol**	**1.33**	**218**	⇓P	**Pn**	**09 09 34.0**	**+1.4**
ILLI	**Illinizas Sur**	**1.41**	**224**	⇓P	**Pn**	**09 09 34.2**	**+0.6**
SNLR	**San Lorenzo-Es**	**1.47**	**312**	⇑P	**Pn**	**09 09 33.5**	**-0.1**
SNLR				S	**Sn**	**09 09 54.5**	**-0.9**
BV15	**Puerto Quito-O**	**1.48**	**264**	⇑P	**Pn**	**09 09 32.6**	**-1.1**
ASDO	**Santo Domingo**	**1.48**	**248**	P	**Pn**	**09 09 33.9**	**0.0**
CRUC	**La Cruz**	**1.49**	**33**	P	**Pn**	**09 09 35.7**	**+1.4**
CRUC				S	**Sn**	**09 09 53.3**	**-3.2**
PIS1	**Pisayambo**	**1.50**	**205**	⇓P	**Pn**	**09 09 35.9**	**+1.4**
AV18	**Acelerografo,**	**1.72**	**270**	P	**Pn**	**09 09 36.3**	**-0.2**
BBAC	**Balboa, Cauca**	**1.78**	**17**	⇓P	**Pn**	**09 09 37.7**	**+0.3**
BBAC	**Balboa, Cauca**	**1.78**	**17**	P	**Pn**	**09 09 37.8**	**+0.4**
BBAC				S	**Sn**	**09 10 03.3**	**+1.3**
AAM2	**Ambato 2 (Merc**	**1.79**	**209**	P	**Pn**	**09 09 38.6**	**+1.0**
AV21	**Acelerografo,**	**1.83**	**281**	P	**Pn**	**09 09 37.1**	**-0.6**
JUI6	**Juive**	**1.86**	**203**	⇓P	**Pn**	**09 09 38.9**	**+0.5**
BBIL	**Ulba Tungurahu**	**1.89**	**203**	⇓P	**Pn**	**09 09 39.6**	**+0.7**
BPAT	**Tungurahua Vol**	**1.92**	**201**	⇓P	**Pn**	**09 09 40.1**	**+0.8**
ARRY	**Arrayan**	**1.93**	**201**	⇓P	**Pn**	**09 09 40.0**	**+0.7**
PKYU	**Pakayacu**	**1.95**	**175**	⇓P	**Pn**	**09 09 40.7**	**+1.4**
IGUA	**Igualata**	**1.99**	**206**	⇓P	**Pn**	**09 09 41.4**	**+1.1**
AMA1	**Acelerografo,**	**2.06**	**288**	P	**Pn**	**09 09 40.4**	**-0.2**
TAMH	**Tambohuasha Ch**	**2.10**	**209**	⇓P	**Pn**	**09 09 43.1**	**+1.6**
JSCH	**Cashca Totoras**	**2.35**	**211**	⇓P	**Pn**	**09 09 45.7**	**+1.3**
SANGA	**Volcan Sangay**	**2.42**	**195**	⇓P	**Pn**	**09 09 46.3**	**+0.9**
FLOC	**Florencia**	**2.45**	**59**	P	**Pn**	**09 09 46.3**	**+1.0**
FLOC				S	**Sn**	**09 10 14.6**	**-1.6**
FLOC	**Florencia**	**2.45**	**59**	⇓P	**Pn**	**09 09 46.4**	**+1.0**
FLOC	**Florencia**	**2.45**	**59**	P	**Pn**	**09 09 46.3**	**+1.0**
FLOC				S	**Sn**	**09 10 16.2**	**0.0**
POPC	**Popayan, Colom**	**2.47**	**26**	P	**Pn**	**09 09 45.8**	**+0.1**
POPC				S	**Sn**	**09 10 16.7**	**-0.1**
PECV	**Mancha de Ca P**	**2.53**	**245**	P	**Pn**	**09 09 49.1**	**+2.8**
GR1C	**Gorgona, Isla**	**2.71**	**351**	P	**Pn**	**09 09 46.8**	**-1.7**
GR1C				S	**Sn**	**09 10 18.4**	**-3.5**
ABH2	**Ecuador-Univer**	**2.81**	**250**	P	**Pn**	**09 09 49.5**	**-0.3**
ABH3	**Manabi, Bahia**	**2.82**	**251**	P	**Pn**	**09 09 49.2**	**-0.6**
GARC	**Garzon, Huila**	**2.93**	**50**	P	**Pn**	**09 09 53.1**	**+1.5**
PTLC	**Puerto Leguiza**	**2.96**	**93**	⇑P	**Pn**	**09 09 53.1**	**+1.4**
PTLC	**Puerto Leguiza**	**2.96**	**93**	P	**Pn**	**09 09 53.1**	**+1.4**
PTLC				S	**Sn**	**09 10 29.7**	**+2.1**
JAMC	**Jamundi, Valle**	**3.08**	**21**	P	**Pn**	**09 09 52.9**	**-0.6**
JAMC				S	**Sn**	**09 10 30.9**	**+0.1**
COHC	**Cochancay**	**3.14**	**209**		**Pn**	**09 09 53.6**	**-0.3**
COHC	**Cochancay**	**3.14**	**209**	P	**Pn**	**09 09 53.3**	**-0.7**
COHC				S	**Sn**	**09 10 31.5**	**-0.2**
COHC	**Cochancay**	**3.14**	**209**	⇓P	**Pn**	**09 09 53.2**	**-0.7**
COHC	**Cochancay**	**3.14**	**209**	P	**Pn**	**09 09 53.0**	**-1.0**
COHC				S	**Sn**	**09 10 32.0**	**+0.3**
MILO	**Milagro-Astudi**	**3.14**	**215**	⇓P	**Pn**	**09 09 52.0**	**-2.0**
AGUAY	**Guayaquil**	**3.21**	**223**	P	**Pn**	**09 09 53.3**	**-1.7**
AMNT	**Manta-Manabi**	**3.23**	**

SDV LR LR 09 16 49.3
comp=Z,555nm,18.9s,baz=226,slow=42
SDV Santo Domingo 11.09 40 Pn 09 11 37.2 -2.8
SDV Santo Domingo 11.09 40 P **Pn 09 11 36.8 -3.3**
SDV Santo Domingo 11.09 40 *e*P **Pn 09 11 37.1 -2.9**
LCR2 La Lucha 2 11.25 327 P **Pn 09 11 43.1 +0.9**
LCR2 S **Sn 09 13 43.0 -3.5**
RAFA San Farael, Vo 11.32 328 Pn 09 11 44.9 +1.6
EGUB Earth Gu¡pi 11.42 330 Pn 09 11 45.6 +1.3
HDC Heredia 11.52 327 Pn 09 11 47.0 +1.3
HDC Heredia 11.52 327 *e*P **Pn 09 11 46.5 +0.8**
TRT2 Tortugero 11.79 330 P **Pn 09 11 50.2 +1.0**
JTS Las Juntas de 12.23 324 P **Pn 09 11 55.6 +0.7**
41nm,0.9s,baz=149,slow=10.0,SNR=32
JTS S **Sn 09 14 10.7 +0.7**
17nm,0.7s,baz=143,slow=20,SNR=7.5
JTS LR LR 09 16 11.7
comp=Z,832nm,18.7s,baz=150,slow=35
JTS Las Juntas de 12.23 324 Pn 09 11 56.3 +1.4
JTS Las Juntas de 12.23 324 P **Pn 09 11 57.2 +2.3**
JTS S **Sn 09 14 10.0 0.0**
JTS Las Juntas de 12.23 324 P **Pn 09 11 56.1 +1.2**
1μm232nm,0.9s
NNA Nana 12.25 176 P **Pn 09 11 54.1 -1.1**
23nm,0.6s,baz=337,slow=12,SNR=12
NNA S **Sn 09 14 01.8 -8.7**
37nm,0.9s,baz=280,slow=18,SNR=2.4
NNA Nana 12.25 176 Pn 09 11 55.2 +0.1
NNA Nana 12.25 176 *i* P **Pn 09 11 56.2 +1.1**
NNA Nana 12.25 176 P **Pn 09 11 55.6 +0.5**
NNA Nana 12.25 176 P **Pn 09 11 55.8 +0.7**
COVE Coope Vega, Sa 12.27 328 P **Pn 09 11 56.1 +0.7**
CMARA Lajas Hojancha 12.30 322 P **Pn 09 11 56.4 +0.6**
JUD3 Juan Diaz 3 12.48 322 Pn 09 11 59.9 +1.7
URI Uribia 12.68 27 P **Pn 09 11 58.0 -2.7**
URIC Uribia, Colomb 12.68 27 P **Pn 09 11 58.0 -2.7**
UPAL Upala 12.76 326 P **Pn 09 12 03.0 +1.3**
ELI1 Hacienda Flor 12.87 323 P **Pn 09 12 04.6 +1.5**
ELI1 S **Sn 09 14 23.0 -2.3**
CARN Rivas 13.28 325 P **Pn 09 12 08.7 +0.2**
PRVC Isla de Provid 13.47 345 P **Pn 09 12 09.8 -1.0**
PRVC Isla de Provid 13.47 345 P **P 09 12 15.9 +0.8**
5μm632nm,1.0s
MORN Al O del Volca 13.64 325 P **Pn 09 12 12.7 -0.3**
CONN Concepcion 13.64 325 P **Pn 09 12 12.5 -0.6**
TEFE Tefe 13.65 106 *e*P **Pn 09 12 11.7 -1.4**
CEAZ Cerra Azul, Ca 13.70 265 P **Pn 09 12 14.3 +0.5**
ACON Acoyapa 13.73 328 P **Pn 09 12 15.2 +1.1**
NANN Nandasmo 14.23 325 P **P 09 12 23.4 -0.3**
MAS3 Al N del Volca 14.33 325 P **P 09 12 25.3 +0.5**
BOAB BOACO BROADBAN14.39 327 Pn 09 12 23.8 +1.3
BOAB BOACO BROADBAN14.39 327 P **Pn 09 12 22.8 +0.3**
WILN Americas 2 14.45 325 P **P 09 12 25.3 -0.8**
UNAN Cigeo UNAN 14.45 325 P **Pn 09 12 24.4 +1.1**
MGAN Managua 14.47 325 P 09 12 25.1 -1.2
TISN Laguna Tiscapa 14.48 325 P **Pn 09 12 22.5 -1.2**
APQ3 Volcan Apoyequ 14.64 325 P **P 09 12 28.0 -0.2**
COPN Copaltepe 14.70 324 P **P 09 12 30.4 +1.6**
MOM2 El Cardon 14.84 325 P **Pn 09 12 29.2 +1.0**
MOM3 MOM3 14.92 325 P **Pn 09 12 29.2 0.0**
MATN Matagalpa 14.93 327 P **Pn 09 12 28.6 -0.8**
CNGN Cerro Negro 15.01 324 P **P 09 12 32.1 -0.3**
SIUN Universidad Ur 15.03 333 P **P 09 12 31.6 -0.8**
ROCN Rota Cerro Neg 15.06 324 P **P 09 12 32.2 -0.6**
POLN Al Sur del Vol 15.20 324 P **Pn 09 12 33.5 +0.8**
LIMN Finca el Limon 15.28 326 P **P 09 12 35.3 -0.1**
CRIN San Cristobal 15.38 324 P **Pn 09 12 35.3 +0.3**
RCVN Varillal2 15.62 328 P **P 09 12 40.8 +1.6**
POTN Potosi Cosigui 15.89 323 P **P 09 12 42.6 +0.6**
CSGN Cosiguina Volc 15.90 323 P **Pn 09 12 40.8 -0.7**
CNCH Conchagua 16.30 323 P **P 09 12 47.4 +0.7**
LCND La Caada 16.36 323 P **Pn 09 12 45.6 -1.4**
TGUH Tegucigalpa,Un 16.59 326 P 09 12 51.5 +1.6
TGUH Tegucigalpa,Un 16.59 326 P **P 09 12 51.7 +1.7**
PACA Pacayal 16.75 322 P **P 09 12 51.1 -0.6**
TECO Alcaldia de Te 17.09 321 P **Pn 09 12 58.4 +2.6**
SCLA Alcaldia de Sa 17.18 321 P **P 09 12 56.6 +0.2**
COEG Centro de Oper 17.21 321 P **P 09 12 56.0 -0.8**
INTHN La Esperanza I 17.28 324 P **Pn 09 12 59.0 +0.7**
PAVA Las Pavas 17.32 321 P **Pn 09 12 59.5 +0.8**
BOAV Boa Vista 17.35 83 Pn **Pn 09 12 59.7 +0.7**
BOAV Boa Vista 17.35 83 P **Pn 09 12 59.1 +0.1**
BOAV Boa Vista 17.35 83 *e*P **Pn 09 13 00.2 +1.2**
MACA Manacapuru-AM 17.41 102 P 09 12 58.7 -0.1
MACA Manacapuru-AM 17.41 102 *e*P **P 09 12 58.1 -0.7**
P5NO Presa 5 de nov 17.42 322 P **P 09 12 59.3 +0.4**
UEES Universidad Ev 17.52 320 P **Pn 09 13 01.6 +0.6**
STH Stony Hill 17.68 3⇑*i*P **Pn 09 13 04.9 +2.0**
MTDJ Mount Denham 17.81 1 Pn 09 13 05.7 +1.2
MTDJ Mount Denham 17.81 1 P **Pn 09 13 05.0 +0.5**
MTDJ Mount Denham 17.81 1 P **Pn 09 13 05.4 +0.9**
MTDJ Mount Denham 17.81 1⇓*i*P **Pn 09 13 05.5 +1.1**
SARH Santa Rosa de 18.03 323 P **Pn 09 13 07.9 +0.8**
SLOZ Alcaldia de Sa 18.10 319 P **Pn 09 13 08.2 +0.3**
FAME Alcaldia de Sa 18.12 318 P **P 09 13 06.8 +0.2**
ESQI Esquipulas 18.22 322 P **Pn 09 13 09.7 +0.4**
LGNH Logne 18.78 15 P **P 09 13 14.5 +0.7**
TPP Pointe-a-Pierr 19.02 58 *e*P **Pn 09 13 21.0 +2.3**
LPAZ La Paz 19.03 150 P **P 09 13 18.0 +0.8**
130nm,0.9s,baz=337,slow=9.6,SNR=259
LPAZ S **S 09 16 46.2 0.0**
9.7nm,1.0s,baz=132,slow=23,SNR=1.8
LPAZ LR LR 09 22 34.1
comp=Z,302nm,22.0s,baz=326,slow=42
TRN Trinidad (W) 19.23 57 *e*P **Pn 09 13 20.0 -1.1**
APG El Apazote 19.26 320 P **Pn 09 13 20.8 -0.9**
39nm,1.0s,baz=143,slow=9.8,SNR=189
APG S **S 09 16 52.5 +2.3**
0.2nm,0.6s,baz=225,slow=18,SNR=1.3
APG LR LR 09 20 12.7
comp=Z,39nm,18.6s,baz=265,slow=34
CBCY The Bluff, Cay 19.41 354 P **P 09 13 20.4 -0.1**
PB18 Visviri 19.56 156 Pn 09 13 25.5 0.0
CHIV Chivirico 19.59 4 P **Pn 09 13 24.1 -1.2**
SDD Santo Domingo 19.61 23 P **P 09 13 21.9 -0.9**
SDDR Presa de Saban 19.61 19 P **Pn 09 13 24.8 -0.8**
SDDR Presa de Saban 19.61 19 P **P 09 13 23.8 +0.9**
GTBY Guantanamo Bay 19.67 7⇓*i*P **Pn 09 13 25.5 -0.7**
RTAL Retalhuleu 19.74 316 P **Pn 09 13 26.5 -0.6**
RTAL Retalhuleu 19.74 316 P **P 09 13 23.8 -0.4**
GRGR Grenville 19.83 53 P **P 09 13 25.7 +0.5**
GRGR Grenville 19.83 53 P **P 09 13 23.8 -1.5**
QMBU Quimbuelo 19.98 8 P **P 09 13 26.0 -0.8**
MASC Masc 20.04 10 P **P 09 13 27.8 +0.4**
DR12 Loma Pena Alta 20.12 24 P **P 09 13 29.4 +1.0**
HUEH Huehuetenango 20.17 318 P Pn 09 13 31.3 -1.1
HUEH Huehuetenango 20.17 318 P **P 09 13 30.4 +1.3**
SC01 Santiago de lo 20.21 20 P Pn 09 13 31.9 -0.7
NMDO Nuevo Mundo 20.31 8 P **P 09 13 30.9 +0.7**
NMDO Nuevo Mundo 20.31 8 P **P 09 13 31.2 +0.9**
NMDO S **S 09 17 08.0 -2.4**
PETF Flores 20.36 325 P **P 09 13 29.7 -1.2**
PETF S **S 09 17 11.7 +0.1**
OBIP Obispado Ponce 20.75 31 P **P 09 13 35.8 +0.7**
CELP Cerrillos 20.80 31 P **P 09 13 36.3 +0.8**
AGPR Aguadilla, PR 20.86 29 P **P 09 13 36.7 +0.5**
UUPR Utuado, UPR, P 20.87 31 P **P 09 13 37.4 +1.1**
AOPR Arecibo Observ 20.93 30 P **P 09 13 38.4 +1.4**
SJG San Juan 21.05 32 P **P 09 13 38.6 +0.4**
198nm,0.7s,baz=211,slow=7.7,SNR=55
SJG S **S 09 17 24.6 -0.2**
6.3nm,0.3s,baz=267,slow=17,SNR=1.6
198nm,0.7s
SJG San Juan 21.05 32 P **P 09 13 39.0 +0.8**
SJG San Juan 21.05 32 P **P 09 13 37.8 -0.4**
SJG S **S 09 17 27.2 +2.4**
CCIG Comitan 21.29 319 P **P 09 13 41.9 +0.9**
CCIG Comitan 21.29 319 P **P 09 13 41.9 +0.9**
CCIG S **S 09 17 29.8 +0.3**
BIM Bigot 21.72 49 P **P 09 13 44.2 -1.2**
MPOM Morne Pois Mar 21.83 49 P **P 09 13 45.7 -0.9**
VILB Vilhena 21.83 128 P **P 09 13 47.0 +0.4**
VILB Vilhena 21.83 128 *e*P **P 09 13 45.5 -1.2**
PB08 IPOC Station P 22.00 158 P **P 09 13 49.6 +0.9**
DSLB Salisbury 22.05 46 *e*P **P 09 13 46.7 -2.2**
TEIG Tepich 22.31 333 P **P 09 13 52.1 +0.7**
TEIG IAmb IAmb 09 13 53.4
comp=Z,363nm,1.2s
GDHS Morne Mazeau, 22.37 44 P **P 09 13 51.3 -0.8**
ITTB Itaituba 22.49 102 *e*P **P 09 13 52.1 -1.1**
PB01 IPOC Station P 22.71 160 IAmb IAmb 09 14 00.6

comp=Z,197nm,0.9s
SMRT St. Maarten 22.79 39 IAmb IAmb 09 13 56.9
comp=Z,123nm,0.8s
PB02 IPOC Station P 22.83 161 P **P 09 13 57.6 +1.2**
PB02 IAmb IAmb 09 14 01.2
comp=Z,203nm,0.7s
DSDZ La Diserade, G 22.89 45 *e*P P 09 13 44.7 -12
PB07 IPOC Station P 23.21 161 IAmb IAmb 09 14 34.4
comp=Z,149nm,0.8s
ANWB Willy Bob 23.33 41 *e*P **P 09 13 56.2 -4.8**
PB03 IPOC Station P 23.55 161 IAmb IAmb 09 14 06.5
comp=Z,206nm,0.7s
CMIG Matias Romero 23.72 316 LR LR 09 22 02.8
comp=Z,214nm,18.5s,baz=130,slow=33
PDRB Porto dos Gac 24.01 120 *e*P **P 09 14 06.5 -0.8**
PTLB Pontes e Lacer 24.16 131 P **P 09 14 09.5 +1.0**
PTLB Pontes e Lacer 24.16 131 *e*P **P 09 14 08.8 +0.3**
PB05 IPOC Station P 24.17 163 IAmb IAmb 09 14 11.1
comp=Z,200nm,0.7s
PB06 IPOC Station P 24.22 161 IAmb IAmb 09 14 12.8
comp=Z,246nm,0.8s
BBSD Serra de San D 24.24 137 *e*P **P 09 14 08.5 -0.8**
CLDB Colider 24.49 118 *e*P **P 09 14 10.5 -1.2**
MDP Montagnes des 25.53 79 LR LR 09 25 41.4
comp=Z,500nm,18.6s,baz=260,slow=39
PB14 IPOC Station P 25.79 164 IAmb IAmb 09 14 26.4
comp=Z,180nm,1.3s
060A Indiantown 26.69 355 IAmb IAmb 09 14 34.1
comp=Z,206nm,0.8s
TLIG Tlapa 26.71 311 P **P 09 14 34.2 +2.5**
SALV Santo Antonio 27.09 127 *e*P **P 09 14 34.3 -0.7**
DWPF Disney Wildern 27.87 353 P **P 09 14 43.4 +1.6**
AC02 Maricunga 28.24 164 IAmb IAmb 09 14 49.4
comp=Z,141nm,0.9s
PRPB Parauapebas 28.62 103 *e*P **P 09 14 47.6 -1.1**
GO03 Copiapo 28.67 166 IAmb IAmb 09 15 27.7
comp=Z,190nm,2.0s
PP1B Ponte de Pedra 28.70 129 *e*P **P 09 14 48.6 -0.8**
SNDB Serra Nova Dou 28.97 116 *e*P **P 09 14 51.0 -0.8**
BDQN Bodoquena, MS 29.12 136 *e*P **P 09 14 52.4 -0.7**
MURT Porto Murtinho 29.38 139 *e*P **P 09 14 54.5 -0.9**
AC05 El Transito 29.85 167 P **P 09 15 01.0 +1.5**
AC05 IAmb IAmb 09 15 02.3
comp=Z,76nm,0.9s
TINO Tinogasta 29.85 162 *e*P **P 09 15 01.8 +2.3**
AQDB Aquidauana 29.88 135 P **P 09 14 59.8 +0.1**
LCO Las Campanas 29.92 168 P **P 09 15 01.8 +1.5**
LCO Las Campanas 29.92 168 P **P 09 15 01.8 +1.5**
LCO pmax pmax
comp=Z,34nm,0.8s
MOIG Morelia 29.96 311 IAmb IAmb 09 15 04.4
comp=Z,74nm,0.8s
ARAG Araguaiana, MT 30.16 123 *e*P **P 09 15 01.0 -1.3**
VCA Vinchina 30.29 163 *e*P **P 09 15 06.3 +2.8**
553A Crawfordville 30.39 349 P **P 09 15 05.8 +1.7**
CO05 La Serena 30.69 169 IAmb IAmb 09 15 09.3
comp=Z,92nm,1.1s
AANI Anillaco 30.75 161 *e*P **P 09 15 09.2 +1.7**
C2SB Chapadao do Su 30.96 129 *e*P **P 09 15 08.5 -0.7**
ACLC CERRO LA CRUZ 31.32 162 *e*P **P 09 15 14.0 +1.5**
AROD Rodeo 31.32 166 *e*P **P 09 15 15.4 +2.8**
SMTB Santa Maria do 31.40 108 *e*P **P 09 15 12.2 -1.0**
ACDV Cuesta del Vie 31.41 166 *e*P **P 09 15 15.4 +2.2**
CO03 El Pedregal 31.70 168 IAmb IAmb 09 15 18.5
comp=Z,100nm,1.4s
352A Blakely 31.74 348 IAmb IAmb 09 15 17.8
comp=Z,212nm,1.3s
CO02 Combarbal 31.99 169 IAmb IAmb 09 15 21.1
comp=Z,123nm,0.9s
AMBA Amambai (Brazi 32.00 138 *e*P **P 09 15 17.4 -1.0**
AVFE Valle Fertil 32.32 163 *e*P **P 09 15 22.4 +1.2**
RGRS Roger Stewart 32.51 356 IAmb IAmb 09 15 24.9
comp=Z,294nm,1.1s
CO04 Los Peladeros 32.81 169 IAmb IAmb 09 15 28.2
comp=Z,72nm,0.9s
ZON Zonda 32.83 166 IAmb IAmb 09 15 28.6
comp=Z,90nm,1.2s
ZAIG Zacatecas 32.88 314 IAmb IAmb 09 15 29.9
comp=Z,100nm,1.1s
CPUP Villa Florida 33.00 145 P **P 09 15 26.0 -1.1**
comp=Z,56nm,0.8s,baz=327,slow=10,SNR=176
CPUP PcP **PcP 09 18 08.5 +0.7**
comp=Z,7.9nm,0.9s,baz=306,slow=3.0,SNR=4.5
comp=Z,56nm,0.8s
ACHE Chepes 33.02 162 *e*P **P 09 15 28.6 +1.2**
VA06 Catapilco 33.26 170 IAmb IAmb 09 15 31.8
comp=Z,66nm,0.8s
AUSP Uspallata 33.31 167 *e*P **P 09 15 32.6 +2.6**
HBVL Hebbronville 33.34 325 IAmb IAmb 09 15 32.6
comp=Z,62nm,0.8s
BDFB Brasilia 33.38 120 P **P 09 15 30.4 -0.2**
comp=Z,82nm,0.9s,baz=290,slow=11,SNR=89
comp=Z,82nm,0.9s
BDFB Brasilia 33.38 120 P **P 09 15 31.0 +0.4**
BDFB IAmb IAmb 09 15 31.8
comp=Z,119nm,1.0s
BDFB Brasilia 33.38 120 P **P 09 15 31.0 +0.4**
BDFB pmax pmax
comp=Z,119nm,1.0s
ITRB Iturama 33.42 128 *e*P **P 09 15 29.7 -1.1**
TRCB Terra Rica 33.54 135 IAmb IAmb 09 15 31.4
comp=Z,43nm,0.7s
TRCB Terra Rica 33.54 135 *e*P **P 09 15 30.7 -1.2**
VA03 San Esteban 33.59 169 IAmb IAmb 09 15 35.3
comp=Z,117nm,1.0s
441A DeRidder 33.64 336 IAmb IAmb 09 15 33.8
comp=Z,76nm,0.6s
VA01 Torpederas 33.65 171 IAmb IAmb 09 15 35.2
comp=Z,104nm,0.9s
LRAL Lakeview Retre 33.70 346 IAmb IAmb 09 15 34.2
comp=Z,187nm,1.1s
ASAL Salagasta 33.79 166 *e*P **P 09 15 35.9 +2.0**
Y52A Lilburn 33.90 351 IAmb IAmb 09 15 35.6
comp=Z,60nm,0.7s
PEL Peldehue 33.93 169 IAmb IAmb 09 15 38.0
comp=Z,72nm,0.9s
PEL Peldehue 33.93 169 P **P 09 15 36.8 +1.7**
PEL pP **pP 09 16 07.2 +1.4**
VBMS Vicksburg 33.95 340 IAmb IAmb 09 15 36.4
comp=Z,141nm,0.9s
JSC Jenkinsville 33.96 355 IAmb IAmb 09 15 37.2
comp=Z,156nm,1.2s
ARCO CERRO ARCO 34.01 167 *e*P **P 09 15 38.3 +2.4**
HODGE Hodges 34.01 353 IAmb IAmb 09 15 37.6
comp=Z,233nm,1.4s
BBSR BB Station 34.19 20 P **P 09 15 37.8 +0.5**
BBSR IAmb IAmb 09 15 39.9
comp=Z,51nm,0.8s
BBSR BB Station 34.19 20 P **P 09 15 37.7 +0.5**
BBSR sP **sP 09 16 23.7 -0.9**
MT16 CCHEN 34.24 169 IAmb IAmb 09 15 40.2
comp=Z,51nm,0.8s
735A Kenedy 34.25 328 IAmb IAmb 09 15 39.5
comp=Z,106nm,0.7s
BIRD Birdtown, Kers 34.25 356 IAmb IAmb 09 15 40.4
comp=Z,160nm,1.2s
AAGR Agrelo 34.26 167 *e*P **P 09 15 40.1 +2.0**
IPMB Ipameri, GO 34.27 124 *e*P **P 09 15 37.0 -1.3**
MT03 Universidad Ad 34.31 169 IAmb IAmb 09 15 42.3
comp=Z,127nm,1.1s
Y49A Blount Mountai 34.35 347 IAmb IAmb 09 15 39.4
comp=Z,99nm,0.9s
MT08 Bocatoma Ro 34.35 168 IAmb IAmb 09 15 42.9
comp=Z,131nm,0.9s
MT09 Talagante 34.50 170 IAmb IAmb 09 15 43.9
comp=Z,264nm,1.6s
EF04 Eagle Ford 04 34.52 328 IAmb IAmb 09 15 41.2
comp=Z,196nm,1.6s
PAULI Pauline 34.54 354 IAmb IAmb 09 15 42.3
comp=Z,139nm,0.9s
EF02 Christine 34.58 327 IAmb IAmb 09 15 42.1
comp=Z,153nm,1.2s
MT13 San Alfonso 34.59 169 IAmb IAmb 09 15 44.3
comp=Z,70nm,0.8s
MLDN Muldoon 34.61 330 IAmb IAmb 09 15 42.6
comp=Z,130nm,1.0s
HNVL Huntsville, TX 34.64 333 IAmb IAmb 09 15 42.3
comp=Z,56nm,0.7s
W59A Clinton 34.69 359 IAmb IAmb 09 15 43.5
comp=Z,74nm,0.9s
143A Socs Landing, 34.70 340 IAmb IAmb 09 15 42.3
comp=Z,97nm,0.9s
833A Chaparral WMA, 34.72 325 IAmb IAmb 09 15 43.8
comp=Z,77nm,1.0s
X51A Calhoun 34.72 350 IAmb IAmb 09 15 43.0
comp=Z,140nm,0.9s

W57A Gilead 34.73 357 IAmb IAmb 09 15 43.6
comp=Z,119nm,0.8s
BO04 La Punta 34.77 170 IAmb IAmb 09 15 45.0
comp=Z,90nm,0.9s
KMSC Kings Mountain 34.82 355 IAmb IAmb 09 15 44.6
comp=Z,119nm,1.0s
FPAL Fort Paine 34.84 349 IAmb IAmb 09 15 43.8
comp=Z,104nm,0.8s
SDBA SAO DESIDERIO 34.96 112 *e*P **P 09 15 43.2 -1.1**
LDASE Londrina, Braz 35.00 134 *e*P **P 09 15 43.0 -1.4**
BO01 Tunca 35.08 170 IAmb IAmb 09 15 48.5
comp=Z,222nm,1.8s
W52A Murphy 35.08 351 IAmb IAmb 09 15 46.5
comp=Z,108nm,0.7s
PTGB Pitanga 35.18 137 *e*P **P 09 15 44.0 -2.0**
V53A Saluda 35.49 353 IAmb IAmb 09 15 50.0
comp=Z,87nm,0.7s
V55A Taylorsville 35.51 355 IAmb IAmb 09 15 50.8
comp=Z,125nm,1.3s
BO02 Sierra Bellavi 35.52 170 IAmb IAmb 09 15 52.6
comp=Z,108nm,1.4s
GO05 Hualane 35.55 172 IAmb IAmb 09 15 50.9
comp=Z,259nm,1.8s
SWET Sewanee 35.56 348 IAmb IAmb 09 15 49.8
comp=Z,119nm,0.8s
HNDO Hondo 35.58 327 IAmb IAmb 09 15 50.9
comp=Z,87nm,1.0s
BB19B Bebedouro 35.59 128 *e*P **P 09 15 49.0 -0.6**
TKL Tuckaleechee C 35.61 352 LR LR 09 30 42.4
comp=Z,99nm,19.2s,baz=144,slow=36
TKL Tuckaleechee C 35.61 352 IAmb IAmb 09 15 50.6
comp=Z,46nm,0.8s
435B Jarrell 35.68 330 IAmb IAmb 09 15 51.4
comp=Z,87nm,0.9s
FRTB Fartura 36.10 133 *e*P **P 09 15 52.5 -1.4**
U54A Nelsons Funny 36.23 354 IAmb IAmb 09 15 56.5
comp=Z,102nm,0.8s
JANB Januaria 36.41 116 *e*P **P 09 15 55.4 -1.2**
CLTN Cedars of Leba 36.48 348 IAmb IAmb 09 15 57.7
comp=Z,68nm,0.9s
NBPS Pedro II - PI 36.58 98 *e*P **P 09 15 56.9 -1.1**
TREL Terrell 36.59 334 IAmb IAmb 09 15 59.1
comp=Z,123nm,0.9s
JCT Junction City 36.60 327 IAmb IAmb 09 15 59.8
comp=Z,202nm,1.8s
WHTX Lake Whitney, 36.60 331 IAmb IAmb 09 15 59.0
comp=Z,141nm,1.1s
PSAL Palomas, Salto 36.61 150 *e*P **P 09 15 56.9 -1.1**
U49A Red Boiling Sp 36.78 349 IAmb IAmb 09 15 59.6
comp=Z,53nm,0.8s
BLA Blacksburg 36.80 356 IAmb IAmb 09 16 01.9
comp=Z,159nm,1.1s
X40A Basin Creek Fa 36.81 339 IAmb IAmb 09 16 00.9
comp=Z,43nm,0.8s
ITAB Concordia 36.83 140 *e*P **P 09 15 58.8 -1.1**
WVT Waverly 36.85 346 P **P 09 15 58.9 -1.1**
WVT IAmb IAmb 09 15 59.2
comp=Z,63nm,0.7s
WVT Waverly 36.85 346 P **P 09 15 58.9 -1.1**
WVT pmax pmax
comp=Z,63nm,0.7s
WVT Waverly 36.85 346 P **P 09 15 58.8 -1.1**
RCLB Rio Claro- Sao 37.11 129 *e*P **P 09 16 01.0 -1.4**
BI05 Punta Hualpn 37.11 174 IAmb IAmb 09 16 04.3
comp=Z,105nm,0.8s
MIAR Mount Ida 37.14 338 IAmb IAmb 09 16 02.8
comp=Z,64nm,1.1s
S57A Dark Hollow, R 37.28 358 IAmb IAmb 09 16 05.6
comp=Z,159nm,1.1s
S54A Dingess, Beckl 37.45 355 IAmb IAmb 09 16 06.8
comp=Z,116nm,1.1s
FW06 Azle 37.46 332 IAmb IAmb 09 16 06.5
comp=Z,104nm,0.8s
R58B Mineral 37.47 360 IAmb IAmb 09 16 07.4
comp=Z,88nm,1.0s
S51A Beattyville 37.54 352 IAmb IAmb 09 16 06.8
comp=Z,126nm,0.8s
OZNA Ozona 37.67 326 IAmb IAmb 09 16 08.8
comp=Z,118nm,1.1s
HPIG 37.69 317 IAmb IAmb 09 16 09.8
comp=Z,43nm,0.8s
CBN Corbin Frederi 37.71 0 IAmb IAmb 09 16 09.5
comp=Z,102nm,0.8s
SPB Sao Paulo 37.84 131 IAmb IAmb 09 16 09.1
comp=Z,43nm,0.8s
SPB Sao Paulo 37.84 131 *e*P **P 09 16 07.2 -1.3**
SPB Sao Paulo 37.84 131 P **P 09 16 07.3 -1.2**
SPB sP **sP 09 16 54.0 -1.3**
FCAR Ozark Folk Cen 37.84 341 IAmb IAmb 09 16 08.2
comp=Z,92nm,0.8s
VAO Valinhos 37.86 130 IAmb IAmb 09 16 10.0
comp=Z,106nm,1.1s
VAO Valinhos 37.86 130 *e*P **P 09 16 07.9 -0.9**
NBMO Morrinhos-CE 37.87 96 *e*P **P 09 16 07.9 -0.9**
TXAR Lajitas Array 38.00 322 P **P 09 16 11.1 +1.1**
comp=Z,22nm,0.7s,baz=141,slow=8.4,SNR=278
TXAR PcP **PcP 09 18 23.6 +0.9**
comp=Z,6.1nm,0.7s,baz=150,slow=6.5,SNR=8.9
TXAR ScP **ScP 09 21 57.3 -0.2**
comp=Z,0.9nm,0.7s,baz=151,slow=8.1,SNR=4.8
TXAR LR LR 09 32 50.8
comp=Z,150nm,21.7s,baz=121,slow=38
comp=Z,22nm,0.7s
ABTX Abilene, Hawle 38.20 329 IAmb IAmb 09 16 12.8
comp=Z,100nm,0.8s
DIAM Diamantina, MG 38.26 121 *e*P **P 09 16 11.6 -0.7**
R50A Paris 38.27 352 IAmb IAmb 09 16 12.7
comp=Z,100nm,0.8s
CPSB Cacapava Do Su 38.32 145 *e*P **P 09 16 10.9 -1.5**
PET01 Itanhaem-SP 38.35 132 *e*P **P 09 16 11.3 -1.4**
R49A Shelbyville 38.41 351 IAmb IAmb 09 16 13.5
comp=Z,85nm,0.8s
CGM3 Cape Girardeau 38.42 345 IAmb IAmb 09 16 13.2
comp=Z,149nm,1.1s
WTFS Witchita Falls 38.54 332 IAmb IAmb 09 16 15.4
comp=Z,84nm,0.9s
WCI Wyandotte Cave 38.55 349 P **P 09 16 13.4 -0.8**
WCI IAmb IAmb 09 16 14.3
comp=Z,130nm,1.1s
WCI Wyandotte Cave 38.55 349 P **P 09 16 13.4 -0.8**
WCI pmax pmax
comp=Z,130nm,1.1s
WCI Wyandotte Cave 38.55 349 P **P 09 16 13.3 -0.8**
WCI pP **pP 09 16 44.3 -1.3**
BSCB Bom Sucesso 38.56 125 *e*P **P 09 16 13.6 -1.1**
Q56A Snyder Ridge, 38.57 358 IAmb IAmb 09 16 17.1
comp=Z,152nm,1.0s
Q54A Coxs Mills 38.59 356 IAmb IAmb 09 16 16.2
comp=Z,79nm,1.0s
ALPN Alpine 38.72 323 IAmb IAmb 09 16 18.3
comp=Z,115nm,0.9s
229A Bryant Ranch, 38.84 326 IAmb IAmb 09 16 19.3
comp=Z,184nm,0.9s
Q51A Peebles 38.87 353 IAmb IAmb 09 16 17.9
comp=Z,128nm,1.4s
MNHN Monahans 38.91 325 IAmb IAmb 09 16 19.5
comp=Z,80nm,0.9s
SLBS Sierra La Lagu 38.93 309 P **P 09 16 19.8 +2.2**
SLBS IAmb IAmb 09 16 20.9
comp=Z,62nm,0.8s
SLBS Sierra La Lagu 38.93 309 P **P 09 16 19.9 +2.2**
SLBS pP **pP 09 16 50.9 +2.0**
P57A Homestead Farm 38.99 360 IAmb IAmb 09 16 21.0
comp=Z,75nm,1.1s
APMT Aspermont 39.00 330 IAmb IAmb 09 16 19.8
comp=Z,156nm,1.2s
PARB Paraibuna 39.08 129 *e*P **P 09 16 17.5 -1.5**
CNLB Canela 39.08 141 *e*P **P 09 16 17.2 -1.7**
U38A Gravette 39.12 339 IAmb IAmb 09 16 19.2
comp=Z,113nm,0.9s
MCWV Mont Chateau 39.21 357 IAmb IAmb 09 16 21.9
comp=Z,61nm,0.9s
TPB01 Permian Basin 39.22 323 IAmb IAmb 09 16 23.1
comp=Z,132nm,0.7s
ODSA Odessa 39.36 326 IAmb IAmb 09 16 22.7
comp=Z,170nm,1.0s
129A Stewart Farms, 39.37 327 IAmb IAmb 09 16 23.1
comp=Z,106nm,0.9s
TPB06 Permian Basin 39.40 325 IAmb IAmb 09 16 23.6
comp=Z,146nm,1.1s
LPIG La Paz 39.43 309 LR LR 09 32 04.9
comp=Z,53nm,18.3s,baz=119,slow=35
WMOK Wichita Mounta 39.49 332 IAmb IAmb 09 16 22.9
comp=Z,152nm,1.5s
CCM Cathedral Cave 39.56 343 P **P 09 16 21.7 -1.0**
CCM IAmb IAmb 09 16 22.4
comp=Z,133nm,0.8s

CCM Cathedral Cave 39.56 343 P P 09 16 21.7 -1.0
CCM pmax pmax
comp=Z,133nm,0.8s
CCM Cathedral Cave 39.56 343 P P 09 16 21.6 -1.0
CCM pP **pP 09 16 52.9 -1.2**
CCM PcP **PcP 09 18 27.8 +0.5**
CCM ScP **ScP 09 22 03.1 0.0**
PECS Pecos 39.57 324 IAmb IAmb 09 16 24.8
comp=Z,98nm,0.6s
P48A Milroy 39.59 351 IAmb IAmb 09 16 22.5
comp=Z,95nm,0.7s
TPB07 Mentone 39.61 324 IAmb IAmb 09 16 25.6
comp=Z,193nm,0.7s
NBMA Muriti-CE 39.63 102 *e*P **P 09 16 22.5 -1.1**
TPB13 Reeves - Culbe 39.69 324 IAmb IAmb 09 16 26.4
comp=Z,215nm,0.8s
128A Castleberry Fa 39.70 326 IAmb IAmb 09 16 28.7
comp=Z,46nm,0.7s
O54A Avella 39.76 357 IAmb IAmb 09 16 25.8
comp=Z,191nm,1.3s
O52A Adamsville 39.80 355 IAmb IAmb 09 16 25.6
comp=Z,127nm,0.8s
S39A Bolivar 39.88 341 IAmb IAmb 09 16 25.1
comp=Z,115nm,0.8s
O53A New Philadelph 39.88 356 IAmb IAmb 09 16 27.3
comp=Z,142nm,1.0s
ACSO Alum Creek Sta 40.02 354 IAmb IAmb 09 16 27.3
comp=Z,124nm,0.8s
P46A Rosedale 40.07 349 IAmb IAmb 09 16 26.3
comp=Z,79nm,0.7s
R40A Maddies Statio 40.09 342 IAmb IAmb 09 16 26.6
comp=Z,59nm,0.8s
OK048 Pawnee Station 40.10 336 IAmb IAmb 09 16 27.8
comp=Z,194nm,1.2s
GO06 Curarrehue 40.12 172 IAmb IAmb 09 16 29.6
comp=Z,56nm,0.9s
SSPA Standing Stone 40.14 360 P **P 09 16 28.7 +1.4**
SSPA IAmb IAmb 09 16 29.7
comp=Z,142nm,0.9s
SSPA Standing Stone 40.14 360 P **P 09 16 28.6 +1.3**
SSPA pP **pP 09 16 59.5 +0.4**
SSPA sP **sP 09 17 15.5 +0.1**
O49A Covington 40.14 352 IAmb IAmb 09 16 27.6
comp=Z,96nm,1.1s
N58A Sunbury 40.35 1 IAmb IAmb 09 16 31.5
comp=Z,128nm,1.1s
T35A Sooner Cattle 40.35 337 IAmb IAmb 09 16 31.9
comp=Z,60nm,0.9s
N53A Lisbon 40.41 356 IAmb IAmb 09 16 30.8
comp=Z,135nm,1.1s
SJMB Sao Joao De Ma 40.58 120 *e*P **P 09 16 30.3 -1.1**
P43A Skaggs, Pawnee 40.60 346 IAmb IAmb 09 16 30.9
comp=Z,175nm,0.9s
N51A Ashland 40.64 355 IAmb IAmb 09 16 32.1
comp=Z,179nm,1.2s
PAL Palisades 40.66 4 IAmb IAmb 09 16 33.5
comp=Z,97nm,0.9s
LR05 Currie 40.69 173 P **P 09 16 33.1 +1.3**
LR05 IAmb IAmb 09 16 34.0
comp=Z,106nm,0.8s
MNTX Cornudas Mount 40.71 323 IAmb IAmb 09 16 34.3
comp=Z,87nm,0.8s
SFIN Lafayette 40.78 349 IAmb IAmb 09 16 31.7
comp=Z,49nm,0.6s
RPN Rapa Nui 40.81 226 LR LR 09 29 24.5
comp=Z,114nm,20.4s,baz=56,slow=30
M57A Sunshine Farm, 40.84 1 IAmb IAmb 09 16 35.7
comp=Z,201nm,1.0s
TRQA Tornquist 40.85 161 P **P 09 16 33.8 +0.5**
TRQA IAmb IAmb 09 16 35.1
comp=Z,143nm,1.1s
TRQA Tornquist 40.85 161 P **P 09 16 33.8 +0.5**
TRQA pmax pmax
comp=Z,143nm,1.1s
CMC01 Camacan, BA 40.86 114 *e*P **P 09 16 32.8 -0.8**
BSFB Barra de Sao F 40.92 120 *e*P **P 09 16 32.7 -1.4**
GUA01 Guaratinga, BA 41.01 116 *e*P **P 09 16 33.7 -1.1**
NBPA Parau_RN 41.02 99 *e*P **P 09 16 33.8 -1.3**
N47A Urbana 41.02 351 IAmb IAmb 09 16 34.2
comp=Z,116nm,0.9s
DUB01 Friburgo-RJ 41.04 125 *e*P **P 09 16 34.0 -1.2**
PAOC Oil Creek Stat 41.06 358 IAmb IAmb 09 16 36.6
comp=Z,169nm,1.0s
P40A Paris 41.16 343 IAmb IAmb 09 16 35.2
comp=Z,270nm,1.8s
M52A Chesterland 41.17 356 IAmb IAmb 09 16 36.2
comp=Z,59nm,0.8s
M63A Gales Ferry 41.23 7 IAmb IAmb 09 16 38.9
comp=Z,278nm,1.4s
PLCA Paso Flores 41.37 172 P **P 09 16 38.6 +1.0**
comp=Z,117nm,0.6s,baz=345,slow=9.2,SNR=627
PLCA PcP **PcP 09 18 34.0 +0.8**
comp=Z,5.3nm,0.6s,baz=7.7,slow=3.6,SNR=3.1
comp=Z,117nm,0.6s
PLCA Paso Flores 41.37 172 P **P 09 16 39.0 +1.4**
PLCA pP **pP 09 17 09.6 +0.4**
PLCA PcP **PcP 09 18 34.1 +0.9**
PLCA ScP **ScP 09 22 11.3 +1.0**
KSCT Kent School, K 41.41 5 IAmb IAmb 09 16 39.6
comp=Z,59nm,0.8s
RIB01 Linhares ES 41.51 120 *e*P **P 09 16 37.7 -1.2**
CAM01 Campos-RJ 41.51 124 *e*P **P 09 16 37.1 -1.8**
PH02 Texas Public H 41.55 330 IAmb IAmb 09 16 40.6
comp=Z,195nm,1.2s
UCCT U. Connecticut 41.60 6 IAmb IAmb 09 16 41.5
comp=Z,72nm,0.9s
L56A Greenwood 41.64 0 IAmb IAmb 09 16 41.7
comp=Z,136nm,1.0s
ERPA Erie 41.67 358 IAmb IAmb 09 16 41.2
comp=Z,127nm,0.8s
LL05 Los Muermos 41.70 175 IAmb IAmb 09 16 42.1
comp=Z,105nm,0.8s
P38A Dawn 41.70 342 IAmb IAmb 09 16 39.7
comp=Z,69nm,0.7s
ALF01 Guarapari-ES 41.76 122 *e*P **P 09 16 39.9 -1.0**
L59A Walton 41.77 3 IAmb IAmb 09 16 43.0
comp=Z,126nm,1.0s
N41A Harden Midland 41.94 345 IAmb IAmb 09 16 40.8
comp=Z,63nm,0.6s
AAM Ann Arbor 42.14 353 IAmb IAmb 09 16 44.4
comp=Z,119nm,1.3s
L46A Eue Claire 42.23 351 IAmb IAmb 09 16 43.6
comp=Z,92nm,1.0s
RCBR Riachuelo 42.23 99 LR LR 09 36 03.5
comp=Z,54nm,19.1s,baz=256,slow=38
RCBR Riachuelo 42.23 99 P **P 09 16 44.2 -0.7**
RCBR Riachuelo 42.23 99 P **P 09 16 44.2 -0.7**
RCBR pmax pmax
comp=Z,30nm,1.0s
MMNY Mt. Morris Dam 42.23 360 IAmb IAmb 09 16 46.2
comp=Z,267nm,1.5s
K57A Scipio Center 42.25 1 P **P 09 16 45.7 +1.2**
BCX Boston College 42.26 7 IAmb IAmb 09 16 47.8
comp=Z,86nm,1.0s
WES Weston 42.29 7 P **P 09 16 46.1 +1.3**
WES IAmb IAmb 09 16 48.4
comp=Z,90nm,1.0s
WES Weston 42.29 7 P **P 09 16 46.1 +1.3**
WES pmax pmax
comp=Z,90nm,1.0s
HRV Adam Dziewonsk 42.38 7 P **P 09 16 46.8 +1.2**
HRV Adam Dziewonsk 42.38 7 P **P 09 16 46.8 +1.2**
HRV pmax pmax
comp=Z,43nm,0.8s
TRY Troy 42.39 4 IAmb IAmb 09 16 48.3
comp=Z,91nm,0.9s
K50A Casco 42.50 355 IAmb IAmb 09 16 46.9
comp=Z,157nm,1.0s
R32A Long Quarter, 42.54 335 IAmb IAmb 09 16 48.2
comp=Z,193nm,1.4s
MEDO Medina 42.67 359 IAmb IAmb 09 16 49.5
comp=Z,139nm,1.1s
N38A Joes South For 42.68 343 IAmb IAmb 09 16 47.7
comp=Z,201nm,1.0s
121A Cookes Peak, D 42.76 321 IAmb IAmb 09 16 52.5
comp=Z,192nm,0.9s
J55A Hilton 42.77 360 IAmb IAmb 09 16 50.3
comp=Z,115nm,0.9s
L42A Oliver, Polo 42.88 347 IAmb IAmb 09 16 48.9
comp=Z,61nm,0.8s
J57A Williamstown 42.94 2 IAmb IAmb 09 16 51.9
comp=Z,135nm,1.1s
319A Douglas 42.96 319 IAmb IAmb 09 16 53.6
comp=Z,114nm,0.9s
J61A Chester 43.10 6 IAmb IAmb 09 16 54.0
comp=Z,109nm,1.4s
LL07 Hotel Espejo d 43.12 175 P **P 09 16 52.3 +0.8**
LL07 IAmb IAmb 09 16 54.0
comp=Z,178nm,0.9s
Y22A Socorro 43.23 324 IAmb IAmb 09 16 55.6
comp=Z,306nm,1.8s
GO07 Milladeo Hill, 43.38 176 IAmb IAmb 09 16 56.2
comp=Z,141nm,0.7s
PECO Prince Edward 43.44 1 IAmb IAmb 09 16 55.5
comp=Z,119nm,0.9s
NCB Newcomb 43.59 4 IAmb IAmb 09 16 57.5
comp=Z,106nm,0.8s
LL02 Futaleuf 43.63 174 IAmb IAmb 09 16 57.5
comp=Z,115nm,0.8s
ANMO Albuquerque 43.65 325 LR LR 09 36 25.0
comp=Z,106nm,21.7s,baz=138,slow=38
ANMO Albuquerque 43.65 325 P **P 09 16 57.8 +1.6**
ANMO Albuquerque 43.65 325 *d* iP **P 09 16 57.5 +1.3**
ANMO pmax pmax
comp=Z,181nm,0.8s
ANMO Albuquerque 43.65 325 P **P 09 16 58.0 +1.8**
ANMO PcP **PP 09 18 40.0 -0.6**
ANMO ScP **ScP 09 22 20.4 +0.7**
I49A Point Hope 43.68 355 IAmb IAmb 09 16 56.2
comp=Z,161nm,1.0s
DELO Deloro Mine 44.02 0 IAmb IAmb 09 17 00.1
comp=Z,249nm,1.5s
LBNH Lisbon 44.05 6 IAmb IAmb 09 17 01.5
comp=Z,90nm,0.9s
T25A Trinidad 44.16 329 IAmb IAmb 09 17 03.1
comp=Z,264nm,1.6s
I45A Fountain 44.19 351 IAmb IAmb 09 17 00.2
comp=Z,158nm,0.8s
SADO Sadowa 44.29 359 LR LR 09 37 26.7
comp=Z,57nm,18.4s,baz=212,slow=38
SADO Sadowa 44.29 359 IAmb IAmb 09 17 01.8
comp=Z,108nm,0.9s
FRNY Flat Rock 44.49 4 IAmb IAmb 09 17 04.7
comp=Z,159nm,0.9s
I42A Draeger Farm, 44.52 348 IAmb IAmb 09 17 02.2
comp=Z,131nm,0.7s
TUC Tucson 44.54 319 P **P 09 17 04.7 +1.5**
TUC IAmb IAmb 09 17 05.7
comp=Z,66nm,0.8s
TUC Tucson 44.54 319 P **P 09 17 04.7 +1.5**
TUC pmax pmax
comp=Z,66nm,0.9s
TUC Tucson 44.54 319 P **P 09 17 04.8 +1.5**
TUC pP **pP 09 17 36.1 +0.8**
WBO Williamsburg 44.56 3 IAmb IAmb 09 17 04.7
comp=Z,112nm,1.0s
GLMI Grayling 44.74 353 IAmb IAmb 09 17 04.7
comp=Z,172nm,1.1s
L34A Svendsen Farm, 44.74 340 IAmb IAmb 09 17 03.9
comp=Z,145nm,0.7s
I40A Norwalk 44.89 347 IAmb IAmb 09 17 05.2
comp=Z,73nm,0.9s
BUKO Buck Lake 44.97 358 IAmb IAmb 09 17 06.8
comp=Z,281nm,1.5s
EMMW East Machias 45.15 10 IAmb IAmb 09 17 10.0
comp=Z,145nm,1.5s
G62A West of Eustis 45.17 7 IAmb IAmb 09 17 10.7
comp=Z,125nm,1.0s
SDCO Great Sand Dun 45.19 329 IAmb IAmb 09 17 11.1
comp=Z,116nm,0.8s
PKME Peaks-Kenny Pk 45.39 8 IAmb IAmb 09 17 11.3
comp=Z,59nm,0.8s
GGN Saint George 45.66 11 IAmb IAmb 09 17 14.0
comp=Z,228nm,1.5s
214A Organ Pipe Nat 45.68 317 IAmb IAmb 09 17 15.0
comp=Z,110nm,0.9s
TRQ Mont Tremblant 45.81 3 IAmb IAmb 09 17 14.5
comp=Z,66nm,0.9s
Q24A Divide 45.93 330 IAmb IAmb 09 17 16.5
comp=Z,201nm,2.0s
COYC Coyhaique 45.96 174 IAmb IAmb 09 17 16.2
comp=Z,137nm,0.7s
COYC Coyhaique 45.96 174 P **P 09 17 15.1 +1.1**
COYC pP **pP 09 17 47.1 +0.5**
COYC ScP **ScP 09 22 27.1 -1.6**
F64A Sherman 46.12 9 IAmb IAmb 09 17 17.4
comp=Z,77nm,0.9s
E46A Sault Ste Mari 46.23 354 IAmb IAmb 09 17 15.9
comp=Z,79nm,0.9s
ECSD EROS Data Cent 46.40 341 IAmb IAmb 09 17 16.9
comp=Z,58nm,0.8s
SFX San Felipe 46.58 315 IAmb IAmb 09 17 21.8
comp=Z,91nm,1.2s
SPMN Marine on St. 46.67 345 IAmb IAmb 09 17 18.9
comp=Z,80nm,0.9s
E62A Clayton Lake 46.68 8 IAmb IAmb 09 17 22.4
comp=Z,168nm,1.1s
LMN Caledonia Moun 46.77 12 IAmb IAmb 09 17 21.7
comp=Z,60nm,0.7s
Y14A Wickenburg 47.01 319 IAmb IAmb 09 17 25.2
comp=Z,105nm,1.4s
PV01 Paradox Valley 47.12 327 IAmb IAmb 09 17 26.0
comp=Z,74nm,0.9s
GBN Guysborough 47.15 16 IAmb IAmb 09 17 25.1
comp=Z,122nm,1.4s
D62A Allapoint, All 47.20 8 IAmb IAmb 09 17 26.1
comp=Z,123nm,1.0s
PV15 Paradox Valley 47.22 327 IAmb IAmb 09 17 26.8
comp=Z,101nm,0.9s
PV03 Paradox Valley 47.35 326 IAmb IAmb 09 17 27.5
comp=Z,134nm,0.9s
PV07 Paradox Valley 47.38 327 IAmb IAmb 09 17 27.9
comp=Z,143nm,1.4s
PV11 David Mesa, Pa 47.40 326 IAmb IAmb 09 17 27.8
comp=Z,109nm,0.8s
PV16 Nyswonger Mesa 47.43 326 IAmb IAmb 09 17 28.1
comp=Z,105nm,1.0s
PV17 East Wray Mesa 47.43 326 IAmb IAmb 09 17 28.0
comp=Z,117nm,0.8s
PV19 Morning Glory 47.47 326 IAmb IAmb 09 17 28.3
comp=Z,150nm,0.9s
PV20 West Nyswonger 47.48 326 IAmb IAmb 09 17 28.4
comp=Z,143nm,1.0s
PV04 Paradox Valley 47.48 327 IAmb IAmb 09 17 28.6
comp=Z,118nm,1.3s
LMQ La Malbaie 47.49 7 IAmb IAmb 09 17 28.0
comp=Z,144nm,1.5s
PV14 Lion Creek, Pa 47.54 326 IAmb IAmb 09 17 28.8
comp=Z,72nm,1.1s
AY03 Cochrane 47.58 175 IAmb IAmb 09 17 29.5
comp=Z,63nm,0.7s
PV23 Carpenter Ridg 47.59 327 IAmb IAmb 09 17 29.2
comp=Z,71nm,0.9s
E38A The Farm, Brul 47.67 347 IAmb IAmb 09 17 26.9
comp=Z,89nm,0.8s
LDAQ Lac Daran 47.80 6 IAmb IAmb 09 17 30.5
comp=Z,118nm,1.1s
BATG Bathurst New B 47.88 11 IAmb IAmb 09 17 31.0
comp=Z,111nm,1.0s
U15A North Elm 48.12 322 IAmb IAmb 09 17 34.3
comp=Z,84nm,1.1s
HMU Henry Mountain 48.20 325 IAmb IAmb 09 17 34.5
comp=Z,93nm,0.9s
W13A Hualapai Mount 48.29 320 IAmb IAmb 09 17 35.6
comp=Z,70nm,1.1s
O20A White River Ci 48.39 329 IAmb IAmb 09 17 35.2
comp=Z,252nm,1.9s
BC3 Big Chuckawall 48.48 317 IAmb IAmb 09 17 36.5
comp=Z,118nm,1.7s
IRM Iron Mountain 48.56 318 P **P 09 17 36.1 +1.6**
IRM IAmb IAmb 09 17 37.2
comp=Z,77nm,1.1s
CBX Cerro Bola 48.57 315 P **P 09 17 36.0 +1.3**
CBX IAmb IAmb 09 17 37.1
comp=Z,72nm,1.0s
GO08 Villa O'Higgin 48.79 175 IAmb IAmb 09 17 39.1
comp=Z,66nm,0.8s
PKCU Pink Cliffs 48.80 323 IAmb IAmb 09 17 39.4
comp=Z,120nm,0.9s
KNB Kanab 48.83 322 IAmb IAmb 09 17 39.5
comp=Z,233nm,1.7s
SRU San Rafael Swe 48.89 326 IAmb IAmb 09 17 39.1
comp=Z,124nm,1.1s
DANC Danby, Needles 49.00 318 IAmb IAmb 09 17 40.6
comp=Z,107nm,1.0s
LCMT Little Creek M 49.09 322 IAmb IAmb 09 17 41.8
comp=Z,68nm,0.8s
P18A Preston Nutter 49.09 327 IAmb IAmb 09 17 40.9
comp=Z,44nm,0.8s
DPP Dos Picos Cty 49.14 315 IAmb IAmb 09 17 41.3
comp=Z,49nm,1.0s
PFO Pinyon Flats O 49.14 316 LR LR 09 37 20.7
comp=Z,142nm,19.0s,baz=122,slow=34
PFO Pinyon Flats O 49.14 316 P **P 09 17 40.3 +1.2**
PFO Pinyon Flats O 49.14 316 *i* P **P 09 17 40.2 +1.2**
PFO pmax pmax
comp=Z,18nm,1.1s
CPE Camp Elliot 49.19 315 IAmb IAmb 09 17 41.7
comp=Z,72nm,1.1s
P17A Butcher Ranch, 49.26 326 IAmb IAmb 09 17 41.9
comp=Z,73nm,0.9s
V12A Nelson 49.30 320 IAmb IAmb 09 17 42.7
comp=Z,84nm,1.1s
SZCU Shurtz Canyon 49.37 323 IAmb IAmb 09 17 43.2
comp=Z,103nm,0.8s
RDMU Red Mountain 49.40 328 IAmb IAmb 09 17 42.6
comp=Z,78nm,0.8s
K22A Casper 49.44 332 IAmb IAmb 09 17 42.8
comp=Z,69nm,0.6s
RSSD Black Hills 49.50 335 P **P 09 17 42.6 +0.9**
RSSD Black Hills 49.50 335 P **P 09 17 42.6 +0.9**
RSSD pmax pmax
comp=Z,211nm,0.8s
RSSD Black Hills 49.50 335 P **P 09 17 43.0 +1.3**
RSSD pP **pP 09 18 14.4 +0.1**
RSSD sP **sP 09 18 30.3 +0.2**
TCRU Three Creeks R 49.65 324 IAmb IAmb 09 17 45.4
comp=Z,117nm,0.8s
ICQ Pointe Anglais 49.85 9 IAmb IAmb 09 17 45.4
comp=Z,52nm,0.9s
BSUT Blindstream Ca 50.02 327 IAmb IAmb 09 17 47.9
comp=Z,50nm,0.9s
MPU Maple Canyon 50.13 326 IAmb IAmb 09 17 48.5
comp=Z,45nm,0.8s
AGMN Agassiz Nation 50.31 344 IAmb IAmb 09 17 47.3
comp=Z,109nm,1.1s
GSC Goldstone, Bar 50.34 318 IAmb IAmb 09 17 50.7
comp=Z,67nm,0.8s
PSUT Pine Spring 50.43 323 IAmb IAmb 09 17 51.5
comp=Z,70nm,1.1s
MWC Mount Wilson 50.59 316 IAmb IAmb 09 17 52.8
comp=Z,133nm,1.6s
PASC Pasadena Art C 50.65 316 IAmb IAmb 09 17 53.1
comp=Z,157nm,1.6s
GWY Greenwater Val 50.76 319 IAmb IAmb 09 17 53.6
comp=Z,94nm,1.4s
QSM Queen of Sheba 50.76 319 IAmb IAmb 09 17 53.6
comp=Z,84nm,1.3s
TCUT Toone Canyon 50.77 327 IAmb IAmb 09 17 53.2
comp=Z,88nm,0.6s
CCCA Chr Cany lake 50.84 318 IAmb IAmb 09 17 54.5
comp=Z,72nm,0.8s
DUG Dugway, Tooele 50.92 325 IAmb IAmb 09 17 54.8
comp=Z,252nm,1.8s
TPNV Topopah Spring 50.94 320 IAmb IAmb 09 17 55.6
comp=Z,56nm,0.9s
PDAR Pinedale Array 50.99 330 P **P 09 17 53.0 0.0**
comp=Z,17nm,0.6s,baz=128,slow=8.9,SNR=147
PDAR PcP **PcP 09 19 06.3 -0.9**
comp=Z,6.7nm,1.0s,baz=155,slow=3.0,SNR=2.1
PDAR LR LR 09 40 59.7
comp=Z,82nm,21.2s,baz=129,slow=38
comp=Z,17nm,0.6s
BW06 Boulder Array 50.99 330 IAmb IAmb 09 17 54.1
comp=Z,139nm,1.8s
LRMC Laurel Mtn Rad 51.03 318 IAmb IAmb 09 17 56.0
comp=Z,81nm,1.2s
S11A Rachel 51.04 321 IAmb IAmb 09 17 56.4
comp=Z,43nm,0.9s
FURC Furnace Creek, 51.05 319 IAmb IAmb 09 17 56.1
comp=Z,122nm,1.0s
TPO Tropico Hills 51.06 317 IAmb IAmb 09 17 55.8
comp=Z,74nm,1.0s
WCT Wildcat Mounta 51.09 320 IAmb IAmb 09 17 56.6
comp=Z,61nm,1.0s
HWUT Hardware Ranch 51.20 328 IAmb IAmb 09 17 55.4
comp=Z,38nm,0.7s
SPUT South Promonto 51.47 327 IAmb IAmb 09 17 58.4
comp=Z,120nm,1.0s
BGU Big Grassy Mou 51.53 326 IAmb IAmb 09 17 58.9
comp=Z,86nm,0.9s
GO09 Cerro Castillo 51.59 176 IAmb IAmb 09 18 00.0
comp=Z,72nm,0.8s
GRAC Grapevine Rang 51.69 319 IAmb IAmb 09 18 01.1
comp=Z,100nm,1.0s
AHID Auburn Hatcher 51.77 329 IAmb IAmb 09 17 60.0
comp=Z,40nm,0.8s
DRLN Deer Lake 51.78 17 IAmb IAmb 09 17 59.8
comp=Z,99nm,0.9s
GMN Gold Mountain 51.80 320 IAmb IAmb 09 18 01.6
comp=Z,87nm,0.9s
CWC Cottonwood Cre 51.84 318 IAmb IAmb 09 18 01.9
comp=Z,46nm,1.0s
SNOW Snow King Moun 52.10 330 IAmb IAmb 09 18 03.0
comp=Z,121nm,1.3s
ULM Lac du Bonnet 52.10 345 P **P 09 17 59.3 -1.5**
comp=Z,84nm,0.6s,baz=150,slow=8.1,SNR=193
ULM PcP **PcP 09 19 10.3 -0.5**
comp=Z,11nm,0.6s,baz=138,slow=6.9,SNR=4.0
ULM LR LR 09 40 35.1
comp=Z,99nm,20.3s,baz=156,slow=36
comp=Z,84nm,0.6s
ULM Lac du Bonnet 52.10 345 IAmb IAmb 09 18 00.2
comp=Z,92nm,0.7s
ULM Lac du Bonnet 52.10 345 *d* iP **P 09 17 59.2 -1.6**
LOHW Long Hollow 52.13 330 IAmb IAmb 09 18 03.0
comp=Z,76nm,1.2s
VES Vestal, Richgr 52.18 317 IAmb IAmb 09 18 04.4
comp=Z,102nm,0.9s
DSP Deep Springs 52.30 319 IAmb IAmb 09 18 05.4
comp=Z,82nm,1.0s
LAO LASA Array 52.48 336 IAmb IAmb 09 18 04.4
comp=Z,42nm,0.8s
FLWY Flagg Ranch 52.52 330 IAmb IAmb 09 18 06.2
comp=Z,132nm,1.1s
RLMT Red Lodge 52.60 332 IAmb IAmb 09 18 06.1
comp=Z,63nm,0.7s
ELK Elko 52.67 324 LR LR 09 42 47.7
comp=Z,88nm,18.3s,baz=88,slow=38
ELK Elko 52.67 324 IAmb IAmb 09 18 07.6
comp=Z,51nm,1.1s
YFT Old Faithful 52.86 331 IAmb IAmb 09 18 09.7
comp=Z,57nm,0.9s
YNE Yellowstone No 52.87 332 IAmb IAmb 09 18 09.3
comp=Z,37nm,0.8s
YNR Norris Junctio 52.97 331 IAmb IAmb 09 18 10.1
comp=Z,47nm,0.9s
NV11 Mina Array Sit 53.03 320 IAmb IAmb 09 18 10.7
comp=Z,81nm,0.8s
NVAR Mina Array Bea 53.12 320 P **P 09 18 10.3 +1.5**
comp=Z,72nm,0.8s,baz=108,slow=5.7,SNR=428
NVAR LR LR 09 42 39.1
comp=Z,81nm,19.2s,baz=121,slow=38
comp=Z,72nm,0.8s
LHV Little Huntoon 53.15 320 IAmb IAmb 09 18 11.9
comp=Z,101nm,0.9s
MDPB Devils Postpil 53.17 319 IAmb IAmb 09 18 11.7
comp=Z,70nm,1.0s
YHB Horse Butte 53.25 331 IAmb IAmb 09 18 12.0
comp=Z,117nm,1.4s
PMPB Monarch Peak 53.55 317 IAmb IAmb 09 18 14.0
comp=Z,61nm,0.9s
BBGB Big Mountain B 53.91 317 IAmb IAmb 09 18 24.9
comp=Z,63nm,0.8s
BCYI Bear Canyon 54.05 329 IAmb IAmb 09 18 17.6
comp=Z,47nm,0.7s
HLID Hailey 54.07 328 IAmb IAmb 09 18 17.5
comp=Z,54nm,0.8s
PNTR Pine Nut 54.33 320 IAmb IAmb 09 18 21.6
comp=Z,38nm,0.7s
DLMT Dillon 54.38 330 IAmb IAmb 09 18 19.6
comp=Z,49nm,0.9s
EFI East Falkland 54.40 165 P **P 09 18 18.6 +1.1**
EFI IAmb IAmb 09 18 19.6
comp=Z,102nm,0.9s
EFI East Falkland 54.40 165 *c* iP **P 09 18 18.6 +1.1**
EFI pmax pmax
comp=Z,77nm,0.6s
PAHR Pah Rah Range 54.55 321 IAmb IAmb 09 18 21.6
comp=Z,48nm,0.9s
MHC Mount Hamilton 54.72 317 IAmb IAmb 09 18 22.8
comp=Z,53nm,0.8s
MPK Martis Peak 54.72 320 IAmb IAmb 09 18 23.3
comp=Z,118nm,1.1s
MFID Camas Ranch 54.74 327 IAmb IAmb 09 18 22.6
comp=Z,125nm,1.0s
EGMT Eagleton 55.02 334 IAmb IAmb 09 18 23.6
comp=Z,68nm,0.8s
SCHQ Schefferville 55.08 8 P **P 09 18 22.0 -0.4**
comp=Z,40nm,0.9s,baz=196,slow=5.4,SNR=60
SCHQ PcP **PcP 09 19 21.9 -0.1**
comp=Z,9.0nm,0.7s,baz=250,slow=3.5,SNR=3.6
SCHQ LR LR 09 43 53.9

comp=Z,33nm,18.8s,baz=183,slow=38
comp=Z,40nm,0.9s
SCHQ Schefferville 55.08 8 IAmb IAmb 09 18 23.6
comp=Z,131nm,1.4s
JRSC Jasper Ridge 55.15 317 IAmb IAmb 09 18 25.7
comp=Z,53nm,1.0s
BEKR Beckworth 55.26 321 IAmb IAmb 09 18 26.5
comp=Z,49nm,0.9s
CVS Carmenet Viney 55.79 318 IAmb IAmb 09 18 30.0
comp=Z,48nm,0.9s
SUTB Sutter Butte 55.82 319 IAmb IAmb 09 18 30.1
comp=Z,59nm,0.8s
FARB Farallon Islan 55.83 317 IAmb IAmb 09 18 30.1
comp=Z,70nm,0.8s
MNRC McLaughlin Min 56.06 319 IAmb IAmb 09 18 32.4
comp=Z,64nm,1.1s
MSO Missoula 56.08 331 IAmb IAmb 09 18 31.6
comp=Z,77nm,1.1s
J08A Circle Bar Ran 56.19 325 IAmb IAmb 09 18 32.8
comp=Z,67nm,0.9s
O03E Paynes Creek 56.41 320 IAmb IAmb 09 18 33.5
comp=Z,72nm,0.8s
O02D Mt. Diablo Mer 56.98 320 IAmb IAmb 09 18 37.2
comp=Z,38nm,0.8s
F10A Beach Ranch, E 57.17 328 IAmb IAmb 09 18 41.5
comp=Z,33nm,0.8s
N02D Trinity Center 57.36 321 IAmb IAmb 09 18 40.5
comp=Z,36nm,0.8s
G08A Pilot Rock 57.66 327 IAmb IAmb 09 18 43.0
comp=Z,102nm,1.0s
LNOR Lincton Mounta 57.67 327 IAmb IAmb 09 18 42.5
comp=Z,67nm,0.9s
FFC Flin Flon 57.77 344 P **P** **09 18 41.0 -0.4**
FFC Flin Flon 57.77 344 P **P** **09 18 41.0 -0.4**
FFC pmax pmax
comp=Z,99nm,0.8s
FFC Flin Flon 57.77 344 P **P** **09 18 41.1 -0.4**
YBH Yreka Blue Hor 57.78 321 IAmb IAmb 09 18 42.5
comp=Z,51nm,0.8s
KMPM Mount Pierce 57.98 319 IAmb IAmb 09 18 46.0
comp=Z,88nm,0.9s
E09A Wood Farm, Sta 58.01 328 IAmb IAmb 09 18 44.9
comp=Z,39nm,0.9s
KUQ Kuujjuaa 58.11 6 IAmb IAmb 09 18 44.0
comp=Z,166nm,1.8s
YPT Yellepit 58.14 327 IAmb IAmb 09 18 48.4
comp=Z,47nm,0.9s
BBOR Butler Butte 58.40 322 IAmb IAmb 09 18 48.5
comp=Z,42nm,0.8s
L02F Cave Junction 58.53 321 IAmb IAmb 09 18 48.7
comp=Z,45nm,0.8s
NEW Newport 58.63 330 LR LR 09 45 11.6
comp=Z,97nm,21.9s,baz=130,slow=37
NEW Newport 58.63 330 IAmb IAmb 09 18 48.9
comp=Z,53nm,1.0s
I04A Tendick Farm, 58.75 323 IAmb IAmb 09 18 49.8
comp=Z,60nm,0.9s
D08A Wollman Farm, 58.76 328 IAmb IAmb 09 18 50.2
comp=Z,35nm,1.0s
C09A Chrisman Ranch 58.91 329 IAmb IAmb 09 18 51.5
comp=Z,79nm,1.6s
E07A Sunnyside 58.95 327 IAmb IAmb 09 18 51.7
comp=Z,35nm,0.7s
H04A Detroit Lake 59.13 324 IAmb IAmb 09 18 52.7
comp=Z,80nm,0.9s
MXC Moxie City 59.19 327 IAmb IAmb 09 18 54.0
comp=Z,66nm,1.0s
I03D Drain, OR 59.26 323 IAmb IAmb 09 18 54.5
comp=Z,68nm,1.0s
EPH Ephrata 59.31 328 IAmb IAmb 09 18 55.6
comp=Z,62nm,1.2s
B08A Colville Reser 59.81 329 IAmb IAmb 09 18 56.8
comp=Z,31nm,0.8s
LTY Liberty 59.82 328 IAmb IAmb 09 18 57.8
comp=Z,45nm,0.8s
LON Longmire 60.13 327 IAmb IAmb 09 18 59.6
comp=Z,61nm,0.8s
GNW Green Mountain 61.17 327 P **P** **09 19 05.3 +0.4**
GNW IAmb IAmb 09 19 06.3
comp=Z,72nm,0.9s
NLWA Neilton Lookou 61.65 326 IAmb IAmb 09 19 10.8
comp=Z,70nm,0.9s
B04A Port Angeles 61.83 327 IAmb IAmb 09 19 11.8
comp=Z,72nm,0.8s
LLLB Lillooet 62.52 330 IAmb IAmb 09 19 15.8
comp=Z,58nm,1.1s
FRB Frobisher Bay 63.66 5 LR LR 09 48 35.7
comp=Z,76nm,19.5s,baz=230,slow=37
CBB Campbell River 63.97 328 P **P** **09 19 25.1 +1.6**
CBB IAmb IAmb 09 19 26.1
comp=Z,60nm,1.0s
HOPE Hope Point 64.12 155 P **P** **09 19 24.7 +0.4**
HOPE Hope Point 64.12 155 P **P** **09 19 24.7 +0.4**
HOPE pmax pmax
comp=Z,170nm,1.1s
HOPE Hope Point 64.12 155 P **P** **09 19 25.2 +0.8**
HOPE pP **pP** **09 19 59.3 +0.9**
HOPE sP **sP** **09 20 13.8 0.0**
IVI Ivigtut 64.81 15 *i* P **P** **09 19 28.7 +0.1**
IVI IAmb IAmb 09 19 29.2
comp=Z,56nm,0.9s
IVI Ivigtut 64.81 15 P **P** **09 19 28.8 +0.2**
IVI pP **pP** **09 20 03.3 +0.1**
BLKN Baker Lake 65.25 351 IAmb IAmb 09 19 31.3
comp=Z,97nm,1.0s
NRS Narsarsuaq 65.52 17 P **P** **09 19 33.6 +0.4**
NRS IAmb IAmb 09 19 34.0
comp=Z,46nm,0.8s
NRS Narsarsuaq 65.52 17 P **P** **09 19 33.6 +0.4**
NRS pmax pmax
comp=Z,47nm,0.8s
NRS Narsarsuaq 65.52 17 *i* P **P** **09 19 33.3 0.0**
NRS IAmb IAmb 09 19 34.2
comp=Z,45nm,0.8s
NUUK Nuuk 66.53 12 *i* P **P** **09 19 39.7 +0.1**
NUUK IAmb IAmb 09 19 40.8
comp=Z,68nm,1.0s
BBB Bella Bella 66.61 329 LR LR 09 50 13.1
comp=Z,42nm,20.9s,baz=190,slow=37
YKAW1 Yellowknife Wh 67.85 343 IAmb IAmb 09 19 48.2
comp=Z,43nm,0.7s
YKA Yellowknife Ar 67.90 343 P **P** **09 19 47.5 -0.8**
comp=Z,19nm,0.7s,baz=142,slow=5.0,SNR=363
YKA pP **pP** **09 20 23.9 +0.5**
comp=Z,5.2nm,1.0s,baz=137,slow=5.6,SNR=2.4
YKA LR LR 09 53 36.4
comp=Z,70nm,18.1s,baz=356,slow=39
comp=Z,19nm,0.7s
YKAW3 Yellowknife Wh 67.95 343 IAmb IAmb 09 19 49.0
comp=Z,43nm,0.8s
SFJD Kangerlussuaq 69.23 11 P **P** **09 19 55.9 -0.5**
SFJD Kangerlussuaq 69.23 11 P **P** **09 19 55.9 -0.5**
SFJD pmax pmax
comp=Z,43nm,1.0s
SFJD Kangerlussuaq 69.23 11 *i* P **P** **09 19 55.5 -0.9**
SFJD IAmb IAmb 09 19 56.6
comp=Z,43nm,1.0s
SFJD Kangerlussuaq 69.23 11 P **P** **09 19 55.9 -0.5**
SFJD pP **pP** **09 20 31.3 -0.2**
KOTAN Kotaneelee Air 69.48 337 P **P** **09 19 58.7 +0.5**
baz=130
U35K Hyder 69.58 332 P **P** **09 19 59.6 +0.8**
baz=122
T35M Bob Quinn 70.26 333 P **P** **09 20 04.1 +1.1**
baz=123
CRAG Craig 70.85 330 P **P** **09 20 07.6 +1.0**
baz=119
WRAK Wrangell Islan 70.95 331 P **P** **09 20 08.3 +1.2**
baz=120
DLBC Dease Lake 70.95 334 LR LR 09 52 23.0
comp=Z,56nm,22.0s,baz=108,slow=37
DLBC Dease Lake 70.95 334 P **P** **09 20 08.4 +1.1**
baz=123,SNR=13
ILULI Ilulissat 71.09 10 *i* P **P** **09 20 07.7 -0.1**
ILULI IAmb IAmb 09 20 08.3
comp=Z,118nm,1.1s
S34M Telegraph Cree 71.16 333 P **P** **09 20 09.3 +0.9**
baz=122,SNR=11
U33K Whale Pass 71.17 331 P **P** **09 20 09.4 +0.9**
baz=120
ANGG Ammassalik, Gr 71.20 16 *i* P **P** **09 20 07.5 -1.0**
ANGG IAmb IAmb 09 20 08.4
comp=Z,41nm,0.8s
WRGLY Wrigley 71.28 340 IAmb IAmb 09 20 10.1
comp=Z,50nm,0.7s
WRGLY Wrigley 71.28 340 P **P** **09 20 09.2 +0.2**
baz=131,SNR=32

WTLY Watson Lake, Y 71.37 336 P **P** **09 20 10.3 +0.6**
baz=125,SNR=5.8
T33K Petersburg 71.44 332 P **P** **09 20 10.8 +0.7**
baz=120
SAQQ Saqqaq 71.66 9 *i* P **P** **09 20 10.9 -0.2**
SAQQ IAmb IAmb 09 20 11.8
comp=Z,73nm,1.0s
R33M Jennings River 71.88 334 P **P** **09 20 13.7 +0.7**
baz=123
NIAQ Niaqornat 72.11 8 *i* P **P** **09 20 14.7 +0.8**
Q32M Nakina River 72.22 334 IAmb IAmb 09 20 17.1
comp=Z,78nm,1.3s
Q32M Nakina River 72.22 334 P **P** **09 20 15.9 +0.9**
baz=121,SNR=7.7
SAATT Saattut 72.43 9 *i* P **P** **09 20 15.7 -0.1**
SAATT IAmb IAmb 09 20 16.5
comp=Z,66nm,1.0s
S32K Killisnoo 72.53 332 P **P** **09 20 17.1 +0.6**
baz=119
SIT Sitka 72.69 331 P **P** **09 20 18.8 +1.2**
baz=118
NUUG Nuugaatsiaq 72.85 8 *i* P **P** **09 20 18.6 +0.4**
NUUG IAmb IAmb 09 20 18.9
comp=Z,30nm,0.8s
R32K Eaglecrest 72.89 332 P **P** **09 20 19.8 +1.0**
baz=119
DBIC Dimbokro 72.98 83 P **P** **09 20 19.6 -0.5**
comp=Z,65nm,0.8s,baz=289,slow=4.6,SNR=83
DBIC LR LR 09 50 01.3
comp=Z,71nm,19.5s,baz=271,slow=34
comp=Z,65nm,0.8s
DBIC Dimbokro 72.98 83 IAmb IAmb 09 20 20.8
comp=Z,69nm,0.8s
DBIC Dimbokro 72.98 83 P **P** **09 20 19.7 -0.5**
P33M Teslin, Yukon 73.11 335 IAmb IAmb 09 20 21.9
comp=Z,67nm,1.0s
P33M Teslin, Yukon 73.11 335 P **P** **09 20 20.9 +0.8**
baz=121,SNR=25
P32M Atlin 73.18 334 P **P** **09 20 21.2 +0.7**
baz=120,SNR=6.5
BESE Bessie Mountai 73.20 333 P **P** **09 20 21.9 +1.3**
BESE IAmb IAmb 09 20 22.8
comp=Z,112nm,1.4s
MORF Marmelete 73.28 51 *e*P **P** **09 20 22.9 +1.4**
MORF IAmb IAmb 09 20 24.5
comp=Z,79nm,2.1s
MORF Marmelete 73.28 51 *e*P **P** **09 20 23.0 +1.4**
S31K Pelican 73.55 332 P **P** **09 20 23.6 +1.0**
baz=117
UPNV Upernavik 73.62 7 *i* P **P** **09 20 22.4 -0.4**
UPNV IAmb IAmb 09 20 22.8
comp=Z,18nm,0.8s
MOE Montemor 73.79 50 *e*P **P** **09 20 25.6 +1.2**
PCVE Castro Verde 73.83 51 *e*P **P** **09 20 25.7 +1.0**
PMTG Montargil 74.00 49 *e*P **P** **09 20 26.2 +0.5**
PCAS Casmilo, Conde 74.02 48 *e*P **P** **09 20 26.6 +0.8**
WHY Whitehorse 74.22 335 P **P** **09 20 26.9 +0.2**
baz=119,SNR=6.6
PESTR Estremoz 74.44 50 *e*P **P** **09 20 27.5 -0.7**
PVIS Viseu 74.62 48 *e*P **P** **09 20 29.9 +0.6**
PCBR Castelo Branco 74.74 49 *e*P **P** **09 20 30.9 +1.0**
M31M Drury Creek, Y 74.78 336 P **P** **09 20 30.7 +1.0**
baz=120,SNR=19
O30N Mendenhall 74.79 334 IAmb IAmb 09 20 31.9
comp=Z,62nm,1.0s
O30N Mendenhall 74.79 334 P **P** **09 20 30.9 +1.1**
baz=118,SNR=16
P30M Million Dollar 74.87 334 P **P** **09 20 31.5 +1.2**
baz=117
RES Resolute Bay 74.98 355 LR LR 09 55 31.1
comp=Z,48nm,20.2s,baz=76,slow=37
N31M Braeburn, Yuko 75.00 335 IAmb IAmb 09 20 32.9
comp=Z,74nm,1.0s
N31M Braeburn, Yuko 75.00 335 P **P** **09 20 32.0 +1.0**
baz=119,SNR=19
KULLO Kullorsuaq 75.19 6 *i* P **P** **09 20 31.6 -0.2**
KULLO IAmb IAmb 09 20 32.5
comp=Z,52nm,0.9s
HYT Haines Junctio 75.43 334 P **P** **09 20 35.0 +1.4**
baz=117,SNR=7.8
N30M Aishikik Lake 75.54 335 IAmb IAmb 09 20 36.5
comp=Z,70nm,0.9s
N30M Aishikik Lake 75.54 335 P **P** **09 20 35.5 +1.3**
baz=117
O29M Mount Kennedy 75.68 333 P **P** **09 20 35.9 +0.9**
baz=116
YUK6 Outpost Mounta 75.86 334 P **P** **09 20 37.6 +1.4**
baz=116,SNR=17
M30M Minto, Yukon 75.94 336 P **P** **09 20 37.0 +0.6**
baz=118,SNR=28
BORG Borgarnes 75.99 22 LR LR 09 52 42.9
comp=Z,25nm,19.3s,baz=188,slow=34
MAYO Mayo, Yukon 76.07 337 P **P** **09 20 38.1 +1.1**
baz=119,SNR=5.2
YUK4 Talbot Arm 76.16 334 P **P** **09 20 39.1 +1.2**
baz=116,SNR=18
SUMG Summit 76.22 11 P **P** **09 20 38.6 +0.4**
SUMG Summit 76.22 11 P **P** **09 20 38.6 +0.4**
SUMG pmax pmax
comp=Z,155nm,0.7s
SUMG Summit 76.22 11 *i* P **P** **09 20 38.5 +0.4**
SUMG IAmb IAmb 09 20 39.6
comp=Z,162nm,0.8s
TULEG Thule 76.31 2 *i* P **P** **09 20 38.0 -0.1**
TULEG IAmb IAmb 09 20 38.9
comp=Z,48nm,0.9s
PINM Pinnacle 76.35 333 P **P** **09 20 39.7 +0.9**
baz=114
M29M Somme Creek 76.57 335 IAmb IAmb 09 20 42.0
comp=Z,55nm,0.9s
M29M Somme Creek 76.57 335 P **P** **09 20 40.9 +0.9**
baz=116
H31M Peel River 76.60 339 P **P** **09 20 40.6 +0.7**
baz=121
O28M Mount Upton 76.60 333 P **P** **09 20 41.3 +0.9**
baz=114
YUK8 Steele Glacier 76.62 334 P **P** **09 20 41.6 +1.1**
baz=115,SNR=13
J30M Hart River 76.71 338 P **P** **09 20 41.7 +0.9**
baz=119
L29M L29M 76.73 336 IAmb IAmb 09 20 42.5
comp=Z,75nm,0.8s
L29M L29M 76.73 336 P **P** **09 20 41.5 +0.7**
baz=117
K29M Barlow Dome 76.82 337 P **P** **09 20 41.8 +0.3**
baz=117
I30M Mount Dempster 77.04 338 P **P** **09 20 43.3 +0.6**
baz=119
YUK3 Moose Creek 77.13 334 P **P** **09 20 44.0 +0.7**
baz=114,SNR=26
MESA MESA 77.16 333 P **P** **09 20 44.4 +1.0**
baz=113
CTG Chitna Glacier 77.19 333 P **P** **09 20 44.7 +1.1**
baz=113,SNR=9.8
F31M Tsiigehtchic 77.25 341 P **P** **09 20 43.7 +0.2**
baz=122,SNR=28
ESDC Sonseca Array 77.36 49 P **P** **09 20 45.2 +0.4**
comp=Z,3.6nm,0.6s,baz=263,slow=5.9,SNR=31
ESDC pP **pP** **09 21 20.9 +0.2**
comp=Z,3.1nm,1.1s,baz=279,slow=6.2,SNR=2.5
comp=Z,3.6nm,0.6s
ESDC Sonseca Array 77.36 49 P **P** **09 20 45.6 +0.8**
J29N Klondike Camp 77.37 337 P **P** **09 20 44.3 -0.1**
baz=117
BVCY Beaver Creek 77.57 335 P **P** **09 20 46.5 +1.0**
baz=114,SNR=19
A36M Sachs Harbour 77.57 346 IAmb IAmb 09 20 45.5
comp=Z,71nm,0.8s
A36M Sachs Harbour 77.57 346 P **P** **09 20 44.5 -0.7**
baz=131
ACRG Accra 77.58 84 IAmb IAmb 09 20 46.9
comp=Z,60nm,0.8s
INK Inuvik 77.64 342 LR LR 09 57 23.1
comp=Z,103nm,20.1s,baz=335,slow=37
INK Inuvik 77.64 342 P **P** **09 20 45.9 +0.2**
baz=122
EPYK Eagle Plains 77.72 339 P **P** **09 20 46.4 +0.2**
baz=119,SNR=19
I29M Ogilvie Camp, 77.82 338 IAmb IAmb 09 20 48.4
comp=Z,151nm,2.0s
I29M Ogilvie Camp, 77.82 338 P **P** **09 20 47.1 +0.3**
baz=117
G30M tAoh Zraii Nji 77.84 340 P **P** **09 20 46.9 0.0**
baz=119
CRQE Cirque 77.90 333 P **P** **09 20 48.3 +0.8**
baz=112,SNR=8.4
M27K Edge Creek, AK 77.98 335 P **P** **09 20 49.0 +1.1**
baz=113,SNR=19
F30M Barrier River 78.01 341 P **P** **09 20 48.2 +0.4**
baz=120
BERG Berg Lake 78.05 332 IAmb IAmb 09 20 50.4
comp=Z,50nm,0.8s
MCARA McCarthy VSAT 78.11 333 IAmb IAmb 09 20 50.7
comp=Z,63nm,1.0s
MCARA McCarthy VSAT 78.11 333 P **P** **09 20 49.6 +1.1**
baz=112,SNR=14
KAIM Kayak Island 78.22 332 P **P** **09 20 50.7 +1.6**
baz=110
L27K Beaver Creek, 78.24 335 IAmb IAmb 09 20 51.3
comp=Z,62nm,1.1s
L27K Beaver Creek, 78.24 335 P **P** **09 20 50.1 +1.0**
baz=113,SNR=36
H29M Whitestone 78.24 339 IAmb IAmb 09 20 50.7
comp=Z,72nm,1.1s
H29M Whitestone 78.24 339 P **P** **09 20 49.6 +0.5**
baz=117,SNR=29
NEEM North Greenlan 78.42 6 *i* P **P** **09 20 50.7 +0.4**
NEEM IAmb IAmb 09 20 51.6
comp=Z,88nm,0.9s
G29M Pine Creek 78.43 340 P **P** **09 20 50.6 +0.4**
baz=118,SNR=21
I28M Miner Creek 78.47 338 P **P** **09 20 50.9 +0.4**
baz=116
M26K Nabesna, AK 78.48 334 P **P** **09 20 51.0 +0.5**
baz=112
BMRM Bremner River 78.67 333 IAmb IAmb 09 20 53.4
comp=Z,51nm,0.9s
BMRM Bremner River 78.67 333 P **P** **09 20 52.4 +0.7**
baz=110,SNR=10
K27K Chicken 78.72 336 IAmb IAmb 09 20 54.1
comp=Z,93nm,1.4s
L26K Log Cabin Wild 78.86 335 P **P** **09 20 53.3 +0.7**
baz=112,SNR=16
N25K Chitina, Valde 78.89 333 P **P** **09 20 53.9 +1.0**
baz=110,SNR=5.1
Q23K Middleton Isla 78.98 331 P **P** **09 20 54.0 +0.8**
baz=108
EYAK Cordova Ski Ar 79.06 332 P **P** **09 20 54.7 +1.1**
baz=109
E29M Blow River 79.08 341 P **P** **09 20 53.9 +0.2**
baz=118,SNR=37
I27K Kandik River 79.17 338 P **P** **09 20 54.6 +0.4**
baz=114,SNR=19
F28M Old Crow 79.39 340 P **P** **09 20 55.4 0.0**
baz=116,SNR=20
H27K Steamboat Moun 79.40 338 P **P** **09 20 55.5 +0.1**
baz=114
KLU Klutina 79.45 333 P **P** **09 20 56.3 +0.4**
baz=109,SNR=7.7
SCRK Sand Creek 79.48 336 P **P** **09 20 56.4 +0.3**
baz=111,SNR=26
I26K Coal Creek Min 79.65 337 P **P** **09 20 56.7 -0.1**
baz=112
TORD Torodi Ar. Bea 79.66 77 P **P** **09 20 57.0 -0.8**
comp=Z,13nm,0.8s,baz=281,slow=6.3,SNR=58
comp=Z,13nm,0.8s
TORD Torodi Ar. Bea 79.66 77 P **P** **09 20 57.0 -0.8**
P23K Montague Islan 79.67 331 P **P** **09 20 56.9 0.0**
baz=108
G27K Doyon Strip 79.68 339 P **P** **09 20 56.6 -0.3**
baz=114
E28M Babbage River 79.72 341 P **P** **09 20 56.8 -0.3**
baz=116
PAX Paxson 79.75 335 P **P** **09 20 57.3 -0.1**
baz=110,SNR=19
RIDG Independent Ri 79.75 335 P **P** **09 20 57.8 +0.4**
baz=111,SNR=14
M24K Tolsona, Glenn 79.77 334 IAmb IAmb 09 20 59.3
comp=Z,62nm,1.0s
M24K Tolsona, Glenn 79.77 334 P **P** **09 20 58.3 +0.7**
baz=109,SNR=11
D28M Stokes Point 79.79 342 P **P** **09 20 57.8 +0.4**
baz=117
K24K Donnelly Dome 80.16 335 P **P** **09 20 59.8 +0.2**
baz=110,SNR=12
SCM Sheep Creek Mo 80.19 333 P **P** **09 21 00.1 +0.2**
baz=108,SNR=9.9
E27K Coleen River 80.23 340 P **P** **09 21 00.1 +0.2**
baz=114,SNR=30
J25K Salcha River, 80.27 336 IAmb IAmb 09 21 01.5
comp=Z,114nm,1.6s
J25K Salcha River, 80.27 336 P **P** **09 21 00.5 +0.2**
baz=110
M23K Glacier View 80.36 333 P **P** **09 21 00.4 -0.3**
baz=108,SNR=6.8
D27M Malcolm River 80.46 341 P **P** **09 21 01.3 +0.1**
baz=115
G26K Porcupine Rive 80.51 339 P **P** **09 21 01.4 0.0**
baz=112,SNR=13
KNK Knik Glacier 80.58 333 P **P** **09 21 02.1 +0.2**
baz=107
DHY Denali Highway 80.60 334 P **P** **09 21 01.9 -0.2**
baz=108
WAT6 Susitna Watana 80.61 334 P **P** **09 21 02.2 +0.1**
baz=108,SNR=26
SML Sawmill 80.64 333 P **P** **09 21 02.1 -0.2**
baz=107,SNR=7.5
PRP Porcupine Dome 80.65 337 P **P** **09 21 02.5 +0.2**
baz=110,SNR=11
SEW Seward 80.68 331 P **P** **09 21 02.0 -0.4**
baz=106
HDA Harding Lake 80.85 336 P **P** **09 21 03.0 -0.2**
baz=109,SNR=33
FYU Fort Yukon 80.90 338 IAmb IAmb 09 21 05.1
comp=Z,124nm,1.6s
O22K Cooper Landing 80.91 332 P **P** **09 21 03.5 -0.1**
baz=106
F26K Sheenjek River 80.92 339 P **P** **09 21 04.0 +0.4**
baz=112,SNR=18
ILAR Eielson Array 80.94 336 P **P** **09 21 03.2 -0.4**
comp=Z,13nm,0.7s,baz=106,slow=4.4,SNR=142
ILAR pP **pP** **09 21 40.3 +0.3**
comp=Z,3.0nm,0.9s,baz=120,slow=4.3,SNR=2.5
ILAR PP **PP** **09 24 08.3 -1.8**
comp=Z,6.3nm,0.9s,baz=104,slow=6.6,SNR=17
comp=Z,13nm,0.7s
PMR Palmer 80.94 333 P **P** **09 21 03.5 -0.3**
baz=106
EKA Eskdalemuir Ar 81.02 34 P **P** **09 21 04.1 -0.2**
comp=Z,5.5nm,0.6s,baz=260,slow=4.0,SNR=18
EKA pP **pP** **09 21 40.8 +0.5**
comp=Z,14nm,1.1s,baz=246,slow=5.0,SNR=4.7
comp=Z,5.5nm,0.6s
WAT1 Susitna Watana 81.04 334 P **P** **09 21 04.2 -0.2**
baz=107
RC01 Rabbit Creek A 81.08 332 P **P** **09 21 04.5 0.0**
baz=106
BRSE Bradley Lake S 81.21 331 P **P** **09 21 05.1 -0.2**
baz=105
POKR Poker Plat Res 81.27 336 P **P** **09 21 05.5 0.0**
baz=108
G25K Bearman Lake 81.30 338 P **P** **09 21 06.5 +1.0**
baz=110
DBG Daneborg 81.30 13 *i* P **P** **09 21 06.1 +0.7**
DBG IAmb IAmb 09 21 07.1
comp=Z,20nm,0.8s
COLA College 81.36 336 P **P** **09 21 06.1 +0.2**
COLA College 81.36 336 *d* P **P** **09 21 05.6 -0.3**
COLA pmax pmax
comp=Z,23nm,0.9s
COLA College 81.36 336 P **P** **09 21 05.8 -0.1**
baz=108
COLA College 81.36 336 P **P** **09 21 06.4 +0.5**
COLA pP **pP** **09 21 41.3 -0.9**
COLA sP **sP** **09 21 57.4 -0.1**
F25K Christian Rive 81.42 339 P **P** **09 21 06.8 +0.6**
baz=110,SNR=16
BELA Belgrano 2 81.43 172 P **P** **09 21 06.2 +0.1**
BELA IAmb IAmb 09 21 07.7
comp=Z,63nm,1.1s
M22K Willow 81.44 333 P **P** **09 21 06.4 0.0**
baz=106
MCK McKinley 81.47 335 P **P** **09 21 06.7 +0.2**
baz=107,SNR=16
C27K Jago River 81.51 341 P **P** **09 21 07.2 +0.6**
baz=112
E25K Arctic Village 81.58 339 P **P** **09 21 07.8 +0.8**
baz=111,SNR=12
HOM Homer 81.64 330 P **P** **09 21 07.6 +0.1**
baz=104
CAPN Captain Cook N 81.67 332 P **P** **09 21 08.0 +0.5**
baz=104
H24K Noodor Dome 81.67 337 P **P** **09 21 07.9 +0.3**
baz=108
KDAK Kodiak Island 81.68 328 LR LR 10 00 46.1

comp=Z,29nm,19.0s,baz=100,slow=38
KDAK **Kodiak Island** **81.68 328** P **P** **09 21 07.5 -0.2**
baz=103
CUT **Chulitna** **81.68 333** P **P** **09 21 07.5 -0.1**
baz=105,SNR=6.7
Q20K **Shuyak Island** **81.77 329** P **P** **09 21 08.1 0.0**
baz=103
NEA2 **Nenana** **81.78 336** IAmb IAmb 09 21 09.1
comp=Z,54nm,0.8s
NEA2 **Nenana** **81.78 336** P **P** **09 21 08.1 0.0**
baz=107,SNR=24
G24K **Hadweenzic Riv** **81.79 338** P **P** **09 21 08.7 +0.6**
baz=109,SNR=21
OHAK **Old Harbor** **81.93 328** P **P** **09 21 08.9 -0.2**
baz=102
TRF **Thorofare Moun** **81.97 334** P **P** **09 21 09.3 -0.1**
baz=106,SNR=6.5
C26K **Camden Bay** **82.00 341** P **P** **09 21 10.0 +0.8**
baz=111
I23K **Minto, Yukon-K** **82.06 336** P **P** **09 21 09.9 +0.4**
baz=107,SNR=42
SKT **Skwentna** **82.15 333** IAmb IAmb 09 21 11.2
comp=Z,140nm,1.6s
SKT **Skwentna** **82.15 333** P **P** **09 21 10.1 0.0**
baz=104,SNR=18
F24K **Squaw Lake** **82.20 339** P **P** **09 21 11.2 +0.9**
baz=108,SNR=15
D25K **Kavik River** **82.27 341** P **P** **09 21 10.9 +0.3**
baz=110,SNR=31
N20K **Mount Spurr** **82.27 332** P **P** **09 21 10.6 -0.2**
baz=104,SNR=8.9
SPCR **Spurr Chakacha** **82.27 332** P **P** **09 21 10.8 0.0**
baz=104,SNR=5.3
SII **Sitkinak Islan** **82.28 327** P **P** **09 21 10.6 -0.3**
baz=101
H23K **Yukon River** **82.32 337** P **P** **09 21 11.1 +0.1**
baz=106
P19K **Oil Pt** **82.42 330** P **P** **09 21 12.5 +0.9**
baz=102
ALE **Alert** **82.42 2** P **P** **09 21 11.2 +0.1**
BPAW **Bear Paw Mtn.** **82.44 335** P **P** **09 21 10.9 -0.8**
BPAW IAmb IAmb 09 21 12.5
comp=Z,54nm,0.8s
BPAW **Bear Paw Mtn.** **82.44 335** P **P** **09 21 11.5 -0.1**
baz=105,SNR=21
Q19K **Cape Douglas,** **82.47 330** P **P** **09 21 11.4 -0.5**
baz=102
MLY **Manley** **82.59 336** P **P** **09 21 12.2 -0.2**
baz=105,SNR=17
E24K **Your Creek** **82.59 339** P **P** **09 21 13.0 +0.6**
baz=108
PPLA **Purkeypile** **82.67 334** IAmb IAmb 09 21 13.9
comp=Z,172nm,1.7s
PPLA **Purkeypile** **82.67 334** P **P** **09 21 12.8 -0.1**
baz=104,SNR=13
G23K **Bananza Creek** **82.76 338** P **P** **09 21 13.9 +0.6**
baz=106,SNR=21
M20K **Styx River** **82.86 332** P **P** **09 21 13.6 -0.4**
baz=103
DAG **Danmarks Havn** **82.91 11** *i* P **P** **09 21 13.8 0.0**
DAG IAmb IAmb 09 21 14.7
comp=Z,53nm,0.8s
CHIR **Chirikof Islan** **82.93 326** P **P** **09 21 14.2 -0.1**
baz=100
CHUM **Lake Minchumin** **82.96 335** P **P** **09 21 14.0 -0.3**
baz=104,SNR=14
COLD **Coldfoot** **82.97 338** P **P** **09 21 15.3 +1.0**
baz=106,SNR=14
E23K **Chandalar** **83.00 339** P **P** **09 21 14.8 +0.4**
baz=107
D24K **Happy Valley** **83.04 340** P **P** **09 21 14.6 0.0**
baz=108
O19K **Port Alsworth** **83.07 331** P **P** **09 21 14.0 -0.9**
baz=102
H22K **Ishtalitna Cre** **83.07 337** P **P** **09 21 14.6 -0.3**
baz=105,SNR=9.0
Q18K **Katmai Hardscr** **83.11 329** P **P** **09 21 14.8 -0.6**
baz=101
I21K **Tanana** **83.13 336** P **P** **09 21 14.7 -0.4**
baz=104
TOLK **Toolik Lake Re** **83.15 339** P **P** **09 21 15.2 0.0**
baz=107,SNR=8.8
C24K **Franklin Bluff** **83.18 341** IAmb IAmb 09 21 17.0
comp=Z,84nm,0.9s
C24K **Franklin Bluff** **83.18 341** P **P** **09 21 15.7 +0.4**
baz=108
N19K **Bonanza Creek** **83.27 331** P **P** **09 21 15.6 -0.5**
baz=101
VNA3 **Neumayer Olymp** **83.36 162** ⇑P **P** **09 21 16.7 +0.5**
comp=Z,64nm,0.7s
P18K **Big Mountain,** **83.36 330** P **P** **09 21 15.7 -0.8**
baz=101
G22K **Bettles** **83.39 338** P **P** **09 21 16.8 +0.5**
baz=105,SNR=8.5
O18K **Koktuh Hills** **83.44 330** P **P** **09 21 16.5 -0.3**
baz=101
Q17K **Contact Creek** **83.50 329** P **P** **09 21 16.9 -0.4**
baz=100
H21K **Melozitna Rive** **83.58 336** P **P** **09 21 17.1 -0.4**
baz=104,SNR=9.8
VNA1 **Neumayer--Stat** **83.58 162** ⇓P **P** **09 21 18.3 +1.0**
comp=Z,58nm,0.8s
K20K **Telida** **83.60 334** P **P** **09 21 17.3 -0.3**
baz=102,SNR=14
D23K **Nanushuk River** **83.63 340** P **P** **09 21 18.4 +0.8**
baz=106
PLK4 **Peulik 4** **83.64 328** IAmb IAmb 09 21 19.1
comp=Z,48nm,1.1s
R17L **Mt. Peulik Vol** **83.64 328** P **P** **09 21 17.8 -0.1**
baz=100
L19K **White Mountain** **83.72 333** P **P** **09 21 17.8 -0.5**
baz=101,SNR=9.6
F22K **John River** **83.79 338** P **P** **09 21 19.0 +0.6**
baz=104
J20K **Nowinta River** **83.81 335** P **P** **09 21 18.3 -0.3**
baz=102,SNR=18
E22K **Anaktuvuk Pass** **83.81 339** P **P** **09 21 18.8 +0.2**
baz=105,SNR=19
C23K **Itkillik River** **83.85 341** IAmb IAmb 09 21 19.9
comp=Z,37nm,0.8s
C23K **Itkillik River** **83.85 341** P **P** **09 21 19.1 +0.4**
baz=106
N18K **Kilae Creek** **83.92 331** P **P** **09 21 18.8 -0.5**
baz=100,SNR=7.7
VNA2 **Neumayer--Watz** **83.95 162** ⇑P **P** **09 21 19.6 +0.4**
comp=Z,40nm,0.8s,baz=290,slow=8.1
Q16K **King Salmon** **83.97 329** P **P** **09 21 19.4 0.0**
baz=99
M18K **Stony River** **84.04 332** P **P** **09 21 19.4 -0.4**
baz=100
G21K **Allakaket** **84.06 337** P **P** **09 21 20.4 +0.6**
baz=103,SNR=37
I20K **Naaghedeneel** **84.08 335** IAmb IAmb 09 21 21.6
comp=Z,114nm,1.9s
I20K **Naaghedeneel** **84.08 335** P **P** **09 21 19.6 -0.3**
baz=102
F21K **Alatna River** **84.21 338** P **P** **09 21 21.4 +0.8**
baz=103,SNR=35
O17K **Koliganek Bris** **84.36 330** P **P** **09 21 21.3 -0.2**
baz=99,SNR=6.9
H20K **Anotleneega Mo** **84.39 336** P **P** **09 21 21.5 0.0**
baz=102,SNR=20
J19K **Poorman** **84.41 334** P **P** **09 21 21.1 -0.6**
baz=101,SNR=7.4
N17K **Nushagak Hills** **84.53 331** P **P** **09 21 22.2 -0.1**
baz=99
CHGN **Chignik** **84.55 326** IAmb IAmb 09 21 23.2
comp=Z,70nm,1.0s
CHGN **Chignik** **84.55 326** P **P** **09 21 22.2 -0.3**
baz=98
L18K **Granite Mounta** **84.57 332** P **P** **09 21 22.4 -0.1**
baz=100,SNR=5.2
E21K **Killik River** **84.66 339** P **P** **09 21 23.0 +0.1**
baz=103
P16K **Nushagak River** **84.71 329** P **P** **09 21 23.1 -0.1**
baz=98
M17K **Holitna River** **84.79 332** P **P** **09 21 23.5 -0.1**
baz=99,SNR=7.5
J18K **Innoko River** **84.79 334** P **P** **09 21 23.5 -0.1**
baz=100,SNR=9.4
O16K **Kokwok River B** **84.84 330** P **P** **09 21 23.8 -0.1**
baz=98
B22K **Teshekpuk Lake** **84.90 341** P **P** **09 21 24.5 +0.6**
baz=103
F20K **Avaraart Lake** **85.03 337** P **P** **09 21 25.1 +0.4**
baz=101
CHNA **Chernabura Isl** **85.04 325** P **P** **09 21 25.1 +0.2**
baz=96

H19K **Roundabout Mou** **85.04 336** P **P** **09 21 25.3 +0.6**
baz=100
GCSA **Galena City Sc** **85.08 335** P **P** **09 21 25.6 +0.6**
baz=100,SNR=17
C21K **Knifeblade Rid** **85.11 340** P **P** **09 21 25.6 +0.6**
baz=102,SNR=13
B21K **Ikpikpuk River** **85.14 340** IAmb IAmb 09 21 26.6
comp=Z,54nm,1.1s
B21K **Ikpikpuk River** **85.14 340** P **P** **09 21 25.5 +0.4**
baz=102,SNR=46
S14K **Fog Glacier** **85.18 326** P **P** **09 21 26.0 +0.2**
baz=97
N16K **Nishlik Lake** **85.30 331** P **P** **09 21 26.3 +0.1**
baz=98
L17K **Donlin** **85.30 332** P **P** **09 21 26.5 +0.3**
baz=98
K17K **Iditarod** **85.39 333** P **P** **09 21 26.8 +0.2**
baz=98
G19K **Purcell Mounta** **85.40 336** P **P** **09 21 26.9 +0.3**
baz=100,SNR=24
E20K **Nigu River** **85.43 339** P **P** **09 21 27.6 +0.8**
baz=101
M16K **Timber Creek** **85.46 331** P **P** **09 21 27.5 +0.5**
baz=98
A22K **Sinclair Lake** **85.56 341** P **P** **09 21 27.7 +0.5**
baz=102
SNAA **Sanae** **85.57 162** ⇑P **P** **09 21 27.8 +0.4**
comp=Z,853nm,0.8s
SNAA **Sanae** **85.57 162** P **P** **09 21 27.5 +0.2**
comp=Z,38nm,0.8s,baz=267,slow=4.6,SNR=29
SNAA LR LR 09 59 29.4
comp=Z,46nm,20.9s,baz=0.5,slow=35
comp=Z,38nm,0.8s
SNAA **Sanae** **85.57 162** P **P** **09 21 27.6 +0.2**
SNAA IAmb IAmb 09 21 28.9
comp=Z,58nm,1.0s
SNAA **Sanae** **85.57 162** *c* *i*P **P** **09 21 27.8 +0.4**
SNAA pmax pmax
comp=Z,47nm,1.0s
SDPT **Sand Point** **85.60 325** P **P** **09 21 27.6 -0.1**
baz=96
NOR **Nord** **85.62 7** *i* P **P** **09 21 27.9 +0.6**
NOR IAmb IAmb 09 21 29.2
comp=Z,25nm,1.0s
O15K **Ungalikthiuk R** **85.66 329** P **P** **09 21 27.5 -0.5**
baz=97
D20K **Etivluk River** **85.67 339** IAmb IAmb 09 21 29.8
comp=Z,61nm,1.3s
D20K **Etivluk River** **85.67 339** P **P** **09 21 28.6 +0.7**
baz=100
E19K **Redstone River** **85.68 338** IAmb IAmb 09 21 29.1
comp=Z,34nm,0.7s
E19K **Redstone River** **85.68 338** P **P** **09 21 28.2 +0.3**
baz=100,SNR=41
H18K **Honsa River** **85.77 335** P **P** **09 21 29.5 +1.1**
baz=98
F19K **Shaleruckik Mo** **85.79 337** P **P** **09 21 28.7 +0.3**
baz=99
MEM **Membach** **85.80 39** *d*P **P** **09 21 29.6 +0.8**
L16K **Owhat River** **85.80 332** P **P** **09 21 29.5 +0.9**
baz=97,SNR=9.3
WLF **Walferdange** **85.81 40** *d*P **P** **09 21 30.1 +1.2**
J17K **VABM Dome** **85.83 333** P **P** **09 21 29.7 +1.0**
baz=98
BTNL **Ternell** **85.87 39** *d*P **P** **09 21 30.3 +1.0**
N15K **Kwiguk River** **85.91 330** P **P** **09 21 29.5 +0.3**
baz=96
G18K **Tagagawik** **86.00 336** IAmb IAmb 09 21 31.4
comp=Z,34nm,0.7s
G18K **Tagagawik** **86.00 336** P **P** **09 21 30.3 +0.8**
baz=98
B20K **Meade River** **86.09 340** IAmb IAmb 09 21 31.8
comp=Z,71nm,1.4s
B20K **Meade River** **86.09 340** P **P** **09 21 30.7 +0.9**
baz=100
A21K **Barrow** **86.14 342** P **P** **09 21 30.5 +0.4**
baz=100
D19K **Kuna River** **86.17 339** P **P** **09 21 31.2 +0.8**
baz=99,SNR=31
M15K **Kasigluk River** **86.26 331** P **P** **09 21 31.8 +0.9**
baz=96
H17K **Granite Mounta** **86.39 335** P **P** **09 21 32.5 +1.0**
baz=97,SNR=16
O14K **Tigyukauivet M** **86.41 329** P **P** **09 21 32.0 +0.4**
baz=95
F18K **Selawik** **86.49 337** P **P** **09 21 32.5 +0.6**
baz=97,SNR=18
J16K **Anvik River** **86.50 333** P **P** **09 21 33.2 +1.2**
baz=96
I17K **Unalakleet** **86.61 334** P **P** **09 21 33.5 +1.1**
baz=96
N14K **Kuskokwak Cree** **86.68 330** P **P** **09 21 33.4 +0.5**
baz=95,SNR=8.2
L15K **Ungalak Mounta** **86.75 332** P **P** **09 21 34.0 +0.8**
baz=95
G17K **Kiwalik Mounta** **86.77 336** P **P** **09 21 34.1 +0.8**
baz=96
C19K **Lookout Ridge** **86.79 339** IAmb IAmb 09 21 35.7
comp=Z,64nm,1.0s
C19K **Lookout Ridge** **86.79 339** P **P** **09 21 34.6 +1.2**
baz=98,SNR=45
K15K **Wolf Creek Mou** **86.83 332** P **P** **09 21 34.3 +0.6**
baz=95
M14K **Bethel** **86.89 331** IAmb IAmb 09 21 35.7
comp=Z,94nm,1.6s
M14K **Bethel** **86.89 331** P **P** **09 21 34.6 +0.7**
baz=95,SNR=9.1
E18K **Tukpahlearik C** **86.96 337** P **P** **09 21 34.6 +0.5**
baz=96
F17K **Baldwin Pennin** **87.11 336** P **P** **09 21 35.6 +0.8**
baz=96,SNR=22
FALS **False Pass** **87.24 325** P **P** **09 21 35.6 -0.2**
baz=93
TROLL **Troll, Antarti** **87.28 162** P **P** **09 21 36.6 +0.8**
L14K **Kuka Creek** **87.29 331** P **P** **09 21 35.5 -0.3**
baz=94
C18K **Utukok River** **87.32 339** IAmb IAmb 09 21 37.4
comp=Z,26nm,0.8s
C18K **Utukok River** **87.32 339** P **P** **09 21 36.5 +0.5**
baz=96
H16K **Elim** **87.35 335** P **P** **09 21 37.0 +0.9**
baz=95,SNR=22
E17K **Hotham Inlet** **87.40 337** P **P** **09 21 37.1 +0.8**
baz=95,SNR=93
A19K **Wainwright** **87.44 340** P **P** **09 21 37.4 +1.0**
baz=96
G16K **Koyuk River** **87.46 335** P **P** **09 21 37.9 +1.3**
baz=95,SNR=27
KEST **Kesra** **87.46 54** LR LR 09 59 02.4
comp=Z,37nm,20.5s,baz=32,slow=34
M13K **Dall Lake** **87.55 330** IAmb IAmb 09 21 40.4
comp=Z,51nm,1.1s
M13K **Dall Lake** **87.55 330** P **P** **09 21 38.1 +1.0**
baz=94,SNR=6.1
TUE **Stuetta** **87.78 44** P **P** **09 21 39.6 +0.8**
TUE **Stuetta** **87.78 44** P **P** **09 21 39.6 +0.8**
J14K **Nanvaranak Lak** **87.80 333** IAmb IAmb 09 21 40.9
comp=Z,57nm,1.0s
J14K **Nanvaranak Lak** **87.80 333** P **P** **09 21 39.8 +1.6**
baz=94,SNR=21
EDA **Edea** **87.89 86** P **P** **09 21 39.7 -0.1**
RDOG **Red Dog Mine** **87.90 338** IAmb IAmb 09 21 40.3
comp=Z,45nm,0.8s
RDOG **Red Dog Mine** **87.90 338** P **P** **09 21 39.3 +0.6**
baz=94,SNR=20
D17K **Noatak River** **87.94 338** P **P** **09 21 39.6 +0.8**
baz=94,SNR=46
C17K **DeLong Mountai** **88.03 338** P **P** **09 21 39.9 +0.6**
baz=94,SNR=49
G15K **Niukluk** **88.14 335** P **P** **09 21 41.2 +1.4**
baz=93
DAVA **Damuels** **88.17 43** *i* P **P** **09 21 41.5 +0.9**
comp=Z,5.0nm,0.6s
DAVA *i* pP **pP** **09 22 20.4 +3.2**
comp=Z,20nm,1.3s
K13K **Kusilvak Mount** **88.27 332** IAmb IAmb 09 21 42.5
comp=Z,35nm,0.8s
K13K **Kusilvak Mount** **88.27 332** P **P** **09 21 41.4 +0.9**
baz=92
F15K **North Star Dit** **88.44 336** IAmb IAmb 09 21 43.8
comp=Z,70nm,1.1s
F15K **North Star Dit** **88.44 336** P **P** **09 21 42.7 +1.5**
baz=93
ANM **Nome** **88.70 334** P **P** **09 21 43.1 +0.6**
baz=92,SNR=17
FETA **Feichten** **88.74 43** *i* P **P** **09 21 44.3 +1.0**
comp=Z,8.1nm,0.8s
FETA *i* pP **pP** **09 22 20.7 +0.7**

comp=Z,13nm,1.2s
RETA **Reutte** **88.77 43** *i* P **P** **09 21 44.6 +1.3**
comp=Z,1.3nm,0.4s
RETA *i* pP **pP** **09 22 21.5 +1.5**
comp=Z,8.1nm,1.0s
C16K **Lisburne Hills** **88.82 338** IAmb IAmb 09 21 44.9
comp=Z,38nm,0.8s
C16K **Lisburne Hills** **88.82 338** P **P** **09 21 43.8 +0.9**
baz=92
M11K **Mekoryuk** **88.96 330** P **P** **09 21 44.6 +0.9**
baz=91
MOTA **Moosalm** **89.00 43** *i* P **P** **09 21 45.2 +0.7**
comp=Z,6.5nm,0.9s
MOTA *i* pP **pP** **09 22 24.0 +2.8**
comp=Z,17nm,1.7s
UNV **Unalaska Valle** **89.01 324** IAmb IAmb 09 21 46.0
comp=Z,38nm,0.7s
UNV **Unalaska Valle** **89.01 324** P **P** **09 21 44.7 +0.6**
baz=91
SQTA **Sankt Quirin** **89.07 43** *i* P **P** **09 21 45.5 +0.7**
comp=Z,7.3nm,0.7s
SQTA *i* pP **pP** **09 22 25.0 +3.5**
comp=Z,13nm,1.2s
F14K **Arctic Creek** **89.13 335** P **P** **09 21 45.6 +1.2**
baz=91
NB2 **NORSAR Subarra** **89.23 29** P **P** **09 21 45.7 +0.6**
comp=Z,17nm,1.2s,baz=263,slow=4.4
NB2 **NORSAR Subarra** **89.23 29** P **P** **09 21 45.7 +0.6**
NOA **NORSAR Array B** **89.23 29** P **P** **09 21 45.7 +0.6**
comp=Z,3.4nm,1.0s,baz=267,slow=4.5,SNR=5.0
comp=Z,3.4nm,1.0s
WATA **Walderalm** **89.32 43** *e*P **P** **09 21 46.8 +0.8**
comp=Z,2.3nm,0.5s
WATA *e*pP **pP** **09 22 26.3 +3.6**
comp=Z,7.8nm,1.0s
WTTA **Wattenberg** **89.36 43** *e*P **P** **09 21 47.0 +0.8**
comp=Z,4.8nm,0.8s
WTTA *i* pP **pP** **09 22 25.9 +3.0**
comp=Z,19nm,1.4s
CTI **Castel Tesino** **89.37 44** P **P** **09 21 46.7 +0.5**
CTI **Castel Tesino** **89.37 44** P **P** **09 21 46.7 +0.5**
CTI pmax pmax
comp=Z,40nm,1.7s
KBS **Kingsbay** **89.64 11** *i* P **P** **09 21 48.3 +1.7**
TNA **Tin City** **89.79 335** P **P** **09 21 48.5 +1.0**
baz=90,SNR=8.1
ABTA **Abfaltersbach** **89.96 43** *i* P **P** **09 21 49.8 +0.9**
comp=Z,6.8nm,1.0s
ABTA *i* pP **pP** **09 22 28.5 +2.9**
comp=Z,14nm,1.5s
LESA **Schwarzleotal** **90.07 43** *i* P **P** **09 21 50.2 +0.8**
comp=Z,2.4nm,0.5s
LESA *i* pP **pP** **09 22 29.2 +3.1**
comp=Z,13nm,1.5s
NVL **N'lazarevskaya** **90.15 161** *e*P **P** **09 21 47.9 -1.2**
NVL *e* 09 25 25.0
NVL *e*PPP PPP 09 27 22.9
NVL *e*S **SKSac** **09 32 05.2 -1.5**
NVL *e*PS **PnS** **09 33 56.9 +0.7**
NVL *e*SS **SS** **09 38 35.3 +2.8**
NVL *e*SSS SSS 09 42 12.6
NVL pmax pmax
comp=Z,47nm,0.9s
NVL MLR MLR
comp=Z,587nm,17.0s
QSPA **South Pole Qui** **90.36 180** P **P** **09 21 51.1 +0.7**
comp=Z,62nm,1.0s,baz=156,slow=1.5,SNR=152
QSPA PP **PP** **09 25 26.3 +0.1**
comp=Z,3.2nm,0.9s,baz=41,slow=0.9,SNR=3.3
comp=Z,62nm,1.0s
QSPA **South Pole Qui** **90.36 180** P **P** **09 21 51.5 +1.1**
QSPA IAmb IAmb 09 21 52.7
comp=Z,62nm,0.9s
HFS **Hagfors** **90.46 30** P **P** **09 21 50.7 -0.1**
comp=Z,1.9nm,0.6s,baz=249,slow=7.6,SNR=5.0
HFS LR LR 10 01 40.4
comp=Z,23nm,18.0s,baz=295,slow=35
comp=Z,1.9nm,0.6s
KBA **Koelnbreinsper** **90.53 43** *e*P **P** **09 21 52.9 +1.3**
comp=Z,1.6nm,0.5s
KBA *e*pP **pP** **09 22 29.6 +1.2**
comp=Z,7.7nm,1.3s
SPITS **Spitsbergen Ar** **90.55 12** P **P** **09 21 51.4 +0.5**
comp=Z,4.8nm,0.6s,baz=282,slow=7.2,SNR=14
SPITS PKKPbc **PKKPdf** **09 39 17.4 +1.0**
comp=Z,2.1nm,0.7s,baz=326,slow=7.3,SNR=10
SPITS LR LR 10 03 50.1
comp=Z,16nm,19.3s,baz=216,slow=36
comp=Z,4.8nm,0.6s
KHC **Kasperske Hory** **90.64 41** *i* P **P** **09 21 52.7 +0.7**
KHC pmax pmax
comp=Z,2.0nm,0.9s
BIOA **Bad Ischl, Aus** **90.72 42** *e*pP pP 09 22 31.9 +2.9
comp=Z,4.6nm,0.8s
GERES **GERSS Array B** **90.73 41** P **P** **09 21 52.9 +0.4**
comp=Z,0.5nm,0.6s,baz=247,slow=6.9,SNR=4.8
MYKA **Terra Mystica** **90.74 44** *e*P **P** **09 21 53.6 +1.0**
comp=Z,2.9nm,0.9s
MYKA *e*pP **pP** **09 22 31.4 +2.2**
comp=Z,4.9nm,0.9s
SPIA **Saint Paul Isl** **91.10 327** P **P** **09 21 55.1 +1.3**
baz=88
MOA **Molln** **91.14 42** *i* pP pP 09 22 34.8 +3.8
comp=Z,6.7nm,1.2s
OBKA **Obir** **91.37 44** *i* PcP **PcP** **09 21 57.2 +0.9**
comp=Z,18nm,1.9s
GAMB **Gambell** **91.48 334** P **P** **09 21 56.1 +0.7**
baz=86
VAE **Valguarnera** **91.54 53** LR LR 10 00 51.9
comp=Z,39nm,18.2s,baz=312,slow=34
SOKA **Soboth** **91.70 43** *e*P **P** **09 21 58.3 +1.4**
comp=Z,0.9nm,0.3s
ARSA **Arzberg** **92.01 43** *e*P **P** **09 21 58.7 +0.4**
comp=Z,0.8nm,0.4s
ARSA *i* pP **pP** **09 22 36.7 +1.6**
comp=Z,6.4nm,1.3s
CONA **Conrad Observa** **92.20 42** *e*P **P** **09 22 00.1 +0.8**
comp=Z,3.6nm,0.9s
CONA *i* pP **pP** **09 22 39.1 +3.0**
comp=Z,7.4nm,1.1s
KRUC **Moravsky** **92.50 41** *e*P **P** **09 21 59.9 -0.6**
KRUC *e* 09 22 38.8
RONA **Rosalia, Austr** **92.51 42** *i* pP pP 09 22 38.9 +1.5
comp=Z,1.9nm,0.7s
VRAC **Vranov** **92.61 41** LR LR 09 59 03.2
comp=Z,27nm,19.0s,baz=248,slow=32
VRAC **Vranov** **92.61 41** *e*P **P** **09 22 02.1 +1.1**
VRAC *e* 09 22 39.2
MORC **Moravsky Berou** **93.20 40** *e*P **P** **09 22 05.3 +1.5**
JAVC **Velka Javorina** **93.35 41** *e*P **P** **09 22 05.3 +0.8**
ARCES **ARCESS Array B** **94.34 20** P **P** **09 22 08.2 -0.3**
comp=Z,3.2nm,0.7s,baz=267,slow=3.5,SNR=7.4
ARCES PKKPbc **PKKPdf** **09 39 08.1 -1.4**
comp=Z,2.5nm,0.8s,baz=98,slow=2.6,SNR=5.8
ARCES LR LR 10 00 53.9
comp=Z,26nm,20.2s,baz=153,slow=33
comp=Z,3.2nm,0.7s
WIN **Windhoek** **94.60 112** IAmb IAmb 09 22 12.2
comp=Z,20nm,0.9s
TSUM **Tsumeb** **95.14 109** P **P** **09 22 13.4 -0.1**
FINES **FINESS Array B** **96.33 28** P **P** **09 22 17.2 -0.5**
comp=Z,3.3nm,0.8s,baz=316,slow=5.3,SNR=10
FINES PKKPbc **PKKPbc** **09 39 02.9 -2.6**
comp=Z,2.4nm,0.7s,baz=147,slow=3.9,SNR=9.3
comp=Z,3.3nm,0.8s
VNDA **Vanda** **96.62 191** P **P** **09 22 19.4 +0.7**
comp=Z,2.4nm,0.8s,baz=108,slow=1.3,SNR=9.4
VNDA LR LR 10 01 49.3
comp=Z,52nm,18.9s,baz=238,slow=33
comp=Z,2.4nm,0.8s
SUR **Sutherland** **97.41 122** LR LR 10 05 50.7
comp=Z,26nm,18.7s,baz=269,slow=35
APA **Apatity** **97.68 21** *e*P Pdif 09 22 25.8 +2.1
APA pmax pmax
comp=Z,12nm,1.1s
MNK **Minsk** **98.79 35** *i* P **P** **09 22 29.1 +0.1**
comp=E,17nm,0.6s
MNK *i* P **P** **09 22 29.1 +0.1**
comp=N,35nm,0.7s
MNK *i* P **P** **09 22 29.1 +0.1**
comp=Z,17nm,0.6s,baz=283
MNK *i* pP **pP** **09 23 02.5 -3.4**
MNK *i* PP **PP** **09 26 31.7 -0.2**
MNK *i* PPP PPP 09 28 38.1
MNK *i* S **SKSac** **09 32 54.6 +0.7**
MNK *i* sS **S** **09 33 55.7 +9.0**
MNK *i* PS **PS** **09 35 30.4 -0.1**

MNK				*i* SS	SS	09 40 37.4	+1.6	
MNK				*i* SSS	SSS	09 44 26.4		
MNK				*i* LR	LR	10 07 26.8		
MNK				*i* LRM	MLR	10 09 03.7		
	comp=Z,72nm,14.6s							
MNK				*i* LRM	MLR	10 09 10.7		
	comp=N,828nm,20.3s							
MNK				*i* LRM	MLR	10 09 13.2		
	comp=E,967nm,18.6s							
MNK	**Minsk**	**98.79**	**35**	*i* P	**P**	**09 22 29.0**	**+0.1**	
MNK				*i* *PP	**pP**	**09 23 02.5**	**-3.4**	
MNK				*i*		09 26 31.6		
MNK				*i* PPP	PPP	09 28 38.1		
MNK				*i* S	**SKSac**	**09 32 54.5**	**+0.7**	
MNK				*i* PS	**PS**	**09 35 30.4**	**-0.1**	
MNK				*i* SS	**SS**	**09 40 37.4**	**+1.6**	
MNK				*i* SSS	SSS	09 44 26.4		
MNK				pmax	pmax			
	comp=Z,17nm,0.6s							
MNK				pmax	pmax			
	comp=E,17nm,0.6s							
MNK				pmax	pmax			
	comp=N,35nm,0.7s							
MNK				MLR	MLR			
	comp=Z,72nm,15.0s							
MNK				MLR	MLR			
	comp=N,828nm,20.0s							
MNK				MLR	MLR			
	comp=E,967nm,19.0s							
BILL	**Bilibino**	**99.19**	**340**	*i* P	**Pdif**	**09 22 31.2**	**+0.7**	
BILL				pmax	pmax			
	comp=Z,5.0nm,1.1s							
AKBB	**Malin Array Si**	**100.46**	**38**	*i* P	**Pdif**	**09 22 36.5**	**0.0**	
AKBB				pmax	pmax			
	comp=Z,2.0nm,0.9s							
BOSA	**Boshof**	**101.56**	**119**	P	**Pdif**	**09 22 42.0**	**-0.1**	
	comp=Z,2.2nm,0.8s,baz=264,slow=7.9,SNR=4.1							
BOSA	**Boshof**	**101.56**	**119**	P	**Pdif**	**09 22 42.0**	**-0.1**	
KIV	**Kislovodsk**	**111.24**	**42**	*e*PKIKP	**PKiKP**	**09 27 25.8**	**+3.0**	
KIV				pmax	pmax			
	comp=Z,5.0nm,1.0s							
GNI	**Garni**	**114.10**	**45**	*i* PKIKP	**PKiKP**	**09 27 29.8**	**+1.3**	
BORK	**Borovoye**	**120.54**	**22**	*i* PKIKP	**PKiKP**	**09 27 42.3**	**+2.0**	
BVAR	**Borovoye Array**	**120.58**	**22**	PP	**PP**	**09 29 05.0**	**-3.7**	
	comp=Z,3.9nm,1.0s,baz=288,slow=6.1,SNR=5.0							
BVAR				PKKPbc	**PKKPbc**	**09 37 45.4**	**-2.8**	
	comp=Z,0.9nm,0.6s,baz=116,slow=3.4,SNR=4.7							
HNR	**Honiara**	**121.87**	**259**	PKP	**PKPdf**	**09 27 43.8**	**0.0**	
	comp=Z,5.2nm,0.5s,baz=115,slow=2.0,SNR=6.9							
HNR	**Honiara**	**121.87**	**259**		**PKPdf**	**09 27 42.7**	**-1.2**	
ZALV	**Zalesovo Beam**	**124.03**	**12**	PKP	**PKPdf**	**09 27 46.3**	**-0.6**	
	comp=Z,4.3nm,0.4s,baz=347,slow=3.3,SNR=23							
KURK	**Kurchatov**	**125.33**	**18**		**PKPdf**	**09 27 49.6**	**+0.1**	
KURK	**Kurchatov**	**125.33**	**18**	PKIKP	**PKPdf**	**09 27 49.6**	**+0.1**	
KURBB	**Kurchatov Arra**	**125.39**	**18**	PKP	**PKPdf**	**09 27 49.6**	**0.0**	
	comp=Z,2.6nm,0.5s,baz=323,slow=2.4,SNR=18							
KURBB				PKKPbc	**PKKPab**	**09 37 26.9**	**-0.8**	
	comp=Z,0.7nm,0.7s,baz=157,slow=3.1,SNR=6.5							
MKAR	**Makanchi Array**	**129.94**	**18**	PKP	**PKPdf**	**09 27 57.9**	**-0.5**	
	comp=Z,1.2nm,0.6s,baz=316,slow=2.2,SNR=9.3							
MKAR				PP	**PP**	**09 30 09.3**	**-1.5**	
	comp=Z,3.5nm,1.1s,baz=349,slow=4.9,SNR=6.6							
MJAR	**Matsushiro Arr**	**130.44**	**322**	PKP	**PKPdf**	**09 27 59.3**	**-0.5**	
	comp=Z,2.0nm,0.5s,baz=78,slow=1.2,SNR=7.1							
MJAR				SKPbc	**SKPab**	**09 31 10.1**	**-0.3**	
	comp=Z,2.3nm,0.7s,baz=66,slow=2.9,SNR=7.3							
AAK	**Ala-Archa**	**130.50**	**27**		**PKiKP**	**09 28 01.2**	**+0.5**	
AAK	**Ala-Archa**	**130.50**	**27**	*i* PKIKP	**PKiKP**	**09 28 00.8**	**+0.1**	
STKA	**Stephens Creek**	**131.35**	**226**	PKP	**PKPdf**	**09 28 01.6**	**+0.1**	
	comp=Z,4.3nm,0.8s,baz=75,slow=2.2,SNR=6.4							
STKA	**Stephens Creek**	**131.35**	**226**	*i* PKIKP	**PKPdf**	**09 28 01.4**	**-0.2**	
CN2	**Changchun**	**131.44**	**338**	*e*PKP	**PKPdf**	**09 27 59.0**	**-2.3**	
ULN	**Ulaanbaatar**	**131.84**	**356**	*i* PKIKP	**PKiKP**	**09 28 03.3**	**+0.1**	
SONM	**Songino Array**	**131.91**	**356**	PKP	**PKPdf**	**09 28 02.0**	**-0.3**	
	comp=Z,0.9nm,0.5s,baz=338,slow=1.2,SNR=4.7							
SONM				pPKP	**pPKPdf**	**09 28 40.4**	**-0.4**	
	comp=Z,0.7nm,0.7s,baz=202,slow=2.7,SNR=2.0							
SONM				PP	**PP**	**09 30 20.2**	**-3.3**	
	comp=Z,2.9nm,1.0s,baz=354,slow=4.7,SNR=6.0							
SONM				SKPbc	**SKPbc**	**09 31 15.8**	**+0.3**	
	comp=Z,4.0nm,1.0s,baz=337,slow=2.3,SNR=7.0							
KDJ	**Kajisay**	**132.09**	**25**		**PKiKP**	**09 28 05.0**	**+1.0**	
KDJ	**Kajisay**	**132.09**	**25**	PKIKP	**PKiKP**	**09 28 05.0**	**+1.0**	
CTA	**Charters Tower**	**132.67**	**243**	PKP	**PKPdf**	**09 28 04.5**	**+0.1**	
	comp=Z,5.2nm,1.0s,baz=202,slow=0.7,SNR=5.8							
INKA	**Innaminka**	**134.12**	**230**		**PKPdf**	**09 28 07.2**	**+0.3**	
WMQ	**Urumqi**	**134.18**	**15**	*e*PKP	**PKiKP**	**09 28 08.5**	**+0.5**	
KSRS	**Korea Array**	**135.56**	**330**	PKhKP	PKPpre	09 27 59.8		
	comp=Z,1.7nm,0.7s,baz=24,slow=2.0,SNR=7.5							
KSRS				PKP	**PKPdf**	**09 28 09.2**	**0.0**	
	comp=Z,1.8nm,0.6s,baz=18,slow=1.3,SNR=9.2							
KSRS				PP	**PP**	**09 30 48.6**	**+1.6**	
	comp=Z,1.5nm,1.0s,baz=15,slow=5.2,SNR=4.3							
KSRS				SKPbc	**SKPbc**	**09 31 28.0**	**+0.2**	
	comp=Z,2.1nm,0.8s,baz=47,slow=3.2,SNR=6.1							
DL2	**Dalian**	**137.11**	**338**	PKP	**PKiKP**	**09 28 13.5**	**-0.5**	
HHC	**Hu-ho-hao-te**	**138.17**	**349**	*e*PKP	**PKiKP**	**09 28 18.0**	**+1.8**	
BTO2	**Baotou**	**138.56**	**351**	*e*PKP	**PKPdf**	**09 28 12.3**	**-2.6**	
BTO2				PPMZ				
	comp=Z,180nm,4.8s							
BTO2				L	L			
	comp=Z,250nm,5.6s							
BTO2				L	L			
	comp=Z,120nm,6.0s							
BTO2				L	L			
	comp=Z,160nm,5.2s							
ASAR	**Alice Springs**	**141.50**	**231**	PKhKP	PKPpre	09 28 13.8		
	comp=Z,3.4nm,0.4s,baz=125,slow=4.1,SNR=51							
ASAR				PKP	**PKPdf**	**09 28 20.6**	**0.0**	
	comp=Z,5.7nm,0.6s,baz=112,slow=2.2,SNR=20							
ASAR				SKPbc	**SKPbc**	**09 31 43.8**	**-1.2**	
	comp=Z,3.4nm,0.9s,baz=124,slow=3.0,SNR=9.5							
WRA	**Warramunga Arr**	**143.01**	**236**	PKhKP	PKPpre	09 28 19.6		
	comp=Z,20nm,0.8s,baz=119,slow=3.2,SNR=193							
WRA				SKPbc	**SKPbc**	**09 31 47.5**	**-1.3**	
	comp=Z,3.0nm,0.8s,baz=118,slow=2.4,SNR=7.6							
LZH	**Lanzhou**	**143.76**	**358**	PKP	PKPbc	09 28 22.8	+0.5	
LZDM	**Lanzhou Array**	**143.90**	**358**	PKP	PKPbc	09 28 23.3	+0.3	
	comp=Z,3.8nm,0.4s,baz=333,slow=1.6,SNR=8.5							
LYN	**LuoYang**	**144.02**	**346**	PKP	**PKPab**	**09 28 22.3**	**-0.1**	
LYN				pPKP	pPKPdf	09 28 59.8	-3.4	
NJ2	**Nanjing**	**144.19**	**335**	*e*PKP	**PKiKP**	**09 28 27.0**	**-1.7**	
NWAO	**Narrogin (SRO)**	**144.62**	**202**		**PKPab**	**09 28 24.8**	**+0.1**	
NWAO	**Narrogin (SRO)**	**144.62**	**202**	PKIKP	**PKPab**	**09 28 24.8**	**+0.1**	
XAN	**Xi'an**	**145.26**	**350**	PKPbc	**PKPbc**	**09 28 26.5**	**-0.4**	
XAN				pPKP	pPKPdf	09 29 06.0	+0.5	
XAN				sPKP	sPKPab	09 29 17.5	-2.0	
WHN	**Wuhan**	**147.23**	**340**	PKPbc	**PKPbc**	**09 28 32.8**	**+0.1**	
WHN				pPKP	**pPKPbc**	**09 29 10.5**	**-0.2**	
MORW	**Morawa**	**148.51**	**204**		**PKPdf**	**09 28 32.2**	**-0.3**	
ENH	**Enshi**	**148.82**	**348**		**PKPbc**	**09 28 36.0**	**-1.0**	
CD2	**Chengdu**	**148.92**	**357**	PKPbc	**PKPdf**	**09 28 33.3**	**+0.1**	
KAAM	**Kaadhehdhoo**	**150.74**	**88**		**PKiKP**	**09 28 42.7**	**0.0**	
HYB	**Hyderabad**	**150.77**	**52**	*e*PKPbc	**PKPbc**	**09 28 42.2**	**+0.1**	
HYB				*e*PKiKP	**PKiKP**	**09 28 43.2**	**+0.6**	
FITZ	**Fitzroy Crossi**	**151.00**	**231**	PKPbc	**PKPbc**	**09 28 42.5**	**0.0**	
	comp=Z,45nm,0.7s,baz=158,slow=1.9,SNR=11							
PSA00	**Pilbara Seismi**	**152.77**	**218**		**PKPdf**	**09 28 39.4**	**+0.1**	
MBWA	**Marble Bar**	**153.15**	**218**		**PKPbc**	**09 28 46.9**	**-0.4**	
CHTO	**Chiang Mai**	**160.72**	**10**		**PKPab**	**09 29 31.1**	**-0.7**	
CHTO	**Chiang Mai**	**160.72**	**10**	PKP2	**PKPab**	**09 29 31.1**	**-0.7**	
CMAR	**Chiang Mai Arr**	**161.07**	**10**	PKP	**PKPdf**	**09 28 50.1**	**+0.3**	
	comp=Z,1.5nm,0.4s,baz=302,slow=2.4,SNR=11							
CMAR				PKPab	**PKPab**	**09 29 32.6**	**-0.7**	
	comp=Z,10nm,0.7s,baz=327,slow=5.2,SNR=31							

KRSC 30 09:10:59.6±1.5, 49°48N×159°05E, h18km±32km, MI3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**2.42**	**346**	*e*P	Pn	09 11 40.2	+2.1
KDTR				*e*S	Sb	09 12 09.8	-2.1
RUS	**Russkaya**	**2.98**	**354**	*e*P	Pn	09 11 48.3	+2.4
ASAK	**Asacha**	**3.00**	**346**	*e*P	Pb	09 11 49.4	-3.1
MTVR	**Mutnovka**	**3.06**	**350**	*e*P	Pn	09 11 50.0	+2.9
MTVR				*e*S	Sn	09 12 26.8	+3.5
GRL	**Gorelyy**	**3.14**	**349**	*e*P	Pn	09 11 51.5	+3.3
GRL				*e*S	Sn	09 12 28.7	+3.4
KRMR	**Karymshinskiy**	**3.41**	**351**	*e*S	Sb	09 12 36.7	-3.7
DALK	**Dalny**	**3.56**	**357**	*e*P	Pn	09 11 56.6	+2.7
DALK				*e*S	Sn	09 12 39.4	+3.9
SPN	**Mys Shipunski**	**3.68**	**9**	*e*P	Pn	09 11 59.1	+3.6
UGLR	**Uglovaya**	**3.74**	**358**	*e*P	Pb	09 12 01.3	-3.8
SMAR	**Somma**	**3.79**	**358**	*e*P	Pb	09 12 02.1	-4.0
AVH	**Avacha**	**3.80**	**357**	*e*P	Pn	09 12 01.6	+4.4
SDLR	**Sedlovina**	**3.81**	**359**	*e*P	Pn	09 12 01.8	+4.4
KOK	**Koryaka**	**3.83**	**356**	*e*P	Pn	09 12 01.6	+3.9
KRX	**Arik**	**3.90**	**356**	*e*P	Pn	09 12 01.6	+2.9
GNL	**Ganaly**	**4.28**	**351**	*e*P	Pn	09 12 07.7	+3.8
KBTR	**Krutoberegovo**	**7.12**	**17**	*e*P	Pn	09 12 48.1	+5.4

*IDC **30** 09:15:16.3±2.1, 9°.65S×108°.39E, h0km, mb3.8/7, mbtmp3.8/9, ML3.5/2, Error ellipse: s-maj=105.1km s-min=16.3km az=51.0*
*DJA **30** 09:15:24.1±0.8, 9°.5S±7°×10°.9E±°, h10km, M3.6/13, MLv3.6/13*

ISC 30 09:15:20.7±1.0, 9°.6S±0°.1×108°.5E±0°.1, h27km, n20, σ0s82/17, mb3.9/7, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCJI	**Gunung Srandil**	**1.96**	**19**	P	**Pn**	**09 15 51.4**	**-0.8**
KPJI	**Karang Pucung**	**2.23**	**10**	P	**Pn**	**09 15 57.2**	**+1.2**
BBJI	**Bungbulang**	**2.25**	**337**	P	**Pn**	**09 15 55.9**	**-0.3**
UGM	**Wanagama**	**2.55**	**51**	P	**Pn**	**09 16 00.5**	**+0.2**
LEM	**Lembang**	**2.85**	**341**	Pn	**Pn**	**09 16 05.8**	**+1.2**
	7.0nm,0.3s,baz=140,slow=13,SNR=8.8						
	63nm,0.7s						
PCJI	**Pacitan**	**2.94**	**63**	P	**Pn**	**09 16 04.6**	**-1.0**
SNJI	**Sawahan-Nganju**	**3.64**	**61**	P	**Pn**	**09 16 16.8**	**+1.3**
GMJI	**Gumukmas**	**5.01**	**76**	P	**Pn**	**09 16 34.9**	**+0.7**
FITZ	**Fitzroy Crossi**	**18.64**	**119**	P	**Pn**	**09 19 36.6**	**-0.4**
	0.1nm,0.3s,baz=285,slow=5.0,SNR=2.8						
	1.3nm,0.6s						
WRA	**Warramunga Arr**	**26.97**	**115**	P	**P**	**09 21 00.8**	**+0.3**
	0.6nm,0.8s,baz=288,slow=11,SNR=9.7						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**28.00**	**123**	P	**P**	**09 21 09.7**	**0.0**
	0.4nm,0.9s,baz=301,slow=9.1,SNR=6.5						
	0.4nm,0.9s						
H08S2	**Diego Garcia H**	**35.68**	**270**	T	T	10 00 09.1	
	baz=95						
H08S3	**Diego Garcia H**	**35.69**	**270**	T	T	10 00 10.0	
	baz=95						
H08S1	**Diego Garcia H**	**35.70**	**270**	T	T	10 00 12.0	
	baz=95						
STKA	**Stephens Creek**	**37.83**	**131**	P	**P**	**09 22 35.8**	**+0.6**
	2.0nm,0.6s,baz=313,slow=8.0,SNR=5.5						
	2.0nm,0.6s						
SONM	**Songino Array**	**57.16**	**358**	P	**P**	**09 25 04.7**	**-0.5**
	0.5nm,0.5s,baz=186,slow=2.9,SNR=2.0						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**60.78**	**340**	P	**P**	**09 25 30.4**	**+0.1**
	1.1nm,0.5s,baz=154,slow=8.1,SNR=15						
	1.1nm,0.5s						
KURBB	**Kurchatov Arra**	**65.35**	**339**	P	**P**	**09 26 00.2**	**-0.2**
	0.6nm,0.6s,baz=148,slow=5.1,SNR=6.6						
	0.6nm,0.6s						
BVAR	**Borovoye Array**	**70.29**	**337**	P	**P**	**09 26 32.1**	**+0.5**
	0.5nm,0.4s,baz=139,slow=9.5,SNR=2.3						
	0.5nm,0.4s						
TXAR	**Lajitas Array**	**144.00**	**52**	PKP	**PKPdf**	**09 34 53.5**	**-1.1**
	0.1nm,0.6s,baz=276,slow=4.7,SNR=1.9						

*IDC **30** 09:30:24.2±3.2, 15°.29S×165°.90E, h0km, mb4.1/3, mbtmp4.2/5, ML4.3/2, MS3.4/9, Error ellipse: s-maj=58.2km s-min=42.1km az=69.0*
*NOU **30** 09:30:24.7, 15°.39S×166°.29E, h8km, ML4.8/13, Vanuatu Islands*
*NEIC **30** 09:30:26.2±1.1, 15°.46S±0°.04×166°.1E±0°.2, h10km±2km, mb4.1/8, Error ellipse: s-maj=32.8km s-min=4.5km az=81.0*

ISC 30 09:30:24.6±1.2, 15°.46S±0°.10×166°.2E±0°.1, h10km, n32, σ1s26/23, mb4.1/6, MS3.4/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**2.94**	**140**	P	**Pn**	**09 31 12.2**	**+0.8**
RTV	**Rentapao**	**3.14**	**138**	P	**Pn**	**09 31 14.7**	**+0.5**
MARNC	**Mare, Loyalty**	**6.23**	**164**	P	**Pn**	**09 31 57.8**	**+1.2**
MARNC	**Mare, Loyalty**	**6.23**	**164**	Pn	**Pn**	**09 31 58.0**	**+1.3**
HURO	**Huro Makira**	**6.50**	**319**	P	**Pn**	**09 32 00.5**	**+0.1**
DZM	**Mont Dzumac**	**6.58**	**178**	Pn	**Pn**	**09 32 03.1**	**+1.6**
	9.8nm,0.3s,baz=349,slow=16,SNR=89						
DZM				Sn	**Sn**	**09 33 14.7**	**-1.9**
	1.5nm,0.3s,baz=306,slow=22,SNR=1.3						
	34nm,0.4s						
YATNC	**Mamie plateau,**	**6.59**	**174**	P	**Pn**	**09 32 02.3**	**+0.7**
ONTNC	**Ouen Toro**	**6.81**	**178**	P	**Pn**	**09 32 07.0**	**+2.4**
ONTNC	**Ouen Toro**	**6.81**	**178**		**Pn**	**09 32 06.9**	**+2.2**
OUENC	**Ouen Island, N**	**6.94**	**175**	P	**Pn**	**09 32 07.1**	**+0.6**
OUENC	**Ouen Island, N**	**6.94**	**175**		**Pn**	**09 32 08.1**	**+1.6**
NGOA	**Tingoa Renbel**	**7.13**	**302**	P	**Pn**	**09 32 09.9**	**+0.8**
HNR	**Honiara**	**8.56**	**314**	LR	LR	09 35 30.9	
	comp=Z,6.4nm,19.9s,baz=252,slow=37						
MSVF	**Nonsavu**	**11.57**	**103**	LR	LR	09 36 50.3	
	comp=Z,65nm,19.6s,baz=312,slow=32						
CTA	**Charters Tower**	**19.55**	**253**	P	**P**	**09 34 51.2**	**-1.4**
	0.4nm,0.3s,baz=70,slow=12,SNR=6.2						
CTA				LR	LR	09 41 03.2	
	comp=Z,82nm,19.3s,baz=72,slow=33						
	5.9nm,0.8s						
CTAO	**Charters Tower**	**19.55**	**253**	P	**P**	**09 34 51.8**	**-0.9**
CTAO				IAmb	IAmb	09 34 58.5	
	comp=Z,10nm,1.1s						
RAO	**Raoul Island**	**20.06**	**136**	LR	LR	09 41 27.5	
	comp=Z,119nm,18.4s,baz=51,slow=32						
AFI	**Afiamalu**	**21.35**	**89**	LR	LR	09 41 21.6	
	comp=Z,55nm,21.6s,baz=186,slow=30						
INKA	**Innaminka**	**26.58**	**238**		**P**	**09 36 03.9**	**+0.8**
INKA				IAmb	IAmb	09 36 04.8	
	comp=Z,4.5nm,0.7s						
WR8	**Warramunga Arr**	**30.51**	**257**	P	P	09 36 36.7	-1.5
WR8				IAmb	IAmb	09 37 17.1	
	comp=Z,2.8nm,1.1s						
WB0	**Warramunga Arr**	**30.60**	**257**	P	**P**	**09 36 38.5**	**-0.6**
WB0				IAmb	IAmb	09 37 17.2	
	comp=Z,6.2nm,1.4s						
WRAB	**Tennant Creek**	**30.65**	**257**	P	**P**	**09 36 38.4**	**-1.0**
WRA	**Warramunga Arr**	**30.66**	**257**	P	**P**	**09 36 38.6**	**-1.0**
	comp=Z,1.6nm,0.9s,baz=84,slow=9.1,SNR=12						
	comp=Z,1.6nm,0.9s						
AS31	**Alice Springs**	**31.46**	**250**	P	**P**	**09 36 46.3**	**-0.3**
ASAR	**Alice Springs**	**31.46**	**250**	P	**P**	**09 36 45.9**	**-0.8**
	comp=Z,2.2nm,0.7s,baz=71,slow=9.9,SNR=47						
	comp=Z,2.2nm,0.7s						
RAR	**Rarotonga**	**32.75**	**105**	LR	LR	09 49 22.2	
	comp=Z,37nm,18.8s,baz=25,slow=34						
FORT	**Forrest**	**38.05**	**240**	P	**P**	**09 37 43.8**	**+0.4**
FITZ	**Fitzroy Crossi**	**38.88**	**260**	LR	LR	09 54 47.3	
	comp=Z,127nm,18.9s,baz=154,slow=38						
KAPI	**Kappang**	**46.78**	**278**	LR	LR	09 58 23.3	
	comp=Z,38nm,18.1s,baz=242,slow=36						
YAK	**Yakutsk**	**82.44**	**344**	LR	LR	10 16 08.4	
	comp=Z,42nm,21.7s,baz=30,slow=33						
NVAR	**Mina Array Bea**	**88.52**	**50**	LR	LR	10 17 01.9	
	comp=Z,17nm,18.3s,baz=278,slow=32						
MKAR	**Makanchi Array**	**97.03**	**316**	P	**P**	**09 43 56.9**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=102,slow=6.2,SNR=2.9						
	comp=Z,0.3nm,0.6s						

IDC 30 09:39:13.5±2.8, 32°.09N×141°.82E, h0km, mb3.3/3, mbtmp3.3/4, ML2.3/1, MS3.5/1, Error ellipse: s-maj=82.2km s-min=21.6km az=59.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.00**	**301**	Pn	Pn	09 39 48.2	-0.3
	13nm,0.3s,baz=114,slow=20,SNR=1.9						
JHJ				Sn	Sn	09 40 14.8	+0.5
	12nm,0.3s,baz=78,slow=18,SNR=2.4						
MJAR	**Matsushiro Arr**	**5.35**	**327**	Pn	Pn	09 40 35.2	+0.6
	0.1nm,0.3s,baz=145,slow=14,SNR=2.2						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**47.16**	**306**	P	P	09 47 47.1	-0.6
	0.2nm,0.5s,baz=78,slow=9.0,SNR=3.5						
	0.2nm,0.5s						
NRIK	**Noril'sk**	**47.91**	**337**	LR	LR	10 10 09.6	
	comp=Z,43nm,18.1s,baz=348,slow=39						
WRA	**Warramunga Arr**	**52.23**	**189**	P	P	09 48 26.3	-0.1
	0.5nm,0.6s,baz=6.6,slow=7.6,SNR=8.4						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**55.96**	**189**	P	P	09 48 53.7	+0.1
	0.1nm,0.5s,baz=9.4,slow=7.1,SNR=1.5						
	0.1nm,0.5s						

IDC 30 09:42:23.8±2.4, 10°.23S×120°.47E, h0km, mb3.2/1, mbtmp3.1/4, ML2.8/3, Error ellipse: s-maj=204.0km s-min=28.5km az=54.0, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.29**	**148**	Pn	Pn	09 44 38.8	-0.2
	0.1nm,0.3s,baz=333,slow=16,SNR=1.1						
FITZ				Sn	Sn	09 46 15.0	-9.3
	0.2nm,0.3s,baz=250,slow=19,SNR=6.9						
	1.7nm,0.8s						
WRA	**Warramunga Arr**	**16.50**	**127**	Pn	Pn	09 46 16.3	-0.4
	baz=302,slow=11,SNR=4.7						
WRA				Sn	Sn	09 49 09.1	-12
	baz=4.3,slow=30,SNR=1.3						
	0.3nm,0.9s						
ASAR	**Alice Springs**	**18.52**	**138**	P	Pn	09 46 42.2	+0.3
	baz=315,slow=12,SNR=5.2						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**66.21**	**332**	P	P	09 53 13.5	0.0
	0.1nm,0.5s,baz=134,slow=8.3,SNR=2.2						
	0.1nm,0.5s						

*NNC **30** 09:47:21.1±1.7, 51°.49N×75°.41E, h0km, mb2.8, mpv2.4, Error ellipse: s-maj=30.6km s-min=11.1km az=24.0, Suspected Mining explosion.*
*IDC **30** 09:47:23.1±1.3, 51°.33N×75°.62E, h0km, mbtmp2.4/3, ML1.7/3, Error ellipse: s-maj=22.6km s-min=9.9km az=26.0*

ISC 30 09:47:22.9±1.2, 51°.3N±0°.1×75°.59E±0°.06, h0km, n9, σ0s75/9, 3C-4D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**1.98**	**108**	Pg	**Pn**	**09 47 58.6**	**+1.0**
	0.1nm,0.3s,baz=292,slow=17,SNR=18						
KURBB				Lg	Lg	09 48 25.6	
	0.3nm,0.3s,baz=292,slow=28,SNR=8.1						
KURBB	**Kurchatov Arra**	**1.98**	**108**	⇓Pn	**Pb**	**09 47 59.4**	**-0.4**
	3.0nm,0.5s,baz=296,slow=16						
KURBB				⇑Sn	**Sg**	**09 48 26.3**	**0.0**
	25nm,0.8s,baz=294,slow=29						
KURK	**Kurchatov**	**2.00**	**105**	⇑Pn	**Pb**	**09 47 59.7**	**-0.4**
	1.4nm,0.8s						
KURK				⇓Sn	**Sg**	**09 48 26.3**	**-0.8**
	6.1nm,0.9s						
BVA0	**Borovoye Array**	**3.65**	**301**	⇓Pg	**Pn**	**09 48 21.5**	**+1.0**
	0.7nm,0.7s						
BVA0				⇑Lg	Lg	09 49 12.4	
	3.8nm,1.2s,baz=114,slow=23,SNR=5.0						
BVAR	**Borovoye Array**	**3.65**	**301**	Pn	**Pn**	**09 48 20.4**	**-0.2**
	baz=114,slow=18,SNR=1.3						
BVAR				Lg	Lg	09 49 17.9	
	0.1nm,0.3s,baz=116,slow=21,SNR=8.1						
	0.2nm,0.3s						
I46RU	**ZALESOVO INFRA**	**6.22**	**61**	I	I	10 26 00.0	
	baz=248,slow=323,SNR=1.4						
ZALV	**Zalesovo Beam**	**6.22**	**61**	Pn	**Pn**	**09 48 56.4**	**+0.4**
	0.2nm,0.3s,baz=248,slow=19,SNR=1.6						
ZALV				Lg	Lg	09 50 39.3	
	0.3nm,0.3s,baz=245,slow=27,SNR=1.9						
	0.4nm,0.3s						
MK31	**Makanchi Array**	**6.29**	**133**	⇓Lg	Lg	09 50 49.2	
	1.8nm,0.8s,baz=319,slow=27,SNR=5.5						
MKAR	**Makanchi Array**	**6.29**	**133**	Pn	**Pn**	**09 48 57.4**	**+0.4**
	baz=313,slow=15,SNR=2.0						
MKAR				Lg	Lg	09 50 42.6	
	0.1nm,0.3s,baz=317,slow=26,SNR=8.1						
	0.1nm,0.3s						

*NEIC **30** 09:52:12.4±1.2, 7°.4S±0°.1×155°.9E±0°.1, h10km±1km, mb4.3/22, Error ellipse: s-maj=25.4km s-min=10.6km az=217.0*
*IDC **30** 09:52:24.7±2.7, 7°.29S×155°.48E, h103km±24km, mb3.6/12, mbtmp4.0/13, MS2.8/4, Error ellipse: s-maj=21.4km s-min=19.0km az=93.0*

**ISC 30 09:52:11.6±0.5, 7°.23S±0°.09×155°.97

comp=Z,2.5nm,0.7s,baz=106,slow=5.5,SNR=26
comp=Z,2.5nm,0.7s
ZALV Zalesovo Beam 84.91 326 P **P** **10 04 46.6 -0.1**
comp=Z,2.0nm,0.6s,baz=119,slow=5.3,SNR=7.8
comp=Z,2.0nm,0.6s
H27K Steamboat Moun 85.91 21 P **P** **10 04 54.1 +2.5**
H27K IAmb IAmb 10 05 37.4
comp=Z,2.0nm,1.1s
C27K Jago River 86.85 18 P **P** **10 04 57.8 +1.8**
C27K IAmb IAmb 10 05 12.4
comp=Z,1.4nm,0.8s
D27M Malcolm River 87.51 19 P **P** **10 05 01.0 +1.6**
BOOM Boomskoye usch 87.53 313 P **P** **10 05 00.5 +0.3**
KURK Kurchatov 87.61 322 P **P** **10 05 00.2 +0.1**
KURK Kurchatov 87.61 322 IAmb IAmb 10 05 18.8
comp=Z,1.8nm,1.1s
KURBB Kurchatov Arra 87.64 322 P **P** **10 05 00.2 0.0**
comp=Z,0.4nm,0.6s,baz=96,slow=4.1,SNR=6.1
comp=Z,0.4nm,0.6s
BVAR Borovoye Array 93.06 323 P **P** **10 05 25.2 -0.4**
comp=Z,1.7nm,0.8s,baz=64,slow=3.4,SNR=5.6
comp=Z,1.7nm,0.8s
BDFB Brasilia 147.13 134 PKPbc **PKPab** **10 11 58.2 +0.5**
comp=Z,4.1nm,0.6s,baz=225,slow=1.4,SNR=5.9

HEL 30 09:58:12.6±0.2, 61°.18N×22°.62E, h0km, ML0.9, Suspected explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAF	**Rauma**	**0.44**	**250**	PG		Pg	09 58 20.1	-1.0
RAF				SG		Sg	09 58 26.9	+0.1
KPF	**Kankaanpaa**	**0.71**	**338**	PG		Pg	09 58 25.5	-0.7
KPF				SG		Sg	09 58 34.1	-1.3
KPF				smax		smax	09 58 34.9	
	comp=Z,0.9nm,0.2s							
MEF	**Metsahovi**	**1.30**	**137**	PN		Pn	09 58 38.0	0.0
MEF				smax		smax	09 58 51.8	
	comp=Z,1.1nm,0.2s							
KEF	**Keuruu**	**1.46**	**46**	PG		Pn	09 58 38.6	-1.7
KEF				smax		smax	09 58 56.4	
	comp=Z,0.5nm,0.2s							
FIA0	**FINESS Array S** baz=259	**1.69**	**79**	PG		Pn	09 58 42.8	-0.5
FIA0				smax		smax	09 59 02.9	
	comp=Z,0.8nm,0.2s							
FIA0				SG		Sn	09 59 04.3	-1.3
VAF	**Ylistaro** baz=180	**1.87**	**1**	PG		Pb	09 58 46.9	-0.7
VAF				smax		smax	09 59 08.6	
	comp=Z,0.7nm,0.2s							
VAF				SG		Sn	09 59 10.3	+0.2
HEMU Hemsoen		**2.64**	**307**	SG		Sb	09 59 33.9	+0.3

HEL 30 09:59:43.1±0.1, 60°.42N×24°.82E, h0km, ML1.2, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NUR	**Nurmijarvi** baz=137	**0.12**	**316**	PG		Pg	09 59 45.4	0.0
HEL1	**Helsinki**	**0.25**	**173**	PG		Pg	09 59 47.6	-0.2
HEL1				SG		Sg	09 59 50.8	-0.2
MEF	**Metsahovi** baz=44	**0.29**	**226**	PG		Pg	09 59 48.5	-0.2
MEF				SG		Sg	09 59 52.5	0.0
HEL5	**Espoo, Suvisaa**	**0.31**	**187**	PG		Pg	09 59 48.7	-0.2
HEL5				SG		Sg	09 59 52.6	-0.3
PVF	**Pernaja** baz=248	**0.53**	**76**	PG		Pg	09 59 52.7	-0.6
PVF				SG		Sg	09 59 59.9	-0.3
PVF				smax		smax	10 00 00.2	
	comp=Z,1.9nm,0.2s							
FIA0	**FINESS Array S** baz=204	**1.20**	**30**	PN		Pn	10 00 07.7	+0.7
FIA0				smax		smax	10 00 19.4	
	comp=Z,2.1nm,0.2s							
FIA0				SB		Sg	10 00 20.6	-0.9
VJF	**Virojoki**	**1.36**	**84**	PG		Pg	10 00 07.7	-1.5
VJF				smax		smax	10 00 24.1	
	comp=Z,2.4nm,0.2s							
RAF	**Rauma**	**1.62**	**293**	PG		Pn	10 00 11.5	-1.3
RAF				smax		smax	10 00 31.6	
	comp=Z,1.0nm,0.2s							
MTSE	**Matsula**	**1.79**	**197**	SG		Sb	10 00 39.9	+0.4
KPF	**Kankaanpaa**	**1.94**	**318**	smax		smax	10 00 40.9	
	comp=Z,0.8nm,0.2s							
KPF				SG		Sb	10 00 44.6	+0.4
RUF	**Ruokolahti**	**2.25**	**62**	smax		smax	10 00 50.0	
	comp=Z,0.8nm,0.2s							
RUF				SG		Sg	10 00 54.5	-1.0
SUF	**Sumiainen**	**2.39**	**15**	smax		smax	10 00 53.8	
	comp=Z,0.7nm,0.2s							
SUF				SG		Sb	10 00 57.2	+0.2
AAL	**Aland**	**2.41**	**266**	SG		Sb	10 00 58.6	+1.0
VAF	**Ylistaro**	**2.82**	**340**	smax		smax	10 01 06.3	
	comp=Z,0.7nm,0.2s							
VAF				SG		Sb	10 01 09.9	+0.6
HUSU	**Husum**	**3.95**	**320**	PN		Pn	10 00 43.5	-1.3
JOF	**Joensuu**	**3.98**	**48**	PB		Pb	10 00 51.4	-2.7
BURU	**Burvik**	**4.47**	**341**	SG		Sb	10 01 58.6	+1.9

HEL 30 09:59:52.2±0.2, 64°.75N×30°.75E, h0km, ML1.4, Suspected explosion, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RMF	**Romuvaara** baz=30	**0.64**	**214**	PG		Pg	10 00 04.0	-0.4
RMF				SG		Sg	10 00 12.0	-0.6
RMF				smax		smax	10 00 12.4	
	comp=Z,6.3nm,0.2s							
KU1	**Kurvinen**	**0.96**	**329**	PG		Pg	10 00 09.9	-0.8
KU6	**Riekki** baz=163	**1.33**	**345**	PG		Pg	10 00 15.4	-2.3
KU6				smax		smax	10 00 32.4	
	comp=Z,1.9nm,0.2s							
KU6				SG		Sg	10 00 34.0	-1.0
MSF	**Maaselka**	**1.37**	**329**	PG		Pg	10 00 17.2	-1.2
MSF				SB		Sg	10 00 35.3	-0.9
KU2	**Taivalkoski**	**1.44**	**314**	PG		Pn	10 00 18.2	-1.3
KU2				SN		Sn	10 00 38.8	-0.2
OLKF	**Oulanka, Finla**	**1.68**	**341**	PG		Pn	10 00 22.5	-0.3
OLKF				smax		smax	10 00 42.2	
	comp=Z,1.3nm,0.2s							
OLKF				SN		Sb	10 00 45.5	-0.1
JOF	**Joensuu** baz=351	**1.85**	**172**	PG		Pn	10 00 25.5	+0.3
NIF	**Nilsia**	**1.88**	**225**	PG		Pn	10 00 26.0	+0.5
NIF				smax		smax	10 00 47.9	
	comp=Z,1.7nm,0.2s							
RANF	**Ranua**	**2.09**	**309**	PG		Pb	10 00 29.7	-1.2
RANF				SG		Sn	10 00 55.9	+0.8
OUL	**Oulu**	**2.09**	**282**	PG		Pb	10 00 30.0	-0.9
OUL				SG		Sn	10 00 55.9	+0.7
OBF4	**Vikkela, Lumij** baz=93	**2.42**	**274**	PG		Pb	10 00 34.9	-1.6
OBF4				smax		smax	10 01 03.7	
	comp=Z,2.3nm,0.2s							
OBF4				SG		Sb	10 01 06.1	-0.7
OUF	**Merijarvi**	**2.62**	**264**	PB		Pn	10 00 36.6	+0.9
OUF				smax		smax	10 01 09.7	
	comp=Z,2.1nm,0.2s							
OUF				SG		Sb	10 01 11.6	-1.1
RNF	**Rovaniemi** baz=128	**2.71**	**316**	PN		Pn	10 00 37.8	+0.9
RNF				SG		Sb	10 01 15.1	-0.1
OBF0	**Syolatti, Pyha**	**2.81**	**268**	PB		Pn	10 00 40.4	+2.0
OBF0				smax		smax	10 01 15.1	
	comp=Z,1.4nm,0.2s							
TOF	**Tornio**	**3.00**	**299**	smax		smax	10 01 20.3	
	comp=Z,0.5nm,0.2s							
TOF				SG		Sb	10 01 23.3	-0.2
VRF	**Varrio** baz=170	**3.05**	**352**	PB		Pn	10 00 42.9	+1.3
VRF				smax		smax	10 01 21.9	
	comp=Z,0.8nm,0.2s							
OBF8	**Ulkokalla**	**3.18**	**266**	SN		Sn	10 01 19.4	-2.5
ERTU	**Ertsjaerv**	**3.98**	**301**	PN		Pn	10 00 55.8	+1.4
ERTU				SG		Sb	10 01 55.7	+4.0
UMAU	**Umeaa**	**4.47**	**263**	PN		Pn	10 01 00.4	-0.6
HEF	**Hetta**	**4.64**	**326**	PB		Pb	10 01 09.9	-4.4
HEF				SB		Sb	10 02 08.9	-1.7

*SNET **30** 10:00:47.4±7.9, 13°.45N×90°.74W, h8km, ML3.3, Presumed earthquake*
*CATAC **30** 10:00:48.9±0.8, 13°N±7°×90°1W±°, h8km±6km, M2.9/10, MLv2.9/10, Error ellipse: s-maj=15.0km s-min=10.7km az=163.5, confirmed*
*GCG **30** 10:00:49.0±1.4, 13°.45N×90°.83W, h21km±15km, MD4.0, ML2.8, Presumed earthquake*
ISC 30 10:00:50.8±2.4, 13°.4N±0°.1×90°.59W±0°.06, h8km±13km, n24, σ1§14/30, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FAME	**Alcaldia de Sa**	**0.69**	**54**	P		**Pg**	**10 01 04.6**	**+0.5**
FG8	**Yepocapa, Chim**	**0.82**	**2**	*eP*		**Pn**	**10 01 07.4**	**-1.4**
FG8				*eS*		**Sn**	**10 01 20.8**	**-0.3**
LOAL	**Lomas de Alarc**	**0.96**	**55**	*eP*		**Pg**	**10 01 09.2**	**0.0**
SBLS	**San Blas**	**1.02**	**67**	*eP*		**Pg**	**10 01 10.2**	**-0.2**
JAYA	**Jayaque - finc**	**1.13**	**79**	P		**Pn**	**10 01 11.4**	**-1.6**
JAYA				S		**Sb**	**10 01 28.9**	**+1.4**
JAYA	**Jayaque - finc**	**1.13**	**79**	*eP*		**Pn**	**10 01 11.5**	**-1.6**
UNIC	**Universidad Ca**	**1.14**	**62**	P		**Pn**	**10 01 11.7**	**-1.4**
UNIC				S		**Sb**	**10 01 28.8**	**+0.9**
UNIC	**Universidad Ca**	**1.14**	**62**	*eP*		**Pn**	**10 01 11.8**	**-1.4**
STG5	**El Palmar, Qui**	**1.21**	**322**	*eP*		**Pn**	**10 01 13.8**	**-0.3**
CEDA	**San Andres**	**1.21**	**73**	P		**Pn**	**10 01 11.8**	**-2.3**
STG8	**El Palmar, Qui**	**1.25**	**324**	*eP*		**Pn**	**10 01 14.2**	**-0.6**
STG8				IAML			10 01 38.5	
	comp=E,233nm,0.2s							
STG2	**El Palmar, Qui**	**1.25**	**322**	*eP*		**Pn**	**10 01 14.8**	**0.0**
PMON	**Piamonte**	**1.27**	**77**	P		**Pn**	**10 01 13.8**	**-1.1**
PMON				S		**Sb**	**10 01 32.8**	**+1.3**
UEES	**Universidad Ev**	**1.34**	**78**	P		**Pn**	**10 01 14.9**	**-0.9**
UEES				S		**Sn**	**10 01 34.1**	**+0.2**
UEES	**Universidad Ev**	**1.34**	**78**	*eP*		Pn	10 01 04.1	-12
UDBS	**Universidad Do**	**1.42**	**79**	P		**Pn**	**10 01 16.3**	**-0.7**
MTO3	**Montecristo**	**1.53**	**51**	P		**Pn**	**10 01 17.3**	**-1.3**
MTO3				S		**Sn**	**10 01 39.0**	**+0.2**
MTO3	**Montecristo**	**1.53**	**51**	*eP*		**Pn**	**10 01 17.1**	**-1.5**
APG	**El Apazote**	**1.56**	**4**	*eP*		**Pn**	**10 01 17.0**	**-2.0**
PAVA	**Las Pavas**	**1.63**	**80**	P		**Pn**	**10 01 19.4**	**-0.5**
ESQI	**Esquipulas**	**1.64**	**47**	P		**Pn**	**10 01 20.1**	**0.0**
ESQI	**Esquipulas**	**1.64**	**47**	*eP*		**Pn**	**10 01 20.4**	**+0.3**
ESQI				*eS*		**Sn**	**10 01 42.3**	**+0.8**
SCLA	**Alcaldia de Sa**	**1.83**	**82**	P		**Pn**	**10 01 22.2**	**-0.3**
SARH	**Santa Rosa de**	**2.21**	**53**	*i P*		**Pn**	**10 01 27.2**	**-0.7**

*VAO **30** 10:01:03.0±2.8, 21°.42S×69°.91W, h30km±17km, mb4.4, Presumed earthquake*
*SJA **30** 10:01:07.1±0.8, 21°.42S×69°.50W, h34km±2km, ML4.4, MW4.3*
*NEIC **30** 10:01:08.5±2.2, 21°.43S±0°.02×69°.50W±0°.03, h30km±5km, mb4.4/9, ML4.6(GUC), Error ellipse: s-maj=5.1km s-min=0.9km az=125.0*
*GUC **30** 10:01:09.3±0.7, 21°.42S×69°.47W, h27km±3km, ML4.6*
*IDC **30** 10:01:12.4±2.6, 21°.29S×69°.20W, h66km±23km, mb3.6/8, mbtmp3.9/13, MS3.3/5, Error ellipse: s-maj=22.8km s-min=17.3km az=68.0*
ISC 30 10:01:08.0±0.9, 21°.40S±0°.02×69°.48W±0°.03, h32km±2km, n122, σ1§61/133, mb4.1/9, MS3.5/3, 3C-7D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PB01	**IPOC Station P**	**0.36**	**359**			**Pb**	**10 01 16.6**	**0.0**
PB01	**IPOC Station P**	**0.36**	**359**	*i P*		**Pb**	**10 01 16.8**	**+0.2**
PB01				*eS*		**Sb**	**10 01 22.7**	**+0.3**
PB01				IAML			10 01 23.0	
	comp=N,91μm,0.3s							
PB01	**IPOC Station P**	**0.36**	**359**	*eP*		**Pb**	**10 01 16.6**	**0.0**
PB01				IAML			10 01 22.9	
	comp=Z,14μm,0.2s							
PB02	**IPOC Station P**	**0.39**	**282**			**Pb**	**10 01 16.9**	**-0.2**
PB02	**IPOC Station P**	**0.39**	**282**	*↑i P*		**Pb**	**10 01 17.4**	**+0.3**
PB02				*eS*		**Sb**	**10 01 23.9**	**+0.6**
PB02				IAML			10 01 24.7	
	comp=E,55μm,0.2s							
PB02	**IPOC Station P**	**0.39**	**282**	*eP*		**Pb**	**10 01 16.7**	**-0.4**
PB02				IAML			10 01 24.6	
	comp=Z,84μm,0.3s							
PB09	**IPOC Station P**	**0.45**	**150**			**Pb**	**10 01 17.9**	**-0.1**
PB09	**IPOC Station P**	**0.45**	**150**	*i P*		**Pb**	**10 01 18.2**	**+0.2**
PB09				*eS*		**Sb**	**10 01 25.1**	**+0.2**
PB09	**IPOC Station P**	**0.45**	**150**	*eP*		**Pb**	**10 01 17.4**	**-0.6**
PB09				IAML			10 01 26.7	
	comp=Z,32μm,0.4s							
PB07	**IPOC Station P**	**0.49**	**229**			**Pb**	**10 01 17.9**	**-0.7**
PB07	**IPOC Station P**	**0.49**	**229**	*eP*		**Pb**	**10 01 17.9**	**-0.7**
PB07				IAML			10 01 26.9	
	comp=Z,42μm,0.3s							
PB03	**IPOC Station P**	**0.69**	**201**			**Pb**	**10 01 21.0**	**-0.8**
PB03	**IPOC Station P**	**0.69**	**201**	*↓i P*		**Pb**	**10 01 21.7**	**-0.2**
PB03				*eS*		**Sb**	**10 01 31.1**	**-0.2**
PB03	**IPOC Station P**	**0.69**	**201**	*eP*		**Pb**	**10 01 21.3**	**-0.5**
PB03				IAML			10 01 33.8	
	comp=E,8μm,0.3s							
PATCX	**Punta Patache**	**0.85**	**313**			**Pn**	**10 01 24.4**	**+0.6**
PATCX	**Punta Patache**	**0.85**	**313**	*↑i P*		**Pn**	**10 01 24.4**	**+0.6**
PATCX	**Punta Patache**	**0.85**	**313**	*eP*		**Pn**	**10 01 24.1**	**+0.3**
PATCX				IAML			10 01 42.0	
	comp=Z,6μm,0.4s							
PX03	**IPOC Station P**	**1.00**	**352**	*eP*		**Pn**	**10 01 25.7**	**-0.3**
PX03				*eS*		**Sn**	**10 01 40.0**	**+1.0**
PX03				IAML			10 01 40.2	
	comp=N,25μm,0.3s							
TA01	**Diego Aracena**	**1.06**	**322**			**Pn**	**10 01 27.4**	**+0.8**
TA01	**Diego Aracena**	**1.06**	**322**	*i P*		**Pn**	**10 01 27.4**	**+0.8**
TA01				*eS*		**Sb**	**10 01 41.8**	**+0.4**
TA01				IAML			10 01 42.5	
	comp=N,24μm,0.3s							
TA01	**Diego Aracena**	**1.06**	**322**	*eP*		**Pn**	**10 01 27.1**	**+0.5**
TA01				IAML			10 01 43.0	
	comp=Z,3μm,0.3s							
PB08	**IPOC Station P**	**1.29**	**14**			**Pn**	**10 01 31.4**	**+1.2**
PB08	**IPOC Station P**	**1.29**	**14**	*↓i P*		**Pn**	**10 01 31.4**	**+1.2**
PB08				*eS*		**Sb**	**10 01 48.9**	**+0.5**
PB08	**IPOC Station P**	**1.29**	**14**	*eP*		**Pn**	**10 01 31.3**	**+1.2**
PB08				*eS*		**Sb**	**10 01 49.5**	**+1.0**
PB08				IAML			10 01 53.0	
	comp=Z,4μm,0.3s							
PB06	**IPOC Station P**	**1.30**	**184**			**Pn**	**10 01 30.8**	**+0.7**
PB06	**IPOC Station P**	**1.30**	**184**	*↓i P*		**Pn**	**10 01 31.0**	**+0.9**
PB06				*eS*		**Sb**	**10 01 47.8**	**-0.8**
PB06				IAML			10 01 48.7	
	comp=E,12μm,0.2s							
PB06	**IPOC Station P**	**1.30**	**184**	*eP*		**Pn**	**10 01 31.0**	**+0.9**
PB06				*eS*		**Sb**	**10 01 47.9**	**-0.6**
PB06				IAML			10 01 48.2	
	comp=Z,5μm,0.6s							
PB05	**IPOC Station P**	**1.59**	**205**			**Pn**	**10 01 35.1**	**+1.0**
PB05	**IPOC Station P**	**1.59**	**205**	*↓i P*		**Pn**	**10 01 35.1**	**+1.0**
PB05				*eS*		**Sb**	**10 01 55.8**	**-0.9**
PB05	**IPOC Station P**	**1.59**	**205**	*eP*		**Pn**	**10 01 35.0**	**+1.0**
PB05				*eS*		**Sb**	**10 01 56.3**	**-0.4**
PB05				IAML			10 01 59.3	
	comp=Z,3μm,0.5s							
PB11	**IPOC Station P**	**1.64**	**354**			**Pn**	**10 01 36.2**	**+1.4**
PB11	**IPOC Station P**	**1.64**	**354**	*↓i P*		**Pn**	**10 01 36.2**	**+1.4**
PB11				*eS*		**Sb**	**10 01 58.1**	**0.0**
PB11				IAML			10 01 59.2	
	comp=E,10μm,0.1s							
PB11	**IPOC Station P**	**1.64**	**354**	*eP*		**Pn**	**10 01 35.5**	**+0.7**
PB11				*eS*		**Sb**	**10 01 59.1**	**+1.0**
PB11				IAML			10 02 02.4	
	comp=Z,4μm,0.4s							
GO01	**Chusmiza**	**1.75**	**9**			**Pn**	**10 01 38.7**	**+2.2**
GO01	**Chusmiza**	**1.75**	**9**	*↓i P*		**Pn**	**10 01 38.8**	**+2.2**
GO01				*eS*		**Sb**	**10 02 01.4**	**-0.1**
GO01				IAML			10 02 03.2	
	comp=N,19μm,0.1s							
GO01	**Chusmiza**	**1.75**	**9**	*eP*		**Pn**	**10 01 38.0**	**+1.4**
GO01				*eS*		**Sb**	**10 02 01.7**	**+0.2**
GO01				IAML			10 02 03.2	
	comp=Z,4μm,0.1s							
PSGCX	**Pisagua**	**1.89**	**341**			**Pn**	**10 01 39.2**	**+1.0**
PSGCX	**Pisagua**	**1.89**	**341**	*eP*		**Pn**	**10 01 39.4**	**+1.2**
PSGCX				*eS*		**Sb**	**10 02 04.7**	**-0.6**
PSGCX	**Pisagua**	**1.89**	**341**	*eP*		**Pn**	**10 01 39.4**	**+1.2**
PSGCX				*eS*		**Sb**	**10 02 05.5**	**+0.1**
PSGCX				IAML			10 02 12.0	
	comp=Z,3μm,0.5s							

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AF01	**San Pedro de A**	**1.96**	**142**	*i P*		**Pb**	**10 01 44.1**	**+0.8**
AF01	**San Pedro de A**	**1.96**	**142**	*eP*		Pn	10 01 27.7	-12
AF01				*eS*		**Sn**	**10 02 03.6**	**+0.7**
AF01				IAML			10 02 26.2	
	comp=E,11μm,0.5s							
PB12	**IPOC Station P**	**2.88**	**344**			**Pn**	**10 01 53.4**	**+1.6**
PB12	**IPOC Station P**	**2.88**	**344**	*↑eP*		**Pn**	**10 01 53.3**	**+1.4**
PB12				IAML			10 02 41.4	
	comp=E,2μm,0.5s							
PB12	**IPOC Station P**	**2.88**	**344**	*eP*		**Pn**	**10 01 52.8**	**+0.9**
PB12				*eS*		**Sn**	**10 02 26.1**	**+0.6**
PB16	**IPOC Station P**	**3.05**	**360**			**Pn**	**10 01 57.8**	**+3.3**
PB16	**IPOC Station P**	**3.05**	**360**	*eP*		**Pn**	**10 01 57.6**	**+3.1**
PB16				IAML			10 02 52.2	
	comp=N,951nm,0.5s							
PB16	**IPOC Station P**	**3.05**	**360**	*eP*		**Pn**	**10 01 57.3**	**+2.8**
PB16				*eS*		**Sb**	**10 02 47.6**	**+8.6**
AP01	**Chacalluta**	**3.12**	**345**	Pn		Pn	10 01 55.2	+0.2
AP01	**Chacalluta**	**3.12**	**345**	*eP*		**Pb**	**10 02 01.6**	**-1.2**
AP01				*eS*		**Sn**	**10 02 34.7**	**+3.5**
AP01	**Chacalluta**	**3.12**	**345**	*eP*		**Pb**	**10 02 00.1**	**-2.7**
PB14	**IPOC Station P**	**3.32**	**195**			**Pn**	**10 01 58.9**	**+0.9**
PB14	**IPOC Station P**	**3.32**	**195**	*↓eP*		**Pn**	**10 01 59.0**	**+0.9**
PB14	**IPOC Station P**	**3.32**	**195**	*eP*		**Pn**	**10 01 59.1**	**+1.1**
PB14				*eS*		**Sn**	**10 02 40.6**	**+4.1**
YJA	**Yavi**	**3.77**	**103**	*eP*		Pn	10 02 09.4	+5.0
PB18	**Visviri**	**3.79**	**0**			**Pn**	**10 02 10.1**	**+5.3**
PB18	**Visviri**	**3.79**	**0**	*eP*		**Pb**	**10 02 10.9**	**-3.7**
SALTA		**4.04**	**135**	*eP*		**Pn**	**10 02 12.3**	**+4.3**
AC01	**Pan de Azucar**	**4.83**	**192**			**Pn**	**10 02 18.4**	**-0.2**
LPAZ	**La Paz**	**5.25**	**14**	P		**Pn**	**10 02 27.8**	**+3.0**
	comp=N,2.2nm,0.3s,baz=210,slow=2.6,SNR=17							
LPAZ				S		**Sn**	**10 03 21.6**	**-2.9**
	comp=N,16nm,0.7s,baz=202,slow=18,SNR=1.2							
LPAZ				LR		LR	10 04 57.0	
	comp=N,334nm,19.9s,baz=230,slow=44							
AC02	**Maricunga**	**5.42**	**177**			**Pn**	**10 02 30.1**	**+3.0**
LCO	**Las Campanas**	**7.66**	**188**	Pn		**Pn**	**10 02 56.1**	**-1.5**
BBSD	**Serra de San D**	**9.37**	**65**	*eP*		**Pn**	**10 03 20.3**	**-0.6**
SIV	**Sergio Ignacio**	**9.62**	**57**	P		**Pn**	**10 03 23.9**	**-0.4**
	comp=N,4.6nm,0.5s,baz=236,slow=12,SNR=22							
SIV				LR		LR	10 07 13.5	
	comp=N,50nm,19.1s,baz=226,slow=39							
CFA	**Coronel Fontan**	**10.22**	**174**	P		**Pn**	**10 03 32.2**	**-0.4**
	comp=N,1.6nm,0.3s,baz=11,slow=17,SNR=8.7							
CFA				S		**Sn**	**10 05 30.4**	**+4.3**
	comp=N,1.9nm,0.5s,baz=146,slow=20,SNR=1.4							
MURT	**Porto Murtinho**	**11.06**	**93**	*eP*		**Pn**	**10 03 43.8**	**-0.2**
PTLB	**Pontes e Lacer**	**11.46**	**61**			**Pn**	**10 03 49.6**	**+0.1**
PTLB	**Pontes e Lacer**	**11.46**	**61**	*eP*		**Pn**	**10 03 49.3**	**-0.3**
BDQN	**Bodoquena, MS**	**11.94**	**88**	*eP*		**Pn**	**10 03 56.9**	**+0.9**
CPUP	**Villa Florida**	**12.15**	**116**	P		**Pn**	**10 03 60.0**	**+1.0**
	comp=N,0.8nm,0.5s,baz=298,slow=13,SNR=3.7							
VILB	**Vilhena**	**12.21**	**48**			**Pn**	**10 04 01.5**	**+1.7**
VILB	**Vilhena**	**12.21**	**48**	*eP*		**Pn**	**10 03 59.6**	**-0.3**
SALV	**Santo Antonio**	**14.16**	**70**	*eP*		**Pn**	**10 04 27.4**	**+1.0**
TRCB	**Terra Rica**	**15.68**	**98**			**Pn**	**10 04 49.1**	**+2.4**
TRCB				IAmb		IAmb	10 04 51.4	
	comp=Z,24nm,0.7s							
TRCB	**Terra Rica**	**15.68**	**98**	*eP*		**Pn**	**10 04 47.0**	**+0.3**
PTGB	**Pitanga**	**16.37**	**105**	*eP*		**Pn**	**10 04 56.8**	**+1.3**
ATAH	**Atahualpa**	**16.59**	**327**	P		**P**	**10 05 01.9**	**+0.9**
	comp=Z,1.6nm,0.9s,baz=69,slow=1.9,SNR=2.0							
ITAB	**Concordia**	**16.84**	**114**			**P**	**10 05 03.2**	**-0.1**
ITAB				IAmb		IAmb	10 05 03.7	
	comp=Z,15nm,0.6s							
ITAB	**Concordia**	**16.84**	**114**	*eP*		**Pn**	**10 05 01.4**	**-0.1**
CPSB	**Cacapava Do Su**	**16.98**	**125**	*eP*		**Pn**	**10 05 01.5**	**-1.7**
LDASE	**Londrina, Braz**	**17.10**	**100**	*eP*		**Pn**	**10 05 04.7**	**0.0**
ARAG	**Araguaiana, MT**	**17.68**	**74**	*eP*		**Pn**	**10 05 12.0**	**+0.1**
TEFE	**Tefe**	**18.40**	**16**	*eP*		**P**	**10 05 17.3**	**-3.2**
FRTB	**Fartura**	**18.52**	**100**	*eP*		**P**	**10 05 22.1**	**+0.1**
PLCA	**Paso Flores**	**19.29**	**182**	P		**Pn**	**10 05 33.4**	**+1.9**
	comp=Z,1.1nm,0.8s,baz=7.3,slow=15,SNR=6.1							
BB19B	**Bebedouro**	**19.54**	**93**	*eP*		**P**	**10 05 32.5**	**-0.6**
SNDB	**Serra Nova Dou**	**19.77**	**65**	*eP*		**P**	**10 05 34.4**	**-1.1**
VAO	**Valinhos**	**20.91**	**99**	P		**P**	**10 05 47.5**	**-0.5**
VAO				IAmb		IAmb	10 05 47.8	
	comp=Z,20nm,1.2s							
BDFB	**Brasilia**	**21.14**	**78**	P		**P**	**10 05 48.4**	**-2.2**
	comp=Z,2.5nm,0.5s,baz=235,slow=10,SNR=4.7							
	comp=Z,2.5nm,0.5s							
BDFB	**Brasilia**	**21.14**	**78**	P		**P**	**10 05 49.5**	**-1.1**
ITTB	**Itaituba**	**21.56**	**40**	*eP*		**P**	**10 05 53.1**	**-1.9**
JANB	**Januaria**	**24.71**	**79**	*eP*		**P**	**10 06 24.6**	**-2.0**
BOAV	**Boa Vista**	**25.22**	**21**	P		**P**	**10 06 31.3**	**+0.2**
BOAV				IAmb		IAmb	10 06 41.2	
	comp=Z,12nm,1.3

n96,σ0↟93/139, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.51**	**339**	P	**Pn**	**10 02 45.1**	**-0.3**
LALI	**Alcalda de L**	**0.51**	**339**	*i* P	**Pn**	**10 02 45.1**	**-0.3**
LALI				*i* S	**Sn**	**10 02 53.0**	**-0.1**
PANCS	**Alcalda de**	**0.59**	**356**	P	**Pb**	**10 02 46.0**	**-0.5**
PANCS				S	**Sn**	**10 02 54.9**	**-0.5**
LFRS	**El Faro**	**0.61**	**6**	*i* P	**Pb**	**10 02 46.4**	**-0.4**
SJTE	**Alcalda de S**	**0.61**	**12**	*i* P	**Pb**	**10 02 46.3**	**-0.4**
SJTE				*e*S	**Sn**	**10 02 55.9**	**+0.2**
TECO	**Alcaldia de Te**	**0.62**	**33**	P	**Pb**	**10 02 46.6**	**-0.3**
TECO				S	**Sn**	**10 02 56.7**	**+0.7**
COEG	**Centro de Oper**	**0.65**	**22**	P	**Pn**	**10 02 46.9**	**-0.6**
COEG				S	**Sn**	**10 02 57.1**	**+0.4**
COEG	**Centro de Oper**	**0.65**	**22**	*i* P	**Pb**	**10 02 47.0**	**-0.6**
MAGS	**Ministerio de**	**0.68**	**347**	*e*P	**Pb**	**10 02 47.4**	**-0.6**
MAGS				*e*S	**Sn**	**10 02 57.7**	**+0.1**
UTEC	**Universidad Te**	**0.69**	**354**	P	**Pb**	**10 02 47.5**	**-0.5**
UTEC				S	**Sn**	**10 02 57.9**	**+0.3**
SEMO	**Seminario San**	**0.69**	**353**	P	**Pn**	**10 02 47.5**	**-0.6**
SEMO				S	**Sn**	**10 02 58.2**	**+0.4**
IGN	**Direccin Gen**	**0.69**	**357**	P	**Pn**	**10 02 47.7**	**-0.5**
IGN				S	**Sn**	**10 02 58.2**	**+0.3**
IGN	**Direccin Gen**	**0.69**	**357**	*e*P	**Pn**	**10 02 47.6**	**-0.5**
UDBS	**Universidad Do**	**0.70**	**358**	P	**Pb**	**10 02 47.7**	**-0.5**
UDBS				S	**Sn**	**10 02 58.3**	**+0.4**
UDBS	**Universidad Do**	**0.70**	**358**	*e*P	**Pb**	**10 02 47.6**	**-0.5**
UEES	**Universidad Ev**	**0.70**	**352**	P	**Pn**	**10 02 47.7**	**-0.6**
UEES				S	**Sn**	**10 02 58.8**	**+0.7**
UEES	**Universidad Ev**	**0.70**	**352**	*i* P	**Pb**	**10 02 47.9**	**-0.5**
JAYA	**Jayaque - finc**	**0.71**	**334**	P	**Pn**	**10 02 47.6**	**-0.7**
JAYA				S	**Sn**	**10 02 57.5**	**-0.8**
JAYA	**Jayaque - finc**	**0.71**	**334**	*i* P	**Pn**	**10 02 47.7**	**-0.7**
JAYA				*i* S	**Sn**	**10 02 58.2**	**-0.1**
JAYA				IAML		10 02 59.0	
	comp=E,64μm,0.2s						
JAYA	**Jayaque - finc**	**0.71**	**334**	*e*P	**Pn**	**10 02 47.6**	**-0.7**
PMON	**Piamonte**	**0.71**	**346**	P	**Pb**	**10 02 47.9**	**-0.6**
PMON	**Piamonte**	**0.71**	**346**	*i* P	**Pb**	**10 02 47.9**	**-0.6**
PMON				*e*S	**Sn**	**10 02 58.7**	**+0.2**
PAVA	**Las Pavas**	**0.72**	**15**	P	**Pn**	**10 02 48.1**	**-0.4**
PAVA				S	**Sn**	**10 02 58.8**	**+0.3**
LBRS	**Las Brisas**	**0.72**	**7**	*e*P	**Pb**	**10 02 48.2**	**-0.4**
LFU	**La Fuente**	**0.73**	**1**	*i* P	**Pb**	**10 02 48.2**	**-0.5**
BOQS	**Boqueron**	**0.73**	**349**	*i* P	**Pb**	**10 02 48.3**	**-0.6**
TECA	**Tecapa**	**0.78**	**52**	*i* P	**Pn**	**10 02 49.1**	**-0.2**
SCLA	**Alcaldia de Sa**	**0.79**	**30**	P	**Pn**	**10 02 49.3**	**-0.1**
POSS	**Presa 15 de Se**	**0.82**	**43**	*e*P	**Pn**	**10 02 49.7**	**-0.1**
POSS				*e*S	**Sb**	**10 03 02.0**	**+1.0**
CEDA	**San Andres**	**0.82**	**342**	P	**Pn**	**10 02 49.3**	**-0.6**
CEDA	**San Andres**	**0.82**	**342**	*e*P	**Pn**	**10 02 49.2**	**-0.6**
CEDA				*e*S	**Sb**	**10 03 01.2**	**+0.1**
PACA	**Pacayal**	**0.91**	**60**	P	**Pn**	**10 02 51.3**	**+0.3**
PACA				S	**Sb**	**10 03 04.8**	**+1.2**
PACA	**Pacayal**	**0.91**	**60**	*e*P	**Pn**	**10 02 51.4**	**+0.3**
LCY	**Lacayo**	**0.91**	**63**	*e*P	**Pn**	**10 02 51.3**	**+0.1**
RANC	**El Ranchito**	**0.92**	**63**	P	**Pn**	**10 02 51.4**	**+0.1**
RANC				S	**Sb**	**10 03 05.0**	**+1.0**
RTR	**El Retiro**	**1.01**	**330**	*e*P	**Pn**	**10 02 52.2**	**-0.4**
P5NO	**Presa 5 de nov**	**1.03**	**21**	P	**Pn**	**10 02 52.4**	**-0.3**
P5NO				S	**Sn**	**10 03 06.0**	**-0.1**
P5NO	**Presa 5 de nov**	**1.03**	**21**	*i* P	**Pn**	**10 02 52.3**	**-0.4**
UNIC	**Universidad Ca**	**1.04**	**337**	P	**Pn**	**10 02 52.5**	**-0.4**
UNIC				S	**Sb**	**10 03 06.7**	**-0.7**
UNIC	**Universidad Ca**	**1.04**	**337**	*i* P	**Pn**	**10 02 52.5**	**-0.4**
LOAL	**Lomas de Alarc**	**1.16**	**327**	P	**Pb**	**10 02 54.7**	**-1.3**
SLOZ	**Alcaldia de Sa**	**1.19**	**328**	P	**Pn**	**10 02 54.7**	**-0.2**
SLOZ				S	**Sb**	**10 03 10.9**	**-0.6**
FAME	**Alcaldia de Sa**	**1.19**	**314**	P	**Pn**	**10 02 53.7**	**-1.2**
LCND	**La Caada**	**1.24**	**76**	P	**Pn**	**10 02 55.6**	**0.0**
CNCH	**Conchagua**	**1.29**	**78**	P	**Pn**	**10 02 56.2**	**-0.1**
CNCH				S	**Sn**	**10 03 13.8**	**+1.1**
CNCH	**Conchagua**	**1.29**	**78**	*e*P	**Pn**	**10 02 56.4**	**0.0**
MTO3	**Montecristo**	**1.39**	**351**	P	**Pn**	**10 02 57.3**	**-0.6**
MTO3				S	**Sn**	**10 03 14.7**	**-0.7**
MTO3	**Montecristo**	**1.39**	**351**	*i* P	**Pn**	**10 02 57.4**	**-0.6**
ESSJ	**San Jos, E**	**1.44**	**292**	*e*P	**Pb**	**10 03 03.7**	**+3.1**
CSGN	**Cosiguina Volc**	**1.53**	**91**	P	**Pn**	**10 02 59.1**	**-0.6**
CSGN				S	**Sn**	**10 03 18.9**	**+0.3**
ESQI	**Esquipulas**	**1.55**	**352**	P	**Pn**	**10 02 59.9**	**-0.1**
ESQI				S	**Sn**	**10 03 18.9**	**-0.2**
ZAFR2	**Estanzuela, Za**	**1.57**	**352**	*i* P	**Pb**	**10 03 05.8**	**+3.0**
POTN	**Potosi Cosigui**	**1.58**	**90**	P	**Pn**	**10 03 00.6**	**+0.3**
INTN	**La Esperanza I**	**1.63**	**38**	P	**Pn**	**10 03 01.7**	**-0.1**
PCG5	**San Vicente Pa**	**1.70**	**315**	*e*P	**Pb**	**10 03 05.4**	**+0.3**
SARH	**Santa Rosa de**	**1.79**	**12**	P	**Pn**	**10 03 03.4**	**+0.3**
SARH	**Santa Rosa de**	**1.79**	**12**	*i* P	**Pn**	**10 03 03.3**	**+0.2**
FG16	**Alotenango, Sa**	**1.83**	**313**	*e*P	**Pb**	**10 03 08.6**	**+1.1**
FG8	**Yepocapa, Chim**	**1.86**	**312**	*e*P	**Pb**	**10 03 09.2**	**+1.4**
CRIN	**San Cristobal**	**2.06**	**99**	P	**Pn**	**10 03 07.2**	**+0.3**
CRIN				S	**Sn**	**10 03 32.3**	**+0.8**
TGUH	**Tegucigalpa,Un**	**2.08**	**60**	P	**Pn**	**10 03 07.1**	**-0.2**
TGUH				S	**Sn**	**10 03 32.5**	**+0.2**
QUEN	**Al S del Volca**	**2.26**	**100**	P	**Pn**	**10 03 09.4**	**-0.3**
TEL3	**Telica 3**	**2.27**	**101**	P	**Pb**	**10 03 14.7**	**-0.1**
HERN	**Volcan Telica**	**2.28**	**100**	P	**Pn**	**10 03 09.2**	**-0.7**
HERN				S	**Sn**	**10 03 37.0**	**0.0**
HOYN	**Al Sur del Vol**	**2.29**	**100**	P	**Pn**	**10 03 10.3**	**+0.3**
HOYN				S	**Sn**	**10 03 36.3**	**-0.9**
POLN	**Al Sur del Vol**	**2.29**	**99**	P	**Pn**	**10 03 09.4**	**-0.6**
POLN				S	**Sn**	**10 03 36.1**	**-1.2**
APG	**El Apazote**	**2.36**	**327**	*i* P	**Pn**	**10 03 11.0**	**-0.2**
ROCN	**Rota Cerro Neg**	**2.38**	**102**	P	**Pn**	**10 03 10.7**	**-0.6**
CNGN	**Cerro Negro**	**2.43**	**102**	P	**Pn**	**10 03 12.7**	**+0.7**
STG5	**El Palmar, Qui**	**2.56**	**303**	*e*P	**Pb**	**10 03 17.9**	**-1.8**
STG8	**El Palmar, Qui**	**2.58**	**304**	*e*P	**Pb**	**10 03 19.5**	**-0.7**
STG2	**El Palmar, Qui**	**2.60**	**303**	*e*P	**Pb**	**10 03 18.9**	**-1.5**
MOM3	**MOM3**	**2.60**	**101**	P	**Pn**	**10 03 13.7**	**-0.5**
COPN	**Copaltepe**	**2.62**	**108**	P	**Pn**	**10 03 13.4**	**-1.1**
MOM2	**El Cardon**	**2.65**	**102**	P	**Pn**	**10 03 14.7**	**-0.2**
MOM2				S	**Sn**	**10 03 44.9**	**-1.0**
OCON	**Estacion meteo**	**2.66**	**76**	P	**Pn**	**10 03 14.5**	**-0.6**
OCON				S	**Sn**	**10 03 45.7**	**-0.6**
LIMN	**Finca el Limon**	**2.70**	**89**	P	**Pn**	**10 03 15.2**	**-0.5**
LIMN				S	**Sn**	**10 03 47.1**	**-0.2**
APQ3	**Volcan Apoyequ**	**2.80**	**105**	P	**Pn**	**10 03 17.3**	**+0.3**
APQ3				S	**Sn**	**10 03 48.9**	**-0.7**
RCFN	**Al S de San Ju**	**2.89**	**79**	P	**Pn**	**10 03 19.0**	**+0.6**
RTAL	**Retalhuleu**	**2.91**	**301**	P	**Pn**	**10 03 18.7**	**+0.1**
RTAL				S	**Sn**	**10 03 52.7**	**+0.2**
RCVN	**Varillal2**	**2.92**	**78**	P	**Pn**	**10 03 18.5**	**-0.3**
RCVN				S	**Sn**	**10 03 52.2**	**-0.7**
TISN	**Laguna Tiscapa**	**2.93**	**107**	P	**Pn**	**10 03 19.3**	**+0.5**
RCON	**San Juan de Ri**	**2.94**	**81**	P	**Pn**	**10 03 18.9**	**-0.2**
UNAN	**Cigeo UNAN**	**2.94**	**108**	P	**Pn**	**10 03 19.5**	**+0.6**
UNAN				S	**Sn**	**10 03 51.8**	**-1.4**
RCPN	**Sur Rio San Ju**	**3.00**	**80**	P	**Pn**	**10 03 19.7**	**-0.2**
MAS3	**Al N del Volca**	**3.05**	**109**	P	**Pn**	**10 03 20.0**	**-0.5**
MAS3				S	**Sn**	**10 03 53.6**	**-2.4**
MATN	**Matagalpa**	**3.13**	**91**	P	**Pn**	**10 03 20.2**	**-1.4**
MATN				S	**Sn**	**10 03 56.5**	**-1.5**
NANN	**Nandasmo**	**3.13**	**110**	P	**Pn**	**10 03 22.2**	**+0.6**
NANN				S	**Sn**	**10 03 57.6**	**-0.3**
NADN	**Granada**	**3.28**	**112**	S	**Sn**	**10 03 59.5**	**-2.1**
BOAB	**BOACO BROADBAN**	**3.43**	**99**	P	**Pn**	**10 03 24.8**	**-0.9**
PETF	**Flores**	**3.94**	**350**	P	**Pn**	**10 03 33.9**	**+1.1**
PETF	**Flores**	**3.94**	**350**	*e*P	**Pn**	**10 03 33.7**	**+0.9**
CMARA	**Lajas Hojancha**	**4.70**	**129**	P	**Pn**	**10 03 44.3**	**+1.0**
JTS	**Las Juntas de**	**4.91**	**123**	P	**Pn**	**10 03 47.2**	**+1.2**
JTS				S	**Sn**	**10 04 43.2**	**+1.3**
OCHAL	**Ojochal**	**6.64**	**125**	P	**Pn**	**10 04 12.9**	**+3.0**
DRK0	**Durika**	**6.88**	**122**	P	**Pn**	**10 04 13.1**	**-0.1**
DRK0				S	**Sn**	**10 05 25.8**	**-4.8**

*NOU **30** 10:08:49.2, 13°.77S×165°.37E, h0km, ML5.3/10, Vanuatu Islands*
*IDC **30** 10:09:15.6±1.3, 15°.47S×165°.68E, h0km, mb4.2/6, mbtmp4.2/9, ML4.5/3, MS3.4/7, Error ellipse: s-maj=34.1km s-min=24.7km az=161.0*
*NEIC **30** 10:09:17.8±1.3, 15°.7S±0°.1×165°.8E±0°.1, h10km±1km, mb4.3/13, Error ellipse: s-maj=18.6km s-min=15.9km az=315.0*

ISC 30 10:09:17.4±1.3, 15°.5S±0°.1×166°.2E±0°.1, h36km, n36, σ1↟08/28, mb4.2/11, MS3.4/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**		**2.94**	**139**	P	**Pn**	**10 10 01.2**	**-0.4**
RTV	**Rentapao**		**3.15**	**137**	P	**Pn**	**10 10 04.4**	**0.0**
MARNC	**Mare, Loyalty**		**6.20**	**164**	P	**Pn**	**10 10 47.0**	**+0.5**
MARNC	**Mare, Loyalty**		**6.20**	**164**	Pn	**Pn**	**10 10 47.2**	**+0.7**
DZM	**Mont Dzumac**		**6.54**	**178**	Pn	**Pn**	**10 10 52.6**	**+1.4**
	13nm,0.3s,baz=0.0,slow=20,SNR=6.8							
DZM					Sn	**Sn**	**10 12 03.6**	**-0.9**
	3.6nm,0.3s,baz=311,slow=22,SNR=1.3 59nm,0.3s							
YATNC	**Mamie plateau,**		**6.56**	**174**	P	**Pn**	**10 10 51.2**	**-0.1**
ONTNC	**Ouen Toro**		**6.77**	**178**	P	**Pn**	**10 10 56.1**	**+1.8**
ONTNC	**Ouen Toro**		**6.77**	**178**		**Pn**	**10 10 56.3**	**+2.0**
OUENC	**Ouen Island, N**		**6.91**	**175**	P	**Pn**	**10 10 57.2**	**+1.1**
OUENC	**Ouen Island, N**		**6.91**	**175**		**Pn**	**10 10 57.9**	**+1.8**
HNR	**Honiara**		**8.55**	**314**	LR	LR	10 14 19.4	
	comp=Z,8.3nm,18.2s,baz=224,slow=37							
MSVF	**Nonsavu**		**11.62**	**103**	Pn	Pn	10 12 09.0	+8.2
	0.2nm,0.3s,baz=270,slow=20,SNR=3.8							
MSVF					LR	LR	10 15 40.0	
	comp=Z,301nm,18.5s,baz=274,slow=32 3.2nm,0.7s							
EIDS	**Eidsvold**		**17.18**	**233**		**Pn**	**10 13 13.3**	**-1.4**
CTA	**Charters Tower**		**19.48**	**254**	P	**P**	**10 13 39.4**	**-2.0**
	0.6nm,0.3s,baz=74,slow=10,SNR=11							
CTA					LR	LR	10 20 34.2	
	comp=Z,114nm,18.6s,baz=143,slow=36 2.6nm,0.8s							
CTAO	**Charters Tower**		**19.48**	**254**	P	**P**	**10 13 40.2**	**-1.3**
CTAO					IAmb	IAmb	10 13 45.4	
	comp=Z,10nm,0.9s							
RAO	**Raoul Island**		**20.07**	**136**	LR	LR	10 20 39.0	
	comp=Z,54nm,19.4s,baz=103,slow=34							
AFI	**Afiamalu**		**21.40**	**89**	LR	LR	10 20 23.5	
	comp=Z,39nm,20.6s,baz=262,slow=31							
BKZ	**Black Stump Fm**		**25.26**	**161**	P	**P**	**10 14 41.0**	**+0.8**
INKA	**Innaminka**		**26.51**	**238**	P	**P**	**10 14 51.8**	**+0.2**
INKA					IAmb	IAmb	10 14 53.9	
	comp=Z,5.2nm,0.7s							
WR0	**Warramunga Arr**		**30.41**	**257**	P	**P**	**10 15 26.2**	**-0.3**
WR0					IAmb	IAmb	10 15 49.2	
	comp=Z,6.0nm,1.4s							
WR8	**Warramunga Arr**		**30.45**	**257**	P	**P**	**10 15 26.4**	**-0.5**
WR8					IAmb	IAmb	10 15 51.6	
	comp=Z,10nm,1.4s							
WB0	**Warramunga Arr**		**30.54**	**257**	P	**P**	**10 15 27.2**	**-0.4**
WB0					IAmb	IAmb	10 16 10.3	
	comp=Z,4.3nm,1.2s							
WRAB	**Tennant Creek**		**30.59**	**257**	P	**P**	**10 15 27.6**	**-0.4**
WRAB					IAmb	IAmb	10 15 39.0	
	comp=Z,4.6nm,1.5s							
WRA	**Warramunga Arr**		**30.60**	**257**	P	**P**	**10 15 27.8**	**-0.4**
	comp=Z,9.9nm,0.9s,baz=85,slow=8.7,SNR=22 comp=Z,1.9nm,0.9s							
AS31	**Alice Springs**		**31.39**	**250**	P	**P**	**10 15 35.1**	**-0.1**
ASAR	**Alice Springs**		**31.39**	**250**	P	**P**	**10 15 35.2**	**0.0**
	comp=Z,2.9nm,0.7s,baz=71,slow=9.9,SNR=78							
ASAR					LR	LR	10 26 26.4	
	comp=Z,103nm,18.5s,baz=202,slow=33 comp=Z,2.9nm,0.7s							
BBOO	**Buckleboo**		**32.26**	**232**	P	**P**	**10 15 42.7**	**0.0**
KNRA	**Kununurra**		**35.99**	**265**	P	**P**	**10 16 14.9**	**-0.2**
KNRA					IAmb	IAmb	10 16 15.3	
	comp=Z,5.4nm,0.8s							
SIJI	**Sorong**		**37.37**	**290**	LR	LR	10 33 31.9	
	comp=Z,53nm,18.0s,baz=166,slow=39							
FORT	**Forrest**		**37.98**	**240**	P	**P**	**10 16 31.7**	**-0.2**
FITZ	**Fitzroy Crossi**		**38.82**	**260**	P	**P**	**10 16 38.7**	**-0.4**
	comp=Z,4.4nm,0.7s,baz=97,slow=6.8,SNR=12 comp=Z,4.4nm,0.7s							
CMAR	**Chiang Mai Arr**		**74.29**	**295**	P	**P**	**10 20 53.5**	**+2.0**
	comp=Z,1.4nm,0.3s,baz=123,slow=5.2,SNR=5.0 comp=Z,1.4nm,0.3s							
HHC	**Hu-ho-hao-te**		**75.48**	**320**	*e*P	P	10 21 03.3	+5.2
ILAR	**Eielson Array**		**87.59**	**18**	P	P	10 22 06.5	+5.1
	comp=Z,0.5nm,0.8s,baz=237,slow=6.3,SNR=6.1 comp=Z,0.5nm,0.8s							
NVAR	**Mina Array Bea**		**88.59**	**50**	LR	LR	10 58 22.1	
	comp=Z,17nm,18.8s,baz=290,slow=33							
MKAR	**Makanchi Array**		**97.02**	**317**	P	Pdif	10 22 46.0	+0.3
	comp=Z,0.4nm,0.6s,baz=112,slow=3.0,SNR=3.6 comp=Z,0.4nm,0.6s							

HEL 30 10:40:54.3±0.5, 67°.64N×33°.88E, h0km, ML1.1, Suspected explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRF	**Varrio**		**1.63**	**276**	PG	Pn	10 41 23.7	-0.6
VRF					smax	smax	10 41 43.0	
	comp=Z,1.4nm,0.2s							
VRF					SG	Sn	10 41 44.4	-1.5
OLKF	**Oulanka, Finla**		**2.20**	**235**	PG	Pb	10 41 34.1	-0.9
OLKF					smax	smax	10 41 59.6	
	comp=Z,0.8nm,0.2s							
OLKF					SG	Sb	10 42 02.4	-0.4
RAJF	**Raja-Jooseppi**		**2.25**	**294**	PB	Pn	10 41 33.2	+0.4
RAJF					SN	Sn	10 42 01.4	+0.2
KU6	**Riekki**		**2.26**	**226**	PG	Pn	10 41 33.0	+0.1
	baz=46							
KU6					smax	smax	10 42 01.2	
	comp=Z,0.5nm,0.2s							
KU6					SG	Sn	10 42 02.2	+0.7
MSF	**Maaselka**		**2.59**	**230**	PG	Pb	10 41 40.1	-1.4
MSF					SG	Sb	10 42 13.4	-0.4
KEV	**Kevo**		**3.29**	**313**	PN	Pn	10 41 47.3	+0.4
KEV					SN	Sn	10 42 25.8	-0.8
ARA0	**ARCESS Array S**		**3.61**	**306**	PN	Pn	10 41 51.0	-0.5
	baz=116							
ARA0					SB	Sb	10 42 43.5	+0.2
HEF	**Hetta**		**3.92**	**286**	PN	Pn	10 41 53.8	-1.8
HEF					SN	Sn	10 42 39.0	-3.2
KTK1	**Kautokeino**		**4.18**	**294**	SN	Sn	10 42 49.3	+0.6

*IDC **30** 10:44:26.4±1.1, 7°.29S×155°.90E, h0km, mb3.9/12, mbtmp3.9/12, MS3.3/3, Error ellipse: s-maj=35.9km s-min=20.8km az=102.0*
*NEIC **30** 10:44:32.0±0.9, 7°.30S±0°.09×156°.0E±0°.1, h35km±2km, mb4.0/10, Error ellipse: s-maj=19.7km s-min=12.0km az=58.0*

ISC 30 10:44:31.9±0.7, 7°.3S±0°.1×156°.0E±0°.1, h44km, n33, σ1↟16/21, mb3.9/17, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**		**4.45**	**119**	LR	LR	10 47 29.6	
	comp=Z,9.8nm,21.0s,baz=342,slow=40							
HNR	**Honiara**		**4.45**	**119**	Pn	**Pn**	**10 45 35.1**	**-1.9**
RABL	**Rabaul**		**4.90**	**309**	Pn	**Pn**	**10 45 40.2**	**-3.0**
PMG	**Port Moresby**		**8.99**	**256**	LR	LR	10 49 46.6	
	comp=Z,126nm,18.8s,baz=330,slow=36							
CTA	**Charters Tower**		**15.84**	**216**	LR	LR	10 53 26.3	
	comp=Z,91nm,19.4s,baz=254,slow=34							
WR8	**Warramunga Arr**		**24.34**	**237**	P	**P**	**10 49 45.4**	**-0.6**
WR8					IAmb	IAmb	10 50 17.0	
	comp=Z,3.4nm,0.9s							
WB0	**Warramunga Arr**		**24.35**	**237**	P	**P**	**10 49 45.6**	**-0.4**
WB0					IAmb	IAmb	10 50 05.8	
	comp=Z,5.1nm,1.3s							
WRAB	**Tennant Creek**		**24.46**	**237**	P	**P**	**10 49 46.6**	**-0.4**
WRAB					IAmb	IAmb	10 50 16.8	
	comp=Z,2.9nm,1.1s							
WRA	**Warramunga Arr**		**24.47**	**237**	P	**P**	**10 49 46.5**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=64,slow=9.5,SNR=8.9 comp=Z,1.4nm,0.8s							
INKA	**Innaminka**		**24.94**	**214**	P	**P**	**10 49 51.3**	**0.0**
INKA					IAmb	IAmb	10 50 00.7	
	comp=Z,4.2nm,0.8s							
AS31	**Alice Springs**		**26.73**	**230**	P	**P**	**10 50 07.3**	**-0.2**
ASAR	**Alice Springs**		**26.73**	**230**	P	**P**	**10 50 06.7**	**-0.9**
	comp=Z,0.4nm,0.8s,baz=61,slow=9.8,SNR=8.2 comp=Z,0.4nm,0.8s							
H11S3	**WAKE ISLAND Hy**		**27.71**	**22**	T	T	11 18 41.8	
	baz=203,slow=74,SNR=50							
H11S2	**WAKE ISLAND Hy**		**27.72**	**22**	T	T	11 18 42.0	
	baz=203,slow=74,SNR=36							
H11S1	**WAKE ISLAND Hy**		**27.73**	**22**	T	T	11 18 43.0	
	baz=203,slow=74,SNR=28							
STKA	**Stephens Creek**		**27.90**	**207**	P	**P**	**10 50 17.8**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=52,slow=7.4,SNR=1.6							
STKA					LR	LR	10 59 56.2	
	comp=Z,94nm,20.0s,baz=213,slow=33 comp=Z,0.6nm,0.4s							
H11N1	**WAKE ISLAND Hy**		**28.90**	**22**	T	T	11 20 25.7	
	baz=204							
H11N3	**WAKE ISLAND Hy**		**28.91**	**22**	T	T	11 20 23.4	
	baz=204							
H11N2	**WAKE ISLAND Hy**		**28.92**	**22**	T	T	11 20 24.9	
	baz=204							
KSRS	**Korea Array**		**51.67**	**331**	P	**P**	**10 53 34.8**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=145,slow=7.4,SNR=2.7 comp=Z,0.6nm,0.6s							
CMAR	**Chiang Mai Arr**		**61.81**	**295**	P	**P**	**10 54 48.7**	**+1.8**
	comp=Z,0.8nm,0.7s,baz=115,slow=4.7,SNR=5.3 comp=Z,0.8nm,0.7s							
SONM	**Songino Array**		**70.12**	**327**	P	**P**	**10 55 40.5**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=131,slow=6.1,SNR=5.8 comp=Z,1.2nm,0.7s							
SONM	**Songino Array**		**70.12**	**327**	IAmb	IAmb	10 55 42.2	
	comp=Z,3.1nm,1.2s							
QSPA	**South Pole Qui**		**82.68**	**180**	P	**P**	**10 56 52.4**	**+1.6**
	comp=Z,1.4nm,0.9s,baz=236,slow=11,SNR=1.0 comp=Z,1.4nm,0.9s							
QSPA	**South Pole Qui**		**82.68**	**180**	IAmb	IAmb	10 56 58.6	
	comp=Z,9.2nm,1.4s							
ILAR	**Eielson Array**		**83.29**	**21**	P	**P**	**10 56 54.8**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=241,slow=5.2,SNR=7.7 comp=Z,0.3nm,0.6s							
MKAR	**Makanchi Array**		**84.28**	**318**	P	**P**	**10 57 00.4**	**+1.1**
	comp=Z,1.7nm,0.7s,baz=104,slow=5.5,SNR=18 comp=Z,1.7nm,0.7s							
ZALV	**Zalesovo Beam**		**84.98**	**326**	P	**P**	**10 57 02.8**	**+0.2**
	comp=Z,1.6nm,0.6s,baz=119,slow=6.0,SNR=6.4 comp=Z,1.6nm,0.6s							
KURK	**Kurchatov**		**87.68**	**322**	P	**P**	**10 57 16.2**	**+0.3**
KURK	**Kurchatov**		**87.68**	**322**	IAmb	IAmb	10 57 16.7	
	comp=Z,2.1nm,1.1s							
KURBB	**Kurchatov Arra**		**87.71**	**322**	P	**P**	**10 57 16.2**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=93,slow=4.9,SNR=5.9 comp=Z,0.4nm,0.6s							
BVAR	**Borovoye Array**		**93.13**	**323**	P	**P**	**10 57 40.5**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=116,slow=3.4,SNR=4.8 comp=Z,1.2nm,0.8s							
BDFB	**Brasilia**		**147.06**	**134**	PKPbc	**PKPab**	**11 04 12.4**	**-0.4**
	comp=Z,2.9nm,0.5s,baz=148,slow=4.6,SNR=4.2							

*NOU **30** 10:47:56.2, 30°.11S×174°.15W, h98km, mb4.7/6, Kermadec Islands Region*
*IDC **30** 10:48:57.5±2.0, 32°.98S×179°.08W, h0km, mb3.7/3, mbtmp3.8/4, ML3.6/1, Error ellipse: s-maj=48.1km s-min=35.9km az=64.0*
*WEL **30** 10:49:00.8±0.6, 33°.5S±5°.5×17°.9W±1°.0, h12km, mB4.9/6, ML4.3/12, MLv4.4/12, Mw(mB)4.2/6, Error ellipse: s-maj=14.5km s-min=4.4km az=112.0, confirmed*
*NEIC **30** 10:49:02.3±1.5, 33°.25S±0°.06×178°.9W±0°.2, h35km±2km, mb4.3/7, Error ellipse: s-maj=28.6km s-min=5.8km az=107.0*

ISC 30 10:49:01.5±1.1, 33°.43S±0°.06×178°.7W±0°.1, h41km, n47, σ1↟58/53, mb4.1/7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.21**	**9**	P	**Pn**	**10 50 04.3**	**+1.1**
GLKZ				S	**Sn**	**10 50 52.2**	**+1.0**
RAO	**Raoul Island**	**4.22**	**9**	Pn	**Pn**	**10 50 00.8**	**-2.6**
MXZ	**Matakaoa Point**	**4.79**	**210**	P	**Pn**	**10 50 14.0**	**+2.9**
MXZ	**Matakaoa Point**	**4.79**	**210**	Pn	**Pn**	**10 50 11.9**	**+0.8**
PKGZ	**Pakihiroa**	**5.14**	**210**	P	**Pn**	**10 50 17.8**	**+1.8**
HAZ	**Te Kaha**	**5.18**	**213**	P	**Pn**	**10 50 18.3**	**+1.9**
PUZ	**Puketiti**	**5.25**	**207**	P	**Pn**	**

KK31				⇑Lg		Lg	10 50 42.1	
	1.1nm,0.2s,baz=188,slow=28,SNR=11							
AAK	**Ala-Archa**	**4.15**	**52**	⇓Pn		**Pb**	**10 50 23.2**	**0.0**
	0.9nm,0.8s							
AAK				⇑Lg		Lg	10 51 24.4	
	1.5nm,1.1s							

NOU ***30*** *10:54:14.7, 10˚.27S×161˚.26E, h13km, MLv4.7/7, Solomon Islands*
IDC ***30*** *10:54:15.1±2.2, 9˚.97S×161˚.32E, h104km±18km, mb3.3/6, mbtmp3.8/7, Error ellipse: s-maj=27.1km s-min=23.7km az=81.0*
ISC 30 10:54:12.6±0.8, **10˚.20S**±0˚.07×**161˚.46E**±0˚.07, **h85**km, **n15,** σ1**9**20/17, **mb3.5/6, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HURO	**Huro Makira**	**0.51**	**121**	P	**Pn**	**10 54 27.7**	**+0.8**
HURO	**Huro Makira**	**0.51**	**121**	S	**Sn**	**10 54 38.5**	**+0.9**
HNR	**Honiara**	**1.67**	**297**	P	**Pn**	**10 54 40.6**	**+0.3**
	24nm,0.4s,baz=207,slow=1.8,SNR=44						
HNR				S	**Sn**	**10 55 00.9**	**-0.6**
	38nm,0.3s,baz=98,slow=20,SNR=19						
HNR	**Honiara**	**1.67**	**297**	P	**Pn**	**10 54 41.6**	**+1.2**
HNR	**Honiara**	**1.67**	**297**	S	**Sn**	**10 55 02.6**	**+1.1**
NGOA	**Tingoa Renbel**	**1.92**	**225**	P	**Pn**	**10 54 44.1**	**+0.4**
NGOA	**Tingoa Renbel**	**1.92**	**225**	S	**Sn**	**10 55 07.3**	**0.0**
SAVO	**Savo Central**	**1.93**	**303**	P	**Pn**	**10 54 44.6**	**+0.8**
DZM	**Mont Dzumac**	**12.74**	**159**	P	**P**	**10 57 15.9**	**-2.5**
	5.3nm,0.3s,baz=311,slow=23,SNR=18						
DZM				S	**Sn**	**10 59 32.1**	**+1.4**
	14nm,1.0s,baz=330,slow=20,SNR=2.5						
WRA	**Warramunga Arr**	**27.88**	**246**	P	**P**	**10 59 56.1**	**+1.3**
	0.3nm,0.5s,baz=73,slow=9.1,SNR=6.8						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**29.49**	**239**	P	**P**	**11 00 09.1**	**+0.1**
	0.4nm,0.9s,baz=69,slow=8.9,SNR=2.5						
	0.4nm,0.9s						
SONM	**Songino Array**	**75.53**	**325**	P	**P**	**11 05 46.3**	**-1.7**
	0.6nm,0.7s,baz=125,slow=7.2,SNR=1.9						
	0.6nm,0.7s						
QSPA	**South Pole Qui**	**79.80**	**180**	P	**P**	**11 06 12.5**	**+1.0**
	0.9nm,0.9s,baz=93,slow=12,SNR=1.5						
	0.9nm,0.9s						
ILAR	**Eielson Array**	**84.10**	**20**	P	**P**	**11 06 33.4**	**-0.4**
	0.3nm,0.8s,baz=233,slow=4.6,SNR=4.6						
	0.3nm,0.8s						
NVAR	**Mina Array Bea**	**88.73**	**51**	P	**P**	**11 06 58.0**	**+0.7**
	0.4nm,0.7s,baz=235,slow=7.1,SNR=4.5						
	0.4nm,0.7s						

RSNC ***30*** *11:06:24.6±0.0, 8˚N±2˚×7˚3W±˚, h0km±3km, M2.6, ML2.5, MLv3.2*
FUNV ***30*** *11:06:24.9, 7˚.72N×72˚.76W, h5km, MW3.5, Presumed earthquake*
ISC 30 11:06:22.6±0.8, **7˚.73N**±0˚.03×**72˚.75W**±0˚.04, **h10**km, **n15,** σ1**9**76/31, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAMC	**Pamplona, Colo**	**0.39**	**173**	P	**Pb**	**11 06 31.5**	**-0.4**
PAMC				S	**Sb**	**11 06 37.6**	**-0.5**
OCAC	**Ocana**	**0.76**	**312**	P	**Pg**	**11 06 36.5**	**-0.9**
OCAC				S	**Sg**	**11 06 46.0**	**-1.3**
BARC	**Barichara**	**1.20**	**201**	P	**Pg**	**11 06 45.6**	**-0.2**
BARC				P	**Pn**	**11 06 45.7**	**-0.1**
BARC				S	**Sg**	**11 07 01.5**	**0.0**
RUSC	**La Rusia**	**1.85**	**190**	P	**Pg**	**11 06 57.7**	**-0.5**
RUSC				S	**Sg**	**11 07 21.8**	**-0.4**
RUSC	**La Rusia**	**1.85**	**190**	*eP*	**Pg**	**11 06 57.3**	**-0.9**
RUSC				*eS*	**Sg**	**11 07 21.3**	**-1.0**
PTBC	**PUERTO BERRIO,**	**2.06**	**235**	P	**Pn**	**11 06 57.3**	**-0.1**
PTBC				S	**Sb**	**11 07 25.7**	**-0.2**
SDV	**Santo Domingo**	**2.39**	**61**	P	**Pb**	**11 07 04.6**	**-1.3**
SDV				S	**Sb**	**11 07 35.7**	**+0.1**
SDV	**Santo Domingo**	**2.39**	**61**	*eP*	**Pb**	**11 07 04.5**	**-1.3**
SDV				*eS*	**Sb**	**11 07 34.8**	**-0.8**
SPBC	**San Pablo de B**	**2.44**	**213**	P	**Pg**	**11 07 07.8**	**-1.7**
SPBC				S	**Sg**	**11 07 40.1**	**-1.1**
UREC	**San Jos de Ur**	**2.76**	**271**	P	**Pn**	**11 07 07.2**	**+0.3**
UREC				S	**Sb**	**11 07 43.9**	**-2.1**
SJCC	**San Jacinto, C**	**3.23**	**312**	P	**Pn**	**11 07 15.8**	**+2.3**
SJCC				S	**Sb**	**11 07 56.5**	**-3.1**
SJCC	**San Jacinto, C**	**3.23**	**312**	*eP*	**Pn**	**11 07 15.7**	**+2.2**
SJCC				*eS*	**Sn**	**11 07 53.8**	**+1.7**
GUY2C	**Guyana, Caldas**	**3.59**	**226**	P	**Pn**	**11 07 21.9**	**+3.0**
GUY2C				S	**Sb**	**11 08 09.1**	**-1.4**
APAC	**Apartado, Choc**	**3.80**	**273**	P	**Pn**	**11 07 21.9**	**+0.6**
APAC				S	**Sn**	**11 08 11.0**	**+4.9**
URIC	**Uribia, Colomb**	**4.02**	**11**	P	**Pn**	**11 07 24.7**	**+0.4**
URIC				S	**Sn**	**11 08 14.7**	**+3.2**

TRN 30 11:08:02.6, 17˚.69N×62˚.51W, h76km, MD3.7, North-east of St. Kitts., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKI	**Saint Kitts**	**0.41**	**212**	*eP*	Pn	11 08 16.2	+0.9
SKI				*eS*	Sn	11 08 26.0	+1.4
SEUS	**St. Eustatius**	**0.49**	**247**	*eP*	Pn	11 08 16.8	+0.9
SEUS				*eS*	Sn	11 08 27.2	+1.6
SMRT	**St. Maarten**	**0.65**	**304**	*eP*	Pn	11 08 17.9	+0.4
SMRT				*eS*	Sn	11 08 29.5	+1.1
ANWB	**Willy Bob**	**0.69**	**91**	*eP*	Pn	11 08 18.8	+0.9
ANWB				*eS*	Sn	11 08 31.1	+1.9
SABA	**Saba**	**0.70**	**265**	*eP*	Pn	11 08 19.2	+1.2
SABA				*eS*	Sn	11 08 31.1	+1.8
DHSZ	**Broadband at M**	**1.58**	**153**	*eP*	Pn	11 08 29.9	+1.1
DHSZ				*eS*	Sn	11 08 49.4	+0.8
MMLZ	**Guadeloupe Bro**	**1.82**	**154**	*eP*	Pn	11 08 33.3	+1.2
MMLZ				*eS*	Sn	11 08 55.9	+1.5
DSDZ	**La Diserade, G**	**1.94**	**134**	*eP*	Pn	11 08 34.2	+0.6
DSDZ				*eS*	Sn	11 08 58.8	+1.5
TBG	**Guadaloupe-3**	**2.00**	**155**	*eP*	Pn	11 08 34.9	+0.4
TBG				*eS*	Sn	11 08 59.5	+0.8
DWS	**Wesley**	**2.40**	**151**	*eP*	Pn	11 08 40.7	+0.9
DWS				*eS*	Sn	11 09 09.1	+0.8
DSLB	**Salisbury**	**2.47**	**155**	*eP*	Pn	11 08 42.2	+1.4
DSLB				*eS*	Sn	11 09 11.1	+1.1

IDC ***30*** *11:26:28.5±2.2, 12˚.69S×83˚.37E, h0km, mb3.7/9, mbtmp3.7/9, MS2.9/2, Error ellipse: s-maj=72.9km s-min=25.1km az=45.0*
ISC 30 11:26:29.1±1.9, **13˚.0S**±0˚.3×**83˚.3E**±0˚.3, **h10**km, **n14,** σ1**9**10/11, **mb4.0/9, South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S2	**Diego Garcia H**	**11.84**	**295**	T	T	11 40 56.4	
	baz=114,slow=74						
H08S1	**Diego Garcia H**	**11.86**	**295**	T	T	11 40 56.1	
	baz=114,slow=74						
H08S3	**Diego Garcia H**	**11.86**	**295**	T	T	11 40 59.5	
	baz=114,slow=74						
PALK	**Pallekele**	**20.25**	**353**	P	**Pn**	**11 31 08.8**	**+2.0**
	5.9nm,0.3s,baz=164,slow=11,SNR=25						
PALK				S	S	11 34 36.6	-16
	4.3nm,0.4s,baz=212,slow=7.5,SNR=8.7						
PALK				LR	LR	11 37 02.0	
	comp=Z,40nm,20.3s,baz=132,slow=32						
ASAR	**Alice Springs**	**49.02**	**110**	P	**P**	**11 35 16.6**	**0.0**
	0.4nm,0.8s,baz=277,slow=8.3,SNR=4.6						
	0.4nm,0.8s						
WRA	**Warramunga Arr**	**49.32**	**105**	P	**P**	**11 35 20.1**	**+1.1**
	0.3nm,0.7s,baz=262,slow=8.5,SNR=4.5						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**59.47**	**359**	P	**P**	**11 36 31.5**	**-0.7**
	0.4nm,0.5s,baz=166,slow=6.2,SNR=4.8						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**63.44**	**357**	P	**P**	**11 36 57.8**	**-1.1**
	0.4nm,0.6s,baz=188,slow=7.0,SNR=5.7						
	0.4nm,0.6s						
SONM	**Songino Array**	**63.93**	**17**	P	**P**	**11 37 01.7**	**-0.7**
	0.7nm,0.7s,baz=204,slow=7.0,SNR=4.4						
	0.7nm,0.7s						
KSRS	**Korea Array**	**65.35**	**38**	P	**P**	**11 37 11.2**	**-0.5**
	0.8nm,0.7s,baz=224,slow=6.8,SNR=2.7						
KSRS				LR	LR	12 07 51.3	
	comp=Z,7.8nm,18.1s,baz=30,slow=38						
	0.8nm,0.7s						

BVAR	**Borovoye Array**	**66.63**	**352**	P		**P**	**11 37 18.9**	**-0.8**
	0.4nm,0.4s,baz=131,slow=5.9,SNR=0.9							
	0.4nm,0.4s							
ZALV	**Zalesovo Beam**	**66.64**	**1**	P		**P**	**11 37 18.7**	**-1.0**
	0.7nm,0.4s,baz=202,slow=7.3,SNR=4.4							
	0.7nm,0.4s							
BRTR	**Keskin Array B**	**69.80**	**321**	P		**P**	**11 37 40.4**	**+0.3**
	0.6nm,0.5s,baz=155,slow=6.0,SNR=3.0							
	0.6nm,0.5s							
PDAR	**Pinedale Array**	**148.28**	**18**	PKPbc		**PKPbc**	**11 46 16.7**	**+0.5**
	0.4nm,0.9s,baz=345,slow=2.0,SNR=2.3							

IDC 30 11:29:58.0±2.3, **23˚.14S×178˚.40W, h0**km, **mb3.8**/3, **mbtmp3.8**/3, **Error ellipse: s-maj=66.7km s-min=39.6km az=27.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.62**	**259**	P	P	11 38 04.0	-0.4
	0.4nm,0.7s,baz=97,slow=7.9,SNR=14						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**43.93**	**265**	P	P	11 38 07.1	+0.1
	1.1nm,0.5s,baz=104,slow=7.8,SNR=20						
	1.1nm,0.5s						
QSPA	**South Pole Qui**	**66.94**	**180**	P	P	11 40 52.4	+0.2
	1.5nm,0.9s,baz=92,slow=7.0,SNR=5.6						
	1.5nm,0.9s						
ARCES	**ARCESS Array B**	**131.44**	**349**	PKP	PKPdf	11 49 11.5	-0.3
	7.0nm,1.1s,baz=37,slow=2.0,SNR=2.1						
HFS	**Hagfors**	**142.07**	**350**	PKP	PKPdf	11 49 29.9	-1.8
	2.5nm,0.8s,baz=352,slow=2.9,SNR=6.5						

NIED ***30*** *11:48:27.6, 43˚.41N×147˚.95E, h0km, MW3.5, Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁴Nm; Mrr0.33; Mθθ0.65; Mϕϕ-0.98; Mrθ1.21; Mϕθ-0.71; Mrϕ0.38; Fault plane solution: Mo1.69000×10¹⁴ NP1: ϕs161.00000°, δ41.00000°, λ12.00000°. NP2:ϕs62.00000°, δ82.00000°, λ130.00000°.*
JMA ***30*** *11:48:27.6±0.6, 43˚.N±3˚×14˚8E±˚, h0km, MV3.5/19, E OFF HOKKAIDO*
SKHL ***30*** *11:48:28.9±0.3, 43˚.50N×148˚.30E, h45km±5km, mb4.5/4*
ISC 30 11:48:28.2±2.8, **43˚.4N**±0˚.1×**148˚.3E**±0˚.1, **h40**km, **n15,** σ1**9**31/21, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHO	**Shikotan**	**1.14**	**294**	*eP*	Pn	11 48 58.3	+11
SHO				AMB	AMB	11 49 00.3	
	190nm,0.3s						
SHO				*eS*	Sn	11 49 12.9	+11
SHO				A	A	11 49 16.2	
	410nm,0.4s						
SHO				A	A	11 49 16.2	
	690nm,0.4s						
NEM2	**Nemuro 2**	**1.84**	**269**	P	**Pn**	**11 48 57.6**	**+0.3**
NEM2				S	**Sn**	**11 49 19.1**	**-0.3**
KUR	**Kuril'sk**	**1.84**	**351**	*eP*	**Pn**	**11 48 57.9**	**+0.6**
KUR				AMB	AMB	11 49 03.5	
	50nm,0.2s						
KUR				*i* S	**Sn**	**11 49 18.3**	**-1.1**
KUR				A	A	11 49 27.5	
	180nm,0.3s						
KUR				A	A	11 49 27.5	
	140nm,0.3s						
NMR	**Nemuro--Hokkai**	**1.85**	**270**	*eP*	**Pn**	**11 48 57.7**	**+0.3**
NMR				*eS*	**Sn**	**11 49 19.1**	**-0.5**
YUK	**Yuzh-Kuril'sk**	**1.85**	**290**	*eP*	**Pn**	**11 48 57.5**	**0.0**
YUK				AMB	AMB	11 48 59.7	
	210nm,0.5s						
YUK				*eS*	**Sn**	**11 49 18.9**	**-0.8**
YUK				A	A	11 49 25.6	
	490nm,0.4s						
YUK				A	A	11 49 25.6	
	490nm,0.4s						
GLVR	**Golovnino**	**2.03**	**280**	*eP*	**Pn**	**11 48 59.1**	**-0.7**
GLVR				AMB	AMB	11 49 01.4	
	50nm,0.2s						
GLVR				*eS*	**Sn**	**11 49 22.6**	**-1.3**
GLVR				A	A	11 49 24.6	
	500nm,0.3s						
GLVR				A	A	11 49 24.6	
	230nm,0.3s						
JKHN	**Kushirohamanak**	**2.30**	**263**	*eP*	**Pn**	**11 49 05.2**	**+1.6**
JKHN				*eS*	**Sn**	**11 49 31.1**	**+0.6**
JRA	**Rausu**	**2.34**	**284**	P	**Pn**	**11 49 04.9**	**+0.7**
JRA				S	**Sn**	**11 49 32.2**	**+0.5**
JNSB	**Nemuroshibetsu**	**2.40**	**280**	P	**Pn**	**11 49 06.0**	**+1.0**
AKK	**Akkeshi**	**2.54**	**262**	*eP*	**Pn**	**11 49 07.9**	**+1.1**
JNK	**Nakash**	**2.59**	**275**	*eP*	**Pn**	**11 49 07.9**	**+0.3**
JAK	**Akkeshi**	**2.65**	**262**	*eP*	**Pn**	**11 49 09.3**	**+1.0**
JTKR	**Abashiri--Toko**	**3.21**	**282**	P	**Pn**	**11 49 17.7**	**+1.6**
JCH	**Churui**	**3.69**	**259**	P	**Pn**	**11 49 24.2**	**+1.6**
JANG	**Nango**	**5.88**	**241**	*eS*	**Sn**	**11 50 55.2**	**-3.8**

MEX ***30*** *13:00:21.5±0.8, 15˚.51N×93˚.43W, h91km±8km, MD4.1*
GCG ***30*** *13:00:21.4±0.6, 15˚.60N×93˚.29W, h88km±13km, MD4.3, ML3.2, Presumed earthquake*
ISC 30 13:00:18.5±1.3, **15˚.48N**±0˚.05×**93˚.38W**±0˚.03, **h106**km±10km, **n25,** σ2**9**11/50, **1D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.28**	**35**	*eP*	**Pn**	**13 00 32.9**	**-0.7**
PCIG				*i* S	**Sn**	**13 00 42.6**	**-2.3**
CARR	**Arriaga**	**0.92**	**326**	*eP*	**Pn**	**13 00 38.7**	**+0.2**
CARR				*eS*	**Sn**	**13 00 52.9**	**-0.7**
PATR	**El Naranjo**	**1.16**	**108**	*eP*	**Pn**	**13 00 42.5**	**+1.2**
PATR				*i* S	**Sn**	**13 00 59.8**	**+1.2**
PAVE	**Pavencul**	**1.20**	**103**	⇓*eP*	**Pn**	**13 00 43.0**	**+1.3**
PAVE				*eS*	**Sn**	**13 01 00.4**	**+1.2**
THIG		**1.22**	**117**	*eP*	**Pn**	**13 00 43.2**	**+1.6**
THIG				*eS*	**Sn**	**13 01 00.8**	**+1.5**
THIG		**1.22**	**117**	*i* P	**Pn**	**13 00 43.2**	**+1.6**
THIG				*i* S	**Sn**	**13 01 00.5**	**+1.3**
THIG				IAML		13 01 01.2	
	comp=N,539nm,0.3s						
CHUJ	**Union Juarez**	**1.29**	**107**	*eP*	**Pn**	**13 00 44.0**	**+1.2**
CHUJ				*eS*	**Sn**	**13 01 02.1**	**+1.0**
TGIG		**1.32**	**11**	*eP*	**Pn**	**13 00 43.6**	**+0.7**
TGIG				*eS*	**Sn**	**13 01 00.4**	**-1.1**
TGIG		**1.32**	**11**	*i* P	**Pn**	**13 00 43.9**	**+0.9**
TGIG				*i* S	**Sn**	**13 01 00.3**	**-1.2**
TGIG				IAML		13 01 06.6	
	comp=E,130nm,0.2s						
CCIG	**Comitan**	**1.44**	**56**	*eP*	**Pn**	**13 00 45.4**	**+0.9**
CCIG				*eS*	**Sn**	**13 01 04.7**	**+0.4**
RTAL	**Retalhuleu**	**1.89**	**120**	*eP*	**Pn**	**13 00 52.0**	**+2.2**
RTAL				*eS*	**Sn**	**13 01 16.2**	**+2.5**
CMIG	**Matias Romero**	**2.16**	**318**	*eP*	**Pn**	**13 00 54.2**	**+0.9**
CMIG				*eS*	**Sn**	**13 01 20.7**	**+0.7**
STG2	**El Palmar, Qui**	**2.20**	**118**	*i* P	**Pn**	**13 00 51.8**	**-2.2**
STG2				*i* S	**Sn**	**13 01 16.0**	**-5.1**
STG8	**El Palmar, Qui**	**2.21**	**117**	*i* P	**Pn**	**13 00 52.3**	**-1.9**
STG8				*i* S	**Sn**	**13 01 16.9**	**-4.7**
STG8				IAML		13 01 26.2	
	comp=N,369nm,0.2s						
HUIG	**Huatulco**	**2.64**	**277**	*eP*	**Pn**	**13 00 59.0**	**-0.6**
HUIG				*eS*	**Sn**	**13 01 27.7**	**-3.5**
NEUV	**Arroyo Zacate**	**3.21**	**314**	*eP*	**Pn**	**13 01 06.5**	**-0.7**
NEUV				*eS*	**Sn**	**13 01 41.6**	**-3.2**
PEIG	**Puerto Escondi**	**3.66**	**279**	*eP*	**Pn**	**13 01 13.1**	**-0.2**
PEIG				*eS*	**Sn**	**13 01 52.9**	**-2.8**
SCIG	**Sabancuy**	**4.06**	**31**	*eP*	**Pn**	**13 01 17.5**	**-1.0**
SCIG				*eS*	**Sn**	**13 02 04.4**	**-0.7**
YOIG	**Yosondua**	**4.23**	**290**	*eP*	**Pn**	**13 01 20.8**	**-0.3**
YOIG				*eS*	**Sn**	**13 02 10.5**	**+0.8**
TOIG	**Toxpalan**	**4.38**	**307**	*eP*	**Pn**	**13 01 26.7**	**+3.7**
TOIG				*eS*	**Sn**	**13 02 13.6**	**+0.5**
TXIG	**Tlaxiaco**	**4.57**	**293**	*eP*	**Pn**	**13 01 27.9**	**+2.3**
TXIG				*eS*	**Sn**	**13 02 19.4**	**+1.6**
PNIG	**Pinotepa**	**4.65**	**282**	*eP*	**Pn**	**13 01 27.5**	**+0.9**
PNIG				*eS*	**Sn**	**13 02 17.2**	**-2.4**
HLIG	**Huajuapan de L**	**4.84**	**300**	*eP*	**Pn**	**13 01 32.0**	**+2.7**
HLIG				*eS*	**Sn**	**13 02 28.4**	**+4.0**
JAUV	**Jalcomulco**	**5.06**	**320**	*eP*	**Pn**	**13 01 32.6**	**+0.5**
JAUV				*eS*	**Sn**	**13 02 25.7**	**-3.8**
FTIG	**Fresnillo de T**	**5.16**	**299**	*eP*	**Pn**	**13 01 35.7**	**+2.2**
FTIG				*eS*	**Sn**	**13 02 33.3**	**+1.5**

JMA ***30*** *13:06:56.9±0.2, 25˚N±2˚×122˚.8E±0˚.7, h136km±2km, MV3.2/17, NW OFF ISHIGAKIJIMA IS*
TAP ***30*** *13:06:57.0, 24˚.88N×122˚.81E, h135km, ML3.4, D*
ISC 30 13:06:56.7±1.5, **24˚.84N**±0˚.05×**122˚.83E**±0˚.03, **h137**km±8km, **n77,** σ0**9**93/139, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.40**	**164**	*eP*	**Pn**	**13 07 16.3**	**+0.1**
JYNG				*eS*	**Sn**	**13 07 30.5**	**-0.3**
YOJ	**Yonaguni jima**	**0.41**	**156**	*eP*	**Pn**	**13 07 16.4**	**+0.2**
YOJ				*eS*	**Sn**	**13 07 31.1**	**+0.2**
YOJ	**Yonaguni jima**	**0.41**	**156**	*eP*	**Pn**	**13 07 16.3**	**+0.2**
YOJ				*eS*	**Sn**	**13 07 30.6**	**-0.3**
EOS2	**EOS2**	**0.68**	**233**	P	**Pn**	**13 07 18.9**	**+1.4**
EOS2				*eS*	**Sn**	**13 07 34.0**	**+0.6**
EOS3	**EOS3**	**0.72**	**220**	*eP*	**Pn**	**13 07 18.4**	**+0.5**
EOS3				S	**Sn**	**13 07 34.4**	**+0.6**
TWB1	**Santiao Chiao**	**0.78**	**283**	*i* P	**Pn**	**13 07 18.8**	**+0.4**
TWB1				S	**Sn**	**13 07 34.7**	**-0.2**
EOS4	**EOS4**	**0.85**	**213**	*eP*	**Pn**	**13 07 18.9**	**+0.3**
EOS4				*eS*	**Sn**	**13 07 35.5**	**+0.3**
SXI1	**Grass Mountain**	**0.90**	**287**	*i* P	**Pn**	**13 07 19.6**	**+0.1**
SXI1				S	**Sn**	**13 07 36.6**	**-0.2**
TWC	**Suao**	**0.92**	**256**	*eP*	**Pn**	**13 07 19.0**	**-0.5**
TWC				*eS*	**Sn**	**13 07 35.6**	**-1.3**
TIPB	**Shuangxi**	**0.92**	**279**	*i* P	**Pn**	**13 07 20.1**	**+0.5**
TIPB				*i* S	**Sn**	**13 07 36.4**	**-0.6**
IRIF	**Iriomote-Funau**	**0.96**	**121**	*eP*	**Pn**	**13 07 19.9**	**0.0**
IRIF				*eS*	**Sn**	**13 07 37.1**	**-0.4**
NDS	**Dongshan**	**1.03**	**259**	*eP*	**Pn**	**13 07 21.2**	**+0.6**
NDS				*i* S	**Sn**	**13 07 38.0**	**-0.7**
PCYT	**Pengchaiyu**	**1.04**	**319**	*eP*	**Pn**	**13 07 21.6**	**+1.0**
TWE	**Neicheng**	**1.06**	**264**	*eP*	**Pn**	**13 07 21.2**	**+0.4**
FUSB	**Fushanzhiwuyua**	**1.13**	**266**	*eP*	**Pn**	**13 07 21.9**	**+0.3**
FUSB				S	**Sn**	**13 07 40.4**	**-0.1**
ENTT	**Nioudou**	**1.16**	**261**	*eP*	**Pn**	**13 07 22.5**	**+0.7**
ENTT				S	**Sn**	**13 07 40.2**	**-0.7**
HATJ	**Hateruma jima**	**1.18**	**131**	*eP*	**Pn**	**13 07 22.6**	**+0.6**
HATJ				*eS*	**Sn**	**13 07 41.3**	**+0.1**
NWLT	**Wulai**	**1.21**	**267**	P	**Pn**	**13 07 21.8**	**-0.5**
NWLT				S	**Sn**	**13 07 40.9**	**-0.9**
ZUZH	**Zhuzihu**	**1.21**	**286**	*eP*	**Pn**	**13 07 23.2**	**+0.9**
ZUZH				S	**Sn**	**13 07 41.5**	**-0.3**
NDT	**Datong Townshi**	**1.22**	**259**	*eP*	**Pn**	**13 07 23.4**	**+1.1**
NDT				*eS*	**Sn**	**13 07 42.5**	**+0.6**
LATG	**Datong**	**1.22**	**256**	*eP*	**Pn**	**13 07 23.3**	**+0.8**
LATG				S	**Sn**	**13 07 42.5**	**+0.3**
JKRS	**Kuro-shima**	**1.23**	**119**	P	**Pn**	**13 07 23.1**	**+0.6**
JKRS				*eS*	**Sn**	**13 07 42.1**	**0.0**
JIJ	**Ishigaki jima**	**1.29**	**111**	P	**Pn**	**13 07 23.1**	**+0.1**
JIJ				*eS*	**Sn**	**13 07 41.8**	**-1.3**
NACB	**Ninganchiao**	**1.30**	**240**	*eP*	**Pn**	**13 07 23.3**	**+0.1**
NACB				*eS*	**Sn**	**13 07 42.3**	**-1.1**
YHNB	**Yeheng**	**1.33**	**263**	*eP*	**Pn**	**13 07 24.0**	**+0.5**
YHNB				S	**Sn**	**13 07 43.6**	**-0.4**
NSK	**Sanguang**	**1.35**	**263**	*i* P	**Pn**	**13 07 24.1**	**+0.4**
NSK				*eS*	**Sn**	**13 07 43.6**	**-0.7**
JISG	**Ishigakijimahi**	**1.37**	**100**	P	**Pn**	**13 07 24.0**	**+0.1**
JISG				*eS*	**Sn**	**13 07 43.3**	**-1.3**
NNSB	**Datong**	**1.38**	**253**	*i* P	**Pn**	**13 07 24.6**	**+0.4**
NNSB				S	**Sn**	**13 07 44.4**	**-0.6**
ETLH	**Xiulin Townshi**	**1.38**	**243**	*eP*	**Pn**	**13 07 24.1**	**0.0**
ETLH				*i* S	**Sn**	**13 07 44.0**	**-1.0**
NNS	**Nan Shan**	**1.38**	**254**	*eP*	**Pn**	**13 07 24.6**	**+0.4**
NNS				*eS*	**Sn**	**13 07 44.2**	**-0.9**
TEYL	**Yanliau Villag**	**1.48**	**230**	*eP*	**Pn**	**13 07 25.0**	**-0.1**
TEYL				*eS*	**Sn**	**13 07 46.9**	**+0.1**
ETM	**Tongmen**	**1.50**	**235**	*eP*	**Pn**	**13 07 25.1**	**-0.1**
ETM				*eS*	**Sn**	**13 07 45.4**	**-1.7**
KSHI	**Guanxi Townshi**	**1.50**	**268**	*eP*	**Pn**	**13 07 26.0**	**+0.7**
KSHI				*i* S	**Sn**	**13 07 47.2**	**0.0**
LXIB	**Xiulin Townshi**	**1.52**	**238**	*i* P	**Pn**	**13 07 25.5**	**-0.3**
LXIB				*eS*	**Sn**	**13 07 46.5**	**-1.4**
SHUL	**Shoufeng**	**1.56**	**228**	*eP*	**Pn**	**13 07 26.1**	**+0.2**
SHUL				S	**Sn**	**13 07 47.4**	**-0.9**
FUSS	**Fushou**	**1.56**	**248**	*eP*	**Pn**	**13 07 26.9**	**+0.7**
FUSS				*eS*	**Sn**	**13 07 47.7**	**-1.0**
NFF	**Wufeng Townshi**	**1.57**	**263**	*eP*	**Pn**	**13 07 26.6**	**+0.4**
NFF				*i* S	**Sn**	**13 07 47.5**	**-1.1**
WHF	**Hehuan Shan**	**1.58**	**244**	*eP*	**Pn**	**13 07 26.3**	**-0.4**
WHF				S	**Sn**	**13 07 48.4**	**-1.1**
TWT	**Tachien**	**1.61**	**249

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.34**	**105**	P	**Pb**	**13 08 24.8**	**-0.3**
JYNG				eS	Sb	13 08 30.2	-0.4
EOS2	**EOS2**	**0.35**	**250**	P	**Pb**	**13 08 24.7**	**-0.6**
EOS2				eS	Sb	13 08 30.3	-0.5
EOS3	**EOS3**	**0.35**	**225**	eP	**Pg**	**13 08 24.8**	**+0.6**
EOS3				eS	Sb	13 08 30.1	-0.8
YOJ	**Yonaguni jima**	**0.39**	**101**	*i* P	**Pb**	**13 08 25.8**	**-0.3**
YOJ				S	Sb	13 08 32.4	+0.2
YOJ	**Yonaguni jima**	**0.39**	**101**	P	**Pb**	**13 08 25.9**	**-0.3**
YOJ				eS	Sb	13 08 32.0	-0.1
EOS4	**EOS4**	**0.48**	**211**	eP	**Pb**	**13 08 27.2**	**-0.3**
EOS4				eS	Sg	13 08 33.9	+1.0
TWC	**Suao**	**0.68**	**276**	P	**Pg**	**13 08 29.6**	**-0.7**
ESAO	**Su ao**	**0.68**	**273**	P	**Pg**	**13 08 30.3**	**0.0**
ESAO				S	Sg	13 08 39.3	+0.1
TWB1	**Santiao Chiao**	**0.72**	**311**	P	**Pb**	**13 08 31.4**	**-0.4**
TWB1				S	Sg	13 08 39.9	-0.6
ILA	**Ilan**	**0.80**	**287**	S	**Sb**	**13 08 43.9**	**0.0**
NDS	**Dongshan**	**0.80**	**277**	P	**Pg**	**13 08 32.3**	**-0.4**
NDS				eS	Sb	13 08 43.6	-0.4
EAHA	**Aohua**	**0.80**	**255**	*i* P	**Pg**	**13 08 32.2**	**-0.4**
EAHA				S	Sg	13 08 43.0	-0.2
TIPB	**Shuangxi**	**0.82**	**302**	P	**Pb**	**13 08 33.2**	**-0.3**
TIPB				eS	Sn	13 08 44.8	-2.1
SXI1	**Grass Mountain**	**0.85**	**311**	P	**Pn**	**13 08 34.7**	**-0.5**
SXI1				S	Sb	13 08 44.5	-1.1
TWE	**Neicheng**	**0.86**	**282**	P	**Pb**	**13 08 33.4**	**-0.8**
TWE				eS	Sg	13 08 44.8	-0.2
NWF	**Wu-fen Shan**	**0.91**	**306**	P	**Pn**	**13 08 35.0**	**-1.0**
NWF				S	Sg	13 08 43.9	+0.5
WFSB	**Wu-fen Shan**	**0.91**	**306**	P	**Pn**	**13 08 35.0**	**-0.9**
WFSB				S	Sn	13 08 47.0	-2.0
ENTT	**Nioudou**	**0.94**	**276**	P	**Pg**	**13 08 35.2**	**0.0**
ENTT				S	Sb	13 08 47.3	-0.6
FUSB	**Fushanzhiwuyua**	**0.94**	**284**	P	**Pb**	**13 08 34.8**	**-0.7**
FUSB				S	Sb	13 08 47.2	-0.8
ETL	**Fush Village**	**0.96**	**247**	eP	**Pb**	**13 08 35.3**	**-0.6**
ETL				S	Sg	13 08 48.6	+0.5
TNOU	**National Taiwa**	**0.96**	**310**	P	**Pn**	**13 08 36.1**	**-0.5**
TNOU				S	Sg	13 08 47.7	-0.5
LATG	**Datong**	**0.97**	**270**	P	**Pg**	**13 08 35.7**	**-0.1**
LATG				S	Sg	13 08 48.5	+0.1
NACB	**Ninganchiao**	**0.98**	**248**	*i* P	**Pb**	**13 08 35.4**	**-0.7**
NACB				S	Sg	13 08 49.3	+0.6
NDT	**Datong Townshi**	**0.98**	**274**	P	**Pn**	**13 08 36.3**	**-0.7**
NDT				S	Sg	13 08 49.4	+0.5
TWA	**Mucha**	**1.01**	**296**	P	**Pn**	**13 08 37.0**	**-0.4**
TWA				eS	Sb	13 08 47.5	-2.7
TWD	**Chiawan**	**1.02**	**243**	eP	**Pb**	**13 08 36.0**	**-0.8**
TWD				eS	Sn	13 08 51.2	-0.4
NWLT	**Wulai**	**1.02**	**284**	P	**Pg**	**13 08 36.7**	**-0.1**
NWLT				S	Sb	13 08 49.4	-0.9
IRIF	**Iriomote-Funau**	**1.06**	**101**	P	**Pb**	**13 08 37.0**	**-0.5**
IRIF				eS	Sn	13 08 51.6	-1.1
ETLH	**Xiulin Townshi**	**1.06**	**252**	P	**Pb**	**13 08 37.0**	**-0.7**
ETLH				eS	Sb	13 08 50.9	-0.7
TAP	**Taipei**	**1.10**	**297**	eP	**Pg**	**13 08 38.5**	**+0.2**
TAP				eS	Sg	13 08 52.5	-0.2
NNSB	**Datong**	**1.10**	**265**	P	**Pb**	**13 08 37.9**	**-0.5**
NNSB				S	Sb	13 08 52.6	-0.3
NNS	**Nan Shan**	**1.11**	**265**	P	**Pb**	**13 08 38.0**	**-0.5**
NNS				eS	Sb	13 08 52.1	-1.0
YHNB	**Yeheng**	**1.11**	**277**	P	**Pg**	**13 08 38.5**	**-0.1**
YHNB				S	Sn	13 08 53.2	-1.0
NSK	**Sanguang**	**1.13**	**277**	P	**Pg**	**13 08 38.3**	**-0.3**
NSK				S	Sb	13 08 53.0	-0.5
ZUZH	**Zhuzihu**	**1.13**	**303**	P	**Pn**	**13 08 38.3**	**-0.8**
ZUZH				S	Sb	13 08 52.9	-0.8
ETM	**Tongmen**	**1.15**	**241**	P	**Pg**	**13 08 39.3**	**-0.1**
ETM				eS	Sb	13 08 54.1	0.0
TWY	**Chenhua**	**1.16**	**309**	P	**Pg**	**13 08 39.3**	**-0.1**
TWY				S	Sg	13 08 54.4	-0.2
ANP	**Anpu**	**1.17**	**304**	eP	**Pg**	**13 08 40.6**	**+1.1**
PCYT	**Pengchaiyu**	**1.18**	**337**	eP	**Pn**	**13 08 37.8**	**-1.9**
LXIB	**Xiulin Townshi**	**1.19**	**245**	P	**Pn**	**13 08 39.5**	**-0.5**
LXIB				eS	Sg	13 08 57.4	+1.8
SHUL	**Shoufeng**	**1.20**	**232**	eP	**Pb**	**13 08 39.6**	**-0.3**
TWS1	**Kuangyinshan**	**1.20**	**298**	P	**Pg**	**13 08 41.6**	**+1.3**
TWS1				eS	Sn	13 08 55.4	-0.9
HATJ	**Hateruma jima**	**1.21**	**113**	eP	**Pn**	**13 08 39.3**	**-0.7**
HATJ				eS	Sb	13 08 54.6	-1.1
NTST	**Danshui**	**1.21**	**301**	eP	**Pg**	**13 08 41.5**	**+1.1**
NTST				eS	Sg	13 08 55.9	-0.2
FUSS	**Fushou**	**1.26**	**257**	P	**Pb**	**13 08 40.7**	**-0.4**
FUSS				eS	Sb	13 08 56.5	-1.0
WHF	**Hehuan Shan**	**1.27**	**252**	P	**Pb**	**13 08 41.1**	**-0.3**
ESL	**Shilin**	**1.28**	**236**	P	**Pn**	**13 08 40.5**	**-0.6**
ESL				eS	Sg	13 08 58.8	+0.5
KSHI	**Guanxi Townshi**	**1.31**	**281**	eP	**Pg**	**13 08 43.3**	**+1.0**
TWT	**Tachien**	**1.32**	**258**	P	**Pg**	**13 08 42.4**	**-0.1**
TWT				eS	Sg	13 09 00.1	+0.4
JKRS	**Kuro-shima**	**1.33**	**103**	eP	**Pb**	**13 08 41.3**	**-0.8**
JKRS				eS	Sg	13 08 59.2	-0.7
TDCB	**Techi**	**1.34**	**258**	eP	**Pg**	**13 08 42.6**	**-0.2**
TDCB				eS	Sg	13 09 00.2	0.0
NFF	**Wufeng Townshi**	**1.34**	**274**	P	**Pg**	**13 08 42.4**	**-0.5**
NFF				S	Sg	13 08 59.8	-0.6
NCUH	**Zhongli**	**1.35**	**289**	P	**Pg**	**13 08 44.3**	**+1.2**
WARBT	**Fenglin Townsh**	**1.37**	**234**	P	**Pn**	**13 08 41.6**	**-0.7**
WARBT				*i* S	Sb	13 09 00.2	-0.3
OWD	**Renai**	**1.42**	**246**	P	**Pb**	**13 08 43.4**	**-0.3**
OWD				S	Sg	13 09 02.8	+0.2
JIJ	**Ishigaki jima**	**1.43**	**97**	eP	**Pn**	**13 08 42.1**	**-1.0**
JIJ				eS	Sn	13 09 00.2	-1.6
LIOB	**Emei**	**1.44**	**275**	P	**Pg**	**13 08 45.0**	**+0.2**
NSTT	**Nanjuang**	**1.45**	**274**	P	**Pg**	**13 08 45.0**	**0.0**
WUSB	**Renai**	**1.45**	**248**	P	**Pb**	**13 08 44.4**	**+0.1**
WUSB				S	Sg	13 09 03.7	-0.2
SBCB	**Hsinchu**	**1.48**	**280**	eP	**Pb**	**13 08 44.6**	**-0.1**
SBCB				eS	Sn	13 09 02.2	-1.0
WHP	**Taichung City**	**1.52**	**260**	P	**Pg**	**13 08 46.1**	**-0.3**
VWDT	**VWDT**	**1.54**	**240**	P	**Pb**	**13 08 45.1**	**-0.6**
EHYH	**Wanrong**	**1.54**	**228**	eP	**Pn**	**13 08 43.3**	**-1.3**
EHY	**Hungye**	**1.55**	**229**	P	**Pn**	**13 08 44.0**	**-0.8**
JISG	**Ishigakijimahi**	**1.57**	**88**	eP	**Pn**	**13 08 44.1**	**-0.9**
WCS	**Beigang Elemen**	**1.60**	**253**	P	**Pg**	**13 08 47.8**	**-0.1**
WCS				eS	Sb	13 09 06.8	-0.3
NMLH	**Miaoli**	**1.64**	**270**	eP	**Pb**	**13 08 46.5**	**-0.9**
YULB	**Yu-li**	**1.64**	**226**	P	**Pn**	**13 08 45.2**	**-0.9**
YULB				S	Sn	13 09 04.9	-2.3
TWQ1	**Liyutan**	**1.67**	**264**	eP	**Pb**	**13 08 47.1**	**-0.8**
TWQ1				eS	Sn	13 09 07.4	-0.4
SSLB	**Suanglung**	**1.67**	**244**	P	**Pb**	**13 08 47.0**	**-1.0**
SSLB				eS	Sn	13 09 06.5	-1.4
TWF1	**Yuli**	**1.67**	**225**	P	**Pn**	**13 08 45.8**	**-0.6**
SMLT	**Sun Moon Lake**	**1.68**	**247**	P	**Pb**	**13 08 47.5**	**-0.6**
SMLT				eS	Sb	13 09 10.0	+0.7
TYC	**Yuchr**	**1.70**	**249**	eP	**Pb**	**13 08 48.1**	**-0.4**
TYC				eS	Sn	13 09 08.7	+0.1
FULB	**Fuli**	**1.79**	**222**	eP	**Pn**	**13 08 46.9**	**-1.2**
TCU	**Taichung**	**1.79**	**258**	eP	**Pn**	**13 08 48.0**	**0.0**
WHYT	**Xinyi Township**	**1.79**	**242**	eP	**Pb**	**13 08 49.5**	**-0.7**
WHYT				eS	Sb	13 09 11.5	-1.2
CHKT	**Chengkung**	**1.82**	**218**	eS	**Sn**	**13 09 09.1**	**-2.5**
WJS	**Zhushan**	**1.84**	**248**	eP	**Pb**	**13 08 51.1**	**+0.2**
WJS				eS	Sb	13 09 12.9	-1.1
WNT	**Mingjian**	**1.86**	**250**	eP	**Pn**	**13 08 48.4**	**-0.6**
WNT				eS	Sn	13 09 12.5	0.0
EHD	**Haiduan**	**1.88**	**223**	eP	**Pn**	**13 08 48.3**	**-0.9**
JTJ	**Tarama**	**1.93**	**87**	eP	**Pn**	**13 08 50.0**	**+0.1**
JTJ				eS	Sn	13 09 13.0	-1.1
ALS	**Alishan**	**1.93**	**238**	P	**Pb**	**13 08 51.5**	**-1.0**
ALS				eS	Sb	13 09 16.2	-0.5
ELDTW	**Lidau**	**1.97**	**227**	P	**Pn**	**13 08 49.7**	**-0.9**
CHN5	**Tsauling**	**1.98**	**242**	P	**Pb**	**13 08 53.1**	**-0.2**
CHN5				eS	Sn	13 09 16.3	+0.6
WDLH	**Douliu**	**2.06**	**246**	eP	**Pb**	**13 08 54.3**	**-0.3**
WDLH				eS	Sb	13 09 18.6	-1.5
LONT	**Longtian**	**2.10**	**220**	P	**Pn**	**13 08 52.1**	**-0.3**
WRL	**Guolierlin Hig**	**2.12**	**253**	eP	**Pb**	**13 08 55.0**	**-0.6**
WRL				eS	Sn	13 09 19.4	+0.5
WCKO	**Fanlu**	**2.12**	**239**	P	**Pb**	**13 08 55.0**	**-0.7**
WCKO				eS	Sn	13 09 19.7	+0.7
RLNB	**Erlin**	**2.14**	**253**	eS	**Sn**	**13 09 19.5**	**+0.2**
STYH	**Taoyuan**	**2.15**	**231**	eP	**Pn**	**13 08 53.7**	**+0.7**
CHN4	**Tsaushan**	**2.18**	**237**	eP	**Pb**	**13 08 55.4**	**-1.2**
CHN4				eS	Sb	13 09 22.0	-1.6
TPUB	**Ta-pu**	**2.18**	**236**	*e*P	**Pb**	**13 08 55.4**	**-1.2**
TPUB				eS	Sb	13 09 23.4	-0.3
WTK	**Tuku**	**2.18**	**248**	*e*P	**Pn**	**13 08 53.3**	**-0.2**
WTK				eS	Sn	13 09 21.0	+0.5
WTP	**Ta-pu**	**2.22**	**235**	*e*P	**Pb**	**13 08 55.7**	**-1.7**
WTP				eS	Sn	13 09 21.5	0.0
CHY	**Chiayi**	**2.23**	**243**	eS	**Sn**	**13 09 22.0**	**+0.2**
TWK	**Hsinying**	**2.30**	**237**	*e*P	**Pn**	**13 08 56.6**	**+1.4**
TWK				eS	Sn	13 09 23.7	+0.1
CHN1	**Nanshi**	**2.32**	**235**	*e*P	**Pb**	**13 08 57.3**	**-1.8**
CHN1				eS	Sn	13 09 24.2	+0.2
WSF	**Szhu**	**2.34**	**248**	eS	**Sn**	**13 09 25.7**	**+1.3**
SLGT	**Liugui**	**2.35**	**230**	*e*P	**Pn**	**13 08 56.2**	**+0.4**
SLGT				eS	Sn	13 09 25.1	+0.3
WSL	**Shuilin Townsh**	**2.38**	**245**	*e*P	**Pn**	**13 08 58.4**	**-1.8**
WSL				eS	Sn	13 09 25.6	+0.1
ECL	**Taimali**	**2.45**	**218**	*e*P	**Pn**	**13 08 57.1**	**0.0**
JMJ2	**Miyako jima3**	**2.50**	**85**	*e*P	**Pn**	**13 08 58.4**	**+0.6**
SSD	**Sandimen**	**2.53**	**226**	*e*P	**Pn**	**13 08 59.7**	**+1.5**
SSD				eS	Sn	13 09 30.3	+1.2
MASBT	**Mashibuluo**	**2.63**	**224**	*e*P	**Pb**	**13 09 01.7**	**-2.6**
MASBT				eS	Sb	13 09 34.6	-2.0
EAST	**Anshuo**	**2.68**	**217**	*e*P	**Pn**	**13 08 60.0**	**-0.3**
LYUB	**Lan-yu**	**2.69**	**200**	*e*P	**Pn**	**13 08 59.2**	**-1.2**
SCZT	**Fangliau**	**2.81**	**220**	eS	**Sn**	**13 09 36.4**	**+0.3**
SLIU	**Shizi**	**2.84**	**216**	*e*P	**Pn**	**13 09 03.4**	**+0.9**
PHUB	**P'eng-hu**	**2.94**	**250**	*e*P	**Pn**	**13 09 04.2**	**+0.3**
PHUB				eS	Sn	13 09 40.8	+1.6
SMST	**Manzhou Townsh**	**2.98**	**213**	*e*P	**Pn**	**13 09 03.6**	**-0.8**
SMST				eS	Sn	13 09 39.0	-1.2
TWKBT	**Hengchun**	**3.06**	**213**	*e*P	**Pn**	**13 09 06.3**	**+0.8**
TWKBT				eS	Sn	13 09 42.9	+0.8
TWK1	**Hengchun**	**3.06**	**213**	*e*P	**Pn**	**13 09 06.6**	**+0.1**
TWK1				eS	Sn	13 09 41.9	-0.3
KSRS	**Korea Array**	**13.66**	**18**	Pn	**P**	**13 11 42.5**	**+2.9**
	0.2nm,0.3s,baz=200,slow=11,SNR=4.6						
KSRS				LR	LR	13 17 05.0	
	comp=Z,19nm,18.1s,baz=250,slow=37 0.8nm,0.7s						
SONM	**Songino Array**	**26.56**	**335**	P	**P**	**13 13 59.8**	**+4.5**
	0.3nm,0.5s,baz=147,slow=8.6,SNR=1.7 0.3nm,0.5s						
KAPI	**Kappang**	**29.50**	**186**	LR	LR	13 25 38.1	
	comp=Z,43nm,19.4s,baz=125,slow=36						
WRA	**Warramunga Arr**	**45.67**	**164**	P	**P**	**13 16 35.0**	**-3.1**
	0.2nm,0.9s,baz=344,slow=8.4,SNR=2.1 0.2nm,0.9s						
ASAR	**Alice Springs**	**49.16**	**166**	P	**P**	**13 17 04.9**	**-0.4**
	0.2nm,0.6s,baz=343,slow=8.5,SNR=4.9 0.2nm,0.6s						

*IDC **30** 13:10:43.2±1.0,32°.53S×179°.86E,h248km±11km,mb3.6/7, mbtmp4.2/9,Error ellipse: s-maj=17.8km s-min=11.7km az=102.0*

*NEIC **30** 13:10:43.5±0.8,32°.57S±0°.07×179°.9E±0°.1,h246km±8km, mb4.0/13,Error ellipse: s-maj=19.9km s-min=4.6km az=116.0*

*WEL **30** 13:10:47.1±0.6,33°S±6°×18°0W±1°.2,h12km,M4.5/10, mB4.8/6,ML4.2/11,MLv4.8/10,Mw(mB)4.0/6,Error ellipse: s-maj=17.2km s-min=4.2km az=110.5,confirmed*

*NOU **30** 13:11:11.3,34°.56S×178°.35E,h271km,mb4.0/12,South of Kermadec Islands*

ISC 30 13:10:43.4±0.6,32°.56S±0°.07×179°.8E±0°.1,h250km,n61, σ1§30/65,mb3.8/14,3C,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.84**	**32**	P	**Pn**	**13 11 46.5**	**+1.1**
GLKZ				S	**S**	**13 12 34.7**	**+0.2**
RAO	**Raoul Island**	**3.85**	**32**	P	**Pn**	**13 11 44.6**	**-0.9**
	222nm,0.3s,baz=347,slow=23,SNR=2.4						
RAO				S	**S**	**13 12 33.6**	**-1.1**
	417nm,0.5s,baz=110,slow=20,SNR=5.0						
RAO	**Raoul Island**	**3.85**	**32**		**Pn**	**13 11 44.7**	**-0.8**
MXZ	**Matakaoa Point**	**5.13**	**193**	P	Pn	13 12 06.0	+5.3
HAZ	**Te Kaha**	**5.43**	**197**	P	**Pn**	**13 12 06.2**	**+1.8**
HAZ				S	**S**	**13 13 09.1**	**+0.1**
PKGZ	**Pakihiroa**	**5.47**	**194**	P	**Pn**	**13 12 06.6**	**+1.7**
PKGZ				S	**S**	**13 13 07.2**	**-2.8**
WCZ	**Waipu Caves**	**5.62**	**232**	P	Pn	13 12 13.5	+6.7
PUZ	**Puketiti**	**5.63**	**192**	P	**Pn**	**13 12 08.1**	**+1.2**
PUZ				S	**S**	**13 13 13.4**	**-0.3**
RUGZ	**Raukumara Rang**	**5.66**	**197**	P	**Pn**	**13 12 09.6**	**+2.3**
RUGZ				S	**S**	**13 13 13.9**	**-0.5**
OUZ	**Omahuta**	**5.79**	**241**	P	Pn	13 12 14.9	+6.1
OUZ	**Omahuta**	**5.79**	**241**	P	Pn	13 12 15.1	+6.3
TWGZ	**Tauwhareparae**	**5.79**	**194**	P	**Pn**	**13 12 10.4**	**+1.5**
TWGZ				S	**S**	**13 13 17.8**	**+0.6**
MBAZ	**Motutapu North**	**5.81**	**222**	P	Pn	13 12 16.5	+7.4
CNGZ	**Carnagh Statio**	**6.04**	**192**	P	**Pn**	**13 12 13.4**	**+1.4**
MWZ	**Matawai**	**6.04**	**197**	P	**Pn**	**13 12 13.1**	**+1.0**
MWZ				S	**S**	**13 13 22.0**	**-0.9**
TKGZ	**Te Karaka**	**6.07**	**195**	P	**Pn**	**13 12 12.9**	**+0.7**
TKGZ				S	**S**	**13 13 22.3**	**-1.1**
URZ	**Urewera**	**6.09**	**200**	P	**Pn**	**13 12 11.8**	**-0.6**
	4.1nm,0.3s,baz=266,slow=4.1,SNR=38						
URZ				S	**S**	**13 13 24.3**	**+0.5**
	92nm,0.4s,baz=103,slow=23,SNR=19						
URZ	**Urewera**	**6.09**	**200**	P	**Pn**	**13 12 14.2**	**+1.7**
TOZ	**Tahuroa Road**	**6.23**	**213**		Pn	13 12 19.6	+5.2
MUGZ	**Murupara**	**6.39**	**202**	P	**Pn**	**13 12 17.1**	**+0.8**
MUGZ				S	**S**	**13 13 29.7**	**-1.1**
BKZ	**Black Stump Fm**	**7.11**	**201**	P	**Pn**	**13 12 25.3**	**-0.1**
BKZ	**Black Stump Fm**	**7.11**	**201**	Pn	**Pn**	**13 12 25.4**	**0.0**
HIZ	**Hauiti**	**7.17**	**213**	P	**Pn**	**13 12 26.9**	**+0.9**
BFZ	**Birch Farm**	**8.59**	**198**	P	**Pn**	**13 12 42.5**	**-1.5**
SNZO	**South Karori**	**9.63**	**203**	P	**Pn**	**13 12 55.4**	**-1.7**
PLWZ	**Palliser**	**9.69**	**201**	Pn	**Pn**	**13 12 55.8**	**-2.2**
TUWZ	**Tuamarina**	**10.00**	**206**		**Pn**	**13 12 59.2**	**-2.6**
QRZ	**Quartz Range**	**10.09**	**213**	P	**Pn**	**13 13 02.7**	**-0.3**
KHZ	**Kahutara**	**11.01**	**205**	P	**Pn**	**13 13 11.9**	**-2.6**
RPZ	**Rata Peaks**	**13.07**	**209**	P	**Pn**	**13 13 36.8**	**-3.3**
	4.3nm,0.5s,baz=13,slow=16,SNR=1.9						
RPZ				S	S	13 15 54.1	-11
	14nm,0.3s,baz=273,slow=23,SNR=21						
RPZ	**Rata Peaks**	**13.07**	**209**	P	**Pn**	**13 13 39.0**	**-1.1**
RPZ	**Rata Peaks**	**13.07**	**209**	Pn	**Pn**	**13 13 36.3**	**-3.7**
RPZ				S		13 15 56.5	-8.7
ODZ	**Otahua Downs**	**14.34**	**207**	P	**Pn**	**13 13 55.3**	**-1.2**
JCZ	**Jackson Bay**	**14.35**	**214**	P	**Pn**	**13 13 55.5**	**-0.3**
MLZ	**Mavora Lakes**	**15.65**	**212**	P	**P**	**13 14 10.3**	**0.0**
MLZ				lAmb	lAmb	13 14 25.3	
	comp=Z,26nm,1.4s						
INKA	**Innaminka**	**33.96**	**268**	P	**P**	**13 17 03.7**	**+0.2**
INKA				lAmb	lAmb	13 17 32.9	
	comp=Z,2.8nm,1.4s						
ASAR	**Alice Springs**	**41.16**	**270**	P	**P**	**13 18 04.7**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=110,slow=7.4,SNR=16 comp=Z,0.9nm,0.7s						
WR8	**Warramunga Arr**	**42.21**	**276**	P	**P**	**13 18 12.4**	**+0.1**
WR8				lAmb	lAmb	13 18 20.6	
	comp=Z,3.0nm,1.0s						
WRAB	**Tennant Creek**	**42.35**	**276**	P	**P**	**13 18 13.5**	**+0.1**
WRAB				lAmb	lAmb	13 18 16.7	
	comp=Z,5.9nm,1.2s						
WRA	**Warramunga Arr**	**42.35**	**276**	P	**P**	**13 18 13.9**	**+0.5**
	comp=Z,1.0nm,0.3s,baz=115,slow=8.0,SNR=32 comp=Z,1.0nm,0.3s						
WRA	**Warramunga Arr**	**42.35**	**276**	lAmb	lAmb	13 18 17.4	
	comp=Z,0.2nm,0.9s						
WB0	**Warramunga Arr**	**42.39**	**276**	P	**P**	**13 18 14.0**	**+0.3**
PTCN	**Pitcairn Islan**	**44.22**	**94**	P	**P**	**13 18 27.7**	**-0.5**
VNDA	**Vanda**	**45.76**	**185**	P	**P**	**13 18 40.6**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=0.6,slow=5.7,SNR=3.5 comp=Z,0.8nm,0.6s						
KNRA	**Kununurra**	**49.04**	**277**	P	**P**	**13 19 05.6**	**0.0**
KNRA				lAmb	lAmb	13 19 45.0	
	comp=Z,6.9nm,1.3s						
FITZ	**Fitzroy Crossi**	**50.51**	**273**	P	**P**	**13 19 17.6**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=124,slow=3.6,SNR=6.0 comp=Z,0.6nm,0.5s						
QSPA	**South Pole Qui**	**57.55**	**180**	P	**P**	**13 20 08.2**	**+1.5**
	comp=Z,20nm,0.7s,baz=47,slow=0.4,SNR=188 comp=Z,20nm,0.7s						
QSPA	**South Pole Qui**	**57.55**	**180**	P	**P**	**13 20 08.5**	**+1.7**
BELA	**Belgrano 2**	**67.90**	**173**	P	**P**	**13 21 14.6**	**+0.1**
BELA				lAmb	lAmb	13 21 26.5	
	comp=Z,5.0nm,1.5s						
MAW	**Mawson**	**69.61**	**201**	P	**P**	**13 21 24.9**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=121,slow=4.3,SNR=1.5 comp=Z,1.4nm,0.7s						
MAW	**Mawson**	**69.61**	**201**	P	**P**	**13 21 24.9**	**-0.2**
TROLL	**Troll, Antarti**	**75.70**	**181**	P	**P**	**13 22 01.1**	**+0.1**
SNAA	**Sanae**	**76.04**	**179**	⇑P	**P**	**13 22 02.9**	**0.0**
	comp=Z,83nm,0.4s						
SNAA	**Sanae**	**76.04**	**179**	P	**P**	**13 22 02.9**	**0.0**
	comp=Z,3.9nm,0.5s,baz=198,slow=13,SNR=5.7 comp=Z,3.9nm,0.5s						
SNAA	**Sanae**	**76.04**	**179**	P	**P**	**13 22 02.9**	**0.0**
SNAA				lAmb	lAmb	13 22 15.8	
	comp=Z,14nm,1.3s						
VNA3	**Neumayer Olymp**	**76.27**	**177**	⇑P	**P**	**13 22 04.2**	**+0.1**
	comp=Z,13nm,0.6s						
VNA2	**Neumayer--Watz**	**76.68**	**178**	⇑P	**P**	**13 22 06.6**	**+0.2**
	comp=Z,13nm,0.6s,baz=194,slow=4.1						
JOW	**Kunigami**	**76.75**	**314**	P	**P**	**13 22 07.9**	**+0.5**
FINES	**FINESS Array B**	**146.46**	**337**	PKPbc	**PKPdf**	**13 29 53.2**	**+0.7**
	comp=Z,2.6nm,0.8s,baz=22,slow=4.9,SNR=5.9						
BRTR	**Keskin Array B**	**151.86**	**294**	PKPbc	**PKPbc**	**13 30 06.3**	**-2.4**
	comp=Z,0.3nm,0.4s,baz=138,slow=5.3,SNR=2.3						
TORD	**Torodi Ar. Bea**	**160.59**	**186**	PKPab	**PKPab**	**13 30 55.5**	**-1.0**
	comp=Z,1.1nm,0.6s,baz=179,slow=4.8,SNR=7.9						

*IDC **30** 13:18:01.7±1.6,3°.51S×131°.15E,h0km,mb3.8/6, mbtmp3.9/9,ML3.6/3,MS3.1/2,Error ellipse: s-maj=54.6km s-min=21.7km az=90.0*

*DJA **30** 13:18:07.6±0.3,3°S±2°×13°1E±°,h37km±8km,M3.9/18, mb4.1/2,MLv3.8/18*

ISC 30 13:18:05.4±0.8,3°.53S±0°.06×131°.20E±0°.05,h30km,n22, σ1§59/24,mb3.8/5,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**1.21**	**60**	P	**Pb**	**13 18 27.4**	**-0.3**
BNDI	**Bandanaira**	**1.63**	**233**	P	**Pb**	**13 18 35.1**	**+0.3**
KMPI	**Kaimana, Papua**	**2.50**	**93**	P	**Pn**	**13 18 43.9**	**-0.1**
SIJI	**Sorong**	**2.64**	**1**	Pn	**Pn**	**13 18 45.5**	**-0.4**
	3.4nm,0.3s,baz=229,slow=21,SNR=26						
SIJI				Sn	**Sn**	**13 19 15.3**	**-1.7**
	9.5nm,0.3s,baz=145,slow=23,SNR=18 7.9nm,0.2s						
SIJI	**Sorong**	**2.64**	**1**	P	**Pn**	**13 18 45.6**	**-0.4**
SWI	**Sorong**	**2.65**	**1**	P	**Pn**	**13 18 46.3**	**+0.2**
SWI				S	**Sn**	**13 19 15.6**	**-1.6**
KRAI	**Karang Ratu**	**2.81**	**274**	P	**Pn**	**13 18 51.1**	**+2.8**
AAI	**Ambon**	**3.00**	**267**	P	**Pn**	**13 18 52.4**	**+1.4**
RKPI	**Ransiki, Papua**	**3.58**	**56**	P	**Pn**	**13 19 00.3**	**+1.3**
RKPI				S	**Sn**	**13 19 40.1**	**-0.2**
MWPI	**Manokwari, Pap**	**3.83**	**48**	P	**Pn**	**13 19 04.9**	**+2.5**
SANI	**Sanana**	**5.41**	**286**	P	**Pn**	**13 19 25.2**	**+1.1**
	0.1nm12nm,0.9s						
SANI				S	**Sn**	**13 20 23.6**	**-1.8**
	0.1nm12nm,0.9s						
BATI	**Baumata**	**10.00**	**228**	Pn	**Pn**	**13 20 27.1**	**0.0**
	1.9nm,0.3s,baz=45,slow=3.7,SNR=6.8 27nm,0.8s						
DAV	**Davao City (W)**	**11.93**	**332**	LR	LR	13 25 49.0	
	comp=Z,60nm,21.5s,baz=334,slow=39						
FITZ	**Fitzroy Crossi**	**15.47**	**200**	Pn	**Pn**	**13 21 39.2**	**

PB02	**IPOC Station P**	**1.19**	**183**	*e*P	**Pn**	**13 18 28.2**	**-0.2**
PB02			⇓	*e*S	**Sn**	**13 18 43.3**	**-0.6**
PB02				IAML		13 18 48.6	
	comp=E,3μm,0.2s						
PB02	**IPOC Station P**	**1.19**	**183**	*e*P	**Pn**	**13 18 27.9**	**-0.5**
PB02				IAML		13 18 47.2	
	comp=Z,2μm,0.2s						
PX02	**IPOC Station P**	**1.20**	**343**⇓	*e*P	**Pn**	**13 18 27.0**	**-1.6**
PX02				*e*S	**Sn**	**13 18 43.5**	**-0.6**
PX02				IAML		13 18 49.0	
	comp=N,409nm,0.2s						
PB12	**IPOC Station P**	**1.57**	**342**	*i* P	**Pn**	**13 18 32.6**	**-0.8**
PB12				*i* S	**Sn**	**13 18 52.6**	**-0.2**
PB12				IAML		13 18 57.3	
	comp=N,576nm,0.2s						
PB12	**IPOC Station P**	**1.57**	**342**	*e*P	**Pn**	**13 18 32.8**	**-0.6**
PB12				*e*S	**Sn**	**13 18 53.8**	**+0.9**
PB12				IAML		13 18 57.6	
	comp=Z,267nm,0.2s						
PB07	**IPOC Station P**	**1.60**	**182**	*e*P	**Pn**	**13 18 34.0**	**+0.1**
PB07				*e*S	**Sn**	**13 18 53.0**	**-0.6**
PB07				IAML		13 18 58.2	
	comp=E,981nm,0.3s						
PB07	**IPOC Station P**	**1.60**	**182**	*e*P	**Pn**	**13 18 33.5**	**-0.3**
PB07				IAML		13 18 59.4	
	comp=Z,594nm,0.2s						
PB09	**IPOC Station P**	**1.75**	**162**	*e*P	**Pn**	**13 18 36.8**	**+0.8**
PB09				*e*S	**Sn**	**13 18 57.6**	**+0.2**
PB09				IAML		13 19 05.7	
	comp=E,501nm,0.5s						
PB09	**IPOC Station P**	**1.75**	**162**	*e*P	**Pn**	**13 18 36.2**	**+0.3**
PB09				*e*S	**Sn**	**13 19 00.2**	**+2.8**
PB09				IAML		13 19 04.1	
	comp=Z,402nm,0.2s						
PB16	**IPOC Station P**	**1.80**	**10**⇓	*i* P	**Pn**	**13 18 37.5**	**+0.5**
PB16				*i* S	**Sn**	**13 19 00.8**	**+1.7**
PB16				IAML		13 19 06.4	
	comp=E,233nm,0.5s						
PB16	**IPOC Station P**	**1.80**	**10**	*e*P	**Pn**	**13 18 36.8**	**-0.1**
PB16				*e*S	**Sn**	**13 19 01.2**	**+2.0**
PB16				IAML		13 19 05.0	
	comp=Z,219nm,0.4s						
PB03	**IPOC Station P**	**1.92**	**178**⇑	*e*P	**Pn**	**13 18 38.2**	**0.0**
PB03				*e*S	**Sn**	**13 19 01.1**	**-0.3**
PB03				IAML		13 19 06.8	
	comp=E,639nm,0.4s						
PB03	**IPOC Station P**	**1.92**	**178**	*e*P	**Pn**	**13 18 37.8**	**-0.4**
PB03				*e*S	**Sn**	**13 19 04.0**	**+2.6**
PB03				IAML		13 19 09.0	
	comp=Z,769nm,0.2s						
PB06	**IPOC Station P**	**2.58**	**175**	*i* P	**Pn**	**13 18 46.6**	**-0.7**
PB06				*i* S	**Sn**	**13 19 17.0**	**-0.6**
PB06				IAML		13 19 25.6	
	comp=E,251nm,0.3s						
PB06	**IPOC Station P**	**2.58**	**175**	*e*P	**Pn**	**13 18 47.1**	**-0.1**
PB06				*e*S	**Sn**	**13 19 17.0**	**-0.6**
PB06				IAML		13 19 27.8	
	comp=Z,168nm,0.4s						
PB05	**IPOC Station P**	**2.74**	**187**	*i* P	**Pn**	**13 18 48.8**	**-0.6**
PB05				*i* S	**Sn**	**13 19 20.7**	**-0.6**
PB05				IAML		13 19 32.6	
	comp=E,253nm,0.6s						
PB05	**IPOC Station P**	**2.74**	**187**	*e*P	**Pn**	**13 18 48.8**	**-0.6**
PB05				*e*S	**Sn**	**13 19 22.0**	**+0.6**
PB05				IAML		13 19 31.2	
	comp=Z,113nm,0.4s						

*IDC **30** 13:26:12.3±1.6,9.°96S×118.°67E, h0km, mb3.6/2, mbtmp3.5/7, ML3.5/5, Error ellipse: s-maj=52.4km s-min=20.6km az=50.0*
*DJA **30** 13:26:23.0±0.3, 10.°S±3.°×11.°9E±.°, h35km±4km, M4.1/24, mb4.0/7, mB5.3/3, MLv4.1/24, Mw(mB)4.7/3*
ISC 30 13:26:20.9±0.9, 9.°86S±0.°06×119.°28E±0.°04, h63km±8km, n30, σ2§14/40, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.24**	**27**	P	**Pn**	**13 26 30.7**	**-0.3**
WBSI				S	**Sn**	**13 26 37.4**	**-0.9**
BASI	**Baing, Sumba**	**1.33**	**106**	P	**Pn**	**13 26 46.5**	**+3.1**
LBFI	**Labuhan Bajo,**	**1.49**	**24**	P	**Pn**	**13 26 45.6**	**0.0**
DBNI	**Kabupaten Domp**	**1.65**	**324**	P	**Pn**	**13 26 48.0**	**+0.2**
DBNI				S	**Sn**	**13 27 08.5**	**+0.5**
PLAI	**Plampang**	**1.80**	**304**	P	**Pn**	**13 26 49.7**	**-0.1**
PLAI				S	**Sn**	**13 27 10.7**	**-1.0**
TWSI	**Taliwang, Sumb**	**2.62**	**295**	P	**Pn**	**13 27 02.1**	**+1.3**
TWSI				S	**Sn**	**13 27 31.5**	**0.0**
MMRI	**Maumere**	**3.16**	**68**	P	**Pn**	**13 27 10.5**	**+2.2**
BSSI	**Bau Bau, Buton**	**3.88**	**18**	P	**Pn**	**13 27 19.4**	**+1.3**
BSSI				S	**Sn**	**13 28 02.6**	**+0.2**
KHKI	**Kahang-Kahang**	**3.92**	**292**	P	**Pn**	**13 27 21.4**	**+2.7**
KHKI				S	**Sn**	**13 28 05.4**	**+2.0**
DNP	**Denpasar**	**4.19**	**286**	P	**Pn**	**13 27 23.8**	**+1.5**
DNP				S	**Sn**	**13 28 10.0**	**0.0**
IGBI	**Denpasar**	**4.21**	**284**	P	**Pn**	**13 27 25.2**	**+2.6**
IGBI				S	**Sn**	**13 28 08.5**	**-2.1**
BATI	**Baumata**	**4.33**	**95**	Pn	**Pn**	**13 27 27.1**	**+2.9**
	8.2nm,0.3s,baz=281,slow=12,SNR=11						
BATI				Sn	**Sn**	**13 28 15.8**	**+2.3**
	5.5nm,0.3s,baz=343,slow=21,SNR=6.4						
	21nm,0.3s						
BATI	**Baumata**	**4.33**	**95**	P	**Pn**	**13 27 26.9**	**+2.6**
RTBI	**Rangdo, Negare**	**4.50**	**288**	P	**Pn**	**13 27 28.0**	**+1.3**
MKS	**Makassar**	**4.61**	**2**	P	**Pn**	**13 27 29.5**	**+1.3**
KAPI	**Kappang**	**4.83**	**6**	Pn	**Pn**	**13 27 30.2**	**-1.0**
	3.2nm,0.3s,baz=59,slow=24,SNR=7.6						
KAPI				Sn	**Sn**	**13 28 24.8**	**-1.1**
	17nm,0.3s,baz=38,slow=23,SNR=14						
	6.7nm,0.3s						
KAPI	**Kappang**	**4.83**	**6**	P	**Pn**	**13 27 33.4**	**+2.2**
KAPI				S	**Sn**	**13 28 24.5**	**-1.4**
JAGI	**Jajag, Banyuwa**	**5.25**	**285**	P	**Pn**	**13 27 36.7**	**-0.2**
JAGI				S	**Sn**	**13 28 32.6**	**-3.5**
ABJI	**Asem Bagus**	**5.39**	**292**	S	**Sn**	**13 28 40.8**	**+1.2**
SPSI	**Sidrap Palu**	**5.87**	**5**	P	**Pn**	**13 27 47.2**	**+1.8**
	0.2nm3μm10nm,0.9s						
SNJI	**Sawahan-Nganju**	**7.72**	**285**	P	**Pn**	**13 28 15.1**	**+4.3**
UGM	**Wanagama**	**8.87**	**282**	P	**Pn**	**13 28 25.3**	**-1.2**
FITZ	**Fitzroy Crossi**	**10.25**	**144**	Pn	**Pn**	**13 28 45.1**	**-0.3**
	0.2nm,0.3s,baz=335,slow=11,SNR=6.7						
FITZ				Sn	Sn	13 30 32.8	-6.0
	0.6nm,0.3s,baz=349,slow=23,SNR=8.4						
	0.7nm,0.4s						
WRA	**Warramunga Arr**	**17.66**	**126**	P	**Pn**	**13 30 25.0**	**+2.3**
	0.1nm,0.3s,baz=305,slow=13,SNR=3.5						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**19.59**	**136**	P	**P**	**13 30 46.6**	**+2.6**
	0.1nm,0.3s,baz=315,slow=11,SNR=7.3						
ASAR				S	**S**	**13 34 16.0**	**-5.9**
	0.3nm,0.6s,baz=305,slow=23,SNR=2.9						
	0.2nm,0.4s						
H08S2	**Diego Garcia H**	**46.27**	**269**	T	T	14 23 56.8	
	baz=95,slow=75,SNR=6.9						
H08S3	**Diego Garcia H**	**46.28**	**269**	T	T	14 24 05.4	
	baz=95,slow=75,SNR=8.1						
H08S1	**Diego Carcia H**	**46.29**	**269**	T	T	14 24 02.6	
	baz=95,slow=75,SNR=4.2						
MKAR	**Makanchi Array**	**65.34**	**333**	P	**P**	**13 36 55.4**	**-1.2**
	0.4nm,0.4s,baz=144,slow=5.8,SNR=7.8						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**69.86**	**334**	P	**P**	**13 37 23.3**	**-1.5**
	0.2nm,0.5s,baz=144,slow=5.5,SNR=4.4						
	0.2nm,0.5s						

*IDC **30** 13:30:14.9±1.3, 35.°54N×23.°45E, h0km, mb3.8/7, mbtmp3.7/8, ML2.5/1, MS3.2/1, Error ellipse: s-maj=37.1km s-min=22.8km az=139.0*
*NEIC **30** 13:30:20.9±1.1, 35.°6N±0.°1×23.°2E±0.°1, h32km±3km, mb4.4/7, Error ellipse: s-maj=21.4km s-min=15.0km az=185.0*
*ATH **30** 13:30:22.6, 35.°41N×23.°36E, h35km±3km, ML3.0/19, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **30** 13:30:23.1, 35.°N±2.°×2.°3E±.°, h22km±2km, M3.1/6, MLh3.1/6*
ISC 30 13:30:21.4±0.9, 35.°40N±0.°04×23.°36E±0.°05, h46km±8km, n112, σ1§47/131, mb4.2/11, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDR	**Palaiochora Ch**	**0.27**	**128**	P	**Pn**	**13 30 30.0**	**+0.2**
ANKY	**Antikythira Is**	**0.46**	**354**	P	**Pn**	**13 30 32.5**	**+0.5**
ANKY				S	**Sn**	**13 30 39.3**	**-0.1**
ANKY	**Antikythira Is**	**0.46**	**354**	P	**Pn**	**13 30 32.7**	**+0.8**
ANKY				S	**Sn**	**13 30 39.1**	**-0.3**
IMMV	**Iera Moni Meta**	**0.51**	**83**	P	**Pn**	**13 30 33.2**	**+0.7**
IMMV				S	**Sn**	**13 30 40.9**	**+0.5**
IMMV	**Iera Moni Meta**	**0.51**	**83**	P	**Pn**	**13 30 33.1**	**+0.7**
IMMV				S	**Sn**	**13 30 41.1**	**+0.7**
CH01	**Chania**	**0.55**	**78**	P	**Pn**	**13 30 34.0**	**+1.1**
CH01				S	**Sn**	**13 30 41.6**	**+0.3**
CHAN	**Chania**	**0.57**	**78**	P	**Pn**	**13 30 34.0**	**+0.9**
CHAN				S	**Sn**	**13 30 43.0**	**+1.4**
CHNB	**Souda**	**0.58**	**82**	P	**Pn**	**13 30 34.5**	**+1.2**
CHNB				S	**Sn**	**13 30 43.2**	**+1.2**
VAM	**Vamos**	**0.68**	**90**	P	**Pn**	**13 30 35.9**	**+1.2**
VAM				S	**Sn**	**13 30 46.2**	**+1.8**
VAM	**Vamos**	**0.68**	**90**	P	**Pn**	**13 30 35.7**	**+0.9**
VAM				S	**Sn**	**13 30 46.1**	**+1.7**
GVD	**Gavdhos**	**0.82**	**133**	P	**Pn**	**13 30 38.0**	**+1.5**
GVD				S	**Sn**	**13 30 50.3**	**+2.7**
GVD	**Gavdhos**	**0.82**	**133**	P	**Pn**	**13 30 37.9**	**+1.3**
GVD				S	**Sn**	**13 30 48.3**	**+0.7**
KTHA	**Kythira Island**	**0.89**	**344**	P	**Pn**	**13 30 39.5**	**+2.1**
KTHA	**Kythira Island**	**0.89**	**344**	P	**Pn**	**13 30 39.6**	**+2.1**
NPS1	**Neapolis Lacon**	**1.13**	**348**	P	**Pn**	**13 30 42.2**	**+1.5**
NPS1				S	**Sn**	**13 30 56.1**	**+0.9**
IDI	**Anoyia**	**1.25**	**95**		**Pn**	**13 30 44.3**	**+1.8**
IDI	**Anoyia**	**1.25**	**95**	P	**Pn**	**13 30 44.6**	**+2.1**
IDI				S	**Sn**	**13 31 01.7**	**+3.5**
IDI	**Anoyia**	**1.25**	**95**	P	**Pn**	**13 30 44.4**	**+1.9**
IDI				S	**Sn**	**13 30 58.9**	**+0.6**
MNVA	**Monemvasia**	**1.31**	**348**	P	**Pn**	**13 30 44.7**	**+1.5**
MNVA				S	**Sn**	**13 31 03.3**	**+0.9**
VLI	**Veliai**	**1.36**	**345**	P	**Pn**	**13 30 46.4**	**+2.5**
VLI				S	**Sn**	**13 31 04.0**	**+3.3**
VLI	**Veliai**	**1.36**	**345**	P	**Pn**	**13 30 45.8**	**+2.0**
VLI				S	**Sn**	**13 31 01.8**	**+1.1**
MHLO	**Agia Marina, M**	**1.53**	**33**	S	**Sn**	**13 31 08.3**	**+3.3**
MHLO	**Agia Marina, M**	**1.53**	**33**	P	**Pn**	**13 30 47.9**	**+1.6**
MHLO				S	**Sn**	**13 31 05.5**	**+0.4**
MILOS	**Milos**	**1.59**	**33**	P	**Pn**	**13 30 49.1**	**+2.0**
NPS	**Neapolis**	**1.84**	**94**	P	**Pn**	**13 30 52.0**	**+1.5**
THR9	**Santorini-Faro**	**1.88**	**59**	P	**Pn**	**13 30 53.1**	**+2.1**
THR9	**Santorini-Faro**	**1.88**	**59**	P	**Pn**	**13 30 52.8**	**+1.8**
THR6	**Thira Island,**	**1.91**	**60**	P	**Pn**	**13 30 52.2**	**+0.8**
SAP3	**Santorini-Thir**	**1.91**	**57**	P	**Pn**	**13 30 52.7**	**+1.3**
SNT5	**Nea Kammeni, S**	**1.93**	**58**	P	**Pn**	**13 30 52.9**	**+1.3**
SNT5	**Nea Kammeni, S**	**1.93**	**58**	P	**Pn**	**13 30 52.8**	**+1.1**
THR3	**Thira Island,**	**1.94**	**58**	P	**Pn**	**13 30 52.8**	**+1.1**
THR3	**Thira Island,**	**1.94**	**58**	P	**Pn**	**13 30 52.6**	**+0.9**
YDRA	**Hydra**	**1.97**	**6**	P	**Pn**	**13 30 53.9**	**+2.0**
THERA	**Ancient Thera,**	**1.97**	**60**	P	**Pn**	**13 30 53.5**	**+1.3**
THERA	**Ancient Thera,**	**1.97**	**60**	P	**Pn**	**13 30 53.1**	**+0.9**
PYL	**PYLOS**	**1.98**	**319**	P	**Pn**	**13 30 52.9**	**+0.5**
THR8	**Santorini-Mono**	**1.99**	**59**	P	**Pn**	**13 30 53.3**	**+0.9**
ITM	**Ithomi**	**2.12**	**327**	P	**Pn**	**13 30 55.5**	**+1.2**
MET1	**Methana Town,**	**2.17**	**0**	P	**Pn**	**13 30 56.0**	**+1.0**
MET3	**Ano Fanari,Met**	**2.17**	**357**	P	**Pn**	**13 30 56.5**	**+1.4**
MET6	**Megalochori,Me**	**2.18**	**360**	P	**Pn**	**13 30 56.7**	**+1.5**
MET2	**Kameni Chora,**	**2.20**	**359**	P	**Pn**	**13 30 56.8**	**+1.3**
MET5	**Makryloggos,Me**	**2.21**	**360**	P	**Pn**	**13 30 57.4**	**+1.8**
ZKR	**Zakros**	**2.35**	**96**	P	**Pn**	**13 30 59.5**	**+2.0**
VLY	**Voula,Athens**	**2.47**	**8**	P	**Pn**	**13 31 01.5**	**+2.4**
VLY	**Voula,Athens**	**2.47**	**8**	P	**Pn**	**13 30 59.6**	**+0.5**
AMT	**Artemida-Makis**	**2.51**	**328**	P	**Pn**	**13 31 01.0**	**+1.3**
ATHU	**Athens Univers**	**2.58**	**7**	P	**Pn**	**13 31 01.1**	**+0.5**
LTK	**Loutraki**	**2.63**	**353**	P	**Pn**	**13 31 03.4**	**+2.0**
LTK	**Loutraki**	**2.63**	**353**	P	**Pn**	**13 31 03.1**	**+1.8**
GUR	**Goura**	**2.66**	**342**	P	**Pn**	**13 31 04.5**	**+2.7**
GUR	**Goura**	**2.66**	**342**	P	**Pn**	**13 31 03.3**	**+1.5**
PTL	**Penteli**	**2.67**	**9**	P	**Pn**	**13 31 03.6**	**+1.7**
PTL	**Penteli**	**2.67**	**9**	P	**Pn**	**13 31 03.1**	**+1.2**
PTL				S	**Sn**	**13 31 33.9**	**+0.8**
DION	**Dionisos Attik**	**2.71**	**10**	P	**Pn**	**13 31 04.1**	**+1.7**
DION	**Dionisos Attik**	**2.71**	**10**	P	**Pn**	**13 31 03.9**	**+1.5**
DION				S	**Sn**	**13 31 34.7**	**+0.7**
VILL	**Villia**	**2.75**	**359**	P	**Pn**	**13 31 04.5**	**+1.5**
KARY	**Karystos**	**2.76**	**18**	P	**Pn**	**13 31 04.7**	**+1.6**
KARY	**Karystos**	**2.76**	**18**	P	**Pn**	**13 31 03.8**	**+0.7**
KARY				S	**Sn**	**13 31 36.6**	**+1.4**
VIL2	**Platees**	**2.80**	**358**	P	**Pn**	**13 31 04.0**	**+0.3**
KLV	**Kalavryta, Ach**	**2.81**	**340**	P	**Pn**	**13 31 05.8**	**+2.0**
KLV	**Kalavryta, Ach**	**2.81**	**340**	P	**Pn**	**13 31 05.8**	**+2.0**
DRO	**Drossia**	**2.87**	**333**	P	**Pn**	**13 31 05.9**	**+1.3**
AIOA	**Agios Ioannis,**	**2.97**	**340**	P	**Pn**	**13 31 07.4**	**+1.4**
RLS	**Rizolos of Patr**	**3.06**	**331**	P	**Pn**	**13 31 08.0**	**+1.9**
KARP	**Karpathos**	**3.10**	**86**	Pn	**Pn**	**13 31 08.6**	**+0.7**
KARP	**Karpathos**	**3.10**	**86**	P	**Pn**	**13 31 08.6**	**+0.7**
AXS	**Araxos**	**3.21**	**331**	P	**Pn**	**13 31 11.0**	**+1.7**
MG00	**Magoula, Dorid**	**3.21**	**340**	P	**Pn**	**13 31 10.4**	**+1.1**
EFP	**Efpalio**	**3.23**	**339**	P	**Pn**	**13 31 11.3**	**+1.7**
ORTH	**Orthonies,Zaky**	**3.25**	**319**	P	**Pn**	**13 31 11.1**	**+1.3**
LKR	**Lokris**	**3.25**	**355**	P	**Pn**	**13 31 11.3**	**+1.4**
KYMI	**Kymi, Euboea I**	**3.28**	**10**	P	**Pn**	**13 31 11.3**	**+1.1**
ATAL	**Atalanti**	**3.29**	**355**	P	**Pn**	**13 31 11.8**	**+1.4**
RTZL	**Ratzakli, Kefa**	**3.38**	**323**	P	**Pn**	**13 31 12.3**	**+0.7**
ANX	**Ano Chora**	**3.39**	**340**	P	**Pn**	**13 31 14.0**	**+2.2**
AXAR	**Agios Charalam**	**3.40**	**351**	P	**Pn**	**13 31 14.0**	**+2.1**
PVO	**Paravola**	**3.53**	**336**	P	**Pn**	**13 31 15.5**	**+1.9**
VLS	**Valsamata**	**3.55**	**322**	P	**Pn**	**13 31 13.9**	**-0.1**
SMG	**Samos**	**3.62**	**50**	P	**Pn**	**13 31 15.7**	**+0.7**
AGG	**Agios Georgios**	**3.70**	**347**	P	**Pn**	**13 31 17.8**	**+1.7**
MAKR	**Makrakomi, Fth**	**3.73**	**345**	P	**Pn**	**13 31 17.7**	**+1.2**
AOS2	**Alonissos-2**	**3.76**	**6**	P	**Pn**	**13 31 17.2**	**+0.4**
FSK	**Fiskardo**	**3.79**	**324**	P	**Pn**	**13 31 17.7**	**+0.5**
EVGI	**Lefkada island**	**3.87**	**327**	P	**Pn**	**13 31 18.8**	**+0.4**
AMPL	**Ampelaki**	**3.91**	**335**	P	**Pn**	**13 31 20.6**	**+1.7**
ARG	**Arkhangelos**	**3.96**	**77**	Pn	**Pn**	**13 31 20.8**	**+1.3**
ARG	**Arkhangelos**	**3.96**	**77**	P	**Pn**	**13 31 20.3**	**+0.8**
DRAG	**Dragano-Lefkad**	**3.96**	**327**	P	**Pn**	**13 31 20.5**	**+0.9**
LKD2	**Lefkada island**	**4.01**	**328**	P	**Pn**	**13 31 21.0**	**+0.7**
TSLK	**Tsoukalades, L**	**4.04**	**328**	P	**Pn**	**13 31 21.4**	**+0.8**
THL	**Klokotos Trika**	**4.29**	**346**	P	**Pn**	**13 31 25.4**	**+1.3**
PRMD	**Pramanda**	**4.50**	**337**	P	**Pn**	**13 31 28.4**	**+1.4**
AKAS	**Kas**	**5.14**	**79**	Pn	**Pn**	**13 31 35.8**	**-0.1**
ELL	**Elmali**	**5.47**	**74**	Pn	**Pn**	**13 31 39.3**	**-1.0**
BRTR	**Keskin Array B**	**9.23**	**59**	Pn	**Pn**	**13 32 29.3**	**-2.6**
	baz=246,slow=12,SNR=1.8						
	0.3nm,0.5s						
KBZ	**Khabaz**	**17.18**	**55**	LR	LR	13 41 49.2	
	comp=Z,73nm,19.1s,baz=332,slow=41						
HFS	**Hagfors**	**25.53**	**349**	P	**P**	**13 35 43.6**	**-1.8**
	1.6nm,0.7s,baz=163,slow=10,SNR=1.7						
	1.6nm,0.7s						
FINES	**FINESS Array B**	**26.12**	**3**	P	**P**	**13 35 48.5**	**-2.1**
	3.7nm,1.1s,baz=182,slow=10.0,SNR=1.6						
	3.7nm,1.1s						
TORD	**Torodi Ar. Bea**	**29.55**	**227**	P	**P**	**13 36 22.7**	**+0.9**
	0.4nm,0.6s,baz=28,slow=8.1,SNR=8.4						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**42.11**	**51**	P	**P**	**13 38 07.5**	**-1.3**
	0.4nm,0.4s,baz=272,slow=8.6,SNR=8.3						
	0.4nm,0.4s						
SPITS	**Spitsbergen Ar**	**42.98**	**358**	P	**P**	**13 38 14.7**	**-0.9**
	5.3nm,1.0s,baz=152,slow=9.8,SNR=8.7						
	5.3nm,1.0s						
MKAR	**Makanchi Array**	**44.87**	**57**	P	**P**	**13 38 29.9**	**-1.1**
	0.3nm,0.4s,baz=272,slow=7.8,SNR=6.8						
	0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**45.90**	**46**	P	P	13 38 37.2	-1.9
	0.7nm,0.4s,baz=272,slow=8.9,SNR=4.3						
	0.7nm,0.4s						
A36M	**Sachs Harbour**	**70.66**	**350**	P	**P**	**13 41 31.7**	**+0.1**
A36M				IAmb	IAmb	13 41 44.4	
	comp=Z,4.5nm,1.5s						
INK	**Inuvik**	**75.16**	**351**	P	**P**	**13 41 58.5**	**+0.1**
INK				IAmb	IAmb	13 42 19.0	
	comp=Z,5.7nm,1.2s						
E29M	**Blow River**	**75.57**	**353**	P	**P**	**13 42 01.3**	**+0.6**
F28M	**Old Crow**	**76.52**	**353**	P	**P**	**13 42 05.5**	**-0.7**
F28M				IAmb	IAmb	13 42 20.6	
	comp=Z,5.1nm,1.4s						
G29M	**Pine Creek**	**77.02**	**353**	P	**P**	**13 42 09.2**	**+0.2**
G29M				IAmb	IAmb	13 42 42.6	
	comp=Z,6.5nm,1.4s						
F19K	**Shaleruckik Mo**	**78.08**	**0**	P	**P**	**13 42 14.8**	**0.0**
F19K				IAmb	IAmb	13 42 20.3	
	comp=Z,3.4nm,1.2s						
SKT	**Skwentna**	**82.87**	**358**	P	**P**	**13 42 40.2**	**-0.4**

*IDC **30** 13:35:32.2±1.2, 49.°09N×158.°34E, h0km, mb3.5/6, mbtmp3.5/6, Error ellipse: s-maj=37.0km s-min=29.4km az=61.0*
*KRSC **30** 13:35:36.8±1.8, 49.°43N×158.°66E, h41km±49km, Ml4.0*
ISC 30 13:35:37.5±1.1, 49.°24N±0.°08×158.°42E±0.°09, h35km, n26, σ1§08/35, mb3.4/6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.08**	**315**	*e*P	**Pn**	**13 36 08.9**	**-0.9**
SKR				*e*S	**Sn**	**13 36 34.0**	**-0.4**
PAU	**Pauzhetka**	**2.46**	**336**	*e*P	**Pn**	**13 36 15.4**	**+0.4**
PAU				*e*S	**Sn**	**13 36 43.9**	**0.0**
KDTR	**Khodutka, Kamc**	**2.59**	**355**	*e*P	**Pn**	**13 36 16.5**	**-0.2**
KDTR				*e*S	**Sn**	**13 36 45.8**	**-1.1**
ASAK	**Asacha**	**3.17**	**354**	*e*P	**Pn**	**13 36 25.6**	**+0.8**
RUS	**Russkaya**	**3.20**	**1**	*e*P	**Pn**	**13 36 24.9**	**-0.3**
RUS				*e*S	**Sn**	**13 37 01.3**	**-0.8**
MTVR	**Mutnovka**	**3.25**	**357**	*e*P	**Pn**	**13 36 26.6**	**+0.5**
MTVR				*e*S	**Sn**	**13 37 02.9**	**-0.8**
GRL	**Gorelyy**	**3.33**	**356**	*e*P	**Pn**	**13 36 28.4**	**+1.3**
GRL				*e*S	**Sn**	**13 37 05.0**	**-0.4**
KRMR	**Karymshinskiy**	**3.60**	**357**	*e*P	**Pn**	**13 36 32.0**	**+1.3**
KRMR				*e*S	**Sn**	**13 37 10.9**	**-1.2**
APC	**Apacha**	**3.78**	**348**	*e*P	**Pn**	**13 36 35.2**	**+2.1**
DALK	**Dalny**	**3.81**	**3**	*e*P	**Pn**	**13 36 33.7**	**+0.2**
DALK				*e*S	**Sn**	**13 37 15.8**	**-1.2**
UGLR	**Uglovaya**	**3.99**	**3**	*e*P	**Pn**	**13 36 37.2**	**+1.1**
SPN	**Mys Shipunski**	**4.00**	**14**	*e*P	**Pn**	**13 36 35.6**	**-0.5**
SPN				*e*S	**Sn**	**13 37 19.7**	**-2.0**
AVH	**Avacha**	**4.04**	**3**	*e*P	**Pn**	**13 36 37.2**	**+0.4**
SMAR	**Somma**	**4.04**	**3**	*e*P	**Pn**	**13 36 38.4**	**+1.5**
SDLR	**Sedlovina**	**4.06**	**4**	*e*P	**Pn**	**13 36 38.5**	**+1.4**
KOK	**Koryaka**	**4.06**	**2**	*e*P	**Pn**	**13 36 38.3**	**+1.1**
KRER	**Koryakskii**	**4.08**	**3**	*e*P	**Pn**	**13 36 39.7**	**+2.3**
KRX	**Arik**	**4.13**	**2**	*e*P	**Pn**	**13 36 38.6**	**+0.4**
GNL	**Ganaly**	**4.48**	**356**	*e*P	**Pn**	**13 36 44.7**	**+1.9**
KBTR	**Krutoberegovo**	**7.47**	**19**	*e*P	**Pn**	**13 37 24.2**	**+0.3**
MKAR	**Makanchi Array**	**48.95**	**298**	P	**P**	**13 44 19.8**	**-0.2**
	0.2nm,0.4s,baz=50,slow=6.4,SNR=4.8						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**49.04**	**304**	P	**P**	**13 44 21.1**	**+0.4**
	0.2nm,0.5s,baz=63,slow=7.7,SNR=2.3						
	0.2nm,0.5s						
BVAR	**Borovoye Array**	**52.01**	**310**	P	**P**	**13 44 43.4**	**+0.4**
	0.4nm,0.5s,baz=66,slow=8.8,SNR=4.0						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**72.13**	**204**	P	**P**	**13 46 57.0**	**-1.2**
	0.8nm,0.7s,baz=21,slow=6.2,SNR=7.8						
	0.8nm,0.7s						
TXAR	**Lajitas Array**	**73.18**	**65**	P	**P**	**13 47 05.6**	**+0.9**
	0.2nm,0.5s,baz=318,slow=6.7,SNR=3.9						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**75.80**	**203**	P	**P**	**13 47 19.7**	**+0.1**
	0.2nm,0.6s,baz=16,slow=5.2,SNR=5.5						
	0.2nm,0.6s						

*IDC **30** 13:49:10.2±3.0, 12.°19N×142.°60E, h85km±33km, mb3.6/9, mbtmp4.0/10, MS3.0/15, Error ellipse: s-maj=29.7km s-min=14.4km az=91.0*
*NEIC **30** 13:49:10.5±0.8, 12.°2N±0.°1×142.°80E±0.°09, h89km±8km, mb4.5/16, Error ellipse: s-maj=16.2km s-min=12.5km az=154

BVAR	**Borovoye Array**	**69.76**	**322**	P		**P**	**14 00 10.0**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=108,slow=4.7,SNR=5.4							
	comp=Z,1.1nm,0.6s							
ILAR	**Eielson Array**	**70.70**	**25**	P		**P**	**14 00 15.9**	**+0.1**
	comp=Z,0.3nm,0.9s,baz=267,slow=7.6,SNR=1.3							
	comp=Z,0.3nm,0.9s							
BMRM	**Bremner River**	**71.00**	**29**	P		**P**	**14 00 17.7**	**-0.1**

*IDC **30** 14:24:51.5±4.0, 9°.66S×112°.77E, h0km, mb3.1/3, mbtmp3.2/4, ML3.1/1, Error ellipse: s-maj=235.3km s-min=25.3km az=47.0*
*DJA **30** 14:24:57.8±1.4, 10°.5±6°×11°.3E±°, h18km±11km, M3.6/19, mb4.0/2, MLv3.5/19*
ISC 30 14:24:57.6±1.0, 9.7S±0.1×112.8E±0.0, h36km, n17, σ1§29/19, mb2.9/3, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAGI	**Jajag, Banyuwa**	**1.77**	**45**	P	**Pn**	**14 25 24.5**	**-1.3**
BLJI	**Banyuglugur**	**2.10**	**20**	P	**Pn**	**14 25 31.1**	**+0.9**
SNJI	**Sawahan-Nganju**	**2.23**	**330**	P	**Pn**	**14 25 32.9**	**+0.6**
PCJI	**Pacitan**	**2.27**	**312**	P	**Pn**	**14 25 33.3**	**+0.7**
PCJI				S	**Sn**	**14 25 59.9**	**+0.5**
ABJI	**Asem Bagus**	**2.34**	**35**	P	**Pn**	**14 25 34.3**	**+0.7**
RTBI	**Rangdo, Negare**	**2.40**	**58**	P	**Pn**	**14 25 35.3**	**+1.0**
IGBI	**Denpasar**	**2.41**	**68**	P	**Pn**	**14 25 35.4**	**+0.9**
KMMI	**Kalianget**	**2.87**	**22**	P	**Pn**	**14 25 41.6**	**+0.7**
UGM	**Wanagama**	**2.95**	**308**	P	**Pn**	**14 25 42.9**	**+0.9**
UGM				S	**Sn**	**14 26 17.9**	**+1.7**
KHKI	**Kahang-Kahang**	**3.02**	**63**	P	**Pn**	**14 25 45.0**	**+2.2**
PLAI	**Plampang**	**4.91**	**80**	P	**Pn**	**14 26 10.0**	**+1.0**
DBNI	**Kabupaten Domp**	**5.50**	**78**	P	**Pn**	**14 26 18.5**	**+1.5**
	0.0nm7.8nm,0.7s							
WBSI	**Waikabubak, Su**	**6.42**	**90**	P	**Pn**	**14 26 31.5**	**+1.8**
FITZ	**Fitzroy Crossi**	**14.91**	**125**	Pn	**Pn**	**14 28 24.4**	**-1.5**
	0.1nm,0.3s,baz=300,slow=14,SNR=1.5							
FITZ				Sn	Sn	14 30 59.3	-11
	0.1nm,0.3s,baz=183,slow=17,SNR=1.7							
	1.1nm,0.9s							
WRA	**Warramunga Arr**	**23.06**	**119**	P	**P**	**14 29 59.4**	**-0.7**
	0.1nm,0.5s,baz=292,slow=9.9,SNR=1.2							
	0.1nm,0.5s							
ASAR	**Alice Springs**	**24.39**	**127**	P	**P**	**14 30 13.8**	**+1.1**
	0.2nm,0.6s,baz=300,slow=8.3,SNR=6.9							
	0.2nm,0.6s							
MKAR	**Makanchi Array**	**62.55**	**337**	P	**P**	**14 35 16.4**	**-1.4**
	0.4nm,0.5s,baz=150,slow=7.3,SNR=8.2							
	0.4nm,0.5s							

*OTT **30** 14:47:37.5±1.0, 82°.91N×24°.52W, h18km, ML4.9/3, East Coast of Greenland. 530km northeast from Alert, Nu*
*IDC **30** 14:47:39.9±0.5, 82°.88N×26°.05W, h0km, mb4.0/27, mbtmp4.0/29, ML4.0/2, MS3.2/37, Error ellipse: s-maj=14.9km s-min=9.8km az=5.0*
*BER **30** 14:47:42.0±3.3, 82°.85N×28°.53W, h0km±32km, ML3.5, ML3.7(DNK), Confirmed Earthquake*
*NEIC **30** 14:47:42.1±1.1, 82°.78N±0°.08×26°.3W±0°.4, h10km±1km, mb4.6/141, Error ellipse: s-maj=14.8km s-min=7.1km az=201.0*
*DNK **30** 14:47:42.1±3.3, 82°.83N×26°.97W, h0km±28km, ML3.7, Presumed earthquake*
ISC 30 14:47:41.6±0.3, 82.72N±0°.05×27.26W±0°.03, h10km, n428, σ1§17/384, mb4.5/96, MS3.2/37, Near north coast of Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NOR	**Nord**	**1.83**	**123**	*i* P	**Pb**	**14 48 15.4**	**+0.3**
NOR				*i* S	**Sg**	**14 48 40.6**	**+0.1**
NOR				IAML		14 48 49.6	
	comp=Z,1μm,0.4s						
NOR	**Nord**	**1.83**	**123**	*i* P	**Pb**	**14 48 15.4**	**+0.3**
NOR				*i* S	**Sg**	**14 48 40.6**	**+0.1**
NOR				IAML		14 48 49.6	
	comp=Z,1μm,0.4s						
DAG	**Danmarks Havn**	**6.17**	**161**	*i* P	**Pn**	**14 49 13.1**	**+0.6**
DAG				*i* S	**Sn**	**14 50 21.0**	**-2.0**
DAG				IAML		14 51 08.9	
	comp=Z,130nm,0.6s						
DAG	**Danmarks Havn**	**6.17**	**161**	*i* P	**Pn**	**14 49 13.1**	**+0.6**
DAG				*i* S	**Sn**	**14 50 21.0**	**-2.0**
DAG				IAML		14 51 08.9	
	comp=Z,130nm,0.6s						
NEEM	**North Greenlan**	**6.62**	**230**	*i* P	**Pn**	**14 49 20.3**	**+1.2**
NEEM				*i* S	**Sn**	**14 50 32.8**	**-1.7**
NEEM				IAML		14 51 27.3	
	comp=Z,253nm,0.8s						
NEEM	**North Greenlan**	**6.62**	**230**	*i* P	**Pn**	**14 49 20.3**	**+1.2**
NEEM				*i* S	**Sn**	**14 50 32.8**	**-1.7**
NEEM				IAML		14 51 27.3	
	comp=Z,253nm,0.8s						
KBS	**Kingsbay**	**7.15**	**101**		**Pn**	**14 49 24.1**	**-1.8**
KBS	**Kingsbay**	**7.15**	**101**	*e*P	**Pn**	**14 49 24.3**	**-1.6**
KBS				IAML		14 51 01.8	
	comp=Z,3.6nm,0.4s						
KBS	**Kingsbay**	**7.15**	**101**	*i* P	**Pn**	**14 49 23.6**	**-2.3**
BRBB	**Barentsburg B**	**8.09**	**102**	*e*P	**Pn**	**14 49 38.9**	**+0.1**
BRBB				*e*S	**Sn**	**14 51 10.9**	**+0.9**
BRBA	**Barentsburg A**	**8.11**	**102**	*e*P	**Pn**	**14 49 39.0**	**-0.2**
BRBA				*e*S	**Sn**	**14 51 13.1**	**+2.4**
BRBA				IAML		14 51 21.8	
	comp=Z,4.4nm,0.2s						
SPA0	**Spitsbergen Ar**	**8.29**	**99**	*e*P	**Pn**	**14 49 41.4**	**-0.3**
SPA0				*e*S	**Sn**	**14 51 15.1**	**0.0**
SPA0				IAML		14 51 32.5	
	comp=Z,4.9nm,0.8s						
SPITS	**Spitsbergen Ar**	**8.29**	**99**	Pn	**Pn**	**14 49 40.8**	**-0.9**
	baz=338,slow=10						
SPITS				Sn	**Sn**	**14 51 16.6**	**+1.5**
	baz=328,slow=14						
	comp=Z,2.9nm,0.3s						
DBG	**Daneborg**	**8.57**	**167**	*i* P	**Pn**	**14 49 44.4**	**-1.0**
DBG				*i* S	**Sn**	**14 51 19.3**	**-2.6**
DBG				IAML		14 52 12.7	
	comp=Z,260nm,1.0s						
DBG	**Daneborg**	**8.57**	**167**	*i* P	**Pn**	**14 49 44.4**	**-1.0**
DBG				*i* S	**Sn**	**14 51 19.3**	**-2.6**
DBG				IAML		14 52 12.7	
	comp=Z,260nm,1.0s						
HSPB	**Hornsund (broa**	**9.15**	**105**	*e*P	**Pn**	**14 49 53.5**	**+0.2**
HSPB				*e*S	**Sn**	**14 51 34.5**	**-1.6**
HSPB				IAML		14 51 52.1	
	comp=Z,2.6nm,0.7s						
HSPB	**Hornsund (broa**	**9.15**	**105**	*i* P	**Pn**	**14 49 54.0**	**+0.6**
TULEG	**Thule**	**9.40**	**252**		**Pn**	**14 49 56.6**	**-0.2**
TULEG	**Thule**	**9.40**	**252**	*i* P	**Pn**	**14 49 57.2**	**+0.5**
TULEG				*i* S	Sn	14 51 36.6	-5.6
TULEG				IAML		14 52 34.3	
	comp=Z,369nm,1.0s						
TULEG	**Thule**	**9.40**	**252**	*i* P	**Pn**	**14 49 57.2**	**+0.5**
TULEG				*i* S	Sn	14 51 36.6	-5.6
TULEG				IAML		14 52 34.3	
	comp=Z,369nm,1.0s						
KULLO	**Kullorsuaq**	**9.86**	**231**	*i* P	**Pn**	**14 50 02.3**	**-0.8**
KULLO				*i* S	Sn	14 51 47.4	-6.2
KULLO				IAML		14 52 55.7	
	comp=Z,228nm,1.2s						
KULLO	**Kullorsuaq**	**9.86**	**231**	PN	**Pn**	**14 50 01.9**	**-1.2**
KULLO				SN	**Sn**	**14 51 49.7**	**-3.9**
KULLO				Trac		14 51 55.7	
	comp=Z,122nm,0.5s						
KULLO	**Kullorsuaq**	**9.86**	**231**	*i* P	**Pn**	**14 50 02.3**	**-0.8**
KULLO				*i* S	Sn	14 51 47.4	-6.2
KULLO				IAML		14 52 55.7	
	comp=Z,228nm,1.2s						
SUMG	**Summit**	**10.44**	**199**		**Pn**	**14 50 12.2**	**+0.8**
SUMG	**Summit**	**10.44**	**199**	*i* P	**Pn**	**14 50 12.3**	**+0.8**
SUMG				*i* S	Sn	14 52 01.6	-6.8
SUMG				IAML		14 53 21.6	
	comp=Z,93nm,0.9s						
SUMG	**Summit**	**10.44**	**199**	*i* P	**Pn**	**14 50 12.3**	**+0.8**
SUMG				*i* S	Sn	14 52 01.6	-6.8
SUMG				IAML		14 53 21.6	
	comp=Z,93nm,0.9s						
HOPEN	**Hopen**	**10.75**	**96**	*e*P	**Pn**	**14 50 14.6**	**-0.7**
UPNV	**Upernavik**	**11.45**	**226**	*i* P	**Pn**	**14 50 24.0**	**-0.9**
UPNV				*i* S	Sn	14 52 22.8	-10
UPNV				IAML		14 53 43.3	
	comp=Z,89nm,0.9s						
UPNV	**Upernavik**	**11.45**	**226**	*i* P	**Pn**	**14 50 24.0**	**-0.9**
UPNV				*i* S	Sn	14 52 22.8	-10
UPNV				IAML		14 53 43.3	
	comp=Z,89nm,0.9s						
POIN	**Pond Inlet**	**13.94**	**254**		**Pn**	**14 50 56.1**	**-2.6**
POIN	**Pond Inlet**	**13.94**	**254**	PN	**Pn**	**14 50 56.4**	**-2.4**
POIN				SN	Sn	14 53 24.5	-8.7
POIN				Trac		14 53 29.2	
	comp=Z,7.1nm,0.2s						
RES	**Resolute Bay**	**14.29**	**275**	Pn	Pn	14 51 00.0	-3.5
	comp=Z,1.6nm,0.3s,baz=29,slow=11,SNR=58						
RES				Sn	Sn	14 53 30.3	-11
	comp=Z,3.4nm,0.3s,baz=21,slow=3.7,SNR=7.4						
RES				Lg	Lg	14 55 07.1	
	baz=134,slow=19						
RES	**Resolute Bay**	**14.29**	**275**		Pn	14 50 59.3	-4.3
RES	**Resolute Bay**	**14.29**	**275**	PN	**Pn**	**14 51 01.4**	**-2.1**
RES				SN	Sn	14 53 32.7	-9.0
RES				Trac		14 53 51.6	
	comp=Z,28nm,0.6s						
ILULI	**Ilulissat**	**14.51**	**215**	Pn	**Pn**	**14 51 08.1**	**+1.5**
ILULI	**Ilulissat**	**14.51**	**215**	PN	**Pn**	**14 51 05.1**	**-1.4**
ILULI				SN	Sn	14 53 38.7	-8.4
ILULI				Trac		14 53 48.6	
	comp=Z,33nm,0.5s						
SFJD	**Kangerlussuaq**	**16.66**	**213**	Pn	**Pn**	**14 51 33.2**	**-1.5**
	comp=Z,1.2nm,0.3s,baz=6.0,slow=12,SNR=8.6						
SFJD				Sn	Sn	14 54 22.9	-16
	comp=Z,1.1nm,0.3s,baz=34,slow=7.5,SNR=3.6						
SFJD				Lg	Lg	14 56 21.4	
	comp=Z,0.3nm,0.3s,baz=306,slow=23,SNR=4.0						
SFJD				LR	LR	14 58 47.0	
	comp=Z,66nm,18.5s,baz=14,slow=40						
SFJD	**Kangerlussuaq**	**16.66**	**213**	Pn	**Pn**	**14 51 31.5**	**-3.2**
ARCES	**ARCESS Array B**	**17.14**	**108**	P	**Pn**	**14 51 38.7**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=344,slow=8.5,SNR=8.4						
ARCES				LR	LR	14 57 17.9	
	comp=Z,55nm,21.4s,baz=334,slow=34						
	comp=Z,14nm,1.1s						
ILON	**Igloolik, Nuna**	**17.51**	**254**	Pn	**Pn**	**14 51 43.1**	**-2.2**
A36M	**Sachs Harbour**	**20.43**	**298**	P	**P**	**14 52 19.8**	**+1.4**
A36M	**Sachs Harbour**	**20.43**	**298**	P	**P**	**14 52 19.8**	**+1.4**
	baz=21,SNR=13						
FRB	**Frobisher Bay**	**21.41**	**233**	P	**P**	**14 52 31.2**	**+2.1**
	comp=Z,11nm,0.8s,baz=356,slow=8.3,SNR=8.7						
FRB				LR	LR	15 00 52.0	
	comp=Z,73nm,18.4s,baz=46,slow=37						
	comp=Z,11nm,0.8s						
IVI	**Ivigtut**	**22.25**	**207**	P	**P**	**14 52 41.4**	**+3.3**
IVI				IAmb	IAmb	14 53 07.3	
	comp=Z,41nm,1.1s						
C36M	**Paulatuk**	**22.79**	**295**	P	**P**	**14 52 44.4**	**+0.7**
C36M	**Paulatuk**	**22.79**	**295**	P	**P**	**14 52 44.3**	**+0.7**
	baz=19						
NB2	**NORSAR Subarra**	**23.79**	**131**	P	**P**	**14 52 56.2**	**+2.2**
	comp=Z,1.3nm,0.7s,baz=326,slow=8.6						
NOA	**NORSAR Array B**	**23.79**	**131**	P	**P**	**14 52 53.6**	**-0.3**
	comp=Z,2.2nm,0.7s,baz=349,slow=9.5,SNR=8.6						
NOA				LR	LR	15 00 44.3	
	comp=Z,22nm,18.1s,baz=350,slow=33						
	comp=Z,2.2nm,0.7s						
A21K	**Barrow**	**24.09**	**322**	P	**P**	**14 52 57.2**	**+0.6**
	baz=14,SNR=8.1						
BLKN	**Baker Lake**	**24.09**	**264**		**P**	**14 52 57.8**	**+1.1**
BLKN				IAmb	IAmb	14 53 07.4	
	comp=Z,16nm,1.0s						
A22K	**Sinclair Lake**	**24.27**	**321**	P	**P**	**14 52 59.1**	**+0.8**
	baz=14						
D28M	**Stokes Point**	**24.41**	**307**	P	**P**	**14 53 00.3**	**+0.8**
	baz=16						
C26K	**Camden Bay**	**24.45**	**312**	P	**P**	**14 53 00.9**	**+1.0**
	baz=16						
C27K	**Jago River**	**24.61**	**311**	P	**P**	**14 53 02.2**	**+0.7**
	baz=16						
D27M	**Malcolm River**	**24.72**	**309**	P	**P**	**14 53 03.2**	**+0.7**
	baz=16						
NRIK	**Noril'sk**	**24.73**	**50**	P	**P**	**14 52 59.5**	**-3.0**
	comp=Z,3.2nm,0.8s,baz=342,slow=7.3,SNR=6.6						
NRIK				LR	LR	15 03 45.2	
	comp=Z,37nm,18.3s,baz=346,slow=39						
	comp=Z,3.2nm,0.8s						
B22K	**Teshekpuk Lake**	**24.79**	**319**		**P**	**14 53 03.8**	**+0.8**
B22K				IAmb	IAmb	14 53 05.7	
	comp=Z,20nm,0.8s						
B22K	**Teshekpuk Lake**	**24.79**	**319**	P	**P**	**14 53 03.4**	**+0.4**
	baz=14						
INK	**Inuvik**	**24.84**	**302**	P	**P**	**14 53 04.2**	**+0.7**
INK				IAmb	IAmb	14 53 06.0	
	comp=Z,14nm,1.1s						
INK	**Inuvik**	**24.84**	**302**	P	**P**	**14 53 04.0**	**+0.6**
	baz=17,SNR=8.1						
HFS	**Hagfors**	**24.92**	**129**	P	**P**	**14 53 04.2**	**-0.1**
	comp=Z,4.0nm,0.5s,baz=353,slow=7.5,SNR=23						
	comp=Z,4.0nm,0.5s						
FINES	**FINESS Array B**	**24.98**	**114**	P	**P**	**14 53 05.3**	**+0.5**
	comp=Z,5.6nm,0.8s,baz=347,slow=11,SNR=23						
	comp=Z,5.6nm,0.8s						
C24K	**Franklin Bluff**	**24.99**	**315**	P	**P**	**14 53 05.0**	**+0.2**
	baz=15						
C23K	**Itkillik River**	**25.04**	**317**		**P**	**14 53 06.1**	**+0.8**
C23K				IAmb	IAmb	14 53 08.2	
	comp=Z,32nm,1.5s						
C23K	**Itkillik River**	**25.04**	**317**	P	**P**	**14 53 06.1**	**+0.8**
	baz=14,SNR=11						
D25K	**Kavik River**	**25.16**	**313**	P	**P**	**14 53 07.4**	**+0.9**
	baz=15						
E28M	**Babbage River**	**25.19**	**307**		**P**	**14 53 07.9**	**+1.3**
E28M				IAmb	IAmb	14 53 09.0	
	comp=Z,6.2nm,0.8s						
E28M	**Babbage River**	**25.19**	**307**	P	**P**	**14 53 07.7**	**+1.0**
	baz=16						
E29M	**Blow River**	**25.23**	**306**	P	**P**	**14 53 07.9**	**+0.9**
	baz=16						
TIXI	**Tiksi**	**25.33**	**17**	LR	LR	15 01 21.7	
	comp=Z,19nm,20.3s,baz=12,slow=33						
B20K	**Meade River**	**25.42**	**322**	P	**P**	**14 53 09.6**	**+0.9**
	baz=13						
A19K	**Wainwright**	**25.52**	**325**	P	**P**	**14 53 10.6**	**+1.0**
	baz=12						
D24K	**Happy Valley**	**25.55**	**315**	P	**P**	**14 53 11.1**	**+1.2**
	baz=14						
B21K	**Ikpikpuk River**	**25.59**	**320**	P	**P**	**14 53 11.2**	**+0.9**
	baz=13						
F31M	**Tsiigehtchic**	**25.70**	**301**	P	**P**	**14 53 12.3**	**+1.1**
	baz=16						
F30M	**Barrier River**	**25.76**	**303**		**P**	**14 53 12.9**	**+1.1**
F30M				IAmb	IAmb	14 53 18.1	
	comp=Z,7.0nm,0.8s						
F30M	**Barrier River**	**25.76**	**303**	P	**P**	**14 53 12.5**	**+0.7**
	baz=16						
E27K	**Coleen River**	**25.80**	**309**	P	**P**	**14 53 12.8**	**+0.5**
	baz=15						
D23K	**Nanushuk River**	**25.90**	**316**		**P**	**14 53 14.6**	**+1.6**
D23K				IAmb	IAmb	14 53 17.7	
	comp=Z,15nm,1.0s						
D23K	**Nanushuk River**	**25.90**	**316**	P	**P**	**14 53 14.1**	**+1.1**
	baz=14						
C21K	**Knifeblade Rid**	**26.06**	**320**	P	**P**	**14 53 15.6**	**+1.0**
	baz=13						
TOLK	**Toolik Lake Re**	**26.11**	**315**	P	**P**	**14 53 16.2**	**+1.1**
	baz=14,SNR=9.2						
F28M	**Old Crow**	**26.18**	**307**	P	**P**	**14 53 16.5**	**+0.8**
F28M				IAmb	IAmb	14 53 17.6	
	comp=Z,7.3nm,0.8s						
F28M	**Old Crow**	**26.18**	**307**	P	**P**	**14 53 16.4**	**+0.7**
	baz=15,SNR=9.9						
E25K	**Arctic Village**	**26.25**	**312**	P	**P**	**14 53 16.9**	**+0.6**
E25K				IAmb	IAmb	14 53 20.8	
	comp=Z,11nm,0.9s						
E25K	**Arctic Village**	**26.25**	**312**	P	**P**	**14 53 17.2**	**+0.8**
	baz=14,SNR=7.8						
G30M	**tAoh Zraii Nji**	**26.41**	**303**	IAmb	IAmb	14 53 22.6	
	comp=Z,22nm,1.4s						
G30M	**tAoh Zraii Nji**	**26.41**	**303**	P	**P**	**14 53 18.6**	**+0.8**
	baz=16						
C19K	**Lookout Ridge**	**26.49**	**324**	P	**P**	**14 53 19.2**	**+0.6**
C19K				IAmb	IAmb	14 53 20.9	
	comp=Z,10nm,0.9s						
C19K	**Lookout Ridge**	**26.49**	**324**	P	**P**	**14 53 19.1**	**+0.6**
	baz=12,SNR=9.6						
F26K	**Sheenjek River**	**26.53**	**310**	P	**P**	**14 53 19.7**	**+0.9**
	baz=14						
E24K	**Your Creek**	**26.57**	**314**	P	**P**	**14 53 19.8**	**+0.6**
	baz=14						
D20K	**Etivluk River**	**26.64**	**321**	IAmb	IAmb	14 53 21.9	
	comp=Z,10nm,0.8s						
D20K	**Etivluk River**	**26.64**	**321**	P	**P**	**14 53 20.6**	**+0.8**
	baz=12						
G29M	**Pine Creek**	**26.67**	**305**	IAmb	IAmb	14 53 27.7	
	comp=Z,34nm,1.5s						
G29M	**Pine Creek**	**26.67**	**305**	P	**P**	**14 53 20.7**	**+0.6**
	baz=15						
E23K	**Chandalar**	**26.69**	**315**	IAmb	IAmb	14 53 26.5	
	comp=Z,27nm,1.2s						
E23K	**Chandalar**	**26.69**	**315**	P	**P**	**14 53 21.0**	**+0.7**
	baz=14						
E21K	**Killik River**	**26.69**	**319**	P	**P**	**14 53 20.9**	**+0.6**
	baz=13						
F25K	**Christian Rive**	**26.77**	**312**	P	**P**	**14 53 21.6**	**+0.6**
	baz=14						
E22K	**Anaktuvuk Pass**	**26.81**	**317**	P	**P**	**14 53 21.9**	**+0.6**
E22K				IAmb	IAmb	14 53 27.1	
	comp=Z,13nm,1.1s						
E22K	**Anaktuvuk Pass**	**26.81**	**317**	P	**P**	**14 53 21.9**	**+0.6**
	baz=13,SNR=11						
D19K	**Kuna River**	**26.98**	**322**	P	**P**	**14 53 23.3**	**+0.4**
	baz=12						
E20K	**Nigu River**	**27.05**	**320**	P	**P**	**14 53 24.3**	**+0.7**
	baz=12						
F24K	**Squaw Lake**	**27.05**	**313**	P	**P**	**14 53 24.6**	**+1.0**
	baz=14						
EPYK	**Eagle Plains**	**27.06**	**303**	P	**P**	**14 53 24.4**	**+0.8**
EPYK	**Eagle Plains**	**27.06**	**303**	P	**P**	**14 53 24.6**	**+1.0**
	baz=15						
C18K	**Utukok River**	**27.06**	**325**		**P**	**14 53 24.2**	**+0.5**
C18K				IAmb	IAmb	14 53 25.5	
	comp=Z,11nm,0.9s						
C18K	**Utukok River**	**27.06**	**325**	P	**P**	**14 53 24.0**	**+0.4**
	baz=11						
G27K	**Doyon Strip**	**27.14**	**308**	P	**P**	**14 53 25.4**	**+1.0**
	baz=14						
G26K	**Porcupine Rive**	**27.22**	**310**	P	**P**	**14 53 26.0**	**+1.1**
	baz=14						
H31M	**Peel River**	**27.35**	**301**	P	**P**	**14 53 26.9**	**+0.7**
	baz=15						
C17K	**DeLong Mountai**	**27.37**	**326**	P	**P**	**14 53 26.9**	**+0.5**
	baz=11						
H29M	**Whitestone**	**27.38**	**305**	IAmb	IAmb	14 53 34.5	
	comp=Z,8.7nm,1.0s						
H29M	**Whitestone**	**27.38**	**305**	P	**P**	**14 53 27.2**	**+0.8**
	baz=15						
F22K	**John River**	**27.45**	**317**	P	**P**	**14 53 27.5**	**+0.4**
	baz=13						
COLD	**Coldfoot**	**27.55**	**315**	P	**P**	**14 53 28.6**	**+0.6**
	baz=13						
G25K	**Bearman Lake**	**27.62**	**311**	P	**P**	**14 53 29.2**	**+0.7**
	baz=14						
H27K	**Steamboat Moun**	**27.69**	**307**	IAmb	IAmb	14 53 39.2	
	comp=Z,9.5nm,1.3s						
H27K	**Steamboat Moun**	**27.69**	**307**	P	**P**	**14 53 30.1**	**+0.8**
	baz=14						
C16K	**Lisburne Hills**	**27.72**	**328**	P	**P**	**14 53 30.1**	**+0.7**
	baz=10						
RDOG	**Red Dog Mine**	**27.77**	**326**	P	**P**	**14 53 30.7**	**+0.8**
RDOG				IAmb	IAmb	14 53 32.2	
	comp=Z,7.2nm,0.8s						
RDOG	**Red Dog Mine**	**27.77**	**326**	P	**P**	**14 53 30.3**	**+0.3**
	baz=11						
G24K	**Hadweenzic Riv**	**27.82**	**313**	P	**P**	**14 53 31.3**	**+0.9**
	baz=13						
F21K	**Alatna River**	**27.84**	**318**	P	**P**	**14 53 31.2**	**+0.6**
	baz=12						
E19K	**Redstone River**	**27.93**	**321**	P	**P**	**14 53 31.9**	**+0.5**
	baz=12						
G22K	**Bettles**	**27.97**	**316**	P	**P**	**14 53 32.2**	**+0.6**
	baz=13						
G23K	**Bananza Creek**	**28.04**	**315**	P	**P**	**14 53 32.7**	**+0.4**
	baz=13						
I30M	**Mount Dempster**	**28.13**	**302**	P	**P**	**14 53 33.8**	**+0.4**
	baz=15						
D17K	**Noatak River**	**28.13**	**326**	P	**P**	**14 53 33.5**	**+0.4**
	baz=11,SNR=8.6						
YKAW3	**Yellowknife Wh**	**28.15**	**281**	P	**P**	**14 53 34.7**	**+1.4**
YKAW3				IAmb	IAmb	14 54 05.2	
	comp=Z,10nm,1.5s						
F20K	**Avaraart Lake**	**28.20**	**319**	P	**P**	**14 53 34.4**	**+0.7**
	baz=12						
I29M	**Ogilvie Camp,**	**28.20**	**304**	P	**P**	**14 53 34.6**	**+0.8**
	baz=14						
YKA	**Yellowknife Ar**	**28.21**	**281**	P	**P**	**14 53 35.0**	**+1.1**
	comp=Z,0.7nm,0.7s,baz=14,slow=10,SNR=12						
YKA				LR	LR	15 04 00.0	
	comp=Z,38nm,20.1s,baz=304,slow=35						
	comp=Z,0.7nm,0.7s						
E18K	**Tukpahlearik C**	**28.22**	**324**	IAmb	IAmb	14 53 35.8	
	comp=Z,12nm,1.4s						
E18K	**Tukpahlearik C**	**28.22**	**324**	P	**P**	**14 53 34.5**	**+0.6**
	baz=11						
I28M	**Miner Creek**	**28.29**	**306**	P	**P**	**14 53 35.2**	**+0.5**
	baz=14						
I27K	**Kandik River**	**28.31**	**307**	IAmb	IAmb	14 53 45.6	
	comp=Z,14nm,1.5s						
I27K	**Kandik River**	**28.31**	**307**	P	**P**	**14 53 35.6**	**+0.7**
	baz=14						
G21K	**Allakaket**	**28.54**	**317**	P	**P**	**14 53 37.5**	**+0.7**
	baz=12						
F19K	**Shaleruckik Mo**	**28.58**	**321**	P	**P**	**14 53 37.5**	**+0.3**
	baz=11						
E17K	**Hotham Inlet**	**28.65**	**324**	P	**P**	**14 53 38.1**	**+0.3**
	baz=11						
H24K	**Noodor Dome**	**28.70**	**312**	P	**P**	**14 53 38.6**	**+0.4**
	baz=13						
I26K	**Coal Creek Min**	**28.76**	**308**	P	**P**	**14 53 39.3**	**+0.6**
	baz=14						
J30M	**Hart River**	**28.76**	**302**	P	**P**	**14 53 38.9**	**0.0**
	baz=14						
PRP	**Porcupine Dome**	**28.78**	**310**	P	**P**	**14 53 39.6**	**+0.4**
PRP	**Porcupine Dome**	**28.78**	**310**	P	**P**	**14 53 39.1**	**0.0**
	baz=13						
H23K	**Yukon River**	**28.86**	**314**	P	**P**	**14 53 39.6**	**-0.1**
	baz=13						
F18K	**Selawik**	**28.96**	**322**	P	**P**	**14 53 40.6**	**+0.1**
	baz=11						
H22K	**Ishtalitna Cre**	**28.96**	**315**	P	**P**	**14 53 40.6**	**0.0**
	baz

I20K	Naaghedeneel	30.31 318	P	P	14 53 52.3	-0.1	
	baz=11						
G16K	Koyuk River	30.36 324	P	P	14 53 52.8	0.0	
	baz=10.0						
L29M	L29M	30.38 303	P	P	14 53 53.0	-0.2	
	baz=13						
RIDG	Independent Ri	30.45 309	P	P	14 53 53.9	+0.1	
	baz=13						
K24K	Donnelly Dome	30.48 310	P	P	14 53 53.8	-0.3	
	baz=12						
F14K	Arctic Creek	30.56 327	P	P	14 53 54.5	-0.2	
	baz=9.2						
GCSA	Galena City Sc	30.57 319	P	P	14 53 54.7	+0.1	
	baz=11						
TNA	Tin City	30.58 329	P	P	14 53 54.7	-0.1	
	baz=8.9						
H17K	Granite Mounta	30.62 322	P	P	14 53 54.9	-0.3	
	baz=10						
BPAW	Bear Paw Mtn.	30.69 314	P	P	14 53 55.6	-0.2	
	baz=12						
FARO	Faro, Yukon	30.71 298	P	P	14 53 56.0	-0.1	
	baz=14						
M30M	Minto, Yukon	30.75 301	P	P	14 53 56.2	-0.3	
	baz=13						
L27K	Beaver Creek,	30.81 306	P	P	14 53 56.6	-0.4	
	baz=13						
M31M	Drury Creek, Y	30.85 299	P	P	14 53 58.7	+1.4	
M31M	Drury Creek, Y	30.85 299	P	P	14 53 57.2	-0.1	
	baz=14						
MCK	McKinley	30.86 312	P	P	14 53 57.2	-0.2	
	baz=12						
G15K	Niukluk	30.88 325	P	P	14 53 57.2	-0.2	
	baz=9.5						
J20K	Nowinta River	30.89 317	P	P	14 53 57.3	-0.3	
	baz=11						
L26K	Log Cabin Wild	31.00 307	P	P	14 53 58.1	-0.6	
	baz=13						
CHUM	Lake Minchumin	31.02 315	P	P	14 53 58.2	-0.5	
	baz=11						
M29M	Somme Creek	31.06 303	P	P	14 53 58.9	-0.4	
	baz=13						
H16K	Elim	31.09 324	P	P	14 53 58.6	-0.7	
	baz=9.8						
J19K	Poorman	31.20 318	P	P	14 53 59.6	-0.7	
	baz=11						
TRF	Thorofare Moun	31.26 313	P	P	14 54 00.6	-0.4	
	baz=12						
PAX	Paxson	31.27 309	P	P	14 54 00.8	-0.3	
	baz=12						
BVCY	Beaver Creek	31.35 305	P	P	14 54 01.6	0.0	
	baz=13						
DHY	Denali Highway	31.35 311	IAmb	IAmb	14 54 04.8		
	comp=Z,4.8nm,0.9s						
DHY	Denali Highway	31.35 311	P	P	14 54 01.7	-0.2	
	baz=12						
ANM	Nome	31.40 326	P	P	14 54 01.5	-0.5	
	baz=9.1						
M27K	Edge Creek, AK	31.51 306	P	P	14 54 03.0	-0.3	
	baz=13						
M26K	Nabesna, AK	31.58 307	P	P	14 54 03.5	-0.3	
	baz=12						
K20K	Telida	31.69 317	P	P	14 54 04.3	-0.4	
	baz=11						
N31M	Braeburn, Yuko	31.71 300	P	P	14 54 04.8	0.0	
	baz=13						
WAT1	Susitna Watana	31.71 312	P	P	14 54 04.6	-0.2	
	baz=12						
I17K	Unalakleet	31.72 322	P	P	14 54 04.4	-0.4	
	baz=9.9						
J18K	Innoko River	31.81 319	P	P	14 54 05.5	-0.2	
	baz=10						
WAT6	Susitna Watana	31.87 311	P	P	14 54 06.1	-0.4	
	baz=12						
N30M	Aishikik Lake	31.88 301	P	P	14 54 06.5	+0.1	
	baz=13						
YUK3	Moose Creek	31.93 304	P	P	14 54 06.9	-0.1	
	baz=13						
PPLA	Purkeypile	31.98 315	P	P	14 54 06.8	-0.5	
	baz=11						
MNK	Minsk	31.99 115	*i* P	P	14 54 08.2	+0.9	
	comp=E,17nm,0.7s						
MNK			*i* P	P	14 54 08.2	+0.9	
	comp=N,15nm,0.7s						
MNK			*i* P	P	14 54 08.2	+0.9	
	comp=Z,9.0nm,0.6s,baz=349						
MNK			*i* PP	PnPn	14 55 13.7	+1.6	
MNK			*i* PPP	PPP	14 55 23.2		
MNK			*i* S	S	14 59 21.4	+3.1	
MNK			*i* SS	SnSn	15 01 12.6	+5.9	
MNK			*i* SSS	SSS	15 01 27.9		
MNK			*i* LQ	LQ	15 04 00.1		
MNK			*i* LR	LR	15 07 07.4		
MNK			*i* LRM	MLR	15 09 04.7		
	comp=Z,104nm,16.5s						
MNK			*i* LRM	MLR	15 09 12.3		
	comp=N,2µm,22.1s						
MNK			*i* LRM	MLR	15 09 13.6		
	comp=E,2µm,22.0s						
J17K	VABM Dome	32.08 321	P	P	14 54 07.7	-0.3	
	baz=10						
YUK4	Talbot Arm	32.16 303	P	P	14 54 07.8	-1.3	
	baz=13						
M24K	Tolsona, Glenn	32.19 309	P	P	14 54 08.6	-0.5	
	baz=12						
L22K	Petersville	32.21 314	P	P	14 54 10.2	+0.9	
L22K			IAmb	IAmb	14 54 11.3		
	comp=Z,7.1nm,0.9s						
WTLY	Watson Lake, Y	32.25 293	P	P	14 54 10.0	+0.4	
	baz=13						
CUT	Chulitna	32.29 313	P	P	14 54 09.8	0.0	
	baz=11						
J16K	Anvik River	32.31 322	P	P	14 54 09.8	-0.2	
	baz=9.7						
YUK8	Steele Glacier	32.34 303	P	P	14 54 10.2	-0.4	
	baz=12						
WHY	Whitehorse	32.41 299	P	P	14 54 11.0	-0.1	
	baz=13						
O30N	Mendenhall	32.44 300	P	P	14 54 12.7	+1.4	
O30N			IAmb	IAmb	14 54 41.7		
	comp=Z,12nm,1.3s						
O30N	Mendenhall	32.44 300	P	P	14 54 11.0	-0.3	
	baz=13						
YUK6	Outpost Mounta	32.52 302	P	P	14 54 11.9	-0.3	
	baz=13						
N25K	Chitina, Valde	32.52 308	P	P	14 54 13.3	+1.3	
N25K			IAmb	IAmb	14 54 14.9		
	comp=Z,7.4nm,0.9s						
N25K	Chitina, Valde	32.52 308	P	P	14 54 11.7	-0.4	
	baz=12						
HYT	Haines Junctio	32.54 301	P	P	14 54 12.1	-0.2	
	baz=13						
SCM	Sheep Creek Mo	32.57 310	P	P	14 54 13.7	+1.2	
SCM	Sheep Creek Mo	32.57 310	P	P	14 54 12.2	-0.3	
	baz=12						
MCARA	McCarthy VSAT	32.58 306	P	P	14 54 12.4	0.0	
	baz=12						
GAMB	Gambell	32.60 331	P	P	14 54 12.2	-0.3	
	baz=7.7						
P33M	Teslin, Yukon	32.62 297	P	P	14 54 12.7	-0.2	
	baz=13						
M23K	Glacier View	32.65 311	P	P	14 54 12.9	-0.1	
	baz=12						
K17K	Iditarod	32.69 320	P	P	14 54 12.7	-0.6	
	baz=10.0						
SML	Sawmill	32.69 311	P	P	14 54 12.8	-0.7	
	baz=11						
KLU	Klutina	32.77 309	P	P	14 54 13.6	-0.6	
	baz=12						
CTG	Chitna Glacier	32.81 305	P	P	14 54 14.0	-0.7	
	baz=12						
SKT	Skwentna	32.82 314	P	P	14 54 15.3	+0.7	
SKT			IAmb	IAmb	14 54 16.2		
	comp=Z,5.7nm,0.7s						
SKT	Skwentna	32.82 314	P	P	14 54 14.3	-0.3	
	baz=11						
O28M	Mount Upton	32.88 304	P	P	14 54 15.3	-0.2	
	baz=12						
M22K	Willow	32.91 313	P	P	14 54 15.4	0.0	
	baz=11						
L19K	White Mountain	32.92 317	IAmb	IAmb	14 54 17.9		
	comp=Z,8.2nm,0.9s						
L19K	White Mountain	32.92 317	P	P	14 54 15.6	+0.1	
	baz=10						
PMR	Palmer	32.98 312	P	P	14 54 15.9	0.0	
	baz=11						
L18K	Granite Mounta	33.04 318	P	P	14 54 15.9	-0.5	
	baz=10						
J14K	Nanvaranak Lak	33.06 324	P	P	14 54 15.7	-0.9	
	baz=9.0						
M20K	Styx River	33.06 315	P	P	14 54 16.2	-0.5	
	baz=11						
KNK	Knik Glacier	33.09 311	P	P	14 54 16.6	-0.3	
	baz=11						
BMRM	Bremner River	33.15 308	P	P	14 54 17.3	-0.2	
	baz=12						
M19K	Big River Lodg	33.15 316	P	P	14 54 17.1	-0.4	
	baz=10						
P30M	Million Dollar	33.17 301	P	P	14 54 17.5	-0.2	
	baz=12						
CRQE	Cirque	33.21 306	P	P	14 54 17.5	-0.6	
	baz=12						
R33M	Jennings River	33.21 295	P	P	14 54 17.8	-0.4	
	baz=13						
L17K	Donlin	33.26 320	P	P	14 54 18.0	-0.4	
	baz=9.8						
P32M	Atlin	33.33 297	P	P	14 54 19.1	0.0	
	baz=13						
K15K	Wolf Creek Mou	33.36 323	P	P	14 54 19.1	-0.2	
	baz=9.3						
GLI	Glacier Island	33.48 310	P	P	14 54 19.9	-0.4	
	baz=11						
RC01	Rabbit Creek A	33.53 312	P	P	14 54 20.1	-0.7	
	baz=8.4						
PINM	Pinnacle	33.55 303	P	P	14 54 20.7	-0.4	
	baz=12						
CLL	Collm	33.57 133	*e*S	S	14 59 36.0	-7.0	
SKAG	Skagway	33.64 299	P	P	14 54 21.6	-0.1	
	baz=12						
MESA	MESA	33.65 305	P	P	14 54 21.7	-0.4	
	baz=12						
N20K	Mount Spurr	33.65 314	P	P	14 54 21.3	-0.6	
	baz=11						
SPCR	Spurr Chakacha	33.65 314	P	P	14 54 21.4	-0.5	
	baz=11						
EYAK	Cordova Ski Ar	33.67 308	P	P	14 54 21.9	-0.1	
	baz=11						
M18K	Stony River	33.69 317	P	P	14 54 21.9	-0.2	
	baz=10						
L16K	Owhat River	33.77 321	P	P	14 54 22.4	-0.5	
	baz=9.5						
Q32M	Nakina River	33.78 296	P	P	14 54 22.8	-0.4	
	baz=13						
M17K	Holitna River	33.91 319	P	P	14 54 23.8	-0.3	
	baz=9.8						
ARTI	Arti	33.93 83	LR	LR	15 09 36.9		
	comp=Z,49nm,20.4s,baz=335,slow=39						
K13K	Kusilvak Mount	33.95 325	P	P	14 54 23.9	-0.5	
	baz=8.6						
L15K	Ungalak Mounta	33.97 322	P	P	14 54 23.9	-0.7	
	baz=9.2						
CAPN	Captain Cook N	33.98 313	P	P	14 54 24.3	-0.3	
	baz=11						
DLBC	Dease Lake	34.03 294	LR	LR	15 10 58.7		
	comp=Z,30nm,19.7s,baz=302,slow=41						
DLBC	Dease Lake	34.03 294	P	P	14 54 25.0	-0.3	
	baz=13						
O22K	Cooper Landing	34.13 312	P	P	14 54 25.7	-0.3	
	baz=11						
KAIM	Kayak Island	34.15 307	P	P	14 54 25.8	-0.4	
	baz=11						
N19K	Bonanza Creek	34.24 316	P	P	14 54 26.4	-0.6	
	baz=10						
P23K	Montague Islan	34.38 310	P	P	14 54 28.0	-0.2	
	baz=11						
L14K	Kuka Creek	34.39 323	P	P	14 54 27.4	-0.7	
	baz=8.9						
M16K	Timber Creek	34.41 320	P	P	14 54 28.2	-0.2	
	baz=9.4						
SEW	Seward	34.47 312	P	P	14 54 29.2	+0.3	
	baz=11						
N18K	Kilae Creek	34.49 317	P	P	14 54 28.6	-0.5	
	baz=9.9						
S34M	Telegraph Cree	34.67 294	P	P	14 54 31.0	+0.3	
	baz=12						
R32K	Eaglecrest	34.71 298	P	P	14 54 30.8	-0.1	
	baz=12						
R31K	City Hall, Gus	34.71 299	P	P	14 54 30.9	0.0	
	baz=12						
N17K	Nushagak Hills	34.76 318	P	P	14 54 31.1	-0.2	
	baz=9.6						
O19K	Port Alsworth	34.83 316	P	P	14 54 31.8	-0.2	
	baz=10.0						
Q23K	Middleton Isla	34.84 309	P	P	14 54 31.9	-0.2	
	baz=11						
M15K	Kasigluk River	34.88 321	P	P	14 54 31.9	-0.5	
	baz=9.1						
M14K	Bethel	34.92 322	P	P	14 54 32.4	-0.3	
	baz=8.9						
N16K	Nishlik Lake	34.94 320	P	P	14 54 32.6	-0.4	
	baz=9.4						
BRSE	Bradley Lake S	34.95 313	P	P	14 54 32.8	-0.3	
	baz=10						
YAK	Yakutsk	34.98 19	LR	LR	15 08 04.3		
	comp=Z,23nm,21.5s,baz=12,slow=35						
HOM	Homer	35.12 313	P	P	14 54 34.5	0.0	
	baz=10						
O18K	Koktuh Hills	35.25 316	P	P	14 54 35.3	-0.3	
	baz=9.8						
P19K	Oil Pt	35.27 315	P	P	14 54 35.5	-0.4	
	baz=10						
N15K	Kwethluk River	35.35 321	P	P	14 54 36.0	-0.5	
	baz=9.1						
M13K	Dall Lake	35.36 324	P	P	14 54 36.1	-0.5	
	baz=8.6						
T35M	Bob Quinn	35.48 293	P	P	14 54 37.4	-0.3	
	baz=12						
O17K	Koliganek Bris	35.49 318	P	P	14 54 36.9	-0.8	
	baz=9.5						
S32K	Killisnoo	35.50 297	P	P	14 54 37.4	-0.4	
	baz=12						
ZVC	Zvikov	35.53 132	*e*P	P	14 54 41.8	+3.6	
M11K	Mekoryuk	35.60 326	P	P	14 54 38.0	-0.6	
	baz=8.0						
P18K	Big Mountain,	35.71 316	P	P	14 54 39.1	-0.6	
	baz=9.7						
O16K	Kokwok River B	35.76 319	P	P	14 54 39.5	-0.5	
	baz=9.3						
KHC	Kasperske Hory	35.78 133	*e*P	P	14 54 44.3	+3.9	
AKASG	Malin Array Be	35.88 115	P	P	14 54 39.6	-1.5	
	comp=Z,0.5nm,0.4s,baz=348,slow=9.3,SNR=9.6						
AKASG			LR	LR	15 08 56.3		
	comp=Z,27nm,19.3s,baz=358,slow=36						
	comp=Z,0.5nm,0.4s						
AKASG	Malin Array Be	35.88 115	IAmb	IAmb	14 54 43.2		
	comp=Z,1.4nm,0.9s						
SIT	Sitka	35.99 298	P	P	14 54 41.6	-0.4	
	baz=12						
P17K	Kvichak River	36.01 317	P	P	14 54 41.2	-0.9	
	baz=9.4						
Q19K	Cape Douglas,	36.02 315	P	P	14 54 41.8	-0.6	
	baz=9.8						
GERES	GERESS Array B	36.08 133	P	P	14 54 42.8	-0.2	
	comp=Z,1.2nm,0.6s,baz=353,slow=6.9,SNR=8.6						
	comp=Z,1.2nm,0.6s						
BFO	Beck Forest	36.11 139	P	P	14 54 43.8	+0.6	
Q20K	Shuyak Island	36.22 314	P	P	14 54 43.4	-0.6	
	baz=9.9						
STHS	Stebnicka Huta	36.27 124	*e*P	P	14 54 47.8	+3.3	
WRAK	Wrangell Islan	36.28 295	P	P	14 54 44.2	-0.3	
	baz=12						
P16K	Nushagak River	36.30 319	P	P	14 54 44.0	-0.6	
	baz=9.2						
O15K	Ungalikthiuk R	36.31 320	P	P	14 54 44.1	-0.6	
	baz=8.9						
O14K	Tigyukauivet M	36.35 321	P	P	14 54 44.4	-0.7	
	baz=8.7						
Q18K	Katmai Hardscr	36.42 316	P	P	14 54 45.3	-0.6	
	baz=9.6						
U35K	Hyder	36.50 293	P	P	14 54 46.5	+0.2	
	baz=12						
Q16K	King Salmon	36.54 317	P	P	14 54 46.5	-0.2	
	baz=9.3						
U33K	Whale Pass	36.67 296	P	P	14 54 47.6	-0.1	
	baz=12						
Q17K	Contact Creek	36.88 317	P	P	14 54 49.2	-0.6	
	baz=9.3						
MODS	Modra-Piesok	36.89 129	*e*P	P	14 54 53.9	+4.1	
KDAK	Kodiak Island	37.06 314	P	P	14 54 50.7	-0.4	
	baz=9.7						
V35K	Ketchikan	37.26 294	P	P	14 54 52.8	0.0	
	baz=12						
CRAG	Craig	37.30 295	P	P	14 54 52.9	-0.2	
	baz=12						
R17L	Mt. Peulik Vol	37.55 317	P	P	14 54 54.6	-0.7	
	baz=9.1						
OHAK	Old Harbor	37.68 314	P	P	14 54 56.2	-0.1	
	baz=9.5						
DAVOX	Davos/Dischmat	37.78 137	LR	LR	15 09 18.8		
	comp=Z,38nm,18.0s,baz=38,slow=34						
ULM	Lac du Bonnet	37.79 257	P	P	14 54 58.5	+1.1	
	comp=Z,4.6nm,0.6s,baz=12,slow=8.1,SNR=12						
ULM			LR	LR	15 10 39.6		
	comp=Z,59nm,18.6s,baz=88,slow=36						
	comp=Z,4.6nm,0.6s						
ULM	Lac du Bonnet	37.79 257	P	P	14 54 58.7	+1.4	
ULM			IAmb	IAmb	14 54 59.5		
	comp=Z,11nm,1.2s						
MA2	Magadan	37.91 2	LR	LR	15 09 35.9		
	comp=Z,33nm,20.6s,baz=359,slow=35						
EPLO	Experimental L	38.09 255	P	P	14 55 01.0	+1.1	
EPLO			IAmb	IAmb	14 55 02.0		
	comp=Z,9.4nm,0.6s						
BVAR	Borovoye Array	38.72 73	P	P	14 55 03.0	-2.2	
	comp=Z,0.3nm,0.5s,baz=324,slow=9.3,SNR=4.5						
BVAR			LR	LR	15 12 01.5		
	comp=Z,36nm,20.1s,baz=340,slow=38						
	comp=Z,0.3nm,0.5s						
SPIA	Saint Paul Isl	39.07 329	P	P	14 55 07.4	-0.6	
	baz=6.8						
S14K	Fog Glacier	39.15 319	P	P	14 55 08.1	-0.8	
	baz=8.4						
CHIR	Chirikof Islan	39.27 316	P	P	14 55 09.2	-0.6	
	baz=8.9						
ZAA0	Zalesovo Array	39.49 59	P	P	14 55 11.2	-0.4	
ZALV	Zalesovo Beam	39.49 59	P	P	14 55 08.1	-3.5	
	comp=Z,1.0nm,0.8s,baz=351,slow=8.0,SNR=10						
ZALV			LR	LR	15 13 02.0		
	comp=Z,45nm,21.1s,baz=338,slow=39						
	comp=Z,1.0nm,0.8s						
EYMN	Ely	39.51 252	P	P	14 55 13.8	+2.0	
EYMN			IAmb	IAmb	14 55 14.4		
	comp=Z,10nm,0.9s						
AKTO	Aktyubinsk	39.71 86	LR	LR	15 12 43.2		
	comp=Z,66nm,21.5s,baz=351,slow=38						
BBB	Bella Bella	39.94 290	LR	LR	15 13 37.7		
	comp=Z,78nm,18.2s,baz=156,slow=39						
SDPT	Sand Point	40.16 320	P	P	14 55 16.6	-0.5	
	baz=8.1						
CHNA	Chernabura Isl	40.60 319	P	P	14 55 20.3	-0.5	
	baz=8.1						
SADO	Sadowa	41.22 238	LR	LR	15 12 20.7		
	comp=Z,46nm,20.6s,baz=130,slow=36						
KURK	Kurchatov	41.97 66	P	P	14 55 32.6	+0.5	
KURBB	Kurchatov Arra	42.05 66	P	P	14 55 30.2	-2.5	
	comp=Z,1.8nm,0.6s,baz=357,slow=7.1,SNR=18						
	comp=Z,1.8nm,0.6s						
UNV	Unalaska Valle	42.12 325	P	P	14 55 32.7	-0.6	
	baz=6.9						
F33A	5 Mile Ranch,	42.17 256	P	P	14 55 35.9	+2.1	
F33A			IAmb	IAmb	14 55 36.4		
	comp=Z,4.8nm,0.6s						
NEW	Newport	42.43 278	LR	LR	15 12 35.8		
	comp=Z,42nm,18.8s,baz=60,slow=35						
MSO	Missoula	43.44 274	P	P	14 55 45.9	+1.7	
TLY	Talaya	43.60 43	LR	LR	15 14 24.8		
	comp=Z,22nm,20.0s,baz=346,slow=37						
ESDC	Sonseca Array	43.86 154	P	P	14 55 47.2	-0.4	
	comp=Z,2.1nm,0.8s,baz=2.5,slow=8.4,SNR=10						
	comp=Z,2.1nm,0.8s						
ECSD	EROS Data Cent	44.29 256	P	P	14 55 52.9	+1.9	
ECSD			IAmb	IAmb	14 55 53.5		
	comp=Z,17nm,1.3s						
KBZ	Khabaz	44.39 103	P	P	14 55 52.0	+0.3	
	comp=Z,1.2nm,0.6s,baz=339,slow=8.6,SNR=5.9						
	comp=Z,1.2nm,0.6s						
LON	Longmire	44.51 282	P	P	14 55 54.1	+1.5	
LON			IAmb	IAmb	14 56 32.4		
	comp=Z,14nm,1.4s						
YHL	Hebgen Lake	45.03 271	IAmb	IAmb	14 56 00.6		
	comp=Z,7.6nm,1.3s						
YPP	Pitchstone Pla	45.55 271	IAmb	IAmb	14 56 06.0		
	comp=Z,6.6nm,1.3s						
BCYI	Bear Canyon	45.84 273	P	P	14 56 04.8	+1.2	
BCYI			IAmb	IAmb	14 56 06.4		
	comp=Z,3.2nm,0.7s						
FXWY	Fox Creek	46.20 271	IAmb	IAmb	14 56 09.7		
	comp=Z,4.2nm,0.9s						
MKAR	Makanchi Array	46.26 64	P	P	14 56 05.5	-1.0	
	comp=Z,1.4nm,0.7s,baz=351,slow=7.2,SNR=13						
MKAR			LR	LR	15 18 35.6		
	comp=Z,37nm,18.2s,baz=358,slow=40						
	comp=Z,1.4nm,0.7s						
PDAR	Pinedale Array	46.87 269	P	P	14 56 13.2	+1.5	
	comp=Z,1.2nm,0.7s,baz=33,slow=4.6,SNR=12						
PDAR			LR	LR	15 16 16.4		
	comp=Z,24nm,19.9s,baz=340,slow=36						
	comp=Z,1.2nm,0.7s						
BRTR	Keskin Array B	47.22 113	P	P	14 56 14.3	0.0	
	comp=Z,1.4nm,0.8s,baz=330,slow=6.2,SNR=6.3						
BRTR			LR	LR	15 17 40.1		
	comp=Z,15nm,18.7s,baz=22,slow=38						
	comp=Z,1.4nm,0.8s						
SONM	Songino Array	47.65 41	P	P	14 56 16.0	-1.5	
	comp=Z,0.5nm,0.5s,baz=345,slow=5.9,SNR=4.1						
SONM			LR	LR	15 15 40.2		
	comp=Z,29nm,21.9s,baz=270,slow=35						
	comp=Z,0.5nm,0.5s						
KLR	Kul'dur	47.86 18	LR	LR	15 15 16.2		
	comp=Z,18nm,21.1s,baz=7.5,slow=35						
HVU	Hansel Valley	48.26 272	IAmb	IAmb	14 56 25.4		
	comp=Z,4.6nm,0.9s						
HWUT	Hardware Ranch	48.27 271	IAmb	IAmb	14 56 25.0		
	comp=Z,6.4nm,0.9s						
KEST	Kesra	48.70 140	P	P	14 56 25.8	+0.1	
	comp=Z,1.7nm,0.6s,baz=322,slow=5.6,SNR=2.0						
	comp=Z,1.7nm,0.6s						
KEST	Kesra	48.70 140	IAmb	IAmb	14 56 32.5		
	comp=Z,15nm,1.4s						
AAK	Ala-Archa	49.44 72	LR	LR	15 20 59.8		
	comp=Z,47nm,18.6s,baz=22,slow=41						
AAK	Ala-Archa	49.44 72	P	P	14 56 32.2	+0.7	
AAK			IAmb	IAmb	14 56 34.7		
	comp=Z,5.1nm,0.8s						
ELK	Elko	49.59 274	LR	LR	15 16 35.0		
	comp=Z,806nm,21.4s,baz=260,slow=35						
KDJ	Kajisay	50.27 70	P	P	14 56 38.4	+0.6	
KDJ			IAmb	IAmb	14 56 41.6		
	comp=Z,3.5nm,0.6s						
ARSB	Arslanbob	50.55 74	IAmb	IAmb	14 57 08.8		
	comp=Z,6.6nm,1.4s						
SRU	San Rafael Swe	50.60 269	P	P	14 56 42.0	+1.8	
Q16A	Castle Valley	50.87 270	IAmb	IAmb	14 56 45.5		
	comp=Z,8.2nm,0.7s						
PV22	Blue Mesa, Par	50.94 267	P	P	14 56 44.8	+1.9	
PV22			IAmb	IAmb	14 56 45.4		
	comp=Z,9.0nm,0.7s						
PV07	Paradox Valley	51.02 267	IAmb	IAmb	14 56 46.4		
	comp=Z,9.7nm,0.9s						
PV14	Lion Creek, Pa	51.13 268	IAmb	IAmb	14 56 47.5		
	comp=Z,11nm,0.9s						
PV12	Saucer Basin,	51.16 267	P	P	14 56 46.3	+1.8	
PV03	Paradox Valley	51.23 267	P	P	14 56 46.4	+1.4	
FCAR	Ozark Folk Cen	51.48 250	IAmb	IAmb	14 56 56.5		
	comp=Z,11nm,1.4s						
PSUT	Pine Spring	51.59 272	IAmb	IAmb	14 56 50.8		
	comp=Z,6.4nm,0.9s						
HMU	Henry Mountain	51.78 269	P	P	14 56 50.9	+1.7	
HMU			IAmb	IAmb	14 56 51.5		
	comp=Z,4.7nm,0.7s						
MVCO	Mesa Verde	52.21 267	IAmb	IAmb	14 56 55.9		
	comp=Z,9.6nm,0.9s						
NV11	Mina Array Sit	52.24 277	P	P	14 56 54.1	+1.6	
NVAR	Mina Array Bea	52.26 277	P	P	14 56 54.3	+1.6	
	comp=Z,2.2nm,0.6s,baz=19,slow=5.4,SNR=18						
	comp=Z,2.2nm,0.6s						
NVAR	Mina Array Bea	52.26 277	P	P	14 56 54.0	+1.3	
PKCU	Pink Cliffs	52.47 271	IAmb	IAmb	14 56 58.4		
	comp=Z,9.9nm,0.9s						
GAR	Garm	52.52 77	IAmb	IAmb	14 56 58.5		
	comp=Z,6.7nm,0.7s						
U15A	North Rim	53.47 270	IAmb	IAmb	14 57 04.1		
	comp=Z,5.4nm,0.9s						
MMAI	Mount Meron Ar	54.05 113	P	P	14 57 06.6	+0.9	
	comp=Z,1.1nm,0.5s,baz=10,slow=17,SNR=4.4						
	comp=Z,1.1nm,0.5s						
ANMO	Albuquerque	54.18 264	LR	LR	15 20 48.7		
	comp=Z,90nm,19.4s,baz=17,slow=37						
ANMO	Albuquerque	54.18 264	IAmb	IAmb	14 57 08.8		
	comp=Z,4.4nm,1.1s

comp=Z,7.0nm,0.7s
CLC China Lake 54.74 276 IAmb IAmb 14 57 14.1
comp=Z,3.8nm,0.7s
APMT Aspermont 54.98 258 IAmb IAmb 14 57 14.5
comp=Z,6.5nm,0.8s
LRMC Laurel Mtn Rad 55.09 276 IAmb IAmb 14 57 16.8
comp=Z,3.4nm,0.9s
Y14A Wickenburg 56.01 271 IAmb IAmb 14 57 23.3
comp=Z,7.2nm,1.1s
IRM Iron Mountain 56.07 273 IAmb IAmb 14 57 23.4
comp=Z,4.3nm,0.9s
PFO Pinyon Flats O 56.77 274 LR LR 15 22 55.7
comp=Z,53nm,18.1s,baz=262,slow=37
TUC Tucson 57.33 268 P **P** **14 57 31.1 +1.8**
TUC IAmb IAmb 14 57 32.3
comp=Z,3.4nm,0.8s
VHRN Van Horn 58.10 262 P **P** **14 57 36.3 +1.4**
LZH Lanzhou 59.09 45 *e*P **P** **14 57 40.0 -1.7**
LZH sP sP 14 57 47.0 +0.6
LZH pmax pmax
comp=Z,14nm,1.5s
TXAR Lajitas Array 59.36 261 P **P** **14 57 44.5 +0.9**
comp=Z,1.2nm,0.7s,baz=26,slow=4.5,SNR=12
TXAR LR LR 15 23 10.2
comp=Z,45nm,18.1s,baz=225,slow=36
comp=Z,1.2nm,0.7s
KSRS Korea Array 59.44 23 LR LR 15 23 55.1
comp=Z,9.3nm,18.3s,baz=350,slow=37
TIA Tai'an 60.03 33 P **P** **14 57 49.0 +1.0**
TIA pmax pmax
comp=Z,6.0nm,1.0s
MJAR Matsushiro Arr 60.75 13 P **P** **14 57 51.6 -1.4**
comp=Z,1.9nm,0.9s,baz=355,slow=7.1,SNR=4.1
MJAR LR LR 15 25 17.1
comp=Z,16nm,18.1s,baz=228,slow=37
comp=Z,1.9nm,0.9s
MJAR Matsushiro Arr 60.75 13 IAmb IAmb 14 58 00.9
comp=Z,4.1nm,1.3s
XAN Xi'an 61.56 41 P **P** **14 57 54.5 -4.0**
XAN pmax pmax
comp=Z,6.0nm,1.0s
NJ2 Nanjing 64.28 32 *e*P **P** **14 58 17.3 +0.8**
NJ2 pmax pmax
comp=Z,23nm,0.7s
LPIG La Paz 65.36 266 LR LR 15 28 03.4
comp=Z,64nm,20.1s,baz=69,slow=37
SJG San Juan 66.37 221 LR LR 15 28 16.9
comp=Z,25nm,18.4s,baz=111,slow=37
PZH PanZhiHua 68.39 49 P **P** **14 58 46.5 +3.4**
JCJ Chichijima 70.27 10 LR LR 15 29 57.7
comp=Z,12nm,21.9s,baz=152,slow=36
TORD Torodi Ar. Bea 70.56 150 P **P** **14 58 56.1 -0.3**
comp=Z,1.0nm,0.7s,baz=345,slow=6.5,SNR=5.5
comp=Z,1.0nm,0.7s
SDV Santo Domingo 75.89 224 LR LR 15 34 59.2
comp=Z,30nm,18.1s,baz=66,slow=37
CMAR Chiang Mai Arr 76.08 52 P **P** **14 59 28.1 -0.9**
comp=Z,1.2nm,0.8s,baz=355,slow=5.8,SNR=11
comp=Z,1.2nm,0.8s
WRA Warramunga Arr 116.75 19 PKP **PKPdf** **15 06 23.3 -2.1**
comp=Z,0.3nm,0.9s,baz=338,slow=1.9,SNR=2.0
ASAR Alice Springs 120.43 20 PKP **PKPdf** **15 06 30.4 -2.0**
comp=Z,0.4nm,0.7s,baz=9.0,slow=1.8,SNR=7.3

*IDC **30** 14:48:35.0±0.9, 9.°42S×113.°06E, h0km, mb4.1/13, mbtmp4.1/16, ML4.1/3, MS2.9/2, Error ellipse: s-maj=35.0km s-min=11.1km az=43.0*
*DJA **30** 14:48:40.4±0.3, 10.°3S×11.°3E±., h10km, M4.4/39, mB5.0/6, mb4.5/12, MLv4.5/39, Mw(mB)4.3/6*
*NEIC **30** 14:48:41.4±1.6, 9.°65S±0.°09×113.°00E±0.°07, h49km±8km, mb4.5/29, Error ellipse: s-maj=13.8km s-min=9.3km az=196.0*
ISC 30 14:48:39.8±0.5, 9.°74S±0.°07×112.°95E±0.°05, h36km, n95, σ1§94/96, mb4.4/26, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	**1.73**	**44**	P	**Pn**	**14 49 08.0**	**+0.6**
JAGI	**Jajag, Banyuwa**	**1.73**	**44**		**Pn**	**14 49 07.6**	**+0.2**
JAGI	**Jajag, Banyuwa**	**1.73**	**44**	P	**Pn**	**14 49 07.9**	**+0.6**
BLJI	**Banyuglugur**	**2.08**	**18**	P	**Pn**	**14 49 13.9**	**+1.7**
SNJI	**Sawahan-Nganju**	**2.27**	**329**	P	**Pn**	**14 49 15.5**	**+0.6**
SNJI				S	**Sn**	**14 49 43.1**	**+1.3**
ABJI	**Asem Bagus**	**2.31**	**34**	P	**Pn**	**14 49 17.7**	**+2.4**
PCJI	**Pacitan**	**2.33**	**311**	P	**Pn**	**14 49 16.1**	**+0.6**
RTBI	**Rangdo, Negare**	**2.34**	**57**	P	**Pn**	**14 49 18.0**	**+2.2**
IGBI	**Denpasar**	**2.35**	**67**	P	**Pn**	**14 49 18.7**	**+2.8**
DNP	**Denpasar**	**2.47**	**65**	P	**Pn**	**14 49 21.4**	**+3.9**
NGJI	**Ngawi**	**2.77**	**328**	P	**Pn**	**14 49 25.2**	**+3.5**
KMMI	**Kalianget**	**2.85**	**21**	P	**Pn**	**14 49 25.0**	**+2.2**
KHKI	**Kahang-Kahang**	**2.96**	**63**	P	**Pn**	**14 49 28.1**	**+3.8**
UGM	**Wanagama**	**3.00**	**307**	P	**Pn**	**14 49 26.1**	**+1.2**
UGM	**Wanagama**	**3.00**	**307**		**Pn**	**14 49 26.0**	**+1.1**
UGM	**Wanagama**	**3.00**	**307**	P	**Pn**	**14 49 26.2**	**+1.3**
UGM				S	**Sn**	**14 50 00.9**	**+1.2**
YOGI	**Yogyakarta**	**3.24**	**306**	P	**Pn**	**14 49 29.9**	**+1.7**
SMRI	**Semarang**	**3.64**	**317**	P	**Pn**	**14 49 35.9**	**+2.2**
SMRI	**Semarang**	**3.64**	**317**		**Pn**	**14 49 35.4**	**+1.7**
SMRI	**Semarang**	**3.64**	**317**	P	**Pn**	**14 49 34.9**	**+1.2**
CTJI	**Waduk Cacaban**	**4.61**	**306**	P	**Pn**	**14 49 49.6**	**+2.7**
KPJI	**Karang Pucung**	**4.63**	**301**	P	**Pn**	**14 49 50.0**	**+2.7**
PLAI	**Plampang**	**4.85**	**80**	P	**Pn**	**14 49 53.5**	**+3.2**
PLAI	**Plampang**	**4.85**	**80**	P	**Pn**	**14 49 53.8**	**+3.5**
DBNI	**Kabupaten Domp** 0.3nm573nm47nm,0.7s	**5.44**	**77**	P	**Pn**	**14 50 01.6**	**+3.2**
BBJI	**Bungbulang**	**5.70**	**293**	P	**Pn**	**14 50 04.4**	**+2.3**
BBJI	**Bungbulang**	**5.70**	**293**	Pn	**Pn**	**14 50 04.1**	**+2.0**
BBJI	**Bungbulang** 24nm,0.9s	**5.70**	**293**	P	**Pn**	**14 50 05.0**	**+2.9**
LEM	**Lembang** 3.5nm,0.3s,baz=140,slow=23,SNR=2.4	**6.01**	**298**	Pn	**Pn**	**14 50 05.7**	**-0.8**
LEM				Sn	**Sn**	**14 51 16.4**	**+2.2**
	2.0nm,0.3s,baz=231,slow=14,SNR=3.6 8.6nm,0.6s						
LEM	**Lembang** 0.2nm1µm26nm,0.8s	**6.01**	**298**	P	Pn	14 50 11.4	+5.0
WBSI	**Waikabubak, Su** 0.3nm47nm,0.8s	**6.35**	**90**	P	Pn	14 50 16.3	+5.3
LBFI	**Labuhan Bajo,**	**6.97**	**80**	P	**Pn**	**14 50 21.4**	**+2.0**
XMI	**Christmas Isla**	**7.18**	**264**	P	**Pn**	**14 50 23.8**	**+1.4**
CGJI	**Cibinong**	**7.82**	**293**	P	**Pn**	**14 50 32.8**	**+1.7**
KAPI	**Kappang** comp=Z,61nm,18.6s,baz=247,slow=44	**8.22**	**56**	LR	LR	14 54 25.0	
BSSI	**Bau Bau, Buton** 23nm,0.5s	**8.28**	**65**	P	**Pn**	**14 50 40.0**	**+2.6**
BATI	**Baumata** 4.0nm,0.3s,baz=114,slow=1.3,SNR=2.2	**10.57**	**93**	Pn	**Pn**	**14 51 06.1**	**-2.7**
BATI				Sn	**Sn**	**14 53 02.6**	**-3.3**
	2.8nm,0.3s,baz=316,slow=9.7,SNR=1.4 11nm,0.4s						
SOEI	**Soe**	**11.16**	**91**	P	**Pn**	**14 51 19.3**	**+2.3**
SOEI	**Soe**	**11.16**	**91**		**Pn**	**14 51 19.9**	**+2.9**
SOEI	**Soe**	**11.16**	**91**	P	**Pn**	**14 51 20.6**	**+3.6**
MNAI	**Manna**	**11.26**	**298**	P	**Pn**	**14 51 19.2**	**+0.9**
MNAI	**Manna**	**11.26**	**298**	Pn	**Pn**	**14 51 18.9**	**+0.6**
EGSI	**Enggano, Bengk**	**11.44**	**292**	P	**Pn**	**14 51 20.0**	**-0.7**
SBUM	**Sibu**	**12.13**	**357**	P	**Pn**	**14 51 34.0**	**+3.9**
GIRL	**Giralia**	**12.89**	**175**	Pn	**Pn**	**14 51 41.6**	**+1.0**
MBWA	**Marble Bar**	**13.10**	**151**	P	**Pn**	**14 51 43.2**	**-0.2**
MBWA	**Marble Bar**	**13.10**	**151**	Pn	**Pn**	**14 51 42.6**	**-0.8**
FITZ	**Fitzroy Crossi** 0.5nm,0.3s,baz=314,slow=7.7,SNR=15	**14.86**	**125**	Pn	**Pn**	**14 52 07.3**	**0.0**
FITZ				Sn	Sn	14 54 41.5	-9.2
	0.3nm,0.3s,baz=222,slow=6.7,SNR=4.1 2.2nm,0.5s						
KNRA	**Kununurra**	**16.52**	**113**		**Pn**	**14 52 29.8**	**+1.0**
MTN	**Manton Dam**	**18.10**	**102**	P	**Pn**	**14 52 47.9**	**-0.6**
KULM	**Kulin**	**19.31**	**320**	P	**P**	**14 53 01.6**	**-0.3**
FAKI	**Fak Fak**	**20.33**	**72**	P	**P**	**14 53 11.4**	**-1.7**
FAKI				IAmb	IAmb	14 53 16.6	
	comp=Z,17nm,0.9s						
WB0	**Warramunga Arr**	**22.98**	**118**	P	**P**	**14 53 42.8**	**+1.3**
WRA	**Warramunga Arr** comp=Z,0.7nm,0.5s,baz=291,slow=11,SNR=16	**23.00**	**119**	P	**P**	**14 53 43.0**	**+1.3**
WRA				S	**S**	**14 57 55.3**	**+5.3**
	comp=Z,0.4nm,0.6s,baz=290,slow=25,SNR=6.0 comp=Z,0.7nm,0.5s						
WRA	**Warramunga Arr**	**23.00**	**119**	P	**P**	**14 53 42.8**	**+1.0**
WRAB	**Tennant Creek**	**23.01**	**119**	P	**P**	**14 53 43.4**	**+1.6**
WR8	**Warramunga Arr**	**23.15**	**118**	P	**P**	**14 53 44.5**	**+1.3**
WR8				IAmb	IAmb	14 54 10.9	
	comp=Z,7.9nm,1.2s						
ASAR	**Alice Springs**	**24.34**	**127**	P	**P**	**14 53 57.0**	**+2.5**
	comp=Z,2.9nm,0.7s,baz=302,slow=8.7,SNR=67						
ASAR				PcP	**PcP**	**14 57 32.8**	**-0.9**
	comp=Z,0.1nm,0.5s,baz=326,slow=2.3,SNR=1.6						
ASAR				S	S	14 58 23.5	+12
	comp=Z,0.3nm,0.9s,baz=307,slow=23,SNR=1.4 comp=Z,2.9nm,0.7s						
CMAR	**Chiang Mai Arr**	**31.24**	**334**	P	**P**	**14 54 56.2**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=167,slow=8.3,SNR=20						
CMAR				LR	LR	15 10 31.5	
	comp=Z,25nm,18.0s,baz=130,slow=42 comp=Z,2.0nm,0.8s						
STKA	**Stephens Creek**	**34.48**	**134**	P	**P**	**14 55 26.9**	**+2.4**
	comp=Z,1.2nm,0.5s,baz=315,slow=13,SNR=1.9 comp=Z,1.2nm,0.5s						
STKA	**Stephens Creek**	**34.48**	**134**	P	**P**	**14 55 25.0**	**+0.5**
H08S2	**Diego Garcia H** baz=95	**40.03**	**270**	T	T	15 38 48.0	
H08S3	**Diego Garcia H**	**40.04**	**270**	T	T	15 38 43.8	
H08S1	**Diego Carcia H** baz=95	**40.05**	**270**	T	T	15 38 58.2	
SHL	**Shillong**	**40.65**	**330**	P	**P**	**14 56 16.0**	**-0.9**
LZDM	**Lanzhou Array**	**46.28**	**350**	P	**P**	**14 57 02.0**	**-0.2**
	comp=Z,2.5nm,0.4s,baz=166,slow=14,SNR=1.5 comp=Z,2.5nm,0.4s						
KSRS	**Korea Array**	**49.00**	**16**	P	**P**	**14 57 21.2**	**-1.7**
	comp=Z,0.7nm,0.6s,baz=211,slow=9.4,SNR=4.9 comp=Z,0.7nm,0.6s						
INU	**Inuyama**	**50.28**	**26**	P	**P**	**14 57 31.1**	**-1.6**
INU				IAmb	IAmb	14 57 39.8	
	comp=Z,12nm,1.2s						
JGF	**Kuroka**	**50.64**	**26**	P	**P**	**14 57 33.6**	**-2.0**
JGF				IAmb	IAmb	14 57 34.9	
	comp=Z,9.8nm,1.0s						
MAJO	**Matsushiro**	**51.80**	**26**	P	**P**	**14 57 41.4**	**-2.8**
MAJO				IAmb	IAmb	14 58 13.2	
	comp=Z,6.3nm,1.1s						
MJAR	**Matsushiro Arr**	**51.80**	**26**	P	**P**	**14 57 41.9**	**-2.3**
	comp=Z,3.4nm,0.7s,baz=195,slow=7.9,SNR=8.4 comp=Z,3.4nm,0.7s						
MJB9	**Matsu-Tunnel**	**51.80**	**26**	P	**P**	**14 57 41.5**	**-2.7**
MJB9				IAmb	IAmb	14 58 13.2	
	comp=Z,6.6nm,1.1s						
JTM	**Tenmabayashi**	**56.58**	**25**	P	**P**	**14 58 17.3**	**-1.6**
ULN	**Ulaanbaatar**	**57.58**	**355**	P	**P**	**14 58 25.2**	**-0.9**
ULN				IAmb	IAmb	14 58 26.2	
	comp=Z,2.5nm,0.6s						
SONM	**Songino Array**	**57.61**	**355**	P	**P**	**14 58 24.5**	**-1.7**
	comp=Z,2.2nm,0.5s,baz=173,slow=8.4,SNR=14						
SONM				PcP	**PcP**	**14 59 18.6**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=162,slow=3.8,SNR=2.0 comp=Z,2.2nm,0.5s						
SONM	**Songino Array**	**57.61**	**355**	P	**P**	**14 58 25.6**	**-0.7**
SONM				IAmb	IAmb	14 58 26.5	
	comp=Z,2.1nm,0.7s						
JEW	**Eniwo**	**58.44**	**24**	P	**P**	**14 58 31.4**	**-0.6**
JKA	**Kamikawa-asahi**	**59.97**	**24**	P	**P**	**14 58 41.7**	**-0.8**
KDJ	**Kajisay**	**61.14**	**330**	P	**P**	**14 58 50.5**	**-0.3**
KDJ				IAmb	IAmb	14 58 52.0	
	comp=Z,3.6nm,0.6s						
NRN	**Naryn**	**61.21**	**329**	P	**P**	**14 58 50.8**	**-0.7**
NRN				IAmb	IAmb	14 58 51.7	
	comp=Z,2.9nm,1.0s						
BOOM	**Boomskoye usch**	**62.02**	**330**	P	**P**	**14 58 55.4**	**-1.4**
YSS	**Yuzhno-Sakhali**	**62.38**	**23**	P	**P**	**14 58 57.4**	**-1.5**
MKAR	**Makanchi Array**	**62.58**	**337**	P	**P**	**14 58 59.1**	**-1.1**
	comp=Z,2.5nm,0.5s,baz=150,slow=7.7,SNR=60 comp=Z,3.5nm,0.5s						
GAR	**Garm**	**62.62**	**324**	P	**P**	**14 58 59.5**	**-1.3**
GAR				IAmb	IAmb	14 59 00.5	
	comp=Z,12nm,1.4s						
ARSB	**Arslanbob**	**62.71**	**327**	P	**P**	**14 59 00.7**	**-0.7**
ARSB				IAmb	IAmb	14 59 01.6	
	comp=Z,3.9nm,0.9s						
AAK	**Ala-Archa**	**62.85**	**329**	P	**P**	**14 59 02.1**	**-0.2**
AAK				IAmb	IAmb	14 59 02.9	
	comp=Z,1.8nm,0.8s						
KURBB	**Kurchatov Arra**	**67.14**	**337**	P	**P**	**14 59 27.7**	**-2.0**
	comp=Z,0.9nm,0.6s,baz=159,slow=5.0,SNR=6.5						
KURBB				PcP	**PcP**	**14 59 57.9**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=145,slow=3.7,SNR=4.4 comp=Z,0.9nm,0.6s						
KURK	**Kurchatov**	**67.18**	**337**	P	**P**	**14 59 28.6**	**-1.4**
KURK				IAmb	IAmb	14 59 29.8	
	comp=Z,1.9nm,0.8s						
KURK	**Kurchatov**	**67.18**	**337**		**PcP**	**14 59 57.9**	**+0.1**
ZALV	**Zalesovo Beam**	**67.77**	**342**	P	**P**	**14 59 32.3**	**-1.4**
	comp=Z,2.8nm,0.5s,baz=145,slow=5.1,SNR=12 comp=Z,2.8nm,0.5s						
BVAR	**Borovoye Array**	**72.26**	**335**	P	**P**	**15 00 00.2**	**-1.0**
	comp=Z,0.7nm,0.6s,baz=150,slow=6.7,SNR=6.0 comp=Z,0.7nm,0.6s						
TIXI	**Tiksi**	**81.90**	**5**	P	**P**	**15 00 53.5**	**-1.5**
TIXI				IAmb	IAmb	15 00 54.4	
	comp=Z,3.2nm,0.8s						
BRTR	**Keskin Array B**	**88.05**	**311**	P	**P**	**15 01 26.4**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=120,slow=7.5,SNR=4.2 comp=Z,1.0nm,0.8s						
LVA	**Lava Point**	**92.60**	**36**	P	**P**	**15 01 47.1**	**-0.5**
TXAR	**Lajitas Array**	**140.61**	**55**	PKhKP	PKPpre	15 08 02.9	
	comp=Z,0.2nm,0.6s,baz=332,slow=2.8,SNR=2.5						

*VAO **30** 14:53:28.5±2.3, 27.°07S×71.°80W, h8km±13km, mb4.5, Presumed earthquake*
*SJA **30** 14:53:31.3±0.8, 26.°98S×71.°45W, h13km±3km, ML4.6, MW4.4*
*IDC **30** 14:53:32.2±0.6, 26.°88S×71.°08W, h0km, mb4.3/10, mbtmp4.2/15, ML3.9/5, MS3.7/15, Error ellipse: s-maj=23.9km s-min=16.5km az=87.0*
*NEIC **30** 14:53:34.0±2.3, 26.°97S±0.°04×71.°27W±0.°05, h10km±1km, mb4.8/17, Mwr4.5(GUC), Error ellipse: s-maj=8.6km s-min=5.4km az=237.0*
*GUC **30** 14:53:35.7±0.7, 27.°03S×71.°24W, h27km±9km, ML4.5*
ISC 30 14:53:33.1±0.4, 26.°99S±0.°02×71.°31W±0.°04, h10km, n157, σ1§81/159, mb4.7/14, MS3.9/12, 4C-1D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC06	**Mina Casimiro**	**0.92**	**113**		**Pb**	**14 53 50.9**	**-0.3**
AC06	**Mina Casimiro**	**0.92**	**113**	*i* P	**Pn**	**14 53 51.1**	**-1.1**
AC06				IAML		14 54 04.3	
	comp=N,29µm,0.2s						
AC01	**Pan de Azucar**	**1.05**	**37**		**Pn**	**14 53 53.6**	**-0.4**
AC01	**Pan de Azucar**	**1.05**	**37**	*e*P	**Pn**	**14 53 53.8**	**-0.2**
AC01				*e*S	**Sn**	**14 54 07.8**	**-0.9**
AC01				IAML		14 54 08.3	
	comp=E,19µm,0.3s						
AC01	**Pan de Azucar**	**1.05**	**37**	*e*P	Pg	14 53 48.0	-5.3
AC01				*e*P	**Pb**	**14 53 53.0**	**-0.5**
AC01				*e*S	**Sn**	**14 54 08.2**	**-0.6**
GO03	**Copiapo**	**1.13**	**122**		**Pn**	**14 53 54.6**	**-0.4**
GO03	**Copiapo**	**1.13**	**122**	*e*P	**Pn**	**14 53 54.5**	**-0.4**
GO03				*e*S	**Sg**	**14 54 08.2**	**-1.2**
GO03	**Copiapo**	**1.13**	**122**	*e*P	**Pn**	**14 53 54.6**	**-0.4**
GO03				*e*S	**Sb**	**14 54 08.8**	**-0.6**
GO03				*e*S	**Sn**	**14 54 09.8**	**-0.8**
GO03				IAML		14 54 11.8	
	comp=Z,8µm,0.5s						
AC04	**Llanos de Chal**	**1.22**	**170**		**Pn**	**14 53 56.1**	**-0.3**
AC04	**Llanos de Chal**	**1.22**	**170**	*i* P	**Pn**	**14 53 56.0**	**-0.3**
AC04	**Llanos de Chal**	**1.22**	**170**	*e*P	**Pn**	**14 53 55.3**	**-1.0**
AC04				*e*S	**Sn**	**14 54 13.1**	**+0.1**
AC04				IAML		14 54 15.5	
	comp=Z,6µm,0.5s						
AC02	**Maricunga**	**1.95**	**86**		**Pb**	**14 54 08.5**	**-0.6**
AC02	**Maricunga**	**1.95**	**86**	*i* P	**Pb**	**14 54 08.7**	**-0.4**
AC02				IAML		14 54 37.6	
	comp=N,4µm,0.3s						
AC02	**Maricunga**	**1.95**	**86**	*e*P	**Pb**	**14 54 08.6**	**-0.4**
AC02				*e*S	**Sg**	**14 54 36.1**	**+0.2**
AC02				IAML		14 54 36.7	
	comp=Z,3µm,1.0s						
AC05	**El Transito**	**2.05**	**154**		**Pb**	**14 54 09.3**	**-1.3**
AC05	**El Transito**	**2.05**	**154**	*i* P	**Pb**	**14 54 09.4**	**-1.1**
AC05				IAML		14 54 48.4	
	comp=N,5µm,0.7s						
AC05	**El Transito**	**2.05**	**154**	*e*P	**Pb**	**14 54 08.8**	**-1.7**
AC05				*e*P	**Pn**	**14 54 09.8**	**+1.9**
AC05				*e*S	**Sb**	**14 54 37.0**	**+0.9**
AC05				IAML		14 54 43.4	
	comp=Z,3µm,0.9s						
LCO	**Las Campanas**	**2.08**	**165**		**Pn**	**14 54 09.3**	**+1.0**
LCO	**Las Campanas**	**2.08**	**165**	*e*P	**Pn**	**14 54 09.4**	**+1.1**
LCO				*e*S	**Sn**	**14 54 35.2**	**+0.8**
LCO				IAML		14 54 44.4	
	comp=Z,7µm,0.6s						
PB14	**IPOC Station P**	**2.49**	**19**		**Pn**	**14 54 13.7**	**-0.4**
PB14	**IPOC Station P**	**2.49**	**19**	*i* P	**Pn**	**14 54 13.5**	**-0.5**
PB14				IAML		14 55 01.2	
	comp=N,1µm,0.9s						
PB14	**IPOC Station P**	**2.49**	**19**	*e*P	**Pn**	**14 54 13.1**	**-0.9**
PB14				*e*S	**Sb**	**14 54 48.0**	**-1.1**
PB14				IAML		14 54 58.9	
	comp=Z,2µm,0.8s						
CO05	**La Serena**	**2.92**	**179**		**Pn**	**14 54 20.1**	**+0.6**
CO05	**La Serena**	**2.92**	**179**	*e*P	**Pn**	**14 54 20.7**	**+1.2**
CO05				IAML		14 55 12.5	
	comp=E,4µm,0.5s						
CO01	**Juntas del Tor**	**3.16**	**161**		**Pn**	**14 54 24.6**	**+1.4**
CO01	**Juntas del Tor**	**3.16**	**161**	*e*P	**Pn**	**14 54 25.3**	**+2.2**
CO01				IAML		14 55 15.0	
	comp=N,1µm,0.1s						
CO01	**Juntas del Tor**	**3.16**	**161**	*e*P	**Pn**	**14 54 24.2**	**+1.1**
CO01				*e*S	**Sn**	**14 55 03.6**	**+2.6**
CO01				IAML		14 55 18.1	
	comp=Z,1µm,0.6s						
GO04	**Tololo Observa**	**3.20**	**172**		**Pn**	**14 54 24.7**	**+1.0**
GO04	**Tololo Observa**	**3.20**	**172**	*i* P	**Pn**	**14 54 25.1**	**+1.4**
GO04	**Tololo Observa**	**3.20**	**172**	*e*P	**Pn**	**14 54 24.5**	**+0.8**
GO04				*e*S	**Sn**	**14 54 59.0**	**-3.0**
GO04				IAML		14 55 25.8	
	comp=Z,4µm,0.7s						
VCA	**Vinchina**	**3.25**	**123**	*i* P	**Pb**	**14 54 29.1**	**-1.9**
VCA				IAML		14 55 22.6	
	comp=E,3µm,0.9s						
VCA	**Vinchina**	**3.25**	**123**	*e*P	**Pb**	**14 54 29.1**	**-1.9**
VCA				*e*S	**Sb**	**14 55 07.5**	**-3.1**
VCA				*e*S	**Sg**	**14 55 16.6**	**-1.0**
VCA				IAML		14 55 25.1	
	comp=Z,1µm,1.6s						
TINO	**Tinogasta**	**3.48**	**109**	*e*P	**Pb**	**14 54 30.6**	**-4.5**
TINO				*e*S	**Sg**	**14 55 22.5**	**-2.6**
AROD	**Rodeo**	**3.55**	**153**	*e*P	**Pn**	**14 54 27.1**	**-1.5**
AROD				*e*P	**Pb**	**14 54 32.7**	**-3.5**
AROD				*e*S	**Sg**	**14 55 27.1**	**-0.1**
ACDV	**Cuesta del Vie**	**3.70**	**149**	*e*P	**Pb**	**14 54 35.0**	**-3.7**
ACDV				*e*S	**Sn**	**14 55 16.6**	**+2.2**
ACDV				IAML		14 55 39.7	
	comp=Z,536nm,1.2s						
CO03	**El Pedregal**	**3.87**	**172**		**Pn**	**14 54 33.8**	**+1.0**
CO03	**El Pedregal**	**3.87**	**172**	*e*P	**Pn**	**14 54 34.0**	**+1.3**
CO03				*e*S	Sn	14 55 07.5	-11
CO03				*e*S	**Sb**	**14 55 19.9**	**-8.5**
CO03				IAML		14 55 47.6	
	comp=Z,1µm,0.6s						
CO02	**Combarbal**	**4.20**	**176**		**Pn**	**14 54 37.7**	**+0.3**
CO02	**Combarbal**	**4.20**	**176**	*e*P	**Pn**	**14 54 38.0**	**+0.5**
CO02				*e*S	**Sn**	**14 55 27.3**	**+0.7**
CO02				IAML		14 55 52.1	
	comp=Z,3µm,0.7s						
PB05	**IPOC Station P**	**4.24**	**14**		**Pn**	**14 54 36.8**	**-1.2**
PB05	**IPOC Station P**	**4.24**	**14**	*e*P	**Pn**	**14 54 36.8**	**-1.2**
PB05				*e*P	Pb	14 54 37.0	-11
PB05				*e*S	**Sb**	**14 55 40.5**	**+1.3**
PB05				IAML		14 55 57.9	
	comp=Z,542nm,1.2s						
ACLC	**CERRO LA CRUZ**	**4.54**	**123**	*e*P	**Pn**	**14 54 40.0**	**-2.1**
ACLC				*e*P	Pb	14 54 45.3	-7.8
ACLC				*e*S	**Sn**	**14 55 40.0**	**+5.0**
ACLC				IAML		14 56 09.3	
	comp=Z,231nm,0.7s						
PB06	**IPOC Station P**	**4.55**	**21**		**Pn**	**14 54 42.0**	**-0.2**
PB06	**IPOC Station P**	**4.55**	**21**	*e*P	**Pn**	**14 54 41.9**	**-0.4**
PB06				*e*S	**Sb**	**14 55 44.5**	**-3.6**
PB06				IAML		14 56 07.6	
	comp=Z,828nm,1.1s						
AVFE	**Valle Fertil**	**4.97**	**138**	*e*P	**Pn**	**14 54 50.9**	**+2.9**
AVFE				*e*S	**Sn**	**14 55 52.0**	**+6.4**
AVFE				IAML		14 56 15.3	
	comp=Z,316nm,0.9s						
RTLL	**Cerro Villicun**	**4.98**	**151**	*e*P	**Pn**	**14 54 50.9**	**+2.9**
RTLL				*e*S	Sn	14 55 31.2	-14
RTLL				IAML		14 56 07.0	
	comp=Z,510nm,0.7s						
CO04	**Los Peladeros**	**5.04**	**177**		**Pn**	**14 54 49.6**	**+0.5**
ZON	**Zonda**	**5.08**	**154**	Pn	**Pn**	**14 54 51.4**	**+2.0**
PB03	**IPOC Station P**	**5.12**	**16**		**Pn**	**14 54 48.6**	**-1.5**
PB03	**IPOC Station P**	**5.12**	**16**	*e*P	**Pn**	**14 54 49.2**	**-0.8**
PB03				*e*S	**Sn**	**14 55 47.0**	**-2.4**
PB03				IAML		14 56 20.4	
	comp=Z,454nm,0.6s						
SALTA		**5.26**	**59**	*e*P	Pb	14 54 58.5	-7.0
CFA	**Coronel Fontan** comp=Z,4.5nm,0.3s,baz=332,slow=12,SNR=57	**5.32**	**150**	Pn	**Pn**	**14 54 54.5**	**+1.9**
CFA				Sn	**Sn**	**14 55 59.5**	**+5.4**
	comp=Z,11nm,0.3s,baz=228,slow=22,SNR=9.1 comp=Z,9.6nm,0.3s						
AHML	**Horco Molle**	**5.34**	**89**	*e*P	Pn	14 54 40.6	-12
MT02	**Curacav**	**6.25**	**179**		**Pn**	**14 55 05.0**	**-0.4**
PB12	**IPOC Station P**	**8.39**	**6**		**Pn**	**14 55 33.3**	**-1.6**
H03N1	**Juan Fernandez** baz=52,slow=71,SNR=4765	**9.19**	**224**	T	T	15 05 21.6	
H03N2	**Juan Fernandez** baz=52,slow=71,SNR=4508	**9.21**	**224**	T	T	15 05 21.4	
H03N3	**Juan Fernandez** baz=52,slow=71,SNR=4193	**9.21**	**224**	T	T	15 05 17.0	
H03S3	**

TEFE	**Tefe**	**24.21**	**16**	*eP*	**P**	**14 58 47.4**	**-2.6**
PMNB	**Patos De Minas**	**24.39**	**75**	*eP*	**P**	**14 58 51.2**	**-0.7**
BDFB	**Brasilia**	**24.42**	**67**	P	**P**	**14 58 49.6**	**-2.5**
	comp=Z,4.4nm,0.6s,baz=232,slow=12,SNR=6.9						
BDFB				LR	LR	15 10 18.9	
	comp=Z,140nm,19.2s,baz=225,slow=42						
	comp=Z,4.4nm,0.6s						
BDFB	**Brasilia**	**24.42**	**67**		**P**	**14 58 51.0**	**-1.2**
BDFB				IAmb	IAmb	14 58 51.5	
	comp=Z,17nm,1.5s						
BSCB	**Bom Sucesso**	**24.94**	**82**	*eP*	**P**	**14 58 57.4**	**+0.6**
NPGB	**Novo Progresso**	**24.97**	**40**	*eP*	**P**	**14 58 56.4**	**-0.6**
MACA	**Manacapuru-AM**	**25.79**	**25**	P	**P**	**14 59 04.9**	**+0.5**
ITTB	**Itaituba**	**26.97**	**36**	*eP*	**P**	**14 59 14.8**	**-0.3**
JANB	**Januaria**	**27.79**	**70**	*eP*	**P**	**14 59 21.5**	**-1.1**
USHA	**Ushuaia**	**27.89**	**176**	LR	LR	15 11 22.7	
	comp=Z,1µm,21.0s,baz=60,slow=38						
SMTB	**Santa Maria do**	**28.79**	**56**	*eP*	**P**	**14 59 32.0**	**+0.6**
PRPB	**Parauapebas**	**29.11**	**48**	*eP*	**P**	**14 59 31.8**	**-2.4**
BOAV	**Boa Vista**	**31.02**	**21**	*eP*	**P**	**14 59 49.6**	**-1.4**
RPN	**Rapa Nui**	**33.78**	**261**	LR	LR	15 10 36.1	
	comp=Z,193nm,18.1s,baz=93,slow=30						
NBPS	**Pedro II - PI**	**36.30**	**57**	*eP*	**P**	**15 00 37.5**	**+0.3**
NBMA	**Muriti-CE**	**36.53**	**64**	*eP*	**P**	**15 00 39.4**	**+0.2**
MDP	**Montagnes des**	**36.66**	**32**	LR	LR	15 16 53.0	
	comp=Z,150nm,18.0s,baz=150,slow=38						
PMSA	**Palmer Station**	**38.07**	**175**	LR	LR	15 15 34.5	
	comp=Z,73nm,21.1s,baz=146,slow=35						
RCBR	**Riachuelo**	**39.73**	**64**	LR	LR	15 20 19.5	
	comp=Z,47nm,18.9s,baz=244,slow=41						
TEIG	**Tepich**	**49.74**	**339**	P	**P**	**15 02 26.2**	**+0.5**
SNAA	**Sanae**	**57.87**	**160**	P	**P**	**15 03 25.5**	**+0.7**
	comp=Z,7.0nm,0.8s,baz=285,slow=7.5,SNR=4.7						
	comp=Z,7.0nm,0.8s						
SNAA	**Sanae**	**57.87**	**160**	IAmb	IAmb	15 03 31.5	
	comp=Z,23nm,1.5s						
HODGE	**Hodges**	**61.77**	**350**	IAmb	IAmb	15 03 52.7	
	comp=Z,15nm,1.2s						
QSPA	**South Pole Qui**	**63.22**	**180**	P	**P**	**15 04 02.4**	**+0.9**
	comp=Z,4.6nm,0.7s,baz=172,slow=6.6,SNR=30						
	comp=Z,4.6nm,0.7s						
QSPA	**South Pole Qui**	**63.22**	**180**	P	**P**	**15 04 03.4**	**+2.0**
QSPA				IAmb	IAmb	15 04 04.3	
	comp=Z,6.5nm,0.9s						
BRDY	**Brady**	**63.70**	**334**	P	**P**	**15 04 06.1**	**+1.2**
BRDY				IAmb	IAmb	15 04 07.8	
	comp=Z,2.6nm,0.7s						
TXAR	**Lajitas Array**	**64.02**	**329**	P	**P**	**15 04 06.0**	**-1.2**
	comp=Z,0.4nm,0.7s,baz=143,slow=7.2,SNR=4.9						
	comp=Z,0.4nm,0.7s						
R40A	**Maddies Statio**	**67.85**	**342**	P	**P**	**15 04 32.3**	**+0.8**
DBIC	**Dimbokro**	**72.42**	**73**	P	**P**	**15 04 58.5**	**-1.5**
	comp=Z,2.5nm,0.7s,baz=249,slow=6.2,SNR=3.6						
DBIC				LR	LR	15 35 28.8	
	comp=Z,81nm,18.8s,baz=204,slow=35						
	comp=Z,2.5nm,0.7s						
DBIC	**Dimbokro**	**72.42**	**73**	IAmb	IAmb	15 05 01.1	
	comp=Z,12nm,1.3s						
D62A	**Allapoint, All**	**73.76**	**2**	P	**P**	**15 05 08.7**	**+1.5**
SUR	**Sutherland**	**77.72**	**120**	LR	LR	15 37 25.2	
	comp=Z,59nm,18.1s,baz=180,slow=34						
PDAR	**Pinedale Array**	**77.84**	**332**	P	**P**	**15 05 33.1**	**+2.1**
	comp=Z,0.2nm,0.5s,baz=134,slow=3.0,SNR=2.5						
	comp=Z,0.2nm,0.5s						
ELK	**Elko**	**78.77**	**327**	LR	LR	15 36 26.1	
	comp=Z,32nm,18.9s,baz=179,slow=33						
RAR	**Rarotonga**	**79.36**	**252**	LR	LR	15 31 56.3	
	comp=Z,50nm,20.1s,baz=45,slow=29						
MAW	**Mawson**	**79.70**	**164**	P	**P**	**15 05 42.2**	**+1.6**
	comp=Z,5.3nm,0.5s,baz=216,slow=6.2,SNR=14						
	comp=Z,5.3nm,0.5s						
MAW	**Mawson**	**79.70**	**164**	P	**P**	**15 05 42.4**	**+1.7**
TSUM	**Tsumeb**	**80.56**	**107**	LR	LR	15 37 05.5	
	comp=Z,62nm,20.4s,baz=162,slow=32						
TORD	**Torodi Ar. Bea**	**81.25**	**70**	P	**P**	**15 05 50.3**	**+0.4**
	comp=Z,14nm,0.7s,baz=252,slow=5.7,SNR=76						
	comp=Z,14nm,0.7s						
TORD	**Torodi Ar. Bea**	**81.25**	**70**	P	**P**	**15 05 50.2**	**+0.4**
TORD				IAmb	IAmb	15 05 51.2	
	comp=Z,9.0nm,0.8s						
BOSA	**Boshof**	**82.79**	**118**	P	**P**	**15 05 58.1**	**0.0**
	comp=Z,4.6nm,0.9s,baz=222,slow=4.4,SNR=5.7						
	comp=Z,4.6nm,0.9s						
FCC	**Fort Churchill**	**87.51**	**348**	P	**P**	**15 06 22.1**	**+1.5**
FCC				IAmb	IAmb	15 06 34.9	
	comp=Z,6.3nm,1.4s						
YKA	**Yellowknife Ar**	**95.64**	**341**	P	**P**	**15 06 59.2**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=143,slow=3.8,SNR=3.2						
	comp=Z,0.1nm,0.3s						
ASAR	**Alice Springs**	**124.06**	**208**	PKP	**PKiKP**	**15 12 33.1**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=129,slow=1.7,SNR=19						
H11S2	**WAKE ISLAND Hyl**	**26.22**	**274**	T	T	17 31 57.5	
	baz=109,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hyl**	**26.23**	**274**	T	T	17 31 57.9	
	baz=109,slow=75,SNR=12						
H11S3	**WAKE ISLAND Hyl**	**26.24**	**274**	T	T	17 31 56.3	
	baz=109,slow=75,SNR=11						
H11N3	**WAKE ISLAND Hyl**	**26.45**	**275**	T	T	17 32 12.3	
	baz=113						
H11N1	**WAKE ISLAND Hyl**	**26.47**	**275**	T	T	17 32 12.7	
	baz=113						
H11N2	**WAKE ISLAND Hyl**	**26.47**	**275**	T	T	17 32 18.5	
	baz=113						
WRA	**Warramunga Arr**	**127.13**	**211**	PKP	**PKiKP**	**15 12 39.2**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=156,slow=1.6,SNR=22						
SHAA	**Shahritus**	**144.36**	**62**		**PKPdf**	**15 13 09.5**	**-0.3**
KURK	**Kurchatov**	**147.07**	**36**		**PKPbc**	**15 13 15.8**	**-0.2**
KURBB	**Kurchatov Arra**	**147.08**	**36**	PKPbc	**PKPbc**	**15 13 15.8**	**-0.2**
	comp=Z,1.2nm,0.3s,baz=276,slow=2.9,SNR=11						
ZALV	**Zalesovo Beam**	**147.83**	**27**	PKPbc	**PKPbc**	**15 13 16.8**	**-1.2**
	comp=Z,10nm,0.7s,baz=305,slow=2.9,SNR=18						
MKAR	**Makanchi Array**	**151.30**	**40**	PKPbc	**PKiKP**	**15 13 27.9**	**+0.6**
	comp=Z,6.4nm,0.7s,baz=320,slow=2.1,SNR=37						
HEH	**HeiHe**	**152.71**	**333**	*eP*	**PKiKP**	**15 13 31.3**	**+1.2**
HEH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WMQ	**Urumqi**	**156.13**	**40**	*eP*KP	**PKPdf**	**15 13 28.3**	**+0.4**
WMQ				LR	LR		
	comp=N,1µm,12.5s						
WMQ				LR	LR		
	comp=E,1µm,10.7s						
WMQ				LR	LR		
	comp=Z,550nm,14.3s						
SONM	**Songino Array**	**159.12**	**4**	PKP	**PKPdf**	**15 13 33.5**	**+2.0**
	comp=Z,0.4nm,0.5s,baz=11,slow=1.2,SNR=5.0						
SONM				PKPab	**pPKPab**	**15 14 09.2**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=331,slow=1.8,SNR=2.1						
HHC	**Hu-ho-hao-te**	**165.98**	**351**	*eP*	**PKPdf**	**15 13 35.0**	**-3.5**
CMAR	**Chiang Mai Arr**	**167.63**	**131**	PKPab	**PKPab**	**15 14 45.5**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=199,slow=4.0,SNR=5.2						
NJ2	**Nanjing**	**169.82**	**302**	*eP*	**PKPdf**	**15 13 41.0**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,16nm,1.2s						
XAN	**Xi'an**	**172.97**	**358**	PKP	PKPdf	15 13 52.5	+10
PZH	**PanZhiHua**	**173.77**	**93**	PKP	**PKPdf**	**15 13 43.0**	**-0.5**

*SKHL **30** 15:07:24.6±0.3, 44°.50N×149°.40E, h44km±3km, mb3.9/3*
*JMA **30** 15:07:25.3±0.5, 45°.N±2°×14°.9E±°, h30km, MV3.5/12, SE OFF ETOROFU*

ISC 30 15:07:22.9±4.1, 44°.34N±0°.09×149°.5E±0°.2, h36km, n15, σ2s2.24/21, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.44**	**309**	*eP*	**Pn**	**15 07 46.3**	**-0.2**
KUR				AMB	AMB	15 07 47.3	
	40nm,0.5s						
KUR				*eS*	**Sn**	**15 08 01.9**	**-2.2**
KUR				A	A	15 08 05.7	
	260nm,0.5s						
KUR				A	A	15 08 05.7	
	180nm,0.5s						
SHO	**Shikotan**	**1.95**	**257**	*eP*	Pn	15 08 00.5	+7.1
SHO				AMB	AMB	15 08 01.5	
	20nm,0.2s						
SHO				*eS*	Sn	15 08 25.7	+9.1
SHO				A	A	15 08 30.3	
	30nm,0.3s						
SHO				A	A	15 08 30.3	
	40nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.60**	**265**	*eP*	**Pn**	**15 08 03.3**	**+0.9**
YUK				AMB	AMB	15 08 04.4	
	50nm,0.6s						
YUK				*eS*	**Sn**	**15 08 32.5**	**-0.2**
YUK				A	A	15 08 34.4	
	130nm,0.6s						
YUK				A	A	15 08 34.4	
	110nm,0.6s						
NEM2	**Nemuro 2**	**2.85**	**251**	*eP*	**Pn**	**15 08 06.8**	**+0.9**
NEM2				*eS*	**Sn**	**15 08 37.4**	**-1.5**
NMR	**Nemuro--Hokkai**	**2.86**	**252**	*eP*	**Pn**	**15 08 06.9**	**+0.9**
NMR				*eS*	**Sn**	**15 08 38.1**	**-1.1**
JRA	**Rausu**	**3.14**	**264**	*eP*	**Pn**	**15 08 12.3**	**+2.4**
JNK	**Nakash**	**3.50**	**259**	*eP*	**Pn**	**15 08 17.2**	**+2.4**
JNK				*eS*	**Sn**	**15 08 54.7**	**-0.2**
AKK	**Akkeshi**	**3.59**	**250**	*eP*	**Pn**	**15 08 18.5**	**+2.4**
JAK	**Akkeshi**	**3.70**	**250**	*eP*	**Pn**	**15 08 18.7**	**+1.2**
JAK				*eS*	**Sn**	**15 08 58.2**	**-1.6**
JTKR	**Abashiri--Toko**	**4.01**	**267**	*eP*	**Pn**	**15 08 24.7**	**+3.0**
JAR	**Ashorobuto**	**4.24**	**258**	*eS*	**Sn**	**15 09 14.1**	**+0.9**
JOB	**Onbets**	**4.32**	**253**	*eS*	**Sn**	**15 09 14.6**	**-0.6**
JCH	**Churui**	**4.75**	**251**	*eP*	**Pn**	**15 08 33.3**	**+1.3**
JCH				*eS*	**Sn**	**15 09 24.4**	**-1.5**
JNBK	**Urakawa-nobuka**	**5.30**	**250**	*eP*	**Pn**	**15 08 40.8**	**+1.3**
JANG	**Nango**	**7.09**	**239**	*eS*	**Sn**	**15 10 16.8**	**-6.5**

IDC 30 15:18:01.8±6.3, 22°.69S×175°.37W, h0km, mb3.8/3, mbtmp3.9/4, Error ellipse: s-maj=209.6km s-min=33.8km az=136.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.37**	**22**	Pn	Pn	15 20 20.3	+2.0
	13nm,0.7s						
AFI				Sn	Sn	15 21 49.6	-15
ASAR	**Alice Springs**	**46.44**	**258**	P	P	15 26 31.4	+0.6
	0.6nm,0.7s,baz=101,slow=8.4,SNR=8.5						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**46.76**	**263**	P	P	15 26 33.0	-0.2
	0.2nm,0.2s,baz=97,slow=8.0,SNR=6.0						
	0.2nm,0.2s						
FITZ	**Fitzroy Crossi**	**55.19**	**263**	P	P	15 27 36.5	-0.2
	4.8nm,1.2s,baz=135,slow=13,SNR=2.4						
	4.8nm,1.2s						
AKASG	**Malin Array Be**	**146.10**	**332**	PKPbc	PKPdf	15 37 41.4	-1.4
	0.3nm,0.3s,baz=44,slow=4.2,SNR=4.3						

*MOS **30** 15:26:01.6, 42°.17N×45°.88E, h17km, MPVA3.5*
*NORS **30** 15:26:02.3, 42°.15N×45°.85E, h8km, MPVA3.4*
*AZER **30** 15:26:02.1, 42°.13N×45°.86E, h29km, ml2.0*
*DRS **30** 15:26:03.8, 42°.23N×46°.01E, h6km*

ISC 30 15:26:02.8±1.1, 42°.15N±0°.02×45°.85E±0°.02, h19km±3km, n27, σ0s87/54, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLTR	**Tlyarata**	**0.37**	**96**	*i* Pg	**Pb**	**15 26 10.5**	**-0.6**
TLTR				*e*Sg	**Sb**	**15 26 16.1**	**-0.4**
BTLR	**Botlikh**	**0.58**	**28**	*i* Pg	**Pb**	**15 26 14.4**	**+0.1**
BTLR				*e*Sg	**Sb**	**15 26 22.3**	**0.0**
XNZR	**Khunzakh**	**0.74**	**58**	*e*Pg	**Pn**	**15 26 17.9**	**-0.6**
XNZR				*e*Sg	**Sn**	**15 26 28.8**	**-0.6**
ZKTA	**Zakatala**	**0.77**	**131**	P	**Pn**	**15 26 18.4**	**-0.3**
ZKTA				S	**Sn**	**15 26 30.0**	**+0.2**
DVE	**Vedeno**	**0.83**	**14**	*e*Pg	**Pn**	**15 26 18.8**	**-0.8**
DVE				*e*Sg	**Sn**	**15 26 30.6**	**-0.8**
GNBR	**Gunib**	**0.86**	**73**	*e*Pg	**Pn**	**15 26 19.6**	**-0.3**
GNBR				*e*Sg	**Sn**	**15 26 31.5**	**-0.5**
UNCR	**Uncukul**	**0.90**	**51**	*e*Pg	**Pn**	**15 26 20.1**	**-0.4**
UNCR				*e*Sg	**Sn**	**15 26 32.6**	**-0.4**
KMKR	**Kumukh**	**0.93**	**91**	*e*Pg	**Pn**	**15 26 20.7**	**-0.3**
KMKR				*e*Sg	**Sn**	**15 26 33.8**	**-0.2**
ARKR	**Arakani**	**0.96**	**61**	*e*Pg	**Pn**	**15 26 21.6**	**+0.3**
ARKR				*e*Sg	**Sn**	**15 26 34.4**	**-0.1**
KRNR	**Karanay**	**1.03**	**49**	*e*Pg	**Pg**	**15 26 22.8**	**-0.1**
KRNR				*e*Sg	**Sn**	**15 26 36.2**	**-0.2**
GROC	**Groznyy**	**1.05**	**358**	*e*Pg	**Pg**	**15 26 23.5**	**+0.2**
GROC				*e*Sg	**Sn**	**15 26 38.3**	**+1.5**
GUDG	**Gudauri**	**1.07**	**288**	*e*Pg	**Pb**	**15 26 22.7**	**-0.1**
GUDG				*e*Sg	**Sn**	**15 26 38.1**	**+0.6**
DLMR	**Dylym**	**1.08**	**32**	*e*Pg	**Pg**	**15 26 23.5**	**-0.3**
DLMR				*e*Sg	**Sn**	**15 26 38.8**	**+1.3**
DBC	**Dubki**	**1.13**	**39**	*e*Pg	**Pg**	**15 26 24.2**	**-0.5**
DBC				*e*Sg	**Sg**	**15 26 40.3**	**+0.8**
BUJR	**Buynaksk**	**1.15**	**54**	*e*Pg	**Pg**	**15 26 24.7**	**-0.3**
BUJR				*e*Sg	**Sg**	**15 26 40.9**	**+0.9**
QZX	**Qazax, Azerbai**	**1.15**	**199**	P	**Pb**	**15 26 24.6**	**+0.5**
QZX				S	**Sg**	**15 26 42.1**	**+2.1**
LACR	**Lac**	**1.34**	**301**	*e*Pg	**Pg**	**15 26 27.7**	**-0.9**
LACR				*e*Sg	**Sg**	**15 26 45.8**	**-0.3**
SEKA	**Sheki**	**1.38**	**133**	P	**Pg**	**15 26 29.1**	**-0.2**
SEKA				S	**Sg**	**15 26 49.3**	**+1.9**
GDB	**GEDABAY**	**1.43**	**183**	P	**Pb**	**15 26 28.9**	**0.0**
GDB				S	**Sg**	**15 26 48.8**	**-0.2**
GANJ	**Ganja**	**1.54**	**167**	P	**Pb**	**15 26 31.3**	**+0.6**
GANJ				S	**Sg**	**15 26 52.5**	**-0.1**
KORR	**Kora**	**1.62**	**306**	*e*Pg	**Pb**	**15 26 32.0**	**-0.1**
KORR				*e*Sg	**Sg**	**15 26 56.2**	**+1.2**
DIGR	**Digorskoe uzhe**	**1.84**	**295**	*e*Pg	**Pb**	**15 26 36.8**	**+0.8**
DIGR				*e*Sg	**Sg**	**15 27 01.4**	**-0.7**
LSNR	**Lesken**	**1.87**	**308**	*e*Pg	**Pb**	**15 26 36.4**	**0.0**
LSNR				*e*Sg	**Sg**	**15 27 01.7**	**-1.4**
GNI	**Garni**	**2.17**	**203**	*e*Pn	**Pb**	**15 26 40.8**	**-0.8**
GNI				*e*Sn	**Sg**	**15 27 11.2**	**-1.4**
NEUR	**Neytrino**	**2.58**	**297**	*e*Pn	**Pb**	**15 26 48.3**	**-0.2**
NEUR				*e*Sn	**Sb**	**15 27 21.5**	**+1.7**
KBZ	**Khabaz**	**2.68**	**307**	*e*Pn	**Pb**	**15 26 51.3**	**+1.1**
KBZ				*e*Sn	**Sb**	**15 27 25.1**	**+2.4**
SHA1	**Shidzhatmaz**	**2.83**	**305**	*e*Pn	**Pb**	**15 26 52.3**	**-0.6**
SHA1				*e*Sn	**Sb**	**15 27 26.1**	**-1.2**

DJA 30 15:37:56.9±0.3, 0°.S±3°×12°.3E±°, h142km±4km, M3.8/20, mb3.7/6, MLv3.8/20, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTOI	**Gorontalo**	**0.72**	**6**	P	Pn	15 38 20.6	+1.9
GTOI				S	Sn	15 38 39.0	+3.8
LUWI	**Luwuk**	**0.97**	**189**	P	Pn	15 38 21.2	+0.5
LUWI				S	Sn	15 38 39.5	+0.7
MRSI	**Marisa**	**1.13**	**299**	P	Pn	15 38 21.9	-0.2
MRSI				S	Sn	15 38 40.7	-0.6
APSI	**Ampana**	**1.52**	**237**	P	Pn	15 38 26.5	+0.4
MNI	**Manado**	**2.44**	**52**	P	Pn	15 38 38.0	+1.1
MPSI	**Mapaga**	**3.06**	**278**	P	Pn	15 38 45.3	+0.6
SANI	**Sanana**	**3.63**	**123**	P	Pn	15 38 50.8	-1.3
NLAI	**Namlea**	**5.22**	**127**	P	Pn	15 39 13.4	+0.3
	14nm,1.2s						
FAKI	**Fak Fak**	**9.73**	**107**	P	Pn	15 40 12.4	-1.2

*BGR **30** 15:42:29.6, 36°.25N×72°.25E, h226km±22km, mb5.1*
*BJI **30** 15:42:31.6, 36°.78N×71°.08E, h210km, mB4.9/29, mb4.7/64*
*MOS **30** 15:42:32.6±0.9, 36°.72N×71°.17E, h215km, mb4.8/52, Error ellipse: s-maj=5.8km s-min=4.1km az=110.7*
*NEIC **30** 15:42:33.5±1.5, 36°.68N±0°.06×71°.10E±0°.09, h214km±6km, mb5.0/196, Mww4.9/10, Error ellipse: s-maj=10.0km s-min=8.2km az=81.0*
*IDC **30** 15:42:33.7±0.5, 36°.56N×71°.10E, h224km±4km, mb4.4/36, mbtmp5.0/40, Error ellipse: s-maj=8.6km s-min=6.2km az=14.0*
*NEIC **30** 15:42:33.6, 36°.68N×71°.10E, h215km*
*GCMT **30** 15:42:34.6±0.3, 36°.66N±0°.02×70°.99E±0°.02, h222km±2km, MW5.0/89, Moment Tensor Solution. s31,c36; s89,c117; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.31±.11; $M_{\theta\theta}$-0.99±.13; $M_{\phi\phi}$-2.32±.14; $M_{r\theta}$-0.43±.11; $M_{\theta\phi}$1.38±.12; $M_{\phi r}$2.06±.11; Best double couple: M_o3.86700×10^{16} NP1:φs139.00000°, δ30.00000°, λ73.00000°. NP2: φs338.00000°, δ61.00000°, λ100.00000°. Principal axes: T 3.9830, Plg72.0000°, Azm271.0000°; N -0.2290, Plg8.0000°, Azm154.0000°; P -3.7500, Plg16.0000°, Azm61.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NNC **30** 15:42:35.8±5.3, 37°.04N×71°.00E, h204km±43km, mb4.5, mpv5.7 Error ellipse: s-maj=44.9km s-min=24.8km az=13.0*
*NEIC **30** 15:42:36.2, 36°.48N×70°.98E, h200km, Moment Tensor Solution. Duration: 1s Moment tensor: Scale 10^{16}Nm; M_{rr}2.33; $M_{\theta\theta}$-1.04; $M_{\phi\phi}$-1.29; $M_{r\theta}$-0.71; $M_{\theta\phi}$1.18; $M_{\phi r}$1.37; Fault plane solution: M_o2.80000×10^{16} NP1: φs130.14000°, δ29.15000°, λ76.14000°. NP2: φs325.91000°, δ61.78000°, λ97.61000°. Principal axes: T 2.8148, Plg72.0000°, Azm254.0000°; N -0.0259, Plg7.0000°, Azm142.0000°; P -2.7889, Plg16.0000°, Azm50.0000°;*

ISC 30 15:42:33.4±0.2, 36°.66N±0°.03×71°.08E±0°.03, h217km±2km, h217km:pP-P, n1030, σ1s32/1123, mb4.9/280, 55C-39D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.41**	**346**		**Pn**	**15 43 16.7**	**-0.8**
CHGR	**Chuyangaron**	**2.51**	**323**		**Pn**	**15 43 17.7**	**-0.8**
CHGR	**Chuyangaron**	**2.51**	**323**	*d* iPN	**Pn**	**15 43 17.6**	**-0.9**
SHAA	**Shahritus**	**2.53**	**292**		**Pn**	**15 43 17.7**	**-1.0**
DRK	**Karamyk**	**2.87**	**11**		**Pn**	**15 43 22.4**	**-0.3**
DRK	**Karamyk**	**2.87**	**11**	PN	**Pn**	**15 43 22.4**	**-0.3**
BTK	**Batken**	**3.40**	**357**		**Pn**	**15 43 29.1**	**+0.5**
BTK	**Batken**	**3.40**	**357**	PN	**Pn**	**15 43 29.1**	**+0.5**
NIL	**Nilore**	**3.49**	**149**		**Pn**	**15 43 29.6**	**-0.1**
NIL	**Nilore**	**3.49**	**149**	PN	**Pn**	**15 43 29.6**	**-0.1**
NIL	**Nilore**	**3.49**	**149**	P	**Pn**	**15 43 29.8**	**+0.1**
NIL				S	**S**	**15 44 10.8**	**-2.9**
SRNI	**Srinagar**	**4.00**	**129**	*e*P	**Pn**	**15 43 35.6**	**-0.4**
SRNI				*e*S	**S**	**15 44 23.8**	**-1.3**
SRNI				IAML		15 44 24.4	
	comp=N,3µm,0.4s						
SRNI				IAML		15 44 25.3	
	comp=E,4µm,0.4s						
KSH2	**Kashi**	**4.33**	**54**	P	**Pn**	**15 43 40.5**	**+0.6**
KSH2				S	**S**	**15 44 29.0**	**-3.2**
KSH2				L	L		
	comp=E,12µm,5.8s						
ARSB	**Arslanbob**	**4.89**	**17**		**Pn**	**15 43 45.6**	**-1.2**
ARSB	**Arslanbob**	**4.89**	**17**	PN	**Pn**	**15 43 45.6**	**-1.2**
JMU	**Jammu**	**4.95**	**140**	*e*P	**Pn**	**15 43 48.4**	**+0.7**
JMU				*e*S	**S**	**15 44 45.2**	**-0.9**
JMU				IAML		15 44 46.4	
	comp=E,3µm,0.2s						
JMU				IAML		15 44 47.7	
	comp=N,3µm,0.3s						
ALCI	**Alchi Leh**	**5.55**	**114**	*e*P	**Pn**	**15 43 56.0**	**+0.5**
ALCI				*e*S	**S**	**15 44 58.5**	**-1.8**
ALCI				IAML		15 44 59.0	
	comp=N,2µm,0.6s						
ALCI				IAML		15 44 59.2	
	comp=E,2µm,0.6s						
TSSA	**Tissa**	**5.65**	**131**	*e*P	**Pn**	**15 43 57.7**	**+1.0**
TSSA				IAML		15 45 00.2	
	comp=E,2µm,0.1s						
TSSA				IAML		15 45 00.4	
	comp=N,2µm,0.4s						
TSSA				*e*S	**S**	**15 45 04.7**	**+2.2**
THN	**Thein Dam**	**5.71**	**136**	*e*P	**Pn**	**15 43 58.4**	**+1.1**
THN				IAML		15 45 02.4	
	comp=E,2µm,0.3s						
THN				IAML		15 45 03.2	
	comp=N,2µm,0.3s						
THN				*e*S	**S**	**15 45 04.1**	**+0.5**
CHM	**Chimkent**	**5.76**	**349**	*e*P	**Pn**	**15 43 57.4**	**-0.5**
NRN	**Naryn**	**6.11**	**37**		**Pn**	**15 44 00.2**	**-2.4**
NRN	**Naryn**	**6.11**	**37**	PN	**Pn**	**15 44 00.2**	**-2.4**
DHRM	**DHARAMSHALA**	**6.16**	**134**	*e*P	**Pn**	**15 44 03.2**	**0.0**
DHRM				IAML		15 45 11.1	
	comp=E,2µm,0.7s						
DHRM				*e*S	**S**	**15 45 11.5**	**-2.8**
DHRM				IAML		15 45 12.7	
	comp=N,1µm,0.3s						
UCH	**Uchtor**	**6.16**	**24**	P	**Pn**	**15 44 02.7**	**-0.7**
	SNR=265						
DZA	**Taraz**	**6.23**	**2**	*e*P	**Pn**	**15 44 03.0**	**-0.7**
EKS2	**Erkin-Say**	**6.34**	**18**	P	**Pn**	**15 44 04.7**	**-0.6**
	SNR=518						
BRLS	**Borolday**	**6.43**	**352**	*e*P	**Pn**	**15 44 02.8**	**-3.6**
KK31	**Karatay Array**	**6.45**	**356**	⇑P	**Pn**	**15 44 05.7**	**-0.9**
	comp=N,87nm,0.3s,baz=175,slow=12						
KK31				⇑S	**S**	**15 45 13.7**	**-7.0**
	comp=N,725nm,0.5s,baz=185,slow=23						
KK31	**Karatay Array**	**6.45**	**356**	PN	**Pn**	**15 44 05.7**	**-0.9**
AAK	**Ala-Archa**	**6.52**	**23**	P	**Pn**	**15 44 07.3**	**-0.3**
	comp=N,234nm,0.3s,baz=180,slow=5.4,SNR=1727						
AAK				S	**S**	**15 45 15.5**	**-7.1**
	comp=N,205nm,0.5s,baz=202,slow=13,SNR=5.7						
AAK	**Ala-Archa**	**6.52**	**23**	P	**Pn**	**15 44 07.1**	**-0.6**
	SNR=764						
AAK	**Ala-Archa**	**6.52**	**23**		**Pn**	**15 44 06.8**	**-0.8**
AAK	**Ala-Archa**	**6.52**	**23**	P	**Pn**	**15 44 07.1**	**-0.6**
AAK	**Ala-Archa**	**6.52**	**23**	⇓P	**

TDK	Taldyqorghan	10.01	31	*eP*		Pn	15 44 51.1	-1.3
MAKZ	Makanchi	12.98	35			Pn	15 45 28.8	-1.3
MAKZ	Makanchi	12.98	35	⇓P		Pn	15 45 28.4	-1.7
	comp=E,360nm,0.9s							
MAKZ	Makanchi	12.98	35	P		Pn	15 45 28.8	-1.3
MK31	Makanchi Array	13.12	36	⇑P		Pn	15 45 30.2	-1.6
	comp=E,187nm,0.8s,baz=202,slow=9.6,SNR=671							
MK31	Makanchi Array	13.12	36	*ceP*		Pn	15 45 30.4	-1.3
MKAR	Makanchi Array	13.12	36	P		Pn	15 45 30.4	-1.3
	comp=E,84nm,0.8s,baz=214,slow=13,SNR=209							
MKAR				S		S	15 47 54.8	-2.1
	comp=E,6.3nm,0.7s,baz=230,slow=22,SNR=1.0							
MKAR	Makanchi Array	13.12	36	*i* P		Pn	15 45 30.2	-1.5
MKAR				pmax	pmax			
	comp=Z,84nm,0.8s							
BRZS	Berezniki	13.37	4	*eP*		Pn	15 45 33.8	-0.9
NGCH	Negor - Chabah	14.12	220	P		Pn	15 45 45.2	-0.3
BHPL	Bhopal	14.45	156	*eP*		P	15 45 51.0	+1.7
WMQ	Urumqi	14.55	55	*eP*		Pn	15 45 48.5	-0.9
WMQ				S		S	15 48 20.5	-10
WMQ				pmax	pmax			
	comp=Z,200nm,1.3s							
WMQ				pmax	pmax			
	comp=Z,920nm,3.7s							
ALBI	Allahabad	14.57	138	*eP*		P	15 45 52.7	+2.2
ALBI				IAML			15 48 27.7	
	comp=N,214nm,0.1s							
ALBI				IAML			15 48 29.6	
	comp=E,148nm,0.6s							
ALBI				*eS*		S	15 48 30.4	-0.6
ZSN	Zaisan	14.84	39	*eP*		Pn	15 45 51.3	-1.6
ZSN				*eS*		S	15 48 36.8	-0.1
KURBB	Kurchatov Arra	14.95	19	P		Pn	15 45 52.2	-1.9
	comp=E,30nm,0.6s,baz=207,slow=11,SNR=73							
KURBB				S		S	15 48 37.4	-1.9
	comp=E,7.4nm,0.7s,baz=215,slow=26,SNR=4.4							
KURBB	Kurchatov Arra	14.95	19	⇑P		Pn	15 45 52.0	-2.1
	comp=E,110nm,0.9s							
AB31	Akbulak array	14.98	331	⇓P		Pn	15 45 52.4	-2.0
	comp=E,40nm,0.8s							
AB31				⇓S		S	15 48 36.2	-3.8
	comp=E,22nm,0.5s,baz=148,slow=23,SNR=166							
AB31	Akbulak array	14.98	331	P		Pn	15 45 52.4	-2.0
AB31				S		S	15 48 36.2	-3.8
KURK	Kurchatov	15.06	19	P		Pn	15 45 53.7	-1.8
KURK	Kurchatov	15.06	19	⇑P		Pn	15 45 52.7	-2.7
	comp=E,42nm,0.9s							
KURK	Kurchatov	15.06	19	*ce*P		Pn	15 45 53.6	-1.8
KURK				pmax	pmax			
	comp=Z,124nm,1.0s							
KURK	Kurchatov	15.06	19	P		Pn	15 45 53.9	-1.5
KURK				S		S	15 48 43.4	+1.7
JASK	Jask - Hormozg	15.59	230	P		P	15 46 01.0	-0.7
BVA0	Borovoye Array	16.37	359	P		Pn	15 46 10.7	-0.5
	comp=Z,12nm,0.6s,baz=163,slow=12,SNR=146							
BVAR	Borovoye Array	16.37	359	P		P	15 46 10.2	+0.1
	comp=Z,28nm,0.7s,baz=165,slow=13,SNR=116							
BVAR				S		S	15 49 09.4	-1.1
	comp=Z,13nm,0.6s,baz=172,slow=22,SNR=2.5							
BORK	Borovoye	16.39	358			P	15 46 10.2	-0.2
BORK	Borovoye	16.39	358	*ce*P		P	15 46 10.6	+0.2
BORK				pmax	pmax			
	comp=Z,35nm,1.0s							
BANOM	Banah	16.54	234	*i* P		P	15 46 12.7	+0.5
	SNR=22							
BANOM	Banah	16.54	234	P		P	15 46 12.5	+0.3
BANOM				S		S	15 49 10.9	-3.4
SHME	Shamm	16.55	234	P		P	15 46 12.9	+0.5
SHME	Shamm	16.55	234	P		Pn	15 46 13.5	-0.1
SHME				S		S	15 49 10.7	-3.9
AKTO	Aktyubinsk	16.68	330	P		P	15 46 13.8	+0.4
	comp=Z,47nm,0.5s,baz=140,slow=8.3,SNR=212							
AKTO				S		S	15 49 13.9	-2.6
	comp=Z,15nm,0.8s,baz=46,slow=23,SNR=1.3							
AKTO	Aktyubinsk	16.68	330	⇓P		P	15 46 14.0	+0.5
	comp=Z,63nm,0.8s							
AKTO				⇓S		S	15 49 17.2	+0.7
	comp=Z,53nm,1.1s							
MDH	Madha	16.98	232	P		P	15 46 17.3	+0.3
MDH	Madha	16.98	232	P		P	15 46 16.8	-0.2
MDH				P		P	15 46 17.3	+0.3
MDH				S		S	15 49 20.5	-2.4
MASF	Masafi	17.01	233	P		Pn	15 46 18.6	-0.5
MASF				S		S	15 49 21.1	-2.6
MSFE	Esma-Masafi	17.02	233	P		Pn	15 46 18.5	-0.7
WSAR	Wadi Sarin	17.16	222	P		Pn	15 46 20.7	-0.1
BIDO	Bidbid	17.21	224	P		Pn	15 46 21.1	-0.4
UOSS	Minazif	17.29	232	P		P	15 46 20.6	+0.2
UOSS	Minazif	17.29	232	P		P	15 46 20.7	+0.3
UOSS	Minazif	17.29	232	P		P	15 46 21.0	+0.5
UOSS				P		P	15 46 21.0	+0.5
HATD	Hatta, Dubai	17.42	232	P		P	15 46 21.9	0.0
HATD	Hatta, Dubai	17.42	232	P		Pn	15 46 23.9	0.0
WBK	Wadi Bani Khal	17.50	220	P		Pn	15 46 24.5	-0.2
ASHO	Ashiyiah	17.57	231	*i* P		P	15 46 24.1	+0.6
	SNR=24							
ASHO	Ashiyiah	17.57	231	P		P	15 46 24.1	+0.6
	SNR=24							
NAZ	Nazwa, Dubai	17.60	233	P		P	15 46 24.0	+0.1
NAZ	Nazwa, Dubai	17.60	233	P		P	15 46 24.4	+0.6
SMDO	Samad	17.62	223	P		Pn	15 46 25.3	-1.0
HOQ	Hoqain	17.63	226	P		Pn	15 46 25.6	-0.8
JLN	Jalan Bani Buh	17.65	218	P		Pn	15 46 25.9	-0.7
SOHO	SOHO	17.68	229	P		P	15 46 25.7	+1.0
SOHO	SOHO	17.68	229	P		P	15 46 25.1	+0.5
LKRN	Lenkeran, Azer	17.77	283	P		Pn	15 46 27.9	+0.1
FAQ	Al Faqa, Dubai	17.82	233	P		P	15 46 26.2	0.0
FAQ	Al Faqa, Dubai	17.82	233	P		P	15 46 26.3	+0.1
ASUD	Al Ashush, Dub	18.07	233	P		P	15 46 29.8	+0.8
ASUD	Al Ashush, Dub	18.07	233	P		P	15 46 29.7	+0.8
JMDO	Jabal Madar	18.15	222	P		Pn	15 46 31.6	-0.8
LSA	Lhasa	18.16	107	P		Pn	15 46 32.9	-0.1
LSA	Lhasa	18.16	107	P		P	15 46 30.3	-0.1
LSA				S		S	15 49 47.0	-0.2
LSA				pmax	pmax			
	comp=Z,110nm,1.0s							
LSA				L		L		
	comp=Z,870nm,17.9s							
LSA				L		L		
	comp=Z,3μm,16.8s							
LSA				L		L		
	comp=Z,4μm,17.2s							
ALNE	Al Ain	18.21	231	*i* P		P	15 46 30.8	+0.2
	SNR=27							
ALNE	Al Ain	18.21	231	P		P	15 46 30.6	+0.1
ARQ	Araqi	18.28	227	P		P	15 46 32.3	+1.0
	SNR=9.9							
AJN	Ajban	18.34	233	*i* P		P	15 46 31.7	-0.1
	SNR=7.3							
AJN	Ajban	18.34	233	P		P	15 46 31.9	0.0
	SNR=7.3							
BSY	Bisya	18.35	225	P		P	15 46 33.3	+1.3
AKT	Akhty	18.74	292	*eP*		P	15 46 36.6	+0.4
AKT				*eS*		S	15 49 58.9	+1.0
AKT				pmax	pmax			
	comp=Z,64nm,0.9s							
GOMU	GeErMu	19.10	84	P		P	15 46 40.8	+0.5
GOMU				pP		Pn	15 46 44.3	+0.5
GOMU				S		S	15 50 07.5	+2.1
GOMU				pmax	pmax			
	comp=Z,37nm,1.4s							
SEKA	Sheki	19.11	291	P		P	15 46 41.1	+1.0
MAK	Makhachkala	19.14	296	*d* iP		P	15 46 41.2	+0.9
MAK				*eS*		S	15 50 08.9	+3.4
MAK				pmax	pmax			
	comp=Z,73nm,0.9s							
MNGR	Mingechevir, A	19.15	290	P		Pn	15 46 43.0	-1.0
MHTO	MHTO	19.36	220	P		P	15 46 43.9	+1.1
UMZA	Um Al Zommool	19.57	229	P		P	15 46 44.8	-0.3
MZWR	Madinat Zayed	19.62	234	P		P	15 46 44.4	-1.1
GANJ	Ganja	19.72	289	P		P	15 46 48.0	+1.4
ZAA0	Zalesovo Array	19.74	25	P		P	15 46 46.1	-0.5
ZAA0	Zalesovo Array	19.74	25	⇑P		P	15 46 46.0	-0.6
	comp=E,66nm,0.7s							
ZALV	Zalesovo Beam	19.74	25	P		P	15 46 46.2	-0.4
	comp=Z,71nm,0.5s,baz=220,slow=11,SNR=396							
ZALV				S		S	15 50 15.4	-1.6
	comp=Z,12nm,0.8s,baz=218,slow=20,SNR=2.1							
NAX	Nakhchivan	20.32	285	P		P	15 46 55.5	+2.4
MZR	Muzera	20.41	233	P		P	15 46 52.0	-2.1
MZR	Muzera	20.41	233	P		P	15 46 52.6	-1.5
	SNR=6.3							
GNI	Garni	20.91	288	P		P	15 46 59.5	+0.1
	comp=Z,28nm,1.0s,baz=119,slow=1.8,SNR=9.0							
GNI				S		S	15 50 43.6	+4.2
	comp=Z,14nm,1.0s,baz=212,slow=22,SNR=1.3							
	comp=Z,28nm,1.0s							
GNI	Garni	20.91	288	P		P	15 46 59.7	+0.3
GNI	Garni	20.91	288	*ce*P		P	15 47 00.0	+0.6
GNI				pmax	pmax			
	comp=Z,58nm,1.3s							
SHL	Shillong	20.92	116	P		P	15 46 58.8	-0.8
SHL	Shillong	20.92	116	P		P	15 46 58.8	-0.8
SHL	Shillong	20.92	116	P		P	15 46 59.2	-0.5
	SNR=41							
SVE	Sverdlovsk	21.36	344	*eP*		P	15 47 03.7	+0.1
SVE				*eS*		S	15 50 47.1	+0.8
SVE				pmax	pmax			
	comp=Z,53nm,1.3s							
ARTI	Arti	21.51	341	P		P	15 47 05.4	+0.2
	comp=Z,68nm,1.1s,baz=148,slow=5.2,SNR=34							
ARTI				S		S	15 50 48.5	-0.3
	comp=Z,11nm,0.9s,baz=148,slow=20,SNR=1.4							
	comp=Z,68nm,1.1s							
ARTI	Arti	21.51	341	P		P	15 47 05.2	0.0
ARTI	Arti	21.51	341	*d* iP		P	15 47 02.7	-2.5
ARTI				*PP		pP	15 47 37.9	-4.5
ARTI				S		S	15 50 47.3	-1.6
ARTI				pmax	pmax			
	comp=Z,46nm,1.0s							
NCK	Nalchik	22.05	297	*i* P		P	15 47 11.2	+0.6
NCK				pmax	pmax			
	comp=Z,40nm,1.1s							
KBZ	Khabaz	22.59	297	P		P	15 47 15.7	+0.2
	comp=Z,17nm,0.8s,baz=131,slow=9.1,SNR=39							
KBZ				S		S	15 51 09.8	+3.5
	comp=Z,5.7nm,0.9s,baz=100,slow=19,SNR=1.3							
	comp=Z,17nm,0.8s							
KBZ	Khabaz	22.59	297	*ce*P		P	15 47 15.1	-0.3
KBZ				pmax	pmax			
	comp=Z,14nm,0.9s							
BRDH	Bariadhala	22.59	122	P		P	15 47 15.1	-0.6
	comp=Z,75nm,0.4s,baz=285,slow=22,SNR=1.3							
	comp=Z,75nm,0.4s							
NEUR	Neytrino	22.66	296	*c* iP		P	15 47 17.3	+0.9
NEUR				pmax	pmax			
	comp=Z,51nm,1.8s							
GTA2	Gaotai	22.71	74	P		P	15 47 18.0	+1.2
GTA2				pP	pP		15 48 00.8	+4.6
GTA2				S		S	15 51 14.3	+5.6
GTA2				SS	SS		15 52 20.3	-32
GTA2				pmax	pmax			
	comp=Z,54nm,1.4s							
GTA2				pmax	pmax			
	comp=Z,430nm,5.4s							
GOF	Gofitskoye	22.72	300	*c* iP		P	15 47 19.0	+2.3
SHA1	Shidzhatmaz	22.76	297	*ce*P		P	15 47 18.4	+1.1
KIV	Kislovodsk	22.77	297	P		P	15 47 17.9	+0.6
KIV	Kislovodsk	22.77	297	*i* P		P	15 47 18.0	+0.8
	SNR=8.8							
KIV	Kislovodsk	22.77	297	*eP*		P	15 47 17.3	0.0
KIV				*eP*		pP	15 47 52.8	-2.9
KIV				*eS*		S	15 51 10.6	+1.0
KIV				pmax	pmax			
	comp=Z,24nm,1.0s							
KIV				MLR	MLR			
	comp=Z,77nm,14.0s							
KIV	Kislovodsk	22.77	297	P		P	15 47 17.6	+0.3
	comp=Z,770nmcomp=Z,60nm,0.9s							
BELG	Belogornoye	22.81	321	*c* iP		P	15 47 17.7	+0.4
BELG				pmax	pmax			
	comp=Z,31nm,0.9s							
SHAO	Shalim	23.03	220	P		P	15 47 20.9	+1.2
DOK	Doka	23.36	224	P		P	15 47 22.9	+0.3
KNGR	Kungurtug, Tuv	23.51	45	*i* P		P	15 47 23.7	-0.2
KNGR				pmax	pmax			
	comp=Z,79nm,1.2s							
DMTO	DMTO	23.64	221	P		P	15 47 25.6	+0.3
WHFO	Wadi Hawf	24.12	224	P		P	15 47 29.5	-0.1
	SNR=20							
RBK	Rabkut	24.22	222	P		P	15 47 30.3	-0.3
LABN	Labinsk	24.27	299	*eP*		P	15 47 31.4	+0.7
LABN				*eP*		pP	15 48 11.0	-0.8
LABN				*eS*		S	15 51 35.7	+2.4
LABN				pmax	pmax			
	comp=Z,15nm,0.1s							
ERBR	Yeremizino-Bor	24.62	301	*eP*		P	15 47 34.7	+0.9
ERBR				*eP*		pP	15 48 15.1	-0.4
ERBR				*eS*		S	15 51 41.1	+2.4
ERBR				pmax	pmax			
	comp=Z,61nm,1.0s							
ABTO	Aybut	24.84	224	P		P	15 47 36.0	-0.1
SOC	Sochi	24.86	296	*eP*		P	15 47 37.3	+1.2
SOC				*eP*		pP	15 48 16.5	-1.6
SOC				*eS*		S	15 51 45.3	+2.7
SOC				pmax	pmax			
	comp=Z,26nm,0.8s							
VRH	Novokhopyorsk	25.45	314	*eP*		P	15 47 41.1	-0.1
VRH				pmax	pmax			
	comp=Z,66nm,0.9s							
RAYN	Ar Rayn	25.62	246	P		P	15 47 42.8	-0.4
RAYN	Ar Rayn	25.62	246	*i* P		P	15 47 42.8	-0.4
	SNR=6.2							
RAYN	Ar Rayn	25.62	246	P		P	15 47 42.8	-0.4
RAYN				pmax	pmax			
	comp=Z,74nm,1.1s							
MOY	Mondy	25.95	45	*eP*		P	15 47 47.3	+1.4
MOY				*e*			15 48 33.3	
MOY				pmax	pmax			
	comp=Z,24nm,2.1s							
KIRV	Kirov	26.12	334	*ce*P		P	15 47 47.4	+0.2
LZDM	Lanzhou Array	26.23	82	P		P	15 47 49.5	+0.7
	comp=Z,7.1nm,0.5s,baz=290,slow=6.0,SNR=3.5							
	comp=Z,7.1nm,0.5s							
LZH	Lanzhou	26.32	81	*eP*		P	15 47 54.5	+5.1
LZH				sP		sP	15 48 59.3	-0.3
LZH				S		S	15 52 06.0	-0.1
LZH				pmax	pmax			
	comp=Z,28nm,1.6s							
LZH				L		L		
	comp=Z,610nm,13.7s							
LZH				L		L		
	comp=Z,920nm,14.6s							
LZH				L		L		
	comp=Z,1μm,16.5s							
ANN	Anapa	26.62	298	*eP*		P	15 47 52.8	+1.0
ANN				*eP*		pP	15 48 34.8	-0.3
ANN				*eS*		S	15 52 15.1	+4.9
ANN				pmax	pmax			
	comp=Z,33nm,0.8s							
VORD	Divnogorie	26.78	312	*eP*		P	15 47 50.6	-2.6
VORD				*eP*		pP	15 48 36.1	-0.4
VORD				pmax	pmax			
	comp=Z,30nm,1.1s							
ZAK	Zakamensk	26.83	49	*eP*		P	15 47 54.3	+0.5
ZAK				pmax	pmax			
	comp=Z,16nm,1.2s							
VSR	Storozhevoye	26.94	313	*eP*		P	15 47 51.8	-2.8
VSR				*eP*		pP	15 48 36.5	-1.4
VSR				pmax	pmax			
	comp=Z,40nm,1.0s							
VORR	Voronezh	27.08	314	*eP*		P	15 47 53.8	-2.0
VORR				pmax	pmax			
	comp=Z,40nm,1.0s							
LPSR	Galich'ya Gora	27.59	315	*eP*		P	15 47 58.3	-2.0
LPSR				*eP*		pP	15 48 42.5	-1.3
LPSR				pmax	pmax			
	comp=Z,60nm,0.9s							
PZH	PanZhiHua	27.91	103	P		P	15 48 04.5	+0.9
PZH				PcP		PcP	15 51 12.8	-0.6
PZH				ScP		ScP	15 54 30.8	-2.7
PZH				pmax	pmax			
	comp=Z,10.0nm,0.6s							
IRK	Irkutsk	28.04	46	*eP*		P	15 48 01.5	-2.9
IRK				pmax	pmax			
	comp=Z,26nm,2.9s							
SONM	Songino Array	28.19	56	P		P	15 48 06.3	+0.4
	comp=Z,19nm,0.8s,baz=264,slow=9.4,SNR=90							
SONM				pP		pP	15 48 51.5	+0.8
	comp=Z,5.5nm,0.8s,baz=254,slow=7.2,SNR=2.3							
SONM				P3KPbc			16 20 21.0	
	comp=Z,0.2nm,0.5s,baz=105,slow=4.5,SNR=3.5							
	comp=Z,19nm,0.8s							
SONM	Songino Array	28.19	56	P		P	15 48 05.9	0.0
SONM				IAmb	IAmb		15 48 08.0	
	comp=Z,18nm,0.8s							
SONM	Songino Array	28.19	56	P		P	15 48 05.9	0.0
SONM				pmax	pmax			
	comp=Z,18nm,0.8s							
ULN	Ulaanbaatar	28.63	56	P		P	15 48 10.1	+0.2
ULN				IAmb	IAmb		15 48 11.7	
	comp=Z,16nm,0.7s							
ULN	Ulaanbaatar	28.63	56	*ce*P		P	15 48 10.6	+0.8
ULN				pmax	pmax			
	comp=Z,12nm,0.6s							
ULN	Ulaanbaatar	28.63	56	P		P	15 48 10.6	+0.8
	comp=Z,1μmcomp=Z,105nm,0.8s							
ILGA	Ilgaz	29.28	290	IAmb	IAmb		15 48 19.5	
	comp=Z,22nm,1.1s							
KIRS	Kirsehir-Merke	29.30	286	⇓P		P	15 48 16.5	+0.7
MMAI	Mount Meron Ar	29.41	274	P		P	15 48 18.0	+1.2
	comp=Z,1.2nm,0.5s,baz=44,slow=7.4,SNR=3.5							
MMAI				PcP		PcP	15 51 17.2	+0.2
	comp=Z,6.0nm,0.7s,baz=36,slow=7.2,SNR=7.3							
BR104	Keskin Array S	29.45	287	P		P	15 48 17.8	+0.7
	comp=Z,95nmcomp=Z,13nm,0.8s							
BR131	Keskin Array S	29.45	288	*d* iP		P	15 48 18.1	+1.0
BRTR	Keskin Array B	29.45	288	P		P	15 48 17.8	+0.6
	comp=Z,8.2nm,0.6s,baz=99,slow=8.6,SNR=45							
BRTR				PcP		PcP	15 51 15.9	-1.2
	comp=Z,1.9nm,0.5s,baz=140,slow=3.9,SNR=4.6							
	comp=Z,8.2nm,0.6s							
BRTR	Keskin Array B	29.45	288	*ce*P		P	15 48 18.1	+0.9
BRTR				pmax	pmax			
	comp=Z,8.0nm,0.6s							
BR106	Keskin Array S	29.46	288	P		P	15 48 17.8	+0.5
	comp=Z,109nmcomp=Z,15nm,0.7s							
BR105	Keskin Array S	29.47	287	P		P	15 48 17.8	+0.5
	comp=Z,100nmcomp=Z,13nm,0.8s							
MOS	Moscow	29.58	321	*eP*		P	15 48 18.4	+0.5
MOS				*eP		pP	15 49 01.0	-0.7
MOS				*e*			15 49 26.4	
MOS				*eS*		S	15 52 59.0	+2.5
MOS				*eSS		sS	15 54 14.2	-1.8
MOS				pmax	pmax			
	comp=Z,100nm,0.7s							
MOS				pmax	pmax			
	comp=Z,100nm,0.8s							
OBN	Obninsk	29.86	319	P		P	15 48 20.7	+0.3
OBN	Obninsk	29.86	319	⇑*eP		P	15 48 21.0	+0.7
OBN				*i *PP		pP	15 49 03.7	-0.5
OBN				*e*			15 49 33.2	
OBN				pmax	pmax			
	comp=Z,94nm,1.0s							
OBN	Obninsk	29.86	319	P		P	15 48 20.2	-0.1
	comp=Z,202nm,0.7s							
BTO2	Baotou	30.38	70	*eP*		P	15 48 26.5	+1.2
BTO2				S		S	15 53 13.3	+3.6
BTO2				pmax	pmax			
	comp=Z,55nm,0.9s							
BTO2				pmax	pmax			
	comp=Z,180nm,5.9s							
BTO2				L	L			
	comp=Z,1μm,7.7s							
BTO2				L	L			
	comp=Z,810nm,4.9s							
BTO2				L	L			
	comp=Z,2μm,16.5s							
CMAR	Chiang Mai Arr	30.47	119	P		P	15 48 26.8	+0.6
	comp=Z,3.1nm,0.8s,baz=304,slow=8.2,SNR=22							
CMAR				PcP		PcP	15 51 18.8	-1.2
	comp=Z,3.2nm,0.7s,baz=288,slow=2.4,SNR=1.3							
CMAR				ScP		ScP	15 54 39.0	-2.6
	comp=Z,1.6nm,0.9s,baz=284,slow=4.1,SNR=5.6							
	comp=Z,3.1nm,0.8s							
CMAR	Chiang Mai Arr	30.47	119	*ce*P		P	15 48 27.2	+1.0
CMAR				pmax	pmax			
	comp=Z,3.0nm,0.8s							
PALK	Pallekele	30.54	161	P		P	15 48 27.2	+0.4
PALK				IAmb	IAmb		15 48 28.4	
	comp=Z,17nm,0.8s							
PALK	Pallekele	30.54	161	P		P	15 48 27.3	+0.4
PALK	Pallekele	30.54	161	P		P	15 48 27.2	+0.4
PALK				pmax	pmax			
	comp=Z,17nm,0.8s							
PALK	Pallekele	30.54	161	P		P	15 48 27.1	+0.4
PALK	Pallekele	30.54	161	P		P	15 48 27.6	+0.7
XAN	Xi'an	30.84	83	⇓P		P	15 48 29.5	+0.1
XAN				pmax	pmax			
	comp=Z,17nm,0.6s							
KLMR	Klimovskoe	31.37	331	*eP*		P	15 48 32.2	-1.4
KLMR				pmax	pmax			
	comp=Z,106nm,1.3s							
PBA	Port Blair	31.63	136	P		P	15 48 36.3	0.0
HHC	Hu-ho-hao-te	31.64	70	*eP*		P	15 48 38.0	+1.6
HHC				PP		PnPn	15 49 49.5	-0.4
HHC				S		S	15 53 31.3	+2.0
HHC				pmax	pmax			
	comp=Z,14nm,0.6s							
HHC				pmax	pmax			
	comp=Z,68nm,4.0s							
HHC				L	L			
	comp=Z,400nm,17.1s							
HHC				L	L			
	comp=Z,490nm,18.0s							
HHC				L	L			
	comp=Z,540nm,15.2s							
ENH	Enshi	32.51	90	P		P	15 48 44.8	+0.9
TIY	Taiyuan	32.77	75	P		P	15 48 47.5	+1.3
TIY				S		S	15 53 47.5	+0.7
AK09	Malin Array Si	32.85	308	P		P	15 48 47.1	+0.6
AK10	Malin Array Si	32.86	308	P		P	15 48 47.2	+0.5
AK08	Malin Array Si	32.87	309	P		P	15 48 47.2	+0.5
AK07	Malin Array Si	32.89	308	P		P	15 48 47.5	+0.6
AK06	Malin Array Si	32.90	308	P		P	15 48 47.5	+0.5
AKASG	Malin Array Be	32.90	309	P		P	15 48 47.0	+0.1
	comp=Z,17nm,0.6s,baz=82,slow=6.9,SNR=165							
AKASG				PcP		PcP	15 51 24.3	-1.7
	comp=Z,4.7nm,0.9s,baz=95,slow=3.6,SNR=4.2							
	comp=Z,17nm,0.6s							
AKASG	Malin Array Be	32.90	309	P		P	15 48 47.2	+0.3
AKASG	Malin Array Be	32.90	309	*c* iP		P	15 48 47.0	+0.1
AKASG				pmax	pmax			
	comp=Z,42nm,0.7s							
AKBB	Malin Array Si	32.90	309	IAmb	IAmb		15 48 48.2	
	comp=Z,41nm,0.8s							
AKBB	Malin Array Si	32.90	309	*ce*P		P	15 48 47.0	0.0
AKBB				pmax	pmax			
	comp=Z,29nm,0.8s							
AKBB	Malin Array Si	32.90	309	P		P	15 48 47.3	+0.3
AK05	Malin Array Si	32.90	308	P		P	15 48 47.4	+0.4
AK02	Malin Array Si	32.90	309	P		P	15 48 47.4	+

LYN L L
comp=Z,17µm,14.3s
BAND Balkesir-Ban 33.59 290 ⇑P **P** **15 48 53.5 +0.3**
LUBAR Lubar, Ukraine 33.73 307 P **P** **15 48 53.3 -0.8**
MI29 MI29, Kamyanyy 33.73 308 P **P** **15 48 54.3 +0.2**
comp=Z,306nm,1.2s
NDNU Novodnistrovsk 33.86 305 P **P** **15 48 55.8 +0.5**
MI28 Mi28,Pidlybu 33.91 309 P **P** **15 48 54.6 -1.1**
NRIK Noril'sk 33.96 10 P **P** **15 48 57.1 +1.2**
comp=Z,12nm,0.7s,baz=201,slow=5.7,SNR=23
comp=Z,12nm,0.7s
NRIK Noril'sk 33.96 10 *e*P **P** **15 48 56.6 +0.7**
NRIK Noril'sk 33.96 10 *d* P **P** **15 48 57.5 +1.6**
NRIK pmax pmax
comp=Z,14nm,1.0s
VRI Vrincioaia 34.21 300 ⇑P **P** **15 49 00.6 +2.2**
VRI Vrincioaia 34.21 300 P **P** **15 49 00.6 +2.2**
VRI Vrincioaia 34.21 300 P **P** **15 48 59.6 +1.2**
comp=Z,20nm,1.5s
PLOR Plostina 34.26 300 ⇓P **P** **15 49 00.9 +2.0**
PLOR Plostina 34.26 300 P **P** **15 49 00.8 +2.0**
TESR Tescani 34.26 301 ⇓P **P** **15 49 00.0 +1.2**
TESR Tescani 34.26 301 P **P** **15 48 59.7 +0.9**
comp=Z,29nm,1.1s
ISR Istrita 34.35 298 ⇑P **P** **15 49 02.7 +3.1**
ISR Istrita 34.35 298 P **P** **15 49 02.7 +3.1**
MNK Minsk 34.43 315 *i* P **P** **15 49 01.2 +1.1**
comp=E,20nm,0.7s
MNK *i* P **P** **15 49 01.2 +1.1**
comp=N,52nm,0.9s
MNK *i* P **P** **15 49 01.2 +1.1**
comp=Z,47nm,0.7s,baz=103
MNK *i* pP **pP** **15 49 44.4 -0.3**
MNK *i* PP **PnPn** **15 50 24.1 +0.5**
MNK *i* S **S** **15 54 14.7 +3.0**
MNK *i* sS **sS** **15 55 32.1 -0.1**
MNK *i* SS **SS** **15 56 52.9 +3.8**
MNK *i* LR LR 16 02 19.8
MNK *i* LRM MLR 16 04 37.8
comp=Z,64nm,14.9s
MNK *i* LRM MLR 16 04 55.6
comp=N,359nm,22.2s
MNK *i* LRM MLR 16 05 08.9
comp=E,573nm,21.0s
MNK Minsk 34.43 315 *i* P **P** **15 49 01.2 +1.1**
MNK *i* *PP **pP** **15 49 44.3 -0.3**
MNK *i* 15 50 24.0
MNK *i* S **S** **15 54 14.7 +3.0**
MNK *i* *SS **sS** **15 55 32.1 -0.1**
MNK pmax pmax
comp=Z,47nm,0.7s
MNK pmax pmax
comp=E,20nm,0.7s
MNK pmax pmax
comp=N,52nm,0.9s
MNK MLR MLR
comp=Z,64nm,15.0s
MNK MLR MLR
comp=N,359nm,22.0s
MNK MLR MLR
comp=E,573nm,21.0s
ONER Baraj Valea Uz 34.44 300 ⇑P **P** **15 49 02.0 +1.7**
KMPD K-Podol'skiy 34.46 304 P **P** **15 49 00.0 -0.4**
KMPD P **P** **15 49 00.6 +0.2**
HORU Horodok 34.52 306 P **P** **15 49 01.8 +0.8**
PRAR RASCA 34.56 302 ⇑P **P** **15 49 02.9 +1.5**
COVR Voineasa-Covas 34.57 300 ⇑P **P** **15 49 03.2 +1.7**
HNS HongShan 34.60 75 ⇑P **P** **15 49 03.3 +1.5**
HNS pP **pP** **15 49 50.3 +2.7**
HNS S **S** **15 54 18.5 +3.7**
HNS pmax pmax
comp=E,9.0nm,1.0s
TURR Turia 34.70 300 ⇑P **P** **15 49 04.4 +1.7**
XLT XiLinHaoTe 34.73 64 *e*P **P** **15 49 04.5 +1.5**
XLT pmax pmax
comp=E,56nm,3.2s
MLR Muntele Rosu 34.76 299 ⇓P **P** **15 49 04.8 +1.5**
MLR Muntele Rosu 34.76 299 IAmb IAmb 15 49 06.6
comp=Z,49nm,1.0s
MLR Muntele Rosu 34.76 299 P **P** **15 49 05.7 +2.4**
MLR Muntele Rosu 34.76 299 P **P** **15 49 04.9 +1.6**
comp=Z,55nm,1.0s
PUL Pulkovo 34.82 325 *ce*P **P** **15 49 04.7 +1.3**
PUL pmax pmax
comp=Z,114nm,1.2s
ELND Elena 34.96 295 ⇑P **P** **15 49 05.8 +0.9**
EZN Ezine 35.02 289 P **P** **15 49 06.2 +0.8**
comp=Z,32nm,1.0s
RNPP5 Staryi Chortor 35.06 309 P **P** **15 49 06.3 +0.7**
RNPP9 Sopachiv 35.08 309 P **P** **15 49 06.5 +0.8**
RNPP8 Varash 35.09 309 P **P** **15 49 06.5 +0.7**
DOPR Dopca 35.14 300 ⇑P **P** **15 49 08.4 +2.0**
NACGM Naroch 35.15 316 ⇑ *i*P **P** **15 49 06.9 +0.7**
comp=Z,142nm,0.9s,baz=103
BOD Bodaibo 35.18 39 *e*P **P** **15 49 06.5 0.0**
BOD pmax pmax
comp=Z,15nm,1.2s
BJI2 Beijing 35.24 70 P **P** **15 49 08.0 +0.8**
BJI2 pP **pP** **15 49 51.3 -1.6**
BJI2 sP **sP** **15 50 14.8 -3.5**
BJI2 PcP **PcP** **15 51 33.0 +0.1**
BJI2 pmax pmax
comp=Z,4.0nm,0.7s
BURAR Bucovina Array 35.25 303 ⇑P **P** **15 49 08.7 +1.2**
BURAR Bucovina Array 35.25 303 P **P** **15 49 08.6 +1.2**
KARP Karpathos 35.27 282 IAmb IAmb 15 50 13.4
comp=Z,53nm,0.9s
GULI GuiLin 35.31 97 P **P** **15 49 07.3 -0.7**
GULI S **S** **15 54 32.5 +6.6**
GULI pmax pmax
comp=Z,11nm,1.8s
GULI L L
comp=Z,3µm,16.3s
GULI L L
comp=Z,7µm,14.1s
GULI L L
comp=Z,10µm,15.9s
KSV Kosov 35.37 304 P **P** **15 49 07.2 -1.1**
VOIR 35.39 299 ⇓P **P** **15 49 09.9 +1.4**
VOIR 35.39 299 P **P** **15 49 10.4 +1.8**
VOIR 35.39 299 P **P** **15 49 09.4 +0.8**
comp=Z,9.4nm,0.7s
ISAL Salakas 35.66 316 *e*P **P** **15 49 12.8 +2.1**
ATD Arta Tunnel 35.67 233 P **P** **15 49 13.2 +1.9**
STNU Starunia 35.76 305 P **P** **15 49 12.5 +0.9**
JOF Joensuu 35.76 330 *e*P **P** **15 49 12.2 +0.8**
VSU Vasula 36.10 321 *ce*P **P** **15 49 14.0 -0.3**
VSU pmax pmax
comp=Z,147nm,1.3s
VSU Vasula 36.10 321 *e*P **P** **15 49 13.8 -0.5**
LVV L'vov 36.12 306 P **P** **15 49 15.0 +0.4**
WHN Wuhan 36.32 87 P **P** **15 49 17.0 +0.5**
WHN pmax pmax
comp=Z,32nm,0.9s
BMR Baia Mare 36.42 303 ⇑P **P** **15 49 19.3 +2.1**
BMR Baia Mare 36.42 303 P **P** **15 49 19.2 +2.1**
SHIU Shidnytsya 36.53 305 P **P** **15 49 19.2 +1.1**
MARR Marisel-Cluj 36.69 301 ⇑P **P** **15 49 21.9 +2.3**
BRIU Brid 36.74 304 P **P** **15 49 20.5 +0.7**
TIA Tai'an 36.77 77 P **P** **15 49 21.8 +1.5**
TIA pmax pmax
comp=Z,10.0nm,0.6s
ARBE Arbavere 36.77 323 *e*P **P** **15 49 20.7 +0.8**
PABE Paberze 36.85 316 *e*P **P** **15 49 21.4 +0.8**
MUKU Mukachevo 36.96 304 P **P** **15 49 22.8 +1.1**
DRGR 36.97 301 ⇑P **P** **15 49 24.0 +2.1**
DRGR 36.97 301 P **P** **15 49 24.0 +2.1**
KWP Kalwaria Pacla 36.97 306 P **P** **15 49 22.9 +1.1**
comp=Z,74nm,1.7s
BERU Beregovo 36.99 304 P **P** **15 49 23.2 +1.3**
GZR Gura Zlata 36.99 299 ⇑P **P** **15 49 22.5 +0.4**
GZR Gura Zlata 36.99 299 P **P** **15 49 22.5 +0.4**
SUW Suwalki 37.05 313 *e*P **P** **15 49 22.9 +0.5**
HOLU Holmets 37.16 304 P **P** **15 49 24.6 +1.2**
LVZ Lovozero 37.33 338 *ce*P **P** **15 49 25.6 +1.0**
LVZ pmax pmax
comp=Z,44nm,1.0s
FINES FINESS Array B 37.39 326 P **P** **15 49 25.6 +0.5**
comp=Z,29nm,0.4s,baz=118,slow=9.2,SNR=266
comp=Z,29nm,0.4s
APA Apatity 37.51 337 ⇓ *e*P **P** **15 49 25.2 -0.9**
APA *e**PP **pP** **15 50 09.3 -2.3**
APA *e* 15 50 56.1
APA pmax pmax
comp=Z,17nm,1.1s
APA MLR MLR
comp=Z,1µm,4.5s
MTSE Matsula 37.64 321 *e*P **P** **15 49 27.9 +0.7**
MEF Metsahovi 37.77 324 *e*P **P** **15 49 29.1 +0.8**
SUF Sumiainen 37.82 328 *e*P **P** **15 49 29.3 +0.6**
STHS Stebnicka Huta 37.92 306 *e*P **P** **15 49 29.6 -0.2**
STHS pmax pmax
comp=Z,12nm,0.8s
STHS Stebnicka Huta 37.92 306 *e*P **P** **15 49 29.6 -0.2**
PBUR Paburge 38.07 316 *e*P **P** **15 49 31.6 +0.8**
R9F13 Warsaw-Wawer 38.09 310 *e*P **P** **15 49 32.1 +1.0**
KEF Keuruu 38.18 327 *e*P **P** **15 49 32.3 +0.7**
KECS Kecovo 38.43 304 *e*P **P** **15 49 33.0 -1.0**
KECS pmax pmax
comp=Z,15nm,1.0s
KECS Kecovo 38.43 304 *e*P **P** **15 49 33.0 -1.0**
PSZ Piszkesteto 38.84 303 ⇓P **P** **15 49 38.7 +1.1**
PSZ Piszkesteto 38.84 303 P **P** **15 49 38.6 +1.1**
PSZ Piszkesteto 38.84 303 *e*P **P** **15 49 38.0 +0.5**
OJC Ojcow 38.86 307 P **P** **15 49 37.9 +0.3**
comp=Z,40nm,1.2s
LANS Liptovska Anna 39.08 305 *e*P **P** **15 49 41.7 +2.2**
LANS pmax pmax
comp=Z,6.0nm,1.3s
LANS Liptovska Anna 39.08 305 *e*P **P** **15 49 41.7 +2.2**
RAF Rauma 39.24 324 *e*P **P** **15 49 38.6 -1.9**
NJ2 Nanjing 39.39 82 *e*P **P** **15 49 42.5 +0.4**
NJ2 pmax pmax
comp=Z,26nm,1.4s
VAF Ylistaro 39.43 328 *e*P **P** **15 49 42.8 +0.8**
DL2 Dalian 39.60 71 P **P** **15 49 41.5 -2.3**
DL2 pP **pP** **15 50 27.0 -3.5**
DL2 sP **sP** **15 50 51.0 -4.6**
DL2 S **S** **15 55 30.5 +0.4**
DL2 pmax pmax
comp=Z,47nm,1.2s
MORH Mrgy, Hungar 39.81 301 ⇑P **P** **15 49 46.3 +0.9**
AAL Aland 39.88 323 *e*P **P** **15 49 46.0 +0.2**
SRO Srobarova 39.91 303 *e*P **P** **15 49 48.1 +1.9**
SRO pmax pmax
comp=Z,33nm,1.0s
SRO Srobarova 39.91 303 *e*P **P** **15 49 48.1 +1.9**
MAUC Maruska 40.15 306 *e*P **P** **15 49 49.8 +1.5**
STEB Steborice 40.17 307 *e*P **P** **15 49 49.5 +1.2**
VADS Vadso 40.19 339 *e*P **P** **15 49 49.1 +0.9**
VADS IAmb IAmb 15 49 49.7
comp=Z,52nm,0.3s
JAVC Velka Javorina 40.28 305 *e*P **P** **15 49 50.7 +1.4**
MORC Moravsky Berou 40.32 306 ⇓P **P** **15 49 51.0 +1.3**
MORC Moravsky Berou 40.32 306 P **P** **15 49 51.3 +1.6**
MORC Moravsky Berou 40.32 306 *e*P **P** **15 49 50.5 +0.8**
MORC *e* 15 51 01.7
MODS Modra-Piesok 40.56 304 *e*P **P** **15 49 52.4 +0.8**
MODS pmax pmax
comp=Z,35nm,1.3s
MODS Modra-Piesok 40.56 304 *e*P **P** **15 49 52.4 +0.8**
KRLC Kraliky 40.80 307 *e*P **P** **15 49 54.5 +0.9**
KRLC Kraliky 40.80 307 *e*P **P** **15 49 54.5 +0.9**
VRAC Vranov 40.96 306 P **P** **15 49 55.8 +1.0**
comp=Z,19nm,0.9s,baz=86,slow=8.8,SNR=17
comp=Z,19nm,0.9s
VRAC Vranov 40.96 306 ⇑P **P** **15 49 56.9 +2.1**
VRAC Vranov 40.96 306 P **P** **15 49 56.9 +2.1**
VRAC Vranov 40.96 306 *e*P **P** **15 49 55.8 +1.0**
VRAC *e* 15 51 07.0
TPTI 41.01 138 P **P** **15 49 54.3 -1.3**
comp=Z,34nm,1.1s
ARA0 ARCESS Array S 41.02 337 *e*P **P** **15 49 56.0 +1.0**
ARCES ARCESS Array B 41.02 337 P **P** **15 49 55.7 +0.6**
comp=Z,38nm,0.6s,baz=115,slow=8.4,SNR=144
comp=Z,38nm,0.6s
DPC Dobruska-Polom 41.09 307 *e*P **P** **15 49 57.2 +1.3**
DPC Dobruska-Polom 41.09 307 *e*P **P** **15 49 57.2 +1.3**
KRUC Moravsky 41.10 305 *e*P **P** **15 49 56.8 +0.8**
KRUC *e* 15 51 07.8
KCSI Kotacane, Aceh 41.12 137 P **P** **15 49 55.3 -1.2**
OSTC Ostas 41.15 308 *e*P **P** **15 49 57.4 +1.0**
OSTC Ostas 41.15 308 *e*P **P** **15 49 57.4 +1.0**
CHVC Chvalec 41.25 308 *e*P **P** **15 49 58.2 +1.0**
CHVC Chvalec 41.25 308 *e*P **P** **15 49 58.2 +1.0**
RONA Rosalia, Austr 41.27 303 *i* P **P** **15 49 58.6 +1.2**
comp=Z,7.3nm,0.8s,SNR=5.9
RONA *es*P **sP** **15 51 09.5 +1.6**
comp=Z,11nm,1.1s
UPC Upice 41.28 307 *e*P **P** **15 49 58.9 +1.5**
UPC Upice 41.28 307 *e*P **P** **15 49 58.9 +1.5**
WINA Allard / Wiene 41.39 304 *i* P **P** **15 49 59.7 +1.3**
SNR=5.6
KTK1 Kautokeino 41.50 336 *e*P **P** **15 49 59.5 +0.6**
KTK1 IAmb IAmb 15 49 59.9
comp=Z,49nm,0.7s
BLEU Blekinge 41.50 316 *i* P **P** **15 49 58.9 -0.1**
CONA Conrad Observa 41.55 304 *e*P **P** **15 49 59.8 +0.1**
comp=Z,30nm,1.2s,SNR=14
CONA *i* sP **sP** **15 51 12.9 +2.8**
comp=Z,30nm,1.3s
TREC Trest 41.68 306 *e*P **P** **15 50 02.3 +1.6**
TREC Trest 41.68 306 *e*P **P** **15 50 02.3 +1.6**
ARSA Arzberg 41.84 303 *i* P **P** **15 50 03.0 +1.0**
comp=Z,18nm,1.9s
ARSA *es*P **sP** **15 51 11.4 -1.1**
comp=Z,9.2nm,1.4s
ZEA Zeya 41.91 48 *e*P **P** **15 50 04.0 +1.6**
ZEA *e* 15 50 53.4
ZEA *e* 15 51 19.0
ZEA pmax pmax
comp=E,10.0nm,0.8s
ZEA pmax pmax
comp=Z,10.0nm,0.7s
BSD Bornholm Skovb 41.94 314 *i* P **P** **15 50 02.4 -0.3**
BSD IAmb IAmb 15 50 03.5
comp=Z,42nm,1.2s
GROS Grobnik 41.95 301 *e*P **P** **15 50 03.3 +0.3**
HEH HeiHe 42.10 53 ⇓P **P** **15 50 05.0 +1.0**
HEH pP **pP** **15 50 53.8 +2.7**
HEH pmax pmax
comp=Z,53nm,0.7s
HAMF Hammerfest 42.10 339 *e*P **P** **15 50 05.0 +1.2**
HAMF IAmb IAmb 15 50 05.6
comp=Z,80nm,0.7s
PERS Pernice 42.19 302 *e*P **P** **15 50 05.6 +0.7**
PVCC Panska Ves 42.20 308 *e*P **P** **15 50 06.4 +1.6**
PVCC Panska Ves 42.20 308 *e*P **P** **15 50 06.4 +1.6**
SOKA Soboth 42.24 302 *i* P **P** **15 50 06.8 +1.5**
comp=Z,15nm,0.7s,SNR=6.3
SOKA *es*P **sP** **15 51 18.4 +2.6**
comp=Z,18nm,1.2s
PRU Pruhonice 42.25 307 *e*P **P** **15 50 06.5 +1.3**
PRU Pruhonice 42.25 307 *e*P **P** **15 50 06.5 +1.3**
PSI Prapat 42.35 136 P **P** **15 50 07.5 +0.9**
PSI pmax pmax
comp=Z,14nm,0.6s
PSI Prapat 42.35 136 P **P** **15 50 05.7 -0.9**
comp=Z,22nm,0.8s
TIP Timpagrande 42.39 291 ⇑P **P** **15 50 07.0 +0.4**
RPSI Rantau Prapat 42.44 136 P **P** **15 50 07.5 +0.4**
CKRC Cesky Krumlov 42.49 305 *e*P **P** **15 50 08.7 +1.4**
CKRC Cesky Krumlov 42.49 305 *e*P **P** **15 50 08.7 +1.4**
ZVC Zvikov 42.52 306 *e*P **P** **15 50 09.0 +1.6**
BNX BinXian 42.55 60 ⇑P **P** **15 50 08.8 +1.0**
BNX pP **pP** **15 50 50.0 -4.9**
BNX S **S** **15 56 15.3 +1.8**
BNX pmax pmax
comp=Z,10.0nm,1.0s
BNX pmax pmax
comp=Z,140nm,5.3s
BRG Berggiesshubel 42.58 308 *e*P **P** **15 50 08.9 +1.0**
comp=Z,31nm,1.0s,baz=84,slow=7.8
BRG *e*pP **pP** **15 51 00.7 +6.8**
baz=84,slow=8.8
DEL Delary 42.59 316 *i* P **P** **15 50 08.0 +0.1**
DEL IAmb IAmb 15 50 09.2
comp=Z,14nm,0.6s
RUE Ruedersdorf 42.61 311 *e*P **P** **15 50 08.5 +0.4**
comp=Z,32nm,1.0s,baz=84,slow=7.8
MOA Molln 42.62 304 *e*P **P** **15 50 09.1 +0.8**
comp=Z,16nm,1.0s,SNR=7.0
MOA *es*P **sP** **15 51 21.4 +2.6**
comp=Z,9.4nm,1.0s
JETT Jettan, Norway 42.64 336 *e*P **P** **15 50 08.9 +0.8**
JETT IAmb IAmb 15 50 19.8
comp=Z,636nm,2.5s
LUNU Lund 42.80 315 *i* P **P** **15 50 09.9 +0.4**
RGN Rugen 42.85 314 *e*P **P** **15 50 11.2 +1.2**
comp=Z,135nm,0.9s,baz=84,slow=7.8
GSI Gunungsitoli 42.87 139 P **P** **15 50 11.5 +0.9**
GSI Gunungsitoli 42.87 139 P **P** **15 50 11.3 +0.7**
GEC2 GERESS Array S 42.89 305 *e*P **P** **15 50 11.4 +0.8**
comp=Z,5.5nm,1.0s,baz=84,slow=7.8
GEC2 *ep*P **pP** **15 51 03.4 +6.7**
baz=84,slow=8.8
GEC2 *es*P **sP** **15 51 23.5 +2.3**
baz=84,slow=8.0
GERES GERESS Array B 42.89 305 P **P** **15 50 11.3 +0.8**
comp=Z,1.2nm,0.4s,baz=96,slow=6.8,SNR=13
GERES PcP **PcP** **15 51 56.6 -0.6**
comp=Z,4.5nm,1.0s,baz=93,slow=5.4,SNR=5.6
comp=Z,1.2nm,0.4s
CUC Castrocucco 42.90 292 IAmb IAmb 15 50 13.7
comp=Z,93nm,1.5s
KHC Kasperske Hory 42.95 306 *e*P **P** **15 50 12.4 +1.5**
KHC Kasperske Hory 42.95 306 *ce*P **P** **15 50 12.0 +1.1**
KHC pmax pmax
comp=Z,22nm,2.5s
HFS Hagfors 42.98 322 P **P** **15 50 11.1 +0.1**
comp=Z,91nm,0.5s,baz=98,slow=11,SNR=369
HFS pP **pP** **15 50 60.0 +2.5**
comp=Z,14nm,0.6s,baz=98,slow=11,SNR=3.1
comp=Z,91nm,0.5s
BJUU Bjuv 43.05 316 *i* P **P** **15 50 12.0 +0.4**
BIOA Bad Ischl, Aus 43.06 303 *e*P **P** **15 50 12.7 +0.8**
comp=Z,2.8nm,0.4s
BIOA *es*P **sP** **15 51 22.3 -0.3**
comp=Z,14nm,1.2s
CLL Collm 43.14 309 *i* P **P** **15 50 12.9 +0.5**
CLL *e**PP **pP** **15 50 58.0 -0.6**
CLL *eS* **S** **15 56 21.0 -1.0**
CLL pmax pmax
comp=Z,28nm,1.2s
CLL Collm 43.14 309 *i* P **P** **15 50 12.9 +0.5**
comp=Z,28nm,1.2s
CLL *ep*P **pP** **15 50 58.0 -0.6**
CLL *es*P **sP** **15 51 22.0 -1.2**
CLL *e*PP **PcP** **15 51 58.0 +0.2**
CLL *e*PPP PPP 15 52 37.0
CLL *eS* **S** **15 56 21.0 -1.0**
CLL *e*SS **ScS** **15 59 54.0 +5.4**
CLL Collm 43.14 309 *e*P **P** **15 50 12.9 +0.5**
comp=Z,17nm,0.9s,baz=84,slow=7.8
CLL *ep*P **pP** **15 51 05.6 +7.0**
baz=84,slow=8.8
TRO Tromso 43.15 336 *e*P **P** **15 50 12.9 +0.7**
MYKA Terra Mystica 43.20 302 *e*P **P** **15 50 13.7 +0.7**
comp=Z,7.0nm,0.7s
MYKA *es*P **sP** **15 51 26.5 +2.8**
comp=Z,18nm,1.6s
FABU Falkenberg 43.25 317 *i* P **P** **15 50 13.2 +0.1**
BORU Boraas 43.25 318 *i* P **P** **15 50 13.3 +0.2**
KBA Koelnbreinsper 43.34 303 *e*P **P** **15 50 14.9 +0.7**
comp=Z,7.2nm,0.9s
KBA *es*P **sP** **15 51 26.5 +1.6**
comp=Z,14nm,1.2s
WET Wettzell 43.40 306 *e*P **P** **15 50 15.6 +1.1**
comp=Z,7.7nm,1.4s,baz=84,slow=7.8
WET *es*P **sP** **15 51 27.7 +2.5**
baz=84,slow=8.0
TANN Tannenbergstha 43.55 308 *e*P **P** **15 50 16.7 +1.0**
comp=Z,15nm,1.1s,baz=84,slow=7.8
MSEY Mahe Island 43.63 203 P **P** **15 50 16.5 -0.2**
FAUS Fauske 43.69 332 *e*P **P** **15 50 17.2 +0.7**
FAUS IAmb IAmb 15 50 21.5
comp=Z,55nm,0.9s
ONAU Onsala 43.70 318 *i* P **P** **15 50 16.4 -0.3**
MOR8 Moi Rana 43.71 331 *e*P **P** **15 50 16.6 -0.1**
MOR8 IAmb IAmb 15 50 17.2
comp=Z,147nm,0.7s
PLN Plauen 43.74 308 *e*P **P** **15 50 18.1 +0.9**
comp=Z,6.3nm,1.2s,baz=84,slow=7.8
LESA Schwarzleotal 43.74 303 *i* P **P** **15 50 17.9 +0.5**
comp=Z,10nm,0.7s,SNR=13
LESA *es*P **sP** **15 51 29.7 +1.6**
comp=Z,28nm,1.2s
YAK Yakutsk 43.80 36 P **P** **15 50 16.9 -0.5**
YAK IAmb IAmb 15 51 08.4
comp=Z,36nm,0.8s
YAK Yakutsk 43.80 36 *e*P **P** **15 50 17.1 -0.3**
YAK *e**PP **pP** **15 51 06.2 +1.5**
YAK *e* 15 51 57.9
YAK *e* 15 52 03.6
YAK *e*PPP PPP 15 52 49.2
YAK *eS* **S** **15 56 29.6 -1.5**
YAK *e* 15 59 49.1
YAK pmax pmax
comp=Z,20nm,1.0s
YAK pmax pmax
comp=N,2.0nm,0.8s
YAK pmax pmax
comp=E,3.0nm,1.4s
YAK pmax pmax
comp=Z,185nm,4.7s
YAK pmax pmax
comp=N,113nm,5.1s
YAK pmax pmax
comp=E,231nm,6.1s
YAK smax smax
comp=N,73nm,1.8s
YAK smax smax
comp=E,61nm,1.5s
STEI Steigen 43.86 333 *e*P **P** **15 50 18.5 +0.6**
TJOU Tjoern 43.88 319 *i* P **P** **15 50 17.5 -0.6**
NEUB Neuenburg 43.92 309 *e*P **P** **15 50 19.3 +0.7**
comp=E,52nm,1.1s,baz=84,slow=7.8
RAUS Rausandaksla 43.93 331 *e*P **P** **15 50 18.8 +0.4**
ABTA Abfaltersbach 43.95 302 *e*P **P** **15 50 18.6 -0.4**
comp=E,6.3nm,0.9s
ABTA *es*P **sP** **15 51 27.9 -1.9**
comp=E,8.9nm,0.9s
MOX Moxa 44.07 308 *e*P **P** **15 50 20.7 +0.9**
comp=E,27nm,1.2s,baz=84,slow=7.8
MOX *es*P **sP** **15 51 32.8 +2.1**
baz=84,slow=8.0
GORT1 Trebel 44.09 311 *e*P **P** **15 50 21.0 +1.2**
comp=E,52nm,1.1s,baz=84,slow=7.8
NC602 NORSAR Array S 44.10 323 *e*P **P** **15 50 18.8 -1.1**
STRU Stroemstad 44.16 320 *i* P **P** **15 50 20.0 -0.4**
STRU *i* pP 15 50 20.2 -47
FLTG Flechtingen 44.17 310 *e*P **P** **15 50 20.8 +0.3**
comp=E,46nm,0.9s,baz=84,slow=7.8
LEIR Leirfjorden 44.22 330 *e*P **P** **15 50 21.2 +0.5**
LEIR IAmb IAmb 15 50 21.4
comp=Z,36nm,0.7s
NB2 NORSAR Subarra 44.29 323 P **P** **15 50 21.2 -0.3**
comp=Z,37nm,0.5s,baz=96,slow=7.9
NB2 NORSAR Subarra 44.29 323 P **P** **15 50 21.2 -0.3**
NOA NORSAR Array B 44.29 323 P **P** **15 50 21.1 -0.3**
comp=Z,58nm,0.7s,baz=96,slow=7.7,SNR=228
NOA pP **pP** **15 51 09.4 +1.0**
comp=Z,5.2nm,0.7s,baz=96,slow=8.0,SNR=2.5
comp=Z,58nm,0.7s
VAGH Vaagaholmen 44.30 331 *e*P **P** **15 50 21.8 +0.5**
KONS Konsvik 44.30 331 *e*P **P** **15 50 21.8 +0.5**
STOK Stokkvaagen 44.31 331 *e*P **P** **15 50 21.8 +0.4**
MNSI Mandailing Nat 44.37 137 P **P** **15 50 22.5 -0.1**
comp=Z,68nm,0.9s
NSS Namsos 44.40 328 *e*P **P** **15 50 22.4 +0.3**
NSS IAmb IAmb 15 50 23.5
comp=Z,20nm,0.6s
GRA1 Grafenberg Arr 44.42 307 IAmb IAmb 15 50 25.5
comp=Z,98nm,1.7s
GRF Grafenberg Arr 44.42 307 *e*P **P** **15 50 24.5 +1.9**
comp=Z,108nm,1.8s,baz=84,slow=7.8
GRF *es*P **sP** **15 51 36.3 +2.9**
baz=84,slow=8.0
GRFO Grafenberg 44.42 307 P **P** **15 50 24.1 +1.5**
GRFO IAmb IAmb 15 50 25.3
comp=Z,101nm,1.7s
GRFO Grafenberg 44.42 307 P **P** **15 50 24.1 +1.5**
GRFO pmax pmax
comp=Z,101nm,1.7s
OSL Oslo 44.45 321 *e*P **P** **15 50 23.0 +0.4**
WTTA Wattenberg 44.46 303 *e*P **P** **15 50 23.5 +0.3**
comp=Z,5.8nm,0.6s
WTTA *i* sP **sP** **15 51 35.6 +1.6**
comp=Z,21nm,1.2s
WATA Walderalm 44.49 303 *i* P **P** **15 50 23.5 +0.2**
comp=Z,17nm,1.4s,SNR=5.1
WATA *i* sP **sP** **15 51 34.2 0.0**
comp=Z,17nm,1.3s
LOF Lofoten 44.53 333 *e*P **P** **15 50 23.2 +0.1**

ASSE Asse, Remlinge 44.53 310 *e*P **P 15 50 23.5 +0.2**
comp=Z,31nm,1.6s,baz=84,slow=7.8
MURB Monte Urbino 44.57 297 IAmb IAmb 15 50 27.4
comp=Z,61nm,1.1s
FUR Furstenfeldbru 44.57 304 *e*P **P 15 50 25.0 +1.2**
comp=Z,66nm,1.3s,baz=84,slow=7.8
VAE Valguarnera 44.63 289 P **P 15 50 25.7 +1.2**
comp=Z,12nm,0.9s,baz=94,slow=16,SNR=2.5
comp=Z,12nm,0.9s
BSEG Bad Segeberg 44.63 313 *e*P **P 15 50 25.3 +1.1**
comp=Z,19nm,1.0s,baz=84,slow=7.8
CLZ Clausthal 44.74 310 *e*P **P 15 50 26.1 +1.0**
comp=Z,49nm,1.3s,baz=84,slow=7.8
RAFF Raffo Rosso 44.74 289 IAmb IAmb 15 50 28.3
comp=Z,124nm,1.3s
SQTA Sankt Quirin 44.76 303 *i* P **P 15 50 25.5 +0.1**
comp=Z,5.1nm,0.5s
SQTA *i* sP **sP 15 51 38.1 +1.7**
comp=Z,8.8nm,0.7s
KSRS Korea Array 44.76 71 P **P 15 50 25.2 -0.2**
comp=Z,5.4nm,1.0s,baz=286,slow=6.8,SNR=15
KSRS pP **pP 15 51 13.3 +0.2**
comp=Z,6.0nm,1.0s,baz=278,slow=7.3,SNR=5.5
comp=Z,5.4nm,1.0s
MOTA Moosalm 44.81 303 *e*P **P 15 50 26.0 +0.1**
comp=Z,7.0nm,0.6s
MOTA *i* sP **sP 15 51 37.7 +0.9**
comp=Z,16nm,1.0s
HOPEN Hopen 44.86 346 *e*P **P 15 50 27.8 +2.2**
SSRD Sdr. Stenderup 44.97 315 *i* P **P 15 50 27.2 +0.5**
KLR Kul'dur 44.99 54*ce*P **P 15 50 26.9 -0.2**
KLR pmax pmax
comp=Z,6.0nm,1.7s
KONO Kongsberg 45.00 321 P **P 15 50 26.9 -0.1**
KONO IAmb IAmb 15 50 28.0
comp=Z,36nm,0.8s
KONO Kongsberg 45.00 321 *e*P **P 15 50 27.2 +0.2**
KONO IAmb IAmb 15 50 27.7
comp=Z,38nm,0.8s
KONO Kongsberg 45.00 321*ce*P **P 15 50 27.5 +0.5**
KONO pmax pmax
comp=Z,85nm,2.5s
KONO Kongsberg 45.00 321 P **P 15 50 27.4 +0.4**
KONO pP **pP 15 51 15.2 +1.4**
KONO sP **sP 15 51 40.2 +1.9**
RETA Reutte 45.02 304 *i* P **P 15 50 27.8 +0.4**
comp=Z,4.5nm,0.9s
RETA *es*P **sP 15 51 40.1 +1.8**
comp=Z,10nm,1.1s
GTTG Gottingen 45.02 309 *e*P **P 15 50 28.3 +1.0**
comp=Z,58nm,1.1s,baz=84,slow=7.8
GTTG *es*P **sP 15 51 40.3 +2.1**
baz=84,slow=8.0
UBBA Unterbreizbach 45.07 308 *e*P **P 15 50 28.6 +1.1**
comp=Z,10nm,0.6s,baz=84,slow=7.8
UBBA *es*P **sP 15 51 41.2 +2.6**
baz=84,slow=8.0
FETA Feichten 45.11 303 *i* P **P 15 50 28.2 -0.1**
comp=Z,7.7nm,0.9s,SNR=6.0
FETA *i* sP **sP 15 51 40.4 +1.0**
comp=Z,19nm,1.3s
BJO1 Bjornoya 45.13 343 *e*P **P 15 50 28.9 +1.1**
RETH Rethem/Aller, 45.28 311 *e*P **P 15 50 29.8 +0.5**
comp=Z,16nm,1.2s,baz=84,slow=7.8
DOMB Dombas 45.40 324 *e*P **P 15 50 30.7 +0.6**
UBR Ueberruh 45.42 304 *e*P **P 15 50 31.0 +0.4**
comp=Z,19nm,1.1s,baz=84,slow=7.8
UBR *es*P **sP 15 51 43.1 +1.5**
baz=84,slow=8.0
FUORN Ofenpass-Fuorn 45.50 302 P **P 15 50 32.0 +0.6**
HOMB Homborsund 45.54 319 *e*P **P 15 50 31.7 +0.5**
HOMB Homborsund 45.54 319 *i* P **P 15 50 31.2 0.0**
TIXI Tiksi 45.60 22 P **P 15 50 31.9 +0.4**
TIXI IAmb IAmb 15 51 22.4
comp=Z,45nm,1.1s
TIXI Tiksi 45.60 22 P **P 15 50 31.9 +0.4**
TIXI pmax pmax
comp=Z,45nm,1.1s
TIXI Tiksi 45.60 22 P **P 15 50 32.0 +0.5**
TIXI pP **pP 15 51 20.7 +1.8**
TIXI sP **sP 15 51 45.5 +1.8**
DAVA Damuels 45.64 303 *e*P **P 15 50 32.6 +0.2**
comp=Z,29nm,0.6s,SNR=7.4
DAVA *i* sP **sP 15 51 43.9 +0.4**
comp=Z,31nm,0.9s
SKAR Skarslia 45.69 322 *e*P **P 15 50 33.4 +1.0**
DAVOX Davos/Dischmat 45.73 303 P **P 15 50 33.3 +0.2**
comp=Z,7.3nm,0.6s,baz=103,slow=5.3,SNR=21
comp=Z,7.3nm,0.6s
STU Stuttgart 45.86 306 *e*P **P 15 50 34.6 +0.7**
comp=Z,30nm,0.7s,baz=84,slow=7.8
PPI Padang Panjang 45.86 137 P **P 15 50 34.0 -0.3**
comp=Z,56nm,0.8s
KASTN Kahler Asten 46.02 309 *e*P **P 15 50 35.7 +0.5**
comp=Z,4.8nm,0.9s,baz=84,slow=7.8
MYKOM Kota Tinggi 46.03 131 P **P 15 50 35.6 0.0**
USRK Ussuriysk Ar. 46.03 61 P **P 15 50 35.4 +0.1**
comp=Z,2.0nm,0.5s,baz=298,slow=6.2,SNR=3.4
comp=Z,2.0nm,0.5s
TNS Taunus Mts 46.13 308 *e*P **P 15 50 36.9 +0.9**
comp=Z,18nm,1.1s,baz=84,slow=7.8
TNS *es*P **sP 15 51 49.4 +2.1**
baz=84,slow=8.0
MOL Molde 46.14 325 *e*P **P 15 50 36.5 +0.6**
TUE Stuetta 46.15 302 P **P 15 50 36.3 -0.1**
SNART Snartemo 46.22 319 *e*P **P 15 50 37.3 +0.7**
SNART Snartemo 46.22 319 *i* P **P 15 50 37.2 +0.7**
PDSI Padang 46.27 137 P **P 15 50 36.7 -0.8**
comp=Z,1µmcomp=Z,94nm,0.7s
IBBN Ibbenburen 46.30 311 *e*P **P 15 50 38.1 +0.8**
comp=Z,68nm,1.2s,baz=84,slow=7.8
AKN Aaknes 46.38 324 *e*P **P 15 50 38.6 +0.8**
BFO Black Forest 46.49 305 *e*P **P 15 50 39.3 +0.4**
comp=Z,21nm,1.6s,baz=84,slow=7.8
BFO *es*P **sP 15 51 52.3 +2.2**
baz=84,slow=8.0
ODD1 Odda 46.51 321 *e*P **P 15 50 39.5 +0.7**
ODD1 IAmb IAmb 15 50 43.5
comp=Z,68nm,1.4s
BLS5 Blasjo 46.60 321 *e*P **P 15 50 42.0 +2.5**
LODK Lodwar 46.61 233 P **P 15 50 40.9 +0.7**
BUG Bochum--Univer 46.71 309 *e*P **P 15 50 41.2 +0.8**
comp=Z,24nm,1.1s,baz=84,slow=7.8
HYA Hoyanger 46.74 323 *e*P **P 15 50 41.4 +0.9**
HSPB Hornsund (broa 47.00 345 *e*P **P 15 50 44.1 +1.8**
BER Bergen 47.16 322 *e*P **P 15 50 44.5 +0.8**
BER IAmb IAmb 15 50 44.9
comp=Z,44nm,0.8s
ASK Askoy 47.22 322 *e*P **P 15 50 44.8 +0.6**
SPA0 Spitsbergen Ar 47.35 347 *e*P **P 15 50 45.8 +0.8**
SPITS Spitsbergen Ar 47.35 347 P **P 15 50 46.4 +1.3**
comp=Z,9.1nm,0.4s,baz=119,slow=12,SNR=128
comp=Z,9.1nm,0.4s
BTNL Ternell 47.54 308 *d*P **P 15 50 47.5 +0.6**
MEM Membach 47.61 309 *d*P **P 15 50 48.5 +1.1**
comp=Z,11nm,1.0s
WLF Walferdange 47.68 307 *d*P **P 15 50 49.4 +1.5**
WLF Walferdange 47.68 307 *e*P **P 15 50 49.1 +1.2**
comp=Z,29nm,0.9s,baz=84,slow=7.8
GRNR Gornyy 47.76 51 ||*i*P **P 15 50 49.5 +1.0**
GRNR pmax pmax
comp=Z,3.0nm,0.8s
GRNR MLR MLR
comp=E,600nm,15.0s
GRNR MLR MLR
comp=N,820nm,13.0s
GRNR MLR MLR
comp=Z,1µm,14.0s
RCHB Rochefort 48.18 308 *d*P **P 15 50 52.6 +0.8**
comp=Z,8.7nm,0.9s
DSRI Dabo 48.27 132 P **P 15 50 53.3 +0.4**
comp=Z,950nmcomp=Z,52nm,1.1s
BMRD Maredsous 48.45 308 *d*P **P 15 50 54.9 +1.1**
comp=Z,12nm,0.8s
KBS Kingsbay 48.47 347 P **P 15 50 54.7 +1.1**
KBS IAmb IAmb 15 50 55.8
comp=Z,47nm,0.8s
KBS Kingsbay 48.47 347 *e*P **P 15 50 54.9 +1.3**
KBS IAmb IAmb 15 50 55.6
comp=Z,46nm,0.8s
KBS Kingsbay 48.47 347*ce*P **P 15 50 54.5 +0.9**
KBS pmax pmax
comp=Z,77nm,1.3s
KBS Kingsbay 48.47 347 *i* P **P 15 50 55.4 +1.8**
KBS Kingsbay 48.47 347 P **P 15 50 55.0 +1.5**
KBS pP **pP 15 51 42.8 +1.2**

DOU Dourbes 48.59 308 *d*P **P 15 50 55.6 +0.7**
comp=Z,12nm,1.2s
KMBO Kilima Mbogo 48.99 228 P **P 15 50 59.2 +0.6**
baz=37,slow=13
KEST Kesra 49.05 288 P **P 15 50 59.6 +0.9**
comp=Z,10.0nm,0.5s,baz=52,slow=1.4,SNR=27
comp=Z,10.0nm,0.5s
KEST Kesra 49.05 288 IAmb IAmb 15 51 01.4
comp=Z,120nm,1.9s
KIBK Kibwezi 49.50 226 P **P 15 51 03.4 +1.1**
KIBK IAmb IAmb 15 51 04.4
comp=Z,26nm,0.7s
KIBK Kibwezi 49.50 226 P **P 15 51 03.6 +1.3**
SNR=9.6
KSI Kapahiang 49.72 137 P **P 15 51 02.8 -1.1**
SBUM Sibu 50.93 122 P **P 15 51 12.6 -0.3**
EGSI Enggano, Bengk 50.97 138 P **P 15 51 13.3 +0.2**
MDSI Maura Dua 51.29 136 P **P 15 51 12.6 -2.9**
comp=Z,18nm,0.6s
LWLI Liwa 51.66 136 P **P 15 51 15.5 -2.9**
KLSI 51.77 135 P **P 15 51 15.4 -3.7**
EKA Eskdalemuir Ar 52.22 316 P **P 15 51 21.6 -0.3**
comp=Z,11nm,0.8s,baz=96,slow=7.2,SNR=19
EKA pP **pP 15 52 11.2 +1.1**
comp=Z,3.7nm,0.7s,baz=86,slow=7.4,SNR=2.6
comp=Z,11nm,0.8s
MBAR Mbarara 52.66 235 P **P 15 51 25.8 -0.1**
MBAR IAmb IAmb 15 51 27.0
comp=Z,47nm,0.8s
MBAR Mbarara 52.66 235*ce*P **P 15 51 26.2 +0.3**
MBAR pmax pmax
comp=Z,47nm,0.7s
MBAR Mbarara 52.66 235 P **P 15 51 26.2 +0.3**
MBAR pP **pP 15 52 14.8 +0.2**
MJAR Matsushiro Arr 52.83 69 P **P 15 51 26.4 -0.4**
comp=Z,4.1nm,1.1s,baz=283,slow=11,SNR=9.4
MJAR pP **pP 15 52 16.2 +0.1**
comp=Z,6.7nm,0.9s,baz=288,slow=9.3,SNR=6.5
comp=Z,4.1nm,1.1s
NOR Nord 53.66 349 *i* P **P 15 51 32.8 +0.8**
NOR IAmb IAmb 15 51 33.5
comp=Z,7.2nm,1.0s
SEY Seymchan 54.25 34 *i* P **P 15 51 36.9 +0.3**
SEY pmax pmax
comp=Z,2.0nm,1.1s
ILTH Belurgan, Co L 54.31 315 P **P 15 51 37.3 +0.1**
DSB Dublin 54.54 314 P **P 15 51 38.7 -0.1**
DAG Danmarks Havn 54.59 344 *i* P **P 15 51 38.4 -0.4**
DAG IAmb IAmb 15 51 40.2
comp=Z,34nm,0.8s
IDGL Inch Island, C 54.70 316 P **P 15 51 40.9 +0.9**
IWEX Carrickbyrne, 55.02 313 P **P 15 51 43.9 +1.7**
DBG Daneborg 55.45 341 *i* P **P 15 51 46.1 +1.1**
IGLA Glengowla, Co 56.22 315 P **P 15 51 52.5 +1.8**
BBKI Banjar Baru 57.04 125 P **P 15 51 57.4 +0.3**
comp=Z,50nm,0.9s
ESDC Sonseca Array 57.44 298 P **P 15 51 59.3 -0.4**
comp=Z,7.5nm,0.9s,baz=58,slow=7.3,SNR=29
ESDC pP **pP 15 52 49.4 +0.7**
comp=Z,2.0nm,0.5s,baz=55,slow=7.8,SNR=3.9
comp=Z,7.5nm,0.9s
ESDC Sonseca Array 57.44 298 P **P 15 51 59.2 -0.4**
TAM Tamanrasset 57.59 276 P **P 15 52 00.7 -0.4**
TAM Tamanrasset 57.59 276 P **P 15 52 00.7 -0.4**
TAM pmax pmax
comp=Z,37nm,0.5s
TAM Tamanrasset 57.59 276 P **P 15 52 00.7 -0.4**
MPSI Mapaga 57.79 117 P **P 15 52 03.8 +1.5**
comp=Z,20nm,1.1s
BILL Bilibino 58.43 26 P **P 15 52 07.2 +1.2**
BILL IAmb IAmb 15 52 60.0
comp=Z,24nm,1.0s
BILL Bilibino 58.43 26*ce*P **P 15 52 06.0 0.0**
BILL pmax pmax
comp=Z,7.0nm,1.0s
MRSI Marisa 59.17 115 P **P 15 52 12.3 +0.5**
comp=Z,539nmcomp=Z,43nm,1.0s
MMSI Mamuju 59.23 121 P **P 15 52 12.9 +0.6**
comp=Z,4µmcomp=Z,547nmcomp=Z,51nm,1.1s
PGAV Gavieira, Arco 59.55 302 *e*P **P 15 52 15.4 +1.2**
MTE Manteigas 59.68 300 *e*P **P 15 52 16.4 +1.3**
ABPO Ambohimpanom 59.79 206 P **P 15 52 16.2 +0.1**
ABPO IAmb IAmb 15 52 17.4
comp=Z,37nm,0.9s
ABPO Ambohimpanom 59.79 206 P **P 15 52 16.2 +0.1**
ABPO pmax pmax
comp=Z,37nm,1.0s
ABPO Ambohimpanom 59.79 206 P **P 15 52 16.6 +0.5**
ABPO pP **pP 15 53 09.4 +2.9**
PVIS Viseu 59.79 300 *e*P **P 15 52 17.1 +1.2**
PBAR Barrancos 60.24 297 *e*P **P 15 52 19.6 +0.7**
PESTR Estremoz 60.34 298 *e*P **P 15 52 20.6 +1.0**
PSARD Sardoal 60.44 299 *e*P **P 15 52 21.1 +0.9**
EVO Evora 60.78 298 *e*P **P 15 52 23.1 +0.6**
MDT Midelt 60.79 291 P **P 15 52 22.5 -0.3**
comp=Z,3.4nm,0.7s,baz=87,slow=9.4,SNR=5.8
comp=Z,3.4nm,0.7s
NEEM North Greenlan 60.89 348 *i* P **P 15 52 23.2 +0.2**
NEEM IAmb IAmb 15 52 24.1
comp=Z,28nm,0.7s
PBEJ Beja 60.90 297 *e*P **P 15 52 24.0 +0.8**
SUMG Summit 60.93 341 *i* P **P 15 52 24.2 +0.8**
SUMG IAmb IAmb 15 52 25.3
comp=Z,30nm,0.7s
MOE Montemor 61.03 298 *e*P **P 15 52 25.0 +0.9**
PVAQ Vaqueiros 61.06 297 *e*P **P 15 52 25.0 +0.6**
KHKI Kahang-Kahang 61.23 128 P **P 15 52 24.0 -1.7**
comp=Z,38nm,0.8s
MESJ Messejana 61.23 297 *e*P **P 15 52 26.0 +0.4**
MESJ IAmb IAmb 15 52 27.1
comp=Z,38nm,1.3s
MESJ Messejana 61.23 297 *e*P **P 15 52 25.9 +0.4**
PTEO Sao Teotonio 61.72 297 *e*P **P 15 52 29.7 +0.9**
VOI Vohitsoka 62.61 205 P **P 15 52 34.7 -0.2**
LBFI Labuhan Bajo, 64.10 124 P **P 15 52 42.1 -2.6**
TULEG Thule 64.29 350 *i* P **P 15 52 44.9 -0.1**
TULEG IAmb IAmb 15 52 46.7
comp=Z,16nm,0.8s
ANGG Ammassalik, Gr 64.30 334 *i* P **P 15 52 45.6 +0.4**
ANGG IAmb IAmb 15 52 46.7
comp=Z,69nm,1.3s
EDA Edea 64.61 255 P **P 15 52 46.8 -1.3**
EDA Edea 64.61 255 P **P 15 52 47.1 -1.0**
UPNV Upernavik 65.00 345 *i* P **P 15 52 50.1 +0.5**
UPNV IAmb IAmb 15 52 51.1
comp=Z,25nm,0.9s
NUUG Nuugaatsiaq 65.22 343 *i* P **P 15 52 51.4 +0.3**
NUUG IAmb IAmb 15 52 52.9
comp=Z,9.0nm,0.8s
FOMA Nahampoana Res 65.39 204 P **P 15 52 52.6 -0.1**
LSZ Lusaka 65.61 226 P **P 15 52 54.7 +0.2**
TORD Torodi Ar. Bea 65.79 269 P **P 15 52 53.6 -2.0**
comp=Z,49nm,0.6s,baz=45,slow=4.9,SNR=293
TORD pP **pP 15 53 45.6 -0.5**
comp=Z,6.8nm,0.8s,baz=45,slow=5.0,SNR=2.1
comp=Z,49nm,0.6s
TORD Torodi Ar. Bea 65.79 269 **P 15 52 53.7 -1.9**
TORD IAmb IAmb 15 52 54.6
comp=Z,33nm,0.8s
ILULI Ilulissat 66.27 341 *i* P **P 15 52 58.2 +0.4**
ILULI IAmb IAmb 15 52 59.1
comp=Z,46nm,1.0s
GDH Godhavn 66.88 341 *i* P **P 15 53 01.9 +0.3**
GDH IAmb IAmb 15 53 03.4
comp=Z,20nm,0.9s
A19K Wainwright 66.99 17 P **P 15 53 03.5 +1.1**
baz=316
A21K Barrow 67.14 15 P **P 15 53 04.0 +0.7**
baz=320,SNR=12
C16K Lisburne Hills 67.28 20 IAmb IAmb 15 53 58.3
comp=Z,26nm,0.9s
C16K Lisburne Hills 67.28 20 P **P 15 53 04.5 +0.3**
baz=313,SNR=17
SFJD Kangerlussuaq 67.63 339 P **P 15 53 06.7 +0.3**
SFJD IAmb IAmb 15 53 07.5
comp=Z,20nm,1.1s
SFJD Kangerlussuaq 67.63 339 P **P 15 53 06.7 +0.3**
SFJD pmax pmax
comp=Z,20nm,1.1s
SFJD Kangerlussuaq 67.63 339 *i* P **P 15 53 06.2 -0.2**
SFJD IAmb IAmb 15 53 07.3
comp=Z,20nm,1.0s
C17K DeLong Mountai 67.72 19 P **P 15 53 07.7 +0.7**
baz=315
A22K Sinclair Lake 67.73 15 P **P 15 53 07.9 +0.9**
baz=321,SNR=16
BATI Baumata 67.89 122 P **P 15 53 07.6 -1.3**
comp=Z,32nm,0.8s
SOEI Soe 67.98 122 P **P 15 53 07.7 -1.8**
comp=Z,33nm,0.8s
B20K Meade River 68.03 16 P **P 15 53 09.8 +0.9**
baz=320
RDOG Red Dog Mine 68.09 19 IAmb IAmb 15 54 03.5
comp=Z,34nm,1.4s
RDOG Red Dog Mine 68.09 19 P **P 15 53 09.6 +0.3**
baz=316
C18K Utukok River 68.10 18 IAmb IAmb 15 53 10.8
comp=Z,18nm,0.8s
C18K Utukok River 68.10 18 P **P 15 53 09.9 +0.5**
baz=317,SNR=21
C19K Lookout Ridge 68.16 17 P **P 15 53 10.7 +0.9**
baz=318
D17K Noatak River 68.30 19 P **P 15 53 11.1 +0.5**
baz=315,SNR=34
TNA Tin City 68.39 23 P **P 15 53 11.8 +0.7**
baz=312
B22K Teshekpuk Lake 68.57 15 IAmb IAmb 15 53 14.0
comp=Z,32nm,1.1s
B22K Teshekpuk Lake 68.57 15 P **P 15 53 13.0 +0.7**
baz=323,SNR=17
B21K Ikpikpuk River 68.89 16 IAmb IAmb 15 53 16.0
comp=Z,24nm,0.9s
B21K Ikpikpuk River 68.89 16 P **P 15 53 15.1 +0.9**
baz=322
F14K Arctic Creek 68.93 22 P **P 15 53 15.5 +1.0**
baz=314,SNR=6.0
D19K Kuna River 68.97 17 P **P 15 53 15.3 +0.5**
baz=319
E17K Hotham Inlet 69.08 20 P **P 15 53 15.8 +0.4**
baz=317,SNR=16
E18K Tukpahlearik C 69.15 19 P **P 15 53 16.4 +0.6**
baz=318,SNR=15
D20K Etivluk River 69.16 17 P **P 15 53 16.5 +0.6**
baz=320,SNR=19
C21K Knifeblade Rid 69.22 16 P **P 15 53 17.1 +0.8**
baz=322
F15K North Star Dit 69.27 21 P **P 15 53 17.4 +0.8**
baz=315
C23K Itkillik River 69.55 14 P **P 15 53 19.4 +1.1**
baz=325
E20K Nigu River 69.61 17 P **P 15 53 19.1 +0.3**
baz=321,SNR=23
F17K Baldwin Pennin 69.70 20 IAmb IAmb 15 54 14.0
comp=Z,34nm,0.8s
F17K Baldwin Pennin 69.70 20 P **P 15 53 19.9 +0.7**
baz=317,SNR=17
NRS Narsarsuaq 69.76 332 *i* P **P 15 53 20.2 +0.5**
NRS IAmb IAmb 15 53 21.1
comp=Z,20nm,0.9s
ANM Nome 69.86 23 IAmb IAmb 15 54 15.5
comp=Z,35nm,1.2s
ANM Nome 69.86 23 P **P 15 53 21.1 +0.8**
baz=314,SNR=6.1
G15K Niukluk 69.96 22 P **P 15 53 21.5 +0.7**
baz=315
E21K Killik River 69.97 16 P **P 15 53 21.0 +0.1**
baz=323
E19K Redstone River 69.98 18 IAmb IAmb 15 54 15.4
comp=Z,82nm,1.8s
E19K Redstone River 69.98 18 P **P 15 53 21.1 +0.2**
baz=320,SNR=15
F18K Selawik 70.02 19 P **P 15 53 21.4 +0.3**
baz=318,SNR=16
C24K Franklin Bluff 70.02 14 P **P 15 53 21.9 +0.8**
baz=327
G16K Koyuk River 70.16 21 P **P 15 53 22.8 +0.8**
baz=317,SNR=6.9
D23K Nanushuk River 70.25 15 IAmb IAmb 15 53 24.3
comp=Z,18nm,1.0s
D23K Nanushuk River 70.25 15 P **P 15 53 23.4 +0.8**
baz=325
F19K Shaleruckik Mo 70.33 18 P **P 15 53 22.5 -0.5**
baz=320
D24K Happy Valley 70.47 14 P **P 15 53 24.5 +0.6**
baz=327
C26K Camden Bay 70.54 12 P **P 15 53 25.7 +1.5**
baz=330,SNR=10
G17K Kiwalik Mounta 70.57 20 P **P 15 53 25.1 +0.6**
baz=318,SNR=11
F20K Avaraart Lake 70.67 18 P **P 15 53 25.0 0.0**
baz=322
E22K Anaktuvuk Pass 70.70 16 P **P 15 53 25.7 +0.4**
baz=325,SNR=15
TOLK Toolik Lake Re 70.75 15 P **P 15 53 26.3 +0.7**
baz=326,SNR=39
H16K Elim 70.75 21 P **P 15 53 26.3 +0.7**
baz=317,SNR=11
BROLN Tlhalogang 70.75 223 *i* P **P 15 53 25.1 -1.2**
D25K Kavik River 70.79 13 IAmb IAmb 15 53 27.9
comp=Z,23nm,0.8s
D25K Kavik River 70.79 13 P **P 15 53 26.9 +1.0**
baz=329,SNR=27
G18K Tagagawik 70.82 19 P **P 15 53 26.1 +0.1**
baz=320
SOOWA Sowa 70.95 224 *i* P **P 15 53 26.0 -1.4**
C27K Jago River 71.00 12 P **P 15 53 28.4 +1.3**
baz=331
G19K Purcell Mounta 71.03 19 P **P 15 53 27.7 +0.4**
baz=321
A36M Sachs Harbour 71.04 5 P **P 15 53 27.7 +0.5**
baz=346,SNR=17
F21K Alatna River 71.06 17 P **P 15 53 27.9 +0.4**
baz=323,SNR=23
F22K John River 71.13 16 P **P 15 53 28.7 +0.8**
baz=324
H17K Granite Mounta 71.20 20 P **P 15 53 28.9 +0.6**
baz=319
E23K Chandalar 71.23 15 IAmb IAmb 15 54 23.2
comp=Z,66nm,1.6s
E23K Chandalar 71.23 15 P **P 15 53 29.1 +0.5**
baz=326,SNR=11
E24K Your Creek 71.45 15 P **P 15 53 30.6 +0.7**
baz=327
H18K Honhosa River 71.46 20 IAmb IAmb 15 54 24.8
comp=Z,85nm,2.0s
H18K Honhosa River 71.46 20 P **P 15 53 30.2 +0.3**
baz=320,SNR=5.8
G21K Allakaket 71.63 17 P **P 15 53 30.9 0.0**
baz=324
ACRG Accra 71.65 263 P **P 15 53 30.4 -1.4**
ACRG IAmb IAmb 15 53 31.4
comp=Z,36nm,0.8s
H19K Roundabout Mou 71.68 19 **P 15 53 31.4 +0.3**
H19K Roundabout Mou 71.68 19 P **P 15 53 31.7 +0.6**
baz=321
J14K Nanvaranak Lak 71.73 23 P **P 15 53 32.3 +0.9**
baz=316
G22K Bettles 71.76 16 P **P 15 53 31.9 +0.3**
baz=325
I17K Unalakleet 71.76 21 IAmb IAmb 15 54 27.0
comp=Z,30nm,1.1s
I17K Unalakleet 71.76 21 P **P 15 53 32.6 +0.9**
baz=318
D27M Malcolm River 71.79 11 P **P 15 53 32.9 +1.0**
baz=333
COLD Coldfoot 71.80 16 IAmb IAmb 15 53 33.4
comp=Z,29nm,1.1s
COLD Coldfoot 71.80 16 P **P 15 53 32.5 +0.6**
baz=326,SNR=19
K13K Kusilvak Mount 71.96 24 P **P 15 53 33.5 +0.6**
baz=316
E25K Arctic Village 71.98 14 P **P 15 53 33.6 +0.6**
baz=330,SNR=11
F24K Squaw Lake 72.04 15 P **P 15 53 33.9 +0.5**
baz=328,SNR=7.5
D28M Stokes Point 72.06 11 P **P 15 53 34.7 +1.4**
baz=335
H20K Anotleneega Mo 72.11 18 P **P 15 53 34.1 +0.3**
baz=323
GCSA Galena City Sc 72.18 20 P **P 15 53 34.6 +0.5**
baz=321,SNR=7.2
J16K Anvik River 72.24 22 P **P 15 53 35.4 +0.9**
baz=318
G23K Bananza Creek 72.27 16 P **P 15 53 35.3 +0.6**
baz=326
ILON Igloolik, Nuna 72.41 350 IAmb IAmb 15 53 36.3
comp=Z,21nm,1.1s
F25K Christian Rive 72.42 14 P **P 15 53 36.8 +1.2**
baz=330,SNR=19
KHWEE KHWEE 72.48 224 *i* P **P 15 53 34.9 -1.7**
H21K Melozitna Rive 72.49 18 P **P 15 53 36.5 +0.5**
baz=324
M11K Mekoryuk 72.53 26 P **P 15 53 37.3 +1.0**

	baz=315								
E28M	**Babbage River**	**72.60**	**11**	P	**P**		**15 53 37.7**	**+1.2**	
	baz=335								
J17K	**VABM Dome**	**72.61**	**21**	IAmb	IAmb		15 54 31.8		
	comp=Z,47nm,1.5s								
J17K	**VABM Dome**	**72.61**	**21**	P	**P**		**15 53 37.4**	**+0.7**	
	baz=320								
F26K	**Sheenjek River**	**72.62**	**13**	P	**P**		**15 53 37.6**	**+0.9**	
	baz=331,SNR=13								
E27K	**Coleen River**	**72.64**	**12**	P	**P**		**15 53 37.8**	**+0.9**	
	baz=333,SNR=25								
H22K	**Ishtalitna Cre**	**72.64**	**17**	P	**P**		**15 53 37.6**	**+0.7**	
	baz=325								
K15K	**Wolf Creek Mou**	**72.70**	**23**	P	**P**		**15 53 38.4**	**+1.1**	
	baz=318								
I20K	**Naaghedeneel**	**72.77**	**19**	P	**P**		**15 53 38.5**	**+0.9**	
	baz=323								
G24K	**Hadweenzic Riv**	**72.82**	**15**	P	**P**		**15 53 38.9**	**+1.0**	
	baz=328,SNR=17								
L14K	**Kuka Creek**	**73.04**	**24**	IAmb	IAmb		15 54 34.9		
	comp=Z,36nm,1.1s								
L14K	**Kuka Creek**	**73.04**	**24**	P	**P**		**15 53 40.4**	**+1.2**	
	baz=317								
E29M	**Blow River**	**73.05**	**11**	P	**P**		**15 53 40.4**	**+1.2**	
	baz=336								
G25K	**Bearman Lake**	**73.05**	**15**	P	**P**		**15 53 40.4**	**+1.2**	
	baz=330,SNR=7.0								
I21K	**Tanana**	**73.08**	**18**	P	**P**		**15 53 40.2**	**+0.7**	
	baz=325								
J19K	**Poorman**	**73.11**	**20**	IAmb	IAmb		15 54 34.9		
	comp=Z,48nm,1.3s								
J19K	**Poorman**	**73.11**	**20**	P	**P**		**15 53 40.5**	**+0.8**	
	baz=322,SNR=19								
H23K	**Yukon River**	**73.12**	**16**	P	**P**		**15 53 40.5**	**+0.8**	
	baz=327								
L15K	**Ungalak Mounta**	**73.17**	**23**	P	**P**		**15 53 40.5**	**+0.5**	
	baz=318								
J18K	**Innoko River**	**73.23**	**20**	P	**P**		**15 53 41.0**	**+0.7**	
	baz=322								
G26K	**Porcupine Rive**	**73.34**	**14**	P	**P**		**15 53 41.9**	**+1.0**	
	baz=331,SNR=8.1								
J20K	**Nowinta River**	**73.36**	**19**	IAmb	IAmb		15 54 36.2		
	comp=Z,37nm,1.2s								
J20K	**Nowinta River**	**73.36**	**19**	P	**P**		**15 53 41.6**	**+0.5**	
	baz=323								
K17K	**Iditarod**	**73.36**	**21**	P	**P**		**15 53 42.0**	**+0.9**	
	baz=320								
LPHEP	**Lephephe**	**73.38**	**223**	*i* P	**P**		**15 53 40.0**	**-1.8**	
LPHEP	**Lephephe**	**73.38**	**223**	IAmb	IAmb		15 53 42.5		
	comp=Z,25nm,1.0s								
F28M	**Old Crow**	**73.44**	**12**	P	**P**		**15 53 42.3**	**+0.7**	
	baz=334,SNR=15								
H24K	**Noodor Dome**	**73.47**	**16**	P	**P**		**15 53 42.6**	**+0.7**	
	baz=328								
M13K	**Dall Lake**	**73.50**	**25**	P	**P**		**15 53 43.2**	**+1.3**	
	baz=317								
MLY	**Manley**	**73.50**	**17**	IAmb	IAmb		15 54 37.0		
	comp=Z,53nm,1.6s								
MLY	**Manley**	**73.50**	**17**	P	**P**		**15 53 42.4**	**+0.4**	
	baz=326								
MBWA	**Marble Bar**	**73.59**	**133**	P	**P**		**15 53 42.4**	**-0.6**	
C36M	**Paulatuk**	**73.71**	**6**	P	**P**		**15 53 43.1**	**+0.1**	
	baz=347,SNR=113								
M14K	**Bethel**	**73.71**	**24**	P	**P**		**15 53 44.2**	**+1.0**	
	baz=318,SNR=11								
I23K	**Minto, Yukon-K**	**73.73**	**17**	P	**P**		**15 53 43.8**	**+0.6**	
	baz=327,SNR=12								
INK	**Inuvik**	**73.73**	**9**	P	**P**		**15 53 44.0**	**+0.8**	
	baz=340,SNR=46								
L16K	**Owhat River**	**73.78**	**23**	IAmb	IAmb		15 54 39.2		
	comp=Z,30nm,1.0s								
L16K	**Owhat River**	**73.78**	**23**	P	**P**		**15 53 44.5**	**+0.9**	
	baz=320,SNR=9.0								
L17K	**Donlin**	**73.81**	**22**	P	**P**		**15 53 44.8**	**+1.1**	
	baz=321								
G27K	**Doyon Strip**	**73.86**	**13**	P	**P**		**15 53 44.8**	**+0.8**	
	baz=333								
PSA00	**Pilbara Seismi**	**73.98**	**133**	P	**P**		**15 53 44.4**	**-0.9**	
PSA00				IAmb	IAmb		15 53 45.4		
	comp=Z,34nm,0.9s								
PSA00	**Pilbara Seismi**	**73.98**	**133**	IAmb	IAmb		15 53 45.3		
	comp=Z,57nm,1.1s								
K20K	**Telida**	**74.04**	**19**	P	**P**		**15 53 45.6**	**+0.5**	
	baz=324,SNR=12								
KDWAN	**Kaudwane**	**74.05**	**224**	*i* P	**P**		**15 53 44.0**	**-1.8**	
CHUM	**Lake Minchumin**	**74.07**	**18**	P	**P**		**15 53 45.7**	**+0.5**	
	baz=325,SNR=9.2								
F30M	**Barrier River**	**74.08**	**10**	P	**P**		**15 53 46.1**	**+0.9**	
	baz=338								
M15K	**Kasigluk River**	**74.17**	**24**	P	**P**		**15 53 46.6**	**+0.8**	
	baz=319								
POKR	**Poker Plat Res**	**74.19**	**16**	P	**P**		**15 53 46.8**	**+0.9**	
	baz=329								
L18K	**Granite Mounta**	**74.22**	**21**	P	**P**		**15 53 46.6**	**+0.5**	
	baz=322								
BPAW	**Bear Paw Mtn.**	**74.22**	**18**	IAmb	IAmb		15 54 40.6		
	comp=Z,39nm,1.4s								
BPAW	**Bear Paw Mtn.**	**74.22**	**18**	P	**P**		**15 53 46.1**	**-0.1**	
	baz=326								
PRP	**Porcupine Dome**	**74.25**	**15**	IAmb	IAmb		15 54 41.2		
	comp=Z,38nm,1.8s								
PRP	**Porcupine Dome**	**74.25**	**15**	P	**P**		**15 53 47.2**	**+0.8**	
	baz=330,SNR=7.5								
NEA2	**Nenana**	**74.27**	**17**	IAmb	IAmb		15 53 47.5		
	comp=Z,30nm,0.8s								
NEA2	**Nenana**	**74.27**	**17**	P	**P**		**15 53 46.5**	**+0.1**	
	baz=327,SNR=19								
COLA	**College**	**74.30**	**16**	*i* P	**P**		**15 53 46.7**	**+0.2**	
COLA				pmax	pmax				
	comp=Z,33nm,0.9s								
COLA	**College**	**74.30**	**16**	P	**P**		**15 53 46.9**	**+0.4**	
	baz=328								
COLA	**College**	**74.30**	**16**	P	**P**		**15 53 47.1**	**+0.6**	
COLA				pP	**pP**		**15 54 40.4**	**+1.4**	
G29M	**Pine Creek**	**74.38**	**11**	P	**P**		**15 53 47.8**	**+0.8**	
	baz=336								
H27K	**Steamboat Moun**	**74.40**	**13**	IAmb	IAmb		15 53 49.1		
	comp=Z,27nm,0.9s								
H27K	**Steamboat Moun**	**74.40**	**13**	P	**P**		**15 53 48.1**	**+1.0**	
	baz=333,SNR=27								
N14K	**Kuskokwak Cree**	**74.42**	**25**	P	**P**		**15 53 48.3**	**+1.1**	
	baz=318								
GRTLG	**Ghanzi**	**74.47**	**228**	*i* P	**P**		**15 53 47.7**	**-0.5**	
M16K	**Timber Creek**	**74.47**	**23**	P	**P**		**15 53 48.7**	**+1.1**	
	baz=320								
CCB	**Clear Creek Bu**	**74.51**	**16**	IAmb	IAmb		15 54 42.3		
	comp=Z,30nm,1.4s								
F31M	**Tsiigehtchic**	**74.52**	**10**	P	**P**		**15 53 48.4**	**+0.7**	
	baz=340,SNR=31								
G30M	**tAoh Zraii Nji**	**74.60**	**11**	P	**P**		**15 53 48.7**	**+0.4**	
	baz=338								
ILAR	**Eielson Array**	**74.61**	**16**	P	**P**		**15 53 47.8**	**-0.5**	
	comp=Z,8.3nm,0.8s,baz=318,slow=4.7,SNR=89								
ILAR				pP	**pP**		**15 54 39.9**	**-0.9**	
	comp=Z,7.7nm,1.1s,baz=319,slow=3.5,SNR=7.1								
	comp=Z,8.3nm,0.8s								
M17K	**Holitna River**	**74.64**	**22**	P	**P**		**15 53 50.0**	**+1.5**	
	baz=321								
N15K	**Kwethluk River**	**74.76**	**24**	P	**P**		**15 53 50.7**	**+1.5**	
	baz=320								
L19K	**White Mountain**	**74.77**	**20**	IAmb	IAmb		15 54 44.7		
	comp=Z,45nm,1.2s								
L19K	**White Mountain**	**74.77**	**20**	P	**P**		**15 53 50.1**	**+0.8**	
	baz=323								
DBIC	**Dimbokro**	**74.77**	**267**	P	**P**		**15 53 48.5**	**-1.5**	
	comp=Z,22nm,0.6s,baz=69,slow=6.4,SNR=36								
	comp=Z,22nm,0.6s								
DBIC	**Dimbokro**	**74.77**	**267**	IAmb	IAmb		15 53 49.4		
	comp=Z,22nm,0.8s								
LBTB	**Lobatse**	**74.84**	**222**	P	**P**		**15 53 50.5**	**+0.3**	
LBTB				pP	**pP**		**15 54 44.1**	**+1.0**	
LBTB				sP	**sP**		**15 55 05.7**	**-0.9**	
HDA	**Harding Lake**	**74.91**	**16**	P	**P**		**15 53 49.2**	**-0.8**	
	baz=329,SNR=7.7								
PPLA	**Purkeypile**	**74.91**	**19**	P	**P**		**15 53 50.3**	**0.0**	
	baz=325,SNR=5.7								
I26K	**Coal Creek Min**	**74.92**	**14**	IAmb	IAmb		15 53 51.6		
	comp=Z,16nm,0.8s								
I26K	**Coal Creek Min**	**74.92**	**14**	P	**P**		**15 53 50.6**	**+0.5**	
	baz=332,SNR=15								
TRF	**Thorofare Moun**	**74.93**	**18**	P	**P**		**15 53 50.0**	**-0.4**	
	baz=327								
I27K	**Kandik River**	**74.95**	**13**	IAmb	IAmb		15 53 52.0		
	comp=Z,20nm,0.8s								
I27K	**Kandik River**	**74.95**	**13**	P	**P**		**15 53 50.9**	**+0.6**	
	baz=333								
N16K	**Nishlik Lake**	**74.95**	**23**	P	**P**		**15 53 51.5**	**+1.1**	
	baz=320								
H29M	**Whitestone**	**74.96**	**12**	P	**P**		**15 53 51.0**	**+0.7**	
	baz=336								
MCK	**McKinley**	**75.03**	**17**	IAmb	IAmb		15 54 45.2		
	comp=Z,33nm,1.5s								
MCK	**McKinley**	**75.03**	**17**	P	**P**		**15 53 50.8**	**0.0**	
	baz=328,SNR=6.6								
KGCAE	**Kacgae**	**75.03**	**226**	*i* P	**P**		**15 53 50.9**	**-0.5**	
M18K	**Stony River**	**75.05**	**21**	P	**P**		**15 53 51.4**	**+0.6**	
	baz=323								
O14K	**Tigyukauivet M**	**75.07**	**25**	P	**P**		**15 53 51.8**	**+0.8**	
	baz=319								
TSUM	**Tsumeb**	**75.07**	**232**	P	**P**		**15 53 50.9**	**-0.8**	
TSUM				IAmb	IAmb		15 53 51.9		
	comp=Z,16nm,0.8s								
J25K	**Salcha River,**	**75.07**	**15**	P	**P**		**15 53 50.7**	**-0.4**	
	baz=330								
EPYK	**Eagle Plains**	**75.09**	**11**	IAmb	IAmb		15 53 52.3		
	comp=Z,28nm,1.2s								
EPYK	**Eagle Plains**	**75.09**	**11**	P	**P**		**15 53 51.1**	**0.0**	
	baz=337,SNR=8.6								
M19K	**Big River Lodg**	**75.12**	**20**	P	**P**		**15 53 51.8**	**+0.4**	
	baz=324								
RND	**Reindeer**	**75.32**	**17**	IAmb	IAmb		15 54 46.6		
	comp=Z,46nm,1.4s								
I28M	**Miner Creek**	**75.39**	**13**	P	**P**		**15 53 52.9**	**0.0**	
	baz=335								
N17K	**Nushagak Hills**	**75.40**	**22**	P	**P**		**15 53 53.5**	**+0.6**	
	baz=322								
M20K	**Styx River**	**75.49**	**20**	P	**P**		**15 53 53.1**	**-0.4**	
	baz=325								
L22K	**Petersville**	**75.59**	**19**	IAmb	IAmb		15 54 48.3		
	comp=Z,43nm,1.2s								
O15K	**Ungalikthiuk R**	**75.61**	**24**	P	**P**		**15 53 54.4**	**+0.3**	
	baz=320								
N18K	**Kilae Creek**	**75.67**	**22**	P	**P**		**15 53 54.9**	**+0.4**	
	baz=323								
K24K	**Donelly Dome**	**75.69**	**16**	P	**P**		**15 53 54.3**	**-0.2**	
	baz=330,SNR=17								
I29M	**Ogilvie Camp,**	**75.76**	**12**	IAmb	IAmb		15 53 55.9		
	comp=Z,22nm,0.9s								
I29M	**Ogilvie Camp,**	**75.76**	**12**	P	**P**		**15 53 55.0**	**+0.1**	
	baz=336,SNR=23								
CUT	**Chulitna**	**75.82**	**19**	P	**P**		**15 53 54.4**	**-0.8**	
	baz=327								
SKT	**Skwentna**	**75.84**	**19**	P	**P**		**15 53 54.9**	**-0.5**	
	baz=326,SNR=11								
O16K	**Kokwok River B**	**75.85**	**23**	P	**P**		**15 53 56.5**	**+1.0**	
	baz=321								
WAT1	**Susitna Watana**	**75.89**	**18**	P	**P**		**15 53 54.9**	**-0.7**	
	baz=328								
MAKGR	**Makgori**	**75.91**	**222**	*i* P	**P**		**15 53 54.9**	**-1.5**	
SCRK	**Sand Creek**	**75.92**	**15**	IAmb	IAmb		15 53 56.9		
	comp=Z,14nm,0.6s								
SCRK	**Sand Creek**	**75.92**	**15**	P	**P**		**15 53 56.3**	**+0.3**	
	baz=332,SNR=17								
RIDG	**Independent Ri**	**75.95**	**16**	IAmb	IAmb		15 54 50.5		
	comp=Z,39nm,1.3s								
RIDG	**Independent Ri**	**75.95**	**16**	P	**P**		**15 53 55.6**	**-0.4**	
	baz=331,SNR=11								
DHY	**Denali Highway**	**75.95**	**17**	IAmb	IAmb		15 53 57.0		
	comp=Z,17nm,0.6s								
DHY	**Denali Highway**	**75.95**	**17**	P	**P**		**15 53 56.1**	**-0.1**	
	baz=329,SNR=13								
H31M	**Peel River**	**75.97**	**11**	P	**P**		**15 53 56.3**	**+0.2**	
	baz=339								
N19K	**Bonanza Creek**	**75.98**	**21**	P	**P**		**15 53 57.1**	**+0.8**	
	baz=324								
O17K	**Koliganek Bris**	**76.03**	**23**	P	**P**		**15 53 56.9**	**+0.5**	
	baz=322								
I30M	**Mount Dempster**	**76.20**	**12**	P	**P**		**15 53 57.6**	**0.0**	
	baz=338								
WAT6	**Susitna Watana**	**76.29**	**17**	P	**P**		**15 53 57.5**	**-0.7**	
	baz=329,SNR=8.8								
N20K	**Mount Spurr**	**76.31**	**20**	P	**P**		**15 53 57.9**	**-0.2**	
	baz=325								
SPCR	**Spurr Chakacha**	**76.31**	**20**	P	**P**		**15 53 58.2**	**+0.1**	
	baz=325								
KOOLE	**Kule**	**76.32**	**227**	*i* P	**P**		**15 53 57.4**	**-1.3**	
P16K	**Nushagak River**	**76.32**	**24**	P	**P**		**15 53 59.0**	**+0.9**	
	baz=321								
M22K	**Willow**	**76.40**	**19**	P	**P**		**15 53 58.8**	**+0.3**	
	baz=327								
PAX	**Paxson**	**76.48**	**16**	IAmb	IAmb		15 54 53.9		
	comp=Z,62nm,1.5s								
PAX	**Paxson**	**76.48**	**16**	P	**P**		**15 53 59.2**	**+0.1**	
	baz=330,SNR=14								
O19K	**Port Alsworth**	**76.53**	**21**	P	**P**		**15 53 59.6**	**+0.4**	
	baz=324								
O18K	**Koktuh Hills**	**76.54**	**22**	P	**P**		**15 53 60.0**	**+0.6**	
	baz=323								
J29N	**Klondike Camp**	**76.61**	**13**	IAmb	IAmb		15 54 54.5		
	comp=Z,28nm,1.1s								
J29N	**Klondike Camp**	**76.61**	**13**	P	**P**		**15 54 00.3**	**+0.6**	
	baz=336,SNR=10								
P17K	**Kvichak River**	**76.69**	**23**	P	**P**		**15 54 00.9**	**+0.7**	
	baz=322,SNR=6.1								
PMR	**Palmer**	**76.79**	**18**	P	**P**		**15 54 00.5**	**-0.1**	
	baz=328								
SML	**Sawmill**	**76.81**	**18**	P	**P**		**15 54 00.8**	**-0.1**	
	baz=328,SNR=5.8								
J30M	**Hart River**	**76.81**	**12**	P	**P**		**15 54 01.3**	**+0.4**	
	baz=338,SNR=15								
L26K	**Log Cabin Wild**	**76.90**	**15**	P	**P**		**15 54 01.7**	**+0.4**	
	baz=332,SNR=5.1								
P18K	**Big Mountain,**	**76.91**	**22**	P	**P**		**15 54 01.7**	**+0.3**	
	baz=323								
CAPN	**Captain Cook N**	**76.95**	**20**	P	**P**		**15 54 01.4**	**-0.2**	
	baz=326								
M23K	**Glacier View**	**76.97**	**18**	P	**P**		**15 54 02.0**	**+0.3**	
	baz=329,SNR=17								
Q16K	**King Salmon**	**77.03**	**23**	P	**P**		**15 54 02.7**	**+0.7**	
	baz=322								
SCM	**Sheep Creek Mo**	**77.04**	**18**	P	**P**		**15 54 02.2**	**+0.1**	
	baz=329								
RC01	**Rabbit Creek A**	**77.06**	**19**	P	**P**		**15 54 02.4**	**+0.2**	
	baz=327								
M24K	**Tolsona, Glenn**	**77.08**	**17**	P	**P**		**15 54 02.9**	**+0.5**	
	baz=330,SNR=11								
UNV	**Unalaska Valle**	**77.09**	**31**	P	**P**		**15 54 03.0**	**+0.5**	
	baz=316								
KNK	**Knik Glacier**	**77.12**	**18**	P	**P**		**15 54 03.0**	**+0.4**	
	baz=328								
L27K	**Beaver Creek,**	**77.19**	**15**	P	**P**		**15 54 03.5**	**+0.5**	
	baz=333								
K29M	**Barlow Dome**	**77.29**	**13**	P	**P**		**15 54 04.0**	**+0.4**	
	baz=337								
P19K	**Oil Pt**	**77.29**	**21**	P	**P**		**15 54 04.2**	**+0.6**	
	baz=325								
M26K	**Nabesna, AK**	**77.53**	**16**	P	**P**		**15 54 05.2**	**+0.3**	
	baz=332								
Q18K	**Katmai Hardscr**	**77.57**	**23**	P	**P**		**15 54 05.5**	**+0.2**	
	baz=324								
O22K	**Cooper Landing**	**77.58**	**19**	P	**P**		**15 54 05.1**	**0.0**	
	baz=328								
FALS	**False Pass**	**77.58**	**29**	P	**P**		**15 54 04.8**	**-0.3**	
	baz=318								
Q17K	**Contact Creek**	**77.61**	**23**	P	**P**		**15 54 05.4**	**-0.1**	
	baz=322								
R16K	**Pilot Point**	**77.61**	**24**	P	**P**		**15 54 05.7**	**+0.4**	
	baz=322								
KLU	**Klutina**	**77.67**	**17**	IAmb	IAmb		15 55 01.1		
	comp=Z,50nm,1.4s								
KLU	**Klutina**	**77.67**	**17**	P	**P**		**15 54 06.2**	**+0.5**	
	baz=330,SNR=5.6								
HOM	**Homer**	**77.74**	**21**	P	**P**		**15 54 06.4**	**+0.4**	
	baz=326								
Q19K	**Cape Douglas,**	**77.76**	**22**	P	**P**		**15 54 07.2**	**+1.0**	
	baz=325								
MAYO	**Mayo, Yukon**	**77.80**	**12**	P	**P**		**15 54 06.9**	**+0.6**	
	baz=338								
M27K	**Edge Creek, AK**	**77.81**	**15**	P	**P**		**15 54 07.0**	**+0.5**	
	baz=333								
MORW	**Morawa**	**77.83**	**141**	IAmb	IAmb		15 54 06.6		
	comp=Z,54nm,1.2s								
L29M	**L29M**	**77.86**	**13**	P	**P**		**15 54 07.4**	**+0.7**	
	baz=336								
N25K	**Chitina, Valde**	**77.88**	**17**	IAmb	IAmb		15 55 02.7		
	comp=Z,74nm,1.8s								
N25K	**Chitina, Valde**	**77.88**	**17**	P	**P**		**15 54 07.3**	**+0.4**	
	baz=331								
BOSA	**Boshof**	**77.91**	**220**	P	**P**		**15 54 06.4**	**-1.1**	
	comp=Z,30nm,0.8s,baz=25,slow=3.8,SNR=78								
	comp=Z,30nm,0.8s								
GLI	**Glacier Island**	**77.92**	**18**	P	**P**		**15 54 06.7**	**-0.3**	
	baz=330								
BRSE	**Bradley Lake S**	**77.93**	**20**	P	**P**		**15 54 07.0**	**-0.1**	
	baz=327								
S14K	**Fog Glacier**	**77.93**	**26**	P	**P**		**15 54 07.4**	**+0.2**	
	baz=321								
R17L	**Mt. Peulik Vol**	**77.96**	**24**	P	**P**		**15 54 07.3**	**0.0**	
	baz=323								
BVCY	**Beaver Creek**	**77.97**	**15**	P	**P**		**15 54 07.6**	**+0.4**	
	baz=334,SNR=8.2								
SEW	**Seward**	**77.97**	**19**	P	**P**		**15 54 07.4**	**+0.1**	
	baz=328								
CHGN	**Chignik**	**78.32**	**26**	P	**P**		**15 54 09.3**	**+0.1**	
	baz=321								
SDPT	**Sand Point**	**78.32**	**27**	P	**P**		**15 54 09.0**	**-0.2**	
	baz=320								
Q20K	**Shuyak Island**	**78.40**	**22**	P	**P**		**15 54 09.8**	**+0.2**	
	baz=326								
M29M	**Somme Creek**	**78.41**	**14**	P	**P**		**15 54 10.0**	**+0.2**	
	baz=336								
MCARA	**McCarthy VSAT**	**78.43**	**16**	P	**P**		**15 54 10.0**	**+0.2**	
	baz=333								
BMRM	**Bremner River**	**78.44**	**17**	IAmb	IAmb		15 55 05.4		
	comp=Z,54nm,1.2s								
BMRM	**Bremner River**	**78.44**	**17**	P	**P**		**15 54 10.1**	**+0.2**	
	baz=331								
VRDI	**Verde Repeater**	**78.47**	**16**	P	**P**		**15 54 10.2**	**-0.1**	
VRDI				IAmb	IAmb		15 55 05.6		
	comp=Z,21nm,1.2s								
EYAK	**Cordova Ski Ar**	**78.53**	**18**	P	**P**		**15 54 10.9**	**+0.6**	
	baz=331								
M30M	**Minto, Yukon**	**78.59**	**13**	IAmb	IAmb		15 55 33.9		
	comp=Z,37nm,1.9s								
M30M	**Minto, Yukon**	**78.59**	**13**	P	**P**		**15 54 11.1**	**+0.4**	
	baz=337								
P23K	**Montague Islan**	**78.60**	**19**	P	**P**		**15 54 10.9**	**+0.2**	
	baz=329								
YUK3	**Moose Creek**	**78.62**	**15**	P	**P**		**15 54 11.0**	**-0.1**	
	baz=335,SNR=10								
CRQE	**Cirque**	**78.98**	**16**	P	**P**		**15 54 12.8**	**-0.1**	
	baz=333								
BARN	**Barnard Glacie**	**79.02**	**16**	IAmb	IAmb		15 55 08.4		
	comp=Z,48nm,1.3s								
KDAK	**Kodiak Island**	**79.02**	**22**	P	**P**		**15 54 13.5**	**+0.4**	
	baz=326								
TGL	**Tana Glacier**	**79.03**	**16**	IAmb	IAmb		15 55 08.6		
	comp=Z,36nm,1.2s								
CHNA	**Chernabura Isl**	**79.04**	**27**	P	**P**		**15 54 13.3**	**+0.1**	
	baz=321								
CTG	**Chitna Glacier**	**79.17**	**15**	P	**P**		**15 54 14.2**	**+0.2**	
	baz=334								
YUK8	**Steele Glacier**	**79.21**	**15**	P	**P**		**15 54 14.3**	**-0.1**	
	baz=335								
OHAK	**Old Harbor**	**79.27**	**23**	P	**P**		**15 54 14.6**	**+0.2**	
	baz=325								
GRNC	**Granite Creek**	**79.29**	**16**	IAmb	IAmb		15 55 09.6		
	comp=Z,38nm,1.3s								
M31M	**Drury Creek, Y**	**79.35**	**12**	IAmb	IAmb		15 55 09.6		
	comp=Z,59nm,1.5s								
M31M	**Drury Creek, Y**	**79.35**	**12**	P	**P**		**15 54 15.0**	**+0.2**	
	baz=339,SNR=12								
Q23K	**Middleton Isla**	**79.36**	**18**	P	**P**		**15 54 14.6**	**-0.2**	
	baz=330								
LOGN	**Logan Glacier**	**79.37**	**15**	IAmb	IAmb		15 55 10.8		
	comp=Z,36nm,1.2s								
YUK4	**Talbot Arm**	**79.38**	**14**	P	**P**		**15 54 15.1**	**-0.1**	
	baz=336,SNR=7.1								
KAIM	**Kayak Island**	**79.40**	**17**	P	**P**		**15 54 14.7**	**-0.4**	
	baz=332								
MMPY	**Sheldon Lake,**	**79.44**	**10**	IAmb	IAmb		15 55 10.8		
	comp=Z,45nm,1.8s								
MMPY	**Sheldon Lake,**	**79.44**	**10**	P	**P**		**15 54 15.2**	**-0.1**	
	baz=342								
BGLC	**Bering Glacier**	**79.50**	**17**	P	**P**		**15 54 15.4**	**-0.1**	
	baz=332								
SII	**Sitkinak Islan**	**79.53**	**24**	P	**P**		**15 54 16.2**	**+0.4**	
	baz=324								
N30M	**Aishikik Lake**	**79.57**	**13**	P	**P**		**15 54 16.5**	**+0.5**	
	baz=337								
O28M	**Mount Upton**	**79.59**	**15**	P	**P**		**15 54 16.3**	**-0.1**	
	baz=335								
CHIR	**Chirikof Islan**	**79.65**	**25**	P	**P**		**15 54 16.7**	**+0.2**	
	baz=324								
KUQ	**Kuujjuaa**	**79.67**	**339**	IAmb	IAmb		15 54 17.5		
	comp=Z,22nm,0.8s								
MESA	**MESA**	**79.75**	**16**	P	**P**		**15 54 17.1**	**-0.1**	
	baz=334								
N31M	**Braeburn, Yuko**	**79.78**	**13**	IAmb	IAmb		15 55 12.7		
	comp=Z,37nm,1.2s								
N31M	**Braeburn, Yuko**	**79.78**	**13**	P	**P**		**15 54 17.3**	**+0.2**	
	baz=338,SNR=5.3								
YUK6	**Outpost Mounta**	**79.80**	**14**	P	**P**		**15 54 17.2**	**-0.3**	
	baz=336								
HYT	**Haines Junctio**	**80.08**	**14**	IAmb	IAmb		15 55 14.2		
	comp=Z,32nm,1.1s								
HYT	**Haines Junctio**	**80.08**	**14**	P	**P**		**15 54 18.7**	**-0.2**	
	baz=337,SNR=9.0								
PINM	**Pinnacle**	**80.19**	**15**	P	**P**		**15 54 19.3**	**-0.1**	
	baz=335								
O29M	**Mount Kennedy**	**80.35**	**14**	P	**P**		**15 54 20.2**	**-0.1**	
	baz=336								
O30N	**Mendenhall**	**80.39**	**13**	IAmb	IAmb		15 55 16.1		
	comp=Z,20nm,1.1s								
O30N	**Mendenhall**	**80.39**	**13**	P	**P**		**15 54 20.4**	**0.0**	
	baz=338,SNR=5.3								
N32M	**Quiet Lake**	**80.56**	**12**	P	**P**		**15 54 21.1**	**-0.2**	
	baz=340								
WHY	**Whitehorse**	**80.72**	**13**	IAmb	IAmb		15 54 22.5		
	comp=Z,24nm,0.9s								
WHY	**Whitehorse**	**80.72**	**13**	P	**P**		**15 54 21.7**	**-0.5**	
	baz=339								
TGTN	**Hyland Airport**	**80.90**	**9**	P	**P**		**15 54 23.1**

baz=342,SNR=6.0

SIT	**Sitka**	**84.01**	**14**	P	**P**	**15 54 38.6**	**-0.5**
	baz=339						
FCC	**Fort Churchill**	**84.13**	**352**	P	**P**	**15 54 40.0**	**+0.3**
FCC				IAmb	IAmb	15 55 34.8	
	comp=Z,26nm,1.3s						
FCC	**Fort Churchill**	**84.13**	**352**	P	**P**	**15 54 40.0**	**+0.3**
FCC				pmax	pmax		
	comp=Z,26nm,1.3s						
ASAR	**Alice Springs**	**84.29**	**125**	P	**P**	**15 54 39.4**	**-1.7**
	comp=Z,16nm,0.8s,baz=310,slow=5.0,SNR=259						
ASAR				pP	**pP**	**15 55 34.5**	**-0.7**
	comp=Z,4.2nm,0.8s,baz=319,slow=5.0,SNR=2.7						
ASAR				PKiKP	**PKiKP**	**15 59 52.0**	**-2.1**
	comp=Z,0.4nm,0.7s,baz=307,slow=0.7,SNR=4.5						
ASAR				PKKPbc	**PKKPbc**	**16 12 51.0**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=117,slow=3.0,SNR=7.6						
	comp=Z,16nm,0.8s						
T35M	**Bob Quinn**	**84.98**	**12**	P	**P**	**15 54 43.8**	**-0.3**
	baz=343						
WRAK	**Wrangell Islan**	**85.17**	**13**	P	**P**	**15 54 44.4**	**-0.5**
	baz=341						
U33K	**Whale Pass**	**85.31**	**13**	P	**P**	**15 54 45.0**	**-0.6**
	baz=341						
CRAG	**Craig**	**85.92**	**14**	P	**P**	**15 54 48.0**	**-0.6**
	baz=341						
U35K	**Hyder**	**86.04**	**12**	P	**P**	**15 54 48.6**	**-0.6**
	baz=343						
V35K	**Ketchikan**	**86.33**	**13**	P	**P**	**15 54 50.0**	**-0.6**
	baz=342						
FFC	**Flin Flon**	**88.78**	**356**	P	**P**	**15 55 02.3**	**-0.1**
FFC	**Flin Flon**	**88.78**	**356**	P	**P**	**15 55 02.3**	**-0.1**
FFC				pmax	pmax		
	comp=Z,54nm,1.7s						
FFC	**Flin Flon**	**88.78**	**356**	P	**P**	**15 55 02.8**	**+0.4**
FFC				pP	**pP**	**15 55 56.5**	**+0.1**
FFC				sP	**sP**	**15 56 21.2**	**+1.7**
EDM	**Edmonton**	**90.40**	**3**	P	**P**	**15 55 10.1**	**+0.1**
EDM	**Edmonton**	**90.40**	**3**	P	**P**	**15 55 10.1**	**+0.1**
EDM				pmax	pmax		
	comp=Z,26nm,0.9s						
INKA	**Innaminka**	**91.58**	**124**	P	**P**	**15 55 14.0**	**-1.7**
ULM	**Lac du Bonnet**	**92.70**	**352**	P	**P**	**15 55 19.6**	**-1.0**
	comp=Z,3.1nm,0.7s,baz=20,slow=6.2,SNR=5.9						
	comp=Z,3.1nm,0.7s						
ULM	**Lac du Bonnet**	**92.70**	**352**	IAmb	IAmb	15 55 21.3	
	comp=Z,15nm,1.5s						
AGMN	**Agassiz Nation**	**94.62**	**351**	IAmb	IAmb	15 55 30.4	
	comp=Z,24nm,1.6s						
STKA	**Stephens Creek**	**94.83**	**126**	P	**P**	**15 55 29.5**	**-1.1**
	comp=Z,1.6nm,0.6s,baz=326,slow=9.8,SNR=3.6						
	comp=Z,1.6nm,0.6s						
YNE	**Yellowstone No**	**98.70**	**1**	IAmb	IAmb	15 57 01.1	
	comp=Z,11nm,1.6s						
PDAR	**Pinedale Array**	**100.95**	**0**	PKiKP	**PKiKP**	**16 00 21.6**	**-0.9**
	comp=Z,0.2nm,0.6s,baz=326,slow=2.4,SNR=4.0						
NVAR	**Mina Array Bea**	**104.78**	**8**	PKiKP	**PKiKP**	**16 00 30.1**	**+0.6**
	comp=Z,0.7nm,0.8s,baz=265,slow=1.5,SNR=3.7						
TXAR	**Lajitas Array**	**114.17**	**355**	PKP	**PKiKP**	**16 00 47.0**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=22,slow=1.5,SNR=3.0						
TXAR				PKKPbc	**PKKPbc**	**16 11 25.2**	**-2.6**
	comp=Z,0.5nm,0.7s,baz=224,slow=1.8,SNR=4.5						
TROLL	**Troll, Antarti**	**118.27**	**199**	PKPdf	**PKPdf**	**16 00 52.9**	**-1.0**
SNAA	**Sanae**	**119.57**	**200**	PKP	**PKPdf**	**16 00 55.0**	**-1.2**
	comp=Z,2.8nm,0.7s,baz=342,slow=3.2,SNR=2.1						
VNA3	**Neumayer Olymp**	**121.38**	**202**	⇓PKPdf	**PKPdf**	**16 00 58.5**	**-1.1**
	comp=Z,9.7nm,0.7s						
BDFB	**Brasilia**	**122.41**	**274**	PKP	**PKiKP**	**16 01 05.7**	**+2.1**
	comp=Z,2.1nm,0.4s,baz=333,slow=6.8,SNR=3.7						
VNDA	**Vanda**	**125.63**	**164**	PKP	**PKPdf**	**16 01 06.0**	**-1.6**
	comp=Z,1.7nm,0.8s,baz=334,slow=6.3,SNR=3.3						
QSPA	**South Pole Qui**	**126.46**	**180**	PKP	**PKPdf**	**16 01 07.4**	**-2.1**
	comp=Z,8.5nm,0.9s,baz=239,slow=0.9,SNR=23						
ROSC	**El Rosal**	**127.57**	**314**	PKP	**PKPdf**	**16 01 12.3**	**-1.4**
	comp=Z,5.2nm,0.3s,baz=124,slow=21,SNR=4.6						
SIV	**San Ignacio**	**132.99**	**283**	PKP	**PKPdf**	**16 01 22.2**	**-1.2**
	comp=Z,1.9nm,0.6s,baz=110,slow=2.5,SNR=9.1						
CPUP	**Villa Florida**	**135.29**	**268**	PKP	**PKPdf**	**16 01 25.8**	**-1.6**
	comp=Z,5.2nm,0.8s,baz=42,slow=3.2,SNR=16						
LPAZ	**La Paz**	**138.62**	**288**	PKP	**PKPdf**	**16 01 33.5**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=14,slow=3.5,SNR=5.0						
PMSA	**Palmer Station**	**141.38**	**209**	PKP	**PKPdf**	**16 01 37.8**	**+0.5**
	comp=Z,40nm,0.9s,baz=129,slow=6.5,SNR=7.0						
AANI	**Anillaco**	**144.06**	**270**	*i* P	**PKPab**	**16 01 41.2**	**-0.3**
TINO	**Tinogasta**	**144.26**	**272**	*i* P	**PKPab**	**16 01 41.9**	**-0.4**
ACLC	**CERRO LA CRUZ**	**144.31**	**269**	*i* P	**PKPab**	**16 01 42.0**	**-0.6**
ACHE	**Chepes**	**144.72**	**266**	*i* P	PKPbc	16 01 43.0	-1.0
AC02	**Maricunga**	**144.99**	**275**	*i* P	PKPbc	16 01 44.8	-0.6
VCA	**Vinchina**	**145.05**	**271**	*i* P	**PKPbc**	**16 01 44.9**	**-0.2**
AVFE	**Valle Fertil**	**145.18**	**268**	*i* P	**PKPdf**	**16 01 44.7**	**-0.6**
ACAN	**Cantantal**	**145.52**	**265**	*i* P	**PKPdf**	**16 01 45.3**	**-0.5**
CFA	**Coronel Fontan**	**146.13**	**266**	PKPbc	**PKPdf**	**16 01 46.5**	**-0.3**
	comp=Z,32nm,1.0s,baz=72,slow=3.9,SNR=51						
GO03	**Copiapo**	**146.20**	**274**	*i* P	**PKPdf**	**16 01 46.2**	**-0.8**
ACDV	**Cuesta del Vie**	**146.34**	**269**	*i* P	**PKPdf**	**16 01 46.3**	**-1.1**
ZON	**Zonda**	**146.47**	**267**		**PKPdf**	**16 01 47.8**	**+0.4**
ZON	**Zonda**	**146.47**	**267**	PKIKP	**PKPdf**	**16 01 47.8**	**+0.4**
AROD	**Rodeo**	**146.62**	**270**	*i* P	**PKPdf**	**16 01 47.9**	**-0.2**
AAGR	**Agrelo**	**147.08**	**264**	*i* P	**PKPdf**	**16 01 48.4**	**-0.1**
ARCO	**CERRO ARCO**	**147.09**	**265**	*i* P	**PKPdf**	**16 01 48.2**	**-0.3**
AUSP	**Uspallata**	**147.26**	**266**	*i* P	**PKPdf**	**16 01 48.9**	**-0.1**
VA03	**San Esteban**	**148.36**	**266**	*i* P	**PKPdf**	**16 01 49.3**	**-1.2**
PLCA	**Paso Flores**	**149.94**	**250**	PKPbc	**PKPbc**	**16 01 57.2**	**-0.7**
	comp=Z,34nm,1.0s,baz=82,slow=3.7,SNR=3.9						

*MOS **30** 15:52:46.9±1.0,23˙98N×123˙45E,h30km,mb5.3/63, MS4.9/21,Error ellipse: s-maj=7.7km s-min=4.2km az=116.4*

*GFZ **30** 15:52:46.2,23˙95N×123˙48E,h29km,MW5.3,Moment Tensor Solution. s118 Moment tensor: Mrr0.72; Mθθ-0.71; Mφφ-0.01; Mrθ0.38; Mrφ-0.40; Mθφ0.59; Fault plane solution: NP1:ϕs43.00000°,δ66.00000°, λ68.00000°. NP2:ϕs268.00000°,δ31.00000°,λ130.00000°. Principal axes: T 1.0600, Plg62.0000°, Azm280.0000°; N 0.0300, Plg19.0000°, Azm52.0000°; P -1.0900, Plg19.0000°, Azm149.0000°;*

*BJI **30** 15:52:47.0,23˙87N×123˙49E,h37km,mB5.1/51,mb4.7/70, ML5.2/4,Ms5.1/83,Ms7 5.1/83*

*JMA **30** 15:52:48.2±0.2,24˚N±1˚×123˙4E±0˙5,h31km±2km, MD5.5/11,MW5.3/11,NEAR ISHIGAKIJIMA ISLAND*

JMA Felt II J1 at NEAR ISHIGAKIJIMA ISLAND.

*NIED **30** 15:52:48.2,23˙85N×123˙37E,h31km,MW5.5,Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁷Nm; Mrr0.64; Mθθ-0.67; Mφφ0.03; Mrθ1.29; Mθφ-0.51; Mrφ0.92; Fault plane solution: Mo1.77000×10¹⁷ NP1: ϕs257.00000°,δ14.00000°,λ112.00000°. NP2: ϕs55.00000°,δ77.00000°,λ85.00000°.*

*IDC **30** 15:52:49.7±1.7,23˙98N×123˙45E,h37km±13km,mb4.5/45, mbtmp4.7/51,ML4.0/6,MS4.7/80 Error ellipse: s-maj=11.4km s-min=9.5km az=72.0*

*NEIC **30** 15:52:49,24˙00N×123˙46E,h40km*

*NEIC **30** 15:52:49,23˙90N×123˙57E,h40km,Moment Tensor Solution. Duration: 2s2 Moment tensor: Scale 10¹⁷Nm; Mrr0.67; Mθθ-0.58; Mφφ-0.09; Mrθ0.53; Mθφ-0.60; Mrφ0.49; Fault plane solution: Mo1.13000×10¹⁷ NP1: ϕs248.90000°,δ25.59000°,λ109.33000°. NP2: ϕs47.65000°,δ65.95000°,λ80.99000°. Principal axes: T 0.9539, Plg68.0000°, Azm301.0000°; N 0.2970, Plg8.0000°, Azm51.0000°; P -1.2509, Plg20.0000°, Azm144.0000°;*

*NEIC **30** 15:52:49.1±1.4,23˙99N±0˙05×123˙45E±0˙07,h33km±4km, mb5.4/239,Mww5.3/22 Error ellipse: s-maj=9.6km s-min=7.3km az=107.0*

*GCMT **30** 15:52:52.1±0.1,23˙78N±0˙01×123˙34E±0˙01,h29km, MW5.4/133,Moment Tensor Solution. s105,c195; s133,c249; Duration: 1s2 Moment tensor: Scale 10¹⁷ Nm; Mrr1.03±.02; Mθθ-0.90±.01; Mφφ-0.13±.01; Mrθ0.73±.03; Mθφ-0.39±.01; Mrφ0.71±.03; Best double couple: Mo1.46300×10¹⁷ NP1:ϕs261.00000°,δ25.00000°, λ116.00000°. NP2:ϕs53.00000°,δ68.00000°,λ78.00000°. Principal axes: T 1.4840, Plg66.0000°, Azm303.0000°; N -0.0440, Plg11.0000°, Azm57.0000°; P -1.4410, Plg22.0000°, Azm151.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 15:52:48.5±0.4,23˚90N±0˙03×123˚40E±0˙02,h29km±2km, h29km:pP-P,n1020,σ1940/934,mb5.2/292,MS4.8/109,

73C-19D,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.40**	**67**	*i*	P		**Pb**	**15 52 57.6**	**+0.3**
HATJ					A		A	15 52 57.6	
	comp=N,989nm,2.8s,comp=E,813nm,1.2s								
HATJ					S		**Sn**	**15 53 04.6**	**-0.3**
IRIF	**Iriomote-Funau**	**0.52**	**35**	*i*	P		**Pb**	**15 52 59.5**	**+0.2**
IRIF					A		A	15 52 59.5	
	comp=N,343nm,2.0s,comp=E,318nm,2.0s								
IRIF					S		**Sn**	**15 53 08.2**	**+0.1**
JKRS	**Kuro-shima**	**0.65**	**59**	*i*	P		**Pn**	**15 53 01.8**	**+0.1**
JKRS					A		A	15 53 01.8	
	comp=N,768nm,1.9s,comp=E,596nm,1.7s								
JKRS					S		**Sn**	**15 53 12.1**	**+1.1**
YOJ	**Yonaguni jima**	**0.66**	**327**		P		**Pn**	**15 53 01.9**	**-0.1**
YOJ	**Yonaguni jima**	**0.66**	**327**		S		**Sb**	**15 53 09.7**	**-0.8**
YOJ	**Yonaguni jima**	**0.66**	**327**				**Pb**	**15 53 01.6**	**0.0**
YOJ	**Yonaguni jima**	**0.66**	**327**		P		**Pb**	**15 53 01.6**	**0.0**
YOJ	**Yonaguni jima**	**0.66**	**327**	*i*	P		**Pb**	**15 53 01.6**	**0.0**
YOJ					A		A	15 53 01.6	
	comp=N,182nm,3.8s,comp=E,181nm,3.6s								
YOJ					*e*S		**Sb**	**15 53 09.7**	**-0.8**
JYNG	**Yonagunijimaku**	**0.69**	**323**	*i*	P		**Pb**	**15 53 01.8**	**-0.2**
JYNG					A		A	15 53 01.8	
	comp=N,267nm,2.1s,comp=E,193nm,2.2s								
JYNG					*e*S		**Sb**	**15 53 10.9**	**-0.3**
JIJ	**Ishigaki jima**	**0.82**	**56**	*i*	P		**Pn**	**15 53 04.1**	**0.0**
JIJ					A		A	15 53 04.1	
	comp=N,337nm,1.5s,comp=E,133nm,1.1s								
JIJ					S		**Sn**	**15 53 16.1**	**+0.8**
JISG	**Ishigakijimahi**	**1.07**	**50**	*i*	P		**Pb**	**15 53 08.1**	**-0.4**
JISG					A		A	15 53 08.1	
	comp=N,279nm,1.8s,comp=E,240nm,2.2s								
JISG					*e*S		**Sb**	**15 53 23.0**	**+0.8**
JTJ	**Tarama**	**1.39**	**58**		P		**Pn**	**15 53 12.9**	**+0.9**
JTJ					A		A	15 53 12.9	
	comp=N,262nm,1.3s,comp=E,279nm,2.6s								
JTJ					*e*S		**Sb**	**15 53 32.1**	**+0.7**
NACB	**Ninganchiao**	**1.68**	**280**		P		**Pn**	**15 53 15.9**	**0.0**
NACB	**Ninganchiao**	**1.68**	**280**		S		**Sn**	**15 53 36.2**	**-0.3**
NACB	**Ninganchiao**	**1.68**	**280**				**Pn**	**15 53 15.7**	**-0.3**
JMJ2	**Miyako jima3**	**1.94**	**64**		A		A	15 53 20.9	
	comp=N,188nm,2.1s,comp=E,142nm,2.1s								
JMJ	**Miyako jima 2**	**1.95**	**62**		P		**Pn**	**15 53 20.6**	**+0.9**
JIKM	**Ikemajima**	**1.96**	**59**		A		A	15 53 21.3	
	comp=N,103nm,2.7s,comp=E,116nm,2.1s								
YULB	**Yu-li**	**2.00**	**256**		P		**Pn**	**15 53 19.4**	**-0.9**
YULB	**Yu-li**	**2.00**	**256**		S		**Sn**	**15 53 43.3**	**-1.1**
YULB	**Yu-li**	**2.00**	**256**				**Pn**	**15 53 19.5**	**-0.9**
YHNB	**Yeheng**	**2.00**	**293**		P		**Pn**	**15 53 22.0**	**+1.5**
YHNB	**Yeheng**	**2.00**	**293**				**Pn**	**15 53 21.5**	**+1.0**
JOGS	**Gusukube**	**2.02**	**65**		A		A	15 53 22.0	
	comp=N,189nm,3.0s,comp=E,218nm,5.5s								
TATO	**Taipei**	**2.04**	**302**		P		**Pn**	**15 53 22.1**	**+1.1**
TATO	**Taipei**	**2.04**	**302**				**Pn**	**15 53 22.1**	**+1.1**
SSLB	**Suanglung**	**2.25**	**268**		P		**Pn**	**15 53 23.7**	**-0.1**
SSLB	**Suanglung**	**2.25**	**268**				**Pn**	**15 53 23.4**	**-0.4**
TWGBT	**Beinan**	**2.39**	**244**		P		**Pn**	**15 53 24.9**	**-0.9**
TWG	**Pinlang**	**2.40**	**244**				**Pn**	**15 53 25.1**	**-0.8**
TPUB	**Ta-pu**	**2.61**	**257**		P		**Pn**	**15 53 30.1**	**+1.2**
TPUB	**Ta-pu**	**2.61**	**257**		S		**Sn**	**15 54 00.7**	**+1.0**
TPUB	**Ta-pu**	**2.61**	**257**				**Pn**	**15 53 29.6**	**+0.7**
JKE	**Kume jima 2**	**3.90**	**51**		A		A	15 53 48.9	
	comp=N,7.0nm,3.2s,comp=E,9.0nm,2.1s								
JAGN	**Aguni-jima**	**4.38**	**52**		A		A	15 53 55.7	
	comp=N,13nm,2.1s,comp=E,14nm,3.0s								
QZH2	**Quanzhou**	**4.50**	**284**	⇑	*i*Pn		**Pn**	**15 53 54.5**	**-0.3**
QZH2					Sn		**Sn**	**15 54 43.0**	**-3.2**
QZH2					SMN				
	comp=E,850nm,1.2s								
QZH2					SME				
	comp=E,620nm,1.1s								
QZH2					L		L		
	comp=E,26μm,14.8s								
JJT3	**Tamagusuku3**	**4.56**	**60**		A		A	15 53 58.0	
	comp=N,38nm,2.5s,comp=E,29nm,2.3s								
KNMB	**Chin-men Tao**	**4.61**	**278**				**Pn**	**15 53 56.0**	**-0.3**
JIH	**Iheya**	**5.17**	**52**		A		A	15 54 06.7	
	comp=N,4.0nm,1.8s,comp=E,5.0nm,2.8s								
JOW	**Kunigami**	**5.28**	**55**		Pn		**Pn**	**15 54 04.7**	**-0.9**
	comp=E,7.5nm,0.3s,baz=140,slow=20,SNR=24								
JOW					Sn		**Sn**	**15 55 06.7**	**+1.1**
	comp=E,7.1nm,0.3s,baz=100,slow=27,SNR=3.6								
	comp=E,34nm,0.3s								
JOW	**Kunigami**	**5.28**	**55**		P		**Pn**	**15 54 05.1**	**-0.5**
JOW	**Kunigami**	**5.28**	**55**		A		A	15 54 08.3	
	comp=N,6.0nm,1.9s,comp=E,5.0nm,3.7s								
SIPP	**Brgy, Tapao**	**6.56**	**205**	*e*	P		**Pn**	**15 54 25.5**	**+2.4**
SIPP				*e*	S		**Sn**	**15 55 33.4**	**-3.5**
ABRA	**Dolores**	**6.71**	**203**	*e*	P		**Pn**	**15 54 26.4**	**+1.2**
ABRA				*i*	S		**Sn**	**15 55 39.0**	**-1.8**
SZP	**Santa**	**6.90**	**204**		P		**Pn**	**15 54 29.3**	**+1.6**
JMZ	**Minamidaito 2**	**7.36**	**73**		P		**Pn**	**15 54 33.9**	**-0.1**
SSE	**Sheshan**	**7.43**	**345**		Pn		**Pn**	**15 54 33.8**	**-1.2**
SSE					Sn		**Sn**	**15 55 58.8**	**+0.5**
SSE					L		L		
	comp=E,4μm,12.5s								
SSE					L		L		
	comp=E,3μm,12.7s								
BOLP	**Bolinao**	**8.17**	**204**	*e*	P		**Pn**	**15 54 44.6**	**-0.6**
BOLP				*e*	S		**Sn**	**15 56 15.2**	**-1.5**
HKPS	**Hong Kong Po S**	**8.68**	**261**		P		**Pn**	**15 54 53.2**	**+1.0**
GZH2	**Guangzhou**	**8.93**	**270**		P		**Pn**	**15 54 55.3**	**-0.4**
GZH2					S		**Sn**	**15 56 36.5**	**+1.1**
GZH2					SME				
	comp=E,220nm,1.1s								
NJ2	**Nanjing**	**9.06**	**335**	*e*	P		**Pn**	**15 54 58.3**	**+1.0**
NJ2					pP			15 55 06.8	
NJ2					S		**Sn**	**15 56 37.5**	**-0.9**
NJ2					pmax		pmax		
	comp=E,160nm,0.7s								
NJ2					SMN				
	comp=E,250nm,2.0s								
NJ2					SME				
	comp=E,400nm,2.0s								
NJ2					L		L		
	comp=E,21μm,13.3s								
NJ2					L		L		
	comp=E,10μm,13.3s								
NJ2					L		L		
	comp=E,25μm,12.3s								
PCPS	**Palayan City**	**9.46**	**194**	*e*	P		Pn	15 54 51.9	-11
PCPS				*e*	S		Sn	15 56 26.4	-22
JSU	**Suzuyama**	**9.81**	**38**		P		**Pn**	**15 55 07.9**	**+0.1**
GQP	**Guinayangan**	**9.99**	**185**	*e*	P		**Pn**	**15 55 11.5**	**+1.4**
GQP				*e*	S		**Sn**	**15 56 53.5**	**-7.8**
TGY	**Tagaytay City**	**10.02**	**194**		Pn		**Pn**	**15 55 12.2**	**+1.5**
	comp=E,8.0nm,0.3s,baz=14,slow=3.2,SNR=12								
TGY					Sn		**Sn**	**15 56 57.0**	**-5.3**
	comp=E,2.5nm,0.3s,baz=11,slow=13,SNR=3.0								
TGY					LR		LR	15 59 18.3	
	comp=E,7μm,20.0s,baz=50,slow=38								
CNSH	**ChangSha**	**10.33**	**297**		P		**Pn**	**15 55 18.0**	**+3.1**
CNSH					S		**Sn**	**15 57 18.0**	**+8.3**
CNSH					pmax		pmax		
	comp=E,30nm,0.7s								
CNSH					L		L		
	comp=E,5μm,12.6s								
CNSH					L		L		
	comp=E,7μm,16.3s								
CNSH					L		L		
	comp=E,8μm,15.4s								
WHN	**Wuhan**	**10.42**	**311**		P		**Pn**	**15 55 17.3**	**+1.3**
WHN					sP			15 55 27.5	
WHN					S		**Sn**	**15 57 11.0**	**-0.8**
WHN					pmax		pmax		
	comp=E,1μm,10.6s								
WHN					L		L		
	comp=E,15μm,11.9s								
WHN					L		L		
	comp=E,17μm,12.5s								
WHN					L		L		
	comp=E,25μm,14.1s								
JNU	**Nakatsue**	**11.29**	**34**		Pn		**Pn**	**15 55 28.1**	**+0.1**
	comp=E,0.6nm,0.3s,baz=204,slow=12,SNR=8.0								
	comp=E,1.7nm,0.3s								
RCP	**Roxas**	**12.29**	**183**	*e*	P		**P**	**15 55 51.1**	**-2.5**
PLP	**Palo**	**12.76**	**173**	*e*	P		**Pn**	**15 55 48.3**	**+0.2**
TIA	**Tai'an**	**13.41**	**338**		P		**Pn**	**15 56 00.5**	**+3.6**
TIA					pmax		pmax		
	comp=E,25nm,1.4s								
TIA					pmax		pmax		
	comp=E,1μm,4.8s								
TIA					L		L		
	comp=E,6μm,13.1s								
TIA					L		L		
	comp=E,3μm,14.4s								
TIA					L		L		
	comp=E,9μm,13.1s								
JMN	**Monobe**	**13.41**	**41**		Pn		Pn	15 55 51.8	-5.2
QIZ	**Qiongzhong**	**13.52**	**252**		P		**Pn**	**15 55 59.3**	**+0.8**
QIZ					S		**Sn**	**15 58 30.8**	**+2.9**
QIZ					L		L		
	comp=E,4μm,20.7s								
QIZ					L		L		
	comp=E,2μm,19.7s								
QIZ					L		L		
	comp=E,3μm,17.9s								
ENH	**Enshi**	**13.92**	**300**				**Pn**	**15 56 02.9**	**-1.1**
KSRS	**Korea Array**	**14.05**	**15**		Pn		**Pn**	**15 56 06.6**	**+1.0**
	comp=E,0.4nm,0.3s,baz=196,slow=11,SNR=28								
KSRS					LR		LR	16 02 06.4	
	comp=E,3μm,19.1s,baz=185,slow=40								
	comp=E,9.9nm,0.9s								
TBP	**Tagbilaran**	**14.14**	**178**	*i*	P		**Pn**	**15 56 07.6**	**+0.6**
SCPH	**Surigao**	**14.18**	**172**	*e*	P		**P**	**15 56 11.3**	**-3.5**
LYN	**LuoYang**	**14.26**	**321**	⇑	P		**Pn**	**15 56 10.5**	**+2.0**
LYN					sP		P	15 56 17.5	+2.0
LYN					PP		**PnPn**	**15 56 23.0**	**+6.4**
LYN					S		**S**	**15 58 57.3**	**-8.4**
LYN					SS		Sn	15 59 08.0	+22
LYN					pmax		pmax		
	comp=E,16nm,0.6s								
LYN					pmax		pmax		
	comp=E,1μm,5.5s								
LYN					L		L		
	comp=E,17μm,11.8s								
LYN					L		L		
	comp=E,5μm,12.4s								
LYN					L		L		
	comp=E,17μm,12.9s								
PPR	**Puerto Princes**	**14.74**	**198**	*i*	P		**P**	**15 56 18.2**	**-2.7**
DL2	**Dalian**	**15.03**	**355**		P		**P**	**15 56 23.8**	**-0.2**
DL2					pmax		pmax		
	comp=E,50nm,1.4s								
DL2					pmax		pmax		
	comp=E,1μm,6.5s								
DL2					L		L		
	comp=E,3μm,17.0s								
DL2					L		L		
	comp=E,4μm,15.3s								
DL2					L		L		
	comp=E,6μm,12.6s								
GYA	**Guiyang**	**15.37**	**283**	⇓	P		**Pn**	**15 56 25.0**	**+1.4**
GYA					pmax		pmax		
	comp=E,31nm,1.5s								
GYA					L		L		
	comp=E,12μm,18.4s								
HNS	**HongShan**	**15.38**	**333**	⇑	P		**P**	**15 56 26.0**	**-1.9**
HNS					sP		**pP**	**15 56 37.0**	**+1.7**
HNS					pmax		pmax		
	comp=E,38nm,1.4s								
HNS					pmax		pmax		
	comp=E,630nm,4.4s								
HNS					L		L		
	comp=E,5μm,14.3s								
HNS					L		L		
	comp=E,4μm,14.5s								
HNS					L		L		
	comp=E,6μm,15.1s								
XAN	**Xi'an**	**16.19**	**312**	⇑	P		**P**	**15 56 38.0**	**+1.1**
XAN					S		**S**	**15 59 41.0**	**-4.2**
XAN					pmax		pmax		
	comp=E,43nm,1.4s								
XAN					pmax		pmax		
	comp=E,980nm,4.1s								
XAN					L		L		
	comp=E,1μm,12.0s								
XAN					L		L		
	comp=E,6μm,12.7s								
XAN					L		L		
	comp=E,7μm,13.1s								
TIY	**Taiyuan**	**16.66**	**328**		P		**P**	**15 56 41.5**	**-0.7**
TIY					sP		**sP**	**15 56 53.0**	**-0.4**
TIY					S		**Sn**	**15 59 43.5**	**-0.7**
TIY					pmax		pmax		
	comp=E,890nm,6.1s								
TIY					L		L		
	comp=E,4μm,15.3s								
TIY					L		L		
	comp=E,3μm,15.3s								
TIY					L		L		
	comp=E,5μm,17.1s								
JGF	**Kuroka**	**16.79**	**43**		P		**Pn**	**15 56 41.9**	**+0.2**
JGF	**Kuroka**	**16.79**	**43**		Pn		**Pn**	**15 56 38.8**	**-2.8**
DAV	**Davao City (W)**	**16.87**	**173**		Pn		**P**	**15 56 45.6**	**+1.1**
	comp=E,138nm,0.3s,baz=3.5,slow=18,SNR=3.7								
DAV					LR		LR	16 03 32.6	
	comp=E,3μm,20.1s,baz=334,slow=38								
DAV	**Davao City (W)**	**16.87**	**173**		IAmb		IAmb	15 56 50.4	
	comp=Z,148nm,0.3s								
KCP	**Kidapawan**	**16.88**	**174**	*i*	P		**P**	**15 56 44.3**	**-0.4**
JHJ	**Hachijo jima 2**	**17.06**	**54**		LR		LR	16 03 00.6	
	comp=Z,1μm,21.4s,baz=254,slow=36								
BJI2	**Beijing**	**17.19**	**341**		P		**P**	**15 56 47.8**	**-0.1**
BJI2					pP	

HHC L L
comp=Z,2µm,20.8s
HHC L L
comp=Z,4µm,16.4s
PZH PanZhiHua 19.77 282 P **Pn** **15 57 18.5 +0.3**
PZH S **S** **16 00 57.3 -0.7**
PZH pmax pmax
comp=Z,40nm,1.5s
PZH pmax pmax
comp=Z,630nm,5.5s
PZH L L
comp=Z,1µm,11.2s
PZH L L
comp=Z,6µm,16.1s
PZH L L
comp=Z,8µm,16.7s
CN2 Changchun 19.92 4 *e*P **P** **15 57 17.0 -0.9**
CN2 *e*S **S** **16 00 55.0 -5.5**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 L L
comp=Z,2µm,12.0s
CN2 L L
comp=Z,2µm,12.0s
CN2 L L
comp=Z,2µm,13.0s
BTO2 Baotou 20.27 329 *e*P **P** **15 57 22.5 +0.6**
BTO2 PP **PnPn** **15 57 43.8 +4.7**
BTO2 pmax pmax
comp=Z,140nm,1.2s
BTO2 pmax pmax
comp=Z,530nm,2.7s
BTO2 L L
comp=Z,9µm,15.0s
BTO2 L L
comp=Z,4µm,15.8s
BTO2 L L
comp=Z,12µm,15.3s
LZH Lanzhou 20.80 310 *e*P Pn 15 57 29.3 -0.9
LZH sP sP 15 57 42.0 +3.9
LZH S **S** **16 01 18.5 +0.1**
LZH pmax pmax
comp=Z,60nm,1.7s
LZH pmax pmax
comp=Z,400nm,4.3s
LZH L L
comp=Z,3µm,15.6s
LZH L L
comp=Z,4µm,18.1s
LZH L L
comp=Z,6µm,17.5s
XLT XiLinHaoTe 20.83 345 *e*P **P** **15 57 27.3 -0.6**
XLT PP **PnPn** **15 57 46.5 -0.2**
XLT S **S** **16 01 17.0 -1.9**
XLT pmax pmax
comp=Z,16nm,0.8s
XLT L L
comp=Z,570nm,14.5s
XLT L L
comp=Z,3µm,14.0s
XLT L L
comp=Z,7µm,14.0s
LZDM Lanzhou Array 20.84 310 P **P** **15 57 28.5 +0.2**
comp=Z,3.5nm,0.3s,baz=146,slow=8.2,SNR=7.7
LZDM LR LR 16 06 10.3
comp=Z,3µm,20.9s,baz=90,slow=38
comp=Z,3.5nm,0.3s
MDJ Mudanjiang 21.27 12 P **P** **15 57 32.5 0.0**
MDJ pmax pmax
comp=Z,15nm,1.3s
MDJ pmax pmax
comp=Z,540nm,11.7s
MDJ L L
comp=Z,4µm,16.8s
MDJ L L
comp=Z,4µm,14.4s
MDJ L L
comp=Z,6µm,16.7s
USRK Ussuriysk Ar. 21.43 17 P **P** **15 57 32.6 -1.7**
comp=Z,3.8nm,0.6s,baz=205,slow=6.4,SNR=5.6
comp=Z,3.8nm,0.6s
BNX BinXian 22.03 7 ⇓P **P** **15 57 39.0 -1.6**
BNX S **S** **16 01 40.0 -2.0**
BNX pmax pmax
comp=Z,34nm,1.2s
BNX pmax pmax
comp=Z,140nm,5.4s
BNX L L
comp=Z,2µm,16.3s
BNX L L
comp=Z,2µm,15.2s
BNX L L
comp=Z,2µm,12.7s
MNI Manado 22.37 176 P **P** **15 57 46.2 +1.6**
comp=Z,3µmcomp=Z,3µmcomp=Z,138nm,1.3s
JTM Tenmabayashi 22.43 37 P **P** **15 57 45.4 +0.4**
JTM Tenmabayashi 22.43 37 P **P** **15 57 41.5 -3.5**
TNCH TengChong 22.67 278 ⇑*i*P **P** **15 57 49.5 +1.6**
TNCH pP sP 15 57 59.0 +0.1
TNCH S **S** **16 01 57.0 +2.4**
TNCH pmax pmax
comp=Z,70nm,1.8s
TNCH pmax pmax
comp=Z,730nm,3.4s
TNCH L L
comp=Z,1µm,7.5s
TNCH L L
comp=Z,5µm,14.0s
TNCH L L
comp=Z,9µm,15.0s
GUMO Guam 22.74 113 LR LR 16 06 32.5
comp=Z,2µm,19.4s,baz=303,slow=36
TOLI2 Tolitoli 22.80 187 P **P** **15 57 49.8 +0.7**
TOLI2 Tolitoli 22.80 187 P **P** **15 57 48.5 -0.7**
GTOI Gorontalo 23.13 181 P **P** **15 57 50.7 -1.8**
comp=Z,3µmcomp=Z,960nmcomp=Z,89nm,1.2s
TNTI Ternate 23.31 170 P **P** **15 57 53.2 -1.1**
TNTI IAmb IAmb 15 58 13.3
comp=Z,231nm,1.3s
TNTI Ternate 23.31 170 P **P** **15 57 55.1 +0.8**
comp=Z,2µmcomp=Z,135nm,1.2s
CHTO Chiang Mai 23.32 262 P **P** **15 57 55.2 +0.7**
CHTO Chiang Mai 23.32 262 P **P** **15 57 53.7 -0.8**
CHTO Chiang Mai 23.32 262 P **P** **15 57 53.7 -0.8**
CHTO pmax pmax
comp=Z,45nm,1.3s
CHTO Chiang Mai 23.32 262 P **P** **15 57 55.9 +1.4**
MRSI Marisa 23.33 184 P **P** **15 57 56.1 +1.6**
comp=Z,2µmcomp=Z,87nm,1.3s
CMAR Chiang Mai Arr 23.43 261 P **P** **15 57 56.0 +0.5**
comp=Z,5.7nm,1.0s,baz=63,slow=8.1,SNR=28
CMAR PcP **PcP** **16 01 42.0 +0.6**
comp=Z,0.8nm,0.6s,baz=104,slow=1.6,SNR=5.3
CMAR LR LR 16 08 19.1
comp=Z,1µm,20.7s,baz=75,slow=40
comp=Z,5.7nm,1.0s
CMAR Chiang Mai Arr 23.43 261*ce*P **P** **15 57 57.5 +2.0**
CMAR pmax pmax
comp=Z,6.0nm,0.9s
MPSI Mapaga 23.67 189 P **P** **15 58 00.3 +2.5**
comp=Z,48nm,1.2s
SBUM Sibu 23.91 209 P **P** **15 57 59.8 -0.3**
SBUM Sibu 23.91 209 P **P** **15 58 00.9 +0.8**
JEM Erimo 24.41 38 P **P** **15 58 05.7 +1.2**
APSI Ampana 24.73 184 P **P** **15 58 10.7 +3.2**
comp=Z,2µmcomp=Z,154nm,1.2s
LUWI Luwuk 24.80 182 P **P** **15 58 08.0 -0.3**
LUWI IAmb IAmb 15 58 31.1
comp=Z,123nm,1.1s
LUWI Luwuk 24.80 182 P **P** **15 58 08.4 +0.1**
comp=Z,2µmcomp=Z,122nm,1.2s
PCI Palu 24.90 188 P **P** **15 58 09.8 +0.6**
comp=Z,2µmcomp=Z,143nm,1.5s
LKP Lekhapani 25.06 284 *e*P P 15 58 01.1 -9.5
LKP IAmb IAmb 15 58 19.4
comp=Z,62nm,0.6s
GTA2 Gaotai 25.31 313 P **P** **15 58 12.3 -0.6**
GTA2 sP sP 15 58 29.0 +5.2
GTA2 sS sS 16 02 46.3 -4.6
GTA2 SS **SnSn** **16 03 37.3 +7.6**
GTA2 ScP **ScP** **16 05 23.8 +1.1**
GTA2 pmax pmax
comp=Z,35nm,0.8s
GTA2 pmax pmax
comp=Z,370nm,7.6s
GTA2 L L
comp=Z,2µm,14.4s
GTA2 L L
comp=Z,4µm,12.7s
GTA2 L L
comp=Z,4µm,15.1s
PASG PASIGHAT 25.55 285 *e*P P 15 58 07.2 -7.8
PASG IAmb IAmb 15 58 18.4
comp=Z,30nm,0.8s
ASAJ Asahikawa 25.57 33 P **P** **15 58 14.4 -0.6**
comp=Z,5.3nm,0.6s,baz=228,slow=14,SNR=11
ASAJ LR LR 16 08 31.3
comp=Z,3µm,21.6s,baz=236,slow=37
comp=Z,5.3nm,0.6s
SWI Sorong 25.77 162 P **P** **15 58 16.6 -0.5**
comp=Z,2µmcomp=Z,758nmcomp=Z,56nm,1.1s
SIJI Sorong 25.78 162 LR LR 16 06 18.4
comp=Z,2µm,21.6s,baz=328,slow=31
SIJI Sorong 25.78 162 P **P** **15 58 21.5 +4.3**
comp=Z,722nmcomp=Z,47nm,1.2s
SANI Sanana 25.92 174 P **P** **15 58 20.3 +1.9**
comp=Z,2µmcomp=Z,1µmcomp=Z,74nm,1.0s
KLR Kul'dur 26.12 12 P **P** **15 58 18.5 -1.4**
comp=Z,2.7nm,0.5s,baz=176,slow=10.0,SNR=12
KLR PcP **PcP** **16 01 47.3 +0.5**
comp=Z,3.7nm,0.8s,baz=292,slow=4.2,SNR=5.6
KLR LR LR 16 09 59.4
comp=Z,2µm,18.9s,baz=194,slow=40
comp=Z,2.7nm,0.5s
KLR Kul'dur 26.12 12*ce*P **P** **15 58 19.1 -0.8**
KLR pmax pmax
comp=Z,30nm,1.6s
HEH HeiHe 26.49 6 *e*P **P** **15 58 21.5 -1.7**
HEH S **S** **16 02 54.5 -0.8**
HEH pmax pmax
comp=Z,32nm,1.3s
HEH pmax pmax
comp=Z,150nm,4.8s
HEH L L
comp=Z,1µm,14.7s
HEH L L
comp=Z,2µm,13.5s
HEH L L
comp=Z,3µm,13.1s
MWPI Manokwari, Pap 26.76 156 P **P** **15 58 29.5 +3.5**
comp=Z,117nm,1.1s
MMSI Mamuju 26.79 190 P **P** **15 58 27.6 +1.3**
comp=Z,808nmcomp=Z,59nm,1.1s
IMP Imphal 26.83 278 *e*P P 15 58 18.1 -8.6
IMP IAmb IAmb 15 58 33.7
comp=Z,67nm,2.0s
ZIRO ZIRO 26.84 284 *e*P P 15 58 17.5 -9.4
ZIRO IAmb IAmb 15 58 42.7
comp=Z,38nm,0.9s
ITAN ITANAGAR 26.95 283 *e*P P 15 58 18.9 -8.8
ITAN IAmb IAmb 15 58 33.2
comp=Z,95nm,0.8s
NLAI Namlea 27.22 172 P **P** **15 58 33.9 +3.8**
ULN Ulaanbaatar 27.22 336 P **P** **15 58 28.6 -1.4**
ULN Ulaanbaatar 27.22 336*ce*P **P** **15 58 28.9 -1.2**
ULN pmax pmax
comp=Z,19nm,1.3s
ULN Ulaanbaatar 27.22 336 P **P** **15 58 28.3 -1.8**
comp=Z,42nm,0.9s
SONM Songino Array 27.45 335 P **P** **15 58 30.5 -1.6**
comp=Z,16nm,0.9s,baz=155,slow=8.8,SNR=36
SONM PcP **PcP** **16 01 50.6 +0.4**
comp=Z,1.9nm,1.0s,baz=116,slow=3.4,SNR=2.5
SONM ScP **ScP** **16 05 27.5 -1.2**
comp=Z,0.4nm,0.7s,baz=202,slow=3.1,SNR=4.1
SONM LR LR 16 10 37.2
comp=Z,3µm,19.4s,baz=176,slow=39
comp=Z,16nm,0.9s
SONM Songino Array 27.45 335 P **P** **15 58 30.7 -1.4**
SONM Songino Array 27.45 335 **ScP** **16 05 29.1 +0.4**
SONM Songino Array 27.45 335 P **P** **15 58 30.7 -1.4**
SONM 16 01 50.6
SONM pmax pmax
comp=Z,34nm,1.3s
KRAI Karang Ratu 27.49 169 P **P** **15 58 35.9 +3.4**
comp=Z,2µmcomp=Z,37nm,1.0s
GOMU GeErMu 27.51 303 P **P** **15 58 32.3 -0.7**
GOMU pmax pmax
comp=Z,5.0nm,1.2s
GOMU L L
comp=Z,2µm,14.3s
GOMU L L
comp=Z,1µm,12.2s
PMSI Majene 27.59 190 P **P** **15 58 35.3 +1.9**
comp=Z,1µmcomp=Z,100nm,1.2s
YSS Yuzhno-Sakhali 27.74 29 *e*P **P** **15 58 38.8 +4.3**
YSS *e*S **S** **16 03 20.2 +5.1**
YSS pmax pmax
comp=Z,40nm,1.3s
YSS MLR MLR
comp=N,2µm,15.0s
TEZP TEZPUR 27.78 282 *e*P P 15 58 27.7 -7.4
TEZP IAmb IAmb 15 58 36.9
comp=Z,135nm,1.6s
SPSI Sidrap Palu 27.93 188 P **P** **15 58 41.4 +5.0**
comp=Z,620nmcomp=Z,28nm,1.1s
SAIH SAIHA 27.97 273 *e*P P 15 58 27.7 -9.3
SAIH IAmb IAmb 15 58 43.6
comp=Z,1µm,4.5s
FAKI Fak Fak 28.02 161 P **P** **15 58 38.4 +1.1**
FAKI Fak Fak 28.02 161 IAmb IAmb 15 59 20.6
comp=Z,82nm,1.3s
BBKI Banjar Baru 28.45 198 P **P** **15 58 45.6 +4.5**
comp=Z,39nm,0.5s
SHL Shillong 28.64 280 P **P** **15 58 42.7 -0.3**
SHL IAmb IAmb 15 59 09.6
comp=Z,92nm,1.8s
SHL Shillong 28.64 280 P **P** **15 58 42.7 -0.3**
SHL pmax pmax
comp=Z,92nm,1.8s
KULM Kulim 28.67 233 P **P** **15 58 42.8 -0.4**
GUWA GUWAHATI 28.78 281 *e*P P 15 58 34.6 -9.5
GUWA IAmb IAmb 15 58 45.6
comp=Z,66nm,1.8s
PBKI Pangkalan Bun 28.81 205 P P 15 58 50.2 +5.9
KAPI Kappang 28.96 188 LR LR 16 11 14.9
comp=Z,1µm,19.0s,baz=354,slow=38
KAPI Kappang 28.96 188 P **P** **15 58 48.5 +2.9**
CIT Chita 29.07 347 *e*P **P** **15 58 44.8 -1.6**
CIT *e* 15 58 54.4
CIT *e* 15 58 59.0
CIT *e* 16 00 00.6
MKS Makassar 29.20 188 P **P** **15 58 51.2 +3.5**
comp=Z,773nmcomp=Z,63nm,1.3s
AGT Agartala 29.37 277 *e*P P 15 58 39.8 -9.5
AGT IAmb IAmb 15 58 52.5
comp=Z,52nm,0.5s
ZEA Zeya 29.93 5 *e*P **P** **15 58 52.9 -1.0**
ZEA *e*S **S** **16 03 42.3 -7.2**
ZEA pmax pmax
comp=N,10.0nm,1.3s
ZEA pmax pmax
comp=Z,30nm,1.3s
ZEA smax smax
comp=N,100nm,5.8s
ZEA MLR MLR
comp=Z,900nm,15.0s
ZEA MLR MLR
comp=E,700nm,11.0s
DHUB DHUBRI 30.32 281 *e*P P 15 58 48.2 -9.4
DHUB IAmb IAmb 15 58 59.3
comp=Z,6.4nm,0.9s
TYV Tymovskoe 30.77 24 *e*P P 15 59 12.9 +12
TYV pmax pmax
comp=Z,200nm,3.9s
TYV pmax pmax
comp=Z,8.0nm,1.1s
JAY Jayapura 31.19 145 LR LR 16 09 24.3
comp=Z,4µm,20.7s,baz=335,slow=32
TLY Talaya 31.61 336 LR LR 16 13 12.9
comp=Z,2µm,19.4s,baz=131,slow=39
TLY Talaya 31.61 336 P **P** **15 59 07.6 -1.2**
TLY Talaya 31.61 336*ce*P **P** **15 59 08.0 -0.8**
TLY pmax pmax
comp=Z,28nm,1.5s
PSI Prapat 31.62 232 P **P** **15 59 11.1 +1.7**
PSI Prapat 31.62 232 P **P** **15 59 10.5 +1.1**
PSI pmax pmax
comp=Z,27nm,1.3s
PSI Prapat 31.62 232 P **P** **15 59 11.1 +1.7**
RPSI Rantau Prapat 31.69 232 P **P** **15 59 10.5 +0.7**
IRK Irkutsk 31.85 338 *e*P **P** **15 59 06.3 -4.6**
IRK pmax pmax
comp=Z,34nm,2.9s
MMRI Maumere 32.36 182 P **P** **15 59 19.5 +3.8**
LBFI Labuhan Bajo, 32.37 187 P **P** **15 59 16.1 +0.4**
comp=Z,19nm,1.0s
MNSI Mandailing Nat 32.57 229 P **P** **15 59 18.1 +0.5**
comp=Z,23nm,1.0s
MOY Mondy 32.63 334 *e*P **P** **15 59 16.1 -1.7**
MOY pmax pmax
comp=Z,34nm,2.0s
PPI Padang Panjang 32.94 226 P **P** **15 59 21.9 +1.1**
comp=Z,30nm,1.2s
KHKI Kahang-Kahang 32.96 194 P P 15 59 29.5 +8.6
KNGR Kungurtug, Tuv 33.36 330 *i* P **P** **15 59 23.9 -0.4**
KNGR pmax pmax
comp=Z,13nm,1.1s
SOEI Soe 33.46 178 IAmb IAmb 16 00 41.0
comp=Z,50nm,1.2s
BATI Baumata 33.90 180 LR LR 16 15 25.0
comp=Z,783nm,19.7s,baz=324,slow=40
BATI Baumata 33.90 180 P **P** **15 59 26.7 -2.4**
GAYA Gaya 34.71 279 *e*P P 15 59 25.1 -11
GAYA IAmb IAmb 15 59 38.3
comp=Z,43nm,1.3s
WMQ Urumqi 35.32 313 *e*P **P** **15 59 42.3 +1.0**
WMQ pP pwP 15 59 51.0 -1.3
WMQ PP **PP** **16 01 05.0 +3.4**
WMQ S **S** **16 05 17.0 +3.3**
WMQ pmax pmax
comp=Z,19nm,0.7s
WMQ L L
comp=Z,2µm,16.3s
WMQ L L
comp=Z,2µm,14.7s
WMQ L L
comp=Z,640nm,20.3s
YAK Yakutsk 38.35 5 P **P** **16 00 04.5 -2.2**
comp=Z,31nm,0.9s,baz=184,slow=7.8,SNR=11
YAK LR LR 16 18 13.4
comp=Z,973nm,19.2s,baz=188,slow=40
comp=Z,31nm,0.9s
YAK Yakutsk 38.35 5 P **P** **16 00 04.8 -1.9**
YAK IAmb IAmb 16 00 14.2
comp=Z,40nm,0.9s
YAK Yakutsk 38.35 5 *e*P **P** **16 00 04.3 -2.4**
YAK *e**PP **pP** **16 00 11.9 -3.1**
YAK *e* 16 01 30.6
YAK *e* 16 02 17.9
YAK *e*S **S** **16 05 58.7 -0.5**
YAK *e*SS **SnSn** **16 08 37.6 -8.1**
YAK *e* 16 10 10.9
YAK pmax pmax
comp=Z,46nm,1.1s
YAK pmax pmax
comp=N,37nm,1.5s
YAK pmax pmax
comp=E,8.0nm,1.0s
YAK pmax pmax
comp=Z,242nm,6.6s
YAK pmax pmax
comp=N,191nm,7.2s
YAK pmax pmax
comp=E,203nm,6.7s
YAK smax smax
comp=N,256nm,7.1s
YAK smax smax
comp=E,167nm,6.3s
YAK MLR MLR
comp=Z,622nm,19.0s
YAK MLR MLR
comp=N,570nm,19.0s
YAK MLR MLR
comp=E,244nm,12.0s
YAK Yakutsk 38.35 5 P **P** **16 00 05.0 -1.6**
YAK pP **pP** **16 00 13.4 -1.6**
ZSN Zaisan 38.57 317 *e*P **P** **16 00 08.4 -0.4**
PTH Pithoragarh 38.82 288 *e*P P 16 00 02.1 -9.2
PTH IAmb IAmb 16 00 13.5
comp=Z,112nm,1.4s
JOSI Joshimath 39.36 290 *e*P P 16 00 06.0 -10
JOSI IAmb IAmb 16 00 17.8
comp=Z,838nm,2.7s
PET Petropavlovsk 39.41 33 P **P** **16 00 14.4 -1.3**
PET IAmb IAmb 16 00 34.6
comp=Z,101nm,1.4s
PET Petropavlovsk 39.41 33 *e*P **P** **16 00 15.1 -0.6**
PET *e*S **S** **16 06 13.8 -1.6**
PET pmax pmax
comp=Z,30nm,0.8s
PET MLR MLR
comp=Z,400nm,15.0s
PET Petropavlovsk 39.41 33 P **P** **16 00 14.7 -1.0**
comp=Z,45nm,1.3s
KRVT Keravat (AS076 39.55 131 LR LR 16 13 19.9
comp=Z,260nm,21.7s,baz=215,slow=31
MK31 Makanchi Array 39.96 315*ce*P **P** **16 00 19.7 -0.7**
MKAR Makanchi Array 39.96 315 P **P** **16 00 19.5 -0.9**
comp=Z,4.5nm,0.5s,baz=99,slow=9.8,SNR=65
MKAR PcP **PcP** **16 02 25.7 +0.3**
comp=Z,3.8nm,0.8s,baz=90,slow=4.1,SNR=3.5
MKAR LR LR 16 18 12.9
comp=Z,1µm,19.0s,baz=92,slow=38
comp=Z,4.5nm,0.5s
MKAR Makanchi Array 39.96 315*ce*P **P** **16 00 20.1 -0.3**
MKAR pmax pmax
comp=Z,5.0nm,0.5s
MAKZ Makanchi 40.16 315 P **P** **16 00 21.6 -0.4**
MAKZ Makanchi 40.16 315 P **P** **16 00 21.7 -0.4**
MAKZ pmax pmax
comp=Z,39nm,1.5s
MAKZ Makanchi 40.16 315 P **P** **16 00 21.9 -0.2**
MAKZ pP **pP** **16 00 30.0 +0.1**
MAKZ PcP **PcP** **16 02 25.0 -1.0**
PMG Port Moresby 40.44 142 LR LR 16 16 28.9
comp=Z,2µm,19.3s,baz=306,slow=35
PMG Port Moresby 40.44 142 P **P** **16 00 23.9 -0.7**
PMG Port Moresby 40.44 142*ce*P **P** **16 00 24.9 +0.3**
PMG pmax pmax
comp=Z,31nm,1.3s
KLP Kalpa 40.46 291 *e*P P 16 00 15.7 -9.5
KLP IAmb IAmb 16 00 29.1
comp=Z,373nm,2.1s
H11N1 WAKE ISLAND Hy 40.48 87 T T 16 43 42.3
baz=276,slow=75,SNR=14
H11N2 WAKE ISLAND Hy 40.48 87 T T 16 44 02.2
baz=276,slow=75,SNR=10.0
MA2 Magadan 40.49 21 P **P** **16 00 22.1 -2.5**
comp=Z,1.2nm,0.3s,baz=180,slow=15,SNR=2.3
MA2 LR LR 16 17 33.3
comp=Z,1µm,20.7s,baz=220,slow=37
comp=Z,1.2nm,0.3s
MA2 Magadan 40.49 21*ce*P **P** **16 00 24.1 -0.5**
MA2 pmax pmax
comp=Z,13nm,1.3s
H11N3 WAKE ISLAND Hy 40.49 87 T T 16 43 50.7
baz=276,slow=75,SNR=11
JHNI Jhansi 40.59 282 *e*P P 16 00 16.6 -9.3
JHNI IAmb IAmb 16 00 26.9
comp=Z,62nm,0.3s
H11S3 WAKE ISLAND Hy 40.60 89 T T 16 43 59.1
baz=278
H11S1 WAKE ISLAND Hy 40.60 89 T T 16 44 02.8
baz=278,slow=74
H11S2 WAKE ISLAND Hy 40.61 89 T T 16 44 00.4
baz=278,slow=74
DDI Dehra Dun 40.66 289 *e*P P 16 00 15.9 -11
DDI IAmb IAmb 16 00 28.8
comp=Z,224nm,1.3s
UZB Uzynbulak 41.12 309 *e*P **P** **16 00 30.2 0.0**
ALCI Alchi Leh 41.38 295 *e*P P 16 00 23.1 -10
ALCI IAmb IAmb 16 00 35.1
comp=Z,25nm,0.6s
SMLA Simla 41.40 291 *e*P P 16 00 23.2 -9.3
SMLA IAmb IAmb 16 00 34.6
comp=Z,49nm,0.6s
KPKS Kokpek 41.44 309 *e*P **P** **16 00 32.7 0.0**
NDI New Delhi 41.49 287 *e*P P 16 00 24.1 -9.1
NDI IAmb IAmb 16 00 34.3
comp=Z,704nm,2.9s
NPLP NPLP New Delhi 41.53 287 *e*P P 16 00 24.4 -9.2
NPLP IAmb IAmb 16 00 35.8
comp=Z,169nm,1.7s
SATY Saty 41.54 309 *e*P **P** **16 00 33.7 0.0**

ZAA0 Zalesovo Array 41.59 326 P **P** 16 00 32.2 -1.5
ZALV Zalesovo Beam 41.59 326 P **P** 16 00 31.9 -1.8
comp=Z,15nm,0.6s,baz=116,slow=8.1,SNR=50
ZALV PcP **PcP** 16 02 29.7 -0.8
comp=Z,2.0nm,0.5s,baz=101,slow=5.8,SNR=2.0
ZALV ScP **ScP** 16 06 16.6 -2.1
comp=Z,0.5nm,0.4s,baz=132,slow=2.1,SNR=1.7
ZALV LR LR 16 19 07.9
comp=Z,3μm,18.2s,baz=118,slow=38
comp=Z,15nm,0.6s
SONA Sohna 41.66 286 *e*P P 16 00 25.5 -9.1
SONA IAmb IAmb 16 00 37.0
comp=Z,150nm,1.4s
FITZ Fitzroy Crossi 41.80 177 LR LR 16 18 43.0
comp=Z,264nm,21.7s,baz=350,slow=37
GUNA GUNA 41.85 281 *e*P P 16 00 27.1 -9.2
GUNA IAmb IAmb 16 00 37.5
comp=Z,29nm,0.9s
TDK Taldygorghan 42.00 311 *e*P **P** 16 00 37.4 +0.2
comp=Z,20nm,0.8s
BHPL Bhopal 42.00 279 *e*P P 16 00 28.2 -9.3
BHPL IAmb IAmb 16 00 39.1
comp=Z,9.4nm,0.9s
BHK Bhakra 42.06 291 *e*P P 16 00 24.8 -13
BHK IAmb IAmb 16 00 40.4
comp=Z,76nm,1.0s
DHRM DHARAMSHALA 42.11 292 *e*P P 16 00 28.9 -10
DHRM IAmb IAmb 16 00 40.9
comp=Z,486nm,2.5s
KUDL Kundal 42.17 286 *e*P P 16 00 29.7 -9.1
KUDL IAmb IAmb 16 00 40.1
comp=Z,33nm,1.1s
COEN Coen 42.30 151 P **P** 16 00 41.0 +1.1
COEN Coen 42.30 151 P **P** 16 00 40.3 +0.4
HYB Hyderabad 42.32 270 *e*P **P** 16 00 40.6 +0.4
HYB *es*P **pwP** 16 00 54.0 +1.3
HYB *e*PP **PP** 16 02 19.0 +0.4
HYB *e*PcP **PcP** 16 02 34.2 +0.6
HYB *e*S **S** 16 06 59.9 +0.2
HYB IVMs_BB IVMs_BB 16 20 49.6
comp=Z,212nm,11.6s
MDOK Medeo 42.54 308 *e*P **P** 16 00 41.9 +0.1
TNSS Tian-Shan 42.58 308 *e*P **P** 16 00 42.5 0.0
AAA Alma-Ata 42.64 308 *e*P **P** 16 00 42.7 +0.2
ULHL Ulahol 42.95 307 P **P** 16 00 45.7 +0.5
SNR=14
KSH2 Kashi 43.02 302 P **P** 16 00 47.3 +1.5
KSH2 sP sP 16 01 02.3 +5.1
KSH2 S **S** 16 07 09.5 -0.3
KSH2 pmax pmax
comp=Z,15nm,0.9s
KSH2 L L
comp=Z,2μm,16.1s
KSH2 L L
comp=Z,1μm,15.8s
KSH2 L L
comp=Z,2μm,18.2s
KUU Kurty 43.19 309 *e*P **P** 16 00 47.0 +0.1
JMU Jammu 43.34 293 *e*P P 16 00 39.0 -9.4
JMU IAmb IAmb 16 00 50.5
comp=Z,55nm,0.8s
TKM2 Tokmak 2 43.54 308 P **P** 16 00 50.7 +0.7
SNR=25
SEY Seymchan 43.57 19 P **P** 16 00 47.9 -1.7
comp=Z,2.7nm,0.6s,baz=224,slow=7.6,SNR=7.8
SEY PcP **PcP** 16 02 37.1 +0.2
comp=Z,4.1nm,0.7s,baz=204,slow=4.9,SNR=4.4
SEY LR LR 16 19 23.7
comp=Z,1μm,21.6s,baz=178,slow=37
comp=Z,2.7nm,0.6s
SEY Seymchan 43.57 19 *i*P **P** 16 00 49.8 +0.2
SEY pmax pmax
comp=Z,4.0nm,0.9s
KURK Kurchatov 43.61 320 P **P** 16 00 49.2 -1.0
KURK Kurchatov 43.61 320*ce*P **P** 16 00 49.1 -1.0
KURK pmax pmax
comp=Z,47nm,1.3s
KURK Kurchatov 43.61 320 P **P** 16 00 49.7 -0.4
KURK pP **pP** 16 00 58.0 0.0
KURBB Kurchatov Arra 43.63 319 P **P** 16 00 49.1 -1.2
comp=Z,30nm,1.2s,baz=114,slow=7.6,SNR=46
KURBB LR LR 16 21 12.1
comp=Z,428nm,19.8s,baz=147,slow=39
comp=Z,30nm,1.2s
KBK Karagaybulak 43.96 307 P **P** 16 00 54.2 +0.8
SNR=6.8
PALK Pallekele 44.12 255 LR LR 16 21 28.2
comp=Z,379nm,18.4s,baz=63,slow=39
CHMS Chumysh 44.16 308 P **P** 16 00 55.1 +0.3
SNR=7.7
UCH Uchtor 44.21 307 P **P** 16 00 57.1 +1.4
SNR=16
AAK Ala-Archa 44.29 307 LR LR 16 22 13.9
comp=Z,1μm,19.5s,baz=99,slow=40
AAK Ala-Archa 44.29 307 P **P** 16 00 55.2 -0.8
AAK Ala-Archa 44.29 307 *i*P **P** 16 00 56.4 +0.4
AAK pmax pmax
comp=Z,5.0nm,1.1s
AAK Ala-Archa 44.29 307 P **P** 16 00 56.6 +0.7
AAK pP **pP** 16 01 05.0 +1.1
AAK x x 16 01 09.5
NIL Nilore 44.65 294 P **P** 16 00 57.8 -1.0
NIL IAmb IAmb 16 01 00.9
comp=Z,46nm,1.1s
NIL Nilore 44.65 294 P **P** 16 00 57.8 -1.0
NIL pmax pmax
comp=Z,46nm,1.2s
WRAB Tennant Creek 44.86 165 P **P** 16 00 59.8 -0.7
WRAB Tennant Creek 44.86 165*ce*P **P** 16 01 00.8 +0.3
WRAB pmax pmax
comp=Z,16nm,0.8s
WRAB Tennant Creek 44.86 165 P **P** 16 01 00.4 -0.1
WRAB x x 16 01 09.8
WRA Warramunga Arr 44.87 165 P **P** 16 01 00.4 -0.1
comp=Z,10nm,0.9s,baz=347,slow=8.6,SNR=40
comp=Z,10nm,0.9s
WRA Warramunga Arr 44.87 165 **P** 16 01 00.3 -0.2
WRA Warramunga Arr 44.87 165 P **P** 16 01 00.3 -0.2
WRA pmax pmax
comp=Z,2.0nm,1.2s
WR8 Warramunga Arr 44.92 165 P **P** 16 01 00.4 -0.5
BTLS Baital 45.02 310 *e*P **P** 16 01 01.9 +0.3
OHH Osh 45.30 304 P **P** 16 01 03.0 -0.9
DRK Karamyk 45.96 302 IAmb IAmb 16 01 42.4
comp=Z,102nm,1.9s
MTSU Mount Surprise 46.50 152 P **P** 16 01 15.2 +1.7
DZA Taraz 46.63 307 *e*P **P** 16 01 14.3 -0.1
QIS Mount Isa 46.93 159 P **P** 16 01 18.0 +1.2
BRZS Berezniki 47.02 317 *e*P **P** 16 01 17.5 +0.2
GAR Garm 47.09 302 IAmb IAmb 16 01 20.2
comp=Z,30nm,0.9s
BRLS Borolday 47.74 307 *e*P **P** 16 01 23.9 +0.9
SHEM Shemya Is, Ala 47.75 39 LR LR 16 19 45.7
comp=Z,175nm,21.9s,baz=285,slow=34
CHM Chimkent 47.84 306 *e*P **P** 16 01 24.0 +0.2
comp=Z,5.8nm,0.6s
TIXI Tiksi 47.87 2 P **P** 16 01 21.7 -1.8
comp=Z,12nm,1.0s,baz=173,slow=4.7,SNR=15
TIXI LR LR 16 24 11.8
comp=Z,2μm,18.5s,baz=200,slow=39
comp=Z,12nm,1.0s
TIXI Tiksi 47.87 2 P **P** 16 01 21.6 -1.8
TIXI Tiksi 47.87 2*ce*P **P** 16 01 21.2 -2.3
TIXI pmax pmax
comp=Z,23nm,1.3s
TIXI Tiksi 47.87 2 P **P** 16 01 21.9 -1.6
TIXI pP **pP** 16 01 30.3 -1.7
TIXI PcP **PcP** 16 02 52.0 +0.2
CHGR Chuyangaron 47.98 301 IAmb IAmb 16 01 50.7
comp=Z,24nm,0.9s
CHGR Chuyangaron 47.98 301 *i*P **P** 16 01 25.6 +0.6
CHGR pmax pmax
comp=Z,27nm,0.9s
ASAR Alice Springs 48.37 167 P **P** 16 01 28.6 +0.6
comp=Z,9.4nm,1.0s,baz=354,slow=7.9,SNR=48
ASAR ScP **ScP** 16 06 45.6 -1.4
comp=Z,1.8nm,1.2s,baz=352,slow=4.2,SNR=3.7
ASAR S **S** 16 08 23.9 -2.8
comp=Z,1.3nm,1.0s,baz=343,slow=19,SNR=7.3
ASAR LR LR 16 22 10.2
comp=Z,382nm,21.6s,baz=344,slow=36
comp=Z,9.4nm,1.0s
HNR Honiara 48.71 129 LR LR 16 21 08.7
comp=Z,50nm,19.8s,baz=28,slow=35
SHAA Shahritus 48.79 300 IAmb IAmb 16 01 34.7
comp=Z,135nm,1.3s

CTA Charters Tower 49.07 151 LR LR 16 20 04.6
comp=Z,1μm,21.9s,baz=338,slow=33
CTAO Charters Tower 49.07 151 P **P** 16 01 35.1 +1.7
BVAR Borovoye Array 49.18 320 P **P** 16 01 33.0 -0.9
comp=Z,2.5nm,0.3s,baz=97,slow=8.9,SNR=27
BVAR PcP **PcP** 16 02 56.5 -0.3
comp=Z,2.8nm,0.5s,baz=88,slow=3.4,SNR=4.3
BVAR LR LR 16 23 15.1
comp=Z,406nm,19.3s,baz=102,slow=37
comp=Z,2.5nm,0.3s
BORK Borovoye 49.22 320 P **P** 16 01 32.4 -1.8
BORK IAmb IAmb 16 01 35.5
comp=Z,48nm,1.6s
BORK Borovoye 49.22 320*ce*P **P** 16 01 33.0 -1.2
BORK pmax pmax
comp=Z,25nm,1.3s
BORK Borovoye 49.22 320 P **P** 16 01 34.1 -0.2
NRIK Noril'sk 50.21 344 P **P** 16 01 39.6 -1.8
comp=Z,11nm,1.0s,baz=103,slow=3.6,SNR=12
NRIK PcP **PcP** 16 02 59.8 -0.5
comp=Z,7.0nm,1.0s,baz=206,slow=2.3,SNR=1.6
NRIK LR LR 16 25 24.5
comp=Z,2μm,18.6s,baz=137,slow=39
comp=Z,11nm,1.0s
NRIK Noril'sk 50.21 344 P **P** 16 01 39.7 -1.7
NRIK Noril'sk 50.21 344*c i*P **P** 16 01 40.2 -1.2
NRIK pmax pmax
comp=Z,18nm,1.2s
MEEK Meekatharra 50.46 186 P **P** 16 01 44.6 +0.8
BILL Bilibino 51.27 19 P **P** 16 01 48.0 -1.5
BILL Bilibino 51.27 19*ce*P **P** 16 01 49.2 -0.3
BILL pmax pmax
comp=Z,13nm,1.5s
QLP Quilpie 54.08 157 P **P** 16 02 11.4 +0.7
SVE Sverdlovsk 55.47 324 *e*P **P** 16 02 20.4 -0.1
SVE pmax pmax
comp=Z,45nm,1.2s
SVE MLR MLR
comp=Z,1μm,17.0s
AKTO Aktyubinsk 56.39 316 LR LR 16 28 03.8
comp=Z,825nm,18.7s,baz=86,slow=38
ARTI Arti 56.64 323 LR LR 16 30 06.5
comp=Z,485nm,18.7s,baz=98,slow=40
ARTI Arti 56.64 323 P **P** 16 02 27.9 -1.0
ARTI IAmb IAmb 16 02 30.1
comp=Z,23nm,0.7s
ARTI Arti 56.64 323*c i*P **P** 16 02 27.7 -1.2
ARTI 16 03 23.7
ARTI 16 04 31.2
ARTI S **S** 16 10 19.7 +0.6
ARTI SS **SS** 16 14 06.6 -0.1
ARTI pmax pmax
comp=Z,20nm,0.8s
ARTI MLR MLR
comp=Z,586nm,15.0s
ARTI Arti 56.64 323 P **P** 16 02 28.1 -0.8
NWAO Narrogin (SRO) 56.82 186 LR LR 16 28 01.3
comp=Z,136nm,20.2s,baz=317,slow=37
SPIA Saint Paul Isl 57.46 36 P **P** 16 02 35.1 +0.5
baz=264
BBOO Buckleboo 57.68 167 P **P** 16 02 36.5 +0.1
BBOO IAmb IAmb 16 02 45.9
comp=Z,29nm,1.1s
GAMB Gambell 57.76 28 P **P** 16 02 37.3 +0.7
baz=258
STKA Stephens Creek 58.13 162 P **P** 16 02 39.9 +0.3
comp=Z,8.6nm,0.9s,baz=333,slow=8.6,SNR=12
STKA LR LR 16 29 14.2
comp=Z,846nm,19.2s,baz=350,slow=38
comp=Z,8.6nm,0.9s
STKA Stephens Creek 58.13 162 P **P** 16 02 39.9 +0.3
STKA Stephens Creek 58.13 162 P **P** 16 02 38.8 -0.8
STKA IAmb IAmb 16 02 49.5
comp=Z,44nm,0.8s
STKA Stephens Creek 58.13 162 P **P** 16 02 38.8 -0.8
STKA pmax pmax
comp=Z,44nm,0.8s
HTT Hallett 58.90 165 P **P** 16 02 46.0 +1.0
CMSA Cobar Meteorol 59.11 158 P **P** 16 02 48.2 +1.8
UNV Unalaska Valle 59.39 40 P **P** 16 02 48.6 +0.4
baz=269
TNA Tin City 59.68 27 P **P** 16 02 49.4 -0.6
TNA IAmb IAmb 16 02 52.2
comp=Z,43nm,1.6s
TNA Tin City 59.68 27 P **P** 16 02 50.5 +0.6
baz=261,SNR=6.4
M11K Mekoryuk 59.85 33 P **P** 16 02 51.4 +0.3
baz=266,SNR=6.1
F14K Arctic Creek 60.32 27 P **P** 16 02 55.2 +0.8
baz=263
ANM Nome 60.62 28 IAmb IAmb 16 03 06.3
comp=Z,19nm,0.9s
ANM Nome 60.62 28 P **P** 16 02 57.3 +0.9
baz=264,SNR=14
K13K Kusilvak Mount 60.71 31 P **P** 16 02 57.9 +0.8
baz=266,SNR=16
F15K North Star Dit 61.04 27 P **P** 16 03 00.1 +0.8
baz=264,SNR=14
C16K Lisburne Hills 61.09 24 P **P** 16 03 00.2 +0.7
baz=262
FALS False Pass 61.19 39 P **P** 16 03 01.1 +0.7
baz=271
G15K Niukluk 61.23 28 P **P** 16 03 01.3 +0.8
baz=265
M13K Dall Lake 61.27 33 IAmb IAmb 16 03 03.9
comp=Z,47nm,1.0s
M13K Dall Lake 61.27 33 P **P** 16 03 01.5 +0.7
baz=268
J14K Nanvaranak Lak 61.28 30 P **P** 16 03 01.4 +0.5
baz=267,SNR=10
KIRV Kirov 61.61 325 LR LR 16 32 10.2
comp=Z,3μm,18.1s,baz=92,slow=38
KIRV Kirov 61.61 325*ce*P **P** 16 03 02.8 -0.4
L14K Kuka Creek 61.62 32 P **P** 16 03 04.5 +1.3
baz=268,SNR=24
D17K Noatak River 61.87 25 P **P** 16 03 05.9 +1.1
baz=264,SNR=19
C17K DeLong Mountai 61.91 24 P **P** 16 03 05.8 +0.7
baz=264
M14K Bethel 61.96 32 P **P** 16 03 06.3 +0.8
baz=269,SNR=15
RDOG Red Dog Mine 61.97 24 P **P** 16 03 06.4 +0.9
baz=264
G16K Koyuk River 61.97 27 P **P** 16 03 04.8 -0.8
G16K IAmb IAmb 16 03 08.5
comp=Z,26nm,1.4s
G16K Koyuk River 61.97 27 P **P** 16 03 06.5 +1.0
baz=266,SNR=9.2
H16K Elim 61.97 28 P **P** 16 03 06.3 +0.8
baz=267,SNR=15
N14K Kuskokwak Cree 62.09 33 P **P** 16 03 07.1 +0.7
baz=270,SNR=5.6
K15K Wolf Creek Mou 62.20 31 IAmb IAmb 16 03 10.6
comp=Z,72nm,1.5s
K15K Wolf Creek Mou 62.20 31 P **P** 16 03 08.1 +1.0
baz=269,SNR=9.6
L15K Ungalak Mounta 62.20 31 P **P** 16 03 08.0 +0.8
baz=269,SNR=6.1
E17K Hotham Inlet 62.30 25 P **P** 16 03 08.8 +1.1
baz=266,SNR=9.4
O14K Tigyukauivet M 62.31 34 P **P** 16 03 08.9 +1.0
baz=271,SNR=6.0
F17K Baldwin Pennin 62.48 26 P **P** 16 03 09.9 +1.0
baz=267
M15K Kasigluk River 62.59 33 P **P** 16 03 10.4 +0.6
baz=270,SNR=10
I17K Unalakleet 62.61 29 P **P** 16 03 10.4 +0.6
baz=269,SNR=8.5
J16K Anvik River 62.64 30 IAmb IAmb 16 04 01.3
comp=Z,28nm,1.4s
J16K Anvik River 62.64 30 P **P** 16 03 11.4 +1.3
baz=269,SNR=6.6
C18K Utukok River 62.65 24 P **P** 16 03 11.2 +1.0
baz=266,SNR=6.6
G17K Kiwalik Mounta 62.68 27 P **P** 16 03 11.3 +0.9
baz=268
E18K Tukpahlearik C 62.79 25 P **P** 16 03 12.0 +1.0
baz=267,SNR=9.5
A19K Wainwright 62.82 22 P **P** 16 03 12.4 +1.3
baz=265,SNR=7.7
BELG Belogornoye 62.86 318 LR LR 16 33 35.6
comp=Z,485nm,21.2s,baz=89,slow=39
BELG Belogornoye 62.86 318 *i*P **P** 16 03 10.8 -0.9
BELG pmax pmax
comp=Z,8.0nm,1.5s
SDPT Sand Point 62.86 39 P **P** 16 03 10.9 -0.8
SDPT Sand Point 62.86 39 P **P** 16 03 12.2 +0.6
baz=273
N15K Kwethluk River 62.89 33 P **P** 16 03 12.9 +1.1
baz=271,SNR=18
H17K Granite Mounta 62.98 28 P **P** 16 03 13.3 +1.0
baz=269,SNR=12
O15K Ungalikthiuk R 63.05 34 P **P** 16 03 13.6 +0.7
baz=272,SNR=13
F18K Selawik 63.13 26 P **P** 16 03 14.2 +1.0
baz=268,SNR=27
L16K Owhat River 63.16 31 P **P** 16 03 13.8 +0.2
baz=271,SNR=14
C19K Lookout Ridge 63.26 23 IAmb IAmb 16 03 41.6
comp=Z,45nm,1.8s
C19K Lookout Ridge 63.26 23 P **P** 16 03 15.0 +0.8
baz=267,SNR=9.7
S14K Fog Glacier 63.33 37 P **P** 16 03 15.5 +0.6
baz=274
J17K VABM Dome 63.33 29 P **P** 16 03 15.7 +1.0
baz=270,SNR=30
CHNA Chernabura Isl 63.40 39 P **P** 16 03 15.1 -0.2
CHNA Chernabura Isl 63.40 39 P **P** 16 03 16.3 +1.0
baz=274
CNBA Chernabura Isl 63.41 39 P **P** 16 03 13.8 -1.4
M16K Timber Creek 63.43 32 P **P** 16 03 16.0 +0.7
baz=272,SNR=14
G18K Tagagawik 63.52 27 P **P** 16 03 16.8 +0.9
baz=269,SNR=15
N16K Nishlik Lake 63.54 33 P **P** 16 03 17.1 +0.9
baz=272,SNR=20
H18K Honhosa River 63.64 27 P **P** 16 03 17.3 +0.7
baz=270
K17K Iditarod 63.70 30 P **P** 16 03 18.4 +1.3
baz=271,SNR=18
CAN Canberra 63.70 157 P **P** 16 03 19.4 +2.0
L17K Donlin 63.71 31 P **P** 16 03 18.4 +1.2
baz=272,SNR=29
D19K Kuna River 63.77 24 IAmb IAmb 16 03 27.0
comp=Z,26nm,0.8s
D19K Kuna River 63.77 24 P **P** 16 03 18.3 +0.8
baz=269,SNR=23
CNB Canberra Magne 63.83 156 P **P** 16 03 19.7 +1.4
LKRN Lenkeran, Azer 63.84 303 P **P** 16 03 19.9 +1.4
F19K Shaleruckik Mo 63.88 26 P **P** 16 03 18.7 +0.5
baz=270,SNR=10.0
O16K Kokwok River B 63.92 34 P **P** 16 03 19.1 +0.5
baz=273,SNR=12
CHGN Chignik 63.96 37 P **P** 16 03 19.6 +0.7
baz=274
P16K Nushagak River 64.00 34 P **P** 16 03 19.8 +0.7
baz=273
MAK Makhachkala 64.07 308 *e*P **P** 16 03 17.2 -2.7
MAK *e* 16 05 39.1
MAK *e*S **S** 16 11 51.8 -2.8
MAK *e*SS **SS** 16 16 06.9 +3.4
MAK pmax pmax
comp=Z,69nm,1.1s
MAK MLR MLR
comp=Z,949nm,21.0s
E19K Redstone River 64.09 25 IAmb IAmb 16 03 29.2
comp=Z,15nm,0.7s
E19K Redstone River 64.09 25 P **P** 16 03 20.3 +0.6
baz=270,SNR=16
AKT Akhty 64.15 306 *e*P **P** 16 03 20.7 +0.1
AKT *e* 16 03 55.0
AKT pmax pmax
comp=Z,28nm,1.3s
AKT MLR MLR
comp=Z,921nm,17.0s
B20K Meade River 64.15 22 P **P** 16 03 20.6 +0.7
baz=269
M17K Holitna River 64.15 32 P **P** 16 03 20.7 +0.6
baz=273,SNR=15
G19K Purcell Mounta 64.16 26 P **P** 16 03 20.5 +0.4
baz=271,SNR=14
GCSA Galena City Sc 64.28 28 P **P** 16 03 21.5 +0.7
baz=272
N17K Nushagak Hills 64.32 33 P **P** 16 03 22.5 +1.3
baz=273,SNR=18
R16K Pilot Point 64.32 36 P **P** 16 03 21.8 +0.5
baz=274
D20K Etivluk River 64.33 24 P **P** 16 03 21.7 +0.5
baz=270
A21K Barrow 64.36 21 P **P** 16 03 22.1 +0.8
baz=269,SNR=15
J18K Innoko River 64.39 29 IAmb IAmb 16 03 24.0
comp=Z,32nm,1.3s
J18K Innoko River 64.39 29 P **P** 16 03 22.4 +0.8
baz=272,SNR=13
O17K Koliganek Bris 64.41 33 P **P** 16 03 22.3 +0.5
baz=274
H19K Roundabout Mou 64.44 27 IAmb IAmb 16 03 25.2
comp=Z,64nm,1.3s
H19K Roundabout Mou 64.44 27 P **P** 16 03 22.5 +0.7
baz=272,SNR=28
L18K Granite Mounta 64.46 31 P **P** 16 03 23.3 +1.2
baz=273,SNR=12
E20K Nigu River 64.49 24 P **P** 16 03 23.1 +0.8
baz=270,SNR=32
SEKA Sheki 64.59 306 P **P** 16 03 24.9 +1.5
F20K Avaraart Lake 64.69 25 P **P** 16 03 24.5 +1.0
baz=272
Q16K King Salmon 64.72 35 P **P** 16 03 24.4 +0.6
baz=275
MNGR Mingechevir, A 64.75 305 P **P** 16 03 26.4 +2.0
P17K Kvichak River 64.79 34 P **P** 16 03 25.2 +0.9
baz=275,SNR=6.1
J19K Poorman 64.85 29 P **P** 16 03 25.7 +1.0
baz=273,SNR=21
A22K Sinclair Lake 64.89 21 P **P** 16 03 25.5 +0.8
baz=270,SNR=27
M18K Stony River 64.92 32 P **P** 16 03 26.2 +1.1
baz=274
N18K Kilae Creek 64.94 32 IAmb IAmb 16 03 41.3
comp=Z,54nm,1.4s
N18K Kilae Creek 64.94 32 P **P** 16 03 25.9 +0.6
baz=274,SNR=6.1
R17L Mt. Peulik Vol 64.97 36 P **P** 16 03 26.0 +0.5
baz=276
C21K Knifeblade Rid 64.98 23 P **P** 16 03 26.5 +1.0
baz=271,SNR=18
B21K Ikpikpuk River 65.03 22 IAmb IAmb 16 03 28.8
comp=Z,25nm,0.9s
B21K Ikpikpuk River 65.03 22 P **P** 16 03 26.9 +1.2
baz=271,SNR=20
H20K Anotleneega Mo 65.09 27 P **P** 16 03 27.1 +0.9
baz=273,SNR=16
Q17K Contact Creek 65.16 35 P **P** 16 03 27.7 +0.8
baz=276
I20K Naaghedeneel 65.30 28 P **P** 16 03 28.9 +1.4
baz=274,SNR=5.7
E21K Killik River 65.30 24 P **P** 16 03 28.4 +0.9
baz=272
L19K White Mountain 65.32 31 P **P** 16 03 29.2 +1.5
baz=275,SNR=18
GANJ Ganja 65.34 305 P **P** 16 03 29.9 +1.6
O18K Koktuh Hills 65.35 33 P **P** 16 03 28.9 +0.9
baz=275
P18K Big Mountain, 65.39 34 P **P** 16 03 28.7 +0.5
baz=276
B22K Teshekpuk Lake 65.42 22 P **P** 16 03 28.9 +0.8
baz=272,SNR=25
ACHA Angle Creek He 65.46 35 IAmb IAmb 16 03 39.7
comp=Z,30nm,1.1s
J20K Nowinta River 65.49 29 P **P** 16 03 29.8 +1.0
baz=274,SNR=24
F21K Alatna River 65.55 25 P **P** 16 03 30.2 +1.0
baz=274,SNR=9.6
M19K Big River Lodg 65.56 31 P **P** 16 03 30.5 +1.2
baz=275
CHIR Chirikof Islan 65.56 38 P **P** 16 03 31.2 +1.8
baz=277
Q18K Katmai Hardscr 65.58 35 P **P** 16 03 30.7 +1.1
baz=276
K20K Telida 65.59 29 IAmb IAmb 16 03 32.5
comp=Z,25nm,1.0s
K20K Telida 65.59 29 P **P** 16 03 30.9 +1.5
baz=275,SNR=13
G21K Allakaket 65.59 26 IAmb IAmb 16 03 32.6
comp=Z,83nm,1.6s
G21K Allakaket 65.59 26 P **P** 16 03 30.8 +1.4
baz=274,SNR=24
O19K Port Alsworth 65.76 33 P **P** 16 03 31.7 +1.1
baz=276,SNR=7.9
H21K Melozitna River 65.94 27 P **P** 16 03 32.8 +1.2
baz=275,SNR=23
F22K John River 66.04 25 P **P** 16 03 33.2 +1.0
baz=275
E22K Anaktuvuk Pass 66.12 24 P **P** 16 03 34.0 +1.2

baz=275,SNR=48
M20K Styx River 66.16 31 P P 16 03 34.8 +1.5
baz=276
Q19K Cape Douglas, 66.25 34 P P 16 03 34.7 +0.9
baz=277
NAX Nakhchivan 66.26 304 P P 16 03 35.9 +1.6
SII Sitkinak Islan 66.27 37 P P 16 03 34.8 +0.9
baz=278
CHUM Lake Minchumin 66.32 29 P P 16 03 35.4 +1.3
baz=276,SNR=9.7
I21K Tanana 66.33 27 P P 16 03 35.8 +1.7
baz=276
G22K Bettles 66.35 25 P P 16 03 35.5 +1.2
baz=275
P19K Oil Pt 66.37 33 P P 16 03 35.8 +1.3
baz=277
C23K Itkillik River 66.41 22 P P 16 03 35.9 +1.3
baz=275,SNR=16
D23K Nanushuk River 66.47 23 IAmb IAmb 16 03 38.5
comp=Z,44nm,1.0s
D23K Nanushuk River 66.47 23 P P 16 03 36.1 +1.1
baz=275,SNR=39
KLMR Klimovskoe 66.48 328 *e*P P 16 03 33.3 -1.9
KLMR pmax pmax
comp=Z,81nm,1.0s
KLMR MLR MLR
comp=Z,801nm,15.0s
PPLA Purkeypile 66.48 30 P P 16 03 36.4 +1.0
baz=277,SNR=7.1
H22K Ishtalitna Cre 66.50 27 P P 16 03 36.7 +1.4
baz=276,SNR=39
GNI Garni 66.63 305 P P 16 03 38.0 +1.3
comp=Z,7.9nm,0.7s,baz=173,slow=4.3,SNR=14
GNI LR LR 16 37 53.0
comp=Z,505nm,18.6s,baz=112,slow=41
comp=Z,7.9nm,0.7s
GNI Garni 66.63 305 *i* P P 16 03 37.6 +0.9
GNI pmax pmax
comp=Z,26nm,1.3s
VRH Novokhopyorsk 66.64 317 *e*P P 16 03 36.1 -0.3
VRH pmax pmax
comp=Z,26nm,0.8s
OHAK Old Harbor 66.67 36 P P 16 03 37.1 +0.7
baz=278
N20K Mount Spurr 66.68 32 P P 16 03 37.4 +0.9
baz=277,SNR=17
SPCR Spurr Chakacha 66.68 32 P P 16 03 37.6 +1.1
baz=277,SNR=9.8
SPU Mount Spurr 66.76 32 IAmb IAmb 16 03 39.6
comp=Z,29nm,1.2s
COLD Coldfoot 66.83 25 P P 16 03 38.7 +1.4
baz=276,SNR=11
MLY Manley 66.87 27 IAmb IAmb 16 03 40.9
comp=Z,42nm,1.3s
MLY Manley 66.87 27 P P 16 03 38.8 +1.2
baz=277,SNR=7.9
GOF Gofitskoye 66.87 311 *ce*P P 16 03 38.5 +0.5
BPAW Bear Paw Mtn. 66.87 28 IAmb IAmb 16 03 40.2
comp=Z,42nm,1.2s
BPAW Bear Paw Mtn. 66.87 28 P P 16 03 39.0 +1.3
baz=277
SKT Skwentna 66.90 31 IAmb IAmb 16 03 56.8
comp=Z,45nm,1.5s
SKT Skwentna 66.90 31 P P 16 03 38.3 +0.4
baz=278
TOLK Toolik Lake Re 66.90 23 P P 16 03 38.8 +1.0
baz=276,SNR=19
Q20K Shuyak Island 66.94 34 P P 16 03 38.8 +0.7
baz=278
E23K Chandalar 66.95 24 P P 16 03 38.9 +0.7
baz=277,SNR=20
G23K Bananza Creek 66.95 26 P P 16 03 39.1 +0.9
baz=277,SNR=15
KDAK Kodiak Island 66.96 35 P P 16 03 38.5 +0.2
comp=Z,12nm,0.6s,baz=95,slow=11,SNR=30
KDAK LR LR 16 33 57.8
comp=Z,168nm,20.8s,baz=258,slow=37
comp=Z,12nm,0.6s
KDAK Kodiak Island 66.96 35 P P 16 03 37.4 -0.9
KDAK Kodiak Island 66.96 35 *i* P P 16 03 38.9 +0.6
KDAK pmax pmax
comp=Z,9.0nm,0.3s
KDAK Kodiak Island 66.96 35 P P 16 03 39.0 +0.6
baz=278
KTH Kantishna Hill 66.97 29 IAmb IAmb 16 03 40.7
comp=Z,24nm,1.2s
C24K Franklin Bluff 67.08 22 P P 16 03 39.6 +0.8
baz=277,SNR=42
D24K Happy Valley 67.11 23 P P 16 03 40.2 +1.1
baz=277,SNR=39
KBZ Khabaz 67.23 309 P P 16 03 40.5 +0.2
comp=Z,18nm,1.1s,baz=83,slow=5.2,SNR=19
KBZ LR LR 16 36 40.9
comp=Z,587nm,19.8s,baz=66,slow=39
comp=Z,18nm,1.1s
KBZ Khabaz 67.23 309 *ce*P P 16 03 40.1 -0.2
KBZ pmax pmax
comp=Z,18nm,1.0s
CAPN Captain Cook N 67.25 32 P P 16 03 40.7 +0.6
baz=278
H23K Yukon River 67.26 26 P P 16 03 41.6 +1.5
baz=278
TRF Thorofare Moun 67.27 29 IAmb IAmb 16 04 05.9
comp=Z,36nm,1.2s
TRF Thorofare Moun 67.27 29 P P 16 03 40.9 +0.6
baz=278
KIV Kislovodsk 67.34 309 ⇑P P 16 03 40.4 -0.7
KIV Kislovodsk 67.34 309 P P 16 03 40.3 -0.7
KIV Kislovodsk 67.34 309 *e*P P 16 03 41.7 +0.7
KIV *e*S S 16 12 37.5 +2.7
KIV pmax pmax
comp=Z,53nm,1.1s
KIV pmax pmax
comp=Z,41nm,3.6s
KIV MLR MLR
comp=Z,508nm,17.0s
KIV Kislovodsk 67.34 309 P P 16 03 41.8 +0.7
comp=Z,772nmcomp=Z,59nm,1.3s
E24K Your Creek 67.37 24 P P 16 03 42.0 +1.2
baz=278
SHA1 Shidzhatmaz 67.40 309 *ce*P P 16 03 41.9 +0.2
CUT Chulitna 67.43 30 P P 16 03 41.0 -0.1
baz=278
I23K Minto, Yukon-K 67.43 27 IAmb IAmb 16 03 51.0
comp=Z,28nm,1.2s
I23K Minto, Yukon-K 67.43 27 P P 16 03 42.1 +1.0
baz=278,SNR=14
NEUR Neytrino 67.47 309 *i* P P 16 03 42.1 0.0
NEUR pmax pmax
comp=Z,15nm,1.4s
MSVF Nonsavu 67.50 123 LR LR 16 30 18.5
comp=Z,502nm,19.5s,baz=330,slow=33
M22K Willow 67.59 31 P P 16 03 42.2 0.0
baz=279,SNR=10
BRSE Bradley Lake S 67.61 33 P P 16 03 43.0 +0.5
baz=279
NEA2 Nenana 67.63 28 IAmb IAmb 16 03 45.3
comp=Z,60nm,1.3s
NEA2 Nenana 67.63 28 P P 16 03 43.4 +1.0
baz=279,SNR=17
F24K Squaw Lake 67.67 25 P P 16 03 44.2 +1.4
baz=278,SNR=52
MCK McKinley 67.82 29 P P 16 03 44.5 +0.8
baz=279,SNR=15
RC01 Rabbit Creek A 67.88 32 IAmb IAmb 16 03 46.2
comp=Z,60nm,1.6s
RC01 Rabbit Creek A 67.88 32 P P 16 03 45.3 +1.2
baz=280
H24K Noodor Dome 67.94 26 IAmb IAmb 16 03 47.4
comp=Z,26nm,1.1s
H24K Noodor Dome 67.94 26 P P 16 03 45.2 +0.8
baz=279,SNR=20
D25K Kavik River 67.95 23 P P 16 03 45.6 +1.1
baz=279,SNR=34
G24K Hadweenzic Riv 67.96 25 IAmb IAmb 16 03 47.9
comp=Z,44nm,1.3s
G24K Hadweenzic Riv 67.96 25 P P 16 03 45.8 +1.2
baz=279,SNR=18
O22K Cooper Landing 67.99 32 P P 16 03 45.3 +0.6
baz=280
WRH Wood River Hil 68.07 28 IAmb IAmb 16 03 48.8
comp=Z,56nm,1.5s
PMR Palmer 68.09 31 IAmb IAmb 16 04 00.0
comp=Z,42nm,1.3s
PMR Palmer 68.09 31 P P 16 03 45.6 +0.3
baz=280
LPSR Galich'ya Gora 68.10 319 *e*P P 16 03 44.8 -0.8
LPSR pmax pmax
comp=Z,37nm,0.8s
VORR Voronezh 68.10 318 *e*P P 16 03 44.9 -0.7
VORR pmax pmax
comp=Z,27nm,0.3s
COLA College 68.11 27 *i* P P 16 03 46.1 +0.7
COLA pmax pmax
comp=Z,12nm,1.0s
COLA College 68.11 27 P P 16 03 45.8 +0.4
baz=280
WAT1 Susitna Watana 68.14 30 P P 16 03 45.8 0.0
baz=280
APA Apatity 68.16 336 ⇓*e*P P 16 03 39.9 -5.8
APA *e* 16 04 10.0
APA *e* 16 06 12.1
APA pmax pmax
comp=Z,15nm,1.6s
APA MLR MLR
comp=Z,2μm,19.1s
SEW Seward 68.19 33 P P 16 03 45.9 -0.1
baz=280
VORD Divnogorie 68.19 317 *e*P P 16 03 44.5 -1.7
VORD pmax pmax
comp=Z,10.0nm,1.1s
VSR Storozhevoye 68.22 318 *e*P P 16 03 45.7 -0.7
VSR pmax pmax
comp=Z,54nm,1.5s
POKR Poker Plat Res 68.24 27 P P 16 03 47.2 +0.9
baz=280
MOS Moscow 68.26 323 *e*P P 16 03 45.1 -1.4
MOS *e* 16 04 12.8
MOS pmax pmax
comp=Z,31nm,0.9s
MOS MLR MLR
comp=Z,900nm,17.0s
GEVA Gevas 68.31 303 IAmb IAmb 16 03 49.9
comp=Z,38nm,1.0s
C26K Camden Bay 68.36 22 P P 16 03 48.0 +1.1
baz=280
SML Sawmill 68.42 31 P P 16 03 47.8 +0.2
baz=280,SNR=7.2
KNK Knik Glacier 68.44 31 P P 16 03 48.0 +0.4
baz=280,SNR=9.1
E25K Arctic Village 68.44 24 IAmb IAmb 16 03 50.3
comp=Z,27nm,1.3s
E25K Arctic Village 68.44 24 P P 16 03 48.2 +0.6
baz=280,SNR=19
G25K Bearman Lake 68.49 25 P P 16 03 49.1 +1.4
baz=280,SNR=14
ERBR Yeremizino-Bor 68.50 312 *e*P P 16 03 47.8 -0.4
ERBR *e*S S 16 12 50.2 +1.8
ERBR pmax pmax
comp=Z,71nm,1.3s
F25K Christian Rive 68.51 24 IAmb IAmb 16 03 51.2
comp=Z,83nm,1.6s
F25K Christian Rive 68.51 24 P P 16 03 49.2 +1.2
baz=280,SNR=26
ILAR Eielson Array 68.53 27 P P 16 03 47.6 -0.5
comp=Z,2.5nm,0.7s,baz=259,slow=5.5,SNR=42
ILAR LR LR 16 36 43.7
comp=Z,371nm,18.8s,baz=294,slow=38
comp=Z,2.5nm,0.7s
WAT6 Susitna Watana 68.56 30 P P 16 03 48.8 +0.3
baz=281,SNR=14
LABN Labinsk 68.57 310 *e*P P 16 03 48.3 -0.4
LABN *e*S S 16 12 52.5 +3.2
LABN pmax pmax
comp=Z,11nm,0.5s
HDA Harding Lake 68.57 28 IAmb IAmb 16 03 49.9
comp=Z,36nm,1.2s
HDA Harding Lake 68.57 28 P P 16 03 48.2 -0.2
baz=280,SNR=18
DHY Denali Highway 68.63 29 P P 16 03 49.7 +0.8
baz=281,SNR=5.1
M23K Glacier View 68.71 31 P P 16 03 49.7 +0.4
baz=281
C27K Jago River 68.82 22 P P 16 03 50.6 +0.8
baz=281
FYU Fort Yukon 68.86 25 IAmb IAmb 16 03 53.1
comp=Z,50nm,1.2s
SCM Sheep Creek Mo 68.89 31 P P 16 03 50.9 +0.5
baz=281,SNR=11
PRP Porcupine Dome 68.95 27 P P 16 03 51.8 +0.9
baz=281,SNR=9.6
OBN Obninsk 68.97 322 P P 16 03 50.4 -0.6
comp=Z,12nm,0.4s,baz=72,slow=3.3,SNR=6.8
OBN LR LR 16 36 05.7
comp=Z,688nm,18.1s,baz=25,slow=38
comp=Z,12nm,0.4s
OBN Obninsk 68.97 322 IAmb IAmb 16 03 52.3
comp=Z,46nm,0.5s
OBN Obninsk 68.97 322 *de*P P 16 03 50.6 -0.4
OBN *e* 16 04 16.6
OBN *e* 16 06 18.5
OBN *e*PPP PPP 16 07 59.1
OBN *e*S S 16 12 56.9 +3.3
OBN pmax pmax
comp=Z,55nm,1.3s
OBN MLR MLR
comp=Z,583nm,18.0s
GURO Guroymak-BITLI 69.04 304 IAmb IAmb 16 03 54.7
comp=Z,30nm,0.9s
F26K Sheenjek River 69.06 24 P P 16 03 52.6 +1.2
baz=282,SNR=35
VADS Vadso 69.11 339 *e*P P 16 03 51.4 -0.1
GLI Glacier Island 69.19 32 P P 16 03 52.8 +0.6
baz=282
K24K Donnelly Dome 69.19 28 IAmb IAmb 16 03 54.4
comp=Z,45nm,0.9s
K24K Donnelly Dome 69.19 28 P P 16 03 52.5 +0.3
baz=282,SNR=13
J25K Salcha River, 69.20 27 P P 16 03 52.4 +0.1
baz=282,SNR=8.0
P23K Montague Islan 69.22 33 P P 16 03 52.7 +0.3
baz=282
G26K Porcupine Rive 69.35 25 P P 16 03 54.9 +1.7
baz=282,SNR=31
M24K Tolsona, Glenn 69.36 30 IAmb IAmb 16 03 59.4
comp=Z,54nm,1.1s
M24K Tolsona, Glenn 69.36 30 P P 16 03 54.0 +0.6
baz=282
PAX Paxson 69.50 29 P P 16 03 54.7 +0.4
baz=282,SNR=10
SOC Sochi 69.52 310 *e*P P 16 03 54.9 +0.3
SOC *e*PPP PPP 16 08 11.2
SOC *e*S S 16 13 00.3 -0.2
SOC *e*SS SS 16 17 29.8 +1.9
SOC pmax pmax
comp=Z,19nm,0.7s
SOC MLR MLR
comp=Z,915nm,20.0s
RIDG Independent Ri 69.61 28 IAmb IAmb 16 03 56.4
comp=Z,88nm,1.6s
RIDG Independent Ri 69.61 28 P P 16 03 55.0 +0.2
baz=283,SNR=21
KLU Klutina 69.61 31 P P 16 03 55.5 +0.5
baz=282,SNR=7.2
DIV Divide 69.76 31 IAmb IAmb 16 03 58.8
comp=Z,56nm,1.2s
D27M Malcolm River 69.85 22 P P 16 03 57.3 +1.0
baz=284,SNR=27
E27K Coleen River 69.89 23 IAmb IAmb 16 03 59.2
comp=Z,25nm,1.1s
E27K Coleen River 69.89 23 P P 16 03 57.3 +0.8
baz=284,SNR=30
EYAK Cordova Ski Ar 69.90 32 P P 16 03 57.3 +0.7
baz=283
SCRK Sand Creek 69.93 28 IAmb IAmb 16 03 58.6
comp=Z,34nm,1.2s
SCRK Sand Creek 69.93 28 P P 16 03 57.2 +0.3
baz=283,SNR=19
I26K Coal Creek Min 69.97 27 P P 16 03 57.4 +0.4
baz=284,SNR=14
DOT Dot Lake 69.97 28 IAmb IAmb 16 03 59.2
comp=Z,66nm,1.6s
SPA0 Spitsbergen Ar 70.19 348 *e*P P 16 03 57.8 -0.4
SPITS Spitsbergen Ar 70.19 348 P P 16 03 57.5 -0.7
comp=Z,3.9nm,0.6s,baz=89,slow=8.4,SNR=20
SPITS LR LR 16 38 26.8
comp=Z,681nm,19.8s,baz=42,slow=39
comp=Z,3.9nm,0.6s
G27K Doyon Strip 70.20 25 P P 16 03 59.8 +1.3
baz=284,SNR=19
N25K Chitina, Valde 70.20 31 IAmb IAmb 16 04 08.3
comp=Z,45nm,1.4s
N25K Chitina, Valde 70.20 31 P P 16 03 59.7 +1.0
baz=284,SNR=7.1
MENT Mentasta 70.29 29 IAmb IAmb 16 04 10.1
comp=Z,32nm,1.0s
KHAM Kharkiv 70.30 317 P P 16 03 59.2 -0.1
BMRM Bremner River 70.35 31 IAmb IAmb 16 04 08.9
comp=Z,53nm,1.4s
BMRM Bremner River 70.35 31 P P 16 04 00.3 +0.9
baz=284
RAYN Ar Rayn 70.37 288 P P 16 03 59.6 -0.6
RAYN Ar Rayn 70.37 288 P P 16 03 59.6 -0.6
RAYN pmax pmax
comp=Z,14nm,1.1s
RAYN Ar Rayn 70.37 288 P P 16 04 00.3 +0.1
H27K Steamboat Moun 70.39 25 P P 16 04 01.2 +1.6
baz=285,SNR=32
L26K Log Cabin Wild 70.43 29 IAmb IAmb 16 04 26.5
comp=Z,49nm,1.5s
L26K Log Cabin Wild 70.43 29 P P 16 04 01.0 +1.1
baz=284,SNR=10
E28M Babbage River 70.52 23 P P 16 04 01.3 +0.9
baz=286,SNR=43
I27K Kandik River 70.52 26 P P 16 04 01.8 +1.4
baz=285,SNR=33
ARCES ARCESS Array B 70.55 338 P P 16 04 00.1 -0.4
comp=Z,6.3nm,1.0s,baz=94,slow=5.2,SNR=7.9
ARCES LR LR 16 38 06.4
comp=Z,503nm,21.3s,baz=73,slow=38
comp=Z,6.3nm,1.0s
D28M Stokes Point 70.60 22 P P 16 04 01.7 +1.0
baz=286,SNR=16
GLB Gilahina Butte 70.61 31 IAmb IAmb 16 04 04.1
comp=Z,48nm,1.3s
F28M Old Crow 70.66 24 IAmb IAmb 16 04 14.7
comp=Z,41nm,1.1s
F28M Old Crow 70.66 24 P P 16 04 02.5 +1.3
baz=286,SNR=31
KBS Kingsbay 70.69 349 *e*P P 16 04 00.9 -0.3
KBS IAmb IAmb 16 04 01.8
comp=Z,17nm,1.4s
KBS Kingsbay 70.69 349 *ce*P P 16 03 59.4 -1.8
KBS pmax pmax
comp=Z,18nm,2.5s
KBS Kingsbay 70.69 349 *i* P P 16 04 00.6 -0.6
KAIM Kayak Island 70.70 32 P P 16 04 02.6 +1.1
baz=284
M26K Nabesna, AK 70.74 29 P P 16 04 02.3 +0.4
baz=285,SNR=17
ANN Anapa 70.81 311 *e*P P 16 04 01.0 -1.5
ANN *e*S S 16 13 15.4 -0.1
ANN pmax pmax
comp=E,20nm,1.0s
MCARA McCarthy VSAT 70.99 31 IAmb IAmb 16 04 13.0
comp=Z,55nm,1.2s
MCARA McCarthy VSAT 70.99 31 P P 16 04 04.2 +0.8
baz=285
L27K Beaver Creek, 71.09 29 P P 16 04 05.1 +1.1
baz=285,SNR=14
CRQE Cirque 71.12 31 P P 16 04 04.6 +0.3
baz=285
E29M Blow River 71.16 23 P P 16 04 05.1 +0.9
baz=287,SNR=17
PUL Pulkovo 71.18 328 *i* P P 16 04 05.4 +1.0
PUL pmax pmax
comp=Z,37nm,0.7s
I28M Miner Creek 71.23 26 P P 16 04 06.0 +1.2
baz=286,SNR=16
M27K Edge Creek, AK 71.26 29 P P 16 04 05.8 +0.7
baz=286,SNR=6.2
KTK1 Kautokeino 71.48 338 *e*P P 16 04 06.2 +0.1
G29M Pine Creek 71.55 24 P P 16 04 07.8 +1.2
baz=287,SNR=31
H29M Whitestone 71.63 25 P P 16 04 08.2 +1.2
baz=287,SNR=18
ARPR Arapgir-MALATY 71.68 305 IAmb IAmb 16 04 10.8
comp=Z,31nm,1.0s
BVCY Beaver Creek 71.70 29 P P 16 04 08.9 +1.2
baz=286,SNR=6.5
BARN Barnard Glacie 71.72 31 IAmb IAmb 16 04 23.6
comp=Z,67nm,1.6s
MESA MESA 71.82 32 P P 16 04 09.3 +0.7
baz=286
CTG Chitna Glacier 71.89 31 P P 16 04 09.9 +1.0
baz=286,SNR=6.2
I29M Ogilvie Camp, 71.91 26 IAmb IAmb 16 04 11.8
comp=Z,35nm,1.3s
I29M Ogilvie Camp, 71.91 26 P P 16 04 09.2 +0.4
baz=288,SNR=17
YUK3 Moose Creek 72.06 30 P P 16 04 11.0 +0.9
baz=287,SNR=7.1
LOGN Logan Glacier 72.09 31 IAmb IAmb 16 04 21.4
comp=Z,29nm,1.0s
F30M Barrier River 72.16 23 P P 16 04 11.2 +1.0
baz=289,SNR=15
G30M tAoh Zraii Nji 72.20 24 P P 16 04 10.8 +0.3
baz=289,SNR=24
EPYK Eagle Plains 72.21 25 IAmb IAmb 16 04 12.4
comp=Z,42nm,1.2s
EPYK Eagle Plains 72.21 25 P P 16 04 11.2 +0.6
baz=289,SNR=17
J29N Klondike Camp 72.23 27 IAmb IAmb 16 04 13.7
comp=Z,30nm,0.8s
J29N Klondike Camp 72.23 27 P P 16 04 11.9 +1.2
baz=288,SNR=25
JETT Jettan, Norway 72.25 339 *e*P P 16 04 11.2 +0.5
JETT IAmb IAmb 16 04 27.9
comp=Z,82nm,1.3s
O28M Mount Upton 72.49 31 P P 16 04 13.9 +1.2
baz=288,SNR=6.9
YUK8 Steele Glacier 72.53 30 P P 16 04 14.2 +1.3
baz=288
PINM Pinnacle 72.66 31 P P 16 04 14.8 +1.4
baz=288
L29M L29M 72.69 28 P P 16 04 15.2 +1.7
baz=289,SNR=18
FINES FINESS Array B 72.70 330 P P 16 04 13.0 -0.5
comp=Z,12nm,0.8s,baz=62,slow=6.2,SNR=29
FINES LR LR 16 39 37.8
comp=Z,2μm,19.3s,baz=80,slow=39
comp=Z,12nm,0.8s
FINES FINESS Array B 72.70 330 *ce*P P 16 04 13.3 -0.3
FINES pmax pmax
comp=Z,12nm,0.8s
K29M Barlow Dome 72.71 27 IAmb IAmb 16 04 16.4
comp=Z,53nm,1.4s
K29M Barlow Dome 72.71 27 P P 16 04 14.9 +1.2
baz=289,SNR=14
INK Inuvik 72.72 22 P P 16 04 13.5 0.0
comp=Z,17nm,0.7s,baz=302,slow=5.7,SNR=58
INK LR LR 16 40 12.3
comp=Z,476nm,18.9s,baz=289,slow=39
comp=Z,17nm,0.7s
INK Inuvik 72.72 22 IAmb IAmb 16 04 15.9
comp=Z,82nm,1.4s
INK Inuvik 72.72 22 P P 16 04 13.9 +0.5
baz=291,SNR=35
I30M Mount Dempster 72.72 26 IAmb IAmb 16 04 16.0
comp=Z,59nm,1.4s
I30M Mount Dempster 72.72 26 P P 16 04 14.7 +0.9
baz=289,SNR=24
M29M Somme Creek 72.75 29 P P 16 04 15.5 +1.5
baz=288,SNR=11
F31M Tsiigehtchic 72.95 23 P P 16 04 15.3 +0.4
baz=291,SNR=5.1
J30M Hart River 72.96 26 P P 16 04 16.1 +0.9
baz=290
YUK4 Talbot Arm 73.02 30 P P 16 04 17.0 +1.3
baz=289
SIM Simferopol' 73.03 312 *e*P P 16 04 14.0 -1.9
SIM pmax pmax
comp=Z,61nm,1.3s
YUK6 Outpost Mounta 73.28 30 P P 16 04 18.3 +1.0
baz=289
H31M Peel River 73.32 25 P P 16 04 17.9 +0.7
baz=291,SNR=23
VSU Vasula 73.33 327 *ce*P P 16 04 16.6 -0.7
VSU pmax pmax
comp=Z,89nm,1.3s
O29M Mount Kennedy 73.39 31 P P 16 04 18.1 +0.3
baz=289
M30M Minto, Yukon 73.44 28 IAmb IAmb 16 04 21.0
comp=Z,78nm,1.5s
M30M Minto, Yukon 73.44 28 P P 16 04 19.4 +1.4
baz=290,SNR=15
MAYO Mayo, Yukon 73.48 27 P P 16 04 19.6 +1.5
baz=290
BNN Bunyan 73.61 306 IAmb IAmb 16 04 22.2
comp=Z,43nm,1.0s
AFI Afiamalu 73.63 114 LR LR 16 33 33.8
comp=Z,651nm,19.1s,slow=33
N30M Aishikik Lake 73.69 30 P P 16 04 21.2 +1.7

baz=290
HYT Haines Junctio 73.72 30 P **P 16 04 20.8 +1.1**
baz=290
ALE Alert 73.75 1 P **P 16 04 19.7 +0.3**
ALE pP **pP 16 04 28.8 +0.9**
A36M Sachs Harbour 73.78 18 IAmb IAmb 16 04 21.1
comp=Z,121nm,1.9s
A36M Sachs Harbour 73.78 18 P **P 16 04 20.0 +0.3**
baz=297
MNK Minsk 73.98 323 *i* P **P 16 04 22.2 +1.0**
comp=E,25nm,0.8s
MNK *i* P **P 16 04 22.2 +1.0**
comp=N,45nm,1.1s
MNK *i* P **P 16 04 22.2 +1.0**
comp=Z,37nm,0.9s,baz=71
MNK *i* PcP **PcP 16 04 37.2 +0.8**
MNK *i* PP **PP 16 07 07.0 +0.8**
MNK *i* PPP PPP 16 08 52.0
MNK *i* S **S 16 13 55.1 +3.6**
MNK *i* ScS **ScS 16 14 32.1 +2.9**
MNK *i* SS **SS 16 18 40.5 +4.7**
MNK *i* SSS SSS 16 22 01.9
MNK *i* LQ LQ 16 32 41.9
MNK *i* LR LR 16 35 58.2
MNK *i* LRM MLR 16 39 28.4
comp=Z,342nm,13.8s
MNK *i* LRM MLR 16 39 31.6
comp=N,469nm,17.4s
MNK *i* LRM MLR 16 39 42.4
comp=E,295nm,20.4s
MNK Minsk 73.98 323 *i* P **P 16 04 22.2 +1.0**
MNK *i* 16 04 37.2
MNK *i* 16 07 06.9
MNK *i* PPP PPP 16 08 51.9
MNK *i* S **S 16 13 55.1 +3.6**
MNK *i* 16 14 32.0
MNK *i* SS **SS 16 18 40.4 +4.7**
MNK pmax pmax
comp=E,25nm,0.8s
MNK pmax pmax
comp=Z,37nm,0.9s
MNK pmax pmax
comp=N,45nm,1.1s
MNK MLR MLR
comp=Z,342nm,14.0s
MNK MLR MLR
comp=N,469nm,17.0s
MNK MLR MLR
comp=E,295nm,20.0s
P30M Million Dollar 74.21 31 P **P 16 04 23.7 +1.1**
baz=290
N31M Braeburn, Yuko 74.27 29 IAmb IAmb 16 04 25.9
comp=Z,52nm,1.4s
N31M Braeburn, Yuko 74.27 29 P **P 16 04 24.0 +1.2**
baz=291
O30N Mendenhall 74.39 30 P **P 16 04 24.5 +0.9**
baz=291
AK09 Malin Array Si 74.41 319 P **P 16 04 22.7 -1.1**
AK03 Malin Array Si 74.42 319 P **P 16 04 22.9 -0.9**
AKASG Malin Array Be 74.42 319 P **P 16 04 22.8 -1.1**
comp=Z,2.1nm,0.4s,baz=60,slow=5.8,SNR=40
comp=Z,2.1nm,0.4s
AKASG Malin Array Be 74.42 319 P **P 16 04 23.7 -0.2**
AKASG IAmb IAmb 16 04 24.9
comp=Z,31nm,1.2s
AKASG Malin Array Be 74.42 319*ce*P **P 16 04 23.2 -0.7**
AKASG pmax pmax
comp=Z,11nm,0.8s
AKBB Malin Array Si 74.42 319 IAmb IAmb 16 04 24.6
comp=Z,34nm,1.1s
AKBB Malin Array Si 74.42 319*ce*P **P 16 04 23.4 -0.5**
AKBB pmax pmax
comp=Z,20nm,1.0s
AKBB Malin Array Si 74.42 319 P **P 16 04 23.1 -0.8**
AK08 Malin Array Si 74.42 319 P **P 16 04 23.0 -0.9**
AK01 Malin Array Si 74.43 319 P **P 16 04 23.1 -0.8**
KIEV Kiev 74.43 319 ⇓P **P 16 04 23.1 -0.9**
KIEV Kiev 74.43 319 P **P 16 04 22.7 -1.2**
KIEV IAmb IAmb 16 04 24.7
comp=Z,30nm,1.1s
KIEV Kiev 74.43 319 P **P 16 04 22.7 -1.2**
KIEV pmax pmax
comp=Z,30nm,1.2s
KIEV Kiev 74.43 319 P **P 16 04 23.2 -0.7**
comp=Z,101nm,1.8s
KIEV Kiev 74.43 319 P **P 16 04 22.9 -1.0**
KIEV pP **pP 16 04 32.2 -0.3**
AK10 Malin Array Si 74.44 319 P **P 16 04 23.3 -0.7**
AK02 Malin Array Si 74.45 319 P **P 16 04 23.2 -0.8**
AK04 Malin Array Si 74.45 319 P **P 16 04 23.0 -1.0**
AK05 Malin Array Si 74.46 319 P **P 16 04 23.4 -0.7**
AK11 Malin Array Si 74.46 319 P **P 16 04 23.2 -0.9**
AK06 Malin Array Si 74.47 319 P **P 16 04 23.4 -0.8**
AK07 Malin Array Si 74.48 319 P **P 16 04 23.4 -0.8**
AK12 Malin Array Si 74.48 319 P **P 16 04 23.3 -0.9**
AK15 Malin Array Si 74.48 319 P **P 16 04 23.3 -0.9**
ILGA Ilgaz 74.49 308 IAmb IAmb 16 04 27.1
comp=Z,44nm,1.3s
AK22 Malin Array Si 74.50 319 P **P 16 04 23.5 -0.8**
AK16 Malin Array Si 74.50 319 P **P 16 04 23.4 -0.9**
AK21 Malin Array Si 74.51 319 P **P 16 04 23.5 -0.8**
AK18 Malin Array Si 74.51 319 P **P 16 04 23.5 -0.9**
AK14 Malin Array Si 74.51 319 P **P 16 04 23.6 -0.8**
AK17 Malin Array Si 74.53 319 P **P 16 04 23.6 -0.9**
AK20 Malin Array Si 74.54 319 P **P 16 04 23.7 -0.8**
AK19 Malin Array Si 74.54 319 P **P 16 04 23.7 -0.9**
AK13 Malin Array Si 74.55 319 P **P 16 04 23.9 -0.7**
STEI Steigen 74.62 338 *e*P **P 16 04 24.4 -0.3**
STEI IAmb IAmb 16 04 26.2
comp=Z,19nm,0.9s
M31M Drury Creek, Y 74.62 28 P **P 16 04 26.0 +1.1**
baz=292,SNR=6.6
FAUS Fauske 74.84 338 *e*P **P 16 04 25.8 -0.2**
FAUS IAmb IAmb 16 04 27.5
comp=Z,198nm,2.0s
ASF Jabal al Asfar 74.88 299 P **P 16 04 27.9 +0.8**
comp=Z,10nm,0.8s,baz=105,slow=4.1,SNR=16
ASF LR LR 16 41 55.5
comp=Z,336nm,20.8s,baz=65,slow=39
comp=Z,10nm,0.8s
KIRS Kirsehir-Merke 74.95 306 ⇓P **P 16 04 27.4 +0.1**
BR131 Keskin Array S 74.97 307 *i* P **P 16 04 27.4 0.0**
BRTR Keskin Array B 74.97 307 P **P 16 04 27.6 +0.2**
comp=Z,25nm,0.9s,baz=94,slow=5.0,SNR=74
BRTR LR LR 16 43 16.2
comp=Z,281nm,18.0s,baz=75,slow=40
comp=Z,25nm,0.9s
BR104 Keskin Array S 74.97 307 P **P 16 04 27.4 -0.1**
comp=Z,345nmcomp=Z,39nm,1.3s
BR106 Keskin Array S 74.98 307 P **P 16 04 28.0 +0.5**
comp=Z,360nmcomp=Z,41nm,1.1s
WHY Whitehorse 74.98 30 P **P 16 04 27.9 +0.8**
baz=292,SNR=5.5
BR105 Keskin Array S 74.98 307 P **P 16 04 27.4 -0.1**
comp=Z,423nmcomp=Z,47nm,1.3s
LOF Lofoten 75.10 339 *e*P **P 16 04 27.9 +0.4**
SKAG Skagway 75.22 31 P **P 16 04 29.2 +0.9**
baz=292
MI28 Mi28,Pidlybu 75.28 319 P **P 16 04 27.3 -1.5**
S31K Pelican 75.34 33 P **P 16 04 29.7 +0.8**
baz=292
C36M Paulatuk 75.39 20 IAmb IAmb 16 04 30.2
comp=Z,38nm,0.8s
C36M Paulatuk 75.39 20 P **P 16 04 29.0 0.0**
baz=299,SNR=31
LUBAR Lubar, Ukraine 75.57 318 P **P 16 04 30.2 -0.3**
N32M Quiet Lake 75.60 29 P **P 16 04 31.0 +0.4**
baz=293
MOR8 Moi Rana 75.68 337 *e*P **P 16 04 29.6 -1.2**
MOR8 IAmb IAmb 16 04 30.4
comp=Z,68nm,1.7s
RAUS Rausandaksla 75.70 337 *e*P **P 16 04 30.5 -0.5**
PABE Paberze 75.76 325 P **P 16 04 30.8 -0.6**
MMPY Sheldon Lake, 75.80 27 P **P 16 04 32.2 +0.5**
baz=294
MMAI Mount Meron Ar 75.80 300 P **P 16 04 33.2 +0.9**
comp=Z,4.0nm,0.7s,baz=49,slow=16,SNR=6.9
MMAI LR LR 16 44 00.3
comp=Z,400nm,20.7s,baz=54,slow=40
comp=Z,4.0nm,0.7s
SORM Soroca 75.81 317 ⇓P **P 16 04 31.0 -0.9**
SORM Soroca 75.81 317 P **P 16 04 31.0 -0.9**
P32M Atlin 75.93 31 P **P 16 04 32.8 +0.3**
baz=293
P33M Teslin, Yukon 76.10 30 IAmb IAmb 16 04 43.3
comp=Z,37nm,1.4s
P33M Teslin, Yukon 76.10 30 P **P 16 04 33.6 +0.1**
baz=294
STOK Stokkvaagen 76.12 337 *e*P **P 16 04 33.0 -0.2**
STOK IAmb IAmb 16 04 35.5
comp=Z,25nm,0.8s
SIT Sitka 76.13 34 P **P 16 04 33.7 +0.2**
baz=292
RNPP9 Sopachiv 76.16 320 P **P 16 04 33.9 +0.1**
LEIR Leirfjorden 76.19 337 *e*P **P 16 04 33.0 -0.6**
RNPP8 Varash 76.21 320 P **P 16 04 33.8 -0.3**
RNPP5 Staryi Chortor 76.23 320 P **P 16 04 34.0 -0.2**
GHAJ Ghor Haditha 76.24 298 IAmb IAmb 16 04 37.2
comp=Z,32nm,1.0s
NDNU Novodnistrovsk 76.27 317 P **P 16 04 34.0 -0.5**
S32K Killisnoo 76.35 33 P **P 16 04 34.9 +0.2**
baz=293
MDUB Mudurnu 76.49 308 IAmb IAmb 16 04 37.6
comp=Z,49nm,0.9s
TLCR 76.52 314 ⇑P **P 16 04 36.0 0.0**
TLCR 76.52 314 P **P 16 04 36.0 0.0**
SAHE Sakarya_HENDEK 76.61 309 ⇓P **P 16 04 37.6 +1.0**
JURR Jurilovca 76.62 313 ⇓P **P 16 04 36.8 +0.2**
SUW Suwalki 76.74 323 *e*P **P 16 04 36.4 -0.7**
SUW Suwalki 76.74 323 P **P 16 04 36.2 -0.8**
SUW Suwalki 76.74 323 P **P 16 04 36.3 -0.8**
CSS Mathiatis 76.77 302 IAmb IAmb 16 04 39.4
comp=Z,42nm,1.0s
KMPD K-Podol'skiy 76.84 317 P **P 16 04 36.7 -1.0**
Q32M Nakina River 76.86 31 P **P 16 04 37.7 -0.2**
baz=294
ATD Arta Tunnel 76.87 277 LR LR 16 40 07.0
comp=Z,5.2nm,18.4s,baz=66,slow=37
TPGR Topolog 76.90 313 ⇑P **P 16 04 38.5 +0.3**
DAG Danmarks Havn 76.95 352 *i* P **P 16 04 37.9 0.0**
DAG IAmb IAmb 16 04 38.3
comp=Z,31nm,1.4s
CFR Carcaliu 76.97 314 ⇓P **P 16 04 38.3 -0.3**
CFR Carcaliu 76.97 314 P **P 16 04 38.2 -0.3**
TIRR Tirgusor 77.04 313 ⇑P **P 16 04 39.3 +0.3**
TIRR Tirgusor 77.04 313 IAmb IAmb 16 04 41.1
comp=Z,23nm,1.0s
TIRR Tirgusor 77.04 313 P **P 16 04 39.3 +0.3**
MFTR Murfatlar 77.14 313 ⇑P **P 16 04 38.0 -1.5**
BORA Eskisehir 77.23 308 IAmb IAmb 16 04 42.1
comp=Z,42nm,0.9s
R33M Jennings River 77.29 30 P **P 16 04 40.4 +0.2**
baz=295
EIL Elat 77.29 297 P **P 16 04 41.6 +1.0**
comp=Z,9.1nm,0.9s,baz=108,slow=1.7,SNR=10
EIL LR LR 16 44 20.9
comp=Z,341nm,19.6s,baz=80,slow=40
comp=Z,9.1nm,0.9s
RAO Raoul Island 77.30 130 LR LR 16 32 38.0
comp=Z,395nm,21.2s,baz=21,slow=31
NSS Namsos 77.37 336 *e*P **P 16 04 39.8 -0.6**
TESR Tescani 77.46 315 ⇑P **P 16 04 41.1 -0.2**
TESR Tescani 77.46 315 P **P 16 04 41.1 -0.2**
comp=Z,55nm,1.5s
TGTN Hyland Airport 77.54 28 P **P 16 04 41.8 +0.2**
baz=297,SNR=6.6
ICOR Ion Corvin 77.58 313 ⇑P **P 16 04 42.8 +0.8**
U33K Whale Pass 77.62 34 P **P 16 04 42.3 +0.4**
baz=294
VRI Vrincioaia 77.65 315 ⇑P **P 16 04 42.2 -0.2**
VRI Vrincioaia 77.65 315 P **P 16 04 42.2 -0.2**
ONER Baraj Valea Uz 77.69 315 ⇓P **P 16 04 42.3 -0.3**
PLOR Plostina 77.70 315 ⇓P **P 16 04 42.9 +0.2**
PLOR Plostina 77.70 315 P **P 16 04 42.9 +0.2**
S34M Telegraph Cree 77.85 32 P **P 16 04 43.8 +0.6**
baz=296
CRAG Craig 77.89 34 P **P 16 04 43.4 -0.1**
baz=294
WRAK Wrangell Islan 77.89 33 P **P 16 04 43.7 +0.3**
baz=295
ISP Isparta 77.90 306*ce*P **P 16 04 44.8 +0.7**
ISP pmax pmax
comp=Z,64nm,1.3s
BURAR Bucovina Array 77.96 317 ⇑P **P 16 04 44.4 +0.2**
BURAR Bucovina Array 77.96 317 P **P 16 04 44.4 +0.2**
STNU Starunia 77.99 318 P **P 16 04 44.5 +0.3**
COVR Voineasa-Covas 78.00 315 ⇑P **P 16 04 44.5 +0.2**
TURR Turia 78.04 315 ⇑P **P 16 04 45.5 +0.9**
ISR Istrita 78.04 314 ⇑P **P 16 04 43.9 -0.8**
ISR Istrita 78.04 314 P **P 16 04 43.8 -0.8**
NEHR Nehoiu 78.09 314 ⇑P **P 16 04 45.9 +1.0**
DLBC Dease Lake 78.15 31 P **P 16 04 45.8 +0.8**
comp=Z,3.8nm,0.8s,baz=293,slow=7.7,SNR=3.0
DLBC LR LR 16 38 52.4
comp=Z,301nm,21.8s,baz=284,slow=35
comp=Z,3.8nm,0.8s
DLBC Dease Lake 78.15 31 P **P 16 04 45.4 +0.4**
baz=296
OZUR 78.17 315 ⇑P **P 16 04 45.2 -0.2**
CTYL Yalikoy Yolu 78.20 310 P **P 16 04 45.2 -0.3**
MORS Morshin 78.20 319 P **P 16 04 45.1 -0.2**
MLR Muntele Rosu 78.30 315 P **P 16 04 46.5 +0.3**
comp=Z,15nm,0.6s,baz=28,slow=2.1,SNR=18
MLR LR LR 16 43 23.5
comp=Z,572nm,21.7s,baz=60,slow=39
comp=Z,15nm,0.6s
MLR Muntele Rosu 78.30 315 ⇑P **P 16 04 47.0 +0.8**
MLR Muntele Rosu 78.30 315 P **P 16 04 46.9 +0.8**
DOPR Dopca 78.48 315 ⇓P **P 16 04 47.4 +0.4**
SHIU Shidnytsya 78.48 319 P **P 16 04 47.5 +0.5**
RAZG Razgrad 78.65 313 ⇑P **P 16 04 47.8 -0.2**
T35M Bob Quinn 78.69 32 P **P 16 04 47.9 0.0**
baz=296
KWP Kalwaria Pacla 78.72 319 *e*P **P 16 04 49.9 +1.7**
V35K Ketchikan 78.73 34 P **P 16 04 47.9 -0.2**
baz=296
BAND Balkesir-Ban 78.74 309 ⇑P **P 16 04 48.6 +0.1**
HFS Hagfors 78.79 331 P **P 16 04 47.9 -0.5**
comp=Z,15nm,0.7s,baz=76,slow=6.3,SNR=27
HFS LR LR 16 43 17.1
comp=Z,2μm,18.4s,baz=55,slow=38
comp=Z,15nm,0.7s
NEEM North Greenlan 78.82 359 *i* P **P 16 04 49.3 +0.7**
NEEM IAmb IAmb 16 04 50.2
comp=Z,83nm,1.3s
VOIR 78.90 315 ⇑P **P 16 04 48.8 -0.6**
VOIR 78.90 315 P **P 16 04 48.8 -0.6**
BEL Belsk 78.93 322 *e*P **P 16 04 49.9 +0.6**
BMR Baia Mare 79.01 317 ⇓P **P 16 04 49.4 -0.5**
BMR Baia Mare 79.01 317 P **P 16 04 49.4 -0.5**
KORU Korolevo 79.05 318 P **P 16 04 50.9 +0.9**
MDB Medias 79.06 316 ⇑P **P 16 04 49.5 -0.7**
MDB Medias 79.06 316 P **P 16 04 49.5 -0.7**
MANT Manisa 79.10 307 IAmb IAmb 16 04 52.1
comp=Z,101nm,1.7s
SZH Strazhitsa 79.12 312 P **P 16 04 51.0 +0.4**
BALB Balikesir 79.16 309 IAmb IAmb 16 04 52.3
comp=Z,76nm,1.3s
ARR Arges 79.20 315 ⇑P **P 16 04 51.0 -0.1**
MUKU Mukachevo 79.20 318 P **P 16 04 51.5 +0.7**
DBG Daneborg 79.21 351 *i* P **P 16 04 50.3 -0.2**
DBG IAmb IAmb 16 04 51.3
comp=Z,36nm,1.3s
U35K Hyder 79.28 33 P **P 16 04 50.9 -0.2**
baz=297
HUMR Humele 79.30 314 ⇑P **P 16 04 51.0 -0.5**
BERU Beregovo 79.31 318 P **P 16 04 51.6 +0.1**
ELND Elena 79.32 312 ⇑P **P 16 04 51.8 +0.2**
CJR Cluj-Napoca 79.33 316 ⇓P **P 16 04 52.3 +0.5**
CJR Cluj-Napoca 79.33 316 P **P 16 04 52.2 +0.5**
HOLU Holmets 79.36 318 P **P 16 04 52.1 +0.4**
NB2 NORSAR Subarra 79.41 333 P **P 16 04 51.1 -0.8**
comp=Z,26nm,0.9s,baz=54,slow=6.2
NB2 NORSAR Subarra 79.41 333 P **P 16 04 51.1 -0.8**
NOA NORSAR Array B 79.41 333 P **P 16 04 51.0 -0.8**
comp=Z,8.4nm,0.6s,baz=55,slow=5.7,SNR=39
NOA LR LR 16 43 45.4
comp=Z,1μm,18.5s,baz=75,slow=38
comp=Z,8.4nm,0.6s
NC602 NORSAR Array S 79.43 332 *e*P **P 16 04 51.3 -0.6**
TULEG Thule 79.50 3 IAmb IAmb 16 04 53.0
comp=Z,37nm,1.3s
TULEG Thule 79.50 3 *i* P **P 16 04 51.6 -0.4**
TULEG IAmb IAmb 16 04 52.7
comp=Z,39nm,1.3s
JMIC Jan Mayen 79.61 346 LR LR 16 45 28.6
comp=Z,414nm,18.2s,baz=66,slow=40
MARR Marisel-Cluj 79.65 316 ⇑P **P 16 04 54.0 +0.5**
STHS Stebnicka Huta 79.67 320 *e*P **P 16 04 53.7 +0.2**
STHS pmax pmax
comp=Z,14nm,1.1s
STHS Stebnicka Huta 79.67 320 *e*P **P 16 04 53.7 +0.2**
LOT Lotru 79.72 315 ⇑P **P 16 04 54.3 +0.3**
URZ Urewera 79.75 140 LR LR 16 40 16.1
comp=Z,618nm,18.6s,baz=306,slow=36
DOMB Dombas 79.77 334 *e*P **P 16 04 53.7 0.0**
DOMB IAmb IAmb 16 04 55.0
comp=Z,180nm,1.7s
DRGR 79.86 317 ⇓P **P 16 04 55.3 +0.7**
DRGR 79.86 317 P **P 16 04 55.3 +0.7**
ALN Alexandroupoli 79.98 310 IAmb IAmb 16 04 56.5
comp=Z,35nm,1.2s
PLVB Pleven 79.98 313 ⇓P **P 16 04 55.4 +0.2**
KOTAN Kotaneelee Air 80.03 28 P **P 16 04 54.8 -0.3**
baz=301
MOL Molde 80.08 335 *e*P **P 16 04 55.6 +0.2**
OJC Ojcow 80.18 321 *e*P **P 16 04 57.1 +0.9**
NIE Niedzica 80.23 320 *e*P **P 16 04 57.3 +0.8**
RPZ Rata Peaks 80.24 147 LR LR 16 41 20.8
comp=Z,449nm,18.5s,baz=352,slow=36
RDO Rodhopi 80.24 311 IAmb IAmb 16 04 58.6
comp=Z,41nm,1.3s
GKP Gorka Klasztor 80.26 324 *e*P **P 16 04 57.6 +1.1**
GZR Gura Zlata 80.39 315 ⇑P **P 16 04 57.9 +0.4**
GZR Gura Zlata 80.39 315 P **P 16 04 57.8 +0.4**
PLD Plovdiv 80.39 312 P **P 16 04 57.9 +0.5**
AKN Aaknes 80.51 335 *e*P **P 16 04 58.1 +0.4**
AKN IAmb IAmb 16 04 60.0
comp=Z,194nm,1.6s
KECS Kecovo 80.52 319 *e*P **P 16 04 59.4 +1.4**
KECS pmax pmax
comp=Z,38nm,1.4s
KECS Kecovo 80.52 319 *e*P **P 16 04 59.4 +1.4**
MPEP Malo Peshtene 80.58 313 P **P 16 04 59.2 +0.7**
PGB Panagyurishte 80.63 312 P **P 16 04 59.1 +0.3**
PUNG Punghina 80.74 314 ⇓P **P 16 05 00.1 +0.8**
SKAR Skarslia 80.81 333 *e*P **P 16 05 00.3 +0.9**
KONO Kongsberg 80.82 332 *i* P **P 16 04 59.8 +0.4**
KONO pmax pmax
comp=Z,10.0nm,1.1s
HERR Herculane 80.83 315 ⇑P **P 16 04 59.9 +0.2**
LANS Liptovska Anna 80.84 320 *e*P **P 16 05 01.9 +2.1**
LANS pmax pmax
comp=Z,17nm,1.6s
LANS Liptovska Anna 80.84 320 *e*P **P 16 05 01.9 +2.1**
BZS Buzias 81.04 316 ⇑P **P 16 05 00.1 -0.7**
BZS Buzias 81.04 316 P **P 16 05 00.1 -0.7**
BLSH Balsha 81.10 313 P **P 16 05 02.2 +0.9**
PSZ Piszkesteto 81.12 319 ⇑P **P 16 05 01.3 0.0**
PSZ Piszkesteto 81.12 319 IAmb IAmb 16 05 03.2
comp=Z,43nm,1.3s
PSZ Piszkesteto 81.12 319 P **P 16 05 01.3 0.0**
VTS Vitosha 81.22 313 P **P 16 05 02.7 +0.6**
MMB Musomishta 81.31 312 P **P 16 05 02.1 -0.4**
HYA Hoyanger 81.40 334 *e*P **P 16 05 02.5 +0.1**
HYA IAmb IAmb 16 05 03.4
comp=Z,35nm,1.2s
STEB Steborice 81.48 321 *e*P **P 16 05 03.4 +0.3**
KKB Krupnik 81.62 312 P **P 16 05 04.2 +0.2**
MORC Moravsky Berou 81.68 321 ⇑P **P 16 05 04.5 +0.2**
MORC Moravsky Berou 81.68 321 P **P 16 05 03.6 -0.6**
MORC Moravsky Berou 81.68 321 P **P 16 05 03.6 -0.6**
MORC pmax pmax
comp=Z,31nm,1.4s
MORC Moravsky Berou 81.68 321 *e*P **P 16 05 04.2 -0.1**
KULLO Kullorsuaq 81.76 0 *i* P **P 16 05 04.2 +0.1**
KULLO IAmb IAmb 16 05 05.8
comp=Z,41nm,1.1s
BOVS Bovan 81.82 314 ⇑P **P 16 05 04.8 -0.2**
KSP Ksiaz 81.90 322 *e*P **P 16 05 06.2 +0.9**
KRLC Kraliky 81.98 321 *e*P **P 16 05 06.2 +0.4**
KRLC AMS AMS 16 45 20.0
comp=Z,600nm,17.5s
KRLC Kraliky 81.98 321 *e*P **P 16 05 06.2 +0.4**
KRLC MLR MLR
comp=Z,600nm,17.5s
JAVC Velka Javorina 82.03 320 *e*P **P 16 05 07.4 +1.3**
SUE Sulen 82.03 334 *e*P **P 16 05 06.2 +0.4**
DPC Dobruska-Polom 82.12 322 *e*P **P 16 05 07.1 +0.6**
DPC *e*pP **pP 16 05 15.8 +0.6**
DPC AMS AMS 16 45 20.0
comp=Z,800nm,15.7s
DPC Dobruska-Polom 82.12 322 *e*P **P 16 05 07.1 +0.6**
DPC *e* 16 05 15.8
DPC MLR MLR
comp=Z,800nm,15.7s
SRO Srobarova 82.12 319 *e*P **P 16 05 07.7 +1.2**
SRO pmax pmax
comp=Z,32nm,1.5s
SRO Srobarova 82.12 319 *e*P **P 16 05 07.7 +1.2**
CHVC Chvalec 82.15 322 *e*P **P 16 05 07.0 +0.3**
CHVC Chvalec 82.15 322 *e*P **P 16 05 07.0 +0.3**
VAY Valandovo 82.21 312 *i* P **P 16 05 06.9 -0.3**
BLS5 Blasjo 82.28 333 *e*P **P 16 05 07.2 0.0**
SMOL Smolenice 82.33 320 *e*P **P 16 05 08.6 +1.0**
SMOL pmax pmax
comp=Z,69nm,2.2s
YKAW3 Yellowknife Wh 82.39 23 IAmb IAmb 16 05 16.7
comp=Z,44nm,1.1s
YKA Yellowknife Ar 82.43 23 P **P 16 05 07.8 -0.1**
comp=Z,5.1nm,0.6s,baz=312,slow=5.8,SNR=78
YKA LR LR 16 45 57.4
comp=Z,239nm,19.1s,baz=285,slow=39
comp=Z,5.1nm,0.6s
YKA Yellowknife Ar 82.43 23 P **P 16 05 07.2 -0.7**
YKA Yellowknife Ar 82.43 23*ce*P **P 16 05 08.1 +0.3**
YKA pmax pmax
comp=Z,5.0nm,0.6s
VRAC Vranov 82.45 321 P **P 16 05 08.7 +0.5**
comp=Z,5.7nm,0.6s,baz=66,slow=4.4,SNR=20
VRAC LR LR 16 44 39.3
comp=Z,362nm,20.4s,baz=61,slow=38
comp=Z,5.7nm,0.6s
VRAC Vranov 82.45 321 ⇑P **P 16 05 08.6 +0.3**
VRAC Vranov 82.45 321 *e*P **P 16 05 08.8 +0.5**
YKAW1 Yellowknife Wh 82.48 23 IAmb IAmb 16 05 17.2
comp=Z,41nm,1.1s
MODS Modra-Piesok 82.48 320 *e*P **P 16 05 09.3 +0.8**
MODS pmax pmax
comp=Z,103nm,1.6s
MODS Modra-Piesok 82.48 320 *e*P **P 16 05 09.3 +0.8**
POIN Pond Inlet 82.56 6 IAmb IAmb 16 05 10.7
comp=Z,83nm,1.6s
MORH Mrgy, Hungar 82.64 317 ⇑P **P 16 05 09.4 +0.1**
KRUC Moravsky 82.68 321 *e*P **P 16 05 09.3 -0.1**
SUMG Summit 82.98 355 IAmb IAmb 16 05 12.9
comp=Z,41nm,1.0s
SUMG Summit 82.98 355 *i* P **P 16 05 11.4 +0.4**
SUMG IAmb IAmb 16 05 12.7
comp=Z,51nm,1.1s
PVCC Panska Ves 83.02 323 AMS AMS 16 45 40.0
comp=Z,700nm,17.0s
IDI Anoyia 83.06 305 LR LR 16 49 08.6
comp=Z,94nm,18.2s,baz=102,slow=41
PRU Pruhonice 83.29 322 AMS AMS 16 46 00.0
comp=Z,600nm,15.7s
WINA Alland / Wiene 83.32 320 *i* PcP **P 16 05 14.3 +1.5**
SNR=11
IVA Berane 83.34 314 ⇑*i*P **P 16 05 13.5 +0.4**
RONA Rosalia, Austr 83.38 319 *i* P **P 16 05 13.5 +0.4**
comp=Z,15nm,1.4s
PLE Pljevlja 83.47 315 *e*P **P 16 05 15.0 +1.2**
CLL Collm 83.49 324 IAmb IAmb 16 05 14.9
comp=Z,37nm,1.4s
CLL Collm 83.49 324 *i* P **P 16 05 13.4 -0.1**
comp=Z,41nm,1.5s
CLL *e*pP **pwP 16 05 24.0 -0.6**
CLL *e*PP **PP 16 08 25.0 -0.4**
CLL *e*S **SKSac 16 15 34.0 0.0**
CLL *e*SS SS 16 21 12.0 +14
CLL *ex* x 16 25 30.0
CLL AMS AMS 16 48 00.0
comp=N,600nm,19.4s
CLL AMS AMS 16 48 00.0
comp=E,300nm,18.5s
OHR Ohrid 83.51 312 *i* P **P 16 05 13.1 -0.9**
CONA Conrad Observa 83.53 320 *i* PcP **P 16 05 15.1 +1.2**
comp=E,39nm,1.3s,SNR=13
UPNV Upernavik 83.56 360 *i* P **P 16 05 13.8 +0.3**

UPNV				IAmb	IAmb	16 05 14.8		
	comp=Z,32nm,0.7s							
KOME	**Kolasin**	**83.60**	**314**	⇑*iP*	**P**	**16 05 14.0**	**-0.4**	
ZVC	**Zvikov**	**83.76**	**322**	*eP*	**P**	**16 05 15.2**	**+0.2**	
ZVC				AMS	AMS	16 46 10.0		
	comp=Z,700nm,11.8s							
PDG	**Podgorica**	**83.96**	**314**	⇑P	**P**	**16 05 16.0**	**-0.1**	
PDG	**Podgorica**	**83.96**	**314**	IAmb	IAmb	16 05 17.7		
	comp=Z,54nm,1.4s							
PDG	**Podgorica**	**83.96**	**314**	⇑*iP*	**P**	**16 05 16.2**	**+0.1**	
CKRC	**Cesky Krumlov**	**84.00**	**321**	*eP*	**P**	**16 05 17.1**	**+0.8**	
CKRC				AMS	AMS	16 46 30.0		
	comp=Z,500nm,14.1s							
CKRC	**Cesky Krumlov**	**84.00**	**321**	*eP*	**P**	**16 05 17.1**	**+0.8**	
CKRC				MLR	MLR			
	comp=Z,500nm,14.1s							
NKME	**Niksic**	**84.01**	**314**	⇑*iP*	**P**	**16 05 16.3**	**-0.2**	
ARSA	**Arzberg**	**84.06**	**319**	IAmb	IAmb	16 05 18.3		
	comp=Z,24nm,1.4s							
ARSA	**Arzberg**	**84.06**	**319**	*eP*	**P**	**16 05 16.8**	**+0.2**	
	comp=Z,12nm,1.2s							
DRME	**Dracevica, Mon**	**84.12**	**314**	*eP*	**P**	**16 05 17.0**	**0.0**	
CEME	**Cevo**	**84.13**	**314**	⇑*iP*	**P**	**16 05 16.7**	**-0.4**	
ULC	**Ulcinj**	**84.18**	**313**	*eP*	**P**	**16 05 16.8**	**-0.5**	
BRY	**Bratogost**	**84.22**	**314**	⇑*iP*	**P**	**16 05 17.1**	**-0.5**	
BLY	**Banja Luka**	**84.23**	**317**	⇑P	**P**	**16 05 18.2**	**+0.7**	
KHC	**Kasperske Hory**	**84.26**	**322**	IAmb	IAmb	16 05 19.5		
	comp=Z,30nm,1.4s							
KHC	**Kasperske Hory**	**84.26**	**322**	*eP*	**P**	**16 05 17.7**	**+0.1**	
KHC				*ep*P	**pP**	**16 05 26.7**	**+0.4**	
KHC				AMS	AMS	16 46 40.0		
	comp=Z,800nm,19.4s							
KHC	**Kasperske Hory**	**84.26**	**322**	*ceP*	**P**	**16 05 18.4**	**+0.8**	
KHC				pmax	pmax			
	comp=Z,23nm,1.3s							
GEC2	**GERESS Array S**	**84.34**	**321**	IAmb	IAmb	16 05 19.6		
	comp=Z,18nm,1.1s							
GERES	**GERESS Array B**	**84.34**	**321**	P	**P**	**16 05 17.9**	**-0.1**	
	comp=Z,7.6nm,1.0s,baz=67,slow=4.5,SNR=29							
	comp=Z,7.6nm,1.0s							
GERES	**GERESS Array B**	**84.34**	**321**	P	**P**	**16 05 18.0**	**-0.1**	
NKC	**Novy Kostel**	**84.34**	**323**	AMS	AMS	16 48 00.0		
	comp=Z,900nm,14.5s							
MOA	**Molln**	**84.51**	**320**	*i* PcP	**P**	**16 05 19.8**	**+0.9**	
	comp=Z,32nm,2.0s,SNR=6.7							
SOKA	**Soboth**	**84.63**	**319**	*eP*	**P**	**16 05 19.5**	**-0.1**	
	comp=Z,30nm,1.6s,SNR=6.2							
NUUG	**Nuugaatsiaq**	**84.79**	**359**	*i* P	**P**	**16 05 19.4**	**-0.4**	
NUUG				IAmb	IAmb	16 05 21.1		
	comp=Z,67nm,1.6s							
BIOA	**Bad Ischl, Aus**	**84.95**	**320**	*i* PcP	**P**	**16 05 21.3**	**+0.2**	
	comp=Z,15nm,1.2s,SNR=6.6							
OBKA	**Obir**	**85.00**	**319**	*i* PcP	**P**	**16 05 22.5**	**+1.0**	
	comp=Z,13nm,1.0s							
GRFO	**Grafenberg**	**85.30**	**323**	P	**P**	**16 05 24.6**	**+1.8**	
GRFO	**Grafenberg**	**85.30**	**323**	P	**P**	**16 05 24.6**	**+1.8**	
KBA	**Koelnbreinsper**	**85.43**	**320**	*e*PcP	**P**	**16 05 24.5**	**+0.7**	
	comp=Z,4.9nm,0.7s							
MYKA	**Terra Mystica**	**85.48**	**319**	*i* PcP	**P**	**16 05 24.3**	**+0.4**	
	comp=Z,6.5nm,0.8s							
LESA	**Schwarzleotal**	**85.65**	**320**	*i* PcP	**P**	**16 05 25.2**	**+0.5**	
	comp=Z,20nm,1.5s,SNR=5.7							
ABTA	**Abfaltersbach**	**86.09**	**320**	*e*PcP	**P**	**16 05 26.6**	**-0.3**	
	comp=Z,7.4nm,1.2s							
WATA	**Walderalm**	**86.33**	**321**	*e*PcP	**P**	**16 05 28.0**	**-0.1**	
	comp=Z,13nm,1.3s							
WTTA	**Wattenberg**	**86.34**	**321**	*e*PcP	**P**	**16 05 28.3**	**+0.1**	
	comp=Z,36nm,2.1s,SNR=6.1							
MOTA	**Moosalm**	**86.60**	**321**	*e*PcP	**P**	**16 05 29.0**	**-0.5**	
	comp=Z,19nm,1.6s							
SQTA	**Sankt Quirin**	**86.61**	**321**	*e*PcP	**P**	**16 05 29.4**	**0.0**	
	comp=Z,19nm,1.4s,SNR=5.6							
RETA	**Reutte**	**86.72**	**321**	*e*PcP	**PcP**	**16 05 31.7**	**-0.6**	
	comp=Z,9.8nm,1.9s							
BLKN	**Baker Lake**	**86.87**	**16**	IAmb	IAmb	16 05 31.2		
	comp=Z,39nm,1.5s							
FETA	**Feichten**	**86.99**	**321**	*i* PcP	**P**	**16 05 31.4**	**0.0**	
	comp=Z,10.0nm,1.2s							
TIP	**Timpagrande**	**87.15**	**312**	IAmb	IAmb	16 05 34.1		
	comp=Z,36nm,1.3s							
RAR	**Rarotonga**	**87.15**	**115**	LR	LR	16 38 51.1		
	comp=Z,375nm,19.8s,baz=292,slow=32							
RAR	**Rarotonga**	**87.15**	**115**	P	**P**	**16 05 33.4**	**+1.1**	
DAVA	**Damuels**	**87.34**	**321**	*i* PcP	**P**	**16 05 33.8**	**+0.7**	
	comp=Z,21nm,1.7s							
BORG	**Borgarnes**	**87.51**	**346**	LR	LR	16 49 38.9		
	comp=Z,525nm,18.4s,baz=23,slow=39							
DAVOX	**Davos/Dischmat**	**87.61**	**321**	P	**P**	**16 05 34.1**	**-0.3**	
	comp=Z,3.6nm,0.6s,baz=91,slow=1.6,SNR=8.4							
DAVOX				LR	LR	16 49 45.0		
	comp=Z,497nm,18.3s,baz=72,slow=39							
	comp=Z,3.6nm,0.6s							
FDMO	**Fiordimonte**	**87.65**	**317**	IAmb	IAmb	16 05 36.5		
	comp=Z,24nm,1.0s							
NRCA	**Norcia**	**87.74**	**316**	IAmb	IAmb	16 05 44.7		
	comp=Z,14nm,1.0s							
WLF	**Walferdange**	**88.05**	**325**	*dP*	**P**	**16 05 37.4**	**+1.1**	
	comp=Z,12nm,1.1s							
TUE	**Stuetta**	**88.09**	**321**	IAmb	IAmb	16 05 38.2		
	comp=Z,59nm,1.9s							
EKA	**Eskdalemuir Ar**	**88.90**	**333**	P	**P**	**16 05 39.8**	**-0.3**	
	comp=Z,1.4nm,0.7s,baz=29,slow=1.9,SNR=4.5							
EKA				LR	LR	16 50 42.8		
	comp=Z,497nm,18.1s,baz=40,slow=39							
	comp=Z,1.4nm,0.7s							
SENIN	**Lac Senin/Sane**	**89.32**	**322**	IAmb	IAmb	16 05 51.5		
	comp=Z,19nm,1.2s							
VAE	**Valguarnera**	**89.59**	**311**	LR	LR	16 51 08.4		
	comp=Z,127nm,21.3s,baz=62,slow=39							
BNI	**Bardonecchia**	**90.43**	**321**	IAmb	IAmb	16 06 06.1		
	comp=Z,15nm,1.2s							
BMO	**Blue Mountains**	**92.02**	**38**	IAmb	IAmb	16 06 04.8		
	comp=Z,21nm,1.2s							
FRB	**Frobisher Bay**	**92.14**	**5**	LR	LR	16 50 11.9		
	comp=Z,495nm,20.9s,baz=339,slow=37							
FFC	**Flin Flon**	**92.56**	**24**	P	**P**	**16 05 55.7**	**-1.5**	
FFC				IAmb	IAmb	16 06 06.1		
	comp=Z,26nm,1.2s							
FFC	**Flin Flon**	**92.56**	**24**	P	**P**	**16 05 55.7**	**-1.5**	
FFC				pmax	pmax			
	comp=Z,26nm,1.2s							
MBAR	**Mbarara**	**92.68**	**271**	LR	LR	16 48 35.0		
	comp=Z,153nm,20.9s,baz=66,slow=36							
BEKR	**Beckworth**	**93.11**	**44**	P	**P**	**16 05 58.4**	**-1.9**	
MFID	**Camas Ranch**	**93.74**	**39**	IAmb	IAmb	16 06 13.2		
	comp=Z,30nm,1.3s							
KEST	**Kesra**	**93.97**	**312**	P	**P**	**16 06 04.5**	**+0.3**	
	comp=Z,5.6nm,0.9s,baz=35,slow=3.5,SNR=5.2							
KEST				LR	LR	16 53 06.1		
	comp=Z,209nm,19.6s,baz=14,slow=38							
	comp=Z,5.6nm,0.9s							
KEST	**Kesra**	**93.97**	**312**	IAmb	IAmb	16 06 32.5		
	comp=Z,24nm,1.4s							
EGMT	**Eagleton**	**94.00**	**33**	IAmb	IAmb	16 06 15.1		
	comp=Z,12nm,1.1s							
PPT	**Papeete**	**94.33**	**107**	LR	LR	16 39 53.8		
	comp=Z,494nm,21.9s,baz=287,slow=30							
HLID	**Hailey**	**94.45**	**38**	IAmb	IAmb	16 06 16.9		
	comp=Z,14nm,1.2s							
NVAR	**Mina Array Bea**	**95.24**	**44**	P	**P**	**16 06 11.3**	**+1.2**	
	comp=Z,1.2nm,0.7s,baz=266,slow=5.9,SNR=6.7							
NVAR				LR	LR	16 46 07.2		
	comp=Z,131nm,20.2s,baz=288,slow=34							
	comp=Z,1.2nm,0.7s							
ELK	**Elko**	**95.73**	**41**	LR	LR	16 43 42.2		
	comp=Z,112nm,21.0s,baz=315,slow=32							
PDAR	**Pinedale Array**	**97.66**	**36**	P	Pdif	16 06 22.4	+1.3	
	comp=Z,0.1nm,0.4s,baz=236,slow=4.4,SNR=1.3							
	comp=Z,0.1nm,0.4s							
ULM	**Lac du Bonnet**	**98.39**	**24**	P	Pdif	16 06 23.9	0.0	
	comp=Z,1.0nm,0.5s,baz=346,slow=4.2,SNR=2.3							
ULM				LR	LR	16 56 19.0		
	comp=Z,248nm,18.5s,baz=344,slow=39							
	comp=Z,1.0nm,0.5s							
ULM	**Lac du Bonnet**	**98.39**	**24**	IAmb	IAmb	16 06 34.6		
	comp=Z,20nm,1.6s							
PFO	**Pinyon Flats O**	**99.29**	**47**	LR	LR	16 44 39.1		
	comp=Z,181nm,21.8s,baz=292,slow=31							
ESDC	**Sonseca Array**	**99.93**	**321**	LR	LR	16 57 03.1		
	comp=Z,554nm,18.2s,baz=26,slow=39							
MAW	**Mawson**	**101.52**	**200**	P	**Pdif**	**16 06 36.2**	**-0.9**	
	comp=Z,4.6nm,1.1s,baz=18,slow=13,SNR=2.3							
NVL	**N'lazarevskaya**	**119.45**	**201**	*e*PKIKP	**PKPdf**	**16 11 34.0**	**-0.5**	
NVL				*e*		16 12 56.4		
NVL				*e*PPP	PPP	16 15 28.2		
NVL				*e*		16 18 46.1		
NVL				*e*PS	**PS**	**16 22 45.4**	**0.0**	
NVL				*e*SS	SS	16 29 21.7	+4.5	
NVL				*e*SSS	SSS	16 33 46.8		
NVL				pmax	pmax			
	comp=Z,13nm,0.9s							
NVL				MLR	MLR			
	comp=Z,745nm,21.0s							
SDV	**Santo Domingo**	**144.64**	**24**	PKP	**PKPab**	**16 12 22.0**	**-0.1**	
	comp=Z,10.0nm,0.6s,baz=16,slow=4.0,SNR=10							
SPBC	**San Pablo de B**	**146.04**	**32**	P	**PKPbc**	**16 12 26.5**	**-0.1**	
VILC	**Villavicencio,**	**147.55**	**33**	P	**PKPbc**	**16 12 31.5**	**+0.4**	
VILC				P	**PKPab**	**16 12 32.7**	**-0.4**	
VILC				P	**PKPab**	**16 12 32.7**	**-0.4**	
URMC	**La Uribe, Meta**	**147.94**	**35**	P	**PKPbc**	**16 12 32.4**	**+0.3**	
PTGC	**Puerto Gaitan,**	**148.23**	**30**	P	**PKPdf**	**16 12 26.0**	**-3.4**	
MDP	**Montagnes des**	**150.91**	**352**	PKP	**PKPdf**	**16 12 31.6**	**-2.1**	
	comp=Z,10nm,0.9s,baz=280,slow=6.1,SNR=1.6							
MDP				PKPbc	**PKiKP**	**16 12 40.0**	**0.0**	
	comp=Z,14nm,0.9s,baz=30,slow=6.5,SNR=2.4							
ATAH	**Atahualpa**	**153.25**	**55**	PKP	**PKPdf**	**16 12 35.1**	**-2.6**	
	comp=Z,2.3nm,0.9s,baz=190,slow=1.8,SNR=3.8							
ATAH				PKPbc	**pPKPdf**	**16 12 46.7**	**+0.6**	
	comp=Z,8.9nm,1.1s,baz=236,slow=3.5,SNR=5.3							
ATAH				PKPab	**pPKPbc**	**16 12 54.8**	**+0.6**	
	comp=Z,7.5nm,0.9s,baz=84,slow=4.9,SNR=4.3							
NNA	**Nana**	**157.42**	**62**	PKP	**PKPdf**	**16 12 43.8**	**+1.0**	
	comp=Z,5.3nm,0.5s,baz=162,slow=3.2,SNR=2.0							
LPAZ	**La Paz**	**166.78**	**57**	PKP	**PKPdf**	**16 12 53.1**	**+0.2**	
	comp=Z,2.8nm,1.1s,baz=32,slow=2.9,SNR=5.9							
CFA	**Coronel Fontan**	**167.16**	**129**	PKP	**PKPdf**	**16 12 53.5**	**+1.4**	
	comp=Z,0.6nm,0.5s,baz=217,slow=5.1,SNR=1.7							
BDFB	**Brasilia**	**168.48**	**314**	PKPab	**PKPab**	**16 14 04.6**	**+1.9**	
	comp=Z,2.0nm,0.5s,baz=225,slow=2.9,SNR=2.3							
CPUP	**Villa Florida**	**177.49**	**165**	PKPab	PKPab	16 14 44.2	+2.1	
	comp=Z,2.1nm,0.8s,baz=170,slow=4.9,SNR=6.3							

JMA 30 15:54:44.7±0.3, 24.°N±1.°×123.°4E±0.°5, h27km±3km, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.42**	**65**	*eS*	Sb	15 54 59.7	+0.1
IRIF	**Iriomote-Funau**	**0.55**	**34**	*eP*	Pb	15 54 55.2	-0.5
IRIF				*eS*	Sb	15 55 03.4	+0.1
JKRS	**Kuro-shima**	**0.67**	**58**	*eP*	Pb	15 54 57.5	-0.2
JKRS				*eS*	Sb	15 55 06.8	+0.2
YOJ	**Yonaguni jima**	**0.67**	**329**	*eP*	Pb	15 54 57.8	-0.1
YOJ				*eS*	Sb	15 55 06.9	+0.1
JYNG	**Yonagunijimaku**	**0.70**	**324**	*eP*	Pb	15 54 57.9	-0.3
JIJ	**Ishigaki jima**	**0.84**	**55**	*eS*	Sb	15 55 11.2	-0.3
JISG	**Ishigakijimahi**	**1.09**	**50**	*eP*	Pn	15 55 04.2	0.0

*IDC **30** 15:56:37.6±0.7, 38.°01N×21.°52E, h0km, mb4.0/12, mbtmp3.8/23, ML3.4/8, Error ellipse: s-maj=14.6km s-min=12.9km az=170.0*
*NEIC **30** 15:56:39.4±1.6, 37.°91N±0.°05×21.°49E±0.°07, h14km±4km, mb4.4/13, Error ellipse: s-maj=8.3km s-min=6.8km az=222.0*
*PDG **30** 15:56:39.8±0.5, 37.°87N×21.°39E, h11km±1km, ML3.8/10, Error ellipse: s-maj=0.4km s-min=0.8km az=0.0*
*ATH **30** 15:56:39.6, 37.°89N×21.°42E, h17km, ML3.8/48, Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
*THE **30** 15:56:39.8, 37.°9N±0.°7×21.°4E±0.°5, h22km±1km, M3.8/13, MLh3.8/13*
*NAO **30** 15:56:45.7, 37.°88N×21.°44E, h33km, MB4.4*

ISC 30 15:56:39.9±0.6, 37.°90N±0.°02×21.°43E±0.°01, h18km±2km, n190, σ1°41/256, mb4.2/13, 12C-10D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCHA	**Lechaina**	**0.13**	**287**	P	**Pg**	**15 56 45.1**	**+1.2**
LCHA				S	**Sb**	**15 56 46.3**	**+1.3**
RLS	**Riolos of Patr**	**0.16**	**12**	P	**Pb**	**15 56 44.7**	**+0.9**
RLS				S	**Sg**	**15 56 48.6**	**+1.3**
RLS	**Riolos of Patr**	**0.16**	**12**	P	**Pb**	**15 56 44.9**	**+1.1**
RLS				S	**Sg**	**15 56 47.7**	**+0.4**
YRMI	**Loutra Irminis**	**0.21**	**344**	P	**Pb**	**15 56 45.6**	**+0.6**
YRMI				S	**Sb**	**15 56 49.1**	**+0.8**
CLEM	**Kyllini,Ilia,G**	**0.23**	**268**	P	**Pb**	**15 56 45.9**	**+0.5**
CLEM				S	**Sg**	**15 56 48.2**	**-0.8**
DRO	**Drossia**	**0.23**	**77**	P	**Pg**	**15 56 45.0**	**-0.3**
DRO				S	**Sb**	**15 56 49.8**	**+0.8**
DRO	**Drossia**	**0.23**	**77**	P	**Pg**	**15 56 45.2**	**-0.1**
DRO				S	**Sb**	**15 56 49.8**	**+0.8**
AXS	**Araxos**	**0.30**	**353**	P	**Pb**	**15 56 46.8**	**+0.1**
AXS				S	**Sb**	**15 56 51.7**	**+0.4**
AXS	**Araxos**	**0.30**	**353**	P	**Pb**	**15 56 46.8**	**+0.1**
AXS				S	**Sg**	**15 56 50.7**	**-0.1**
PATG	**Patra B**	**0.41**	**35**	P	**Pb**	**15 56 49.3**	**+0.6**
AMT	**Artemida-Makis**	**0.43**	**148**	P	**Pg**	**15 56 48.2**	**-0.5**
AMT				S	**Sg**	**15 56 54.7**	**+0.1**
AMT	**Artemida-Makis**	**0.43**	**148**	P	**Pg**	**15 56 48.2**	**-0.5**
AMT				S	**Sb**	**15 56 55.9**	**+0.8**
ZARO	**Zacharo**	**0.45**	**157**	P	**Pg**	**15 56 48.7**	**-0.3**
PATC	**Patra C**	**0.46**	**35**	P	**Pb**	**15 56 49.7**	**+0.3**
PATC				S	**Sg**	**15 56 55.7**	**+0.4**
MSL1	**Messolongi**	**0.47**	**360**	P	**Pb**	**15 56 49.9**	**+0.2**
UPR	**University Cam**	**0.48**	**36**	P	**Pb**	**15 56 50.0**	**+0.3**
UPR				S	**Sb**	**15 56 57.4**	**+0.9**
UPR	**University Cam**	**0.48**	**36**	P	**Pb**	**15 56 50.1**	**+0.4**
UPR				S	**Sg**	**15 56 56.2**	**+0.1**
KYPS	**Kipseli, Zakin**	**0.48**	**261**	P	**Pb**	**15 56 50.1**	**+0.3**
KYPS				S	**Sb**	**15 56 56.4**	**-0.2**
RIOA	**Rio**	**0.49**	**36**	P	**Pb**	**15 56 50.3**	**+0.3**
RIOA				S	**Sg**	**15 56 56.6**	**+0.2**
LTHK	**Lithakia**	**0.50**	**248**	P	**Pg**	**15 56 49.8**	**-0.1**
LTHK				S	**Sb**	**15 56 57.8**	**+0.7**
LTHK	**Lithakia**	**0.50**	**248**	P	**Pg**	**15 56 49.9**	**-0.1**
RTZL	**Ratzakli, Kefa**	**0.55**	**289**	P	**Pg**	**15 56 50.5**	**-0.3**
RTZL				S	**Sb**	**15 56 59.3**	**+0.9**
RTZL	**Ratzakli, Kefa**	**0.55**	**289**	P	**Pg**	**15 56 50.5**	**-0.3**
RTZL				S	**Sg**	**15 56 57.8**	**-0.4**
AGRP	**Agrapidokambos**	**0.55**	**25**	P	**Pg**	**15 56 50.5**	**-0.4**
AGRP				S	**Sb**	**15 56 58.7**	**+0.3**
ZIRI	**Ziria, Aigiali**	**0.58**	**45**	P	**Pg**	**15 56 51.5**	**+0.1**
ZIRI				S	**Sg**	**15 56 59.4**	**+0.2**
ORTH	**Orthonies,Zaky**	**0.58**	**266**	P	**Pb**	**15 56 51.6**	**+0.1**
ORTH				S	**Sb**	**15 57 00.1**	**+0.8**
ORTH	**Orthonies,Zaky**	**0.58**	**266**	P	**Pb**	**15 56 52.1**	**+0.7**
ORTH				S	**Sb**	**15 56 59.4**	**+0.1**
AIOA	**Agios Ioannis,**	**0.58**	**59**	P	**Pg**	**15 56 50.9**	**-0.6**
KLV	**Kalavryta, Ach**	**0.59**	**76**	P	**Pg**	**15 56 51.0**	**-0.6**
KLV				S	**Sb**	**15 57 00.1**	**+0.4**
KLV	**Kalavryta, Ach**	**0.59**	**76**	P	**Pg**	**15 56 51.0**	**-0.6**
KLV				S	**Sb**	**15 57 00.3**	**+0.6**
VVK	**Vomvokou**	**0.60**	**30**	P	**Pg**	**15 56 51.7**	**-0.2**
MALA	**Malamata, Dori**	**0.61**	**35**	P	**Pg**	**15 56 51.7**	**-0.2**
MALA				S	**Sg**	**15 56 59.1**	**-0.9**
AGEO	**AgiosGiorgios,**	**0.62**	**54**	P	**Pg**	**15 56 51.9**	**-0.3**
EFP	**Efpalio**	**0.65**	**36**	P	**Pb**	**15 56 52.3**	**-0.3**
EFP	**Efpalio**	**0.65**	**36**	P	**Pb**	**15 56 52.3**	**-0.3**
EFP				S	**Sg**	**15 57 01.3**	**0.0**
MG00	**Magoula, Dorid**	**0.66**	**38**	P	**Pb**	**15 56 52.7**	**-0.1**
MG00				S	**Sb**	**15 57 02.3**	**+0.6**
AST1	**Astakos**	**0.69**	**338**	P	**Pg**	**15 56 53.6**	**+0.1**
SERG	**Sergoula**	**0.71**	**44**	P	**Pb**	**15 56 53.3**	**-0.5**
SERG	**Sergoula**	**0.71**	**44**	P	**Pb**	**15 56 53.4**	**-0.4**
SERG				S	**Sg**	**15 57 04.4**	**+1.0**
VLS	**Valsamata**	**0.72**	**293**	P	**Pb**	**15 56 53.3**	**-0.5**
VLS	**Valsamata**	**0.72**	**293**	P	**Pb**	**15 56 53.1**	**-0.7**
VLS				S	**Sg**	**15 57 03.4**	**-0.1**
PVO	**Paravola**	**0.72**	**6**	P	**Pb**	**15 56 53.6**	**-0.3**
PVO	**Paravola**	**0.72**	**6**	P	**Pb**	**15 56 53.9**	**0.0**
PVO				S	**Sb**	**15 57 03.2**	**-0.3**
GUR	**Goura**	**0.73**	**87**	P	**Pb**	**15 56 53.2**	**-0.8**
GUR	**Goura**	**0.73**	**87**	P	**Pb**	**15 56 53.1**	**-0.9**
GUR				S	**Sg**	**15 57 05.0**	**+1.2**
KALE	**Kalithea**	**0.75**	**49**	P	**Pb**	**15 56 53.9**	**-0.4**
KALE	**Kalithea**	**0.75**	**49**	P	**Pb**	**15 56 54.0**	**-0.4**
KALE				S	**Sg**	**15 57 04.8**	**+0.3**
KFL1	**Kefalonia,Entr**	**0.78**	**290**	P	**Pb**	**15 56 54.0**	**-0.9**
KFL1				S	**Sb**	**15 57 05.0**	**-0.1**
ARG2	**Argostoli**	**0.79**	**291**	P	**Pb**	**15 56 53.5**	**-1.6**
ARG2	**Argostoli**	**0.79**	**291**	P	**Pb**	**15 56 53.4**	**-1.6**
ARG2				S	**Sb**	**15 57 05.3**	**-0.1**
ANX	**Ano Chora**	**0.80**	**29**	P	**Pb**	**15 56 54.9**	**-0.3**
ANX				S	**Sg**	**15 57 06.4**	**+0.4**
ITM	**Ithomi**	**0.82**	**151**		**Pb**	**15 56 54.8**	**-0.8**
ITM	**Ithomi**	**0.82**	**151**	P	**Pb**	**15 56 55.0**	**-0.6**
FSK	**Fiskardo**	**0.88**	**310**	P	**Pb**	**15 56 56.3**	**-0.3**
DMLN	**Damoulianata-K**	**0.90**	**293**	P	**Pb**	**15 56 56.5**	**-0.4**
EVGI	**Lefkada island**	**0.94**	**320**	P	**Pb**	**15 56 57.6**	**-0.1**
EVGI				S	**Sg**	**15 57 10.5**	**-0.1**
NYDR	**Nydri-Lefkada**	**0.99**	**325**	P	**Pb**	**15 56 58.2**	**-0.3**
NYDR				S	**Sg**	**15 57 12.1**	**-0.1**
PYL1	**Pylos**	**1.01**	**168**	P	**Pb**	**15 56 57.9**	**-0.8**
DLFA	**Delphi**	**1.02**	**55**	P	**Pb**	**15 56 58.4**	**-0.7**
DRAG	**Dragano-Lefkad**	**1.03**	**320**	P	**Pb**	**15 56 59.1**	**-0.1**
DRAG				S	**Sg**	**15 57 13.3**	**-0.1**
PYL	**PYLOS**	**1.03**	**166**	P	**Pb**	**15 56 58.3**	**-0.9**
AMPL	**Ampelaki**	**1.04**	**351**	P	**Pb**	**15 56 59.3**	**0.0**
KIAA	**Kiato**	**1.05**	**83**	P	**Pb**	**15 56 59.6**	**+0.1**
ARS1	**Argos**	**1.07**	**104**	P	**Pb**	**15 56 59.6**	**-0.2**
LKD2	**Lefkada island**	**1.07**	**326**	P	**Pb**	**15 56 59.6**	**-0.3**
LKD2				S	**Sn**	**15 57 14.2**	**-0.3**
MTHA	**Methoni**	**1.10**	**168**	P	**Pb**	**15 57 00.1**	**-0.2**
MTHA				S	**Sb**	**15 57 13.9**	**-0.3**
TSLK	**Tsoukalades, L**	**1.10**	**327**	P	**Pb**	**15 57 00.5**	**+0.1**
TSLK				S	**Sb**	**15 57 14.8**	**+0.3**
NPLA	**Nafplio**	**1.14**	**107**	P	**Pg**	**15 57 01.9**	**-0.1**
LTK	**Loutraki**	**1.23**	**84**	P	**Pn**	**15 57 02.1**	**0.0**
MAKR	**Makrakomi, Fth**	**1.24**	**26**	P	**Pb**	**15 57 03.0**	**+0.2**
MAKR				S	**Sg**	**15 57 19.7**	**-0.4**
ART2	**Arta**	**1.29**	**345**	P	**Pn**	**15 57 03.4**	**+0.4**
AXAR	**Agios Charalam**	**1.30**	**48**	P	**Pb**	**15 57 03.9**	**+0.1**
ARTB	**Arta**	**1.30**	**345**	P	**Pn**	**15 57 02.9**	**-0.3**
AGG	**Agios Georgios**	**1.33**	**32**	P	**Pb**	**15 57 04.2**	**-0.1**
TETR	**Tetrakomo, Epi**	**1.45**	**355**	P	**Pb**	**15 57 06.2**	**-0.2**
LKR	**Lokris**	**1.45**	**58**	P	**Pb**	**15 57 06.1**	**-0.2**
MET3	**Ano Fanari,Met**	**1.46**	**102**	P	**Pb**	**15 57 06.3**	**-0.3**
ATAL	**Atalanti**	**1.48**	**57**	P	**Pn**	**15 57 06.5**	**+0.8**
VIL2	**Platees**	**1.49**	**77**	P	**Pb**	**15 57 06.9**	**0.0**
MET2	**Kameni Chora,**	**1.54**	**100**	P	**Pb**	**15 57 07.3**	**-0.4**
MET2					Pg_3	15 57 07.5	
MET5	**Makryloggos,Me**	**1.56**	**100**	P	**Pb**	**15 57 08.0**	**-0.2**
MET6	**Megalochori,Me**	**1.56**	**101**	P	**Pb**	**15 57 08.0**	**-0.2**
MET4	**Agioi Theodoro**	**1.59**	**99**	P	**Pn**	**15 57 08.1**	**+1.1**
AIDA	**Aidipsos**	**1.59**	**53**	P	**Pb**	**15 57 08.6**	**-0.2**
PRGA	**Parga**	**1.60**	**330**	P	**Pb**	**15 57 08.4**	**-0.4**
PRMD	**Pramanda**	**1.65**	**351**	P	**Pn**	**15 57 08.2**	**+0.2**
MAGU	**Magoula**	**1.66**	**83**	P	**Pn**	**15 57 08.7**	**+0.7**
VLI	**Velitai**	**1.69**	**134**	P	**Pb**	**15 57 10.2**	**-0.1**
THL	**Klokotos Trika**	**1.73**	**15**	P	**Pn**	**15 57 09.9**	**+0.9**
NOAC	**Athens-Thissio**	**1.81**	**87**	P	**Pn**	**15 57 11.1**	**+0.9**
KEK	**Kerkira**	**2.21**	**325**		**Pn**	**15 57 16.9**	**+1.2**
SCTE	**Santa Cesarea**	**3.17**	**314**		**Pn**	**15 57 29.7**	**+0.9**
OHR	**Ohrid**	**3.25**	**352**

MOTA	**Moosalm**	**12.11**	**324**	*e*Pn		**Pn**	**15 59 32.7**	**+1.1**
	2.5nm,0.6s								
MOTA				*e*Sn		**Sn**	**16 01 41.9**	**-4.2**
	4.9nm,0.8s								
GERES	**GERESS Array B**	**12.29**	**335**	Pn		**Pn**	**15 59 33.0**	**-0.9**
	baz=144,slow=12,SNR=2.3								
	0.3nm,0.4s								
DAVOX	**Davos/Dischmat**	**12.31**	**320**	Pn		**Pn**	**15 59 33.8**	**-0.5**
	0.1nm,0.3s,baz=319,slow=9.4,SNR=1.4								
DAVOX				Sn		**Sn**	**16 01 44.3**	**-6.7**
	0.2nm,0.3s,baz=343,slow=17,SNR=5.0								
	0.5nm,0.5s								
MMAI	**Mount Meron Ar**	**12.39**	**109**	Pn		**Pn**	**15 59 34.9**	**-0.5**
	0.5nm,0.4s,baz=305,slow=5.1,SNR=3.6								
AKASG	**Malin Array Be**	**13.95**	**21**	Pn		**Pn**	**15 59 55.6**	**-0.9**
	0.8nm,0.3s,baz=212,slow=8.9,SNR=6.3								
	0.4nm,0.6s								
SUW	**Suwalki**	**16.16**	**4**	P		**P**	**16 00 29.0**	**0.0**
NACGM	**Naroch**	**17.40**	**10**	*e*P		**P**	**16 00 42.5**	**-0.2**
	comp=Z,33nm,0.9s,baz=194								
PABE	**Paberze**	**17.70**	**5**	Pn		**Pn**	**16 00 44.3**	**-0.9**
PABE				IAmb		IAmb	16 00 55.5		
	comp=Z,22nm,0.8s								
GNI	**Garni**	**18.25**	**76**	P		**Pn**	**16 00 52.0**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=214,slow=22,SNR=1.6								
	comp=Z,2.3nm,0.5s								
ESDC	**Sonseca Array**	**19.86**	**283**	P		**P**	**16 01 10.6**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=78,slow=11,SNR=18								
	comp=Z,5.0nm,0.9s								
ESDC	**Sonseca Array**	**19.86**	**283**	IAmb		IAmb	16 01 14.1		
	comp=Z,0.2nm,0.7s								
HFS	**Hagfors**	**22.79**	**350**	P		**P**	**16 01 40.7**	**-0.5**
	comp=Z,8.5nm,0.9s,baz=147,slow=8.8,SNR=7.8								
	comp=Z,8.5nm,0.9s								
FINES	**FINESS Array B**	**23.75**	**6**	P		**P**	**16 01 49.8**	**-1.0**
	comp=Z,5.5nm,1.0s,baz=167,slow=12,SNR=6.8								
	comp=Z,5.5nm,1.0s								
NB2	**NORSAR Subarra**	**24.04**	**348**	P		**P**	**16 01 53.4**	**-0.2**
	comp=Z,17nm,2.0s,baz=160,slow=9.3								
NOA	**NORSAR Array B**	**24.04**	**348**	P		**P**	**16 01 53.3**	**-0.3**
	comp=Z,2.6nm,1.0s,baz=165,slow=11,SNR=5.9								
	comp=Z,2.6nm,1.0s								
EKA	**Eskdalemuir Ar**	**24.07**	**324**	P		**P**	**16 01 54.4**	**+0.5**
	comp=Z,2.5nm,0.6s,baz=129,slow=9.7,SNR=14								
	comp=Z,2.5nm,0.6s								
ESK	**Eskdalemuir**	**24.08**	**324**	P		**P**	**16 01 54.7**	**+0.7**
EKB	**Eskdalemuir**	**24.09**	**324**	P		**P**	**16 01 54.7**	**+0.6**
TORD	**Torodi Ar. Bea**	**30.27**	**221**	P		**P**	**16 02 49.9**	**0.0**
	comp=Z,1.2nm,0.5s,baz=29,slow=8.5,SNR=7.2								
	comp=Z,1.2nm,0.5s								
ARCES	**ARCESS Array B**	**31.77**	**3**	P		**P**	**16 03 02.0**	**-0.7**
	comp=Z,2.7nm,0.7s,baz=188,slow=9.0,SNR=2.3								
	comp=Z,2.7nm,0.7s								
DBIC	**Dimbokro**	**39.18**	**224**	P		**P**	**16 04 09.9**	**+3.1**
	comp=Z,1.0nm,0.4s,baz=2.8,slow=5.2,SNR=3.3								
	comp=Z,1.0nm,0.4s								
KURBB	**Kurchatov Array**	**41.82**	**53**	P		**P**	**16 04 28.4**	**0.0**
	comp=Z,1.0nm,0.6s,baz=277,slow=8.8,SNR=4.7								
	comp=Z,1.0nm,0.6s								
MKAR	**Makanchi Array**	**44.84**	**58**	P		**P**	**16 04 51.9**	**-0.9**
	comp=Z,1.6nm,0.5s,baz=270,slow=7.5,SNR=16								
	comp=Z,1.6nm,0.5s								
ZALV	**Zalesovo Beam**	**45.35**	**48**	P		**P**	**16 04 55.9**	**-0.8**
	comp=Z,1.5nm,0.5s,baz=269,slow=8.6,SNR=4.5								
	comp=Z,1.5nm,0.5s								
SCHQ	**Schefferville**	**59.15**	**318**	P		**P**	**16 06 39.7**	**+0.5**
	comp=Z,2.7nm,0.9s,baz=53,slow=4.3,SNR=4.2								
	comp=Z,2.7nm,0.9s								
SCHQ	**Schefferville**	**59.15**	**318**	IAmb		IAmb	16 06 55.3		
	comp=Z,4.6nm,0.9s								
FRNY	**Flat Rock**	**67.63**	**310**	P		**P**	**16 07 35.5**	**0.0**
CMAR	**Chiang Mai Arr**	**69.22**	**82**	P		**P**	**16 07 44.5**	**-1.3**
	comp=Z,0.5nm,0.9s,baz=302,slow=6.1,SNR=1.8								
	comp=Z,0.5nm,0.9s								
E29M	**Blow River**	**72.90**	**352**	P		**P**	**16 08 08.0**	**+0.7**
E29M				IAmb		IAmb	16 08 26.0		
	comp=Z,5.4nm,1.2s								
C16K	**Lisburne Hills**	**74.02**	**3**	P		**P**	**16 08 15.2**	**+1.3**
E19K	**Redstone River**	**74.96**	**359**	P		**P**	**16 08 20.2**	**+0.8**
E19K				IAmb		IAmb	16 08 31.7		
	comp=Z,2.0nm,0.7s								
M19K	**Big River Lodg**	**80.49**	**358**	P		**P**	**16 08 51.5**	**+1.2**
M16K	**Timber Creek**	**81.43**	**0**	P		**P**	**16 08 56.2**	**+0.9**
MTDJ	**Mount Denham**	**85.81**	**290**	P		**P**	**16 09 19.1**	**+0.4**
I07A	**Izee**	**91.06**	**333**	P		**P**	**16 09 43.8**	**+0.5**
ASAR	**Alice Springs**	**121.43**	**97**	PKP		**PKiKP**	**16 15 33.0**	**+0.5**
	comp=Z,0.3nm,1.0s,baz=297,slow=2.2,SNR=1.6								

KRSC 30 15:57:21.2±0.8, 53°.46N×167°.97E, h66km±16km, MI3.8, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**2.10**	**327**	*e*S	Sn	15 58 21.6	+2.4
MKZ	**Mys Kozlova**	**3.84**	**289**	*e*P	Pn	15 59 21.4	+3.6
MKZ				*e*S	Sn	15 59 05.7	+4.1
KBTR	**Krutoberegovo**	**4.06**	**315**	*e*P	Pn	15 58 23.8	+3.1
KBTR				*e*S	Sn	15 59 10.0	+3.1
SPN	**Mys Shipunski**	**4.79**	**269**	*e*P	Pn	15 58 34.2	+3.5
SPN				*e*S	Sn	15 59 27.6	+2.8
KII	**Karymskiy**	**5.09**	**280**	*e*S	Sn	15 59 35.9	+3.6

WBNET 30 15:57:43.4, 50°.26N×12°.45E, h10km, MI0.1, 5C-4D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBCW	**Luby**	**0.03**	**273**	⇓P	Pg	15 57 45.5	+0.1
LBCW				S	Sg	15 57 46.8	+0.2
STCW	**Studenec**	**0.04**	**96**	⇑P	Pg	15 57 45.6	+0.1
STCW				S	Sg	15 57 46.8	-0.1
VAC	**Vackov**	**0.06**	**239**	⇑P	Pg	15 57 45.6	+0.1
VAC				S	Sg	15 57 47.0	-0.1
POCW	**Potky**	**0.06**	**344**	⇑P	Pg	15 57 45.7	+0.1
POCW				S	Sg	15 57 47.3	+0.1
KVC	**Kvetna**	**0.07**	**145**	⇓P	Pg	15 57 45.8	+0.1
KVC				S	Sg	15 57 47.3	-0.1
KRCW	**Kraslice**	**0.08**	**37**	⇑P	Pg	15 57 45.9	0.0
KRCW				S	Sg	15 57 47.6	-0.1
KOCW	**Kopaniny**	**0.14**	**271**	⇓P	Pg	15 57 46.6	0.0
KOCW				S	Sg	15 57 48.8	-0.2
ZHC	**Zelena Hora**	**0.21**	**206**	⇑P	Pg	15 57 48.0	+0.1
ZHC				S	Sg	15 57 51.0	+0.1
LACW	**Lazy**	**0.24**	**152**	⇓P	Pg	15 57 48.6	+0.2
LACW				S	Sg	15 57 52.0	+0.3

HEL 30 16:02:25.7±0.1, 65°.81N×24°.74E, h0km, ML1.1, Suspected explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOF	**Tornio**	**0.32**	**328**	PG	Pg	16 02 30.9	-0.9
TOF				SG	Sg	16 02 34.7	-1.2
RANF	**Ranua**	**0.87**	**75**	PG	Pg	16 02 40.9	-1.4
	baz=262						
RANF				SB	Sg	16 02 52.9	-0.6
OUL	**Oulu**	**0.87**	**146**	PG	Pg	16 02 41.2	-1.2
RNF	**Rovaniemi**	**0.96**	**32**	PB	Pg	16 02 43.2	-0.8
RNF				SB	Sg	16 02 56.9	+0.5
OBF4	**Vikkela, Lumij**	**1.01**	**171**	PB	Pg	16 02 44.3	-0.8
OBF4				smax	smax	16 02 56.6	
	comp=Z,1.1nm,0.2s						
OBF4				SB	Sg	16 02 57.4	-0.7
ERTU	**Ertsjaerv**	**1.28**	**307**	PG	Pg	16 02 48.6	-1.5
	baz=127						
ERTU				SB	Sg	16 03 06.2	-0.4
OBF0	**Syolatti, Pyha**	**1.33**	**189**	PG	Pg	16 02 49.8	-1.4
OBF0				smax	smax	16 03 05.9	
	comp=Z,1.7nm,0.2s						
OBF0				SN	Sn	16 03 10.6	+0.7
KU2	**Taivalkoski**	**1.45**	**92**	PG	Pn	16 02 51.5	-1.6
OUF	**Merijarvi**	**1.45**	**180**	PN	Pn	16 02 52.4	-0.7
OUF				smax	smax	16 03 09.2	
	comp=Z,1.5nm,0.2s						
OUF				SG	Sg	16 03 10.2	-1.9
KLF	**Kolari**	**1.47**	**348**	PG	Pn	16 02 52.2	-1.1
KLF				smax	smax	16 03 09.8	
	comp=Z,2.0nm,0.2s						
KLF				SN	Sg	16 03 12.0	-0.7
OBF8	**Ulkokalla**	**1.58**	**201**	PG	Pn	16 02 54.4	-0.5
OBF8				smax	smax	16 03 13.1	
	comp=Z,1.2nm,0.2s						
MSF	**Maaselka**	**1.77**	**85**	PG	Pn	16 02 57.9	+0.3
	baz=273						
MSF				SN	Sb	16 03 21.9	+0.1
BURU	**Burvik**	**1.88**	**231**	SG	Sn	16 03 23.8	+0.5
OLKF	**Oulanka, Finla**	**1.97**	**73**	PG	Pb	16 03 01.9	-0.5
OLKF				smax	smax	16 03 24.3	
	comp=Z,1.1nm,0.2s						
OLKF				SG	Sb	16 03 26.8	-0.7
KU1	**Kurvinen**	**2.01**	**95**	PG	Pn	16 03 01.4	+0.5
KU1				SG	Sn	16 03 27.4	+0.7
KU6	**Riekki**	**2.12**	**82**	smax	smax	16 03 28.7	
	comp=Z,0.7nm,0.2s						
KU6				SG	Sn	16 03 30.1	+0.6
LANU	**Lannavaara**	**2.49**	**336**	PG	Pn	16 03 09.0	+1.5
LANU				SG	Sb	16 03 42.8	+0.3
HEF	**Hetta**	**2.65**	**351**	smax	smax	16 03 43.7	
	comp=Z,0.7nm,0.2s						
HEF				SG	Sb	16 03 47.0	+0.1
RAJF	**Raja-Jooseppi**	**3.02**	**26**	SG	Sb	16 03 56.6	-1.0
KTK1	**Kautokeino**	**3.27**	**350**	SG	Sb	16 04 07.1	+2.3
KEF	**Keuruu**	**3.66**	**179**	SB	Sb	16 04 14.4	-1.5
ARA0	**ARCESS Array S**	**3.75**	**4**	SN	Sn	16 04 04.7	-5.0
HEMU	**Hemsoen**	**4.29**	**226**	SB	Sb	16 04 31.2	-3.0
FIA0	**FINESS Array S**	**4.42**	**172**	SN	Sn	16 04 21.2	-4.9

*PTWC **30** 16:06:42, 17°.90N×66°.90W, h10km, MI4.4/16*
*NEIC **30** 16:06:43.0±1.3, 17°.88N±0°.03×66°.89W±0°.02, h5km±1km, mb4.2/13, ML4.4/37, Mwr4.1/19, Md4.2/15(RSPR), Mwr4.0/16(SLM), Error ellipse: s-maj=5.6km s-min=2.9km az=21.0, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr=0.22; Mθθ=0.05; Mφφ 0.16; Mrθ=0.61; Mθφ 1.45; Mφr=0.23; Fault plane solution: M0 1.60000×10^15 NP1: φs1.08000°, δ67.10000°, λ-168.96000°. NP2: φs 266.74000°, δ79.84000°, λ-23.28000°. Principal axes: T 1.5946, Plg9.0000°, Azm316.0000°; N 0.0043, Plg65.0000°, Azm64.0000°; P -1.5990, Plg24.0000°, Azm222.0000°;*
*IDC **30** 16:06:42.7±0.9, 17°.96N×66°.89W, h0km, mb3.8/13, mbtmp3.9/16, ML3.2/3, MS3.5/5 Error ellipse: s-maj=24.1km s-min=8.3km az=176.0*
*NEIC **30** 16:06:42.4, 17°.84N×66°.89W, h10km*
*NEIC **30** 16:06:43, 17°.92N×66°.89W, h5km, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr=0.03; Mθθ 0.59; Mφφ 0.55; Mrθ=0.04; Mθφ 0.96; Mφr=0.21; Fault plane solution: M0 1.14000×10^15 NP1: φs 16.00000°, δ85.00000°, λ-170.00000°. NP2: φs 285.00000°, δ80.00000°, λ-5.00000°. Principal axes: T 1.1350, Plg4.0000°, Azm150.0000°; N -0.0001, Plg79.0000°, Azm42.0000°; P -1.1349, Plg11.0000°, Azm241.0000°;*
*SDD **30** 16:06:43.6±1.1, 17°.88N×66°.91W, h12km±8km, MD3.6, ML3.8, MW4.1, Presumed earthquake*
*OSPL **30** 16:06:44.5±1.7, 17°.89N×66°.88W, h0km±13km, ML4.1, Presumed earthquake*

ISC 30 16:06:42.7±0.9, 17°.86N±0°.04×66°.89W±0°.02, h8km±5km, n99, σ1s22/105, mb4.1/18, MS3.9/3, 4C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.12**	**6**		**Pg**	**16 06 45.1**	**-0.2**
MLPR	**Magueyes Islan**	**0.18**	**307**	Pg	**Pg**	**16 06 46.9**	**+0.5**
MLPR				IAML		16 06 50.4	
	134μm,0.7s						
MLPR	**Magueyes Islan**	**0.18**	**307**	P	**Pg**	**16 06 46.9**	**+0.5**
MLPR	**Magueyes Islan**	**0.18**	**307**	*e*P	**Pg**	**16 06 46.9**	**+0.5**
MLPR				*e*S	**Sg**	**16 06 49.7**	**+0.8**
MLPR				IAML		16 06 50.2	
	comp=E,18μm,0.4s						
MLPR				IAML		16 06 50.2	
	comp=N,45μm,0.8s						
CRPR	**Cabo Rojo, PR**	**0.25**	**305**	*i* P	**Pg**	**16 06 48.2**	**+0.5**
CRPR				*e*S	**Sg**	**16 06 52.2**	**+1.0**
CRPR				IAML		16 06 52.8	
	comp=Z,55μm,0.5s						
OBIP	**Obispado Ponce**	**0.33**	**56**		**Pg**	**16 06 49.3**	**+0.2**
OBIP	**Obispado Ponce**	**0.33**	**56**		**Sg**	**16 06 54.4**	**+0.8**
OBIP	**Obispado Ponce**	**0.33**	**56**	P	**Pg**	**16 06 49.3**	**+0.2**
OBIP	**Obispado Ponce**	**0.33**	**56**	*i* P	**Pg**	**16 06 49.5**	**+0.4**
OBIP				*e*S	**Sg**	**16 06 54.3**	**+0.8**
OBIP				IAML		16 06 54.7	
	comp=Z,88μm,0.7s						
LSP	**Las Mesas**	**0.36**	**330**		**Pg**	**16 06 49.9**	**+0.1**
CELP	**Cerrillos**	**0.37**	**54**		**Pg**	**16 06 50.0**	**+0.1**
CELP	**Cerrillos**	**0.37**	**54**		**Sg**	**16 06 55.5**	**+0.7**
CELP	**Cerrillos**	**0.37**	**54**	P	**Pg**	**16 06 50.2**	**+0.3**
CELP	**Cerrillos**	**0.37**	**54**	⇓*e*Pg	**Pg**	**16 06 52.0**	**+0.3**
CELP				⇓*e*Sg	**Sg**	**16 06 55.5**	**+0.7**
CELP				IAML		16 06 58.5	
	comp=N,6μm,0.4s						
CELP				IAML		16 06 58.6	
	comp=E,4μm,0.4s						
UUPR	**Utuado, UPR, P**	**0.42**	**23**		**Pg**	**16 06 50.8**	**-0.2**
UUPR	**Utuado, UPR, P**	**0.42**	**23**	P	**Pg**	**16 06 50.7**	**-0.2**
PRSN	**Puerto Rico Se**	**0.43**	**326**	Pg	**Pg**	**16 06 50.9**	**-0.1**
PRSN				IAML		16 06 60.0	
	comp=E,57μm,0.4s						
PRSN	**Puerto Rico Se**	**0.43**	**326**		**Sg**	**16 06 57.4**	**+0.7**
PRSN	**Puerto Rico Se**	**0.43**	**326**	P	**Pg**	**16 06 51.0**	**-0.1**
PRSN	**Puerto Rico Se**	**0.43**	**326**	⇑*e*Pg	**Pg**	**16 06 51.1**	**+0.1**
PRSN				IAML		16 06 59.9	
	comp=E,33μm,0.3s						
PRSN				IAML		16 07 00.5	
	comp=N,34μm,0.3s						
AOPR	**Arecibo Observ**	**0.50**	**15**		**Pg**	**16 06 51.9**	**-0.5**
AOPR				IAML		16 07 03.6	
	comp=N,52μm,0.4s						
AOPR	**Arecibo Observ**	**0.50**	**15**		**Sg**	**16 06 58.5**	**-0.6**
AOPR	**Arecibo Observ**	**0.50**	**15**	P	**Pg**	**16 06 52.1**	**-0.4**
AOPR	**Arecibo Observ**	**0.50**	**15**	⇑*e*Pg	**Pg**	**16 06 52.0**	**-0.4**
AOPR				IAML		16 06 58.9	
	comp=E,14nm,0.4s						
AOPR				IAML		16 07 03.6	
	comp=N,46μm,0.4s						
AGPR	**Aguadilla, PR**	**0.64**	**341**		**Pg**	**16 06 54.5**	**-0.5**
AGPR				IAML		16 07 03.9	
	comp=N,23μm,0.4s						
AGPR	**Aguadilla, PR**	**0.64**	**341**		**Sg**	**16 07 03.0**	**-0.4**
AGPR	**Aguadilla, PR**	**0.64**	**341**	P	**Pg**	**16 06 54.6**	**-0.5**
AGPR	**Aguadilla, PR**	**0.64**	**341**	⇑*e*Pg	**Pg**	**16 06 54.6**	**-0.5**
AGPR				⇑*e*Sg	**Sg**	**16 07 03.3**	**-0.1**
AGPR				IAML		16 07 03.3	
	comp=E,9μm,0.4s						
AGPR				IAML		16 07 03.8	
	comp=N,17μm,0.4s						
ECPR	**Experimental S**	**0.68**	**48**		**Pg**	**16 06 55.3**	**-0.5**
ECPR				IAML		16 07 06.1	
	comp=N,23μm,0.2s						
ECPR				IAML		16 07 06.1	
	comp=N,26μm,0.2s						
ECPR	**Experimental S**	**0.68**	**48**		**Sg**	**16 07 04.7**	**0.0**
ECPR	**Experimental S**	**0.68**	**48**	P	**Pg**	**16 06 55.4**	**-0.4**
EMPR	**Esperanza - Ma**	**0.70**	**29**		**Pg**	**16 06 56.1**	**-0.1**
EMPR					**Sg**	**16 07 05.7**	**+0.2**
EMPR	**Esperanza - Ma**	**0.70**	**29**	P	**Pg**	**16 06 56.1**	**-0.1**
SJG	**San Juan**	**0.75**	**70**	Pg	**Pg**	**16 06 57.0**	**-0.1**
	comp=N,200nm,0.3s,baz=255,slow=15,SNR=180						
SJG				Lg	Lg	16 07 06.3	
	comp=N,1μm,0.3s,baz=9.7,slow=17,SNR=31						
SJG	**San Juan**	**0.75**	**70**		**Pg**	**16 06 56.8**	**-0.3**
SJG	**San Juan**	**0.75**	**70**	*e*P	**Pg**	**16 06 57.0**	**-0.1**
SJG				*e*S	**Sg**	**16 07 07.2**	**+0.3**
SJG	**San Juan**	**0.75**	**70**	⇓*e*Pg	**Pg**	**16 06 57.0**	**-0.1**
SJG				⇓*e*Sg	**Sg**	**16 07 07.6**	**+0.7**
SJG	**San Juan**	**0.75**	**70**	*i* P	**Pg**	**16 06 57.0**	**-0.1**
SJG				*e*S	**Sg**	**16 07 07.5**	**+0.6**
SJG				IAML		16 07 09.4	
	comp=Z,67μm,0.3s						
IGPR	**InterUniversit**	**0.76**	**82**		**Pg**	**16 06 57.6**	**+0.3**
IGPR					**Sb**	**16 07 08.3**	**-0.2**
IGPR	**InterUniversit**	**0.76**	**82**	P	**Pg**	**16 06 57.6**	**+0.3**
IDE	**Isla Desecheo**	**0.76**	**314**		**Pg**	**16 06 56.9**	**-0.5**
IDE					**Sg**	**16 07 07.5**	**+0.2**
HUMP	**Col San Antoni**	**1.03**	**74**		**Pg**	**16 07 01.5**	**-0.9**
HUMP	**Col San Antoni**	**1.03**	**74**		**Sg**	**16 07 15.8**	**-0.1**
HUMP	**Col San Antoni**	**1.03**	**74**	P	**Pg**	**16 07 01.6**	**-0.9**
CUPR	**Culebra, Puert**	**1.59**	**74**		**Pn**	**16 07 10.6**	**-0.6**
HIDR	**Higuey Centro**	**1.88**	**293**	*e*Pg	**Pn**	**16 07 16.0**	**+0.9**
HIDR				IAML		16 07 43.1	
	comp=E,919nm,0.2s						
HIDR				IAML		16 07 46.4	
	comp=N,1μm,0.2s						
DR12	**Loma Pena Alta**	**2.54**	**292**		**Pn**	**16 07 24.3**	**+0.1**
DR12	**Loma Pena Alta**	**2.54**	**292**		**Sn**	**16 07 56.9**	**+1.5**
HATOM	**Hato Mayor del**	**2.54**	**292**	*e*Pg	**Pn**	**16 07 26.2**	**+2.1**
HATOM				IAML		16 08 06.6	
	comp=N,569nm,0.5s						
HATOM				IAML		16 08 10.3	
	comp=E,772nm,0.6s						
SMDR	**Samana, DR**	**2.60**	**304**		**Pb**	**16 07 27.7**	**-1.8**
SMDR					**Sb**	**16 08 00.8**	**-0.9**
SMDR	**Samana, DR**	**2.60**	**304**	*e*Pg	**Pb**	**16 07 28.6**	**-0.9**
SMDR				IAML		16 08 23.1	
	comp=N,695nm,0.6s						
SDD	**Santo Domingo**	**2.93**	**282**	Pn	**Pn**	**16 07 29.5**	**-0.1**
SDD				IAML		16 08 22.3	
	comp=N,956nm,0.8s						
SDD				IAML		16 08 28.3	
	comp=E,965nm,0.9s						
BANI	**BANI**	**3.34**	**280**	Pn	**Pn**	**16 07 35.1**	**-0.2**
SABA	**Saba**	**3.49**	**93**	Pn	**Pn**	**16 07 36.6**	**-0.6**
SABA				IAML		16 08 29.9	
	comp=N,564nm,0.8s						
SABA				IAML		16 08 31.8	
	comp=E,1μm,0.7s						
PODR	**Polo**	**4.19**	**275**	*i* P	**Pn**	**16 07 47.3**	**+0.3**
PODR				IAML		16 08 46.6	
	comp=Z,547nm,0.3s						
LOVI	**El Cajuil, Ovi**	**4.26**	**270**	*i* P	**Pn**	**16 07 48.2**	**+0.3**
LOVI				*e*S	**Sn**	**16 08 36.4**	**-1.5**
LOVI				IAML		16 08 39.2	
	comp=Z,111nm,1.5s						
SDDR	**Presa de Saban**	**4.32**	**286**		Pn	16 07 53.6	+4.9
SDDR	**Presa de Saban**	**4.32**	**286**	*e*P	Pn	16 07 54.0	+5.3
LODU1	**El Espartillar**	**4.38**	**277**	*i* P	**Pn**	**16 07 51.5**	**+1.9**
LODU1				IAML		16 08 57.5	
	comp=Z,191nm,0.6s						
LONE3	**El Aguacate, B**	**4.40**	**280**	*i* P	**Pn**	**16 07 52.2**	**+2.3**
LONE3				IAML		16 08 54.0	
	comp=Z,64nm,0.6s						
LOBH	**Bahia de las A**	**4.52**	**271**	*i* P	**Pn**	**16 07 52.5**	**+1.1**
LOBH				IAML		16 08 51.7	
	comp=Z,82nm,2.0s						
ANWB	**Willy Bob**	**4.87**	**91**	*e*P	**Pn**	**16 07 58.0**	**+1.8**
GDHS	**Morne Mazeau,**	**5.15**	**107**	Pn	**Pn**	**16 08 00.2**	**0.0**
GRTK	**Grand Turk**	**5.40**	**313**	*i* P	**Pn**	**16 08 04.1**	**+0.6**
GRTK				IAML		16 09 12.1	
	comp=Z,103nm,1.8s						
BIM	**Bigot**	**6.51**	**120**	Pn	**Pn**	**16 08 18.5**	**-0.3**
BIM	**Bigot**	**6.51**	**120**	x	x	16 08 18.5	
SDV	**Santo Domingo**	**9.63**	**203**	Pn	**Pn**	**16 09 03.8**	**+1.9**
	comp=Z,1.8nm,0.3s,baz=5.6,slow=8.6,SNR=14						
SDV				Sn	**Sn**	**16 10 43.5**	**-7.0**
	comp=Z,0.6nm,0.3s,baz=320,slow=21,SNR=1.6						
SDV				LR	LR	16 12 57.2	
	comp=Z,146nm,21.1s,baz=74,slow=38						
	comp=Z,11nm,0.6s						
SDV	**Santo Domingo**	**9.63**	**203**	Pn	**Pn**	**16 09 01.9**	**0.0**
ROSC	**El Rosal**	**14.84**	**210**	Pn	**Pn**	**16 10 15.8**	**+2.5**
	comp=Z,1.0nm,0.3s,baz=70,slow=18,SNR=6.7						
ROSC				Sn	Sn	16 12 32.4	-26
	comp=Z,1.6nm,0.3s,baz=43,slow=19,SNR=6.2						
	comp=Z,3.0nm,0.3s						
JTS	**Las Juntas de**	**19.05**	**249**	P	**Pn**	**16 11 07.6**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=47,slow=8.4,SNR=6.2						
JTS				LR	LR	16 18 42.6	
	comp=Z,42nm,20.0s,baz=303,slow=38						
	comp=Z,6.1nm,0.5s						
JTS	**Las Juntas de**	**19.05**	**249**	P	**P**	**16 11 04.4**	**-1.1**
JUD3	**Juan Diaz 3**	**19.63**	**250**	P	**P**	**16 11 11.7**	**-0.2**
GOGA	**Godfrey**	**21.47**	**319**	P	**P**	**16 11 30.8**	**-0.9**
GOGA				IAmb	IAmb	16 11 41.6	
	comp=Z,15nm,1.4s						
PAULI	**Pauline**	**21.50**	**325**	P	**P**	**16 11 29.4**	**-2.5**
PAULI				IAmb	IAmb	16 11 48.5	
	comp=Z,12nm,1.1s						
152A	**Waverly Hall**	**21.80**	**316**	P	**P**	**16 11 33.9**	**-1.3**
152A				IAmb	IAmb	16 11 40.7	
	comp=Z,7.9nm,0.9s						
BG3	**Lake Jocassee**	**22.25**	**323**		**P**	**16 11 40.2**	**+0.1**
BG3				IAmb	IAmb	16 12 07.6	
	comp=Z,9.6nm,1.2s						
V53A	**Saluda**	**22.68**	**325**	P	**P**	**16 11 43.6**	**-1.0**
V53A				IAmb	IAmb	16 12 27.4	
	comp=Z,7.4nm,1.0s						
CPCT	**Cooper Cave**	**23.50**	**322**	P	**P**	**16 11 51.1**	**-1.9**
CPCT				IAmb	IAmb	16 12 21.6	
	comp=Z,14nm,1.3s						
WVT	**Waverly**	**25.96**	**319**	P	**P**	**16 12 13.4**	**-2.4**
ATAH	**Atahualpa**	**27.31**	**206**	LR	LR	16 25 10.4	
	comp=Z,64nm,18.1s,baz=52,slow=40						
TXAR	**Lajitas Array**	**35.44**	**296**	P	**P**	**16 13

HOPEN				IAML		16 16 38.8			
	comp=Z,127nm,0.2s								
SPA0	**Spitsbergen Ar**	**1.56**	**334**	Pb	Pn	16 16 22.2	-1.9		
	baz=143,slow=22								
SPA0				Pg	Pg	16 16 24.0	-1.8		
	baz=143,slow=22								
SPA0				Sb	**Sn**	**16 16 42.2**	**-2.3**		
	baz=156,slow=37								
SPA0	**Spitsbergen Ar**	**1.56**	**334**	Pb	Pn	16 16 22.2	-1.9		
SPA0				Pg	Pg	16 16 24.0	-1.8		
SPA0				Sb	**Sn**	**16 16 42.2**	**-2.3**		
SPA0	**Spitsbergen Ar**	**1.56**	**334**	*e*P	Pn	16 16 22.1	-2.1		
SPA0				*e*S	Sn	16 16 41.1	-3.5		
SPITS	**Spitsbergen Ar**	**1.56**	**334**	P	Pn	16 16 22.1	-2.1		
SPITS				S	**Sn**	**16 16 43.0**	**-1.6**		
BRBA	**Barentsburg A**	**1.74**	**319**	Pb	**Pn**	**16 16 26.7**	**+0.1**		
BRBA				Sb	**Sn**	**16 16 48.8**	**-0.2**		
BRBA	**Barentsburg A**	**1.74**	**319**	*e*Pg	**Pn**	**16 16 27.6**	**+0.9**		
BRBA				*e*Sg	**Sn**	**16 16 48.6**	**-0.4**		
BRBA				IAML		16 16 52.2			
	comp=Z,73nm,0.4s								
BRBB	**Barentsburg B**	**1.77**	**320**	Pn	**Pn**	**16 16 27.1**	**+0.1**		
BRBB				Sn	**Sn**	**16 16 49.0**	**-0.6**		
BRBB	**Barentsburg B**	**1.77**	**320**	*e*P	Pn	16 16 25.9	-1.0		
BRBB				*e*Pg	Pg	16 16 28.1	-1.7		
BRBB				*e*S	Sn	16 16 45.9	-3.8		
BRBB				*e*Sg	Sg	16 16 49.0	-3.6		
BRBB	**Barentsburg B**	**1.77**	**320**	P	Pn	16 16 26.0	-1.0		
BRBB				S	**Sn**	**16 16 47.0**	**-2.6**		
BJO1	**Bjornoya**	**2.33**	**185**	Pg	**Pb**	**16 16 39.6**	**+1.3**		
BJO1				Sg	**Sg**	**16 17 11.2**	**+0.4**		
BJO1	**Bjornoya**	**2.33**	**185**	*e*Pg	**Pb**	**16 16 39.8**	**+1.5**		
BJO1				*e*Sg	**Sb**	**16 17 09.6**	**+2.4**		
BJO1				IAML		16 17 12.7			
	comp=Z,27nm,0.4s								
BEAR	**Bear Island, N**	**2.34**	**185**	Pg	**Pb**	**16 16 39.6**	**+1.2**		
	baz=357,slow=18								
BEAR				Sg	**Sg**	**16 17 10.4**	**-0.6**		
	baz=357,slow=37								
KBS	**Kingsbay**	**2.69**	**326**	Pn	Pn	16 16 37.2	-2.4		
KBS				Sg	**Sn**	**16 17 16.7**	**+4.3**		
KBS	**Kingsbay**	**2.69**	**326**	*e*P	Pn	16 16 37.2	-2.4		
KBS				*e*Pg	Pg	16 16 43.9	-3.5		
KBS				*e*Sg	**Sn**	**16 17 17.0**	**+4.7**		
KBS				IAML		16 17 24.7			
	comp=Z,56nm,0.5s								
KBS	**Kingsbay**	**2.69**	**326**	*e*P	Pn	16 16 37.7	-1.9		
KBS				*i* S	**Sn**	**16 17 15.5**	**+3.1**		
KBS	**Kingsbay**	**2.69**	**326**	P	Pn	16 16 36.9	-2.7		
KBS				S	**Sn**	**16 17 09.4**	**-2.9**		
ZFI2	**Zemlya Franca-**	**6.67**	**40**	P	Pn	16 17 33.5	-0.6		
ZFI2				*e*S	Sn	16 18 43.9	-6.3		
	comp=Z,11nm,2.8s								
VADS	**Vadso**	**7.25**	**153**	P	**Pn**	**16 17 41.8**	**-0.5**		
VADS				S	**Sn**	**16 18 59.5**	**-5.1**		
ARA0	**ARCESS Array S**	**7.50**	**164**	Pn	**Pn**	**16 17 44.4**	**-1.3**		
	baz=356,slow=10								
ARA0				Sn	Sn	16 19 03.7	-7.1		
	baz=353,slow=28								
ARA0	**ARCESS Array S**	**7.50**	**164**	Pn	**Pn**	**16 17 44.4**	**-1.3**		
ARA0				Sn	Sn	16 19 03.7	-7.1		
ARCES	**ARCESS Array B**	**7.50**	**164**	P	**Pn**	**16 17 46.3**	**+0.6**		
ARCES				S	Sn	16 19 02.9	-8.0		
APA0	**Apatity Array**	**10.06**	**150**	S	Sn	16 20 05.8	-7.7		

*IDC **30** 16:26:33.8±6.4,24°.59N×141°.43E,h175km±134km, mb3.2/2,mbtmp3.8/4,ML3.7/2,MS3.7/1,Error ellipse: s-maj=200.8km s-min=38.8km az=63.0*
*NEIC **30** 16:26:35.4±0.8,24°.6N±0°.1×141°.6E±0°.2,h182km±10km, mb4.2/14,Error ellipse: s-maj=25.6km s-min=14.8km az=107.0*

ISC 30 16:26:31.5±0.8,**24°.48N**±0°.09×**141°.4E**±0°.1,**h148**km,**n19,** σ1°**05**/18,**mb4.1/9,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JCJ	**Chichijima**	**2.69**	**14**	P		Pn	16 27 19.2	+4.4
	34nm,0.3s,baz=259,slow=16,SNR=24							
JCJ				S		**Sn**	**16 27 51.0**	**+2.7**
	92nm,0.2s,baz=276,slow=23,SNR=14							
	96nm,0.4s							
KSRS	**Korea Array**	**17.34**	**321**	P		**Pn**	**16 30 23.6**	**-0.8**
	0.1nm,0.3s,baz=133,slow=12,SNR=5.1							
	0.9nm,0.6s							
SSLB	**Suanglung**	**18.71**	**272**	P		**Pn**	**16 30 40.7**	**-0.2**
SSLB				IAmb		IAmb	16 31 20.0	
	comp=Z,25nm,1.3s							
PMG	**Port Moresby**	**34.14**	**170**	LR		LR	16 47 59.2	
	comp=Z,107nm,18.3s,baz=326,slow=38							
WB0	**Warramunga Arr**	**44.52**	**189**	P		**P**	**16 34 28.9**	**+0.5**
WB0				IAmb		IAmb	16 34 52.0	
	comp=Z,5.4nm,1.4s							
WR8	**Warramunga Arr**	**44.69**	**189**	P		**P**	**16 34 30.2**	**+0.4**
WRAB	**Tennant Creek**	**44.69**	**190**	P		**P**	**16 34 30.3**	**+0.5**
WRAB				IAmb		IAmb	16 34 53.2	
	comp=Z,4.5nm,1.2s							
WRA	**Warramunga Arr**	**44.70**	**190**	P		**P**	**16 34 30.3**	**+0.4**
	comp=Z,1.8nm,0.3s,baz=7.8,slow=8.6,SNR=64							
	comp=Z,1.8nm,0.3s							
WRA	**Warramunga Arr**	**44.70**	**190**	P		**P**	**16 34 29.5**	**-0.4**
GSI	**Gunungsitoli**	**48.24**	**248**	P		**P**	**16 34 58.5**	**+0.8**
GSI				IAmb		IAmb	16 35 15.1	
	comp=Z,29nm,1.5s							
ASAR	**Alice Springs**	**48.42**	**189**	P		**P**	**16 34 58.1**	**-0.8**
	comp=Z,0.1nm,0.6s,baz=12,slow=6.5,SNR=1.4							
	comp=Z,0.1nm,0.6s							
EIDS	**Eidsvold**	**50.43**	**169**	P		**P**	**16 35 14.8**	**+0.7**
EIDS				IAmb		IAmb	16 35 37.1	
	comp=Z,20nm,1.4s							
INKA	**Innaminka**	**51.92**	**181**	P		**P**	**16 35 25.8**	**+0.7**
SDPT	**Sand Point**	**52.16**	**38**	P		**P**	**16 35 25.5**	**-1.2**
O15K	**Ungalikthiuk R**	**53.36**	**33**	P		**P**	**16 35 34.8**	**-0.6**
O15K				IAmb		IAmb	16 36 11.4	
	comp=Z,17nm,1.5s							
C19K	**Lookout Ridge**	**56.41**	**22**	P		**P**	**16 35 56.4**	**-0.9**
C19K				IAmb		IAmb	16 36 10.4	
	comp=Z,2.5nm,1.3s							
D20K	**Etivluk River**	**57.31**	**23**	P		**P**	**16 36 02.5**	**-1.0**
D20K				IAmb		IAmb	16 36 32.4	
	comp=Z,3.3nm,1.4s							
KNK	**Knik Glacier**	**59.30**	**32**	P		**P**	**16 36 16.3**	**-1.2**
SCM	**Sheep Creek Mo**	**59.88**	**31**	P		**P**	**16 36 20.7**	**-0.8**

*IDC **30** 16:32:14.1±0.9,55°.08S×35°.85W,h0km,mb3.9/6, mbtmp4.0/6,Error ellipse: s-maj=31.2km s-min=23.0km az=50.0*
*NEIC **30** 16:32:15.8±0.9,55°.15S±0°.07×35°.8W±0°.2,h10km±1km, mb4.4/6,Error ellipse: s-maj=24.9km s-min=5.8km az=244.0*

ISC 30 16:32:15.7±0.8,**55°.1S**±0°.1×**35°.8W**±0°.1,**h10**km,**n21,** σ0°**63**/14,**mb4.2/7,South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HOPE	**Hope Point**	**0.90**	**335**	Pg		**Pb**	**16 32 33.4**	**+0.1**
HOPE				Sg		**Sn**	**16 32 47.1**	**-0.2**
MG03	**Isla Dawson**	**20.05**	**259**	P		Pn	16 36 49.6	-0.7
SNAA	**Sanae**	**21.75**	**152**	P		**P**	**16 37 08.0**	**+1.0**
	5.2nm,0.8s,baz=269,slow=6.0,SNR=4.1							
	5.2nm,0.8s							
SNAA	**Sanae**	**21.75**	**152**	P		**P**	**16 37 06.6**	**-0.4**
GO08	**Villa O'Higgin**	**23.46**	**271**	P		**P**	**16 37 25.1**	**0.0**
GO08				IAmb		IAmb	16 37 29.6	
	comp=Z,13nm,1.1s							
PLCA	**Paso Flores**	**27.01**	**288**	P		**P**	**16 37 58.4**	**+0.7**
	comp=Z,1.5nm,0.8s,baz=175,slow=3.5,SNR=3.6							
	comp=Z,1.5nm,0.8s							
QSPA	**South Pole Qui**	**35.16**	**180**	P		**P**	**16 39 09.0**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=177,slow=9.6,SNR=8.6							
	comp=Z,1.2nm,0.7s							
QSPA	**South Pole Qui**	**35.16**	**180**	IAmb		IAmb	16 39 18.0	
	comp=Z,12nm,1.4s							
GO01	**Chusmiza**	**43.43**	**311**	P		**P**	**16 40 19.3**	**+0.2**
GO01				IAmb		IAmb	16 40 39.8	
	comp=Z,9.1nm,1.3s							
SUR	**Sutherland**	**45.29**	**84**	P		**P**	**16 40 34.1**	**+0.5**
	comp=Z,3.7nm,0.8s,baz=217,slow=15,SNR=1.6							
	comp=Z,3.7nm,0.8s							
SUR	**Sutherland**	**45.29**	**84**	P		**P**	**16 40 33.2**	**-0.4**
LPAZ	**La Paz**	**46.00**	**314**	P		**P**	**16 40 40.0**	**+0.2**
	comp=Z,1.1nm,0.7s,baz=172,slow=5.9,SNR=5.0							
	comp=Z,1.1nm,0.7s							

H10N3	**ASCENSION HYDR**	**50.10**	**28**	T		T	17 34 56.6		
	baz=194,slow=75,SNR=261								
H10N1	**ASCENSION HYDR**	**50.10**	**28**	T		T	17 34 57.2		
	baz=194,slow=75,SNR=130								
H10N2	**ASCENSION HYDR**	**50.12**	**28**	T		T	17 34 57.9		
	baz=194,slow=75,SNR=195								
H04S2	**CROZET ISLANDS**	**52.35**	**120**	T		T	17 38 06.6		
	baz=225,slow=75,SNR=35								
H04S3	**CROZET ISLANDS**	**52.36**	**120**	T		T	17 38 07.8		
	baz=225,slow=75,SNR=22								
H04S1	**CROZET ISLANDS**	**52.37**	**120**	T		T	17 38 07.8		
	baz=225,slow=75,SNR=21								
TORD	**Torodi Ar. Bea**	**74.98**	**38**	P		**P**	**16 43 57.0**	**0.0**	
	comp=Z,0.9nm,0.9s,baz=210,slow=6.0,SNR=4.1								
	comp=Z,0.9nm,0.9s								
ILAR	**Eielson Array**	**145.88**	**315**	PKPbc		**PKPdf**	**16 51 51.7**	**-1.4**	
	comp=Z,0.9nm,0.9s,baz=133,slow=2.1,SNR=7.1								
ZALV	**Zalesovo Beam**	**146.43**	**67**	PKPbc		**PKPdf**	**16 51 54.8**	**+0.4**	
	comp=Z,1.0nm,0.8s,baz=242,slow=3.2,SNR=3.9								

*TIR **30** 16:37:35.2,41°.49N×19°.40E,h24km±1km,Md2.7/5,Ml2.1/6*
*PDG **30** 16:37:37.9±0.1,41°.60N×19°.41E,h12km,ML2.0/12,Error ellipse: s-maj=0.1km s-min=0.2km az=0.0*
*RHSSO **30** 16:37:38.7±0.9,41°.60N×19°.44E,h4km±3km,ML2.1/5*
*BEO **30** 16:37:39.6±0.9,41°.59N×19°.25E,h22km±5km,ML1.8/3*

ISC 30 16:37:36.5±1.1,**41°.54N**±0°.03×**19°.45E**±0°.03,**h10**km±9km, **n35,** σ0°**84**/67,**5C-1D,Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TIR	**Tirane**	**0.37**	**121**	P		**Pg**	**16 37 43.1**	**-0.6**
TIR				S		**Sg**	**16 37 49.4**	**+0.8**
TIR				AML		AML	16 37 50.7	
	0.8nm,0.4s							
ULC	**Ulcinj**	**0.45**	**340**	*e*Pg		**Pg**	**16 37 45.3**	**0.0**
ULC				*i* Sg		**Sg**	**16 37 51.5**	**+0.2**
SDA	**Shkodra**	**0.51**	**4**	P		**Pg**	**16 37 46.4**	**-0.1**
SDA				S		**Sb**	**16 37 54.9**	**-0.1**
SDA				AML		AML	16 37 55.6	
	0.2nm,0.2s							
SDA				AMd			16 38 32.7	
DRME	**Dracevica, Mon**	**0.68**	**343**	*e*Pg		**Pg**	**16 37 49.3**	**-0.3**
DRME				*i* Sg		**Sb**	**16 37 59.1**	**-0.6**
DRME	**Dracevica, Mon**	**0.68**	**343**	*e*Pg		**Pg**	**16 37 49.1**	**-0.5**
DRME				*e*Sg		**Sb**	**16 37 58.5**	**-1.2**
PHP	**Peshkopia**	**0.76**	**79**	P		**Pg**	**16 37 50.1**	**-1.1**
PHP				S		**Sg**	**16 38 01.6**	**+0.6**
PHP				AML		AML	16 38 08.7	
	0.3nm,0.5s							
PHP				AMd			16 38 30.3	
BUM	**Brajici-Budva**	**0.87**	**332**	*e*Pg		**Pg**	**16 37 52.8**	**-0.4**
BUM				*i* Sg		**Sb**	**16 38 05.4**	**+0.1**
PDG	**Podgorica**	**0.90**	**351**	P		**Pb**	**16 37 54.3**	**+0.1**
PDG				S		**Sn**	**16 38 06.9**	**-1.3**
PDG				AMd			16 38 48.2	
PDG	**Podgorica**	**0.90**	**351**	*e*Pg		**Pn**	**16 37 55.5**	**+0.4**
PDG				*e*Sg		**Sn**	**16 38 08.4**	**+0.2**
PDG	**Podgorica**	**0.90**	**351**	*e*Pg		**Pg**	**16 37 53.4**	**-0.4**
PDG				*i* Sg		**Sn**	**16 38 06.8**	**-1.4**
PDG	**Podgorica**	**0.90**	**351**	⇑*i*Pg		**Pb**	**16 37 54.2**	**0.0**
PDG				*e*Sg		**Sb**	**16 38 08.7**	**-0.5**
CEME	**Cevo**	**1.08**	**339**	⇓*i*Pg		**Pb**	**16 37 56.7**	**-0.6**
CEME				*i* Sg		**Sn**	**16 38 12.8**	**0.0**
PVY	**Plav**	**1.12**	**20**	⇑*i*Pg		**Pb**	**16 37 57.4**	**-0.6**
PVY				*i* Sg		**Sn**	**16 38 15.0**	**+1.2**
HCY	**Herceg Novi**	**1.15**	**322**	*e*Pg		**Pb**	**16 37 58.1**	**-0.4**
HCY				*i* Sg		**Sn**	**16 38 15.3**	**+0.9**
HCY	**Herceg Novi**	**1.15**	**322**	⇑*i*Pg		**Pn**	**16 37 59.0**	**+0.4**
HCY				*e*Sg		**Sn**	**16 38 13.6**	**-0.8**
NKME	**Niksic**	**1.28**	**343**	*e*Pg		**Pn**	**16 38 00.5**	**+0.1**
NKME				*i* Sg		**Sn**	**16 38 19.6**	**+1.9**
KOME	**Kolasin**	**1.31**	**2**	*e*Pg		**Pn**	**16 38 01.1**	**+0.2**
KOME				*i* Sg		**Sg**	**16 38 20.8**	**+2.1**
KBN	**Korca**	**1.36**	**132**	S		**Sn**	**16 38 18.6**	**-1.1**
KBN				AML		AML	16 38 27.1	
	0.2nm,0.8s							
IVA	**Berane**	**1.37**	**14**	*e*Pg		**Pb**	**16 38 02.3**	**+0.1**
IVA				*i* Sg		**Sg**	**16 38 23.1**	**+2.5**
TREB	**Trebinje**	**1.43**	**326**	*e*Pg		**Pb**	**16 38 03.4**	**+0.2**
TREB				*e*Sg		**Sg**	**16 38 22.3**	**-0.3**
BRY	**Bratogost**	**1.52**	**334**	*e*Pg		**Pb**	**16 38 04.8**	**0.0**
BRY				*i* Sg		**Sg**	**16 38 26.8**	**+1.4**
BRY	**Bratogost**	**1.52**	**334**	⇑*i*Pg		**Pb**	**16 38 04.6**	**-0.2**
BRY				*e*Sg		**Sg**	**16 38 25.6**	**+0.2**
SRN	**Sarande**	**1.71**	**166**	P		**Pn**	**16 38 06.2**	**-0.1**
SRN				S		**Sn**	**16 38 29.7**	**+1.6**
SRN				AMd			16 39 13.1	
UPM	**Unac-Piva**	**1.71**	**347**	*e*Pn		**Pb**	**16 38 07.8**	**-0.3**
UPM				*i* Sn		**Sg**	**16 38 31.3**	**-0.2**
UPM	**Unac-Piva**	**1.71**	**347**	*e*Pn		**Pb**	**16 38 08.2**	**+0.1**
UPM				*e*Sn		**Sg**	**16 38 30.5**	**-1.0**
KLINJ	**Klinje**	**1.75**	**339**	*e*Pn		**Pb**	**16 38 08.7**	**0.0**
KLINJ				*e*Sn		**Sb**	**16 38 31.0**	**+0.3**
SJES	**Sjenica**	**1.76**	**13**	*e*Pg		**Pb**	**16 38 10.2**	**-0.1**
SJES				*e*Sg		**Sg**	**16 38 33.8**	**+0.6**
SJES	**Sjenica**	**1.76**	**13**	⇑*i*Pn		**Pb**	**16 38 09.6**	**+0.7**
SJES				*e*Sn		**Sb**	**16 38 31.4**	**+0.2**
STON	**Ston**	**1.86**	**316**	*e*Pg		**Pb**	**16 38 10.4**	**-0.1**
STON				*e*Sg		**Sb**	**16 38 34.1**	**+0.3**
NOCI	**Noci**	**1.95**	**248**	P		**Pn**	**16 38 09.2**	**-0.4**
NOCI				S		**Sn**	**16 38 34.8**	**+0.7**
NOCI				AML		AML	16 38 38.8	
	0.1nm,0.3s							
NOCI				AMd			16 39 24.7	
RUDO	**Rudo**	**2.08**	**358**	*e*Sn		**Sb**	**16 38 39.2**	**-0.9**
SELS	**Selova**	**2.09**	**36**	*e*Pn		**Pb**	**16 38 14.7**	**+0.3**
SELS				*e*Sn		**Sb**	**16 38 39.9**	**-0.4**
IVAS	**Ivanjica**	**2.10**	**14**	*e*Pn		**Pb**	**16 38 14.0**	**-0.7**
IVAS				*e*Sn		**Sn**	**16 38 40.4**	**+0.5**
IGT	**Igoumenitsa**	**2.12**	**161**	S		**Sn**	**16 38 39.4**	**+1.3**
BBLS	**Lazi&#263i**	**2.33**	**359**	*e*Pn		**Pb**	**16 38 17.0**	**-1.5**
BBLS				*e*Sn		**Sb**	**16 38 45.5**	**-1.8**

*NEIC **30** 16:47:20.7±1.6,11°.67N±0°.06×86°.74W±0°.06,h67km,2km, mb4.7/127,Error ellipse: s-maj=10.2km s-min=6.7km az=51.0*
*IDC **30** 16:47:23.0±0.6,12°.12N×86°.24W,h102km±5km,mb3.8/15, mbtmp4.2/20,MS3.5/3,Error ellipse: s-maj=16.2km s-min=6.2km az=53.0*
*CATAC **30** 16:47:24.3±0.1,12°.N±1°.×8°.7W±°.,h71km±1km,M5.0/73, mb5.2/7,mB5.4/6,MLv5.0/73,Mw(mB)4.8/6,Error ellipse: s-maj=3.6km s-min=1.3km az=38.6,confirmed*
*SNET **30** 16:47:24.8±1.1,11°.81N×86°.68W,h64km±189km,ML5.2, Presumed earthquake*
*GCG **30** 16:47:31.5±1.9,12°.19N×87°.16W,h17km±388km,MD4.7, ML4.4,Presumed earthquake*

ISC 30 16:47:22.3±0.5,**11°.81N**±0°.03×**86°.64W**±0°.03,**h94**km±4km, **n266,** σ1°**85**/298,**mb4.6**/67,**10C-36D,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
COPN	**Copaltepe**	**0.37**	**8**	⇓P		**Pn**	**16 47 37.2**	**+0.6**
ABCN	**Banco Central**	**0.45**	**46**	⇓P		**Pn**	**16 47 38.3**	**+1.2**
ABCN				S		**Sn**	**16 47 49.5**	**+1.4**
UNAN	**Cigeo UNAN**	**0.47**	**50**	⇑P		**Pn**	**16 47 38.3**	**+1.0**
UNAN				S		**Sn**	**16 47 49.6**	**+1.2**
AMTN	**Mateare**	**0.47**	**26**	⇑P		**Pn**	**16 47 38.3**	**+1.1**
AMTN				S		**Sn**	**16 47 49.9**	**+1.5**
USIM	**UNAN**	**0.47**	**50**			**Pn**	**16 47 35.8**	**-1.5**
TISN	**Laguna Tiscapa**	**0.49**	**48**	⇑P		**Pn**	**16 47 38.4**	**+1.0**
APQ2	**Apoyeque**	**0.50**	**39**	⇓P		**Pn**	**16 47 38.3**	**+0.9**
APQ2				S		**Sn**	**16 47 50.0**	**+1.3**
ALLN	**Telcor Managua**	**0.50**	**46**	P		**Pn**	**16 47 38.6**	**+1.1**
ALLN				S		**Sn**	**16 47 50.1**	**+1.3**
MAS3	**Al N del Volca**	**0.51**	**65**	⇑P		**Pn**	**16 47 38.1**	**+0.6**
MAS3				S		**Sn**	**16 47 49.9**	**+1.0**
APYN	**Apoyeque**	**0.51**	**34**	P		**Pn**	**16 47 38.4**	**+0.9**
APYN				S		**Sn**	**16 47 49.6**	**+0.7**
MASN	**Masaya**	**0.51**	**70**	P		**Pn**	**16 47 38.6**	**+1.0**
MASN				S		**Sn**	**16 47 50.0**	**+1.0**
MGAN	**Managua**	**0.51**	**49**			**Pn**	**16 47 36.9**	**-0.6**
MGAN	**Managua**	**0.51**	**49**	⇑P		**Pn**	**16 47 38.5**	**+0.9**
MGAN				S		**Sn**	**16 47 50.2**	**+1.2**
MGAN	**Managua**	**0.51**	**49**	P		**Pn**	**16 47 38.2**	**+0.7**
NANN	**Nandasmo**	**0.53**	**76**	⇓P		**Pn**	**16 47 39.6**	**+1.9**
NANN				S		**Sn**	**16 47 51.3**	**+2.1**
APQ3	**Volcan Apoyequ**	**0.54**	**30**	P		**Pn**	**16 47 38.4**	**+0.7**

WILN	**Americas 2**	**0.57**	**52**	⇑P		**Pn**	**16 47 38.7**	**+0.8**	
WILN				S		**Sn**	**16 47 50.8**	**+1.1**	
NADN	**Granada**	**0.60**	**95**	⇓P		**Pn**	**16 47 39.3**	**+1.0**	
NADN				S		**Sn**	**16 47 51.7**	**+1.5**	
MOM2	**El Cardon**	**0.65**	**14**	⇓P		**Pn**	**16 47 39.3**	**+0.6**	
MOM2				S		**Sn**	**16 47 51.9**	**+1.0**	
MACN	**El Madrono**	**0.66**	**357**	⇓P		**Pn**	**16 47 39.5**	**+0.7**	
MACN				S		**Sn**	**16 47 52.0**	**+0.9**	
ALEN	**Leon**	**0.68**	**341**	P		**Pn**	**16 47 39.7**	**+0.7**	
ALEN				S		**Sn**	**16 47 52.1**	**+0.5**	
CNGA	**Al SSO del Vol**	**0.69**	**355**	⇑P		**Pn**	**16 47 40.0**	**+0.9**	
CNGA				S		**Sn**	**16 47 53.0**	**+1.4**	
CNGN	**Cerro Negro**	**0.69**	**356**			**Pn**	**16 47 39.1**	**0.0**	
CNGN	**Cerro Negro**	**0.69**	**356**	⇓P		**Pn**	**16 47 39.7**	**+0.6**	
CNGN				S		**Sn**	**16 47 52.8**	**+1.0**	
MOM3	**MOM3**	**0.71**	**10**	⇓P		**Pn**	**16 47 39.9**	**+0.7**	
MOM3				S		**Sn**	**16 47 53.7**	**+1.7**	
ROCN	**Rota Cerro Neg**	**0.71**	**352**	P		**Pn**	**16 47 40.2**	**+0.9**	
ROCN				S		**Sn**	**16 47 53.1**	**+1.0**	
TEL3	**Telica 3**	**0.79**	**346**	⇓P		**Pn**	**16 47 40.7**	**+0.7**	
QUEN	**Al S del Volca**	**0.81**	**345**	P		**Pn**	**16 47 41.5**	**+1.2**	
QUEN				S		**Sn**	**16 47 55.2**	**+1.5**	
HOYN	**Al Sur del Vol**	**0.81**	**347**	⇓P		**Pn**	**16 47 41.0**	**+0.7**	
HOYN				S		**Sn**	**16 47 55.1**	**+1.3**	
TELN	**Telica**	**0.81**	**347**	⇓P		**Pn**	**16 47 41.1**	**+0.7**	
TELN				S		**Sn**	**16 47 54.8**	**+0.9**	
HERN	**Volcan Telica**	**0.82**	**347**			**Pn**	**16 47 40.4**	**0.0**	
HERN	**Volcan Telica**	**0.82**	**347**	⇓P		**Pn**	**16 47 41.1**	**+0.7**	
HERN				S		**Sn**	**16 47 54.8**	**+0.8**	
POLN	**Al Sur del Vol**	**0.85**	**349**	⇓P		**Pn**	**16 47 41.6**	**+0.9**	
POLN				S		**Sn**	**16 47 55.4**	**+0.9**	
CRIN	**San Cristobal**	**0.97**	**336**			**Pn**	**16 47 42.5**	**+0.4**	
CRIN	**San Cristobal**	**0.97**	**336**	⇓P		**Pn**	**16 47 43.0**	**+0.9**	
CRIN				S		**Sn**	**16 47 58.5**	**+1.7**	
CRIN	**San Cristobal**	**0.97**	**336**	P		**Pn**	**16 47 42.9**	**+0.9**	
JAPN	**Al SSO del Vol**	**0.99**	**106**	P		**Pn**	**16 47 43.5**	**+1.4**	
MORN	**Al O del Volca**	**1.01**	**105**	⇓P		**Pn**	**16 47 43.2**	**+0.9**	
MORN				S		**Sn**	**16 47 59.2**	**+1.7**	
CONN	**Concepcion**	**1.03**	**104**	⇓P		**Pn**	**16 47 43.3**	**+0.8**	
CONN				S		**Sn**	**16 47 59.4**	**+1.6**	
BOAB	**BOACO BROADBAN**	**1.15**	**56**			**Pn**	**16 47 44.1**	**+0.2**	
BOAB	**BOACO BROADBAN**	**1.15**	**56**	⇓P		**Pn**	**16 47 44.9**	**+0.9**	
CARN	**Rivas**	**1.26**	**119**	⇓P		**Pn**	**16 47 46.4**	**+1.1**	
CARN				S		**Sn**	**16 48 04.3**	**+1.7**	
LIMN	**Finca el Limon**	**1.28**	**12**	⇓P		**Pn**	**16 47 46.5**	**+0.8**	
LIMN				S		**Sn**	**16 48 03.9**	**+0.7**	
MATN	**Matagalpa**	**1.32**	**32**	⇑P		**Pn**	**16 47 46.2**	**+0.1**	
MATN				S		**Sn**	**16 48 04.5**	**+0.5**	
ACON	**Acoyapa**	**1.45**	**83**	⇓P		**Pn**	**16 47 48.7**	**+1.2**	
ACON				S		**Sn**	**16 48 07.5**	**+0.8**	
POTN	**Potosi Cosigui**	**1.46**	**325**	⇓P		**Pn**	**16 47 48.6**	**+1.0**	
POTN				S		**Sn**	**16 48 07.9**	**+1.1**	
CSGN	**Cosiguina Volc**	**1.47**	**323**	⇓P		**Pn**	**16 47 48.8**	**+0.9**	
CSGN				S		**Sn**	**16 48 08.0**	**+0.7**	
ELI1	**Hacienda Flor**	**1.57**	**137**	⇓P		**Pn**	**16 47 51.2**	**+2.1**	
ELI1				S		**Sn**	**16 48 12.5**	**+2.9**	
RCON	**San Juan de Ri**	**1.73**	**16**	⇓P		**Pn**	**16 47 52.9**	**+1.5**	
RCON				S		**Sn**	**16 48 15.6**	**+2.2**	
RCFN	**Al S de San Ju**	**1.77**	**14**

MTO3	Montecristo	3.69	315	*e*P		Pn	16 48 19.1	+1.7
MTO3	Montecristo	3.69	315	*e*P		Pn	16 48 19.2	+1.8
SLOZ	Alcaldia de Sa	3.77	306	P		Pn	16 48 20.6	+2.3
ESQI	Esquipulas	3.79	316			Pn	16 48 16.8	-2.0
ESQI	Esquipulas	3.79	316	⇓P		Pn	16 48 21.1	+2.3
ESQI	Esquipulas	3.79	316	*e*P		Pn	16 48 21.2	+2.5
ZAFR2	Estanzuela, Za	3.81	317	*e*P		Pn	16 48 27.1	+8.2
FAME	Alcaldia de Sa	3.86	302	P		Pn	16 48 21.4	+1.9
FAME				S		Sn	16 49 02.8	-1.1
BILN	Bilwi Airport	3.89	55	P		Pn	16 48 21.6	+1.7
BILN				S		Sn	16 49 12.4	+7.9
OCHAL	Ojochal	3.99	132	P		Pn	16 48 23.7	+2.4
OCHAL				S		Sn	16 49 09.7	+2.6
DRK0	Durika	4.19	127	P		Pn	16 48 23.3	-0.9
DRK0				S		Sn	16 49 10.0	-2.1
PIRO	Carate, Puerto	4.69	136	⇓P		Pn	16 48 33.6	+2.8
APG	El Apazote	4.89	311	P		Pn	16 48 36.2	+2.5
	comp=N,9.9nm,0.6s,baz=133,slow=10,SNR=113							
APG				S		Sn	16 49 33.0	+3.8
	comp=N,3.3nm,0.7s,baz=82,slow=17,SNR=1.0							
APG	El Apazote	4.89	311	*i* P		Pn	16 48 36.1	+2.4
BRU2	Volcan	4.91	127			Pn	16 48 32.1	-1.8
BRU2	Volcan	4.91	127	P		Pn	16 48 36.4	+2.5
BRU2				S		Sn	16 49 29.9	+0.3
CDITO	Canoas	4.91	131	P		Pn	16 48 36.2	+2.4
CDITO				S		Sn	16 49 31.4	+2.0
STG5	El Palmar, Qui	5.26	300	*e*P		Pn	16 48 45.0	+6.4
STG5				*e*S		Sn	16 49 43.4	+5.4
STG8	El Palmar, Qui	5.29	300	*i* P		Pn	16 48 45.9	+6.8
STG8				*e*S		Sn	16 49 44.9	+6.1
STG8				IAML			16 49 46.7	
	comp=N,747nm,0.7s							
PRVC	Isla de Provid	5.38	73	P		Pn	16 48 41.6	+1.4
SOKI	Kika Raxquin	5.52	303	*e*P		Pn	16 48 46.0	+3.6
RTAL	Retalhuleu	5.61	299			Pn	16 48 42.0	-1.3
HUEH	Huehuetenango	5.87	307			Pn	16 48 50.7	+3.6
PETF	Flores	5.96	329			Pn	16 48 47.0	-1.1
PETF	Flores	5.96	329	P		Pn	16 48 51.5	+3.5
PETF	Flores	5.96	329	*e*P		Pn	16 48 51.3	+3.3
SMCA	Catarina	6.09	300	*e*P		Pn	16 48 52.6	+2.7
THIG		6.28	300	*e*P		Pn	16 48 55.8	+3.4
CCIG	Comitan	6.94	310			Pn	16 49 00.3	-1.3
CCIG	Comitan	6.94	310	P		Pn	16 49 04.7	+3.1
CCIG	Comitan	6.94	310	*e*P		Pn	16 49 04.6	+3.1
BCIP	Isla Barro Col	7.19	111			Pn	16 49 07.4	+2.6
SCIG	Sabancuy	8.36	329	P		Pn	16 49 23.6	+2.9
TEIG	Tepich	8.52	350			Pn	16 49 22.3	-0.5
CMIG	Matias Romero	9.55	304	P		Pn	16 49 38.0	+1.0
	comp=N,27nm,0.3s,baz=126,slow=12,SNR=110							
CMIG				S		Sn	16 51 26.5	+3.9
	comp=N,8.4nm,0.6s,baz=297,slow=22,SNR=1.1							
CAP2	Capurgana	9.66	108	P		Pn	16 49 42.3	+3.8
DBBC	Dabeiba	11.34	114	P		Pn	16 50 04.2	+2.8
GR1C	Gorgona, Isla	12.13	136	P		Pn	16 50 14.4	+2.5
YOTC	Yotoco, Valle	12.82	127	P		Pn	16 50 22.7	+1.5
	comp=N,332nmcomp=N,37nm,1.0s							
JAMC	Jamundi, Valle	13.05	130	P		Pn	16 50 25.8	+1.4
	comp=N,546nmcomp=N,31nm,1.1s							
BBAC	Balboa, Cauca	13.47	136	P		Pn	16 50 31.5	+1.7
	comp=N,26nm,0.9s							
POPC	Popayan, Colom	13.50	132	P		Pn	16 50 32.0	+1.6
	comp=N,57nm,1.1s							
ROSC	El Rosal	14.02	119	P		Pn	16 50 33.7	-3.4
	comp=N,4.0nm,0.3s,baz=298,slow=17,SNR=4.7							
OTAV	Otavalo	14.08	144			Pn	16 50 35.9	-2.1
PAMC	Pamplona, Colo	14.45	107	P		Pn	16 50 46.9	+4.1
SDV	Santo Domingo	16.02	99	P		Pn	16 51 00.2	-2.1
	comp=N,12nm,1.0s,baz=273,slow=8.1,SNR=9.0							
SDV				S		Sn	16 53 52.3	-7.5
	comp=N,2.2nm,0.8s,baz=345,slow=15,SNR=1.7							
SDV				LR		LR	16 57 22.1	
	comp=N,64nm,19.4s,baz=29,slow=38							
SDV	Santo Domingo	16.02	99			Pn	16 51 02.3	-0.1
BANI	Bilwi	17.02	65	P		Pn	16 51 16.6	+1.8
656A	Willston	17.89	12			P	16 51 26.2	+1.8
DR12	Loma Pena Alta	18.03	65	P		P	16 51 27.5	+1.3
HBVL	Hebbronville	18.92	325	P		P	16 51 37.1	+1.3
HBVL				IAmb		IAmb	16 51 40.4	
	comp=Z,63nm,1.3s							
TIGA	Tifton	19.74	8	P		P	16 51 46.2	+1.6
TIGA				IAmb		IAmb	16 51 51.7	
	comp=Z,35nm,0.8s							
MLPR	Magueyes Islan	19.90	70			P	16 51 47.5	+1.0
AOPR	Arecibo Observ	20.27	69	IAmb		IAmb	16 51 57.0	
	comp=Z,40nm,0.9s							
833A	Chaparral WMA,	20.30	326	IAmb		IAmb	16 51 52.2	
	comp=Z,43nm,1.2s							
CELP	Cerrillos	20.35	70	IAmb		IAmb	16 51 58.1	
	comp=Z,56nm,0.9s							
ATAH	Atahualpa	20.53	156	P		P	16 51 55.9	+2.2
	comp=Z,16nm,0.8s,baz=22,slow=6.2,SNR=21							
	comp=Z,16nm,0.8s							
ECPR	Experimental S	20.62	69	IAmb		IAmb	16 51 57.4	
	comp=Z,85nm,1.5s							
SJG	San Juan	20.76	70	P		P	16 51 50.9	-4.9
	comp=Z,4.6nm,0.3s,baz=263,slow=2.4,SNR=9.1							
	comp=Z,4.6nm,0.3s							
SJG	San Juan	20.76	70	P		P	16 51 55.3	-0.4
SJG				IAmb		IAmb	16 52 02.3	
	comp=Z,55nm,0.9s							
152A	Waverly Hall	20.84	5	IAmb		IAmb	16 52 00.9	
	comp=Z,46nm,0.9s							
HNDO	Hondo	21.20	328	IAmb		IAmb	16 52 01.0	
	comp=Z,18nm,0.7s							
GOGA	Godfrey	21.70	7	P		P	16 52 06.0	+0.4
GOGA				IAmb		IAmb	16 52 08.8	
	comp=Z,20nm,0.8s							
DRIO	Del Rio	21.83	325	IAmb		IAmb	16 52 09.4	
	comp=Z,18nm,0.9s							
Y49A	Blount Mountai	21.95	1	P		P	16 52 09.0	+0.6
Y49A				IAmb		IAmb	16 52 10.3	
	comp=Z,16nm,0.7s							
Y52A	Lilburn	22.08	6	IAmb		IAmb	16 52 12.4	
	comp=Z,26nm,0.8s							
FPAL	Fort Paine	22.65	2	P		P	16 52 16.1	+0.3
HODGE	Hodges	22.68	9	IAmb		IAmb	16 52 17.6	
	comp=Z,16nm,0.7s							
X51A	Calhoun	22.71	4	IAmb		IAmb	16 52 18.8	
	comp=Z,21nm,1.0s							
OZNA	Ozona	23.27	327	P		P	16 52 21.8	-0.1
W52A	Murphy	23.31	6	IAmb		IAmb	16 52 23.2	
	comp=Z,20nm,0.7s							
W50A	Signal Mountai	23.32	3	IAmb		IAmb	16 52 24.0	
	comp=Z,15nm,0.6s							
BG3	Lake Jocassee	23.33	8	IAmb		IAmb	16 52 24.0	
	comp=Z,17nm,0.7s							
PAULI	Pauline	23.33	10	IAmb		IAmb	16 52 23.9	
	comp=Z,16nm,0.7s							
BIRD	Birdtown, Kers	23.42	13	IAmb		IAmb	16 52 25.9	
	comp=Z,22nm,1.1s							
PLPT	Palo Pinto	23.49	335	IAmb		IAmb	16 53 00.2	
	comp=Z,26nm,0.7s							
TXAR	Lajitas Array	23.57	320	P		P	16 52 25.5	+0.9
	comp=Z,30nm,0.7s,baz=138,slow=10.0,SNR=257							
TXAR				PcP		PcP	16 56 08.6	+1.2
	comp=Z,0.8nm,0.7s,baz=131,slow=3.6,SNR=3.7							
TXAR				ScP		ScP	16 59 36.6	-0.7
	comp=Z,0.6nm,0.8s,baz=147,slow=5.7,SNR=5.4							
CPCT	Cooper Cave	23.62	4	P		P	16 52 25.6	+0.7
CPCT				IAmb		IAmb	16 52 27.9	
	comp=Z,23nm,0.8s							
KMSC	Kings Mountain	23.73	11	IAmb		IAmb	16 52 27.4	
	comp=Z,18nm,0.7s							
TKL	Tuckaleechee C	23.89	6	IAmb		IAmb	16 52 30.1	
	comp=Z,20nm,0.9s							
ABTX	Abilene, Hawle	23.91	332	IAmb		IAmb	16 52 29.1	
	comp=Z,20nm,0.9s							
V53A	Saluda	24.01	8	IAmb		IAmb	16 52 31.6	
	comp=Z,24nm,0.8s							
W57A	Gilead	24.01	13	IAmb		IAmb	16 52 29.5	
	comp=Z,27nm,0.6s							
CLTN	Cedars of Leba	24.18	1	P		P	16 52 30.7	+0.8
V55A	Taylorsville	24.44	11	IAmb		IAmb	16 52 35.6	
	comp=Z,23nm,0.9s							
TPB05	Hovey Rd	24.50	323	IAmb		IAmb	16 52 59.8	
	comp=Z,8.3nm,0.8s							
GDHS	Morne Mazeau,	24.53	77			P	16 52 34.1	+0.7
APMT	Aspermont	24.72	332	IAmb		IAmb	16 52 37.1	
	comp=Z,30nm,0.7s							
TPB06	Permian Basin	24.97	325	IAmb		IAmb	16 53 03.5	
	comp=Z,20nm,0.9s							
U54A	Nelsons Funny	24.99	9	IAmb		IAmb	16 52 41.1	
	comp=Z,28nm,0.8s							
129A	Stewart Farms,	25.00	328	IAmb		IAmb	16 52 39.6	
	comp=Z,21nm,0.9s							
U56A	King	25.08	12	IAmb		IAmb	16 52 42.7	
	comp=Z,27nm,0.8s							
POST	Post	25.16	330	P		P	16 52 40.5	+1.5
POST				IAmb		IAmb	16 52 41.1	
	comp=Z,31nm,0.7s							
128A	Castleberry Fa	25.32	327	IAmb		IAmb	16 52 42.8	
	comp=Z,20nm,0.7s							
WMOK	Wichita Mounta	25.36	336	IAmb		IAmb	16 52 44.1	
	comp=Z,28nm,1.4s							
DKNS	Dickens	25.38	331	P		P	16 52 41.2	+0.3
DKNS				IAmb		IAmb	16 52 43.4	
	comp=Z,13nm,0.7s							
T59A	Double "B" Far	26.36	17	IAmb		IAmb	16 52 51.7	
	comp=Z,19nm,1.2s							
MSTX	Muleshoe	26.52	329	IAmb		IAmb	16 52 54.5	
	comp=Z,18nm,0.9s							
AMTX	Amarillo	26.73	332	IAmb		IAmb	16 52 57.3	
	comp=Z,15nm,0.7s							
Q52A	Bidwell	27.32	7	IAmb		IAmb	16 52 59.3	
	comp=Z,18nm,0.7s							
Q54A	Coxs Mills	27.55	10	IAmb		IAmb	16 53 01.5	
	comp=Z,28nm,1.1s							
Q56A	Snyder Ridge,	27.92	12	IAmb		IAmb	16 53 06.3	
	comp=Z,16nm,0.9s							
P53A	Whipple	27.96	9	IAmb		IAmb	16 53 05.8	
	comp=Z,19nm,0.8s							
121A	Cookes Peak, D	28.33	320	P		P	16 53 09.2	+1.7
Q52A	Adamsville	28.52	8	P		P	16 53 09.2	+0.3
Q52A				IAmb		IAmb	16 53 09.7	
	comp=Z,19nm,0.8s							
P57A	Homestead Farm	28.61	14	IAmb		IAmb	16 53 11.8	
	comp=Z,21nm,1.1s							
ANMO	Albuquerque	29.23	325	P		P	16 53 16.3	+0.8
	comp=Z,1.4nm,0.6s,baz=161,slow=6.5,SNR=4.4							
	comp=Z,1.4nm,0.6s							
N53A	Lisbon	29.34	9	IAmb		IAmb	16 53 16.9	
	comp=Z,20nm,0.7s							
SSPA	Standing Stone	29.73	14	P		P	16 53 19.9	+0.2
X16A	Lo Mia Camp, P	31.88	319	P		P	16 53 40.4	+1.5
PV03	Paradox Valley	32.96	327	IAmb		IAmb	16 54 14.0	
	comp=Z,5.3nm,0.7s							
PV12	Saucer Basin,	32.98	327	IAmb		IAmb	16 54 14.8	
	comp=Z,13nm,0.7s							
PV19	Morning Glory	33.08	327	IAmb		IAmb	16 54 15.2	
	comp=Z,8.9nm,0.8s							
PV10	Paradox Valley	33.15	327	IAmb		IAmb	16 54 15.4	
	comp=Z,9.8nm,0.8s							
LPAZ	La Paz	33.39	146	P		P	16 53 53.5	+0.9
	comp=Z,0.9nm,0.6s,baz=332,slow=7.9,SNR=3.7							
	comp=Z,0.9nm,0.6s							
PB16	IPOC Station P	34.39	150	P		P	16 54 00.7	-0.7
PB16				IAmb		IAmb	16 54 05.3	
	comp=Z,7.9nm,0.9s							
PFO	Pinyon Flats O	34.82	313	LR		LR	17 09 24.7	
	comp=Z,196nm,18.8s,baz=254,slow=38							
F33A	5 Mile Ranch,	34.90	348	IAmb		IAmb	16 54 03.5	
	comp=Z,9.3nm,0.6s							
GO01	Chusmiza	35.69	151	P		P	16 54 11.4	-0.9
GO01				IAmb		IAmb	16 54 17.0	
	comp=Z,9.4nm,1.1s							
VILB	Vilhena	35.97	132	P		P	16 54 13.9	-0.4
PDAR	Pinedale Array	36.71	331	P		P	16 54 20.2	-0.4
	comp=Z,0.5nm,0.7s,baz=140,slow=9.5,SNR=4.0							
PDAR				pP		pP	16 54 43.3	+1.0
	comp=Z,1.3nm,0.6s,baz=126,slow=9.4,SNR=8.5							
	comp=Z,0.5nm,0.7s							
HWUT	Hardware Ranch	36.83	328	IAmb		IAmb	16 54 47.5	
	comp=Z,8.2nm,0.7s							
AGMN	Agassiz Nation	37.18	350	IAmb		IAmb	16 54 23.3	
	comp=Z,14nm,1.3s							
EPLO	Experimental L	38.21	353	IAmb		IAmb	16 54 31.4	
	comp=Z,10nm,0.6s							
ELK	Elko	38.25	324	pP		pP	16 54 57.5	+2.1
	comp=Z,2.3nm,0.7s,baz=135,slow=4.7,SNR=6.7							
NVAR	Mina Array Bea	38.70	319	P		P	16 54 38.7	+1.2
	comp=Z,0.5nm,0.6s,baz=122,slow=7.3,SNR=2.7							
NVAR				pP		pP	16 55 02.0	+2.7
	comp=Z,2.6nm,0.8s,baz=133,slow=7.3,SNR=9.1							
NVAR				PcP		PcP	16 56 48.0	+0.4
	comp=Z,2.7nm,0.7s,baz=128,slow=5.0,SNR=10							
	comp=Z,0.5nm,0.6s							
ULM	Lac du Bonnet	39.08	351	P		P	16 54 37.7	-2.3
	comp=Z,6.4nm,0.7s,baz=160,slow=8.8,SNR=12							
	comp=Z,6.4nm,0.7s							
ULM	Lac du Bonnet	39.08	351	IAmb		IAmb	16 54 38.6	
	comp=Z,9.1nm,0.8s							
SCHQ	Schefferville	45.67	16	P		P	16 55 31.1	-2.4
	comp=Z,6.3nm,0.6s,baz=210,slow=6.6,SNR=17							
	comp=Z,6.3nm,0.6s							
SCHQ	Schefferville	45.67	16	P		P	16 55 31.4	-2.1
SCHQ				IAmb		IAmb	16 55 32.4	
	comp=Z,15nm,1.3s							
ZON	Zonda	46.42	159	P		P	16 55 39.8	0.0
ZON				IAmb		IAmb	16 55 43.5	
	comp=Z,24nm,1.5s							
BDFB	Brasilia	46.97	125	P		P	16 55 41.8	-2.5
	comp=Z,1.9nm,0.4s,baz=345,slow=7.3,SNR=3.4							
	comp=Z,1.9nm,0.4s							
CPUP	Villa Florida	47.43	143	P		P	16 55 46.0	-1.5
	comp=Z,1.3nm,0.6s,baz=340,slow=9.3,SNR=4.7							
	comp=Z,1.3nm,0.6s							
LR05	Currie	53.52	166	P		P	16 56 34.1	+0.8
LR05				IAmb		IAmb	16 56 37.4	
	comp=Z,9.4nm,0.8s							
PLCA	Paso Flores	54.36	165	P		P	16 56 40.6	+1.2
	comp=Z,7.3nm,0.8s,baz=339,slow=8.4,SNR=22							
PLCA				PcP		PcP	16 57 42.1	-0.1
	comp=Z,3.9nm,0.8s,baz=296,slow=3.6,SNR=5.0							
	comp=Z,7.3nm,0.8s							
YKA	Yellowknife Ar	54.44	344	P		P	16 56 36.7	-2.9
	comp=Z,0.5nm,0.8s,baz=143,slow=6.6,SNR=7.7							
YKA				pP		pP	16 57 01.0	-1.6
	comp=Z,1.1nm,0.9s,baz=144,slow=6.8,SNR=5.3							
YKA				PcP		PcP	16 57 40.3	-1.8
	comp=Z,0.4nm,0.7s,baz=147,slow=3.2,SNR=4.2							
	comp=Z,0.5nm,0.8s							
LL02	Futaleuf	56.38	167	P		P	16 56 54.0	+0.2
LL02				IAmb		IAmb	16 56 56.2	
	comp=Z,11nm,1.1s							
ILAR	Eielson Array	66.92	336	P		P	16 58 02.8	-1.6
	comp=Z,0.6nm,0.6s,baz=136,slow=4.1,SNR=7.0							
ILAR				pP		pP	16 58 26.1	-2.1
	comp=Z,0.4nm,0.6s,baz=141,slow=3.4,SNR=2.6							
	comp=Z,0.6nm,0.6s							
EKA	Eskdalemuir Ar	76.68	36	P		P	16 58 59.5	-3.4
	comp=Z,1.1nm,0.6s,baz=260,slow=5.4,SNR=4.4							
	comp=Z,1.1nm,0.6s							
ESDC	Sonseca Array	76.97	52	P		P	16 59 01.6	-3.4
	comp=Z,2.1nm,0.9s,baz=292,slow=5.3,SNR=7.8							
	comp=Z,2.1nm,0.9s							
ESDC	Sonseca Array	76.97	52	IAmb		IAmb	16 59 05.6	
	comp=Z,3.4nm,1.2s							
SONM	Songino Array	119.50	350	PKKPbc		PKKPbc	17 16 12.1	-2.6
	comp=Z,0.4nm,0.5s,baz=151,slow=3.4,SNR=3.7							
KSRS	Korea Array	121.23	328	PKP		PKPdf	17 06 03.7	-1.1
	comp=Z,1.5nm,0.8s,baz=7.8,slow=2.2,SNR=5.7							
HHC	Hu-ho-hao-te	124.97	343	*e*P		PKPdf	17 06 10.8	-1.2
NJ2	Nanjing	130.02	331	*e*P		PKPdf	17 06 23.0	+1.2
NJ2				pmax		pmax		
	comp=Z,10.0nm,0.9s							
STKA	Stephens Creek	131.43	238	PKP		PKPdf	17 06 24.9	+0.6
	comp=Z,4.1nm,0.5s,baz=112,slow=4.7,SNR=13							
STKA	Stephens Creek	131.43	238			PKPdf	17 06 24.8	+0.4
ASAR	Alice Springs	139.76	247	PKhKP		PKPpre	17 06 32.4	
	comp=Z,2.0nm,0.7s,baz=112,slow=3.6,SNR=17							
ASAR				PKP		PKPdf	17 06 41.0	+0.8
	comp=Z,3.6nm,0.6s,baz=102,slow=9.9,SNR=21							
ASAR				SKPbc		SKPbc	17 10 06.5	-1.1
	comp=Z,0.5nm,0.7s,baz=92,slow=2.6,SNR=8.1							
WRA	Warramunga Arr	139.84	253	PKhKP		PKPpre	17 06 32.2	
	comp=Z,0.9nm,0.6s,baz=95,slow=2.9,SNR=12							
WRA				PKP		PKPdf	17 06 40.9	+0.5
	comp=Z,6.6nm,0.6s,baz=91,slow=2.2,SNR=37							
WRA				SKPbc		SKPbc	17 10 07.5	-0.4
	comp=Z,0.8nm,0.8s,baz=98,slow=2.8,SNR=5.9							
WRA	Warramunga Arr	139.84	253			PKPpre	17 06 34.2	
PZH	PanZhiHua	141.06	348	P		PKPdf	17 06 42.0	-0.6
FITZ	Fitzroy Crossi	148.22	255	PKPbc		PKPdf	17 06 57.0	+2.1
	comp=Z,11nm,0.8s,baz=42,slow=1.6,SNR=19							
CMAR	Chiang Mai Arr	149.43	350	PKPbc		PKPdf	17 06 59.5	+2.6
	comp=Z,0.8nm,0.6s,baz=338,slow=3.9,SNR=6.7							
NWAO	Narrogin (SRO)	149.65	222	PKPbc		PKPbc	17 07 01.7	+0.1
	comp=Z,23nm,0.8s,baz=169,slow=4.9,SNR=8.3							
BATI	Baumata	150.22	270	PKPbc		PKPbc	17 07 04.8	+1.3
	comp=Z,5.8nm,0.4s,baz=90,slow=2.0,SNR=3.8							

KRSC 30 16:47:28.1±1.7, 49.46N×158.95E, h40km±48km, MI3.6,

East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.20	305	*e*P	Pn	16 48 02.3	+0.2
SKR				*e*S	Sn	16 48 27.3	-0.7
KDTR	Khodutka, Kamc	2.42	347	*e*P	Pn	16 48 08.0	+3.0
KDTR				*e*S	Sn	16 48 36.8	+3.5
PAU	Pauzhetka	2.43	327	*e*P	Pn	16 48 08.6	+3.3
PAU				*e*S	Sn	16 48 37.6	+3.9
RUS	Russkaya	2.99	355	*e*P	Pn	16 48 16.3	+3.4
RUS				*e*S	Sn	16 48 51.1	+3.7
ASAK	Asacha	3.00	348	*e*P	Pn	16 48 17.4	+4.3
ASAK				*e*S	Sn	16 48 52.1	+4.2
MTVR	Mutnovka	3.06	351	*e*P	Pn	16 48 17.6	+3.5
MTVR				*e*S	Sn	16 48 53.5	+3.9
GRL	Gorelyy	3.14	350	*e*P	Pn	16 48 19.3	+4.1
GRL				*e*S	Sn	16 48 56.0	+4.5
KRMR	Karymshinskiy	3.41	352	*e*P	Pn	16 48 23.0	+4.3
KRMR				*e*S	Sn	16 49 02.8	+4.9
PET	Petropavlovsk	3.57	357	*e*P	Pn	16 48 24.8	+3.9
PET				*e*S	Sn	16 49 05.7	+3.9
DALK	Dalny	3.58	358	*e*P	Pn	16 48 25.0	+4.0
DALK				*e*S	Sn	16 49 06.4	+4.5
APC	Apacha	3.65	343	*e*P	Pn	16 48 26.3	+4.4
UGLR	Uglovaya	3.75	359	*e*P	Pn	16 48 27.6	+4.1
UGLR				*e*S	Sn	16 49 10.6	+4.1
AVH	Avacha	3.81	358	*e*P	Pn	16 48 28.8	+4.5
AVH				*e*S	Sn	16 49 12.4	+4.6
KOK	Koryaka	3.84	357	*e*P	Pn	16 48 29.6	+4.9
KOK				*e*S	Sn	16 49 14.4	+5.8
KRER	Koryakskii	3.85	358	*e*P	Pn	16 48 29.7	+4.8
KRX	Arik	3.91	357	*e*P	Pn	16 48 30.2	+4.5
KRX				*e*S	Sn	16 49 15.2	+4.9
GNL	Ganaly	4.29	352	*e*P	Pn	16 48 36.2	+5.4
GNL				*e*S	Sn	16 49 25.4	+5.8
MKZ	Mys Kozlova	5.38	18	*e*P	Pn	16 48 50.4	+4.7
KBTR	Krutoberegovo	7.15	18	*e*P	Pn	16 49 13.7	+3.7

NEIC ***30*** *17:15:08.6±2.3, 10.43N±0.06×86.29W±0.05, h10km±1km, mb4.6/69, Error ellipse: s-maj=11.3km s-min=5.5km az=213.0*

UCR ***30*** *17:15:09.0±0.8, 10.36N×86.34W, h18km±4km, MW4.8, Presumed earthquake*

CATAC ***30*** *17:15:09.3±0.5, 10.N±2.×8.6W±., h29km±6km, M4.6/46, MLv4.6/46, Error ellipse: s-maj=6.0km s-min=2.9km az=32.1, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}3.68; $M_{\theta\theta}$-1.86; $M_{\phi\phi}$-1.83; $M_{r\theta}$1.57; $M_{\theta\phi}$2.48; $M_{\phi r}$0.84; Fault plane solution: M_o4.41186×10^{15} NP1: ϕ_s112.66112°, δ53.39842°, λ59.95616°. NP2: ϕ_s336.78922°, δ45.97766°, λ123.98406°. Principal axes: T 4.4675, Plg65.9242°, Azm322.4553°; N -0.1135, Plg23.6990°, Azm131.6880°; P -4.3540, Plg4.0017°, Azm223.4476°; confirmed*

IDC ***30*** *17:15:10.0±0.7, 11.24N×85.79W, h0km, mb3.9/8, mbtmp3.9/9, ML3.1/2, MS3.8/11 Error ellipse: s-maj=40.4km s-min=10.6km az=53.0*

ISC 30 17:15:08.2±1.3, 10.35N±0.03×86.31W±0.04, h17km±7km, n232, σ1$42/242, mb4.6/40, MS3.8/10, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SACU	Santa Cruz	0.71	97	*e*P	Pb	17 15 23.5	+1.3
SACU				*e*S	Sn	17 15 34.4	+0.3
DELF	Filadelfia	0.75	83	*e*P	Pb	17 15 24.1	+1.3
JUD3	Juan Diaz 3	0.78	104	Pg	Pg	17 15 23.3	-0.2
JUD3				Sg	Sb	17 15 34.7	+1.0
JUD3	Juan Diaz 3	0.78	104	*e*P	Pb	17 15 24.3	+1.0
ALIBA	Liberia Airpor	0.78	72	*e*P	Pn	17 15 25.3	+0.8
ELI1	Hacienda Flor	0.80	69	P	Pn	17 15 25.7	+1.1
ELI1				S	Sn	17 15 39.0	+2.8
ELI1	Hacienda Flor	0.80	69	*e*P	Pn	17 15 25.8	+1.1
NICO	Nicoya	0.87	104	*e*P	Pg	17 15 25.5	+0.3
NICO				*e*S	Sb	17 15 37.6

APYN	**Apoyeque**	**1.87**	**359**	P		**Pn**	**17 15 40.2**	**+0.7**
COVE	**Coope Vega, Sa**	**1.91**	**79**	P		**Pn**	**17 15 41.3**	**+1.3**
COVE				S		**Sn**	**17 16 04.9**	**+1.3**
APQ3	**Volcan Apoyequ**	**1.91**	**358**	P		**Pn**	**17 15 41.0**	**+1.0**
APQ3				S		**Sb**	**17 16 05.3**	**-0.9**
ACON	**Acoyapa**	**1.95**	**35**	P		**Pn**	**17 15 41.3**	**+0.7**
ACON				S		**Sb**	**17 16 07.5**	**+0.1**
VPL3	**V. Platanar**	**1.96**	**90**	*eP*		**Pn**	**17 15 42.4**	**+1.6**
ITAL	**Pital**	**2.00**	**87**	*eP*		**Pn**	**17 15 42.7**	**+1.4**
VPS8	**V Poas**	**2.04**	**95**	*eP*		**Pn**	**17 15 44.1**	**+2.0**
MOM2	**El Cardon**	**2.08**	**355**	P		**Pn**	**17 15 43.1**	**+0.8**
MOM2				S		**Sb**	**17 16 10.1**	**-1.0**
BELE	**Belen**	**2.12**	**100**	*eP*		**Pn**	**17 15 45.2**	**+2.2**
MACN	**El Madrono**	**2.13**	**350**	P		**Pn**	**17 15 43.9**	**+0.8**
MACN				S		**Sn**	**17 16 11.1**	**+1.8**
MOM3	**MOM3**	**2.15**	**354**	P		**Pn**	**17 15 44.2**	**+0.8**
MOM3				S		**Sn**	**17 16 11.1**	**+1.4**
CNGA	**Al SSO del Vol**	**2.16**	**350**	P		**Pn**	**17 15 44.4**	**+0.9**
CNGA				S		**Sn**	**17 16 12.0**	**+1.9**
HEME	**Heredia, Merce**	**2.16**	**99**	*eP*		**Pb**	**17 15 47.0**	**-0.1**
CNGN	**Cerro Negro**	**2.17**	**350**			**Pn**	**17 15 43.9**	**+0.3**
CNGN	**Cerro Negro**	**2.17**	**350**	P		**Pn**	**17 15 44.5**	**+0.9**
CNGN				S		**Sn**	**17 16 12.4**	**+2.2**
CNGN	**Cerro Negro**	**2.17**	**350**	*eP*		**Pn**	**17 15 44.9**	**+1.3**
BOAB	**BOACO BROADBAN**	**2.17**	**17**			**Pn**	**17 15 44.0**	**+0.3**
BOAB	**BOACO BROADBAN**	**2.17**	**17**	P		**Pn**	**17 15 44.4**	**+0.7**
BOAB				S		**Sb**	**17 16 13.5**	**-0.3**
HDC	**Heredia**	**2.19**	**99**			**Pn**	**17 15 45.0**	**+1.0**
ROCN	**Rota Cerro Neg**	**2.20**	**349**	P		**Pn**	**17 15 44.7**	**+0.7**
ROCN				S		**Sn**	**17 16 11.6**	**+0.8**
PICV	**PH. Pirrs**	**2.20**	**109**	*eP*		**Pn**	**17 15 45.8**	**+1.8**
LUJA	**Lujan**	**2.24**	**101**	*eP*		**Pn**	**17 15 47.6**	**+2.9**
SJS	**Escuela Geolog**	**2.25**	**100**	*rP*		**Pb**	**17 15 48.0**	**-0.5**
SJS				*eP*		**Pb**	**17 15 48.1**	**-0.5**
AMPA	**Desamparados**	**2.25**	**101**	*eP*		**Pn**	**17 15 47.8**	**+2.9**
ECI	**Escuela Centro**	**2.26**	**100**	*eP*		**Pn**	**17 15 47.2**	**+2.3**
SJS3	**Mercedes San J**	**2.26**	**100**	*eP*		**Pb**	**17 15 48.0**	**-0.6**
HOYN	**Al Sur del Vol**	**2.29**	**347**	P		**Pn**	**17 15 46.0**	**+0.6**
HOYN				S		**Sn**	**17 16 15.2**	**+2.0**
TELN	**Telica**	**2.30**	**347**	P		**Pn**	**17 15 45.3**	**-0.1**
TELN				S		**Sn**	**17 16 15.2**	**+1.8**
HERN	**Volcan Telica**	**2.30**	**347**			**Pn**	**17 15 45.6**	**+0.2**
HERN	**Volcan Telica**	**2.30**	**347**	P		**Pn**	**17 15 46.2**	**+0.7**
HERN				S		**Sn**	**17 16 14.6**	**+1.2**
POLN	**Al Sur del Vol**	**2.34**	**348**	P		**Pn**	**17 15 47.2**	**+1.3**
POLN				S		**Sn**	**17 16 15.8**	**+1.6**
LCR2	**La Lucha 2**	**2.34**	**105**	S		**Sn**	**17 16 13.1**	**-1.6**
CVIMO	**Finca Echandi**	**2.35**	**98**	*eP*		**Pn**	**17 15 48.6**	**+2.4**
PIEC	**Cerro El Cedra**	**2.42**	**107**	*eP*		**Pn**	**17 15 49.1**	**+1.8**
CRIN	**San Cristobal**	**2.44**	**343**			**Pn**	**17 15 48.0**	**+0.6**
CRIN	**San Cristobal**	**2.44**	**343**	P		**Pn**	**17 15 48.8**	**+1.3**
CRIN				S		**Sn**	**17 16 18.0**	**+1.0**
CRIN	**San Cristobal**	**2.44**	**343**	*eP*		**Pn**	**17 15 48.2**	**+0.8**
VICA	**Volcano Irazu**	**2.45**	**98**	*eP*		**Pn**	**17 15 50.0**	**+2.2**
CVTQ	**Turrialba Volc**	**2.52**	**98**	*eP*		**Pn**	**17 15 51.2**	**+2.4**
VTR0	**Volcan Turrial**	**2.53**	**97**	*eP*		**Pn**	**17 15 51.0**	**+2.1**
CVTR	**Volcan Turrial**	**2.53**	**97**	*eP*		**Pn**	**17 15 51.1**	**+2.2**
TRT2	**Tortugero**	**2.54**	**85**	P		**Pn**	**17 15 50.6**	**+2.0**
TRT2	**Tortugero**	**2.54**	**85**	*eP*		**Pn**	**17 15 50.7**	**+2.1**
CVTV	**Tajo**	**2.54**	**98**	*eP*		**Pn**	**17 15 51.3**	**+2.3**
VTCV	**VTCV, Calle Va**	**2.56**	**98**	*eP*		**Pn**	**17 15 51.6**	**+2.4**
ABRB	**Las Abras (San**	**2.57**	**97**	*eP*		**Pn**	**17 15 51.8**	**+2.4**
MATN	**Matagalpa**	**2.59**	**8**	P		**Pn**	**17 15 49.4**	**0.0**
MATN				S		**Sn**	**17 16 22.5**	**+2.0**
RESJ	**San Isidro (Tu**	**2.64**	**97**	*eP*		**Pn**	**17 15 52.8**	**+2.6**
BUS1	**Rivas**	**2.64**	**107**	*eP*		**Pn**	**17 15 51.8**	**+1.3**
EGUB	**Earth Guipi**	**2.68**	**93**			**Pn**	**17 15 52.6**	**+2.1**
EGUB	**Earth Guipi**	**2.68**	**93**	*eP*		**Pb**	**17 15 54.6**	**-1.1**
LCOCO	**El Coco**	**2.72**	**95**	*eP*		**Pn**	**17 15 53.8**	**+2.7**
CSGN	**Cosiguina Volc**	**2.88**	**335**	P		**Pn**	**17 15 54.2**	**+0.7**
CSGN	**Cosiguina Volc**	**2.88**	**335**	*eP*		**Pn**	**17 15 54.3**	**+0.9**
POTN	**Potosi Cosigui**	**2.88**	**336**	P		**Pn**	**17 15 54.2**	**+0.8**
POTN				S		**Sn**	**17 16 29.8**	**+2.2**
OCHAL	**Ojochal**	**2.90**	**115**	S		**Sn**	**17 16 28.3**	**+0.1**
VERH	**Veragua Rainfo**	**3.10**	**98**	*eP*		**Pn**	**17 15 58.6**	**+2.2**
RCON	**San Juan de Ri**	**3.12**	**3**	P		**Pn**	**17 15 58.3**	**+1.5**
DRK0	**Durika**	**3.20**	**109**	P		**Pn**	**17 15 56.7**	**-1.3**
DRK0				S		**Sn**	**17 16 33.6**	**-2.4**
DRK0	**Durika**	**3.20**	**109**	*eP*		**Pn**	**17 15 56.5**	**-1.5**
RCVN	**Varillal2**	**3.21**	**2**	P		**Pn**	**17 15 59.1**	**+1.0**
OCON	**Estacion meteo**	**3.26**	**357**	P		**Pn**	**17 15 59.7**	**+1.0**
CNCH	**Conchagua**	**3.27**	**333**	P		**Pn**	**17 16 00.3**	**+1.5**
CNCH				S		**Sn**	**17 16 37.9**	**+0.4**
LCND	**La Caada**	**3.32**	**332**	P		**Pn**	**17 16 01.0**	**+1.5**
PIRO	**Carate, Puerto**	**3.51**	**123**			**Pn**	**17 16 02.5**	**+0.5**
PIRO	**Carate, Puerto**	**3.51**	**123**	P		**Pn**	**17 16 01.2**	**-0.9**
PIRO				S		**Sn**	**17 16 44.0**	**+0.8**
PIRO	**Carate, Puerto**	**3.51**	**123**	*eP*		**Pn**	**17 16 03.4**	**+1.3**
SIUN	**Universidad Ur**	**3.66**	**24**			**Pn**	**17 16 04.3**	**+0.2**
SIUN	**Universidad Ur**	**3.66**	**24**	P		**Pn**	**17 16 05.2**	**+1.0**
SIUN				S		**Sn**	**17 16 48.7**	**+1.7**
PACA	**Pacayal**	**3.67**	**328**	P		**Pn**	**17 16 05.6**	**+1.1**
ALCO	**Alturas Coton,**	**3.70**	**112**	*eP*		**Pn**	**17 16 08.5**	**+3.7**
TGUH	**Tegucigalpa,Un**	**3.80**	**346**			**Pn**	**17 16 04.6**	**-1.6**
TGUH	**Tegucigalpa,Un**	**3.80**	**346**	P		**Pn**	**17 16 06.9**	**+0.7**
TGUH				S		**Sn**	**17 16 52.4**	**+1.9**
CDITO	**Canoas**	**3.82**	**117**	P		**Pn**	**17 16 07.0**	**+0.7**
CDITO				S		**Sn**	**17 16 50.3**	**-0.6**
BRU2	**Volcan**	**3.89**	**113**			**Pn**	**17 16 09.6**	**+2.3**
BRU2	**Volcan**	**3.89**	**113**	P		**Pn**	**17 16 07.1**	**-0.3**
BRU2				S		**Sn**	**17 16 52.1**	**-0.6**
PAVA	**Las Pavas**	**4.22**	**323**	P		**Pn**	**17 16 12.3**	**+0.4**
MTO3	**Montecristo**	**5.01**	**324**			**Pn**	**17 16 24.4**	**+1.5**
ESQI	**Esquipulas**	**5.13**	**325**	Pn		**Pn**	**17 16 25.2**	**+0.8**
APG	**El Apazote**	**6.15**	**319**	Pn		**Pn**	**17 16 38.8**	**+0.2**
	0.1nm,0.3s,baz=107,slow=13,SNR=6.2							
PETF	**Flores**	**7.38**	**332**	Pn		**Pn**	**17 16 54.1**	**-1.3**
CCIG	**Comitan**	**8.18**	**317**	Pn		**Pn**	**17 17 06.2**	**-0.3**
CMIG	**Matias Romero**	**10.69**	**310**	Pn		**Pn**	**17 17 43.0**	**+2.3**
	0.7nm,0.3s,baz=116,slow=12,SNR=9.2							
	2.9nm,0.5s							
ROSC	**El Rosal**	**13.08**	**114**	LR		LR	17 23 45.6	
	comp=Z,287nm,18.1s,baz=51,slow=40							
ROSC	**El Rosal**	**13.08**	**114**	Pn		**Pn**	**17 18 11.1**	**-2.7**
TLIG	**Tlapa**	**13.89**	**302**			**Pn**	**17 18 27.1**	**+2.6**
ATAH	**Atahualpa**	**19.07**	**155**	LR		LR	17 26 05.0	
	comp=Z,534nm,18.5s,baz=344,slow=33							
656A	**Willston**	**19.25**	**10**	P		**P**	**17 19 28.4**	**-3.4**
656A				IAmb		IAmb	17 20 04.4	
	comp=Z,47nm,1.3s							
152A	**Waverly Hall**	**22.26**	**4**			**P**	**17 20 04.4**	**0.0**
152A				IAmb		IAmb	17 20 08.4	
	comp=Z,38nm,1.0s							
146A	**Union**	**22.32**	**354**	P		**P**	**17 20 03.8**	**-1.3**
154A	**Montrose**	**22.35**	**7**	P		**P**	**17 20 02.6**	**-2.7**
CZSB	**Cruzeiro do Su**	**22.50**	**142**	P		**P**	**17 20 08.5**	**+1.4**
LRAL	**Lakeview Retre**	**22.58**	**358**			**P**	**17 20 08.3**	**+0.5**
LRAL				IAmb		IAmb	17 20 10.8	
	comp=Z,12nm,0.8s							
HNDO	**Hondo**	**22.61**	**329**	P		**P**	**17 20 05.9**	**-2.3**
NATX	**Nacogdoches**	**22.66**	**341**	P		**P**	**17 20 07.1**	**-1.7**
NATX				IAmb		IAmb	17 20 18.7	
	comp=Z,26nm,0.7s							
Z47A	**Carrollton**	**22.80**	**356**	P		**P**	**17 20 08.9**	**-1.3**
Z47A				IAmb		IAmb	17 20 25.4	
	comp=Z,15nm,0.6s							
GOGA	**Godfrey**	**23.10**	**6**	P		**P**	**17 20 12.3**	**-1.0**
DRIO	**Del Rio**	**23.22**	**327**	IAmb		IAmb	17 20 31.5	
	comp=Z,19nm,1.5s							
Y49A	**Blount Mountai**	**23.39**	**360**			**P**	**17 20 15.6**	**-0.7**
Y49A				IAmb		IAmb	17 20 25.4	
	comp=Z,9.1nm,0.7s							
Y52A	**Lilburn**	**23.49**	**5**	P		**P**	**17 20 16.6**	**-0.6**
Y52A				IAmb		IAmb	17 20 18.2	
	comp=Z,11nm,0.6s							
Y45A	**Yeager Farm, C**	**23.59**	**353**	P		**P**	**17 20 17.2**	**-0.9**
Y45A				IAmb		IAmb	17 20 27.2	
	comp=Z,16nm,0.6s							
BRDY	**Brady**	**23.93**	**332**	P		**P**	**17 20 22.9**	**+1.4**
WLAR	**White Oak Lake**	**24.05**	**346**	P		**P**	**17 20 21.5**	**-1.1**
HODGE	**Hodges**	**24.05**	**8**	IAmb		IAmb	17 20 25.0	
	comp=Z,13nm,0.9s							
X51A	**Calhoun**	**24.14**	**3**	IAmb		IAmb	17 20 25.4	
	comp=Z,15nm,0.7s							
PAULI	**Pauline**	**24.70**	**9**	IAmb		IAmb	17 20 30.6	
	comp=Z,19nm,0.9s							
W50A	**Signal Mountai**	**24.75**	**2**	P		**P**	**17 20 28.7**	**-0.3**
W50A				IAmb		IAmb	17 20 31.5	
	comp=Z,32nm,1.4s							
SWET	**Sewanee**	**24.75**	**1**	IAmb		IAmb	17 20 31.3	
	comp=Z,14nm,0.9s							

BIRD	**Birdtown, Kers**	**24.76**	**12**	IAmb		IAmb	17 20 30.9		
	comp=Z,12nm,0.8s								
TXAR	**Lajitas Array**	**24.90**	**322**	P		**P**	**17 20 32.3**	**+1.7**	
	comp=Z,1.9nm,0.6s,baz=138,slow=9.5,SNR=23								
TXAR				PcP		**PcP**	**17 24 10.3**	**+4.0**	
	comp=Z,0.5nm,0.8s,baz=145,slow=4.6,SNR=3.5								
	comp=Z,1.9nm,0.6s								
MIAR	**Mount Ida**	**24.98**	**346**	IAmb		IAmb	17 20 40.0		
	comp=Z,9.8nm,0.9s								
CPCT	**Cooper Cave**	**25.04**	**3**	IAmb		IAmb	17 20 34.5		
	comp=Z,23nm,1.4s								
KMSC	**Kings Mountain**	**25.09**	**10**	IAmb		IAmb	17 20 34.2		
	comp=Z,16nm,0.8s								
TKL	**Tuckaleechee C**	**25.30**	**5**	LR		LR	17 30 59.5		
	comp=Z,178nm,18.6s,baz=353,slow=39								
TKL	**Tuckaleechee C**	**25.30**	**5**	IAmb		IAmb	17 20 40.4		
	comp=Z,8.3nm,0.8s								
V53A	**Saluda**	**25.40**	**7**	IAmb		IAmb	17 20 36.5		
	comp=Z,11nm,0.7s								
WHAR	**Wooly Hollow**	**25.42**	**349**	IAmb		IAmb	17 20 42.8		
	comp=Z,12nm,1.0s								
V58A	**Windy Hill, Pi**	**26.16**	**13**	IAmb		IAmb	17 20 49.0		
	comp=Z,10nm,0.7s								
U54A	**Nelsons Funny**	**26.37**	**8**	IAmb		IAmb	17 21 03.6		
	comp=Z,20nm,1.1s								
LPIG	**La Paz**	**26.63**	**304**	LR		LR	17 32 33.6		
	comp=Z,186nm,18.9s,baz=58,slow=39								
DKNS	**Dickens**	**26.81**	**332**	IAmb		IAmb	17 21 07.3		
	comp=Z,31nm,1.3s								
S51A	**Beattyville**	**27.28**	**5**	IAmb		IAmb	17 20 53.1		
	comp=Z,15nm,0.7s								
Q54A	**Coxs Mills**	**28.93**	**9**	IAmb		IAmb	17 21 07.8		
	comp=Z,12nm,0.6s								
Q56A	**Snyder Ridge,**	**29.27**	**11**	IAmb		IAmb	17 21 12.1		
	comp=Z,14nm,0.8s								
PV18	**Skein Mesa, Pa**	**34.38**	**328**	IAmb		IAmb	17 22 05.1		
	comp=Z,5.0nm,0.7s								
SADO	**Sadowa**	**34.84**	**9**	LR		LR	17 36 46.4		
	comp=Z,213nm,18.7s,baz=184,slow=38								
SRU	**San Rafael Swe**	**35.88**	**327**	IAmb		IAmb	17 22 17.8		
	comp=Z,10nm,0.8s								
CCCA	**Chr Cany lake**	**37.74**	**317**	IAmb		IAmb	17 22 28.1		
	comp=Z,15nm,1.4s								
PDAR	**Pinedale Array**	**38.14**	**332**	P		**P**	**17 22 27.1**	**+0.2**	
	comp=Z,0.5nm,0.6s,baz=130,slow=7.1,SNR=7.1								
PDAR				PcP		**PcP**	**17 24 43.2**	**+1.6**	
	comp=Z,0.3nm,0.6s,baz=144,slow=2.2,SNR=2.9								
	comp=Z,0.5nm,0.6s								
GMN	**Gold Mountain**	**38.68**	**319**	P		**P**	**17 22 34.6**	**+3.1**	
DSP	**Deep Springs**	**39.19**	**319**	P		**P**	**17 22 33.5**	**-1.9**	
NV11	**Mina Array Sit**	**39.92**	**320**	P		**P**	**17 22 40.6**	**-1.1**	
NVAR	**Mina Array Bea**	**40.01**	**320**	P		**P**	**17 22 46.1**	**+3.5**	
	comp=Z,1.4nm,0.7s,baz=120,slow=8.0,SNR=10								
NVAR				PcP		**PcP**	**17 24 51.3**	**+3.7**	
	comp=Z,1.0nm,0.6s,baz=134,slow=4.4,SNR=6.4								
NVAR				LR		LR	17 40 39.2		
	comp=Z,139nm,20.8s,baz=121,slow=39								
	comp=Z,1.4nm,0.7s								
NVAR	**Mina Array Bea**	**40.01**	**320**	P		**P**	**17 22 43.0**	**+0.4**	
LHV	**Little Huntoon**	**40.04**	**319**	P		**P**	**17 22 43.4**	**+0.9**	
KVN	**Kaiserville**	**40.25**	**321**			**P**	**17 22 45.3**	**+0.8**	
ULM	**Lac du Bonnet**	**40.56**	**351**	P		**P**	**17 22 44.1**	**-2.5**	
	comp=Z,1.8nm,0.7s,baz=173,slow=5.7,SNR=3.0								
ULM				LR		LR	17 41 25.9		
	comp=Z,69nm,18.5s,baz=121,slow=40								
	comp=Z,1.8nm,0.7s								
LYMT	**Lyon Mountain**	**42.62**	**334**	P		**P**	**17 23 03.0**	**-1.0**	
ORV	**Oroville**	**42.70**	**319**	P		**P**	**17 23 04.8**	**+0.4**	
RPN	**Rapa Nui**	**43.44**	**210**	LR		LR	17 36 21.6		
	comp=Z,149nm,21.8s,baz=99,slow=29								
SCHQ	**Schefferville**	**46.97**	**15**	P		**P**	**17 23 35.6**	**-2.5**	
SCHQ				LR		LR	17 43 50.9		
	comp=Z,4.1nm,0.5s,baz=212,slow=8.5,SNR=7.8								
	comp=Z,91nm,18.8s,baz=344,slow=37								
	comp=Z,4.1nm,0.5s								
SCHQ	**Schefferville**	**46.97**	**15**	IAmb		IAmb	17 23 42.0		
	comp=Z,17nm,1.4s								
PLCA	**Paso Flores**	**52.87**	**165**	P		P	17 24 32.1	+8.8	
	comp=Z,1.0nm,0.7s,baz=324,slow=9.7,SNR=4.2								
	comp=Z,1.0nm,0.7s								
YKA	**Yellowknife Ar**	**55.92**	**345**	P		**P**	**17 24 43.4**	**-1.7**	
	comp=Z,0.5nm,1.0s,baz=143,slow=6.3,SNR=5.3								
	comp=Z,0.5nm,1.0s								
DLBC	**Dease Lake**	**58.27**	**335**	LR		LR	17 54 12.3		
	comp=Z,107nm,18.1s,baz=98,slow=41								
SFJD	**Kangerlussuaq**	**61.43**	**15**	LR		LR	17 52 09.9		
	comp=Z,116nm,18.4s,baz=202,slow=37								
ILAR	**Eielson Array**	**68.38**	**336**	P		**P**	**17 26 08.5**	**-0.1**	
	comp=Z,0.7nm,0.7s,baz=124,slow=4.7,SNR=11								
	comp=Z,0.7nm,0.7s								
RND	**Reindeer**	**68.68**	**335**	P		**P**	**17 26 10.5**	**-0.1**	
F25K	**Christian Rive**	**69.07**	**339**	P		**P**	**17 26 12.1**	**-0.9**	
G21K	**Allakaket**	**71.56**	**337**	IAmb		IAmb	17 26 37.0		
	comp=Z,4.1nm,0.9s								
F21K	**Alatna River**	**71.76**	**338**	P		**P**	**17 26 30.1**	**+0.7**	
F21K				IAmb		IAmb	17 26 38.5		
	comp=Z,8.2nm,1.4s								
C19K	**Lookout Ridge**	**74.44**	**339**	IAmb		IAmb	17 26 56.1		
	comp=Z,11nm,1.4s								
WMQ	**Urumqi**	**125.81**	**5**	*e*PKP		**PKPdf**	**17 34 10.0**	**+0.5**	
WMQ				LR		LR			
	comp=N,1μm,24.3s								
WMQ				LR		LR			
	comp=E,1μm,20.1s								
WMQ				LR		LR			
	comp=Z,1μm,24.2s								
HHC	**Hu-ho-hao-te**	**126.45**	**343**	*eP*		**PKPdf**	**17 34 07.3**	**-3.6**	
GTA2	**Gaotai**	**130.10**	**354**	PKP		**PKPdf**	**17 34 19.8**	**+1.9**	
GTA2				sPKP		sPKPdf	17 34 26.5	+1.2	
NJ2	**Nanjing**	**131.45**	**331**	*eP*		**PKPdf**	**17 34 19.0**	**-1.5**	
NJ2				pmax		pmax			
	comp=Z,15nm,0.7s								
ASAR	**Alice Springs**	**139.49**	**246**	PKhKP		PKPpre	17 34 34.5		
	comp=Z,0.4nm,0.7s,baz=112,slow=2.1,SNR=7.9								
ASAR				PKP		pPKPdf	17 34 41.5	+0.3	
	comp=Z,0.4nm,0.7s,baz=110,slow=2.1,SNR=3.3								
WRA	**Warramunga Arr**	**139.72**	**251**	PKhKP		PKPpre	17 34 36.0		
	comp=Z,0.7nm,1.0s,baz=96,slow=2.7,SNR=4.9								
WRA				PKP		pPKPdf	17 34 42.4	+0.6	
	comp=Z,1.1nm,1.0s,baz=94,slow=2.5,SNR=6.2								
ASAR	**Alice Springs**	**139.49**	**246**	PKhKP		PKPpre	17 34 34.5		
	comp=Z,0.4nm,0.7s,baz=112,slow=2.1,SNR=7.9								
ASAR				PKP		pPKPdf	17 34 41.5	+0.3	
	comp=Z,0.4nm,0.7s,baz=110,slow=2.1,SNR=3.3								
WRA	**Warramunga Arr**	**139.72**	**251**	PKhKP		PKPpre	17 34 36.0		
	comp=Z,0.7nm,1.0s,baz=96,slow=2.7,SNR=4.9								
WRA				PKP		pPKPdf	17 34 42.4	+0.6	
	comp=Z,1.1nm,1.0s,baz=94,slow=2.5,SNR=6.2								
PZH	**PanZhiHua**	**142.54**	**348**	P		**PKPdf**	**17 34 39.3**	**-2.0**	
CMAR	**Chiang Mai Arr**	**150.91**	**350**	PKPbc		**PKPbc**	**17 35 02.5**	**+1.6**	
	comp=Z,2.5nm,1.1s,baz=318,slow=3.1,SNR=14								

*IDC **30** 17:25:02.0±1.8, 13°.35S×66°.79E, h0km, mb3.7/7, mbtmp3.7/7, MS3.4/2, Error ellipse: s-maj=65.6km s-min=26.0km az=52.0*

ISC 30 17:25:02.6±1.8, 13°.5S±0°.3×66°.6E±0°.4, h10km, n17, σ1°05/9, mb3.8/7, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**8.22**	**45**	T	T	17 35 49.5	
	baz=226,slow=75						
H08S2	**Diego Garcia H**	**8.23**	**45**	T	T	17 35 49.5	
	baz=226,slow=75						
H08S3	**Diego Garcia H**	**8.24**	**45**	T	T	17 35 48.5	
	baz=226,slow=75						
PALK	**Pallekele**	**24.96**	**35**	LR	LR	17 38 24.4	
	comp=Z,68nm,18.9s,baz=193,slow=32						
MBAR	**Mbarara**	**37.73**	**287**	LR	LR	17 44 40.0	
	comp=Z,68nm,21.2s,baz=169,slow=31						
H01W3	**Cape Leeuwin H**	**47.79**	**125**	T	T	18 24 59.2	
	baz=284,slow=75,SNR=6.2						
H01W2	**Cape Leeuwin H**	**47.79**	**125**	T	T	18 24 59.3	
	baz=284,slow=75,SNR=7.3						
H01W1	**Cape Leeuwin H**	**47.80**	**125**	T	T	18 25 00.4	
	baz=284,slow=75,SNR=9.1						
BRTR	**Keskin Array B**	**61.20**	**331**	P	**P**	**17 35 17.8**	**0.0**
	0.4nm,0.6s,baz=167,slow=7.1,SNR=3.7						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**61.67**	**12**	P	**P**	**17 35 20.4**	**-0.3**
	0.4nm,0.5s,baz=189,slow=7.8,SNR=5.4						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**64.12**	**110**	P	**P**	**17 35 36.9**	**-0.7**
	0.5nm,0.7s,baz=270,slow=5.7,SNR=6.9						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**64.72**	**8**	P	**P**	**17 35 40.0**	**-0.7**
	0.5nm,0.8s,baz=208,slow=6.9,SNR=4.1						
	0.5nm,0.8s						
WRA	**Warramunga Arr**	**64.84**	**106**	P	**P**	**17 35 42.8**	**+0.4**
	1.0nm,0.9s,baz=269,slow=5.9,SNR=6.3						
	1.0nm,0.9s						
ZALV	**Zalesovo Beam**	**68.98**	**11**	P	**P**	**17 36 06.6**	**-1.3**
	1.0nm,0.5s,baz=194,slow=10,SNR=5.8						
	1.0nm,0.5s						
SONM	**Songino Array**	**70.62**	**27**	P	**P**	**17 36 19.2**	**+0.9**

	0.6nm,0.9s,baz=194,slow=5.5,SNR=4.5								
	0.6nm,0.9s								
PDAR	**Pinedale Array**	**150.66**	**354**	PKPbc		**PKiKP**	**17 44 57.8**	**+1.5**	
	0.7nm,0.6s,baz=95,slow=2.5,SNR=8.2								
TXAR	**Lajitas Array**	**161.85**	**332**	PKP		**PKPdf**	**17 45 04.2**	**-0.7**	
	0.6nm,0.3s,baz=56,slow=6.9,SNR=4.1								

*UCR **30** 17:53:18.2±0.6, 10°.38N×86°.35W, h13km±8km, MW3.8, Presumed earthquake*
*CATAC **30** 17:53:20.8±0.3, 10°.N±2°.×8°.6W±°., h29km, M3.7/34, MLv3.7/34, Error ellipse: s-maj=4.8km s-min=2.3km az=44.4, confirmed*

ISC 30 17:53:19.7±1.4, 10°.36N±0°.05×86°.26W±0°.05, h53km±17km, n83, σ1°09/114, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SACU	**Santa Cruz**	**0.67**	**98**	*eP*	**Pn**	**17 53 32.8**	**-0.4**
SACU				*eS*	**Sn**	**17 53 43.6**	**+0.5**
DELF	**Filadelfia**	**0.70**	**83**	*eP*	**Pn**	**17 53 33.5**	**-0.1**
JUD3	**Juan Diaz 3**	**0.74**	**105**	*eP*	**Pn**	**17 53 33.5**	**-0.6**
JUD3				*eS*	**Sn**	**17 53 44.9**	**+0.3**
ALIBA	**Liberia Airpor**	**0.74**	**72**	*eP*	**Pn**	**17 53 34.6**	**+0.5**
ELI1	**Hacienda Flor**	**0.75**	**68**	P	**Pn**	**17 53 34.9**	**+0.6**
ELI1				S	**Sn**	**17 53 46.7**	**+1.8**
ELI1	**Hacienda Flor**	**0.75**	**68**	*eP*	**Pn**	**17 53 34.9**	**+0.6**
NICO	**Nicoya**	**0.83**	**106**	*eP*	**Pn**	**17 53 34.9**	**-0.4**
ERIA	**Liberia**	**0.85**	**71**	*eP*	**Pn**	**17 53 36.2**	**+0.6**
CMARA	**Lajas Hojancha**	**0.89**	**112**	P	**Pn**	**17 53 35.8**	**-0.4**
CMARA				S	**Sn**	**17 53

mbtmp4.5/30,ML4.7/1,MS4.8/75,Error ellipse: s-maj=15.7km s-min=13.3km az=11.0

MOS ***30*** *17:54:39.0 1.5, 13°.82S×66°.35E,h10km,mb5.1/52, MS4.8/22,Error ellipse: s-maj=8.6km s-min=5.5km az=103.0*

NEIC ***30*** *17:54:40.6, 13°.76S×66°.15E,h10km*

NEIC ***30*** *17:54:40.6±2.6, 13°.76S±0°.08×66°.15E±0°.04,h10km±1km, mb5.1/97,Ms_20 5.2/173,Mwb5.5/42,Mww5.6/21,Error ellipse: s-maj=13.7km s-min=6.3km az=184.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.33; Mθθ-2.24; Mφφ 1.91; Mrθ-0.30; Mθφ 0.96; Mφr-0.26; Fault plane solution: M₀2.33000×10¹⁷ NP1: φs237.80000°,δ86.51000°,λ10.39000°. NP2: φs147.16000°,δ79.62000°,λ176.46000°. Principal axes: T 2.1721, Plg10.0000°, Azm103.0000°; N 0.2954, Plg79.0000°, Azm256.0000°; P -2.4675, Plg5.0000°, Azm12.0000°;*

BJI ***30*** *17:54:40.0, 13°.80S×66°.20E,h10km,mB5.2/40,mb4.7/61, Ms5.2/65,Ms7 5.0/62*

NEIC ***30*** *17:54:40.6, 13°.77S×66°.15E,h10km*

NEIC ***30*** *17:54:41.2, 13°.76S×66°.25E,h26km,Moment Tensor Solution. Duration: 3s2 Moment tensor: Scale 10¹⁷Nm; Mrr-0.34; Mθθ-2.88; Mφφ 3.22; Mrθ 0.31; Mθφ 1.25; Mφr 1.35; Fault plane solution: M₀3.58000×10¹⁷ NP1: φs324.65000°,δ76.59000°,λ167.77000°. NP2: φs57.52000°,δ78.10000°,λ13.71000°. Principal axes: T 3.9125, Plg18.0000°, Azm281.0000°; N -0.7874, Plg72.0000°, Azm98.0000°; P -3.1251, Plg1.0000°, Azm191.0000°;*

GFZ ***30*** *17:54:42.3, 13°.72S×66°.33E,h10km,MW5.5,Moment Tensor Solution. s133 Moment tensor: Mrr-0.08; Mθθ-1.91; Mφφ 1.99; Mrθ-0.06; Mθφ 0.86; Mφr-0.05; Fault plane solution: NP1:φs146.00000°,δ87.00000°, λ179.00000°. NP2:φs236.00000°,δ89.00000°,λ2.00000°. Principal axes: T 2.1700, Plg1.0000°, Azm101.0000°; N -0.0800, Plg87.0000°, Azm240.0000°; P -2.0900, Plg1.0000°, Azm11.0000°;*

GCMT ***30*** *17:54:44.6±0.1, 13°.63S±0°.01×66°.14E±0°.01,h15km, MW5.6/150,Moment Tensor Solution. s118,c216; s150,c307; Duration: 1s5 Moment tensor: Scale 10¹⁷ Nm; Mrr-0.17±.03; Mθθ-2.47±.03; Mφφ 2.64±.03; Mrθ-0.51±.09; Mθφ 0.93±.02; Mφr 0.57±.09; Best double couple: M₀2.82400×10¹⁷ NP1:φs55.00000°,δ74.00000°, λ-3.00000°. NP2:φs145.00000°,δ87.00000°, λ-164.00000°. Principal axes: T 2.8780, Plg9.0000°, Azm279.0000°; N -0.1090, Plg74.0000°, Azm155.0000°; P -2.7710, Plg13.0000°, Azm11.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 17:54:40.8±0.3, 13.73S±0°.04×66.12E±0°.04, h10km, n603, σ25 05/496, mb5.0/174, MS5.1/201, 26C-19D, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ROCAM	**Rodrigues Isla**	**6.55**	**203**	Pn	**Pn**	**17 56 16.1**	**-1.1**
H08S1	**Diego Garcia H**	**8.69**	**47**	T	T	18 05 23.6	
	baz=226,slow=75						
H08S2	**Diego Garcia H**	**8.70**	**47**	T	T	18 05 26.2	
	baz=226,slow=75						
H08S3	**Diego Garcia H**	**8.71**	**47**	T	T	18 05 28.8	
	baz=226,slow=75						
MSEY	**Mahe Island**	**13.82**	**310**		**Pn**	**17 57 57.8**	**+0.8**
MSEY	**Mahe Island**	**13.82**	**310**	P	**Pn**	**17 57 57.8**	**+0.8**
MSEY	**Mahe Island**	**13.82**	**310**	P	**Pn**	**17 57 58.1**	**+1.0**
MSEY				S	**Sn**	**18 00 33.3**	**+2.5**
KAAM	**Kaadhehdhoo**	**15.69**	**26**		**Pn**	**17 58 21.8**	**-0.2**
KAAM	**Kaadhehdhoo**	**15.69**	**26**	P	**Pn**	**17 58 21.1**	**-1.0**
	SNR=5.0						
KAAM	**Kaadhehdhoo**	**15.69**	**26**	P	**Pn**	**17 58 20.1**	**-1.9**
	3µm122nm,1.3s						
OPO	**Ambohidratompo**	**18.81**	**253**	P	**P**	**17 59 00.8**	**-0.1**
	0.2nm,0.3s,baz=86,slow=16,SNR=21						
OPO				S	**Sn**	**18 02 23.2**	**-8.9**
	1.8nm,0.6s,baz=118,slow=21,SNR=1.3 6.7nm,0.5s						
ABPO	**Ambohimpanom**	**18.87**	**251**		**Pn**	**17 59 02.6**	**+0.6**
ABPO	**Ambohimpanom**	**18.87**	**251**	P	**Pn**	**17 59 02.7**	**+0.6**
ABPO				pmax	pmax		
	comp=Z,17nm,0.7s						
VOI	**Vohitsoka**	**20.10**	**243**	P	**P**	**17 59 15.5**	**+0.5**
VOI	**Vohitsoka**	**20.10**	**243**	P	Pn	17 59 22.4	+5.6
HMDM	**Hanimaadhoo**	**21.54**	**19**		**P**	**17 59 27.9**	**-2.5**
HMDM	**Hanimaadhoo**	**21.54**	**19**	P	**P**	**17 59 29.9**	**-0.5**
	SNR=5.2						
HMDM	**Hanimaadhoo**	**21.54**	**19**	P	**P**	**17 59 27.0**	**-3.4**
	comp=Z,2µmcomp=Z,85nm,1.2s						
PALK	**Pallekele**	**25.39**	**36**	LR	LR	18 08 01.1	
	comp=Z,3µm,19.5s,baz=210,slow=32						
PALK	**Pallekele**	**25.39**	**36**	P	**P**	**18 00 09.2**	**+0.5**
PALK				IAmb	IAmb	18 00 29.3	
	comp=Z,47nm,1.3s						
PALK	**Pallekele**	**25.39**	**36**	P	**P**	**18 00 09.2**	**+0.5**
PALK				pmax	pmax		
	comp=Z,47nm,1.3s						
PALK				MLR	MLR		
	comp=Z,3µm,20.0s						
PALK	**Pallekele**	**25.39**	**36**	P	**P**	**18 00 09.2**	**+0.5**
PALK				S	**S**	**18 04 33.1**	**-2.4**
PALK	**Pallekele**	**25.39**	**36**	P	**P**	**18 00 09.5**	**+0.8**
KIBK	**Kibwezi**	**29.97**	**290**		**P**	**18 00 48.5**	**-1.3**
KIBK	**Kibwezi**	**29.97**	**290**	P	**P**	**18 00 50.2**	**+0.4**
KMBO	**Kilima Mbogo**	**31.19**	**291**	P	**P**	**18 01 00.1**	**-0.6**
	baz=113,slow=8.4						
KMBO				LR	LR	18 10 53.3	
	comp=Z,2µm,21.1s,baz=104,slow=31						
HYB	**Hyderabad**	**33.29**	**22**	*e*P	**P**	**18 01 18.1**	**-0.8**
HYB				*e*S	**S**	**18 06 39.9**	**+0.4**
HYB				*e*ScP	**ScP**	**18 07 44.5**	**-1.3**
HYB				IVMsBB		18 12 20.7	
	comp=Z,1µm,16.2s						
ABTO	**Aybut**	**33.38**	**337**	P	**P**	**18 01 21.9**	**+2.2**
ATD	**Arta Tunnel**	**34.09**	**316**	LR	LR	18 14 19.1	
	comp=Z,60nm,18.5s,baz=128,slow=34						
DOK	**Doka**	**34.25**	**340**	P	**P**	**18 01 27.2**	**+0.1**
DOK				S	**S**	**18 06 54.6**	**+0.5**
GSI	**Gunungsitoli**	**34.57**	**67**	P	**P**	**18 01 31.1**	**+1.1**
GSI	**Gunungsitoli**	**34.57**	**67**		**P**	**18 01 29.0**	**-1.0**
GSI	**Gunungsitoli**	**34.57**	**67**	P	**P**	**18 01 30.5**	**+0.5**
	comp=Z,1µmcomp=Z,45nm,1.4s						
BSI	**Banda Aceh**	**34.69**	**58**	P	**P**	**18 01 32.2**	**+1.1**
	comp=Z,553nmcomp=Z,30nm,1.5s						
LODK	**Lodwar**	**34.95**	**297**		**P**	**18 01 33.4**	**0.0**
LODK	**Lodwar**	**34.95**	**297**	P	**P**	**18 01 35.1**	**+1.7**
	SNR=8.5						
MHTO	**MHTO**	**35.41**	**347**	P	**P**	**18 01 37.7**	**+0.6**
MHTO				S	**S**	**18 07 11.6**	**-0.5**
KCSI	**Kotacane, Aceh**	**35.77**	**64**	P	**P**	**18 01 39.6**	**-0.8**
	comp=Z,453nmcomp=Z,23nm,1.4s						
JLN	**Jalan Bani Buh**	**36.26**	**349**	P	**P**	**18 01 46.2**	**+1.8**
JLN				S	**S**	**18 07 26.0**	**+1.0**
PDSI	**Padang**	**36.29**	**72**	P	**P**	**18 01 45.7**	**+0.8**
	comp=Z,677nmcomp=Z,14nm,1.2s						
RPSI	**Rantau Prapat**	**36.40**	**66**	P	**P**	**18 01 44.3**	**-1.5**
RPSI				IAMs_20	IAMs_20	18 13 53.8	
	comp=Z,3µm,19.0s						
PPI	**Padang Panjang**	**36.40**	**72**	P	P	18 01 32.8	-13
PSI	**Prapat**	**36.45**	**66**	P	**P**	**18 01 46.9**	**+0.6**
PSI	**Prapat**	**36.45**	**66**	P	**P**	**18 01 44.3**	**-2.0**
PSI				pmax	pmax		
	comp=Z,15nm,1.1s						
PSI				MLR	MLR		
	comp=Z,3µm,19.0s						
PSI	**Prapat**	**36.45**	**66**	P	**P**	**18 01 46.4**	**+0.1**
	comp=Z,476nmcomp=Z,17nm,1.4s						
PBA	**Port Blair**	**36.51**	**48**	P	**P**	**18 01 43.1**	**-3.5**
PBA	**Port Blair**	**36.51**	**48**	P	**P**	**18 01 45.0**	**-1.6**
JMDO	**Jabal Madar**	**36.73**	**348**	P	**P**	**18 01 50.8**	**+2.4**
JMDO				S	**S**	**18 07 32.5**	**+0.3**
LSZ	**Lusaka**	**36.73**	**263**	LR	LR	18 15 16.1	
	comp=Z,3µm,20.3s,baz=101,slow=34						
LSZ	**Lusaka**	**36.73**	**263**		**P**	**18 01 47.9**	**-0.8**
LSZ				IAmb	IAmb	18 01 57.5	
	comp=Z,25nm,1.1s						
LSZ	**Lusaka**	**36.73**	**263**	IAMs_20	IAMs_20	18 15 03.6	
	comp=Z,3µm,20.0s						
LSZ	**Lusaka**	**36.73**	**263**	P	**P**	**18 01 47.9**	**-0.8**
LSZ				pmax	pmax		
	comp=Z,25nm,1.1s						
LSZ				MLR	MLR		
	comp=Z,3µm,20.0s						
LSZ	**Lusaka**	**36.73**	**263**	P	**P**	**18 01 49.1**	**+0.4**
LSZ				S	**S**	**18 07 35.6**	**+2.8**
WBK	**Wadi Bani Khal**	**36.79**	**349**	P	**P**	**18 01 51.2**	**+2.2**
BSY	**Bisya**	**37.29**	**346**	P	**P**	**18 01 53.8**	**+0.7**
MBAR	**Mbarara**	**37.37**	**287**	LR	LR	18 14 43.4	
	comp=Z,3µm,21.7s,baz=90,slow=32						
MBAR	**Mbarara**	**37.37**	**287**	P	**P**	**18 01 52.0**	**-2.3**
MBAR	**Mbarara**	**37.37**	**287**	P	**P**	**18 01 52.0**	**-2.3**
MBAR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
MBAR				MLR	MLR		
	comp=Z,2µm,21.0s						
MBAR	**Mbarara**	**37.37**	**287**	P	**P**	**18 01 54.8**	**+0.5**
MBAR				S	**S**	**18 07 45.4**	**+2.7**
SMDO	**Samad**	**37.40**	**348**	P	**P**	**18 01 56.1**	**+1.8**
WSAR	**Wadi Sarin**	**37.46**	**349**	LR	LR	18 13 02.1	
	comp=Z,7.6nm,20.2s,baz=192,slow=29						
WSAR	**Wadi Sarin**	**37.46**	**349**	P	**P**	**18 01 56.4**	**+1.7**
WSAR				S	**S**	**18 07 44.9**	**+1.5**
MNAI	**Manna**	**37.50**	**79**	IAMs_20	IAMs_20	18 13 08.6	
	comp=Z,3µm,21.0s						
BROLN	**Tlhalogang**	**37.65**	**253**	*i* P	**P**	**18 01 55.6**	**-0.9**
UMZA	**Um Al Zommool**	**37.77**	**343**	P	**P**	**18 01 58.0**	**+0.7**
UMZA				S	**S**	**18 07 47.6**	**-0.5**
ARQ	**Araqi**	**38.02**	**346**	P	**P**	**18 02 00.7**	**+1.3**
ARQ				S	**S**	**18 07 51.6**	**-0.2**
HOQ	**Hoqain**	**38.07**	**347**	P	**P**	**18 02 00.2**	**+0.4**
HOQ				S	**S**	**18 07 52.1**	**-0.6**
MZR	**Muzera**	**38.55**	**341**	P	**P**	**18 02 05.5**	**+1.7**
SOOWA	**Sowa**	**38.66**	**254**	*i* P	**P**	**18 02 04.3**	**-0.7**
SOHO	**SOHO**	**38.78**	**346**	P	**P**	**18 02 07.4**	**+1.7**
SOHO				S	**S**	**18 08 03.6**	**+0.3**
ALNE	**Al Ain**	**38.90**	**345**	P	**P**	**18 02 08.7**	**+1.9**
ALNE				S	**S**	**18 08 04.6**	**-0.5**
KLSI		**39.10**	**80**	P	**P**	**18 02 09.6**	**+0.9**
MZWR	**Madinat Zayed**	**39.13**	**342**	P	**P**	**18 02 11.6**	**+2.9**
LPHEP	**Lephephe**	**39.24**	**250**	*i* P	**P**	**18 02 08.4**	**-1.5**
LPHEP	**Lephephe**	**39.24**	**250**	P	**P**	**18 02 09.5**	**-0.4**
ASHO	**Ashiyiah**	**39.42**	**346**	P	**P**	**18 02 11.7**	**+0.5**
KHWEE	**KHWEE**	**39.48**	**252**	*i* P	**P**	**18 02 10.7**	**-1.2**
KHWEE	**KHWEE**	**39.48**	**252**	P	**P**	**18 02 10.8**	**-1.0**
KHWEE				IAmb	IAmb	18 02 25.9	
	comp=Z,39nm,1.2s						
KSANE	**Kasane**	**39.57**	**259**	P	**P**	**18 02 09.7**	**-3.0**
LBTB	**Lobatse**	**39.70**	**247**	LR	LR	18 17 12.3	
	comp=Z,2µm,18.1s,baz=81,slow=34						
NAZ	**Nazwa, Dubai**	**39.81**	**345**	*i* P	**P**	**18 02 16.7**	**+2.4**
KDWAN	**Kaudwane**	**40.34**	**250**	*i* P	**P**	**18 02 17.4**	**-1.7**
MYKOM	**Kota Tinggi**	**40.45**	**71**	*i* P	**P**	**18 02 19.4**	**-0.5**
MYKOM	**Kota Tinggi**	**40.45**	**71**	P	**P**	**18 02 19.9**	**0.0**
	comp=Z,26nm,1.5s						
MAKGR	**Makgori**	**40.54**	**246**	*i* P	**P**	**18 02 18.9**	**-1.8**
MAKGR	**Makgori**	**40.54**	**246**	P	**P**	**18 02 17.0**	**-3.7**
BOSA	**Boshof**	**40.67**	**242**	P	**P**	**18 02 20.8**	**-1.0**
	comp=Z,14nm,1.1s,baz=81,slow=8.4,SNR=9.7						
BOSA				LR	LR	18 16 48.9	
	comp=Z,1µm,18.0s,baz=86,slow=33 comp=Z,14nm,1.1s						
BBJI	**Bungbulang**	**41.25**	**86**	P	**P**	**18 02 24.6**	**-2.0**
LEM	**Lembang**	**41.35**	**85**	LR	LR	18 16 53.0	
	comp=Z,2µm,19.7s,baz=232,slow=32						
RAYN	**Ar Rayn**	**42.16**	**331**	P	**P**	**18 02 33.9**	**+0.1**
RAYN	**Ar Rayn**	**42.16**	**331**	P	**P**	**18 02 33.9**	**+0.1**
RAYN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
RAYN				MLR	MLR		
	comp=Z,900nm,20.0s						
TPI	**Tanjungpandan**	**42.45**	**79**	P	**P**	**18 02 36.1**	**-0.2**
	comp=Z,510nmcomp=Z,28nm,1.2s						
KPJI	**Kang Pucung**	**42.52**	**86**	P	**P**	**18 02 37.5**	**+0.6**
	comp=Z,998nmcomp=Z,36nm,1.2s						
KGCAE	**Kacgae**	**42.54**	**251**	*i* P	**P**	**18 02 35.0**	**-2.1**
BRDH	**Bariadhala**	**43.98**	**35**	LR	LR	18 19 43.3	
	comp=Z,2µm,21.1s,baz=220,slow=34						
KOOLE	**Kule**	**44.40**	**251**	*i* P	**P**	**18 02 51.4**	**-0.8**
KOOLE	**Kule**	**44.40**	**251**	P	**P**	**18 02 52.2**	**0.0**
KOOLE				IAmb	IAmb	18 03 00.5	
	comp=Z,26nm,1.0s						
PCJI	**Pacitan**	**44.52**	**88**	P	**P**	**18 02 53.2**	**+0.1**
SNJI	**Sawahan-Nganju**	**45.17**	**87**	P	**P**	**18 02 59.4**	**+1.0**
	comp=Z,41nm,1.3s						
SUR	**Sutherland**	**45.25**	**238**	LR	LR	18 20 15.3	
	comp=Z,853nm,18.2s,baz=86,slow=34						
SUR	**Sutherland**	**45.25**	**238**	P	**P**	**18 02 57.4**	**-1.5**
SUR				IAmb	IAmb	18 03 04.6	
	comp=Z,28nm,1.1s						
SUR	**Sutherland**	**45.25**	**238**	P	**P**	**18 03 03.5**	**+4.6**
CM31	**Chiang Mai Arr**	**45.50**	**46**	P	**P**	**18 03 01.9**	**+1.2**
	SNR=7.3						
CMAR	**Chiang Mai Arr**	**45.50**	**46**	P	**P**	**18 03 00.8**	**+0.1**
	comp=Z,2.0nm,1.0s,baz=238,slow=9.0,SNR=11						
CMAR				LR	LR	18 20 48.3	
	comp=Z,607nm,18.7s,baz=235,slow=34 comp=Z,2.0nm,1.0s						
CHTO	**Chiang Mai**	**45.74**	**46**	P	**P**	**18 03 05.9**	**+3.3**
CHTO	**Chiang Mai**	**45.74**	**46**	P	**P**	**18 03 01.9**	**-0.7**
CHTO				IAmb	IAmb	18 03 22.6	
	comp=Z,29nm,1.8s						
CHTO	**Chiang Mai**	**45.74**	**46**	P	**P**	**18 03 01.9**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,29nm,1.8s						
CHTO				MLR	MLR		
	comp=Z,800nm,20.0s						
CHTO	**Chiang Mai**	**45.74**	**46**	P	**P**	**18 03 03.9**	**+1.3**
CHTO	**Chiang Mai**	**45.74**	**46**	P	**P**	**18 03 00.3**	**-2.3**
KBD	**Kabd**	**46.22**	**337**	P	**P**	**18 03 07.9**	**+1.7**
SHL	**Shillong**	**46.43**	**33**	P	**P**	**18 03 07.9**	**-0.2**
	SNR=20						
MORE	**Moreh**	**46.71**	**36**	IAmb	IAmb	18 03 22.8	
	comp=Z,20nm,0.9s						
MORE				IAMs_20	IAMs_20	18 21 06.6	
	comp=Z,1µm,21.0s						
TSUM	**Tsumeb**	**46.75**	**256**	LR	LR	18 22 10.6	
	comp=Z,3µm,18.1s,baz=78,slow=35						
JAGI	**Jajag, Banyuwa**	**47.36**	**89**	P	**P**	**18 03 15.2**	**-0.3**
JAGI	**Jajag, Banyuwa**	**47.36**	**89**	P	**P**	**18 03 13.9**	**-1.6**
JAGI				IAMs_20	IAMs_20	18 19 24.8	
	comp=Z,2µm,20.0s						
JAGI	**Jajag, Banyuwa**	**47.36**	**89**	P	**P**	**18 03 15.0**	**-0.5**
	comp=Z,53nm,1.1s						
KMMI	**Kalianget**	**47.46**	**87**	P	**P**	**18 03 16.5**	**+0.2**
	comp=Z,36nm,1.5s						
NIL	**Nilore**	**47.60**	**8**	P	**P**	**18 03 16.6**	**-0.4**
NIL				IAmb	IAmb	18 03 26.5	
	comp=Z,23nm,1.2s						
NIL	**Nilore**	**47.60**	**8**	P	**P**	**18 03 16.6**	**-0.4**
NIL				pmax	pmax		
	comp=Z,23nm,1.2s						
NIL				MLR	MLR		
	comp=Z,2µm,20.0s						
NIL	**Nilore**	**47.60**	**8**	P	**P**	**18 03 16.8**	**-0.2**
H01W3	**Cape Leeuwin H**	**48.03**	**125**	T	T	18 54 58.4	
	baz=286,slow=75						
H01W2	**Cape Leeuwin H**	**48.04**	**125**	T	T	18 54 50.7	
	baz=286,slow=75						
H01W1	**Cape Leeuwin H**	**48.05**	**125**	T	T	18 54 43.9	
	baz=286,slow=75						
UBPT	**Khong Chiam**	**48.43**	**55**	P	**P**	**18 03 25.6**	**+1.9**
SBUM	**Sibu**	**48.45**	**74**	P	**P**	**18 03 24.2**	**+0.3**
SBUM	**Sibu**	**48.45**	**74**	P	**P**	**18 03 23.7**	**-0.3**
SBUM				IAmb	IAmb	18 03 35.7	
	comp=Z,16nm,1.1s						
SBUM	**Sibu**	**48.45**	**74**	P	**P**	**18 03 23.9**	**0.0**
	comp=Z,14nm,1.1s						
KHKI	**Kahang-Kahang**	**48.80**	**89**	P	**P**	**18 03 27.7**	**+1.1**
	comp=Z,19nm,1.1s						
LSA	**Lhasa**	**49.47**	**29**	P	**P**	**18 03 30.3**	**-1.7**
LSA				S	**S**	**18 10 37.5**	**-2.4**
LSA				L	L		
	comp=Z,960nm,17.2s						
LSA				L	L		
	comp=Z,2µm,19.9s						
TNCH	**TengChong**	**49.82**	**40**	P	**P**	**18 03 34.8**	**+0.4**
TNCH				S	**S**	**18 10 45.8**	**+1.3**
TNCH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TNCH				pmax	pmax		
	comp=Z,98nm,2.8s						
TNCH				L	L		
	comp=Z,610nm,14.1s						
TNCH				L	L		
	comp=Z,330nm,10.4s						
TNCH				L	L		
	comp=Z,1µm,17.0s						
NWAO	**Narrogin (SRO)**	**50.16**	**122**	LR	LR	18 19 37.5	
	comp=Z,2µm,21.6s,baz=288,slow=30						
SHAA	**Shahritus**	**51.05**	**2**	P	**P**	**18 03 42.7**	**-0.7**
SHAA				IAmb	IAmb	18 05 12.2	
	comp=Z,38nm,1.2s						
MBWA	**Marble Bar**	**51.48**	**106**	IAMs_20	IAMs_20	18 20 06.4	
	comp=Z,2µm,20.0s						
PSA00	**Pilbara Seismi**	**51.58**	**107**	P	**P**	**18 03 45.8**	**-1.9**
PSA00				IAmb	IAmb	18 03 53.4	
	comp=Z,26nm,1.4s						
CHGR	**Chuyangaron**	**52.19**	**3**	P	**P**	**18 03 50.3**	**-1.6**
CHGR				IAmb	IAmb	18 05 30.4	
	comp=Z,25nm,1.1s						
CHGR	**Chuyangaron**	**52.19**	**3**	*i* P	**P**	**18 03 53.1**	**+1.2**
CHGR				pmax	pmax		
	comp=Z,25nm,1.1s						
WBSI	**Waikabubak, Su**	**52.24**	**92**	P	**P**	**18 03 53.0**	**+0.3**
	comp=Z,773nmcomp=Z,50nm,1.2s						
PZH	**PanZhiHua**	**52.90**	**41**	P	**P**	**18 03 57.0**	**-0.4**
PZH				S	**S**	**18 11 25.3**	**-1.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				L	L		
	comp=Z,520nm,16.1s						
PZH				L	L		
	comp=Z,810nm,17.5s						
PZH				L	L		
	comp=Z,680nm,18.4s						
LBFI	**Labuhan Bajo,**	**52.94**	**90**	P	**P**	**18 03 56.9**	**-0.9**
DRK	**Karamyk**	**53.20**	**5**	IAmb	IAmb	18 04 12.6	
	comp=Z,60nm,1.9s						
MKS	**Makassar**	**53.20**	**86**	P	**P**	**18 04 00.2**	**+0.4**
	comp=Z,669nmcomp=Z,44nm,1.3s						
MMSI	**Mamuju**	**53.27**	**83**	P	**P**	**18 03 59.8**	**-0.5**
	comp=Z,648nmcomp=Z,56nm,1.1s						
KSH2	**Kashi**	**53.33**	**9**	P	**P**	**18 03 59.5**	**-0.9**
KSH2				sP	pwP	18 04 07.0	-0.6
KSH2				PP	**PP**	**18 06 04.0**	**+3.1**
KSH2				S	**S**	**18 11 26.0**	**-6.3**
KSH2				pmax	pmax		
	comp=Z,33nm,1.4s						
KSH2				pmax	pmax		
	comp=Z,170nm,4.3s						
KSH2				L	L		
	comp=Z,1µm,17.2s						
KSH2				L	L		
	comp=Z,3µm,14.4s						
KSH2				L	L		
	comp=Z,3µm,24.7s						
KAPI	**Kappang**	**53.52**	**86**	LR	LR	18 23 11.4	
	comp=Z,2µm,21.6s,baz=228,slow=32						
KAPI	**Kappang**	**53.52**	**86**	P	**P**	**18 04 01.1**	**-1.1**
KAPI	**Kappang**	**53.52**	**86**	P	**P**	**18 03 58.7**	**-3.4**
KAPI				IAmb	IAmb	18 04 01.7	
	comp=Z,26nm,1.2s						
KAPI	**Kappang**	**53.52**	**86**	IAMs_20	IAMs_20	18 22 49.1	
	comp=Z,2µm,21.0s						
KAPI	**Kappang**	**53.52**	**86**	P	**P**	**18 03 58.7**	**-3.4**
KAPI				pmax	pmax		
	comp=Z,27nm,1.2s						
KAPI				MLR	MLR		
	comp=Z,2µm,21.0s						
KAPI	**Kappang**	**53.52**	**86**	P	**P**	**18 04 01.5**	**-0.7**
KAPI	**Kappang**	**53.52**	**86**	P	**P**	**18 04 01.0**	**-1.1**
	comp=Z,11nm,1.2s						
GHAJ	**Ghor Haditha**	**53.53**	**327**	P	**P**	**18 04 00.7**	**-1.1**
GHAJ				IAmb	IAmb	18 04 07.9	
	comp=Z,19nm,1.1s						
ASF	**Jabal al Asfar**	**53.54**	**329**	LR	LR	18 24 21.2	
	comp=Z,467nm,20.6s,baz=146,slow=33						
BTK	**Batken**	**53.69**	**4**	IAmb	IAmb	18 04 31.0	
	comp=Z,24nm,1.3s						
MAW	**Mawson**	**53.87**	**182**	LR	LR	18 21 28.3	
	comp=Z,779nm,20.6s,baz=345,slow=30						
QIZ	**Qiongzhong**	**53.99**	**54**	P	**P**	**18 04 04.8**	**-0.6**
QIZ				S	**S**	**18 11 42.3**	**+0.7**
QIZ				SS	**SS**	**18 15 26.3**	**+3.1**
QIZ				L	L		
	comp=Z,1µm,17.2s						
QIZ				L	L		
	comp=Z,810nm,18.5s						
QIZ				L	L		
	comp=Z,810nm,16.4s						
MMAI	**Mount Meron Ar**	**54.97**	**328**	P	**P**	**18 04 14.2**	**+1.8**
	comp=Z,5.5nm,1.0s,baz=114,slow=6.5,SNR=5.5						
MMAI				LR	LR	18 26 05.1	
	comp=Z,946nm,18.2s,baz=133,slow=34 comp=Z,5.5nm,1.0s						
MPSI	**Mapaga**	**55.05**	**80**	P	**P**	**18 04 13.9**	**+0.6**
	comp=Z,556nmcomp=Z,11nm,1.1s						
ARSB	**Arslanbob**	**55.14**	**6**	IAmb	IAmb	18 04 32.8	
	comp=Z,39nm,1.3s						
MMRI	**Maumere**	**55.19**	**91**	P	**P**	**18 04 14.0**	**-0.3**
MMRI	**Maumere**	**55.19**	**91**	P	**P**	**18 04 13.5**	**-0.8**
MMRI	**Maumere**	**55.19**	**91**	P	**P**	**18 04 13.9**	**-0.3**
	comp=Z,873nmcomp=Z,52nm,1.7s						
KKSI	**Kolaka, Sulawe**	**55.55**	**86**	P	**P**	**18 04 20.4**	**+3.5**
	comp=Z,38nm,1.0s						
CHM	**Chimkent**	**55.86**	**3**	*e*P	**P**	**18 04 20.1**	**+1.5**
	comp=Z,11nm,1.0s						
WUS	**Wushi**	**55.98**	**12**	IAMs_20	IAMs_20	18 26 26.6	
	comp=Z,2µm,18.0s						
GYA	**Guiyang**	**56.12**	**45**	↓P	**P**	**18 04 23.5**	**+2.7**
GYA				S	**S**	**18 12 08.5**	**-1.7**
GYA				pmax	pmax		
	comp=Z,12nm,1.7s						
GYA				L	L		
	comp=Z,730nm,19.4s						
GYA				L	L		
	comp=Z,450nm,16.0s						
GYA				L	L		
	comp=Z,670nm,18.5s						
TOLI2	**Tolitoli**	**56.12**	**79**	P	**P**	**18 04 20.5**	**-0.5**
BATI	**Baumata**	**56.30**	**93**	LR	LR	18 24 46.9	
	comp=Z,2µm,21.9s,baz=280,slow=32						
**B

SGDS	**Sogindy**	**57.43**	**7**	*eP*	**P**	**18 04 31.1 +1.3**
MDOK	**Medeo**	**57.49**	**9**	*eP*	**P**	**18 04 31.3 +1.0**
AKT	**Akhty**	**57.50**	**344**	*eP*	**P**	**18 04 30.3 -0.1**
AKT				*e*		18 05 24.6
AKT				*eS*	**S**	**18 12 24.7 -3.2**
AKT				pmax	pmax	
	comp=Z,28nm,1.2s					
AKT				MLR	MLR	
	comp=Z,379nm,18.0s					
AAA	**Alma-Ata**	**57.51**	**9**	*eP*	**P**	**18 04 31.4 +1.1**
SATY	**Saty**	**57.62**	**11**	*eP*	**P**	**18 04 32.2 +1.0**
	comp=Z,13nm,1.2s					
UZB	**Uzynbulak**	**57.82**	**11**	*eP*	**P**	**18 04 33.5 +0.8**
KPKS	**Kokpek**	**58.06**	**11**	*eP*	**P**	**18 04 35.0 +0.7**
EDA	**Edea**	**58.18**	**283**	P	**P**	**18 04 33.6 -1.9**
EDA				IAmb	IAmb	18 04 44.2
	comp=Z,21nm,0.9s					
EDA				IAMs_20	IAMs_20	18 27 48.7
	comp=Z,2µm,20.0s					
ARPR	**Arapgir-MALATY**	**58.60**	**335**	IAmb	IAmb	18 04 52.9
	comp=Z,28nm,1.4s					
BTLS	**Baital**	**58.93**	**7**	*eP*	**P**	**18 04 41.2 +1.1**
MAK	**Makhachkala**	**58.94**	**344**	*eP*	**P**	**18 04 36.7 -3.5**
MAK				*e*		18 06 49.5
MAK				*eS*	**S**	**18 12 41.3 -5.1**
MAK				*eSS*	**SS**	**18 16 35.9 -4.6**
MAK				pmax	pmax	
	comp=Z,76nm,1.0s					
MAK				MLR	MLR	
	comp=Z,276nm,15.0s					
BNN	**Bunyan**	**59.47**	**333**	P	**P**	**18 04 45.5 +1.3**
BNN				IAmb	IAmb	18 04 48.9
	comp=Z,14nm,1.2s					
SANI	**Sanana**	**60.27**	**84**	P	**P**	**18 04 49.9 -0.2**
SANI	**Sanana**	**60.27**	**84**	P	**P**	**18 04 48.3 -1.8**
	comp=Z,29nm,1.6s					
TOKA	**Tokat**	**60.41**	**334**	P	**P**	**18 04 50.7 +0.1**
TOKA				IAmb	IAmb	18 04 56.0
	comp=Z,16nm,1.1s					
ENH	**Enshi**	**60.47**	**43**	P	**P**	**18 04 53.9 +2.8**
WMQ	**Urumqi**	**60.57**	**18**	*eP*	**P**	**18 04 51.5 0.0**
WMQ				sP	pwP	18 04 59.5 +0.8
WMQ				S	**S**	**18 13 06.3 -1.2**
WMQ				pmax	pmax	
	comp=Z,16nm,1.7s					
WMQ				pmax	pmax	
	comp=Z,150nm,3.7s					
WMQ				L	L	
	comp=Z,2µm,22.3s					
WMQ				L	L	
	comp=Z,2µm,17.7s					
WMQ				L	L	
	comp=Z,2µm,20.7s					
KIRS	**Kirsehir-Merke**	**60.57**	**332**	⇑P	**P**	**18 04 55.0 +3.3**
NEUR	**Neytrino**	**60.63**	**341**	*i* P	**P**	**18 04 54.2 +2.0**
NEUR				pmax	pmax	
	comp=Z,6.0nm,1.3s					
LZDM	**Lanzhou Array**	**60.85**	**35**	LR	LR	18 30 24.7
	comp=Z,297nm,21.2s,baz=35,slow=35					
TGY	**Tagaytay City**	**60.91**	**65**	LR	LR	18 30 05.1
	comp=Z,338nm,18.9s,baz=275,slow=35					
KBZ	**Khabaz**	**60.99**	**341**	P	**P**	**18 04 54.8 +0.5**
	comp=Z,5.7nm,1.1s,baz=189,slow=7.1,SNR=5.4					
KBZ				LR	LR	18 29 51.5
	comp=Z,676nm,20.4s,baz=166,slow=35					
	comp=Z,5.7nm,1.1s					
KBZ	**Khabaz**	**60.99**	**341**	*ce*P	**P**	**18 04 55.9 +1.6**
KBZ				pmax	pmax	
	comp=Z,7.0nm,1.1s					
LZH	**Lanzhou**	**61.03**	**35**	SS	SS	18 17 17.5 +3.5
LZH				pmax	pmax	
	comp=Z,21nm,1.4s					
LZH				LR	LR	
	comp=N,790nm,16.5s					
LZH				LR	LR	
	comp=E,780nm,18.1s					
LZH				LR	LR	
	comp=Z,790nm,17.8s					
BR104	**Keskin Array S**	**61.16**	**332**	P	**P**	**18 04 55.8 0.0**
	comp=Z,81nmcomp=Z,8.7nm,1.2s					
BR131	**Keskin Array S**	**61.18**	**332**	*i* P	**P**	**18 04 57.9 +2.0**
BR131	**Keskin Array S**	**61.18**	**332**	P	**P**	**18 04 58.7 +2.9**
	SNR=6.2					
BRTR	**Keskin Array B**	**61.18**	**332**	P	**P**	**18 04 55.8 -0.1**
	comp=Z,8.3nm,1.1s,baz=138,slow=9.4,SNR=28					
	comp=Z,8.3nm,1.1s					
BR105	**Keskin Array S**	**61.18**	**332**	P	**P**	**18 04 57.1 +1.2**
	comp=Z,83nmcomp=Z,9.8nm,1.2s					
BR106	**Keskin Array S**	**61.19**	**332**	P	**P**	**18 04 56.3 +0.3**
	comp=Z,78nmcomp=Z,8.9nm,1.2s					
KIV	**Kislovodsk**	**61.26**	**341**	⇓P	**P**	**18 04 59.6 +3.3**
KIV	**Kislovodsk**	**61.26**	**341**	P	**P**	**18 04 56.0 -0.3**
KIV				IAmb	IAmb	18 05 01.0
	comp=Z,17nm,1.1s					
KIV	**Kislovodsk**	**61.26**	**341**	*eP*	**P**	**18 04 59.3 +3.0**
KIV				*eS*	**S**	**18 13 20.6 +4.2**
KIV				*eSS*	**SS**	**18 17 21.5 +4.4**
KIV				pmax	pmax	
	comp=Z,12nm,1.1s					
GTA2	**Gaotai**	**61.53**	**29**	*eP*	**P**	**18 04 57.0 -1.2**
GTA2				S	**S**	**18 13 19.0 -1.1**
GTA2				SS	**SS**	**18 17 19.3 -2.3**
GTA2				pmax	pmax	
	comp=Z,5.0nm,1.7s					
GTA2				L	L	
	comp=Z,840nm,23.0s					
GTA2				L	L	
	comp=Z,930nm,21.6s					
GTA2				L	L	
	comp=Z,850nm,22.0s					
SOC	**Sochi**	**61.93**	**339**	*eP*	**P**	**18 05 00.8 +0.1**
SOC				*e*PPP	PPP	18 08 49.4
SOC				*eS*	**S**	**18 13 23.9 -0.8**
SOC				*eSS*	**SS**	**18 17 26.7 -0.8**
SOC				*e*SSS	SSS	18 20 12.5
MK31	**Makanchi Array**	**61.97**	**13**	*i* P	**P**	**18 04 59.4 -1.5**
MK31				pmax	pmax	
	comp=Z,6.0nm,0.8s					
MKAR	**Makanchi Array**	**61.97**	**13**	P	**P**	**18 04 59.3 -1.6**
	comp=Z,2.2nm,0.7s,baz=200,slow=7.3,SNR=16					
MKAR				LR	LR	18 30 36.8
	comp=Z,927nm,19.2s,baz=186,slow=35					
	comp=Z,2.2nm,0.7s					
MKAR	**Makanchi Array**	**61.97**	**13**	*i* P	**P**	**18 04 59.7 -1.2**
MKAR				pmax	pmax	
	comp=Z,4.0nm,0.9s					
DAV	**Davao City (W)**	**62.53**	**74**	LR	LR	18 29 40.4
	comp=Z,881nm,21.8s,baz=242,slow=34					
XAN	**Xi'an**	**62.57**	**39**	⇓P	**P**	**18 05 04.8 -0.4**
XAN				S	**S**	**18 13 31.8 -1.5**
XAN				pmax	pmax	
	comp=Z,19nm,1.4s					
XAN				pmax	pmax	
	comp=Z,140nm,3.9s					
XAN				L	L	
	comp=Z,390nm,16.5s					
XAN				L	L	
	comp=Z,520nm,15.8s					
XAN				L	L	
	comp=Z,630nm,20.6s					
BORA	**Eskisehir**	**62.81**	**330**	IAmb	IAmb	18 05 11.3
	comp=Z,22nm,1.1s					
AUDHS	**Darwin High Sc**	**62.87**	**97**	P	**P**	**18 05 07.7 +0.1**
ZSN	**Zaisan**	**63.17**	**14**	*eP*	**P**	**18 05 10.3 +1.4**
ELIB	**Princess Elisa**	**63.48**	**194**	*dP*	**P**	**18 05 10.8 -0.1**
	comp=Z,6.2nm,1.1s					
WHN	**Wuhan**	**63.94**	**46**	P	**P**	**18 05 17.0 +2.6**
WHN				S	**S**	**18 13 53.8 +3.3**
WHN				L	L	
	comp=Z,950nm,10.3s					
WHN				L	L	
	comp=Z,1µm,13.8s					
WHN				L	L	
	comp=Z,2µm,20.2s					
AKTO	**Aktyubinsk**	**64.28**	**354**	LR	LR	18 32 36.9
	comp=Z,314nm,19.8s,baz=171,slow=35					
BAND	**Balkesir-Ban**	**64.35**	**329**	⇓P	**P**	**18 05 20.2 +3.3**
AUALC	**St Philip's Co**	**64.45**	**110**	P	**P**	**18 05 17.7 -0.3**
ASAR	**Alice Springs**	**64.47**	**110**	P	**P**	**18 05 15.9 -2.1**
	comp=Z,8.4nm,1.0s,baz=274,slow=5.8,SNR=30					
ASAR				LR	LR	18 30 53.1
	comp=Z,2µm,18.1s,baz=266,slow=34					
	comp=Z,8.4nm,1.0s					
ASAR	**Alice Springs**	**64.47**	**110**	P	**P**	**18 05 16.0 -2.1**
KURBB	**Kurchatov Arra**	**64.99**	**9**	P	**P**	**18 05 19.1 -1.6**
	comp=Z,3.1nm,0.9s,baz=206,slow=6.9,SNR=14					
KURBB				LR	LR	18 31 13.8
	comp=Z,1µm,21.2s,baz=182,slow=34					
	comp=Z,3.1nm,0.9s					
KURK	**Kurchatov**	**65.09**	**9**	P	**P**	**18 05 20.1 -1.3**
KURK	**Kurchatov**	**65.09**	**9**	IAMs_20	IAMs_20	18 30 54.9
	comp=Z,1µm,21.0s					
KURK	**Kurchatov**	**65.09**	**9**	*ce*P	**P**	**18 05 20.4 -1.0**
KURK				pmax	pmax	
	comp=Z,10.0nm,1.3s					
KURK	**Kurchatov**	**65.09**	**9**	P	**P**	**18 05 20.2 -1.3**
LYN	**LuoYang**	**65.13**	**41**	P	P	18 05 27.0 +4.9
LYN				S	**S**	**18 14 07.5 +2.5**
LYN				pmax	pmax	
	comp=Z,170nm,8.6s					
LYN				L	L	
	comp=Z,580nm,20.0s					
LYN				L	L	
	comp=Z,890nm,15.4s					
LYN				L	L	
	comp=Z,1µm,17.0s					
WRA	**Warramunga Arr**	**65.22**	**106**	P	**P**	**18 05 21.1 -2.0**
	comp=Z,13nm,1.0s,baz=269,slow=5.5,SNR=34					
	comp=Z,13nm,1.0s					
WRA	**Warramunga Arr**	**65.22**	**106**	P	**P**	**18 05 20.5 -2.5**
WRA	**Warramunga Arr**	**65.22**	**106**	P	**P**	**18 05 20.5 -2.5**
WRA				pmax	pmax	
	comp=Z,3.0nm,1.1s					
SIM	**Simferopol'**	**65.22**	**336**	*eP*	**P**	**18 05 24.3 +1.9**
SIM				pmax	pmax	
	comp=Z,22nm,1.2s					
WB1	**Warramunga Ar.**	**65.22**	**106**	P	**P**	**18 05 22.5 -0.6**
WRAB	**Tennant Creek**	**65.23**	**106**	P	**P**	**18 05 22.6 -0.5**
WRAB	**Tennant Creek**	**65.23**	**106**	P	**P**	**18 05 20.3 -2.8**
WRAB	**Tennant Creek**	**65.23**	**106**	P	**P**	**18 05 20.3 -2.8**
WRAB				pmax	pmax	
	comp=Z,36nm,1.1s					
SSLB	**Suanglung**	**65.28**	**56**	P	**P**	**18 05 27.4 +4.1**
WB0	**Warramunga Arr**	**65.29**	**106**	P	**P**	**18 05 21.9 -1.6**
CAVK	**Edirne/Enez-Ca**	**65.59**	**328**	⇓P	**P**	**18 05 28.7 +3.8**
SIJI	**Sorong**	**65.67**	**85**	LR	LR	18 29 58.4
	comp=Z,659nm,21.9s,baz=266,slow=32					
NVL	**N'lazarevskaya**	**65.77**	**197**	*eP*	**P**	**18 05 28.6 +3.0**
NVL				*e*		18 05 53.0
NVL				*e*		18 07 54.8
NVL				*e*PPP	PPP	18 09 23.9
NVL				*eS*	**S**	**18 14 15.5 +3.7**
NVL				*eSS*	**SS**	**18 18 30.9 +5.0**
NVL				pmax	pmax	
	comp=Z,19nm,1.1s					
NVL				MLR	MLR	
	comp=Z,555nm,19.0s					
BVAR	**Borovoye Array**	**66.58**	**3**	P	**P**	**18 05 29.5 -1.5**
	comp=Z,2.4nm,0.7s,baz=168,slow=7.6,SNR=18					
BVAR				LR	LR	18 32 27.5
	comp=Z,810nm,21.7s,baz=180,slow=34					
	comp=Z,2.4nm,0.7s					
BORK	**Borovoye**	**66.60**	**3**	P	**P**	**18 05 28.9 -2.3**
BORK				IAmb	IAmb	18 05 40.0
	comp=Z,18nm,1.0s					
BORK	**Borovoye**	**66.60**	**3**	*ce*P	**P**	**18 05 29.9 -1.2**
BORK				pmax	pmax	
	comp=Z,12nm,1.3s					
TIRR	**Tirgusor**	**67.30**	**332**	⇑P	**P**	**18 05 38.6 +2.9**
TIRR	**Tirgusor**	**67.30**	**332**	P	**P**	**18 05 38.6 +2.9**
TIRR	**Tirgusor**	**67.30**	**332**	P	**P**	**18 05 37.9 +2.2**
	comp=Z,9.1nm,0.8s					
ELND	**Elena**	**67.37**	**329**	⇓P	**P**	**18 05 39.0 +2.8**
BTO2	**Baotou**	**67.67**	**35**	*eP*	**P**	**18 05 40.3 +1.9**
BTO2				PP	**PP**	**18 08 11.5 +3.7**
BTO2				S	**S**	**18 14 41.0 +5.1**
BTO2				pmax	pmax	
	comp=Z,16nm,0.5s					
BTO2				pmax	pmax	
	comp=Z,240nm,4.3s					
BTO2				L	L	
	comp=Z,1µm,18.6s					
BTO2				L	L	
	comp=Z,910nm,16.1s					
BTO2				L	L	
	comp=Z,1µm,23.4s					
BELG	**Belogornoye**	**67.76**	**348**	LR	LR	18 35 28.9
	comp=Z,407nm,19.6s,baz=157,slow=36					
BELG	**Belogornoye**	**67.76**	**348**	*i* P	**P**	**18 05 39.9 +1.4**
BELG				pmax	pmax	
	comp=Z,7.0nm,1.3s					
NJ2	**Nanjing**	**67.97**	**47**	*eP*	**P**	**18 05 40.5 +0.3**
NJ2				S	**S**	**18 14 41.3 +1.8**
NJ2				SS	**SS**	**18 19 06.5 +4.6**
NJ2				pmax	pmax	
	comp=Z,24nm,0.8s					
NJ2				pmax	pmax	
	comp=Z,560nm,4.7s					
NJ2				L	L	
	comp=Z,1µm,16.6s					
NJ2				L	L	
	comp=Z,2µm,15.2s					
NJ2				L	L	
	comp=Z,2µm,14.2s					
CFR	**Carcaliu**	**67.97**	**332**	⇑P	**P**	**18 05 42.9 +2.9**
CFR	**Carcaliu**	**67.97**	**332**	P	**P**	**18 05 42.8 +2.9**
VRH	**Novokhopyorsk**	**68.07**	**344**	*eP*	**P**	**18 05 42.1 +1.7**
VRH				pmax	pmax	
	comp=Z,20nm,1.0s					
HNS	**HongShan**	**68.33**	**40**	⇑P	**P**	**18 05 45.5 +3.1**
HNS				S	**S**	**18 14 43.5 0.0**
HNS				pmax	pmax	
	comp=Z,14nm,1.3s					
HNS				L	L	
	comp=Z,440nm,15.5s					
HNS				L	L	
	comp=Z,450nm,15.7s					
HNS				L	L	
	comp=Z,530nm,18.6s					
PLVB	**Pleven**	**68.33**	**329**	⇑P	**P**	**18 05 45.1 +2.8**
VORD	**Divnogorie**	**68.55**	**342**	*eP*	**P**	**18 05 42.8 -0.7**
VORD				pmax	pmax	
	comp=Z,10.0nm,1.0s					
KHAM	**Kharkiv**	**68.67**	**340**	P	**P**	**18 05 44.8 +0.4**
HHC	**Hu-ho-hao-te**	**68.68**	**35**	*eP*	**P**	**18 05 44.8 +0.1**
HHC				S	**S**	**18 14 44.5 -3.4**
HHC				sS	sS	18 14 54.0 +2.9
HHC				SS	**SS**	**18 19 16.5 +3.6**
HHC				pmax	pmax	
	comp=Z,5.0nm,0.6s					
HHC				pmax	pmax	
	comp=Z,130nm,5.7s					
HHC				L	L	
	comp=Z,290nm,17.1s					
HHC				L	L	
	comp=Z,340nm,18.9s					
HHC				L	L	
	comp=Z,380nm,19.9s					
VSR	**Storozhevoye**	**68.81**	**342**	*eP*	**P**	**18 05 46.2 +1.1**
VSR				pmax	pmax	
	comp=Z,15nm,1.3s					
BISRR	**Bisoca**	**68.91**	**331**	⇑P	**P**	**18 05 49.4 +3.4**
SSE	**Sheshan**	**69.13**	**49**	P	**P**	**18 05 49.5 +1.9**
SSE				S	**S**	**18 14 58.0 +4.6**
SSE				pmax	pmax	
	comp=Z,12nm,0.7s					
SSE				pmax	pmax	
	comp=Z,70nm,3.5s					
SSE				L	L	
	comp=Z,250nm,19.8s					
SSE				L	L	
	comp=Z,290nm,19.8s					
VRI	**Vrincioaia**	**69.14**	**332**	⇓P	**P**	**18 05 50.7 +3.4**
VRI	**Vrincioaia**	**69.14**	**332**	P	**P**	**18 05 50.7 +3.4**
VRI	**Vrincioaia**	**69.14**	**332**	P	**P**	**18 05 49.9 +2.6**
	comp=Z,31nm,1.1s					
TIA	**Tai'an**	**69.15**	**42**	P	**P**	**18 05 52.0 +4.4**
TIA				S	**S**	**18 14 58.0 +4.5**
TIA				pmax	pmax	
	comp=Z,12nm,0.8s					
TIA				L	L	
	comp=Z,590nm,17.9s					
TIA				L	L	
	comp=Z,150nm,17.9s					
TIA				L	L	
	comp=Z,780nm,17.9s					
PLOR	**Plostina**	**69.17**	**332**	⇑P	**P**	**18 05 50.9 +3.3**
PLOR	**Plostina**	**69.17**	**332**	P	**P**	**18 05 50.8 +3.3**
TORD	**Torodi Ar. Bea**	**69.19**	**290**	P	**P**	**18 05 47.0 -1.2**
	comp=Z,5.0nm,1.0s,baz=159,slow=3.9,SNR=14					
TORD				LR	LR	18 33 32.8
	comp=Z,572nm,21.9s,baz=114,slow=34					
	comp=Z,5.0nm,1.0s					
TORD	**Torodi Ar. Bea**	**69.19**	**290**	IAmb	IAmb	18 05 52.3
	comp=Z,7.4nm,1.1s					
VORR	**Voronezh**	**69.20**	**342**	*eP*	**P**	**18 05 48.0 +0.5**
VORR				pmax	pmax	
	comp=Z,10.0nm,1.0s					
MLR	**Muntele Rosu**	**69.23**	**331**	LR	LR	18 34 05.4
	comp=Z,271nm,21.9s,baz=144,slow=34					
MLR	**Muntele Rosu**	**69.23**	**331**	⇓P	**P**	**18 05 51.2 +3.2**
MLR	**Muntele Rosu**	**69.23**	**331**	IAmb	IAmb	18 06 07.8
	comp=Z,19nm,1.3s					
MLR	**Muntele Rosu**	**69.23**	**331**	P	**P**	**18 05 51.2 +3.2**
ZALV	**Zalesovo Beam**	**69.27**	**12**	P	**P**	**18 05 46.1 -1.8**
	comp=Z,3.7nm,0.7s,baz=210,slow=6.5,SNR=17					
ZALV				LR	LR	18 34 52.2
	comp=Z,860nm,19.1s,baz=200,slow=35					
	comp=Z,3.7nm,0.7s					
ZALV	**Zalesovo Beam**	**69.27**	**12**		**P**	**18 05 45.8 -2.1**
WDD	**Wied Dalam**	**69.33**	**317**	IAMs_20	IAMs_20	18 36 31.9
	comp=Z,1µm,19.0s					
COVR	**Voineasa-Covas**	**69.37**	**331**	⇑P	**P**	**18 05 51.5 +2.8**
		69.61	**330**	⇓P	**P**	**18 05 52.7 +2.4**
VOIR		**69.61**	**330**	P	**P**	**18 05 52.7 +2.4**
VOIR		**69.61**	**330**	P	**P**	**18 05 51.8 +1.5**
	comp=Z,7.4nm,0.9s					
TESR	**Tescani**	**69.66**	**332**	⇓P	**P**	**18 05 53.2 +2.7**
TESR	**Tescani**	**69.66**	**332**	P	**P**	**18 05 50.7 +0.2**
	comp=Z,16nm,1.2s					
KNGR	**Kungurtug, Tuv**	**69.71**	**21**	*i* P	**P**	**18 05 49.9 -0.9**
KNGR				pmax	pmax	
	comp=Z,11nm,1.1s					
DOPR	**Dopca**	**69.84**	**331**	⇑P	**P**	**18 05 54.2 +2.5**
BOVS	**Bovan**	**70.01**	**327**	⇑P	**P**	**18 05 55.3 +2.6**
QIS	**Mount Isa**	**70.05**	**107**	P	**P**	**18 05 53.6 0.0**
LPSR	**Galich'ya Gora**	**70.10**	**343**	*eP*	**P**	**18 05 53.3 +0.3**
LPSR				pmax	pmax	
	comp=Z,10.0nm,1.0s					
ARTI	**Arti**	**70.15**	**355**	LR	LR	18 36 30.3
	comp=Z,514nm,19.0s,baz=174,slow=36					
ARTI	**Arti**	**70.15**	**355**	P	**P**	**18 05 54.9 +1.6**
ARTI				IAmb	IAmb	18 06 01.8
	comp=Z,21nm,1.2s					
ARTI	**Arti**	**70.15**	**355**	*c* P	**P**	**18 05 55.3 +2.0**
ARTI						18 08 24.4
ARTI				S	**S**	**18 15 08.1 +3.7**
ARTI				SS	**SS**	**18 19 36.4 +1.6**
ARTI				pmax	pmax	
	comp=Z,16nm,1.3s					
SORM	**Soroca**	**70.15**	**334**	⇓P	**P**	**18 05 55.6 +2.1**
SORM	**Soroca**	**70.15**	**334**	P	**P**	**18 05 55.6 +2.1**
INKA	**Innaminka**	**70.27**	**115**	IAmb	IAmb	18 06 06.8
	comp=Z,19nm,1.6s					
VAE	**Valguarnera**	**70.36**	**318**	LR	LR	18 35 21.3
	comp=Z,367nm,20.2s,baz=133,slow=35					
SVE	**Sverdlovsk**	**70.44**	**357**	*eP*	**P**	**18 05 57.0 +2.0**
SVE				*eS*	**S**	**18 15 11.0 +3.3**
SVE				pmax	pmax	
	comp=Z,33nm,1.3s					
SVE				MLR	MLR	
	comp=Z,417nm,15.0s					
SNAA	**Sanae**	**70.48**	**198**	LR	LR	18 29 17.2
	comp=Z,468nm,21.7s,baz=18,slow=30					
PDG	**Podgorica**	**70.53**	**325**	⇓P	**P**	**18 05 59.3 +3.4**
PDG	**Podgorica**	**70.53**	**325**	IAmb	IAmb	18 06 00.4
	comp=Z,19nm,1.3s					
STKA	**Stephens Creek**	**70.65**	**119**	P	**P**	**18 05 56.1 -1.0**
	comp=Z,1.1nm,0.5s,baz=293,slow=3.1,SNR=4.3					
STKA				LR	LR	18 32 15.8
	comp=Z,2µm,20.8s,baz=254,slow=32					
	comp=Z,1.1nm,0.5s					
STKA	**Stephens Creek**	**70.65**	**119**	*i* P	**P**	**18 05 56.6 -0.5**
GZR	**Gura Zlata**	**70.69**	**329**	⇓P	**P**	**18 05 59.8 +2.8**
GZR	**Gura Zlata**	**70.69**	**329**	P	**P**	**18 05 59.7 +2.8**
BJI2	**Beijing**	**70.84**	**39**	P	**P**	**18 05 58.3 +0.4**
BJI2				pP	**pwP**	**18 06 03.3 -1.7**
BJI2				S	**S**	**18 15 13.3 +0.2**
BJI2				pmax	pmax	
	comp=Z,2.0nm,1.3s					
BJI2				pmax	pmax	
	comp=Z,50nm,4.1s					
BJI2				L	L	
	comp=Z,170nm,22.9s					
BJI2				L	L	
	comp=Z,250nm,22.2s					
BJI2				L	L	
	comp=Z,260nm,23.1s					
MATE	**Matera**	**70.85**	**322**	⇑P	**P**	**18 06 01.0 +3.1**
NDNU	**Novodnistrovsk**	**70.93**	**334**	P	**P**	**18 05 59.5 +1.3**
SONM	**Songino Array**	**71.02**	**27**	P	**P**	**18 05 58.1 -0.8**
	comp=Z,10.0nm,1.2s,baz=219,slow=7.0,SNR=20					
SONM				LR	LR	18 36 26.1
	comp=Z,942nm,20.8s,baz=216,slow=35					
	comp=Z,10.0nm,1.2s					
SONM	**Songino Array**	**71.02**	**27**	P	**P**	**18 05 56.9 -2.1**
SONM	**Songino Array**	**71.02**	**27**	P	**P**	**18 05 56.9 -2.1**
SONM				pmax	pmax	
	comp=Z,10.0nm,1.1s					
BURAR	**Bucovina Array**	**71.14**	**332**	⇑P	**P**	**18 06 03.2 +3.5**
BURAR	**Bucovina Array**	**71.14**	**332**	P	**P**	**18 06 03.1 +3.5**
KMPD	**K-Podol'skiy**	**71.29**	**333**	P	**P**	**18 06 01.6 +1.2**
KMPD				P	**pP**	**18 06 01.8 -0.6**
ULN	**Ulaanbaatar**	**71.34**	**28**	P	**P**	**18 05 59.5 -1.4**
ULN				IAmb	IAmb	18 06 19.6
	comp=Z,18nm,1.5s					
ULN	**Ulaanbaatar**	**71.34**	**28**	*i* P	**P**	**18 06 00.1 -0.8**
ULN				pmax	pmax	
	comp=Z,5.0nm,1.2s					
ULN	**Ulaanbaatar**	**71.34**	**28**	P	**P**	**18 06 02.5 +1.6**
BZS	**Buzias**	**71.43**	**329**	⇓P	**P**	**18 06 04.2 +2.9**
BZS	**Buzias**	**71.43**	**329**	P	**P**	**18 06 04.2 +2.9**
MARR	**Marisel-Cluj**	**71.44**	**330**	⇑P	**P**	**18 06 04.7 +3.2**
ZAK	**Zakamensk**	**71.66**	**24**	*eP*	**P**	**18 06 02.2 -0.5**
ZAK				pmax	pmax	
	comp=Z,7.0nm,1.6s					
AK07	**Malin Array Si**	**71.70**	**336**	P	**P**	**18 06 04.2 +1.4**
AK09	**Malin Array Si**	**71.72**	**336**	P	**P**	**18 06 03.4 +0.5**
AK10	**Malin Array Si**	**71.72**	**336**	P	**P**	**18 06 03.9 +1.0**
KSV	**Kosov**	**71.72**	**333**	P	**P**	**18 06 04.4 +1.3**
AK06	**Malin Array Si**	**71.73**	**336**	P	**P**	**18 06 03.4 +0.4**
AK08	**Malin Array Si**	**71.74**	**336**	P	**P**	**18 06 04.1 +1.0**
LUBAR	**Lubar, Ukraine**	**71.78**	**335**	P	**P**	**18 06 04.9 +1.5**
AK14	**Malin Array Si**	**71.80**	**336**	P	**P**	**18 06 03.5 +0.1**
AK01	**Malin Array Si**	**71.80**	**336**	P	**P**	**18 06 04.7 +1.3**
AKASG	**Malin Array Be**	**71.81**	**336**	P	**P**	**18 06 04.1 +0.6**
	comp=Z,3.7nm,0.8s,baz=142,slow=4.8,SNR=16					
AKASG				LR	LR	18 36 16.2
	comp=Z,331nm,21.6s,baz=131,slow=35					
	comp=Z,3.7nm,0.8s					
AKASG	**Malin Array Be**	**71.81**	**336**	*i* P	**P**	**18 06 05.5 +2.0**
AKASG				pmax	pmax	
	comp=Z,7.0nm,1.0s					
AKBB	**Malin Array Si**	**71.81**	**336**	IAmb	IAmb	18 06 21.6
	comp=Z,22nm,1.2s					
AKBB	**Malin Array Si**	**71.81**	**336**	*ce*P	**P**	**18 06 05.3 +1.8**
AKBB				pmax	pmax	
	comp=Z,14nm,1.1s					
AKBB	**Malin Array Si**	**71.81**	**336**	P	**P**	**18 06 04.5 +1.0**
KIEV	**Kiev**	**71.81**	**336**	⇓P	**P**	**18 06 05.8 +2.4**
KIEV	**Kiev**	**71.81**	**336**	P	**P**	**18 06 02.0 -1.5**
KIEV				IAmb	IAmb	18 06 21.6
	comp=Z,20nm,1.2s					
KIEV	**Kiev**	**71.81**	**336**	P	**P**	**18 06 02.0 -1.5**
KIEV				pmax	pmax	
	comp=Z,20nm,1.2s					
KIEV	**Kiev**	**71.81**	**336**	P	**P**	**18 06 04.4 +0.9**
	comp=Z,58nm,2.0s					
MOY	**Mondy**	**71.82**	**22**	*eP*	**P**

BERU Beregovo 72.77 331 P P 18 06 12.1 +2.8
KEST Kesra 72.78 315 P P 18 06 10.2 +0.5
comp=Z,3.1nm,0.9s,baz=64,slow=7.6,SNR=3.6
KEST LR LR 18 38 03.5
comp=Z,943nm,20.9s,baz=110,slow=36
comp=Z,3.1nm,0.9s
KEST Kesra 72.78 315 lAmb lAmb 18 07 56.6
comp=Z,34nm,1.8s
KEST Kesra 72.78 315 P P 18 06 12.2 +2.5
TLY Talaya 72.82 23 LR LR 18 36 43.2
comp=Z,965nm,21.4s,baz=209,slow=35
OBN Obninsk 72.98 343⇑ eP P 18 06 12.2 +1.9
OBN e 18 06 28.2
OBN e 18 08 56.2
OBN pmax pmax
comp=Z,5.0nm,0.5s
OBN MLR MLR
comp=Z,434nm,20.0s
HOLU Holmets 73.11 331 P P 18 06 13.4 +2.1
BLY Banja Luka 73.18 326 ⇓P P 18 06 15.3 +3.5
MOS Moscow 73.23 344 eP P 18 06 12.9 +1.1
MOS e 18 06 28.1
MOS pmax pmax
comp=Z,28nm,1.1s
MOS MLR MLR
comp=Z,600nm,19.0s
DBIC Dimbokro 73.30 281 P P 18 06 13.0 -0.2
comp=Z,12nm,0.9s,baz=129,slow=7.4,SNR=11
DBIC LR LR 18 37 37.4
comp=Z,385nm,18.3s,baz=136,slow=35
comp=Z,12nm,0.9s
DBIC Dimbokro 73.30 281 lAmb lAmb 18 06 26.6
comp=Z,21nm,1.1s
DBIC Dimbokro 73.30 281 P P 18 06 13.0 -0.2
KIRV Kirov 73.34 351 LR LR 18 38 41.2
comp=Z,382nm,19.7s,baz=164,slow=36
KIRV Kirov 73.34 351 ceP P 18 06 13.9 +1.5
INTR Introdacqua 73.35 322 P P 18 06 11.9 -1.1
INTR lAmb lAmb 18 06 17.7
comp=Z,25nm,1.3s
MORH Mrgy, Hungar 73.36 328 ⇓P P 18 06 15.9 +3.1
MORH Mrgy, Hungar 73.36 328 P P 18 06 15.1 +2.3
QLP Quilpie 73.49 114 P P 18 06 16.0 +1.9
IRK Irkutsk 73.50 23 eP P 18 06 12.0 -1.6
IRK pmax pmax
comp=Z,26nm,1.7s
DL2 Dalian 73.63 42 eP P 18 06 13.5 -1.1
DL2 S S 18 15 45.3 +0.2
DL2 pmax pmax
comp=Z,28nm,1.0s
DL2 pmax pmax
comp=Z,220nm,5.7s
DL2 L L
comp=Z,570nm,19.7s
DL2 L L
comp=Z,670nm,19.6s
DL2 L L
comp=Z,920nm,17.7s
PSZ Piszkesteto 73.87 330 ⇓P P 18 06 18.8 +2.9
PSZ Piszkesteto 73.87 330 P P 18 06 18.8 +2.9
CMSA Cobar Meteorol 74.16 119 P P 18 06 20.4 +2.4
STHS Stebnicka Huta 74.27 331 eP P 18 06 21.4 +3.3
STHS Stebnicka Huta 74.27 331 eP P 18 06 21.3 +3.2
NRCA Norcia 74.31 322 lAmb lAmb 18 06 23.6
comp=Z,26nm,1.2s
JAY Jayapura 74.43 89 LR LR 18 42 10.3
comp=Z,206nm,18.1s,baz=250,slow=38
MTSU Mount Surprise 74.81 105 P P 18 06 24.4 +2.4
LANS Liptovska Anna 74.92 330 eP P 18 06 26.1 +4.1
LANS Liptovska Anna 74.92 330 eP P 18 06 26.1 +4.1
MNK Minsk 75.31 338 iP P 18 06 24.6 +0.6
comp=E,10.0nm,0.7s
MNK iP P 18 06 24.6 +0.6
comp=N,17nm,1.0s
MNK iP P 18 06 24.6 +0.6
comp=Z,17nm,1.0s,baz=142
MNK iPcP PcP 18 06 37.5 +0.3
MNK iPP PP 18 09 13.1 +0.2
MNK iPPP PPP 18 10 59.0
MNK iS S 18 16 05.0 +1.7
MNK iScS ScS 18 16 37.6 +0.7
MNK iSS SS 18 20 56.0 +2.3
MNK iSSS SSS 18 24 22.6
MNK iLQ LQ 18 33 30.7
MNK iLR LR 18 41 10.4
MNK iLRM MLR 18 42 17.9
comp=E,329nm,17.9s
MNK iLRM MLR 18 42 29.9
comp=N,214nm,19.3s
MNK Minsk 75.31 338 iP P 18 06 24.5 +0.6
MNK i 18 06 37.5
MNK i 18 09 13.1
MNK iPPP PPP 18 10 59.0
MNK iS S 18 16 05.0 +1.7
MNK i 18 16 37.5
MNK iSS SS 18 20 55.9 +2.3
MNK pmax pmax
comp=E,10.0nm,0.7s
MNK pmax pmax
comp=N,17nm,1.0s
MNK pmax pmax
comp=Z,17nm,1.0s
MNK MLR MLR
comp=E,329nm,18.0s
MNK MLR MLR
comp=N,214nm,19.0s
MNK MLR MLR
comp=Z,232nm,20.0s
MODS Modra-Piesok 75.48 329 eP P 18 06 28.0 +2.8
MODS Modra-Piesok 75.48 329 eP P 18 06 28.0 +2.8
RONA Rosalia, Austr 75.55 328 iP pP 18 06 28.7 +1.1
comp=Z,10nm,1.3s
SOKA Soboth 75.56 326 iP pP 18 06 29.1 +1.3
comp=Z,12nm,1.6s
ARSA Arzberg 75.66 327 lAmb lAmb 18 06 31.8
comp=Z,20nm,1.3s
ARSA Arzberg 75.66 327 iP pP 18 06 29.5 +1.2
comp=Z,12nm,1.1s
OBKA Obir 75.72 326 iP pP 18 06 30.1 +1.4
comp=Z,19nm,1.9s
CONA Conrad Observa 75.92 328 iP P 18 06 28.1 +0.3
comp=Z,18nm,1.3s
INCN Inchon 76.25 45 P P 18 06 29.3 -0.5
INCN Inchon 76.25 45 P P 18 06 29.3 -0.5
INCN pmax pmax
comp=Z,37nm,1.4s
INCN MLR MLR
comp=Z,700nm,19.0s
MORC Moravsky Berou 76.28 330 ⇑P P 18 06 32.6 +2.9
MORC Moravsky Berou 76.28 330 P P 18 06 30.4 +0.7
MORC lAmb lAmb 18 06 46.5
comp=Z,30nm,1.9s
MORC Moravsky Berou 76.28 330 P P 18 06 30.4 +0.7
MORC pmax pmax
comp=Z,30nm,1.9s
MORC Moravsky Berou 76.28 330 eP P 18 06 31.7 +2.0
CTA Charters Tower 76.29 108 LR LR 18 37 59.3
comp=Z,2μm,19.1s,baz=240,slow=34
CTAO Charters Tower 76.29 108 P P 18 06 32.7 +2.2
CTAO Charters Tower 76.29 108 P P 18 06 29.1 -1.4
CTAO lAmb lAmb 18 06 42.5
comp=Z,29nm,1.1s
CTAO Charters Tower 76.29 108 P P 18 06 29.1 -1.4
CTAO pmax pmax
comp=Z,29nm,1.2s
CTAO MLR MLR
comp=Z,2μm,19.0s
MYKA Terra Mystica 76.29 326 iP pP 18 06 34.9 +3.0
comp=Z,14nm,1.7s
QSPA South Pole Qui 76.35 180 P P 18 06 29.0 -1.1
comp=Z,7.5nm,1.0s,baz=278,slow=1.5,SNR=8.6
QSPA LR LR 18 35 15.5
comp=Z,667nm,20.8s,baz=280,slow=32
comp=Z,7.5nm,1.0s
QSPA South Pole Qui 76.35 180 P P 18 06 31.7 +1.7
QSPA lAmb lAmb 18 07 12.4
comp=Z,29nm,1.3s
QSPA South Pole Qui 76.35 180 lAMs_20 lAMs_20 18 34 50.9
comp=Z,932nm,21.0s
KRUC Moravsky 76.37 329 eP P 18 06 32.9 +2.7
AULRC Lightning Ridg 76.39 117 P P 18 06 33.5 +2.6
VRAC Vranov 76.43 329 eP P 18 06 33.5 +2.9
AUMTS Mt Stromlo 76.45 123 P P 18 06 33.9 +2.7
ZCCA Zocca 76.46 323 P P 18 06 30.0 -0.9
MOA Molln 76.70 327 iP pP 18 06 35.2 +1.0
comp=Z,24nm,1.0s
KBA Koelnbreinsper 76.72 326 iP pP 18 06 35.4 +0.9
comp=Z,12nm,1.2s
BIOA Bad Ischl, Aus 76.94 327 iP P 18 06 35.9 +2.4
comp=Z,6.0nm,1.0s
ABTA Abfaltersbach 76.98 325 iP P 18 06 34.5 +0.7
comp=Z,21nm,1.1s
KSRS Korea Array 77.14 46 P P 18 06 34.9 +0.2
comp=Z,5.9nm,1.0s,baz=237,slow=5.7,SNR=11
KSRS LR LR 18 40 06.5
comp=Z,572nm,21.0s,baz=235,slow=35
comp=Z,5.9nm,1.0s
CIT Chita 77.24 28 eP P 18 06 36.8 +1.7
CIT e 18 06 48.4
LESA Schwarzleotal 77.30 326 iP pP 18 06 38.3 +0.7
comp=Z,14nm,1.0s
KLMR Klimovskoe 77.31 347 eP P 18 06 36.3 +1.1
KLMR e 18 09 30.9
KLMR pmax pmax
comp=Z,38nm,1.2s
KLMR MLR MLR
comp=Z,552nm,16.0s
OSTC Ostas 77.43 330 eP P 18 06 37.7 +1.5
OSTC Ostas 77.43 330 eP P 18 06 37.7 +1.5
GERES GERESS Array B 77.61 328 P P 18 06 37.6 +0.3
comp=Z,1.4nm,0.9s,baz=144,slow=4.8,SNR=8.5
GERES LR LR 18 41 40.5
comp=Z,96nm,19.9s,baz=141,slow=36
comp=Z,1.4nm,0.9s
ZVC Zvikov 77.73 328 eP P 18 06 39.1 +1.3
WTTA Wattenberg 77.77 325 iP pP 18 06 40.9 +0.6
comp=Z,9.7nm,1.0s
WATA Walderalm 77.84 325 iP P 18 06 40.8 +2.1
comp=Z,15nm,1.2s
KHC Kasperske Hory 77.85 328 eP P 18 06 40.5 +1.9
KHC AMS AMS 18 33 00.0
comp=Z,300nm,20.3s
KHC Kasperske Hory 77.85 328 ceP P 18 06 40.9 +2.3
KHC pmax pmax
comp=Z,11nm,1.3s
VNDA Vanda 77.93 167 LR LR 18 36 26.8
comp=Z,656nm,21.3s,baz=268,slow=32
SQTA Sankt Quirin 77.98 325 iP P 18 06 39.5 0.0
comp=Z,6.9nm,0.9s
MOTA Moosalm 78.11 325 iP P 18 06 40.3 +0.1
comp=Z,8.5nm,1.2s
FETA Feichten 78.13 325 iP pP 18 06 43.3 +0.9
comp=Z,12nm,1.0s
FUORN Ofenpass-Fuorn 78.17 324 lAmb lAmb 18 06 45.2
comp=Z,19nm,1.4s
RETA Reutte 78.38 325 iP pP 18 06 45.2 +1.5
comp=Z,8.7nm,1.2s
DAVOX Davos/Dischmat 78.47 324 LR LR 18 42 39.9
comp=Z,96nm,19.0s,baz=114,slow=37
CN2 Changchun 78.68 39 eP P 18 06 46.8 +3.6
CN2 pmax pmax
comp=Z,10.0nm,0.7s
DAVA Damuels 78.76 325 iP pP 18 06 46.4 +0.5
comp=Z,11nm,1.3s
BELA Belgrano 2 78.92 192 P P 18 06 43.3 -0.8
PMG Port Moresby 79.18 97 LR LR 18 38 16.1
comp=Z,749nm,21.0s,baz=252,slow=33
PMG Port Moresby 79.18 97 lAMs_20 lAMs_20 18 37 52.8
comp=Z,887nm,18.0s
CLL Collm 79.48 329 iP P 18 06 51.0 +3.5
CLL e 18 07 02.0
CLL eS S 18 16 48.0 -0.8
CLL pmax pmax
comp=Z,12nm,1.4s
CLL Collm 79.48 329 iP P 18 06 51.0 +3.5
comp=Z,12nm,1.4s
CLL ex x 18 07 02.0
CLL ePPP PPP 18 11 18.0
CLL eS S 18 16 48.0 -0.8
CLL eSP SPn 18 17 31.0 +0.2
CLL eSS SS 18 21 30.0 -27
CLL eSSS SSS 18 25 30.0
CLL eSSSS 18 27 42.0
EIDS Eidsvold 79.76 114 P P 18 06 51.9 +2.2
TW1H Toowoomba 1 Ha 80.16 116 P P 18 06 55.3 +3.4
BNX BinXian 80.87 38 ⇑P P 18 06 58.3 +3.2
BNX S SKSac 18 17 10.0 -3.8
BNX pmax pmax
comp=Z,7.0nm,1.2s
BNX pmax pmax
comp=Z,100nm,4.6s
BNX L L
comp=Z,540nm,24.0s
BNX L L
comp=Z,560nm,22.1s
BNX L L
comp=Z,410nm,26.0s
FINES FINESS Array B 81.33 342 P P 18 06 58.1 +0.9
comp=Z,2.6nm,0.9s,baz=101,slow=3.9,SNR=4.2
FINES LR LR 18 43 46.6
comp=Z,327nm,20.9s,baz=135,slow=36
comp=Z,2.6nm,0.9s
MDJ Mudanjiang 81.67 40 P P 18 07 03.7 +4.4
MDJ Mudanjiang 81.67 40 P P 18 07 00.0 +0.7
MDJ S S 18 17 10.5 -1.5
MDJ pmax pmax
comp=Z,6.0nm,1.9s
MDJ L L
comp=Z,410nm,19.2s
MDJ L L
comp=Z,420nm,17.5s
MDJ L L
comp=Z,710nm,22.1s
MDT Midelt 81.78 307 LR LR 18 43 05.0
comp=Z,920nm,20.8s,baz=118,slow=36
GUMO Guam 82.57 74 LR LR 18 40 07.1
comp=Z,231nm,21.7s,baz=238,slow=33
USRK Ussuriysk Ar. 83.00 41 P P 18 07 05.6 -0.7
comp=Z,4.3nm,0.8s,baz=262,slow=3.9,SNR=4.7
comp=Z,4.3nm,0.8s
HEH HeiHe 83.17 35 eP P 18 07 07.5 +0.4
HEH pmax pmax
comp=Z,7.0nm,1.4s
HEH L L
comp=Z,410nm,19.5s
HEH L L
comp=Z,270nm,18.7s
HEH L L
comp=Z,530nm,17.5s
ESDC Sonseca Array 83.94 313 P P 18 07 11.5 +0.1
comp=Z,6.2nm,1.2s,baz=110,slow=4.7,SNR=8.2
ESDC LR LR 18 45 18.6
comp=Z,594nm,19.6s,baz=114,slow=36
comp=Z,6.2nm,1.2s
ESDC Sonseca Array 83.94 313 P P 18 07 08.4 -2.9
ESDC lAmb lAmb 18 07 30.4
comp=Z,35nm,1.9s
AVE Averroes 84.16 306 lAMs_20 lAMs_20 18 42 04.8
comp=Z,909nm,21.0s
JCJ Chichijima 84.16 60 LR LR 18 39 46.8
comp=Z,275nm,19.8s,baz=245,slow=32
JHJ Hachijo jima 2 84.19 54 LR LR 18 45 45.2
comp=Z,211nm,19.3s,baz=258,slow=36
MAJO Matsushiro 84.21 50 P P 18 07 17.6 +4.8
MJAR Matsushiro Arr 84.21 50 P P 18 07 12.5 -0.2
comp=Z,6.7nm,1.0s,baz=238,slow=5.7,SNR=11
MJAR LR LR 18 42 40.8
comp=Z,286nm,21.1s,baz=242,slow=34
comp=Z,6.7nm,1.0s
MJAR Matsushiro Arr 84.21 50 P P 18 07 11.3 -1.5
MJAR Matsushiro Arr 84.21 50 P P 18 07 11.3 -1.5
MJAR pmax pmax
comp=Z,40nm,1.4s
NRIK Noril'sk 84.23 7 P P 18 07 12.4 +0.4
comp=Z,0.9nm,0.5s,baz=201,slow=5.7,SNR=5.9
NRIK LR LR 18 44 10.1
comp=Z,812nm,21.3s,baz=188,slow=35
comp=Z,0.9nm,0.5s
NRIK Noril'sk 84.23 7 eP P 18 07 13.5 +1.4
NRIK pmax pmax
comp=Z,6.0nm,1.2s
HFS Hagfors 84.70 337 P P 18 07 14.5 -0.2
comp=Z,9.2nm,1.1s,baz=56,slow=2.7,SNR=4.3
comp=Z,9.2nm,1.1s
ZEA Zeya 84.89 31 eP P 18 07 19.0 +3.2
ZEA e 18 17 42.2
ZEA e 18 18 42.5
ZEA MLR MLR
comp=E,300nm,15.0s
KRVT Keravat (AS076 85.02 93 LR LR 18 41 26.4
comp=E,53nm,21.4s,baz=166,slow=33
KLR Kul'dur 85.14 37 LR LR 18 46 47.2
comp=E,467nm,20.1s,baz=240,slow=37
KLR Kul'dur 85.14 37 iP P 18 07 16.8 -0.3
KLR pmax pmax
comp=Z,14nm,1.5s
NOA NORSAR Array B 86.22 336 P P 18 07 23.4 +1.1
comp=Z,0.9nm,0.8s,baz=120,slow=4.5,SNR=2.1
comp=Z,0.9nm,0.8s
JMM Marumori 86.61 50 P P 18 07 29.3 +4.6
ARCES ARCESS Array B 87.78 347 P P 18 07 30.3 +0.7
comp=Z,2.9nm,0.9s,baz=161,slow=5.7,SNR=1.6
ARCES LR LR 18 47 52.8
comp=Z,186nm,18.1s,baz=135,slow=36
comp=Z,2.9nm,0.9s
GRNR Gornyy 88.52 37⇑ iP P 18 07 35.3 +1.7
GRNR pmax pmax
comp=Z,4.0nm,1.3s
EKA Eskdalemuir Ar 89.83 328 P P 18 07 39.7 +0.1
comp=Z,4.1nm,1.1s,baz=96,slow=8.5,SNR=3.5
EKA LR LR 18 50 18.8
comp=Z,206nm,20.1s,baz=118,slow=37
comp=Z,4.1nm,1.1s
ASAJ Asahikawa 89.99 44 LR LR 18 47 31.3
comp=Z,286nm,20.7s,baz=244,slow=35
YAK Yakutsk 90.23 25 LR LR 18 48 06.9
comp=Z,753nm,19.8s,baz=235,slow=36
YAK Yakutsk 90.23 25 lAMs_20 lAMs_20 18 47 49.4
comp=Z,757nm,20.0s
YAK Yakutsk 90.23 25 iP P 18 07 41.3 0.0
YAK pmax pmax
comp=Z,3.0nm,0.9s
YSS Yuzhno-Sakhali 91.03 42 eP P 18 07 43.0 -2.4
YSS eS S 18 18 36.4 -6.6
YSS ePPS PPS 18 20 25.3
YSS pmax pmax
comp=Z,10.0nm,1.1s
RPZ Rata Peaks 91.10 136 LR LR 18 41 44.6
comp=Z,396nm,18.6s,baz=161,slow=31
HNR Honiara 91.47 100 LR LR 18 44 36.6
comp=Z,25nm,21.3s,baz=317,slow=33
PMSA Palmer Station 93.19 199 LR LR 18 43 54.8
comp=Z,222nm,18.0s,baz=125,slow=32
DZM Mont Dzumac 94.21 114 LR LR 18 48 08.0
comp=Z,929nm,19.6s,baz=249,slow=34
TIXI Tiksi 94.74 16 LR LR 18 50 31.5
comp=Z,1μm,21.2s,baz=249,slow=35
TIXI Tiksi 94.74 16 P P 18 08 02.4 +0.4
TIXI lAmb lAmb 18 08 11.8
comp=Z,7.8nm,1.1s
TIXI Tiksi 94.74 16 P P 18 08 02.4 +0.4
TIXI pmax pmax
comp=Z,8.0nm,1.1s
TIXI MLR MLR
comp=Z,1μm,20.0s
SPITS Spitsbergen Ar 95.81 351 LR LR 18 53 28.2
comp=Z,315nm,21.0s,baz=146,slow=37
URZ Urewera 97.39 132 LR LR 18 46 21.9
comp=Z,492nm,18.1s,baz=248,slow=32
JMIC Jan Mayen 97.95 341 LR LR 18 51 38.0
comp=Z,190nm,21.8s,baz=256,slow=35
MA2 Magadan 99.02 31 LR LR 18 54 05.9
comp=Z,372nm,18.9s,baz=253,slow=36
BI02 San Fabin de 115.78 217 lAMs_20 lAMs_20 19 01 00.2
comp=Z,514nm,22.0s
C18K Utukok River 117.43 18 lAMs_20 lAMs_20 19 05 27.2
comp=Z,722nm,22.0s
B20K Meade River 117.69 15 lAMs_20 lAMs_20 19 03 05.0
comp=Z,608nm,20.0s
E21K Killik River 119.60 16 lAMs_20 lAMs_20 19 07 32.3
comp=Z,554nm,21.0s
H18K Honhosa River 120.44 20 lAMs_20 lAMs_20 19 07 31.9
comp=Z,558nm,22.0s
D25K Kavik River 120.77 13 lAMs_20 lAMs_20 19 06 50.2
comp=Z,602nm,21.0s
H19K Roundabout Mou 120.83 19 lAMs_20 lAMs_20 19 07 17.1
comp=Z,573nm,20.0s
C27K Jago River 121.07 12 lAMs_20 lAMs_20 19 08 23.2
comp=Z,489nm,20.0s
A36M Sachs Harbour 121.37 4 lAMs_20 lAMs_20 19 05 49.0
comp=Z,389nm,20.0s
COLD Coldfoot 121.47 16 lAMs_20 lAMs_20 19 08 19.7
comp=Z,560nm,22.0s
G23K Bananza Creek 121.90 16 lAMs_20 lAMs_20 19 08 09.2
comp=Z,553nm,22.0s
E25K Arctic Village 121.91 13 lAMs_20 lAMs_20 19 07 58.4
comp=Z,610nm,21.0s
J19K Poorman 122.09 20 lAMs_20 lAMs_20 19 09 06.5
comp=Z,439nm,20.0s
F26K Sheenjek River 122.57 13 lAMs_20 lAMs_20 19 07 55.9
comp=Z,629nm,22.0s
H23K Yukon River 122.69 17 lAMs_20 lAMs_20 19 09 34.0
comp=Z,558nm,20.0s
MLY Manley 122.93 18 lAMs_20 lAMs_20 19 09 53.4
comp=Z,561nm,21.0s
K20K Telida 123.04 20 lAMs_20 lAMs_20 19 09 37.4
comp=Z,528nm,22.0s
H24K Noodor Dome 123.13 16 lAMs_20 lAMs_20 19 07 21.7
comp=Z,469nm,22.0s
I23K Minto, Yukon-K 123.24 17 lAMs_20 lAMs_20 19 09 26.7
comp=Z,639nm,22.0s
F28M Old Crow 123.53 12 PKiKP 18 13 39.1 +0.9
FALS False Pass 123.85 32 lAMs_20 lAMs_20 19 05 32.6
comp=Z,608nm,21.0s
WRH Wood River Hil 124.11 17 PKPdf 18 13 39.1 -0.1
ILAR Eielson Array 124.22 16 PKP PKiKP 18 13 39.4 -0.2
comp=Z,1.8nm,0.9s,baz=309,slow=3.4,SNR=15
SCRK Sand Creek 125.62 16 lAMs_20 lAMs_20 19 08 35.7
comp=Z,640nm,22.0s
LPAZ La Paz 125.84 238 PKP PKiKP 18 13 45.2 +0.1
comp=Z,1.3nm,0.8s,baz=354,slow=3.9,SNR=4.4
AP01 Chacalluta 126.52 234 lAMs_20 lAMs_20 19 00 13.2
comp=Z,601nm,21.0s
SMRT St. Maarten 131.06 282 lAMs_20 lAMs_20 19 02 12.2
comp=Z,343nm,18.0s
YKA Yellowknife Ar 131.30 0 PKP PKPdf 18 13 53.1 +0.2
comp=Z,1.1nm,0.8s,baz=343,slow=2.9,SNR=14
ULM Lac du Bonnet 140.73 342 PKP PKPdf 18 14 11.2 +0.4
comp=Z,1.9nm,0.8s,baz=45,slow=1.4,SNR=3.2
W59A Clinton 141.62 310 lAMs_20 lAMs_20 19 16 54.7
comp=Z,420nm,20.0s
V58A Windy Hill, Pi 141.84 311 lAMs_20 lAMs_20 19 17 20.5
comp=Z,374nm,20.0s
Y60A Bolivia 141.92 308 lAMs_20 lAMs_20 19 15 04.9
comp=Z,319nm,20.0s
X58A Rowland 142.55 310 lAMs_20 lAMs_20 19 15 49.2
comp=Z,376nm,19.0s
W57A Gilead 142.77 311 lAMs_20 lAMs_20 19 16 46.1
comp=Z,325nm,19.0s
V55A Taylorsville 143.33 313 lAMs_20 lAMs_20 19 21 50.8
comp=Z,317nm,19.0s
O48B Farmland 143.51 322 lAMs_20 lAMs_20 19 14 22.4
comp=Z,477nm,22.0s
Y57A Sumter 143.56 310 lAMs_20 lAMs_20 19 16 40.2
comp=Z,419nm,21.0s
SPMN Marine on St. 143.87 334 lAMs_20 lAMs_20 19 20 53.5
comp=Z,399nm,22.0s
R50A Paris 144.17 318 lAMs_20 lAMs_20 19 17 31.3
comp=Z,329nm,21.0s
V53A Saluda 144.56 314 lAMs_20 lAMs_20 19 19 40.0
comp=Z,318nm,20.0s
TZTN Tazewell 144.62 315 PKPab 18 14 15.1 -1.6
TZTN lAMs_20 lAMs_20 19 18 59.4
comp=Z,418nm,20.0s
R49A Shelbyville 144.71 319 PKPdf 18 14 18.6 +0.3
BG3 Lake Jocassee 144.98 313 PKPbc 18 14 14.4 -3.7
I37A Lemond, Waseca 145.10 334 PKPbc 18 14 14.4 -3.8
T50A Nancy 145.22 317 PKPbc 18 14 15.4 -3.4
T50A lAMs_20 lAMs_20 19 18 35.3
comp=Z,375nm,20.0s
E28A Huff 145.43 344 PKPbc 18 14 16.6 -2.6
WCI Wyandotte Cave 145.45 320 lAMs_20 lAMs_20 19 14 37.0
comp=Z,376nm,21.0s
NEW Newport 145.46 4 PKPbc 18 14 16.8 -2.5
NEW Newport 145.46 4 PKP2 PKPbc 18 14 16.8 -2.5
W52A Murphy 145.63 314 lAMs_20 lAMs_20 19 20 01.5
comp=Z,436nm,20.0s
EGMT Eagleton 145.63 355 PKPdf 18 14 16.6 -3.1
C09A Chrisman Ranch 145.83 5 PKPdf 18 14 18.1 -1.8
CPCT Cooper Cave 145.86 314 PKPdf 18 14 16.1 -4.3
060A Indiantown 146.03 298 lAMs_20 lAMs_20 19 15 01.6
comp=Z,435nm,19.0s
GOGA Godfrey 146.12 311 lAMs_20 lAMs_20 19 18 15.9
comp=Z,319nm,20.0s
U49A Red Boiling Sp 146.13 317 lAMs_20 lAMs_20 19 18 29.3
comp=Z,415nm,21.0s
154A Montrose 146.22 309 lAMs_20 lAMs_20 19 19 34.6
comp=Z,367nm,20.0s
Y52A Lilburn 146.34 312 lAMs_20 lAMs_20 19 21 21.6

comp=Z,444nm,21.0s
DWPF Disney Wildern 146.61 301 IAMs_20 IAMs_20 19 12 17.9
comp=Z,472nm,22.0s
Q44A Meyer Farm, Va 146.66 323 IAMs_20 IAMs_20 19 32 32.7
comp=Z,410nm,21.0s
T47A Sharon Grove 146.72 319 IAMs_20 IAMs_20 19 16 37.6
comp=Z,357nm,20.0s
061Z Ochoppi 146.81 296 IAMs_20 IAMs_20 19 14 59.5
comp=Z,300nm,20.0s
656A Willston 147.09 303 IAMs_20 IAMs_20 19 10 34.3
comp=Z,370nm,22.0s
V48A Smith Brothers 147.27 317 IAMs_20 IAMs_20 19 14 56.4
comp=Z,296nm,20.0s
152A Waverly Hall 147.40 310 IAMs_20 IAMs_20 19 21 18.7
comp=Z,418nm,22.0s
N38A Joes South For 147.56 330 IAMs_20 IAMs_20 19 22 16.5
comp=Z,385nm,18.0s
WVT Waverly 147.70 318 **PKPdf** **18 14 19.9 -3.5**
WVT Waverly 147.70 318 IAMs_20 IAMs_20 19 18 40.6
comp=Z,372nm,19.0s
WVT Waverly 147.70 318 PKHKP PKPpre 18 14 19.9
WVT MLR MLR
comp=Z,400nm,19.0s
P40A Paris 147.91 327 **PKPdf** **18 14 23.2 -0.4**
CCM Cathedral Cave 148.52 324 **PKPdf** **18 14 22.2 -2.5**
CCM Cathedral Cave 148.52 324 PKHKP PKPpre 18 14 22.2
BMO Blue Mountains 148.84 5 **PKPdf** **18 14 22.7 -2.5**
BMO Blue Mountains 148.84 5 PKHKP PKPpre 18 14 22.7
BMO MLR MLR
comp=Z,400nm,18.0s
LRAL Lakeview Retre 148.88 313 **PKPdf** **18 14 24.3 -1.1**
R40A Maddies Statio 148.92 326 **PKPdf** **18 14 25.8 +0.4**
T42A Van Buren 149.14 323 **PKPbc** **18 14 29.3 -0.6**
FLWY Flagg Ranch 149.63 355 IAMs_20 IAMs_20 19 26 46.4
comp=Z,343nm,20.0s
OXF Oxford 149.70 317 IAMs_20 IAMs_20 19 23 00.8
comp=Z,339nm,19.0s
S39A Bolivar 149.93 326 IAMs_20 IAMs_20 19 31 26.8
comp=Z,341nm,19.0s
MOOW Moose Ponds 149.96 355 IAMs_20 IAMs_20 19 20 47.2
comp=Z,364nm,21.0s
LOHW Long Hollow 150.09 355 IAMs_20 IAMs_20 19 28 33.5
comp=Z,287nm,20.0s
MFID Camas Ranch 150.37 3 **PKPdf** **18 14 28.2 +0.5**
PDAR Pinedale Array 150.82 353 PKPbc **PKPbc** **18 14 33.2 -0.9**
comp=Z,4.2nm,1.0s,baz=48,slow=2.2,SNR=11
143A Socs Landing, 152.12 316 IAMs_20 IAMs_20 19 21 54.9
comp=Z,406nm,20.0s
HWUT Hardware Ranch 152.15 356 IAMs_20 IAMs_20 19 27 51.1
comp=Z,367nm,21.0s
O02D Mt. Diablo Mer 152.51 15 IAMs_20 IAMs_20 19 32 08.9
comp=Z,368nm,20.0s
KSCO Kaye Shedlock' 152.92 340 IAMs_20 IAMs_20 19 23 50.5
comp=Z,360nm,20.0s
ISCO Idaho Springs 153.03 346 IAMs_20 IAMs_20 19 27 57.9
comp=Z,421nm,21.0s
OK029 Liberty Lake 153.52 329 IAMs_20 IAMs_20 19 35 05.6
comp=Z,380nm,20.0s
WELL Weller Preserv 154.65 13 IAMs_20 IAMs_20 19 29 36.3
comp=Z,335nm,21.0s
SDCO Great Sand Dun 154.94 344 IAMs_20 IAMs_20 19 28 21.7
comp=Z,380nm,20.0s
WMOK Wichita Mounta 155.02 329 IAMs_20 IAMs_20 19 25 44.2
comp=Z,404nm,21.0s
NVAR Mina Array Bea 155.09 8 PKP **PKPdf** **18 14 33.9 -1.0**
comp=Z,0.4nm,0.6s,baz=51,slow=0.4,SNR=3.6
JRSC Jasper Ridge 155.27 16 IAMs_20 IAMs_20 19 23 29.8
comp=Z,433nm,22.0s
WHTX Lake Whitney, 156.40 323 IAMs_20 IAMs_20 19 27 27.6
comp=Z,377nm,21.0s
TIN Tinemaha, Big 156.45 9 IAMs_20 IAMs_20 19 32 16.8
comp=Z,324nm,20.0s
ABTX Abilene, Hawle 157.13 328 IAMs_20 IAMs_20 19 28 31.3
comp=Z,395nm,20.0s
JCT Junction City 158.87 324 IAMs_20 IAMs_20 19 28 31.7
comp=Z,375nm,21.0s
TXAR Lajitas Array 161.81 330 PKP **PKPdf** **18 14 42.3 -0.8**
comp=Z,1.7nm,1.1s,baz=48,slow=1.9,SNR=7.4
TXAR PKPab **PKPab** **18 15 27.3 -1.1**
comp=Z,0.3nm,0.7s,baz=38,slow=3.8,SNR=1.1

*ISK **30** 18:00:33.9, 42°.20N×34°.25E, h16km, ML2.5/4*
*AFAD **30** 18:00:37.4, 41°.83N×34°.18E, h7km±2km, ML1.8*
ISC 30 18:00:36.0±1.1, 41°.95N±0°.04×34°.18E±0°.03, h17km±8km, n20, σ1°8/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BZK	**Bozkurt**	**0.14**	**276**	Pg	**Pg**	**18 00 40.7**	**+0.9**
SEYI	**Kastamonu-Seyd**	**0.45**	**227**	P	**Pg**	**18 00 45.3**	**+0.1**
SEYI				S	**Sg**	**18 00 50.9**	**-0.5**
SEYI				IAML		18 00 51.0	
	comp=E,181nm,0.3s						
BOYA	**Sinop/Boyabat-**	**0.56**	**138**	P	**Pg**	**18 00 47.1**	**+0.1**
BOYA				S	**Sg**	**18 00 54.0**	**-0.5**
SINO	**SINOP_Merkez**	**0.76**	**84**	P	**Pg**	**18 00 52.7**	**+1.9**
SNOP	**Sinop**	**0.77**	**84**	Pg	**Pg**	**18 00 48.8**	**-2.1**
SNOP				Sg	**Sg**	**18 00 59.5**	**-1.6**
KAGI	**orum-Kargı**	**0.84**	**165**	P	**Pg**	**18 00 51.8**	**-0.5**
KAGI				IAML		18 01 07.0	
	comp=N,49nm,0.3s						
PELI	**Kastamonı-Ara**	**0.92**	**226**	P	**Pg**	**18 00 53.6**	**-0.3**
PELI				S	**Sg**	**18 01 04.3**	**-1.7**
PELI				IAML		18 01 07.0	
	comp=E,41nm,0.2s						
PELI				IAML		18 01 08.0	
	comp=N,31nm,0.4s						
CIDE	**Kastamonu/Cide**	**0.93**	**266**	P	**Pg**	**18 00 53.8**	**-0.1**
CIDE				S	**Sg**	**18 01 05.7**	**-0.4**
ILGA	**Ilgaz**	**0.96**	**202**	P	**Pb**	**18 00 54.2**	**-0.2**
ILGA				S	**Sb**	**18 01 06.5**	**-0.3**
ILGA				IAML		18 01 10.0	
	comp=N,31nm,0.5s						
ILGA				IAML		18 01 10.0	
	comp=E,31nm,0.4s						
KURC	**Kurucasile-Bar**	**1.08**	**265**	Pn	**Pg**	**18 00 56.3**	**-0.6**
YENC	**ankr-Yen**	**1.29**	**192**	P	**Pn**	**18 01 00.7**	**+1.3**
YENC				S	**Sn**	**18 01 17.4**	**+1.1**
AYAZ	**Ayas K¶y, M**	**1.36**	**158**	P	**Pg**	**18 01 02.2**	**-0.1**
AYAZ				S	**Sn**	**18 01 19.1**	**+1.0**
AYAZ				IAML		18 01 21.0	
	comp=E,20nm,0.4s						
KBUK	**KARABUK-Merkez**	**1.37**	**239**	P	**Pn**	**18 01 00.4**	**+0.1**
KBUK				IAML		18 01 24.0	
	comp=N,12nm,0.6s						
BTIN	**Bartın**	**1.48**	**259**	P	**Pn**	**18 01 00.1**	**-1.8**
BTIN				IAML		18 01 23.0	
	comp=N,18nm,0.8s						
BTIN				IAML		18 01 23.0	
	comp=E,26nm,0.4s						
ELDT	**Eldivan**	**1.56**	**202**	P	**Pg**	**18 01 05.2**	**-0.9**
ELDT				IAML		18 01 27.0	
	comp=E,22nm,0.5s						
ELDT				IAML		18 01 28.0	
	comp=N,11nm,0.4s						
DERS	**Karabk-Eskip**	**1.65**	**229**	P	**Pg**	**18 01 07.5**	**-0.2**
DERS				IAML		18 01 32.0	
	comp=E,10nm,0.5s						
DERS				IAML		18 01 33.0	
	comp=N,9.3nm,0.6s						
SUNG	**orum-Sungurl**	**1.76**	**178**	P	**Pg**	**18 01 08.6**	**-1.2**
SUNG				IAML		18 01 31.0	
	comp=N,14nm,2.0s						
CORM	**Corum**	**1.80**	**169**	Pn	**Pb**	**18 01 08.6**	**0.0**
CORM				Sn	**Sg**	**18 01 34.1**	**+0.2**
DEVR	**Zonguldak/Devr**	**1.84**	**245**	P	**Pn**	**18 01 08.7**	**+1.8**
BCAM	**Yenicaga**	**1.95**	**235**	P	**Pn**	**18 01 09.7**	**+1.2**

*DJA **30** 18:16:18.9±1.6, 8°.N±10°×9°.4E±1°.8, h10km, M3.9/9, mb3.9/2, MLv3.8/9*
*IDC **30** 18:16:21.7±2.7, 6°.52N×94°.02E, h0km, mb3.3/5, mbtmp3.3/6, ML3.6/1, Error ellipse: s-maj=96.4km s-min=23.5km az=65.0*
ISC 30 18:16:28.3±1.5, 6°.9N±0°.1×94°.4E±0°.3, h26km, n9, σ2s80/10, mb3.4/5, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**1.62**	**148**	P	**Pn**	**18 16 53.6**	**-1.6**
BSI				S	**Sb**	**18 17 22.2**	**+4.7**
LHMI	**Lhok Sumawe**	**2.99**	**123**	P	**Pn**	**18 17 10.3**	**-3.7**
TPTI		**4.51**	**143**	P	**Pn**	**18 17 34.7**	**-0.4**
	0.1nm9.7nm,1.0s						

CMAR Chiang Mai Arr 12.32 20 Pn **Pn** **18 19 24.8 +2.6**
0.1nm,0.3s,baz=206,slow=13,SNR=1.8
0.1nm,0.3s
MKAR Makanchi Array 41.12 347 P **P** **18 24 09.2 -1.0**
0.5nm,0.8s,baz=150,slow=6.7,SNR=2.2
0.5nm,0.8s
SONM Songino Array 42.07 12 P **P** **18 24 19.3 +1.2**
0.3nm,0.7s,baz=188,slow=8.3,SNR=2.5
0.3nm,0.7s
WRA Warramunga Arr 47.45 125 P **P** **18 24 59.1 -2.2**
0.3nm,0.7s,baz=306,slow=8.9,SNR=4.7
0.3nm,0.7s
ZALV Zalesovo Beam 47.58 352 P **P** **18 25 01.4 -0.3**
0.3nm,0.4s,baz=184,slow=6.9,SNR=2.1
0.3nm,0.4s
ASAR Alice Springs 49.06 130 P **P** **18 25 12.0 -1.6**
0.4nm,0.7s,baz=299,slow=7.4,SNR=6.3
0.4nm,0.7s

*IDC **30** 18:25:56.8±0.7, 13°.84S×66°.33E, h0km, mb4.1/19, mbtmp4.1/20, ML4.4/1, MS4.3/58, Error ellipse: s-maj=21.0km s-min=16.3km az=178.0*
*NEIC **30** 18:25:59.7±2.5, 13°.76S±0°.06×66°.16E±0°.09, h10km±1km, mb4.7/46, Error ellipse: s-maj=17.3km s-min=3.0km az=124.0*
*GCMT **30** 18:26:02.7±0.1, 13°.69S±0°.01×66°.07E±0°.01, h13km, MW5.2/134, Moment Tensor Solution. s71,c95; s134,c234; Duration: 1ſ0 Moment tensor: Scale 10^17 Nm; Mrr-0.02±.01; Mθθ-0.66±.01; Mφφ0.68±.01; Mrθ-0.10±.03; Mrφ0.28±.01; Mθφ0.22±.03; Best double couple: M0 0.76200×10^17 NP1:φs57.00000°, δ72.00000°, λ2.00000°. NP2:φs326.00000°, δ88.00000°, λ162.00000°. Principal axes: T 0.7830, Plg14.0000°, Azm280.0000°; N -0.0420, Plg72.0000°, Azm141.0000°; P -0.7410, Plg11.0000°, Azm13.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 30 18:25:59.7±0.5, 13°.8S±0°.1×66°.15E±0°.07, h15km, n136, σ1ſ79/80, mb4.6/53, MS4.3/59, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**8.74**	**46**	T	T	18 36 49.5	
	baz=226,slow=75,SNR=3564						
H08S2	**Diego Garcia H**	**8.75**	**46**	T	T	18 37 06.5	
	baz=226,slow=75,SNR=2079						
H08S3	**Diego Garcia H**	**8.76**	**46**	T	T	18 36 50.9	
	baz=226,slow=75,SNR=4390						
MSEY	**Mahe Island**	**13.91**	**310**	Pn	**Pn**	**18 29 17.0**	**+0.5**
KAAM	**Kaadhehdhoo**	**15.76**	**26**	Pn	**Pn**	**18 29 41.3**	**0.0**
OPO	**Ambohidratompo**	**18.80**	**253**	P	**Pn**	**18 30 20.8**	**+1.3**
	0.1nm,0.3s,baz=83,slow=18,SNR=9.2						
OPO				S	Sn	18 33 36.0	-14
	2.0nm,0.8s,baz=82,slow=23,SNR=1.7						
	2.2nm,0.4s						
ABPO	**Ambohimpanom**	**18.86**	**252**		**P**	**18 30 18.0**	**-1.6**
HMDM	**Hanimaadhoo**	**21.63**	**19**	P	**P**	**18 30 47.6**	**-1.9**
PALK	**Pallekele**	**25.46**	**35**	LR	LR	18 39 22.3	
	comp=Z,785nm,19.4s,baz=210,slow=32						
PALK	**Pallekele**	**25.46**	**35**	P	**P**	**18 31 29.0**	**+1.6**
PALK				IAmb	IAmb	18 31 32.8	
	comp=Z,31nm,1.3s						
KIBK	**Kibwezi**	**30.03**	**290**	P	**P**	**18 32 07.0**	**-1.4**
KMBO	**Kilima Mbogo**	**31.25**	**291**	LR	LR	18 42 10.1	
	comp=Z,562nm,21.6s,baz=104,slow=31						
ATD	**Arta Tunnel**	**34.19**	**316**	LR	LR	18 45 45.0	
	comp=Z,20nm,18.8s,baz=136,slow=35						
GSI	**Gunungsitoli**	**34.58**	**67**		**P**	**18 32 49.4**	**+1.1**
GSI				IAmb	IAmb	18 33 12.7	
	comp=Z,24nm,1.4s						
LODK	**Lodwar**	**35.02**	**297**	P	**P**	**18 32 51.1**	**-1.0**
RPSI	**Rantau Prapat**	**36.41**	**66**	P	**P**	**18 33 03.9**	**-0.2**
RPSI				IAmb	IAmb	18 33 31.0	
	comp=Z,7.7nm,1.2s						
LSZ	**Lusaka**	**36.74**	**263**	LR	LR	18 46 41.0	
	comp=Z,886nm,19.3s,baz=109,slow=34						
LSZ	**Lusaka**	**36.74**	**263**		**P**	**18 33 06.9**	**-0.1**
LSZ				IAmb	IAmb	18 33 16.5	
	comp=Z,9.9nm,1.0s						
MBAR	**Mbarara**	**37.43**	**288**	LR	LR	18 46 09.7	
	comp=Z,670nm,20.3s,baz=88,slow=32						
MBAR	**Mbarara**	**37.43**	**288**	P	**P**	**18 33 12.4**	**-0.5**
KSANE	**Kasane**	**39.58**	**259**		**P**	**18 33 30.2**	**-0.6**
KSANE				IAmb	IAmb	18 33 41.2	
	comp=Z,20nm,1.1s						
LBTB	**Lobatse**	**39.69**	**247**	LR	LR	18 48 37.1	
	comp=Z,581nm,18.3s,baz=80,slow=34						
BOSA	**Boshof**	**40.64**	**242**	P	**P**	**18 33 39.1**	**-0.5**
	comp=Z,8.1nm,1.1s,baz=67,slow=6.4,SNR=5.4						
BOSA				LR	LR	18 48 04.9	
	comp=Z,370nm,18.2s,baz=88,slow=33						
	comp=Z,8.1nm,1.1s						
LEM	**Lembang**	**41.34**	**85**	LR	LR	18 47 01.0	
	comp=Z,491nm,20.9s,baz=306,slow=31						
RAYN	**Ar Rayn**	**42.26**	**331**		**P**	**18 33 52.3**	**-0.5**
BRDH	**Bariadhala**	**44.05**	**35**	LR	LR	18 51 04.0	
	comp=Z,504nm,20.1s,baz=224,slow=34						
KOOLE	**Kule**	**44.39**	**251**	P	**P**	**18 34 08.6**	**-1.6**
KOOLE				IAmb	IAmb	18 34 13.3	
	comp=Z,8.7nm,0.8s						
SUR	**Sutherland**	**45.22**	**238**	LR	LR	18 49 19.4	
	comp=Z,347nm,19.0s,baz=84,slow=31						
CMAR	**Chiang Mai Arr**	**45.55**	**46**	P	**P**	**18 34 18.7**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=233,slow=8.4,SNR=4.9						
CMAR				PcP	**PcP**	**18 35 58.3**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=212,slow=3.4,SNR=2.4						
CMAR				LR	LR	18 52 18.3	
	comp=Z,164nm,18.6s,baz=235,slow=35						
	comp=Z,0.2nm,0.6s						
SHL	**Shillong**	**46.50**	**33**	P	**P**	**18 34 26.4**	**-0.4**
TSUM	**Tsumeb**	**46.75**	**257**	LR	LR	18 53 26.1	
	comp=Z,801nm,18.4s,baz=78,slow=35						
NIL	**Nilore**	**47.70**	**8**		**P**	**18 34 34.8**	**-1.0**
NIL				IAmb	IAmb	18 34 38.9	
	comp=Z,11nm,1.4s						
H01W3	**Cape Leeuwin H**	**47.95**	**125**	T	T	19 26 13.8	
	baz=284,slow=75,SNR=77						
H01W2	**Cape Leeuwin H**	**47.96**	**125**	T	T	19 26 06.9	
	baz=284,slow=75,SNR=93						
H01W1	**Cape Leeuwin H**	**47.97**	**125**	T	T	19 26 08.0	
	baz=284,slow=75,SNR=85						
LSA	**Lhasa**	**49.54**	**29**	P	**P**	**18 34 48.7**	**-2.0**
LSA				IAmb	IAmb	18 34 59.0	
	comp=Z,14nm,1.4s						
NWAO	**Narrogin (SRO)**	**50.08**	**121**	LR	LR	18 51 18.7	
	comp=Z,486nm,21.1s,baz=308,slow=30						
GAR	**Garm**	**52.70**	**4**	P	**P**	**18 35 14.2**	**+0.4**
GAR				IAmb	IAmb	18 35 31.4	
	comp=Z,14nm,1.2s						
DRK	**Karamyk**	**53.29**	**5**	P	**P**	**18 35 16.3**	**-2.1**
DRK				IAmb	IAmb	18 35 41.9	
	comp=Z,8.9nm,1.2s						
KAPI	**Kappang**	**53.50**	**86**	LR	LR	18 54 32.7	
	comp=Z,414nm,21.4s,baz=232,slow=32						
KAPI	**Kappang**	**53.50**	**86**	P	**P**	**18 35 17.4**	**-2.7**
ASF	**Jabal al Asfar**	**53.64**	**329**	LR	LR	18 56 48.9	
	comp=Z,154nm,18.4s,baz=151,slow=34						
MAW	**Mawson**	**53.77**	**182**	LR	LR	18 53 03.7	
	comp=Z,261nm,20.1s,baz=0.5,slow=30						
BTK	**Batken**	**53.79**	**4**		**P**	**18 35 21.3**	**-0.4**
BTK				IAmb	IAmb	18 35 48.0	
	comp=Z,5.3nm,1.1s						
ARSB	**Arslanbob**	**55.24**	**6**	P	**P**	**18 35 30.4**	**-1.9**
ARSB				IAmb	IAmb	18 35 48.8	
	comp=Z,7.4nm,1.1s						
NRN	**Naryn**	**55.73**	**9**		**P**	**18 35 34.9**	**-1.2**
AAK	**Ala-Archa**	**56.71**	**7**	LR	LR	18 58 17.3	
	comp=Z,283nm,19.6s,baz=194,slow=34						
AAK	**Ala-Archa**	**56.71**	**7**		**P**	**18 35 43.3**	**+0.4**
BOOM	**Boomskoye usch**	**56.76**	**9**	P	**P**	**18 35 43.4**	**+0.2**
GURO	**Guroymak-BITLI**	**56.79**	**337**	P	**P**	**18 35 45.6**	**+2.2**
GURO				IAmb	IAmb	18 35 56.2	
	comp=Z,9.7nm,1.1s						
SOEI	**Soe**	**56.93**	**93**	P	**P**	**18 35 45.1**	**+0.1**
FITZ	**Fitzroy Crossi**	**57.15**	**103**	LR	LR	18 56 23.2	
	comp=Z,814nm,21.4s,baz=270,slow=32						
PRZ	**Przheval'sk**	**57.16**	**11**	P	**P**	**18 35 45.5**	**-0.6**
PRZ				IAmb	IAmb	18 36 08.4	
	comp=Z,5.9nm,1.0s						
GNI	**Garni**	**57.27**	**341**	LR	LR	19 01 15.6	
	comp=Z,136nm,18.5s,baz=298,slow=37						
GNI	**Garni**	**57.27**	**341**		**P**	**18 35 47.6**	**+0.7**
EDA	**Edea**	**58.23**	**283**		**P**	**18 35 50.2**	**-3.8**

TGY Tagaytay City 60.93 65 LR LR 19 01 27.2
comp=Z,58nm,18.6s,baz=248,slow=35
KBZ Khabaz 61.09 341 P **P** **18 36 12.4 -0.7**
comp=Z,1.1nm,0.9s,baz=182,slow=4.0,SNR=5.1
KBZ LR LR 19 01 20.3
comp=Z,174nm,20.5s,baz=170,slow=35
comp=Z,1.1nm,0.9s
BRTR Keskin Array B 61.28 332 P **P** **18 36 13.5 -1.2**
comp=Z,0.6nm,0.8s,baz=144,slow=9.1,SNR=4.1
comp=Z,0.6nm,0.8s
GTA2 Gaotai 61.60 29 P **P** **18 36 19.3 +2.5**
GTA2 sP pwP 18 36 32.5 +8.0
GTA2 pmax pmax
comp=Z,5.0nm,1.1s
MKAR Makanchi Array 62.06 12 P **P** **18 36 17.3 -2.3**
comp=Z,5.3nm,1.1s,baz=204,slow=7.4,SNR=10.0
MKAR LR LR 19 02 17.4
comp=Z,210nm,19.6s,baz=172,slow=35
comp=Z,5.3nm,1.1s
DAV Davao City (W) 62.53 74 LR LR 19 01 02.0
comp=Z,222nm,21.9s,baz=254,slow=34
AKTO Aktyubinsk 64.38 354 LR LR 19 03 13.2
comp=Z,122nm,20.5s,baz=122,slow=35
ASAR Alice Springs 64.41 110 P **P** **18 36 33.5 -2.3**
comp=Z,0.7nm,0.8s,baz=270,slow=6.0,SNR=19
ASAR LR LR 19 01 55.1
comp=Z,503nm,18.1s,baz=272,slow=34
comp=Z,0.7nm,0.8s
KURBB Kurchatov Arra 65.09 9 P **P** **18 36 37.1 -2.4**
comp=Z,2.1nm,1.0s,baz=206,slow=6.9,SNR=12
KURBB LR LR 19 02 34.8
comp=Z,224nm,21.2s,baz=174,slow=34
comp=Z,2.1nm,1.0s
WRA Warramunga Arr 65.16 106 P **P** **18 36 38.9 -1.9**
comp=Z,2.3nm,0.9s,baz=269,slow=5.9,SNR=14
comp=Z,2.3nm,0.9s
WRA Warramunga Arr 65.16 106 **P** **18 36 40.4 -0.4**
WRAB Tennant Creek 65.17 106 P **P** **18 36 42.2 +1.4**
KURK Kurchatov 65.19 9 **P** **18 36 40.6 +0.5**
KURK IAmb IAmb 18 36 54.3
comp=Z,3.5nm,0.9s
WR8 Warramunga Arr 65.31 106 **P** **18 36 43.5 +1.8**
SIJI Sorong 65.65 85 LR LR 19 01 19.8
comp=Z,176nm,21.8s,baz=224,slow=32
BVAR Borovoye Array 66.68 3 P **P** **18 36 49.6 -0.1**
comp=Z,2.9nm,0.9s,baz=152,slow=6.7,SNR=9.5
BVAR LR LR 19 05 18.6
comp=Z,144nm,20.1s,baz=178,slow=35
comp=Z,2.9nm,0.9s
BORK Borovoye 66.70 3 P **P** **18 36 51.0 +1.2**
BORK IAmb IAmb 18 37 00.3
comp=Z,5.4nm,1.0s
TORD Torodi Ar. Bea 69.25 290 P **P** **18 37 05.8 -0.9**
comp=Z,3.6nm,1.0s,baz=114,slow=3.6,SNR=8.6
comp=Z,3.6nm,1.0s
TORD Torodi Ar. Bea 69.25 290 **P** **18 37 06.4 -0.2**
MLR Muntele Rosu 69.33 331 LR LR 19 08 46.6
comp=Z,59nm,18.2s,baz=151,slow=37
ZAA0 Zalesovo Array 69.37 12 P **P** **18 37 06.2 -0.4**
ZALV Zalesovo Beam 69.37 12 P **P** **18 37 05.8 -0.8**
comp=Z,3.7nm,0.9s,baz=207,slow=5.3,SNR=15
ZALV LR LR 19 06 13.6
comp=Z,246nm,19.9s,baz=191,slow=35
comp=Z,3.7nm,0.9s
ARTI Arti 70.25 355 LR LR 19 07 50.3
comp=Z,105nm,19.4s,baz=165,slow=36
SNAA Sanae 70.39 198 LR LR 19 01 35.4
comp=Z,137nm,19.7s,baz=14,slow=30
STKA Stephens Creek 70.58 119 LR LR 19 03 35.9
comp=Z,440nm,21.0s,baz=242,slow=32
SONM Songino Array 71.09 27 P **P** **18 37 17.5 0.0**
comp=Z,1.9nm,0.7s,baz=217,slow=6.9,SNR=14
SONM LR LR 19 06 47.0
comp=Z,271nm,21.5s,baz=224,slow=34
comp=Z,1.9nm,0.7s
SONM Songino Array 71.09 27 IAmb IAmb 18 37 28.9
comp=Z,3.1nm,1.0s
AKASG Malin Array Be 71.91 336 P **P** **18 37 22.8 +0.6**
comp=Z,0.4nm,0.6s,baz=150,slow=5.4,SNR=5.4
AKASG LR LR 19 07 34.9
comp=Z,74nm,21.4s,baz=82,slow=35
comp=Z,0.4nm,0.6s
JOW Kunigami 72.59 56 LR LR 19 10 19.9
comp=Z,94nm,18.7s,baz=170,slow=37
KEST Kesra 72.87 315 LR LR 19 09 20.2
comp=Z,289nm,20.4s,baz=104,slow=36
TLY Talaya 72.91 23 LR LR 19 08 36.7
comp=Z,220nm,20.0s,baz=215,slow=35
DBIC Dimbokro 73.34 281 P **P** **18 37 33.3 +1.8**
comp=Z,7.1nm,1.0s,baz=127,slow=8.2,SNR=7.1
DBIC LR LR 19 07 04.2
comp=Z,171nm,21.3s,baz=101,slow=34
comp=Z,7.1nm,1.0s
STHS Stebnicka Huta 74.37 331 *e*P P 18 37 42.7 +5.9
JAY Jayapura 74.41 89 LR LR 19 10 39.7
comp=Z,69nm,19.6s,baz=257,slow=36
LANS Liptovska Anna 75.03 330 *e*P **P** **18 37 43.9 +3.3**
MODS Modra-Piesok 75.58 329 *e*P P 18 37 48.8 +5.0
RONA Rosalia, Austr 75.65 328 *e*P **P** **18 37 47.6 +3.4**
comp=Z,8.6nm,1.5s
SOKA Soboth 75.67 326 *e*P **P** **18 37 48.0 +3.6**
comp=Z,6.6nm,1.2s
ARSA Arzberg 75.76 327 *e*pP P 18 37 50.7 +5.8
comp=Z,3.9nm,1.0s
CONA Conrad Observa 76.02 328 *e*P **P** **18 37 49.2 +2.8**
comp=Z,5.8nm,1.1s
CTA Charters Tower 76.23 108 LR LR 19 09 29.2
comp=Z,535nm,18.9s,baz=238,slow=34
QSPA South Pole Qui 76.25 180 LR LR 19 06 42.5
comp=Z,284nm,21.1s,baz=284,slow=32
QSPA South Pole Qui 76.25 180 P **P** **18 37 49.9 +2.3**
QSPA IAmb IAmb 18 37 53.4
comp=Z,10nm,1.1s
MYKA Terra Mystica 76.39 326 *e*pP P 18 37 54.6 +6.0
comp=Z,8.3nm,1.1s
MOA Molln 76.80 327 *e*P **P** **18 37 53.3 +2.5**
comp=Z,13nm,1.3s
BIOA Bad Ischl, Aus 77.04 327 *e*P **P** **18 37 55.1 +2.9**
comp=Z,7.3nm,1.5s
ABTA Abfaltersbach 77.08 325 *e*P **P** **18 37 54.6 +2.1**
comp=Z,5.7nm,0.8s
KSRS Korea Array 77.19 46 P **P** **18 37 52.0 -1.1**
comp=Z,0.8nm,0.8s,baz=268,slow=5.4,SNR=2.4
KSRS LR LR 19 11 27.9
comp=Z,144nm,20.7s,baz=245,slow=36
comp=Z,0.8nm,0.8s
LESA Schwarzleotal 77.39 326 *i* P **P** **18 37 57.8 +3.6**
comp=Z,1.1nm,1.4s
GERES GERESS Array B 77.72 328 P **P** **18 37 58.1 +2.1**
comp=Z,0.6nm,0.9s,baz=134,slow=9.5,SNR=3.5
comp=Z,0.6nm,0.9s
VNDA Vanda 77.83 167 LR LR 19 08 27.5
comp=Z,221nm,19.2s,baz=272,slow=33
WTTA Wattenberg 77.87 325 *i* P **P** **18 37 59.8 +2.8**
comp=Z,8.2nm,1.0s
WATA Walderalm 77.94 325 *e*P **P** **18 38 00.1 +2.7**
comp=Z,3.7nm,0.8s
SQTA Sankt Quirin 78.08 325 *e*P **P** **18 38 00.5 +2.5**
comp=Z,4.5nm,1.4s
MOTA Moosalm 78.21 325 *e*P **P** **18 38 01.8 +2.9**
comp=Z,6.2nm,1.2s
FETA Feichten 78.23 325 *e*P **P** **18 38 01.2 +2.2**
comp=Z,5.3nm,1.1s
RETA Reutte 78.48 325 *i* P **P** **18 38 03.0 +2.7**
comp=Z,8.0nm,1.2s
DAVA Damuels 78.86 325 *e*P **P** **18 38 06.0 +3.6**
comp=Z,6.2nm,1.2s
PMG Port Moresby 79.14 97 LR LR 19 09 58.5
comp=Z,218nm,20.8s,baz=217,slow=34
MDT Midelt 81.87 307 LR LR 19 14 32.5
comp=Z,192nm,20.5s,baz=94,slow=36
GUMO Guam 82.57 74 LR LR 19 12 32.2
comp=Z,40nm,20.8s,baz=108,slow=34
ESDC Sonseca Array 84.03 313 P **P** **18 38 31.0 +1.1**
comp=Z,3.8nm,1.2s,baz=99,slow=4.1,SNR=6.0
ESDC LR LR 19 15 33.5
comp=Z,182nm,21.2s,baz=117,slow=35
comp=Z,3.8nm,1.2s
ESDC Sonseca Array 84.03 313 **P** **18 38 30.1 +0.2**
ESDC IAmb IAmb 18 38 42.5
comp=Z,7.0nm,1.2s
JCJ Chichijima 84.18 60 LR LR 19 10 45.2
comp=Z,87nm,19.4s,baz=186,slow=32
JHJ Hachijo jima 2 84.23 54 LR LR 19 16 56.4
comp=Z,58nm,19.5s,baz=276,slow=36
MJAR Matsushiro Arr 84.25 50 P **P** **18 38 30.0 -1.0**
comp=Z,2.0nm,1.1s,baz=241,slow=4.9,SNR=2.5
MJAR LR LR 19 14 00.6
comp=Z,78nm,21.1s,baz=242,slow=34

comp=Z,2.0nm,1.1s
MJAR Matsushiro Arr 84.25 50 IAmb IAmb 18 39 12.7
comp=Z,7.5nm,1.4s
NRIK Noril'sk 84.32 7 LR LR 19 15 30.6
comp=Z,211nm,19.9s,baz=184,slow=35
KLR Kul'dur 85.20 37 LR LR 19 18 08.1
comp=Z,146nm,20.1s,baz=252,slow=37
ARCES ARCESS Array B 87.89 347 P **P 18 38 49.0 +0.7**
comp=Z,5.5nm,0.9s,baz=131,slow=2.5,SNR=2.8
comp=Z,5.5nm,0.9s
YAK Yakutsk 90.31 25 LR LR 19 19 37.3
comp=Z,207nm,19.4s,baz=239,slow=36
RPZ Rata Peaks 91.01 136 LR LR 19 12 38.4
comp=Z,176nm,19.5s,baz=108,slow=31
PMSA Palmer Station 93.10 199 LR LR 19 16 43.5
comp=Z,74nm,19.2s,baz=108,slow=33
DZM Mont Dzumac 94.15 114 LR LR 19 19 19.0
comp=Z,244nm,19.7s,baz=212,slow=34
TIXI Tiksi 94.83 16 LR LR 19 21 52.7
comp=Z,440nm,20.9s,baz=226,slow=35
TIXI Tiksi 94.83 16 P **P 18 39 21.5 +1.0**
TIXI IAmb IAmb 18 39 29.2
comp=Z,3.1nm,0.8s
URZ Urewera 97.30 132 LR LR 19 14 54.7
comp=Z,191nm,21.7s,baz=250,slow=30
ILAR Eielson Array 124.31 16 PKP **PKPdf 18 44 57.5 -0.1**
comp=Z,0.7nm,1.0s,baz=257,slow=2.6,SNR=5.0
YKA Yellowknife Ar 131.40 0 PKP **PKPdf 18 45 11.5 +0.4**
comp=Z,0.4nm,0.7s,baz=341,slow=3.2,SNR=8.3
PDAR Pinedale Array 150.93 353 PKPbc **PKPbc 18 45 52.6 +0.2**
comp=Z,0.7nm,0.9s,baz=357,slow=3.0,SNR=4.0

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*GCG **30** 18:48:06.7±1.6, 13.˚05N×90.˚86W, h37km±11km, MD3.8, Presumed earthquake*
*SNET **30** 18:48:06.0±1.9, 13.˚14N×90.˚86W, h15km, ML3.7, Presumed earthquake*
*CATAC **30** 18:48:10.2±0.4, 13˚N±2˚×9˚1W±˚, h13km±2km, M3.7/32, MLv3.7/32, Error ellipse: s-maj=4.9km s-min=1.9km az=22.1, confirmed*

ISC 30 18:48:11.4±1.4, 13°34N±0.06×90°62W±0.04, h22km±5km, n60, σ1s29/95, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAME	**Alcaldia de Sa**	**0.77**	**49**	P	**Pb**	**18 48 25.3**	**-0.9**
FAME				S	**Sb**	**18 48 35.7**	**-0.6**
PCG5	**San Vicente Pa**	**0.91**	**15**	*eP*	**Pn**	**18 48 29.1**	**+0.1**
LOAL	**Lomas de Alarc**	**1.05**	**51**	P	**Pn**	**18 48 29.8**	**-1.0**
LOAL				S	**Sb**	**18 48 42.9**	**-1.2**
LOAL	**Lomas de Alarc**	**1.05**	**51**	*eP*	**Pn**	**18 48 29.5**	**-1.3**
LOAL				*eS*	**Sn**	**18 48 48.1**	**+3.3**
SLOZ	**Alcaldia de Sa**	**1.06**	**50**	P	**Pn**	**18 48 30.0**	**-1.0**
SLOZ				S	**Sb**	**18 48 43.2**	**-1.4**
SBLS	**San Blas**	**1.09**	**62**	*eP*	**Pn**	**18 48 30.2**	**-1.4**
SNJE	**San Jose**	**1.12**	**62**	*eP*	**Pn**	**18 48 30.6**	**-1.3**
SNJE				*eS*	**Sn**	**18 48 52.0**	**+5.2**
JAYA	**Jayaque - finc**	**1.18**	**74**	P	**Pn**	**18 48 31.4**	**-1.3**
JAYA				S	**Sb**	**18 48 48.8**	**+0.7**
JAYA	**Jayaque - finc**	**1.18**	**74**	*eP*	**Pn**	**18 48 30.7**	**-2.0**
JAYA				*eS*	**Sb**	**18 48 49.8**	**+1.7**
JAYA	**Jayaque - finc**	**1.18**	**74**	*eP*	**Pn**	**18 48 30.9**	**-1.8**
UNIC	**Universidad Ca**	**1.22**	**58**	P	**Pn**	**18 48 32.2**	**-1.1**
UNIC				S	**Sn**	**18 48 49.1**	**0.0**
LALI	**Alcalda de L**	**1.27**	**83**	P	**Pn**	**18 48 31.9**	**-1.9**
LALI				S	**Sb**	**18 48 50.9**	**+0.3**
LALI	**Alcalda de L**	**1.27**	**83**	*eP*	**Pn**	**18 48 32.2**	**-1.6**
CEDA	**San Andres**	**1.28**	**69**	P	**Pn**	**18 48 33.2**	**-0.7**
CEDA				S	**Sn**	**18 48 50.7**	**+0.3**
CEDA	**San Andres**	**1.28**	**69**	*eP*	**Pn**	**18 48 32.9**	**-1.1**
STG5	**El Palmar, Qui**	**1.28**	**326**	*eP*	**Pb**	**18 48 34.8**	**0.0**
STG8	**El Palmar, Qui**	**1.32**	**327**	*eP*	**Pb**	**18 48 35.9**	**+0.3**
STG2	**El Palmar, Qui**	**1.32**	**326**	*eP*	**Pb**	**18 48 37.9**	**+2.3**
PMON	**Piamonte**	**1.32**	**73**	P	**Pn**	**18 48 33.5**	**-1.1**
PMON				S	**Sn**	**18 48 51.3**	**-0.4**
PMON	**Piamonte**	**1.32**	**73**	*eP*	**Pn**	**18 48 33.8**	**-0.8**
BQQS	**Boqueron**	**1.36**	**73**	*eP*	**Pn**	**18 48 34.3**	**-1.0**
PIC2	**El Picacho**	**1.39**	**73**	*eP*	**Pn**	**18 48 34.7**	**-1.0**
UEES	**Universidad Ev**	**1.39**	**74**	P	**Pn**	**18 48 34.5**	**-1.1**
UEES				S	**Sn**	**18 48 53.4**	**0.0**
SEMO	**Seminario San**	**1.40**	**75**	P	**Pn**	**18 48 35.4**	**-0.3**
SEMO				S	**Sb**	**18 48 54.3**	**-0.2**
UTEC	**Universidad Te**	**1.43**	**75**	P	**Pn**	**18 48 35.8**	**-0.2**
UTEC				S	**Sn**	**18 48 54.4**	**+0.2**
LOMA	**Loma Larga**	**1.44**	**78**	P	**Pn**	**18 48 35.4**	**-0.9**
LOMA				S	**Sb**	**18 48 55.4**	**-0.2**
LOMA	**Loma Larga**	**1.44**	**78**	*eP*	**Pn**	**18 48 35.3**	**-1.0**
IGN	**Direccin Gen**	**1.46**	**75**	P	**Pb**	**18 48 37.5**	**-0.3**
IGN				S	**Sn**	**18 48 55.0**	**+0.1**
UDBS	**Universidad Do**	**1.47**	**75**	P	**Pb**	**18 48 37.7**	**-0.4**
UDBS				S	**Sb**	**18 48 56.1**	**-0.4**
RTAL	**Retalhuleu**	**1.58**	**319**	P	**Pn**	**18 48 38.7**	**+0.6**
RTAL				S	**Sn**	**18 48 55.5**	**-2.4**
SJTE	**Alcalda de S**	**1.59**	**80**	*eP*	**Pn**	**18 48 37.3**	**-1.0**
MTO3	**Montecristo**	**1.62**	**49**	P	**Pn**	**18 48 38.2**	**-0.6**
MTO3				S	**Sn**	**18 48 58.2**	**-0.8**
MTO3	**Montecristo**	**1.62**	**49**	*eP*	**Pn**	**18 48 38.2**	**-0.6**
MTO3	**Montecristo**	**1.62**	**49**	*eP*	**Pn**	**18 48 38.4**	**-0.4**
SOKI	**Kika Raxquin**	**1.66**	**333**	*eP*	**Pn**	**18 48 36.5**	**-3.1**
APG	**El Apazote**	**1.67**	**5**	*eP*	**Pn**	**18 48 39.1**	**-0.3**
APG				*eS*	**Sb**	**18 49 03.7**	**+1.5**
PAVA	**Las Pavas**	**1.68**	**77**	P	**Pn**	**18 48 39.5**	**-0.1**
PAVA				S	**Sb**	**18 49 01.8**	**-0.5**
PAVA	**Las Pavas**	**1.68**	**77**	*eP*	**Pn**	**18 48 39.1**	**-0.5**
COEG	**Centro de Oper**	**1.71**	**80**	P	**Pn**	**18 48 39.8**	**-0.2**
COEG				S	**Sn**	**18 49 02.3**	**+1.0**
COEG	**Centro de Oper**	**1.71**	**80**	*eP*	**Pn**	**18 48 39.5**	**-0.5**
ESQI	**Esquipulas**	**1.74**	**45**	P	**Pn**	**18 48 40.2**	**-0.2**
ESQI				S	**Sn**	**18 49 01.6**	**-0.3**
ESQI	**Esquipulas**	**1.74**	**45**	*eP*	**Pn**	**18 48 40.2**	**-0.2**
TECO	**Alcaldia de Te**	**1.80**	**83**	P	**Pn**	**18 48 40.6**	**-0.5**
TECO				S	**Sb**	**18 49 05.1**	**-0.7**
SCLA	**Alcaldia de Sa**	**1.87**	**79**	P	**Pn**	**18 48 42.0**	**-0.2**
SCLA				S	**Sn**	**18 49 05.5**	**+0.3**
SCLA	**Alcaldia de Sa**	**1.87**	**79**	*eP*	**Pn**	**18 48 41.8**	**-0.4**
SCLA				*eS*	**Sb**	**18 49 10.9**	**+2.9**
P5NO	**Presa 5 de nov**	**1.92**	**70**	P	**Pn**	**18 48 42.4**	**-0.4**
P5NO				S	**Sn**	**18 49 07.3**	**+1.1**
PQSS	**Presa 15 de Se**	**2.02**	**82**	P	**Pn**	**18 48 43.8**	**-0.4**
PQSS				S	**Sn**	**18 49 10.2**	**+1.4**
HUEH	**Huehuetenango**	**2.15**	**337**	P	**Pn**	**18 48 46.5**	**+0.3**
HUEH				S	**Sn**	**18 49 11.8**	**-0.5**
PACA	**Pacayal**	**2.24**	**86**	P	**Pn**	**18 48 47.4**	**+0.1**
PACA				S	**Sb**	**18 49 16.6**	**-1.9**
PACA	**Pacayal**	**2.24**	**86**	*eP*	**Pn**	**18 48 46.3**	**-1.0**
PACA				*eS*	**Sb**	**18 49 20.6**	**+2.1**
RANC	**El Ranchito**	**2.27**	**87**	P	**Pn**	**18 48 46.1**	**-1.6**
RANC				S	**Sb**	**18 49 18.0**	**-1.4**
SARH	**Santa Rosa de**	**2.30**	**51**	P	**Pn**	**18 48 48.5**	**+0.4**
SARH				S	**Sn**	**18 49 15.2**	**-0.6**
SARH	**Santa Rosa de**	**2.30**	**51**	*eP*	**Pn**	**18 48 48.1**	**0.0**
LCND	**La Caada**	**2.66**	**90**	P	**Pn**	**18 48 52.0**	**-0.9**
CNCH	**Conchagua**	**2.71**	**91**	P	**Pn**	**18 48 52.4**	**-1.4**
CNCH				S	**Sn**	**18 49 28.6**	**+2.6**
TGUH	**Tegucigalpa,Un**	**3.33**	**77**	P	**Pn**	**18 49 03.3**	**+1.0**
CRIN	**San Cristobal**	**3.53**	**100**	P	**Pn**	**18 49 06.8**	**+1.7**
PETF	**Flores**	**3.63**	**11**	P	**Pn**	**18 49 06.0**	**-0.3**
YUSH	**Yuscaran**	**3.72**	**80**	P	**Pn**	**18 49 08.0**	**+0.4**
LIMN	**Finca el Limon**	**4.15**	**93**	P	**Pn**	**18 49 12.0**	**-1.5**
LIMN				S	**Sn**	**18 50 02.2**	**+0.7**

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*IDC **30** 18:55:49.0±3.4, 6.˚70S×147.˚12E, h138km±37km, mb3.1/3, mbtmp3.6/6, Error ellipse: s-maj=47.1km s-min=30.4km az=130.0*

ISC 30 18:55:49.9±1.3, 6°8S±0.˚1×147°1E±0.˚3, h150km, n7, σ0s74/8, mb3.4/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.64**	**179**	P	**Pn**	**18 56 32.2**	**-0.7**
	31nm,0.3s,baz=4.4,slow=13,SNR=53						
PMG				S	**Sn**	**18 57 05.7**	**-0.3**
	37nm,0.4s,baz=170,slow=22,SNR=15						
CTA	**Charters Tower**	**13.29**	**184**	P	**Pn**	**18 58 53.7**	**+0.8**
	2.6nm,0.9s,baz=1.2,slow=15,SNR=1.3						
WRA	**Warramunga Arr**	**18.05**	**222**	P	**P**	**18 59 49.6**	**-0.3**
	0.7nm,0.5s,baz=46,slow=11,SNR=13						
ASAR	**Alice Springs**	**21.08**	**216**	P	**P**	**19 00 23.3**	**+0.7**
	0.5nm,0.5s,baz=53,slow=9.3,SNR=28						
	0.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**53.71**	**299**	P	**P**	**19 04 57.0**	**+0.2**
	0.5nm,0.6s,baz=120,slow=6.0,SNR=4.6						
	0.5nm,0.6s						
ILAR	**Eielson Array**	**86.12**	**23**	P	**P**	**19 08 13.9**	**+0.2**
	0.4nm,0.6s,baz=249,slow=4.5,SNR=7.0						
	0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**145.38**	**283**	PKPbc	**PKPab**	**19 15 10.7**	**-0.9**
	0.7nm,0.6s,baz=75,slow=2.6,SNR=5.1						

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*IDC **30** 19:00:21.8±1.1, 13.˚60S×66.˚32E, h0km, mb3.8/7, mbtmp3.8/8, ML4.3/1, MS3.5/3, Error ellipse: s-maj=33.8km s-min=27.1km az=48.0*

ISC 30 19:00:23.2±1.1, 13°6S±0.˚2×66°3E±0.˚2, h10km, n18, σ0s59/9, mb3.9/7, MS3.3/3, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**8.51**	**46**	T	T	19 11 29.6	
	baz=226,slow=76,SNR=120						
H08S2	**Diego Garcia H**	**8.52**	**46**	T	T	19 11 22.8	
	baz=226,slow=76,SNR=101						
H08S3	**Diego Garcia H**	**8.53**	**46**	T	T	19 11 27.3	
	baz=226,slow=76,SNR=130						
OPO	**Ambohidratompo**	**18.99**	**253**	P	**P**	**19 04 45.3**	**-0.1**
	0.1nm,0.3s,baz=85,slow=17,SNR=10.0						
	1.1nm,0.3s						
PALK	**Pallekele**	**25.22**	**35**	LR	LR	19 13 21.7	
	comp=Z,85nm,18.4s,baz=77,slow=31						
MBAR	**Mbarara**	**37.50**	**287**	LR	LR	19 20 52.8	
	comp=Z,49nm,19.1s,baz=34,slow=33						
LEM	**Lembang**	**41.18**	**85**	LR	LR	19 21 35.0	
	comp=Z,72nm,18.9s,baz=284,slow=31						
H01W3	**Cape Leeuwin H**	**47.95**	**125**	T	T	20 00 19.8	
	baz=284,slow=75						
H01W2	**Cape Leeuwin H**	**47.95**	**125**	T	T	20 00 34.7	
	baz=284,slow=75						
H01W1	**Cape Leeuwin H**	**47.97**	**125**	T	T	20 00 35.8	
	baz=284,slow=75						
MKAR	**Makanchi Array**	**61.84**	**12**	P	**P**	**19 10 41.7**	**-0.8**
	0.5nm,0.6s,baz=192,slow=6.6,SNR=3.1						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**64.34**	**110**	P	**P**	**19 10 59.6**	**-0.2**
	0.4nm,0.9s,baz=271,slow=6.2,SNR=8.2						
	0.4nm,0.9s						
KURBB	**Kurchatov Arra**	**64.88**	**9**	P	**P**	**19 11 02.8**	**+0.3**
	1.3nm,0.3s,baz=205,slow=7.0,SNR=2.0						
	1.3nm,0.3s						
WRA	**Warramunga Arr**	**65.08**	**106**	P	**P**	**19 11 04.6**	**0.0**
	0.8nm,0.9s,baz=268,slow=6.1,SNR=6.0						
	0.8nm,0.9s						
BVAR	**Borovoye Array**	**66.48**	**3**	P	**P**	**19 11 12.4**	**-0.4**
	0.9nm,0.7s,baz=168,slow=7.6,SNR=4.2						
	0.9nm,0.7s						
ZALV	**Zalesovo Beam**	**69.15**	**12**	P	**P**	**19 11 28.8**	**-0.8**
	1.1nm,0.7s,baz=191,slow=6.0,SNR=5.5						
	1.1nm,0.7s						
SONM	**Songino Array**	**70.86**	**27**	P	**P**	**19 11 40.9**	**+0.5**
	0.5nm,0.7s,baz=211,slow=6.3,SNR=4.3						
	0.5nm,0.7s						
PDAR	**Pinedale Array**	**150.75**	**354**	PKPbc	**PKiKP**	**19 20 17.6**	**+0.5**
	0.5nm,0.7s,baz=356,slow=3.3,SNR=5.4						

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*TEH **30** 19:04:19.5, 37.˚33N×57.˚66E, h5km, ML3.5, Presumed earthquake*
*IDC **30** 19:04:21.3±6.2, 37.˚47N×57.˚47E, h0km, mb3.3/2, mbtmp3.5/5, ML3.1/3, MS3.1/1, Error ellipse: s-maj=109.2km s-min=19.4km az=7.0*

ISC 30 19:04:20.1±1.7, 37°42N±0.˚06×57°65E±0.˚04, h6km±14km, n26, σ1s95/26, 2C-2D, Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BJND	**Bojnord**	**0.25**	**233**	Pg	**Pg**	**19 04 23.8**	**-1.2**
ISFR	**Sfrayin**	**0.46**	**142**	Pg	**Pg**	**19 04 28.0**	**-1.0**
IEMG	**Emamgholi**	**0.80**	**90**	Pg	**Pg**	**19 04 35.8**	**+0.3**
SBZV	**Sabzevar**	**1.03**	**182**	Pg	**Pg**	**19 04 38.2**	**-1.5**
IAKL	**Akhelmad**	**1.20**	**132**	Pg	**Pg**	**19 04 41.2**	**-2.0**
IKRD	**Kardeh**	**1.62**	**113**	Pg	**Pn**	**19 04 49.1**	**-0.4**
TAPT	**Tabas- Tapeh t**	**2.56**	**189**	Pn	**Pn**	**19 05 03.2**	**+0.9**
IGLO	**Ghaloghah**	**3.19**	**255**	Pn	**Pn**	**19 05 13.2**	**+2.1**
TNSJ	**Nastanj**	**3.55**	**194**	Pn	**Pn**	**19 05 17.2**	**+1.4**
AFRZ	**Afriz**	**4.13**	**164**	Pn	**Pn**	**19 05 25.2**	**+1.2**
ILAS	**Lasjerd**	**4.29**	**243**	Pn	**Pn**	**19 05 27.4**	**+1.2**
IPRN	**Peran**	**4.42**	**256**	Pn	**Pn**	**19 05 29.7**	**+1.8**
TPRV	**Parvadeh(Tabas**	**4.45**	**190**	Pn	**Pn**	**19 05 29.3**	**+1.0**
ITEG	**Tejag**	**4.60**	**168**	Pn	**Pn**	**19 05 31.3**	**+0.9**
ANAR	**Anarak**	**5.29**	**218**	Pn	**Pn**	**19 05 40.9**	**+1.0**
ISFB	**Sefidab**	**5.35**	**237**	Pn	**Pn**	**19 05 42.6**	**+2.0**
ICHK	**Chekchek**	**5.81**	**208**	Pn	**Pn**	**19 05 47.5**	**+0.5**
IZEF	**Zefreh**	**6.27**	**226**	Pn	**Pn**	**19 05 55.1**	**+1.7**
AB31	**Akbulak array**	**11.95**	**7**	⇓Pn	**Pn**	**19 07 11.2**	**+0.3**
	1.1nm,0.8s,baz=193,slow=12,SNR=5.4						
AB31				⇑Sn	Sn	19 09 16.4	-8.1
	1.2nm,0.6s,baz=195,slow=23,SNR=4.4						
KBZ	**Khabaz**	**12.86**	**304**	Pn	**Pn**	**19 07 23.2**	**-0.1**
	0.1nm,0.3s,baz=177,slow=5.3,SNR=4.3						
KBZ				Sn	**Sn**	**19 09 43.3**	**-3.4**
	0.1nm,0.3s,baz=237,slow=14,SNR=2.0						
	0.5nm,0.5s						
AKTO	**Aktyubinsk**	**13.02**	**1**	⇑Pn	**Pn**	**19 07 26.4**	**+0.9**
	1.0nm,0.7s						
AKTO				⇓Sn	**Sn**	**19 09 45.6**	**-5.1**
	2.1nm,0.7s						
BVAR	**Borovoye Array**	**17.96**	**26**	P	**Pn**	**19 08 31.1**	**+0.7**
	0.1nm,0.3s,baz=214,slow=12,SNR=13						
	2.5nm,0.6s						
MMAI	**Mount Meron Ar**	**18.69**	**263**	LR	LR	19 17 56.1	
	comp=Z,60nm,18.8s,baz=96,slow=44						
KURBB	**Kurchatov Arra**	**19.91**	**42**	P	**Pn**	**19 08 56.3**	**+2.4**
	baz=240,slow=11,SNR=3.6						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**20.48**	**55**	P	Pn	19 09 01.2	+0.6
	0.9nm,0.7s,baz=241,slow=11,SNR=8.9						
	0.9nm,0.7s						
ZALV	**Zalesovo Beam**	**24.95**	**40**	P	**P**	**19 09 46.7**	**+2.6**
	0.4nm,0.4s,baz=242,slow=8.9,SNR=3.6						
	0.4nm,0.4s						

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*IDC **30** 19:13:01.5±1.2, 31.˚80N×23.˚66E, h0km, mb3.9/12, mbtmp3.7/22, ML3.2/6, Error ellipse: s-maj=23.7km s-min=15.5km az=178.0*
*GII **30** 19:13:06.3±0.0, 32.˚156N±0.˚002×24.˚299E±0.˚001, h0km, Mws4.0, confirmed*

ISC 30 19:13:03.0±0.9, 31°84N±0.˚09×23°92E±0.˚06, h10km, n42, σ1s76/65, mb3.9/11, Near coast of Libya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDI	**Anoyia**	**3.54**	**13**	Pn	**Pn**	**19 14 00.1**	**+2.0**
	13nm,0.3s,baz=220,slow=6.3,SNR=51						
IDI				Sn	**Sn**	**19 14 41.1**	**+1.2**
	5.2nm,0.3s,baz=232,slow=17,SNR=3.8						
CSS	**Mathiatis**	**8.46**	**66**	P	**Pn**	**19 15 07.3**	**+1.6**
CSS				S	**Sn**	**19 16 36.4**	**-4.8**
KZIT	**Kziot**	**9.00**	**93**	P	**Pn**	**19 15 13.8**	**+0.7**
KZIT				S	**Sn**	**19 16 53.2**	**-1.4**
RMNI	**Mount Ramon**	**9.36**	**95**	P	**Pn**	**19 15 18.2**	**+0.1**
RMNI				S	**Sn**	**19 17 02.2**	**-1.4**
AMAZ	**Amatzia**	**9.37**	**89**	P	**Pn**	**19 15 18.1**	**-0.1**
AMAZ				S	**Sn**	**19 17 01.7**	**-2.0**
OFRI	**`Ofer**	**9.40**	**82**	P	**Pn**	**19 15 18.2**	**-0.4**
OFRI				S	**Sn**	**19 17 01.4**	**-3.0**
KRMI	**Paran Flat**	**9.43**	**98**	P	**Pn**	**19 15 19.7**	**+0.7**
KRMI				S	**Sn**	**19 17 04.5**	**-0.7**
SLTI	**Sal'it**	**9.45**	**85**	P	**Pn**	**19 15 18.9**	**-0.3**
SLTI				S	**Sn**	**19 17 02.7**	**-2.7**
YTIR	**Yattir**	**9.56**	**90**	P	**Pn**	**19 15 20.6**	**-0.2**
YTIR				S	**Sn**	**19 17 06.7**	**-1.6**
PRNI	**Paran**	**9.62**	**96**	P	**Pn**	**19 15 21.8**	**+0.2**
PRNI				S	**Sn**	**19 17 08.7**	**-1.0**
VAE	**Valguarnera**	**9.64**	**308**	Pn	Pn	19 15 19.1	-2.8
	4.3nm,0.9s,baz=189,slow=15,SNR=1.9						
VAE				Sn	Sn	19 17 02.4	-7.9
	0.3nm,0.3s,baz=109,slow=13,SNR=1.8						
HRFI	**Mount Harif**	**9.71**	**98**	P	**Pn**	**19 15 23.6**	**+0.7**
HRFI				S	**Sn**	**19 17 11.0**	**-1.1**
EIL	**Elat**	**9.73**	**100**	Pn	**Pn**	**19 15 24.6**	**+1.5**
	0.2nm,0.3s,baz=318,slow=22,SNR=1.6						
EIL				Sn	**Sn**	**19 17 12.1**	**-0.3**
	0.2nm,0.3s,baz=33,slow=22,SNR=1.1						
	1.0nm,0.6s						
EIL	**Elat**	**9.73**	**100**	P	**Pn**	**19 15 24.3**	**+1.2**
EIL				S	**Sn**	**19 17 12.0**	**-0.5**
DSI	**Dead Sea**	**9.76**	**89**	P	**Pn**	**19 15 23.9**	**+0.4**
DSI				S	**Sn**	**19 17 11.0**	**-2.3**
MMC7	**Mount Meron ar**	**9.77**	**80**	P	**Pn**	**19 15 23.2**	**-0.5**
MSBI	**Mazada**	**9.77**	**90**	P	**Pn**	**19 15 23.5**	**-0.1**
MSBI				S	**Sn**	**19 17 11.0**	**-2.3**
MMA0B	**Mount Meron ar**	**9.77**	**80**	P	**Pn**	**19 15 23.2**	**-0.6**
MMA0B				S	**Sn**	**19 17 10.0**	**-3.7**
MMAI	**Mount Meron Ar**	**9.77**	**80**	Pn	**Pn**	**19 15 24.8**	**+1.0**
	1.5nm,0.3s,baz=278,slow=13,SNR=14						
MMAI				Sn	**Sn**	**19 17 11.3**	**-2.3**
	1.9nm,0.3s,baz=283,slow=22,SNR=4.4						
HMDT	**Nahal Hemdat**	**9.86**	**85**	P	**Pn**	**19 15 24.4**	**-0.4**
HMDT				S	**Sn**	**19 17 12.2**	**-3.3**
GHAJ	**Ghor Haditha**	**9.95**	**90**	P	**Pn**	**19 15 27.1**	**+1.1**
GHAJ				S	**Sn**	**19 17 16.0**	**-1.8**
GEM	**Giv'at Ha'Em**	**10.01**	**79**	P	**Pn**	**19 15 26.4**	**-0.5**
GEM				S	**Sn**	**19 17 15.5**	**-3.7**
NATI	**Neve Ativ**	**10.07**	**79**	P	**Pn**	**19 15 27.6**	**-0.1**
NATI				S	**Sn**	**19 17 18.2**	**-2.5**
KSHT	**Keshet**	**10.11**	**80**	P	**Pn**	**19 15 29.3**	**+0.9**
KSHT				S	**Sn**	**19 17 18.5**	**-3.5**
ASF	**Jabal al Asfar**	**11.02**	**85**	Pn	**Pn**	**19 15 41.8**	**+1.0**
	0.2nm,0.3s,baz=146,slow=19,SNR=1.7						
ASF				Sn	**Sn**	**19 17 42.6**	**-1.7**
	0.1nm,0.3s,baz=338,slow=2.6,SNR=1.8						
	0.4nm,0.3s						
BRTR	**Keskin Array B**	**11.14**	**42**	Pn	**Pn**	**19 15 44.8**	**+2.3**
	0.1nm,0.3s,baz=224,slow=14,SNR=2.4						
BRTR				Sn	**Sn**	**19 17 45.3**	**-1.8**
	0.1nm,0.3s,baz=207,slow=24,SNR=2.6						
	0.2nm,0.3s						
DAVOX	**Davos/Dischmat**	**18.42**	**328**	P	**P**	**19 17 18.4**	**-0.1**
	0.1nm,0.3s,baz=111,slow=14,SNR=1.7						
	0.4nm,0.3s						
GERES	**GERESS Array B**	**18.66**	**339**	P	**P**	**19 17 20.5**	**-0.6**
	baz=166,slow=12,SNR=2.4						
	0.3nm,0.5s						
KBZ	**Khabaz**	**19.08**	**46**	P	**Pn**	**19 17 28.6**	**+2.2**
	0.1nm,0.3s,baz=296,slow=5.2,SNR=4.0						
	2.6nm,1.1s						
AKASG	**Malin Array Be**	**19.25**	**10**	P	**P**	**19 17 27.1**	**-0.4**
	0.7nm,0.5s,baz=205,slow=9.7,SNR=5.1						
ESDC	**Sonseca Array**	**23.88**	**297**	P	**P**	**19 18 14.2**	**-2.5**
	0.4nm,0.6s,baz=97,slow=9.4,SNR=5.5						
	0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**27.61**	**233**	P	**P**	**19 18 49.3**	**-1.4**
	0.3nm,0.3s,baz=30,slow=7.7,SNR=6.3						
	0.3nm,0.3s						
HFS	**Hagfors**	**29.11**	**349**	P	**P**	**19 19 03.9**	**+0.2**
	2.8nm,1.0s,baz=157,slow=8.0,SNR=4.8						
	2.8nm,1.0s						
FINES	**FINESS Array B**	**29.65**	**2**	P	**P**	**19 19 08.5**	**+0.1**
	1.9nm,0.9s,baz=172,slow=10,SNR=6.1						
	1.9nm,0.9s						
EKA	**Eskdalemuir Ar**	**30.25**	**329**	P	**P**	**19 19 12.8**	**-1.0**
	1.1nm,0.8s,baz=128,slow=8.9,SNR=1.6						
	1.1nm,0.8s						
ARCES	**ARCESS Array B**	**37.75**	**1**	P	**P**	**19 20 19.0**	**+0.3**
	3.9nm,0.8s,baz=183,slow=9.7,SNR=5.7						
	3.9nm,0.8s						
BVAR	**Borovoye Array**	**39.42**	**44**	P	**P**	**19 20 34.8**	**+1.9**
	0.4nm,0.5s,baz=281,slow=8.7,SNR=2.4						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**44.05**	**48**	P	**P**	**19 21 12.9**	**+2.0**
	0.7nm,0.4s,baz=270,slow=8.5,SNR=12						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**46.52**	**54**	P	**P**	**19 21 32.6**	**+2.0**
	1.0nm,0.5s,baz=258,slow=5.9,SNR=12						
	1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**48.08**	**44**	P	**P**	**19 21 44.1**	**+1.5**
	0.8nm,0.3s,baz=268,slow=8.6,SNR=5.9						
	0.8nm,0.3s						
SONM	**Songino Array**	**62.42**	**49**	P	**P**	**19 23 28.3**	**+2.0**
	0.4nm,0.6s,baz=288,slow=5.9,SNR=3.3						
	0.4nm,0.6s						
SCHQ	**Schefferville**	**65.06**	**320**	P	**P**	**19 23 42.5**	**-0.9**

QRD	**Qoradiz**	**2.45**	**60**	P		**Pn**	**19 13 55.1**	**-0.7**
QRD				S		**Sb**	**19 14 28.3**	**-1.8**
MUSM	**Mu-Merkez**	**2.46**	**282**	P		**Pb**	**19 13 59.3**	**-0.4**
GDB	**GEDABAY**	**2.62**	**20**	P		**Pn**	**19 13 58.3**	**0.0**
GDB				S		**Sb**	**19 14 33.4**	**-1.8**
AGDM	**Agdam**	**2.69**	**46**	P		**Pn**	**19 13 59.3**	**+0.2**
AGDM				S		**Sb**	**19 14 34.8**	**-2.4**
GANJ	**Ganja**	**2.73**	**29**	P		**Pn**	**19 13 59.9**	**+0.1**
GANJ				S		**Sb**	**19 14 36.8**	**-1.6**
BLQ	**Beylaqan**	**2.74**	**57**	P		**Pn**	**19 13 59.3**	**-0.4**
BLQ				S		**Sb**	**19 14 35.3**	**-3.2**
BRDA	**Brd**	**2.84**	**44**	P		**Pn**	**19 14 01.0**	**-0.1**
BRDA				S		**Sb**	**19 14 38.4**	**-2.9**
QZX	**Qazax, Azerbai**	**2.86**	**12**	P		**Pn**	**19 14 01.6**	**+0.1**
QZX				S		**Sb**	**19 14 39.4**	**-2.6**
YRD	**Yardimli**	**2.94**	**76**	P		**Pn**	**19 14 02.3**	**-0.4**
YRD				S		**Sn**	**19 14 39.9**	**+1.2**
LRK	**Lerik**	**2.97**	**81**	P		**Pn**	**19 14 02.8**	**-0.3**
LRK				S		**Sn**	**19 14 41.3**	**+1.8**
GLBA	**Clilabad**	**3.13**	**71**	P		**Pn**	**19 14 05.2**	**+0.1**
GLBA				S		**Sn**	**19 14 45.4**	**+2.1**
ZRD	**Zardab**	**3.14**	**49**	P		**Pn**	**19 14 05.7**	**+0.5**
ZRD				S		**Sb**	**19 14 46.4**	**-3.5**
MNGR	**Mingechevir, A**	**3.17**	**37**	P		**Pn**	**19 14 06.0**	**+0.4**
MNGR				S		**Sb**	**19 14 47.5**	**-3.3**
ASTR	**Astara**	**3.31**	**84**	P		**Pn**	**19 14 07.3**	**-0.3**
ASTR				S		**Sn**	**19 14 49.2**	**+1.5**
LKRN	**Lenkeran, Azer**	**3.32**	**81**	P		**Pn**	**19 14 07.6**	**-0.1**
LKRN				S		**Sn**	**19 14 49.5**	**+1.7**
SAAT	**Saatly**	**3.39**	**61**	P		**Pn**	**19 14 08.4**	**-0.2**
SAAT				S		**Sn**	**19 14 51.4**	**+2.0**
KDMR	**Kurdemir**	**3.50**	**52**	P		**Pn**	**19 14 10.4**	**+0.2**
KDMR				S		**Sn**	**19 14 54.3**	**+2.1**
SEKA	**Sheki**	**3.57**	**34**	P		**Pn**	**19 14 12.3**	**+1.1**
SEKA				S		**Sb**	**19 14 58.0**	**-4.4**
QBL	**Gabala**	**3.67**	**42**	P		**Pn**	**19 14 13.0**	**+0.3**
QBL				S		**Sn**	**19 14 59.5**	**+2.9**
ZKTA	**Zakatala**	**3.72**	**24**	P		**Pn**	**19 14 13.8**	**+0.6**
ZKTA				S		**Sb**	**19 15 01.0**	**-5.7**
IML	**Ismayilli**	**3.76**	**47**	P		**Pn**	**19 14 14.2**	**+0.3**
IML				S		**Sn**	**19 15 01.7**	**+3.0**
ALIB	**&Aumlli-Bayram**	**3.83**	**62**	P		**Pn**	**19 14 15.1**	**+0.3**
ALIB				S		**Sn**	**19 15 02.9**	**+2.4**
XNQ	**Khinaliq**	**3.99**	**42**	P		**Pn**	**19 14 17.6**	**+0.3**
XNQ				S		**Sn**	**19 15 07.3**	**+2.5**
PQL	**Pirkuli**	**4.00**	**50**	P		**Pn**	**19 14 17.4**	**+0.2**
PQL				S		**Sn**	**19 15 06.4**	**+1.7**

*IDC **30** 19:19:08.5±2.2,8˚.68S×114˚.26E, h0km, mb3.6/7, mbtmp3.6/8, ML3.5/1, Error ellipse: s-maj=140.6km s-min=16.7km az=52.0*
*DJA **30** 19:19:23.2±0.3,9˚S±4˚×11˚4E±˚, h69km±4km, M3.9/31, mB4.3/3, mb3.9/7, MLv4.0/31, Mw(mB)3.4/3*
ISC 30 19:19:20.8±0.8, 8˚.85S±0˚.10×114˚.43E±0˚.05, h101km, n27, σ1§83/31, mb3.5/7, Bali region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JAGI	**Jajag, Banyuwa**	**0.47**	**325**	P		**Pn**	**19 19 36.3**	**-0.2**
JAGI				S		**Sn**	**19 19 47.1**	**-1.1**
RTBI	**Rangdo, Negare**	**0.64**	**53**	P		**Pn**	**19 19 38.8**	**+0.9**
RTBI				S		**Sn**	**19 19 51.5**	**+0.9**
IGBI	**Denpasar**	**0.71**	**87**	P		**Pn**	**19 19 38.9**	**+0.5**
IGBI				S		**Sn**	**19 19 51.2**	**-0.4**
DNP	**Denpasar**	**0.80**	**77**	P		**Pn**	**19 19 40.3**	**+1.1**
ABJI	**Asem Bagus**	**1.07**	**350**	P		**Pn**	**19 19 40.6**	**+1.5**
KHKI	**Kahang-Kahang**	**1.27**	**68**	P		**Pn**	**19 19 45.7**	**+1.4**
KHKI				S		**Sn**	**19 20 03.1**	**+1.0**
BLJI	**Banyuglugur**	**1.37**	**323**	P		**Pn**	**19 19 47.2**	**+1.6**
KMMI	**Kalianget**	**1.85**	**346**	P		**Pn**	**19 19 54.3**	**+2.8**
SNJI	**Sawahan-Nganju**	**2.85**	**292**	P		**Pn**	**19 20 07.4**	**+2.7**
PCJI	**Pacitan**	**3.28**	**281**	P		**Pn**	**19 20 12.6**	**+2.3**
PLAI	**Plampang**	**3.31**	**90**	P		**Pn**	**19 20 12.4**	**+1.6**
PLAI				S		**Sn**	**19 20 49.7**	**+0.3**
DBNI	**Kabupaten Domp**	**3.86**	**85**	P		**Pn**	**19 20 19.0**	**+0.9**
UGM	**Wanagama**	**3.97**	**283**	P		**Pn**	**19 20 22.8**	**+3.1**
WBSI	**Waikabubak, Su**	**4.96**	**99**	P		**Pn**	**19 20 35.9**	**+2.8**
LBFI	**Labuhan Bajo,**	**5.42**	**86**	P		**Pn**	**19 20 39.1**	**-0.1**
KPJI	**Karang Pucung** 0.1nm14nm,1.3s	**5.65**	**285**	P		**Pn**	**19 20 44.6**	**+2.3**
BSSI	**Bau Bau, Buton** 0.1nm15nm,0.8s	**6.59**	**66**	P		**Pn**	**19 20 57.6**	**+2.5**
BBJI	**Bungbulang** 0.1nm9.7nm,1.8s	**6.85**	**281**	P		**Pn**	**19 20 59.8**	**+1.1**
PMSI	**Majene**	**6.94**	**40**	P		**Pn**	**19 21 03.3**	**+3.3**
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=326,slow=4.5,SNR=11	**14.25**	**131**	Pn		Pn	19 22 34.5	-3.5
FITZ	0.3nm,0.3s,baz=12,slow=22,SNR=11 0.6nm,0.3s			Sn		Sn	19 25 04.9	-10
WRA	**Warramunga Arr** 0.8nm,0.8s,baz=295,slow=12,SNR=20 0.8nm,0.8s	**22.19**	**122**	P		**P**	**19 24 08.8**	**-0.1**
ASAR	**Alice Springs** 1.5nm,0.5s,baz=302,slow=9.4,SNR=45 1.5nm,0.5s	**23.76**	**131**	P		**P**	**19 24 25.1**	**+0.9**
CMAR	**Chiang Mai Arr** 0.3nm,0.6s,baz=150,slow=9.2,SNR=6.4 0.3nm,0.6s	**31.14**	**331**	P		**P**	**19 25 27.6**	**-2.5**
STKA	**Stephens Creek** 1.7nm,0.5s,baz=326,slow=8.1,SNR=5.5 1.7nm,0.5s	**34.07**	**136**	P		**P**	**19 25 57.0**	**+1.4**
SONM	**Songino Array** 0.2nm,0.4s,baz=169,slow=8.5,SNR=2.4 0.2nm,0.4s	**56.88**	**354**	P		**P**	**19 28 54.5**	**-0.8**
MKAR	**Makanchi Array** 0.3nm,0.3s,baz=147,slow=7.3,SNR=7.2 0.3nm,0.3s	**62.36**	**336**	P		**P**	**19 29 31.4**	**-1.3**
ZALV	**Zalesovo Beam** 0.2nm,0.3s,baz=137,slow=5.1,SNR=1.9 0.2nm,0.3s	**67.38**	**342**	P		**P**	**19 30 02.8**	**-2.2**

IDC 30 19:38:15.9±54.0, 22˚.14S×177˚.63W, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=993.3km s-min=158.5km az=85.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
STKA	**Stephens Creek** 1.2nm,0.5s,baz=90,slow=11,SNR=4.2 1.2nm,0.5s	**37.42**	**246**	P		P	19 45 29.3	-1.6
ASAR	**Alice Springs** 0.6nm,0.5s,baz=91,slow=6.8,SNR=31 0.6nm,0.5s	**44.50**	**258**	P		P	19 46 29.4	-0.1
WRA	**Warramunga Arr** 1.8nm,0.6s,baz=98,slow=8.5,SNR=51 1.8nm,0.6s	**44.74**	**264**	P		P	19 46 32.2	+0.8

SJA 30 19:42:25.4±0.8, 22˚.48S×66˚.11W, h266km±5km, ML3.6, MW3.6, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
YJA	**Yavi**	**0.63**	**61**	*e*P		Pn	19 43 02.0	+0.9
YJA				*e*S		S	19 43 28.0	-1.2
HJA	**Humahuaca**	**0.97**	**138**	*e*P		Pn	19 43 03.1	+0.7
SALTA		**1.75**	**187**	*e*P		Pn	19 43 05.3	-2.4
SALTA				*e*P			19 43 08.3	
AF01	**San Pedro de A**	**1.97**	**256**	*e*P		Pn	19 42 50.9	-18
PB09	**IPOC Station P**	**2.98**	**283**	*e*P		Pn	19 43 19.7	+0.8
PB09				*e*S		S	19 44 00.2	-1.1
PB09	comp=Z,43nm,0.2s			IAML			19 44 03.5	
PB06	**IPOC Station P**	**3.21**	**265**	*e*P		Pn	19 43 21.7	+0.4
PB06				*e*S		S	19 44 03.3	-2.3
PB06	comp=Z,82nm,0.1s			IAML			19 44 05.4	
PB03	**IPOC Station P**	**3.40**	**277**	*e*P		Pn	19 43 23.4	0.0
PB03				*e*S		S	19 44 05.8	-3.7
PB03	comp=Z,135nm,0.1s			IAML			19 44 06.2	
PB01	**IPOC Station P**	**3.45**	**294**	*e*P		Pn	19 43 24.1	+0.3
PB01				*e*S		S	19 44 08.1	-2.3
PB01	comp=Z,77nm,0.1s			IAML			19 44 10.6	
PB07	**IPOC Station P**	**3.58**	**281**	*e*P		Pn	19 43 25.4	-0.1
PB07				*e*S		S	19 44 10.5	-2.6
PB07	comp=Z,124nm,0.1s			IAML			19 44 11.0	
FSA	**Cafayete**	**3.62**	**178**	*e*P		Pn	19 43 26.2	+0.5
PB02	**IPOC Station P**	**3.70**	**288**	*e*P		Pn	19 43 26.6	-0.1
PB02				*e*S		S	19 44 11.9	-3.6
PB02	comp=Z,163nm,0.2s			IAML			19 44 14.7	
PB05	**IPOC Station P**	**3.80**	**264**	*e*P		Pn	19 43 27.4	-0.4
PB05				*e*S		S	19 44 13.6	-3.8
PB05	comp=Z,41nm,0.2s			IAML			19 44 14.7	
GO01	**Chusmiza**	**4.02**	**314**	*e*P		Pn	19 43 32.3	+1.6
GO01				*e*S		S	19 44 23.8	+1.2
GO01	comp=Z,35nm,0.8s			IAML			19 44 49.5	
PATCX	**Punta Patache**	**4.11**	**293**	*e*P		Pn	19 43 31.0	-0.3
PATCX				*e*S		S	19 44 21.5	-2.3
PATCX	comp=Z,53nm,0.3s			IAML			19 44 23.7	
HMBC	**Humberstone**	**4.15**	**301**	*e*P		Pn	19 43 31.6	-0.2
HMBC				*e*S		S	19 44 21.7	-3.1
HMBC	comp=Z,89nm,0.3s			IAML			19 44 24.9	
TA01	**Diego Aracena**	**4.24**	**296**	*e*P		Pn	19 43 32.2	-0.5
TA01				*e*S		S	19 44 23.3	-3.2
TA01	comp=Z,26nm,0.3s			IAML			19 44 25.1	
PB11	**IPOC Station P**	**4.28**	**309**	*e*P		Pn	19 43 33.3	0.0
PB11				*e*S		S	19 44 24.3	-3.2
PB11	comp=Z,54nm,0.3s			IAML			19 44 26.4	
PB14	**IPOC Station P**	**4.48**	**241**	*e*P		Pn	19 43 35.0	-0.9
PB14				*e*S		S	19 44 26.8	-5.3
PB14	comp=Z,53nm,0.2s			IAML			19 44 28.6	
PSGCX	**Pisagua**	**4.72**	**307**	*e*P		Pn	19 43 37.8	-0.8
PSGCX				*e*S		S	19 44 33.2	-3.7
PSGCX	comp=Z,21nm,0.3s			IAML			19 44 38.9	
AC02	**Maricunga**	**5.13**	**212**	*e*P		Pn	19 43 43.7	-0.1
AC02				*e*S		S	19 44 46.8	+0.4
AC02	comp=Z,10nm,4.2s			IAML			19 45 25.2	
PB16	**IPOC Station P**	**5.21**	**322**	*e*P		Pn	19 43 45.9	+1.0
PB16				*e*S		S	19 44 49.6	+1.2
AC01	**Pan de Azucar**	**5.48**	**227**	*e*P		Pn	19 43 33.9	-14
AC01				*e*S		S	19 44 47.1	-6.3
AC01	comp=Z,9.5nm,0.7s			IAML			19 44 53.1	

*SJA **30** 19:52:13.5±0.4, 35˚.63S×73˚.89W, h17km±3km, ML3.3, MW3.5*
*GUC **30** 19:52:18.2±0.8, 35˚.73S×73˚.59W, h21km±8km, ML3.4*
ISC 30 19:52:15.8±2.1, 35˚.67S±0˚.05×73˚.6W±0˚.1, h5km±16km, n15, σ1§53/23, 2C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BI05	**Punta Hualpn**	**1.14**	**162**	⇑*e*P		**Pg**	**19 52 37.5**	**-0.2**
BI05				*e*S		**Sb**	**19 52 50.9**	**-2.2**
BI05	comp=E,1µm,0.4s			IAML			19 52 59.2	
BI05	**Punta Hualpn**	**1.14**	**162**	*e*S		**Sg**	**19 52 54.6**	**+2.2**
BI05	comp=Z,671nm,0.4s			IAML			19 52 58.9	
GO05	**Hualane**	**1.54**	**65**	*e*P		**Pb**	**19 52 44.4**	**-0.5**
GO05				*e*S		**Sn**	**19 53 04.7**	**+0.3**
BO03	**Pichilemu**	**1.80**	**50**	*i* P		**Pb**	**19 52 47.9**	**-1.4**
BO03				*e*S		**Sb**	**19 53 12.1**	**0.0**
BO03	comp=E,201nm,0.4s			IAML			19 53 22.2	
ML02	**Panimavida**	**1.80**	**94**	⇑*e*P		**Pn**	**19 52 48.0**	**+0.4**
ML02				*e*S		**Sn**	**19 53 11.0**	**+0.1**
ML02	comp=E,1µm,0.7s			IAML			19 53 23.1	
BI02	**San Fabin de**	**2.15**	**118**	*e*P		**Pn**	**19 52 52.5**	**0.0**
BI02				*e*S		**Sn**	**19 53 20.3**	**+0.7**
BI02	comp=E,451nm,0.4s			IAML			19 53 28.3	
BI02	**San Fabin de**	**2.15**	**118**	*e*P		**Pn**	**19 52 52.5**	**0.0**
BI02				*e*S		**Sb**	**19 53 24.0**	**+1.6**
BI02	comp=Z,310nm,0.5s			IAML			19 53 28.1	
BO01	**Tunca**	**2.44**	**59**	*e*P		**Pb**	**19 52 57.7**	**-2.7**
BO01	comp=Z,123nm,0.7s			IAML			19 53 48.0	
BO02	**Sierra Bellavi**	**2.49**	**70**	*e*P		**Pn**	**19 52 57.6**	**+0.4**
BO02				*e*S		**Sb**	**19 53 31.0**	**-1.1**
BO02	comp=N,518nm,0.5s			IAML			19 53 44.9	
BO02	**Sierra Bellavi**	**2.49**	**70**	*e*P		**Pn**	**19 52 57.3**	**+0.1**
BO02	comp=Z,264nm,0.7s			IAML			19 53 42.8	
BO04	**La Punta**	**3.00**	**57**	⇓*e*S		**Sn**	**19 53 41.6**	**+1.2**
BO04	comp=E,113nm,0.6s			IAML			19 53 59.2	
CANA	**Caviahue**	**3.03**	**138**	*e*P		**Pn**	**19 53 06.3**	**+1.6**
CANA				*e*S		**Sb**	**19 53 44.9**	**-2.8**
CANA	comp=Z,48nm,0.8s			IAML			19 54 05.6	
GO06	**Curarrehue**	**4.27**	**157**	*e*P		**Pn**	**19 53 22.9**	**+1.2**
GO06	comp=Z,20nm,1.0s			IAML			19 54 39.3	
RFA	**San Rafael**	**4.32**	**80**	*e*P		**Pn**	**19 53 24.5**	**+2.2**
RFA	comp=Z,20nm,0.7s			IAML			19 54 41.5	
ZON	**Zonda**	**5.83**	**47**	*e*P		**Pn**	**19 53 44.6**	**+1.5**
ZON	comp=Z,6.7nm,1.0s			IAML			19 55 41.2	

IDC 30 19:56:17.3±2.8, 22˚.42S×171˚.15E, h0km, mb3.6/2, mbtmp3.6/3, ML3.5/1, Error ellipse: s-maj=122.3km s-min=41.4km az=170.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DZM	**Mont Dzumac** 2.8nm,0.3s,baz=76,slow=19,SNR=19	**4.37**	**274**	Pn		Pn	19 57 27.0	+1.9
DZM	baz=169,slow=16 13nm,0.6s			Sn		Sn	19 58 18.1	+1.2
ASAR	**Alice Springs** 0.8nm,0.8s,baz=91,slow=8.9,SNR=12 0.8nm,0.8s	**34.24**	**261**	P		P	20 03 04.8	-0.3
WRA	**Warramunga Arr** 0.4nm,0.5s,baz=98,slow=8.1,SNR=11 0.4nm,0.5s	**34.36**	**267**	P		P	20 03 05.2	-1.0
GERES	**GERESS Array B** 0.3nm,0.4s,baz=356,slow=4.7,SNR=3.9	**148.12**	**331**	PKPbc		PKPbc	20 16 05.0	0.0

*IDC **30** 20:08:44.7±6.0, 37˚.60N×71˚.92E, h138km±44km, mb3.3/6, mbtmp3.8/12, MS2.9/1, Error ellipse: s-maj=52.2km s-min=22.7km az=175.0*
*NNC **30** 20:08:45.8±7.9, 37˚.70N×71˚.31E, h118km±140km, mb3.2, mpv3.6, Error ellipse: s-maj=65.7km s-min=44.1km az=15.0*
ISC 30 20:08:38.7±0.7, 37˚.30N±0˚.06×71˚.72E±0˚.08, h100km, n26, σ3§14/39, mb3.5/6, 6C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JMU	**Jammu**	**5.18**	**150**	*e*P		**Pn**	**20 09 58.2**	**+4.3**
JMU				*e*S		**Sn**	**20 10 53.0**	**+0.5**
JMU	comp=E,56nm,0.7s			IAML			20 10 57.2	
JMU	comp=N,67nm,0.2s			IAML			20 11 00.0	
ALCI	**Alchi Leh**	**5.41**	**123**	*e*P		**Pn**	**20 09 58.9**	**+1.6**
ALCI				*e*S		**Sn**	**20 10 58.4**	**-0.1**
AAK	**Ala-Archa**	**5.74**	**21**	P		**Pn**	**20 10 04.6**	**+3.0**
AAK	comp=N,3.2nm,0.3s,baz=190,slow=9.9,SNR=28			S		**Sn**	**20 11 05.4**	**-0.7**
AAK	**Ala-Archa** comp=N,9.2nm,0.6s,baz=162,slow=20,SNR=14	**5.74**	**21**	⇑P		**Pn**	**20 10 04.7**	**+3.1**
AAK	comp=N,0.6nm,0.4s			⇑S		**Sn**	**20 11 06.5**	**+0.4**
TSSA	**Tissa** comp=N,13nm,0.9s	**5.75**	**140**	*e*P		**Pn**	**20 10 03.2**	**+1.4**
TSSA				*e*S		**Sn**	**20 11 05.1**	**-1.5**
TSSA	comp=N,189nm,0.5s			IAML			20 11 10.2	
KK31	**Karatay Array** comp=N,15nm,0.3s,baz=178,slow=13,SNR=531	**5.87**	**351**	⇑P		**Pn**	**20 10 05.7**	**+2.5**
KK31				S		**Sn**	**20 11 07.9**	**-1.2**
	comp=N,26nm,0.6s,baz=177,slow=22,SNR=15							
THN	**Thein Dam**	**5.88**	**144**	*e*P		**Pn**	**20 10 05.8**	**+2.4**
THN				*e*S		**Sn**	**20 11 08.4**	**-1.0**
THN	comp=N,75nm,0.6s			IAML			20 11 12.4	
THN	comp=E,67nm,0.3s			IAML			20 11 12.8	
DHRM	**DHARAMSHALA**	**6.29**	**142**	*e*P		**Pn**	**20 10 11.1**	**+1.9**
DHRM				*e*S		**Sn**	**20 11 17.4**	**-2.4**
DHRM	comp=N,107nm,0.2s			IAML			20 11 22.9	
DHRM				IAML			20 11 23.1	
BHK	**Bhakra**	**7.04**	**145**	*e*P		**Pn**	**20 10 22.1**	**+2.9**
BHK				*e*S		**Sn**	**20 11 34.9**	**-2.8**
BHK	comp=N,36nm,0.4s			IAML			20 11 37.6	
BHK	comp=E,40nm,0.2s			IAML			20 11 39.1	
SMLA	**Simla**	**7.63**	**142**	*e*P		**Pn**	**20 10 28.1**	**+0.9**
SMLA				*e*S		**Sn**	**20 11 46.8**	**-5.2**
SMLA	comp=E,54nm,0.4s			IAML			20 11 51.3	
SMLA	comp=N,40nm,0.4s			IAML			20 11 51.4	
KLP	**Kalpa**	**7.89**	**135**	*e*P		**Pn**	**20 10 31.9**	**+1.0**
KLP				*e*S		**Sn**	**20 11 52.9**	**-5.9**
KLP	comp=N,63nm,0.5s			IAML			20 12 00.7	
KLP	comp=E,84nm,0.6s			IAML			20 12 00.7	
KUDL	**Kundal**	**9.97**	**155**	*e*P		**Pn**	**20 10 58.1**	**-0.9**
KUDL				*e*S		**Sn**	**20 12 41.2**	**-7.9**
KUDL	comp=E,6.9nm,0.4s			IAML			20 12 48.4	
KUDL	comp=N,6.0nm,0.8s			IAML			20 12 58.0	
MKAR	**Makanchi Array** comp=N,1.1nm,1.0s,baz=221,slow=14,SNR=2.4	**12.30**	**36**	P		**Pn**	**20 11 29.1**	**-1.2**
KURBB	**Kurchatov Arra** comp=N,1.1nm,0.2s,baz=204,slow=9.9,SNR=3.1	**14.18**	**18**	P		**Pn**	**20 11 55.5**	**+0.7**
AB31	**Akbulak array** comp=N,0.9nm,0.3s,baz=131,slow=13,SNR=88	**14.68**	**328**	⇑P		**Pn**	**20 12 01.1**	**-0.2**
AB31	comp=N,2.7nm,0.6s,baz=154,slow=22,SNR=12			⇑S		**Sn**	**20 14 35.1**	**-7.9**
BVAR	**Borovoye Array** comp=N,0.4nm,0.4s,baz=178,slow=11,SNR=4.8	**15.75**	**357**	P		**Pn**	**20 12 14.5**	**-0.2**
AKTO	**Aktyubinsk** comp=N,5.9nm,0.6s,baz=130,slow=13,SNR=15	**16.39**	**328**	P		**Pn**	**20 12 23.0**	**+0.3**
AKTO	**Aktyubinsk** comp=N,3.2nm,0.6s	**16.39**	**328**	⇑P		**P**	**20 12 24.3**	**+0.6**
AKTO	comp=N,2.0nm,0.7s			⇓S		**Sn**	**20 15 16.9**	**-7.4**
ZALV	**Zalesovo Beam** comp=N,1.1nm,0.3s,baz=211,slow=9.7,SNR=12	**18.95**	**24**	P		**P**	**20 12 51.2**	**-0.5**
BELG	**Belogornoye** comp=N,3.4nm,0.7s,baz=129,slow=6.5,SNR=1.7 comp=N,3.4nm,0.7s	**22.64**	**319**	P		**P**	**20 13 32.6**	**+1.4**
KBZ	**Khabaz** comp=N,1.0nm,0.7s,baz=150,slow=8.1,SNR=2.0 comp=N,1.0nm,0.7s	**22.76**	**295**	P		**P**	**20 13 36.4**	**+3.9**
KVAR	**Kislovodsk Arr** comp=N,30nm,20.3s,baz=248,slow=44	**22.93**	**296**	LR		LR	20 25 36.5	
SONM	**Songino Array** comp=N,0.2nm,0.4s,baz=278,slow=10.0,SNR=3.6 comp=N,0.2nm,0.4s	**27.41**	**56**	P		**P**	**20 14 14.8**	**-0.1**
BRTR	**Keskin Array B** comp=N,0.3nm,0.5s,baz=103,slow=8.7,SNR=2.1 comp=N,0.3nm,0.5s	**29.75**	**287**	P		**P**	**20 14 38.0**	**+2.2**
FINES	**FINESS Array B** comp=N,0.7nm,0.4s,baz=109,slow=7.5,SNR=10 comp=N,0.7nm,0.4s	**37.15**	**325**	P		**P**	**20 15 40.6**	**+1.2**
HFS	**Hagfors** comp=N,2.7nm,0.6s,baz=108,slow=9.4,SNR=12 comp=N,2.7nm,0.6s	**42.80**	**321**	P		**P**	**20 16 27.2**	**+1.1**

*IDC **30** 20:12:25.2±1.8, 59˚.78N×153˚.39W, h88km±28km, mb3.5/4, mbtmp3.7/9, Error ellipse: s-maj=35.0km s-min=11.5km az=108.0*
*NEIC **30** 20:12:26.6±1.0, 59˚.74N±0˚.03×153˚.14W±0˚.08, h114km±4km, ML3.1/154, ML3.0(AEIC), Error ellipse: s-maj=6.0km s-min=3.6km az=73.0*
*AEIC **30** 20:12:28.1±1.6, 59˚.73N±0˚.03×153˚.16W±0˚.09, h105km±3km, Error ellipse: s-maj=6.5km s-min=4.5km az=111.0*
ISC 30 20:12:26.2±0.8, 59˚.71N±0˚.04×153˚.10W±0˚.04, h115km±5km, n134, σ1§01/136, mb3.8/4, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
P19K	**Oil Pt**	**0.09**	**228**			**Sn**	**20 12 53.0**	**-1.0**
P19K	**Oil Pt**	**0.09**	**228**			**Pn**	**20 12 42.2**	**+0.1**
P19K	comp=N,658nm,0.5s			IAML			20 12 54.1	
P19K	comp=E,815nm,0.5s			IAML			20 12 55.6	
ILS	**Iliamna Low So**	**0.24**	**4**			**Pn**	**20 12 42.5**	**-0.1**
ILS						**Sn**	**20 12 53.9**	**-1.0**
ILSW	**Iliamna Southw**	**0.27**	**355**			**Pn**	**20 12 42.4**	**-0.2**
ILSW	comp=N,664nm,0.7s			IAML			20 12 54.6	
ILSW	comp=E,658nm,0.8s			IAML			20 12 55.1	
ILSW	**Iliamna Southw**	**0.27**	**355**			**Sn**	**20 12 54.0**	**-1.0**
IVE	**Iliamna Volcan**	**0.31**	**8**			**Pn**	**20 12 42.7**	**-0.1**
IVE						**Sn**	**20 12 54.1**	**-1.2**
AU22	**Augustine Moun**	**0.37**	**201**			**Pn**	**20 12 42.9**	**0.0**
AU22						**Sn**	**20 12 55.0**	**-0.4**
AUL	**Augustine Lava**	**0.37**	**207**			**Pn**	**20 12 43.0**	**0.0**
AUL						**Sn**	**20 12 55.1**	**-0.4**
AUF	**Augustine Flow**	**0.38**	**209**			**Pn**	**20 12 42.9**	**0.0**
AUF						**Sn**	**20 12 54.9**	**-0.6**
AUCH	**Augustine Cone**	**0.39**	**207**			**Pn**	**20 12 43.4**	**+0.3**
AUW	**Augustine West**	**0.39**	**209**			**Pn**	**20 12 43.3**	**+0.2**
AUJK	**Augustine Jueg**	**0.40**	**203**			**Sn**	**20 12 55.1**	**-0.6**
AUI	**Augustine Isla**	**0.41**	**204**			**Sn**	**20 12 54.9**	**-1.0**
RED	**Redoubt Volcan**	**0.73**	**13**			**Sn**	**20 12 58.8**	**-1.1**
RED	**Redoubt Volcan**	**0.73**	**13**			**Pn**	**20 12 45.6**	**+0.2**
RED	comp=E,498nm,0.7s			IAML			20 12 59.8	
RED	comp=N,304nm,0.9s			IAML			20 12 59.8	
HOM	**Homer**	**0.74**	**94**	Pn		**Pn**	**20 12 46.0**	**+0.6**
HOM	comp=E,714nm,0.5s			IAML			20 13 02.2	
HOM	comp=N,718nm,0.4s			IAML			20 13 02.2	
O19K	**Port Alsworth**	**0.78**	**309**			**Pn**	**20 12 45.5**	**-0.2**
O19K	comp=E,670nm,0.4s			IAML			20 13 00.1	
O19K	comp=N,953nm,0.5s			IAML			20 13 00.1	
Q19K	**Cape Douglas,**	**0.84**	**200**			**Pn**	**20 12 46.5**	**+0.2**
Q19K	comp=E,657nm,0.9s			IAML			20 13 09.0	
CNPM	**China Poot**	**0.96**	**100**			**Pn**	**20 12 47.9**	**+0.4**
CNPM	comp=N,354nm,0.3s			IAML			20 13 04.9	
CNPM	comp=E,333nm,0.3s			IAML		

	comp=E,138nm,0.6s									
SEW					IAML			20 13 26.5		
	comp=N,132nm,0.3s									
STLK	**Strandline Lak**	**1.90**	**19**			**Pn**		**20 12 58.8**	**+0.6**	
STLK					IAML			20 13 26.0		
	comp=N,79nm,0.5s									
STLK					IAML			20 13 26.1		
	comp=E,49nm,0.3s									
ACHA	**Angle Creek He**	**1.90**	**218**			**Pn**		**20 12 58.5**	**+0.3**	
KDAK	**Kodiak Island**	**1.96**	**172**	P		**Pn**		**20 12 58.3**	**-0.6**	
	comp=E,22nm,0.3s,baz=21,slow=4.3,SNR=113									
KDAK				S		**Sn**		**20 13 23.3**	**-0.5**	
	comp=E,33nm,0.3s,baz=30,slow=16,SNR=8.5									
KDAK	**Kodiak Island**	**1.96**	**172**			**Pn**		**20 12 58.5**	**-0.3**	
KDAK					IAML			20 13 25.5		
	comp=E,105nm,0.5s									
KDAK					IAML			20 13 29.9		
	comp=E,97nm,0.5s									
RC01	**Rabbit Creek A**	**2.17**	**49**			**Pn**		**20 13 01.9**	**+0.4**	
M20K	**Styx River**	**2.18**	**360**			**Pn**		**20 13 02.3**	**+0.6**	
SKT	**Skwentna**	**2.40**	**18**			**Pn**		**20 13 05.0**	**+0.6**	
SKT					IAML			20 13 39.1		
	comp=E,31nm,0.5s									
SKT					IAML			20 13 42.2		
	comp=N,46nm,0.4s									
OHAK	**Old Harbor**	**2.50**	**182**	P		**Pn**		**20 13 04.9**	**-0.9**	
OHAK	**Old Harbor**	**2.50**	**182**	S		**Sn**		**20 13 33.8**	**-2.3**	
OHAK	**Old Harbor**	**2.50**	**182**			**Pn**		**20 13 04.9**	**-0.9**	
OHAK					IAML			20 13 35.8		
	comp=N,71nm,0.2s									
OHAK					IAML			20 13 39.4		
	comp=E,45nm,0.8s									
P16K	**Nushagak River**	**2.60**	**257**	Pn		**Pn**		**20 13 07.6**	**+0.6**	
P16K					IAML			20 13 41.0		
	comp=N,32nm,0.7s									
L19K	**White Mountain**	**2.62**	**342**			**Pn**		**20 13 07.3**	**-0.1**	
PLK4	**Peulik 4**	**2.69**	**221**			**Pn**		**20 13 09.3**	**+0.9**	
PLK4					IAML			20 14 01.0		
	comp=N,29nm,1.1s									
PMR	**Palmer**	**2.71**	**44**	P		**Pn**		**20 13 08.9**	**+0.4**	
PMR	**Palmer**	**2.71**	**44**	S		**Sn**		**20 13 39.5**	**-1.6**	
PMR	**Palmer**	**2.71**	**44**			**Pn**		**20 13 08.4**	**-0.1**	
PMR					IAML			20 13 41.5		
	comp=N,76nm,0.3s									
PMR					IAML			20 13 44.7		
	comp=E,89nm,0.4s									
KNK	**Knik Glacier**	**2.86**	**51**			**Pn**		**20 13 10.3**	**-0.1**	
P23K	**Montague Islan**	**2.89**	**82**			**Pn**		**20 13 11.4**	**+0.6**	
P23K					IAML			20 13 46.1		
	comp=E,146nm,0.7s									
P23K					IAML			20 13 48.5		
	comp=N,99nm,0.6s									
GHO	**Glory Hole Cre**	**2.91**	**43**	IAML				20 13 45.7		
	comp=E,126nm,0.4s									
GHO					IAML			20 13 47.1		
	comp=N,147nm,0.3s									
CUT	**Chulitna**	**3.03**	**26**			**Pn**		**20 13 13.0**	**+0.4**	
CUT					IAML			20 13 55.7		
	comp=N,96nm,0.4s									
CUT					IAML			20 14 18.2		
	comp=E,76nm,0.7s									
L22K	**Petersville**	**3.04**	**21**			**Pn**		**20 13 13.6**	**+0.7**	
L22K					IAML			20 13 51.1		
	comp=E,43nm,0.4s									
L22K					IAML			20 14 04.6		
	comp=N,24nm,0.6s									
L18K	**Granite Mounta**	**3.06**	**327**			**Pn**		**20 13 12.8**	**-0.3**	
SML	**Sawmill**	**3.14**	**46**			**Pn**		**20 13 13.8**	**-0.4**	
SML					IAML			20 13 51.8		
	comp=N,90nm,0.9s									
SML					IAML			20 13 59.1		
	comp=E,68nm,0.5s									
R16K	**Pilot Point**	**3.18**	**229**			**Pn**		**20 13 15.4**	**+0.7**	
R16K					IAML			20 13 55.9		
	comp=N,20nm,1.1s									
R16K					IAML			20 14 03.7		
	comp=E,26nm,0.9s									
M16K	**Timber Creek**	**3.19**	**297**	Pn		**Pn**		**20 13 15.1**	**+0.3**	
GLI	**Glacier Island**	**3.21**	**66**	Pn		**Pn**		**20 13 15.3**	**+0.2**	
GLI					IAML			20 13 52.0		
	comp=N,116nm,0.5s									
SII	**Sitkinak Islan**	**3.22**	**191**	P		**Pn**		**20 13 14.3**	**-0.9**	
SII	**Sitkinak Islan**	**3.22**	**191**	S		**Sn**		**20 13 50.2**	**-2.8**	
PPLA	**Purkeypile**	**3.22**	**7**	IAML				20 14 37.0		
	comp=E,18nm,1.2s									
PPLA					IAML			20 14 44.2		
	comp=N,15nm,0.8s									
HIN	**Hinchinbrook I**	**3.38**	**75**	Pn		**Pn**		**20 13 17.8**	**+0.5**	
MID	**Middleton Isla**	**3.45**	**92**	Pn		**Pn**		**20 13 19.0**	**+0.8**	
SCM	**Sheep Creek Mo**	**3.54**	**51**	IAML				20 14 02.5		
	comp=E,93nm,0.4s									
SCM					IAML			20 14 02.8		
	comp=N,83nm,0.6s									
N15K	**Kwethluk River**	**3.55**	**280**			**Pn**		**20 13 20.1**	**+0.6**	
EYAK	**Cordova Ski Ar**	**3.77**	**74**	P		**Pn**		**20 13 23.1**	**+0.6**	
EYAK	**Cordova Ski Ar**	**3.77**	**74**	S		**Sn**		**20 14 04.7**	**-1.3**	
DIV	**Divide**	**3.90**	**66**	Pn		**Pn**		**20 13 24.6**	**+0.3**	
DIV						**Sn**		**20 14 07.0**	**-2.3**	
DIV					IAML			20 14 10.9		
	comp=E,53nm,0.3s									
DIV					IAML			20 14 11.0		
	comp=N,66nm,0.5s									
K17K	**Iditarod**	**3.92**	**322**			**Pn**		**20 13 24.4**	**-0.1**	
K17K					IAML			20 14 26.2		
	comp=E,9.4nm,0.8s									
TRF	**Thorofare Moun**	**3.98**	**18**			**Pn**		**20 13 25.5**	**0.0**	
TRF					IAML			20 14 35.5		
	comp=N,23nm,0.5s									
TRF					IAML			20 14 36.8		
	comp=E,14nm,0.6s									
KTH	**Kantishna Hill**	**3.99**	**14**	IAML				20 14 36.8		
	comp=N,12nm,0.8s									
KTH					IAML			20 14 47.4		
	comp=E,11nm,1.1s									
CHIR	**Chirikof Islan**	**4.13**	**200**	P		**Pn**		**20 13 26.0**	**-1.3**	
CHIR	**Chirikof Islan**	**4.13**	**200**	S		**Sn**		**20 14 12.3**	**-2.4**	
CHIR	**Chirikof Islan**	**4.13**	**200**	Pn		**Pn**		**20 13 26.2**	**-1.1**	
CHIR					IAML			20 14 20.3		
	comp=N,42nm,1.2s									
CHIR					IAML			20 14 47.0		
	comp=E,43nm,1.2s									
J18K	**Innoko River**	**4.14**	**337**	Pn		**Pn**		**20 13 27.2**	**-0.2**	
RND	**Reindeer**	**4.22**	**27**	IAML				20 14 20.8		
	comp=E,9.6nm,0.3s									
RND					IAML			20 14 24.4		
	comp=N,9.0nm,1.0s									
RAGM	**Ragged Mountai**	**4.28**	**77**	Pn		**Pn**		**20 13 29.8**	**+0.5**	
DHY	**Denali Highway**	**4.35**	**37**	IAML				20 14 22.1		
	comp=E,25nm,0.5s									
DHY					IAML			20 14 24.0		
	comp=N,19nm,0.4s									
BMRM	**Bremner River**	**4.40**	**70**	Pn		**Pn**		**20 13 31.6**	**+0.6**	
BMRM					IAML			20 14 23.9		
	comp=N,48nm,0.5s									
BMRM					IAML			20 14 30.4		
	comp=E,40nm,0.5s									
CHGN	**Chignik**	**4.44**	**222**	Pn		**Pn**		**20 13 31.8**	**+0.4**	
CHGN					IAML			20 15 00.1		
	comp=E,43nm,0.2s									
J19K	**Poorman**	**4.46**	**346**			**Pn**		**20 13 31.8**	**+0.1**	
MCK	**McKinley**	**4.49**	**24**	IAML				20 14 28.2		
	comp=E,7.9nm,0.5s									
MCK					IAML			20 15 00.5		
	comp=N,8.8nm,1.1s									
BPAW	**Bear Paw Mtn.**	**4.51**	**12**	Pn		**Pn**		**20 13 32.8**	**+0.4**	
BPAW					IAML			20 16 39.0		
	comp=E,5.7nm,0.5s									
N25K	**Chitina, Valde**	**4.59**	**62**			**Pn**		**20 13 33.7**	**+0.1**	
N25K					IAML			20 14 27.7		
	comp=E,43nm,0.5s									
N25K					IAML			20 14 28.1		
	comp=N,39nm,0.5s									
HARP	**HAARP**	**4.71**	**52**	Pn		**Pn**		**20 13 35.9**	**+0.9**	
BERG	**Berg Lake**	**4.76**	**78**	Pn		**Pn**		**20 13 36.5**	**+0.8**	
GLB	**Gilahina Butte**	**4.90**	**65**	Pn		**Pn**		**20 13 38.3**	**+0.7**	
PAX	**Paxson**	**4.91**	**45**			**Pn**		**20 13 38.1**	**+0.2**	
PAX					IAML			20 14 35.3		
	comp=E,11nm,0.5s									
PAX					IAML			20 14 47.3		
	comp=N,11nm,0.7s									
L14K	**Kuka Creek**	**5.01**	**293**	Pn		**Pn**		**20 13 39.4**	**+0.3**	
L14K					IAML			20 14 20.8		
	comp=E,4.4nm,1.1s									
L14K					IAML			20 16 31.7		
	comp=N,4.9nm,1.1s									
VRDI	**Verde Repeater**	**5.01**	**68**	Pn		**Pn**		**20 13 39.8**	**+0.6**	
VRDI					IAML			20 14 39.0		
	comp=E,14nm,1.0s									
J16K	**Anvik River**	**5.07**	**318**	Pn		**Pn**		**20 13 39.2**	**-0.7**	
CRQM	**Cirque**	**5.07**	**74**	Pn		**Pn**		**20 13 41.5**	**+1.4**	
TGL	**Tana Glacier**	**5.22**	**74**	Pn		**Pn**		**20 13 43.3**	**+1.2**	
TGL						**Sn**		**20 14 37.9**	**-3.2**	
MCARA	**McCarthy VSAT**	**5.25**	**67**	Pn		**Pn**		**20 13 42.9**	**+0.6**	
NEA2	**Nenana**	**5.25**	**19**			**Pn**		**20 13 41.5**	**-0.8**	
NEA2					IAML			20 14 51.2		
	comp=E,3.5nm,0.4s									
WRH	**Wood River Hil**	**5.32**	**24**			**Pn**		**20 13 43.0**	**-0.3**	
WRH					IAML			20 15 13.4		
	comp=N,4.2nm,0.8s									
MESA	**MESA**	**5.62**	**80**	Pn		**Pn**		**20 13 48.4**	**+0.9**	
COLA	**College**	**5.73**	**23**	P		**Pn**		**20 13 48.6**	**-0.1**	
COLA	**College**	**5.73**	**23**			**Pn**		**20 13 48.9**	**+0.2**	
GRNC	**Granite Creek**	**5.75**	**75**	Pn		**Pn**		**20 13 50.4**	**+1.1**	
BARN	**Barnard Glacie**	**5.83**	**72**	Pn		**Pn**		**20 13 52.1**	**+1.7**	
DOT	**Dot Lake**	**5.83**	**44**	Pn		**Pn**		**20 13 50.8**	**+0.6**	
ILAR	**Eielson Array**	**5.84**	**27**	P		**Pn**		**20 13 50.2**	**-0.1**	
	comp=N,8.2nm,0.5s,baz=215,slow=14,SNR=140									
ILAR				S		**Sn**		**20 14 53.8**	**-2.2**	
	comp=N,0.9nm,0.3s,baz=210,slow=23,SNR=4.9									
SDPT	**Sand Point**	**5.91**	**225**	Pn		**Pn**		**20 13 48.7**	**-2.6**	
CTGM	**Chitina Glacie**	**5.98**	**73**	Pn		**Pn**		**20 13 54.3**	**+2.0**	
CHNA	**Chernabura Isl**	**6.03**	**219**	P		**Pn**		**20 13 51.6**	**-1.3**	
CNBA	**Chernabura Isl**	**6.04**	**218**	Pn		**Pn**		**20 13 51.1**	**-1.9**	
M27K	**Edge Creek, AK**	**6.06**	**59**	Pn		**Pn**		**20 13 55.2**	**+1.7**	
PCA	**Pinnacle**	**6.47**	**81**	Pn		**Pn**		**20 14 00.5**	**+1.6**	
YUK3	**Moose Creek**	**6.53**	**66**			**Pn**		**20 14 01.3**	**+1.5**	
G18K	**Tagagawik**	**6.70**	**340**	Pn		**Pn**		**20 14 02.0**	**0.0**	
YUK8	**Steele Glacier**	**6.77**	**71**			**Pn**		**20 14 05.3**	**+2.1**	
O29M	**Mount Kennedy**	**7.30**	**79**	Pn		**Pn**		**20 14 12.4**	**+2.1**	
G24K	**Hadweenzic Riv**	**7.46**	**17**			**Pn**		**20 14 11.6**	**-0.5**	
F20K	**Avaraart Lake**	**7.46**	**352**			**Pn**		**20 14 11.2**	**-0.9**	
COLD	**Coldfoot**	**7.65**	**8**	Pn		**Pn**		**20 14 15.1**	**+0.4**	
L29M	**L29M**	**7.94**	**58**	Pn		**Pn**		**20 14 20.2**	**+1.5**	
N30M	**Aishikik Lake**	**8.07**	**71**	Pn		**Pn**		**20 14 21.4**	**+0.8**	
G26K	**Porcupine Rive**	**8.37**	**26**	Pn		**Pn**		**20 14 24.6**	**+0.1**	
H27K	**Steamboat Moun**	**8.38**	**34**			**Pn**		**20 14 24.8**	**+0.1**	
F25K	**Christian Rive**	**8.57**	**20**	Pn		**Pn**		**20 14 26.6**	**-0.6**	
E24K	**Your Creek**	**8.63**	**12**	Pn		**Pn**		**20 14 28.1**	**+0.1**	
G27K	**Doyon Strip**	**8.78**	**31**	Pn		**Pn**		**20 14 29.6**	**-0.4**	
F26K	**Sheenjek River**	**8.93**	**23**	Pn		**Pn**		**20 14 32.2**	**+0.1**	
E25K	**Arctic Village**	**9.06**	**18**	Pn		**Pn**		**20 14 33.0**	**-0.8**	
F28M	**Old Crow**	**9.84**	**31**	Pn		**Pn**		**20 14 44.0**	**-0.3**	
D25K	**Kavik River**	**10.06**	**14**	Pn		**Pn**		**20 14 47.7**	**+0.3**	
F30M	**Barrier River**	**10.99**	**37**	Pn		**Pn**		**20 14 59.7**	**-0.1**	
R33M	**Jennings River**	**11.22**	**82**	Pn		**Pn**		**20 15 02.0**	**-1.1**	
DLBC	**Dease Lake**	**11.92**	**86**	P		**Pn**		**20 15 15.1**	**+2.7**	
	comp=N,0.8nm,0.3s,baz=324,slow=17,SNR=6.6									
INK	**Inuvik**	**12.10**	**36**	P		**Pn**		**20 15 16.2**	**+1.8**	
	comp=N,0.9nm,0.8s,baz=232,slow=12,SNR=2.0									
YKA	**Yellowknife Ar**	**18.62**	**65**	P		**Pn**		**20 16 36.5**	**+0.6**	
	comp=N,0.3nm,0.4s,baz=282,slow=10,SNR=4.1									
SONM	**Songino Array**	**54.92**	**306**	P		**P**		**20 21 46.2**	**+1.5**	
	comp=N,0.6nm,0.6s,baz=33,slow=8.6,SNR=4.4									
	comp=N,0.6nm,0.6s									
ZALV	**Zalesovo Beam**	**57.58**	**324**	P		**P**		**20 22 04.1**	**+0.9**	
	comp=N,1.0nm,0.4s,baz=32,slow=6.1,SNR=5.3									
	comp=N,1.0nm,0.4s									
BVAR	**Borovoye Array**	**62.30**	**332**	P		**P**		**20 22 36.1**	**+0.5**	
	comp=N,0.5nm,0.5s,baz=38,slow=7.3,SNR=2.9									
	comp=N,0.5nm,0.5s									
MKAR	**Makanchi Array**	**64.62**	**321**	P		**P**		**20 22 50.9**	**-0.1**	
	comp=N,0.8nm,0.8s,baz=33,slow=5.7,SNR=2.5									
	comp=N,0.8nm,0.8s									

*IDC **30** 20:13:45.5±1.9,36°.73N×15°.59W,h0km,mb3.4/5, mbtmp3.7/7,ML4.4/2,MS2.9/2,Error ellipse: s-maj=41.3km s-min=29.7km az=93.0*
*IGIL **30** 20:13:46.8,36°.72N×15°.89W,h27km,ML3.6*
*MDD **30** 20:13:46.1±0.5,36°.77N×15°.93W,h32km±12km,Mb4.9/28, M_mb4.4/28,Error ellipse: s-maj=5.5km s-min=2.1km az=118.0*
*INMG **30** 20:13:49.8±2.0,36°.69N×15°.84W,h10km,ML3.8,Error ellipse: s-maj=6.6km s-min=1.9km az=121.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Madeira-Tore*
*CNRM **30** 20:13:49.9,36°.32N×15°.48W,h33km,ML4.5*

ISC 30 20:13:43.7±0.9,36°.61N±0°.05×15°.64W±0°.07,h10km,n123, σ3≈12/203,mb3.9/6,21C,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
PMPST	**Porto Santo, M**	**3.57**	**189**	*eP*	**Pn**	**20 13 39.7**	**+0.6**
PMPST				*eS*	**Sn**	**20 15 16.8**	**-4.7**
PMPST				*i* IAML		20 15 20.7	
PMPST				*i* IAML		20 15 20.8	
PMPST				*i* IAML		20 15 22.5	
PMPS	**Porto Santo**	**3.59**	**189**	*eP*	**Pn**	**20 14 39.9**	**+0.5**
PMPS				*eS*	**Sn**	**20 15 17.6**	**-4.3**
PMPS				*i* IAML		20 15 21.2	
PMOZ	**Porto Moniz, M**	**3.99**	**199**	Pn	**Pn**	**20 14 46.8**	**+1.7**
PMOZ				Sn	**Sn**	**20 15 27.5**	**-4.4**
PMOZ	**Porto Moniz, M**	**3.99**	**199**	*eP*	**Pn**	**20 14 46.4**	**+1.3**
PMOZ				*eS*	**Sn**	**20 15 27.7**	**-4.3**
PMOZ				*i* IAML		20 15 31.7	
PMOZ				*i* IAML		20 15 38.3	
PMOZ				*i* IAML		20 15 43.8	
PMOZ	**Porto Moniz, M**	**3.99**	**199**	P	**Pn**	**20 14 45.5**	**+0.5**
PMOZ				S	**Sn**	**20 15 30.0**	**-1.9**
PMAR	**Madeira**	**4.02**	**196**	*eP*	**Pn**	**20 14 46.2**	**+0.7**
PMAR				*eS*	**Sn**	**20 15 28.3**	**-4.5**
PMAR				*i* IAML		20 15 37.4	
PMAR				*i* IAML		20 15 38.4	
PMAR				*i* IAML		20 15 39.2	
PMAR	**Madeira**	**4.02**	**196**	P	**Pn**	**20 14 45.5**	**0.0**
PMAR				S	**Sn**	**20 15 30.6**	**-2.2**
FUL	**Funchal**	**4.09**	**195**	*eP*	**Pn**	**20 14 47.1**	**+0.8**
FUL				*eS*	**Sn**	**20 15 29.8**	**-4.4**
FUL				*i* IAML		20 15 33.9	
FUL				*i* IAML		20 15 36.1	
FUL				*i* IAML		20 15 38.6	
PFVI	**Vila Bisbo**	**5.49**	**83**	Pn	**Pn**	**20 15 07.3**	**+1.8**
PFVI				Sn	**Sn**	**20 16 05.3**	**-3.4**
PFVI	**Vila Bisbo**	**5.49**	**83**	*eP*	**Pn**	**20 15 07.6**	**+2.1**
PFVI				*eS*	**Sn**	**20 16 05.2**	**-3.4**
PFVI				*i* IAML		20 16 10.2	
PFVI				*i* IAML		20 16 10.6	
PFVI				*i* IAML		20 16 11.1	
PFVI	**Vila Bisbo**	**5.49**	**83**	P	**Pn**	**20 15 06.7**	**+1.3**
PFVI				S	**Sn**	**20 16 09.7**	**+1.1**
PMAFR	**Mafra**	**5.55**	**63**	Pn	**Pn**	**20 15 07.7**	**+1.3**
PMAFR	**Mafra**	**5.55**	**63**	*eP*	**Pn**	**20 15 07.9**	**+1.5**
PMAFR				*eS*	**Sn**	**20 16 06.9**	**-3.3**
PMAFR				*i* IAML		20 16 11.5	
PMAFR				*i* IAML		20 16 14.1	
PMAFR				*i* IAML		20 16 15.1	
PTEO	**Sao Teotonio**	**5.61**	**78**	*eP*	**Pn**	**20 15 08.7**	**+1.6**
PTEO				*eS*	**Sn**	**20 16 08.0**	**-3.6**
PTEO				*i* IAML		20 16 13.6	
PTEO				*i* IAML		20 16 13.7	
PTEO				*i* IAML		20 16 14.6	
MORF	**Marmelete**	**5.64**	**81**	*eP*	**Pn**	**20 15 09.5**	**+1.9**
MORF				*eS*	**Sn**	**20 16 09.9**	**-2.5**
MORF				IAML		20 16 14.0	
	comp=N,94nm,0.4s						
MORF	**Marmelete**	**5.64**	**81**	*eP*	**Pn**	**20 15 09.5**	**+1.9**
MORF				*eS*	**Sn**	**20 16 09.7**	**-2.7**
MORF				*i* IAML		20 16 13.9	
MORF				*i* IAML		20 16 14.6	
MORF				*i* IAML		20 16 16.6	
MESJ	**Messejana**	**6.04**	**76**	*eP*	**Pn**	**20 15 14.9**	**+1.8**
MESJ				*eS*	**Sn**	**20 16 18.9**	**-3.5**
MESJ				IAML		20 16 23.8	
	comp=N,40nm,0.2s						
MESJ	**Messejana**	**6.04**	**76**	*eP*	**Pn**	**20 15 15.0**	**+1.8**
MESJ				*eS*	**Sn**	**20 16 18.9**	**-3.5**
MESJ				*i* IAML		20 16 23.9	
MESJ				*i* IAML		20 16 24.2	
MESJ				*i* IAML		20 16 25.4	
MOE	**Montemor**	**6.09**	**70**	*eP*	**Pn**	**20 15 14.7**	**+0.8**
MOE				*eS*	**Sn**	**20 16 18.3**	**-5.3**
MOE				*i* IAML		20 16 25.0	
MOE				*i* IAML		20 16 25.2	
MOE				*i* IAML		20 16 25.6	
PSBE	**So Bento**	**6.13**	**60**	*eP*	**Pn**	**20 15 15.8**	**+1.5**
PSBE				*eS*	**Sn**	**20 16 20.7**	**-3.7**
PSBE				*i* IAML		20 16 29.0	
PSBE				*i* IAML		20 16 30.5	
PSBE				*i* IAML		20 16 30.8	
PCVE	**Castro Verde**	**6.16**	**78**	Pn	**Pn**	**20 15 16.2**	**+1.5**
PCVE				Sn	**Sn**	**20 16 21.7**	**-3.5**
PCVE	**Castro Verde**	**6.16**	**78**	*eP*	**Pn**	**20 15 16.4**	**+1.7**
PCVE				*eS*	**Sn**	**20 16 21.2**	**-3.9**
PCVE				*i* IAML		20 16 27.8	
PCVE				*i* IAML		20 16 27.8	
PCVE				*i* IAML		20 16 29.9	
PBDV	**Barranco-do-Ve**	**6.21**	**82**	Pn	**Pn**	**20 15 17.3**	**+1.9**
PBDV				Sn	**Sn**	**20 16 24.7**	**-1.7**
PBDV	**Barranco-do-Ve**	**6.21**	**82**	*eP*	**Pn**	**20 15 17.6**	**+2.2**
PBDV				*eS*	**Sn**	**20 16 24.8**	**-1.6**
PBDV				*i* IAML		20 16 30.7	
PBDV				*i* IAML		20 16 31.7	
PBDV				*i* IAML		20 16 33.2	
EVO	**Evora**	**6.35**	**70**	Pn	**Pn**	**20 15 18.7**	**+1.3**
EVO				Sn	**Sn**	**20 16 25.2**	**-4.7**
EVO	**Evora**	**6.35**	**70**	*eP*	**Pn**	**20 15 18.8**	**+1.5**
EVO				*eS*	**Sn**	**20 16 25.4**	**-4.6**
EVO				*i* IAML		20 16 29.7	
EVO				*i* IAML		20 16 30.1	
EVO				*i* IAML		20 16 30.5	
PBEJ	**Beja**	**6.35**	**75**	*eP*	**Pn**	**20 15 19.4**	**+2.0**
PBEJ				*eS*	**Sn**	**20 16 26.5**	**-3.4**
PBEJ				*i* IAML		20 16 30.4	
PBEJ				*i* IAML		20 16 33.1	
PBEJ				*i* IAML		20 16 33.7	
PMTG	**Montargil**	**6.36**	**65**	*eP*	**Pn**	**20 15 18.3**	**+0.8**
PMTG				*eS*	**Sn**	**20 16 26.0**	**-4.1**
PMTG				*i* IAML		20 16 28.6	
PMTG				*i* IAML		20 16 29.6	
PMTG				*i* IAML		20 16 31.2	
PVAQ	**Vaqueiros**	**6.39**	**81**	*eP*	**Pn**	**20 15 19.8**	**+2.0**
PVAQ				*eS*	**Sn**	**20 16 28.2**	**-2.7**
PVAQ				*i* IAML		20 16 34.0	
PVAQ				*i* IAML		20 16 34.6	
PVAQ				*i* IAML		20 16 34.8	
PVAQ	**Vaqueiros**	**6.39**	**81**	P	**Pn**	**20 15 19.7**	**+1.8**
PVAQ				S	**Sn**	**20 16 31.3**	**+0.4**
PARRA	**Arraiolos**	**6.41**	**68**	*eP*	**Pn**	**20 15 18.9**	**+0.8**
PARRA				*eS*	**Sn**	**20 16 27.1**	**-4.3**
PARRA				*i* IAML		20 16 30.0	
PARRA				*i* IAML		20 16 30.8	
PARRA				*i* IAML		20 16 30.9	
PCAS	**Casmilo, Conde**	**6.58**	**56**	*eP*	**Pn**	**20 15 22.1**	**+1.6**
PCAS				*eS*	**Sn**	**20 16 30.9**	**-4.6**
PCAS				*i* IAML		20 16 36.3	
PCAS				*i* IAML		20 16 36.3	
PCAS				*i* IAML		20 16 37.6	
EGRO	**El Granado**	**6.58**	**80**	Pn	**Pn**	**20 15 22.2**	**+1.6**
EGRO				Sn	**Sn**	**20 16 32.4**	**-3.3**
EGRO	**El Granado**	**6.58**	**80**	Pn	**Pn**	**20 15 22.2**	**+1.6**
EGRO				⇑*i*IVmb_VC		20 15 26.3	
	comp=N,382nm,SNR=2.2						
EGRO				Sn	**Sn**	**20 16 32.8**	**-2.9**
PSARD	**Sardoal**	**6.61**	**61**	*eP*	**Pn**	**20 15 22.4**	**+1.5**
PSARD				*eS*	**Sn**	**20 16 31.6**	**-4.6**
PSARD				*i* IAML		20 16 38.1	
PSARD				*i* IAML		20 16 38.1	
PSARD				*i* IAML		20 16 38.5	
EXAYA	**Ayamonte**	**6.62**	**82**	Pn	**Pn**	**20 15 23.6**	**+2.5**
EXAYA				Sn	**Sn**	**20 16 39.8**	**+3.2**
PESTR	**Estremoz**	**6.76**	**68**	Pn	**Pn**	**20 15 23.1**	**+0.1**
PESTR				Sn	**Sn**	**20 16 34.9**	**-5.2**
PESTR	**Estremoz**	**6.76**	**68**	*eP*	**Pn**	**20 15 24.5**	**+1.5**
PESTR				*eS*	**Sn**	**20 16 35.3**	**-4.8**
PESTR				*i* IAML		20 16 40.9	
PESTR				*i* IAML		20 16 43.1	
PESTR				*i* IAML		20 16 43.2	
PESTR	**Estremoz**	**6.76**	**68**	P	**Pn**	**20 15 26.2**	**+3.2**
PESTR				S	**Sn**	**20 16 43.4**	**+3.3**
PBAR	**Barrancos**	**7.02**	**75**	Pn	**Pn**	**20 15 27.4**	**+0.8**
PBAR				Sn	**Sn**	**20 16 42.7**	**-3.7**
PBAR	**Barrancos**	**7.02**	**75**	*eP*	**Pn**	**20 15 28.5**	**+1.9**
PBAR				*eS*	**Sn**	**20 16 43.2**	**-3.2**
PBAR				*i* IAML		20 16 46.8	
PBAR				*i* IAML		20 16 46.9	
PBAR		

CROM					⇑*i*VmbVC			20 15 46.8	
	comp=N,632nm,SNR=1.6								
CROM					Sn		**Sn**	**20 17 04.2**	**-8.1**
CFUE	**Fuerteventura**	**8.07**	**169**		Pn		**Pn**	**20 15 42.1**	**+1.1**
CFUE					⇑*i*VmbVC			20 15 44.6	
	comp=N,384nm,SNR=2.3								
CFUE					Sn		**Sn**	**20 17 07.8**	**-4.5**
MVO	**Moncorvo**	**8.11**	**53**	*e*P			**Pn**	**20 15 42.1**	**+0.6**
MVO				*e*S			Sn	20 17 05.3	-7.9
MVO				*i* IAML				20 17 07.5	
MVO				*i* IAML				20 17 08.7	
MVO				*i* IAML				20 17 11.2	
CMIR	**El Paso, La Pa**	**8.11**	**194**		Pn		**Pn**	**20 15 42.1**	**+0.4**
CMIR					⇑*i*VmbVC			20 15 49.9	
	comp=N,252nm,SNR=1.6								
CMIR					Sn		**Sn**	**20 17 08.0**	**-5.5**
EMAZ	**Mazaricos**	**8.14**	**37**		Pn		**Pn**	**20 15 41.7**	**-0.3**
EMAZ					Sn		Sn	20 17 04.3	-10
EPLA	**Plasencia**	**8.26**	**62**		Pn		**Pn**	**20 15 45.5**	**+1.8**
EPLA					⇑*i*VmbVC			20 15 46.4	
	comp=N,375nm,SNR=2.1								
EPLA					Sn		**Sn**	**20 17 12.1**	**-4.9**
ECAB	**El Cabril**	**8.27**	**77**		Pn		**Pn**	**20 15 44.4**	**+0.7**
ECAB					Sn		Sn	**20 17 11.5**	**-5.7**
ECAB	**El Cabril**	**8.27**	**77**		Pn		**Pn**	**20 15 45.1**	**+1.4**
ECAB					⇑*i*VmbVC			20 15 47.0	
	comp=N,415nm,SNR=3.8								
ECAB					Sn		**Sn**	**20 17 13.6**	**-3.6**
STS	**Santiago**	**8.31**	**39**		Pn		**Pn**	**20 15 44.8**	**+0.6**
STS					Sn		Sn	20 17 10.6	-7.4
SMIR	**Smir Dam**	**8.35**	**93**		P		**Pn**	**20 15 46.2**	**+1.4**
EAGO	**Agolada(Pontev**	**8.49**	**41**		Pn		**Pn**	**20 15 46.0**	**-0.6**
EAGO					Sn		Sn	20 17 13.9	-8.6
CHEFC	**Chefchaouen**	**8.49**	**97**		P		**Pn**	**20 15 49.1**	**+2.2**
CHEFC					S		**Sn**	**20 17 22.9**	**+0.1**
PBRG	**Braganca**	**8.63**	**50**	*e*P			**Pn**	**20 15 49.4**	**+0.7**
PBRG				*e*S			Sn	20 17 17.3	-8.8
PBRG				*i* IAML				20 17 21.9	
PBRG				*i* IAML				20 17 23.4	
PBRG				*i* IAML				20 17 23.8	
ECAL	**Calabor**	**8.71**	**50**		Pn		**Pn**	**20 15 50.2**	**+0.4**
ECAL					Sn		Sn	20 17 18.9	-9.2
ECAL	**Calabor**	**8.71**	**50**		Pn		**Pn**	**20 15 50.4**	**+0.5**
ECAL					Sn		Sn	20 17 19.3	-8.8
SICH	**Sidi Chahed**	**8.79**	**104**		P		**Pn**	**20 15 52.6**	**+1.7**
SICH					S		**Sn**	**20 17 29.5**	**-0.6**
EADA	**Adamuz**	**8.94**	**77**		Pn		**Pn**	**20 15 54.5**	**+1.6**
EADA					Sn		**Sn**	**20 17 27.6**	**-6.1**
EADA	**Adamuz**	**8.94**	**77**		Pn		**Pn**	**20 15 54.2**	**+1.3**
EADA					⇑*i*VmbVC			20 16 00.0	
	comp=N,311nm,SNR=3.0								
EADA					Sn		**Sn**	**20 17 31.0**	**-2.7**
TIO	**Tiouine**	**8.98**	**127**		Pn		**Pn**	**20 15 57.7**	**+4.0**
TIO					Sn		**Sn**	**20 17 31.4**	**-3.6**
TIO	**Tiouine**	**8.98**	**127**		P		**Pn**	**20 15 53.0**	**-0.7**
TIO					S		**Sn**	**20 17 31.3**	**-3.6**
TANT	**Tantan**	**8.98**	**154**		P		**Pn**	**20 15 54.2**	**+0.6**
TISM	**Timmit**	**9.05**	**120**		P		**Pn**	**20 15 55.2**	**+0.8**
TISM					S		**Sn**	**20 17 32.1**	**-4.2**
IFR	**Ifrane**	**9.15**	**107**		Pn		**Pn**	**20 15 57.9**	**+1.9**
IFR					Sn		**Sn**	**20 17 32.7**	**-6.4**
EGOR	**Sierra Gorda,**	**9.25**	**83**		Pn		**Pn**	**20 15 59.4**	**+2.0**
EGOR					Sn		**Sn**	**20 17 38.5**	**-3.0**
LCRM	**LCR**	**9.30**	**105**		P		**Pn**	**20 15 58.7**	**+0.7**
OUZM	**OUZ**	**9.32**	**125**		P		**Pn**	**20 15 58.3**	**0.0**
OUZM					S		**Sn**	**20 17 38.1**	**-5.2**
EPON	**Pontenova**	**9.35**	**42**		Pn		**Pn**	**20 15 58.3**	**-0.1**
EPON					⇑*i*VmbVC			20 16 06.7	
	comp=N,540nm,SNR=1.3								
EPON					Sn		Sn	20 17 34.8	-8.8
PAB	**San Pablo**	**9.37**	**68**		Pn		**Pn**	**20 15 59.5**	**+0.6**
PAB					⇑*i*VmbVC			20 16 08.3	
	comp=N,229nm,SNR=2.3								
PAB					Sn		**Sn**	**20 17 37.3**	**-7.0**
PALE	**Palemas**	**9.59**	**95**		P		**Pn**	**20 16 04.1**	**+2.2**
PALE					S		**Sn**	**20 17 49.0**	**-0.7**
ELGU	**Los Guajares,**	**9.64**	**85**		Pn		**Pn**	**20 16 04.8**	**+2.2**
ELGU					Sn		**Sn**	**20 17 46.5**	**-4.6**
PSIM	**Granatula de C**	**9.67**	**73**		Pn		**Pn**	**20 16 04.6**	**+1.7**
PSIM					Sn		**Sn**	**20 17 46.0**	**-5.6**
ESDC	**Sonseca Array**	**9.69**	**68**		Pn		**Pn**	**20 16 04.8**	**+1.5**
	comp=N,1.6nm,0.3s,baz=257,slow=13,SNR=53								
ESDC					Sn		**Sn**	**20 17 44.3**	**-7.9**
	comp=N,1.8nm,0.3s,baz=259,slow=24,SNR=11								
	comp=N,3.3nm,0.3s								
ESDC	**Sonseca Array**	**9.69**	**68**		Pn		**Pn**	**20 16 04.6**	**+1.4**
ESDC					⇑*i*VmbVC			20 16 07.1	
	comp=N,204nm,SNR=2.1								
ESDC					Sn		**Sn**	**20 17 45.3**	**-6.8**
ESBB	**Sonseca Array**	**9.69**	**68**		Pn		**Pn**	**20 16 05.6**	**+2.3**
ESBB					⇑*i*VmbVC			20 16 22.1	
	comp=N,248nm,SNR=2.4								
MD31	**MD31**	**9.70**	**109**		P		**Pn**	**20 16 04.5**	**+1.1**
MD31					S		**Sn**	**20 17 49.1**	**-3.3**
AKLM	**AKL**	**9.82**	**99**		P		**Pn**	**20 16 05.8**	**+0.7**
AKLM					S		**Sn**	**20 17 52.6**	**-2.8**
MDT	**Midelt**	**9.84**	**109**		Pn		**Pn**	**20 16 07.5**	**+2.2**
	comp=N,1.0nm,0.3s,baz=298,slow=7.3,SNR=23								
MDT					Sn		**Sn**	**20 17 50.9**	**-5.0**
	comp=N,1.9nm,0.3s,baz=189,slow=23,SNR=11								
	comp=N,2.0nm,0.2s								
MDT	**Midelt**	**9.84**	**109**		P		**Pn**	**20 16 05.8**	**+0.5**
MDT					S		**Sn**	**20 17 53.9**	**-2.0**
EQES	**Quesada**	**10.10**	**79**		Pn		**Pn**	**20 16 10.5**	**+1.7**
EQES					⇑*i*VmbVC			20 16 12.5	
	comp=N,191nm,SNR=2.1								
EQES					Sn		**Sn**	**20 17 57.6**	**-4.6**
TZRR	**Tazzarine**	**10.20**	**122**		P		**Pn**	**20 16 09.8**	**-0.4**
UCM	**Universidad Co**	**10.39**	**65**		Pn		**Pn**	**20 16 14.6**	**+1.8**
UCM					Sn		**Sn**	**20 18 01.6**	**-7.8**
EARI	**Arriondas**	**10.42**	**47**		⇑*i*VmbVC			20 16 14.2	
	comp=N,613nm,SNR=1.0								
EARI					Pn		**Pn**	**20 16 14.7**	**+1.5**
EARI					Sn		**Sn**	**20 18 02.6**	**-7.4**
JBK	**JBK**	**10.90**	**98**		P		**Pn**	**20 16 19.2**	**-0.7**
TAF	**Taforalt**	**10.90**	**96**		P		**Pn**	**20 16 20.6**	**+0.8**
ETOR	**Torete**	**11.41**	**64**		Pn		**Pn**	**20 16 28.0**	**+1.2**
ETOR					⇑*i*VmbVC			20 16 31.8	
	comp=N,312nm,SNR=2.4								
ETOR					Sn		Sn	20 18 26.3	-8.0
ELAN	**Lanestosa**	**11.46**	**51**		Pn		**Pn**	**20 16 28.9**	**+1.5**
ELAN					Sn		Sn	20 18 26.3	-9.2
KEST	**Kesra**	**20.18**	**85**		P		Pn	20 18 20.8	+0.4
	comp=N,2.7nm,0.9s,baz=255,slow=16,SNR=2.6								
	comp=N,2.7nm,0.9s								
EKA	**Eskdalemuir Ar**	**20.57**	**21**		P		**P**	**20 18 24.7**	**+2.2**
	comp=N,1.3nm,0.7s,baz=209,slow=13,SNR=5.6								
	comp=N,1.3nm,0.7s								
DAVOX	**Davos/Dischmat**	**21.50**	**54**		P		**P**	**20 18 35.4**	**+2.6**
	comp=N,0.7nm,0.7s,baz=272,slow=6.8,SNR=5.7								
	comp=N,0.7nm,0.7s								
FETA	**Feichten**	**22.13**	**54**	*i* pP			**P**	**20 18 45.3**	**+5.7**
	comp=N,6.1nm,1.4s								
MOTA	**Moosalm**	**22.48**	**53**	*i* pP			pP	20 18 47.7	+2.5
	comp=N,7.7nm,1.1s								
SQTA	**Sankt Quirin**	**22.51**	**54**	*e*pP			pP	20 18 47.9	+2.5
	comp=N,9.8nm,1.1s								
WATA	**Walderalm**	**22.78**	**53**	*i* pP			**P**	**20 18 52.3**	**+5.9**
	comp=N,4.1nm,0.8s								
GERES	**GERESS Array B**	**24.61**	**51**		P		**P**	**20 19 06.9**	**+2.7**
	comp=N,0.7nm,0.7s,baz=245,slow=8.7,SNR=4.6								
	comp=N,0.7nm,0.7s								
TORD	**Torodi Ar. Bea**	**28.07**	**142**		P		**P**	**20 19 40.1**	**+4.6**
	comp=N,0.9nm,0.8s,baz=321,slow=10,SNR=4.8								
	comp=N,0.9nm,0.8s								
NOA	**NORSAR Array B**	**29.76**	**26**		LR		LR	20 31 24.8	
	comp=N,18nm,20.4s,baz=280,slow=36								
HFS	**Hagfors**	**30.10**	**29**		LR		LR	20 32 14.3	
	comp=N,28nm,19.0s,baz=258,slow=37								
WRA	**Warramunga Arr**	**148.95**	**66**		PKPbc		**PKiKP**	**20 33 34.4**	**+0.8**
	comp=N,0.2nm,0.6s,baz=314,slow=2.2,SNR=4.7								
ASAR	**Alice Springs**	**150.80**	**72**		PKPbc		**PKiKP**	**20 33 39.5**	**+2.1**
	comp=N,0.5nm,0.5s,baz=317,slow=1.8,SNR=13								

*JMA **30** 20:25:17.4±0.1,23°.8N±0°.8×122°.5E±0°.5,h44km,MV2.5/16, NEAR ISHIGAKIJIMA ISLAND*
*TAP **30** 20:25:18.1,23°.81N×122°.50E,h38km,ML3.4, C*
ISC 30 20:25:17.3±1.0,23°.75N±0°.02×122°.52E±0°.02,h31km±10km, n136,σ1§44/247,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS4	**EOS4**	**0.41**	**334**	*e*P		**Pb**	**20 25 26.6**	**+0.5**
EOS4				*e*S		**Sb**	**20 25 32.9**	**+0.8**
EOS3	**EOS3**	**0.56**	**341**	*e*P		**Pb**	**20 25 29.1**	**+0.4**
EOS3				*e*S		**Sb**	**20 25 37.1**	**+0.6**
EOS2	**EOS2**	**0.71**	**339**	*e*P		**Pb**	**20 25 31.6**	**+0.4**
EOS2				*e*S		**Sb**	**20 25 41.5**	**+0.9**
JYNG	**Yonagunijimaku**	**0.80**	**29**	*e*P		**Pb**	**20 25 32.5**	**-0.2**
JYNG				*e*S		**Sb**	**20 25 41.7**	**-1.5**
YOJ	**Yonaguni jima**	**0.84**	**33**	*i* P		**Pb**	**20 25 32.9**	**-0.5**
YOJ				S		**Sb**	**20 25 43.5**	**-0.8**
YOJ	**Yonaguni jima**	**0.84**	**33**	*e*P		**Pb**	**20 25 32.9**	**-0.5**
YOJ				*e*S		**Sb**	**20 25 43.5**	**-0.8**
TEYL	**Yanliau Villag**	**0.85**	**278**	P		**Pb**	**20 25 33.0**	**-0.6**
TEYL				*e*S		**Sb**	**20 25 43.2**	**-1.5**
HWA	**Hwalien**	**0.86**	**285**	P		**Pn**	**20 25 33.0**	**-0.3**
HWA				*e*S		**Sb**	**20 25 41.9**	**-3.2**
SHUL	**Shoufeng**	**0.88**	**272**	*i* P		**Pn**	**20 25 33.3**	**-0.2**
SHUL				*e*S		**Sb**	**20 25 44.2**	**-1.1**
TEGC	**Jichi Village**	**0.90**	**267**	P		**Pn**	**20 25 33.7**	**-0.1**
TEGC				S		**Sb**	**20 25 45.3**	**-0.7**
TWD	**Chiawan**	**0.90**	**291**	*i* P		**Pn**	**20 25 33.2**	**-0.6**
TWD				*e*S		**Sb**	**20 25 44.3**	**-1.9**
ETL	**Fush Village**	**0.91**	**296**	*e*P		**Pn**	**20 25 33.5**	**-0.5**
ETL				*e*S		**Sb**	**20 25 43.5**	**-2.9**
EAHA	**Aohua**	**0.91**	**309**	*e*P		**Pn**	**20 25 33.6**	**-0.4**
EAHA				*e*S		**Sb**	**20 25 46.3**	**-0.2**
NACB	**Ninganchiao**	**0.94**	**297**	*i* P		**Pn**	**20 25 33.7**	**-0.7**
NACB				*e*S		**Sb**	**20 25 45.0**	**-2.3**
ETM	**Tongmen**	**0.96**	**283**	*i* P		**Pn**	**20 25 34.0**	**-0.7**
EWUT	**Wuta**	**0.96**	**316**	*e*P		**Pn**	**20 25 34.9**	**+0.1**
EWUT				*e*S		**Sb**	**20 25 46.9**	**-1.0**
ESL	**Shilin**	**0.99**	**274**	P		**Pn**	**20 25 34.4**	**-0.8**
ESL				*e*S		**Sn**	**20 25 45.7**	**-2.5**
ESAO	**Su ao**	**1.02**	**323**	*e*P		**Pn**	**20 25 34.7**	**-0.9**
ESAO				*e*S		**Sn**	**20 25 47.1**	**-1.8**
WARBT	**Fenglin Townsh**	**1.04**	**268**	P		**Pn**	**20 25 35.1**	**-0.6**
WARBT				S		**Sn**	**20 25 48.0**	**-1.2**
LXIB	**Xiulin Townshi**	**1.04**	**285**	P		**Pn**	**20 25 35.5**	**-0.5**
LXIB				S		**Sn**	**20 25 48.7**	**-1.0**
TWC	**Suao**	**1.05**	**325**	*e*P		**Pn**	**20 25 34.3**	**-1.6**
TWC				S		**Sn**	**20 25 48.2**	**-1.3**
ETLH	**Xiulin Townshi**	**1.05**	**296**	P		**Pn**	**20 25 35.5**	**-0.5**
ETLH				S		**Sn**	**20 25 48.3**	**-1.4**
ECBN	**Changbin**	**1.07**	**246**	P		**Pn**	**20 25 36.2**	**0.0**
ECBN				S		**Sn**	**20 25 49.2**	**-0.8**
EHYH	**Wanrong**	**1.11**	**257**	P		**Pn**	**20 25 36.9**	**+0.2**
EHYH				S		**Sn**	**20 25 50.9**	**0.0**
EHY	**Hungye**	**1.12**	**258**	*i* P		**Pn**	**20 25 37.0**	**0.0**
EHY				S		**Sn**	**20 25 51.0**	**-0.3**
NDS	**Dongshan**	**1.14**	**320**	P		**Pn**	**20 25 37.9**	**+0.7**
NDS				S		**Sn**	**20 25 51.9**	**+0.1**
CHKH	**Chenggong**	**1.17**	**242**	P		**Pn**	**20 25 37.2**	**-0.4**
CHKH				S		**Sn**	**20 25 51.0**	**-1.5**
EYUL	**Yuli**	**1.17**	**250**	P		**Pn**	**20 25 37.9**	**+0.3**
EYUL				*e*S		**Sn**	**20 25 52.8**	**+0.3**
YULB	**Yu-li**	**1.18**	**252**	P		**Pn**	**20 25 37.9**	**+0.3**
YULB				S		**Sn**	**20 25 52.3**	**-0.4**
TWF1	**Yuli**	**1.19**	**251**	*i* P		**Pn**	**20 25 37.9**	**+0.1**
TWF1				S		**Sn**	**20 25 52.7**	**-0.2**
LATG	**Datong**	**1.19**	**311**	P		**Pn**	**20 25 38.4**	**+0.4**
LATG				S		**Sn**	**20 25 52.4**	**-0.9**
WHF	**Hehuan Shan**	**1.21**	**289**	P		**Pn**	**20 25 38.4**	**-0.1**
WHF				S		**Sn**	**20 25 52.6**	**-1.5**
HATJ	**Hateruma jima**	**1.22**	**75**	*e*P		**Pn**	**20 25 38.7**	**+0.5**
HATJ				*e*S		**Sn**	**20 25 54.4**	**+0.7**
NNSB	**Datong**	**1.24**	**303**	P		**Pn**	**20 25 38.8**	**+0.2**
NNSB				S		**Sn**	**20 25 53.7**	**-0.6**
TWE	**Neicheng**	**1.24**	**321**	*i* P		**Pn**	**20 25 39.2**	**+0.7**
TWE				S		**Sn**	**20 25 53.8**	**-0.4**
ENTT	**Nioudou**	**1.24**	**316**	P		**Pn**	**20 25 39.0**	**+0.5**
ENTT				*e*S		**Sn**	**20 25 53.9**	**-0.3**
CHKT	**Chengkung**	**1.24**	**239**	P		**Pn**	**20 25 38.2**	**-0.4**
CHKT				S		**Sn**	**20 25 52.6**	**-1.6**
OWD	**Renai**	**1.24**	**280**	P		**Pn**	**20 25 38.6**	**-0.1**
OWD				S		**Sn**	**20 25 53.9**	**-0.7**
NDT	**Datong Townshi**	**1.25**	**313**	*e*S		**Sn**	**20 25 54.2**	**-0.3**
NNS	**Nan Shan**	**1.25**	**303**	P		**Pn**	**20 25 39.2**	**+0.4**
NNS				S		**Sn**	**20 25 54.4**	**-0.2**
IRIF	**Iriomote-Funau**	**1.25**	**62**	*e*P		**Pn**	**20 25 39.3**	**+0.6**
IRIF				*e*S		**Sn**	**20 25 55.7**	**+1.2**
FULB	**Fuli**	**1.25**	**244**	P		**Pn**	**20 25 38.6**	**-0.2**
FULB				S		**Sn**	**20 25 53.6**	**-1.0**
VWDT	**VWDT**	**1.26**	**270**	*i* P		**Pn**	**20 25 39.2**	**+0.4**
VWDT				S		**Sn**	**20 25 54.4**	**-0.3**
FUSS	**Fushou**	**1.26**	**293**	P		**Pn**	**20 25 38.4**	**+0.3**
FUSS				S		**Sn**	**20 25 54.1**	**-1.1**
WUSB	**Renai**	**1.30**	**281**	P		**Pn**	**20 25 39.7**	**+0.2**
WUSB				S		**Sn**	**20 25 54.9**	**-1.1**
FUSB	**Fushanzhiwuyua**	**1.31**	**320**	P		**Pn**	**20 25 40.4**	**+0.7**
FUSB				S		**Sn**	**20 25 56.4**	**+0.3**
TWT	**Tachien**	**1.32**	**292**	S		**Sn**	**20 25 56.5**	**-0.1**
TDCB	**Techi**	**1.34**	**292**	P		**Pn**	**20 25 40.6**	**+0.6**
TDCB				S		**Sn**	**20 25 56.0**	**-0.9**
EHD	**Haiduan**	**1.35**	**244**	P		**Pn**	**20 25 40.0**	**0.0**
EHD				*e*S		**Sn**	**20 25 56.0**	**-0.9**
ECS	**Chishang**	**1.36**	**241**	P		**Pn**	**20 25 40.6**	**+0.4**
ECS				S		**Sn**	**20 25 57.4**	**+0.2**
TIPB	**Shuangxi**	**1.37**	**333**	P		**Pn**	**20 25 40.6**	**+0.3**
TIPB				S		**Sn**	**20 25 57.0**	**-0.4**
NWLT	**Wulai**	**1.38**	**318**	P		**Pn**	**20 25 41.4**	**+1.0**
NWLT				S		**Sn**	**20 25 57.6**	**0.0**
YHNB	**Yeheng**	**1.39**	**311**	P		**Pn**	**20 25 41.2**	**+0.6**
YHNB				S		**Sn**	**20 25 57.5**	**-0.1**
NSK	**Sanguang**	**1.40**	**311**	*e*P		**Pn**	**20 25 41.5**	**+0.6**
NSK				*e*S		**Sn**	**20 25 58.0**	**-0.3**
SSLB	**Suanglung**	**1.43**	**272**	P		**Pn**	**20 25 41.6**	**+0.4**
SSLB				*e*S		**Sn**	**20 25 59.1**	**0.0**
LDUT	**Ludao**	**1.44**	**222**	P		**Pn**	**20 25 41.1**	**-0.3**
LDUT				*e*S		**Sn**	**20 25 57.6**	**-1.6**
JKRS	**Kuro-shima**	**1.45**	**70**	*e*P		**Pn**	**20 25 42.2**	**+0.8**
JKRS				*e*S		**Sn**	**20 26 00.5**	**+1.2**
SXI1	**Grass Mountain**	**1.46**	**336**	P		**Pn**	**20 25 41.8**	**+0.1**
SXI1				S		**Sn**	**20 25 59.9**	**+0.1**
SMLT	**Sun Moon Lake**	**1.49**	**275**	*i* P		**Pn**	**20 25 42.8**	**+0.8**
ELDTW	**Lidau**	**1.49**	**248**	P		**Pn**	**20 25 42.0**	**0.0**
ELDTW				S		**Sn**	**20 26 00.0**	**-0.5**
TWA	**Mucha**	**1.49**	**325**	*e*S		**Sn**	**20 26 01.2**	**+0.8**
WCS	**Beigang Elemen**	**1.50**	**282**	P		**Pn**	**20 25 42.9**	**+0.8**
NHDH	**Xindian Distri**	**1.51**	**323**	*e*S		**Sn**	**20 26 01.9**	**+1.1**
WHYT	**Xinyi Township**	**1.53**	**268**	P		**Pn**	**20 25 42.7**	**+0.9**
WHYT				*e*S		**Sn**	**20 26 02.3**	**+1.0**
LONT	**Longtian**	**1.53**	**237**	P		**Pn**	**20 25 43.0**	**+0.4**
LONT				S		**Sn**	**20 26 01.2**	**-0.2**
WHP	**Taichung City**	**1.53**	**290**	P		**Pn**	**20 25 43.9**	**+1.3**
WHP				*e*S		**Sn**	**20 26 02.0**	**+0.6**
NHY	**Taipei**	**1.54**	**326**	*e*S		**Sn**	**20 26 02.2**	**+0.5**
NFF	**Wufeng Townshi**	**1.55**	**305**	P		**Pn**	**20 25 44.3**	**+1.4**
NFF				*e*S		**Sn**	**20 26 02.1**	**+0.2**
ALS	**Alishan**	**1.59**	**262**	P		**Pn**	**20 25 44.8**	**+1.2**
ALS				S		**Sn**	**20 26 03.9**	**+0.6**
KSHI	**Guanxi Townshi**	**1.59**	**310**	P		**Pn**	**20 25 44.8**	**+1.4**
KSHI				S		**Sn**	**20 26 04.9**	**+2.0**
JIJ	**Ishigaki jima**	**1.60**	**67**	*e*P		**Pn**	**20 25 43.8**	**+0.2**
JIJ				*e*S		**Sn**	**20 26 02.9**	**-0.4**
TTN	**Taitung**	**1.61**	**232**	P		**Pn**	**20 25 44.5**	**+1.0**
TTN				S		**Sn**	**20 26 03.1**	**-0.1**
TWGBT	**Beinan**	**1.62**	**235**	P		**Pn**	**20 25 43.9**	**+0.2**
TWGBT				S		**Sn**	**20 25 58.8**	**-0.8**
TWG	**Pinlang**	**1.62**	**235**	P		**Pn**	**20 25 44.0**	**+0.2**
TWG				S		**Sn**	**20 26 02.8**	**-0.8**
LIOB	**Emei**	**1.63**	**303**	P		**Pn**	**20 25 46.0**	**+2.0**
LIOB				S		**Sn**	**20 26 05.3**	**+1.3**
NSTT	**Nanjuang**	**1.64**	**303**	P		**Pn**	**20 25 45.9**	**+1.9**
NSTT				*e*S		**Sn**	**20 26 05.1**	**+1.1**
WJS	**Zhushan**	**1.64**	**273**	P		**Pn**	**20 25 46.0**	**+2.0**
ZUZH	**Zhuzihu**	**1.66**	**328**	P		**Pn**	**20 25 45.5**	**+1.2**
ZUZH				S		**Sn**	**20 26 04.3**	**-0.3**
TWS1	**Kuangyinshan**	**1.67**	**323**	*e*P		**Pn**	**20 25 45.4**	**+0.9**
TWS1				*e*S		**Sn**	**20 26 05.7**	**+0.7**
WNT	**Mingjian**	**1.68**	**275**	P		**Pn**	**20 25 46.8**	**+2.2**
WNT				S		**Sn**	**20 26 07.8**	**+2.6**
ANP	**Anpu**	**1.69**	**328**	*e*P		**Pn**	**20 25 45.5**	**+0.6**
ANP				S		**Sn**	**20 26 04.9**	**-0.6**
CHN5	**Tsauling**	**1.69**	**265**	*e*P		**Pn**	**20 25 46.8**	**+1.9**
CHN5				*e*S		**Sn**	**20 26 06.5**	**+0.9**
STYH	**Taoyuan**	**1.70**	**250**	P		**Pn**	**20 25 46.0**	**+1.1**
STYH				S		**Sn**	**20 26 06.0**	**+0.5**
TWQ1	**Liyutan**	**1.70**	**291**	P		**Pn**	**20 25 47.0**	**+2.1**
TWQ1				*e*S		**Sn**	**20 26 07.9**	**+2.3**
NTST	**Danshui**	**1.71**	**325**	*e*P		**Pn**	**20 25 45.3**	**+0.4**
NTST				*e*S		**Sn**	**20 26 06.2**	**+0.4**
NCUH	**Zhongli**	**1.71**	**315**	S		**Sn**	**20 26 06.8**	**+0.8**
TCU	**Taichung**	**1.73**	**283**	P		**Pn**	**20 25 47.7**	**+2.4**
TCU				*e*S		**Sn**	**20 26 09.6**	**+3.3**
WCKO	**Fanlu**	**1.78**	**260**	P		**Pn**	**20 25 48.4**	**+2.4**
WCKO				*e*S		**Sn**	**20 26 10.1**	**+2.4**
TPUB	**Ta-pu**	**1.79**	**256**	P		**Pn**	**20 25 48.1**	**+1.9**
TPUB				*e*S		**Sn**	**20 26 09.8**	**+1.9**
WGK	**Gukeng**	**1.79**	**268**	P		**Pn**	**20 25 48.5**	**+2.3**
WGK				*e*S		**Sn**	**20 26 10.3**	**+2.5**
WDL	**Douliou City**	**1.81**	**269**	*e*S		**Sn**	**20 26 11.2**	**+2.9**
WDJ	**Dajia District**	**1.81**	**289**	S		**Sn**	**20 26 11.0**	**+2.6**
WDLH	**Douliu**	**1.81**	**268**	P		**Pn**	**20 25 48.6**	**+2.1**
WDLH				*e*S		**Sn**	**20 26 10.9**	**+2.5**
WTP	**Ta-pu**	**1.82**	**254**	*i* P		**Pn**	**20 25 48.5**	**+2.0**
WTP				*e*S		**Sn**	**20 26 11.3**	**+2.7**
WCHH	**Zhanghua**	**1.82**	**281**	*e*P		**Pn**	**20 25 48.6**	**+2.1**
WCHH				S		**Sn**	**20 26 12.0**	**+3.4**
WCH1	**Changhua City**	**1.83**	**280**	*e*S		**Sn**	**20 26 10.6**	**+1.8**
JISG	**Ishigakijimahi**	**1.84**	**63**	P		**Pn**	**20 25 46.7**	**0.0**
JISG				*e*S		**Sn**	**20 26 08.2**	**-0.7**
ECL	**Taimali**	**1.84**	**232**	P		**Pn**	**20 25 46.8**	**0.0**
ECL				S		**Sn**	**20 26 07.7**	**-1.4**
SLGT	**Liugui**	**1.88**	**247**	*e*P		**Pn**	**20 25 48.1**	**+0.8**
SLGT				*e*S		**Sn**	**20 26 11.3**	**+1.3**
SGST	**Jiashian**	**1.90**	**250**	P		**Pn**	**20 25 49.0**	**+1.4**
SGST				S		**Sn**	**20 26 12.9**	**+2.4**
CHN1	**Nanshi**	**1.91**	**253**	P		**Pn**	**20 25 50.3**	**+2.5**
CHN1				*e*S		**Sn**	**20 26 14.0**	**+3.1**
LAY	**Lan-yu**	**1.93**	**208**	*e*P		**Pn**	**20 25 47.3**	**-0.7**
LAY				*e*S		**Sn**	**20 26 09.0**	**-2.2**
TWK	**Hsinying**	**1.93**	**256**	P		**Pn**	**20 25 50.3**	**+2.3**
TWK				S		**Sn**	**20 26 14.2**	**+3.0**
CHY	**Chiayi**	**1.94**	**263**	*e*P		**Pn**	**20 25 49.6**	**+1.5**
CHY				*e*S		**Sn**	**20 26 14.2**	**+2.8**
LYUB	**Lan-yu**	**1.94**	**206**	P		**Pn**	**20 25 47.4**	**-0.8**
LYUB				S		**Sn**	**20 26 09.1**	**-2.5**
WRL	**Guol

BOAB				S		Sn	20 33 17.1	+0.2
PIEC	Cerro El Cedra	2.45	103	eP		Pn	20 32 51.1	+0.7
VICA	Volcano Irazu	2.50	94	eP		Pb	20 32 53.7	-3.1
CVTG	V. Turrialba,	2.56	91	eP		Pb	20 32 56.4	-1.2
VTR0	Volcan Turrial	2.58	93	eP		Pb	20 32 56.8	-1.4
CVTR	Volcan Turrial	2.58	93	eP		Pb	20 32 55.8	-2.4
ABRB	Las Abras (San	2.62	94	eP		Pb	20 32 57.0	-1.8
TRT2	Tortugero	2.63	82	eP		Pb	20 32 58.6	-0.1
BUS1	Rivas	2.67	103	eP		Pn	20 32 55.8	+2.2
EGUB	Earth Gu¡pi	2.74	89	eP		Pb	20 33 04.7	+4.0
RVLA	Villa Bonita	2.75	91	eP		Pb	20 33 02.6	+1.8
CSGN	Cosiguina Volc	3.01	337	eP		Pn	20 32 58.5	+0.5
VERH	Veragua Rainfo	3.15	94	eP		Pn	20 33 01.9	+2.0
DRK0	Durika	3.22	106	P		Pn	20 33 01.2	+0.2
DRK0				S		Sn	20 33 36.5	-2.0

IDC 30 20:55:50.9±4.0, 29°88S×176°08W, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=72.0km s-min=43.0km az=49.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
RAO	**Raoul Island**	**1.72**	**291**	Pn		Pn	20 56 22.6	+0.5
	145nm,0.3s,baz=93,slow=19,SNR=7.7							
RAO				Sn		Sn	20 56 44.9	+0.2
	243nm,0.3s,baz=108,slow=21,SNR=6.0							
STKA	**Stephens Creek**	**36.22**	**256**	P		P	21 02 54.9	-0.7
	2.3nm,0.8s,baz=83,slow=8.1,SNR=3.7							
	2.3nm,0.8s							
ASAR	**Alice Springs**	**44.80**	**266**	P		P	21 04 06.6	-0.2
	0.3nm,0.4s,baz=108,slow=7.9,SNR=8.4							
	0.3nm,0.4s							
WRA	**Warramunga Arr**	**45.75**	**271**	P		P	21 04 14.5	+0.2
	0.4nm,0.3s,baz=111,slow=8.2,SNR=13							
	0.4nm,0.3s							

*IDC **30** 21:01:35.7±0.4, 9°16S×123°72E, h99km±3km, mb4.1/25, mbtmp4.5/30, MS3.4/23, Error ellipse: s-maj=11.6km s-min=5.9km az=77.0*

*NEIC **30** 21:01:35.8±2.4, 9°23S±0°06×123°81E±0°06, h103km±6km, mb4.9/43, Error ellipse: s-maj=10.2km s-min=8.1km az=47.0*

*DJA **30** 21:01:35.3±0.2, 9°S±2°×12°4E±°, h90km±3km, M4.7/85, mB5.2/36, mb4.9/85, MLv5.0/31, Mw(mB)4.6/36*

*GCMT **30** 21:01:37.8±0.3, 9°21S±0°03×123°90E±0°03, h91km±7km, MW4.7/76, Moment Tensor Solution. s12,c13; s76,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.57±.11; $M_{\theta\theta}$-0.52±.19; $M_{\phi\phi}$-0.04±.21; $M_{r\theta}$0.77±.05; $M_{r\phi}$-0.14±.13; $M_{\theta\phi}$1.13±.06; Best double couple: M_o1.46600×10^{16} NP1:ϕ_s267.00000°, δ14.00000°, λ138.00000°. NP2: ϕ_s39.00000°, δ80.00000°, λ79.00000°. Principal axes: T 1.5730, Plg53.0000°, Azm296.0000°; N -0.2150, Plg11.0000°, Azm40.0000°; P -1.3590, Plg35.0000°, Azm138.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 21:01:36.1±0.3, 9°21S±0°04×123°82E±0°04, h105km±2km, h105km:pP-P, n236, σ1963/240, mb4.7/61, 1C-1D, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
SOEI	**Soe**	**0.70**	**141**	P		Pn	21 01 53.6	-0.6
SOEI	**Soe**	**0.70**	**141**	S		Sn	21 02 07.5	-0.2
SOEI	**Soe**	**0.70**	**141**	Pn		Pn	21 01 53.3	-0.9
SOEI	**Soe**	**0.70**	**141**	P		Pn	21 01 53.0	-1.2
BATI	**Baumata**	**1.00**	**189**	P		Pn	21 01 56.6	-0.4
	4µm,0.4s,baz=61,slow=2.0,SNR=1552							
BATI				S		Sn	21 02 12.2	-0.5
	10µm,0.5s,baz=100,slow=23,SNR=15							
BATI	**Baumata**	**1.00**	**189**	P		Pn	21 01 56.3	-0.7
BATI				S		Sn	21 02 13.1	+0.4
MMRI	**Maumere**	**1.66**	**290**	P		Pn	21 02 04.8	+0.1
MMRI	**Maumere**	**1.66**	**290**	S		Sn	21 02 27.0	+0.7
MMRI	**Maumere**	**1.66**	**290**	Pn		Pn	21 02 04.2	-0.5
MMRI	**Maumere**	**1.66**	**290**	P		Pn	21 02 04.2	-0.5
MMRI				S		Sn	21 02 26.4	+0.1
LBFI	**Labuhan Bajo,**	**3.95**	**280**	P		Pn	21 02 35.3	+0.6
WBSI	**Waikabubak, Su**	**4.39**	**264**	P		Pn	21 02 39.8	-0.9
BSSI	**Bau Bau, Buton**	**4.49**	**312**	P		Pn	21 02 42.4	+0.3
KDI	**Kendari**	**5.35**	**347**	P		Pn	21 02 53.8	+0.1
KKSI	**Kolaka, Sulawe**	**5.45**	**337**	P		Pn	21 02 54.4	-0.6
	0.8nm2µm190nm,0.7s							
DBNI	**Kabupaten Domp**	**5.49**	**277**	P		Pn	21 02 55.3	-0.3
	2.4nm4µm291nm,0.8s							
DBNI				S		Sn	21 03 56.1	-1.3
	2.4nm4µm291nm,0.8s							
KAPI	**Kappang**	**5.80**	**316**	P		Pn	21 02 59.7	-0.1
	38nm,0.9s,baz=130,slow=10.0,SNR=36							
KAPI				S		Sn	21 04 03.4	-1.6
	20nm,0.7s,baz=233,slow=19,SNR=1.1							
KAPI				LR		LR	21 05 26.6	
	comp=Z,474nm,20.6s,baz=148,slow=40							
KAPI	**Kappang**	**5.80**	**316**	P		Pn	21 03 01.4	+1.6
	44nm,1.2s							
KAPI	**Kappang**	**5.80**	**316**	Pn		Pn	21 03 01.0	+1.2
KAPI	**Kappang**	**5.80**	**316**	P		Pn	21 03 00.8	+1.0
MKS	**Makassar**	**5.86**	**312**	P		Pn	21 03 02.1	+1.5
	0.6nm2µm219nm,1.2s							
PLAI	**Plampang**	**5.98**	**273**	P		Pn	21 03 02.8	+0.6
	250nm,0.6s							
PLAI	**Plampang**	**5.98**	**273**	S		Sn	21 04 07.7	-1.7
	250nm,0.6s							
PLAI	**Plampang**	**5.98**	**273**	P		Pn	21 03 02.3	+0.1
	5µm323nm,0.9s							
SPSI	**Sidrap Palu**	**6.58**	**322**	P		Pn	21 03 11.1	+0.7
	0.3nm962nm84nm,1.1s							
NLAI	**Namlea**	**6.77**	**29**	P		Pn	21 03 15.0	+2.1
	0.3nm83nm,0.7s							
TTSI	**Tana Toraja**	**7.30**	**327**	P		Pn	21 03 24.0	+3.8
	0.6nm2µm229nm,0.8s							
KRAI	**Karang Ratu**	**7.41**	**38**	P		Pn	21 03 23.4	+1.7
SANI	**Sanana**	**7.43**	**17**	P		Pn	21 03 24.6	+2.6
	130nm,0.7s							
SANI	**Sanana**	**7.43**	**17**	P		Pn	21 03 23.9	+1.9
	0.6nm2µm137nm,0.7s							
PMSI	**Majene**	**7.47**	**319**	P		Pn	21 03 24.6	+2.0
	0.2nm62nm,0.9s							
SAUI	**Saumlaki**	**7.50**	**81**	P		Pn	21 03 22.1	-0.8
	356nm,1.2s							
SAUI	**Saumlaki**	**7.50**	**81**	S		Sn	21 04 41.9	-4.5
	356nm,1.2s							
SAUI	**Saumlaki**	**7.50**	**81**			Pn	21 03 21.3	-1.6
SAUI	**Saumlaki**	**7.50**	**81**	P		Pn	21 03 22.3	-0.6
	7µm376nm,1.2s							
DRS	**Darwin Rock St**	**7.66**	**115**	P		Pn	21 03 23.7	-1.3
	192nm,0.4s							
MTN	**Manton Dam**	**8.04**	**117**			Pn	21 03 27.9	-2.3
KNRA	**Kununurra**	**8.04**	**144**			Pn	21 03 27.0	-3.3
MMSI	**Mamuju**	**8.11**	**323**	P		Pn	21 03 35.2	+4.0
KHKI	**Kahang-Kahang**	**8.16**	**275**	P		Pn	21 03 31.1	-0.7
	0.5nm59nm,0.6s							
LUWI	**Luwuk**	**8.18**	**353**	P		Pn	21 03 33.7	+1.6
	128nm,0.7s							
LUWI	**Luwuk**	**8.18**	**353**	Pn		Pn	21 03 31.0	-1.2
LUWI	**Luwuk**	**8.18**	**353**	P		Pn	21 03 34.1	+2.0
	1µm128nm,0.7s							
APSI	**Ampana**	**8.52**	**345**	P		Pn	21 03 37.5	+0.7
	968nm69nm,0.9s							
IGBI	**Denpasar**	**8.58**	**272**	P		Pn	21 03 35.4	-2.1
FITZ	**Fitzroy Crossi**	**9.01**	**169**	P		Pn	21 03 41.0	-2.4
	35nm,0.2s,baz=4.7,slow=10,SNR=101							
FITZ				S		Sn	21 05 13.8	-9.3
	254nm,0.3s,baz=273,slow=22,SNR=34							
PCI	**Palu**	**9.15**	**334**	P		Pn	21 03 47.6	+2.2
	70nm,0.9s							
JAGI	**Jajag, Banyuwa**	**9.58**	**274**	P		Pn	21 03 47.6	-3.6
	45nm,0.4s							
JAGI	**Jajag, Banyuwa**	**9.58**	**274**			Pn	21 03 47.1	-4.2
JAGI	**Jajag, Banyuwa**	**9.58**	**274**	P		Pn	21 03 47.0	-4.2
	50nm,0.4s							
ABJI	**Asem Bagus**	**9.58**	**278**	P		Pn	21 03 51.2	0.0
	33nm,0.9s							
MRSI	**Marisa**	**9.80**	**349**	P		Pn	21 03 54.2	0.0
	35nm,1.1s							
KMMI	**Kalianget**	**9.99**	**282**	P		Pn	21 03 59.0	+2.3
	40nm,0.8s							
MPSI	**Mapaga**	**10.26**	**337**	P		Pn	21 04 00.8	+0.4
	19nm,0.8s							
FAKI	**Fak Fak**	**10.45**	**54**	P		Pn	21 04 00.9	-2.2
	36nm,0.9s							
FAKI	**Fak Fak**	**10.45**	**54**	Pn		Pn	21 04 00.5	-2.5
FAKI	**Fak Fak**	**10.45**	**54**	P		Pn	21 04 01.2	-1.9
	38nm,0.5s							
BKB	**Balikpapan**	**10.48**	**319**	P		Pn	21 04 05.4	+2.0
	71nm,1.0s							
TNTI	**Ternate**	**10.53**	**20**	P		Pn	21 04 04.1	+0.1
BBKI	**Banjar Baru**	**10.59**	**302**	P		Pn	21 04 07.4	+2.5
	1µm78nm,1.2s							
TOLI2	**Tolitoli**	**10.69**	**343**	P		Pn	21 04 08.5	+2.2
	42nm,0.8s							
TOLI2	**Tolitoli**	**10.69**	**343**	Pn		Pn	21 04 08.3	+2.1
SIJI	**Sorong**	**11.12**	**42**	P		Pn	21 04 12.1	0.0
	9.1nm,0.4s,baz=257,slow=21,SNR=14							
SIJI				S		Sn	21 06 16.7	+2.3
	2.5nm,0.3s,baz=244,slow=22,SNR=1.4							
SIJI	**Sorong**	**11.12**	**42**	P		Pn	21 04 12.8	+0.7
	18nm,1.0s							
SWI	**Sorong**	**11.12**	**42**	P		Pn	21 04 13.1	+1.1
	27nm,0.8s							
SNJI	**Sawahan-Nganju**	**12.01**	**276**	P		Pn	21 04 24.2	+0.1
MBWA	**Marble Bar**	**12.52**	**198**	P		Pn	21 04 30.6	0.0
	16nm,1.0s							
MBWA	**Marble Bar**	**12.52**	**198**	Pn		Pn	21 04 28.6	-2.0
PCJI	**Pacitan**	**12.54**	**274**	P		Pn	21 04 28.4	-2.5
PSA00	**Pilbara Seismi**	**12.88**	**197**	P		Pn	21 04 35.1	-0.2
PSA00	**Pilbara Seismi**	**12.88**	**197**	Pn		Pn	21 04 33.4	-2.0
UGM	**Wanagama**	**13.21**	**275**	P		Pn	21 04 37.1	-2.7
	74nm,1.6s							
UGM	**Wanagama**	**13.21**	**275**			Pn	21 04 36.7	-3.1
UGM	**Wanagama**	**13.21**	**275**	P		Pn	21 04 39.8	0.0
	77nm,1.6s							
BAKI	**Biak**	**14.59**	**58**	P		Pn	21 04 56.7	-0.9
WB0	**Warramunga Arr**	**14.65**	**137**			Pn	21 04 54.0	-4.4
WRA	**Warramunga Arr**	**14.74**	**138**	P		Pn	21 04 54.6	-4.9
	15nm,0.6s,baz=315,slow=15,SNR=169							
WRA				S		Sn	21 07 27.5	-15
	53nm,0.6s,baz=316,slow=23,SNR=10							
WRA	**Warramunga Arr**	**14.74**	**138**			Pn	21 04 55.0	-4.5
WRAB	**Tennant Creek**	**14.74**	**137**	P		Pn	21 04 55.4	-4.1
	58nm,0.8s							
WRAB	**Tennant Creek**	**14.74**	**137**			Pn	21 04 55.3	-4.2
KPJI	**Karang Pucung**	**14.85**	**276**	P		Pn	21 04 57.7	-3.2
	45nm,0.9s							
WR8	**Warramunga Arr**	**14.86**	**137**			Pn	21 04 56.3	-4.6
BBJI	**Bungbulang**	**16.09**	**275**	P		P	21 05 17.2	-0.7
	64nm,0.7s							
BBJI	**Bungbulang**	**16.09**	**275**			Pn	21 05 11.8	-4.7
BBJI					IAmb	IAmb	21 05 19.2	
	comp=Z,42nm,0.7s							
BBJI	**Bungbulang**	**16.09**	**275**	P		Pn	21 05 17.1	+0.6
	comp=Z,576nmcomp=Z,65nm,0.7s							
LEM	**Lembang**	**16.22**	**277**	P		Pn	21 05 15.7	-2.5
	comp=Z,39nm,0.8s,baz=67,slow=7.8,SNR=21							
LEM					LR	LR	21 12 14.4	
	comp=Z,139nm,19.4s,baz=175,slow=40							
LEM	**Lembang**	**16.22**	**277**	P		P	21 05 19.1	-0.2
	comp=Z,1µmcomp=Z,91nm,0.6s							
GIRL	**Giralia**	**16.22**	**213**	P		Pn	21 05 17.3	-0.7
GIRL					IAmb	IAmb	21 05 42.5	
	comp=Z,208nm,1.5s							
DAV	**Davao City (W)**	**16.27**	**6**	LR		LR	21 13 00.1	
	comp=Z,56nm,19.2s,baz=136,slow=42							
SBUM	**Sibu**	**16.36**	**315**	P		P	21 05 23.5	+2.7
KKM	**Kota Kinabalu**	**16.94**	**333**	P		P	21 05 28.9	+1.6
	comp=Z,108nm,0.7s							
KKM	**Kota Kinabalu**	**16.94**	**333**			P	21 05 27.8	+0.5
KKM	**Kota Kinabalu**	**16.94**	**333**	P		P	21 05 29.6	+2.3
	comp=Z,1µmcomp=Z,108nm,0.7s							
DBJI	**Dramaga**	**17.11**	**278**	P		P	21 05 29.4	+0.3
	comp=Z,55nm,0.7s							
TPI	**Tanjungpandan**	**17.30**	**291**	P		P	21 05 31.0	-0.1
ASAR	**Alice Springs**	**17.31**	**147**	P		P	21 05 30.6	-0.7
	comp=Z,58nm,0.8s,baz=324,slow=12,SNR=218							
ASAR					S	Sn	21 08 32.3	-12
	comp=Z,32nm,0.6s,baz=319,slow=22,SNR=11							
ASAR					LR	LR	21 12 43.7	
	comp=Z,338nm,18.2s,baz=344,slow=38							
GENI	**Genyem**	**17.53**	**69**	P		Pn	21 05 34.5	+0.4
	comp=Z,39nm,0.5s							
XMI	**Christmas Isla**	**17.91**	**265**	P		Pn	21 05 39.4	+0.8
	comp=Z,151nm,1.1s							
MEEK	**Meekatharra**	**18.02**	**195**	P		Pn	21 05 41.1	+1.1
	comp=Z,20nm,0.8s							
JAY	**Jayapura**	**18.06**	**69**	P		P	21 05 39.4	-0.2
	comp=Z,11nm,0.6s,baz=211,slow=7.7,SNR=4.8							
CGJI	**Cibinong**	**18.14**	**277**	P		P	21 05 38.3	-2.0
QIS	**Mount Isa**	**18.95**	**128**	P		Pn	21 05 51.0	-0.1
	comp=Z,117nm,1.0s							
KLSI		**19.47**	**282**	P		Pn	21 05 57.0	-0.1
KASI	**Kota Agung**	**19.51**	**279**	P		P	21 05 54.0	-1.3
	comp=Z,63nm,0.7s							
COEN	**Coen**	**19.54**	**106**	P		P	21 05 56.4	+0.8
	comp=Z,51nm,0.8s							
COEN	**Coen**	**19.54**	**106**	P		P	21 05 55.2	-0.5
COEN					IAmb	IAmb	21 06 01.9	
	comp=Z,37nm,0.8s							
MDSI	**Maura Dua**	**20.05**	**282**	P		Pn	21 06 02.7	-1.2
	comp=Z,736nmcomp=Z,12nm,0.4s							
MORW	**Morawa**	**21.06**	**199**	P		P	21 06 13.4	+1.4
	comp=Z,26nm,2.1s							
MORW	**Morawa**	**21.06**	**199**	P		P	21 06 12.5	+0.5
MNAI	**Manna**	**21.26**	**282**	P		P	21 06 15.8	+1.5
	comp=Z,171nm,0.9s							
FORT	**Forrest**	**21.82**	**170**	P		P	21 06 20.2	+0.2
FORT					IAmb	IAmb	21 06 27.2	
	comp=Z,30nm,0.8s							
BLDU	**Ballidu**	**22.31**	**196**	P		P	21 06 26.1	+1.0
	comp=Z,26nm,0.9s							
MYKOM	**Kota Tinggi**	**22.70**	**298**	P		P	21 06 28.4	-0.9
KLBR	**Kellerberrin**	**22.98**	**193**	P		P	21 06 33.0	+1.2
	comp=Z,25nm,0.8s							
PMG	**Port Moresby**	**23.03**	**92**	P		P	21 06 33.3	+0.8
	comp=Z,17nm,0.7s,baz=222,slow=8.3,SNR=5.3							
PMG					S	S	21 10 38.8	+3.4
	comp=Z,25nm,1.2s,baz=202,slow=12,SNR=1.7							
PMG					LR	LR	21 16 16.7	
	comp=Z,121nm,21.0s,baz=242,slow=38							
	comp=Z,17nm,0.7s							
PMG	**Port Moresby**	**23.03**	**92**	P		P	21 06 33.6	+1.0
PMG					IAmb	IAmb	21 07 02.6	
	comp=Z,28nm,0.9s							
TGY	**Tagaytay City**	**23.34**	**353**	P		P	21 06 36.0	+0.6
	comp=Z,39nm,0.4s,baz=224,slow=8.7,SNR=3.5							
	comp=Z,39nm,0.4s							
CTA	**Charters Tower**	**24.22**	**119**	P		P	21 06 44.5	+1.2
	comp=Z,6.7nm,0.7s,baz=297,slow=13,SNR=5.8							
	comp=Z,6.7nm,0.7s							
NWAO	**Narrogin (SRO)**	**24.38**	**194**	P		P	21 06 45.4	+0.8
	comp=Z,2.8nm,0.4s,baz=28,slow=7.5,SNR=6.3							
NWAO					S	S	21 11 03.1	+6.4
	comp=Z,4.4nm,0.6s,baz=62,slow=6.6,SNR=1.6							
	comp=Z,2.8nm,0.4s							
NWAO	**Narrogin (SRO)**	**24.38**	**194**	P		P	21 06 45.6	+1.0
	comp=Z,9.7nm,1.4s							
BBOO	**Buckleboo**	**26.07**	**156**	P		P	21 07 01.0	+1.0
BBOO	**Buckleboo**	**26.07**	**156**	P		P	21 07 00.8	+0.8
BBOO					IAmb	IAmb	21 07 02.3	
	comp=Z,16nm,0.8s							
HTT	**Hallett**	**27.84**	**152**	P		P	21 07 16.7	+0.8
STKA	**Stephens Creek**	**27.95**	**146**	P		P	21 07 18.1	+1.3
	comp=Z,3.9nm,0.6s,baz=321,slow=8.9,SNR=10							
	comp=Z,3.9nm,0.6s							
STKA	**Stephens Creek**	**27.95**	**146**	P		P	21 07 17.9	+1.1
	comp=Z,2.7nm,0.9s							
STKA	**Stephens Creek**	**27.95**	**146**	P		P	21 07 17.9	+1.1
STKA					IAmb	IAmb	21 07 25.6	
	comp=Z,59nm,1.1s							
GSI	**Gunungsitoli**	**28.15**	**290**	P		P	21 07 15.4	-3.4
KRVT	**Keravat (AS076**	**28.42**	**82**	LR		LR	21 20 03.2	
	comp=Z,12nm,18.9s,baz=147,slow=39							
CMSA	**Cobar Meteorol**	**30.11**	**141**	P		P	21 07 38.6	+2.6
	comp=Z,17nm,0.9s							
JOW	**Kunigami**	**36.09**	**7**	LR		LR	21 24 04.2	
	comp=Z,25nm,21.3s,baz=106,slow=37							
CMAR	**Chiang Mai Arr**	**36.85**	**318**	P		P	21 08 35.1	+0.5
	comp=Z,14nm,0.7s,baz=146,slow=7.0,SNR=112							
CMAR					pP	pP	21 08 57.9	+0.5
	comp=Z,3.5nm,0.9s,baz=140,slow=6.6,SNR=2.9							
CMAR					PcP	PcP	21 10 55.1	+0.6
	comp=Z,1.0nm,0.7s,baz=152,slow=2.4,SNR=1.4							
CMAR					ScP	ScP	21 14 33.4	+1.5
	comp=Z,0.4nm,0.7s,baz=172,slow=3.2,SNR=4.6							
	comp=Z,14nm,0.7s							
CHTO	**Chiang Mai**	**37.11**	**319**	P		P	21 08 37.5	+0.7
	comp=Z,20nm,0.9s							
CHTO	**Chiang Mai**	**37.11**	**319**	P		P	21 08 37.3	+0.5
CHTO					IAmb	IAmb	21 08 38.2	
	comp=Z,20nm,0.7s							
CHTO	**Chiang Mai**	**37.11**	**319**	P		P	21 08 37.4	+0.7
CHTO					pP	pP	21 08 59.5	-0.1
KMI2	**Kunming**	**39.85**	**329**	P		P	21 09 01.5	+1.6
KMI2					pmax	pmax		
	comp=Z,10.0nm,0.8s							
NJ2	**Nanjing**	**41.30**	**354**	eP		P	21 09 12.3	+0.9
NJ2					pmax	pmax		
	comp=Z,14nm,0.9s							
PZH	**PanZhiHua**	**41.47**	**329**	P		P	21 09 13.3	+0.2
ENH	**Enshi**	**41.60**	**341**	P		P	21 09 12.0	-2.0
TNCH	**TengChong**	**42.02**	**325**	P		P	21 09 18.5	+0.8
TNCH					pmax	pmax		
	comp=Z,15nm,0.7s							
DZM	**Mont Dzumac**	**42.84**	**113**	P		P	21 09 25.7	+1.4
	comp=Z,5.8nm,0.7s,baz=202,slow=16,SNR=2.0							
	comp=Z,5.8nm,0.7s							
YATNC	**Mamie plateau,**	**43.25**	**112**	P		P	21 09 28.9	+1.4
CD2	**Chengdu**	**44.29**	**335**	eP		P	21 09 36.5	+0.8
XAN	**Xi'an**	**45.28**	**343**	⇓P		P	21 09 42.0	-1.5
XAN					pP	pP	21 10 06.0	-1.1
XAN					pmax	pmax		
	comp=Z,14nm,0.7s							
PALK	**Pallekele**	**45.98**	**289**	LR		LR	21 28 40.4	
	comp=Z,48nm,20.5s,baz=124,slow=35							
SHL	**Shillong**	**46.49**	**319**	P		P	21 09 52.2	-1.0
KSRS	**Korea Array**	**46.58**	**4**	P		P	21 09 52.2	-1.3
	comp=Z,1.2nm,0.9s,baz=179,slow=9.7,SNR=2.7							
KSRS					LR	LR	21 30 01.5	
	comp=Z,12nm,21.2s,baz=150,slow=37							
	comp=Z,1.2nm,0.9s							
MJAR	**Matsushiro Arr**	**47.48**	**16**	P		P	21 09 58.5	-2.1
	comp=Z,4.0nm,1.0s,baz=192,slow=8.4,SNR=8.2							
MJAR					pP	pP	21 10 24.9	+0.5
	comp=Z,1.9nm,0.6s,baz=190,slow=8.7,SNR=3.2							
	comp=Z,4.0nm,1.0s							
LZDM	**Lanzhou Array**	**48.76**	**338**	P		P	21 10 10.5	-0.4
	comp=Z,2.8nm,0.3s,baz=130,slow=4.3,SNR=1.8							
	comp=Z,2.8nm,0.3s							
LZH	**Lanzhou**	**48.82**	**338**	eP		P	21 10 11.3	+0.1
LZH					sP	sP	21 10 46.0	-0.6
LZH					pmax	pmax		
	comp=Z,17nm,1.4s							
LSA	**Lhasa**	**49.85**	**322**	P		P	21 10 20.0	+0.5
LSA	**Lhasa**	**49.85**	**322**	P		P	21 10 17.5	-2.0
LSA					pmax	pmax		
	comp=Z,10.0nm,0.6s							
H08S2	**Diego Garcia H**	**50.76**	**268**	T		T	22 06 34.5	
	baz=98,slow=76,SNR=4.5							
H08S3	**Diego Garcia H**	**50.77**	**268**	T		T	22 06 24.9	
	baz=98,slow=76,SNR=5.3							
H08S1	**Diego Garcia H**	**50.78**	**268**	T		T	22 06 27.8	
	baz=98,slow=76,SNR=4.7							
HHC	**Hu-ho-hao-te**	**51.08**	**348**	eP		P	21 10 30.5	+2.5
HHC					pmax	pmax		
	comp=Z,11nm,0.9s							
HHC					pmax	pmax		
	comp=Z,110nm,4.5s							
BTO2	**Baotou**	**51.34**	**346**	eP		P	21 10 32.5	+2.5
BTO2					pmax	pmax		
	comp=Z,5.0nm,0.5s							
BTO2					pmax	pmax		
	comp=Z,150nm,4.5s							
JTM	**Tenmabayashi**	**52.23**	**17**	P		P	21 10 35.1	-1.3
JTM					IAmb	IAmb	21 10 50.5	
	comp=Z,19nm,1.2s							
GOMU	**GeErMu**	**52.77**	**330**	P		P	21 10 41.5	+0.4
GOMU					pmax	pmax		
	comp=Z,6.0nm,0.8s							
GTA2	**Gaotai**	**53.35**	**337**	eP		P	21 10 44.5	-0.4
GTA2					pmax	pmax		
	comp=Z,7.0nm,1.0s							
RPZ	**Rata Peaks**	**53.45**	**138**	LR		LR	21 35 53.9	
	comp=Z,168nm,18.1s,baz=166,slow=38							
USRK	**Ussuriysk Ar.**	**53.67**	**7**	P		P	21 10 46.4	-0.6
	comp=Z,5.3nm,0.5s,baz=192,slow=6.5,SNR=12							
	comp=Z,5.3nm,0.5s							
MDJ	**Mudanjiang**	**53.83**	**5**	P		P	21 10 47.6	-0.5
MDJ					IAmb	IAmb	21 10 48.5	
	comp=Z,15nm,0.8s							
MDJ	**Mudanjiang**	**53.83**	**5**	P		P	21 10 47.8	-0.3
MDJ					pmax	pmax		
	comp=Z,22nm,0.8s							
MDJ	**Mudanjiang**	**53.83**	**5**	P		P	21 10 47.9	-0.2
MDJ					pP	pP	21 11 12.9	+0.4
MDJ					sP	sP	21

comp=Z,2.8nm,0.8s
ZAA0 Zalesovo Array 71.02 337 P **P** **21 12 40.4 -2.1**
ZAA0 IAmb IAmb 21 12 41.9
comp=Z,13nm,1.0s
ZALV Zalesovo Beam 71.02 337 P **P** **21 12 40.8 -1.6**
comp=Z,7.8nm,0.7s,baz=139,slow=4.2,SNR=45
ZALV pP **pP** **21 13 06.4 -1.4**
comp=Z,3.2nm,0.6s,baz=121,slow=3.8,SNR=3.9
comp=Z,7.8nm,0.7s
VNDA Vanda 71.08 172 P **P** **21 12 41.7 -0.8**
comp=Z,0.8nm,0.6s,baz=311,slow=8.2,SNR=6.6
VNDA LR LR 21 43 41.0
comp=Z,82nm,19.1s,baz=340,slow=36
comp=Z,0.8nm,0.6s
YAK Yakutsk 71.17 3 P **P** **21 12 42.4 -0.8**
YAK IAmb IAmb 21 12 43.4
comp=Z,28nm,0.8s
YAK Yakutsk 71.17 3 P **P** **21 12 42.8 -0.4**
KURBB **Kurchatov Arra 71.34 331** P **P** **21 12 43.5 -1.0**
comp=Z,9.4nm,1.0s,baz=137,slow=5.0,SNR=32
KURBB pP **pP** **21 13 10.0 +0.1**
comp=Z,1.9nm,0.7s,baz=145,slow=5.4,SNR=3.4
comp=Z,9.4nm,1.0s
KURK Kurchatov 71.36 332 P **P** **21 12 44.2 -0.4**
KURK IAmb IAmb 21 12 45.7
comp=Z,24nm,1.1s
KURK Kurchatov 71.36 332 P **P** **21 12 44.6 -0.1**
KURK pP **pP** **21 13 10.7 +0.7**
BVAR Borovoye Array 76.78 330 P **P** **21 13 15.5 -0.7**
comp=Z,3.1nm,0.6s,baz=122,slow=7.2,SNR=20
BVAR pP **pP** **21 13 41.4 -0.4**
comp=Z,1.4nm,0.6s,baz=125,slow=9.3,SNR=3.6
comp=Z,3.1nm,0.6s
BORK Borovoye 76.83 330 P **P** **21 13 15.7 -0.7**
BORK Borovoye 76.83 330 P **P** **21 13 16.4 -0.1**
BORK pP **pP** **21 13 43.2 +1.1**
BORK sP **sP** **21 13 54.4 +1.4**
TIXI Tiksi 80.75 2 P **P** **21 13 36.3 -1.1**
QSPA South Pole Qui 80.78 180 P **P** **21 13 39.3 +1.2**
comp=Z,1.4nm,0.7s,baz=304,slow=3.6,SNR=6.1
comp=Z,1.4nm,0.7s
QSPA South Pole Qui 80.78 180 P **P** **21 13 37.8 -0.2**
AKTO Aktyubinsk 82.15 324 LR LR 21 54 01.1
comp=Z,18nm,21.3s,baz=150,slow=38
NRIK Noril'sk 82.31 348 P **P** **21 13 45.5 -0.2**
comp=Z,1.1nm,0.3s,baz=100,slow=5.7,SNR=6.0
comp=Z,1.1nm,0.3s
RAYN Ar Rayn 83.08 295 P **P** **21 13 51.2 +0.4**
RAYN pP **pP** **21 14 16.2 -0.7**
RAYN sP **sP** **21 14 28.3 +0.7**
TBI Tubuai 83.42 113 *e*LR LR 21 40 22.0
comp=Z,467nm,37.2s
PPT2 Papeete2 84.06 107 *e*LR LR 21 40 29.0
comp=Z,97nm,33.8s
PPT2 *e*LR LR 21 40 39.1
comp=Z,106nm,37.2s
PPT Papeete 84.06 107 LR LR 21 50 35.9
comp=Z,38nm,18.3s,baz=164,slow=35
ARTI Arti 84.48 329 LR LR 21 56 08.1
comp=Z,14nm,19.1s,baz=152,slow=39
ARTI Arti 84.48 329 P **P** **21 13 56.3 -0.9**
ARTI IAmb IAmb 21 13 57.7
comp=Z,15nm,0.8s
ARTI Arti 84.48 329 P **P** **21 13 56.5 -0.7**
ARTI pP **pP** **21 14 22.8 -0.5**
KBZ Khabaz 89.80 314 P **P** **21 14 22.6 -0.5**
comp=Z,2.6nm,1.0s,baz=182,slow=2.2,SNR=3.6
comp=Z,2.6nm,1.0s
LSZ Lusaka 92.97 254 LR LR 21 55 39.4
comp=Z,30nm,18.7s,baz=134,slow=35
BOSA Boshof 93.07 241 P **P** **21 14 40.0 +1.1**
comp=Z,1.8nm,0.8s,baz=117,slow=4.4,SNR=4.5
comp=Z,1.8nm,0.8s
LBTB Lobatse 93.51 244 LR LR 21 53 15.6
comp=Z,26nm,19.0s,baz=138,slow=33
EIL Elat 93.52 299 LR LR 22 04 25.8
comp=Z,12nm,18.4s,baz=63,slow=40
MMAI Mount Meron Ar 93.63 303 P **P** **21 14 40.5 -0.7**
comp=Z,0.5nm,0.5s,baz=37,slow=15,SNR=1.4
comp=Z,0.5nm,0.5s
BRTR Keskin Array B 95.94 309 P **P** **21 14 49.7 -2.0**
comp=Z,0.9nm,0.8s,baz=86,slow=5.2,SNR=4.6
BRTR LR LR 22 05 54.4
comp=Z,9.3nm,18.6s,baz=133,slow=40
comp=Z,0.9nm,0.8s
ILAR Eielson Array 97.96 26 P **P** **21 14 59.7 -0.3**
comp=Z,0.2nm,0.7s,baz=270,slow=7.3,SNR=1.4
comp=Z,0.2nm,0.7s
CLL Collm 110.12 321 *e*PP **PP** **21 20 31.0 +0.3**
PDAR Pinedale Array 122.77 45 PKP **PKiKP** **21 20 20.8 +0.2**
comp=Z,0.1nm,0.4s,baz=235,slow=5.9,SNR=2.1
TORD Torodi Ar. Bea 123.18 280 PKP **PKiKP** **21 20 22.2 +0.3**
comp=Z,2.5nm,0.7s,baz=88,slow=1.3,SNR=18
TORD pPKP **pPKPdf** **21 20 48.9 -0.4**
comp=Z,1.4nm,0.7s,baz=72,slow=1.1,SNR=4.2
EPLO Experimental L 129.01 31 PKPdf **PKPdf** **21 20 31.8 0.0**
DBIC Dimbokro 129.14 271 PKP **PKiKP** **21 20 34.4 +0.6**
comp=Z,1.6nm,0.6s,baz=116,slow=11,SNR=2.2
TXAR Lajitas Array 131.30 59 PKP **PKiKP** **21 20 38.7 +0.8**
comp=Z,0.2nm,0.5s,baz=357,slow=3.2,SNR=2.1
TXAR SKPbc **SKPab** **21 23 54.1 +1.0**
comp=Z,2.4nm,0.9s,baz=260,slow=2.3,SNR=11
CPUP Villa Florida 144.66 178 PKP **PKPdf** **21 21 02.1 +0.7**
comp=Z,2.8nm,0.7s,baz=189,slow=1.4,SNR=6.6
CPUP pPKP **pPKPdf** **21 21 29.1 -0.1**
comp=Z,3.0nm,0.7s,baz=227,slow=5.2,SNR=3.2
LPAZ La Paz 152.04 155 PKPbc **PKiKP** **21 21 23.6 +2.3**
comp=Z,1.0nm,0.5s,baz=213,slow=2.0,SNR=5.1

*ISK **30** 21:04:51.3, 38.47N×39.17E, h10km±1km, ML2.6/4*
AFAD 30 21:04:51.4, 38.49N×39.12E, h15km±1km, ML2.2, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESGZ	**Sivrice-Elazig**	**0.08**	**217**	Pg	Pg	21 04 54.1	-0.6
ESGZ				Sg	Sg	21 04 56.2	-0.6
ELZG	**Elazig**	**0.11**	**274**	P	Pb	21 04 55.3	0.0
ELZG				S	Sg	21 04 57.4	0.0
ELZG	comp=E,868nm,0.4s			IAML		21 04 58.0	
ELZG	comp=N,469nm,0.2s			IAML		21 04 59.0	
ESIJ	**Sivrice-Elazig**	**0.15**	**106**	Pg	Pg	21 04 54.5	-1.1
SVRC	**Sivrice-ELAZID**	**0.18**	**128**	Pg	Pg	21 04 54.9	-1.1
SVRC				Sg	Sg	21 04 57.4	-1.6
MDYL	**Doganyol-Malat**	**0.19**	**200**	Pg	Pg	21 04 55.6	-0.4
ELZ	**Elazig**	**0.21**	**19**	P	Pg	21 04 56.6	+0.3
ELZ	comp=E,679nm,0.2s			IAML	S	21 05 00.0	+0.3
ELZ				S	S	21 05 00.0	+0.3
CNGT	**ngs**	**0.31**	**153**	P	Pg	21 04 57.4	-0.6
CNGT				S	Sg	21 05 00.8	-1.6
MDNT	**Maden**	**0.45**	**102**	P	Pb	21 05 01.0	-0.1
MDNT				S	Sb	21 05 07.2	-0.5
MDNT	comp=E,155nm,0.2s			IAML		21 05 25.0	
MAYA	**Malatya/Merkez**	**0.57**	**253**	P	Pg	21 05 02.8	+0.1
MAYA				S	Sg	21 05 10.5	+0.1
MAYA	comp=N,130nm,0.2s			IAML		21 05 13.0	
MAYA	comp=E,111nm,0.4s			IAML		21 05 26.0	
KOVA	**Elazig, Kovanc**	**0.58**	**68**	P	Pg	21 05 02.3	-0.6
MCKZ	**Bingol**	**0.64**	**350**	P	Pb	21 05 04.2	-0.1
MCKZ				S	Sg	21 05 12.7	+0.3
NARI	**Adyaman-Kaht**	**0.67**	**205**	P	Pb	21 05 04.8	0.0
KAHTU	**Kahta**	**0.79**	**211**	P	Pb	21 05 07.3	+0.4
KAHTU	comp=N,77nm,0.4s			IAML		21 05 37.0	
KAHTU	comp=E,66nm,0.5s			IAML		21 05 38.0	
ARPR	**Arapgir-MALATY**	**0.86**	**315**	Pg	Pn	21 05 09.0	-0.1
HANM	**anlurfa/Hi**	**0.93**	**192**	P	Pn	21 05 09.7	-0.2
HANM	comp=N,194nm,0.5s			IAML		21 05 47.0	
AKCD	**Akcadag**	**0.96**	**259**	P	Pb	21 05 09.9	0.0
AKCD	comp=E,99nm,0.2s			IAML		21 05 48.0	
DYBB	**Diyarbakir**	**0.96**	**123**	Pg	Pb	21 05 09.6	-0.2
AZEY	**Adyaman-Merk**	**0.97**	**226**	P	Pn	21 05 10.6	+0.2
DIYA	**Diyarbakir**	**0.97**	**125**	P	Pg	21 05 10.2	+0.1
HEKM	**Malatya_Hekimh**	**0.99**	**293**	P	Pg	21 05 10.7	+0.1
HEKM	comp=E,108nm,0.3s			IAML		21 05 50.0	

*ISK **30** 21:15:37.3, 34.82N×27.60E, h14km, ML2.5/10*
*GII **30** 21:15:42.4±0.0, 34.291N±0.003×28.191E±0.001, h0km, Mws2.9, confirmed*
ISC 30 21:15:33.9±2.0, 34.59N±0.07×27.6E±0.1, h10km, n27, σ2s21/42, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**2.13**	**0**	Pn	**Pn**	**21 16 10.3**	**+0.6**
DAT				Sn	**Sn**	**21 16 34.5**	**-1.8**
TURN	**Turunc**	**2.25**	**14**	Pn	**Pn**	**21 16 11.9**	**+0.7**
TURN				Sn	**Sn**	**21 16 37.3**	**-1.7**
AKAS	**Kas**	**2.34**	**45**	Pn	**Pn**	**21 16 13.9**	**+1.4**
AKAS				Sn	**Sn**	**21 16 40.7**	**-0.7**
DALY	**Dalyan (Mula)**	**2.39**	**21**	Pn	**Pn**	**21 16 14.0**	**+0.9**
BODT	**Bodrum**	**2.47**	**355**	Pn	**Pn**	**21 16 15.3**	**+1.0**
BODT				Sn	**Sn**	**21 16 42.8**	**-1.8**
YER	**Yerkesik**	**2.60**	**13**	Pn	**Pn**	**21 16 17.1**	**+0.9**
MLSB	**Milas**	**2.70**	**4**	Pn	**Pn**	**21 16 18.4**	**+0.9**
ELL	**Elmali**	**2.88**	**41**	Pn	**Pn**	**21 16 21.6**	**+1.6**
APMY	**Acipayam-Deniz**	**3.20**	**26**	Pn	**Pn**	**21 16 25.6**	**+1.2**
KORT	**Korkueli**	**3.30**	**42**	Pn	**Pn**	**21 16 27.6**	**+1.8**
CSS	**Mathiatis**	**4.76**	**84**	P	**Pn**	**21 16 49.2**	**+3.5**
CSS				S	**Sn**	**21 17 40.6**	**-0.4**
KZIT	**Kziot**	**6.83**	**121**	P	**Pn**	**21 17 16.4**	**+2.3**
KZIT				Sn		21 18 28.1	-3.8
SALP	**Salfit**	**6.86**	**109**	P	**Pn**	**21 17 16.8**	**+2.2**
SALP				S	**Sn**	**21 18 29.9**	**-2.9**
GEM	**Giv'at Ha'Em**	**6.87**	**99**	P	**Pn**	**21 17 16.9**	**+2.1**
GEM				S	**Sn**	**21 18 31.1**	**-1.9**
AMAZ	**Amatzia**	**6.88**	**114**	P	**Pn**	**21 17 17.2**	**+2.2**
AMAZ				S	**Sn**	**21 18 29.9**	**-3.5**
NATI	**Neve Ativ**	**6.92**	**99**	P	**Pn**	**21 17 17.2**	**+1.9**
NATI				S	**Sn**	**21 18 31.9**	**-2.3**
KSHT	**Keshet**	**7.05**	**101**	P	**Pn**	**21 17 20.1**	**+2.8**
KSHT				S	**Sn**	**21 18 35.9**	**-1.6**
HMDT	**Nahal Hemdat**	**7.05**	**107**	P	**Pn**	**21 17 18.7**	**+1.5**
HMDT				S	**Sn**	**21 18 34.7**	**-2.7**
YTIR	**Yattir**	**7.11**	**115**	P	**Pn**	**21 17 20.9**	**+2.8**
YTIR				S	**Sn**	**21 18 36.6**	**-2.5**
DSI	**Dead Sea**	**7.22**	**113**	P	**Pn**	**21 17 21.7**	**+2.2**
DSI				S	**Sn**	**21 18 38.4**	**-3.2**
RMNI	**Mount Ramon**	**7.26**	**121**	P	**Pn**	**21 17 21.6**	**+1.4**
RMNI				Sn		21 18 39.3	-3.5
MSBI	**Mazada**	**7.32**	**114**	P	**Pn**	**21 17 23.3**	**+2.5**
MSBI				S	**Sn**	**21 18 40.4**	**-3.6**
GHAJ	**Ghor Haditha**	**7.48**	**114**	P	**Pn**	**21 17 25.3**	**+2.2**
GHAJ				S	**Sn**	**21 18 45.1**	**-2.9**
KRMI	**Paran Flat**	**7.52**	**124**	P	**Pn**	**21 17 25.9**	**+2.2**
KRMI				S	Sn	21 18 45.6	-3.4
PRNI	**Paran**	**7.57**	**122**	P	**Pn**	**21 17 26.6**	**+2.1**
PRNI				S	Sn	21 18 47.1	-3.2
HRFI	**Mount Harif**	**7.78**	**124**	P	**Pn**	**21 17 29.6**	**+2.3**
HRFI				S	Sn	21 18 51.9	-3.7
EIL	**Elat**	**7.96**	**126**	P	**Pn**	**21 17 32.0**	**+2.3**
EIL				S	Sn	21 18 56.9	-2.8

*SOME **30** 21:21:06.6, 39.67N×77.15E, h20km*
*NNC **30** 21:21:08.2±3.1, 39.79N×77.22E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=23.4km s-min=14.0km az=162.0*
*KRNET **30** 21:21:13.0±0.1, 39.91N×77.21E, h13km, mb2.8*
ISC 30 21:21:11.0±3.3, 39.9N±0.1×77.20E±0.06, h5km±18km, n14, σ1s16/22, 11C-3D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNKS	**Jany-Kuch**	**1.70**	**316**	⇑*i*P	**Pg**	**21 21 43.9**	**+0.4**
JNKS				⇑*i*S	**Sg**	**21 22 06.6**	**+1.1**
NRN	**Naryn**	**1.82**	**330**	⇑*i*P	**Pg**	**21 21 46.3**	**+0.3**
NRN				⇑*i*S	**Sg**	**21 22 10.5**	**+0.9**
TARG	**Taragay, Kyrgy**	**1.93**	**14**	⇑*e*P	**Pg**	**21 21 48.0**	**0.0**
TARG				⇑*i*S	**Sg**	**21 22 13.3**	**+0.2**
ULHL	**Ulahol**	**2.50**	**344**	⇑*i*P	**Pb**	**21 21 56.3**	**-0.2**
ULHL				⇑*i*S	**Sb**	**21 22 28.0**	**+0.3**
BOOM	**Boomskoye usch**	**2.80**	**341**	⇑*e*P	**Pb**	**21 22 00.5**	**-1.1**
BOOM				⇑*i*S	**Sb**	**21 22 35.3**	**-1.1**
TNSS	**Tian-Shan** 1.5nm,0.5s	**3.19**	**357**	*e*P	**Pb**	**21 22 09.3**	**+0.9**
TNSS	2.7nm,0.8s			*e*S	**Sg**	**21 22 53.3**	**-0.2**
SATY	**Saty** 0.9nm,0.4s	**3.33**	**15**	Pg	**Pb**	**21 22 10.9**	**+0.3**
SATY	6.0nm,0.5s			Lg	Lg	21 22 56.4	
AAK	**Ala-Archa** 0.8nm,0.6s	**3.45**	**325**	⇑Pg	**Pb**	**21 22 11.0**	**-1.6**
AAK	3.8nm,0.9s			⇓Lg	Lg	21 23 02.4	
UZB	**Uzynbulak** 4.0nm,0.5s	**3.57**	**22**	Pg	**Pb**	**21 22 13.4**	**-1.3**
UZB	2.3nm,0.6s			Lg	Lg	21 23 01.1	
UZB	**Uzynbulak** 4.0nm,0.5s	**3.57**	**22**	*e*P	**Pb**	**21 22 13.4**	**-1.3**
UZB	2.3nm,0.6s			*e*S	**Sb**	**21 23 00.3**	**+1.9**
KPKS	**Kokpek** 0.1nm,0.1s	**3.78**	**17**	Pg	**Pb**	**21 22 18.4**	**+0.2**
KPKS	3.7nm,0.5s			Lg	Lg	21 23 09.5	
KPKS	**Kokpek** 0.1nm,0.1s	**3.78**	**17**	*e*P	**Pb**	**21 22 18.4**	**+0.2**
KPKS	3.7nm,0.5s			*e*S	**Sg**	**21 23 09.5**	**-2.9**
PDGK	**Podgornoye** 0.9nm,0.5s	**3.88**	**26**	⇓Pg	**Pb**	**21 22 20.6**	**+0.6**
PDGK	5.9nm,0.8s			⇓Lg	Lg	21 23 12.3	
BLB	**Baldybastay** 0.7nm,0.1s	**4.35**	**12**	Pg	**Pb**	**21 22 28.7**	**+0.7**
BLB	6.2nm,0.5s			Lg	Lg	21 23 26.7	

*CATAC **30** 21:32:13.1±0.5, 7°N±2°×7°3W±°, h163km±5km, M4.5/10, mb4.6/2, mB4.7/2, MLv4.4/10, Mw(mB)3.9/2, Error ellipse: s-maj=7.7km s-min=4.1km az=98.9, confirmed*
*RSNC **30** 21:32:13.7±0.0, 7°N±1°×7°3W±°, h167km±2km, M4.1, mB4.7, mb4.4, ML3.8, MLv4.5, Mw(mB)3.9*
*IDC **30** 21:32:14.5±0.6, 6.74N±0.09×72.93W, h164km±6km, mb3.3/7, mbtmp3.8/11, Error ellipse: s-maj=17.6km s-min=7.3km az=133.0*
*NEIC **30** 21:32:15.1±1.4, 6.74N±0.09×72.95W±0.09, h161km±7km, mb4.2/14, Error ellipse: s-maj=15.8km s-min=10.6km az=137.0*
*FUNV **30** 21:32:17.1, 7.14N×73.27W, h5km, MW3.8, Presumed earthquake*
ISC 30 21:32:13.3±0.6, 6.86N±0.03×73.15W±0.03, h155km±5km, n97, σ1s80/140, mb4.1/14, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**187**	P	**Pn**	**21 32 35.5**	**+0.8**
BARC				S	**Sn**	**21 32 50.6**	**-0.4**
PAMC	**Pamplona, Colo**	**0.66**	**43**	P	**Pn**	**21 32 38.3**	**+1.6**
PAMC				S	**Sn**	**21 32 55.3**	**+0.8**
RUSC	**La Rusia**	**0.96**	**176**	P	**Pn**	**21 32 39.5**	**+0.6**
RUSC				S	**Sn**	**21 32 58.8**	**+0.4**
RUSC	**La Rusia**	**0.96**	**176**	P	**Pn**	**21 32 39.3**	**+0.4**
RUSC				S	**Sn**	**21 32 57.3**	**-1.1**
RUSC	**La Rusia**	**0.96**	**176**	⇑*i*P	**Pn**	**21 32 39.5**	**+0.6**
RUSC				*e*S	**Sn**	**21 32 57.1**	**-1.3**
PTBC	**PUERTO BERRIO,**	**1.34**	**256**	P	**Pn**	**21 32 41.8**	**+0.1**
PTBC				S	**Sn**	**21 33 02.6**	**-0.8**
OCAC	**Ocana**	**1.38**	**353**	P	**Pn**	**21 32 43.5**	**+1.2**
OCAC				S	**Sn**	**21 33 04.8**	**+0.2**
SPBC	**San Pablo de B**	**1.51**	**218**	P	**Pn**	**21 32 44.0**	**+0.5**
SPBC				S	**Sn**	**21 33 05.4**	**-1.3**
NORC	**Norcasia**	**2.14**	**233**	P	**Pn**	**21 32 50.9**	**+0.4**
NORC				S	**Sn**	**21 33 18.2**	**-0.9**
CHIC	**Chingaza**	**2.29**	**195**	P	**Pn**	**21 32 53.2**	**+0.6**
CHIC				S	**Sn**	**21 33 22.1**	**-0.7**
ROSC	**El Rosal** 534nm,0.3s,baz=107,slow=19,SNR=129	**2.32**	**210**	P	**Pn**	**21 32 55.1**	**+2.1**
ROSC	1µm,0.3s,baz=16,slow=20,SNR=16			S	**Sn**	**21 33 26.2**	**+2.8**
ROSC	**El Rosal**	**2.32**	**210**		**Pn**	**21 32 54.9**	**+1.9**
ROSC	**El Rosal**	**2.32**	**210**	P	**Pn**	**21 32 55.0**	**+2.1**
ROSC				S	**Sn**	**21 33 23.9**	**+0.5**

HELC Santa Helena 2.46 255 P **Pn** **21 32 56.1 +1.5**
HELC S **Sn** **21 33 26.9 +0.7**
HELC Santa Helena 2.46 255 P **Pn** **21 32 55.8 +1.3**
HELC S **Sn** **21 33 25.3 -1.0**
HELC Santa Helena 2.46 255 *e*P **Pn** **21 32 56.8 +2.3**
HELC *e*S **Sn** **21 33 26.5 +0.2**
CVER Cruz Verde, Cu 2.50 202 P **Pn** **21 32 56.8 +1.6**
CVER S **Sn** **21 33 27.6 +0.2**
UREC San Jos de Ur 2.53 291 P **Pn** **21 32 54.9 -0.2**
UREC S **Sn** **21 33 26.0 -1.3**
GUY2C Guyana, Caldas 2.74 234 P **Pn** **21 32 58.5 +0.4**
GUY2C S **Sn** **21 33 29.7 -2.9**
VILC Villavicencio, 2.78 191 P **Pn** **21 32 58.6 +0.3**
VILC S **Sn** **21 33 30.1 -3.1**
PTGC Puerto Gaitan, 2.83 159 P **Pn** **21 32 57.5 -1.3**
PTGC S **Sn** **21 33 29.9 -4.1**
RECRC Villamaria, Ca 2.89 229 P **Pn** **21 33 01.4 +1.3**
RECRC S **Sn** **21 33 33.8 -2.4**
NIZA Niza - Manizal 2.92 232 P **Pn** **21 33 01.8 +1.6**
NIZA S **Sn** **21 33 33.0 -3.4**
CMAN1 Manizales, Cal 2.96 233 P **Pn** **21 33 02.8 +2.2**
CMAN1 S **Sn** **21 33 35.8 -1.4**
CBOC Ciudad Bolivar 3.01 251 P **Pn** **21 33 01.2 0.0**
CBOC S **Sn** **21 33 38.2 -0.1**
DBBC Dabeiba 3.04 273 P **Pn** **21 33 02.6 +1.1**
DBBC S **Sn** **21 33 36.2 -2.6**
ARGC Ariguani, Magd 3.17 340 P **Pn** **21 33 05.4 +2.3**
ARGC S **Sn** **21 33 41.8 0.0**
SDV Santo Domingo 3.21 51 P **Pn** **21 33 05.1 +1.4**
38nm,0.3s,baz=206,slow=3.5,SNR=69
SDV S **Sn** **21 33 42.8 0.0**
245nm,0.4s,baz=260,slow=19,SNR=49
SDV Santo Domingo 3.21 51 Pn **Pn** **21 33 04.5 +0.8**
SDV Santo Domingo 3.21 51 P **Pn** **21 33 04.9 +1.2**
SDV S **Sn** **21 33 37.4 -5.3**
SDV Santo Domingo 3.21 51 *e*S **Sn** **21 33 42.6 -0.1**
APAC Apartado, Choc 3.56 287 P **Pn** **21 33 09.2 +1.2**
APAC S **Sn** **21 33 46.8 -3.7**
PRAC Prado 3.57 209 P **Pn** **21 33 08.7 +0.5**
PRAC S **Sn** **21 33 51.6 +0.7**
PRAC Prado 3.57 209 P **Pn** **21 33 08.7 +0.5**
PRAC S **Sn** **21 33 46.8 -4.1**
ORTC Ortega, Tolima 3.60 216 P **Pn** **21 33 09.7 +1.1**
ORTC S **Sn** **21 33 47.9 -3.6**
SJCC San Jacinto, C 3.63 327 P **Pn** **21 33 09.0 0.0**
SJCC S **Sn** **21 33 51.8 -0.4**
SJCC San Jacinto, C 3.63 327 P **Pn** **21 33 09.1 +0.1**
SJCC S **Sn** **21 33 50.8 -1.4**
SJCC San Jacinto, C 3.63 327 *i*P **Pn** **21 33 09.2 +0.2**
SJCC *e*S **Sn** **21 33 47.4 -4.9**
PLMC San Jos del P 3.67 238 P **Pn** **21 33 09.4 -0.2**
PLMC S **Sn** **21 33 49.3 -3.9**
LCBC Los crdobas, 3.76 302 P **Pn** **21 33 10.1 -0.5**
LCBC S **Sn** **21 33 50.3 -4.8**
URMC La Uribe, Meta 3.79 199 P **Pn** **21 33 11.7 +0.6**
URMC S **Sn** **21 33 51.8 -4.3**
YOTC Yotoco, Valle 4.28 228 P **Pn** **21 33 17.6 +0.1**
CAP2 Capurgana 4.54 293 P **Pn** **21 33 20.6 -0.2**
CAP2 S **Sn** **21 34 11.9 -1.5**
PIZC Pizarro, Choco 4.59 246 P **Pn** **21 33 22.8 +1.3**
PTAC Punta Ardita, 4.63 274 P **Pn** **21 33 21.7 -0.4**
MACC Macarena, Meta 4.73 188 P **Pn** **21 33 22.1 -1.3**
BETC Betania 4.74 209 P **Pn** **21 33 23.0 -0.5**
URI Uribia 4.95 13 P **Pn** **21 33 26.1 -0.1**
URI S **Sn** **21 34 20.2 -2.9**
URIC Uribia, Colomb 4.95 13 P **Pn** **21 33 25.5 -0.7**
URIC Uribia, Colomb 4.95 13 *e*S **Sn** **21 34 19.2 -3.9**
JAMC Jamundi, Valle 5.04 224 P **Pn** **21 33 27.3 -0.4**
0.2nm2µm47nm,0.8s
GARC Garzon, Huila 5.19 207 P **Pn** **21 33 29.2 -0.5**
POPC Popayan, Colom 5.54 220 P **Pn** **21 33 34.2 -0.1**
473nm43nm,0.7s
FLOC Florencia 5.80 206 P **Pn** **21 33 37.8 +0.2**
FLOC S **Sn** **21 34 43.4 -0.1**
FLOC Florencia 5.80 206 P **Pn** **21 33 37.3 -0.3**
838nm72nm,1.1s
GR1C Gorgona, Isla 6.30 233 P **Pn** **21 33 44.0 -0.1**
BBAC Balboa, Cauca 6.30 221 P **Pn** **21 33 44.4 0.0**
868nm48nm,0.6s
GCUF Volcan Galeras 6.99 217 P **Pn** **21 33 53.5 -0.2**
22nm,0.7s
BCIP Isla Barro Col 7.01 290 P **Pn** **21 33 52.9 -0.7**
OTAV Otavalo 8.44 219 Pn **Pn** **21 34 13.1 0.0**
MTDJ Mount Denham 12.08 340 Pn **P** **21 35 04.3 -2.7**
JTS Las Juntas de 12.16 287 P **P** **21 35 05.9 -1.9**
5.1nm,0.8s,baz=85,slow=5.8,SNR=9.2
JTS S **Sn** **21 37 12.9 -3.4**
14nm,0.4s,baz=142,slow=19,SNR=8.9
JTS Las Juntas de 12.16 287 Pn **P** **21 35 06.1 -1.6**
JTS **Sn** **21 37 14.1 -2.2**
SDDR Presa de Saban 12.19 8 Pn **P** **21 35 06.2 -1.9**
CELP Cerrillos 12.86 29 Pn **Pn** **21 35 09.2 -1.4**
BOAV Boa Vista 13.34 109 Pn **Pn** **21 35 14.9 -1.9**
APG El Apazote 18.82 297 P **Pn** **21 36 23.6 -0.2**
0.5nm,0.7s,baz=127,slow=9.9,SNR=4.7
KSPA Keystone Colle 34.63 357 P **P** **21 38 50.5 +2.8**
KSPA IAmb IAmb 21 38 50.9
comp=Z,3.7nm,0.8s
TXAR Lajitas Array 36.42 312 P **P** **21 39 05.5 +2.2**
comp=Z,0.6nm,0.6s,baz=140,slow=9.3,SNR=4.6
comp=Z,0.6nm,0.6s
J57A Williamstown 36.49 357 P **P** **21 39 05.4 +1.9**
J57A IAmb IAmb 21 39 19.7
comp=Z,9.4nm,1.1s
NCB Newcomb 36.98 359 P **P** **21 39 09.8 +2.1**
NCB IAmb IAmb 21 39 28.4
comp=Z,5.0nm,1.0s
WBO Williamsburg 38.04 358 P **P** **21 39 18.4 +1.9**
E62A Clayton Lake 39.74 4 P **P** **21 39 33.7 +3.0**
D62A Allapoint, All 40.23 4 P **P** **21 39 36.7 +2.0**
D62A IAmb IAmb 21 39 38.0
comp=Z,6.7nm,0.7s
BATG Bathurst New B 40.73 7 P **P** **21 39 40.7 +1.9**
BATG IAmb IAmb 21 39 45.6
comp=Z,10nm,1.0s
EYMN Ely 43.83 342 P **P** **21 40 04.6 +0.7**
EYMN IAmb IAmb 21 40 10.2
comp=Z,10nm,0.9s
PV02 Paradox Valley 44.83 319 P **P** **21 40 14.8 +2.5**
PV02 IAmb IAmb 21 40 15.7
comp=Z,1.6nm,0.5s
PDAR Pinedale Array 48.03 324 P **P** **21 40 38.7 +1.5**
comp=Z,0.1nm,0.5s,baz=139,slow=6.8,SNR=1.7
comp=Z,0.1nm,0.5s
SCHQ Schefferville 48.11 5 P **P** **21 40 38.8 +1.5**
comp=Z,6.5nm,0.6s,baz=188,slow=7.2,SNR=20
comp=Z,6.5nm,0.6s
SCHQ Schefferville 48.11 5 P **P** **21 40 39.2 +2.0**
NVAR Mina Array Bea 51.44 315 P **P** **21 41 05.5 +2.5**
comp=Z,0.2nm,0.3s,baz=59,slow=6.4,SNR=1.7
comp=Z,0.2nm,0.3s
BLKN Baker Lake 59.64 349 P **P** **21 42 01.2 +0.4**
BLKN IAmb IAmb 21 42 02.3
comp=Z,1.6nm,0.7s
YKA Yellowknife Ar 63.22 340 P **P** **21 42 26.1 +1.2**
comp=Z,0.5nm,0.6s,baz=133,slow=5.9,SNR=13
comp=Z,0.5nm,0.6s
DBIC Dimbokro 67.76 86 P **P** **21 42 53.6 -1.3**
comp=Z,2.8nm,0.8s,baz=231,slow=2.0,SNR=2.4
comp=Z,2.8nm,0.8s
SUMG Summit 68.96 11 P **P** **21 43 02.7 +0.9**
M30M Minto, Yukon 71.99 334 P **P** **21 43 21.9 +2.0**
TORD Torodi Ar. Bea 73.76 78 P **P** **21 43 29.7 -1.5**
comp=Z,0.2nm,0.4s,baz=284,slow=7.9,SNR=2.0
comp=Z,0.2nm,0.4s
H29M Whitestone 73.91 337 P **P** **21 43 32.8 +1.7**
C24K Franklin Bluff 78.61 340 P **P** **21 43 59.2 +1.7**
ZALV Zalesovo Beam 116.64 14 PKP **PKPdf** **21 50 38.7 -0.3**
comp=Z,0.5nm,0.4s,baz=4,slow=1.1,SNR=3.0
KURBB Kurchatov Arra 117.73 20 PKP **PKPdf** **21 50 41.2 0.0**
comp=Z,0.1nm,0.4s,baz=311,slow=2.2,SNR=1.7
MKAR Makanchi Array 122.30 20 PKP **PKPdf** **21 50 49.9 -0.3**
comp=Z,0.3nm,0.5s,baz=277,slow=3.4,SNR=6.1
SONM Songino Array 125.54 0 PKP **PKPdf** **21 50 57.2 +0.6**
comp=Z,0.3nm,0.5s,baz=

IDC ***30*** *22:05:29.6±0.5, 33°.86N×141°.70E, h0km, mb4.0/28, mbtmp4.0/34, ML3.5/5, MS3.5/16, Error ellipse: s-maj=13.8km s-min=12.0km az=104.0*

MOS ***30*** *22:05:30.0±0.7, 33°.81N×141°.67E, h12km, mb4.5/21, Error ellipse: s-maj=14.0km s-min=6.4km az=117.3*

NEIC ***30*** *22:05:32.1±2.0, 33°.85N±0°.06×141°.69E±0°.08, h10km±1km, mb4.5/31, Error ellipse: s-maj=12.3km s-min=9.5km az=127.0*

NIED ***30*** *22:05:34.3, 33°.93N×141°.53E, h30km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr0.88; Mθθ0.52; Mϕϕ-1.41; Mrθ-0.10; Mθϕ-0.13; Mϕr1.50; Fault plane solution: M0 1.90000×10^15 NP1: ϕs200.00000°, δ20.00000°, λ113.00000°. NP2: ϕs355.00000°, δ72.00000°, λ82.00000°.*

JMA ***30*** *22:05:34.3±0.7, 34°.1N×14°.2E±, h30km, MV3.7/32, FAR SE OFF BOSO PEN*

ISC 30 22:05:33.5±0.4, 33°.86N±0°.04×141°.69E±0°.06, h24km, n150, σ1§23/148, mb4.3/63, MS3.5/17, 14C-1D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BSO1	**Boso 1**	**0.99**	**324**	*e*P		**Pn**	**22 05 50.1**	**-1.4**
BSO3	**Boso 3**	**1.36**	**314**	*e*P		**Pn**	**22 05 56.1**	**-0.6**
BSO4	**Boso 4**	**1.59**	**316**	*e*P		**Pn**	**22 05 59.9**	**-0.2**
JHJ2	**Mitsune**	**1.74**	**245**			**Pn**	**22 06 01.6**	**-0.5**
JHJ2	**Mitsune**	**1.74**	**245**	*e*P		**Pn**	**22 06 02.0**	**-0.1**
JMKN	**Mikurajimanish**	**1.75**	**272**	*e*P		**Pn**	**22 06 01.5**	**-0.8**
JHJ	**Hachijo jima 2**	**1.76**	**246**	Pn		**Pn**	**22 06 02.5**	**+0.1**
	110nm,0.3s,baz=142,slow=23,SNR=33							
JHJ				Sn		**Sn**	**22 06 23.5**	**-0.6**
	214nm,0.3s,baz=87,slow=22,SNR=9.1							
JMYK	**Miyake Tsubota**	**1.80**	**277**	*e*P		**Pn**	**22 06 02.4**	**-0.6**
JIM2	**Oshima 3**	**2.06**	**295**	*e*P		**Pn**	**22 06 05.7**	**-0.9**
JKO	**Kozu shima**	**2.15**	**280**	*e*P		**Pn**	**22 06 07.1**	**-0.7**
KTJ3	**Kamata3**	**2.42**	**297**	*e*P		**Pn**	**22 06 09.9**	**-1.7**
KTJ3				*e*S		**Sn**	**22 06 37.8**	**-2.7**
JIZS	**Izushimoda**	**2.48**	**291**	*e*P		**Pn**	**22 06 11.9**	**-0.5**
JOD2	**Odawara 2**	**2.57**	**304**	*e*P		**Pn**	**22 06 12.7**	**-0.9**
MJAR	**Matsushiro Arr**	**3.92**	**314**	Pn		**Pn**	**22 06 32.2**	**+0.1**
	1.8nm,0.3s,baz=146,slow=11,SNR=59							
MJAR				Sn		**Sn**	**22 07 17.1**	**-0.3**
	1.3nm,0.3s,baz=146,slow=18,SNR=6.6							
MJAR				LR		LR	22 08 08.4	
	comp=Z,210nm,19.1s,baz=126,slow=40 12nm,0.4s							
MJAR	**Matsushiro Arr**	**3.92**	**314**			**Pn**	**22 06 32.1**	**-0.1**
MAJO	**Matsushiro**	**3.92**	**314**	Pn		**Pn**	**22 06 31.8**	**-0.3**
MAJO	**Matsushiro**	**3.92**	**314**	*i* P		**Pn**	**22 06 32.6**	**+0.5**
MJB9	**Matsu-Tunnel**	**3.92**	**314**	Pn		**Pn**	**22 06 32.9**	**+0.6**
JGF	**Kuroka**	**3.97**	**297**			**Pn**	**22 06 33.3**	**+0.4**
INU	**Inuyama**	**4.13**	**292**			**Pn**	**22 06 35.0**	**-0.1**
JMN	**Monobe**	**6.51**	**271**	Pn		**Pn**	**22 07 08.8**	**+1.0**
JCJ	**Chichijima**	**6.75**	**176**	Pn		**Pn**	**22 07 10.4**	**-0.7**
	28nm,0.3s,baz=85,slow=23,SNR=8.0							
JCJ				Sn		**Sn**	**22 08 23.1**	**-4.1**
	24nm,0.3s,baz=292,slow=23,SNR=5.2							
JCJ	**Chichijima**	**6.75**	**176**	Pn		**Pn**	**22 07 10.2**	**-0.9**
JTM	**Tenmabayashi**	**6.94**	**356**			**Pn**	**22 07 12.5**	**-1.0**
JNU	**Nakatsue**	**9.06**	**268**	Pn		**Pn**	**22 07 41.9**	**-1.0**
	0.2nm,0.3s,baz=171,slow=9.4,SNR=1.6 2.9nm,0.8s							
ASAJ	**Asahikawa**	**10.27**	**4**	Pn		**Pn**	**22 07 57.0**	**-2.3**
	1.7nm,0.3s,baz=234,slow=10,SNR=9.7							
ASAJ				Sn		**Sn**	**22 09 48.6**	**-5.0**
	0.5nm,0.3s,baz=119,slow=19,SNR=2.0 6.8nm,0.4s							
ASAJ	**Asahikawa**	**10.27**	**4**	P		**Pn**	**22 07 57.7**	**-1.6**
JKA	**Kamikawa-asahi**	**10.27**	**4**	Pn		**Pn**	**22 07 57.7**	**-1.6**
KSRS	**Korea Array**	**11.76**	**292**	Pn		**Pn**	**22 08 20.6**	**+0.9**
	0.1nm,0.3s,baz=103,slow=14,SNR=6.5							
KSRS				LR		LR	22 12 55.0	
	comp=Z,173nm,18.5s,baz=100,slow=38 1.2nm,0.7s							
YSS	**Yuzhno-Sakhali**	**13.11**	**3**	*e*P		**Pn**	**22 08 35.8**	**-2.3**
YSS				pmax		pmax		
	comp=Z,10.0nm,0.7s							
YSS				MLR		MLR		
	comp=N,400nm,12.0s							
YSS				MLR		MLR		
	comp=Z,500nm,12.0s							
YSS				MLR		MLR		
	comp=E,300nm,13.0s							
JOW	**Kunigami**	**13.53**	**242**	LR		LR	22 14 17.1	
	comp=E,164nm,18.5s,baz=148,slow=39							
CN2	**Changchun**	**16.06**	**313**	*e*P		**P**	**22 09 19.0**	**-1.9**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
BNX	**BinXian**	**16.14**	**322**	⇑P		**Pn**	**22 09 19.0**	**+0.3**
BNX				pmax		pmax		
	comp=Z,7.0nm,1.3s							
KLR	**Kul'dur**	**17.05**	**337**	P		**Pn**	**22 09 29.6**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=102,slow=5.3,SNR=2.0							
KLR				LR		LR	22 16 41.9	
	comp=Z,170nm,18.6s,baz=154,slow=39 comp=Z,0.9nm,0.5s							
KLR	**Kul'dur**	**17.05**	**337**	*i* P		**P**	**22 09 30.6**	**-1.1**
NJ2	**Nanjing**	**19.25**	**271**	*e*P		**Pn**	**22 09 56.5**	**-0.7**
NJ2				pmax		pmax		
	comp=Z,22nm,1.1s							
HEH	**HeiHe**	**19.46**	**332**	*e*P		Pn	22 10 10.0	+10
HEH				pmax		pmax		
	comp=Z,4.0nm,0.7s							
HEH				LR		LR		
	comp=N,270nm,14.6s							
HEH				LR		LR		
	comp=E,270nm,11.3s							
HEH				LR		LR		
	comp=Z,330nm,15.6s							
XLT	**XiLinHaoTe**	**22.24**	**304**	*e*P		**P**	**22 10 29.5**	**+1.0**
XLT				pP		sP	22 10 34.5	-0.8
XLT				sP		pwP	22 10 38.5	-4.3
XLT				PP		**PnPn**	**22 10 55.0**	**+3.8**
XLT				S		**S**	**22 14 29.5**	**-2.6**
XLT				pmax		pmax		
	comp=Z,9.0nm,1.0s							
XLT				LR		LR		
	comp=N,14nm,13.6s							
XLT				LR		LR		
	comp=Z,170nm,12.8s							
ZEA	**Zeya**	**22.36**	**337**	*e*P		**P**	**22 10 29.4**	**-0.2**
ZEA				pmax		pmax		
	comp=N,10.0nm,1.0s							
ZEA				pmax		pmax		
	comp=Z,10.0nm,0.7s							
ZEA				MLR		MLR		
	comp=E,100nm,14.0s							
LYN	**LuoYang**	**24.15**	**280**	*e*P		**P**	**22 10 45.8**	**-1.9**
LYN				S		**S**	**22 15 02.5**	**-1.8**
LYN				pmax		pmax		
	comp=Z,9.0nm,0.8s							
LYN				LR		LR		
	comp=N,150nm,7.6s							
LYN				LR		LR		
	comp=E,610nm,14.6s							
LYN				LR		LR		
	comp=Z,710nm,14.3s							
HHC	**Hu-ho-hao-te**	**24.87**	**295**	*e*P		**P**	**22 10 54.0**	**-0.3**
HHC				pmax		pmax		
	comp=Z,14nm,0.6s							
HHC				pmax		pmax		
	comp=Z,60nm,4.8s							
HHC				LR		LR		
	comp=N,110nm,12.0s							
HHC				LR		LR		
	comp=E,130nm,12.9s							
HHC				LR		LR		
	comp=Z,130nm,12.0s							
MA2	**Magadan**	**26.42**	**10**	P		**P**	**22 11 08.4**	**+0.4**
	comp=Z,2.1nm,0.4s,baz=186,slow=15,SNR=1.7							
MA2				LR		LR	22 22 49.4	
	comp=Z,51nm,20.2s,baz=213,slow=39 comp=Z,2.1nm,0.4s							
H11N2	**WAKE ISLAND Hy**	**26.44**	**116**	T		T	22 39 14.7	
	baz=308							
H11N1	**WAKE ISLAND Hy**	**26.45**	**116**	T		T	22 39 13.3	
	baz=308,slow=74							
H11N3	**WAKE ISLAND Hy**	**26.46**	**116**	T		T	22 39 19.2	
	baz=308,slow=74							
H11S3	**WAKE ISLAND Hy**	**27.05**	**118**	T		T	22 40 02.1	
	baz=313							
H11S1	**WAKE ISLAND Hy**	**27.05**	**118**	T		T	22 39 56.8	
	baz=313							
H11S2	**WAKE ISLAND Hy**	**27.07**	**118**	T		T	22 40 14.3	
	baz=313							
XAN	**Xi'an**	**27.13**	**280**	P		**P**	**22 11 14.3**	**-0.5**
XAN				pmax		pmax		
	comp=Z,5.0nm,0.9s							
YAK	**Yakutsk**	**29.22**	**348**	*i* P		**P**	**22 11 33.6**	**+0.6**
YAK				pmax		pmax		
	comp=Z,4.0nm,0.7s							
ULN	**Ulaanbaatar**	**29.43**	**309**	*ce*P		**P**	**22 11 36.2**	**+0.9**
ULN				pmax		pmax		
	comp=Z,6.0nm,2.5s							
SHEM	**Shemya Is, Ala**	**29.83**	**41**	LR		LR	22 24 22.7	
	comp=Z,41nm,18.4s,baz=200,slow=38							
SONM	**Songino Array**	**29.85**	**309**	P		**P**	**22 11 39.5**	**+0.6**
	comp=Z,1.2nm,0.9s,baz=124,slow=10,SNR=6.6 comp=Z,1.2nm,0.9s							
SONM	**Songino Array**	**29.85**	**309**	P		**P**	**22 11 39.5**	**+0.6**
SEY	**Seymchan**	**29.87**	**10**	P		**P**	**22 11 39.5**	**+0.8**
	comp=Z,1.1nm,0.5s,baz=241,slow=4.8,SNR=2.0 comp=Z,1.1nm,0.5s							
SEY	**Seymchan**	**29.87**	**10**	*i* P		**P**	**22 11 39.9**	**+1.2**
SEY				pmax		pmax		
	comp=Z,7.0nm,1.6s							
LZDM	**Lanzhou Array**	**31.11**	**285**	P		**P**	**22 11 49.2**	**-1.2**
	comp=Z,0.6nm,0.3s,baz=99,slow=9.0,SNR=1.0 comp=Z,0.6nm,0.3s							
TLY	**Talaya**	**32.66**	**315**	LR		LR	22 25 59.0	
	comp=Z,72nm,18.4s,baz=86,slow=38							
GTA2	**Gaotai**	**33.87**	**292**	*e*P		**P**	**22 12 13.8**	**-0.6**
GTA2				sP		sP	22 12 21.5	+0.5
GTA2				pmax		pmax		
	comp=Z,3.0nm,1.0s							
GTA2				LR		LR		
	comp=N,140nm,12.7s							
GTA2				LR		LR		
	comp=E,130nm,14.4s							
GTA2				LR		LR		
	comp=Z,110nm,13.4s							
PZH	**PanZhiHua**	**35.14**	**269**	P		**P**	**22 12 26.5**	**+1.0**
KNGR	**Kungurtug, Tuv**	**36.13**	**311**	*i* P		**P**	**22 12 34.6**	**+0.9**
KNGR				pmax		pmax		
	comp=Z,6.0nm,1.2s							
BILL	**Bilibino**	**37.02**	**15**	*ce*P		**P**	**22 12 42.2**	**+1.3**
BILL				pmax		pmax		
	comp=Z,10.0nm,1.8s							
GOMU	**GeErMu**	**38.17**	**287**	P		**P**	**22 12 51.5**	**0.0**
GOMU				pP		pP	22 12 53.3	-3.3
GOMU				pmax		pmax		
	comp=Z,5.0nm,1.0s							
TIXI	**Tiksi**	**38.47**	**354**	*ce*P		**P**	**22 12 54.0**	**+1.0**
TIXI				pmax		pmax		
	comp=Z,4.0nm,1.7s							
CMAR	**Chiang Mai Arr**	**41.02**	**259**	P		**P**	**22 13 13.7**	**-1.2**
	comp=Z,1.0nm,0.3s,baz=47,slow=7.6,SNR=9.5							
CMAR				LR		LR	22 33 24.9	
	comp=Z,42nm,18.4s,baz=340,slow=41 comp=Z,1.0nm,0.3s							
CMAR	**Chiang Mai Arr**	**41.02**	**259**	*ce*P		**P**	**22 13 13.6**	**-1.3**
CMAR				pmax		pmax		
	comp=Z,1.0nm,0.3s							
ZALV	**Zalesovo Beam**	**44.27**	**315**	P		**P**	**22 13 41.1**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=78,slow=6.8,SNR=6.2							
ZALV				PcP		**PcP**	**22 15 24.2**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=80,slow=3.4,SNR=2.4 comp=Z,1.5nm,0.7s							
O15K	**Ungalikthiuk R**	**45.62**	**38**	P		**P**	**22 13 52.5**	**+0.9**
MKAR	**Makanchi Array**	**46.06**	**305**	P		**P**	**22 13 55.4**	**+0.1**
	comp=Z,2.2nm,0.8s,baz=88,slow=11,SNR=10							
MKAR				LR		LR	22 33 52.6	
	comp=Z,44nm,18.8s,baz=47,slow=37 comp=Z,2.2nm,0.8s							
MKAR	**Makanchi Array**	**46.06**	**305**	*ce*P		**P**	**22 13 58.7**	**+3.4**
MKAR				pmax		pmax		
	comp=Z,2.0nm,0.8s							
NRIK	**Noril'sk**	**46.26**	**337**	P		**P**	**22 13 56.4**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=120,slow=6.8,SNR=2.3							
NRIK				LR		LR	22 35 08.5	
	comp=Z,56nm,18.2s,baz=132,slow=38 comp=Z,1.2nm,0.6s							
NRIK	**Noril'sk**	**46.26**	**337**			**P**	**22 13 56.6**	**+0.2**
NRIK				IAmb		IAmb	22 14 24.2	
	comp=Z,7.9nm,1.5s							
NRIK	**Noril'sk**	**46.26**	**337**	*i* P		**P**	**22 13 57.2**	**+0.7**
NRIK				pmax		pmax		
	comp=Z,10.0nm,2.8s							
C18K	**Utukok River**	**47.04**	**25**	P		**P**	**22 14 03.9**	**+1.1**
C18K				IAmb		IAmb	22 14 39.9	
	comp=Z,4.8nm,1.3s							
G18K	**Tagagawik**	**47.29**	**29**	P		**P**	**22 14 05.8**	**+1.1**
G18K				IAmb		IAmb	22 14 13.8	
	comp=Z,4.0nm,0.9s							
MTN	**Manton Dam**	**47.52**	**194**	P		**P**	**22 14 06.6**	**-0.2**
C19K	**Lookout Ridge**	**47.73**	**24**	P		**P**	**22 14 09.6**	**+1.6**
C19K				IAmb		IAmb	22 14 16.1	
	comp=Z,3.6nm,0.9s							
KURK	**Kurchatov**	**48.12**	**310**	P		**P**	**22 14 10.8**	**-0.4**
KURK				IAmb		IAmb	22 14 13.2	
	comp=Z,6.0nm,1.0s							
KURK	**Kurchatov**	**48.12**	**310**	*ce*P		**P**	**22 14 11.5**	**+0.3**
KURK				pmax		pmax		
	comp=Z,7.0nm,1.0s							
E19K	**Redstone River**	**48.18**	**27**	P		**P**	**22 14 13.3**	**+1.8**
E19K				IAmb		IAmb	22 14 21.2	
	comp=Z,5.9nm,0.8s							
KURBB	**Kurchatov Arra**	**48.18**	**310**	P		**P**	**22 14 11.6**	**-0.2**
	comp=Z,4.2nm,1.0s,baz=85,slow=7.7,SNR=20 comp=Z,4.2nm,1.0s							
B20K	**Meade River**	**48.79**	**24**	P		**P**	**22 14 17.8**	**+1.7**
B20K				IAmb		IAmb	22 14 23.3	
	comp=Z,4.6nm,0.8s							
B21K	**Ikpikpuk River**	**49.57**	**24**	P		**P**	**22 14 23.7**	**+1.7**
B21K				IAmb		IAmb	22 14 32.3	
	comp=Z,4.8nm,0.9s							
E22K	**Anaktuvuk Pass**	**50.32**	**27**	P		**P**	**22 14 29.7**	**+1.8**
E22K				IAmb		IAmb	22 14 35.0	
	comp=Z,6.3nm,1.1s							
C23K	**Itkillik River**	**50.98**	**24**	P		**P**	**22 14 34.3**	**+1.6**
C23K				IAmb		IAmb	22 14 41.7	
	comp=Z,13nm,1.4s							
C24K	**Franklin Bluff**	**51.62**	**25**	P		**P**	**22 14 38.6**	**+1.0**
C24K				IAmb		IAmb	22 14 44.5	
	comp=Z,4.7nm,0.9s							
LEM	**Lembang**	**51.76**	**225**	P		**P**	**22 14 40.3**	**+0.8**
	comp=Z,11nm,0.4s,baz=14,slow=19,SNR=2.0							
ILAR	**Eielson Array**	**52.07**	**31**	P		**P**	**22 14 41.2**	**+0.2**
	comp=Z,2.7nm,1.0s,baz=273,slow=6.4,SNR=13 comp=Z,2.7nm,1.0s							
AAK	**Ala-Archa**	**52.25**	**301**			**P**	**22 14 42.5**	**-0.4**
AAK	**Ala-Archa**	**52.25**	**301**	*ce*P		**P**	**22 14 42.4**	**-0.5**
AAK				pmax		pmax		
	comp=Z,4.0nm,1.7s							
BVAR	**Borovoye Array**	**52.91**	**314**	P		**P**	**22 14 47.6**	**+0.2**
	comp=Z,1.5nm,0.8s,baz=87,slow=6.4,SNR=8.9							
BVAR				LR		LR	22 38 16.6	
	comp=Z,44nm,18.6s,baz=78,slow=37 comp=Z,1.5nm,0.8s							
BORK	**Borovoye**	**52.95**	**314**	P		**P**	**22 14 47.5**	**-0.2**
BORK	**Borovoye**	**52.95**	**314**	*ce*P		**P**	**22 14 48.0**	**+0.3**
BORK				pmax		pmax		
	comp=Z,4.0nm,1.3s							
C27K	**Jago River**	**53.36**	**25**	P		**P**	**22 14 51.1**	**+0.7**
ARSB	**Arslanbob**	**53.68**	**299**	P		**P**	**22 14 53.5**	**0.0**
ARSB				IAmb		IAmb	22 15 05.7	
	comp=Z,8.3nm,1.3s							
ARSB	**Arslanbob**	**53.68**	**299**	P		**P**	**22 14 53.5**	**0.0**
ARSB				pmax		pmax		
	comp=Z,8.0nm,1.3s							
WB0	**Warramunga Arr**	**53.77**	**189**			**P**	**22 14 54.0**	**0.0**
WB0				IAmb		IAmb	22 15 18.0	
	comp=Z,5.0nm,0.9s							
WRA	**Warramunga Arr**	**53.95**	**189**	P		**P**	**22 14 55.1**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=4.6,slow=7.6,SNR=22 comp=Z,0.6nm,0.4s							
WRA	**Warramunga Arr**	**53.95**	**189**			**P**	**22 14 55.1**	**-0.2**
WRA	**Warramunga Arr**	**53.95**	**189**	*i* P		**P**	**22 14 55.4**	**0.0**
WRA				pmax		pmax		
	comp=Z,1.0nm,0.3s							
CRQM	**Cirque**	**54.01**	**36**	P		**P**	**22 14 56.5**	**+0.9**
GAR	**Garm**	**56.32**	**297**	P		**P**	**22 15 13.8**	**+1.2**
GAR				IAmb		IAmb	22 15 15.8	
	comp=Z,5.3nm,0.9s							
CHGR	**Chuyangaron**	**57.28**	**297**			**P**	**22 15 19.1**	**-0.2**
CHGR	**Chuyangaron**	**57.28**	**297**	*i* P		**P**	**22 15 19.9**	**+0.6**
CHGR				pmax		pmax		
	comp=Z,14nm,1.1s							
ASAR	**Alice Springs**	**57.68**	**188**	P		**P**	**22 15 21.3**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=8.2,slow=7.3,SNR=9.1							
SVE	**Sverdlovsk**	**57.70**	**320**	*e*P		**P**	**22 15 22.2**	**+0.3**
M31M	**Drury Creek, Y**	**57.92**	**33**	P		**P**	**22 15 24.9**	**+1.6**
M31M				IAmb		IAmb	22 15 51.9	
	comp=Z,8.4nm,1.3s							
PSA00	**Pilbara Seismi**	**58.92**	**204**	P		**P**	**22 15 29.8**	**-0.9**
ARTI	**Arti**	**59.02**	**320**			**P**	**22 15 30.3**	**-0.8**
ARTI	**Arti**	**59.02**	**320**	*d* iP		**P**	**22 15 31.2**	**+0.1**
ARTI							22 17 39.7	
ARTI				S		**S**	**22 23 39.5**	**+3.4**
ARTI				SS		**SS**	**22 27 31.9**	**+2.4**
ARTI				pmax		pmax		
	comp=Z,8.0nm,0.8s							
MSVF	**Nonsavu**	**61.91**	**140**	LR		LR	22 38 33.9	
	comp=Z,55nm,20.4s,baz=174,slow=32							
STKA	**Stephens Creek**	**65.38**	**180**	P		**P**	**22 16 15.5**	**+1.6**
	comp=Z,0.5nm,0.4s,baz=319,slow=19,SNR=3.0 comp=Z,0.5nm,0.4s							
FORT	**Forrest**	**65.56**	**193**	P		**P**	**22 16 15.5**	**+0.4**
YKA	**Yellowknife Ar**	**66.45**	**29**	P		**P**	**22 16 20.8**	**+0.4**
	comp=Z,6.6nm,0.9s,baz=298,slow=6.9,SNR=6.1 comp=Z,0.6nm,0.9s							
YKA	**Yellowknife Ar**	**66.45**	**29**	P		**P**	**22 16 19.7**	**-0.8**
YKA	**Yellowknife Ar**	**66.45**	**29**	*ce*P		**P**	**22 16 21.2**	**+0.8**
YKA				pmax		pmax		
	comp=Z,1.0nm,0.9s							
ARCES	**ARCESS Array B**	**67.05**	**340**	P		**P**	**22 16 23.6**	**-0.6**
	comp=Z,3.1nm,0.9s,baz=347,slow=7.4,SNR=1.5 comp=Z,3.1nm,0.9s							
OBN	**Obninsk**	**70.78**	**324**	LR		LR	22 50 34.1	
	comp=Z,46nm,18.3s,baz=48,slow=38							
OBN	**Obninsk**	**70.78**	**324**	*ce*P		**P**	**22 16 48.8**	**+1.2**
OBN				*e*			22 17 10.7	
OBN				*e*			22 19 22.9	
OBN				*e*PPP		PPP	22 21 08.9	
OBN				pmax		pmax		
	comp=Z,6.0nm,1.2s							
OBN				MLR		MLR		
	comp=Z,69nm,16.0s							
FINES	**FINESS Array B**	**71.73**	**333**	P		**P**	**22 16 53.2**	**0.0**
	comp=Z,5.4nm,0.9s,baz=64,slow=8.7,SNR=6.8 comp=Z,5.4nm,0.9s							
KBZ	**Khabaz**	**73.16**	**312**	P		**P**	**22 17 02.5**	**+0.5**
	comp=Z,3.0nm,0.9s,baz=80,slow=3.8,SNR=7.2 comp=Z,3.0nm,0.9s							
KBZ	**Khabaz**	**73.16**	**312**	*ce*P		**P**	**22 17 03.4**	**+1.3**
KBZ				pmax		pmax		
	comp=Z,4.0nm,0.9s							
KIV	**Kislovodsk**	**73.17**	**312**	*e*P		**P**	**22 17 03.2**	**+0.9**
KIV				pmax		pmax		
	comp=Z,7.0nm,1.1s							
GNI	**Garni**	**73.80**	**308**	LR		LR	22 54 58.3	
	comp=Z,30nm,18.2s,baz=58,slow=40							
NVAR	**Mina Array Bea**	**76.72**	**53**	P		**P**	**22 17 21.3**	**-1.8**
	comp=Z,0.2nm,0.5s,baz=308,slow=5.3,SNR=1.7 comp=Z,0.2nm,0.5s							
NVAR	**Mina Array Bea**	**76.72**	**53**	P		**P**	**22 17 22.3**	**-0.8**
AKASG	**Malin Array Be**	**76.96**	**323**	P		**P**	**22 17 23.5**	**-0.3**
	comp=Z,1.3nm,0.5s,baz=50,slow=6.0,SNR=11							
AKASG				LR		LR	22 55 29.1	
	comp=Z,68nm,19.1s,baz=58,slow=39 comp=Z,1.3nm,0.5s							
AKASG	**Malin Array Be**	**76.96**	**323**	P		**P**	**22 17 24.1**	**+0.2**
AKASG	**Malin Array Be**	**76.96**	**323**	*ce*P		**P**	**22 17 23.7**	**-0.2**
AKASG				pmax		pmax		
	comp=Z,1.0nm,0.6s							
HFS	**Hagfors**	**77.08**	**336**	P		**P**	**22 17 24.3**	**-0.1**
	comp=Z,2.4nm,0.8s,baz=122,slow=2.3,SNR=5.9 comp=Z,2.4nm,0.8s							
NOA	**NORSAR Array B**	**77.20**	**338**	P		**P**	**22 17 24.1**	**-1.1**
	comp=Z,1.2nm,0.8s,baz=40,slow=5.5,SNR=3.8							
NOA				LR		LR	22 55 22.1	
	comp=Z,42nm,18.4s,baz=260,slow=39 comp=Z,1.2nm,0.8s							
PDAR	**Pinedale Array**	**79.73**	**45**	P		**P**	**22 17 40.9**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=270,slow=0.3,SNR=5.2 comp=Z,0.4nm,0.6s							
BR131	**Keskin Array S**	**81.14**	**312**	*i* P		**P**	**22 17 47.8**	**+0.6**
BRTR	**Keskin Array B**	**81.14**	**312**	P		**P**	**22 17 45.5**	**-1.7**
	comp=Z,1.4nm,0.9s,baz=129,slow=3.3,SNR=7.3 comp=Z,1.4nm,0.9s							
BRTR	**Keskin Array B**	**81.14**	**312**	*ce*P		**P**	**22 17 48.0**	**+0.8**
BRTR				pmax		pmax		
	comp=Z,2.0nm,0.9s							
RAYN	**Ar Rayn**	**82.09**	**293**	P		**P**	**22 17 52.8**	**+0.4**
RAYN				IAmb		IAmb	22 17 54.4	
	comp=Z,3.7nm,1.0s							
RAYN	**Ar Rayn**	**82.09**	**293**	P		**P**	**22 17 52.8**	**+0.4**
RAYN				pmax		pmax		
	comp=Z,4.0nm,1.0s							
PV19	**Morning Glory**	**82.78**	**48**	P		**P**	**22 17 57.0**	**+1.1**
PV19				IAmb		IAmb	22 18 32.4	
	comp=Z,3.8nm,0.7s							
CLL	**Collm**	**83.97**	**330**	*e*P		**P**	**22 18 02.0**	**+0.5**
CLL	**Collm**	**83.97**	**330**	*e*P		**P**	**22 18 02.0**	**+0.5**
MMAI	**Mount Meron Ar**	**84.00**	**306**	P		**P**	**22 18 03.0**	**+0.9**
	comp=Z,2.6nm,0.9s,baz=36,slow=15,SNR=4.2 comp=Z,2.6nm,0.9s							
GERES	**GERESS Array B**	**85.53**	**329**	P		**P**	**22 18 09.4**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=27,slow=1.5,SNR=4.0 comp=Z,0.3nm,0.4s							
EKA	**Eskdalemuir Ar**	**86.20**	**341**	P		**P**	**22 18 13.2**	**+0.6**
	comp=Z,1.6nm,0.8s,baz=32,slow=6.7,SNR=2.1 comp=Z,1.6nm,0.8s							
TXAR	**Lajitas Array**	**91.87**	**53**	P		**P**	**22 18 41.3**	**+1.2**
	comp=Z,2.0nm,0.4s,baz=339,slow=3.2,SNR=2.7 comp=Z,2.0nm,0.4s							
TORD	**Torodi Ar. Bea**	**119.71**	**314**	P

LZDM	**Lanzhou Array**	**20.47**	**305**	P		**P**		**22 14 47.4**	**-0.4**
	1.0nm,0.3s,baz=132,slow=10,SNR=4.0								
	1.0nm,0.3s								
CMAR	**Chiang Mai Arr**	**24.46**	**258**	P		**P**		**22 15 28.7**	**+1.7**
	0.5nm,0.3s,baz=64,slow=12,SNR=1.1								
	0.5nm,0.3s								
SONM	**Songino Array**	**26.37**	**332**	P		**P**		**22 15 44.9**	**+0.8**
	0.2nm,0.3s,baz=153,slow=13,SNR=1.7								
SONM				PcP		**PcP**		**22 19 07.2**	**+0.7**
	0.2nm,0.6s,baz=151,slow=3.3,SNR=1.9								
	0.2nm,0.3s								
MKAR	**Makanchi Array**	**39.39**	**314**	P		**P**		**22 17 37.5**	**+0.6**
	0.6nm,0.5s,baz=100,slow=9.7,SNR=7.5								
	0.6nm,0.5s								
ZALV	**Zalesovo Beam**	**40.72**	**325**	P		**P**		**22 17 47.6**	**-0.1**
	2.4nm,0.5s,baz=114,slow=8.4,SNR=12								
	2.4nm,0.5s								
KURBB	**Kurchatov Arra**	**42.95**	**318**	P		**P**		**22 18 06.1**	**+0.2**
	1.0nm,0.6s,baz=109,slow=9.0,SNR=10								
	1.0nm,0.6s								
AAK	**Ala-Archa**	**43.96**	**306**	LR		LR		22 40 15.4	
	comp=Z,48nm,18.4s,baz=71,slow=41								
WRA	**Warramunga Ar**	**46.22**	**167**	P		**P**		**22 18 32.3**	**+0.1**
	0.8nm,0.7s,baz=348,slow=8.5,SNR=5.5								
	0.8nm,0.7s								
BVAR	**Borovoye Array**	**48.46**	**319**	P		**P**		**22 18 49.5**	**+0.4**
	0.7nm,0.5s,baz=95,slow=8.4,SNR=6.7								
	0.7nm,0.5s								
NRIK	**Noril'sk**	**48.90**	**344**	P		**P**		**22 18 52.4**	**+0.2**
	1.9nm,0.7s,baz=117,slow=9.9,SNR=4.4								
	1.9nm,0.7s								
ASAR	**Alice Springs**	**49.76**	**168**	P		**P**		**22 19 00.1**	**+0.7**
	0.2nm,0.4s,baz=354,slow=8.8,SNR=3.0								
	0.2nm,0.4s								
ILAR	**Eielson Array**	**66.77**	**28**	P		**P**		**22 20 57.0**	**0.0**
	0.2nm,0.7s,baz=305,slow=5.5,SNR=1.7								
	0.2nm,0.7s								
FINES	**FINESS Array B**	**71.71**	**330**	P		**P**		**22 21 27.3**	**-0.2**
	1.4nm,0.9s,baz=94,slow=14,SNR=3.9								
	1.4nm,0.9s								
BRTR	**Keskin Array B**	**74.62**	**307**	P		**P**		**22 21 45.5**	**+0.2**
	0.6nm,0.8s,baz=122,slow=4.7,SNR=4.3								
	0.6nm,0.8s								
YKA	**Yellowknife Ar**	**80.67**	**24**	P		**P**		**22 22 16.6**	**-1.6**
	0.2nm,0.5s,baz=312,slow=5.6,SNR=4.8								
	0.2nm,0.5s								

HEL 30 22:11:13.0±0.4, 67.19N×20.58E, h0km, ML1.0,
Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERTU	**Ertsjaerv**	**0.90**	**134**	PG	Pg	22 11 28.7	-1.5
ERTU				SB	Sg	22 11 41.8	0.0
LANU	**Lannavaara**	**1.02**	**31**	PG	Pg	22 11 31.2	-1.4
KLF	**Kolari**	**1.32**	**86**	PG	Pg	22 11 36.9	-1.4
KLF				smax	smax	22 11 52.9	
	comp=Z,0.8nm,0.2s						
KLF				SN	Sn	22 11 57.2	+0.3
HEF	**Hetta**	**1.70**	**42**	PG	Pn	22 11 43.4	-0.5
HEF				smax	smax	22 12 03.8	
	comp=Z,0.9nm,0.2s						
HEF				SN	Sn	22 12 05.5	-0.8
KALU	**Kalix**	**1.74**	**139**	PN	Pn	22 11 44.4	+0.1
	baz=320						
KALU				SN	Sg	22 12 08.7	0.0
TOF	**Tornio**	**1.86**	**125**	PG	Pn	22 11 46.5	+0.4
TOF				smax	smax	22 12 08.5	
	comp=Z,0.9nm,0.2s						
TOF				SG	Sb	22 12 11.0	-0.6
KTK1	**Kautokeino**	**2.09**	**27**	PG	Pb	22 11 50.6	-1.1
KTK1				SG	Sb	22 12 17.5	-0.7
RNF	**Rovaniemi**	**2.22**	**103**	PG	Pn	22 11 52.4	+1.4
	baz=283						
RNF				SG	Sb	22 12 22.3	+0.3
BURU	**Burvik**	**2.63**	**172**	SG	Sb	22 12 35.6	+1.8
RANF	**Ranua**	**2.75**	**112**	SG	Sb	22 12 36.7	-0.3
ARA0	**ARCESS Array S**	**2.98**	**35**	SB	Sn	22 12 40.4	+2.4
OUL	**Oulu**	**3.02**	**132**	SG	Sb	22 12 46.6	+1.7
KU6	**Riekki**	**3.89**	**103**	SN	Sn	22 12 58.6	-1.7

UPP 30 22:11:51.2±0.0, 67.17N×20.64E, h0km, ML2.1,
Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.06**	**207**	P	Pg	22 11 52.6	+0.3
	baz=23						
DUNU				S	Sg	22 11 53.6	+0.5
MASU	**Masugnsbyn**	**0.60**	**61**	P	Pg	22 12 02.6	0.0
MASU				S	Sg	22 12 10.7	+0.3
RATU	**Laukkuluspa**	**0.77**	**329**	P	Pg	22 12 05.5	-0.4
RATU				S	Sg	22 12 15.9	+0.1
KUA	**Kurravaara**	**0.79**	**352**	P	Pg	22 12 06.1	-0.2
KUA				S	Sg	22 12 16.7	+0.1
SALU	**Saltoluokta**	**0.85**	**285**	S	Sg	22 12 18.8	+0.3
ERTU	**Ertsjaerv**	**0.87**	**135**	P	Pg	22 12 07.1	-0.8
NIKU	**Nikkaluokta**	**0.93**	**319**	P	Pg	22 12 08.3	-0.7
PAJU	**Pajala**	**0.98**	**98**	P	Pg	22 12 09.3	-0.6
LANU	**Lannavaara**	**1.02**	**30**	P	Pg	22 12 10.3	-0.4
HARU	**Harads**	**1.02**	**172**	P	Pg	22 12 10.1	-0.7
KOVU	**Salmi**	**1.07**	**350**	P	Pg	22 12 11.1	-0.6

*IDC **30** 22:12:07.5±1.1, 48.93S×116.99W, h0km, mb3.8/8, mbtmp3.8/8, MS3.9/23, Error ellipse: s-maj=41.5km s-min=23.7km az=147.0*
*GCMT **30** 22:12:15.0±0.4, 49.67S±0.02×116.44W±0.03, h24km±2km, MW4.9/73, Moment Tensor Solution. s18,c20; s73,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.56±.19; $M_{\theta\theta}$-0.61±.17; $M_{\phi\phi}$0.05±.14; $M_{r\theta}$1.39±.25; $M_{\theta\phi}$2.28±.09; $M_{\phi r}$-0.18±.17; Best double couple: M_o2.69400×10^{16} NP1:ϕ_s356.00000°,δ57.00000°,λ174.00000°. NP2: ϕ_s89.00000°,δ85.00000°,λ33.00000°. Principal axes: T 2.4030, Plg26.0000°, Azm317.0000°; N 0.5830, Plg57.0000°, Azm96.0000°; P -2.9860, Plg19.0000°, Azm218.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*
ISC 30 22:12:09.1±1.1, 49.0S±0.2×116.9W±0.2, h10km, n44,
σ0s52/9, mb3.9/8, MS3.9/23, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**22.57**	**18**	LR	LR	22 22 42.9	
	comp=Z,43nm,19.4s,baz=138,slow=28						
PMSA	**Palmer Station**	**31.81**	**140**	LR	LR	22 27 36.7	
	comp=Z,355nm,19.9s,baz=294,slow=29						
H03S2	**Juan Fernandez**	**31.89**	**76**	T	T	22 51 45.9	
	baz=227,slow=74,SNR=22						
H03S1	**Juan Fernandez**	**31.90**	**76**	T	T	22 51 43.1	
	baz=227,slow=74,SNR=18						
H03S3	**Juan Fernandez**	**31.91**	**76**	T	T	22 51 42.2	
	baz=227,slow=74,SNR=24						
H03N3	**Juan Fernandez**	**32.14**	**75**	T	T	22 51 55.3	
	baz=230,slow=72,SNR=34						
H03N2	**Juan Fernandez**	**32.14**	**75**	T	T	22 51 54.1	
	baz=230,slow=72,SNR=30						
H03N1	**Juan Fernandez**	**32.15**	**75**	T	T	22 51 52.5	
	baz=230,slow=72,SNR=19						
PLCA	**Paso Flores**	**33.46**	**94**	LR	LR	22 28 52.9	
	comp=Z,121nm,19.6s,baz=232,slow=30						
TBI	**Tubuai**	**36.17**	**303**	eLR	LR	22 29 08.9	
	2um,24.8s						
CFA	**Coronel Fontan**	**40.24**	**83**	P	**P**	**22 19 45.6**	**-0.3**
	1.6nm,0.9s,baz=256,slow=8.3,SNR=1.5						
	1.6nm,0.9s						
VNDA	**Vanda**	**40.90**	**199**	LR	LR	22 32 51.3	
	comp=Z,176nm,20.0s,baz=95,slow=30						
PPT2	**Papeete2**	**40.94**	**308**	eLR	LR	22 31 12.1	
	511nm,28.0s						
PPT2				eLR	LR	22 31 19.8	
	640nm,26.8s						
QSPA	**South Pole Qui**	**41.25**	**180**	P	**P**	**22 19 54.0**	**0.0**
	3.5nm,1.0s,baz=115,slow=6.6,SNR=6.2						
QSPA				LR	LR	22 34 36.0	
	comp=Z,136nm,19.3s,baz=92,slow=33						
	3.5nm,1.0s						
RAR	**Rarotonga**	**43.81**	**294**	LR	LR	22 34 22.4	
	comp=Z,71nm,21.5s,baz=56,slow=30						
TAOE	**Nuku Hiva Isla**	**44.46**	**326**	eLR	LR	22 32 55.6	
	423nm,26.5s						
URZ	**Urewera**	**47.53**	**257**	LR	LR	22 37 34.9	
	comp=Z,120nm,18.0s,baz=188,slow=32						
RPZ	**Rata Peaks**	**48.28**	**248**	LR	LR	22 38 17.1	
	comp=Z,125nm,18.8s,baz=214,slow=32						
NNA	**Nana**	**49.56**	**56**	LR	LR	22 37 24.4	
	comp=Z,275nm,19.1s,baz=242,slow=31						
CPUP	**Villa Florida**	**50.88**	**86**	P	**P**	**22 21 10.1**	**0.0**
	0.8nm,0.3s,baz=252,slow=3.2,SNR=0.6						
CPUP				LR	LR	22 39 01.5	
	comp=Z,117nm,21.2s,baz=251,slow=32						
	0.8nm,0.3s						
SNAA	**Sanae**	**51.09**	**158**	LR	LR	22 42 23.7	
	comp=Z,176nm,18.6s,baz=192,slow=36						
LPAZ	**La Paz**	**51.21**	**68**	P	**P**	**22 21 14.3**	**+0.9**
	2.1nm,1.1s,baz=216,slow=12,SNR=4.6						
	2.1nm,1.1s						
SIV	**San Ignacio**	**55.83**	**74**	P	**P**	**22 21 47.0**	**+0.4**
	1.0nm,0.7s,baz=200,slow=12,SNR=3.3						
SIV				LR	LR	22 41 37.5	
	comp=Z,94nm,21.0s,baz=294,slow=32						
	1.0nm,0.7s						
MAW	**Mawson**	**63.77**	**180**	LR	LR	22 48 46.0	
	comp=Z,138nm,18.7s,baz=171,slow=34						
ROSC	**El Rosal**	**65.14**	**48**	LR	LR	22 47 16.5	
	comp=Z,140nm,19.1s,baz=240,slow=32						
JTS	**Las Juntas de**	**65.37**	**35**	LR	LR	22 42 53.8	
	comp=Z,89nm,18.9s,baz=149,slow=28						
STKA	**Stephens Creek**	**73.52**	**240**	LR	LR	22 51 29.0	
	comp=Z,95nm,19.1s,baz=199,slow=32						
MDP	**Montagnes des**	**77.39**	**67**	LR	LR	22 53 34.4	
	comp=Z,62nm,20.2s,baz=190,slow=32						
TXAR	**Lajitas Array**	**78.83**	**12**	P	**P**	**22 24 11.6**	**-0.4**
	0.3nm,0.9s,baz=248,slow=11,SNR=1.3						
	0.3nm,0.9s						
RCBR	**Riachuelo**	**79.75**	**87**	LR	LR	22 56 19.3	
	comp=Z,61nm,21.4s,baz=248,slow=33						
SJG	**San Juan**	**80.56**	**48**	LR	LR	22 56 36.6	
	comp=Z,41nm,18.6s,baz=100,slow=33						
ASAR	**Alice Springs**	**84.16**	**241**	P	**P**	**22 24 40.8**	**+0.2**
	0.5nm,0.8s,baz=157,slow=4.9,SNR=4.5						
	0.5nm,0.8s						
WRA	**Warramunga Arr**	**86.80**	**243**	P	**P**	**22 24 53.9**	**+0.2**
	0.6nm,1.0s,baz=145,slow=5.3,SNR=3.0						
	0.6nm,1.0s						
SUR	**Sutherland**	**90.70**	**145**	LR	LR	22 58 41.5	
	comp=Z,52nm,18.5s,baz=194,slow=31						
FITZ	**Fitzroy Crossi**	**93.24**	**238**	LR	LR	23 03 25.7	
	comp=Z,94nm,21.7s,baz=160,slow=33						
H11S2	**WAKE ISLAND Hy**	**95.13**	**292**	T	T	00 12 05.0	
	baz=140,slow=76,SNR=63						
H11S3	**WAKE ISLAND Hy**	**95.14**	**292**	T	T	00 12 03.0	
	baz=140,slow=76,SNR=43						
H11S1	**WAKE ISLAND Hy**	**95.15**	**292**	T	T	00 12 04.7	
	baz=140,slow=76,SNR=52						
BOSA	**Boshof**	**95.72**	**147**	LR	LR	22 59 57.7	
	comp=Z,70nm,20.9s,baz=201,slow=30						
H11N3	**WAKE ISLAND Hy**	**95.94**	**293**	T	T	00 13 02.2	
	baz=142,slow=75,SNR=11						
H11N1	**WAKE ISLAND Hy**	**95.95**	**293**	T	T	00 13 05.2	
	baz=142,slow=75,SNR=11						
H11N2	**WAKE ISLAND Hy**	**95.96**	**293**	T	T	00 13 05.2	
	baz=142,slow=75,SNR=8.9						
LBTB	**Lobatse**	**99.12**	**146**	LR	LR	23 03 42.6	
	comp=Z,89nm,18.5s,baz=182,slow=31						
BRTR	**Keskin Array B**	**157.15**	**103**	PKPab	**PKPab**	**22 32 34.9**	**-0.6**
	0.8nm,0.7s,baz=212,slow=5.1,SNR=6.7						

*IDC **30** 22:26:02.2±2.2, 30.47S×177.61W, h0km, mb3.7/2, mbtmp3.7/3, ML2.9/1, Error ellipse: s-maj=56.3km s-min=29.0km az=109.0*
ISC 30 22:26:06.2±2.1, 30.42S±0.10×177.7W±0.4, h33km, n13,
σ1s86/8, mb3.8/3, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.18**	**351**	Pn	**Pn**	**22 26 26.2**	**-0.1**
	65nm,0.3s,baz=106,slow=22,SNR=1.8						
RAO				Sn	**Sn**	**22 26 39.0**	**-2.3**
	197nm,0.3s,baz=181,slow=22,SNR=9.8						
URZ	**Urewera**	**8.91**	**207**	Pn	**Pn**	**22 28 10.6**	**-1.9**
	0.1nm,0.3s,baz=67,slow=17,SNR=1.8						
URZ				Sn	**Sn**	**22 29 51.2**	**-0.6**
	0.4nm,0.3s,baz=25,slow=20,SNR=1.7						
	4.8nm,0.9s						
ASAR	**Alice Springs**	**43.35**	**267**	P	**P**	**22 34 07.5**	**+2.0**
	0.3nm,0.4s,baz=108,slow=6.8,SNR=4.7						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**44.34**	**272**	P	**P**	**22 34 15.0**	**+1.5**
	0.6nm,0.4s,baz=111,slow=8.1,SNR=28						
	0.6nm,0.4s						
QSPA	**South Pole Qui**	**59.69**	**180**	P	P	22 36 16.7	+10
	0.8nm,0.7s,baz=90,slow=2.0,SNR=6.0						
H03S2	**Juan Fernandez**	**80.25**	**123**	T	T	00 07 30.8	
	baz=238						
H03S1	**Juan Fernandez**	**80.26**	**123**	T	T	00 07 36.4	
	baz=238						
H03S3	**Juan Fernandez**	**80.27**	**123**	T	T	00 07 31.8	
	baz=238						
H03N3	**Juan Fernandez**	**80.44**	**123**	T	T	00 07 45.5	
	baz=243						
H03N2	**Juan Fernandez**	**80.44**	**123**	T	T	00 07 37.8	
	baz=243						
H03N1	**Juan Fernandez**	**80.46**	**123**	T	T	00 07 39.1	
	baz=243						
BVAR	**Borovoye Array**	**126.59**	**316**	PKP	**PKiKP**	**22 45 07.3**	**+1.3**
	0.5nm,0.7s,baz=76,slow=1.8,SNR=5.3						
FINES	**FINESS Array B**	**145.25**	**340**	PKPbc	**PKPdf**	**22 45 40.3**	**+0.6**
	1.2nm,0.8s,baz=56,slow=3.9,SNR=8.6						

*IDC **30** 22:33:40.5±0.7, 1.66N×101.22W, h0km, mb4.2/10, mbtmp4.2/10, MS3.6/8, Error ellipse: s-maj=38.5km s-min=16.4km az=60.0*
*NEIC **30** 22:33:43.4±1.3, 1.7N±0.1×101.1W±0.2, h10km±1km, mb4.5/126, Error ellipse: s-maj=29.7km s-min=19.2km az=237.0*
ISC 30 22:33:42.7±0.6, 1.7N±0.1×101.2W±0.1, h14km, n152,
σ0s86/127, mb4.5/72, MS3.7/9, Galapagos Triple
Junction region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAIG	**Zacatecas**	**21.01**	**356**	P	**P**	**22 38 26.7**	**+0.3**
OTAV	**Otavalo**	**22.75**	**93**		**P**	**22 38 44.4**	**-0.8**
OTAV				IAmb	IAmb	22 38 58.8	
	comp=Z,18nm,1.2s						
833A	**Chaparral WMA,**	**26.55**	**3**	P	**P**	**22 39 20.1**	**-0.2**
833A				IAmb	IAmb	22 39 23.1	
	comp=Z,14nm,1.2s						
TXAR	**Lajitas Array**	**27.61**	**355**	P	**P**	**22 39 31.6**	**+1.7**
TXAR	comp=Z,1.4nm,0.8s,baz=175,slow=11,SNR=14			PcP	**PcP**	**22 42 48.1**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=178,slow=6.1,SNR=8.8						
	comp=Z,1.4nm,0.8s						
SAND	**Sanderson**	**28.14**	**358**	P	**P**	**22 39 35.3**	**+0.7**
ALPN	**Alpine**	**28.64**	**356**	P	**P**	**22 39 39.9**	**+0.8**
JCT	**Junction City**	**28.68**	**2**	P	**P**	**22 39 39.9**	**+0.5**
VHRN	**Van Horn**	**29.18**	**353**	P	**P**	**22 39 45.0**	**+1.1**
CZSB	**Cruzeiro do Su**	**29.88**	**109**	P	**P**	**22 39 50.3**	**0.0**
MNTX	**Cornudas Mount**	**30.13**	**353**	P	**P**	**22 39 52.8**	**+0.5**
POST	**Post**	**31.23**	**359**	P	**P**	**22 40 01.5**	**-0.5**
POST				IAmb	IAmb	22 40 03.0	
	comp=Z,7.6nm,0.8s						
TUC	**Tucson**	**31.79**	**344**	P	**P**	**22 40 07.9**	**+1.0**
113A	**Mohawk Valley,**	**33.12**	**340**	P	**P**	**22 40 18.9**	**+0.4**
113A				IAmb	IAmb	22 40 23.2	
	comp=Z,5.5nm,1.1s						
SMWD	**Samnorwood**	**33.27**	**1**	P	**P**	**22 40 20.1**	**+0.3**
SMWD				IAmb	IAmb	22 40 22.0	
	comp=Z,5.1nm,0.8s						
MIAR	**Mount Ida**	**33.46**	**11**		**P**	**22 40 21.5**	**0.0**
MIAR				IAmb	IAmb	22 40 23.2	
	comp=Z,7.0nm,0.8s						
TUL3	**Leonard**	**34.43**	**8**	P	**P**	**22 40 30.1**	**+0.3**
WUAZ	**Wupatki**	**34.98**	**345**	P	**P**	**22 40 35.6**	**+0.8**
WUAZ				IAmb	IAmb	22 40 37.5	
	comp=Z,6.5nm,0.9s						
HHAR	**Hobbs**	**35.08**	**10**	P	**P**	**22 40 35.5**	**0.0**
W13A	**Hualapai Mount**	**35.30**	**342**	P	**P**	**22 40 36.9**	**-0.8**
T25A	**Trinidad**	**35.42**	**356**	P	**P**	**22 40 38.2**	**-0.4**
T25A				IAmb	IAmb	22 40 42.2	
	comp=Z,8.6nm,1.4s						
MVCO	**Mesa Verde**	**36.00**	**350**	P	**P**	**22 40 44.1**	**+0.4**
MVCO				IAmb	IAmb	22 40 45.5	
	comp=Z,5.9nm,1.1s						
MWC	**Mount Wilson**	**36.03**	**336**	P	**P**	**22 40 45.0**	**+1.2**
MWC				IAmb	IAmb	22 40 46.8	
	comp=Z,6.5nm,0.6s						
SDCO	**Great Sand Dun**	**36.12**	**354**	P	**P**	**22 40 45.4**	**+0.7**
V12A	**Nelson**	**36.19**	**341**	P	**P**	**22 40 45.5**	**+0.4**
MTPC	**Mountain Pass**	**36.20**	**340**	P	**P**	**22 40 46.0**	**+0.6**
MTPC				IAmb	IAmb	22 40 50.3	
	comp=Z,11nm,1.4s						
MGMO	**Mountain Grove**	**36.25**	**12**	P	**P**	**22 40 45.6**	**+0.1**
MGMO				IAmb	IAmb	22 40 47.1	
	comp=Z,5.5nm,0.8s						
T42A	**Van Buren**	**36.39**	**14**	P	**P**	**22 40 46.6**	**-0.1**
T42A				IAmb	IAmb	22 40 48.0	
	comp=Z,7.3nm,0.9s						
WVT	**Waverly**	**36.44**	**18**		**P**	**22 40 46.7**	**-0.4**
WVT				IAmb	IAmb	22 40 48.2	
	comp=Z,9.1nm,1.1s						
S39A	**Bolivar**	**36.56**	**10**	P	**P**	**22 40 48.0**	**-0.2**
S39A				IAmb	IAmb	22 40 49.6	
	comp=Z,7.3nm,0.9s						
R32A	**Long Quarter,**	**36.64**	**3**	P	**P**	**22 40 48.7**	**-0.2**
R32A				IAmb	IAmb	22 41 23.0	
	comp=Z,13nm,1.2s						
CLTN	**Cedars of Leba**	**36.90**	**20**	P	**P**	**22 40 50.5**	**-0.6**
CSU	**Charleston Sou**	**36.91**	**30**	P	**P**	**22 40 51.7**	**+0.5**
PV05	**Paradox Valley**	**36.95**	**350**	P	**P**	**22 40 52.7**	**+0.9**
LRMC	**Laurel Mtn Rad**	**36.98**	**337**	P	**P**	**22 40 52.7**	**+0.8**
LRMC				IAmb	IAmb	22 40 54.5	
	comp=Z,4.9nm,0.8s						
CGM3	**Cape Girardeau**	**37.00**	**15**	P	**P**	**22 40 52.2**	**+0.3**
CGM3				IAmb	IAmb	22 40 52.6	
	comp=Z,17nm,1.5s						
SHPR	**Sheep Range**	**37.00**	**341**	P	**P**	**22 40 53.1**	**+1.0**
PV02	**Paradox Valley**	**37.02**	**350**	P	**P**	**22 40 53.0**	**+0.7**
PV02				IAmb	IAmb	22 40 54.7	
	comp=Z,13nm,1.2s						
PV18	**Skein Mesa, Pa**	**37.09**	**350**	P	**P**	**22 40 53.0**	**+0.1**
PV18				IAmb	IAmb	22 41 15.5	
	comp=Z,14nm,1.4s						
QSM	**Queen of Sheba**	**37.10**	**339**	P	**P**	**22 40 54.1**	**+1.3**
PV15	**Paradox Valley**	**37.10**	**350**	P	**P**	**22 40 53.4**	**+0.3**
PV15				IAmb	IAmb	22 40 55.8	
	comp=Z,11nm,1.5s						
HMU	**Henry Mountain**	**37.15**	**347**	P	**P**	**22 40 52.7**	**-0.8**
PV19	**Morning Glory**	**37.16**	**350**	P	**P**	**22 40 54.3**	**+0.8**
PV19				IAmb	IAmb	22 40 57.6	
	comp=Z,10nm,1.2s						
LPAZ	**La Paz**	**37.18**	**120**	P	**P**	**22 40 55.0**	**+0.6**
	comp=Z,3.5nm,1.0s,baz=295,slow=9.1,SNR=9.8						
LPAZ				LR	LR	22 54 37.4	
	comp=Z,36nm,21.7s,baz=294,slow=34						
	comp=Z,3.5nm,1.0s						
PV04	**Paradox Valley**	**37.23**	**350**	P	**P**	**22 40 54.6**	**+0.5**
PV10	**Paradox Valley**	**37.23**	**350**	P	**P**	**22 40 54.1**	**-0.1**
PV10				IAmb	IAmb	22 40 55.7	
	comp=Z,7.4nm,1.1s						
CLC	**China Lake**	**37.24**	**338**	P	**P**	**22 40 55.0**	**+1.0**
PV23	**Carpenter Ridg**	**37.30**	**350**	P	**P**	**22 40 54.9**	**+0.1**
PV23				IAmb	IAmb	22 41 19.2	
	comp=Z,10nm,1.3s						
CCM	**Cathedral Cave**	**37.33**	**13**	P	**P**	**22 40 55.0**	**+0.3**
CCM				IAmb	IAmb	22 40 55.9	
	comp=Z,4.8nm,0.7s						
R40A	**Maddies Statio**	**37.34**	**12**		**P**	**22 40 54.9**	**+0.1**
R40A				IAmb	IAmb	22 40 56.3	
	comp=Z,12nm,0.7s						
PV22	**Blue Mesa, Par**	**37.34**	**350**	P	**P**	**22 40 55.3**	**+0.3**
SZCU	**Shurtz Canyon**	**37.40**	**344**	P	**P**	**22 40 56.8**	**+1.3**
PV21	**Cone Mtn., Par**	**37.40**	**350**	P	**P**	**22 40 56.5**	**+0.9**
FVM	**French Village**	**37.46**	**14**	P	**P**	**22 40 55.7**	**0.0**
FVM				IAmb	IAmb	22 40 56.9	
	comp=Z,7.2nm,0.7s						
T47A	**Sharon Grove**	**37.46**	**19**	P	**P**	**22 40 56.3**	**+0.5**
T47A				IAmb	IAmb	22 41 12.1	
	comp=Z,6.0nm,1.0s						
U49A	**Red Boiling Sp**	**37.47**	**21**	P	**P**	**22 40 56.1**	**+0.2**
U49A				IAmb	IAmb	22 40 57.1	
	comp=Z,4.9nm,0.8s						
KSU1	**Kansas State U**	**37.48**	**6**	P	**P**	**22 40 55.4**	**-0.5**
KSU1				IAmb	IAmb	22 40 57.7	
	comp=Z,12nm,1.1s						
S44A	**Carbondale**	**37.48**	**16**	P	**P**	**22 40 55.9**	**-0.1**
SIUC	**Southern Illin**	**37.51**	**16**	P	**P**	**22 40 55.9**	**-0.3**
FURC	**Furnace Creek,**	**37.55**	**339**	P	**P**	**22 40 56.5**	**0.0**
FURC				IAmb	IAmb	22 40 59.3	
	comp=Z,10nm,1.4s						
MTPU	**Mount Pierson**	**37.58**	**346**		**P**	**22 40 58.4**	**+1.2**
P38A	**Dawn**	**38.41**	**9**	P	**P**	**22 41 03.8**	**0.0**
P38A				IAmb	IAmb	22 41 05.2	
	comp=Z,6.5nm,1.0s						
PSUT	**Pine Spring**	**38.48**	**344**	P	**P**	**22 41 04.8**	**+0.1**
P40A	**Paris**	**38.58**	**11**		**P**	**22 41 05.0**	**-0.3**
P40A				IAmb	IAmb	22 41 06.6	
	comp=Z,11nm,0.9s						
P17A	**Butcher Ranch,**	**38.62**	**348**	P	**P**	**22 41 06.5**	**+0.7**
Q44A	**Meyer Farm, Va**	**38.68**	**15**	P	**P**	**22 41 06.4**	**+0.3**
Q44A				IAmb	IAmb	22 41 07.1	
	comp=Z,11nm,1.0s						
O20A	**White River Ci**	**38.82**	**351**	P	**P**	**22 41 07.5**	**0.0**
U54A	**Nelsons Funny**	**39.02**	**25**	P	**P**	**22 41 09.3**	**+0.3**
U54A				IAmb	IAmb	22 41 15.8	
	comp=Z,14nm,1.2s						
HAYD	**Hayden**	**39.06**	**353**	P

	comp=Z,32nm,19.8s,baz=259,slow=32 comp=Z,1.1nm,0.5s								
BDFB	**Brasilia** comp=Z,0.9nm,0.3s,baz=243,slow=4.5,SNR=5.6 comp=Z,0.9nm,0.3s	**55.26**	**110**	P		**P**	**22 43 16.6**	**+0.4**	
YKAW1	**Yellowknife Wh**	**61.48**	**353**	P		**P**	**22 43 58.0**	**-0.6**	
YKAW1	comp=Z,6.9nm,1.2s			IAmb		IAmb	22 43 59.7		
YKA	**Yellowknife Ar** comp=Z,1.7nm,0.9s,baz=167,slow=6.0,SNR=22 comp=Z,1.7nm,0.9s	**61.51**	**353**	P		**P**	**22 43 58.5**	**-0.4**	
YKA	**Yellowknife Ar**	**61.51**	**353**	P		**P**	**22 43 58.0**	**-0.8**	
USHA	**Ushuaia** comp=Z,2µm,21.5s,baz=230,slow=28	**62.43**	**159**	LR		LR	23 02 44.4		
FRB	**Frobisher Bay** comp=Z,42nm,18.5s,baz=238,slow=40	**66.39**	**15**	LR		LR	23 17 25.3		
INK	**Inuvik**	**70.07**	**348**	P		**P**	**22 44 53.8**	**-0.2**	
INK	comp=Z,5.2nm,1.1s			IAmb		IAmb	22 44 55.7		
RND	**Reindeer**	**70.81**	**339**	P		**P**	**22 44 59.2**	**+0.5**	
F28M	**Old Crow**	**71.00**	**345**	P		**P**	**22 44 59.5**	**-0.2**	
F28M	comp=Z,2.0nm,0.8s			IAmb		IAmb	22 45 00.8		
ILAR	**Eielson Array** comp=Z,5.3nm,0.6s,baz=149,slow=5.2,SNR=104 comp=Z,5.3nm,0.6s	**71.02**	**341**	P		**P**	**22 44 59.9**	**+0.1**	
PRP	**Porcupine Dome**	**71.08**	**342**	P		**P**	**22 45 00.5**	**0.0**	
E28M	**Babbage River** comp=Z,6.1nm,1.4s	**71.67**	**346**	IAmb		IAmb	22 45 17.6		
PPLA	**Purkeypile**	**71.72**	**338**	P		**P**	**22 45 04.1**	**-0.2**	
A36M	**Sachs Harbour**	**71.85**	**352**	P		**P**	**22 45 06.1**	**+1.4**	
E27K	**Coleen River** comp=Z,6.6nm,1.1s	**71.86**	**345**	IAmb		IAmb	22 45 06.5		
H24K	**Noodor Dome**	**72.03**	**342**	P		**P**	**22 45 06.0**	**0.0**	
MLY	**Manley**	**72.46**	**340**	P		**P**	**22 45 08.5**	**-0.1**	
MLY	comp=Z,4.5nm,0.7s			IAmb		IAmb	22 45 09.5		
D27M	**Malcolm River** comp=Z,3.2nm,0.9s	**72.49**	**346**	IAmb		IAmb	22 45 10.3		
RES	**Resolute Bay** comp=Z,58nm,18.5s,baz=0.0,slow=37	**73.02**	**2**	LR		LR	23 18 35.4		
H21K	**Melozitna Rive** comp=Z,4.4nm,1.0s	**73.53**	**340**	IAmb		IAmb	22 45 16.0		
COLD	**Coldfoot**	**73.63**	**342**	P		**P**	**22 45 16.2**	**+0.8**	
COLD	comp=Z,5.3nm,0.9s			IAmb		IAmb	22 45 17.2		
J18K	**Innoko River** comp=Z,5.2nm,0.8s	**73.75**	**337**	IAmb		IAmb	22 45 17.0		
D25K	**Kavik River** comp=Z,5.0nm,0.8s	**73.91**	**345**	IAmb		IAmb	22 45 18.6		
E23K	**Chandalar** comp=Z,10nm,1.4s	**73.98**	**343**	IAmb		IAmb	22 45 19.7		
G21K	**Allakaket** comp=Z,3.7nm,0.9s	**74.26**	**341**	IAmb		IAmb	22 45 20.6		
F21K	**Alatna River** comp=Z,8.7nm,1.1s	**74.66**	**341**	IAmb		IAmb	22 45 23.5		
E22K	**Anaktuvuk Pass**	**74.67**	**343**	P		**P**	**22 45 22.0**	**+0.4**	
E22K	comp=Z,4.5nm,1.1s			IAmb		IAmb	22 45 23.1		
G19K	**Purcell Mounta** comp=Z,4.5nm,0.8s	**75.27**	**340**	IAmb		IAmb	22 45 26.3		
F20K	**Avaraart Lake** comp=Z,5.5nm,0.8s	**75.29**	**341**	IAmb		IAmb	22 45 27.2		
G18K	**Tagagawik**	**75.70**	**339**	P		**P**	**22 45 28.2**	**+0.8**	
G18K	comp=Z,7.9nm,1.1s			IAmb		IAmb	22 45 29.5		
B21K	**Ikpikpuk River** comp=Z,3.9nm,0.8s	**76.37**	**343**	IAmb		IAmb	22 45 32.7		
RDOG	**Red Dog Mine**	**78.19**	**340**	P		**P**	**22 45 41.8**	**+0.4**	
H11N3	**WAKE ISLAND Hy** baz=87	**91.26**	**290**	T		T	00 27 54.4		
H11N2	**WAKE ISLAND Hy** baz=87	**91.27**	**290**	T		T	00 27 56.1		
H11N1	**WAKE ISLAND Hy** baz=87	**91.28**	**290**	T		T	00 28 02.4		
H11S2	**WAKE ISLAND Hy** baz=87	**91.50**	**288**	T		T	00 28 13.0		
H11S1	**WAKE ISLAND Hy** baz=87	**91.50**	**288**	T		T	00 28 11.2		
H11S3	**WAKE ISLAND Hy** baz=87	**91.52**	**288**	T		T	00 28 23.9		
QSPA	**South Pole Qui** comp=Z,1.5nm,1.0s,baz=162,slow=3.2,SNR=2.4 comp=Z,1.5nm,1.0s	**91.69**	**180**	P		**P**	**22 46 50.7**	**+1.2**	
QSPA	**South Pole Qui**	**91.69**	**180**	P		**P**	**22 46 50.0**	**+0.4**	
MDT	**Midelt** comp=Z,68nm,20.4s,baz=230,slow=31	**94.61**	**57**	LR		LR	23 23 05.1		
NOA	**NORSAR Array B** comp=Z,9.5nm,18.5s,baz=345,slow=35	**99.20**	**27**	LR		LR	23 31 44.2		
ASAR	**Alice Springs** comp=Z,0.3nm,0.6s,baz=96,slow=2.2,SNR=4.5	**122.44**	**243**	PKP		**PKPdf**	**22 52 37.7**	**-0.8**	
WRA	**Warramunga Arr** comp=Z,0.3nm,0.6s,baz=97,slow=2.2,SNR=6.1	**122.85**	**247**	PKP		**PKPdf**	**22 52 38.4**	**-1.0**	
WRA	**Warramunga Arr**	**122.85**	**247**			**PKPdf**	**22 52 38.8**	**-0.6**	
ZALV	**Zalesovo Beam** comp=Z,0.8nm,0.6s,baz=48,slow=2.2,SNR=4.3	**124.35**	**356**	PKP		**PKPdf**	**22 52 41.0**	**-0.4**	
ZALV	**Zalesovo Beam**	**124.35**	**356**	PKPdf		**PKPdf**	**22 52 40.7**	**-0.6**	
KBZ	**Khabaz** comp=Z,1.9nm,0.3s,baz=309,slow=6.2,SNR=2.5	**124.52**	**31**	PKP		**PKiKP**	**22 52 42.0**	**-0.2**	
BVAR	**Borovoye Array** comp=Z,1.5nm,0.6s,baz=316,slow=0.2,SNR=14	**125.04**	**6**	PKP		**PKiKP**	**22 52 43.0**	**0.0**	
SONM	**Songino Array** comp=Z,0.2nm,0.5s,baz=338,slow=3.2,SNR=4.0	**125.14**	**338**	PKP		**PKiKP**	**22 52 43.0**	**-0.5**	
KURBB	**Kurchatov Arra** comp=Z,1.9nm,0.2s,baz=0.4,slow=2.1,SNR=6.7	**127.90**	**0**	PKP		**PKPdf**	**22 52 47.8**	**-0.4**	
HHC	**Hu-ho-hao-te**	**128.25**	**329**	*e*P		**PKPdf**	**22 52 45.0**	**-4.3**	
MKAR	**Makanchi Array** comp=Z,0.4nm,0.7s,baz=342,slow=3.8,SNR=2.0	**131.64**	**357**	PKP		**PKPdf**	**22 52 54.5**	**-1.0**	
WMQ	**Urumqi**	**134.02**	**351**	*e*PKP		**PKiKP**	**22 53 05.5**	**+4.1**	
WMQ				sPKP			22 53 17.8		
PZH	**PanZhiHua**	**144.31**	**323**	PKP		**PKPdf**	**22 53 19.5**	**+0.1**	
CMAR	**Chiang Mai Arr** comp=Z,0.9nm,0.3s,baz=5.9,slow=2.0,SNR=13	**151.87**	**316**	PKPbc		**PKiKP**	**22 53 38.4**	**-0.2**	

*IDC **30** 23:04:37.4±1.5, 34°.80S×179°.80W, h0km, mb4.1/3, mbtmp4.1/4, ML3.8/1, MS2.3/1, Error ellipse: s-maj=39.7km s-min=31.7km az=73.0*
*NEIC **30** 23:04:38.5±1.7, 35°.2S±0°.1×179°.6W±0°.2, h10km±1km, mb4.3/6, Error ellipse: s-maj=22.4km s-min=20.6km az=62.0*
*WEL **30** 23:04:41.3±1.3, 35°.5S±7°×18°.0W±1°.4, h12km, M4.1/1, ML3.6/4, MLv4.1/1, Error ellipse: s-maj=18.5km s-min=8.1km az=102.0, confirmed*

ISC 30 23:04:39.2±1.0, **35°.22S**±0°.07×**179°.69W**±0°.09, **h10**km, **n86,**
σ**2s73**/85, **mb4.3/6, East of North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.84**	**214**			Pn	**Pn**	**23 05 23.8**	**-0.8**
MXZ	**Matakaoa Point**	**2.84**	**214**	P		P	**Pb**	**23 05 29.1**	**-0.9**
MXZ				S		S	**Sb**	**23 06 03.3**	**-1.6**
WMGZ	**Waiomatatini S**	**3.01**	**210**	P		P	**Pb**	**23 05 30.9**	**-2.0**
WMGZ				S		S	**Sb**	**23 06 11.1**	**+1.4**
PKGZ	**Pakihiroa**	**3.20**	**214**	P		P	**Pn**	**23 05 32.9**	**+3.4**
PKGZ				S		S	**Sb**	**23 06 13.4**	**-1.7**
HAZ	**Te Kaha**	**3.25**	**218**	P		P	**Pn**	**23 05 33.1**	**+2.8**
HAZ				S		S	**Sb**	**23 06 16.3**	**-0.3**
PUZ	**Puketiti**	**3.29**	**210**	P		P	**Pn**	**23 05 33.7**	**+2.9**
PUZ				S		S	**Sn**	**23 06 13.9**	**+3.9**
RUGZ	**Raukumara Rang**	**3.46**	**217**	P		P	**Pn**	**23 05 36.5**	**+3.2**
RUGZ				S		S	**Sn**	**23 06 18.7**	**+4.2**
TWGZ	**Tauwhareparae**	**3.50**	**212**	P		P	**Pn**	**23 05 36.9**	**+3.2**
TWGZ				S		S	**Sb**	**23 06 21.2**	**-2.6**
CNGZ	**Carnagh Statio**	**3.67**	**207**	P		P	**Pb**	**23 05 40.4**	**-3.8**
WHRZ	**Whale Island**	**3.76**	**225**	P		P	**Pn**	**23 05 41.5**	**+4.2**
TKGZ	**Te Karaka**	**3.77**	**211**	P		P	**Pn**	**23 05 40.7**	**+3.2**
TKGZ				S		S	**Sb**	**23 06 27.8**	**-3.9**
MWZ	**Matawai**	**3.83**	**215**	P		P	**Pn**	**23 05 41.2**	**+3.0**
MYRZ	**Mayor Island**	**3.88**	**237**	P		P	**Pb**	**23 05 45.3**	**-2.5**
URZ	**Urewera** 5.7nm,0.3s,baz=299,slow=1.2,SNR=67	**3.98**	**219**	Pn		P	**Pn**	**23 05 42.6**	**+2.4**
URZ	10nm,0.3s,baz=343,slow=20,SNR=8.2 23nm,0.4s			Sn		S	**Sn**	**23 06 27.6**	**+0.7**
URZ	**Urewera**	**3.98**	**219**	P		P	**Pn**	**23 05 42.3**	**+2.1**
OPRZ	**Ohinepanea**	**4.00**	**228**	P		P	**Pn**	**23 05 44.1**	**+3.5**
RAGZ	**Rawiri**	**4.01**	**215**	P		P	**Pn**	**23 05 42.9**	**+2.1**
RIGZ	**Rimuhau**	**4.04**	**210**	P		P	**Pn**	**23 05 43.8**	**+2.8**
EDRZ	**Edgecumbe**	**4.07**	**224**	P		P	Pn	23 05 46.5	+4.9
TGRZ	**Tauranga**	**4.12**	**231**	P		P	**Pn**	**23 05 44.6**	**+2.5**
PRGZ	**Paritu Road**	**4.18**	**207**	P		P	**Pn**	**23 05 47.2**	**+4.2**
OMRZ	**Omania**	**4.28**	**227**	P		P	Pb	23 05 49.9	-4.7
TARZ	**Mount Tarawera**	**4.29**	**224**	P		P	**Pn**	**23 05 49.3**	**+4.6**
RTZ	**Ruatahuna**	**4.32**	**217**				**Pn**	**23 05 46.7**	**+1.8**
RTZ	**Ruatahuna**	**4.32**	**217**	P			**Pn**	**23 05 47.0**	**+2.1**
MUGZ	**Murupara**	**4.32**	**220**	P			**Pn**	**23 05 47.3**	**+2.4**
MHGZ	**Mahia Peninsul**	**4.37**	**205**	P			**Pn**	**23 05 47.3**	**+1.6**
KMRZ	**Kaimai**	**4.39**	**232**	P			**Pn**	**23 05 48.5**	**+2.6**
WIAZ	**Waiheke Island**	**4.48**	**248**	P			**Pn**	**23 05 50.5**	**+3.4**
RAHZ	**Arahi**	**4.50**	**214**	P			**Pn**	**23 05 51.0**	**+3.5**
MTHZ	**Maungataniwha**	**4.57**	**216**	P			**Pn**	**23 05 51.2**	**+2.8**
TOZ	**Tahuroa Road**	**4.62**	**236**				**Pn**	**23 05 50.3**	**+1.3**
NMHZ	**Naumai**	**4.78**	**215**	P			**Pn**	**23 05 53.2**	**+1.8**
ARHZ	**Aropaoanui**	**4.83**	**212**	P			Pn	23 05 57.1	+5.2
WCZ	**Waipu Caves**	**4.92**	**260**	P			**Pn**	**23 05 56.2**	**+3.1**
BKZ	**Black Stump Fm**	**4.98**	**217**				**Pn**	**23 05 54.0**	**-0.1**
BKZ	**Black Stump Fm**	**4.98**	**217**	P			**Pn**	**23 05 57.4**	**+3.3**
MCHZ	**McNeill Hill**	**5.11**	**213**	P			**Pn**	**23 06 00.6**	**+4.8**
RATZ	**Rangitukua**	**5.14**	**224**	P			**Pn**	**23 06 00.6**	**+4.3**
RITZ	**Rihia Road**	**5.17**	**222**	P			**Pn**	**23 06 01.0**	**+4.3**
KWHZ	**Kaweka Forest**	**5.22**	**215**	P			**Pn**	**23 05 59.5**	**+2.1**
KATZ	**Kakaramea**	**5.26**	**223**	P			**Pn**	**23 06 02.6**	**+4.6**
KAHZ	**Kahuranaki**	**5.32**	**210**	P			**Pn**	**23 06 00.9**	**+2.1**
TMVZ	**Te Maari**	**5.35**	**222**	P			**Pn**	**23 06 00.8**	**+1.5**
NTVZ	**North Tongarir**	**5.36**	**222**	P			**Pn**	**23 06 01.1**	**+1.8**
ETVZ	**East Tongariro**	**5.37**	**222**	P			**Pn**	**23 06 01.1**	**+1.6**
OTVZ	**Oturere**	**5.41**	**222**	P			**Pn**	**23 06 01.9**	**+1.9**
WTVZ	**West Tongariro**	**5.42**	**223**	P			**Pn**	**23 06 04.0**	**+3.8**
SNVZ	**South Ngauruho**	**5.44**	**222**	P			**Pn**	**23 06 03.0**	**+2.5**
NGZ	**Ngauruhoe**	**5.45**	**222**	P			Pn	23 06 07.0	+6.3
TWVZ	**Taurewa**	**5.47**	**224**	P			Pn	23 06 07.6	+6.8
HIZ	**Hauiti**	**5.47**	**231**				**Pn**	**23 06 00.3**	**-0.5**
HIZ	**Hauiti**	**5.47**	**231**	P			**Pn**	**23 06 04.7**	**+3.9**
TUVZ	**Tukino**	**5.49**	**221**	P			Pn	23 06 08.4	+7.2
OUZ	**Omahuta**	**5.50**	**268**	P			**Pn**	**23 06 02.3**	**+1.2**
COVZ	**Chateau Observ**	**5.50**	**222**	P			**Pb**	**23 06 11.1**	**-4.3**
MOVZ	**Moawhango**	**5.54**	**220**	P			**Pn**	**23 06 04.8**	**+3.0**
WNVZ	**Wahianoa**	**5.56**	**221**	P			**Pb**	**23 06 13.0**	**-3.5**
PKVZ	**Pokaka**	**5.67**	**223**	P			**Pn**	**23 06 08.4**	**+4.8**
PNHZ	**Pukenui**	**5.71**	**214**	P			**Pn**	**23 06 04.9**	**+0.8**
VRZ	**Vera Road**	**5.90**	**227**	P			**Pn**	**23 06 10.9**	**+4.2**
DVHZ	**Dannevirke**	**6.04**	**212**	P			**Pn**	**23 06 10.1**	**+1.5**
BFZ	**Birch Farm**	**6.33**	**209**	Pn			**Pn**	**23 06 12.1**	**-0.5**
MRZ	**Mangatainoka R**	**6.59**	**213**				**Pn**	**23 06 16.1**	**-0.1**
MSWZ	**Moikau Station**	**7.36**	**211**	Pn			**Pn**	**23 06 25.1**	**-1.5**
SNZO	**South Karori**	**7.51**	**214**	Pn			**Pn**	**23 06 26.4**	**-2.4**
TUWZ	**Tuamarina**	**7.97**	**217**	Pn			**Pn**	**23 06 33.0**	**-2.0**
QRZ	**Quartz Range**	**8.31**	**225**	Pn			**Pn**	**23 06 38.1**	**-1.6**
CTZ	**Chatham Island**	**8.83**	**165**	Pn			**Pn**	**23 06 45.1**	**-1.7**
CTZ	**Chatham Island**	**8.83**	**165**	P			**Pn**	**23 06 49.8**	**+2.9**
HNR	**Honiara** comp=Z,5.2nm,19.9s,baz=310,slow=31	**31.70**	**319**	LR			LR	23 21 01.3	
AS31	**Alice Springs**	**41.69**	**273**	P			**P**	**23 12 26.9**	**-1.3**
AS31	comp=Z,2.2nm,0.4s			IAmb			IAmb	23 12 31.7	
ASAR	**Alice Springs** comp=Z,2.9nm,0.4s,baz=114,slow=7.8,SNR=36 comp=Z,2.9nm,0.4s	**41.69**	**273**	P			**P**	**23 12 27.4**	**-0.9**
WRA	**Warramunga Arr** comp=Z,0.9nm,0.4s,baz=117,slow=7.9,SNR=33 comp=Z,0.9nm,0.4s	**43.11**	**278**	P			**P**	**23 12 37.9**	**-1.9**
WRA	**Warramunga Arr**	**43.11**	**278**	P			**P**	**23 12 38.6**	**-1.2**
WB0	**Warramunga Arr**	**43.16**	**278**	P			**P**	**23 12 38.4**	**-1.9**
WB0	comp=Z,8.3nm,1.4s			IAmb			IAmb	23 13 17.9	
FORT	**Forrest**	**43.64**	**260**	P			**P**	**23 12 44.0**	**+0.1**
FORT	comp=Z,8.2nm,1.1s			IAmb			IAmb	23 13 15.7	
QSPA	**South Pole Qui** comp=Z,1.0nm,0.8s,baz=358,slow=0.7,SNR=7.0 comp=Z,1.0nm,0.8s	**54.90**	**180**	P			**P**	**23 14 12.5**	**+2.6**
QSPA	**South Pole Qui**	**54.90**	**180**	P			**P**	**23 14 11.5**	**+1.7**
QSPA	comp=Z,1.8nm,0.9s			IAmb			IAmb	23 14 34.8	
BELA	**Belgrano 2**	**65.21**	**172**	P			**P**	**23 15 21.2**	**+1.0**
H03N3	**Juan Fernandez** baz=237,slow=72,SNR=15	**79.21**	**123**	T			T	00 45 03.6	
H03N2	**Juan Fernandez** baz=237,slow=72,SNR=6.7	**79.22**	**123**	T			T	00 45 02.9	
H03N1	**Juan Fernandez** baz=237,slow=72,SNR=14	**79.23**	**123**	T			T	00 44 59.8	
FINES	**FINESS Array B** comp=Z,2.2nm,1.0s,baz=343,slow=6.0,SNR=3.8	**149.07**	**336**	PKPbc			**PKPdf**	**23 24 23.9**	**+1.2**
BRTR	**Keskin Array B** comp=Z,0.3nm,0.7s,baz=126,slow=2.3,SNR=2.1	**153.26**	**290**	PKPbc			**PKiKP**	**23 24 38.2**	**+0.6**
HFS	**Hagfors** comp=Z,2.8nm,0.8s,baz=8.9,slow=10,SNR=2.5	**153.60**	**345**	PKPab			**PKPab**	**23 24 48.0**	**-1.9**

*IDC **30** 23:13:04.0±2.2, 34°.82S×179°.66W, h0km, mb3.7/4, mbtmp3.7/5, ML3.6/1, Error ellipse: s-maj=48.2km s-min=35.9km az=57.0*
*WEL **30** 23:13:09.6±1.1, 35°.5S±8°×18°.0W±1°.0, h12km, M3.8/13, mB4.2/1, ML3.8/19, MLv3.8/13, Mw(mB)3.3/1, Error ellipse: s-maj=13.3km s-min=10.0km az=97.5, confirmed*

ISC 30 23:13:07.6±1.5, **35°.05S**±0°.10×**179°.8W**±0°.1, **h10**km, **n33,**
σ**1s23**/34, **mb3.7/4, East of North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.95**	**211**	P		P	**Pn**	**23 13 54.6**	**+0.1**
WMGZ	**Waiomatatini S**	**3.13**	**207**	P		P	**Pn**	**23 13 58.4**	**+1.4**
PKGZ	**Pakihiroa**	**3.30**	**211**	P		P	**Pn**	**23 14 00.4**	**+1.1**
PKGZ				S		S	**Sn**	**23 14 40.3**	**+1.5**
HAZ	**Te Kaha**	**3.35**	**215**	P		P	**Pn**	**23 14 01.2**	**+1.3**
PUZ	**Puketiti**	**3.41**	**207**	P		P	**Pn**	**23 14 01.5**	**+0.7**
RUGZ	**Raukumara Rang**	**3.56**	**214**	P		P	**Pn**	**23 14 03.5**	**+0.5**
TWGZ	**Tauwhareparae**	**3.61**	**209**	P		P	**Pn**	**23 14 04.3**	**+0.7**
TWGZ				S		S	**Sn**	**23 14 48.4**	**+2.1**
CNGZ	**Carnagh Statio**	**3.79**	**205**	P		P	**Pn**	**23 14 06.2**	**+0.1**
MWZ	**Matawai**	**3.93**	**213**	P		P	**Pn**	**23 14 08.4**	**+0.3**
URZ	**Urewera** 3.0nm,0.3s,baz=79,slow=5.2,SNR=36	**4.07**	**217**	P		P	**Pn**	**23 14 09.7**	**-0.1**
URZ	2.5nm,0.3s,baz=119,slow=15,SNR=6.8 6.5nm,0.3s			Sn		S	**Sn**	**23 14 53.9**	**-3.7**
URZ	**Urewera**	**4.07**	**217**	P		P	**Pn**	**23 14 10.0**	**+0.1**
URZ				S		S	**Sn**	**23 14 57.6**	**0.0**
RAGZ	**Rawiri**	**4.12**	**212**	P		P	**Pn**	**23 14 10.4**	**-0.2**
RIGZ	**Rimuhau**	**4.15**	**208**	P		P	**Pn**	**23 14 11.8**	**+0.7**
RIGZ				S		S	**Sn**	**23 14 58.4**	**-1.3**
MUGZ	**Murupara**	**4.41**	**218**	P		P	**Pn**	**23 14 14.9**	**+0.4**
RTZ	**Ruatahuna**	**4.41**	**215**	P		P	**Pn**	**23 14 14.9**	**+0.3**
KNZ	**Kohu**	**4.46**	**207**	P		P	**Pn**	**23 14 14.6**	**-0.6**
RAHZ	**Arahi**	**4.61**	**212**	P		P	**Pn**	**23 14 18.3**	**+1.0**
MTHZ	**Maungataniwha**	**4.67**	**215**	P		P	**Pn**	**23 14 19.1**	**+1.0**
NMHZ	**Naumai**	**4.88**	**213**	P		P	**Pn**	**23 14 22.6**	**+1.5**
WCZ	**Waipu Caves**	**4.88**	**258**	P		P	**Pn**	**23 14 22.6**	**+1.6**
BKZ	**Black Stump Fm**	**5.08**	**215**	P		P	**Pn**	**23 14 24.3**	**+0.5**
KWHZ	**Kaweka Forest**	**5.32**	**214**	P		P	**Pn**	**23 14 27.0**	**-0.1**
OUZ	**Omahuta**	**5.44**	**266**	P		P	**Pn**	**23 14 29.7**	**+1.0**
HIZ	**Hauiti**	**5.53**	**230**	P		P	**Pn**	**23 14 32.1**	**+2.2**
CTZ	**Chatham Island**	**9.01**	**165**	P		P	**Pn**	**23 15 19.2**	**+1.5**
STKA	**Stephens Creek** 0.5nm,0.3s,baz=63,slow=4.5,SNR=1.7 0.5nm,0.3s	**32.25**	**264**	P		P	**P**	**23 19 35.6**	**-0.7**
ASAR	**Alice Springs** 0.8nm,0.5s,baz=115,slow=7.8,SNR=10 0.8nm,0.5s	**41.61**	**273**	P		P	**P**	**23 20 55.1**	**-0.9**
WRA	**Warramunga Arr** 0.5nm,0.7s,baz=118,slow=7.8,SNR=8.4 0.5nm,0.7s	**43.02**	**278**	P		P		23 21 05.3	-2.2
QSPA	**South Pole Qui** 0.8nm,0.9s,baz=350,slow=7.7,SNR=3.3 0.8nm,0.9s	**55.08**	**180**	P		P	**P**	**23 22 39.2**	**-0.2**
H03S2	**Juan Fernandez** baz=242,slow=74,SNR=7.4	**79.14**	**124**	T		T		00 52 16.1	
H03S1	**Juan Fernandez** baz=242,slow=74,SNR=6.7	**79.15**	**124**	T		T		00 52 22.4	
H03S3	**Juan Fernandez** baz=242,slow=74,SNR=8.2	**79.16**	**124**	T		T		00 52 21.3	
FINES	**FINESS Array B** 1.5nm,0.9s,baz=339,slow=10,SNR=1.6	**148.89**	**336**	PKPbc			**PKPdf**	**23 32 51.6**	**+0.9**

*IDC **30** 23:32:32.9±12.0, 36°.15N×70°.96E, h170km±116km, mb3.4/4, mbtmp3.8/7, Error ellipse: s-maj=68.2km s-min=30.4km az=26.0*

ISC 30 23:32:37.9±0.9, **36°.48N**±0°.07×**70°.71E**±0°.10, **h200**km, **n21,**
σ**2s24**/28, **mb3.8/3, 3C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ALCI	**Alchi Leh**	**5.75**	**111**	*e*S			**Sn**	**23 35 08.1**	**-0.8**
TSSA	**Tissa**	**5.77**	**127**	*e*P			**Pn**	**23 34 06.1**	**+3.7**
TSSA				*e*S			**Sn**	**23 35 08.5**	**-0.6**
TSSA					IAML			23 35 11.4	
TSSA	comp=E,69nm,0.3s				IAML			23 35 12.0	
THN	**Thein Dam** comp=N,61nm,0.5s	**5.79**	**133**	*e*P			**Pn**	**23 34 06.4**	**+3.8**
THN				*e*S			**Sn**	**23 35 10.8**	**+1.3**
THN					IAML			23 35 12.3	
THN	comp=E,52nm,0.4s				IAML			23 35 12.8	
DHRM	**DHARAMSHALA** comp=N,48nm,0.6s	**6.25**	**131**	*e*P			**Pn**	**23 34 11.9**	**+3.1**
DHRM				*e*S			**Sn**	**23 35 21.2**	**+0.7**
DHRM					IAML			23 35 22.7	
DHRM	comp=E,85nm,0.6s				IAML			23 35 23.6	
UCH	**Uchtor** comp=N,94nm,0.4s SNR=38	**6.45**	**26**	P			**Pn**	**23 34 12.3**	**+0.9**
EKS2	**Erkin-Say** SNR=7.2	**6.61**	**20**	P			**Pn**	**23 34 14.3**	**+1.1**
KK31	**Karatay Array** comp=N,7.4nm,0.5s,baz=177,slow=12,SNR=45	**6.62**	**359**	⇓P			**Pn**	**23 34 14.7**	**+1.6**
KK31				⇑S			**Sn**	**23 35 26.8**	**-1.9**
AAK	**Ala-Archa** SNR=21 comp=N,2.6nm,0.4s,baz=180,slow=26,SNR=3.9	**6.81**	**24**	P			**Pn**	**23 34 16.8**	**+1.0**
AAK	**Ala-Archa** comp=N,1.8nm,0.5s	**6.81**	**24**	⇑P			**Pn**	**23 34 16.3**	**+0.5**
AAK	comp=N,6.4nm,0.7s			⇑S			**Sn**	**23 35 31.3**	**-2.1**
ULHL	**Ulahol** SNR=16	**7.18**	**35**	P			**Pn**	**23 34 21.0**	**+0.4**
CHMS	**Chumysh** SNR=5.9	**7.22**	**24**	P			**Pn**	**23 34 21.2**	**+0.3**
TKM2	**Tokmak 2** SNR=7.1	**7.45**	**29**	P			**Pn**	**23 34 25.5**	**+1.3**
KLP	**Kalpa**	**7.97**	**126**	*e*P			**Pn**	**23 34 33.8**	**+2.7**
KLP				*e*S			**Sn**	**23 35 57.3**	**-3.7**
KLP					IAML			23 36 01.0	
KLP	comp=E,13nm,0.4s				IAML			23 36 03.0	
KUDL	**Kundal** comp=N,9.3nm,0.6s	**9.64**	**148**	*e*P			**Pn**	**23 34 54.5**	**+2.0**
KUDL				*e*S			**Sn**	**23 36 35.8**	**-4.6**
KUDL					IAML			23 36 37.8	
MKAR	**Makanchi Array** comp=E,1.0nm,0.6s,baz=212,slow=12,SNR=9.6	**13.45**	**36**	P			**Pn**	**23 35 39.5**	**-1.3**
KURBB	**Kurchatov Arra** comp=E,0.9nm,0.8s,baz=208,slow=11,SNR=7.6	**15.22**	**19**	P			**Pn**	**23 36 00.0**	**-2.6**
BVAR	**Borovoye Array** comp=E,1.3nm,0.5s,baz=169,slow=11,SNR=15	**16.55**	**359**	P			**Pn**	**23 36 19.1**	**+0.5**
FINES	**FINESS Array B** comp=E,4.6nm,1.1s,baz=140,slow=20,SNR=2.6 comp=E,4.6nm,1.1s	**37.37**	**326**	P			**P**	**23 39 31.3**	**+0.3**
HFS	**Hagfors** comp=E,2.9nm,0.9s,baz=115,slow=9.7,SNR=1.8 comp=E,2.9nm,0.9s	**42.94**	**322**	P			**P**	**23 40 18.0**	**+1.3**
TORD	**Torodi Ar. Bea** comp=E,0.4nm,0.7s,baz=42,slow=4.9,SNR=8.0 comp=E,0.4nm,0.7s	**65.48**	**268**	P			**P**	**23 42 59.4**	**-0.6**
ASAR	**Alice Springs** comp=E,0.2nm,0.3s,baz=305,slow=5.5,SNR=1.7 comp=E,0.2nm,0.3s	**84.43**	**125**	P			**P**	**23 44 44.7**	**-3.4**

*IDC **30** 23:57:01.3±2.7, 0°.83N×121°.98E, h43km±23km, mb3.5/7, mbtmp3.8/8, ML4.5/1, Error ellipse: s-maj=108.6km s-min=15.3km az=65.0*
*DJA **30** 23:57:07.6±0.2, 1°.N±2°×12°.2E±°, h84km±4km, M4.5/31, mb4.5/6, mB5.4/4, MLv4.3/31, Mw(mB)4.8/4*
*NEIC **30** 23:57:07.9±1.4, 0°.7N±0°.2×121°.6E±0°.2, h99km±11km, mb4.3/5,

KURBB **Kurchatov Arra 61.27 318** P P 00 09 03.2 -0.1
0.1nm,0.3s,baz=91,slow=7.6,SNR=4.6
0.1nm,0.3s
ILAR **Eielson Array 62.92 26** P P 00 09 12.9 -1.1
0.1nm,0.7s,baz=260,slow=6.6,SNR=6.7
0.1nm,0.7s
BVAR **Borovoye Array 66.40 320** P P 00 09 37.0 +0.4
0.4nm,0.5s,baz=84,slow=5.5,SNR=5.0
0.4nm,0.5s
YKA **Yellowknife Ar 77.25 28** P P 00 10 42.4 +1.9
0.3nm,0.5s,baz=291,slow=5.7,SNR=4.0
0.3nm,0.5s
FINES **FINESS Array B 86.61 335** P P 00 11 28.1 -0.9
2.0nm,0.8s,baz=145,slow=4.7,SNR=4.7
2.0nm,0.8s

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*IDC **31** 00:01:41.6±1.3,29°.53S×179°.17W,h225km±13km,mb3.0/3, mbtmp3.7/4,Error ellipse: s-maj=31.6km s-min=25.3km az=131.0*

ISC 31 00:01:40.1±0.8,29°.6S±0°.1×179°.4W±0°.1,h200km,n12, σ1ᵍ73/14,mb3.3/3,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.36**	**77**	P	**Pn**	**00 02 15.2**	**+2.5**
	448nm,0.2s,baz=307,slow=20,SNR=8.8						
RAO				S	**Sn**	**00 02 36.0**	**-1.8**
	337nm,0.3s,baz=180,slow=20,SNR=3.1						
URZ	**Urewera**	**9.12**	**197**	P	**Pn**	**00 03 48.7**	**+0.8**
	6.8nm,0.9s,baz=333,slow=11,SNR=7.7						
URZ				S	**Sn**	**00 05 28.7**	**-1.4**
	3.0nm,0.3s,baz=98,slow=15,SNR=8.9						
ASAR	**Alice Springs**	**41.91**	**267**	P	**P**	**00 09 13.7**	**+2.5**
	0.2nm,0.3s,baz=110,slow=5.4,SNR=1.7						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**42.82**	**272**	P	**P**	**00 09 18.8**	**+0.2**
	0.4nm,0.4s,baz=110,slow=7.5,SNR=7.0						
	0.4nm,0.4s						
QSPA	**South Pole Qui**	**60.53**	**180**	P	**P**	**00 11 29.0**	**0.0**
	0.6nm,0.7s,baz=8.8,slow=1.2,SNR=1.6						
	0.6nm,0.7s						
KURBB	**Kurchatov Arra**	**119.62**	**314**	PKP	**PKPdf**	**00 20 03.2**	**-2.5**
	0.2nm,0.3s,baz=113,slow=2.9,SNR=2.6						
BVAR	**Borovoye Array**	**124.95**	**316**	PKP	**PKPdf**	**00 20 14.3**	**-1.6**
	0.4nm,0.4s,baz=132,slow=2.1,SNR=3.7						
FINES	**FINESS Array B**	**143.94**	**339**	PKP	**PKPab**	**00 20 47.4**	**-1.2**
	0.8nm,0.3s,baz=50,slow=3.5,SNR=16						
HFS	**Hagfors**	**148.18**	**348**	PKPbc	**PKPdf**	**00 20 59.0**	**+1.0**
	12nm,1.3s,baz=43,slow=2.8,SNR=4.2						
AKASG	**Malin Array Be**	**149.89**	**323**	PKPbc	**PKPbc**	**00 21 05.0**	**-1.2**
	1.0nm,0.6s,baz=47,slow=3.4,SNR=5.4						
MMAI	**Mount Meron Ar**	**150.11**	**286**	PKPbc	**PKPbc**	**00 21 07.7**	**+0.2**
	1.1nm,0.5s,baz=102,slow=6.2,SNR=6.6						
BRTR	**Keskin Array B**	**151.11**	**299**	PKPbc	**PKPbc**	**00 21 08.2**	**-1.4**
	0.1nm,0.3s,baz=138,slow=5.4,SNR=4.1						

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*IDC **31** 00:16:39.2±1.0, 14°.88S×173°.65W, h0km, mb3.5/5, mbtmp3.6/6, ML4.5/1, Error ellipse: s-maj=47.9km s-min=21.8km az=146.0*

ISC 31 00:16:43.6±0.9,14°.9S±0°.3×173°.5W±0°.2,h30km,n15, σ1ᵍ28/10,mb3.4/5,Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.92**	**60**	Pn	**Pn**	**00 17 14.5**	**+0.2**
	180nm,0.3s,baz=233,slow=10,SNR=97						
AFI				Sn	**Sn**	**00 17 35.8**	**-1.6**
	125nm,0.3s,baz=243,slow=18,SNR=9.2						
	426nm,0.3s						
H11S2	**WAKE ISLAND Hy**	**38.46**	**329**	T	T	01 04 24.1	
	baz=146,slow=76						
H11S3	**WAKE ISLAND Hy**	**38.48**	**329**	T	T	01 04 27.7	
	baz=146,slow=76						
H11S1	**WAKE ISLAND Hy**	**38.48**	**329**	T	T	01 04 31.0	
	baz=146,slow=76						
H11N3	**WAKE ISLAND Hy**	**39.41**	**330**	T	T	01 06 06.0	
	baz=147,slow=74						
H11N1	**WAKE ISLAND Hy**	**39.41**	**330**	T	T	01 06 15.6	
	baz=147						
H11N2	**WAKE ISLAND Hy**	**39.42**	**330**	T	T	01 06 28.7	
	baz=147,slow=74						
WRA	**Warramunga Arr**	**49.88**	**256**	P	**P**	**00 25 33.4**	**-1.3**
	0.1nm,0.4s,baz=94,slow=6.7,SNR=5.2						
	0.1nm,0.4s						
ASAR	**Alice Springs**	**50.19**	**251**	P	**P**	**00 25 35.3**	**-1.7**
	0.9nm,0.6s,baz=86,slow=8.3,SNR=11						
	0.9nm,0.6s						
VNDA	**Vanda**	**63.89**	**186**	P	**P**	**00 27 13.4**	**+0.3**
	0.4nm,0.6s,baz=16,slow=7.4,SNR=2.2						
	0.4nm,0.6s						
PDAR	**Pinedale Array**	**81.93**	**42**	P	**P**	**00 29 01.1**	**+0.3**
	0.2nm,0.6s,baz=269,slow=6.5,SNR=2.8						
	0.2nm,0.6s						
ILAR	**Eielson Array**	**81.94**	**11**	P	**P**	**00 29 00.3**	**+0.3**
	0.2nm,0.6s,baz=224,slow=6.4,SNR=4.7						
	0.2nm,0.6s						
GERES	**GERESS Array B**	**145.60**	**352**	PKPbc	**PKPbc**	**00 36 20.0**	**+0.6**
	0.1nm,0.3s,baz=28,slow=6.0,SNR=3.7						
BRTR	**Keskin Array B**	**145.69**	**321**	PKPbc	**PKPdf**	**00 36 19.9**	**+0.3**
	0.3nm,0.6s,baz=45,slow=3.7,SNR=4.6						
ESDC	**Sonseca Array**	**153.64**	**18**	PKPbc	**PKiKP**	**00 36 41.8**	**+1.9**
	0.4nm,0.4s,baz=269,slow=3.9,SNR=1.9						

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*GUC **31** 00:33:04.0±0.8, 17°.87S×69°.52W, h142km±4km, ML3.4*
*IDC **31** 00:33:07.1±4.7, 17°.44S×69°.07W, h171km±26km, mb3.3/5, mbtmp3.9/6, Error ellipse: s-maj=76.7km s-min=19.8km az=20.0*

ISC 31 00:33:02.3±0.8,17°.84S±0°.05×69°.37W±0°.08,h144km±7km, n20,σ1ᵍ51/28,mb3.4/3,5C-1D,Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB18	**Visviri**	**0.27**	**337**	⇓*i*P	**Pn**	**00 33 24.1**	**+1.3**
PB18				*i* S	**Sn**	**00 33 40.3**	**+2.0**
PB18				IAML		00 33 42.2	
	comp=E,429nm,0.7s						
PB16	**IPOC Station P**	**0.51**	**195**	⇑*i*P	**Pn**	**00 33 24.8**	**+1.0**
PB16				*e*S	**Sn**	**00 33 41.1**	**+1.0**
PB16				IAML		00 33 42.6	
	comp=N,339nm,0.5s						
AP01	**Chacalluta**	**1.06**	**240**	⇑*i*P	**Pn**	**00 33 26.5**	**-0.6**
AP01				*i* S	**Sn**	**00 33 44.4**	**-1.5**
AP01				IAML		00 33 45.7	
	comp=N,3μm,0.4s						
PB12	**IPOC Station P**	**1.19**	**230**	⇑*i*P	**Pn**	**00 33 27.6**	**-0.8**
PB12				*i* S	**Sn**	**00 33 46.4**	**-1.9**
PB12				IAML		00 33 47.0	
	comp=E,2μm,0.2s						
PX02	**IPOC Station P**	**1.36**	**215**	*e*P	**Pn**	**00 33 28.8**	**-1.4**
GO01	**Chusmiza**	**1.82**	**175**	*e*P	**Pn**	**00 33 37.2**	**+1.6**
GO01				*e*S	**Sn**	**00 34 02.4**	**+1.4**
GO01				IAML		00 34 13.2	
	comp=E,359nm,0.1s						
PSGCX	**Pisagua**	**1.89**	**202**	⇑*i*P	**Pn**	**00 33 35.5**	**-0.3**
PSGCX				*i* S	**Sn**	**00 34 00.0**	**-1.6**
PB11	**IPOC Station P**	**1.93**	**188**	⇑*i*P	**Pn**	**00 33 36.8**	**+0.4**
PB11				*e*S	**Sn**	**00 34 02.1**	**-0.5**
PB11				IAML		00 34 04.3	
	comp=E,359nm,0.3s						
LPAZ	**La Paz**	**1.95**	**38**	P	**Pn**	**00 33 38.5**	**+1.4**
	comp=E,86nm,0.3s,baz=215,slow=6.9,SNR=626						
LPAZ				S	**Sn**	**00 34 03.0**	**-0.8**
	comp=E,18nm,0.4s,baz=225,slow=11,SNR=7.7						
PB08	**IPOC Station P**	**2.29**	**175**	*e*P	**Pn**	**00 33 42.6**	**+1.6**
PB08				*e*S	**Sn**	**00 34 12.3**	**+1.4**
PB08				IAML		00 34 15.7	
	comp=E,108nm,0.3s						
TA02	**Huaiquique**	**2.52**	**196**	*e*P	**Pn**	**00 33 43.0**	**-0.5**
TA02				*i* S	**Sn**	**00 34 12.5**	**-2.6**
TA02				IAML		00 34 14.9	
	comp=N,530nm,0.1s						
SIV	**San Ignacio**	**8.15**	**78**	P	**Pn**	**00 34 56.4**	**-1.5**
	comp=N,5.2nm,0.4s,baz=259,slow=10,SNR=31						
SIV				S	**Sn**	**00 36 25.0**	**-3.7**
	comp=N,4.1nm,0.7s,baz=289,slow=18,SNR=10						
H03N1	**Juan Fernandez**	**17.74**	**207**	T	T	00 54 49.8	
	baz=28,slow=73,SNR=4.9						
H03N2	**Juan Fernandez**	**17.75**	**207**	T	T	00 54 26.3	
	baz=28,slow=73,SNR=4.9						
H03N3	**Juan Fernandez**	**17.76**	**207**	T	T	00 54 48.6	
	baz=28,slow=73,SNR=5.4						
BDFB	**Brasilia**	**20.57**	**87**	P	**P**	**00 37 30.4**	**+0.4**
	comp=N,1.6nm,0.4s,baz=267,slow=10,SNR=4.5						
	comp=N,1.6nm,0.4s						
TXAR	**Lajitas Array 57.41 324**			P	**P**	**00 42 36.4**	**+0.3**
	comp=N,0.1nm,0.4s,baz=143,slow=7.0,SNR=2.3						
	comp=N,0.1nm,0.4s						
DBIC	**Dimbokro 68.16 75**			P	**P**	**00 43 47.0**	**-0.5**
	comp=N,3.5nm,0.8s,baz=266,slow=7.9,SNR=3.3						
	comp=N,3.5nm,0.8s						
TORD	**Torodi Ar. Bea 76.57 71**			P	**P**	**00 44 37.1**	**-0.2**
	comp=N,0.7nm,0.3s,baz=253,slow=5.7,SNR=29						
	comp=N,0.7nm,0.3s						
YKA	**Yellowknife Ar 87.61 341**			P	**P**	**00 45 34.2**	**+0.4**
	comp=N,0.2nm,0.5s,baz=132,slow=4.3,SNR=6.7						
	comp=N,0.2nm,0.5s						

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*SDD **31** 00:41:03.3±2.1, 19°.72N×70°.57W, h18km±21km, MD3.1, ML2.1, MW2.8, Presumed earthquake*
*OSPL **31** 00:41:04.9±1.6, 19°.57N×70°.47W, h0km±18km, ML2.5, Presumed earthquake*

ISC 31 00:41:03.6±1.1,19°.63N±0°.04×70°.53W±0°.03,h26km±9km, n19,σ1ᵍ14/30,21C-1D,Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SC01	**Santiago de lo**	**0.28**	**224**	⇑*e*Pg	**Pb**	**00 41 09.8**	**-0.7**
SC01				⇑*e*Sg	**Sb**	**00 41 15.5**	**+0.4**
SC01				IAML		00 41 19.4	
	comp=N,88nm,0.2s						
SC01	**Santiago de lo**	**0.28**	**224**	*i* P	**Pb**	**00 41 10.1**	**-0.4**
SFDR	**San Fco. de Ma**	**0.43**	**142**	⇑*e*Pg	**Pb**	**00 41 12.6**	**-0.2**
SFDR				⇑*e*Sg	**Sn**	**00 41 20.9**	**-0.3**
SFDR				IAML		00 41 24.5	
	comp=N,244nm,0.1s						
LOPP1	**Punta Rusia, P**	**0.67**	**290**	*i* P	**Pn**	**00 41 18.1**	**+0.6**
LOPP1				*e*S	**Sn**	**00 41 28.6**	**+1.4**
LOPP1				IAML		00 41 33.7	
	comp=Z,70nm,0.3s						
NADR	**Nagua**	**0.69**	**113**	⇑*e*Pg	**Pn**	**00 41 16.6**	**-1.1**
NADR				⇑*e*Sg	**Sn**	**00 41 27.2**	**-0.3**
NADR				IAML		00 41 33.3	
	comp=N,162nm,0.7s						
ABDR	**Alto Bandera**	**0.82**	**187**	⇑*e*Pg	**Pb**	**00 41 19.0**	**-0.5**
ABDR				⇑*e*Sg	**Sn**	**00 41 30.6**	**-0.6**
ABDR				IAML		00 41 38.1	
	comp=N,0.3nm,1.1s						
SDDR	**Presa de Saban**	**0.96**	**228**	⇑*e*Pg	**Pn**	**00 41 20.9**	**-0.7**
SDDR				⇑*e*Sg	**Sb**	**00 41 32.2**	**-1.9**
SDDR				IAML		00 41 36.7	
	comp=N,16nm,1.4s						
SDDR	**Presa de Saban**	**0.96**	**228**	*i* P	**Pb**	**00 41 21.1**	**-0.7**
SDDR				IAML		00 41 37.5	
	comp=Z,252nm,0.1s						
MCDR	**Montecristi**	**1.10**	**284**	⇑*e*Pg	**Pb**	**00 41 23.1**	**-0.9**
MCDR				⇑*e*		00 41 27.0	
MCDR				IAML		00 41 43.6	
	comp=N,88nm,0.2s						
BANI	**BANI**	**1.24**	**173**	⇑*e*Pg	**Pb**	**00 41 25.8**	**-0.6**
BANI				⇑*e*Sg	**Sb**	**00 41 44.4**	**+2.3**
BANI				IAML		00 41 44.7	
	comp=N,152nm,0.3s						
SMDR	**Samana, DR**	**1.31**	**105**	⇑*e*Pg	**Pb**	**00 41 26.9**	**-0.7**
SMDR				⇑*e*Sg	**Sb**	**00 41 45.2**	**+1.4**
SMDR				IAML		00 42 04.6	
	comp=N,56nm,0.7s						
LONE3	**El Aguacate, B**	**1.35**	**221**	*i* P	**Pb**	**00 41 28.1**	**-0.2**
LONE3				IAML		00 41 49.9	
	comp=Z,13nm,2.2s						
HATOM	**Hato Mayor del**	**1.37**	**128**	⇑*e*Pg	**Pb**	**00 41 27.6**	**-1.0**
HATOM				⇓*e*Sg	**Sb**	**00 41 47.6**	**+1.9**
HATOM				IAML		00 41 53.1	
	comp=N,15nm,1.3s						
LODU1	**El Espartillar**	**1.56**	**215**	*i* P	**Pb**	**00 41 32.4**	**+0.7**
LODU1				IAML		00 41 58.1	
	comp=Z,56nm,2.5s						
PODR	**Polo**	**1.62**	**206**	⇑*e*Pg	**Pb**	**00 41 33.0**	**0.0**
PODR				⇑*e*Sg	**Sb**	**00 41 55.1**	**+2.0**
PODR				IAML		00 42 11.2	
	comp=N,71nm,3.9s						
PODR	**Polo**	**1.62**	**206**	*i* P	**Pb**	**00 41 32.7**	**-0.3**
PODR				IAML		00 42 01.0	
	comp=Z,101nm,0.3s						
GRTK	**Grand Turk**	**1.96**	**343**	*e*S	**Sb**	**00 42 03.0**	**+0.4**
GRTK				IAML		00 42 06.1	
	comp=Z,35nm,2.5s						
HIDR	**Higuey Centro**	**2.00**	**121**	⇑*e*Pg	**Pb**	**00 41 38.5**	**-0.8**
HIDR				⇑*e*Sg	**Sb**	**00 42 05.4**	**+1.7**
HIDR				IAML		00 42 08.8	
	comp=N,55nm,0.2s						
LOBH	**Bahia de las A**	**2.05**	**211**	*i* P	**Pb**	**00 41 38.8**	**-1.4**
LOBH				IAML		00 42 15.8	
	comp=Z,69nm,1.8s						

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*IDC **31** 00:52:51.3±1.2,23°.30S×174°.81W, h0km, mb4.0/7, mbtmp4.0/8, ML5.7/1, Error ellipse: s-maj=58.3km s-min=22.6km az=156.0*

ISC 31 00:52:53.7±0.8,22°.8S±0°.3×175°.1W±0°.2,h10km,n13, σ0ᵍ49/13,mb4.0/8,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**8.22**	**307**	Pn	**Pn**	**00 54 59.9**	**+6.7**
	3.0nm,0.3s,baz=137,slow=15,SNR=6.2						
	5.7nm,0.3s						
STKA	**Stephens Creek**	**39.32**	**247**	P	**P**	**01 00 22.9**	**-0.2**
	2.3nm,0.7s,baz=112,slow=16,SNR=4.4						
	2.3nm,0.7s						
ASAR	**Alice Springs**	**46.69**	**258**	P	**P**	**01 01 23.1**	**+0.1**
	4.0nm,0.9s,baz=94,slow=8.1,SNR=34						
	4.0nm,0.9s						
WRA	**Warramunga Arr**	**47.02**	**264**	P	**P**	**01 01 24.9**	**-0.7**
	1.6nm,0.6s,baz=103,slow=8.4,SNR=29						
WRA				PcP	**PcP**	**01 02 58.4**	**+0.5**
	0.2nm,0.7s,baz=100,slow=3.8,SNR=1.3						
	1.6nm,0.6s						
QSPA	**South Pole Qui**	**67.24**	**180**	P	**P**	**01 03 48.1**	**-0.1**
	1.3nm,0.8s,baz=341,slow=3.4,SNR=2.5						
NVAR	**Mina Array Bea**	**80.90**	**42**	P	**P**	**01 05 08.5**	**+0.1**
	0.8nm,1.0s,baz=225,slow=3.9,SNR=4.1						
	0.8nm,1.0s						
TXAR	**Lajitas Array**	**86.05**	**56**	P	**P**	**01 05 34.8**	**-0.3**
	0.3nm,0.8s,baz=201,slow=6.7,SNR=3.7						
	0.3nm,0.8s						
ILAR	**Eielson Array**	**90.01**	**12**	P	**P**	**01 05 52.3**	**-0.7**
	0.4nm,0.9s,baz=186,slow=7.3,SNR=2.6						
	0.4nm,0.9s						
CMAR	**Chiang Mai Arr**	**93.45**	**288**	P	**P**	**01 06 10.4**	**+0.4**
	0.8nm,0.4s,baz=129,slow=2.9,SNR=6.1						
	0.8nm,0.4s						
AKASG	**Malin Array Be**	**146.37**	**332**	PKPbc	**PKPbc**	**01 12 34.5**	**-0.1**
	1.1nm,0.6s,baz=42,slow=4.1,SNR=7.9						
EKA	**Eskdalemuir Ar**	**147.00**	**8**	PKPbc	**PKPbc**	**01 12 37.1**	**+0.8**
	1.8nm,0.9s,baz=351,slow=3.6,SNR=1.8						
BRTR	**Keskin Array B**	**150.43**	**311**	PKPbc	**PKPbc**	**01 12 46.3**	**+0.4**
	0.7nm,0.7s,baz=120,slow=4.1,SNR=5.7						
MMAI	**Mount Meron Ar**	**151.33**	**297**	PKPbc	**PKiKP**	**01 12 48.9**	**+0.3**
	1.4nm,0.7s,baz=50,slow=4.5,SNR=2.0						

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*WEL **31** 01:13:52.9±0.4, 39°.5s3°×17°.4E±°, h5km, M3.3/62, ML3.3/35, MLv3.3/62, Error ellipse: s-maj=4.2km s-min=3.5km az=139.5, confirmed*
*NOU **31** 01:13:53.2, 39°.18S×173°.68E, h0km, MLv3.5/16, Off W. Coast of N. Island, N.Z.*

ISC 31 01:13:53.2±1.0,39°.21S±0°.03×173°.73E±0°.03,h13km±6km, n120,σ1ᵍ05/126,Off west coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NBEZ	**Newall Road No**	**0.12**	**119**	P	**Pg**	**01 13 56.5**	**0.0**
NBEZ				S	**Sg**	**01 13 58.7**	**-0.2**
NMEZ	**Namu Road**	**0.23**	**150**	P	**Pg**	**01 13 58.2**	**-0.1**
NMEZ				S	**Sg**	**01 14 01.8**	**+0.1**
KHEZ	**Kahui Hut**	**0.24**	**111**	P	**Pg**	**01 13 58.4**	**0.0**
KHEZ	**Kahui Hut**	**0.24**	**111**	S	**Sg**	**01 14 02.0**	**+0.1**
KHEZ	**Kahui Hut**	**0.24**	**111**	P	**Pg**	**01 13 58.4**	**0.0**
KHEZ				S	**Sg**	**01 14 01.9**	**+0.1**
PREZ	**Palmer Road**	**0.36**	**112**	P	**Pg**	**01 14 00.5**	**0.0**
PREZ				S	**Sg**	**01 14 05.3**	**-0.1**
DREZ	**Durham Road**	**0.37**	**87**	P	**Pg**	**01 14 01.0**	**+0.4**
DREZ				S	**Sb**	**01 14 06.6**	**-0.7**
MHEZ	**Mangahewa**	**0.48**	**74**	P	**Pb**	**01 14 03.2**	**-0.3**
LREZ	**Lake Rotokare**	**0.58**	**116**	P	**Pg**	**01 14 04.5**	**0.0**
LREZ				S	**Sg**	**01 14 12.8**	**+0.5**
VRZ	**Vera Road**	**0.81**	**84**	P	**Pg**	**01 14 08.3**	**-0.5**
WAZ	**Wanganui**	**1.12**	**120**	P	**Pb**	**01 14 13.5**	**-0.8**
HIZ	**Hauiti**	**1.12**	**52**	P	**Pb**	**01 14 14.0**	**-0.4**
HIZ	**Hauiti**	**1.12**	**52**	S	**Sn**	**01 14 29.9**	**0.0**
HIZ	**Hauiti**	**1.12**	**52**	P	**Pn**	**01 14 13.9**	**-0.6**
PKVZ	**Pokaka**	**1.26**	**94**	P	**Pn**	**01 14 15.7**	**-0.9**
TWVZ	**Taurewa**	**1.34**	**85**	P	**Pn**	**01 14 16.9**	**-0.8**
MTVZ	**Mangateitei**	**1.36**	**98**	P	**Pn**	**01 14 17.6**	**-0.4**
COVZ	**Chateau Observ**	**1.41**	**90**	P	**Pn**	**01 14 18.5**	**-0.1**
TRVZ	**Turoa**	**1.42**	**94**	P	**Pn**	**01 14 18.7**	**-0.2**
FWVZ	**Far West T-bar**	**1.42**	**92**	P	**Pn**	**01 14 18.8**	**-0.1**
WHVZ	**Whangaehu Hut**	**1.45**	**94**	P	**Pn**	**01 14 18.5**	**-0.8**
WTVZ	**West Tongariro**	**1.45**	**87**	P	**Pn**	**01 14 18.6**	**-0.6**
NGZ	**Ngauruhoe**	**1.46**	**89**	P	**Pn**	**01 14 18.8**	**-0.5**
WNVZ	**Wahianoa**	**1.46**	**95**	P	**Pn**	**01 14 19.2**	**-0.1**
SNVZ	**South Ngauruho**	**1.49**	**90**	P	**Pn**	**01 14 19.5**	**-0.3**
KRVZ	**Karewarewa**	**1.49**	**86**	P	**Pn**	**01 14 19.4**	**-0.4**
TUVZ	**Tukino**	**1.50**	**93**	P	**Pn**	**01 14 19.9**	**0.0**
OTVZ	**Oturere**	**1.51**	**89**	P	**Pn**	**01 14 19.9**	**-0.2**
NTVZ	**North Tongarir**	**1.52**	**86**	P	**Pn**	**01 14 19.9**	**-0.3**
TMVZ	**Te Maari**	**1.54**	**87**	P	**Pn**	**01 14 20.4**	**-0.1**
ETVZ	**East Tongariro**	**1.54**	**88**	P	**Pn**	**01 14 20.5**	**0.0**
KATZ	**Kakaramea**	**1.55**	**82**	P	**Pn**	**01 14 20.3**	**-0.3**
OHWZ	**Ohakea**	**1.58**	**130**	P	**Pb**	**01 14 22.1**	**-0.1**
MOVZ	**Moawhango**	**1.58**	**98**	P	**Pn**	**01 14 20.7**	**-0.3**
DUWZ	**D'Urville Isla**	**1.60**	**175**	P	**Pn**	**01 14 21.2**	**0.0**
RATZ	**Rangitukua**	**1.63**	**79**	P	**Pn**	**01 14 21.6**	**0.0**
WATZ	**Wairara**	**1.64**	**73**	P	**Pn**	**01 14 21.6**	**-0.2**
TLZ	**Tolley Road**	**1.67**	**59**	P	**Pn**	**01 14 21.8**	**-0.3**
RITZ	**Rihia Road**	**1.67**	**83**	P	**Pb**	**01 14 23.3**	**-0.6**
KUTZ	**Kaahu Road**	**1.79**	**67**	P	**Pn**	**01 14 24.5**	**+0.7**
WHTZ	**Whakaora**	**1.82**	**73**	P	**Pb**	**01 14 26.2**	**-0.2**
QRZ	**Quartz Range**	**1.86**	**209**	P	**Pn**	**01 14 26.0**	**-1.0**
QRZ	**Quartz Range**	**1.86**	**209**	S	**Sb**	**01 14 50.6**	**+0.4**
QRZ	**Quartz Range**	**1.86**	**209**	P	**Pn**	**01 14 23.9**	**-0.9**
KIW	**Kapiti Island**	**1.88**	**152**	P	**Pn**	**01 14 25.7**	**+0.6**
TKNZ	**Takaka Hill**	**1.92**	**198**	P	**Pn**	**01 14 25.4**	**-0.2**
TSZ	**Takapari Road**	**1.92**	**117**	P	**Pn**	**01 14 27.0**	**+1.4**
OGWZ	**Otaki Gorge**	**1.95**	**146**	P	**Pn**	**01 14 27.0**	**+1.0**
POWZ	**Post Office Ro**	**1.97**	**128**	P	**Pn**	**01 14 28.1**	**-0.7**
WPRZ	**Whakapapataran**	**2.02**	**71**	P	**Pn**	**01 14 26.8**	**-0.2**
NNZ	**Nelson**	**2.02**	**187**	P	**Pn**	**01 14 27.0**	**0.0**
TOZ	**Tahuroa Road**	**2.03**	**44**	P	**Pn**	**01 14 27.2**	**+0.2**
MRZ	**Mangatainoka R**	**2.03**	**136**	P	**Pn**	**01 14 28.6**	**+1.5**
PNHZ	**Pukenui**	**2.04**	**111**	P	**Pn**	**01 14 29.5**	**-0.5**
TCW	**Tory Channel**	**2.04**	**168**	P	**Pn**	**01 14 27.6**	**+0.4**
KRHZ	**Kereru**	**2.09**	**103**	P	**Pn**	**01 14 29.8**	**-1.2**
KWHZ	**Kaweka Forest**	**2.10**	**97**	P	**Pn**	**01 14 29.8**	**+1.6**
MRHZ	**Matea Rd**	**2.13**	**81**	P	**Pn**	**01 14 29.8**	**+1.3**
BKZ	**Black Stump Fm**	**2.15**	**90**	P	**Pn**	**01 14 30.0**	**+1.2**
BKZ	**Black Stump Fm**	**2.15**	**90**	S	**Sb**	**01 14 58.7**	**+0.1**
BKZ	**Black Stump Fm**	**2.15**	**90**	P	**Pn**	**01 14 30.0**	**+1.2**
CAW	**Cannon Point**	**2.16**	**152**	P	**Pn**	**01 14 30.3**	**+1.5**
HSRZ	**Hossack Road**	**2.16**	**66**	P	**Pb**	**01 14 32.2**	**0.0**
DVHZ	**Dannevirke**	**2.17**	**121**	P	**Pb**	**01 14 31.4**	**-1.0**
HOWZ	**Holdsworth Sta**	**2.17**	**141**	P	**Pb**	**01 14 31.3**	**-1.1**
PRWZ	**Pori Road**	**2.19**	**129**	P	**Pb**	**01 14 32.3**	**-0.3**
NGRZ	**Ngongotaha**	**2.22**	**61**	P	**Pn**	**01 14 29.8**	**0.0**
TUWZ	**Tuamarina**	**2.23**	**176**	P	**Pn**	**01 14 30.3**	**+0.6**
SNZO	**South Karori**	**2.23**	**161**	P	**Pn**	**01 14 31.2**	**+1.4**
SNZO	**South Karori**	**2.23**	**161**	S	**Sb**	**01 15 01.3**	**+0.5**
AWAZ	**Awhitu Peninsu**	**2.26**	**19**	P	**Pn**	**01 14 31.5**	**+1.3**
WPHZ	**Waipukurau**	**2.26**	**113**	P	**Pb**	**01 14 32.9**	**-1.0**
TIWZ	**Tintock**	**2.28**	**134**	P	**Pb**	**01 14 33.3**	**-1.0**
MCHZ	**McNeill Hill**	**2.31**	**97**	P	**Pb**	**01 14 35.1**	**+0.3**
BHW	**Baring Head**	**2.37**	**159**	P	**Pn**	**01 14 33.2**	**+1.5**
WTAZ	**Waiatarua**	**2.37**	**17**	P	**Pn**	**01 14 33.1**	**+1.3**
MTW	**Mount Morrison**	**2.37**	**146**	P	**Pb**	**01 14 34.1**	**-1.4**
MKAZ	**Moumakai**	**2.38**	**29**	P	**Pn**	**01 14 32.9**	**+0.9**
BFZ	**Birch Farm**	**2.43**	**128**	P	**Pn**	**01 14 34.8**	**+2.2**
BFZ	**Birch Farm**	**2.43**	**128**	S	**Sb**	**01 15 06.1**	**-0.6**
BFZ	**Birch Farm**	**2.43**	**128**	P	**Pb**	**01 14 36.0**	**-0.8**
MTHZ	**Maungataniwha**	**2.45**	**83**	P	**Pn**	**01 14 35.0**	**+2.1**
**TGRZ

BANOM				S	**Sg**	**01 57 24.6**	**+0.2**
JHRM	**Jahrom**	**1.88**	**316**	Pn	**Pg**	**01 57 06.8**	**-0.3**
MASF	**Masafi**	**2.03**	**151**	P	**Pb**	**01 57 07.7**	**-1.2**
MASF				S	**Sb**	**01 57 34.4**	**-0.4**
MSFE	**Esma-Masafi**	**2.04**	**151**	P	**Pn**	**01 57 07.0**	**+0.3**
MDH	**Madha**	**2.16**	**149**	P	**Pn**	**01 57 09.1**	**+0.8**
MDH	**Madha**	**2.16**	**149**	P	**Pn**	**01 57 09.1**	**+0.8**
QIR1	**Qir**	**2.22**	**307**	Pn	**Pb**	**01 57 11.3**	**-0.8**
NAZ	**Nazwa, Dubai**	**2.23**	**166**	P	**Pn**	**01 57 10.4**	**+1.2**
UOSS	**Minazif**	**2.43**	**155**	P	**Pn**	**01 57 12.7**	**+0.6**
UOSS	**Minazif**	**2.43**	**155**	P	**Pn**	**01 57 12.9**	**+0.9**
FAQ	**Al Faqa, Dubai**	**2.45**	**169**	P	**Pn**	**01 57 13.3**	**+1.0**
FAQ				S	**Sn**	**01 57 43.8**	**+0.9**
HATD	**Hatta, Dubai**	**2.51**	**157**	P	**Pn**	**01 57 14.1**	**+0.9**
HATD	**Hatta, Dubai**	**2.51**	**157**	P	**Pn**	**01 57 14.4**	**+1.2**
ASHO	**Ashiyiah**	**2.62**	**160**	P	**Pn**	**01 57 15.7**	**+1.0**
ASHO	**Ashiyiah** SNR=32	**2.62**	**160**	P	**Pn**	**01 57 15.7**	**+1.0**
ALNE	**Al Ain**	**3.15**	**168**	P	**Pn**	**01 57 21.8**	**-0.1**
SOHO	**SOHO**	**3.29**	**156**	P	**Pn**	**01 57 23.7**	**-0.2**
ARQ	**Araqi**	**4.03**	**160**	P	**Pn**	**01 57 34.1**	**0.0**
IMEH	**Mehriz**	**4.24**	**355**	Pn	**Pn**	**01 57 37.9**	**+0.8**
IBAF	**Bafgh**	**4.44**	**6**	Pn	**Pn**	**01 57 40.1**	**+0.3**
BSY	**Bisya**	**4.80**	**156**	P	**Pn**	**01 57 45.1**	**+0.4**
SMDO	**Samad**	**4.90**	**146**	P	**Pn**	**01 57 46.7**	**+0.7**
IRAM	**Rameshen**	**5.19**	**334**	Pn	**Pn**	**01 57 50.9**	**+0.7**
MHTO	**MHTO**	**6.69**	**156**	P	**Pn**	**01 58 10.7**	**0.0**
DOK	**Doka**	**8.54**	**186**	P	**Pn**	**01 58 34.6**	**-1.4**
SHAO	**Shalim**	**9.11**	**177**	P	**Pn**	**01 58 42.3**	**-1.4**
WHFO	**Wadi Hawf**	**9.27**	**188**	P	**Pn**	**01 58 44.8**	**-1.3**
DMTO	**DMTO**	**9.40**	**181**	P	**Pn**	**01 58 46.0**	**-1.7**

*IDC **31** 02:40:04.5±1.6,30°.40S×60°.47E, h0km, mb3.8/8, mbtmp3.8/8, MS3.4/12, Error ellipse: s-maj=57.8km s-min=27.5km az=31.0*
*NEIC **31** 02:40:06.5±1.0,30°.3S±0°.1×60°.4E±0°.2, h10km±1km, mb4.6/10, Error ellipse: s-maj=23.3km s-min=20.5km az=239.0*

ISC 31 02:40:06.2±0.7,**30°.3S**±0°.1×**60°.4E**±0°.1,**h10**km,**n33,** σ0§69/22,**mb4.2**/13,**MS3.4**/12,**Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOMA	**Nahampoana Res**	**13.05**	**291**	Pn	**Pn**	**02 43 10.6**	**-1.2**
VOI	**Vohitsoka**	**14.82**	**301**	Pn	**Pn**	**02 43 36.1**	**0.0**
KAAM	**Kaadhehdhoo**	**32.86**	**24**	P	**P**	**02 46 40.0**	**-0.4**
LSZ	**Lusaka** comp=Z,39nm,20.0s,baz=139,slow=32	**33.14**	**290**	LR	LR	02 57 48.6	
KMBO	**Kilima Mbogo** comp=Z,57nm,20.4s,baz=104,slow=32	**36.42**	**318**	LR	LR	02 59 49.2	
MAW	**Mawson** comp=Z,108nm,19.0s,baz=336,slow=33	**37.38**	**178**	LR	LR	03 00 41.8	
MBAR	**Mbarara** comp=Z,29nm,18.3s,baz=116,slow=35	**40.84**	**311**	LR	LR	03 03 42.3	
CASY	**Casey**	**46.89**	**155**	P	**P**	**02 48 36.0**	**-0.4**
PSA00	**Pilbara Seismi**	**53.61**	**96**	P	**P**	**02 49 27.2**	**-0.8**
PSA00	comp=Z,15nm,1.3s			IAmb	IAmb	02 50 07.4	
FORT	**Forrest**	**57.38**	**109**	P	**P**	**02 49 54.4**	**-0.6**
FORT	comp=Z,5.7nm,1.1s			IAmb	IAmb	02 50 26.1	
QSPA	**South Pole Qui**	**59.87**	**180**	P	**P**	**02 50 12.1**	**+0.1**
QSPA	comp=Z,4.0nm,1.2s			IAmb	IAmb	02 50 30.3	
CM31	**Chiang Mai Arr**	**61.01**	**42**	P	**P**	**02 50 19.8**	**-0.4**
CM31	comp=Z,6.8nm,0.3s			IAmb	IAmb	02 51 04.2	
CMAR	**Chiang Mai Arr** comp=Z,1.4nm,0.3s,baz=228,slow=8.4,SNR=4.8	**61.01**	**42**	P	**P**	**02 50 21.0**	**+0.9**
CMAR				LR	LR	03 13 57.5	
EIL	**Elat** comp=Z,42nm,21.0s,baz=230,slow=32	**64.38**	**335**	LR	LR	03 14 36.2	
ASAR	**Alice Springs** comp=Z,0.7nm,0.8s,baz=237,slow=6.8,SNR=6.6 comp=Z,0.7nm,0.8s	**64.78**	**104**	P	**P**	**02 50 44.5**	**-1.0**
AS31	**Alice Springs**	**64.78**	**104**	P	**P**	**02 50 44.9**	**-0.5**
ASF	**Jabal al Asfar** comp=Z,20nm,20.5s,baz=205,slow=33	**66.01**	**338**	LR	LR	03 16 51.3	
WRA	**Warramunga Arr** comp=Z,0.8nm,0.8s,baz=241,slow=5.3,SNR=5.3 comp=Z,0.8nm,0.8s	**66.68**	**100**	P	**P**	**02 50 57.9**	**+0.2**
WRA	**Warramunga Arr**	**66.68**	**100**	P	**P**	**02 50 57.5**	**-0.2**
WB0	**Warramunga Arr**	**66.80**	**100**	P	**P**	**02 50 58.3**	**-0.2**
WB0	comp=Z,7.8nm,1.4s			IAmb	IAmb	02 50 58.7	
TORD	**Torodi Ar. Bea** comp=Z,0.3nm,0.7s,baz=147,slow=3.4,SNR=2.3 comp=Z,0.3nm,0.7s	**71.11**	**298**	P	**P**	**02 51 25.9**	**+0.7**
GNI	**Garni** comp=Z,36nm,19.6s,baz=208,slow=35	**71.58**	**347**	LR	LR	03 21 24.7	
AAK	**Ala-Archa** comp=Z,16nm,20.8s,baz=191,slow=33	**73.71**	**11**	LR	LR	03 21 11.6	
BRTR	**Keskin Array B** comp=Z,0.6nm,0.8s,baz=168,slow=6.3,SNR=3.9 comp=Z,0.6nm,0.8s	**73.98**	**339**	P	**P**	**02 51 42.2**	**+0.3**
KBZ	**Khabaz** comp=Z,24nm,19.2s,baz=138,slow=35	**75.39**	**347**	LR	LR	03 24 03.9	
MKAR	**Makanchi Array** comp=Z,1.1nm,0.9s,baz=180,slow=5.8,SNR=3.6 comp=Z,1.1nm,0.9s	**79.22**	**15**	P	**P**	**02 52 12.1**	**+0.8**
KEST	**Kesra** comp=Z,36nm,18.1s,baz=262,slow=37	**81.36**	**320**	LR	LR	03 30 31.2	
KURBB	**Kurchatov Arra** comp=Z,0.5nm,0.9s,baz=205,slow=5.5,SNR=3.5 comp=Z,0.5nm,0.9s	**82.13**	**12**	P	**P**	**02 52 26.6**	**-0.1**
KURK	**Kurchatov**	**82.24**	**12**	P	**P**	**02 52 27.4**	**+0.2**
KURK	comp=Z,2.3nm,1.1s			IAmb	IAmb	02 52 30.5	
ZALV	**Zalesovo Beam** comp=Z,0.6nm,0.6s,baz=235,slow=5.2,SNR=3.6 comp=Z,0.6nm,0.6s	**86.50**	**14**	P	**P**	**02 52 48.7**	**-0.1**
MSWZ	**Moikau Station**	**86.69**	**137**	P	**P**	**02 52 52.1**	**+1.7**
TLY	**Talaya** comp=Z,18nm,21.6s,baz=273,slow=34	**90.01**	**25**	LR	LR	03 30 37.1	
YKA	**Yellowknife Ar** comp=Z,0.7nm,0.8s,baz=349,slow=3.3,SNR=14	**147.62**	**356**	PKPbc	**PKPbc**	**02 59 49.9**	**-0.2**

DJA 31 02:42:21.4±0.6,**3°N**±3°×**12°6E**±°,**h126**km±6km,**M3.9**/12, **mB4.8**/1,**mb4.4**/2,**MLv3.7**/12,**Mw(mB)4.1**/1,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.88**	**340**	P	Pn	02 42 44.0	+1.1
SGSI				S	Sn	02 43 00.4	+1.2
MNI	**Manado**	**1.71**	**215**	P	Pn	02 42 52.6	+0.9
TNTI	**Ternate**	**2.57**	**143**	P	Pn	02 43 02.4	0.0
GTOI	**Gorontalo**	**3.58**	**232**	P	Pn	02 43 16.3	+0.9
SANI	**Sanana**	**4.87**	**178**	P	Pn	02 43 30.8	-1.9
NLAI	**Namlea** 1µm37nm,1.0s	**6.18**	**168**	P	Pn	02 43 49.4	-1.0

DMN 31 02:46:44.4±0.3,**28°.75N**×**87°.48E**,**h2**km,**Ml4.0**/9,**Error ellipse: s-maj=4.3km s-min=2.6km az=31.0**,**Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIRN	**Jiri** baz=227,slow=0.0	**1.57**	**227**	Pg	Pn	02 47 13.5	-0.1
JIRN	449nm,0.3s,baz=227,slow=0.0			Sg	Sn	02 47 34.1	-0.6
JIRN	**Jiri** baz=224,slow=0.0	**1.57**	**227**	Pg	Pn	02 47 13.5	-0.1
JIRN	449nm,0.3s,baz=224,slow=0.0			Sg	Sn	02 47 33.7	-1.0
GUN	**Gumba** baz=240,slow=0.0	**1.64**	**240**	Pg	Pb	02 47 15.2	-0.3
GUN	439nm,0.3s,baz=240,slow=0.0			Sg	Sg	02 47 37.2	+0.2
GUN	**Gumba** baz=238,slow=0.0	**1.64**	**240**	Pg	Pb	02 47 15.1	-0.4
GUN	349nm,0.3s,baz=238,slow=0.0			Sg	Sn	02 47 35.7	-0.6
ODAN	**Odare** baz=182,slow=0.0	**1.88**	**182**	Pg	Pb	02 47 19.9	+0.3
ODAN	baz=182,slow=0.0			Sg	Sb	02 47 43.7	+0.1
ODAN	**Odare** baz=180,slow=0.0	**1.88**	**182**	Pg	Pg	02 47 21.6	+1.2
ODAN				Sg	Sg	02 47 46.5	+1.7
	201nm,0.5s,baz=180,slow=0.0						
RAMN	**Ramite** baz=204,slow=0.0	**1.95**	**204**	Pg	Pb	02 47 20.9	+0.1
RAMN	154nm,0.4s,baz=204,slow=0.0			Sg	Sb	02 47 45.7	0.0
RAMN	**Ramite** baz=202,slow=0.0	**1.95**	**204**	Pg	Pg	02 47 21.6	-0.2
RAMN	154nm,0.4s,baz=202,slow=0.0			Sg	Sb	02 47 46.1	+0.4
KKN	**Kakani** baz=245,slow=0.0	**2.16**	**244**	Pg	Pb	02 47 24.6	+0.2
KKN	224nm,0.3s,baz=245,slow=0.0			Sg	Sg	02 47 53.2	-0.6
KKN	**Kakani** baz=243,slow=0.0	**2.16**	**244**	Pg	Pb	02 47 24.5	+0.1
KKN	194nm,0.2s,baz=243,slow=0.0			Sg	Sg	02 47 52.8	-1.0
PKI	**Pulchoki** baz=238,slow=0.0	**2.17**	**238**	Pg	Pb	02 47 25.2	+0.6
PKI	221nm,0.4s,baz=238,slow=0.0			Sg	Sg	02 47 53.4	-0.7
PKI	**Pulchoki** baz=236,slow=0.0	**2.17**	**238**	Pg	Pg	02 47 25.3	-0.7
PKI	202nm,0.4s,baz=236,slow=0.0			Sg	Sg	02 47 53.6	-0.5
PKIN	**Phulchoki** baz=238,slow=0.0	**2.17**	**238**	Pg	Pb	02 47 25.2	+0.5
PKIN	459nm,0.4s,baz=238,slow=0.0			Sg	Sg	02 47 53.4	-0.9
PKIN	**Phulchoki** baz=236,slow=0.0	**2.17**	**238**	Pg	Pg	02 47 25.1	+0.4
PKIN	459nm,0.4s,baz=236,slow=0.0			Sg	Sg	02 47 53.4	-0.9
DMN	**Daman** baz=242,slow=0.0	**2.38**	**242**	Pg	Pb	02 47 28.7	+0.6
DMN	218nm,0.6s,baz=242,slow=0.0			Sg	Sb	02 47 58.7	+0.6
DMN	**Daman** baz=241,slow=0.0	**2.38**	**242**	Pg	Pb	02 47 28.6	+0.5
DMN	130nm,0.4s,baz=241,slow=0.0			Sg	Sg	02 47 59.7	-1.2
GKN	**Gorkha** baz=254,slow=0.0	**2.61**	**254**	Pg	Pg	02 47 33.5	-1.0
GKN	162nm,0.3s,baz=254,slow=0.0			Sg	Sg	02 48 07.5	-0.8
GKN	**Gorkha** baz=253,slow=0.0	**2.61**	**254**	Pg	Pg	02 47 33.5	-1.0
GKN	162nm,0.3s,baz=253,slow=0.0			Sg	Sg	02 48 06.7	-1.6
DANN	**Dangsing** baz=264,slow=0.0	**3.29**	**264**	Pn	Pn	02 47 36.7	-0.6
KOLN	**Koldanda** baz=255,slow=0.0	**3.56**	**255**	Pg	Pb	02 47 50.2	+2.0
KOLN	56nm,0.4s,baz=255,slow=0.0			Sg	Sg	02 48 35.8	-2.9

*SOME **31** 02:51:57.1,39°.87N×77°.22E, h10km*
*KRNET **31** 02:51:58.9±0.1,39°.99N×77°.29E, h15km, mb3.8*
*NNC **31** 02:52:01.2±1.5,40°.06N×77°.24E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=10.7km s-min=8.1km az=158.0*
*IDC **31** 02:52:04.7±4.0,40°.07N×78°.23E, h0km, mb3.0/1, mbtmp3.2/5, ML2.6/4, Error ellipse: s-maj=44.8km s-min=36.2km az=49.0*

ISC 31 02:52:00.3±2.7,**40°.04N**±0°.10×**77°.32E**±0°.05,**h1**km±15km, **n43,**σ1§84/52,**13C-7D**,**Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNKS	**Jany-Kuch**	**1.64**	**309**	⇓*e*P	**Pn**	**02 52 29.6**	**-1.0**
JNKS				⇑*i*S	**Sn**	**02 52 52.1**	**-0.4**
NRN	**Naryn**	**1.72**	**325**	⇓*i*P	**Pn**	**02 52 31.5**	**-0.2**
NRN				⇓*i*S	**Sg**	**02 52 55.4**	**-0.1**
TARG	**Taragay, Kyrgy**	**1.73**	**12**	⇓*i*P	**Pn**	**02 52 32.1**	**+0.2**
TARG				⇑*i*S	**Sg**	**02 52 56.2**	**+0.3**
KDJ	**Kajisay**	**2.09**	**357**	⇑*e*P	**Pn**	**02 52 37.9**	**+1.2**
KDJ				⇑*i*S	**Sb**	**02 53 06.3**	**+0.5**
ULHL	**Ulahol** SNR=35	**2.35**	**340**	P	**Pb**	**02 52 43.1**	**-0.5**
ULHL	**Ulahol**	**2.35**	**340**	⇑*e*P	**Pn**	**02 52 41.4**	**+1.1**
ULHL				⇑*i*S	**Sb**	**02 53 12.4**	**-0.9**
BOOM	**Boomskoye usch**	**2.66**	**337**	⇑*e*P	**Pn**	**02 52 45.5**	**+1.0**
BOOM				⇑*i*S	**Sb**	**02 53 19.7**	**-2.4**
TNSS	**Tian-Shan** 12nm,0.7s	**3.01**	**355**	Pg	**Pb**	**02 52 55.9**	**+1.0**
TNSS	27nm,0.8s			Lg	Lg	02 53 36.8	
IZV	**Izvestkoviy** 24nm,0.6s	**3.04**	**350**	Pg	**Pb**	**02 52 56.7**	**+1.3**
IZV	75nm,0.5s			Lg	Lg	02 53 38.3	
UCH	**Uchtor** SNR=13	**3.05**	**317**	P	**Pn**	**02 52 52.6**	**+2.6**
MDOK	**Medeo** 22nm,1.0s	**3.13**	**356**	Pg	**Pb**	**02 52 58.1**	**+1.2**
MDOK	123nm,0.7s			Lg	Lg	02 53 40.5	
TKM2	**Tokmak 2** SNR=15	**3.16**	**336**	P	**Pn**	**02 52 54.2**	**+2.9**
KBK	**Karagaybulak** SNR=21	**3.17**	**326**	P	**Pb**	**02 52 58.6**	**+1.1**
KST	**Kastek** 8.0nm,0.4s	**3.17**	**342**	Pg	**Pb**	**02 52 58.6**	**+1.1**
KST	62nm,0.6s			Lg	Lg	02 53 41.7	
KNDC	**Almaty** 34nm,0.6s	**3.19**	**355**	⇑Pg	**Pb**	**02 52 59.8**	**+2.0**
KNDC	368nm,0.7s			⇑Lg	Lg	02 53 43.9	
KOTS	**Kotyrbulak** 25nm,0.3s	**3.20**	**357**	Pg	**Pb**	**02 52 59.8**	**+1.8**
KOTS	319nm,0.8s			Lg	Lg	02 53 43.6	
KOTS	**Kotyrbulak** 299nm,0.2s	**3.20**	**357**	*e*P	**Pb**	**02 52 59.8**	**+1.8**
KOTS	4µm,0.5s			*e*S	**Sg**	**02 53 44.9**	**+1.9**
UZB	**Uzynbulak** 7.1nm,0.3s	**3.36**	**22**	Pg	**Pb**	**02 53 02.0**	**+1.3**
UZB	29nm,0.7s			Lg	Lg	02 53 47.6	
AAK	**Ala-Archa** SNR=16	**3.36**	**322**	P	**Pn**	**02 52 56.6**	**+2.5**
AAK	**Ala-Archa** 6.3nm,0.5s	**3.36**	**322**	⇑Pn	**Pn**	**02 52 56.0**	**+1.9**
AAK	51nm,0.8s			⇑Lg	Lg	02 53 46.8	
DGS	**Degeres** 17nm,0.6s	**3.41**	**341**	Pg	**Pb**	**02 53 03.1**	**+1.5**
DGS	38nm,0.6s			Lg	Lg	02 53 49.1	
DGS	**Degeres** 237nm,0.3s	**3.41**	**341**	*e*P	**Pb**	**02 53 02.7**	**+1.2**
DGS	453nm,0.5s			*e*S	**Sg**	**02 53 49.8**	**+0.1**
KURS	**Kuram** 19nm,0.7s	**3.50**	**10**	Pg	**Pb**	**02 53 04.1**	**+1.0**
KURS	41nm,1.2s			Lg	Lg	02 53 51.1	
CHMS	**Chumysh** SNR=5.4	**3.53**	**328**	P	**Pn**	**02 52 59.1**	**+2.7**
KPKS	**Kokpek** 0.2nm,0.1s	**3.57**	**16**	Pg	**Pb**	**02 53 06.1**	**+1.7**
KPKS	27nm,0.4s			Lg	Lg	02 53 54.4	
PDGK	**Podgornoye** 16nm,0.7s	**3.67**	**26**	⇓Pg	**Pb**	**02 53 08.7**	**+2.7**
PDGK	43nm,0.7s			⇓Lg	Lg	02 53 57.0	
KTBS	**Karatobe** 8.5nm,0.4s	**3.70**	**353**	Pg	**Pb**	**02 53 08.4**	**+1.8**
KTBS	3.8nm,0.3s			Lg	Lg	02 53 58.3	
EKS2	**Erkin-Say** SNR=60	**3.74**	**316**	P	**Pn**	**02 53 02.1**	**+2.9**
KRBS	**Karabastau** 9.0nm,0.5s	**3.86**	**342**	Pg	**Pb**	**02 53 11.1**	**+2.0**
KRBS	35nm,0.7s			Lg	Lg	02 54 02.7	
USP	**Ospenovka** SNR=7.6	**3.86**	**328**	P	**Pb**	**02 53 10.4**	**+1.2**
KUU	**Kurty** 4.6nm,0.1s	**3.92**	**350**	Pg	**Pb**	**02 53 11.9**	**+1.6**
KUU	29nm,0.4s			Lg	Lg	02 54 04.4	
KTMS	**Ketmen**	**4.09**	**33**	Pg	**Pb**	**02 53 14.8**	**+1.6**
KTMS	2.3nm,0.3s			Lg	Lg	02 54 08.9	
MRKS	**Merke** 21nm,0.7s	**4.10**	**313**	Pg	**Pb**	**02 53 10.3**	**-3.1**
MRKS	28nm,0.5s			Lg	Lg	02 54 01.4	
BLB	**Baldybastay** 20nm,0.6s	**4.15**	**12**	Pg	**Pb**	**02 53 16.4**	**+2.3**
BLB	44nm,1.1s			Lg	Lg	02 54 12.1	
KNOS	**Konyrlen** 8.0nm,0.7s	**4.53**	**17**	Pg	**Pg**	**02 53 24.7**	**-2.4**
KNOS	14nm,0.5s			Lg	Lg	02 54 25.9	
DJR	**Jarkent** 2.2nm,0.6s	**4.67**	**22**	Pg	**Pb**	**02 53 24.7**	**+1.7**
DJR	12nm,0.9s			Lg	Lg	02 54 26.0	
BTLS	**Baital**	**5.55**	**335**	Pg	**Pb**	**02 53 40.5**	**+2.5**
BTLS				Lg	Lg	02 54 53.4	
KK31	**Karatay Array** 0.3nm,0.5s,baz=128,slow=14,SNR=4.1	**5.96**	**303**	Pn	**Pn**	**02 53 32.1**	**+2.5**
KK31	2.3nm,0.6s,baz=112,slow=16,SNR=10.0			⇓Pg	**Pb**	**02 53 48.4**	**+3.5**
KK31	2.3nm,0.4s,baz=121,slow=29,SNR=5.6			⇑Lg	Lg	02 55 06.5	
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=207,slow=12,SNR=4.7	**7.66**	**27**	Pn	**Pn**	**02 53 53.5**	**+0.5**
MKAR	0.1nm,0.3s,baz=210,slow=28,SNR=2.7 0.2nm,0.3s			Lg	Lg	02 55 59.1	
KURBB	**Kurchatov Arra** baz=189,slow=12,SNR=2.5	**10.62**	**4**	Pn	**Pn**	**02 54 34.1**	**+0.6**
KURBB	baz=187,slow=29,SNR=4.7 0.2nm,0.2s			Lg	Lg	02 57 41.8	
BVAR	**Borovoye Array** baz=159,slow=12,SNR=6.5 1.5nm,0.7s	**13.83**	**342**	Pn	**P**	**02 55 23.5**	**-2.5**
ZALV	**Zalesovo Beam** 0.1nm,0.3s,baz=216,slow=14,SNR=4.4 0.4nm,0.5s	**14.81**	**18**	Pn	**Pn**	**02 55 32.0**	**+1.2**
SONM	**Songino Array** 0.4nm,0.5s,baz=258,slow=7.2,SNR=4.0 0.4nm,0.5s	**22.24**	**60**	P	**P**	**02 56 57.1**	**-1.4**

*CATAC **31** 02:55:26.2±0.5, 14°.N±3°×9°.2W±°, h39km±7km, M3.6/16, MLv3.6/16, Error ellipse: s-maj=8.2km s-min=3.0km az=34.3, confirmed*
*SNET **31** 02:55:27.5±2.5, 14°.04N×91°.72W, h35km, ML3.5, Presumed earthquake*
*GCG **31** 02:55:27.7±1.5, 14°.08N×91°.72W, h40km±39km, MD3.9, ML3.9, Presumed earthquake*

ISC 31 02:55:26.3±2.4,**13°.9N**±0°.1×**91°.8W**±0°.1,**h48**km±28km,**n38,** σ1§62/50,**Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.62**	**10**	P	**Pn**	**02 55 38.7**	**-0.3**
RTAL				S	**Sn**	**02 55 48.3**	**+0.3**
RTAL	**Retalhuleu**	**0.62**	**10**	*e*P	**Pn**	**02 55 38.6**	**-0.3**
RTAL				*e*S	**Sn**	**02 55 48.3**	**+0.3**
STG5	**El Palmar, Qui**	**0.66**	**42**	*i* P	**Pn**	**02 55 40.1**	**+0.5**
STG5				*i* S	**Sn**	**02 55 49.3**	**+0.1**
STG2	**El Palmar, Qui**	**0.67**	**39**	*i* P	**Pn**	**02 55 40.5**	**+0.7**
STG2	comp=E,6µm,0.2s			IAML		02 55 54.3	
STG8	**El Palmar, Qui**	**0.69**	**40**	*i* P	**Pn**	**02 55 41.0**	**+0.9**
STG8				*i* S	**Sn**	**02 55 52.0**	**+1.8**
STG8	comp=N,4µm,0.2s			IAML		02 55 53.2	
SMCA	**Catarina**	**0.97**	**345**	*i* P	**Pn**	**02 55 42.8**	**-0.8**
SOKI	**Kika Raxquin**	**0.98**	**24**	*i* P	**Pn**	**02 55 43.4**	**-0.8**
QUEO	**Labor Ovalle**	**0.99**	**17**	*i* P	**Pn**	**02 55 43.7**	**-0.5**
FG8	**Yepocapa, Chim**	**1.26**	**74**	*i* P	Pn	02 55 43.5	-4.1
FG8				*i* S	Sn	02 55 54.9	-8.6
FG16	**Alotenango, Sa**	**1.31**	**74**	*i* P	Pn	02 55 44.7	-3.8
FG16				*i* S	**Sn**	**02 55 58.4**	**-6.5**
ESSJ	**San Jos, E**	**1.32**	**105**	*i* P	Pn	02 55 43.9	-4.4
GCG4	**OSOP**	**1.41**	**61**	*i* P	**Pn**	**02 55 50.2**	**+0.5**
PCG5	**San Vicente Pa**	**1.42**	**78**	*i* P	**Pn**	**02 55 46.9**	**-3.0**
PCG5				*i* S	**Sn**	**02 56 01.2**	**-6.4**
PCG5	comp=N,3µm,0.2s			IAML		02 56 03.5	
APG	**El Apazote**	**1.69**	**50**	*i* P	**Pn**	**02 55 54.1**	**+0.4**
APG				*i* S	**Sn**	**02 56 14.9**	**+0.6**
FAME	**Alcaldia de Sa**	**1.74**	**92**	P	**Pn**	**02 55 53.5**	**-0.7**
SLOZ	**Alcaldia de Sa**	**1.97**	**86**	P	**Pn**	**02 55 57.4**	**+0.1**
SLOZ	**Alcaldia de Sa**	**1.97**	**86**	*e*P	**Pn**	**02 55 57.9**	**+0.6**
SLOZ				*e*S	**Sn**	**02 56 22.0**	**+1.1**
LOAL	**Lomas de Alarc**	**1.97**	**87**	P	**Pn**	**02 55 58.0**	**+0.6**
LOAL				S	**Sn**	**02 56 21.6**	**+0.7**
SBLS	**San Blas**	**2.12**	**92**	*e*P	**Pn**	**02 56 00.1**	**+0.5**
SBLS				*e*S	**Sn**	**02 56 24.7**	**-0.3**
UNIC	**Universidad Ca**	**2.20**	**88**	P	**Pn**	**02 56 00.8**	**+0.3**
UNIC				S	**Sn**	**02 56 27.4**	**+0.9**
JAYA	**Jayaque - finc**	**2.31**	**96**	P	**Pn**	**02 56 02.2**	**+0.1**
JAYA	**Jayaque - finc**	**2.31**	**96**	*i* P	**Pn**	**02 56 01.7**	**-0.3**
JAYA	**Jayaque - finc**	**2.31**	**96**	*e*P	**Pn**	**02 56 02.1**	**+0.1**
JAYA				*e*S	**Sn**	**02 56 28.9**	**-0.4**
MTO3	**Montecristo**	**2.42**	**78**	P	**Pn**	**02 56 03.8**	**+0.1**
MTO3				S	**Sn**	**02 56 32.8**	**+0.5**
MTO3	**Montecristo**	**2.42**	**78**	*i* P	**Pn**	**02 56 03.7**	**0.0**
PMON	**Piamonte**	**2.43**	**94**	P	**Pn**	**02 56 04.1**	**+0.4**
PMON	**Piamonte**	**2.43**	**94**	*e*P	**Pn**	**02 56 04.3**	**+0.6**
PMON				*e*S	**Sn**	**02 56 32.8**	**+0.5**
ESQI	**Esquipulas**	**2.48**	**75**	P	**Pn**	**02 56 02.6**	**-1.7**
UEES	**Universidad Ev**	**2.50**	**94**	S	**Sn**	**02 56 34.7**	**+0.6**
SEMO	**Seminario San**	**2.52**	**94**	S	**Sn**	**02 56 34.9**	**+0.5**
UTEC	**Universidad Te**	**2.54**	**94**	S	**Sn**	**02 56 35.1**	**+0.1**
UDBS	**Universidad Do**	**2.59**	**94**	S	**Sn**	**02 56 36.4**	**+0.3**
PAVA	**Las Pavas**	**2.80**	**94**	P	**Pn**	**02 56 09.1**	**+0.4**
COEG	**Centro de Oper**	**2.86**	**96**	P	**Pn**	**02 56 10.9**	**+1.3**
COEG				S	**Sn**	**02 56 43.8**	**+0.9**
SCLA	**Alcaldia de Sa**	**3.00**	**94**	P	**Pn**	**02 56 12.8**	**+1.4**
SARH	**Santa Rosa de**	**3.08**	**73**	P	**Pn**	**02 56 14.1**	**+1.5**
PACA	**Pacayal**	**3.42**	**97**	P	**Pn**	**02 56 17.1**	**-0.2**
IZABA	**Izabal, Puerto**	**3.60**	**60**	P	**Pn**	**02 56 21.9**	**+2.2**

*ISK **31** 03:00:54.1, 36°.97N×27°.52E, h10km, ML3.3/20*
*ATH **31** 03:00:54.3, 37°.00N×27°.52E, h14km±1km, ML3.1/10, Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*AFAD **31** 03:00:54.2, 36°.97N×27°.51E, h10km±1km, ML3.1*
*THE **31** 03:00:56.0, 37°.N±2°×2°.8E±°, h30km±5km, M2.9/6, MLh2.9/6*

ISC 31 03:00:54.2±0.8,**36°.98N**±0°.02×**27°.52E**±0°.02,**h14**km±5km, **n81,**σ0§56/118,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BODA	**Bodrum-Mula**	**0.09**	**305**	Pg	**Pg**	**03 00 57.1**	**0.0**
BODA				Sg	**Sg**	**03 00 59.2**	**0.0**
BDRM	**Kayabasi**	**0.10**	**323**	P	**Pg**	**03 00 57.5**	**+0.2**
BDRM				S	**Sg**	**03 00 59.1**	**-0.4**
BDRM	comp=E,1µm,0.2s			IAML		03 01 00.0	
BODT	**Bodrum**	**0.19**	**295**	P	**Pb**	**03 01 02.4**	**+2.9**
YKAV	**Yalikavak-Bodr**	**0.24**	**306**

DDIM				IAML		03 01 18.0		
	comp=E,2μm,0.5s							
DDIM				IAML		03 01 19.0		
	comp=N,2μm,0.5s							
TURN	**Turunc**	**0.62**	**110**	Pg	**Pg**	**03 01 06.2**	**-0.1**	
TURN	**Turunc**	**0.62**	**110**	P	**Pg**	**03 01 06.1**	**-0.2**	
TURN				IAML		03 01 17.0		
	comp=N,979nm,0.3s							
TURN				IAML		03 01 17.0		
	comp=E,951nm,0.3s							
YER	**Yerkesik**	**0.63**	**76**	P	**Pb**	**03 01 07.6**	**+0.5**	
YER				S	**Sb**	**03 01 16.2**	**+0.4**	
YER	**Yerkesik**	**0.63**	**76**	Pg	**Pb**	**03 01 07.0**	**0.0**	
MULA	**Mugla, Merkez-**	**0.69**	**67**	P	**Pb**	**03 01 08.6**	**+0.4**	
MULA				S	**Sb**	**03 01 18.0**	**+0.3**	
MULA				IAML		03 01 22.0		
	comp=E,782nm,0.3s							
AYDN	**Tasoluk**	**0.73**	**23**	P	**Pb**	**03 01 08.9**	**+0.1**	
AYDN				S	**Sb**	**03 01 19.1**	**+0.3**	
AYDN				IAML		03 01 22.0		
	comp=N,1μm,0.7s							
AYDN				IAML		03 01 23.0		
	comp=E,2μm,0.4s							
GCAM	**G?zelcaml?**	**0.75**	**342**	Pg	**Pb**	**03 01 08.9**	**-0.2**	
GCAM	**G?zelcaml?**	**0.75**	**342**	P	**Pb**	**03 01 09.2**	**+0.2**	
GCAM				S	**Sb**	**03 01 20.0**	**+0.8**	
GCAM				IAML		03 01 24.0		
	comp=N,1μm,0.2s							
GCAM				IAML		03 01 26.0		
	comp=E,1μm,0.3s							
RDI1	**Rhodes Town Ha**	**0.78**	**133**	P	**Pb**	**03 01 09.7**	**+0.2**	
RDI1				S	**Sg**	**03 01 20.1**	**+0.6**	
KUSD	**Kusadasi-Aydin**	**0.89**	**348**	Pg	**Pn**	**03 01 11.9**	**-0.5**	
SMG	**Samos**	**0.91**	**323**	P	**Pb**	**03 01 11.9**	**+0.1**	
SMG				S	**Sn**	**03 01 25.0**	**-0.5**	
SMG	**Samos**	**0.91**	**323**	P	**Pb**	**03 01 11.6**	**-0.1**	
SMG				S	**Sb**	**03 01 23.4**	**-0.3**	
ARG	**Arkhangelos**	**0.91**	**147**	P	**Pb**	**03 01 11.9**	**+0.2**	
ARG				S	**Sb**	**03 01 24.2**	**+0.4**	
ARG	**Arkhangelos**	**0.91**	**147**	Pg	**Pb**	**03 01 11.5**	**-0.3**	
ARG	**Arkhangelos**	**0.91**	**147**	P	**Pb**	**03 01 11.3**	**-0.4**	
ARG				S	**Sg**	**03 01 24.8**	**+1.1**	
DALY	**Dalyan (Mula)**	**0.92**	**100**	Pg	**Pb**	**03 01 12.1**	**+0.1**	
AYDB	**Zeytinkoy-Aydi**	**1.00**	**17**	Pg	**Pg**	**03 01 13.6**	**0.0**	
KRL1	**Karlovasi Samo**	**1.04**	**322**	P	**Pb**	**03 01 13.8**	**-0.2**	
ESEN	**Aydn-Nazilli**	**1.05**	**39**	P	**Pn**	**03 01 14.4**	**-0.1**	
ESEN				S	**Sb**	**03 01 27.1**	**-0.6**	
ESEN				IAML		03 01 32.0		
	comp=E,376nm,0.4s							
NAZL	**Nazilli-Aydin**	**1.16**	**32**	Pn	**Pg**	**03 01 16.6**	**+0.1**	
SABU	**Mula-Dalaman**	**1.17**	**97**	P	**Pg**	**03 01 16.9**	**+0.1**	
SABU				S	**Sb**	**03 01 31.4**	**+0.1**	
DGB	**zmir**	**1.18**	**335**	P	**Pn**	**03 01 16.1**	**-0.3**	
GMLD	**Gumuldur**	**1.19**	**336**	Pn	**Pg**	**03 01 18.3**	**+1.1**	
IZMR	**zmir-demi**	**1.20**	**16**	P	**Pg**	**03 01 16.9**	**-0.4**	
IZMR				S	**Sg**	**03 01 33.6**	**+0.6**	
IZMR				IAML		03 01 39.0		
	comp=N,305nm,0.6s							
IZMR				IAML		03 01 41.0		
	comp=E,338nm,0.6s							
TAVA	**DENIZLI_Tavas**	**1.21**	**66**	P	**Pg**	**03 01 17.7**	**+0.2**	
TAVA				S	**Sg**	**03 01 33.5**	**+0.1**	
DUVT	**Torbali**	**1.23**	**357**	P	**Pn**	**03 01 16.9**	**-0.2**	
DUVT				S	**Sn**	**03 01 33.2**	**-0.4**	
DUVT				IAML		03 01 38.0		
	comp=E,274nm,0.5s							
DNZT	**Denizli-Tavas-**	**1.24**	**76**	P	**Pg**	**03 01 18.5**	**+0.5**	
DNZT				S	**Sg**	**03 01 34.7**	**+0.5**	
ODEM	**Odemis-Izmir**	**1.36**	**19**	Pn	**Pb**	**03 01 19.3**	**-0.3**	
DNIZ	**Denizli-Tavas-**	**1.37**	**62**	P	**Pb**	**03 01 20.0**	**+0.3**	
DNIZ				S	**Sg**	**03 01 39.2**	**+0.8**	
DNIZ				IAML		03 01 44.0		
	comp=E,580nm,0.4s							
DNIZ				IAML		03 01 47.0		
	comp=N,407nm,0.4s							
KIRA	**zmir-Kiraz**	**1.40**	**30**	P	**Pb**	**03 01 19.8**	**-0.4**	
KIRA				S	**Sg**	**03 01 39.3**	**0.0**	
CAME	**Cameli-Denizli**	**1.43**	**91**	Pn	**Pb**	**03 01 21.1**	**+0.4**	
CAEL	**Denizli, Camel**	**1.45**	**84**	P	**Pg**	**03 01 22.8**	**+0.8**	
CAEL				IAML		03 01 55.0		
	comp=E,204nm,0.8s							
BLCB	**Balcova**	**1.45**	**345**	Pn	**Pn**	**03 01 19.9**	**-0.2**	
SULTU	**Buldan**	**1.46**	**43**	P	**Pb**	**03 01 21.0**	**-0.3**	
SULTU				S	**Sg**	**03 01 43.0**	**+1.8**	
KARP	**Karpathos**	**1.46**	**192**	P	**Pn**	**03 01 19.8**	**-0.5**	
KARP				S	**Sn**	**03 01 39.2**	**0.0**	
KARP	**Karpathos**	**1.46**	**192**	Pn	**Pn**	**03 01 19.1**	**-1.2**	
KARP	**Karpathos**	**1.46**	**192**	P	**Pn**	**03 01 19.6**	**-0.7**	
IZZE	**Mula-Seydike**	**1.48**	**111**	P	**Pb**	**03 01 21.9**	**+0.4**	
IZZE				S	**Sg**	**03 01 41.3**	**-0.5**	
IZZE				IAML		03 01 45.0		
	comp=E,304nm,0.5s							
ZEYE	**Izmir, Urla-Ze**	**1.49**	**327**	P	**Pn**	**03 01 20.5**	**-0.1**	
ZEYE				S	**Sn**	**03 01 39.1**	**-0.8**	
ZEYE				IAML		03 01 49.0		
	comp=E,192nm,0.4s							
ZEYE				IAML		03 01 50.0		
	comp=N,253nm,0.5s							
APMY	**Acipayam-Deniz**	**1.50**	**71**	Pn	**Pb**	**03 01 22.0**	**0.0**	
GOLH	**Golhisar**	**1.65**	**81**	P	**Pb**	**03 01 25.1**	**+0.6**	
GOLH				S	**Sg**	**03 01 46.6**	**-0.7**	
KNIK	**Mula-Seydike**	**1.65**	**94**	P	**Pg**	**03 01 25.8**	**-0.1**	
MANT	**Manisa**	**1.71**	**28**	P	**Pn**	**03 01 24.3**	**+0.4**	
NAX1	**Naxos Island**	**1.72**	**275**	P	**Pn**	**03 01 23.1**	**-0.7**	
THR8	**Santorini-Mono**	**1.74**	**251**	P	**Pn**	**03 01 24.9**	**+0.9**	
BAGT	**Foa**	**1.75**	**343**	P	**Pn**	**03 01 24.6**	**+0.4**	
BAGT				IAML		03 01 57.0		
	comp=N,169nm,0.7s							
BAGT				IAML		03 02 06.0		
	comp=E,189nm,0.8s							
THERA	**Ancient Thera,**	**1.76**	**250**	P	**Pb**	**03 01 25.4**	**-0.8**	
KTTT	**Salihli**	**1.76**	**15**	P	**Pn**	**03 01 24.2**	**-0.2**	
CAMT	**Merkez**	**1.77**	**355**	P	**Pn**	**03 01 24.2**	**-0.3**	
CAMT				S	**Sg**	**03 01 50.7**	**-0.4**	
CAMT				IAML		03 01 59.0		
	comp=N,221nm,0.7s							
CAMT				IAML		03 02 03.0		
	comp=E,298nm,0.7s							
INCE	**Denizli-Bozkur**	**1.79**	**66**	P	**Pb**	**03 01 26.3**	**-0.6**	
INCE				S	**Sb**	**03 01 48.8**	**-0.5**	
SNT5	**Nea Kammeni, S**	**1.80**	**252**	P	**Pn**	**03 01 24.8**	**-0.2**	
THR6	**Thira Island,**	**1.82**	**250**	P	**Pn**	**03 01 25.2**	**+0.1**	
CHOS	**Chios island**	**1.82**	**321**	P	**Pn**	**03 01 25.4**	**+0.2**	
CHOS				S	**Sn**	**03 01 47.5**	**-0.6**	
SAP3	**Santorini-Thir**	**1.83**	**253**	P	**Pn**	**03 01 24.9**	**-0.4**	
AKAS	**Kas**	**1.84**	**113**	Pn	**Pn**	**03 01 26.2**	**+0.7**	
AKAS	**Kas**	**1.84**	**113**	P	**Pg**	**03 01 28.9**	**-0.6**	
AKAS				S	**Sg**	**03 01 53.2**	**-0.1**	
AKAS				IAML		03 02 00.0		
	comp=N,302nm,0.6s							
AKAS				IAML		03 02 07.0		
	comp=E,157nm,1.1s							
THR9	**Santorini-Faro**	**1.85**	**251**	P	**Pn**	**03 01 26.5**	**+1.0**	
KARB	**zmir-Karabur**	**1.89**	**333**	P	**Pn**	**03 01 26.2**	**0.0**	
KARB				S	**Sg**	**03 01 54.3**	**-0.8**	
AKHS	**Akhisar**	**1.91**	**7**	P	**Pn**	**03 01 27.0**	**+0.7**	
EAG2	**Marmaro, Chios**	**1.92**	**325**	P	**Pn**	**03 01 26.7**	**+0.2**	
ZEDA	**zmir-Bergama**	**2.01**	**350**	P	**Pn**	**03 01 27.9**	**+0.1**	
ZEDA				S	**Sg**	**03 01 57.8**	**-1.0**	
SIT2	**Siteia**	**2.11**	**213**	P	**Pn**	**03 01 28.8**	**-0.4**	
STIA	**Sitia Lasithi**	**2.12**	**213**	P	**Pn**	**03 01 29.9**	**+0.6**	
ZKR	**Zakros**	**2.14**	**210**	P	**Pn**	**03 01 30.2**	**+0.6**	
PRK	**Paraskevi**	**2.46**	**337**	P	**Pn**	**03 01 34.4**	**+0.4**	
PRK	**Paraskevi**	**2.46**	**337**	P	**Pn**	**03 01 34.3**	**+0.3**	
KARY	**Karystos**	**2.67**	**294**	P	**Pn**	**03 01 37.0**	**+0.2**	
IDI	**Anoyia**	**2.72**	**232**	P	**Pn**	**03 01 37.8**	**+0.2**	
DION	**Dionisos Attik**	**3.05**	**292**	P	**Pn**	**03 01 42.7**	**+0.6**	

*ISK **31** 03:14:13.2,35°.65N×33°.73E,h5km,ML2.6/18*
*AFAD **31** 03:14:16.0,35°.77N×33°.63E,h21km±1km,ML2.1*
ISC 31 03:14:14.6±1.2,35°.67N±0°.03×33°.69E±0°.03,h11km±9km,
n36,σ1§18/50,Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EREN	**Erenkoy**	**0.42**	**109**	P	**Pn**	**03 14 26.5**	**-0.1**
EREN				S	**Sb**	**03 14 34.0**	**+3.7**
EREN				IAML		03 14 44.0	
	comp=E,201nm,0.6s						
EREN				IAML		03 14 45.0	
	comp=N,128nm,0.5s						
AKK1	**Akkuyu-Mersin**	**0.49**	**346**	Pg	**Pg**	**03 14 23.8**	**-0.4**
AKK1				Sg	**Sg**	**03 14 31.6**	**+0.9**
TISA	**Tisan-Mersin**	**0.49**	**359**	Pg	**Pg**	**03 14 23.5**	**-0.8**
BECE	**Buyukeceli-Mer**	**0.50**	**348**	Pg	**Pg**	**03 14 23.9**	**-0.5**
BECE				Sg	**Sg**	**03 14 31.7**	**+0.7**
GULN	**MERSIN_Gulnar**	**0.53**	**347**	P	**Pg**	**03 14 24.4**	**-0.6**
GULN				S	**Sg**	**03 14 31.8**	**-0.1**
GULN				IAML		03 14 33.0	
	comp=N,118nm,0.5s						
YESI	**Yesilovacik-Me**	**0.53**	**356**	Pg	**Pg**	**03 14 24.4**	**-0.5**
YORU	**Yoruktepe-Mers**	**0.54**	**335**	Pg	**Pg**	**03 14 24.8**	**-0.3**
TEPK	**Tepekoy-MERSIN**	**0.57**	**348**	Pg	**Pg**	**03 14 25.1**	**-0.6**
IKL	**Isikli**	**0.57**	**360**	Pg	**Pg**	**03 14 24.9**	**-0.8**
IKL				Sg	**Sg**	**03 14 33.8**	**+0.5**
OREN	**Orenkoy-Mersin**	**0.57**	**341**	Pg	**Pg**	**03 14 25.0**	**-0.7**
OREN				Sg	**Sg**	**03 14 33.4**	**+0.1**
TEKE	**Tekeli-Mersin**	**0.67**	**316**	Pg	**Pg**	**03 14 27.3**	**-0.2**
SILI	**Silifke-Mersin**	**0.72**	**15**	Pg	**Pg**	**03 14 28.2**	**-0.4**
SLFK	**Silifke-Mersin**	**0.75**	**16**	Pg	**Pg**	**03 14 28.3**	**-0.9**
CSS	**Mathiatis**	**0.76**	**203**	Pg	**Pg**	**03 14 28.4**	**-1.0**
BERE	**Bereket-Mersin**	**0.78**	**331**	Pg	**Pg**	**03 14 29.4**	**-0.3**
KEBE	**Keben-Mersin**	**0.78**	**1**	Pg	**Pg**	**03 14 29.1**	**-0.6**
TEVE	**Tevekalti-Mers**	**0.79**	**346**	Pg	**Pg**	**03 14 29.6**	**-0.4**
KIZK	**Mersin**	**0.89**	**24**	Pg	**Pg**	**03 14 30.8**	**-1.0**
KIZK	**Mersin**	**0.89**	**24**	P	**Pg**	**03 14 31.6**	**-0.2**
KIZK				S	**Sb**	**03 14 43.7**	**-0.3**
KIZK				IAML		03 14 50.0	
	comp=E,56nm,0.3s						
ERMK	**Ermenek**	**1.16**	**327**	P	**Pg**	**03 14 36.7**	**-0.2**
ERMK				S	**Sg**	**03 14 50.9**	**-1.1**
ERMK				IAML		03 14 54.0	
	comp=E,40nm,0.7s						
ERMK				IAML		03 14 55.0	
	comp=N,41nm,0.2s						
GAZI	**Gazipasa**	**1.25**	**297**	Pn	**Pb**	**03 14 38.6**	**+0.4**
GAZI	**Gazipasa**	**1.25**	**297**	P	**Pg**	**03 14 38.8**	**+0.2**
GAZI				S	**Sb**	**03 14 53.5**	**-0.8**
GAZI				IAML		03 15 01.0	
	comp=E,30nm,0.6s						
GAZI				IAML		03 15 03.0	
	comp=N,50nm,0.9s						
HDMB	**Hadim**	**1.62**	**323**	Pn	**Pn**	**03 14 43.8**	**+0.5**
KKBE	**Karaman, Kazim**	**1.66**	**339**	P	**Pn**	**03 14 44.7**	**+0.9**
KKBE				S	**Sn**	**03 15 04.2**	**-1.0**
KERG	**Konya-Eregli**	**1.78**	**11**	P	**Pb**	**03 14 46.8**	**-0.5**
KERG				S	**Sn**	**03 15 07.4**	**-0.7**
KERG				IAML		03 15 09.0	
	comp=N,46nm,1.8s						
KERG				IAML		03 15 16.0	
	comp=E,25nm,0.5s						
GULE	**Gulek**	**1.84**	**28**	P	**Pb**	**03 14 47.5**	**-0.8**
GULE				S	**Sb**	**03 15 11.7**	**+0.4**
GULE				IAML		03 15 25.0	
	comp=E,33nm,0.5s						
GULE				IAML		03 15 26.0	
	comp=N,29nm,0.7s						
YURE	**YUREGIR**	**1.95**	**53**	P	**Pb**	**03 14 51.0**	**+0.8**
YAYL	**Yayladag**	**2.00**	**79**	P	**Pb**	**03 14 50.3**	**-0.8**
YAYL				S	**Sn**	**03 15 10.3**	**-3.2**
YAYL				IAML		03 15 17.0	
	comp=E,14nm,1.1s						
KEPZ	**Antalya-Kepez**	**2.09**	**307**	P	**Pb**	**03 14 53.1**	**+0.6**
KMER	**Konya-Meram**	**2.35**	**334**	P	**Pn**	**03 14 55.4**	**+2.1**
KMER				IAML		03 15 24.0	
	comp=E,9.9nm,1.0s						
SEDI	**Konya, Seydise**	**2.36**	**319**	P	**Pb**	**03 14 56.4**	**-0.9**
SEDI				S	**Sn**	**03 15 21.4**	**-1.2**
SEDI				IAML		03 15 37.0	
	comp=E,11nm,0.6s						
NIDE	**Nigde/Merkez-G**	**2.49**	**20**	P	**Pn**	**03 14 57.4**	**+2.2**
NIDE				IAML		03 15 45.0	
	comp=N,8.4nm,0.5s						
NIDE				IAML		03 15 48.0	
	comp=E,11nm,0.8s						
KONT	**Konya--Tatoy**	**2.51**	**335**	P	**Pb**	**03 14 58.1**	**-1.7**
BSIR	**Belisirma, Guz**	**2.64**	**10**	P	**Pn**	**03 14 59.7**	**+2.4**
BSIR				IAML		03 16 18.0	
	comp=E,7.1nm,1.5s						
ALIN	**Konya, Altinte**	**2.70**	**346**	P	**Pn**	**03 14 59.2**	**+1.0**
YAHY	**KAYSERI_Yahyal**	**2.77**	**29**	P	**Pn**	**03 15 00.7**	**+1.7**

*NEIC **31** 03:23:00.5±1.3,17°.85S±0°.2×178°.7W±0°.1,h584km±7km,*
mb4.1/32,Error ellipse: s-maj=24.9km s-min=13.8km
az=158.0
*IDC **31** 03:23:00.2±1.9,17°.49S×178°.87W,h580km±17km,mb3.3/8,*
mbtmp4.2/9,Error ellipse: s-maj=69.5km s-min=14.8km
az=148.0
ISC 31 03:23:01.2±0.6,17°.7S±0°.1×178°.9W±0°.1,h600km,n48,
σ0§94/51,mb4.1/23,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**2.91**	**269**	P	**P**	**03 24 17.8**	**-2.2**
	61nm,0.7s,baz=122,slow=10,SNR=59						
MSVF	**Nonsavu**	**2.91**	**269**	P	**P**	**03 24 18.2**	**-1.8**
MARNC	**Mare, Loyalty**	**12.88**	**251**	P	**P**	**03 25 47.4**	**-1.5**
EIDS	**Eidsvold**	**28.91**	**249**	P	**P**	**03 28 14.4**	**+0.8**
EIDS				IAmb	IAmb	03 28 38.6	
	comp=Z,12nm,1.4s						
MLZ	**Mavora Lakes**	**29.65**	**199**	P	**P**	**03 28 19.2**	**-0.6**
ARMA	**Armidale**	**29.65**	**239**	P	**P**	**03 28 21.3**	**+1.2**
ARMA				IAmb	IAmb	03 28 36.3	
	comp=Z,11nm,1.2s						
CTAO	**Charters Tower**	**33.03**	**260**	P	**P**	**03 28 47.8**	**-1.1**
COEN	**Coen**	**36.64**	**270**	P	**P**	**03 29 19.9**	**+1.0**
TOO	**Toolangi**	**36.95**	**230**	P	**P**	**03 29 22.4**	**+1.3**
STKA	**Stephens Creek**	**38.33**	**241**	P	**P**	**03 29 33.2**	**+0.9**
	comp=Z,4.4nm,0.4s,baz=85,slow=10.0,SNR=16						
	comp=Z,4.4nm,0.4s						
STKA	**Stephens Creek**	**38.33**	**241**	P	**P**	**03 29 33.7**	**+1.3**
BBOO	**Buckleboo**	**43.11**	**241**	P	**P**	**03 30 11.0**	**+0.8**
WR8	**Warramunga Arr**	**44.06**	**259**	P	**P**	**03 30 17.8**	**+0.1**
WB0	**Warramunga Arr**	**44.18**	**260**	P	**P**	**03 30 18.9**	**+0.3**
WB0				IAmb	IAmb	03 30 19.4	
	comp=Z,4.1nm,0.9s						
WRAB	**Tennant Creek**	**44.21**	**259**	P	**P**	**03 30 19.0**	**+0.2**
WRAB				IAmb	IAmb	03 30 19.9	
	comp=Z,5.8nm,0.8s						
WRA	**Warramunga Arr**	**44.22**	**259**	P	**P**	**03 30 19.2**	**+0.3**
	comp=Z,2.2nm,0.5s,baz=91,slow=7.0,SNR=53						
WRA				PcP	**PcP**	**03 31 51.2**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=90,slow=3.0,SNR=1.5						
	comp=Z,2.2nm,0.5s						
WRA	**Warramunga Arr**	**44.22**	**259**	P	**P**	**03 30 18.7**	**-0.2**
WRA					**PcP**	**03 31 50.8**	**+0.7**
AS31	**Alice Springs**	**44.40**	**254**	P	**P**	**03 30 21.1**	**+0.8**
AS31				IAmb	IAmb	03 30 21.9	
	comp=Z,7.1nm,0.7s						
ASAR	**Alice Springs**	**44.40**	**254**	P	**P**	**03 30 21.4**	**+1.0**
	comp=Z,25nm,0.6s,baz=88,slow=8.2,SNR=388						
ASAR				PcP	**PcP**	**03 31 51.4**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=100,slow=3.6,SNR=1.0						
	comp=Z,25nm,0.6s						
FORT	**Forrest**	**49.68**	**244**	P	**P**	**03 30 59.2**	**-0.4**
FORT				IAmb	IAmb	03 31 32.0	
	comp=Z,13nm,1.5s						
PSA00	**Pilbara Seismi**	**57.52**	**255**	P	**P**	**03 31 55.5**	**+0.5**
PSA00				IAmb	IAmb	03 32 15.0	
	comp=Z,11nm,1.1s						
MBWA	**Marble Bar**	**57.68**	**256**	P	**P**	**03 31 56.7**	**+0.6**
MBWA				IAmb	IAmb	03 31 57.6	
	comp=Z,21nm,1.4s						
QSPA	**South Pole Qui**	**72.36**	**180**	P	**P**	**03 33 27.4**	**+0.1**
PET	**Petropavlovsk**	**73.06**	**346**	P	**P**	**03 33 30.8**	**-0.3**
NVAR	**Mina Array Bea**	**79.59**	**44**	P	**P**	**03 34 06.7**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=224,slow=8.0,SNR=6.2						
	comp=Z,0.6nm,0.7s						
NVAR	**Mina Array Bea**	**79.59**	**44**	P	**P**	**03 34 06.9**	**-0.7**
M17K	**Holitna River**	**80.67**	**10**	P	**P**	**03 34 13.6**	**+1.2**
M17K				IAmb	IAmb	03 34 24.2	
	comp=Z,6.9nm,1.2s						
K15K	**Wolf Creek Mou**	**80.90**	**8**	P	**P**	**03 34 14.7**	**+1.2**
K15K				IAmb	IAmb	03 34 22.4	
	comp=Z,9.0nm,1.4s						
SLKM	**Skilak Lake**	**81.30**	**14**	P	**P**	**03 34 15.3**	**-0.3**
SLKM				IAmb	IAmb	03 34 30.2	
	comp=Z,13nm,1.3s						
L18K	**Granite Mounta**	**81.57**	**10**	P	**P**	**03 34 17.7**	**+0.8**
K17K	**Iditarod**	**81.77**	**9**	P	**P**	**03 34 18.9**	**+0.9**
K17K				IAmb	IAmb	03 34 51.8	
	comp=Z,12nm,1.5s						
I07A	**Izee**	**81.93**	**39**	P	**P**	**03 34 19.7**	**+0.4**
J16K	**Anvik River**	**81.97**	**8**	P	**P**	**03 34 20.1**	**+1.1**
J17K	**VABM Dome**	**82.30**	**9**	P	**P**	**03 34 21.3**	**+0.7**
J17K				IAmb	IAmb	03 34 52.5	
	comp=Z,5.2nm,1.5s						
U15A	**North Rim**	**82.72**	**48**	P	**P**	**03 34 24.3**	**+0.5**
IL31		**85.78**	**13**	P	**P**	**03 34 37.4**	**-0.2**
ILAR	**Eielson Array**	**85.78**	**13**	P	**P**	**03 34 37.1**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=226,slow=5.0,SNR=12						
	comp=Z,0.3nm,0.4s						
TX31	**Lajitas Ar. Si**	**86.27**	**58**	P	**P**	**03 34 42.0**	**+1.1**
TX31				IAmb	IAmb	03 34 42.6	
	comp=Z,2.1nm,0.9s						
TXAR	**Lajitas Array**	**86.27**	**58**	P	**P**	**03 34 41.4**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=222,slow=5.7,SNR=14						
	comp=Z,1.4nm,0.8s						
PDAR	**Pinedale Array**	**87.52**	**44**	P	**P**	**03 34 46.5**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=204,slow=3.6,SNR=9.1						
	comp=Z,0.7nm,0.6s						
YNE	**Yellowstone No**	**88.24**	**41**	P	**P**	**03 34 47.8**	**-2.2**
MMPY	**Sheldon Lake,**	**88.33**	**20**	P	**P**	**03 34 50.5**	**+0.8**
MMPY				IAmb	IAmb	03 35 31.5	
	comp=Z,7.6nm,1.5s						
SNAA	**Sanae**	**90.82**	**179**	P	**P**	**03 35 01.1**	**-0.2**
YKA	**Yellowknife Ar**	**94.33**	**25**	P	**P**	**03 35 16.7**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=244,slow=4.9,SNR=4.6						
	comp=Z,0.2nm,0.7s						
YKA	**Yellowknife Ar**	**94.33**	**25**	P	**P**	**03 35 16.1**	**-1.1**
SPITS	**Spitsbergen Ar**	**119.03**	**356**	PKP	**PKPdf**	**03 40 41.9**	**0.0**
	comp=Z,4.4nm,1.0s,baz=0.0,slow=2.2,SNR=5.6						
BRTR	**Keskin Array B**	**144.31**	**315**	PKP	**PKPdf**	**03 41 30.6**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=54,slow=2.5,SNR=2.6						
GERES	**GERESS Array B**	**147.29**	**345**	PKPbc	**PKPbc**	**03 41 39.1**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=20,slow=3.3,SNR=6.2						

*SDD **31** 03:27:32.7±1.0,17°.81N×66°.75W,h20km±9km,MD3.0,*
ML2.0,MW2.7,Presumed earthquake
*OSPL **31** 03:27:34.5±0.4,17°.86N×66°.74W,h2km±999km,ML2.7,*
Presumed earthquake
ISC 31 03:27:34.9±1.4,17°.94N±0°.09×66°.76W±0°.03,h10km±10km,
n8,σ0§84/15,8C-2D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OBIP	**Obispado Ponce**	**0.18**	**56**	*i* P	**Pg**	**03 27 38.4**	**-0.3**
OBIP				*e*S	**Sg**	**03 27 41.5**	**+0.1**
OBIP				IAML		03 27 43.7	
	comp=Z,1μm,0.1s						
CELP	**Cerrillos**	**0.22**	**53**	↑*e*Pg	**Pg**	**03 27 39.2**	**-0.2**
CELP				↑*e*Sg	**Sg**	**03 27 43.4**	**+0.9**
CELP				IAML		03 27 43.8	
	comp=N,71nm,0.2s						
MLPR	**Magueyes Islan**	**0.27**	**276**	↓*e*Pg	**Pg**	**03 27 40.0**	**-0.3**
MLPR				↑*e*Sg	**Sg**	**03 27 43.8**	**-0.2**
MLPR				IAML		03 27 46.3	
	comp=N,78nm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.34**	**281**	*i* P	**Pg**	**03 27 41.2**	**-0.3**
CRPR				*e*S	**Sg**	**03 27 46.5**	**+0.5**
CRPR				IAML		03 27 48.1	
	comp=Z,96nm,0.6s						
PRSN	**Puerto Rico Se**	**0.45**	**307**	↑*e*Pg	**Pg**	**03 27 42.6**	**-1.2**
PRSN				↓*e*Sg	**Sg**	**03 27 50.8**	**+1.0**
PRSN				IAML		03 27 56.3	
	comp=N,195nm,0.3s						
SJG	**San Juan**	**0.61**	**74**	*i* P	**Pg**	**03 27 45.7**	**-1.0**
SJG				IAML		03 27 56.5	
	comp=Z,912nm,0.1s						
AGPR	**Aguadilla, PR**	**0.62**	**328**	↑*e*Pg	**Pg**	**03 27 45.6**	**-1.3**
AGPR				↑*e*Sg	**Sg**	**03 27 56.0**	**+1.0**
AGPR				IAML		03 27 58.9	
	comp=N,64nm,1.4s						
HATOM	**Hato Mayor del**	**2.62**	**289**	↑*e*Pg	**Pn**	**03 28 17.4**	**0.0**
HATOM				↑*e*Sg	**Sn**	**03 28 50.1**	**+0.7**
HATOM				IAML		03 28 57.0	
	comp=N,15nm,2.9s						

*NEIC **31** 03:37:58.9±0.8,17°.90N±0°.02×66°.88W±0°.01,h10km±1km,*
ML2.7/29,Md3.0/18(RSPR),Error ellipse: s-maj=3.4km
s-min=1.9km az=358.0
*SDD **31** 03:37:58.6±2.5,17°.88N×66°.87W,h12km±21km,MD3.0,*
ML2.4,MW2.7,Presumed earthquake
*OSPL **31** 03:37:59.0±0.7,17°.82N×66°.90W,h2km

CATAC ***31*** *04:07:26.8±0.5, 13˚N±2˚×9˚0W±˚, h14km±2km, M3.5/25, MLv3.5/25, Error ellipse: s-maj=5.4km s-min=4.2km az=29.5, confirmed*
SNET ***31*** *04:07:27.1±1.4, 12˚.96N×89˚.57W, h30km, ML3.4, Presumed earthquake*
GCG ***31*** *04:07:28.0±2.2, 12˚.95N×89˚.52W, h27km±14km, MD3.9, Presumed earthquake*

ISC 31 04:07:27.4±2.0, 12˚.95N±0˚.08×89˚.54W±0˚.06, h26km±12km, n47, σ0°51/74, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.58**	**22**	P		**Pb**	**04 07 39.3**	**+0.3**
LALI				S		**Sb**	**04 07 46.9**	**0.0**
LALI	**Alcalda de L**	**0.58**	**22**	*i* P		**Pb**	**04 07 39.3**	**+0.3**
LALI	**Alcalda de L**	**0.58**	**22**	*e*P		**Pb**	**04 07 39.3**	**+0.3**
LALI				*e*S		**Sb**	**04 07 47.1**	**+0.2**
JAYA	**Jayaque - finc**	**0.71**	**7**	P		**Pb**	**04 07 40.9**	**-0.4**
JAYA				S		**Sb**	**04 07 50.9**	**+0.2**
JAYA	**Jayaque - finc**	**0.71**	**7**	*i* P		**Pb**	**04 07 40.9**	**-0.4**
JAYA				*i* S		**Sn**	**04 07 52.4**	**+0.3**
JAYA	**Jayaque - finc**	**0.71**	**7**	*e*P		**Pb**	**04 07 40.9**	**-0.4**
JAYA				*e*S		**Sb**	**04 07 51.2**	**+0.5**
PANCS	**Alcalda de**	**0.75**	**28**	P		**Pb**	**04 07 41.5**	**-0.4**
PANCS				S		**Sb**	**04 07 52.3**	**+0.6**
PMON	**Piamonte**	**0.79**	**16**	P		**Pb**	**04 07 42.2**	**-0.4**
PMON				S		**Sb**	**04 07 53.5**	**+0.5**
PMON	**Piamonte**	**0.79**	**16**	*e*P		**Pb**	**04 07 42.3**	**-0.4**
SEMO	**Seminario San**	**0.81**	**22**	P		**Pb**	**04 07 42.6**	**-0.4**
SEMO				S		**Sb**	**04 07 54.0**	**+0.4**
LFRS	**El Faro**	**0.82**	**35**	*e*P		**Pb**	**04 07 43.0**	**-0.1**
UEES	**Universidad Ev**	**0.82**	**21**	P		**Pb**	**04 07 42.8**	**-0.4**
UEES				S		**Sb**	**04 07 53.9**	**+0.1**
UTEC	**Universidad Te**	**0.82**	**24**	P		**Pb**	**04 07 42.8**	**-0.3**
UTEC				S		**Sn**	**04 07 54.4**	**-0.3**
BOQS	**Boqueron**	**0.83**	**18**	*e*P		**Pb**	**04 07 43.0**	**-0.2**
CEDA	**San Andres**	**0.86**	**9**	P		**Pb**	**04 07 43.3**	**-0.5**
CEDA	**San Andres**	**0.86**	**9**	*e*P		**Pb**	**04 07 43.4**	**-0.5**
CEDA				*e*S		**Sb**	**04 07 55.3**	**+0.2**
SBLS	**San Blas**	**0.89**	**355**	*e*P		**Pb**	**04 07 43.8**	**-0.6**
SBLS				*e*S		**Sb**	**04 07 56.0**	**-0.1**
LFU	**La Fuente**	**0.90**	**27**	*e*P		**Pb**	**04 07 44.3**	**-0.2**
COEG	**Centro de Oper**	**0.93**	**44**	P		**Pb**	**04 07 44.3**	**-0.6**
COEG				S		**Sn**	**04 07 57.1**	**-0.3**
TECO	**Alcaldia de Te**	**0.95**	**51**	P		**Pb**	**04 07 44.3**	**-0.8**
TECO				S		**Sn**	**04 07 57.3**	**-0.4**
PAVA	**Las Pavas**	**0.96**	**38**	P		**Pb**	**04 07 45.2**	**-0.3**
PAVA				S		**Sn**	**04 07 58.3**	**+0.1**
PAVA	**Las Pavas**	**0.96**	**38**	*e*P		**Pb**	**04 07 45.2**	**-0.3**
PAVA				*e*S		**Sn**	**04 07 59.4**	**+1.1**
UNIC	**Universidad Ca**	**1.03**	**360**	P		**Pb**	**04 07 45.9**	**-0.3**
UNIC				S		**Sb**	**04 07 59.6**	**-0.2**
LOAL	**Lomas de Alarc**	**1.07**	**348**	P		**Pb**	**04 07 46.4**	**-0.4**
SCLA	**Alcaldia de Sa**	**1.09**	**46**	P		**Pn**	**04 07 47.1**	**0.0**
SCLA				S		**Sb**	**04 08 01.2**	**-0.3**
SLOZ	**Alcaldia de Sa**	**1.10**	**348**	P		**Pn**	**04 07 46.7**	**-0.4**
SLOZ				S		**Sb**	**04 08 01.9**	**+0.2**
P5NO	**Presa 5 de nov**	**1.28**	**36**	P		**Pn**	**04 07 50.0**	**+0.3**
P5NO				S		**Sb**	**04 08 07.2**	**+0.1**
PACA	**Pacayal**	**1.30**	**66**	P		**Pn**	**04 07 49.8**	**-0.1**
PACA	**Pacayal**	**1.30**	**66**	*e*P		**Pn**	**04 07 50.0**	**0.0**
PACA				*e*S		**Sn**	**04 08 06.2**	**-0.3**
RANC	**El Ranchito**	**1.31**	**68**	P		**Pn**	**04 07 50.1**	**-0.1**
RANC				S		**Sb**	**04 08 08.1**	**+0.1**
MTO3	**Montecristo**	**1.46**	**7**	P		**Pn**	**04 07 52.4**	**+0.1**
MTO3				S		**Sb**	**04 08 12.1**	**0.0**
MTO3	**Montecristo**	**1.46**	**7**	*i* P		**Pn**	**04 07 52.3**	**+0.1**
INTP	**Intipuca**	**1.47**	**80**	*e*P		**Pn**	**04 07 52.1**	**-0.1**
INTP				*e*S		**Sn**	**04 08 10.0**	**-0.6**
ESQI	**Esquipulas**	**1.62**	**7**	P		**Pn**	**04 07 54.8**	**+0.5**
LCND	**La Caada**	**1.65**	**77**	P		**Pn**	**04 07 54.7**	**0.0**
LCND				S		**Sb**	**04 08 16.6**	**-0.9**
CNCH	**Conchagua**	**1.70**	**79**	P		**Pn**	**04 07 55.7**	**+0.3**
CSGN	**Cosiguina Volc**	**1.93**	**89**	P		**Pn**	**04 07 58.8**	**+0.2**
INTHN	**La Esperanza I**	**1.95**	**46**	P		**Pn**	**04 07 59.5**	**+0.5**
SARH	**Santa Rosa de**	**1.97**	**23**	P		**Pn**	**04 08 00.2**	**+1.1**
SARH	**Santa Rosa de**	**1.97**	**23**	*i* P		**Pn**	**04 08 00.2**	**+1.1**
SARH				*i* S		**Sb**	**04 08 25.1**	**-1.7**
POTN	**Potosi Cosigui**	**1.98**	**88**	P		**Pn**	**04 07 59.9**	**+0.6**
POTN				S		**Sn**	**04 08 24.5**	**+1.2**
APG	**El Apazote**	**2.23**	**336**	*i* P		**Pn**	**04 08 03.3**	**+0.4**
TGUH	**Tegucigalpa,Un**	**2.47**	**63**	P		**Pn**	**04 08 06.4**	**+0.3**
HERN	**Volcan Telica**	**2.67**	**97**	P		**Pn**	**04 08 08.7**	**0.0**
HOYN	**Al Sur del Vol**	**2.67**	**97**	P		**Pn**	**04 08 10.1**	**+1.3**
POLN	**Al Sur del Vol**	**2.68**	**96**	P		**Pn**	**04 08 09.3**	**+0.4**
YUSH	**Yuscaran**	**2.81**	**69**	P		**Pn**	**04 08 11.1**	**+0.4**

MOS ***31*** *04:26:35.8±0.8, 41˚.94N×46˚.30E, h7km, mb3.6/1, Error ellipse: s-maj=12.4km s-min=6.0km az=66.1*
AZER ***31*** *04:26:35.4, 41˚.84N×46˚.27E, h5km, ml2.4*
DRS ***31*** *04:26:36.8, 42˚.04N×46˚.41E, h6km*

ISC 31 04:26:36.0±1.0, 41˚.95N±0˚.02×46˚.27E±0˚.03, h7km±8km, n53, σ1°08/94, 2C-1D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TLTR	**Tlyarata** 754nm,0.2s	**0.17**	**21**	*e*Pg		**Pg**	**04 26 39.8**	**+0.2**
TLTR	3µm,0.2s			*e*Sg		**Sg**	**04 26 42.2**	**+0.1**
TLTR	**Tlyarata**	**0.17**	**21**	*e*PG		**Pg**	**04 26 39.7**	**+0.2**
TLTR	comp=Z,754nm,0.2s			pmax	pmax			
ZKTA	**Zakatala**	**0.41**	**140**	P		**Pb**	**04 26 44.5**	**-1.0**
ZKTA				S		**Sb**	**04 26 50.3**	**-1.6**
KMKR	**Kumukh** comp=Z,115nm,0.4s	**0.64**	**73**	*e*Pg		**Pg**	**04 26 48.5**	**+0.1**
KMKR	comp=Z,759nm,0.4s			*e*Sg		**Sg**	**04 26 56.9**	**0.0**
KMKR	**Kumukh**	**0.64**	**73**	*e*PG		**Pg**	**04 26 48.5**	**+0.1**
KMKR				*e*S		**Sg**	**04 26 56.9**	**0.0**
KMKR	comp=Z,115nm,0.4s			pmax	pmax			
XNZR	**Khunzakh** comp=Z,55nm,0.6s	**0.68**	**28**	*e*Pg		**Pb**	**04 26 50.1**	**-0.1**
XNZR	comp=Z,68nm,0.5s			*e*Sg		**Sb**	**04 26 59.5**	**-0.3**
GNBR	**Gunib** comp=Z,50nm,0.4s	**0.68**	**49**	*e*Pg		**Pb**	**04 26 49.6**	**-0.7**
GNBR	comp=Z,103nm,0.2s			*e*Sg		**Sb**	**04 26 58.9**	**-1.0**
GNBR	**Gunib**	**0.68**	**49**	*e*PG		**Pb**	**04 26 49.5**	**-0.7**
GNBR				*e*S		**Sb**	**04 26 58.8**	**-1.0**
GNBR	comp=Z,50nm,0.4s			pmax	pmax			
HNZR	**Khunzah**	**0.69**	**28**	*e*PG		**Pb**	**04 26 50.1**	**-0.4**
HNZR				*e*S		**Sb**	**04 26 59.5**	**-0.9**
HNZR	comp=Z,55nm,0.6s			pmax	pmax			
BTLR	**Botlikh** comp=Z,13nm,0.5s	**0.72**	**357**	*e*Pg		**Pb**	**04 26 50.6**	**-0.2**
BTLR	comp=Z,93nm,0.2s			*e*Sg		**Sb**	**04 27 00.6**	**-0.3**
BTLR	**Botlikh**	**0.72**	**357**	*c i*PG		**Pb**	**04 26 50.6**	**-0.2**
ARKR	**Arakani**	**0.85**	**39**	*i*PG		**Pb**	**04 26 52.8**	**-0.3**
ARKR				*e*S		**Sb**	**04 27 04.2**	**-0.4**
ARKR	comp=Z,120nm,0.4s			pmax	pmax			
UNCR	**Uncukul** comp=Z,36nm,0.3s	**0.86**	**27**	*e*Pg		**Pb**	**04 26 53.3**	**0.0**
UNCR	comp=Z,86nm,0.7s			*e*Sg		**Sb**	**04 27 05.0**	**0.0**
UNCR	**Uncukul**	**0.86**	**27**	*e*PG		**Pb**	**04 26 53.2**	**0.0**
UNCR				*e*S		**Sb**	**04 27 04.9**	**0.0**
UNCR	comp=Z,36nm,0.3s			pmax	pmax			
KRNR	**Karanay** comp=Z,7.0nm,0.3s	**1.00**	**28**	*e*Pg		**Pb**	**04 26 55.5**	**-0.2**
KRNR	comp=Z,22nm,0.3s			*e*Sg		**Sg**	**04 27 08.2**	**+0.1**
KRNR	**Karanay**	**1.00**	**28**	*e*PG		**Pb**	**04 26 55.4**	**-0.2**
KRNR				*e*S		**Sg**	**04 27 08.2**	**+0.1**
KRNR	comp=Z,7.0nm,0.3s			pmax	pmax			
DVE	**Vedeno** comp=Z,10.0nm,0.2s	**1.01**	**354**	*e*Pg		**Pn**	**04 26 56.6**	**-0.1**
DVE	comp=Z,54nm,0.4s			*e*Sg		**Sb**	**04 27 10.4**	**+0.9**
DVE	**Vedeno**	**1.01**	**354**	*d i*PG		**Pn**	**04 26 56.5**	**-0.1**
SEKA	**Sheki**	**1.01**	**136**	P		**Pn**	**04 26 56.6**	**-0.1**
SEKA				S		**Sn**	**04 27 10.9**	**-0.3**
URKR	**Urkarakh** comp=Z,11nm,0.1s	**1.04**	**77**	*e*Pg		**Pb**	**04 26 56.0**	**-0.4**
URKR	comp=Z,34nm,0.3s			*e*Sg		**Sb**	**04 27 09.8**	**-0.5**
URKR	**Urkarakh**	**1.04**	**77**	*e*PG		**Pb**	**04 26 55.9**	**-0.4**
URKR				*e*S		**Sb**	**04 27 09.7**	**-0.5**
URKR	comp=Z,11nm,0.1s			pmax	pmax			
BUJR	**Buynaksk** comp=Z,43nm,0.4s	**1.07**	**35**	*e*Pg		**Pn**	**04 26 57.7**	**+0.2**
BUJR	comp=Z,108nm,0.8s			*e*Sg		**Sn**	**04 27 12.4**	**-0.2**
BUJR	**Buynaksk**	**1.07**	**35**	*e*PG		**Pn**	**04 26 57.7**	**+0.2**
BUJR				*e*S		**Sn**	**04 27 12.4**	**-0.2**
BUJR	comp=Z,43nm,0.4s			pmax	pmax			
QZX	**Qazax, Azerbai**	**1.12**	**218**	P		**Pn**	**04 26 58.7**	**+0.7**
QZX				S		**Sn**	**04 27 15.4**	**+1.8**
DBC	**Dubki** comp=Z,8.0nm,0.4s	**1.15**	**21**	*e*Pg		**Pb**	**04 26 58.0**	**-0.2**
DBC	comp=Z,20nm,0.2s			*e*Sg		**Sb**	**04 27 13.5**	**+0.2**
DBC	**Dubki**	**1.15**	**21**	*e*PG		**Pb**	**04 26 58.0**	**-0.2**
DBC				*e*S		**Sb**	**04 27 13.5**	**+0.2**
DBC	comp=Z,8.0nm,0.4s			pmax	pmax			
SGKR	**Sergokala** comp=Z,17nm,0.5s	**1.15**	**63**	*e*Pg		**Pb**	**04 26 58.0**	**-0.3**
SGKR	comp=Z,69nm,0.4s			*e*Sg		**Sb**	**04 27 13.4**	**0.0**
SGKR	**Sergokala**	**1.15**	**63**	*e*PG		**Pb**	**04 26 57.9**	**-0.3**
SGKR				*e*S		**Sb**	**04 27 13.3**	**0.0**
SGKR	comp=Z,17nm,0.5s			pmax	pmax			
AKT	**Akhty** comp=Z,15nm,0.4s	**1.19**	**113**	*e*Pg		**Pb**	**04 26 58.5**	**-0.4**
AKT	comp=Z,48nm,0.5s			*e*Sg		**Sb**	**04 27 14.3**	**-0.1**
AKT	**Akhty**	**1.19**	**113**	*e*PG		**Pg**	**04 26 57.6**	**-1.2**
AKT				*e*S		**Sb**	**04 27 14.4**	**-0.1**
AKT	comp=Z,24nm,0.2s			pmax	pmax			
AKT	comp=N,90nm,0.4s			smax	smax			
AKT	comp=E,136nm,0.4s			smax	smax			
AKT	comp=E,112nm,0.4s			smax	smax			
GDB	**GEDABAY**	**1.29**	**198**	P		**Pb**	**04 27 00.7**	**+0.1**
GDB				S		**Sn**	**04 27 18.8**	**+0.8**
GANJ	**Ganja**	**1.30**	**178**	P		**Pg**	**04 27 01.8**	**+0.8**
GANJ				S		**Sn**	**04 27 19.1**	**+0.9**
MNGR	**Mingechevir, A**	**1.32**	**152**	P		**Pg**	**04 27 02.2**	**+0.8**
MNGR				S		**Sn**	**04 27 22.9**	**+4.2**
KSMR	**Kasumkent** comp=E,18nm,0.3s	**1.43**	**103**	*e*Pg		**Pg**	**04 27 02.9**	**-0.5**
KSMR	**Kasumkent**	**1.43**	**103**	PG		**Pg**	**04 27 02.9**	**-0.5**
KSMR				S		**Sg**	**04 27 21.9**	**-0.1**
QBL	**Gabala**	**1.54**	**130**	P		**Pg**	**04 27 06.3**	**+0.7**
QBL				S		**Sg**	**04 27 28.7**	**+3.0**
QSAR	**Qusar**	**1.55**	**105**	P		**Pg**	**04 27 05.6**	**-0.1**
QSAR				S		**Sg**	**04 27 28.8**	**+2.9**
XNQ	**Khinaliq**	**1.60**	**118**	P		**Pg**	**04 27 06.7**	**-0.1**
XNQ				S		**Sg**	**04 27 30.8**	**+3.3**
QUBA	**Quba, Azerbaij**	**1.77**	**109**	P		**Pg**	**04 27 09.0**	**-0.9**
QUBA				S		**Sg**	**04 27 35.3**	**+2.5**
BRDA	**Brd**	**1.82**	**158**	P		**Pg**	**04 27 10.5**	**-0.4**
BRDA				S		**Sg**	**04 27 35.5**	**+1.1**
IML	**Ismayilli**	**1.84**	**128**	P		**Pb**	**04 27 09.4**	**-0.6**
IML				S		**Sg**	**04 27 37.1**	**+1.9**
AGDM	**Agdam**	**1.94**	**161**	P		**Pg**	**04 27 12.3**	**-1.0**
AGDM				S		**Sg**	**04 27 37.7**	**-0.7**
GNI	**Garni** comp=Z,29nm,0.6s	**2.14**	**213**	*i* PN		**Pb**	**04 27 15.0**	**-0.1**
GNI				pmax	pmax			
SIZA	**Siyzn**	**2.16**	**113**	P		**Pb**	**04 27 15.7**	**+0.3**
SIZA				S		**Sg**	**04 27 46.9**	**+1.6**
ATGJ	**Altiaghaj**	**2.28**	**118**	P		**Pb**	**04 27 16.5**	**-1.0**
ATGJ				S		**Sg**	**04 27 49.3**	**0.0**
BLQ	**Beylaqan**	**2.43**	**156**	S		**Sg**	**04 27 51.8**	**-2.2**
SBZ	**Shahbuz**	**2.61**	**192**	P		**Pb**	**04 27 21.5**	**-1.6**
SBZ				S		**Sg**	**04 27 56.3**	**+1.0**
QRD	**Qoradiz**	**2.61**	**162**	S		**Sg**	**04 27 58.4**	**-1.4**
NAX	**Nakhchivan**	**2.83**	**192**	S		**Sg**	**04 28 05.5**	**-1.5**
ORD	**Ordubad**	**3.02**	**184**	S		**Sb**	**04 28 07.2**	**-0.1**
YRD	**Yardimli**	**3.38**	**153**	S		**Sg**	**04 28 21.7**	**-2.9**
BORK	**Borovoye**	**19.58**	**47**	*i* P		**Pn**	**04 31 05.0**	**-0.6**
BORK	comp=Z,8.0nm,2.8s			pmax	pmax			
KURK	**Kurchatov**	**23.84**	**57**	*i* P		**P**	**04 31 48.9**	**-0.6**
KURK	comp=Z,2.0nm,1.1s			pmax	pmax			

SNET ***31*** *04:28:16.1±1.8, 12˚.92N×89˚.56W, h23km, ML3.5, Presumed earthquake*
CATAC ***31*** *04:28:16.9±0.5, 13˚N±2˚×9˚0W±˚, h18km±3km, M3.6/29, MLv3.6/29, Error ellipse: s-maj=4.8km s-min=3.3km az=33.8, confirmed*

ISC 31 04:28:17.4±1.6, 12˚.98N±0˚.06×89˚.52W±0˚.04, h25km±13km, n57, σ0°53/87, 15D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.55**	**21**	ǁP		**Pn**	**04 28 28.9**	**-0.7**
LALI				S		**Sn**	**04 28 37.9**	**0.0**
LALI	**Alcalda de L**	**0.55**	**21**	*e*P		**Pn**	**04 28 28.9**	**-0.7**
LALI				*e*S		**Sb**	**04 28 36.8**	**+0.9**
JAYA	**Jayaque - finc**	**0.68**	**6**	ǁP		**Pb**	**04 28 30.6**	**-0.1**
JAYA	**Jayaque - finc**	**0.68**	**6**	*e*P		**Pb**	**04 28 30.6**	**-0.1**
JAYA				*e*S		**Sn**	**04 28 41.3**	**-0.2**
PANCS	**Alcalda de**	**0.71**	**28**	P		**Pb**	**04 28 31.2**	**0.0**
PANCS				S		**Sn**	**04 28 41.8**	**-0.4**
LOMA	**Loma Larga**	**0.75**	**27**	*e*P		**Pb**	**04 28 32.0**	**+0.1**
PMON	**Piamonte**	**0.76**	**15**	P		**Pb**	**04 28 32.0**	**0.0**
PMON	**Piamonte**	**0.76**	**15**	*e*P		**Pb**	**04 28 31.9**	**-0.1**
PMON				*e*S		**Sn**	**04 28 43.4**	**0.0**
SEMO	**Seminario San**	**0.78**	**22**	P		**Pb**	**04 28 32.1**	**-0.2**
SEMO				S		**Sn**	**04 28 43.5**	**-0.3**
LFRS	**El Faro**	**0.78**	**35**	*e*P		**Pn**	**04 28 32.6**	**-0.4**
UTEC	**Universidad Te**	**0.78**	**23**	P		**Pb**	**04 28 32.4**	**0.0**
UTEC				S		**Sn**	**04 28 43.9**	**-0.1**
UEES	**Universidad Ev**	**0.79**	**21**	ǁP		**Pb**	**04 28 32.4**	**-0.1**
UEES	**Universidad Ev**	**0.79**	**21**	*e*P		**Pb**	**04 28 32.5**	**0.0**
UEES				*e*S		**Sn**	**04 28 43.8**	**-0.2**
BOQS	**Boqueron**	**0.79**	**17**	*e*P		**Pn**	**04 28 32.8**	**-0.4**
BOQS				*e*S		**Sn**	**04 28 44.0**	**-0.3**
PIC2	**El Picacho**	**0.81**	**19**	*e*P		**Pn**	**04 28 33.1**	**-0.3**
SJTE	**Alcalda de S**	**0.81**	**38**	*e*P		**Pb**	**04 28 32.7**	**-0.1**
SJTE				*e*S		**Sn**	**04 28 44.5**	**-0.1**
IGN	**Direccin Gen**	**0.81**	**25**	P		**Pb**	**04 28 32.8**	**-0.1**
IGN				S		**Sn**	**04 28 44.6**	**0.0**
UDBS	**Universidad Do**	**0.82**	**26**	P		**Pb**	**04 28 32.9**	**-0.1**
UDBS				S		**Sb**	**04 28 44.4**	**+0.8**
CEDA	**San Andres**	**0.83**	**9**	ǁP		**Pb**	**04 28 33.0**	**-0.2**
CEDA				S		**Sb**	**04 28 44.8**	**+0.8**
CEDA	**San Andres**	**0.83**	**9**	*e*P		**Pb**	**04 28 33.0**	**-0.2**
CEDA				*e*S		**Sn**	**04 28 45.1**	**0.0**
SBLS	**San Blas**	**0.86**	**354**	*e*P		**Pb**	**04 28 33.5**	**-0.4**
SBLS				*e*S		**Sn**	**04 28 45.9**	**-0.2**
SNJE	**San Jose**	**0.89**	**355**	*e*P		**Pb**	**04 28 33.8**	**-0.6**
COEG	**Centro de Oper**	**0.89**	**44**	ǁP		**Pb**	**04 28 34.0**	**-0.4**
COEG				S		**Sn**	**04 28 46.6**	**-0.1**
TECO	**Alcaldia de Te**	**0.91**	**52**	ǁP		**Pb**	**04 28 34.0**	**-0.6**
TECO	**Alcaldia de Te**	**0.91**	**52**	*e*P		**Pb**	**04 28 34.1**	**-0.4**
TECO				*e*S		**Sn**	**04 28 47.0**	**-0.1**
RTR	**El Retiro**	**0.92**	**353**	*e*P		**Pb**	**04 28 34.5**	**-0.4**
PAVA	**Las Pavas**	**0.93**	**38**	ǁP		**Pb**	**04 28 34.9**	**-0.1**
PAVA				S		**Sn**	**04 28 47.8**	**+0.2**
PAVA	**Las Pavas**	**0.93**	**38**	*e*P		**Pb**	**04 28 34.9**	**-0.1**
PAVA				*e*S		**Sn**	**04 28 48.3**	**+0.7**
FAME	**Alcaldia de Sa**	**0.98**	**331**	ǁP		**Pb**	**04 28 34.4**	**-1.4**
FAME				S		**Sb**	**04 28 47.2**	**-1.2**
UNIC	**Universidad Ca**	**1.00**	**359**	ǁP		**Pb**	**04 28 35.4**	**-0.7**
UNIC				S		**Sn**	**04 28 49.4**	**+0.1**
LOAL	**Lomas de Alarc**	**1.04**	**346**	P		**Pn**	**04 28 36.1**	**-0.5**
SCLA	**Alcaldia de Sa**	**1.06**	**47**	ǁP		**Pb**	**04 28 36.7**	**-0.3**
SCLA	**Alcaldia de Sa**	**1.06**	**47**	*e*P		**Pb**	**04 28 36.7**	**-0.3**
SLOZ	**Alcaldia de Sa**	**1.07**	**346**	ǁP		**Pn**	**04 28 36.4**	**-0.6**
SLOZ				S		**Sb**	**04 28 51.3**	**+0.3**
P5NO	**Presa 5 de nov**	**1.25**	**36**	P		**Pb**	**04 28 39.6**	**-0.7**
P5NO				S		**Sb**	**04 28 56.2**	**+0.2**
PACA	**Pacayal**	**1.27**	**67**	ǁP		**Pn**	**04 28 39.5**	**-0.1**
PACA	**Pacayal**	**1.27**	**67**	*e*P		**Pn**	**04 28 39.6**	**-0.1**
PACA				*e*S		**Sn**	**04 28 56.1**	**+0.2**
RANC	**El Ranchito**	**1.28**	**69**	P		**Pb**	**04 28 40.1**	**-0.9**
MTO3	**Montecristo**	**1.42**	**6**	ǁP		**Pn**	**04 28 41.9**	**0.0**
MTO3				S		**Sb**	**04 29 01.8**	**+0.6**
INTP	**Intipuca**	**1.45**	**81**	*e*P		**Pn**	**04 28 41.7**	**-0.3**
INTP				*e*S		**Sn**	**04 28 59.6**	**-0.7**
ESQI	**Esquipulas**	**1.58**	**6**	P		**Pn**	**04 28 44.2**	**+0.2**
LCND	**La Caada**	**1.62**	**78**	ǁP		**Pn**	**04 28 44.4**	**0.0**
CNCH	**Conchagua**	**1.67**	**80**	P		**Pn**	**04 28 45.1**	**-0.2**
CNCH				S		**Sn**	**04 29 06.0**	**0.0**
CNCH	**Conchagua**	**1.67**	**80**	*e*P		**Pn**	**04 28 45.5**	**+0.3**
CNCH				*e*S		**Sn**	**04 29 06.2**	**+0.2**
CSGN	**Cosiguina Volc**	**1.92**	**90**	P		**Pn**	**04 28 48.8**	**+0.3**
SARH	**Santa Rosa de**	**1.94**	**22**	ǁP		**Pn**	**04 28 49.9**	**+1.0**
POTN	**Potosi Cosigui**	**1.97**	**89**	P		**Pn**	**04 28 50.0**	**+0.9**
POTN				S		**Sn**	**04 29 14.0**	**+0.9**
TGUH	**Tegucigalpa,Un**	**2.44**	**64**	P		**Pn**	**04 28 55.9**	**+0.1**
RTAL	**Retalhuleu**	**2.61**	**306**	P		**Pn**	**04 28 58.6**	**+0.6**
RTAL				S		**Sn**	**04 29 31.4**	**+2.4**
TEL3	**Telica 3**	**2.64**	**98**	P		**Pn**	**04 28 58.8**	**+0.2**
HERN	**Volcan Telica**	**2.65**	**98**	P		**Pn**	**04 28 57.9**	**-0.8**
YUSH	**Yuscaran**	**2.78**	**69**	P		**Pn**	**04 29 00.8**	**+0.3**
MOM3	**MOM3**	**2.97**	**99**	P		**Pn**	**04 29 02.9**	**-0.1**
COPN	**Copaltepe**	**2.97**	**105**	P		**Pn**	**04 29 02.8**	**-0.1**
OCON	**Estacion meteo**	**3.04**	**77**	P		**Pn**	**04 29 04.4**	**+0.5**
LIMN	**Finca el Limon**	**3.08**	**88**	P		**Pn**	**04 29 04.6**	**+0.1**
MATN	**Matagalpa**	**3.51**	**90**	P		**Pn**	**04 29 09.8**	**-0.7**

JMA 31 05:03:44.9±0.2, 37˚.9N±0˚.8×144˚.4E±0˚.9, h51km, MV3.5/30, FAR E OFF NORTH HONSHU, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.35**	**282**	*i* P		**Pn**	**05 04 22.0**	**+1.0**
JIKH				*e*S		**Sn**	**05 04 49.7**	**+1.0**
OFUJ	**Ofunato**	**2.46**	**300**	*i* P		**Pn**	**05 04 23.6**	**+1.1**
OFUJ				*e*S		**Sn**	**05 04 52.5**	**+1.3**
JIO	**Ouri**	**2.47**	**285**	P		**Pn**	**05 04 23.8**	**+1.2**
JIO				*e*S		**Sn**	**05 04 52.7**	**+1.1**
JKMT	**Kesennumamotoy**	**2.48**	**293**	P		**Pn**	**05 04 23.9**	**+1.1**
JMK	**Ichinoseki**	**2.72**	**295**	P		**Pn**	**05 04 27.7**	**+1.7**
JOM	**Ohasama**	**2.91**	**304**	P		**Pn**	**05 04 30.3**	**+1.6**
JANG	**Nango**	**3.36**	**319**	*e*P		**Pn**	**05 04 36.1**	**+1.2**
BSO1	**Boso 1**	**4.23**	**222**	*e*P		**Pn**	**05 04 45.1**	**-1.2**
BSO1				*e*S		**Sn**	**05 05 34.1**	**0.0**
JOT	**Ohata**	**4.36**	**325**	*e*P		**Pn**	**05 04 50.5**	**+2.0**
JOT				*e*S		**Sn**	**05 05 37.3**	**-0.7**
JRY	**Ryogami san**	**4.77**	**249**	P		**Pn**	**05 04 55.0**	**+0.8**
JRY				*e*S		**Sn**	**05 05 46.6**	**-1.6**
JCH	**Churui**	**4.81**	**351**	P		**Pn**	**05 04 54.5**	**-0.2**
JCH				*e*S		**Sn**	**05 05 46.1**	**-3.0**
NEM2	**Nemuro 2**	**5.59**	**10**	*e*P		**Pn**	**05 05 02.7**	**-2.7**
NEM2				*e*S		**Sn**	**05 06 02.0**	**-6.3**
JOSM	**Okushiri--Mats**	**5.66**	**320**	*e*P		**Pn**	**05 05 07.1**	**+1.1**
JTKR	**Abashiri--Toko**	**6.11**	**357**	*e*P		**Pn**	**05 05 12.2**	**-0.4**
JTKR				*e*S		**Sn**	**05 06 16.9**	**-4.2**

ASRS ***31*** *05:08:53.0±1.3, 54˚.70N×83˚.69E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*

IDC 31 05:08:55.6±2.5, 54˚.64N×83˚.81E, h0km, mbtmp2.6/2, ML2.3/2, Error ellipse: s-maj=20.2km s-min=11.8km az=174.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** 0.2nm,0.8s,baz=318,slow=329,SNR=7.7	**0.91**	**139**	I		I	05 14 20.0	
ZALV	**Zalesovo Beam** 1.5nm,

H11N2	**WAKE ISLAND Hy**	**26.99**	**121**	T	T	06 53 07.2		
	baz=312,slow=75,SNR=4.6							
H11N1	**WAKE ISLAND Hy**	**27.00**	**121**	T	T	06 53 02.0		
	baz=312,slow=75,SNR=4.3							
H11N3	**WAKE ISLAND Hy**	**27.01**	**121**	T	T	06 53 05.3		
	baz=312,slow=75,SNR=3.0							
H11S1	**WAKE ISLAND Hy**	**27.70**	**123**	T	T	06 54 00.8		
	baz=307							
H11S3	**WAKE ISLAND Hy**	**27.70**	**123**	T	T	06 53 51.7		
	baz=307							
H11S2	**WAKE ISLAND Hy**	**27.71**	**123**	T	T	06 53 53.3		
	baz=307							
SONM	**Songino Array**	**28.95**	**305**	P	**P**	**06 25 07.6**		**+1.4**
	0.6nm,0.5s,baz=114,slow=8.0,SNR=4.1							
	0.6nm,0.5s							
MKAR	**Makanchi Array**	**45.28**	**303**	P	**P**	**06 27 25.3**		**+1.0**
	1.1nm,0.7s,baz=90,slow=11,SNR=3.9							
	1.1nm,0.7s							
KURBB	**Kurchatov Arra**	**47.17**	**309**	P	**P**	**06 27 39.6**		**+0.5**
	0.7nm,0.6s,baz=84,slow=7.8,SNR=7.7							
	0.7nm,0.6s							
ILAR	**Eielson Array**	**49.65**	**32**	P	P	06 28 01.3		+3.3
	0.1nm,0.6s,baz=269,slow=7.5,SNR=1.4							
	0.1nm,0.6s							
WRA	**Warramunga Arr**	**56.46**	**189**	P	**P**	**06 28 48.4**		**-0.2**
	0.4nm,0.8s,baz=7.4,slow=7.3,SNR=4.7							
	0.4nm,0.8s							
ASAR	**Alice Springs**	**60.18**	**189**	P	**P**	**06 29 16.1**		**+1.5**
	0.2nm,0.8s,baz=18,slow=9.8,SNR=1.4							
	0.2nm,0.8s							

*ASRS **31** 06:30:07.0±0.8, 54°.20N×87°.16E, h0km, M2.6(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 31 06:30:07.1±3.5, 54°.22N×87°.51E, h0km, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=30.7km s-min=20.5km az=38.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.61**	**261**	I	I	06 40 20.0	
	baz=79,slow=327,SNR=9.2						
ZALV	**Zalesovo Beam**	**1.61**	**261**	Pg	Pn	06 30 35.0	-1.8
	1.6nm,0.3s,baz=75,slow=16,SNR=17						
ZALV				Lg	Lg	06 30 58.9	
	0.7nm,0.3s,baz=80,slow=25,SNR=5.0						
KURBB	**Kurchatov Arra**	**6.56**	**240**	Pn	Pn	06 31 46.1	+1.3
	0.1nm,0.3s,baz=55,slow=14,SNR=5.7						
KURBB				Lg	Lg	06 33 32.9	
	baz=60,slow=30,SNR=2.3						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**8.14**	**206**	Pn	Pn	06 32 07.2	+0.7
	0.1nm,0.3s,baz=25,slow=15,SNR=1.6						
	0.1nm,0.3s						

IDC 31 06:31:41.9±3.4, 23°.51S×64°.46W, h0km, mb3.7/1, mbtmp3.4/4, ML3.6/3, Error ellipse: s-maj=57.9km s-min=21.3km az=49.0, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPUP	**Villa Florida**	**7.06**	**115**	Pn	Pn	06 33 24.9	-1.6
	0.7nm,0.3s,baz=288,slow=12,SNR=29						
CPUP				Pg	Pb	06 33 50.2	+4.8
	0.9nm,0.3s,baz=288,slow=17,SNR=7.1						
CPUP				Lg	Lg	06 35 28.5	
	1.3nm,0.3s,baz=220,slow=17,SNR=3.8						
	4.2nm,0.7s						
LPAZ	**La Paz**	**7.97**	**334**	Pn	Pn	06 33 40.6	+0.9
	0.1nm,0.3s,baz=153,slow=11,SNR=1.9						
LPAZ				Sn	Sn	06 35 11.4	+0.4
	0.3nm,0.3s,baz=94,slow=9.6,SNR=1.7						
	0.4nm,0.4s						
SIV	**San Ignacio**	**8.13**	**24**	Pn	Pn	06 33 41.8	+0.4
	0.1nm,0.3s,baz=209,slow=10,SNR=20						
SIV				Sn	Sn	06 35 12.8	-1.4
	0.1nm,0.3s,baz=187,slow=12,SNR=3.6						
	0.9nm,0.3s						
TORD	**Torodi Ar. Bea**	**74.23**	**68**	P	P	06 43 21.5	+0.3
	0.4nm,0.6s,baz=253,slow=5.2,SNR=2.3						
	0.4nm,0.6s						

*ASRS **31** 06:36:41.0±1.8, 53°.73N×91°.08E, h0km, M2.6(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 31 06:36:47.3±4.8, 53°.64N×90°.75E, h0km, mbtmp3.0/2, ML2.5/2, Error ellipse: s-maj=49.2km s-min=27.9km az=40.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.53**	**277**	I	I	07 02 10.0	
	baz=92,slow=331,SNR=1.2						
ZALV	**Zalesovo Beam**	**3.53**	**277**	Pg	Pb	06 37 50.4	-0.3
	0.9nm,0.3s,baz=94,slow=15,SNR=6.2						
ZALV				Lg	Lg	06 38 39.5	
	0.6nm,0.3s,baz=96,slow=26,SNR=5.0						
KURBB	**Kurchatov Arra**	**8.11**	**253**	Pn	Pn	06 38 46.4	+0.2
	0.1nm,0.3s,baz=65,slow=15,SNR=5.6						
KURBB				Lg	Lg	06 41 04.7	
	baz=69,slow=36,SNR=6.6						
	0.8nm,0.4s						
MKAR	**Makanchi Array**	**8.74**	**222**	Pn	Pn	06 38 55.5	+0.6
	0.1nm,0.3s,baz=30,slow=12,SNR=1.2						
	0.2nm,0.5s						

*IDC **31** 06:42:49.6±1.3, 17°.15N×62°.08W, h104km±7km, mb3.4/6, mbtmp3.9/10, MS3.4/3, Error ellipse: s-maj=25.3km s-min=16.8km az=4.0*
*TRN **31** 06:42:49.3, 17°.17N×62°.10W, h105km, MD4.4, North-west of Barbuda. Felt in St. Barthelemy MMI IV.*
*NEIC **31** 06:42:50.7±0.6, 17°.18N±0°.08×62°.10W±0°.09, h108km±7km, mb4.3/14, Error ellipse: s-maj=15.4km s-min=6.7km az=224.0*
*PTWC **31** 06:42:50, 17°.20N×62°.10W, h108km, Ml4.3/12*
ISC 31 06:42:50.0±0.6, 17°.18N±0°.04×62°.08W±0°.05, h110km±5km, n101, σ0s68/118, mb4.1/11, 3C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANWB	**Willy Bob**	**0.57**	**30**		**Pn**	**06 43 08.2**	**+1.0**
ANWB	**Willy Bob**	**0.57**	**30**	P	**Pn**	**06 43 08.2**	**+1.0**
ANWB	**Willy Bob**	**0.57**	**30**	*eP*	**Pn**	**06 43 08.1**	**+0.8**
ANWB				*eS*	**Sn**	**06 43 20.5**	**+0.3**
SKI	**Saint Kitts**	**0.65**	**284**	*eP*	**Pn**	**06 43 08.2**	**+0.4**
SKI				*eS*	**Sn**	**06 43 20.9**	**-0.4**
ABD	**La Joyeuse, An**	**0.90**	**141**		**Pn**	**06 43 10.8**	**+0.6**
ABD	**La Joyeuse, An**	**0.90**	**141**	P	**Pn**	**06 43 10.9**	**+0.8**
SEUS	**St. Eustatius**	**0.91**	**290**		**Pn**	**06 43 10.9**	**+0.7**
SEUS	**St. Eustatius**	**0.91**	**290**	P	**Pn**	**06 43 10.0**	**-0.2**
SEUS	**St. Eustatius**	**0.91**	**290**	*iP*	**Pn**	**06 43 10.9**	**+0.7**
SEUS				*eS*	**Sn**	**06 43 25.6**	**+0.1**
DHSZ	**Broadband at M**	**0.95**	**161**	*eP*	**Pn**	**06 43 11.1**	**+0.5**
DHSZ				*eS*	**Sn**	**06 43 26.2**	**0.0**
GDHS	**Morne Mazeau,**	**0.95**	**161**		**Pn**	**06 43 11.4**	**+0.6**
GDHS	**Morne Mazeau,**	**0.95**	**161**	P	**Pn**	**06 43 11.3**	**+0.6**
CBE	**Ff, Capester**	**1.19**	**157**		**Pn**	**06 43 13.7**	**+0.4**
CBE	**Ff, Capester**	**1.19**	**157**	P	**Pn**	**06 43 14.3**	**+1.0**
SABA	**Saba**	**1.19**	**292**		**Pn**	**06 43 13.6**	**+0.4**
SABA	**Saba**	**1.19**	**292**	P	**Pn**	**06 43 13.8**	**+0.6**
SABA	**Saba**	**1.19**	**292**	*iP*	**Pn**	**06 43 13.5**	**+0.3**
SABA				*eS*	**Sn**	**06 43 30.5**	**-0.3**
MMLZ	**Guadeloupe Bro**	**1.19**	**161**	*eP*	**Pn**	**06 43 14.1**	**+0.9**
MMLZ				*eS*	**Sn**	**06 43 31.9**	**+1.1**
SMRT	**St. Maarten**	**1.28**	**313**		**Pn**	**06 43 14.4**	**+0.1**
SMRT	**St. Maarten**	**1.28**	**313**	P	**Pn**	**06 43 14.4**	**+0.1**
SMRT	**St. Maarten**	**1.28**	**313**	*eP*	**Pn**	**06 43 14.2**	**0.0**
SMRT				*eS*	**Sn**	**06 43 31.8**	**-0.8**
DSDZ	**La Diserade, G**	**1.30**	**131**	*eP*	**Pn**	**06 43 15.0**	**+0.6**
DSDZ				*eS*	**Sn**	**06 43 33.1**	**+0.2**
GDSD	**La Dsirade Is**	**1.30**	**131**		**Pn**	**06 43 15.1**	**+0.6**
H05N1	**Guadeloupe/Mar**	**1.30**	**131**	P	**Pn**	**06 43 15.2**	**+0.8**
H05N1				S	**Sn**	**06 43 32.9**	**-0.2**
	SNR=9493						
TBG	**Guadaloupe-3**	**1.38**	**162**	*eP*	**Pn**	**06 43 16.2**	**+0.8**
TBG				*eS*	**Sn**	**06 43 35.5**	**+0.9**
TDBA	**Terre de Bas,**	**1.39**	**162**		**Pn**	**06 43 16.4**	**+0.9**
MAGL	**Barre de l'ile**	**1.44**	**148**		**Pn**	**06 43 17.0**	**+0.8**
MAGL	**Barre de l'ile**	**1.44**	**148**	P	**Pn**	**06 43 16.9**	**+0.8**
MAGL	**Barre de l'ile**	**1.44**	**148**	*eS*	**Sn**	**06 43 36.7**	**+0.8**
DWS	**Wesley**	**1.76**	**155**	*eP*	**Pn**	**06 43 20.2**	**+0.2**
DWS				*eS*	**Sn**	**06 43 42.3**	**-0.5**
DSLB	**Salisbury**	**1.84**	**160**	P	**Pn**	**06 43 21.6**	**+0.6**
DSLB	**Salisbury**	**1.84**	**160**	*iP*	**Pn**	**06 43 21.8**	**+0.8**
DSLB				*eS*	**Sn**	**06 43 45.1**	**+0.5**
DLPL	**La Plaine**	**2.00**	**156**	P	**Pn**	**06 43 23.7**	**+0.7**
DLPL	**La Plaine**	**2.00**	**156**	*eP*	**Pn**	**06 43 23.9**	**+0.9**
DLPL				*eS*	**Sn**	**06 43 48.2**	**-0.1**
SVN	**Savane Anatole**	**2.48**	**159**		**Pn**	**06 43 29.9**	**+0.6**
SVN	**Savane Anatole**	**2.48**	**159**	*eP*	**Pn**	**06 43 29.8**	**+0.5**
SVN				*eS*	**Sn**	**06 43 58.2**	**-1.1**
CXM	**Morne La Croix**	**2.51**	**159**		**Pn**	**06 43 30.2**	**+0.5**
BIM	**Bigot**	**2.82**	**160**		**Pn**	**06 43 34.4**	**+0.8**
BIM	**Bigot**	**2.82**	**160**	P	**Pn**	**06 43 34.4**	**+0.8**
BIM	**Bigot**	**2.82**	**160**	*eP*	**Pn**	**06 43 33.8**	**+0.2**
BIM				*eS*	**Sn**	**06 44 06.8**	**-0.4**
MPOM	**Morne Pois Mar**	**2.96**	**156**		**Pn**	**06 43 35.9**	**+0.4**
MPOM	**Morne Pois Mar**	**2.96**	**156**	P	**Pn**	**06 43 35.8**	**+0.4**
H05S1	**Guadeloupe/Mar**	**2.99**	**156**	P	**Pn**	**06 43 36.3**	**+0.5**
H05S1				S	**Sn**	**06 44 10.5**	**-0.6**
	SNR=2657						
CUPR	**Culebra, Puert**	**3.25**	**291**		**Pn**	**06 43 39.4**	**+0.1**
CUPR	**Culebra, Puert**	**3.25**	**291**	P	**Pn**	**06 43 39.1**	**-0.2**
SLBI	**Saint Lucia, B**	**3.31**	**161**	*eP*	**Pn**	**06 43 40.2**	**+0.1**
SLBI				*eS*	**Sn**	**06 44 19.2**	**+0.3**
SLCP	**Castries, St.**	**3.32**	**161**	*eP*	**Pn**	**06 43 40.2**	**-0.1**
SLCP				*eS*	**Sn**	**06 44 19.5**	**+0.4**
MCLT	**Moule a Chique**	**3.62**	**162**	*eP*	**Pn**	**06 43 44.3**	**0.0**
MCLT				*eS*	**Sn**	**06 44 26.7**	**+0.5**
HUMP	**Col San Antoni**	**3.72**	**286**		**Pn**	**06 43 45.8**	**+0.3**
HUMP	**Col San Antoni**	**3.72**	**286**	P	**Pn**	**06 43 45.3**	**-0.2**
SVB	**Belmont**	**3.96**	**168**	P	**Pn**	**06 43 49.9**	**+1.0**
SVB	**Belmont**	**3.96**	**168**	*eP*	**Pn**	**06 43 49.6**	**+0.7**
SJG	**San Juan**	**3.99**	**284**	P	**Pn**	**06 43 49.7**	**+0.6**
	10nm,0.2s,baz=80,slow=4.3,SNR=9.0						
SJG				S	**Sn**	**06 44 34.8**	**-0.2**
	52nm,0.4s,baz=164,slow=23,SNR=14						
SJG	**San Juan**	**3.99**	**284**		**Pn**	**06 43 49.6**	**+0.4**
SJG	**San Juan**	**3.99**	**284**	*eP*	**Pn**	**06 43 49.6**	**+0.4**
ECPR	**Experimental S**	**4.23**	**286**	P	**Pn**	**06 43 52.9**	**+0.4**
OBIP	**Obispado Ponce**	**4.40**	**282**		**Pn**	**06 43 54.8**	**+0.2**
BBGH	**Gun Hill**	**4.69**	**148**	*eP*	**Pn**	**06 43 59.6**	**+0.9**
BBGH				*eS*	**Sn**	**06 44 49.9**	**-2.2**
GCMP	**Grenada, Carri**	**4.71**	**172**	*eP*	**Pn**	**06 43 58.8**	**-0.1**
MLPR	**Magueyes Islan**	**4.80**	**280**	Pn	**Pn**	**06 44 00.2**	**+0.2**
AGPR	**Aguadilla, PR**	**4.96**	**286**	Pn	**Pn**	**06 44 02.7**	**+0.4**
GRNF	**Grenada Fort F**	**5.11**	**176**	*eP*	**Pn**	**06 44 04.3**	**0.0**
TRN	**Trinidad (W)**	**6.52**	**174**	*eP*	**Pn**	**06 44 25.4**	**+1.9**
DR12	**Loma Pena Alta**	**7.13**	**284**	Pn	**Pn**	**06 44 33.2**	**+1.5**
BANI	**BANI**	**7.98**	**280**	Pn	**Pn**	**06 44 44.6**	**+1.3**
SDDR	**Presa de Saban**	**8.94**	**283**	Pn	**Pn**	**06 44 56.4**	**+0.2**
SDDR	**Presa de Saban**	**8.94**	**283**	*eP*	**Pn**	**06 44 56.2**	**-0.1**
SDV	**Santo Domingo**	**11.71**	**226**	P	**Pn**	**06 45 34.0**	**+0.1**
	3.6nm,0.8s,baz=13,slow=7.4,SNR=4.5						
BOAV	**Boa Vista**	**14.77**	**174**	Pn	**Pn**	**06 46 12.6**	**-0.9**
MDP	**Montagnes des**	**15.15**	**141**	P	**Pn**	**06 46 16.1**	**-2.2**
	11nm,1.0s,baz=333,slow=18,SNR=16						
MDP				S	Sn	06 48 51.2	-15
	10.0nm,0.5s,baz=54,slow=19,SNR=10						
MDP				LR	LR	06 53 10.8	
	comp=Z,27nm,18.2s,baz=216,slow=41						
ROSC	**EI Rosal**	**17.15**	**226**	P	**Pn**	**06 46 43.0**	**-0.4**
	4.7nm,0.5s,baz=226,slow=23,SNR=6.7						
ROSC	**EI Rosal**	**17.15**	**226**	P	**P**	**06 46 43.8**	**+0.5**
ROSC				IAmb	IAmb	06 46 45.6	
	comp=Z,28nm,1.5s						
SOR	**Soroa**	**20.43**	**289**	P	**P**	**06 47 18.7**	**0.0**
SOR				IAmb	IAmb	06 47 22.2	
	comp=Z,7.7nm,0.7s						
OTAV	**Otavalo**	**23.30**	**225**	P	**P**	**06 47 49.6**	**+0.6**
TEIG	**Tepich**	**24.99**	**281**	P	**P**	**06 48 04.1**	**+0.4**
SIV	**San Ignacio**	**32.97**	**178**	LR	LR	07 02 36.9	
	comp=Z,137nm,21.5s,baz=238,slow=36						
BRDY	**Brady**	**36.29**	**300**	P	**P**	**06 49 42.5**	**-0.6**
BRDY				IAmb	IAmb	06 49 43.3	
	comp=Z,2.6nm,0.6s						
WMOK	**Wichita Mounta**	**37.09**	**305**	P	**P**	**06 49 49.8**	**0.0**
ABTX	**Abilene, Hawle**	**37.16**	**302**	P	**P**	**06 49 50.6**	**+0.1**
OZNA	**Ozona**	**37.99**	**298**	P	**P**	**06 49 57.0**	**-0.5**
SAND	**Sanderson**	**38.65**	**297**	P	**P**	**06 50 02.4**	**-0.6**
SAND				IAmb	IAmb	06 50 03.4	
	comp=Z,6.6nm,1.5s						
ECSD	**EROS Data Cent**	**39.37**	**320**	P	**P**	**06 50 08.8**	**0.0**
TXAR	**Lajitas Array**	**39.88**	**295**	P	**P**	**06 50 13.4**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=133,slow=7.1,SNR=22						
	comp=Z,0.7nm,0.7s						
ALPN	**Alpine**	**40.01**	**297**	P	**P**	**06 50 13.9**	**-0.6**
ALPN				IAmb	IAmb	06 50 15.2	
	comp=Z,2.9nm,0.9s						
HTMS	**Hat Mesa**	**40.40**	**300**	P	**P**	**06 50 17.4**	**-0.2**
VHRN	**Van Horn**	**41.23**	**297**	P	**P**	**06 50 25.1**	**+0.7**
VHRN				IAmb	IAmb	06 50 25.7	
	comp=Z,4.1nm,0.6s						
MNTX	**Cornudas Mount**	**41.71**	**299**	P	**P**	**06 50 28.6**	**+0.4**
MNTX				IAmb	IAmb	06 50 29.2	
	comp=Z,3.0nm,0.6s						
ULM	**Lac du Bonnet**	**42.69**	**328**	P	**P**	**06 50 35.3**	**-0.5**
	comp=Z,1.6nm,0.3s,baz=133,slow=8.4,SNR=7.5						
	comp=Z,1.6nm,0.3s						
ULM	**Lac du Bonnet**	**42.69**	**328**	P	**P**	**06 50 35.9**	**+0.1**
ULM				IAmb	IAmb	06 51 17.1	
	comp=Z,9.9nm,1.5s						
PDAR	**Pinedale Array**	**47.59**	**313**	P	**P**	**06 51 15.3**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=120,slow=9.5,SNR=8.8						
	comp=Z,0.9nm,0.6s						
NVAR	**Mina Array Bea**	**53.19**	**305**	P	**P**	**06 51 58.3**	**+1.0**
	comp=Z,0.7nm,0.8s,baz=109,slow=5.9,SNR=5.6						
NVAR				pP	**pP**	**06 52 23.0**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=89,slow=7.2,SNR=2.1						
	comp=Z,0.7nm,0.8s						
H10N3	**ASCENSION HYDR**	**53.19**	**114**	T	T	07 49 08.8	
	baz=299,slow=75,SNR=9.2						
H10N2	**ASCENSION HYDR**	**53.20**	**114**	T	T	07 49 28.4	
	baz=299,slow=75,SNR=17						
H10N1	**ASCENSION HYDR**	**53.22**	**114**	T	T	07 49 25.5	
	baz=299,slow=75,SNR=38						
H10S3	**ASCENSION HYDR**	**53.58**	**115**	T	T	07 49 40.6	
	baz=293,slow=74,SNR=4.4						
H10S2	**ASCENSION HYDR**	**53.60**	**115**	T	T	07 50 05.0	
	baz=287,slow=74,SNR=4.3						
YKA	**Yellowknife Ar**	**57.99**	**334**	P	**P**	**06 52 31.4**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=102,slow=7.0,SNR=10						
YKA				pP	**pP**	**06 52 56.5**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=108,slow=6.8,SNR=4.9						
	comp=Z,0.3nm,0.7s						
RPN	**Rapa Nui**	**63.56**	**227**	LR	LR	07 17 34.8	
	comp=Z,59nm,20.3s,baz=38,slow=33						
ILAR	**Eielson Array**	**72.40**	**333**	P	**P**	**06 54 04.8**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=96,slow=4.7,SNR=8.5						
ILAR				pP	**pP**	**06 54 30.6**	**-0.8**
	comp=Z,0.1nm,0.5s,baz=79,slow=3.9,SNR=2.2						
	comp=Z,0.2nm,0.4s						
HHC	**Hu-ho-hao-te**	**121.97**	**6**	*eP*	**PKPdf**	**07 01 32.0**	**0.0**
PZH	**PanZhiHua**	**133.82**	**20**	PKP	**PKPdf**	**07 01 54.3**	**-0.7**

*IDC **31** 06:56:27.6±0.9, 23°.75S×64°.34W, h0km, mb3.6/5, mbtmp3.7/10, ML3.7/5, MS3.2/3, Error ellipse: s-maj=28.3km s-min=19.3km az=75.0*
*SJA **31** 06:56:30.1±0.9, 23°.60S×64°.59W, h10km±10km, ML3.8, MW3.9*
*VAO **31** 06:56:32.5±2.1, 23°.60S×63°.90W, h9km±15km, mb4.5, Presumed earthquake*
*NEIC **31** 06:56:33.1±1.5, 23°.54S±0°.08×64°.31W±0°.08, h28km±8km, mb4.1/4, Error ellipse: s-maj=12.5km s-min=11.0km az=158.0*
ISC 31 06:56:29.3±0.5, 23°.65S±0°.05×64°.30W±0°.05, h10km, n69, σ1s70/68, mb3.5/5, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HJA	**Humahuaca**	**1.11**	**293**	*iP*	**Pg**	**06 56 47.4**	**-3.4**
HJA				IAML		06 57 11.7	
	comp=Z,4μm,0.4s						
SLA	**San Lorenzo**	**1.53**	**226**	*iP*	**Pn**	**06 56 56.4**	**-0.4**
SLA				*iS*	**Sg**	**06 57 20.0**	**+1.4**
SLA				IAML		06 57 26.4	
	comp=Z,1μm,0.5s						
YJA	**Yavi**	**1.85**	**322**	*iP*	**Pn**	**06 57 01.7**	**+0.3**
YJA				*eS*	**Sn**	**06 57 24.3**	**-0.9**
YJA				IAML		06 57 57.6	
	comp=Z,574nm,0.5s						
SALTA		**1.95**	**253**	*iP*	**Pn**	**06 57 03.5**	**+0.5**
SALTA				*iS*	**Sn**	**06 57 25.9**	**-1.9**
SALTA				IAML		06 57 57.7	
	comp=Z,6μm,0.7s						
FSA	**Cafayete**	**2.88**	**212**	*iP*	**Pn**	**06 57 15.7**	**+0.2**
AF01	**San Pedro de A**	**3.64**	**280**	Pn	**Pn**	**06 57 28.6**	**+2.6**
PB09	**IPOC Station P**	**4.92**	**291**	Pn	**Pn**	**06 57 44.7**	**+1.2**
PB09	**IPOC Station P**	**4.92**	**291**	*iP*	**Pn**	**06 57 45.7**	**+2.1**
PB09				IAML		06 59 20.1	
	comp=Z,38nm,1.4s						
PB06	**IPOC Station P**	**4.95**	**280**	Pn	**Pn**	**06 57 45.4**	**+1.6**
PB06	**IPOC Station P**	**4.95**	**280**	*iP*	**Pn**	**06 57 45.8**	**+2.0**
PB06				IAML		06 58 58.0	
	comp=Z,52nm,1.3s						
PB03	**IPOC Station P**	**5.28**	**287**	Pn	**Pn**	**06 57 49.0**	**+0.6**
PB03	**IPOC Station P**	**5.28**	**287**	IAML		06 59 32.3	
	comp=Z,26nm,2.5s						
TINO	**Tinogasta**	**5.29**	**213**	*iP*	**Pn**	**06 57 50.5**	**+2.0**
AC02	**Maricunga**	**5.40**	**233**	Pn	**Pn**	**06 57 53.9**	**+3.5**
PB01	**IPOC Station P**	**5.46**	**297**	Pn	**Pn**	**06 57 52.4**	**+1.5**
PB05	**IPOC Station P**	**5.49**	**277**	Pn	**Pn**	**06 57 52.6**	**+1.4**
PB07	**IPOC Station P**	**5.51**	**289**	Pn	**Pn**	**06 57 51.7**	**+0.2**
PB02	**IPOC Station P**	**5.67**	**293**	Pn	**Pn**	**06 57 54.9**	**+1.1**
PB08	**IPOC Station P**	**5.71**	**307**	Pn	Pn	06 57 49.1	-5.4
GO01	**Chusmiza**	**6.04**	**310**	Pn	**Pn**	**06 57 59.9**	**+0.8**
TA01	**Diego Aracena**	**6.26**	**298**	Pn	**Pn**	**06 58 02.3**	**+0.6**
MURT	**Porto Murtinho**	**6.49**	**73**	*eP*	**Pn**	**06 58 02.9**	**-1.9**
PSGCX	**Pisagua**	**6.76**	**306**	Pn	**Pn**	**06 58 09.1**	**+0.5**
CPUP	**Villa Florida**	**6.86**	**114**	Pn	**Pn**	**06 58 10.6**	**+0.6**
	comp=Z,2.0nm,0.3s,baz=286,slow=12,SNR=84						
CPUP				LR	LR	07 01 21.7	
	comp=Z,401nm,18.5s,baz=306,slow=43						
	comp=Z,26nm,0.8s						
BBSD	**Serra de San D**	**7.30**	**29**	*eP*	**Pn**	**06 58 16.1**	**0.0**
BDQN	**Bodoquena, MS**	**7.69**	**67**	*eP*	**Pn**	**06 58 20.2**	**-1.2**
LPAZ	**La Paz**	**8.17**	**333**	Pn	**Pn**	**06 58 29.3**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=142,slow=8.4,SNR=9.1						
LPAZ				LR	LR	07 01 35.3	
	comp=Z,80nm,20.4s,baz=44,slow=37						
	comp=Z,1.0nm,0.3s						
SIV	**San Ignacio**	**8.20**	**22**	Pn	**Pn**	**06 58 29.6**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=181,slow=7.5,SNR=26						
	comp=Z,5.3nm,0.4s						
AQDB	**Aquidauana**	**8.58**	**70**	Pn	**Pn**	**06 58 34.7**	**+1.1**
AQDB	**Aquidauana**	**8.58**	**70**	*eP*	**Pn**	**06 58 32.3**	**-1.2**
CFA	**Coronel Fontan**	**8.66**	**203**	Pn	**Pn**	**06 58 31.3**	**-3.4**
	comp=Z,0.2nm,0.3s,baz=20,slow=14,SNR=5.8						
CFA				Lg	Lg	07 00 55.2	
	comp=Z,1.0nm,0.3s,baz=94,slow=5.5,SNR=4.1						
	comp=Z,0.3nm,0.3s						
PSAL	**Palomas, Salto**	**9.49**	**143**	*eP*	**Pn**	**06 58 47.2**	**+1.2**
PTLB	**Pontes e Lacer**	**9.50**	**32**	Pn	**Pn**	**06 58 45.5**	**-0.7**
PTLB	**Pontes e Lacer**	**9.50**	**32**	*eP*	**Pn**	**06 58 47.5**	**+1.3**
PP1B	**Ponte de Pedra**	**10.68**	**57**	*eP*	**Pn**	**06 59 01.2**	**-1.1**
TRCB	**Terra Rica**	**10.76**	**88**	*eP*	**Pn**	**06 59 01.6**	**-1.9**
SALV	**Santo Antonio**	**11.18**	**48**	*eP*	**Pn**	**06 59 05.8**	**-3.5**
VILB	**Vilhena**	**11.33**	**21**	*eP*	**Pn**	**06 59 12.7**	**+1.4**
ITAB	**Concordia**	**11.56**	**111**	Pn	**Pn**	**06 59 16.9**	**+2.5**
ITAB	**Concordia**	**11.56**	**111**	*eP*	**Pn**	**06 59 13.5**	**-0.9**
CPSB	**Cacapava Do Su**	**11.78**	**127**	*eP*	**Pn**	**06 59 17.7**	**+0.3**
LDASE	**Londrina, Braz**	**12.10**	**91**	*eP*	**Pn**	**06 59 20.9**	**-0.9**
CNLB	**Canela**	**13.29**	**118**	*eP*	**Pn**	**06 59 36.2**	**-2.0**
FRTB	**Fartura**	**13.52**	**92**	*eP*	**Pn**	**06 59 40.4**	**-0.9**
TRQA	**Tornquist**	**14.49**	**173**	Pn	**Pn**	**06 59 52.6**	**-1.9**
TRQA	**Tornquist**	**14.49**	**173**	*eP*	**Pn**	**06 59 57.8**	**+3.3**
BB19B	**Bebedouro**	**14.81**	**83**	*eP*	**Pn**	**06 59 57.4**	**-1.6**
VAO	**Valinhos**	**15.94**	**91**		**P**	**07 00 16.8**	**-0.6**
VAO				IAmb	IAmb	07 00 37.2	
	comp=Z,11nm,1.0s						
SNDB	**Serra Nova Dou**	**

1.5nm,0.7s,baz=298,slow=3.0,SNR=7.1

*NNC **31** 07:05:17.6±0.4, 50°.03N×78°.82E, h0km, mb3.0, mpv2.0, Error ellipse: s-maj=10.8km s-min=1.9km az=71.0, Suspected Mining explosion.*
*IDC **31** 07:05:17.6±1.1, 50°.07N×78°.80E, h0km, mbtmp2.4/2, ML1.6/1, Error ellipse: s-maj=9.2km s-min=7.0km az=54.0*
ISC 31 07:05:17.6±1.3, 50.11N±0.08×78.8E±0.2, h0km, n15, σ0s70/25, 13C-7D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.51**	**341**	⇑P		**Pb**		**07 05 29.1**	**-0.3**
KUR07				⇑S		**Sb**		**07 05 37.7**	**+0.4**
KUR14	**Kurchatov Arra**	**0.52**	**347**	⇑P		**Pb**		**07 05 29.4**	**-0.2**
KUR14				⇓S		**Sb**		**07 05 38.1**	**+0.4**
KUR06	**Kurchatov Arra**	**0.52**	**342**	⇓P		**Pb**		**07 05 29.3**	**-0.4**
KUR06				⇑S		**Sb**		**07 05 38.4**	**+0.6**
KUR15	**Kurchatov Arra**	**0.53**	**345**	⇑P		**Pb**		**07 05 29.6**	**-0.2**
KUR15				⇑S		**Sb**		**07 05 38.3**	**+0.3**
KURBB	**Kurchatov Arra**	**0.54**	**343**	Pg		**Pg**		**07 05 28.7**	**+0.7**
	0.3nm,0.3s,baz=167,slow=19,SNR=13								
KURBB				Lg		Lg		07 05 37.8	
	0.6nm,0.3s,baz=161,slow=34,SNR=12								
KURBB	**Kurchatov Arra**	**0.54**	**343**	⇓P		**Pb**		**07 05 29.9**	**0.0**
	0.9nm,0.2s								
KURBB				⇑S		**Sb**		**07 05 39.0**	**+0.7**
	27nm,0.6s								
KUR16	**Kurchatov Arra**	**0.55**	**341**	⇓P		**Pb**		**07 05 30.0**	**-0.1**
KUR16				⇑S		**Sb**		**07 05 38.8**	**+0.2**
KUR05	**Kurchatov Arra**	**0.56**	**344**	⇑P		**Pb**		**07 05 29.8**	**-0.4**
KUR05				⇑S		**Sb**		**07 05 38.9**	**+0.1**
KUR17	**Kurchatov Arra**	**0.56**	**339**	⇑P		**Pb**		**07 05 30.4**	**+0.1**
KUR17				⇓S		**Sb**		**07 05 39.2**	**+0.3**
KUR04	**Kurchatov Arra**	**0.58**	**345**	⇑P		**Pb**		**07 05 30.5**	**-0.1**
KUR04				⇑S		**Sb**		**07 05 39.8**	**+0.5**
KURK	**Kurchatov**	**0.62**	**351**	⇓P		**Pb**		**07 05 31.4**	**+0.2**
	0.4nm,0.3s								
KURK				⇓S		**Sb**		**07 05 41.0**	**+0.5**
	4.1nm,0.8s								
MK31	**Makanchi Array**	**4.06**	**143**	Pg		**Pb**		**07 06 32.0**	**+2.1**
	0.8nm,0.6s,baz=315,slow=13,SNR=4.2								
MK31				Lg		Lg		07 07 24.4	
	1.6nm,0.6s,baz=331,slow=27,SNR=4.1								
MKAR	**Makanchi Array**	**4.06**	**143**	Pn		**Pn**		**07 06 19.6**	**-1.3**
	baz=316,slow=9.9,SNR=1.3								
MKAR				Pg		**Pb**		**07 06 28.9**	**-0.9**
	0.1nm,0.3s,baz=319,slow=14,SNR=5.7								
MKAR				Lg		Lg		07 07 24.4	
	0.3nm,0.3s,baz=336,slow=26,SNR=7.4								
	0.3nm,0.7s								
I46RU	**ZALESOVO INFRA**	**5.36**	**42**	I		I		07 37 20.0	
	baz=227,slow=326,SNR=4.9								
ZALV	**Zalesovo Beam**	**5.36**	**42**	Pn		**Pn**		**07 06 37.9**	**-0.8**
	0.5nm,0.3s,baz=226,slow=14,SNR=1.0								

*SJA **31** 07:06:44.6±0.7, 20°.75S×68°.86W, h115km±4km, ML3.5, MW3.5*
*GUC **31** 07:06:46.7±0.7, 20°.75S×68°.88W, h107km±2km, ML3.5*
ISC 31 07:06:46.7±1.4, 20.76S±0.03×68.94W±0.05, h108km±9km, n36, σ0s84/69, 6C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.59**	**241**	*e*P		**Pn**		**07 07 03.6**	**-0.4**
PB01				*i* S		**Sn**		**07 07 16.9**	**-0.3**
PB01				IAML				07 07 18.3	
	comp=N,4μm,0.2s								
PB01	**IPOC Station P**	**0.59**	**241**	*e*P		**Pn**		**07 07 03.7**	**-0.4**
PB01				*e*S		**Sn**		**07 07 17.7**	**+0.5**
PB01				IAML				07 07 18.1	
	comp=Z,2μm,0.2s								
PB08	**IPOC Station P**	**0.64**	**342**	⇑*i*P		**Pn**		**07 07 04.4**	**-0.5**
PB08				*i* S		**Sn**		**07 07 18.3**	**-0.3**
PB08				IAML				07 07 18.6	
	comp=N,3μm,0.2s								
PB08	**IPOC Station P**	**0.64**	**342**	*e*P		**Pn**		**07 07 03.7**	**-1.2**
PB08				*e*P				07 07 04.5	
PB08				*e*S		**Sn**		**07 07 18.7**	**+0.2**
PB08				IAML				07 07 18.7	
	comp=Z,1μm,0.4s								
PX03	**IPOC Station P**	**0.74**	**298**	*e*P		**Pn**		**07 07 04.1**	**-1.3**
PX03				*e*S		**Sn**		**07 07 19.3**	**-0.1**
PB02	**IPOC Station P**	**1.06**	**238**	*e*P		**Pn**		**07 07 08.4**	**0.0**
PB02				*i* S		**Sn**		**07 07 24.9**	**0.0**
PB02				IAML				07 07 26.3	
	comp=E,1μm,0.2s								
PB02	**IPOC Station P**	**1.06**	**238**	*e*P		**Pn**		**07 07 08.5**	**0.0**
PB02				*e*S		**Sn**		**07 07 25.8**	**+0.9**
PB02				IAML				07 07 26.0	
	comp=Z,1μm,0.4s								
PB02				*e*S				07 07 26.2	
PB09	**IPOC Station P**	**1.07**	**195**	*e*P		**Pn**		**07 07 09.0**	**+0.2**
PB09				*i* S		**Sn**		**07 07 26.0**	**+0.6**
PB09				IAML				07 07 28.6	
	comp=E,458nm,0.4s								
PB09	**IPOC Station P**	**1.07**	**195**	*e*P		**Pn**		**07 07 08.3**	**-0.5**
PB09				*e*S		**Sn**		**07 07 26.9**	**+1.5**
PB09				IAML				07 07 27.6	
	comp=Z,305nm,0.5s								
GO01	**Chusmiza**	**1.11**	**347**	⇑*i*P		**Pn**		**07 07 09.0**	**-0.5**
GO01				*e*S		**Sn**		**07 07 26.2**	**-0.3**
GO01				IAML				07 07 28.8	
	comp=N,3μm,0.2s								
GO01	**Chusmiza**	**1.11**	**347**	*e*P		**Pn**		**07 07 09.1**	**-0.3**
GO01				*e*S		**Sn**		**07 07 27.5**	**+1.0**
GO01				IAML				07 07 29.4	
	comp=Z,669nm,0.5s								
PATCX	**Punta Patache**	**1.14**	**267**	⇑*i*P		**Pn**		**07 07 09.1**	**-0.2**
PATCX				*i* S		**Sn**		**07 07 27.3**	**+0.9**
PATCX				IAML				07 07 30.6	
	comp=N,1μm,0.3s								
PATCX	**Punta Patache**	**1.14**	**267**	*e*P		**Pn**		**07 07 08.5**	**-0.9**
PATCX				*e*P				07 07 09.3	
PATCX				*e*S		**Sn**		**07 07 27.9**	**+1.4**
PATCX				IAML				07 07 28.5	
	comp=Z,509nm,0.4s								
TA01	**Diego Aracena**	**1.18**	**279**	⇑*i*P		**Pn**		**07 07 09.4**	**-0.2**
TA01				*e*S		**Sn**		**07 07 27.2**	**+0.1**
TA01				IAML				07 07 29.3	
	comp=E,894nm,0.5s								
TA01	**Diego Aracena**	**1.18**	**279**	*e*P		**Pn**		**07 07 09.5**	**-0.2**
TA01				*e*S		**Sn**		**07 07 28.2**	**+1.1**
TA01				IAML				07 07 36.4	
	comp=Z,339nm,0.7s								
PB11	**IPOC Station P**	**1.20**	**326**	⇑*i*P		**Pn**		**07 07 09.7**	**-0.5**
PB11				*i* S		**Sn**		**07 07 27.7**	**-0.1**
PB11				IAML				07 07 29.8	
	comp=E,2μm,0.2s								
PB11	**IPOC Station P**	**1.20**	**326**	*e*P		**Pn**		**07 07 09.6**	**-0.5**
PB11				*e*S		**Sn**		**07 07 28.5**	**+0.7**
PB11				IAML				07 07 30.8	
	comp=Z,712nm,0.2s								
TA02	**Huaiquique**	**1.22**	**293**	*e*P		**Pn**		**07 07 10.0**	**-0.1**
TA02				*e*S		**Sn**		**07 07 28.2**	**+0.3**
TA02				IAML				07 07 31.9	
	comp=N,4μm,0.1s								
TA02	**Huaiquique**	**1.22**	**293**	*e*P		**Pn**		**07 07 10.0**	**-0.1**
TA02				*e*S		**Sn**		**07 07 29.7**	**+1.8**
TA02				IAML				07 07 36.6	
	comp=Z,1μm,0.1s								
PB07	**IPOC Station P**	**1.31**	**222**	⇓*i*P		**Pn**		**07 07 11.3**	**-0.1**
PB07				*i* S		**Sn**		**07 07 30.2**	**+0.2**
PB07				IAML				07 07 31.6	
	comp=E,631nm,0.2s								
PB07	**IPOC Station P**	**1.31**	**222**	*e*P		Pn		07 07 05.8	-5.6
PB07				*e*P				07 07 11.3	
PB07				*e*S		**Sn**		**07 07 31.0**	**+0.9**
PB07				IAML				07 07 31.4	
	comp=Z,647nm,0.8s								
PB03	**IPOC Station P**	**1.50**	**210**	⇓*i*P		**Pn**		**07 07 13.5**	**-0.1**
PB03				*i* S		**Sn**		**07 07 34.0**	**+0.2**
PB03				IAML				07 07 38.8	
	comp=E,301nm,0.2s								
PB03	**IPOC Station P**	**1.50**	**210**	*e*P		**Pn**		**07 07 13.5**	**-0.1**
PB03				*e*S		**Sn**		**07 07 35.0**	**+1.1**
PB03				IAML				07 07 35.8	
	comp=Z,385nm,0.2s								
PSGCX	**Pisagua**	**1.60**	**316**	⇑*i*P		**Pn**		**07 07 14.3**	**-0.5**
PSGCX				*e*S		**Sn**		**07 07 36.5**	**+0.4**
PSGCX	**Pisagua**	**1.60**	**316**	*e*P		**Pn**		**07 07 14.2**	**-0.5**
PSGCX				*e*S		**Sn**		**07 07 37.2**	**+1.1**
PSGCX				IAML				07 07 41.5	
	comp=Z,188nm,0.2s								
PB06	**IPOC Station P**	**2.03**	**197**	*e*P		**Pn**		**07 07 19.9**	**-0.3**
PB06				*e*S		**Sn**		**07 07 45.5**	**-0.2**
PB06				IAML				07 07 52.9	
	comp=E,334nm,0.2s								
PB06	**IPOC Station P**	**2.03**	**197**	*e*P		**Pn**		**07 07 20.1**	**-0.1**
PB06				*e*S		**Sn**		**07 07 45.9**	**+0.2**
PB06				IAML				07 07 50.3	
	comp=Z,257nm,0.7s								
AF01	**San Pedro de A**	**2.30**	**162**	*e*P		**Pn**		**07 07 24.3**	**+0.5**
AF01				*e*S		**Sn**		**07 07 50.3**	**-1.8**
AF01				IAML				07 08 16.8	
	comp=Z,136nm,1.1s								
PB05	**IPOC Station P**	**2.40**	**209**	*e*P		**Pn**		**07 07 24.7**	**-0.1**
PB05				*i* S		**Sn**		**07 07 53.0**	**-1.0**
PB05				IAML				07 08 02.8	
	comp=E,118nm,0.4s								
PB05	**IPOC Station P**	**2.40**	**209**	*e*P		**Pn**		**07 07 24.6**	**-0.3**
PB05				*e*S		Sn		07 08 05.8	+12
PB16	**IPOC Station P**	**2.47**	**347**	*e*P		**Pn**		**07 07 26.8**	**+0.5**
PB16				*i* S		**Sn**		**07 07 56.9**	**+0.5**
PB16				IAML				07 08 07.7	
	comp=E,124nm,0.4s								
PB16	**IPOC Station P**	**2.47**	**347**	*e*P		**Pn**		**07 07 26.2**	**0.0**
PB16				*e*S		**Sn**		**07 07 55.3**	**-1.1**
PB12	**IPOC Station P**	**2.50**	**328**	*e*P		**Pn**		**07 07 25.1**	**-1.1**
PB12				*e*S		**Sn**		**07 07 55.9**	**-0.6**
PB12				IAML				07 08 07.3	
	comp=N,462nm,0.5s								
PB12	**IPOC Station P**	**2.50**	**328**	*e*P		**Pn**		**07 07 25.1**	**-1.1**
PB12				*e*S		**Sn**		**07 07 59.6**	**+3.1**
PB12				IAML				07 08 03.2	
	comp=Z,184nm,0.2s								
HJA	**Humahuaca**	**4.08**	**127**	*e*P		**Pn**		**07 07 48.7**	**+1.2**
PB14	**IPOC Station P**	**4.08**	**199**	*e*P		**Pn**		**07 07 45.9**	**-1.6**
PB14				*e*P				07 07 46.2	
PB14				*e*S		**Sn**		**07 08 34.1**	**-0.4**

*ASRS **31** 07:09:30.0±1.2, 54°.18N×86°.41E, h0km, M2.6(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 31 07:09:32.9±2.8, 54°.16N×86°.37E, h0km, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=21.2km s-min=12.2km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.94**	**258**	I		I		07 16 30.0	
	baz=75,slow=328,SNR=0.6								
ZALV	**Zalesovo Beam**	**0.94**	**258**	Pg		**Pg**		07 09 49.9	-1.0
	1.1nm,0.3s,baz=76,slow=17,SNR=12								
ZALV				Lg		Lg		07 10 04.4	
	6.2nm,0.3s,baz=79,slow=31,SNR=43								
KURBB	**Kurchatov Arra**	**5.96**	**237**	Pn		Pn		07 11 03.2	+0.8
	0.1nm,0.3s,baz=52,slow=13,SNR=4.7								
	0.4nm,0.4s								
MKAR	**Makanchi Array**	**7.82**	**201**	Pn		Pn		07 11 29.0	+1.2
	0.1nm,0.3s,baz=20,slow=13,SNR=4.3								
	0.2nm,0.5s								

*CATAC **31** 07:15:11.9±0.5, 13°.N×2°.×8°.9W±°, h16km±3km, M3.1/26, MLv3.1/26, Error ellipse: s-maj=5.2km s-min=2.8km az=31.9, confirmed*
*SNET **31** 07:15:12.5±1.0, 12°.88N×89°.12W, h28km, ML3.3, Presumed earthquake*
*GCG **31** 07:15:14.4±0.6, 12°.95N×89°.20W, h32km±6km, MD3.8, ML3.7, Presumed earthquake*
ISC 31 07:15:11.9±1.6, 12.85N±0.06×89.13W±0.04, h27km±12km, n51, σ0s48/80, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.66**	**344**	P		**Pb**		**07 15 24.0**	**-0.9**
LALI				S		**Sb**		**07 15 34.2**	**+0.5**
LALI	**Alcalda de L**	**0.66**	**344**	*i* P		**Pn**		**07 15 25.6**	**+0.1**
LALI				*i* S		**Sb**		**07 15 33.8**	**+0.1**
PANCS	**Alcalda de**	**0.76**	**357**	P		**Pb**		**07 15 25.5**	**-1.1**
PANCS				S		**Sb**		**07 15 36.0**	**-0.6**
TECO	**Alcaldia de Te**	**0.76**	**27**	P		**Pb**		**07 15 26.5**	**-0.1**
TECO				S		**Sb**		**07 15 36.7**	**0.0**
SJTE	**Alcalda de S**	**0.77**	**9**	*e*P		**Pb**		**07 15 26.9**	**+0.1**
SJTE				*e*S		**Sn**		**07 15 37.2**	**-0.6**
LFRS	**El Faro**	**0.77**	**5**	*e*P		**Pn**		**07 15 27.3**	**+0.1**
LOMA	**Loma Larga**	**0.79**	**357**	*e*P		**Pn**		**07 15 27.4**	**-0.1**
COEG	**Centro de Oper**	**0.80**	**18**	P		**Pb**		**07 15 27.2**	**-0.1**
COEG				S		**Sn**		**07 15 38.2**	**-0.5**
UTEC	**Universidad Te**	**0.85**	**355**	P		**Pb**		**07 15 28.1**	**+0.1**
UTEC				S		**Sn**		**07 15 39.4**	**-0.4**
SEMO	**Seminario San**	**0.85**	**354**	P		**Pb**		**07 15 28.1**	**0.0**
SEMO				S		**Sb**		**07 15 39.1**	**-0.2**
JAYA	**Jayaque - finc**	**0.85**	**339**	P		**Pn**		**07 15 28.2**	**-0.2**
JAYA	**Jayaque - finc**	**0.85**	**339**	*i* P		**Pn**		**07 15 28.4**	**0.0**
JAYA				*i* S		**Sb**		**07 15 39.5**	**+0.1**
JAYA				IAML				07 15 40.6	
	comp=E,3μm,0.3s								
JAYA	**Jayaque - finc**	**0.85**	**339**	*e*P		**Pn**		**07 15 28.4**	**0.0**
JAYA				*e*S		**Sn**		**07 15 39.8**	**-0.4**
IGN	**Direccin Gen**	**0.86**	**358**	P		**Pn**		**07 15 28.0**	**-0.3**
IGN				S		**Sn**		**07 15 39.6**	**-0.5**
UDBS	**Universidad Do**	**0.86**	**359**	P		**Pn**		**07 15 28.3**	**-0.1**
UDBS				S		**Sn**		**07 15 39.6**	**-0.5**
UEES	**Universidad Ev**	**0.87**	**353**	P		**Pn**		**07 15 28.5**	**0.0**
UEES				S		**Sn**		**07 15 40.4**	**+0.1**
PMON	**Piamonte**	**0.87**	**348**	P		**Pn**		**07 15 28.6**	**0.0**
PMON	**Piamonte**	**0.87**	**348**	*e*P		**Pn**		**07 15 28.1**	**0.0**
PMON				*e*S		**Sn**		**07 15 40.5**	**-0.1**
PAVA	**Las Pavas**	**0.88**	**13**	P		**Pb**		**07 15 28.7**	**+0.1**
PAVA	**Las Pavas**	**0.88**	**13**	*e*P		**Pb**		**07 15 28.7**	**+0.1**
PAVA				*e*S		**Sn**		**07 15 40.6**	**0.0**
TECA	**Tecapa**	**0.89**	**44**	*e*P		**Pb**		**07 15 29.0**	**+0.1**
BOQS	**Boqueron**	**0.89**	**351**	*e*P		**Pb**		**07 15 29.2**	**+0.3**
BOQS				*e*S		**Sn**		**07 15 40.7**	**-0.4**
SCLA	**Alcaldia de Sa**	**0.93**	**25**	P		**Pn**		**07 15 29.4**	**0.0**
SCLA				S		**Sn**		**07 15 41.9**	**0.0**
PQSS	**Presa 15 de Se**	**0.95**	**36**	*e*P		**Pb**		**07 15 29.7**	**0.0**
PQSS				*e*S		**Sn**		**07 15 42.4**	**+0.2**
CEDA	**San Andres**	**0.98**	**345**	P		**Pn**		**07 15 30.2**	**+0.2**
CEDA	**San Andres**	**0.98**	**345**	*e*P		**Pn**		**07 15 30.2**	**+0.2**
CEDA				*e*S		**Sn**		**07 15 43.2**	**+0.2**
PACA	**Pacayal**	**1.00**	**52**	P		**Pb**		**07 15 30.6**	**-0.1**
PACA				S		**Sb**		**07 15 43.8**	**+0.3**
PACA	**Pacayal**	**1.00**	**52**	*e*P		**Pn**		**07 15 30.5**	**+0.1**
PACA				*e*S		**Sb**		**07 15 44.7**	**+1.2**
RANC	**El Ranchito**	**1.01**	**55**	P		**Pn**		**07 15 30.6**	**+0.2**
RANC				S		**Sb**		**07 15 44.1**	**+0.4**
SBLS	**San Blas**	**1.09**	**334**	*e*P		**Pn**		**07 15 32.1**	**+0.4**
P5NO	**Presa 5 de nov**	**1.19**	**18**	P		**Pb**		**07 15 33.4**	**-0.4**
P5NO				S		**Sb**		**07 15 48.8**	**+0.1**
UNIC	**Universidad Ca**	**1.19**	**340**	P		**Pb**		**07 15 33.6**	**-0.3**
UNIC				S		**Sb**		**07 15 48.6**	**-0.4**
LCND	**La Caada**	**1.29**	**69**	P		**Pn**		**07 15 34.2**	**0.0**
FAME	**Alcaldia de Sa**	**1.31**	**319**	P		**Pb**		**07 15 36.1**	**+0.2**
FAME				S		**Sn**		**07 15 50.3**	**-0.8**
SLOZ	**Alcaldia de Sa**	**1.33**	**332**	P		**Pn**		**07 15 35.6**	**+0.8**
SLOZ				S		**Sb**		**07 15 53.3**	**+0.4**
CNCH	**Conchagua**	**1.33**	**71**	P		**Pn**		**07 15 35.2**	**+0.3**
CNCH				S		**Sb**		**07 15 52.5**	**-0.6**
CSGN	**Cosiguina Volc**	**1.54**	**85**	P		**Pn**		**07 15 38.2**	**+0.5**
CSGN				S		**Sb**		**07 15 58.1**	**-0.9**
MTO3	**Montecristo**	**1.55**	**352**	P		**Pn**		**07 15 38.5**	**+0.4**
MTO3				S		**Sn**		**07 15 57.7**	**+0.2**
MTO3	**Montecristo**	**1.55**	**352**	*i* P		**Pn**		**07 15 38.6**	**+0.6**
POTN	**Potosi Cosigui**	**1.59**	**85**	P		**Pn**		**07 15 38.4**	**0.0**
ESQI	**Esquipulas**	**1.71**	**353**	P		**Pn**		**07 15 41.2**	**+1.1**
INTHN	**La Esperanza I**	**1.77**	**34**	P		**Pb**		**07 15 42.9**	**-0.9**
SARH	**Santa Rosa de**	**1.95**	**11**	P		**Pn**		**07 15 44.5**	**+1.2**
SARH	**Santa Rosa de**	**1.95**	**11**	*i* P		**Pn**		**07 15 44.5**	**+1.2**
CRIN	**San Cristobal**	**2.04**	**94**	P		**Pn**		**07 15 44.8**	**+0.2**
TGUH	**Tegucigalpa,Un**	**2.17**	**56**	P		**Pn**		**07 15 47.3**	**+0.8**
HERN	**Volcan Telica**	**2.26**	**96**	P		**Pn**		**07 15 47.5**	**-0.2**
YUSH	**Yuscaran**	**2.48**	**64**	P		**Pn**		**07 15 51.2**	**+0.4**
COPN	**Copaltepe**	**2.57**	**105**	P		**Pn**		**07 15 53.1**	**+1.2**
MOM3	**MOM3**	**2.57**	**97**	P		**Pn**		**07 15 52.1**	**+0.2**
LIMN	**Finca el Limon**	**2.71**	**85**	P		**Pn**		**07 15 53.8**	**0.0**

*NEIC **31** 07:15:25.6±1.0, 6°.68S±0.03×147°.5E±0°.2, h72km±14km, mb4.2/13, Error ellipse: s-maj=30.8km s-min=4.7km az=89.0*
*IDC **31** 07:15:28.4±2.9, 6°.94S×147°.60E, h97km±20km, mb3.8/4, mbtmp4.0/7, MS3.6/2, Error ellipse: s-maj=37.3km s-min=22.4km az=119.0*
ISC 31 07:15:24.4±1.8, 6.7S±0.1×147.4E±0.2, h63km, n22, σ0s80/22, mb4.2/8, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.73**	**184**	P		**Pn**		**07 16 06.4**	**+0.5**
	90nm,0.5s,baz=25,slow=14,SNR=20								
PMG				S		**Sn**		**07 16 38.4**	**+0.6**
	61nm,0.5s,baz=320,slow=9.9,SNR=4.3								
PMG	**Port Moresby**	**2.73**	**184**			**Pn**		**07 16 05.9**	**0.0**
COEN	**Coen**	**8.34**	**209**	Pn		**Pn**		**07 17 22.9**	**+0.2**
CTA	**Charters Tower**	**13.39**	**185**	P		**Pn**		**07 18 33.3**	**+1.6**
	0.9nm,0.3s,baz=13,slow=13,SNR=1.5								
CTA				LR		LR		07 23 06.8	
	comp=Z,59nm,19.4s,baz=272,slow=35								
MTN	**Manton Dam**	**17.14**	**248**			**P**		**07 19 20.5**	**-0.2**
WB0	**Warramunga Arr**	**18.13**	**223**	P		**Pn**		**07 19 32.3**	**+0.3**
WB0				lAmb		lAmb		07 19 41.2	
	comp=Z,7.9nm,1.5s								
WR8	**Warramunga Arr**	**18.19**	**222**	P		**Pn**		**07 19 32.9**	**+0.2**
WR8				lAmb		lAmb		07 20 14.2	
	comp=Z,8.4nm,1.4s								
WRAB	**Tennant Creek**	**18.27**	**223**	P		**Pn**		**07 19 33.5**	**-0.3**
WRA	**Warramunga Arr**	**18.29**	**223**	P		**P**		**07 19 32.9**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=52,slow=11,SNR=12								
AS31	**Alice Springs**	**21.29**	**216**	P		**P**		**07 20 06.3**	**+0.3**
AS31				lAmb		lAmb		07 20 11.7	
	comp=Z,2.8nm,0.3s								
ASAR	**Alice Springs**	**21.29**	**216**	P		**P**		**07 20 06.3**	**+0.3**
	comp=Z,1.2nm,0.3s,baz=54,slow=9.0,SNR=45								
ASAR				S		**S**		**07 23 57.9**	**-1.4**
	comp=Z,0.3nm,0.9s,baz=28,slow=25,SNR=4.2								
	comp=Z,1.2nm,0.3s								
FITZ	**Fitzroy Crossi**	**24.04**	**240**	P		**P**		**07 20 34.4**	**+0.6**
	comp=Z,4.2nm,0.5s,baz=57,slow=7.6,SNR=20								
	comp=Z,4.2nm,0.5s								
STKA	**Stephens Creek**	**25.66**	**191**	P		**P**		**07 20 46.7**	**-1.7**
	comp=Z,1.6nm,0.3s,baz=0.5,slow=8.5,SNR=9.6								
	comp=Z,1.6nm,0.3s								
DAV	**Davao City (W)**	**25.67**	**302**	LR		LR		07 31 01.5	
	comp=Z,643nm,18.9s,baz=154,slow=36								
BBOO	**Buckleboo**	**28.07**	**201**	P		**P**		**07 21 10.1**	**+0.1**
FORT	**Forrest**	**30.06**	**215**	P		**P**		**07 21 27.0**	**-0.8**
FORT				lAmb		lAmb		07 21 38.9	
	comp=Z,6.4nm,1.1s								
MBWA	**Marble Bar**	**30.38**	**239**	P		**P**		**07 21 30.8**	**+0.1**
MBWA				lAmb		lAmb		07 22 08.1	
	comp=Z,9.4nm,1.1s								
PSA00	**Pilbara Seismi**	**30.45**	**238**	P		**P**		**07 21 31.7**	**+0.4**
PSA00				lAmb		lAmb		07 22 06.5	
	comp=Z,13nm,1.1s								
MORW	**Morawa**	**37.01**	**229**	P		**P**		**07 22 28.2**	**0.0**
QSPA	**South Pole Qui**	**83.31**	**180**	P		**P**		**07 27 43.5**	**-0.8**
	comp=Z,2.0nm,1.1s,baz=0.0,slow=2.0,SNR=6.1								
	comp=Z,2.0nm,1.1s								
QSPA	**South Pole Qui**	**83.31**	**180**	lAmb		lAmb		07 28 22.1	
	comp=Z,6.0nm,1.4s								
TORD	**Torodi Ar. Bea**	**145.61**	**283**	PKPbc		**PKPab**		**07 34 58.6**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=68,slow=2.9,SNR=2.5								

*ASRS **31** 07:25:14.0±0.8, 54°.32N×86°.73E, h0km, M2.6(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 31 07:25:13.5±3.2, 54°.39N×86°.88E, h0km, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=27.1km s-min=17.8km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.29**	**251**	I		I		07 33 40.0	
	baz=71,slow=330,SNR=3.9								
ZALV	**Zalesovo Beam**	**1.29**	**251**	Pg		**Pg**		07 25 36.6	-1.7
	0.8nm,0.3s,baz=69,slow=17,SNR=9.3								
ZALV				Lg		Lg		07 25 55.5	
	1

MTN	**Manton Dam**	**18.28**	**162**			**Pn**	**07 32 06.4**	**-1.8**
KNRA	**Kununurra**	**20.44**	**170**			**P**	**07 32 31.6**	**-0.4**
KNRA					IAmb	IAmb	07 32 45.1	
	comp=Z,13nm,0.5s							
LEM	**Lembang**	**20.98**	**237**	LR	LR	LR	07 41 34.5	
	comp=Z,174nm,19.4s,baz=353,slow=39							
GUMO	**Guam**	**21.27**	**64**	LR	LR	LR	07 39 57.1	
	comp=Z,119nm,19.9s,baz=144,slow=35							
JOW	**Kunigami**	**22.29**	**7**	P		**P**	**07 32 51.5**	**-0.4**
JOW					IAmb	IAmb	07 32 53.0	
	comp=Z,24nm,1.0s							
FITZ	**Fitzroy Crossi**	**22.56**	**179**	P		**P**	**07 32 53.0**	**-1.8**
	comp=Z,8.7nm,0.7s,baz=6.5,slow=8.2,SNR=24							
	comp=Z,8.7nm,0.7s							
COEN	**Coen**	**25.59**	**136**	P		**P**	**07 33 24.8**	**+0.8**
COEN					IAmb	IAmb	07 33 56.9	
	comp=Z,20nm,1.2s							
WB0	**Warramunga Arr**	**25.82**	**160**			**P**	**07 33 25.0**	**-1.0**
WB0					IAmb	IAmb	07 33 42.0	
	comp=Z,25nm,1.1s							
PMG	**Port Moresby**	**25.86**	**123**	LR	LR	LR	07 44 07.2	
	comp=Z,99nm,18.6s,baz=340,slow=38							
WRAB	**Tennant Creek**	**25.96**	**160**	P		**P**	**07 33 25.5**	**-1.7**
WRAB					IAmb	IAmb	07 33 43.9	
	comp=Z,38nm,1.4s							
WRA	**Warramunga Arr**	**25.96**	**160**	P		**P**	**07 33 25.5**	**-1.8**
	comp=Z,8.4nm,0.8s,baz=339,slow=10,SNR=37							
	comp=Z,8.4nm,0.8s							
WRA	**Warramunga Arr**	**25.96**	**160**	P		**P**	**07 33 26.8**	**-0.4**
WB2	**Warramunga Arr**	**25.97**	**160**	P		**P**	**07 33 28.4**	**+1.1**
WR8	**Warramunga Arr**	**26.03**	**160**			**P**	**07 33 26.9**	**-1.0**
WR8					IAmb	IAmb	07 33 43.5	
	comp=Z,18nm,1.1s							
WR0	**Warramunga Arr**	**26.05**	**160**	P		**P**	**07 33 27.2**	**-0.8**
WR0					IAmb	IAmb	07 33 43.6	
	comp=Z,19nm,1.2s							
MBWA	**Marble Bar**	**26.18**	**192**	P		**P**	**07 33 27.1**	**-2.0**
PSA00	**Pilbara Seismi**	**26.56**	**191**			**P**	**07 33 30.5**	**-2.1**
PSA00					IAmb	IAmb	07 33 32.6	
	comp=Z,12nm,0.7s							
PSA00	**Pilbara Seismi**	**26.56**	**191**			**P**	**07 33 30.7**	**-1.9**
PSA00					IAmb	IAmb	07 33 32.6	
	comp=Z,5.9nm,0.8s							
NJ2	**Nanjing**	**27.96**	**348**	*e*P		**P**	**07 33 51.5**	**+6.4**
NJ2					pmax	pmax		
	comp=Z,26nm,0.5s							
KRVT	**Keravat (AS076**	**28.14**	**108**	LR	LR	LR	07 42 51.7	
	comp=Z,27nm,20.8s,baz=223,slow=32							
CMAR	**Chiang Mai Arr**	**29.20**	**300**	P		**P**	**07 33 57.0**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=121,slow=7.4,SNR=7.9							
CMAR				LR		LR	07 48 23.9	
	comp=Z,77nm,18.3s,baz=115,slow=42							
	comp=Z,0.8nm,0.3s							
AS31	**Alice Springs**	**29.33**	**164**	P		**P**	**07 33 56.9**	**-0.5**
ASAR	**Alice Springs**	**29.33**	**164**	P		**P**	**07 33 56.0**	**-1.4**
	comp=Z,0.7nm,0.3s,baz=341,slow=7.0,SNR=15							
	comp=Z,0.7nm,0.3s							
PZH	**PanZhiHua**	**31.32**	**316**	P		**P**	**07 34 19.0**	**+3.8**
JHJ	**Hachijo jima 2**	**31.43**	**24**	LR		LR	07 47 24.4	
	comp=Z,96nm,20.2s,baz=304,slow=38							
KSRS	**Korea Array**	**32.78**	**4**	P		**P**	**07 34 24.5**	**-3.2**
	comp=Z,0.9nm,0.4s,baz=178,slow=10,SNR=5.2							
KSRS				LR		LR	07 48 06.9	
	comp=Z,31nm,20.8s,baz=200,slow=37							
	comp=Z,0.9nm,0.4s							
MAJO	**Matsushiro**	**33.93**	**19**	P		**P**	**07 34 37.1**	**-0.6**
MJAR	**Matsushiro Arr**	**33.93**	**19**	LR		LR	07 50 14.2	
	comp=Z,62nm,18.0s,baz=214,slow=40							
MJAR	**Matsushiro Arr**	**33.93**	**19**	P		**P**	**07 34 37.8**	**0.0**
MJAR					IAmb	IAmb	07 35 24.7	
	comp=Z,7.1nm,0.7s							
MJB9	**Matsu-Tunnel**	**33.93**	**19**	P		**P**	**07 34 34.7**	**-3.1**
MORW	**Morawa**	**34.64**	**194**	P		**P**	**07 34 41.8**	**-2.2**
FORT	**Forrest**	**35.28**	**176**	P		**P**	**07 34 48.0**	**-1.5**
NWAO	**Narrogin (SRO)**	**38.10**	**191**	P		**P**	**07 35 12.7**	**-0.7**
NWAO					IAmb	IAmb	07 35 39.8	
	comp=Z,23nm,1.2s							
HHC	**Hu-ho-hao-te**	**38.14**	**343**	*e*P		**P**	**07 35 17.0**	**+3.1**
HHC					pmax	pmax		
	comp=Z,9.0nm,0.8s							
HHC					pmax	pmax		
	comp=Z,49nm,4.9s							
SHL	**Shillong**	**38.21**	**306**	P		**P**	**07 35 14.4**	**-0.4**
SHL					IAmb	IAmb	07 35 37.0	
	comp=Z,7.0nm,0.7s							
BBOO	**Buckleboo**	**38.59**	**165**	P		**P**	**07 35 16.8**	**-0.7**
BBOO					IAmb	IAmb	07 35 20.5	
	comp=Z,12nm,1.1s							
EIDS	**Eidsvold**	**38.92**	**141**	P		**P**	**07 35 19.7**	**-0.9**
STKA	**Stephens Creek**	**39.46**	**158**	P		**P**	**07 35 24.0**	**-0.9**
	comp=Z,4.6nm,0.8s,baz=328,slow=6.1,SNR=12							
	comp=Z,4.6nm,0.8s							
STKA	**Stephens Creek**	**39.46**	**158**			**P**	**07 35 24.3**	**-0.6**
ASAJ	**Asahikawa**	**42.20**	**19**	LR		LR	07 55 08.0	
	comp=Z,53nm,18.9s,baz=130,slow=39							
H11N1	**WAKE ISLAND Hy**	**43.20**	**66**	T		T	08 21 37.8	
	baz=254,slow=75,SNR=70							
H11N2	**WAKE ISLAND Hy**	**43.21**	**66**	T		T	08 21 38.8	
	baz=254,slow=75,SNR=95							
H11N3	**WAKE ISLAND Hy**	**43.21**	**66**	T		T	08 21 37.6	
	baz=254,slow=75,SNR=85							
EVN	**Everest**	**43.32**	**307**	P		**P**	**07 35 57.8**	**+0.2**
CAN	**Canberra**	**45.53**	**153**	P		**P**	**07 36 14.7**	**+0.4**
TOO	**Toolangi**	**45.98**	**158**	P		**P**	**07 36 18.2**	**+0.3**
TLY	**Talaya**	**50.27**	**343**	LR		LR	07 58 34.2	
	comp=Z,32nm,18.0s,baz=134,slow=37							
WMQ	**Urumqi**	**51.19**	**325**	*e*P		**P**	**07 37 01.8**	**+3.8**
WMQ					pmax	pmax		
	comp=Z,8.0nm,1.1s							
MKAR	**Makanchi Array**	**56.03**	**326**	P		**P**	**07 37 32.0**	**-1.4**
	comp=Z,1.2nm,0.6s,baz=127,slow=8.1,SNR=9.7							
	comp=Z,1.2nm,0.6s							
ZALV	**Zalesovo Beam**	**59.17**	**333**	LR		LR	08 05 25.7	
	comp=Z,33nm,19.2s,baz=64,slow=38							
KURBB	**Kurchatov Arra**	**60.24**	**328**	P		**P**	**07 38 00.7**	**-2.0**
	comp=Z,1.3nm,0.7s,baz=125,slow=6.2,SNR=11							
	comp=Z,1.3nm,0.7s							
KURK	**Kurchatov**	**60.24**	**328**	P		**P**	**07 38 01.9**	**-0.8**
BKZ	**Black Stump Fm**	**64.19**	**138**	P		**P**	**07 38 29.1**	**-0.3**
BORK	**Borovoye**	**65.86**	**327**	P		**P**	**07 38 41.3**	**+1.2**
BORK					IAmb	IAmb	07 38 47.3	
	comp=Z,2.3nm,0.5s							
ARTI	**Arti**	**73.52**	**328**	LR		LR	08 15 03.4	
	comp=Z,54nm,18.2s,baz=274,slow=38							
O18K	**Koktuh Hills**	**80.76**	**30**	P		**P**	**07 40 07.0**	**-0.9**
KDAK	**Kodiak Island**	**81.92**	**32**	LR		LR	08 10 16.4	
	comp=Z,50nm,21.6s,baz=169,slow=31							
PPLA	**Purkeypile**	**82.51**	**27**	P		**P**	**07 40 16.0**	**-1.2**
PPLA					IAmb	IAmb	07 40 40.0	
	comp=Z,12nm,1.4s							
BRLK	**Bradley Lake**	**82.93**	**30**	P		**P**	**07 40 17.2**	**-2.2**
BRLK					IAmb	IAmb	07 40 24.2	
	comp=Z,6.6nm,1.2s							
E22K	**Anaktuvuk Pass**	**83.10**	**22**	P		**P**	**07 40 19.6**	**-0.5**
KTH	**Kantishna Hill**	**83.13**	**27**	IAmb		IAmb	07 40 20.8	
	comp=Z,11nm,1.5s							
RC01	**Rabbit Creek A**	**83.56**	**29**	P		**P**	**07 40 21.3**	**-1.2**
RC01					IAmb	IAmb	07 40 23.7	
	comp=Z,4.4nm,0.8s							
COLD	**Coldfoot**	**83.65**	**23**	P		**P**	**07 40 22.9**	**0.0**
COLD					IAmb	IAmb	07 40 23.7	
	comp=Z,4.8nm,1.2s							
C23K	**Itkillik River**	**83.67**	**20**	IAmb		IAmb	07 40 49.3	
	comp=Z,7.3nm,1.4s							
H23K	**Yukon River**	**83.84**	**24**	IAmb		IAmb	07 40 24.0	
	comp=Z,3.2nm,0.9s							
I23K	**Minto, Yukon-K**	**83.89**	**25**	P		**P**	**07 40 23.3**	**-0.9**
I23K					IAmb	IAmb	07 40 24.0	
	comp=Z,7.3nm,1.2s							
MCK	**McKinley**	**84.03**	**26**	IAmb		IAmb	07 40 23.1	
	comp=Z,5.0nm,0.9s							
KNK	**Knik Glacier**	**84.19**	**29**	P		**P**	**07 40 24.5**	**-1.3**
SML	**Sawmill**	**84.26**	**28**	P		**P**	**07 40 24.8**	**-1.4**
H24K	**Noodor Dome**	**84.53**	**24**	IAmb		IAmb	07 40 28.9	
	comp=Z,3.8nm,1.1s							
CCB	**Clear Creek Bu**	**84.54**	**26**	P		**P**	**07 40 25.2**	**-2.3**
CCB					IAmb	IAmb	07 40 32.2	
	comp=Z,4.9nm,1.3s							
DHY	**Denali Highway**	**84.72**	**27**	P		**P**	**07 40 28.2**	**-0.3**
DHY					IAmb	IAmb	07 41 03.5	
	comp=Z,6.2nm,1.4s							
SCM	**Sheep Creek Mo**	**84.73**	**28**	P		**P**	**07 40 28.8**	**+0.2**
ILAR	**Eielson Array**	**84.94**	**25**	P		**P**	**07 40 26.0**	**-3.5**
	comp=Z,0.6nm,0.5s,baz=253,slow=4.7,SNR=23							
	comp=Z,0.6nm,0.5s							
MBAR	**Mbarara**	**94.59**	**270**	LR		LR	08 22 10.9	
	comp=Z,22nm,18.4s,baz=96,slow=34							
NOA	**NORSAR Array B**	**97.37**	**333**	LR		LR	08 27 51.8	
	comp=Z,52nm,19.5s,baz=350,slow=37							

*IDC **31** 07:40:42.6±1.3,22.˚62S×173.˚27E, h0km, mb3.8/5, mbtmp3.8/7, ML4.7/2, MS3.4/1, Error ellipse: s-maj=39.4km s-min=23.3km az=159.0*
*NEIC **31** 07:40:44.5±1.1,22.˚69S±0.˚09×173.˚27E±0.˚08, h10km±1km, mb4.2/7, Error ellipse: s-maj=16.1km s-min=11.4km az=27.0*
ISC 31 07:40:47.4±0.8, 22.˚6S±0.˚1×173.˚25E±0.˚09, h32km, n19, σ0s81/17, mb4.1/8, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**4.97**	**282**	Pn	**Pn**	**07 41 59.9**	**0.0**
OUENC	**Ouen Island, N**	**5.93**	**271**	Pn	**Pn**	**07 42 13.3**	**+0.3**
ONTNC	**Ouen Toro**	**6.29**	**272**	Pn	**Pn**	**07 42 17.8**	**-0.2**
DZM	**Mont Dzumac**	**6.32**	**274**	Pn	**Pn**	**07 42 19.5**	**+0.9**
	2.2nm,0.3s,baz=330,slow=23,SNR=29						
DZM				Sn	**Sn**	**07 43 30.5**	**+0.7**
	baz=271,slow=2.4						
	5.9nm,0.3s						
MSVF	**Nonsavu**	**6.63**	**44**	Pn	**Pn**	**07 42 22.6**	**-0.1**
	1.8nm,0.3s,baz=217,slow=14,SNR=9.4						
	3.9nm,0.4s						
MSVF	**Nonsavu**	**6.63**	**44**		**Pn**	**07 42 23.9**	**+1.2**
LTZ	**Lake Taylor**	**20.13**	**182**	P	**P**	**07 45 19.1**	**+0.3**
LTZ				IAmb	IAmb	07 45 33.6	
	comp=Z,17nm,1.3s						
CTA	**Charters Tower**	**25.25**	**271**	LR	LR	07 55 34.4	
	comp=Z,73nm,18.3s,baz=46,slow=35						
STKA	**Stephens Creek**	**29.53**	**245**	P	**P**	**07 46 49.6**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=72,slow=13,SNR=1.9						
	comp=Z,0.8nm,0.6s						
PATS	**Pohnpei**	**32.72**	**332**	P	**P**	**07 47 17.0**	**-0.3**
ASAR	**Alice Springs**	**36.12**	**260**	P	**P**	**07 47 47.0**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=89,slow=9.0,SNR=11						
	comp=Z,0.9nm,0.8s						
WR8	**Warramunga Arr**	**36.13**	**267**	P	**P**	**07 47 46.2**	**-0.7**
WR8				IAmb	IAmb	07 47 58.5	
	comp=Z,4.1nm,1.2s						
WB0	**Warramunga Arr**	**36.27**	**267**	P	**P**	**07 47 46.3**	**-1.8**
WB0				IAmb	IAmb	07 48 27.6	
	comp=Z,5.1nm,1.3s						
WRA	**Warramunga Arr**	**36.29**	**267**	P	**P**	**07 47 47.2**	**-1.0**
	comp=Z,0.6nm,0.7s,baz=99,slow=8.5,SNR=8.9						
	comp=Z,0.6nm,0.7s						
WRA	**Warramunga Arr**	**36.29**	**267**	IAmb	IAmb	07 47 49.9	
	comp=Z,0.3nm,1.1s						
FORT	**Forrest**	**40.96**	**249**	P	**P**	**07 48 26.5**	**-0.9**
FORT				IAmb	IAmb	07 48 27.2	
	comp=Z,6.6nm,1.1s						
QSPA	**South Pole Qui**	**67.45**	**180**	P	**P**	**07 51 39.9**	**0.0**
	comp=Z,1.0nm,0.8s,baz=34,slow=3.6,SNR=3.1						
	comp=Z,1.0nm,0.8s						
QSPA	**South Pole Qui**	**67.45**	**180**	IAmb	IAmb	07 51 52.7	
	comp=Z,5.5nm,1.4s						
ILAR	**Eielson Array**	**92.38**	**16**	P	**P**	**07 53 53.9**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=222,slow=6.0,SNR=6.5						
	comp=Z,0.4nm,0.8s						

*IDC **31** 07:45:34.0±1.3,22.˚49S×173.˚32E, h0km, mb3.8/4, mbtmp3.8/6, ML4.8/2, MS3.2/3, Error ellipse: s-maj=36.0km s-min=24.1km az=164.0*
*NEIC **31** 07:45:36.6±1.7,22.˚48S±0.˚05×173.˚38E±0.˚08, h10km±1km, mb4.3/8, Error ellipse: s-maj=13.8km s-min=5.4km az=59.0*
ISC 31 07:45:40.1±0.9, 22.˚4S±0.˚1×173.˚34E±0.˚09, h44km, n17, σ0s71/16, mb4.2/7, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**5.01**	**279**	Pn	**Pn**	**07 46 53.0**	**+0.2**
OUENC	**Ouen Island, N**	**6.01**	**269**	Pn	**Pn**	**07 47 06.8**	**+0.2**
ONTNC	**Ouen Toro**	**6.38**	**269**	Pn	**Pn**	**07 47 12.6**	**+1.0**
DZM	**Mont Dzumac**	**6.40**	**272**	Pn	**Pn**	**07 47 11.4**	**-0.5**
	2.4nm,0.3s,baz=131,slow=17,SNR=19						
DZM				Sn	**Sn**	**07 48 23.3**	**-0.4**
	2.1nm,0.3s,baz=285,slow=22,SNR=7.1						
DZM				LR	LR	07 49 07.9	
	comp=Z,75nm,18.8s,baz=49,slow=34						
	7.5nm,0.4s						
MSVF	**Nonsavu**	**6.41**	**45**	Pn	**Pn**	**07 47 11.9**	**-0.2**
	2.4nm,0.3s,baz=215,slow=14,SNR=11						
	1.5nm,0.3s						
RAO	**Raoul Island**	**10.42**	**133**	LR	LR	07 50 59.2	
	comp=Z,105nm,21.1s,baz=1.0,slow=31						
MRZ	**Mangatainoka R**	**18.31**	**175**	P	**P**	**07 49 49.4**	**-1.1**
MRZ				IAmb	IAmb	07 49 49.7	
	comp=Z,27nm,1.3s						
LTZ	**Lake Taylor**	**20.35**	**182**	Pn	**P**	**07 50 14.0**	**+1.2**
WR8	**Warramunga Arr**	**36.23**	**266**	P	**P**	**07 52 38.8**	**-0.4**
WR8				IAmb	IAmb	07 53 15.2	
	comp=Z,6.7nm,1.4s						
ASAR	**Alice Springs**	**36.24**	**260**	P	**P**	**07 52 39.2**	**0.0**
	comp=Z,0.5nm,0.5s,baz=101,slow=9.2,SNR=4.5						
	comp=Z,0.5nm,0.5s						
WB0	**Warramunga Arr**	**36.37**	**267**	P	**P**	**07 52 40.5**	**+0.2**
WRAB	**Tennant Creek**	**36.38**	**266**	P	**P**	**07 52 40.8**	**+0.4**
WRAB				IAmb	IAmb	07 53 03.6	
	comp=Z,6.7nm,1.4s						
WRA	**Warramunga Arr**	**36.38**	**266**	P	**P**	**07 52 39.2**	**-1.3**
	comp=Z,0.5nm,0.7s,baz=98,slow=8.5,SNR=11						
	comp=Z,0.5nm,0.7s						
FORT	**Forrest**	**41.12**	**248**	P	**P**	**07 53 20.0**	**0.0**
FORT				IAmb	IAmb	07 53 23.2	
	comp=Z,4.9nm,0.8s						
QSPA	**South Pole Qui**	**67.68**	**180**	P	**P**	**07 56 32.4**	**-0.2**
	comp=Z,2.1nm,0.9s,baz=36,slow=2.0,SNR=7.2						
QSPA				LR	LR	08 24 33.7	
	comp=Z,45nm,18.1s,baz=214,slow=35						
	comp=Z,2.1nm,0.9s						
QSPA	**South Pole Qui**	**67.68**	**180**	IAmb	IAmb	07 56 40.7	
	comp=Z,8.5nm,1.4s						
ILAR	**Eielson Array**	**92.14**	**16**	P	**P**	**07 58 44.8**	**+0.5**
	comp=Z,0.6nm,0.9s,baz=205,slow=5.1,SNR=5.0						
	comp=Z,0.6nm,0.9s						

IDC 31 07:54:15.2±3.3, 22.˚05S×173.˚24E, h0km, mb3.4/3, mbtmp3.4/5, ML4.9/1, MS3.0/1, Error ellipse: s-maj=130.8km s-min=24.9km az=156.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.24**	**47**	Pn	Pn	07 55 49.7	+1.0
	1.0nm,0.3s,baz=241,slow=19,SNR=4.5						
	7.3nm,1.1s						
DZM	**Mont Dzumac**	**6.30**	**269**	Pn	Pn	07 55 51.2	+1.7
	6.8nm,0.9s,baz=127,slow=11,SNR=15						
DZM				Sn	Sn	07 57 04.9	+2.5
	0.8nm,0.3s,baz=134,slow=24,SNR=6.3						
RAR	**Rarotonga**	**25.09**	**93**	LR	LR	08 08 33.7	
	comp=Z,30nm,18.9s,baz=89,slow=34						
ASAR	**Alice Springs**	**36.20**	**260**	P	P	08 01 20.4	+0.4
	0.3nm,0.7s,baz=80,slow=9.7,SNR=4.8						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**36.31**	**266**	P	P	08 01 19.7	-1.2
	0.2nm,0.4s,baz=97,slow=8.4,SNR=7.5						
	0.2nm,0.4s						
ILAR	**Eielson Array**	**91.84**	**16**	P	P	08 07 24.5	-0.2
	0.2nm,0.7s,baz=232,slow=4.4,SNR=2.6						
	0.2nm,0.7s						

*ASRS **31** 08:00:17.0±1.1,54.˚66N×83.˚67E, h0km, M2.3(MOS), The earthquakes of Russia in 2020. Obninsk, GS RAS, 2022.*
IDC 31 08:00:19.4±2.5, 54.˚62N×83.˚83E, h0km, mbtmp3.2/2, ML2.3/2, Error ellipse: s-maj=18.9km s-min=12.0km az=171.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.89**	**139**	I	I	08 05 44.3	
	baz=317,slow=333						
ZALV	**Zalesovo Beam**	**0.89**	**139**	Pg	Pg	08 00 35.2	-1.2
	1.3nm,0.3s,baz=321,slow=20,SNR=16						
ZALV				Lg	Lg	08 00 49.7	
	9.8nm,0.3s,baz=320,slow=29,SNR=45						
KURBB	**Kurchatov Arra**	**5.14**	**221**	Pn	Pn	08 01 37.2	-0.4
	0.1nm,0.3s,baz=42,slow=14,SNR=1.1						
	2.1nm,0.2s						
MKAR	**Makanchi Array**	**7.90**	**188**	Pn	Pn	08 02 16.8	+1.4
	0.1nm,0.3s,baz=5.4,slow=12,SNR=2.2						
MKAR				Lg	Lg	08 04 30.9	
	0.1nm,0.3s,baz=9.7,slow=27,SNR=2.8						
	0.9nm,0.9s						

*IDC **31** 08:02:44.3±1.1,31.˚97N×141.˚98E, h0km, mb3.7/11, mbtmp3.7/17, ML3.5/6, MS3.2/6, Error ellipse: s-maj=29.2km s-min=18.8km az=18.0*
*NIED **31** 08:02:48.7,31.˚99N×141.˚82E, h50km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^14^Nm; Mrr7.00; Mθθ-1.87; Mϕϕ-5.13; Mrθ-3.80; Mθϕ4.16; Mϕr-0.89; Fault plane solution: M0 8.46000×10^14^ NP1: ϕs168.00000°, δ45.00000°, λ126.00000°. NP2: ϕs302.00000°, δ55.00000°, λ60.00000°.*
*JMA **31** 08:02:48.7±0.2,32.˚0N±0.˚8×14.˚2E±.˚, h50km, MV3.7/13, NEAR TORISHIMA IS*
ISC 31 08:02:47.8±0.7, 31.˚88N±0.˚06×141.˚86E±0.˚08, h29km, n30, σ1s34/32, mb3.7/11, MS3.1/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAOM	**Aogashimamukai**	**1.87**	**289**	*e*P	**Pn**	**08 03 18.0**	**+0.1**
JHCJ	**Hachijojimakas**	**2.11**	**305**	*e*S	**Sn**	**08 03 45.1**	**-1.4**
JHJ2	**Mitsune**	**2.12**	**306**	*e*P	**Pn**	**08 03 21.6**	**+0.3**
JHJ2				*e*S	**Sn**	**08 03 45.5**	**-1.2**
JHJ	**Hachijo jima 2**	**2.15**	**306**	Pn	**Pn**	**08 03 21.3**	**-0.4**
	36nm,0.3s,baz=327,slow=22,SNR=7.0						
JHJ				Sn	**Sn**	**08 03 47.4**	**0.0**
	52nm,0.3s,baz=66,slow=20,SNR=6.9						
	94nm,0.3s						
JMKN	**Mikurajimanish**	**2.77**	**317**	*e*S	**Sn**	**08 04 01.8**	**-1.0**
BSO1	**Boso 1**	**2.87**	**345**	*e*P	**Pn**	**08 03 31.4**	**+0.3**
BSO1				*e*S	**Sn**	**08 04 04.1**	**-0.3**
JOD2	**Odawara 2**	**4.10**	**326**	*e*P	**Pn**	**08 03 48.7**	**+0.2**
JYN	**Shimob**	**4.55**	**323**	*e*P	**Pn**	**08 03 55.9**	**+1.1**
JCJ	**Chichijima**	**4.77**	**177**	Pn	**Pn**	**08 03 58.4**	**+0.6**
	8.5nm,0.3s,baz=283,slow=23,SNR=8.0						
JCJ				Sn	**Sn**	**08 04 50.7**	**-1.4**
	15nm,0.3s,baz=317,slow=22,SNR=4.3						
	21nm,0.3s						
JRY	**Ryogami san**	**4.81**	**330**	*e*P	**Pn**	**08 03 59.2**	**+0.9**
JAG	**Ashikaga**	**4.96**	**337**	P	**Pn**	**08 04 00.7**	**+0.4**
JAG				*e*S	**Sn**	**08 04 54.8**	**-1.9**
MJAR	**Matsushiro Arr**	**5.55**	**328**	Pn	**Pn**	**08 04 07.8**	**-0.7**
	0.4nm,0.3s,baz=149,slow=11,SNR=19						
MJAR				Sn	**Sn**	**08 05 06.6**	**-4.8**
	0.3nm,0.3s,baz=149,slow=12,SNR=4.5						
	6.5nm,0.6s						
ASAJ	**Asahikawa**	**12.23**	**3**	Pn	**Pn**	**08 05 38.2**	**-1.9**
	0.6nm,0.3s,baz=158,slow=22,SNR=1.5						
	1.9nm,0.4s						
KSRS	**Korea Array**	**12.75**	**300**	Pn	**Pn**	**08 05 48.4**	**+1.3**
	0.1nm,0.3s,baz=108,slow=12,SNR=1.6						
KSRS				LR	LR	08 11 00.4	
	comp=Z,76nm,18.1s,baz=105,slow=39						
	0.5nm,0.5s						
JOW	**Kunigami**	**12.87**	**250**	LR	LR	08 10 46.9	
	comp=Z,77nm,18.5s,baz=300,slow=37						
KLR	**Kul'dur**	**18.93**	**339**	P	**P**	**08 07 05.7**	**-0.6**
	0.2nm,0.3s,baz=129,slow=12,SNR=4.0						
	1.4nm,0.6s						
SONM	**Songino Array**	**31.22**	**311**	P	**P**	**08 09 04.7**	**0.0**
	0.6nm,0.6s,baz=122,slow=9.9,SNR=5.8						
	0.6nm,0.6s						
TLY	**Talaya**	**34.17**	**317**	LR	LR	08 22 52.1	
	comp=Z,23nm,19.7s,baz=114,slow=35						
ZALV	**Zalesovo Beam**	**45.78**	**316**	P	**P**	**08 11 07.2**	**+0.7**
	0.7nm,0.5s,baz=100,slow=6.2,SNR=5.4						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**47.32**	**306**	P	**P**	**08 11 20.6**	**+1.8**
	2.6nm,0.8s,baz=87,slow=10,SNR=9.4						
	2.6nm,0.8s						
KURBB	**Kurchatov Arra**	**49.58**	**312**	P	**P**	**08 11 37.1**	**+1.0**
	2.8nm,0.8s,baz=89,slow=7.8,SNR=12						
	2.8nm,0.8s						
AAK	**Ala-Archa**	**53.40**	**302**	LR	LR	08 34 46.1	
	comp=Z,30nm,18.7s,baz=44,slow=36						
ILAR	**Eielson Array**	**53.70**	**30**	P	**P**	**08 12 06.8**	**+0.1**
	0.7nm,0.8s,baz=264,slow=6.2,SNR=9.1						
ILAR				LR	LR	08 34 02.4	
	comp=Z,10.0nm,21.3s,baz=225,slow=35						
	0.7nm,0.8s						
BVAR	**Borovoye Array**	**54.40**	**315**	P	**P**	**08 12 13.6**	**+1.6**
	0.6nm,0.4s,baz=89,slow=6.2,SNR=2.7						
	0.6nm,0.4s						
YKA	**Yellowknife Ar**	**68.10**	**29**	P	**P**	**08 13 44.3

19nm,0.3s,baz=258,slow=23,SNR=2.2
SIJI Sorong 7.75 30 P **Pn** 08 07 23.2 0.0
SWI Sorong 7.75 29 P **Pn** 08 07 23.3 +0.1
KNRA Kununurra 8.06 171 **Pn** 08 07 25.8 -1.4
KAPI Kappang 8.10 289 **Pn** 08 07 27.4 -0.4
WBSI Waikabubak, Su 8.21 256 P **Pn** 08 07 29.4 +0.1
PLAI Plampang 9.65 262 P **Pn** 08 07 46.7 -1.5
FITZ Fitzroy Crossi 10.52 189 P **Pn** 08 07 57.3 -2.2
30nm,0.4s,baz=3.5,slow=10,SNR=156
FITZ S **Sn** 08 09 46.9 -9.4
36nm,0.4s,baz=81,slow=20,SNR=13
TOLI2 Tolitoli 10.97 322 P **Pn** 08 08 07.3 +1.9
TOLI2 Tolitoli 10.97 322 **Pn** 08 08 06.5 +1.0
BKB Balikpapan 12.30 301 **P** 08 08 28.2 +0.6
JAGI Jajag, Banyuwa 13.20 266 P **Pn** 08 08 34.5 +0.5
JAGI Jajag, Banyuwa 13.20 266 **Pn** 08 08 32.8 -1.2
GENI Genyem 13.63 69 P **P** 08 08 42.0 -0.4
WB0 Warramunga Arr 13.78 151 **Pn** 08 08 40.1 -1.2
WRAB Tennant Creek 13.90 152 **Pn** 08 08 40.9 -1.9
WRA Warramunga Arr 13.91 152 P **Pn** 08 08 40.2 -2.6
7.5nm,0.2s,baz=328,slow=13,SNR=276
WRA S **Sn** 08 11 08.6 -9.1
51nm,0.9s,baz=323,slow=24,SNR=5.9
WRA Warramunga Arr 13.91 152 **Pn** 08 08 41.2 -1.6
WR8 Warramunga Ar 13.99 152 **Pn** 08 08 41.6 -2.3
JAY Jayapura 14.15 69 P **Pn** 08 08 44.5 -1.5
46nm,0.9s,baz=231,slow=8.5,SNR=22
MBWA Marble Bar 15.35 208 P **Pn** 08 09 01.4 +0.7
MBWA Marble Bar 15.35 208 **Pn** 08 09 00.7 +0.1
PSA00 Pilbara Seismi 15.65 207 P **Pn** 08 09 04.7 +0.3
PSA00 Pilbara Seismi 15.65 207 **Pn** 08 09 03.8 -0.7
PSA00 Pilbara Seismi 15.65 207 **Pn** 08 09 03.7 -0.7
COEN Coen 16.65 113 P **P** 08 09 16.8 +0.9
COEN Coen 16.65 113 P **P** 08 09 17.0 +1.1
UGM Wanagama 16.78 268 P **Pn** 08 09 17.9 -0.2
UGM Wanagama 16.78 268 P **P** 08 09 16.7 -0.7
AS31 Alice Springs 17.07 159 P **P** 08 09 21.3 +0.8
ASAR Alice Springs 17.07 159 P **P** 08 09 20.3 -0.1
50nm,0.6s,baz=340,slow=11,SNR=405
ASAR S **S** 08 12 24.1 -5.3
15nm,0.8s,baz=340,slow=22,SNR=6.2
ASAR ScP **ScP** 08 17 13.6 -0.9
11nm,0.7s,baz=348,slow=2.2,SNR=8.6
QIS Mount Isa 17.39 139 P **P** 08 09 25.4 +1.4
KKM Kota Kinabalu 17.64 320 P **Pn** 08 09 28.1 -0.3
KKM Kota Kinabalu 17.64 320 P **P** 08 09 26.7 -0.1
SBUM Sibu 18.22 303 P **Pn** 08 09 34.9 -0.3
SBUM Sibu 18.22 303 P **P** 08 09 33.1 0.0
MTSU Mount Surprise 19.43 124 P **P** 08 09 47.6 +1.4
PMG Port Moresby 19.56 96 P **P** 08 09 48.6 +1.0
128nm,0.5s,baz=154,slow=2.7,SNR=47
PMG Port Moresby 19.56 96 P **P** 08 09 50.3 +2.7
PMG Port Moresby 19.56 96 P **P** 08 09 49.8 +2.2
BBJI Bungbulang 19.63 269 P **P** 08 09 45.6 -2.9
BBJI Bungbulang 19.63 269 P **P** 08 09 45.1 -3.4
MANU Manus Island 20.61 75 P **P** 08 09 59.9 +1.1
MEEK Meekatharra 20.65 203 P **P** 08 10 00.8 +1.6
XMI Christmas Isla 21.67 261 P **P** 08 10 10.6 +0.5
CTA Charters Tower 22.00 126 P **P** 08 10 13.8 +0.4
22nm,0.9s,baz=297,slow=9.4,SNR=17
22nm,0.9s
CTAO Charters Tower 22.00 126 P **P** 08 10 14.6 +1.2
CTAO IAmb IAmb 08 10 16.5
comp=Z,33nm,1.0s
TGY Tagaytay City 22.58 343 P **P** 08 10 18.1 -0.8
comp=Z,402nm,0.6s,baz=186,slow=3.0,SNR=10
FORT Forrest 23.00 179 P **P** 08 10 23.7 +1.2
MORW Morawa 23.85 205 P **P** 08 10 31.1 +0.8
MORW Morawa 23.85 205 P **P** 08 10 30.8 +0.5
MORW IAmb IAmb 08 10 33.4
comp=Z,27nm,0.7s
QLP Quilpie 24.66 142 P **P** 08 10 39.1 +1.4
BLDU Ballidu 24.95 202 P **P** 08 10 40.9 +0.7
MYKOM Kota Tinggi 25.35 291 P **P** 08 10 44.6 +0.5
KLBR Kellerberrin 25.46 200 P **P** 08 10 45.8 +0.9
BBOO Buckleboo 26.26 163 P **P** 08 10 53.0 +1.0
BBOO Buckleboo 26.26 163 P **P** 08 10 53.0 +1.0
NWAO Narrogin (SRO) 26.86 199 P **P** 08 10 57.2 -0.2
comp=Z,11nm,0.6s,baz=26,slow=6.9,SNR=8.7
comp=Z,11nm,0.6s
NWAO Narrogin (SRO) 26.86 199 P **P** 08 10 58.6 +1.2
NWAO Narrogin (SRO) 26.86 199 P **P** 08 10 58.1 +0.7
STKA Stephens Creek 27.45 153 P **P** 08 11 03.1 +0.4
comp=Z,8.2nm,0.4s,baz=328,slow=9.3,SNR=46
comp=Z,8.2nm,0.4s
STKA Stephens Creek 27.45 153 P **P** 08 11 03.6 +0.9
STKA Stephens Creek 27.45 153 P **P** 08 11 03.9 +1.2
HTT Hallett 27.75 159 P **P** 08 11 06.6 +1.2
CMSA Cobar Meteorol 29.21 147 P **P** 08 11 19.7 +1.4
KULM Kulim 29.68 295 P **P** 08 11 22.6 0.0
KULM Kulim 29.68 295 **P** 08 11 22.3 -0.3
PSI Prapat 30.31 289 P **P** 08 11 28.0 -0.3
TPUB Ta-pu 31.50 348 P **P** 08 11 37.7 -0.8
TPUB Ta-pu 31.50 348 P **P** 08 11 37.2 -1.3
ARMA Armidale 32.02 138 P **P** 08 11 44.6 +1.5
ARMA IAmb IAmb 08 12 59.1
comp=Z,19nm,1.4s
HNR Honiara 32.17 95 P **P** 08 11 45.0 +0.5
comp=Z,6.2nm,0.5s,baz=253,slow=5.6,SNR=4.0
comp=Z,6.2nm,0.5s
NGOA Tingoa Renbel 32.37 99 P **P** 08 11 47.7 +1.5
CAN Canberra 33.88 147 P **P** 08 12 01.1 +1.9
CAN Canberra 33.88 147 P **P** 08 12 00.1 +1.0
CAN IAmb IAmb 08 13 10.8
comp=Z,42nm,1.8s
CAN Canberra 33.88 147 P **P** 08 12 02.0 +2.8
CAN sP **sP** 08 12 56.2 +0.7
JOW Kunigami 34.30 1 P **P** 08 12 02.5 -0.3
comp=Z,10nm,0.6s,baz=187,slow=6.4,SNR=8.4
comp=Z,10nm,0.6s
JOW Kunigami 34.30 1 P **P** 08 12 03.7 +0.9
CMAR Chiang Mai Arr 38.28 313 P **P** 08 12 36.2 -0.5
comp=Z,10nm,0.6s,baz=141,slow=6.7,SNR=60
CMAR PcP **PcP** 08 14 48.1 +0.9
comp=Z,4.7nm,0.6s,baz=159,slow=2.8,SNR=13
CMAR ScP **S** 08 18 18.0 +0.2
comp=Z,1.2nm,0.5s,baz=162,slow=2.8,SNR=8.1
comp=Z,10nm,0.6s
CHTO Chiang Mai 38.51 313 P **P** 08 12 39.2 +0.6
CHTO Chiang Mai 38.51 313 **P** 08 12 38.4 -0.1
CHTO IAmb IAmb 08 12 39.6
comp=Z,13nm,0.7s
CHTO Chiang Mai 38.51 313 P **P** 08 12 38.9 +0.3
CHTO sP **sP** 08 13 33.6 -0.8
CHTO PcP **PcP** 08 14 49.1 +1.2
SANVU Saraoutou 39.65 105 P **P** 08 12 50.1 +2.0
SANVU pP **pP** 08 13 25.1 +0.1
SANVU sP **sP** 08 13 44.7 0.0
WHN Wuhan 40.02 342 P **P** 08 12 51.8 +0.9
WHN pmax pmax
comp=Z,74nm,1.2s
DZM Mont Dzumac 40.17 115 P **P** 08 12 52.7 +0.2
comp=Z,6.8nm,0.5s,baz=311,slow=11,SNR=3.3
comp=Z,6.8nm,0.5s
NJ2 Nanjing 40.34 349 *e*P P 08 12 58.3 +4.8
NJ2 pmax pmax
comp=Z,32nm,0.7s
KMI2 Kunming 40.53 324 P **P** 08 12 56.8 +1.3
KMI2 pmax pmax
comp=Z,16nm,0.7s
YATNC Mamie plateau, 40.57 115 P **P** 08 12 57.4 +1.8
OUENC Ouen Island, N 40.61 116 P **P** 08 12 57.9 +1.9
MARNC Mare, Loyalty 41.46 114 P **P** 08 13 04.5 +1.6
ENH Enshi 41.48 336 **P** 08 13 02.5 -0.4
ENH IAmb IAmb 08 13 04.1
comp=Z,19nm,0.5s
ENH Enshi 41.48 336 P **P** 08 13 03.0 0.0
ENH sP **sP** 08 13 58.3 -0.7
PZH PanZhiHua 42.15 325 P **P** 08 13 09.0 +0.5
PZH pmax pmax
comp=Z,10.0nm,0.7s
KSRS Korea Array 44.89 1 P **P** 08 13 29.9 -0.1
comp=Z,3.1nm,0.5s,baz=180,slow=9.7,SNR=15
comp=Z,3.1nm,0.5s
XAN Xi'an 45.05 338 ⇓P **P** 08 13 30.8 -0.7
XAN S **S** 08 19 55.0 -2.0
XAN pmax pmax
comp=Z,23nm,0.6s
XAN pmax pmax
comp=Z,120nm,4.2s
HNS HongShan 46.39 346 ⇑P **P** 08 13 41.0 -0.8
HNS pmax pmax
comp=Z,9.0nm,0.6s
SHL Shillong 47.84 315 **P** 08 13 52.7 -0.7
SHL IAmb IAmb 08 13 58.0
comp=Z,15nm,0.5s
LZDM Lanzhou Array 48.81 334 P **P** 08 14 00.6 -0.4
comp=Z,17nm,0.5s,baz=170,slow=12,SNR=14
comp=Z,17nm,0.5s
LZH Lanzhou 48.86 334 *e*P **P** 08 14 02.0 +0.9
LZH pP pP 08 14 37.8 -1.2
LZH pmax pmax
comp=Z,62nm,1.0s
LZH L L
comp=Z,200nm,16.2s
LZH L L
comp=Z,120nm,16.8s
LZH L L
comp=Z,180nm,13.7s
MSVF Nonsavu 50.22 107 P **P** 08 14 13.1 +1.5
comp=Z,8.2nm,0.8s,baz=252,slow=12,SNR=5.6
comp=Z,8.2nm,0.8s
MSVF Nonsavu 50.22 107 P **P** 08 14 13.0 +1.3
MSVF Nonsavu 50.22 107 P **P** 08 14 13.7 +2.1
MSVF Nonsavu 50.22 107 P **P** 08 14 13.9 +2.3
OUZ Omahuta 50.33 130 P **P** 08 14 13.9 +1.8
OUZ Omahuta 50.33 130 P **P** 08 14 14.6 +2.6
HHC Hu-ho-hao-te 50.45 344 *e*P **P** 08 14 16.5 +3.6
HHC pmax pmax
comp=Z,12nm,0.8s
HHC pmax pmax
comp=Z,77nm,4.6s
LSA Lhasa 50.98 318 P **P** 08 14 16.3 -1.3
LSA pmax pmax
comp=Z,28nm,0.6s
JCZ Jackson Bay 51.07 142 P **P** 08 14 18.8 +1.2
JCZ Jackson Bay 51.07 142 P **P** 08 14 19.9 +2.2
CN2 Changchun 51.26 358 P **P** 08 14 22.5 +3.7
CN2 pmax pmax
comp=Z,10.0nm,0.5s
FOZ Fox Glacier 51.42 141 P **P** 08 14 20.6 +0.6
FOZ IAmb IAmb 08 15 57.4
comp=Z,42nm,1.7s
WHZ Wether Hill Ro 51.59 145 P **P** 08 14 21.4 +0.1
WHZ IAmb IAmb 08 16 00.1
comp=Z,60nm,1.8s
USRK Ussuriysk Ar. 51.79 4 P **P** 08 14 22.5 -0.2
comp=Z,1.9nm,0.4s,baz=190,slow=7.0,SNR=9.0
comp=Z,1.9nm,0.4s
QRZ Quartz Range 51.87 137 P **P** 08 14 24.9 +1.5
QRZ Quartz Range 51.87 137 P **P** 08 14 26.1 +2.6
RPZ Rata Peaks 52.28 141 P **P** 08 14 28.1 +1.6
THZ Tophouse 52.54 138 P **P** 08 14 29.1 +0.6
THZ IAmb IAmb 08 14 31.4
comp=Z,34nm,1.6s
THZ Tophouse 52.54 138 P **P** 08 14 30.3 +1.8
LTZ Lake Taylor 52.60 139 P **P** 08 14 31.7 +2.8
OXZ Oxford 52.71 140 P **P** 08 14 31.4 +1.7
EVN Everest 52.88 314 **P** 08 14 31.6 -0.2
TCW Tory Channel 53.22 137 P **P** 08 14 34.5 +1.1
KHZ Kahutara 53.26 138 P **P** 08 14 35.0 +1.4
KHZ Kahutara 53.26 138 P **P** 08 14 35.2 +1.5
WTVZ West Tongariro 53.28 134 P **P** 08 14 36.3 +2.3
GOMU GeErMu 53.33 327 P **P** 08 14 36.3 +1.6
GOMU pmax pmax
comp=Z,5.0nm,0.5s
OTVZ Oturere 53.35 134 P **P** 08 14 36.9 +2.3
TMVZ Te Maari 53.36 134 P **P** 08 14 37.4 +2.8
GTA2 Gaotai 53.47 333 P **P** 08 14 35.8 +0.4
GTA2 sP sP 08 15 33.0 +0.3
GTA2 pmax pmax
comp=Z,84nm,0.7s
GTA2 L L
comp=Z,140nm,13.7s
GTA2 L L
comp=Z,130nm,14.4s
GTA2 L L
comp=Z,180nm,15.5s
SNZO South Karori 53.56 137 P **P** 08 14 36.5 +0.7
BHW Baring Head 53.71 137 P **P** 08 14 37.6 +0.7
BHW IAmb IAmb 08 14 38.2
comp=Z,14nm,0.6s
MRZ Mangatainoka R 53.89 135 P **P** 08 14 39.1 +0.9
TSZ Takapari Road 53.91 135 P **P** 08 14 39.5 +1.0
BKZ Black Stump Fm 53.95 133 P **P** 08 14 39.8 +1.0
BKZ Black Stump Fm 53.95 133 P **P** 08 14 40.0 +1.2
BKZ IAmb IAmb 08 16 17.5
comp=Z,28nm,1.4s
BKZ Black Stump Fm 53.95 133 P **P** 08 14 39.9 +1.2
KWHZ Kaweka Forest 53.99 134 P **P** 08 14 40.7 +1.6
PNHZ Pukenui 54.02 134 P **P** 08 14 40.5 +1.2
KRHZ Kereru 54.04 134 P **P** 08 14 40.6 +1.1
URZ Urewera 54.06 132 P **P** 08 14 38.7 -0.9
MTHZ Maungataniwha 54.08 133 P **P** 08 14 40.9 +1.2
RTZ Ruatahuna 54.10 133 P **P** 08 14 41.1 +1.2
NMHZ Naumai 54.15 133 P **P** 08 14 42.2 +1.9
MCHZ McNeill Hill 54.20 134 P **P** 08 14 42.3 +1.7
BFZ Birch Farm 54.36 135 P **P** 08 14 42.8 +1.1
BFZ Birch Farm 54.36 135 P **P** 08 14 43.0 +1.3
RUGZ Raukumara Rang 54.38 132 P **P** 08 14 42.5 +0.5
HAZ Te Kaha 54.38 131 P **P** 08 14 43.2 +1.4
MWZ Matawai 54.40 132 P **P** 08 14 43.1 +1.1
RIGZ Rimuhau 54.70 132 P **P** 08 14 45.2 +1.0
MXZ Matakaoa Point 54.71 131 P **P** 08 14 45.9 +1.7
MXZ Matakaoa Point 54.71 131 P **P** 08 14 45.2 +0.9
PUZ Puketiti 54.84 132 P **P** 08 14 46.1 +0.9
HEH HeiHe 57.68 360 *e*P **P** 08 15 03.0 -2.0
ULN Ulaanbaatar 58.16 344 **P** 08 15 08.9 +0.3
SONM Songino Array 58.32 343 P **P** 08 15 09.3 -0.3
comp=Z,1.9nm,0.4s,baz=162,slow=8.3,SNR=18
SONM PcP **PcP** 08 15 58.6 -0.1
comp=Z,1.5nm,0.5s,baz=160,slow=4.5,SNR=4.3
comp=Z,1.9nm,0.4s
SONM Songino Array 58.32 343 P **P** 08 15 09.6 0.0
TLY Talaya 62.56 344 P **P** 08 15 38.4 +0.2
comp=Z,1.8nm,0.5s,baz=288,slow=9.0,SNR=3.6
comp=Z,1.8nm,0.5s
TLY Talaya 62.56 344 IAmb IAmb 08 15 43.9
comp=Z,2.4nm,0.4s
WMQ Urumqi 62.61 329 *e*P **P** 08 15 39.5 +0.8
WMQ PcP **PcP** 08 16 12.0 -4.0
WMQ PP **PP** 08 18 04.5 +5.7
WMQ ScP **ScP** 08 19 59.5 -1.9
WMQ pmax pmax
comp=Z,17nm,0.7s
NIL Nilore 65.77 312 **P** 08 15 58.9 -0.5
KSH2 Kashi 66.90 318 P **P** 08 16 06.3 -0.4
KSH2 pmax pmax
comp=Z,12nm,0.6s
MKAR Makanchi Array 67.43 328 P **P** 08 16 09.6 -0.1
comp=Z,21nm,0.6s,baz=118,slow=8.3,SNR=133
comp=Z,21nm,0.6s
KDJ Kajisay 67.50 322 IAmb IAmb 08 16 11.5
comp=Z,8.3nm,0.6s
BOOM Boomskoye usch 68.47 322 IAmb IAmb 08 16 17.4
comp=Z,11nm,0.6s
AAK Ala-Archa 69.45 321 **P** 08 16 22.8 +0.3
AAK IAmb IAmb 08 16 24.2
comp=Z,8.0nm,0.6s
AAK Ala-Archa 69.45 321 P **P** 08 16 23.0 +0.5
ARSB Arslanbob 69.72 319 IAmb IAmb 08 16 25.5
comp=Z,11nm,0.5s
GAR Garm 70.37 316 P **P** 08 16 27.7 -0.4
GAR IAmb IAmb 08 16 29.0
comp=Z,12nm,0.5s
ZAA0 Zalesovo Array 71.09 335 IAmb IAmb 08 16 31.9
comp=Z,19nm,0.8s
ZALV Zalesovo Beam 71.09 335 P **P** 08 16 31.0 -1.0
comp=Z,15nm,0.4s,baz=131,slow=5.1,SNR=72
comp=Z,15nm,0.4s
ZALV Zalesovo Beam 71.09 335 **P** 08 16 30.9 -1.0
KURBB Kurotov Arra 71.78 330 P **P** 08 16 36.0 -0.2
comp=Z,21nm,0.6s,baz=134,slow=5.1,SNR=98
comp=Z,21nm,0.6s
KURK Kurchatov 71.80 330 **P** 08 16 36.1 -0.2
KURK Kurchatov 71.80 330 P **P** 08 16 36.1 -0.2
KURK PcP **PcP** 08 16 54.6 +0.4
KURK pP **pP** 08 17 16.5 -0.5
VNDA Vanda 72.10 173 P **P** 08 16 38.5 +0.8
comp=Z,1.0nm,0.5s,baz=329,slow=7.9,SNR=8.5
comp=Z,1.0nm,0.5s
VNDA Vanda 72.10 173 IAmb IAmb 08 16 44.1
comp=Z,6.0nm,1.4s
MAW Mawson 73.41 201 P **P** 08 16 46.2 +0.7
comp=Z,2.9nm,0.6s,baz=45,slow=4.3,SNR=1.8
comp=Z,2.9nm,0.6s
MAW Mawson 73.41 201 P **P** 08 16 47.1 +1.6
BVAR Borovoye Array 77.30 329 P **P** 08 17 07.6 -0.4
comp=Z,5.3nm,0.7s,baz=133,slow=6.5,SNR=21
comp=Z,5.3nm,0.7s
BORK Borovoye 77.35 329 **P** 08 17 07.8 -0.4
BORK Borovoye 77.35 329 P **P** 08 17 07.8 -0.4
VOI Vohitsoka 78.55 249 **P** 08 17 16.0 +0.3
VOI IAmb IAmb 08 17 17.1
comp=Z,19nm,0.7s
TIXI Tiksi 79.16 0 P **P** 08 17 17.2 -0.6
comp=Z,6.3nm,0.3s,baz=193,slow=3.3,SNR=11
comp=Z,6.3nm,0.3s
TIXI Tiksi 79.16 0 **P** 08 17 17.2 -0.6
TIXI Tiksi 79.16 0 P **P** 08 17 17.8 +0.1
NRIK Noril'sk 81.61 347 P **P** 08 17 30.1 -0.8
comp=Z,5.6nm,0.5s,baz=134,slow=5.2,SNR=12
comp=Z,5.6nm,0.5s
QSPA South Pole Qui 82.31 180 P **P** 08 17 35.0 +0.2
comp=Z,4.3nm,0.7s,baz=175,slow=1.0,SNR=21
comp=Z,4.3nm,0.7s
QSPA South Pole Qui 82.31 180 P **P** 08 17 35.8 +1.0
QSPA IAmb IAmb 08 18 21.4
comp=Z,21nm,1.6s
ARTI Arti 85.02 329 P **P** 08 17 47.6 -1.0
comp=Z,2.8nm,0.5s,baz=181,slow=2.5,SNR=5.7
comp=Z,2.8nm,0.5s
ARTI Arti 85.02 329 **P** 08 17 47.4 -1.2
ARTI IAmb IAmb 08 17 48.7
comp=Z,16nm,1.2s
RAYN Ar Rayn 85.71 294 **P** 08 17 52.8 0.0
RAYN IAmb IAmb 08 17 53.2
comp=Z,14nm,0.7s
N14K Kuskokwak Cree 87.18 28 IAmb IAmb 08 18 01.5
comp=Z,14nm,0.7s
C19K Lookout Ridge 91.12 20 IAmb IAmb 08 18 18.0
comp=Z,7.4nm,0.7s
D19K Kuna River 91.44 21 P **P** 08 18 18.3 -0.6
D19K IAmb IAmb 08 18 18.9
comp=Z,5.8nm,0.5s
D20K Etivluk River 92.03 21 IAmb IAmb 08 18 21.7
comp=Z,4.3nm,0.6s
TROLL Troll, Antarti 92.89 195 ⇑P **P** 08 18 26.6 +0.9
B21K Ikpikpuk River 92.96 20 IAmb IAmb 08 18 26.2
comp=Z,4.3nm,0.6s
B22K Teshekpuk Lake 93.52 19 IAmb IAmb 08 20 34.5
comp=Z,8.3nm,1.2s
SML Sawmill 93.97 28 P **P** 08 18 29.8 -0.9
RND Reindeer 93.98 27 P **P** 08 18 29.5 -1.3
RND IAmb IAmb 08 21 49.2
comp=Z,24nm,2.0s
BELA Belgrano 2 94.00 184 **P** 08 18 31.2 +0.6
C23K Itkillik River 94.37 20 IAmb IAmb 08 18 32.3
comp=Z,4.5nm,0.7s
SNAA Sanae 94.42 194 ⇑P **P** 08 18 34.5 +1.8
comp=Z,15nm,0.3s
ILAR Eielson Array 95.03 25 P **P** 08 18 33.4 -2.0
comp=Z,0.2nm,0.4s,baz=228,slow=5.3,SNR=6.9
comp=Z,0.2nm,0.4s
DOT Dot Lake 96.14 27 IAmb IAmb 08 18 43.5
comp=Z,5.5nm,1.0s
VNA3 Neumayer Olymp 96.29 193 ⇑P **P** 08 18 41.2 +0.1
comp=Z,2.6nm,0.9s
BOSA Boshof 96.95 240 P **P** 08 18 43.8 -1.4
comp=Z,1.8nm,0.7s,baz=96,slow=2.9,SNR=5.6
comp=Z,1.8nm,0.7s
BRTR Keskin Array B 97.77 309 P **P** 08 18 46.7 -2.0
comp=Z,0.4nm,0.5s,baz=112,slow=3.1,SNR=2.6
comp=Z,0.4nm,0.5s
AKASG Malin Array Be 101.10 320 P **Pdif** 08 19 00.8 -2.1
comp=Z,0.4nm,0.4s,baz=86,slow=3.8,SNR=2.5
AKASG PKiKP **PKiKP** 08 23 26.2 -0.9
comp=Z,0.7nm,0.5s,baz=86,slow=2.3,SNR=5.9
ARCES ARCESS Array B 101.32 339 P **Pdif** 08 19 02.4 -1.2
comp=Z,1.2nm,0.7s,baz=42,slow=2.0,SNR=4.4
ARCES PKiKP **PKiKP** 08 23 27.1 +0.1
comp=Z,0.8nm,0.5s,baz=99,slow=1.9,SNR=6.6
SPITS Spitsbergen Ar 101.73 349 P **Pdif** 08 19 03.7 -1.6
comp=Z,1.2nm,0.4s,baz=80,slow=9.5,SNR=13
FINES FINESS Array B 102.14 331 PKiKP **PKiKP** 08 23 28.7 +0.1
comp=Z,1.8nm,0.6s,baz=108,slow=2.6,SNR=7.8
NOA NORSAR Array B 109.21 332 PKiKP **PKiKP** 08 23 41.1 -0.7
comp=Z,0.7nm,0.7s,baz=262,slow=3.5,SNR=3.5
YKA Yellowknife Ar 109.45 26 PKiKP **PKiKP** 08 23 42.0 -0.2
comp=Z,1.0nm,0.6s,baz=304,slow=2.2,SNR=29
YKA PKKPbc **PKKPbc** 08 34 47.9 -2.4
comp=Z,0.6nm,0.9s,baz=109,slow=3.0,SNR=7.6
GERES GERESS Array B 111.30 320 PKiKP **PKiKP** 08 23 45.5 -0.7
comp=Z,1.6nm,0.6s,baz=80,slow=1.5,SNR=9.8
WTTA Wattenberg 113.02 318 *i* PKiKP **PKiKP** 08 23 49.5 -0.2
comp=Z,14nm,0.7s
MOTA Moosalm 113.35 318 *i* PKiKP **PKiKP** 08 23 49.9 -0.4
comp=Z,3.4nm,0.6s
NVAR Mina Array Bea 113.68 51 PKiKP **PKiKP** 08 23 52.0 +0.8
comp=Z,0.9nm,0.9s,baz=247,slow=3.1,SNR=5.2
DAVA Damuels 114.17 319 *i* PKP PKPdf 08 23 51.5 -0.3
comp=Z,6.2nm,0.7s
KEST Kesra 117.20 306 PKP **PKPdf** 08 23 57.4 -0.5
comp=Z,4.1nm,0.9s,baz=18,slow=3.0,SNR=5.3
EKA Eskdalemuir Ar 118.52 330 PKP **PKPdf** 08 23 59.2 -0.5
comp=Z,1.1nm,0.4s,baz=22,slow=3.1,SNR=9.9
PDAR Pinedale Array 119.15 45 PKP **PKiKP** 08 24 02.0 +0.3
comp=Z,0.9nm,0.4s,baz=81,slow=2.0,SNR=18
PDAR PKKPbc **PKKPab** 08 34 19.0 +1.0
comp=Z,0.9nm,0.6s,baz=115,slow=5.8,SNR=10
ULM Lac du Bonnet 124.37 32 PKP **PKPdf** 08 24 10.7 -0.4
comp=Z,5.6nm,0.6s,baz=291,slow=1.5,SNR=15
ESDC Sonseca Array 126.18 314 PKP **PKPdf** 08 24 14.5 -0.5
comp=Z,1.5nm,0.7s,baz=14,slow=4.2,SNR=8.0
TORD Torodi Ar. Bea 126.46 281 PKP **PKPdf** 08 24 15.9 -0.2
comp=Z,4.5nm,0.7s,baz=95,slow=1.2,SNR=25
TXAR Lajitas Array 127.43 59 PKP **PKiKP** 08 24 18.6 +0.3
comp=Z,0.6nm,0.6s,baz=194,slow=3.4,SNR=8.5
SCHQ Schefferville 131.59 11 PKP **PKiKP** 08 24 25.4 -0.4
comp=Z,2.4nm,0.4s,baz=291,slow=1.3,SNR=21
SCHQ SKPbc **SKPbc** 08 27 33.2 -0.7
comp=Z,5.7nm,1.0s,baz=341,slow=5.0,SNR=5.5
DBIC Dimbokro 132.69 272 PKP **PKPdf** 08 24 28.2 +0.2
comp=Z,2.0nm,0.4s,baz=127,slow=2.5,SNR=4.8
CPUP Villa Florida 145.88 172 PKPbc **PKPbc** 08 24 52.4 -0.2
comp=Z,2.5nm,0.4s,baz=188,slow=2.0,SNR=19
CPUP SKPbc **SKiKP** 08 28 15.2 -0.4
comp=Z,3.9nm,0.8s,baz=183,slow=2.2,SNR=10.0
LPAZ La Paz 151.63 147 PKPbc **PKiKP** 08 25 08.8 +0.2
comp=Z,3.8nm,0.4s,baz=39,slow=5.3,SNR=22

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*IDC **31** 08:16:52.0±0.9, 20°.52S×169°.43E, h0km, mb3.9/8, mbtmp4.0/10, ML3.7/2, MS3.4/13, Error ellipse: s-maj=25.6km s-min=22.8km az=130.0*
*NOU **31** 08:16:58.2, 20°.61S×169°.08E, h0km, MLv4.1/5, Vanuatu Islands*
*NEIC **31** 08:16:59.0±1.7, 20°.6S±0°.1×169°.3E±0°.1, h40km±3km, mb4.5/17, Error ellipse: s-maj=21.8km s-min=13.7km az=135.0*

ISC 31 08:16:59.7±0.7, 20°.6S±0°.1×169°.28E±0°.09, h55km, n52, σ0s77/37, mb4.3/14, MS3.5/12, 1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.45**	**233**	P	**Pn**	**08 17 22.2**	**-1.4**
MARNC	**Mare, Loyalty**	**1.45**	**233**	S	**Sn**	**08 17 40.0**	**-1.5**
MARNC	**Mare, Loyalty**	**1.45**	**233**		**Pn**	**08 17 22.6**	**-1.0**
YATNC	**Mamie plateau,**	**2.65**	**237**	P	**Pn**	**08 17 39.6**	**-0.3**
OUENC	**Ouen Island, N**	**2.89**	**231**	P	**Pn**	**08 17 43.7**	**+0.4**
OUENC	**Ouen Island, N**	**2.89**	**231**		**Pn**	**08 17 43.3**	**+0.1**
DZM	**Mont Dzumac**	**3.01**	**241**	Pn	**Pn**	**08 17 44.6**	**-0.4**
	4.7nm,0.3s,baz=101,slow=12,SNR=108						
DZM				Sn	**Sn**	**08 18 19.8**	**-0.2**
	24nm,0.3s,baz=37,slow=23,SNR=7.1						
	29nm,0.5s						
ONTNC	**Ouen Toro**	**3.12**	**237**	P	**Pn**	**08 17 46.9**	**+0.5**
ONTNC	**Ouen Toro**	**3.12**	**237**		**Pn**	**08 17 46.5**	**+0.1**
HNR	**Honiara**	**14.31**	**320**	LR	LR	08 24 50.0	
	comp=Z,6.1nm,19.9s,baz=246,slow=33						
URZ	**Urewera**	**18.84**	**161**	P	**Pn**	**08 21 15.1**	**-1.0**
	0.4nm,0.3s,baz=351,slow=9.3,SNR=4.4						
	13nm,1.0s						
RTZ	**Ruatahuna**	**19.13**	**161**		**Pn**	**08 21 18.7**	**-0.9**
RTZ				IAmb	IAmb	08 21 21.8	
	comp=Z,34nm,1.0s						
AFI	**Afiamalu**	**19.27**	**73**	LR	LR	08 27 17.2	
	comp=Z,77nm,20.8s,baz=248,slow=33						
BKZ	**Black Stump Fm**	**19.50**	**163**		**Pn**	**08 21 23.5**	**-0.5**
BKZ				IAmb	IAmb	08 21 24.8	
	comp=Z,19nm,1.1s						
THZ	**Tophouse**	**21.30**	**173**	P	**P**	**08 21 42.5**	**+0.8**
THZ				IAmb	IAmb	08 21 45.4	
	comp=Z,13nm,0.9s						
CTA	**Charters Tower**	**21.59**	**267**	LR	LR	08 28 35.0	

	comp=Z,70nm,21.6s,baz=39,slow=32					
INZ	**Inchbonnie**	**22.11 176**	P	**P**	**08 21 51.6**	**+1.1**
INZ			IAmb	IAmb	08 21 53.4	
	comp=Z,15nm,1.0s					
LTZ	**Lake Taylor**	**22.24 174**	P	**P**	**08 21 53.1**	**+1.2**
LTZ			IAmb	IAmb	08 21 55.5	
	comp=Z,19nm,1.4s					
PMG	**Port Moresby**	**24.06 294**	LR	LR	08 29 28.1	
	comp=Z,82nm,18.2s,baz=170,slow=31					
STKA	**Stephens Creek**	**27.17 240**	P	**P**	**08 22 39.6**	**+1.6**
	comp=Z,1.6nm,0.6s,baz=97,slow=15,SNR=4.8					
	comp=Z,1.6nm,0.6s					
STKA	**Stephens Creek**	**27.17 240**	IAmb	IAmb	08 22 41.8	
	comp=Z,19nm,1.1s					
RAR	**Rarotonga**	**28.89 97**	LR	LR	08 31 53.4	
	comp=Z,36nm,21.5s,baz=283,slow=31					
BBOO	**Buckleboo**	**31.93 241**	P	**P**	**08 23 20.2**	**-0.1**
WR8	**Warramunga Arr**	**32.59 265**	P	**P**	**08 23 26.9**	**+0.6**
WR8			IAmb	IAmb	08 24 04.2	
	comp=Z,12nm,1.5s					
WB0	**Warramunga Arr**	**32.72 265**	P	**P**	**08 23 28.0**	**+0.7**
WRA	**Warramunga Arr**	**32.74 265**	P	**P**	**08 23 27.2**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=95,slow=8.5,SNR=11					
	comp=Z,0.4nm,0.4s					
AS31	**Alice Springs**	**32.85 258**	P	**P**	**08 23 29.1**	**+0.5**
ASAR	**Alice Springs**	**32.86 258**	P	**P**	**08 23 29.0**	**+0.5**
	comp=Z,1.8nm,0.7s,baz=85,slow=9.2,SNR=14					
ASAR			LR	LR	08 35 50.4	
	comp=Z,89nm,18.8s,baz=114,slow=34					
	comp=Z,1.8nm,0.7s					
NWAO	**Narrogin (SRO)**	**47.63 244**	P	**P**	**08 25 31.3**	**+0.8**
VNDA	**Vanda**	**57.06 182**	P	**P**	**08 26 39.5**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=0.0,slow=10,SNR=2.0					
	comp=Z,0.6nm,0.6s					
VNDA	**Vanda**	**57.06 182**	IAmb	IAmb	08 26 42.1	
	comp=Z,4.3nm,1.4s					
SBA	**Scott Base**	**57.29 181**		**P**	**08 26 42.5**	**+1.2**
MJAR	**Matsushiro Arr**	**63.99 332**	LR	LR	08 55 19.1	
	comp=Z,6.2nm,19.2s,baz=156,slow=36					
ASAJ	**Asahikawa**	**68.90 340**	LR	LR	08 53 16.4	
	comp=Z,30nm,22.0s,baz=54,slow=32					
QSPA	**South Pole Qui**	**69.44 180**	P	**P**	**08 28 02.2**	**+0.2**
	comp=Z,9.1nm,0.9s,baz=7.3,slow=1.7,SNR=25					
	comp=Z,9.1nm,0.9s					
QSPA	**South Pole Qui**	**69.44 180**	P	**P**	**08 28 02.4**	**+0.5**
SHEM	**Shemya Is, Ala**	**73.16 3**	LR	LR	08 54 30.6	
	comp=Z,28nm,20.0s,baz=106,slow=31					
RPN	**Rapa Nui**	**73.51 113**	LR	LR	08 56 13.7	
	comp=Z,24nm,19.5s,baz=50,slow=32					
PETK	**Petropavlovsk-**	**74.10 353**	LR	LR	08 54 28.8	
	comp=Z,74nm,21.7s,baz=73,slow=30					
KLR	**Kul'dur**	**77.14 336**	LR	LR	09 02 17.5	
	comp=Z,17nm,18.3s,baz=344,slow=35					
BELA	**Belgrano 2**	**80.73 175**	P	**P**	**08 29 05.7**	**-0.9**
BELA			IAmb	IAmb	08 29 06.5	
	comp=Z,7.7nm,1.0s					
MA2	**Magadan**	**81.33 351**	LR	LR	09 00 34.1	
	comp=Z,27nm,20.3s,baz=154,slow=32					
SONM	**Songino Array**	**88.34 323**	P	**P**	**08 29 45.6**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=114,slow=3.6,SNR=2.5					
	comp=Z,0.4nm,0.5s					
SONM	**Songino Array**	**88.34 323**	IAmb	IAmb	08 29 58.8	
	comp=Z,2.5nm,1.2s					
VNA3	**Neumayer Olymp**	**88.38 180** ⇓	P	**P**	**08 29 44.7**	**-0.6**
	comp=Z,4.1nm,0.6s					
VNA2	**Neumayer--Watz**	**88.67 181**	P	**P**	**08 29 46.5**	**-0.2**
	baz=184,slow=4.1					
NVAR	**Mina Array Bea**	**89.68 48**	P	**P**	**08 29 52.3**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=246,slow=6.9,SNR=2.4					
	comp=Z,0.3nm,0.8s					
ILAR	**Eielson Array**	**91.53 17**	P	**P**	**08 29 59.2**	**-0.6**
	comp=Z,0.1nm,0.6s,baz=234,slow=4.3,SNR=1.7					
	comp=Z,0.1nm,0.6s					
DLBC	**Dease Lake**	**93.25 27**	LR	LR	09 08 39.9	
	comp=Z,21nm,19.2s,baz=104,slow=33					
EKA	**Eskdalemuir Ar**	**144.88 352**	PKP	**PKPab**	**08 36 28.6**	**-0.9**
	comp=Z,1.2nm,0.7s,baz=347,slow=2.6,SNR=3.8					
GERES	**GERESS Array B**	**145.72 331**	PKPbc	**PKPbc**	**08 36 32.4**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=53,slow=0.7,SNR=7.2					
DAVOX	**Davos/Dischmat**	**148.97 332**	PKPbc	**PKPbc**	**08 36 42.1**	**+0.4**
	comp=Z,2.5nm,0.6s,baz=0.0,slow=4.0,SNR=4.8					

IDC ***31*** *08:25:06.3±1.2,23°.16S×173°.50E, h0km, mb3.9/5, mbtmp3.9/7, ML4.7/2, MS3.1/3, Error ellipse: s-maj=36.8km s-min=23.6km az=151.0*

NEIC ***31*** *08:25:07.7±0.6,23°.1S±0°.1×173°.60E±0°.05, h10km±1km, mb4.4/7, Error ellipse: s-maj=20.0km s-min=6.0km az=199.0*

ISC 31 08:25:10.7±0.8, 23°.1S±0°.2×173°.53E±0°.08, h35km, n19, σ0s73/17, mb4.3/7, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**5.33**	**286**	Pn	**Pn**	**08 26 27.9**	**+0.1**
OUENC	**Ouen Island, N**	**6.21**	**275**	Pn	**Pn**	**08 26 39.9**	**+0.1**
ONTNC	**Ouen Toro**	**6.58**	**275**	Pn	**Pn**	**08 26 45.2**	**+0.3**
DZM	**Mont Dzumac**	**6.62**	**277**	Pn	**Pn**	**08 26 45.9**	**+0.2**
	4.8nm,0.3s,baz=124,slow=14,SNR=97						
DZM				Sn	**Sn**	**08 27 58.8**	**-1.2**
	3.5nm,0.3s,baz=164,slow=19,SNR=4.7						
DZM				LR	LR	08 28 44.6	
	comp=Z,87nm,19.7s,baz=30,slow=33						
MSVF	**Nonsavu**	**6.78**	**39**	Pn	**Pn**	**08 26 49.0**	**+1.2**
	8.9nm,0.3s						
	0.8nm,0.3s,baz=240,slow=9.1,SNR=8.0						
	3.5nm,0.6s						
MSVF	**Nonsavu**	**6.78**	**39**		**Pn**	**08 26 46.9**	**-1.0**
NIUE	**Niue**	**15.94**	**79**	Pn	**Pn**	**08 28 51.0**	**-1.4**
EIDS	**Eidsvold**	**20.60**	**259**	P	**P**	**08 29 46.6**	**-0.3**
EIDS				IAmb	IAmb	08 30 05.0	
	comp=Z,11nm,1.1s						
CTA	**Charters Tower**	**25.52**	**271**	LR	LR	08 40 15.4	
	comp=Z,29nm,18.6s,baz=172,slow=36						
STKA	**Stephens Creek**	**29.58**	**246**	P	**P**	**08 31 12.5**	**0.0**
	comp=Z,0.5nm,0.3s,baz=69,slow=7.9,SNR=4.7						
STKA				LR	LR	08 40 59.6	
	comp=Z,74nm,19.6s,baz=201,slow=32						
	comp=Z,0.5nm,0.3s						
STKA	**Stephens Creek**	**29.58**	**246**	IAmb	IAmb	08 31 19.5	
	comp=Z,26nm,1.1s						
ASAR	**Alice Springs**	**36.30**	**261**	P	**P**	**08 32 11.8**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=86,slow=9.0,SNR=14						
	comp=Z,1.4nm,0.8s						
WR8	**Warramunga Arr**	**36.37**	**267**	P	**P**	**08 32 12.0**	**+0.2**
WR8				IAmb	IAmb	08 32 14.9	
	comp=Z,4.6nm,1.1s						
WB0	**Warramunga Arr**	**36.51**	**268**	P	**P**	**08 32 13.5**	**+0.5**
WB0				IAmb	IAmb	08 32 21.2	
	comp=Z,5.6nm,1.4s						
WRA	**Warramunga Arr**	**36.52**	**267**	P	**P**	**08 32 12.7**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=97,slow=8.6,SNR=6.9						
	comp=Z,0.9nm,0.8s						
QSPA	**South Pole Qui**	**67.02**	**180**	P	**P**	**08 36 00.1**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=315,slow=11,SNR=5.2						
	comp=Z,0.7nm,0.6s						
QSPA	**South Pole Qui**	**67.02**	**180**	IAmb	IAmb	08 36 07.7	
	comp=Z,9.6nm,1.4s						
ILAR	**Eielson Array**	**92.73**	**16**	P	**P**	**08 38 19.5**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=232,slow=5.6,SNR=6.8						
	comp=Z,0.6nm,0.8s						
EKA	**Eskdalemuir Ar**	**147.67**	**356**	PKPbc	**PKiKP**	**08 44 53.4**	**+0.2**
	comp=Z,2.0nm,1.1s,baz=2.5,slow=1.9,SNR=4.3						

IDC ***31*** *09:03:51.7±1.8,4°.28S×151°.65E, h0km, mb3.5/5, mbtmp3.6/6, ML1.9/1, MS2.5/2, Error ellipse: s-maj=62.3km s-min=24.6km az=119.0*

ISC 31 09:03:56.9±1.8, 4°.3S±0°.2×151°.6E±0°.4, h35km, n9, σ0s79/7, mb3.5/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.73**	**221**	Pn	**Pn**	**09 05 33.6**	**+0.4**
	1.3nm,0.3s,baz=342,slow=20,SNR=1.6						
	4.2nm,0.5s						
HNR	**Honiara**	**9.70**	**122**	LR	LR	09 09 55.9	
	comp=Z,4.5nm,18.4s,baz=28,slow=38						
WRA	**Warramunga Arr**	**22.91**	**226**	P	**P**	**09 08 56.5**	**-1.4**
	0.3nm,0.6s,baz=49,slow=10,SNR=6.5						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**25.74**	**220**	P	**P**	**09 09 24.8**	**+0.4**
	0.4nm,0.7s,baz=52,slow=8.5,SNR=6.3						
	0.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**56.61**	**295**	P	**P**	**09 13 36.9**	**0.0**
	0.8nm,0.3s,baz=117,slow=5.1,SNR=6.9						
	0.8nm,0.3s						
SONM	**Songino Array**	**65.29**	**328**	LR	LR	09 40 52.8	
	comp=Z,18nm,21.1s,baz=272,slow=34						
MKAR	**Makanchi Array**	**79.19**	**319**	P	**P**	**09 15 58.6**	**+0.2**
	0.4nm,0.6s,baz=80,slow=8.4,SNR=2.5						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**82.15**	**22**	P	**P**	**09 16 13.6**	**-0.2**
	0.3nm,0.7s,baz=245,slow=5.4,SNR=7.1						
	0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**149.04**	**288**	PKPbc	**PKiKP**	**09 23 43.9**	**+0.2**
	1.0nm,1.0s,baz=69,slow=3.0,SNR=3.1						

GUC 31 09:20:43.0±0.8, 21°.17S×68°.96W, h112km±4km, ML3.0, 5C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.51**	**284**	⇑*i*P	Pn	09 20 59.6	-0.7
PB01				*i* S	Sn	09 21 12.5	-0.8
PB01				IAML		09 21 13.4	
	comp=N,605nm,0.6s						
PB09	**IPOC Station P**	**0.68**	**203**	*e*P	Pn	09 21 01.5	-0.2
PB09				*i* S	Sn	09 21 16.0	+0.3
PB02	**IPOC Station P**	**0.89**	**260**	⇑*i*P	Pn	09 21 03.1	-0.3
PB02				*i* S	Sn	09 21 18.4	-0.4
PB02				IAML		09 21 19.6	
	comp=N,479nm,0.3s						
PX03	**IPOC Station P**	**0.98**	**320**	*e*P	Pn	09 21 02.9	-1.4
PX03				*i* S	Sn	09 21 19.6	-0.9
PX03				IAML		09 21 20.2	
	comp=N,386nm,0.2s						
PB08	**IPOC Station P**	**1.03**	**350**	*e*P	Pn	09 21 04.9	-0.3
PB08				*i* S	Sn	09 21 21.6	-0.2
PB08				IAML		09 21 23.3	
	comp=E,316nm,0.2s						
PB03	**IPOC Station P**	**1.15**	**220**	*e*P	Pn	09 21 05.3	-0.8
PB03				*i* S	Sn	09 21 23.0	-0.6
PB03				IAML		09 21 23.7	
	comp=E,218nm,0.2s						
PATCX	**Punta Patache**	**1.17**	**287**	⇑*i*P	Pn	09 21 05.9	-0.3
PATCX				*i* S	Sn	09 21 23.0	-0.8
PATCX				IAML		09 21 25.2	
	comp=E,177nm,0.2s						
TA01	**Diego Aracena**	**1.29**	**297**	⇑*i*P	Pn	09 21 06.8	-0.7
TA01				*i* S	Sn	09 21 25.3	-0.7
TA01				IAML		09 21 28.3	
	comp=E,251nm,0.3s						
TA02	**Huaiquique**	**1.41**	**309**	*e*P	Pn	09 21 08.1	-0.8
TA02				*i* S	Sn	09 21 27.5	-1.1
TA02				IAML		09 21 32.5	
	comp=N,569nm,0.2s						
GO01	**Chusmiza**	**1.50**	**352**	*e*P	Pn	09 21 10.3	-0.2
GO01				*i* S	Sn	09 21 31.4	+0.1
PB11	**IPOC Station P**	**1.54**	**335**	*e*P	Pn	09 21 09.9	-0.8
PB11				*i* S	Sn	09 21 31.1	-0.5
PB11				IAML		09 21 32.3	
	comp=E,299nm,0.3s						
PB06	**IPOC Station P**	**1.64**	**200**	*e*P	Pn	09 21 11.4	-0.3
PB06				*i* S	Sn	09 21 33.2	-0.4
PB06				IAML		09 21 34.1	
	comp=E,160nm,0.8s						
PSGCX	**Pisagua**	**1.90**	**325**	⇑*i*P	Pn	09 21 13.6	-1.4
PSGCX				*i* S	Sn	09 21 37.2	-2.2
PSGCX				IAML		09 21 40.3	
	comp=E,1μm,0.1s						
PB05	**IPOC Station P**	**2.04**	**214**	*e*P	Pn	09 21 16.2	-0.5
PB05				*i* S	Sn	09 21 40.3	-2.1
PB12	**IPOC Station P**	**2.85**	**333**	*e*P	Pn	09 21 25.2	-2.0
PB12				*i* S	Sn	09 21 58.1	-3.1
PB12				IAML		09 22 00.6	
	comp=E,43nm,0.3s						
PB16	**IPOC Station P**	**2.86**	**350**	*e*P	Pn	09 21 29.0	+1.1

SCB 31 09:21:22.2±2.7, 22°.51S×67°.60W, h53km±42km, ML3.0/2, Error ellipse: s-maj=13.2km s-min=12.7km az=0.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB03	**IPOC Station P**	**2.05**	**283**	P	Pn	09 21 58.5	+4.1
MOCB	**Mochara**	**2.21**	**56**	P	Pn	09 22 00.1	+3.2
PB07	**IPOC Station P**	**2.26**	**290**	P	Pn	09 22 00.9	+3.5
PB01	**IPOC Station P**	**2.29**	**309**	P	Pn	09 22 01.2	+3.6
PB01				S	Sn	09 22 30.4	+5.7
PB01				IAML		09 22 32.0	
	73nm,0.2s						
PB05	**IPOC Station P**	**2.43**	**262**	P	Pn	09 22 03.0	+3.4
PB02	**IPOC Station P**	**2.44**	**299**	P	Pn	09 22 02.8	+3.0
PB02				S	Sn	09 22 32.9	+4.4
PB02				IAML		09 22 33.6	
	90nm,0.3s						
PB14	**IPOC Station P**	**3.33**	**230**	P	Pn	09 22 13.2	+1.2

IDC ***31*** *09:28:41.1±1.0,3°.88N×125°.18E, h0km, mb3.9/6, mbtmp4.0/7, ML4.5/1, Error ellipse: s-maj=53.3km s-min=17.2km az=71.0*

NEIC ***31*** *09:28:42.9±1.3,3°.9N±0°.1×125°.2E±0°.1, h10km±1km, mb4.4/13, Error ellipse: s-maj=23.0km s-min=15.2km az=61.0*

DJA ***31*** *09:28:56.7±0.7,4°.1N±6°×12°.6E±°, h112km±5km, M4.6/12, mB5.2/3, mb4.9/3, MLv4.4/12, Mw(mB)4.6/3*

MAN ***31*** *09:28:56.0,4°.19N×125°.62E, h169km, MS3.8*

ISC 31 09:28:53.9±0.6, 3°.96N±0°.04×126°.06E±0°.09, h107km, n36, σ2s12/39, mb4.0/12, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.60**	**243**	P	**Pn**	**09 29 13.7**	**+2.6**
SGSI				S	**Sn**	**09 29 28.4**	**+4.3**
DDMP	**Don Marcelino,**	**2.15**	**351**	*e*P	**Pn**	**09 29 30.8**	**+2.0**
DDMP				*e*S	**Sn**	**09 29 54.8**	**-0.6**
GSPH	**General Santos**	**2.38**	**332**	*i* P	**Pn**	**09 29 32.9**	**+1.1**
GSPH				*i* S	**Sn**	**09 30 00.4**	**-0.5**
DAV	**Davao City (W)**	**3.12**	**351**	Sn	**Sn**	**09 30 22.3**	**+4.1**
	54nm,0.3s,baz=257,slow=16,SNR=1.4						
KCP	**Kidapawan**	**3.18**	**342**	*e*P	**Pn**	**09 29 45.2**	**+3.0**
KCP				*i* S	**Sn**	**09 30 22.3**	**+2.8**
TNTI	**Ternate**	**3.43**	**158**	Pn	Pn	09 29 39.9	-5.6
TNTI	**Ternate**	**3.43**	**158**	P	**Pn**	**09 29 48.1**	**+2.6**
CDOP	**Cateel, Davao**	**3.81**	**6**	*e*P	**Pn**	**09 29 53.7**	**+3.0**
CDOP				*e*S	**Sn**	**09 30 37.1**	**+2.4**
BIPH	**Bislig**	**4.20**	**4**	*i* P	**Pn**	**09 29 58.2**	**+2.3**
BIPH				*e*S	**Sn**	**09 30 46.1**	**+2.0**
GTOI	**Gorontalo**	**4.50**	**223**	P	**Pn**	**09 30 01.1**	**+1.2**
MRSI	**Marisa**	**5.38**	**230**	P	**Pn**	**09 30 13.3**	**+1.5**
	2μm201nm,0.6s						
LUWI	**Luwuk**	**5.96**	**214**	Pn	Pn	09 30 03.3	-16
LUWI	**Luwuk**	**5.96**	**214**	P	**Pn**	**09 30 23.8**	**+4.1**
	0.4nm5μm95nm,0.7s						
SANI	**Sanana**	**5.97**	**181**	P	**Pn**	**09 30 18.9**	**-1.0**
APSI	**Ampana**	**6.55**	**222**	P	Pn	09 30 33.8	+6.1
SIJI	**Sorong**	**7.08**	**133**	Pn	**Pn**	**09 30 35.8**	**+0.9**
	7.1nm,0.3s,baz=329,slow=16,SNR=13						
	19nm,0.4s						
FAKI	**Fak Fak**	**9.22**	**138**	Pn	**Pn**	**09 31 04.9**	**+0.9**
MTN	**Manton Dam**	**17.44**	**163**	P	**P**	**09 32 49.3**	**-0.9**
KNRA	**Kununurra**	**19.70**	**172**	P	**P**	**09 33 13.1**	**-1.7**
KNRA				IAmb	IAmb	09 33 16.2	
	comp=Z,7.9nm,0.9s						
TPUB	**Ta-pu**	**19.93**	**345**	P	**P**	**09 33 14.9**	**-2.4**
FITZ	**Fitzroy Crossi**	**21.93**	**181**	P	**P**	**09 33 37.1**	**-1.6**
	comp=Z,11nm,0.5s,baz=356,slow=7.3,SNR=32						
	comp=Z,11nm,0.5s						
JOW	**Kunigami**	**22.84**	**5**	P	**P**	**09 33 45.5**	**-2.5**
JOW				IAmb	IAmb	09 33 56.4	
	comp=Z,18nm,1.1s						
WB0	**Warramunga Arr**	**24.96**	**161**	P	**P**	**09 34 07.7**	**+0.1**
WB0				IAmb	IAmb	09 34 09.4	
	comp=Z,5.4nm,0.3s						
WRAB	**Tennant Creek**	**25.11**	**161**	P	**P**	**09 34 09.2**	**+0.4**
WRAB				IAmb	IAmb	09 34 23.6	
	comp=Z,8.9nm,1.4s						
WRA	**Warramunga Arr**	**25.11**	**161**	P	**P**	**09 34 09.2**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=339,slow=10,SNR=55						
	comp=Z,0.7nm,0.3s						
WRA	**Warramunga Arr**	**25.11**	**161**	P	**P**	**09 34 06.4**	**-2.6**
WR8	**Warramunga Arr**	**25.18**	**161**	P	**P**	**09 34 09.2**	**-0.3**
WR8				IAmb	IAmb	09 34 23.8	
	comp=Z,9.9nm,1.4s						
AS31	**Alice Springs**	**28.51**	**165**	P	**P**	**09 34 39.1**	**-0.3**
ASAR	**Alice Springs**	**28.51**	**165**	P	**P**	**09 34 39.1**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=340,slow=6.9,SNR=30						
	comp=Z,0.4nm,0.4s						
KSRS	**Korea Array**	**33.38**	**3**	P	**P**	**09 35 22.8**	**+0.8**
	comp=Z,0.9nm,0.4s,baz=178,slow=9.9,SNR=6.1						
	comp=Z,0.9nm,0.4s						
FORT	**Forrest**	**34.60**	**177**	P	**P**	**09 35 31.9**	**-0.8**
FORT				IAmb	IAmb	09 35 32.4	
	comp=Z,4.5nm,0.6s						
BBOO	**Buckleboo**	**37.78**	**166**	P	**P**	**09 35 59.7**	**-0.1**
MKAR	**Makanchi Array**	**56.98**	**325**	P	**P**	**09 38 25.5**	**-2.9**
	comp=Z,0.7nm,0.6s,baz=120,slow=7.4,SNR=4.6						
	comp=Z,0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**61.18**	**328**	P	**P**	**09 38 54.4**	**-2.8**
	comp=Z,0.2nm,0.3s,baz=129,slow=5.7,SNR=2.8						
	comp=Z,0.2nm,0.3s						
VNDA	**Vanda**	**83.74**	**173**	P	**P**	**09 41 10.1**	**-0.4**
VNDA				IAmb	IAmb	09 41 18.4	
	comp=Z,3.5nm,1.5s						
QSPA	**South Pole Qui**	**93.87**	**180**	P	**P**	**09 41 60.0**	**+0.9**

RSNC ***31*** *09:29:16.6±0.0,8°.N±1°×7°.2W±°, h2km±3km, M3.3, mB4.7, mb3.7, ML3.1, MLv3.9, Mw(mB)3.9*

FUNV ***31*** *09:29:19.4,7°.89N×71°.63W, h5km, MW3.7, Presumed earthquake*

ISC 31 09:29:14.4±1.2, 8°.07N±0°.03×71°.94W±0°.04, h8km±10km, n29, σ1s83/48, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAMC	**Pamplona, Colo**	**1.05**	**226**	P	**Pg**	**09 29 34.0**	**-0.6**
PAMC				S	**Sg**	**09 29 47.5**	**-0.8**
OCAC	**Ocana**	**1.38**	**277**	P	**Pn**	**09 29 39.4**	**-0.8**
OCAC				S	**Sb**	**09 29 56.5**	**-2.0**
SDV	**Santo Domingo**	**1.52**	**58**	P	**Pg**	**09 29 44.3**	**+0.6**
SDV				S	**Sg**	**09 30 05.0**	**+1.5**
SDV	**Santo Domingo**	**1.52**	**58**	*e*P	**Pg**	**09 29 44.2**	**+0.6**
SDV				*e*S	**Sg**	**09 30 04.1**	**+0.6**
BARC	**Barichara**	**1.92**	**220**	P	**Pb**	**09 29 50.1**	**+0.3**
BARC				P	**Pb**	**09 29 50.1**	**+0.3**
BARC				S	**Sb**	**09 30 13.7**	**-0.4**
RUSC	**La Rusia**	**2.44**	**208**	P	**Pb**	**09 29 56.8**	**-2.2**
RUSC				S	**Sg**	**09 30 31.5**	**-1.6**
RUSC	**La Rusia**	**2.44**	**208**	*e*P	**Pb**	**09 29 59.3**	**+0.4**
RUSC				*e*S	**Sb**	**09 30 29.1**	**-0.3**
ARGC	**Ariguani, Magd**	**2.89**	**308**	P	**Pn**	**09 30 01.4**	**+0.5**
ARGC				S	**Sb**	**09 30 41.8**	**-0.1**
PTBC	**PUERTO BERRIO,**	**2.93**	**239**	P	**Pn**	**09 30 01.1**	**-0.2**
PTBC				S	**Sb**	**09 30 43.6**	**+0.7**
SPBC	**San Pablo de B**	**3.20**	**222**	P	**Pn**	**09 30 06.8**	**+1.6**
SPBC				S	**Sb**	**09 30 49.7**	**-1.3**
UREC	**San Jos de Ur**	**3.58**	**265**	P	**Pn**	**09 30 11.4**	**+1.1**
UREC				S	**Sb**	**09 30 56.6**	**-5.1**
URIC	**Uribia, Colomb**	**3.61**	**359**	P	**Pn**	**09 30 09.9**	**-0.8**
URIC	**Uribia, Colomb**	**3.61**	**359**	*e*P	**Pb**	**09 30 17.2**	**-1.4**
URIC				*e*S	**Sb**	**09 31 01.4**	**-1.2**
SJCC	**San Jacinto, C**	**3.68**	**300**	P	**Pn**	**09 30 13.4**	**+1.6**
SJCC				S	**Sn**	**09 30 58.4**	**+2.9**
SJCC	**San Jacinto, C**	**3.68**	**300**	*e*P	**Pb**	**09 30 20.0**	**+0.2**
SJCC				*e*S	**Sb**	**09 31 05.6**	**+0.9**
CHIC	**Chingaza**	**3.85**	**208**	P	**Pn**	**09 30 16.4**	**+1.9**
CHIC				S	**Sn**	**09 31 01.5**	**+1.3**
ROSC	**El Rosal**	**3.99**	**217**	P	**Pn**	**09 30 19.6**	**+3.3**
VILC	**Villavicencio,**	**4.30**	**204**	P	**Pn**	**09 30 21.3**	**+0.9**
GUY2C	**Guyana, Caldas**	**4.43**	**231**	P	**Pn**	**09 30 25.0**	**+2.6**
LCBC	**Los crdobas,**	**4.45**	**280**	P	**Pn**	**09 30 23.4**	**+1.1**
CBOC	**Ciudad Bolivar**	**4.60**	**242**	P	Pb	**09 30 29.6**	**-6.0**
APAC	**Apartado, Choc**	**4.60**	**268**	P	**Pn**	**09 30 25.3**	**+0.9**
APAC				S	**Sn**	**09 31 20.9**	**+2.8**
PRAC	**Prado**	**5.23**	**214**	P	**Pn**	**09 30 35.7**	**+2.7**
	0.1nm12nm,0.9s						
PRAC				S	**Sn**	**09 31 35.9**	**+2.3**
	0.1nm12nm,0.9s						
URMC	**La Uribe, Meta**	**5.37**	**207**	P	**Pn**	**09 30 36.8**	**+1.8**
	0.1nm626nm8.3nm,0.7s						
URMC				S	**Sn**	**09 31 36.3**	**-0.9**
	0.1nm626nm8.3nm,0.7s						
FUNV	**FUNVISIS**	**5.59**	**64**	*e*P	**Pn**	**09 30 39.5**	**+1.4**
FUNV				*e*S	**Sn**	**09 31 38.3**	**-4.4**
YOTC	**Yotoco, Valle**	**5.97**	**227**	P	**Pn**	**09 30 45.7**	**+2.3**
	3.3nm,0.6s						
GARC	**Garzon, Huila**	**6.83**	**211**	P	**Pn**	**09 30 56.7**	**+1.4**
POPC	**Popayan, Colom**	**7.24**	**221**	P	**Pn**	**09 31 02.9**	**+2.0**
FLOC	**Florencia**	**7.43**	**210**	P	**Pn**	**09 31 03.3**	**0.0**

HEL 31 09:42:52.0±0.2, 62°.39N×25°.83E, h0km, ML1.2, Suspected explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUF	**Sumiainen**	**0.37**	**24**	*e*P	Pg	09 42 58.2	-0.8
SUF	**Sumiainen**	**0.37**	**24**	PG	Pg	09 42 58.8	-0.2
SUF				SG	Sg	09 43 00.7

North-east of Barbuda., North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANWB	**Willy Bob**	**2.58**	**235**	*e*P	Pn	10 14 00.3	+0.8
DSDZ	**La Diserade, G**	**3.18**	**207**	*e*P	Pn	10 14 10.0	+2.1
DSDZ				*e*S	Sn	10 14 46.4	+1.8
SKI	**Saint Kitts**	**3.52**	**239**	*e*P	Pn	10 14 14.9	+2.4
SKI				*e*S	Sn	10 14 54.4	+1.5
DHSZ	**Broadband at M**	**3.56**	**216**	*e*P	Pn	10 14 15.2	+2.0
DHSZ				*e*S	Sn	10 14 55.4	+1.4
MAGL	**Barre de l'île**	**3.60**	**207**	*e*P	Pn	10 14 15.5	+1.9
MAGL				*e*S	Sn	10 14 55.4	+0.5
MMLZ	**Guadeloupe Bro**	**3.70**	**213**	*e*P	Pn	10 14 16.8	+1.8
MMLZ				*e*S	Sn	10 14 59.0	+1.6
SABA	**Saba**	**3.81**	**247**	*e*P	Pn	10 14 18.1	+1.6
TBG	**Guadaloupe-3**	**3.85**	**211**	*e*P	Pn	10 14 19.4	+2.3
DWS	**Wesley**	**3.95**	**205**	*e*S	Sn	10 15 03.9	+0.3
DSLB	**Salisbury**	**4.11**	**206**	*e*P	Pn	10 14 22.8	+2.0
DSLB				*e*S	Sn	10 15 08.1	+0.4
BIM	**Bigot**	**4.85**	**197**	*e*P	Pn	10 14 33.8	+2.9
BIM				*e*S	Sn	10 15 26.1	+0.2
SLBI	**Saint Lucia, B**	**5.30**	**195**	*e*P	Pn	10 14 39.3	+2.3
SLBI				*e*S	Sn	10 15 36.6	-0.2

IDC 31 10:22:10.4±1.2, 29°.38N×102°.03E, h0km, mb3.4/4, mbtmp3.4/5, ML3.8/1, Error ellipse: s-maj=78.7km s-min=21.3km az=61.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**18.74**	**9**	P	Pn	10 26 31.0	-0.1
	0.3nm,0.3s,baz=199,slow=12,SNR=5.0						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**23.21**	**324**	P	P	10 27 19.4	+0.5
	0.3nm,0.6s,baz=123,slow=12,SNR=1.2						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**27.61**	**327**	P	P	10 27 58.7	-0.6
	0.1nm,0.3s,baz=134,slow=9.3,SNR=2.2						
	0.1nm,0.3s						
WRA	**Warramunga Arr**	**58.09**	**144**	P	P	10 32 05.4	-0.4
	0.8nm,0.7s,baz=335,slow=7.4,SNR=12						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**61.00**	**146**	P	P	10 32 26.1	+0.3
	0.4nm,0.7s,baz=331,slow=6.0,SNR=6.7						
	0.4nm,0.7s						

*SOME **31** 10:30:16.6, 41°.28N×84°.20E, h5km*
*NNC **31** 10:30:31.6±2.7, 41°.32N×83°.47E, h0km, mb3.7, mpv3.5, Error ellipse: s-maj=26.8km s-min=17.6km az=27.0*

ISC 31 10:30:32.6±3.0, 41°.5N±0°.2×83°.35E±0°.1, h10km, n11, σ1§84/16, 4C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**2.98**	**313**	Pg	**Pg**	**10 31 27.7**	**-1.9**
	8.7nm,0.4s						
KTMS				Lg	Lg	10 32 07.9	
	42nm,0.5s						
KTMS	**Ketmen**	**2.98**	**313**	*e*P	**Pn**	**10 31 21.9**	**+1.9**
	57nm,0.1s						
KTMS				*e*S	**Sg**	**10 32 09.3**	**+1.2**
	474nm,0.2s						
PDGK	**Podgornoye**	**3.41**	**304**	⇓Pn	**Pn**	**10 31 26.2**	**+0.2**
	5.0nm,0.6s						
PDGK				⇑Pg	**Pg**	**10 31 36.6**	**-1.4**
	13nm,0.6s						
PDGK				⇑Sn	**Sb**	**10 32 13.0**	**-1.8**
	49nm,0.7s						
UZB	**Uzynbulak**	**3.62**	**299**	Pg	**Pg**	**10 31 41.9**	**-0.2**
UZB				Lg	Lg	10 32 32.5	
UZB	**Uzynbulak**	**3.62**	**299**	*e*P	**Pb**	**10 31 35.8**	**-1.1**
	106nm,0.1s						
UZB				*e*S	**Sg**	**10 32 32.6**	**+3.6**
	896nm,0.3s						
DJR	**Jarkent**	**3.88**	**319**	Pg	**Pg**	**10 31 45.9**	**-1.0**
DJR				Lg	Lg	10 32 39.8	
KPKS	**Kokpek**	**3.99**	**302**	Pg	**Pg**	**10 31 47.6**	**-1.4**
	0.6nm,0.3s						
KPKS				Lg	Lg	10 32 42.5	
	95nm,0.6s						
SATY	**Saty**	**4.00**	**295**	Pg	**Pg**	**10 31 48.8**	**-0.5**
	5.6nm,0.3s						
SATY				Lg	Lg	10 32 44.3	
	86nm,0.4s						
KNOS	**Konyrlen**	**4.21**	**315**	Pg	**Pg**	**10 31 52.0**	**-1.3**
	7.0nm,0.3s						
KNOS				Lg	Lg	10 32 49.8	
	25nm,0.5s						
BLB	**Baldybastay**	**4.45**	**308**	Pg	**Pg**	**10 31 56.1**	**-1.7**
	18nm,0.3s						
BLB				Lg	Lg	10 32 57.0	
	30nm,0.9s						
MK31	**Makanchi Array**	**5.38**	**352**	⇑Pn	**Pn**	**10 31 55.3**	**+2.3**
	0.4nm,0.2s,baz=142,slow=12,SNR=6.7						
MK31				⇑Pg	**Pg**	**10 32 14.2**	**-1.5**
	1.7nm,0.4s,baz=175,slow=17,SNR=3.6						
MK31				⇓Lg	Lg	10 33 33.2	
	33nm,0.7s,baz=160,slow=27,SNR=6.1						

HEL 31 10:35:33.5±0.1, 62°.89N×24°.56E, h0km, ML0.9, Suspected explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF	**Keuruu**	**0.74**	**169**	PB	Pg	10 35 47.4	-0.2
KEF				*s*max	*s*max	10 35 56.6	
	comp=Z,1.1nm,0.2s						
SUF	**Sumiainen**	**0.75**	**102**	PB	Pg	10 35 47.5	-0.3
SUF				*s*max	*s*max	10 35 56.9	
	comp=Z,0.6nm,0.2s						
VAF	**Ylistaro**	**0.88**	**281**	PG	Pg	10 35 49.3	-1.0
VAF				*s*max	*s*max	10 36 00.7	
	comp=Z,0.6nm,0.2s						
VAF				SB	Sg	10 36 01.6	-0.1
OUF	**Merijarvi**	**1.49**	**3**	PG	Pn	10 36 00.5	-1.0
OUF				*s*max	*s*max	10 36 18.1	
	comp=Z,0.5nm,0.2s						
OUF				SN	Sn	10 36 23.7	+2.2
NIF	**Nilsia**	**1.56**	**70**	PN	Pn	10 36 02.1	-0.3
	baz=255						
NIF				*s*max	*s*max	10 36 20.2	
	comp=Z,0.9nm,0.2s						
NIF				SN	Sn	10 36 22.2	-1.1
KPF	**Kankaanpaa**	**1.57**	**229**	PN	Pn	10 36 02.4	-0.2
	baz=46						
KPF				*s*max	*s*max	10 36 20.7	
	comp=Z,0.9nm,0.2s						
KPF				SN	Sn	10 36 23.6	0.0
FIA0	**FINESS Array S**	**1.61**	**153**	PN	Pb	10 36 04.2	+0.1
	baz=336						
FIA0				*s*max	*s*max	10 36 21.7	
	comp=Z,0.7nm,0.2s						
FIA0				SN	Sg	10 36 25.4	+0.1
OBF4	**Vikkela, Lumij**	**1.95**	**7**	*s*max	*s*max	10 36 31.3	
	comp=Z,0.5nm,0.2s						
OBF4				SG	Sn	10 36 33.6	+0.7
UMAU	**Umeaa**	**2.02**	**301**	SG	Sn	10 36 35.4	+0.9
BURU	**Burvik**	**2.21**	**322**	SG	Sb	10 36 41.4	-0.9
OUL	**Oulu**	**2.28**	**14**	SG	Sn	10 36 42.3	+1.2
RAF	**Rauma**	**2.29**	**216**	PB	Pn	10 36 12.1	-0.4
RAF				*s*max	*s*max	10 36 41.4	
	comp=Z,0.7nm,0.2s						
RAF				SG	Sb	10 36 43.2	-1.3
RUF	**Ruokolahti**	**2.53**	**124**	PG	Pb	10 36 18.1	-1.6
	baz=309						
RUF				*s*max	*s*max	10 36 48.1	
	comp=Z,0.5nm,0.2s						
HEL1	**Helsinki**	**2.73**	**177**	SB	Sb	10 36 55.3	-1.7
VSU	**Vasula**	**4.57**	**166**	SG	Sb	10 37 50.9	+1.0

*MOS **31** 11:23:58.0±1.1, 36°.46N×141°.04E, h33km, mb5.2/60, Error ellipse: s-maj=7.3km s-min=4.3km az=106.6*
*BJI **31** 11:23:59.1, 36°.39N×140°.90E, h43km, mB4.8/26, mb4.8/73, Ms4.2/57, Ms7.4.1/57*
*JMA **31** 11:23:60.0±0.1, 36°.4N±0°.3×141°.0E±0°.8, h47km±1km, MD4.7/40, MW4.7/40, E OFF IBARAKI PREF*
JMA Felt III J1 at E OFF IBARAKI PREF .
*NIED **31** 11:23:60.0, 36°.39N×141°.04E, h47km, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr0.74; Mθθ-0.12; Mϕϕ-0.62; Mrθ0.50; Mθϕ-0.34; Mϕr1.11;*

Fault plane solution: M0 1.44000×10¹⁶ NP1: ϕs209.00000°, δ16.00000°, λ95.00000°. NP2: ϕs25.00000°, δ74.00000°, λ89.00000°.
*NEIC **31** 11:24:00.1±1.4, 36°.39N±0°.06×141°.16E±0°.09, h36km±5km, mb4.9/265 Error ellipse: s-maj=10.8km s-min=8.4km az=107.0*
*IDC **31** 11:24:01.9±1.4, 36°.34N×141°.00E, h52km±13km, mb4.4/35, mbtmp4.7/40, ML4.2/5, MS3.9/63, Error ellipse: s-maj=12.5km s-min=7.9km az=65.0*
*GCMT **31** 11:24:04.1±0.4, 36°.33N±0°.02×141°.00E±0°.03, h39km±1km, MW4.8/64, Moment Tensor Solution. s31,c36; s64,c84; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.00±.16; Mθθ-0.53±.09; Mϕϕ-1.47±.07; Mrθ0.50±.08; Mθϕ-0.75±.06; Mϕr1.05±.06; Best double couple: M0 2.26300×10¹⁶ NP1: ϕs211.00000°, δ30.00000°, λ93.00000°. NP2: ϕs27.00000°, δ60.00000°, λ88.00000°. Principal axes: T 2.3220, Plg75.0000°, Azm293.0000°; N -0.1190, Plg1.0000°, Azm28.0000°; P -2.2040, Plg15.0000°, Azm118.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 11:24:00.8±0.4, 36°.42N±0°.03×141°.06E±0°.04, h43km±2km, h43km:pP-P, n776, σ1§56/664, mb4.9/247, MS4.0/72, 28C-33D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.39**	**259**	⇓*i*P	**Pn**	**11 24 09.6**	**-0.8**
JHYU				A	A	11 24 09.6	
	comp=N,125nm,0.3s,comp=E,133nm,0.7s						
JHYU				⇓S	**Sn**	**11 24 16.3**	**-0.7**
JHO	**Hitachi**	**0.44**	**296**	⇓*i*P	**Pn**	**11 24 10.1**	**-0.9**
JHO				A	A	11 24 10.1	
	comp=N,62nm,0.3s,comp=E,88nm,0.6s						
JHO				⇓S	**Sn**	**11 24 17.2**	**-0.9**
JIHU	**Itakohorinouch**	**0.62**	**224**	⇓*i*P	**Pn**	**11 24 12.9**	**-0.4**
JIHU				A	A	11 24 12.9	
	comp=N,213nm,1.2s,comp=E,139nm,1.5s						
JIHU				⇓S	**Sn**	**11 24 22.3**	**0.0**
JCAJ	**Choshiashikaji**	**0.71**	**194**	A	A	11 24 13.4	
	comp=N,27nm,1.2s,comp=E,49nm,0.9s						
ONAJ	**Iwakimizuishiy**	**0.72**	**343**	⇓*i*P	**Pn**	**11 24 13.7**	**-0.9**
ONAJ				A	A	11 24 13.7	
	comp=N,54nm,0.4s,comp=E,68nm,0.3s						
ONAJ				⇓S	**Sn**	**11 24 23.4**	**-1.2**
JYT	**Yasato**	**0.73**	**255**	⇓*i*P	**Pn**	**11 24 13.5**	**-1.1**
JYT				A	A	11 24 13.5	
	comp=N,60nm,0.4s,comp=E,46nm,0.3s						
JYT				⇓*e*S	**Sn**	**11 24 22.3**	**-2.3**
JFFD	**Fukushimafurud**	**0.79**	**329**	A	A	11 24 15.0	
	comp=N,32nm,1.0s,comp=E,32nm,1.4s						
JSMT	**Sammumatsuo**	**0.92**	**213**	A	A	11 24 16.3	
	comp=N,40nm,1.7s,comp=E,47nm,6.1s						
JFK	**Kawauchi**	**0.96**	**351**	*i* P	**Pn**	**11 24 16.9**	**-1.0**
JFK				A	A	11 24 16.9	
	comp=N,10.0nm,0.6s,comp=E,23nm,4.5s						
JFK				S	**Sn**	**11 24 29.0**	**-1.5**
JSB	**Shiboa**	**1.07**	**301**	A	A	11 24 18.9	
	comp=N,45nm,1.6s,comp=E,81nm,0.9s						
JCCN	**Chibachonan**	**1.23**	**213**	A	A	11 24 20.7	
	comp=N,41nm,1.3s,comp=E,53nm,1.5s						
I30JP	**ISUMI INFRASON**	**1.26**	**209**	P	**Pn**	**11 24 21.5**	**-0.4**
	baz=37,slow=12						
I30JP				S	**Sn**	**11 24 36.9**	**-0.8**
	baz=34,slow=38						
JOTO	**OTAMA OYAMA**	**1.28**	**333**	*i* P	**Pn**	**11 24 22.9**	**+0.6**
JOTO				A	A	11 24 22.9	
	comp=N,135nm,0.5s,comp=E,151nm,0.4s						
JOTO				S	**Sn**	**11 24 39.4**	**+1.1**
TOK	**Tokyo**	**1.28**	**236**	A	A	11 24 21.5	
	comp=N,43nm,1.6s,comp=E,40nm,1.4s						
JAG	**Ashikaga**	**1.30**	**271**	⇓*i*P	**Pn**	**11 24 21.8**	**-0.7**
JAG				A	A	11 24 21.8	
	comp=N,12nm,1.3s,comp=E,10.0nm,1.7s						
JAG				⇓S	**Sn**	**11 24 37.9**	**-0.8**
JMST	**Minamisoumatoc**	**1.31**	**354**	A	A	11 24 22.7	
	comp=N,17nm,0.4s,comp=E,31nm,1.0s						
JKUC	**kamogawauchiur**	**1.44**	**210**	A	A	11 24 23.7	
	comp=N,18nm,2.4s,comp=E,12nm,7.4s						
JMM	**Marumori**	**1.46**	**352**	⇓*i*P	**Pn**	**11 24 24.4**	**-0.3**
JMM				A	A	11 24 24.4	
	comp=N,15nm,0.4s,comp=E,19nm,0.8s						
JMM				⇓S	**Sn**	**11 24 42.4**	**-0.3**
JFY	**Yanaizu**	**1.47**	**313**	⇓*i*P	**Pn**	**11 24 25.2**	**+0.3**
JFY				A	A	11 24 25.2	
	comp=N,12nm,5.0s,comp=E,11nm,3.0s						
JKT	**Katashina**	**1.50**	**284**	⇓*i*P	**Pn**	**11 24 25.5**	**+0.1**
JKT				A	A	11 24 25.5	
	comp=N,20nm,0.3s,comp=E,25nm,0.4s						
JYO	**Yokosk**	**1.64**	**224**	A	A	11 24 26.7	
	comp=N,23nm,1.6s,comp=E,21nm,1.4s						
JYAR	**Yonezawaarcadi**	**1.67**	**334**	A	A	11 24 27.6	
	comp=N,37nm,1.0s,comp=E,31nm,1.8s						
TATJ	**Tateyama 2**	**1.68**	**215**	A	A	11 24 27.2	
	comp=N,36nm,4.4s,comp=E,29nm,4.8s						
JSGW	**Sagamiharawaka**	**1.71**	**242**	A	A	11 24 27.6	
	comp=N,10.0nm,1.7s,comp=E,13nm,3.8s						
JIKH	**Ishinomakikobu**	**1.92**	**10**	A	A	11 24 31.5	
	comp=N,5.0nm,1.0s,comp=E,10.0nm,0.6s						
JGK	**Kuni**	**1.96**	**275**	A	A	11 24 31.4	
	comp=N,9.0nm,3.6s,comp=E,9.0nm,2.9s						
JYS	**Shirataka**	**1.97**	**336**	A	A	11 24 32.1	
	comp=N,19nm,4.1s,comp=E,23nm,1.8s						
JOU	**Okura**	**1.97**	**351**	A	A	11 24 32.2	
	comp=N,21nm,1.1s,comp=E,18nm,1.1s						
JOD2	**Odawara 2**	**1.97**	**235**	A	A	11 24 31.4	
	comp=N,15nm,3.3s,comp=E,13nm,1.6s						
JNS	**Sasagawa**	**1.98**	**316**	A	A	11 24 32.0	
	comp=N,6.0nm,1.1s,comp=E,8.0nm,1.1s						
JIM2	**Oshima 3**	**2.15**	**219**	A	A	11 24 34.0	
	comp=N,14nm,2.5s,comp=E,12nm,1.5s						
JOFO	**Osakifurukawao**	**2.19**	**357**	A	A	11 24 35.2	
	comp=N,39nm,1.2s,comp=E,41nm,1.7s						
JIZZ	**Izumozaki**	**2.19**	**301**	A	A	11 24 34.9	
	comp=N,16nm,2.5s,comp=E,15nm,1.1s						
JHTM	**Izuhatsuma**	**2.22**	**230**	A	A	11 24 34.9	
	comp=N,19nm,4.8s,comp=E,17nm,1.3s						
JFNN	**Fujinakano**	**2.29**	**238**	A	A	11 24 35.9	
	comp=N,16nm,4.2s,comp=E,14nm,4.1s						
MJAR	**Matsushiro Arr**	**2.30**	**274**	P	**Pn**	**11 24 36.6**	**+0.3**
	comp=E,56nm,0.3s,baz=111,slow=9.6,SNR=1426						
MJAR				S	**Sn**	**11 25 04.3**	**+0.9**
	comp=E,195nm,0.4s,baz=244,slow=31,SNR=3.4						
MJAR				LR	LR	11 25 40.7	
	comp=E,3μm,21.5s,baz=92,slow=44						
	comp=E,231nm,0.4s						
MAJO	**Matsushiro**	**2.31**	**274**	P	**Pn**	**11 24 37.2**	**+0.9**
MAJO	**Matsushiro**	**2.31**	**274**		**Pn**	**11 24 36.4**	**+0.1**
MAJO	**Matsushiro**	**2.31**	**274**	*d* iP	**Pn**	**11 24 36.9**	**+0.6**
MJB9	**Matsu-Tunnel**	**2.31**	**274**		**Pn**	**11 24 37.5**	**+1.1**
JYA	**Atsumi**	**2.42**	**334**	A	A	11 24 38.5	
	comp=N,12nm,0.9s,comp=E,19nm,0.9s						
JJN	**Nakama**	**2.43**	**287**	A	A	11 24 38.2	
	comp=N,7.0nm,0.7s,comp=E,7.0nm,3.7s						
JNT	**Takato**	**2.43**	**258**	A	A	11 24 38.1	
	comp=N,12nm,5.5s,comp=E,7.0nm,2.4s						
JIZS	**Izushimoda**	**2.46**	**227**	A	A	11 24 38.3	
	comp=N,6.0nm,3.3s,comp=E,4.0nm,2.3s						
JYK	**Kaneyama**	**2.56**	**348**	A	A	11 24 40.5	
	comp=N,5.0nm,1.1s,comp=E,6.0nm,2.5s						
SHZ3	**Shizuoka 3**	**2.68**	**241**	A	A	11 24 41.5	
	comp=N,7.0nm,3.8s,comp=E,7.0nm,1.3s						
OFUJ	**Ofunato**	**2.70**	**10**	A	A	11 24 42.7	
	comp=N,4.0nm,2.4s,comp=E,5.0nm,2.2s						
JYYZ	**Yamagatayuza**	**2.75**	**341**	A	A	11 24 43.1	
	comp=N,21nm,3.0s,comp=E,17nm,2.7s						
JNY	**Yasuok**	**2.81**	**249**	A	A	11 24 43.3	
	comp=N,12nm,1.7s,comp=E,7.0nm,2.0s						
JSG	**Sagara**	**2.92**	**234**	P	**Pn**	**11 24 48.1**	**+3.4**
JSG	**Sagara**	**2.92**	**234**	Pn	**Pn**	**11 24 44.6**	**-0.1**
JRG	**Rokugo**	**3.00**	**354**	A	A	11 24 46.7	
	comp=N,7.0nm,0.9s,comp=E,6.0nm,1.2s						
JGF	**Kuroka**	**3.11**	**256**	P	**Pn**	**11 24 49.7**	**+2.3**
JGF	**Kuroka**	**3.11**	**256**		**Pn**	**11 24 48.9**	**+1.4**
JGF	**Kuroka**	**3.11**	**256**	A	A	11 24 47.7	
	comp=N,7.0nm,2.1s,comp=E,9.0nm,2.0s						
HMMJ	**Hamamatsu 2**	**3.13**	**241**	A	A	11 24 47.9	
	comp=N,4.0nm,2.1s,comp=E,2.0nm,2.3s						
JAO	**Obara**	**3.30**	**251**	A	A	11 24 50.3	
	comp=N,5.0nm,3.2s,comp=E,6.0nm,2.8s						
JSZI	**Iwateshizukuis**	**3.32**	**359**	A	A	11 24 51.3	
	comp=N,12nm,3.0s,comp=E,12nm,1.5s						
JHJ2	**Mitsune**	**3.45**	**198**	P	**Pn**	**11 24 52.6**	**+0.6**
JHJ2	**Mitsune**	**3.45**	**198**	Pn	**Pn**	**11 24 52.8**	**+0.7**
INU	**Inuyama**	**3.45**	**253**	P	**Pn**	**11 24 53.7**	**+1.6**
INU	**Inuyama**	**3.45**	**253**		**Pn**	**11 24 53.4**	**+1.3**
JHJ	**Hachijo jima 2**	**3.45**	**198**	P	**Pn**	**11 24 53.0**	**+0.9**
	comp=E,78nm,0.3s,baz=154,slow=23,SNR=19						
JHJ				S	**Sn**	**11 25 29.9**	**-1.9**
	comp=E,391nm,0.3s,baz=74,slow=23,SNR=7.8						
	comp=E,169nm,0.3s						
JKEN	**Kujiedanarisaw**	**3.82**	**7**	A	A	11 24 58.4	
	comp=N,13nm,0.6s,comp=E,11nm,0.9s						
JNTW	**Noshirotokiwa**	**3.92**	**350**	A	A	11 24 59.7	
	comp=N,12nm,4.7s,comp=E,10.0nm,3.9s						
JTM	**Tenmabayashi**	**4.37**	**0**	Pn	**Pn**	**11 25 06.0**	**+1.4**
JAHD	**Aomorihigashid**	**4.85**	**2**	A	A	11 25 12.8	
	comp=N,9.0nm,1.9s,comp=E,9.0nm,1.8s						
JMN	**Monobe**	**6.47**	**248**	P	**Pn**	**11 25 34.6**	**+1.0**
JMN	**Monobe**	**6.47**	**248**	Pn	**Pn**	**11 25 33.7**	**+0.1**
ASAJ	**Asahikawa**	**7.78**	**8**	P	**Pn**	**11 25 50.5**	**-0.9**
	comp=E,24nm,0.3s,baz=219,slow=11,SNR=59						
ASAJ				S	**Sn**	**11 27 14.8**	**-3.4**
	comp=E,36nm,0.7s,baz=246,slow=14,SNR=1.3						
ASAJ				LR	LR	11 29 55.7	
	comp=E,205nm,18.8s,baz=160,slow=45						
ASAJ	**Asahikawa**	**7.78**	**8**	P	**Pn**	**11 25 49.9**	**-1.5**
JKA	**Kamikawa-asahi**	**7.78**	**8**		**Pn**	**11 25 49.9**	**-1.5**
NMR	**Nemuro--Hokkai**	**7.81**	**26**	*e*P	**Pn**	**11 25 48.9**	**-3.0**
NMR				*i* S	Sn	11 27 10.3	-8.7
GLVR	**Golovnino**	**8.07**	**24**	*e*P	**Pn**	**11 25 54.4**	**-1.0**
GLVR				*i* S	**Sn**	**11 27 18.9**	**-6.3**
GLVR				pmax	pmax		
	comp=Z,858nm,1.3s						
GLVR				pmax	pmax		
	comp=Z,271nm,0.6s						
GLVR				pmax	pmax		
	comp=N,117nm,0.2s						
GLVR				pmax	pmax		
	comp=E,207nm,0.7s						
RUSJ	**Misakicho**	**8.32**	**21**	*e*P	**Pn**	**11 25 58.0**	**-0.8**
RUSJ				*i* S	**Sn**	**11 27 27.1**	**-4.2**
YUK	**Yuzh-Kuril'sk**	**8.45**	**24**	*e*P	**Pn**	**11 25 59.6**	**-0.9**
YUK				*i* S	**Sn**	**11 27 27.5**	**-7.0**
YUK				pmax	pmax		
	comp=Z,431nm,1.2s						
YUK				pmax	pmax		
	comp=Z,202nm,0.8s						
YUK				pmax	pmax		
	comp=N,66nm,0.6s						
YUK				pmax	pmax		
	comp=E,109nm,0.3s						
JNU	**Nakatsue**	**9.00**	**252**	P	**Pn**	**11 26 09.8**	**+1.6**
	comp=E,1.6nm,0.3s,baz=122,slow=3.6,SNR=15						
JNU				LR	LR	11 30 01.6	
	comp=E,1μm,18.4s,baz=59,slow=40						
	comp=E,25nm,0.8s						
TEY	**Ternei**	**9.25**	**340**	*e*P	Pn	11 26 07.0	-4.5
TEY				*e*		11 27 50.8	
JCJ	**Chichijima**	**9.34**	**174**	P	**Pn**	**11 26 09.5**	**-3.4**
	comp=E,89nm,0.4s,baz=90,slow=14,SNR=16						
JCJ				S	Sn	11 27 44.4	-12
	comp=E,125nm,0.5s,baz=276,slow=23,SNR=4.4						
JCJ	**Chichijima**	**9.34**	**174**	P	**Pn**	**11 26 10.6**	**-2.3**
JCJ	**Chichijima**	**9.34**	**174**	Pn	**Pn**	**11 26 10.5**	**-2.4**
VLA	**Vladivostok**	**9.73**	**316**	⇑*e*P	**Pn**	**11 26 16.3**	**-1.8**
VLA				pmax	pmax		
	comp=Z,19nm,1.2s						
PSTR	**Posyet**	**10.07**	**311**	⇑*e*P	**Pn**	**11 26 23.7**	**+0.9**
JSU	**Suzuyama**	**10.08**	**244**	Pn	**Pn**	**11 26 21.9**	**-1.1**
KUR	**Kuril'sk**	**10.20**	**28**	P	**Pn**	**11 26 20.7**	**-3.8**
KUR				pmax	pmax		
	comp=Z,46nm,0.9s						
USRK	**Ussuriysk Ar.**	**10.41**	**321**	P	**Pn**	**11 26 29.7**	**+2.3**
	comp=Z,5.2nm,0.3s,baz=133,slow=12,SNR=34						
	comp=Z,13nm,0.6s						
KSRS	**Korea Array**	**10.57**	**280**	P	**Pn**	**11 26 33.2**	**+3.6**
	comp=Z,8.0nm,0.4s,baz=98,slow=14,SNR=35						
KSRS				LR	LR	11 30 22.5	
	comp=Z,1μm,19.8s,baz=85,slow=36						
YSS	**Yuzhno-Sakhali**	**10.61**	**6**	Pn	**Pn**	**11 26 29.2**	**-0.8**
YSS	**Yuzhno-Sakhali**	**10.61**	**6**	*e*P	**Pn**	**11 26 28.6**	**-1.5**
YSS				*e*S	**Sn**	**11 28 21.0**	**-6.4**
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				MLR	MLR		
	comp=Z,500nm,14.0s						
YSS				MLR	MLR		
	comp=N,400nm,15.0s						
YSS				MLR	MLR		
	comp=E,300nm,11.0s						
MDJ	**Mudanjiang**	**11.96**	**317**	P	**Pn**	**11 26 50.8**	**+2.2**
MDJ				pmax	pmax		
	comp=E,7.0nm,1.4s						
MDJ				pmax	pmax		
	comp=E,220nm,4.0s						
MDJ				L	L		
	comp=E,430nm,22.6s						
MDJ				L	L		
	comp=E,350nm,20.7s						
MDJ				L	L		
	comp=E,1μm,20.9s						
BNX	**BinXian**	**13.87**	**316**	⇓P	**Pn**	**11 27 14.0**	**-0.7**
BNX				pmax	pmax		
	comp=E,8.0nm,1.3s						
CN2	**Changchun**	**14.03**	**306**	P	**Pn**	**11 27 17.8**	**+0.9**
CN2				pP	P	11 27 25.0	+1.3
CN2				S	**Sn**	**11 29 52.3**	**+1.2**
CN2				pmax	pmax		
	comp=E,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=E,200nm,8.0s						
CN2				L	L		
	comp=E,200nm,12.0s						
CN2				L	L		
	comp=E,400nm,12.0s						
CN2				L	L		
	comp=E,500nm,14.0s						
JOW	**Kunigami**	**14.48**	**232**	P	**Pn**	**11 27 20.8**	**-2.2**
	com

SSE pmax pmax
comp=Z,130nm,3.7s
SSE L L
comp=Z,220nm,18.7s
SSE L L
comp=Z,200nm,21.0s
NJ2 Nanjing 18.86 263 *e*P **P 11 28 15.8 -1.5**
NJ2 pmax pmax
comp=Z,33nm,0.7s
TIA Tai'an 19.29 277 P **P 11 28 20.5 -1.4**
TIA pmax pmax
comp=Z,38nm,0.9s
TIA pmax pmax
comp=Z,140nm,3.6s
TIA L L
comp=Z,350nm,18.1s
TIA L L
comp=Z,450nm,18.1s
TIA L L
comp=Z,630nm,21.1s
ZEA Zeya 19.82 335 *e*P **P 11 28 25.1 -2.4**
ZEA pmax pmax
comp=E,10.0nm,0.7s
ZEA pmax pmax
comp=N,20nm,0.9s
ZEA pmax pmax
comp=Z,40nm,0.8s
ZEA MLR MLR
comp=N,100nm,12.0s
ZEA MLR MLR
comp=Z,200nm,15.0s
BJI2 Beijing 19.87 288 P **P 11 28 27.0 -1.2**
BJI2 pP **pP 11 28 35.5 -3.2**
BJI2 sP **sP 11 28 40.0 -4.3**
BJI2 PP **PnPn 11 28 44.5 -0.3**
BJI2 S **S 11 32 00.8 -8.7**
BJI2 pmax pmax
comp=Z,7.0nm,0.5s
BJI2 pmax pmax
comp=Z,44nm,5.0s
BJI2 L L
comp=Z,100nm,19.0s
BJI2 L L
comp=Z,120nm,20.6s
BJI2 L L
comp=Z,170nm,17.7s
BJT Baijiatuau 19.87 288 P 11 28 27.4 -0.9
BJT Baijiatuau 19.87 288 P **P 11 28 27.4 -0.9**
BJT pmax pmax
comp=Z,12nm,0.5s
PETK Petropavlovsk- 20.36 30 LR LR 11 35 48.8
comp=Z,114nm,21.9s,baz=232,slow=35
XLT XiLinHaoTe 20.45 299 *e*P **P 11 28 32.8 -1.9**
XLT PcP **PcP 11 32 49.8 +4.5**
XLT pmax pmax
comp=Z,52nm,1.0s
XLT L L
comp=Z,690nm,17.7s
XLT L L
comp=Z,850nm,17.5s
YHNB Yeheng 20.56 241 P **P 11 28 35.7 -0.3**
YHNB IAmb IAmb 11 28 38.3
comp=Z,104nm,1.9s
NACB Ninganchiao 20.73 239 P **P 11 28 36.0 -1.6**
HNS HongShan 21.08 281 ⇓P **P 11 28 38.8 -2.5**
HNS S **S 11 32 33.5 0.0**
HNS pmax pmax
comp=Z,38nm,0.8s
HNS L L
comp=Z,290nm,16.9s
HNS L L
comp=Z,520nm,19.1s
HNS L L
comp=Z,580nm,18.0s
SSLB Suanglung 21.42 240 P **P 11 28 44.7 -0.5**
TPUB Ta-pu 21.96 239 P **P 11 28 48.0 -3.0**
TPUB IAmb IAmb 11 28 52.7
comp=Z,53nm,1.4s
GUMO Guam 22.99 170 LR LR 11 36 36.7
comp=Z,128nm,21.5s,baz=4.5,slow=33
WHN Wuhan 23.00 263 P **P 11 28 59.5 -2.4**
WHN pmax pmax
comp=Z,42nm,0.6s
LYN LuoYang 23.33 274 P **P 11 29 00.8 -4.3**
LYN S **S 11 33 13.0 -1.6**
LYN pmax pmax
comp=Z,35nm,0.6s
LYN L L
comp=Z,260nm,14.7s
LYN L L
comp=Z,710nm,17.7s
LYN L L
comp=Z,900nm,17.2s
HHC Hu-ho-hao-te 23.41 290 *e*P **P 11 29 06.5 +0.5**
HHC pmax pmax
comp=Z,9.0nm,0.6s
HHC pmax pmax
comp=Z,77nm,4.6s
HHC L L
comp=Z,140nm,13.4s
HHC L L
comp=Z,330nm,15.5s
HHC L L
comp=Z,390nm,17.6s
MA2 Magadan 24.02 12 LR LR 11 38 46.3
comp=Z,86nm,21.5s,baz=188,slow=37
MA2 Magadan 24.02 12 **P 11 29 09.8 -1.5**
MA2 IAmb IAmb 11 29 13.7
comp=Z,31nm,1.0s
MA2 Magadan 24.02 12*de*P **P 11 29 12.0 +0.7**
MA2 pmax pmax
comp=Z,30nm,1.0s
MA2 Magadan 24.02 12 P **P 11 29 11.4 +0.1**
comp=Z,35nm,1.5s
BTO2 Baotou 24.69 290 *e*P **P 11 29 18.0 +0.2**
BTO2 pP **pP 11 29 29.8 +0.5**
BTO2 S **S 11 33 38.3 +1.6**
BTO2 pmax pmax
comp=Z,30nm,0.8s
BTO2 pmax pmax
comp=Z,240nm,5.3s
BTO2 L L
comp=Z,340nm,11.8s
BTO2 L L
comp=Z,820nm,15.1s
BTO2 L L
comp=Z,720nm,14.2s
XAN Xi'an 26.30 274 ⇑P **P 11 29 31.5 -0.9**
XAN sP pP 11 29 46.0 +2.1
XAN S **S 11 34 03.0 +0.8**
XAN pmax pmax
comp=Z,19nm,0.5s
XAN pmax pmax
comp=Z,120nm,5.2s
XAN L L
comp=Z,180nm,12.4s
XAN L L
comp=Z,250nm,15.8s
XAN L L
comp=Z,320nm,19.2s
YAK Yakutsk 26.61 348 LR LR 11 40 23.0
comp=Z,309nm,19.3s,baz=163,slow=37
YAK Yakutsk 26.61 348 **P 11 29 34.4 -0.4**
YAK Yakutsk 26.61 348*c i*P **P 11 29 34.1 -0.7**
YAK *e**PP **pP 11 29 48.1 +1.8**
YAK *e* 11 30 17.4
YAK *e* 11 32 56.6
YAK *e*S **S 11 34 05.5 -0.9**
YAK *e*SS **SnSn 11 35 14.3 +2.6**
YAK *e* 11 40 21.4
YAK pmax pmax
comp=Z,111nm,1.6s
YAK pmax pmax
comp=N,59nm,1.5s
YAK pmax pmax
comp=E,13nm,1.5s
YAK pmax pmax
comp=Z,15nm,0.9s
YAK pmax pmax
comp=N,31nm,1.7s
YAK pmax pmax
comp=E,13nm,1.0s
YAK smax smax
comp=E,106nm,4.0s
YAK smax smax
comp=N,85nm,2.5s

ENH Enshi 27.00 266 **P 11 29 37.9 -0.8**
SEY Seymchan 27.45 11⇑*e*P **P 11 29 43.2 +0.9**
SEY pmax pmax
comp=Z,20nm,0.9s
ULN Ulaanbaatar 27.47 305 **P 11 29 42.6 -0.4**
ULN Ulaanbaatar 27.47 305*de*P **P 11 29 42.4 -0.5**
ULN pmax pmax
comp=Z,12nm,0.9s
ULN Ulaanbaatar 27.47 305 P **P 11 29 43.0 +0.1**
SONM Songino Array 27.90 305 P **P 11 29 46.4 -0.4**
comp=Z,14nm,0.9s,baz=108,slow=9.1,SNR=60
SONM PcP **PcP 11 33 02.1 +0.7**
comp=Z,1.7nm,0.7s,baz=152,slow=4.1,SNR=3.9
SONM LR LR 11 41 00.7
comp=Z,325nm,20.2s,baz=88,slow=36
comp=Z,14nm,0.9s
SONM Songino Array 27.90 305 **P 11 29 46.2 -0.5**
SONM IAmb IAmb 11 29 47.7
comp=Z,15nm,0.9s
SONM PcP **PcP 11 33 01.8 +0.4**
H11N2 WAKE ISLAND Hy 28.08 119 T T 11 59 21.5
baz=311,slow=75
H11N1 WAKE ISLAND Hy 28.09 119 T T 11 59 16.5
baz=311
H11N3 WAKE ISLAND Hy 28.10 119 T T 11 59 15.5
baz=311,slow=75
SHEM Shemya Is, Ala 28.30 44 LR LR 11 38 31.6
comp=Z,109nm,20.8s,baz=155,slow=31
TGY Tagaytay City 28.60 224 LR LR 11 40 24.2
comp=Z,52nm,18.4s,baz=298,slow=34
H11S1 WAKE ISLAND Hy 28.77 121 T T 12 00 05.7
baz=314,slow=76,SNR=1392
H11S3 WAKE ISLAND Hy 28.77 121 T T 12 00 09.1
baz=314,slow=76,SNR=986
H11S2 WAKE ISLAND Hy 28.79 121 T T 12 00 04.5
baz=314,slow=76,SNR=882
LZH Lanzhou 29.90 281 *e*P **P 11 30 08.8 +4.2**
LZH sP sP 11 30 21.0 -0.4
LZH pmax pmax
comp=Z,19nm,1.1s
LZH L L
comp=Z,350nm,16.2s
LZH L L
comp=Z,660nm,16.5s
LZH L L
comp=Z,800nm,17.5s
LZDM Lanzhou Array 30.04 280 P **P 11 30 06.0 -0.1**
comp=Z,3.7nm,0.5s,baz=112,slow=6.6,SNR=3.6
LZDM LR LR 11 43 04.3
comp=Z,452nm,18.4s,baz=65,slow=38
comp=Z,3.7nm,0.5s
ZAK Zakamensk 30.44 309 *e*P **P 11 30 07.7 -1.4**
ZAK pmax pmax
comp=Z,10.0nm,1.2s
TLY Talaya 30.53 312 P **P 11 30 10.3 +0.4**
comp=Z,13nm,0.8s,baz=110,slow=3.7,SNR=20
TLY LR LR 11 43 01.4
comp=Z,296nm,18.5s,baz=102,slow=37
comp=Z,13nm,0.8s
TLY Talaya 30.53 312 **P 11 30 09.9 +0.1**
TLY IAmb IAmb 11 30 11.5
comp=Z,11nm,0.7s
TLY Talaya 30.53 312*c i*P **P 11 30 10.0 +0.1**
TLY pmax pmax
comp=Z,14nm,0.9s
TLY Talaya 30.53 312 P **P 11 30 10.3 +0.4**
GYA Guiyang 30.84 261 ⇓P **P 11 30 13.3 +0.3**
GYA pmax pmax
comp=Z,39nm,1.1s
CD2 Chengdu 31.40 271 P **P 11 30 17.3 -0.5**
CD2 S **S 11 35 25.5 +3.1**
CD2 pmax pmax
comp=Z,40nm,0.7s
CD2 L L
comp=Z,570nm,17.5s
CD2 L L
comp=Z,510nm,15.3s
MOY Mondy 32.13 311 *e*P **P 11 30 23.5 -0.5**
QIZ Qiongzhong 32.42 246 P **P 11 30 27.5 +0.7**
QIZ S **S 11 35 40.5 +2.1**
QIZ L L
comp=Z,200nm,17.1s
QIZ L L
comp=Z,280nm,14.7s
QIZ L L
comp=Z,230nm,14.5s
DAV Davao City (W) 32.46 210 LR LR 11 43 21.2
comp=Z,148nm,21.1s,baz=55,slow=36
GTA2 Gaotai 32.51 288 P **P 11 30 28.0 +0.4**
GTA2 PcP **PcP 11 33 14.5 +0.9**
GTA2 pmax pmax
comp=Z,11nm,1.2s
GTA2 L L
comp=Z,170nm,16.1s
GTA2 L L
comp=Z,230nm,17.2s
GTA2 L L
comp=Z,350nm,17.9s
KNGR Kungurtug, Tuv 34.10 308⇑*e*P **P 11 30 42.3 +1.1**
KNGR pmax pmax
comp=Z,17nm,1.0s
KMI2 Kunming 34.58 262 P **P 11 30 44.5 -1.3**
KMI2 sP sP 11 31 01.5 -1.1
KMI2 L L
comp=Z,270nm,15.0s
KMI2 L L
comp=Z,350nm,18.2s
KMI2 L L
comp=Z,360nm,22.5s
BILL Bilibino 34.70 16 **P 11 30 46.4 +0.3**
BILL Bilibino 34.70 16*de*P **P 11 30 46.4 +0.3**
BILL pmax pmax
comp=Z,10.0nm,1.0s
PZH PanZhiHua 34.76 265 P **P 11 30 46.0 -1.2**
PZH pmax pmax
comp=Z,10.0nm,0.7s
TIXI Tiksi 35.87 353 **P 11 30 55.7 -0.3**
TIXI Tiksi 35.87 353⇑*e*P **P 11 30 55.6 -0.4**
TIXI pmax pmax
comp=Z,9.0nm,1.0s
GOMU GeErMu 36.99 284 P **P 11 31 06.8 +0.3**
GOMU PcP **PcP 11 33 26.5 -0.4**
GOMU pmax pmax
comp=Z,12nm,0.8s
JAY Jayapura 38.73 181 LR LR 11 46 35.6
comp=Z,40nm,18.1s,baz=352,slow=35
GAMB Gambell 39.39 31 P **P 11 31 27.0 +1.2**
baz=249
UNV Unalaska Valle 39.87 47 P **P 11 31 30.6 +0.7**
baz=266
CHTO Chiang Mai 40.87 256 P **P 11 31 37.2 -1.5**
CHTO Chiang Mai 40.87 256 P **P 11 31 37.2 -1.5**
CHTO pmax pmax
comp=Z,4.0nm,0.8s
CHTO Chiang Mai 40.87 256 P **P 11 31 40.5 +1.8**
comp=Z,5.7nm,0.8s
WMQ Urumqi 40.87 297 *e*P **P 11 31 39.8 +1.3**
WMQ sP pP 11 31 53.8 +3.4
WMQ PcP **PcP 11 33 40.0 +1.4**
WMQ pmax pmax
comp=Z,13nm,0.7s
WMQ L L
comp=Z,220nm,24.9s
M11K Mekoryuk 40.92 37 P **P 11 31 39.7 +1.1**
baz=258
CMAR Chiang Mai Arr 41.07 256 P **P 11 31 40.1 -0.2**
comp=Z,2.1nm,0.8s,baz=44,slow=7.2,SNR=15
CMAR PcP **PcP 11 33 40.5 +0.9**
comp=Z,0.5nm,0.3s,baz=71,slow=2.9,SNR=4.8
CMAR LR LR 11 50 33.9
comp=Z,132nm,18.6s,baz=65,slow=39
comp=Z,2.1nm,0.8s
CMAR Chiang Mai Arr 41.07 256*ce*P **P 11 31 40.5 +0.1**
CMAR pmax pmax
comp=Z,2.0nm,0.7s
TNA Tin City 41.53 29 P **P 11 31 45.1 +1.6**
baz=251
FALS False Pass 41.73 46 P **P 11 31 46.6 +1.3**
baz=267
K13K Kusilvak Mount 41.97 35 P **P 11 31 48.8 +1.6**
baz=258
LSA Lhasa 41.99 276 P **P 11 31 47.5 -0.8**
LSA pmax pmax
comp=Z,12nm,0.9s
ZALV Zalesovo Beam 42.12 313 P **P 11 31 48.8 +0.2**
comp=Z,28nm,0.8s,baz=91,slow=7.4,SNR=104

ZALV PcP **PcP 11 33 42.2 -0.2**
comp=Z,2.5nm,0.5s,baz=115,slow=3.2,SNR=4.7
ZALV LR LR 11 50 01.1
comp=Z,150nm,20.4s,baz=84,slow=37
comp=Z,28nm,0.8s
ZALV Zalesovo Beam 42.12 313 **P 11 31 48.2 -0.4**
ZALV PcP **PcP 11 33 42.4 0.0**
ZALV Zalesovo Beam 42.12 313 P **P 11 31 48.2 -0.4**
ZALV 11 33 42.4
F14K Arctic Creek 42.13 30 P **P 11 31 50.5 +2.0**
baz=253
ANM Nome 42.27 31 P **P 11 31 50.1 +0.5**
ANM Nome 42.27 31 P **P 11 31 50.1 +0.5**
ANM pmax pmax
comp=Z,11nm,1.2s
ANM Nome 42.27 31 P **P 11 31 51.7 +2.1**
baz=255
M13K Dall Lake 42.32 37 P **P 11 31 52.2 +2.2**
baz=261
ZSN Zaisan 42.38 303 *e*P **P 11 31 51.3 +0.5**
comp=Z,24nm,0.9s
J14K Nanvaranak Lak 42.64 34 P **P 11 31 54.5 +1.9**
baz=258
L14K Kuka Creek 42.79 36 P **P 11 31 55.8 +2.0**
baz=261
F15K North Star Dit 42.87 30 P **P 11 31 56.6 +2.1**
baz=254
G15K Niukluk 42.93 31 P **P 11 31 57.0 +2.0**
baz=256,SNR=5.7
M14K Bethel 43.05 37 IAmb IAmb 11 31 59.5
comp=Z,16nm,1.0s
M14K Bethel 43.05 37 P **P 11 31 58.1 +2.2**
baz=262
N14K Kuskokwak Cree 43.08 38 P **P 11 31 58.0 +1.8**
baz=263
SHL Shillong 43.12 270 P **P 11 31 55.5 -1.7**
SHL IAmb IAmb 11 32 00.5
comp=Z,9.3nm,0.4s
SHL Shillong 43.12 270 P **P 11 31 55.5 -1.7**
SHL pmax pmax
comp=Z,9.0nm,0.4s
O14K Tigyukauivet M 43.22 39 P **P 11 31 58.9 +1.5**
baz=264
C16K Lisburne Hills 43.38 26 P **P 11 31 59.8 +1.3**
baz=251,SNR=5.4
L15K Ungalak Mounta 43.41 36 P **P 11 32 00.8 +1.9**
baz=262
SDPT Sand Point 43.44 45 P **P 11 32 00.7 +1.6**
baz=269
K15K Wolf Creek Mou 43.48 35 P **P 11 32 01.3 +1.9**
baz=261
H16K Elim 43.60 31 P **P 11 32 02.1 +1.7**
baz=258,SNR=7.6
M15K Kasigluk River 43.66 37 P **P 11 32 02.7 +1.8**
baz=263
NRIK Noril'sk 43.71 336 P **P 11 32 01.3 +0.1**
comp=Z,4.1nm,0.5s,baz=102,slow=7.9,SNR=7.1
NRIK PcP **PcP 11 33 47.8 +0.4**
comp=Z,3.8nm,0.5s,baz=101,slow=5.2,SNR=3.7
NRIK LR LR 11 51 52.4
comp=Z,195nm,18.4s,baz=118,slow=38
comp=Z,4.1nm,0.5s
NRIK Noril'sk 43.71 336 **P 11 32 01.1 -0.1**
NRIK Noril'sk 43.71 336*c i*P **P 11 32 00.6 -0.6**
NRIK pmax pmax
comp=Z,9.0nm,1.0s
G16K Koyuk River 43.72 30 P **P 11 32 03.3 +2.0**
baz=257
N15K Kwethluk River 43.90 38 P **P 11 32 04.7 +1.8**
baz=264
O15K Ungalikthiuk R 43.95 40 P **P 11 32 05.1 +1.8**
baz=266
D17K Noatak River 44.02 27 P **P 11 32 05.5 +1.9**
baz=254,SNR=13
J16K Anvik River 44.06 34 P **P 11 32 05.9 +1.8**
baz=261
I17K Unalakleet 44.12 33 P **P 11 32 06.3 +1.9**
baz=260
RDOG Red Dog Mine 44.18 27 P **P 11 32 06.7 +1.7**
baz=254
C17K DeLong Mountai 44.21 26 P **P 11 32 07.0 +1.8**
baz=253,SNR=6.3
MK31 Makanchi Array 44.21 303*c i*P **P 11 32 05.5 -0.1**
MK31 pmax pmax
comp=Z,15nm,0.8s
MKAR Makanchi Array 44.21 303 P **P 11 32 05.6 +0.1**
comp=Z,9.3nm,0.7s,baz=83,slow=10,SNR=30
MKAR LR LR 11 51 26.4
comp=Z,219nm,18.3s,baz=82,slow=37
comp=Z,9.3nm,0.7s
MKAR Makanchi Array 44.21 303*ce*P **P 11 32 05.5 -0.1**
MKAR pmax pmax
comp=Z,10.0nm,0.7s
E17K Hotham Inlet 44.33 28 P **P 11 32 08.0 +1.8**
baz=256,SNR=8.1
L16K Owhat River 44.36 36 P **P 11 32 08.1 +1.6**
baz=264
F17K Baldwin Pennin 44.40 29 P **P 11 32 08.5 +1.8**
baz=257,SNR=6.5
MAKZ Makanchi 44.42 303 P **P 11 32 07.3 0.0**
MAKZ Makanchi 44.42 303 P **P 11 32 07.3 0.0**
MAKZ pmax pmax
comp=Z,22nm,0.7s
G17K Kiwalik Mounta 44.44 30 P **P 11 32 09.1 +2.1**
baz=258,SNR=5.8
M16K Timber Creek 44.54 37 P **P 11 32 09.9 +1.9**
baz=265
N16K Nishlik Lake 44.59 38 P **P 11 32 10.6 +2.2**
baz=265,SNR=5.9
H17K Granite Mounta 44.64 31 P **P 11 32 10.7 +2.1**
baz=260,SNR=9.1
BRDH Bariadhala 44.67 266 LR LR 11 53 50.5
comp=Z,236nm,18.9s,baz=72,slow=40
J17K VABM Dome 44.76 34 IAmb IAmb 11 32 12.9
comp=Z,12nm,0.9s
J17K VABM Dome 44.76 34 P **P 11 32 11.8 +2.2**
baz=262,SNR=9.1
O16K Kokwok River B 44.87 39 P **P 11 32 12.4 +1.9**
baz=267
E18K Tukpahlearik C 44.87 28 P **P 11 32 12.4 +1.9**
baz=257,SNR=7.1
P16K Nushagak River 44.89 40 P **P 11 32 12.8 +2.1**
baz=268
C18K Utukok River 44.95 26 P **P 11 32 13.0 +1.7**
baz=255
L17K Donlin 44.96 35 P **P 11 32 13.7 +2.4**
baz=264,SNR=9.0
K17K Iditarod 45.02 35 P **P 11 32 13.9 +2.2**
baz=264,SNR=11
F18K Selawik 45.06 29 P **P 11 32 13.9 +2.0**
baz=258,SNR=8.3
R16K Pilot Point 45.07 42 P **P 11 32 14.3 +2.1**
baz=269
M17K Holitna River 45.30 37 P **P 11 32 16.3 +2.3**
baz=266,SNR=7.5
H18K Honhosa River 45.32 31 IAmb IAmb 11 32 16.7
comp=Z,11nm,0.9s
H18K Honhosa River 45.32 31 P **P 11 32 16.4 +2.2**
baz=261
G18K Tagagawik 45.32 30 P **P 11 32 15.8 +1.7**
baz=260
N17K Nushagak Hills 45.37 38 P **P 11 32 16.4 +1.9**
baz=267
O17K Koliganek Bris 45.38 39 P **P 11 32 16.5 +1.9**
baz=268
A19K Wainwright 45.42 24 P **P 11 32 16.8 +2.0**
baz=254
Q16K King Salmon 45.57 40 P **P 11 32 17.8 +1.7**
baz=269
C19K Lookout Ridge 45.63 26 IAmb IAmb 11 32 19.6
comp=Z,12nm,1.1s
C19K Lookout Ridge 45.63 26 P **P 11 32 18.4 +1.8**
baz=256,SNR=9.3
P17K Kvichak River 45.70 40 P **P 11 32 18.6 +1.5**
baz=269
L18K Granite Mounta 45.72 35 P **P 11 32 19.4 +2.1**
baz=266
R17L Mt. Peulik Vol 45.73 42 P **P 11 32 19.1 +1.7**
baz=270
KAPI Kappang 45.79 210 LR LR 11 50 46.6
comp=Z,47nm,19.3s,baz=26,slow=35
KAPI Kappang 45.79 210 P **P 11 32 16.6 -1.7**
KAPI Kappang 45.79 210⇑*e*P **P 11 32 18.5 +0.2**
KAPI pmax pmax
comp=Z,30nm,1.1s
KAPI Kappang 45.79 210 P **P 11 32 18.5 +0.2**
comp=Z,274nmcomp=Z,13nm,1.1s
J18K Innoko River 45.82 34 P **P 11 32 19.4 +1.3**

F19K **Shaleruckik Mo** 45.83 29 P P 11 32 19.7 +1.6
baz=264 baz=260

GCSA **Galena City Sc** 45.89 32 P P 11 32 19.7 +1.2
baz=263,SNR=5.9

PMG **Port Moresby** 45.94 172 LR LR 11 51 26.3
comp=Z,35nm,18.1s,baz=328,slow=36

Q17K **Contact Creek** 45.98 41 P P 11 32 20.5 +1.1
baz=270

G19K **Purcell Mounta** 45.99 30 IAmb IAmb 11 32 21.6
comp=Z,9.2nm,0.9s

G19K **Purcell Mounta** 45.99 30 P P 11 32 20.8 +1.4
baz=261,SNR=12

N18K **Kilae Creek** 46.02 38 IAmb IAmb 11 32 22.9
comp=Z,9.9nm,0.9s

N18K **Kilae Creek** 46.02 38 P P 11 32 21.3 +1.6
baz=268

D19K **Kuna River** 46.02 27 P P 11 32 21.4 +1.7
baz=258

M18K **Stony River** 46.08 36 P P 11 32 22.3 +2.1
baz=267,SNR=8.0

KURK **Kurchatov** 46.09 309 P 11 32 20.0 -0.3

KURK **Kurchatov** 46.09 309*c iP* P 11 32 20.1 -0.3

KURK pmax pmax

comp=Z,49nm,0.9s

KURK **Kurchatov** 46.09 309 P P 11 32 20.1 -0.2

KURK pP **pP** 11 32 32.7 +0.2

KURK sP **sP** 11 32 38.1 +0.6

E19K **Redstone River** 46.15 28 P P 11 32 22.4 +1.8
baz=260

KURBB **Kurchatov Arra** 46.16 308 P P 11 32 20.6 -0.3

KURBB LR LR 11 53 13.7

comp=Z,34nm,0.6s,baz=85,slow=7.9,SNR=308

comp=Z,220nm,18.3s,baz=178,slow=38
comp=Z,34nm,0.6s

EVN **Everest** 46.17 276 P 11 32 22.2 +0.2

H19K **Roundabout Mou** 46.17 31 IAmb IAmb 11 32 23.6
comp=Z,17nm,0.8s

H19K **Roundabout Mou** 46.17 31 P P 11 32 22.6 +1.9
baz=263,SNR=14

CHIR **Chirikof Islan** 46.18 44 P P 11 32 22.9 +1.9
baz=273

P18K **Big Mountain,** 46.32 39 IAmb IAmb 11 32 37.5
comp=Z,9.0nm,0.9s

P18K **Big Mountain,** 46.32 39 P P 11 32 23.8 +1.7
baz=270

O18K **Koktuh Hills** 46.33 39 IAmb IAmb 11 32 27.0
comp=Z,7.5nm,0.8s

O18K **Koktuh Hills** 46.33 39 P P 11 32 23.9 +1.7
baz=269

J19K **Poorman** 46.35 33 IAmb IAmb 11 32 24.7
comp=Z,14nm,0.9s

J19K **Poorman** 46.35 33 P P 11 32 23.7 +1.5
baz=265,SNR=14

Q18K **Katmai Hardscr** 46.43 40 P P 11 32 24.2 +1.1
baz=270

L19K **White Mountain** 46.58 36 P P 11 32 25.6 +1.5
baz=267

D20K **Etivluk River** 46.60 26 P P 11 32 25.8 +1.6
baz=259

F20K **Avaraart Lake** 46.66 29 P P 11 32 26.3 +1.7
baz=262

B20K **Meade River** 46.67 25 P P 11 32 26.5 +1.9
baz=258

E20K **Nigu River** 46.68 27 P P 11 32 26.8 +2.0
baz=260

N19K **Bonanza Creek** 46.71 37 P P 11 32 27.3 +2.1
baz=269

M19K **Big River Lodg** 46.78 36 P P 11 32 27.2 +1.5
baz=268

O19K **Port Alsworth** 46.78 38 IAmb IAmb 11 32 30.2
comp=Z,32nm,1.7s

O19K **Port Alsworth** 46.78 38 P P 11 32 27.2 +1.5
baz=270

H20K **Anotleneega Mo** 46.81 31 P P 11 32 27.7 +1.8
baz=264,SNR=7.8

I20K **Naaghedeneel** 46.92 32 P P 11 32 28.6 +2.0
baz=265

SII **Sitkinak Islan** 46.95 43 P P 11 32 29.0 +1.9
baz=273

K20K **Telida** 47.00 34 P P 11 32 28.8 +1.5

K20K IAmb IAmb 11 32 30.3

comp=Z,14nm,0.7s

K20K **Telida** 47.00 34 P P 11 32 29.4 +2.0
baz=267,SNR=16

J20K **Nowinta River** 47.01 33 IAmb IAmb 11 32 30.4
comp=Z,13nm,0.9s

J20K **Nowinta River** 47.01 33 P P 11 32 29.5 +2.1
baz=266

A21K **Barrow** 47.14 23 P P 11 32 29.8 +1.6
baz=257,SNR=13

Q19K **Cape Douglas,** 47.14 40 P P 11 32 29.8 +1.2
baz=271

UZB **Uzynbulak** 47.19 298 *eP* P 11 32 29.3 0.0
comp=Z,15nm,1.2s

TDK **Taldyqorghan** 47.20 301 *eP* P 11 32 29.5 +0.3
comp=Z,12nm,0.6s

C21K **Knifeblade Rid** 47.33 26 P P 11 32 32.0 +2.2
baz=261

P19K **Oil Pt** 47.34 39 P P 11 32 31.4 +1.4
baz=271

KPKS **Kokpek** 47.36 299 *eP* P 11 32 30.9 +0.3

M20K **Styx River** 47.38 36 P P 11 32 32.5 +2.1
baz=269

B21K **Ikpikpuk River** 47.47 25 P P 11 32 32.9 +2.1
baz=261

G21K **Allakaket** 47.47 30 IAmb IAmb 11 32 33.7
comp=Z,8.1nm,0.9s

G21K **Allakaket** 47.47 30 P P 11 32 32.5 +1.5
baz=264

E21K **Killik River** 47.52 27 P P 11 32 32.9 +1.6
baz=262

RED **Redoubt Volcan** 47.55 38 IAmb IAmb 11 32 33.9
comp=Z,13nm,0.8s

F21K **Alatna River** 47.55 29 P P 11 32 33.0 +1.4
baz=264,SNR=8.9

A22K **Sinclair Lake** 47.59 23 P P 11 32 33.6 +1.8
baz=259,SNR=12

SATY **Saty** 47.65 298⇑ *iP* P 11 32 33.0 +0.2

H21K **Melozitna Rive** 47.69 31 P P 11 32 34.5 +1.8
baz=266,SNR=10

KDAK **Kodiak Island** 47.75 42 LR LR 11 52 18.9
comp=Z,96nm,21.9s,baz=239,slow=36

KDAK **Kodiak Island** 47.75 42 P P 11 32 34.3 +1.1

KDAK **Kodiak Island** 47.75 42 P P 11 32 34.3 +1.1

KDAK pmax pmax

comp=Z,122nm,2.0s

KDAK **Kodiak Island** 47.75 42 P P 11 32 34.6 +1.4
baz=273

PRZ **Przheval'sk** 47.80 297 P P 11 32 34.3 +0.2

PRZ **Przheval'sk** 47.80 297 P P 11 32 34.3 +0.2

PRZ pmax pmax

comp=Z,35nm,0.8s

Q20K **Shuyak Island** 47.80 40 P P 11 32 35.2 +1.6
baz=273

CHUM **Lake Minchumin** 47.80 33 P P 11 32 35.8 +2.3
baz=268,SNR=7.1

N20K **Mount Spurr** 47.82 37 P P 11 32 35.9 +2.1
baz=270,SNR=12

SPCR **Spurr Chakacha** 47.82 37 P P 11 32 35.8 +1.9
baz=270,SNR=5.3

PPLA **Purkeypile** 47.84 35 IAmb IAmb 11 32 36.8
comp=Z,9.4nm,0.8s

PPLA **Purkeypile** 47.84 35 P P 11 32 36.0 +2.0
baz=269,SNR=5.1

B22K **Teshekpuk Lake** 47.99 24 IAmb IAmb 11 32 36.9
comp=Z,9.8nm,0.7s

B22K **Teshekpuk Lake** 47.99 24 P P 11 32 36.5 +1.6
baz=261,SNR=10

I21K **Tanana** 48.00 32 P P 11 32 36.9 +1.9
baz=267

F22K **John River** 48.09 28 P P 11 32 37.8 +2.0
baz=265

SKT **Skwentna** 48.14 36 P P 11 32 37.9 +1.7
baz=270

KULM **Kulim** 48.26 240 P P 11 32 36.7 -1.0

KULM IAmb IAmb 11 32 38.9

comp=Z,17nm,1.2s

E22K **Anaktuvuk Pass** 48.28 28 IAmb IAmb 11 32 40.0
comp=Z,15nm,1.0s

E22K **Anaktuvuk Pass** 48.28 28 P P 11 32 39.0 +1.8
baz=265,SNR=18

H22K **Ishtalitna Cre** 48.29 31 IAmb IAmb 11 32 40.0
comp=Z,7.0nm,0.8s

H22K **Ishtalitna Cre** 48.29 31 P P 11 32 39.1 +1.7
baz=267,SNR=9.1

G22K **Bettles** 48.30 29 P P 11 32 39.1 +1.8
baz=266

CAPN **Captain Cook N** 48.34 37 P P 11 32 39.5 +1.8
baz=272

BPAW **Bear Paw Mtn.** 48.39 33 P P 11 32 39.5 +1.3
baz=269

KTH **Kantishna Hill** 48.42 34 IAmb IAmb 11 32 54.0
comp=Z,13nm,1.0s

MLY **Manley** 48.52 32 P P 11 32 40.5 +1.3
baz=268

SOEI **Soe** 48.57 202 P 11 32 39.9 -0.2

MDOK **Medeo** 48.59 299 *eP* P 11 32 40.2 +0.1

BRSE **Bradley Lake S** 48.59 39 P P 11 32 41.1 +1.4
baz=273

AAA **Alma-Ata** 48.67 299 *eP* P 11 32 41.0 +0.3
comp=Z,15nm,0.7s

TNSS **Tian-Shan** 48.69 299 *eP* P 11 32 41.1 -0.1

TRF **Thorofare Moun** 48.70 34 IAmb IAmb 11 32 44.2
comp=Z,7.7nm,0.8s

TRF **Thorofare Moun** 48.70 34 P P 11 32 41.9 +1.2
baz=270,SNR=5.0

CUT **Chulitna** 48.72 35 P P 11 32 41.9 +1.3
baz=271

KDJ **Kajisay** 48.76 297 IAmb IAmb 11 32 43.2
comp=Z,15nm,1.0s

D23K **Nanushuk River** 48.77 26 P P 11 32 42.8 +1.8
baz=265,SNR=5.4

M22K **Willow** 48.81 36 IAmb IAmb 11 32 43.7
comp=Z,11nm,0.8s

M22K **Willow** 48.81 36 P P 11 32 42.9 +1.6
baz=272

COLD **Coldfoot** 48.83 29 P P 11 32 43.0 +1.6
baz=267

G23K **Bananza Creek** 48.87 30 P P 11 32 43.2 +1.3
baz=268

C23K **Itkillik River** 48.88 25 P P 11 32 43.4 +1.7
baz=264,SNR=13

RC01 **Rabbit Creek A** 49.02 37 IAmb IAmb 11 32 45.2
comp=Z,10nm,0.8s

RC01 **Rabbit Creek A** 49.02 37 P P 11 32 43.9 +0.9
baz=273

H23K **Yukon River** 49.04 31 P P 11 32 45.4 +2.3
baz=269

E23K **Chandalar** 49.10 28 IAmb IAmb 11 32 46.5
comp=Z,16nm,0.9s

E23K **Chandalar** 49.10 28 P P 11 32 45.4 +1.8
baz=267,SNR=22

I23K **Minto, Yukon-K** 49.11 32 P P 11 32 45.0 +1.4
baz=270,SNR=5.3

TOLK **Toolik Lake Re** 49.15 27 P P 11 32 45.7 +1.8
baz=266,SNR=10

BATI **Baumata** 49.18 203 LR LR 11 54 42.3
comp=Z,35nm,19.7s,baz=358,slow=38

SEW **Seward** 49.22 38 P P 11 32 45.3 +0.9
baz=274

NEA2 **Nenana** 49.23 32 P P 11 32 46.1 +1.6
baz=270

PMR **Palmer** 49.29 36 IAmb IAmb 11 32 47.1
comp=Z,14nm,1.2s

PMR **Palmer** 49.29 36 P P 11 32 45.9 +1.0
baz=273,SNR=6.2

MCK **McKinley** 49.30 33 IAmb IAmb 11 32 47.2
comp=Z,6.5nm,0.8s

MCK **McKinley** 49.30 33 P P 11 32 46.2 +1.1
baz=271,SNR=7.3

RND **Reindeer** 49.35 34 IAmb IAmb 11 32 47.4
comp=Z,11nm,0.8s

GHO **Glory Hole Cre** 49.38 36 IAmb IAmb 11 32 49.3
comp=Z,13nm,0.8s

D24K **Happy Valley** 49.45 26 P P 11 32 47.6 +1.5
baz=267

WAT1 **Susitna Watana** 49.50 35 P P 11 32 47.6 +0.9
baz=272

E24K **Your Creek** 49.52 28 P P 11 32 48.6 +1.8
baz=268

C24K **Franklin Bluff** 49.53 26 P P 11 32 48.3 +1.6
baz=266

KNK **Knik Glacier** 49.62 37 P P 11 32 48.5 +0.9

KNK IAmb IAmb 11 32 50.0

comp=Z,11nm,0.8s

KNK PcP **PcP** 11 34 07.2 -1.3

KNK **Knik Glacier** 49.62 37 P P 11 32 48.8 +1.2
baz=274,SNR=5.7

SML **Sawmill** 49.66 36 IAmb IAmb 11 32 50.0
comp=Z,14nm,0.8s

SML **Sawmill** 49.66 36 P P 11 32 49.2 +1.3
baz=273,SNR=10

WRH **Wood River Hil** 49.66 32 IAmb IAmb 11 32 50.6
comp=Z,6.2nm,0.8s

TKM2 **Tokmak 2** 49.68 299 P P 11 32 49.6 +1.1
SNR=29

H24K **Noodor Dome** 49.73 31 IAmb IAmb 11 32 51.5
comp=Z,8.6nm,0.9s

H24K **Noodor Dome** 49.73 31 P P 11 32 50.4 +2.1
baz=270,SNR=10

F24K **Squaw Lake** 49.73 28 P P 11 32 49.9 +1.6
baz=269

COLA **College** 49.75 32 P P 11 32 48.3 -0.1

COLA **College** 49.75 32*c iP* P 11 32 49.7 +1.3

COLA pmax pmax

comp=Z,8.0nm,0.8s

COLA **College** 49.75 32 P P 11 32 50.0 +1.6
baz=271

CCB **Clear Creek Bu** 49.78 32 IAmb IAmb 11 32 57.0
comp=Z,15nm,1.6s

NRN **Norn** 49.81 297 IAmb IAmb 11 32 51.4
comp=Z,15nm,1.1s

G24K **Hadweenzic Riv** 49.89 30 IAmb IAmb 11 32 52.8
comp=Z,15nm,1.2s

G24K **Hadweenzic Riv** 49.89 30 P P 11 32 51.2 +1.7
baz=270,SNR=7.1

WAT6 **Susitna Watana** 49.89 35 P P 11 32 50.8 +1.0
baz=273

POKR **Poker Plat Res** 49.92 32 P P 11 32 51.6 +1.7
baz=271

M23K **Glacier View** 49.95 36 P P 11 32 51.3 +1.2
baz=274

BRZS **Berezniki** 49.97 308 *eP* P 11 32 50.8 +0.4

DHY **Denali Highway** 50.03 34 IAmb IAmb 11 32 52.8
comp=Z,30nm,1.9s

DHY **Denali Highway** 50.03 34 P P 11 32 51.7 +0.9
baz=273

SCM **Sheep Creek Mo** 50.13 36 P P 11 32 52.8 +1.3
baz=274,SNR=5.5

HDA **Harding Lake** 50.15 33 P P 11 32 52.7 +1.1
baz=272,SNR=6.6

ILAR **Eielson Airway** 50.17 32 P P 11 32 52.3 +0.7
comp=Z,12nm,0.8s,baz=270,slow=6.4,SNR=139
comp=Z,12nm,0.8s

KBK **Karagaybulak** 50.21 299 P P 11 32 53.4 +0.8
SNR=20

P23K **Montague Islan** 50.25 38 P P 11 32 53.6 +1.3
baz=276

GLI **Glacier Island** 50.32 37 P P 11 32 54.0 +1.2
baz=275

D25K **Kavik River** 50.33 26 P P 11 32 54.5 +1.6
baz=269

USP **Ospenovka** 50.36 299 P P 11 32 54.0 +0.6
SNR=6.3

G25K **Bearman Lake** 50.43 29 P P 11 32 55.4 +1.8
baz=271

AAK **Ala-Archa** 50.54 299 P P 11 32 55.0 0.0
comp=Z,10nm,0.9s,baz=111,slow=5.4,SNR=23

AAK LR LR 11 55 35.9

comp=Z,548nm,19.0s,baz=67,slow=38
comp=Z,10nm,0.9s

AAK **Ala-Archa** 50.54 299 P P 11 32 52.0 -3.0
SNR=7.0

AAK **Ala-Archa** 50.54 299 P 11 32 55.3 +0.4

AAK IAmb IAmb 11 32 58.4

comp=Z,12nm,0.9s

AAK **Ala-Archa** 50.54 299*c iP* P 11 32 55.0 0.0

AAK pmax pmax

comp=Z,12nm,0.9s

AAK **Ala-Archa** 50.54 299 P P 11 32 55.2 +0.2

AAK pP **pP** 11 33 07.9 +0.7

AAK sP **sP** 11 33 13.3 +1.1

F25K **Christian Rive** 50.60 28 P P 11 32 57.2 +2.2
baz=271,SNR=9.8

E25K **Arctic Village** 50.62 28 P P 11 32 57.1 +2.1
baz=270,SNR=11

UCH **Uchtor** 50.64 298 P P 11 32 56.6 +0.5
SNR=11

M24K **Tolsona, Glenn** 50.65 36 IAmb IAmb 11 32 58.2
comp=Z,14nm,0.8s

M24K **Tolsona, Glenn** 50.65 36 P P 11 32 57.0 +1.6
baz=275

K24K **Donnelly Dome** 50.70 33 P P 11 32 57.4 +1.7
baz=274

PRP **Porcupine Dome** 50.71 31 IAmb IAmb 11 32 58.4
comp=Z,8.4nm,0.8s

PRP **Porcupine Dome** 50.71 31 P P 11 32 57.6 +1.7
baz=273,SNR=10

BVAR **Borovoye Array** 50.78 313 P P 11 32 56.5 0.0
comp=Z,8.6nm,0.6s,baz=77,slow=6.5,SNR=48

BVAR LR LR 11 55 47.4

comp=Z,160nm,18.2s,baz=73,slow=38
comp=Z,8.6nm,0.6s

FYU **Fort Yukon** 50.78 30 IAmb IAmb 11 32 59.7
comp=Z,12nm,0.9s

BORK **Borovoye** 50.82 313 P 11 32 56.8 +0.1

BORK **Borovoye** 50.82 313*c iP* P 11 32 56.7 +0.1

BORK pmax pmax

comp=Z,21nm,0.8s

BORK **Borovoye** 50.82 313 P P 11 32 56.9 +0.1

KSH2 **Kashi** 50.82 294 P P 11 32 58.5 +1.4

KSH2 pP sP 11 33 13.8 -0.5

KSH2 pmax pmax

comp=Z,21nm,0.8s

J25K **Salcha River,** 50.83 32 P P 11 32 57.9 +1.2
baz=274

KLU **Klutina** 50.83 36 IAmb IAmb 11 32 58.8
comp=Z,7.3nm,0.7s

KLU **Klutina** 50.83 36 P P 11 32 58.4 +1.6
baz=276,SNR=6.2

C26K **Camden Bay** 50.85 25 P P 11 32 58.9 +2.2
baz=270,SNR=8.2

PAX **Paxson** 50.90 34 P P 11 32 59.1 +1.7
baz=275

DIV **Divide** 50.94 37 IAmb IAmb 11 33 00.2
comp=Z,12nm,0.8s

EYAK **Cordova Ski Ar** 51.01 37 P P 11 32 59.7 +1.6
baz=277

EKS2 **Erkin-Say** 51.04 299 P P 11 32 59.3 +0.6
SNR=6.0

HARP **HAARP** 51.10 35 IAmb IAmb 11 33 01.5
comp=Z,16nm,0.8s

RIDG **Independent Ri** 51.12 33 P P 11 32 59.6 +0.7

RIDG **Independent Ri** 51.12 33 P P 11 33 00.3 +1.4
baz=275

F26K **Sheenjek River** 51.16 28 P P 11 33 01.5 +2.3
baz=272,SNR=22

PSI **Prapat** 51.24 239 P P 11 33 00.1 -0.4

PSI pmax pmax

comp=Z,19nm,1.0s

PSI **Prapat** 51.24 239 P P 11 33 00.3 -0.2
comp=Z,23nm,0.9s

C27K **Jago River** 51.27 26 P P 11 33 01.6 +1.7
baz=271

RPSI **Rantau Prapat** 51.31 239 P P 11 33 00.1 -0.8

RPSI IAmb IAmb 11 33 01.0

comp=Z,19nm,1.0s

G26K **Porcupine Rive** 51.34 29 P P 11 33 02.3 +1.9
baz=273,SNR=7.5

N25K **Chitina, Valde** 51.45 36 P P 11 33 03.0 +1.6
baz=277

DOT **Dot Lake** 51.48 33 IAmb IAmb 11 33 04.7
comp=Z,7.9nm,0.8s

SCRK **Sand Creek** 51.48 33 IAmb IAmb 11 33 03.6
comp=Z,11nm,0.7s

SCRK **Sand Creek** 51.48 33 P P 11 33 02.6 +1.0
baz=275,SNR=6.9

BMRM **Bremner River** 51.52 37 P P 11 33 03.5 +1.5
baz=277

MENT **Mentasta** 51.70 34 IAmb IAmb 11 33 06.2
comp=Z,7.4nm,0.7s

I26K **Coal Creek Min** 51.71 31 P P 11 33 04.8 +1.5
baz=275

KAIM **Kayak Island** 51.75 38 P P 11 33 05.2 +1.6
baz=278

L26K **Log Cabin Wild** 51.86 34 IAmb IAmb 11 33 07.4
comp=Z,12nm,0.8s

L26K **Log Cabin Wild** 51.86 34 P P 11 33 06.2 +1.8
baz=277,SNR=12

VRDI **Verde Repeater** 52.04 36 IAmb IAmb 11 33 08.5
comp=Z,8.7nm,0.9s

M26K **Nabesna, AK** 52.10 35 P P 11 33 08.0 +1.7
baz=277

E27K **Coleen River** 52.10 28 IAmb IAmb 11 33 09.3
comp=Z,8.4nm,0.9s

E27K **Coleen River** 52.10 28 P P 11 33 08.2 +2.0
baz=274,SNR=13

G27K **Doyon Strip** 52.19 29 P P 11 33 08.7 +1.9
baz=275

MCARA **McCarthy VSAT** 52.22 36 IAmb IAmb 11 33 37.8
comp=Z,15nm,1.0s

MCARA **McCarthy VSAT** 52.22 36 P P 11 33 08.9 +1.8
baz=278

D27M **Malcolm River** 52.26 26 P P 11 33 09.1 +1.8
baz=274

CRQM **Cirque** 52.26 37 IAmb IAmb 11 33 10.8
comp=Z,10nm,0.8s

CRQE **Cirque** 52.28 37 P P 11 33 09.4 +1.7
baz=279

H27K **Steamboat Moun** 52.30 30 P P 11 33 09.8 +2.2
baz=276

I27K **Kandik River** 52.32 31 P P 11 33 10.1 +2.3
baz=276

L27K **Beaver Creek,** 52.54 34 P P 11 33 11.5 +2.0
baz=278

M27K **Edge Creek, AK** 52.62 35 IAmb IAmb 11 33 13.1
comp=Z,8.9nm,0.9s

M27K **Edge Creek, AK** 52.62 35 P P 11 33 12.1 +1.9
baz=276

DZA **Taraz** 52.69 300 *eP* P 11 33 11.1 +0.3
comp=Z,14nm,1.2s

F28M **Old Crow** 52.80 28 IAmb IAmb 11 33 14.5
comp=Z,8.0nm,0.8s

F28M **Old Crow** 52.80 28 P P 11 33 13.5 +2.2
baz=276,SNR=11

E28M **Babbage River** 52.82 27 P P 11 33 13.5 +2.1
baz=276

MESA **MESA** 52.94 38 P P 11 33 14.4 +1.8
baz=280

D28M **Stokes Point** 53.04 26 P P 11 33 14.7 +1.8
baz=276

I28M **Miner Creek** 53.04 31 P P 11 33 15.1 +2.0
baz=278

BVCY **Beaver Creek** 53.08 35 P P 11 33 15.3 +1.9
baz=279,SNR=7.0

KNRA **Kununurra** 53.10 195 IAmb IAmb 11 33 28.2
comp=Z,17nm,1.1s

CTGM **Chitina Glacie** 53.10 37 IAmb IAmb 11 33 16.3
comp=Z,8.2nm,0.8s

YUK3 **Moose Creek** 53.37 35 P P 11 33 17.2 +1.4
baz=280,SNR=7.5

E29M **Blow River** 53.45 27 P P 11 33 18.3 +2.3
baz=277

G29M **Pine Creek** 53.60 29 P P 11 33 19.7 +2.5
baz=278,SNR=19

BRLS **Borolday** 53.69 301⇑ *iP* P 11 33 19.8 +1.6
comp=Z,8.1nm,0.8s

I29M **Ogilvie Camp,** 53.73 31 P P 11 33 20.1 +1.9
baz=279,SNR=20

J29N **Klondike Camp** 53.91 32 IAmb IAmb 11 33 36.7
comp=Z,5.0nm,0.7s

J29N **Klondike Camp** 53.91 32 P P 11 33 21.3 +1.7
baz=280

CHM **Chimkent** 54.08 300 *eP* P 11 33 21.4 +0.3
comp=Z,23nm,1.1s

M29M **Somme Creek** 54.17 34 P P 11 33 23.8 +2.3
baz=281

L29M **L29M** 54.20 34 P P 11 33 24.4 +2.7
baz=281,SNR=15

EPYK **Eagle Plains** 54.20 29 P P 11 33 23.7 +2.1
baz=280,SNR=28

G30M **tAoh Zraii Nji** 54.29 29 P P 11 33 24.1 +1.8
baz=280,SNR=24

YUK4 **Talbot Arm** 54.31 36 P P 11 33 24.7 +2.1
baz=282

K29M **Barlow Dome** 54.33 33 P P 11 33 24.8 +2.1
baz=281

F30M **Barrier River** 54.35 28 P P 11 33 25.0 +2.3
baz=280

NIL **Nilore** 54.54 289 P P 11 33 24.3 -0.3

NIL **Nilore** 54.54 289 P P 11 33 24.3 -0.3

NIL pmax pmax

comp=Z,34nm,1.4s

I30M **Mount Dempster** 54.55 31 P P 11 33 26.0 +1.8
baz=281,SNR=36

O29M **Mount Kennedy** 54.56 37 P P 11 33 26.3 +1.8
baz=282

J30M **Hart River** 54.69 32 P P 11 33 27.3 +2.0
baz=281

M30M **Minto, Yukon** 54.91 34 P P 11 33 28.8 +2.0
baz=282

HYT **Haines Junctio** 54.96 36 P P 11 33 29.2 +1.8
baz=283

N30M Aishikik Lake 55.02 35 P P 11 33 29.6 +1.9
baz=283
INK Inuvik 55.06 27 IAmb IAmb 11 33 29.9
comp=Z,11nm,0.8s
INK Inuvik 55.06 27 P P 11 33 29.1 +1.4
baz=281,SNR=16
MAYO Mayo, Yukon 55.09 33 P P 11 33 30.0 +1.9
baz=282
F31M Tsiigehtchic 55.16 28 IAmb IAmb 11 33 31.4
comp=Z,12nm,1.1s
F31M Tsiigehtchic 55.16 28 P P 11 33 29.7 +1.3
baz=282,SNR=13
H31M Peel River 55.26 30 P P 11 33 31.1 +1.8
baz=282
P30M Million Dollar 55.39 37 P P 11 33 32.2 +1.9
baz=284
SVE Sverdlovsk 55.42 319 eP P 11 33 31.1 +0.6
SVE pmax pmax
comp=Z,36nm,1.0s
N31M Braeburn, Yuko 55.62 35 P P 11 33 33.8 +1.9
baz=284
O30N Mendenhall 55.65 36 P P 11 33 34.0 +1.8
baz=284
M31M Drury Creek, Y 56.08 34 P P 11 33 37.0 +1.8
baz=285
WB0 Warramunga Arr 56.23 188 P 11 33 35.9 -0.7
WB0 IAmb IAmb 11 33 49.9
comp=Z,18nm,1.2s
WHY Whitehorse 56.25 36 IAmb IAmb 11 33 39.7
comp=Z,14nm,0.8s
WHY Whitehorse 56.25 36 P P 11 33 38.4 +1.8
baz=285,SNR=5.4
S31K Pelican 56.31 39 P P 11 33 38.6 +1.8
baz=286
SKAG Skagway 56.36 38 P P 11 33 38.9 +1.8
baz=286
WRAB Tennant Creek 56.40 188 P P 11 33 37.5 -0.4
WRAB IAmb IAmb 11 33 38.1
comp=Z,11nm,0.9s
WRAB Tennant Creek 56.40 188 ceP P 11 33 36.8 -1.1
WRAB pmax pmax
comp=Z,17nm,1.3s
WRAB Tennant Creek 56.40 188 P P 11 33 37.4 -0.5
WRAB pP pP 11 33 50.4 +0.3
WR8 Warramunga Arr 56.41 187 P P 11 33 37.5 -0.4
WR8 IAmb IAmb 11 33 38.1
comp=Z,18nm,1.0s
CTA Charters Tower 56.41 174 LR LR 11 58 41.8
comp=Z,57nm,18.2s,baz=3.5,slow=37
WRA Warramunga Arr 56.41 188 P P 11 33 37.2 -0.8
comp=Z,7.9nm,0.8s,baz=5.4,slow=7.3,SNR=73
comp=Z,7.9nm,0.8s
WRA Warramunga Arr 56.41 188 P P 11 33 37.2 -0.8
ARTI Arti 56.74 319 P P 11 33 39.9 -0.1
comp=Z,29nm,0.4s,baz=87,slow=3.8,SNR=49
ARTI LR LR 11 58 20.7
comp=Z,72nm,20.2s,baz=128,slow=36
comp=Z,29nm,0.4s
ARTI Arti 56.74 319 P P 11 33 39.7 -0.3
ARTI Arti 56.74 319 c iP P 11 33 39.9 -0.1
ARTI 11 34 33.9
ARTI 11 35 43.8
ARTI S S 11 41 31.9 +2.4
ARTI SS SS 11 45 12.9 -4.3
ARTI pmax pmax
comp=Z,59nm,1.2s
ARTI Arti 56.74 319 P P 11 33 40.0 -0.1
ARTI pP pP 11 33 52.8 +0.5
SHAA Shahritus 56.85 295 IAmb IAmb 11 33 43.0
comp=Z,96nm,0.9s
A36M Sachs Harbour 56.94 22 P 11 33 42.6 +1.5
A36M Sachs Harbour 56.94 22 P P 11 33 42.8 +1.7
baz=286,SNR=39
SIT Sitka 57.04 40 P P 11 33 43.9 +1.9
baz=287
R32K Eaglecrest 57.09 39 P P 11 33 44.2 +1.8
baz=287
P32M Atlin 57.11 37 P P 11 33 44.4 +1.9
baz=287
S32K Kiliisnoo 57.30 40 P P 11 33 45.8 +1.9
baz=288
P33M Teslin, Yukon 57.36 36 IAmb IAmb 11 33 47.6
comp=Z,15nm,1.1s
P33M Teslin, Yukon 57.36 36 P P 11 33 46.0 +1.6
baz=287
Q32M Nakina River 58.01 38 P P 11 33 50.1 +1.0
baz=288
C36M Paulatuk 58.11 25 P P 11 33 50.5 +1.2
baz=289,SNR=13
U33K Whale Pass 58.49 41 P P 11 33 53.6 +1.4
baz=289
R33M Jennings River 58.50 37 P P 11 33 53.8 +1.4
baz=289
CRAG Craig 58.71 42 P P 11 33 55.4 +1.7
baz=290
WRAK Wrangell Islan 58.80 40 P P 11 33 55.8 +1.5
baz=290
AKTO Aktyubinsk 58.88 312 P P 11 33 54.9 -0.2
comp=Z,7.7nm,0.7s,baz=71,slow=7.0,SNR=21
AKTO LR LR 12 00 27.8
comp=Z,149nm,18.5s,baz=136,slow=37
comp=Z,7.7nm,0.7s
S34M Telegraph Cree 58.92 39 P P 11 33 56.5 +1.3
baz=290
DLBC Dease Lake 59.29 38 P P 11 33 59.3 +1.4
baz=290
V35K Ketchikan 59.56 41 P P 11 34 00.6 +0.9
baz=291
T35M Bob Quinn 59.69 39 P P 11 34 02.7 +2.1
baz=291
ASAR Alice Springs 60.14 188 P P 11 34 03.5 -0.5
comp=Z,4.2nm,0.8s,baz=8.4,slow=6.2,SNR=50
comp=Z,4.2nm,0.8s
WRGLY Wrigley 60.52 31 P P 11 34 08.0 +1.9
baz=293,SNR=6.5
KIRV Kirov 60.57 323 LR LR 12 01 00.3
comp=Z,138nm,18.7s,baz=59,slow=37
KIRV Kirov 60.57 323 ceP P 11 34 06.6 +0.1
ALE Alert 60.74 3 P P 11 34 08.2 +0.8
ALE sP sP 11 34 27.6 +2.7
SPITS Spitsbergen Ar 61.07 349 P P 11 34 09.9 +0.2
comp=Z,9.2nm,1.0s,baz=84,slow=8.5,SNR=11
SPITS LR LR 12 01 36.1
comp=Z,100nm,20.4s,baz=34,slow=37
comp=Z,9.2nm,1.0s
KBS Kingsbay 61.22 350 deP P 11 34 11.6 +1.0
KBS pmax pmax
comp=Z,16nm,1.0s
KBS Kingsbay 61.22 350 i P P 11 34 11.4 +0.8
KOTAN Kotaneelee Air 61.49 35 P P 11 34 14.5 +1.7
baz=294
NOR Nord 61.65 356 i P P 11 34 13.8 +0.2
NOR IAmb IAmb 11 34 14.5
comp=Z,6.0nm,0.9s
PALK Pallekele 61.96 258 LR LR 12 04 01.6
comp=Z,59nm,20.2s,baz=48,slow=39
PALK Pallekele 61.96 258 P P 11 34 16.6 0.0
PALK IAmb IAmb 11 34 18.1
comp=Z,13nm,0.9s
PALK Pallekele 61.96 258 P P 11 34 16.6 0.0
PALK pmax pmax
comp=Z,13nm,1.0s
BBB Bella Bella 62.70 44 LR LR 11 58 02.8
comp=Z,41nm,21.1s,baz=186,slow=32
APA Apatity 63.13 336 ⇓ eP P 11 34 16.5 -7.1
APA e 11 34 58.9
APA e 11 36 41.0
APA eSS SS 11 46 58.1 +1.3
APA MLR MLR
comp=Z,3µm,5.9s
RES Resolute Bay 63.27 14 P P 11 34 24.4 0.0
comp=Z,9.7nm,0.9s,baz=310,slow=7.0,SNR=33
comp=Z,9.7nm,0.9s
RES Resolute Bay 63.27 14 P 11 34 24.7 +0.3
RES IAmb IAmb 11 34 25.8
comp=Z,10nm,0.9s
RES Resolute Bay 63.27 14 P P 11 34 24.7 +0.3
RES pmax pmax
comp=Z,10.0nm,0.9s
INKA Innaminka 63.81 180 P P 11 34 28.4 -0.1
BELG Belogornoye 64.06 317 ceP P 11 34 29.6 -0.3
BELG pmax pmax
comp=Z,10.0nm,1.2s
KLMR Klimovskoe 64.13 328 eP P 11 34 28.5 -1.8
KLMR e*PP pP 11 34 40.4 -2.3
KLMR e 11 36 48.4
KLMR pmax pmax
comp=Z,18nm,1.2s
MSVF Nonsavu 64.21 140 LR LR 11 55 53.4
comp=Z,100nm,21.1s,baz=343,slow=30
ARCES ARCESS Array B 64.47 339 P P 11 34 32.6 +0.2
comp=Z,3.0nm,0.7s,baz=58,slow=7.3,SNR=6.3
comp=Z,3.0nm,0.7s
YKA Yellowknife Ar 64.48 30 P P 11 34 33.2 +0.6
comp=Z,3.0nm,0.8s,baz=305,slow=7.5,SNR=54
comp=Z,3.0nm,0.8s
YKAW1 Yellowknife Wh 64.54 30 IAmb IAmb 11 34 34.7
comp=Z,8.5nm,0.9s
TULEG Thule 65.75 7 i P P 11 34 40.6 0.0
TULEG IAmb IAmb 11 34 41.0
comp=Z,6.6nm,0.9s
NEEM North Greenlan 66.16 3 i P P 11 34 44.2 +0.6
NEEM IAmb IAmb 11 34 44.8
comp=Z,17nm,1.0s
DAG Danmarks Havn 66.36 355 i P P 11 34 44.5 0.0
DAG IAmb IAmb 11 34 45.4
comp=Z,11nm,0.9s
AFI Afiamalu 66.96 129 LR LR 11 57 54.9
comp=Z,79nm,22.0s,baz=300,slow=30
MOS Moscow 67.58 323 eP P 11 34 51.7 -0.8
MOS e 11 43 49.7
MOS pmax pmax
comp=Z,36nm,1.0s
VRH Novokhopyorsk 67.85 318 eP P 11 34 53.1 -1.2
VRH pmax pmax
comp=Z,18nm,0.6s
POIN Pond Inlet 67.88 12 P 11 34 54.6 +0.4
POIN IAmb IAmb 11 34 55.2
comp=Z,8.0nm,0.9s
STKA Stephens Creek 67.94 180 P P 11 34 55.0 +0.1
comp=Z,3.7nm,0.9s,baz=340,slow=8.1,SNR=7.7
comp=Z,3.7nm,0.9s
STKA Stephens Creek 67.94 180 P P 11 34 54.9 -0.1
STKA Stephens Creek 67.94 180 P P 11 34 54.9 -0.1
STKA pmax pmax
comp=Z,36nm,1.2s
FORT Forrest 67.95 192 P P 11 34 54.5 -0.5
FORT IAmb IAmb 11 35 09.1
comp=Z,10nm,0.7s
OBN Obninsk 68.42 323 LR LR 12 05 26.4
comp=Z,135nm,19.1s,baz=338,slow=36
OBN Obninsk 68.42 323 eP P 11 34 57.8 0.0
OBN i 11 35 12.6
OBN i 11 35 21.4
OBN pmax pmax
comp=Z,11nm,0.9s
LPSR Galich'ya Gora 68.59 320 eP P 11 34 58.6 -0.4
LPSR pmax pmax
comp=Z,25nm,1.0s
VORR Voronezh 68.94 319 eP P 11 34 58.6 -2.6
VORR pmax pmax
comp=Z,10.0nm,0.8s
VSR Storozhevoye 69.21 319 eP P 11 35 02.3 -0.5
VSR pmax pmax
comp=Z,16nm,0.6s
AKT Akhty 69.22 307 eP P 11 35 02.8 -0.4
AKT e 11 35 26.6
AKT pmax pmax
comp=Z,26nm,1.1s
AKT MLR MLR
comp=Z,228nm,14.0s
FINES FINESS Array B 69.23 332 P P 11 35 02.8 0.0
comp=Z,14nm,0.8s,baz=65,slow=6.7,SNR=19
FINES LR LR 12 06 46.3
comp=Z,93nm,19.7s,baz=40,slow=37
comp=Z,14nm,0.8s
VORD Divnogorie 69.28 319 eP P 11 35 01.6 -1.6
VORD pmax pmax
comp=Z,10.0nm,0.9s
ILON Igloolik, Nuna 69.92 15 P 11 35 07.1 +0.2
ILON IAmb IAmb 11 35 07.9
comp=Z,13nm,0.8s
EDM Edmonton 70.00 38 IAmb IAmb 11 35 09.5
comp=Z,14nm,1.0s
VSU Vasula 70.84 330 ⇑ eP P 11 35 11.9 -0.8
VSU pmax pmax
comp=Z,29nm,0.9s
KBZ Khabaz 71.09 311 P P 11 35 15.1 +0.7
comp=Z,9.1nm,0.9s,baz=61,slow=2.9,SNR=23
comp=Z,9.1nm,0.9s
KBZ Khabaz 71.09 311 ceP P 11 35 14.8 +0.3
KBZ pmax pmax
comp=Z,12nm,0.9s
KIV Kislovodsk 71.10 311 P P 11 35 14.5 -0.2
KIV Kislovodsk 71.10 311 eP P 11 35 15.0 +0.3
KIV pmax pmax
comp=Z,27nm,1.1s
KIV MLR MLR
comp=Z,93nm,18.0s
SHA1 Shidzhatmaz 71.23 311 ⇑ eP P 11 35 15.6 -0.1
SUMG Summit 71.30 360 IAmb IAmb 11 35 17.9
comp=Z,17nm,1.0s
SUMG Summit 71.30 360 i P P 11 35 17.1 +1.3
SUMG IAmb IAmb 11 35 17.7
comp=Z,14nm,0.9s
ERBR Yeremizino-Bor 71.46 313 eP P 11 35 15.2 -1.5
ERBR eS S 11 44 27.6 -4.4
ERBR pmax pmax
comp=Z,35nm,0.9s
GNI Garni 71.85 307 LR LR 12 09 08.0
comp=Z,63nm,20.1s,baz=44,slow=38
LABN Labinsk 71.91 312 eP P 11 35 18.0 -1.4
LABN pmax pmax
comp=Z,11nm,0.5s
BMO Blue Mountains 72.56 47 P P 11 35 25.0 +1.6
BMO Blue Mountains 72.56 47 P P 11 35 25.0 +1.6
BMO pmax pmax
comp=Z,4.0nm,0.9s
JTMT Jette 72.64 43 P P 11 35 25.3 +1.4
MNK Minsk 72.85 326 i P P 11 35 25.4 +0.6
MNK comp=E,7.0nm,0.6s i P P 11 35 25.4 +0.6
comp=N,16nm,0.9s
MNK i P P 11 35 25.4 +0.6
comp=Z,25nm,0.8s,baz=51
MNK i PcP PcP 11 35 42.0 +0.3
MNK i PP PP 11 38 07.8 +1.1
MNK i PPP PPP 11 39 52.6
MNK i S S 11 44 50.4 +2.9
MNK i PS PnS 11 45 23.3 +0.4
MNK i SS SS 11 50 10.8 +44
MNK i SSS SSS 11 52 53.3
MNK i LQ LQ 12 01 49.6
MNK i LR LR 12 06 51.2
MNK i LRM MLR 12 10 50.5
comp=Z,186nm,16.4s
MNK Minsk 72.85 326 i P P 11 35 25.4 +0.6
MNK i 11 35 42.0
MNK i 11 38 07.7
MNK i PPP PPP 11 39 52.5
MNK i S S 11 44 50.4 +2.9
MNK i PS PnS 11 45 23.3 +0.4
MNK pmax pmax
comp=E,7.0nm,0.6s
MNK pmax pmax
comp=N,16nm,0.9s
MNK pmax pmax
comp=Z,25nm,0.8s
MNK MLR MLR
comp=Z,186nm,16.0s
ANN Anapa 73.75 314 eP P 11 35 29.9 -0.4
ANN eS S 11 44 58.8 +0.7
ANN pmax pmax
comp=Z,39nm,1.0s
FFC Flin Flon 74.38 32 P 11 35 34.8 +1.0
FFC IAmb IAmb 11 35 35.4
comp=Z,14nm,1.0s
FFC Flin Flon 74.38 32 P P 11 35 34.8 +1.0
FFC pmax pmax
comp=Z,14nm,1.0s
FFC Flin Flon 74.38 32 P P 11 35 34.6 +0.8
HFS Hagfors 74.53 336 P P 11 35 34.7 +0.1
comp=Z,2.2nm,0.5s,baz=55,slow=5.6,SNR=7.5
HFS LR LR 12 10 27.5
comp=Z,226nm,19.1s,baz=23,slow=37
comp=Z,2.2nm,0.5s
AKASG Malin Array Be 74.61 322 P P 11 35 34.9 -0.3
comp=Z,12nm,0.8s,baz=49,slow=5.9,SNR=43
AKASG LR LR 12 09 56.3
comp=Z,194nm,18.6s,baz=62,slow=37
comp=Z,12nm,0.8s
AKASG Malin Array Be 74.61 322 P P 11 35 35.3 +0.1
AKBB Malin Array Si 74.61 322 P P 11 35 34.9 -0.3
AKBB Malin Array Si 74.61 322 de P P 11 35 35.1 -0.1
AKBB Malin Array Si 74.61 322 P P 11 35 34.7 -0.5
KIEV Kiev 74.62 322 P P 11 35 34.9 -0.4
KIEV IAmb IAmb 11 35 35.8
comp=Z,19nm,1.1s
KIEV Kiev 74.62 322 P P 11 35 34.9 -0.4
KIEV pmax pmax
comp=Z,19nm,1.1s
KIEV Kiev 74.62 322 P P 11 35 34.5 -0.8
comp=Z,73nm,1.2s
NB2 NORSAR Subarra 74.65 337 P P 11 35 35.0 -0.3
comp=Z,3.8nm,0.8s,baz=39,slow=6.2
NOA NORSAR Array B 74.65 337 P P 11 35 35.6 +0.3
comp=Z,6.7nm,0.8s,baz=39,slow=5.8,SNR=16
NOA LR LR 12 11 34.4
comp=Z,149nm,19.6s,baz=20,slow=38
comp=Z,6.7nm,0.8s
FCC Fort Churchill 74.68 26 IAmb IAmb 11 35 36.8
comp=Z,18nm,1.1s
EGMT Eagleton 74.92 41 IAmb IAmb 11 35 53.2
comp=Z,16nm,0.9s
DLMT Dillon 74.98 44 IAmb IAmb 11 35 54.4
comp=Z,11nm,0.7s
BOZ Bozeman (W) 75.38 44 IAmb IAmb 11 35 56.3
comp=Z,7.5nm,0.8s
LHV Little Huntoon 75.56 53 IAmb IAmb 11 35 57.4
comp=Z,16nm,1.1s
NVAR Mina Array Bea 75.58 53 P P 11 35 43.0 +1.7
comp=Z,2.5nm,0.7s,baz=289,slow=5.6,SNR=26
NVAR LR LR 12 01 54.8
comp=Z,41nm,21.0s,baz=310,slow=30
comp=Z,2.5nm,0.7s
NVAR Mina Array Bea 75.58 53 P P 11 35 41.6 +0.2
LUBAR Lubar, Ukraine 75.83 322 P P 11 35 41.9 -0.4
SFJD Kangerlussuaq 76.52 5 LR LR 12 12 12.1
comp=Z,36nm,18.3s,baz=359,slow=38
SORM Soroca 76.69 321 P P 11 35 46.4 -0.7
comp=Z,19nm,1.1s
KMPD K-Podol'skiy 77.37 322 P P 11 35 49.9 -1.0
FRB Frobisher Bay 77.44 13 LR LR 12 10 35.4
comp=Z,44nm,21.9s,baz=306,slow=36
FURC Furnace Creek, 77.66 54 IAmb IAmb 11 36 08.1
comp=Z,9.1nm,1.0s
S11A Rachel 77.68 52 IAmb IAmb 11 36 20.4
comp=Z,7.1nm,0.8s
TPNV Topopah Spring 77.77 53 IAmb IAmb 11 36 10.5
comp=Z,11nm,1.2s
HWUT Hardware Beach 77.86 47 IAmb IAmb 11 36 10.1
comp=Z,22nm,1.6s
GWY Greenwater Val 77.95 54 IAmb IAmb 11 36 17.9
comp=Z,8.7nm,1.2s
QSM Queen of Sheba 77.95 54 IAmb IAmb 11 36 10.0
comp=Z,16nm,1.3s
DUG Dugway, Tooele 77.97 49 IAmb IAmb 11 36 10.7
comp=Z,34nm,2.0s
BNN Bunyan 78.23 310 P P 11 35 55.9 -0.2
BNN IAmb IAmb 11 35 57.8
comp=Z,9.6nm,0.9s
PDAR Pinedale Array 78.30 45 P P 11 35 57.5 +0.9
comp=Z,1.7nm,0.6s,baz=262,slow=1.9,SNR=25
comp=Z,1.7nm,0.6s
SHIU Shidnytsya 78.44 324 P P 11 35 57.1 +0.2
KWP Kalwaria Pacla 78.47 324 eP P 11 35 58.4 +1.3
KWP Kalwaria Pacla 78.47 324 P P 11 35 57.1 0.0
comp=Z,32nm,1.2s
RAKU Rahkiv 78.86 322 P P 11 35 58.4 -0.9
BR131 Keskin Array S 79.05 311 deP P 11 36 00.7 +0.1
BRTR Keskin Array B 79.05 311 P P 11 36 01.1 +0.4
comp=Z,4.9nm,1.0s,baz=108,slow=4.0,SNR=19
BRTR LR LR 12 14 57.7
comp=Z,43nm,18.1s,baz=28,slow=39
comp=Z,4.9nm,1.0s
BR106 Keskin Array S 79.06 311 P P 11 35 59.9 -0.8
comp=Z,43nmcomp=Z,4.4nm,1.1s
BR104 Keskin Array S 79.06 311 P P 11 36 00.3 -0.4
comp=Z,56nmcomp=Z,7.3nm,1.1s
BR105 Keskin Array S 79.07 311 P P 11 36 00.3 -0.4
comp=Z,60nmcomp=Z,6.6nm,1.0s
STHS Stebnicka Huta 79.30 325 eP P 11 36 00.9 -0.8
STHS pmax pmax
comp=Z,10.0nm,1.1s
STHS Stebnicka Huta 79.30 325 eP P 11 36 00.9 -0.8
HOLU Holmets 79.38 324 P P 11 36 01.8 -0.3
OJC Ojcow 79.39 326 eP P 11 36 02.7 +0.6
OJC Ojcow 79.39 326 P P 11 36 02.3 +0.2
OJC Ojcow 79.39 326 P P 11 36 02.3 +0.2
OJC Ojcow 79.39 326 P P 11 36 01.9 -0.2
comp=Z,18nm,1.1s
BERU Beregovo 79.46 323 P P 11 36 02.0 -0.5
PFO Pinyon Flats O 79.62 56 LR LR 12 03 18.3
comp=Z,94nm,21.3s,baz=280,slow=30
PFO Pinyon Flats O 79.62 56 ⇓ eP P 11 36 04.6 +0.8
PFO pmax pmax
comp=Z,4.0nm,1.0s
MLR Muntele Rosu 79.67 320 LR LR 12 13 43.8
comp=Z,254nm,18.2s,baz=58,slow=37
P17A Butcher Ranch, 79.67 48 IAmb IAmb 11 36 06.4
comp=Z,7.2nm,0.7s
NIE Niedzica 79.74 325 eP P 11 36 05.4 +1.3
Q16A Castle Valley 79.76 49 IAmb IAmb 11 36 21.5
comp=Z,10nm,1.2s
KNB Kanab 79.92 51 IAmb IAmb 11 36 22.6
comp=Z,12nm,1.2s
RAR Rarotonga 80.03 126 LR LR 12 04 18.9
comp=Z,126nm,20.1s,baz=312,slow=30
SRU San Rafael Swe 80.03 49 IAmb IAmb 11 36 22.9
comp=Z,8.1nm,0.8s
ULM Lac du Bonnet 80.17 33 P P 11 36 06.5 +0.1
comp=Z,3.2nm,0.7s,baz=311,slow=5.0,SNR=6.6
ULM LR LR 12 12 38.0
comp=Z,17nm,20.0s,baz=276,slow=36
comp=Z,3.2nm,0.7s
ULM Lac du Bonnet 80.17 33 P P 11 36 06.1 -0.2
ULM Lac du Bonnet 80.17 33 P P 11 36 06.1 -0.2
ULM pmax pmax
comp=Z,6.0nm,0.9s
LANS Liptovska Anna 80.31 325 eP P 11 36 09.2 +2.0
LANS pmax pmax
comp=Z,5.0nm,1.1s
LANS Liptovska Anna 80.31 325 eP P 11 36 09.2 +2.0
W13A Hualapai Mount 80.41 53 P P 11 36 08.4 +0.2
KSP Ksiaz 80.48 328 eP P 11 36 08.6 +0.6
KSP Ksiaz 80.48 328 P P 11 36 07.8 -0.2
comp=Z,16nm,1.0s
STEB Steborice 80.50 327 eP P 11 36 09.1 +1.0
STEB epP pP 11 36 23.9 +2.9
RAYN Ar Rayn 80.63 292 P 11 36 09.4 +0.1
RAYN IAmb IAmb 11 36 10.3
comp=Z,15nm,0.9s
RAYN Ar Rayn 80.63 292 P P 11 36 09.4 +0.1
RAYN pmax pmax
comp=Z,15nm,1.0s
RAYN Ar Rayn 80.63 292 P P 11 36 09.5 +0.1
RAYN pP pP 11 36 23.0 +0.8
RAYN sP sP 11 36 28.8 +1.7
HMU Henry Mountain 80.64 50 IAmb IAmb 11 36 24.5
comp=Z,14nm,1.2s
MORC Moravsky Berou 80.72 327 IAmb IAmb 11 36 10.9
comp=Z,12nm,1.1s
MORC Moravsky Berou 80.72 327 eP P 11 36 09.6 +0.2
DPC Dobruska-Polom 80.83 328 eP P 11 36 10.6 +0.7
DPC Dobruska-Polom 80.83 328 eP P 11 36 10.6 +0.7
KRLC Kraliky 80.83 327 eP P 11 36 10.0 0.0
KRLC Kraliky 80.83 327 eP P 11 36 10.0 0.0
PSZ Piszkesteto 81.00 324 IAmb IAmb 11 36 12.7
comp=Z,15nm,1.1s
PV21 Cone Mtn., Par 81.31 48 IAmb IAmb 11 36 28.2
comp=Z,12nm,0.9s
JAVC Velka Javorina 81.34 326 eP P 11 36 13.7 +1.0
PVCC Panska Ves 81.44 329 eP P 11 36 13.9 +0.8
PVCC Panska Ves 81.44 329 eP P 11 36 13.9 +0.8
PV22 Blue Mesa, Par 81.44 48 IAmb IAmb 11 36 31.6
comp=Z,13nm,1.0s
PV04 Paradox Valley 81.46 48 IAmb IAmb 11 36 30.4
comp=Z,20nm,1.2s
VRAC Vranov 81.48 327 LR LR 12 14 08.0
comp=Z,113nm,18.7s,baz=27,slow=37
VRAC Vranov 81.48 327 eP P 11 36 13.7 +0.3
CLL Collm 81.49 330 i P P 11 36 13.4 +0.1
CLL e*PP pP 11 36 27.0 +0.8
CLL pmax pmax
comp=Z,22nm,1.0s
CLL Collm 81.49 330 i P P 11 36 13.4 +0.1
comp=Z,22nm,1.0s
CLL epP pP 11 36 27.0 +0.8
CLL esP sP 11 36 32.0 +0.9

CLL	**Collm**	**81.49**	**330**	P		**P**	**11 36 12.0**	**-1.3**	
	comp=Z,22nm,1.0s								
PV16	**Nyswonger Mesa**	**81.51**	**48**	IAmb	IAmb		11 36 30.7		
	comp=Z,12nm,1.0s								
EPLO	**Experimental L**	**81.54**	**32**	IAmb	IAmb		11 36 28.3		
	comp=Z,12nm,0.9s								
PV11	**David Mesa, Pa**	**81.54**	**48**	IAmb	IAmb		11 36 37.1		
	comp=Z,16nm,1.0s								
PV05	**Paradox Valley**	**81.55**	**49**	IAmb	IAmb		11 36 29.6		
	comp=Z,16nm,1.0s								
PV03	**Paradox Valley**	**81.59**	**48**	IAmb	IAmb		11 36 31.0		
	comp=Z,16nm,1.3s								
ASF	**Jabal al Asfar**	**81.62**	**304**	LR	LR		12 15 56.0		
	comp=Z,48nm,18.5s,baz=26,slow=38								
PV13	**Radium Mtn., P**	**81.67**	**48**	P		**P**	**11 36 14.4**	**-0.4**	
PV13				IAmb	IAmb		11 36 31.9		
	comp=Z,22nm,1.3s								
SMOL	**Smolenice**	**81.70**	**326**	*e*P		**P**	**11 36 15.5**	**+1.0**	
SMOL				pmax	pmax				
	comp=Z,13nm,1.3s								
KRUC	**Moravsky**	**81.75**	**327**	*e*P		**P**	**11 36 14.8**	**0.0**	
WUAZ	**Wupatki**	**81.76**	**52**	IAmb	IAmb		11 36 31.2		
	comp=Z,6.6nm,0.8s								
PV01	**Paradox Valley**	**81.83**	**48**	IAmb	IAmb		11 36 31.5		
	comp=Z,12nm,1.3s								
HSKC	**Hora Svate Kat**	**81.85**	**329**	*e*P		**P**	**11 36 15.8**	**+0.5**	
HSKC				*e*pP		**pP**	**11 36 30.8**	**+2.6**	
PRU	**Pruhonice**	**81.86**	**328**	*e*P		**P**	**11 36 16.3**	**+1.0**	
PRU	**Pruhonice**	**81.86**	**328**	*e*P		**P**	**11 36 16.3**	**+1.0**	
MODS	**Modra-Piesok**	**81.87**	**326**	*e*P		**P**	**11 36 17.0**	**+1.6**	
MODS	**Modra-Piesok**	**81.87**	**326**	*e*P		**P**	**11 36 17.0**	**+1.6**	
MODS	**Modra-Piesok**	**81.87**	**326**	*e*P		**P**	**11 36 17.0**	**+1.6**	
MMAI	**Mount Meron Ar**	**82.09**	**305**	P		**P**	**11 36 17.6**	**+0.6**	
	comp=Z,2.2nm,0.5s,baz=46,slow=8.3,SNR=4.5								
MMAI				LR	LR		12 16 08.8		
	comp=Z,130nm,19.9s,baz=22,slow=38								
	comp=Z,2.2nm,0.5s								
KUQ	**Kuujjuuaa**	**82.64**	**15**	IAmb	IAmb		11 38 42.5		
	comp=Z,25nm,1.7s								
RONA	**Rosalia, Austr**	**82.81**	**326**	*i* P		**P**	**11 36 20.5**	**+0.1**	
	comp=Z,13nm,1.5s								
CONA	**Conrad Observa**	**82.84**	**326**	*i* P		**P**	**11 36 20.3**	**-0.3**	
	comp=Z,10nm,1.3s								
CKRC	**Cesky Krumlov**	**82.84**	**328**	*e*P		**P**	**11 36 20.8**	**+0.3**	
CKRC	**Cesky Krumlov**	**82.84**	**328**	*e*P		**P**	**11 36 20.8**	**+0.3**	
KHC	**Kasperske Hory**	**82.92**	**328**	IAmb	IAmb		11 36 22.4		
	comp=Z,9.0nm,0.9s								
KHC	**Kasperske Hory**	**82.92**	**328**	*e*P		**P**	**11 36 21.5**	**+0.6**	
KHC				*e*pP		**pP**	**11 36 35.7**	**+1.8**	
KHC	**Kasperske Hory**	**82.92**	**328**	*ce*P		**P**	**11 36 21.0**	**+0.1**	
KHC				pmax	pmax				
	comp=Z,10.0nm,1.0s								
KHC	**Kasperske Hory**	**82.92**	**328**	P		**P**	**11 36 20.1**	**-0.8**	
	comp=Z,13nm,1.0s								
GEC2	**GERESS Array S**	**83.09**	**328**	IAmb	IAmb		11 36 22.4		
	comp=Z,5.9nm,0.9s								
GERES	**GERESS Array B**	**83.09**	**328**	P		**P**	**11 36 21.7**	**-0.2**	
	comp=Z,2.6nm,0.8s,baz=46,slow=5.8,SNR=10								
	comp=Z,2.6nm,0.8s								
F33A	**5 Mile Ranch,**	**83.20**	**36**	IAmb	IAmb		11 36 37.1		
	comp=Z,12nm,1.1s								
ARSA	**Arzberg**	**83.50**	**326**	*i* P		**P**	**11 36 23.9**	**-0.1**	
	comp=Z,3.1nm,0.8s								
EKA	**Eskdalemuir Ar**	**83.62**	**340**	P		**P**	**11 36 24.4**	**0.0**	
	comp=Z,1.3nm,0.6s,baz=20,slow=4.5,SNR=6.1								
EKA				LR	LR		12 15 40.7		
	comp=Z,66nm,20.4s,baz=5.5,slow=37								
	comp=Z,1.3nm,0.6s								
SDCO	**Great Sand Dun**	**83.92**	**47**	IAmb	IAmb		11 36 42.5		
	comp=Z,12nm,1.6s								
BIOA	**Bad Ischl, Aus**	**84.00**	**327**	*i* P		**P**	**11 36 27.1**	**+0.6**	
	comp=Z,7.5nm,0.8s								
SOKA	**Soboth**	**84.15**	**326**	*e*P		**P**	**11 36 27.6**	**+0.3**	
	comp=Z,13nm,1.1s								
TUC	**Tucson**	**84.17**	**54**	P		**P**	**11 36 28.7**	**+1.0**	
TUC	**Tucson**	**84.17**	**54**	P		**P**	**11 36 28.7**	**+1.0**	
TUC				pmax	pmax				
	comp=Z,2.0nm,0.8s								
EIL	**Elat**	**84.47**	**303**	LR	LR		12 17 55.5		
	comp=Z,38nm,18.5s,baz=73,slow=38								
OBKA	**Obir**	**84.49**	**326**	*e*P		**P**	**11 36 29.4**	**+0.3**	
	comp=Z,25nm,1.9s								
ECSD	**EROS Data Cent**	**84.58**	**38**	IAmb	IAmb		11 36 44.1		
	comp=Z,8.2nm,0.9s								
KBA	**Koelnbreinsper**	**84.59**	**327**	*e*P		**P**	**11 36 29.8**	**0.0**	
	comp=Z,6.6nm,1.1s								
LESA	**Schwarzleotal**	**84.62**	**328**	*i* P		**P**	**11 36 29.9**	**+0.2**	
	comp=Z,12nm,1.6s								
MEM	**Membach**	**84.73**	**333**	*d*P		**P**	**11 36 29.7**	**-0.4**	
	comp=Z,7.5nm,1.0s								
MYKA	**Terra Mystica**	**84.81**	**327**	*i* P		**P**	**11 36 30.2**	**-0.5**	
	comp=Z,2.5nm,0.5s								
T25A	**Trinidad**	**84.97**	**47**	IAmb	IAmb		11 36 47.5		
	comp=Z,6.5nm,0.9s								
ANMO	**Albuquerque**	**85.20**	**50**	P		**P**	**11 36 32.6**	**-0.4**	
ANMO				IAmb	IAmb		11 36 48.8		
	comp=Z,6.1nm,1.1s								
ANMO	**Albuquerque**	**85.20**	**50**	P		**P**	**11 36 32.6**	**-0.4**	
ANMO				pmax	pmax				
	comp=Z,6.0nm,1.2s								
ABTA	**Abfaltersbach**	**85.21**	**327**	*e*P		**P**	**11 36 30.9**	**-1.8**	
	comp=Z,2.5nm,0.6s								
MOTA	**Moosalm**	**85.35**	**328**	*e*P		**P**	**11 36 33.3**	**-0.2**	
	comp=Z,7.1nm,1.2s								
RETA	**Reute**	**85.38**	**329**	*e*P		**P**	**11 36 33.6**	**+0.1**	
	comp=Z,8.8nm,0.8s								
RCHB	**Rochefort**	**85.39**	**333**	*d*P		**P**	**11 36 32.2**	**-1.2**	
BMRD	**Maredsous**	**85.44**	**334**	*d*P		**P**	**11 36 33.2**	**-0.4**	
WLF	**Walferdange**	**85.45**	**333**	*d*P		**P**	**11 36 35.0**	**+1.3**	
BFO	**Black Forest**	**85.70**	**331**			**P**	**11 36 35.1**	**0.0**	
BFO	**Black Forest**	**85.70**	**331**	P		**P**	**11 36 35.1**	**0.0**	
BFO				pmax	pmax				
	comp=Z,38nm,0.3s								
FETA	**Feichten**	**85.76**	**328**	*e*P		**P**	**11 36 33.8**	**-1.7**	
	comp=Z,2.4nm,0.9s								
DAVA	**Damuels**	**85.91**	**329**	*i* PcP		**P**	**11 36 36.4**	**+0.1**	
	comp=Z,18nm,1.0s								
SCHQ	**Schefferville**	**86.01**	**16**	P		**P**	**11 36 36.8**	**+0.4**	
	comp=Z,5.8nm,0.9s,baz=2.0,slow=4.2,SNR=5.1								
SCHQ				LR	LR		12 18 11.3		
	comp=Z,50nm,18.9s,baz=348,slow=38								
	comp=Z,5.8nm,0.9s								
FUORN	**Ofenpass-Fuorn**	**86.28**	**328**	IAmb	IAmb		11 36 39.4		
	comp=Z,11nm,1.1s								
DAVOX	**Davos/Dischmat**	**86.31**	**329**	LR	LR		12 19 13.3		
	comp=Z,73nm,18.6s,baz=251,slow=38								
LPIG	**La Paz**	**89.74**	**60**	LR	LR		12 10 09.4		
	comp=Z,27nm,21.5s,baz=274,slow=31								
TXAR	**Lajitas Array**	**90.72**	**52**	P		**P**	**11 37 00.3**	**+0.8**	
	comp=Z,1.6nm,0.8s,baz=280,slow=3.4,SNR=20								
	comp=Z,1.6nm,0.8s								
S39A	**Bolivar**	**90.73**	**40**	IAmb	IAmb		11 36 59.8		
	comp=Z,3.9nm,0.8s								
SADO	**Sadowa**	**91.37**	**27**	LR	LR		12 20 33.3		
	comp=Z,42nm,18.1s,baz=342,slow=37								
BRDY	**Brady**	**92.25**	**48**	IAmb	IAmb		11 37 21.6		
	comp=Z,7.2nm,1.2s								
TKL	**Tuckaleechee C**	**97.05**	**35**	LR	LR		12 26 16.6		
	comp=Z,14nm,18.6s,baz=354,slow=38								
ESDC	**Sonseca Array**	**97.72**	**333**	P		**P**	**11 37 30.1**	**-1.1**	
	comp=Z,0.8nm,0.8s,baz=44,slow=5.1,SNR=3.5								
ESDC				LR	LR		12 25 38.1		
	comp=Z,133nm,18.9s,baz=350,slow=38								
	comp=Z,0.8nm,0.8s								
TORD	**Torodi Ar. Bea**	**117.56**	**314**	PKP		**PKPdf**	**11 42 42.0**	**-0.6**	
	comp=Z,1.1nm,0.9s,baz=359,slow=2.6,SNR=5.9								
QSPA	**South Pole Qui**	**126.16**	**180**	PKP		**PKPdf**	**11 42 57.2**	**-0.3**	
	comp=Z,2.7nm,0.9s,baz=289,slow=1.4,SNR=5.6								
BOSA	**Boshof**	**126.18**	**259**	PKP		**PKPdf**	**11 42 58.6**	**-0.2**	
	comp=Z,3.2nm,1.0s,baz=358,slow=1.5,SNR=3.1								
NVL	**N'lazarevskaya**	**136.61**	**202**	*e*PKIKP		**PKPdf**	**11 43 12.4**	**-4.6**	
NVL				pmax	pmax				
	comp=Z,6.0nm,0.7s								
H03N2	**Juan Fernandez**	**147.24**	**97**	T		T	14 28 17.8		
	baz=291,slow=76,SNR=55								
H03N3	**Juan Fernandez**	**147.25**	**97**	T		T	14 28 17.8		
	baz=291,slow=76,SNR=60								
LPAZ	**La Paz**	**147.25**	**60**	PKPbc		**PKPbc**	**11 43 40.9**	**+0.3**	
	comp=Z,5.1nm,0.7s,baz=321,slow=3.3,SNR=13								
H03N1	**Juan Fernandez**	**147.25**	**97**	T		T	14 28 18.9		
	baz=291,slow=76,SNR=63								

UPP ***31*** *11:24:12.7±0.1, 67.84N×20.21E, h1km, ML2.6, Confirmed Induced event*
ISC 31 11:24:11.6±1.3, 67.79N±0.05×20.35E±0.05, h0km, n8, σ0s36/12, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara** baz=205	**0.17**	**359**	P	**Pg**	**11 24 15.2**	**+0.4**
KUA				S	**Sg**	**11 24 17.1**	**+0.2**
RATU	**Laukkuluspa**	**0.29**	**277**	P	**Pg**	**11 24 17.3**	**+0.2**
RATU				S	**Sg**	**11 24 20.7**	**-0.1**
KOVU	**Salmi**	**0.44**	**351**	P	**Pg**	**11 24 19.9**	**-0.1**
KOVU				S	**Sg**	**11 24 25.5**	**-0.2**
NIKU	**Nikkaluokta**	**0.51**	**280**	P	**Pg**	**11 24 21.1**	**-0.1**
NIKU				S	**Sg**	**11 24 27.1**	**-0.6**
DUNU	**Dundret**	**0.68**	**173**	S	**Sb**	**11 24 36.4**	**+0.3**
SALU	**Saltoluokta**	**0.82**	**241**	*e*P	**Pg**	**11 24 26.9**	**-0.3**
SALU	**Saltoluokta**	**0.82**	**241**	P	**Pg**	**11 24 27.7**	**+0.5**
HEF	**Hetta**	**1.39**	**62**	*e*P	**Pg**	**11 24 37.9**	**-0.3**

VIE 31 11:35:23.6±0.2, 47.66N×12.83E, h0km, ml1.1/2, Error ellipse: s-maj=1.5km s-min=1.1km az=74.0 13 km NE of Lofer Suspected Mining explosion., Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LESA	**Schwarzleotal** 0.8nm,0.1s	**0.26**	**203**	*i* Pg	Pg	11 35 28.4	-0.1
LESA	1.6nm,0.2s			*i* Sg	Sg	11 35 32.5	+0.6
BIOA	**Bad Ischl, Aus** 3.5nm,0.2s	**0.55**	**87**	*i* Sg	Sg	11 35 41.8	+0.6

IDC ***31*** *12:00:55.0±0.9, 24.75N×121.56E, h0km, mb3.7/8, mbtmp3.7/9, ML3.1/1, MS2.8/2, Error ellipse: s-maj=53.8km s-min=18.0km az=68.0*
JMA ***31*** *12:00:56.4±0.2, 25.2N×122.3E±0.6, h44km, MV3.0/11, TAIWAN REGION*
TAP ***31*** *12:00:56.5, 25.05N×122.27E, h15km, ML3.9, C*
ISC 31 12:00:56.0±1.0, 25.05N±0.02×122.33E±0.02, h14km±7km, n127, σ0s89/196, mb3.6/8, 11C-9D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.32**	**263**	*i* P	**Pg**	**12 01 02.5**	**0.0**
TWB1				*i* S	**Sg**	**12 01 06.6**	**-0.4**
SXI1	**Grass Mountain**	**0.42**	**276**	*i* P	**Pg**	**12 01 04.7**	**+0.3**
SXI1				S	**Sg**	**12 01 10.1**	**0.0**
TIPB	**Shuangxi**	**0.47**	**261**	P	**Pg**	**12 01 05.5**	**+0.2**
TIPB				*e*S	**Sg**	**12 01 11.3**	**-0.3**
NTC	**Toucheng**	**0.50**	**247**	P	**Pg**	**12 01 06.0**	**+0.2**
NTC				*e*S	**Sb**	**12 01 13.1**	**-0.5**
NWF	**Wu-fen Shan**	**0.50**	**273**	P	**Pb**	**12 01 06.3**	**-0.3**
NWF				*e*S	**Sb**	**12 01 13.5**	**-0.3**
WFSB	**Wu-fen Shan**	**0.50**	**273**	P	**Pb**	**12 01 06.3**	**-0.3**
WFSB				*e*S	**Sg**	**12 01 12.8**	**+0.2**
TNOU	**National Taiwa**	**0.52**	**281**	P	**Pg**	**12 01 06.1**	**+0.2**
TNOU				*e*S	**Sg**	**12 01 12.9**	**-0.2**
ILA	**Ilan**	**0.60**	**242**	*e*P	**Pg**	**12 01 08.0**	**+0.2**
ILA				*e*S	**Sb**	**12 01 16.6**	**0.0**
TWC	**Suao**	**0.62**	**225**	P	**Pg**	**12 01 07.8**	**-0.3**
TWC				*e*S	**Sg**	**12 01 15.8**	**-0.7**
PCYT	**Pengchaiyu**	**0.62**	**338**	P	**Pg**	**12 01 08.8**	**+0.6**
EOS2	**EOS2**	**0.63**	**188**	P	**Pb**	**12 01 09.5**	**+0.7**
EOS2				*e*S	**Sb**	**12 01 18.6**	**+1.2**
ESAO	**Su ao**	**0.65**	**223**	*e*P	**Pb**	**12 01 09.0**	**-0.1**
ESAO				*e*S	**Sg**	**12 01 16.8**	**-0.5**
TWA	**Mucha**	**0.68**	**264**	P	**Pb**	**12 01 09.7**	**0.0**
TWA				*e*S	**Sb**	**12 01 18.7**	**-0.3**
TWE	**Neicheng**	**0.69**	**242**	P	**Pg**	**12 01 09.2**	**-0.3**
TWE				*e*S	**Sg**	**12 01 18.4**	**-0.1**
NHY	**Taipei**	**0.69**	**269**	*e*P	**Pb**	**12 01 10.3**	**+0.5**
NHY				*e*S	**Sb**	**12 01 19.4**	**+0.2**
NDS	**Dongshan**	**0.70**	**234**	*e*P	**Pb**	**12 01 09.8**	**-0.1**
NDS				*e*S	**Sb**	**12 01 19.0**	**-0.4**
TWY	**Chenhua**	**0.70**	**289**	*e*P	**Pb**	**12 01 10.2**	**+0.3**
TWY				*e*S	**Sb**	**12 01 19.8**	**+0.3**
ZUZH	**Zhuzihu**	**0.72**	**279**	*e*P	**Pb**	**12 01 10.4**	**0.0**
ZUZH				*e*S	**Sb**	**12 01 20.0**	**-0.2**
FUSB	**Fushanzhiwuyua**	**0.74**	**247**	P	**Pg**	**12 01 10.0**	**-0.3**
FUSB				*e*S	**Sg**	**12 01 20.0**	**-0.1**
NHDH	**Xindian Distri**	**0.74**	**263**	*e*P	**Pb**	**12 01 11.0**	**+0.4**
NHDH				*e*S	**Sb**	**12 01 20.3**	**-0.2**
ANP	**Anpu**	**0.75**	**281**	P	**Pg**	**12 01 10.7**	**+0.1**
ANP				*e*S	**Sb**	**12 01 20.7**	**-0.3**
TAP	**Taipei**	**0.75**	**269**	*e*P	**Pb**	**12 01 11.0**	**+0.2**
TAP				*e*S	**Sb**	**12 01 21.1**	**+0.2**
EOS3	**EOS3**	**0.76**	**181**	*e*P	**Pb**	**12 01 11.5**	**+0.6**
EOS3				*e*S	**Sb**	**12 01 22.9**	**+1.9**
TATO	**Taipei**	**0.77**	**265**	S	**Sb**	**12 01 21.3**	**-0.2**
TATO	**Taipei**	**0.77**	**265**	P	**Pb**	**12 01 11.3**	**+0.1**
TATO	**Taipei**	**0.77**	**265**	S	**Sb**	**12 01 21.5**	**0.0**
EWUT	**Wuta**	**0.79**	**220**	*e*P	**Pb**	**12 01 11.4**	**0.0**
EWUT				*e*S	**Sg**	**12 01 21.0**	**-0.6**
NWLT	**Wulai**	**0.80**	**250**	*e*P	**Pg**	**12 01 11.5**	**-0.1**
NWLT				*e*S	**Sg**	**12 01 20.8**	**-1.3**
ENTT	**Nioudou**	**0.81**	**240**	*e*P	**Pg**	**12 01 11.3**	**-0.3**
ENTT				*e*S	**Sb**	**12 01 22.5**	**-0.1**
NTST	**Danshui**	**0.81**	**278**	*e*P	**Pb**	**12 01 12.3**	**+0.5**
JYNG	**Yonagunijimaku**	**0.81**	**137**	*e*P	**Pg**	**12 01 11.2**	**-0.6**
JYNG				*e*S	**Sg**	**12 01 22.7**	**+0.2**
TWS1	**Kuangyinshan**	**0.83**	**274**	P	**Pb**	**12 01 12.5**	**+0.3**
TWS1				*e*S	**Sb**	**12 01 24.1**	**+0.9**
YOJ	**Yonaguni jima**	**0.85**	**133**	P	**Pg**	**12 01 12.6**	**+0.1**
YOJ	**Yonaguni jima**	**0.85**	**133**	P	**Pg**	**12 01 12.5**	**+0.1**
YOJ	**Yonaguni jima**	**0.85**	**133**	*e*P	**Pg**	**12 01 11.9**	**-0.5**
YOJ	**Yonaguni jima**	**0.85**	**133**	P	**Pg**	**12 01 11.9**	**-0.5**
NDT	**Datong Townshi**	**0.87**	**239**	*e*P	**Pg**	**12 01 12.5**	**-0.4**
NDT				*e*S	**Sb**	**12 01 24.4**	**+0.1**
LATG	**Datong**	**0.89**	**235**	*e*P	**Pg**	**12 01 13.1**	**-0.3**
LATG				*e*S	**Sb**	**12 01 25.2**	**0.0**
EAHA	**Aohua**	**0.90**	**217**	*e*P	**Pg**	**12 01 13.1**	**-0.3**
EAHA				*e*S	**Sg**	**12 01 24.5**	**-0.6**
EOS4	**EOS4**	**0.92**	**181**	*e*P	**Pg**	**12 01 13.8**	**0.0**
EOS4				*e*S	**Sb**	**12 01 26.3**	**+0.8**
YHNB	**Yeheng**	**0.95**	**247**	P	**Pg**	**12 01 13.9**	**-0.5**
YHNB	**Yeheng**	**0.95**	**247**	P	**Pg**	**12 01 13.8**	**-0.6**
YHNB	**Yeheng**	**0.95**	**247**	P	**Pg**	**12 01 13.8**	**-0.6**
YHNB				*e*S	**Sg**	**12 01 24.6**	**-2.2**
NSK	**Sanguang**	**0.96**	**247**	P	**Pg**	**12 01 13.9**	**-0.7**
NSK				*e*S	**Sg**	**12 01 25.4**	**-1.7**
NCUH	**Zhongli**	**1.04**	**266**	*e*P	**Pg**	**12 01 15.4**	**-0.8**
NCUH				*e*S	**Sb**	**12 01 30.1**	**+0.7**
NNSB	**Datong**	**1.06**	**235**	P	**Pg**	**12 01 15.9**	**-0.6**
NNSB				*e*S	**Sg**	**12 01 29.2**	**-1.2**
NNS	**Nan Shan**	**1.06**	**235**	P	**Pg**	**12 01 16.0**	**-0.6**
NNS				*e*S	**Sg**	**12 01 29.0**	**-0.8**
KSHI	**Guanxi Townshi**	**1.08**	**256**	*e*P	**Pg**	**12 01 16.5**	**-0.5**
KSHI				*e*S	**Sb**	**12 01 30.9**	**+0.4**
ETL	**Fush Village**	**1.10**	**216**	*e*P	**Pg**	**12 01 16.3**	**-0.9**
ETL				*e*S	**Sg**	**12 01 30.2**	**-1.3**
NACB	**Ninganchiao**	**1.10**	**218**	P	**Pg**	**12 01 16.3**	**-0.9**
NACB	**Ninganchiao**	**1.10**	**218**	S	**Sg**	**12 01 31.0**	**-0.6**
NACB	**Ninganchiao**	**1.10**	**218**	P	**Pg**	**12 01 16.1**	**-1.1**
NACB	**Ninganchiao**	**1.10**	**218**	S	**Sg**	**12 01 30.2**	**-1.4**
NACB	**Ninganchiao**	**1.10**	**218**	*e*P	**Pg**	**12 01 15.8**	**-1.4**
NACB				*e*S	**Sg**	**12 01 30.2**	**-1.4**
ETLH	**Xiulin Townshi**	**1.14**	**223**	*e*P	**Pg**	**12 01 17.1**	**-1.0**
ETLH				*e*S	**Sg**	**12 01 31.8**	**-1.2**
TWD	**Chiawan**	**1.18**	**215**	*e*P	**Pb**	**12 01 17.6**	**-0.5**
TWD				*e*S	**Sg**	**12 01 32.7**	**-1.3**
NFF	**Wufeng Townshi**	**1.18**	**250**	P	**Pg**	**12 01 17.7**	**-1.0**
NFF				*e*S	**Sg**	**12 01 32.6**	**-1.5**
SBCB	**Hsinchu**	**1.25**	**258**	*e*P	**Pn**	**12 01 18.8**	**-0.2**
HSN	**Hsinchu**	**1.26**	**259**	*e*P	**Pn**	**12 01 17.9**	**-1.3**
HSN				*e*S	**Sb**	**12 01 33.7**	**-2.0**
LIOB	**Emei**	**1.26**	**252**	P	**Pn**	**12 01 18.9**	**-0.3**
LIOB				*e*S	**Sb**	**12 01 35.3**	**-0.3**
FUSS	**Fushou**	**1.27**	**231**	*e*P	**Pn**	**12 01 19.5**	**0.0**
FUSS				*e*S	**Sg**	**12 01 35.9**	**-1.3**
NSTT	**Nanjuang**	**1.28**	**251**	P	**Pn**	**12 01 19.0**	**-0.4**
NSTT				*e*S	**Sb**	**12 01 35.3**	**-0.9**
TWT	**Tachien**	**1.32**	**233**	*e*P	**Pn**	**12 01 20.6**	**+0.5**
TWT				*e*S	**Sb**	**12 01 36.8**	**-0.6**
ETM	**Tongmen**	**1.32**	**216**	*e*P	**Pn**	**12 01 20.4**	**+0.3**
ETM				*e*S	**Sb**	**12 01 37.6**	**+0.2**
LXIB	**Xiulin Townshi**	**1.32**	**219**	*e*P	**Pn**	**12 01 19.9**	**-0.2**
LXIB				*e*S	**Sb**	**12 01 37.5**	**0.0**
WHF	**Hehuan Shan**	**1.32**	**227**	*e*P	**Pn**	**12 01 20.6**	**+0.1**
WHF				*e*S	**Sb**	**12 01 37.1**	**-0.7**
TDCB	**Techi**	**1.33**	**234**	*e*P	**Pn**	**12 01 20.5**	**+0.3**
TDCB				*e*S	**Sb**	**12 01 37.0**	**-0.8**
TEYL	**Yanliau Villag**	**1.35**	**210**	*e*P	**Pn**	**12 01 21.0**	**+0.6**
TEYL				*e*S	**Sg**	**12 01 39.5**	**-0.1**
SHUL	**Shoufeng**	**1.44**	**209**	*e*P	**Pn**	**12 01 22.1**	**+0.4**
SHUL				*e*S	**Sg**	**12 01 42.8**	**+0.4**
IRIF	**Iriomote-Funau**	**1.46**	**119**	*e*P	**Pn**	**12 01 20.4**	**-1.4**
ESL	**Shilin**	**1.48**	**214**	*e*P	**Pn**	**12 01 22.0**	**-0.1**
WHP	**Taichung City**	**1.48**	**239**	*e*P	**Pn**	**12 01 22.8**	**+0.5**
OWD	**Renai**	**1.52**	**224**	P	**Pn**	**12 01 23.6**	**+0.8**
OWD				*e*S	**Sb**	**12 01 43.8**	**+0.7**
WUSB	**Renai**	**1.53**	**227**	*e*P	**Pb**	**12 01 24.2**	**0.0**
WUSB				*e*S	**Sn**	**12 01 43.5**	**+0.8**
TWQ1	**Liyutan**	**1.58**	**244**	*e*P	**Pn**	**12 01 23.7**	**+0.1**
WARBT	**Fenglin Townsh**	**1.58**	**213**	*e*P	**Pn**	**12 01 23.2**	**-0.4**
WARBT				*e*S	**Sn**	**12 01 43.8**	**-0.1**
WCS	**Beigang Elemen**	**1.63**	**233**	*e*P	**Pb**	**12 01 25.5**	**-0.3**
VWDT	**VWDT**	**1.69**	**220**	*e*P	**Pn**	**12 01 26.3**	**+1.3**
VWDT				*e*S	**Sb**	**12 01 48.4**	**+0.6**
WDJ	**Dajia District**	**1.69**	**246**	*e*S	**Sn**	**12 01 46.8**	**+0.3**
JKRS	**Kuro-shima**	**1.73**	**118**	*e*P	**Pn**	**12 01 24.2**	**-1.4**
SMLT	**Sun Moon Lake**	**1.75**	**229**	*e*P	**Pb**	**12 01 27.7**	**-0.2**
SMLT				*e*S	**Sb**	**12 01 50.5**	**+0.8**
TYC	**Yuchr**	**1.76**	**230**	*e*P	**Pb**	**12 01 27.7**	**-0.4**
TYC				*e*S	**Sn**	**12 01 49.1**	**+0.8**
SSLB	**Suanglung**	**1.78**	**225**	P	**Pb**	**12 01 28.0**	**-0.4**
SSLB	**Suanglung**	**1.78**	**225**	P	**Pn**	**12 01 27.8**	**+1.5**
SSLB	**Suanglung**	**1.78**	**225**	*e*P	**Pn**	**12 01 27.5**	**+1.2**
EHY	**Hungye**	**1.79**	**211**	*e*P	**Pn**	**12 01 26.1**	**-0.4**
EHY				*e*S	**Sn**	**12 01 49.0**	**0.0**
JISG	**Ishigakijimahi**	**1.85**	**104**	*e*P	**Pn**	**12 01 26.5**	**-0.8**
YULB	**Yu-li**	**1.90**	**210**	P	**Pn**	**12 01 29.4**	**+1.4**
YULB	**Yu-li**	**1.90**	**210**	P	**Pn**	**12 01 27.8**	**-0.2**
YULB	**Yu-li**	**1.90**	**210**	*e*P	**Pn**	**12 01 27.2**	**-0.8**
YULB				*e*S	**Sn**	**12 01 50.5**	**-1.2**
WJS	**Zhushan**	**1.91**	**230**	*e*P	**Pn**	**12 01 29.3**	**+1.3**
WHYT	**Xinyi Township**	**1.91**	**225**	*e*P	**Pb**	**12 01 30.1**	**-0.5**
WHYT				*e*S	**Sb**	**12 01 55.4**	**+1.2**
TWF1	**Yuli**	**1.94**	**209**	*e*P	**Pn**	**12 01 28.0**	**-0.5**
TWF1				*e*S	**Sn**	**12 01 51.1**	**-1.5**
ALS	**Alishan**	**2.07**	**223**	*e*P	**Pb**	**12 01 32.8**	**-0.7**
ALS				*e*S	**Sb**	**12 02 00.0**	**+0.8**
FULB	**Fuli**	**2.07**	**207**	*e*P	**Pn**	**12 01 30.3**	**-0.1**
CHN5	**Tsauling**	**2.09**	**227**	*e*P	**Pb**	**12 01 33.3**	**-0.4**
WRL	**Guolierlin Hig**	**2.12**	**238**	*e*P	**Pn**	**12 01 31.1**	**+0.2**
WDLH	**Douliu**	**2.12**	**231**	*e*P	**Pn**	**12 01 32.7**	**+1.7**
WDLH				*e*S	**Sb**	**12 01 59.5**	**-1.0**
EHD	**Haiduan**	**2.15

KUR pmax pmax
comp=N,81nm,0.3s
KUR pmax pmax
comp=E,30nm,0.3s
KUR smax smax
comp=N,125nm,0.4s
KUR smax smax
comp=E,70nm,0.6s
KUR Kuril'sk 3.81 259 *e*P **Pn 12 31 15.9 +2.1**
KUR AMB AMB 12 31 16.3
comp=E,330nm,0.5s
KUR *e*S **Sn 12 31 58.9 +1.4**
KUR A A 12 32 06.1
comp=E,140nm,0.4s
KUR A A 12 32 06.1
comp=E,80nm,0.4s
SKR Severo-Kuril's 4.99 22 *e*PN **Pn 12 31 29.3 -0.8**
SKR pmax pmax
comp=Z,23nm,0.6s
SKR MLR MLR
comp=N,900nm,14.0s
SKR MLR MLR
comp=E,1μm,14.0s
SKR Severo-Kuril's 4.99 22 *e*P **Pn 12 31 29.3 -0.8**
SKR AMB AMB 12 31 30.5
comp=E,20nm,0.4s
SKR *e*S **Sn 12 32 22.1 -4.6**
SKR A A 12 32 32.4
comp=E,100nm,0.5s
SKR A A 12 32 32.4
comp=E,110nm,0.5s
SHO Shikotan 5.01 246 *e*P **Pb 12 31 40.1 -4.2**
SHO AMB AMB 12 31 44.1
comp=E,40nm,0.6s
SHO *e*S **Sn 12 32 35.2 +8.0**
SHO A A 12 32 41.1
comp=E,60nm,0.3s
SHO A A 12 32 41.1
comp=E,60nm,0.3s
YUK Yuzh-Kuril'sk 5.56 251 *e*PN **Pn 12 31 38.9 +0.9**
YUK pmax pmax
comp=Z,52nm,0.4s
YUK pmax pmax
comp=N,117nm,0.5s
YUK pmax pmax
comp=E,36nm,0.4s
YUK Yuzh-Kuril'sk 5.56 251 *e*P **Pn 12 31 39.1 +1.1**
YUK AMB AMB 12 31 43.2
comp=E,50nm,0.4s
YUK *i* S **Sn 12 32 41.7 +0.9**
YUK A A 12 32 49.9
comp=E,160nm,0.6s
YUK A A 12 32 49.9
comp=E,120nm,0.6s
PAU Pauzhetka 5.89 23 *e*P **Pn 12 31 41.6 -0.8**
PAU *e*S **Sn 12 32 45.6 -3.1**
GLVR Golovnino 5.92 249 *e*PN **Pn 12 31 43.4 +0.6**
GLVR pmax pmax
comp=Z,44nm,0.2s
GLVR pmax pmax
comp=N,54nm,0.3s
GLVR pmax pmax
comp=E,50nm,0.3s
GLVR Golovnino 5.92 249 *e*P **Pn 12 31 43.4 +0.6**
GLVR AMB AMB 12 31 44.4
comp=E,40nm,0.3s
GLVR *e*S **Sn 12 32 49.7 +0.3**
GLVR A A 12 32 58.1
comp=E,50nm,0.3s
GLVR A A 12 32 58.1
comp=E,40nm,0.3s
NEM2 Nemuro 2 5.95 245 *e*P **Pn 12 31 42.4 -0.8**
NEM2 *e*S **Sn 12 32 48.1 -2.1**
NMR Nemuro--Hokkai 5.95 245 *e*PN **Pn 12 31 41.8 -1.5**
NMR Nemuro--Hokkai 5.95 245 *e*P **Pn 12 31 42.5 -0.8**
NMR *i* S **Sn 12 32 48.8 -1.6**
JRA Rausu 6.09 252 *e*P **Pn 12 31 47.1 +1.9**
JNK Nakash 6.50 250 *e*P **Pn 12 31 51.9 +1.0**
AKK Akkeshi 6.69 246 *e*P **Pn 12 31 53.4 0.0**
JAK Akkeshi 6.79 246 P **Pn 12 31 53.9 -0.9**
JAK *e*S **Sn 12 33 07.6 -3.5**
JTKR Abashiri--Toko 6.89 255 P **Pn 12 31 57.9 +1.7**
YSS Yuzhno-Sakhali 7.23 281 *e*PN **Pn 12 32 02.7 +1.9**
YSS MLR MLR
comp=N,300nm,11.0s
YSS MLR MLR
comp=Z,300nm,11.0s
YSS Yuzhno-Sakhali 7.23 281 *e*P **Pn 12 32 02.9 +2.1**
JAR Ashorobuto 7.25 251 P **Pn 12 32 02.1 +1.0**
JAR *e*S **Sn 12 33 23.1 +0.7**
JOB Onbets 7.39 248 *e*S **Sn 12 33 23.9 -1.9**
PEA0B Petropavlovsk- 7.61 21 Pn **Pn 12 32 04.9 -1.1**
PEA0B Petropavlovsk- 7.61 21 PN **Pn 12 32 04.9 -1.1**
JKK2 Kamakawa 2 7.71 257 *e*P **Pn 12 32 09.6 +2.2**
JKA Kamikawa-asahi 7.73 259 Pn 12 32 09.4 +1.8
JKA Kamikawa-asahi 7.73 259 *e*P **Pn 12 32 10.7 +3.0**
ASAJ Asahikawa 7.73 259 P **Pn 12 32 10.7 +3.0**
comp=Z,1.0nm,0.3s,baz=74,slow=14,SNR=12
comp=Z,10nm,0.8s
JCH Churui 7.84 247 *e*P **Pn 12 32 09.0 -0.2**
JCH *e*S **Sn 12 33 33.6 -3.2**
JNBK Urakawa-nobuka 8.39 247 *e*P **Pn 12 32 15.8 -1.0**
TYV Tymovskoe 8.45 308 *e*PN **Pn 12 32 21.6 +4.1**
TYV pmax pmax
comp=Z,7.0nm,1.0s
TYV pmax pmax
comp=Z,200nm,3.9s
TYV Tymovskoe 8.45 308 *e*P **Pn 12 32 20.7 +3.2**
JTM Tenmabayashi 10.27 243 Pn **Pn 12 32 41.5 -1.0**
GRNR Gornyy 12.05 299 *e*PN Pn 12 33 11.7 +4.8
GRNR MLR MLR
comp=E,150nm,15.0s
GRNR MLR MLR
comp=N,120nm,12.0s
GRNR MLR MLR
comp=Z,170nm,11.0s
MA2 Magadan 13.57 355 LR LR 12 38 36.0
comp=Z,80nm,18.3s,baz=192,slow=37
MA2 Magadan 13.57 355 Pn **Pn 12 33 26.3 -1.3**
MA2 Magadan 13.57 355‖ *e*PN **Pn 12 33 25.7 -1.9**
MA2 Magadan 13.57 355 *e*P **Pn 12 33 25.7 -1.9**
MJAR Matsushiro Arr 14.72 235 P **P 12 33 46.9 -2.1**
baz=41,slow=9.5,SNR=4.1
comp=Z,2.0nm,0.8s
MAJO Matsushiro 14.72 235‖ *e*P **P 12 33 48.3 -0.8**
KLR Kul'dur 14.75 290 P **Pn 12 33 44.3 +0.6**
comp=Z,0.2nm,0.3s,baz=114,slow=15,SNR=5.8
KLR LR LR 12 39 35.1
comp=Z,106nm,19.3s,baz=106,slow=38
comp=Z,1.2nm,0.6s
KLR Kul'dur 14.75 290‖ *e*P **Pn 12 33 44.4 +0.7**
KLR Kul'dur 14.75 290 *e*P **Pn 12 33 44.4 +0.7**
USRK Ussuriysk Ar. 15.05 270 P **Pn 12 33 49.2 +1.5**
comp=Z,0.1nm,0.3s,baz=70,slow=12,SNR=3.0
comp=Z,3.4nm,0.7s
SHEM Shemya Is, Ala 15.13 56 LR LR 12 40 00.1
comp=Z,32nm,18.2s,baz=282,slow=38
MDJ Mudanjiang 16.62 273 P **Pn 12 34 08.5 +0.6**
SEY Seymchan 16.88 359 P **Pn 12 34 10.3 -0.6**
comp=Z,0.2nm,0.3s,baz=177,slow=9.0,SNR=3.9
comp=Z,0.7nm,0.3s
HEH HeiHe 17.63 293 *e*P **P 12 34 21.0 -0.2**
HEH pmax pmax
comp=Z,8.0nm,0.6s
ZEA Zeya 18.27 304 *e*P **Pn 12 34 30.2 +1.9**
ZEA Zeya 18.27 304 *e*P **Pn 12 34 30.2 +1.9**
CN2 Changchun 19.71 273 P **P 12 34 42.8 -1.3**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
KSRS Korea Array 20.64 254 P Pn 12 34 56.4 -0.3
comp=Z,2.9nm,0.8s,baz=56,slow=11,SNR=9.9
KSRS LR LR 12 41 53.8
comp=Z,43nm,21.9s,baz=45,slow=34
comp=Z,2.9nm,0.8s
KSRS Korea Array 20.64 254 *e*P Pn 12 34 58.2 +1.6
KSRS pmax pmax
comp=Z,3.0nm,0.8s
YAK Yakutsk 20.89 328 LR LR 12 42 32.0
comp=Z,72nm,19.5s,baz=124,slow=35
YAK Yakutsk 20.89 328‖ *e*P **P 12 34 55.8 -0.9**
YAK pmax pmax
comp=Z,7.0nm,0.8s
YAK Yakutsk 20.89 328 *e*P **P 12 34 55.8 -0.9**
BILL Bilibino 23.02 13‖ *e*P **P 12 35 18.6 -0.8**
BILL pmax pmax
comp=Z,2.0nm,0.9s
BILL Bilibino 23.02 13 *e*P **P 12 35 18.6 -0.8**
H11N2 WAKE ISLAND Hy 28.63 152 T T 13 08 02.2
baz=340,slow=76,SNR=8.3
H11N1 WAKE ISLAND Hy 28.64 152 T T 13 08 01.0
baz=340,slow=76,SNR=5.8
H11N3 WAKE ISLAND Hy 28.64 152 T T 13 08 02.2
baz=340,slow=76,SNR=4.6
ANM Nome 29.20 36 P **P 12 36 16.8 +1.1**
ANM IAmb IAmb 12 36 22.3
comp=Z,5.7nm,1.4s
ANM Nome 29.20 36 P **P 12 36 16.8 +1.1**
ANM pmax pmax
comp=Z,6.0nm,1.4s
H11S1 WAKE ISLAND Hy 29.71 153 T T 13 09 25.6
baz=341,slow=76,SNR=5.3
H11S3 WAKE ISLAND Hy 29.72 153 T T 13 09 26.9
baz=341,slow=76,SNR=3.4
H11S2 WAKE ISLAND Hy 29.73 153 T T 13 09 22.5
baz=341,slow=76,SNR=4.6
C16K Lisburne Hills 30.61 29 P **P 12 36 28.1 -0.1**
C16K IAmb IAmb 12 37 03.7
comp=Z,4.9nm,1.3s
F17K Baldwin Pennin 31.42 33 P **P 12 36 36.1 +0.8**
F17K IAmb IAmb 12 36 43.4
comp=Z,3.1nm,0.9s
SONM Songino Array 31.58 290 P **P 12 36 36.0 -1.2**
comp=Z,0.3nm,0.4s,baz=85,slow=8.7,SNR=1.5
SONM PcP **PcP 12 39 29.6 +0.7**
comp=Z,0.4nm,0.3s,baz=112,slow=1.6,SNR=4.1
SONM LR LR 12 50 29.5
comp=Z,66nm,18.4s,baz=94,slow=38
comp=Z,0.3nm,0.4s
TLY Talaya 32.51 298 LR LR 12 51 08.2
comp=Z,110nm,18.0s,baz=68,slow=39
H19K Roundabout Mou 33.10 36 P 12 36 50.7 +0.7
E19K Redstone River 33.23 32 P 12 36 52.2 +1.1
D20K Etivluk River 33.78 30 P 12 36 55.7 -0.3
D20K IAmb IAmb 12 36 57.3
comp=Z,5.6nm,1.1s
B20K Meade River 33.98 28 P **P 12 36 57.8 +0.2**
H21K Melozitna Rive 34.62 36 P **P 12 37 04.2 +1.0**
H21K IAmb IAmb 12 37 04.7
comp=Z,5.4nm,1.1s
B21K Ikpikpuk River 34.72 29 P **P 12 37 04.9 +1.0**
KTH Kantishna Hill 35.24 40 P 12 37 09.8 +1.2
E22K Anaktuvuk Pass 35.38 32 IAmb IAmb 12 37 22.9
comp=Z,4.0nm,0.8s
C23K Itkillik River 36.12 29 P **P 12 37 16.4 +0.4**
C23K IAmb IAmb 12 37 17.2
comp=Z,3.0nm,0.8s
E23K Chandalar 36.18 32 IAmb IAmb 12 37 30.1
comp=Z,3.2nm,0.9s
COLA College 36.63 38‖ *e*P **P 12 37 20.7 +0.3**
COLA pmax pmax
comp=Z,3.0nm,1.0s
G24K Hadweenzic Riv 36.87 35 IAmb IAmb 12 37 25.2
comp=Z,4.3nm,1.1s
ILAR Eielson Array 37.04 38 P **P 12 37 23.0 -0.9**
comp=Z,1.1nm,0.9s,baz=266,slow=7.8,SNR=11
comp=Z,1.1nm,0.9s
ILAR Eielson Array 37.04 38 *e*P **P 12 37 24.0 0.0**
ILAR pmax pmax
comp=Z,1.0nm,0.9s
LZH Lanzhou 37.94 273 *e*P **P 12 37 34.0 +1.8**
LZH pP pP 12 37 41.0 +1.0
LZH pmax pmax
comp=Z,19nm,1.4s
LZDM Lanzhou Array 38.11 273 P **P 12 37 34.1 +0.3**
comp=Z,2.4nm,0.4s,baz=57,slow=10,SNR=2.5
comp=Z,2.4nm,0.4s
G26K Porcupine Rive 38.34 34 IAmb IAmb 12 37 37.4
comp=Z,6.6nm,1.4s
C27K Jago River 38.48 30 IAmb IAmb 12 37 37.7
comp=Z,6.9nm,1.4s
M26K Nabesna, AK 38.88 42 P **P 12 37 41.3 +1.7**
M26K IAmb IAmb 12 37 56.3
comp=Z,5.2nm,1.0s
GTA2 Gaotai 39.11 280 *e*P **P 12 37 43.3 +1.4**
GTA2 sP pwP 12 37 58.5 +3.0
GTA2 pmax pmax
comp=Z,7.0nm,0.8s
K27K Chicken 39.15 39 IAmb IAmb 12 38 07.7
comp=Z,10nm,1.5s
NRIK Noril'sk 39.33 329 LR LR 12 56 35.0
comp=Z,23nm,20.5s,baz=318,slow=40
L27K Beaver Creek, 39.35 41 P **P 12 37 44.4 +0.9**
E29M Blow River 40.56 32 P **P 12 37 54.0 +0.6**
I30M Mount Dempster 41.46 37 P 12 38 02.1 +1.1
I30M IAmb IAmb 12 38 14.3
comp=Z,4.5nm,0.9s
ZALV Zalesovo Beam 43.02 306 P **P 12 38 11.9 -1.8**
comp=Z,0.8nm,0.6s,baz=69,slow=8.1,SNR=5.2
ZALV PcP **PcP 12 40 04.1 +0.8**
comp=Z,0.3nm,0.3s,baz=82,slow=3.1,SNR=2.9
ZALV LR LR 12 57 21.3
comp=Z,105nm,19.2s,baz=84,slow=38
comp=Z,0.8nm,0.6s
ZALV Zalesovo Beam 43.02 306 P **P 12 38 11.1 -2.5**
GOMU GeErMu 44.13 279 P **P 12 38 22.5 -0.8**
GOMU pmax pmax
comp=Z,9.0nm,0.8s
A36M Sachs Harbour 44.42 26 IAmb IAmb 12 38 39.2
comp=Z,5.0nm,0.8s
MK31 Makanchi Array 47.27 298‖ *e*P **P 12 38 46.0 -1.6**
MKAR Makanchi Array 47.27 298 P **P 12 38 47.1 -0.5**
comp=Z,2.4nm,0.8s,baz=74,slow=8.0,SNR=9.9
MKAR PcP **PcP 12 40 18.6 +0.4**
comp=Z,0.5nm,0.8s,baz=20,slow=4.6,SNR=1.8
MKAR LR LR 12 59 38.9
comp=Z,75nm,20.2s,baz=72,slow=37
comp=Z,2.4nm,0.8s
KURK Kurchatov 47.75 304 P 12 38 49.9 -1.3
KURK Kurchatov 47.75 304 *d*P **P 12 38 49.9 -1.3**
KURK pmax pmax
comp=Z,6.0nm,0.9s
KURK Kurchatov 47.75 304 *e*P **P 12 38 49.9 -1.3**
KURBB Kurchatov Arra 47.84 304 P **P 12 38 50.8 -1.1**
comp=Z,3.1nm,0.8s,baz=69,slow=8.5,SNR=21
comp=Z,3.1nm,0.8s
BVAR Borovoye Array 51.30 310 P **P 12 39 17.6 -0.6**
comp=Z,0.7nm,0.4s,baz=51,slow=7.1,SNR=7.1
BVAR PcP **PcP 12 40 33.4 +0.6**
comp=Z,0.3nm,0.4s,baz=29,slow=3.3,SNR=1.8
comp=Z,0.7nm,0.4s
BORK Borovoye 51.33 310 P 12 39 17.8 -0.6
BORK IAmb IAmb 12 39 18.3
comp=Z,6.5nm,1.3s
BORK Borovoye 51.33 310‖ *e*P **P 12 39 17.4 -1.0**
YKA Yellowknife Ar 51.43 36 P **P 12 39 19.8 +0.8**
comp=Z,0.8nm,0.7s,baz=300,slow=8.0,SNR=14
comp=Z,0.8nm,0.7s
YKA Yellowknife Ar 51.43 36 P **P 12 39 18.9 -0.1**
CHTO Chiang Mai 52.00 257 P **P 12 39 24.6 +0.7**
CHTO Chiang Mai 52.00 257 P **P 12 39 24.6 +0.7**
CHTO pmax pmax
comp=Z,3.0nm,1.0s
CMAR Chiang Mai Arr 52.25 257 P **P 12 39 27.6 +1.8**
comp=Z,0.6nm,0.6s,baz=36,slow=7.4,SNR=7.3
comp=Z,0.6nm,0.6s
SHL Shillong 52.39 269 P 12 39 27.2 +0.3
SHL Shillong 52.39 269 P **P 12 39 27.2 +0.3**
SHL pmax pmax
comp=Z,5.0nm,0.6s
KDJ Kajisay 52.74 295 IAmb IAmb 12 39 32.9
comp=Z,2.6nm,0.8s
BOOM Boomskoye usch 53.33 296 IAmb IAmb 12 39 35.1
comp=Z,2.9nm,0.8s
AAK Ala-Archa 54.15 297 LR LR 13 05 53.1
comp=Z,65nm,18.5s,baz=38,slow=40
AAK Ala-Archa 54.15 297 P 12 39 39.2 -0.4
AAK IAmb IAmb 12 39 40.7
comp=Z,2.2nm,0.7s
AAK Ala-Archa 54.15 297 P **P 12 39 39.2 -0.4**
AAK pmax pmax
comp=Z,2.0nm,0.7s
AAK Ala-Archa 54.15 297 *e*P **P 12 39 39.2 -0.4**
EVN Everest 54.41 275 P 12 39 43.9 +1.7
EVN IAmb IAmb 12 39 44.8
comp=Z,5.7nm,1.1s
PMG Port Moresby 55.51 187 LR LR 13 00 12.5
comp=Z,24nm,21.0s,baz=187,slow=32
AKTO Aktyubinsk 59.18 312 LR LR 13 08 36.0
comp=Z,162nm,18.2s,baz=5.0,slow=39
PLID Pearl Lake 60.02 55 P 12 40 21.3 +0.1
PLID IAmb IAmb 12 40 35.1
comp=Z,2.1nm,0.7s
NIL Nilore 60.14 289 P 12 40 23.4 +1.5
NIL Nilore 60.14 289 P 12 40 23.4 +1.5
NIL pmax pmax
comp=Z,11nm,0.9s
NVAR Mina Array Bea 62.71 62 P **P 12 40 40.6 +1.1**
comp=Z,0.5nm,0.6s,baz=298,slow=6.4,SNR=4.7
comp=Z,0.5nm,0.6s
NVAR Mina Array Bea 62.71 62 P **P 12 40 40.4 +1.0**
FINES FINESS Array B 64.64 335 P **P 12 40 51.1 -0.4**
comp=Z,4.6nm,0.7s,baz=31,slow=7.2,SNR=11
comp=Z,4.6nm,0.7s
FINES FINESS Array B 64.64 335 *i* P **P 12 40 51.0 -0.5**
FINES pmax pmax
comp=Z,5.0nm,0.7s
PDAR Pinedale Array 65.11 54 P **P 12 40 55.5 +0.3**
comp=Z,0.6nm,0.7s,baz=256,slow=0.6,SNR=6.7
comp=Z,0.6nm,0.7s
OBN Obninsk 65.86 326 *i* P **P 12 40 59.3 -0.2**
OBN pmax pmax
comp=Z,6.0nm,0.8s
OBN MLR MLR
comp=Z,211nm,17.0s
OBN Obninsk 65.86 326 *e*P **P 12 40 59.3 -0.2**
WRA Warramunga Arr 67.91 199 P **P 12 41 13.2 +0.3**
comp=Z,0.5nm,0.9s,baz=8.9,slow=6.5,SNR=2.0
comp=Z,0.5nm,0.9s
WRA Warramunga Arr 67.91 199 P **P 12 41 14.6 +1.7**
WRA Warramunga Arr 67.91 199 P **P 12 41 14.6 +1.7**
NB2 NORSAR Subarra 68.85 341 P **P 12 41 18.2 -0.3**
comp=Z,1.1nm,0.5s,baz=29,slow=6.5
NOA NORSAR Array B 68.85 341 P **P 12 41 18.1 -0.3**
comp=Z,0.8nm,0.7s,baz=28,slow=6.4,SNR=4.3
comp=Z,0.8nm,0.7s
NOA NORSAR Array B 68.85 341 *e*P **P 12 41 16.7 -1.7**
NOA pmax pmax
comp=Z,1.0nm,0.7s
HFS Hagfors 69.08 340 P **P 12 41 18.8 -1.0**
comp=Z,4.1nm,0.8s,baz=0.0,slow=5.8,SNR=7.7
comp=Z,4.1nm,0.8s
KIV Kislovodsk 71.28 314 *e*P **P 12 41 32.7 -0.9**
KIV pmax pmax
comp=Z,9.0nm,1.1s
KIV Kislovodsk 71.28 314 *e*P **P 12 41 32.7 -0.9**
KBZ Khabaz 71.33 314 P **P 12 41 34.4 +0.5**
comp=Z,3.9nm,0.8s,baz=52,slow=4.2,SNR=10.0
comp=Z,3.9nm,0.8s
KBZ Khabaz 71.33 314 *de*P **P 12 41 35.4 +1.6**
KBZ pmax pmax
comp=Z,3.0nm,0.8s
KBZ Khabaz 71.33 314 *e*P **P 12 41 35.4 +1.6**
SHA1 Shidzhatmaz 71.45 314‖ *e*P **P 12 41 33.9 -1.0**
ASAR Alice Springs 71.60 199 P **P 12 41 36.9 +1.3**
comp=Z,0.6nm,1.0s,baz=15,slow=6.8,SNR=10
comp=Z,0.6nm,1.0s
AKASG Malin Array Be 72.10 326 P **P 12 41 38.0 -0.3**
comp=Z,4.1nm,0.5s,baz=35,slow=6.2,SNR=24
AKASG LR LR 13 15 05.1
comp=Z,58nm,18.7s,baz=46,slow=37
comp=Z,4.1nm,0.5s
AKBB Malin Array Si 72.10 326‖ *e*P **P 12 41 38.1 -0.3**
GNI Garni 72.98 310 LR LR 13 18 11.5
comp=Z,34nm,18.6s,baz=352,slow=39
EKA Eskdalemuir Ar 76.98 346 P **P 12 42 06.9 +0.3**
comp=Z,0.5nm,0.5s,baz=18,slow=5.3,SNR=4.0
comp=Z,0.5nm,0.5s
TXAR Lajitas Array 77.79 60 P **P 12 42 12.4 +0.8**
comp=Z,0.9nm,0.6s,baz=297,slow=4.4,SNR=18
comp=Z,0.9nm,0.6s
KHC Kasperske Hory 78.84 334‖ *e*P **P 12 42 18.3 +1.2**
KHC pmax pmax
comp=Z,2.0nm,1.0s
BR131 Keskin Array S 78.89 317‖ *e*P **P 12 42 19.2 +1.6**
RAO Raoul Island 79.45 155 LR LR 13 10 58.4
comp=Z,76nm,20.2s,baz=103,slow=31
ASF Jabal al Asfar 83.14 310 LR LR 13 22 45.5
comp=Z,38nm,18.1s,baz=20,slow=38
MMAI Mount Meron Ar 83.27 312 LR LR 13 25 10.4
comp=Z,49nm,19.1s,baz=351,slow=40
EIL Elat 86.13 310 LR LR 13 27 40.1
comp=Z,30nm,18.6s,baz=240,slow=40

*OSPL **31** 13:08:05.4±0.3, 17°.89N×66°.81W, h11km±3km, ML3.5, Presumed earthquake*
*NEIC **31** 13:08:05.6±0.5, 17°.96N±0°.03×66°.813W±0°.008, h10km±1km, ML3.1/29, Md3.3/12(RSPR), Error ellipse: s-maj=4.5km s-min=2.1km az=176.0*
ISC 31 13:08:04.7±1.3**, 17°.93N**±0°.06×**66°.82W**±0°.02**, h17**km±7km**, n21**, σ0**°48/30**, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
GBPR	**Guanica, Bosqu**	**0.08**	**308**			**Pg**	**13 08 07.8**	**-0.2**
GBPR						**Sg**	**13 08 09.6**	**-0.7**
MLPR	**Magueyes Islan**	**0.22**	**281**			**Pg**	**13 08 09.9**	**0.0**
MLPR				IAML			13 08 14.3	
	2μm,0.2s							
MLPR				IAML			13 08 15.4	
	3μm,0.3s							
OBIP	**Obispado Ponce**	**0.23**	**60**			**Pg**	**13 08 10.0**	**0.0**
OBIP	**Obispado Ponce**	**0.23**	**60**	*i* P		**Pg**	**13 08 10.2**	**+0.1**
OBIP				*e*S		**Sg**	**13 08 13.8**	**+0.1**
OBIP				IAML			13 08 14.8	
	2μm,0.2s							
CELP	**Cerrillos**	**0.27**	**57**			**Pg**	**13 08 10.9**	**+0.2**
CELP				IAML			13 08 15.9	
	2μm,0.1s							
CRPR	**Cabo Rojo, PR**	**0.29**	**286**	*i* P		**Pg**	**13 08 11.2**	**+0.1**
CRPR				*e*S		**Sg**	**13 08 15.4**	**0.0**
CRPR				IAML			13 08 16.1	
	2μm,0.2s							
UUPR	**Utuado, UPR, P**	**0.34**	**15**			**Pg**	**13 08 11.7**	**-0.2**
LSP	**Las Mesas**	**0.36**	**314**			**Pg**	**13 08 12.2**	**0.0**
LSP						**Sg**	**13 08 18.3**	**+1.0**
PRSN	**Puerto Rico Se**	**0.43**	**313**			**Pg**	**13 08 13.2**	**-0.2**
PRSN	**Puerto Rico Se**	**0.43**	**313**			**Sg**	**13 08 19.7**	**+0.4**
ECPR	**Experimental S**	**0.58**	**48**			**Pg**	**13 08 16.0**	**-0.3**
ECPR						**Sg**	**13 08 23.6**	**-0.5**
ECPR				IAML			13 08 25.4	
	2μm,0.2s							
ECPR				IAML			13 08 26.1	
	2μm,0.2s							
AGPR	**Aguadilla, PR**	**0.61**	**332**			**Pg**	**13 08 16.3**	**-0.5**
AGPR				IAML			13 08 30.0	
	2μm,617nm,0.5s							
AGPR	**Aguadilla, PR**	**0.61**	**332**			**Sg**	**13 08 24.8**	**-0.1**
EMPR	**Esperanza - Ma**	**0.61**	**26**			**Pg**	**13 08 17.0**	**+0.2**
EMPR						**Sg**	**13 08 25.4**	**+0.4**
SJG	**San Juan**	**0.66**	**74**			**Pg**	**13 08 17.4**	**-0.2**
SJG	**San Juan**	**0.66**	**74**	*i* P		**Pg**	**13 08 17.5**	**-0.2**
SJG				*e*S		**Sg**	**13 08 26.4**	**-0.1**
SJG				IAML			13 08 27.9	
	2μm,0.1s							
IGPR	**InterUniversit**	**0.68**	**87**			**Pg**	**13 08 18.1**	**+0.1**
IGPR						**Sg**	**13 08 27.9**	**+1.0**
IDE	**Isla Desecheo**	**0.78**	**306**			**Pg**	**13 08 19.4**	**-0.4**
IDE						**Sg**	**13 08 29.6**	**-0.6**
HUMP	**Col San Antoni**	**0.94**	**77**			**Pg**	**13 08 22.0**	**-1.0**
HUMP	**Col San Antoni**	**0.94**	**77**			**Sg**	**13 08 34.7**	**-0.7**
CUPR	**Culebra, Puert**	**1.51**	**75**	Pn		**Pn**	**13 08 31.2**	**+0.3**

*IDC **31** 13:16:34.5±4.5, 47°.17N×76°.50E, h0km, mbtmp2.6/2, ML2.1/2, Error ellipse: s-maj=43.4km s-min=15.6km az=63.0*
*SOME **31** 13:16:42.4, 46°.08N×75°.87E, h5km*
ISC 31 13:16:30.5±1.4**, 47°.00N**±0°.05×**76°.05E**±0°.10**, h10**km**, n8,** σ1**9**51**/11, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
ARXS	**Arharly**	**3.05**	**155**	*e*P		**Pb**	**13 17 24.3**	**-0.6**
	2.3nm,0.4s							
ARXS				*e*S		**Sn**	**13 17 54.5**	**-0.9**
	4.6nm,0.4s							
KRBS	**Karabastau**	**3.31**	**185**	*e*P		**Pb**	**13 17 28.0**	**-1.3**
	5.0nm,0.5s							
KRBS				*e*S		**Sn**	**13 18 01.2**	**-0.7**
	0.5nm,0.2s							
DJR	**Jarkent**	**3.74**	**134**	*e*P		**Pg**	**13 17 44.3**	**+2.3**
	0.9nm,0.1s							
DJR				*e*S		**Sg**	**13 18 28.7**	**-1.7**
	5.7nm,0.8s							
KURBB	**Kurchatov Arra**	**3.98**	**23**	Pg		**Pb**	**13 17 39.3**	**-1.4**
	0.1nm,0.3s,baz=209,slow=17,SNR=5.9							

KURBB			Lg	Lg	13 18 31.7		
	0.3nm,0.3s,baz=208,slow=29,SNR=5.8						
MKAR	**Makanchi Array**	**4.28 90**	Pn	**Pn**	**13 17 36.7**	**+1.0**	
	0.1nm,0.3s,baz=274,slow=13,SNR=5.7						
MKAR			Pg	**Pb**	**13 17 44.1**	**-1.7**	
	0.3nm,0.3s,baz=274,slow=15,SNR=11						
MKAR			Lg	Lg	13 18 40.5		
	0.7nm,0.3s,baz=279,slow=29,SNR=6.0						
	0.3nm,0.4s						
BVAR	**Borovoye Array**	**7.05 331**	Lg	Lg	13 20 10.7		
	0.1nm,0.3s,baz=141,slow=29,SNR=5.9						
ZALV	**Zalesovo Beam**	**8.92 36**	Pn	**Pn**	**13 18 40.3**	**+1.0**	
	0.1nm,0.3s,baz=218,slow=14,SNR=2.1						
ZALV			Sn	**Sn**	**13 20 19.6**	**-0.1**	
	0.1nm,0.3s,baz=222,slow=25,SNR=5.0						
	0.2nm,0.3s						
I46RU	**ZALESOVO INFRA**	**8.92 36**	I	I	14 07 40.0		
	baz=222,slow=326,SNR=2.6						

IDC 31 13:36:54.9±7.2, 18°58S×176°69W, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=310.7km s-min=40.7km az=142.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**46.12**	**260**	P	P	13 45 20.7	-0.7
	0.2nm,0.5s,baz=98,slow=8.1,SNR=2.6						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**46.19**	**255**	P	P	13 45 22.2	+0.3
	0.5nm,0.6s,baz=87,slow=8.2,SNR=8.1						
	0.5nm,0.6s						
ILAR	**Eielson Array**	**86.18**	**12**	P	P	13 49 37.6	0.0
	0.1nm,0.4s,baz=223,slow=5.7,SNR=4.2						
	0.1nm,0.4s						

IDC 31 13:38:10.0±3.5, 7°70S×147°61E, h81km±35km, mb3.0/2, mbtmp3.5/4, Error ellipse: s-maj=90.1km s-min=17.7km az=122.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**1.75**	**195**	P	Pn	13 38 37.4	-1.3
	214nm,0.3s,baz=29,slow=12,SNR=323						
PMG				S	Sn	13 39 00.8	+0.5
	1μm,0.4s,baz=181,slow=21,SNR=26						
CTA	**Charters Tower**	**12.38**	**186**	P	Pn	13 41 03.0	-0.3
	2.5nm,0.9s,baz=1.6,slow=14,SNR=1.9						
CTA				S	Sn	13 43 13.2	-6.3
	1.9nm,0.8s,baz=166,slow=23,SNR=1.5						
WRA	**Warramunga Arr**	**17.70**	**225**	P	Pn	13 42 11.4	+0.1
	0.4nm,0.3s,baz=53,slow=12,SNR=21						
ASAR	**Alice Springs**	**20.61**	**218**	P	P	13 42 43.5	+0.6
	0.6nm,0.7s,baz=40,slow=10.0,SNR=22						
ASAR				S	S	13 46 29.1	+0.3
	0.5nm,0.8s,baz=44,slow=24,SNR=4.8						
	0.6nm,0.7s						
ILAR	**Eielson Array**	**86.80**	**23**	P	P	13 50 45.2	+0.1
	0.2nm,0.6s,baz=248,slow=5.2,SNR=5.6						
	0.2nm,0.6s						

*IDC **31** 13:58:24.6±2.4, 18°16S×69°89W, h112km±20km, mb3.6/3, mbtmp4.0/7, Error ellipse: s-maj=26.8km s-min=22.0km az=176.0*
*NEIC **31** 13:58:26.7±1.5, 18°00S±0°05×69°97W±0°08, h127km±5km, mb4.3/8, Error ellipse: s-maj=10.5km s-min=7.7km az=73.0*
*GUC **31** 13:58:27.1±0.7, 17°59S×69°83W, h99km±7km, ML3.6*

ISC 31 13:58:26.4±0.7, 17°99S±0°05×69°83W±0°07, h127km±5km, n59, σ1§37/63, mb4.0/5, 2C-3D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB16	**IPOC Station P**	**0.46**	**139**		**Pn**	**13 58 46.4**	**+0.7**
PB16	**IPOC Station P**	**0.46**	**139**	*eP*	**Pn**	**13 58 46.7**	**+1.0**
PB16				*eS*	**Sn**	**13 59 01.1**	**+0.9**
PB16				IAML		13 59 01.9	
	comp=N,1μm,0.3s						
PB18	**Visviri**	**0.52**	**40**		**Pn**	**13 58 46.7**	**+0.8**
PB18	**Visviri**	**0.52**	**40**	*iP*	**Pn**	**13 58 47.7**	**+1.8**
AP01	**Chacalluta**	**0.62**	**232**	Pn	**Pn**	**13 58 46.5**	**+0.6**
AP01	**Chacalluta**	**0.62**	**232**	*eP*	**Pn**	**13 58 46.5**	**+0.6**
AP01				*eS*	**Sn**	**13 59 01.0**	**+0.4**
AP01				IAML		13 59 03.7	
	comp=N,4μm,0.3s						
PB12	**IPOC Station P**	**0.78**	**217**		**Pn**	**13 58 46.7**	**-0.5**
PB12	**IPOC Station P**	**0.78**	**217**	*eP*	**Pn**	**13 58 47.6**	**+0.3**
PB12				*eS*	**Sn**	**13 59 02.8**	**-0.3**
PB12				IAML		13 59 04.7	
	comp=N,3μm,0.3s						
PSGCX	**Pisagua**	**1.62**	**190**		**Pn**	**13 58 56.0**	**+0.1**
PSGCX	**Pisagua**	**1.62**	**190**	*eP*	**Pn**	**13 58 56.2**	**+0.3**
PSGCX				*eS*	**Sn**	**13 59 18.2**	**-0.1**
PB11	**IPOC Station P**	**1.77**	**175**		**Pn**	**13 58 58.2**	**+0.6**
PB11	**IPOC Station P**	**1.77**	**175**	*i P*	**Pn**	**13 58 58.4**	**+0.8**
PB11				*i S*	**Sn**	**13 59 22.4**	**+0.9**
PB11				IAML		13 59 23.1	
	comp=N,999nm,0.4s						
GO01	**Chusmiza**	**1.77**	**160**		**Pn**	**13 58 59.4**	**+1.4**
GO01	**Chusmiza**	**1.77**	**160**	*eP*	**Pn**	**13 58 59.5**	**+1.4**
GO01				*eS*	**Sn**	**13 59 23.9**	**+1.8**
GO01				IAML		13 59 26.4	
	comp=N,670nm,0.2s						
PB08	**IPOC Station P**	**2.23**	**164**		**Pn**	**13 59 04.9**	**+1.4**
PB08	**IPOC Station P**	**2.23**	**164**	*eP*	**Pn**	**13 59 05.0**	**+1.5**
HMBC	**Humberstone**	**2.28**	**181**		**Pn**	**13 59 03.9**	**+0.1**
HMBC	**Humberstone**	**2.28**	**181**	*eP*	**Pn**	**13 59 03.9**	**+0.1**
LPAZ	**La Paz**	**2.34**	**44**	P	**Pn**	**13 59 06.7**	**+1.5**
	comp=N,39nm,0.3s,baz=278,slow=4.4,SNR=177						
LPAZ				S	**Sn**	**13 59 36.0**	**+1.2**
	comp=N,22nm,0.7s,baz=269,slow=4.1,SNR=5.2						
TA01	**Diego Aracena**	**2.58**	**187**	Pn	**Pn**	**13 59 07.5**	**0.0**
PATCX	**Punta Patache**	**2.83**	**186**	Pn	**Pn**	**13 59 10.5**	**-0.3**
PATCX	**Punta Patache**	**2.83**	**186**	*eP*	**Pn**	**13 59 11.0**	**+0.1**
PB01	**IPOC Station P**	**3.06**	**174**		**Pn**	**13 59 13.8**	**+0.1**
PB01	**IPOC Station P**	**3.06**	**174**	*eP*	**Pn**	**13 59 14.1**	**+0.4**
PB02	**IPOC Station P**	**3.31**	**181**		**Pn**	**13 59 17.0**	**-0.1**
PB02	**IPOC Station P**	**3.31**	**181**	*eP*	**Pn**	**13 59 17.4**	**+0.2**
PB07	**IPOC Station P**	**3.72**	**181**		**Pn**	**13 59 22.7**	**+0.1**
PB07	**IPOC Station P**	**3.72**	**181**	*eP*	**Pn**	**13 59 22.9**	**+0.4**
PB09	**IPOC Station P**	**3.83**	**172**		**Pn**	**13 59 24.5**	**+0.5**
PB09	**IPOC Station P**	**3.83**	**172**	*eP*	**Pn**	**13 59 24.8**	**+0.9**
PB03	**IPOC Station P**	**4.04**	**179**		**Pn**	**13 59 26.8**	**0.0**
PB06	**IPOC Station P**	**4.70**	**177**		**Pn**	**13 59 35.2**	**-0.3**
PB05	**IPOC Station P**	**4.85**	**184**		**Pn**	**13 59 36.7**	**-0.8**
PB14	**IPOC Station P**	**6.62**	**185**	Pn	**Pn**	**13 59 59.7**	**-1.9**
SIV	**San Ignacio**	**8.61**	**78**	P	**Pn**	**14 00 26.0**	**-2.2**
	comp=N,4.4nm,0.3s,baz=262,slow=9.6,SNR=34						
SIV				S	**Sn**	**14 01 57.6**	**-6.1**
	comp=N,1.6nm,0.5s,baz=166,slow=24,SNR=2.1						
AC02	**Maricunga**	**8.83**	**176**	Pn	**Pn**	**14 00 29.9**	**-1.6**
NNA	**Nana**	**9.03**	**310**	P	**Pn**	**14 00 32.8**	**-1.1**
	comp=N,10nm,0.3s,baz=133,slow=10,SNR=7.8						
NNA	**Nana**	**9.03**	**310**		**Pn**	**14 00 31.8**	**-2.0**
VILB	**Vilhena**	**10.54**	**63**		**Pn**	**14 00 54.6**	**+0.4**
PTLB	**Pontes e Lacer**	**10.55**	**78**		**Pn**	**14 00 54.7**	**+0.5**
CFA	**Coronel Fontan**	**13.63**	**174**	P	**Pn**	**14 01 30.6**	**-4.0**
	comp=N,0.5nm,0.3s,baz=348,slow=15,SNR=2.5						
H03N1	**Juan Fernandez**	**17.41**	**206**	T	T	14 20 37.4	
	baz=27,slow=73,SNR=15						
H03N2	**Juan Fernandez**	**17.42**	**206**	T	T	14 20 19.6	
	baz=27,slow=73,SNR=9.9						
H03N3	**Juan Fernandez**	**17.43**	**206**	T	T	14 20 35.8	
	baz=27,slow=73,SNR=12						
ITAB	**Concordia**	**18.73**	**123**	P	**P**	**14 02 36.0**	**+0.7**
ITAB				IAmb	IAmb	14 02 37.3	
	comp=Z,9.2nm,1.0s						
PLTB	**Pedras Altas**	**20.08**	**136**	P	**P**	**14 02 49.8**	**-0.2**
BDFB	**Brasilia**	**21.01**	**87**	P	**P**	**14 02 59.8**	**-0.4**
	comp=Z,2.7nm,0.5s,baz=243,slow=11,SNR=4.1						
	comp=Z,2.7nm,0.5s						
BDFB	**Brasilia**	**21.01**	**87**	P	**P**	**14 03 02.5**	**+2.4**
TRQA	**Tornquist**	**21.14**	**163**	P	**P**	**14 03 02.1**	**+0.9**
TRQA				IAmb	IAmb	14 03 34.5	
	comp=Z,8.7nm,1.4s						
VLDQ	**Val d'Or**	**66.15**	**354**	P	**P**	**14 09 01.2**	**+1.3**
VLDQ				IAmb	IAmb	14 09 14.5	
	comp=Z,7.1nm,1.2s						
TORD	**Torodi Ar. Bea**	**77.03**	**71**	P	**P**	**14 10 06.9**	**+1.0**
	comp=Z,0.6nm,0.4s,baz=249,slow=6.2,SNR=7.2						
	comp=Z,0.6nm,0.4s						
TORD	**Torodi Ar. Bea**	**77.03**	**71**	IAmb	IAmb	14 10 19.1	
	comp=Z,5.6nm,0.6s						
YKA	**Yellowknife Ar**	**87.61**	**341**	P	**P**	**14 10 59.8**	**0.0**
	comp=Z,0.4nm,0.6s,baz=137,slow=4.2,SNR=11						
	comp=Z,0.4nm,0.6s						
YKAW3	**Yellowknife Wh**	**87.66**	**341**	P	**P**	**14 11 00.5**	**+0.5**
MAW	**Mawson**	**87.92**	**164**	P	**P**	**14 11 02.5**	**+1.1**
ASAR	**Alice Springs**	**132.56**	**210**	PKP	**PKPdf**	**14 17 26.7**	**-0.1**
	comp=Z,0.1nm,0.6s,baz=127,slow=1.5,SNR=1.2						
WRA	**Warramunga Arr**	**135.46**	**213**	PKP	**PKiKP**	**14 17 33.2**	**-0.6**
	comp=Z,0.3nm,1.0s,baz=151,slow=2.0,SNR=1.7						
MKAR	**Makanchi Array**	**143.23**	**32**	PKP	**PKPdf**	**14 17 46.3**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=250,slow=3.4,SNR=4.5						
MJAR	**Matsushiro Arr**	**149.15**	**312**	PKPbc	**PKPbc**	**14 17 59.3**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=78,slow=1.1,SNR=1.5						

*IDC **31** 14:16:28.8±1.1, 6°71N×72°85W, h168km±11km, mb3.3/7, mbtmp3.9/10, Error ellipse: s-maj=20.8km s-min=11.7km az=108.0*
*NEIC **31** 14:16:28.8±0.8, 6°69N±0°08×72°98W±0°09, h162km±8km, mb4.2/30, Error ellipse: s-maj=14.8km s-min=8.8km az=122.0*
*RSNC **31** 14:16:29.5±0.0, 7°N±1°×7°3W±°, h149km±1km, M4.0, mB4.6, mb4.3, ML3.6, MLv4.3, Mw(mB)3.8*
*FUNV **31** 14:16:31.8, 7°14N×73°21W, h5km, MW3.6, Presumed earthquake*

ISC 31 14:16:28.3±0.6, 6°80N±0°03×73°12W±0°03, h156km±5km, n100, σ1§19/137, mb4.1/20, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.22**	**198**	P	Pn	14 17 01.4	+12
BARC	**Barichara**	**0.22**	**198**	P	**Pn**	**14 16 50.0**	**+0.3**
BARC				P	**Pn**	**14 16 50.0**	**+0.3**
BARC				S	**Sn**	**14 17 04.7**	**-1.4**
BARC				S		14 17 05.1	
PAMC	**Pamplona, Colo**	**0.68**	**38**	P	**Pn**	**14 16 52.9**	**+1.0**
	569nm90μm3μm,0.5s						
PAMC	**Pamplona, Colo**	**0.68**	**38**	P	**Pn**	**14 16 52.7**	**+0.8**
PAMC				S	**Sn**	**14 17 09.6**	**-0.4**
RUSC	**La Rusia**	**0.91**	**178**	P	**Pn**	**14 16 53.8**	**+0.3**
RUSC				S	**Sn**	**14 17 11.5**	**-1.3**
RUSC	**La Rusia**	**0.91**	**178**	*eP*	**Pn**	**14 16 54.0**	**+0.4**
RUSC				*eS*	**Sn**	**14 17 12.0**	**-0.8**
PTBC	**PUERTO BERRIO,**	**1.36**	**259**	P	**Pn**	**14 16 56.2**	**-0.7**
PTBC				S	**Sn**	**14 17 17.5**	**-1.4**
OCAC	**Ocana**	**1.44**	**352**	P	**Pn**	**14 16 57.9**	**-0.1**
OCAC				S	**Sn**	**14 17 20.4**	**-0.4**
SPBC	**San Pablo de B**	**1.49**	**220**	P	**Pn**	**14 16 58.6**	**+0.3**
SPBC				S	**Sn**	**14 17 19.8**	**-1.6**
NORC	**Norcasia**	**2.13**	**235**	P	**Pn**	**14 17 05.5**	**0.0**
NORC				S	**Sn**	**14 17 32.1**	**-2.0**
CHIC	**Chingaza**	**2.24**	**196**	P	**Pn**	**14 17 07.7**	**+0.6**
CHIC				S	**Sn**	**14 17 36.1**	**-0.9**
ROSC	**El Rosal**	**2.29**	**212**	P	**Pn**	**14 17 09.8**	**+2.1**
	381nm,0.4s,baz=71,slow=9.5,SNR=98						
ROSC				S	**Sn**	**14 17 37.1**	**-0.8**
	825nm,0.5s,baz=45,slow=16,SNR=10.0						
ROSC	**El Rosal**	**2.29**	**212**		**Pn**	**14 17 09.1**	**+1.4**
ROSC	**El Rosal**	**2.29**	**212**	P	**Pn**	**14 17 09.3**	**+1.7**
ROSC				S	**Sn**	**14 17 36.5**	**-1.4**
BOG	**Bogota**	**2.36**	**204**	P	**Pn**	**14 17 08.2**	**-0.3**
HELC	**Santa Helena**	**2.47**	**256**	P	**Pn**	**14 17 10.1**	**+0.3**
HELC				S	**Sn**	**14 17 39.2**	**-2.5**
HELC	**Santa Helena**	**2.47**	**256**	*eP*	**Pn**	**14 17 12.3**	**+2.5**
HELC				*eS*	**Sn**	**14 17 42.6**	**+0.8**
MEDEC	**Medelln, Ant**	**2.51**	**258**	P	**Pn**	**14 17 09.5**	**-0.6**
MEDEC				S	**Sn**	**14 17 41.2**	**-1.1**
UREC	**San Jos de Ur**	**2.58**	**292**	P	**Pn**	**14 17 10.2**	**-0.5**
UREC	**San Jos de Ur**	**2.58**	**292**	P	**Pn**	**14 17 09.7**	**-1.0**
UREC				S	**Sn**	**14 17 42.5**	**-1.0**
GUY2C	**Guyana, Caldas**	**2.73**	**235**	P	**Pn**	**14 17 13.6**	**+0.5**
GUY2C				S	**Sn**	**14 17 46.0**	**-1.6**
VILC	**Villavicencio,**	**2.73**	**192**	P	**Pn**	**14 17 14.1**	**+1.3**
	18μm270nm,0.6s						
VILC	**Villavicencio,**	**2.73**	**192**	P	**Pn**	**14 17 13.1**	**+0.3**
VILC				S	**Sn**	**14 17 47.7**	**+0.5**
PTGC	**Puerto Gaitan,**	**2.77**	**159**	P	**Pn**	**14 17 12.9**	**-0.1**
PTGC				S	**Sn**	**14 17 46.4**	**-1.3**
RECRC	**Villamaria, Ca**	**2.88**	**231**	P	**Pn**	**14 17 15.6**	**+0.6**
RECRC				S	**Sn**	**14 17 51.9**	**+0.9**
NIZA	**Niza - Manizal**	**2.91**	**234**	P	**Pn**	**14 17 15.7**	**+0.5**
NIZA				S	**Sn**	**14 17 49.7**	**-1.7**
CBOC	**Ciudad Bolivar**	**3.03**	**252**	P	**Pn**	**14 17 17.4**	**+1.0**
CBOC				S	**Sn**	**14 17 53.3**	**-0.4**
DBBC	**Dabeiba**	**3.08**	**274**	P	**Pn**	**14 17 17.7**	**+0.7**
SDV	**Santo Domingo**	**3.21**	**50**	P	**Pn**	**14 17 19.4**	**+0.6**
	157nm,0.3s,baz=174,slow=3.1,SNR=299						
SDV				S	**Sn**	**14 17 56.5**	**-1.5**
	104nm,0.4s,baz=253,slow=22,SNR=12						
SDV	**Santo Domingo**	**3.21**	**50**		**Pn**	**14 17 19.3**	**+0.4**
SDV	**Santo Domingo**	**3.21**	**50**	P	**Pn**	**14 17 19.2**	**+0.4**
SDV	**Santo Domingo**	**3.21**	**50**	*eP*	**Pn**	**14 17 19.6**	**+0.8**
SDV				*eS*	**Sn**	**14 17 56.6**	**-1.4**
ARGC	**Ariguani, Magd**	**3.23**	**340**	P	**Pn**	**14 17 19.6**	**+0.7**
ARGC				S	**Sn**	**14 17 58.0**	**-0.3**
PRAC	**Prado**	**3.54**	**210**	P	**Pn**	**14 17 23.6**	**+0.7**
PRAC	**Prado**	**3.54**	**210**	P	**Pn**	**14 17 23.0**	**+0.1**
PRAC				S	**Sn**	**14 18 04.7**	**-0.5**
ORTC	**Ortega, Tolima**	**3.57**	**217**	P	**Pn**	**14 17 24.8**	**+1.5**
ORTC	**Ortega, Tolima**	**3.57**	**217**	P	**Pn**	**14 17 24.0**	**+0.7**
ORTC				S	**Sn**	**14 18 05.8**	**-0.2**
APAC	**Apartado, Choc**	**3.60**	**288**	P	**Pn**	**14 17 24.3**	**+0.7**
APAC	**Apartado, Choc**	**3.60**	**288**	P	**Pn**	**14 17 23.6**	**0.0**
APAC				S	**Sn**	**14 18 05.5**	**-1.1**
PLMC	**San Jos del P**	**3.67**	**239**	P	**Pn**	**14 17 25.0**	**+0.4**
PLMC				S	**Sn**	**14 18 06.3**	**-2.0**
SJCC	**San Jacinto, C**	**3.69**	**327**	P	**Pn**	**14 17 23.6**	**-1.2**
SJCC				S	**Sn**	**14 18 06.1**	**-2.7**
SJCC	**San Jacinto, C**	**3.69**	**327**	*eP*	**Pn**	**14 17 24.2**	**-0.6**
SJCC				*eS*	**Sn**	**14 18 03.0**	**-5.8**
URMC	**La Uribe, Meta**	**3.75**	**200**	P	**Pn**	**14 17 26.1**	**+0.5**
URMC				S	**Sn**	**14 18 08.5**	**-1.7**
GUVC	**San Jose del G**	**4.26**	**173**	P	**Pn**	**14 17 31.4**	**-0.8**
GUVC				S	**Sn**	**14 18 20.6**	**-1.3**
YOTC	**Yotoco, Valle**	**4.26**	**229**	P	**Pn**	**14 17 32.2**	**-0.1**
SMRC	**Santa Marta, M**	**4.47**	**346**	P	**Pn**	**14 17 33.5**	**-1.4**
CAPC	**Capurgana**	**4.58**	**294**	P	**Pn**	**14 17 35.7**	**-0.6**
MACC	**Macarena, Meta**	**4.68**	**189**	P	**Pn**	**14 17 36.7**	**-1.0**
BETC	**Betania**	**4.70**	**210**	P	**Pn**	**14 17 37.8**	**-0.2**
URIC	**Uribia, Colomb**	**4.99**	**13**	P	**Pn**	**14 17 40.0**	**-1.8**
JAMC	**Jamundi, Valle**	**5.03**	**225**	P	**Pn**	**14 17 43.1**	**+0.7**
JAMC	**Jamundi, Valle**	**5.03**	**225**	P	**Pn**	**14 17 42.4**	**0.0**
JAMC				S	**Sn**	**14 18 38.4**	**-1.9**
GARC	**Garzon, Huila**	**5.16**	**207**	P	**Pn**	**14 17 44.0**	**-0.3**
GARC				S	**Sn**	**14 18 41.2**	**-2.3**
POPC	**Popayan, Colom**	**5.52**	**220**	P	**Pn**	**14 17 49.5**	**+0.5**
	276nm18nm,0.6s						
FLOC	**Florencia**	**5.77**	**206**	P	**Pn**	**14 17 52.1**	**0.0**
	702nm28nm,0.8s						
BBAC	**Balboa, Cauca**	**6.29**	**221**	P	**Pn**	**14 17 58.9**	**-0.2**
GCUF	**Volcan Galeras**	**6.96**	**217**	P	**Pn**	**14 18 09.1**	**+0.7**
OTAV	**Otavalo**	**8.42**	**219**		**Pn**	**14 18 25.7**	**-2.0**
MTDJ	**Mount Denham**	**12.14**	**340**	Pn	**Pn**	**14 19 18.2**	**+1.8**
SDDR	**Presa de Saban**	**12.24**	**8**	Pn	**Pn**	**14 19 18.2**	**+0.7**
BOAV	**Boa Vista**	**13.29**	**109**	Pn	**Pn**	**14 19 28.9**	**-2.2**
ATAH	**Atahualpa**	**14.81**	**201**	P	**Pn**	**14 19 51.5**	**+0.9**
	2.3nm,0.7s,baz=74,slow=6.7,SNR=6.9						
ESQI	**Esquipulas**	**17.70**	**297**	P	**Pn**	**14 20 25.5**	**+0.1**
TEIG	**Tepich**	**19.86**	**314**	P	**Pn**	**14 20 49.2**	**-1.5**
TEIG				IAmb	IAmb	14 20 55.6	
	comp=Z,18nm,1.1s						
LPAZ	**La Paz**	**23.47**	**168**	P	**P**	**14 21 21.3**	**-3.3**
	comp=Z,2.1nm,0.8s,baz=336,slow=10.0,SNR=4.2						
	comp=Z,2.1nm,0.8s						
WHAR	**Wooly Hollow**	**33.38**	**331**	P	**P**	**14 22 52.9**	**+1.0**
WHAR				IAmb	IAmb	14 23 14.7	
	comp=Z,8.7nm,1.3s						
FCAR	**Ozark Folk Cen**	**33.79**	**332**	P	**P**	**14 22 56.1**	**+0.7**
FCAR				IAmb	IAmb	14 22 56.8	
	comp=Z,5.6nm,1.0s						
S44A	**Carbondale**	**34.07**	**337**	P	**P**	**14 22 58.9**	**+1.2**
S44A				IAmb	IAmb	14 23 21.3	
	comp=Z,9.5nm,1.3s						
T42A	**Van Buren**	**34.26**	**334**	P	**P**	**14 22 59.8**	**+0.4**
T42A				IAmb	IAmb	14 23 06.8	
	comp=Z,7.0nm,1.4s						
CCM	**Cathedral Cave**	**35.19**	**335**	P	**P**	**14 23 07.8**	**+0.4**
SFIN	**Lafayette**	**35.70**	**342**	P	**P**	**14 23 12.9**	**+1.2**
TXAR	**Lajitas Array**	**36.48**	**312**	P	**P**	**14 23 19.7**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=129,slow=8.8,SNR=9.1						
	comp=Z,0.5nm,0.5s						
MNTX	**Cornudas Mount**	**38.99**	**314**	P	**P**	**14 23 40.8**	**+1.2**
MNTX				IAmb	IAmb	14 23 41.1	
	comp=Z,4.6nm,1.4s						
BATG	**Bathurst New B**	**40.78**	**7**	P	**P**	**14 23 55.4**	**+1.4**
EYMN	**Ely**	**43.89**	**342**	P	**P**	**14 24 19.8**	**+0.5**
PV13	**Radium Mtn., P**	**44.92**	**319**	P	**P**	**14 24 28.6**	**+0.7**
EPLO	**Experimental L**	**46.11**	**341**	P	**P**	**14 24 36.7**	**0.0**
EPLO				IAmb	IAmb	14 25 08.4	
	comp=Z,8.4nm,1.4s						
ULM	**Lac du Bonnet**	**47.30**	**340**	P	**P**	**14 24 46.0**	**0.0**
	comp=Z,1.8nm,0.4s,baz=148,slow=7.1,SNR=4.7						
	comp=Z,1.8nm,0.4s						
ULM	**Lac du Bonnet**	**47.30**	**340**	P	**P**	**14 24 45.9**	**-0.1**
ULM				IAmb	IAmb	14 24 46.7	
	comp=Z,5.3nm,1.2s						
PLCA	**Paso Flores**	**47.36**	**177**	P	**P**	**14 24 45.0**	**-1.6**
	comp=Z,0.9nm,0.8s,baz=349,slow=5.2,SNR=1.4						
	comp=Z,0.9nm,0.8s						
PDAR	**Pinedale Array**	**48.10**	**324**	P	**P**	**14 24 53.1**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=123,slow=8.9,SNR=6.0						
	comp=Z,0.4nm,0.5s						
BGU	**Big Grassy Mou**	**49.16**	**320**	P	**P**	**14 25 01.3**	**+0.6**
DSP	**Deep Springs**	**50.80**	**314**	P	**P**	**14 25 13.9**	**+1.0**
FFC	**Flin Flon**	**53.10**	**340**	P	**P**	**14 25 29.6**	**0.0**
FFC				IAmb	IAmb	14 25 53.0	
	comp=Z,4.6nm,1.4s						
F10A	**Beach Ranch, E**	**54.44**	**323**	P	**P**	**14 25 40.0**	**+0.4**
F10A				IAmb	IAmb	14 26 11.8	
	comp=Z,5.3nm,1.4s						
EDM	**Edmonton**	**56.64**	**332**	P	**P**	**14 25 55.0**	**0.0**
EDM				IAmb	IAmb	14 26 23.2	
	comp=Z,2.8nm,1.0s						
YKA	**Yellowknife Ar**	**63.28**	**340**	P	**P**	**14 26 40.5**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=134,slow=6.0,SNR=22						
YKA				pP	**pP**	**14 27 18.8**	**+1.6**
	comp=Z,0.3nm,0.7s,baz=137,slow=5.9,SNR=2.7						
	comp=Z,0.8nm,0.6s						
YKA	**Yellowknife Ar**	**63.28**	**340**	P	**P**	**14 26 40.2**	**+0.2**
WRAK	**Wrangell Islan**	**67.66**	**329**	P	**P**	**14 27 09.1**	**+0.8**
SUMG	**Summit**	**69.01**	**11**	P	**P**	**14 27 17.1**	**+0.2**
SUMG				IAmb	IAmb	14 27 19.5	
	comp=Z,5.7nm,1.1s						
INK	**Inuvik**	**73.05**	**340**	P	**P**	**14 27 41.4**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=117,slow=2.3,SNR=4.4						
	comp=Z,0.3nm,0.5s						
INK	**Inuvik**	**73.05**	**340**	P	**P**	**14 27 41.1**	**+0.3**
F30M	**Barrier River**	**73.54**	**339**	P	**P**	**14 27 44.5**	**+0.7**
F30M				IAmb	IAmb	14 27 45.1	
	comp=Z,6.1nm,1.5s						
E29M	**Blow River**	**74.57**	**340**	P	**P**	**14 27 50.5**	**+0.8**
E27K	**Coleen River**	**75.80**	**339**	P	**P**	**14 27 57.3**	**+0.5**
PPLA	**Purkeypile**	**79.00**	**333**	P	**P**	**14 28 15.5**	**+0.7**
PPLA				IAmb	IAmb	14 28 26.2	
	comp=Z,11nm,1.4s						
J20K	**Nowinta River**	**80.00**	**334**	P	**P**	**14 28 20.6**	**+0.5**
J20K				IAmb	IAmb	14 28 52.2	
	comp=Z,4.1nm,1.4s						
B21K	**Ikpikpuk River**	**80.70**	**339**	P	**P**	**14 28 24.2**	**+0.7**
ASAR	**Alice Springs**	**149.10**	**234**	PKP	**PKPdf**	**14 35 53.6**	**-1.1**
	comp=Z,1.1nm,0.6s,baz=112,slow=2.8,SNR=1.5						
ASAR				PKPbc	**PKPbc**	**14 35 58.3**	**-0.7**
	comp=Z,1.2nm,0.7s,baz=120,slow=3.6,SNR=19						
WRA	**Warramunga Arr**	**150.33**	**241**	PKP	**PKPdf**	**14 35 55.6**	**-1.1**
	comp=Z,0.3nm,1.0s,baz=89,slow=2.4,SNR=2.4						
WRA				PKPbc	**PKP

0.3nm,0.5s,baz=331,slow=9.0,SNR=15
ASAR PcP **PcP** **15 39 43.3 +0.1**
0.3nm,0.5s,baz=351,slow=2.1,SNR=11
0.3nm,0.5s
CMAR Chiang Mai Arr 30.12 309 P **P** **15 36 57.5 +0.9**
0.5nm,0.7s,baz=141,slow=7.3,SNR=6.2
CMAR PcP **PcP** **15 39 54.5 +0.2**
0.2nm,0.4s,baz=128,slow=3.5,SNR=1.6
0.5nm,0.7s
STKA Stephens Creek 36.09 153 P **P** **15 37 48.8 +0.7**
1.7nm,0.7s,baz=345,slow=8.4,SNR=4.7
1.7nm,0.7s
KSRS Korea Array 37.63 6 P **P** **15 38 04.2 +3.2**
0.6nm,0.8s,baz=208,slow=7.6,SNR=1.9
0.6nm,0.8s
MKAR Makanchi Array 58.80 328 P **P** **15 40 42.4 -0.7**
0.3nm,0.4s,baz=143,slow=7.6,SNR=4.6
MKAR PcP **PcP** **15 41 29.3 -1.6**
0.4nm,0.7s,baz=111,slow=3.2,SNR=1.5
0.3nm,0.4s

*IDC **31** 15:43:30.1±0.9, 41°.57S×84°.98E, h0km, mb4.0/11, mbtmp4.0/11, MS3.8/26, Error ellipse: s-maj=29.4km s-min=22.6km az=4.0*
*NEIC **31** 15:43:32.0±1.7, 41°.6S±0°.1×84°.99E±0°.08, h10km±1km, mb4.6/14, Error ellipse: s-maj=19.5km s-min=9.9km az=172.0*
ISC 31 15:43:31.9±0.6, 41°.5S±0°.1×85°.02E±0°.09, h10km, n58, σ1s24/26, mb4.3/19, MS3.9/26, 1D, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AIS	**Amsterdam Isla**	**6.83**	**300**		Pn	**Pn**	**15 45 12.5**	**+0.4**
H01W2	**Cape Leeuwin H**	**23.74**	**83**		T	T	16 12 38.8	
	baz=245,slow=74,SNR=137							
H01W3	**Cape Leeuwin H**	**23.75**	**83**		T	T	16 12 39.6	
	baz=245,slow=74,SNR=145							
H01W1	**Cape Leeuwin H**	**23.76**	**83**		T	T	16 12 40.2	
	baz=245,slow=74,SNR=121							
H04S1	**CROZET ISLANDS**	**24.22**	**246**		T	T	16 14 53.0	
	baz=88							
H04S2	**CROZET ISLANDS**	**24.24**	**246**		T	T	16 14 53.0	
	baz=88							
H04S3	**CROZET ISLANDS**	**24.24**	**246**		T	T	16 14 53.0	
	baz=88							
H04N2	**CROZET ISLANDS**	**24.30**	**248**		T	T	16 14 59.8	
	baz=91,slow=75,SNR=362							
H04N3	**CROZET ISLANDS**	**24.32**	**248**		T	T	16 14 58.6	
	baz=91,slow=75,SNR=297							
H04N1	**CROZET ISLANDS**	**24.32**	**248**		T	T	16 15 00.7	
	baz=91,slow=75,SNR=227							
NWAO	**Narrogin (SRO)**	**26.92**	**82**		LR	LR	15 57 07.3	
	comp=Z,172nm,20.3s,baz=154,slow=30							
NWAO	**Narrogin (SRO)**	**26.92**	**82**		P	**P**	**15 49 13.7**	**+0.4**
NWAO					IAmb	IAmb	15 49 30.6	
	comp=Z,30nm,1.4s							
MAW	**Mawson**	**28.80**	**197**		LR	LR	15 58 40.6	
	comp=Z,131nm,19.0s,baz=34,slow=32							
H08S2	**Diego Garcia H**	**35.50**	**338**		T	T	16 28 00.4	
	baz=163,slow=76,SNR=350							
H08S1	**Diego Carcia H**	**35.51**	**338**		T	T	16 27 48.8	
	baz=163,slow=76,SNR=473							
H08S3	**Diego Garcia H**	**35.52**	**338**		T	T	16 27 50.5	
	baz=163,slow=76,SNR=324							
FORT	**Forrest**	**36.04**	**87**		P	**P**	**15 50 32.7**	**-0.7**
FORT					IAmb	IAmb	15 50 57.6	
	comp=Z,6.4nm,1.1s							
LEM	**Lembang**	**39.95**	**36**		LR	LR	16 04 47.0	
	comp=Z,192nm,19.9s,baz=228,slow=32							
FITZ	**Fitzroy Crossi**	**41.74**	**68**		LR	LR	16 06 53.3	
	comp=Z,114nm,18.4s,baz=232,slow=34							
ASAR	**Alice Springs**	**44.24**	**82**		P	**P**	**15 51 40.5**	**-1.0**
	comp=Z,0.8nm,0.9s,baz=214,slow=7.4,SNR=12							
ASAR					PcP	**PcP**	**15 53 27.2**	**+1.1**
	comp=Z,0.6nm,0.6s,baz=221,slow=2.9,SNR=8.0							
ASAR					LR	LR	16 07 54.5	
	comp=Z,226nm,19.3s,baz=238,slow=33							
	comp=Z,0.8nm,0.9s							
KNRA	**Kununurra**	**45.57**	**69**		P	**P**	**15 51 51.9**	**-0.3**
KNRA					IAmb	IAmb	15 51 58.9	
	comp=Z,4.9nm,0.9s							
STKA	**Stephens Creek**	**45.66**	**97**		P	**P**	**15 51 52.4**	**-0.4**
	comp=Z,2.2nm,0.9s,baz=208,slow=6.5,SNR=3.6							
STKA					LR	LR	16 09 42.3	
	comp=Z,94nm,18.1s,baz=208,slow=34							
	comp=Z,2.2nm,0.9s							
STKA	**Stephens Creek**	**45.66**	**97**		IAmb	IAmb	15 51 55.1	
	comp=Z,20nm,1.1s							
BATI	**Baumata**	**46.07**	**59**		P	**P**	**15 51 56.5**	**+0.4**
	comp=Z,7.9nm,0.4s,baz=243,slow=11,SNR=1.7							
	comp=Z,7.9nm,0.4s							
SOEI	**Soe**	**46.80**	**59**		P	**P**	**15 52 00.8**	**-1.2**
WRA	**Warramunga Arr**	**46.81**	**78**		P	**P**	**15 52 00.7**	**-1.2**
	comp=Z,1.1nm,0.9s,baz=233,slow=8.2,SNR=6.8							
WRA					PcP	**PcP**	**15 53 35.5**	**+0.5**
	comp=Z,0.4nm,1.0s,baz=235,slow=2.6,SNR=2.2							
	comp=Z,1.1nm,0.9s							
WRA	**Warramunga Arr**	**46.81**	**78**		IAmb	IAmb	15 52 03.3	
	comp=Z,0.2nm,1.1s							
WB0	**Warramunga Arr**	**46.96**	**78**		P	**P**	**15 52 00.7**	**-2.3**
WB0					IAmb	IAmb	15 52 01.4	
	comp=Z,2.9nm,1.1s							
VNDA	**Vanda**	**47.04**	**163**		P	**P**	**15 52 03.1**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=260,slow=5.0,SNR=4.3							
VNDA					LR	LR	16 09 54.4	
	comp=Z,94nm,20.0s,baz=268,slow=34							
	comp=Z,0.4nm,0.6s							
QSPA	**South Pole Qui**	**48.66**	**180**		P	**P**	**15 52 19.0**	**+3.1**
	comp=Z,6.8nm,1.1s,baz=334,slow=8.4,SNR=14							
QSPA					LR	LR	16 10 39.1	
	comp=Z,164nm,19.9s,baz=308,slow=34							
QSPA	**South Pole Qui**	**48.66**	**180**		P	**P**	**15 52 17.1**	**+1.2**
PALK	**Pallekele**	**48.69**	**354**		LR	LR	16 07 45.9	
	comp=Z,194nm,21.2s,baz=178,slow=30							
PALK	**Pallekele**	**48.69**	**354**		P	**P**	**15 52 16.5**	**+0.1**
PALK					IAmb	IAmb	15 52 22.4	
	comp=Z,11nm,1.2s							
MTN	**Manton Dam**	**49.18**	**68**		P	**P**	**15 52 19.0**	**-1.3**
MTN					IAmb	IAmb	15 52 23.1	
	comp=Z,15nm,1.3s							
BOSA	**Boshof**	**49.68**	**265**		P	**P**	**15 52 22.4**	**-1.7**
	comp=Z,2.2nm,0.9s,baz=146,slow=7.3,SNR=2.3							
BOSA					LR	LR	16 10 03.4	
	comp=Z,124nm,18.1s,baz=192,slow=32							
	comp=Z,2.2nm,0.9s							
SBUM	**Sibu**	**50.25**	**36**		P	**P**	**15 52 28.1**	**-0.3**
SNAA	**Sanae**	**50.57**	**204**		LR	LR	16 11 31.5	
	comp=Z,69nm,18.2s,baz=330,slow=33							
SNAA	**Sanae**	**50.57**	**204**		P	**P**	**15 52 29.2**	**-1.0**
SNAA					IAmb	IAmb	15 52 40.4	
	comp=Z,9.5nm,1.3s							
SUR	**Sutherland**	**51.07**	**258**		LR	LR	16 10 02.5	
	comp=Z,100nm,18.1s,baz=152,slow=31							
VNA3	**Neumayer Olymp**	**52.79**	**204**	⇓P		P	15 52 55.9	+9.1
LSZ	**Lusaka**	**55.29**	**281**		LR	LR	16 13 14.1	
	comp=Z,77nm,18.2s,baz=132,slow=32							
CTA	**Charters Tower**	**55.59**	**87**		LR	LR	16 15 34.4	
	comp=Z,44nm,18.1s,baz=233,slow=35							
TSUM	**Tsumeb**	**60.78**	**270**		LR	LR	16 16 07.1	
	comp=Z,107nm,20.8s,baz=152,slow=32							
CMAR	**Chiang Mai Arr**	**61.03**	**15**		P	**P**	**15 53 46.1**	**+0.5**
	comp=Z,1.5nm,0.9s,baz=207,slow=7.1,SNR=15							
CMAR					LR	LR	16 17 34.8	
	comp=Z,19nm,18.9s,baz=200,slow=34							
	comp=Z,1.5nm,0.9s							
PMG	**Port Moresby**	**63.03**	**78**		LR	LR	16 18 52.1	
	comp=Z,80nm,19.1s,baz=220,slow=34							
BRDH	**Bariadhala**	**64.14**	**7**		LR	LR	16 17 04.9	
	comp=Z,143nm,21.9s,baz=166,slow=31							
EVN	**Everest**	**69.12**	**2**		P	**P**	**15 54 39.6**	**+0.7**
EVN					IAmb	IAmb	15 54 41.8	
	comp=Z,4.1nm,1.2s							
PMSA	**Palmer Station**	**71.32**	**193**		LR	LR	16 27 19.1	
	comp=Z,79nm,20.5s,baz=212,slow=37							
AAK	**Ala-Archa**	**84.29**	**352**		LR	LR	16 28 53.7	
	comp=Z,71nm,22.0s,baz=190,slow=32							
MKAR	**Makanchi Array**	**87.94**	**358**		LR	LR	16 33 04.6	
	comp=Z,61nm,19.8s,baz=152,slow=34							
GNI	**Garni**	**89.12**	**330**		LR	LR	16 31 20.7	
	comp=Z,44nm,19.1s,baz=5.0,slow=32							
SONM	**Songino Array**	**90.94**	**14**		P	**P**	**15 56 36.2**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=204,slow=3.2,SNR=3.1							
	comp=Z,0.3nm,0.4s							
BRTR	**Keskin Array B**	**93.36**	**323**		P	**P**	**15 56 48.2**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=111,slow=5.9,SNR=1.8							
	comp=Z,0.3nm,0.6s							
TORD	**Torodi Ar. Bea**	**93.68**	**284**		P	**P**	**15 56 46.9**	**-1.9**
	comp=Z,0.8nm,1.0s,baz=139,slow=7.7,SNR=2.3							
	comp=Z,0.8nm,1.0s							
DBIC	**Dimbokro**	**94.28**	**275**		LR	LR	16 37 58.5	
	comp=Z,72nm,18.1s,baz=150,slow=35							
BVAR	**Borovoye Array**	**94.99**	**351**		LR	LR	16 37 03.5	
	comp=Z,69nm,18.5s,baz=159,slow=34							
ZALV	**Zalesovo Beam**	**95.07**	**360**		P	**P**	**15 56 54.9**	**+0.6**
	comp=Z,0.3nm,0.2s,baz=179,slow=5.9,SNR=1.6							
ZALV					LR	LR	16 37 09.7	
	comp=Z,49nm,20.7s,baz=129,slow=34							
	comp=Z,0.3nm,0.2s							
PLCA	**Paso Flores**	**95.20**	**198**		LR	LR	16 40 11.7	
	comp=Z,76nm,18.3s,baz=168,slow=36							

TRN 31 16:11:59.2, 17°.60N×61°.04W, h24km, MD3.5, East of Barbuda., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ANWB	**Willy Bob**	**0.72**	**276**		*e*P	Pn	16 12 15.2	+1.3
ANWB					*e*S	Sn	16 12 27.5	+3.4
DSDZ	**La Diserade, G**	**1.28**	**181**		*e*P	Pb	16 12 22.2	-0.5
DSDZ					*e*S	Sn	16 12 37.2	-0.7
DHSZ	**Broadband at M**	**1.49**	**208**		*e*P	Pb	16 12 26.6	-0.3
DHSZ					*e*S	Sb	16 12 44.7	-0.2
MMLZ	**Guadeloupe Bro**	**1.66**	**201**		*e*P	Pb	16 12 28.8	-0.4
MMLZ					*e*S	Sb	16 12 50.0	+0.4
TBG	**Guadaloupe-3**	**1.83**	**199**		*e*P	Pb	16 12 31.0	-1.2
TBG					*e*S	Sb	16 12 54.1	-0.5
DSLB	**Salisbury**	**2.18**	**190**		*e*P	Pb	16 12 36.5	-1.6
DSLB					*e*S	Sb	16 13 03.5	-1.1

*ATH **31** 16:13:32.3±0.5, 41°.77N×20°.10E, h10km, ML3.1/17, Latitude uncertainty: 3 km; Longitude uncertainty: 2 km*
*RHSSO **31** 16:13:34.8±0.8, 41°.50N×20°.26E, h7km±3km, ML3.4/8*
*TIR **31** 16:13:34.7, 41°.56N×20°.14E, h25km±1km, Ml3.3/2*
*PDG **31** 16:13:34.9±0.1, 41°.54N×20°.14E, h4km, MD3.3/1, ML3.2/13, Error ellipse: s-maj=0.1km s-min=0.5km az=0.0*
*BEO **31** 16:13:34.2±0.4, 41°.49N×20°.27E, h0km±2km, ML2.8/11*
*SKO **31** 16:13:35.6, 41°.52N×20°.20E, h5km, ML3.1*
*THE **31** 16:13:36.3, 41°.N±2°×2°.0E±°, h4km±4km, M2.8/11, ML2.8/11*
ISC 31 16:13:35.0±0.9, 41°.52N±0°.01×20°.19E±0°.02, h11km±7km, n129, σ1s13/198, 24C-17D, Albania

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.25**	**50**		P	**Pg**	**16 13 40.0**	**-0.1**
PHP					S	**Sg**	**16 13 44.5**	**+1.0**
PHP	**Peshkopia**	**0.25**	**50**		P	**Pg**	**16 13 40.0**	**-0.1**
PHP					S	**Sg**	**16 13 44.8**	**+1.2**
TIR	**Tirane**	**0.30**	**234**		P	**Pg**	**16 13 40.7**	**-0.3**
TIR					S	**Sg**	**16 13 46.1**	**+1.1**
TIR					AML	AML	16 13 49.0	
	8.1nm,0.3s							
OHR	**Ohrid**	**0.62**	**132**	⇑	*i*Pg	**Pg**	**16 13 46.2**	**-0.8**
OHR					*i* Sg	**Sb**	**16 13 56.5**	**0.0**
OHR					*e*Lg	Lg	16 13 56.8	
	comp=N,827nm,0.4s							
OHR					*e*Lg	Lg	16 13 57.9	
	comp=E,592nm,0.4s							
SDA	**Shkodra**	**0.74**	**316**		P	**Pg**	**16 13 48.3**	**-0.9**
SDA					S	**Sg**	**16 13 58.9**	**0.0**
SDA					AML	AML	16 14 02.4	
	comp=E,8.6nm,0.2s							
ULC	**Ulcinj**	**0.83**	**302**	⇑	*i*Pg	**Pg**	**16 13 49.6**	**-1.4**
ULC					*i* Sg	**Sg**	**16 14 02.2**	**+0.3**
LMS2	**Laimos Florina**	**0.99**	**133**		P	**Pg**	**16 13 53.2**	**-0.9**
DRME	**Dracevica, Mon**	**1.00**	**312**	⇑	*i*Pg	**Pg**	**16 13 52.7**	**-1.5**
DRME					*i* Sg	**Sg**	**16 14 07.6**	**+0.3**
DRME	**Dracevica, Mon**	**1.00**	**312**		*e*Pg	**Pg**	**16 13 52.9**	**-1.3**
DRME					*e*Sg	**Sb**	**16 14 08.4**	**+0.9**
KBN	**Korca**	**1.01**	**153**		P	**Pg**	**16 13 54.2**	**-0.2**
KBN					S	**Sb**	**16 14 08.9**	**+1.2**
KBN	**Korca**	**1.01**	**153**		P	**Pg**	**16 13 53.3**	**-1.1**
KBN					S	**Sg**	**16 14 05.9**	**-1.6**
SKO	**Skopje**	**1.04**	**64**	*i*	Pg	**Pg**	**16 13 54.4**	**-0.5**
SKO				*i*	Sg	**Sg**	**16 14 08.1**	**-1.3**
PVY	**Plav**	**1.08**	**351**		*e*Pg	**Pg**	**16 13 54.1**	**-1.7**
PVY					*i* Sg	**Sb**	**16 14 11.5**	**+1.5**
PDG	**Podgorica**	**1.14**	**323**	⇓	P	**Pg**	**16 13 55.2**	**-1.7**
PDG				⇑	S	**Sg**	**16 14 08.3**	**-3.5**
PDG	**Podgorica**	**1.14**	**323**		P	**Pg**	**16 13 55.4**	**-1.5**
PDG	**Podgorica**	**1.14**	**323**		*e*Pg	**Pg**	**16 13 55.6**	**-1.4**
PDG					*e*Sg	**Sb**	**16 14 13.0**	**+1.4**
PDG	**Podgorica**	**1.14**	**323**	⇓	*i*Pg	**Pg**	**16 13 55.5**	**-1.4**
PDG					*i* Sg	**Sb**	**16 14 12.8**	**+1.2**
PDG	**Podgorica**	**1.14**	**323**	⇓	*i*Pg	**Pg**	**16 13 55.4**	**-1.5**
PDG					*e*Sg	**Sb**	**16 14 13.0**	**+1.4**
VLO	**Vlora**	**1.18**	**207**		P	**Pn**	**16 13 58.6**	**+1.2**
VLO					S	**Sn**	**16 14 15.5**	**+2.1**
BUM	**Brajici-Budva**	**1.24**	**309**	⇓	*i*Pg	**Pg**	**16 13 56.9**	**-1.9**
BUM					*i* Sg	**Sn**	**16 14 15.9**	**+0.8**
NEST	**Nestorio**	**1.28**	**149**		P	**Pg**	**16 13 58.1**	**-1.6**
NEST					S	**Sg**	**16 14 16.1**	**-1.3**
NEST	**Nestorio**	**1.28**	**149**		P	**Pg**	**16 13 58.3**	**-1.4**
NEST					S	**Sn**	**16 14 19.2**	**+2.9**
IVA	**Berane**	**1.36**	**351**	⇓	*i*Pg	**Pn**	**16 13 59.6**	**-0.5**
IVA					*i* Sg	**Sn**	**16 14 20.8**	**+2.6**
CEME	**Cevo**	**1.39**	**318**	⇑	*i*Pg	**Pn**	**16 13 59.3**	**-1.1**
CEME					*i* Sg	**Sn**	**16 14 20.9**	**+2.0**
KOME	**Kolasin**	**1.42**	**340**	⇑	*i*Pg	**Pn**	**16 14 00.9**	**+0.1**
KOME					*i* Sg	**Sg**	**16 14 22.5**	**+1.9**
PENT	**Pentalofos**	**1.51**	**151**		P	**Pn**	**16 14 02.4**	**+0.3**
PENT	**Pentalofos**	**1.51**	**151**		P	**Pb**	**16 14 03.2**	**+0.2**
PENT					S	**Sg**	**16 14 25.6**	**+2.1**
NKME	**Niksic**	**1.54**	**324**	⇑	*i*Pg	**Pn**	**16 14 02.2**	**-0.3**
NKME					*i* Sg	**Sg**	**16 14 26.4**	**+1.7**
HCY	**Herceg Novi**	**1.56**	**307**	⇓	*i*Pg	**Pn**	**16 14 03.0**	**+0.3**
HCY					*i* Sg	**Sg**	**16 14 27.3**	**+2.0**
HCY	**Herceg Novi**	**1.56**	**307**		*e*Pn	**Pn**	**16 14 03.2**	**+0.5**
HCY					*e*Sg	**Sg**	**16 14 26.5**	**+1.2**
SRN	**Sarande**	**1.65**	**185**		P	**Pb**	**16 14 05.6**	**+0.3**
SRN	**Sarande**	**1.65**	**185**		P	**Pn**	**16 14 04.6**	**+0.8**
SRN					S	**Sb**	**16 14 26.2**	**+0.1**
KZN	**Kozani**	**1.71**	**135**		P	**Pb**	**16 14 06.1**	**-0.3**
KZN					S	**Sg**	**16 14 31.4**	**+1.5**
SJES	**Sjenica**	**1.74**	**355**		*e*Pn	**Pn**	**16 14 06.4**	**+1.1**
SJES					*e*Sn	**Sb**	**16 14 29.9**	**+0.9**
SJES	**Sjenica**	**1.74**	**355**	⇓	*i*Pn	**Pn**	**16 14 06.2**	**+0.9**
SJES					*e*Sn	**Sn**	**16 14 28.4**	**+0.8**
GRG	**Griva**	**1.76**	**108**		P	**Pn**	**16 14 04.8**	**-0.7**
GRG					S	**Sn**	**16 14 27.5**	**-0.4**
GRG	**Griva**	**1.76**	**108**		P	**Pn**	**16 14 05.2**	**-0.3**
GRG					S	**Sb**	**16 14 30.0**	**+0.6**
BARS	**Barje**	**1.77**	**43**	*e*	Pn	**Pn**	**16 14 06.1**	**+0.6**
BARS					*e*Sn	**Sb**	**16 14 30.2**	**+0.6**
VAY	**Valandovo**	**1.80**	**96**	*i*	Pn	**Pb**	**16 14 07.3**	**-0.6**
VAY				*i*	Sn	**Sn**	**16 14 28.6**	**-0.2**
VAY					*e*Lg	Lg	16 14 29.8	
	comp=N,205nm,0.9s							
VAY					*e*Lg	Lg	16 14 32.4	
	comp=E,159nm,0.6s							
KPRO	**Kipourio**	**1.80**	**150**		P	**Pn**	**16 14 06.0**	**0.0**
KPRO					S	**Sn**	**16 14 28.0**	**-0.9**
KPRO	**Kipourio**	**1.80**	**150**		P	**Pn**	**16 14 06.4**	**+0.3**
KPRO					S	**Sg**	**16 14 33.0**	**+0.1**
TREB	**Trebinje**	**1.81**	**312**		*e*Pn	**Pn**	**16 14 06.4**	**+0.2**
TREB					*e*Sn	**Sb**	**16 14 32.0**	**+1.1**
TREB	**Trebinje**	**1.81**	**312**		*e*Pn	**Pn**	**16 14 06.6**	**+0.4**
TREB					*e*Sn	**Sn**	**16 14 31.0**	**+1.8**
SELS	**Selova**	**1.83**	**22**		*e*Pn	**Pn**	**16 14 06.0**	**-0.4**
SELS					*e*Sn	**Sn**	**16 14 31.0**	**+1.4**
KEK	**Kerkira**	**1.83**	**189**		P	**Pn**	**16 14 06.4**	**+0.2**
KEK	**Kerkira**	**1.83**	**189**		P	**Sg**	**16 14 06.4**	**0.0**
KEK					S	**Sg**	**16 14 35.9**	**+2.0**
BRY	**Bratogost**	**1.84**	**319**	⇓	*i*Pn	**Pn**	**16 14 07.6**	**+0.9**
BRY					*i* Sn	**Sg**	**16 14 33.9**	**-0.3**
BRY	**Bratogost**	**1.84**	**319**	⇓	*i*Pn	**Pn**	**16 14 07.5**	**+0.9**
BRY					*e*Sn	**Sn**	**16 14 31.7**	**+1.6**
PLE	**Pljevlja**	**1.90**	**342**	⇓	*i*Pn	**Pn**	**16 14 08.6**	**+1.2**
PLE					*i* Sn	**Sg**	**16 14 35.7**	**-0.3**
UPM	**Unac-Piva**	**1.93**	**331**		*e*Pn	**Pn**	**16 14 09.0**	**+1.1**
UPM					*i* Sn	**Sg**	**16 14 36.3**	**-0.7**
UPM	**Unac-Piva**	**1.93**	**331**		*e*Pn	**Pn**	**16 14 09.1**	**+1.1**
UPM					*e*Sn	**Sn**	**16 14 33.4**	**+1.1**
JAN	**Janina**	**1.93**	**165**		P	**Pb**	**16 14 09.4**	**-0.8**
BOSS	**Bosilegrad**	**1.96**	**60**		*e*Pn	**Pn**	**16 14 07.6**	**-0.6**
BOSS					*e*Sn	**Sn**	**16 14 33.7**	**+0.8**
IGT	**Igoumenitsa**	**1.99**	**177**		P	**Pn**	**16 14 08.7**	**+0.1**
IGT	**Igoumenitsa**	**1.99**	**177**		*e*Pn	**Pn**	**16 14 09.2**	**+0.6**
IGT					*e*Sn	**Sb**	**16 14 35.4**	**-0.6**
IGT	**Igoumenitsa**	**1.99**	**177**		P	**Pn**	**16 14 09.4**	**+0.8**
MESG	**Mesagne**	**2.00**	**243**		P	**Pn**	**16 14 08.3**	**-0.4**
IVAS	**Ivanjica**	**2.05**	**359**		*e*Pn	**Pn**	**16 14 09.6**	**+0.1**
IVAS					*e*Sn	**Sb**	**16 14 38.4**	**+0.6**
KNT	**Kendrikon**	**2.07**	**99**		P	**Pn**	**16 14 08.8**	**-0.9**
KNT					S	**Sn**	**16 14 34.1**	**-1.4**
KNT	**Kendrikon**	**2.07**	**99**		P	**Pn**	**16 14 09.0**	**-0.7**
GOCS	**Kraljevo Serbi**	**2.10**	**14**		*e*Pn	**Pn**	**16 14 10.5**	**+0.3**
GOCS					*e*Sn	**Sb**	**16 14 38.7**	**-0.5**
PRMD	**Pramanda**	**2.11**	**161**		P	**Pn**	**16 14 12.0**	**+1.8**
RUDO	**Rudo**	**2.18**	**344**		*e*Pn	**Pn**	**16 14 12.6**	**+1.4**
RUDO					*e*Sn	**Sn**	**16 14 39.6**	**+1.4**
RUDO	**Rudo**	**2.18**	**344**		*e*Pn	**Pn**	**16 14 12.3**	**+1.1**
RUDO					*e*Sn	**Sn**	**16 14 39.3**	**+1.1**
KKB	**Krupnik**	**2.22**	**81**		P	**Pn**	**16 14 11.7**	**-0.1**
KKB					S	**Sn**	**16 14 38.8**	**-0.4**
KKB	**Krupnik**	**2.22**	**81**		*e*P	**Pn**	**16 14 11.5**	**-0.3**
TRAN	**Tran**	**2.25**	**54**		*e*P	**Pb**	**16 14 15.3**	**-0.3**
THE	**Thessaloniki**	**2.28**	**112**		P	**Pn**	**16 14 12.2**	**-0.3**
TETR	**Tetrakomo, Epi**	**2.33**	**159**		P	**Pb**	**16 14 15.7**	**-1.3**
HORT	**Hortiatis**	**2.39**	**112**		P	**Pn**	**16 14 12.7**	**-1.4**
BOVS	**Bovan**	**2.39**	**27**	⇑	P	**Pn**	**16 14 14.2**	**+0.2**
BOVS				⇑	S	**Sn**	**16 14 44.2**	**+0.9**
BOVS	**Bovan**	**2.39**	**27**		*e*Pn	**Pn**	**16 14 13.8**	**-0.2**
GRUS	**Gruza**	**2.40**	**9**		*e*Pn	**Pn**	**16 14 14.4**	**+0.3**
THL	**Klokotos Trika**	**2.40**	**144**		P	**Pn**	**16 14 16.2**	**+2.0**
BBLS	**Lazi&#263i**	**2.41**	**346**		*e*Pn	**Pn**	**16 14 16.2**	**+1.8**
BBLS	**Lazi&#263i**	**2.41**	**346**		*e*Pn	**Pn**	**16 14 15.5**	**+1.1**
BBLS					*e*Sn	**Sn**	**16 14 45.5**	**+1.5**
SOH	**Sokhos**	**2.49**	**105**		P	**Pn**	**16 14 15.4**	**0.0**
ZAPS	**Zavoj**	**2.52**	**45**		*e*Pn	**Pn**	**16 14 16.5**	**+0.7**
VTS	**Vitosha**	**2.52**	**63**		*e*P	**Pn**	**16 14 15.8**	**-0.1**
DIVS	**Divibare**	**2.58**	**357**		*e*Pn	**Pn**	**16 14 16.9**	**+0.2**
DIVS					*e*Sn	**Sn**	**16 14 49.6**	**+1.5**
PLNA	**Plana**	**2.59**	**67**		*e*P	**Pn**	**16 14 17.4**	**+0.4**
SRS	**Serrai**	**2.59**	**98**		*e*Pn	**Pn**	**16 14 16.6**	**-0.3**
SRS					*e*Sn	**Sn**	**16 14 49.1**	**+0.7**
SRS	**Serrai**	**2.59**	**98**		P	**Pn**	**16 14 15.9**	**-1.0**
MMB	**Musomishta**	**2.67**	**88**		*e*P	**Pb**	**16 14 21.6**	**-1.2**
TRUS	**Trudelj**	**2.70**	**3**		*e*Pn	**Pn**	**16 14 19.8**	**+1.4**
AMPL	**Ampelaki**	**2.71**	**163**		P	**Pn**	**16 14 20.3**	**+1.7**
TSLK	**Tsoukalades, L**	**2.72**	**172**		P	**Pn**	**16 14 18.8**	**+0.2**
PLG	**Polygyros**	**2.72**	**114**		P	**Pn**	**16 14 19.0**	**+0.4**
ZAGS	**Zajecar**	**2.74**	**33**		*e*Pn	**Pn**	**16 14 18.3**	**-0.5**
LKD2	**Lefkada island**	**2.76**	**172**		P	**Pn**	**16 14 19.0**	**-0.1**
MATE	**Matera**	**2.77**	**253**	⇑	P	**Pn**	**16 14 18.5**	**-0.9**
BLKB	**Belogradchik**	**2.79**	**40**	⇑	S	**Sn**	**16 14 54.1**	**+0.9**
NYDR	**Nydri-Lefkada**	**2.83**	**172**		P	**Pn**	**16 14 19.6**	**-0.6**
EVR	**Evrytania**	**2.88**	**154**		P	**Pn**	**16 14 22.2**	**+1.2**
BORS2	**Bor- Borsko je**	**2.90**	**27**		*e*Pn	**Pn**	**16 14 20.0**	**-1.0**
MAKR	**Makrakomi, Fth**	**2.92**	**149**		P	**Pn**	**16 14 22.3**	**+1.0**
EVGl	**Lefkada island**	**2.92**	**173**		P	**Pn**	**16 14 20.5**	**-0.8**
AGG	**Agios Georgios**	**2.99**	**146**		P	**Pn**	**16 14 23.4**	**+1.1**
**M

AF01					IAML				16 23 39.6	
	comp=N,2μm,0.6s									
PB03	**IPOC Station P**	**1.17 266**				**Pn**			**16 23 07.9**	**+0.3**
PB03	**IPOC Station P**	**1.17 266**⇑		*eP*		**Pn**			**16 23 08.0**	**+0.3**
PB03					*eS*	**Sn**			**16 23 25.4**	**-0.1**
PB03					IAML				16 23 26.9	
	comp=E,2μm,0.5s									
PB06	**IPOC Station P**	**1.24 234**				**Pn**			**16 23 08.9**	**+0.5**
PB06	**IPOC Station P**	**1.24 234**⇑		*eP*		**Pn**			**16 23 09.0**	**+0.6**
PB06					*eS*	**Sn**			**16 23 26.7**	**0.0**
PB06					IAML				16 23 30.0	
	comp=E,3μm,0.5s									
PB01	**IPOC Station P**	**1.31 315**				**Pn**			**16 23 09.8**	**+0.7**
PB01	**IPOC Station P**	**1.31 315**⇑		*eP*		**Pn**			**16 23 09.8**	**+0.7**
PB01					*eS*	**Sn**			**16 23 28.5**	**+0.5**
PB01					IAML				16 23 31.7	
	comp=N,1μm,0.3s									
PB07	**IPOC Station P**	**1.32 280**				**Pn**			**16 23 09.8**	**+0.5**
PB02	**IPOC Station P**	**1.46 296**				**Pn**			**16 23 11.3**	**+0.5**
PB02	**IPOC Station P**	**1.46 296**⇑		*eP*		**Pn**			**16 23 11.3**	**+0.5**
PB02					*eS*	**Sn**			**16 23 31.0**	**-0.1**
PB02					IAML				16 23 35.3	
	comp=N,2μm,0.3s									
PB05	**IPOC Station P**	**1.81 241**				**Pn**			**16 23 15.3**	**+0.2**
PB05	**IPOC Station P**	**1.81 241**⇑		*eP*		**Pn**			**16 23 15.0**	**0.0**
PB05					*eS*	**Sn**			**16 23 37.9**	**-0.7**
PB05					IAML				16 23 44.9	
	comp=N,2μm,0.3s									
PX03	**IPOC Station P**	**1.89 326**		*eP*		**Pn**			**16 23 16.8**	**+0.8**
PATCX	**Punta Patache**	**1.92 306**				**Pn**			**16 23 16.9**	**+0.4**
TA01	**Diego Aracena**	**2.10 311**				**Pn**			**16 23 19.1**	**+0.4**
TA01	**Diego Aracena**	**2.10 311**⇑		*eP*		**Pn**			**16 23 18.9**	**+0.2**
TA01					*eS*	**Sn**			**16 23 44.5**	**-0.6**
TA01					IAML				16 23 47.9	
	comp=N,2μm,0.3s									
HMBC	**Humberstone**	**2.13 322**				**Pn**			**16 23 19.3**	**+0.2**
HMBC	**Humberstone**	**2.13 322**⇑		*eP*		**Pn**			**16 23 19.5**	**+0.5**
HMBC					*eS*	**Sn**			**16 23 45.9**	**0.0**
HMBC					IAML				16 23 49.4	
	comp=N,1μm,0.4s									
TA02	**Huaiquique**	**2.28 318**⇑		*eP*		**Pn**			**16 23 21.7**	**+0.9**
TA02					*eS*	**Sn**			**16 23 48.7**	**-0.4**
TA02					IAML				16 23 55.3	
	comp=N,981nm,0.4s									
GO01	**Chusmiza**	**2.38 344**⇑		*eP*		**Pn**			**16 23 24.1**	**+1.4**
GO01					*eS*	**Sn**			**16 23 53.3**	**+1.1**
GO01					IAML				16 23 57.6	
	comp=N,628nm,0.4s									
PB11	**IPOC Station P**	**2.45 334**				**Pn**			**16 23 23.9**	**+0.7**
PB11	**IPOC Station P**	**2.45 334**⇑		*eP*		**Pn**			**16 23 24.0**	**+0.7**
PB11					*eS*	**Sn**			**16 23 54.1**	**+0.8**
PB11					IAML				16 23 56.1	
	comp=N,787nm,0.4s									
PB11					IAML				16 24 01.3	
	comp=E,906nm,0.5s									
YJA	**Yavi**	**2.77 95**		*eP*		**Pn**			**16 23 31.7**	**+4.1**
PSGCX	**Pisagua**	**2.81 327**				**Pn**			**16 23 27.2**	**-0.7**
PSGCX	**Pisagua**	**2.81 327**⇑		*eP*		**Pn**			**16 23 27.4**	**-0.5**
PSGCX					*eS*	**Sn**			**16 24 00.4**	**-1.1**
SALTA		**2.99 139**		*eP*		**Pn**			**16 23 33.4**	**+2.7**
SALTA		**2.99 139**		*eP*		**Pn**			**16 23 33.5**	**+2.8**
HJA	**Humahuaca**	**3.10 114**		*eP*		**Pn**			**16 23 35.3**	**+3.3**
PB14	**IPOC Station P**	**3.17 213**				**Pn**			**16 23 31.9**	**-0.9**
PB14	**IPOC Station P**	**3.17 213**		*eP*		**Pn**			**16 23 32.7**	**-0.1**
PB16	**IPOC Station P**	**3.74 345**		*eP*		**Pn**			**16 23 42.6**	**+1.9**
PB12	**IPOC Station P**	**3.76 332**				**Pn**			**16 23 39.7**	**-0.7**
PB12	**IPOC Station P**	**3.76 332**		*eP*		**Pn**			**16 23 39.4**	**-1.0**
SLA	**San Lorenzo**	**3.88 135**		*eP*		**Pn**			**16 23 45.7**	**+3.6**
AC01	**Pan de Azucar**	**4.58 204**				**Pn**			**16 23 49.5**	**-1.8**
FSA	**Cafayete**	**4.72 151**		*eP*		**Pn**			**16 23 56.1**	**+2.7**
AC02	**Maricunga**	**4.88 187**				**Pn**			**16 23 55.7**	**-0.1**
AC02	**Maricunga**	**4.88 187**		*eP*		**Pn**			**16 23 55.9**	**+0.1**
AC02					*eS*	**Sn**			**16 24 55.8**	**+4.4**
AC02					IAML				16 25 26.2	
	comp=Z,58nm,0.6s									
AHML	**Horco Molle**	**5.59 150**		*eP*		Pn			16 23 49.9	-15
LPAZ	**La Paz**	**5.66 4**		P		**Pn**			**16 24 09.0**	**+2.5**
	comp=Z,3.3nm,0.4s,baz=177,slow=6.8,SNR=12									
LPAZ					S	Sn			16 25 01.9	-8.9
	comp=Z,4.5nm,0.6s,baz=207,slow=9.0,SNR=4.2									
GO03	**Copiapo**	**5.82 195**		*eP*		**Pn**			**16 24 06.4**	**-1.7**
GO03					*eS*	Sn			16 24 55.6	-18
GO03					IAML				16 25 44.0	
	comp=Z,48nm,0.4s									
TINO	**Tinogasta**	**6.12 172**		*eP*		**Pn**			**16 24 12.4**	**+0.2**
VCA	**Vinchina**	**6.74 178**		*eP*		**Pn**			**16 24 21.0**	**+0.3**
VCA					*eS*	**Sn**			**16 25 37.5**	**+1.4**
VCA					IAML				16 26 25.4	
	comp=Z,10.0nm,1.5s									
AC05	**El Transito**	**7.02 193**				**Pn**			**16 24 21.4**	**-3.1**
LCO	**Las Campanas**	**7.29 195**		Pn		**Pn**			**16 24 24.2**	**-3.9**
BBSD	**Serra de San D**	**8.82 59**		*eP*		**Pn**			**16 24 47.1**	**-1.7**
SIV	**San Ignacio**	**9.20 51**		P		**Pn**			**16 24 52.2**	**-1.8**
	comp=Z,15nm,0.6s,baz=237,slow=10,SNR=94									
SIV					S	**Sn**			**16 26 28.3**	**-7.5**
	comp=Z,1.9nm,0.5s,baz=312,slow=22,SNR=6.0									
CFA	**Coronel Fontan**	**9.60 179**		P		**Pn**			**16 24 56.3**	**-2.9**
	comp=Z,1.1nm,0.4s,baz=355,slow=14,SNR=7.7									
CFA					S	**Sn**			**16 26 37.0**	**-8.3**
	comp=Z,1.0nm,0.3s,baz=53,slow=17,SNR=2.1									
MURT	**Porto Murtinho**	**10.12 90**		*eP*		**Pn**			**16 25 04.2**	**-2.1**
PTLB	**Pontes e Lacer**	**10.98 55**				**Pn**			**16 25 17.6**	**-0.4**
PTLB	**Pontes e Lacer**	**10.98 55**		*eP*		**Pn**			**16 25 16.9**	**-1.0**
BDQN	**Bodoquena, MS**	**11.06 84**		*eP*		**Pn**			**16 25 16.9**	**-2.1**
CPUP	**Villa Florida**	**11.08 115**		P		**Pn**			**16 25 17.4**	**-1.7**
	comp=Z,0.7nm,0.6s,baz=296,slow=7.9,SNR=1.2									
VILB	**Vilhena**	**11.96 43**				**Pn**			**16 25 31.6**	**+0.7**
VILB	**Vilhena**	**11.96 43**		*eP*		**Pn**			**16 25 27.8**	**-3.2**
AQDB	**Aquidauana**	**12.03 85**		*eP*		**Pn**			**16 25 31.6**	**-0.2**
AMBA	**Amambai (Brazi**	**12.52 97**		*eP*		**Pn**			**16 25 39.1**	**+0.8**
SALV	**Santo Antonio**	**13.53 66**		*eP*		**Pn**			**16 25 50.8**	**-0.7**
H03N1	**Juan Fernandez**	**14.67 217**		T		T			16 39 13.3	
	baz=40,slow=72,SNR=4.7									
H03N2	**Juan Fernandez**	**14.68 217**		T		T			16 39 12.5	
	baz=40,slow=72,SNR=3.7									
H03N3	**Juan Fernandez**	**14.69 217**		T		T			16 39 21.2	
	baz=40,slow=72,SNR=3.0									
TRCB	**Terra Rica**	**14.70 96**		P		**P**			**16 26 11.1**	**+1.6**
TRCB	**Terra Rica**	**14.70 96**		*eP*		**Pn**			**16 26 08.2**	**+1.8**
BI02	**San Fabin de**	**14.84 189**		Pn		**Pn**			**16 26 07.9**	**-0.3**
PDRB	**Porto dos Gac**	**15.25 49**		*eP*		**Pn**			**16 26 14.0**	**+0.6**
ITAB	**Concordia**	**15.77 113**		Pn		**Pn**			**16 26 20.6**	**+0.7**
ITAB					IAmb	IAmb			16 26 23.4	
	comp=Z,14nm,0.6s									
ITAB	**Concordia**	**15.77 113**		*eP*		**Pn**			**16 26 20.4**	**+0.6**
CPSB	**Cacapava Do Su**	**15.90 125**		*eP*		**Pn**			**16 26 20.3**	**-1.1**
LDASE	**Londrina, Braz**	**16.10 98**		*eP*		**P**			**16 26 25.7**	**+0.6**
CLDB	**Colider**	**16.42 50**		*eP*		**Pn**			**16 26 26.7**	**-1.3**
PLTB	**Pedras Altas**	**16.46 129**				**Pn**			**16 26 28.4**	**0.0**
PLTB					IAmb	IAmb			16 26 29.8	
	comp=Z,9.9nm,0.9s									
PLTB	**Pedras Altas**	**16.46 129**		*eP*		**Pn**			**16 26 27.5**	**-0.9**
FRTB	**Fartura**	**17.53 98**		*eP*		**Pn**			**16 26 41.9**	**+0.5**
MAJ01	**Sao Joao Batis**	**18.50 111**		*eP*		**P**			**16 26 51.4**	**-0.1**
BB19B	**Bebedouro**	**18.60 91**		*eP*		**P**			**16 26 53.2**	**+0.6**
PLCA	**Paso Flores**	**18.79 185**		P		**P**			**16 26 55.4**	**+0.9**
	comp=Z,1.0nm,0.5s,baz=360,slow=9.7,SNR=5.6									
SNDB	**Serra Nova Dou**	**19.20 62**		*eP*		**P**			**16 26 59.1**	**-0.1**
IPMB	**Ipameri, GO**	**19.47 82**		*eP*		**P**			**16 27 01.3**	**-0.8**
PET01	**Itanhaem-SP**	**19.65 101**		*eP*		**P**			**16 27 04.1**	**+0.2**
ITTB	**Itaituba**	**21.43 37**		*eP*		**P**			**16 27 22.2**	**-1.0**
JANB	**Januaria**	**23.92 77**		*eP*		**P**			**16 27 47.2**	**-0.5**
TXAR	**Lajitas Array**	**61.23 325**		P		**P**			**16 32 47.6**	**+0.4**
	comp=Z,0.1nm,0.6s,baz=134,slow=8.2,SNR=2.0									
	comp=Z,0.1nm,0.6s									
QSPA	**South Pole Qui**	**68.22 180**		P		**P**			**16 33 33.8**	**+1.6**
	comp=Z,1.4nm,0.5s,baz=221,slow=0.9,SNR=29									
	comp=Z,1.4nm,0.5s									
DBIC	**Dimbokro**	**68.50 73**		P		**P**			**16 33 34.9**	**+0.3**
	comp=Z,2.8nm,0.6s,baz=254,slow=8.0,SNR=4.0									
	comp=Z,2.8nm,0.6s									
PDAR	**Pinedale Array**	**74.71 330**		P		**P**			**16 34 12.2**	**+0.7**
	comp=Z,0.2nm,0.7s,baz=124,slow=7.4,SNR=2.4									
	comp=Z,0.2nm,0.7s									
VNDA	**Vanda**	**76.45 190**		P		**P**			**16 34 23.1**	**+2.4**
	comp=Z,1.0nm,0.9s,baz=134,slow=4.5,SNR=3.8									
	comp=Z,1.0nm,0.9s									
TORD	**Torodi Ar. Bea**	**77.15 70**		P		**P**			**16 34 25.8**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=251,slow=6.0,SNR=8.7									
	comp=Z,1.0nm,0.5s									
YKA	**Yellowknife Ar**	**91.76 340**		P		**P**			**16 35 39.8**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=135,slow=3.7,SNR=9.6									
	comp=Z,0.3nm,0.6s									
ASAR	**Alice Springs**	**129.67 207**		PKP		**PKiKP**			**16 41 41.5**	**+0.3**
	comp=Z,0.5nm,0.9s,baz=127,slow=1.8,SNR=6.1									
WRA	**Warramunga Arr**	**132.74 210**		PKP		**PKiKP**			**16 41 48.0**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=167,slow=1.7,SNR=8.2									
HHC	**Hu-ho-hao-te**	**161.18 360**		*eP*		**PKPdf**			**16 42 32.3**	**+1.1**
PZH	**PanZhiHua**	**170.02 61**		PKP		**PKPdf**			**16 42 36.5**	**-2.4**

IDC ***31*** *16:38:42.2±0.7,24°.71N×128°.05E, h0km, mb3.8/15, mbtmp3.8/20, ML3.1/4, MS3.1/9, Error ellipse: s-maj=24.7km s-min=13.6km az=80.0*

NEIC ***31*** *16:38:44.5±0.9,24°.74N±0°.07×128°.01E±0°.09, h10km±1km, mb4.5/27, Error ellipse: s-maj=15.8km s-min=9.3km az=129.0*

JMA ***31*** *16:38:45.3±0.3,25°.N±1°×12°.8E±°, h81km, MV3.5/23, NEAR OKINAWAJIMA ISLAND*

NIED ***31*** *16:38:45.3,24°.81N×127°.89E, h81km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=0.76; Mθθ=0.65; Mφφ=0.11; Mrθ=0.66; Mrφ=0.22; Mθφ=0.43; Fault plane solution: M0 1.09000×10¹⁵ NP1:φs78.00000°, δ23.00000°, λ=-74.00000°. NP2:φs241.00000°, δ68.00000°, λ=-97.00000°.*

ISC 31 16:38:43.7±1.3, 24°.74N±0°.04×127°.98E±0°.04, h11km±8km, n98, σ1s80/101, mb4.4/34, MS3.2/8, 1C, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JJT3	**Tamagusuku3**	**1.41**	**353**	P		**Pb**	**16 39 09.0**	**-1.1**
JJT3				*eS*		**Sg**	**16 39 26.2**	**-3.0**
JNTH	**Nagotoyohara**	**1.78**	**1**	P		**Pn**	**16 39 13.4**	**-1.0**
JKE	**Kume jima 2**	**1.92**	**326**	P		**Pn**	**16 39 15.6**	**-0.7**
JKE				*eS*		**Sn**	**16 39 38.0**	**-2.5**
JAGN	**Aguni-jima**	**1.96**	**340**	*eP*		**Pn**	**16 39 16.4**	**-0.5**
JOW	**Kunigami**	**2.10**	**7**	Pn		**Pn**	**16 39 18.3**	**-0.7**
	22nm,0.3s,baz=162,slow=17,SNR=31							
JOW					Sn	**Sn**	**16 39 40.8**	**-4.4**
	22nm,0.3s,baz=111,slow=28,SNR=14							
	61nm,0.3s							
JOW	**Kunigami**	**2.10**	**7**	P		**Pn**	**16 39 18.2**	**-0.7**
JOW	**Kunigami**	**2.10**	**7**			**Pn**	**16 39 18.0**	**-0.9**
JOW	**Kunigami**	**2.10**	**7**	*eP*		**Pn**	**16 39 18.2**	**-0.7**
JYRO	**Yoronjima**	**2.32**	**10**	*eP*		**Pn**	**16 39 21.2**	**-0.7**
JOGS	**Gusukube**	**2.34**	**271**	*eP*		**Pn**	**16 39 21.5**	**-0.7**
JMJ2	**Miyako jima3**	**2.41**	**271**	*eP*		**Pn**	**16 39 22.4**	**-0.7**
JMJ2				*eS*		**Sn**	**16 39 50.1**	**-2.6**
JMJ	**Miyako jima 2**	**2.45**	**272**	P		**Pn**	**16 39 22.4**	**-1.2**
JIKM	**Ikemajima**	**2.49**	**275**	*eP*		**Pn**	**16 39 23.3**	**-0.9**
JIKM				*eS*		**Sn**	**16 39 51.6**	**-3.1**
JOKE	**Okinoerabujima**	**2.67**	**11**	*eS*		**Sn**	**16 39 55.2**	**-3.9**
JTJ	**Tarama**	**2.98**	**269**	*eP*		**Pn**	**16 39 29.8**	**-1.2**
JTJ				*eS*		**Sn**	**16 40 03.4**	**-3.4**
JMZ	**Minamidaito 2**	**3.13**	**69**	P		**Pn**	**16 39 30.3**	**-2.7**
JMZ	**Minamidaito 2**	**3.13**	**69**	S		**Sn**	**16 40 07.0**	**-3.3**
JMZ	**Minamidaito 2**	**3.13**	**69**	Pn		**Pn**	**16 39 30.0**	**-3.0**
JMZ	**Minamidaito 2**	**3.13**	**69**	*eP*		**Pn**	**16 39 29.9**	**-3.0**
JTK	**Tokunoshima**	**3.16**	**16**	*eP*		**Pn**	**16 39 32.8**	**-0.6**
JKDJ	**Kitadaitoujima**	**3.23**	**67**	*eX*			16 39 31.6	
JKDJ				*eS*		**Sn**	**16 40 08.7**	**-4.3**
JISG	**Ishigakijimahi**	**3.34**	**268**	*eP*		**Pn**	**16 39 34.5**	**-1.5**
JIJ	**Ishigaki jima**	**3.52**	**265**	*eP*		**Pn**	**16 39 36.9**	**-1.5**
JIJ				*eS*		**Sn**	**16 40 14.8**	**-5.1**
JAMN	**Amaminishikomi**	**3.65**	**17**	*eP*		**Pn**	**16 39 40.9**	**+0.7**
JKRS	**Kuro-shima**	**3.65**	**263**	*eP*		**Pn**	**16 39 39.2**	**-1.0**
NACB	**Ninganchiao**	**5.85**	**266**	P		**Pn**	**16 40 07.9**	**-2.5**
NACB	**Ninganchiao**	**5.85**	**266**			**Pn**	**16 40 08.1**	**-2.3**
YHNB	**Yeheng**	**6.01**	**271**	P		**Pn**	**16 40 11.3**	**-1.4**
YHNB	**Yeheng**	**6.01**	**271**	Pn		**Pn**	**16 40 12.4**	**-0.3**
YULB	**Yu-li**	**6.25**	**259**	P		**Pn**	**16 40 12.9**	**-3.1**
YULB	**Yu-li**	**6.25**	**259**			**Pn**	**16 40 12.9**	**-3.1**
SSLB	**Suanglung**	**6.48**	**263**	P		**Pn**	**16 40 16.8**	**-2.4**
SSLB	**Suanglung**	**6.48**	**263**			**Pn**	**16 40 16.6**	**-2.6**
TPUB	**Ta-pu**	**6.87**	**260**	P		**Pn**	**16 40 23.2**	**-1.3**
TPUB	**Ta-pu**	**6.87**	**260**			**Pn**	**16 40 22.9**	**-1.6**
JNU	**Nakatsue**	**8.73**	**16**	Pn		**Pn**	**16 40 50.2**	**+0.2**
	0.3nm,0.3s,baz=159,slow=7.2,SNR=5.6							
JNU					Sn	**Sn**	**16 42 24.6**	**-4.0**
	0.2nm,0.3s,baz=99,slow=20,SNR=1.1							
	12nm,0.9s							
NJ2	**Nanjing**	**10.85**	**314**	*eP*		**Pn**	**16 41 18.8**	**-0.1**
NJ2				pmax	pmax			
	comp=Z,14nm,0.5s							
NJ2				pmax	pmax			
	comp=Z,280nm,4.9s							
NJ2				LR	LR			
	comp=N,370nm,5.2s							
NJ2				LR	LR			
	comp=E,470nm,5.7s							
NJ2				LR	LR			
	comp=Z,440nm,13.7s							
KSRS	**Korea Array**	**12.68**	**360**	Pn		**Pn**	**16 41 44.5**	**+0.5**
	comp=Z,1.6nm,1.0s,baz=181,slow=14,SNR=5.6							
KSRS				LR		LR	16 46 46.8	
	comp=Z,31nm,18.8s,baz=180,slow=38							
MJAR	**Matsushiro Arr**	**14.68**	**34**	Pn		**Pn**	**16 42 11.8**	**+0.3**
	baz=207,slow=6.8,SNR=1.4							
	comp=Z,1.2nm,0.9s							
LYN	**LuoYang**	**16.64**	**310**	P		**P**	**16 42 39.5**	**+0.1**
LYN				PP		**pwP**	**16 42 51.3**	**+1.5**
LYN				pmax	pmax			
	comp=Z,39nm,1.1s							
LYN				LR	LR			
	comp=N,190nm,7.9s							
LYN				LR	LR			
	comp=E,260nm,11.0s							
HNS	**HongShan**	**16.97**	**321**	⇑P		**P**	**16 42 43.0**	**0.0**
HNS				pmax	pmax			
	comp=Z,6.0nm,0.6s							
HNS				LR	LR			
	comp=N,240nm,11.6s							
HNS				LR	LR			
	comp=E,100nm,9.8s							
HNS				LR	LR			
	comp=Z,190nm,12.9s							
XAN	**Xi'an**	**19.00**	**304**	P		**Pn**	**16 43 09.0**	**+2.8**
XAN				pmax	pmax			
	comp=Z,9.0nm,0.5s							
CN2	**Changchun**	**19.13**	**354**	P		**Pn**	**16 43 09.0**	**+1.3**
CN2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
GUMO	**Guam**	**19.40**	**122**	P		**P**	**16 43 09.7**	**-0.2**
USRK	**Ussuriysk Ar.**	**19.69**	**9**	P		**Pn**	**16 43 13.5**	**-0.8**
	baz=177,slow=12,SNR=3.5							
	comp=Z,1.4nm,0.7s							
XLT	**XiLinHaoTe**	**21.45**	**336**	*eP*		**P**	**16 43 37.0**	**+4.9**
XLT				pmax	pmax			
	comp=Z,9.0nm,1.4s							
BTO2	**Baotou**	**21.99**	**321**	*eP*		**P**	**16 43 38.5**	**+0.5**
BTO2				S		**S**	**16 47 42.8**	**+2.1**
BTO2				pmax	pmax			
	comp=Z,11nm,0.6s							
BTO2				pmax	pmax			
	comp=Z,100nm,3.9s							
BTO2				LR	LR			
	comp=N,460nm,9.8s							
BTO2				LR	LR			
	comp=E,310nm,7.7s							
BTO2				LR	LR			
	comp=Z,280nm,5.7s							
PZH	**PanZhiHua**	**23.71**	**280**	P		**P**	**16 43 57.0**	**+1.0**
PZH				pmax	pmax			
	comp=Z,10.0nm,0.5s							
TOLI2	**Tolitoli**	**24.50**	**198**	P		**P**	**16 44 02.6**	**-0.6**
TOLI2				IAmb	IAmb		16 44 03.9	
	comp=Z,26nm,1.5s							
KLR	**Kul'dur**	**24.63**	**6**	LR		LR	16 52 21.3	
	comp=Z,22nm,20.6s,baz=278,slow=33							
SIJI	**Sorong**	**25.65**	**172**	LR		LR	16 53 55.4	
	comp=Z,29nm,20.2s,baz=154,slow=36							
LUWI	**Luwuk**	**26.12**	**192**	P		**P**	**16 44 18.2**	**+0.4**
LUWI				IAmb	IAmb		16 44 23.8	
	comp=Z,14nm,0.9s							
CMAR	**Chiang Mai Arr**	**27.68**	**263**	P		**P**	**16 44 33.5**	**+1.5**
	comp=Z,0.2nm,0.4s,baz=74,slow=4.3,SNR=2.3							
	comp=Z,0.2nm,0.4s							
GTA2	**Gaotai**	**27.92**	**309**	*eP*		**P**	**16 44 34.0**	**-0.2**
GTA2				pmax	pmax			
	comp=Z,2.0nm,0.8s							
BKB	**Balikpapan**	**27.99**	**204**	P		**P**	**16 44 33.1**	**-1.6**
SONM	**Songino Array**	**28.70**	**329**	P		**P**	**16 44 42.7**	**+1.7**
	comp=Z,0.3nm,0.4s,baz=148,slow=8.5,SNR=3.0							
SONM				LR		LR	16 57 05.2	
	comp=Z,58nm,19.1s,baz=124,slow=38							
	comp=Z,0.3nm,0.4s							
SHL	**Shillong**	**32.63**	**279**			**P**	**16 45 16.6**	**+0.7**
TLY	**Talaya**	**32.71**	**332**	LR		LR	16 59 54.6	
	comp=Z,42nm,18.0s,baz=142,slow=39							
YAK	**Yakutsk**	**37.30**	**1**	LR		LR	17 00 15.5	
	comp=Z,21nm,18.4s,baz=278,slow=35							
MTN	**Manton Dam**	**37.48**	**175**	P		**P**	**16 45 56.6**	**-0.9**
MTN				IAmb		IAmb	16 45 57.0	
	comp=Z,8.8nm,1.3s							
GSI	**Gunungsitoli**	**37.49**	**236**	P		**P**	**16 45 57.2**	**-0.6**
GSI				IAmb		IAmb	16 46 09.6	
	comp=Z,9.1nm,1.3s							
WMQ	**Urumqi**	**37.89**	**310**	*eP*		**P**	**16 46 00.0**	**-1.0**
WMQ				pP		pP	16 46 06.5	+4.3
WMQ				PcP		**PcP**	**16 48 19.8**	**+2.8**
WMQ				pmax	pmax			
	comp=Z,8.0nm,0.7s							
PMG	**Port Moresby**	**38.75**	**149**	LR		LR	16 59 58.6	
	comp=Z,41nm,20.9s,baz=316,slow=33							
KNRA	**Kununurra**	**40.17**	**179**	P		**P**	**16 46 19.8**	**-0.3**
KNRA				IAmb		IAmb	16 46 20.5	
	comp=Z,7.6nm,0.7s							
MKAR	**Makanchi Array**	**42.38**	**313**	P		**P**	**16 46 38.2**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=96,slow=9.2,SNR=9.1							
	comp=Z,1.5nm,0.7s							
ZALV	**Zalesovo Beam**	**43.31**	**324**	P		**P**	**16 46 46.1**	**+0.7**
	comp=Z,1.5nm,0.6s,baz=110,slow=9.1,SNR=7.7							
ZALV				LR		LR	17 05 16.4	
	comp=Z,65nm,18.3s,baz=52,slow=37							
	comp=Z,1.5nm,0.6s							
WB0	**Warramunga Arr**	**44.67**	**171**			**P**	**16 46 56.3**	**-0.5**
WB0				IAmb		IAmb	16 46 57.2	
	comp=Z,9.5nm,0.7s							
WRAB	**Tennant Creek**	**44.83**	**171**	P		**P**	**16 46 57.6**	**-0.4**
WRAB				IAmb		IAmb	16 46 58.6	
	comp=Z,7.6nm,0.7s							
WRA	**Warramunga Arr**	**44.84**	**172**	P		**P**	**16 46 57.9**	**-0.2**
	comp=Z,9.5nm,0.6s,baz=352,slow=8.6,SNR=114							
WRA	**Warramunga Arr**	**44.84**	**172**	IAmb		IAmb	16 46 58.8	
	comp=Z,1.4nm,0.7s							
WR8	**Warramunga Ar**	**44.87**	**171**			**P**	**16 46 58.1**	**-0.2**
KURK	**Kurchatov**	**45.76**	**318**	P		**P**	**16 47 05.3**	**+0.2**
KURBB	**Kurchatov Arra**	**45.79**	**318**	P		**P**	**16 47 05.6**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=107,slow=9.0,SNR=5.3							
	comp=Z,0.3nm,0.4s							
PSA00	**Pilbara Seismi**	**46.70**	**190**	P		**P**	**16 47 12.2**	**-0.6**
PSA00				IAmb		IAmb	16 47 28.9	
	comp=Z,7.0nm,1.4s							
CTAO	**Charters Tower**	**47.97**	**157**	P		**P**	**16 47 23.0**	**+0.3**
ASAR	**Alice Springs**	**48.46**	**173**	P		**P**	**16 47 26.6**	**+0.1**
	comp=Z,2.7nm,0.7s,baz=4.1,slow=9.8,SNR=66							
	comp=Z,2.7nm,0.7s							
NRIK	**Noril'sk**	**50.60**	**343**	P		**P**	**16 47 42.7**	**+0.4**
	comp=Z,1.3

*SNET **31** 16:44:17.0±1.2,13°.84N×90°.91W,h91km±18km,ML3.5, Presumed earthquake*
ISC 31 16:44:16.7±2.8,13°.5N±0°.2×91°.1W±0°.1,h29km,n20, σ1s12/22,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FG8	Yepocapa, Chim	0.96	33	*i* P	Pn	16 44 33.1	-1.3
STG5	El Palmar, Qui	0.97	346	*i* P	Pb	16 44 36.3	+1.2
FG16	Alotenango, Sa	1.00	35	*i* P	Pn	16 44 33.9	-1.1
STG8	El Palmar, Qui	1.02	346	*i* P	Pb	16 44 37.4	+1.4
PCG5	San Vicente Pa	1.04	43	*i* P	Pn	16 44 33.2	-2.2
SOKI	Kika Raxquin	1.39	348	*i* P	Pn	16 44 38.7	-1.9
LOAL	Lomas de Alarc	1.40	67	*e*P	Pn	16 44 39.7	-0.6
SLOZ	Alcaldia de Sa	1.40	66	*e*P	Pn	16 44 39.3	-1.1
SBLS	San Blas	1.49	75	*e*P	Pn	16 44 40.5	-1.3
SBLS				*e*S	Sn	16 45 00.2	-0.2
SNJE	San Jose	1.51	74	*e*P	Pn	16 44 40.9	-1.2
JAYA	Jayaque - finc	1.62	83	*i* P	Pn	16 44 42.2	-1.3
JAYA				*i* S	Sn	16 45 03.3	-0.2
JAYA	comp=E,849nm,0.2s			IAML		16 45 08.5	
JAYA	Jayaque - finc	1.62	83	*e*P	Pn	16 44 42.3	-1.2
APG	El Apazote	1.66	22	*i* P	Pn	16 44 44.3	+0.1
PMON	Piamonte	1.76	81	*e*P	Pn	16 44 44.5	-0.8
MTO3	Montecristo	1.94	61	*i* P	Pn	16 44 47.7	-0.2
MTO3	Montecristo	1.94	61	*e*P	Pn	16 44 47.6	-0.2
LFRS	El Faro	1.99	85	*e*P	Pn	16 44 48.5	-0.1
ESQI	Esquipulas	2.04	57	*e*P	Pn	16 44 49.1	0.0
SJTE	Alcalda de S	2.05	85	*e*P	Pn	16 44 49.1	-0.2
COEG	Centro de Oper	2.17	85	*e*P	Pn	16 44 50.8	-0.2

*IDC **31** 16:55:13.8±0.8,24°.75N×128°.18E,h0km,mb3.6/9, mbtmp3.6/13,ML3.3/4,MS2.6/4, Error ellipse: s-maj=28.8km s-min=15.8km az=85.0*
*JMA **31** 16:55:16.7±0.3,25°.1N±1°×12°.8E±°,h72km,MV3.3/24,FAR S OFF OKINAWAJIMA*
ISC 31 16:55:13.6±3.1,24°.76N±0°.07×127°.92E±0°.06,h1km±19km, n41,σ1s81/44,mb3.6/10,Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT3	Tamagusuku3	1.39	355	*e*P	Pn	16 55 40.4	+0.3
JJT3				S	Sg	16 55 57.7	-0.5
JNTH	Nagotoyohara	1.76	3	P	Pn	16 55 44.7	-0.5
JKE	Kume jima 2	1.87	327	P	Pn	16 55 47.0	+0.3
JKE				S	Sn	16 56 08.9	-2.0
JAGN	Aguni-jima	1.92	342	P	Pn	16 55 48.2	+0.7
JOW	Kunigami	2.09	9	Pn	Pn	16 55 49.9	0.0
JOW	31nm,0.3s,baz=173,slow=13,SNR=77			Sn	Sn	16 56 12.9	-3.6
JOW	Kunigami	2.09	9	*e*P	Pn	16 55 49.9	0.0
JOW	22nm,0.3s,baz=128,slow=26,SNR=14			*e*S	Sn	16 56 14.2	-2.4
JIH	59nm,0.3s Iheya	2.27	1	*e*P	Pn	16 55 52.7	+0.5
JOGS	Gusukube	2.28	271	*e*P	Pn	16 55 52.9	+0.5
JYRO	Yoronjima	2.31	12	*e*P	Pn	16 55 52.6	-0.2
JMJ2	Miyako jima3	2.35	270	P	Pn	16 55 53.8	+0.3
JIKM	Ikemajima	2.43	274	*e*P	Pn	16 55 55.0	+0.5
JIKM				*e*S	Sn	16 56 23.8	-1.0
JTJ	Tarama	2.93	268	*e*P	Pn	16 56 01.2	0.0
JTK	Tokunoshima	3.16	17	*e*P	Pn	16 56 05.2	+0.7
JMZ	Minamidaito 2	3.17	70	*e*P	Pn	16 56 01.2	-3.5
JKDJ	Kitadaitoujima	3.28	68	*e*P	Pn	16 56 03.0	-3.1
JISG	Ishigakijimahi	3.29	268	*e*P	Pn	16 56 05.6	-0.6
JISG				*e*S	Sn	16 56 41.9	-4.0
JIJ	Ishigaki jima	3.46	264	*e*S	Sn	16 56 46.2	-4.0
JKRS	Kuro-shima	3.60	263	*e*P	Pn	16 56 10.5	0.0
JAMN	Amaminishikomi	3.65	18	*e*P	Pn	16 56 12.2	+1.0
JTAJ	Takarajima	4.53	14	*e*P	Pn	16 56 23.7	+0.4
NACB	Ninganchiao	5.79	266	P	Pn	16 56 39.7	-1.0
YHNB	Yeheng	5.95	271	P	Pn	16 56 46.9	+3.9
YULB	Yu-li	6.20	259	P	Pn	16 56 44.2	-2.2
SSLB	Suanglung	6.43	263	P	Pn	16 56 48.0	-1.5
TPUB	Ta-pu	6.82	259	P	Pn	16 56 54.0	-0.9
JNU	Nakatsue	8.73	17	Pn	Pn	16 57 20.3	-0.8
KSRS	0.2nm,0.3s,baz=191,slow=10,SNR=3.3 8.8nm,0.9s Korea Array	12.66	0	Pn	Pn	16 58 13.4	-1.4
KSRS	0.1nm,0.3s,baz=185,slow=13,SNR=2.6			LR	LR	17 02 45.0	
GUMO	comp=Z,27nm,21.6s,baz=190,slow=36 0.5nm,0.6s Guam	19.46	122	LR	LR	17 07 11.2	
USRK	comp=Z,16nm,18.6s,baz=80,slow=37 Ussuriysk Ar.	19.68	9	P	P	16 59 44.6	+0.5
KLR	0.1nm,0.3s,baz=198,slow=9.1,SNR=2.8 0.8nm,0.7s Kul'dur	24.61	6	LR	LR	17 11 04.3	
SIJI	comp=Z,16nm,18.6s,baz=78,slow=39 Sorong	25.68	172	LR	LR	17 09 40.1	
CMAR	comp=Z,17nm,19.5s,baz=152,slow=34 Chiang Mai Arr	27.62	263	P	P	17 01 06.2	+3.3
MKAR	0.3nm,0.6s,baz=103,slow=15,SNR=2.1 0.3nm,0.6s Makanchi Array	42.32	313	P	P	17 03 10.4	+1.4
ZALV	0.9nm,0.7s,baz=93,slow=10,SNR=5.6 0.9nm,0.7s Zalesovo Beam	43.25	324	P	P	17 03 17.3	+0.8
WRA	0.6nm,0.5s,baz=64,slow=5.0,SNR=1.9 0.6nm,0.5s Warramunga Arr	44.87	171	P	P	17 03 29.1	-0.6
KURBB	4.7nm,0.6s,baz=352,slow=8.6,SNR=87 Kurchatov Arra	45.73	318	P	P	17 03 37.6	+1.3
ASAR	0.4nm,0.7s,baz=103,slow=8.7,SNR=4.2 0.4nm,0.7s Alice Springs	48.48	173	P	P	17 03 58.1	0.0
NRIK	1.1nm,0.6s,baz=1.9,slow=9.2,SNR=49 1.1nm,0.6s Noril'sk	50.56	343	P	P	17 04 14.4	+0.9
BVAR	0.9nm,0.5s,baz=116,slow=7.2,SNR=4.5 0.9nm,0.5s Borovoye Array	51.19	319	P	P	17 04 20.5	+2.1
ILAR	0.6nm,0.7s,baz=92,slow=4.5,SNR=3.5 0.6nm,0.7s Eielson Array	65.86	28	P	P	17 06 00.6	0.0
YKA	0.3nm,0.9s,baz=256,slow=4.7,SNR=2.9 0.3nm,0.9s Yellowknife Ar	79.97	25	P	P	17 07 24.8	+0.5
	0.2nm,0.7s,baz=302,slow=6.0,SNR=4.3 0.2nm,0.7s						

*IDC **31** 16:58:44.8±2.2,33°.60S×179°.46W,h0km,mb3.5/3, mbtmp3.5/4,ML3.4/1, Error ellipse: s-maj=52.6km s-min=36.6km az=65.0*
*WEL **31** 16:58:49.5±1.0,34°.5S±8°×17°9W±1°4,h135km±45km, M4.0/7,mB4.3/2,ML3.8/9,MLv4.0/7,Mw(mB)3.4/2, Error ellipse: s-maj=19.9km s-min=8.2km az=112.8,confirmed*
ISC 31 16:58:50.9±1.1,33°.87S±0°.07×179°.2W±0°.1,h50km,n30, σ1s51/34,mb3.1/3,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	4.39	206	P	Pn	16 59 55.2	+0.1
WMGZ				S	Sn	17 00 46.9	+1.9
PKGZ	Pakihiroa	4.56	208	P	Pn	16 59 56.7	-0.7
PKGZ				S	Sn	17 00 49.3	+0.2
HAZ	Te Kaha	4.59	211	P	Pn	16 59 57.9	+0.1
HAZ				S	Sn	17 00 52.3	+2.6
PUZ	Puketiti	4.67	205	P	Pn	16 59 59.8	+0.8
PUZ				S	Sn	17 00 49.8	-2.1
GLKZ	Green Lake	4.72	14	P	Pn	16 59 59.3	-0.3
RUGZ	Raukumara Rang	4.81	211	P	Pn	17 00 00.5	-0.4
TWGZ	Tauwhareparae	4.87	207	P	Pn	17 00 01.2	-0.5
TWGZ				S	Sn	17 00 56.9	+0.2
CNGZ	Carnagh Statio	5.06	204	P	Pn	17 00 03.3	-0.9
TKGZ	Te Karaka	5.15	207	P	Pn	17 00 02.4	-3.0
TKGZ				S	Sn	17 01 03.6	+0.1
MWZ	Matawai	5.18	210	P	Pn	17 00 04.3	-1.7
URZ	Urewera	5.30	213	Pn	Pn	17 00 04.9	-2.7
URZ	1.3nm,0.3s,baz=27,slow=16,SNR=13			Sn	Sn	17 01 04.3	-3.1
URZ	1.8nm,0.3s,baz=312,slow=20,SNR=6.9 2.5nm,0.3s Urewera	5.30	213	P	Pn	17 00 06.1	-1.4
RAGZ	Rawiri	5.37	210	P	Pn	17 00 07.6	-1.0
RIGZ	Rimuhau	5.42	206	P	Pn	17 00 08.8	-0.3
MKAZ	Moumakai	5.62	233	P	Pn	17 00 13.6	+1.7
MUGZ	Murupara	5.64	214	P	Pn	17 00 11.0	-1.1
WCZ	Waipu Caves	5.69	247	P	Pn	17 00 13.4	+0.5
RAHZ	Arahi	5.86	210	P	Pn	17 00 15.4	+0.1
MTHZ	Maungataniwha	5.91	212	P	Pn	17 00 15.1	-0.9
OUZ	Omahuta	6.10	255	P	Pn	17 00 18.3	-0.1
BKZ	Black Stump Fm	6.32	212	P	Pn	17 00 20.1	-1.5
ETVZ	East Tongariro	6.67	216	P	Pn	17 00 26.2	-0.2
OTVZ	Oturere	6.71	217	P	Pn	17 00 26.2	-0.8
ASAR	Alice Springs	42.04	271	P	P	17 06 36.8	-1.1
WRA	0.3nm,0.7s,baz=118,slow=7.9,SNR=4.3 0.3nm,0.7s Warramunga Arr	43.34	276	P	P	17 06 47.1	-1.3
QSPA	0.1nm,0.3s,baz=116,slow=8.4,SNR=8.0 0.1nm,0.3s South Pole Qui	56.25	180	P	P	17 08 29.1	+3.2
H03N3	1.9nm,1.1s,baz=59,slow=5.9,SNR=2.3 1.9nm,1.1s Juan Fernandez	79.61	123	T	T	18 39 18.2	
H03N2	baz=238,slow=72,SNR=9.5 Juan Fernandez	79.61	123	T	T	18 39 12.4	
H03N1	baz=238,slow=72,SNR=6.2 Juan Fernandez	79.63	123	T	T	18 39 22.3	
FINES	baz=238,slow=72,SNR=10 FINESS Array B	148.00	337	PKPbc	PKPbc	17 18 29.0	-1.0
	2.0nm,0.8s,baz=11,slow=2.1,SNR=1.4						

*CATAC **31** 17:14:41.4±1.0,2°.5S±2°×8°0W±°,h26km±8km,M3.9/7, MLv3.9/7,Error ellipse: s-maj=10.6km s-min=4.9km az=103.2,confirmed*
*IGQ **31** 17:14:42.9±0.3,2°.5S±2°×8°0W±°,h46km±4km,M3.8/22, Mjma3.6/22,ML4.0/21,MLv3.6/22,Ms(BB)3.9/9*
ISC 31 17:14:42.6±1.3,1°.89S±0°.03×79°.97W±0°.04,h64km±8km, n55,σ1s30/73,Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGUAY	Guayaquil	0.17	174	P	Pn	17 14 52.2	-0.2
GYE3	Ecuador-Guayaq	0.27	165	P	Pn	17 14 51.8	-1.2
GYE3				S	Sn	17 15 00.2	-0.3
AMIL	Milagro (Trans	0.45	123	P	Pn	17 14 54.7	+0.3
AMIL				S	Sn	17 15 05.3	+2.3
CSOL	CASCOL	0.53	295	P	Pn	17 14 55.1	-0.1
MILO	Milagro-Astudi	0.57	133	P	Pn	17 14 54.7	-1.0
MILO				S	Sn	17 15 05.3	+0.1
JIPI	JIPIJAPA	0.79	312	P	Pn	17 14 58.2	0.0
MORR	Playas El Morr	0.83	206	P	Pn	17 14 59.3	+0.6
PPLP	Puerto Lpez	0.87	293	P	Pn	17 14 58.9	-0.3
PPLP	Puerto Lpez	0.87	293	P	Pn	17 14 59.0	-0.3
PPLP				S	Sn	17 15 12.5	+0.9
COHC	Cochancay	0.92	129	P	Pn	17 14 58.6	-1.2
COHC	Cochancay	0.92	129	P	Pn	17 14 58.7	-1.2
COHC	Cochancay	0.92	129	P	Pn	17 14 58.6	-1.2
COHC				S	Sn	17 15 11.4	-1.1
JSCH	Cashca Tororas	1.01	80	P	Pn	17 14 59.8	-1.4
SALI	Salinas	1.06	254	P	Pn	17 15 01.7	0.0
ISPG	Isla Puna-Puer	1.09	190	P	Pn	17 15 03.7	+1.7
PECV	Mancha de Ca P	1.11	356	P	Pn	17 15 02.5	+0.3
TAMH	Tambohuasha Ch	1.24	74	P	Pn	17 15 03.5	-0.8
IGUA	Igualata	1.39	73	P	Pn	17 15 05.8	-0.7
PCRA	Pucara 2	1.39	160	P	Pn	17 15 05.1	-1.3
BMAS	Trigal station	1.54	76	P	Pn	17 15 04.9	-3.4
BPAT	Tungurahua Vol	1.58	76	P	Pn	17 15 08.4	-0.6
SANGA	Volcan Sangay	1.61	96	P	Pn	17 15 08.8	-0.4
ARNL	Arenillas	1.65	183	P	Pn	17 15 09.0	-0.4
ARNL				S	Sn	17 15 28.8	-1.0
ARNL	Arenillas	1.65	183	P	Pn	17 15 09.1	-0.4
ILLI	Illinizas Sur	1.70	47	P	Pn	17 15 10.0	-0.6
BRRN	Barrancas-Volc	1.85	54	P	Pn	17 15 12.9	+0.3
VCES	Cotopaxi	1.91	56	P	Pn	17 15 13.9	+0.4
VCES				S	Sn	17 15 38.2	+1.5
BREF	Cotopaxi Volca	1.95	52	P	Pn	17 15 14.7	+0.6
BVC2	Cotopaxi Volca	1.98	52	P	Pn	17 15 14.8	+0.4
BTAM	Cotopaxi Volca	1.98	53	P	Pn	17 15 14.7	+0.3
PUYO	Puyo, Santa Ro	1.98	79	P	Pn	17 15 15.8	+1.7
PUYO				S	Sn	17 15 41.4	+3.4
GGPT	Toaza - Volcan	2.13	39	P	Pn	17 15 15.9	-0.4
BV15	Puerto Quito-O	2.17	20	P	Pn	17 15 14.1	-2.4
TERV	Terraza Guagua	2.18	39	P	Pn	17 15 16.9	-0.3
GGPC	Guagua Pichinc	2.18	39	P	Pn	17 15 16.9	-0.3
GGPC				S	Sn	17 15 44.8	+1.3
GGPC	Guagua Pichinc	2.18	39	P	Pn	17 15 17.0	-0.2
ANTS	Antisana-Sarah	2.27	53	P	Pn	17 15 19.8	+1.4
ANTS				S	Sn	17 15 48.5	+2.9
ANTS	Antisana-Sarah	2.27	53	P	Pn	17 15 18.7	+0.3
PULU	Pululahua	2.40	38	P	Pn	17 15 19.6	-0.3
PULU				S	Sn	17 15 48.5	+0.1
PULU	Pululahua	2.40	38	P	Pn	17 15 19.6	-0.3
PAC1	Pacto, Paraso	2.44	29	P	Pn	17 15 18.1	-2.2
PAC1	Pacto, Paraso	2.44	29	P	Pn	17 15 18.3	-2.0
PAC1				S	Sn	17 15 46.1	-3.1
MCRA	Macar, Loja	2.46	180	P	Pn	17 15 19.8	-0.7
MCRA				S	Sn	17 15 48.1	-1.5
OTAV	Otavalo	2.60	36	P	Pn	17 15 22.0	-0.7
OTAV				S	Sn	17 15 52.8	-0.7
OTAV	Otavalo	2.60	36	P	Pn	17 15 21.7	-1.0
OTAV	Otavalo	2.60	36	P	Pn	17 15 21.8	-1.0
OTAV				S	Sn	17 15 52.7	-0.7
CUSE	Cuicocha Este	2.69	36	P	Pn	17 15 23.5	-0.4
CUSE	Cuicocha Este	2.69	36	P	Pn	17 15 23.3	-0.6
CUSE				S	Sn	17 15 55.6	+0.1
CUIC	Cuicocha-Domo	2.71	36	P	Pn	17 15 24.1	-0.1
IMBA	Imbabura, San	2.79	39	P	Pn	17 15 26.2	+1.0
IMBA				S	Sn	17 16 01.1	+3.2
IMBA	Imbabura, San	2.79	39	P	Pn	17 15 26.1	+0.8
URCU	Urcuqui	2.88	37	P	Pn	17 15 26.7	+0.2
ZUMB	Zumba	3.07	164	P	Pn	17 15 30.6	+1.7
BBAC	Balboa, Cauca	4.74	35	P	Pn	17 15 52.1	+0.3
BBAC				S	Sn	17 16 45.7	0.0
POPC	Popayan, Colom	5.50	37	P	Pn	17 15 59.8	-2.3

*NNC **31** 17:18:37.4±4.3,40°.98N×77°.52E,h0km,mb2.8,mpv2.6, Error ellipse: s-maj=32.6km s-min=17.3km az=161.0*
*KRNET **31** 17:18:37.2±0.1,40°.88N×77°.96E,h16km,mb2.3*
ISC 31 17:18:40.4±2.5,41°.0N±0°.1×77°.87E±0°.07,h19km,n10, σ0s91/14,8C-4D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	0.74	356	⇑*i*P	Pb	17 18 53.6	-1.4
TARG				⇑*i*S	Sb	17 19 05.4	+0.5
KDJ	Kajisay	1.25	336	⇑*i*P	Pn	17 19 02.9	-0.2
KDJ				⇑*i*S	Sg	17 19 21.7	+0.6
NRN	Naryn	1.48	288	⇑*i*P	Pb	17 19 06.7	-0.8
NRN				⇑*i*S	Sg	17 19 28.7	+0.3
ULHL	Ulahol	1.75	316	⇑*i*P	Pb	17 19 11.9	-0.2
ULHL				⇑*i*S	Sg	17 19 37.0	0.0
SATY	Saty 3.1nm,0.3s	2.11	11	Pg	Pb	17 19 19.1	+1.0
SATY				Lg	Lg	17 19 49.0	
KOTS	3.5nm,0.1s Kotyrbulak 1.4nm,0.2s	2.31	346	Pg	Pb	17 19 19.9	-1.7
KOTS				Lg	Lg	17 19 50.3	
UZB	2.1nm,0.3s Uzynbulak 3.5nm,0.2s	2.32	21	Pg	Pb	17 19 21.0	-0.7
UZB				Lg	Lg	17 19 52.4	
KPKS	1.0nm,0.2s Kokpek 0.4nm,0.2s	2.55	13	Pg	Pb	17 19 25.5	-0.1
KPKS				Lg	Lg	17 19 59.9	
PDGK	0.8nm,0.1s Podgornoye 0.8nm,0.5s	2.63	27	⇓Pg	Pb	17 19 26.3	-0.7
PDGK				⇓Lg	Lg	17 20 01.2	
AAK	4.7nm,0.7s Ala-Archa 0.2nm,0.4s	3.01	304	⇓Pg	Pn	17 19 28.2	+0.9
AAK				⇓Lg	Lg	17 20 03.3	
	0.3nm,0.5s						

*IDC **31** 17:27:52.9±1.2,35°.24N×22°.95E,h0km,mb3.6/8, mbtmp3.5/11,ML3.2/2,MS2.8/1,Error ellipse: s-maj=28.2km s-min=21.1km az=167.0*
*THE **31** 17:27:58.5,35°.N±4°×2°3E±°,h2km±5km,M2.8/11, MLh2.8/11*
*ATH **31** 17:27:59.2±0.5,35°.31N×22°.71E,h10km,ML3.1/8, Latitude uncertainty: 3 km; Longitude uncertainty: 2 km*
ISC 31 17:27:56.2±1.7,35°.23N±0°.05×22°.63E±0°.05,h8km±10km, n54,σ1s59/61,mb3.8/7,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDR	Palaiochora Ch	0.81	89	P	Pb	17 28 13.8	+1.3
KNDR				S	Sb	17 28 24.2	+0.6
ANKY	Antikythira Is	0.84	40	P	Pg	17 28 12.0	-0.3
ANKY				S	Sb	17 28 22.7	-1.8
ANKY	Antikythira Is	0.84	40	P	Pg	17 28 12.7	+0.3
KTHA	Kythira Island	1.08	19	P	Pg	17 28 16.0	-1.0
KTHA	Kythira Island	1.08	19	P	Pg	17 28 17.2	+0.2
IMMV	Iera Moni Meta	1.13	78	S	Sg	17 28 31.3	-1.2
IMMV	Iera Moni Meta	1.13	78	P	Pn	17 28 19.6	+1.3
IMMV				S	Sn	17 28 33.8	-0.1
CH01	Chania	1.17	75	P	Pb	17 28 19.7	+1.1
CH01				S	Sb	17 28 34.6	+0.6
CHAN	Chania	1.19	75	P	Pb	17 28 19.7	+0.8
CHAN				Sg_2		17 28 35.9	
GVD	Gavdhos	1.26	108	P	Pg	17 28 20.1	-0.2
GVD	Gavdhos	1.26	108	P	Pg	17 28 21.2	+0.9
GVD				S	Sn	17 28 39.0	+1.9
VAM	Vamos	1.29	82	P	Pb	17 28 21.7	+1.0
VAM				S	Sb	17 28 37.2	-0.3
VAM	Vamos	1.29	82	P	Pb	17 28 21.8	+1.0
VAM				Sg_2		17 28 39.4	
NPS1	Neapolis Lacon	1.33	15	P	Pb	17 28 22.3	+0.9
NPS1				S	Sb	17 28 39.1	+0.6
VLI	Veliai	1.51	9	P	Pn	17 28 24.5	+1.0
VLI				S	Sg	17 28 43.9	-0.8
VLI	Veliai	1.51	9	P	Pn	17 28 25.1	+1.6
PYL	PYLOS	1.81	337	P	Pn	17 28 29.1	+1.4
PYL				S	Sn	17 28 54.2	+3.3
PYL	PYLOS	1.81	337	P	Pn	17 28 29.1	+1.4
IDI	Anoyia	1.85	88	P	Pn	17 28 29.2	+1.0
IDI				S	Sn	17 28 52.9	+1.1
IDI	Anoyia	1.85	88	P	Pn	17 28 30.0	+1.8
ITM	Ithomi	2.03	344	P	Pn	17 28 32.4	+1.7
ITM	Ithomi	2.03	344	P	Pn	17 28 32.4	+1.7
MHLO	Agia Marina, M	2.05	44	P	Pn	17 28 32.7	+1.8
VLX	Vlachokerasia	2.15	355	P	Pn	17 28 35.0	+2.7
AMT	Artemida-Makis	2.42	342	P	Pn	17 28 37.3	+1.3
AMT				S	Sn	17 29 06.9	+1.1
AMT	Artemida-Makis	2.42	342	P	Pn	17 28 38.1	+2.1
MET1	Methana Town,	2.42	14	P	Pn	17 28 37.9	+1.8
MET6	Megalochori,Me	2.43	14	P	Pn	17 28 38.6	+2.5
NPS	Neapolis	2.44	88	P	Pn	17 28 36.8	+0.5
NPS				S	Sn	17 29 08.6	+2.2
NPS	Neapolis	2.44	88	P	Pn	17 28 38.1	+1.8
MET2	Kameni Chora,	2.45	13	P	Pn	17 28 37.7	+1.4
MET5	Makryloggos,Me	2.46	14	P	Pn	17 28 38.0	+1.4
MET4	Agioi Theodoro	2.47	14	P	Pn	17 28 38.5	+1.8
THRS	Thira Island,	2.51	61	P	Pn	17 28 38.4	+1.2
THERA	Ancient Thera,	2.58	63	P	Pn	17 28 40.1	+2.0
GUR	Goura	2.71	355	P	Pn	17 28 41.8	+1.7
VLY	Voula,Athens	2.78	19	P	Pn	17 28 43.0	+2.0
LTK	Loutraki	2.80	5	P	Pn	17 28 42.9	+1.6
KLV	Kalavryta, Ach	2.84	352	P	Pn	17 28 43.5	+1.7
RLS	Riolos of Patr	2.98	342	P	Pn	17 28 45.4	+1.7
VIL2	Platees	3.02	10	P	Pn	17 28 45.7	+1.4
BRTR	Keskin Array B	9.83	60	Pn	Pn	17 30 14.7	-3.2
MMAI	0.1nm,0.3s,baz=248,slow=13,SNR=3.6 0.7nm,1.1s Mount Meron Ar	10.81	98	Pn	Pn	17 30 24.2	-7.2
GERES	0.6nm,0.3s,baz=292,slow=12,SNR=1.6 1.9nm,0.7s GERESS Array B	15.12	337	Pn	Pn	17 31 29.7	-0.4
ESDC	0.2nm,0.5s,baz=148,slow=13,SNR=1.4 Sonseca Array	21.54	290	P	P	17 32 45.2	-0.7
HFS	0.9nm,0.9s,baz=96,slow=12,SNR=2.7 0.9nm,0.9s Hagfors	25.59	350	P	P	17 33 23.4	-2.0
FINES	1.5nm,0.7s,baz=158,slow=12,SNR=5.4 1.5nm,0.7s FINESS Array B	26.33	4	P	P	17 33 29.9	-2.2
TORD	3.9nm,1.0s,baz=173,slow=13,SNR=1.6 3.9nm,1.0s Torodi Ar. Bea	29.00	226	P	P	17 33 56.6	+0.1
DBIC	0.4nm,1.0s,baz=28,slow=8.6,SNR=1.9 0.4nm,1.0s Dimbokro	38.03	228	LR	LR	17 50 13.1	
KURBB	comp=Z,16nm,22.0s,baz=139,slow=35 Kurchatov Arra	42.69	51	P	P	17 35 50.1	-3.2
MKAR	0.2nm,0.4s,baz=273,slow=8.7,SNR=2.4 0.2nm,0.4s Makanchi Array	45.46	56	P	P	17 36 11.8	-3.8
ZALV	0.5nm,0.6s,baz=268,slow=8.5,SNR=5.0 0.5nm,0.6s Zalesovo Beam	46.45	46	P	P	17 36 19.4	-3.9
TXAR	0.3nm,0.3s,baz=275,slow=9.0,SNR=3.2 0.3nm,0.3s Lajitas Array	98.24	315	P	P	17 41 34.3	-0.1
ASAR	0.1nm,0.5s,baz=46,slow=3.0,SNR=2.0 0.1nm,0.5s Alice Springs	120.10	99	PKP	PKPdf	17 46 44.9	-3.0
	0.2nm,0.7s,baz=298,slow=2.0,SNR=1.6						

*CATAC **31** 17:29:32.2±0.6,14°N±3°×9°1W±°,h29km±5km,M3.8/22, MLv3.8/22,Error ellipse: s-maj=7.9km s-min=2.2km az=22.7,confirmed*
*GCG **31** 17:29:33.0±1.0,13°.64N×90°.66W,h34km±24km,MD4.1, MW3.3,Presumed earthquake*
*SNET **31** 17:29:33.0±0.9,13°.65N×90°.61W,h42km±5km,ML3.5, Presumed earthquake*
ISC 31 17:29:32.9±2.3,13°.64N±0°.07×90°.54W±0°.04,h9km±14km, n48,σ1s30/66,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	Alcaldia de Sa	0.55	68	P	Pn	17 29 45.8	-1.1
PCG5	San Vicente Pa	0.59	15	*i* P	Pn	17 29 47.0	-0.6
FG8	Yepocapa, Chim	0.61	358	*i* P	Pn	17 29 48.9	+1.0
FG8				*i* S	Sn	17 30 00.1	+2

ESQI				S		**Sb**	**17 30 19.3**	**-0.2**
SJTE	**Alcalda de S**	**1.49**	**91**	*e*P		**Pn**	**17 29 59.7**	**-0.2**
PAVA	**Las Pavas**	**1.56**	**87**	P		**Pn**	**17 30 00.2**	**-0.7**
COEG	**Centro de Oper**	**1.61**	**91**	P		**Pn**	**17 30 01.6**	**0.0**
COEG				S		**Sn**	**17 30 23.1**	**+0.6**
QUIS	**Sacapulas**	**1.73**	**342**	*i* P		**Pn**	**17 30 02.1**	**-1.1**
SCLA	**Alcaldia de Sa**	**1.76**	**88**	P		**Pn**	**17 30 01.7**	**-1.9**
P5NO	**Presa 5 de nov**	**1.76**	**79**	P		**Pn**	**17 30 02.2**	**-1.4**
P5NO				S		**Sn**	**17 30 26.3**	**+0.1**
SARH	**Santa Rosa de**	**2.06**	**57**	P		**Pn**	**17 30 07.0**	**-0.7**
PACA	**Pacayal**	**2.16**	**94**	P		**Pn**	**17 30 09.4**	**+0.2**
CNCH	**Conchagua**	**2.66**	**98**	S		**Sn**	**17 30 50.4**	**+2.0**

*IDC **31** 17:35:15.6±1.0,69°.32N×144°.93W,h0km,mb3.9/5, mbtmp3.6/9,ML3.0/4,Error ellipse: s-maj=16.6km s-min=15.9km az=105.0*
*AEIC **31** 17:35:16.7±1.0,69°.13N±0°.03×144°.70W±0°.08,h11km±6km, Error ellipse: s-maj=4.9km s-min=3.9km az=198.0*
*NEIC **31** 17:35:18.1±1.2,69°.17N±0°.02×144°.59W±0°.01,h10km±2km, ML3.0/124,ML2.9(AEIC),Error ellipse: s-maj=3.2km s-min=3.0km az=6.0*

ISC 31 17:35:16.9±1.3,69°22N±0°.03×144°65W±0°.03, h13km±10km,n159,σ1§37/173,mb4.0/5,Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
C27K	**Jago River**	**0.52**	**39**			**Pb**	**17 35 28.0**	**0.0**
C27K				Sg		**Sb**	**17 35 35.7**	**+0.3**
D25K	**Kavik River**	**0.62**	**280**			**Pg**	**17 35 28.5**	**-0.5**
D25K				Sg		**Sg**	**17 35 36.8**	**-0.4**
D25K				IAML			17 35 38.0	
	comp=N,655nm,0.4s							
C26K	**Camden Bay**	**0.70**	**353**			**Pn**	**17 35 32.1**	**-0.4**
C26K						**Sn**	**17 35 42.6**	**-0.7**
E25K	**Arctic Village**	**1.16**	**197**			**Pn**	**17 35 37.6**	**-1.2**
E25K						**Pn**	**17 35 37.9**	**-0.9**
E25K				Sg		**Sb**	**17 35 53.0**	**-0.7**
E25K				IAML			17 35 57.1	
	comp=N,287nm,0.6s							
D27M	**Malcolm River**	**1.31**	**87**	Sn		**Sb**	**17 35 58.8**	**+0.6**
D27M				IAML			17 36 03.1	
	comp=N,228nm,0.7s							
D27M				IAML			17 36 04.7	
	comp=E,225nm,0.7s							
D27M	**Malcolm River**	**1.31**	**87**			**Pn**	**17 35 41.7**	**+0.7**
D24K	**Happy Valley**	**1.49**	**269**			**Pb**	**17 35 45.2**	**+0.7**
D24K						**Sg**	**17 36 06.4**	**+1.5**
C24K	**Franklin Bluff**	**1.51**	**291**			**Pn**	**17 35 45.4**	**+0.6**
C24K				Sn		**Sg**	**17 36 05.9**	**+0.4**
C24K				IAML			17 36 17.1	
	comp=E,170nm,0.8s							
C24K				IAML			17 36 19.0	
	comp=N,161nm,0.8s							
E27K	**Coleen River**	**1.53**	**132**			**Pn**	**17 35 44.6**	**+0.7**
E27K				Sn		**Sn**	**17 36 04.5**	**+0.9**
F26K	**Sheenjek River**	**1.55**	**173**			**Pn**	**17 35 44.8**	**+0.6**
F26K				Sn		**Sn**	**17 36 04.3**	**+0.2**
F26K				IAML			17 36 06.3	
	comp=E,244nm,1.0s							
F25K	**Christian Rive**	**1.68**	**193**			**Pn**	**17 35 46.7**	**+0.7**
F25K				Sn		**Sn**	**17 36 08.3**	**+0.9**
F25K				IAML			17 36 12.6	
	comp=E,199nm,0.5s							
E24K	**Your Creek**	**1.82**	**232**			**Pn**	**17 35 48.9**	**+1.0**
E24K				Sn		**Sn**	**17 36 12.6**	**+1.8**
E24K				IAML			17 36 19.5	
	comp=E,113nm,1.1s							
TOLK	**Toolik Lake Re**	**1.87**	**254**			**Pb**	**17 35 51.0**	**0.0**
E28M	**Babbage River**	**1.95**	**106**			**Pn**	**17 35 51.4**	**+1.7**
E28M				Sn		**Sb**	**17 36 16.8**	**+0.3**
E28M				IAML			17 36 22.5	
	comp=N,112nm,0.9s							
E28M				IAML			17 36 26.5	
	comp=E,100nm,1.1s							
F24K	**Squaw Lake**	**2.09**	**217**			**Pn**	**17 35 52.4**	**+0.8**
F24K				IAML			17 36 26.8	
	comp=N,91nm,0.3s							
E23K	**Chandalar**	**2.16**	**240**			**Pn**	**17 35 54.6**	**+1.9**
E23K				IAML			17 36 29.6	
	comp=E,108nm,0.6s							
D23K	**Nanushuk River**	**2.18**	**266**			**Pn**	**17 35 54.9**	**+2.1**
D23K				IAML			17 36 32.1	
	comp=N,121nm,1.0s							
D23K				IAML			17 36 33.1	
	comp=E,86nm,0.9s							
C23K	**Itkillik River**	**2.19**	**289**			**Pn**	**17 35 54.5**	**+1.7**
C23K				IAML			17 36 29.0	
	comp=E,106nm,0.8s							
G26K	**Porcupine Rive**	**2.31**	**172**			**Pn**	**17 35 56.3**	**+1.8**
G26K				IAML			17 36 33.6	
	comp=E,111nm,0.9s							
F28M	**Old Crow**	**2.39**	**130**			**Pn**	**17 35 56.6**	**+0.8**
G25K	**Bearman Lake**	**2.53**	**193**			**Pn**	**17 35 59.2**	**+1.6**
E29M	**Blow River**	**2.59**	**106**			**Pn**	**17 36 00.7**	**+2.2**
E29M				IAML			17 36 40.0	
	comp=N,77nm,0.9s							
G27K	**Doyon Strip**	**2.67**	**154**			**Pn**	**17 36 01.8**	**+2.2**
FYU	**Fort Yukon**	**2.68**	**185**			**Pn**	**17 36 01.6**	**+2.0**
G24K	**Hadweenzic Riv**	**2.75**	**204**			**Pn**	**17 36 01.4**	**+0.7**
G24K				IAML			17 36 49.3	
	comp=E,57nm,1.1s							
G24K				IAML			17 36 49.4	
	comp=N,58nm,0.7s							
E22K	**Anaktuvuk Pass**	**2.84**	**251**			**Pn**	**17 36 03.5**	**+1.6**
E22K				IAML			17 36 57.4	
	comp=N,48nm,1.1s							
COLD	**Coldfoot**	**2.88**	**229**			**Pn**	**17 36 04.2**	**+1.7**
H27K	**Steamboat Moun**	**3.23**	**157**			**Pn**	**17 36 09.4**	**+2.1**
H27K				IAML			17 37 03.1	
	comp=E,36nm,0.6s							
G23K	**Bananza Creek**	**3.24**	**221**			**Pn**	**17 36 08.5**	**+1.1**
G23K				IAML			17 37 09.2	
	comp=E,48nm,0.8s							
B22K	**Teshekpuk Lake**	**3.25**	**294**			**Pn**	**17 36 09.4**	**+2.0**
F22K	**John River**	**3.28**	**242**			**Pn**	**17 36 10.1**	**+2.2**
G29M	**Pine Creek**	**3.40**	**130**			**Pn**	**17 36 11.6**	**+2.0**
B21K	**Ikpikpuk River**	**3.54**	**281**			**Pn**	**17 36 13.4**	**+2.0**
B21K				IAML			17 37 15.2	
	comp=N,28nm,1.3s							
B21K				IAML			17 37 18.4	
	comp=E,30nm,0.6s							
C21K	**Knifeblade Rid**	**3.62**	**274**			**Pn**	**17 36 15.1**	**+2.6**
H24K	**Noodor Dome**	**3.62**	**202**			**Pn**	**17 36 13.0**	**+0.3**
F30M	**Barrier River**	**3.65**	**112**			**Pn**	**17 36 15.2**	**+2.2**
F30M				IAML			17 37 23.0	
	comp=E,24nm,1.1s							
F30M				IAML			17 37 26.7	
	comp=N,34nm,1.2s							
PRP	**Porcupine Dome**	**3.74**	**186**			**Pn**	**17 36 15.5**	**+1.2**
PRP				IAML			17 37 03.2	
	comp=E,22nm,0.4s							
I27K	**Kandik River**	**3.82**	**161**			**Pn**	**17 36 16.6**	**+1.2**
I27K				IAML			17 37 25.8	
	comp=E,28nm,1.0s							
H29M	**Whitestone**	**3.85**	**139**			**Pn**	**17 36 17.3**	**+1.6**
H29M				IAML			17 37 08.1	
	comp=E,24nm,0.5s							
H29M				IAML			17 37 33.0	
	comp=N,25nm,1.0s							
F21K	**Alatna River**	**3.86**	**243**			**Pn**	**17 36 17.0**	**+1.2**
F21K				IAML			17 37 26.1	
	comp=N,27nm,1.0s							
G30M	**tAoh Zraii Nji**	**3.88**	**122**			**Pn**	**17 36 17.6**	**+1.5**
H23K	**Yukon River**	**3.90**	**211**			**Pn**	**17 36 17.3**	**+0.9**
H23K				IAML			17 37 28.3	
	comp=E,22nm,1.8s							
H23K				IAML			17 37 32.4	
	comp=N,22nm,0.8s							
A22K	**Sinclair Lake**	**3.95**	**302**			**Pn**	**17 36 19.6**	**+2.5**
INK	**Inuvik**	**4.15**	**98**	Pn		**Pn**	**17 36 23.0**	**+3.2**
	comp=N,0.9nm,0.3s,baz=287,slow=8.6,SNR=24							
INK				Sn		**Sn**	**17 37 10.2**	**+2.1**
	comp=N,0.5nm,0.3s,baz=344,slow=13,SNR=3.6							
INK				Lg	Lg		17 37 27.8	
	comp=N,0.7nm,0.3s,baz=354,slow=18,SNR=5.3 comp=N,2.3nm,0.4s							
INK	**Inuvik**	**4.15**	**98**			**Pn**	**17 36 21.5**	**+1.6**
EPYK	**Eagle Plains**	**4.15**	**130**	Pn		**Pn**	**17 36 21.6**	**+1.6**
I28M	**Miner Creek**	**4.21**	**152**			**Pn**	**17 36 22.2**	**+1.5**
I28M				IAML			17 37 14.5	
	comp=N,15nm,0.6s							
I28M				IAML			17 37 37.5	
	comp=E,22nm,1.7s							
H22K	**Ishtalitna Cre**	**4.22**	**221**			**Pn**	**17 36 22.1**	**+1.3**
H22K				IAML			17 37 40.2	
	comp=N,15nm,1.2s							
H22K				IAML			17 37 42.0	
	comp=E,19nm,1.0s							
E20K	**Nigu River**	**4.31**	**262**			**Pn**	**17 36 25.0**	**+2.8**
G21K	**Allakaket**	**4.31**	**235**			**Pn**	**17 36 23.0**	**+0.9**
D20K	**Etivluk River**	**4.34**	**269**			**Pn**	**17 36 24.6**	**+2.1**
D20K				IAML			17 37 48.4	
	comp=E,16nm,1.1s							
D20K				IAML			17 37 56.9	
	comp=N,17nm,0.8s							
F31M	**Tsiigehtchic**	**4.42**	**109**			**Pn**	**17 36 25.0**	**+1.5**
F31M				IAML			17 37 42.5	
	comp=E,15nm,0.8s							
B20K	**Meade River**	**4.45**	**286**			**Pn**	**17 36 25.7**	**+1.8**
B20K				IAML			17 37 59.5	
	comp=N,18nm,1.2s							
I23K	**Minto, Yukon-K**	**4.48**	**206**			**Pn**	**17 36 25.4**	**+1.0**
I23K				IAML			17 37 50.4	
	comp=E,15nm,0.9s							
I23K				IAML			17 38 20.8	
	comp=N,12nm,3.7s							
MDM	**Murphy Dome**	**4.51**	**200**			**Pn**	**17 36 26.0**	**+1.2**
ILAR	**Eielson Array**	**4.56**	**192**	Pn		**Pn**	**17 36 26.9**	**+1.5**
	comp=N,0.5nm,0.3s,baz=2.3,slow=13,SNR=25							
ILAR				Sn		**Sn**	**17 37 18.3**	**+0.1**
	comp=N,1.2nm,0.3s,baz=8.7,slow=23,SNR=8.2							
ILAR				Lg	Lg		17 37 39.3	
	comp=N,0.9nm,0.3s,baz=6.6,slow=31,SNR=5.0 comp=N,0.6nm,0.3s							
J25K	**Salcha River,**	**4.64**	**184**			**Pn**	**17 36 27.4**	**+0.8**
J25K				IAML			17 37 46.5	
	comp=E,14nm,1.5s							
F20K	**Avaraart Lake**	**4.68**	**247**			**Pn**	**17 36 28.5**	**+1.4**
F20K				IAML			17 37 51.3	
	comp=N,12nm,1.1s							
F20K				IAML			17 37 51.6	
	comp=E,10nm,0.8s							
CCB	**Clear Creek Bu**	**4.76**	**197**			**Pn**	**17 36 29.4**	**+1.1**
CCB				IAML			17 37 26.0	
	comp=E,10nm,1.4s							
H21K	**Melozitna Rive**	**4.76**	**225**			**Pn**	**17 36 29.6**	**+1.3**
H21K				IAML			17 37 56.3	
	comp=E,10nm,0.9s							
H21K				IAML			17 37 59.7	
	comp=N,9.5nm,1.2s							
MLY	**Manley**	**4.83**	**212**	Pn		**Pn**	**17 36 30.5**	**+1.2**
HDA	**Harding Lake**	**4.92**	**192**	Pn		**Pn**	**17 36 31.9**	**+1.5**
HDA				IAML			17 38 03.8	
	comp=N,12nm,1.0s							
D19K	**Kuna River**	**4.93**	**268**			**Pn**	**17 36 32.4**	**+1.7**
D19K				IAML			17 38 01.5	
	comp=E,14nm,1.4s							
I21K	**Tanana**	**4.96**	**219**			**Pn**	**17 36 32.0**	**+1.0**
I21K				IAML			17 38 07.7	
	comp=E,13nm,2.6s							
WRH	**Wood River Hil**	**4.96**	**198**			**Pn**	**17 36 32.2**	**+1.2**
WRH				IAML			17 37 42.4	
	comp=N,10nm,4.5s							
WRH				IAML			17 38 05.5	
	comp=E,11nm,2.3s							
E19K	**Redstone River**	**4.99**	**255**			**Pn**	**17 36 33.0**	**+1.6**
I30M	**Mount Dempster**	**5.14**	**137**			**Pn**	**17 36 35.0**	**+1.4**
I30M				IAML			17 37 36.1	
	comp=N,7.3nm,0.4s							
I30M				IAML			17 37 36.6	
	comp=E,8.8nm,0.3s							
H31M	**Peel River**	**5.23**	**126**			**Pn**	**17 36 35.1**	**+0.3**
H31M				IAML			17 38 12.2	
	comp=N,9.6nm,3.1s							
SCRK	**Sand Creek**	**5.28**	**177**			**Pn**	**17 36 36.5**	**+1.0**
SCRK				IAML			17 38 02.8	
	comp=N,8.0nm,3.3s							
SCRK				IAML			17 38 09.6	
	comp=E,8.7nm,0.8s							
C19K	**Lookout Ridge**	**5.33**	**276**			**Pn**	**17 36 38.1**	**+2.0**
C19K				IAML			17 37 40.8	
	comp=E,9.0nm,0.4s							
C19K				IAML			17 38 37.6	
	comp=N,8.8nm,1.2s							
J29N	**Klondike Camp**	**5.42**	**149**			**Pn**	**17 36 39.0**	**+1.6**
BWN	**Browne**	**5.42**	**203**			**Pn**	**17 36 38.0**	**+0.7**
H20K	**Anotleneega Mo**	**5.44**	**231**			**Pn**	**17 36 39.0**	**+1.4**
K24K	**Donnelly Dome**	**5.46**	**185**			**Pn**	**17 36 38.8**	**+0.9**
F19K	**Shaleruckik Mo**	**5.48**	**250**			**Pn**	**17 36 39.7**	**+1.7**
RIDG	**Independent Ri**	**5.51**	**181**			**Pn**	**17 36 39.8**	**+1.2**
DOT	**Dot Lake**	**5.60**	**177**	Pn		**Pn**	**17 36 41.0**	**+1.2**
G19K	**Purcell Mounta**	**5.65**	**243**			**Pn**	**17 36 41.2**	**+0.7**
J30M	**Hart River**	**5.70**	**141**			**Pn**	**17 36 42.2**	**+1.0**
BPAW	**Bear Paw Mtn.**	**5.73**	**209**			**Pn**	**17 36 42.0**	**+0.4**
MCK	**McKinley**	**5.77**	**199**			**Pn**	**17 36 42.9**	**+0.7**
A19K	**Wainwright**	**5.79**	**287**			**Pn**	**17 36 44.3**	**+1.9**
H19K	**Roundabout Mou**	**5.87**	**236**			**Pn**	**17 36 44.3**	**+0.9**
C18K	**Utukok River**	**5.99**	**272**			**Pn**	**17 36 46.2**	**+1.0**
RND	**Reindeer**	**6.08**	**198**	Pn		**Pn**	**17 36 48.0**	**+1.5**
K29M	**Barlow Dome**	**6.10**	**149**			**Pn**	**17 36 48.1**	**+1.3**
E18K	**Kashunlearik C**	**6.18**	**261**			**Pn**	**17 36 48.6**	**+0.9**
KTH	**Kantishna Hill**	**6.22**	**207**	Pn		**Pn**	**17 36 49.0**	**+0.6**
TRF	**Thorofare Moun**	**6.22**	**204**	Pn		**Pn**	**17 36 49.3**	**+0.8**
DHY	**Denali Highway**	**6.27**	**191**			**Pn**	**17 36 49.5**	**+0.3**
PAX	**Paxson**	**6.29**	**183**			**Pn**	**17 36 49.4**	**+0.1**
L27K	**Beaver Creek,**	**6.29**	**168**			**Pn**	**17 36 49.4**	**0.0**
J20K	**Nowinta River**	**6.31**	**221**	Pn		**Pn**	**17 36 50.4**	**+1.0**
G18K	**Tagagawik**	**6.31**	**245**			**Pn**	**17 36 51.1**	**+1.5**
MENT	**Mentasta**	**6.32**	**176**			**Pn**	**17 36 50.5**	**+0.7**
L29M	**L29M**	**6.68**	**154**	Pn		**Pn**	**17 36 55.6**	**+1.0**
H18K	**Honhosa River**	**6.71**	**239**	Pn		**Pn**	**17 36 55.5**	**+0.6**
C17K	**DeLong Mountai**	**6.74**	**272**			**Pn**	**17 36 56.0**	**+0.6**
E17K	**Hotham Inlet**	**6.75**	**260**			**Pn**	**17 36 56.9**	**+1.3**
RDOG	**Red Dog Mine**	**6.77**	**269**	Pn		**Pn**	**17 36 56.2**	**+0.4**
J19K	**Poorman**	**6.82**	**225**	Pn		**Pn**	**17 36 56.5**	**0.0**
F17K	**Baldwin Pennin**	**6.86**	**254**			**Pn**	**17 36 58.3**	**+1.2**
M26K	**Nabesna, AK**	**6.88**	**174**	Pn		**Pn**	**17 36 59.6**	**+2.1**
M27K	**Edge Creek, AK**	**6.99**	**169**	Pn		**Pn**	**17 37 01.0**	**+2.1**
K20K	**Telida**	**7.00**	**217**	Pn		**Pn**	**17 36 59.0**	**0.0**
PPLA	**Purkeypile**	**7.05**	**209**	Pn		**Pn**	**17 37 00.7**	**+1.0**
L22K	**Petersville**	**7.17**	**203**	Pn		**Pn**	**17 37 03.9**	**+2.4**
M24K	**Tolsona, Glenn**	**7.17**	**186**	Pn		**Pn**	**17 37 03.9**	**+2.5**
G17K	**Kiwalik Mounta**	**7.20**	**246**			**Pn**	**17 37 03.6**	**+1.8**
M29M	**Somme Creek**	**7.26**	**157**			**Pn**	**17 37 04.0**	**+1.3**
H17K	**Granite Mounta**	**7.33**	**241**	Pn		**Pn**	**17 37 05.1**	**+1.6**
M30M	**Minto, Yukon**	**7.40**	**151**	Pn		**Pn**	**17 37 05.2**	**+0.7**
SCM	**Sheep Creek Mo**	**7.50**	**190**	Pn		**Pn**	**17 37 06.6**	**+0.7**
J18K	**Innoko River**	**7.53**	**226**	Pn		**Pn**	**17 37 07.0**	**+0.7**
C16K	**Lisburne Hills**	**7.57**	**273**			**Pn**	**17 37 06.9**	**+0.2**
SML	**Sawmill**	**7.60**	**193**	Pn		**Pn**	**17 37 08.1**	**+0.8**
GHO	**Glory Hole Cre**	**7.69**	**195**	Pn		**Pn**	**17 37 09.1**	**+0.7**
KLU	**Klutina**	**7.78**	**185**	Pn		**Pn**	**17 37 10.6**	**+0.8**
SKT	**Skwentna**	**7.80**	**205**	Pn		**Pn**	**17 37 11.5**	**+1.5**
G16K	**Koyuk River**	**7.83**	**249**			**Pn**	**17 37 11.3**	**+0.9**
MCARA	**McCarthy YSAT**	**7.90**	**174**	Pn		**Pn**	**17 37 12.0**	**+0.6**
KNIK	**Knik Glacier**	**8.00**	**193**	Pn		**Pn**	**17 37 13.4**	**+0.7**
VRDI	**Verde Repeater**	**8.04**	**176**	Pn		**Pn**	**17 37 15.1**	**+1.6**
M20K	**Styx River**	**8.16**	**210**	Pn		**Pn**	**17 37 15.5**	**+0.6**
L19K	**White Mountain**	**8.21**	**216**	Pn		**Pn**	**17 37 16.2**	**+0.5**
J17K	**VABM Dome**	**8.22**	**232**	Pn		**Pn**	**17 37 16.0**	**+0.3**
BMRM	**Bremner River**	**8.29**	**180**	Pn		**Pn**	**17 37 17.7**	**+1.0**
BARN	**Barnard Glacie**	**8.29**	**170**	Pn		**Pn**	**17 37 18.1**	**+1.2**
STLK	**Strandline Lak**	**8.31**	**205**	Pn		**Pn**	**17 37 18.3**	**+1.3**
I17K	**Unalakleet**	**8.32**	**238**	Pn		**Pn**	**17 37 18.5**	**+1.5**
N30M	**Aishikik Lake**	**8.40**	**154**	Pn		**Pn**	**17 37 18.7**	**+0.4**
CTGM	**Chitina Glacie**	**8.41**	**169**	Pn		**Pn**	**17 37 19.5**	**+1.1**
F15K	**North Star Dit**	**8.43**	**255**	Pn		**Pn**	**17 37 18.4**	**-0.2**
CRQM	**Cirque**	**8.53**	**175**	Pn		**Pn**	**17 37 19.6**	**-0.5**
TGL	**Tana Glacier**	**8.54**	**174**	Pn		**Pn**	**17 37 20.6**	**+0.5**
MMPY	**Sheldon Lake,**	**8.57**	**134**	Pn		**Pn**	**17 37 22.4**	**+1.8**
L18K	**Granite Mounta**	**8.59**	**221**	Pn		**Pn**	**17 37 21.9**	**+1.2**
GRNC	**Granite Creek**	**8.61**	**170**	Pn		**Pn**	**17 37 24.2**	**+2.9**
J16K	**Anvik River**	**8.74**	**235**	Pn		**Pn**	**17 37 22.8**	**-0.1**
HYT	**Haines Junctio**	**8.95**	**157**	Pn		**Pn**	**17 37 27.1**	**+1.3**
O30N	**Mendenhall**	**9.21**	**153**	Pn		**Pn**	**17 37 28.6**	**-0.8**
N19K	**Bonanza Creek**	**9.39**	**211**	Pn		**Pn**	**17 37 34.2**	**+2.3**
M17K	**Holitna River**	**9.48**	**220**	Pn		**Pn**	**17 37 33.9**	**+1.0**
L16K	**Owhat River**	**9.71**	**226**	Pn		**Pn**	**17 37 37.8**	**+1.8**
J14K	**Nanvaranak Lak**	**10.03**	**239**	Pn		**Pn**	**17 37 42.4**	**+2.0**
M16K	**Timber Creek**	**10.17**	**223**	Pn		**Pn**	**17 37 42.7**	**+0.3**
N17K	**Nushagak Hills**	**10.20**	**217**	Pn		**Pn**	**17 37 42.9**	**+0.1**
N15K	**Kwethluk River**	**11.19**	**223**	Pn		**Pn**	**17 37 58.6**	**+2.3**
YKAW3	**Yellowknife Wh**	**13.84**	**104**	Pn		**Pn**	**17 38 30.8**	**-1.6**
YKA	**Yellowknife Ar**	**13.88**	**104**	Pn		**Pn**	**17 38 31.2**	**-1.9**
	comp=N,0.1nm,0.3s,baz=310,slow=14,SNR=4.4 comp=N,0.3nm,0.5s							
YKA	**Yellowknife Ar**	**13.88**	**104**	Pn		**Pn**	**17 38 29.6**	**-3.4**
YKAW1	**Yellowknife Wh**	**13.93**	**104**	Pn		**Pn**	**17 38 33.0**	**-0.7**
RES	**Resolute Bay**	**15.88**	**48**	Pn		**Pn**	**17 39 00.6**	**+0.9**
	baz=275,slow=12,SNR=1.3 comp=N,0.3nm,0.6s							
PMPB	**Monarch Peak**	**35.57**	**146**	P		**P**	**17 42 12.6**	**-1.0**
FINES	**FINESS Array B**	**49.45**	**6**	P		**P**	**17 44 07.3**	**+1.3**
	comp=N,1.3nm,0.9s,baz=338,slow=14,SNR=1.2 comp=N,1.3nm,0.9s							
HFS	**Hagfors**	**50.00**	**14**	P		**P**	**17 44 09.2**	**-1.0**
	comp=N,2.7nm,0.8s,baz=347,slow=5.9,SNR=2.5 comp=N,2.7nm,0.8s							
MJAR	**Matsushiro Arr**	**51.85**	**273**	P		**P**	**17 44 24.1**	**-0.3**
	comp=N,0.7nm,0.5s,baz=36,slow=9.0,SNR=2.1 comp=N,0.7nm,0.5s							
ZALV	**Zalesovo Beam**	**51.94**	**325**	P		**P**	**17 44 24.4**	**-0.5**
	comp=N,0.2nm,0.4s,baz=11,slow=8.8,SNR=1.7 comp=N,0.2nm,0.4s							
EKA	**Eskdalemuir Ar**	**52.62**	**27**	P		**P**	**17 44 29.1**	**-0.8**
	comp=N,2.7nm,1.0s,baz=326,slow=8.8,SNR=2.8 comp=N,2.7nm,1.0s							

*IDC **31** 17:51:26.1±0.6,13°.85N×121°.01E,h156km±3km,mb2.9/8, mbtmp3.3/8,MS3.5/1,Error ellipse: s-maj=36.0km s-min=14.8km az=66.0*
*MAN **31** 17:51:27.0,13°.80N×120°.56E,h141km,MS3.3*

ISC 31 17:51:26.3±1.0,13°.7N±0°.1×120°.6E±0°.1,h150km,n13, σ1§91/13,mb3.0/8,Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TGY	**Tagaytay City**	**0.48**	**40**	P		**Pn**	**17 51 47.3**	**-0.3**
	149nm,0.3s,baz=188,slow=7.1,SNR=12							
TGY				S		**Sn**	**17 52 05.0**	**+1.1**
	247nm,0.4s,baz=131,slow=20,SNR=25							
TGY	**Tagaytay City**	**0.48**	**40**	*e*P		**Pn**	**17 51 49.0**	**+1.4**
TGY				*e*S		**Sn**	**17 52 06.0**	**+2.1**
PCPS	**Palayan City**	**1.00**	**25**	*e*P		Pn	17 51 59.4	+8.3
PCPS				*e*S		Sn	17 52 24.9	+15
GQP	**Guinayangan**	**1.78**	**84**	*i* P		**Pn**	**17 52 00.5**	**+1.6**
CMAR	**Chiang Mai Arr**	**21.34**	**286**	P		**P**	**17 56 03.3**	**+1.5**
	0.3nm,0.5s,baz=102,slow=8.1,SNR=4.9 0.3nm,0.5s							
JCJ	**Chichijima**	**24.14**	**53**	LR		LR	18 04 00.6	
	comp=Z,117nm,21.1s,baz=132,slow=32							
KSRS	**Korea Array**	**24.50**	**14**	P		**P**	**17 56 27.1**	**-4.6**
	1.0nm,0.7s,baz=211,slow=7.1,SNR=3.4 0.0nm,0.7s							
SONM	**Songino Array**	**36.00**	**344**	P		**P**	**17 58 13.3**	**+0.4**
	0.2nm,0.6s,baz=168,slow=7.4,SNR=1.9 0.2nm,0.6s							
WRA	**Warramunga Arr**	**36.09**	**158**	P		**P**	**17 58 12.5**	**-1.4**
	0.1nm,0.4s,baz=331,slow=9.9,SNR=5.1 0.1nm,0.4s							
ASAR	**Alice Springs**	**39.38**	**161**	P		**P**	**17 58 40.8**	**-0.7**
	0.1nm,0.4s,baz=335,slow=7.9,SNR=11 0.1nm,0.4s							
MKAR	**Makanchi Array**	**45.96**	**324**	P		**P**	**17 59 34.8**	**+0.5**
	0.4nm,0.9s,baz=135,slow=10,SNR=1.1 0.4nm,0.9s							
ZALV	**Zalesovo Beam**	**48.99**	**333**	P		**P**	**17 59 57.3**	**-0.2**
	0.4nm,0.4s,baz=112,slow=6.7,SNR=2.2 0.4nm,0.4s							
KURBB	**Kurchatov Arra**	**50.12**	**326**	P		**P**	**18 00 06.9**	**+0.8**
	0.2nm,0.4s,baz=138,slow=8.6,SNR=2.8 0.2nm,0.4s							

*MAN **31** 18:28:02.0,5°.13N×127°.09E,h71km,MS3.8*
*IDC **31** 18:28:10.6±4.0,5°.04N×125°.76E,h48km±49km,mb3.1/5, mbtmp3.4/6,MS2.5/1,Error ellipse: s-maj=111.1km s-min=17.8km az=70.0*

ISC 31 18:28:09.2±2.5,5°.3N±0°.1×126°.8E±0°.1,h43km±24km,n12, σ1§65/19,mb3.5/5,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DDMP	**Don Marcelino,

KUZU	**Kuzuini**	**1.28**	**149**	P	**Pg**	**18 34 29.2**	**+0.4**
KUZU				S	**Sg**	**18 34 47.0**	**+1.5**
NZIP	**Nizip/Gaziante**	**1.40**	**126**	P	**Pb**	**18 34 30.3**	**0.0**
NZIP				S	**Sn**	**18 34 47.5**	**-0.6**
NZIP				IAML		18 34 51.0	
	comp=E,302nm,0.4s						
TAHT	**Tahtakopru-Hat**	**1.49**	**182**	Pn	**Pg**	**18 34 31.9**	**-1.0**
GULA	**Gulagac**	**1.66**	**287**	Pn	**Pb**	**18 34 34.4**	**-0.3**
KOZK	**Kozakli-Nevseh**	**1.72**	**322**	Pn	**Pb**	**18 34 35.7**	**-0.1**
YOZ	**Yozgat**	**1.91**	**338**	Pn	**Pb**	**18 34 38.2**	**-0.9**
YESY	**Yesilyurt**	**1.98**	**268**	Pn	**Pb**	**18 34 39.1**	**-1.2**
KEBE	**Keben-Mersin**	**2.47**	**236**	Pn	**Pb**	**18 34 46.8**	**-1.8**

*ISK **31** 18:35:17.4, 37°.87N×36°.25E, h7km, ML2.4/7*
*AFAD **31** 18:35:17.2, 37°.88N×36°.30E, h6km±2km, ML2.5*
ISC 31 18:35:17.7±0.9, 37°.87N±0°.03×36°.27E±0°.03, h10km±8km, n18, σ0s59/30, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAIM	**ADANA**	**0.18**	**307**	P	**Pg**	**18 35 21.8**	**+0.1**
SAIM				IAML		18 35 25.0	
	comp=N,2μm,0.2s						
SAIM				IAML		18 35 25.0	
	comp=E,3μm,0.4s						
SAIM				S	**Sg**	**18 35 25.1**	**+0.6**
ANDN	**Andirin**	**0.29**	**168**	P	**Pg**	**18 35 23.7**	**0.0**
KOZT	**Kozan**	**0.52**	**222**	Pg	**Pb**	**18 35 28.4**	**-0.5**
KOZT				Sg	**Sg**	**18 35 34.9**	**+0.2**
SARI	**SarD1z-Kayseri**	**0.55**	**13**	Pg	**Pg**	**18 35 28.5**	**0.0**
SARI				Sg	**Sb**	**18 35 36.7**	**-0.9**
KMRS	**Kahramanmaras**	**0.62**	**126**	Pg	**Pg**	**18 35 29.8**	**+0.1**
KAHM	**Kahramanmaras,**	**0.67**	**121**	P	**Pg**	**18 35 30.0**	**-0.7**
KAHM				S	**Sg**	**18 35 39.5**	**0.0**
KHMR	**Kahramanmara**	**0.73**	**136**	P	**Pg**	**18 35 31.8**	**0.0**
KHMR				P	**Pg**	**18 35 31.8**	**0.0**
YAHY	**KAYSERI_Yahyal**	**0.75**	**288**	P	**Pg**	**18 35 31.9**	**-0.2**
YAHY				S	**Sg**	**18 35 40.2**	**-1.7**
YAHY				IAML		18 35 43.0	
	comp=N,123nm,0.6s						
KAMA	**Osmaniye**	**0.75**	**155**	P	**Pg**	**18 35 31.9**	**-0.3**
KHMN	**Narli-Kahraman**	**0.85**	**124**	P	**Pb**	**18 35 34.7**	**+0.1**
KHMN				S	**Sg**	**18 35 44.9**	**-0.3**
KHMN				IAML		18 35 48.0	
	comp=N,86nm,0.5s						
GAZ	**Gaziantep**	**1.02**	**132**	Pg	**Pb**	**18 35 37.7**	**+0.2**
CAYT	**Sariam**	**1.02**	**228**	P	**Pn**	**18 35 38.8**	**+0.8**
CAYT				S	**Sn**	**18 35 52.7**	**+0.2**
CMRD	**Camardi-Nigde**	**1.03**	**259**	Pg	**Pg**	**18 35 37.4**	**-0.1**
BNN	**Bunyan**	**1.04**	**342**	Pg	**Pb**	**18 35 37.9**	**+0.1**
BNN				Sg	**Sb**	**18 35 52.3**	**+0.8**
HASA	**Hatay-Hassa-Ha**	**1.13**	**171**	P	**Pn**	**18 35 39.7**	**+0.1**
HASA				S	**Sg**	**18 35 54.0**	**0.0**
HASA				IAML		18 35 58.0	
	comp=N,103nm,0.5s						
GZT	**Gaziantep**	**1.15**	**116**	P	**Pn**	**18 35 40.0**	**0.0**
GZT				S	**Sn**	**18 35 56.0**	**+0.2**
GZT				IAML		18 35 57.0	
	comp=N,180nm,0.4s						
KUZU	**Kuzuini**	**1.27**	**149**	P	**Pg**	**18 35 43.0**	**+0.9**
KUZU				S	**Sg**	**18 35 57.4**	**-1.2**
TAHT	**Tahtakopru-Hat**	**1.49**	**182**	Pn	**Pb**	**18 35 45.3**	**-0.1**

*IDC **31** 18:40:10.6±2.6, 5°.46S×153°.66E, h51km±23km, mb4.0/12, mbtmp4.3/14, ML2.8/3, MS3.2/7, Error ellipse: s-maj=19.3km s-min=14.9km az=22.0*
*NEIC **31** 18:40:10.1±1.6, 5°.46S±0°.07×153°.67E±0°.07, h44km±4km, mb4.5/40, Error ellipse: s-maj=10.9km s-min=8.5km az=224.0*
ISC 31 18:40:10.5±1.0, 5°.47S±0°.06×153°.63E±0°.06, h52km±10km, n92, σ0s81/91, mb4.4/27, MS3.4/5, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.94**	**311**		**Pn**	**18 40 42.2**	**+1.2**
KRVT	**Keravat (AS076**	**1.97**	**306**	LR	LR	18 41 49.0	
	comp=Z,71nm,20.5s,baz=45,slow=50						
HNR	**Honiara**	**7.40**	**123**	P	**Pn**	**18 41 56.2**	**+0.3**
	0.1nm,0.3s,baz=306,slow=8.7,SNR=1.3						
HNR				S	**Sn**	**18 43 20.2**	**+1.7**
	1.3nm,0.5s,baz=315,slow=19,SNR=1.2						
HNR				LR	LR	18 44 49.6	
	comp=Z,7.8nm,18.9s,baz=349,slow=38						
HNR	**Honiara**	**7.40**	**123**		**Pn**	**18 41 55.7**	**-0.2**
PMG	**Port Moresby**	**7.51**	**238**	P	**Pn**	**18 41 59.2**	**+1.7**
	3.2nm,0.3s,baz=67,slow=11,SNR=12						
PMG				S	**Sn**	**18 43 21.8**	**+0.4**
	18nm,0.5s,baz=69,slow=17,SNR=3.6						
PMG				LR	LR	18 44 59.3	
	comp=Z,118nm,21.9s,baz=46,slow=38						
	8.4nm,0.4s						
PMG	**Port Moresby**	**7.51**	**238**		**Pn**	**18 41 57.1**	**-0.5**
PMG					**Sn**	**18 43 20.3**	**-1.1**
PATS	**Pohnpei**	**13.09**	**21**	Pn	**Pn**	**18 43 12.5**	**-1.3**
JAY	**Jayapura**	**13.22**	**282**	P	**Pn**	**18 43 15.8**	**+0.1**
	0.3nm,0.3s,baz=107,slow=17,SNR=1.4						
	8.7nm,0.8s						
CTA	**Charters Tower**	**16.21**	**206**	LR	LR	18 49 29.9	
	comp=Z,74nm,19.9s,baz=41,slow=34						
EIDS	**Eidsvold**	**19.94**	**187**	P	**P**	**18 44 36.8**	**-1.3**
DZM	**Mont Dzumac**	**20.64**	**144**	P	**P**	**18 44 45.6**	**-0.4**
	15nm,0.5s,baz=305,slow=12,SNR=40						
	15nm,0.5s						
OUENC	**Ouen Island, N**	**21.14**	**144**	P	**P**	**18 44 50.6**	**-0.7**
OUENC				IAmb	IAmb	18 45 13.8	
	comp=Z,28nm,1.1s						
MARNC	**Mare, Loyalty**	**21.17**	**140**	P	**P**	**18 44 49.9**	**-1.6**
WR8	**Warramunga Arr**	**23.53**	**231**	P	**P**	**18 45 15.4**	**-0.8**
WRA	**Warramunga Arr**	**23.64**	**231**	P	**P**	**18 45 16.0**	**-1.3**
	comp=Z,1.1nm,0.7s,baz=57,slow=10,SNR=20						
WRA				PcP	**PcP**	**18 49 02.0**	**+1.1**
	comp=Z,1.6nm,0.7s,baz=62,slow=2.3,SNR=8.8						
	comp=Z,1.1nm,0.7s						
WRA	**Warramunga Arr**	**23.64**	**231**	P	**P**	**18 45 15.9**	**-1.3**
WRA					**PcP**	**18 49 01.1**	**+0.2**
ARMA	**Armidale**	**24.89**	**184**	P	**P**	**18 45 27.9**	**-0.8**
ARMA				IAmb	IAmb	18 46 10.7	
	comp=Z,15nm,1.4s						
ASAR	**Alice Springs**	**26.23**	**224**	P	**P**	**18 45 41.4**	**+0.5**
	comp=Z,0.8nm,0.5s,baz=57,slow=9.2,SNR=28						
ASAR				PcP	**PcP**	**18 49 07.5**	**+0.9**
	comp=Z,1.6nm,0.7s,baz=58,slow=2.7,SNR=14						
ASAR				LR	LR	18 55 49.7	
	comp=Z,95nm,18.4s,baz=125,slow=36						
	comp=Z,0.8nm,0.5s						
ASAR	**Alice Springs**	**26.23**	**224**	P	**P**	**18 45 40.9**	**0.0**
ASAR					**PcP**	**18 49 06.8**	**+0.2**
H11S3	**WAKE ISLAND Hy**	**27.07**	**28**	T	T	19 14 00.6	
	baz=209,slow=76,SNR=35						
H11S2	**WAKE ISLAND Hy**	**27.07**	**28**	T	T	19 13 59.4	
	baz=209,slow=76,SNR=28						
H11S1	**WAKE ISLAND Hy**	**27.09**	**28**	T	T	19 14 06.3	
	baz=209,slow=76,SNR=14						
STKA	**Stephens Creek**	**28.59**	**202**	LR	LR	18 56 59.2	
	comp=Z,83nm,18.8s,baz=197,slow=35						
HAZ	**Te Kaha**	**38.95**	**149**	P	**P**	**18 47 32.5**	**+1.0**
RUGZ	**Raukumara Rang**	**39.05**	**149**	P	**P**	**18 47 33.3**	**+0.8**
MXZ	**Matakaoa Point**	**39.08**	**148**	P	**P**	**18 47 31.9**	**-0.6**
PKGZ	**Pakihiroa**	**39.19**	**149**	P	**P**	**18 47 34.1**	**+0.6**
RTZ	**Ruatahuna**	**39.21**	**151**	P	**P**	**18 47 33.3**	**-0.5**
RTZ				IAmb	IAmb	18 47 34.6	
	comp=Z,9.7nm,1.0s						
MWZ	**Matawai**	**39.26**	**150**	P	**P**	**18 47 35.4**	**+1.2**
WMGZ	**Waiomatatini S**	**39.32**	**148**	P	**P**	**18 47 34.8**	**+0.2**
MTHZ	**Maungataniwha**	**39.33**	**151**	P	**P**	**18 47 34.6**	**-0.1**
RAGZ	**Rawiri**	**39.33**	**150**	P	**P**	**18 47 36.2**	**+1.4**
BKZ	**Black Stump Fm**	**39.41**	**152**	P	**P**	**18 47 35.8**	**+0.4**
PUZ	**Puketiti**	**39.43**	**149**	P	**P**	**18 47 35.6**	**+0.1**
RAHZ	**Arahi**	**39.49**	**151**	P	**P**	**18 47 36.7**	**+0.7**
NMHZ	**Naumai**	**39.50**	**151**	P	**P**	**18 47 37.2**	**+1.0**
TKGZ	**Te Karaka**	**39.50**	**150**	P	**P**	**18 47 36.3**	**+0.2**
RIGZ	**Rimuhau**	**39.66**	**150**	P	**P**	**18 47 38.1**	**+0.5**
CNGZ	**Carnagh Statio**	**39.72**	**149**	P	**P**	**18 47 38.2**	**+0.3**
KRHZ	**Kereru**	**39.73**	**152**	P	**P**	**18 47 37.7**	**-0.3**
PNHZ	**Pukenui**	**39.87**	**153**	P	**P**	**18 47 37.7**	**-1.5**
THZ	**Tophouse**	**40.02**	**157**	P	**P**	**18 47 40.2**	**-0.3**
THZ				IAmb	IAmb	18 47 47.6	
	comp=Z,7.0nm,1.1s						
KAHZ	**Kahuranaki**	**40.09**	**152**	P	**P**	**18 47 41.8**	**+0.8**
TCW	**Tory Channel**	**40.09**	**156**	P	**P**	**18 47 40.1**	**-0.9**
DVHZ	**Dannevirke**	**40.16**	**153**	P	**P**	**18 47 41.9**	**+0.3**
BFZ	**Birch Farm**	**40.51**	**153**	P	**P**	**18 47 44.2**	**-0.2**
PLWZ	**Palliser**	**40.80**	**155**	P	**P**	**18 47 46.3**	**-0.5**
MLZ	**Mavora Lakes**	**41.70**	**165**	P	**P**	**18 47 54.9**	**+0.7**
MLZ				IAmb	IAmb	18 47 55.9	
	comp=Z,12nm,1.1s						
TPUB	**Ta-pu**	**43.08**	**313**	P	**P**	**18 48 04.6**	**-1.2**
SSLB	**Suanglung**	**43.15**	**314**	P	**P**	**18 48 05.2**	**-1.0**
MJAR	**Matsushiro Arr**	**44.22**	**342**	LR	LR	19 05 52.0	
	comp=Z,15nm,18.0s,baz=139,slow=35						
ENH	**Enshi**	**55.21**	**313**		**P**	**18 49 38.3**	**-0.1**
CM31	**Chiang Mai Arr**	**58.91**	**295**	P	**P**	**18 50 05.7**	**+1.0**
CMAR	**Chiang Mai Arr**	**58.91**	**295**	P	**P**	**18 50 06.8**	**+2.1**
	comp=Z,3.4nm,0.8s,baz=117,slow=5.1,SNR=40						
	comp=Z,3.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**58.91**	**295**		**P**	**18 50 05.9**	**+1.1**
CMAR				PcP	**PcP**	**18 50 53.7**	**+0.1**
CHTO	**Chiang Mai**	**59.02**	**296**		**P**	**18 50 06.1**	**+0.6**
CHTO				IAmb	IAmb	18 50 08.1	
	comp=Z,3.4nm,1.1s						
PBA	**Port Blair**	**62.90**	**286**	P	**P**	**18 50 31.4**	**-0.5**
SONM	**Songino Array**	**67.33**	**328**	P	**P**	**18 51 00.9**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=147,slow=5.3,SNR=5.3						
	comp=Z,0.6nm,0.5s						
SONM	**Songino Array**	**67.33**	**328**	P	**P**	**18 51 00.4**	**+0.3**
SHL	**Shillong**	**67.36**	**300**		**P**	**18 51 01.4**	**+0.6**
SHL				IAmb	IAmb	18 51 02.6	
	comp=Z,7.4nm,1.2s						
TLY	**Talaya**	**71.07**	**330**	LR	LR	19 23 05.4	
	comp=Z,8.3nm,18.1s,baz=308,slow=36						
EVN	**Everest**	**72.39**	**301**		**P**	**18 51 32.6**	**+0.3**
K13K	**Kusilvak Mount**	**74.45**	**19**	P	**P**	**18 51 43.1**	**+0.2**
K15K	**Wolf Creek Mou**	**75.75**	**20**	P	**P**	**18 51 50.6**	**+0.3**
K15K				IAmb	IAmb	18 52 05.7	
	comp=Z,10nm,1.4s						
L16K	**Owhat River**	**76.06**	**21**	P	**P**	**18 51 51.9**	**-0.3**
L16K				IAmb	IAmb	18 51 55.8	
	comp=Z,8.5nm,1.5s						
KDAK	**Kodiak Island**	**76.40**	**26**	LR	LR	19 23 42.6	
	comp=Z,28nm,18.9s,baz=216,slow=34						
J16K	**Anvik River**	**76.74**	**19**	P	**P**	**18 51 56.0**	**0.0**
J16K				IAmb	IAmb	18 52 25.2	
	comp=Z,5.0nm,1.4s						
J17K	**VABM Dome**	**77.32**	**20**	P	**P**	**18 51 59.3**	**0.0**
J20K	**Nowinta River**	**79.52**	**21**	P	**P**	**18 52 10.9**	**-0.4**
TRF	**Thorofare Moun**	**80.50**	**22**	P	**P**	**18 52 16.5**	**-0.3**
TRF				IAmb	IAmb	18 52 17.5	
	comp=Z,7.3nm,1.4s						
IMAR	**Indian Mountai**	**80.74**	**19**	P	**P**	**18 52 17.1**	**-0.8**
MKAR	**Makanchi Array**	**81.37**	**319**	P	**P**	**18 52 22.7**	**+0.9**
	comp=Z,2.1nm,0.6s,baz=96,slow=7.8,SNR=24						
	comp=Z,2.1nm,0.6s						
MKAR	**Makanchi Array**	**81.37**	**319**	P	**P**	**18 52 21.9**	**+0.1**
ZAA0	**Zalesovo Array**	**82.17**	**326**	P	**P**	**18 52 24.9**	**-0.7**
ZALV	**Zalesovo Beam**	**82.17**	**326**	P	**P**	**18 52 25.2**	**-0.5**
	comp=Z,1.9nm,0.5s,baz=122,slow=5.7,SNR=9.2						
	comp=Z,1.9nm,0.5s						
ZALV	**Zalesovo Beam**	**82.17**	**326**	P	**P**	**18 52 25.4**	**-0.3**
ILAR	**Eielson Array**	**82.47**	**22**	P	**P**	**18 52 25.4**	**-1.6**
	comp=Z,0.3nm,0.7s,baz=241,slow=5.4,SNR=4.5						
	comp=Z,0.3nm,0.7s						
PRZ	**Przheval'sk**	**82.88**	**314**	P	**P**	**18 52 29.8**	**-0.2**
J25K	**Salcha River,**	**82.96**	**22**	P	**P**	**18 52 29.0**	**-0.7**
M27K	**Edge Creek, AK**	**83.33**	**25**	P	**P**	**18 52 31.7**	**-0.1**
M27K				IAmb	IAmb	18 52 36.0	
	comp=Z,8.7nm,1.5s						
KDJ	**Kajisay**	**83.67**	**313**		**P**	**18 52 35.3**	**+1.3**
NRN	**Naryn**	**84.38**	**312**		**P**	**18 52 38.4**	**+0.6**
NRN				IAmb	IAmb	18 52 47.9	
	comp=Z,3.2nm,1.2s						
QSPA	**South Pole Qui**	**84.50**	**180**	P	**P**	**18 52 38.3**	**+0.6**
	comp=Z,4.8nm,0.7s,baz=349,slow=5.2,SNR=20						
	comp=Z,4.8nm,0.7s						
QSPA	**South Pole Qui**	**84.50**	**180**	P	**P**	**18 52 38.2**	**+0.5**
QSPA				IAmb	IAmb	18 52 38.7	
	comp=Z,5.3nm,0.8s						
KURK	**Kurchatov**	**84.80**	**322**		**P**	**18 52 39.3**	**0.0**
KURK				IAmb	IAmb	18 52 40.8	
	comp=Z,4.7nm,1.1s						
KURBB	**Kurchatov Arra**	**84.83**	**322**	P	**P**	**18 52 39.2**	**-0.2**
	comp=Z,1.8nm,0.9s,baz=108,slow=3.6,SNR=18						
	comp=Z,1.8nm,0.9s						
MAW	**Mawson**	**85.27**	**203**	P	**P**	**18 52 41.1**	**-0.2**
	comp=Z,2.2nm,0.6s,baz=175,slow=21,SNR=1.1						
	comp=Z,2.2nm,0.6s						
MAW	**Mawson**	**85.27**	**203**	P	**P**	**18 52 41.8**	**+0.5**
MAW				IAmb	IAmb	18 53 12.8	
	comp=Z,4.7nm,1.3s						
AAK	**Ala-Archa**	**85.72**	**313**		**P**	**18 52 45.2**	**+0.8**
AAK				IAmb	IAmb	18 52 46.5	
	comp=Z,2.3nm,0.8s						
BVAR	**Borovoye Array**	**90.27**	**323**	P	**P**	**18 53 05.0**	**-0.6**
	comp=Z,2.8nm,0.8s,baz=96,slow=6.0,SNR=15						
	comp=Z,2.8nm,0.8s						
BORK	**Borovoye**	**90.31**	**323**		**P**	**18 53 05.0**	**-0.8**
BORK				IAmb	IAmb	18 53 07.2	
	comp=Z,2.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**151.30**	**287**	PKPbc	**PKPbc**	**18 59 59.4**	**0.0**
	comp=Z,2.3nm,0.6s,baz=68,slow=1.7,SNR=15						

KRSC 31 18:52:33.0±1.1, 54°.55N×166°.00E, h60km±32km, MI3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**2.47**	**314**	*e*P	Pn	18 53 12.3	+1.6
KBTR				*e*S	Sn	18 53 42.2	+2.6
MKZ	**Mys Kozlova**	**2.49**	**272**	*e*P	Pn	18 53 13.4	+2.4
MKZ				*e*S	Sn	18 53 43.2	+3.0
KBG	**Krutoberegovo**	**2.54**	**314**	*e*S	Sn	18 53 43.5	+1.9
NLC	**Nalytchevo**	**4.18**	**253**	*e*S	Sn	18 54 23.8	+2.3
SMAR	**Somma**	**4.45**	**256**	*e*P	Pn	18 53 41.8	+3.7
UGLR	**Uglovaya**	**4.46**	**255**	*e*P	Pn	18 53 41.4	+3.4
UGLR				*e*S	Sn	18 54 32.0	+3.4
KRER	**Koryakskii**	**4.46**	**257**	*e*P	Pn	18 53 42.1	+3.9
KRER				*e*S	Sn	18 54 32.9	+3.9
AVH	**Avacha**	**4.48**	**256**	*e*P	Pn	18 53 42.2	+3.8
AVH				*e*S	Sn	18 54 33.1	+3.8
KRX	**Arik**	**4.50**	**258**	*e*P	Pn	18 53 42.5	+3.7
KRX				*e*S	Sn	18 54 33.3	+3.5
KOK	**Koryaka**	**4.53**	**257**	*e*P	Pn	18 53 42.5	+3.4
KOK				*e*S	Sn	18 54 33.7	+3.2
DALK	**Dalny**	**4.56**	**254**	*e*P	Pn	18 53 42.9	+3.6
DALK				*e*S	Sn	18 54 34.5	+3.6
PET	**Petropavlovsk**	**4.62**	**254**	*e*S	Sn	18 54 36.8	+4.4
GNL	**Ganaly**	**4.82**	**263**	*e*P	Pn	18 53 47.2	+4.1
RUS	**Russkaya**	**4.95**	**248**	*e*P	Pn	18 53 47.4	+2.7
KRMR	**Karymshinskiy**	**4.99**	**253**	*e*P	Pn	18 53 49.1	+3.9
KRMR				*e*S	Sn	18 54 45.5	+4.1
MTVR	**Mutnovka**	**5.10**	**249**	*e*P	Pn	18 53 50.3	+3.3
MTVR				*e*S	Sn	18 54 47.2	+2.7
GRL	**Gorelyy**	**5.13**	**250**	*e*P	Pn	18 53 50.9	+3.6
GRL				*e*S	Sn	18 54 48.7	+3.5
ASAK	**Asacha**	**5.30**	**249**	*e*P	Pn	18 53 53.6	+4.0
ASAK				*e*S	Sn	18 54 52.9	+3.5

*IDC **31** 19:01:19.7±1.6, 10°.80S×123°.51E, h60km±13km, mb3.3/5, mbtmp3.7/8, Error ellipse: s-maj=56.3km s-min=12.9km az=79.0*
*DJA **31** 19:01:20.4±1.2, 11°.5±9°×12°.3E±°, h33km±12km, M4.3/10, mB5.0/1, mb4.9/3, MLv4.1/10, Mw(mB)4.3/1*
ISC 31 19:01:17.9±0.7, 10°.92S±0°.05×123°.40E±0°.07, h35km, n26, σ2s41/26, mb3.8/5, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**0.75**	**20**	P	**Pn**	**19 01 33.6**	**+1.6**
	595nm,0.4s,baz=181,slow=4.4,SNR=311						
BATI				S	**Sn**	**19 01 44.5**	**+2.2**
	3μm,0.4s,baz=216,slow=6.3,SNR=37						
BATI	**Baumata**	**0.75**	**20**	P	**Pn**	**19 01 33.9**	**+1.9**
BATI				S	**Sn**	**19 01 44.3**	**+2.1**
SOEI	**Soe**	**1.43**	**36**	P	Pn	19 01 45.0	+3.5
SOEI	**Soe**	**1.43**	**36**	P	Pn	19 01 45.1	+3.5
MMRI	**Maumere**	**2.54**	**333**	P	**Pn**	**19 01 57.6**	**+0.9**
MMRI	**Maumere**	**2.54**	**333**	S	**Sn**	**19 02 26.0**	**-0.4**
MMRI	**Maumere**	**2.54**	**333**	P	**Pn**	**19 01 57.5**	**+0.9**
WBSI	**Waikabubak, Su**	**4.15**	**287**	P	**Pn**	**19 02 20.1**	**+1.3**
LBFI	**Labuhan Bajo,**	**4.23**	**305**	P	**Pn**	**19 02 21.4**	**+1.5**
DBNI	**Kabupaten Domp**	**5.56**	**295**	P	**Pn**	**19 02 40.5**	**+2.3**
	0.3nm44nm,0.6s						
PLAI	**Plampang**	**5.92**	**290**	P	**Pn**	**19 02 44.6**	**+1.4**
PLAI	**Plampang**	**5.92**	**290**	P	**Pn**	**19 02 44.9**	**+1.7**
	1μm143nm,0.7s						
FITZ	**Fitzroy Crossi**	**7.46**	**163**	P	**Pn**	**19 03 08.8**	**+4.5**
	2.4nm,0.3s,baz=352,slow=11,SNR=47						
FITZ				S	**Sn**	**19 04 30.6**	**+2.9**
	32nm,0.6s,baz=157,slow=9.6,SNR=21						
DRS	**Darwin Rock St**	**7.49**	**102**	P	**Pn**	**19 03 08.6**	**+3.8**
FAKI	**Fak Fak**	**11.84**	**48**	P	**Pn**	**19 04 06.4**	**+2.1**
UGM	**Wanagama**	**13.05**	**282**	P	**Pn**	**19 04 22.7**	**+1.7**
WRA	**Warramunga Arr**	**13.84**	**132**	P	**Pn**	**19 04 32.4**	**+0.8**
	1.2nm,0.4s,baz=310,slow=15,SNR=30						
WRA				S	**Sn**	**19 07 00.3**	**-3.8**
	6.8nm,0.5s,baz=297,slow=24,SNR=18						
ASAR	**Alice Springs**	**16.15**	**143**	P	**P**	**19 05 05.0**	**-0.3**
	1.3nm,0.4s,baz=314,slow=12,SNR=35						
ASAR				S	**Sn**	**19 07 55.7**	**-4.8**
	2.8nm,0.5s,baz=319,slow=22,SNR=15						
MJAR	**Matsushiro Arr**	**49.22**	**16**	P	**P**	**19 10 00.2**	**-2.7**
	0.7nm,0.6s,baz=179,slow=8.6,SNR=4.0						
	0.7nm,0.6s						
USRK	**Ussuriysk Ar.**	**55.41**	**7**	P	**P**	**19 10 47.6**	**-1.1**
	1.0nm,0.6s,baz=197,slow=7.3,SNR=2.2						
	1.0nm,0.6s						
SONM	**Songino Array**	**60.41**	**347**	P	**P**	**19 11 22.8**	**-1.1**
	0.4nm,0.6s,baz=165,slow=8.7,SNR=5.4						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**68.18**	**331**	P	**P**	**19 12 13.5**	**-1.2**
	0.2nm,0.6s,baz=137,slow=7.1,SNR=4.5						
	0.2nm,0.6s						
H04N2	**CROZET ISLANDS**	**69.47**	**225**	T	T	20 28 07.6	
	baz=87,slow=74,SNR=405						
H04N3	**CROZET ISLANDS**	**69.48**	**225**	T	T	20 28 06.1	
	baz=87,slow=74,SNR=406						
H04N1	**CROZET ISLANDS**	**69.48**	**225**	T	T	20 28 07.3	
	baz=87,slow=74,SNR=440						
KURBB	**Kurchatov Arra**	**72.65**	**332**	P	**P**	**19 12 39.9**	**-1.9**
	0.3nm,0.7s,baz=136,slow=5.9,SNR=2.9						
	0.3nm,0.7s						

IDC 31 19:11:18.6±9.3, 42°.13S×79°.05E, h0km, mb3.8/4, mbtmp3.8/4, MS3.6/9, Error ellipse: s-maj=240.4km s-min=46.3km az=42.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H04N2	**CROZET ISLANDS**	**19.92**	**249**	T	T	19 38 23.0	
	baz=88,slow=74,SNR=1021						
H04N3	**CROZET ISLANDS**	**19.94**	**249**	T	T	19 38 22.3	
	baz=88,slow=74,SNR=1519						
H04N1	**CROZET ISLANDS**	**19.94**	**249**	T	T	19 38 17.9	
	baz=88,slow=74,SNR=840						
H01W2	**Cape Leeuwin H**	**28.24**	**87**	T	T	19 45 27.7	
	baz=245,slow=74						
H01W3	**Cape Leeuwin H**	**28.25**	**87**	T	T	19 45 25.4	
	baz=245,slow=74						
H01W1	**Cape Leeuwin H**	**28.26**	**87**	T	T	19 45 26.5	
	baz=245,slow=74						
LEM	**Lembang**	**43.31**	**44**	LR	LR	19 33 59.9	
	comp=Z,59nm,18.7s,baz=194,slow=31						
BOSA	**Boshof**	**45.19**	**269**	LR	LR	19 34 46.8	
	comp=Z,79nm,20.1s,baz=194,slow=31						
LBTB	**Lobatse**	**46.93**	**274**	LR	LR	19 35 48.5	
	comp=Z,66nm,18.5s,baz=169,slow=31						
VNDA	**Vanda**	**47.74**	**163**	LR	LR	19 38 43.8	
	comp=Z,103nm,18.5s,baz=274,slow=34						
QSPA	**South Pole Qui**	**48.04**	**180**	LR	LR	19 39 19.9	
	comp=Z,110nm,18.2s,baz=260,slow=35						
ASAR	**Alice Springs**	**48.75**	**86**	P	P	19 20 05.0	-0.2
	1.0nm,0.9s,baz=238,slow=7.6,SNR=11						
	1.0nm,0.9s						
PALK	**Palilekele**	**49.18**	**2**	LR	LR	19 37 57.6	
	comp=Z,51nm,18.3s,baz=145,slow=32						
WRA	**Warramunga Arr**	**51.31**	**82**	P	P	19 20 24.6	-0.1
	1.2nm,0.8s,baz=234,slow=7.5,SNR=8.4						
	1.2nm,0.8s						
TSUM	**Tsumeb**	**56.34**	**274**	LR	LR	19 41 11.8	
	comp=Z,61nm,20.9s,baz=144,slow=32

TDK					S		Sg	19 22 49.9	-1.0
TDK	**Taldyqorghan**	**0.91**	**316**	*eP*		**Pg**	19 22 38.4	-0.7
	966nm,0.1s								
TDK					*eS*		**Sg**	19 22 50.3	-0.6
	8μm,0.2s								
KAPS	**Kapalarasan**	**0.94**	**3**	P			**Pg**	19 22 39.2	-0.5
KAPS					S		**Sg**	19 22 51.0	-1.0
KPKS	**Kokpek**	**0.98**	**207**	P			**Pb**	19 22 40.6	-0.1
KPKS					S		**Sb**	19 22 53.9	+0.2
KPKS	**Kokpek**	**0.98**	**207**	*eP*			**Pb**	19 22 40.6	-0.1
	528nm,0.1s								
KPKS					*eS*		**Sb**	19 22 54.2	+0.5
	2μm,0.1s								
PDGK	**Podgornoye**	**1.03**	**172**	⇑P			**Pg**	19 22 40.8	-0.7
	9.7nm,0.2s								
PDGK					⇑S		**Sg**	19 22 54.7	-0.2
	18nm,0.3s								
ARXS	**Arharly**	**1.06**	**263**	P			**Pg**	19 22 41.6	-0.4
	13nm,0.1s								
ARXS					S		**Sg**	19 22 55.3	-0.5
	36nm,0.3s								
ARXS	**Arharly**	**1.06**	**263**	*eP*			**Pg**	19 22 41.6	-0.4
	612nm,0.1s								
ARXS					*eS*		**Sg**	19 22 55.8	0.0
	1μm,0.1s								
KURS	**Kuram**	**1.18**	**224**	P			**Pn**	19 22 44.3	+0.2
	17nm,0.4s								
KURS					S		**Sb**	19 23 00.1	+0.8
	56nm,0.4s								
KTMS	**Ketmen**	**1.19**	**139**	P			**Pg**	19 22 43.5	-0.9
KTMS					S		**Sg**	19 22 58.3	-1.6
KTMS	**Ketmen**	**1.19**	**139**	*eP*			**Pg**	19 22 43.5	-0.9
	3μm,0.1s								
KTMS					*eS*		**Sg**	19 22 59.1	-0.8
	364nm,0.1s								
UZB	**Uzynbulak**	**1.22**	**189**	P			**Pg**	19 22 44.5	-0.5
	6.0nm,0.1s								
UZB					S		**Sb**	19 23 00.6	+0.2
	54nm,0.3s								
UZB	**Uzynbulak**	**1.22**	**189**	*eP*			**Pg**	19 22 44.5	-0.5
	204nm,0.1s								
UZB					*eS*		**Sb**	19 23 00.8	+0.4
	950nm,0.1s								
SATY	**Saty**	**1.44**	**207**	P			**Pg**	19 22 49.5	+0.3
SATY					S		**Sg**	19 23 08.4	+0.4
KOTS	**Kotyrbulak**	**1.93**	**235**	P			**Pb**	19 22 57.0	+0.2
	24nm,0.3s								
KOTS					S		**Sb**	19 23 21.6	+0.6
	72nm,0.3s								
KTBS	**Karatobe**	**1.98**	**252**	Pg			**Pb**	19 22 57.9	+0.2
KTBS					Lg		Lg	19 23 23.1	
MDOK	**Medeo**	**2.01**	**235**	Pg			**Pb**	19 22 58.2	0.0
	29nm,0.2s								
MDOK					Lg		Lg	19 23 24.1	
	100nm,0.6s								
KNDC	**Almaty**	**2.03**	**237**	⇑Pn			**Pb**	19 22 58.3	-0.1
	13nm,0.2s								
KNDC					⇑Sn		**Sg**	19 23 26.3	-0.4
	85nm,0.5s								
TNSS	**Tian-Shan**	**2.15**	**233**	Pg			**Pb**	19 23 01.2	+0.5
	1.7nm,0.2s								
TNSS					Lg		Lg	19 23 29.0	
	10.0nm,0.3s								
KUU	**Kurty**	**2.17**	**259**	Pg			**Pb**	19 23 01.1	+0.1
KUU					Lg		Lg	19 23 29.0	
IZV	**Izvestkoviy**	**2.34**	**237**	Pg			**Pb**	19 23 03.6	-0.3
	7.6nm,0.4s								
IZV					Lg		Lg	19 23 33.5	
	40nm,0.7s								
KRBS	**Karabastau**	**2.69**	**257**	Pg			**Pb**	19 23 09.1	-0.6
	4.1nm,0.4s								
KRBS					Lg		Lg	19 23 42.7	
	22nm,0.3s								
KST	**Kastek**	**2.74**	**243**	Pg			**Pb**	19 23 11.3	+0.6
	2.2nm,0.2s								
KST					Lg		Lg	19 23 46.8	
	26nm,0.4s								
DGS	**Degeres**	**2.78**	**248**	Pg			**Pb**	19 23 12.1	+0.8
	4.5nm,0.2s								
DGS					Lg		Lg	19 23 47.6	
	38nm,0.5s								
MK31	**Makanchi Array**	**3.23**	**40**	Pn			**Pn**	19 23 15.1	+2.8
	0.2nm,0.1s,baz=215,slow=15,SNR=19								
MK31					⇓Lg		Lg	19 23 55.4	
	0.6nm,0.2s,baz=217,slow=25,SNR=6.3								
SGDS	**Sogindy**	**3.48**	**257**	Pg			**Pb**	19 23 23.6	+0.3
	1.1nm,0.2s								
SGDS					Lg		Lg	19 24 07.5	
	10nm,0.3s								
AAK	**Ala-Archa**	**3.88**	**246**	⇓Pn			**Pn**	19 23 23.4	+2.0
	2.6nm,0.3s								
AAK					⇓Pg		**Pb**	19 23 32.1	+1.9
	7.1nm,0.4s								
AAK					⇑Lg		Lg	19 24 21.7	
	13nm,0.5s								
KURBB	**Kurchatov Arra**	**6.30**	**356**	⇑Pg			**Pb**	19 24 12.9	+1.7
	0.3nm,0.3s								
KURBB					⇓Sn		**Sn**	19 25 06.3	+0.1
	0.2nm,0.2s								
KURBB					⇓Lg		Lg	19 25 39.5	
	4.7nm,0.6s								
KURK	**Kurchatov**	**6.39**	**356**	⇑Pg			**Pb**	19 24 13.1	+0.4
	0.1nm,0.2s								
KURK					⇑Sn		**Sn**	19 25 04.5	-3.8
	0.3nm,0.6s								
KURK					⇑Lg		Lg	19 25 39.3	
	0.3nm,0.5s								
KK31	**Karatay Array**	**6.48**	**262**	⇓Pg			**Pg**	19 24 21.8	-3.9
	0.3nm,0.4s,baz=78,slow=18,SNR=4.3								
KK31					Lg		Lg	19 25 42.1	
	2.7nm,0.5s,baz=73,slow=29,SNR=9.2								

*IDC **31** 19:47:46.5±0.8,24˚.25N×124˚.17E,h0km,mb3.8/13, mbtmp3.8/13,MS2.9/2,Error ellipse: s-maj=37.4km s-min=15.4km az=68.0*
*JMA **31** 19:47:48.1±0.1,24˚.2N±0˚.4×124˚.2E±0˚.4,h10km±1km, MD4.2/14,MV3.9/14,NEAR ISHIGAKIJIMA ISLAND*
JMA Felt I J1 at NEAR ISHIGAKIJIMA ISLAND.
*NEIC **31** 19:47:52.4±1.8,24˚.11N±0˚.07×124˚.04E±0˚.08,h40km±8km, mb4.4/30,Error ellipse: s-maj=11.8km s-min=10.0km az=48.0*

ISC 31 19:47:48.2±1.1,**24˚.15N**±0˚.05×**124˚.17E**±0˚.03,**h14**km±6km, **n84**,σ1§**12**/83,**mb4.3**/26,**Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKRS	**Kuro-shima**	**0.18**	**301**	*i* P	**Pg**	**19 47 52.4**	**0.0**
JKRS				A	A	19 47 52.4	
	comp=N,56nm,3.4s,comp=E,74nm,0.4s						
JKRS				*eS*	**Sg**	**19 47 55.6**	**+0.4**
JIJ	**Ishigaki jima**	**0.22**	**352**	*i* P	**Pg**	**19 47 52.5**	**-0.6**
JIJ				A	A	19 47 52.5	
	comp=N,22nm,3.7s,comp=E,15nm,1.3s						
JIJ				S	**Sg**	**19 47 55.5**	**-0.9**
HATJ	**Hateruma jima**	**0.35**	**255**	*i* P	**Pg**	**19 47 55.6**	**+0.3**
HATJ				A	A	19 47 55.6	
	comp=N,26nm,3.7s,comp=E,26nm,4.0s						
HATJ				*eS*	**Sb**	**19 48 01.0**	**-0.6**
IRIF	**Iriomote-Funau**	**0.45**	**295**	*i* P	**Pg**	**19 47 57.2**	**+0.1**
IRIF				A	A	19 47 57.2	
	comp=N,14nm,0.4s,comp=E,40nm,0.4s						
IRIF				S	**Sb**	**19 48 03.8**	**-0.7**
JISG	**Ishigakijimahi**	**0.46**	**16**	*i* P	**Pg**	**19 47 56.6**	**-0.7**
JISG				*eS*	**Sg**	**19 48 02.9**	**-0.6**
JTJ	**Tarama**	**0.69**	**44**	*i* P	**Pg**	**19 48 01.1**	**-0.6**
JTJ				A	A	19 48 01.1	
	comp=N,18nm,3.7s,comp=E,15nm,0.5s						
JTJ				*eS*	**Sb**	**19 48 10.9**	**-0.5**
YOJ	**Yonaguni jima**	**1.11**	**287**	P	**Pb**	**19 48 08.8**	**-0.3**
YOJ	**Yonaguni jima**	**1.11**	**287**	S	**Sn**	**19 48 24.5**	**+0.1**
YOJ	**Yonaguni jima**	**1.11**	**287**		**Sb**	**19 48 08.9**	**-0.2**
YOJ				Sn	**Sb**	**19 48 23.6**	**+0.1**
YOJ	**Yonaguni jima**	**1.11**	**287**	*eP*	**Pg**	**19 48 09.3**	**-0.3**
YOJ				A	A	19 48 09.3	
	comp=N,8.0nm,2.6s,comp=E,7.0nm,1.9s						
YOJ				*eS*	**Sb**	**19 48 23.8**	**+0.4**
JYNG	**Yonagunijimaku**	**1.16**	**285**	*i* P	**Pb**	**19 48 09.9**	**-0.2**
JYNG				S	**Sg**	**19 48 25.6**	**-0.2**
JMJ2	**Miyako jima3**	**1.21**	**60**	P	**Pn**	**19 48 10.2**	**-0.5**
JMJ	**Miyako jima 2**	**1.22**	**57**	P	**Pn**	**19 48 10.8**	**0.0**
JMJ	**Miyako jima 2**	**1.22**	**57**	S	**Sn**	**19 48 28.4**	**+1.3**
JIKM	**Ikemajima**	**1.25**	**51**	*eP*	**Pn**	**19 48 10.8**	**-0.5**
JOGS	**Gusukube**	**1.28**	**61**	*eP*	**Pn**	**19 48 11.6**	**-0.1**
JOGS				A	A	19 48 11.6	
	comp=N,8.0nm,1.3s,comp=E,10.0nm,5.3s						
NACB	**Ninganchiao**	**2.36**	**271**	P	**Pn**	**19 48 27.5**	**+1.0**
NACB	**Ninganchiao**	**2.36**	**271**		**Pn**	**19 48 26.8**	**+0.3**
TATO	**Taipei**	**2.58**	**289**	P	**Pn**	**19 48 30.9**	**+1.3**
TATO	**Taipei**	**2.58**	**289**		**Pn**	**19 48 30.5**	**+0.9**
TATO				Sn	**Sn**	**19 48 57.8**	**-3.0**
YHNB	**Yeheng**	**2.60**	**282**	P	**Pn**	**19 48 31.3**	**+1.3**
YHNB	**Yeheng**	**2.60**	**282**		**Pn**	**19 48 30.4**	**+0.4**
YHNB				Sn	**Sn**	**19 49 00.5**	**-1.0**
YULB	**Yu-li**	**2.74**	**255**	P	**Pn**	**19 48 32.0**	**+0.2**
YULB	**Yu-li**	**2.74**	**255**		**Pn**	**19 48 31.4**	**-0.4**
YULB				Sn	**Sn**	**19 49 01.9**	**-2.8**
SSLB	**Suanglung**	**2.97**	**264**	P	**Pn**	**19 48 36.2**	**+1.3**
SSLB	**Suanglung**	**2.97**	**264**		**Pn**	**19 48 35.2**	**+0.2**
TWGBT	**Beinan**	**3.13**	**246**	P	**Pn**	**19 48 37.5**	**+0.3**
TWG	**Pinlang**	**3.14**	**246**		**Pn**	**19 48 36.0**	**-1.2**
TWG				Sn	**Sn**	**19 49 13.3**	**-1.3**
TPUB	**Ta-pu**	**3.36**	**256**	P	**Pn**	**19 48 42.4**	**+2.1**
TPUB	**Ta-pu**	**3.36**	**256**		**Pn**	**19 48 40.1**	**-0.1**
JNU	**Nakatsue**	**10.71**	**32**	LR	LR	19 54 18.9	
	comp=E,68nm,19.7s,baz=199,slow=37						
KSRS	**Korea Array**	**13.65**	**13**	Pn	**Pn**	**19 51 04.8**	**+3.4**
	comp=E,0.3nm,0.3s,baz=196,slow=11,SNR=6.5						
CMAR	**Chiang Mai Arr**	**24.16**	**261**	P	**P**	**19 53 05.6**	**+1.4**
	comp=E,0.3nm,0.4s,baz=58,slow=8.1,SNR=6.1						
CMAR				LR	LR	20 03 33.7	
	comp=E,26nm,18.5s,baz=300,slow=39 comp=E,0.3nm,0.4s						
CMAR	**Chiang Mai Arr**	**24.16**	**261**	P	**P**	**19 53 02.5**	**-1.7**
KLR	**Kul'dur**	**25.74**	**11**	P	**P**	**19 53 18.4**	**+0.2**
	comp=E,0.9nm,0.4s,baz=167,slow=16,SNR=4.9 comp=E,0.9nm,0.4s						
SONM	**Songino Array**	**27.54**	**334**	P	**P**	**19 53 34.0**	**-0.6**
	comp=E,0.5nm,0.6s,baz=149,slow=8.6,SNR=4.2 comp=E,0.5nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**39.76**	**88**	T	T	20 37 40.2	
	baz=284,slow=75,SNR=3.3						
H11N2	**WAKE ISLAND Hy**	**39.76**	**88**	T	T	20 37 38.3	
	baz=284,slow=75,SNR=3.7						
H11N3	**WAKE ISLAND Hy**	**39.78**	**88**	T	T	20 37 40.9	
	baz=284,slow=75,SNR=4.2						
KNRA	**Kununurra**	**39.83**	**173**	P	**P**	**19 55 20.5**	**-0.8**
KNRA				IAmb	IAmb	19 55 30.3	
	comp=Z,7.4nm,1.1s						
H11S3	**WAKE ISLAND Hy**	**39.89**	**90**	T	T	20 37 54.3	
	baz=283,slow=75,SNR=6.2						
H11S1	**WAKE ISLAND Hy**	**39.90**	**90**	T	T	20 37 55.0	
	baz=283,slow=75,SNR=4.5						
H11S2	**WAKE ISLAND Hy**	**39.91**	**90**	T	T	20 37 55.9	
	baz=283,slow=75,SNR=3.9						
MKAR	**Makanchi Array**	**40.28**	**315**	P	**P**	**19 55 24.4**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=100,slow=10.0,SNR=9.6 comp=Z,1.1nm,0.6s						
ZALV	**Zalesovo Beam**	**41.79**	**326**	P	**P**	**19 55 36.2**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=117,slow=8.7,SNR=2.8 comp=Z,0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**41.79**	**326**	P	**P**	**19 55 35.8**	**-1.4**
KDJ	**Kajisay**	**42.66**	**307**	P	**P**	**19 55 45.1**	**+0.4**
KURK	**Kurchatov**	**43.89**	**319**	P	**P**	**19 55 53.9**	**-0.3**
KURBB	**Kurchatov Arra**	**43.91**	**319**	P	**P**	**19 55 53.9**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=98,slow=9.2,SNR=4.8 comp=Z,0.2nm,0.5s						
WB0	**Warramunga Arr**	**44.77**	**166**	P	**P**	**19 56 00.5**	**-1.0**
WB0				IAmb	IAmb	19 56 33.4	
	comp=Z,7.1nm,1.4s						
WRA	**Warramunga Arr**	**44.93**	**166**	P	**P**	**19 56 03.6**	**+0.8**
	comp=Z,1.5nm,0.8s,baz=347,slow=8.7,SNR=13 comp=Z,1.5nm,0.8s						
WR8	**Warramunga Arr**	**44.97**	**166**	P	**P**	**19 56 03.4**	**+0.3**
WR8				IAmb	IAmb	19 56 08.7	
	comp=Z,5.3nm,1.1s						
KKAR	**Karatay Array**	**47.67**	**307**	P	**P**	**19 56 23.2**	**-1.1**
ASAR	**Alice Springs**	**48.46**	**168**	P	**P**	**19 56 31.8**	**+1.3**
	comp=Z,0.6nm,0.7s,baz=355,slow=13,SNR=13 comp=Z,0.6nm,0.7s						
BVAR	**Borovoye Array**	**49.45**	**320**	P	**P**	**19 56 37.1**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=103,slow=9.3,SNR=2.3 comp=Z,0.3nm,0.5s						
FORT	**Forrest**	**54.74**	**176**	P	**P**	**19 57 18.2**	**+1.0**
KAAM	**Kaadhehdhoo**	**54.82**	**252**	P	**P**	**19 57 16.9**	**-1.4**
ABKAR	**Abdulah array**	**55.42**	**314**	P	**P**	**19 57 22.2**	**+0.1**
BBOO	**Buckleboo**	**57.76**	**168**	P	**P**	**19 57 38.9**	**0.0**
STKA	**Stephens Creek**	**58.14**	**163**	P	**P**	**19 57 42.8**	**+1.2**
	comp=Z,2.1nm,0.8s,baz=312,slow=6.5,SNR=4.3 comp=Z,2.1nm,0.8s						
STKA	**Stephens Creek**	**58.14**	**163**	IAmb	IAmb	19 57 46.0	
	comp=Z,47nm,1.4s						
AKUT	**Akutan**	**59.19**	**40**	P	**P**	**19 57 46.5**	**-2.1**
F15K	**North Star Dit**	**60.51**	**27**	P	**P**	**19 57 56.8**	**-0.8**
L14K	**Kuka Creek**	**61.05**	**32**	P	**P**	**19 58 02.2**	**+0.9**
E19K	**Redstone River**	**63.58**	**25**	P	**P**	**19 58 19.9**	**+1.8**
E19K				IAmb	IAmb	19 58 21.3	
	comp=Z,3.2nm,1.1s						
B21K	**Ikpikpuk River**	**64.54**	**23**	IAmb	IAmb	19 58 27.4	
	comp=Z,3.6nm,0.8s						
H21K	**Melozitna Rive**	**65.41**	**27**	P	**P**	**19 58 30.7**	**+0.6**
H21K				IAmb	IAmb	19 58 32.8	
	comp=Z,2.9nm,0.8s						
E22K	**Anaktuvuk Pass**	**65.62**	**24**		**P**	**19 58 32.9**	**+1.4**
D23K	**Nanushuk River**	**65.97**	**23**	P	**P**	**19 58 35.2**	**+1.6**
H22K	**Ishtalitna Cre**	**65.97**	**27**		**P**	**19 58 35.6**	**+1.8**
H22K				IAmb	IAmb	19 58 36.8	
	comp=Z,3.2nm,0.8s						
E23K	**Chandalar**	**66.44**	**24**	P	**P**	**19 58 38.6**	**+1.7**
E23K				IAmb	IAmb	19 58 41.5	
	comp=Z,4.6nm,1.1s						
D24K	**Happy Valley**	**66.61**	**23**	P	**P**	**19 58 39.1**	**+1.3**
E24K	**Your Creek**	**66.86**	**24**	IAmb	IAmb	19 58 42.1	
	comp=Z,3.1nm,0.7s						
F24K	**Squaw Lake**	**67.16**	**25**		**P**	**19 58 43.2**	**+1.8**
G24K	**Hadweenzic Riv**	**67.44**	**26**		**P**	**19 58 44.8**	**+1.6**
F25K	**Christian Rive**	**68.00**	**24**	IAmb	IAmb	19 58 50.2	
	comp=Z,3.3nm,0.8s						
I27K	**Kandik River**	**69.99**	**26**	IAmb	IAmb	19 59 01.9	
	comp=Z,4.4nm,0.8s						
I28M	**Miner Creek**	**70.71**	**26**	P	**P**	**19 59 04.8**	**+1.2**
I28M				IAmb	IAmb	19 59 06.7	
	comp=Z,2.8nm,0.9s						
G30M	**tAoh Zraii Nji**	**71.70**	**24**	IAmb	IAmb	19 59 10.8	
	comp=Z,4.0nm,1.1s						
FINES	**FINESS Array B**	**72.85**	**330**	P	**P**	**19 59 16.8**	**+0.5**
	comp=Z,4.0nm,0.9s,baz=68,slow=5.9,SNR=5.1 comp=Z,4.0nm,0.9s						
AKASG	**Malin Array Be**	**74.70**	**319**	P	**P**	**19 59 26.7**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=70,slow=5.7,SNR=3.1 comp=Z,0.2nm,0.3s						
AKASG	**Malin Array Be**	**74.70**	**319**	IAmb	IAmb	19 59 34.9	
	comp=Z,1.7nm,0.9s						
GERES	**GERESS Array B**	**84.59**	**322**	P	**P**	**20 00 22.0**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=74,slow=4.7,SNR=5.4 comp=Z,0.8nm,0.6s						
GERES	**GERESS Array B**	**84.59**	**322**	P	**P**	**20 00 21.7**	**+0.4**

*SJA **31** 19:48:38.7±0.6,21˚.28S×68˚.75W,h136km±4km,ML3.5, MW3.6*
*GUC **31** 19:48:40.8±0.7,21˚.29S×68˚.68W,h120km±4km,ML3.6*

ISC 31 19:48:40.1±1.7,**21˚.28S**±0˚.04×**68˚.76W**±0˚.08, **h130**km±12km,**n34**,σ0§**49**/60,**6C-2D**,**Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.69**	**221**	⇑*i* P	**Pn**	**19 49 00.5**	**-0.1**
PB09				*eS*	**Sn**	**19 49 15.6**	**-0.5**
PB09				IAML		19 49 16.6	
	comp=N,902nm,0.2s						
PB09	**IPOC Station P**	**0.69**	**221**	*eP*	**Pn**	**19 49 00.5**	**-0.1**
PB09				*eS*	**Sn**	**19 49 16.3**	**+0.2**
PB09				IAML		19 49 18.9	
	comp=Z,760nm,0.3s						
PB01	**IPOC Station P**	**0.72**	**289**	⇓*i* P	**Pn**	**19 49 00.3**	**-0.4**
PB01				*eS*	**Sn**	**19 49 15.6**	**-0.6**
PB01				IAML		19 49 17.4	
	comp=E,2μm,0.2s						
PB01	**IPOC Station P**	**0.72**	**289**	*eP*	**Pn**	**19 49 00.3**	**-0.4**
PB01				*eS*	**Sn**	**19 49 16.8**	**+0.5**
PB01				IAML		19 49 17.5	
	comp=Z,601nm,0.3s						
PB02	**IPOC Station P**	**1.06**	**267**	*eP*	**Pn**	**19 49 04.0**	**+0.3**
PB02				*eS*	**Sn**	**19 49 21.5**	**-0.1**
PB02				IAML		19 49 22.6	
	comp=N,2μm,0.3s						
PB02	**IPOC Station P**	**1.06**	**267**	*eP*	**Pn**	**19 49 03.4**	**-0.3**
PB02				*eS*	**Sn**	**19 49 21.9**	**+0.3**
PB02				IAML		19 49 27.2	
	comp=Z,2μm,0.4s						
PB07	**IPOC Station P**	**1.14**	**247**	⇑*i* P	**Pn**	**19 49 04.6**	**+0.1**
PB07				*eS*	**Sn**	**19 49 22.8**	**-0.3**
PB07				IAML		19 49 24.2	
	comp=E,2μm,0.4s						
PB07	**IPOC Station P**	**1.14**	**247**	*eP*	**Pn**	**19 49 04.4**	**-0.2**
PB07				*eS*	**Sn**	**19 49 23.4**	**+0.3**
PB07				IAML		19 49 24.1	
	comp=Z,938nm,0.3s						
PB03	**IPOC Station P**	**1.20**	**230**	⇑*i* P	**Pn**	**19 49 05.1**	**-0.1**
PB03				*eS*	**Sn**	**19 49 23.8**	**-0.4**
PB03				IAML		19 49 24.6	
	comp=N,603nm,0.3s						
PB03	**IPOC Station P**	**1.20**	**230**	*eP*	**Pn**	**19 49 05.1**	**-0.1**
PB03				*eS*	**Sn**	**19 49 24.4**	**+0.2**
PB03				IAML		19 49 25.5	
	comp=Z,622nm,0.2s						
PATCX	**Punta Patache**	**1.38**	**289**	*i* P	**Pn**	**19 49 07.5**	**+0.6**
PATCX				*eS*	**Sn**	**19 49 27.8**	**+0.5**
PATCX				IAML		19 49 29.5	
	comp=E,1μm,0.3s						
PATCX	**Punta Patache**	**1.38**	**289**	*eP*	**Pn**	**19 49 06.9**	**0.0**
PATCX				*eS*	**Sn**	**19 49 28.3**	**+1.0**
PATCX				IAML		19 49 28.8	
	comp=Z,526nm,0.5s						
HMBC	**Humberstone**	**1.45**	**313**	⇓*i* P	**Pn**	**19 49 07.6**	**-0.2**
HMBC				*eS*	**Sn**	**19 49 28.5**	**-0.3**
HMBC				IAML		19 49 32.2	
	comp=N,1μm,0.6s						
HMBC	**Humberstone**	**1.45**	**313**	*eP*	**Pn**	**19 49 07.6**	**-0.2**
HMBC				*eS*	**Sn**	**19 49 28.9**	**+0.1**
HMBC				IAML		19 49 29.5	
	comp=Z,926nm,0.3s						
TA01	**Diego Aracena**	**1.50**	**298**	⇑*i* P	**Pn**	**19 49 08.4**	**+0.2**
TA01				*eS*	**Sn**	**19 49 29.7**	**0.0**
TA01				IAML		19 49 31.4	
	comp=N,1μm,0.5s						
TA01	**Diego Aracena**	**1.50**	**298**	*eP*	**Pn**	**19 49 07.8**	**-0.4**
TA01				*eS*	**Sn**	**19 49 30.0**	**+0.4**
TA01				IAML		19 49 30.9	
	comp=Z,329nm,0.3s						
PB06	**IPOC Station P**	**1.61**	**208**	⇑*i* P	**Pn**	**19 49 09.6**	**0.0**
PB06				*eS*	**Sn**	**19 49 31.9**	**-0.3**
PB06				IAML		19 49 34.1	
	comp=E,294nm,0.1s						
PB06	**IPOC Station P**	**1.61**	**208**	*eP*	**Pn**	**19 49 09.6**	**0.0**
PB06				*eS*	**Sn**	**19 49 32.2**	**0.0**
PB06				IAML		19 49 39.3	
	comp=Z,222nm,0.2s						
TA02	**Huaiquique**	**1.63**	**308**	*eP*	**Pn**	**19 49 09.6**	**-0.1**
TA02	**Huaiquique**	**1.63**	**308**	*eP*	**Pn**	**19 49 09.7**	**+0.1**
TA02				*eS*	**Sn**	**19 49 33.5**	**+1.3**
TA02				IAML		19 49 36.3	
	comp=Z,334nm,0.1s						
GO01	**Chusmiza**	**1.65**	**346**	*i* P	**Pn**	**19 49 10.4**	**-0.1**
GO01				IAML		19 49 35.6	
	comp=N,575nm,0.2s						
GO01	**Chusmiza**	**1.65**	**346**	*eP*	**Pn**	**19 49 10.5**	**+0.1**
GO01				*eS*	**Sn**	**19 49 34.5**	**+1.0**
GO01				IAML		19 49 37.3	
	comp=Z,176nm,0.3s						
PB11	**IPOC Station P**	**1.73**	**331**	⇑*i* P	**Pn**	**19 49 10.7**	**-0.3**
PB11				*eS*	**Sn**	**19 49 34.2**	**-0.3**
PB11	**IPOC Station P**	**1.73**	**331**	*eP*	**Pn**	**19 49 10.7**	**-0.3**
PB11				*eS*	**Sn**	**19 49 34.6**	**+0.1**
PB11				IAML		19 49 36.9	
	comp=Z,266nm,0.3s						
AF01	**San Pedro de A**	**1.75**	**162**	*eP*	**Pn**	**19 49 11.6**	**+0.1**
AF01	**San Pedro de A**	**1.75**	**162**	*eP*	**Pn**	**19 49 11.3**	**-0.2**
AF01				*eS*	Sn	19 49 22.8	-13
AF01				IAML		19 49 34.5	
	comp=Z,241nm,0.6s						
PB05	**IPOC Station P**	**2.06**	**220**	*eP*	**Pn**	**19 49 14.7**	**-0.2**
PB05	**IPOC Station P**	**2.06**	**220**	*eP*	**Pn**	**19 49 14.8**	**-0.2**
PB05				*eP*		19 49 14.9	
PB05				*eS*	**Sn**	**19 49 42.7**	**+1.0**
PSGCX	**Pisagua**	**2.10**	**322**	*eP*	**Pn**	**19 49 14.8**	**-0.7**
PSGCX	**Pisagua**	**2.10**	**322**	*eP*	**Pn**	**19 49 14.9**	**-0.5**
PSGCX				*eS*	**Sn**	**19 49 43.0**	**+0.4**
PSGCX				IAML		19 49 44.6	
	comp=Z,210nm,0.6s						
PB16	**IPOC Station P**	**3.01**	**346**	*eP*	**Pn**	**19 49 27.7**	**+0.2**
PB16				IAML		19 50 06.4	
	comp=N,73nm,0.2s						
PB16	**IPOC Station P**	**3.01**	**346**	*eP*	**Pn**	**19 49 27.6**	**+0.2**
PB16				*eS*	**Sn**	**19 50 04.7**	**+0.9**
PB16				IAML		19 50 08.7	
	comp=Z,70nm,0.7s						
PB12	**IPOC Station P**	**3.03**	**331**	*eP*	**Pn**	**19 49 25.9**	**-1.3**
PB12				IAML		19 50 08.3	
	comp=E,177nm,0.2s						
**P

0.3nm,0.3s,baz=106,slow=15,SNR=7.8
0.8nm,0.6s
USRK Ussuriysk Ar. 10.61 310 Pn Pn 19 52 22.1 +1.1
JCJ Chichijima 10.79 185 Pn **Pn 19 52 23.1 -0.5**
19nm,0.4s,baz=336,slow=20,SNR=7.5
JCJ Sn **Sn 19 54 16.3 -7.6**
4.3nm,0.3s,baz=106,slow=23,SNR=2.3
JNU Nakatsue 11.16 249 Pn **Pn 19 52 29.4 +0.7**
0.2nm,0.3s,baz=57,slow=17,SNR=1.5
3.2nm,0.8s
KLR Kul'dur 14.07 327 LR LR 19 57 35.5
comp=Z,26nm,20.9s,baz=164,slow=33
PETK Petropavlovsk- 18.22 29 P P 19 54 03.7 +1.7
HILR Hailar Array B 20.53 312 P P 19 54 25.5 -1.8
1.8nm,0.3s,baz=108,slow=13,SNR=9.0
MA2 Magadan 22.24 10 P **P 19 54 45.1 -0.4**
2.2nm,0.5s,baz=195,slow=11,SNR=3.8
2.2nm,0.5s
NACB Ninganchiao 22.99 240 P P 19 54 52.0 -1.7
YAK Yakutsk 25.60 345 P P 19 55 18.2 +0.3
9.0nm,0.6s,baz=137,slow=1.1,SNR=7.6
9.0nm,0.6s
YAK Yakutsk 25.60 345 P 19 55 15.6 -2.3
SEY Seymchan 25.70 10 P **P 19 55 19.2 +0.5**
1.9nm,0.5s,baz=193,slow=7.0,SNR=13
1.9nm,0.5s
H11N2 WAKE ISLAND Hy 27.35 125 T T 20 24 15.7
baz=317,slow=75,SNR=37
H11N1 WAKE ISLAND Hy 27.36 125 T T 20 24 18.8
baz=317,slow=75,SNR=28
H11N3 WAKE ISLAND Hy 27.37 125 T T 20 24 31.2
baz=317,slow=75,SNR=34
H11S1 WAKE ISLAND Hy 28.12 127 T T 20 25 17.1
baz=318,slow=76,SNR=19
H11S3 WAKE ISLAND Hy 28.12 127 T T 20 25 18.1
baz=318,slow=76,SNR=17
H11S2 WAKE ISLAND Hy 28.14 127 T T 20 25 18.0
baz=318,slow=76,SNR=17
SONM Songino Array 28.57 302 P **P 19 55 46.0 +1.1**
0.3nm,0.5s,baz=103,slow=8.4,SNR=6.1
SONM PcP **PcP 19 58 56.3 +0.5**
0.3nm,0.4s,baz=91,slow=1.3,SNR=3.6
0.3nm,0.5s
SONM Songino Array 28.57 302 P P 19 55 45.3 +0.4
ENH Enshi 28.89 265 P P 19 55 49.1 +1.4
TIXI Tiksi 34.65 352 P P 19 56 37.1 -0.7
4.0nm,0.3s,baz=130,slow=2.9,SNR=6.6
4.0nm,0.3s
TIXI Tiksi 34.65 352 IAmb IAmb 19 56 37.6
comp=Z,1.7nm,0.7s
CLES Cleveland East 35.46 50 P P 19 56 44.8 -0.2
ANM Nome 40.10 32 P P 19 57 25.8 +1.7
C16K Lisburne Hills 41.29 26 P P 19 57 34.8 +0.9
C16K IAmb IAmb 19 57 51.7
comp=Z,9.0nm,1.4s
N15K Kwethluk River 41.66 39 P P 19 57 37.4 +0.4
N15K IAmb IAmb 19 57 56.1
comp=Z,11nm,1.2s
L16K Owhat River 42.14 37 P P 19 57 42.1 +1.2
L16K IAmb IAmb 19 58 13.7
comp=Z,6.8nm,1.4s
M16K Timber Creek 42.30 38 P P 19 57 42.9 +0.6
M16K IAmb IAmb 19 58 20.6
comp=Z,13nm,1.4s
ZALV Zalesovo Beam 42.45 312 P P 19 57 44.1 +0.6
comp=Z,0.6nm,0.3s,baz=96,slow=6.0,SNR=4.4
ZALV PcP **PcP 19 59 36.8 +0.6**
baz=95,slow=3.5
comp=Z,0.6nm,0.3s
K17K Iditarod 42.81 35 P P 19 57 49.0 +2.6
C18K Utukok River 42.87 26 P P 19 57 47.2 +0.4
C18K IAmb IAmb 19 57 58.7
comp=Z,5.8nm,1.1s
M17K Holitna River 43.07 37 P P 19 57 50.8 +2.3
M17K IAmb IAmb 19 58 01.1
comp=Z,5.0nm,1.1s
CMAR Chiang Mai Arr 43.15 256 LR LR 20 19 23.4
comp=Z,10nm,18.2s,baz=180,slow=41
H18K Honhosa River 43.15 32 P P 19 57 49.8 +0.7
G18K Tagagawik 43.17 31 P 19 57 50.2 +1.0
G18K IAmb IAmb 19 58 01.0
comp=Z,4.2nm,1.1s
L18K Granite Mounta 43.50 36 P P 19 57 53.3 +1.3
L18K IAmb IAmb 19 57 54.9
comp=Z,6.6nm,1.4s
C19K Lookout Ridge 43.55 26 P P 19 57 53.4 +1.1
C19K IAmb IAmb 19 58 05.2
comp=Z,5.1nm,1.1s
N18K Kilae Creek 43.78 38 P P 19 57 56.1 +1.9
N18K IAmb IAmb 19 58 13.1
comp=Z,8.9nm,1.4s
H19K Roundabout Mou 44.00 31 P 19 57 56.5 +0.6
H19K IAmb IAmb 19 57 58.9
comp=Z,4.3nm,1.0s
E19K Redstone River 44.02 29 P P 19 57 56.8 +0.7
O18K Koktuh Hills 44.08 40 P P 19 57 56.8 +0.1
B20K Meade River 44.60 25 P P 19 58 01.9 +1.2
B20K IAmb IAmb 19 58 02.5
comp=Z,3.4nm,0.6s
MKAR Makanchi Array 44.94 302 P P 19 58 03.8 +0.1
comp=Z,0.5nm,0.6s,baz=82,slow=9.0,SNR=5.5
comp=Z,0.5nm,0.6s
IMAR Indian Mountai 45.17 31 P P 19 58 05.6 +0.3
KDAK Kodiak Island 45.48 43 P P 19 58 08.5 +0.7
B22K Teshekpuk Lake 45.92 25 P P 19 58 11.8 +0.7
B22K IAmb IAmb 19 58 29.1
comp=Z,3.0nm,0.7s
KURK Kurchatov 46.59 308 P 19 58 17.0 +0.4
KURK Kurchatov 46.59 308 PcP 19 59 51.0 +0.6
KURBB Kurchatov Arra 46.66 308 P **P 19 58 17.6 +0.4**
comp=Z,3.3nm,0.6s,baz=80,slow=8.0,SNR=38
KURBB PcP **PcP 19 59 51.0 +0.3**
comp=Z,0.4nm,0.6s,baz=87,slow=1.9,SNR=2.2
comp=Z,3.3nm,0.6s
ILAR Eielson Array 47.98 33 P **P 19 58 27.7 +0.3**
comp=Z,1.3nm,0.8s,baz=263,slow=6.7,SNR=16
comp=Z,1.3nm,0.8s
D25K Kavik River 48.23 27 P P 19 58 30.4 +1.1
D25K IAmb IAmb 19 58 45.5
comp=Z,3.5nm,0.9s
BVAR Borovoye Array 51.11 312 P P 19 58 52.0 +0.7
comp=Z,0.7nm,0.5s,baz=64,slow=6.8,SNR=5.3
BVAR PcP **PcP 20 00 08.2 +1.4**
comp=Z,0.8nm,0.5s,baz=78,slow=5.9,SNR=2.5
comp=Z,0.7nm,0.5s
I30M Mount Dempster 52.38 32 P P 19 59 02.1 +1.3
I30M IAmb IAmb 19 59 03.2
comp=Z,2.2nm,0.8s
KKAR Karatay Array 53.99 300 P P 19 59 13.0 +0.2
KNRA Kununurra 54.99 197 P P 19 59 21.0 +0.8
ARTI Arti 56.82 319 P P 19 59 33.0 +0.1
WB0 Warramunga Arr 57.94 190 P P 19 59 41.7 +0.5
WRA Warramunga Arr 58.12 190 P P 19 59 43.0 +0.5
comp=Z,3.2nm,0.6s,baz=8.7,slow=7.1,SNR=32
comp=Z,3.2nm,0.6s
WRA Warramunga Arr 58.12 190 P P 19 59 42.4 0.0
ABKAR Akbulak array 58.53 310 P P 19 59 45.1 0.0
SPITS Spitsbergen Ar 59.98 349 P P 19 59 55.0 +0.2
comp=Z,6.5nm,1.0s,baz=25,slow=3.8,SNR=9.1
comp=Z,6.5nm,1.0s
KBS Kingsbay 60.08 350 P P 19 59 55.9 +0.5
ASAR Alice Springs 61.85 190 P P 20 00 08.7 +0.6
comp=Z,1.1nm,0.7s,baz=10,slow=6.4,SNR=14
comp=Z,1.1nm,0.7s
YKAW3 Yellowknife Wh 62.29 31 P P 20 00 09.5 -1.0
YKAW3 IAmb IAmb 20 00 43.1
comp=Z,2.1nm,1.2s
FIA1 FINESS Array S 68.75 333 P P 20 00 51.5 -0.8
FINES FINESS Array B 68.75 333 P P 20 00 52.7 +0.3
comp=Z,4.1nm,0.9s,baz=45,slow=5.7,SNR=6.0
comp=Z,4.1nm,0.9s
FINES FINESS Array B 68.75 333 P P 20 00 52.0 -0.4
FORT Forrest 69.77 194 P P 20 00 59.8 +1.0
SUMG Summit 69.84 1 P P 20 01 00.1 +0.8
SUMG IAmb IAmb 20 01 13.9
comp=Z,3.3nm,1.0s
KBZ Khabaz 71.47 311 P P 20 01 10.4 +1.1
comp=Z,1.1nm,0.7s,baz=14,slow=2.5,SNR=4.7
comp=Z,1.1nm,0.7s
HULI Fort Hunter Li 72.74 58 P P 20 01 16.2 -0.9
NVAR Mina Array Bea 73.29 54 P P 20 01 21.9 +1.3
comp=Z,1.1nm,0.8s,baz=283,slow=7.4,SNR=4.1
comp=Z,1.1nm,0.8s
ELK Elko 73.87 51 P P 20 01 23.4 -0.6
HFS Hagfors 73.92 336 P P 20 01 24.1 +0.5
comp=Z,1.8nm,0.8s,baz=52,slow=5.8,SNR=4.3
comp=Z,1.8nm,0.8s

AKASG Malin Array Be 74.53 323 P P 20 01 27.8 +0.5
comp=Z,0.1nm,0.3s,baz=47,slow=6.4,SNR=2.0
comp=Z,0.1nm,0.3s
AKASG Malin Array Be 74.53 323 IAmb IAmb 20 01 36.3
comp=Z,2.9nm,1.3s
PDAR Pinedale Array 76.01 46 P P 20 01 37.0 +0.6
comp=Z,0.4nm,0.6s,baz=270,slow=1.5,SNR=5.4
comp=Z,0.4nm,0.6s

*NEIC **31** 19:53:51.2±1.6, 19°.32N×0°.09×145°.4E±0°.2, h188km±10km, mb4.1/17, Error ellipse: s-maj=23.4km s-min=12.4km az=87.0*
*IDC **31** 19:53:56.8±5.7, 19°.23N×145°.45E, h255km±57km, mb3.1/12, mbtmp3.7/13, Error ellipse: s-maj=30.7km s-min=12.3km az=91.0*
ISC 31 19:53:52.5±0.7, 19°.22N±0°.07×145°.4E±0°.2, h214km, n37, σ1℘15/38, mb3.7/18, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DPSS	**Saipan**	**3.98**	**174**	Pn	**Pn**	**19 54 53.8**	**-0.8**
DPSS				Sn	**S**	**19 55 41.7**	**-1.4**
JHJ2	**Mitsune**	**14.71**	**341**	Pn	**Pn**	**19 57 06.6**	**-3.9**
JGF	**Kuroka**	**17.80**	**338**	P	**P**	**19 57 45.7**	**+0.6**
MJAR	**Matsushiro Arr**	**18.38**	**341**	P	**P**	**19 57 52.6**	**+1.2**
	1.7nm,0.7s,baz=171,slow=8.9,SNR=4.6						
MJAR	**Matsushiro Arr**	**18.38**	**341**	P	**P**	**19 57 50.1**	**-1.3**
MAJO	**Matsushiro**	**18.38**	**341**	P	**P**	**19 57 49.8**	**-1.7**
MAJO				IAmb	IAmb	19 57 59.8	
	comp=Z,16nm,1.5s						
MJB9	**Matsu-Tunnel**	**18.38**	**341**	P	**P**	**19 57 50.7**	**-0.8**
MJB9				IAmb	IAmb	19 58 09.1	
	comp=Z,12nm,1.4s						
SSLB	**Suanglung**	**23.18**	**286**	P	**P**	**19 58 40.5**	**+0.1**
SSLB				IAmb	IAmb	19 59 16.0	
	comp=Z,16nm,1.3s						
KSRS	**Korea Array**	**23.73**	**324**	P	**P**	**19 58 45.8**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=149,slow=7.6,SNR=5.1						
	comp=Z,0.9nm,0.6s						
KS19	**Wonju Array Si**	**23.79**	**324**	P	**P**	**19 58 45.7**	**-0.1**
KLR	**Kul'dur**	**31.89**	**343**	P	**P**	**19 59 58.7**	**+1.1**
	comp=Z,2.0nm,0.5s,baz=161,slow=5.7,SNR=8.1						
	comp=Z,2.0nm,0.5s						
KNRA	**Kununurra**	**38.34**	**206**	P	**P**	**20 00 53.7**	**+0.7**
WB0	**Warramunga Arr**	**40.22**	**196**	P	**P**	**20 01 09.1**	**+0.7**
WB0				IAmb	IAmb	20 01 41.4	
	comp=Z,5.6nm,1.4s						
WRA	**Warramunga Arr**	**40.40**	**196**	P	**P**	**20 01 10.7**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=25,slow=8.6,SNR=7.6						
	comp=Z,0.8nm,0.6s						
WRA	**Warramunga Arr**	**40.40**	**196**	P	**P**	**20 01 09.6**	**-0.3**
FITZ	**Fitzroy Crossi**	**41.85**	**209**	P	**P**	**20 01 22.4**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=31,slow=9.1,SNR=11						
	comp=Z,0.8nm,0.3s						
SONM	**Songino Array**	**42.56**	**321**	P	**P**	**20 01 28.7**	**+1.4**
	comp=Z,0.3nm,0.4s,baz=111,slow=7.9,SNR=2.3						
	comp=Z,0.3nm,0.4s						
ASAR	**Alice Springs**	**44.08**	**195**	P	**P**	**20 01 39.9**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=13,slow=7.5,SNR=2.4						
	comp=Z,0.2nm,0.4s						
ASAR	**Alice Springs**	**44.08**	**195**	P	**P**	**20 01 40.4**	**+0.8**
O15K	**Ungalikthiuk R**	**55.87**	**31**	P	**P**	**20 03 08.7**	**+1.1**
N15K	**Kwethluk River**	**56.11**	**29**	P	**P**	**20 03 10.7**	**+1.3**
MKAR	**Makanchi Array**	**57.90**	**314**	P	**P**	**20 03 22.4**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=81,slow=8.1,SNR=1.7						
	comp=Z,0.3nm,0.7s						
MKAR	**Makanchi Array**	**57.90**	**314**	P	**P**	**20 03 22.0**	**-0.1**
KURK	**Kurchatov**	**60.69**	**318**	P	**P**	**20 03 41.5**	**+0.4**
KURBB	**Kurchatov Arra**	**60.74**	**318**	P	**P**	**20 03 42.1**	**+0.6**
	comp=Z,0.2nm,0.4s,baz=92,slow=7.5,SNR=9.8						
	comp=Z,0.2nm,0.4s						
IMAR	**Indian Mountai**	**60.86**	**24**	P	**P**	**20 03 43.2**	**+1.2**
BPAW	**Bear Paw Mtn.**	**61.42**	**27**	P	**P**	**20 03 46.7**	**+0.8**
BPAW				IAmb	IAmb	20 03 59.0	
	comp=Z,3.9nm,1.3s						
DHY	**Denali Highway**	**62.75**	**28**	P	**P**	**20 03 56.0**	**+1.2**
DHY				IAmb	IAmb	20 04 33.0	
	comp=Z,3.0nm,1.1s						
IL31		**63.31**	**26**	P	**P**	**20 03 58.0**	**-0.2**
IL31				IAmb	IAmb	20 04 25.6	
	comp=Z,4.6nm,1.4s						
ILAR	**Eielson Array**	**63.31**	**26**	P	**P**	**20 03 58.0**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=250,slow=6.2,SNR=5.7						
	comp=Z,0.3nm,0.4s						
BMAR	**Burnt Mountain**	**64.76**	**24**	P	**P**	**20 04 09.1**	**+1.4**
BVAR	**Borovoye Array**	**65.89**	**320**	P	**P**	**20 04 15.8**	**+0.5**
	comp=Z,0.5nm,0.4s,baz=90,slow=8.6,SNR=7.6						
	comp=Z,0.5nm,0.4s						
BORK	**Borovoye**	**65.93**	**320**	P	**P**	**20 04 16.1**	**+0.6**
BORK				IAmb	IAmb	20 04 50.6	
	comp=Z,1.9nm,0.9s						
KKAR	**Karatay Array**	**66.22**	**309**	P	**P**	**20 04 18.6**	**+1.1**
YKA	**Yellowknife Ar**	**77.67**	**28**	P	**P**	**20 05 25.4**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=290,slow=5.8,SNR=3.5						
	comp=Z,0.2nm,0.6s						
FINES	**FINESS Array B**	**86.29**	**335**	P	**P**	**20 06 08.3**	**-1.6**
	comp=Z,1.6nm,0.8s,baz=59,slow=5.3,SNR=6.1						
	comp=Z,1.6nm,0.8s						
FINES	**FINESS Array B**	**86.29**	**335**	P	**P**	**20 06 08.4**	**-1.5**

*IDC **31** 19:58:04.3±0.8, 12°.91N×125°.90E, h0km, mb4.0/12, mbtmp4.0/13, MS2.9/6, Error ellipse: s-maj=28.6km s-min=13.9km az=67.0*
*NEIC **31** 19:58:06.3±1.6, 13°.00N±0°.07×125°.90E±0°.06, h10km±1km, mb4.4/26, Error ellipse: s-maj=14.5km s-min=6.2km az=144.0*
*MAN **31** 19:58:07.0, 13°.03N×125°.78E, h80km, MS3.6*
ISC 31 19:58:09.4±0.6, 13°.01N±0°.05×125°.96E±0°.07, h40km, n67, σ1℘39/62, mb4.2/22, MS2.8/6, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLP	**Palo**	**2.07**	**208**	*e*P	**Pn**	**19 58 41.1**	**-0.6**
PLP				*e*S	**Sn**	**19 59 04.2**	**-2.0**
MMPH	**Masbate**	**2.37**	**254**	*i* P	**Pn**	**19 58 44.7**	**-1.0**
SCPH	**Surigao**	**3.24**	**188**	*e*P	**Pn**	**19 58 56.1**	**-1.6**
SCPH				*e*S	**Sn**	**19 59 33.5**	**-1.6**
LLP	**Lapu-Lapu**	**3.31**	**216**	*e*P	**Pn**	**19 58 58.0**	**-0.7**
LLP				*i* S	**Sn**	**19 59 42.3**	**+5.4**
RCP	**Roxas**	**3.46**	**246**	*e*P	**Pn**	**19 58 59.7**	**-1.0**
RCP				*i* S	**Sn**	**19 59 40.9**	**+0.4**
GQP	**Guinayangan**	**3.53**	**285**	*e*P	**Pn**	**19 58 59.7**	**-2.1**
GQP				*i* S	**Sn**	**19 59 40.2**	**-2.2**
TBP	**Tagbilaran**	**3.89**	**212**	*e*P	**Pn**	**19 59 09.6**	**+2.9**
SNPH	**Sibulan**	**4.52**	**217**	*e*P	Pn	**19 59 04.9**	**-11**
JAP	**San Jose, Anti**	**4.53**	**241**	*e*P	**Pn**	**19 59 17.3**	**+1.9**
CGP	**Cagayan de Oro**	**4.69**	**195**	*e*P	**Pn**	**19 59 19.5**	**+1.7**
CGP				*e*S	**Sn**	**20 00 09.7**	**-1.3**
BIPH	**Bislig**	**4.81**	**175**	*i* P	Pn	19 59 38.3	+19
BIPH				*e*S	**Sn**	**20 00 11.8**	**-2.1**
TGY	**Tagaytay City**	**5.00**	**283**	Pn	**Pn**	**19 59 20.6**	**-1.4**
	54nm,0.5s,baz=215,slow=18,SNR=3.2						
TGY				Sn	**Sn**	**20 00 18.0**	**-0.8**
	10nm,0.3s,baz=109,slow=18,SNR=1.4						
PCPS	**Palayan City**	**5.03**	**290**	*e*P	**Pn**	**19 59 22.7**	**+0.3**
PCPS				*e*S	**Sn**	**20 00 19.8**	**+0.5**
PIP	**Pasuquin**	**7.38**	**316**	*e*P	**Pn**	**19 59 52.8**	**-1.8**
PIP				*e*S	Sn	20 01 03.2	-14
TOLI2	**Tolitoli**	**12.89**	**204**	Pn	**Pn**	**20 01 10.1**	**0.0**
BKB	**Balikpapan**	**16.79**	**213**		**Pn**	**20 02 00.6**	**-1.0**
FAKI	**Fak Fak**	**17.01**	**158**		**P**	**20 02 06.3**	**+0.3**
FAKI				IAmb	IAmb	20 02 10.8	
	comp=Z,52nm,1.3s						
SBUM	**Sibu**	**17.17**	**233**		**Pn**	**20 02 05.8**	**-0.7**
KAPI	**Kappang**	**18.94**	**199**		**P**	**20 02 26.2**	**-1.0**
KAPI				IAmb	IAmb	20 02 34.9	
	comp=Z,27nm,1.1s						
JNU	**Nakatsue**	**20.52**	**12**	LR	LR	20 09 30.7	
	comp=Z,35nm,21.7s,baz=206,slow=33						
SAUI	**Saumlaki**	**21.52**	**165**	P	**P**	**20 02 54.6**	**-0.5**
SOEI	**Soe**	**22.68**	**184**	P	**P**	**20 03 06.7**	**-1.0**
JAGI	**Jajag, Banyuwa**	**24.35**	**209**	P	**P**	**20 03 23.5**	**-0.2**
KSRS	**Korea Array**	**24.41**	**4**	P	**P**	**20 03 25.6**	**+1.6**
	comp=Z,1.0nm,0.8s,baz=182,slow=7.1,SNR=4.3						
KSRS				LR	LR	20 11 51.2	
	comp=Z,21nm,21.4s,baz=195,slow=34						
	comp=Z,1.0nm,0.8s						
MJAR	**Matsushiro Arr**	**25.89**	**23**	LR	LR	20 12 36.6	
	comp=Z,33nm,19.8s,baz=190,slow=34						
CM31	**Chiang Mai Arr**	**26.55**	**285**	P	**P**	**20 03 42.2**	**-1.6**
CM31				IAmb	IAmb	20 03 44.8	
	comp=Z,6.1nm,0.8s						

CMAR Chiang Mai Arr 26.55 285 P P 20 03 43.8 +0.1
comp=Z,3.2nm,0.8s,baz=96,slow=7.6,SNR=27
comp=Z,3.2nm,0.8s
CMAR Chiang Mai Arr 26.55 285 P 20 03 42.6 -1.1
CHTO Chiang Mai 26.60 286 P P 20 03 42.6 -1.6
KNRA Kununurra 28.64 174 P P 20 04 02.5 +0.2
KNRA IAmb IAmb 20 04 16.0
comp=Z,11nm,1.0s
FITZ Fitzroy Crossi 30.91 181 P P 20 04 21.8 -0.7
comp=Z,3.2nm,0.4s,baz=13,slow=4.6,SNR=14
comp=Z,3.2nm,0.4s
WRA Warramunga Arr 33.77 166 P P 20 04 46.6 -1.0
comp=Z,0.9nm,0.9s,baz=342,slow=9.0,SNR=6.5
comp=Z,0.9nm,0.9s
WR8 Warramunga Arr 33.82 165 P P 20 04 46.9 -1.1
WR8 IAmb IAmb 20 04 48.6
comp=Z,3.8nm,1.1s
ASAJ Asahikawa 34.13 22 LR LR 20 16 43.7
comp=Z,24nm,21.6s,baz=164,slow=33
SHL Shillong 34.40 296 P P 20 04 51.8 -1.4
SHL IAmb IAmb 20 05 09.7
comp=Z,2.5nm,0.8s
KLR Kul'dur 36.43 6 LR LR 20 19 43.7
comp=Z,14nm,20.5s,baz=232,slow=36
AS31 Alice Springs 37.27 168 P P 20 05 16.7 -0.9
ASAR Alice Springs 37.27 168 P P 20 05 17.6 0.0
comp=Z,0.7nm,0.6s,baz=352,slow=7.7,SNR=12
comp=Z,0.7nm,0.6s
ASAR Alice Springs 37.27 168 P P 20 05 16.9 -0.7
SONM Songino Array 38.37 339 P P 20 05 27.9 +1.1
comp=Z,0.3nm,0.3s,baz=134,slow=6.4,SNR=3.9
comp=Z,0.3nm,0.3s
SONM Songino Array 38.37 339 P P 20 05 26.3 -0.5
H11S3 WAKE ISLAND Hy 39.51 77 T T 20 49 12.2
baz=276
H11S1 WAKE ISLAND Hy 39.53 77 T T 20 49 15.6
baz=276
H11S2 WAKE ISLAND Hy 39.53 77 T T 20 49 19.5
baz=276
H11N1 WAKE ISLAND Hy 39.76 75 T T 20 49 54.8
baz=266
H11N2 WAKE ISLAND Hy 39.77 75 T T 20 49 58.1
baz=266
H11N3 WAKE ISLAND Hy 39.78 75 T T 20 50 02.2
baz=266
TLY Talaya 42.57 340 LR LR 20 24 15.0
comp=Z,33nm,19.6s,baz=229,slow=37
INKA Innaminka 42.97 161 P P 20 06 05.5 +0.8
INKA IAmb IAmb 20 06 47.9
comp=Z,3.4nm,0.7s
FORT Forrest 43.58 177 P P 20 06 10.0 +0.4
FORT IAmb IAmb 20 06 24.3
comp=Z,6.6nm,0.7s
BBOO Buckleboo 46.57 168 P P 20 06 34.1 +0.7
STKA Stephens Creek 47.08 162 P P 20 06 38.1 +0.7
comp=Z,1.9nm,0.6s,baz=337,slow=8.8,SNR=5.8
comp=Z,1.9nm,0.6s
STKA Stephens Creek 47.08 162 IAmb IAmb 20 06 39.6
comp=Z,12nm,0.8s
MKAR Makanchi Array 49.69 322 P P 20 06 58.8 +1.4
comp=Z,2.4nm,0.7s,baz=113,slow=8.6,SNR=14
comp=Z,2.4nm,0.7s
NIL Nilore 51.98 303 P P 20 07 15.2 +0.3
NIL IAmb IAmb 20 07 16.6
comp=Z,7.6nm,0.9s
ZALV Zalesovo Beam 52.10 330 P P 20 07 15.4 0.0
KURK Kurchatov 53.66 325 P P 20 07 28.0 +1.0
KURK IAmb IAmb 20 07 29.1
comp=Z,2.6nm,0.8s
KURBB Kurchatov Arra 53.67 324 P P 20 07 28.2 +1.2
comp=Z,2.2nm,0.9s,baz=124,slow=7.8,SNR=17
comp=Z,2.2nm,0.9s
GAR Garm 55.34 309 P P 20 07 40.0 +0.4
GAR IAmb IAmb 20 07 41.0
comp=Z,4.9nm,0.9s
KKAR Karatay Array 56.14 313 P P 20 07 45.1 0.0
BVAR Borovoye Array 59.26 325 P P 20 08 08.4 +1.6
comp=Z,1.2nm,0.8s,baz=113,slow=8.0,SNR=3.7
comp=Z,1.2nm,0.8s
ABKAR Akbulak array 64.62 319 P P 20 08 42.0 -0.9
RAYN Ar Rayn 76.28 291 P P 20 09 55.2 +0.6
RAYN IAmb IAmb 20 09 56.3
comp=Z,2.9nm,0.8s
HDA Harding Lake 77.12 26 P P 20 10 00.6 +2.1
ILAR Eielson Array 77.12 26 P P 20 09 59.7 +1.2
comp=Z,0.3nm,0.8s,baz=251,slow=4.9,SNR=4.2
comp=Z,0.3nm,0.8s
DOT Dot Lake 78.44 27 P P 20 10 06.8 +0.9
FINES FINESS Array B 83.35 332 P P 20 10 32.5 +0.4
comp=Z,3.8nm,1.0s,baz=37,slow=6.4,SNR=1.4
comp=Z,3.8nm,1.0s

*SJA **31** 20:07:20.8±0.5, 29°.86S×73°.01W, h40km, ML3.2, MW3.6*
*GUC **31** 20:07:23.4±0.7, 30°.00S×72°.47W, h59km±6km, ML3.2*
ISC 31 20:07:22.7±2.3, 29°.90S±0°.05×72°.8W±0°.1, h35km, n27, σ1℘61/26, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**1.23**	**129**	*i* P	**Pn**	**20 07 42.2**	**-1.2**
CO06				*e*S	**Sn**	**20 07 56.3**	**-2.6**
CO06				IAML		20 07 57.7	
	comp=N,817nm,0.2s						
CO05	**La Serena**	**1.31**	**91**	*i* P	**Pn**	**20 07 43.5**	**-1.0**
CO05				*e*S	**Sn**	**20 07 58.7**	**-2.1**
CO05				IAML		20 08 00.7	
	comp=E,896nm,0.3s						
GO04	**Tololo Observa**	**1.71**	**100**	*i* P	**Pn**	**20 07 50.1**	**-0.2**
GO04				*e*S	**Sn**	**20 08 10.1**	**-0.9**
GO04				IAML		20 08 13.3	
	comp=E,1μm,0.6s						
CO02	**Combarbal**	**1.99**	**131**	*i* P	**Pn**	**20 07 53.9**	**0.0**
CO02				*e*S	**Sn**	**20 08 16.3**	**-1.5**
LCO	**Las Campanas**	**1.99**	**64**	*i* P	**Pn**	**20 07 53.8**	**-0.3**
CO03	**El Pedregal**	**2.01**	**118**	*i* P	**Pn**	**20 07 54.2**	**-0.1**
CO03				*e*S	**Sn**	**20 08 17.4**	**-0.9**
CO03				IAML		20 08 21.8	
	comp=E,310nm,0.3s						
AC04	**Llanos de Chal**	**2.24**	**41**	*i* P	**Pn**	**20 07 55.9**	**-1.4**
AC04				IAML		20 08 22.2	
	comp=E,79nm,0.1s						
CO01	**Juntas del Tor**	**2.31**	**93**	*i* P	**Pn**	**20 07 59.1**	**+0.7**
CO01				IAML		20 08 30.1	
	comp=N,104nm,0.4s						
AC05	**El Transito**	**2.41**	**64**	*i* P	**Pn**	**20 08 00.2**	**+0.5**
AC05				*e*S	**Sn**	**20 08 28.1**	**0.0**
AC05				IAML		20 08 28.9	
	comp=N,133nm,0.3s						
CO04	**Los Peladeros**	**2.62**	**145**	*i* P	**Pn**	**20 08 02.9**	**0.0**
CO04				*e*S	**Sn**	**20 08 31.6**	**-2.0**
CO04				IAML		20 08 35.0	
	comp=N,308nm,0.3s						
VA06	**Catapilco**	**2.93**	**155**	IAML		20 08 48.2	
	comp=E,176nm,0.4s						
GO03	**Copiapo**	**3.19**	**44**	*i* P	**Pn**	**20 08 10.2**	**-0.2**
GO03				IAML		20 08 47.8	
	comp=N,48nm,0.6s						
AC06	**Mina Casimiro**	**3.29**	**40**	IAML		20 08 50.8	
	comp=E,46nm,0.5s						
ROCH	**El Roble**	**3.40**	**155**	*i* P	**Pn**	**20 08 13.2**	**-0.3**
ROCH				IAML		20 08 57.3	
	comp=N,97nm,0.4s						
VA03	**San Esteban**	**3.42**	**147**	*i* P	**Pn**	**20 08 14.4**	**+0.8**
PEL	**Peldehue**	**3.68**	**152**	IAML		20 09 03.6	
	comp=N,13nm,0.3s						
AUSP	**Uspallata**	**3.70**	**130**	*e*P	Pn	20 08 21.1	+3.5
AUSP				*e*S	Sn	20 09 06.5	+6.3
MT10	**Hacienda Santa**	**3.86**	**151**	*i* P	**Pn**	**20 08 20.2**	**+0.6**
ZON	**Zonda**	**3.87**	**116**	*e*P	**Pn**	**20 08 19.7**	**0.0**
ZON				*e*P		20 08 23.6	
ZON				*e*S	Sn	20 09 10.3	+6.3
ZON				IAML		20 09 12.8	
	comp=Z,30nm,0.4s						
VCA	**Vinchina**	**4.13**	**75**	*e*P	Pn	20 08 27.2	+3.8
VCA				*e*S	Sn	20 09 16.7	+6.0
VCA				IAML		20 09 18.1	
	comp=Z,45nm,0.5s						
MT04	**Ro Olivares**	**4.14**	**148**	*i* P	Pn	20 08 25.6	+1.9
MT09	**Talagante**	**4.14**

AC02	**Maricunga**	**4.42**	**47**	*eP*	Pn	20 08 28.4	+0.8
AC02				*eS*	**Sn**	**20 09 19.7**	**+1.6**
AC02				IAML		20 09 46.3	
	comp=Z,13nm,0.4s						
AAGR	**Agrelo**	**4.62**	**134**	*eP*	Pn	20 08 34.3	+4.3
AAGR				IAML		20 09 36.3	
	comp=Z,21nm,4.1s						
AVFE	**Valle Fertil**	**4.64**	**101**	*eP*	Pn	20 08 33.6	+3.3
AVFE				*eS*	**Sn**	**20 09 26.6**	**+3.5**
AVFE				IAML		20 09 47.7	
	comp=Z,17nm,0.5s						

ISC 31 20:25:16.4±2.1,**58°19N**±0°07×**151°3W**±0°1,**h24**km,**n7,**
σ0:**64**/9,**Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
Q20K	**Shuyak Island**	**0.73**	**306**	P	**Pb**	**20 25 30.0**	**-0.4**
	baz=121						
Q20K				S	**Sb**	**20 25 39.4**	**-0.5**
	baz=121						
KDAK	**Kodiak Island**	**0.81**	**240**	P	**Pn**	**20 25 32.7**	**+0.4**
	baz=52						
KDAK				S	**Sn**	**20 25 43.4**	**-0.2**
	baz=52						
Q19K	**Cape Douglas,**	**1.45**	**302**	P	**Pn**	**20 25 41.5**	**+0.3**
	baz=118						
OHAK	**Old Harbor**	**1.46**	**229**	P	**Pn**	**20 25 41.5**	**+0.3**
	baz=44						
BRSE	**Bradley Lake S**	**1.58**	**10**	P	**Pn**	**20 25 43.1**	**+0.2**
	baz=192						
P19K	**Oil Pt**	**1.79**	**326**	P	**Pn**	**20 25 46.6**	**+0.8**
	baz=144						
Q18K	**Katmai Hardscr**	**2.02**	**285**	P	**Pn**	**20 25 50.0**	**+0.9**
	baz=100						

NEIC ***31*** *20:33:27.7±1.8, 16°.63S±0°.07×173°.63W±0°.07, h77km±5km, mb4.8/323, Error ellipse: s-maj=11.5km s-min=8.3km az=209.0*

NOU ***31*** *20:33:30.7, 16°.74S×173°.49W, h108km, mb5.1/45, Tonga Islands*

IDC ***31*** *20:33:30.7±0.6, 16°.45S×173°.86W, h97km±4km, mb4.2/22, mbtmp4.5/23, MS3.5/35, Error ellipse: s-maj=16.1km s-min=10.4km az=141.0*

GCMT ***31*** *20:33:31.7±0.3, 16°.54S±0°.02×173°.40W±0°.02, h110km±3km, MW5.0/87, Moment Tensor Solution. s33,c39; s87,c122; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=0.26±.11; Mθθ1.76±.13; Mφφ=-1.50±.12; Mrθ=-0.93±.09; Mrφ=-2.13±.12; Mθφ1.75±.06; Best double couple: M₀3.32200×10¹⁶ NP1:φ₁250.00000°,δ54.00000°, λ-179.00000°. NP2:φ₂160.00000°,δ89.00000°, λ-36.00000°. Principal axes: T 3.5350, Plg24.0000°, Azm211.0000°; N -0.4270, Plg54.0000°, Azm339.0000°; P -3.1080, Plg25.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 20:33:27.2±0.3,**16°52S**±0°05×**173°61W**±0°04,**h72**km±2km,
h71km:**pP-P**,**n760,**σ1:**14**/631,**mb4.8**/181,**28C-21D,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.14**	**35**	P	**Pn**	**20 34 13.0**	**-1.4**
	5μm,0.6s,baz=86,slow=0.5,SNR=773						
AFI				S	**Sn**	**20 34 46.1**	**-4.7**
	5μm,0.6s,baz=52,slow=21,SNR=11						
AFI				LR	LR	20 34 56.8	
	comp=Z,540nm,18.9s,baz=142,slow=27						
NIUE	**Niue**	**4.34**	**127**	P	**Pn**	**20 34 31.4**	**+0.7**
NIUE				S	**Sn**	**20 35 17.1**	**-2.9**
NIUE	**Niue**	**4.34**	**127**	P	**Pn**	**20 34 31.7**	**+1.1**
NIUE	**Niue**	**4.34**	**127**	S	**Sn**	**20 35 17.2**	**-2.8**
NIUE	**Niue**	**4.34**	**127**		**Pn**	**20 34 31.6**	**+0.9**
NIUE				Sn	**Sn**	**20 35 16.2**	**-3.7**
NIUE	**Niue**	**4.34**	**127**	P	**Pn**	**20 34 31.8**	**+1.1**
NIUE				S	**Sn**	**20 35 16.2**	**-3.7**
FUTU	**Fugatoga**	**4.87**	**296**	P	Pn	20 34 44.0	+6.0
FUTU	**Fugatoga**	**4.87**	**296**		Pn	20 34 43.2	+5.3
FUTU				Sn	**Sn**	**20 35 33.4**	**+0.3**
LKBA	**Tubou, Lakemba**	**5.25**	**250**	P	**Pn**	**20 34 47.8**	**+4.6**
TAVE	**Taveuni**	**6.04**	**267**	P	Pn	20 35 00.0	+6.1
DGTI	**Dogotuki**	**6.39**	**271**	P	Pn	20 35 04.9	+6.2
MSVF	**Nonsavu**	**8.06**	**260**	P	Pn	20 35 28.6	+6.9
	144nm,1.0s,baz=112,slow=14,SNR=30						
MSVF				LR	LR	20 37 48.4	
	comp=Z,546nm,21.3s,baz=88,slow=33						
MSVF	**Nonsavu**	**8.06**	**260**	P	Pn	20 35 27.7	+6.0
MSVF	**Nonsavu**	**8.06**	**260**		Pn	20 35 28.8	+7.1
YSA	**Yasawairara**	**8.45**	**269**	P	**Pn**	**20 35 29.1**	**+2.2**
GLKZ	**Green Lake**	**13.29**	**197**	P	**Pn**	**20 36 29.2**	**-3.6**
RAR	**Rarotonga**	**13.90**	**112**	P	**Pn**	**20 36 41.2**	**+0.2**
	71nm,0.6s,baz=278,slow=11,SNR=13						
RAR				LR	LR	20 41 42.7	
	comp=Z,103nm,18.5s,baz=286,slow=35						
RAR	**Rarotonga**	**13.90**	**112**	P	**Pn**	**20 36 41.7**	**+0.7**
RAR	**Rarotonga**	**13.90**	**112**		**Pn**	**20 36 42.0**	**+1.0**
RAR	**Rarotonga**	**13.90**	**112**	P	**Pn**	**20 36 42.0**	**+1.0**
MARNC	**Mare, Loyalty**	**18.04**	**251**	P	**Pn**	**20 37 33.1**	**-0.1**
MARNC	**Mare, Loyalty**	**18.04**	**251**		**P**	**20 37 32.6**	**-0.1**
OUENC	**Ouen Island, N**	**19.34**	**249**	P	**Pn**	**20 37 48.9**	**+0.3**
OUENC	**Ouen Island, N**	**19.34**	**249**		**P**	**20 37 46.5**	**-0.4**
DZM	**Mont Dzumac**	**19.61**	**251**	P	**P**	**20 37 48.3**	**-1.7**
	21nm,1.1s,baz=90,slow=20,SNR=11						
ONTNC	**Ouen Toro**	**19.66**	**250**	P	**Pn**	**20 37 52.2**	**-0.2**
ONTNC	**Ouen Toro**	**19.66**	**250**		**P**	**20 37 50.9**	**+0.5**
OUZ	**Omahuta**	**21.86**	**209**	P	**P**	**20 38 13.0**	**-0.9**
GRZ	**Great Barrier**	**21.93**	**204**	P	**P**	**20 38 15.1**	**+0.4**
WCZ	**Waipu Caves**	**22.12**	**207**	P	**P**	**20 38 16.7**	**0.0**
MXZ	**Matakaoa Point**	**22.15**	**197**	P	**P**	**20 38 17.2**	**+0.2**
MXZ	**Matakaoa Point**	**22.15**	**197**		**P**	**20 38 15.2**	**-1.9**
MXZ	**Matakaoa Point**	**22.15**	**197**	P	**P**	**20 38 16.2**	**-0.8**
WMGZ	**Waiomatatini S**	**22.36**	**197**	P	**P**	**20 38 19.9**	**+0.6**
HAZ	**Te Kaha**	**22.48**	**198**	P	**P**	**20 38 20.3**	**-0.3**
ABAZ	**Army Bay**	**22.48**	**205**	P	**P**	**20 38 21.4**	**+0.8**
PKGZ	**Pakihiroa**	**22.49**	**197**	P	**P**	**20 38 20.5**	**-0.3**
WIAZ	**Waiheke Island**	**22.53**	**204**	P	**P**	**20 38 21.7**	**+0.5**
MBAZ	**Motutapu North**	**22.60**	**205**	P	**P**	**20 38 22.5**	**+0.6**
PUZ	**Puketiti**	**22.64**	**197**	P	**P**	**20 38 21.5**	**-0.9**
RUGZ	**Raukumara Rang**	**22.70**	**198**	P	**P**	**20 38 23.4**	**+0.2**
ETAZ	**East Tamaki Re**	**22.75**	**204**	P	**P**	**20 38 24.1**	**+0.6**
MKAZ	**Moumakai**	**22.79**	**204**	P	**P**	**20 38 24.2**	**+0.3**
TWGZ	**Tauwhareparae**	**22.81**	**197**	P	**P**	**20 38 24.8**	**+0.6**
WTAZ	**Waiatarua**	**22.87**	**205**	P	**P**	**20 38 24.7**	**-0.1**
TGRZ	**Tauranga**	**22.94**	**201**	P	**P**	**20 38 26.4**	**+1.0**
AWAZ	**Awhitu Peninsu**	**22.96**	**205**	P	**P**	**20 38 25.5**	**-0.1**
PPT	**Papeete**	**23.00**	**96**	P	**P**	**20 38 28.6**	**+2.4**
	50nm,0.8s,baz=275,slow=9.8,SNR=4.5						
PPT				LR	LR	20 45 54.3	
	comp=Z,39nm,18.3s,baz=289,slow=32						
	50nm,0.8s						
PPTF	**Pamatai, Papee**	**23.01**	**96**	P	**P**	**20 38 26.3**	**-0.1**
CNGZ	**Carnagh Statio**	**23.03**	**197**	P	**P**	**20 38 26.8**	**+0.5**
MWZ	**Matawai**	**23.09**	**198**	P	**P**	**20 38 26.1**	**-0.8**
TKGZ	**Te Karaka**	**23.09**	**197**	P	**P**	**20 38 26.3**	**-0.6**
EDRZ	**Edgecumbe**	**23.12**	**200**	P	**P**	**20 38 27.4**	**+0.1**
URZ	**Urewera**	**23.15**	**199**	P	**P**	**20 38 26.5**	**-0.9**
KMRZ	**Kaimai**	**23.16**	**201**	P	**P**	**20 38 28.5**	**+0.9**
TOZ	**Tahuroa Road**	**23.21**	**202**		**P**	**20 38 27.2**	**-0.9**
TOZ	**Tahuroa Road**	**23.21**	**202**	P	**P**	**20 38 29.3**	**+1.2**
MKRZ	**Makatiti**	**23.24**	**200**	P	**P**	**20 38 30.0**	**+1.6**
OMRZ	**Omania**	**23.24**	**200**	P	**P**	**20 38 29.4**	**+1.0**
RAGZ	**Rawiri**	**23.27**	**198**	P	**P**	**20 38 28.6**	**-0.1**
TARZ	**Mount Tarawera**	**23.32**	**200**	P	**P**	**20 38 28.6**	**-0.6**
RIGZ	**Rimuhau**	**23.36**	**197**	P	**P**	**20 38 30.1**	**+0.5**
MUGZ	**Murupara**	**23.45**	**199**	P	**P**	**20 38 29.5**	**-0.8**
RTZ	**Ruatahuna**	**23.51**	**199**		**P**	**20 38 29.2**	**-1.7**
RTZ	**Ruatahuna**	**23.51**	**199**	P	**P**	**20 38 30.0**	**-1.0**
HRRZ	**Handcock Road**	**23.53**	**200**	P	**P**	**20 38 30.4**	**-0.6**
PRGZ	**Paritu Road**	**23.53**	**197**	P	**P**	**20 38 32.1**	**+1.1**
PRRZ	**Plateau Road**	**23.59**	**200**	P	**P**	**20 38 30.5**	**-1.1**
KNZ	**Kokohu**	**23.68**	**197**	P	**P**	**20 38 33.0**	**+0.6**
TLZ	**Tolley Road**	**23.73**	**202**	P	**P**	**20 38 33.0**	**+0.2**
MHGZ	**Mahia Peninsul**	**23.74**	**197**	P	**P**	**20 38 33.9**	**+1.0**
RAHZ	**Arahi**	**23.76**	**198**	P	**P**	**20 38 33.0**	**-0.1**
MTHZ	**Maungataniwha**	**23.77**	**199**	P	**P**	**20 38 32.1**	**-1.2**
WHHZ	**Waihua**	**23.86**	**198**	P	**P**	**20 38 34.6**	**+0.7**
NMHZ	**Naumai**	**24.01**	**199**	P	**P**	**20 38 34.7**	**-0.6**
RATZ	**Rangitukua**	**24.13**	**201**	P	**P**	**20 38 35.5**	**-0.9**
HIZ	**Hauiti**	**24.14**	**203**	P	**P**	**20 38 35.5**	**-1.0**
HIZ	**Hauiti**	**24.14**	**203**	P	**P**	**20 38 38.1**	**+1.6**
BKZ	**Black Stump Fm**	**24.17**	**199**	P	**P**	**20 38 35.3**	**-1.5**
BKZ	**Black Stump Fm**	**24.17**	**199**		**P**	**20 38 34.8**	**-2.0**
BKZ				IAmb	IAmb	20 38 39.3	
	comp=Z,20nm,0.6s						
BKZ	**Black Stump Fm**	**24.17**	**199**	P	**P**	**20 38 36.0**	**-0.8**
RITZ	**Rihia Road**	**24.20**	**200**	P	**P**	**20 38 35.7**	**-1.4**
KATZ	**Kakaramea**	**24.25**	**201**	P	**P**	**20 38 37.7**	**0.0**
MCHZ	**McNeill Hill**	**24.36**	**198**	P	**P**	**20 38 38.8**	**+0.3**
NTVZ	**North Tongariro**	**24.37**	**201**	P	**P**	**20 38 37.5**	**-1.2**
TMVZ	**Te Maari**	**24.38**	**200**	P	**P**	**20 38 36.9**	**-1.9**
ETVZ	**East Tongariro**	**24.39**	**200**	P	**P**	**20 38 37.9**	**-1.1**
WTVZ	**West Tongariro**	**24.42**	**201**	P	**P**	**20 38 38.4**	**-0.8**
KWHZ	**Kaweka Forest**	**24.43**	**199**	P	**P**	**20 38 38.4**	**-0.8**
TWVZ	**Taurewa**	**24.43**	**201**	P	**P**	**20 38 38.5**	**-0.7**
OTVZ	**Oturere**	**24.43**	**200**	P	**P**	**20 38 37.7**	**-1.6**
SNVZ	**South Ngauruho**	**24.46**	**200**	P	**P**	**20 38 38.7**	**-0.9**
NGZ	**Ngauruhoe**	**24.47**	**201**	P	**P**	**20 38 37.8**	**-1.8**
TUVZ	**Tukino**	**24.53**	**200**	P	**P**	**20 38 38.6**	**-1.6**
MOVZ	**Moawhango**	**24.63**	**200**	P	**P**	**20 38 39.2**	**-1.8**
KAHZ	**Kahuranaki**	**24.63**	**198**	P	**P**	**20 38 42.2**	**+1.2**
KRHZ	**Kereru**	**24.64**	**199**	P	**P**	**20 38 40.1**	**-0.9**
VRZ	**Vera Road**	**24.71**	**202**	P	**P**	**20 38 43.2**	**+1.4**
PNHZ	**Pukenui**	**24.94**	**199**	P	**P**	**20 38 43.9**	**0.0**
KHEZ	**Kahui Hut**	**25.14**	**203**	P	**P**	**20 38 45.7**	**0.0**
KHEZ	**Kahui Hut**	**25.14**	**203**	P	**P**	**20 38 46.3**	**+0.6**
DVHZ	**Dannevirke**	**25.31**	**199**	P	**P**	**20 38 47.1**	**-0.1**
BFZ	**Birch Farm**	**25.63**	**198**	P	**P**	**20 38 50.1**	**0.0**
BFZ	**Birch Farm**	**25.63**	**198**	P	**P**	**20 38 48.5**	**-1.5**
BFZ	**Birch Farm**	**25.63**	**198**	P	**P**	**20 38 49.4**	**-0.7**
MRZ	**Mangatainoka R**	**25.82**	**199**	P	**P**	**20 38 49.7**	**-2.0**
MRZ				IAmb	IAmb	20 38 54.3	
	comp=Z,35nm,0.9s						
HOWZ	**Holdsworth Sta**	**26.05**	**199**	P	**P**	**20 38 53.1**	**-0.8**
OGWZ	**Otaki Gorge**	**26.09**	**200**	P	**P**	**20 38 52.9**	**-1.2**
TMWZ	**Te Maipa**	**26.13**	**198**	P	**P**	**20 38 53.7**	**-0.9**
TRWZ	**Traveller**	**26.46**	**198**	P	**P**	**20 38 57.9**	**+0.4**
DUWZ	**D'Urville Isla**	**26.50**	**202**	P	**P**	**20 38 55.4**	**-2.5**
PAWZ	**Paruwai Farm**	**26.52**	**199**	P	**P**	**20 38 57.2**	**-0.9**
MSWZ	**Moikau Station**	**26.61**	**199**	P	**P**	**20 38 56.8**	**-2.1**
MSWZ	**Moikau Station**	**26.61**	**199**	P	**P**	**20 38 57.3**	**-1.6**
SNZO	**South Karori**	**26.69**	**200**	P	**P**	**20 38 57.7**	**-1.8**
SNZO	**South Karori**	**26.69**	**200**	P	**P**	**20 38 57.2**	**-2.3**
SNZO				IAmb	IAmb	20 39 04.1	
	comp=Z,35nm,0.8s						
HNR	**Honiara**	**26.69**	**282**	LR	LR	20 48 06.1	
	comp=Z,4.5nm,18.8s,baz=213,slow=33						
HNR	**Honiara**	**26.69**	**282**	P	**P**	**20 38 56.4**	**-3.5**
BHW	**Baring Head**	**26.72**	**200**	P	**P**	**20 38 57.4**	**-2.4**
BHW				IAmb	IAmb	20 39 00.8	
	comp=Z,16nm,0.7s						
PLWZ	**Palliser**	**26.75**	**199**	P	**P**	**20 38 57.9**	**-2.3**
PLWZ	**Palliser**	**26.75**	**199**	P	**P**	**20 38 58.5**	**-1.6**
QRZ	**Quartz Range**	**27.03**	**204**	P	**P**	**20 39 02.8**	**+0.1**
QRZ	**Quartz Range**	**27.03**	**204**	P	**P**	**20 39 02.8**	**+0.1**
TUWZ	**Tuamarina**	**27.05**	**201**	P	**P**	**20 39 00.1**	**-2.7**
TUWZ	**Tuamarina**	**27.05**	**201**	P	**P**	**20 39 05.1**	**+2.4**
NNZ	**Nelson**	**27.06**	**202**	P	**P**	**20 39 05.5**	**+0.7**
MRNZ	**Matariki Terra**	**27.44**	**203**	P	**P**	**20 39 05.2**	**-1.1**
THZ	**Tophouse**	**27.71**	**202**	IAmb	IAmb	20 39 09.2	
	comp=Z,26nm,0.8s						
THZ	**Tophouse**	**27.71**	**202**	P	**P**	**20 39 07.9**	**-0.9**
KHZ	**Kahutara**	**28.06**	**200**	P	**P**	**20 39 09.8**	**-2.0**
KHZ	**Kahutara**	**28.06**	**200**	P	**P**	**20 39 10.9**	**-0.9**
DSZ	**Denniston Nort**	**28.10**	**204**	P	**P**	**20 39 10.5**	**-1.8**
GVZ	**Greta Valley S**	**28.72**	**201**	P	**P**	**20 39 16.5**	**-1.2**
LTZ	**Lake Taylor**	**28.82**	**202**	P	**P**	**20 39 15.8**	**-2.9**
LTZ	**Lake Taylor**	**28.82**	**202**	P	**P**	**20 39 16.6**	**-2.1**
LHI	**Lord Howe Isla**	**28.98**	**234**	P	**P**	**20 39 19.1**	**-1.0**
INZ	**Inchbonnie**	**29.08**	**203**	P	**P**	**20 39 18.4**	**-2.5**
MHCZ	**Mount Hutt**	**29.73**	**202**	P	**P**	**20 39 24.8**	**-1.9**
WACZ	**Wakanui South**	**29.99**	**201**	P	**P**	**20 39 30.1**	**+1.1**
RPZ	**Rata Peaks**	**30.08**	**202**	LR	LR	20 49 59.5	
	comp=Z,156nm,18.2s,baz=84,slow=33						
RPZ	**Rata Peaks**	**30.08**	**202**	P	**P**	**20 39 28.5**	**-1.2**
ARCZ	**Arundel**	**30.23**	**202**	P	**P**	**20 39 29.7**	**-1.4**
FOZ	**Fox Glacier**	**30.39**	**204**	P	**P**	**20 39 30.4**	**-2.1**
TMZ	**Timaru**	**30.67**	**202**	P	**P**	**20 39 33.5**	**-1.5**
JCZ	**Jackson Bay**	**31.25**	**205**	P	**P**	**20 39 39.3**	**-0.9**
JCZ	**Jackson Bay**	**31.25**	**205**	P	**P**	**20 39 38.4**	**-1.8**
ODZ	**Otahua Downs**	**31.37**	**202**	P	**P**	**20 39 40.1**	**-1.0**
ODZ	**Otahua Downs**	**31.37**	**202**	P	**P**	**20 39 40.7**	**-0.4**
MLZ	**Mavora Lakes**	**32.59**	**204**	P	**P**	**20 39 50.6**	**-1.3**
DCZ	**Deep Cove**	**33.06**	**205**	P	**P**	**20 39 54.3**	**-1.6**
APZ	**The Paps**	**33.87**	**203**	P	**P**	**20 40 22.2**	**-0.8**
EIDS	**Eidsvold**	**34.05**	**249**	P	**P**	**20 40 03.4**	**-1.3**
ARMA	**Armidale**	**34.60**	**240**	P	**P**	**20 40 08.6**	**-1.0**
	comp=Z,29nm,1.1s						
ARMA	**Armidale**	**34.60**	**240**	P	**P**	**20 40 08.8**	**-0.8**
ARMA	**Armidale**	**34.60**	**240**	P	**P**	**20 40 08.2**	**-1.5**
AUPHS	**Peel High Scho**	**35.40**	**239**	P	**P**	**20 40 15.7**	**-0.7**
SYDH	**Sydney Hard Ro**	**36.32**	**235**	P	**P**	**20 40 23.3**	**-0.9**
AULRC	**Lightning Ridg**	**37.45**	**243**	P	**P**	**20 40 33.3**	**-0.5**
CNB	**Canberra Magne**	**37.92**	**233**	P	**P**	**20 40 35.8**	**-1.9**
	comp=Z,41nm,0.8s						
CNB	**Canberra Magne**	**37.92**	**233**	P	**P**	**20 40 36.4**	**-1.4**
AUMHS	**Melrose High S**	**38.14**	**233**	P	**P**	**20 40 38.8**	**-0.8**
CAN	**Canberra**	**38.20**	**233**	P	**P**	**20 40 39.2**	**-0.9**
	comp=Z,26nm,1.1s						
CAN	**Canberra**	**38.20**	**233**	P	**P**	**20 40 38.8**	**-1.3**
CAN	**Canberra**	**38.20**	**233**	P	**P**	**20 40 38.6**	**-1.5**
CTA	**Charters Tower**	**38.21**	**258**	P	**P**	**20 40 38.7**	**-1.6**
	comp=Z,5.3nm,0.7s,baz=98,slow=7.0,SNR=5.3						
CTA				LR	LR	20 54 37.9	
	comp=Z,63nm,18.1s,baz=54,slow=33						
	comp=Z,5.3nm,0.7s						
CTAO	**Charters Tower**	**38.21**	**258**	P	**P**	**20 40 38.9**	**-1.5**
PMG	**Port Moresby**	**38.82**	**276**	LR	LR	20 54 29.0	
	comp=Z,174nm,18.9s,baz=46,slow=33						
H11S2	**WAKE ISLAND Hy**	**39.82**	**330**	T	T	21 21 44.2	
	baz=151,slow=74,SNR=16						
CMSA	**Cobar Meteorol**	**39.82**	**240**	P	**P**	**20 40 52.0**	**-1.6**
	comp=Z,52nm,0.8s						
CMSA	**Cobar Meteorol**	**39.82**	**240**	P	**P**	**20 40 52.0**	**-1.6**
H11S3	**WAKE ISLAND Hy**	**39.83**	**330**	T	T	21 22 07.8	
	SNR=19						
H11S1	**WAKE ISLAND Hy**	**39.83**	**330**	T	T	21 21 30.0	
	baz=179,slow=74,SNR=19						
QLP	**Quilpie**	**40.31**	**248**	P	**P**	**20 40 55.6**	**-2.1**
QLP	**Quilpie**	**40.31**	**248**	P	**P**	**20 40 55.9**	**-1.9**
H11N3	**WAKE ISLAND Hy**	**40.78**	**331**	T	T	21 23 49.8	
	baz=140,slow=74,SNR=15						
H11N1	**WAKE ISLAND Hy**	**40.78**	**331**	T	T	21 24 24.7	
	SNR=18						
H11N2	**WAKE ISLAND Hy**	**40.80**	**331**	T	T	21 23 51.2	
	baz=134,slow=74,SNR=13						
TOO	**Toolangi**	**41.61**	**232**	P	**P**	**20 41 06.5**	**-1.9**
TOO	**Toolangi**	**41.61**	**232**	P	**P**	**20 41 07.1**	**-1.3**
TOO				IAmb	IAmb	20 41 08.0	
	comp=Z,13nm,0.8s						
COEN	**Coen**	**41.72**	**267**	P	**P**	**20 41 07.8**	**-1.7**
COEN				IAmb	IAmb	20 42 34.3	
	comp=Z,30nm,1.4s						
TAU	**Tasmania Unive**	**42.37**	**223**	P	**P**	**20 41 13.0**	**-1.4**
BRAT	**Ballarat**	**42.78**	**232**	P	**P**	**20 41 17.3**	**-0.5**
STKA	**Stephens Creek**	**43.31**	**241**	P	**P**	**20 41 20.8**	**-1.5**
	comp=Z,25nm,0.8s,baz=91,slow=9.6,SNR=60						
STKA				LR	LR	20 59 32.2	
	comp=Z,78nm,18.3s,baz=82,slow=36						
	comp=Z,25nm,0.8s						
STKA	**Stephens Creek**	**43.31**	**241**	P	**P**	**20 41 21.2**	**-1.0**
STKA	**Stephens Creek**	**43.31**	**241**	P	**P**	**20 41 20.6**	**-1.6**
INKA	**Innaminka**	**43.51**	**247**	P	**P**	**20 41 22.4**	**-1.4**
INKA				IAmb	IAmb	20 41 24.2	
	comp=Z,12nm,1.0s						
ARPS	**Mount Arapiles**	**44.17**	**234**	P	**P**	**20 41 27.2**	**-1.8**
HTT	**Hallett**	**45.80**	**239**	P	**P**	**20 41 41.3**	**-0.8**
AUMBR	**Murray Bridge**	**45.81**	**237**	P	**P**	**20 41 41.1**	**-0.9**
BBOO	**Buckleboo**	**48.08**	**241**	P	**P**	**20 41 58.6**	**-1.3**
BBOO	**Buckleboo**	**48.08**	**241**	P	**P**	**20 41 57.6**	**-2.3**
WR8	**Warramunga Arr**	**49.25**	**258**	IAmb	IAmb	20 42 09.7	
	comp=Z,13nm,1.4s						
WB0	**Warramunga Arr**	**49.36**	**258**	P	**P**	**20 42 07.1**	**-2.8**
WB0				IAmb	IAmb	20 42 11.1	
	comp=Z,12nm,1.3s						
WRAB	**Tennant Creek**	**49.39**	**258**	P	**P**	**20 42 07.9**	**-2.2**
WRA	**Warramunga Arr**	**49.40**	**258**	P	**P**	**20 42 07.7**	**-2.4**
	comp=Z,2.9nm,0.6s,baz=94,slow=7.7,SNR=19						
WRA				pP	**sP**	**20 42 33.3**	**-2.3**
	comp=Z,4.3nm,0.9s,baz=92,slow=8.0,SNR=4.5						
WRA				PcP	**PcP**	**20 43 31.2**	**-0.5**
	comp=Z,3.6nm,1.0s,baz=89,slow=4.2,SNR=5.2						
	comp=Z,2.9nm,0.6s						
WRA	**Warramunga Arr**	**49.40**	**258**	P	**P**	**20 42 07.7**	**-2.4**
WRA					**pwP**	**20 42 29.2**	**-0.5**
ASAR	**Alice Springs**	**49.58**	**253**	P	**P**	**20 42 09.5**	**-2.0**
	comp=Z,33nm,0.8s,baz=89,slow=8.1,SNR=283						
ASAR				pP	**sP**	**20 42 35.2**	**-1.7**
	comp=Z,52nm,0.7s,baz=85,slow=8.6,SNR=17						
ASAR				PcP	**PcP**	**20 43 32.3**	**0.0**
	comp=Z,2.0nm,0.6s,baz=91,slow=4.5,SNR=0.9						
	comp=Z,33nm,0.8s						
ASAR	**Alice Springs**	**49.58**	**253**		**P**	**20 42 09.6**	**-2.0**
ASAR					**pP**	**20 42 30.5**	**+1.5**
AUALC	**St Philip's Co**	**49.60**	**253**	P	**P**	**20 42 10.2**	**-1.4**
MTN	**Manton Dam**	**53.44**	**266**	P	**P**	**20 42 38.9**	**-1.5**
MTN				IAmb	IAmb	20 42 43.5	
	comp=Z,16nm,1.4s						
SAUI	**Saumlaki**	**54.36**	**272**	P	**P**	**20 42 44.4**	**-2.7**
FORT	**Forrest**	**54.74**	**244**	P	**P**	**20 42 47.1**	**-2.5**
KNRA	**Kununurra**	**55.20**	**262**	P	**P**	**20 42 51.3**	**-1.9**
SIJI	**Sorong**	**56.45**	**280**	LR	LR	21 06 12.6	
	comp=Z,21nm,19.4s,baz=142,slow=35						
SIJI	**Sorong**	**56.45**	**280**	P	**P**	**20 43 02.2**	**+0.1**
	comp=Z,28nm,1.0s						
SWI	**Sorong**	**56.45**	**280**	P	**P**	**20 43 02.2**	**+0.1**
	comp=Z,37nm,0.8s						
DRV	**Dumont d'Urvil**	**58.48**	**200**	P	**P**	**20 43 16.4**	**+0.9**
DRV				pP	**sP**	**20 43 42.8**	**+1.3**
DRV				PcP	**PcP**	**20 44 07.0**	**+1.7**
SOEI	**Soe**	**60.68**	**268**	P	**P**	**20 43 32.7**	**+1.0**
SOEI	**Soe**	**60.68**	**268**	P	**P**	**20 43 32.3**	**+0.6**
SOEI	**Soe**	**60.68**	**268**	P	**P**	**20 43 32.5**	**+0.8**
BATI	**Baumata**	**61.15**	**267**	LR	LR	21 09 38.6	
	comp=Z,70nm,19.4s,baz=62,slow=36						
SBA	**Scott Base**	**62.13**	**185**	P	**P**	**20 43 42.1**	**+1.8**
SBA	**Scott Base**	**62.13**	**185**	P	**P**	**20 43 43.6**	**+3.4**
SBA				pP	**sP**	**20 44 09.8**	**+3.4**
SBA				x	x	20 44 18.1	
SBA				x	x	20 44 19.9	
SBA				sP	**PcP**	**20 44 22.7**	**+2.9**
VNDA	**Vanda**	**62.25**	**186**	P	**P**	**20 43 42.9**	**+1.8**
	comp=Z,13nm,0.9s,baz=7.1,slow=6.3,SNR=53						
	comp=Z,13nm,0.9s						
VNDA	**Vanda**	**62.25**	**186**	P	**P**	**20 43 42.9**	**+1.8**
VNDA	**Vanda**	**62.25**	**186**	P	**P**	**20 43 43.6**	**+2.5**
VNDA				pP	**sP**	**20 44 09.6**	**+2.4**
VNDA				sP	**PcP**	**20 44 22.8**	**+2.5**
PSA00	**Pilbara Seismi**	**62.70**	**254**	P	**P**	**20 43 43.3**	**-1.8**
PSA00	**Pilbara Seismi**	**62.70**	**254**	P	**P**	**20 43 43.0**	**-2.0**
PSA00				IAmb	IAmb	20 43 44.7	
	comp=Z,7.9nm,0.9s						
MMRI	**Maumere**	**62.89**	**269**	P	**P**	**20 43 44.3**	**-2

OHAK **Old Harbor** 75.39 11 P P 20 45 03.5 +0.8
baz=200
WCT **Wildcat Mounta** 75.46 44 IAmb IAmb 20 45 06.4
comp=Z,15nm,1.7s
TPNV **Topopah Spring** 75.80 44 IAmb IAmb 20 45 55.8
comp=Z,16nm,1.6s
KDAK **Kodiak Island** 76.05 11 P P 20 45 07.1 +0.5
comp=Z,5.7nm,0.6s,baz=223,slow=3.8,SNR=12
KDAK LR LR 21 10 27.7
comp=Z,51nm,20.2s,baz=195,slow=29
comp=Z,5.7nm,0.6s
KDAK **Kodiak Island** 76.05 11 P P 20 45 07.3 +0.8
baz=201
V12A **Nelson** 76.08 46 IAmb IAmb 20 45 10.2
comp=Z,14nm,1.3s
O14K **Tigyukauivet M** 76.17 6 P P 20 45 08.3 +1.2
baz=192
Q16K **King Salmon** 76.21 9 P P 20 45 08.3 +0.9
baz=197
O15K **Ungalikthiuk R** 76.26 7 P P 20 45 08.2 +0.5
baz=194
P16K **Nushagak River** 76.36 8 P P 20 45 08.8 +0.5
baz=195
Q18K **Katmai Hardscr** 76.44 10 P P 20 45 08.9 0.0
baz=198
Y14A **Wickenburg** 76.44 48 IAmb IAmb 20 45 11.9
comp=Z,21nm,1.4s
P17K **Kvichak River** 76.74 9 P P 20 45 10.5 +0.1
baz=197
N14K **Kuskokwak Cree** 76.78 6 P P 20 45 11.5 +0.9
baz=192
KSRS **Korea Array** 76.81 316 P P 20 45 11.8 +0.5
comp=Z,0.8nm,0.7s,baz=113,slow=5.8,SNR=2.3
KSRS LR LR 21 16 06.9
comp=Z,7.6nm,19.2s,baz=355,slow=33
comp=Z,0.8nm,0.7s
Q20K **Shuyak Island** 76.86 11 P P 20 45 11.9 +0.8
baz=201
M11K **Mekoryuk** 76.86 4 P P 20 45 12.3 +1.3
baz=187
O16K **Kokwok River B** 76.89 8 P P 20 45 11.6 +0.3
baz=195
Q19K **Cape Douglas,** 76.94 10 P P 20 45 11.9 +0.3
baz=200
M13K **Dall Lake** 77.11 5 P P 20 45 13.5 +1.1
baz=190
P18K **Big Mountain,** 77.11 10 P P 20 45 13.2 +0.7
baz=198
N15K **Kwethluk River** 77.20 7 P P 20 45 13.6 +0.6
baz=193
O17K **Koliganek Bris** 77.20 8 P P 20 45 13.7 +0.7
baz=196
TUC **Tucson** 77.25 51 P 20 45 15.0 +0.9
O18K **Koktuh Hills** 77.56 9 IAmb IAmb 20 45 17.6
comp=Z,10nm,0.9s
O18K **Koktuh Hills** 77.56 9 P P 20 45 15.8 +0.8
baz=198
M14K **Bethel** 77.57 6 P P 20 45 16.0 +1.0
baz=191
M15K **Kasigluk River** 77.64 6 P P 20 45 16.5 +1.1
baz=193
N16K **Nishlik Lake** 77.65 7 P P 20 45 16.6 +1.0
baz=194
P19K **Oil Pt** 77.69 10 P P 20 45 16.5 +0.7
baz=200
N17K **Nushagak Hills** 77.91 8 P P 20 45 17.9 +0.9
baz=196
HOM **Homer** 77.98 11 P P 20 45 17.9 +0.5
baz=201
O19K **Port Alsworth** 78.02 10 P P 20 45 18.0 +0.5
baz=199
L14K **Kuka Creek** 78.08 5 P P 20 45 18.7 +0.9
baz=191
M16K **Timber Creek** 78.16 7 P P 20 45 18.9 +0.6
baz=194
U15A **North Rim** 78.22 46 IAmb IAmb 20 45 22.6
comp=Z,11nm,1.1s
BRSE **Bradley Lake S** 78.23 12 P P 20 45 19.1 +0.3
baz=202
N18K **Kilae Creek** 78.24 9 P P 20 45 19.2 +0.4
baz=197
RED **Redoubt Volcan** 78.49 10 IAmb IAmb 20 45 21.0
comp=Z,14nm,1.0s
K13K **Kusilvak Mount** 78.51 4 P P 20 45 20.9 +0.7
baz=189
L15K **Ungalak Mounta** 78.53 6 P P 20 45 21.1 +0.8
baz=192
ELK **Elko** 78.55 41 LR LR 21 11 04.6
comp=Z,66nm,21.8s,baz=261,slow=29
N19K **Bonanza Creek** 78.58 9 IAmb IAmb 20 45 21.7
comp=Z,12nm,0.8s
N19K **Bonanza Creek** 78.58 9 P P 20 45 20.8 0.0
baz=199
M17K **Holitna River** 78.72 8 P P 20 45 21.8 +0.4
M17K **Holitna River** 78.72 8 P P 20 45 22.3 +0.9
baz=196
L16K **Owhat River** 78.77 7 IAmb IAmb 20 45 24.1
comp=Z,10nm,0.9s
L16K **Owhat River** 78.77 7 P P 20 45 22.7 +1.1
baz=194
SEW **Seward** 78.82 12 P P 20 45 22.7 +0.8
baz=204
G08A **Pilot Rock** 78.95 36 IAmb IAmb 20 45 25.3
comp=Z,12nm,1.2s
BBB **Bella Bella** 78.97 27 LR LR 21 14 53.7
comp=Z,29nm,18.1s,baz=240,slow=31
M18K **Stony River** 79.03 9 P P 20 45 23.6 +0.6
baz=197
SLKM **Skilak Lake** 79.04 12 IAmb IAmb 20 45 24.4
comp=Z,13nm,0.8s
CAPN **Captain Cook N** 79.11 11 P P 20 45 24.5 +1.0
baz=202
K15K **Wolf Creek Mou** 79.13 6 P P 20 45 24.9 +1.3
baz=192
P23K **Montague Islan** 79.15 13 P P 20 45 24.7 +0.9
baz=205
L17K **Donlin** 79.32 7 P P 20 45 26.2 +1.5
baz=195
N20K **Mount Spurr** 79.32 10 P P 20 45 25.3 +0.5
baz=201
SPCR **Spurr Chakacha** 79.32 10 P P 20 45 25.4 +0.6
baz=201
J14K **Nanvaranak Lak** 79.40 5 P P 20 45 26.2 +1.2
baz=190
CRAG **Craig** 79.44 22 P P 20 45 26.2 +0.8
baz=219
L18K **Granite Mounta** 79.61 8 IAmb IAmb 20 45 28.7
comp=Z,7.9nm,0.8s
L18K **Granite Mounta** 79.61 8 P P 20 45 27.6 +1.4
baz=196
M19K **Big River Lodg** 79.63 9 P P 20 45 26.9 +0.6
baz=199
STLK **Strandline Lak** 79.67 10 P P 20 45 25.8 -0.9
STLK IAmb IAmb 20 45 27.1
comp=Z,8.1nm,0.9s
RC01 **Rabbit Creek A** 79.67 12 P P 20 45 27.0 +0.4
baz=203
KAIM **Kayak Island** 79.77 14 P P 20 45 28.1 +1.0
baz=208
M20K **Styx River** 79.81 10 P P 20 45 28.0 +0.6
baz=200
L19K **White Mountain** 79.83 9 P P 20 45 28.2 +0.8
baz=198
K17K **Iditarod** 79.89 7 IAmb IAmb 20 45 30.3
comp=Z,10nm,1.0s
K17K **Iditarod** 79.89 7 P P 20 45 29.0 +1.3
baz=195
V35K **Ketchikan** 79.89 23 P P 20 45 28.3 +0.5
baz=220
SIT **Sitka** 79.94 20 P P 20 45 29.0 +1.0
baz=217
U33K **Whale Pass** 79.95 22 P P 20 45 28.8 +0.7
baz=219
EYAK **Cordova Ski Ar** 80.01 14 P P 20 45 28.9 +0.5
baz=207
GLI **Glacier Island** 80.01 13 P P 20 45 28.6 +0.2
baz=206
GAMB **Gambell** 80.05 1 P P 20 45 29.4 +0.9
baz=182
SKT **Skwentna** 80.17 10 P P 20 45 29.6 +0.3
baz=201
J16K **Anvik River** 80.19 6 P P 20 45 31.2 +1.8
baz=193
M22K **Willow** 80.21 11 P P 20 45 29.9 +0.5
baz=203
KNK **Knik Glacier** 80.22 12 IAmb IAmb 20 45 30.8
comp=Z,8.0nm,0.7s
KNK **Knik Glacier** 80.22 12 P P 20 45 30.0 +0.4
baz=204
PMR **Palmer** 80.25 12 P P 20 45 30.0 +0.3
PMR **Palmer** 80.25 12 IAmb IAmb 20 45 31.3
comp=Z,15nm,1.3s
PMR **Palmer** 80.25 12 P P 20 45 30.6 +0.9
baz=204
S31K **Pelican** 80.37 19 P P 20 45 30.9 +0.5
baz=216
GHO **Glory Hole Cre** 80.45 12 IAmb IAmb 20 45 32.1
comp=Z,14nm,0.9s
J17K **VABM Dome** 80.46 7 IAmb IAmb 20 45 33.4
comp=Z,13nm,0.8s
J17K **VABM Dome** 80.46 7 P P 20 45 32.0 +1.2
baz=194
DIV **Divide** 80.52 13 P P 20 45 31.4 +0.1
PLID **Pearl Lake** 80.53 37 IAmb IAmb 20 45 58.3
comp=Z,23nm,1.9s
MESA **MESA** 80.60 15 P P 20 45 32.7 +0.9
baz=211
SML **Sawmill** 80.60 12 P P 20 45 32.4 +0.7
baz=204
BMRM **Bremner River** 80.64 14 IAmb IAmb 20 45 33.3
comp=Z,17nm,1.0s
BMRM **Bremner River** 80.64 14 P P 20 45 32.2 +0.3
baz=208
NJ2 **Nanjing** 80.67 307 eP P 20 45 32.5 -0.1
NJ2 pmax pmax
comp=Z,14nm,0.5s
I17K **Unalakleet** 80.77 6 IAmb IAmb 20 45 35.1
comp=Z,8.9nm,0.9s
I17K **Unalakleet** 80.77 6 P P 20 45 33.5 +1.1
baz=192,SNR=6.1
CUT **Chulitna** 80.79 11 P P 20 45 32.7 +0.2
baz=203,SNR=5.1
J18K **Innoko River** 80.80 8 IAmb IAmb 20 45 34.7
comp=Z,11nm,0.7s
J18K **Innoko River** 80.80 8 P P 20 45 33.7 +1.0
baz=196
CRQE **Cirque** 80.81 15 P P 20 45 33.3 +0.4
baz=209
L22K **Petersville** 80.81 11 IAmb IAmb 20 45 32.9
comp=Z,9.5nm,0.9s
KLU **Klutina** 80.82 13 P P 20 45 33.2 +0.3
baz=207
SCM **Sheep Creek Mo** 80.83 12 IAmb IAmb 20 45 33.7
comp=Z,10nm,0.6s
SCM **Sheep Creek Mo** 80.83 12 P P 20 45 33.2 +0.3
baz=205,SNR=6.1
C09A **Chrisman Ranch** 80.84 34 IAmb IAmb 20 45 34.9
comp=Z,6.3nm,0.3s
PPLA **Purkeypile** 80.92 10 P P 20 45 34.3 +0.8
baz=201
PINM **Pinnacle** 80.97 16 P P 20 45 34.3 +0.6
baz=212
K20K **Telida** 81.06 9 P P 20 45 35.0 +0.9
baz=199,SNR=6.4
ANM **Nome** 81.07 4 P P 20 45 35.2 +1.2
baz=188,SNR=7.1
MA2 **Magadan** 81.16 343 LR LR 21 14 05.4
comp=Z,21nm,21.8s,baz=142,slow=30
R32K **Eaglecrest** 81.17 20 P P 20 45 35.7 +1.0
baz=218
N25K **Chitina, Valde** 81.21 14 IAmb IAmb 20 45 37.1
comp=Z,9nm,1.6s
N25K **Chitina, Valde** 81.21 14 P P 20 45 35.6 +0.7
baz=208,SNR=5.7
PV05 **Paradox Valley** 81.24 46 IAmb IAmb 20 45 38.9
comp=Z,16nm,1.2s
M24K **Tolsona, Glenn** 81.31 13 P P 20 45 35.5 +0.1
M24K IAmb IAmb 20 45 38.0
comp=Z,13nm,0.9s
M24K **Tolsona, Glenn** 81.31 13 P P 20 45 36.4 +1.0
baz=206
KLR **Kul'dur** 81.34 327 LR LR 21 15 31.7
comp=Z,14nm,20.3s,baz=144,slow=31
H16K **Elim** 81.37 5 P P 20 45 36.9 +1.3
baz=191,SNR=23
MCARA **McCarthy VSAT** 81.38 14 P P 20 45 36.3 +0.6
baz=210
LOGN **Logan Glacier** 81.39 15 IAmb IAmb 20 45 39.1
comp=Z,18nm,1.2s
TXAR **Lajitas Array** 81.40 56 P P 20 45 38.1 +1.4
comp=Z,2.0nm,0.7s,baz=221,slow=7.9,SNR=31
TXAR pP sP 20 46 04.0 +0.8
comp=Z,4.2nm,1.1s,baz=227,slow=5.0,SNR=5.6
TXAR LR LR 21 12 53.7
comp=Z,53nm,21.2s,baz=223,slow=29
comp=Z,2.0nm,0.7s
TXAR **Lajitas Array** 81.40 56 P P 20 45 37.2 +0.5
TXAR sP 20 46 03.2 0.0
WAT6 **Susitna Watana** 81.42 12 P P 20 45 36.6 +0.4
baz=205,SNR=8.7
CTG **China Glacier** 81.43 15 P P 20 45 36.7 +0.5
baz=211
PV10 **Paradox Valley** 81.43 46 IAmb IAmb 20 45 39.0
comp=Z,16nm,1.0s
BARN **Barnard Glacie** 81.43 15 IAmb IAmb 20 45 37.4
comp=Z,8.7nm,0.9s
J19K **Poorman** 81.45 8 P P 20 45 37.2 +1.1
baz=197
PV18 **Skein Mesa, Pa** 81.46 46 IAmb IAmb 20 45 39.4
comp=Z,2nm,1.2s
PV13 **Radium Mtn., P** 81.47 46 IAmb IAmb 20 45 39.5
comp=Z,13nm,1.3s
WAT1 **Susitna Watana** 81.49 11 P P 20 45 36.9 +0.6
baz=204
PV03 **Paradox Valley** 81.50 46 IAmb IAmb 20 45 39.8
comp=Z,18nm,1.5s
PV11 **David Mesa, Pa** 81.51 46 IAmb IAmb 20 46 17.0
comp=Z,14nm,1.2s
PV02 **Paradox Valley** 81.56 46 IAmb IAmb 20 46 52.2
comp=Z,14nm,0.8s
O28M **Mount Upton** 81.56 16 P P 20 45 37.4 +0.4
baz=212
G15K **Niukluk** 81.59 4 P P 20 45 37.9 +1.1
baz=189,SNR=24
O29M **Mount Kennedy** 81.60 17 IAmb IAmb 20 45 39.0
comp=Z,7.1nm,0.8s
O29M **Mount Kennedy** 81.60 17 P P 20 45 37.9 +0.8
baz=214
PV01 **Paradox Valley** 81.64 46 IAmb IAmb 20 45 40.3
comp=Z,12nm,1.0s
T35M **Bob Quinn** 81.64 22 P P 20 45 37.7 +0.4
baz=222
ANMO **Albuquerque** 81.67 50 LR LR 21 16 46.0
comp=Z,27nm,18.8s,baz=243,slow=32
ANMO **Albuquerque** 81.67 50 P P 20 45 38.5 +0.3
ANMO **Albuquerque** 81.67 50 IAmb IAmb 20 45 40.2
comp=Z,4.6nm,0.8s
ANMO **Albuquerque** 81.67 50 IAmb IAmb 20 45 41.0
comp=Z,30nm,2.0s
ANMO **Albuquerque** 81.67 50 P P 20 45 39.6 +1.5
NEW **Newport** 81.74 34 LR LR 21 13 01.8
comp=Z,44nm,19.8s,baz=222,slow=29
TRF **Thorofare Moun** 81.75 10 IAmb IAmb 20 45 40.0
comp=Z,9.0nm,0.9s
TRF **Thorofare Moun** 81.75 10 P P 20 45 38.0 +0.1
baz=202,SNR=8.6
CHUM **Lake Minchumin** 81.82 9 P P 20 45 38.5 +0.5
baz=200
J20K **Nowinta River** 81.83 8 IAmb IAmb 20 45 39.8
comp=Z,11nm,0.9s
J20K **Nowinta River** 81.83 8 P P 20 45 38.9 +0.9
baz=199,SNR=12
ALPN **Alpine** 81.85 55 IAmb IAmb 20 45 41.6
comp=Z,8.4nm,0.8s
SKAG **Skagway** 81.86 19 P P 20 45 39.4 +1.2
baz=217
H17K **Granite Mounta** 81.87 6 P P 20 45 39.1 +0.9
baz=193
P30M **Million Dollar** 81.91 18 P P 20 45 39.7 +1.0
baz=215
F14K **Arctic Creek** 81.93 3 P P 20 45 39.7 +1.2
baz=187
TNA **Tin City** 81.94 2 P P 20 45 39.8 +1.2
baz=185,SNR=14
DHY **Denali Highway** 81.94 12 IAmb IAmb 20 46 27.4
comp=Z,23nm,1.9s
DHY **Denali Highway** 81.94 12 P P 20 45 39.3 +0.5
baz=205
RND **Reindeer** 81.97 11 P P 20 45 38.9 0.0
RND IAmb IAmb 20 45 41.3
comp=Z,12nm,0.9s
GCSA **Galena City Sc** 82.02 7 P P 20 45 40.0 +1.0
baz=196
S34M **Telegraph Cree** 82.03 21 P P 20 45 40.2 +1.0
baz=221
YUK8 **Steele Glacier** 82.11 16 P P 20 45 40.3 +0.4
baz=212,SNR=6.0
G16K **Koyuk River** 82.11 5 P P 20 45 40.7 +1.2
baz=191
YUK6 **Outpost Mounta** 82.19 17 P P 20 45 41.3 +0.9
baz=214
PAX **Paxson** 82.23 13 P P 20 45 40.4 +0.1
baz=207
BPAW **Bear Paw Mtn.** 82.24 10 P P 20 45 40.0 -0.2
baz=202
H18K **Honhosa River** 82.24 6 P P 20 45 40.9 +0.7
baz=195
MCK **McKinley** 82.25 11 P P 20 45 40.6 +0.3
baz=204,SNR=23
F15K **North Star Dit** 82.25 4 P P 20 45 41.1 +0.8
baz=189
M26K **Nabesna, AK** 82.27 14 IAmb IAmb 20 45 42.2
comp=Z,14nm,1.3s
M26K **Nabesna, AK** 82.27 14 P P 20 45 41.4 +0.9
baz=209
TPB05 **Hovey Rd** 82.32 55 IAmb IAmb 20 45 44.5
comp=Z,26nm,1.7s
HYT **Haines Junctio** 82.33 17 P P 20 45 41.8 +0.8
baz=215
YUK3 **Moose Creek** 82.34 15 P P 20 45 41.7 +0.7
baz=212,SNR=6.0
G17K **Kiwalik Mounta** 82.36 5 P P 20 45 41.7 +1.0
baz=192
I20K **Naaghedeneel** 82.37 8 P P 20 45 42.1 +1.2
baz=198
Q32M **Nakina River** 82.44 20 P P 20 45 42.5 +0.9
baz=220
YUK4 **Talbot Arm** 82.45 16 P P 20 45 42.9 +1.3
baz=214,SNR=5.9
P32M **Atlin** 82.46 19 P P 20 45 42.5 +0.9
baz=218
M27K **Edge Creek, AK** 82.50 14 IAmb IAmb 20 45 45.4
comp=Z,18nm,1.4s
M27K **Edge Creek, AK** 82.50 14 P P 20 45 42.6 +0.9
baz=210,SNR=6.8
BWN **Browne** 82.56 10 IAmb IAmb 20 45 43.0
comp=Z,14nm,0.8s
DLMT **Dillon** 82.68 38 P P 20 45 43.6 +0.4
DLMT IAmb IAmb 20 45 45.5
comp=Z,12nm,1.1s
O30N **Mendenhall** 82.69 18 IAmb IAmb 20 45 44.6
comp=Z,21nm,1.4s
O30N **Mendenhall** 82.69 18 P P 20 45 43.5 +0.8
baz=216,SNR=5.7
FXWY **Fox Creek** 82.74 41 IAmb IAmb 20 45 46.1
comp=Z,14nm,1.4s
L26K **Log Cabin Wild** 82.74 13 IAmb IAmb 20 45 44.5
comp=Z,15nm,1.5s
BVCY **Beaver Creek** 82.79 15 P P 20 45 44.0 +0.9
baz=211
DLBC **Dease Lake** 82.81 21 P P 20 45 44.1 +0.7
comp=Z,2.3nm,0.9s,baz=206,slow=8.6,SNR=3.4
DLBC LR LR 21 12 44.2
comp=Z,37nm,22.0s,baz=55,slow=28
comp=Z,2.3nm,0.9s
DLBC **Dease Lake** 82.81 21 P P 20 45 44.1 +0.7
baz=222
SNOW **Snow King Moun** 82.82 41 IAmb IAmb 20 45 47.0
comp=Z,13nm,1.0s
H19K **Roundabout Mou** 82.82 7 IAmb IAmb 20 45 45.4
comp=Z,8.5nm,0.9s
H19K **Roundabout Mou** 82.82 7 P P 20 45 44.1 +1.0
baz=196,SNR=8.1
K24K **Donnelly Dome** 82.92 12 IAmb IAmb 20 45 45.5
comp=Z,22nm,1.2s
K24K **Donnelly Dome** 82.92 12 P P 20 45 44.4 +0.7
baz=207
BELA **Belgrano 2** 82.93 172 P P 20 45 43.6 -0.2
G18K **Tagagawik** 82.93 6 IAmb IAmb 20 45 45.4
comp=Z,8.1nm,0.9s
G18K **Tagagawik** 82.93 6 P P 20 45 44.7 +0.9
baz=194
MNHN **Monahans** 82.93 55 IAmb IAmb 20 45 46.7
comp=Z,7.5nm,0.8s
WHY **Whitehorse** 82.95 18 P P 20 45 44.8 +0.6
baz=217
N30M **Aishikik Lake** 82.97 17 P P 20 45 44.7 +0.6
baz=215
MOOW **Moose Ponds** 82.97 41 IAmb IAmb 20 46 23.3
comp=Z,20nm,2.0s
H20K **Anotleneega Mo** 82.98 8 P P 20 45 45.3 +1.3
baz=198
LOHW **Long Hollow** 82.99 41 IAmb IAmb 20 45 47.0
comp=Z,12nm,1.4s
NEA2 **Nenana** 83.02 10 P P 20 45 45.3 +1.1
baz=204
RIDG **Independent Ri** 83.05 12 IAmb IAmb 20 46 24.1
comp=Z,18nm,1.5s
RIDG **Independent Ri** 83.05 12 P P 20 45 45.3 +0.8
baz=208
I21K **Tanana** 83.09 9 P P 20 45 45.4 +0.8
baz=201
L27K **Beaver Creek,** 83.12 14 P P 20 45 45.3 +0.5
baz=210
MLY **Manley** 83.15 10 P P 20 45 45.1 +0.1
baz=202,SNR=9.6
FLWY **Flagg Ranch** 83.17 40 IAmb IAmb 20 45 48.4
comp=Z,14nm,0.9s
R33M **Jennings River** 83.21 20 P P 20 45 45.8 +0.4
baz=221
YHB **Horse Butte** 83.21 39 IAmb IAmb 20 45 48.8
comp=Z,11nm,0.9s
BW06 **Boulder Array** 83.23 42 IAmb IAmb 20 45 47.7
comp=Z,7.6nm,0.8s
F17K **Baldwin Pennin** 83.23 5 IAmb IAmb 20 45 47.4
comp=Z,12nm,0.8s
F17K **Baldwin Pennin** 83.23 5 P P 20 45 46.3 +1.1
baz=192,SNR=14
PDAR **Pinedale Array** 83.23 42 P P 20 45 46.5 +0.4
comp=Z,5.5nm,0.7s,baz=215,slow=3.3,SNR=47
PDAR LR LR 21 13 57.6
comp=Z,34nm,20.1s,baz=228,slow=29
comp=Z,5.5nm,0.7s
PDAR **Pinedale Array** 83.23 42 P P 20 45 45.6 -0.5
HDA **Harding Lake** 83.23 11 IAmb IAmb 20 45 46.5
comp=Z,12nm,1.0s
HDA **Harding Lake** 83.23 11 P P 20 45 46.2 +0.9
baz=206
P33M **Teslin, Yukon** 83.23 19 P P 20 45 46.1 +0.6
baz=219
CCB **Clear Creek Bu** 83.29 11 IAmb IAmb 20 45 46.7
comp=Z,13nm,0.9s
G19K **Purcell Mounta** 83.34 7 IAmb IAmb 20 45 47.9
comp=Z,9.1nm,0.8s
G19K **Purcell Mounta** 83.34 7 P P 20 45 47.0 +1.2
baz=196
N31M **Braeburn, Yuko** 83.36 17 IAmb IAmb 20 45 48.0
comp=Z,10nm,0.9s
N31M **Braeburn, Yuko** 83.36 17 P P 20 45 47.0 +0.9
baz=216
BOZ **Bozeman (W)** 83.39 39 IAmb IAmb 20 45 49.1
comp=Z,10nm,1.1s
M29M **Somme Creek** 83.42 16 P P 20 45 47.2 +0.7
baz=214
H21K **Melozitna Rive** 83.42 9 P P 20 45 47.3 +1.0
baz=200
SCRK **Sand Creek** 83.44 13 P P 20 45 47.3 +0.7
baz=208
I23K **Minto, Yukon-K** 83.48 10 P P 20 45 47.6 +1.0
baz=203,SNR=5.3
COLA **College** 83.49 11 P P 20 45 46.9 +0.3
COLA **College** 83.49 11 P P 20 45 47.0 +0.4
F18K **Selawik** 83.52 6 P P 20 45 47.2 +0.5
baz=193,SNR=9.8
SEY **Seymchan** 83.54 345 P P 20 45 46.8 -0.1
comp=Z,3.8nm,0.8s,baz=152,slow=7.2,SNR=17
comp=Z,3.8nm,0.8s
ILAR **Eielson Array** 83.57 11 P P 20 45 47.0 -0.1
comp=Z,2.4nm,0.8s,baz=213,slow=5.3,SNR=43
ILAR pP sP 20 46 12.7 -1.0
comp=Z,1.3nm,0.7s,baz=216,slow=6.6,SNR=3.4
ILAR LR LR 21 16 29.4
comp=Z,21nm,19.2s,baz=211,slow=31
comp=Z,2.4nm,0.8s
ILAR **Eielson Array** 83.57 11 P P 20 45 46.5 -0.6
IMAR **Indian Mountai** 83.60 8 P P 20 45 47.4 +0.2
J25K **Salcha River,** 83.72 12 IAmb IAmb 20 45 50.1
comp=Z,14nm,1.3s
J25K **Salcha River,** 83.72 12 P P 20 45 48.4 +0.4
baz=207,SNR=11
POKR **Poker Plat Res** 83.79 11 P P 20 45 48.5 +0.3
baz=205
E17K **Hotham Inlet** 83.81 5 P P 20 45 49.2 +0.9
baz=191,SNR=29

H22K	**Ishtalitna Cre**	**83.85**	**9**	IAmb	IAmb	20 45 50.2
	comp=Z,10nm,1.0s					
H22K	**Ishtalitna Cre**	**83.85**	**9**	P	**P**	**20 45 49.2 +0.6**
	baz=201					
DRIO	**Del Rio**	**83.88**	**57**	IAmb	IAmb	20 45 51.6
	comp=Z,9.9nm,0.7s					
N32M	**Quiet Lake**	**83.89**	**18**	IAmb	IAmb	20 45 50.7
	comp=Z,7.8nm,0.8s					
N32M	**Quiet Lake**	**83.89**	**18**	P	**P**	**20 45 49.6 +0.8**
	baz=219					
F19K	**Shaleruckik Mo**	**83.94**	**6**	P	**P**	**20 45 49.7 +0.9**
	baz=195					
M30M	**Minto, Yukon**	**83.97**	**16**	P	**P**	**20 45 49.8 +0.6**
	baz=215,SNR=5.5					
L29M	**L29M**	**84.06**	**15**	P	**P**	**20 45 50.4 +0.8**
	baz=214,SNR=11					
YNE	**Yellowstone No**	**84.07**	**40**	IAmb	IAmb	20 45 53.0
	comp=Z,12nm,1.2s					
H23K	**Yukon River**	**84.08**	**10**	P	**P**	**20 45 50.4 +0.7**
	baz=203					
G21K	**Allakaket**	**84.14**	**8**	P	**P**	**20 45 50.8 +0.9**
	baz=199					
E18K	**Tukpahlearik C**	**84.24**	**5**	P	**P**	**20 45 51.6 +1.2**
	baz=192					
M31M	**Drury Creek, Y**	**84.33**	**17**	P	**P**	**20 45 51.7 +0.6**
	baz=217					
D17K	**Noatak River**	**84.33**	**4**	P	**P**	**20 45 51.8 +0.9**
	baz=190,SNR=10					
H24K	**Noodor Dome**	**84.36**	**10**	P	**P**	**20 45 51.9 +0.8**
	baz=205					
F20K	**Avaraart Lake**	**84.37**	**7**	IAmb	IAmb	20 45 53.0
	comp=Z,7.5nm,0.8s					
CMIG	**Matias Romero**	**84.44**	**70**	LR	LR	21 13 35.4
	comp=Z,36nm,21.6s,baz=182,slow=28					
WTLY	**Watson Lake, Y**	**84.48**	**21**	P	**P**	**20 45 52.5 +0.6**
	baz=223					
PRP	**Porcupine Dome**	**84.50**	**11**	IAmb	IAmb	20 45 53.5
	comp=Z,10nm,0.8s					
PRP	**Porcupine Dome**	**84.50**	**11**	P	**P**	**20 45 52.6 +0.7**
	baz=207,SNR=12					
RLMT	**Red Lodge**	**84.58**	**40**	IAmb	IAmb	20 45 55.3
	comp=Z,11nm,1.3s					
E19K	**Redstone River**	**84.60**	**6**	P	**P**	**20 45 53.2 +1.0**
	baz=196					
RDOG	**Red Dog Mine**	**84.69**	**4**	P	**P**	**20 45 53.2 +0.5**
RDOG				IAmb	IAmb	20 45 54.7
	comp=Z,6.9nm,0.8s					
RDOG	**Red Dog Mine**	**84.69**	**4**	P	**P**	**20 45 53.8 +1.1**
	baz=190					
C16K	**Lisburne Hills**	**84.77**	**3**	IAmb	IAmb	20 45 54.8
	comp=Z,7.0nm,0.8s					
C16K	**Lisburne Hills**	**84.77**	**3**	P	**P**	**20 45 53.6 +0.5**
	baz=188					
I26K	**Coal Creek Min**	**84.78**	**12**	P	**P**	**20 45 54.0 +0.8**
	baz=209					
G22K	**Bettles**	**84.80**	**9**	P	**P**	**20 45 54.3 +1.1**
	baz=201					
F21K	**Alatna River**	**84.81**	**8**	IAmb	IAmb	20 45 55.0
	comp=Z,6.2nm,0.7s					
F21K	**Alatna River**	**84.81**	**8**	P	**P**	**20 45 54.1 +0.8**
	baz=199					
G23K	**Bananza Creek**	**84.82**	**9**	IAmb	IAmb	20 45 55.2
	comp=Z,7.4nm,0.9s					
G23K	**Bananza Creek**	**84.82**	**9**	P	**P**	**20 45 54.4 +0.9**
	baz=203					
K29M	**Barlow Dome**	**84.82**	**15**	IAmb	IAmb	20 45 55.5
	comp=Z,6.2nm,0.8s					
K29M	**Barlow Dome**	**84.82**	**15**	P	**P**	**20 45 54.7 +1.1**
	baz=214					
SN07	**Snyder 07**	**85.08**	**54**	IAmb	IAmb	20 45 57.0
	comp=Z,9.9nm,0.7s					
C17K	**DeLong Mountai**	**85.09**	**4**	P	**P**	**20 45 55.5 +0.8**
	baz=190,SNR=5.5					
J29N	**Klondike Camp**	**85.15**	**15**	IAmb	IAmb	20 45 57.4
	comp=Z,7.5nm,0.8s					
J29N	**Klondike Camp**	**85.15**	**15**	P	**P**	**20 45 56.1 +1.0**
	baz=214					
AMTX	**Amarillo**	**85.20**	**52**	IAmb	IAmb	20 45 58.0
	comp=Z,12nm,0.9s					
G24K	**Hadweenzic Riv**	**85.22**	**10**	P	**P**	**20 45 56.5 +1.1**
	baz=205					
F22K	**John River**	**85.25**	**8**	P	**P**	**20 45 56.5 +1.0**
	baz=200					
COLD	**Coldfoot**	**85.27**	**9**	P	**P**	**20 45 56.8 +1.2**
	baz=202,SNR=7.9					
DKNS	**Dickens**	**85.29**	**53**	IAmb	IAmb	20 45 58.7
	comp=Z,5.7nm,0.7s					
I27K	**Kandik River**	**85.36**	**13**	IAmb	IAmb	20 45 57.2
	comp=Z,24nm,1.8s					
I27K	**Kandik River**	**85.36**	**13**	P	**P**	**20 45 56.8 +0.6**
	baz=211					
C18K	**Utukok River**	**85.40**	**5**	IAmb	IAmb	20 46 38.1
	comp=Z,26nm,1.9s					
C18K	**Utukok River**	**85.40**	**5**	P	**P**	**20 45 57.2 +0.9**
	baz=192					
E20K	**Nigu River**	**85.48**	**6**	P	**P**	**20 45 57.7 +1.0**
	baz=197					
D19K	**Kuna River**	**85.51**	**6**	IAmb	IAmb	20 45 58.5
	comp=Z,11nm,0.8s					
D19K	**Kuna River**	**85.51**	**6**	P	**P**	**20 45 57.6 +0.7**
	baz=195					
G25K	**Bearman Lake**	**85.52**	**11**	P	**P**	**20 45 58.0 +1.2**
	baz=206					
MMPY	**Sheldon Lake,**	**85.57**	**18**	IAmb	IAmb	20 45 59.2
	comp=Z,8.6nm,1.1s					
MMPY	**Sheldon Lake,**	**85.57**	**18**	P	**P**	**20 45 58.2 +1.0**
	baz=220					
BILL	**Bilibino**	**85.58**	**353**	P	**P**	**20 45 57.0 -0.1**
BILL				IAmb	IAmb	20 45 59.0
	comp=Z,12nm,1.2s					
I28M	**Miner Creek**	**85.59**	**13**	P	**P**	**20 45 58.1 +0.7**
	baz=212					
TGTN	**Hyland Airport**	**85.69**	**20**	P	**P**	**20 45 58.8 +0.9**
	baz=223					
J30M	**Hart River**	**85.72**	**15**	P	**P**	**20 45 59.0 +1.0**
	baz=216					
APMT	**Aspermont**	**85.77**	**54**	IAmb	IAmb	20 46 00.7
	comp=Z,11nm,0.8s					
D20K	**Ettiviuk River**	**85.87**	**6**	P	**P**	**20 45 59.4 +0.8**
	baz=196					
ABTX	**Abilene, Hawle**	**85.87**	**54**	P	**P**	**20 45 59.3 -0.1**
BRDY	**Brady**	**85.88**	**56**	IAmb	IAmb	20 46 01.3
	comp=Z,7.6nm,1.0s					
E22K	**Anaktuvuk Pass**	**85.89**	**8**	IAmb	IAmb	20 46 00.5
	comp=Z,8.3nm,0.8s					
E22K	**Anaktuvuk Pass**	**85.89**	**8**	P	**P**	**20 45 59.6 +0.9**
	baz=201,SNR=11					
I29M	**Ogilvie Camp,**	**85.89**	**14**	IAmb	IAmb	20 46 00.2
	comp=Z,10nm,1.2s					
I29M	**Ogilvie Camp,**	**85.89**	**14**	P	**P**	**20 45 59.5 +0.7**
	baz=214,SNR=6.6					
F24K	**Squaw Lake**	**85.90**	**10**	P	**P**	**20 45 59.7 +0.9**
	baz=205					
H27K	**Steamboat Moun**	**85.92**	**12**	P	**P**	**20 45 59.9 +0.9**
	baz=211					
C19K	**Lookout Ridge**	**85.98**	**5**	IAmb	IAmb	20 46 01.1
	comp=Z,16nm,1.3s					
C19K	**Lookout Ridge**	**85.98**	**5**	P	**P**	**20 46 00.3 +1.1**
	baz=193					
HNS	**HongShan**	**86.03**	**311**	⇑P	**P**	**20 46 02.3 +2.3**
HNS				pmax	pmax	
	comp=Z,9.0nm,0.6s					
G26K	**Porcupine Rive**	**86.10**	**11**	IAmb	IAmb	20 46 01.9
	comp=Z,12nm,0.9s					
G26K	**Porcupine Rive**	**86.10**	**11**	P	**P**	**20 46 00.9 +1.2**
	baz=208					
E23K	**Chandalar**	**86.13**	**9**	IAmb	IAmb	20 46 55.7
	comp=Z,10nm,1.4s					
E23K	**Chandalar**	**86.13**	**9**	P	**P**	**20 46 01.0 +1.0**
	baz=203					
KOTAN	**Kotaneelee Air**	**86.17**	**22**	P	**P**	**20 46 01.0 +0.8**
	baz=227					
I30M	**Mount Dempster**	**86.24**	**15**	IAmb	IAmb	20 46 39.1
	comp=Z,6.6nm,1.0s					
I30M	**Mount Dempster**	**86.24**	**15**	P	**P**	**20 46 01.4 +0.8**
	baz=216					
E24K	**Your Creek**	**86.31**	**9**	IAmb	IAmb	20 46 49.8
	comp=Z,16nm,1.9s					
E24K	**Your Creek**	**86.31**	**9**	P	**P**	**20 46 01.9 +1.1**
	baz=204					
F25K	**Christian Rive**	**86.34**	**10**	P	**P**	**20 46 02.0 +1.0**
	baz=207					
BMAR	**Burnt Mountain**	**86.38**	**11**	P	**P**	**20 46 02.2 +1.0**
G27K	**Doyon Strip**	**86.39**	**12**	IAmb	IAmb	20 46 51.4
	comp=Z,14nm,2.0s					
G27K	**Doyon Strip**	**86.39**	**12**	P	**P**	**20 46 02.3 +1.1**
	baz=210					
C21K	**Knifeblade Rid**	**86.50**	**7**	P	**P**	**20 46 02.8 +1.2**
	baz=198					
H29M	**Whitestone**	**86.59**	**14**	IAmb	IAmb	20 46 03.8
	comp=Z,7.4nm,0.9s					
H29M	**Whitestone**	**86.59**	**14**	P	**P**	**20 46 03.1 +0.9**
	baz=214					
TOLK	**Toolik Lake Re**	**86.67**	**9**	P	**P**	**20 46 03.8 +1.3**
	baz=203					
MAW	**Mawson**	**86.68**	**199**	P	**P**	**20 46 03.2 +0.5**
	comp=Z,4.8nm,0.6s,baz=128,slow=9.4,SNR=7.6					
	comp=Z,4.8nm,0.6s					
MAW	**Mawson**	**86.68**	**199**	IAmb	IAmb	20 47 47.8
	comp=Z,23nm,1.9s					
F26K	**Sheenjek River**	**86.69**	**11**	P	**P**	**20 46 04.0 +1.3**
	baz=208					
D23K	**Nanushuk River**	**86.82**	**8**	P	**P**	**20 46 03.7 +0.4**
D23K	**Nanushuk River**	**86.82**	**8**	P	**P**	**20 46 04.5 +1.2**
	baz=202					
E25K	**Arctic Village**	**86.83**	**10**	IAmb	IAmb	20 46 52.1
	comp=Z,20nm,2.0s					
E25K	**Arctic Village**	**86.83**	**10**	P	**P**	**20 46 04.5 +1.2**
	baz=207					
A19K	**Wainwright**	**86.94**	**4**	P	**P**	**20 46 04.6 +0.9**
	baz=192					
B21K	**Ikpikpuk River**	**86.96**	**7**	IAmb	IAmb	20 46 44.4
	comp=Z,21nm,2.0s					
B21K	**Ikpikpuk River**	**86.96**	**7**	P	**P**	**20 46 04.6 +0.8**
	baz=198					
B20K	**Meade River**	**87.07**	**6**	IAmb	IAmb	20 46 05.9
	comp=Z,5.3nm,0.6s					
B20K	**Meade River**	**87.07**	**6**	P	**P**	**20 46 04.7 +0.4**
	baz=196					
EPYK	**Eagle Plains**	**87.09**	**14**	P	**P**	**20 46 05.2 +0.6**
	baz=215					
H31M	**Peel River**	**87.21**	**15**	P	**P**	**20 46 05.8 +0.5**
	baz=217					
G29M	**Pine Creek**	**87.25**	**13**	P	**P**	**20 46 06.0 +0.6**
	baz=214					
D24K	**Happy Valley**	**87.25**	**9**	IAmb	IAmb	20 46 07.5
	comp=Z,3.7nm,0.7s					
D24K	**Happy Valley**	**87.25**	**9**	P	**P**	**20 46 06.5 +1.2**
	baz=204					
ENH	**Enshi**	**87.34**	**302**	P	**P**	**20 46 07.5 +0.8**
ENH	**Enshi**	**87.34**	**302**	P	**P**	**20 46 07.3 +0.6**
ENH				IAmb	IAmb	20 46 08.5
	comp=Z,5.0nm,0.7s					
F28M	**Old Crow**	**87.45**	**12**	IAmb	IAmb	20 48 22.8
	comp=Z,16nm,1.9s					
F28M	**Old Crow**	**87.45**	**12**	P	**P**	**20 46 07.2 +0.9**
	baz=212					
E27K	**Coleen River**	**87.60**	**11**	P	**P**	**20 46 08.0 +0.9**
	baz=210					
C23K	**Itkillik River**	**87.64**	**8**	P	**P**	**20 46 08.1 +1.0**
	baz=202					
G30M	**tAoh Zraii Nji**	**87.71**	**14**	IAmb	IAmb	20 46 09.0
	comp=Z,8.2nm,1.1s					
G30M	**tAoh Zraii Nji**	**87.71**	**14**	P	**P**	**20 46 08.1 +0.5**
	baz=216					
B22K	**Teshekpuk Lake**	**87.77**	**7**	IAmb	IAmb	20 46 09.1
	comp=Z,4.3nm,0.7s					
B22K	**Teshekpuk Lake**	**87.77**	**7**	P	**P**	**20 46 08.3 +0.5**
	baz=199					
D25K	**Kavik River**	**87.77**	**9**	P	**P**	**20 46 08.3 +0.4**
	baz=206					
C24K	**Franklin Bluff**	**87.79**	**8**	IAmb	IAmb	20 46 09.8
	comp=Z,6.3nm,0.8s					
C24K	**Franklin Bluff**	**87.79**	**8**	P	**P**	**20 46 08.5 +0.7**
	baz=204					
A22K	**Sinclair Lake**	**88.24**	**6**	P	**P**	**20 46 10.6 +0.7**
	baz=198					
F30M	**Barrier River**	**88.32**	**14**	P	**P**	**20 46 11.2 +0.7**
	baz=216					
E28M	**Babbage River**	**88.35**	**12**	P	**P**	**20 46 11.1 +0.5**
	baz=212					
C27K	**Jago River**	**88.48**	**10**	P	**P**	**20 46 12.0 +0.9**
	baz=208					
E29M	**Blow River**	**88.50**	**12**	P	**P**	**20 46 12.1 +0.8**
	baz=214					
C26K	**Camden Bay**	**88.54**	**10**	P	**P**	**20 46 12.3 +0.9**
	baz=207					
D27M	**Malcolm River**	**88.63**	**11**	P	**P**	**20 46 12.5 +0.5**
	baz=211					
F31M	**Tsiigehtchic**	**88.66**	**14**	P	**P**	**20 46 12.6 +0.6**
	baz=218					
XAN	**Xi'an**	**89.11**	**306**	P	**P**	**20 46 14.5 -0.5**
XAN				pmax	pmax	
	comp=Z,6.0nm,0.8s					
D28M	**Stokes Point**	**89.12**	**12**	P	**P**	**20 46 14.8 +0.6**
	baz=213					
GSI	**Gunungsitoli**	**89.23**	**272**	P	**P**	**20 46 17.4 +1.4**
INK	**Inuvik**	**89.39**	**14**	P	**P**	**20 46 15.8 +0.4**
	comp=Z,2.2nm,0.8s,baz=224,slow=5.6,SNR=9.1					
	comp=Z,2.2nm,0.8s					
INK	**Inuvik**	**89.39**	**14**	P	**P**	**20 46 15.9 +0.5**
	baz=218					
HHC	**Hu-ho-hao-te**	**89.63**	**313**	*e*P	**P**	**20 46 19.0 +1.6**
HHC				pmax	pmax	
	comp=Z,14nm,0.7s					
HHC				pmax	pmax	
	comp=Z,110nm,4.8s					
ELIB	**Princess Elisa**	**91.01**	**185**	*d*P	**P**	**20 46 23.4 0.0**
	comp=Z,13nm,0.9s					
YKA	**Yellowknife Ar**	**91.20**	**23**	P	**P**	**20 46 24.2 +0.3**
	comp=Z,1.3nm,1.0s,baz=249,slow=4.6,SNR=14					
YKA				pP	**sP**	**20 46 50.1 -0.6**
	comp=Z,0.9nm,0.8s,baz=248,slow=4.8,SNR=4.9					
YKA				LR	LR	21 21 00.0
	comp=Z,27nm,19.4s,baz=359,slow=31					
	comp=Z,1.3nm,1.0s					
VNA3	**Neumayer Olymp**	**91.77**	**175**	⇑P	**P**	**20 46 24.0 -2.7**
	comp=Z,2.4nm,0.8s					
C36M	**Paulatuk**	**92.48**	**16**	P	**P**	**20 46 30.4 +0.7**
	baz=227					
PZH	**PanZhiHua**	**92.59**	**297**	P	**P**	**20 46 34.3 +2.9**
PZH				pmax	pmax	
	comp=Z,10.0nm,0.5s					
CMAR	**Chiang Mai Arr**	**92.77**	**288**	P	**P**	**20 46 33.0 +0.7**
	comp=Z,1.1nm,0.8s,baz=108,slow=2.4,SNR=9.7					
CMAR				LR	LR	21 23 55.3
	comp=Z,8.6nm,21.8s,baz=145,slow=33					
	comp=Z,1.1nm,0.8s					
CMAR	**Chiang Mai Arr**	**92.77**	**288**	P	**P**	**20 46 30.9 -1.4**
CFA	**Coronel Fontan**	**94.00**	**124**	P	**P**	**20 46 39.6 +1.8**
	comp=Z,1.4nm,0.5s,baz=229,slow=3.3,SNR=4.4					
	comp=Z,1.4nm,0.5s					
A36M	**Sachs Harbour**	**94.03**	**13**	P	**P**	**20 46 36.6 -0.2**
A36M	**Sachs Harbour**	**94.03**	**13**	P	**P**	**20 46 37.8 +1.0**
	baz=226					
ULM	**Lac du Bonnet**	**94.92**	**39**	LR	LR	21 20 54.8
	comp=Z,22nm,19.9s,baz=280,slow=30					
SONM	**Songino Array**	**95.54**	**318**	P	**P**	**20 46 44.6 +0.1**
	comp=Z,0.3nm,0.6s,baz=126,slow=7.5,SNR=3.7					
SONM				LR	LR	21 28 16.8
	comp=Z,9.5nm,18.4s,baz=122,slow=34					
	comp=Z,0.3nm,0.6s					
SONM	**Songino Array**	**95.54**	**318**	IAmb	IAmb	20 47 08.2
	comp=Z,5.9nm,1.9s					
TKL	**Tuckaleechee C**	**99.31**	**56**	LR	LR	21 24 17.3
	comp=Z,27nm,21.2s,baz=298,slow=31					
LPAZ	**La Paz**	**99.62**	**110**	LR	LR	21 23 16.5
	comp=Z,24nm,20.1s,baz=78,slow=30					
BVAR	**Borovoye Array**	**118.63**	**322**	PKP	**PKiKP**	**20 52 06.9 0.0**
	comp=Z,0.5nm,0.4s,baz=0.0,slow=1.5,SNR=3.7					
ARCES	**ARCESS Array B**	**125.68**	**352**	PKP	**PKPdf**	**20 52 20.0 +0.1**
	comp=Z,3.3nm,0.9s,baz=47,slow=2.3,SNR=5.4					
BOSA	**Boshof**	**131.56**	**202**	PKP	**PKiKP**	**20 52 34.3 +0.7**
	comp=Z,2.3nm,0.9s,baz=135,slow=1.4,SNR=4.6					
FINES	**FINESS Array B**	**132.98**	**347**	PKhKP	PKPpre	20 52 24.4
	comp=Z,2.8nm,0.8s,baz=131,slow=26,SNR=1.2					
FINES				PKP	**PKiKP**	**20 52 35.1 0.0**
	comp=Z,1.6nm,0.7s,baz=339,slow=1.9,SNR=4.1					
AKASG	**Malin Array Be**	**141.28**	**337**	PKhKP	PKPpre	20 52 43.7
	comp=Z,0.5nm,0.5s,baz=43,slow=3.9,SNR=5.0					
SORM	**Soroca**	**143.68**	**335**	⇑P	PKPab	20 52 50.7 0.0
KWP	**Kalwaria Pacla**	**144.41**	**342**	*e*PKP	PKPbc	20 52 54.2 +0.4
OJC	**Ojcow**	**144.68**	**345**	*e*PKP	**PKPdf**	**20 52 55.4 -0.2**
KSP	**Ksiaz**	**144.84**	**349**	*e*PKP	**PKPdf**	**20 52 56.3 +0.4**
CLL	**Collm**	**144.89**	**353**	*i* PKPbc	PKPbc	20 52 55.3 +0.1
	comp=Z,7.0nm,0.6s					
CLL				*e*PP	**PP**	**20 56 15.0 +1.7**
CLL				*e*SKPdf	**SKPdf**	**20 56 20.0 -4.1**
STHS	**Stebnicka Huta**	**145.03**	**343**	*e*PKP	**PKPdf**	**20 52 56.4 +0.1**
CHVC	**Chvalec**	**145.13**	**349**	*e*PKP	**PKPdf**	**20 52 57.0 +0.5**
OSTC	**Ostas**	**145.13**	**349**	*e*PKP	**PKPdf**	**20 52 56.9 +0.4**
UPC	**Upice**	**145.22**	**349**	*e*PKP	**PKPdf**	**20 52 57.1 +0.5**
NIE	**Niedzica**	**145.29**	**344**	*e*PKP	**PKPab**	**20 52 58.3 +1.5**
DPC	**Dobruska-Polom**	**145.31**	**349**	*e*PKP	**PKPab**	**20 52 57.8 +0.9**
BURAR	**Bucovina Array**	**145.32**	**337**	⇓P	**PKPab**	**20 52 58.1 +1.1**
GIRR	**Girov**	**145.37**	**336**	⇓P	**PKPab**	**20 52 57.5 +0.4**
STEB	**Steborice**	**145.41**	**347**	*e*PKP	**PKPab**	**20 52 57.9 +0.7**
STEB				*ex*	x	20 53 24.0
OKC	**Ostrava-Krasne**	**145.42**	**347**	*e*PKP	**PKPab**	**20 52 57.6 +0.4**
BIR	**Birlad**	**145.46**	**334**	⇑P	**PKPab**	**20 52 58.4 +0.9**
KRLC	**Kraliky**	**145.49**	**348**	*e*PKP	**PKPab**	**20 52 58.1 +0.6**
HSKC	**Hora Svate Kat**	**145.52**	**352**	*e*PKP	**PKPbc**	**20 52 57.5 +0.2**
VLDR	**Vladesti**	**145.60**	**333**	⇓P	**PKPab**	**20 52 58.5 +0.5**
MORC	**Moravsky Berou**	**145.61**	**347**	⇑P	**PKPab**	**20 52 58.6 +0.6**
MORC	**Moravsky Berou**	**145.61**	**347**	*e*PKP	**PKPab**	**20 52 58.3 +0.3**
TESR	**Tescani**	**145.67**	**335**	⇑P	**PKPab**	**20 52 58.4 +0.1**
GHRR		**145.72**	**334**	⇑P	**PKPab**	**20 52 59.6 +1.1**
LANS	**Liptovska Anna**	**145.75**	**345**	*e*PKP	**PKPab**	**20 52 59.6 +1.1**
UCC	**Uccle**	**145.76**	**2**	*d*PKP	**PKPab**	**20 52 58.8 +0.4**
SCTR	**Scanteiesti**	**145.77**	**333**	⇑P	**PKPab**	**20 52 58.8 +0.2**
TLCR		**145.77**	**331**	⇓P	**PKPab**	**20 52 59.2 +0.6**
BEBN	**Eben Emael**	**145.80**	**1**	*d*PKP	**PKPab**	**20 52 59.1 +0.5**
TATR	**Tatarca**	**145.80**	**333**	⇓P	**PKPab**	**20 52 59.8 +1.0**
ONER	**Baraj Valea Uz**	**145.92**	**335**	⇑P	**PKPab**	**20 53 00.0 +0.8**
MAUC	**Maruska**	**145.94**	**347**	*e*PKP	**PKPab**	**20 52 59.9 +0.7**
PRU	**Pruhonice**	**145.97**	**351**	*e*PKP	**PKPab**	**20 52 59.5 +0.3**
PRU				*ex*	x	20 53 26.4
IZVR	**Izvoarele**	**145.97**	**333**	⇓P	**PKPab**	**20 53 00.4 +1.1**
MEM	**Membach**	**145.99**	**0**	*d*PKP	**PKPab**	**20 52 59.4 +0.1**
BSTI	**Sart Tilman**	**146.01**	**1**	*d*PKP	**PKPab**	**20 52 59.7 +0.4**
BTNL	**Ternell**	**146.01**	**0**	*d*PKP	**PKPab**	**20 52 59.5 +0.1**
NKC	**Novy Kostel**	**146.01**	**353**	*e*PKP	**PKPab**	**20 52 59.6 +0.1**
CFR	**Carcaliu**	**146.09**	**332**	⇓P	**PKPab**	**20 53 00.3 +0.4**
VRI	**Vrincioaia**	**146.16**	**334**	⇑P	**PKPab**	**20 53 00.1 -0.1**
BGES	**Gesves**	**146.20**	**1**	*d*PKP	**PKPab**	**20 52 59.8 -0.3**
PLOR	**Plostina**	**146.20**	**334**	⇑P	**PKPbc**	**20 52 59.7 +0.1**
TPGR	**Topolog**	**146.21**	**331**	⇑P	**PKPbc**	**20 53 00.1 -0.3**
BHOU	**Houvegnez**	**146.25**	**0**	*d*PKP	**PKPab**	**20 53 01.1 +0.8**
VRAC	**Vranov**	**146.25**	**348**	⇑P	**PKPab**	**20 53 00.7 +0.3**
VRAC	**Vranov**	**146.25**	**348**	*e*PKP	**PKPab**	**20 53 01.5 +1.1**
BMRD	**Maredsous**	**146.27**	**2**	*d*PKP	**PKPab**	**20 53 00.4 0.0**
TURR	**Turia**	**146.30**	**335**	⇑P	**PKPab**	**20 53 01.3 +0.6**
OZUR		**146.36**	**335**	⇑P	**PKPab**	**20 53 01.3 +0.3**
COVR	**Voineasa-Covas**	**146.39**	**335**	⇑P	**PKPbc**	**20 53 00.1 -0.1**
RCHB	**Rochefort**	**146.43**	**1**	*d*PKP	**PKPab**	**20 53 00.7 -0.3**
JAVC	**Velka Javorina**	**146.45**	**346**	*e*PKP	**PKPab**	**20 53 01.9 +0.7**
DOU	**Dourbes**	**146.47**	**2**	*d*PKP	**PKPab**	**20 53 01.1 -0.1**
TREC	**Trest**	**146.48**	**349**	*e*PKP	**PKPbc**	**20 53 00.8 +0.5**
KRUC	**Moravsky**	**146.53**	**348**	*e*PKP	**PKPab**	**20 53 01.0 -0.4**
ZVC	**Zvikov**	**146.56**	**351**	*e*PKP	**PKPab**	**20 53 01.4 -0.1**
DOPR	**Dopca**	**146.62**	**336**	⇑P	**PKPab**	**20 53 02.2 +0.3**
NEHR	**Nehoiu**	**146.69**	**334**	⇑P	**PKPab**	**20 53 02.1 -0.2**
PSZ	**Piszkesteto**	**146.77**	**343**	⇓P	**PKPab**	**20 53 02.6 +0.1**
MLR	**Muntele Rosu**	**146.79**	**335**	⇑P	**PKPbc**	**20 53 02.1 +0.6**
MARR	**Marisel-Cluj**	**146.87**	**339**	⇑P	**PKPbc**	**20 53 02.3 +0.8**
BRTR	**Keskin Array B**	**146.88**	**320**	PKPbc	**PKPbc**	**20 53 02.0 +0.2**
	comp=Z,5.0nm,0.6s,baz=102,slow=2.5,SNR=26					
WLF	**Walferdange**	**146.94**	**0**	*d*PKP	**PKPab**	**20 53 02.7 -0.3**
KHC	**Kasperske Hory**	**146.95**	**351**	*e*PKP	**PKPbc**	**20 53 02.3 +0.7**
MODS	**Modra-Piesok**	**147.00**	**347**	*e*PKP	**PKPab**	**20 53 03.3 0.0**
KIRS	**Kirsehir-Merke**	**147.05**	**319**	⇓P	**PKPdf**	**20 53 00.0 -0.2**
CKRC	**Cesky Krumlov**	**147.14**	**350**	*e*PKP	**PKPbc**	**20 53 02.8 +0.7**
CKRC				*ex*	x	20 53 31.3
VOIR		**147.19**	**335**	⇑P	**PKPbc**	**20 53 03.2 +0.7**
GERES	**GERESS Array B**	**147.21**	**351**	PKPbc	**PKPbc**	**20 53 03.1 +0.7**
	comp=Z,2.1nm,0.6s,baz=29,slow=3.0,SNR=18					
SRO	**Srobarova**	**147.28**	**345**	*e*PKP	**PKPab**	**20 53 04.1 -0.3**
ARR	**Arges**	**147.42**	**336**	⇑P	**PKPbc**	**20 53 03.3 +0.2**
WINA	**Alland / Wiene**	**147.50**	**348**	*e*PKP	**PKiKP**	**20 53 04.4 -0.9**
	comp=Z,6.6nm,1.1s					
CONA	**Conrad Observa**	**147.72**	**348**	*e*PKiKP	**PKPbc**	**20 53 04.8 +0.9**
	comp=Z,5.6nm,0.6s					
RONA	**Rosalia, Austr**	**147.85**	**347**	PKiKP	**PKPbc**	**20 53 05.1 +1.0**
	comp=Z,5.7nm,0.9s,SNR=5.1					
MOA	**Molln**	**148.09**	**350**	*e*PKiKP	**PKPbc**	**20 53 05.4 +0.6**
	comp=Z,0.7nm,0.3s					
GZR	**Gura Zlata**	**148.09**	**338**	⇑P	**PKPbc**	**20 53 05.4 +0.5**
BZS	**Buzias**	**148.31**	**339**	⇑P	**PKPbc**	**20 53 06.1 +0.7**
ARSA	**Arzberg**	**148.43**	**348**	*e*PKiKP	**PKiKP**	**20 53 06.8 -0.4**
	comp=Z,3.5nm,1.0s					
HERR	**Herculane**	**148.67**	**338**	⇑P	**PKPbc**	**20 53 06.2 -0.2**
MORH	**Mrgy, Hungar**	**148.67**	**344**	⇑P	**PKPbc**	**20 53 06.7 +0.4**
LESA	**Schwarzleotal**	**148.74**	**352**	*i* PKiKP	**PKiKP**	**20 53 07.5 -0.

BOOM	**Boomskoye usch**	**2.79**	**340**	⇑*e*P		**Pn**	**21 08 50.1**	**+0.5**
BOOM				⇑*i*S		**Sn**	**21 09 24.9**	**+0.9**
TNSS	**Tian-Shan**	**3.17**	**356**	Pg		**Pb**	**21 08 59.7**	**-1.4**
	3.9nm,0.4s							
TNSS				Lg		Lg	21 09 37.6	
	3.8nm,0.5s							
IZV	**Izvestkoviy**	**3.19**	**352**	Pg		**Pb**	**21 09 00.3**	**-1.1**
	6.7nm,0.4s							
IZV				Lg		Lg	21 09 38.6	
	8.4nm,0.4s							
MDOK	**Medeo**	**3.29**	**358**	Pg		**Pb**	**21 09 03.5**	**+0.5**
	10nm,0.5s							
MDOK				Lg		Lg	21 09 44.2	
	16nm,0.5s							
SATY	**Saty**	**3.30**	**15**	Pg		**Pb**	**21 09 03.3**	**+0.1**
	13nm,0.5s							
SATY				Lg		Lg	21 09 44.2	
	8.5nm,0.4s							
KST	**Kastek**	**3.31**	**344**	Pg		**Pb**	**21 09 03.6**	**+0.4**
	3.9nm,0.4s							
KST				Lg		Lg	21 09 44.3	
	10nm,0.4s							
KNDC	**Almaty**	**3.35**	**357**	⇓Pg		**Pb**	**21 09 03.6**	**-0.3**
	9.8nm,0.6s							
KNDC				⇓Lg		Lg	21 09 48.4	
	27nm,0.6s							
KOTS	**Kotyrbulak**	**3.36**	**359**	Pg		**Pb**	**21 09 04.4**	**+0.2**
	7.0nm,0.3s							
KOTS				Lg		Lg	21 09 46.0	
	34nm,0.5s							
AAK	**Ala-Archa**	**3.45**	**324**	⇓Pg		**Pb**	**21 09 04.5**	**-1.1**
	1.5nm,0.5s							
AAK				⇑Lg		Lg	21 09 53.0	
	4.2nm,0.6s							
UZB	**Uzynbulak**	**3.54**	**22**	Pg		**Pb**	**21 09 08.0**	**+0.8**
	8.3nm,0.3s							
UZB				Lg		Lg	21 09 51.8	
	4.2nm,0.4s							
DGS	**Degeres**	**3.54**	**342**	Pg		**Pb**	**21 09 07.4**	**+0.2**
	4.8nm,0.7s							
DGS				Lg		Lg	21 09 50.8	
	9.0nm,0.4s							
KURS	**Kuram**	**3.68**	**11**	Pg		**Pb**	**21 09 08.8**	**-0.7**
	5.6nm,0.7s							
KURS				Lg		Lg	21 09 53.1	
	5.7nm,0.8s							
KPKS	**Kokpek**	**3.75**	**16**	Pg		**Pb**	**21 09 11.0**	**+0.2**
	0.3nm,0.1s							
KPKS				Lg		Lg	21 09 56.9	
	5.9nm,0.3s							
PDGK	**Podgornoye**	**3.85**	**25**	⇑Pg		**Pb**	**21 09 11.2**	**-1.2**
	2.1nm,0.4s							
PDGK				⇓Lg		Lg	21 10 00.9	
	7.0nm,0.6s							
KRBS	**Karabastau**	**3.99**	**344**	Pg		**Pb**	**21 09 15.0**	**+0.1**
	2.4nm,0.6s							
KRBS				Lg		Lg	21 10 03.8	
	7.5nm,0.6s							
SGDS	**Sogindy**	**4.07**	**332**	Pg		**Pb**	**21 09 18.5**	**+2.3**
	3.6nm,0.9s							
SGDS				Lg		Lg	21 10 09.8	
	3.5nm,0.3s							
BLB	**Baldybastay**	**4.32**	**12**	Pg		**Pb**	**21 09 21.1**	**+0.6**
	13nm,0.3s							
BLB				Lg		Lg	21 10 14.2	
	9.5nm,0.5s							
ARXS	**Arharly**	**4.36**	**6**	Pg		**Pb**	**21 09 22.7**	**+1.5**
	5.0nm,0.6s							
ARXS				Lg		Lg	21 10 16.8	
	5.4nm,0.5s							
KK31	**Karatay Array**	**5.99**	**305**	⇓Pg		**Pg**	**21 09 58.8**	**+0.3**
	0.3nm,0.5s							
KK31				Lg		Lg	21 11 11.6	
	0.7nm,0.5s,baz=118,slow=27,SNR=3.5							

*IDC **31** 21:53:30.3±1.1, 16°.43N×147°.83E, h0km, mb3.6/10, mbtmp3.7/11, ML4.4/1, MS3.2/3, Error ellipse: s-maj=33.8km s-min=19.9km az=102.0*

ISC 31 21:53:35.5±1.1, 16°.4N±0°.1×147°.7E±0°.2, h35km, n18, σ0s87/14, mb3.5/11, MS3.4/3, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.91**	**226**	Pn	**Pn**	**21 54 31.7**	**-1.3**
	25nm,0.3s,baz=66,slow=20,SNR=1.7						
GUMO				Sn	**Sn**	**21 55 17.4**	**-0.2**
	24nm,0.3s,baz=41,slow=20,SNR=2.0						
	86nm,0.3s						
H11S3	**WAKE ISLAND Hy**	**18.21**	**81**	T	T	22 16 20.1	
	baz=266,slow=75,SNR=4.5						
H11S1	**WAKE ISLAND Hy**	**18.22**	**80**	T	T	22 16 19.9	
	baz=266,slow=75,SNR=5.7						
H11S2	**WAKE ISLAND Hy**	**18.23**	**81**	T	T	22 16 20.7	
	baz=266,slow=75,SNR=3.8						
MJAR	**Matsushiro Arr**	**21.81**	**339**	P	**P**	**21 58 24.4**	**-0.2**
	0.6nm,0.3s,baz=171,slow=10,SNR=2.8						
	0.6nm,0.3s						
SIJI	**Sorong**	**23.61**	**225**	LR	LR	22 06 44.5	
	comp=Z,24nm,21.3s,baz=74,slow=34						
WRA	**Warramunga Arr**	**38.40**	**201**	P	**P**	**22 00 54.5**	**+0.7**
	0.5nm,0.7s,baz=23,slow=9.6,SNR=4.8						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**42.01**	**199**	P	**P**	**22 01 24.9**	**+1.3**
	0.4nm,0.7s,baz=27,slow=7.3,SNR=3.2						
	0.4nm,0.7s						
SONM	**Songino Array**	**46.17**	**322**	P	**P**	**22 01 57.1**	**+0.2**
	0.3nm,0.5s,baz=108,slow=4.7,SNR=2.6						
	0.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**46.49**	**280**	P	**P**	**22 02 01.0**	**+1.3**
	0.7nm,0.3s,baz=75,slow=11,SNR=4.7						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**61.48**	**315**	P	**P**	**22 03 48.4**	**-0.3**
	0.3nm,0.6s,baz=86,slow=9.7,SNR=2.0						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**64.35**	**319**	P	**P**	**22 04 07.8**	**+0.1**
	1.0nm,0.5s,baz=98,slow=7.3,SNR=10						
	1.0nm,0.5s						
ILAR	**Eielson Array**	**64.89**	**25**	P	**P**	**22 04 09.6**	**-1.4**
	0.3nm,0.7s,baz=269,slow=7.3,SNR=4.1						
	0.3nm,0.7s						
BVAR	**Borovoye Array**	**69.50**	**321**	P	**P**	**22 04 40.4**	**-0.1**
	0.6nm,0.7s,baz=76,slow=9.1,SNR=2.1						
	0.6nm,0.7s						
YKA	**Yellowknife Ar**	**79.14**	**28**	P	**P**	**22 05 36.9**	**+0.6**
	0.3nm,0.7s,baz=293,slow=6.3,SNR=5.1						
YKA				LR	LR	22 40 59.7	
	comp=Z,28nm,18.9s,baz=86,slow=36						
	0.3nm,0.7s						
FINES	**FINESS Array B**	**89.81**	**336**	P	**P**	**22 06 30.2**	**-0.1**
	6.2nm,1.1s,baz=60,slow=5.2,SNR=3.8						
ULM	**Lac du Bonnet**	**93.40**	**35**	LR	LR	22 43 35.5	
	comp=Z,15nm,21.2s,baz=270,slow=32						
DBIC	**Dimbokro**	**144.51**	**308**	PKP	**PKPdf**	**22 13 08.8**	**-0.4**
	1.5nm,0.5s,baz=87,slow=3.3,SNR=4.7						

*JMA **31** 22:22:51.9±0.2, 25°N±3°×123°.4E±0°.6, h165km±3km, MVZ.8/19, NW OFF ISHIGAKIJIMA IS*

ISC 31 22:22:52.1±2.2, 25°.1N±0°.2×123°.39E±0°.06, h163km±17km, n18, σ0s45/26, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.71**	**209**	P	**Pn**	**22 23 16.0**	**-0.1**
YOJ	**Yonaguni jima**	**0.71**	**209**	*e*P	**Pn**	**22 23 16.1**	**+0.1**
JYNG	**Yonagunijimaku**	**0.75**	**212**	*e*P	**Pn**	**22 23 16.5**	**+0.2**
JYNG				*e*S	**Sn**	**22 23 35.2**	**+0.3**
IRIF	**Iriomote-Funau**	**0.81**	**157**	*e*S	**Sn**	**22 23 35.7**	**+0.2**
JISG	**Ishigakijimahi**	**0.98**	**121**	*e*P	**Pn**	**22 23 17.8**	**-0.1**
JISG				*e*S	**Sn**	**22 23 37.3**	**-0.3**
JIJ	**Ishigaki jima**	**1.00**	**136**	*e*P	**Pn**	**22 23 18.1**	**0.0**
JIJ				*e*S	**Sn**	**22 23 37.1**	**-0.9**
JKRS	**Kuro-shima**	**1.02**	**146**	*e*P	**Pn**	**22 23 18.7**	**+0.4**
JKRS				*e*S	**Sn**	**22 23 38.4**	**+0.1**
HATJ	**Hateruma jima**	**1.10**	**160**	*e*S	**Sn**	**22 23 40.0**	**+0.6**
JTJ	**Tarama**	**1.28**	**110**	*e*P	**Pn**	**22 23 20.8**	**+0.4**
JTJ				*e*S	**Sn**	**22 23 42.0**	**-0.2**
JIKM	**Ikemajima**	**1.70**	**95**	*e*P	**Pn**	**22 23 25.0**	**+0.4**
JIKM				*e*S	**Sn**	**22 23 49.5**	**-0.3**
TATO	**Taipei**	**1.73**	**267**	P	**Pn**	**22 23 25.3**	**+0.3**
JMJ2	**Miyako jima3**	**1.80**	**101**	*e*P	**Pn**	**22 23 26.0**	**+0.3**
JMJ2				*e*S	**Sn**	**22 23 51.1**	**-0.6**
JOGS	**Gusukube**	**1.86**	**100**	*e*P	**Pn**	**22 23 26.8**	**+0.3**
JOGS				*e*S	**Sn**	**22 23 52.3**	**-0.6**
NACB	**Ninganchiao**	**1.87**	**241**	P	**Pn**	**22 23 25.9**	**-0.6**
YHNB	**Yeheng**	**1.87**	**257**	P	**Pn**	**22 23 26.7**	**0.0**
YULB	**Yu-li**	**2.55**	**229**	P	**Pn**	**22 23 33.9**	**-0.6**
SSLB	**Suanglung**	**2.57**	**240**	P	**Pn**	**22 23 34.6**	**-0.1**
TPUB	**Ta-pu**	**3.08**	**235**	P	**Pn**	**22 23 41.9**	**+0.8**

*IDC **31** 22:28:28.3±2.6, 16°.34S×173°.41W, h0km, mb3.8/5, mbtmp3.8/6, ML3.6/1, MS3.2/8, Error ellipse: s-maj=136.4km s-min=21.6km az=141.0*

ISC 31 22:28:36.5±2.3, 16°.5S±0°.6×173°.4W±0°.5, h66km, n21, σ0s21/7, mb3.6/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.02**	**31**	Pn	Pn	22 29 13.5	-8.5
	9.0nm,0.3s,baz=58,slow=5.0,SNR=5.6						
AFI				Sn	Sn	22 29 42.6	-15
	30nm,0.3s,baz=234,slow=23,SNR=13						
AFI				LR	LR	22 30 28.3	
	comp=Z,113nm,19.6s,baz=246,slow=42						
	17nm,0.3s						
MSVF	**Nonsayu**	**8.26**	**260**	LR	LR	22 33 17.6	
	comp=Z,161nm,19.4s,baz=23,slow=35						
RAR	**Rarotonga**	**13.72**	**112**	LR	LR	22 35 18.5	
	comp=Z,90nm,20.8s,baz=306,slow=30						
DZM	**Mont Dzumac**	**19.80**	**251**	LR	LR	22 39 37.5	
	comp=Z,127nm,18.7s,baz=265,slow=34						
H11S2	**WAKE ISLAND Hy**	**39.91**	**330**	T	T	23 17 47.9	
	baz=149,slow=76,SNR=7.8						
H11S3	**WAKE ISLAND Hy**	**39.92**	**330**	T	T	23 17 48.6	
	baz=149,slow=76,SNR=5.9						
H11S1	**WAKE ISLAND Hy**	**39.93**	**330**	T	T	23 17 49.2	
	baz=149,slow=76,SNR=4.0						
H11N3	**WAKE ISLAND Hy**	**40.87**	**331**	T	T	23 19 42.8	
	baz=150,slow=76,SNR=2.6						
H11N1	**WAKE ISLAND Hy**	**40.88**	**331**	T	T	23 19 42.3	
	baz=150,slow=76,SNR=3.0						
H11N2	**WAKE ISLAND Hy**	**40.89**	**331**	T	T	23 19 43.3	
	baz=150,slow=76,SNR=2.7						
STKA	**Stephens Creek**	**43.49**	**241**	P	**P**	**22 36 33.5**	**-0.1**
	1.7nm,0.7s,baz=105,slow=9.5,SNR=4.6						
	1.7nm,0.7s						
WRA	**Warramunga Arr**	**49.60**	**258**	P	**P**	**22 37 21.6**	**0.0**
	0.3nm,0.4s,baz=92,slow=7.2,SNR=6.9						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**49.77**	**253**	P	**P**	**22 37 23.0**	**+0.1**
	2.9nm,0.5s,baz=88,slow=8.3,SNR=57						
	2.9nm,0.5s						
SHEM	**Shemya Is, Ala**	**69.80**	**352**	LR	LR	23 02 20.8	
	comp=Z,19nm,21.0s,baz=290,slow=29						
KSRS	**Korea Array**	**76.95**	**316**	LR	LR	23 09 06.6	
	comp=Z,5.3nm,21.1s,baz=200,slow=32						
TXAR	**Lajitas Array**	**81.23**	**56**	LR	LR	23 11 24.4	
	comp=Z,34nm,19.3s,baz=74,slow=32						
KLR	**Kul'dur**	**81.44**	**327**	LR	LR	23 15 02.6	
	comp=Z,15nm,18.1s,baz=228,slow=34						
PDAR	**Pinedale Array**	**83.09**	**42**	P	**P**	**22 40 55.4**	**+0.1**
	0.3nm,0.6s,baz=184,slow=4.5,SNR=4.3						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**83.53**	**11**	P	**P**	**22 40 56.9**	**+0.1**
	0.2nm,0.5s,baz=201,slow=6.8,SNR=5.4						
	0.2nm,0.5s						
BRTR	**Keskin Array B**	**147.01**	**320**	PKPbc	**PKPab**	**22 48 13.9**	**+0.1**
	0.9nm,0.8s,baz=42,slow=2.3,SNR=3.8						
GERES	**GERESS Array B**	**147.23**	**351**	PKPbc	**PKPab**	**22 48 13.9**	**-0.4**
	0.2nm,0.5s,baz=347,slow=3.0,SNR=2.0						

*IDC **31** 22:33:06.2±2.8, 51°.48N×173°.60W, h0km, mb3.4/4, mbtmp3.5/5, ML3.8/1, Error ellipse: s-maj=81.6km s-min=26.1km az=177.0*
*AEIC **31** 22:33:10.4±2.4, 51°.5N±0°.1×173°.52W±0°.09, h26km±7km, Error ellipse: s-maj=19.4km s-min=7.9km az=177.0*
*NEIC **31** 22:33:12.4±1.4, 51°.8N±0°.2×173°.5W±0°.1, h36km±10km, mb3.7/43, ML3.6/14, ML3.2(AEIC), Error ellipse: s-maj=25.9km s-min=8.4km az=168.0*

ISC 31 22:33:11.0±1.1, 51°.4N±0°.2×173°.52W±0°.07, h37km, n75, σ1s24/72, mb3.7/10, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**1.72**	**294**	Pn	**Pn**	**22 33 38.4**	**+0.1**
GSTR				IAML		22 34 14.7	
	comp=E,744nm,0.5s						
ADK	**Adak**	**2.03**	**284**	Pn	**Pn**	**22 33 42.1**	**-0.5**
ADK				IAML		22 34 16.8	
	comp=E,358nm,0.3s						
KIWB	**Kanaga Island**	**2.31**	**282**	Pn	**Pn**	**22 33 46.9**	**+0.5**
KIWB				IAML		22 34 29.9	
	comp=E,372nm,0.6s						
KIWB				IAML		22 34 32.3	
	comp=N,282nm,0.5s						
CLES	**Cleveland East**	**2.63**	**56**	Pn	**Pn**	**22 33 48.6**	**-2.3**
CLES				IAML		22 34 39.8	
	comp=N,436nm,1.6s						
CLES				IAML		22 34 43.6	
	comp=E,387nm,1.9s						
AMKA	**Amchitka**	**4.50**	**272**	Pn	**Pn**	**22 34 16.8**	**+0.3**
AMKA				IAML		22 35 36.6	
	comp=N,50nm,0.9s						
AMKA				IAML		22 35 38.5	
	comp=E,69nm,0.8s						
UNV	**Unalaska Valle**	**4.91**	**58**	Pn	**Pn**	**22 34 21.3**	**-0.9**
AKUT	**Akutan**	**5.43**	**57**	Pn	**Pn**	**22 34 31.9**	**+2.7**
M11K	**Mekoryuk**	**9.87**	**22**	Pn	**Pn**	**22 35 33.2**	**+3.2**
N14K	**Kuskokwak Cree**	**10.81**	**33**	Pn	**Pn**	**22 35 43.1**	**+0.2**
L16K	**Owhat River**	**12.86**	**31**	Pn	**Pn**	**22 36 11.7**	**+0.8**
K17K	**Iditarod**	**13.97**	**30**	Pn	**Pn**	**22 36 22.9**	**-3.1**
L18K	**Granite Mounta**	**14.15**	**34**	Pn	**Pn**	**22 36 28.0**	**-0.6**
J17K	**VABM Dome**	**14.25**	**27**	P	**P**	**22 36 36.9**	**+0.2**
TNA	**Tin City**	**14.47**	**9**		**Pn**	**22 36 35.1**	**+2.3**
M19K	**Big River Lodg**	**14.79**	**37**	P	**P**	**22 36 40.7**	**-2.0**
J18K	**Innoko River**	**15.01**	**30**	P	**Pn**	**22 36 42.6**	**+2.4**
BRLK	**Bradley Lake**	**15.21**	**48**	Pn	**Pn**	**22 36 41.3**	**-1.5**
J19K	**Poorman**	**15.73**	**30**	Pn	**Pn**	**22 36 48.6**	**-0.9**
J19K				IAmb	IAmb	22 36 55.4	
	comp=Z,4.6nm,1.1s						
SKT	**Skwentna**	**15.95**	**40**	P	**P**	**22 36 54.9**	**-0.7**
SKT				IAmb	IAmb	22 37 07.4	
	comp=Z,3.6nm,1.1s						
J20K	**Nowinta River**	**16.33**	**31**	P	**P**	**22 36 58.5**	**-1.2**
J20K				IAmb	IAmb	22 37 26.8	
	comp=Z,4.6nm,1.3s						
KTH	**Kantishna Hill**	**17.05**	**36**	P	**Pn**	**22 37 06.0**	**-0.3**
KTH				IAmb	IAmb	22 37 33.9	
	comp=Z,6.2nm,1.4s						
TRF	**Thorofare Moun**	**17.23**	**37**	P	**Pn**	**22 37 08.4**	**-0.2**
TRF				IAmb	IAmb	22 37 33.7	
	comp=Z,4.2nm,1.2s						
BPAW	**Bear Paw Mtn.**	**17.35**	**34**	P	**Pn**	**22 37 10.5**	**+0.5**
SCM	**Sheep Creek Mo**	**17.64**	**44**		**Pn**	**22 37 12.0**	**-1.6**
SCM				IAmb	IAmb	22 37 43.5	
	comp=Z,10.0nm,1.4s						
IMAR	**Indian Mountai**	**17.71**	**27**		**Pn**	**22 37 14.0**	**-0.4**
RND	**Reindeer**	**17.75**	**38**		**Pn**	**22 37 13.5**	**-1.5**
E19K	**Redstone River**	**17.98**	**21**	Pn	**P**	**22 37 19.0**	**+1.1**
MLY	**Manley**	**18.00**	**32**		**P**	**22 37 18.4**	**+0.2**
G21K	**Allakaket**	**18.17**	**26**		**Pn**	**22 37 19.9**	**-0.1**
DHY	**Denali Highway**	**18.17**	**40**		**Pn**	**22 37 18.1**	**-2.0**
I23K	**Minto, Yukon-K**	**18.54**	**33**	P	**P**	**22 37 24.0**	**0.0**
WRH	**Wood River Hil**	**18.60**	**36**	P	**P**	**22 37 24.2**	**-0.6**
N25K	**Chitina, Valde**	**18.76**	**46**	P	**P**	**22 37 25.4**	**-1.3**
N25K				IAmb	IAmb	22 37 32.8	
	comp=Z,8.4nm,1.4s						
CCB	**Clear Creek Bu**	**18.80**	**35**	P	**P**	**22 37 25.8**	**-1.1**
BERG	**Berg Lake**	**18.82**	**50**	P	**P**	**22 37 26.6**	**-0.5**
HDA	**Harding Lake**	**18.99**	**37**	P	**P**	**22 37 28.8**	**-0.3**
HDA				IAmb	IAmb	22 37 45.9	
	comp=Z,8.7nm,1.3s						
K24K	**Donnelly Dome**	**19.15**	**39**	P	**P**	**22 37 29.8**	**-1.0**
K24K				IAmb	IAmb	22 37 34.5	
	comp=Z,9.4nm,1.2s						
IL31		**19.20**	**36**	P	**P**	**22 37 29.6**	**-1.7**
IL31				IAmb	IAmb	22 37 31.6	
	comp=Z,4.4nm,1.3s						
ILAR	**Eielson Array**	**19.20**	**36**	P	**P**	**22 37 31.2**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=227,slow=8.9,SNR=20						
	comp=Z,0.6nm,0.4s						
ILAR	**Eielson Array**	**19.20**	**36**	P	**P**	**22 37 29.8**	**-1.5**
H24K	**Noodor Dome**	**19.45**	**32**	P	**P**	**22 37 33.6**	**-0.4**
H24K				IAmb	IAmb	22 37 40.9	
	comp=Z,4.8nm,1.3s						
J25K	**Salcha River,**	**19.69**	**37**	P	**P**	**22 37 34.8**	**-1.9**
J25K				IAmb	IAmb	22 37 42.6	
	comp=Z,3.7nm,0.8s						
G24K	**Hadweenzic Riv**	**20.09**	**31**	Pn	**P**	**22 37 41.3**	**+0.3**
G24K				IAmb	IAmb	22 38 06.9	
	comp=Z,4.0nm,1.2s						
LOGN	**Logan Glacier**	**20.21**	**50**	P	**P**	**22 37 42.3**	**-0.3**
M27K	**Edge Creek, AK**	**20.22**	**45**	Pn	**P**	**22 37 43.1**	**+0.5**
M27K				IAmb	IAmb	22 37 47.2	
	comp=Z,3.5nm,1.2s						
B21K	**Ikpikpuk River**	**20.31**	**19**	Pn	**P**	**22 37 42.8**	**-0.5**
B21K				IAmb	IAmb	22 38 17.9	
	comp=Z,3.9nm,1.3s						
L27K	**Beaver Creek,**	**20.48**	**43**	P	**P**	**22 37 44.9**	**-0.3**
BCAR	**Beaver Creek A**	**20.50**	**43**	Pn	**P**	**22 37 46.3**	**+0.8**
I26K	**Coal Creek Min**	**20.84**	**37**	P	**P**	**22 37 47.2**	**-2.0**
I26K				IAmb	IAmb	22 37 55.2	
	comp=Z,6.9nm,1.3s						
C23K	**Itkillik River**	**21.35**	**22**	P	**P**	**22 37 54.1**	**-0.5**
C23K				IAmb	IAmb	22 37 58.1	
	comp=Z,5.5nm,1.5s						
BMAR	**Burnt Mountain**	**21.44**	**31**	P	**P**	**22 37 55.7**	**+0.1**
I28M	**Miner Creek**	**22.13**	**38**	P	**P**	**22 38 01.7**	**-1.3**
I28M				IAmb	IAmb	22 38 03.5	
	comp=Z,3.4nm,1.0s						
H29M	**Whitestone**	**23.02**	**37**	P	**P**	**22 38 10.5**	**-1.9**
H29M				IAmb	IAmb	22 38 25.8	
	comp=Z,3.2nm,0.9s						
E29M	**Blow River**	**24.10**	**32**	P	**P**	**22 38 21.4**	**-1.3**
INK	**Inuvik**	**25.55**	**34**	P	**P**	**22 38 34.5**	**-1.3**
INK				IAmb	IAmb	22 38 45.9	
	comp=Z,2.3nm,1.2s						
YKA	**Yellowknife Ar**	**32.78**	**47**	P	**P**	**22 39 40.7**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=280,slow=9.0,SNR=1.6						
	comp=Z,0.1nm,0.3s						
LON	**Longmire**	**33.60**	**77**	P	**P**	**22 39 48.8**	**+1.3**
H11N2	**WAKE ISLAND Hy**	**35.18**	**213**	T	T	23 17 59.8	
	baz=21,slow=76,SNR=5.4						
H11N3	**WAKE ISLAND Hy**	**35.19**	**213**	T	T	23 18 00.5	
	baz=21,slow=76,SNR=5.2						
H11N1	**WAKE ISLAND Hy**	**35.20**	**213**	T	T	23 18 01.2	
	baz=21,slow=76,SNR=4.5						
LYMT	**Lyon Mountain**	**39.23**	**72**	P	**P**	**22 40 36.7**	**+1.0**
PDAR	**Pinedale Array**	**43.12**	**75**	P	**P**	**22 41 08.4**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=305,slow=2.6,SNR=5.3						
	comp=Z,0.3nm,0.5s						
PDAR	**Pinedale Array**	**43.12**	**75**	P	**P**	**22 41 08.3**	**+0.6**
FCC	**Fort Churchill**	**43.50**	**48**	P	**P**	**22 41 10.3**	**+0.1**
FCC				IAmb	IAmb	22 41 16.8	
	comp=Z,2.3nm,1.2s						
SONM	**Songino Array**	**49.55**	**299**	P	**P**	**22 41 58.6**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=59,slow=8.5,SNR=4.9						
	comp=Z,0.4nm,0.4s						
SONM	**Songino Array**	**49.55**	**299**	P	**P**	**22 41 59.2**	**+1.2**
SONM				IAmb	IAmb	22 42 16.6	
	comp=Z,0.6nm,1.0s						
MKAR	**Makanchi Array**	**62.55**	**311**	P	**P**	**22 43 30.5**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=53,slow=6.6,SNR=6.5						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**62.55**	**311**	P	**P**	**22 43 29.8**	**-1.0**
SSPA	**Standing Stone**	**62.67**	**58**	P	**P**	**22 43 31.8**	**+0.1**
BOOM	**Boomskoye usch**	**68.76**	**312**	P	**P**	**22 44 12.1**	**+1.1**
ABKAR	**Akbulak array**	**69.83**	**326**	P	**P**	**22 44 17.0**	**-0.3**
GAR	**Garm**	**74.12**	**313**	P	**P**	**22 44 43.2**	**-0.2**
AKBB	**Malin Array Si**	**76.43**	**345**	P	**P**	**22 44 54.7**	**-1.5**
KIEV	**Kiev**	**76.44**	**345**	P	**P**	**22 44 55.0**	**-1.3**
BURAR	**Bucovina Array**	**80.04**	**347**	P	**P**	**22 45 15.9**	**-0.5**
BURAR				IAmb	IAmb	22 45 34.8	
	comp=Z,1.1nm,1.1s						

*MAN **31** 22:47:59.0, 6°.08N×126°.08E, h139km, MS3.4*
*IDC **31** 22:48:00.1±0.8, 5°.99N×125°.91E, h155km±9km, mb3.2/5, mbtmp3.7/6, Error ellipse: s-maj=59.3km s-min=15.7km az=70.0*

ISC 31 22:47:59.7±0.8, 6°.07N±0°.07×126°.12E±0°.10, h152km±8km, n15, σ1s15/24, mb3.4/5, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.41**	**275**	*e*P	**Pn**	**22 48 20.1**	**-0.8**
DDMP				*e*S	**Sn**	**22 48 35.0**	**-1.9**
DAV	**Davao City (W)**	**1.13**	**332**	P	**Pn**	**22 48 26.6**	**+0.7**
	101nm,0.4s,baz=287,slow=21,SNR=3.9						
DAV				S	**Sn**	**22 48 46.8**	**+1.0**
	437nm,0.5s,baz=128,slow=7.2,SNR=8.3						
DAV				LR	LR	22 48 58.8	
	comp=Z,64nm,19.4s,baz=166,slow=52						
DMPH	**Davao City--Mi**	**1.18**	**329**	*e*P	**Pn**	**22 48 27.2**	**+0.9**
DMPH				*i* S	**Sn**	**22 48 47.1**	**+0.4**
KCP	**Kidapawan**	**1.39**	**312**	*e*P	**Pn**	**22 48 28.6**	**+0.3**
KCP				*i* S	**Sn**	**22 48 50.6**	**+0.4**
CDDP	**Cateel, Davao**	**1.73**	**10**	*e*P	**Pn**	**22 48 32.6**	**+0.6**
CDDP				*e*S	**Sn**	**22 48 56.4**	**-0.4**
BUKP	**Musuan**	**2.08**	**330**	*e*P	**Pn**	**22 48 37.0**	**+1.0**
BUKP				*e*S	**Sn**	**22 49 02.5**	**-1.5**
BIPH	**Bislig**	**2.11**	**6**	*e*P	**Pn**	**22 48 36.3**	**-0.1**
BIPH				*i* S

PB05				eS		S	23 07 27.2	-1.4
GO01	**Chusmiza**	**2.87**	**322**	eP		Pn	23 06 54.1	+1.2
GO01				eS		S	23 07 30.4	+0.2
GO01				IAML			23 07 35.5	
	comp=N,172nm,0.1s							
GO01	**Chusmiza**	**2.87**	**322**	P		Pn	23 06 53.9	+1.0
PATCX	**Punta Patache**	**2.87**	**292**	eP		Pn	23 06 53.0	+0.4
PATCX				eS		S	23 07 28.3	-1.3
PATCX				IAML			23 07 30.6	
	comp=E,169nm,0.3s							
TA01	**Diego Aracena**	**3.01**	**297**	eS		S	23 07 30.2	-2.0
PB11	**IPOC Station P**	**3.09**	**314**	eP		Pn	23 06 55.4	+0.2
PB11				eS		S	23 07 33.0	-1.2
PB11				IAML			23 07 35.7	
	comp=E,224nm,0.2s							
PB11	**IPOC Station P**	**3.09**	**314**	P		Pn	23 06 55.4	+0.2
PB11				S		S	23 07 33.3	-1.0
PB11				IAML			23 07 34.8	
	comp=E,186nm,0.2s							
PB14	**IPOC Station P**	**3.90**	**226**	P		Pn	23 07 05.6	+0.6
SOET	**ToroToro**	**4.06**	**21**	P		Pn	23 07 08.0	+0.8
PB16	**IPOC Station P**	**4.14**	**330**	P		Pn	23 07 09.6	+1.2
AOEA	**Aiquile**	**4.23**	**28**	P		Pn	23 07 10.1	+0.9
BBSD	**Serra de San D**	**7.89**	**54**	P		Pn	23 07 54.9	-1.2
SIV	**San Ignacio**	**8.36**	**46**	P		Pn	23 08 01.5	-0.8

*IDC **31** 23:26:11.5±4.6,5°.15S×149°.32E,h159^{km}±47^{km},mb3.3/4, mbtmp3.8/5,Error ellipse: s-maj=102.0km s-min=28.7km az=133.0*

ISC 31 23:26:10.6±1.6,**5°.0S**±0°.2×**149°.2E**±0°.5,**h150**^{km},**n6, σ0^{s}48/7,mb3.4/3,Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**4.82**	**205**	P		**Pn**	**23 27 21.9**	**+0.2**
	35nm,0.5s,baz=24,slow=7.5,SNR=9.7							
PMG				S		**Sn**	**23 28 17.3**	**+0.1**
	28nm,0.8s,baz=328,slow=7.4,SNR=4.4							
WRA	**Warramunga Arr**	**20.73**	**223**	P		**P**	**23 30 38.9**	**-0.6**
	0.8nm,0.4s,baz=44,slow=9.8,SNR=13							
	0.8nm,0.4s							
ASAR	**Alice Springs**	**23.70**	**217**	P		**P**	**23 31 08.4**	**-0.6**
	0.5nm,0.4s,baz=53,slow=8.0,SNR=10							
	0.5nm,0.4s							
FITZ	**Fitzroy Crossi**	**26.45**	**239**	P		**P**	**23 31 34.1**	**+0.3**
	1.4nm,0.3s,baz=60,slow=11,SNR=17							
	1.4nm,0.3s							
ILAR	**Eielson Array**	**83.71**	**23**	P		**P**	**23 38 22.3**	**0.0**
	0.4nm,0.7s,baz=260,slow=5.8,SNR=5.0							
	0.4nm,0.7s							
TORD	**Torodi Ar. Bea**	**146.93**	**286**	PKPbc		**PKPbc**	**23 45 36.8**	**+0.3**
	0.4nm,0.8s,baz=73,slow=4.0,SNR=2.5							

*ISK **31** 23:41:31.4,35°.38N×25°.88E,h4^{km},ML3.1/7*
*IDC **31** 23:41:31.1±1.3,35°.41N×25°.93E,h0^{km},mb3.4/5, mbtmp3.3/8,ML2.8/3,Error ellipse: s-maj=31.9km s-min=20.1km az=171.0*
*THE **31** 23:41:32.2,35°.N±1°×2°.6E±°,h4^{km}±2^{km},M3.0/10, MLh3.0/10*
*ATH **31** 23:41:32.1,35°.38N×25°.89E,h6^{km}±2^{km},ML3.1/10, Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*

ISC 31 23:41:32.3±0.9,**35°.37N**±0°.03×**25°.88E**±0°.02,**h10**^{km}±7^{km}, **n68,σ0^{s}61/89,mb3.3/4,Crete**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NPS	**Neapolis**	**0.24**	**244**	P		**Pg**	**23 41 37.0**	**-0.3**
NPS				S		**Sg**	**23 41 40.0**	**-0.6**
NPS	**Neapolis**	**0.24**	**244**	P		**Pg**	**23 41 36.9**	**-0.3**
NPS				S		**Sg**	**23 41 40.8**	**+0.2**
ZKR	**Zakros**	**0.37**	**133**	P		**Pg**	**23 41 39.5**	**-0.2**
ZKR				S		**Sg**	**23 41 45.2**	**+0.6**
ZKR	**Zakros**	**0.37**	**133**	Pg		**Pg**	**23 41 39.7**	**0.0**
ZKR				Sg		**Sg**	**23 41 45.6**	**+1.0**
ZKR	**Zakros**	**0.37**	**133**	P		**Pg**	**23 41 39.6**	**0.0**
ZKR				S		**Sg**	**23 41 44.4**	**-0.1**
IDI	**Anoyia**	**0.82**	**265**	P		**Pg**	**23 41 47.0**	**-1.0**
IDI				S		**Sg**	**23 41 58.3**	**-0.4**
IDI	**Anoyia**	**0.82**	**265**	Pg		**Pg**	**23 41 47.7**	**-0.3**
IDI				Sg		**Sg**	**23 41 59.4**	**+0.8**
IDI	**Anoyia**	**0.82**	**265**	P		**Pg**	**23 41 48.1**	**+0.1**
IDI				S		**Sg**	**23 41 59.1**	**+0.5**
THERA	**Ancient Thera,**	**1.05**	**342**	P		**Pg**	**23 41 52.1**	**-0.3**
THERA				S		**Sb**	**23 42 06.9**	**+0.5**
THERA	**Ancient Thera,**	**1.05**	**342**	P		**Pb**	**23 41 52.5**	**-0.1**
KARP	**Karpathos**	**1.06**	**80**	P		**Pg**	**23 41 52.0**	**-0.6**
KARP				S		**Sb**	**23 42 06.9**	**+0.2**
KARP	**Karpathos**	**1.06**	**80**	Pg		**Pb**	**23 41 52.5**	**-0.2**
KARP				Sg		**Sb**	**23 42 07.7**	**+1.0**
KARP	**Karpathos**	**1.06**	**80**	P		**Pg**	**23 41 52.4**	**-0.3**
KARP				S		**Sg**	**23 42 05.7**	**-0.7**
THR8	**Thira Island,**	**1.06**	**338**	P		**Pb**	**23 41 53.1**	**+0.3**
THR9	**Santorini-Faro**	**1.07**	**337**	S		**Sb**	**23 42 08.1**	**+1.0**
THR8	**Santorini-Mono**	**1.09**	**343**	P		**Pg**	**23 41 52.3**	**-0.8**
SNT5	**Nea Kammeni, S**	**1.11**	**339**	P		**Pg**	**23 41 53.3**	**-0.2**
SNT5				S		**Sb**	**23 42 07.9**	**-0.1**
THR3	**Thira Island,**	**1.11**	**339**	P		**Pg**	**23 41 53.2**	**-0.4**
THR3				S		**Sn**	**23 42 09.1**	**-0.1**
THR5	**Thira Island,**	**1.13**	**338**	P		**Pg**	**23 41 53.8**	**-0.3**
THR5				S		**Sb**	**23 42 09.6**	**+0.9**
SAP3	**Santorini-Thir**	**1.15**	**338**	P		**Pg**	**23 41 53.9**	**-0.5**
SAP3				S		**Sn**	**23 42 10.6**	**+0.3**
SAP3	**Santorini-Thir**	**1.15**	**338**	P		**Pg**	**23 41 53.9**	**-0.5**
VAM	**Vamos**	**1.38**	**272**	P		**Pn**	**23 41 56.6**	**-1.0**
VAM				S		**Sb**	**23 42 15.7**	**-0.1**
VAM	**Vamos**	**1.38**	**272**	P		**Pn**	**23 41 57.1**	**-0.4**
VAM				S		**Sb**	**23 42 16.4**	**+0.6**
CHAN	**Chania**	**1.51**	**276**	P		**Pn**	**23 41 58.5**	**-0.9**
IMMV	**Iera Moni Meta**	**1.56**	**274**	P		**Pn**	**23 42 00.1**	**+0.1**
IMMV				S		**Sn**	**23 42 20.1**	**-0.2**
IMMV	**Iera Moni Meta**	**1.56**	**274**	Pn		**Pn**	**23 42 00.0**	**0.0**
IMMV				Sn		**Sb**	**23 42 22.0**	**+1.0**
IMMV	**Iera Moni Meta**	**1.56**	**274**	P		**Pn**	**23 42 00.3**	**+0.3**
GVD	**Gavdhos**	**1.56**	**251**	Pn		**Pn**	**23 42 01.0**	**+0.8**
DAT	**Datca**	**1.93**	**45**	Pn		**Pn**	**23 42 05.8**	**+0.5**
ARG	**Arkhangelos**	**2.01**	**64**	P		**Pn**	**23 42 06.5**	**+0.2**
ARG	**Arkhangelos**	**2.01**	**64**	Pn		**Pn**	**23 42 06.9**	**+0.6**
ARG	**Arkhangelos**	**2.01**	**64**	P		**Pn**	**23 42 06.0**	**-0.3**
BODT	**Bodrum**	**2.05**	**34**	P		**Pn**	**23 42 07.9**	**+1.1**
BODT	**Bodrum**	**2.05**	**34**	Pn		**Pn**	**23 42 07.4**	**+0.6**
ANKY	**Antikythira Is**	**2.16**	**284**	P		**Pn**	**23 42 08.7**	**+0.3**
SMG	**Samos**	**2.46**	**18**	P		**Pn**	**23 42 12.4**	**-0.1**
VLI	**Veliai**	**2.74**	**300**	P		**Pn**	**23 42 16.1**	**-0.2**
KARY	**Karystos**	**2.90**	**337**	P		**Pn**	**23 42 19.0**	**+0.4**
VLY	**Voula,Athens**	**2.99**	**326**	P		**Pn**	**23 42 20.3**	**+0.4**
MET4	**Agioi Theodoro**	**3.01**	**319**	P		**Pn**	**23 42 20.7**	**+0.7**
MET6	**Megalochori,Me**	**3.01**	**318**	P		**Pn**	**23 42 21.1**	**+1.1**
MET5	**Makryloggos,Me**	**3.03**	**319**	P		**Pn**	**23 42 21.4**	**+1.0**
MET2	**Kameni Chora,**	**3.04**	**318**	P		**Pn**	**23 42 21.1**	**+0.7**
MET3	**Ano Fanari,Met**	**3.07**	**317**	P		**Pn**	**23 42 21.1**	**+0.1**
ATHU	**Athens Univers**	**3.09**	**328**	P		**Pn**	**23 42 21.6**	**+0.4**
DION	**Dionisos Attik**	**3.12**	**330**	P		**Pn**	**23 42 22.4**	**+0.8**
STFN	**Stefani**	**3.37**	**327**	P		**Pn**	**23 42 26.1**	**+1.0**
VIL2	**Platees**	**3.53**	**324**	P		**Pn**	**23 42 26.7**	**-0.5**
LTK	**Loutraki**	**3.54**	**319**	P		**Pn**	**23 42 28.1**	**+0.8**
KYMI	**Kymi, Euboea I**	**3.56**	**337**	P		**Pn**	**23 42 28.5**	**+1.0**
ITM	**Ithomi**	**3.67**	**301**	P		**Pn**	**23 42 29.1**	**-0.1**
PYL	**PYLOS**	**3.68**	**296**	P		**Pn**	**23 42 29.7**	**+0.4**
GUR	**Goura**	**3.83**	**313**	P		**Pn**	**23 42 31.7**	**+0.3**
LKR	**Lokris**	**4.01**	**326**	P		**Pn**	**23 42 33.9**	**+0.2**
KLV	**Kalavryta, Ach**	**4.01**	**313**	P		**Pn**	**23 42 34.5**	**+0.6**
ANX	**Ano Chora**	**4.52**	**317**	P		**Pn**	**23 42 41.5**	**+0.7**
MAKR	**Makrakomi, Fth**	**4.71**	**322**	P		**Pn**	**23 42 43.6**	**+0.2**
EVR	**Evrytania**	**4.81**	**319**	P		**Pn**	**23 42 44.9**	**0.0**
PRMD	**Pramanda**	**5.63**	**319**	P		**Pn**	**23 42 56.2**	**+0.1**
BRTR	**Keskin Array B**	**7.54**	**52**	Pn		**Pn**	**23 43 23.5**	**+1.1**
	0.1nm,0.3s,baz=231,slow=14,SNR=1.9							
	0.3nm,0.6s							
MMAI	**Mount Meron Ar**	**8.23**	**104**	Pn		**Pn**	**23 43 31.1**	**-0.8**
	1.2nm,0.3s,baz=305,slow=15,SNR=8.4							
MMAI				Sn		**Sn**	**23 45 03.2**	**-1.8**
	0.6nm,0.3s,baz=241,slow=46,SNR=2.9							
	1.2nm,0.5s							
AKASG	**Malin Array Be**	**15.52**	**8**	Pn		**P**	**23 45 15.2**	**-0.2**
	0.5nm,0.3s,baz=199,slow=11,SNR=4.5							
GERES	**GERESS Array B**	**16.19**	**330**	Pn		**P**	**23 45 22.3**	**-0.8**
	baz=158,slow=16,SNR=1.5							
	0.1nm,0.3s							
ESDC	**Sonseca Array**	**24.00**	**289**	P		**P**	**23 46 47.3**	**0.0**
	0.6nm,1.0s,baz=86,slow=9.7,SNR=2.1							
	0.6nm,1.0s							
EKA	**Eskdalemuir Ar**	**28.21**	**324**	P		**P**	**23 47 24.7**	**-0.4**
	0.3nm,0.5s,baz=120,slow=10,SNR=5.1							
	0.3nm,0.5s							
TORD	**Torodi Ar. Bea**	**31.08**	**231**	P		**P**	**23 47 52.0**	**+1.2**
	0.5nm,0.6s,baz=42,slow=7.8,SNR=5.0							
	0.5nm,0.6s							
KURBB	**Kurchatov Arra**	**40.53**	**51**	P		**P**	**23 49 11.1**	**-0.3**
	0.4nm,0.6s,baz=275,slow=8.9,SNR=4.7							
	0.4nm,0.6s							
MKAR	**Makanchi Array**	**43.16**	**57**	P		**P**	**23 49 33.3**	**+0.2**
	0.3nm,0.5s,baz=271,slow=8.5,SNR=5.8							
	0.3nm,0.5s							

*BUT **31** 23:52:28.7±1.9,44°.40N±0°.07×115°.24W±0°.08,h13^{km}±3^{km}, Error ellipse: s-maj=10.9km s-min=7.1km az=145.0*
*BJI **31** 23:52:29.5,44°.50N×115°.10W,h10^{km},mB6.4/62, mb5.8/61,Ms6.8/88,Ms7 6.6/86*
*IDC **31** 23:52:29.1±0.3,44°.44N×115°.01W,h0^{km},mb5.1/46, mbtmp5.1/53,ML4.9/7,MS6.3/89,Error ellipse: s-maj=7.8km s-min=4.8km az=76.0*
*MOS **31** 23:52:29.3±0.8,44°.48N×115°.03W,h10^{km},mb6.2/30, MS6.4/21,Error ellipse: s-maj=7.5km s-min=4.9km az=93.1*
*NEIC **31** 23:52:30.8±1.3,44°.47N±0°.07×115°.1W±0°.1,h12^{km}±3^{km}, mb6.1/407,ML6.4/72,Ms_20 6.4/641,Mwb6.5/191, Mww6.5/212,ML6.8/27(BUT),Error ellipse: s-maj=12.4km s-min=10.0km az=109.0,Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$=1.70; M$_{\theta\theta}$0.40; M$_{\phi\phi}$1.30; M$_{r\theta}$0.71; M$_{r\phi}$-6.72; M$_{\theta\phi}$1.02; Fault plane solution: M$_0$7.00000×10^{18} NP1:ϕs180.88000°,δ80.60000°, λ-11.89000°. NP2:ϕs272.85000°,δ78.27000°, λ-170.40000°. Principal axes: T 7.5915, Plg2.0000°, Azm227.0000°; N -1.3821, Plg75.0000°, Azm323.0000°; P -6.2095, Plg15.0000°, Azm137.0000°;*
*ISC-PP **31** 23:52:30,44°.47N×115°.12W,h4^{km},Mwppsm6.8,Moment Tensor Solution. s37 Moment tensor: Scale 10^{19}Nm; M$_{rr}$-0.34±.11; M$_{\theta\theta}$0.15±.24; M$_{\phi\phi}$0.04±.17; M$_{r\theta}$0.07±.14; M$_{\theta\phi}$0.52±.13; M$_{r\phi}$-0.40±.16; Fault plane solution: M$_0$1.66000×10^{19} NP1:ϕs168.70000°,δ74.80000°, λ306.70000°. NP2:ϕs278.10000°,δ39.30000°, λ-155.60000°.*
*PTWC **31** 23:52:30,44°.40N×115°.10W,h10^{km},Mwp6.8/18*
*NEIC **31** 23:52:31,44°.45N×115°.14W,h10^{km}*
*IPGP **31** 23:52:31.0,44°.45N×115°.14W,h16^{km},Mw6.4,Fault plane solution: NP1:ϕs272.00000°,δ64.00000°,λ-164.00000°. NP2:ϕs175.00000°,δ75.00000°,λ-27.00000°.*
*NEIC **31** 23:52:31,44°.45N×115°.14W,h20^{km}*
*NEIC **31** 23:52:31,44°.45N×115°.00W,h20^{km},Moment Tensor Solution. Duration: 9s0 Moment tensor: Scale 10^{18}Nm; M$_{rr}$2.45; M$_{\theta\theta}$2.05; M$_{\phi\phi}$0.41; M$_{r\theta}$0.55; M$_{\theta\phi}$-5.98; M$_{r\phi}$1.79; Fault plane solution: M$_0$6.67000×10^{18} NP1: ϕs269.12000°,δ67.20000°,λ-162.65000°. NP2: ϕs172.21000°,δ74.04000°,λ-23.77000°. Principal axes: T 7.3287, Plg5.0000°, Azm222.0000°; N -1.6100, Plg62.0000°, Azm320.0000°; P -5.7187, Plg28.0000°, Azm129.0000°;*
*GFZ **31** 23:52:32.6,44°.51N×114°.86W,h18^{km},MW6.4,Moment Tensor Solution. s91 Moment tensor: M$_{rr}$-2.23; M$_{\theta\theta}$1.33; M$_{\phi\phi}$0.91; M$_{r\theta}$-0.47; M$_{\theta\phi}$-4.99; M$_{r\phi}$1.93; Fault plane solution: NP1:ϕs174.00000°,δ78.00000°, λ-28.00000°. NP2:ϕs270.00000°,δ61.00000°, λ-166.00000°. Principal axes: T 6.4400, Plg11.0000°, Azm224.0000°; N -1.9800, Plg59.0000°, Azm334.0000°; P -4.4600, Plg28.0000°, Azm128.0000°;*
*BGR **31** 23:52:36.1,45°.17N×115°.44W,h33^{km},mb5.8,Ms6.6*
*GCMT **31** 23:52:38.1±0.0,44°.45N×115°.20W,h14^{km},MW6.5/166, Moment Tensor Solution. s157,c394; s166,c679; Duration: 4s2 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-2.32±.03; M$_{\theta\theta}$1.78±.03; M$_{\phi\phi}$0.53±.03; M$_{r\theta}$1.12±.06; M$_{\theta\phi}$-5.97±.03; M$_{r\phi}$1.15±.07; Best double couple: M$_0$6.39200×10^{18} NP1:ϕs174.00000°,δ72.00000°, λ-19.00000°. NP2:ϕs270.00000°,δ72.00000°, λ-161.00000°. Principal axes: T 7.1600, Plg0.0000°, Azm42.0000°; N -1.5420, Plg64.0000°, Azm311.0000°; P -5.6240, Plg26.0000°, Azm132.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 31 23:52:31.4±0.4,**44°.41N**±0°.02×**115°.09W**±0°.03,**h10**^{km}±2^{km}, **h11**^{km}**:pP-P,n1546,σ2^{s}33**/1490,**mb6.0**/310,**MS6.4**/417, **40C-52D,Western Idaho**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PLID	**Pearl Lake**	**0.94**	**317**	Pg		**Pg**	**23 52 47.3**	**-2.2**
PLID				Sg		**Sg**	**23 52 58.3**	**-3.4**
HLID	**Hailey**	**0.98**	**150**	Pg		**Pb**	**23 52 50.5**	**0.0**
HLID				Sg		**Sb**	**23 53 03.8**	**+0.3**
HLID	**Hailey**	**0.98**	**150**	P		**Pg**	**23 52 47.2**	**-3.1**
MFID	**Camas Ranch**	**1.13**	**208**	Pg		**Pb**	**23 52 57.1**	**-1.3**
MFID				Sg		**Sb**	**23 53 06.9**	**-0.9**
MFID				IAML			23 53 09.5	
	1060µm,0.6s							
BCYI	**Bear Canyon**	**1.22**	**94**			**Pb**	**23 52 53.4**	**-1.2**
BMO	**Blue Mountains**	**1.64**	**286**	Pn		**Pn**	**23 52 58.0**	**-2.3**
BMO	**Blue Mountains**	**1.64**	**286**	P		**Pn**	**23 52 58.0**	**-2.3**
MCMT	**McKenzie Canyo**	**1.66**	**75**	Pn		**Pn**	**23 52 58.9**	**-1.8**
MOMT	**Monida**	**1.94**	**84**			**Pn**	**23 53 03.5**	**-1.1**
DLMT	**Dillon**	**2.02**	**61**	Pn		**Pn**	**23 53 04.1**	**-1.5**
DLMT				IAML			23 53 42.0	
	283µm,1.1s							
DLMT				IAML			23 53 44.8	
	305µm,1.3s							
VCMT	**Victor**	**2.13**	**17**			**Pn**	**23 53 04.9**	**-2.2**
F10A	**Beach Ranch, E**	**2.17**	**317**	Pn		**Pn**	**23 53 04.9**	**-2.8**
F10A				IAML			23 53 42.0	
	comp=E,158µm,0.8s							
F10A				IAML			23 53 43.9	
	comp=N,239µm,0.7s							
HBMT	**Mount Humbug**	**2.24**	**51**			**Pn**	**23 53 06.9**	**-1.8**
BGMT	**Barton Gulch**	**2.32**	**68**			**Pn**	**23 53 08.3**	**-1.5**
BPMT	**Black Pine Rid**	**2.34**	**29**	Pn		**Pn**	**23 53 07.6**	**-2.5**
LRM	**Limekiln Ridge**	**2.34**	**52**	Pn		**Pn**	**23 53 09.1**	**-1.1**
BUT	**Butte**	**2.40**	**47**			**Pn**	**23 53 09.1**	**-1.8**
TPMT	**Tepee Creek**	**2.47**	**81**			**Pn**	**23 53 11.0**	**-0.9**
CMI	**Centennial Mou**	**2.49**	**86**			**Pn**	**23 53 11.0**	**-1.2**
MSO	**Missoula**	**2.55**	**18**	Pn		**Pn**	**23 53 11.0**	**-1.9**
MSO				IAML			23 53 54.7	
	comp=N,200µm,0.7s							
MSO				IAML			23 54 01.5	
	comp=N,233µm,0.9s							
MSO	**Missoula**	**2.55**	**18**	⇑P		**Pn**	**23 53 10.8**	**-2.1**
QLMT	**Earthquake Lak**	**2.65**	**80**	Pn		**Pn**	**23 53 13.4**	**-0.9**
J08A	**Circle Bar Ran**	**2.66**	**248**	Pn		**Pn**	**23 53 12.7**	**-1.6**
J08A				IAML			23 54 05.2	
	comp=E,209µm,1.9s							
J08A				IAML			23 54 08.1	
	comp=N,186µm,2.7s							
LCCM	**Lewis and Clar**	**2.69**	**57**			**Pn**	**23 53 13.2**	**-1.6**
LNOR	**Lincton Mounta**	**2.69**	**304**	Pn		**Pn**	**23 53 11.7**	**-3.0**
BOZ	**Bozeman (W)**	**2.73**	**63**	Pn		**Pn**	**23 53 15.4**	**+0.1**
BOZ				IAML			23 54 06.8	
	comp=N,201µm,1.6s							
BOZ				IAML			23 54 06.9	
	comp=N,150µm,1.7s							
BOZ	**Bozeman (W)**	**2.73**	**63**	P		**Pn**	**23 53 15.4**	**+0.1**
BOZ	**Bozeman (W)**	**2.73**	**63**	P		**Pn**	**23 53 13.8**	**-1.6**
BOZ	**Bozeman (W)**	**2.73**	**63**	⇓P		**Pn**	**23 53 13.5**	**-1.9**
YPDC	**Denny Creek**	**2.77**	**82**			**Pn**	**23 53 15.4**	**-0.6**
ELMT	**Elliston**	**2.79**	**40**			**Pn**	**23 53 13.9**	**-2.4**
YHB	**Horse Butte**	**2.81**	**82**	Pn		**Pn**	**23 53 15.7**	**-0.8**
YHB				IAML			23 54 06.3	
	comp=E,146µm,1.6s							
MCID	**Moose Creek**	**2.82**	**93**			**Pn**	**23 53 16.0**	**-0.6**
CHMT	**Chamberlain Mo**	**2.82**	**27**			**Pn**	**23 53 14.4**	**-2.2**
YHL	**Hebgen Lake**	**2.83**	**80**	Pn		**Pn**	**23 53 16.8**	**0.0**
YHL				IAML			23 54 06.5	
	comp=E,162µm,0.9s							
YPWB	**West Boundary**	**2.86**	**85**			**Pn**	**23 53 17.1**	**-0.2**
NDMT	**Ninemile Divid**	**2.87**	**4**			**Pn**	**23 53 14.5**	**-2.8**
GCR	**Grayling Creek**	**2.87**	**81**			**Pn**	**23 53 17.1**	**-0.3**
G08A	**Pilot Rock**	**2.89**	**289**	Pn		**Pn**	**23 53 15.7**	**-1.8**
PCMT	**Pistol Creek**	**2.90**	**15**			**Pn**	**23 53 15.5**	**-2.2**
YMC	**Maple Creek**	**2.94**	**82**			**Pn**	**23 53 17.8**	**-0.6**
YMR	**Madison River**	**2.96**	**84**	Pn		**Pn**	**23 53 18.9**	**+0.2**
ECR	**Eagle Creek**	**3.02**	**115**	Pn		**Pn**	**23 53 20.9**	**+1.5**
YPM	**Purple Mountai**	**3.03**	**84**			**Pn**	**23 53 19.5**	**-0.1**
FXWY	**Fox Creek**	**3.03**	**103**	Pn		**Pn**	**23 53 20.9**	**+1.3**
FBMT	**Ferry Basin**	**3.03**	**9**			**Pn**	**23 53 17.2**	**-2.4**
BEMT	**Mount Belmont**	**3.04**	**39**			**Pn**	**23 53 17.2**	**-2.5**
SLMT	**Seeley Lake**	**3.04**	**21**			**Pn**	**23 53 17.4**	**-2.3**
YFT	**Old Faithful**	**3.05**	**88**	Pn		**Pn**	**23 53 21.0**	**+1.1**
YFT				IAML			23 54 15.7	
	comp=N,88µm,1.2s							
YFT				IAML			23 54 17.9	
	comp=E,94µm,2.5s							
YHH	**Holmes Hill**	**3.06**	**81**	Pn		**Pn**	**23 53 20.1**	**+0.1**
YPP	**Pitchstone Pla**	**3.08**	**91**	Pn		**Pn**	**23 53 21.8**	**+1.5**
YPP				IAML			23 54 23.0	
	comp=N,108µm,2.5s							
HVU	**Hansel Valley**	**3.13**	**146**	Pn		**Pn**	**23 53 22.1**	**+1.2**
HVU	**Hansel Valley**	**3.13**	**146**	P		**Pn**	**23 53 22.1**	**+1.2**
YNR	**Norris Junctio**	**3.17**	**83**	Pn		**Pn**	**23 53 22.7**	**+1.2**
YNR				IAML			23 54 22.2	
	comp=N,134µm,1.8s							
YNR				IAML			23 54 27.6	
	comp=E,79µm,1.6s							
BHMT	**Big Hole Peak**	**3.17**	**1**			**Pn**	**23 53 19.0**	**-2.5**
FLWY	**Flagg Ranch**	**3.17**	**94**	Pn		**Pn**	**23 53 21.9**	**+0.3**
FLWY				IAML			23 54 23.0	
	comp=E,133µm,1.0s							
YPT	**Yellepit**	**3.19**	**302**	Pn		**Pn**	**23 53 21.0**	**-0.5**
YMV	**Mammoth Vault**	**3.19**	**78**			**Pn**	**23 53 21.8**	**0.0**
SWMT	**Swartz Lake**	**3.19**	**13**			**Pn**	**23 53 19.2**	**-2.5**
LYMT	**Lyon Mountain**	**3.23**	**37**	Pn		**Pn**	**23 53 20.2**	**-2.1**
YLT	**Little Thumb C**	**3.23**	**88**			**Pn**	**23 53 23.4**	**+1.1**
SXM	**Sixmile**	**3.25**	**56**			**Pn**	**23 53 21.3**	**-1.2**
WVOR	**Wild Horse Val**	**3.25**	**234**	Pn		**Pn**	**23 53 22.4**	**-0.1**
WVOR				IAML			23 54 21.7	
	comp=E,77µm,2.2s							
WVOR				IAML			23 54 24.0	
	comp=E,94µm,2.2s							
WVOR	**Wild Horse Val**	**3.25**	**234**	P		**Pn**	**23 53 22.4**	**-0.1**
WVOR	**Wild Horse Val**	**3.25**	**234**	P		**Pn**	**23 53 18.7**	**-3.8**
SNOW	**Snow King Moun**	**3.27**	**105**			**Pn**	**23 53 22.5**	**-0.4**
SNOW	**Snow King Moun**	**3.27**	**105**	IAML			23 54 27.3	
	comp=E,123µm,1.7s							
YMS	**Mount Sheridan**	**3.28**	**91**			**Pn**	**23 53 25.3**	**+2.2**
BZMT	**Bozeman Pass**	**3.29**	**66**			**Pn**	**23 53 21.9**	**-1.2**
YUF	**Upper Falls**	**3.29**	**83**			**Pn**	**23 53 23.0**	**-0.1**
AHID	**Auburn Hatcher**	**3.33**	**118**			**Pn**	**23 53 22.9**	**-0.9**
AHID	**Auburn Hatcher**	**3.33**	**118**	IAML			23 54 21.9	
	comp=E,75µm,2.4s							
AHID				IAML			23 54 27.7	
	comp=E,87µm,1.0s							
AHID	**Auburn Hatcher**	**3.33**	**118**	P		**Pn**	**23 53 23.0**	**-0.7**
AHID	**Auburn Hatcher**	**3.33**	**118**	⇓P		**Pn**	**23 53 22.9**	**-0.7**
LOHW	**Long Hollow**	**3.34**	**102**			**Pn**	**23 53 23.0**	**-0.7**
LOHW	**Long Hollow**	**3.34**	**102**	IAML			23 54 29.8	
	comp=E,83µm,2.8s							
JTMT	**Jette**	**3.38**	**9**			**Pn**	**23 53 22.0**	**-2.3**
YJC	**Joseph's Coat**	**3.41**	**83**			**Pn**	**23 53 26.1**	**+1.3**
YTP	**The Promontory**	**3.45**	**89**			**Pn**	**23 53 25.3**	**0.0**
BSMT	**Bassoo Peak**	**3.45**	**3**			**Pn**	**23 53 23.2**	**-2.0**
YPLA	**Lake Butte**	**3.46**	**87**			**Pn**	**23 53 25.8**	**+0.3**
YPPC	**Pelican Cone**	**3.51**	**84**			**Pn**	**23 53 27.4**	**+1.2**
YBMT	**Yellow Bay**	**3.54**	**12**			**Pn**	**23 53 24.1**	**-2.3**
YPSB	**Soda Butte**	**

ISCO Idaho Springs 8.42 120 Pn **Pn** 23 54 35.1 +1.5
ISCO Idaho Springs 8.42 120 P **Pn** 23 54 35.1 +1.5
ISCO Idaho Springs 8.42 120 ⇑P **Pn** 23 54 35.1 +1.5
MCCM Marconi Confer 8.57 226 ⇑P **Pn** 23 54 36.3 +0.8
MVCO Mesa Verde 8.76 143 ⇑P **Pn** 23 54 39.3 +1.1
JRSC Jasper Ridge 8.84 220 Pn **Pn** 23 54 41.2 +2.1
SAO San Andreas Ge 9.04 214 ⇑P **Pn** 23 54 43.0 +1.2
WUAZ Wupatki 9.33 161 ⇓P **Pn** 23 54 49.5 +3.5
SDCO Great Sand Dun 9.83 129 ⇑P **Pn** 23 54 54.7 +1.7
OGNE Ogallala 10.22 105 ⇑P **Pn** 23 54 58.8 +0.7
MWC Mount Wilson 10.43 194 Pn **Pn** 23 55 04.2 +3.1
MWC Mount Wilson 10.43 194 P **Pn** 23 55 04.2 +3.1
PFO Pinyon Flats O 10.84 186 Pn **Pn** 23 55 07.9 +1.4
comp=N,2.4nm,0.3s,baz=9.2,slow=6.0,SNR=70
PFO Lg Lg 23 58 09.9
comp=N,8.0nm,0.3s,baz=94,slow=20,SNR=3.6
PFO LR LR 23 59 55.3
comp=N,119µm,18.7s,baz=8.0,slow=41
comp=N,62nm,0.7s
PFO Pinyon Flats O 10.84 186⇑*e*P **Pn** 23 55 08.2 +1.6
PFO MLR MLR
comp=Z,571µm,11.0s
I57US PINON FLAT INF 10.84 186 Lg Lg 23 58 11.2
baz=6.3,slow=29
SALN Salton City 11.13 184 Pn **Pn** 23 55 14.7 +4.2
ANMO Albuquerque 11.55 142 Pn **Pn** 23 55 17.3 +0.9
comp=Z,1.1nm,0.3s,baz=326,slow=13,SNR=76
ANMO Lg Lg 23 58 36.3
comp=Z,3.1nm,0.3s,baz=351,slow=9.8,SNR=3.8
ANMO LR LR 00 00 19.7
comp=Z,297µm,21.5s,baz=320,slow=41
comp=Z,23nm,0.7s
ANMO Albuquerque 11.55 142*d* P **Pn** 23 55 18.7 +2.3
ANMO pmax pmax
comp=Z,31nm,0.8s
ANMO MLR MLR
comp=Z,358µm,18.0s
ANMO Albuquerque 11.55 142 ⇑P **Pn** 23 55 17.6 +1.1
BBB Bella Bella 11.63 317 Pn **Pn** 23 55 17.6 +0.3
comp=Z,1.0nm,0.3s,baz=140,slow=12,SNR=4.1
BBB Lg Lg 23 58 36.3
comp=Z,6.1nm,0.3s,baz=50,slow=21,SNR=9.8
BBB LR LR 23 59 38.9
comp=Z,114µm,21.8s,baz=130,slow=37
comp=Z,59nm,1.1s
BBB Bella Bella 11.63 317 ⇓P **Pn** 23 55 21.2 +3.9
TUC Tucson 12.54 163 P **Pn** 23 55 33.9 +4.0
TUC Tucson 12.54 163 ⇑P **Pn** 23 55 33.4 +3.5
CBKS Cedar Bluff 12.77 111 ⇑P **Pn** 23 55 33.9 +0.9
ECSD EROS Data Cent 13.31 86 ⇑P **Pn** 23 55 38.9 -1.3
319A Douglas 13.79 159 Pn **Pn** 23 55 50.0 +3.0
AGMN Agassiz Nation 13.84 67 ⇑P **Pn** 23 55 43.9 -3.4
RUBB Prince Rupert 13.97 321 Pn **Pn** 23 55 52.8 +3.6
AMTX Amarillo 14.03 128 Pn **Pn** 23 55 50.9 +0.7
AMTX Amarillo 14.03 128 ⇓P **Pn** 23 55 52.5 +2.4
MSTX Muleshoe 14.12 133 Pn **Pn** 23 55 53.7 +2.2
I10CA LAC DU BONNET 14.16 59 Lg Lg 23 59 50.0
baz=240,slow=84
I10CA I I 01 14 20.0
baz=258,slow=264,SNR=1.4
ULM Lac du Bonnet 14.27 59 Pn **Pn** 23 55 51.4 -1.9
comp=Z,4.0nm,0.3s,baz=252,slow=11,SNR=47
ULM Lg Lg 23 59 47.1
comp=Z,10nm,0.3s,baz=149,slow=22,SNR=3.4
ULM Lac du Bonnet 14.27 59 Pn **Pn** 23 55 51.1 -2.1
ULM Lac du Bonnet 14.27 59*r* P **Pn** 23 55 52.0 -1.3
DIB Dawson Inlet, 14.41 314 Pn **Pn** 23 55 56.7 +1.5
KSU1 Kansas State U 14.77 105 ⇓P **Pn** 23 55 59.3 -0.9
MNTX Cornudas Mount 14.80 146 ⇑P **Pn** 23 56 02.9 +2.1
U35K Hyder 14.93 326 P **Pn** 23 56 00.7 -1.6
baz=134,SNR=10
U35K S **Sn** 23 58 50.2 +2.7
baz=134
CROK Carrier 15.21 115 IAmb IAmb 23 56 12.3
comp=Z,1µm,1.5s
V35K Ketchikan 15.21 322 P **Pn** 23 56 05.4 -0.7
baz=129,SNR=12
V35K S **Sn** 23 58 56.7 +2.2
baz=129
TPB13 Reeves - Culbe 15.58 142 IAmb IAmb 23 56 16.9
comp=Z,538nm,1.2s
HSIG 15.71 166 P **P** 23 56 15.9 -0.8
HSIG 15.71 166 ⇓P **P** 23 56 16.1 -0.7
T35M Bob Quinn 15.78 328 P **Pn** 23 56 13.9 +0.5
baz=136,SNR=54
T35M S **Sn** 23 59 12.0 +3.8
baz=136
WMOK Wichita Mounta 15.83 122 ⇓P **Pn** 23 56 14.0 -0.3
OK029 Liberty Lake 15.98 117 Pn **Pn** 23 56 15.1 -1.0
CRAG Craig 15.98 320 P **P** 23 56 24.9 +5.3
comp=Z,636nm,1.5s
CRAG Craig 15.98 320 P **Pn** 23 56 16.9 +0.9
baz=126,SNR=43
CRAG S **Sn** 23 59 14.5 +1.5
baz=126
CRAG Craig 15.98 320 ⇓p **P** 23 56 20.1 +0.5
APMT Aspermont 16.05 129 IAmb IAmb 23 56 20.8
comp=Z,1µm,1.6s
SCIA State Center 16.15 91 ⇑P **Pn** 23 56 16.5 -1.8
WRAK Wrangell Islan 16.23 324 P **Pn** 23 56 20.3 +1.1
baz=131,SNR=26
WRAK S **Sn** 23 59 22.2 +3.1
baz=131
OK052 Battle Ridge R 16.28 115 Pn **Pn** 23 56 20.0 0.0
U33K Whale Pass 16.37 322 P **Pn** 23 56 21.3 +0.3
baz=128,SNR=22
U33K S **Sn** 23 59 25.7 +3.2
baz=128
KOTAN Kotaneelee Air 16.64 344 P **Pn** 23 56 25.4 +0.9
baz=157,SNR=168
KOTAN S **Sn** 23 59 28.5 -0.7
baz=157
EYMN Ely 16.70 69 ⇓P **Pn** 23 56 21.9 -3.5
T33K Petersburg 16.74 324 P **Pn** 23 56 26.6 +0.9
baz=130
S34M Telegraph Cree 16.79 329 P **Pn** 23 56 27.2 +1.0
baz=137,SNR=84
S34M S **S** 23 59 38.9 -4.5
baz=137
DLBC Dease Lake 16.79 332 Pn **P** 23 56 27.6 -1.0
comp=Z,0.5nm,0.3s,baz=130,slow=11,SNR=79
DLBC Lg Lg 00 01 16.3
comp=Z,2.1nm,0.3s,baz=128,slow=9.5,SNR=6.0
DLBC LR LR 00 02 41.0
comp=Z,128µm,19.5s,baz=120,slow=36
DLBC Dease Lake 16.79 332 P **Pn** 23 56 26.5 0.0
baz=140,SNR=91
DLBC S **S** 23 59 40.8 -2.9
baz=140
SRIG Santa Rosalia 17.21 171 **P** 23 56 34.1 +0.8
SRIG Santa Rosalia 17.21 171 P **P** 23 56 36.4 +3.1
OZNA Ozona 17.39 136 **Pn** 23 56 34.3 +0.2
TXAR Lajitas Array 17.58 145 P **P** 23 56 38.8 +1.2
comp=Z,123nm,0.9s,baz=337,slow=8.0,SNR=212
TXAR Lg Lg 00 01 40.7
comp=Z,0.1nm,0.3s,baz=8.2,slow=16,SNR=1.4
TXAR LR LR 00 03 44.6
comp=Z,258µm,18.6s,baz=324,slow=38
WTLY Watson Lake, Y 17.76 337 P **P** 23 56 39.0 -0.3
baz=146,SNR=124
WTLY S **Sn** 23 59 57.3 +1.1
baz=146
R33M Jennings River 17.84 333 P **Pn** 23 56 39.6 0.0
baz=140,SNR=590
R33M S **S** 00 00 03.6 -1.6
baz=140
S32K Killisnoo 17.84 324 P **Pn** 23 56 39.1 -0.3
baz=129,SNR=54
SIT Sitka 17.91 322 P **P** 23 56 44.2 +3.3
comp=Z,713nm,1.5s
SIT Sitka 17.91 322 P **Pn** 23 56 40.3 -0.1
baz=126,SNR=35
SIT S **S** 00 00 04.4 -2.0
baz=126
Q32M Nakina River 17.96 330 P **Pn** 23 56 41.2 0.0
baz=137,SNR=100
Q32M S **S** 00 00 05.9 -1.8
baz=137
HHAR Hobbs 18.02 110 **Pn** 23 56 41.0 -0.8
JFWS Jewell Farm 18.02 86 Pn **Pn** 23 56 40.2 -1.6
JFWS IAmb IAmb 23 56 48.5
comp=Z,2µm,1.6s
JFWS Jewell Farm 18.02 86 P **Pn** 23 56 40.2 -1.6
JFWS pmax pmax
comp=Z,2µm,1.6s
JFWS Jewell Farm 18.02 86 ⇑P **Pn** 23 56 39.6 -2.2
baz=139
L46A Eue Claire 21.08 86 IAmb IAmb 23 57 26.2
comp=Z,836nm,1.2s
L46A IAMs_20 IAMs_20 00 04 48.3
comp=Z,183µm,18.0s
SLBS Sierra La Lagu 21.10 167 P **P** 23 57 16.8 +0.8
SLBS IAmb IAmb 23 57 28.2
comp=Z,2µm,1.9s
SLBS Sierra La Lagu 21.10 167 IAMs_20 IAMs_20 00 04 20.7
comp=Z,149µm,18.0s
SLBS Sierra La Lagu 21.10 167 P **P** 23 57 17.8 +1.8
SLBS Sierra La Lagu 21.10 167 ⇓P **P** 23 57 18.4 +2.3
HYT Haines Junctio 21.16 329 P **P** 23 57 14.6 -1.9
baz=131,SNR=721
HYT S Sn 00 01 16.6 -1.7
baz=131
LNXT Lenox 21.17 104 P **P** 23 57 16.4 -0.2
P46A Rosedale 21.22 93 IAmb IAmb 23 57 33.6
comp=Z,658nm,1.1s
GLAT Glass 21.22 104 IAmb IAmb 23 57 31.5
comp=Z,2µm,1.2s
O29M Mount Kennedy 21.24 327 IAMs_20 IAMs_20 00 05 22.3
comp=Z,187µm,22.0s
O29M Mount Kennedy 21.24 327 P **P** 23 57 15.6 -1.7
baz=128,SNR=451
O29M S Sn 00 01 22.6 +2.5
baz=128
T45A Paducah 21.30 101 IAmb IAmb 23 57 34.4
comp=Z,1µm,0.8s
MET Memphis--Engin 21.38 107 P **P** 23 57 19.6 +0.7
N30M Aishikik Lake 21.43 331 P **P** 23 57 17.8 -1.5
baz=133,SNR=322
N30M S Sn 00 01 25.7 +0.9
baz=133
YUK6 Outpost Mounta 21.56 328 P **P** 23 57 18.2 -2.6
baz=130,SNR=350
YUK6 S Sn 00 01 29.6 +1.6
baz=130
USIN University of 21.56 98 IAmb IAmb 23 57 32.0
comp=Z,927nm,0.9s
GLMI Grayling 21.64 78 IAmb IAmb 23 57 35.0
comp=Z,925nm,1.1s
GLMI IAMs_20 IAMs_20 00 04 55.9
comp=Z,106µm,19.0s
GLMI Grayling 21.64 78 ⇑P **P** 23 57 21.0 -0.6
E46A Sault Ste Mari 21.65 74 IAmb IAmb 23 57 32.8
comp=Z,1µm,1.2s
KVTX Kingsville 21.77 135 ⇑P **P** 23 57 25.0 +1.9
HBVL Hebbronville 21.78 137 P **P** 23 57 23.9 +0.7
HBVL IAmb IAmb 23 57 40.6
comp=Z,757nm,1.2s
PINM Pinnacle 21.79 325 P **P** 23 57 21.1 -2.1
baz=125,SNR=6.9
PINM S Sn 00 01 34.7 +1.4
baz=125
J47A Sunmer 21.82 82 P **P** 23 57 23.8 +0.2
J47A IAMs_20 IAMs_20 00 05 13.3
comp=Z,126µm,21.0s
143A Socs Landing, 21.82 114 P **P** 23 57 25.3 +1.6
N47A Urbana 21.86 89 IAmb IAmb 23 57 34.9
comp=Z,1µm,1.4s
N47A IAMs_20 IAMs_20 00 05 33.6
comp=Z,116µm,18.0s
YUK4 Talbot Arm 21.92 329 P **P** 23 57 21.9 -2.8
baz=130,SNR=512
441A DeRidder 21.99 121 IAMs_20 IAMs_20 00 06 58.4
comp=Z,199µm,20.0s
OXF Oxford 22.08 108 IAMs_20 IAMs_20 00 06 07.3
comp=Z,154µm,18.0s
OXF Oxford 22.08 108 ⇓P **P** 23 57 27.2 +0.8
M30M Minto, Yukon 22.11 333 IAMs_20 IAMs_20 00 06 09.2
comp=Z,159µm,20.0s
M30M Minto, Yukon 22.11 333 P **P** 23 57 24.6 -2.1
baz=135,SNR=411
M30M S Sn 00 01 36.4 -4.5
baz=135
O28M Mount Upton 22.16 326 IAMs_20 IAMs_20 00 05 09.6
comp=Z,119µm,20.0s
O28M Mount Upton 22.16 326 P **P** 23 57 24.6 -2.7
baz=126
O28M S Sn 00 01 39.5 -2.9
baz=126
YUK8 Steele Glacier 22.30 328 P **P** 23 57 27.0 -1.9
baz=128,SNR=800
YUK8 S Sn 00 01 41.9 -3.9
baz=128
WVT Waverly 22.31 102 P **P** 23 57 27.8 -1.1
WVT IAmb IAmb 23 57 43.5
comp=Z,1µm,1.2s
WVT Waverly 22.31 102 P **P** 23 57 27.8 -1.1
WVT pmax pmax
comp=Z,1µm,1.2s
WVT MLR MLR
comp=Z,64µm,20.0s
Y45A Yeager Farm, C 22.36 109 IAMs_20 IAMs_20 00 06 34.8
comp=Z,146µm,18.0s
T47A Sharon Grove 22.40 100 IAmb IAmb 23 57 49.6
comp=Z,516nm,1.0s
WCI Wyandotte Cave 22.43 96 P **P** 23 57 29.4 -0.7
WCI IAmb IAmb 23 57 41.8
comp=Z,588nm,1.1s
WCI Wyandotte Cave 22.43 96 P **P** 23 57 29.4 -0.7
WCI pmax pmax
comp=Z,588nm,1.2s
WCI MLR MLR
comp=Z,100µm,21.0s
WCI Wyandotte Cave 22.43 96 ⇓P **P** 23 57 29.0 -1.1
O48B Farmland 22.45 90 P **P** 23 57 30.1 -0.3
O48B IAmb IAmb 23 57 44.8
comp=Z,1µm,1.3s
O48B IAMs_20 IAMs_20 00 05 18.0
comp=Z,122µm,21.0s
MESA MESA 22.54 324 IAMs_20 IAMs_20 00 06 24.6
comp=Z,163µm,18.0s
MESA MESA 22.54 324 P **P** 23 57 30.1 -1.3
baz=122,SNR=156
MESA S Sn 00 01 46.2 -5.3
baz=122
P48A Milroy 22.55 92 IAmb IAmb 23 57 45.2
comp=Z,1µm,1.2s
M29M Somme Creek 22.58 331 P **P** 23 57 31.1 -0.6
baz=132,SNR=432
M29M S Sn 00 01 47.5 -4.7
baz=132
MAYO Mayo, Yukon 22.58 336 P **P** 23 57 31.2 -0.3
baz=139,SNR=43
MAYO S **S** 00 01 44.1 +5.3
baz=139
BLKN Baker Lake 22.66 22 IAmb IAmb 23 57 54.9
comp=Z,1µm,1.2s
CTG Chitna Glacier 22.73 326 P **P** 23 57 31.4 -1.9
baz=125,SNR=412
CTG S **S** 00 01 48.2 +6.5
baz=125
YUK3 Moose Creek 22.87 328 P **P** 23 57 33.8 -1.1
baz=128,SNR=631
YUK3 S **S** 00 01 51.5 +7.1
baz=128
AAM Ann Arbor 22.89 84 ⇓P **P** 23 57 35.0 +0.1
BARN Barnard Glacie 22.91 326 IAMs_20 IAMs_20 00 05 33.5
comp=Z,110µm,21.0s
L29M L29M 22.92 333 IAMs_20 IAMs_20 00 06 42.9
comp=Z,189µm,19.0s
L29M L29M 22.92 333 P **P** 23 57 34.5 -0.7
baz=134,SNR=249
L29M S **S** 00 01 50.3 +5.3
baz=134
N49A Columbus Grove 22.93 88 IAmb IAmb 23 57 55.9
comp=Z,723nm,1.1s
O49A Covington 23.07 90 IAmb IAmb 23 57 58.0
comp=Z,873nm,1.0s
O49A IAMs_20 IAMs_20 00 05 49.1
comp=Z,106µm,20.0s
I49A Point Hope 23.07 80 IAMs_20 IAMs_20 00 05 50.1
comp=Z,114µm,19.0s
BGLC Bering Glacier 23.08 323 P **P** 23 57 36.7 -0.1
baz=120,SNR=9.0
BGLC S Sn 00 01 56.3 -7.7
baz=120
V48A Smith Brothers 23.21 102 IAMs_20 IAMs_20 00 07 29.4
comp=Z,141µm,19.0s
TGL Tana Glacier 23.22 325 IAMs_20 IAMs_20 00 05 39.5
comp=Z,123µm,20.0s
K29M Barlow Dome 23.25 335 IAMs_20 IAMs_20 00 07 26.6
comp=Z,129µm,20.0s
K29M Barlow Dome 23.25 335 P **P** 23 57 38.0 -0.7
baz=136,SNR=1000

YKAW1 Yellowknife Wh 18.11 1 Pn **Pn** 23 56 40.0 -2.7
YKA Yellowknife Ar 18.12 1 P **Pn** 23 56 37.6 -5.2
comp=Z,7.0nm,0.7s,baz=186,slow=12,SNR=88
YKA Lg Lg 00 01 49.6
comp=Z,6.9nm,0.3s,baz=173,slow=28,SNR=5.8
YKA LR LR 00 04 02.4
comp=Z,139µm,19.1s,baz=178,slow=38
YKA Yellowknife Ar 18.12 1 Pn **Pn** 23 56 40.4 -2.4
YKA Yellowknife Ar 18.12 1*eP* **Pn** 23 56 40.4 -2.4
TBO Thunder Bay 18.14 67 **Pn** 23 56 41.8 -1.4
YKAW3 Yellowknife Wh 18.19 1 **Pn** 23 56 41.5 -2.1
BRDY Brady 18.21 131 **Pn** 23 56 44.1 0.0
JIS Juneau Island 18.28 326 P **P** 23 56 51.3 +6.3
comp=Z,318nm,1.2s
R32K Eaglecrest 18.34 326 P **P** 23 56 45.6 0.0
baz=131,SNR=29
R32K S **S** 00 00 17.5 +2.5
baz=131
JCT Junction City 18.42 134 P **P** 23 56 46.7 0.0
JCT Junction City 18.42 134 P **P** 23 56 46.7 0.0
JCT pmax pmax
comp=Z,372nm,1.0s
JCT Junction City 18.42 134 ⇑P **Pn** 23 56 47.5 +0.7
WHTX Lake Whitney, 18.55 126 P **Pn** 23 56 48.5 +0.2
TGTN Hyland Airport 18.83 340 P **P** 23 56 51.2 +0.2
baz=150,SNR=287
TGTN S **Sn** 00 00 21.4 -0.6
baz=150
TREL Terrell 18.84 122 IAmb IAmb 23 56 59.9
comp=Z,2µm,1.5s
S31K Pelican 18.85 323 P **P** 23 56 50.3 -0.9
baz=127,SNR=107
S31K S **S** 00 00 29.4 +4.2
baz=127
DRIO Del Rio 18.87 138 P **P** 23 56 51.5 -0.1
R31K City Hall, Gus 18.92 325 P **Pn** 23 56 53.9 +1.3
baz=129
R31K S **S** 00 00 30.2 +3.5
baz=129
P32M Atlin 18.93 330 P **Pn** 23 56 52.6 -0.2
baz=135,SNR=144
P32M S **S** 00 00 27.7 +0.7
baz=135
HPIG 19.02 153 P **Pn** 23 56 55.6 +1.3
HPIG 19.02 153 ⇓P **Pn** 23 56 55.7 +1.5
F42A Maple Grove Fa 19.06 76 IAmb IAmb 23 57 02.2
comp=Z,1µm,1.8s
P33M Teslin, Yukon 19.07 332 P **Pn** 23 56 55.0 +0.4
P33M Teslin, Yukon 19.07 332 P **P** 23 56 52.0 -1.8
baz=138
P33M S **S** 00 00 32.8 +2.8
baz=138
Z38A Mt. Pleasant 19.17 119 IAmb IAmb 23 57 02.4
comp=Z,1µm,1.2s
MIAR Mount Ida 19.26 113 P **P** 23 56 55.6 -0.3
MIAR IAmb IAmb 23 57 03.5
comp=Z,2µm,1.7s
MIAR Mount Ida 19.26 113 P **P** 23 56 55.6 -0.3
MIAR pmax pmax
comp=Z,2µm,1.7s
MIAR Mount Ida 19.26 113 ⇑P **P** 23 56 55.2 -0.7
FCC Fort Churchill 19.29 34 P **P** 23 56 54.5 -1.5
FCC Fort Churchill 19.29 34 P **P** 23 56 54.5 -1.5
FCC pmax pmax
comp=Z,1µm,1.6s
435B Jarrell 19.38 129 P **P** 23 56 57.3 +0.1
435B IAmb IAmb 23 57 09.3
comp=Z,2µm,1.6s
HDIL Hopedale 19.39 92 IAmb IAmb 23 57 08.5
comp=Z,2µm,1.7s
HDIL Hopedale 19.39 92 ⇓P **P** 23 56 56.5 -0.7
SKAG Skagway 19.44 328 P **Pn** 23 57 03.5 +4.7
comp=Z,662nm,1.6s
SKAG Skagway 19.44 328 P **P** 23 56 55.9 -1.7
baz=132
SKAG S **S** 00 00 44.7 +7.6
baz=132
SKAG Skagway 19.44 328 ⇑P **Pn** 23 57 02.2 +3.4
WRGLY Wrigley 19.46 349 IAmb IAmb 23 57 07.9
comp=Z,2µm,1.5s
WRGLY Wrigley 19.46 349 P **P** 23 56 56.5 -1.3
baz=162,SNR=89
WRGLY S **Sn** 00 00 30.1 -7.0
baz=162
N32M Quiet Lake 19.87 334 P **P** 23 56 59.9 -2.5
baz=139
N32M S **Sn** 00 00 47.7 +0.6
baz=139
UALR University of 19.94 111 IAmb IAmb 23 57 13.5
comp=Z,2µm,1.8s
M44A Midewin, Midew 20.01 89 P **P** 23 57 03.7 -0.4
M44A IAmb IAmb 23 57 17.0
comp=Z,2µm,1.5s
M44A IAMs_20 IAMs_20 00 03 54.1
comp=Z,131µm,21.0s
LCAR Lake Charles 20.03 106 P **P** 23 57 03.6 -0.7
WLAR White Oak Lake 20.09 115 P **P** 23 57 05.1 +0.1
WLAR IAmb IAmb 23 57 12.5
comp=Z,734nm,1.1s
WHY Whitehorse 20.10 331 P **P** 23 57 03.2 -1.8
baz=135,SNR=295
WHY S Sn 00 00 56.4 +3.5
baz=135
PBMO Poplar Bluff 20.17 104 P **P** 23 57 05.6 -0.2
PBMO IAmb IAmb 23 57 11.3
comp=Z,619nm,1.1s
Q44A Meyer Farm, Va 20.20 97 P **P** 23 57 05.2 -1.0
833A Chaparral WMA, 20.38 137 P **P** 23 57 08.8 +0.7
833A IAmb IAmb 23 57 22.5
comp=Z,927nm,1.4s
EF02 Christine 20.44 134 IAmb IAmb 23 57 25.1
comp=Z,1µm,1.3s
CGM3 Cape Girardeau 20.46 102 IAmb IAmb 23 57 24.4
comp=Z,2µm,1.6s
EF04 Eagle Ford 04 20.48 132 IAmb IAmb 23 57 21.7
comp=Z,2µm,1.8s
P30M Million Dollar 20.50 328 P **P** 23 57 07.7 -1.6
baz=130
P30M S Sn 00 01 03.2 +1.0
baz=130
MMPY Sheldon Lake, 20.51 338 IAmb IAmb 23 57 17.8
comp=Z,640nm,1.0s
MMPY Sheldon Lake, 20.51 338 P **P** 23 57 07.6 -1.7
baz=145,SNR=166
MMPY S **S** 00 00 59.0 +0.5
baz=145
S44A Carbondale 20.56 100 IAmb IAmb 23 57 25.7
comp=Z,3µm,1.8s
Z41A Richland Creek 20.56 115 IAmb IAmb 23 57 17.0
comp=Z,1µm,1.4s
SIUC Southern Illin 20.58 100 P **P** 23 57 09.6 -0.6
SIUC IAmb IAmb 23 57 22.1
comp=Z,526nm,0.9s
O30N Mendenhall 20.61 330 IAmb IAmb 23 57 21.9
comp=Z,1µm,1.4s
O30N IAMs_20 IAMs_20 00 04 30.7
comp=Z,155µm,18.0s
O30N Mendenhall 20.61 330 P **P** 23 57 07.7 -2.8
baz=133,SNR=415
O30N S Sn 00 01 05.3 +0.4
baz=133
LPIG La Paz 20.63 168 P **P** 23 57 11.0 +0.2
comp=Z,39nm,0.4s,baz=1.1,slow=3.5,SNR=11
LPIG LR LR 00 04 16.5
comp=Z,120µm,18.3s,baz=340,slow=34
comp=Z,39nm,0.4s
I45A Fountain 20.64 81 P **P** 23 57 10.5 -0.4
I45A IAmb IAmb 23 57 22.8
comp=Z,1µm,0.9s
I45A IAMs_20 IAMs_20 00 04 49.6
comp=Z,194µm,19.0s
PARMO Parma 20.70 103 IAmb IAmb 23 57 19.6
comp=Z,798nm,0.9s
GNAR Gosnell 20.87 105 P **P** 23 57 13.6 +0.2
N31M Braeburn, Yuko 21.00 332 IAMs_20 IAMs_20 00 05 30.8
comp=Z,165µm,19.0s
N31M Braeburn, Yuko 21.00 332 P **P** 23 57 12.6 -2.1
baz=135,SNR=789
N31M S Sn 00 01 12.2 -2.1
baz=135
SFIN Lafayette 21.02 91 IAmb IAmb 23 57 31.1
comp=Z,683nm,1.0s
SFIN IAMs_20 IAMs_20 00 04 38.8
comp=Z,174µm,22.0s
M31M Drury Creek, Y 21.07 334 P **P** 23 57 13.6 -1.8
baz=139,SNR=765
M31M S Sn 00 01 13.9 -2.2

K29M					S	S	00 01 57.3	+6.6	
	baz=136								
SUCK	**Suckling Hills**	**23.27**	**322**		IAMs_20	IAMs_20	00 06 03.2		
	comp=Z,712µm,21.0s								
CRQE	**Cirque**	**23.33**	**324**		P	P	**23 57 38.5**	**-1.0**	
	baz=122,SNR=124								
CRQE					S	S	**00 01 57.1**	**+5.2**	
	baz=122								
CRQM	**Cirque**	**23.35**	**324**		IAMs_20	IAMs_20	00 06 49.4		
	comp=Z,124µm,19.0s								
BERG	**Berg Lake**	**23.40**	**323**		IAMs_20	IAMs_20	00 05 42.3		
	comp=Z,128µm,22.0s								
BVCY	**Beaver Creek**	**23.41**	**329**		P	P	**23 57 39.7**	**-0.5**	
	baz=128,SNR=27								
BVCY					S	S	**00 01 59.8**	**+6.7**	
	baz=128								
146A	**Union**	**23.41**	**111**		IAMs_20	IAMs_20	00 06 41.0		
	comp=Z,129µm,20.0s								
J30M	**Hart River**	**23.45**	**337**		P	P	**23 57 40.5**	**-0.1**	
	baz=139,SNR=1000								
J30M					S	S	**00 02 01.1**	**+7.3**	
	baz=139								
KAIM	**Kayak Island**	**23.48**	**322**		P	P	**23 57 40.2**	**-0.7**	
	baz=118,SNR=26								
KAIM					S	S	**00 02 00.5**	**+6.3**	
	baz=118								
M50A	**Fremont**	**23.59**	**86**		IAMs_20	IAMs_20	00 06 14.9		
	comp=Z,122µm,21.0s								
MCARA	**McCarthy VSAT**	**23.64**	**326**		P	P	**23 57 41.4**	**-1.0**	
	baz=123,SNR=229								
MCARA					S	S	**00 02 02.2**	**+5.4**	
	baz=123								
VRDI	**Verde Repeater**	**23.73**	**325**		IAMs_20	IAMs_20	00 07 14.2		
	comp=Z,97µm,19.0s								
X48A	**Hartselle**	**23.74**	**105**		P	P	**23 57 42.3**	**-1.3**	
Z47A	**Carrollton**	**23.74**	**109**		IAMs_20	IAMs_20	00 07 09.6		
	comp=Z,169µm,18.0s								
M27K	**Edge Creek, AK**	**23.75**	**329**		IAMs_20	IAMs_20	00 06 51.8		
	comp=Z,136µm,21.0s								
M27K	**Edge Creek, AK**	**23.75**	**329**		P	P	**23 57 43.4**	**-0.3**	
	baz=127,SNR=223								
M27K					S	S	**00 02 05.9**	**+7.1**	
	baz=127								
R50A	**Paris**	**23.81**	**94**		P	P	**23 57 43.6**	**-0.6**	
R50A					IAmb	IAmb	23 57 55.8		
	comp=Z,1µm,1.5s								
RAGM	**Ragged Mountai**	**23.82**	**323**		IAMs_20	IAMs_20	00 06 08.4		
	comp=Z,118µm,21.0s								
H31M	**Peel River**	**23.90**	**340**		IAMs_20	IAMs_20	00 07 33.6		
	comp=Z,97µm,18.0s								
H31M	**Peel River**	**23.90**	**340**		P	P	**23 57 44.7**	**-0.2**	
	baz=144,SNR=171								
H31M					S	S	**00 02 06.4**	**+5.6**	
	baz=144								
J29N	**Klondike Camp**	**23.91**	**335**		IAMs_20	IAMs_20	00 07 46.0		
	comp=Z,101µm,20.0s								
J29N	**Klondike Camp**	**23.91**	**335**		P	P	**23 57 44.9**	**-0.1**	
	baz=136,SNR=164								
J29N					S	S	**00 02 08.2**	**+7.2**	
	baz=136								
ZAIG	**Zacatecas**	**23.92**	**150**		P	P	**23 57 47.4**	**+1.6**	
346A	**Big Creek Wild**	**23.93**	**114**		P	P	**23 57 45.3**	**-0.1**	
I30M	**Mount Dempster**	**23.95**	**338**		IAMs_20	IAMs_20	00 06 27.1		
	comp=Z,106µm,20.0s								
I30M	**Mount Dempster**	**23.95**	**338**		P	P	**23 57 44.6**	**-0.9**	
	baz=140,SNR=349								
I30M					S	S	**00 02 08.7**	**+6.7**	
	baz=140								
GLB	**Gilahina Butte**	**23.99**	**325**		IAMs_20	IAMs_20	00 07 40.1		
	comp=Z,97µm,18.0s								
T50A	**Nancy**	**24.00**	**97**		P	P	**23 57 45.0**	**-1.0**	
T50A					IAmb	IAmb	23 58 13.2		
	comp=Z,732nm,1.4s								
ACSO	**Alum Creek Sta**	**24.02**	**89**		IAMs_20	IAMs_20	00 06 17.4		
	comp=Z,115µm,20.0s								
ACSO	**Alum Creek Sta**	**24.02**	**89**	⇓	P	P	**23 57 44.7**	**-1.5**	
BMRM	**Bremner River**	**24.07**	**324**		P	P	**23 57 46.4**	**-0.2**	
	baz=120,SNR=152								
BMRM					S	S	**00 02 10.5**	**+6.8**	
	baz=120								
SWET	**Sewanee**	**24.10**	**102**		IAmb	IAmb	23 58 07.3		
	comp=Z,396nm,1.1s								
Q23K	**Middleton Isla**	**24.14**	**320**		P	P	**23 57 46.1**	**-1.0**	
	baz=115,SNR=9.4								
Q23K					S	S	00 02 16.3	+12	
	baz=115								
BCAR	**Beaver Creek A**	**24.15**	**330**		P	P	**23 57 47.6**	**+0.2**	
L27K	**Beaver Creek,**	**24.16**	**330**		P	P	**23 57 47.1**	**-0.3**	
	baz=128,SNR=162								
L27K					S	S	**00 02 09.6**	**+4.5**	
	baz=128								
M26K	**Nabesna, AK**	**24.20**	**328**		IAMs_20	IAMs_20	00 06 07.6		
	comp=Z,149µm,20.0s								
M26K	**Nabesna, AK**	**24.20**	**328**		P	P	**23 57 44.9**	**-2.9**	
	baz=125,SNR=914								
M26K					S	S	**00 02 11.7**	**+5.9**	
	baz=125								
Q51A	**Peebles**	**24.21**	**92**		IAmb	IAmb	23 57 59.9		
	comp=Z,681nm,1.1s								
Q51A					IAMs_20	IAMs_20	00 06 59.4		
	comp=Z,130µm,19.0s								
P51A	**Williamsport**	**24.24**	**91**		IAmb	IAmb	23 58 11.0		
	comp=Z,668nm,1.0s								
EYAK	**Cordova Ski Ar**	**24.36**	**322**		P	P	**23 57 53.7**	**+4.5**	
	comp=Z,493nm,1.6s								
EYAK	**Cordova Ski Ar**	**24.36**	**322**		IAMs_20	IAMs_20	00 06 34.1		
	comp=Z,132µm,21.0s								
EYAK	**Cordova Ski Ar**	**24.36**	**322**		P	P	**23 57 46.4**	**-2.8**	
	baz=118								
EYAK					S	S	**00 02 16.7**	**+8.5**	
	baz=118								
N25K	**Chitina, Valde**	**24.40**	**325**		IAMs_20	IAMs_20	00 07 32.0		
	comp=Z,107µm,18.0s								
N25K	**Chitina, Valde**	**24.40**	**325**		P	P	**23 57 47.4**	**-2.2**	
	baz=121,SNR=449								
N25K					S	S	**00 02 14.4**	**+5.4**	
	baz=121								
Y49A	**Blount Mountai**	**24.50**	**106**		IAMs_20	IAMs_20	00 07 12.6		
	comp=Z,171µm,22.0s								
W50A	**Signal Mountai**	**24.55**	**102**		IAMs_20	IAMs_20	00 06 43.7		
	comp=Z,98µm,19.0s								
LRAL	**Lakeview Retre**	**24.57**	**108**		P	P	**23 57 51.3**	**0.0**	
LRAL					IAMs_20	IAMs_20	00 07 36.4		
	comp=Z,151µm,19.0s								
LRAL	**Lakeview Retre**	**24.57**	**108**	⇑	P	P	**23 57 50.6**	**-0.7**	
I29M	**Ogilvie Camp,**	**24.59**	**337**		P	P	**23 57 49.9**	**-1.5**	
	baz=137								
I29M					S	S	**00 02 15.4**	**+3.4**	
	baz=137								
S51A	**Beattyville**	**24.61**	**95**		IAmb	IAmb	23 58 16.0		
	comp=Z,950nm,1.4s								
DIV	**Divide**	**24.65**	**324**		IAMs_20	IAMs_20	00 06 33.6		
	comp=Z,105µm,21.0s								
FPAL	**Fort Paine**	**24.68**	**103**		IAmb	IAmb	23 58 23.3		
	comp=Z,404nm,1.2s								
L26K	**Log Cabin Wild**	**24.70**	**329**		IAMs_20	IAMs_20	00 07 30.9		
	comp=Z,126µm,19.0s								
L26K	**Log Cabin Wild**	**24.70**	**329**		P	P	**23 57 51.0**	**-1.3**	
	baz=126,SNR=348								
L26K					S	S	**00 02 19.7**	**+6.1**	
	baz=126								
MENT	**Mentasta**	**24.78**	**328**		P	P	**23 57 56.9**	**+3.8**	
	comp=Z,443nm,1.2s								
P23K	**Montague Islan**	**24.86**	**320**		P	P	**23 57 52.4**	**-1.3**	
	baz=114,SNR=45								
P23K					S	S	**00 02 22.9**	**+6.6**	
	baz=114								
O52A	**Adamsville**	**24.88**	**88**		P	P	**23 57 53.3**	**-0.8**	
O52A					IAMs_20	IAMs_20	00 06 43.3		
	comp=Z,101µm,22.0s								
KLU	**Klutina**	**24.89**	**324**		IAMs_20	IAMs_20	00 06 30.9		
	comp=Z,103µm,21.0s								
KLU	**Klutina**	**24.89**	**324**		P	P	**23 57 52.7**	**-1.4**	
	baz=119,SNR=145								
KLU					S	S	**00 02 23.2**	**+6.3**	
	baz=119								
EPYK	**Eagle Plains**	**24.94**	**339**		IAMs_20	IAMs_20	00 08 57.2		
	comp=Z,104µm,20.0s								
EPYK	**Eagle Plains**	**24.94**	**339**		P	P	**23 57 53.4**	**-1.0**	
	baz=141,SNR=266								
EPYK					S	S	**00 02 21.1**	**+3.6**	
	baz=141								
CPCT	**Cooper Cave**	**24.98**	**100**		P	P	**23 57 54.2**	**-0.8**	
CPCT					IAmb	IAmb	23 58 20.3		
	comp=Z,836nm,1.3s								
Q52A	**Bidwell**	**25.01**	**91**		IAMs_20	IAMs_20	00 07 21.6		
	comp=Z,120µm,19.0s								
HARP	**HAARP**	**25.04**	**327**		IAMs_20	IAMs_20	00 07 53.9		
	comp=Z,139µm,18.0s								
F31M	**Tsiigehtchic**	**25.12**	**343**		P	P	**23 57 55.1**	**-0.8**	
	baz=147,SNR=170								
F31M					S	S	**00 02 25.5**	**+5.1**	
	baz=147								
I28M	**Miner Creek**	**25.13**	**336**		IAMs_20	IAMs_20	00 08 24.2		
	comp=Z,121µm,22.0s								
I28M	**Miner Creek**	**25.13**	**336**		P	P	**23 57 55.7**	**-0.5**	
	baz=135,SNR=416								
I28M					S	S	**00 02 26.4**	**+5.6**	
	baz=135								
TZTN	**Tazewell**	**25.13**	**97**		IAmb	IAmb	23 58 24.5		
	comp=Z,599nm,1.4s								
TZTN	**Tazewell**	**25.13**	**97**	⇓	P	P	**23 57 55.8**	**-0.6**	
H29M	**Whitestone**	**25.25**	**338**		P	P	**23 57 56.6**	**-0.6**	
	baz=138,SNR=324								
H29M					S	S	**00 02 25.7**	**+3.2**	
	baz=138								
M24K	**Tolsona, Glenn**	**25.30**	**325**		IAMs_20	IAMs_20	00 08 07.6		
	comp=Z,134µm,19.0s								
M24K	**Tolsona, Glenn**	**25.30**	**325**		P	P	**23 57 56.4**	**-1.4**	
	baz=120								
M24K					S	S	**00 02 27.8**	**+4.4**	
	baz=120								
G30M	**tAoh Zraii Nji**	**25.30**	**341**		IAmb	IAmb	23 58 07.3		
	comp=Z,683nm,1.4s								
G30M					IAMs_20	IAMs_20	00 08 23.6		
	comp=Z,113µm,18.0s								
G30M	**tAoh Zraii Nji**	**25.30**	**341**		P	P	**23 57 57.0**	**-0.6**	
	baz=143,SNR=160								
G30M					S	S	**00 02 26.1**	**+2.9**	
	baz=143								
DOT	**Dot Lake**	**25.32**	**330**		IAMs_20	IAMs_20	00 07 33.5		
	comp=Z,117µm,19.0s								
N53A	**Lisbon**	**25.36**	**86**		IAmb	IAmb	23 58 18.8		
	comp=Z,778nm,1.2s								
N53A					IAMs_20	IAMs_20	00 07 19.8		
	comp=Z,93µm,19.0s								
TKL	**Tuckaleechee C**	**25.40**	**99**		P	P	**23 57 57.4**	**-1.5**	
	comp=Z,34nm,0.8s,baz=300,slow=9.1,SNR=28								
TKL					LR	LR	00 08 44.8		
	comp=Z,192µm,19.0s,baz=302,slow=38								
	comp=Z,34nm,0.8s								
TKL	**Tuckaleechee C**	**25.40**	**99**	⇑	P	P	**23 57 58.1**	**-0.7**	
C36M	**Paulatuk**	**25.42**	**353**		IAMs_20	IAMs_20	00 08 43.0		
	comp=Z,119µm,18.0s								
C36M	**Paulatuk**	**25.42**	**353**		P	P	**23 57 56.3**	**-2.3**	
	baz=165,SNR=33								
C36M					S	S	**00 02 27.3**	**+2.3**	
	baz=165								
P53A	**Whipple**	**25.43**	**89**		IAMs_20	IAMs_20	00 06 57.9		
	comp=Z,94µm,22.0s								
PAX	**Paxson**	**25.47**	**327**		IAMs_20	IAMs_20	00 08 18.2		
	comp=Z,141µm,20.0s								
PAX	**Paxson**	**25.47**	**327**		P	P	**23 57 58.8**	**-0.5**	
	baz=123,SNR=387								
PAX					S	S	**00 02 31.1**	**+5.0**	
	baz=123								
SADO	**Sadowa**	**25.48**	**76**		P	P	**23 57 58.8**	**-0.7**	
	comp=Z,89nm,1.0s,baz=300,slow=10,SNR=39								
SADO					LR	LR	00 08 08.7		
	comp=Z,126µm,19.1s,baz=308,slow=37								
	comp=Z,89nm,1.0s								
SCRK	**Sand Creek**	**25.49**	**330**		IAMs_20	IAMs_20	00 08 50.7		
	comp=Z,88µm,20.0s								
SCRK	**Sand Creek**	**25.49**	**330**		P	P	**23 57 59.4**	**-0.1**	
	baz=126,SNR=547								
SCRK					S	S	**00 02 34.0**	**+7.5**	
	baz=126								
ERPA	**Erie**	**25.55**	**83**		IAmb	IAmb	23 58 11.8		
	comp=Z,399nm,0.9s								
ERPA					IAMs_20	IAMs_20	00 07 39.8		
	comp=Z,142µm,21.0s								
ERPA	**Erie**	**25.55**	**83**	⇓	P	P	**23 58 00.2**	**+0.1**	
W52A	**Murphy**	**25.57**	**101**		P	P	**23 57 59.9**	**-0.5**	
W52A					IAmb	IAmb	23 58 32.6		
	comp=Z,740nm,1.6s								
W52A					IAMs_20	IAMs_20	00 07 26.9		
	comp=Z,117µm,22.0s								
SCM	**Sheep Creek Mo**	**25.64**	**324**		P	P	**23 58 00.6**	**-0.3**	
	baz=118,SNR=253								
SCM					S	S	**00 02 33.5**	**+4.7**	
	baz=118								
BRAL	**Brewton**	**25.66**	**111**	⇓	P	P	**23 58 02.4**	**+1.2**	
RIDG	**Independent Ri**	**25.66**	**329**		P	P	**23 58 00.9**	**-0.1**	
	baz=125,SNR=311								
RIDG					S	S	**00 02 33.8**	**+4.6**	
	baz=125								
G29M	**Pine Creek**	**25.69**	**339**		IAMs_20	IAMs_20	00 09 18.9		
	comp=Z,137µm,19.0s								
G29M	**Pine Creek**	**25.69**	**339**		P	P	**23 58 00.2**	**-1.0**	
	baz=140								
G29M					S	S	**00 02 35.8**	**+6.4**	
	baz=140								
250A	**Grady**	**25.69**	**109**		P	P	**23 58 02.1**	**+0.6**	
F30M	**Barrier River**	**25.71**	**342**		P	P	**23 58 00.5**	**-0.8**	
	baz=144,SNR=590								
F30M					S	S	**00 02 35.1**	**+5.5**	
	baz=144								
I27K	**Kandik River**	**25.75**	**335**		P	P	**23 58 01.4**	**-0.4**	
	baz=133,SNR=162								
I27K					S	S	**00 02 36.3**	**+5.9**	
	baz=133								
M23K	**Glacier View**	**25.79**	**324**		P	P	**23 58 01.9**	**-0.2**	
	baz=117,SNR=211								
M23K					S	S	**00 02 35.8**	**+4.7**	
	baz=117								
INK	**Inuvik**	**25.82**	**344**		LR	LR	00 07 30.1		
	comp=Z,61µm,18.6s,baz=145,slow=35								
INK	**Inuvik**	**25.82**	**344**		P	P	**23 58 01.4**	**-0.8**	
	baz=149,SNR=246								
INK					S	S	**00 02 35.3**	**+3.9**	
	baz=149								
PAMR	**Moraine State**	**25.84**	**85**		IAmb	IAmb	23 58 34.7		
	comp=Z,907nm,1.3s								
SEW	**Seward**	**25.85**	**320**		P	P	**23 58 01.4**	**-1.2**	
	baz=112,SNR=29								
SEW					S	S	**00 02 38.0**	**+6.1**	
	baz=112								
O54A	**Avella**	**25.90**	**87**		IAmb	IAmb	23 58 26.6		
	comp=Z,273nm,1.0s								
O54A					IAMs_20	IAMs_20	00 07 38.3		
	comp=Z,107µm,18.0s								
KNK	**Knik Glacier**	**25.93**	**323**		P	P	**23 58 02.4**	**-1.0**	
	baz=116,SNR=295								
KNK					S	S	**00 02 38.8**	**+5.4**	
	baz=116								
PAOC	**Oil Creek Stat**	**25.95**	**84**		P	P	**23 58 03.2**	**-0.6**	
PAOC					IAmb	IAmb	23 58 20.7		
	comp=Z,464nm,1.1s								
Q54A	**Coxs Mills**	**26.02**	**90**		IAmb	IAmb	23 58 42.1		
	comp=Z,854nm,1.4s								
Q54A					IAMs_20	IAMs_20	00 07 27.6		
	comp=Z,114µm,22.0s								
I26K	**Coal Creek Min**	**26.03**	**333**		IAmb	IAmb	23 58 12.4		
	comp=Z,560nm,1.1s								
I26K	**Coal Creek Min**	**26.03**	**333**		P	P	**23 58 03.2**	**-1.1**	
	baz=130								
I26K					S	S	**00 02 40.7**	**+5.8**	
	baz=130								
K24K	**Donnelly Dome**	**26.04**	**329**		IAMs_20	IAMs_20	00 07 17.2		
	comp=Z,132µm,18.0s								
K24K	**Donnelly Dome**	**26.04**	**329**		P	P	**23 58 03.5**	**-0.9**	
	baz=124,SNR=162								
K24K					S	S	**00 02 40.7**	**+5.6**	
	baz=124								
SML	**Sawmill**	**26.05**	**324**		P	P	**23 58 03.6**	**-0.9**	
	baz=117,SNR=179								
SML					S	S	**00 02 39.0**	**+3.7**	
	baz=117								
V53A	**Saluda**	**26.08**	**98**		IAmb	IAmb	23 58 42.6		
	comp=Z,411nm,1.4s								
VLDQ	**Val d'Or**	**26.11**	**68**		IAmb	IAmb	23 58 13.0		
	comp=Z,531nm,1.3s								
O22K	**Cooper Landing**	**26.12**	**320**		P	P	**23 58 03.7**	**-1.3**	
	baz=112,SNR=38								
O22K					S	S	**00 02 41.3**	**+5.1**	
	baz=112								
Y52A	**Lilburn**	**26.13**	**103**		IAmb	IAmb	23 58 16.6		
	comp=Z,948nm,1.8s								
Y52A					IAMs_20	IAMs_20	00 08 09.7		
	comp=Z,98µm,18.0s								
H27K	**Steamboat Moun**	**26.15**	**336**		IAmb	IAmb	23 58 13.9		
	comp=Z,721nm,1.2s								
H27K					IAMs_20	IAMs_20	00 09 19.1		
	comp=Z,130µm,18.0s								
H27K	**Steamboat Moun**	**26.15**	**336**		P	P	**23 58 03.8**	**-1.6**	
	baz=134,SNR=412								
H27K					S	S	**00 02 40.0**	**+3.2**	
	baz=134								
WAT6	**Susitna Watana**	**26.17**	**326**		P	P	**23 58 04.7**	**-1.1**	
	baz=119,SNR=354								
WAT6					S	S	**00 02 40.9**	**+3.6**	
	baz=119								
S54A	**Dingess, Beckl**	**26.17**	**93**		IAMs_20	IAMs_20	00 08 13.5		
	comp=Z,131µm,19.0s								
DHY	**Denali Highway**	**26.26**	**327**		IAMs_20	IAMs_20	00 07 32.2		
	comp=Z,116µm,21.0s								
DHY	**Denali Highway**	**26.26**	**327**		P	P	**23 58 06.0**	**-0.6**	
	baz=120,SNR=158								
DHY					S	S	**00 02 44.5**	**+5.6**	
	baz=120								
GHO	**Glory Hole Cre**	**26.29**	**323**		IAMs_20	IAMs_20	00 08 57.9		
	comp=Z,77µm,18.0s								
PMR	**Palmer**	**26.30**	**323**		P	P	**23 58 11.5**	**+4.8**	
	comp=Z,282nm,1.9s								
PMR	**Palmer**	**26.30**	**323**		P	P	**23 58 06.5**	**-0.2**	
	baz=115,SNR=28								
PMR					S	S	**00 02 43.9**	**+4.8**	
	baz=115								
BRSE	**Bradley Lake S**	**26.33**	**318**		P	P	**23 58 06.9**	**-0.2**	
	baz=110,SNR=51								
BRSE					S	S	**00 02 45.9**	**+6.2**	
	baz=110								
152A	**Waverly Hall**	**26.34**	**106**		IAMs_20	IAMs_20	00 09 27.4		
	comp=Z,119µm,18.0s								
J25K	**Salcha River,**	**26.35**	**331**		IAMs_20	IAMs_20	00 07 30.5		
	comp=Z,89µm,20.0s								
J25K	**Salcha River,**	**26.35**	**331**		P	P	**23 58 06.9**	**-0.3**	
	baz=126,SNR=175								
J25K					S	S	**00 02 47.9**	**+7.9**	
	baz=126								
RC01	**Rabbit Creek A**	**26.36**	**322**		P	P	**23 58 06.3**	**-1.0**	
	baz=114,SNR=66								
RC01					S	S	**00 02 45.3**	**+5.2**	
	baz=114								
U54A	**Nelsons Funny**	**26.37**	**96**		IAmb	IAmb	23 58 44.4		
	comp=Z,271nm,1.1s								
U54A					IAMs_20	IAMs_20	00 08 21.0		
	comp=Z,145µm,22.0s								
MCWV	**Mont Chateau**	**26.48**	**88**		IAmb	IAmb	23 58 48.0		
	comp=Z,322nm,1.0s								
MCWV	**Mont Chateau**	**26.48**	**88**	⇓	P	P	**23 58 08.0**	**-0.5**	
G27K	**Doyon Strip**	**26.59**	**337**		IAMs_20	IAMs_20	00 09 12.7		
	comp=Z,128µm,21.0s								
G27K	**Doyon Strip**	**26.59**	**337**		P	P	**23 58 08.2**	**-1.2**	
	baz=134,SNR=796								
G27K					S	S	**00 02 49.2**	**+5.5**	
	baz=134								
DELO	**Deloro Mine**	**26.60**	**76**		IAmb	IAmb	23 58 37.8		
	comp=Z,424nm,1.2s								
WAT1	**Susitna Watana**	**26.61**	**326**		P	P	**23 58 08.7**	**-0.9**	
	baz=118								
WAT1					S	S	**00 02 48.5**	**+4.3**	
	baz=118								
KDAK	**Kodiak Island**	**26.68**	**313**		LR	LR	00 07 13.2		
	comp=Z,73µm,21.8s,baz=81,slow=33								
KDAK	**Kodiak Island**	**26.68**	**313**	*d*	P	P	**23 58 09.7**	**-0.5**	
KDAK					pmax	pmax			
	comp=Z,550nm,1.5s								
KDAK					MLR	MLR			
	comp=Z,100µm,22.0s								
KDAK	**Kodiak Island**	**26.68**	**313**		P	P	**23 58 08.6**	**-1.6**	
	baz=104								
KDAK					S	S	**00 02 52.6**	**+7.4**	
	baz=104								
KDAK	**Kodiak Island**	**26.68**	**313**	⇑	P	P	**23 58 14.6**	**+4.4**	
F28M	**Old Crow**	**26.69**	**339**		IAMs_20	IAMs_20	00 09 12.4		
	comp=Z,89µm,19.0s								
F28M	**Old Crow**	**26.69**	**339**		P	P	**23 58 09.4**	**-0.9**	
	baz=138,SNR=281								
F28M					S	S	**00 02 50.1**	**+4.9**	
	baz=138								
HOM	**Homer**	**26.73**	**318**		P	P	**23 58 09.1**	**-1.6**	
	baz=108								
HOM					S	S	**00 02 49.5**	**+3.6**	
	baz=108								
GOGA	**Godfrey**	**26.79**	**103**		IAmb	IAmb	23 58 39.8		
	comp=Z,830nm,1.9s								
GOGA	**Godfrey**	**26.79**	**103**	⇓	P	P	**23 58 11.2**	**-0.2**	
Q20K	**Shuyak Island**	**26.79**	**315**		P	P	**23 58 10.4**	**-0.8**	
	baz=106,SNR=22								
Q20K					S	S	**00 02 50.1**	**+3.1**	
	baz=106								
M22K	**Willow**	**26.80**	**323**		P	P	**23 58 11.4**	**+0.3**	
	baz=114,SNR=30								
M22K					S	S	**00 02 48.3**	**+1.5**	
	baz=114								
HDA	**Harding Lake**	**26.80**	**329**		IAMs_20	IAMs_20	00 08 03.4		
	comp=Z,89µm,19.0s								
HDA	**Harding Lake**	**26.80**	**329**		P	P	**23 58 11.3**	**0.0**	
	baz=123,SNR=294								
HDA					S	S	**00 02 50.2**	**+3.2**	
	baz=123								
E29M	**Blow River**	**26.81**	**341**		P	P	**23 58 10.9**	**-0.4**	
	baz=142								
E29M					S	S	**00 02 50.3**	**+3.3**	
	baz=142								
R55A	**Marlinton**	**26.82**	**91**		IAMs_20	IAMs_20	00 07 55.7		
	comp=Z,121µm,20.0s								
MMNY	**Mt. Morris Dam**	**26.85**	**80**		IAmb	IAmb	23 58 52.7		
	comp=Z,506nm,1.4s								
CAPN	**Captain Cook N**	**26.88**	**320**		P	P	**23 58 10.9**	**-1.0**	
	baz=111								
CAPN					S	S	**00 02 54.3**	**+6.2**	
	baz=111								
451A	**Vernon**	**26.88**	**111**		IAMs_20	IAMs_20	00 09 20.8		
	comp=Z,115µm,21.0s								
OHAK	**Old Harbor**	**26.93**	**312**		P	P	**23 58 17.7**	**+5.3**	
	comp=Z,269nm,2.6s								
OHAK	**Old Harbor**	**26.93**	**312**		P	P	**23 58 12.5**	**+0.1**	
	baz=102,SNR=19								
OHAK					S	S	**00 02 53.0**	**+4.0**	
	baz=102								
PRP	**Porcupine Dome**	**26.94**	**332**		IAmb	IAmb	23 58 18.9		
	comp=Z,489nm,1.2s								
PRP	**Porcupine Dome**	**26.94**	**332**		P	P	**23 58 12.7**	**0.0**	
	baz=127,SNR=353								
PRP					S	S	**00 02 53.2**	**+3.7**

G26K IAMs_20 IAMs_20 00 09 54.6
comp=Z,93µm,19.0s
G26K Porcupine Rive 27.30 336 P **P** **23 58 15.0 -0.6**
G26K baz=131,SNR=437 S **S** **00 03 00.9 +6.1**
baz=131
E28M Babbage River 27.36 341 IAmb IAmb 23 58 27.4
E28M Babbage River 27.36 341 P **P** **23 58 15.6 -0.7**
E28M baz=140,SNR=74 S **S** **00 02 59.6 +3.9**
baz=140
POKR Poker Plat Res 27.37 331 P **P** **23 58 15.5 -0.9**
POKR baz=124 S **S** **00 02 58.8 +2.9**
baz=124
COLA College 27.38 330 P **P** **23 58 18.9 +2.5**
comp=Z,384nm,1.6s
COLA College 27.38 330 P **P** **23 58 17.3 +0.8**
COLA College 27.38 330 IAMs_20 IAMs_20 00 08 37.8
comp=Z,99µm,20.0s
COLA College 27.38 330*d i* P **P** **23 58 16.9 +0.5**
COLA pmax pmax
comp=Z,1µm,1.5s
COLA College 27.38 330 P **P** **23 58 16.0 -0.4**
COLA baz=123 S **S** **00 02 59.8 +3.8**
baz=123
COLA College 27.38 330 P **P** **23 58 17.8 +1.4**
COLA College 27.38 330 ⇑P **P** **23 58 17.6 +1.1**
L22K Petersville 27.39 324 IAMs_20 IAMs_20 00 09 18.6
comp=Z,98µm,21.0s
154A Montrose 27.49 104 IAmb IAmb 23 58 45.8
comp=Z,630nm,1.1s
P19K Oil Pt 27.50 317 P **P** **23 58 15.7 -1.9**
P19K baz=107,SNR=25 S **S** **00 03 02.5 +4.4**
baz=107
SKT Skwentna 27.50 323 IAMs_20 IAMs_20 00 09 37.9
comp=Z,102µm,19.0s
SKT Skwentna 27.50 323 P **P** **23 58 14.3 -3.3**
SKT baz=113,SNR=72 S **S** **00 03 02.6 +4.5**
baz=113
Q19K Cape Douglas, 27.51 316 P **P** **23 58 14.9 -2.8**
Q19K baz=105 S **S** **00 03 03.5 +5.2**
baz=105
RED Redoubt Volcan 27.51 319 P **P** **23 58 18.1 +0.4**
N20K Mount Spurr 27.51 321 P **P** **23 58 15.3 -2.5**
N20K baz=111 S **S** **00 03 00.0 +1.6**
baz=111
SPCR Spurr Chakacha 27.51 321 P **P** **23 58 16.4 -1.4**
SPCR baz=111,SNR=65 S **S** **00 03 00.0 +1.6**
baz=111
SSPA Standing Stone 27.52 85 P **P** **23 58 17.0 -1.0**
SSPA IAmb IAmb 23 58 57.5
comp=Z,527nm,1.6s
SSPA Standing Stone 27.52 85 IAMs_20 IAMs_20 00 08 02.1
comp=Z,76µm,18.0s
SSPA Standing Stone 27.52 85 ⇑P **P** **23 58 16.4 -1.6**
ILSW Iliamna Southw 27.55 318 P **P** **23 58 18.6 +0.4**
ILSW IAmb IAmb 23 58 34.5
comp=Z,518nm,1.3s
E27K Coleen River 27.56 339 IAmb IAmb 23 58 32.1
E27K comp=Z,552nm,1.2s IAMs_20 IAMs_20 00 10 25.3
comp=Z,131µm,18.0s
E27K Coleen River 27.56 339 P **P** **23 58 16.8 -1.3**
E27K baz=136,SNR=137 S **S** **00 03 01.4 +2.5**
baz=136
TRF Thorofare Moun 27.60 326 IAMs_20 IAMs_20 00 09 30.5
comp=Z,79µm,19.0s
TRF Thorofare Moun 27.60 326 P **P** **23 58 17.4 -1.2**
TRF baz=117,SNR=137 S **S** **00 03 03.5 +3.5**
baz=117
NEA2 Nenana 27.68 329 IAmb IAmb 23 58 30.2
comp=Z,585nm,1.7s
NEA2 Nenana 27.68 329 P **P** **23 58 18.3 -0.9**
NEA2 baz=120,SNR=46 S **S** **00 03 05.1 +4.2**
baz=120
D28M Stokes Point 27.74 342 P **P** **23 58 19.4 -0.1**
D28M baz=142 S **S** **00 03 06.6 +5.0**
baz=142
GAC Glen Almond 27.82 73 ⇑P **P** **23 58 20.2 -0.3**
M57A Sunshine Farm, 27.83 83 IAMs_20 IAMs_20 00 09 00.1
comp=Z,135µm,20.0s
K57A Scipio Center 27.83 80 IAmb IAmb 23 59 00.0
comp=Z,580nm,1.6s
TIGA Tifton 27.84 107 IAmb IAmb 23 58 47.4
TIGA comp=Z,668nm,1.6s IAMs_20 IAMs_20 00 09 34.1
comp=Z,124µm,19.0s
P57A Homestead Farm 27.85 87 IAmb IAmb 23 58 55.9
comp=Z,463nm,1.4s
S57A Dark Hollow, R 27.87 91 IAmb IAmb 23 59 07.0
comp=Z,261nm,1.2s
JSC Jenkinsville 27.88 100 IAmb IAmb 23 58 49.4
comp=Z,512nm,1.2s
G25K Bearman Lake 27.89 334 P **P** **23 58 19.9 -1.0**
G25K baz=128,SNR=212 S **S** **00 03 04.3 +0.3**
baz=128
KTH Kantishna Hill 27.90 326 IAMs_20 IAMs_20 00 08 24.5
comp=Z,102µm,18.0s
F26K Sheenjek River 27.90 337 IAmb IAmb 23 58 37.7
comp=Z,763nm,1.6s
F26K IAMs_20 IAMs_20 00 10 02.5
comp=Z,111µm,19.0s
F26K Sheenjek River 27.90 337 P **P** **23 58 19.3 -1.9**
F26K baz=132,SNR=294 S **S** **00 03 07.1 +2.7**
baz=132
H24K Noodor Dome 27.92 332 P **P** **23 58 21.8 +0.5**
H24K Noodor Dome 27.92 332 P **P** **23 58 20.9 -0.5**
H24K baz=124,SNR=834 S **S** **00 03 06.4 +1.6**
baz=124
CHIR Chirikof Islan 27.98 309 IAMs_20 IAMs_20 00 07 18.7
comp=Z,82µm,20.0s
CHIR Chirikof Islan 27.98 309 P **P** **23 58 21.4 -0.5**
baz=97
I23K Minto, Yukon-K 28.07 330 IAMs_20 IAMs_20 00 08 41.0
comp=Z,70µm,18.0s
I23K Minto, Yukon-K 28.07 330 P **P** **23 58 21.8 -0.8**
I23K baz=121,SNR=106 S **S** **00 03 06.8 -0.1**
baz=121
A36M Sachs Harbour 28.08 353 IAmb IAmb 23 59 07.1
comp=Z,275nm,0.8s
A36M IAMs_20 IAMs_20 00 09 22.3
comp=Z,120µm,20.0s
A36M Sachs Harbour 28.08 353 P **P** **23 58 21.9 -0.7**
A36M baz=164,SNR=106 S **S** **00 03 10.6 +3.6**
baz=164
Q18K Katmai Hardscr 28.13 315 P **P** **23 58 22.2 -1.1**
Q18K baz=103,SNR=43 S **S** **00 03 12.6 +4.3**
baz=103
PPLA Purkeypile 28.14 324 IAMs_20 IAMs_20 00 09 40.9
comp=Z,81µm,20.0s
PPLA Purkeypile 28.14 324 P **P** **23 58 22.8 -0.7**
PPLA baz=114,SNR=37 S **S** **00 03 10.9 +2.5**
baz=114
M20K Styx River 28.17 322 IAMs_20 IAMs_20 00 10 10.6
comp=Z,85µm,20.0s
M20K Styx River 28.17 322 P **P** **23 58 22.7 -0.9**
M20K baz=111 S **S** **00 03 08.5 -0.2**
baz=111
BPAW Bear Paw Mtn. 28.17 327 IAMs_20 IAMs_20 00 08 42.7
comp=Z,124µm,21.0s
BPAW Bear Paw Mtn. 28.17 327 P **P** **23 58 23.5 0.0**
BPAW baz=117,SNR=63 S **S** **00 03 13.0 +4.3**
baz=117
O19K Port Alsworth 28.18 318 P **P** **23 58 23.8 +0.2**
O19K baz=106,SNR=39 S **S** **00 03 11.2 +2.5**
baz=106

D27M Malcolm River 28.18 341 P **P** **23 58 22.7 -1.0**
D27M baz=139,SNR=48 S **S** **00 03 11.4 +2.6**
baz=139
BIRD Birdtown, Kers 28.25 98 IAmb IAmb 23 59 06.3
comp=Z,234nm,1.1s
F25K Christian Rive 28.27 336 IAmb IAmb 23 58 35.1
comp=Z,679nm,1.6s
F25K IAMs_20 IAMs_20 00 10 36.2
comp=Z,111µm,20.0s
F25K Christian Rive 28.27 336 P **P** **23 58 22.1 -2.4**
F25K baz=130,SNR=215 S **S** **00 03 13.0 +2.8**
baz=130
G24K Hadweenzic Riv 28.29 333 P **P** **23 58 22.7 -1.9**
G24K baz=126,SNR=644 S **S** **00 03 14.9 +4.5**
baz=126
N58A Sunbury 28.29 84 IAmb IAmb 23 59 18.0
comp=Z,228nm,1.1s
N58A IAMs_20 IAMs_20 00 08 24.3
comp=Z,92µm,22.0s
TRQ Mont Tremblant 28.35 72 IAmb IAmb 23 58 32.9
comp=Z,334nm,1.1s
BINY Binghamton 28.36 81 ⇓P **P** **23 58 25.1 -0.4**
P18K Big Mountain, 28.41 316 P **P** **23 58 25.9 +0.2**
P18K Big Mountain, 28.41 316 P **P** **23 58 23.2 -2.6**
P18K baz=104 S **S** **00 03 11.5 -1.0**
baz=104
N19K Bonanza Creek 28.43 319 P **P** **23 58 23.9 -2.1**
N19K baz=107,SNR=174 S **S** **00 03 11.8 -1.2**
baz=107
H23K Yukon River 28.49 331 IAMs_20 IAMs_20 00 09 33.0
comp=Z,78µm,19.0s
H23K Yukon River 28.49 331 P **P** **23 58 24.5 -1.9**
H23K baz=122 S **S** **00 03 14.9 +1.3**
baz=122
PAGS Pennsylvania G 28.50 85 IAmb IAmb 23 59 28.4
comp=Z,270nm,1.1s
O18K Koktuh Hills 28.52 317 P **P** **23 58 24.6 -2.0**
O18K baz=105 S **S** **00 03 14.2 +0.1**
baz=105
MLY Manley 28.52 329 P **P** **23 58 25.2 -1.5**
baz=119,SNR=72
MLY S **S** **00 03 16.1 +1.9**
baz=119
R58B Mineral 28.56 90 IAMs_20 IAMs_20 00 10 36.7
comp=Z,89µm,21.0s
E25K Arctic Village 28.59 337 IAMs_20 IAMs_20 00 10 34.6
comp=Z,121µm,19.0s
E25K Arctic Village 28.59 337 P **P** **23 58 25.6 -1.7**
E25K baz=131,SNR=230 S **S** **00 03 19.4 +4.2**
baz=131
CHUM Lake Minchumin 28.60 326 P **P** **23 58 26.1 -1.2**
CHUM baz=115 S **S** **00 03 18.6 +3.2**
baz=115
R17L Mt. Peulik Vol 28.64 312 P **P** **23 58 25.9 -1.8**
R17L baz=100 S **S** **00 03 18.8 +2.7**
baz=100
LONY Lake Ozonia 28.68 75 ⇑P **P** **23 58 27.9 -0.4**
SDMD Soldier's Deli 28.72 87 P **P** **23 58 28.2 -0.5**
KSPA Keystone Colle 28.72 82 P **P** **23 58 28.3 -0.4**
KSPA IAmb IAmb 23 59 29.7
comp=Z,274nm,1.4s
M19K Big River Lodg 28.73 321 IAMs_20 IAMs_20 00 10 20.6
comp=Z,81µm,18.0s
M19K Big River Lodg 28.73 321 P **P** **23 58 25.9 -2.7**
M19K baz=109 S **S** **00 03 20.6 +3.1**
baz=109
CBN Corbin Frederi 28.82 89 IAmb IAmb 23 59 12.1
comp=Z,300nm,1.1s
MVL Millersville 28.85 85 IAmb IAmb 23 59 18.9
comp=Z,278nm,1.3s
F24K Squaw Lake 28.90 334 P **P** **23 58 29.2 -0.8**
F24K baz=127,SNR=365 S **S** **00 03 26.5 +6.4**
baz=127
P17K Kvichak River 28.97 315 P **P** **23 58 29.5 -1.2**
P17K baz=102 S **S** **00 03 24.4 +3.2**
baz=102
Q16K King Salmon 28.98 314 P **P** **23 58 30.5 -0.2**
Q16K baz=101,SNR=23 S **S** **00 03 23.6 +2.3**
baz=101
L19K White Mountain 29.03 322 IAMs_20 IAMs_20 00 10 29.4
comp=Z,96µm,20.0s
L19K White Mountain 29.03 322 P **P** **23 58 29.8 -1.5**
L19K baz=109 S **S** **00 03 24.1 +1.9**
baz=109
J59A Piesco 29.04 77 IAmb IAmb 23 59 09.3
comp=Z,333nm,1.6s
N18K Kilae Creek 29.06 319 P **P** **23 58 29.7 -1.8**
N18K baz=105,SNR=137 S **S** **00 03 27.0 +4.3**
baz=105
X58A Rowland 29.10 97 P **P** **23 58 31.8 -0.3**
X58A IAmb IAmb 23 59 02.0
comp=Z,358nm,1.4s
K20K Telida 29.11 324 IAMs_20 IAMs_20 00 10 21.5
comp=Z,93µm,18.0s
K20K Telida 29.11 324 P **P** **23 58 29.5 -2.4**
K20K baz=112 S **S** **00 03 27.4 +4.0**
baz=112
C27K Jago River 29.13 340 IAMs_20 IAMs_20 00 10 02.8
comp=Z,125µm,20.0s
C27K Jago River 29.13 340 P **P** **23 58 28.7 -3.3**
C27K baz=135 S **S** **00 03 29.4 +5.9**
baz=135
G23K Bananza Creek 29.13 332 IAMs_20 IAMs_20 00 09 20.9
comp=Z,74µm,18.0s
G23K Bananza Creek 29.13 332 P **P** **23 58 30.8 -1.3**
G23K baz=123,SNR=212 S **S** **00 03 30.3 +6.6**
baz=123
MNTQ Montreal, Queb 29.14 73 IAmb IAmb 23 58 43.8
comp=Z,549nm,1.9s
H22K Ishtalitna Cre 29.18 330 P **P** **23 58 30.2 -2.3**
H22K baz=120,SNR=117 S **S** **00 03 28.9 +4.5**
baz=120
Y58A Scranton 29.20 99 IAMs_20 IAMs_20 00 09 15.9
comp=Z,104µm,18.0s
M18K Stony River 29.26 320 P **P** **23 58 30.4 -2.8**
M18K baz=107,SNR=105 S **S** **00 03 24.3 -1.4**
baz=107
NHSC New Hope 29.26 101 ⇑P **P** **23 58 34.5 +1.0**
R16K Pilot Point 29.27 312 P **P** **23 58 30.6 -2.7**
R16K baz=98 S **S** **00 03 28.8 +2.9**
baz=98
257A Skidaway Islan 29.30 103 IAMs_20 IAMs_20 00 09 56.7
comp=Z,113µm,20.0s
FRNY Flat Rock 29.32 74 IAmb IAmb 23 58 42.9
comp=Z,502nm,1.9s
456A Hilliard 29.34 106 IAmb IAmb 23 58 44.4
comp=Z,411nm,1.2s
E24K Your Creek 29.42 335 IAMs_20 IAMs_20 00 11 12.5
comp=Z,67µm,18.0s
E24K Your Creek 29.42 335 P **P** **23 58 31.9 -2.7**
E24K baz=127,SNR=357 S **S** **00 03 33.7 +5.5**
baz=127
O17K Koliganek Bris 29.42 316 P **P** **23 58 32.2 -2.4**
O17K baz=102 S **S** **00 03 30.2 +1.9**
baz=102
W59A Clinton 29.43 96 P **P** **23 58 35.0 0.0**
W59A IAmb IAmb 23 59 18.4
comp=Z,398nm,1.4s
J20K Nowinta River 29.46 326 IAMs_20 IAMs_20 00 09 32.7
comp=Z,94µm,19.0s
J20K Nowinta River 29.46 326 P **P** **23 58 32.1 -2.8**
J20K baz=113,SNR=52 S **S** **00 03 33.2 +4.3**
baz=113

COLD Coldfoot 29.47 333 IAMs_20 IAMs_20 00 11 34.9
comp=Z,63µm,19.0s
COLD Coldfoot 29.47 333 P **P** **23 58 32.4 -2.7**
COLD baz=123,SNR=225 S **S** **00 03 33.3 +4.4**
baz=123
H21K Melozitna Rive 29.58 329 IAMs_20 IAMs_20 00 09 27.8
comp=Z,105µm,21.0s
H21K Melozitna Rive 29.58 329 P **P** **23 58 34.1 -2.0**
H21K baz=117,SNR=180 S **S** **00 03 33.4 +2.6**
baz=117
CHGN Chignik 29.58 309 P **P** **23 58 32.4 -3.7**
CHGN baz=95 S **S** **00 03 33.3 +2.5**
baz=95
D25K Kavik River 29.60 338 IAMs_20 IAMs_20 00 10 42.4
comp=Z,119µm,19.0s
D25K Kavik River 29.60 338 P **P** **23 58 33.7 -2.6**
D25K baz=131 S **S** **00 03 34.5 +3.4**
baz=131
C26K Camden Bay 29.63 340 P **P** **23 58 33.4 -3.0**
C26K baz=134,SNR=474 S **S** **00 03 33.9 +2.5**
baz=134
N17K Nushagak Hills 29.64 318 P **P** **23 58 33.7 -2.9**
N17K baz=104 S **S** **00 03 33.0 +1.2**
baz=104
P16K Nushagak River 29.73 315 P **P** **23 58 35.0 -2.3**
P16K baz=100 S **S** **00 03 35.5 +2.4**
baz=100
G22K Bettles 29.74 332 P **P** **23 58 35.3 -2.1**
G22K baz=121 S **S** **00 03 36.5 +3.4**
baz=121
E23K Chandalar 29.75 335 P **P** **23 58 34.9 -2.8**
E23K baz=125 S **S** **00 03 39.3 +5.8**
baz=125
656A Willston 29.82 109 P **P** **23 58 38.5 0.0**
656A IAmb IAmb 23 58 58.6
comp=Z,653nm,1.6s
I20K Naaghedeneel 29.84 327 P **P** **23 58 38.7 +0.4**
I20K IAmb IAmb 23 59 33.4
comp=Z,306nm,1.1s
I20K IAMs_20 IAMs_20 00 09 45.7
comp=Z,119µm,21.0s
I20K Naaghedeneel 29.84 327 P **P** **23 58 35.4 -2.9**
I20K baz=114 S **S** **00 03 36.5 +1.8**
baz=114
L18K Granite Mounta 29.86 321 IAMs_20 IAMs_20 00 10 57.3
comp=Z,73µm,18.0s
L18K Granite Mounta 29.86 321 P **P** **23 58 34.5 -4.0**
L18K baz=107,SNR=256 S **S** **00 03 38.4 +3.3**
baz=107
O16K Kokwok River B 29.88 316 P **P** **23 58 35.5 -3.3**
O16K baz=101 S **S** **00 03 38.6 +3.1**
baz=101
M17K Holitna River 29.98 320 P **P** **23 58 36.4 -3.1**
M17K baz=105 S **S** **00 03 42.1 +5.1**
baz=105
J19K Poorman 29.99 325 IAMs_20 IAMs_20 00 10 46.7
comp=Z,87µm,18.0s
J19K Poorman 29.99 325 P **P** **23 58 38.0 -1.6**
J19K baz=111,SNR=119 S **S** **00 03 40.5 +3.3**
baz=111
IMAR Indian Mountai 30.07 329 P **P** **23 58 39.9 -0.5**
TOLK Toolik Lake Re 30.08 336 P **P** **23 58 39.1 -1.4**
TOLK baz=126,SNR=385 S **S** **00 03 39.5 +1.0**
baz=126
P61A Hammonton 30.08 85 IAMs_20 IAMs_20 00 09 39.9
comp=Z,79µm,18.0s
TLIG Tlapa 30.16 147 P **P** **23 58 42.1 +0.4**
CHNA Chernabura Isl 30.16 306 P P 23 58 46.1 +4.8
comp=Z,316nm,2.0s
CHNA Chernabura Isl 30.16 306 P **P** **23 58 38.8 -2.4**
CHNA baz=92 S **S** **00 03 42.0 +2.0**
baz=92
CNBA Chernabura Isl 30.16 306 IAMs_20 IAMs_20 00 08 43.6
comp=Z,73µm,20.0s
D24K Happy Valley 30.17 337 IAmb IAmb 23 58 47.9
comp=Z,389nm,1.2s
D24K IAMs_20 IAMs_20 00 11 43.4
comp=Z,116µm,20.0s
D24K Happy Valley 30.17 337 P **P** **23 58 39.5 -1.6**
D24K baz=128 S **S** **00 03 43.0 +3.1**
baz=128
ILON Igloolik, Nuna 30.18 23 P **P** **23 58 40.2 -1.0**
ILON IAmb IAmb 23 58 48.2
comp=Z,247nm,1.0s
S14K Fog Glacier 30.21 309 P **P** **23 58 38.4 -3.4**
S14K baz=94 S **S** **00 03 39.8 -1.2**
baz=94
G21K Allakaket 30.23 330 P **P** **23 58 39.7 -2.1**
G21K baz=118 S **S** **00 03 42.6 +1.7**
baz=118
LDAQ Lac Daran 30.26 68 P **P** **23 58 41.8 -0.5**
J18K Innoko River 30.26 324 IAMs_20 IAMs_20 00 11 30.0
comp=Z,66µm,20.0s
J18K Innoko River 30.26 324 P **P** **23 58 40.2 -1.9**
J18K baz=109 S **S** **00 03 43.8 +2.3**
baz=109
CPNY Central Park 30.27 82 IAmb IAmb 23 59 39.5
comp=Z,289nm,1.3s
F22K John River 30.27 333 P **P** **23 58 40.7 -1.4**
F22K baz=121,SNR=463 S **S** **00 03 44.7 +3.2**
baz=121
H20K Anotleneega Mo 30.28 328 P **P** **23 58 40.1 -2.2**
H20K baz=115,SNR=154 S **S** **00 03 44.0 +2.2**
baz=115
N16K Nishlik Lake 30.39 317 P **P** **23 58 41.6 -1.6**
N16K baz=102,SNR=101 S **S** **00 03 46.6 +3.0**
baz=102
E22K Anaktuvuk Pass 30.48 334 IAMs_20 IAMs_20 00 11 51.6
comp=Z,95µm,20.0s
E22K Anaktuvuk Pass 30.48 334 P **P** **23 58 41.8 -2.2**
E22K baz=122,SNR=1000 S **S** **00 03 46.6 +1.7**
baz=122
C24K Franklin Bluff 30.49 338 IAMs_20 IAMs_20 00 10 43.7
comp=Z,79µm,18.0s
C24K Franklin Bluff 30.49 338 P **P** **23 58 42.3 -1.6**
C24K baz=129,SNR=380 S **S** **00 03 45.8 +1.0**
baz=129
HNH Hanover 30.52 76 IAmb IAmb 23 58 56.7
comp=Z,505nm,1.7s
F21K Alatna River 30.56 332 P **P** **23 58 43.6 -1.1**
F21K baz=119,SNR=90 S **S** **00 03 49.1 +2.9**
baz=119
L17K Donlin 30.56 321 P **P** **23 58 42.9 -1.8**
L17K baz=105 S **S** **00 03 48.1 +2.0**
baz=105
D23K Nanushuk River 30.60 336 P **P** **23 58 42.2 -2.8**
D23K baz=125 S **S** **00 03 47.6 +1.0**
baz=125
M16K Timber Creek 30.60 318 P **P** **23 58 43.6 -1.5**
M16K baz=103 S **S** **00 03 49.3 +2.6**
baz=103
L61B Northampton 30.62 79 P **P** **23 58 45.2 -0.3**
L61B IAmb IAmb 23 58 57.9
comp=Z,370nm,1.7s
LBNH Lisbon 30.62 75 ⇓P **P** **23 58 46.0 +0.5**
O15K Ungalikthiuk R 30.68 315 P **P** **23 58 44.5 -1.3**
O15K baz=99,SNR=19 S **S** **00 03 47.4 -0.7**
baz=99

SDPT	**Sand Point**	**30.69**	**307**	P	P	23 58 51.1	+5.2
	comp=Z,367nm,1.7s						
SDPT	**Sand Point**	**30.69**	**307**	P	**P**	**23 58 43.8**	**-2.1**
	baz=92						
SDPT				S	**S**	**00 03 46.6**	**-1.6**
	baz=92						
K17K	**Iditarod**	**30.72**	**322**	IAMs_20	IAMs_20	00 11 40.1	
	comp=Z,79µm,18.0s						
K17K	**Iditarod**	**30.72**	**322**	P	**P**	**23 58 44.3**	**-1.8**
	baz=106,SNR=112						
K17K				S	**S**	**00 03 49.5**	**+0.9**
	baz=106						
GCSA	**Galena City Sc**	**30.77**	**326**	P	**P**	**23 58 43.9**	**-2.6**
	baz=111						
GCSA				S	**S**	**00 03 50.0**	**+0.7**
	baz=111						
H19K	**Roundabout Mou**	**30.90**	**328**	P	**P**	**23 58 45.0**	**-2.6**
	baz=113						
H19K				S	**S**	**00 03 50.2**	**-1.0**
	baz=113						
LMQ	**La Malbaie**	**30.94**	**68**	P	**P**	**23 58 47.5**	**-0.7**
LMQ				IAmb	IAmb	23 59 06.6	
	comp=Z,280nm,1.2s						
N15K	**Kwethluk River**	**30.98**	**317**	P	**P**	**23 58 45.9**	**-2.5**
	baz=100						
N15K				S	**S**	**00 03 54.4**	**+1.7**
	baz=100						
L16K	**Owhat River**	**31.00**	**320**	P	**P**	**23 58 46.5**	**-2.0**
	baz=103,SNR=172						
L16K				S	**S**	**00 03 56.4**	**+3.4**
	baz=103						
C23K	**Itkillik River**	**31.09**	**337**	IAMs_20	IAMs_20	00 12 47.6	
	comp=Z,98µm,18.0s						
C23K	**Itkillik River**	**31.09**	**337**	P	**P**	**23 58 47.0**	**-2.2**
	baz=126						
C23K				S	**S**	**00 03 58.1**	**+3.9**
	baz=126						
J17K	**VABM Dome**	**31.25**	**323**	IAMs_20	IAMs_20	00 11 41.1	
	comp=Z,66µm,20.0s						
J17K	**VABM Dome**	**31.25**	**323**	P	**P**	**23 58 49.0**	**-1.8**
	baz=106,SNR=54						
J17K				S	**S**	**00 03 59.5**	**+2.5**
	baz=106						
F20K	**Avaraart Lake**	**31.26**	**331**	P	**P**	**23 58 49.0**	**-1.8**
	baz=116,SNR=103						
F20K				S	**S**	**00 04 02.2**	**+5.3**
	baz=116						
E21K	**Killik River**	**31.33**	**334**	IAMs_20	IAMs_20	00 12 37.0	
	comp=Z,69µm,19.0s						
E21K	**Killik River**	**31.33**	**334**	P	**P**	**23 58 49.5**	**-2.0**
	baz=120						
E21K				S	**S**	**00 04 00.2**	**+2.1**
	baz=120						
M15K	**Kasigluk River**	**31.36**	**318**	P	**P**	**23 58 49.4**	**-2.4**
	baz=100,SNR=121						
M15K				S	**S**	**00 04 02.2**	**+3.5**
	baz=100						
DWPF	**Disney Wildern**	**31.37**	**110**	P	**P**	**23 58 52.6**	**+0.4**
DWPF	**Disney Wildern**	**31.37**	**110**	⇓P	**P**	**23 58 52.7**	**+0.6**
G19K	**Purcell Mounta**	**31.38**	**328**	IAMs_20	IAMs_20	00 12 03.4	
	comp=Z,105µm,20.0s						
G19K	**Purcell Mounta**	**31.38**	**328**	P	**P**	**23 58 49.8**	**-2.1**
	baz=113,SNR=57						
G19K				S	**S**	**00 04 03.2**	**+4.4**
	baz=113						
HRV	**Adam Dziewonsk**	**31.39**	**78**	P	**P**	**23 58 52.1**	**-0.1**
HRV	**Adam Dziewonsk**	**31.39**	**78**	IAMs_20	IAMs_20	00 10 33.1	
	comp=Z,106µm,18.0s						
HRV	**Adam Dziewonsk**	**31.39**	**78**	P	**P**	**23 58 52.1**	**-0.1**
HRV				pmax	pmax		
	comp=Z,131nm,1.4s						
HRV				MLR	MLR		
	comp=Z,106µm,18.0s						
M63A	**Gales Ferry**	**31.41**	**80**	IAMs_20	IAMs_20	00 10 47.8	
	comp=Z,113µm,20.0s						
MYIG	**Merida**	**31.43**	**130**	P	**P**	**23 58 54.8**	**+2.1**
O14K	**Tigyukauivet M**	**31.43**	**315**	P	**P**	**23 58 50.6**	**-1.8**
	baz=97						
O14K				S	**S**	**00 04 03.6**	**+3.9**
	baz=97						
H18K	**Honhosa River**	**31.51**	**326**	IAMs_20	IAMs_20	00 10 48.8	
	comp=Z,72µm,20.0s						
H18K	**Honhosa River**	**31.51**	**326**	P	**P**	**23 58 50.0**	**-3.1**
	baz=110						
H18K				S	**S**	**00 04 02.6**	**+1.7**
	baz=110						
KUQ	**Kuujjuuaa**	**31.57**	**48**	IAmb	IAmb	23 59 39.1	
	comp=Z,276nm,1.5s						
RES	**Resolute Bay**	**31.67**	**10**	P	**P**	**23 58 53.6**	**-0.8**
	comp=Z,87nm,1.1s,baz=212,slow=10,SNR=36						
RES				LR	LR	00 12 07.2	
	comp=Z,76µm,20.0s,baz=207,slow=37 comp=Z,87nm,1.1s						
RES	**Resolute Bay**	**31.67**	**10**	P	**P**	**23 58 52.9**	**-1.5**
RES				IAmb	IAmb	23 59 05.8	
	comp=Z,286nm,1.2s						
RES	**Resolute Bay**	**31.67**	**10**	P	**P**	**23 58 52.9**	**-1.5**
RES				pmax	pmax		
	comp=Z,286nm,1.3s						
RES	**Resolute Bay**	**31.67**	**10**	⇓P	**P**	**23 58 53.1**	**-1.2**
BCX	**Boston College**	**31.71**	**78**	IAMs_20	IAMs_20	00 10 43.8	
	comp=Z,102µm,19.0s						
N14K	**Kuskokwak Cree**	**31.73**	**316**	P	**P**	**23 58 52.9**	**-2.1**
	baz=98						
N14K				S	**S**	**00 04 03.6**	**-0.7**
	baz=98						
G18K	**Tagagawik**	**31.88**	**328**	P	**P**	**23 58 54.5**	**-1.8**
	baz=111,SNR=99						
G18K				S	**S**	**00 04 08.5**	**+1.8**
	baz=111						
J16K	**Anvik River**	**31.89**	**322**	IAMs_20	IAMs_20	00 12 32.8	
	comp=Z,70µm,18.0s						
J16K	**Anvik River**	**31.89**	**322**	P	**P**	**23 58 54.3**	**-2.1**
	baz=105						
J16K				S	**S**	**00 04 06.8**	**0.0**
	baz=105						
F19K	**Shaleruckik Mo**	**31.90**	**330**	P	**P**	**23 58 54.8**	**-1.7**
	baz=113,SNR=50						
F19K				S	**S**	**00 04 06.1**	**-0.9**
	baz=113						
L15K	**Ungalak Mounta**	**31.93**	**319**	P	**P**	**23 58 54.3**	**-2.4**
	baz=101,SNR=122						
L15K				S	**S**	**00 04 08.0**	**+0.5**
	baz=101						
C21K	**Knifeblade Rid**	**31.94**	**334**	P	**P**	**23 58 54.3**	**-2.5**
	baz=120						
C21K				S	**S**	**00 04 07.3**	**-0.3**
	baz=120						
E20K	**Nigu River**	**31.96**	**332**	P	**P**	**23 58 54.8**	**-2.3**
	baz=117						
E20K				S	**S**	**00 04 08.3**	**+0.3**
	baz=117						
E19K	**Redstone River**	**31.96**	**331**	P	**P**	**23 58 54.5**	**-2.6**
	baz=115						
E19K				S	**S**	**00 04 06.6**	**-1.4**
	baz=115						
M14K	**Bethel**	**31.99**	**317**	P	**P**	**23 58 55.5**	**-1.7**
	baz=99,SNR=181						
M14K				S	**S**	**00 04 07.7**	**-0.7**
	baz=99						
H17K	**Granite Mounta**	**32.06**	**326**	P	**P**	**23 58 54.7**	**-3.2**
	baz=108,SNR=137						
H17K				S	**S**	**00 04 06.5**	**-3.0**
	baz=108						
K15K	**Wolf Creek Mou**	**32.07**	**320**	IAMs_20	IAMs_20	00 12 27.8	
	comp=Z,60µm,19.0s						
K15K	**Wolf Creek Mou**	**32.07**	**320**	P	**P**	**23 58 55.8**	**-2.2**
	baz=102,SNR=138						
K15K				S	**S**	**00 04 11.0**	**+1.3**
	baz=102						
L64A	**Middleborough**	**32.08**	**79**	P	**P**	**23 58 58.4**	**+0.1**
L64A				IAmb	IAmb	23 59 06.2	
	comp=Z,353nm,1.8s						
I17K	**Unalakleet**	**32.08**	**323**	IAMs_20	IAMs_20	00 12 15.0	
	comp=Z,81µm,19.0s						
I17K	**Unalakleet**	**32.08**	**323**	P	**P**	**23 58 55.0**	**-3.1**
	baz=105						
I17K				S	**S**	**00 04 08.5**	**-1.3**
	baz=105						
CMIG	**Matias Romero**	**32.12**	**142**	P	**P**	**23 58 58.4**	**-0.4**
	comp=Z,186nm,1.0s,baz=332,slow=7.7,SNR=108						
CMIG				LR	LR	00 13 09.3	
	comp=Z,86µm,19.2s,baz=282,slow=39 comp=Z,186nm,1.0s						
B21K	**Ikpikpuk River**	**32.13**	**335**	IAMs_20	IAMs_20	00 12 49.1	
	comp=Z,85µm,19.0s						
B21K	**Ikpikpuk River**	**32.13**	**335**	P	**P**	**23 58 56.8**	**-1.6**
	baz=121,SNR=284						
B21K				S	**S**	**00 04 09.8**	**-0.6**
	baz=121						
PKME	**Peaks-Kenny Pk**	**32.16**	**72**	IAmb	IAmb	23 59 09.8	
	comp=Z,324nm,1.6s						
PKME	**Peaks-Kenny Pk**	**32.16**	**72**	⇑P	**P**	**23 58 59.4**	**+0.5**
B22K	**Teshekpuk Lake**	**32.16**	**337**	IAMs_20	IAMs_20	00 13 11.1	
	comp=Z,79µm,18.0s						
B22K	**Teshekpuk Lake**	**32.16**	**337**	P	**P**	**23 58 57.0**	**-1.7**
	baz=123,SNR=415						
B22K				S	**S**	**00 04 13.7**	**+2.7**
	baz=123						
SCIG	**Sabancuy**	**32.29**	**134**	P	**P**	**23 59 01.6**	**+1.3**
D20K	**Etivluk River**	**32.31**	**333**	IAMs_20	IAMs_20	00 10 52.9	
	comp=Z,92µm,18.0s						
D20K	**Etivluk River**	**32.31**	**333**	P	**P**	**23 58 56.5**	**-3.6**
	baz=117						
D20K				S	**S**	**00 04 15.8**	**+2.4**
	baz=117						
M65A	**Busby, Falmout**	**32.34**	**79**	P	**P**	**23 58 58.9**	**-1.7**
	baz=290						
M65A				S	**S**	**00 04 17.6**	**+3.4**
	baz=290						
SCHQ	**Schefferville**	**32.34**	**54**	P	**P**	**23 58 59.5**	**-1.0**
	comp=Z,50nm,1.0s,baz=264,slow=9.1,SNR=22						
SCHQ				LR	LR	00 11 38.8	
	comp=Z,56µm,21.9s,baz=272,slow=36 comp=Z,50nm,1.0s						
SCHQ	**Schefferville**	**32.34**	**54**	IAmb	IAmb	00 00 05.8	
	comp=Z,155nm,1.0s						
FALS	**False Pass**	**32.38**	**306**	P	**P**	**23 59 05.2**	**+4.5**
	comp=Z,138nm,1.1s						
FALS	**False Pass**	**32.38**	**306**	IAMs_20	IAMs_20	00 09 39.1	
	comp=Z,65µm,22.0s						
FALS	**False Pass**	**32.38**	**306**	P	**P**	**23 58 58.0**	**-2.7**
	baz=88						
FALS				S	**S**	**00 04 15.5**	**+0.9**
	baz=88						
L14K	**Kuka Creek**	**32.43**	**318**	P	**P**	**23 58 59.1**	**-2.1**
	baz=99,SNR=139						
L14K				S	**S**	**00 04 16.8**	**+1.5**
	baz=99						
FRB	**Frobisher Bay**	**32.45**	**37**	P	**P**	**23 59 00.6**	**-0.7**
	comp=Z,49nm,1.0s,baz=254,slow=12,SNR=6.6						
FRB				LR	LR	00 13 04.2	
	comp=Z,73µm,18.5s,baz=270,slow=38 comp=Z,49nm,1.0s						
F18K	**Selawik**	**32.51**	**329**	P	**P**	**23 59 00.4**	**-1.3**
	baz=111,SNR=218						
F18K				S	**S**	**00 04 19.3**	**+2.9**
	baz=111						
G17K	**Kiwalik Mounta**	**32.53**	**326**	P	**P**	**23 59 00.4**	**-1.6**
	baz=108						
G17K				S	**S**	**00 04 13.3**	**-3.5**
	baz=108						
ICQ	**Pointe Anglais**	**32.59**	**64**	P	**P**	**23 59 01.8**	**-0.8**
ICQ				IAmb	IAmb	23 59 09.8	
	comp=Z,208nm,0.9s						
M13K	**Dall Lake**	**32.62**	**317**	P	**P**	**23 59 01.1**	**-1.7**
	baz=97						
M13K				S	**S**	**00 04 17.6**	**-0.7**
	baz=97						
F64A	**Sherman**	**32.64**	**71**	IAmb	IAmb	23 59 14.9	
	comp=Z,442nm,1.7s						
F64A				IAMs_20	IAMs_20	00 10 59.1	
	comp=Z,72µm,21.0s						
D19K	**Kuna River**	**32.71**	**332**	IAMs_20	IAMs_20	00 13 33.0	
	comp=Z,54µm,19.0s						
D19K	**Kuna River**	**32.71**	**332**	P	**P**	**23 59 01.3**	**-2.3**
	baz=115						
D19K				S	**S**	**00 04 21.0**	**+1.4**
	baz=115						
TEIG	**Tepich**	**32.82**	**129**	P	**P**	**23 59 04.1**	**-0.9**
TEIG				IAmb	IAmb	23 59 15.1	
	comp=Z,154nm,1.0s						
TEIG	**Tepich**	**32.82**	**129**	P	**P**	**23 59 06.0**	**+1.0**
H16K	**Elim**	**32.93**	**324**	P	**P**	**23 59 04.1**	**-1.4**
	baz=105,SNR=144						
H16K				S	**S**	**00 04 22.9**	**-0.1**
	baz=105						
A22K	**Sinclair Lake**	**32.96**	**337**	P	**P**	**23 59 04.3**	**-1.4**
	baz=122,SNR=367						
A22K				S	**S**	**00 04 25.0**	**+1.7**
	baz=122						
F17K	**Baldwin Pennin**	**33.06**	**328**	IAmb	IAmb	23 59 20.0	
	comp=Z,205nm,1.1s						
F17K				IAMs_20	IAMs_20	00 11 46.8	
	comp=Z,92µm,20.0s						
F17K	**Baldwin Pennin**	**33.06**	**328**	P	**P**	**23 59 05.4**	**-1.1**
	baz=109						
F17K				S	**S**	**00 04 26.7**	**+1.7**
	baz=109						
J14K	**Nanvaranak Lak**	**33.08**	**321**	IAMs_20	IAMs_20	00 13 06.6	
	comp=Z,65µm,19.0s						
J14K	**Nanvaranak Lak**	**33.08**	**321**	P	**P**	**23 59 04.5**	**-2.3**
	baz=101						
J14K				S	**S**	**00 04 27.8**	**+2.4**
	baz=101						
B20K	**Meade River**	**33.09**	**335**	IAMs_20	IAMs_20	00 13 11.5	
	comp=Z,98µm,18.0s						
B20K	**Meade River**	**33.09**	**335**	P	**P**	**23 59 05.2**	**-1.6**
	baz=118						
B20K				S	**S**	**00 04 27.0**	**+1.6**
	baz=118						
E18K	**Tukpahlearik C**	**33.15**	**330**	IAmb	IAmb	23 59 13.7	
	comp=Z,446nm,1.5s						
E18K	**Tukpahlearik C**	**33.15**	**330**	P	**P**	**23 59 05.8**	**-1.6**
	baz=111,SNR=323						
E18K				S	**S**	**00 04 28.4**	**+2.0**
	baz=111						
G16K	**Koyuk River**	**33.18**	**326**	IAMs_20	IAMs_20	00 11 51.0	
	comp=Z,56µm,20.0s						
G16K	**Koyuk River**	**33.18**	**326**	P	**P**	**23 59 05.2**	**-2.4**
	baz=106						
G16K				S	**S**	**00 04 26.8**	**0.0**
	baz=106						
POIN	**Pond Inlet**	**33.24**	**19**	P	**P**	**23 59 07.5**	**-0.6**
C19K	**Lookout Ridge**	**33.45**	**333**	IAMs_20	IAMs_20	00 12 20.1	
	comp=Z,95µm,18.0s						
C19K	**Lookout Ridge**	**33.45**	**333**	P	**P**	**23 59 07.3**	**-2.8**
	baz=114						
C19K				S	**S**	**00 04 33.6**	**+2.5**
	baz=114						
K13K	**Kusilvak Mount**	**33.45**	**319**	IAMs_20	IAMs_20	00 13 25.4	
	comp=Z,65µm,18.0s						
K13K	**Kusilvak Mount**	**33.45**	**319**	P	**P**	**23 59 07.6**	**-2.5**
	baz=98						
K13K				S	**S**	**00 04 32.7**	**+1.5**
	baz=98						
E17K	**Hotham Inlet**	**33.48**	**329**	P	**P**	**23 59 08.3**	**-2.0**
	baz=109,SNR=137						
E17K				S	**S**	**00 04 33.9**	**+2.3**
	baz=109						
EMMW	**East Machias**	**33.56**	**72**	P	**P**	**23 59 10.3**	**-0.9**
A21K	**Barrow**	**33.58**	**337**	P	**P**	**23 59 10.1**	**-1.0**
	baz=121,SNR=93						
A21K				S	**S**	**00 04 35.7**	**+2.7**
	baz=121						
G15K	**Niukluk**	**33.77**	**325**	P	**P**	**23 59 10.3**	**-2.5**
	baz=104						
G15K				S	**S**	**00 04 40.7**	**+4.7**
	baz=104						
AKUT	**Akutan**	**33.79**	**305**	P	P	23 59 18.9	+5.8
	comp=Z,193nm,1.8s						
C18K	**Utukok River**	**33.81**	**332**	IAMs_20	IAMs_20	00 12 03.5	
	comp=Z,62µm,20.0s						
C18K	**Utukok River**	**33.81**	**332**	P	**P**	**23 59 11.8**	**-1.4**
	baz=112,SNR=451						
C18K				S	**S**	**00 04 39.3**	**+2.6**
	baz=112						
BATG	**Bathurst New B**	**33.83**	**67**	IAmb	IAmb	00 00 10.4	
	comp=Z,156nm,1.0s						
GGN	**Saint George**	**33.86**	**71**	P	**P**	**23 59 13.1**	**-0.8**
GGN				IAmb	IAmb	23 59 25.7	
	comp=Z,461nm,1.6s						
M11K	**Mekoryuk**	**34.03**	**316**	P	**P**	**23 59 13.9**	**-1.2**
	baz=94						
M11K				S	**S**	**00 04 43.8**	**+3.8**
	baz=94						
CCIG	**Comitan**	**34.09**	**138**	IAmb	IAmb	23 59 27.6	
	comp=Z,457nm,1.5s						
CCIG	**Comitan**	**34.09**	**138**	P	**P**	**23 59 18.2**	**+2.0**
CCIG	**Comitan**	**34.09**	**138**	⇓P	**P**	**23 59 17.7**	**+1.4**
D17K	**Noatak River**	**34.14**	**330**	P	**P**	**23 59 14.0**	**-2.0**
	baz=108,SNR=108						
D17K				S	**S**	**00 04 42.2**	**+0.5**
	baz=108						
F15K	**North Star Dit**	**34.18**	**326**	IAMs_20	IAMs_20	00 14 03.5	
	comp=Z,64µm,19.0s						
F15K	**North Star Dit**	**34.18**	**326**	P	**P**	**23 59 14.0**	**-2.4**
	baz=104						
F15K				S	**S**	**00 04 47.0**	**+4.5**
	baz=104						
RDOG	**Red Dog Mine**	**34.19**	**330**	IAMs_20	IAMs_20	00 13 54.7	
	comp=Z,63µm,21.0s						
RDOG	**Red Dog Mine**	**34.19**	**330**	P	**P**	**23 59 13.4**	**-3.0**
	baz=109						
RDOG				S	**S**	**00 04 46.2**	**+3.6**
	baz=109						
ANM	**Nome**	**34.23**	**324**	IAMs_20	IAMs_20	00 13 30.8	
	comp=Z,64µm,20.0s						
ANM	**Nome**	**34.23**	**324**	P	**P**	**23 59 14.1**	**-2.7**
	baz=102,SNR=106						
ANM				S	**S**	**00 04 48.2**	**+5.1**
	baz=102						
UNV	**Unalaska Valle**	**34.24**	**305**	P	**P**	**23 59 21.2**	**+4.2**
	comp=Z,320nm,2.2s						
UNV	**Unalaska Valle**	**34.24**	**305**	P	**P**	**23 59 14.7**	**-2.4**
	baz=84						
UNV				S	**S**	**00 04 44.0**	**+0.4**
	baz=84						
A19K	**Wainwright**	**34.38**	**334**	P	**P**	**23 59 15.4**	**-2.6**
	baz=114						
A19K				S	**S**	**00 04 46.9**	**+1.6**
	baz=114						
C17K	**DeLong Mountai**	**34.43**	**331**	P	**P**	**23 59 15.6**	**-2.9**
	baz=109						
C17K				S	**S**	**00 04 49.1**	**+2.9**
	baz=109						
PETF	**Flores**	**34.68**	**134**	P	**P**	**23 59 21.2**	**0.0**
PETF	**Flores**	**34.68**	**134**	P	**P**	**23 59 22.2**	**+1.0**
F14K	**Arctic Creek**	**34.81**	**325**	P	**P**	**23 59 19.3**	**-2.5**
	baz=102						
F14K				S	**S**	**00 04 57.6**	**+5.5**
	baz=102						
CAMR	**Camarioca**	**34.85**	**117**	P	**P**	**23 59 22.6**	**0.0**
CAMR	**Camarioca**	**34.85**	**117**	P	**P**	**23 59 24.1**	**+1.5**
C16K	**Lisburne Hills**	**35.13**	**330**	IAmb	IAmb	23 59 30.4	
	comp=Z,320nm,1.2s						
C16K	**Lisburne Hills**	**35.13**	**330**	P	**P**	**23 59 22.2**	**-2.4**
	baz=107,SNR=149						
C16K				S	**S**	**00 05 01.3**	**+4.4**
	baz=107						
TNA	**Tin City**	**35.48**	**325**	IAMs_20	IAMs_20	00 14 55.8	
	comp=Z,49µm,20.0s						
TNA	**Tin City**	**35.48**	**325**	P	**P**	**23 59 24.8**	**-2.7**
	baz=100						
TNA				S	**S**	**00 05 05.1**	**+2.8**
	baz=100						
TNA	**Tin City**	**35.48**	**325**	⇑P	**P**	**23 59 30.1**	**+2.5**
RTAL	**Retalhuleu**	**35.83**	**139**	P	**P**	**23 59 33.3**	**+2.3**
APG	**El Apazote**	**36.00**	**137**	P	**P**	**23 59 32.3**	**-0.5**
	comp=Z,4.9nm,1.1s,baz=328,slow=15,SNR=16						
APG				LR	LR	00 15 34.8	
	comp=Z,10µm,20.1s,baz=252,slow=38 comp=Z,4.9nm,1.1s						
SPIA	**Saint Paul Isl**	**36.11**	**311**	P	**P**	**23 59 30.4**	**-2.6**
	baz=86						
SPIA				S	**S**	**00 05 18.4**	**+6.3**
	baz=86						
HAL	**Halifax**	**36.21**	**71**	P	**P**	**23 59 33.8**	**-0.3**
HAL				IAmb	IAmb	23 59 42.0	
	comp=Z,256nm,1.2s						
HAL	**Halifax**	**36.21**	**71**	P	**P**	**23 59 33.8**	**-0.3**
HAL				pmax	pmax		
	comp=Z,256nm,1.2s						
IZABA	**Izabal, Puerto**	**36.34**	**133**	P	**P**	**23 59 37.2**	**+1.8**
GAMB	**Gambell**	**36.87**	**322**	IAMs_20	IAMs_20	00 15 28.6	
	comp=Z,63µm,20.0s						
GAMB	**Gambell**	**36.87**	**322**	P	**P**	**23 59 36.6**	**-2.8**
	baz=94						
GAMB				S	**S**	**00 05 24.9**	**+1.3**
	baz=94						
GAMB	**Gambell**	**36.87**	**322**	⇓P	**P**	**23 59 42.7**	**+3.2**
ESQI	**Esquipulas**	**36.94**	**136**	P	**P**	**23 59 41.2**	**+0.5**
SARH	**Santa Rosa de**	**37.05**	**135**	P	**P**	**23 59 43.6**	**+2.1**
MTO3	**Montecristo**	**37.07**	**136**	IAmb	IAmb	23 59 52.2	
	comp=Z,508nm,1.4s						
MTO3	**Montecristo**	**37.07**	**136**	P	**P**	**23 59 42.6**	**+0.7**
FAME	**Alcaldia de Sa**	**37.22**	**137**	P	**P**	**23 59 45.2**	**+2.3**
GBN	**Guysborough**	**37.37**	**69**	IAmb	IAmb	23 59 55.5	
	comp=Z,566nm,1.3s						
TULEG	**Thule**	**37.44**	**16**	⇓P	**P**	**23 59 43.8**	**-0.4**
CEDA	**San Andres**	**37.56**	**136**	P	**P**	**23 59 48.6**	**+2.8**
JAYA	**Jayaque - finc**	**37.66**	**136**	P	**P**	**23 59 48.1**	**+1.2**
PMON	**Piamonte**	**37.68**	**136**	P	**P**	**23 59 48.1**	**+1.2**
UEES	**Universidad Ev**	**37.71**	**136**	P	**P**	**23 59 49.9**	**+2.7**
P5NO	**Presa 5 de nov**	**37.72**	**135**	P	**P**	**23 59 48.8**	**+1.6**
PAVA	**Las Pavas**	**37.86**	**136**	P	**P**	**23 59 50.2**	**+1.7**
LALI	**Alcalda de L**	**37.87**	**136**	P	**P**	**23 59 50.7**	**+2.4**
COEG	**Centro de Oper**	**37.97**	**136**	P	**P**	**23 59 49.5**	**+0.1**
SCLA	**Alcaldia de Sa**	**37.98**	**135**	P	**P**	**23 59 52.2**	**+2.8**
TECO	**Alcaldia de Te**	**38.09**	**136**	P	**P**	**23 59 52.9**	**+2.5**
CBCY	**The Bluff, Cay**	**38.29**	**118**	P	**P**	**23 59 53.0**	**+1.1**
PACA	**Pacayal**	**38.38**	**135**	P	**P**	**23 59 54.1**	**+1.2**
TGUH	**Tegucigalpa,Un**	**38.42**	**133**	P	**P**	**23 59 53.6**	**+0.4**
TGUH				IAMs_20	IAMs_20	00 17 49.1	
	comp=Z,58µm,19.0s						
TGUH	**Tegucigalpa,Un**	**38.42**	**133**	P	**P**	**23 59 54.8**	**+1.6**
TGUH	**Tegucigalpa,Un**	**38.42**	**133**	⇓P	**P**	**23 59 54.7**	**+1.4**
RANC	**El Ranchito**	**38.43**	**135**	P	**P**	**23 59 54.1**	**+0.8**
YUSH	**Yuscaran**	**38.74**	**133**	P	**P**	**23 59 57.5**	**+1.6**
DRLN	**Deer Lake**	**38.87**	**62**	IAmb	IAmb	00 00 05.2	
	comp=Z,441nm,1.8s						
RCVN	**Varillal2**	**39.39**	**132**	P	**P**	**00 00 02.8**	**+1.5**
CRIN	**San Cristobal**	**39.68**	**134**	P	**P**	**00 00 04.0**	**+0.3**
CRIN	**San Cristobal**	**39.68**	**134**	P	**P**	**00 00 05.7**	**+1.9**
LIMN	**Finca el Limon**	**39.73**	**133**	P	**P**	**00 00 06.0**	**+1.8**
HLGC	**Holguin**	**39.84**	**113**	*e*P	**P**	**00 00 01.7**	**-3.3**
YAR	**Yar**	**40.02**	**114**	*e*P	**P**	**00 00 04.7**	**-1.8**
CNGN	**Cerro Negro**	**40.03**	**134**	P	**P**	**00 00 07.8**	**+1.2**
SIUN	**Universidad Ur**	**40.04**	**130**	P	**P**	**00 00 07.8**	**+1.1**
MATN	**Matagalpa**	**40.08**	**132**	P	**P**	**00 00 07.1**	**+0.1**
MOM3	**MOM3**	**40.12**	**134**	P	**P**	**00 00 09.7**	**+2.5**
MOM2	**El Cardon**	**40.20**	**134**	P	**P**	**00 00 09.4**	**+1.5**
CHIV	**Chivirico**	**40.26**	**115**	P	**P**	**00 00 08.0**	**-0.4**
CHIV				IAmb	IAmb	00 00 18.4	
	comp=Z,332nm,1.2s						
CHIV	**Chivirico**	**40.26**	**115**	P	**P**	**00 00 09.0**	**+0.6**
CHIV	**Chivirico**	**40.26**	**115**	*e*P	P	00 00 03.2	-5.3
SFJD	**Kangerlussuaq**	**40.30**	**33**	P	**P**	**00 00 08.0**	**-0.2**
	comp=Z,46nm,0.7s,baz=274,slow=7.8,SNR=12						
SFJD				LR	LR	00 16 53.1	
	comp=Z,41µm,21.2s,baz=267,slow=36 comp=Z,46nm,0.7s						
SFJD	**Kangerlussuaq**	**40.30**	**33**	P	**P**	**00 00 08.1**	**-0.1**
SFJD				IAmb	IAmb	00 00 17.9	
	comp=Z,192nm,0.8s						
SFJD	**Kangerlussuaq**	**40.30**	**33**	P	**P**	**00 00 08.1**	**-0.1**
SFJD				pmax	pmax		
	comp=Z,192nm,0.8s						
SF

GTBY Guantanamo Bay 41.15 113 P **P** **00 00 16.7 +0.9**
QMBU Quimbuelo 41.16 113 P **P** **00 00 16.3 +0.4**
ACON Acoyapa 41.28 132 P **P** **00 00 17.2 +0.4**
MASC Masc 41.56 112 P **P** **00 00 19.0 -0.1**
MASC Masc 41.56 112 *e*P **P** **00 00 17.3 -1.8**
IVI Ivigtut 41.74 42 IAMs_20 IAMs_20 00 16 47.4
comp=Z,51µm,21.0s
MLOA Mauna Loa Obse 41.76 247 P **P** **00 00 20.6 -0.7**
MLOA IAmb IAmb 00 00 27.2
comp=Z,450nm,1.1s
DES Desert 41.78 246 P **P** **00 00 20.2 -0.8**
TRH Trail 41.83 247 P **P** **00 00 20.5 -1.3**
KHLU Kahalu`u 41.93 247 P **P** **00 00 21.7 -0.6**
KHLU IAmb IAmb 00 00 32.3
comp=Z,737nm,1.2s
DAH Dandelion 41.95 247 P **P** **00 00 21.6 -1.1**
GRTK Grand Turk 42.73 108 P **P** **00 00 29.8 +1.2**
COVE Coope Vega, Sa 42.73 132 P **P** **00 00 30.5 +1.8**
CMARA Lajas Hojancha 42.78 134 P **P** **00 00 28.2 -1.0**
JTS Las Juntas de 42.80 133 LR LR 00 20 11.9
comp=Z,26µm,19.0s,baz=318,slow=39
JTS Las Juntas de 42.80 133 P **P** **00 00 26.9 -2.4**
JTS Las Juntas de 42.80 133 P **P** **00 00 26.9 -2.4**
JTS pmax pmax
comp=Z,52nm,1.0s
JTS MLR MLR
comp=Z,28µm,22.0s
JTS Las Juntas de 42.80 133 P **P** **00 00 31.4 +2.1**
NRS Narsarsuaq 43.06 42 IAMs_20 IAMs_20 00 17 28.4
comp=Z,40µm,21.0s
LCR2 La Lucha 2 43.76 133 P **P** **00 00 37.6 +0.3**
LGNH Logne 43.81 112 P **P** **00 00 38.9 +1.4**
SDDR Presa de Saban 44.36 110 P **P** **00 00 42.4 +0.5**
SUMG Summit 44.37 25 P **P** **00 00 41.4 -0.4**
SUMG IAmb IAmb 00 00 56.0
comp=Z,442nm,1.1s
SUMG Summit 44.37 25 P **P** **00 00 41.4 -0.4**
SUMG pmax pmax
comp=Z,442nm,1.1s
SUMG MLR MLR
comp=Z,26µm,21.0s
SC01 Santiago de lo 44.43 109 P **P** **00 00 43.5 +1.1**
BRU2 Volcan 45.25 132 P **P** **00 00 50.8 +1.6**
CDITO Canoas 45.34 132 P **P** **00 00 51.3 +1.6**
BILL Bilibino 45.63 329 P **P** **00 00 50.6 -0.7**
BILL IAMs_20 IAMs_20 00 19 26.1
comp=Z,52µm,21.0s
ANGG Ammassalik, Gr 45.65 35 IAMs_20 IAMs_20 00 19 21.5
comp=Z,46µm,20.0s
SHEM Shemya Is, Ala 45.82 307 LR LR 00 17 06.6
comp=Z,23µm,21.6s,baz=62,slow=32
BCIP Isla Barro Col 46.51 128 IAMs_20 IAMs_20 00 23 12.3
comp=Z,35µm,20.0s
BCIP Isla Barro Col 46.51 128 P **P** **00 00 59.5 +0.6**
AGPR Aguadilla, PR 47.55 107 P **P** **00 01 07.4 +0.4**
ECPR Experimental S 48.17 107 IAmb IAmb 00 01 20.4
comp=Z,135nm,1.0s
CELP Cerrillos 48.19 107 IAmb IAmb 00 01 21.9
comp=Z,329nm,1.2s
SJG San Juan 48.46 107 LR LR 00 22 16.4
comp=Z,39µm,20.8s,baz=295,slow=37
SJG San Juan 48.46 107 P **P** **00 01 13.1 -0.9**
SJG IAmb IAmb 00 01 22.8
comp=Z,204nm,1.2s
SJG San Juan 48.46 107 IAMs_20 IAMs_20 00 24 55.3
comp=Z,50µm,21.0s
SJG San Juan 48.46 107 P **P** **00 01 13.1 -0.9**
SJG pmax pmax
comp=Z,204nm,1.2s
SJG MLR MLR
comp=Z,50µm,21.0s
SJG San Juan 48.46 107 P **P** **00 01 13.8 -0.2**
HUMP Col San Antoni 48.64 106 IAmb IAmb 00 01 19.9
comp=Z,268nm,1.0s
URI Uribia 49.23 118 P **P** **00 01 21.0 +1.0**
SMRT St. Maarten 50.62 104 IAMs_20 IAMs_20 00 22 40.6
comp=Z,50µm,20.0s
SABA Saba 50.80 105 IAmb IAmb 00 01 55.9
comp=Z,146nm,0.9s
SABA IAMs_20 IAMs_20 00 25 15.3
comp=Z,40µm,19.0s
SABA Saba 50.80 105 P **P** **00 01 30.9 -1.1**
SEUS St. Eustatius 51.07 104 IAMs_20 IAMs_20 00 25 25.4
comp=Z,36µm,18.0s
HELC Santa Helena 51.39 126 P **P** **00 01 37.1 +0.3**
ANWB Willy Bob 51.78 103 IAMs_20 IAMs_20 00 27 33.2
comp=Z,27µm,18.0s
SDV Santo Domingo 52.23 119 LR LR 00 25 43.6
comp=Z,40µm,21.8s,baz=308,slow=38
SDV Santo Domingo 52.23 119 P **P** **00 01 42.2 -0.6**
SDV IAMs_20 IAMs_20 00 25 20.7
comp=Z,44µm,22.0s
BORG Borgarnes 52.43 33 LR LR 00 23 26.3
comp=Z,38µm,21.9s,baz=297,slow=36
SEY Seymchan 52.72 325 LR LR 00 27 08.4
comp=Z,31µm,18.9s,baz=54,slow=39
GDHS Morne Mazeau, 52.75 105 IAMs_20 IAMs_20 00 22 19.6
comp=Z,46µm,20.0s
ABD La Joyeuse, An 52.80 104 IAMs_20 IAMs_20 00 24 48.3
comp=Z,45µm,20.0s
CBE Ff, Capester 53.00 105 IAMs_20 IAMs_20 00 24 15.5
comp=Z,49µm,20.0s
CBE Ff, Capester 53.00 105 P **P** **00 01 50.1 +1.7**
RUSC La Rusia 53.07 124 P **P** **00 01 49.5 +0.1**
KBS Kingsbay 53.08 11 P **P** **00 01 47.3 -0.8**
KBS IAmb IAmb 00 01 54.6
comp=Z,282nm,1.2s
KBS Kingsbay 53.08 11 *e*P **P** **00 01 52.1 +4.0**
KBS IVmB 00 01 53.8
comp=Z,3µm,1.6s
KBS *e*PP **PP** **00 03 54.3 +6.8**
KBS *e*S **S** **00 09 20.6 +2.9**
KBS *e*SS **SS** **00 13 00.1 +4.0**
KBS IVMs_BB IVMs_BB 00 21 16.0
comp=Z,23µm,19.4s
KBS Kingsbay 53.08 11 P **P** **00 01 47.3 -0.8**
KBS pmax pmax
comp=Z,282nm,1.2s
ROSC El Rosal 53.18 126 P **P** **00 01 50.3 +0.2**
comp=Z,59nm,1.1s,baz=337,slow=9.7,SNR=42
ROSC LR LR 00 27 10.9
comp=Z,34µm,21.8s,baz=354,slow=39
comp=Z,59nm,1.1s
ROSC El Rosal 53.18 126 IAmb IAmb 00 02 02.2
comp=Z,372nm,1.4s
GDSD La Dsirade Is 53.21 104 IAmb IAmb 00 01 58.5
comp=Z,512nm,1.5s
GDSD IAMs_20 IAMs_20 00 24 50.0
comp=Z,41µm,22.0s
MAGL Barre de l'ile 53.31 104 IAMs_20 IAMs_20 00 27 03.7
comp=Z,45µm,18.0s
JMI Jan Mayen 53.68 23 *e*P **P** **00 01 51.2 -1.4**
JMI *e*S **S** **00 09 22.9 -3.1**
JMI IVMs_BB IVMs_BB 00 26 39.0
comp=Z,17µm,4.9s
JMIC Jan Mayen 53.72 23 LR LR 00 25 32.1
comp=Z,35µm,19.7s,baz=312,slow=37
JMIC Jan Mayen 53.72 23 *e*P **P** **00 01 55.0 +2.1**
JMIC IVMs_BB IVMs_BB 00 26 32.3
comp=Z,20µm,11.0s
PRAC Prado 53.77 127 P **P** **00 01 53.1 -0.9**
JNE Jan Mayen East 53.77 23 *e*P **P** **00 01 54.6 +1.3**
JNE *e*S **S** **00 09 26.3 -0.9**
JNE IVMs_BB IVMs_BB 00 26 31.5
comp=Z,22µm,17.9s
SVN Savane Anatole 54.15 105 IAMs_20 IAMs_20 00 27 38.2
comp=Z,32µm,18.0s
SPA0 Spitsbergen Ar 54.23 11 *e*P **P** **00 02 01.1 +4.5**
SPA0 *e*S **S** **00 09 37.2 +3.8**
SPA0 IVMs_BB IVMs_BB 00 24 24.0
comp=Z,21µm,19.1s
SPITS Spitsbergen Ar 54.23 11 P **P** **00 01 55.9 -0.8**
comp=Z,99nm,1.1s,baz=346,slow=1.7,SNR=22
SPITS LR LR 00 24 45.4
comp=Z,58µm,19.2s,baz=316,slow=36
comp=Z,99nm,1.1s
SPITS Spitsbergen Ar 54.23 11 P **P** **00 01 57.3 +0.7**
SPITS pmax pmax
comp=Z,237nm,1.3s
FDFM Morne la Roset 54.23 105 IAmb IAmb 00 02 08.2
comp=Z,275nm,1.3s
FDFM Morne la Roset 54.23 105 IAMs_20 IAMs_20 00 24 33.2
comp=Z,37µm,20.0s
BIM Bigot 54.45 106 P **P** **00 01 57.7 -1.3**
BIM IAmb IAmb 00 02 07.9
comp=Z,253nm,1.1s
MPOM Morne Pois Mar 54.64 105 IAmb IAmb 00 02 10.8
comp=Z,237nm,1.3s
TULM Tulcn-Chalpat 54.64 132 P **P** **00 02 02.0 +1.1**
OTAV Otavalo 54.70 133 P **P** **00 02 00.6 -0.7**
OTAV IAmb IAmb 00 02 11.3
comp=Z,477nm,1.6s
OTAV Otavalo 54.70 133 IAMs_20 IAMs_20 00 26 48.3
comp=Z,31µm,19.0s
OTAV Otavalo 54.70 133 P **P** **00 02 00.6 -0.7**
OTAV pmax pmax
comp=Z,477nm,1.7s
OTAV MLR MLR
comp=Z,31µm,19.0s
OTAV Otavalo 54.70 133 P **P** **00 02 02.0 +0.7**
PETK Petropavlovsk- 54.73 312 P **P** **00 01 59.7 -0.9**
comp=Z,4.4nm,0.8s,baz=72,slow=11,SNR=12
PETK LR LR 00 23 14.4
comp=Z,16µm,21.4s,baz=40,slow=34
comp=Z,4.4nm,0.8s
PETK Petropavlovsk- 54.73 312 P **P** **00 01 59.3 -1.2**
IMBA Imbabura, San 54.80 133 P **P** **00 02 02.7 +0.7**
PULU Pululahua 54.85 133 P **P** **00 02 03.7 +1.4**
MA2 Magadan 54.97 322 LR LR 00 27 45.3
comp=Z,23µm,19.0s,baz=52,slow=38
MA2 Magadan 54.97 322 IAMs_20 IAMs_20 00 27 43.1
comp=Z,32µm,19.0s
GGPC Guagua Pichinc 54.97 133 P **P** **00 02 04.8 +1.4**
FLOC Florencia 55.08 129 P **P** **00 02 03.2 -0.4**
ANTS Antisana-Sarah 55.46 133 P **P** **00 02 08.7 +1.7**
VCES Cotopaxi 55.60 134 P **P** **00 02 09.8 +1.9**
TIXI Tiksi 55.82 340 LR LR 00 26 34.5
comp=Z,47µm,21.4s,baz=61,slow=37
TIXI Tiksi 55.82 340 P **P** **00 02 09.2 +1.1**
TIXI IAmb IAmb 00 02 13.3
comp=Z,200nm,1.2s
TIXI Tiksi 55.82 340 P **P** **00 02 09.2 +1.1**
TIXI pmax pmax
comp=Z,200nm,1.3s
TIXI MLR MLR
comp=Z,55µm,22.0s
XMAS Kiritimati 56.35 234 IAMs_20 IAMs_20 00 21 26.9
comp=Z,28µm,19.0s
HOPEN Hopen 56.72 10 *e*P **P** **00 02 17.2 +2.8**
HOPEN *e*S **S** **00 10 06.5 0.0**
HOPEN IVMs_BB IVMs_BB 00 25 48.7
comp=Z,17µm,14.2s
ARNL Arenillas 57.12 137 P **P** **00 02 18.7 +0.6**
BJO1 Bjornoya 57.48 13 *e*P **P** **00 02 23.7 +3.8**
TAOE Nuku Hiva Isla 57.66 210 *e*P P 00 02 27.6 +5.7
comp=Z,645nm,1.4s
TAOE *e*S **S** **00 10 20.9 +0.5**
comp=Z,10µm,30.5s
TAOE *e*SS **SS** **00 14 07.5 -3.5**
comp=Z,28µm,27.5s
TAOE *e*LQ LQ 00 16 43.4
comp=Z,28µm,29.2s
TAOE *e*LR LR 00 19 10.7
comp=Z,49µm,34.0s
LOF Lofoten 61.38 19 *e*P **P** **00 02 48.4 +1.4**
LOF IVmB_BB 00 03 02.4
comp=Z,9µm,3.6s
LOF *e*S **S** **00 11 03.2 -4.0**
LOF IVMs_BB IVMs_BB 00 30 00.6
comp=Z,19µm,16.5s
TRO Tromso 61.39 17 *e*P **P** **00 02 48.3 +1.4**
TRO IVmB_BB 00 03 09.8
comp=Z,4µm,4.6s
TRO *e*S **S** **00 11 03.3 -3.8**
TRO IVMs_BB IVMs_BB 00 26 36.5
comp=Z,10µm,24.6s
HAMF Hammerfest 61.46 14 IVmB_BB 00 02 50.1
comp=Z,3µm,5.0s
HAMF *e*P **P** **00 02 50.5 +3.1**
HAMF *e*S **S** **00 11 07.6 -0.5**
HAMF IVMs_BB IVMs_BB 00 28 15.6
comp=Z,13µm,22.9s
JETT Jettan, Norway 61.75 16 *e*P **P** **00 02 51.3 +1.8**
JETT IVmB_BB 00 02 52.2
comp=Z,5µm,3.6s
JETT *e*S **S** **00 11 10.9 -1.0**
JETT IVMs_BB IVMs_BB 00 26 27.3
comp=Z,16µm,29.0s
YAK Yakutsk 61.90 331 LR LR 00 30 42.7
comp=Z,38µm,21.5s,baz=36,slow=37
YAK Yakutsk 61.90 331 IAMs_20 IAMs_20 00 30 35.0
comp=Z,40µm,22.0s
STEI Steigen 61.94 19 *e*P **P** **00 02 53.1 +2.4**
STEI *e*S **S** **00 11 11.3 -2.9**
STEI IVMs_BB IVMs_BB 00 27 25.4
comp=Z,15µm,21.9s
FAUS Fauske 62.39 19 *e*P **P** **00 02 56.0 +2.3**
VAGH Vaagaholmen 62.40 21 *e*P **P** **00 02 55.6 +1.9**
VAGH *e*S **S** **00 11 19.9 -0.1**
VAGH IVMs_BB IVMs_BB 00 31 08.9
comp=Z,13µm,15.2s
KONS Konsvik 62.54 21 *e*P **P** **00 02 57.0 +2.3**
KONS *e*S **S** **00 11 19.8 -2.0**
KONS IVMs_BB IVMs_BB 00 30 40.5
comp=Z,15µm,16.9s
STOK Stokkvaagen 62.65 21 *e*P **P** **00 02 58.1 +2.7**
STOK IVmB_BB 00 03 01.8
comp=Z,8µm,4.1s
STOK *e*S **S** **00 11 16.6 -6.5**
STOK IVMs_BB IVMs_BB 00 27 57.1
comp=Z,11µm,17.6s
ARA0 ARCESS Array S 62.74 15 *e*P **P** **00 02 59.1 +3.0**
ARA0 IVmB 00 03 07.9
comp=Z,2µm,2.6s
ARA0 *e*S **S** **00 11 23.3 -1.0**
ARA0 IVMs_BB IVMs_BB 00 29 04.6
comp=Z,13µm,21.5s
ARCES ARCESS Array B 62.74 15 P **P** **00 02 56.3 +0.2**
comp=Z,27nm,1.1s,baz=334,slow=6.0,SNR=4.0
ARCES LR LR 00 30 22.1
comp=Z,33µm,20.6s,baz=340,slow=36
comp=Z,27nm,1.1s
ARCES ARCESS Array B 62.74 15 P **P** **00 02 55.5 -0.5**
ARCES IAmb IAmb 00 04 12.7
comp=Z,276nm,2.0s
ARCES ARCESS Array B 62.74 15 P **P** **00 02 55.5 -0.5**
ARCES pmax pmax
comp=Z,276nm,2.0s
KTK1 Kautokeino 62.76 16 *e*P **P** **00 02 58.0 +1.8**
KTK1 IVmB 00 03 03.6
comp=Z,2µm,2.6s
KTK1 *e*S **S** **00 11 23.7 -0.9**
KTK1 IVMs_BB IVMs_BB 00 28 03.8
comp=Z,16µm,22.5s
RAUS Rausandaksla 62.83 21 IVmB_BB 00 02 57.3
comp=Z,5µm,7.7s
RAUS *e*P **P** **00 02 58.4 +1.7**
RAUS *e*S **S** **00 11 23.9 -1.5**
RAUS IVMs_BB IVMs_BB 00 31 27.3
comp=Z,13µm,19.1s
KPL Plockton 62.83 35 *e*P **P** **00 02 55.5 -1.2**
KPL IAMs_20 IAMs_20 00 31 44.0
comp=Z,34µm,14.8s
LEIR Leirfjorden 62.84 21 *e*P **P** **00 02 58.1 +1.4**
LEIR IVmB 00 02 59.1
comp=Z,4µm,3.5s
LEIR *e*S **S** **00 11 21.0 -4.6**
LEIR IVMs_BB IVMs_BB 00 31 07.0
comp=Z,16µm,17.2s
VADS Vadso 62.88 13 *e*P **P** **00 02 59.8 +2.8**
VADS IVmB_BB 00 03 02.5
comp=Z,4µm,4.0s
VADS *e*S **S** **00 11 25.4 -0.6**
VADS IVMs_BB IVMs_BB 00 29 35.6
comp=Z,15µm,18.4s
MOR8 Moi Rana 63.13 21 *e*P **P** **00 02 59.6 +0.9**
MOR8 IVmB_BB 00 03 02.0
comp=Z,7µm,4.0s
MOR8 *e*S **S** **00 11 25.3 -4.0**
MOR8 IVMs_BB IVMs_BB 00 31 46.0
comp=Z,11µm,16.6s
IDGL Inch Island, C 63.51 38 *e*P **P** **00 03 00.3 -1.1**
BOAV Boa Vista 63.64 115 P **P** **00 03 01.3 -1.4**
MCD Coleburn Disti 63.64 34 *e*P **P** **00 03 01.0 -1.1**
MCD IAMs_20 IAMs_20 00 32 14.0
comp=Z,39µm,16.9s
LAWE Loch Awe, Argy 63.65 36 *e*P **P** **00 03 00.5 -1.7**
LAWE IAMs_20 IAMs_20 00 30 11.3
comp=Z,36µm,16.3s
NSS Namsos 63.77 23 *e*P **P** **00 03 01.8 -1.0**
FOO Floro 63.87 27 *e*P **P** **00 03 04.2 +0.6**
FOO IVmB 00 03 08.5
comp=Z,2µm,2.9s
FOO *e*S **S** **00 11 34.2 -4.2**
FOO IVMs_BB IVMs_BB 00 31 54.6
comp=Z,14µm,14.7s
MOL Molde 63.96 26 *e*P **P** **00 03 05.3 +1.1**
MOL *e*S **S** **00 11 34.7 -4.8**
MOL IVMs_BB IVMs_BB 00 29 11.4
comp=Z,11µm,17.8s
AKN Aaknes 64.07 26 *e*P **P** **00 03 05.8 +0.8**
AKN IVmB_BB 00 03 13.7
comp=Z,4µm,2.6s
AKN *e*S **S** **00 11 40.7 -0.5**
AKN IVMs_BB IVMs_BB 00 29 30.3
comp=Z,16µm,24.6s
INVG Invergeldie, C 64.10 35 *e*P **P** **00 03 03.9 -1.3**
INVG IAMs_20 IAMs_20 00 32 37.6
comp=Z,41µm,14.8s
EAB Aberfoyle 64.14 36 *e*P **P** **00 03 04.1 -1.3**
SUE Sulen 64.17 28 *e*P **P** **00 03 05.3 -0.2**
SUE *e*S **S** **00 11 38.3 -3.9**
SUE IVMs_BB IVMs_BB 00 31 57.4
comp=Z,11µm,19.7s
PGBU Glenifferbraes 64.33 36 *e*P **P** **00 03 05.0 -1.7**
PGBU IAMs_20 IAMs_20 00 30 40.1
comp=Z,68µm,16.4s
DRUM Mains of Drumt 64.41 34 *e*P **P** **00 03 05.7 -1.5**
DRUM IAMs_20 IAMs_20 00 31 59.0
comp=Z,28µm,19.6s
CZSB Cruzeiro do Su 64.44 132 P **P** **00 03 07.5 -0.4**
HYA Hoyanger 64.56 27 *e*P **P** **00 03 10.9 +2.8**
HYA IVmB_BB 00 03 43.3
comp=Z,4µm,4.3s
HYA *e*S **S** **00 11 42.5 -4.5**
HYA IVMs_BB IVMs_BB 00 32 16.4
comp=Z,13µm,18.5s
ILTH Belurgan, Co L 64.72 38 *e*P **P** **00 03 07.7 -1.6**
ASK Askoy 64.73 28 *e*P **P** **00 03 11.0 +1.8**
ASK *e*S **S** **00 11 42.5 -6.7**
ASK IVMs_BB IVMs_BB 00 30 25.4
comp=Z,10µm,17.0s
EDI Edinburgh 64.79 35 *e*P **P** **00 03 07.6 -2.1**
EDI IAMs_20 IAMs_20 00 33 06.2
comp=Z,37µm,14.9s
DOMB Dombas 64.82 26 *e*P **P** **00 03 11.0 +1.1**
DOMB *e*S **S** **00 11 45.3 -5.1**
DOMB IVMs_BB IVMs_BB 00 31 17.8
comp=Z,10µm,19.8s
BER Bergen 64.85 28 *e*P **P** **00 03 09.0 -1.0**
BER *e*S **S** **00 11 43.2 -7.4**
BER IVMs_BB IVMs_BB 00 30 18.2
comp=Z,9µm,21.9s
NEWG New Galloway 64.90 36 *e*P **P** **00 03 09.0 -1.5**
NEWG IAMs_20 IAMs_20 00 31 39.6
comp=Z,40µm,15.9s
ESK Eskdalemuir 65.20 36 *e*P **P** **00 03 10.8 -1.6**
ESK IAMs_20 IAMs_20 00 31 23.6
comp=Z,37µm,16.1s
ESK Eskdalemuir 65.20 36 P **P** **00 03 12.1 -0.3**
ESK Eskdalemuir 65.20 36 P **P** **00 03 12.1 -0.3**
ESK pmax pmax
comp=Z,68nm,1.0s
ESK MLR MLR
comp=Z,36µm,18.0s
EKA Eskdalemuir Ar 65.21 36 P **P** **00 03 10.6 -1.9**
comp=Z,23nm,1.1s,baz=309,slow=5.3,SNR=14
EKA LR LR 00 29 38.7
comp=Z,16µm,19.1s,baz=329,slow=34
comp=Z,23nm,1.1s
EKA Eskdalemuir Ar 65.21 36 P **P** **00 03 09.7 -2.7**
EKA pmax pmax
comp=Z,55nm,1.0s
DSB Dublin 65.22 39 IAMs_20 IAMs_20 00 30 17.1
comp=Z,22µm,20.0s
NRIK Noril'sk 65.34 351 P **P** **00 03 12.4 -0.7**
comp=Z,11nm,0.9s,baz=34,slow=4.6,SNR=19
NRIK PKPPKP P'P'df 00 31 54.2 -8.4
comp=Z,1.0nm,0.4s,baz=204,slow=1.7,SNR=4.4
NRIK LR LR 00 32 11.3
comp=Z,23µm,20.6s,baz=30,slow=36
comp=Z,11nm,0.9s
NRIK Noril'sk 65.34 351 P **P** **00 03 12.0 -1.1**
NRIK Noril'sk 65.34 351 P **P** **00 03 12.0 -1.1**
NRIK pmax pmax
comp=Z,83nm,1.2s
SKAR Skarslia 65.61 27 *e*P **P** **00 03 16.2 +1.1**
SKAR IVmB 00 03 17.5
comp=Z,3µm,2.9s
SKAR *e*S **S** **00 11 56.2 -4.1**
SKAR IVMs_BB IVMs_BB 00 30 28.6
comp=Z,16µm,25.4s
IWEX Carrickbyrne, 65.62 40 *e*P **P** **00 03 13.9 -1.2**
ODD1 Odda 65.64 28 *e*P **P** **00 03 16.7 +1.4**
ODD1 IVmB_BB 00 03 21.0
comp=Z,2µm,4.7s
ODD1 *e*S S 00 11 51.4 -9.1
ODD1 IVMs_BB IVMs_BB 00 30 50.4
comp=Z,14µm,20.7s
KMY Karmoy 65.68 29 *e*P **P** **00 03 14.7 -0.7**
KMY *e*S **S** **00 11 54.5 -6.4**
KMY IVMs_BB IVMs_BB 00 32 36.9
comp=Z,12µm,16.2s
LVZ Lovozero 65.72 12 P **P** **00 03 15.5 -0.1**
LVZ IAmb IAmb 00 03 44.5
comp=Z,176nm,1.2s
LVZ Lovozero 65.72 12 P **P** **00 03 15.5 -0.1**
LVZ pmax pmax
comp=Z,176nm,1.2s
BLS5 Blasjo 65.94 28 *e*P **P** **00 03 16.7 -0.5**
BLS5 IVmB_BB 00 03 27.8
comp=Z,2µm,6.0s
BLS5 *e*S **S** **00 11 56.9 -7.3**
BLS5 IVMs_BB IVMs_BB 00 31 03.4
comp=Z,12µm,17.6s
NNA Nana 66.00 138 P **P** **00 03 17.2 -0.8**
NNA Nana 66.00 138 IAMs_20 IAMs_20 00 28 24.9
comp=Z,22µm,21.0s
NNA Nana 66.00 138 P **P** **00 03 17.2 -0.8**
NNA pmax pmax
comp=Z,552nm,1.6s
EDMD Edmundbyers 66.05 36 *e*P **P** **00 03 16.5 -1.4**
EDMD IAMs_20 IAMs_20 00 31 59.0
comp=Z,31µm,16.9s
WLF1 Llynfaes 66.07 38 *e*P **P** **00 03 16.6 -1.4**
WLF1 IAMs_20 IAMs_20 00 32 05.7
comp=Z,63µm,15.4s
YSS Yuzhno-Sakhali 66.13 313 IAMs_20 IAMs_20 00 33 47.3
comp=Z,33µm,19.0s
PMOR Pomariorio Ree 66.25 215 *e*P **P** **00 03 23.1 +3.6**
comp=Z,156nm,1.3s
PMOR *e*LR LR 00 23 05.5
comp=Z,32µm,29.8s
NB2 NORSAR Subarra 66.25 25 P **P** **00 03 17.7 -1.5**
comp=Z,219nm,1.4s,baz=317,slow=6.5
NB2 NORSAR Subarra 66.25 25 P **P** **00 03 17.7 -1.5**
NOA NORSAR Array B 66.25 25 P **P** **00 03 17.9 -1.3**
comp=Z,37nm,1.2s,baz=317,slow=6.5,SNR=20
NOA LR LR 00 31 38.1
comp=Z,14µm,20.3s,baz=330,slow=36
comp=Z,37nm,1.2s
NC602 NORSAR Array S 66.59 25 *e*P **P** **00 03 21.5 +0.2**
NC602 *e*S **S** **00 12 07.5 -4.5**
NC602 IVMs_BB IVMs_BB 00 33 34.2
comp=Z,10µm,17.6s
LLW Llanuwychllyn 66.69 38 *e*P **P** **00 03 20.0 -2.0**
LLW IAMs_20 IAMs_20 00 32 32.0
comp=Z,18µm,15.0s
KONO Kongsberg 66.82 27 P **P** **00 03 22.5 -0.2**
KONO IAmb IAmb 00 03 33.4
comp=Z,89nm,0.9s
KONO Kongsberg 66.82 27 *e*P **P** **00 03 23.5 +0.7**
KONO IVmB_BB 00 03 42.2
comp=Z,3µm,5.0s
KONO *e*S **S** **00 12 08.1 -6.7**
KONO IVMs_BB IVMs_BB 00 30 29.9
comp=Z,13µm,17.5s
KONO Kongsberg 66.82 27 P **P** **00 03 22.5 -0.2**
KONO pmax pmax
comp=Z,89nm,1.0s
RSBS Rosebush, Pemb 66.82 39 *e*P **P** **00 03 21.7 -1.2**
RSBS IAMs_20 IAMs_20 00 33 50.8
comp=Z,29µm,16.1s
FOEL Foel Wylfa 66.87 38 *e*P **P** **00 03 22.0 -1.2**
FOEL IAMs_20 IAMs_20 00 31 14.1
comp=Z,27µm,17.2s

MDP Montagnes des 66.94 106 LR LR 00 36 13.6
comp=Z,19µm,18.6s,baz=326,slow=39
OSL Oslo 66.96 26 *eP* **P 00 03 24.3 +0.7**
OSL IVmB 00 03 33.9
comp=Z,2µm,1.2s
OSL *eS* **S 00 12 13.3 -3.1**
OSL IVMs_BB IVMs_BB 00 33 07.5
comp=Z,8µm,14.9s
SNART Snartemo 67.02 29 *eP* **P 00 03 24.2 +0.2**
LBWR Ladybower, Pea 67.15 37 *eP* **P 00 03 23.8 -1.1**
LBWR IAMs_20 IAMs_20 00 33 20.6
comp=Z,32µm,16.9s
HLM1 Long Mynd 67.27 38 *eP* **P 00 03 24.5 -1.3**
HLM1 IAMs_20 IAMs_20 00 32 58.2
comp=Z,31µm,15.1s
HOMB Homborsund 67.51 28 *eP* **P 00 03 30.0 +2.8**
HOMB *eS* **S 00 12 18.0 -5.1**
HOMB IVMs_BB IVMs_BB 00 34 08.3
comp=Z,13µm,18.4s
MCH1 Michaelchurch 67.58 38 *eP* **P 00 03 26.4 -1.3**
MCH1 IAMs_20 IAMs_20 00 32 52.2
comp=Z,42µm,16.0s
HFS Hagfors 67.73 25 P **P 00 03 27.2 -1.3**
comp=Z,34nm,1.0s,baz=318,slow=6.2,SNR=16
HFS LR LR 00 32 30.1
comp=Z,19µm,18.1s,baz=318,slow=36
comp=Z,34nm,1.0s
MACA Manacapuru-AM 67.77 119 P **P 00 03 28.1 -1.3**
CWF Charnwood Fore 67.80 37 *eP* **P 00 03 27.9 -1.2**
CWF IAMs_20 IAMs_20 00 32 12.8
comp=Z,33µm,18.0s
JKA Kamikawa-asahi 68.05 311 P **P 00 03 29.9 -1.0**
ASAJ Asahikawa 68.05 311 P **P 00 03 31.1 +0.3**
comp=Z,56nm,1.0s,baz=26,slow=3.5,SNR=14
ASAJ LR LR 00 29 18.2
comp=Z,10µm,21.9s,baz=45,slow=32
comp=Z,56nm,1.0s
TIAR Tiarei 69.14 215 *eP* **P 00 03 40.4 +2.6**
comp=Z,138nm,1.2s
TIAR *e*LR LR 00 24 30.8
comp=Z,16µm,28.7s
PPT Papeete 69.25 215 P **P 00 03 39.6 +1.2**
comp=Z,40nm,1.0s,baz=63,slow=8.7,SNR=4.0
PPT LR LR 00 28 39.3
comp=Z,8µm,19.9s,baz=36,slow=31
comp=Z,40nm,1.0s
PPT2 Papeete2 69.27 215 *eP* **P 00 03 39.3 +0.7**
comp=Z,75nm,1.2s
PPT2 *eP*P **PP 00 06 12.0 0.0**
PPT2 comp=Z,1µm,28.5s *e*S **S 00 12 43.6 -1.4**
PPT2 comp=Z,13µm,32.8s *e*SS **SS 00 17 09.0 -3.2**
PPT2 comp=Z,18µm,31.0s *e*LQ LQ 00 20 41.8
PPT2 comp=Z,16µm,29.0s *e*LR LR 00 24 27.3
PPT2 comp=Z,60µm,33.5s *e*LR LR 00 24 38.3
comp=Z,35µm,36.5s
PAE Paea 69.33 215 *eP* **P 00 03 42.4 +3.5**
PAE comp=Z,52nm,1.3s *e*LR LR 00 24 33.9
comp=Z,6µm,29.6s
FINES FINESS Array B 69.92 19 P **P 00 03 40.7 -1.4**
comp=Z,9.0nm,0.7s,baz=329,slow=5.2,SNR=29
FINES PKPPKP 00 31 46.4
comp=Z,4.3nm,1.1s,baz=343,slow=6.0,SNR=4.1
FINES LR LR 00 32 30.2
comp=Z,31µm,21.1s,baz=348,slow=34
comp=Z,9.0nm,0.7s
KLR Kul'dur 70.01 320 P **P 00 03 42.8 0.0**
comp=Z,25nm,1.0s,baz=32,slow=6.1,SNR=18
KLR LR LR 00 33 54.8
comp=Z,18µm,21.2s,baz=36,slow=36
comp=Z,25nm,1.0s
HLG Helgoland 70.43 32 *eP* **P 00 03 44.1 -1.2**
comp=Z,211nm,1.0s,baz=324,slow=5.9
PTCN Pitcairn Islan 70.49 194 IAMs_20 IAMs_20 00 26 52.6
comp=Z,24µm,22.0s
HEH HeiHe 71.20 323 *eP* **P 00 03 48.8 -1.3**
HEH pP **pP 00 03 53.8 -0.5**
HEH S **S 00 13 05.8 -1.0**
HEH SS **SS 00 17 41.0 +1.5**
HEH pmax
comp=Z,380nm,1.5s
HEH pmax
comp=Z,3µm,3.9s
HEH L
comp=Z,38µm,16.9s
HEH L
comp=Z,33µm,20.8s
RPN Rapa Nui 71.38 175 LR LR 00 29 08.3
comp=Z,13µm,19.3s,baz=357,slow=31
BSEG Bad Segeberg 71.53 31 *eP* **P 00 03 51.0 -1.0**
comp=Z,53nm,0.9s,baz=324,slow=5.9
BSEG Bad Segeberg 71.53 31 *eP* **P 00 03 51.0 -1.0**
comp=Z,53nm,0.9s,baz=324,slow=5.9
UCC Uccle 71.62 36 *dP* **P 00 03 54.8 +2.1**
UCC *d*PP **PP 00 06 30.2 -0.7**
IBBN Ibbenburen 71.84 33 *eP* **P 00 03 52.8 -1.1**
comp=Z,152nm,0.9s,baz=324,slow=5.9
IBBN Ibbenburen 71.84 33 *eP* **P 00 03 52.9 -1.1**
comp=Z,152nm,0.9s,baz=324,slow=5.9
PGAV Gavieira, Arco 71.95 49 *eP* **P 00 03 55.8 +0.8**
PGAV comp=Z,193nm,1.7s *i* IAmb IAmb 00 04 07.8
PGAV *e*S **S 00 13 16.9 +0.8**
PGAV *e*SS **SS 00 17 55.7 +4.0**
PGAV *e*LR LR 00 26 51.8
PGAV *i* IAMs_20 IAMs_20 00 36 48.5
comp=Z,18µm,18.0s
RGN Rugen 72.10 29 *eP* **P 00 03 54.5 -0.9**
comp=Z,130nm,1.1s,baz=324,slow=5.9
RETH Rethem/Aller, 72.11 32 *eP* **P 00 03 54.8 -0.7**
comp=Z,80nm,0.9s,baz=324,slow=5.9
RETH Rethem/Aller, 72.11 32 *eP* **P 00 03 54.9 -0.7**
comp=Z,223nm,1.5s,baz=324,slow=5.9
BMRD Maredsous 72.17 36 *dP* **P 00 03 54.9 -1.0**
comp=Z,32nm,1.2s
BEBN Eben Emael 72.17 35 *dP* **P 00 03 55.5 -0.5**
comp=Z,28nm,0.9s
BGES Gesves 72.24 36 *dP* **P 00 03 55.6 -0.8**
comp=Z,48nm,0.9s
DOU Dourbes 72.25 36 *dP* **P 00 03 55.5 -1.0**
comp=Z,35nm,1.0s
PCAB Cabril 72.25 49 *eP* **P 00 03 56.4 -0.3**
PCAB *i* IAmb IAmb 00 04 09.4
comp=Z,290nm,1.5s
BSTI Sart Tilman 72.28 35 *dP* **P 00 03 56.1 -0.6**
comp=Z,15nm,0.8s
BCLA Clavier 72.30 35 *dP* **P 00 03 57.5 +0.8**
BUG Bochum--Univer 72.31 34 *eP* **P 00 03 55.3 -1.5**
comp=Z,80nm,1.1s,baz=324,slow=5.9
BUG Bochum--Univer 72.31 34 *eP* **P 00 03 55.3 -1.5**
comp=Z,80nm,1.1s,baz=324,slow=5.9
PTO Porto 72.34 49 *eP* **P 00 03 56.8 -0.3**
PTO *i* IAmb IAmb 00 04 09.9
comp=Z,404nm,1.5s
MEM Membach 72.45 35 *dP* **P 00 03 56.8 -0.8**
comp=Z,62nm,1.0s
RCHB Rochefort 72.47 36 *dP* **P 00 03 56.1 -1.6**
comp=Z,67nm,1.0s
BTNL Ternell 72.51 35 *dP* **P 00 03 56.8 -1.2**
comp=Z,47nm,1.0s
POLO Lamas de Olo 72.61 49 *eP* **P 00 03 58.4 -0.6**
POLO *i* IAmb IAmb 00 04 11.9
comp=Z,164nm,1.5s
GORT1 Trebel 72.64 31 *eP* **P 00 03 57.6 -1.0**
comp=Z,105nm,1.3s,baz=324,slow=5.9
GORT1 Trebel 72.64 31 *eP* **P 00 03 57.4 -1.2**
comp=Z,236nm,1.8s,baz=324,slow=5.9
BHOU Houvegnez 72.64 35 *dP* **P 00 03 58.4 -0.4**
comp=Z,36nm,1.0s
PVRL Vila Real 72.72 49 *eP* **P 00 03 59.3 -0.2**
PVRL *i* IAmb IAmb 00 04 12.4
comp=Z,384nm,1.5s
CLF Chambon-Foret 72.79 39 IAmb IAmb 00 04 10.8
comp=Z,112nm,1.0s
PBRG Braganca 72.88 48 *eP* **P 00 04 00.5 0.0**
PBRG *i* IAmb IAmb 00 04 13.3
comp=Z,198nm,1.7s
PMOZ Porto Moniz, M 72.94 61 *eP* **P 00 04 00.1 -0.9**
PMOZ *i* IAmb IAmb 00 04 14.3
comp=Z,268nm,1.8s
PMOZ *e*S **SKiKP 00 13 36.5 +2.6**
PMOZ *e*LR LR 00 27 19.1
PMOZ *i* IAMs_20 IAMs_20 00 32 58.0
comp=Z,14µm,20.0s
KASTN Kahler Asten 72.95 33 *eP* **P 00 03 59.2 -1.4**
comp=Z,23nm,1.0s,baz=324,slow=5.9
KASTN Kahler Asten 72.95 33 *eP* **P 00 03 59.2 -1.4**
comp=Z,23nm,1.0s,baz=324,slow=5.9
PVIS Viseu 73.02 49 *eP* **P 00 04 02.8 +1.5**
ASSE Asse, Remlinge 73.09 32 *eP* **P 00 04 00.2 -1.1**
comp=Z,95nm,1.4s,baz=324,slow=5.9
ASSE Asse, Remlinge 73.09 32 *eP* **P 00 04 00.2 -1.1**
comp=Z,95nm,1.4s,baz=324,slow=5.9
FLTG Flechtingen 73.14 31 *eP* **P 00 03 59.9 -1.8**
comp=Z,88nm,1.4s,baz=324,slow=5.9
FLTG Flechtingen 73.14 31 *eP* **P 00 03 59.9 -1.8**
comp=Z,88nm,1.4s,baz=324,slow=5.9
PCAS Casmilo, Conde 73.15 50 *eP* **P 00 04 01.5 -0.5**
PCAS *i* IAmb IAmb 00 04 15.2
comp=Z,561nm,1.5s
MVO Moncorvo 73.17 49 *eP* **P 00 04 01.9 -0.3**
MVO *i* IAmb IAmb 00 04 14.5
comp=Z,266nm,1.5s
MVO *e*S **SKiKP 00 13 34.2 +0.2**
MVO *e*SS **SS 00 18 19.3 +8.9**
MVO *e*LR LR 00 27 25.7
MVO *i* IAMs_20 IAMs_20 00 34 09.4
comp=Z,16µm,18.0s
PMAR Madeira 73.19 61 *eP* **P 00 04 01.8 -0.7**
PMAR *i* IAmb IAmb 00 04 16.8
comp=Z,982nm,1.7s
CLZ Clausthal 73.20 32 *eP* **P 00 04 01.3 -0.9**
comp=Z,197nm,1.5s,baz=324,slow=5.9
CLZ Clausthal 73.20 32 *eP* **P 00 04 01.3 -0.9**
comp=Z,197nm,1.5s,baz=324,slow=5.9
WLF Walferdange 73.23 35 IAMs_20 IAMs_20 00 34 24.8
comp=Z,29µm,21.0s
WLF Walferdange 73.23 35 *dP* **P 00 04 02.2 -0.1**
comp=Z,36nm,1.3s
WLF Walferdange 73.23 35 *eP* **P 00 04 01.5 -0.8**
comp=Z,114nm,1.3s,baz=324,slow=5.9
WLF Walferdange 73.23 35 *eP* **P 00 04 01.5 -0.8**
comp=Z,95nm,1.2s,baz=324,slow=5.9
FUL Funchal 73.25 61 *eP* **P 00 04 03.1 +0.4**
FUL *i* IAmb IAmb 00 04 15.9
comp=Z,436nm,1.6s
GTTG Gottingen 73.28 32 *eP* **P 00 04 01.4 -1.1**
comp=Z,62nm,1.2s,baz=324,slow=5.9
GTTG Gottingen 73.28 32 *eP* **P 00 04 01.5 -1.1**
comp=Z,62nm,1.2s,baz=324,slow=5.9
PMPST Porto Santo, M 73.31 60 *eP* **P 00 04 00.8 -2.2**
PMPST *i* IAmb IAmb 00 04 14.8
comp=Z,667nm,1.7s
PSBE So Bento 73.36 51 *eP* **P 00 04 02.8 -0.4**
PSBE *i* IAmb IAmb 00 04 15.8
comp=Z,454nm,1.6s
MTE Manteigas 73.43 49 P **P 00 04 02.8 -0.9**
MTE IAMs_20 IAMs_20 00 33 47.1
comp=Z,28µm,20.0s
MTE Manteigas 73.43 49 *eP* **P 00 04 03.7 -0.1**
MTE *i* IAmb IAmb 00 04 15.9
comp=Z,400nm,1.5s
MTE *e*S **SKiKP 00 13 37.7 +3.3**
MTE *e*SS **SS 00 18 23.1 +8.8**
MTE *e*LR LR 00 27 24.0
MTE *i* IAMs_20 IAMs_20 00 34 23.0
comp=Z,25µm,18.0s
PMAFR Mafra 73.48 51 *eP* **P 00 04 03.8 -0.1**
PMAFR *i* IAmb IAmb 00 04 17.2
comp=Z,631nm,1.3s
USRK Ussuriysk Ar. 73.51 316 P **P 00 04 03.8 -0.2**
comp=Z,8.5nm,0.8s,baz=42,slow=5.2,SNR=11
USRK PKPPKP **P'P'df 00 31 40.4 -6.7**
comp=Z,4.5nm,0.7s,baz=68,slow=1.5,SNR=4.9
comp=Z,8.5nm,0.8s
USRK Ussuriysk Ar. 73.51 316 P **P 00 04 03.2 -0.8**
PSARD Sardoal 73.65 50 *eP* **P 00 04 04.4 -0.6**
PSARD *i* IAmb IAmb 00 04 17.9
comp=Z,386nm,1.3s
LIS Lisbon 73.72 52 *eP* **P 00 04 05.3 0.0**
LIS *e*S **S 00 13 36.8 +0.8**
LIS IAMs_20 IAMs_20 00 31 50.3
comp=N,47µm,20.7s
LIS Lisbon 73.72 52 *eP* **P 00 04 05.7 +0.4**
LIS *i* IAmb IAmb 00 04 18.9
comp=N,852nm,1.4s
TNS Taunus Mts 73.73 34 *eP* **P 00 04 04.1 -1.2**
comp=N,39nm,1.1s,baz=324,slow=5.9
TNS Taunus Mts 73.73 34 *eP* **P 00 04 04.2 -1.2**
comp=N,39nm,1.1s,baz=324,slow=5.9
PCBR Castelo Branco 73.86 50 *eP* **P 00 04 05.9 -0.3**
PCBR *i* IAmb IAmb 00 04 18.8
comp=N,253nm,1.5s
UBBA Unterbreizbach 73.87 33 *eP* **P 00 04 04.9 -1.0**
comp=N,98nm,1.6s,baz=324,slow=5.9
UBBA Unterbreizbach 73.87 33 *eP* **P 00 04 04.8 -1.1**
comp=N,98nm,1.6s,baz=324,slow=5.9
RUE Ruedersdorf 73.94 30 *eP* **P 00 04 05.0 -1.4**
comp=N,179nm,1.7s,baz=324,slow=5.9
RUE Ruedersdorf 73.94 30 *eP* **P 00 04 05.0 -1.4**
comp=N,71nm,1.2s,baz=324,slow=5.9
PMTG Montargil 73.99 51 *eP* **P 00 04 06.6 -0.3**
PMTG *i* IAmb IAmb 00 04 18.9
comp=N,295nm,1.5s
LPAZ La Paz 74.02 133 P **P 00 04 07.0 -0.9**
comp=N,30nm,0.8s,baz=335,slow=5.3,SNR=40
LPAZ PKPPKP 00 31 40.7
comp=N,0.4nm,0.5s,baz=58,slow=2.2,SNR=4.3
comp=N,30nm,0.8s
LPAZ La Paz 74.02 133 P **P 00 04 06.6 -1.4**
LPAZ La Paz 74.02 133 P **P 00 04 06.6 -1.4**
LPAZ pmax pmax
comp=Z,52nm,0.8s
PMRV Marv??o 74.20 50 *eP* **P 00 04 07.6 -0.6**
PMRV *i* IAmb IAmb 00 04 20.9
comp=Z,505nm,1.6s
PMRV *e*S **S 00 13 41.9 +0.4**
PMRV *e*LR LR 00 27 55.9
PMRV *i* IAMs_20 IAMs_20 00 33 02.1
comp=Z,20µm,20.0s
NEUB Neuenburg 74.24 32 *eP* **P 00 04 06.8 -1.3**
comp=Z,77nm,1.0s,baz=324,slow=5.9
NEUB Neuenburg 74.24 32 *eP* **P 00 04 06.9 -1.3**
comp=Z,77nm,1.0s,baz=324,slow=5.9
PARRA Arraiolos 74.27 51 *eP* **P 00 04 07.9 -0.7**
PARRA *i* IAmb IAmb 00 04 21.5
comp=Z,221nm,1.5s
MOE Montemor 74.30 51 *eP* **P 00 04 08.5 -0.2**
MOE *i* IAmb IAmb 00 04 21.9
comp=Z,288nm,1.6s
MDJ Mudanjiang 74.38 318 IAMs_20 IAMs_20 00 34 41.5
comp=Z,27µm,21.0s
MDJ Mudanjiang 74.38 318 P **P 00 04 11.0 +1.9**
MDJ S **S 00 13 46.8 +3.5**
MDJ sS sS 00 13 54.0 +3.8
MDJ pmax
comp=Z,1µm,3.8s
MDJ L
comp=Z,10µm,18.8s
MDJ L
comp=Z,18µm,19.3s
MDJ L
comp=Z,31µm,21.8s
TBI Tubuai 74.40 213 *e*S **S 00 13 43.1 -0.6**
comp=Z,89µm,34.5s
TBI *e*SS **SS 00 18 37.3 +6.6**
comp=Z,57µm,33.8s
TBI *e*LQ LQ 00 23 35.5
comp=Z,35µm,27.8s
TBI *e*LR LR 00 26 58.9
comp=Z,207µm,36.0s
TBI *e*LR LR 00 27 03.5
comp=Z,37µm,35.2s
PB18 Visviri 74.41 135 P **P 00 04 10.0 -0.1**
PB18 IAMs_20 IAMs_20 00 38 25.9
comp=Z,16µm,21.0s
PESTR Estremoz 74.48 51 IAmb IAmb 00 04 19.2
comp=Z,102nm,0.9s
PESTR Estremoz 74.48 51 *eP* **P 00 04 09.0 -0.8**
PESTR *i* IAmb IAmb 00 04 21.9
comp=Z,236nm,1.3s
EVO Evora 74.48 51 *eP* **P 00 04 09.2 -0.7**
EVO *i* IAmb IAmb 00 04 22.2
comp=Z,240nm,1.6s
BNX BinXian 74.57 320 ||P **P 00 04 09.0 -1.2**
BNX S **S 00 13 46.8 +1.4**
BNX pmax
comp=Z,2µm,3.5s
BNX L
comp=Z,13µm,17.7s
BNX L
comp=Z,17µm,19.4s
PABE Paberze 74.60 23 IAMs_20 IAMs_20 00 34 41.3
comp=Z,28µm,21.0s
CLL Collm 74.61 31 IAMs_20 IAMs_20 00 39 12.1
comp=Z,23µm,19.0s
CLL Collm 74.61 31 *eP* **P 00 04 08.8 -1.5**
comp=Z,52nm,0.9s,baz=324,slow=5.9
CLL Collm 74.61 31 *eP* **P 00 04 08.9 -1.5**
comp=Z,52nm,0.9s,baz=324,slow=5.9
MOX Moxa 74.63 32 *eP* **P 00 04 09.3 -1.2**
comp=Z,155nm,1.6s,baz=324,slow=5.9
MOX *e*L L 00 36 21.4
comp=Z,35µm,21.3s
MOX Moxa 74.63 32 *eP* **P 00 04 09.2 -1.2**
comp=Z,155nm,1.6s,baz=324,slow=5.9
MOX *e*L L 00 36 21.5
comp=Z,35µm,21.3s
ECH Echery 74.77 36 IAMs_20 IAMs_20 00 35 32.6
comp=Z,24µm,19.0s
PTEO Sao Teotonio 74.77 52 *eP* **P 00 04 10.9 -0.6**
PTEO *i* IAmb IAmb 00 04 25.0
comp=Z,395nm,1.8s
MESJ Messejana 74.85 52 *eP* **P 00 04 11.8 -0.2**
MESJ *e*S **S 00 13 49.5 +0.7**
MESJ IAMs_20 IAMs_20 00 34 04.4
comp=Z,37µm,19.2s
MESJ Messejana 74.85 52 *eP* **P 00 04 11.5 -0.5**
MESJ *i* IAmb IAmb 00 04 24.4
comp=Z,200nm,1.5s
MESJ Messejana 74.85 52 *eP* **P 00 04 11.8 -0.2**
MESJ *e*S **S 00 13 49.5 +0.7**
PB12 IPOC Station P 74.85 136 IAMs_20 IAMs_20 00 34 10.5
comp=Z,16µm,22.0s
HILR Hailar Array B 74.90 327 P **P 00 04 11.6 -0.6**
comp=Z,89nm,1.1s,baz=44,slow=7.4,SNR=18
HILR LR LR 00 40 30.3
comp=Z,23µm,18.2s,baz=60,slow=38
comp=Z,89nm,1.1s
PBEJ Beja 74.92 51 *eP* **P 00 04 11.9 -0.5**
PBEJ *i* IAmb IAmb 00 04 24.6
comp=Z,282nm,1.7s
PLN Plauen 74.97 32 *eP* **P 00 04 11.0 -1.4**
comp=Z,16nm,0.9s,baz=324,slow=5.9
PLN Plauen 74.97 32 *eP* **P 00 04 11.1 -1.4**
comp=Z,16nm,0.9s,baz=324,slow=5.9
MORF Marmelete 74.98 52 *eP* **P 00 04 12.6 -0.2**
MORF *e*S **S 00 13 51.0 +0.6**
MORF IAMs_20 IAMs_20 00 33 54.1
comp=Z,34µm,21.9s
MORF Marmelete 74.98 52 P **P 00 04 11.4 -1.4**
MORF IAmb IAmb 00 04 22.8
comp=Z,273nm,0.9s
MORF Marmelete 74.98 52 *eP* **P 00 04 12.6 -0.2**
MORF *i* IAmb IAmb 00 04 26.1
comp=Z,637nm,1.4s
MORF Marmelete 74.98 52 P **P 00 04 11.4 -1.4**
MORF pmax pmax
comp=Z,273nm,0.9s
PFVI Vila Bisbo 75.00 53 *eP* **P 00 04 12.5 -0.4**
PFVI *i* IAmb IAmb 00 04 26.3
comp=Z,766nm,1.4s
PB16 IPOC Station P 75.03 135 IAMs_20 IAMs_20 00 38 38.1
comp=Z,20µm,21.0s
PCVE Castro Verde 75.10 52 *eP* **P 00 04 13.1 -0.3**
PCVE *i* IAmb IAmb 00 04 25.9
comp=Z,329nm,1.4s
TANN Tannenbergstha 75.14 32 *eP* **P 00 04 12.1 -1.4**
comp=Z,98nm,1.6s,baz=324,slow=5.9
TANN Tannenbergstha 75.14 32 *eP* **P 00 04 12.1 -1.4**
comp=Z,98nm,1.6s,baz=324,slow=5.9
BFO Black Forest 75.17 35 P **P 00 04 11.7 -2.0**
BFO Black Forest 75.17 35 P **P 00 04 11.7 -2.0**
BFO pmax pmax
comp=Z,79nm,0.9s
BFO MLR MLR
comp=Z,28µm,18.0s
BFO Black Forest 75.17 35 *eP* **P 00 04 12.4 -1.2**
comp=Z,82nm,0.9s,baz=324,slow=5.9
BFO Black Forest 75.17 35 *eP* **P 00 04 12.5 -1.2**
comp=Z,82nm,0.9s,baz=324,slow=5.9
STU Stuttgart 75.18 34 IAMs_20 IAMs_20 00 37 01.2
comp=Z,22µm,19.0s
STU Stuttgart 75.18 34 *eP* **P 00 04 12.6 -1.0**
comp=Z,232nm,1.4s,baz=324,slow=5.9
STU Stuttgart 75.18 34 *eP* **P 00 04 12.7 -1.0**
comp=Z,193nm,1.1s,baz=324,slow=5.9
GRA1 Grafenberg Arr 75.25 33 IAmb IAmb 00 04 37.7
comp=Z,162nm,1.4s
GRF Grafenberg Arr 75.25 33 *eP* **P 00 04 13.3 -0.7**
comp=Z,210nm,1.5s,baz=324,slow=5.9
GRF *e*L L 00 38 37.2
comp=Z,25µm,18.9s
GRF Grafenberg Arr 75.25 33 *eP* **P 00 04 13.4 -0.7**
comp=Z,210nm,1.5s,baz=324,slow=5.9
GRF *e*L L 00 38 37.2
comp=Z,25µm,18.9s
PBAR Barrancos 75.28 51 *eP* **P 00 04 14.0 -0.4**
PBAR *i* IAmb IAmb 00 04 26.7
comp=Z,293nm,1.6s
NKC Novy Kostel 75.28 32 *eP* **P 00 04 14.0 -0.3**
NKC *e*pP **sP 00 04 20.7 +0.7**
NKC AMS AMS 00 30 20.0
comp=Z,31µm,30.5s
BRG Berggiesshubel 75.31 31 *eP* **P 00 04 13.2 -1.2**
comp=Z,212nm,1.8s,baz=324,slow=5.9
BRG Berggiesshubel 75.31 31 *eP* **P 00 04 13.2 -1.2**
comp=Z,212nm,1.8s,baz=324,slow=5.9
HSKC Hora Svate Kat 75.34 31 *eP* **P 00 04 13.0 -1.6**
HSKC AMS AMS 00 30 50.0
comp=Z,28µm,34.2s
PBDV Barranco-do-Ve 75.44 52 *eP* **P 00 04 15.9 +0.5**
PBDV *i* IAmb IAmb 00 04 28.4
comp=Z,423nm,1.3s
PVAQ Vaqueiros 75.44 52 *eP* **P 00 04 15.2 -0.1**
PVAQ *i* IAmb IAmb 00 04 28.0
comp=Z,426nm,1.4s
PVAQ *e*S **S 00 13 55.7 +0.3**
PVAQ *e*SS **SS 00 18 53.9 +9.0**
PVAQ *e*LR LR 00 28 31.6
PVAQ *i* IAMs_20 IAMs_20 00 35 01.6
comp=Z,30µm,18.0s
RICC Richard 75.64 31 *eP* **P 00 04 20.6 +4.3**
MAJO Matsushiro 75.67 307 P **P 00 04 15.6 -1.1**
MAJO IAmb IAmb 00 04 25.0
comp=Z,289nm,1.4s
MAJO Matsushiro 75.67 307 P **P 00 04 15.6 -1.1**
MAJO pmax pmax
comp=Z,289nm,1.4s
MJAR Matsushiro Arr 75.67 307 P **P 00 04 16.5 -0.2**
comp=Z,27nm,1.0s,baz=31,slow=5.1,SNR=23
MJAR LR LR 00 32 53.0
comp=Z,9µm,21.9s,baz=26,slow=32
comp=Z,27nm,1.0s
MJAR Matsushiro Arr 75.67 307 P **P 00 04 15.6 -1.1**
MJAR IAmb IAmb 00 04 25.1
comp=Z,189nm,1.3s
SUW Suwalki 75.68 24 IAMs_20 IAMs_20 00 36 09.9
comp=Z,25µm,21.0s
PAB San Pablo 75.76 48 P **P 00 04 16.0 -1.3**
PAB IAmb IAmb 00 04 28.6
comp=Z,325nm,1.7s
PAB San Pablo 75.76 48 IAMs_20 IAMs_20 00 35 12.7
comp=Z,24µm,19.0s
PAB San Pablo 75.76 48 P **P 00 04 16.0 -1.3**
PAB pmax pmax
comp=Z,325nm,1.7s
PSGCX Pisagua 75.79 137 IAmb IAmb 00 04 28.6
comp=Z,258nm,1.3s
PSGCX IAMs_20 IAMs_20 00 39 48.3
comp=Z,20µm,21.0s
PVCC Panska Ves 75.82 30 *eP* **P 00 04 17.2 -0.1**
PVCC *e*pP **sP 00 04 25.2 +2.1**
PVCC *e*PP **PP 00 07 11.9 +5.2**
PVCC *ex* x 00 14 06.1
PVCC AMS AMS 00 38 20.0
comp=Z,28µm,18.6s
ESBB Sonseca Array 75.87 48 IAmb IAmb 00 04 29.1
comp=Z,99nm,0.9s
ESDC Sonseca Array 75.87 48 P **P 00 04 17.2 -0.7**
comp=Z,25nm,1.1s,baz=309,slow=4.8,SNR=37
ESDC LR LR 00 35 30.5
comp=Z,16µm,19.5s,baz=314,slow=34
comp=Z,25nm,1.1s
ESDC Sonseca Array 75.87 48 P **P 00 04 16.9 -1.0**

ESDC IAmb IAmb 00 04 29.2
comp=Z,104nm,0.9s
SSB Saint Sauveur 75.90 39 IAMs_20 IAMs_20 00 39 29.6
comp=Z,18µm,21.0s
PB11 IPOC Station P 76.16 136 IAmb IAmb 00 04 38.2
comp=Z,259nm,1.0s
TARA Tarawa 76.23 258 IAMs_20 IAMs_20 00 36 07.5
comp=Z,12µm,18.0s
PRU Pruhonice 76.26 31 *e*P **P** **00 04 18.2 -1.6**
PRU *ex* x 00 14 12.6
PRU AMS AMS 00 31 20.0
comp=Z,28µm,31.0s
SENIN Lac Senin/Sane 76.28 37 P **P** **00 04 20.0 -0.3**
CHVC Chvalec 76.31 30 *e*P **P** **00 04 20.8 +0.7**
CHVC *e*pP **pP** **00 04 24.0 -0.4**
CHVC AMS AMS 00 37 50.0
comp=Z,23µm,18.8s
GO01 Chusmiza 76.31 136 IAmb IAmb 00 04 45.0
comp=Z,138nm,1.3s
GO01 IAMs_20 IAMs_20 00 42 46.1
comp=Z,15µm,19.0s
WET Wettzell 76.33 32 *e*P **P** **00 04 19.1 -1.2**
comp=Z,181nm,2.0s,baz=324,slow=5.9
WET Wettzell 76.33 32 *e*P **P** **00 04 19.1 -1.2**
comp=Z,181nm,2.0s,baz=324,slow=5.9
UPC Upice 76.36 30 *e*P **P** **00 04 20.7 +0.3**
UPC *e*pP **pP** **00 04 24.3 -0.3**
UPC *e*PP **PP** **00 07 15.2 +4.0**
UPC *ex* x 00 14 12.1
UPC AMS AMS 00 37 50.0
comp=Z,24µm,18.9s
CEST Esterri de Car 76.38 43 IAmb IAmb 00 04 32.5
comp=Z,105nm,0.9s
OSTC Ostas 76.39 30 *e*P **P** **00 04 21.6 +1.0**
OSTC *e*PP **PP** **00 07 14.8 +3.3**
OSTC *ex* x 00 14 13.4
OSTC AMS AMS 00 40 40.0
comp=Z,28µm,16.6s
UBR Ueberruh 76.41 35 *e*P **P** **00 04 20.2 -0.6**
comp=Z,132nm,1.1s,baz=324,slow=5.9
UBR Ueberruh 76.41 35 *e*P **P** **00 04 20.3 -0.6**
comp=Z,132nm,1.1s,baz=324,slow=5.9
FUR Furstenfeldbru 76.50 34 *e*P **P** **00 04 20.6 -0.6**
baz=324,slow=5.9
FUR Furstenfeldbru 76.50 34 *e*P **P** **00 04 20.6 -0.6**
comp=Z,180nm,1.4s,baz=324,slow=5.9
ZVC Zvikov 76.58 31 *e*P **P** **00 04 23.4 +1.7**
ZVC *e*pP **pP** **00 04 26.4 +0.5**
ZVC *e*PP **PP** **00 07 17.6 +4.5**
ZVC *ex* x 00 14 17.1
ZVC AMS AMS 00 30 50.0
comp=Z,32µm,35.7s
TA01 Diego Aracena 76.58 137 P **P** **00 04 21.6 -0.3**
DPC Dobruska-Polom 76.60 30 *e*P **P** **00 04 22.7 +0.9**
DPC *e*pP **pP** **00 04 25.8 -0.3**
DPC *e*PP **PP** **00 07 17.8 +4.5**
DPC *ex* x 00 14 14.5
DPC AMS AMS 00 38 00.0
comp=Z,22µm,18.6s
KHC Kasperske Hory 76.60 32 IAMs_20 IAMs_20 00 43 01.8
comp=Z,21µm,19.0s
KHC Kasperske Hory 76.60 32 *e*P **P** **00 04 21.5 -0.4**
KHC *e*pP **sP** **00 04 29.3 +1.6**
KHC *e*PP **PP** **00 07 16.0 +2.7**
KHC *ex* x 00 14 13.9
KHC AMS AMS 00 31 20.0
comp=Z,37µm,35.0s
DAVA Damuels 76.64 35 *i* P **P** **00 04 21.2 -1.1**
comp=Z,29nm,1.3s,SNR=9.0
PB08 IPOC Station P 76.73 136 IAMs_20 IAMs_20 00 40 40.2
comp=Z,18µm,22.0s
RETA Reutte 76.83 34 *i* P **P** **00 04 22.2 -1.1**
comp=Z,32nm,1.9s,SNR=7.6
GEC2 GERESS Array S 76.88 32 *e*P **P** **00 04 22.2 -1.3**
comp=Z,215nm,1.8s,baz=324,slow=5.9
GEC2 GERESS Array S 76.88 32 *e*P **P** **00 04 22.2 -1.3**
comp=Z,215nm,1.8s,baz=324,slow=5.9
GERES GERESS Array B 76.88 32 P **P** **00 04 22.8 -0.7**
comp=Z,2.0nm,0.8s,baz=315,slow=0.9,SNR=16
GERES LR LR 00 38 18.9
comp=Z,21µm,20.1s,baz=326,slow=36
comp=Z,2.0nm,0.8s
GERES GERESS Array B 76.88 32 P **P** **00 04 21.8 -1.7**
CN2 Changchun 76.95 320 P **P** **00 04 22.5 -1.3**
CN2 pP pP 00 04 27.3 -0.8
CN2 PP **PP** **00 07 16.0 -0.3**
CN2 S **S** **00 14 06.8 -5.0**
CN2 pmax
comp=Z,120nm,1.2s
CN2 pmax
comp=Z,2µm,3.0s
CN2 L
comp=Z,15µm,16.0s
CN2 L
comp=Z,18µm,19.0s
KRLC Kraliky 76.99 29 *e*P **P** **00 04 24.8 +0.8**
KRLC *e*pP **pP** **00 04 28.9 +0.6**
KRLC AMS AMS 00 38 10.0
comp=Z,26µm,19.0s
RAR Rarotonga 77.02 222 LR LR 00 32 53.8
comp=Z,6µm,19.3s,baz=22,slow=32
DAVOX Davos/Dischmat 77.04 35 P **P** **00 04 24.2 -0.4**
comp=Z,10nm,1.1s,baz=322,slow=8.8,SNR=7.2
DAVOX LR LR 00 39 13.7
comp=Z,23µm,19.7s,baz=328,slow=36
comp=Z,10nm,1.1s
TUE Stuetta 77.06 36 P **P** **00 04 24.9 +0.2**
MOTA Moosalm 77.09 34 *i* P **P** **00 04 24.1 -0.7**
comp=Z,41nm,1.5s,SNR=9.5
CKRC Cesky Krumlov 77.13 32 *e*P **P** **00 04 25.8 +1.0**
CKRC *e*pP **sP** **00 04 30.7 +0.1**
CKRC AMS AMS 00 31 10.0
comp=Z,34µm,36.7s
JHJ Hachijo jima 2 77.15 304 LR LR 00 40 09.2
comp=Z,4µm,18.1s,baz=41,slow=37
FETA Feichten 77.20 35 *i* pP **P** **00 04 25.6 +0.2**
comp=Z,34nm,2.0s,SNR=11
SQTA Sankt Quirin 77.23 34 *i* P **P** **00 04 25.0 -0.5**
comp=Z,56nm,1.7s,SNR=13
WATA Walderalm 77.28 34 *i* P **P** **00 04 25.1 -0.8**
comp=Z,23nm,1.4s,SNR=11
PB02 IPOC Station P 77.36 137 P **P** **00 04 26.3 -0.1**
PB02 IAmb IAmb 00 04 36.2
comp=Z,108nm,0.9s
PB02 IAMs_20 IAMs_20 00 40 37.0
comp=Z,15µm,22.0s
WTTA Wattenberg 77.37 34 *i* P **P** **00 04 25.7 -0.7**
comp=Z,42nm,1.6s,SNR=13
STEB Steborice 77.46 29 *e*P **P** **00 04 27.2 +0.6**
AFI Afiamalu 77.55 236 LR LR 00 31 25.3
comp=Z,17µm,21.9s,baz=42,slow=30
VRAC Vranov 77.57 30 P **P** **00 04 26.9 -0.4**
comp=Z,6.7nm,0.8s,baz=331,slow=8.0,SNR=7.7
VRAC LR LR 00 39 37.8
comp=Z,20µm,19.1s,baz=334,slow=36
comp=Z,6.7nm,0.8s
SIV San Ignacio 77.64 127 LR LR 00 42 44.8
comp=Z,20µm,19.2s,baz=353,slow=39
LESA Schwarzleotal 77.65 33 *e*P **P** **00 04 27.3 -0.5**
comp=Z,12nm,1.5s
OKC Ostrava-Krasne 77.67 29 *e*P **P** **00 04 29.3 +1.5**
OKC AMS AMS 00 36 30.0
comp=Z,22µm,22.1s
PB07 IPOC Station P 77.71 138 IAMs_20 IAMs_20 00 40 47.3
comp=Z,15µm,22.0s
BIOA Bad Ischl, Aus 77.81 33 *i* P **P** **00 04 27.3 -1.3**
comp=Z,10nm,1.6s,SNR=6.7
MOA Molln 77.92 32 *e*P **P** **00 04 27.5 -1.7**
comp=Z,11nm,1.5s
IRK Irkutsk 77.92 336 *e*P **P** **00 04 28.2 -0.9**
IRK *e*S **S** **00 14 20.6 -1.5**
IRK pmax pmax
comp=Z,551nm,3.1s
MAUC Maruska 77.96 29 *e*P **P** **00 04 28.8 -0.6**
MAUC AMS AMS 00 36 40.0
comp=Z,36µm,22.3s
OBN Obninsk 77.97 16 IAMs_20 IAMs_20 00 39 04.1
comp=Z,22µm,18.0s
PB09 IPOC Station P 78.08 137 P **P** **00 04 31.1 +0.6**
PB09 IAmb IAmb 00 04 49.9
comp=Z,250nm,1.3s
PB09 IAMs_20 IAMs_20 00 41 09.2
comp=Z,15µm,21.0s
ABTA Abfaltersbach 78.14 34 *i* P **P** **00 04 29.6 -0.9**
comp=Z,20nm,1.4s,SNR=7.8
KBA Koelnbreinsper 78.19 33 *i* pP **P** **00 04 30.8 -0.2**
comp=Z,11nm,1.3s,SNR=11
PTLB Pontes e Lacer 78.33 125 P **P** **00 04 30.6 -1.2**
PTLB IAmb IAmb 00 04 41.7
comp=Z,488nm,1.8s
WINA Alland / Wiene 78.38 31 *i* P **P** **00 04 30.5 -1.3**
comp=Z,271nm,2.5s,SNR=12
CONA Conrad Observa 78.45 31 *i* P **P** **00 04 30.8 -1.5**
comp=Z,202nm,2.9s,SNR=7.6
PB05 IPOC Station P 78.52 138 IAmb IAmb 00 04 42.6
comp=Z,148nm,1.3s
AVE Averroes 78.53 55 IAMs_20 IAMs_20 00 37 27.7
comp=Z,20µm,20.0s
TLY Talaya 78.60 337 LR LR 00 41 26.2
comp=Z,14µm,19.8s,baz=18,slow=37
TLY Talaya 78.60 337 P **P** **00 04 31.2 -1.8**
TLY IAmb IAmb 00 04 45.5
comp=Z,135nm,1.1s
MYKA Terra Mystica 78.68 33 *e*P **P** **00 04 31.5 -2.1**
comp=Z,19nm,1.7s
RONA Rosalia, Austr 78.81 31 *e*P **P** **00 04 32.6 -1.6**
comp=Z,910nm,8.1s
PRMA PARMA 78.84 36 P **P** **00 04 34.5 +0.3**
ARSA Arzberg 78.89 32 *e*P **P** **00 04 32.7 -1.9**
comp=Z,161nm,2.6s
CART Cartagena 78.98 48 P **P** **00 04 34.8 -0.5**
CART IAMs_20 IAMs_20 00 37 12.8
comp=Z,20µm,20.0s
OBKA Obir 79.13 33 *i* pP **P** **00 04 36.0 0.0**
comp=Z,24nm,1.4s,SNR=6.0
SOKA Soboth 79.18 32 *i* P **P** **00 04 35.5 -0.8**
comp=Z,43nm,1.8s,SNR=11
SABO M.te Sabotino 79.20 34 IAmb IAmb 00 04 47.3
comp=Z,215nm,1.1s
SNY Shenyang 79.35 319 ⇑P **P** **00 04 37.5 +0.4**
SNY pmax
comp=Z,37nm,1.5s
SNY pmax
comp=Z,2µm,4.8s
SNY L
comp=Z,9µm,18.9s
SNY L
comp=Z,24µm,19.9s
SNY L
comp=Z,18µm,21.3s
ARTI Arti 79.42 4 LR LR 00 42 49.5
comp=Z,20µm,19.1s,baz=342,slow=38
ARTI Arti 79.42 4 P **P** **00 04 35.8 -1.5**
ARTI IAMs_20 IAMs_20 00 40 02.5
comp=Z,27µm,21.0s
ARTI Arti 79.42 4 P **P** **00 04 35.8 -1.5**
ARTI pmax pmax
comp=Z,60nm,0.9s
ARTI MLR MLR
comp=Z,27µm,21.0s
JCJ Chichijima 79.91 298 LR LR 00 33 17.7
comp=Z,14µm,21.7s,baz=42,slow=31
MAHO Mahon 79.91 43 IAMs_20 IAMs_20 00 41 44.1
comp=Z,18µm,19.0s
PB14 IPOC Station P 79.94 139 IAmb IAmb 00 04 51.3
comp=Z,638nm,1.9s
PB14 IAMs_20 IAMs_20 00 41 57.3
comp=Z,11µm,18.0s
BEHE Becsehely 80.02 32 P **P** **00 04 40.6 -0.2**
AKASG Malin Array Be 80.33 22 P **P** **00 04 40.0 -2.3**
comp=Z,3.7nm,0.8s,baz=334,slow=5.0,SNR=19
AKASG LR LR 00 39 26.6
comp=Z,33µm,21.3s,baz=342,slow=35
comp=Z,3.7nm,0.8s
AKASG Malin Array Be 80.33 22 P **P** **00 04 41.2 -1.1**
AKASG IAmb IAmb 00 05 13.8
comp=Z,156nm,1.2s
AKASG Malin Array Be 80.33 22 P **P** **00 04 41.2 -1.1**
AKASG pmax pmax
comp=Z,156nm,1.3s
AKBB Malin Array Si 80.33 22 IAmb IAmb 00 05 13.8
comp=Z,183nm,1.4s
KIEV Kiev 80.33 22 P **P** **00 04 40.8 -1.5**
KIEV Kiev 80.33 22 P **P** **00 04 40.8 -1.5**
KIEV pmax pmax
comp=Z,165nm,1.4s
KIEV MLR MLR
comp=Z,32µm,21.0s
MDT Midelt 80.51 53 LR LR 00 37 40.8
comp=Z,10µm,19.4s,baz=329,slow=34
ZALV Zalesovo Beam 80.55 348 P **P** **00 04 41.2 -2.3**
comp=Z,9.0nm,0.8s,baz=20,slow=4.4,SNR=11
ZALV LR LR 00 42 56.7
comp=Z,13µm,20.8s,baz=5.5,slow=38
comp=Z,9.0nm,0.8s
ZALV Zalesovo Beam 80.55 348 P **P** **00 04 41.0 -2.5**
KSRS Korea Array 80.59 314 P **P** **00 04 43.7 -0.2**
comp=Z,7.2nm,0.9s,baz=53,slow=6.0,SNR=19
comp=Z,7.2nm,0.9s
KSAR Wonju Array Be 80.62 314 P **P** **00 04 42.8 -1.3**
KSAR Wonju Array Be 80.62 314 P **P** **00 04 42.8 -1.3**
CASP Castiglione de 80.66 37 P **P** **00 04 42.7 -1.6**
SACV Santiago Islan 80.73 78 IAMs_20 IAMs_20 00 35 45.8
comp=Z,19µm,20.0s
ULN Ulaanbaatar 80.92 333 P **P** **00 04 44.7 -1.1**
ULN Ulaanbaatar 80.92 333 P **P** **00 04 44.7 -1.1**
ULN MLR MLR
comp=Z,32µm,20.0s
MURB Monte Urbino 80.99 36 IAmb IAmb 00 04 58.9
comp=Z,293nm,1.2s
AC01 Pan de Azucar 81.15 140 IAmb IAmb 00 04 58.3
comp=Z,201nm,1.6s
AC01 IAMs_20 IAMs_20 00 36 06.4
comp=Z,13µm,19.0s
SONM Songino Array 81.16 333 P **P** **00 04 46.1 -0.9**
comp=Z,10.0nm,0.9s,baz=34,slow=3.1,SNR=21
SONM PKPPKP P'P'df 00 31 24.2 -10
comp=Z,2.0nm,1.3s,baz=204,slow=3.3,SNR=6.4
SONM LR LR 00 44 41.5
comp=Z,21µm,21.0s,baz=22,slow=39
comp=Z,10.0nm,0.9s
SONM Songino Array 81.16 333 P **P** **00 04 45.7 -1.3**
SONM IAmb IAmb 00 04 57.5
comp=Z,210nm,1.3s
SONM Songino Array 81.16 333 P **P** **00 04 45.7 -1.3**
SONM pmax pmax
comp=Z,210nm,1.3s
BLY Banja Luka 81.62 32 IAMs_20 IAMs_20 00 44 32.5
comp=Z,23µm,19.0s
FUTU Fugatoga 81.73 241 IAMs_20 IAMs_20 00 33 24.1
comp=Z,22µm,21.0s
JNU Naitsue 82.28 309 P **P** **00 04 53.0 -0.1**
comp=Z,27nm,1.1s,baz=21,slow=7.4,SNR=4.7
JNU LR LR 00 37 56.5
comp=Z,8µm,21.9s,baz=34,slow=33
comp=Z,27nm,1.1s
AC06 Mina Casimiro 82.30 141 IAMs_20 IAMs_20 00 36 36.8
comp=Z,19µm,20.0s
AC02 Maricunga 82.42 140 IAmb IAmb 00 05 17.5
comp=Z,149nm,1.4s
BELG Belgornoye 82.43 11 LR LR 00 41 23.9
comp=Z,23µm,20.2s,baz=343,slow=36
GO03 Copiapo 82.56 141 IAMs_20 IAMs_20 00 36 44.6
comp=Z,19µm,20.0s
DL2 Dalian 82.57 319 P **P** **00 04 58.3 +3.9**
DL2 PP **PP** **00 08 03.5 +0.4**
DL2 S **SKSac** **00 15 12.3 -3.2**
DL2 pmax
comp=Z,340nm,1.3s
DL2 pmax
comp=Z,3µm,4.9s
DL2 L
comp=Z,28µm,19.5s
DL2 L
comp=Z,29µm,19.1s
VSL Villasalto 82.65 40 IAMs_20 IAMs_20 00 40 59.4
comp=Z,18µm,18.0s
BORK Borovoye 82.81 357 P **P** **00 04 55.4 0.0**
BORK Borovoye 82.81 357 P **P** **00 04 55.4 0.0**
BORK pmax pmax
comp=Z,42nm,0.9s
BORK MLR MLR
comp=Z,31µm,21.0s
BVAR Borovoye Array 82.83 357 P **P** **00 04 54.6 -1.0**
comp=Z,3.9nm,0.8s,baz=358,slow=4.3,SNR=12
BVAR PKPPKP P'P'df 00 31 21.8 -9.4
comp=Z,0.3nm,0.5s,baz=32,slow=43,SNR=2.9
BVAR LR LR 00 44 42.7
comp=Z,32µm,21.2s,baz=2.7,slow=38
comp=Z,3.9nm,0.8s
PATS Pohnpei 82.83 273 IAMs_20 IAMs_20 00 33 53.6
comp=Z,15µm,21.0s
LCO Las Campanas 83.56 142 P **P** **00 04 59.0 -0.8**
LCO IAmb IAmb 00 05 09.0
comp=Z,143nm,1.4s
LCO Las Campanas 83.56 142 P **P** **00 04 59.0 -0.8**
LCO pmax pmax
comp=Z,143nm,1.5s
LCO Las Campanas 83.56 142 P **P** **00 05 02.5 +2.8**
AC05 El Transito 83.60 142 IAMs_20 IAMs_20 00 37 24.4
comp=Z,23µm,20.0s
MLR Muntele Rosu 84.05 26 LR LR 00 43 12.0
comp=Z,32µm,19.8s,baz=342,slow=36
BJI2 Beijing 84.13 323 P **P** **00 05 01.5 -0.9**
BJI2 pP **PcP** **00 05 06.3 0.0**
BJI2 sP **sP** **00 05 08.8 +0.5**
BJI2 PP **PP** **00 08 15.8 0.0**
BJI2 SKS **SKSac** **00 15 19.0 -6.8**
BJI2 pmax
comp=Z,42nm,1.5s
BJI2 pmax
comp=Z,670nm,3.6s
BJI2 L
comp=Z,14µm,19.8s
BJI2 L
comp=Z,8µm,18.7s
BJI2 L
comp=Z,14µm,20.2s
VA04 Juan Fernndez 84.40 150 IAMs_20 IAMs_20 00 37 47.5
comp=Z,19µm,19.0s
KURK Kurchatov 84.51 351 P **P** **00 05 02.1 -2.0**
KURK Kurchatov 84.51 351 P **P** **00 05 02.1 -2.0**
KURK pmax pmax
comp=Z,62nm,1.2s
KURK MLR MLR
comp=Z,25µm,19.0s
GO04 Tololo Observa 84.52 143 IAMs_20 IAMs_20 00 38 54.7
comp=Z,12µm,19.0s
KURBB Kurchatov Arra 84.61 351 P **P** **00 05 02.8 -1.8**
comp=Z,3.6nm,0.8s,baz=5.4,slow=5.1,SNR=14
KURBB LR LR 00 45 46.0
comp=Z,18µm,19.0s,baz=2.5,slow=38
comp=Z,3.6nm,0.8s
SEM Semipalatinsk 84.62 350 *e*P **P** **00 05 06.4 +1.3**
SEM *e*S **SKSac** **00 15 29.6 +0.5**
SEM LR LR 00 43 42.2
CO01 Juntas del Tor 84.66 142 P **P** **00 05 04.8 -0.5**
CUC Castrocucco 85.07 36 IAMs_20 IAMs_20 00 42 47.2
comp=Z,19µm,21.0s
CO03 El Pedregal 85.14 143 P **P** **00 05 12.1 +4.5**
BDFB Brasilia 85.29 117 P **P** **00 05 08.1 -0.6**
comp=Z,27nm,1.1s,baz=319,slow=7.4,SNR=16
BDFB LR LR 00 47 50.2
comp=Z,16µm,18.4s,baz=321,slow=39
comp=Z,27nm,1.1s
BDFB Brasilia 85.29 117 IAmb IAmb 00 05 18.9
comp=Z,275nm,1.8s
HHC Hu-ho-hao-te 85.34 326 *e*P **P** **00 05 07.8 -0.9**
HHC pP pP 00 05 12.5 -0.5
HHC sP sP 00 05 16.3 +1.8
HHC PP **PP** **00 08 27.8 +2.0**
HHC S **SKSac** **00 15 36.3 +2.5**
HHC pmax
comp=Z,92nm,1.3s
HHC pmax
comp=Z,480nm,5.2s
HHC L
comp=Z,23µm,21.8s
HHC L
comp=Z,36µm,19.9s
AKTO Aktyubinsk 85.35 4 LR LR 00 47 05.4
comp=Z,27µm,19.8s,baz=356,slow=38
KEST Kesra 85.66 42 P **P** **00 05 09.7 -0.7**
comp=Z,34nm,1.1s,baz=317,slow=1.6,SNR=20
KEST LR LR 00 41 36.1
comp=Z,14µm,20.9s,baz=338,slow=34
comp=Z,34nm,1.1s
KEST Kesra 85.66 42 IAmb IAmb 00 05 22.6
comp=Z,180nm,1.2s
BRZS Berezniki 85.75 355 *e*P **P** **00 05 11.9 +1.5**
CO04 Los Peladeros 86.06 144 IAmb IAmb 00 05 32.1
comp=Z,180nm,1.2s
CO04 IAMs_20 IAMs_20 00 39 15.4
comp=Z,19µm,22.0s
BTO2 Baotou 86.09 327 *e*P **P** **00 05 11.5 -0.9**
BTO2 PP **PP** **00 08 35.0 +3.1**
BTO2 S **S** **00 15 45.5 -1.3**
BTO2 pmax
comp=Z,19nm,1.0s
BTO2 pmax
comp=Z,3µm,4.1s
BTO2 L
comp=Z,30µm,16.9s
BTO2 L
comp=Z,30µm,20.0s
RCBR Riachuelo 86.37 102 LR LR 00 40 57.8
comp=Z,11µm,19.9s,baz=319,slow=34
VA06 Catapilco 86.37 144 IAMs_20 IAMs_20 00 39 52.6
comp=Z,15µm,18.0s
CEL Celeste 86.56 37 IAMs_20 IAMs_20 00 43 03.6
comp=Z,15µm,21.0s
VAE Valguarnera 86.57 38 LR LR 00 44 08.1
comp=Z,11µm,18.3s,baz=318,slow=36
ABKAR Akbulak array 86.62 3 P **P** **00 05 12.3 -2.4**
VA01 Torpederas 86.62 145 IAMs_20 IAMs_20 00 39 08.5
comp=Z,20µm,20.0s
ZON Zonda 86.63 142 IAmb IAmb 00 05 39.2
comp=Z,107nm,1.1s
MSVF Nonsavu 86.71 241 LR LR 00 38 20.0
comp=Z,21µm,19.6s,baz=35,slow=32
ZSN Zaisan 86.85 347 *e*P **P** **00 05 17.7 +1.8**
ZSN *e*S **SKSac** **00 15 43.6 +0.8**
VA03 San Esteban 86.86 144 IAMs_20 IAMs_20 00 37 48.6
comp=Z,18µm,22.0s
CFA Coronel Fontan 86.88 141 LR LR 00 40 57.3
comp=Z,9µm,18.6s,baz=349,slow=34
HNS HongShan 86.94 322 ⇓P **P** **00 05 16.3 -0.2**
HNS SKS **SKSac** **00 15 40.0 -3.6**
HNS pmax
comp=Z,290nm,1.5s
HNS pmax
comp=Z,3µm,3.5s
HNS L
comp=Z,16µm,19.8s
HNS L
comp=Z,20µm,18.4s
HNS L
comp=Z,20µm,20.8s
MT02 Curacav 87.04 144 IAmb IAmb 00 05 25.8
comp=Z,197nm,1.5s
MT02 IAMs_20 IAMs_20 00 39 31.4
comp=Z,19µm,22.0s
PEL Peldehue 87.13 144 P **P** **00 05 16.2 -1.1**
PEL IAMs_20 IAMs_20 00 37 55.9
comp=Z,17µm,22.0s
PEL Peldehue 87.13 144 P **P** **00 05 16.2 -1.1**
PEL pmax pmax
comp=Z,445nm,1.9s
PEL Peldehue 87.13 144 P **P** **00 05 18.7 +1.4**
MT05 Renca 87.32 144 IAMs_20 IAMs_20 00 40 12.9
comp=Z,15µm,20.0s
MT16 CCHEN 87.44 144 IAMs_20 IAMs_20 00 39 56.1
comp=Z,17µm,21.0s
MT03 Universidad Ad 87.51 144 IAMs_20 IAMs_20 00 39 57.7
comp=Z,17µm,21.0s
MT01 Popeta 87.52 145 IAMs_20 IAMs_20 00 39 34.0
comp=Z,20µm,20.0s
MT09 Talagante 87.55 145 IAMs_20 IAMs_20 00 39 45.9
comp=Z,19µm,20.0s
GUMO Guam 87.63 287 P **P** **00 05 20.7 +0.6**
comp=Z,313nm,1.1s,baz=64,slow=7.2,SNR=4.2
GUMO LR LR 00 37 24.6
comp=Z,7µm,21.6s,baz=54,slow=31
TIY Taiyuan 87.65 324 P **P** **00 05 24.5 +4.5**
TIY PP **PP** **00 08 47.8 +3.4**
TIY SKS **SKSac** **00 15 44.0 -4.1**
TIY S **SKSac** **00 15 49.5 +1.4**
TIY pmax
comp=Z,59nm,0.7s
TIY pmax
comp=Z,2µm,5.3s
TIY L
comp=Z,31µm,20.6s
TIY L
comp=Z,11µm,27.5s
MT08 Bocatoma Ro 87.67 144 IAMs_20 IAMs_20 00 40 47.9
comp=Z,17µm,19.0s
BO04 La Punta 87.89 144 IAMs_20 IAMs_20 00 39 56.9
comp=Z,17µm,21.0s
MKAR Makanchi Array 87.89 348 P **P** **00 05 20.4 -0.6**

comp=Z,4.6nm,1.0s,baz=16,slow=7.5,SNR=9.0
MKAR LR LR 00 47 36.7
comp=Z,20µm,21.3s,baz=1.0,slow=38
comp=Z,4.6nm,1.0s
MKAR Makanchi Array 87.89 348 P P 00 05 19.4 -1.5
MAKZ Makanchi 87.92 348 IAMs_20 IAMs_20 00 49 44.8
comp=Z,19µm,19.0s
CPUP Villa Florida 87.97 131 P P 00 05 20.6 -0.8
comp=Z,22nm,1.1s,baz=324,slow=5.2,SNR=20
CPUP LR LR 00 48 49.5
comp=Z,7µm,19.6s,baz=345,slow=38
comp=Z,22nm,1.1s
WDD Wied Dalam 87.98 39 IAMs_20 IAMs_20 00 47 17.5
comp=Z,18µm,18.0s
BO01 Tunca 88.04 145 IAmb IAmb 00 05 30.3
comp=Z,124nm,1.2s
BO01 IAMs_20 IAMs_20 00 39 48.9
comp=Z,18µm,20.0s
GO05 Hualane 88.23 146 IAMs_20 IAMs_20 00 39 10.0
comp=Z,17µm,20.0s
JOW Kunigami 88.51 307 P P 00 05 25.1 +0.9
comp=Z,35nm,0.8s,baz=70,slow=6.2,SNR=3.9
comp=Z,35nm,0.8s
BO02 Sierra Bellavi 88.51 145 P P 00 05 23.3 -0.6
BO02 IAMs_20 IAMs_20 00 40 04.4
comp=Z,17µm,19.0s
SSE Sheshan 89.02 314 P P 00 05 24.5 -2.0
SSE pmax
comp=Z,11nm,0.9s
SSE pmax
comp=Z,1µm,3.5s
SSE L
comp=Z,6µm,19.6s
SSE L
comp=Z,4µm,20.9s
ML02 Panimavida 89.09 146 IAMs_20 IAMs_20 00 39 45.7
comp=Z,12µm,20.0s
BI05 Punta Hualpn 89.25 148 IAMs_20 IAMs_20 00 40 09.0
comp=Z,17µm,19.0s
NJ2 Nanjing 89.42 317 ⇑P **P 00 05 28.8 +0.4**
NJ2 pP **pP 00 05 32.5 -0.2**
NJ2 sP **sP 00 05 36.3 +2.1**
NJ2 S **S 00 16 22.0 +3.4**
NJ2 SS **SS 00 22 13.0 +0.7**
NJ2 pmax
comp=Z,380nm,1.4s
NJ2 pmax
comp=Z,7µm,3.5s
NJ2 L
comp=Z,30µm,17.3s
NJ2 L
comp=Z,43µm,20.2s
KIV Kislovodsk 89.82 16 IAMs_20 IAMs_20 00 48 54.4
comp=Z,17µm,20.0s
KVAR Kislovodsk Arr 89.82 16 LR LR 00 48 43.6
comp=Z,11µm,19.3s,baz=276,slow=38
WMQ Urumqi 89.83 344 ⇑P **P 00 05 31.5 +1.3**
WMQ sP sP 00 05 39.0 +3.0
WMQ SKS **SKSac 00 16 00.5 -0.4**
WMQ pmax
comp=Z,9.0nm,0.7s
WMQ pmax
comp=Z,410nm,5.1s
WMQ L
comp=Z,22µm,20.5s
WMQ L
comp=Z,21µm,22.9s
WMQ L
comp=Z,18µm,24.1s
BI02 San Fabin de 89.93 146 IAMs_20 IAMs_20 00 40 54.0
comp=Z,13µm,20.0s
KBZ Khabaz 90.08 16 P P 00 05 30.8 -0.4
KBZ comp=Z,3.1nm,0.9s,baz=346,slow=4.4,SNR=11
LR LR 00 49 05.5
comp=Z,12µm,19.6s,baz=349,slow=38
comp=Z,3.1nm,0.9s
TDK Taldyqorghan 90.17 350 *e*P **P 00 05 33.3 +1.6**
comp=Z,411nm,3.5s
TDK *e*S **SKSac 00 16 03.7 +1.0**
TDK LR LR 00 47 05.5
comp=Z,13µm,17.1s
LYN LuoYang 90.31 322 ⇓P **P 00 05 32.0 -0.5**
LYN pmax
comp=Z,64nm,1.2s
LYN pmax
comp=Z,3µm,5.0s
LYN L
comp=Z,17µm,20.1s
LYN L
comp=Z,27µm,21.2s
BTLS Baital 90.56 354 *e*P **P 00 05 34.9 +1.4**
GTA2 Gaotai 90.77 334 P **P 00 05 38.8 +4.1**
GTA2 sP sP 00 05 47.3 +6.7
GTA2 S **S 00 16 34.5 +3.3**
GTA2 pmax
comp=Z,48nm,1.6s
GTA2 pmax
comp=Z,1µm,5.2s
GTA2 L
comp=Z,18µm,21.0s
GTA2 L
comp=Z,22µm,18.6s
GTA2 L
comp=Z,28µm,21.3s
BRTR Keskin Array B 91.64 24 P **P 00 05 39.6 +0.9**
comp=Z,1.2nm,0.8s,baz=346,slow=2.9,SNR=4.8
BRTR PKKPbc **PKKPbc 00 22 56.2 -0.5**
comp=Z,1.3nm,1.0s,baz=339,slow=1.7,SNR=3.8
BRTR LR LR 00 48 58.2
comp=Z,12µm,18.4s,baz=336,slow=37
BRTR Keskin Array B 91.64 24 P **P 00 05 38.2 -0.5**
BRTR Keskin Array B 91.64 24 P **P 00 05 38.2 -0.5**
KPKS Kokpek 91.65 350 *e*P **P 00 05 40.3 +1.6**
UZB Uzynbulak 91.92 350 *e*P **P 00 05 41.2 +1.2**
SATY Saty 92.08 350 *e*P **P 00 05 42.1 +1.4**
comp=Z,93nm,2.3s
SGDS Sogindy 92.09 353 *e*P **P 00 05 42.1 +1.4**
SGDS *e*S **SKSac 00 16 14.6 +0.7**
AAA Alma-Ata 92.11 351 *e*P **P 00 05 42.3 +1.5**
comp=Z,63nm,1.3s
AAA LR LR 00 48 15.1
comp=Z,11µm,18.3s
MDOK Medeo 92.14 351 *e*P **P 00 05 42.4 +1.4**
MDOK *e*S **SKSac 00 16 15.1 +0.8**
MDOK LR LR 00 48 16.9
XAN Xi'an 92.26 325 P **P 00 05 40.5 -1.1**
XAN pP pP 00 05 45.3 -0.6
XAN PP **PP 00 09 23.5 +2.4**
XAN SKS **SKSac 00 16 11.3 -3.7**
XAN S **S 00 16 42.3 -2.4**
XAN pmax
comp=Z,200nm,1.3s
XAN pmax
comp=Z,3µm,4.8s
XAN L
comp=Z,17µm,17.0s
XAN L
comp=Z,34µm,17.7s
TNSS Tian-Shan 92.27 351 *e*P **P 00 05 42.9 +0.9**
GO06 Curarrehue 92.39 148 IAMs_20 IAMs_20 00 41 55.9
comp=Z,14µm,19.0s
ISP Isparta 92.44 27 IAMs_20 IAMs_20 00 48 34.8
comp=Z,18µm,22.0s
LZH Lanzhou 92.44 329 P **P 00 05 46.3 +3.7**
LZH pP sP 00 05 50.5 +2.1
LZH PP **PP 00 09 26.3 +3.7**
LZH SKS **SKSac 00 16 15.0 -1.2**
LZH S **S 00 16 45.8 -0.7**
LZH pmax
comp=Z,70nm,1.8s
LZH pmax
comp=Z,1µm,4.0s
LZH L
comp=Z,29µm,15.9s
LZH L
comp=Z,50µm,17.1s
KKAR Karatay Array 92.73 356 P **P 00 05 42.4 -1.2**
KKAR Karatay Array 92.73 356 P **P 00 05 42.4 -1.2**
IDI Anoyia 92.75 32 LR LR 00 50 56.0
comp=Z,12µm,18.4s,baz=332,slow=38
WHN Wuhan 92.83 319 P **P 00 05 44.0 -0.2**
WHN pP **pP 00 05 48.3 -0.2**
WHN sP **sP 00 05 51.5 +1.4**
WHN PP **PP 00 09 31.0 +5.3**
WHN SKS **SKSac 00 16 14.5 -3.7**
WHN S **S 00 16 45.5 -4.2**
WHN SS **SS 00 23 02.0 +0.6**
WHN pmax
comp=Z,290nm,1.3s
WHN pmax
comp=Z,4µm,3.2s
WHN L
comp=Z,18µm,14.1s
WHN L
comp=Z,54µm,23.6s
BRLS Borolday 92.83 356 *e*P **P 00 05 46.7 +2.6**
DZA Taraz 92.89 355 *e*P **P 00 05 45.9 +1.6**
AAK Ala-Archa 92.91 353 LR LR 00 50 27.0
comp=Z,17µm,21.5s,baz=359,slow=37
AAK Ala-Archa 92.91 353 P **P 00 05 42.8 -1.9**
AAK Ala-Archa 92.91 353 P **P 00 05 42.8 -1.9**
AAK pmax pmax
comp=Z,39nm,1.4s
AAK MLR MLR
comp=Z,24µm,22.0s
HNR Honiara 92.95 260 LR LR 00 41 52.1
comp=Z,468nm,20.9s,baz=130,slow=32
HNR Honiara 92.95 260 IAMs_20 IAMs_20 00 50 57.6
comp=Z,12µm,18.0s
RAO Raoul Island 93.04 231 LR LR 00 39 44.2
comp=Z,10µm,21.6s,baz=44,slow=30
RAO Raoul Island 93.04 231 IAMs_20 IAMs_20 00 39 33.0
comp=Z,10µm,21.0s
CHM Chimkent 93.55 357 *e*P **P 00 05 49.0 +1.6**
comp=Z,97nm,2.4s
CHM LR LR 00 49 06.8
PLCA Paso Flores 93.73 148 P **P 00 05 47.7 -0.3**
comp=Z,14nm,1.1s,baz=345,slow=5.6,SNR=14
PLCA LR LR 00 42 50.5
comp=Z,16µm,18.7s,baz=343,slow=32
comp=Z,14nm,1.1s
PLCA Paso Flores 93.73 148 P **P 00 05 46.7 -1.3**
PLCA Paso Flores 93.73 148 P **P 00 05 46.7 -1.3**
PLCA pmax pmax
comp=Z,309nm,2.0s
TATO Taipei 93.75 311 IAMs_20 IAMs_20 00 53 23.8
comp=Z,10µm,19.0s
WUS Wushi 93.81 349 IAMs_20 IAMs_20 00 51 13.5
comp=Z,14µm,21.0s
GNI Garni 93.89 15 LR LR 00 49 01.8
comp=Z,12µm,22.0s,baz=357,slow=36
GNI Garni 93.89 15 IAMs_20 IAMs_20 00 52 55.1
comp=Z,15µm,22.0s
TAM Tamanrasset 93.91 53 IAMs_20 IAMs_20 00 44 20.4
comp=Z,18µm,20.0s
YHNB Yeheng 94.06 311 IAMs_20 IAMs_20 00 52 05.0
comp=Z,12µm,20.0s
NACB Ninganchiao 94.33 310 IAMs_20 IAMs_20 00 51 31.3
comp=Z,14µm,22.0s
SSLB Suanglung 94.99 310 IAMs_20 IAMs_20 00 48 14.8
comp=Z,10µm,21.0s
KRVT Keravat (AS076 95.05 269 LR LR 00 41 12.1
comp=Z,3µm,21.5s,baz=320,slow=31
TRQA Tornquist 95.08 141 P **P 00 05 52.1 -2.0**
TRQA IAmb IAmb 00 06 03.3
comp=Z,71nm,1.6s
TRQA Tornquist 95.08 141 P **P 00 05 52.1 -2.0**
TRQA pmax pmax
comp=Z,71nm,1.6s
YULB Yu-li 95.12 310 IAMs_20 IAMs_20 00 54 58.2
comp=Z,13µm,19.0s
GOMU GeErMu 95.30 336 P **P 00 06 00.5 +4.5**
GOMU pP sP 00 06 04.8 +3.0
GOMU sP pP 00 06 07.5 +7.2
GOMU pmax
comp=Z,9.0nm,2.0s
GOMU L
comp=Z,3µm,16.0s
GOMU L
comp=Z,790nm,15.6s
GOMU L
comp=Z,2µm,16.1s
QZH2 Quanzhou 95.32 313 P **P 00 05 54.5 -1.2**
QZH2 SKS **SKSac 00 16 30.5 -1.4**
QZH2 S **ScS 00 17 13.0 +0.4**
QZH2 pmax
comp=Z,840nm,7.4s
QZH2 L
comp=Z,9µm,18.9s
QZH2 L
comp=Z,16µm,21.3s
CNSH ChangSha 95.48 319 P **P 00 06 00.8 +4.4**
CNSH PP **PP 00 09 52.8 +6.4**
CNSH SKS **SKSac 00 16 33.0 +0.4**
CNSH pmax
comp=Z,30nm,1.2s
CNSH L
comp=Z,16µm,20.4s
CNSH L
comp=Z,10µm,18.4s
CNSH L
comp=Z,16µm,20.2s
TPUB Ta-pu 95.56 310 IAMs_20 IAMs_20 00 48 42.8
comp=Z,10µm,20.0s
TWG Pinlang 95.70 310 IAMs_20 IAMs_20 00 53 26.5
comp=Z,11µm,20.0s
KNMB Chin-men Tao 95.82 313 IAMs_20 IAMs_20 00 52 13.7
comp=Z,12µm,22.0s
AY01 Puyuhuapi 96.17 151 IAMs_20 IAMs_20 00 43 60.0
comp=Z,16µm,19.0s
GAR Garm 96.83 356 IAmb IAmb 00 06 42.3
comp=Z,64nm,1.1s
CD2 Chengdu 97.08 327 P Pdif 00 06 05.3 +1.5
CD2 sP sP 00 06 11.0 +1.4
CD2 PP **PP 00 09 58.8 +0.1**
CD2 SKS **SKSac 00 16 40.3 -0.8**
CD2 S **ScS 00 17 29.5 +2.3**
CD2 SS **SS 00 24 00.3 -1.5**
CD2 pmax
comp=Z,680nm,6.5s
CD2 L
comp=Z,47µm,23.7s
CD2 L
comp=Z,28µm,20.6s
DZM Mont Dzumac 97.33 246 LR LR 00 43 20.3
comp=Z,14µm,20.1s,baz=38,slow=31
COYC Coyhaique 97.37 151 IAMs_20 IAMs_20 00 42 19.8
comp=Z,14µm,20.0s
ONTNC Ouen Toro 97.49 246 IAMs_20 IAMs_20 00 43 14.4
comp=Z,13µm,20.0s
MMAI Mount Meron Ar 98.39 25 LR LR 00 53 09.1
comp=Z,9µm,20.7s,baz=356,slow=37
AY03 Cochrane 98.66 152 IAMs_20 IAMs_20 00 46 50.9
comp=Z,11µm,18.0s
GZH2 Guangzhou 98.92 316 P Pdif 00 06 15.5 +3.4
GZH2 PP **PP 00 19.5 +6.5**
GZH2 SKS **SKSac 00 16 53.0 +2.5**
GZH2 S **S 00 17 39.5 -3.1**
GZH2 SS **SS 00 24 29.0 +0.9**
GZH2 L
comp=Z,11µm,18.8s
GZH2 L
comp=Z,22µm,21.2s
TORD Torodi Ar. Bea 99.03 62 P **Pdif 00 06 10.7 -2.0**
comp=Z,5.7nm,1.2s,baz=318,slow=1.9,SNR=8.5
TORD LR LR 00 48 39.0
comp=Z,23µm,20.2s,baz=320,slow=34
comp=Z,5.7nm,1.2s
DBIC Dimbokro 99.54 71 P **Pdif 00 06 14.6 -0.3**
comp=Z,5.2nm,1.1s,baz=334,slow=5.8,SNR=6.1
DBIC LR LR 00 50 20.4
comp=Z,25µm,18.3s,baz=334,slow=35
comp=Z,5.2nm,1.1s
DBIC Dimbokro 99.54 71 P **Pdif 00 06 14.2 -0.8**
DBIC Dimbokro 99.54 71 P **Pdif 00 06 14.2 -0.8**
DBIC pmax pmax
comp=Z,29nm,1.2s
ASF Jabal al Asfar 99.62 24 LR LR 00 51 29.8
comp=Z,11µm,21.2s,baz=343,slow=36
GO08 Villa O'Higgin 99.73 153 IAMs_20 IAMs_20 00 43 06.1
comp=Z,11µm,21.0s
HKPS Hong Kong Po S 99.82 315 IAMs_20 IAMs_20 00 57 58.5
comp=Z,15µm,19.0s
PZH PanZhiHua 101.80 327 Pdif **Pdif 00 06 29.0 +4.0**
PZH PP **PP 00 10 36.0 +1.3**
PZH SKS **SKSac 00 17 01.5 -3.3**
PZH S **Sdif 00 18 06.8 -0.1**
PZH SS **SS 00 25 06.0 -2.0**
PZH PPMZ
comp=Z,240nm,3.5s
PZH L
comp=Z,15µm,22.2s
PZH L
comp=Z,15µm,19.8s
PMG Port Moresby 102.04 269 IAMs_20 IAMs_20 00 44 46.8
comp=Z,11µm,22.0s
GO09 Cerro Castillo 102.24 154 IAMs_20 IAMs_20 00 45 40.5
comp=Z,10µm,19.0s
LSA Lhasa 102.45 337 IAMs_20 IAMs_20 00 57 26.6
comp=Z,15µm,20.0s
LSA Lhasa 102.45 337 P **Pdif 00 06 24.0 -4.3**
LSA L
comp=Z,8µm,19.2s
LSA L
comp=Z,6µm,18.6s
LSA L
comp=Z,14µm,17.2s
MG05 Puerto Natales 102.54 154 IAMs_20 IAMs_20 00 45 48.5
comp=Z,12µm,18.0s
KMI2 Kunming 102.61 325 Pdif **Pdif 00 06 31.3 +2.6**
KMI2 PP **PP 00 10 44.3 +3.3**
KMI2 S **Sdif 00 18 15.3 +1.5**
KMI2 PPMZ
comp=Z,770nm,7.8s
KMI2 L
comp=Z,16µm,21.6s
KMI2 L
comp=Z,21µm,22.7s
RTZ Ruatahuna 102.85 228 IAMs_20 IAMs_20 00 51 13.9
comp=Z,9µm,20.0s
CTZ Chatham Island 103.46 221 IAMs_20 IAMs_20 00 52 28.0
comp=Z,12µm,18.0s
MG04 Isla Riesco 103.85 155 IAMs_20 IAMs_20 00 46 46.2
comp=Z,12µm,18.0s
GO10 Punta Arenas 104.27 154 IAMs_20 IAMs_20 00 46 44.2
comp=Z,14µm,21.0s
MG02 Cerro Sombrero 104.53 153 IAMs_20 IAMs_20 00 48 03.0
comp=Z,12µm,19.0s
QIZ Qiongzhong 104.71 316 IAMs_20 IAMs_20 01 01 48.8
comp=Z,10µm,20.0s
QIZ Qiongzhong 104.71 316 Pdif **Pdif 00 06 38.0 +0.1**
QIZ PP **PP 00 10 54.3 -2.3**
QIZ SS SS 00 25 48.0 -0.4
QIZ L
comp=Z,10µm,18.0s
QIZ L
comp=Z,12µm,18.1s
MG03 Isla Dawson 105.05 154 IAMs_20 IAMs_20 00 47 06.7
comp=Z,10µm,19.0s
MRZ Mangatainoka R 105.08 227 IAMs_20 IAMs_20 00 55 34.8
comp=Z,8µm,18.0s
DAV Davao City (W) 105.26 296 IAMs_20 IAMs_20 00 46 04.0
comp=Z,10µm,21.0s
MG01 Puerto William 106.85 154 IAMs_20 IAMs_20 00 49 01.5
comp=Z,11µm,19.0s
LTZ Lake Taylor 108.33 228 IAMs_20 IAMs_20 01 03 45.8
comp=Z,7µm,18.0s
RPZ Rata Peaks 109.62 228 IAMs_20 IAMs_20 00 50 01.9
comp=Z,10µm,21.0s
CHTO Chiang Mai 109.82 326 IAMs_20 IAMs_20 01 03 56.4
comp=Z,12µm,19.0s
CTAO Charters Tower 109.84 261 IAMs_20 IAMs_20 00 51 41.2
comp=Z,10µm,20.0s
CMAR Chiang Mai Arr 110.14 326 Pdiff **Pdif 00 07 02.5 +0.4**
comp=Z,0.8nm,0.3s,baz=10,slow=4.3,SNR=8.7
LBZ Lake Benmore 110.53 228 IAMs_20 IAMs_20 00 50 38.1
comp=Z,10µm,21.0s
MLZ Mavora Lakes 112.28 228 IAMs_20 IAMs_20 00 55 46.4
comp=Z,8µm,19.0s
PYZ Puysegur Point 113.56 228 IAMs_20 IAMs_20 00 52 24.4
comp=Z,8µm,21.0s
HYB Hyderabad 117.22 345 *e*Pdif **Pdif 00 07 32.7 -0.9**
HYB *e*PKiKP **PKPdf 00 11 15.9 -1.3**
HYB *e*PP **PP 00 12 28.0 +1.8**
HYB *e*SKSac **SKSac 00 18 07.4 -2.3**
HYB *e*SKKSac **SKKSac 00 19 26.1 -2.6**
HYB IVMs_BB IVMs_BB 01 02 56.8
comp=Z,4µm,23.0s
CAN Canberra 117.50 246 IAMs_20 IAMs_20 00 53 26.3
comp=Z,13µm,20.0s
WRA Warramunga Arr 118.25 269 PKP **PKPdf 00 11 17.8 -1.1**
comp=Z,7.7nm,0.8s,baz=35,slow=1.6,SNR=39
WRA Warramunga Arr 118.25 269 **PKPdf 00 11 16.1 -2.8**
STKA Stephens Creek 120.46 254 PKP **PKPdf 00 11 21.6 -1.2**
comp=Z,13nm,0.9s,baz=36,slow=3.9,SNR=12
STKA Stephens Creek 120.46 254 PKPdf **PKPdf 00 11 21.7 -1.1**
ASAR Alice Springs 120.92 266 PKP **PKPdf 00 11 22.8 -1.2**
comp=Z,6.3nm,0.8s,baz=42,slow=1.7,SNR=35
ASAR PKKPbc **PKKPbc 00 21 25.9 -0.1**
comp=Z,1.1nm,0.7s,baz=228,slow=3.8,SNR=8.5
ASAR Alice Springs 120.92 266 PKPdf **PKPdf 00 11 21.9 -2.1**
ASAR Alice Springs 120.92 266 PKIKP **PKPdf 00 11 21.9 -2.1**
KULM Kulim 121.02 317 IAMs_20 IAMs_20 01 09 42.1
comp=Z,11µm,20.0s
LHMI Lhok Sumawe 122.81 321 IAMs_20 IAMs_20 01 05 25.2
comp=Z,10µm,22.0s
TAU Tasmania Unive 122.86 240 IAMs_20 IAMs_20 00 56 27.4
comp=Z,7µm,20.0s
PSI Prapat 124.02 318 PKIKP **PKPdf 00 11 28.9 -1.5**
RPSI Rantau Prapat 124.11 318 PKPdf **PKPdf 00 11 28.9 -1.5**
BKNI Bangkinang 125.09 314 IAMs_20 IAMs_20 01 15 47.2
comp=Z,11µm,19.0s
LODK Lodwar 125.53 37 PKPdf **PKPdf 00 11 31.4 -1.8**
LODK IAMs_20 IAMs_20 01 08 26.9
comp=Z,11µm,21.0s
PMBI Palembang 125.79 308 IAMs_20 IAMs_20 01 12 14.7
comp=Z,8µm,22.0s
GSI Gunungsitoli 125.97 318 IAMs_20 IAMs_20 01 14 24.2
comp=Z,10µm,20.0s
PALK Pallekele 126.62 340 IAMs_20 IAMs_20 01 12 12.8
comp=Z,11µm,21.0s
MBAR Mbarara 126.89 45 IAMs_20 IAMs_20 01 05 36.7
comp=Z,12µm,21.0s
MNAI Manna 127.98 309 IAMs_20 IAMs_20 01 12 49.3
comp=Z,9µm,21.0s
HMDM Hanimaadhoo 128.51 349 IAMs_20 IAMs_20 01 13 53.7
comp=Z,9µm,20.0s
PSA00 Pilbara Seismi 129.65 278 PKPdf **PKPdf 00 11 39.2 -1.5**
KMBO Kilima Mbogo 130.42 38 PKP **PKPdf 00 11 42.2 -0.6**
baz=354,slow=4.9
SBA Scott Base 130.57 196 PKPdf **PKPdf 00 11 40.2 -0.5**
SBA Scott Base 130.57 196 IAMs_20 IAMs_20 00 55 40.6
comp=Z,8µm,21.0s
SBA Scott Base 130.57 196 PKIKP **PKPdf 00 11 40.3 -0.5**
BELA Belgrano 2 131.04 164 PKPdf **PKPdf 00 11 40.8 -0.9**
VNDA Vanda 131.44 197 PKP **PKPdf 00 11 42.6 +0.2**
comp=Z,2.0nm,0.9s,baz=335,slow=2.7,SNR=7.5
VNDA Vanda 131.44 197 PKPdf **PKPdf 00 11 42.8 +0.4**
KIBK Kibwezi 131.85 37 PKPdf **PKPdf 00 11 43.2 -2.1**
KIBK IAMs_20 IAMs_20 01 09 53.8
comp=Z,8µm,20.0s
QSPA South Pole Qui 134.23 180 PKhKP PKPpre 00 11 40.1
comp=Z,6.3nm,1.1s,baz=108,slow=1.2,SNR=7.2
QSPA PKP **PKPdf 00 11 48.4 +0.4**
comp=Z,18nm,0.9s,baz=81,slow=2.8,SNR=16
QSPA South Pole Qui 134.23 180 PKPpre PKPpre 00 11 38.5
QSPA PKPdf **PKiKP 00 11 49.0 -0.4**
KAAM Kaadhehdhoo 134.72 349 IAMs_20 IAMs_20 01 13 29.2
comp=Z,9µm,22.0s
KOOLE Kule 137.75 75 PKPdf **PKPdf 00 11 54.2 -1.9**
COCO West Island 137.82 310 IAMs_20 IAMs_20 01 17 44.9
comp=Z,6µm,22.0s
NWAO Narrogin (SRO) 138.22 267 IAMs_20 IAMs_20 01 08 12.3
comp=Z,7µm,21.0s
SNAA Sanae 138.37 154 PKP **PKPdf 00 11 55.2 -0.5**
comp=Z,26nm,1.1s,baz=257,slow=3.7,SNR=6.3
SNAA Sanae 138.37 154 PKPpre 00 11 47.3
SNAA IAMs_20 IAMs_20 01 22 48.5
comp=Z,8µm,19.0s
SNAA Sanae 138.37 154 PKHKP PKPpre 00 11 47.3
MSEY Mahe Island 139.56 15 IAMs_20 IAMs_20 01 24 42.2
comp=Z,5µm,21.0s
LPHEP Lephephe 141.86 70 PKPdf **PKPdf 00 12 00.6 -2.9**
DGAR Diego Garcia 142.56 348 IAMs_20 IAMs_20 01 18 50.1
comp=Z,7µm,21.0s
LBTB Lobatse 142.79 72 **PKPdf 00 12 02.8 -2.3**
LBTB Lobatse 142.79 72 PKIKP **PKPdf 00 12 02.8 -2.3**
BOSA Boshof 144.83 77 PKP **PKPab 00 12 06.8 -0.7**
comp=Z,51nm,1.2s,baz=297,slow=3.4,SNR=14
BOSA Boshof 144.83 77 PKPdf **PKPab 00 12 06.0 -1.6**
BOSA Boshof 144.83 77 PKIKP **PKPab 00 12 06.0 -1.6**
ELIB Princess Elisa 146.08 158 *d*PKP **PKPdf 00 12 09.4 0.0**
CASY Casey 147.19 212 IAMs_20 IAMs_20 01 22 23.2
comp=Z,6µm,18.0s
GRHM Grahamstown, E 148.27 83 PKPbc **PKPbc 00 12 17.0 -0.6**

*IDC **31** 23:56:07.8±2.4, 36.07N×141.32E, h0km, mb3.5/4,*

mbtmp3.8/7,ML4.4/2,Error ellipse: s-maj=62.1km s-min=21.7km az=63.0
*JMA **31** 23:56:21.1±0.2,35.7N±0.5×140.0E±0.7,h67km±1km, MV3.3/40,CENTRAL CHIBA PREF*
ISC 31 23:56:21.1±0.9,35.52N±0.05×140.03E±0.05,h70km±8km, n24,σ1s78/30,mb3.4/4,7D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JCCN	**Chibachonan**	**0.21**	**128**	*i* P		**Pn**		**23 56 32.6**	**+0.8**
JCCN				S		**Sn**		**23 56 41.8**	**+2.1**
JSMT	**Sammumatsuo**	**0.36**	**70**	P		**Pn**		**23 56 32.5**	**-0.2**
JOD2	**Odawara 2**	**0.81**	**252**	⇓*i* P		**Pn**		**23 56 37.5**	**+0.2**
JOD2				⇓S		**Sn**		**23 56 49.4**	**0.0**
BSO3	**Boso 3**	**0.81**	**151**	⇓*i* P		**Pn**		**23 56 37.6**	**+0.5**
BSO3				⇓S		**Sn**		**23 56 51.5**	**+2.6**
JIM2	**Oshima 3**	**0.94**	**212**	P		**Pn**		**23 56 39.1**	**+0.2**
JIM2				S		**Sn**		**23 56 52.7**	**+0.7**
JAG	**Ashikaga**	**1.02**	**333**	*i* P		**Pn**		**23 56 38.7**	**-1.2**
JAG				S		**Sn**		**23 56 51.5**	**-2.3**
JRY	**Ryogami san**	**1.04**	**299**	⇓*i* P		**Pn**		**23 56 40.2**	**0.0**
BSO1	**Boso 1**	**1.16**	**138**	*e* P		**Pn**		**23 56 41.4**	**+0.3**
BSO1				S		**Sn**		**23 56 57.5**	**+1.3**
JYN	**Shimob**	**1.21**	**270**	⇓*i* P		**Pn**		**23 56 42.6**	**+0.2**
JYN				⇓S		**Sn**		**23 56 58.7**	**+0.4**
JIZS	**Izushimoda**	**1.23**	**230**	P		**Pn**		**23 56 43.3**	**+0.7**
JIZS				S		**Sn**		**23 56 59.6**	**+0.9**
JKT	**Katashina**	**1.40**	**333**	P		**Pn**		**23 56 43.8**	**-1.1**
JKT				S		**Sn**		**23 57 00.5**	**-2.2**
MJAR	**Matsushiro Arr**	**1.79**	**305**	Pn		**Pn**		**23 56 49.9**	**-0.1**
	6.5nm,0.3s,baz=136,slow=13,SNR=29								
MJAR				Sn		**Sn**		**23 57 14.0**	**+2.0**
	3.0nm,0.3s,baz=173,slow=25,SNR=4.4								
JHJ	**Hachijo jima 2**	**2.40**	**185**	Pn		**Pn**		**23 57 00.1**	**+1.9**
	72nm,0.3s,baz=336,slow=21,SNR=20								
JHJ				Sn		**Sn**		**23 57 27.3**	**+0.7**
	66nm,0.3s,baz=305,slow=22,SNR=5.7								
	197nm,0.4s								
JCJ	**Chichijima**	**8.59**	**167**	Pn		**Pn**		**23 58 19.7**	**-3.1**
	7.7nm,0.3s,baz=276,slow=21,SNR=7.4								
JCJ				Sn		**Sn**		**23 59 52.3**	**-5.9**
	2.5nm,0.3s,baz=304,slow=18,SNR=1.6								
	20nm,0.3s								
H11N2	**WAKE ISLAND Hy**	**28.40**	**116**	T		T		00 31 55.7	
	baz=308,slow=75								
H11N1	**WAKE ISLAND Hy**	**28.41**	**117**	T		T		00 31 56.9	
	baz=308,slow=75								
H11N3	**WAKE ISLAND Hy**	**28.42**	**116**	T		T		00 31 58.2	
	baz=308,slow=75								
H11S3	**WAKE ISLAND Hy**	**29.05**	**119**	T		T		00 32 49.3	
	baz=310								
H11S1	**WAKE ISLAND Hy**	**29.05**	**119**	T		T		00 32 53.1	
	baz=310								
H11S2	**WAKE ISLAND Hy**	**29.06**	**119**	T		T		00 32 43.9	
	baz=310								
MKAR	**Makanchi Array**	**43.99**	**303**	P		**P**		**00 04 21.4**	**0.0**
	0.6nm,0.9s,baz=77,slow=8.3,SNR=2.0								
	0.6nm,0.9s								
KURBB	**Kurchatov Arra**	**46.07**	**309**	P		**P**		**00 04 37.1**	**-0.6**
	0.2nm,0.4s,baz=84,slow=8.1,SNR=4.2								
	0.2nm,0.4s								
WRA	**Warramunga Arr**	**55.42**	**187**	P		**P**		**00 05 47.9**	**-0.4**
	0.4nm,0.3s,baz=360,slow=7.5,SNR=26								
	0.4nm,0.3s								
ASAR	**Alice Springs**	**59.15**	**187**	P		**P**		**00 06 15.6**	**+1.0**
	0.1nm,0.3s,baz=21,slow=12,SNR=4.6								
	0.1nm,0.3s								

ISC Computed Locations for March 2020

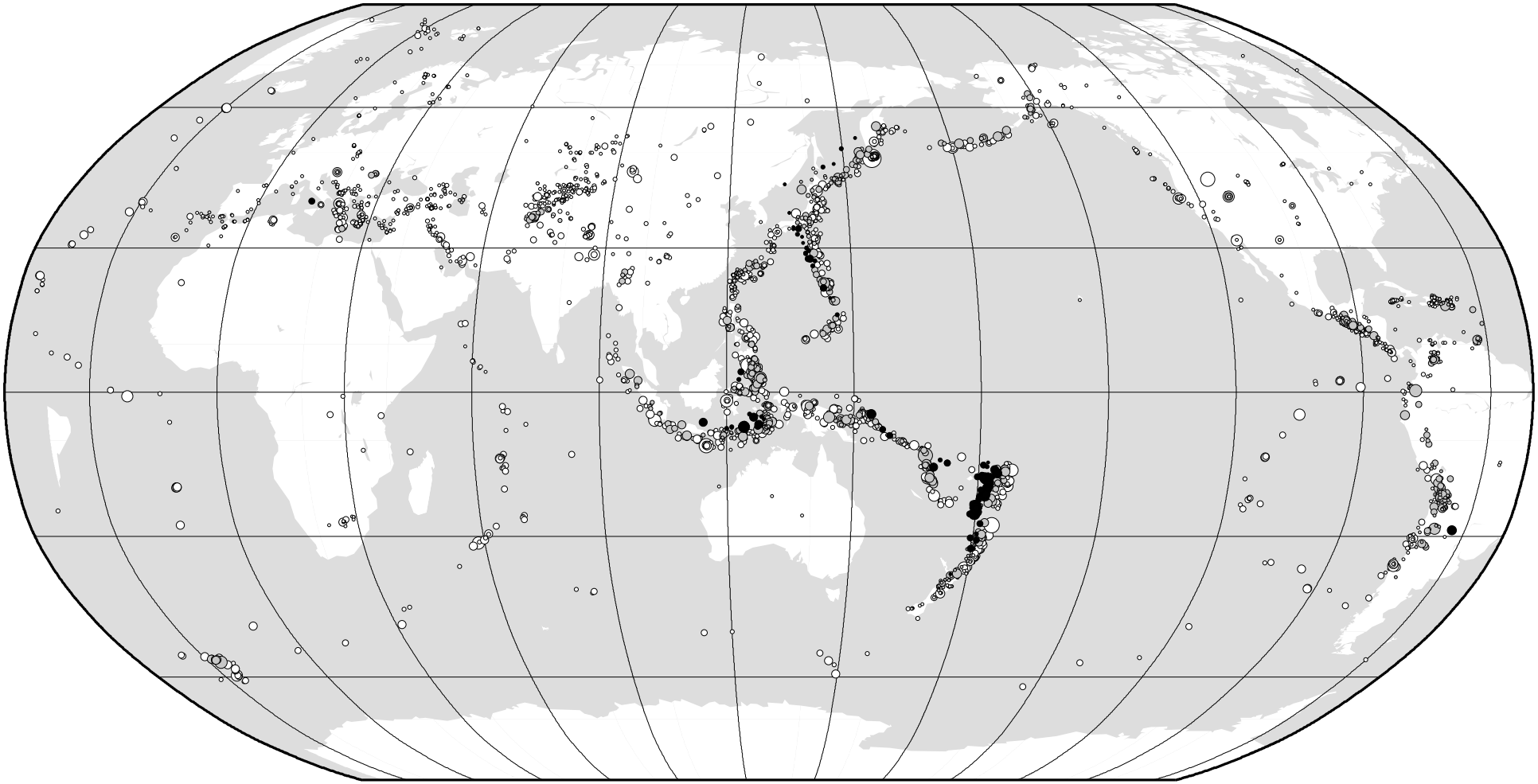

Depth (km)	0-70	70-300	>300
M=8	○	○	●
M=6.5	○	○	●
M=4	○	○	●

Robinson Projection, centred on 0˚N,130˚E

3432 Events